Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*IDC **01** 00:10:59.1±0.7,7.40N×94.09E,h0km,mb4.0/17, mb1 4.1/20,mb1mx3.9/46,mbtmp4.0/20,ML3.9/3,MS3.4/9, Ms1 3.4/9,ms1mx3.1/42,Error ellipse: s-maj=25.2km s-min=16.2km az=66.0*

*NEIC **01** 00:11:00.6±1.4,7.41N±0.08×94.21E±0.08,h10km±1km, mb4.5/35,Error ellipse: s-maj=15.9km s-min=10.2km az=44.0*

ISC 01 00:11:00.5±0.4,**7.39N**±0.07×**94.25E**±0.06,**h10**km,**n102,** σ1**$28**/83,**mb4.3**/34,**MS3.4**/6,**1C**,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.43**	**129**		**Pn**	**00 11 54.9**	**+0.9**
PBA	**Port Blair**	**4.50**	**341**	*eP*	Pn	00 12 13.1	+4.4
PBA	**Port Blair**	**4.50**	**341**	Pn	**Pn**	00 12 09.0	+0.3
DGPR	**DIGLIPUR**	**5.90**	**347**	*eP*	**Pn**	**00 12 31.8**	**+3.8**
PSI	**Prapat**	**6.51**	**134**	Pn	**Pn**	**00 12 39.5**	**+2.9**
	1.2nm,0.3s,baz=2.0,slow=12,SNR=6.1						
PSI				LR	LR	00 15 21.1	
	comp=Z,275nm,20.6s,baz=115,slow=39						
RPSI	**Rantau Prapat**	**6.58**	**135**		**Pn**	**00 12 39.5**	**+2.0**
RPSI	**Rantau Prapat**	**6.58**	**135**	Pn	**Pn**	**00 12 37.4**	**0.0**
KULM	**Kulim**	**6.69**	**108**		**Pn**	**00 12 38.1**	**-0.7**
GSI	**Gunungsitoli**	**6.89**	**151**	Pn	**Pn**	**00 12 42.3**	**+0.7**
IPM	**Ipoh**	**7.33**	**113**		**Pn**	**00 12 46.2**	**-1.5**
CMAR	**Chiang Mai Arr**	**11.91**	**22**	Pn	**Pn**	**00 13 52.0**	**+1.5**
	0.9nm,0.3s,baz=213,slow=14,SNR=3.3						
CMAR				LR	LR	00 18 35.2	
	comp=Z,129nm,18.5s,baz=260,slow=38						
PALK	**Pallekele**	**13.44**	**270**	Pn	**Pn**	**00 14 09.8**	**-1.7**
	0.2nm,0.3s,baz=56,slow=3.6,SNR=1.7						
PALK				Sn	Sn	00 16 29.4	-12
	0.3nm,0.3s,baz=157,slow=18,SNR=2.1						
QIZ	**Qiongzhong**	**19.07**	**51**	P	**P**	**00 15 20.3**	**-2.9**
QIZ				S	**Sn**	**00 18 57.0**	**-0.7**
QIZ				pmax	pmax		
	comp=Z,20nm,1.7s						
QIZ				LR	LR		
	comp=N,440nm,11.8s						
QIZ				LR	LR		
	comp=E,220nm,18.6s						
KMI	**Kunming**	**19.41**	**24**↑	*eP*	**Pn**	**00 15 30.2**	**+1.9**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LEM	**Lembang**	**19.42**	**136**	LR	LR	00 24 15.1	
	comp=Z,154nm,19.6s,baz=340,slow=41						
ODAN	**Odare**	**20.44**	**342**	*eP*	Pn	00 15 42.9	+2.4
RAMN	**Ramite**	**20.77**	**340**	*eP*	Pn	00 15 46.1	+1.7
TAPN	**Taplejung**	**20.80**	**343**	*eP*	Pn	00 15 44.0	-0.8
PKI	**Pulchoki**	**21.76**	**338**	*eP*	**P**	**00 15 55.2**	**+2.5**
PKIN	**Phulchoki**	**21.77**	**338**	*eP*	**P**	**00 15 55.1**	**+2.4**
GUN	**Gumba**	**21.90**	**340**	*eP*	**P**	**00 15 54.7**	**+0.4**
DMN	**Daman**	**21.90**	**338**	*eP*	**P**	**00 15 57.5**	**+3.3**
LSA	**Lhasa**	**22.39**	**353**	P	**P**	**00 16 01.6**	**+2.0**
LSA				pmax	pmax		
	comp=Z,20nm,0.9s						
GKN	**Gorkha**	**22.43**	**337**	*eP*	**P**	**00 15 59.4**	**-0.4**
KOLN	**Koldanda**	**22.65**	**335**	*eP*	**P**	**00 16 01.3**	**-0.8**
DANN	**Dangsing**	**23.09**	**336**	*eP*	**P**	**00 16 05.7**	**-1.2**
PYUN	**Piuthan**	**23.20**	**334**	*eP*	**P**	**00 16 08.1**	**+0.3**
MYLDM	**Lahad Datu**	**24.20**	**94**	P	**P**	**00 16 15.1**	**-2.4**
H08S3	**Diego Garcia H**	**26.34**	**236**	T	T	00 43 15.0	
	baz=54,slow=75,SNR=526						
H08S2	**Diego Garcia H**	**26.34**	**236**	T	T	00 43 15.0	
	baz=54,slow=75,SNR=18						
H08S1	**Diego Carcia H**	**26.36**	**236**	T	T	00 43 14.3	
	baz=54,slow=75,SNR=5.5						
KAPI	**Kappang**	**28.27**	**115**	LR	LR	00 28 28.1	
	comp=Z,42nm,18.0s,baz=284,slow=37						
KAPI	**Kappang**	**28.27**	**115**	P	**P**	**00 16 51.9**	**-2.4**
KAPI				IAmb	IAmb	00 16 53.8	
	comp=Z,5.9nm,0.9s						
NACB	**Ninganchiao**	**31.06**	**54**	P	**P**	**00 17 19.4**	**+0.6**
NIL	**Nilore**	**32.56**	**326**	P	**P**	**00 17 31.7**	**-0.4**
KBL	**Kabul**	**35.63**	**323**	P	**P**	**00 17 58.4**	**-0.5**
KSH	**Kashi**	**35.96**	**336**	P	P	00 18 06.1	+4.5
KSH				pmax	pmax		
	comp=Z,220nm,4.2s						
HHC	**Hu-ho-hao-te**	**36.72**	**22**	*eP*	**P**	**00 18 08.5**	**+0.4**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,71nm,5.6s						
WMQ	**Urumqi**	**36.74**	**352**	*eP*	**P**	**00 18 08.9**	**+0.8**
GAR	**Garm**	**38.15**	**329**	P	**P**	**00 18 19.9**	**-0.3**
GAR				IAmb	IAmb	00 18 26.6	
	comp=Z,9.9nm,1.0s						
CHGR	**Chuyangaron**	**38.49**	**328**	P	**P**	**00 18 22.4**	**-0.7**
CHGR				IAmb	IAmb	00 18 31.4	
	comp=Z,14nm,0.9s						
SOCY	**Socotra**	**39.94**	**280**	P	**P**	**00 18 35.9**	**+0.4**
FITZ	**Fitzroy Crossi**	**40.02**	**130**	P	**P**	**00 18 37.2**	**+1.3**
MK31	**Makanchi Array**	**40.59**	**347**	P	**P**	**00 18 39.3**	**-1.0**
MKAR	**Makanchi Array**	**40.59**	**347**	P	**P**	**00 18 39.6**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=168,slow=7.8,SNR=13						
MAKZ	**Makanchi**	**40.67**	**347**	P	**P**	**00 18 40.3**	**-0.7**
KK31	**Karatay Array**	**41.24**	**333**	P	**P**	**00 18 44.7**	**-1.1**
KKAR	**Karatay Array**	**41.24**	**333**	P	**P**	**00 18 44.7**	**-1.1**
KKAR	**Karatay Array**	**41.24**	**333**	P	**P**	**00 18 46.1**	**+0.3**
SONM	**Songino Array**	**41.61**	**12**	P	**P**	**00 18 49.6**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=195,slow=5.6,SNR=2.5						
KSRS	**Korea Array**	**42.76**	**41**	LR	LR	00 39 36.5	
	comp=Z,46nm,18.3s,baz=218,slow=40						
GEYT	**Alibeck**	**44.64**	**318**	P	**P**	**00 19 11.5**	**-1.9**
	comp=Z,3.9nm,0.6s,baz=131,slow=8.1,SNR=9.8						
GEYT				LR	LR	00 41 00.7	
	comp=Z,42nm,18.7s,baz=35,slow=40						
GEYT	**Alibeck**	**44.64**	**318**	P	**P**	**00 19 14.2**	**+0.7**
GYA0B	**ALIBECK ARRAY**	**44.64**	**318**	P	**P**	**00 19 14.0**	**+0.6**
GYA0B				IAmb	IAmb	00 19 21.5	
	comp=Z,5.7nm,0.8s						
KURBB	**Kurchatov Arra**	**45.04**	**346**	P	**P**	**00 19 16.3**	**0.0**
	comp=Z,1.6nm,0.4s,baz=166,slow=7.0,SNR=12						
KURK	**Kurchatov**	**45.11**	**346**	P	**P**	**00 19 16.8**	**-0.1**
KURK				IAmb	IAmb	00 19 23.3	
	comp=Z,6.5nm,1.0s						
H01W3	**Cape Leeuwin H**	**46.05**	**157**	T	T	01 08 56.4	
	baz=329						
H01W2	**Cape Leeuwin H**	**46.06**	**157**	T	T	01 09 00.4	
	baz=329						
H01W1	**Cape Leeuwin H**	**46.06**	**157**	T	T	01 08 57.6	
	baz=329						
ZAA0	**Zalesovo Array**	**47.05**	**352**	P	**P**	**00 19 32.4**	**+0.3**
ZAA0				IAmb	IAmb	00 19 40.6	
	comp=Z,3.4nm,0.7s						
ZALV	**Zalesovo Beam**	**47.05**	**352**	P	**P**	**00 19 32.4**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=180,slow=6.2,SNR=7.4						
ZALV				LR	LR	00 40 15.8	
	comp=Z,28nm,21.3s,baz=85,slow=37						
ZALV	**Zalesovo Beam**	**47.05**	**352**	P	**P**	**00 19 32.1**	**0.0**
JAY	**Jayapura**	**47.38**	**100**	LR	LR	00 42 15.3	
	comp=Z,43nm,19.0s,baz=140,slow=40						
WB0	**Warramunga Arr**	**47.84**	**125**	P	**P**	**00 19 39.5**	**+0.6**
WB0				IAmb	IAmb	00 19 59.3	
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**47.89**	**125**	P	**P**	**00 19 39.4**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=306,slow=8.5,SNR=3.1						
WRAB	**Tennant Creek**	**47.89**	**125**	P	**P**	**00 19 40.2**	**+1.0**
WRAB				IAmb	IAmb	00 19 48.6	
	comp=Z,2.8nm,0.9s						
WB2	**Warramunga Arr**	**47.90**	**125**	P	**P**	**00 19 39.3**	**0.0**
WB2				IAmb	IAmb	00 19 50.3	
	comp=Z,2.5nm,0.8s						
WR0	**Warramunga Arr**	**48.06**	**125**	P	**P**	**00 19 41.4**	**+0.9**
WR0				IAmb	IAmb	00 19 43.1	
	comp=Z,2.4nm,0.9s						
ASAR	**Alice Springs**	**49.52**	**130**	P	**P**	**00 19 52.5**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=304,slow=8.0,SNR=3.2						
ASAR	**Alice Springs**	**49.52**	**130**	P	**P**	**00 19 51.4**	**-0.3**
BRVK	**Borovoye**	**49.55**	**341**	P	**P**	**00 19 51.1**	**-0.3**
BRVK				IAmb	IAmb	00 19 57.7	
	comp=Z,3.0nm,0.7s						
FORT	**Forrest**	**49.89**	**141**	P	**P**	**00 19 56.0**	**+1.6**
ABKAR	**Akbulak array**	**50.71**	**331**	P	**P**	**00 20 00.3**	**-0.1**
ABKAR	**Akbulak array**	**50.71**	**331**	IAmb	IAmb	00 20 10.3	
	comp=Z,2.6nm,0.7s						
ARU	**Arti**	**56.38**	**337**	P	**P**	**00 20 41.3**	**-0.5**
ARU				IAmb	IAmb	00 20 48.7	
	comp=Z,8.7nm,1.1s						
STKA	**Stephens Creek**	**59.69**	**134**	LR	LR	00 49 45.6	
	comp=Z,49nm,19.0s,baz=32,slow=39						
NRIK	**Noril'sk**	**62.03**	**357**	P	**P**	**00 21 21.1**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=184,slow=19,SNR=2.2						
BRTR	**Keskin Array B**	**62.83**	**311**	P	**P**	**00 21 25.5**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=119,slow=7.6,SNR=1.9						
FIA1	**FINESS Array S**	**73.19**	**332**	P	**P**	**00 22 30.9**	**-0.4**
FINES	**FINESS Array B**	**73.19**	**332**	P	**P**	**00 22 30.8**	**-0.6**
	comp=Z,3.2nm,0.8s,baz=98,slow=5.8,SNR=9.8						
BOSA	**Boshof**	**75.42**	**238**	P	**P**	**00 22 45.1**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=135,slow=1.4,SNR=1.3						
BOSA	**Boshof**	**75.42**	**238**	P	**P**	**00 22 45.2**	**0.0**
BOSA				IAmb	IAmb	00 22 54.3	
	comp=Z,5.1nm,0.8s						
ARD3	**ARCESS Array S**	**75.75**	**340**	P	**P**	**00 22 46.7**	**+0.6**
ARCES	**ARCESS Array B**	**75.76**	**340**	P	**P**	**00 22 48.0**	**+1.8**
	comp=Z,2.5nm,0.9s,baz=90,slow=6.3,SNR=1.4						
MAW	**Mawson**	**78.08**	**192**	P	**P**	**00 23 00.0**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=31,slow=12,SNR=1.9						
MAW	**Mawson**	**78.08**	**192**	IAmb	IAmb	00 23 09.5	
	comp=Z,0.6nm,1.1s						
GERES	**GERESS Array B**	**78.26**	**318**	P	**P**	**00 23 00.6**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=86,slow=6.0,SNR=6.8						
CORL	**Corleone**	**78.37**	**307**	P	**P**	**00 22 59.4**	**-2.1**
CIMO	**Cimolais**	**79.05**	**316**	P	**P**	**00 23 04.5**	**-0.6**
CIMO				IAmb	IAmb	00 23 05.5	
	comp=Z,3.9nm,1.0s						
NC405	**NORSAR Array S**	**79.97**	**331**	P	**P**	**00 23 10.4**	**+0.6**
NC602	**NORSAR Array S**	**80.03**	**330**	P	**P**	**00 23 10.5**	**+0.4**
ZCCA	**Zocca**	**80.08**	**314**	P	**P**	**00 23 10.9**	**+0.1**
ZCCA				IAmb	IAmb	00 23 19.0	
	comp=Z,7.5nm,1.0s						
NC303	**NORSAR Array S**	**80.14**	**331**	P	**P**	**00 23 10.9**	**+0.2**
NB2	**NORSAR Subarra**	**80.21**	**331**	P	**P**	**00 23 09.5**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=91,slow=5.9						
NOA	**NORSAR Array B**	**80.21**	**331**	P	**P**	**00 23 09.4**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=91,slow=5.7,SNR=2.5						
NC204	**NORSAR Array S**	**80.44**	**331**	P	**P**	**00 23 13.1**	**+0.7**
TORD	**Torodi Ar. Bea**	**90.82**	**283**	P	**P**	**00 24 05.1**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=85,slow=4.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**90.82**	**283**	IAmb	IAmb	00 24 06.5	
	comp=Z,1.4nm,1.1s						
ESDC	**Sonseca Array**	**91.61**	**310**	P	**P**	**00 24 07.0**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=59,slow=4.4,SNR=2.5						
IMAR	**Indian Mountai**	**92.03**	**22**	P	**P**	**00 24 11.2**	**+1.7**
PDAR	**Pinedale Array**	**125.58**	**21**	PKP	**PKiKP**	**00 30 03.3**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=348,slow=3.9,SNR=1.8						
CPUP	**Villa Florida**	**147.05**	**232**	PKPbc	**PKPbc**	**00 30 44.5**	**0.0**
	comp=Z,1.2nm,0.7s,baz=78,slow=6.8,SNR=3.1						

ROM 01 00:27:47.8±0.2,**43.456N**±0.003×**12.451E**±0.007, **h8**km±1km,**ML0.9**/6,**5C-1D**,**Error ellipse: s-maj=0.5km s-min=0.3km az=116.0**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.04**	**262**	P	Pg	00 27 49.6	+0.1
ATPI				S	Sg	00 27 50.7	+0.1
ATPI				AML	AML		
	comp=E,298μm,0.3s						
ATPI				AML	AML		
	comp=N,295μm,0.4s						
ATPI				AML	AML		
	comp=E,298μm,0.3s						
ATVO	**AVT- Monte Val**	**0.08**	**204**	↑P	Pg	00 27 50.3	+0.4
ATVO				S	Sg	00 27 52.0	+0.5
ATVO				AML	AML		
	comp=E,187μm,0.4s						
ATVO				AML	AML		
	comp=N,224μm,0.4s						
PIEI	**Pieia**	**0.10**	**37**	↑P	Pg	00 27 50.7	+0.4
PIEI				S	Sg	00 27 52.8	+0.8
PIEI				AML	AML		
	comp=E,186μm,0.1s						
PIEI				AML	AML		
	comp=N,112μm,0.3s						
ATFO	**Monte Foce - G**	**0.12**	**135**	↑P	Pg	00 27 51.0	+0.3
ATFO				S	Sg	00 27 53.3	+0.7
ATFO				AML	AML		
	comp=E,89μm,1.0s						
ATFO				AML	AML		
	comp=N,102μm,0.6s						
ATFO				AML	AML		
	comp=N,102μm,0.6s						
ATFO				AML	AML		
	comp=E,89μm,1.0s						
BADI	**Badiali**	**0.16**	**290**	P	Pg	00 27 51.9	+0.7
BADI				AML	AML		
	comp=E,69μm,0.8s						
BADI				AML	AML		
	comp=N,82μm,0.3s						
BADI				AML	AML		
	comp=N,82μm,0.3s						
BADI				AML	AML		
	comp=E,68μm,0.8s						
ATMI	**Monte Miggiano**	**0.18**	**228**	P	Pg	00 27 52.3	+0.8
ATMI				AML	AML		
	comp=E,49μm,1.1s						
ATMI				AML	AML		
	comp=N,50μm,1.4s						
ATMI				AML	AML		
	comp=E,49μm,1.1s						
NARO	**Abbazia di Nar**	**0.18**	**31**	↑P	Pg	00 27 52.0	+0.4
NARO				S	Sg	00 27 55.1	+1.0
NARO				AML	AML		
	comp=E,42μm,0.7s						
NARO				AML	AML		
	comp=E,42μm,0.7s						
NARO				AML	AML		
	comp=N,53μm,1.6s						
FRON	**Frontone**	**0.21**	**73**	↑P	Pg	00 27 52.5	+0.4
MPAG	**Monte Paganucc**	**0.28**	**52**	↓P	Pg	00 27 54.0	+0.5
FSSB	**Fossombrone**	**0.34**	**45**	P	Pg	00 27 55.0	+0.5

*IDC **01** 00:41:30.4±3.1,22.15S×178.05W,h298km±39km, mb3.2/4, mb1 3.6/6,mb1mx3.2/36,mbtmp4.1/6,Error ellipse: s-maj=42.7km s-min=19.4km az=127.0*

*NEIC **01** 00:41:32.8±1.8,22.13S±0.10×177.83W±0.1,h351km±6km, mb4.3/32,Error ellipse: s-maj=18.6km s-min=12.0km az=121.0*

ISC 01 00:41:32.4±0.5,**22.21S**±0.06×**177.73W**±0.09,**h350**km, **n62**,σ1**$87**/73,**mb4.2**/15,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.96**	**318**	Pn	**Pn**	**00 43 01.4**	**-1.7**
GLKZ	**Green Lake**	**7.03**	**181**	S	**S**	**00 44 36.6**	**-1.8**
AFI	**Afiamalu**	**10.01**	**35**	P	**Pn**	**00 43 52.2**	**+1.5**
	4.7nm,0.3s,baz=99,slow=3.1,SNR=6.3						
AFI				S	**S**	**00 45 40.0**	**-4.1**
	1.3nm,0.3s,baz=108,slow=23,SNR=1.8						
AFI	**Afiamalu**	**10.01**	**35**	P	**Pn**	**00 43 51.3**	**+0.6**
OUZ	**Omahuta**	**15.02**	**208**		**Pn**	**00 44 48.4**	**-1.0**
OUZ				IAmb	IAmb	00 44 54.0	
	comp=Z,6.9nm,1.0s						
WMGZ	**Waiomatatini S**	**15.91**	**191**	P	**Pn**	**00 44 58.9**	**-0.8**
WMGZ				S	**S**	**00 47 41.1**	**-5.2**
HAZ	**Te Kaha**	**15.97**	**193**	P	**P**	**00 44 56.3**	**-1.1**
PUZ	**Puketiti**	**16.18**	**191**	P	**P**	**00 45 00.7**	**+0.9**
PUZ				S	**S**	**00 47 50.6**	**-1.2**
RUGZ	**Raukumara Rang**	**16.19**	**193**	P	**Pn**	**00 45 01.6**	**-1.5**
RUGZ				S	**S**	**00 47 51.5**	**-0.7**
TWGZ	**Tauwhareparae**	**16.34**	**192**	P	**Pn**	**00 45 04.3**	**-0.4**
TWGZ				S	**S**	**00 47 51.0**	**-3.9**
MWZ	**Matawai**	**16.58**	**193**	P	**Pn**	**00 45 07.0**	**-0.5**
MWZ				S	**S**	**00 47 59.6**	**-0.1**
URZ	**Urewera**	**16.60**	**194**	P	**Pn**	**00 45 06.1**	**-1.6**
	comp=Z,3.0nm,0.3s,baz=326,slow=0.8,SNR=13						
URZ				S	**S**	**00 47 58.1**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=195,slow=20,SNR=1.6						
URZ	**Urewera**	**16.60**	**194**	P	**Pn**	**00 45 06.1**	**-1.6**
URZ				S	**S**	**00 47 58.7**	**-1.3**
URZ	**Urewera**	**16.60**	**194**	P	**P**	**00 45 04.6**	**+0.3**
URZ				IAmb	IAmb	00 45 21.3	
	comp=Z,16nm,1.2s						
MUGZ	**Murupara**	**16.89**	**195**	P	**P**	**00 45 08.8**	**+1.4**
MUGZ				S	**S**	**00 48 10.5**	**+4.8**
RIGZ	**Rimuhau**	**16.89**	**192**	P	**Pn**	**00 45 10.1**	**-1.0**
RIGZ				S	**S**	**00 48 07.0**	**+1.2**
KNZ	**Kokohu**	**17.21**	**192**	P	**P**	**00 45 12.4**	**+1.6**
RAHZ	**Arahi**	**17.23**	**194**	P	**P**	**00 45 13.1**	**+2.0**
RAHZ				S	**S**	**00 48 12.7**	**+0.2**
NMHZ	**Naumai**	**17.47**	**194**	P	**P**	**00 45 16.6**	**+2.9**
NMHZ				S	**S**	**00 48 16.7**	**-0.5**
BKZ	**Black Stump Fm**	**17.61**	**195**	P	**P**	**00 45 16.1**	**+0.9**
BKZ	**Black Stump Fm**	**17.61**	**195**	P	**P**	**00 45 15.3**	**+0.1**
BKZ				IAmb	IAmb	00 45 24.0	
	comp=Z,13nm,1.2s						
KAHZ	**Kahuranaki**	**18.12**	**193**	P	**P**	**00 45 20.5**	**-0.1**
KAHZ				S	**S**	**00 48 31.3**	**+1.5**
SNZO	**South Karori**	**20.08**	**197**	P	**P**	**00 45 41.5**	**+0.5**
SNZO				IAmb	IAmb	00 45 59.5	
	comp=Z,40nm,1.1s						
QRZ	**Quartz Range**	**20.31**	**202**	P	**P**	**00 45 44.5**	**+1.3**
QRZ				IAmb	IAmb	00 45 46.4	
	comp=Z,13nm,0.5s						
NNZ	**Nelson**	**20.38**	**200**	P	**P**	**00 45 44.5**	**+0.7**
NNZ				IAmb	IAmb	00 45 55.0	
	comp=Z,47nm,1.2s						
BSWZ	**Blackbirch Sta**	**20.69**	**198**	P	**P**	**00 45 47.1**	**+0.5**
THZ	**Tophouse**	**21.02**	**200**	P	**P**	**00 45 50.7**	**+1.0**
KHZ	**Kahutara**	**21.43**	**198**	P	**P**	**00 45 54.5**	**+1.2**
KHZ				IAmb	IAmb	00 46 06.6	
	comp=Z,16nm,1.1s						
OXZ	**Oxford**	**22.71**	**200**	P	**P**	**00 46 06.4**	**+1.4**
OXZ				IAmb	IAmb	00 46 08.6	
	comp=Z,10nm,0.9s						
MQZ	**McQueen's Vall**	**22.87**	**198**	P	**P**	**00 46 07.4**	**+1.0**
MQZ				IAmb	IAmb	00 46 07.5	
	comp=Z,17nm,1.1s						
RPZ	**Rata Peaks**	**23.38**	**201**	P	**P**	**00 46 11.2**	**+0.2**
RPZ				IAmb	IAmb	00 46 16.5	
	comp=Z,28nm,1.2s						
FOZ	**Fox Glacier**	**23.64**	**203**	P	**P**	**00 46 14.2**	**+0.8**
PPT	**Papeete**	**26.86**	**85**	P	**P**	**00 46 43.5**	**+1.1**
PPTF	**Pamatai, Papee**	**26.86**	**85**	P	**P**	**00 46 43.5**	**+0.9**
TOO	**Toolangi**	**35.12**	**236**	P	**P**	**00 47 56.1**	**+2.1**
TOO				IAmb	IAmb	00 48 03.0	
	comp=Z,7.7nm,1.0s						
BBOO	**Buckleboo**	**42.04**	**245**	P	**P**	**00 48 51.3**	**+0.3**
BBOO				IAmb	IAmb	00 48 55.8	
	comp=Z,12nm,1.1s						
ASAR	**Alice Springs**	**44.40**	**258**	P	**P**	**00 49 10.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=96,slow=7.6,SNR=10						
WR0	**Warramunga Arr**	**44.45**	**264**	P	**P**	**00 49 10.5**	**+0.2**
WC3	**Warramunga Arr**	**44.60**	**264**	P	**P**	**00 49 11.2**	**-0.3**
WB0	**Warramunga Arr**	**44.62**	**264**	P	**P**	**00 49 11.1**	**-0.6**
WB2	**Warramunga Arr**	**44.62**	**264**	P	**P**	**00 49 10.8**	**-0.9**
WRA	**Warramunga Arr**	**44.64**	**264**	P	**P**	**00 49 11.4**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=98,slow=7.6,SNR=18						
WRA	**Warramunga Arr**	**44.64**	**264**	IAmb	IAmb	00 49 12.1	
	comp=Z,0.1nm,0.8s						
FORT	**Forrest**	**48.87**	**248**	P	**P**	**00 49 41.1**	**-3.0**
FORT				IAmb	IAmb	00 49 53.3	
	comp=Z,21nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.07**	**264**	P	**P**	**00 50 15.8**	**+0.6**
KNMB	**Chin-men Tao**	**77.47**	**303**	P	**P**	**00 52 48.4**	**-1.9**
SAO	**San Andreas Ge**	**79.10**	**43**	P	**P**	**00 52 57.4**	**-1.5**
SAO				IAmb	IAmb	00 52 59.0	
	comp=Z,8.1nm,1.1s						
KMRM	**Mail Ridge**	**79.92**	**39**	P	**P**	**00 53 02.5**	**-0.7**
KMRM				IAmb	IAmb	00 53 11.3	
	comp=Z,4.9nm,0.9s						
MAW	**Mawson**	**80.05**	**200**	P	**P**	**00 53 01.3**	**-2.2**
JCC	**Jacoby Creek,**	**80.12**	**39**	P	**P**	**00 53 01.6**	**-0.6**
MESA	**MESA**	**87.12**	**17**	P	**P**	**00 53 39.3**	**+0.1**
YAH	**Yahtse**	**87.33**	**17**	P	**P**	**00 53 42.1**	**+1.8**
TGL	**Tana Glacier**	**87.37**	**16**	P	**P**	**00 53 42.1**	**+1.8**
TGL				IAmb	IAmb	00 53 43.0	
	comp=Z,8.6nm,1.0s						
PLCA	**Paso Flores**	**87.92**	**133**	P	**P**	**00 53 42.9**	**-0.6**
PLCA				IAmb	IAmb	00 53 50.7	
	comp=Z,2.5nm,1.0s						
TRF	**Thorofare Moun**	**88.06**	**12**	P	**P**	**00 53 46.9**	**+3.4**
EFI	**East Falkland**	**89.52**	**147**	P	**P**	**00 53 54.1**	**+3.5**
CCB	**Clear Creek Bu**	**89.62**	**12**	P	**P**	**00 53 53.7**	**+3.2**
ILAR	**Eielson Array**	**89.92**	**13**	P	**P**	**00 53 55.4**	**+3.4**
	comp=Z,0.2nm,0.4s,baz=216,slow=5.2,SNR=6.2						
ILAR	**Eielson Array**	**89.92**	**13**	P	**P**	**00 53 52.4**	**+0.4**
IL18	**Eielson Array**	**89.93**	**13**	P	**P**	**00 53 51.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**90.92**	**289**	P	**P**	**00 54 01.4**	**+3.7**
	comp=Z,0.7nm,0.4s,baz=122,slow=4.4,SNR=1.6						
ACON	**Acoyapa**	**96.77**	**80**		pP	00 55 48.5	+2.5

*ATH **01** 00:46:21.2,35.85N×29.15E,h28km±6km,ML2.1/2, Error ellipse: s-maj=11.6km s-min=0.9km az=358.0*

*NIC **01** 00:46:21.1±0.0,35.80N×29.19E,h20km±1km,Ml3.3/3*

*ISK **01** 00:46:21.4,35.93N×29.22E,h46km±2km,ML2.4/14*

*THE **01** 00:46:22.9,35.97N×29.13E,h7km±2km,ML2.0/2,Error ellipse: s-maj=2.9km s-min=0.6km az=97.0*

*DDA **01** 00:46:22.6,35.98N×29.08E,h8km±3km,ML2.2*

*GII **01** 00:46:26.0±0.7,35.57N×29.45E,h40km*

ISC 01 00:46:22.5±1.8,**35.91N**±0.03×**29.24E**±0.02,**h39**km±3km, **n58**,σ1**$17

KARP	**Karpathos**	**1.73**	**259**	PN	**Pn**	**00 46 49.9**	**-0.1**
KARP	**Karpathos**	**1.73**	**259**	P	**Pn**	**00 46 50.1**	**+0.1**
KARP				S	**Sn**	**00 47 11.3**	**+0.5**
KARP				AML	AML	00 47 12.9	
	comp=E,0.1nm,0.9s						
KARP				AML	AML	00 47 12.9	
	comp=E,0.1nm,0.9s						
KARP	**Karpathos**	**1.73**	**259**	P	**Pn**	**00 46 50.7**	**+0.7**
KARP				S	**Sn**	**00 47 11.6**	**+0.8**
MLSB	**Milas**	**1.82**	**320**	PN	**Pn**	**00 46 51.1**	**-0.1**
BCK	**Bucak**	**1.89**	**35**	PN	**Pn**	**00 46 52.4**	**+0.1**
BODT	**Bodrum**	**1.93**	**307**	PN	**Pn**	**00 46 52.4**	**-0.4**
BODT	**Bodrum**	**1.93**	**307**	P	**Pn**	**00 46 52.7**	**-0.1**
BODT				S	**Sn**	**00 47 15.6**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**2.30**	**332**	PN	**Pn**	**00 46 57.7**	**-0.3**
GAZI	**Gazipasa**	**2.52**	**82**	PN	**Pn**	**00 47 00.9**	**+0.1**
AKMS	**Akamas**	**2.68**	**108**	⇑P	**Pn**	**00 47 03.3**	**+0.2**
AKMS				AML	AML	00 47 35.1	
	comp=E,0.3nm,0.4s						
AKMS				AML	AML	00 47 35.2	
	comp=E,0.3nm,0.8s						
ALFC	**Alefka**	**2.84**	**104**	P	**Pn**	**00 47 05.4**	**0.0**
NATA	**Nata**	**2.95**	**112**	P	**Pn**	**00 47 07.3**	**+0.5**
NPS	**Neapolis**	**3.02**	**259**	P	**Pn**	**00 47 08.5**	**+0.6**
NPS	**Neapolis**	**3.02**	**259**	P	**Pn**	**00 47 08.8**	**+1.0**
TEKE	**Tekeli-Mersin**	**3.15**	**85**	PN	**Pn**	**00 47 10.0**	**+0.5**
LAST	**Lasithi**	**3.15**	**257**	P	**Pn**	**00 47 10.9**	**+1.3**
LAST	**Lasithi**	**3.15**	**257**	P	**Pn**	**00 47 11.1**	**+1.4**
SZAC	**Souni**	**3.19**	**110**	⇑P	**Pn**	**00 47 10.4**	**+0.2**
SZAC				AML	AML	00 47 48.3	
	comp=E,0.2nm,0.3s						
SZAC				AML	AML	00 47 48.4	
	comp=E,0.1nm,0.2s						
ASGA	**Asgata**	**3.46**	**108**	P	**Pn**	**00 47 14.1**	**+0.2**
CSS	**Mathiatis**	**3.47**	**105**	Pn	**Pn**	**00 47 14.3**	**+0.3**
CSS	**Mathiatis**	**3.47**	**105**	P	**Pn**	**00 47 14.5**	**+0.5**
IDI	**Anoyia**	**3.60**	**261**	P	**Pn**	**00 47 16.0**	**+0.3**
MVOU	**Mavrovouni**	**3.70**	**103**	P	**Pn**	**00 47 18.5**	**+1.4**
MMA0B	**Mount Meron ar**	**5.85**	**118**	Pn	**Pn**	**00 47 46.3**	**-0.5**
MMA0B				Sn	**Sn**	**00 48 49.9**	**-2.7**
GEM	**Giv'at Ha'Em**	**5.95**	**115**	Pn	**Pn**	**00 47 48.3**	**+0.3**
GEM				Sn	**Sn**	**00 48 51.4**	**-3.4**
HMDT	**Nahal Hemdat**	**6.37**	**123**	Pn	**Pn**	**00 47 53.9**	**+0.2**
YTIR	**Yattir**	**6.68**	**131**	Pn	**Pn**	**00 47 57.1**	**-1.0**
DSI	**Dead Sea**	**6.70**	**128**	Pn	**Pn**	**00 47 57.8**	**-0.5**
PRNI	**Paran**	**7.35**	**137**	Pn	**Pn**	**00 48 06.0**	**-1.3**

*INET **01** 00:48:26.9,9.″43N×85.″51W,h0km,MW3.6*
UPA 01 00:48:39.3±0.9,10.°08N×85.°38W,h0km±29km,MW4.5,2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**0.47**	**64**	⇓*iP*	Pb	00 48 49.8	-0.7
JTS				*eS*	Sb	00 48 57.9	-0.2
HDC	**Heredia**	**1.25**	**93**	⇓*iP*	Pg	00 49 02.9	-0.5
HDC				*eS*	Sn	00 49 22.3	+0.5
BATAN	**Batan**	**1.98**	**89**	*eP*	Pn	00 49 13.2	-0.8
BATAN				*eS*	Sb	00 49 40.8	-0.6
DRK0	**Durika**	**2.26**	**111**	*eP*	Pn	00 49 16.6	-1.4
DRK0				*eS*	Sn	00 49 47.8	+1.0
RIOS	**Rincon, Osa**	**2.30**	**126**	*eP*	Pn	00 49 17.9	-0.5
RIOS				*eS*	Sn	00 49 46.6	-0.9
PTJ1	**Puerto Jimnez**	**2.56**	**127**	*eP*	Pn	00 49 22.7	+0.6
PTJ1				*eS*	Sn	00 49 55.1	+1.1
MLIR3	**Monte Lirio, C**	**2.83**	**117**	*eP*	Pn	00 49 25.1	-0.7
CDITO	**Canoas**	**2.90**	**121**	*eP*	Pn	00 49 27.0	+0.3
BRU2	**Volcan**	**2.95**	**115**	*eP*	Pn	00 49 26.9	-0.7
BRU2				*eS*	Sn	00 50 05.4	+1.6
BC3P	**Paso Ancho**	**3.01**	**114**	*eP*	Pn	00 49 28.5	0.0
BC3P				*eS*	Sn	00 50 07.8	+2.5
LESP3	**La Esperanza,**	**3.05**	**123**	*eP*	Pn	00 49 29.0	+0.2
BCO2	**Palmira**	**3.12**	**115**	*eP*	Pn	00 49 29.6	-0.4
BCO2				*eS*	Sn	00 50 09.9	+1.8
PTAR3	**Potrerillos Ar**	**3.17**	**116**	*eP*	Pn	00 49 30.5	0.0
BAGA3	**Bagala, Chiriq**	**3.24**	**119**	*eP*	Pn	00 49 31.1	-0.4
BAGA3				*eS*	Sn	00 50 12.8	+1.9
LOCO3	**Loma Colorada,**	**3.37**	**119**	*eP*	Pn	00 49 32.5	-0.6
LOCO3				*eS*	Sn	00 50 12.7	-1.1
CHGR2	**Aguacate**	**3.39**	**109**	*eP*	Pn	00 49 32.2	-1.3
CHGR2				*eS*	Sn	00 50 14.2	-0.3
CACAO	**El Cacao, Vera**	**5.23**	**121**	*eP*	Pn	00 49 58.7	-0.2

*MOS **01** 00:51:56.9±0.8,52.°63N×101.°25E,h9km,mb4.7/38, MS4.2/24,Error ellipse: s-maj=5.5km s-min=4.7km az=26.5*
MOS Felt (IV) at Orlik; (III-IV) at Irkutsk.
*NNC **01** 00:51:57.8±5.1,53.°55N×101.°27E,h0km,mb4.6,Error ellipse: s-maj=74.7km s-min=60.4km az=143.0*
*IDC **01** 00:51:57.4±0.5,52.°59N×101.°31E,h0km,mb4.1/23, mb1 4.2/29,mb1mx4.2/43,mbtmp4.1/29,ML3.5/5,MS3.9/31, Ms1 4.0/31,ms1mx3.9/42,Error ellipse: s-maj=15.4km s-min=6.6km az=28.0*
*BJI **01** 00:51:58.0±0.0,52.°52N×101.°27E,h6km,mB4.8/42, mb4.5/54,Ms4.8/47,Ms7 4.4/47*
*BYKL **01** 00:51:58.6±0.3,52.°56N×101.°25E,Mw4.6/12(IEC), #STATIONS AAK BRVK CHTO ERM INCN KMI KONO MA2 MAJO PET SSE TATO FELT I=IV-V MSK at Onot,Novoletniki,Uspensky 3,IV at Orlik,Zima,Usolye-Sibirskoe III-IV at Cheremkhovo,Angarsk,Irkutsk, III at Kyren,Bokhan,Kultuk*
*NEIC **01** 00:51:59.0±1.9,52.°59N±0.°04×101.°32E±0.°08,h10km±1km, mb4.6/51,Error ellipse: s-maj=8.9km s-min=5.5km az=302.0*
*GCMT **01** 00:52:01.0±0.3,52.°70N±0.°02×101.°45E±0.°03,h30km±1km, MW4.8/77,Moment Tensor Solution. s18,c20; s77,c111; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.24±.13; Mθθ1.53±.09; Mϕϕ-1.29±.08; Mrθ-0.07±.13; Mθϕ1.20±.07; Mϕr-0.31±.12; Best double couple: M=1.88100×10^16^ NP1:ϕs295.00000°,δ80.00000°,λ-4.00000°. NP2: ϕs25.00000°,δ86.00000°,λ-170.00000°. Principal axes: T 1.9850, Plg4.0000°, Azm159.0000°; N -0.2050, Plg79.0000°, Azm45.0000°; P -1.7780, Plg10.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **01** 00:52:01.3±0.0,52.°78N×101.°52E,h33km,mb5.1,Ms4.5*
ISC 01 00:51:58.9±0.5,52.°66N±0.°02×101.°35E±0.°02,h10km±2km, h9km:pP-P,n358,σ1s78/410,mb4.5/84,MS4.2/52,42C-35D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**0.94**	**263**	⇑*iPg*	**Pg**	**00 52 14.8**	**-2.3**
	2μm,0.5s						
ORL				⇑*iPg*	**Pg**	**00 52 14.8**	**-2.3**
	8μm,0.5s						
ORL				⇓*iPg*	**Pg**	**00 52 14.8**	**-2.3**
	8μm,0.5s						
ORL				Pmax		00 52 15.0	
	5μm,0.3s						
ORL				*e*		00 52 15.7	
ORL				*eSg*	**Sg**	**00 52 26.2**	**-3.2**
ORL				Smax		00 52 28.8	
	41μm,0.3s						
ORL	**Orlik**	**0.94**	**263**	⇓*iPG*	**Pg**	**00 52 14.8**	**-2.3**
ORL				*e*		00 52 26.0	
ORL				pmax	pmax		
	comp=Z,7μm,0.2s						
ORL				smax	smax		
	comp=N,2μm,0.4s						
ARS	**Arshan**	**1.00**	**138**	⇑*iPg*	**Pg**	**00 52 16.5**	**-1.5**
ARS				*ePb*	**Pb**	**00 52 18.1**	**-0.2**
ARS				max		00 52 18.4	
	comp=N,17μm,0.3s						
ARS				*eSg*	**Sg**	**00 52 28.8**	**-2.2**
ARS				*eSb*	**Sb**	**00 52 32.0**	**+0.5**
ARS				max		00 52 35.3	
	comp=N,130μm,0.8s						
ARS	**Arshan**	**1.00**	**138**	⇑*iPG*	**Pg**	**00 52 16.5**	**-1.5**
ARS				*e*		00 52 28.9	
ARS				pmax	pmax		
	comp=Z,23μm,0.5s						
ARS				smax	smax		
	comp=N,156μm,0.4s						
MOY	**Mondy**	**1.02**	**192**	⇑*iPg*	**Pg**	**00 52 15.8**	**-2.7**
MOY				Pmax		00 52 16.5	
	comp=N,26μm,0.7s						
MOY				*eSg*	**Sg**	**00 52 28.2**	**-3.6**
MOY				Smax		00 52 29.0	
	comp=N,134μm,1.0s						
MOY	**Mondy**	**1.02**	**192**	⇑*iPG*	**Pg**	**00 52 15.9**	**-2.6**
MOY				*e*		00 52 27.9	
MOY				pmax	pmax		
	comp=Z,27μm,0.6s						
MOY				smax	smax		
	comp=N,117μm,0.8s						
TLY	**Talaya**	**1.72**	**124**	Pg	**Pn**	**00 52 29.2**	**+0.2**
	comp=N,13nm,0.3s,baz=292,slow=13,SNR=480						
TLY				Lg	Lg	00 52 50.6	
	comp=N,57nm,0.3s,baz=30,slow=20,SNR=35						
TLY	**Talaya**	**1.72**	**124**	⇑*iPn*	**Pn**	**00 52 29.1**	**+0.2**
TLY				*ePg*	**Pb**	**00 52 30.3**	**-0.4**
TLY				Pmax		00 52 35.7	
	comp=N,4μm,0.4s						
TLY				*eSg*	**Sn**	**00 52 50.7**	**-0.4**
TLY				*e*		00 52 52.7	
TLY				max		00 53 00.9	
	comp=N,16μm,1.0s						
TLY	**Talaya**	**1.72**	**124**	⇑*iPN*	**Pn**	**00 52 29.2**	**+0.2**
TLY				*e*		00 52 30.1	
TLY				*e*		00 52 52.4	
TLY				pmax	pmax		
	comp=Z,2μm,0.1s						
TLY				smax	smax		
	comp=N,16μm,0.3s						
IRK	**Irkutsk**	**1.84**	**102**	⇓*iPg*	**Pb**	**00 52 32.2**	**-0.4**
IRK				*e*		00 52 37.3	
IRK				max		00 52 37.5	
	comp=N,12μm,0.5s						
IRK				*eSg*	**Sb**	**00 52 56.2**	**+0.5**
IRK				Smax		00 52 56.6	
	comp=N,79μm,0.8s						
IRK				*e*		00 52 59.3	
IRK	**Irkutsk**	**1.84**	**102**	*ePN*	**Pb**	**00 52 32.2**	**-0.4**
IRK				*e*		00 52 56.2	
IRK				pmax	pmax		
	comp=Z,12μm,0.4s						
IRK				smax	smax		
	comp=N,7μm,0.8s						
IVK	**Ivanovka**	**2.08**	**113**	*ePn*	**Pn**	**00 52 33.6**	**-0.2**
IVK				*ePg*	**Pb**	**00 52 35.5**	**-1.1**
IVK				*e*		00 52 40.7	
IVK				max		00 52 41.1	
	comp=N,4μm,0.5s						
IVK				*i* Sg	**Sb**	**00 53 02.0**	**-0.5**
IVK				*e*		00 53 10.4	
IVK				max		00 53 10.6	
	comp=N,51μm,1.0s						
IVK	**Ivanovka**	**2.08**	**113**	*ePN*	**Pb**	**00 52 35.6**	**-1.1**
IVK				*e*		00 53 01.9	
IVK				pmax	pmax		
	comp=Z,4μm,0.6s						
IVK				smax	smax		
	comp=N,1μm,1.8s						
LSTR	**Listvyanka**	**2.29**	**109**	*ePn*	**Pn**	**00 52 36.3**	**-0.4**
LSTR				*ePg*	**Pb**	**00 52 39.0**	**-1.2**
LSTR				*e*		00 52 45.5	
LSTR				max		00 52 49.6	
	comp=N,2μm,0.6s						
LSTR				*eSg*	**Sb**	**00 53 08.7**	**+0.2**
LSTR				*e*		00 53 11.7	
LSTR				max		00 53 12.4	
	comp=N,39μm,0.9s						
LSTR	**Listvyanka**	**2.29**	**109**	*ePN*	**Pn**	**00 52 37.2**	**+0.5**
LSTR				*e*		00 52 39.7	
LSTR				*e*		00 53 08.8	
LSTR				pmax	pmax		
	comp=Z,2μm,0.4s						
LSTR				smax	smax		
	comp=N,2μm,1.4s						
BGT	**Bolshoye Golou**	**2.57**	**102**	*ePn*	**Pn**	**00 52 40.2**	**-0.4**
BGT				*e*		00 52 42.8	
BGT				*ePg*	**Pb**	**00 52 44.2**	**-0.8**
BGT				*e*		00 52 49.5	
BGT				max		00 52 52.7	
	comp=N,4μm,0.5s						
BGT				*eSg*	**Sb**	**00 53 17.6**	**+1.0**
BGT				*e*		00 53 21.0	
BGT				max		00 53 21.2	
	comp=N,52μm,1.1s						
BGT	**Bolshoye Golou**	**2.57**	**102**	*ePN*	**Pn**	**00 52 40.6**	**0.0**
BGT				*e*		00 52 44.6	
BGT				*e*		00 53 17.1	
BGT				pmax	pmax		
	comp=Z,4μm,0.4s						
BGT				smax	smax		
	comp=N,670nm,1.3s						
ZAK	**Zakamensk**	**2.58**	**151**	*ePn*	**Pn**	**00 52 41.2**	**+0.3**
ZAK				⇑*iPg*	**Pb**	**00 52 43.4**	**-2.0**
ZAK				Pmax		00 52 46.1	
	comp=N,4μm,0.8s						
ZAK				*ePgPg*	**Pg**	**00 52 49.7**	**+1.3**
ZAK				*eSg*	**Sb**	**00 53 17.4**	**+0.1**
ZAK				*e*		00 53 22.6	
ZAK				max		00 53 23.0	
	comp=N,11μm,0.9s						
ZAK	**Zakamensk**	**2.58**	**151**	⇑*ePN*	**Pn**	**00 52 41.2**	**+0.3**
ZAK				*i*		00 52 43.4	
ZAK				*e*		00 53 17.4	
ZAK				pmax	pmax		
	comp=Z,4μm,0.8s						
ZAK				smax	smax		
	comp=N,1μm,0.6s						
TRG	**Tyrgan**	**3.04**	**86**	⇓*iPn*	**Pn**	**00 52 46.9**	**-0.3**
TRG				*e*		00 52 50.5	
TRG				*ePg*	**Pb**	**00 52 53.3**	**+0.1**
TRG				*e*		00 52 55.7	
TRG				max		00 53 00.4	
	comp=N,3μm,0.6s						
TRG				*e*		00 53 21.7	
TRG				*eSg*	**Sg**	**00 53 34.9**	**-1.7**
TRG				Smax		00 53 35.8	
	comp=N,16μm,1.3s						
TRG	**Tyrgan**	**3.04**	**86**	*ePN*	**Pn**	**00 52 46.9**	**-0.3**
TRG				*e*		00 52 53.4	
TRG				*eS*	**Sn**	**00 53 23.0**	**-0.7**
TRG				*e*		00 53 35.2	
TRG				pmax	pmax		
	comp=Z,2μm,0.4s						
TRG				smax	smax		
	comp=N,2μm,0.7s						
STDB	**Stepnoy Dvoret**	**3.11**	**97**	*ePn*	**Pn**	**00 52 49.0**	**+0.9**
STDB				*e*		00 52 52.4	
STDB				*ePg*	**Pb**	**00 52 56.4**	**+2.1**
STDB				*eSg*	**Sg**	**00 53 37.6**	**-1.2**
STDB				*e*		00 53 48.0	
KNGR	**Kungurtug, Tuv**	**3.15**	**231**	⇓*iPn*	**Pn**	**00 52 49.1**	**+0.4**
KNGR				⇓*iPg*	**Pb**	**00 52 52.3**	**-2.8**
KNGR				*eSg*	**Sb**	**00 53 33.1**	**-0.5**
KNGR				*e*		00 53 39.4	
KAB	**Kabansk**	**3.31**	**99**	*ePn*	**Pn**	**00 52 52.9**	**+2.1**
KAB				*ePg*	**Pb**	**00 52 59.7**	**+2.0**
KAB				Pmax		00 53 06.5	
	comp=N,6μm,0.6s						
KAB				*e*		00 53 41.8	
KAB				*eSg*	**Sg**	**00 53 44.1**	**-1.1**
KAB				Smax		00 53 51.7	
	comp=N,95μm,1.6s						
KAB	**Kabansk**	**3.31**	**99**	*ePN*	**Pb**	**00 52 59.7**	**+2.0**
KAB				*e*		00 53 44.0	
KAB				pmax	pmax		
	comp=Z,6μm,0.6s						
KAB				smax	smax		
	comp=N,5μm,1.6s						
FFNB	**Fofonovo**	**3.38**	**98**	*ePn*	**Pn**	**00 52 51.2**	**-0.5**
FFNB				*e*		00 52 54.9	
FFNB				*ePg*	**Pb**	**00 52 58.9**	**0.0**
FFNB				*e*		00 53 32.6	
FFNB				*eSg*	**Sb**	**00 53 42.9**	**+2.9**
HRMR	**Khuramsha**	**3.61**	**104**	⇓*iPn*	**Pn**	**00 52 54.7**	**-0.2**
HRMR				*e*		00 53 00.6	
HRMR				*ePg*	**Pb**	**00 53 04.9**	**+2.1**
HRMR				Pmax		00 53 10.3	
	comp=N,7μm,0.5s						
HRMR				*eSg*	**Sg**	**00 53 51.2**	**-3.5**
HRMR				Smax		00 53 52.3	
	comp=N,43μm,0.6s						
OGRR	**Ongureny**	**3.89**	**73**	*e*	**Pn**	**00 52 58.8**	**+0.1**
OGRR				*e*		00 53 05.2	
OGRR				*e*		00 53 09.7	
OGRR				max		00 53 14.7	
	comp=N,2μm,1.0s						
OGRR				*e*		00 53 42.9	
OGRR				*eSg*	**Sg**	**00 54 02.1**	**-1.5**
OGRR				Smax		00 54 04.8	
	comp=N,12μm,0.7s						
OGRR	**Ongureny**	**3.89**	**73**	*ePN*	**Pn**	**00 52 58.8**	**+0.1**
OGRR				*e*		00 53 09.3	
OGRR				*e*		00 54 02.1	
OGRR				pmax	pmax		
	comp=Z,2μm,1.1s						
OGRR				smax	smax		
	comp=N,300nm,1.0s						
UUDB	**Ulan-Yde**	**3.96**	**99**	⇓*iPn*	**Pn**	**00 52 59.3**	**-0.5**
UUDB				*e*		00 53 03.2	
UUDB				*ePg*	**Pb**	**00 53 10.8**	**+2.0**
UUDB				Pmax		00 53 17.0	
	comp=N,3μm,0.6s						
UUDB				*e*		00 53 50.9	
UUDB				*eSg*	**Sg**	**00 54 02.6**	**-3.4**
UUDB				Smax		00 54 04.7	
	comp=N,14μm,1.1s						
KELR	**Kotokel**	**4.10**	**86**	*ePn*	**Pn**	**00 53 01.8**	**+0.2**
KELR				*e*		00 53 53.3	
KELR				*eSg*	**Sg**	**00 54 06.7**	**-3.6**
KZLR	**Kyzyl**	**4.35**	**260**	*e*	**Pn**	**00 53 05.7**	**+0.6**
KZLR				*e*		00 53 13.8	
KZLR				*e*		00 53 52.8	
KZLR				*eSg*	**Sb**	**00 54 10.5**	**+2.6**
KZLR				*e*		00 54 17.9	
MXMB	**Maximikha**	**4.51**	**79**	*ePn*	**Pn**	**00 53 08.5**	**+1.2**
MXMB				*e*		00 53 10.2	
MXMB				*ePg*	**Pb**	**00 53 19.9**	**+1.7**
MXMB				*eSg*	**Sg**	**00 54 20.1**	**-3.6**
ARDR	**Aradan**	**4.83**	**272**	*ePn*	**Pn**	**00 53 13.1**	**+1.5**
ARDR				*ePg*	**Pb**	**00 53 23.3**	**-0.2**
ARDR				*e*		00 53 35.4	
ARDR				*eSg*	**Sb**	**00 54 25.5**	**+3.9**
SYVR	**Suvo**	**5.30**	**76**	*e*	**Pn**	**00 53 18.5**	**+0.4**
SYVR				*e*		00 53 34.9	
SYVR				max		00 53 42.9	
	comp=N,653nm,1.2s						
SYVR				*e*		00 54 38.1	
SYVR				*eSg*	**Sg**	**00 54 44.3**	**-4.6**
SYVR				Smax		00 54 50.8	
	comp=N,3μm,1.8s						
SYVR	**Suvo**	**5.30**	**76**	*ePN*	**Pn**	**00 53 21.0**	**+2.9**
SYVR				*e*		00 53 35.5	
SYVR				*e*		00 54 43.3	
SYVR				pmax	pmax		
	comp=Z,668nm,1.2s						
SYVR				smax	smax		
	comp=N,3μm,0.9s						
NIZ	**Nizh Angarsk**	**5.73**	**54**	*ePn*	**Pn**	**00 53 24.2**	**+0.2**
NIZ				*e*		00 53 30.7	
NIZ				*e*		00 53 39.9	
NIZ				max		00 53 48.0	
	comp=N,620nm,0.6s						
NIZ				*eSn*	**Sn**	**00 54 29.4**	**-0.4**
NIZ				*e*		00 54 36.8	
NIZ				*eSg*	**Sg**	**00 54 58.5**	**-4.1**
NIZ				Smax		00 55 06.7	
	comp=N,10μm,1.4s						
NIZ	**Nizh Angarsk**	**5.73**	**54**	⇑*iPN*	**Pn**	**00 53 24.6**	**+0.6**
NIZ				*e*		00 53 42.3	
NIZ				*eS*	**Sn**	**00 54 31.0**	**+1.2**
NIZ				*e*		00 54 58.7	
NIZ				pmax	pmax		
	comp=Z,557nm,0.5s						
NIZ				smax	smax		
	comp=N,10μm,1.9s						
SONM	**Songino Array**	**5.82**	**144**	Pn	**Pn**	**00 53 25.6**	**+0.3**
	comp=N,2.6nm,0.3s,baz=327,slow=14,SNR=23						
SONM				Pg	**Pb**	**00 53 41.9**	**+1.5**
	comp=N,98nm,0.3s,baz=325,slow=18,SNR=82						
SONM				Lg	Lg	00 54 59.5	
	comp=N,218nm,0.3s,baz=323,slow=30,SNR=14						
SONM				LR	LR	00 55 56.5	
	comp=N,1μm,19.8s,baz=329,slow=41						
SONM	**Songino Array**	**5.82**	**144**	Pn	**Pn**	**00 53 25.5**	**+0.1**
I34MN	**SONGINO INFRAS**	**5.85**	**144**	Pg	Pg	00 53 46.1	-4.7
	baz=347,slow=31,SNR=1.1						
KRAR	**Krasnoyarsk**	**5.98**	**307**	⇓*ePN*	**Pn**	**00 53 27.0**	**-0.4**
ULN	**Ulaanbaatar**	**6.04**	**140**	⇓*ePN*	**Pn**	**00 53 28.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
ULN	**Ulaanbaatar**	**6.04**	**140**		**Pn**	**00 53 28.5**	**+0.1**
YLYR	**Ulyunkhan**	**6.23**	**65**	*e*	**Pn**	**00 53 30.5**	**-0.3**
YLYR				*e*		00 53 37.0	
YLYR				*ePg*	**Pg**	**00 53 54.3**	**-3.7**
YLYR				Pmax		00 53 56.5	
	comp=Z,460nm,1.2s						
YLYR				*eSn*	**Sn**	**00 54 39.9**	**-2.2**
YLYR				*eSg*	**Sg**	**00 55 13.2**	**-5.4**
YLYR				*e*		00 55 19.4	
YLYR				max		00 55 24.4	
	comp=Z,7μm,1.0s						
YLYR	**Ulyunkhan**	**6.23**	**65**	*ePN*	**Pn**	**00 53 31.4**	**+0.6**
YLYR				*e*		00 53 51.0	
YLYR				*eS*	**Sn**	**00 54 43.7**	**+1.6**
YLYR				*e*		00 55 14.7	
YLYR				pmax	pmax		
	comp=Z,468nm,1.6s						
YLYR				smax	smax		
	comp=N,7μm,1.0s						
KMO	**Kumora**	**6.61**	**57**	⇓*iPn*	**Pn**	**00 53 36.5**	**+0.4**
KMO				*e*		00 53 43.3	
KMO				Pg	Pg	00 54 00.4	-5.0
KMO				Pmax		00 54 15.0	
	comp=N,457nm,0.6s						
KMO				*eSn*	**Sn**	**00 54 50.9**	**-0.6**
KMO				*eSg*	**Sg**	**00 55 27.3**	**-3.6**
KMO				*e*		00 55 46.3	
KMO				max		00 55 46.8	
	comp=N,11μm,1.4s						
YOA	**Uoyan**	**6.98**	**56**	*ePn*	**Pn**	**00 53 44.3**	**+3.1**
YOA				*e*		00 53 47.7	
YOA				*ePg*	Pb	00 54 05.3	+5.1
YOA				Pmax		00 54 13.8	
	comp=N,2μm,1.5s						
YOA				*e*		00 54 53.0	
YOA				*e*		00 55 26.6	
YOA				*eSg*	**Sg**	**00 55 37.3**	**-5.5**
YOA				Smax		00 55 51.0	
	comp=N,36μm,1.5s						
CIT	**Chita**	**7.51**	**90**	*e*	**Pb**	**00 54 13.1**	**+3.9**
CIT				max		00 54 20.1	
	comp=N,277nm,0.8s						
CIT				*eSg*	**Sg**	**00 55 52.9**	**-6.7**
CIT				Smax		00 55 56.4	
	comp=N,3μm,1.5s						
CIT				*e*		00 56 00.4	
CIT	**Chita**	**7.51**	**90**	*ePG*	Pb	00 54 16.0	+6.8
CIT				*e*		00 55 52.6	
CIT				pmax	pmax		
	comp=Z,206nm,0.8s						
CIT				smax	smax		
	comp=N,3μm,1.8s						
KPC	**Khapcheranga**	**7.54**	**109**	*ePn*	**Pn**	**00 53 48.7**	**-0.2**
KPC				*e*		00 53 51.0	
KPC				*e*		00 53 52.6	
KPC				max		00 54 21.5	
	comp=N,81nm,0.7s						
KPC				*e*		00 55 40.4	
KPC				*eSg*	**Sg**	**00 55 53.5**	**-7.2**
KPC				*e*		00 56 01.8	
KPC				max		00 56 03.2	
	comp=N,3μm,1.4s						
KPC	**Khapcheranga**	**7.54**	**109**	*ePN*	**Pn**	**00 53 48.8**	**-0.2**
KPC				*e*		00 54 14.2	
KPC				*e*		00 55 53.5	
KPC				pmax	pmax		
	comp=Z,82nm,0.8s						
KPC				smax	smax		
	comp=E,3μm,1.6s						
UKT	**Uakit**	**7.76**	**64**	⇑*iPn*	**Pn**	**00 53 52.0**	**+0.1**
UKT				*e*		00 53 59.5	
UKT

UKT e 00 56 11.8
UKT max 00 56 12.7
comp=E,2μm,1.4s
UKT Uakit 7.76 64 *e*PG Pb 00 54 18.9 +5.5
UKT pmax pmax
comp=Z,211nm,1.1s
BOD Bodaibo 8.88 49 *e* **Pn 00 54 07.2 +0.1**
BOD *e* 00 54 22.2
BOD *e*Pg Pg 00 54 40.8 -7.9
BOD Pmax 00 54 57.0
comp=Z,146nm,1.5s
BOD *e* 00 56 07.8
BOD *e*Sg **Sg 00 56 37.9 -5.6**
BOD Smax 00 56 49.3
comp=Z,5μm,2.2s
BOD Bodaibo 8.88 49 *e*PN **Pn 00 54 07.3 +0.1**
BOD *e* 00 54 38.5
BOD *e* 00 56 35.8
BOD pmax pmax
comp=Z,147nm,0.8s
BOD smax smax
comp=N,5μm,2.2s
NLYR Nelyaty 9.17 60 *e* **Pn 00 54 10.7 -0.5**
NLYR *e* 00 54 17.0
NLYR *e* 00 54 36.4
NLYR max 00 54 53.7
comp=N,173nm,1.6s
NLYR *e*Sg Sn 00 56 47.9 +53
NLYR Smax 00 56 59.9
comp=N,3μm,1.1s
DGZ Jazzator, Alta 9.23 257⇓ *e*P **Pn 00 54 12.3 +0.1**
ZAA0 Zalesovo Array 9.98 284 ⇓Pn **Pn 00 54 22.6 +0.3**
comp=N,2.5nm,1.2s
ZAA0 ⇑Pg 00 54 54.3
comp=N,4.0nm,0.9s
ZAA0 ⇑Lg Lg 00 57 05.7
comp=N,177nm,1.6s
ZAA0 Zalesovo Array 9.98 284 Pn **Pn 00 54 23.0 +0.8**
ZALV Zalesovo Beam 9.98 284 Pn **Pn 00 54 23.4 +1.2**
comp=N,0.1nm,0.3s,baz=96,slow=9.2,SNR=22
ZALV Lg Lg 00 57 04.3
comp=N,4.7nm,0.3s,baz=90,slow=21,SNR=9.2
ZALV LR LR 00 58 16.2
comp=N,839nm,20.4s,baz=105,slow=38
CRS Chara 10.65 60 *e*Pg Pn 00 55 12.5 +41
CRS *e* 00 55 15.7
CRS max 00 55 21.2
comp=N,144nm,1.4s
CRS *e* 00 57 05.3
CRS *e*Sg Sn 00 57 30.0 +59
CRS *e* 00 57 39.9
CRS max 00 58 06.1
comp=N,3μm,1.7s
TUP Tupik 11.21 74 *e*Pn **Pn 00 54 40.6 +1.5**
TUP *e* 00 54 44.1
TUP max 00 54 47.0
comp=N,77nm,1.7s
TUP *e* 00 55 10.6
TUP *e* 00 56 36.9
TUP *e* 00 57 41.9
TUP *e*Sg 00 57 48.8
TUP Smax 00 58 13.7
comp=N,1μm,1.6s
HIA Hailar 12.08 99⇓ *e*P **Pn 00 54 51.0 0.0**
HIA pmax pmax
comp=Z,7.0nm,0.7s
YKLR Yuktali 12.39 63 *e* 00 55 52.8
YKLR *e* 00 58 21.1
YKLR Sg 00 58 24.0
YKLR *e* 00 58 40.3
WMQ Urumqi 12.67 231 *e*P **Pn 00 55 00.6 +1.4**
WMQ pP 00 55 02.4
WMQ sP 00 55 03.8
WMQ PP **PnPn 00 55 09.5 +2.7**
WMQ S **Sn 00 57 22.6 +2.3**
WMQ pmax pmax
comp=Z,40nm,0.7s
WMQ pmax pmax
comp=Z,320nm,3.7s
WMQ LR LR
comp=Z,2μm,6.7s
WMQ LR LR
comp=Z,820nm,4.5s
WMQ LR LR
comp=Z,510nm,15.5s
GTA Gaotai 13.30 185 *e*P **Pn 00 55 08.6 +0.8**
GTA pP P 00 55 12.7 -4.9
GTA sP 00 55 15.7
GTA S **Sn 00 57 37.2 +1.5**
GTA pmax pmax
comp=Z,6.0nm,0.8s
GTA LR LR
comp=Z,1μm,9.6s
GTA LR LR
comp=Z,4μm,12.7s
GTA LR LR
comp=Z,1μm,8.8s
BTO Baotou 13.44 150 *e*P **Pn 00 55 06.9 -2.8**
MK31 Makanchi Array 13.64 252 ⇓Pn **P 00 55 17.6 -3.6**
comp=Z,9.7nm,0.7s,baz=53,slow=8.7,SNR=13
MK31 ⇓Lg Lg 00 59 16.2
comp=Z,111nm,1.1s,baz=47,slow=27,SNR=7.0
MK31 Makanchi Array 13.64 252⇓ *e*P **Pn 00 55 13.3 +1.0**
MK31 Makanchi Array 13.64 252 Pn **Pn 00 55 12.6 +0.3**
MKAR Makanchi Array 13.64 252 Pn **Pn 00 55 13.0 +0.7**
comp=Z,0.1nm,0.3s,baz=74,slow=9.1,SNR=11
MKAR Lg Lg 00 59 01.0
comp=Z,0.4nm,0.3s,baz=72,slow=21,SNR=6.3
MKAR LR LR 01 00 31.8
comp=Z,991nm,20.2s,baz=50,slow=38
MKAR Makanchi Array 13.64 252 P **Pn 00 55 13.0 +0.7**
HHC Hu-ho-hao-te 13.72 145 *e*P **Pn 00 55 14.2 +0.7**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.2s
HHC LR LR
comp=Z,2μm,6.5s
HHC LR LR
comp=Z,1μm,5.8s
HHC LR LR
comp=Z,2μm,6.5s
MAKZ Makanchi 13.81 253 ⇑Pn **P 00 55 21.2 -2.0**
comp=Z,9.6nm,0.8s
MAKZ ⇓Lg Lg 00 59 26.3
comp=Z,96nm,1.2s
MAKZ Makanchi 13.81 253 P **Pn 00 55 10.1 -4.5**
MAKZ Makanchi 13.81 253 Pn **Pn 00 55 10.1 -4.5**
KURK Kurchatov 14.22 271 ⇑Pn **Pn 00 55 21.2 +1.0**
comp=Z,37nm,1.3s
KURK ⇑Lg Lg 00 59 30.0
comp=Z,205nm,1.2s
KURK Kurchatov 14.22 271*d* *i*P **Pn 00 55 20.5 +0.3**
KURK pmax pmax
comp=Z,23nm,1.7s
KURK Kurchatov 14.22 271 Pn **Pn 00 55 20.7 +0.5**
KURBB Kurchatov Arra 14.30 271 Pn **Pn 00 55 22.1 +0.8**
comp=Z,0.1nm,0.3s,baz=78,slow=14,SNR=21
KURBB Lg Lg 00 59 24.7
comp=Z,0.2nm,0.3s,baz=77,slow=31,SNR=8.8
KURBB Kurchatov Arra 14.30 271 ⇑Pn **Pn 00 55 20.7 -0.7**
comp=Z,43nm,1.4s
KURBB ⇑Lg Lg 00 59 30.0
comp=Z,463nm,1.3s
KURBB Kurchatov Arra 14.30 271 P **Pn 00 55 20.6 -0.7**
ZEA Zeya 15.53 76 *e*P **P 00 55 42.2 0.0**
ZEA *e*S **Sn 00 58 33.5 +3.7**
ZEA pmax pmax
comp=E,100nm,2.0s
ZEA pmax pmax
comp=N,64nm,1.8s
ZEA pmax pmax
comp=Z,100nm,1.8s
ZEA smax smax
comp=N,200nm,5.3s
ZEA MLR MLR
comp=Z,500nm,8.0s
BJI Beijing 16.21 135 P **Pn 00 55 46.9 +0.3**
BJI pmax pmax
comp=Z,3.0nm,0.4s
LZH Lanzhou 16.67 173 *e*P **Pn 00 55 52.4 -0.3**
LZH pP P 00 55 56.0 +0.9
LZH sP pP 00 55 59.4 +1.3
LZH S **Sn 00 58 59.0 +1.2**
LZH sS S 00 59 05.8 -3.4

LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,140nm,5.4s
LZH LR LR
comp=Z,1μm,8.7s
LZH LR LR
comp=Z,1μm,11.9s
LZH LR LR
comp=Z,1μm,12.2s
TDK Taldyqorghan 16.89 252 *e*P **Pn 00 55 54.0 -1.3**
comp=Z,88nm,1.3s,baz=252
TDK *e*PP **PnPn 00 56 03.5 -1.1**
baz=252
TDK LR LR 01 01 39.1
comp=Z,1μm,9.5s,baz=252
TDK Taldyqorghan 16.89 252 *e*P **Pn 00 55 53.9 -1.3**
TDK pmax pmax
comp=Z,88nm,1.3s
TDK MLR MLR
comp=Z,1μm,10.0s
PDGK Podgornoye 17.29 246 ⇓Pn **P 00 56 05.9 +4.0**
comp=Z,30nm,1.0s
PDGK ⇓Lg Lg 01 01 17.6
comp=Z,116nm,1.4s
PDGK Podgornoye 17.29 246 P **Pn 00 55 57.9 -2.6**
SHLS Shalkode 17.42 246 *e*P **Pn 00 55 57.7 -4.4**
comp=Z,32nm,1.0s,baz=245
SHLS *e*PP **pP 00 56 07.5 +1.1**
baz=245
SHLS LR LR 01 01 56.2
comp=Z,254nm,13.0s,baz=245
SHLS Shalkode 17.42 246 *e*P **Pn 00 55 57.6 -4.4**
SHLS pmax pmax
comp=Z,32nm,1.0s
SHLS MLR MLR
comp=Z,254nm,13.0s
KPKS Kokpek 17.66 248 *e*P **Pn 00 56 03.6 -1.3**
comp=Z,55nm,1.8s,baz=248
KPKS LR LR 01 02 14.3
comp=Z,236nm,9.8s,baz=248
KPKS Kokpek 17.66 248 *e*P **Pn 00 56 03.6 -1.3**
KPKS pmax pmax
comp=Z,55nm,1.8s
KPKS MLR MLR
comp=Z,236nm,10.0s
YAK Yakutsk 17.79 47 *e*P **P 00 56 11.3 +4.2**
YAK *e*S **S 00 59 30.1 -1.3**
YAK pmax pmax
comp=E,30nm,1.3s
YAK pmax pmax
comp=Z,41nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK pmax pmax
comp=Z,50nm,1.3s
YAK pmax pmax
comp=N,57nm,1.8s
YAK pmax pmax
comp=E,97nm,2.1s
YAK smax smax
comp=E,231nm,2.5s
YAK smax smax
comp=N,302nm,2.3s
YAK MLR MLR
comp=N,91nm,10.0s
YAK MLR MLR
comp=Z,469nm,17.0s
YAK MLR MLR
comp=E,216nm,13.0s
NRIK Noril'sk 17.93 344 P **Pn 00 56 03.9 -4.1**
comp=E,0.4nm,0.3s,baz=138,slow=7.9,SNR=9.9
NRIK S **Sn 00 59 19.4 -8.4**
comp=E,1.3nm,0.3s,baz=239,slow=12,SNR=4.3
NRIK Lg Lg 01 01 21.5
baz=59,slow=19,SNR=2.0
NRIK LR LR 01 03 28.6
comp=E,265nm,20.9s,baz=182,slow=38
BRZS Berezniki 18.07 273 *e*P **Pn 00 56 09.3 -0.6**
comp=E,19nm,1.6s,baz=273
BRZS *e*S **Sn 00 59 31.0 -0.3**
baz=273
BRZS Berezniki 18.07 273 *e*P **Pn 00 56 09.2 -0.6**
BRZS *e*S **Sn 00 59 31.0 -0.3**
BRZS pmax pmax
comp=Z,19nm,1.6s
SATY Saty 18.07 247 *e*P **Pn 00 56 08.7 -1.5**
comp=Z,20nm,1.7s,baz=247
SATY LR LR 01 02 28.3
comp=Z,120nm,8.7s,baz=247
SATY Saty 18.07 247 *e*P **Pn 00 56 08.6 -1.5**
SATY pmax pmax
comp=Z,20nm,1.7s
SATY MLR MLR
comp=Z,120nm,9.0s
CN2 Changchun 18.27 109 *e*P **P 00 56 14.0 +1.5**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
PRZ Przheval'sk 18.45 246 P **P 00 56 14.4 -0.4**
PRZ pmax pmax
comp=Z,30nm,0.9s
PRZ Przheval'sk 18.45 246 P **P 00 56 14.4 -0.4**
PRZ IAmb IAmb 00 56 31.2
comp=Z,30nm,0.8s
BVAR Borovoye Array 18.64 283 P **P 00 56 15.4 -1.1**
comp=Z,0.3nm,0.3s,baz=69,slow=17,SNR=6.6
BRVK Borovoye 18.69 284 ⇓P **P 00 56 16.0 -1.1**
comp=Z,22nm,0.9s
BRVK Borovoye 18.69 284*d* *i*P **P 00 56 15.5 -1.6**
BRVK pmax pmax
comp=Z,22nm,2.5s
BRVK Borovoye 18.69 284 P **P 00 56 16.5 -0.6**
KUU Kurty 18.74 252 *e*P **P 00 56 15.9 -1.8**
comp=Z,55nm,2.5s,baz=252
KUU LR LR 01 02 44.2
comp=Z,694nm,9.3s,baz=252
KUU Kurty 18.74 252 *e*P **P 00 56 15.9 -1.8**
KUU pmax pmax
comp=Z,55nm,2.5s
KUU MLR MLR
comp=Z,694nm,9.0s
MDOK Medeo 18.77 249 *e*P **P 00 56 17.3 -1.0**
baz=249
MDOK LR LR 01 02 52.0
comp=Z,694nm,13.1s,baz=249
MDOK Medeo 18.77 249 *e*P **P 00 56 17.3 -1.0**
MDOK MLR MLR
comp=Z,694nm,13.0s
AAA Alma-Ata 18.82 250 *e*P **P 00 56 18.2 -0.5**
comp=Z,7.5nm,0.8s,baz=250
AAA *e*S **Sn 00 59 49.5 -0.3**
baz=250
AAA LR LR 01 03 02.5
comp=Z,449nm,10.1s,baz=250
AAA Alma-Ata 18.82 250 *e*P **P 00 56 18.2 -0.5**
AAA *e*S **Sn 00 59 49.4 -0.3**
AAA pmax pmax
comp=Z,8.0nm,0.8s
AAA MLR MLR
comp=Z,449nm,10.0s
KDJ Kajisay 19.36 247 P **P 00 56 23.2 -1.6**
KDJ pmax pmax
comp=Z,30nm,0.9s
KDJ Kajisay 19.36 247 P **P 00 56 23.2 -1.6**
KDJ IAmb IAmb 00 56 37.9
comp=Z,30nm,0.9s
KLR Kul'dur 19.39 88 P **Pn 00 56 25.8 -0.1**
comp=Z,0.2nm,0.3s,baz=276,slow=5.5,SNR=7.4
KLR Lg Lg 01 02 05.7
comp=Z,0.1nm,0.3s,baz=256,slow=3.5,SNR=4.6
KLR LR LR 01 04 23.3
comp=Z,672nm,18.9s,baz=286,slow=38
KLR Kul'dur 19.39 88⇓ *i*P **Pn 00 56 26.3 +0.4**
KLR pmax pmax
comp=Z,21nm,1.7s
KLR MLR MLR
comp=Z,693nm,17.0s
XAN Xi'an 19.39 161 P **P 00 56 24.4 -0.6**
XAN sP sP 00 56 31.5 +2.1
XAN PP **PnPn 00 56 42.0 +2.9**
XAN S **Sn 00 59 56.1 -7.5**
XAN PcP **PcP 01 00 45.4 -1.0**
XAN pmax pmax
comp=Z,22nm,1.0s
XAN pmax pmax
comp=Z,1μm,8.7s
XAN LR LR
comp=Z,620nm,13.2s
XAN LR LR
comp=Z,990nm,10.3s
XAN LR LR
comp=Z,880nm,12.8s
XAN Xi'an 19.39 161 P **P 00 56 25.2 +0.2**
XAN pmax pmax
comp=Z,17nm,0.7s
XAN Xi'an 19.39 161 P **P 00 56 25.2 +0.2**
BTLS Baital 19.43 258 *e*P **P 00 56 23.9 -1.3**
comp=Z,25nm,2.5s,baz=258
BTLS *e*S **Sn 01 00 02.7 -1.6**
baz=258
BTLS LR LR 01 03 08.1
comp=Z,56nm,7.4s,baz=258
BTLS Baital 19.43 258 *e*P **P 00 56 23.9 -1.3**
BTLS *e*S **Sn 01 00 02.7 -1.6**
BTLS pmax pmax
comp=Z,25nm,2.5s
BTLS MLR MLR
comp=Z,56nm,7.0s
BOOM Boomskoye usch 19.83 249 P **Pn 00 56 30.5 -0.9**
BOOM pmax pmax
comp=Z,26nm,0.9s
BOOM Boomskoye usch 19.83 249 P **Pn 00 56 30.5 -0.9**
BOOM IAmb IAmb 00 56 46.4
comp=Z,26nm,0.9s
TIA Tai'an 19.86 140 P **Pn 00 56 32.7 +1.1**
TIA S **Sn 01 00 16.8 +2.0**
TIA pmax pmax
comp=Z,15nm,1.8s
TIA pmax pmax
comp=Z,160nm,5.1s
TIA LR LR
comp=Z,770nm,10.4s
TIA LR LR
comp=Z,830nm,10.4s
TIA LR LR
comp=Z,2μm,11.3s
SGDS Sogindy 19.99 253 *e*P **P 00 56 31.1 -0.5**
comp=Z,26nm,2.8s,baz=253
SGDS LR LR 01 03 26.8
comp=Z,196nm,9.1s,baz=253
SGDS Sogindy 19.99 253 *e*P **P 00 56 31.0 -0.5**
SGDS pmax pmax
comp=Z,26nm,2.8s
SGDS MLR MLR
comp=Z,196nm,9.0s
USP Ospenovka 20.18 253 P **P 00 56 33.9 +0.4**
SNR=15
CHMS Chumysh 20.20 252 P **P 00 56 33.9 +0.2**
SNR=7.7
KBK Karagaybulak 20.30 251 P **P 00 56 35.0 +0.1**
SNR=8.1
FRU1 Bishkek 20.38 252 P **P 00 56 35.8 0.0**
FRU1 pmax pmax
comp=Z,25nm,1.2s
FRU1 Bishkek 20.38 252 P **P 00 56 35.8 0.0**
AAK Ala-Archa 20.57 252*de*P **P 00 56 37.6 -0.3**
AAK pmax pmax
comp=Z,68nm,1.7s
UCH Uchtor 20.82 251 P **P 00 56 41.4 +0.6**
SNR=22
EKS2 Erkin-Say 20.97 253 P **P 00 56 42.6 +0.4**
SNR=62
AML Almayashu 21.35 252 P **P 00 56 46.5 -0.1**
SNR=12
CD2 Chengdu 21.81 174 *e*P **P 00 56 50.5 -0.6**
KSH Kashi 21.82 243 P **P 00 56 56.0 +4.6**
KSH sP sP 00 57 01.8 +5.9
KSH PP **PnPn 00 57 20.2 +7.8**
KSH S **S 01 00 49.4 -3.2**
KSH sS Sn 01 01 01.4 -0.7
KSH pmax pmax
comp=Z,290nm,5.7s
KSH LR LR
comp=Z,370nm,5.0s
KSH LR LR
comp=Z,450nm,7.5s
KSH LR LR
comp=Z,590nm,10.0s
USA0B Ussuriysk Arra 21.89 100 P **P 00 56 51.5 -0.4**
USA0B pmax pmax
comp=Z,9.0nm,0.8s
USA0B Ussuriysk Arra 21.89 100 P **P 00 56 51.5 -0.4**
USRK Ussuriysk Ar. 21.89 100 P **P 00 56 53.3 +1.5**
comp=Z,4.9nm,0.8s,baz=299,slow=13,SNR=9.2
USRK Lg Lg 01 03 26.4
comp=Z,1.8nm,0.7s,baz=316,slow=24,SNR=4.3
USRK LR LR 01 06 28.0
comp=Z,181nm,18.1s,baz=300,slow=40
USRK Ussuriysk Ar. 21.89 100 P **P 00 56 51.9 0.0**
DZA Taraz 22.27 256 *e*P **P 00 56 54.9 -1.1**
comp=Z,15nm,1.2s,baz=256
DZA LR LR 01 04 44.0
comp=Z,48nm,8.5s,baz=256
DZA Taraz 22.27 256 *e*P **P 00 56 54.8 -1.1**
DZA pmax pmax
comp=Z,15nm,1.2s
DZA MLR MLR
comp=Z,48nm,9.0s
TIXI Tiksi 22.58 22⇑ *e*P **P 00 56 59.1 +0.1**
TIXI pmax pmax
comp=Z,90nm,1.0s
TIXI MLR MLR
comp=Z,449nm,13.0s
TIXI Tiksi 22.58 22 P **P 00 56 57.9 -1.1**
KK31 Karatay Array 22.63 257 ⇑P **P 00 56 58.3 -1.5**
comp=Z,16nm,0.9s,baz=54,slow=10,SNR=86
KK31 Karatay Array 22.63 257 P **P 00 56 58.7 -1.1**
KK31 pmax pmax
comp=Z,20nm,1.0s
KK31 Karatay Array 22.63 257 P **P 00 56 58.7 -1.1**
KK31 IAmb IAmb 00 57 12.4
comp=Z,20nm,1.0s
KKAR Karatay Array 22.63 257 P **P 00 56 58.0 -1.8**
KKAR 00 56 58.7
KKAR Karatay Array 22.63 257 P **P 00 56 58.7 -1.1**
KKAR IAmb IAmb 00 57 12.4
comp=Z,20nm,1.0s
KKAR Karatay Array 22.63 257 P **P 00 56 58.0 -1.8**
IUG Iuzhnay 23.48 256 *e*P **P 00 57 08.0 -0.8**
comp=Z,20nm,1.6s,baz=256
IUG Iuzhnay 23.48 256 *e*P **P 00 57 07.9 -0.8**
IUG pmax pmax
comp=Z,20nm,1.6s
SVE Sverdlovsk 23.61 296 *e*P **P 00 57 09.5 -0.2**
SVE *e*S **S 01 01 27.6 +3.8**
SVE pmax pmax
comp=Z,49nm,1.3s
SVE MLR MLR
comp=Z,548nm,17.0s
KS19 Wonju Array Si 23.91 119 P **P 00 57 12.5 -0.2**
KSAR Wonju Array Be 23.96 119 P **P 00 57 13.3 +0.1**
KSAR Wonju Array Be 23.96 119 P **P 00 57 13.3 +0.1**
KSRS Korea Array 23.97 119 P **P 00 57 13.3 0.0**
comp=Z,3.6nm,0.8s,baz=313,slow=8.1,SNR=12
KSRS Lg Lg 01 04 29.4
comp=Z,0.5nm,0.3s,baz=322,slow=31,SNR=1.5
KSRS LR LR 01 06 13.0
comp=Z,284nm,20.2s,baz=314,slow=36
WHN Wuhan 24.07 152 ⇑P **P 00 57 18.2 +3.9**
NJ2 Nanjing 24.20 141 ⇑P **P 00 57 15.9 +0.4**
NJ2 pP **pP 00 57 18.4 -0.4**
NJ2 sP **sP 00 57 19.6 -0.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 pmax pmax
comp=Z,120nm,4.0s
NJ2 LR LR
comp=Z,820nm,11.4s
NJ2 LR LR
comp=Z,2μm,11.6s
NJ2 LR LR
comp=Z,1μm,12.1s
BTK Batken 24.34 251 P **P 00 57 16.4 -0.5**
BTK pmax pmax
comp=Z,11nm,0.8s
BTK Batken 24.34 251 P **P 00 57 16.4 -0.5**
BTK IAmb IAmb 00 57 28.0
comp=Z,11nm,0.8s
ARU Arti 24.80 296 P **P 00 57 20.5 -0.3**
comp=Z,2.9nm,0.3s,baz=90,slow=8.8,SNR=25
ARU LR LR 01 07 57.4
comp=Z,633nm,19.2s,baz=78,slow=39
ARU Arti 24.80 296*d* *i*P **P 00 57 20.3 -0.4**

ARU				PPP	PPP	00 57 59.5	
ARU				S	**S**	**01 01 43.8**	**+0.9**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARU				MLR	MLR		
	comp=Z,522nm,17.0s						
ARU	**Arti**	**24.80**	**296**	P	**P**	**00 57 19.7**	**-1.0**
ARU				IAmb	IAmb	00 57 35.3	
	comp=Z,17nm,0.9s						
GAR	**Garm**	**25.34**	**250**	P	**P**	**00 57 25.7**	**-0.2**
AB31	**Akbulak array**	**26.04**	**279** ⇓	P	**P**	**00 57 30.7**	**-1.4**
	comp=Z,8.3nm,0.7s,baz=74,slow=10,SNR=37						
AB31	**Akbulak array**	**26.04**	**279**	*i* P	**P**	**00 57 31.4**	**-0.7**
ABKAR	**Akbulak array**	**26.04**	**279**	P	**P**	**00 57 31.2**	**-0.8**
ABKAR	**Akbulak array**	**26.04**	**279**	IAmb	IAmb	00 57 42.4	
	comp=Z,11nm,0.8s						
CHGR	**Chuyangaron**	**26.24**	**251**	P	**P**	**00 57 33.6**	**-0.4**
GYA	**Guiyang**	**26.48**	**169** ⇓	P	**P**	**00 57 36.0**	**-0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,5.9s						
AKTO	**Aktyubinsk**	**26.74**	**283**	P	**P**	**00 57 37.8**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=62,slow=10.0,SNR=6.9						
AKTO				LR	LR	01 08 23.6	
	comp=Z,314nm,19.8s,baz=65,slow=37						
AKTO	**Aktyubinsk**	**26.74**	**283** ⇑	P	**P**	**00 57 37.5**	**-0.8**
	comp=Z,18nm,1.2s						
YSS	**Yuzh-Sakhalins**	**27.04**	**85**	*eP*	P	00 57 33.6	-7.4
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				MLR	MLR		
	comp=Z,800nm,14.0s						
YSS				MLR	MLR		
	comp=N,300nm,15.0s						
YSS				MLR	MLR		
	comp=E,500nm,15.0s						
TAPN	**Taplejung**	**27.26**	**207**	*eP*	**P**	**00 57 44.1**	**+0.5**
	comp=E,55nm,1.3s						
GUN	**Gumba**	**27.28**	**211**	*eP*	**P**	**00 57 44.4**	**+0.6**
KMI	**Kunming**	**27.52**	**177** ⇓	*eP*	**P**	**00 57 45.3**	**-0.6**
KMI				pmax	pmax		
	comp=E,17nm,0.5s						
DANN	**Dangsing**	**27.58**	**215**	*eP*	**P**	**00 57 46.1**	**-0.3**
	comp=E,13nm,0.6s						
NIL	**Nilore**	**27.67**	**238**	P	**P**	**00 57 46.5**	**-0.4**
NIL				pmax	pmax		
	comp=Z,12nm,1.1s						
NIL	**Nilore**	**27.67**	**238**	P	**P**	**00 57 46.5**	**-0.4**
NIL				IAmb	IAmb	00 57 57.8	
	comp=Z,12nm,1.1s						
PKI	**Pulchoki**	**27.74**	**212**	*eP*	**P**	**00 57 48.0**	**+0.1**
ODAN	**Odare**	**27.82**	**208**	*eP*	**P**	**00 57 48.5**	**0.0**
MA2	**Magadan**	**27.83**	**56**	LR	LR	01 08 44.0	
	comp=Z,171nm,18.1s,baz=225,slow=36						
PYUN	**Piuthan**	**28.08**	**216**	*eP*	**P**	**00 57 50.6**	**-0.2**
	comp=Z,27nm,0.9s						
KOLN	**Koldanda**	**28.16**	**215**	*eP*	**P**	**00 57 51.1**	**-0.5**
SEY	**Seymchan**	**28.30**	**49**	Lg	Lg	01 06 49.0	
	comp=Z,7.5nm,0.9s,baz=352,slow=22,SNR=3.9						
SEY				LR	LR	01 09 07.2	
	comp=Z,228nm,19.2s,baz=285,slow=36						
ASAJ	**Asahikawa**	**28.36**	**91**	LR	LR	01 09 21.7	
	comp=Z,130nm,18.9s,baz=194,slow=37						
JNU	**Nakatsue**	**28.83**	**121**	LR	LR	01 09 18.6	
	comp=Z,275nm,20.4s,baz=322,slow=36						
KBL	**Kabul**	**29.24**	**245**	P	**P**	**00 58 00.3**	**-0.8**
KBL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBL	**Kabul**	**29.24**	**245**	P	**P**	**00 58 00.3**	**-0.8**
KIRV	**Kirov**	**29.27**	**302**	LR	LR	01 11 19.1	
	comp=Z,590nm,18.3s,baz=40						
MJAR	**Matsushiro Arr**	**30.39**	**107**	LR	LR	01 10 05.5	
	comp=Z,150nm,18.2s,baz=235,slow=36						
YULB	**Yu-li**	**32.95**	**145**	P	**P**	**00 58 33.2**	**-0.4**
HRA	**Herat**	**33.20**	**252**	P	**P**	**00 58 35.5**	**-0.5**
GEYT	**Alibeck**	**33.24**	**261**	P	**P**	**00 58 36.4**	**+0.3**
	comp=Z,2.9nm,0.7s,baz=3.8,slow=2.2,SNR=10						
GEYT				LR	LR	01 13 00.9	
	comp=Z,232nm,19.6s,baz=0.0,slow=38						
GEYT	**Alibeck**	**33.24**	**261**	P	**P**	**00 58 36.8**	**+0.7**
GYA0	**ALIBECK ARRAY**	**33.24**	**261**	P	**P**	**00 58 35.7**	**-0.4**
GYA0				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**33.24**	**261**	P	**P**	**00 58 35.7**	**-0.4**
GYA0B				IAmb	IAmb	00 58 45.2	
	comp=Z,6.6nm,0.8s						
PETK	**Petropavlovsk-**	**33.26**	**66**	P	**P**	**00 58 36.9**	**+0.8**
	comp=Z,5.2nm,1.0s,baz=308,slow=5.3,SNR=1.8						
PETK				LR	LR	01 12 56.6	
	comp=Z,243nm,19.2s,baz=295,slow=38						
KLMR	**Klimovskoe**	**33.66**	**309**	*eP*	**P**	**00 58 38.5**	**-0.9**
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	**Klimovskoe**	**33.66**	**309**	*eP*	**P**	**00 58 38.5**	**-0.9**
KLMR				AMP		00 58 40.7	
	comp=Z,18nm,1.4s						
KLMR				LQ	LQ	01 09 55.7	
KLMR				LQ	LQ	01 09 55.7	
KLMR				LR	LR	01 13 28.6	
BILL	**Bilibino**	**33.70**	**38** ⇑	*eP*	**P**	**00 58 43.7**	**+4.0**
BILL				*e*		00 59 53.0	
BILL				pmax	pmax		
	comp=Z,12nm,1.1s						
BILL				MLR	MLR		
	comp=Z,367nm,15.0s						
CHTO	**Chiang Mai**	**33.83**	**184**	P	**P**	**00 58 41.1**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**33.83**	**184**	P	**P**	**00 58 41.1**	**-0.2**
CHTO				IAmb	IAmb	00 58 49.2	
	comp=Z,5.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**34.19**	**184**	P	**P**	**00 58 44.9**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=355,slow=9.3,SNR=10						
CMAR				LR	LR	01 12 10.1	
	comp=Z,127nm,18.8s,baz=36,slow=36						
CMAR	**Chiang Mai Arr**	**34.19**	**184**	*ce*	**P**	**00 58 44.7**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**34.19**	**184**	P	**P**	**00 58 45.2**	**+0.8**
QIZ	**Qiongzhong**	**34.22**	**166**	P	**P**	**00 58 44.7**	**0.0**
QIZ				PP	**PP**	**01 00 02.7**	**+0.6**
QIZ				S	**S**	**01 04 12.6**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,18nm,1.2s						
QIZ				LR	LR		
	comp=Z,310nm,14.3s						
QIZ				LR	LR		
	comp=Z,510nm,13.5s						
QIZ				LR	LR		
	comp=Z,420nm,12.8s						
VRH	**Novokhopyorsk**	**35.88**	**292**	*eP*	**P**	**00 58 57.3**	**-1.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRH				MLR	MLR		
	comp=Z,960nm,15.0s						
MOS	**Moscow**	**36.23**	**301**	*eP*	**P**	**00 59 00.4**	**-1.3**
MOS				*e*		01 00 22.0	
MOS				MLR	MLR		
	comp=Z,400nm,19.0s						
MAK	**Makhachkala**	**36.64**	**277**	*eP*	P	00 58 57.8	-7.5
MAK				*e*		01 00 22.5	
MAK				*eS*	S	01 04 37.6	-11
MAK				*eSS*	**SnSn**	**01 07 18.6**	**+0.9**
MAK				MLR	MLR		
	comp=Z,144nm,11.0s						
LPSR	**Galich'ya Gora**	**36.82**	**296**	*eP*	**P**	**00 59 05.0**	**-1.7**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LPSR				MLR	MLR		
	comp=Z,300nm,15.0s						
OBN	**Obninsk**	**37.03**	**300** ⇑	*eP*	**P**	**00 59 07.7**	**-0.8**
OBN				*e*		01 00 33.6	
OBN				pmax	pmax		
	comp=Z,23nm,2.5s						
OBN				MLR	MLR		
	comp=Z,467nm,18.0s						
VSR	**Storozhevoye**	**37.31**	**293**	*eP*	**P**	**00 59 09.9**	**-1.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.6s						
VSR				MLR	MLR		
	comp=Z,510nm,13.0s						
ARCES	**ARCESS Array B**	**37.36**	**326**	P	**P**	**00 59 11.5**	**+0.4**
	comp=Z,5.6nm,1.2s,baz=63,slow=10,SNR=1.6						
ARCES				LR	LR	01 16 06.5	
	comp=Z,121nm,18.9s,baz=80,slow=39						
SPITS	**Spitsbergen Ar**	**38.09**	**341**	P	**P**	**00 59 17.7**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=99,slow=24,SNR=2.2						
KIV	**Kislovodsk**	**38.98**	**281**	*eP*	**P**	**00 59 25.5**	**+0.3**
KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
KIV				MLR	MLR		
	comp=Z,253nm,16.0s						
KIV	**Kislovodsk**	**38.98**	**281**	P	**P**	**00 59 24.8**	**-0.4**
KBZ	**Khabaz**	**38.98**	**281**	P	**P**	**00 59 23.6**	**-1.4**
	comp=Z,1.6nm,0.9s,baz=117,slow=9.0,SNR=2.4						
KBZ				LR	LR	01 17 01.2	
	comp=Z,232nm,19.3s,baz=47,slow=39						
KBZ	**Khabaz**	**38.98**	**281** ⇑	*eP*	**P**	**00 59 24.2**	**-0.9**
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FINES	**FINESS Array B**	**39.65**	**313**	P	**P**	**00 59 30.6**	**+0.2**
	comp=Z,4.0nm,0.6s,baz=72,slow=8.8,SNR=21						
FINES				LR	LR	01 17 41.7	
	comp=Z,243nm,21.1s,baz=72,slow=39						
FINES	**FINESS Array B**	**39.65**	**313**	*i* P	**P**	**00 59 30.3**	**-0.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	**FINESS Array B**	**39.65**	**313**	P	**P**	**00 59 30.4**	**0.0**
VSU	**Vasula**	**40.56**	**309**	*eP*	**P**	**00 59 35.8**	**-2.3**
VSU	**Vasula**	**40.56**	**309** ⇓	*i* P	**P**	**00 59 37.9**	**-0.1**
VSU				pmax	pmax		
	comp=Z,42nm,1.3s						
IDID	**Didziasalis**	**42.00**	**305**	*eP*	**P**	**00 59 50.5**	**+0.6**
IZAR	**Zarasai**	**42.04**	**305**	*eP*	**P**	**00 59 50.3**	**+0.1**
ISAL	**Salakas**	**42.18**	**305**	*eP*	**P**	**00 59 51.2**	**-0.2**
IIGN	**Ignalina**	**42.24**	**305**	*eP*	**P**	**00 59 51.6**	**-0.2**
AKASG	**Malin Array Be**	**43.03**	**298**	P	**P**	**00 59 57.5**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=54,slow=8.9,SNR=9.6						
AKASG				LR	LR	01 18 35.2	
	comp=Z,266nm,19.3s,baz=70,slow=37						
AKASG	**Malin Array Be**	**43.03**	**298**	IAmb	IAmb	01 00 06.2	
	comp=Z,1.3nm,0.8s						
AKBB	**Malin Array Si**	**43.03**	**298** ⇓	*eP*	**P**	**00 59 57.5**	**-0.8**
AKBB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PABE	**Paberze**	**43.28**	**306**	*eP*	**P**	**00 59 59.8**	**-0.5**
PBUR	**Paburge**	**44.02**	**307**	*eP*	**P**	**01 00 04.7**	**-1.5**
MARD	**Mardin**	**44.16**	**275**	P	**P**	**01 00 08.4**	**+0.6**
SORM	**Soroca**	**44.91**	**295** ⇑	P	**P**	**01 00 12.9**	**-0.5**
SORM	**Soroca**	**44.91**	**295** ⇑	P	**P**	**01 00 12.9**	**-0.5**
DAG	**Danmarks Havn**	**45.44**	**344**	*i* P	**P**	**01 00 21.0**	**+3.7**
DAG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
DAG	**Danmarks Havn**	**45.44**	**344**	*i* P	**P**	**01 00 21.0**	**+3.7**
	comp=Z,3.3nm,0.6s						
DAG	**Danmarks Havn**	**45.44**	**344**	IAmb	IAmb	01 00 22.2	
	comp=Z,3.3nm,0.6s						
DAG	**Danmarks Havn**	**45.44**	**344**	*i* P	**P**	**01 00 21.0**	**+3.7**
NC405	**NORSAR Array S**	**45.95**	**318**	P	**P**	**01 00 21.2**	**-0.4**
NB2	**NORSAR Subarra**	**46.20**	**318**	P	**P**	**01 00 23.1**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=75,slow=7.4						
NOA	**NORSAR Array B**	**46.20**	**318**	P	**P**	**01 00 23.4**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=58,slow=7.7,SNR=5.8						
NOA				LR	LR	01 21 23.0	
	comp=Z,223nm,18.2s,baz=55,slow=38						
BIZ	**Bicaz**	**46.84**	**295** ⇑	P	**P**	**01 00 29.0**	**+0.2**
BR131	**Keskin Array S**	**46.92**	**282**	P	**P**	**01 00 29.5**	**-0.1**
BR131				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BR131	**Keskin Array S**	**46.92**	**282**	P	**P**	**01 00 29.5**	**-0.1**
BR131				IAmb	IAmb	01 00 31.7	
	comp=Z,4.7nm,0.9s						
BRTR	**Keskin Array B**	**46.92**	**282**	P	**P**	**01 00 28.6**	**-1.0**
	comp=Z,4.8nm,1.0s,baz=70,slow=8.5,SNR=10						
BRTR				LR	LR	01 22 42.1	
	comp=Z,83nm,20.5s,baz=34,slow=39						
BRTR	**Keskin Array B**	**46.92**	**282**	*ce*	**P**	**01 00 30.0**	**+0.4**
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRTR	**Keskin Array B**	**46.92**	**282**	P	**P**	**01 00 29.7**	**+0.1**
BUR08	**Bucovina Ar. S**	**46.93**	**296**	IAmb	IAmb	01 00 39.5	
	comp=Z,7.2nm,0.9s						
BURAR	**Bucovina Array**	**46.94**	**296** ⇑	P	**P**	**01 00 29.8**	**+0.2**
BURAR	**Bucovina Array**	**46.94**	**296** ⇑	P	**P**	**01 00 29.8**	**+0.2**
BURAR	**Bucovina Array**	**46.94**	**296**	P	**P**	**01 00 29.4**	**-0.2**
VRI	**Vrincioaia**	**47.14**	**293** ⇑	P	P	01 00 39.4	+8.3
VRI	**Vrincioaia**	**47.14**	**293** ⇑	P	P	01 00 39.4	+8.3
KOLS	**Kolonicke sedl**	**47.75**	**299**	*eP*	**P**	**01 00 35.0**	**-0.8**
KOLS	**Kolonicke sedl**	**47.75**	**299**	*eP*	**P**	**01 00 35.0**	**-0.8**
DOPR	**Dopca**	**47.82**	**294** ⇑	P	**P**	**01 00 37.6**	**+1.2**
OJC	**Ojcow**	**48.29**	**302**	P	**P**	**01 00 39.7**	**-0.2**
OJC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OJC	**Ojcow**	**48.29**	**302**	P	**P**	**01 00 39.7**	**-0.2**
OJC				IAmb	IAmb	01 00 53.7	
	comp=Z,6.3nm,1.0s						
VOIR		**48.33**	**294** ⇓	P	**P**	**01 00 41.5**	**+1.1**
VOIR		**48.33**	**294** ⇓	P	**P**	**01 00 41.5**	**+1.1**
ARR	**Arges**	**48.61**	**294** ⇓	P	**P**	**01 00 44.1**	**+1.5**
OKC	**Ostrava-Krasne**	**49.37**	**302**	AMS	AMS	01 22 50.0	
	comp=Z,400nm,18.8s						
GZR	**Gura Zlata**	**49.62**	**295** ⇑	P	**P**	**01 00 50.7**	**+0.4**
PSZ	**Piszkesteto**	**49.63**	**299**	P	**P**	**01 00 51.4**	**+1.1**
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSZ	**Piszkesteto**	**49.63**	**299**	P	**P**	**01 00 51.4**	**+1.1**
SIRR	**Siria**	**49.69**	**296** ⇓	P	**P**	**01 00 50.3**	**-0.5**
MORC	**Moravsky Berou**	**49.72**	**302** ⇑	P	**P**	**01 00 51.5**	**+0.5**
MORC	**Moravsky Berou**	**49.72**	**302**	*eP*	**P**	**01 00 51.3**	**+0.3**
MORC				*e*		01 00 58.4	
MORC	**Moravsky Berou**	**49.72**	**302**	P	**P**	**01 00 51.3**	**+0.3**
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MORC	**Moravsky Berou**	**49.72**	**302**	P	**P**	**01 00 51.3**	**+0.3**
MORC				IAmb	IAmb	01 00 59.9	
	comp=Z,5.6nm,0.8s						
VYHS	**Vyhne**	**49.83**	**300**	*eP*	**P**	**01 00 51.9**	**+0.1**
VYHS				pmax	pmax		
	comp=Z,11nm,1.1s						
VYHS	**Vyhne**	**49.83**	**300**	*eP*	P	01 00 51.9	+0.1
OSTC	**Ostas**	**49.92**	**304**	*eP*	P	01 01 00.5	+8.0
OSTC				AMS	AMS	01 23 20.0	
	comp=Z,500nm,18.9s						
KRLC	**Kraliky**	**49.93**	**303**	*eP*	**P**	**01 00 52.5**	**-0.1**
KRLC				*e*		01 00 58.2	
KRLC				MLR	MLR		
	comp=Z,400nm,19.1s						
KRLC	**Kraliky**	**49.93**	**303**	*eP*	**P**	**01 00 52.5**	**-0.1**
KRLC				*epP*	**sP**	**01 00 58.2**	**+0.8**
KRLC				AMS	AMS	01 23 20.0	
	comp=Z,400nm,19.1s						
CHVC	**Chvalec**	**49.99**	**304**	*eP*	**P**	**01 00 53.1**	**+0.1**
CHVC				*ex*	x	01 00 59.0	
CHVC				AMS	AMS	01 23 20.0	
	comp=Z,400nm,16.8s						
DPC	**Dobruska-Polom**	**50.00**	**304**	*eP*	**P**	**01 00 53.7**	**+0.6**
DPC				*e*		01 01 01.5	
DPC				MLR	MLR		
	comp=Z,500nm,15.3s						
DPC	**Dobruska-Polom**	**50.00**	**304**	*eP*	**P**	**01 00 53.7**	**+0.6**
DPC				*ex*	x	01 01 01.5	
DPC				AMS	AMS	01 24 00.0	
	comp=Z,500nm,15.3s						
JAVC	**Velka Javorina**	**50.22**	**301**	*eP*	**P**	**01 00 56.5**	**+1.7**
VRAC	**Vranov**	**50.50**	**302**	*eP*	**P**	**01 00 57.6**	**+0.8**
KRUC	**Moravsky**	**50.75**	**302**	*eP*	**P**	**01 00 59.7**	**+1.0**
PVCC	**Panska Ves**	**50.77**	**305**	AMS	AMS	01 24 00.0	
	comp=Z,400nm,15.9s						
BRG	**Berggiesshubel**	**50.87**	**305**	*e*	P	01 01 05.3	+5.7
	comp=Z,6.8nm,1.1s						
BRG	**Berggiesshubel**	**50.87**	**305**	*eP*	**P**	**01 01 00.1**	**+0.5**
BRG				*e*		01 01 05.3	
BRG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
BRG				MLR	MLR		
	comp=N,389nm,9.3s						
BRG				MLR	MLR		
	comp=E,348nm,20.1s						
BRG				MLR	MLR		
	comp=Z,619nm,17.3s						
BRG	**Berggiesshubel**	**50.87**	**305**				
	comp=Z,619nm,17.3s						
BRG	**Berggiesshubel**	**50.87**	**305**				
	comp=N,389nm,9.3s						
BRG	**Berggiesshubel**	**50.87**	**305**				
	comp=E,348nm,20.1s						
BRG	**Berggiesshubel**	**50.87**	**305**	*eP*	**P**	**01 01 00.1**	**+0.5**
	comp=E,8.5nm,1.3s						
CLL	**Collm**	**51.06**	**306** ⇑	*i* P	**P**	**01 01 01.5**	**+0.5**
	comp=Z,11nm,1.2s						
CLL				*i* pP	**sP**	**01 01 06.7**	**+0.9**
CLL				*i* sP	**pP**	**01 01 08.8**	**+4.3**
	comp=Z,9.0nm,0.9s						
CLL				*eS*	**S**	**01 08 18.0**	**-0.2**
CLL				LmH		01 20 00.0	
	comp=N,1μm,19.6s						
CLL				LmH		01 20 00.0	
	comp=E,800nm,20.1s						
CLL	**Collm**	**51.06**	**306** ⇑	*i* P	**P**	**01 01 01.5**	**+0.5**
CLL				*i*		01 01 06.7	
CLL				*i*		01 01 08.8	
CLL				pmax	pmax		
	comp=Z,11nm,1.2s						
CLL	**Collm**	**51.06**	**306**	IAmb	IAmb	01 01 09.6	
	comp=Z,7.9nm,0.8s						
TREC	**Trest**	**51.07**	**303**	AMS	AMS	01 23 40.0	
	comp=Z,400nm,25.5s						
ELL	**Elmali**	**51.08**	**282**	P	**P**	**01 01 01.5**	**0.0**
ELL				pmax	pmax		
	comp=Z,43nm,1.0s						
ELL	**Elmali**	**51.08**	**282**	P	**P**	**01 01 01.5**	**0.0**
PRU	**Pruhonice**	**51.12**	**304**	*eP*	**P**	**01 01 02.1**	**+0.6**
PRU				*e*		01 01 09.7	
PRU				MLR	MLR		
	comp=Z,400nm,15.1s						
PRU	**Pruhonice**	**51.12**	**304**	*eP*	**P**	**01 01 02.1**	**+0.6**
PRU				*ex*	x	01 01 09.7	
PRU				AMS	AMS	01 24 30.0	
	comp=Z,400nm,15.1s						
PRA	**Prague**	**51.12**	**304**	AMS	AMS	01 24 10.0	
	comp=Z,200nm,16.2s						
COLA	**College**	**51.33**	**31** ⇓	*eP*	**P**	**01 01 04.1**	**+1.3**
COLA				pmax	pmax		
	comp=Z,45nm,2.6s						
ILAR	**Eielson Array**	**51.70**	**30**	P	**P**	**01 01 06.3**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=318,slow=7.2,SNR=2.9						
ILAR				LR	LR	01 23 43.2	
	comp=Z,193nm,19.4s,baz=317,slow=37						
CONA	**Conrad Observa**	**51.74**	**301**	P	**P**	**01 01 07.7**	**+1.4**
	comp=Z,6.7nm,1.0s						
NKC	**Novy Kostel**	**52.01**	**305**	AMS	AMS	01 25 30.0	
	comp=Z,500nm,14.7s						
GUMO	**Guam**	**52.08**	**122**	LR	LR	01 20 45.2	
	comp=Z,60nm,21.9s,baz=314,slow=33						
KHC	**Kasperske Hory**	**52.15**	**304**	*eP*	**P**	**01 01 09.1**	**-0.1**
KHC				*e*		01 01 14.7	
KHC				MLR	MLR		
	comp=Z,400nm,18.2s						
KHC	**Kasperske Hory**	**52.15**	**304**	*eP*	**P**	**01 01 09.1**	**-0.1**
KHC				*epP*	**sP**	**01 01 14.7**	**+0.6**
KHC				AMS	AMS	01 24 50.0	
	comp=Z,400nm,18.2s						
MOX	**Moxa**	**52.16**	**306**	P	**P**	**01 01 10.4**	**+1.1**
MOX				pmax	pmax		
	comp=Z,12nm,2.7s						
MOX	**Moxa**	**52.16**	**306**	*eL*	L	01 25 30.2	
	comp=Z,375nm,18.6s						
GERES	**GERESS Array B**	**52.27**	**303**	P	**P**	**01 01 09.2**	**-1.0**
	comp=Z,1.4nm,1.0s,baz=69,slow=7.3,SNR=8.9						
GERES				LR	LR	01 24 41.7	
	comp=Z,250nm,18.4s,baz=57,slow=38						
GERES	**GERESS Array B**	**52.27**	**303**	P	**P**	**01 01 10.7**	**+0.5**
GERES	**GERESS Array B**	**52.27**	**303**	P	**P**	**01 01 10.7**	**+0.5**
ARSA	**Arzberg**	**52.35**	**301**	*eP*	**P**	**01 01 08.8**	**-2.0**
	comp=Z,4.6nm,1.2s						
MOA	**Molln**	**52.62**	**302**	*eP*	**P**	**01 01 11.9**	**-0.8**
	comp=Z,4.7nm,1.0s						
RSO	**Redoubt South**	**52.68**	**37**	P	**P**	**01 01 16.1**	**+2.9**
SUA	**Susitna One**	**52.72**	**35**	P	**P**	**01 01 15.1**	**+1.7**
DHY	**Denali Highway**	**52.73**	**32**	P	**P**	**01 01 13.2**	**-0.3**
DHY				IAmb	IAmb	01 01 26.6	
	comp=Z,9.2nm,0.8s						
GRA1	**Grafenberg Arr**	**52.97**	**306**	P	**P**	**01 01 15.9**	**+0.6**
GRA1				IAmb	IAmb	01 01 24.6	
	comp=Z,13nm,1.1s						
GRF	**Grafenberg Arr**	**52.97**	**306**	P	**P**	**01 01 15.9**	**+0.6**
GRF				pmax	pmax		
	comp=Z,13nm,1.1s						
GRF	**Grafenberg Arr**	**52.97**	**306**	*eP*	**P**	**01 01 16.0**	**+0.8**
	comp=Z,31nm,1.4s,baz=49,slow=6.2						
GRF				*eL*	L	01 25 55.7	
	comp=Z,356nm,18.0s						
SOKA	**Soboth**	**52.98**	**301**	*eP*	**P**	**01 01 16.2**	**+0.7**
	comp=Z,4.7nm,1.1s						
WATA	**Walderalm**	**54.33**	**303**	*eP*	**P**	**01 01 25.9**	**+0.5**
	comp=Z,10.0nm,1.4s						
WTTA	**Wattenberg**	**54.35**	**303**	*eP*	**P**	**01 01 26.6**	**+1.0**
	comp=Z,8.0nm,1.0s						
MOTA	**Moosalm**	**54.57**	**303**	P	**P**	**01 01 27.2**	**0.0**
	comp=Z,7.0nm,1.2s						
SQTA	**Sankt Quirin**	**54.60**	**303**	*eP*	**P**	**01 01 29.4**	**+2.0**
	comp=Z,11nm,1.1s						
RETA	**Reutte**	**54.65**	**304**	*eP*	**P**	**01 01 27.2**	**-0.4**
	comp=Z,7.7nm,1.1s						
MEM	**Membach**	**54.89**	**309**	P	**P**	**01 01 29.7**	**+0.4**
MEM				x	x	01 01 37.1	
FETA	**Feichten**	**54.97**	**303**	P	**P**	**01 01 31.1**	**+0.9**
	comp=Z,9.4nm,1.1s						
CTI	**Castel Tesino**	**55.15**	**302**	IAmb	IAmb	01 01 41.9	
	comp=Z,5.6nm,0.7s						
DAVA	**Damuels**	**55.23**	**304**	*eP*	**P**	**01 01 32.7**	**+0.7**
	comp=Z,8.4nm,1.1s						
BFO	**Black Forest**	**55.30**	**306**	P	**P**	**01 01 32.6**	**+0.3**
BFO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BFO	**Black Forest**	**55.30**	**306**	P	**P**	**01 01 32.6**	**+0.3**
BFO				IAmb	IAmb	01 01 47.2	
	comp=Z,5.4nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**55.48**	**303**	P	**P**	**01 01 33.8**	**-0.1**
FUORN				IAmb	IAmb	01 01 43.0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HERR	**Herculane**	**0.29**	**160**	⇑P	Pg	00 58 45.0	+0.2
HERR				⇑S	Sg	00 58 49.1	+0.4
HERR	**Herculane**	**0.29**	**160**	⇑P	Pg	00 58 45.0	+0.2
HERR				⇑S	Sg	00 58 49.1	+0.4
GZR	**Gura Zlata**	**0.43**	**55**	⇑P	Pg	00 58 47.5	+0.1
GZR				⇑S	Sg	00 58 53.3	+0.2
GZR	**Gura Zlata**	**0.43**	**55**	⇑P	Pg	00 58 47.5	+0.1
GZR				⇑S	Sg	00 58 53.3	+0.2
MDVR	**Moldovita**	**0.54**	**227**	⇓P	Pg	00 58 49.8	+0.3
MDVR				⇓S	Sg	00 58 56.8	+0.1
MDVR	**Moldovita**	**0.54**	**227**	⇓P	Pg	00 58 49.8	+0.3
MDVR				⇓S	Sg	00 58 56.8	+0.1
BZS	**Buzias**	**0.66**	**315**	⇑P	Pg	00 58 52.0	+0.3
BZS				⇑S	Sg	00 59 00.5	+0.1
BZS	**Buzias**	**0.66**	**315**	⇑P	Pg	00 58 52.0	+0.3
BZS				⇑S	Sg	00 59 00.5	+0.1

IDC 01 01:05:48.1±1.3, 37.°34N×134.°92E, h398km±15km, mb2.7/1, mb1 2.9/4, mb1mx2.6/36, mbtmp3.5/4, Error ellipse: s-maj=37.0km s-min=23.5km az=98.0, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**2.75**	**106**	P	Pn	01 06 49.6	+0.3
	0.2nm,0.3s,baz=284,slow=9.6,SNR=12						
JNU	**Nakatsue**	**5.35**	**219**	P	Pn	01 07 13.7	-0.2
	0.7nm,0.3s,baz=15,slow=6.2,SNR=3.8						
USRK	**Ussuriysk Ar.**	**7.20**	**343**	P	Pn	01 07 34.0	+0.2
	baz=145,slow=10,SNR=14						
WRA	**Warramunga AR**	**56.98**	**181**	P	P	01 14 54.0	+0.1
	0.4nm,0.8s,baz=359,slow=7.9,SNR=5.8						
LPAZ	**La Paz**	**150.77**	**50**	PKPab	PKPab	01 25 03.4	-0.6
	1.3nm,0.3s,baz=323,slow=3.2,SNR=9.6						

IDC 01 01:06:38.4±2.6, 5.°06S×146.°80E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.3/25, mbtmp3.2/3, ML3.2/1, Error ellipse: s-maj=371.4km s-min=31.1km az=121.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.13**	**218**	P	P	01 11 03.3	0.0
	0.1nm,0.3s,baz=42,slow=9.5,SNR=6.0						
ASAR	**Alice Springs**	**22.29**	**213**	P	P	01 11 37.3	-0.2
	0.2nm,0.6s,baz=40,slow=7.5,SNR=1.9						
ILAR	**Eielson Array**	**84.70**	**23**	P	P	01 19 14.0	+0.1
	0.4nm,0.8s,baz=236,slow=5.2,SNR=5.5						

*ARE **01** 01:42:32±1.6, 16.°85S±0.°07×70.°5W±0.°1, h29km±2km, Error ellipse: s-maj=15.9km s-min=8.7km az=112.0*
*GUC **01** 01:42:34.5±0.3, 17.°66S×70.°64W, h47km±3km, ML3.9*
*NEIC **01** 01:42:38.5±1.7, 16.°91S±0.°05×70.°64W±0.°07, h21km±5km, mb4.0/1, ML4.1(ARE), Error ellipse: s-maj=9.9km s-min=7.6km az=112.0*
*IDC **01** 01:42:40.9±1.9, 16.°91S×70.°55W, h50km±20km, mb3.3/4, mb1 3.8/8, mb1mx3.6/29, mbtmp3.8/8, ML3.9/4, MS3.4/4, Ms1 3.5/4, ms1mx3.1/14, Error ellipse: s-maj=19.7km s-min=16.3km az=131.0*

ISC 01 01:42:38.9±0.8, 16.°93S±0.°06×70.°63W±0.°08, h35km, n29, σ1s80/31, mb3.5/5, 1C, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**1.46**	**169**		**Pn**	**01 43 02.4**	**-0.5**
PB16	**IPOC Station P**	**1.76**	**143**		**Pn**	**01 43 07.0**	**-0.5**
MNMC	**Minye Minye**	**2.40**	**156**		**Pn**	**01 43 17.4**	**+1.4**
LPAZ	**La Paz**	**2.48**	**76**	P	**Pn**	**01 43 19.6**	**+2.1**
	66nm,0.3s,baz=257,slow=12,SNR=1079						
LPAZ				S	**Sn**	**01 43 47.9**	**+1.1**
	baz=213,slow=13,SNR=1.3						
LPAZ				LR	LR	01 44 30.4	
	comp=Z,415nm,20.5s,baz=241,slow=46						
LPAZ	**La Paz**	**2.48**	**76**	i P	**Pn**	**01 43 19.4**	**+1.9**
LPAZ	**La Paz**	**2.48**	**76**		**Pn**	**01 43 18.9**	**+1.5**
PSGCX	**Pisagua**	**2.70**	**170**		**Pn**	**01 43 21.5**	**+1.6**
PB11	**IPOC Station P**	**2.97**	**162**		**Pn**	**01 43 25.1**	**+1.4**
GO01	**Chusmiza**	**3.05**	**154**		**Pn**	**01 43 27.4**	**+2.3**
PB08	**IPOC Station P**	**3.49**	**157**		**Pn**	**01 43 34.0**	**+2.9**
TA01	**Diego Aracena**	**3.64**	**173**		**Pn**	**01 43 34.8**	**+2.0**
PB01	**IPOC Station P**	**4.24**	**165**		**Pn**	**01 43 42.8**	**+1.7**
PB07	**IPOC Station P**	**4.83**	**172**		**Pn**	**01 43 50.1**	**+0.8**
PB09	**IPOC Station P**	**5.02**	**165**		**Pn**	**01 43 52.7**	**+0.8**
PB04	**IPOC Station P**	**5.40**	**175**	Pn	**Pn**	**01 43 58.9**	**+1.8**
PB06	**IPOC Station P**	**5.83**	**170**		**Pn**	**01 44 04.5**	**+1.3**
LVC	**Limon Verde**	**5.88**	**164**	P	**Pn**	**01 44 05.2**	**+1.3**
	2.4nm,0.3s,baz=332,slow=10,SNR=18						
LVC				S	**Sn**	**01 45 13.0**	**+2.6**
	0.3nm,0.3s,baz=258,slow=20,SNR=1.3						
PB15	**IPOC Station P**	**6.34**	**170**		**Pn**	**01 44 11.6**	**+1.4**
NNA	**Nana**	**7.76**	**308**	P	**Pn**	**01 44 30.7**	**+1.1**
	0.4nm,0.3s,baz=46,slow=4.1,SNR=1.4						
NNA				LR	LR	01 47 35.7	
	comp=Z,283nm,19.7s,baz=129,slow=38						
GO02	**Mina Guanaco**	**8.25**	**173**		**Pn**	**01 44 37.0**	**+0.5**
SIV	**San Ignacio**	**9.22**	**86**	P	**Pn**	**01 44 48.2**	**-1.3**
	2.1nm,0.3s,baz=286,slow=9.3,SNR=27						
SIV				LR	LR	01 48 43.1	
	comp=Z,181nm,18.2s,baz=230,slow=40						
PLCA	**Paso Flores**	**23.72**	**180**	P	**P**	**01 47 43.1**	**-4.7**
	0.8nm,0.5s,baz=302,slow=18,SNR=5.1						
TXAR	**Lajitas Array**	**55.97**	**325**	P	**P**	**01 52 14.1**	**+0.1**
	0.2nm,0.6s,baz=155,slow=9.0,SNR=2.3						
PDAR	**Pinedale Array**	**69.35**	**330**	P	**P**	**01 53 44.5**	**+1.2**
	0.2nm,0.4s,baz=129,slow=8.2,SNR=2.0						
NVAR	**Mina Array Bea**	**70.91**	**322**	P	**P**	**01 53 53.6**	**+0.7**
	0.4nm,0.7s,baz=155,slow=6.9,SNR=2.3						
TORD	**Torodi Ar. Bea**	**77.43**	**72**	P	**P**	**01 54 29.2**	**-2.0**
	1.6nm,0.9s,baz=288,slow=2.8,SNR=7.0						
TORD				LR	LR	02 26 45.1	
	comp=Z,72nm,19.8s,baz=205,slow=34						
TORD	**Torodi Ar. Bea**	**77.43**	**72**	P	**P**	**01 54 29.4**	**-1.7**
TORD				IAmb	IAmb	01 54 30.8	
	comp=Z,1.2nm,0.8s						
WRA	**Warramunga Arr**	**135.91**	**215**	PKP	**PKiKP**	**02 01 58.5**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=127,slow=2.8,SNR=2.0						
SONM	**Songino Array**	**149.08**	**4**	PKPbc	**PKiKP**	**02 02 25.1**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=335,slow=1.8,SNR=4.4						

*KRNET **01** 01:44:52.4±0.1, 45.°22N×79.°49E, mb3.2*
*NNC **01** 01:44:53.9±0.4, 44.°74N×79.°70E, h0km, mb4.0, mpv3.9, Error ellipse: s-maj=3.2km s-min=2.7km az=78.0*
*SOME **01** 01:44:53.6, 44.°77N×79.°78E, h20km*

ISC 01 01:44:55.1±0.9, 44.°71N±0.°03×79.°68E±0.°03, h10km, n52, σ1s21/85, 15C-11D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.38**	**168**	⇓i P	**Pg**	**01 45 02.2**	**-0.5**
	104nm,0.2s						
DJR				⇓i S	**Sg**	**01 45 08.0**	**+0.2**
	253nm,0.2s						
DJR	**Jarkent**	**0.38**	**168**	P	**Pg**	**01 45 02.2**	**-0.5**
	104nm,0.2s						
DJR				S	**Sg**	**01 45 07.9**	**+0.2**
	253nm,0.2s						
TDK	**Taldyqorghan**	**0.96**	**289**	eP	**Pg**	**01 45 12.3**	**-1.3**
	98nm,0.1s						
TDK				eS	**Sg**	**01 45 25.6**	**-0.4**
	285nm,0.3s						
TDK	**Taldyqorghan**	**0.96**	**289**	P	**Pg**	**01 45 12.3**	**-1.3**
	98nm,0.1s						
TDK				S	**Sg**	**01 45 25.6**	**-0.4**
	285nm,0.3s						
MNBS	**Baschi**	**1.11**	**236**	eP	**Pb**	**01 45 15.1**	**-1.5**
	91nm,0.1s						
MNBS				eS	**Sg**	**01 45 30.4**	**-0.5**
	149nm,0.3s						
MNBS	**Baschi**	**1.11**	**236**	P	**Pb**	**01 45 15.1**	**-1.5**
	91nm,0.1s						
MNBS				S	**Sg**	**01 45 30.4**	**-0.5**
	149nm,0.3s						
PDGK	**Podgornoye**	**1.38**	**186**	P	**Pn**	**01 45 20.3**	**-0.4**
	12nm,0.2s						
PDGK				S	**Sn**	**01 45 39.3**	**+0.3**
	86nm,0.4s						
PDGK	**Podgornoye**	**1.38**	**186**	⇑P	**Pn**	**01 45 20.2**	**-0.4**
	6.5nm,0.3s						
PDGK				⇑S	**Sn**	**01 45 39.3**	**+0.3**
	165nm,0.7s						
ARXS	**Arharly**	**1.42**	**250**	eP	**Pb**	**01 45 21.1**	**-0.6**
	257nm,0.2s						
ARXS				eS	**Sg**	**01 45 40.7**	**0.0**
	145nm,0.2s						
ARXS	**Arharly**	**1.42**	**250**	P	**Pb**	**01 45 21.1**	**-0.6**
	257nm,0.2s						
ARXS				S	**Sg**	**01 45 40.7**	**0.0**
	145nm,0.2s						
KPKS	**Kokpek**	**1.43**	**211**	eP	**Pb**	**01 45 21.8**	**-0.2**
	127nm,0.1s						
KPKS				eS	**Sg**	**01 45 42.0**	**+0.7**
	288nm,0.2s						
SHLS	**Shalkode**	**1.56**	**186**	eP	**Pn**	**01 45 23.0**	**0.0**
	27nm,0.2s						
SHLS				eS	**Sb**	**01 45 44.0**	**+0.1**
	145nm,0.3s						
SHLS	**Shalkode**	**1.56**	**186**	P	**Pn**	**01 45 23.0**	**0.0**
	27nm,0.2s						
SHLS				S	**Sb**	**01 45 44.0**	**+0.1**
	145nm,0.3s						
UZB	**Uzynbulak**	**1.63**	**197**	eP	**Pb**	**01 45 24.8**	**-0.6**
	31nm,0.2s						
UZB				eS	**Sg**	**01 45 47.0**	**-0.5**
	447nm,0.2s						
UZB	**Uzynbulak**	**1.63**	**197**	P	**Pb**	**01 45 24.8**	**-0.6**
	31nm,0.2s						
UZB				S	**Sg**	**01 45 47.0**	**-0.5**
	447nm,0.2s						
KURS	**Kuram**	**1.63**	**222**	eP	**Pb**	**01 45 25.1**	**-0.3**
	56nm,0.3s						
KURS				eS	**Sg**	**01 45 47.6**	**-0.1**
	150nm,0.4s						
KURS	**Kuram**	**1.63**	**222**	P	**Pb**	**01 45 25.1**	**-0.3**
	56nm,0.3s						
KURS				S	**Sg**	**01 45 47.6**	**-0.1**
	150nm,0.4s						
ZHN	**Zhinishke**	**1.78**	**211**	eP	**Pb**	**01 45 27.8**	**-0.1**
	55nm,0.3s						
ZHN				eS	**Sg**	**01 45 52.3**	**-0.1**
	173nm,0.2s						
ZHN	**Zhinishke**	**1.78**	**211**	P	**Pb**	**01 45 27.8**	**-0.1**
	55nm,0.3s						
ZHN				S	**Sg**	**01 45 52.3**	**-0.1**
	173nm,0.2s						
SATY	**Saty**	**1.89**	**210**	eP	**Pb**	**01 45 29.7**	**-0.1**
	57nm,0.2s						
SATY				eS	**Sg**	**01 45 55.9**	**+0.1**
	280nm,0.2s						
SATY	**Saty**	**1.89**	**210**	Pg	**Pb**	**01 45 30.1**	**+0.3**
	57nm,0.2s						
SATY				Lg	Lg	01 45 56.1	
	280nm,0.2s						
KOTS	**Kotyrbulak**	**2.37**	**233**	eP	**Pb**	**01 45 38.9**	**+0.9**
	63nm,0.3s						
KOTS				eS	**Sg**	**01 46 11.3**	**+0.1**
	574nm,0.3s						
KOTS	**Kotyrbulak**	**2.37**	**233**	Pg	**Pb**	**01 45 38.9**	**+0.9**
	63nm,0.3s						
KOTS				Lg	Lg	01 46 11.3	
	574nm,0.3s						
KTBS	**Karatobe**	**2.38**	**246**	eP	**Pb**	**01 45 38.3**	**+0.2**
	13nm,0.3s						
KTBS				eS	**Sg**	**01 46 10.2**	**-1.2**
	219nm,0.3s						
KTBS	**Karatobe**	**2.38**	**246**	Pg	**Pb**	**01 45 38.3**	**+0.2**
	13nm,0.3s						
KTBS				Lg	Lg	01 46 10.2	
	219nm,0.3s						
PRZ	**Przheval'sk**	**2.41**	**203**	⇑i P	**Pb**	**01 45 38.4**	**-0.3**
	baz=96						
PRZ				⇑i S	**Sg**	**01 46 11.9**	**-0.6**
	baz=96						
ANVS	**Anan'yevo**	**2.41**	**218**	⇑eP	**Pb**	**01 45 37.2**	**-1.6**
	baz=9.0						
ANVS				⇑i S	**Sb**	**01 46 10.1**	**+1.4**
	baz=9.0						
MDOK	**Medeo**	**2.45**	**232**	eP	**Pb**	**01 45 40.2**	**+0.8**
	18nm,0.4s						
MDOK				eS	**Sg**	**01 46 13.5**	**-0.3**
	107nm,0.5s						
MDOK	**Medeo**	**2.45**	**232**	Pg	**Pb**	**01 45 40.2**	**+0.8**
	18nm,0.4s						
MDOK				Lg	Lg	01 46 13.5	
	107nm,0.5s						
KNDC	**Almaty**	**2.46**	**234**	⇑Pg	**Pb**	**01 45 39.0**	**-0.5**
	40nm,0.5s						
KNDC				⇑Lg	Lg	01 46 14.6	
	96nm,0.3s						
AAA	**Alma-Ata**	**2.50**	**234**	eP	**Pb**	**01 45 40.6**	**+0.5**
	77nm,0.2s						
AAA				eS	**Sg**	**01 46 14.7**	**-0.7**
	153nm,0.2s						
AAA	**Alma-Ata**	**2.50**	**234**	Pg	**Pb**	**01 45 40.6**	**+0.5**
	77nm,0.2s						
AAA				Lg	Lg	01 46 15.0	
	153nm,0.2s						
KUU	**Kurty**	**2.54**	**252**	eP	**Pb**	**01 45 40.4**	**-0.4**
	18nm,0.3s						
KUU				eS	**Sb**	**01 46 13.8**	**+1.8**
	64nm,0.3s						
KUU	**Kurty**	**2.54**	**252**	Pg	**Pb**	**01 45 40.4**	**-0.4**
	18nm,0.3s						
KUU				Lg	Lg	01 46 13.8	
	64nm,0.3s						
TNSS	**Tian-Shan**	**2.59**	**231**	eP	**Pb**	**01 45 41.5**	**-0.4**
	15nm,0.4s						
TNSS				eS	**Sb**	**01 46 15.7**	**+1.8**
	26nm,0.3s						
TNSS	**Tian-Shan**	**2.59**	**231**	Pg	**Pb**	**01 45 41.5**	**-0.4**
	15nm,0.4s						
TNSS				Lg	Lg	01 46 15.7	
	26nm,0.3s						
MAKZ	**Makanchi**	**2.65**	**37**	⇓Pn	**Pn**	**01 45 38.5**	**+0.6**
	3.3nm,0.5s						
MAKZ				⇓Lg	Lg	01 46 13.5	
	43nm,0.6s						
MK31	**Makanchi Array**	**2.77**	**40**	⇓Pn	**Pn**	**01 45 39.8**	**+0.2**
	1.3nm,0.2s,baz=215,slow=15,SNR=81						
MK31				⇑Lg	Lg	01 46 17.0	
	3.1nm,0.2s,baz=218,slow=25,SNR=19						
KRBS	**Karabastau**	**3.06**	**252**	eP	**Pb**	**01 45 49.3**	**-0.3**
	12nm,0.4s						
KRBS				eS	**Sb**	**01 46 29.2**	**+2.2**
	23nm,0.3s						
KRBS	**Karabastau**	**3.06**	**252**	Pg	**Pb**	**01 45 49.3**	**-0.3**
	12nm,0.4s						
KRBS				Lg	Lg	01 46 29.2	
	23nm,0.3s						
KDJ	**Kajisay**	**3.15**	**216**	⇓i P	**Pn**	**01 45 47.7**	**+2.7**
	baz=9.0						
KDJ				⇓i S	**Sb**	**01 46 27.7**	**-2.3**
	baz=9.0						
KST	**Kastek**	**3.16**	**240**	eP	**Pb**	**01 45 50.8**	**-0.7**
	16nm,0.3s						
KST				eS	**Sb**	**01 46 31.6**	**+1.4**
	21nm,0.4s						
KST	**Kastek**	**3.16**	**240**	Pg	**Pb**	**01 45 52.4**	**+0.9**
	16nm,0.3s						
KST				Lg	Lg	01 46 34.4	
TKM2	**Tokmak 2**	**3.46**	**240**	⇓Pg	**Pb**	**01 45 58.6**	**+2.1**
	5.4nm,0.5s						
TKM2				⇑Lg	Lg	01 46 45.0	
	10nm,0.5s						
BOOM	**Boomskoye usch**	**3.51**	**232**	⇑eP	**Pn**	**01 45 51.2**	**+1.3**
	baz=25						
BOOM				⇑i S	**Sn**	**01 46 33.6**	**+2.1**
	baz=25						
SGDS	**Sogindy**	**3.85**	**253**	Pg	**Pb**	**01 46 03.7**	**+0.5**
	14nm,0.3s						
SGDS				Lg	Lg	01 46 53.8	
	10nm,0.4s						
ZSN	**Zaisan**	**4.53**	**51**	Pg	**Pb**	**01 46 12.1**	**-2.7**
	7.1nm,0.3s						
ZSN				Lg	Lg	01 47 08.9	
	6.9nm,0.2s						
MRKS	**Merke**	**5.07**	**250**	eP	**Pb**	**01 46 26.8**	**+2.8**
	5.6nm,0.4s						
MRKS				eS	**Sg**	**01 47 33.4**	**-4.6**
	7.5nm,0.7s						
MRKS	**Merke**	**5.07**	**250**	Pg	**Pb**	**01 46 26.8**	**+2.8**
	5.6nm,0.4s						
MRKS				Lg	Lg	01 47 33.4	
	7.5nm,0.7s						
KURBB	**Kurchatov Arra**	**5.97**	**353**	⇓Pg	**Pb**	**01 46 40.2**	**+1.0**
	1.2nm,0.3s						
KURBB				⇑Lg	Lg	01 48 02.1	
	17nm,0.6s						
KURK	**Kurchatov**	**6.06**	**354**	⇑Pg	**Pb**	**01 46 41.9**	**+1.3**
	2.8nm,1.0s						
KURK				⇑Lg	Lg	01 48 03.0	
	11nm,0.8s						
KK31	**Karatay Array**	**6.82**	**260**	⇓Pg	**Pg**	**01 47 02.1**	**-3.5**
	0.7nm,0.5s,baz=76,slow=16,SNR=5.3						
KK31				⇓Lg	Lg	01 48 32.9	
	2.8nm,0.6s,baz=70,slow=25,SNR=6.4						

*NEIC **01** 02:06:14.0±1.4, 22.°81S±0.°09×63.°73W±0.°10, h525km±6km, mb4.5/204, Error ellipse: s-maj=13.4km s-min=12.9km az=205.0*
*VAO **01** 02:06:14.3±0.2, 22.°76S×63.°74W, h531km±3km, mb5.0*
*IDC **01** 02:06:14.8±0.8, 22.°73S×63.°65W, h526km±7km, mb4.2/14, mb1 4.4/21, mb1mx4.3/28, mbtmp5.2/21, Error ellipse: s-maj=11.8km s-min=9.1km az=44.0*

ISC 01 02:06:15.7±0.3, 22.°80S±0.°04×63.°84W±0.°05, h550km, n562, σ1s75/529, mb4.5/121, 3C-18D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**2.45**	**218**	⇓i P	**P**	**02 07 25.3**	**-2.4**
SLA				i S	**S**	**02 08 17.8**	**-8.7**
LVC	**Limon Verde**	**4.69**	**271**	P	**P**	**02 07 41.0**	**-2.5**
	138nm,0.3s,baz=96,slow=5.5,SNR=1098						
LVC				S	**S**	**02 08 48.1**	**-6.8**
	63nm,0.3s,baz=156,slow=20,SNR=18						
LVC	**Limon Verde**	**4.69**	**271**		**P**	**02 07 40.8**	**-2.6**
LVC	**Limon Verde**	**4.69**	**271**	eP	**P**	**02 07 40.8**	**-2.6**
PB09	**IPOC Station P**	**5.10**	**280**	⇓i P	**P**	**02 07 44.7**	**-2.0**
PB09	**IPOC Station P**	**5.10**	**280**	P	**P**	**02 07 44.1**	**-2.6**
PB15	**IPOC Station P**	**5.21**	**264**	⇓i P	**P**	**02 07 44.9**	**-2.7**
PB15				i S	**S**	**02 08 56.4**	**-6.1**
PB15	**IPOC Station P**	**5.21**	**264**	P	**P**	**02 07 44.5**	**-3.0**
PB06	**IPOC Station P**	**5.29**	**270**	⇓i P	**P**	**02 07 45.6**	**-2.7**
PB06	**IPOC Station P**	**5.29**	**270**	P	**P**	**02 07 45.7**	**-2.7**
PB03	**IPOC Station P**	**5.52**	**277**	⇑i P	**P**	**02 07 47.8**	**-2.5**
PB03				⇓i P	**P**	**02 07 47.8**	**-2.5**
PB01	**IPOC Station P**	**5.53**	**287**	⇓i P	**P**	**02 07 48.0**	**-2.2**
PB01				i S	**S**	**02 09 01.3**	**-6.2**
PB01	**IPOC Station P**	**5.53**	**287**	P	**P**	**02 07 48.2**	**-2.1**
PB08	**IPOC Station P**	**5.61**	**297**	⇓i P	**P**	**02 07 49.9**	**-1.5**
PB08				i S	**S**	**02 09 04.4**	**-5.0**
PB08	**IPOC Station P**	**5.61**	**297**	P	**P**	**02 07 49.9**	**-1.5**
PB07	**IPOC Station P**	**5.70**	**280**	⇓i P	**P**	**02 07 49.5**	**-2.3**
PB07				i S	**S**	**02 09 04.0**	**-6.4**
PB07	**IPOC Station P**	**5.70**	**280**	P	**P**	**02 07 49.6**	**-2.3**
GO02	**Mina Guanaco**	**5.76**	**245**	⇓i P	**P**	**02 07 50.2**	**-2.3**
GO02				i S	**S**	**02 09 07.9**	**-3.8**
GO02	**Mina Guanaco**	**5.76**	**245**		**P**	**02 07 50.4**	**-2.2**
PB04	**IPOC Station P**	**5.85**	**273**	⇓i P	**P**	**02 07 50.6**	**-2.6**
PB04	**IPOC Station P**	**5.85**	**273**		**P**	**02 07 50.5**	**-2.8**
PB05	**IPOC Station P**	**5.87**	**268**	⇓i P	**P**	**02 07 50.6**	**-2.7**
GO01	**Chusmiza**	**5.89**	**301**	P	**P**	**02 07 52.5**	**-1.5**
PB11	**IPOC Station P**	**6.21**	**298**	⇓i P	**P**	**02 07 54.5**	**-2.1**
PB11				i S	**S**	**02 09 13.4**	**-5.5**
PB11	**IPOC Station P**	**6.21**	**298**		**P**	**02 07 54.4**	**-2.1**
AC02	**Maricunga**	**6.27**	**229**		**P**	**02 07 54.6**	**-2.7**
PB14	**IPOC Station P**	**6.29**	**252**	⇓i P	**P**	**02 07 55.2**	**-2.1**
PB14				i S	**S**	**02 09 16.1**	**-4.3**
PB14	**IPOC Station P**	**6.29**	**252**		**P**	**02 07 55.2**	**-2.1**
TA01	**Diego Aracena**	**6.30**	**289**	⇓i P	**P**	**02 07 55.1**	**-2.1**
TA01				i S	**S**	**02 09 14.3**	**-5.8**
TA01	**Diego Aracena**	**6.30**	**289**		**P**	**02 07 55.1**	**-2.1**
MNMC	**Minye Minye**	**6.50**	**303**	⇑i P	**P**	**02 07 57.9**	**-1.5**
MNMC	**Minye Minye**	**6.50**	**303**	P	**P**	**02 07 57.9**	**-1.5**
PSGC	**Pisagua**	**6.67**	**297**	⇓i P	**P**	**02 07 58.5**	**-2.3**
PSGC				i S	**S**	**02 09 20.6**	**-6.1**
PSGCX	**Pisagua**	**6.67**	**297**		**P**	**02 07 58.2**	**-2.6**
CPUP	**Villa Florida**	**6.89**	**122**	P	**P**	**02 08 01.0**	**-1.6**
	45nm,0.3s,baz=314,slow=9.0,SNR=793						
CPUP				S	**S**	**02 09 26.9**	**-3.3**
	baz=288,slow=20,SNR=1.1						
CPUP				ScP	**ScP**	**02 16 28.3**	**+3.3**
	0.1nm,0.3s,baz=356,slow=4.6,SNR=2.8						
CPUP	**Villa Florida**	**6.89**	**122**	P	**P**	**02 08 00.4**	**-2.2**
CPUP	**Villa Florida**	**6.89**	**122**	eP	**P**	**02 08 01.2**	**-1.4**
PB16	**IPOC Station P**	**6.92**	**309**	⇑i P	**P**	**02 08 02.9**	**-0.8**
PB16				i S	**S**	**02 09 28.4**	**-3.5**
PB16	**IPOC Station P**	**6.92**	**309**		**P**	**02 08 02.4**	**-1.3**
AC01	**Pan de Azucar**	**7.00**	**240**		**P**	**02 08 02.2**	**-1.5**
VCA	**Vinchina**	**7.11**	**213**	⇓i P	**P**	**02 08 02.4**	**-2.4**
VCA				i S	**S**	**02 09 28.7**	**-5.5**
SIV	**San Ignacio**	**7.25**	**22**	P	**P**	**02 08 04.5**	**-1.8**
	14nm,0.3s,baz=211,slow=8.7,SNR=138						
SIV				S	**S**	**02 09 33.3**	**-3.5**
	2.0nm,0.3s,baz=240,slow=17,SNR=6.8						
LPAZ	**La Paz**	**7.63**	**327**	P	**P**	**02 08 09.7**	**-0.9**
	58nm,0.3s,baz=107,slow=4.9,SNR=1256						
LPAZ				S	**S**	**02 09 40.5**	**-4.1**
	7.3nm,0.3s,baz=65,slow=25,SNR=7.1						
LPAZ				ScP	**ScP**	**02 16 29.6**	**+3.0**
	0.2nm,0.3s,baz=194,slow=3.3,SNR=7.4						
LPAZ	**La Paz**	**7.63**	**327**	P	**P**	**02 08 09.5**	**-1.1**
LPAZ					**ScP**	**02 16 30.1**	**+3.5**
LPAZ	**La Paz**	**7.63**	**327**	eP	**P**	**02 08 09.8**	**-0.9**
LPAZ				eS	**S**	**02 09 40.8**	**-3.8**
AC04	**Llanos de Chal**	**8.47**	**229**	P	**P**	**02 08 17.0**	**-1.0**
PTLB	**Pontes e Lacer**	**8.55**	**32**	eP	**P**	**02 08 19.0**	**-0.1**
PTLB				eS	**S**	**02 09 58.2**	**-2.0**
LCO	**Las Campanas**	**8.74**	**224**	P	**P**	**02 08 20.1**	**-1.0**
ITQB	**Itaqui**	**9.42**	**138**	eP	**P**	**02 08 26.6**	**-1.1**
ITQB				eS	**S**	**02 10 13.8**	**-2.3**
TRCB	**Terra Rica**	**10.34**	**92**	eP	**P**	**02 08 35.6**	**-1.6**
TRCB				eS	**S**	**02 10 30.3**	**-3.2**
VILB	**Vilhena**	**10.38**	**20**	eP	**P**

SMTB Santa Maria do 20.86 51 eP P 02 10 19.3 -0.5
ATAH Atahualpa 20.95 316 P P 02 10 23.1 +2.0
comp=Z,10nm,0.5s,baz=138,slow=9.6,SNR=11
PRPB Paraupebas 21.35 41 eP P 02 10 23.1 -1.1
SJMB Sao Joao De Ma 21.57 83 eP P 02 10 24.9 -1.2
BSFB Barra de Sao F 21.84 84 eP P 02 10 27.4 -1.2
MALB Monte Alegre 22.80 25 eP P 02 10 35.9 -1.3
MCPB Macapa, AP 25.07 29 eP P 02 10 56.5 -0.8
TMAB Tom-Au,PA,Br 25.41 39 eP P 02 10 59.9 -0.4
PUAC Puerto Asis, P 26.31 330 eP P 02 11 08.9 +0.7
PAC1 Pacto, Paraso 27.16 326 eP P 02 11 16.7 +0.9
GCUF Volcan Galeras 27.26 329 eP P 02 11 17.3 +0.1
GARC Garzon, Huila 27.31 334 eP P 02 11 15.9 -1.4
ROSB Rosrio 27.50 47 eP P 02 11 17.8 -0.9
PCON Cinco Dias 27.82 332 eP P 02 11 21.7 -0.3
BBAC Balboa, Cauca 27.92 330 eP P 02 11 22.4 -0.2
PTGC Puerto Gaitan, 28.03 342 eP P 02 11 22.6 -0.6
POPC Popayan, Colom 28.13 332 eP P 02 11 24.3 -0.1
PRAC Prado 28.47 336 eP P 02 11 25.5 -1.7
ORTC Ortega, Tolima 28.79 336 eP P 02 11 28.8 -1.1
CHIC Chingaza 28.92 339 eP P 02 11 30.4 -1.1
YOTC Yotoco, Valle 29.29 334 eP P 02 11 32.3 -2.1
ROSC El Rosal 29.32 338 P P 02 11 35.3 +0.4
comp=Z,25nm,0.4s,baz=78,slow=7.5,SNR=10
ROSC El Rosal 29.32 338 P P 02 11 35.6 +0.7
TOLC Tolima 29.44 336 eP P 02 11 34.1 -1.8
RREF El Recreo 29.74 336 eP P 02 11 34.1 -4.8
MDP Montagnes des 29.81 23 P P 02 11 38.1 -0.6
comp=Z,69nm,0.6s,baz=200,slow=9.3,SNR=130
RUSC La Rusia 29.91 341 eP P 02 11 39.3 -0.9
SPBC San Pablo de B 29.99 339 eP P 02 11 38.8 -1.6
GUY2C Guyana, Caldas 30.04 337 eP P 02 11 40.4 -0.8
TAMC Tame, Arauca 30.08 344 eP P 02 11 39.4 -1.6
BARC Barichara 30.61 342 eP P 02 11 44.0 -1.8
CBOC Ciudad Bolivar 30.87 336 eP P 02 11 46.4 -1.7
PTBC PUERTO BERRIO, 30.95 339 eP P 02 11 45.3 -3.2
HELC Santa Helena 31.00 337 eP P 02 11 47.5 -1.8
PAMC Pamplona, Colo 31.18 343 eP P 02 11 49.8 -1.2
BRRC Barranca, Sant 31.25 341 eP P 02 11 48.1 -3.0
RCBR Riachuelo 31.79 62 P P 02 11 55.0 -0.8
DBBC Dabeiba 32.01 336 eP P 02 11 55.4 -2.2
SDV Santo Domingo 32.18 347 eP P 02 11 57.6 -1.6
SDV Santo Domingo 32.18 347 P P 02 11 58.1 -1.1
SDV Santo Domingo 32.18 347 eP P 02 11 57.9 -1.4
UREC San Jos de Ur 32.45 338 eP P 02 11 58.8 -2.5
MOTC Monteria, Cord 33.45 338 eP P 02 12 07.6 -2.1
SJCC San Jacinto, C 34.34 340 eP P 02 12 15.4 -1.9
URIC Uribia, Colomb 35.20 346 eP P 02 12 20.4 -3.9
JTS Las Juntas de 38.85 326 P P 02 12 54.3 0.0
SKI Saint Kitts 39.90 2 P P 02 13 01.9 -0.8
PDPR Patillas Dam, 40.62 357 IAmb IAmb 02 13 09.1
comp=Z,12nm,0.8s
MLPR Magueyes Islan 40.64 355 P P 02 13 07.7 -0.8
MPR Mayaguez 40.88 355 P P 02 13 07.8 -2.7
AOPR Arecibo Observ 40.99 356 IAmb IAmb 02 13 10.4
comp=Z,21nm,0.8s
SDDR Presa de Saban 42.16 349 P P 02 13 20.2 -0.4
SDDR IAmb IAmb 02 13 22.7
comp=Z,13nm,1.2s
TGUH Tegucigalpa,Un 43.22 326 P P 02 13 29.5 +0.4
TGUH IAmb IAmb 02 13 29.7
comp=Z,21nm,0.8s
PETF Flores 46.97 325 P P 02 13 57.8 +0.2
CCIG Comitan 47.70 322 P P 02 14 03.0 -0.3
CCIG IAmb IAmb 02 14 04.0
comp=Z,20nm,0.8s
TEIG Tepich 48.96 329 P P 02 14 12.2 -0.2
TLIG Tlapa 52.56 317 P P 02 14 38.9 +0.2
158A Hollywood 57.39 344 P P 02 15 13.1 +1.1
baz=162
VNA1 Neumayer--Stat 57.51 161 P P 02 15 14.6 +2.2
157A Early Branch 57.55 343 P P 02 15 14.6 +1.6
baz=161
352A Blakely 57.63 339 IAmb IAmb 02 15 14.5
comp=Z,31nm,0.8s
NHSC New Hope 57.73 344 P P 02 15 15.2 +0.9
baz=162
Z58A St. Stephen 57.86 344 P P 02 15 15.8 +0.7
baz=162
VNA2 Neumayer--Watz 57.89 161 P P 02 15 16.4 +1.4
Z57A Bowman 58.05 343 P P 02 15 17.0 +0.5
baz=162
X60A Albert Glenn T 58.62 346 P P 02 15 21.0 +0.7
baz=165
Y57A Sumter 58.65 344 P P 02 15 21.0 +0.5
baz=162
X59A McDuffie Farm, 58.75 346 P P 02 15 20.9 -0.2
baz=164
X58A Rowland 58.91 345 P P 02 15 22.6 +0.4
baz=163
ZAIG Zacatecas 58.92 318 P P 02 15 24.0 +1.1
ZAIG IAmb IAmb 02 15 26.1
comp=Z,19nm,1.1s
GOGA Godfrey 58.94 341 P P 02 15 22.5 0.0
baz=159
X57A Johnson Farm, 59.00 344 P P 02 15 23.2 +0.3
baz=162
W60A Pink Hill 59.02 347 P P 02 15 23.2 +0.3
baz=165
X56A White Oak 59.27 343 P P 02 15 25.2 +0.5
baz=162
W58A Raeford 59.33 345 P P 02 15 25.1 +0.1
baz=163
X55A Gracelyn & Ava 59.41 343 P P 02 15 26.1 +0.5
baz=161
SNAA Sanae 59.54 161 P P 02 15 27.0 +1.0
SNAA Sanae 59.54 161 P P 02 15 25.6 -0.4
W57A Gilead 59.63 345 P P 02 15 27.3 +0.2
baz=163
X54A Belton 59.69 342 P P 02 15 28.0 +0.6
baz=160
LRAL Lakeview Retre 59.76 338 P P 02 15 27.7 -0.3
baz=155
LRAL Lakeview Retre 59.76 338 IAmb IAmb 02 15 28.0
comp=Z,8.2nm,0.5s
W56A Indian Trail 59.76 344 P P 02 15 28.2 +0.3
baz=162
V59A Middlesex 59.82 346 P P 02 15 28.5 +0.2
baz=165
KMSC Kings Mountain 59.96 343 P P 02 15 29.9 +0.6
baz=161
V58A Windy Hill, Pi 60.04 346 P P 02 15 29.9 +0.1
baz=164
W54A Cherokee Point 60.14 343 P P 02 15 31.4 +0.9
baz=160,SNR=7.9
U60A Pendleton 60.28 348 P P 02 15 31.4 +0.1
baz=166
V57A Coltrane Farms 60.28 345 P P 02 15 31.3 -0.1
baz=163
U59A Littleton 60.29 347 P P 02 15 31.5 +0.1
baz=165
Y49A Blount Mountai 60.30 338 IAmb IAmb 02 15 32.1
comp=Z,18nm,0.7s
V56A Mocksville 60.38 344 P P 02 15 32.9 +0.8
baz=162
X51A Calhoun 60.44 340 IAmb IAmb 02 15 33.2
comp=Z,14nm,0.8s
U58A Oxford 60.49 346 P P 02 15 33.2 +0.5
baz=164
V55A Taylorsville 60.60 344 P P 02 15 34.5 +1.0
baz=162,SNR=6.2
V55A Taylorsville 60.60 344 IAmb IAmb 02 15 34.6
comp=Z,16nm,0.5s
U57A Blanch 60.70 346 P P 02 15 34.4 +0.3
baz=164
V54A Nebo 60.73 343 P P 02 15 35.0 +0.6
baz=161,SNR=5.5
HKT Hockley 60.80 328 P P 02 15 35.5 +0.7
T59A Double "B" Far 60.84 347 P P 02 15 35.4 +0.4
baz=166
U56A King 60.87 345 P P 02 15 36.2 +1.0
baz=162,SNR=5.7
X48A Hartselle 61.06 338 IAmb IAmb 02 15 37.3
comp=Z,16nm,0.8s
T57A Hurt 61.22 346 P P 02 15 38.0 +0.5
baz=164
833A Chaparral WMA, 61.31 324 P P 02 15 39.7 +1.4
baz=142,SNR=10
SWET Sewanee 61.38 339 IAmb IAmb 02 15 39.0
comp=Z,18nm,1.1s
U54A Nelsons Funny 61.39 344 P P 02 15 39.2 +0.4
baz=161
U54A Nelsons Funny 61.39 344 IAmb IAmb 02 15 40.0
comp=Z,15nm,0.7s
T56A Rocky Mt 61.43 345 P P 02 15 39.5 +0.6
baz=163
S59A Mechanicsville 61.55 348 P P 02 15 40.1 +0.5
baz=166
T55A Pulaski 61.70 345 P P 02 15 41.6 +1.0
baz=162
BLA Blacksburg 61.70 345 P P 02 15 41.6 +0.9
baz=163
T54A Tazewell 61.84 344 P P 02 15 42.1 +0.5
baz=161
R58B Mineral 61.86 347 P P 02 15 42.3 +0.7
baz=165
OXF Oxford 61.96 336 P P 02 15 41.9 -0.5
baz=153
CBN Corbin Frederi 61.99 348 P P 02 15 43.2 +0.6
baz=166
T53A Wise 62.02 343 P P 02 15 43.0 +0.2
baz=160
V48A Smith Brothers 62.15 339 IAmb IAmb 02 15 43.6
comp=Z,11nm,0.6s
R58A Rapidan 62.21 347 P P 02 15 44.4 +0.5
baz=165
S55A Lewisburg 62.25 345 P P 02 15 45.1 +0.8
baz=163
CLTN Cedars of Leba 62.31 340 IAmb IAmb 02 15 45.0
comp=Z,15nm,0.6s
R57A Stanardsville 62.31 347 P P 02 15 45.5 +0.9
baz=165
S54A Dingess, Beckl 62.47 344 P P 02 15 46.3 +0.6
baz=162
Q60A Greensboro 62.49 349 P P 02 15 46.8 +1.1
baz=168
R55A Marlinton 62.65 346 P P 02 15 48.0 +1.2
baz=163
R54A Victor 62.76 345 P P 02 15 48.2 +0.7
baz=162
Q58A Fox Den Farm, 62.77 348 P P 02 15 48.2 +0.7
baz=166
WVT Waverly 62.85 338 P P 02 15 47.5 -0.6
baz=155
WVT Waverly 62.85 338 P P 02 15 47.4 -0.6
Q57A Strasburg 63.00 347 P P 02 15 50.4 +1.4
baz=165
R53A Hurricane 63.14 344 P P 02 15 50.5 +0.6
baz=161
Q56A Snyder Ridge, 63.17 347 P P 02 15 51.3 +1.2
baz=164
P59A Jarrettsville 63.19 349 P P 02 15 51.5 +1.3
baz=167,SNR=5.2
JCT Junction City 63.23 325 P P 02 15 51.7 +1.0
baz=143,SNR=8.9
JCT Junction City 63.23 325 IAmb IAmb 02 15 52.5
comp=Z,19nm,0.6s
WHTX Lake Whitney, 63.26 328 P P 02 15 51.6 +0.7
baz=145
Q55A Buckhannon 63.32 346 P P 02 15 52.4 +1.3
baz=163
O61A Allentown 63.36 351 P P 02 15 52.5 +1.2
baz=169
P57A Homestead Farm 63.36 348 P P 02 15 52.9 +1.6
baz=165
P57A Homestead Farm 63.36 348 IAmb IAmb 02 15 53.2
comp=Z,13nm,0.7s
T47A Sharon Grove 63.38 339 IAmb IAmb 02 15 52.0
comp=Z,17nm,0.6s
Q54A Coxs Mills 63.48 345 P P 02 15 52.6 +0.5
baz=162
Q53A Leroy 63.53 345 P P 02 15 53.2 +0.7
baz=162
P56A Dayton Farm, R 63.54 347 P P 02 15 53.2 +0.7
baz=164
W41B Gary Mavity, V 63.64 334 P P 02 15 52.7 -0.5
baz=151
MIAR Mount Ida 63.64 333 P P 02 15 53.4 +0.2
baz=149
MIAR Mount Ida 63.64 333 IAmb IAmb 02 15 54.3
comp=Z,33nm,1.8s
O60A Telford 63.71 350 P P 02 15 54.7 +1.2
baz=168
P55A Reedsville 63.76 346 P P 02 15 54.9 +1.0
baz=164
O58A Lewisberry 63.77 349 P P 02 15 55.0 +1.0
baz=166
Q52A Bidwell 63.81 344 P P 02 15 54.8 +0.6
baz=161
MCWV Mont Chateau 63.90 346 P P 02 15 55.9 +1.1
baz=164
O57A Amberson 63.99 348 P P 02 15 56.4 +1.1
baz=166
P54A Burton 63.99 346 P P 02 15 56.0 +0.6
baz=163
LCAR Lake Charles 63.99 336 IAmb IAmb 02 15 56.0
comp=Z,7.4nm,0.6s
P53A Whipple 64.09 345 P P 02 15 56.9 +0.9
baz=162,SNR=5.3
FCAR Ozark Folk Cen 64.21 335 IAmb IAmb 02 15 57.2
comp=Z,12nm,0.5s
O56A Blue Knob Stat 64.22 348 P P 02 15 58.0 +1.2
baz=165
WCI Wyandotte Cave 64.26 340 P P 02 15 56.5 -0.6
baz=157
WCI Wyandotte Cave 64.26 340 P P 02 15 56.7 -0.3
W39A Magazine 64.29 333 P P 02 15 58.3 +0.9
baz=149
W39A Magazine 64.29 333 IAmb IAmb 02 15 58.9
comp=Z,8.0nm,0.5s
LIC Lamto 64.30 71 eP P 02 15 57.2 -0.7
comp=Z,29nm,0.3s
O55A Ligonier 64.31 347 P P 02 15 58.5 +1.0
baz=164
PBMO Poplar Bluff 64.35 337 IAmb IAmb 02 15 58.3
comp=Z,17nm,0.9s
P52A Corning 64.41 344 P P 02 15 58.3 +0.2
baz=161
P52A Corning 64.41 344 IAmb IAmb 02 15 58.9
comp=Z,15nm,0.8s
N58A Sunbury 64.43 349 P P 02 15 59.2 +1.1
baz=167
X37A Clayton 64.45 331 IAmb IAmb 02 17 35.8
comp=Z,7.6nm,0.7s
TXAR Lajitas Array 64.47 322 P P 02 15 59.7 +1.0
comp=Z,4.6nm,0.6s,baz=150,slow=8.6,SNR=54
TX31 Lajitas Ar. Si 64.47 322 IAmb IAmb 02 16 00.2
comp=Z,14nm,0.7s
N57A Milroy 64.50 348 P P 02 15 59.6 +1.1
baz=166
TIC Toumodi 64.51 70 eP P 02 15 58.5 -0.7
KIC Kosan Boka 64.62 71 eP P 02 15 59.5 -0.4
comp=Z,86nm,0.4s
DBIC Dimbokro 64.66 70 P P 02 16 00.1 0.0
comp=Z,35nm,0.4s,baz=217,slow=6.9,SNR=86
DBIC Dimbokro 64.66 70 P P 02 16 00.2 0.0
L63A North Scituate 64.73 354 P P 02 16 01.1 +1.1
baz=172
O53A New Philadelph 64.78 345 P P 02 16 00.8 +0.5
baz=162
N56A West Decatur 64.80 348 P P 02 16 01.6 +1.2
baz=165
N55A Mason Center 64.80 347 P P 02 16 01.7 +1.2
baz=164
ABTX Abilene, Hawle 64.86 327 P P 02 16 01.7 +0.7
baz=143
M59A Waymart 64.91 350 P P 02 16 02.2 +1.1
baz=168
U40A Yellville 64.91 334 P P 02 16 01.2 0.0
baz=150
U40A Yellville 64.91 334 IAmb IAmb 02 16 02.1
comp=Z,6.3nm,0.6s
M57A Sunshine Farm, 64.99 349 P P 02 16 02.9 +1.3
baz=166
P49A Miami Univ. Ec 65.00 342 P P 02 16 01.6 -0.1
baz=159
O51A Pataskala 65.02 344 P P 02 16 01.9 0.0
baz=161
L60A Shokan 65.17 351 P P 02 16 03.9 +1.1
baz=169
N54A Moraine State 65.18 347 P P 02 16 04.0 +1.1
baz=164
ACSO Alum Creek Sta 65.19 344 P P 02 16 03.2 +0.3
baz=160
ACSO Alum Creek Sta 65.19 344 IAmb IAmb 02 16 04.1
comp=Z,20nm,0.8s
HHAR Hobbs 65.28 334 IAmb IAmb 02 16 04.5
comp=Z,7.7nm,0.7s
MGMO Mountain Grove 65.37 335 IAmb IAmb 02 16 05.1
comp=Z,11nm,0.7s
L58A Harry Jones Me 65.46 350 P P 02 16 05.8 +1.2
baz=168
L57A Andrews Acres 65.58 349 P P 02 16 06.4 +1.0
baz=167
BINY Binghamton 65.64 350 P P 02 16 06.8 +1.1
baz=168
M54A Oil Creek Stat 65.64 347 P P 02 16 06.4 +0.7
baz=164
TUL1 Leonard 65.75 332 P P 02 16 07.1 +0.6
baz=148
CCM Cathedral Cave 65.78 337 P P 02 16 06.3 -0.3
baz=152
CCM Cathedral Cave 65.78 337 P P 02 16 06.3 -0.3
L56A Greenwood 65.84 349 P P 02 16 07.8 +0.8
baz=166
K58A Earlville 66.13 351 P P 02 16 09.8 +1.0
baz=168
WMOK Wichita Mounta 66.14 329 P P 02 16 09.4 +0.4
baz=145,SNR=5.3
WMOK Wichita Mounta 66.14 329 IAmb IAmb 02 18 41.0
comp=Z,21nm,1.9s
L53A Girard 66.19 347 P P 02 16 09.7 +0.6
baz=163
OK031 S. Brethren Rd 66.25 331 IAmb IAmb 02 16 10.7
comp=Z,14nm,0.9s
ERPA Erie 66.29 347 P P 02 16 10.3 +0.6
baz=164
R40A Maddies Statio 66.37 336 IAmb IAmb 02 16 10.6
comp=Z,11nm,0.6s
SFIN Lafayette 66.48 341 P P 02 16 10.4 -0.5
baz=157
J59A Piesco 66.66 352 P P 02 16 13.2 +1.2
baz=169,SNR=5.3
J58A Remsen 66.67 351 P P 02 16 13.1 +1.0
baz=168
I63A Otisfield 66.80 355 P P 02 16 14.4 +1.6
baz=173
I60A Shoreham 66.88 353 P P 02 16 14.4 +1.1
baz=170
I59A Olmsteadville 66.90 352 P P 02 16 14.5 +1.0
baz=170
T35A Sooner Cattle 66.91 332 IAmb IAmb 02 16 15.5
comp=Z,17nm,1.3s
I58A Old Forge 66.94 351 P P 02 16 14.7 +0.9
baz=169
LBNH Lisbon 67.12 354 P P 02 16 16.2 +1.4
baz=172
MNTX Cornudas Mount 67.21 322 P P 02 16 16.3 +0.6
baz=138,SNR=14
MNTX Cornudas Mount 67.21 322 IAmb IAmb 02 16 17.0
comp=Z,13nm,1.1s
H65A Eastbrook 67.28 357 P P 02 16 17.1 +1.4
baz=176
I57A Carthage 67.28 351 P P 02 16 16.8 +1.0
baz=168
HDIL Hopedale 67.33 339 P P 02 16 15.9 -0.3
baz=155
H63A New Sharon 67.37 355 P P 02 16 18.1 +1.9
baz=174
H62A Milan 67.37 354 P P 02 16 17.9 +1.6
baz=173
QSPA South Pole Qui 67.41 180 P P 02 16 16.9 +0.4
QSPA IAmb IAmb 02 16 19.1
comp=Z,7.0nm,0.8s
H61A Lyndonville 67.41 354 P P 02 16 18.1 +1.5
baz=172
MSTX Muleshoe 67.52 326 P P 02 16 18.6 +1.0
baz=141,SNR=21
H58A Gabriels 67.55 352 P P 02 16 18.6 +1.1
baz=170
H57A Richville 67.76 351 P P 02 16 19.4 +0.7
baz=168
G63A Kingsbury 67.79 356 P P 02 16 20.4 +1.5
baz=174
LONY Lake Ozonia 67.80 352 P P 02 16 19.7 +0.7
baz=169
G64A Maxfield 67.87 356 P P 02 16 20.2 +0.9
baz=175
PKME Peaks-Kenny Pk 67.91 356 P P 02 16 20.7 +1.1
baz=174
G62A West of Eustis 67.96 355 P P 02 16 21.1 +1.2
baz=173
G60A Masonville 68.01 354 P P 02 16 21.8 +1.6
baz=172
G59A Clarenceville 68.08 353 P P 02 16 21.2 +0.6
baz=171
G61A St-Isidore-de- 68.11 354 P P 02 16 22.2 +1.4
baz=172
G58A Ormstown 68.25 352 P P 02 16 22.5 +0.8
baz=170
G57A Newington 68.33 352 P P 02 16 23.2 +1.1
baz=169
H53A Bobcaygeon 68.39 349 P P 02 16 23.0 +0.5
baz=165
F64A Sherman 68.45 357 P P 02 16 23.9 +1.1
baz=176
HSIG 68.65 316 P P 02 16 25.3 +0.9
HSIG IAmb IAmb 02 16 27.1
comp=Z,21nm,1.4s
KSU1 Kansas State U 68.79 333 P P 02 16 25.3 +0.3
baz=148
E64A Bridgewater 68.98 357 P P 02 16 27.2 +1.2
baz=176
G54A Lake Saint Pet 69.10 349 P P 02 16 27.4 +0.6
baz=166
121A Cookes Peak, D 69.20 321 P P 02 16 30.5 +2.6
baz=137,SNR=6.6
121A Cookes Peak, D 69.20 321 IAmb IAmb 02 16 31.2
comp=Z,13nm,1.0s
319A Douglas 69.26 319 IAmb IAmb 02 16 31.3
comp=Z,19nm,0.9s
E62A Clayton Lake 69.28 356 P P 02 16 28.8 +1.0
baz=174
KOWA Kowa 69.30 64 P P 02 16 28.7 0.0
E57A Chemin Saint G 69.51 352 P P 02 16 30.1 +0.9
baz=170
D63A Stockholm 69.61 357 P P 02 16 30.8 +1.0
baz=176
ALGO Algonquin Park 69.63 349 P P 02 16 30.3 +0.4
baz=166
D62A Allapoint, All 69.71 356 P P 02 16 31.5 +1.1
baz=175
E56A St. Veronique 69.75 352 P P 02 16 31.2 +0.6
baz=169
JFWS Jewell Farm 69.77 340 P P 02 16 31.2 +0.4
baz=154
SCIA State Center 69.89 337 P P 02 16 32.2 +0.6
baz=151
CBKS Cedar Bluff 69.91 331 P P 02 16 33.5 +1.7
baz=145,SNR=5.6
D58A Chemin du LacG 70.04 353 P P 02 16 33.5 +1.1
baz=170,SNR=6.2
D56A ZEC Mazanza, M 70.21 352 P P 02 16 34.0 +0.6
baz=169
ANMO Albuquerque 70.23 324 P P 02 16 35.9 +1.8
baz=138
ANMO Albuquerque 70.23 324 P P 02 16 35.3 +1.2
ANMO IAmb IAmb 02 16 37.7
comp=Z,13nm,1.1s
D55A Sainte-Anne-du 70.28 352 P P 02 16 34.5 +0.7
baz=169
LATQ La Tuque 70.31 354 P P 02 16 34.9 +0.9
baz=171
T25A Trinidad 70.82 327 P P 02 16 39.3 +1.9
baz=141
TUC Tucson 70.82 319 P P 02 16 39.4 +2.0
baz=134
TUC Tucson 70.82 319 P P 02 16 37.8 +0.3
TUC IAmb IAmb 02 16 40.4
comp=Z,23nm,1.9s
BGNE Belgrade 71.37 333 P P 02 16 41.1 +0.8
baz=147,SNR=11
KSCO Kaye Shedlock' 71.41 329 P P 02 16 42.7 +1.9
baz=142
214A Organ Pipe Nat 71.82 318 P P 02 16 44.8 +1.6
baz=133
SDCO Great Sand Dun 71.84 326 P P 02 16 45.6 +2.0
baz=140,SNR=12
DRLN Deer Lake 71.95 4 P P 02 16 44.0 +0.5
W18A Petrified Fore 72.19 322 P P 02 16 47.6 +2.1
baz=136,SNR=6.9
W18A Petrified Fore 72.19 322 IAmb IAmb 02 16 48.6
comp=Z,16nm,1.1s
LSQQ Lebel-sur-Quev 72.48 351 P P 02 16 46.9 +0.3
baz=167
S22A 4UR Ranch, Cre 72.53 325 P P 02 16 49.3 +1.7
baz=139
Q24A Divide 72.59 327 P P 02 16 49.9 +2.0
baz=140,SNR=7.9
Q24A Divide 72.59 327 IAmb IAmb 02 16 50.8
comp=Z,12nm,0.8s

K31A	O'Neill	72.63	334	IAmb	IAmb	02 16 49.7
	comp=Z,30nm,1.1s					
SPMN	Marine on St.	72.66	339	P	P	02 16 48.1 +0.3
	baz=152					
SPMN	Marine on St.	72.66	339	IAmb	IAmb	02 16 48.4
	comp=Z,12nm,0.8s					
X16A	Lo Mia Camp, P	72.68	320	IAmb	IAmb	02 16 51.8
	comp=Z,14nm,1.1s					
ECSD	EROS Data Cent	72.72	336	P	P	02 16 48.5 +0.3
	baz=148,SNR=6.5					
ECSD	EROS Data Cent	72.72	336	IAmb	IAmb	02 16 49.0
	comp=Z,14nm,1.2s					
CHGQ	Chibougamau	72.98	353	P	P	02 16 50.2 +0.7
	baz=170					
MVCO	Mesa Verde	73.02	324	P	P	02 16 52.2 +1.9
	baz=137,SNR=5.9					
MVCO	Mesa Verde	73.02	324	IAmb	IAmb	02 16 53.4
	comp=Z,31nm,1.4s					
WUAZ	Wupatki	73.42	321	P	P	02 16 55.1 +2.7
	baz=135,SNR=5.4					
WUAZ	Wupatki	73.42	321	IAmb	IAmb	02 16 55.9
	comp=Z,11nm,0.9s					
TOA0	Torodi Ar. Sit	73.43	68	P	P	02 16 52.5 -0.2
TORD	Torodi Ar. Bea	73.43	68	P	P	02 16 52.5 -0.2
	comp=Z,48nm,0.5s,baz=262,slow=5.9,SNR=901					
TORD				pP	pP	02 18 44.5 -2.9
	comp=Z,2.9nm,0.7s,baz=250,slow=5.7,SNR=2.9					
TORD				S	S	02 25 36.4 -2.0
	comp=Z,1.3nm,1.1s,baz=244,slow=12,SNR=4.5					
TORD	Torodi Ar. Bea	73.43	68	P	P	02 16 52.1 -0.6
ISCO	Idaho Springs	73.47	328	P	P	02 16 54.9 +2.0
	baz=140,SNR=13					
ISCO	Idaho Springs	73.47	328	IAmb	IAmb	02 16 55.8
	comp=Z,8.7nm,0.7s					
SYO	Syowa Base	73.61	159	⇓*e*P	P	02 16 52.2 -0.6
SYO	Syowa Base	73.61	159	⇓*i*P	P	02 16 53.6 +0.8
SMCO	Snowmass	73.68	326	IAmb	IAmb	02 16 57.4
	comp=Z,9.4nm,0.7s					
PV01	Paradox Valley	73.74	325	IAmb	IAmb	02 16 57.5
	comp=Z,14nm,1.3s					
PV15	Paradox Valley	73.84	325	IAmb	IAmb	02 16 58.5
	comp=Z,17nm,1.2s					
PV02	Paradox Valley	73.88	325	IAmb	IAmb	02 16 58.4
	comp=Z,21nm,1.5s					
PV22	Blue Mesa, Par	74.15	325	IAmb	IAmb	02 16 59.7
	comp=Z,18nm,0.9s					
PDMCI	Parker Dam,Lak	74.23	319	P	P	02 16 59.0 +2.1
	baz=132					
IKP	In-Ko-Pah, Jac	74.36	316	P	P	02 16 59.9 +2.1
	baz=131					
N23A	Red Feather La	74.47	328	P	P	02 17 00.7 +2.3
	baz=140,SNR=10					
N23A	Red Feather La	74.47	328	IAmb	IAmb	02 17 01.2
	comp=Z,12nm,0.6s					
PHWY	Pilot Hill	74.55	329	IAmb	IAmb	02 17 01.8
	comp=Z,7.8nm,0.4s					
BC3	Big Chuckawall	74.61	317	P	P	02 17 01.4 +2.2
	baz=132,SNR=5.0					
MONP2	Monument Peak	74.72	316	P	P	02 17 02.3 +2.3
	baz=131					
BAR	Barrett	74.74	316	IAmb	IAmb	02 17 02.7
	comp=Z,9.0nm,0.8s					
IRM	Iron Mountain	74.75	318	P	P	02 17 02.1 +2.2
	baz=132					
O20A	White River Ci	75.04	326	P	P	02 17 03.6 +2.0
	baz=138,SNR=9.8					
O20A	White River Ci	75.04	326	IAmb	IAmb	02 17 04.7
	comp=Z,12nm,0.9s					
TSUM	Tsumeb	75.17	105	P	P	02 17 03.1 +0.4
BELC	Belle Mtn. Jos	75.17	317	P	P	02 17 04.9 +2.5
	baz=131,SNR=5.5					
PFO	Pinyon Flats O	75.21	317	P	P	02 17 04.7 +2.1
	baz=131					
PFO	Pinyon Flats O	75.21	317	P	P	02 17 03.9 +1.3
GMRC	Granite Mounta	75.48	318	P	P	02 17 06.6 +2.5
	baz=132,SNR=15					
MURC	Murrieta	75.67	316	P	P	02 17 07.4 +2.4
	baz=130					
OUK	Oukaimeden	75.89	47	P	P	02 17 07.6 +1.0
	SNR=11					
OUK	Oukaimeden	75.89	47	P	P	02 17 07.6 +1.0
	SNR=11					
K22A	Casper	76.09	329	P	P	02 17 09.3 +1.9
	baz=140					
K22A	Casper	76.09	329	IAmb	IAmb	02 18 15.0
	comp=Z,32nm,1.9s					
VNDA	Vanda	76.36	189	P	P	02 17 10.7 +2.5
	comp=Z,0.7nm,0.9s,baz=117,slow=4.1,SNR=4.6					
BFSC	Mount Baldy Ra	76.38	317	P	P	02 17 11.0 +2.0
	baz=130					
OUZM	OUZ	76.46	48	P	P	02 17 10.6 +1.0
	SNR=22					
OUZM	OUZ	76.46	48	P	P	02 17 10.6 +1.0
	SNR=22					
GSC	Goldstone, Bar	76.53	318	P	P	02 17 12.3 +2.5
	baz=131,SNR=6.0					
ZGR	Zagora	76.77	49	P	P	02 17 12.2 +0.9
	SNR=24					
ZGR	Zagora	76.77	49	P	P	02 17 12.2 +0.9
	SNR=24					
PRN	Pahroc Range	76.86	320	IAmb	IAmb	02 17 15.4
	comp=Z,17nm,1.1s					
EDW2	Edwards Air Fo	77.00	317	P	P	02 17 14.1 +1.8
	baz=130,SNR=5.2					
TZRR	Tazzarine	77.20	49	P	P	02 17 14.7 +1.1
	SNR=16					
TZRR	Tazzarine	77.20	49	P	P	02 17 14.7 +1.1
	SNR=16					
TPNV	Topopah Spring	77.27	319	P	P	02 17 16.3 +2.4
	baz=132,SNR=7.2					
FURC	Furnace Creek,	77.32	319	P	P	02 17 16.5 +2.6
	baz=131					
MPMC	Manual Prospec	77.44	318	P	P	02 17 16.6 +1.7
	baz=130,SNR=6.6					
DUG	Dugway, Tooele	77.51	324	P	P	02 17 17.4 +2.3
	baz=135,SNR=7.4					
PDAR	Pinedale Array	77.65	327	P	P	02 17 17.2 +1.3
	comp=Z,4.3nm,0.5s,baz=125,slow=8.2,SNR=75					
BW06	Boulder Array	77.66	327	P	P	02 17 17.4 +1.4
	baz=138,SNR=10.0					
ISA	Isabella, Lake	77.80	317	P	P	02 17 19.1 +2.4
	baz=130					
R11A	Troy Canyon, C	77.81	321	P	P	02 17 19.2 +2.4
	baz=132,SNR=13					
HWUT	Hardware Ranch	77.84	325	IAmb	IAmb	02 17 19.3
	comp=Z,14nm,0.5s					
CWC	Cottonwood Cre	78.05	318	P	P	02 17 20.3 +2.2
	baz=130					
ULM	Lac du Bonnet	78.06	340	P	P	02 17 18.2 +0.6
	comp=Z,8.0nm,0.5s,baz=145,slow=5.4,SNR=22					
ULM	Lac du Bonnet	78.06	340	IAmb	IAmb	02 17 18.7
	comp=Z,9.6nm,0.5s					
ZHG	ZHG	78.07	46	P	P	02 17 18.5 +0.3
	SNR=8.1					
ZHG	ZHG	78.07	46	P	P	02 17 18.5 +0.3
	SNR=8.1					
GOLM	Goulmima	78.17	48	P	P	02 17 20.0 +1.1
	SNR=13					
GOLM	Goulmima	78.17	48	P	P	02 17 20.0 +1.1
	SNR=13					
VES	Vestal, Richgr	78.30	317	P	P	02 17 21.4 +2.2
	baz=129,SNR=5.2					
BOSA	Boshof	78.67	116	P	P	02 17 21.4 -0.3
	comp=Z,13nm,0.7s,baz=257,slow=3.6,SNR=25					
BOSA	Boshof	78.67	116	P	P	02 17 21.5 -0.3
BOSA				IAmb	IAmb	02 17 22.3
	comp=Z,22nm,1.1s					
CZD	Col de Zad	78.89	47	P	P	02 17 24.6 +1.7
	SNR=26					
CZD	Col de Zad	78.89	47	P	P	02 17 24.6 +1.7
	SNR=26					
LAO	LASA Array	79.06	332	P	P	02 17 24.4 +1.3
	baz=141					
MDT	Midelt	79.06	47	P	P	02 17 24.9 +1.4
	SNR=18					
MDT	Midelt	79.06	47	P	P	02 17 24.9 +1.4
	SNR=18					
IMW	Indian Meadow	79.17	327	P	P	02 17 25.3 +1.2
IMW				IAmb	IAmb	02 17 26.7
	comp=Z,12nm,0.8s					
MORF	Marmelete	79.19	42	*e*P	P	02 17 24.7 +0.7
MORF				AMb	AMB	02 17 26.2
	comp=Z,53nm,1.4s					
MORF	Marmelete	79.19	42	*e*P	P	02 17 25.1 +1.1
	comp=Z,56nm,1.2s					
RLMT	Red Lodge	79.26	329	P	P	02 17 26.0 +1.6
	baz=138,SNR=6.5					
RLMT	Red Lodge	79.26	329	IAmb	IAmb	02 17 27.0
	comp=Z,26nm,1.6s					
PTEO	Sao Teotonio	79.29	42	*e*P	P	02 17 26.0 +1.5
	comp=Z,68nm,1.1s					
H17A	Grant Village	79.35	328	P	P	02 17 27.5 +2.6
	baz=137					
OMMB	Old Mammoth Mi	79.37	318	IAmb	IAmb	02 17 27.6
	comp=Z,7.6nm,0.6s					
NVAR	Mina Array Bea	79.47	319	P	P	02 17 27.4 +1.8
	comp=Z,1.1nm,0.5s,baz=135,slow=5.8,SNR=12					
NVAR	Mina Array Bea	79.47	319	P	P	02 17 26.5 +0.8
RSA	Sarsar	79.48	45	P	P	02 17 27.1 +1.4
	SNR=9.8					
RSA	Sarsar	79.48	45	P	P	02 17 27.1 +1.4
	SNR=9.8					
PBDV	Barranco-do-Ve	79.59	42	*e*P	P	02 17 27.6 +1.5
	comp=Z,41nm,1.6s					
DGMT	Dagmar	79.61	334	P	P	02 17 27.8 +1.9
	baz=143					
KVN	Kaiserville	79.75	320	IAmb	IAmb	02 17 29.6
	comp=Z,14nm,1.1s					
PCVE	Castro Verde	79.77	42	*e*P	P	02 17 28.4 +1.4
	comp=Z,27nm,0.9s					
PNCL	Nicolau / Gran	79.77	41	*e*P	P	02 17 28.1 +1.1
	comp=Z,21nm,1.4s					
PVAQ	Vaqueiros	79.83	42	*e*P	P	02 17 28.6 +1.3
	comp=Z,41nm,1.4s					
PBEJ	Beja	80.12	42	*e*P	P	02 17 29.6 +0.8
	comp=Z,14nm,1.0s					
LBTB	Lobatse	80.20	113	P	P	02 17 29.6 -0.2
LBTB				IAmb	IAmb	02 17 30.6
	comp=Z,19nm,0.8s					
PSBE	So Bento	80.51	40	*e*P	P	02 17 32.3 +1.4
	comp=Z,36nm,1.0s					
PMTG	Montargil	80.56	41	*e*P	P	02 17 32.2 +1.1
	comp=Z,34nm,1.7s					
HLID	Hailey	80.71	325	P	P	02 17 34.4 +2.4
	baz=134,SNR=21					
HLID	Hailey	80.71	325	IAmb	IAmb	02 17 35.2
	comp=Z,11nm,0.8s					
BOZ	Bozeman (W)	80.74	328	P	P	02 17 33.0 +0.9
	baz=136					
TDRA	Tendrara	80.96	49	P	P	02 17 35.0 +1.5
	SNR=18					
TDRA	Tendrara	80.96	49	P	P	02 17 35.0 +1.5
	SNR=18					
FIGM	Figuig	80.98	50	P	P	02 17 35.0 +1.4
	SNR=36					
FIGM	Figuig	80.98	50	P	P	02 17 35.0 +1.4
	SNR=36					
PCAS	Casmilo, Conde	81.03	40	*e*P	P	02 17 34.2 +0.7
	comp=Z,28nm,2.1s					
COI	Coimbra	81.18	40	*e*P	P	02 17 35.4 +1.2
	comp=Z,49nm,1.5s					
TAM	Tamanrasset	81.27	61	P	P	02 17 35.2 -0.1
TAM				IAmb	IAmb	02 17 37.3
	comp=Z,28nm,1.0s					
PMRV	Marv??o	81.29	41	*e*P	P	02 17 35.5 +0.6
	comp=Z,24nm,1.4s					
JBK	JBK	81.33	47	P	P	02 17 36.0 +0.5
PCBR	Castelo Branco	81.50	40	*e*P	P	02 17 36.5 +0.6
	comp=Z,25nm,1.7s					
HORN	Hornachuelos	81.64	43	P	P	02 17 37.5 +0.8
EGMT	Eagleton	81.64	331	P	P	02 17 37.4 +0.9
	baz=138					
MAW	Mawson	81.69	162	P	P	02 17 37.8 +1.4
	comp=Z,12nm,0.7s,baz=208,slow=5.8,SNR=44					
MAW	Mawson	81.69	162	P	P	02 17 36.7 +0.2
TAF	Taforalt	81.71	47	P	P	02 17 37.3 +0.1
PVIS	Viseu	81.81	40	*e*P	P	02 17 38.3 +0.8
	comp=Z,16nm,2.1s					
MTE	Manteigas	81.81	40	*e*P	P	02 17 38.3 +0.7
	comp=Z,22nm,1.5s					
ORV	Oroville	82.11	319	P	P	02 17 40.0 +0.9
PVRL	Vila Real	82.27	39	*e*P	P	02 17 40.9 +1.1
	comp=Z,28nm,1.2s					
POLO	Lamas de Olo	82.28	39	*e*P	P	02 17 40.8 +0.8
PCAB	Cabril	82.36	39	*e*P	P	02 17 41.2 +0.9
	comp=Z,50nm,1.8s					
PGAV	Gavieira, Arco	82.39	38	*e*P	P	02 17 41.4 +0.9
	comp=Z,43nm,1.6s					
MVO	Moncorvo	82.60	40	*e*P	P	02 17 42.5 +0.9
	comp=Z,39nm,1.5s					
O03E	Paynes Creek	82.75	319	P	P	02 17 44.0 +1.6
	baz=128					
J08A	Cache Bar Ran	82.76	323	IAmb	IAmb	02 17 45.3
	comp=Z,17nm,0.6s					
PBRG	Braganca	83.17	39	*e*P	P	02 17 45.6 +1.2
	comp=Z,54nm,1.6s					
PAB	San Pablo	83.22	42	P	P	02 17 45.1 +0.3
SESP	Santiago Espad	83.52	44	P	P	02 17 46.4 0.0
ESDC	Sonseca Array	83.54	42	P	P	02 17 47.2 +1.0
	comp=Z,18nm,0.9s,baz=238,slow=4.7,SNR=84					
M04C	Macdoel	83.69	320	P	P	02 17 48.7 +1.6
	baz=128					
K05A	Summer Lake	83.72	322	IAmb	IAmb	02 17 50.2
	comp=Z,14nm,0.9s					
L04D	Klamath Falls	84.23	320	P	P	02 17 50.9 +1.2
	baz=128					
J05D	Fort Rock, OR	84.27	322	P	P	02 17 51.8 +1.9
	baz=129					
PINE	Pine Mountain	84.42	322	IAmb	IAmb	02 17 53.7
	comp=Z,7.9nm,0.8s					
J04D	Umpqua Nationa	84.74	321	P	P	02 17 53.8 +1.6
	baz=128					
L02E	Cave Junction	84.96	320	P	P	02 17 54.9 +1.8
	baz=127					
I05D	Terrebonne, OR	84.98	323	P	P	02 17 55.2 +2.0
	baz=129					
I04A	Tendick Farm,	85.25	322	P	P	02 17 55.4 +0.8
	baz=128					
HAWA	Hanford	85.30	325	IAmb	IAmb	02 17 57.1
	comp=Z,8.3nm,0.7s					
K02D	Willamette Mer	85.32	320	P	P	02 17 57.0 +2.1
	baz=127					
D08A	Wollman Farm,	85.41	326	IAmb	IAmb	02 17 57.5
	comp=Z,12nm,1.0s					
G05D	Wamic, OR	85.53	323	P	P	02 17 58.1 +2.2
	baz=129					
LSZ	Lusaka	86.02	105	P	P	02 18 00.2 +1.2
LTY	Liberty	86.45	325	IAmb	IAmb	02 19 08.9
	comp=Z,28nm,1.8s					
B05A	Bryant	87.83	325	P	P	02 18 07.5 +0.9
	baz=128					
KEST	Kesra	90.39	51	P	P	02 18 19.8 +0.9
	comp=Z,4.8nm,0.8s,baz=82,slow=2.3,SNR=6.3					
KEST	Kesra	90.39	51	IAmb	IAmb	02 18 21.1
	comp=Z,8.9nm,0.9s					
SSB	Saint Sauveur	91.88	41	IAmb	IAmb	02 18 27.4
	comp=Z,6.4nm,0.9s					
YKA	Yellowknife Ar	94.03	339	P	P	02 18 35.4 +0.6
	comp=Z,1.7nm,0.7s,baz=246,slow=9.9,SNR=4.9					
ECH	Echery	94.90	39	P	P	02 18 39.5 +0.4
DAVA	Damuels	96.09	41	*e*P	P	02 18 45.6 +0.9
	comp=Z,4.7nm,0.7s					
STU	Stuttgart	96.36	40	P	P	02 18 45.6 0.0
FETA	Feichten	96.48	42	*e*P	P	02 18 47.2 +0.7
	comp=Z,7.8nm,1.0s					
RETA	Reutte	96.71	41	*i* P	P	02 18 48.3 +0.9
	comp=Z,5.5nm,1.0s					
MOTA	Moosalm	96.86	41	*e*P	P	02 18 48.9 +0.8
	comp=Z,5.8nm,1.1s					
SQTA	Sankt Quirin	96.87	42	*e*P	P	02 18 49.1 +1.0
	comp=Z,6.2nm,0.7s					
WATA	Walderalm	97.14	42	*e*P	P	02 18 50.0 +0.6
	comp=Z,7.8nm,1.2s					
WTTA	Wattenberg	97.15	42	*e*P	P	02 18 50.6 +1.1
	comp=Z,9.2nm,1.4s					
ABTA	Abfaltersbach	97.47	42	*e*P	P	02 18 51.8 +0.9
	comp=Z,5.3nm,0.9s					
MOA	Molln	99.01	42	*e*P	Pdif	02 18 58.3 +0.7
	comp=Z,2.9nm,0.9s					
ILAR	Eielson Array	107.47	334	PP	PP	02 24 08.6 -2.1
	comp=Z,0.3nm,0.8s,baz=107,slow=5.1,SNR=4.5					
KBZ	Khabaz	117.26	51	PKP	PKiKP	02 23 59.2 +0.5
	comp=Z,4.0nm,0.9s,baz=271,slow=1.9,SNR=5.6					
TARA	Tarawa	120.98	257		PKiKP	02 24 08.0 +1.0
GEYT	Alibeck	128.46	59	PKP	PKiKP	02 24 21.9 +0.7
	comp=Z,1.7nm,0.6s,baz=207,slow=1.7,SNR=5.6					
ABKAR	Akbulak array	128.84	44		PKiKP	02 24 22.7 +1.1
ASAR	Alice Springs	130.70	202	PKP	PKiKP	02 24 26.0 -0.3
	comp=Z,1.1nm,0.5s,baz=137,slow=1.8,SNR=16					
ASAR				SKPbc	SKPab	02 27 01.0 +2.2
	comp=Z,17nm,0.7s,baz=146,slow=3.2,SNR=93					
WRA	Warramunga Arr	133.97	204	PKhKP	PKPpre	02 24 16.4
	comp=Z,0.1nm,0.4s,baz=159,slow=2.2,SNR=4.8					
WRA				PKP	PKiKP	02 24 32.4 -0.5
	comp=Z,1.9nm,0.5s,baz=159,slow=1.7,SNR=37					
WRA				SKPbc	SKPab	02 27 12.1 -0.9
	comp=Z,14nm,0.9s,baz=159,slow=2.8,SNR=62					
KURK	Kurchatov	139.69	37	PKPdf	PKPdf	02 24 40.8 -0.1
ZAA0	Zalesovo Array	140.95	29	PKPdf	PKPdf	02 24 43.4 +0.2
ZALV	Zalesovo Beam	140.95	29	PKhKP	PKPpre	02 24 38.1
	comp=Z,1.2nm,0.4s,baz=314,slow=5.3,SNR=6.1					
ZALV				PKP	PKiKP	02 24 45.0 -1.0
	comp=Z,3.7nm,0.5s,baz=283,slow=2.6,SNR=13					
ZALV				SKPbc	SKiKP	02 27 32.1 +2.0
	comp=Z,6.6nm,0.8s,baz=298,slow=3.2,SNR=11					
KSH	Kashi	142.13	54	*e*PKP	PKPdf	02 24 42.1 -3.8
PRZ	Przheval'sk	143.02	49	PKPdf	PKPdf	02 24 47.0 -0.5
MK31	Makanchi Array	143.74	40		PKPdf	02 24 48.5 +0.1
MKAR	Makanchi Array	143.74	40	PKP	PKPdf	02 24 48.5 +0.1
	comp=Z,31nm,0.8s,baz=305,slow=3.7,SNR=84					
MKAR				SKPbc	SKiKP	02 27 38.6 +2.4
	comp=Z,0.7nm,0.7s,baz=273,slow=3.0,SNR=2.2					
WMQ	Urumqi	148.54	41	*e*P	PKPdf	02 24 56.9 +0.3
WMQ	Urumqi	148.54	41	PKPbc	PKiKP	02 25 02.5 +0.4
CISI	Cisompet, Garu	148.75	164		PKiKP	02 25 03.4 0.0
PYUN	Piuthan	149.64	73	*e*P	PKPdf	02 25 00.8 +1.8
KOLN	Koldanda	150.19	74	*e*P	PKPdf	02 25 01.0 +1.1
DANN	Dangsing	150.31	72	*e*P	PKPdf	02 25 01.7 +1.6
GKN	Gorkha	151.10	73	*e*P	PKPdf	02 25 02.4 +1.2
DMN	Daman	151.54	74	*e*P	PKPdf	02 25 04.1 +2.1
KKN	Kakani	151.68	73	*e*P	PKPdf	02 25 03.9 +1.8
SONM	Songino Array	153.82	15	PKP	PKPdf	02 25 06.7 +2.2
	comp=Z,1.8nm,0.9s,baz=332,slow=2.4,SNR=6.7					
SONM				PKPbc	PKiKP	02 25 14.4 +1.5
	comp=Z,2.3nm,0.9s,baz=9.9,slow=1.7,SNR=7.8					
SONM				PKPab	PKPab	02 25 30.2 +1.5
	comp=Z,4.3nm,0.8s,baz=312,slow=4.3,SNR=11					
SONM				PP	PP	02 29 09.6 +4.2
	comp=Z,0.7nm,0.8s,baz=343,slow=3.1,SNR=4.4					
SONM	Songino Array	153.82	15		PKPab	02 25 29.9 +1.2
SONM	Songino Array	153.82	15		PKPdf	02 25 05.6 +1.1
GTA	Gaotai	158.37	36	*e*P	PKPab	02 25 49.9 +1.2
GTA				pmax	pmax	
	comp=Z,11nm,1.1s					
HHC	Hu-ho-hao-te	161.59	11	*e*P	PKPdf	02 25 12.1 -2.0
CMAR	Chiang Mai Arr	163.32	102	PKP	PKPdf	02 25 17.7 +1.4
	comp=Z,0.9nm,0.3s,baz=269,slow=2.5,SNR=7.6					
CMAR				PKPab	PKPab	02 26 11.2 +0.2
	comp=Z,2.2nm,0.6s,baz=250,slow=6.2,SNR=11					
NJ2	Nanjing	170.47	346	*e*P	PKPdf	02 25 22.1 +1.0
NJ2				pmax	pmax	
	comp=Z,9.0nm,0.5s					

ISU ***01*** *03:25:11.0,39.60N×73.40E,h0km*
NNC ***01*** *03:25:11.7±4.1,40.40N×73.74E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=36.9km s-min=21.6km az=156.0
KRNET ***01*** *03:25:12.2±0.1,40.52N×73.99E,h15km,mb3.2*
SOME ***01*** *03:25:12.5,40.60N×74.15E,h5km*

ISC 01 03:25:11.5±1.3, 40.47N±0.04×74.02E±0.03, h13km±12km, n35, σ2s20/67, 27C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OHH	Osh	0.94	274	⇑*i*P		Pb	03 25 29.8	0.0
	baz=71							
OHH				⇑*i*S		Sn	03 25 42.9	-1.1
	baz=71							
OHH	Osh	0.94	274	*e*P		Pg	03 25 30.3	+0.5
OHH				*e*S		Sg	03 25 42.7	+0.5
ANR	Andizhan	1.30	283	*e*P		Pg	03 25 38.3	+1.8
ANR				*e*S		Sg	03 25 58.7	+5.3
ARLS	Aral	1.41	9	⇑*i*P		Pg	03 25 38.2	-0.4
	baz=11							
ARLS				⇑*i*S		Sg	03 25 57.2	+0.3
	baz=11							
AML	Almayashu	1.68	352	⇑*e*P		Pb	03 25 42.6	+0.1
	baz=52							
AML				⇑*i*S		Sg	03 26 04.2	-1.4
	baz=52							
UCH	Uchtor	1.79	12	⇑*e*P		Pb	03 25 45.1	+0.6
	baz=13							
UCH				⇑*i*S		Sg	03 26 09.1	-0.2
	baz=13							
AAK	Ala-Archa	2.19	9	⇓*i*P		Pb	03 25 51.3	+0.1
	baz=10.0							
AAK				⇓*i*S		Sg	03 26 19.6	-2.5
	baz=10.0							
AAK	Ala-Archa	2.19	9	⇑Pn		Pb	03 25 51.4	+0.1
	8.9nm,0.6s							
AAK				⇑Lg		Lg	03 26 23.1	
	14nm,0.6s							
EKS2	Erkin-Say	2.20	355	⇓*i*P		Pb	03 25 50.8	-0.4
	baz=56							
EKS2				⇓*i*S		Sb	03 26 19.3	+0.9
	baz=56							
KBK	Karagaybulak	2.29	17	⇑*i*P		Pb	03 25 52.8	-0.1
	baz=18							
KBK				⇑*i*S		Sb	03 26 22.2	+1.0
	baz=18							
MNAS	Manas	2.32	331	⇑*i*P		Pb	03 25 52.7	-0.5
	baz=31							
MNAS				⇑*i*S		Sb	03 26 22.5	+0.7
	baz=31							
MRKS	Merke	2.35	346	*e*P		Pg	03 25 55.2	-1.4
	19nm,0.3s							
MRKS				*e*S		Sg	03 26 25.7	-1.4
	18nm,0.5s							
FRU1	Bishkek	2.38	11	⇓*i*P		Pb	03 25 53.9	-0.4
	baz=12							
FRU1				⇓*i*S		Sb	03 26 24.1	+0.5
	baz=12							
ULHL	Ulahol	2.44	43	⇑*i*P		Pb	03 25 54.4	-0.9
	baz=44							
ULHL				⇑*i*S		Sb	03 26 26.7	+1.3
	baz=44							
BOOM	Boomskoye usch	2.48	35	⇑*i*P		Pb	03 25 55.5	-0.5
	baz=36							
BOOM				⇑*i*S		Sb	03 26 27.1	+0.5
	baz=36							
BTK	Batken	2.49	262	*e*P		Pg	03 25 58.5	-0.7
BTK				*e*S		Sg	03 26 31.5	+0.1
CHMS	Chumysh	2.58	12	⇓*e*P		Pb	03 25 56.5	-1.3
	baz=13							
CHMS				⇓*i*S		Sb	03 26 29.1	-0.3
	baz=13							
TKM2	Tokmak 2	2.72	25	⇑Pn		Pb	03 25 59.9	-0.2
	8.4nm,0.7s							
TKM2				⇓Sn		Sb	03 26 34.9	+1.4
	21nm,0.8s							
USP	Ospenovka	2.82	7	⇑*i*P		Pb	03 25 59.7	-2.0
	baz=8.0							
USP				⇑*i*S		Sb	03 26 34.7	-

	5.1nm,0.3s							
KTBS				*e*S		**Sb**	**03 27 07.4**	**+3.1**
	15nm,0.4s							
KUU	**Kurty**	**3.83**	**26**	*e*P		**Pb**	**03 26 20.4**	**+1.5**
	3.0nm,0.9s							
KUU				*e*S		**Sb**	**03 27 08.7**	**+3.5**
	14nm,0.5s							
BRLS	**Borolday**	**4.04**	**311**	⇓*e*P		**Pb**	**03 26 25.4**	**+2.8**
	18nm,0.2s							
BRLS				*e*S		**Sg**	**03 27 18.1**	**-3.2**
	11nm,0.4s							
SATY	**Saty**	**4.18**	**50**	*e*P		**Pb**	**03 26 27.0**	**+2.1**
	3.8nm,0.6s							
SATY				*e*S		**Sb**	**03 27 19.9**	**+4.6**
	7.5nm,1.0s							
KPKS	**Kokpek**	**4.59**	**48**	*e*P		**Pb**	**03 26 33.9**	**+2.0**
	2.4nm,0.3s							
KPKS				*e*S		**Sb**	**03 27 32.1**	**+5.0**
	9.6nm,0.5s							
PDGK	**Podgornoye**	**4.98**	**53**	⇓Pg		**Pg**	**03 26 46.3**	**-0.6**
	6.0nm,1.0s							
PDGK				⇓Lg		Lg	03 27 54.5	
	7.6nm,0.9s							
DJR	**Jarkent**	**5.75**	**46**	*e*P		**Pb**	**03 26 55.4**	**+3.6**
	1.3nm,0.3s							
DJR				*e*S		**Sg**	**03 28 09.2**	**-7.0**
	1.9nm,0.3s							

*NEIC **01** 03:59:47.7±1.0,60.°13N±0.°03×151.°68W±0.°05,h79km±8km, Error ellipse: s-maj=4.1km s-min=3.7km az=120.0*
*ANF **01** 03:59:48.2±0.6,60.°13N×151.°51W,h82km±5km,ML3.7/8, ML3.8/9,Error ellipse: s-maj=6.4km s-min=4.3km az=116.0*
*AEIC **01** 03:59:48.5±0.9,60.°13N±0.°03×151.°68W±0.°06,h75km±6km, ML3.1/83,Error ellipse: s-maj=5.0km s-min=2.5km az=49.0*

ISC 01 03:59:46.7±1.4,60.°11N±0.°04×151.°69W±0.°03,h88km±8km, n104,σ0§83/126,Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOM	**Homer**	**0.45**	**177**	P	**Pn**	**04 00 01.4**	**+0.6**
	baz=360,SNR=10						
HOM				S	**Sn**	**04 00 11.8**	**+0.5**
	baz=360						
HOM	**Homer**	**0.45**	**177**		**Pn**	**04 00 01.5**	**+0.6**
BRLK	**Bradley Lake**	**0.53**	**130**		**Pn**	**04 00 01.6**	**+0.1**
BRLK					**Sn**	**04 00 12.2**	**-0.4**
BRSE	**Bradley Lake S**	**0.60**	**127**		**Pn**	**04 00 02.5**	**+0.3**
BRSE					**Sn**	**04 00 13.2**	**-0.4**
CNPM	**China Poot**	**0.62**	**158**		**Pn**	**04 00 02.9**	**+0.6**
CNPM					**Sn**	**04 00 13.9**	**-0.1**
RSO	**Redoubt South**	**0.64**	**305**		**Pn**	**04 00 02.2**	**-0.5**
IVE	**Iliamna Volcan**	**0.67**	**263**		**Pn**	**04 00 02.7**	**-0.1**
RDWB	**Redoubt West**	**0.69**	**304**		**Pn**	**04 00 02.7**	**-0.4**
RDWB					**Sn**	**04 00 14.0**	**-1.3**
DFR	**Drift River**	**0.70**	**315**		**Pn**	**04 00 02.6**	**-0.5**
DFR					**Sn**	**04 00 14.2**	**-1.1**
ILS	**Iliamna Low So**	**0.71**	**259**		**Pn**	**04 00 03.4**	**+0.1**
CAPN	**Captain Cook N**	**0.72**	**22**	P	**Pn**	**04 00 04.3**	**+1.2**
	baz=201						
CAPN				S	**Sn**	**04 00 16.5**	**+1.1**
	baz=201						
CAPN	**Captain Cook N**	**0.72**	**22**		**Pn**	**04 00 04.4**	**+1.2**
NCT	**North Crescent**	**0.77**	**307**		**Pn**	**04 00 03.7**	**-0.1**
NCT					**Sn**	**04 00 15.9**	**-0.7**
SLKM	**Skilak Lake**	**0.84**	**60**		**Pn**	**04 00 04.1**	**-0.4**
SLKM					**Sn**	**04 00 16.6**	**-1.1**
OPT	**Oil Point**	**0.90**	**240**		**Pn**	**04 00 06.0**	**+0.8**
O22K	**Cooper Landing**	**1.05**	**68**	P	**Pn**	**04 00 06.9**	**+0.1**
	baz=250,SNR=52						
O22K				S	**Sn**	**04 00 21.8**	**0.0**
	baz=250						
O22K	**Cooper Landing**	**1.05**	**68**		**Pn**	**04 00 07.1**	**+0.3**
SEW	**Seward**	**1.12**	**89**		**Pn**	**04 00 07.3**	**-0.3**
SPCR	**Spurr Chakacha**	**1.13**	**347**		**Pn**	**04 00 08.0**	**+0.2**
SPCR					**Sn**	**04 00 23.3**	**-0.4**
AUL	**Augustine Lava**	**1.14**	**231**		**Pn**	**04 00 09.5**	**+1.6**
SPCN	**Chakachatna No**	**1.15**	**348**		**Pn**	**04 00 08.4**	**+0.3**
AUCH	**Augustine Cone**	**1.16**	**231**		**Pn**	**04 00 09.4**	**+1.2**
SPCP	**Crater Peak Br**	**1.19**	**349**		**Pn**	**04 00 09.0**	**+0.4**
SPCP					**Sn**	**04 00 25.3**	**+0.2**
SPCG	**Spurr Capps Gl**	**1.20**	**352**		**Pn**	**04 00 09.0**	**+0.2**
SPBG	**Spurr Blockage**	**1.21**	**344**		**Pn**	**04 00 09.1**	**+0.3**
RC01	**Rabbit Creek A**	**1.38**	**43**	P	**Pn**	**04 00 11.0**	**+0.2**
	baz=225,SNR=10						
RC01				S	**Sn**	**04 00 28.3**	**-0.7**
	baz=225						
RC01	**Rabbit Creek A**	**1.38**	**43**		**Pn**	**04 00 10.9**	**+0.1**
STLK	**Strandline Lak**	**1.40**	**357**		**Pn**	**04 00 11.6**	**+0.4**
SUA	**Susitna One**	**1.44**	**18**		**Pn**	**04 00 12.1**	**+0.4**
PWL	**Port Wells**	**1.82**	**64**		**Pn**	**04 00 16.5**	**0.0**
SKT	**Skwentna**	**1.88**	**2**		**Pn**	**04 00 17.8**	**+0.5**
PMR	**Palmer**	**1.95**	**39**		**Pn**	**04 00 18.2**	**+0.1**
KNK	**Knik Glacier**	**2.06**	**49**		**Pn**	**04 00 19.8**	**+0.2**
GHO	**Glory Hole Cre**	**2.15**	**38**		**Pn**	**04 00 21.1**	**+0.2**
SVW2	**Sparrevohn**	**2.16**	**299**		**Pn**	**04 00 20.6**	**-0.3**
SML	**Sawmill**	**2.37**	**42**		**Pn**	**04 00 24.0**	**+0.3**
KDAK	**Kodiak Island**	**2.38**	**192**		**Pn**	**04 00 24.0**	**+0.3**
GLI	**Glacier Island**	**2.40**	**69**	Pn	**Pn**	**04 00 23.3**	**-0.8**
CUT	**Chulitna**	**2.41**	**16**	P	**Pn**	**04 00 25.1**	**+1.0**
	baz=197,SNR=10						
CUT				S	**Sn**	**04 00 53.1**	**+0.2**
	baz=197						
CUT	**Chulitna**	**2.41**	**16**		**Pn**	**04 00 25.0**	**+0.8**
HIN	**Hinchinbrook I**	**2.60**	**81**		**Pn**	**04 00 27.1**	**+0.2**
FID	**Port Fidalgo**	**2.66**	**74**		**Pn**	**04 00 26.4**	**-1.3**
SCM	**Sheep Creek Mo**	**2.74**	**49**		**Pn**	**04 00 29.1**	**+0.3**
PPLA	**Purkeypile**	**2.81**	**355**		**Pn**	**04 00 30.4**	**+0.6**
OHAK	**Old Harbor**	**3.01**	**197**		**Pn**	**04 00 32.2**	**0.0**
WAT7	**Susitna Watana**	**3.06**	**25**		**Pn**	**04 00 33.8**	**+0.8**
DIV	**Divide**	**3.09**	**68**		**Pn**	**04 00 33.1**	**-0.4**
WAT1	**Susitna Watana**	**3.12**	**27**		**Pn**	**04 00 35.0**	**+1.2**
WAT6	**Susitna Watana**	**3.13**	**36**		**Pn**	**04 00 34.9**	**+0.8**
KLU	**Klutina**	**3.15**	**61**		**Pn**	**04 00 34.3**	**+0.1**
WAT2	**Susitna Watana**	**3.23**	**26**		**Pn**	**04 00 35.8**	**+0.5**
M24K	**Tolsona, Glenn**	**3.35**	**51**	P	**Pn**	**04 00 38.0**	**+1.1**
	baz=236						
M24K				S	**Sn**	**04 01 16.1**	**+0.5**
	baz=236						
M24K	**Tolsona, Glenn**	**3.35**	**51**		**Pn**	**04 00 37.9**	**+1.0**
TRF	**Thorofare Moun**	**3.42**	**11**		**Pn**	**04 00 38.1**	**+0.2**
KTH	**Kantishna Hill**	**3.48**	**6**		**Pn**	**04 00 39.2**	**+0.6**
TT01	**Tatalina**	**3.49**	**325**		**Pn**	**04 00 39.1**	**+0.4**
TTA	**Tatalina**	**3.51**	**326**		**Pn**	**04 00 39.4**	**+0.3**
RND	**Reindeer**	**3.58**	**21**		**Pn**	**04 00 40.6**	**+0.7**
DHY	**Denali Highway**	**3.62**	**33**		**Pn**	**04 00 41.8**	**+1.1**
HMT	**Hamilton**	**3.71**	**83**	Pn	**Pn**	**04 00 42.6**	**+0.8**
N25K	**Chitina, Valde**	**3.78**	**63**	P	**Pn**	**04 00 42.8**	**0.0**
	baz=250						
N25K				S	**Sn**	**04 01 24.6**	**-1.5**
	baz=250						
N25K	**Chitina, Valde**	**3.78**	**63**		**Pn**	**04 00 42.8**	**0.0**
MCK	**McKinley**	**3.87**	**18**	P	**Pn**	**04 00 45.0**	**+1.2**
	baz=201,SNR=14						
MCK				S	**Sn**	**04 01 26.9**	**-1.1**
	baz=201						
MCK	**McKinley**	**3.87**	**18**		**Pn**	**04 00 44.8**	**+1.0**
BPAW	**Bear Paw Mtn.**	**4.02**	**4**	Pn	**Pn**	**04 00 46.8**	**+0.8**
GLB	**Gilahina Butte**	**4.09**	**67**		**Pn**	**04 00 46.7**	**-0.2**
BWN	**Browne**	**4.21**	**13**	Pn	**Pn**	**04 00 49.9**	**+1.4**
TGL	**Tana Glacier**	**4.44**	**78**	Pn	**Pn**	**04 00 52.7**	**+1.0**
MCARA	**McCarthy VSAT**	**4.44**	**69**	Pn	**Pn**	**04 00 51.8**	**+0.2**
NEA2	**Nenana**	**4.67**	**14**	P	**Pn**	**04 00 55.2**	**+0.6**
	baz=196,SNR=10						
NEA2				S	**Sn**	**04 01 47.9**	**+0.4**
	baz=196						
NEA2	**Nenana**	**4.67**	**14**		**Pn**	**04 00 54.8**	**+0.1**
PTPK	**Patty Peak**	**4.67**	**73**		**Pn**	**04 00 55.0**	**+0.2**
ISLE	**Juniper Island**	**4.67**	**80**	Pn	**Pn**	**04 00 55.6**	**+0.7**
KIAG	**Kiagna River**	**4.69**	**76**		**Pn**	**04 00 55.0**	**-0.1**
WRH	**Wood River Hil**	**4.69**	**19**		**Pn**	**04 00 55.5**	**+0.5**
BALM	**Baldy**	**4.71**	**75**		**Pn**	**04 00 55.0**	**-0.3**
HDA	**Harding Lake**	**4.85**	**25**	P	**Pn**	**04 00 58.2**	**+1.0**
	baz=209,SNR=20						
HDA				S	**Sn**	**04 01 50.3**	**-1.8**
	baz=209						
HDA				S	**Sn**	**04 01 50.3**	**-1.8**
	baz=209						
HDA	**Harding Lake**	**4.85**	**25**		**Pn**	**04 00 58.2**	**+1.0**
RIDG	**Independent Ri**	**4.87**	**39**	Pn	**Pn**	**04 00 59.0**	**+1.5**
CCB	**Clear Creek Bu**	**4.90**	**20**		**Pn**	**04 00 58.2**	**+0.4**
MLY	**Manley**	**4.96**	**5**	P	**Pn**	**04 01 00.0**	**+1.3**
	baz=185,SNR=7.4						
YAH	**Yahtse**	**4.96**	**83**	Pn	**Pn**	**04 01 00.7**	**+1.7**
PS08	**TAPS Pump Stn8**	**5.00**	**25**		**Pn**	**04 00 60.0**	**+0.8**
BARN	**Barnard Glacie**	**5.04**	**75**		**Pn**	**04 01 00.7**	**+0.8**
TCOL	**CIGO, UAF Yank**	**5.10**	**19**	P	**Pn**	**04 01 01.4**	**+0.7**
	baz=202,SNR=17						
TCOL				S	**Sn**	**04 01 57.0**	**-1.1**
	baz=202						
TCOL	**CIGO, UAF Yank**	**5.10**	**19**		**Pn**	**04 01 01.3**	**+0.7**
COLA	**College**	**5.11**	**19**		**Pn**	**04 01 01.1**	**+0.5**
MDM	**Murphy Dome**	**5.13**	**17**		**Pn**	**04 01 01.6**	**+0.6**
RKAV	**Rock Avalanche**	**5.17**	**83**		**Pn**	**04 01 02.5**	**+0.9**
I23K	**Minto, Yukon-K**	**5.17**	**11**	P	**Pn**	**04 01 02.3**	**+0.8**
	baz=193						
I23K	**Minto, Yukon-K**	**5.17**	**11**		**Pn**	**04 01 02.6**	**+1.1**
IL31		**5.19**	**23**		**Pn**	**04 01 02.2**	**+0.5**
ILAR	**Eielson Array**	**5.19**	**23**	Pn	**Pn**	**04 01 01.6**	**-0.1**
CTGM	**Chitina Glacie**	**5.19**	**76**	Pn	**Pn**	**04 01 03.5**	**+1.6**
TABL	**Table Mountain**	**5.26**	**82**	Pn	**Pn**	**04 01 04.1**	**+1.1**
SCRK	**Sand Creek**	**5.31**	**40**	P	**Pn**	**04 01 03.9**	**+0.3**
	baz=226						
SCRK				S	**Sn**	**04 02 01.0**	**-2.4**
	baz=226						
SCRK	**Sand Creek**	**5.31**	**40**		**Pn**	**04 01 03.9**	**+0.3**
POKR	**Poker Plat Res**	**5.40**	**19**	P	**Pn**	**04 01 05.5**	**+0.9**
	baz=203,SNR=7.4						
POKR	**Poker Plat Res**	**5.40**	**19**		**Pn**	**04 01 05.5**	**+0.9**
BCAR	**Beaver Creek A**	**5.58**	**54**	Pn	**Pn**	**04 01 09.0**	**+1.8**
IMAR	**Indian Mountai**	**5.97**	**352**		**Pn**	**04 01 13.2**	**+0.8**
PRP	**Porcupine Dome**	**6.12**	**25**		**Pn**	**04 01 15.4**	**+0.9**
BMAR	**Burnt Mountain**	**7.99**	**20**	Pn	**Pn**	**04 01 40.0**	**+0.1**
TOLK	**Toolik Lake Re**	**8.62**	**5**	P	**Pn**	**04 01 50.0**	**+1.6**
	baz=187						

IDC 01 04:02:27.4±1.7,3.°32S×151.°12E,h0km,mb3.1/3, mb1 3.4/3,mb1mx3.3/23,mbtmpg3.1/3,Error ellipse: s-maj=31.3km s-min=24.8km az=33.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.33**	**137**	Pn	Pb	04 02 53.8	+0.5
	12nm,0.3s,baz=186,slow=4.2,SNR=19						
KRVT				Sn	Sb	04 03 10.9	0.0
	20nm,0.3s,baz=91,slow=18,SNR=4.1						
WRA	**Warramunga Arr**	**23.26**	**223**	P	P	04 07 36.7	0.0
	0.1nm,0.3s,baz=48,slow=10,SNR=6.1						
ASAR	**Alice Springs**	**26.19**	**218**	P	P	04 08 03.8	-0.2
	0.3nm,0.8s,baz=45,slow=9.4,SNR=2.1						
ILAR	**Eielson Array**	**81.43**	**22**	P	P	04 14 46.1	0.0
	0.2nm,1.0s,baz=250,slow=5.9,SNR=1.3						

*IDC **01** 04:28:09.8±4.8,38.°10N×72.°92E,h83km±34km,mb3.4/4, mb1 3.6/8,mb1mx3.2/43,mbtmpg3.8/8,MS3.4/1,Ms1 3.4/1, ms1mx2.4/30,Error ellipse: s-maj=62.4km s-min=28.8km az=143.0*
*NNC **01** 04:28:19.1±3.2,38.°92N×72.°92E,h200km±39km,mb2.7, mpv3.5,Error ellipse: s-maj=33.8km s-min=17.5km az=12.0*

ISC 01 04:28:13.6±1.3,38.°5N±0.°1×72.°60E±0.°08,h100km,n22, σ1§97/27,mb3.7/4,6C-2D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.76**	**13**	P	**Pn**	**04 29 11.3**	**+1.4**
	SNR=173						
UCH	**Uchtor**	**4.03**	**21**	P	**Pn**	**04 29 13.2**	**-0.5**
	SNR=9.3						
EKS2	**Erkin-Say**	**4.29**	**12**	P	**Pn**	**04 29 19.7**	**+2.9**
	SNR=22						
AAK	**Ala-Archa**	**4.41**	**19**	P	**Pn**	**04 29 20.3**	**+1.8**
	SNR=13						
AAK	**Ala-Archa**	**4.41**	**19**	P	**Pn**	**04 29 19.9**	**+1.4**
	4.0nm,0.4s						
AAK				S	**Sn**	**04 30 09.5**	**+0.7**
	44nm,0.5s						
KBK	**Karagaybulak**	**4.55**	**22**	P	**Pn**	**04 29 23.7**	**+3.2**
	SNR=5.6						
ULHL	**Ulahol**	**4.69**	**35**	P	**Pn**	**04 29 22.8**	**+0.5**
	SNR=14						
CHMS	**Chumysh**	**4.81**	**19**	P	**Sn**	**04 30 19.3**	**+0.9**
	SNR=6.7						
KK31	**Karatay Array**	**4.90**	**342**	⇑P	**Pn**	**04 29 27.7**	**+2.8**
	7.0nm,0.2s,baz=154,slow=13,SNR=300						
KK31				⇓S	**Sn**	**04 30 22.1**	**+1.7**
	33nm,0.6s,baz=154,slow=23,SNR=15						
TKM2	**Tokmak 2**	**5.00**	**26**	⇑P	**Pn**	**04 29 26.3**	**-0.2**
	3.7nm,0.8s						
TKM2				⇑S	**Sn**	**04 30 19.7**	**-3.4**
	18nm,0.6s						
USP	**Ospenovka**	**5.01**	**16**	P	**Pn**	**04 29 27.8**	**+1.3**
	SNR=9.3						
MKAR	**Makanchi Array**	**10.96**	**37**	P	**Pn**	**04 30 45.5**	**-1.7**
	0.1nm,0.3s,baz=232,slow=14,SNR=1.7						
GEYT	**Alibeck**	**11.41**	**272**	P	**Pn**	**04 30 53.5**	**+0.1**
	0.7nm,0.3s,baz=98,slow=10,SNR=6.7						
GEYT				S	**Sn**	**04 32 56.6**	**-2.3**
	1.0nm,0.3s,baz=109,slow=15,SNR=4.8						
AB31	**Akbulak array**	**14.11**	**324**	⇑P	**Pn**	**04 31 28.2**	**-0.6**
	2.5nm,0.5s,baz=130,slow=13,SNR=73						
AB31				⇓S	**Sn**	**04 34 01.6**	**-2.5**
	1.3nm,0.7s,baz=138,slow=23,SNR=3.6						
AKTO	**Aktyubinsk**	**15.83**	**324**	P	**P**	**04 31 52.6**	**+0.3**
	2.0nm,0.3s,baz=126,slow=8.4,SNR=18						
AKTO	**Aktyubinsk**	**15.83**	**324**	⇑P	**P**	**04 31 51.6**	**-0.8**
	3.9nm,0.8s						
AKTO				⇑S	**Sn**	**04 34 41.1**	**-4.4**
	1.5nm,0.9s						
ZALV	**Zalesovo Beam**	**17.60**	**24**	P	**P**	**04 32 11.8**	**-0.1**
	0.7nm,0.3s,baz=213,slow=11,SNR=3.7						
FINES	**FINESS Array B**	**36.60**	**324**	P	**P**	**04 35 11.6**	**+1.9**
	0.5nm,0.3s,baz=116,slow=9.9,SNR=11						
ARCES	**ARCESS Array B**	**39.84**	**336**	P	**P**	**04 35 37.8**	**+1.0**
	2.4nm,0.9s,baz=98,slow=8.7,SNR=4.1						
NOA	**NORSAR Array B**	**43.60**	**322**	P	**P**	**04 36 08.8**	**+1.2**
	0.3nm,0.5s,baz=111,slow=7.4,SNR=1.3						
MJAR	**Matsushiro Arr**	**51.08**	**71**	LR	LR	05 00 47.6	
	comp=Z,35nm,18.4s,baz=210,slow=38						
TORD	**Torodi Ar. Bea**	**67.03**	**269**	P	**P**	**04 38 55.8**	**-0.5**
	0.5nm,0.8s,baz=52,slow=5.6,SNR=4.6						

*IDC **01** 04:43:33.0±2.2,22.°42N×144.°48E,h0km,mb3.9/6, mb1 4.1/7,mb1mx3.7/46,mbtmpg3.9/7,ML3.0/1,Error ellipse: s-maj=116.9km s-min=23.0km az=84.0*

ISC 01 04:43:38.4±2.3,22.°4N±0.°2×144.°3E±0.°8,h33km,n11, σ0§43/8,mb3.9/6,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.07**	**341**	Pn	**Pn**	**04 47 08.6**	**-0.3**
	0.1nm,0.3s,baz=161,slow=13,SNR=4.1						
H11S3	**WAKE ISLAND Hy**	**21.30**	**96**	T	T	05 11 27.1	
	baz=284						
H11S1	**WAKE ISLAND Hy**	**21.31**	**96**	T	T	05 11 22.5	
	baz=284						
H11S2	**WAKE ISLAND Hy**	**21.32**	**96**	T	T	05 11 26.0	
	baz=284						
WRA	**Warramunga Arr**	**43.19**	**194**	P	**P**	**04 51 36.3**	**-0.1**
	0.4nm,0.2s,baz=16,slow=9.1,SNR=15						
ASAR	**Alice Springs**	**46.89**	**193**	P	**P**	**04 52 05.8**	**0.0**
	0.2nm,0.4s,baz=9.3,slow=6.5,SNR=2.0						
MKAR	**Makanchi Array**	**55.01**	**312**	P	**P**	**04 53 06.7**	**0.0**
	0.4nm,0.6s,baz=96,slow=8.8,SNR=1.4						
ARCES	**ARCESS Array B**	**78.60**	**342**	P	**P**	**04 55 37.0**	**+0.6**
	1.9nm,0.9s,baz=74,slow=9.5,SNR=1.0						
KBZ	**Khabaz**	**82.65**	**314**	P	**P**	**04 55 59.0**	**+0.4**
	2.4nm,0.8s,baz=136,slow=6.7,SNR=4.1						
FINES	**FINESS Array B**	**83.01**	**335**	P	**P**	**04 55 59.6**	**-0.4**
	0.7nm,0.3s,baz=60,slow=4.8,SNR=16						
TORD	**Torodi Ar. Bea**	**129.12**	**310**	PKP	**PKPdf**	**05 02 43.5**	**-0.4**
	0.7nm,1.1s,baz=63,slow=0.6,SNR=4.2						

IDC 01 04:43:49.5±2.5,0.°53S×135.°82E,h0km,mb3.4/2, mb1 3.6/4,mb1mx3.4/40,mbtmpg3.5/4,ML3.3/2,MS3.0/2, Ms1 3.0/2,ms1mx2.5/14,Error ellipse: s-maj=63.1km s-min=29.2km az=72.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.56**	**266**	Pn	Pn	04 45 00.0	+0.1
	2.2nm,0.3s,baz=90,slow=1.0,SNR=1.5						

JAY	**Jayapura**	**5.27**	**112**	LR	LR	04 47 13.2		
	comp=Z,34nm,21.6s,baz=238,slow=39							
WRA	**Warramunga Arr**	**19.34**	**184**	P	P	04 48 16.8	+0.1	
	0.1nm,0.3s,baz=3.3,slow=12,SNR=8.5							
ASAR	**Alice Springs**	**23.07**	**184**	P	P	04 48 57.0	+0.1	
	0.6nm,0.7s,baz=12,slow=11,SNR=7.2							
RAR	**Rarotonga**	**66.03**	**113**	LR	LR	05 18 04.4		
	comp=Z,60nm,20.8s,baz=154,slow=31							
MKAR	**Makanchi Array**	**66.31**	**323**	P	P	04 54 39.9	-0.1	
	0.7nm,0.8s,baz=107,slow=6.2,SNR=1.8							

IDC 01 04:47:55.1±1.7,10.°24S×165.°54E,h0km,mb3.7/3, mb1 4.0/4,mb1mx3.6/35,mbtmp3.8/4,ML4.1/1,Error ellipse: s-maj=54.3km s-min=31.1km az=127.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.79**	**176**	Pn	Pn	04 50 45.3	+0.5
	1.2nm,0.3s,baz=42,slow=5.7,SNR=18						
DZM				Sn	Sn	04 52 47.3	-10
	0.2nm,0.3s,baz=186,slow=22,SNR=2.0						
H11S2	**WAKE ISLAND Hy**	**28.57**	**2**	T	T	05 24 28.7	
	baz=182						
H11S3	**WAKE ISLAND Hy**	**28.58**	**2**	T	T	05 24 31.0	
	baz=182						
H11S1	**WAKE ISLAND Hy**	**28.59**	**2**	T	T	05 24 34.5	
	baz=182						
WRA	**Warramunga Arr**	**31.58**	**249**	P	P	04 54 20.1	+0.3
	0.6nm,0.6s,baz=81,slow=9.0,SNR=7.3						
ASAR	**Alice Springs**	**32.98**	**242**	P	P	04 54 31.6	-0.5
	0.8nm,0.8s,baz=68,slow=9.6,SNR=6.6						
ILAR	**Eielson Array**	**82.82**	**19**	P	P	05 00 21.0	0.0
	0.4nm,0.6s,baz=238,slow=5.1,SNR=6.5						

IDC 01 05:15:01.7±2.5,29.°94S×138.°92E,h0km,mb1 2.9/3, mb1mx2.8/35,mbtmp2.6/3,ML2.7/3,Error ellipse: s-maj=81.4km s-min=15.6km az=47.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.00**	**131**	Pn	Pn	05 15 50.4	-0.1
	0.4nm,0.3s,baz=316,slow=16,SNR=6.1						
STKA				Pg	Pb	05 15 57.2	+1.2
	0.6nm,0.3s,baz=308,slow=15,SNR=8.4						
STKA				Sn	Sn	05 16 26.8	-0.4
	0.6nm,0.3s,baz=301,slow=12,SNR=4.4						
STKA				Lg	Lg	05 16 36.5	
	0.9nm,0.3s,baz=182,slow=22,SNR=4.9						
ASAR	**Alice Springs**	**7.69**	**323**	Pn	Pn	05 16 55.8	+0.8
	0.1nm,0.3s,baz=148,slow=12,SNR=1.6						
ASAR				Sn	Sn	05 18 21.9	-1.0
	0.1nm,0.3s,baz=149,slow=22,SNR=2.3						
WRA	**Warramunga Arr**	**10.79**	**336**	Pn	Pn	05 17 37.3	-0.2
	0.1nm,0.3s,baz=156,slow=13,SNR=7.2						

*IDC **01** 05:15:30.9±2.0,31.°93S×110.°99W,h0km,mb4.0/3, mb1 4.5/4,mb1mx4.0/31,mbtmp4.1/4,ML4.4/1,MS3.9/11, Ms1 3.9/11,ms1mx3.8/19,Error ellipse: s-maj=105.4km s-min=39.8km az=113.0*
*GCMT **01** 05:15:37.0±0.5,32.°08S±0.°03×111.°21W±0.°03,h17km±2km, MW4.8/82,Moment Tensor Solution. s10,c11; s82,c101; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.17±.10; Mθθ-0.37±.11; Mθφ0.53±.10; Mrθ-0.42±.26; Mφφ1.91±.08; Mφr0.73±.30; Best double couple: M₀2.13800×10¹⁶ NP1:φs81.00000°,δ89.00000°,λ-10.00000°. NP2: φs175.00000°,δ81.00000°,λ-159.00000°. Principal axes: T 2.0940, Plg8.0000°, Azm307.0000°; N 0.0890, Plg67.0000°, Azm196.0000°; P -2.1830, Plg21.0000°, Azm40.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 01 05:15:33.0±1.4,31.°8S±0.°2×110.°9W±0.°2,h10km,n26, σ1§03/10,mb4.0/3,MS4.0/14,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**4.87**	**17**	Pn	**Pn**	**05 16 46.7**	**+0.3**
	15nm,0.3s,baz=191,slow=6.6,SNR=14						
RPN				Sn	**Sn**	**05 17 42.0**	**-0.7**
	7.1nm,0.3s,baz=283,slow=10,SNR=1.2						
H03S2	**Juan Fernandez**	**26.90**	**103**	T	T	05 49 45.6	
	baz=264,slow=75,SNR=31						
H03S3	**Juan Fernandez**	**26.91**	**103**	T	T	05 49 54.4	
	baz=264,slow=75,SNR=16						
H03S1	**Juan Fernandez**	**26.92**	**103**	T	T	05 49 54.9	
	baz=264,slow=75,SNR=18						
H03N2	**Juan Fernandez**	**26.93**	**102**	T	T	05 49 42.4	
	baz=268,slow=73,

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.01**	**221**	P	**Pg**	**05 44 52.0**	**+0.8**
EGFH	baz=121			S	**Sg**	**05 44 53.7**	**+0.7**
ESL	**Shilin**	**0.14**	**359**	P	**Pb**	**05 44 53.0**	**0.0**
ESL	baz=17			S	**Sb**	**05 44 55.4**	**-0.3**
HGSD	**Ruisui**	**0.18**	**183**	P	**Pb**	**05 44 54.3**	**+0.6**
HGSD	baz=177			*e*S	**Sb**	**05 44 59.7**	**+2.6**
EHY	**Hungye**	**0.20**	**211**	*e*P	**Pg**	**05 44 53.2**	**-0.1**
EHY	baz=199			*e*S	**Sg**	**05 44 56.8**	**+0.4**
VWDT	**VWDT**	**0.28**	**286**	⇑*i*P	**Pb**	**05 44 55.0**	**-0.4**
VWDT	baz=286			S	**Sb**	**05 44 59.0**	**-0.8**
YULB	**Yu-li**	**0.31**	**204**	P	**Pg**	**05 44 55.1**	**0.0**
YULB	baz=193			S	**Sg**	**05 44 59.6**	**0.0**
YULB	**Yu-li**	**0.31**	**204**		**Pg**	**05 44 54.5**	**-0.6**
YULB				Sg	**Sg**	**05 44 59.5**	**0.0**
HWA	**Hwalien**	**0.34**	**28**	P	**Pb**	**05 44 56.9**	**+0.5**
HWA	baz=27			*e*S	**Sb**	**05 45 02.6**	**+1.1**
TWF1	**Yuli**	**0.35**	**201**	P	**Pg**	**05 44 55.8**	**0.0**
TWF1	baz=198			S	**Sb**	**05 45 01.2**	**-0.6**
OWD	**Renai**	**0.36**	**320**	P	**Pb**	**05 44 56.4**	**-0.5**
OWD	baz=323			S	**Sg**	**05 45 00.8**	**-0.5**
TWD	**Chiawan**	**0.43**	**20**	P	**Pb**	**05 44 57.6**	**-0.3**
TWD	baz=20			*e*S	**Sb**	**05 45 03.7**	**-0.4**
CHGB	**Renai**	**0.45**	**328**	⇓*i*P	**Pb**	**05 44 58.1**	**-0.3**
CHGB	baz=338			S	**Sb**	**05 45 04.0**	**-1.1**
SSLB	**Suanglung**	**0.45**	**284**	⇓*i*P	**Pg**	**05 44 57.5**	**-0.3**
SSLB	baz=291			*i* S	**Sg**	**05 45 02.9**	**-1.0**
SSLB	**Suanglung**	**0.45**	**284**		**Pg**	**05 44 57.4**	**-0.3**
SSLB				Sg	**Sg**	**05 45 02.7**	**-1.2**
WHF	**Hehuan Shan**	**0.49**	**342**	⇓*i*P	**Pb**	**05 44 58.7**	**-0.6**
WHF	baz=346			S	**Sb**	**05 45 05.4**	**-1.0**
FULB	**Fuli**	**0.49**	**195**	*e*P	**Pb**	**05 44 59.0**	**0.0**
FULB	baz=198			S	**Sn**	**05 45 07.9**	**-1.6**
NACB	**Ninganchiao**	**0.52**	**16**	⇑*i*P	**Pg**	**05 44 58.6**	**-0.3**
NACB	baz=20			*e*S	**Sg**	**05 45 05.9**	**0.0**
NACB	**Ninganchiao**	**0.52**	**16**		**Pg**	**05 44 58.6**	**-0.3**
NACB				Sg	**Sg**	**05 45 05.8**	**0.0**
ETLH	**Xiulin Townshi**	**0.53**	**5**	⇑P	**Pg**	**05 44 59.2**	**0.0**
ETLH	baz=9.0			*i* S	**Sg**	**05 45 06.3**	**+0.1**
SMLT	**Sun Moon Lake**	**0.53**	**293**	⇓*i*P	**Pb**	**05 44 59.0**	**-0.7**
SMLT	baz=300			S	**Sg**	**05 45 05.9**	**-0.4**
WHYT	**Xinyi Township**	**0.53**	**272**	*i* P	**Pb**	**05 44 59.4**	**-0.2**
WHYT	baz=269			*i* S	**Sb**	**05 45 06.3**	**-0.9**
TYC	**Yuchr**	**0.57**	**293**	⇓*i*P	**Pb**	**05 44 59.7**	**-0.6**
TYC	baz=301			*e*S	**Sg**	**05 45 07.2**	**-0.5**
CHKT	**Chengkung**	**0.58**	**186**	*e*P	**Pb**	**05 45 00.4**	**0.0**
CHKT	baz=170			*e*S	**Sb**	**05 45 09.0**	**+0.6**
DPDB	**Guoxing**	**0.58**	**307**	⇓P	**Pb**	**05 45 00.3**	**-0.2**
DPDB	baz=315			*e*S	**Sg**	**05 45 07.6**	**-0.4**
FUSS	**Fushou**	**0.59**	**343**	⇓*i*P	**Pb**	**05 45 00.8**	**-0.1**
FUSS	baz=346			S	**Sb**	**05 45 08.5**	**-0.7**
ALS	**Alishan**	**0.60**	**254**	⇑*i*P	**Pb**	**05 45 00.8**	**-0.1**
ALS	baz=260			S	**Sg**	**05 45 08.2**	**-0.3**
ELDTW	**Lidau**	**0.62**	**218**	P	**Pg**	**05 45 00.1**	**-0.7**
ELDTW	baz=209			*e*S	**Sg**	**05 45 08.1**	**-1.0**
TWT	**Tachien**	**0.62**	**338**	⇓*i*P	**Pb**	**05 45 01.4**	**+0.1**
TWT	baz=332			S	**Sg**	**05 45 08.9**	**-0.3**
TDCB	**Techi**	**0.63**	**336**	⇓*i*P	**Pb**	**05 45 01.3**	**-0.1**
TDCB	baz=332			S	**Sg**	**05 45 08.7**	**-0.6**
WJS	**Zhushan**	**0.66**	**283**	P	**Pn**	**05 45 02.7**	**-0.8**
WJS	baz=283			*e*S	**Sb**	**05 45 11.3**	**+0.4**
CHN5	**Tsauling**	**0.70**	**264**	⇓*i*P	**Pn**	**05 45 02.9**	**-1.1**
CHN5	baz=256			S	**Sb**	**05 45 12.2**	**+0.2**
EDH	**Donghe**	**0.71**	**190**	*e*P	**Pg**	**05 45 02.5**	**0.0**
EDH	baz=185			*e*S	**Sb**	**05 45 12.9**	**+0.6**
WNT	**Mingjian**	**0.72**	**286**	⇓*i*P	**Pn**	**05 45 03.7**	**-0.5**
WNT	baz=292			S	**Sn**	**05 45 14.2**	**-0.8**
WHP	**Taichung City**	**0.75**	**323**	*e*P	**Pb**	**05 45 03.4**	**0.0**
WHP	baz=326			*e*S	**Sg**	**05 45 12.2**	**-0.9**
NNSB	**Datong**	**0.75**	**356**	⇑*i*P	**Pb**	**05 45 03.2**	**-0.2**
NNSB	baz=9.0			S	**Sg**	**05 45 13.0**	**-0.2**
NNSH	**Datong**	**0.75**	**356**	⇑P	**Pb**	**05 45 03.4**	**0.0**
NNSH	baz=5.0			*e*S	**Sb**	**05 45 13.4**	**-0.2**
NNS	**Nan Shan**	**0.76**	**356**	⇑*i*P	**Pb**	**05 45 03.5**	**-0.2**
NNS	baz=9.0			S	**Sb**	**05 45 13.6**	**-0.4**
WGK	**Gukeng**	**0.80**	**271**	*e*P	**Pn**	**05 45 04.9**	**-0.5**
WGK	baz=270			S	**Sn**	**05 45 16.3**	**-0.7**
STYT	**Tauyuan**	**0.81**	**231**	⇑*i*P	**Pg**	**05 45 04.4**	**+0.1**
STYT	baz=227			*e*S	**Sn**	**05 45 15.9**	**-1.3**
LONT	**Longtian**	**0.82**	**200**	*e*P	**Pg**	**05 45 04.6**	**+0.1**
LONT	baz=196			*e*S	**Sn**	**05 45 16.7**	**-0.6**
WDLH	**Douliu**	**0.82**	**271**	P	**Pn**	**05 45 05.5**	**-0.1**
WDLH	baz=271			S	**Sn**	**05 45 16.9**	**-0.7**
TPUB	**Ta-pu**	**0.83**	**243**	⇑*i*P	**Pn**	**05 45 05.1**	**-0.6**
TPUB	baz=241			S	**Sg**	**05 45 15.4**	**-0.2**
TPUB	**Ta-pu**	**0.83**	**243**		**Pn**	**05 45 05.1**	**-0.6**
TPUB				Sg	**Sg**	**05 45 15.4**	**-0.2**
TCU	**Taichung**	**0.84**	**304**	*e*P	**Pn**	**05 45 05.9**	**+0.1**
TCU	baz=308			*e*S	**Sn**	**05 45 18.8**	**+0.9**
ENAH	**Nanao**	**0.84**	**24**	*e*P	**Pb**	**05 45 04.2**	**-0.8**
ENAH	baz=17			*e*S	**Sg**	**05 45 16.2**	**+0.1**
WTP	**Ta-pu**	**0.87**	**241**	⇑*i*P	**Pn**	**05 45 05.8**	**-0.5**
WTP	baz=238			*e*S	**Sg**	**05 45 17.2**	**+0.4**
CHN2	**Minshiung**	**0.89**	**261**	*e*P	**Pn**	**05 45 07.0**	**+0.4**
CHN2	baz=260			*e*S	**Sn**	**05 45 19.7**	**+0.4**
WCHH	**Zhanghua**	**0.90**	**297**	*e*P	**Pn**	**05 45 06.8**	**+0.1**
WCHH	baz=298			*e*S	**Sn**	**05 45 19.5**	**+0.2**
TWQ1	**Liyutan**	**0.90**	**318**	*e*P	**Pn**	**05 45 06.9**	**+0.2**
TWQ1	baz=327			*e*S	**Sn**	**05 45 20.7**	**+1.2**
TWG	**Pinlang**	**0.92**	**201**	*e*P	**Pb**	**05 45 05.9**	**-0.3**
TWG	baz=184			*e*S	**Sn**	**05 45 19.4**	**-0.5**
TWG	**Pinlang**	**0.92**	**201**		**Pb**	**05 45 04.4**	**-1.7**
TWG					**Sn**	**05 45 19.8**	**0.0**
TWGBT	**Beinan**	**0.92**	**201**	*e*P	**Pb**	**05 45 05.7**	**-0.5**
TWGBT	baz=184			*e*S	**Sb**	**05 45 17.9**	**-0.3**
NDT	**Datong Townshi**	**0.93**	**4**	*e*P	**Pb**	**05 45 05.9**	**-0.5**
NDT	baz=15			S	**Sg**	**05 45 18.5**	**-0.2**
CHY	**Chiayi**	**0.94**	**259**	*e*P	**Pn**	**05 45 07.5**	**+0.2**
CHY	baz=258			*e*S	**Sn**	**05 45 20.1**	**-0.4**
TTN	**Taitung**	**0.95**	**196**	*e*P	**Pg**	**05 45 07.2**	**+0.1**
TTN	baz=180			*e*S	**Sg**	**05 45 19.4**	**-0.2**
WTK	**Tuku**	**0.96**	**271**	*e*P	**Pn**	**05 45 07.8**	**+0.3**
WTK	baz=271			*e*S	**Sn**	**05 45 21.6**	**+0.7**
NSY	**Sanyi**	**0.96**	**320**	P	**Pn**	**05 45 08.4**	**+0.8**
NSY	baz=331			*e*S	**Sn**	**05 45 22.5**	**+1.5**
TWK	**Hsinying**	**0.96**	**245**	P	**Pn**	**05 45 07.6**	**0.0**
TWK	baz=243			S	**Sn**	**05 45 20.7**	**-0.3**
CHN1	**Nanshi**	**0.97**	**240**	⇑*i*P	**Pn**	**05 45 07.7**	**+0.1**
CHN1	baz=237			*e*S	**Sn**	**05 45 21.3**	**+0.2**
ENTT	**Nioudou**	**0.97**	**7**	*e*P	**Pb**	**05 45 07.0**	**0.0**
ENTT	baz=10.0			*e*S	**Sg**	**05 45 20.2**	**+0.2**
SNST	**Tainan City**	**0.97**	**242**	*e*P	**Pn**	**05 45 07.9**	**+0.2**
SNST	baz=240			*e*S	**Sn**	**05 45 20.8**	**-0.4**
SGST	**Jiashian**	**0.98**	**233**	⇑*i*P	**Pb**	**05 45 07.0**	**-0.3**
SGST	baz=230			S	**Sn**	**05 45 21.1**	**-0.3**
WDJ	**Dajia District**	**0.99**	**313**	⇓*i*P	**Pn**	**05 45 08.7**	**+0.8**
WDJ	baz=315			*e*S	**Sn**	**05 45 24.0**	**+2.4**
YHNB	**Yeheng**	**0.99**	**357**	P	**Pb**	**05 45 07.3**	**-0.2**
YHNB	baz=359			*e*S	**Sb**	**05 45 20.2**	**-0.2**
YHNB	**Yeheng**	**0.99**	**357**		**Pb**	**05 45 07.3**	**-0.2**
YHNB				Sg	**Sb**	**05 45 20.3**	**-0.2**
SLGT	**Liugui**	**0.99**	**227**	*e*P	**Pn**	**05 45 07.8**	**-0.2**
SLGT	baz=216			*e*S	**Sg**	**05 45 20.4**	**-0.5**
NSK	**Sanguang**	**1.00**	**356**	P	**Pb**	**05 45 07.4**	**-0.2**
NSK	baz=359			S	**Sg**	**05 45 20.9**	**-0.2**
LDUT	**Ludao**	**1.00**	**178**	*e*P	**Pb**	**05 45 06.0**	**-1.6**
LDUT	baz=174			*e*S	**Sb**	**05 45 19.4**	**-1.2**
TWC	**Suao**	**1.00**	**22**	*e*P	**Pb**	**05 45 06.5**	**-1.2**
TWC	baz=17			*e*S	**Sg**	**05 45 21.4**	**+0.2**
RLNB	**Erlin**	**1.01**	**282**	*e*P	**Pn**	**05 45 08.4**	**+0.2**
RLNB	baz=283			*e*S	**Sn**	**05 45 23.0**	**+0.9**
NSTT	**Nanjuang**	**1.03**	**337**	⇓*i*P	**Pg**	**05 45 08.9**	**+0.4**
NSTT	baz=349			*e*S	**Sn**	**05 45 21.9**	**-0.8**
LIOB	**Emei**	**1.04**	**338**	*i* P	**Pg**	**05 45 09.2**	**+0.5**
LIOB	baz=349			*e*S	**Sn**	**05 45 22.7**	**-0.2**
NMLH	**Miaoli**	**1.04**	**326**	⇓P	**Pg**	**05 45 09.9**	**+1.2**
NMLH	baz=328			*e*S	**Sn**	**05 45 24.1**	**+1.2**
WLGB	**Puzi**	**1.06**	**259**	*e*P	**Pb**	**05 45 07.3**	**-1.3**
WLGB	baz=259			*e*S	**Sn**	**05 45 23.5**	**+0.1**
TWE	**Neicheng**	**1.06**	**11**	*e*P	**Pb**	**05 45 08.5**	**-0.2**
TWE	baz=28			*e*S	**Sn**	**05 45 23.8**	**+0.4**
WTCT	**Ta-ch'eng**	**1.07**	**280**	*e*P	**Pg**	**05 45 08.9**	**-0.5**
WTCT	baz=281			*e*S	**Sn**	**05 45 23.7**	**0.0**
NWLT	**Wulai**	**1.10**	**3**	*e*P	**Pn**	**05 45 09.5**	**0.0**
NWLT	baz=15			*e*S	**Sg**	**05 45 23.6**	**-0.6**
ICHU	**Yijhu**	**1.11**	**254**	P	**Pg**	**05 45 10.2**	**+0.2**
ICHU	baz=252			*e*S	**Sg**	**05 45 25.5**	**+1.1**
WSF	**Szhu**	**1.11**	**268**	*e*P	**Pg**	**05 45 11.3**	**+1.2**
WSF	baz=268			*e*S	**Sg**	**05 45 25.1**	**+0.4**
WMLT	**Mailiao**	**1.12**	**277**	*e*S	**Sg**	**05 45 26.2**	**+1.4**
ILA	**Ilan**	**1.12**	**15**	*e*P	**Pb**	**05 45 09.2**	**-0.5**
CHN3	**Shinhua**	**1.15**	**239**	*e*P	**Pg**	**05 45 11.4**	**+0.6**
CHN3	baz=249			*e*S	**Sg**	**05 45 29.1**	**+3.3**
ECL	**Taimali**	**1.16**	**202**	P	**Pb**	**05 45 10.2**	**-0.2**
ECL	baz=188			*e*S	**Sn**	**05 45 25.7**	**-0.1**
SCST	**Cishan**	**1.17**	**228**	*e*P	**Pg**	**05 45 12.2**	**+1.0**
SCST	baz=224			*e*S	**Sg**	**05 45 30.1**	**+3.7**
CHN8	**Yiju**	**1.17**	**254**	*e*P	**Pg**	**05 45 11.3**	**+0.1**
CHN8	baz=252			*e*S	**Sg**	**05 45 27.2**	**+0.7**
SBCB	**Hsinchu**	**1.18**	**340**	*e*P	**Pg**	**05 45 12.0**	**+0.5**
SBCB	baz=342			*e*S	**Sg**	**05 45 28.0**	**+1.0**
SSD	**Sandimen**	**1.18**	**219**	P	**Pb**	**05 45 10.8**	**+0.1**
SSD	baz=208			*e*S	**Sg**	**05 45 29.0**	**+2.1**
TSMG	**Majia**	**1.21**	**217**	*e*P	**Pb**	**05 45 10.9**	**-0.3**
TSMG	baz=208			*e*S	**Sg**	**05 45 29.3**	**+1.6**
NTC	**Toucheng**	**1.23**	**17**	*e*P	**Pn**	**05 45 10.9**	**-0.3**
NTC	baz=18			*e*S	**Sg**	**05 45 28.4**	**+0.1**
SCLT	**Jiali**	**1.24**	**247**	*e*P	**Pg**	**05 45 12.7**	**+0.1**
SCLT	baz=244			*e*S	**Sg**	**05 45 30.4**	**+1.5**
TWM1	**Shoushan**	**1.26**	**228**	*e*P	**Pg**	**05 45 14.6**	**+1.6**
TAI1	**Yung-k'ang**	**1.28**	**241**	*e*P	**Pg**	**05 45 14.0**	**+0.8**
SGLT	**Jiouru**	**1.28**	**223**	*e*P	**Pg**	**05 45 15.1**	**+1.8**
SGLT	baz=210			*e*S	**Sg**	**05 45 33.2**	**+3.1**
MASBT	**Mashibuluo**	**1.29**	**215**	*e*P	**Pb**	**05 45 12.4**	**-0.2**
MASBT	baz=211			*e*S	**Sg**	**05 45 31.1**	**+0.7**
TATO	**Taipei**	**1.29**	**2**	*e*P	**Pn**	**05 45 11.9**	**-0.2**
TATO	baz=18			*e*S	**Sg**	**05 45 30.7**	**+0.2**
TATO	**Taipei**	**1.29**	**2**		**Pb**	**05 45 12.3**	**-0.3**
TWA	**Mucha**	**1.30**	**6**	*e*P	**Pb**	**05 45 12.4**	**-0.5**
TWA	baz=22			*e*S	**Sg**	**05 45 31.3**	**+0.5**
NCUH	**Zhongli**	**1.31**	**350**	*e*P	**Pg**	**05 45 13.6**	**-0.2**
NCUH	baz=352			*e*S	**Sg**	**05 45 32.3**	**+1.5**
NCU	**National Centr**	**1.31**	**350**	*e*P	**Pg**	**05 45 13.8**	**0.0**
NCU	baz=352			*e*S	**Sg**	**05 45 32.1**	**+1.3**
TIPB	**Shuangxi**	**1.34**	**15**	*e*P	**Pb**	**05 45 13.2**	**-0.3**
TAP	**Taipei**	**1.36**	**3**	*e*P	**Pg**	**05 45 15.5**	**+0.7**
TAP	baz=18			*e*S	**Sg**	**05 45 33.5**	**+1.0**
TAP1	**Taipei**	**1.36**	**3**	*e*P	**Pb**	**05 45 13.4**	**-0.4**
TAP1	baz=18			*e*S	**Sg**	**05 45 32.0**	**-0.5**
SNJT	**Kaohsiung City**	**1.37**	**228**	*e*P	**Pg**	**05 45 15.1**	**+0.2**
EAST	**Anshuo**	**1.40**	**203**	⇓*e*P	**Pg**	**05 45 14.9**	**-0.6**
EAST	baz=187			*e*S	**Sg**	**05 45 32.9**	**-0.8**
TWS1	**Kuangyinshan**	**1.42**	**359**	*e*P	**Pb**	**05 45 14.8**	**0.0**
TWS1	baz=20			*e*S	**Sg**	**05 45 36.4**	**+2.0**
TWB1	**Santiao Chiao**	**1.42**	**21**	*e*P	**Pb**	**05 45 14.2**	**-0.5**
NWF	**Wu-fen Shan**	**1.42**	**13**	*e*P	**Pn**	**05 45 14.0**	**0.0**
NWF	baz=26			*e*S	**Sn**	**05 45 32.2**	**-0.3**
WFSB	**Wu-fen Shan**	**1.42**	**13**	*e*P	**Pn**	**05 45 13.8**	**-0.1**
WFSB	baz=26			*e*S	**Sn**	**05 45 31.5**	**-0.9**
SSPT	**Xinbi**	**1.43**	**214**	*e*P	**Pg**	**05 45 15.8**	**-0.3**
SSPT	baz=209			*e*S	**Sg**	**05 45 34.8**	**+0.1**
YM01	**YM01**	**1.47**	**5**	*e*P	**Pn**	**05 45 14.4**	**-0.2**
YM04	**YM04**	**1.47**	**4**	*e*P	**Pn**	**05 45 14.9**	**+0.2**
YM10	**YM10**	**1.48**	**4**	*e*P	**Pb**	**05 45 15.3**	**-0.5**
NTST	**Danshui**	**1.48**	**1**	*e*P	**Pg**	**05 45 16.9**	**-0.2**
YM05	**YM05**	**1.49**	**5**	*e*P	**Pn**	**05 45 14.5**	**-0.4**
YM05	baz=20			*e*S	**Sg**	**05 45 36.7**	**+0.1**
YM11	**YM11**	**1.49**	**5**	*e*P	**Pg**	**05 45 17.3**	**+0.1**
SCZT	**Fangliau**	**1.50**	**210**	*e*P	**Pb**	**05 45 16.6**	**+0.5**
SCZT	baz=205			*e*S	**Sg**	**05 45 36.0**	**-1.0**
YM03	**YM03**	**1.50**	**4**	*e*P	**Pb**	**05 45 15.4**	**-0.8**
ANP	**Anpu**	**1.51**	**3**	*e*P	**Pb**	**05 45 16.2**	**-0.1**
YM08	**YM08**	**1.51**	**5**	*e*P	**Pn**	**05 45 14.6**	**-0.5**
SLIU	**Shizi**	**1.57**	**202**	*e*P	**Pb**	**05 45 17.6**	**+0.4**
JYNG	**Yonagunijimaku**	**1.58**	**61**	P	**Pn**	**05 45 16.3**	**+0.2**
JYNG				*e*S	**Sb**	**05 45 37.2**	**-0.1**
TWY	**Chenhua**	**1.60**	**5**	*e*P	**Pb**	**05 45 17.4**	**-0.4**
LAY	**Lan-yu**	**1.63**	**176**	*e*P	**Pn**	**05 45 14.8**	**-2.1**
YOJ	**Yonaguni jima**	**1.64**	**61**	*e*P	**Pn**	**05 45 17.2**	**+0.3**
YOJ	**Yonaguni jima**	**1.64**	**61**	P	**Pn**	**05 45 17.1**	**+0.3**
YOJ				*e*S	**Sb**	**05 45 38.8**	**-0.2**
YOJ	**Yonaguni jima**	**1.64**	**61**		**Pn**	**05 45 17.1**	**+0.3**
WDGT	**Dungji**	**1.68**	**256**	*e*P	**Pn**	**05 45 17.4**	**-0.1**
WDGT	baz=255			*e*S	**Sn**	**05 45 38.6**	**-0.1**
PHUB	**P'eng-hu**	**1.72**	**265**	*e*P	**Pn**	**05 45 17.9**	**0.0**
PHUB	baz=246			*e*S	**Sb**	**05 45 40.2**	**-1.1**
PNG	**Penghu**	**1.73**	**267**	*e*P	**Pn**	**05 45 18.2**	**+0.2**
PNG	baz=268			*e*S	**Sb**	**05 45 41.3**	**-0.2**
TWK1	**Hengchun**	**1.82**	**199**	*e*P	**Pb**	**05 45 20.5**	**-1.1**
TWKBT	**Hengchun**	**1.82**	**198**	*e*P	**Pb**	**05 45 20.4**	**-1.2**
TSEB	**Hengchuen, Pin**	**1.83**	**196**	*e*P	**Pn**	**05 45 19.7**	**+0.2**
VCHM	**Qimei**	**1.90**	**256**	*e*P	**Pn**	**05 45 20.2**	**-0.2**
PCYT	**Pengchaiyu**	**2.03**	**16**	*e*P	**Pn**	**05 45 23.4**	**+1.1**
IRIF	**Iriomote-Funau**	**2.20**	**72**	P	**Pn**	**05 45 24.8**	**+0.2**
IRIF				*e*S	**Sn**	**05 45 52.1**	**+0.6**
HATJ	**Hateruma jima**	**2.20**	**80**	P	**Pn**	**05 45 24.7**	**+0.1**
HATJ				*e*S	**Sn**	**05 45 51.5**	**-0.1**
VWUC	**VWUC**	**2.23**	**306**	*e*P	**Pn**	**05 45 24.4**	**-0.6**
PTTC	**Pingtan**	**2.37**	**320**	*e*P	**Pn**	**05 45 26.4**	**-0.4**
JKRS	**Kuro-shima**	**2.42**	**76**	P	**Pn**	**05 45 28.2**	**+0.6**
JKRS				*e*S	**Sn**	**05 45 57.9**	**+0.9**
JIJ	**Ishigaki jima**	**2.57**	**74**	P	**Pn**	**05 45 29.4**	**-0.3**
JIJ				*e*S	**Sn**	**05 46 00.7**	**0.0**
JISG	**Ishigakijimahi**	**2.78**	**70**	P	**Pn**	**05 45 32.4**	**-0.2**
MATB	**Ma-tsu**	**2.81**	**332**	*e*P	**Pn**	**05 45 32.2**	**-0.8**
KNM	**Kinmen**	**2.84**	**286**	*e*P	**Pn**	**05 45 34.8**	**+1.4**
QZH	**Quanzhou**	**2.88**	**297**	Pn	**Pn**	**05 45 33.8**	**-0.2**
QZH				*e*Sn	**Sn**	**05 46 05.5**	**-2.9**
QZH	comp=N,160nm,0.5s			smax	smax		
QZH	comp=E,120nm,0.5s			smax	smax		
KNMB	**Chin-men Tao**	**2.89**	**286**	*e*P	**Pn**	**05 45 33.6**	**-0.5**
KNMB	**Chin-men Tao**	**2.89**	**286**	Pn	**Pn**	**05 45 34.2**	**0.0**
JTJ	**Tarama**	**3.13**	**72**	P	**Pn**	**05 45 37.7**	**+0.2**
JTJ				S	**Sn**	**05 46 15.1**	**+0.5**
LYJJ	**Jianjiangzhen**	**3.24**	**332**	*e*P	**Pn**	**05 45 38.6**	**-0.3**
MHZQ	**Yeshan**	**3.25**	**318**	*e*P	**Pn**	**05 45 39.9**	**+0.8**
ZPLA	**Ao Xicun**	**3.38**	**275**	*e*P	**Pn**	**05 45 40.6**	**-0.2**
AXDP	**Jialang**	**3.39**	**292**	*e*P	**Pn**	**05 45 41.1**	**+0.2**

baz=292
ZZJH Jiuhuzhen 3.57 284 *e*P **Pn 05 45 43.4 0.0**
baz=283
JTU Tsushima 12.85 31 Pn **Pn 05 47 48.6 -2.1**
CMAR Chiang Mai Arr 21.61 260 P **P 05 49 41.9 +3.6**
comp=E,0.5nm,0.3s,baz=58,slow=7.3,SNR=5.1
SONM Songino Array 26.92 337 P **P 05 50 29.5 +0.2**
comp=E,0.8nm,0.5s,baz=151,slow=9.1,SNR=3.7
SONM Songino Array 26.92 337 P **P 05 50 27.0 -2.3**
RPSI Rantau Prapat 30.15 230 P **P 05 50 58.2 0.0**
RPSI IAmb IAmb 05 51 12.9
comp=Z,7.8nm,1.2s
WMQ Urumqi 34.17 314 *e*P **P 05 51 34.4 +1.1**
MKAR Makanchi Array 38.86 316 P **P 05 52 13.5 +0.3**
comp=Z,0.5nm,0.5s,baz=110,slow=9.8,SNR=3.6
MKAR Makanchi Array 38.86 316 P **P 05 52 12.9 -0.3**
ZALV Zalesovo Beam 40.79 327 P **P 05 52 29.8 +0.6**
comp=Z,1.0nm,0.5s,baz=101,slow=7.7,SNR=4.5
ZALV Zalesovo Beam 40.79 327 P **P 05 52 30.4 +1.3**
H11N1 WAKE ISLAND Hy 42.29 86 T T 06 37 42.4
baz=283,slow=75,SNR=17
H11N2 WAKE ISLAND Hy 42.29 86 T T 06 37 42.5
baz=283,slow=75,SNR=15
H11N3 WAKE ISLAND Hy 42.30 86 T T 06 37 43.7
baz=283,slow=75,SNR=19
H11S3 WAKE ISLAND Hy 42.41 88 T T 06 37 52.6
baz=284,slow=74,SNR=19
H11S1 WAKE ISLAND Hy 42.41 88 T T 06 37 54.0
baz=284,slow=74,SNR=9.0
H11S2 WAKE ISLAND Hy 42.42 88 T T 06 37 54.7
baz=284,slow=74,SNR=8.6
KURK Kurchatov 42.63 320 P **P 05 52 44.0 -0.2**
KURK IAmb IAmb 05 53 12.5
comp=Z,4.8nm,1.4s
KURBB Kurchatov Arra 42.64 320 P **P 05 52 44.5 +0.2**
comp=Z,0.8nm,0.8s,baz=109,slow=8.6,SNR=5.8
WRAB Tennant Creek 45.14 163 P **P 05 53 04.5 -0.2**
WRA Warramunga Arr 45.14 163 P **P 05 53 04.0 -0.7**
comp=Z,0.5nm,0.7s,baz=345,slow=8.8,SNR=4.0
WB2 Warramunga Arr 45.15 163 P **P 05 53 03.8 -1.0**
WB2 IAmb IAmb 05 53 11.5
comp=Z,5.7nm,1.2s
WR0 Warramunga Arr 45.22 163 P **P 05 53 04.8 -0.5**
WR0 IAmb IAmb 05 53 12.2
comp=Z,6.4nm,1.2s
KKAR Karatay Array 45.96 308 P **P 05 53 09.3 -1.8**
ASAR Alice Springs 48.59 165 P **P 05 53 30.1 -1.6**
comp=Z,0.1nm,0.3s,baz=343,slow=7.4,SNR=4.7
ABKAR Akbulak array 53.96 315 P **P 05 54 11.4 -0.3**
FINES FINESS Array B 72.00 330 P **P 05 56 12.4 +1.0**
comp=Z,1.5nm,0.8s,baz=64,slow=6.3,SNR=7.6
CLL Collm 82.59 323 *e*(P) **P 05 57 14.0 +2.9**
EKA Eskdalemuir Ar 88.27 332 P **P 05 57 38.9 -0.4**
comp=Z,1.6nm,0.8s,baz=58,slow=6.8,SNR=3.7

BJI ***01*** *05:44:54.6±0.0,34.˙00N×142.˙91E,h16km,mB4.9/24, mb4.5/34,Ms4.2/12,Ms7 3.9/12*
MOS ***01*** *05:44:55.8±0.9,33.˙80N×142.˙46E,h10km,mb4.8/34,Error ellipse: s-maj=10.7km s-min=6.1km az=112.8*
IDC ***01*** *05:44:56.1±0.5,33.˙84N×142.˙48E,h0km,mb4.4/24, mb1 4.5/31,mb1mx4.4/55,mbtmp4.3/31,ML3.8/6,MS3.3/11, Ms1 3.3/11,ms1mx3.1/40,Error ellipse: s-maj=14.3km s-min=12.2km az=88.0*
NEIC ***01*** *05:44:57.4±1.9,33.˙86N±0.˙05×142.˙54E±0.˙05,h10km±1km, mb4.7/56,Error ellipse: s-maj=10.6km s-min=4.4km az=40.0*
NIED ***01*** *05:44:59.5,33.˙85N×142.˙43E,h63km,MW4.3,Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.90; $M_{\theta\theta}$0.38; $M_{\phi\phi}$2.52; $M_{r\theta}$0.41; $M_{\theta\phi}$0.82; $M_{\phi r}$0.49; Fault plane solution: M_o2.92000×10^{15} NP1: ϕ_s203.00000°,δ51.00000°,λ-85.00000°. NP2:ϕ_s14.00000°, δ39.00000°,λ-97.00000°.*
JMA ***01*** *05:44:59.4±0.2,33.˙85N×142.˙43E,h63km,M4.3*
ISC 01 05:44:57.1±2.4,33.˙84N±0.˙05×142.˙48E±0.˙06,h7km±14km, n224,σ1s05/230,mb4.6/71,MS3.6/11,6C-13D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.48**	**304**	P			**Pn**	**05 45 23.8**	**+0.1**
BSO1				S			**Sn**	**05 45 42.1**	**-1.0**
BSO3	**Boso 3**	**1.89**	**301**	P			**Pn**	**05 45 30.1**	**+0.5**
BSO3				*e*S			**Sn**	**05 45 52.1**	**-1.5**
BSO4	**Boso 4**	**2.11**	**304**	P			**Pn**	**05 45 33.2**	**+0.5**
KTR	**Katsuura**	**2.21**	**307**	P			**Pn**	**05 45 34.4**	**+0.2**
KTR				*e*S			**Sn**	**05 46 00.3**	**-1.6**
CHOJ	**Chosi**	**2.29**	**325**	P			**Pn**	**05 45 35.0**	**-0.3**
CHOJ				*e*S			**Sn**	**05 46 02.2**	**-1.5**
JKUC	**kamogawauchiur**	**2.30**	**306**	P			**Pn**	**05 45 35.6**	**+0.2**
JKUC				*e*S			**Sn**	**05 46 02.6**	**-1.4**
JHJ2	**Mitsune**	**2.34**	**253**	P			**Pn**	**05 45 36.0**	**0.0**
JHJ2	**Mitsune**	**2.34**	**253**	Pn			**Pn**	**05 45 36.2**	**+0.2**
JHJ	**Hachijo jima 2**	**2.36**	**253**	Pn			**Pn**	**05 45 36.2**	**-0.1**
	100nm,0.3s,baz=63,slow=18,SNR=62								
JHJ							Sn	**05 46 00.9**	**-4.7**
	226nm,0.3s,baz=72,slow=19,SNR=20								
JMKN	**Mikurajimanish**	**2.40**	**272**	P			**Pn**	**05 45 36.8**	**-0.1**
JMKN				S			**Sn**	**05 46 04.0**	**-2.6**
JIM2	**Oshima 2**	**2.67**	**290**	P			**Pn**	**05 45 39.9**	**-0.7**
JYT	**Yasato**	**3.03**	**322**				**Pn**	**05 45 44.9**	**-0.6**
JOD2	**Odawara 2**	**3.14**	**298**	P			**Pn**	**05 45 46.5**	**-0.5**
JOD2				S			**Sn**	**05 46 22.7**	**-2.1**
JAG	**Ashikaga**	**3.58**	**317**	P			**Pn**	**05 45 52.9**	**-0.1**
JYN	**Shimob**	**3.64**	**298**	P			**Pn**	**05 45 54.1**	**+0.2**
JYN				S			**Sn**	**05 46 36.2**	**-1.0**
JSG	**Sagara**	**3.65**	**284**	Pn			**Pn**	**05 45 53.9**	**-0.1**
JRY	**Ryogami san**	**3.65**	**307**	P			**Pn**	**05 45 54.3**	**+0.2**
JRY				*e*S			**Sn**	**05 46 36.1**	**-1.4**
JMM	**Marumori**	**4.24**	**342**				**Pn**	**05 46 01.2**	**-0.9**
MJAR	**Matsushiro Arr**	**4.41**	**309**	Pn			**Pn**	**05 46 04.8**	**+0.3**
	1.3nm,0.3s,baz=123,slow=9.7,SNR=47								
MJAR							Sn	**05 46 53.7**	**-2.5**
	2.9nm,0.3s,baz=116,slow=31,SNR=8.7								
MAJO	**Matsushiro**	**4.42**	**309**	*ce*P			**Pn**	**05 46 04.9**	**+0.3**
MAJO	**Matsushiro**	**4.42**	**309**	Pn			**Pn**	**05 46 04.9**	**+0.3**
MAJO							**Sn**	**05 46 55.9**	**-0.9**
MAT	**Matsushiro**	**4.42**	**309**	P			**Pn**	**05 46 04.3**	**-0.3**
MAT				S			**Sn**	**05 46 54.8**	**-1.5**
JGF	**Kuroka**	**4.57**	**294**	Pn			**Pn**	**05 46 08.5**	**+1.8**
INU	**Inuyama**	**4.75**	**290**				**Pn**	**05 46 10.9**	**+1.8**
JSD	**Sado**	**5.41**	**322**	Pn			**Pn**	**05 46 18.0**	**-0.2**
JWT	**Wachi**	**6.01**	**286**				**Pn**	**05 46 28.4**	**+1.9**
JCJ	**Chichijima**	**6.73**	**182**	Pn			Pn	05 46 34.4	-2.0
JTM	**Tenmabayashi**	**7.02**	**351**	Pn			**Pn**	**05 46 41.2**	**+0.8**
JMN	**Monobe**	**7.16**	**271**	Pn			**Pn**	**05 46 45.0**	**+2.7**
JHS	**Saijyo**	**7.82**	**281**	Pn			**Pn**	**05 46 53.4**	**+2.1**
ERM	**Erimo**	**8.18**	**4**	P			Pn	05 46 53.5	-2.7
ERM	**Erimo**	**8.18**	**4**	Pn			Pn	05 46 53.5	-2.7
JEW	**Eniwo**	**9.02**	**355**	Pn			**Pn**	**05 47 09.3**	**+1.6**
JNU	**Nakatsue**	**9.72**	**269**	Pn			**Pn**	**05 47 18.1**	**+0.7**
	0.5nm,0.3s,baz=51,slow=6.5,SNR=4.0								
NMR	**Nemuro--Hokkai**	**9.85**	**14**	*e*P			**Pn**	**05 47 17.1**	**-2.0**
ASAJ	**Asahikawa**	**10.26**	**0**	Pn			**Pn**	**05 47 23.7**	**-1.1**
	3.0nm,0.3s,baz=188,slow=15,SNR=10								
ASAJ							Sn	05 49 10.0	-10
	2.4nm,0.3s,baz=271,slow=22,SNR=2.7								
ASAJ							LR	LR 05 53 25.8	
	comp=Z,96nm,18.1s,baz=198,slow=50								
JKA	**Kamikawa-asahi**	**10.26**	**0**	Pn			**Pn**	**05 47 23.7**	**-1.1**
GRPR	**Tuman**	**10.46**	**13**	*e*P			Pn	05 47 25.1	-2.3
GRPR					pmax	pmax			
	comp=Z,116nm,0.2s								
KSRS	**Korea Array**	**12.38**	**291**	Pn			**Pn**	**05 47 55.8**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=302,slow=13,SNR=4.3								
KSRS					LR		LR	05 52 56.3	
	comp=Z,90nm,20.1s,baz=90,slow=39								
YSS	**Yuzh-Sakhalins**	**13.10**	**1**	*e*P			**Pn**	**05 48 01.4**	**-2.1**
YSS				*e*S			**Sn**	**05 50 25.3**	**-4.2**
YSS					pmax	pmax			
	comp=Z,20nm,1.0s								
YSS	**Yuzh-Sakhalins**	**13.10**	**1**	Pn			**Pn**	**05 48 01.9**	**-1.7**
USRK	**Ussuriysk Ar.**	**13.16**	**325**	Pn			**Pn**	**05 48 03.8**	**-0.5**
	baz=146,slow=13,SNR=3.4								
USRK	**Ussuriysk Ar.**	**13.16**	**325**	Pn			**Pn**	**05 48 03.0**	**-1.4**
TYV	**Tymovskoe**	**17.01**	**0**	*e*P			**Pn**	**05 48 56.3**	**+0.9**
TYV					pmax	pmax			
	comp=Z,400nm,4.7s								
TYV					pmax	pmax			
	comp=Z,9.0nm,1.2s								
KLR	**Kul'dur**	**17.32**	**336**	P			**Pn**	**05 48 58.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=128,slow=13,SNR=6.6								
KLR					LR		LR	05 56 11.6	
	comp=Z,62nm,18.1s,baz=155,slow=39								
KLR	**Kul'dur**	**17.32**	**336**	*e*P			**Pn**	**05 48 58.0**	**-1.3**
KLR					pmax	pmax			
	comp=Z,10.0nm,1.6s								
NJ2	**Nanjing**	**19.90**	**271**	*e*P			**P**	**05 49 29.6**	**+0.4**
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
GUMO	**Guam**	**20.28**	**173**	LR			LR	05 56 06.3	
	comp=Z,20nm,21.9s,baz=62,slow=33								
ZEA	**Zeya**	**22.64**	**336**	*e*P			**P**	**05 50 01.0**	**+2.5**
ZEA					pmax	pmax			
	comp=N,40nm,1.1s								
WHN	**Wuhan**	**24.00**	**270**	P			**P**	**05 50 16.6**	**+4.1**
HHC	**Hu-ho-hao-te**	**25.46**	**295**	*e*P			**P**	**05 50 26.4**	**+0.5**
HHC					pmax	pmax			
	comp=N,10.0nm,1.1s								
HHC					pmax	pmax			
	comp=N,150nm,5.6s								
H11N2	**WAKE ISLAND Hy**	**25.85**	**117**	T			T	06 17 28.8	
	baz=309,slow=75,SNR=14								
H11N1	**WAKE ISLAND Hy**	**25.86**	**117**	T			T	06 17 12.2	
	baz=309,slow=75,SNR=10.0								
H11N3	**WAKE ISLAND Hy**	**25.87**	**117**	T			T	06 17 16.0	
	baz=309,slow=75,SNR=9.6								
H11S1	**WAKE ISLAND Hy**	**26.47**	**119**	T			T	06 17 43.4	
	baz=312,slow=75,SNR=11								
H11S3	**WAKE ISLAND Hy**	**26.47**	**119**	T			T	06 17 44.1	
	baz=312,slow=75,SNR=12								
H11S2	**WAKE ISLAND Hy**	**26.49**	**119**	T			T	06 17 45.6	
	baz=312,slow=75,SNR=9.2								
XAN	**Xi'an**	**27.77**	**280**	P			**P**	**05 50 47.9**	**+1.2**
XAN				sP			pwP	05 50 55.1	-0.2
XAN					pmax	pmax			
	comp=N,8.0nm,1.2s								
XAN					pmax	pmax			
	comp=N,150nm,5.5s								
XAN	**Xi'an**	**27.77**	**280**	P			**P**	**05 50 45.1**	**-1.6**
XAN					pmax	pmax			
	comp=Z,7.0nm,0.9s								
XAN	**Xi'an**	**27.77**	**280**	P			**P**	**05 50 45.1**	**-1.6**
ENH	**Enshi**	**28.12**	**272**	P			**P**	**05 50 49.5**	**-0.3**
ENH					IAmb	IAmb		05 50 52.4	
	comp=Z,8.5nm,0.6s								
ULN	**Ulaanbaatar**	**29.95**	**309**	*e*P			**P**	**05 51 08.0**	**+2.0**
ULN					pmax	pmax			
	comp=Z,11nm,1.3s								
ULN	**Ulaanbaatar**	**29.95**	**309**	P			**P**	**05 51 06.4**	**+0.4**
ULN					IAmb	IAmb		05 51 12.5	
	comp=Z,6.5nm,0.8s								
SONM	**Songino Array**	**30.37**	**308**	P			**P**	**05 51 10.5**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=111,slow=8.3,SNR=10								
SONM					LR		LR	06 05 06.9	
	comp=Z,90nm,19.6s,baz=24,slow=40								
SONM	**Songino Array**	**30.37**	**308**	P			**P**	**05 51 10.2**	**+0.5**
SONM					pmax	pmax			
	comp=Z,6.0nm,1.1s								
SONM	**Songino Array**	**30.37**	**308**	P			**P**	**05 51 10.2**	**+0.5**
LZH	**Lanzhou**	**31.60**	**285**	*e*P			**P**	**05 51 23.9**	**+3.1**
LZH				pP			pwP	05 51 27.8	-1.6
LZH				sP			sP	05 51 31.0	+10
LZH					pmax	pmax			
	comp=Z,14nm,1.1s								
CD2	**Chengdu**	**32.70**	**276**	*e*P			**P**	**05 51 30.0**	**-0.4**
ZAK	**Zakamensk**	**32.99**	**312**	*e*P			P	05 51 27.8	-4.9
ZAK					pmax	pmax			
	comp=Z,4.0nm,1.3s								
TLY	**Talaya**	**33.13**	**314**	*e*P			P	05 51 43.2	+9.4
TLY					pmax	pmax			
	comp=Z,9.0nm,0.6s								
TLY					MLR	MLR			
	comp=Z,226nm,15.0s								
GTA	**Gaotai**	**34.45**	**292**	*e*P			**P**	**05 51 46.6**	**+1.0**
GTA				pP			sP	05 51 50.6	+5.0
GTA				sP			pwP	05 51 53.7	-0.5
GTA					pmax	pmax			
	comp=Z,4.0nm,0.8s								
BILL	**Bilibino**	**36.87**	**15**	*e*P			**P**	**05 52 05.2**	**-0.6**
BILL				*e*				05 53 36.7	
BILL				*e*SS			SS	06 02 14.7	
BILL					pmax	pmax			
	comp=Z,4.0nm,0.9s								
TIXI	**Tiksi**	**38.56**	**353**	*e*P			**P**	**05 52 19.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**41.66**	**260**	P			**P**	**05 52 45.8**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=53,slow=7.6,SNR=4.1								
CMAR					LR		LR	06 12 12.8	
	comp=Z,32nm,18.0s,baz=146,slow=39								
CMAR	**Chiang Mai Arr**	**41.66**	**260**	*i* P			**P**	**05 52 46.4**	**0.0**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.5s								
CMAR	**Chiang Mai Arr**	**41.66**	**260**	P			**P**	**05 52 46.7**	**+0.2**
WMQ	**Urumqi**	**43.12**	**300**	*e*P			**P**	**05 52 59.0**	**+0.8**
WMQ					pmax	pmax			
	comp=Z,20nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,50nm,3.7s								
WMQ					LR	LR			
	comp=Z,700nm,29.1s								
WMQ					LR	LR			
	comp=Z,1μm,29.2s								
WMQ					LR	LR			
	comp=Z,110nm,29.0s								
ZALV	**Zalesovo Beam**	**44.74**	**315**	P			**P**	**05 53 10.7**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=88,slow=6.3,SNR=5.6								
ZALV					PcP		**PcP**	**05 54 52.5**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=105,slow=3.1,SNR=6.8								
ZALV					LR		LR	06 14 34.1	
	comp=Z,24nm,18.9s,baz=106,slow=40								
ZALV	**Zalesovo Beam**	**44.74**	**315**	P			**P**	**05 53 10.3**	**-0.6**
NRIK	**Noril'sk**	**46.53**	**336**	P			**P**	**05 53 24.5**	**-0.4**
	comp=Z,4.3nm,0.9s,baz=89,slow=7.3,SNR=3.7								
NRIK	**Noril'sk**	**46.53**	**336**	*e*P			**P**	**05 53 25.2**	**+0.3**
MK31	**Makanchi Array**	**46.60**	**305**	*e*P			**P**	**05 53 27.4**	**+1.6**
MKAR	**Makanchi Array**	**46.60**	**305**	P			**P**	**05 53 26.4**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=88,slow=9.9,SNR=10								
MKAR					PcP		**PcP**	**05 54 59.4**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=101,slow=2.9,SNR=2.8								
MKAR					LR		LR	06 15 48.3	
	comp=Z,56nm,18.1s,baz=61,slow=40								
MKAR	**Makanchi Array**	**46.60**	**305**	P			**P**	**05 53 25.3**	**-0.5**
MTN	**Manton Dam**	**47.66**	**195**	P			**P**	**05 53 33.9**	**-0.4**
KURK	**Kurchatov**	**48.62**	**310**	*de*P			**P**	**05 53 41.5**	**+0.1**
KURK					pmax	pmax			
	comp=Z,9.0nm,0.6s								
KURK	**Kurchatov**	**48.62**	**310**	P			**P**	**05 53 41.4**	**0.0**
KURBB	**Kurchatov Arra**	**48.69**	**310**	P			**P**	**05 53 42.0**	**+0.1**
	comp=Z,8.5nm,0.6s,baz=85,slow=7.4,SNR=67								
KURBB					PcP		**PcP**	**05 55 06.5**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=84,slow=3.7,SNR=2.6								
KDAK	**Kodiak Island**	**48.93**	**40**	P			**P**	**05 53 44.0**	**+0.3**
KDAK					pmax	pmax			
	comp=Z,95nm,1.5s								
KDAK	**Kodiak Island**	**48.93**	**40**	P			**P**	**05 53 44.0**	**+0.3**
SKT	**Skwentna**	**49.57**	**35**	P			**P**	**05 53 48.6**	**+0.1**
SUA	**Susitna One**	**49.92**	**35**	P			**P**	**05 53 51.5**	**+0.2**
GHO	**Glory Hole Cre**	**50.80**	**35**	P			**P**	**05 53 56.6**	**-1.3**
GHO					IAmb	IAmb		05 54 04.0	
	comp=Z,16nm,1.3s								
TOLK	**Toolik Lake Re**	**50.93**	**26**	P			**P**	**05 53 59.9**	**+1.1**
KNRA	**Kunununra**	**50.95**	**197**	P			**P**	**05 53 58.4**	**-0.9**
KNRA					IAmb	IAmb		05 54 12.6	
	comp=Z,12nm,1.0s								
KNK	**Knik Glacier**	**51.02**	**35**	P			**P**	**05 54 00.3**	**+0.8**
KNK					IAmb	IAmb		05 54 00.8	
	comp=Z,11nm,0.9s								
SCM	**Sheep Creek Mo**	**51.56**	**35**	P			**P**	**05 54 03.5**	**-0.1**
SCM					pmax	pmax			
	comp=Z,29nm,1.4s								
SCM	**Sheep Creek Mo**	**51.56**	**35**	P			**P**	**05 54 03.5**	**-0.1**
IL31		**51.75**	**31**	P			**P**	**05 54 05.1**	**+0.2**
ILAR	**Eielson Array**	**51.75**	**31**	P			**P**	**05 54 05.0**	**0.0**
	comp=Z,2.3nm,0.6s,baz=263,slow=6.0,SNR=24								
KLU	**Klutina**	**52.24**	**35**	P			**P**	**05 54 09.3**	**+0.6**
KLU					IAmb	IAmb		05 54 31.3	
	comp=Z,17nm,1.4s								
AAK	**Ala-Archa**	**52.82**	**301**	*e*P			**P**	**05 54 14.1**	**+0.7**
BRVK	**Borovoye**	**53.45**	**314**	*e*P			**P**	**05 54 18.1**	**+0.4**
BRVK					pmax	pmax			
	comp=Z,13nm,2.8s								
CTA	**Charters Tower**	**53.75**	**176**	P			**P**	**05 54 20.2**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=13,slow=8.6,SNR=2.5								
WB0	**Warramunga Arr**	**53.86**	**189**	P			**P**	**05 54 20.8**	**-0.2**
WB0					IAmb	IAmb		05 54 21.5	
	comp=Z,12nm,1.2s								
WRAB	**Tennant Creek**	**54.03**	**189**	*d* iP			**P**	**05 54 21.8**	**-0.4**
WRAB					pmax	pmax			
	comp=Z,6.0nm,1.0s								
WRA	**Warramunga Arr**	**54.04**	**189**	P			**P**	**05 54 22.0**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=6.5,slow=7.6,SNR=29								
WRA	**Warramunga Arr**	**54.04**	**189**	P			**P**	**05 54 21.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**54.09**	**200**	P			**P**	**05 54 22.8**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=16,slow=6.8,SNR=14								
FITZ	**Fitzroy Crossi**	**54.09**	**200**	P			**P**	**05 54 22.6**	**0.0**
FITZ					IAmb	IAmb		05 54 26.2	
	comp=Z,5.5nm,0.9s								
KKAR	**Karatay Array**	**55.52**	**302**	P			**P**	**05 54 32.0**	**-0.9**
KKAR	**Karatay Array**	**55.52**	**302**	P			**P**	**05 54 32.0**	**-0.9**
INK	**Inuvik**	**56.84**	**26**	P			**P**	**05 54 41.9**	**0.0**
	comp=Z,2.0nm,0.5s,baz=283,slow=5.1,SNR=12								
INK	**Inuvik**	**56.84**	**26**	P			**P**	**05 54 42.1**	**+0.2**
INK					pmax	pmax			
	comp=Z,6.0nm,1.2s								
INK	**Inuvik**	**56.84**	**26**	P			**P**	**05 54 42.1**	**+0.2**
INK					IAmb	IAmb		05 55 00.6	
	comp=Z,6.0nm,1.2s								
WHY	**Whitehorse**	**57.66**	**35**	P			**P**	**05 54 47.9**	**-0.1**
WHY					IAmb	IAmb		05 55 00.1	
	comp=Z,14nm,1.4s								
AS31	**Alice Springs**	**57.77**	**189**	P			**P**	**05 54 48.7**	**-0.3**
ASAR	**Alice Springs**	**57.77**	**189**	P			**P**	**05 54 48.9**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=11,slow=7.8,SNR=36								
ASAR	**Alice Springs**	**57.77**	**189**	P			**P**	**05 54 48.0**	**-0.9**
ARU	**Arti**	**59.34**	**320**	*d* iP			**P**	**05 54 59.4**	**-0.2**
ARU				S			**S**	**06 03 10.9**	**+2.5**
ARU				SS			**SS**	**06 07 03.0**	**+0.5**
ARU					pmax	pmax			
	comp=Z,9.0nm,0.9s								
ABKAR	**Akbulak array**	**60.69**	**312**	P			**P**	**05 55 08.3**	**-0.7**
KIRV	**Kirov**	**63.33**	**324**	*e*P			**P**	**05 55 26.8**	**+0.3**
STKA	**Stephens Creek**	**65.37**	**181**	P			**P**	**05 55 39.6**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=322,slow=10.0,SNR=3.7								
RES	**Resolute Bay**	**65.47**	**14**	P			**P**	**05 55 40.8**	**+0.5**
RES					pmax	pmax			
	comp=Z,6.0nm,0.8s								
RES	**Resolute Bay**	**65.47**	**14**	P			**P**	**05 55 40.8**	**+0.5**
RES					IAmb	IAmb		05 55 41.5	
	comp=Z,5.9nm,0.8s								
FORT	**Forrest**	**65.70**	**194**	P			**P**	**05 55 42.8**	**+0.6**
YKA	**Yellowknife Ar**	**66.14**	**30**	P			**P**	**05 55 44.5**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=294,slow=4.8,SNR=4.4								
YKA	**Yellowknife Ar**	**66.14**	**30**	*i* P			**P**	**05 55 45.0**	**+0.2**
YKA					pmax	pmax			
	comp=Z,1.0nm,0.6s								
ARCES	**ARCESS Array B**	**67.29**	**340**	LR			LR	06 30 37.7	
	comp=Z,27nm,18.8s,baz=260,slow=41								
OBN	**Obninsk**	**71.18**	**324**	*e*P			**P**	**05 56 18.4**	**+2.0**
OBN				*e*				05 56 36.1	
OBN				*e*				05 58 55.9	
OBN				*e*S			**S**	**06 05 33.9**	**+0.4**
OBN					pmax	pmax			
	comp=Z,17nm,0.4s								
OBN					MLR	MLR			
	comp=Z,61nm,16.0s								
PINE	**Pine Mountain**	**71.75**	**49**	P			**P**	**05 56 20.5**	**+0.1**
FINES	**FINESS Array B**	**72.04**	**333**	P			**P**	**05 56 21.3**	**-0.2**
	comp=Z,3.9nm,0.8s,baz=104,slow=8.0,SNR=11								
FINES					LR		LR	06 30 12.0	
	comp=Z,44nm,19.9s,baz=289,slow=38								
FINES	**FINESS Array B**	**72.04**	**333**	*i* P			**P**	**05 56 21.7**	**+0.2**
FINES					pmax	pmax			
	comp=Z,4.0nm,0.8s								
FINES	**FINESS Array B**	**72.04**	**333**	P			**P**	**05 56 20.8**	**-0.6**
K05A	**Summer Lake**	**72.31**	**50**	P			**P**	**05 56 24.6**	**+0.9**
MOD	**Modoc Plateau**	**73.10**	**51**	P			**P**	**05 56 28.3**	**-0.1**
MOD					IAmb	IAmb		05 56 30.3	
	comp=Z,4.4nm,1.0s								
J08A	**Circle Bar Ran**	**73.52**	**49**	P			**P**	**05 56 31.1**	**+0.3**
J08A					IAmb	IAmb		05 56 33.2	
	comp=Z,9.0nm,1.1s								
KBZ	**Khabaz**	**73.66**	**312**	P			**P**	**05 56 31.7**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=264,slow=1.8,SNR=4.0								
KBZ	**Khabaz**	**73.66**	**312**	*e*P			**P**	**05 56 31.8**	**+0.4**
KBZ					pmax	pmax			
	comp=Z,4.0nm,0.9s								
KIV	**Kislovodsk**	**73.67**	**312**	*e*P			**P**	**05 56 30.6**	**-1.0**
KIV					pmax	pmax			
	comp=Z

	comp=Z,4.0nm,1.2s							
RSSD	**Black Hills**	**81.62**	**42**	P	**P**	**05 57 15.7**	**-0.5**
BRTR	**Keskin Array B**	**81.63**	**312**	P	**P**	**05 57 16.4**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=76,slow=5.2,SNR=9.1							
BRTR	**Keskin Array B**	**81.63**	**312**	P	**P**	**05 57 16.6**	**+0.4**
KOLS	**Kolonicke sedl**	**81.92**	**325**	*e*P	**P**	**05 57 16.8**	**-0.6**
KOLS	**Kolonicke sedl**	**81.92**	**325**	*e*P	**P**	**05 57 16.8**	**-0.6**
MORC	**Moravsky Berou**	**83.51**	**328**	*e*P	**P**	**05 57 26.2**	**+0.5**
DPC	**Dobruska-Polom**	**83.62**	**329**	*e*P	**P**	**05 57 26.9**	**+0.6**
DPC	**Dobruska-Polom**	**83.62**	**329**	*e*P	**P**	**05 57 26.9**	**+0.6**
KRLC	**Kraliky**	**83.63**	**328**	*e*P	**P**	**05 57 26.1**	**-0.2**
KRLC	**Kraliky**	**83.63**	**328**	*e*P	**P**	**05 57 26.1**	**-0.2**
PSZ	**Piszkesteto**	**83.76**	**325**	P	**P**	**05 57 25.9**	**-1.1**
PSZ				pmax	pmax			
	comp=Z,12nm,1.1s							
PSZ	**Piszkesteto**	**83.76**	**325**	P	**P**	**05 57 25.9**	**-1.1**
VYHS	**Vyhne**	**83.85**	**326**	*e*P	**P**	**05 57 28.0**	**+0.6**
VYHS	**Vyhne**	**83.85**	**326**	*e*P	**P**	**05 57 28.0**	**+0.6**
S22A	**4UR Ranch, Cre**	**83.99**	**48**	P	**P**	**05 57 27.1**	**-1.5**
S22A				IAmb	IAmb	05 57 31.2		
	comp=Z,5.0nm,0.8s							
JAVC	**Velka Javorina**	**84.12**	**327**	*e*P	**P**	**05 57 30.4**	**+1.6**
BRG	**Berggiesshubel**	**84.24**	**330**	*i* P	**P**	**05 57 29.4**	**+0.1**
	comp=Z,14nm,1.4s							
BRG	**Berggiesshubel**	**84.24**	**330**	*i* P	**P**	**05 57 29.4**	**+0.1**
BRG				pmax	pmax			
	comp=Z,14nm,1.5s							
VRAC	**Vranov**	**84.27**	**328**	*e*P	**P**	**05 57 30.2**	**+0.6**
CLL	**Collm**	**84.30**	**331**	⇓*i*P	**P**	**05 57 29.2**	**-0.4**
CLL				pmax	pmax			
	comp=Z,7.0nm,0.9s							
CLL	**Collm**	**84.30**	**331**	P	**P**	**05 57 27.5**	**-2.1**
CLL				IAmb	IAmb	05 57 31.0		
	comp=Z,7.0nm,0.9s							
KRUC	**Moravsky**	**84.54**	**328**	*e*P	**P**	**05 57 31.3**	**+0.4**
MODS	**Modra-Piesok**	**84.65**	**327**	*e*P	**P**	**05 57 31.1**	**-0.4**
MODS				pmax	pmax			
	comp=Z,6.0nm,0.9s							
MODS	**Modra-Piesok**	**84.65**	**327**	*e*P	**P**	**05 57 31.1**	**-0.4**
PRU	**Pruhonice**	**84.66**	**329**	*e*P	**P**	**05 57 31.7**	**+0.2**
PRU	**Pruhonice**	**84.66**	**329**	*e*P	**P**	**05 57 31.7**	**+0.2**
NKC	**Novy Kostel**	**85.35**	**330**	*e*P	**P**	**05 57 35.2**	**+0.2**
NKC	**Novy Kostel**	**85.35**	**330**	*e*P	**P**	**05 57 35.2**	**+0.2**
K31A	**O'Neill**	**85.51**	**40**	P	**P**	**05 57 34.4**	**-1.5**
KHC	**Kasperske Hory**	**85.72**	**329**	*e*P	**P**	**05 57 36.9**	**0.0**
KHC	**Kasperske Hory**	**85.72**	**329**	*e*P	**P**	**05 57 36.9**	**0.0**
GERES	**GERESS Array B**	**85.88**	**329**	P	**P**	**05 57 37.6**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=42,slow=6.1,SNR=13							
GERES	**GERESS Array B**	**85.88**	**329**	P	**P**	**05 57 36.9**	**-0.9**
ANMO	**Albuquerque**	**85.97**	**50**	⇓*e*P	**P**	**05 57 39.3**	**+0.7**
ANMO				pmax	pmax			
	comp=Z,3.0nm,1.3s							
ANMO	**Albuquerque**	**85.97**	**50**	P	**P**	**05 57 37.8**	**-0.8**
ANMO				IAmb	IAmb	05 57 40.5		
	comp=Z,3.1nm,0.8s							
BNM	**Barren Site**	**86.36**	**51**	P	**P**	**05 57 39.6**	**-1.0**
EKA	**Eskdalemuir Ar**	**86.43**	**341**	P	**P**	**05 57 40.3**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=74,slow=6.2,SNR=2.5							
TXAR	**Lajitas Array**	**91.36**	**53**	P	**P**	**05 58 04.9**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=305,slow=3.4,SNR=47							
TXAR	**Lajitas Array**	**91.36**	**53**	P	**P**	**05 58 04.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**120.19**	**315**	PKP	**PKPdf**	**06 03 48.4**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=33,slow=1.7,SNR=11							
LPAZ	**La Paz**	**147.40**	**65**	PKPbc	**PKPbc**	**06 04 43.4**	**+0.3**
	comp=Z,6.9nm,0.7s,baz=319,slow=2.6,SNR=22							
PLCA	**Paso Flores**	**152.95**	**114**	PKPbc	**PKiKP**	**06 04 55.1**	**-0.2**
	comp=Z,2.8nm,1.1s,baz=229,slow=10,SNR=3.0							

*KRSC **01** 05:47:41.0±1.6, 48˚.67N×157˚.19E, h7km±30km, ML4.2*
*IDC **01** 05:47:46.8±5.4, 48˚.82N×155˚.38E, h47km±33km, mb3.5/6, mb1 3.7/9, mb1mx3.3/53, mbtmp3.8/9, ML3.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/33, Error ellipse: s-maj=89.9km s-min=26.7km az=130.0*

ISC 01 05:47:41.1±1.6, 48˚.4N±0˚.1×156˚.2E±0˚.2, h35km, n29, σ1§49/28, mb3.8/6, 1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.27**	**358**	*e*P	**Pn**	**05 48 17.2**	**+1.1**
SKR				*e*S	**Sn**	**05 48 44.4**	**+1.5**
PAU	**Pauzhetka**	**3.08**	**7**	*e*P	**Pn**	**05 48 28.8**	**+1.6**
PAU				*e*S	**Sn**	**05 49 03.7**	**+0.9**
KDTR	**Khodutka, Kamc**	**3.60**	**19**	*e*P	**Pn**	**05 48 35.2**	**+0.8**
KDTR				*e*S	**Sn**	**05 49 14.0**	**-1.7**
RUS	**Russkaya**	**4.28**	**19**	*e*P	**Pn**	**05 48 44.2**	**+0.5**
RUS				*e*S	**Sn**	**05 49 30.6**	**-1.8**
GRL	**Gorelyy**	**4.31**	**15**	*e*P	**Pn**	**05 48 46.1**	**+1.9**
GRL				*e*S	**Sn**	**05 49 33.0**	**-0.3**
PETK	**Petropavlovsk-**	**4.79**	**11**	P	**Pn**	**05 48 53.0**	**+2.2**
	0.5nm,0.3s,baz=195,slow=10,SNR=14						
PETK				S	Sn	05 49 55.8	+11
	0.2nm,0.3s,baz=67,slow=34,SNR=1.4						
PET	**Petropavlovsk**	**4.87**	**18**	*e*S	**Sn**	**05 49 47.1**	**+0.3**
DALK	**Dalny**	**4.90**	**18**	*e*P	**Pn**	**05 48 53.4**	**+1.3**
DALK				*e*S	**Sn**	**05 49 46.8**	**-0.7**
SMAR	**Somma**	**5.12**	**18**	*e*P	**Pn**	**05 48 57.3**	**+1.8**
KRER	**Koryakskii**	**5.15**	**17**	*e*P	**Pn**	**05 48 58.4**	**+2.5**
SDLR	**Sedlovina**	**5.16**	**18**	*e*P	**Pn**	**05 48 57.1**	**+1.3**
KRX	**Arik**	**5.18**	**16**	*e*P	**Pn**	**05 48 58.7**	**+2.4**
MKZ	**Mys Kozlova**	**7.05**	**27**	*e*P	**Pn**	**05 49 22.5**	**+0.9**
MA2	**Magadan**	**11.63**	**346**	LR	LR	05 54 16.2	
	comp=Z,53nm,18.4s,baz=156,slow=35						
SEY	**Seymchan**	**14.71**	**353**	P	**Pn**	**05 51 04.8**	**-1.6**
	0.6nm,0.3s,baz=356,slow=24,SNR=14						
SEY	**Seymchan**	**14.71**	**353**	⇓*i*P	**Pn**	**05 51 05.0**	**-1.3**
KLR	**Kul'dur**	**16.12**	**282**	P	**Pn**	**05 51 23.2**	**-1.6**
	0.1nm,0.3s,baz=84,slow=8.8,SNR=1.9						
KSRS	**Korea Array**	**23.30**	**252**	P	**P**	**05 52 46.1**	**+0.4**
	0.8nm,0.5s,baz=50,slow=12,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**29.89**	**159**	T	T	06 25 43.3	
	baz=340,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy**	**29.90**	**160**	T	T	06 25 59.0	
	baz=340,slow=76,SNR=26						
H11N3	**WAKE ISLAND Hy**	**29.90**	**159**	T	T	06 25 58.8	
	baz=340,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**31.02**	**160**	T	T	06 27 26.6	
	baz=341,slow=76,SNR=72						
H11S3	**WAKE ISLAND Hy**	**31.03**	**160**	T	T	06 27 20.6	
	baz=341,slow=76,SNR=91						
H11S2	**WAKE ISLAND Hy**	**31.04**	**160**	T	T	06 27 10.9	
	baz=341,slow=76,SNR=57						
MKAR	**Makanchi Array**	**48.04**	**297**	P	**P**	**05 56 14.9**	**-1.8**
	0.4nm,0.6s,baz=68,slow=8.5,SNR=1.2						
KURBB	**Kurchatov Arra**	**48.29**	**304**	P	**P**	**05 56 17.9**	**-0.6**
	0.5nm,0.5s,baz=65,slow=8.5,SNR=2.9						
CMAR	**Chiang Mai Arr**	**54.79**	**258**	P	**P**	**05 57 08.8**	**+1.3**
	0.5nm,0.3s,baz=38,slow=9.2,SNR=4.5						
FINES	**FINESS Array B**	**63.41**	**336**	P	**P**	**05 58 07.0**	**+0.5**
	0.8nm,0.4s,baz=39,slow=8.0,SNR=11						
NOA	**NORSAR Array B**	**67.30**	**342**	P	**P**	**05 58 32.4**	**+0.6**
	0.8nm,0.8s,baz=22,slow=6.9,SNR=2.5						

*SKHL **01** 05:57:53.0±0.1, 42˚.17N×142˚.63E, h52km±1km, mb4.9/3*
*MOS **01** 05:57:55.3±0.9, 42˚.47N×142˚.68E, h63km, mb4.2/1, Error ellipse: s-maj=23.2km s-min=11.5km az=60.1*
*JMA **01** 05:57:56.5±0.1, 42˚.53N×142˚.68E, h43km±1km, M3.5 Broadband fault plane solution: P waves. NP1: ϕs262.00000°, δ41.00000°, λ-23.00000°. NP2:ϕs10.00000°, δ75.00000°, λ-128.00000°. Principal axes: T Plg21.0000°, Azm128.0000°; N Plg37.0000°, Azm21.0000°; P Plg46.0000°, Azm241.0000°;*
*NIED **01** 05:57:56.5, 42˚.53N×142˚.68E, h43km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 1014Nm; Mrr1.62; Mθθ-0.57; Mφφ-1.05; Mrθ0.24; Mφθ1.97; Mφr-1.75; Fault plane solution: Mo2.96000×1014 NP1: ϕs166.00000°, δ69.00000°, λ122.00000°. NP2: ϕs286.00000°, δ38.00000°, λ36.00000°.*
*IDC **01** 05:57:57.5±2.3, 42˚.51N×142˚.63E, h60km±19km, mb3.4/6, mb1 3.6/7, mb1mx3.3/45, mbtmp3.7/7 Error ellipse: s-maj=31.8km s-min=15.8km az=104.0*

ISC 01 05:57:55.6±0.8, 42˚.43N±0˚.04×142˚.65E±0˚.03, h49km±8km, n41, σ1§31/48, mb3.7/6, 7C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSHD	**Hidakashinhida**	**0.14**	**261**	⇑P	**Pn**	**05 58 03.7**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.17**	**153**	P	**Pn**	**05 58 04.3**	**+0.6**
JBT2	**Biratori 2**	**0.41**	**329**	⇑P	**Pn**	**05 58 04.9**	**-0.9**
JTHR	**Tokachihiroo**	**0.50**	**106**	P	**Pn**	**05 58 07.3**	**+0.4**
JCH	**Churui**	**0.56**	**71**	⇓P	**Pn**	**05 58 07.4**	**-0.2**
JCH				*e*S	**Sn**	**05 58 16.0**	**-0.1**
JEM	**Erimo**	**0.56**	**138**	⇑P	**Pn**	**05 58 09.3**	**+1.7**
JIAM	**Iburiatsuma**	**0.57**	**290**	P	**Pn**	**05 58 08.8**	**+1.1**
JFR	**Furan**	**0.73**	**357**	⇑P	**Pn**	**05 58 08.8**	**-1.0**
JEW	**Eniwo**	**0.97**	**295**	⇑P	**Pn**	**05 58 13.2**	**+0.2**
JOB	**Onbets**	**0.99**	**61**	⇓P	**Pn**	**05 58 13.4**	**+0.2**
JAB	**Ashibetsu**	**1.12**	**344**	P	**Pn**	**05 58 14.7**	**-0.2**
JNB	**Noboribetsu**	**1.19**	**272**	⇓P	**Pn**	**05 58 15.8**	**-0.1**
JNB				*e*S	**Sn**	**05 58 30.6**	**-0.4**
JAR	**Ashorobuto**	**1.19**	**43**	⇓P	**Pn**	**05 58 15.3**	**-0.7**
JISS	**Ishikarishitsu**	**1.24**	**313**	⇑P	**Pn**	**05 58 16.5**	**0.0**
JKK2	**Kamakawa 2**	**1.44**	**3**	⇑P	**Pn**	**05 58 19.2**	**-0.2**
JKA	**Kamikawa-asahi**	**1.68**	**359**	*e*P	**Pn**	**05 58 23.0**	**+0.4**
ASAJ	**Asahikawa**	**1.68**	**359**	P	**Pn**	**05 58 23.0**	**+0.4**
	42nm,0.3s,baz=212,slow=9.5,SNR=62						
ASAJ				S	**Sn**	**05 58 43.4**	**+0.3**
	31nm,0.3s,baz=14,slow=29,SNR=14						
NMR	**Nemuro--Hokkai**	**2.45**	**66**	*e*P	**Pn**	**05 58 32.0**	**-1.0**
NMR				*e*S	**Sn**	**05 58 59.0**	**-2.8**
NMR	**Nemuro--Hokkai**	**2.45**	**66**	*e*PN	**Pn**	**05 58 32.1**	**-1.0**
NMR				*e*S	**Sn**	**05 58 59.0**	**-2.8**
GLVR	**Golovnino**	**2.48**	**57**	*e*P	**Pn**	**05 58 33.0**	**-0.4**
GLVR				*e*S	**Sn**	**05 59 03.0**	**+0.6**
GLVR				A	A	05 59 04.0	
	330nm,0.3s						
GLVR				A	A	05 59 04.0	
	147nm,0.3s						
GLVR	**Golovnino**	**2.48**	**57**	*e*PN	**Pn**	**05 58 33.8**	**+0.4**
GLVR				*e*S	**Sn**	**05 59 03.0**	**+0.6**
GLVR				smax	smax		
	comp=N,670nm,0.3s						
GLVR				smax	smax		
	comp=E,147nm,0.1s						
RUSJ	**Misakicho**	**2.53**	**48**	*e*PN	**Pn**	**05 58 35.6**	**+1.4**
RUSJ				*e*S	**Sn**	**05 59 07.7**	**+3.9**
GRPR	**Tuman**	**2.77**	**55**	*e*P	**Pn**	**05 58 37.0**	**-0.4**
GRPR				AMB	AMB	05 58 43.0	
	comp=E,141nm,0.2s						
GRPR				*e*S	**Sn**	**05 59 10.0**	**+0.4**
GRPR				A	A	05 59 12.0	
	comp=E,160nm,0.4s						
GRPR				A	A	05 59 12.0	
	comp=E,362nm,0.4s						
GRPR	**Tuman**	**2.77**	**55**	*e*PN	**Pn**	**05 58 37.9**	**+0.5**
GRPR				*e*S	**Sn**	**05 59 10.0**	**+0.4**
GRPR				pmax	pmax		
	comp=Z,141nm,0.2s						
GRPR				smax	smax		
	comp=N,160nm,0.1s						
GRPR				smax	smax		
	comp=E,362nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.84**	**55**	*e*P	**Pn**	**05 58 39.0**	**+0.5**
YUK				AMB	AMB	05 58 39.8	
	comp=E,190nm,0.3s						
YUK				*e*S	**Sn**	**05 59 12.9**	**+1.5**
YUK				A	A	05 59 20.4	
	comp=E,350nm,0.3s						
YUK				A	A	05 59 20.4	
	comp=E,210nm,0.3s						
KUR	**Kuril'sk**	**4.70**	**52**	*e*P	**Pn**	**05 59 03.8**	**-0.1**
KUR				AMB	AMB	05 59 08.0	
	comp=E,50nm,0.4s						
KUR				*e*S	**Sn**	**05 59 58.8**	**+1.7**
KUR				A	A	06 00 05.6	
	comp=E,40nm,0.7s						
KUR				A	A	06 00 05.6	
	comp=E,40nm,0.7s						
MJAR	**Matsushiro Arr**	**6.81**	**212**	P	**Pn**	**05 59 36.1**	**+3.1**
	comp=E,0.2nm,0.3s,baz=28,slow=11,SNR=5.6						
JHJ	**Hachijo jima 2**	**9.57**	**195**	P	**Pn**	**06 00 09.5**	**-1.3**
	comp=E,5.5nm,0.3s,baz=357,slow=17,SNR=1.3						
JHJ				S	**Sn**	**06 01 53.2**	**-3.6**
	comp=E,4.1nm,0.3s,baz=48,slow=15,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**30.52**	**130**	T	T	06 35 44.6	
	baz=324,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	**30.53**	**130**	T	T	06 35 44.3	
	baz=324,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**30.54**	**130**	T	T	06 35 46.1	
	baz=324,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**31.39**	**132**	T	T	06 36 52.1	
	baz=325,slow=72						
H11S3	**WAKE ISLAND Hy**	**31.39**	**132**	T	T	06 36 50.9	
	baz=325,slow=72						
H11S2	**WAKE ISLAND Hy**	**31.41**	**132**	T	T	06 36 49.8	
	baz=325,slow=72						
ZALV	**Zalesovo Beam**	**39.17**	**308**	P	**P**	**06 05 18.8**	**+0.4**
	comp=E,0.6nm,0.4s,baz=92,slow=9.4,SNR=2.2						
MKAR	**Makanchi Array**	**42.27**	**297**	P	**P**	**06 05 43.9**	**-0.1**
	comp=E,0.6nm,0.7s,baz=89,slow=6.9,SNR=1.9						
ILAR	**Eielson Array**	**44.48**	**35**	P	**P**	**06 06 01.9**	**+0.4**
	comp=E,0.5nm,0.5s,baz=258,slow=5.9,SNR=5.5						
ILAR	**Eielson Array**	**44.48**	**35**	P	**P**	**06 06 02.0**	**+0.4**
INK	**Inuvik**	**49.18**	**29**	P	**P**	**06 06 38.3**	**+0.1**
	comp=E,2.0nm,0.9s,baz=289,slow=6.3,SNR=6.1						
WRA	**Warramunga Arr**	**62.53**	**189**	P	**P**	**06 08 15.2**	**+0.9**
	comp=E,0.6nm,0.9s,baz=10,slow=7.6,SNR=2.5						
FINES	**FINESS Array B**	**64.50**	**332**	P	**P**	**06 08 27.1**	**+0.3**
	comp=E,1.3nm,1.0s,baz=51,slow=9.1,SNR=5.0						

*IDC **01** 05:59:12.5±0.7, 64˚.71N×17˚.51W, h0km, mb3.8/11, mb1 4.0/14, mb1mx3.8/43, mbtmp3.8/14, ML2.5/2, Error ellipse: s-maj=21.4km s-min=10.3km az=10.0*
*REY **01** 05:59:13.0, 64˚.67N×17˚.45W, h8km*
*NEIC **01** 05:59:13.3±1.4, 64˚.6N±0˚.1×17˚.7W±0˚.2, h8km±5km, mb4.4/14, Error ellipse: s-maj=17.8km s-min=10.0km az=195.0*

ISC 01 05:59:13.4±0.4, 64˚.69N±0˚.02×17˚.50W±0˚.02, h10km, n112, σ1§66/126, mb4.0/26, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.11**	**261**	P	**Pg**	**05 59 15.9**	**-0.4**
	baz=71						
IDYN	**Dyngjuhals**	**0.12**	**29**	P	**Pg**	**05 59 15.9**	**-0.4**
	baz=17						
IURH	**Urdarhals**	**0.20**	**49**	P	**Pg**	**05 59 17.2**	**-0.4**
	baz=41						
IURH				S	**Sg**	**05 59 20.2**	**-0.3**
	baz=41						
IGRF	**Grimsfjall**	**0.30**	**161**	P	**Pg**	**05 59 18.3**	**-1.2**
	baz=162						
IKVE	**Kverkfjoll**	**0.35**	**92**	P	**Pg**	**05 59 19.5**	**-1.0**
	baz=88						
IHUS	**Husbondi**	**0.40**	**190**	P	**Pg**	**05 59 20.6**	**-0.7**
	baz=193						
IHUS				S	**Sg**	**05 59 26.1**	**-0.6**
	baz=193						
ISKR	**Skrokkalda**	**0.41**	**251**	P	**Pg**	**05 59 20.8**	**-0.6**
	baz=255						
ISKR				S	**Sb**	**05 59 27.1**	**-1.9**
	baz=255						
IVOT	**Vottur**	**0.44**	**162**	P	**Pg**	**05 59 20.9**	**-1.2**
	baz=164						
IJOK	**Jokulheimar**	**0.49**	**220**	P	**Pg**	**05 59 22.0**	**-1.0**
	baz=224						
IJOK				S	**Sg**	**05 59 29.1**	**-0.4**
	baz=224						
ISVA	**Svartarkot**	**0.66**	**9**	P	**Pg**	**05 59 25.1**	**-1.0**
	baz=7.1						
ISVA				S	**Sb**	**05 59 34.5**	**-1.6**
	baz=7.1						
IIEY	**Innrieyrar**	**0.66**	**205**	P	**Pg**	**05 59 24.6**	**-1.5**
	baz=207						
IIEY				S	**Sg**	**05 59 33.8**	**-1.0**
	baz=207						
IKSK	**Karasker**	**0.69**	**140**	P	**Pg**	**05 59 24.4**	**-2.4**
	baz=140						
IKSK				S	**Sg**	**05 59 34.2**	**-1.6**
	baz=140						
IKAL	**Kalfafell**	**0.75**	**186**	P	**Pg**	**05 59 26.2**	**-1.7**
	baz=188						
IKAL				S	**Sg**	**05 59 36.5**	**-1.2**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**80**	P	**Pg**	**05 59 26.2**	**-2.0**
	baz=79						
IVSH				S	**Sg**	**05 59 36.6**	**-1.6**
	baz=79						
IVAT	**Vatnsfell**	**0.80**	**231**	P	**Pg**	**05 59 27.3**	**-1.4**
	baz=233						
IVAT				S	**Sg**	**05 59 38.1**	**-1.0**
	baz=233						
IADA	**Aoalbol**	**0.89**	**67**	P	**Pg**	**05 59 28.2**	**-2.2**
	baz=66						
IADA				S	**Sg**	**05 59 40.1**	**-1.8**
	baz=66						
IHVE	**Hveravellir**	**0.91**	**282**	P	**Pg**	**05 59 29.0**	**-1.8**
	baz=283						
IHVE				S	**Sb**	**05 59 41.7**	**-1.6**
	baz=283						
IMEL	**Melhnausar**	**0.95**	**22**	P	**Pg**	**05 59 29.9**	**-1.8**
	baz=20						
IREN	**Reynihlio**	**0.99**	**14**	P	**Pg**	**05 59 30.6**	**-1.9**
	baz=13						
IKVO	**Krokottuvotn**	**1.06**	**14**	P	**Pg**	**05 59 31.7**	**-2.1**
	baz=13						
ISNB	**Snabyli**	**1.08**	**208**	P	**Pg**	**05 59 31.8**	**-2.3**
	baz=209						
ISNB				S	**Sg**	**05 59 45.3**	**-2.8**
	baz=209						
IGRS	**Grimsstaoir**	**1.11**	**31**	P	**Pb**	**05 59 32.6**	**-2.2**
	baz=29						
ISLY	**Slysaalda**	**1.12**	**220**	P	**Pb**	**05 59 32.8**	**-2.1**
	baz=221						
IFED	**Fedgar**	**1.17**	**236**	P	**Pb**	**05 59 33.8**	**-1.8**
	baz=237						
IRJU	**Rjupnafell**	**1.20**	**206**	P	**Pb**	**05 59 33.9**	**-2.2**
	baz=207						
ISKI	**Skildingahlsh**	**1.20**	**9**	P	**Pb**	**05 59 34.1**	**-2.1**
	baz=8.3						
IGHA	**Grjothals**	**1.21**	**17**	P	**Pb**	**05 59 34.0**	**-2.4**
	baz=15						
IMJO	**Mjoaskard**	**1.22**	**232**	P	**Pb**	**05 59 34.6**	**-1.9**
	baz=234						
IGRA	**Granastaoir**	**1.23**	**358**	P	**Pb**	**05 59 34.5**	**-2.3**
	baz=358						
IGYG	**Gygjarholskot**	**1.25**	**252**	P	**Pb**	**05 59 34.8**	**-2.2**
	baz=253						
IHAU	**Haukadalur**	**1.30**	**237**	P	**Pn**	**05 59 35.7**	**-1.8**
	baz=238						
IDIM	**Dimmadalss**	**1.30**	**10**	P	**Pn**	**05 59 35.5**	**-2.1**
	baz=9.3						
IHLA	**Hella**	**1.31**	**344**	P	**Pn**	**05 59 36.1**	**-1.6**
	baz=343						
IHVO	**Lagu-Hvolar**	**1.31**	**207**	P	**Pn**	**05 59 36.0**	**-1.8**
	baz=209						
IHED	**Heoinshofoi**	**1.40**	**3**	P	**Pn**	**05 59 37.0**	**-1.9**
	baz=2.3						
IALF	**Alftagrof**	**1.42**	**212**	P	**Pn**	**05 59 37.5**	**-1.7**
	baz=214						
IBRE	**Brettingsstaoi**	**1.45**	**353**	P	**Pn**	**05 59 38.0**	**-1.6**
	baz=353						
IESK	**Eystri-Skogar**	**1.45**	**217**	P	**Pn**	**05 59 38.2**	**-1.5**
	baz=218						
ISAU	**Saurbar**	**1.45**	**242**	P	**Pn**	**05 59 37.7**	**-2.0**
	baz=243						
IGIL	**Gilhagi**	**1.47**	**19**	P	**Pn**	**05 59 37.9**	**-2.0**
	baz=18						
IMID	**Miomork**	**1.47**	**226**	P	**Pn**	**05 59 38.8**	**-1.2**
	baz=228						
ISIG	**Siglufjorour**	**1.56**	**338**	P	**Pn**	**05 59 39.9**	**-1.3**
	baz=338						
IASM	**Asmuli**	**1.61**	**239**	P	**Pn**	**05 59 40.9**	**-0.9**
	baz=240						
BORG	**Borgarnes**	**1.65**	**274**	Pg	**Pn**	**05 59 40.9**	**-1.4**
	35nm,0.3s,baz=103,slow=7.7,SNR=61						
BORG				Lg	Lg	06 00 04.5	
	23nm,0.3s,baz=257,slow=21,SNR=7.3						
BORG	**Borgarnes**	**1.65**	**274**		**Pn**	**05 59 41.2**	**-1.1**
IKRO	**Krokur**	**1.68**	**251**	P	**Pn**	**05 59 41.3**	**-1.5**
	baz=252						
ISOL	**Solvholt**	**1.69**	**245**	P	**Pn**	**05 59 41.8**	**-1.0**
	baz=246						
IHEI	**Heioarbar**	**1.69**	**255**	P	**Pn**	**05 59 41.8**	**-1.2**
	baz=256						
IVME	**Vestmannaeyjar**	**1.77**	**225**	P	**Pn**	**05 59 43.4**	**-0.6**
	baz=226						
ILEI	**Leirhofn**	**1.77**	**13**	P	**Pn**	**05 59 43.0**	**-1.1**
	baz=12						
IHRN	**Hraun**	**1.80**	**324**	P	**Pn**	**05 59 43.4**	**-1.0**
	baz=324						
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn	**Pn**	**06 02 02.3**	**+1.1**
	baz=321,slow=13,SNR=14						
ESK	**Eskdalemuir**	**11.78**	**136**	Pn	**Pn**	**06 02 01.8**	**+0.6**
NOA	**NORSAR Array B**	**13.53**	**92**	Pn	**Pn**	**06 02 22.7**	**-2.5**
	0.0nm,0.3s,baz=299,slow=13,SNR=4.0						
HFS	**Hagfors**	**15.05**	**93**	Pn	**Pn**	**06 02 48.4**	**+2.6**
	0.2nm,0.3s,baz=316,slow=6.0,SNR=1.6						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**06 03 43.7**	**-0.2**
	0.1nm,0.3s,baz=297,slow=9.2,SNR=2.3						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**06 03 44.3**	**+0.4**
FIA1	**FINESS Array S**	**19.70**	**79**	P	**Pn**	**06 03 43.8**	**0.0**
FIA1				IAmb	IAmb	06 03 49.9	
	comp=Z,24nm,1.5s						
CLL	**Collm**	**20.71**	**116**	*i* P	**P**	**06 03 55.1**	**+1.6**
	comp=Z,16nm,1.5s						
CLL

BOZ	**Bozeman (W)**	**51.60**	**297**	P	**P**	**06 08 20.2**	**+0.6**
MKAR	**Makanchi Array**	**52.71**	**58**	P	**P**	**06 08 27.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=319,slow=8.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	**P**	**06 08 31.4**	**+0.2**
	comp=Z,2.0nm,1.1s,baz=343,slow=8.6,SNR=6.4						
BW06	**Boulder Array**	**53.17**	**293**	P	**P**	**06 08 31.1**	**-0.3**
BW06				IAmb	IAmb	06 08 55.7	
	comp=Z,4.1nm,1.2s						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**06 08 32.7**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=46,slow=6.4,SNR=7.1						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**06 08 31.1**	**-0.3**
BTK	**Batken**	**53.95**	**72**	P	**P**	**06 08 37.9**	**+0.9**
TCUT	**Toone Canyon**	**55.30**	**294**	P	**P**	**06 08 45.3**	**-1.7**
SZCU	**Shurtz Canyon**	**58.98**	**293**	P	**P**	**06 09 13.1**	**+0.1**
SONM	**Songino Array**	**59.62**	**40**	P	**P**	**06 09 17.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=322,slow=8.1,SNR=2.8						
ASAR	**Alice Springs**	**134.94**	**38**	PKP	**PKPdf**	**06 18 32.6**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=322,slow=2.8,SNR=3.2						

ANF ***01*** *06:03:15.6±0.6,36.°09N×97.°25W,h0km,ML3.7/7,Error ellipse: s-maj=8.8km s-min=2.3km az=168.0*

NEIC ***01*** *06:03:16,36.°06N×97.°25W,h2km,Moment Tensor Solution. Moment tensor: Scale 10¹³Nm; Mrr0.00; Mθθ3.28; Mϕϕ-3.28; Mrθ-0.33; Mθϕ-1.89; Mϕr0.58; Fault plane solution: M₀3.85000×10¹³ NP1:φ₁240.00000°, δ80.00000°,λ-180.00000°. NP2:φ₂150.00000°, δ90.00000°,λ-10.00000°. Principal axes: T 3.8440, Plg7.0000°, Azm195.0000°; N 0.0000, Plg80.0000°, Azm330.0000°; P -3.8440, Plg7.0000°, Azm105.0000°;*

TUL ***01*** *06:03:16±1.0,36.°048N±0.°010×97.°25W±0.°01,h5km±6km, ML3.3,Mwr3.0/5(SLM) Error ellipse: s-maj=1.6km s-min=1.3km az=115.0*

NEIC ***01*** *06:03:16.4±1.0,36.°06N±0.°01×97.°25W±0.°01,h5km±6km, Error ellipse: s-maj=1.7km s-min=1.5km az=152.0*

ISC 01 06:03:16.1±1.1,36.°07N±0.°02×97.°25W±0.02,h2km±11km, n53,σ0°73/71,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.32**	**212**		**Pg**	**06 03 22.2**	**0.0**
OK029				Sg	**Sg**	**06 03 26.4**	**+0.1**
OK031	**S. Brethren Rd**	**0.35**	**109**		**Pg**	**06 03 23.2**	**+0.4**
OK031				Sg	**Sg**	**06 03 28.1**	**+0.8**
OK030	**Cody Creek RV**	**0.40**	**110**		**Pg**	**06 03 24.1**	**+0.3**
OK030				Sg	**Sg**	**06 03 29.7**	**+0.7**
OK005	**Luther M Schoo**	**0.41**	**174**		**Pg**	**06 03 24.1**	**+0.1**
QUOK	**Quay**	**0.45**	**76**	Pg	**Pg**	**06 03 25.2**	**+0.5**
QUOK				Sg	**Sg**	**06 03 31.4**	**+0.9**
OK025	**Westminster Rd**	**0.49**	**189**		**Pg**	**06 03 25.5**	**0.0**
OK025				Sg	**Sg**	**06 03 32.4**	**+0.6**
BCOK	**Bluff Creek, N**	**0.50**	**216**		**Pg**	**06 03 25.6**	**-0.1**
BCOK				Sg	**Sg**	**06 03 32.5**	**+0.2**
OKCFA	**Oklahoma City**	**0.67**	**194**		**Pg**	**06 03 28.7**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.68**	**193**		**Pg**	**06 03 28.9**	**-0.2**
CROK	**Carrier**	**0.74**	**307**		**Pg**	**06 03 30.4**	**+0.1**
CROK				Sg	**Sg**	**06 03 36.0**	**+0.2**
FNO	**Franklin**	**0.82**	**189**		**Pg**	**06 03 31.4**	**-0.3**
FNO				Sg	**Sg**	**06 03 43.0**	**+0.6**
KAN13	**South Haven SW**	**0.96**	**349**		**Pg**	**06 03 34.6**	**0.0**
KAN13				Sg	**Sb**	**06 03 47.9**	**-0.9**
T35A	**Sooner Cattle**	**1.03**	**35**	Pg	**Pg**	**06 03 35.9**	**-0.1**
T35A				Sg	**Sb**	**06 03 49.8**	**-0.9**
KAN14	**Manchester OK**	**1.06**	**327**		**Pg**	**06 03 36.3**	**-0.1**
KAN14				Sg	**Sb**	**06 03 50.5**	**-1.0**
KAN09	**Caldwell North**	**1.11**	**344**		**Pb**	**06 03 37.4**	**-0.6**
KAN09				Sg	**Sb**	**06 03 52.3**	**-0.6**
KAN05	**Bluff City Nor**	**1.16**	**334**		**Pb**	**06 03 38.0**	**-0.8**
KAN05				Sg	**Sg**	**06 03 53.8**	**+0.6**
TUL1	**Leonard**	**1.19**	**97**	P	**Pb**	**06 03 37.9**	**-1.5**
	baz=277						
TUL1				S	**Sb**	**06 03 54.4**	**-0.9**
	baz=277						
TUL1	**Leonard**	**1.19**	**97**		**Pb**	**06 03 37.9**	**-1.5**
TUL1				Sg	**Sb**	**06 03 54.2**	**-1.1**
KAN10	**Anthony SW Sta**	**1.26**	**327**		**Pn**	**06 03 39.8**	**-0.9**
KAN10				Sg	**Sg**	**06 03 56.6**	**+0.2**
KAN12	**Harper NE Stat**	**1.37**	**334**		**Pb**	**06 03 41.9**	**-0.5**
U32A	**Winter Ranch,**	**1.45**	**283**		**Pn**	**06 03 42.5**	**-0.9**
WMOK	**Wichita Mounta**	**1.82**	**224**	P	**Pn**	**06 03 48.5**	**0.0**
	baz=43						
WMOK				S	**Sb**	**06 04 13.0**	**-0.5**
	baz=43						
WMOK	**Wichita Mounta**	**1.82**	**224**	Pn	**Pn**	**06 03 48.4**	**-0.1**
X37A	**Clayton**	**2.13**	**133**	Pn	**Pn**	**06 03 52.8**	**+0.1**
U38A	**Gravette**	**2.34**	**80**		**Pn**	**06 03 55.9**	**+0.3**
R32A	**Long Quarter,**	**2.62**	**334**		**Pn**	**06 04 00.3**	**+0.8**
HHAR	**Hobbs**	**2.68**	**84**		**Pn**	**06 04 00.4**	**0.0**
Z35A	**Perchaven, San**	**2.73**	**180**		**Pn**	**06 04 00.8**	**-0.1**
W39A	**Magazine**	**2.95**	**106**	P	**Pn**	**06 04 04.3**	**+0.3**
	baz=288						
W39A	**Magazine**	**2.95**	**106**		**Pn**	**06 04 04.3**	**+0.3**
KSU1	**Kansas State U**	**3.07**	**9**	Pn	**Pn**	**06 04 06.3**	**+0.7**
MIAR	**Mount Ida**	**3.36**	**116**	P	**Pn**	**06 04 10.1**	**+0.5**
	baz=298						
MIAR				S	**Sn**	**06 04 51.7**	**+1.6**
	baz=298						
MIAR	**Mount Ida**	**3.36**	**116**	Pn	**Pn**	**06 04 10.1**	**+0.5**
Z38A	**Mt. Pleasant**	**3.36**	**146**	Pn	**Pn**	**06 04 10.3**	**+0.7**
CBKS	**Cedar Bluff**	**3.38**	**325**	Pn	**Pn**	**06 04 10.4**	**+0.4**
S39A	**Bolivar**	**3.54**	**62**	Pn	**Pn**	**06 04 12.4**	**+0.3**
U40A	**Yellville**	**3.56**	**84**	P	**Pn**	**06 04 11.9**	**-0.5**
	baz=266						
U40A	**Yellville**	**3.56**	**84**		**Pn**	**06 04 12.0**	**-0.5**
AMTX	**Amarillo**	**3.81**	**253**	Sb	**Sb**	**06 05 13.8**	**+3.1**
	baz=71						
AMTX	**Amarillo**	**3.81**	**253**	Pn	**Pn**	**06 04 16.3**	**+0.4**
X40A	**Basin Creek Fa**	**3.94**	**112**		**Pn**	**06 04 17.6**	**+0.1**
WHTX	**Lake Whitney,**	**4.07**	**183**	Pn	**Pn**	**06 04 19.3**	**-0.1**
WHAR	**Wooly Hollow**	**4.11**	**99**	Pn	**Pn**	**06 04 19.7**	**-0.3**
MGMO	**Mountain Grove**	**4.15**	**73**	Pn	**Pn**	**06 04 20.5**	**+0.2**
FCAR	**Ozark Folk Cen**	**4.16**	**91**		**Pn**	**06 04 20.5**	**-0.1**
W41B	**Gary Mavity, V**	**4.17**	**101**	P	**Pn**	**06 04 20.4**	**-0.3**
	baz=284						
W41B	**Gary Mavity, V**	**4.17**	**101**		**Pn**	**06 04 20.4**	**-0.3**
237A	**Washetta, Mont**	**4.23**	**163**	Pn	**Pn**	**06 04 20.8**	**-0.7**
R40A	**Maddies Statio**	**4.55**	**59**	Pn	**Pn**	**06 04 26.1**	**+0.1**
LCAR	**Lake Charles**	**4.94**	**88**	Pn	**Pn**	**06 04 30.6**	**-0.7**
T42A	**Van Buren**	**5.05**	**77**	Pn	**Pn**	**06 04 33.2**	**+0.5**
KSCO	**Kaye Shedlock'**	**5.19**	**306**	Pn	**Pn**	**06 04 35.9**	**+1.0**
CCM	**Cathedral Cave**	**5.19**	**66**	Pn	**Pn**	**06 04 35.7**	**+0.9**

IDC ***01*** *06:13:30.0±1.6,23.°57S×66.°69W,h213km±32km,mb3.1/1, mb1 3.1/6,mb1mx3.0/21,mbtmp3.6/6, Error ellipse: s-maj=42.7km s-min=19.7km az=125.0*

GUC ***01*** *06:13:30.2±0.6,23.°83S×67.°10W,h248km±9km,ML4.1*

ISC 01 06:13:29.3±1.1,23.°77S±0.°07×66.°8W±0.°2,h222km±20km, n17,σ1°§15/28,7C-2D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.24**	**300**	P	**Pn**	**06 14 13.1**	**+0.8**
	5.3nm,0.3s,baz=144,slow=6.2,SNR=85						
LVC				S	**S**	**06 14 45.8**	**+0.2**
	14nm,0.3s,baz=256,slow=23,SNR=35						
LVC	**Limon Verde**	**2.24**	**300**	*eP*	**Pn**	**06 14 13.2**	**+0.9**
LVC				*iS*	**S**	**06 14 45.8**	**+0.2**
PB15	**IPOC Station P**	**2.49**	**282**	⇑*iP*	**Pn**	**06 14 15.4**	**+0.7**
PB15				*iS*	**S**	**06 14 49.7**	**-0.4**
PB15				IAML		06 14 52.2	
	comp=N,779nm,0.1s						
PB06	**IPOC Station P**	**2.74**	**292**	⇑*iP*	**Pn**	**06 14 18.2**	**+0.8**
PB06				*iS*	**S**	**06 14 54.2**	**-0.6**
PB06				IAML		06 14 57.3	
	comp=E,179nm,0.4s						
GO02	**Mina Guanaco**	**2.88**	**241**	⇑*iP*	**Pn**	**06 14 18.8**	**-0.3**
GO02				*iS*	**S**	**06 14 56.7**	**-1.1**
GO02				IAML		06 14 58.0	
	comp=E,198nm,0.4s						
PB03	**IPOC Station P**	**3.20**	**302**	⇑*iP*	**Pn**	**06 14 23.3**	**+0.7**
PB03				*iS*	**S**	**06 15 03.1**	**-1.0**
PB03				IAML		06 15 06.8	
	comp=N,173nm,0.2s						
PB05	**IPOC Station P**	**3.24**	**286**	⇓*iP*	**Pn**	**06 14 23.4**	**+0.4**
PB05				*iS*	**S**	**06 15 02.8**	**-2.1**
PB05				IAML		06 15 07.6	
	comp=E,69nm,0.5s						
PB04	**IPOC Station P**	**3.38**	**294**	⇑*iP*	**Pn**	**06 14 25.3**	**+0.6**
PB04				*iS*	**S**	**06 15 06.5**	**-1.4**
PB04				IAML		06 15 09.8	
	comp=N,176nm,0.3s						
PB14	**IPOC Station P**	**3.38**	**255**	⇑*iP*	**Pn**	**06 14 24.5**	**-0.3**
PB07	**IPOC Station P**	**3.48**	**305**	⇑*iP*	**Pn**	**06 14 26.5**	**+0.6**
PB07				*iS*	**S**	**06 15 08.5**	**-1.6**
PB07				IAML		06 15 10.5	
	comp=N,202nm,0.2s						
PB01	**IPOC Station P**	**3.66**	**317**	⇓*iP*	**Pn**	**06 14 28.8**	**+0.8**
PB01				*iS*	**S**	**06 15 13.3**	**-0.7**
PB01				IAML		06 15 15.4	
	comp=E,114nm,0.3s						
PB08	**IPOC Station P**	**4.21**	**329**	*eP*	**Pn**	**06 14 36.5**	**+1.7**
PB08				*iS*	**S**	**06 15 27.5**	**+1.2**
LPAZ	**La Paz**	**7.54**	**350**	P	**Pn**	**06 15 16.1**	**-1.3**
	comp=E,0.3nm,0.3s,baz=184,slow=8.9,SNR=6.6						
SIV	**San Ignacio**	**9.44**	**36**	P	**Pn**	**06 15 39.3**	**-1.9**
	comp=E,0.2nm,0.3s,baz=199,slow=13,SNR=7.5						
PLCA	**Paso Flores**	**17.21**	**190**	P	**Pn**	**06 17 18.8**	**+1.9**
	comp=E,0.2nm,0.3s,baz=356,slow=11,SNR=6.6						
BDFB	**Brasilia**	**19.45**	**69**	P	**P**	**06 17 38.6**	**-1.0**
	baz=E,0.2nm,0.3s,baz=248,slow=10.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**76.33**	**69**	P	**P**	**06 24 55.0**	**+0.6**
	comp=E,0.3nm,0.5s,baz=246,slow=5.6,SNR=5.1						

IDC 01 06:46:51.8±9.3,0.°25S×67.°10E,h0km,mb3.5/2,mb1 3.8/2, mb1mx3.3/32,mbtmp3.5/2,Error ellipse: s-maj=861.4km s-min=53.8km az=38.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**68.56**	**111**	P	P	06 57 57.2	+0.1
	0.4nm,0.6s,baz=287,slow=5.5,SNR=2.9						
ASAR	**Alice Springs**	**68.72**	**115**	P	P	06 57 58.0	0.0
	0.3nm,0.7s,baz=270,slow=5.4,SNR=4.1						
TXAR	**Lajitas Array**	**149.76**	**344**	PKPbc	PKPbc	07 06 44.2	-0.5
	0.4nm,0.7s,baz=112,slow=1.0,SNR=4.7						

IDC ***01*** *07:20:49.2±2.9,38.°29N×141.°96E,h63km±30km,mb3.2/1, mb1 3.5/5,mb1mx3.2/56,mbtmp3.7/5,ML3.1/4,MS2.9/1, Ms1 2.9/1,ms1mx2.4/25, Error ellipse: s-maj=40.7km s-min=13.3km az=120.0*

JMA ***01*** *07:20:50.0,38.°32N×141.°60E,h54km±1km,M3.8*

JMA Felt I J1.

NIED ***01*** *07:20:50.1,38.°32N×141.°60E,h54km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.18; Mθθ-1.53; Mϕϕ-1.65; Mrθ2.46; Mθϕ-3.39; Mϕr1.01; Fault plane solution: M₀4.97000×10¹⁴ NP1:φ₁64.00000°, δ64.00000°,λ113.00000°. NP2:φ₂199.00000°,δ35.00000°, λ51.00000°.*

ISC 01 07:20:49.9±1.4,38.°30N±0.°05×141.°68E±0.°09,h48km±8km, n28,σ1°§34/37,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.17**	**274**	P	**Pn**	**07 20 58.4**	**+0.6**
JIKH				S	**Sn**	**07 21 04.2**	**+0.9**
JIO	**Ouri**	**0.30**	**301**	P	**Pn**	**07 20 59.2**	**+0.4**
JIO				*iS*	**Sn**	**07 21 05.5**	**+0.3**
JKMT	**Kesennumamotoy**	**0.54**	**342**	P	**Pn**	**07 21 01.6**	**+0.1**
JKMT				S	**Sn**	**07 21 09.7**	**0.0**
JOFO	**Osakifurukawao**	**0.68**	**297**	P	**Pn**	**07 21 03.0**	**-0.2**
JMK	**Ichinoseki**	**0.75**	**331**	P	**Pn**	**07 21 04.2**	**+0.1**
JMK				*eS*	**Sn**	**07 21 14.2**	**-0.3**
OFUJ	**Ofunato**	**0.78**	**359**	P	**Pn**	**07 21 04.6**	**0.0**
OFUJ				*eS*	**Sn**	**07 21 15.1**	**-0.2**
JOU	**Okura**	**0.80**	**275**	P	**Pn**	**07 21 04.5**	**-0.4**
JOU				*eS*	**Sn**	**07 21 15.2**	**-0.7**
JMM	**Marumori**	**0.82**	**239**	P	**Pn**	**07 21 04.6**	**-0.6**
JMM				S	**Sn**	**07 21 15.3**	**-1.0**
JFK	**Kawauchi**	**1.13**	**215**	P	**Pn**	**07 21 09.1**	**-0.3**
JFK				S	**Sn**	**07 21 23.2**	**-0.5**
JYK	**Kaneyama**	**1.21**	**301**	P	**Pn**	**07 21 09.9**	**-0.5**
JOM	**Ohasama**	**1.21**	**346**	P	**Pn**	**07 21 10.3**	**-0.1**
JOM				S	**Sn**	**07 21 25.6**	**-0.1**
JYS	**Shirataka**	**1.27**	**267**	P	**Pn**	**07 21 11.1**	**-0.2**
JYS				S	**Sn**	**07 21 26.9**	**-0.4**
JFT	**Otama**	**1.32**	**234**	P	**Pn**	**07 21 11.9**	**0.0**
JFT				S	**Sn**	**07 21 27.6**	**-0.7**
JRG	**Rokugo**	**1.37**	**324**	P	**Pn**	**07 21 12.7**	**+0.1**
JYA	**Atsumi**	**1.57**	**281**	P	**Pn**	**07 21 15.0**	**-0.4**
JYA				S	**Sn**	**07 21 34.7**	**+0.2**
MAT	**Matsushiro**	**3.27**	**239**	P	**Pn**	**07 21 40.0**	**+1.3**
MAT				S	**Sn**	**07 22 21.0**	**+4.6**
MJAR	**Matsushiro Arr**	**3.27**	**239**	P	**Pn**	**07 21 39.1**	**+0.4**
	0.4nm,0.3s,baz=41,slow=11,SNR=30						
MJAR				S	**Sn**	**07 22 21.1**	**+4.7**
	0.3nm,0.3s,baz=38,slow=18,SNR=4.8						
JHJ	**Hachijo jima 2**	**5.39**	**197**	P	**Pn**	**07 22 07.5**	**-0.3**
	9.6nm,0.3s,baz=337,slow=20,SNR=6.7						
JHJ				S	**Sn**	**07 23 05.7**	**-2.9**
	11nm,0.3s,baz=18,slow=20,SNR=1.5						
ASAJ	**Asahikawa**	**5.85**	**6**	P	**Pn**	**07 22 13.6**	**-0.5**
	1.0nm,0.3s,baz=197,slow=14,SNR=2.1						
ASAJ				S	**Sn**	**07 23 20.3**	**+0.5**
	0.7nm,0.3s,baz=252,slow=20,SNR=3.9						
USRK	**Ussuriysk Ar.**	**9.38**	**312**	P	**Pn**	**07 23 02.7**	**+0.3**
	baz=124,slow=14,SNR=8.2						
KLR	**Kul'dur**	**13.06**	**330**	LR	LR	07 28 14.4	
	comp=Z,50nm,20.4s,baz=1.0,slow=34						
H11N2	**WAKE ISLAND Hy**	**28.64**	**123**	T	T	07 56 54.8	
	baz=316,slow=76,SNR=91						
H11N1	**WAKE ISLAND Hy**	**28.64**	**123**	T	T	07 57 01.4	
	baz=316,slow=76,SNR=91						
H11N3	**WAKE ISLAND Hy**	**28.65**	**123**	T	T	07 57 02.1	
	baz=316,slow=76,SNR=59						
H11S1	**WAKE ISLAND Hy**	**29.39**	**125**	T	T	07 57 51.7	
	baz=318,slow=76,SNR=48						
H11S3	**WAKE ISLAND Hy**	**29.39**	**125**	T	T	07 57 54.9	
	baz=318,slow=76,SNR=59						
H11S2	**WAKE ISLAND Hy**	**29.41**	**125**	T	T	07 57 55.0	
	baz=318,slow=76,SNR=59						
MKAR	**Makanchi Array**	**43.64**	**301**	P	**P**	**07 28 48.9**	**-0.8**
	0.6nm,0.8s,baz=80,slow=9.9,SNR=1.9						

DJA ***01*** *07:21:11.0±0.2,6.°S±2.°×10.°5E±.°,h10km,M4.5/18,mb5.2/3, mB6.3/1,MLv4.1/18,Mw(mB)6.0/1*

IDC ***01*** *07:21:15.9±3.7,6.°05S×105.°18E,h61km±31km,mb3.9/15, mb1 4.1/17,mb1mx3.8/48,mbtmp4.2/17,ML4.5/2,MS2.7/1, Ms1 2.7/1,ms1mx2.4/37, Error ellipse: s-maj=38.7km s-min=14.3km az=53.0*

NEIC ***01*** *07:21:16.8±1.8,6.°1S±0.°1×105.°2E±0.°1,h78km±7km, mb4.4/11,Error ellipse: s-maj=21.3km s-min=8.1km az=223.0*

ISC 01 07:21:09.0±0.5,6.°09S±0.°05×105.°29E±0.°04,h10km,n61, σ1°§36/69,mb4.1/19,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CGJI	**Cibinong**	**0.66**	**143**	P	**Pb**	**07 21 22.1**	**-0.4**
CGJI				S	**Sg**	**07 21 30.9**	**+0.6**
BLSI	**Bandar Lampung**	**0.72**	**356**	P	**Pn**	**07 21 25.0**	**-0.2**
BLSI				S	**Sn**	**07 21 35.8**	**-0.5**
TNG	**Tangerang**	**1.35**	**94**	P	**Pb**	**07 21 33.8**	**-0.6**
TNG				P	**Pn**	**07 21 33.5**	**-0.4**
TNG				S	**Sn**	**07 21 49.5**	**-2.4**
TNG				S	**Sb**	**07 21 51.1**	**-0.6**
KLSI		**1.50**	**338**	P	**Pg**	**07 21 38.9**	**+1.1**
DBJI	**Dramaga**	**1.52**	**108**	P	**Pn**	**07 21 36.4**	**+0.1**
SKJI	**Sukabumi**	**1.55**	**126**	P	**Pn**	**07 21 37.2**	**+0.5**
CBJI	**Citeko**	**1.58**	**102**	P	**Pg**	**07 21 39.5**	**+0.1**
LWLI	**Liwa**	**1.62**	**311**	P	**Pg**	**07 21 41.8**	**+1.6**
CNJI	**Cibinong**	**2.19**	**124**	P	**Pn**	**07 21 45.9**	**+0.4**
LEM	**Lembang**	**2.42**	**108**	P	**Pg**	**07 21 55.0**	**-0.5**
	19nm,0.3s,baz=202,slow=9.7,SNR=14						
LEM				S	**Sg**	**07 22 26.0**	**-1.0**
	4.6nm,0.3s,baz=294,slow=20,SNR=3.7						
LEM				LR	LR	07 23 05.0	
	comp=Z,163nm,20.8s,baz=172,slow=43						
LEM	**Lembang**	**2.42**	**108**	P	**Pn**	**07 21 48.5**	**-0.3**
MNAI	**Manna**	**2.89**	**306**	P	**Pb**	**07 21 58.8**	**-1.9**
MNAI	**Manna**	**2.89**	**306**	Pn	**Pb**	**07 22 00.6**	**-0.1**
CISI	**Cisompet, Garu**	**2.90**	**120**	P	**Pn**	**07 21 55.2**	**-0.1**
CISI	**Cisompet, Garu**	**2.90**	**120**	Pn	**Pb**	**07 21 58.5**	**-2.4**
JCJI	**Jatiwangi**	**2.99**	**98**	P	**Pn**	**07 21 56.8**	**+0.4**
PMBI	**Palembang**	**3.18**	**351**	P	**Pb**	**07 22 02.5**	**-3.2**
PMBI	**Palembang**	**3.18**	**351**	Pn	**Pb**	**07 22 05.3**	**-0.4**
CMJI	**Cimerak**	**3.56**	**118**	P	**Pn**	**07 22 04.0**	**-0.3**
KSI	**Kapahiang**	**3.62**	**312**	P	**Pb**	**07 22 08.7**	**-4.4**
KPJI	**Karang Pucung**	**3.82**	**109**	P	**Pn**	**07 22 07.9**	**0.0**
PPBI	**Pangkal Pinang**	**3.99**	**12**	P	**Pn**	**07 22 11.8**	**+1.5**
TPI	**Tanjungpandan**	**4.06**	**36**	P	**Pn**	**07 22 12.5**	**+1.2**
BATI	**Baumata**	**18.64**	**104**	P	**Pn**	**07 25 30.1**	**+2.7**
	7.3nm,0.3s,baz=285,slow=19,SNR=2.5						
SOEI	**Soe**	**19.14**	**102**	P	**P**	**07 25 32.7**	**0.0**
	30nm,0.6s						
UBPT	**Khong Chiam**	**21.23**	**0**	P	**P**	**07 25 59.3**	**+4.1**
UBPT				IAmb	IAmb	07 26 05.3	
	comp=Z,12nm,0.5s						
TNTI	**Ternate**	**23.07**	**74**	P	**P**	**07 26 16.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**23.17**	**123**	P	**P**	**07 26 17.9**	**+2.0**
	comp=Z,3.2nm,1.1s,baz=316,slow=13,SNR=3.2						
FITZ	**Fitzroy Crossi**	**23.17**	**123**	P	**P**	**07 26 17.1**	**+1.2**
KNRA	**Kununurra**	**24.91**	**114**	P	**P**	**07 26 33.2**	**+0.8**
KNRA				IAmb	IAmb	07 26 34.8	
	comp=Z,16nm,0.9s						
CMAR	**Chiang Mai Arr**	**25.18**	**346**	P	**P**	**07 26 35.4**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=186,slow=8.2,SNR=1.5						
CMAR	**Chiang Mai Arr**	**25.18**	**346**	P	**P**	**07 26 35.0**	**+0.1**
WRA	**Warramunga Arr**	**31.40**	**119**	P	**P**	**07 27 31.4**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=297,slow=9.6,SNR=9.3						
WRA				PcP	**PcP**	**07 30 24.4**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=295,slow=2.0,SNR=4.6						
WRA	**Warramunga Arr**	**31.40**	**119**	P	**P**	**07 27 30.8**	**+0.3**
ASAR	**Alice Springs**	**32.59**	**125**	P	**P**	**07 27 41.8**	**+0.8**
	comp=Z,2.9nm,1.1s,baz=292,slow=7.9,SNR=13						
ASAR				PcP	**PcP**	**07 30 28.2**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=313,slow=1.9,SNR=3.9						
ASAR	**Alice Springs**	**32.59**	**125**	P	**P**	**07 27 42.7**	**+1.7**
STKA	**Stephens Creek**	**42.51**	**132**	P	**P**	**07 29 06.8**	**+2.0**
	comp=Z,4.2nm,0.8s,baz=324,slow=10.0,SNR=6.1						
STKA	**Stephens Creek**	**42.51**	**132**	P	**P**	**07 29 05.8**	**+1.0**
STKA				IAmb	IAmb	07 29 13.2	
	comp=Z,3.2nm,1.4s						
SONM	**Songino Array**	**53.70**	**1**	P	**P**	**07 30 31.6**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=180,slow=8.6,SNR=7.0						
SONM	**Songino Array**	**53.70**	**1**	P	**P**	**07 30 30.5**	**-0.7**
USRK	**Ussuriysk Ar.**	**55.54**	**23**	P	**P**	**07 30 45.4**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=215,slow=6.8,SNR=5.4						
USRK	**Ussuriysk Ar.**	**55.54**	**23**	P	**P**	**07 30 44.7**	**+0.2**
MKAR	**Makanchi Array**	**56.47**	**341**	P	**P**	**07 30 50.3**	**-0.9**
	comp=Z,1.4nm,1.0s,baz=170,slow=6.3,SNR=4.1						
KKAR	**Karatay Array**	**58.23**	**331**	P	**P**	**07 31 02.5**	**-1.1**
KLR	**Kul'dur**	**59.73**	**20**	P	**P**	**07 31 13.9**	**0.0**
	comp=Z,0.7nm,0.5s,baz=301,slow=2.4,SNR=3.9						
GEYT	**Alibeck**	**61.96**	**319**	P	**P**	**07 31 28.7**	**-0.7**
	comp=Z,2.8nm,0.2s,baz=145,slow=7.1,SNR=3.1						
GEYT	**Alibeck**	**61.96**	**319**	P	**P**	**07 31 29.5**	**+0.1**
ZALV	**Zalesovo Beam**	**62.25**	**346**	P	**P**	**07 31 29.7**	**-1.2**
	comp=Z,3.0nm,0.9s,baz=144,slow=5.2,SNR=7.0						
ZALV	**Zalesovo Beam**	**62.25**	**346**	P	**P**	**07 31 30.0**	**-0.9**
ABKAR	**Akbulak array**	**67.77**	**330**	P	**P**	**07 32 06.0**	**-1.0**
ABKAR				IAmb	IAmb	07 32 07.2	
	comp=Z,2.9nm,0.8s						
KBZ	**Khabaz**	**74.84**	**318**	P	**P**	**07 32 50.0**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=82,slow=7.9,SNR=5.3						
BRTR	**Keskin Array B**	**79.96**	**312**	P	**P**	**07 33 18.4**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=129,slow=4.9,SNR=4.4						
BRTR	**Keskin Array B**	**79.96**	**312**	P	**P**	**07 33 16.4**	**-2.4**
AKASG	**Malin Array Be**	**85.93**	**322**	P	**P**	**07 33 49.1**	**-0.2**
	comp=Z,0.2nm,0.2s,baz=81,slow=4.4,SNR=7.0						
AKASG	**Malin Array Be**	**85.93**	**322**	P	**P**	**07 33 47.6**	**-1.7**
MLR	**Mumbite Rosu**	**86.88**	**316

comp=Z,14nm,0.8s
VNDA Vanda 54.85 185 P P 07 32 16.4 +0.9
PSA00 Pilbara Seismi 55.53 259 P P 07 32 20.4 -0.8
QSPA South Pole Qui 66.63 180 P P 07 33 33.8 -0.1
QSPA IAmb IAmb 07 33 47.9
comp=Z,4.2nm,1.2s
JGF Kuroka 71.44 324 P P 07 34 03.6 +0.4
TXAR Lajitas Array 89.94 58 P P 07 35 40.9 +0.9
comp=Z,0.1nm,0.6s,baz=230,slow=6.9,SNR=2.2
HFS Hagfors 142.16 349 PKP PKPdf 07 42 04.7 -4.4
comp=Z,1.0nm,0.3s,baz=45,slow=2.6,SNR=8.8
CLL Collm 150.51 344 *e*PKPbc **PKPbc 07 42 29.0 -0.1**

*NNC **01** 07:23:33.0±5.4, 39.2°N×71.1°E, h2km±34km, mb3.6, mpv3.4, Error ellipse: s-maj=38.6km s-min=21.7km az=0.0*
*KRNET **01** 07:23:34.6±0.1, 39.02°N×71.63E, h14km, mb3.3*
ISC 01 07:23:36.8±1.4, 39.07N±0.09×71.45E±0.07, h10km, n14, σ2s03/22, 9C-13D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.88**	**266**	⇑*i*P	**Pb**	**07 23 53.8**	**-0.5**
	baz=69						
GAR				⇑*i*S	**Sn**	**07 24 08.1**	**-0.2**
	baz=69						
BTK	**Batken**	**1.10**	**334**	⇓*i*P	**Pb**	**07 23 57.5**	**-0.5**
	baz=29						
BTK				⇓*i*S	**Sn**	**07 24 14.4**	**+0.7**
	baz=29						
OHH	**Osh**	**1.78**	**35**	⇓*i*P	**Pn**	**07 24 07.1**	**-0.7**
	baz=30						
OHH				⇓*i*S	**Sn**	**07 24 30.7**	**+0.2**
	baz=30						
CHGR	**Chuyangaron**	**1.83**	**258**	⇑*i*P	**Pg**	**07 24 11.2**	**-0.7**
	baz=60						
CHGR				⇑*i*S	**Sg**	**07 24 37.1**	**+1.4**
	baz=60						
IUG	**Iuzhnay**	**3.26**	**341**	Pg	**Pb**	**07 24 33.0**	**-1.8**
	16nm,0.4s						
IUG				Lg	Lg	07 25 15.1	
	51nm,0.4s						
AML	**Almayashu**	**3.51**	**28**	⇓*i*P	**Pn**	**07 24 32.1**	**+0.4**
	baz=26						
AML				⇓*i*S	**Sn**	**07 25 13.6**	**+0.1**
	baz=26						
MNAS	**Manas**	**3.51**	**13**	⇓*i*P	**Pn**	**07 24 32.9**	**+1.3**
	baz=11						
MNAS				⇓*i*S	**Sn**	**07 25 15.1**	**+1.9**
	baz=11						
ARLS	**Aral**	**3.55**	**37**	⇓*i*P	**Pn**	**07 24 32.2**	**+0.1**
	baz=35						
ARLS				⇓*i*S	**Sn**	**07 25 14.0**	**-0.2**
	baz=35						
MRKS	**Merke**	**3.92**	**20**	Pg	**Pn**	**07 24 40.9**	**+3.8**
	5.9nm,0.5s						
MRKS				Lg	Lg	07 25 28.7	
	12nm,0.4s						
KK31	**Karatay Array**	**4.09**	**350**	⇓Pg	**Pn**	**07 24 43.3**	**+3.8**
	1.8nm,0.5s,baz=171,slow=13,SNR=26						
KK31				⇑Lg	Lg	07 25 35.5	
	3.1nm,0.4s,baz=167,slow=22,SNR=6.4						
AAK	**Ala-Archa**	**4.25**	**32**	⇑Pg	**Pn**	**07 24 44.4**	**+2.7**
	3.4nm,0.5s						
AAK				⇑Lg	Lg	07 25 39.8	
	7.7nm,1.1s						
TKM2	**Tokmak 2**	**4.97**	**38**	⇓Pg	**Pn**	**07 24 54.9**	**+3.3**
	2.1nm,0.7s						
TKM2				⇓Lg	Lg	07 26 00.3	
	2.6nm,0.6s						
SGDS	**Sogindy**	**5.00**	**28**	Pg	**Pn**	**07 24 54.3**	**+2.5**
	3.2nm,0.5s						
SGDS				Lg	Lg	07 25 52.1	
	2.2nm,0.4s						
AB31	**Akbulak array**	**13.10**	**325**	⇑Pn	**Pn**	**07 26 42.1**	**-0.7**
	0.3nm,0.5s,baz=138,slow=13,SNR=10						
AB31				⇑Sn	**Sn**	**07 29 05.0**	**-3.4**
	0.5nm,0.6s						

*MAN **01** 07:30:45.6, 5.01N×126.33E, h18km, mb5.2, ML4.1, MS4.2*
*NEIC **01** 07:30:46.4±2.0, 4.99N±0.05×126.46E±0.09, h73km±8km, mb4.4/24, Error ellipse: s-maj=14.1km s-min=5.5km az=64.0*
*IDC **01** 07:30:46.9±1.7, 4.93N×126.30E, h72km±14km, mb4.0/19, mb1 4.2/20, mb1mx4.0/43, mbtmp4.3/20, MS3.2/10, Ms1 3.2/10, ms1mx3.0/34, Error ellipse: s-maj=21.0km s-min=10.6km az=71.0*
*DJA **01** 07:30:47.1±0.8, 5°N±5°×12°6E±°, h15km±5km, M4.6/14, mB5.2/7, mb4.6/13, MLv4.7/14, Mw(mB)4.6/7*
ISC 01 07:30:46.7±0.4, 4.95N±0.04×126.40E±0.06, h71km, n93, σ1s30/101, mb4.4/31, 2C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.33**	**329**	*e*P	**Pn**	**07 31 07.3**	**-2.2**
DDMP				*e*S	**Sn**	**07 31 24.9**	**-1.7**
SGSI	**Sangihe**	**1.53**	**215**	P	**Pn**	**07 31 10.5**	**-1.6**
SGSI				S	**Sn**	**07 31 28.7**	**-2.5**
MATI	**Mati**	**1.98**	**356**	*e*P	**Pn**	**07 31 17.6**	**-0.6**
MATI				*e*S	Sn	07 31 60.0	+18
DAV	**Davao City (W)**	**2.25**	**339**	Pn	**Pn**	**07 31 22.2**	**-0.7**
SKMP	**Bagumbayan, Su**	**2.41**	**310**	*e*P	**Pn**	**07 31 23.6**	**-0.4**
SKMP				*e*S	**Sn**	**07 31 52.5**	**-0.1**
KCP	**Kidapawan**	**2.42**	**328**	⇑*e*P	**Pn**	**07 31 23.8**	**-0.3**
KCP				*i* S	**Sn**	**07 31 57.5**	**+4.7**
BUKP	**Musuan**	**3.20**	**336**	*e*P	**Pn**	**07 31 34.8**	**+0.1**
BUKP				*e*S	**Sn**	**07 32 09.4**	**-2.3**
CGP	**Cagayan de Oro**	**3.87**	**334**	⇓*e*P	**Pn**	**07 31 45.5**	**+1.7**
CGP				*e*S	**Sn**	**07 32 31.4**	**+3.4**
PAGZ	**Pagadian**	**4.15**	**314**	*e*P	**Pn**	**07 31 47.5**	**-0.2**
TNTI	**Ternate**	**4.26**	**167**	P	**Pn**	**07 31 48.8**	**-0.4**
TNTI	**Ternate**	**4.26**	**167**	Pn	**Pn**	**07 31 49.6**	**+0.4**
TNTI				Sn	**Sn**	**07 32 38.9**	**+1.2**
GLSP	**General Luna,**	**4.81**	**357**	*e*P	**Pn**	**07 31 57.9**	**+1.3**
GLSP				*e*S	Sn	07 33 02.6	+12
KMSI	**Cibinong**	**4.97**	**209**	P	**Pn**	**07 31 58.2**	**-0.7**
GTOI	**Gorontalo**	**5.46**	**218**	P	**Pn**	**07 32 04.0**	**-1.6**
	0.3nm636nm29nm,0.7s						
SANI	**Sanana**	**6.97**	**183**	P	**Pn**	**07 32 24.7**	**-1.5**
	0.2nm1µm20nm,0.5s						
LUWI	**Luwuk**	**6.97**	**211**	P	**Pn**	**07 32 25.6**	**-0.6**
	0.7nm4µm212nm,0.9s						
LUWI	**Luwuk**	**6.97**	**211**	Pn	**Pn**	**07 32 27.1**	**+0.9**
APSI	**Ampana**	**7.51**	**219**	P	**Pn**	**07 32 33.7**	**+0.1**
	0.2nm58nm,0.8s						
SIJI	**Sorong**	**7.56**	**140**	P	**Pn**	**07 32 35.4**	**+1.2**
	14nm,0.3s,baz=350,slow=21,SNR=13						
SIJI				LR	LR	07 35 44.5	
	comp=Z,246nm,21.7s,baz=246,slow=39						
MYLDM	**Lahad Datu**	**7.87**	**272**	Pn	**Pn**	**07 32 39.2**	**+0.7**
MYLDM				Sn	**Sn**	**07 34 09.1**	**+2.9**
MPSI	**Mapaga**	**7.95**	**235**	P	**Pn**	**07 32 39.9**	**+0.3**
	0.1nm9.8nm,0.5s						
NLAI	**Namlea**	**8.17**	**175**	P	**Pn**	**07 32 42.1**	**-0.5**
	0.7nm3µm87nm,0.4s						
MSAI	**Masohi**	**8.62**	**163**	P	**Pn**	**07 32 48.9**	**+0.1**
	2µm16nm,0.6s						
FAKI	**Fak Fak**	**9.76**	**143**	P	**Pn**	**07 33 07.2**	**+2.8**
	63nm,0.9s						
FAKI	**Fak Fak**	**9.76**	**143**	Pn	**Pn**	**07 33 04.6**	**+0.2**
LQP	**Lukban**	**10.28**	**333**	⇑*e*P	Pn	07 33 18.1	+6.4
TTSI	**Tana Toraja**	**10.31**	**220**	P	Pn	07 33 23.5	+12
TGY	**Tagaytay City**	**10.56**	**330**	LR	LR	07 37 46.4	
	comp=Z,96nm,19.4s,baz=200,slow=40						
KAPI	**Kappang**	**11.92**	**214**	LR	LR	07 38 20.7	
	comp=Z,44nm,20.4s,baz=40,slow=38						
MTKI	**Muara Teweh, K**	**12.90**	**243**	P	P	07 34 14.3	+19
SBUM	**Sibu**	**14.37**	**261**		**P**	**07 34 12.3**	**+0.7**
SOEI	**Soe**	**14.77**	**188**	P	**Pn**	**07 34 14.2**	**+2.3**
KSM	**Kuching**	**16.43**	**258**	P	**P**	**07 34 33.8**	**-0.7**
KSM				IAmb	IAmb	07 34 38.0	
	comp=Z,32nm,1.4s						
MTN	**Manton Dam**	**18.30**	**165**	P	**P**	**07 34 53.6**	**-1.5**
MTN				IAmb	IAmb	07 35 01.9	
	comp=Z,12nm,0.6s						
YULB	**Yu-li**	**18.98**	**345**	P	**P**	**07 35 00.7**	**-1.9**
TPUB	**Ta-pu**	**19.07**	**344**	P	**P**	**07 35 01.5**	**-2.0**
TPUB				IAmb	IAmb	07 35 13.0	
	comp=Z,23nm,1.2s						
KNRA	**Kununurra**	**20.63**	**174**	P	**P**	**07 35 20.0**	**-0.5**
KNRA				IAmb	IAmb	07 35 30.5	
	comp=Z,15nm,0.7s						
FITZ	**Fitzroy Crossi**	**22.92**	**182**	P	**P**	**07 35 44.4**	**-0.5**
	comp=Z,2.6nm,0.4s,baz=0.6,slow=5.9,SNR=21						
FITZ	**Fitzroy Crossi**	**22.92**	**182**	P	**P**	**07 35 45.3**	**+0.4**
UBPT	**Khong Chiam**	**22.99**	**298**	P	**P**	**07 35 44.0**	**-1.7**
UBPT				IAmb	IAmb	07 35 52.6	
	comp=Z,12nm,0.8s						
WB0	**Warramunga Arr**	**25.79**	**162**	P	**P**	**07 36 10.9**	**-0.3**
WB0				IAmb	IAmb	07 36 36.2	
	comp=Z,13nm,0.9s						
WRA	**Warramunga Arr**	**25.94**	**163**	P	**P**	**07 36 12.0**	**-0.6**
	comp=Z,3.3nm,0.5s,baz=342,slow=10,SNR=33						
WRA				PcP	**PcP**	**07 39 40.3**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=338,slow=3.3,SNR=1.9						
WRA				ScP	**ScP**	**07 43 14.4**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=333,slow=3.3,SNR=6.9						
WRA	**Warramunga Arr**	**25.94**	**163**	P	**P**	**07 36 12.6**	**-0.1**
WB2	**Warramunga Arr**	**25.95**	**163**	P	**P**	**07 36 12.2**	**-0.4**
WB2				IAmb	IAmb	07 36 38.4	
	comp=Z,12nm,0.9s						
KRVT	**Keravat (AS076**	**27.20**	**109**	LR	LR	07 46 37.6	
	comp=Z,55nm,18.9s,baz=297,slow=35						
PSI	**Prapat**	**27.49**	**267**	P	**P**	**07 36 28.1**	**+1.3**
	comp=Z,3.9nm,0.6s,baz=180,slow=8.7,SNR=7.4						
RPSI	**Rantau Prapat**	**27.50**	**266**	P	**P**	**07 36 28.1**	**+1.3**
NJ2	**Nanjing**	**27.87**	**346**	*e*P	**P**	**07 36 31.5**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AS31	**Alice Springs**	**29.37**	**166**	P	**P**	**07 36 43.6**	**+0.3**
ASAR	**Alice Springs**	**29.37**	**166**	P	**P**	**07 36 43.2**	**0.0**
	comp=Z,2.0nm,0.6s,baz=351,slow=7.6,SNR=53						
ASAR				PcP	**PcP**	**07 39 48.6**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=342,slow=2.4,SNR=4.1						
ASAR				ScP	**ScP**	**07 43 24.9**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=342,slow=2.6,SNR=9.1						
ASAR				LR	LR	07 49 51.2	
	comp=Z,42nm,18.5s,baz=89,slow=39						
ASAR	**Alice Springs**	**29.37**	**166**	P	**P**	**07 36 43.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**29.98**	**299**	P	**P**	**07 36 49.2**	**+0.4**
	comp=Z,6.4nm,0.8s,baz=112,slow=7.1,SNR=31						
CMAR				ScP	**ScP**	**07 43 26.0**	**0.0**
	comp=Z,1.6nm,0.9s,baz=132,slow=1.3,SNR=5.7						
CMAR				LR	LR	07 48 16.8	
	comp=Z,34nm,21.9s,baz=166,slow=35						
CMAR	**Chiang Mai Arr**	**29.98**	**299**	P	**P**	**07 36 50.5**	**+1.7**
CHTO	**Chiang Mai**	**30.12**	**300**	P	**P**	**07 36 51.3**	**+1.3**
CHTO				IAmb	IAmb	07 36 53.0	
	comp=Z,7.7nm,0.7s						
JWT	**Wachi**	**31.31**	**14**	P	**P**	**07 36 59.0**	**-1.2**
KSRS	**Korea Array**	**32.38**	**2**	P	**P**	**07 37 11.0**	**+1.5**
	comp=Z,2.0nm,0.6s,baz=181,slow=9.5,SNR=7.1						
XAN	**Xi'an**	**33.18**	**333**	P	**P**	**07 37 15.7**	**-1.0**
XAN				pP	pP	07 37 23.6	-9.4
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MJAR	**Matsushiro Arr**	**33.26**	**17**	pP	pP	07 37 35.5	+1.8
	comp=Z,2.5nm,0.8s,baz=199,slow=8.8,SNR=3.5						
FORT	**Forrest**	**35.57**	**178**	P	**P**	**07 37 37.1**	**-0.1**
HNR	**Honiara**	**36.36**	**113**	LR	LR	07 53 20.4	
	comp=Z,47nm,18.1s,baz=252,slow=37						
HHC	**Hu-ho-hao-te**	**38.14**	**342**	*e*P	**P**	**07 37 59.2**	**0.0**
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
BBOO	**Buckleboo**	**38.66**	**167**	P	**P**	**07 38 03.6**	**+0.1**
NWAO	**Narrogin (SRO)**	**38.66**	**192**	P	**P**	**07 38 03.4**	**-0.1**
SHL	**Shillong**	**38.90**	**305**	P	**P**	**07 38 04.5**	**-1.3**
STKA	**Stephens Creek**	**39.38**	**159**	P	**P**	**07 38 10.1**	**+0.5**
	comp=Z,3.9nm,0.5s,baz=332,slow=9.1,SNR=15						
STKA				PcP	**PcP**	**07 40 17.2**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=324,slow=4.2,SNR=1.9						
STKA				LR	LR	07 55 26.9	
	comp=Z,36nm,18.3s,baz=24,slow=38						
STKA	**Stephens Creek**	**39.38**	**159**	P	**P**	**07 38 09.1**	**-0.4**
USRK	**Ussuriysk Ar.**	**39.40**	**6**	P	**P**	**07 38 11.4**	**+1.9**
	comp=Z,2.0nm,0.5s,baz=213,slow=9.1,SNR=5.6						
USRK	**Ussuriysk Ar.**	**39.40**	**6**	P	**P**	**07 38 10.1**	**+0.6**
SONM	**Songino Array**	**46.04**	**341**	P	**P**	**07 39 03.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=160,slow=9.2,SNR=2.1						
SONM	**Songino Array**	**46.04**	**341**	P	**P**	**07 39 02.3**	**-1.1**
DZM	**Mont Dzumac**	**47.51**	**126**	P	**P**	**07 39 15.3**	**+0.1**
	comp=Z,7.2nm,0.9s,baz=288,slow=20,SNR=2.6						
WMQ	**Urumqi**	**51.54**	**325**	*e*P	**P**	**07 39 46.7**	**+1.1**
PETK	**Petropavlovsk-**	**54.43**	**23**	P	**P**	**07 40 07.9**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=150,slow=2.2,SNR=6.4						
PETK	**Petropavlovsk-**	**54.43**	**23**	P	**P**	**07 40 06.7**	**+0.1**
MK31	**Makanchi Array**	**56.37**	**325**	P	**P**	**07 40 20.0**	**-0.7**
MK31				IAmb	IAmb	07 40 41.0	
	comp=Z,6.4nm,1.3s						
MKAR	**Makanchi Array**	**56.37**	**325**	P	**P**	**07 40 19.6**	**-1.1**
	comp=Z,1.8nm,0.4s,baz=116,slow=7.7,SNR=21						
MKAR				pP	**pP**	**07 40 38.5**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=126,slow=8.3,SNR=2.9						
MKAR				PcP	**PcP**	**07 41 16.5**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=127,slow=4.0,SNR=3.9						
MKAR				ScP	**ScP**	**07 45 08.1**	**-2.3**
	comp=Z,1.1nm,0.7s,baz=117,slow=4.0,SNR=4.8						
MKAR				LR	LR	08 05 35.8	
	comp=Z,43nm,18.3s,baz=132,slow=37						
MKAR	**Makanchi Array**	**56.37**	**325**	P	**P**	**07 40 19.4**	**-1.3**
ZALV	**Zalesovo Beam**	**59.35**	**333**	P	**P**	**07 40 39.5**	**-1.9**
	comp=Z,1.5nm,0.3s,baz=110,slow=5.9,SNR=3.6						
KURK	**Kurchatov**	**60.54**	**327**	P	**P**	**07 40 48.4**	**-1.2**
KURK				IAmb	IAmb	07 40 53.6	
	comp=Z,4.3nm,0.8s						
KK31	**Karatay Array**	**62.12**	**317**	P	**P**	**07 41 01.1**	**+0.7**
KK31				IAmb	IAmb	07 41 05.3	
	comp=Z,1.4nm,0.8s						
KKAR	**Karatay Array**	**62.12**	**317**	P	**P**	**07 41 00.6**	**+0.2**
KKAR				IAmb	IAmb	07 41 05.3	
	comp=Z,1.4nm,0.8s						
NRIK	**Noril'sk**	**69.17**	**346**	P	**P**	**07 41 45.3**	**0.0**
	comp=Z,2.7nm,0.5s,baz=111,slow=6.6,SNR=7.6						
ABKAR	**Akbulak array**	**71.00**	**321**	P	**P**	**07 41 55.5**	**-1.4**
ABKAR	**Akbulak array**	**71.00**	**321**	P	**P**	**07 41 55.7**	**-1.1**
ILAR	**Eielson Array**	**84.15**	**25**	P	**P**	**07 43 10.2**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=246,slow=5.0,SNR=9.8						
INK	**Inuvik**	**89.15**	**21**	P	**P**	**07 43 34.4**	**+0.3**
	comp=Z,2.2nm,1.1s,baz=262,slow=6.7,SNR=1.4						
ARCES	**ARCESS Array B**	**89.19**	**340**	P	**P**	**07 43 33.2**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=77,slow=6.4,SNR=8.4						
FINES	**FINESS Array B**	**90.61**	**332**	P	**P**	**07 43 39.3**	**-1.8**
	comp=Z,0.8nm,0.5s,baz=62,slow=4.4,SNR=10						
FINES	**FINESS Array**	**90.61**	**332**	P	**P**	**07 43 39.4**	**-1.6**
NOA	**NORSAR Array B**	**97.55**	**334**	P	**P**	**07 44 11.1**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=66,slow=4.5,SNR=3.5						
YKA	**Yellowknife Ar**	**98.53**	**24**	LR	LR	08 31 00.4	
	comp=Z,15nm,21.3s,baz=0.0,slow=37						
TXAR	**Lajitas Array**	**121.11**	**51**	PKP	**PKiKP**	**07 49 32.9**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=324,slow=2.4,SNR=1.7						
TORD	**Torodi Ar. Bea**	**122.22**	**289**	PKP	**PKPdf**	**07 49 33.8**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=71,slow=1.5,SNR=5.5						

*BJI **01** 07:47:42.5±0.0, 41.90N×142.64E, h58km, mB4.9/24, mb4.6/35, Ms4.0/3, Ms7 3.8/4*
*NIED **01** 07:47:44.7, 42.01N×142.53E, h51km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr=1.07; Mθθ=0.06; Mφφ=1.13; Mrθ=0.35; Mφθ=0.84; Mφr=2.61; Fault plane solution: M0=2.97000×10^15 NP1: φs=357.00000°, δ=79.00000°, λ=-108.00000°. NP2: φs=237.00000°, δ=21.00000°, λ=-32.00000°.*
*JMA **01** 07:47:44.7±0.2, 42.01N×142.53E, h51km±2km, M4.3 Broadband fault plane solution: P waves. NP1: φs=241.00000°, δ=17.00000°, λ=-41.00000°. NP2: φs=10.00000°, δ=79.00000°, λ=-103.00000°. Principal axes: T Plg33.0000°, Azm111.0000°; N Plg12.0000°, Azm13.0000°; P Plg54.0000°, Azm265.0000°;*
JMA Felt III J1.
*MOS **01** 07:47:44.0±1.0, 41.97N×142.55E, h58km, mb4.7/17 Error ellipse: s-maj=7.9km s-min=5.7km az=84.1*
*NEIC **01** 07:47:45.2±2.0, 41.94N±0.04×142.47E±0.05, h52km±6km, mb4.7/32, Error ellipse: s-maj=6.2km s-min=5.5km az=178.0*
*IDC **01** 07:47:46.2±0.6, 42.01N×142.51E, h58km±4km, mb3.9/18, mb1 4.1/25, mb1mx4.0/47, mbtmp4.2/25, MS3.3/9, Ms1 3.3/9, ms1mx3.1/32, Error ellipse: s-maj=13.4km s-min=7.7km az=101.0*
ISC 01 07:47:45.9±0.5, 41.98N±0.04×142.54E±0.03, h56km±4km, n180, σ1s44/207, mb4.6/48, 19C-10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.34**	**28**	⇑P	**Pn**	**07 47 53.7**	**-2.2**
JNBK				*e*S	**Sn**	**07 48 01.0**	**-2.1**
JSHD	**Hidakashinhida**	**0.43**	**353**	⇑P	**Pn**	**07 47 54.9**	**-1.9**
JSHD				*e*S	**Sn**	**07 48 03.0**	**-1.7**
ERM	**Erimo**	**0.47**	**85**	P	**Pn**	**07 47 55.9**	**-1.2**
ERM						07 48 05.6	
ERM	**Erimo**	**0.47**	**85**		**Pn**	**07 47 55.9**	**-1.2**
ERM				Sn	**Sn**	**07 48 05.6**	**+0.4**
JEM	**Erimo**	**0.47**	**85**	⇓P	**Pn**	**07 47 55.9**	**-1.2**
JEM				*e*S	**Sn**	**07 48 04.1**	**-1.1**
JTHR	**Tokachihiroo**	**0.65**	**61**	⇓P	**Pn**	**07 47 57.9**	**-1.3**
JTHR				*e*S	**Sn**	**07 48 07.5**	**-1.5**
JIAM	**Iburiatsuma**	**0.79**	**325**	⇑P	**Pn**	**07 48 00.2**	**-0.8**
JIAM				*e*S	**Sn**	**07 48 12.1**	**0.0**
JBT2	**Biratori 2**	**0.81**	**351**	⇑P	**Pn**	**07 47 59.3**	**-2.0**
JBT2				*e*S	**Sn**	**07 48 11.2**	**-1.4**
JCH	**Churui**	**0.88**	**44**	⇓P	**Pn**	**07 48 00.7**	**-1.5**
JCH				*e*S	**Sn**	**07 48 12.8**	**-1.5**
JKB	**Kayabe**	**1.12**	**266**	⇑P	**Pn**	**07 48 04.1**	**-1.3**
JKB				*e*S	**Sn**	**07 48 18.4**	**-1.5**
JEW	**Eniwo**	**1.18**	**317**	⇑P	**Pn**	**07 48 04.7**	**-1.4**
JEW				*e*S	**Sn**	**07 48 19.1**	**-2.1**
JEW	**Eniwo**	**1.18**	**317**		**Pn**	**07 48 05.0**	**-1.1**
JEW				Sn	**Sn**	**07 48 20.1**	**-1.1**
JFR	**Furan**	**1.19**	**2**	⇑P	**Pn**	**07 48 04.7**	**-1.6**
JNB	**Noboribetsu**	**1.22**	**294**	⇑P	**Pn**	**07 48 04.5**	**-2.1**
JNB				*e*S	**Sn**	**07 48 19.6**	**-2.5**
JOT	**Ohata**	**1.26**	**242**	⇑P	**Pn**	**07 48 06.2**	**-1.0**
JOT				*e*S	**Sn**	**07 48 22.0**	**-1.2**
JOB	**Onbets**	**1.33**	**46**	⇓P	**Pn**	**07 48 07.7**	**-0.5**
JISS	**Ishikarishitsu**	**1.54**	**328**	⇑P	**Pn**	**07 48 09.7**	**-1.3**
JISS				*e*S	**Sn**	**07 48 28.8**	**-1.0**
JAB	**Ashibetsu**	**1.54**	**352**	P	**Pn**	**07 48 10.0**	**-1.1**
JAB				*e*S	**Sn**	**07 48 30.6**	**+0.6**
JAR	**Ashorobuto**	**1.60**	**34**	⇓P	**Pn**	**07 48 10.5**	**-1.4**
JTM	**Tenmabayashi**	**1.62**	**223**	Pn	**Pn**	**07 48 12.7**	**+0.5**
JTM				Sn	**Sn**	**07 48 34.0**	**+2.1**
ASAJ	**Asahikawa**	**2.14**	**1**	P	**Pn**	**07 48 17.9**	**-1.3**
	42nm,0.3s,baz=216,slow=9.2,SNR=87						
ASAJ				S	**Sn**	**07 48 43.4**	**-1.2**
	33nm,0.3s,baz=169,slow=25,SNR=5.7						
JKA	**Kamikawa-asahi**	**2.14**	**1**	Pn	**Pn**	**07 48 18.8**	**-0.4**
NMR	**Nemuro--Hokkai**	**2.73**	**58**	⇓*i*P	**Pn**	**07 48 25.6**	**-1.7**
NMR				*e*S	**Sn**	**07 48 57.3**	**-1.8**
GLVR	**Golovnino**	**2.81**	**50**	⇓*i*P	**Pn**	**07 48 28.1**	**-0.2**
GLVR				*e*S	**Sn**	**07 49 01.0**	**0.0**
GLVR				pmax	pmax		
	comp=N,77nm,0.1s						
GLVR				pmax	pmax		
	comp=E,76nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,534nm,0.1s						
GLVR				smax	smax		
	comp=N,3µm,0.5s						
GLVR				smax	smax		
	comp=E,984nm,0.4s						
GRPR	**Tuman**	**3.11**	**49**	*e*P	**Pn**	**07 48 32.7**	**+0.2**
GRPR				*e*S	**Sn**	**07 49 07.2**	**-1.2**
GRPR				pmax	pmax		
	comp=Z,314nm,0.2s						
GRPR				pmax	pmax		
	comp=N,79nm,0.1s						
GRPR				pmax	pmax		
	comp=E,51nm,0.1s						
GRPR				smax	smax		
	comp=E,2µm,0.4s						
GRPR				smax	smax		
	comp=N,837nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**3.19**	**49**	*e*P	**Pn**	**07 48 33.8**	**+0.3**
YUK				*e*S	**Sn**	**07 49 09.9**	**-0.4**
YUK				pmax	pmax		
	comp=N,186nm,0.4s						
YUK				pmax	pmax		
	comp=Z,430nm,0.4s						
YUK				pmax	pmax		
	comp=E,151nm,0.1s						
YUK				smax	smax		
	comp=N,397nm,0.3s						
YUK				smax	smax		
	comp=E,2µm,0.3s						
YUK				smax	smax		
	comp=E,1µm,0.6s						
YUK				smax	smax		
	comp=N,3µm,1.6s						
JMM	**Marumori**	**4.32**	**199**		**Pn**	**07 48 49.2**	**+0.1**
YSS	**Yuzh-Sakhalins**	**4.98**	**2**	⇑*e*P	**Pn**	**07 48 59.3**	**+1.3**
YSS				*e*S	**Sn**	**07 49 56.0**	**+1.8**
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
YSS				MLR	MLR		
	comp=E,200nm,17.0s						
YSS	**Yuzh-Sakhalins**	**4.98**	**2**	Pn	**Pn**	**07 48 59.1**	**+1.1**
KUR	**Kuril'sk**	**5.06**	**48**	*c* P	**Pn**	**07 49 00.6**	**+1

MA2	**Magadan**	**18.35**	**13**	P		**P**	**07 51 54.8**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=176,slow=15,SNR=2.8							
MA2				LR		LR	07 58 34.1	
	comp=Z,44nm,20.8s,baz=198,slow=36							
MA2	**Magadan**	**18.35**	**13**	*i* P		**P**	**07 51 55.5**	**0.0**
MA2				pmax		pmax		
	comp=Z,30nm,1.2s							
MA2	**Magadan**	**18.35**	**13**	IAmb		IAmb	07 52 03.1	
	comp=Z,72nm,1.4s							
BJI	**Beijing**	**19.96**	**273**	P		**P**	**07 52 11.1**	**-2.3**
BJI				pmax		pmax		
	comp=Z,7.0nm,0.8s							
TIA	**Tai'an**	**20.51**	**262**	P		**P**	**07 52 17.4**	**-1.9**
TIA				pmax		pmax		
	comp=Z,24nm,0.8s							
NJ2	**Nanjing**	**21.29**	**250**	*e*P		**P**	**07 52 26.0**	**-1.7**
NJ2				pmax		pmax		
	comp=Z,17nm,0.5s							
YAK	**Yakutsk**	**21.51**	**343**	LR		LR	08 00 50.5	
	comp=Z,61nm,19.7s,baz=324,slow=37							
YAK	**Yakutsk**	**21.51**	**343**	*i* P		**P**	**07 52 30.2**	**+0.4**
YAK				pmax		pmax		
	comp=Z,7.0nm,0.8s							
SEY	**Seymchan**	**21.78**	**12**	P		**P**	**07 52 30.0**	**-2.7**
	comp=Z,3.3nm,0.5s,baz=187,slow=6.3,SNR=8.7							
SEY	**Seymchan**	**21.78**	**12**	*i* P		**P**	**07 52 32.4**	**-0.3**
HHC	**Hu-ho-hao-te**	**23.20**	**278**	*e*P		**P**	**07 52 48.6**	**+0.7**
HHC				pmax		pmax		
	comp=Z,23nm,0.9s							
HHC				pmax		pmax		
	comp=Z,74nm,5.4s							
WHN	**Wuhan**	**25.32**	**252**	ǁP		**P**	**07 53 08.2**	**+0.9**
SSLB	**Suanglung**	**25.52**	**231**	P		**P**	**07 53 10.2**	**+0.9**
ULN	**Ulaanbaatar**	**25.64**	**295**	*ce*P		**P**	**07 53 10.4**	**+0.1**
ULN				pmax		pmax		
	comp=Z,10.0nm,2.5s							
SONM	**Songino Array**	**26.09**	**295**	P		**P**	**07 53 13.8**	**-0.6**
	comp=Z,2.2nm,0.4s,baz=70,slow=8.6,SNR=15							
SONM				LR		LR	08 04 14.9	
	comp=Z,90nm,19.0s,baz=34,slow=38							
SONM	**Songino Array**	**26.09**	**295**	P		**P**	**07 53 14.0**	**-0.4**
SONM				pmax		pmax		
	comp=Z,2.0nm,0.6s							
SONM	**Songino Array**	**26.09**	**295**	P		**P**	**07 53 13.9**	**-0.4**
XAN	**Xi'an**	**27.51**	**264**	P		**P**	**07 53 27.7**	**+0.6**
XAN				pP		pP	07 53 40.1	-0.6
XAN				pmax		pmax		
	comp=Z,9.0nm,0.8s							
ENH	**Enshi**	**28.96**	**257**	P		**P**	**07 53 38.2**	**-1.8**
ENH				IAmb		IAmb	07 53 38.9	
	comp=Z,13nm,0.6s							
BILL	**Bilibino**	**29.05**	**18ǁ**	*e*P		**P**	**07 53 40.1**	**-0.3**
BILL				*e*			07 54 38.6	
BILL				pmax		pmax		
	comp=Z,4.0nm,1.1s							
BILL				MLR		MLR		
	comp=Z,86nm,17.0s							
H11N2	**WAKE ISLAND Hy**	**30.29**	**130**	T		T	08 25 25.2	
	baz=323,slow=75,SNR=248							
H11N1	**WAKE ISLAND Hy**	**30.30**	**130**	T		T	08 25 26.1	
	baz=323,slow=75,SNR=183							
H11N3	**WAKE ISLAND Hy**	**30.31**	**130**	T		T	08 25 26.5	
	baz=323,slow=75,SNR=162							
LZH	**Lanzhou**	**30.44**	**272**	*e*P		**P**	**07 53 56.8**	**+3.6**
LZH				pP		pP	07 54 07.5	+0.6
LZH				sP		sP	07 54 12.5	-0.8
LZH				pmax		pmax		
	comp=Z,17nm,0.9s							
TIXI	**Tiksi**	**30.51**	**352**	*i* P		**P**	**07 53 53.3**	**0.0**
H11S1	**WAKE ISLAND Hy**	**31.15**	**131**	T		T	08 26 32.8	
	baz=325,slow=76,SNR=286							
H11S3	**WAKE ISLAND Hy**	**31.16**	**131**	T		T	08 26 33.9	
	baz=325,slow=76,SNR=190							
H11S2	**WAKE ISLAND Hy**	**31.17**	**131**	T		T	08 26 30.1	
	baz=325,slow=76,SNR=253							
CD2	**Chengdu**	**32.84**	**263**	*e*P		**P**	**07 54 13.5**	**-0.7**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
DGZ	**Jazzator, Alta**	**38.39**	**301**	*i* P		**P**	**07 55 02.0**	**+0.2**
DGZ				pmax		pmax		
	comp=Z,8.0nm,1.0s							
ZAA0	**Zalesovo Array**	**39.39**	**308**	P		**P**	**07 55 09.2**	**-0.6**
ZALV	**Zalesovo Beam**	**39.39**	**308**	P		**P**	**07 55 08.9**	**-0.8**
	comp=Z,6.0nm,0.7s,baz=89,slow=8.2,SNR=20							
ZALV				PcP		**PcP**	**07 57 17.7**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=95,slow=4.9,SNR=4.3							
ZALV				pPcP			07 57 34.8	
	comp=Z,2.3nm,0.6s,baz=96,slow=1.6,SNR=6.1							
ZALV	**Zalesovo Beam**	**39.39**	**308**	*i* P		**P**	**07 55 09.3**	**-0.5**
ZALV				pmax		pmax		
	comp=Z,6.0nm,0.7s							
ZALV	**Zalesovo Beam**	**39.39**	**308**	P		**P**	**07 55 09.0**	**-0.8**
WMQ	**Urumqi**	**39.59**	**292**	*e*P		**P**	**07 55 12.9**	**+1.1**
WMQ				pmax		pmax		
	comp=Z,38nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,230nm,5.5s							
MK31	**Makanchi Array**	**42.40**	**298**	P		**P**	**07 55 34.7**	**-0.1**
MK31				pmax		pmax		
	comp=Z,10.0nm,1.1s							
MK31	**Makanchi Array**	**42.40**	**298**	P		**P**	**07 55 34.7**	**-0.1**
MKAR	**Makanchi Array**	**42.40**	**298**	P		**P**	**07 55 34.0**	**-0.7**
	comp=Z,5.3nm,0.7s,baz=84,slow=9.8,SNR=22							
MKAR	**Makanchi Array**	**42.40**	**298**	*i* P		**P**	**07 55 34.2**	**-0.6**
MKAR				pmax		pmax		
	comp=Z,5.0nm,0.7s							
MKAR	**Makanchi Array**	**42.40**	**298**	P		**P**	**07 55 34.2**	**-0.6**
KDAK	**Kodiak Island**	**42.93**	**45**	P		**P**	**07 55 38.3**	**-0.5**
KDAK				pmax		pmax		
	comp=Z,44nm,1.4s							
KDAK	**Kodiak Island**	**42.93**	**45**	P		**P**	**07 55 38.3**	**-0.5**
KTH	**Kantishna Hill**	**43.22**	**37**	P		**P**	**07 55 41.0**	**-0.2**
KTH				IAmb		IAmb	07 55 56.1	
	comp=Z,17nm,1.2s							
TRF	**Thorofare Moun**	**43.51**	**37**	P		**P**	**07 55 42.2**	**-1.4**
CHTO	**Chiang Mai**	**43.52**	**252**	P		**P**	**07 55 44.7**	**+0.6**
CHTO				pmax		pmax		
	comp=Z,8.0nm,0.7s							
CHTO	**Chiang Mai**	**43.52**	**252**	P		**P**	**07 55 44.7**	**+0.6**
CHTO				IAmb		IAmb	07 55 50.1	
	comp=Z,7.6nm,0.7s							
KURK	**Kurchatov**	**43.71**	**304**	*ce*P		**P**	**07 55 45.0**	**-0.3**
KURK				pmax		pmax		
	comp=Z,9.0nm,0.7s							
KURK	**Kurchatov**	**43.71**	**304**	P		**P**	**07 55 44.9**	**-0.3**
KURK				IAmb		IAmb	07 55 47.6	
	comp=Z,11nm,0.9s							
CMAR	**Chiang Mai Arr**	**43.76**	**251**	P		**P**	**07 55 47.2**	**+1.3**
	comp=Z,1.4nm,0.4s,baz=41,slow=8.9,SNR=7.2							
CMAR				LR		LR	08 14 25.7	
	comp=Z,31nm,19.4s,baz=63,slow=36							
GHO	**Glory Hole Cre**	**44.28**	**39**	P		**P**	**07 55 49.4**	**-0.4**
GHO				IAmb		IAmb	07 56 16.2	
	comp=Z,16nm,1.1s							
IL31		**44.90**	**35**	P		**P**	**07 55 53.9**	**-0.6**
ILAR	**Eielson Array**	**44.90**	**35**	P		**P**	**07 55 53.9**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=255,slow=5.2,SNR=34							
VRDI	**Verde Repeater**	**46.96**	**40**	P		**P**	**07 56 10.9**	**-0.1**
VRDI				IAmb		IAmb	07 56 28.5	
	comp=Z,17nm,1.5s							
BCAR	**Beaver Creek A**	**47.37**	**37**	P		**P**	**07 56 14.1**	**0.0**
GUN	**Gumba**	**47.70**	**272**	*e*P		**P**	**07 56 17.2**	**-0.2**
	comp=Z,50nm,0.4s							
BRVK	**Borovoye**	**48.05**	**309**	*ce*P		**P**	**07 56 19.3**	**-0.1**
BRVK				pmax		pmax		
	comp=Z,5.0nm,1.3s							
BRVK	**Borovoye**	**48.05**	**309**	P		**P**	**07 56 19.3**	**-0.1**
BRVK				IAmb		IAmb	07 56 19.6	
	comp=Z,4.6nm,0.5s							
BOOM	**Boomskoye usch**	**48.12**	**294**	P		**P**	**07 56 19.9**	**-0.4**
BOOM				pmax		pmax		
	comp=Z,11nm,0.7s							
BOOM	**Boomskoye usch**	**48.12**	**294**	P		**P**	**07 56 19.9**	**-0.4**
TKM2	**Tokmak 2**	**48.19**	**295**	P		**P**	**07 56 21.1**	**+0.2**
	SNR=21							
KKN	**Kakani**	**48.21**	**272**	*e*P		**P**	**07 56 21.5**	**+0.3**
PKI	**Pulchoki**	**48.23**	**272**	*e*P		**P**	**07 56 21.3**	**-0.2**
	comp=Z,13nm,0.5s							
PKIN	**Phulchoki**	**48.24**	**272**	*e*P		**P**	**07 56 21.3**	**-0.2**
DMN	**Daman**	**48.44**	**272**	*e*P		**P**	**07 56 22.9**	**-0.1**
	comp=Z,16nm,0.5s							
GKN	**Gorkha**	**48.58**	**273**	*e*P		**P**	**07 56 23.9**	**-0.1**
	comp=Z,15nm,0.4s							
KBK	**Karagaybulak**	**48.73**	**295**	P		**P**	**07 56 24.8**	**-0.2**
	SNR=8.3							
AAK	**Ala-Archa**	**49.04**	**295**	P		**P**	**07 56 26.6**	**-0.8**
	SNR=5.5							
AAK	**Ala-Archa**	**49.04**	**295**	*ce*P		**P**	**07 56 27.4**	**0.0**
AAK				pmax		pmax		
	comp=Z,24nm,2.5s							
DANN	**Dangsing**	**49.05**	**274**	*e*P		**P**	**07 56 28.0**	**+0.3**
	comp=Z,67nm,0.5s							
KSH	**Kashi**	**49.33**	**291**	*e*P		**P**	**07 56 30.5**	**+1.0**
KSH				pmax		pmax		
	comp=Z,310nm,5.1s							
KOLN	**Koldanda**	**49.48**	**273**	*e*P		**P**	**07 56 30.9**	**0.0**
	comp=Z,16nm,0.5s							
EKS2	**Erkin-Say**	**49.52**	**295**	P		**P**	**07 56 30.5**	**-0.5**
	SNR=8.1							
PYUN	**Piuthan**	**49.75**	**274**	*e*P		**P**	**07 56 33.1**	**+0.1**
AML	**Almayashu**	**49.79**	**295**	P		**P**	**07 56 33.5**	**+0.1**
	SNR=5.5							
KK31	**Karatay Array**	**51.52**	**297**	P		**P**	**07 56 45.3**	**-0.6**
KK31				pmax		pmax		
	comp=Z,6.0nm,0.7s							
KK31	**Karatay Array**	**51.52**	**297**	P		**P**	**07 56 45.3**	**-0.6**
KK31				IAmb		IAmb	07 56 45.9	
	comp=Z,6.1nm,0.7s							
KKAR	**Karatay Array**	**51.52**	**297**	P		**P**	**07 56 45.0**	**-0.9**
KKAR				pmax		pmax		
	comp=Z,6.0nm,0.7s							
KKAR	**Karatay Array**	**51.52**	**297**	P		**P**	**07 56 45.0**	**-0.9**
KKAR				IAmb		IAmb	07 56 45.8	
	comp=Z,6.1nm,0.7s							
KKAR	**Karatay Array**	**51.52**	**297**	P		**P**	**07 56 44.9**	**-1.0**
ARU	**Arti**	**53.30**	**316**	*d i* P		**P**	**07 56 58.9**	**0.0**
ARU							07 58 57.1	
ARU				S		**S**	**08 04 28.7**	**+2.6**
ARU				SS		**SS**	**08 08 05.3**	**-0.5**
ARU				pmax		pmax		
	comp=Z,11nm,1.7s							
ARU	**Arti**	**53.30**	**316**	P		**P**	**07 57 00.1**	**+1.2**
GAR	**Garm**	**53.48**	**293**	P		**P**	**07 57 00.2**	**-0.4**
CHGR	**Chuyangaron**	**54.44**	**293**	P		**P**	**07 57 06.9**	**-0.7**
PSI	**Prapat**	**55.14**	**237**	P		**P**	**07 57 13.8**	**+1.0**
	comp=Z,2.5nm,0.5s,baz=352,slow=2.0,SNR=3.0							
RPSI	**Rantau Prapat**	**55.22**	**237**	P		**P**	**07 57 13.8**	**+0.5**
AB31	**Akbulak array**	**55.50**	**308**	*i* P		**P**	**07 57 14.4**	**-0.5**
ABKAR	**Akbulak array**	**55.50**	**308**	P		**P**	**07 57 14.7**	**-0.2**
MTN	**Manton Dam**	**55.55**	**194**	P		**P**	**07 57 15.9**	**+0.4**
MTN				IAmb		IAmb	07 57 38.4	
	comp=Z,6.0nm,0.9s							
AKTO	**Aktyubinsk**	**56.09**	**310**	P		**P**	**07 57 18.5**	**-0.7**
KNRA	**Kununurra**	**58.76**	**196**	P		**P**	**07 57 38.5**	**+0.4**
ARCES	**ARCESS Array B**	**59.69**	**339**	P		**P**	**07 57 45.2**	**+1.1**
	comp=Z,4.8nm,1.1s,baz=34,slow=8.7,SNR=1.2							
WB0	**Warramunga Arr**	**61.89**	**189**	P		**P**	**07 57 59.2**	**-0.4**
WB0				IAmb		IAmb	07 58 16.7	
	comp=Z,6.2nm,0.8s							
WRA	**Warramunga Arr**	**62.07**	**189**	P		**P**	**07 58 00.2**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=6.6,slow=7.2,SNR=27							
WRA				pP		**pP**	**07 58 16.8**	**+1.2**
	comp=Z,3.1nm,0.7s,baz=5.5,slow=7.1,SNR=9.6							
WRA	**Warramunga Arr**	**62.07**	**189**	P		**P**	**07 57 59.8**	**-0.9**
GEYT	**Alibeck**	**62.27**	**297**	P		**P**	**07 58 01.1**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=25,slow=18,SNR=4.9							
GEYT				LR		LR	08 26 56.0	
	comp=Z,50nm,19.1s,baz=10.0,slow=38							
FINES	**FINESS Array B**	**64.86**	**332**	P		**P**	**07 58 17.3**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=32,slow=7.5,SNR=9.4							
FINES	**FINESS Array B**	**64.86**	**332**	*ce*P		**P**	**07 58 17.6**	**-1.1**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.5s							
FINES	**FINESS Array B**	**64.86**	**332**	P		**P**	**07 58 17.9**	**-0.8**
SUMG	**Summit**	**65.75**	**0**	P		**P**	**07 58 25.9**	**+1.2**
SUMG	**Summit**	**65.75**	**0**	P		**P**	**07 58 25.9**	**+1.2**
ASAR	**Alice Springs**	**65.80**	**189**	P		**P**	**07 58 25.6**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=3.7,slow=7.6,SNR=14							
ASAR				pP		**pP**	**07 58 42.1**	**+2.0**
	comp=Z,1.9nm,0.8s,baz=9.7,slow=6.6,SNR=9.1							
HUMO	**Hull Mountain**	**66.03**	**54**	P		**P**	**07 58 27.7**	**+1.0**
HUMO				IAmb		IAmb	07 58 33.0	
	comp=Z,11nm,1.5s							
K05A	**Summer Lake**	**67.19**	**53**	P		**P**	**07 58 35.4**	**+1.1**
K05A				IAmb		IAmb	07 58 51.2	
	comp=Z,11nm,1.4s							
KIV	**Kislovodsk**	**68.36**	**310**	*e*P		**P**	**07 58 40.6**	**-0.8**
KIV				pmax		pmax		
	comp=Z,29nm,1.0s							
KIV				MLR		MLR		
	comp=Z,92nm,17.0s							
KBZ	**Khabaz**	**68.38**	**310**	*i* P		**P**	**07 58 40.7**	**-0.7**
KBZ				pmax		pmax		
	comp=Z,3.0nm,1.0s							
BEKR	**Beckworth**	**69.24**	**55**	P		**P**	**07 58 47.7**	**+0.6**
NC405	**NORSAR Array S**	**69.77**	**337**	P		**P**	**07 58 48.9**	**-0.8**
NB201	**NORSAR Array S**	**69.94**	**337**	P		**P**	**07 58 50.0**	**-0.9**
NB2	**NORSAR Subarra**	**69.97**	**337**	P		**P**	**07 58 50.4**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=34,slow=6.2							
NOA	**NORSAR Array B**	**69.97**	**337**	P		**P**	**07 58 50.0**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=38,slow=6.2,SNR=4.2							
NOA				pP		**pP**	**07 59 06.4**	**0.0**
	comp=Z,2.1nm,0.8s,baz=37,slow=6.2,SNR=4.4							
AKASG	**Malin Array Be**	**70.94**	**322**	P		**P**	**07 58 55.8**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=43,slow=6.2,SNR=5.1							
AKASG	**Malin Array Be**	**70.94**	**322**	P		**P**	**07 58 56.2**	**-0.8**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.8s							
AKASG	**Malin Array Be**	**70.94**	**322**	P		**P**	**07 58 56.1**	**-0.8**
NVAR	**Mina Array Bea**	**71.38**	**55**	P		**P**	**07 59 01.0**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=295,slow=6.5,SNR=6.8							
NVAR	**Mina Array Bea**	**71.38**	**55**	P		**P**	**07 59 00.6**	**+0.3**
PDAR	**Pinedale Array**	**73.62**	**47**	P		**P**	**07 59 13.6**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=315,slow=0.7,SNR=9.8							
MPU	**Maple Canyon**	**74.30**	**50**	P		**P**	**07 59 17.6**	**+0.1**
GERES	**GERESS Array B**	**78.97**	**328**	P		**P**	**07 59 42.7**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=46,slow=7.1,SNR=2.1							
GERES				pP		**pP**	**07 59 59.2**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=35,slow=7.7,SNR=3.7							
GERES	**GERESS Array B**	**78.97**	**328**	P		**P**	**07 59 42.3**	**-1.2**
MEM	**Membach**	**80.28**	**334**	P		**P**	**07 59 47.8**	**-2.7**
BGES	**Gesves**	**80.78**	**334**	P		**P**	**07 59 50.2**	**-2.9**
TXAR	**Lajitas Array**	**86.44**	**53**	P		**P**	**08 00 23.4**	**+0.8**
	comp=Z,1.3nm,0.6s,baz=296,slow=3.7,SNR=21							
TXAR				pP		**pP**	**08 00 38.3**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=292,slow=3.5,SNR=5.5							

*IDC **01** 08:48:04.5±2.3,5°27N×127°53E,h**0**km,**mb3.8**/4,*
mb1 3.9**/4,**mb1mx3.6**/39,**mbtmp3.8**/4,**Error ellipse:
s-maj=162.9km s-min=28.0km az=65.0,Philippine
Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.93**	**165**	P		P	07 53 39.1	+0.4
	1.3nm,0.5s,baz=345,slow=10,SNR=11							
ASAR	**Alice Springs**	**29.43**	**168**	P		P	07 54 09.8	-0.2
	0.2nm,0.6s,baz=354,slow=8.5,SNR=4.9							
STKA	**Stephens Creek**	**39.30**	**161**	P		P	07 55 34.8	-0.5
	5.6nm,1.2s,baz=0.0,slow=8.1,SNR=3.9							
MKAR	**Makanchi Array**	**56.77**	**324**	P		P	07 57 50.3	-0.1
	0.4nm,0.4s,baz=127,slow=7.9,SNR=2.5							

*SSNC **01** 07:53:36.0±0.9, 19°76N×74°37W,h13km±6km, MD3.3,*
ML3.1,MW3.3
*OSPL **01** 07:53:38.1±2.5, 19°55N×74°84W,h63km±50km, ML3.0*
ISC 01 07:53:37.0±1.0,20°04N±0°10×74°53W±0°03,h29km±10km,
n8,σ1§54/16,Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MASC	**Masc**	**0.31**	**63**	*e*P		**Pb**	**07 53 43.9**	**-0.7**
MASC				*e*S		**Sb**	**07 53 50.0**	**+0.4**
GTBY	**Guantanamo Bay**	**0.56**	**259**	*i* P		**Pb**	**07 53 48.1**	**-0.3**
GTBY				*e*S		**Sb**	**07 53 58.0**	**+1.8**
GTBY				IAML			07 54 04.3	
	comp=Z,795nm,0.7s							
GTMO	**Guantanamo**	**0.58**	**275**	*e*P		**Pb**	**07 53 47.6**	**-1.1**
GTMO				*e*S		**Sb**	**07 53 56.7**	**0.0**
GTMO				IAML			07 53 57.9	
	comp=N,3μm,0.4s							
GTMO				IAML			07 53 58.0	
	comp=E,3μm,0.3s							
RCC	**Rio Carpintero**	**1.10**	**268**	*e*P		**Pn**	**07 53 56.0**	**-0.5**
RCC				*e*S		**Sn**	**07 54 11.3**	**+0.5**
RCC				IAML			07 54 16.4	
	comp=E,277nm,0.3s							
RCC				IAML			07 54 17.6	
	comp=N,296nm,0.4s							

LMGC	**Las Mercedes**	**2.33**	**271**	*e*P		**Pn**	**07 54 14.6**	**+1.2**
LMGC				*e*S		**Sn**	**07 54 42.5**	**+1.4**
LMGC				IAML			07 54 51.7	
	comp=E,85nm,0.3s							
LMGC				IAML			07 54 52.0	
	comp=N,75nm,0.2s							
LGNH	**Logne**	**2.36**	**130**	*i* P		**Pn**	**07 54 12.7**	**-1.2**
LGNH				*e*S		**Sn**	**07 54 39.7**	**-2.2**
SDDR	**Presa de Saban**	**3.23**	**108**	*i* P		**Pn**	**07 54 29.2**	**+3.3**
SDDR				*e*S		**Sn**	**07 55 03.0**	**-0.3**
SDDR				IAML			07 55 28.0	
	comp=Z,30nm,0.8s							
CCCC	**Cccc**	**3.25**	**291**	*e*P		**Pn**	**07 54 24.8**	**-1.3**
CCCC				*e*S		**Sn**	**07 55 03.3**	**-0.5**

*IDC **01** 08:30:04.7±1.1,41°56N×137°82E,h276km±12km,mb3.2/8,*
mb1 3.4/15,mb1mx3.2/43,mbtmp3.9/15,Error ellipse:
s-maj=21.9km s-min=11.6km az=73.0
*NEIC **01** 08:30:05.6±1.0,41°59N±0°07×137°77E±0°03,*
h277km±8km,mb4.3/8,Error ellipse: s-maj=10.8km
s-min=3.0km az=190.0
*JMA **01** 08:30:05.5±0.3,41°57N×137°83E,h279km±3km,M3.6*
ISC 01 08:30:05.4±0.6,41°47N±0°05×138°01E±0°06,h300km,n64,
σ1§94/68,mb3.7/13,Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**1.25**	**60**	P		**Pn**	**08 30 45.2**	**-1.8**
JOMM	**Oshimamatsumae**	**1.50**	**87**	P		**Pn**	**08 30 47.5**	**-1.0**
JHST	**Hiyamasetana**	**1.69**	**55**	P		**Pn**	**08 30 48.5**	**-1.2**
JIW	**Iwasaki**	**1.74**	**119**	P		**Pn**	**08 30 49.7**	**-0.6**
JSR	**Shiriuchi**	**1.81**	**87**	P		**Pn**	**08 30 50.3**	**-0.4**
JSI2	**Shiura 2**	**1.85**	**102**	P		**Pn**	**08 30 50.6**	**-0.4**
JSI2				*e*S		**S**	**08 31 26.2**	**-1.2**
JOT	**Ohata**	**2.28**	**91**	P		**Pn**	**08 30 54.2**	**-0.3**
JKB	**Kayabe**	**2.30**	**78**	P		**Pn**	**08 30 54.0**	**-0.6**
JTM	**Tenmabayashi**	**2.41**	**105**	Pn		**Pn**	**08 30 55.0**	**-0.5**
JSK	**Shakotan**	**2.62**	**43**	P		**Pn**	**08 30 56.4**	**-1.0**
JANG	**Nango**	**2.87**	**111**	P		**Pn**	**08 30 59.0**	**-0.9**
JEW	**Eniwo**	**2.90**	**61**	Pn		**Pn**	**08 31 00.2**	**+0.1**
JYK	**Kaneyama**	**3.12**	**144**	P		**Pn**	**08 31 02.1**	**-0.3**
JAW	**Awa shima**	**3.15**	**162**	P		**Pn**	**08 31 02.5**	**-0.3**
JOM	**Ohasama**	**3.20**	**127**	P		**Pn**	**08 31 02.9**	**-0.3**
JSD	**Sado**	**3.43**	**177**	P		**Pn**	**08 31 05.3**	**-0.3**
JSD	**Sado**	**3.43**	**177**			**Pn**	**08 31 05.4**	**-0.3**
JMK	**Ichinoseki**	**3.51**	**135**	P		**Pn**	**08 31 05.7**	**-0.7**
JHR	**Hokuryu**	**3.56**	**49**	P		**Pn**	**08 31 06.8**	**0.0**
JNBK	**Urakawa-nobuka**	**3.63**	**76**	P		**Pn**	**08 31 07.3**	**-0.3**
JFR	**Furan**	**3.80**	**62**	P		**Pn**	**08 31 09.1**	**-0.3**
JFR				*e*S		**S**	**08 31 58.0**	**-2.5**
ERM	**Erimo**	**3.89**	**80**			**Pn**	**08 31 10.7**	**+0.4**
JSZ	**Suzu**	**4.05**	**187**	P		**Pn**	**08 31 12.3**	**+0.1**
JCH	**Churui**	**4.14**	**72**	P		**Pn**	**08 31 12.7**	**-0.5**
JCH				*e*S		**S**	**08 32 03.7**	**-3.8**
JMM	**Marumori**	**4.19**	**148**			**Pn**	**08 31 13.0**	**-0.8**
JKK2	**Kamakawa 2**	**4.24**	**54**	P		**Pn**	**08 31 13.9**	**-0.3**
JKK2				*e*S		**S**	**08 32 06.6**	**-2.7**
ASAJ	**Asahikawa**	**4.29**	**50**	P		**Pn**	**08 31 14.2**	**-0.6**
	18nm,0.3s,baz=246,slow=10,SNR=39							
ASAJ				S		**S**	**08 32 06.8**	**-3.5**
	baz=162,slow=20,SNR=1.2							
JKA	**Kamikawa-asahi**	**4.29**	**50**			**Pn**	**08 31 14.5**	**-0.3**
JWK2	**Keihoku**	**4.78**	**35**	P		**Pn**	**08 31 20.5**	**+0.3**
MAJO	**Matsushiro**	**4.92**	**178**	Pn		**Pn**	**08 31 22.9**	**+0.8**
MJAR	**Matsushiro Arr**	**4.92**	**178**	P		**Pn**	**08 31 22.1**	**-0.1**
	0.4nm,0.3s,baz=355,slow=11,SNR=19							
MJAR	**Matsushiro Arr**	**4.92**	**178**			**Pn**	**08 31 22.7**	**+0.6**
JTKR	**Abashiri--Toko**	**5.01**	**58**	P		**Pn**	**08 31 22.8**	**-0.2**
JTKR				*e*S		**S**	**08 32 22.1**	**-3.2**
USA0B	**Ussuriysk Arra**	**5.20**	**304**			**Pn**	**08 31 21.7**	**-3.5**
USRK	**Ussuriysk Ar.**	**5.20**	**304**	P		**Pn**	**08 31 21.6**	**-3.6**
	baz=112,slow=11,SNR=47							
USRK	**Ussuriysk Ar.**	**5.20**	**304**			**Pn**	**08 31 21.8**	**-3.4**
JGF	**Kuroka**	**5.88**	**185**	P

comp=N,14nm,0.4s

*IDC **01** 08:55:11.5±0.8,6°.55S×131°.92E,h0km,mb4.0/7, mb1 4.3/12,mb1mx4.1/36,mbtmp4.3/12,ML4.5/4,MS3.2/4, Ms1 3.2/4,ms1mx2.8/30,Error ellipse: s-maj=26.7km s-min=17.0km az=62.0*

*DJA **01** 08:55:14.3±0.7,7°.5±2°.×13°.2E±°,h30km±9km,M4.8/21, mb4.8/21,mB5.3/14,MLv5.0/12,Mw(mB)4.8/14*

*NEIC **01** 08:55:15.5±2.8,6°.61S±0°.06×132°.07E±0°.09,h58km±10km, mb4.3/11,Error ellipse: s-maj=13.1km s-min=7.9km az=104.0*

ISC 01 08:55:14.9±0.5,6°.54S±0°.04×132°.07E±0°.05,h35km,n71, σ2s00/71,mb4.0/9,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.63**	**208**	P	**Pn**	**08 55 40.8**	**-0.3**
SAUI				S	**Sn**	**08 56 07.0**	**+6.2**
SAUI	**Saumlaki**	**1.63**	**208**		**Pn**	**08 55 44.1**	**+3.0**
BNDI	**Bandanaira**	**2.94**	**313**	P	**Pn**	**08 56 00.6**	**+1.4**
BNDI				S	**Sn**	**08 56 35.3**	**+1.9**
FAKI	**Fak Fak**	**3.60**	**3**	P	**Pn**	**08 56 09.7**	**+1.4**
FAKI				S	**Sn**	**08 56 48.7**	**-0.9**
FAKI	**Fak Fak**	**3.60**	**3**		**Pn**	**08 56 10.1**	**+1.9**
MSAI	**Masohi**	**4.46**	**315**	P	**Pn**	**08 56 21.6**	**+1.6**
AAI	**Ambon**	**4.79**	**306**	P	**Pn**	**08 56 26.2**	**+1.6**
SIJI	**Sorong**	**5.69**	**352**	Pn	**Pn**	**08 56 37.8**	**+0.8**
	16nm,0.3s,baz=212,slow=13,SNR=34						
SIJI				Sn	**Sn**	**08 57 37.7**	**-3.5**
	33nm,0.3s,baz=229,slow=19,SNR=24						
NLAI	**Namlea**	**5.94**	**303**	P	**Pn**	**08 56 41.6**	**+1.2**
	0.6nm3µm125nm,0.7s						
MTN	**Manton Dam**	**6.33**	**188**	Pn	**Pn**	**08 56 45.9**	**+0.1**
BAKI	**Biak**	**6.66**	**37**	P	**Pn**	**08 56 50.7**	**+0.3**
	1.3nm4µm248nm,0.5s						
WAMI	**Wamena**	**7.12**	**69**	P	**Pn**	**08 56 58.1**	**+1.5**
	1.8nm122nm,0.8s						
SANI	**Sanana**	**7.53**	**306**	P	**Pn**	**08 57 04.9**	**+2.6**
	0.6nm2µm125nm,0.5s						
SMPI	**Sarmi**	**8.01**	**56**	P	**Pn**	**08 57 08.7**	**-0.2**
	30nm,0.5s						
SOEI	**Soe**	**8.36**	**247**	P	**Pn**	**08 57 14.6**	**+0.8**
	1µm79nm,0.7s						
SOEI	**Soe**	**8.36**	**247**	Pn	**Pn**	**08 57 14.4**	**+0.6**
GENI	**Genyem**	**8.97**	**64**	P	**Pn**	**08 57 22.0**	**-0.1**
	72nm,0.6s						
BATI	**Baumata**	**9.08**	**246**	Pn	**Pn**	**08 57 23.2**	**-0.4**
	12nm,0.3s,baz=90,slow=3.0,SNR=6.2						
BATI				Sn	**Sn**	**08 59 00.2**	**-4.5**
	16nm,0.3s,baz=45,slow=20,SNR=2.3						
BATI	**Baumata**	**9.08**	**246**	P	**Pn**	**08 57 23.7**	**+0.1**
	630nm48nm,0.8s						
JAY	**Jayapura**	**9.49**	**65**	Pn	**Pn**	**08 57 32.1**	**+2.9**
	2.6nm,0.3s,baz=226,slow=12,SNR=8.2						
JAY				Sn	**Sn**	**08 59 16.3**	**+1.6**
	1.6nm,0.3s,baz=128,slow=19,SNR=2.2						
KNRA	**Kununurra**	**9.64**	**199**	Pn	**Pn**	**08 57 29.2**	**-2.0**
GTOI	**Gorontalo**	**11.51**	**308**	P	**Pn**	**08 58 01.6**	**+4.7**
	384nm27nm,0.8s						
KAPI	**Kappang**	**12.35**	**276**	LR	LR	09 03 14.8	
	comp=Z,124nm,20.7s,baz=96,slow=40						
TTSI	**Tana Toraja**	**12.69**	**285**	P	P	08 58 29.4	+5.6
WBSI	**Waikabubak, Su**	**12.93**	**255**	P	**Pn**	**08 58 16.4**	**+0.1**
	43nm,0.7s						
FITZ	**Fitzroy Crossi**	**13.09**	**208**	Pn	Pn	08 58 13.5	-4.9
	3.8nm,0.3s,baz=34,slow=11,SNR=143						
FITZ				Sn	Sn	09 00 28.5	-14
	4.9nm,0.3s,baz=207,slow=22,SNR=7.4						
FITZ	**Fitzroy Crossi**	**13.09**	**208**	Pn	**Pn**	**08 58 15.8**	**-2.7**
WB0	**Warramunga Arr**	**13.34**	**170**	Pn	**Pn**	**08 58 19.4**	**-2.5**
WRAB	**Tennant Creek**	**13.50**	**171**		**Pn**	**08 58 21.4**	**-2.7**
WRA	**Warramunga Arr**	**13.51**	**171**	Pn	Pn	08 58 19.1	-5.1
	3.0nm,0.3s,baz=357,slow=13,SNR=51						
WRA				Sn	Sn	09 00 40.5	-13
	10.0nm,0.3s,baz=344,slow=21,SNR=12						
WRA				Lg	Lg	09 02 16.4	
	baz=349,slow=30,SNR=1.7						
WR0	**Warramunga Arr**	**13.55**	**170**	Pn	**Pn**	**08 58 21.8**	**-3.0**
MPSI	**Mapaga**	**13.94**	**299**	P	**Pn**	**08 58 30.3**	**+0.2**
	2µm8.4nm,0.4s						
PMG	**Port Moresby**	**15.21**	**102**	Pn	**P**	**08 58 50.1**	**-1.7**
	2.9nm,0.3s,baz=339,slow=7.6,SNR=5.2						
PMG				LR	LR	09 05 29.7	
	comp=Z,113nm,18.2s,baz=6.0,slow=40						
PMG	**Port Moresby**	**15.21**	**102**		**Pn**	**08 58 46.9**	**-0.3**
PMG				IAmb	IAmb	08 59 10.4	
	comp=Z,27nm,1.1s						
AS31	**Alice Springs**	**17.12**	**174**	P	**Pn**	**08 59 09.9**	**-1.7**
ASAR	**Alice Springs**	**17.12**	**174**	P	**Pn**	**08 59 07.5**	**-4.1**
	comp=Z,1.6nm,0.3s,baz=358,slow=7.9,SNR=42						
ASAR				S	Sn	09 02 04.9	-16
	comp=Z,2.3nm,0.3s,baz=356,slow=26,SNR=8.4						
ASAR	**Alice Springs**	**17.12**	**174**	P	**Pn**	**08 59 09.8**	**-1.9**
BBKI	**Banjar Baru**	**17.43**	**279**	P	**P**	**08 59 18.3**	**+1.8**
	comp=Z,3µmcomp=Z,27nm,1.0s						
MYLDM	**Lahad Datu**	**17.86**	**310**	P	**Pn**	**08 59 20.7**	**-0.1**
MYLDM				IAmb	IAmb	08 59 38.7	
	comp=Z,44nm,1.1s						
PSA00	**Pilbara Seismi**	**19.06**	**217**	P	**P**	**08 59 32.1**	**-2.3**
PSA00				IAmb	IAmb	08 59 35.3	
	comp=Z,12nm,0.6s						
CTA	**Charters Tower**	**19.26**	**136**	P	**Pn**	**08 59 38.8**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=321,slow=14,SNR=13						
CTAO	**Charters Tower**	**19.26**	**136**	P	**Pn**	**08 59 36.9**	**-0.8**
CTAO				IAmb	IAmb	08 59 40.7	
	comp=Z,9.3nm,0.8s						
KRVT	**Keravat (AS076**	**19.99**	**85**	LR	LR	09 07 49.1	
	comp=Z,85nm,19.7s,baz=301,slow=38						
SBUM	**Sibu**	**21.74**	**294**	P	**P**	**09 00 01.6**	**-1.9**
SBUM				IAmb	IAmb	09 00 05.0	
	comp=Z,6.9nm,1.0s						
GUMO	**Guam**	**23.69**	**32**	LR	LR	09 10 25.0	
	comp=Z,28nm,20.5s,baz=187,slow=38						
FORT	**Forrest**	**24.41**	**188**	P	**P**	**09 00 28.9**	**-1.3**
BBOO	**Buckleboo**	**26.40**	**172**	P	**P**	**09 00 46.2**	**-2.0**
STKA	**Stephens Creek**	**26.73**	**162**	P	**P**	**09 00 52.3**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=345,slow=9.4,SNR=8.5						
STKA	**Stephens Creek**	**26.73**	**162**	P	**P**	**09 00 48.8**	**-2.5**
ARMA	**Armidale**	**30.03**	**145**	P	**P**	**09 01 17.4**	**-3.4**
ARMA				IAmb	IAmb	09 01 25.2	
	comp=Z,15nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.05**	**308**	P	**P**	**09 02 55.5**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=136,slow=7.2,SNR=10.0						
CMAR	**Chiang Mai Arr**	**41.05**	**308**	P	**P**	**09 02 54.0**	**-1.4**
MJAR	**Matsushiro Arr**	**43.24**	**7**	P	**P**	**09 03 14.5**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=194,slow=8.5,SNR=4.1						
ODAN	**Odare**	**54.53**	**310**	*eP*	**P**	**09 04 40.8**	**+0.8**
TAPN	**Taplejung**	**54.54**	**310**	*eP*	**P**	**09 04 40.8**	**+0.6**
RAMN	**Ramite**	**55.18**	**309**	*eP*	**P**	**09 04 45.5**	**+0.7**
	comp=Z,18nm,0.4s						
GUN	**Gumba**	**56.22**	**310**	*eP*	**P**	**09 04 52.8**	**+0.5**
	comp=Z,17nm,0.4s						
PKI	**Pulchoki**	**56.41**	**309**	*eP*	**P**	**09 04 53.8**	**+0.1**
GKN	**Gorkha**	**57.22**	**309**	*eP*	**P**	**09 04 59.7**	**+0.5**
	comp=Z,17nm,0.3s						
KOLN	**Koldanda**	**57.91**	**308**	*eP*	**P**	**09 05 04.8**	**+0.7**
	comp=Z,13nm,0.5s						
DANN	**Dangsing**	**58.06**	**309**	*eP*	**P**	**09 05 05.7**	**+0.4**
	comp=Z,9.4nm,0.5s						
PYUN	**Piuthan**	**58.54**	**308**	*eP*	**P**	**09 05 09.2**	**+0.7**
	comp=Z,27nm,0.6s						
SONM	**Songino Array**	**58.69**	**340**	P	**P**	**09 05 10.8**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=152,slow=6.5,SNR=3.0						
SONM	**Songino Array**	**58.69**	**340**	P	**P**	**09 05 08.5**	**-0.5**
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**09 06 18.6**	**+1.8**
	comp=Z,1.2nm,0.3s,baz=114,slow=7.7,SNR=18						
MKAR	**Makanchi Array**	**68.99**	**326**	P	**P**	**09 06 17.5**	**+0.7**
KSH	**Kashi**	**69.08**	**317**	P	**P**	**09 06 20.1**	**+2.4**
KSH				pmax	pmax		
	comp=Z,150nm,6.1s						
ZALV	**Zalesovo Beam**	**72.10**	**333**	P	**P**	**09 06 36.5**	**+0.9**
	comp=Z,1.0nm,0.6s,baz=117,slow=6.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**72.10**	**333**	P	**P**	**09 06 34.4**	**-1.2**
VNDA	**Vanda**	**72.66**	**174**	P	**P**	**09 06 41.5**	**+2.9**
	comp=Z,0.7nm,0.7s,baz=328,slow=8.2,SNR=2.8						
TORD	**Torodi Ar. Bea**	**130.74**	**282**	PKP	**PKiKP**	**09 14 25.4**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=95,slow=1.5,SNR=1.6						

*IDC **01** 09:51:52.8±1.1,31°.80S×111°.13W,h0km,mb3.7/5, mb1 4.1/5,mb1mx3.8/34,mbtmp3.7/5,MS3.7/2,Ms1 3.7/2, ms1mx3.2/31,Error ellipse: s-maj=46.3km s-min=30.5km az=86.0*

ISC 01 09:51:54.1±1.1,31°.9S±0°.2×111°.2W±0°.3,h10km,n15, σ0s65/7,mb3.8/5,Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**4.97**	**19**	LR	LR	09 54 28.7	
	comp=Z,268nm,19.6s,baz=38,slow=32						
H03S2	**Juan Fernandez**	**27.12**	**103**	T	T	10 26 08.1	
	baz=264,slow=76,SNR=19						
H03S3	**Juan Fernandez**	**27.13**	**103**	T	T	10 26 08.5	
	baz=264,slow=76,SNR=9.4						
H03S1	**Juan Fernandez**	**27.13**	**103**	T	T	10 26 11.6	
	baz=264,slow=76,SNR=15						
H03N2	**Juan Fernandez**	**27.15**	**102**	T	T	10 25 55.9	
	baz=268,slow=73,SNR=152						
H03N3	**Juan Fernandez**	**27.15**	**102**	T	T	10 25 57.1	
	baz=268,slow=73,SNR=194						
H03N1	**Juan Fernandez**	**27.16**	**102**	T	T	10 25 57.6	
	baz=268,slow=73,SNR=276						
SIV	**San Ignacio**	**48.03**	**83**	P	**P**	**10 00 33.9**	**0.0**
	0.6nm,0.5s,baz=243,slow=8.3,SNR=4.4						
QSPA	**South Pole Qui**	**58.34**	**180**	P	**P**	**10 01 49.2**	**0.0**
	0.8nm,1.0s,baz=90,slow=4.0,SNR=1.8						
TXAR	**Lajitas Array**	**61.26**	**7**	P	**P**	**10 02 10.3**	**+0.7**
	0.8nm,1.1s,baz=185,slow=9.1,SNR=2.9						
NVAR	**Mina Array Bea**	**70.23**	**354**	P	**P**	**10 03 07.5**	**0.0**
	0.8nm,0.9s,baz=185,slow=8.9,SNR=4.8						
DZM	**Mont Dzumac**	**72.49**	**255**	LR	LR	10 27 51.4	
	comp=Z,187nm,20.7s,baz=44,slow=30						
PDAR	**Pinedale Array**	**74.27**	**1**	P	**P**	**10 03 30.6**	**-0.8**
	1.0nm,1.0s,baz=158,slow=6.2,SNR=4.0						
CMAR	**Chiang Mai Arr**	**149.76**	**251**	PKPbc	**PKiKP**	**10 11 46.3**	**+0.5**
	0.4nm,0.3s,baz=174,slow=2.5,SNR=1.5						
ZALV	**Zalesovo Beam**	**155.11**	**337**	PKPab	**PKPab**	**10 12 11.0**	**-0.5**
	0.5nm,0.3s,baz=20,slow=4.6,SNR=2.2						

*IDC **01** 09:56:43.4±1.7,29°.84S×177°.34W,h0km,mb4.0/3, mb1 4.2/4,mb1mx3.8/32,mbtmp4.0/4,ML3.6/1,Error ellipse: s-maj=37.7km s-min=26.5km az=80.0*

ISC 01 09:56:49.3±1.6,29°.83S±0°.08×177°.5W±0°.2,h35km,n8, σ1s07/11,mb4.0/3,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.67**	**329**	LR	LR	09 56 57.9	
	comp=Z,122nm,19.5s,baz=259,slow=19						
RAO				Pn	**Pn**	**09 57 02.0**	**-0.2**
	2µm,0.3s,baz=96,slow=18,SNR=111						
RAO				Sn	**Sn**	**09 57 11.1**	**-0.4**
	2µm,0.3s,baz=81,slow=19,SNR=14						
URZ	**Urewera**	**9.51**	**206**	Pn	**Pn**	**09 59 03.6**	**-0.1**
	0.5nm,0.3s,baz=2.9,slow=5.8,SNR=1.3						
URZ				Sn	**Sn**	**10 00 48.2**	**-1.1**
	1.1nm,0.3s,baz=49,slow=18,SNR=7.2						
STKA	**Stephens Creek**	**35.01**	**256**	P	**P**	**10 03 40.3**	**+1.8**
	1.2nm,0.5s,baz=102,slow=13,SNR=4.1						
ASAR	**Alice Springs**	**43.55**	**266**	P	**P**	**10 04 49.8**	**-0.2**
	1.3nm,0.5s,baz=100,slow=7.5,SNR=37						
ASAR				PcP	**PcP**	**10 06 39.0**	**+1.7**
	0.3nm,0.6s,baz=109,slow=4.5,SNR=1.7						
WRA	**Warramunga Arr**	**44.49**	**271**	P	**P**	**10 04 56.6**	**-0.9**
	1.6nm,0.6s,baz=110,slow=7.8,SNR=21						
FINES	**FINESS Array B**	**144.75**	**341**	PKP	**PKPab**	**10 16 20.1**	**-0.5**
	2.5nm,0.5s,baz=48,slow=4.1,SNR=28						
NOA	**NORSAR Array B**	**148.25**	**352**	PKPbc	**PKPbc**	**10 16 30.8**	**-0.2**
	0.6nm,0.6s,baz=13,slow=4.4,SNR=2.0						
AKASG	**Malin Array Be**	**151.09**	**324**	PKPbc	**PKPbc**	**10 16 37.4**	**-0.8**
	0.6nm,0.4s,baz=45,slow=3.1,SNR=3.1						

*IDC **01** 10:05:41.3±0.4,31°.93S×111°.12W,h0km,mb4.7/23, mb1 4.8/24,mb1mx4.7/36,mbtmp4.7/24,ML5.0/1,MS5.3/23, Ms1 5.3/23,ms1mx5.3/24,Error ellipse: s-maj=15.5km s-min=14.4km az=159.0*

*MOS **01** 10:05:42.4±1.1,31°.86S×111°.11W,h11km,mb5.4/42, Error ellipse: s-maj=11.1km s-min=7.0km az=87.0*

*BJI **01** 10:05:43.6±0.0,31°.90S×111°.20W,h10km,mB5.6/17, Ms5.8/22,Ms7 5.7/21*

*NEIC **01** 10:05:43.5±1.3,31°.92S±0°.08×111°.1W±0°.1,h10km±1km, mb5.2/276,Ms_20 5.4/641,Mwb5.6/37,Mww5.8, Mwc5.7(GCMT),Error ellipse: s-maj=18.1km s-min=13.7km az=291.0*

*NEIC **01** 10:05:44,31°.95S×111°.02W,h13km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=0.18; Mθθ=-1.74; Mφφ 1.56; Mrθ=-0.52; Mφφ 2.76; Mφr=0.16; Fault plane solution: M0 3.26000×10^17^ NP1:φs=164.46000°, δ80.30000°,λ,178.87000°. NP2:φs=254.65000°,δ88.89000°, λ,9.70000°. Principal axes: T 3.1768, Plg8.0000°, Azm120.0000°; N 0.1677, Plg80.0000°, Azm261.0000°; P -3.3444, Plg6.0000°, Azm29.0000°;*

*NEIC **01** 10:05:47,32°.05S×111°.20W,h18km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=0.21; Mθθ-2.12; Mφφ 2.33; Mrθ=-0.70; Mθφ 3.79; Mφr 0.00; Fault plane solution: M0 4.45000×10^17^ NP1:φs=165.00000°, δ81.00000°,λ-177.00000°. NP2:φs=75.00000°,δ87.00000°, λ-9.00000°. Principal axes: T 4.5244, Plg4.0000°, Azm120.0000°; N -0.1442, Plg81.0000°, Azm237.0000°; P -4.3802, Plg8.0000°, Azm29.0000°;*

*GCMT **01** 10:05:47.5±0.1,32°.03S±0°.01×111°.20W±0°.01,h16km, MW5.7/159,Moment Tensor Solution. s133,c262; s159,c435; Duration: 1s7 Moment tensor: Scale 10^17^ Nm; Mrr=0.32±.04; Mθθ-1.90±.04; Mφφ 2.22±.04; Mrθ-0.98±.11; Mθφ 3.59±.03; Mφr-0.19±.10; Best double couple: M0 4.26000×10^17^ NP1:φs=165.00000°,δ76.00000°, λ-178.00000°. NP2:φs=75.00000°,δ88.00000°, λ-14.00000°. Principal axes: T 4.3920, Plg8.0000°, Azm121.0000°; N -0.2670, Plg76.0000°, Azm246.0000°; P -4.1280, Plg11.0000°, Azm29.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 10:05:53,31°.73S×111°.09W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=0.46; Mθθ-1.70; Mφφ 2.16; Mrθ 1.92; Mθφ 4.78; Mφr-1.28; Fault plane solution: M0 5.67000×10^17^ NP1:φs=351.00000°, δ74.00000°,λ-163.00000°. NP2:φs=257.00000°, δ74.00000°,λ-16.00000°. Principal axes: T 5.3858, Plg0.0000°, Azm304.0000°; N 0.5231, Plg67.0000°, Azm34.0000°; P -5.9089, Plg23.0000°, Azm214.0000°;*

ISC 01 10:05:43.1±0.2,31°.90S±0°.05×111°.22W±0°.06,h10km, n968,σ1s35/735,mb5.2/164,MS5.4/341,15C-13D,Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**5.03**	**20**	Pn	**Pn**	**10 06 57.0**	**-1.7**
	54nm,0.3s,baz=204,slow=7.2,SNR=27						
RPN				Sn	**Sn**	**10 07 53.5**	**-3.4**
	76nm,0.3s,baz=166,slow=3.4,SNR=10						
RPN	**Rapa Nui**	**5.03**	**20**	P	**Pn**	**10 06 57.0**	**-1.7**
RPN	**Rapa Nui**	**5.03**	**20**	Pn	**Pn**	**10 06 57.0**	**-1.7**
RPN				Sn	**Sn**	**10 07 54.4**	**-2.5**
H03S2	**Juan Fernandez**	**27.14**	**103**	T	T	10 39 50.0	
	baz=264,slow=75,SNR=587						
H03S3	**Juan Fernandez**	**27.15**	**103**	T	T	10 40 00.4	
	baz=264,slow=75,SNR=140						
H03S1	**Juan Fernandez**	**27.15**	**103**	T	T	10 40 01.6	
	baz=264,slow=75,SNR=222						
H03N2	**Juan Fernandez**	**27.17**	**102**	T	T	10 39 54.3	
	baz=268,slow=73,SNR=6012						
H03N3	**Juan Fernandez**	**27.17**	**102**	T	T	10 39 49.6	
	baz=268,slow=73,SNR=3837						
H03N1	**Juan Fernandez**	**27.18**	**102**	T	T	10 39 47.9	
	baz=268,slow=73,SNR=7075						
BI03	**Tigo**	**31.76**	**110**	P	**P**	**10 12 08.0**	**+0.5**
BI03				IAmb	IAmb	10 12 09.6	
	comp=Z,50nm,1.1s						
LL01	**San Ignacio de**	**32.41**	**120**	P	**P**	**10 12 13.3**	**+0.3**
GO05	**Huala**	**32.78**	**106**	P	**P**	**10 12 16.3**	**-0.2**
GO05				IAmb	IAmb	10 12 17.4	
	comp=Z,26nm,0.8s						
BI02	**San Fabin de**	**33.18**	**109**	P	**P**	**10 12 19.9**	**-0.1**
BI02				IAmb	IAmb	10 12 22.0	
	comp=Z,53nm,1.1s						
MT02	**Curacav**	**33.66**	**103**	P	**P**	**10 12 23.6**	**-0.6**
MT02				IAmb	IAmb	10 12 29.9	
	comp=Z,60nm,1.4s						
PLCA	**Paso Flores**	**33.69**	**117**	P	**P**	**10 12 24.9**	**+0.6**
	comp=Z,12nm,0.9s,baz=273,slow=8.8,SNR=18						
PLCA				LR	LR	10 22 34.5	
	comp=Z,12µm,19.4s,baz=268,slow=30						
PLCA	**Paso Flores**	**33.69**	**117**	P	**P**	**10 12 24.7**	**+0.4**
PLCA	**Paso Flores**	**33.69**	**117**	*eP*	**P**	**10 12 25.7**	**+1.3**
BO02	**Sierra Bellavi**	**33.75**	**106**	P	**P**	**10 12 24.9**	**-0.1**
BO02				IAmb	IAmb	10 12 30.2	
	comp=Z,28nm,1.1s						
ROC1	**El Roble**	**33.81**	**103**	P	**P**	**10 12 25.1**	**-0.6**
MT05	**Renca**	**33.97**	**104**	P	**P**	**10 12 27.9**	**+1.0**
PEL	**Peldehue**	**34.05**	**103**	P	**P**	**10 12 28.7**	**+1.1**
PEL				pmax	pmax		
	comp=Z,123nm,1.3s						
PEL	**Peldehue**	**34.05**	**103**	P	**P**	**10 12 28.7**	**+1.1**
PEL				IAMs_20	IAMs_20	10 22 21.7	
	comp=Z,9µm,19.0s						
CO02	**Combarbal**	**34.15**	**100**	P	**P**	**10 12 28.1**	**-0.4**
CO02				IAMs_20	IAMs_20	10 22 10.0	
	comp=Z,7µm,20.0s						
VA03	**San Esteban**	**34.23**	**103**	P	**P**	**10 12 29.6**	**+0.4**
VA03				IAmb	IAmb	10 12 31.0	
	comp=Z,61nm,1.2s						
VA03				IAMs_20	IAMs_20	10 22 27.1	
	comp=Z,7µm,19.0s						
GO09	**Cerro Castillo**	**34.40**	**136**	P	**P**	**10 12 31.0**	**+0.7**
GO09				IAMs_20	IAMs_20	10 23 08.0	
	comp=Z,6µm,18.0s						
CO03	**El Pedregal**	**34.48**	**99**	P	**P**	**10 12 31.4**	**0.0**
CO03				IAmb	IAmb	10 12 33.0	
	comp=Z,53nm,1.1s						
CO03				IAMs_20	IAMs_20	10 22 19.0	
	comp=Z,8µm,20.0s						
GO04	**Tololo Observa**	**34.54**	**98**	P	**P**	**10 12 31.8**	**-0.3**
TBI	**Tubuai**	**34.79**	**274**	*eS*	**S**	**10 17 57.2**	**-7.5**
	comp=Z,1µm,27.5s						
TBI				*eLQ*	LQ	10 20 11.0	
	comp=Z,7µm,26.5s						
TBI				*eLR*	LR	10 21 40.9	
	comp=Z,8µm,29.0s,baz=112						
AC04	**Llanos de Chal**	**34.81**	**95**	P	**P**	**10 12 33.3**	**-0.8**
AC04				IAmb	IAmb	10 12 55.6	
	comp=Z,64nm,1.4s						
AC04				IAMs_20	IAMs_20	10 22 54.7	
	comp=Z,9µm,19.0s						
LCO	**Las Campanas**	**34.91**	**96**	P	**P**	**10 12 35.4**	**+0.1**
LCO				pmax	pmax		
	comp=Z,83nm,1.4s						
LCO	**Las Campanas**	**34.91**	**96**	P	**P**	**10 12 35.4**	**+0.1**
CO01	**Juntas del Tor**	**35.18**	**98**	P	**P**	**10 12 37.4**	**-0.2**
CO01				IAmb	IAmb	10 12 49.9	
	comp=Z,51nm,1.4s						
TAOE	**Nuku Hiva Isla**	**35.30**	**304**	*eS*	**S**	**10 18 06.9**	**-5.9**
	comp=Z,728nm,29.6s						
TAOE				*eLR*	LR	10 21 56.3	
	comp=Z,20µm,25.9s,baz=145						
AC05	**El Transito**	**35.31**	**96**	P	**P**	**10 12 38.4**	**-0.3**
AC05				IAmb	IAmb	10 12 56.5	
	comp=Z,59nm,1.3s						
AC01	**Pan de Azucar**	**35.83**	**91**	IAMs_20	IAMs_20	10 22 56.9	
	comp=Z,7µm,20.0s						
ZON	**Zonda**	**36.02**	**101**	P	**P**	**10 12 45.1**	**+0.6**
ZON				pmax	pmax		
	comp=Z,124nm,1.5s						
ZON	**Zonda**	**36.02**	**101**	P	**P**	**10 12 45.1**	**+0.6**
ZON				IAMs_20	IAMs_20	10 23 24.4	
	comp=Z,9µm,21.0s						
MEH	**Mehetia**	**36.04**	**284**	*eT*	T	10 50 24.1	
	comp=Z,56nm,0.2s						
AC02	**Maricunga**	**36.86**	**93**	P	**P**	**10 12 50.9**	**-1.4**
AC02				IAmb	IAmb	10 13 10.6	
	comp=Z,54nm,1.4s						
GO02	**Mina Guanaco**	**37.01**	**90**	P	**P**	**10 12 52.9**	**-0.5**
GO02				IAMs_20	IAMs_20	10 23 33.3	
	comp=Z,8µm,22.0s						
TVO	**Taravao**	**37.06**	**283**	*eT*	T	10 51 40.8	
	comp=Z,3.1nm,0.3s						
TIAR	**Tiarei**	**37.25**	**283**	*eT*	T	10 51 53.8	
	comp=Z,9.5nm,0.3s						
NNA	**Nana**	**37.31**	**66**	*i* P	**P**	**10 12 54.6**	**-1.1**
NNA				pmax	pmax		
	comp=Z,32nm,1.3s						
PPTF	**Pamatai, Papee**	**37.42**	**283**	IAMs_20	IAMs_20	10 23 33.9	
	comp=Z,8µm,20.0s						
PPT2	**Papeete2**	**37.43**	**283**	*eS*	**S**	**10 18 38.3**	**-6.9**
	comp=Z,1µm,27.2s						
PPT2				*eLQ*	LQ	10 21 19.9	
	comp=Z,3µm,21.5s						
PPT2				*eLR*	LR	10 22 51.6	
	comp=Z,18µm,25.0s,baz=120						
PPT2	**Papeete2**	**37.43**	**283**	*eT*	T	10 52 01.9	
	comp=Z,3.1nm,0.3s						
PPT	**Papeete**	**37.44**	**283**	P	**P**	**10 12 58.6**	**+1.9**
	comp=Z,18nm,0.6s,baz=60,slow=20,SNR=1.9						
PPT				LR	LR	10 24 02.8	
	comp=Z,9µm,18.1s,baz=104,slow=29						
PB15	**IPOC Station P**	**37.83**	**87**	P	**P**	**10 13 00.5**	**+0.3**
PB06	**IPOC Station P**	**37.93**	**87**	P	**P**	**10 13 01.4**	**+0.4**
TA01	**Diego Aracena**	**38.30**	**83**	IAMs_20	IAMs_20	10 24 07.6	
	comp=Z,6µm,21.0s						
LVC	**Limon Verde**	**

CPSB Cacapava Do Su 48.96 104 *e*P P **10 14 29.0 -0.7**
ORTC Ortega, Tolima 49.37 51 *e*P P **10 14 34.3 +1.3**
PRAC Prado 49.47 51 *e*P P **10 14 35.0 +1.2**
ANIL Santa Ana 49.71 50 *e*P P **10 14 37.1 +1.2**
RTAL Retalhuleu 49.81 25 P P **10 14 38.2 +2.0**
RTAL IAMs_20 IAMs_20 10 30 03.9
comp=Z,4µm,22.0s
TOLC Tolima 49.83 50 *e*P P **10 14 36.8 -0.1**
PTLB Pontes e Lacer 49.97 84 *e*P P **10 14 37.5 -0.1**
SNET Serv Nac Est T 49.99 28 IAMs_20 IAMs_20 10 30 08.4
comp=Z,5µm,22.0s
CRIN San Cristobal 50.03 31 IAMs_20 IAMs_20 10 30 13.4
comp=Z,4µm,20.0s
ACON Acoyapa 50.25 34 P P **10 14 40.1 +0.5**
ACON IAmb IAmb 10 15 09.3
comp=Z,34nm,1.2s
ACON IAMs_20 IAMs_20 10 30 21.1
comp=Z,3µm,18.0s
GUY2C Guyana, Caldas 50.28 49 *e*P P **10 14 41.1 +0.6**
VILB Vilhena 50.30 80 *e*P P **10 14 39.6 -0.6**
CBOC Ciudad Bolivar 50.36 48 *e*P P **10 14 42.0 +1.3**
HUEH Huehuetenango 50.62 25 P P **10 14 45.0 +2.4**
HUEH IAMs_20 IAMs_20 10 31 01.1
comp=Z,3µm,20.0s
TLIG Tlapa 50.66 16 P P **10 14 44.5 +1.7**
TLIG IAMs_20 IAMs_20 10 31 01.4
comp=Z,3µm,18.0s
ROSC El Rosal 50.68 51 P P **10 14 44.6 +1.3**
comp=Z,18nm,0.6s,baz=193,slow=2.8,SNR=14
ROSC LR LR 10 32 35.8
comp=Z,3µm,19.0s,baz=222,slow=32
ROSC El Rosal 50.68 51 P P **10 14 45.6 +2.3**
ROSC IAMs_20 IAMs_20 10 32 24.7
comp=Z,3µm,18.0s
ESQI Esquipulas 50.74 28 P P **10 14 46.9 +3.5**
ESQI IAmb IAmb 10 14 58.9
comp=Z,43nm,1.1s
ESQI IAMs_20 IAMs_20 10 30 43.2
comp=Z,5µm,20.0s
MATN Matagalpa 50.74 33 P P **10 14 43.7 +0.3**
ESPN Las Esperanzas 50.87 35 P P **10 14 46.5 +2.3**
ESPN IAmb IAmb 10 14 59.9
comp=Z,48nm,1.3s
CHIC Chingaza 50.91 51 *e*P P **10 14 46.8 +1.7**
HELC Santa Helena 50.91 48 *e*P P **10 14 45.9 +0.8**
ITAB Concordia 51.06 101 *e*P P **10 14 45.8 +0.1**
DBBC Dabeiba 51.12 47 *e*P P **10 14 47.9 +1.6**
TGUH Tegucigalpa,Un 51.14 30 P P **10 14 44.5 -2.0**
TGUH IAmb IAmb 10 15 05.8
comp=Z,51nm,1.2s
TGUH IAMs_20 IAMs_20 10 30 55.8
comp=Z,3µm,20.0s
CCIG Comitan 51.29 24 P P **10 14 49.1 +1.5**
CCIG IAmb IAmb 10 14 53.8
comp=Z,29nm,1.0s
CCIG IAMs_20 IAMs_20 10 31 03.0
comp=Z,3µm,21.0s
CNLB Canela 51.43 104 *e*P P **10 14 49.3 +0.7**
PTGC Puerto Gaitan, 51.67 53 *e*P P **10 14 51.1 +0.7**
CAPC Capurgana 51.69 45 *e*P P **10 14 51.5 +1.0**
PTBC PUERTO BERRIO, 51.87 49 *e*P P **10 14 52.4 +0.6**
PTGB Pitanga 52.03 98 *e*P P **10 14 53.6 +0.5**
UREC San Jos de Ur 52.11 47 *e*P P **10 14 54.4 +0.7**
MOIG Morelia 52.18 12 P P **10 14 55.5 +1.2**
UNM Universidad Na 52.23 14 P P **10 14 57.4 +2.7**
UNM pmax pmax
comp=Z,201nm,1.5s
UNM Universidad Na 52.23 14 P P **10 14 57.4 +2.7**
RUSC La Rusia 52.28 51 *e*P P **10 14 55.9 +0.4**
TRCB Tierra Rica 52.29 95 *e*P P **10 14 55.0 0.0**
LCBC Los crdobas, 52.46 45 *e*P P **10 14 56.6 +0.3**
PETF Flores 52.68 26 P P **10 14 59.5 +1.7**
PETF IAmb IAmb 10 15 16.9
comp=Z,55nm,1.2s
PETF IAMs_20 IAMs_20 10 32 06.9
comp=Z,4µm,20.0s
BARC Barichara 52.73 50 *e*P P **10 14 58.4 -0.1**
BRRC Barranca, Sant 52.77 49 *e*P P **10 14 59.2 +0.7**
MOTC Monteria, Cord 52.83 46 *e*P P **10 15 00.5 +1.6**
PAMC Pamplona, Colo 53.61 50 *e*P P **10 15 02.6 -2.7**
OCAC Ocana 53.88 49 *e*P P **10 15 03.8 -3.1**
PCMB Pacaembu 53.93 95 *e*P P **10 15 06.9 -0.2**
SJCC San Jacinto, C 54.00 46 *e*P P **10 15 08.4 +0.8**
ARGC Ariguani, Magd 54.54 47 *e*P P **10 15 06.5 -5.0**
FRTB Fartura 54.67 97 *e*P P **10 15 13.0 +0.5**
ZAIG Zacatecas 54.99 10 P P **10 15 14.6 -0.3**
ZAIG IAMs_20 IAMs_20 10 33 57.7
comp=Z,4µm,19.0s
CLDB Colider 55.06 81 *e*P P **10 15 13.3 -2.1**
SLBS Sierra La Lagu 55.29 1 IAMs_20 IAMs_20 10 32 52.2
comp=Z,4µm,22.0s
ITRB Iturama 55.50 93 *e*P P **10 15 19.1 +0.5**
SMRC Santa Marta, M 55.57 46 *e*P P **10 15 16.8 -2.1**
LPIG La Paz 55.70 1 LR LR 10 33 59.3
comp=Z,2µm,18.2s,baz=187,slow=30
SDV Santo Domingo 56.11 51 P P **10 15 20.9 -2.2**
comp=Z,3.6nm,0.4s,baz=172,slow=5.5,SNR=5.8
SDV Santo Domingo 56.11 51 P P **10 15 21.1 -1.9**
SDV IAmb IAmb 10 15 50.2
comp=Z,22nm,1.2s
SDV Santo Domingo 56.11 51 IAMs_20 IAMs_20 10 35 07.7
comp=Z,3µm,22.0s
SDV Santo Domingo 56.11 51 *e*P P **10 15 21.6 -1.4**
TEIG Tepich 56.30 26 IAMs_20 IAMs_20 10 34 19.8
comp=Z,4µm,20.0s
SPB Sao Paulo 56.36 99 P P **10 15 24.5 -0.1**
SPB IAmb IAmb 10 15 27.0
comp=Z,41nm,1.4s
SPB Sao Paulo 56.36 99 *e*P P **10 15 24.7 +0.1**
BB19B Bebedouro 56.47 95 *e*P P **10 15 26.1 +0.6**
RAO Raoul Island 56.65 254 LR LR 10 34 16.9
comp=Z,470nm,19.3s,baz=106,slow=30
MXZ Matakaoa Point 56.96 243 IAMs_20 IAMs_20 10 33 24.9
comp=Z,4µm,20.0s
VAO Valinhos 56.99 98 *e*P P **10 15 29.9 +0.6**
NPGB Novo Progresso 57.46 77 *e*P P **10 15 31.4 -1.2**
URZ Urewera 57.66 242 LR LR 10 34 28.2
comp=Z,4µm,20.7s,baz=102,slow=30
BKZ Black Stump Fm 57.86 241 IAMs_20 IAMs_20 10 33 53.2
comp=Z,4µm,21.0s
AFI Afiamalu 57.88 273 LR LR 10 33 44.9
comp=Z,3µm,21.2s,baz=120,slow=29
AFI Afiamalu 57.88 273 IAMs_20 IAMs_20 10 33 22.9
comp=Z,3µm,20.0s
IPMB Ipameri, GO 58.08 92 *e*P P **10 15 36.9 -0.1**
QSPA South Pole Qui 58.29 180 LR LR 10 37 13.4
comp=Z,2µm,19.2s,baz=110,slow=32
QSPA South Pole Qui 58.29 180 P P **10 15 38.1 +0.3**
QSPA South Pole Qui 58.29 180 IAMs_20 IAMs_20 10 37 12.0
comp=Z,3µm,19.0s
SNDB Serra Nova Dou 58.30 84 *e*P P **10 15 38.2 -0.3**
VNDA Vanda 58.45 195 P P **10 15 38.2 -0.3**
comp=Z,1.8nm,0.8s,baz=97,slow=6.2,SNR=8.6
VNDA LR LR 10 35 22.4
comp=Z,3µm,19.3s,baz=90,slow=30
VNDA Vanda 58.45 195 P P **10 15 39.1 +0.5**
VNDA pmax pmax
comp=Z,24nm,1.5s
VNDA Vanda 58.45 195 P P **10 15 39.1 +0.5**
SNZO South Karori 58.56 238 IAMs_20 IAMs_20 10 34 15.4
comp=Z,3µm,21.0s
ITTB Itaituba 58.65 74 *e*P P **10 15 40.0 -0.9**
HPIG 58.75 6 P P **10 15 42.4 +0.9**
HPIG IAmb IAmb 10 15 57.6
comp=Z,16nm,0.9s
SRIG Santa Rosalia 58.90 359 P P **10 15 44.0 +1.8**
SRIG IAMs_20 IAMs_20 10 35 01.1
comp=Z,3µm,21.0s
HIZ Hauiti 59.28 241 IAMs_20 IAMs_20 10 35 19.6
comp=Z,3µm,20.0s
BDFB Brasilia 59.32 90 P P **10 15 44.0 -1.7**
comp=Z,9.5nm,0.9s,baz=220,slow=6.7,SNR=8.3
BDFB LR LR 10 38 34.3
comp=Z,2µm,20.3s,baz=247,slow=33
BDFB Brasilia 59.32 90 P P **10 15 44.7 -0.9**
BDFB pmax pmax
comp=Z,18nm,1.1s
BDFB Brasilia 59.32 90 P P **10 15 44.7 -0.9**
BDFB IAmb IAmb 10 15 47.1
comp=Z,18nm,1.1s
BDFB IAMs_20 IAMs_20 10 38 25.2
comp=Z,3µm,19.0s
MTDJ Mount Denham 59.39 38 IAMs_20 IAMs_20 10 36 50.1
comp=Z,3µm,18.0s
NNZ Nelson 59.54 238 IAMs_20 IAMs_20 10 34 44.3
comp=Z,4µm,21.0s
BSCB Bom Sucesso 59.67 97 *e*P P **10 15 48.2 +0.2**
QRZ Quartz Range 60.27 238 IAMs_20 IAMs_20 10 35 17.7
comp=Z,4µm,21.0s
RPZ Rata Peaks 60.44 235 LR LR 10 38 20.2
comp=Z,2µm,18.6s,baz=96,slow=32
KVTX Kingsville 60.47 14 IAMs_20 IAMs_20 10 38 19.5
comp=Z,3µm,18.0s
HSIG 60.59 0 P P **10 15 54.1 +0.3**
HSIG IAmb IAmb 10 16 06.0
comp=Z,19nm,0.9s
HSIG IAMs_20 IAMs_20 10 35 53.7
comp=Z,2µm,21.0s
833A Chaparral WMA, 60.94 12 P P **10 15 57.3 +1.1**
baz=191,SNR=7.8
833A Chaparral WMA, 60.94 12 P P **10 15 57.4 +1.2**
833A IAMs_20 IAMs_20 10 37 30.2
comp=Z,3µm,21.0s
PCRV Puerto La Cruz 61.11 55 P P **10 15 56.2 -1.5**
comp=Z,6.9nm,0.8s,baz=323,slow=7.5,SNR=3.6
PLCV Puerto La Cruz 61.13 55 P P **10 15 56.2 -1.6**
MALB Monte Alegre 61.29 73 *e*P P **10 15 59.8 +0.8**
TX31 Lajitas Ar. Si 61.32 8 P P **10 16 00.0 +1.1**
TX32 Lajitas Array 61.32 8 P P **10 16 00.1 +1.1**
TX32 IAmb IAmb 10 16 27.4
comp=Z,28nm,1.3s
TXAR Lajitas Array 61.32 8 P P **10 15 59.1 +0.2**
comp=Z,2.8nm,0.8s,baz=188,slow=8.6,SNR=31
TXAR LR LR 10 38 30.0
comp=Z,2µm,18.3s,baz=0.0,slow=32
TXAR Lajitas Array 61.32 8 P P **10 15 59.5 +0.6**
TXAR Lajitas Array 61.32 8 P P **10 15 59.5 +0.6**
735A Kenedy 61.75 13 P P **10 16 03.5 +1.7**
735A IAMs_20 IAMs_20 10 38 55.6
comp=Z,2µm,19.0s
GTBY Guantanamo Bay 62.07 39 P P **10 16 04.8 +0.8**
GTBY IAmb IAmb 10 16 32.7
comp=Z,16nm,1.1s
GTBY IAMs_20 IAMs_20 10 37 38.2
comp=Z,2µm,18.0s
LGNH Logne 62.31 42 P P **10 16 06.1 +0.4**
JANB Januaria 62.74 91 *e*P P **10 16 09.1 +0.3**
319A Douglas 62.96 2 P P **10 16 10.8 +0.9**
JCT Junction City 62.98 11 P P **10 16 10.5 +0.5**
JCT pmax pmax
comp=Z,42nm,1.0s
JCT Junction City 62.98 11 P P **10 16 10.6 +0.7**
baz=191,SNR=22
JCT Junction City 62.98 11 P P **10 16 10.5 +0.5**
SMTB Santa Maria do 63.01 84 *e*P P **10 16 11.1 +0.4**
HKT Hockley 63.23 15 P P **10 16 12.6 +1.2**
HKT pmax pmax
comp=Z,43nm,1.5s
HKT Hockley 63.23 15 P P **10 16 12.6 +1.2**
HKT Hockley 63.23 15 IAMs_20 IAMs_20 10 41 30.7
comp=Z,2µm,18.0s
SDDR Presa de Saban 63.44 43 P P **10 16 14.0 +0.8**
SDDR IAmb IAmb 10 16 37.9
comp=Z,32nm,1.4s
MNTX Cornudas Mount 63.50 6 P P **10 16 13.5 +0.2**
baz=185,SNR=20
MNTX Cornudas Mount 63.50 6 P P **10 16 13.7 +0.4**
MNTX IAmb IAmb 10 16 31.9
comp=Z,21nm,1.2s
SDBA SAO DESIDERIO 63.51 88 *e*P P **10 16 14.1 +0.1**
214A Organ Pipe Nat 63.53 358 P P **10 16 14.7 +1.1**
baz=178
435B Jarrell 63.67 13 P P **10 16 15.8 +1.3**
baz=193
435B Jarrell 63.67 13 P P **10 16 15.7 +1.3**
435B IAMs_20 IAMs_20 10 39 48.3
comp=Z,2µm,19.0s
SJMB Sao Joao De Ma 63.71 96 *e*P P **10 16 15.6 +0.4**
SDD Santo Domingo 63.84 44 P P **10 16 16.2 +0.4**
TUC Tucson 63.87 0 P P **10 16 16.7 +0.8**
TUC pmax pmax
comp=Z,17nm,1.0s
TUC Tucson 63.87 0 P P **10 16 16.9 +1.0**
baz=180
TUC Tucson 63.87 0 P P **10 16 16.7 +0.8**
TUC IAmb IAmb 10 16 31.5
comp=Z,17nm,1.0s
TUC Tucson 63.87 0 IAMs_20 IAMs_20 10 37 44.5
comp=Z,3µm,20.0s
BSFB Barra de Sao F 63.94 97 *e*P P **10 16 16.8 +0.1**
MCPB Macapa, AP 63.94 73 *e*P P **10 16 16.8 0.0**
GDL2 Guadalupe Moun 64.08 6 P P **10 16 17.7 +0.3**
121A Cookes Peak, D 64.17 3 P P **10 16 19.2 +1.2**
baz=183,SNR=7.3
121A Cookes Peak, D 64.17 3 P P **10 16 18.9 +0.9**
121A IAmb IAmb 10 16 30.4
comp=Z,19nm,1.1s
121A IAMs_20 IAMs_20 10 38 24.3
comp=Z,2µm,20.0s
UABX UABC, Campus M 64.31 356 IAMs_20 IAMs_20 10 37 49.6
comp=Z,2µm,20.0s
RMX La Honrosa, 64.32 355 IAMs_20 IAMs_20 10 37 27.5
comp=Z,2µm,21.0s
TKX Tecate 64.33 355 P P **10 16 21.0 +2.2**
TKX IAmb IAmb 10 16 33.4
comp=Z,22nm,1.1s
113A Mohawk Valley, 64.37 358 P P **10 16 20.7 +1.7**
IKP In-Ko-Pah, Jac 64.37 355 P P **10 16 20.6 +1.4**
baz=175
VNA1 Neumayer--Stat 64.39 159 P P **10 16 18.0 -0.8**
BAR Barrett 64.44 355 P P **10 16 21.0 +1.5**
BAR IAmb IAmb 10 16 35.2
comp=Z,37nm,1.4s
VNA2 Neumayer--Watz 64.54 159 P P **10 16 20.6 +0.8**
baz=255,slow=6.2
MONP2 Monument Peak 64.63 355 P P **10 16 22.2 +1.2**
baz=175
SWSC Sam W. Stewart 64.64 356 P P **10 16 21.9 +1.1**
baz=176
109C Camp Elliot, M 64.68 355 P P **10 16 22.0 +1.0**
baz=174
GLA Glamis 64.69 357 P P **10 16 22.5 +1.2**
baz=176
MSVF Nonsavu 64.74 264 *i* P P **10 16 23.1 +1.1**
MSVF pmax pmax
comp=Z,21nm,1.3s
MSVF Nonsavu 64.74 264 IAMs_20 IAMs_20 10 38 00.8
comp=Z,2µm,20.0s
TOSP Speyside 64.77 57 IAMs_20 IAMs_20 10 41 54.0
comp=Z,3µm,22.0s
WHTX Lake Whitney, 64.87 13 P P **10 16 22.7 +0.4**
baz=193,SNR=7.2
WHTX Lake Whitney, 64.87 13 P P **10 16 22.9 +0.6**
CPRX Cap Rock 64.96 7 P P **10 16 23.9 +0.8**
ABTX Abilene, Hawle 65.11 11 P P **10 16 24.1 +0.2**
baz=191,SNR=5.4
ABTX Abilene, Hawle 65.11 11 P P **10 16 24.4 +0.5**
237A Washetta, Mont 65.21 14 P P **10 16 25.6 +1.1**
NATX Nacogdoches 65.23 16 P P **10 16 26.0 +1.4**
baz=195
NATX Nacogdoches 65.23 16 P P **10 16 25.7 +1.1**
BC3 Big Chuckawall 65.33 356 P P **10 16 26.7 +1.3**
baz=176,SNR=6.9
PFO Pinyon Flats O 65.35 355 P P **10 16 26.3 +0.7**
PFO pmax pmax
comp=Z,32nm,1.4s
PFO Pinyon Flats O 65.35 355 P P **10 16 27.2 +1.6**
baz=175
PFO Pinyon Flats O 65.35 355 P P **10 16 26.2 +0.7**
PFO IAmb IAmb 10 16 40.6
comp=Z,32nm,1.4s
MURC Murrieta 65.40 355 P P **10 16 27.0 +1.3**
baz=174
SNAA Sanae 65.54 161 P P **10 16 25.5 -0.9**
SNAA Sanae 65.54 161 P P **10 16 25.5 -0.9**
SNAA pmax pmax
comp=Z,46nm,1.2s
SNAA Sanae 65.54 161 P P **10 16 25.5 -0.9**
SNAA IAMs_20 IAMs_20 10 40 13.9
comp=Z,2µm,19.0s
BELC Belle Mtn. Jos 65.71 356 P P **10 16 29.4 +1.5**
baz=175,SNR=10
Y22D IRIS PASSCAL I 65.75 4 P P **10 16 29.7 +1.5**
baz=184
Y22D IRIS PASSCAL I 65.75 4 P P **10 16 30.7 +2.5**
Y22D IAMs_20 IAMs_20 10 39 47.1
comp=Z,2µm,19.0s
IRM Iron Mountain 65.81 356 P P **10 16 29.8 +1.4**
baz=176
BNM Barren Site 65.84 4 P P **10 16 29.7 +0.8**
PDPR Patillas Dam, 65.88 48 P P **10 16 28.8 -0.3**
PDPR IAmb IAmb 10 16 29.8
comp=Z,28nm,1.3s
PDMCI Parker Dam,Lak 65.91 357 P P **10 16 30.3 +1.3**
baz=177
344A Westbrook Farm 65.93 19 P P **10 16 29.8 +0.6**
X16A Lo Mia Camp, P 65.97 360 P P **10 16 31.2 +1.5**
X16A IAmb IAmb 10 16 49.0
comp=Z,16nm,1.1s
X16A IAMs_20 IAMs_20 10 39 07.2
comp=Z,2µm,20.0s
MSTX Muleshoe 66.00 8 P P **10 16 30.0 +0.2**
baz=188,SNR=18
MSTX Muleshoe 66.00 8 P P **10 16 29.7 -0.1**
SCZ2 Santa Cruz Isl 66.03 352 P P **10 16 31.1 +1.3**
baz=172
BBRC Big Bear Solar 66.03 355 P P **10 16 31.4 +1.3**
baz=175
PASC Pasadena Art C 66.05 354 IAMs_20 IAMs_20 10 38 30.3
comp=Z,2µm,19.0s
BFSC Mount Baldy Ra 66.07 354 P P **10 16 31.0 +0.8**
baz=174
MWC Mount Wilson 66.09 354 P P **10 16 31.4 +1.0**
MWC pmax pmax
comp=Z,38nm,1.4s
MWC Mount Wilson 66.09 354 P P **10 16 31.4 +1.0**
MWC IAmb IAmb 10 16 50.8
comp=Z,38nm,1.4s
MWC IAMs_20 IAMs_20 10 38 31.4
comp=Z,2µm,19.0s
DECC Green Verdugo 66.14 354 P P **10 16 30.3 -0.3**
baz=173
Z35A Perchaven, San 66.21 13 P P **10 16 31.4 +0.4**
NEE2 Needles Airpor 66.39 357 P P **10 16 33.2 +1.1**
baz=177
GMRC Granite Mounta 66.47 356 P P **10 16 34.4 +1.6**
baz=176,SNR=6.2
OSI Osito Audit: C 66.54 353 P P **10 16 33.8 +0.7**
baz=173
OSI Osito Audit: C 66.54 353 IAMs_20 IAMs_20 10 39 11.3
comp=Z,2µm,19.0s
HEC Hector,Ludlow 66.55 355 P P **10 16 32.7 -0.5**
baz=175
Z38A Mt. Pleasant 66.60 15 P P **10 16 34.1 +0.7**
ANMO Albuquerque 66.65 4 P P **10 16 34.1 +0.1**
ANMO pmax pmax
comp=Z,10.0nm,1.1s
ANMO Albuquerque 66.65 4 P P **10 16 33.3 -0.6**
baz=184
ANMO Albuquerque 66.65 4 P P **10 16 34.1 +0.1**
RRX Edison Barstow 66.65 355 P P **10 16 34.9 +1.1**
baz=175
W18A Petrified Fore 66.68 1 P P **10 16 35.0 +0.9**
baz=181
W18A Petrified Fore 66.68 1 P P **10 16 34.9 +0.7**
W18A IAmb IAmb 10 16 57.7
comp=Z,27nm,1.2s
W18A IAMs_20 IAMs_20 10 39 26.0
comp=Z,2µm,20.0s
VBMS Vicksburg 66.71 19 P P **10 16 35.5 +1.3**
baz=199
MDP Montagnes des 66.72 68 P P **10 16 34.2 -0.5**
comp=Z,9.7nm,0.9s,baz=266,slow=7.5,SNR=2.8
656A Willston 66.75 27 IAMs_20 IAMs_20 10 41 28.5
comp=Z,2µm,18.0s
BRAL Brewton 66.78 22 IAMs_20 IAMs_20 10 42 27.4
comp=Z,2µm,19.0s
553A Crawfordville 66.78 25 IAMs_20 IAMs_20 10 40 18.3
comp=Z,2µm,21.0s
143A Socs Landing, 66.93 18 P P **10 16 36.4 +0.8**
AMTX Amarillo 67.04 9 P P **10 16 36.9 +0.5**
baz=189
AMTX Amarillo 67.04 9 P P **10 16 37.2 +0.9**
AMTX IAmb IAmb 10 16 43.5
comp=Z,11nm,0.8s
AMTX IAMs_20 IAMs_20 10 41 47.8
comp=Z,2µm,18.0s
GSC Goldstone, Bar 67.06 355 P P **10 16 37.6 +1.2**
GSC pmax pmax
comp=Z,49nm,1.2s
GSC Goldstone, Bar 67.06 355 P P **10 16 37.9 +1.5**
baz=175,SNR=13
GSC Goldstone, Bar 67.06 355 P P **10 16 37.6 +1.2**
ARVC Arvin 67.06 353 P P **10 16 37.8 +1.4**
baz=173
WUAZ Wupatki 67.06 360 P P **10 16 37.8 +1.2**
baz=180
WUAZ Wupatki 67.06 360 P P **10 16 36.5 -0.1**
WUAZ IAmb IAmb 10 17 05.3
comp=Z,35nm,1.3s
Z41A Richland Creek 67.10 17 P P **10 16 37.9 +1.2**
baz=197
Z41A Richland Creek 67.10 17 P P **10 16 37.7 +1.1**
TUQ Turquoise Moun 67.13 356 P P **10 16 38.0 +1.0**
baz=176
LRMC Laurel Mtn Rad 67.30 354 P P **10 16 37.9 -0.2**
baz=174
SMMC Simmler 67.37 352 P P **10 16 40.0 +1.6**
baz=174
WLAR White Oak Lake 67.44 16 P P **10 16 39.6 +0.8**
ISA Isabella, Lake 67.55 354 P P **10 16 40.4 +0.8**
ISA pmax pmax
comp=Z,25nm,1.4s
ISA Isabella, Lake 67.55 354 P P **10 16 41.1 +1.5**
baz=173,SNR=5.8
ISA Isabella, Lake 67.55 354 P P **10 16 40.4 +0.8**
ISA IAmb IAmb 10 16 50.9
comp=Z,25nm,1.4s
ISA IAMs_20 IAMs_20 10 39 17.2
comp=Z,2µm,20.0s
SHOC Shoshone, Teco 67.61 356 P P **10 16 41.7 +1.8**
baz=175
352A Blakely 67.78 24 IAMs_20 IAMs_20 10 41 05.8
comp=Z,3µm,21.0s
250A Grady 67.78 23 IAMs_20 IAMs_20 10 42 14.9
comp=Z,3µm,21.0s
VES Vestal, Richgr 67.79 353 P P **10 16 41.7 +0.7**
baz=173
X37A Clayton 67.80 14 P P **10 16 41.1 0.0**
X37A IAmb IAmb 10 17 07.4
comp=Z,26nm,1.1s
MPMC Manual Prospec 67.86 355 P P **10 16 41.7 0.0**
baz=174,SNR=18
W35A Tecumseh 68.05 13 P P **10 16 41.8 -0.8**
FNO Franklin 68.06 12 P P **10 16 43.6 +1.0**
MIAR Mount Ida 68.15 16 P P **10 16 44.1 +0.8**
MIAR pmax pmax
comp=Z,29nm,1.2s
MIAR Mount Ida 68.15 16 P P **10 16 45.0 +1.7**
baz=196
MIAR Mount Ida 68.15 16 P P **10 16 44.1 +0.8**
MIAR IAmb IAmb 10 17 01.7
comp=Z,29nm,1.1s
SHPR Sheep Range 68.15 357 P P **10 16 44.4 +0.9**
SHPR IAmb IAmb 10 16 59.7
comp=Z,35nm,1.2s
SHPR IAMs_20 IAMs_20 10 40 01.2
comp=Z,2µm,21.0s
OKCFA Oklahoma City 68.20 12 P P **10 16 43.2 -0.4**
FURC Furnace Creek, 68.22 355 P P **10 16 45.0 +1.4**
baz=175
X40A Basin Creek Fa 68.27 16 P P **10 16 41.5 -2.4**
baz=197
X40A Basin Creek Fa 68.27 16 P P **10 16 44.9 +0.9**
CWC Cottonwood Cre 68.29 354 P P **10 16 45.9 +1.6**
baz=174
VOG Valley Oaks Go 68.30 353 P P **10 16 45.7 +1.6**
baz=172
Z47A Carrollton 68.34 21 P P **10 16 45.2 +0.8**
Z47A IAmb IAmb 10 16 46.4
comp=Z,30nm,1.1s
PMPB Monarch Peak 68.36 352 IAMs_20 IAMs_20 10 40 28.4
comp=Z,2µm,19.0s
OK025 Westminster Rd 68.38 12 P P **10 16 44.7 0.0**
OK025 IAmb IAmb 10 17 03.1
comp=Z,17nm,1.1s
OK025 IAMs_20 IAMs_20 10 42 25.2
comp=Z,3µm,19.0s
BCOK Bluff Creek, N 68.41 12 P P **10 16 45.5 +0.6**
LRAL Lakeview Retre 68.52 22 P P **10 16 44.4 -1.2**
baz=202
LRAL Lakeview Retre 68.52 22 P P **10 16 46.2 +0.6**
LRAL IAMs_20 IAMs_20 10 43 54.5
comp=Z,2µm,18.0s
Y45A Yeager Farm, C 68.53 19 P P **10 16 46.9 +1.2**
Y45A IAmb IAmb 10 17 06.6
comp=Z,20nm,0.8s
OK029 Liberty Lake 68.57 12 P P **10 16 46.1 +0.2**

OK029 IAMs_20 IAMs_20 10 42 32.2
comp=Z,3µm,19.0s
KNB Kanab 68.58 359 P **P** **10 16 46.5 +0.4**
KNB pmax pmax
comp=Z,28nm,1.3s
KNB Kanab 68.58 359 P **P** **10 16 46.5 +0.4**
LCMT Little Creek M 68.58 358 P **P** **10 16 46.4 +0.3**
TPNV Topopah Spring 68.66 356 P **P** **10 16 47.8 +1.2**
TPNV pmax pmax
comp=Z,22nm,1.0s
TPNV Topopah Spring 68.66 356 P **P** **10 16 47.7 +1.2**
baz=175
TPNV Topopah Spring 68.66 356 P **P** **10 16 47.8 +1.2**
TPNV IAmb IAmb 10 16 52.9
comp=Z,22nm,0.9s
W39A Magazine 68.73 15 P **P** **10 16 43.1 -3.7**
baz=196
X43A Marvell 68.78 18 P **P** **10 16 48.9 +1.6**
MVCO Mesa Verde 68.80 2 P **P** **10 16 48.1 +0.5**
baz=182,SNR=8.7
MVCO Mesa Verde 68.80 2 P **P** **10 16 48.3 +0.8**
OK030 Cody Creek RV 68.82 13 P **P** **10 16 46.9 -0.5**
OK030 IAmb IAmb 10 17 03.5
comp=Z,34nm,1.4s
OK030 IAMs_20 IAMs_20 10 42 58.8
comp=Z,2µm,18.0s
OK031 S. Brethren Rd 68.83 12 P **P** **10 16 47.4 -0.1**
OK031 IAmb IAmb 10 17 01.9
comp=Z,32nm,1.4s
OK031 IAMs_20 IAMs_20 10 42 59.1
comp=Z,2µm,18.0s
U32A Winter Ranch, 68.88 11 P **P** **10 16 48.6 +0.7**
U32A IAmb IAmb 10 16 55.2
comp=Z,16nm,0.9s
TIN Tinemaha, Big 68.91 354 P **P** **10 16 47.8 -0.3**
baz=174
152A Waverly Hall 68.93 24 P **P** **10 16 48.2 0.0**
152A IAMs_20 IAMs_20 10 42 03.4
comp=Z,3µm,22.0s
SAO San Andreas Ge 68.98 351 IAMs_20 IAMs_20 10 41 07.9
comp=Z,2µm,18.0s
T25A Trinidad 68.98 6 P **P** **10 16 49.2 +0.5**
baz=186,SNR=7.1
T25A Trinidad 68.98 6 P **P** **10 16 50.0 +1.4**
T25A IAmb IAmb 10 17 08.0
comp=Z,32nm,1.2s
TUL1 Leonard 68.99 13 P **P** **10 16 48.7 +0.2**
baz=194,SNR=10
TUL1 Leonard 68.99 13 P **P** **10 16 48.8 +0.3**
PKCU Pink Cliffs 69.00 359 P **P** **10 16 50.2 +1.3**
PRN Pahroc Range 69.04 357 P **P** **10 16 49.9 +1.0**
PRN IAmb IAmb 10 17 16.1
comp=Z,19nm,1.2s
PRN IAMs_20 IAMs_20 10 40 28.8
comp=Z,2µm,21.0s
W41B Gary Mavity, V 69.06 17 P **P** **10 16 48.8 -0.1**
baz=197,SNR=7.4
W41B Gary Mavity, V 69.06 17 P **P** **10 16 49.5 +0.6**
QUOK Quay 69.07 13 P **P** **10 16 49.4 +0.5**
CCUT Cedar City 69.12 358 P **P** **10 16 49.9 +0.3**
WHAR Wooly Hollow 69.16 16 P **P** **10 16 50.4 +0.8**
WHAR IAmb IAmb 10 17 15.3
comp=Z,36nm,1.3s
Z51A Franklin 69.37 23 IAMs_20 IAMs_20 10 42 41.0
comp=Z,2µm,20.0s
S22A 4UR Ranch, Cre 69.41 4 P **P** **10 16 52.8 +1.3**
baz=184,SNR=15
S22A 4UR Ranch, Cre 69.41 4 P **P** **10 16 52.4 +1.0**
S22A IAmb IAmb 10 17 06.4
comp=Z,18nm,1.2s
S22A IAMs_20 IAMs_20 10 41 45.0
comp=Z,2µm,20.0s
154A Montrose 69.45 25 IAMs_20 IAMs_20 10 41 29.0
comp=Z,2µm,22.0s
Y49A Blount Mountai 69.46 22 IAMs_20 IAMs_20 10 43 22.5
comp=Z,2µm,20.0s
SDCO Great Sand Dun 69.49 5 P **P** **10 16 52.7 +0.7**
baz=185,SNR=11
SDCO Great Sand Dun 69.49 5 P **P** **10 16 52.3 +0.3**
SDCO IAmb IAmb 10 17 11.1
comp=Z,26nm,1.4s
SDCO IAMs_20 IAMs_20 10 42 03.2
comp=Z,2µm,18.0s
OMMB Old Mammoth Mi 69.54 353 P **P** **10 16 51.4 -0.9**
OMMB IAMs_20 IAMs_20 10 40 30.7
comp=Z,2µm,21.0s
MLAC Mammoth, Mammo 69.54 354 P **P** **10 16 53.6 +1.5**
baz=173
MDPB Devils Postpil 69.56 353 IAMs_20 IAMs_20 10 40 31.4
comp=Z,2µm,20.0s
MTPU Mount Pierson 69.59 359 P **P** **10 16 53.0 +0.4**
PV01 Paradox Valley 69.72 2 P **P** **10 16 53.1 -0.1**
HHAR Hobbs 69.73 15 P **P** **10 16 53.5 +0.4**
PV13 Radium Mtn., P 69.74 2 P **P** **10 16 54.0 +0.7**
PV13 IAMs_20 IAMs_20 10 41 14.8
comp=Z,2µm,22.0s
KAN13 South Haven SW 69.75 12 P **P** **10 16 54.1 +0.9**
FCAR Ozark Folk Cen 69.78 16 P **P** **10 16 52.9 -0.4**
FCAR IAmb IAmb 10 17 20.1
comp=Z,22nm,1.2s
PV02 Paradox Valley 69.79 2 P **P** **10 16 54.3 +0.6**
PV02 IAmb IAmb 10 17 21.7
comp=Z,27nm,1.3s
U38A Gravette 69.79 14 P **P** **10 16 53.3 -0.1**
U38A IAmb IAmb 10 17 11.3
comp=Z,46nm,1.5s
X48A Hartselle 69.81 21 P **P** **10 16 54.0 +0.4**
X48A IAmb IAmb 10 17 06.6
comp=Z,20nm,1.4s
PV18 Skein Mesa, Pa 69.82 2 P **P** **10 16 54.0 +0.1**
PV18 IAmb IAmb 10 17 19.4
comp=Z,29nm,1.4s
T35A Sooner Cattle 69.83 13 P **P** **10 16 54.1 +0.4**
T35A IAmb IAmb 10 17 12.5
comp=Z,41nm,1.3s
T35A IAMs_20 IAMs_20 10 43 31.5
comp=Z,2µm,18.0s
PV03 Paradox Valley 69.83 2 P **P** **10 16 53.8 -0.2**
PV03 IAmb IAmb 10 17 04.3
comp=Z,26nm,1.3s
TPH Tonopah 69.84 355 P **P** **10 16 55.4 +1.4**
TPH pmax pmax
comp=Z,57nm,0.9s
TPH Tonopah 69.84 355 P **P** **10 16 55.4 +1.4**
PV17 East Wray Mesa 69.85 2 P **P** **10 16 54.0 0.0**
PV17 IAmb IAmb 10 17 08.4
comp=Z,18nm,1.1s
PV11 David Mesa, Pa 69.88 2 P **P** **10 16 54.7 +0.5**
PV11 IAmb IAmb 10 17 20.6
comp=Z,31nm,1.3s
PV11 IAMs_20 IAMs_20 10 45 06.5
comp=Z,2µm,18.0s
PV19 Morning Glory 69.88 2 P **P** **10 16 54.4 +0.1**
PV19 IAmb IAmb 10 17 03.7
comp=Z,23nm,1.4s
PV16 Nyswonger Mesa 69.89 2 P **P** **10 16 53.8 -0.4**
PV16 IAmb IAmb 10 17 22.2
comp=Z,23nm,1.3s
PV12 Saucer Basin, 69.90 2 P **P** **10 16 53.2 -1.1**
PV12 IAmb IAmb 10 16 56.8
comp=Z,19nm,1.0s
PV20 West Nyswonger 69.92 2 P **P** **10 16 54.8 +0.4**
PV20 IAmb IAmb 10 17 04.8
comp=Z,21nm,1.2s
PV15 Paradox Valley 69.93 2 P **P** **10 16 54.9 +0.3**
PV15 IAmb IAmb 10 17 09.8
comp=Z,19nm,1.0s
PV14 Lion Creek, Pa 69.94 2 IAMs_20 IAMs_20 10 41 40.3
comp=Z,2µm,21.0s
PV04 Paradox Valley 69.97 2 P **P** **10 16 55.1 +0.4**
PV04 IAMs_20 IAMs_20 10 41 12.9
comp=Z,2µm,20.0s
NVL N'lazarevskaya 69.97 163 *e*P **P** **10 16 52.9 -1.3**
NVL *e*S **S** **10 26 01.4 -2.7**
NVL pmax pmax
comp=Z,49nm,1.2s
R11A Troy Canyon, C 70.01 356 P **P** **10 16 56.3 +1.3**
baz=176,SNR=9.9
R11A Troy Canyon, C 70.01 356 P **P** **10 16 56.3 +1.3**
R11A IAmb IAmb 10 17 19.1
comp=Z,41nm,1.5s
R11A IAMs_20 IAMs_20 10 41 08.4
comp=Z,2µm,20.0s
PV07 Paradox Valley 70.02 2 P **P** **10 16 55.1 0.0**
PV07 IAMs_20 IAMs_20 10 43 32.4
comp=Z,2µm,21.0s

PV23 Carpenter Ridg 70.03 2 P **P** **10 16 55.6 +0.5**
PV23 IAmb IAmb 10 17 09.8
comp=Z,40nm,1.2s
GOGA Godfrey 70.04 24 IAMs_20 IAMs_20 10 42 11.7
comp=Z,3µm,22.0s
U40A Yellville 70.05 16 P **P** **10 16 56.6 +1.6**
baz=196
U40A Yellville 70.05 16 P **P** **10 16 54.0 -1.0**
U40A IAmb IAmb 10 17 21.9
comp=Z,27nm,1.2s
CMB Columbia Colle 70.10 352 P **P** **10 16 56.3 +0.9**
CMB pmax pmax
comp=Z,16nm,1.3s
CMB Columbia Colle 70.10 352 P **P** **10 16 56.3 +0.9**
CMB IAMs_20 IAMs_20 10 41 09.6
comp=Z,2µm,20.0s
PV22 Blue Mesa, Par 70.11 2 P **P** **10 16 56.0 +0.4**
PV22 IAmb IAmb 10 17 23.5
comp=Z,18nm,1.2s
PSUT Pine Spring 70.12 358 P **P** **10 16 55.8 +0.2**
LHV Little Huntoon 70.12 354 P **P** **10 16 57.0 +1.6**
LHV IAMs_20 IAMs_20 10 41 14.2
comp=Z,2µm,19.0s
Y52A Lilburn 70.24 24 IAMs_20 IAMs_20 10 42 32.1
comp=Z,3µm,22.0s
NV11 Mina Array Sit 70.27 354 P **P** **10 16 57.7 +1.1**
NV11 IAMs_20 IAMs_20 10 41 19.1
comp=Z,2µm,20.0s
NVAR Mina Array Bea 70.28 354 P **P** **10 16 57.1 +0.4**
comp=Z,9.1nm,0.8s,baz=188,slow=6.6,SNR=50
NVAR LR LR 10 42 06.3
comp=Z,2µm,18.1s,baz=178,slow=31
FPAL Fort Paine 70.35 22 IAMs_20 IAMs_20 10 43 45.9
comp=Z,2µm,20.0s
Q16A Castle Valley 70.46 0 P **P** **10 16 57.5 -0.3**
WAKR Walker 70.46 353 P **P** **10 16 58.7 +0.9**
WAKR IAMs_20 IAMs_20 10 42 03.2
comp=Z,2µm,18.0s
RYN Ryan 70.50 354 P **P** **10 16 58.9 +0.9**
RYN IAmb IAmb 10 17 10.8
comp=Z,16nm,1.0s
RYN IAMs_20 IAMs_20 10 41 35.1
comp=Z,2µm,19.0s
X51A Calhoun 70.62 23 IAMs_20 IAMs_20 10 43 50.0
comp=Z,2µm,20.0s
SRU San Rafael Swe 70.66 1 P **P** **10 16 58.7 -0.2**
SRU pmax pmax
comp=Z,34nm,1.3s
SRU San Rafael Swe 70.66 1 P **P** **10 16 58.7 -0.2**
Z56A Williston 70.73 26 IAMs_20 IAMs_20 10 44 28.8
comp=Z,2µm,18.0s
Q24A Divide 70.73 5 P **P** **10 16 59.3 -0.2**
baz=185
Q24A Divide 70.73 5 IAMs_20 IAMs_20 10 43 20.9
comp=Z,2µm,19.0s
SMCO Snowmass 70.83 3 IAMs_20 IAMs_20 10 42 02.6
comp=Z,2µm,22.0s
TMUT Trail Mountain 70.84 0 P **P** **10 17 01.0 +0.8**
SWET Sewanee 70.87 22 P **P** **10 17 00.0 -0.1**
SWET IAmb IAmb 10 17 13.7
comp=Z,26nm,1.2s
SWET IAMs_20 IAMs_20 10 44 04.7
comp=Z,2µm,21.0s
KVN Kaiserville 70.88 354 P **P** **10 17 01.5 +1.2**
KVN pmax pmax
comp=Z,47nm,1.3s
KVN Kaiserville 70.88 354 P **P** **10 17 01.5 +1.2**
KVN IAMs_20 IAMs_20 10 41 21.2
comp=Z,2µm,20.0s
R32A Long Quarter, 70.93 10 P **P** **10 17 01.1 +0.7**
MGMO Mountain Grove 70.95 16 P **P** **10 17 00.7 +0.2**
KSCO Kaye Shedlock' 71.00 7 P **P** **10 17 02.3 +1.4**
baz=188
KSCO Kaye Shedlock' 71.00 7 P **P** **10 17 01.8 +0.9**
KSCO IAMs_20 IAMs_20 10 44 40.0
comp=Z,2µm,18.0s
P17A Butcher Ranch, 71.02 0 P **P** **10 17 01.3 +0.2**
PBMO Poplar Bluff 71.04 18 P **P** **10 17 01.2 +0.1**
PBMO IAmb IAmb 10 17 27.8
comp=Z,28nm,1.3s
UTMT University of 71.05 19 P **P** **10 17 05.5 +4.4**
W50A Signal Mountai 71.05 22 IAMs_20 IAMs_20 10 44 07.5
comp=Z,2µm,20.0s
PNTR Pine Nut 71.06 353 P **P** **10 17 02.1 +0.7**
PNTR IAmb IAmb 10 17 14.2
comp=Z,21nm,1.1s
PNTR IAMs_20 IAMs_20 10 42 22.0
comp=Z,2µm,19.0s
AFDM Forest Hills D 71.07 352 P **P** **10 17 01.5 +0.3**
V48A Smith Brothers 71.08 21 P **P** **10 17 01.1 -0.2**
V48A IAmb IAmb 10 17 14.7
comp=Z,21nm,1.2s
V48A IAMs_20 IAMs_20 10 45 18.2
comp=Z,2µm,19.0s
RUBR Rubicon Trail 71.08 353 IAMs_20 IAMs_20 10 41 50.6
comp=Z,2µm,19.0s
T42A Van Buren 71.11 17 P **P** **10 17 01.1 -0.3**
WVT Waverly 71.14 20 IAMs_20 IAMs_20 10 46 09.0
comp=Z,2µm,19.0s
CBKS Cedar Bluff 71.16 9 P **P** **10 17 03.5 +1.7**
baz=190
S39A Bolivar 71.22 15 P **P** **10 17 02.2 +0.1**
VCNR Virginia City 71.27 353 P **P** **10 17 02.2 -0.5**
VCNR IAmb IAmb 10 17 26.4
comp=Z,24nm,1.5s
VCNR IAMs_20 IAMs_20 10 42 36.5
comp=Z,2µm,18.0s
W52A Murphy 71.41 23 IAMs_20 IAMs_20 10 43 30.9
comp=Z,3µm,21.0s
ISCO Idaho Springs 71.53 5 P **P** **10 17 04.9 +0.5**
ISCO pmax pmax
comp=Z,21nm,1.4s
ISCO Idaho Springs 71.53 5 P **P** **10 17 05.2 +0.9**
baz=185,SNR=12
ISCO Idaho Springs 71.53 5 P **P** **10 17 04.9 +0.5**
ISCO IAmb IAmb 10 17 31.3
comp=Z,21nm,1.4s
ISCO IAMs_20 IAMs_20 10 43 20.1
comp=Z,2µm,20.0s
CPCT Cooper Cave 71.53 23 IAMs_20 IAMs_20 10 44 09.3
comp=Z,2µm,20.0s
CLTN Cedars of Leba 71.55 21 IAMs_20 IAMs_20 10 45 09.8
comp=Z,2µm,20.0s
PAHR Pah Rah Range 71.65 353 P **P** **10 17 05.9 +1.0**
PAHR IAmb IAmb 10 17 17.6
comp=Z,32nm,1.5s
PAHR IAMs_20 IAMs_20 10 43 08.7
comp=Z,2µm,18.0s
O20A White River Ci 71.73 2 P **P** **10 17 06.6 +1.2**
baz=182,SNR=7.0
O20A White River Ci 71.73 2 P **P** **10 17 05.7 +0.3**
ORV Oroville 71.73 352 P **P** **10 17 06.0 +0.8**
ORV pmax pmax
comp=Z,17nm,1.4s
ORV Oroville 71.73 352 P **P** **10 17 06.0 +0.8**
DUG Dugway, Tooele 71.75 359 P **P** **10 17 06.0 +0.5**
DUG pmax pmax
comp=Z,30nm,1.5s
DUG Dugway, Tooele 71.75 359 P **P** **10 17 06.6 +1.1**
baz=178
DUG Dugway, Tooele 71.75 359 P **P** **10 17 06.0 +0.5**
DUG IAmb IAmb 10 17 31.8
comp=Z,30nm,1.4s
BEKR Beckworth 71.91 353 P **P** **10 17 06.2 -0.3**
V51A Loudon 71.91 23 IAMs_20 IAMs_20 10 43 38.4
comp=Z,3µm,22.0s
KSU1 Kansas State U 71.94 12 P **P** **10 17 07.4 +1.0**
baz=193
KSU1 Kansas State U 71.94 12 IAMs_20 IAMs_20 10 44 37.3
comp=Z,2µm,19.0s
CCM Cathedral Cave 72.05 16 P **P** **10 17 09.3 +2.2**
baz=198
U49A Red Boiling Sp 72.11 21 P **P** **10 17 07.7 +0.2**
RDMU Red Mountain 72.13 1 P **P** **10 17 07.9 +0.1**
JLU Jordanelle 72.14 360 P **P** **10 17 08.3 +0.4**
T47A Sharon Grove 72.15 20 P **P** **10 17 07.8 0.0**
T47A IAmb IAmb 10 17 22.1
comp=Z,23nm,1.1s
T47A IAMs_20 IAMs_20 10 45 47.7
comp=Z,2µm,20.0s
FVM French Village 72.18 17 P **P** **10 17 08.2 +0.3**
FVM pmax pmax
comp=Z,38nm,1.5s
FVM French Village 72.18 17 P **P** **10 17 08.2 +0.3**
FVM IAmb IAmb 10 17 33.2
comp=Z,38nm,1.5s

CTU Camp Tracy 72.23 360 P **P** **10 17 08.5 +0.1**
BIRD Birdtown, Kers 72.24 26 IAMs_20 IAMs_20 10 45 39.9
comp=Z,2µm,18.0s
V53A Saluda 72.31 24 P **P** **10 17 09.0 +0.2**
V53A IAmb IAmb 10 17 23.0
comp=Z,38nm,1.4s
V53A IAMs_20 IAMs_20 10 43 44.8
comp=Z,2µm,21.0s
KMSC Kings Mountain 72.36 25 IAMs_20 IAMs_20 10 44 46.1
comp=Z,2µm,21.0s
ELK Elko 72.38 357 P **P** **10 17 09.8 +0.5**
ELK pmax pmax
comp=Z,13nm,1.3s
ELK Elko 72.38 357 P **P** **10 17 09.8 +0.5**
ELK IAMs_20 IAMs_20 10 42 55.1
comp=Z,2µm,20.0s
BGU Big Grassy Mou 72.48 359 P **P** **10 17 10.5 +0.6**
O03E Paynes Creek 72.50 352 P **P** **10 17 10.9 +1.0**
baz=170
O02D Mt. Diablo Mer 72.51 351 P **P** **10 17 11.9 +2.0**
baz=170
Y60A Bolivia 72.56 28 IAMs_20 IAMs_20 10 45 44.1
comp=Z,2µm,18.0s
N23A Red Feather La 72.60 4 P **P** **10 17 11.9 +1.2**
baz=185,SNR=8.3
N23A Red Feather La 72.60 4 P **P** **10 17 11.8 +1.2**
N23A IAmb IAmb 10 17 37.0
comp=Z,49nm,1.4s
N23A IAMs_20 IAMs_20 10 43 27.4
comp=Z,2µm,22.0s
T50A Nancy 72.87 22 IAMs_20 IAMs_20 10 45 14.7
comp=Z,2µm,20.0s
WDC Whiskeytown Da 72.88 351 P **P** **10 17 12.2 +0.2**
WDC pmax pmax
comp=Z,18nm,1.1s
WDC Whiskeytown Da 72.88 351 P **P** **10 17 12.2 +0.2**
PHWY Pilot Hill 73.03 5 P **P** **10 17 13.8 +0.5**
PHWY IAMs_20 IAMs_20 10 43 41.9
comp=Z,2µm,22.0s
P38A Dawn 73.03 14 P **P** **10 17 14.7 +1.8**
P38A IAmb IAmb 10 17 26.7
comp=Z,33nm,1.4s
V55A Taylorsville 73.04 25 IAMs_20 IAMs_20 10 45 28.1
comp=Z,2µm,19.0s
HWUT Hardware Ranch 73.15 360 P **P** **10 17 13.4 -0.5**
HWUT IAMs_20 IAMs_20 10 43 40.2
comp=Z,2µm,20.0s
N02D Trinity Center 73.29 351 P **P** **10 17 15.6 +1.1**
baz=170
RWWY Rawlins 73.32 3 P **P** **10 17 14.6 -0.3**
RWWY IAmb IAmb 10 17 30.5
comp=Z,18nm,0.8s
Q44A Meyer Farm, Va 73.41 18 P **P** **10 17 15.8 +0.6**
Q44A IAmb IAmb 10 17 41.8
comp=Z,21nm,0.8s
U54A Nelsons Funny 73.42 24 IAMs_20 IAMs_20 10 44 49.3
comp=Z,2µm,20.0s
WCI Wyandotte Cave 73.54 20 IAMs_20 IAMs_20 10 46 27.5
comp=Z,2µm,20.0s
M02C Callahan 73.72 351 P **P** **10 17 17.9 +0.8**
baz=170
CNNC Cliffs of the 73.76 28 IAMs_20 IAMs_20 10 46 20.1
comp=Z,2µm,18.0s
N35A Tabor 73.82 12 P **P** **10 17 18.2 +0.6**
S51A Beattyville 73.83 23 IAMs_20 IAMs_20 10 45 20.2
comp=Z,3µm,21.0s
MOD Modoc Plateau 73.92 353 P **P** **10 17 19.1 +0.8**
MOD IAmb IAmb 10 17 30.9
comp=Z,25nm,1.1s
R49A Shelbyville 73.93 21 IAMs_20 IAMs_20 10 46 03.9
comp=Z,2µm,20.0s
BGNE Belgrade 73.94 10 P **P** **10 17 19.7 +1.5**
baz=191
BGNE Belgrade 73.94 10 IAMs_20 IAMs_20 10 45 17.4
comp=Z,3µm,21.0s
M04C Macdoel 73.97 352 P **P** **10 17 20.6 +2.0**
baz=170
YBH Yreka Blue Hor 74.03 351 P **P** **10 17 19.5 +0.6**
comp=Z,2.4nm,1.0s,baz=163,slow=11,SNR=4.6
R50A Paris 74.19 22 P **P** **10 17 19.4 -0.4**
R50A IAMs_20 IAMs_20 10 46 05.1
comp=Z,2µm,20.0s
AHID Auburn Hatcher 74.30 0 P **P** **10 17 19.7 -0.9**
AHID IAMs_20 IAMs_20 10 44 18.8
comp=Z,2µm,20.0s
K22A Casper 74.31 4 P **P** **10 17 22.3 +1.6**
baz=184,SNR=12
K22A Casper 74.31 4 P **P** **10 17 21.4 +0.8**
BW06 Boulder Array 74.32 1 P **P** **10 17 19.7 -1.0**
baz=181,SNR=10
BW06 Boulder Array 74.32 1 P **P** **10 17 20.2 -0.5**
BW06 IAmb IAmb 10 17 35.5
comp=Z,32nm,1.4s
PD31 Pinedale Array 74.32 1 P **P** **10 17 19.9 -0.9**
PD31 IAmb IAmb 10 17 45.9
comp=Z,32nm,1.4s
PDAR Pinedale Array 74.32 1 P **P** **10 17 20.0 -0.8**
comp=Z,8.5nm,1.0s,baz=163,slow=8.1,SNR=18
PDAR Pinedale Array 74.32 1 P **P** **10 17 19.3 -1.5**
L04D Klamath Falls 74.46 351 P **P** **10 17 20.7 -0.8**
baz=170
V60A Jim Taylor Roa 74.47 28 IAMs_20 IAMs_20 10 45 55.9
comp=Z,2µm,19.0s
RCBR Riachuelo 74.48 87 IAMs_20 IAMs_20 10 48 14.3
comp=Z,2µm,20.0s
BLA Blacksburg 74.54 25 IAMs_20 IAMs_20 10 47 28.8
comp=Z,1µm,18.0s
P46A Rosedale 74.57 19 IAMs_20 IAMs_20 10 48 07.8
comp=Z,1µm,20.0s
ECR Eagle Creek 74.59 360 P **P** **10 17 22.5 +0.2**
S54A Dingess, Beckl 74.75 24 IAMs_20 IAMs_20 10 45 10.4
comp=Z,2µm,22.0s
U59A Littleton 74.77 27 IAMs_20 IAMs_20 10 46 43.9
comp=Z,2µm,19.0s
K04D Chiloquin, OR 74.79 352 P **P** **10 17 24.5 +1.1**
baz=171
K05A Summer Lake 74.79 353 P **P** **10 17 24.4 +1.0**
K05A IAmb IAmb 10 17 52.3
comp=Z,47nm,1.2s
HDIL Hopedale 74.90 17 P **P** **10 17 25.7 +1.9**
baz=199
REDW Red Top Meadow 74.90 0 P **P** **10 17 24.3 +0.2**
REDW IAmb IAmb 10 17 49.5
comp=Z,44nm,1.4s
REDW IAMs_20 IAMs_20 10 44 58.6
comp=Z,2µm,20.0s
HUMO Hull Mountain 74.92 351 P **P** **10 17 24.8 +0.8**
SNOW Snow King Moun 75.00 0 P **P** **10 17 25.1 +0.4**
SNOW IAmb IAmb 10 17 31.9
comp=Z,30nm,1.4s
SNOW IAMs_20 IAMs_20 10 44 52.3
comp=Z,2µm,19.0s
R53A Hurricane 75.01 23 IAMs_20 IAMs_20 10 45 19.2
comp=Z,3µm,22.0s
TPAW Teton Pass 75.03 0 P **P** **10 17 25.4 +0.5**
TPAW IAMs_20 IAMs_20 10 44 42.0
comp=Z,2µm,20.0s
K31A O'Neill 75.04 9 IAMs_20 IAMs_20 10 46 18.6
comp=Z,2µm,20.0s
MFID Camas Ranch 75.07 357 P **P** **10 17 25.5 +0.6**
LOHW Long Hollow 75.15 0 P **P** **10 17 25.3 -0.2**
LOHW IAMs_20 IAMs_20 10 44 36.2
comp=Z,2µm,22.0s
HLID Hailey 75.16 358 P **P** **10 17 26.3 +0.8**
baz=177,SNR=28
HLID Hailey 75.16 358 P **P** **10 17 26.0 +0.5**
HLID IAmb IAmb 10 17 33.3
comp=Z,44nm,1.2s
HLID IAMs_20 IAMs_20 10 44 53.6
comp=Z,2µm,19.0s
Q51A Peebles 75.18 22 IAMs_20 IAMs_20 10 45 41.8
comp=Z,3µm,22.0s
J08A Circle Bar Ran 75.19 355 P **P** **10 17 27.0 +1.4**
J08A IAmb IAmb 10 17 37.3
comp=Z,30nm,1.3s
J08A IAMs_20 IAMs_20 10 44 27.2
comp=Z,2µm,19.0s
P49A Miami Univ. Ec 75.21 21 IAMs_20 IAMs_20 10 46 42.8
comp=Z,2µm,20.0s
MOOW Moose Ponds 75.29 0 P **P** **10 17 26.5 +0.2**
MOOW IAMs_20 IAMs_20 10 44 51.8
comp=Z,2µm,21.0s
SCIA State Center 75.30 14 IAMs_20 IAMs_20 10 46 55.0
comp=Z,2µm,19.0s
SFIN Lafayette 75.31 19 IAMs_20 IAMs_20 10 48 40.4
comp=Z,2µm,19.0s
J05D Fort Rock, OR 75.38 352 P **P** **10 17 28.2 +1.4**

baz=171,SNR=8.7
IMW **Indian Meadow** **75.44** **0** P **P** **10 17 27.7 +0.4**
IMW IAMs_20 IAMs_20 10 45 33.7
comp=Z,2µm,19.0s
J04D **Umpqua Nationa** **75.44 352** P **P** **10 17 27.9 +0.8**
baz=170
FLWY **Flagg Ranch** **75.62** **0** P **P** **10 17 29.0 +0.8**
FLWY IAmb IAmb 10 17 43.5
comp=Z,27nm,1.0s
FLWY IAMs_20 IAMs_20 10 45 13.7
comp=Z,2µm,21.0s
P51A **Williamsport** **75.68** **22** IAMs_20 IAMs_20 10 46 08.2
comp=Z,2µm,22.0s
S58A **Poland Farm, P** **75.77** **27** IAMs_20 IAMs_20 10 48 26.4
comp=Z,2µm,18.0s
PINE **Pine Mountain** **75.85 353** P **P** **10 17 30.6 +1.0**
PINE IAmb IAmb 10 17 42.9
comp=Z,26nm,0.9s
T60A **Surry** **75.87** **28** IAMs_20 IAMs_20 10 48 21.0
comp=Z,2µm,18.0s
BCYI **Bear Canyon** **75.87 358** P **P** **10 17 27.1 -2.6**
O49A **Covington** **75.93** **21** IAMs_20 IAMs_20 10 47 14.7
comp=Z,2µm,20.0s
H17A **Grant Village** **75.94** **0** P **P** **10 17 30.2 +0.1**
baz=180
H17A **Grant Village** **75.94** **0** P **P** **10 17 34.4 +4.4**
RSSD **Black Hills** **75.94** **5** P **P** **10 17 30.8 +0.7**
RSSD pmax pmax
comp=Z,27nm,1.2s
RSSD **Black Hills** **75.94** **5** P **P** **10 17 31.0 +0.9**
baz=186
RSSD **Black Hills** **75.94** **5** P **P** **10 17 30.8 +0.7**
RSSD IAmb IAmb 10 17 49.1
comp=Z,27nm,1.2s
R56A **Bull Pasture M** **75.97** **25** P **P** **10 17 30.3 +0.2**
baz=207
Q54A **Coxs Mills** **75.98** **24** IAMs_20 IAMs_20 10 45 58.8
comp=Z,2µm,20.0s
I07A **Izee** **76.00 354** P **P** **10 17 31.3 +1.1**
I07A IAmb IAmb 10 17 43.7
comp=Z,29nm,1.0s
I07A IAMs_20 IAMs_20 10 44 29.6
comp=Z,2µm,18.0s
K38A **Parkersburg** **76.10** **14** IAMs_20 IAMs_20 10 47 30.5
comp=Z,2µm,18.0s
LKWY **Lake** **76.11** **1** P **P** **10 17 30.5 -0.5**
LKWY pmax pmax
comp=Z,12nm,1.1s
LKWY **Lake** **76.11** **1** P **P** **10 17 30.5 -0.5**
LKWY IAMs_20 IAMs_20 10 45 52.5
comp=Z,2µm,20.0s
P52A **Corning** **76.12** **23** IAMs_20 IAMs_20 10 46 29.8
comp=Z,2µm,20.0s
R58B **Mineral** **76.15** **27** IAMs_20 IAMs_20 10 48 36.3
comp=Z,2µm,18.0s
YMR **Madison River** **76.21** **0** P **P** **10 17 32.5 +0.9**
P53A **Whipple** **76.24** **23** IAMs_20 IAMs_20 10 46 29.8
comp=Z,2µm,21.0s
YNR **Norris Junctio** **76.25** **0** P **P** **10 17 33.0 +1.2**
YHB **Horse Butte** **76.29** **0** P **P** **10 17 32.6 +0.6**
YHH **Holmes Hill** **76.33** **0** P **P** **10 17 33.0 +0.7**
QLMT **Earthquake Lak** **76.37 360** P **P** **10 17 33.9 +1.4**
MCMT **McKenzie Canyo** **76.38 359** P **P** **10 17 33.0 +0.5**
YHL **Hebgen Lake** **76.39** **0** P **P** **10 17 33.4 +0.7**
ACSO **Alum Creek Sta** **76.39** **22** IAMs_20 IAMs_20 10 46 42.9
comp=Z,2µm,22.0s
I05D **Terrebonne, OR** **76.44 353** P **P** **10 17 34.7 +2.1**
baz=171
ECSD **EROS Data Cent** **76.45** **11** P **P** **10 17 32.9 +0.3**
baz=193
ECSD **EROS Data Cent** **76.45** **11** P **P** **10 17 33.0 +0.3**
CBN **Corbin Frederi** **76.55** **27** IAMs_20 IAMs_20 10 49 01.9
comp=Z,2µm,19.0s
YNE **Yellowstone No** **76.55** **1** P **P** **10 17 34.0 +0.5**
BMO **Blue Mountains** **76.59 356** P **P** **10 17 34.1 +0.6**
BMO pmax pmax
comp=Z,12nm,1.1s
BMO **Blue Mountains** **76.59 356** P **P** **10 17 34.1 +0.6**
BMO IAMs_20 IAMs_20 10 45 07.7
comp=Z,1µm,18.0s
Q56A **Snyder Ridge,** **76.61** **25** IAMs_20 IAMs_20 10 48 33.6
comp=Z,1µm,18.0s
N49A **Columbus Grove** **76.65** **21** IAMs_20 IAMs_20 10 47 47.8
comp=Z,2µm,21.0s
O52A **Adamsville** **76.66** **23** P **P** **10 17 34.8 +0.9**
RLMT **Red Lodge** **76.68** **1** P **P** **10 17 35.6 +1.3**
baz=182,SNR=7.7
RLMT **Red Lodge** **76.68** **1** P **P** **10 17 34.8 +0.6**
RLMT IAmb IAmb 10 17 53.2
comp=Z,29nm,1.2s
PLID **Pearl Lake** **76.75 357** P **P** **10 17 34.6 0.0**
PLID IAmb IAmb 10 17 45.4
comp=Z,33nm,1.4s
SUSD **Miller** **76.80** **9** P **P** **10 17 36.0 +1.4**
baz=190
SUSD **Miller** **76.80** **9** IAMs_20 IAMs_20 10 47 14.2
comp=Z,2µm,20.0s
DLMT **Dillon** **76.91 359** P **P** **10 17 36.3 +0.9**
CASY **Casey** **77.04 196** P **P** **10 17 36.4 +0.6**
CASY IAmb IAmb 10 17 59.8
comp=Z,22nm,1.3s
CASY **Casey** **77.04 196** IAMs_20 IAMs_20 10 45 56.6
comp=Z,2µm,21.0s
L46A **Eue Claire** **77.05** **19** IAMs_20 IAMs_20 10 49 11.4
comp=Z,2µm,19.0s
SYO **Syowa Base** **77.11 170**⇑ *e*P **P** **10 17 34.1 -2.1**
SYO **Syowa Base** **77.11 170**⇑ *ep*P pP 10 17 38.0 -0.6
SYO **Syowa Base** **77.11 170**⇑ *e*X P 10 17 42.4 +6.2
SYO **Syowa Base** **77.11 170**⇓ *e*PP PP 10 20 27.0 -2.1
BOZ **Bozeman (W)** **77.14 360** P **P** **10 17 37.7 +1.0**
BOZ pmax pmax
comp=Z,14nm,1.2s
BOZ **Bozeman (W)** **77.14 360** P **P** **10 17 37.9 +1.2**
baz=180,SNR=10
BOZ **Bozeman (W)** **77.14 360** P **P** **10 17 37.6 +1.0**
G08A **Pilot Rock** **77.15 354** P **P** **10 17 37.9 +1.1**
G08A IAmb IAmb 10 17 50.1
comp=Z,21nm,1.0s
G08A IAMs_20 IAMs_20 10 46 24.1
comp=Z,2µm,18.0s
O54A **Avella** **77.20** **24** IAMs_20 IAMs_20 10 48 29.4
comp=Z,2µm,19.0s
N51A **Ashland** **77.21** **22** IAMs_20 IAMs_20 10 47 06.5
comp=Z,3µm,22.0s
I37A **Lemond, Waseca** **77.29** **13** P **P** **10 17 37.9 +0.5**
GCMT **Greycliff** **77.34** **1** P **P** **10 17 38.2 +0.3**
LRM **Limekiln Ridge** **77.37 359** P **P** **10 17 38.7 +0.6**
M50A **Fremont** **77.44** **21** IAMs_20 IAMs_20 10 47 36.6
comp=Z,2µm,20.0s
F10A **Beach Ranch, E** **77.70 356** P **P** **10 17 39.9 +0.1**
F10A IAmb IAmb 10 17 55.0
comp=Z,26nm,1.2s
F05D **White Salmon** **77.98 353** P **P** **10 17 43.5 +2.3**
baz=171
N54A **Moraine State** **78.03** **24** IAMs_20 IAMs_20 10 49 05.3
comp=Z,2µm,19.0s
AAM **Ann Arbor** **78.07** **21** IAMs_20 IAMs_20 10 48 51.4
comp=Z,2µm,20.0s
F04A **Amboy** **78.13 352** P **P** **10 17 42.8 +0.8**
F04A IAmb IAmb 10 17 54.6
comp=Z,33nm,1.0s
N55A **Marion Center** **78.22** **24** P **P** **10 17 43.0 +0.3**
baz=207
M53A **Wi Miller and** **78.23** **23** IAMs_20 IAMs_20 10 47 23.5
comp=Z,2µm,21.0s
HRY **Holter Researc** **78.25 360** P **P** **10 17 43.8 +1.0**
HAWA **Hanford** **78.29 354** P **P** **10 17 43.8 +0.9**
E09A **Wood Farm, Sta** **78.30 355** P **P** **10 17 43.6 +0.6**
E09A IAMs_20 IAMs_20 10 47 12.6
comp=Z,1µm,18.0s
E08A **Dider Farm, El** **78.35 354** P **P** **10 17 44.1 +0.9**
E08A IAmb IAmb 10 17 55.9
comp=Z,25nm,1.3s
E08A IAMs_20 IAMs_20 10 46 33.8
comp=Z,2µm,19.0s
LAO **LASA Array** **78.36** **4** P **P** **10 17 43.6 +0.2**
baz=184,SNR=8.5
LAO **LASA Array** **78.36** **4** P **P** **10 17 43.8 +0.4**
LAO IAmb IAmb 10 17 47.3
comp=Z,46nm,1.2s
MSO **Missoula** **78.41 358** P **P** **10 17 44.6 +0.9**
baz=178
MSO **Missoula** **78.41 358** P **P** **10 17 44.1 +0.4**
MSO IAMs_20 IAMs_20 10 47 28.5
comp=Z,1µm,18.0s
SSPA **Standing Stone** **78.48** **25** IAMs_20 IAMs_20 10 49 32.5
comp=Z,2µm,18.0s
MVL **Millersville** **78.50** **27** IAMs_20 IAMs_20 10 49 11.6
comp=Z,2µm,20.0s
F33A **5 Mile Ranch,** **78.55** **11** P **P** **10 17 44.5 +0.2**
F33A IAmb IAmb 10 18 01.0
comp=Z,25nm,1.4s
PAGS **Pennsylvania G** **78.56** **26** IAMs_20 IAMs_20 10 48 49.2
comp=Z,2µm,20.0s
SPMN **Marine on St.** **78.57** **13** P **P** **10 17 45.9 +1.4**
baz=196
SPMN **Marine on St.** **78.57** **13** IAMs_20 IAMs_20 10 48 40.7
comp=Z,1µm,19.0s
M54A **Oil Creek Stat** **78.63** **24** IAMs_20 IAMs_20 10 47 22.1
comp=Z,2µm,22.0s
E28A **Huff** **78.69** **7** P **P** **10 17 45.9 +0.7**
E28A IAmb IAmb 10 17 53.4
comp=Z,41nm,1.2s
E04D **Cinebar** **78.77 352** P **P** **10 17 46.0 +0.5**
baz=170
PSUB **Penn St. - Bra** **78.79** **27** IAMs_20 IAMs_20 10 49 14.1
comp=Z,1µm,19.0s
K50A **Casco** **78.81** **21** IAMs_20 IAMs_20 10 48 40.1
comp=Z,2µm,22.0s
P61A **Hammonton** **78.83** **28** IAMs_20 IAMs_20 10 50 11.5
comp=Z,1µm,19.0s
LON **Longmire** **78.87 353** P **P** **10 17 46.9 +0.7**
LON pmax pmax
comp=Z,17nm,1.4s
LON **Longmire** **78.87 353** P **P** **10 17 46.9 +0.7**
E03A **Lebam** **78.88 351** P **P** **10 17 47.3 +1.2**
E03A IAmb IAmb 10 17 59.1
comp=Z,28nm,1.1s
D08A **Wollman Farm,** **78.90 355** P **P** **10 17 46.5 +0.2**
D08A IAMs_20 IAMs_20 10 46 52.4
comp=Z,2µm,20.0s
M55A **Ridgway** **78.91** **24** IAMs_20 IAMs_20 10 49 20.4
comp=Z,2µm,20.0s
F36A **Milaca** **79.05** **12** P **P** **10 17 47.4 +0.3**
F36A IAmb IAmb 10 18 09.7
comp=Z,28nm,1.2s
ERPA **Erie** **79.06** **23** IAMs_20 IAMs_20 10 47 58.6
comp=Z,2µm,21.0s
N58A **Sunbury** **79.09** **26** IAMs_20 IAMs_20 10 51 24.3
comp=Z,2µm,18.0s
G40A **Rib Lake** **79.15** **15** P **P** **10 17 48.4 +0.7**
G40A IAmb IAmb 10 18 13.5
comp=Z,31nm,1.4s
LTY **Liberty** **79.25 353** P **P** **10 17 48.1 -0.1**
D05A **Enumclaw** **79.32 353** P **P** **10 17 48.5 0.0**
D05A IAmb IAmb 10 18 04.2
comp=Z,46nm,1.2s
JTMT **Jette** **79.33 358** P **P** **10 17 49.4 +0.6**
JTMT IAmb IAmb 10 18 01.6
comp=Z,24nm,1.0s
CAN **Canberra** **79.37 235** IAMs_20 IAMs_20 10 50 03.9
comp=Z,2µm,20.0s
M57A **Sunshine Farm,** **79.38** **25** IAMs_20 IAMs_20 10 50 14.8
comp=Z,2µm,19.0s
EGMT **Eagleton** **79.57** **1** P **P** **10 17 52.5 +2.5**
baz=181
EGMT **Eagleton** **79.57** **1** P **P** **10 17 51.1 +1.0**
EGMT IAmb IAmb 10 17 54.7
comp=Z,40nm,1.2s
EGMT IAMs_20 IAMs_20 10 47 20.2
comp=Z,1µm,20.0s
C09A **Chrisman Ranch** **79.59 355** P **P** **10 17 50.7 +0.6**
C09A IAmb IAmb 10 18 10.8
comp=Z,40nm,1.4s
C09A IAMs_20 IAMs_20 10 48 09.7
comp=Z,2µm,18.0s
D32A **Dogwood Acres,** **79.71** **10** IAMs_20 IAMs_20 10 49 09.1
comp=Z,2µm,19.0s
NLWA **Neilton Lookou** **79.75 351** P **P** **10 17 52.1 +1.2**
NLWA IAmb IAmb 10 18 06.7
comp=Z,39nm,1.3s
BRNJ **Basking Ridge** **79.78** **27** IAMs_20 IAMs_20 10 50 34.4
comp=Z,1µm,18.0s
D03D **Eldon** **79.79 352** P **P** **10 17 52.7 +1.6**
baz=170
WVNY **West Valley, N** **79.79** **24** IAMs_20 IAMs_20 10 49 30.8
comp=Z,2µm,20.0s
I49A **Point Hope** **79.81** **20** IAMs_20 IAMs_20 10 49 15.6
comp=Z,2µm,20.0s
L56A **Greenwood** **79.92** **25** P **P** **10 17 52.8 +0.8**
baz=208
L56A **Greenwood** **79.92** **25** P **P** **10 17 52.6 +0.6**
L56A IAmb IAmb 10 17 59.5
comp=Z,61nm,1.4s
L56A IAMs_20 IAMs_20 10 50 19.2
comp=Z,2µm,20.0s
NEW **Newport** **79.98 356** P **P** **10 17 52.1 -0.1**
comp=Z,12nm,1.0s,baz=163,slow=4.4,SNR=16
NEW **Newport** **79.98 356** P **P** **10 17 52.7 +0.5**
NEW pmax pmax
comp=Z,30nm,1.1s
NEW **Newport** **79.98 356** P **P** **10 17 54.1 +1.9**
baz=175,SNR=22
NEW **Newport** **79.98 356** P **P** **10 17 52.7 +0.5**
NEW IAmb IAmb 10 18 05.2
comp=Z,30nm,1.1s
NEW **Newport** **79.98 356** IAMs_20 IAMs_20 10 47 13.3
comp=Z,1µm,20.0s
G45A **Suttons Bay** **80.03** **18** IAMs_20 IAMs_20 10 50 11.4
comp=Z,1µm,19.0s
MDND **Maddock** **80.07** **8** IAMs_20 IAMs_20 10 48 55.8
comp=Z,2µm,21.0s
ODNJ **Ogdensburg** **80.11** **27** IAMs_20 IAMs_20 10 50 02.1
comp=Z,1µm,20.0s
GLMI **Grayling** **80.11** **19** IAMs_20 IAMs_20 10 50 42.5
comp=Z,2µm,18.0s
E38A **The Farm, Brul** **80.14** **14** IAMs_20 IAMs_20 10 49 49.2
comp=Z,1µm,18.0s
B08A **Colville Reser** **80.23 355** P **P** **10 17 53.7 +0.2**
B08A IAMs_20 IAMs_20 10 47 40.5
comp=Z,1µm,20.0s
DGMT **Dagmar** **80.26** **5** P **P** **10 17 55.7 +2.1**
baz=186
DGMT **Dagmar** **80.26** **5** P **P** **10 17 54.8 +1.2**
DGMT **Dagmar** **80.26** **5** IAMs_20 IAMs_20 10 48 19.0
comp=Z,2µm,21.0s
PAL **Palisades** **80.31** **28** IAMs_20 IAMs_20 10 48 52.6
comp=Z,1µm,20.0s
B05A **Bryant** **80.40 353** P **P** **10 17 55.9 +1.6**
baz=171
MEDO **Medina** **80.51** **24** IAMs_20 IAMs_20 10 50 04.9
comp=Z,2µm,20.0s
BINY **Binghamton** **80.55** **26** IAMs_20 IAMs_20 10 51 35.7
comp=Z,2µm,20.0s
WALA **Waterton Lakes** **80.63 358** P **P** **10 17 55.4 -0.4**
MAW **Mawson** **80.70 178** P **P** **10 17 55.6 -0.4**
comp=Z,6.8nm,1.0s,baz=193,slow=6.8,SNR=11
MAW LR LR 10 51 15.6
comp=Z,2µm,18.2s,baz=190,slow=34
MAW **Mawson** **80.70 178** P **P** **10 17 56.4 +0.5**
MAW pmax pmax
comp=Z,3.0nm,1.2s
MAW **Mawson** **80.70 178** P **P** **10 17 56.4 +0.5**
J55A **Hilton** **80.82** **24** IAMs_20 IAMs_20 10 50 44.1
comp=Z,1µm,18.0s
A04D **Lummi Island** **80.91 352** P **P** **10 17 59.9 +2.8**
baz=170
E43A **Lone Tree Farm** **80.94** **17** IAMs_20 IAMs_20 10 51 27.1
comp=Z,2µm,18.0s
YLE **Yale** **80.97** **28** IAMs_20 IAMs_20 10 47 49.8
comp=Z,1µm,21.0s
AGMN **Agassiz Nation** **81.02** **10** P **P** **10 17 58.1 +0.5**
baz=193
AGMN **Agassiz Nation** **81.02** **10** P **P** **10 17 58.3 +0.7**
AGMN IAmb IAmb 10 18 19.7
comp=Z,32nm,1.4s
AGMN IAMs_20 IAMs_20 10 49 57.6
comp=Z,2µm,20.0s
J56A **Wolcott** **81.17** **25** IAMs_20 IAMs_20 10 51 15.2
comp=Z,2µm,20.0s
TRY **Troy** **81.88** **27** IAMs_20 IAMs_20 10 49 46.0
comp=Z,1µm,20.0s
DELO **Delano Mine** **81.99** **24** IAMs_20 IAMs_20 10 51 07.1
comp=Z,2µm,19.0s
QUA2 **Belchertown** **82.01** **28** IAMs_20 IAMs_20 10 48 08.5
comp=Z,1µm,21.0s
BRYW **Bryant College** **82.04** **29** IAMs_20 IAMs_20 10 49 44.2
comp=Z,1µm,19.0s
M65A **Busby, Falmout** **82.11** **30** IAMs_20 IAMs_20 10 51 13.4
comp=Z,1µm,18.0s
I57A **Carthage** **82.17** **25** P **P** **10 18 05.3 +1.4**
baz=210
J59A **Piesco** **82.19** **26** P **P** **10 18 04.9 +0.8**
baz=211
I58A **Old Forge** **82.21** **26** P **P** **10 18 05.3 +1.2**
baz=210
K62A **Royalston** **82.39** **28** IAMs_20 IAMs_20 10 49 13.7
comp=Z,1µm,19.0s
J60A **Lant Hill Farm** **82.41** **27** P **P** **10 18 06.6 +1.5**
baz=212
WES **Weston** **82.52** **29** IAMs_20 IAMs_20 10 48 27.8
comp=Z,2µm,21.0s
HRV **Adam Dziewonsk** **82.52** **28** IAMs_20 IAMs_20 10 48 29.0
comp=Z,2µm,21.0s
PLVO **Plevna** **82.64** **24** IAMs_20 IAMs_20 10 52 06.1
comp=Z,2µm,18.0s
H57A **Richville** **82.72** **25** P **P** **10 18 08.4 +1.7**
baz=210
ULM **Lac du Bonnet** **82.92** **10** P **P** **10 18 07.3 -0.3**
comp=Z,6.0nm,0.9s,baz=178,slow=3.1,SNR=3.6
ULM LR LR 10 51 26.2
comp=Z,2µm,19.1s,baz=180,slow=33
ULM **Lac du Bonnet** **82.92** **10** *i* P **P** **10 18 08.0 +0.4**
ULM **Lac du Bonnet** **82.92** **10** IAmb IAmb 10 18 16.9
comp=Z,17nm,1.2s
ULM IAMs_20 IAMs_20 10 51 06.0
comp=Z,2µm,20.0s
H58A **Gabriels** **83.12** **26** P **P** **10 18 10.3 +1.4**
baz=211
FFD **Franklin Falls** **83.29** **28** IAMs_20 IAMs_20 10 50 01.4
comp=Z,1µm,20.0s
G57A **Newington** **83.42** **25** P **P** **10 18 12.2 +1.9**
baz=210
FRNY **Flat Rock** **83.70** **26** IAMs_20 IAMs_20 10 52 23.2
comp=Z,1µm,19.0s
I62A **Tamworth** **83.76** **28** IAMs_20 IAMs_20 10 50 02.6
comp=Z,2µm,21.0s
G58A **Ormstown** **83.80** **25** P **P** **10 18 14.0 +1.7**
baz=211
G59A **Clarenceville** **84.06** **26** P **P** **10 18 13.7 +0.1**
baz=212
H61A **Lyndonville** **84.08** **27** P **P** **10 18 15.6 +1.8**
baz=213
F57A **Harrington** **84.14** **25** P **P** **10 18 15.7 +1.7**
baz=210
I63A **Otisfield** **84.20** **28** IAMs_20 IAMs_20 10 50 12.5
comp=Z,1µm,21.0s
G62A **West of Eustis** **85.19** **28** IAMs_20 IAMs_20 10 50 02.7
comp=Z,2µm,22.0s
VLDQ **Val d'Or** **85.21** **22** IAMs_20 IAMs_20 10 51 18.1
comp=Z,2µm,22.0s
STKA **Stephens Creek** **86.41 235** P **P** **10 18 25.8 -0.2**
comp=Z,5.3nm,1.1s,baz=341,slow=6.3,SNR=3.4
STKA LR LR 10 50 56.9
comp=Z,637nm,20.0s,baz=115,slow=31
FFC **Flin Flon** **86.64** **5** P **P** **10 18 25.9 -0.4**
FFC pmax pmax
comp=Z,32nm,1.2s
FFC **Flin Flon** **86.64** **5** P **P** **10 18 25.9 -0.4**
D62A **Allapoint, All** **87.31** **27** IAMs_20 IAMs_20 10 53 48.8
comp=Z,1µm,20.0s
HAL **Halifax** **87.65** **32** IAMs_20 IAMs_20 10 51 19.6
comp=Z,1µm,21.0s
BBOO **Buckleboo** **89.60 231** IAMs_20 IAMs_20 10 51 34.4
comp=Z,2µm,20.0s
CTA **Charters Tower** **89.64 247** P **P** **10 18 42.2 +0.6**
comp=Z,3.4nm,0.8s,baz=45,slow=7.1,SNR=2.9
FCC **Fort Churchill** **91.45** **9** IAMs_20 IAMs_20 10 56 16.7
comp=Z,2µm,20.0s
YKA **Yellowknife Ar** **94.10 358** P **P** **10 19 00.9 -0.2**
comp=Z,1.9nm,0.8s,baz=180,slow=3.0,SNR=3.0
SCHQ **Schefferville** **94.43** **24** P **P** **10 19 03.3 +0.5**
comp=Z,3.5nm,0.8s,baz=297,slow=4.5,SNR=3.6
SCHQ LR LR 10 57 16.4
comp=Z,1µm,21.9s,baz=187,slow=33
SCHQ **Schefferville** **94.43** **24** IAmb IAmb 10 19 23.2
comp=Z,14nm,1.1s
PMG **Port Moresby** **94.80 256** *i* P **P** **10 19 07.9 +2.4**
PMG pmax pmax
comp=Z,11nm,1.0s
TABL **Table Mountain** **95.23 346** IAMs_20 IAMs_20 10 51 55.8
comp=Z,1µm,20.0s
FID **Port Fidalgo** **96.72 343** IAMs_20 IAMs_20 10 52 07.5
comp=Z,2µm,22.0s
ASAR **Alice Springs** **96.78 237** P **P** **10 19 14.7 +0.2**
comp=Z,0.8nm,0.9s,baz=133,slow=5.0,SNR=4.6
ASAR LR LR 10 59 37.7
comp=Z,977nm,18.1s,baz=148,slow=33
WR8 **Warramunga Arr** **98.66 240** IAMs_20 IAMs_20 11 01 46.5
comp=Z,2µm,19.0s
WR6 **Warramunga Arr** **98.69 240** IAMs_20 IAMs_20 11 01 56.4
comp=Z,1µm,18.0s
WR4 **Warramunga Arr** **98.73 240** IAMs_20 IAMs_20 10 55 54.4
comp=Z,1µm,22.0s
WR3 **Warramunga Arr** **98.75 240** IAMs_20 IAMs_20 10 55 55.8
comp=Z,1µm,21.0s
WC3 **Warramunga Arr** **98.75 240** IAMs_20 IAMs_20 10 55 54.9
comp=Z,1µm,21.0s
WR2 **Warramunga Arr** **98.77 240** IAMs_20 IAMs_20 11 05 35.3
comp=Z,1µm,19.0s
WB1 **Warramunga Ar.** **98.77 240** IAMs_20 IAMs_20 11 06 38.4
comp=Z,1µm,18.0s
WB2 **Warramunga Arr** **98.78 240** IAMs_20 IAMs_20 11 04 34.6
comp=Z,974nm,18.0s
WC2 **Warramunga Arr** **98.78 240** IAMs_20 IAMs_20 11 04 26.6
comp=Z,976nm,18.0s
WRAB **Tennant Creek** **98.78 240** *i* P **P** **10 19 22.5 -1.0**
WRAB pmax pmax
comp=Z,2.0nm,1.1s
WRAB **Tennant Creek** **98.78 240** IAMs_20 IAMs_20 11 04 35.6
comp=Z,909nm,18.0s
WR1 **Warramunga Arr** **98.79 240** IAMs_20 IAMs_20 11 06 37.6
comp=Z,1µm,18.0s
WRA **Warramunga Arr** **98.79 240** LR LR 11 01 25.4
comp=Z,657nm,18.1s,baz=170,slow=34
WB5 **Warramunga Arr** **98.81 240** IAMs_20 IAMs_20 11 08 45.3
comp=Z,1µm,21.0s
WB7 **Warramunga Arr** **98.82 240** IAMs_20 IAMs_20 11 02 08.9
comp=Z,1µm,19.0s
WB6 **Warramunga Arr** **98.82 240** IAMs_20 IAMs_20 10 55 33.2
comp=Z,1µm,22.0s
WB8 **Warramunga Arr** **98.83 240** IAMs_20 IAMs_20 11 02 19.1
comp=Z,1µm,18.0s
ILAR **Eielson Array** **100.31 345** P **Pdif** **10 19 30.1 +0.9**
comp=Z,0.7nm,1.0s,baz=180,slow=3.6,SNR=5.0
ILAR **Eielson Array** **100.31 345** *i* P **Pdif** **10 19 29.8 +0.7**
ILAR **Eielson Array** **100.31 345** **Pdif** **10 19 29.8 +0.7**
NWAO **Narrogin (SRO)** **100.95 220** IAMs_20 IAMs_20 10 57 32.5
comp=Z,1µm,19.0s
H01W1 **Cape Leeuwin H** **101.05 217** T T 12 12 33.7
baz=140,slow=75,SNR=29
H01W2 **Cape Leeuwin H** **101.06 217** T T 12 12 29.5
baz=140,slow=75,SNR=32
H01W3 **Cape Leeuwin H** **101.07 217** T T 12 12 36.9
baz=140,slow=75,SNR=25
KNRA **Kununurra** **105.58 240** IAMs_20 IAMs_20 11 05 19.9
comp=Z,1µm,18.0s
FITZ **Fitzroy Crossi** **106.25 236** IAMs_20 IAMs_20 11 03 46.1
comp=Z,1µm,20.0s
TOC5 **Torodi Ar. Sit** **116.17** **90** IAMs_20 IAMs_20 11 08 45.0
comp=Z,1µm,20.0s
TOB4 **Torodi Ar. Sit** **116.18** **90** IAMs_20 IAMs_20 11 06 40.3
comp=Z,1µm,21.0s
TOA3 **Torodi Ar. Sit** **116.19** **90** IAMs_20 IAMs_20 11 06 40.6
comp=Z,1µm,22.0s
TORD **Torodi Ar. Bea** **116.20** **90** PKP **PKPdf** **10 24 25.6 -1.6**
comp=Z,1.8nm,1.0s,baz=293,slow=3.0,SNR=6.4
TOB3 **Torodi Ar. Sit** **116.20** **90** IAMs_20 IAMs_20 11 08 44.8
comp=Z,1µm,20.0s
TOA2 **Torodi Ar. Sit** **116.20** **90** IAMs_20 IAMs_20 11 08 44.8
comp=Z,1µm,19.0s
BILL **Bilibino** **116.46 335**⇑ *e*PKIKP **PKiKP** **10 24 28.8 +2.7**
BILL *e* 10 25 34.4
BILL *e*PPP PPP 10 28 06.7
BILL *e* 10 31 38.2
BILL *e*SS SS 10 41 39.3 +1.3
BILL pmax pmax
comp=Z,5.0nm,1.6s
COI **Coimbra** **118.85** **58** IAMs_20 IAMs_20 11 13 55.3
comp=Z,1µm,18.0s
KAPI **Kappang** **119.20 242** IAMs_20 IAMs_20 11 14 20.1
comp=Z,858nm,19.0s
MA2 **Magadan** **120.87 324** *i* PKIKP **PKiKP** **10 24 36.4 +1.4**
MA2 pmax pmax
comp=Z,19nm,1.2s
MA2 **Magadan** **120.87 324** IAMs_20 IAMs_20 11 07 49.0
comp=Z,1µm,20.0s
JAGI **Jajag, Banyuwa** **120.94 235** IAMs_20 IAMs_20 11 12 17.2
comp=Z,1µm,20.0s
JYT **Yasato** **121.91 295** IAMs_20 IAMs_20 11 05 18.0
comp=Z,1µm,22.0s

ESDC	**Sonseca Array**	**121.95**	**60**	PKP	**PKPdf**	**10 24 35.8**	**-1.8**		
	comp=Z,2.4nm,1.2s,baz=276,slow=3.5,SNR=6.1								
JMM	**Marumori**	**121.96**	**297**	IAMs_20	IAMs_20	11 16 27.2			
	comp=Z,926nm,19.0s								
YSS	**Yuzh-Sakhalins**	**122.95**	**308**	*i* PKIKP	**PKPdf**	**10 24 39.2**	**0.0**		
YSS				*e*		10 31 38.2			
TAM	**Tamanrasset**	**123.76**	**82**	IAMs_20	IAMs_20	11 13 34.6			
	comp=Z,1μm,22.0s								
JGF	**Kuroka**	**123.91**	**294**	IAMs_20	IAMs_20	11 10 16.0			
	comp=Z,783nm,20.0s								
JSD	**Sado**	**123.92**	**297**	IAMs_20	IAMs_20	11 07 57.2			
	comp=Z,844nm,22.0s								
MYLDM	**Lahad Datu**	**126.50**	**251**	IAMs_20	IAMs_20	11 17 33.7			
	comp=Z,1μm,20.0s								
JSU	**Suzuyama**	**128.18**	**287**	IAMs_20	IAMs_20	11 23 26.2			
	comp=Z,722nm,18.0s								
KKM	**Kota Kinabalu**	**128.84**	**250**	IAMs_20	IAMs_20	11 18 08.6			
	comp=Z,967nm,21.0s								
TIXI	**Tiksi**	**129.28**	**339**	*i* PKIKP	**PKPdf**	**10 24 51.0**	**+0.4**		
TIXI	**Tiksi**	**129.28**	**339**	IAMs_20	IAMs_20	11 20 20.3			
	comp=Z,750nm,19.0s								
USRK	**Ussuriysk Ar.**	**129.88**	**303**	PKP	**PKPdf**	**10 24 50.9**	**-1.7**		
	comp=Z,0.4nm,0.5s,baz=46,slow=4.2,SNR=2.2								
USRK	**Ussuriysk Ar.**	**129.88**	**303**	PKIKP	**PKPdf**	**10 24 51.4**	**-1.2**		
USRK	**Ussuriysk Ar.**	**129.88**	**303**		**PKPdf**	**10 24 51.4**	**-1.2**		
JTU	**Tsushima**	**129.88**	**290**	IAMs_20	IAMs_20	11 10 55.2			
	comp=Z,1μm,22.0s								
KLR	**Kul'dur**	**130.58**	**310**	PKP	**PKPdf**	**10 24 54.0**	**+0.3**		
	comp=Z,1.9nm,0.9s,baz=55,slow=8.7,SNR=4.4								
KLR	**Kul'dur**	**130.58**	**310**	*i* PKIKP	**PKPdf**	**10 24 53.7**	**-0.1**		
KLR				pmax	pmax				
	comp=Z,2.0nm,1.0s								
PMBI	**Palembang**	**131.35**	**231**	IAMs_20	IAMs_20	11 14 17.2			
	comp=Z,941nm,22.0s								
KSRS	**Korea Array**	**131.73**	**294**	PKP	**PKiKP**	**10 24 57.4**	**+0.1**		
	comp=Z,1.1nm,0.8s,baz=171,slow=8.9,SNR=4.1								
VSL	**Villasalto**	**131.92**	**64**	IAMs_20	IAMs_20	11 21 34.4			
	comp=Z,1μm,22.0s								
YOJ	**Yonaguni jima**	**132.04**	**275**	IAMs_20	IAMs_20	11 05 54.1			
	comp=Z,908nm,20.0s								
MSSA	**Maissana**	**132.70**	**57**	IAMs_20	IAMs_20	11 22 55.8			
	comp=Z,600nm,20.0s								
INCN	**Inchon**	**132.74**	**293**	IAMs_20	IAMs_20	11 14 52.8			
	comp=Z,883nm,20.0s								
NOA	**NORSAR Array B**	**132.96**	**34**	PKP	**PKPdf**	**10 24 55.8**	**-2.1**		
	comp=Z,1.1nm,0.9s,baz=296,slow=2.0,SNR=2.1								
TWG	**Pinlang**	**133.06**	**272**		PKPpre	10 24 53.2			
TWG				IAMs_20	IAMs_20	11 15 46.9			
	comp=Z,943nm,20.0s								
YULB	**Yu-li**	**133.09**	**273**	IAMs_20	IAMs_20	11 23 11.9			
	comp=Z,866nm,19.0s								
DAVA	**Damuels**	**133.18**	**53**	*e*P	**PKiKP**	**10 25 04.1**	**+3.9**		
	comp=Z,14nm,2.0s								
VLC	**Villacollemand**	**133.31**	**57**	IAMs_20	IAMs_20	11 24 28.8			
	comp=Z,705nm,21.0s								
FUORN	**Ofenpass-Fuorn**	**133.41**	**54**	PKPdf	**PKPdf**	**10 24 58.7**	**-0.9**		
FUORN				IAMs_20	IAMs_20	11 26 53.4			
	comp=Z,982nm,20.0s								
SSLB	**Suanglung**	**133.53**	**274**	IAMs_20	IAMs_20	11 14 10.6			
	comp=Z,726nm,21.0s								
TPUB	**Ta-pu**	**133.62**	**273**	IAMs_20	IAMs_20	11 13 33.0			
	comp=Z,998nm,21.0s								
FETA	**Feichten**	**133.75**	**53**	*e*P	**PKPdf**	**10 25 00.7**	**+0.7**		
	comp=Z,6.2nm,1.0s								
ZCCA	**Zocca**	**133.75**	**57**	IAMs_20	IAMs_20	11 06 20.5			
	comp=Z,850nm,20.0s								
OSSC	**Osservatorio P**	**133.87**	**58**	IAMs_20	IAMs_20	11 25 25.7			
	comp=Z,987nm,22.0s								
MOTA	**Moosalm**	**134.02**	**53**	*e*P	**PKPdf**	**10 25 01.1**	**+0.5**		
	comp=Z,17nm,1.5s								
SQTA	**Sankt Quirin**	**134.08**	**53**	*e*P	**PKPdf**	**10 25 01.3**	**+0.7**		
	comp=Z,11nm,1.2s								
WATA	**Walderalm**	**134.34**	**53**	*e*P	**PKPdf**	**10 25 01.5**	**+0.4**		
	comp=Z,7.8nm,0.9s								
CTI	**Castel Tesino**	**134.34**	**55**	IAMs_20	IAMs_20	11 22 57.0			
	comp=Z,792nm,20.0s								
WTTA	**Wattenberg**	**134.38**	**53**	*e*P	**PKPdf**	**10 25 01.8**	**+0.6**		
	comp=Z,21nm,2.1s								
ABTA	**Abfaltersbach**	**134.96**	**54**	*e*P	**PKiKP**	**10 25 03.1**	**-0.6**		
	comp=Z,8.1nm,1.4s								
CLL	**Collm**	**135.21**	**47**	*e*PKPdf	**PKPdf**	**10 25 03.0**	**+0.6**		
	comp=Z,69nm,2.4s								
CLL				*e*		10 25 17.0			
CLL				*e*PP	PP	10 27 30.0	-8.6		
CLL				*e*(SP)		10 37 48.0			
CLL				*e*SS	SS	10 45 18.0	-16		
CLL				*e*		10 46 36.0			
CLL				*e*SSS	SSS	10 50 30.0			
CLL				*e*(SSSS)		10 53 48.0			
CLL	**Collm**	**135.21**	**47**	*e*PKIKP	**PKPdf**	**10 25 03.0**	**+0.6**		
CLL				pmax	pmax				
	comp=Z,69nm,2.4s								
ZOU	**Zoufplan**	**135.27**	**54**	IAMs_20	IAMs_20	11 29 54.7			
	comp=Z,703nm,19.0s								
MYKOM	**Kota Tinggi**	**135.41**	**235**	IAMs_20	IAMs_20	11 16 49.7			
	comp=Z,975nm,21.0s								
KEV	**Kevo**	**135.55**	**19**	IAMs_20	IAMs_20	11 17 08.4			
	comp=Z,971nm,22.0s								
KHC	**Kasperske Hory**	**135.67**	**51**	*e*PKIKP	**PKPdf**	**10 25 02.6**	**-0.8**		
KHC	**Kasperske Hory**	**135.67**	**51**	*e*PKPDF	**PKPdf**	**10 25 02.6**	**-0.8**		
SSE	**Sheshan**	**135.68**	**283**	IAMs_20	IAMs_20	11 10 54.4			
	comp=Z,657nm,18.0s								
GEC2	**GERESS Array S**	**135.76**	**51**		**PKPdf**	**10 25 03.5**	**-0.2**		
GEC2				IAMs_20	IAMs_20	11 34 06.1			
	comp=Z,706nm,20.0s								
GERES	**GERESS Array B**	**135.76**	**51**	PKP	**PKPdf**	**10 25 03.1**	**-0.6**		
	comp=Z,1.8nm,0.9s,baz=333,slow=1.5,SNR=9.5								
GERES	**GERESS Array B**	**135.76**	**51**	PKIKP	**PKPdf**	**10 25 03.6**	**-0.1**		
GERES	**GERESS Array B**	**135.76**	**51**	PKPdf	**PKPdf**	**10 25 03.6**	**-0.1**		
TRI	**Trieste**	**135.80**	**55**	IAMs_20	IAMs_20	11 26 45.7			
	comp=Z,857nm,18.0s								
BRG	**Berggiesshubel**	**135.83**	**48**	*e*(P)	**PKiKP**	**10 25 05.1**	**-0.1**		
	comp=Z,29nm,2.0s								
BRG	**Berggiesshubel**	**135.83**	**48**	*e*PKIKP	**PKiKP**	**10 25 05.1**	**-0.1**		
BRG				pmax	pmax				
	comp=Z,29nm,2.0s								
MOA	**Molln**	**136.16**	**52**	*e*P	**PKPdf**	**10 25 04.0**	**-0.3**		
	comp=Z,3.6nm,1.1s								
BKNI	**Bangkinang**	**136.24**	**231**	IAMs_20	IAMs_20	11 24 41.0			
	comp=Z,698nm,20.0s								
SOKA	**Soboth**	**136.69**	**54**	*e*P	**PKPdf**	**10 25 05.3**	**-0.2**		
	comp=Z,14nm,1.5s								
CONA	**Conrad Observa**	**137.23**	**52**	P	**PKiKP**	**10 25 08.4**	**+0.1**		
	comp=Z,10nm,1.3s								
KRLC	**Kraliky**	**137.70**	**49**	*e*PKIKP	**PKiKP**	**10 25 11.2**	**+2.1**		
KRLC	**Kraliky**	**137.70**	**49**	*e*PKPDF	**PKiKP**	**10 25 11.2**	**+2.1**		
NJ2	**Nanjing**	**137.84**	**284**	*e*PKP	**PKiKP**	**10 25 09.1**	**-0.8**		
MODS	**Modra-Piesok**	**138.16**	**51**	*e*PKIKP	**PKiKP**	**10 25 14.1**	**+4.0**		
MODS	**Modra-Piesok**	**138.16**	**51**	*e*PKP	**PKiKP**	**10 25 14.1**	**+4.0**		
MORC	**Moravsky Berou**	**138.22**	**49**	IAMs_20	IAMs_20	11 34 53.3			
	comp=Z,769nm,20.0s								
HKPS	**Hong Kong Po S**	**138.74**	**268**	IAMs_20	IAMs_20	11 16 03.5			
	comp=Z,760nm,21.0s								
VYHS	**Vyhne**	**139.18**	**51**	*e*PKIKP	**PKiKP**	**10 25 11.7**	**-0.4**		
VYHS	**Vyhne**	**139.18**	**51**	*e*PKP	**PKiKP**	**10 25 11.7**	**-0.4**		
RPSI	**Rantau Prapat**	**139.40**	**230**	IAMs_20	IAMs_20	11 23 55.8			
	comp=Z,707nm,20.0s								
FINES	**FINESS Array B**	**139.60**	**30**	PKP	**PKPdf**	**10 25 09.2**	**-1.0**		
	comp=Z,4.4nm,1.1s,baz=278,slow=4.1,SNR=3.5								
FINES	**FINESS Array B**	**139.60**	**30**	PKIKP	**PKPdf**	**10 25 09.7**	**-0.5**		
FINES	**FINESS Array B**	**139.60**	**30**		**PKPdf**	**10 25 09.7**	**-0.5**		
PDG	**Podgorica**	**139.67**	**60**	IAMs_20	IAMs_20	11 25 44.3			
	comp=Z,755nm,19.0s								
DIVS	**Divibare**	**140.22**	**58**	IAMs_20	IAMs_20	11 29 50.6			
	comp=Z,584nm,19.0s								
SUW	**Suwalki**	**140.88**	**42**	IAMs_20	IAMs_20	11 34 54.4			
	comp=Z,621nm,19.0s								
QIZ	**Qiongzhong**	**141.00**	**261**	PKP	**PKPdf**	**10 25 14.2**	**+0.1**		
QIZ				PP	**PP**	**10 28 17.4**	**+2.1**		
QIZ				SS	SS	10 46 46.9	+3.4		
QIZ				LR	LR				
	comp=Z,520nm,18.6s								
QIZ				LR	LR				
	comp=Z,410nm,27.9s								
QIZ				LR	LR				
	comp=Z,590nm,17.2s								
QIZ	**Qiongzhong**	**141.00**	**261**	IAMs_20	IAMs_20	11 36 11.7			
	comp=Z,709nm,20.0s								
NRIK	**Noril'sk**	**141.03**	**350**	PKP	**PKPdf**	**10 25 12.4**	**-0.2**		
	comp=Z,4.3nm,0.9s,baz=301,slow=0.4,SNR=4.1								
NRIK	**Noril'sk**	**141.03**	**350**	*i* PKIKP	**PKPdf**	**10 25 13.4**	**+0.8**		
NRIK				pmax	pmax				
	comp=Z,12nm,1.3s								
BJT	**Baijiatuau**	**141.18**	**296**	IAMs_20	IAMs_20	11 26 06.8			
	comp=Z,758nm,20.0s								
HERR	**Herculane**	**141.92**	**57**	⇓P	**PKPdf**	**10 25 08.3**	**-6.6**		
LHMI	**Lhok Sumawe**	**142.59**	**231**	IAMs_20	IAMs_20	11 42 24.5			
	comp=Z,927nm,21.0s								
ARR	**Arges**	**143.44**	**56**	⇑P	PKPbc	10 25 16.0	+1.1		
BUR08	**Bucovina Ar. S**	**143.52**	**52**	PKPdf	PKPbc	10 25 15.9	+0.7		
BURAR	**Bucovina Array**	**143.54**	**52**	⇑P	PKPab	10 25 14.6	+0.3		
BURAR	**Bucovina Array**	**143.54**	**52**	⇑PKIKP	PKPab	10 25 14.6	+0.3		
BURAR	**Bucovina Array**	**143.54**	**52**	PKPdf	PKPbc	10 25 15.5	+0.3		
VOIR		**143.72**	**55**	⇑P	PKPbc	10 25 15.8	0.0		
VOIR		**143.72**	**55**	⇑PKIKP	PKPbc	10 25 15.8	0.0		
DOPR	**Dopca**	**143.90**	**54**	⇓P	PKPbc	10 25 17.1	+0.8		
BIZ	**Bicaz**	**144.25**	**53**	⇑P	PKPbc	10 25 17.3	+0.1		
MLR	**Muntele Rosu**	**144.34**	**55**	PKIKP	**PKPab**	**10 25 17.5**	**+0.1**		
MLR	**Muntele Rosu**	**144.34**	**55**	PKPdf	**PKPab**	**10 25 17.5**	**+0.1**		
HHC	**Hu-ho-hao-te**	**144.71**	**297**	*e*PKP	**PKPab**	**10 25 17.4**	**-1.5**		
ALN	**Alexandroupoli**	**144.74**	**63**	PKIKP	PKPbc	10 25 19.4	+0.4		
ALN	**Alexandroupoli**	**144.74**	**63**	PKPdf	PKPbc	10 25 19.4	+0.4		
VRI	**Vrincioaia**	**144.84**	**54**	⇑P	**PKPab**	**10 25 18.7**	**-0.4**		
VRI	**Vrincioaia**	**144.84**	**54**	⇑PKIKP	**PKPab**	**10 25 18.7**	**-0.4**		
RAZG	**Razgrad**	**144.95**	**58**	⇓P	PKPbc	10 25 19.7	+0.1		
ENH	**Enshi**	**145.24**	**278**		**PKPbc**	**10 25 20.2**	**-0.8**		
KLMR	**Klimovskoe**	**145.27**	**25**	*e*PKIKP	**PKPbc**	**10 25 19.7**	**-0.3**		
KLMR				*e*		10 28 48.4			
KLMR				pmax	pmax				
	comp=Z,98nm,1.4s								
KLMR	**Klimovskoe**	**145.27**	**25**	*e*PKPdf	**PKPbc**	**10 25 19.8**	**-0.3**		
KLMR				AMP		10 25 27.0			
	comp=Z,98nm,1.4s								
KLMR				*e*SKP	**SKPdf**	**10 28 48.5**	**-6.1**		
KLMR				LQ	LQ	11 16 38.6			
KLMR				LQ	LQ	11 16 38.6			
KLMR				LR	LR	11 34 52.1			
AKASG	**Malin Array Be**	**145.38**	**45**	PKPbc	**PKPbc**	**10 25 19.4**	**-1.3**		
	comp=Z,6.2nm,0.7s,baz=283,slow=3.5,SNR=18								
AKASG	**Malin Array Be**	**145.38**	**45**	PKIKP	**PKPbc**	**10 25 19.6**	**-1.1**		
AKASG	**Malin Array Be**	**145.38**	**45**		**PKPbc**	**10 25 19.6**	**-1.1**		
KARP	**Karpathos**	**145.38**	**72**		**PKPbc**	**10 25 21.1**	**-0.2**		
SORM	**Soroca**	**145.50**	**50**	⇓P	**PKPdf**	**10 25 20.5**	**-0.6**		
SORM	**Soroca**	**145.50**	**50**	⇓PKIKP	**PKPdf**	**10 25 20.5**	**-0.6**		
BTO	**Baotou**	**145.88**	**297**	*e*PKPbc	**PKPdf**	**10 25 22.1**	**-0.1**		
CFR	**Carcaliu**	**145.92**	**55**	⇓P	**PKPdf**	**10 25 21.4**	**-0.5**		
CFR	**Carcaliu**	**145.92**	**55**	⇓PKP2	**PKPdf**	**10 25 21.4**	**-0.5**		
KIS	**Kishinev**	**146.06**	**52**	*e*PKP	**PKPbc**	**10 25 23.0**	**0.0**		
	comp=Z,130nm,3.5s								
KIS				XM		10 25 55.0			
	comp=Z,370nm,6.6s								
KIS	**Kishinev**	**146.06**	**52**	*e*PKP2	**PKPbc**	**10 25 23.0**	**0.0**		
KIS				pmax	pmax				
	comp=Z,130nm,3.5s								
MILM	**Milestii Mici**	**146.07**	**52**	⇑P	**PKPdf**	**10 25 19.7**	**-2.4**		
TPGR	**Topolog**	**146.16**	**56**	⇓P	**PKPdf**	**10 25 22.4**	**+0.1**		
TIRR	**Tirgusor**	**146.22**	**57**	⇓P	**PKPdf**	**10 25 22.7**	**+0.3**		
TIRR	**Tirgusor**	**146.22**	**57**	PKP2	**PKPbc**	**10 25 23.1**	**-0.4**		
TIRR	**Tirgusor**	**146.22**	**57**	PKPdf	**PKPbc**	**10 25 23.1**	**-0.4**		
XAN	**Xi'an**	**146.40**	**285**	PKPbc	**PKPdf**	**10 25 22.8**	**-0.4**		
XAN				PP	**PP**	**10 28 54.3**	**+6.5**		
XAN				SKKS		10 35 39.3			
XAN				SS	**SS**	**10 47 45.4**	**-0.4**		
XAN				AMB	AMB				
	comp=Z,250nm,6.7s								
XAN				LR	LR				
	comp=Z,350nm,9.0s								
XAN				LR	LR				
	comp=Z,910nm,18.0s								
XAN				LR	LR				
	comp=Z,2μm,7.8s								
XAN	**Xi'an**	**146.40**	**285**	PKIKP	**PKPdf**	**10 25 22.8**	**-0.4**		
XAN	**Xi'an**	**146.40**	**285**		**PKPdf**	**10 25 22.8**	**-0.4**		
GYA	**Guiyang**	**146.60**	**271**	⇑PKPbc	**PKPab**	**10 25 26.4**	**0.0**		
GYA				PKPab	sPKPab	10 25 32.0	+2.1		
GYA				SS	SS	10 47 50.8	+2.4		
GYA				AMB	AMB				
	comp=Z,290nm,7.0s								
ULN	**Ulaanbaatar**	**146.97**	**310**	PKIKP	**PKPdf**	**10 25 24.0**	**+0.2**		
ULN	**Ulaanbaatar**	**146.97**	**310**		**PKPdf**	**10 25 24.0**	**+0.2**		
SLVN	**Son La**	**147.01**	**260**		**PKPdf**	**10 25 23.1**	**-1.5**		
IRK	**Irkutsk**	**147.20**	**319**	*e*PKP2	**PKPbc**	**10 25 25.3**	**-0.8**		
IRK				pmax	pmax				
	comp=Z,116nm,1.9s								
SONM	**Songino Array**	**147.41**	**310**	PKP	**PKPdf**	**10 25 22.8**	**-1.8**		
	comp=Z,9.7nm,1.2s,baz=95,slow=1.6,SNR=12								
SONM				PKPbc	**PKPbc**	**10 25 26.9**	**-0.1**		
	comp=Z,8.6nm,1.2s,baz=104,slow=2.4,SNR=9.5								
SONM	**Songino Array**	**147.41**	**310**		**PKPdf**	**10 25 25.4**	**+0.9**		
OBN	**Obninsk**	**147.55**	**35**	*i* PKP2	**PKPbc**	**10 25 25.7**	**-1.2**		
OBN				*e*		10 28 59.5			
OBN				*e*SSS	SSS	10 53 32.3			
OBN				pmax	pmax				
	comp=Z,32nm,1.1s								
ELL	**Elmali**	**147.69**	**71**	PKP2	**PKPbc**	**10 25 28.6**	**+0.5**		
ELL	**Elmali**	**147.69**	**71**		**PKPbc**	**10 25 28.6**	**+0.5**		
MOS	**Moscow**	**147.71**	**33**	*e*PKIKP	**PKPdf**	**10 25 24.7**	**+0.1**		
MOS				pmax	pmax				
	comp=Z,400nm,2.4s								
MOS				pmax	pmax				
	comp=Z,92nm,1.9s								
TLY	**Talaya**	**147.78**	**318**	⇑*e*PKP2	**PKiKP**	**10 25 29.5**	**-0.2**		
TLY				*e*SS	SS	10 48 06.8	+7.0		
TLY				pmax	pmax				
	comp=Z,41nm,0.9s								
ISP	**Isparta**	**148.22**	**69**	IAMs_20	IAMs_20	11 43 28.1			
	comp=Z,618nm,19.0s								
ZAK	**Zakamensk**	**148.51**	**316**	*e*PKP2	**PKPbc**	**10 25 28.9**	**-0.9**		
ZAK				pmax	pmax				
	comp=Z,27nm,1.7s								
MOY	**Mondy**	**149.28**	**319**	*e*PKP2	**PKiKP**	**10 25 33.4**	**+0.5**		
KMI	**Kunming**	**149.49**	**266**	⇓*e*PKPbc	**PKPbc**	**10 25 31.6**	**-1.6**		
KMI	**Kunming**	**149.49**	**266**	IAMs_20	IAMs_20	11 23 25.1			
	comp=Z,753nm,21.0s								
CMAR	**Chiang Mai Arr**	**149.71**	**251**	PKP	**PKPdf**	**10 25 28.2**	**-0.8**		
	comp=Z,0.6nm,0.3s,baz=199,slow=1.9,SNR=2.0								
CMAR				PKPbc	**PKPbc**	**10 25 33.6**	**-0.1**		
	comp=Z,10nm,1.1s,baz=176,slow=0.8,SNR=18								
CHTO	**Chiang Mai**	**149.90**	**252**	PKIKP	**PKPbc**	**10 25 34.1**	**0.0**		
CHTO				PKP	**pPKPab**	**10 25 41.9**	**-0.3**		
CHTO	**Chiang Mai**	**149.90**	**252**		**PKPbc**	**10 25 34.1**	**0.0**		
CHTO				PKPab	**pPKPab**	**10 25 41.9**	**-0.3**		
ANTO	**Ankara**	**149.94**	**65**	IAMs_20	IAMs_20	11 38 12.2			
	comp=Z,634nm,20.0s								
LPSR	**Galich'ya Gora**	**150.08**	**37**	*e*PKHKP	**PKPdf**	**10 25 29.3**	**+0.8**		
LPSR				pmax	pmax				
	comp=Z,50nm,1.6s								
CD2	**Chengdu**	**150.20**	**277**	PKPbc	**PKPdf**	**10 25 30.0**	**+0.5**		
CSS	**Mathiatis**	**150.35**	**74**		**PKPbc**	**10 25 35.1**	**+0.3**		
CSS					**PKPab**	**10 25 41.0**	**-0.2**		
BR131	**Keskin Array S**	**150.60**	**65**	PKIKP	**PKPbc**	**10 25 35.0**	**-0.4**		
BR131	**Keskin Array S**	**150.60**	**65**		**PKPbc**	**10 25 35.0**	**-0.4**		
BRTR	**Keskin Array B**	**150.60**	**65**	PKP	**PKPdf**	**10 25 30.2**	**+0.2**		
	comp=Z,0.8nm,0.4s,baz=285,slow=5.5,SNR=2.4								
BRTR				PKPbc	**PKPbc**	**10 25 35.0**	**-0.4**		
	comp=Z,12nm,1.0s,baz=222,slow=1.7,SNR=16								
BRTR	**Keskin Array B**	**150.60**	**65**	PKPbc	**PKPbc**	**10 25 35.1**	**-0.3**		
LZH	**Lanzhou**	**150.73**	**288**	*e*PKPbc	**PKPbc**	**10 25 35.8**	**0.0**		
LZH				SS	SS	10 48 33.9	-0.6		
LZH				LR	LR				
	comp=Z,280nm,16.3s								
LZH				LR	LR				
	comp=Z,410nm,15.7s								
LZH				LR	LR				
	comp=Z,490nm,17.4s								
VSR	**Storozhevoye**	**150.92**	**40**	*e*PKIKP	**PKPdf**	**10 25 31.0**	**+1.2**		
VSR				pmax	pmax				
	comp=Z,30nm,1.3s								
VORD	**Divnogorie**	**151.11**	**40**	*e*PKIKP	**PKPdf**	**10 25 31.2**	**+1.1**		
VORD				pmax	pmax				
	comp=Z,10.0nm,1.0s								
VRH	**Novokhopyorsk**	**152.29**	**38**	*e*PKIKP	**PKPbc**	**10 25 35.5**	**-3.2**		
VRH				pmax	pmax				
	comp=Z,10.0nm,0.6s								
ANN	**Anapa**	**152.43**	**53**	*i* PKIKP	**PKiKP**	**10 25 43.7**	**+4.2**		
ANN				pmax	pmax				
	comp=Z,72nm,1.1s								
GTA	**Gaotai**	**153.78**	**295**	*e*PKPbc	**PKPdf**	**10 25 32.0**	**-2.7**		
GTA				AMB	AMB				
	comp=Z,190nm,9.6s								
GTA				LR	LR				
	comp=Z,480nm,19.9s								
GTA				LR	LR				
	comp=Z,820nm,23.1s								
GTA				LR	LR				
	comp=Z,1μm,22.3s								
ARU	**Arti**	**154.46**	**13**	*i* PKIKP	**PKPdf**	**10 25 36.4**	**+1.5**		
ARU				PPP	PPP	10 32 41.8			
ARU	**Arti**	**154.46**	**13**	PKPdf	**PKPdf**	**10 25 33.4**	**-1.5**		
ARU				PKPab	**pPKPab**	**10 25 58.9**	**-1.2**		
ZAA0	**Zalesovo Array**	**155.15**	**337**	PKPdf	**PKPdf**	**10 25 33.0**	**-2.9**		
ZALV	**Zalesovo Beam**	**155.15**	**337**	PKP	**PKPdf**	**10 25 34.4**	**-1.5**		
	comp=Z,1.0nm,0.4s,baz=169,slow=0.8,SNR=8.8								
ZALV				PKPab	**pPKPab**	**10 26 02.0**	**-1.1**		
	comp=Z,5.6nm,1.0s,baz=29,slow=3.4,SNR=4.6								
ZALV	**Zalesovo Beam**	**155.15**	**337**		**PKPdf**	**10 25 33.9**	**-2.0**		
KIV	**Kislovodsk**	**156.26**	**52**	*e*PKIKP	**PKPdf**	**10 25 38.4**	**+0.5**		
KIV				pmax	pmax				
	comp=Z,27nm,1.0s								
KIV	**Kislovodsk**	**156.26**	**52**	IAMs_20	IAMs_20	11 50 58.1			
	comp=Z,712nm,19.0s								
BRVK	**Borovoye**	**158.83**	**357**	PKIKP	**PKPdf**	**10 25 39.8**	**-0.9**		
BRVK				PKP	**PKPab**	**10 26 17.1**	**+0.6**		
BRVK	**Borovoye**	**158.83**	**357**	PKPdf	**PKPdf**	**10 25 39.8**	**-0.9**		
BRVK				PKPab	**PKPab**	**10 26 17.1**	**+0.6**		
AKTO	**Aktyubinsk**	**159.83**	**20**	PKP	**PKPdf**	**10 25 40.0**	**-1.9**		
	comp=Z,3.5nm,1.1s,baz=343,slow=2.6,SNR=6.1								
AKTO				PKPab	**PKPab**	**10 26 21.6**	**+0.7**		
	comp=Z,2.4nm,0.8s,baz=321,slow=5.6,SNR=1.8								
KURK	**Kurchatov**	**159.84**	**342**	PKIKP	**PKPdf**	**10 25 40.3**	**-1.6**		
KURK	**Kurchatov**	**159.84**	**342**	PKPdf	**PKPdf**	**10 25 40.3**	**-1.6**		
KURK				PKPab	**pPKPab**	**10 26 22.4**	**-1.1**		
MAK	**Makhachkala**	**159.88**	**51**	*e*PKIKP	**PKPdf**	**10 25 37.8**	**-4.4**		
MAK				*e*		10 29 57.6			
MAK				pmax	pmax				
	comp=Z,366nm,1.3s								
WMQ	**Urumqi**	**160.96**	**314**	*e*PKP	**PKPdf**	**10 25 44.3**	**+0.8**		
WMQ				LR	LR				
	comp=Z,770nm,27.3s								
WMQ				LR	LR				
	comp=Z,670nm,21.3s								
WMQ				LR	LR				
	comp=Z,580nm,22.7s								
ABKAR	**Akbulak array**	**161.44**	**18**		**PKPdf**	**10 25 44.3**	**+0.6**		
ABKAR	**Akbulak array**	**161.44**	**18**	PKPdf	**PKPdf**	**10 25 40.6**	**-3.1**		
BRZS	**Berezniki**	**161.70**	**352**	*e*PKP	**PKPdf**	**10 25 42.6**	**-1.4**		
	comp=Z,1.2nm,1.1s,baz=352								
BRZS				*e*PKP

JYT				*e*S		**Sb**	**10 19 38.1**	**-2.6**
JSB	**Shiboa**	**1.13**	**279**	P		**Pb**	**10 19 27.4**	**-0.4**
JSB				S		**Sb**	**10 19 41.5**	**-1.1**
JMM	**Marumori**	**1.14**	**339**	P		**Pn**	**10 19 26.8**	**-1.4**
JMM				S		**Sb**	**10 19 41.0**	**-1.8**
MJAR	**Matsushiro Arr**	**2.51**	**265**	Pn		**Pn**	**10 19 47.4**	**+0.4**
	1.9nm,0.3s,baz=89,slow=15,SNR=61							
MJAR				Pg		**Pb**	**10 19 52.5**	**+1.2**
	2.0nm,0.3s,baz=89,slow=16,SNR=37							
MJAR				Sn		**Sb**	**10 20 20.4**	**-1.8**
	1.0nm,0.3s,baz=81,slow=17,SNR=5.7							
MJAR				LR		LR	10 21 11.5	
	comp=Z,52nm,21.0s,baz=50,slow=49							
MAT	**Matsushiro**	**2.51**	**265**	P		**Pn**	**10 19 47.1**	**+0.1**
MAT				S		**Sn**	**10 20 18.6**	**+0.9**
ASAJ	**Asahikawa**	**7.37**	**7**	Pn		**Pn**	**10 20 54.7**	**+0.9**
	0.6nm,0.3s,baz=149,slow=12,SNR=4.3							
USRK	**Ussuriysk Ar.**	**10.24**	**319**	Pn		**Pn**	**10 21 35.6**	**+2.5**
	baz=148,slow=13,SNR=2.7							
SEY	**Seymchan**	**27.04**	**11**	LR		LR	10 36 41.0	
	comp=Z,109nm,20.0s,baz=182,slow=39							
H11N2	**WAKE ISLAND Hy**	**28.10**	**120**	T		T	10 54 26.0	
	baz=312,slow=75							
H11N1	**WAKE ISLAND Hy**	**28.11**	**120**	T		T	10 54 27.2	
	baz=312,slow=75							
H11N3	**WAKE ISLAND Hy**	**28.11**	**120**	T		T	10 54 29.3	
	baz=312,slow=75							
H11S1	**WAKE ISLAND Hy**	**28.80**	**122**	T		T	10 55 19.7	
	baz=315,slow=76							
H11S3	**WAKE ISLAND Hy**	**28.80**	**122**	T		T	10 55 19.8	
	baz=315,slow=76							
H11S2	**WAKE ISLAND Hy**	**28.82**	**122**	T		T	10 55 19.5	
	baz=315,slow=76							
TGY	**Tagaytay City**	**29.02**	**224**	LR		LR	10 36 14.5	
	comp=Z,67nm,20.5s,baz=172,slow=35							
ILAR	**Eielson Array**	**49.73**	**32**	P		**P**	**10 27 57.6**	**-0.6**
	0.3nm,0.6s,baz=272,slow=7.1,SNR=2.4							
WRA	**Warramunga Arr**	**56.82**	**188**	P		**P**	**10 28 51.2**	**+0.5**
	0.2nm,0.5s,baz=7.3,slow=7.7,SNR=1.6							

*IDC **01** 10:28:22.3±4.3, 33.°07N×139.°44E, h15km±29km, mb3.3/5, mb1 3.6/7, mb1mx3.5/37, mbtmp3.5/7, ML3.2/2, MS2.3/1, Ms1 2.3/1, ms1mx2.2/23, Error ellipse: s-maj=22.8km s-min=10.7km az=172.0*

*JMA **01** 10:28:23.9, 33.°38N×139.°45E, h32km±2km, M3.4*

ISC 01 10:28:22.5±1.5, 33.°32N±0.°04×139.°47E±0.°04, h16km±10km, n28, σ1°29/36, mb3.4/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHJ	**Hachijo jima 2**	**0.33**	**127**	Pn		**Pn**	**10 28 32.3**	**-0.3**
	359nm,0.3s,baz=324,slow=24,SNR=378							
JHJ				Sn		**Sn**	**10 28 39.2**	**+0.2**
	1μm,0.3s,baz=260,slow=22,SNR=24							
JHJ				LR		LR	10 28 41.1	
	comp=Z,48nm,19.5s,baz=49,slow=60							
JHJ2	**Mitsune**	**0.35**	**125**	P		**Pn**	**10 28 32.8**	**-0.2**
JHJ2				S		**Sn**	**10 28 39.1**	**-0.6**
JHCJ	**Hachijojimakas**	**0.37**	**131**	P		**Pn**	**10 28 32.8**	**-0.4**
JHCJ				S		**Sn**	**10 28 39.4**	**-0.6**
JMKN	**Mikurajimanish**	**0.58**	**10**	P		**Pg**	**10 28 34.5**	**+0.4**
JMKN				*e*S		**Sg**	**10 28 41.8**	**-0.1**
JAOM	**Aogashimamukai**	**0.89**	**164**	P		**Pn**	**10 28 41.4**	**+1.1**
JAOM				*e*S		**Sn**	**10 28 53.5**	**+0.7**
JKO	**Kozu shima**	**0.91**	**342**	P		**Pb**	**10 28 39.4**	**-0.6**
JKO				*e*S		**Sb**	**10 28 50.3**	**-1.6**
JSKK	**Shikinejimakit**	**1.04**	**348**	P		**Pb**	**10 28 41.4**	**-0.7**
JSKK				*e*S		**Sb**	**10 28 54.3**	**-1.2**
JTHY	**Toshimahigashi**	**1.21**	**353**	P		**Pn**	**10 28 44.5**	**-0.3**
JTHY				*e*S		**Sb**	**10 28 59.0**	**-1.6**
JIM2	**Oshima 3**	**1.40**	**359**	P		**Pn**	**10 28 47.3**	**-0.1**
JIZS	**Izushimoda**	**1.48**	**341**	P		**Pn**	**10 28 48.1**	**-0.4**
JIZS				*e*S		**Sn**	**10 29 05.9**	**-1.6**
TK03	**Tokai 3**	**1.51**	**304**	P		**Pn**	**10 28 49.7**	**+0.9**
TK03				*e*S		**Sn**	**10 29 08.5**	**+0.4**
TK02	**Tokai 2**	**1.56**	**294**	P		**Pn**	**10 28 49.5**	**+0.1**
TK02				S		**Sn**	**10 29 08.5**	**-0.7**
KTJ3	**Kamata3**	**1.65**	**349**	P		**Pn**	**10 28 50.4**	**-0.4**
KTJ3				*e*S		**Sn**	**10 29 09.9**	**-1.7**
BSO3	**Boso 3**	**1.71**	**30**	P		**Pn**	**10 28 52.2**	**+0.7**
MJAR	**Matsushiro Arr**	**3.38**	**343**	Pn		**Pn**	**10 29 16.3**	**+1.6**
	0.7nm,0.3s,baz=149,slow=14,SNR=41							
MJAR				LR		LR	10 30 18.2	
	comp=Z,45nm,19.6s,baz=200,slow=32							
MAT	**Matsushiro**	**3.38**	**342**	P		**Pn**	**10 29 16.9**	**+2.2**
MAT				S		**Sn**	**10 29 57.5**	**+3.0**
JNU	**Nakatsue**	**7.20**	**271**	Pn		**Pn**	**10 30 08.1**	**+0.9**
	0.7nm,0.3s,baz=78,slow=6.3,SNR=9.6							
JNU				Sn		**Sn**	**10 31 27.1**	**-1.6**
	baz=35,slow=12,SNR=1.9							
H11N2	**WAKE ISLAND Hy**	**27.92**	**112**	T		T	11 03 22.6	
	baz=304,slow=75,SNR=56							
H11N1	**WAKE ISLAND Hy**	**27.93**	**112**	T		T	11 03 22.9	
	baz=304,slow=75,SNR=42							
H11N3	**WAKE ISLAND Hy**	**27.94**	**112**	T		T	11 03 23.9	
	baz=304,slow=75,SNR=42							
H11S3	**WAKE ISLAND Hy**	**28.48**	**114**	T		T	11 04 04.6	
	baz=307,slow=75,SNR=3.7							
H11S1	**WAKE ISLAND Hy**	**28.48**	**114**	T		T	11 03 59.1	
	baz=307,slow=75,SNR=5.1							
H11S2	**WAKE ISLAND Hy**	**28.49**	**114**	T		T	11 04 09.3	
	baz=307,slow=75,SNR=4.4							
MKAR	**Makanchi Array**	**44.84**	**305**	P		**P**	**10 36 36.6**	**+0.8**
	0.5nm,0.7s,baz=88,slow=10,SNR=1.7							
WRA	**Warramunga Arr**	**53.19**	**186**	P		**P**	**10 37 37.7**	**-2.2**
	0.5nm,0.5s,baz=5.5,slow=7.9,SNR=13							
ILAR	**Eielson Array**	**53.49**	**31**	P		**P**	**10 37 42.7**	**+1.0**
	0.2nm,0.7s,baz=245,slow=5.8,SNR=1.7							
ASAR	**Alice Springs**	**56.91**	**186**	P		**P**	**10 38 04.8**	**-2.0**
	0.2nm,0.5s,baz=7.8,slow=7.5,SNR=1.8							
PDAR	**Pinedale Array**	**81.42**	**44**	P		**P**	**10 40 41.3**	**+2.2**
	0.2nm,0.5s,baz=298,slow=1.9,SNR=2.2							

*NEIC **01** 10:31:38.6±1.6, 59.°4S±0.°1×26.°2W±0.°3, h35km±2km, mb4.8/21, Error ellipse: s-maj=29.2km s-min=18.4km az=238.0*

*IDC **01** 10:31:42.2±6.4, 59.°39S×26.°37W, h75km±57km, mb3.8/6, mb1 4.1/7, mb1mx3.8/22, mbtmp4.2/7, ML5.1/1, MS4.6/1, Ms1 4.6/1, ms1mx3.7/21, Error ellipse: s-maj=33.6km s-min=20.1km az=51.0*

ISC 01 10:31:40.9±0.6, 59.°4S±0.°1×26.°3W±0.°1, h61km, n42, σ0°87/39, mb4.5/14, 1C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNA1	**Neumayer--Stat**	**13.51**	**154**	P		**Pn**	**10 34 48.8**	**-0.6**
VNA3	**Neumayer Olymp**	**13.67**	**157**	P		**Pn**	**10 34 50.6**	**-0.9**
VNA2	**Neumayer--Watz**	**13.91**	**154**	P		**Pn**	**10 34 53.8**	**-1.0**
	baz=318,slow=16							
SNAA	**Sanae**	**15.49**	**152**	P		**Pn**	**10 35 15.1**	**-0.3**
SNAA	**Sanae**	**15.49**	**152**	P		**Pn**	**10 35 14.9**	**-0.4**
	7.9nm,0.3s,baz=316,slow=12,SNR=53							
SNAA				S		Sn	10 37 52.0	-14
	0.6nm,0.3s,baz=340,slow=20,SNR=2.6							
SNAA	**Sanae**	**15.49**	**152**			**Pn**	**10 35 15.0**	**-0.3**
SNAA				IAmb		IAmb	10 35 17.6	
	comp=Z,37nm,0.4s							
USHA	**Ushuaia**	**23.02**	**263**	LR		LR	10 43 21.1	
	comp=Z,1μm,20.1s,baz=34,slow=30							
GO09	**Cerro Castillo**	**26.91**	**267**	P		**P**	**10 37 14.9**	**-1.1**
SYO	**Syowa Base**	**28.73**	**137↑**	*ep*P		P	10 37 37.2	+5.3
QSPA	**South Pole Qui**	**30.82**	**180**	P		**P**	**10 37 51.3**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=111,slow=0.6,SNR=10							
QSPA	**South Pole Qui**	**30.82**	**180**	P		**P**	**10 37 51.5**	**+0.8**
PLCA	**Paso Flores**	**33.18**	**284**	P		**P**	**10 38 10.8**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=148,slow=5.9,SNR=12							
PLCA	**Paso Flores**	**33.18**	**284**	P		**P**	**10 38 11.6**	**+0.1**
LC01	**Cunco**	**35.24**	**285**	P		**P**	**10 38 28.9**	**-0.4**
LC01				IAmb		IAmb	10 38 34.8	
	comp=Z,22nm,1.6s							
MAW	**Mawson**	**37.19**	**141**	P		**P**	**10 38 45.8**	**+0.3**
BO02	**Sierra Bellavi**	**37.96**	**290**	P		**P**	**10 38 52.4**	**-0.1**
BO02				IAmb		IAmb	10 38 58.1	
	comp=Z,17nm,1.3s							
GO05	**Huala**	**38.34**	**289**	P		**P**	**10 38 55.3**	**-0.3**
GO05				IAmb		IAmb	10 39 20.8	
	comp=Z,23nm,1.1s							
PEL	**Peldehue**	**39.26**	**292**	P		**P**	**10 39 04.7**	**+1.3**
MT02	**Curacav**	**39.38**	**291**	P		**P**	**10 39 04.3**	**0.0**
MT02				IAmb		IAmb	10 39 04.6	
	comp=Z,29nm,1.1s							
CPUP	**Villa Florida**	**39.44**	**313**	P		**P**	**10 39 04.0**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=174,slow=6.5,SNR=2.8							
CPUP	**Villa Florida**	**39.44**	**313**	IAmb		IAmb	10 39 07.3	
	comp=Z,14nm,1.6s							
ROC1	**El Roble**	**39.56**	**292**	P		**P**	**10 39 08.0**	**+1.9**
AC05	**El Transito**	**42.67**	**296**	P		**P**	**10 39 32.4**	**+0.8**
VNDA	**Vanda**	**43.22**	**183**	P		**P**	**10 39 36.3**	**+1.1**
AC04	**Llanos de Chal**	**43.58**	**296**	P		**P**	**10 39 39.6**	**+0.9**
AC04				IAmb		IAmb	10 39 40.3	
	comp=Z,30nm,1.3s							
GO02	**Mina Guanaco**	**45.52**	**299**	P		**P**	**10 39 54.8**	**+0.3**
MNMC	**Minye Minye**	**50.81**	**303**	P		**P**	**10 40 36.0**	**+0.6**
MNMC				IAmb		IAmb	10 40 37.5	
	comp=Z,8.1nm,0.7s							
PB16	**IPOC Station P**	**51.48**	**304**	P		**P**	**10 40 41.1**	**+0.4**
PB16				IAmb		IAmb	10 40 53.0	
	comp=Z,7.1nm,1.2s							
LPAZ	**La Paz**	**52.74**	**306**	P		**P**	**10 40 50.1**	**0.0**
	comp=Z,1.4nm,0.3s,baz=147,slow=5.7,SNR=12							
LPAZ	**La Paz**	**52.74**	**306**	P		**P**	**10 40 50.1**	**0.0**
RCBR	**Riachuelo**	**53.97**	**348**	P		**P**	**10 41 00.1**	**+1.7**
TOA0	**Torodi Ar. Sit**	**75.79**	**28**	P		**P**	**10 43 20.3**	**+0.3**
TOA0				IAmb		IAmb	10 43 24.0	
	comp=Z,10.0nm,1.6s							
TORD	**Torodi Ar. Bea**	**75.79**	**28**	P		**P**	**10 43 20.1**	**0.0**
	comp=Z,1.3nm,0.4s,baz=200,slow=6.1,SNR=18							
TORD	**Torodi Ar. Bea**	**75.79**	**28**	P		**P**	**10 43 20.3**	**+0.3**
ASAR	**Alice Springs**	**95.62**	**162**	P		**P**	**10 45 00.5**	**+0.9**
	comp=Z,0.6nm,1.0s,baz=190,slow=4.7,SNR=2.9							
FINES	**FINESS Array B**	**127.14**	**29**	PKP		**PKPdf**	**10 50 35.2**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=219,slow=1.2,SNR=5.7							
ARCES	**ARCESS Array B**	**133.90**	**23**	PKP		**PKPdf**	**10 50 47.8**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=222,slow=1.6,SNR=8.8							
INK	**Inuvik**	**148.66**	**317**	PKPbc		**PKPbc**	**10 51 17.9**	**-1.4**
	comp=Z,2.7nm,0.8s,baz=59,slow=3.7,SNR=8.2							
INK	**Inuvik**	**148.66**	**317**			**PKPbc**	**10 51 19.6**	**+0.2**
SONM	**Songino Array**	**150.31**	**92**	PKPbc		**PKPbc**	**10 51 23.2**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=220,slow=5.1,SNR=4.5							
SONM	**Songino Array**	**150.31**	**92**			**PKPbc**	**10 51 23.6**	**-0.6**
ILAR	**Eielson Array**	**152.62**	**307**	PKPbc		**PKPbc**	**10 51 27.4**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=143,slow=3.2,SNR=8.7							

KRSC 01 10:32:53.2±3.1, 48.°71N×156.°94E, h7km±57km, ML4.3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PAU	**Pauzhetka**	**2.76**	**358**	*e*P		Pb	10 33 40.4	-2.4
PAU				*e*S		Sb	10 34 15.7	-1.0
KDTR	**Khodutka, Kamc**	**3.18**	**13**	*e*P		Pb	10 33 47.3	-2.7
KDTR				*e*S		Sb	10 34 28.2	-0.8
RUS	**Russkaya**	**3.86**	**14**	*e*P		Pn	10 33 56.2	+3.3
RUS				*e*S		Sn	10 34 43.3	+4.9
GRL	**Gorelyy**	**3.91**	**10**	*e*P		Pn	10 33 57.8	+4.1
GRL				*e*S		Sb	10 34 45.7	-4.3
PET	**Petropavlovsk**	**4.45**	**13**	*e*P		Pn	10 34 05.2	+4.2
DALK	**Dalny**	**4.47**	**14**	*e*P		Pn	10 34 05.3	+4.0
DALK				*e*S		Sn	10 34 59.4	+5.8
UGLR	**Uglovaya**	**4.66**	**14**	*e*P		Pn	10 34 08.7	+4.7
AVH	**Avacha**	**4.70**	**13**	*e*P		Pn	10 34 09.8	+5.3
SMAR	**Somma**	**4.70**	**14**	*e*P		Pn	10 34 10.1	+5.4
SDLR	**Sedlovina**	**4.73**	**14**	*e*P		Pn	10 34 08.5	+3.5
KRER	**Koryakskii**	**4.74**	**13**	*e*P		Pn	10 34 09.8	+4.6
KRX	**Arik**	**4.77**	**12**	*e*P		Pn	10 34 10.1	+4.5
SPN	**Mys Shipunski**	**4.80**	**23**	*e*P		Pn	10 34 11.0	+5.1
GNL	**Ganaly**	**5.03**	**7**	*e*P		Pn	10 34 14.3	+5.2
MKZ	**Mys Kozlova**	**6.56**	**25**	*e*P		Pn	10 34 33.5	+3.5
KZV	**Kizimen**	**6.74**	**17**	*e*P		Pn	10 34 38.2	+5.7
TUMR	**Tumrok**	**6.87**	**16**	*e*P		Pn	10 34 40.6	+6.2

*IDC **01** 10:36:27.7±0.4, 33.°72N×131.°85E, h75km±3km, mb3.7/16, mb1 3.9/20, mb1mx3.7/41, mbtmp4.0/20, MS2.9/1, Ms1 2.9/1, ms1mx2.7/46, Error ellipse: s-maj=10.1km s-min=7.6km az=121.0*

*JMA **01** 10:36:27.7, 33.°68N×131.°96E, h68km±1km, M4.2 Broadband fault plane solution: P waves. NP1: ϕs78.00000°, δ22.00000°, λ16.00000°. NP2: ϕs333.00000°, δ84.00000°, λ111.00000°. Principal axes: T Plg47.0000°, Azm265.0000°; N Plg21.0000°, Azm151.0000°; P Plg36.0000°, Azm45.0000°;*

JMA Felt II J1.

*NEIC **01** 10:36:27.7±1.7, 33.°65N±0.°05×131.°95E±0.°04, h74km±5km, mb4.5/22 Error ellipse: s-maj=7.9km s-min=4.2km az=155.0*

*NIED **01** 10:36:27.8, 33.°68N×131.°96E, h68km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr1.49; Mθθ-0.92; Mϕϕ-0.58; Mrθ-1.26; Mθϕ0.97; Mϕr1.27; Fault plane solution: M0.2.40000×10^15^ NP1: ϕs314.00000°, δ69.00000°, λ93.00000°. NP2: ϕs125.00000°, δ21.00000°, λ81.00000°.*

ISC 01 10:36:27.7±0.4, 33.°66N±0.°03×131.°96E±0.°03, h74km±3km, n92, σ1°27/129, mb4.3/25, 9C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JKI	**Kunimi**	**0.33**	**265**	⇓P		**Pn**	**10 36 39.0**	**-0.5**
JKI				S		**Sn**	**10 36 46.9**	**-1.3**
JKD	**Kudamatsu**	**0.40**	**350**	⇑P		**Pn**	**10 36 39.2**	**-0.9**
JKD				S		**Sn**	**10 36 47.6**	**-1.5**
JNA	**Nagahama**	**0.45**	**104**	⇑P		**Pn**	**10 36 39.9**	**-0.6**
JNA				S		**Sn**	**10 36 48.8**	**-1.1**
JHM	**Kurahashi**	**0.67**	**45**	⇑P		**Pn**	**10 36 42.0**	**-0.6**
JHM				*e*S		**Sn**	**10 36 52.5**	**-1.2**
UWA2	**Uwa jima 2**	**0.72**	**129**	⇑P		**Pn**	**10 36 42.5**	**-0.7**
UWA2				S		**Sn**	**10 36 53.3**	**-1.3**
JET	**Tanbara**	**0.92**	**83**	⇑P		**Pn**	**10 36 44.9**	**-0.6**
JET				*e*S		**Sn**	**10 36 57.5**	**-1.2**
JKU	**Kubokawa**	**0.99**	**111**	⇑P		**Pn**	**10 36 45.6**	**-0.8**
JKU				*e*S		**Sn**	**10 36 59.0**	**-1.2**
JNU	**Nakatsue**	**1.05**	**239**	P		**Pn**	**10 36 47.1**	**-0.1**
	1μm,0.3s,baz=168,slow=8.8							
JNU				S		**Sn**	**10 37 01.0**	**-0.6**
	341nm,0.3s,baz=162,slow=21,SNR=6.6							
JNU				LR		LR	10 37 17.9	
	comp=Z,238nm,20.3s,baz=108,slow=50							
JNU	**Nakatsue**	**1.05**	**239**	Pn		**Pn**	**10 36 47.0**	**-0.1**
JNU				Sn		**Sn**	**10 37 00.5**	**-1.1**
JHT	**Toyohira**	**1.07**	**21**	⇑P		**Pn**	**10 36 47.1**	**-0.2**
JHT				*e*S		**Sn**	**10 37 01.1**	**-0.9**
JTO	**Tosashimizu**	**1.07**	**138**	⇑P		**Pn**	**10 36 46.8**	**-0.5**
JTO				*e*S		**Sn**	**10 37 00.0**	**-1.9**
JHGM	**Hagimishima**	**1.30**	**329**	⇑P		**Pn**	**10 36 50.2**	**-0.1**
JGT2	**ShimaneMisato**	**1.47**	**18**	⇓P		**Pn**	**10 36 51.9**	**-0.5**
JGT2				*e*S		**Sn**	**10 37 10.1**	**-0.9**
JMN	**Monobe**	**1.60**	**87**	Pn		**Pn**	**10 36 53.5**	**-0.7**
JMN				Sn		**Sn**	**10 37 12.4**	**-1.9**
JHS	**Saijyo**	**1.64**	**35**	Pn		**Pn**	**10 36 54.9**	**+0.1**
JHS				Sn		**Sn**	**10 37 13.9**	**-1.2**
JTU	**Tsushima**	**2.29**	**293**			**Pn**	**10 37 02.8**	**-0.5**
JSU	**Suzuyama**	**2.50**	**211**	Pn		**Pn**	**10 37 06.4**	**+0.2**
JSU				Sn		**Sn**	**10 37 34.5**	**-1.2**
JWT	**Wachi**	**3.27**	**59**	Pn		**Pn**	**10 37 16.7**	**0.0**
JWT				Sn		**Sn**	**10 37 54.2**	**-0.2**
INU	**Inuyama**	**4.50**	**67**			**Pn**	**10 37 34.6**	**+1.1**
INU				Sn		**Sn**	**10 38 23.4**	**-1.2**
JGF	**Kuroka**	**4.85**	**65**	Pn		**Pn**	**10 37 38.8**	**+0.5**
JGF				Sn		**Sn**	**10 38 31.3**	**-1.9**
KSRS	**Korea Array**	**5.01**	**320**	P		**Pn**	**10 37 40.5**	**+0.1**
	2.5nm,0.3s,baz=140,slow=14,SNR=46							
KSRS				S		**Sn**	**10 38 36.1**	**-0.8**
	2.5nm,0.3s,baz=140,slow=24,SNR=5.4							
KSRS				LR		LR	10 39 52.0	
	comp=Z,132nm,18.4s,baz=28,slow=42							
KSAR	**Wonju Array Be**	**5.02**	**320**			**Pn**	**10 37 40.8**	**+0.2**
KS19	**Wonju Array Si**	**5.08**	**320**			**Pn**	**10 37 40.8**	**-0.5**
JSG	**Sagara**	**5.26**	**77**	Pn		**Pn**	**10 37 47.7**	**+3.9**
JSG				Sn		**Sn**	**10 38 42.6**	**-0.5**
MJB9	**Matsu-Tunnel**	**5.87**	**59**	Pn		**Pn**	**10 37 53.5**	**+1.3**
MAJO	**Matsushiro**	**5.87**	**59**	Pn		**Pn**	**10 37 53.2**	**+1.0**
MAT	**Matsushiro**	**5.87**	**59**	P		**Pn**	**10 37 53.3**	**+1.1**
MAT				*e*S		**Sn**	**10 38 58.8**	**+0.7**
MJAR	**Matsushiro Arr**	**5.87**	**59**	P		**Pn**	**10 37 53.3**	**+1.1**
	4.2nm,0.3s,baz=244,slow=14,SNR=266							
MJAR	**Matsushiro Arr**	**5.87**	**59**			**Pn**	**10 37 53.4**	**+1.2**
JHJ	**Hachijo jima 2**	**6.57**	**93**	P		**Pn**	**10 38 01.4**	**-0.3**
	34nm,0.3s,baz=85,slow=23,SNR=22							
JHJ				S		**Sn**	**10 39 11.5**	**-3.6**
	21nm,0.3s,baz=56,slow=17,SNR=7.5							
JHJ2	**Mitsune**	**6.60**	**93**	Pn		**Pn**	**10 38 01.6**	**-0.4**
JHJ2						**Sn**	**10 39 13.9**	**-2.0**
JSD	**Sado**	**6.72**	**48**	Pn		**Pn**	**10 38 05.1**	**+1.3**
JYT	**Yasato**	**7.23**	**67**	Pn		**Pn**	**10 38 11.3**	**+0.6**
JMZ	**Minamidaito 2**	**7.84**	**185**	Pn		**Pn**	**10 38 19.3**	**+0.2**
JMM	**Marumori**	**8.31**	**57**			**Pn**	**10 38 28.5**	**+3.0**
JTM	**Tenmabayashi**	**10.16**	**43**	Pn		**Pn**	**10 38 55.1**	**+4.4**
USA0B	**Ussuriysk Arra**	**10.52**	**0**	Pn		**Pn**	**10 38 56.5**	**+0.9**
USRK	**Ussuriysk Ar.**	**10.52**	**0**	P		**Pn**	**10 38 56.5**	**+0.9**
	baz=189,slow=13,SNR=9.6							
USRK				S		**Sn**	**10 40 50.1**	**-1.5**
	baz=168,slow=21,SNR=3.0							
USRK	**Ussuriysk Ar.**	**10.52**	**0**	Pn		**Pn**	**10 38 57.3**	**+1.8**
NJ2	**Nanjing**	**11.14**	**265**	*e*P		**Pn**	**10 39 03.6**	**-0.4**
NJ2				pmax		pmax		
	comp=Z,11nm,0.5s							
ASAJ	**Asahikawa**	**13.31**	**35**	P		**Pn**	**10 39 33.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=200,slow=9.6,SNR=8.5							
JKA	**Kamikawa-asahi**	**13.31**	**35**			**Pn**	**10 39 33.8**	**+0.3**
BJT	**Baijiatuan**	**14.14**	**301**	P		**P**	**10 39 53.0**	**+3.3**
BJI	**Beijing**	**14.14**	**301**	P		**P**	**10 39 52.5**	**+2.8**
BJI				LR		LR		
	comp=N,120nm,6.1s							
BJI				LR		LR		
	comp=E,270nm,20.6s							
BJI				LR		LR		
	comp=Z,460nm,32.2s							
KLR	**Kul'dur**	**15.55**	**359**	P		**P**	**10 40 05.4**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=172,slow=7.7,SNR=28							
HHC	**Hu-ho-hao-te**	**17.73**	**300**	*e*P		**Pn**	**10 40 29.9**	**+0.3**
HHC				pmax		pmax		
	comp=Z,16nm,1.1s							
HHC				pmax		pmax		
	comp=Z,220nm,5.8s							
XAN	**Xi'an**	**19.13**	**278**	P		**Pn**	**10 40 48.8**	**+2.3**
XAN				pP		pP	10 40 58.2	-1.8
XAN				pmax		pmax		
	comp=Z,10.0nm,0.9s							
ENH	**Enshi**	**19.36**	**266**	P		**P**	**10 40 48.2**	**+0.8**
ENH				IAmb		IAmb	10 40 52.7	
	comp=Z,18nm,1.1s							
GYA	**Guiyang**	**23.00**	**259**	⇓P		**P**	**10 41 25.5**	**-1.1**
GYA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
SONM	**Songino Array**	**23.85**	**314**	P		**P**	**10 41 33.7**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=133,slow=9.8,SNR=9.1							
SONM				pP		**pP**	**10 41 51.7**	**+0.7**
	comp=Z,2.7nm,0.7s,baz=122,slow=10,SNR=4.7							
SONM	**Songino Array**	**23.85**	**314**	P		**P**	**10 41 34.2**	**0.0**
CD2	**Chengdu**	**23.97**	**271**	*e*P		**P**	**10 41 34.0**	**-1.3**
GTA	**Gaotai**	**26.37**	**292**	*e*P		**P**	**10 41 57.9**	**+0.8**
GTA				pP		pP	10 42 16.0	+1.6
GTA				sP		sP	10 42 24.3	+1.2
GTA				pmax		pmax		
	comp=Z,2.0nm,0.6s							
GTA				pmax		pmax		
	comp=Z,60nm,9.2s							
GTA				LR		LR		
	comp=N,84nm,13.5s							
GTA				LR		LR		
	comp=E,240nm,19.1s							
GTA				LR		LR		
	comp=Z,230nm,15.1s							
WMQ	**Urumqi**	**35.61**	**300**	*e*P		**P**	**10 43 20.0**	**+1.8**
WMQ				pmax		pmax		
	comp=Z,16nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,140nm,4.1s							
WMQ				LR		LR		
	comp=N,450nm,29.0s							
WMQ				LR		LR		
	comp

TXAR	**Lajitas Array**	**98.18**	**47**	P	**P**	**10 49 56.4**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=132,slow=1.9,SNR=2.3						
TXAR				pP	**pP**	**10 50 18.8**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=358,slow=3.8,SNR=1.4						

*IDC **01** 10:59:52.4±0.3,31°.80S×111°.34W,h0km,mb5.2/26, mb1 5.3/27,mb1mx5.3/27,mbtmp5.1/27,ML5.3/1,MS5.8/25, Ms1 5.8/25,ms1mx5.6/29,Error ellipse: s-maj=13.4km s-min=12.6km az=85.0*

*MOS **01** 10:59:53.7±1.0,31°.75S×111°.25W,h11km,mb5.8/40, MS5.8/15,Error ellipse: s-maj=10.1km s-min=8.0km az=71.3*

*NEIC **01** 10:59:54.6±2.0,31°.85S±0°.08×111°.2W±0°.1,h10km±1km, mb5.7/523,Ms_20 5.9/895,Mwb5.9/83,Mww6.0, Mwc6.0(GCMT),Error ellipse: s-maj=15.1km s-min=13.1km az=119.0*

*BJI **01** 10:59:54.2±0.0,31°.60S×111°.20W,h10km,mB6.0/44, Ms5.9/60,Ms7 5.9/56*

*NEIC **01** 10:59:55.1,31°.82S×111°.18W,h5km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.65; $M_{\theta\theta}$-8.67; $M_{\phi\phi}$6.01; $M_{r\theta}$0.89; $M_{\theta\phi}$5.82; $M_{\phi r}$-0.24; Fault plane solution: $M_0$9.69000×10^{17} NP1:ϕ_s334.29000°, δ86.75000°,λ-177.73000°. NP2:ϕ_s244.16000°, δ87.73000°,λ-3.26000°. Principal axes: T 8.0446, Plg1.0000°, Azm289.0000°; N 2.7134, Plg86.0000°, Azm29.0000°; P -10.7580, Plg4.0000°, Azm199.0000°;*

*GCMT **01** 10:59:59.6±0.1,31°.94S×111°.22W,h12km,MW6.0/157, Moment Tensor Solution. s156,c340; s157,c557; Duration: 2s5 Moment tensor: Scale 10^{18}Nm; M_{rr}0.80±.01; $M_{\theta\theta}$-1.00±.01; $M_{\phi\phi}$0.20±.01; $M_{r\theta}$-0.60±.02; $M_{\theta\phi}$1.02±.01; $M_{\phi r}$0.05±.02; Best double couple: $M_0$1.40400×10^{18} NP1:ϕ_s155.00000°,δ45.00000°, λ146.00000°. NP2:ϕ_s271.00000°,δ66.00000°,λ50.00000°. Principal axes: T 1.1060, Plg51.0000°, Azm134.0000°; N 0.6010, Plg36.0000°, Azm289.0000°; P -1.7020, Plg12.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 11:00:00,31°.97S×111°.23W,h13km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.84; $M_{\theta\theta}$-1.07; $M_{\phi\phi}$0.23; $M_{r\theta}$-0.44; $M_{\theta\phi}$1.11; $M_{\phi r}$-0.04; Fault plane solution: $M_0$1.54000×10^{18} NP1:ϕ_s157.00000°, δ53.00000°,λ149.00000°. NP2:ϕ_s267.00000°,δ66.00000°, λ41.00000°. Principal axes: T 1.1263, Plg46.0000°, Azm127.0000°; N 0.6290, Plg43.0000°, Azm292.0000°; P -1.7552, Plg8.0000°, Azm29.0000°;*

*NEIC **01** 11:00:04,31°.82S×111°.30W,h16km,Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.69; $M_{\theta\theta}$-0.86; $M_{\phi\phi}$0.17; $M_{r\theta}$0.23; $M_{\theta\phi}$1.03; $M_{\phi r}$-0.08; Fault plane solution: $M_0$1.32000×10^{18} NP1:ϕ_s345.00000°, δ69.00000°,λ167.00000°. NP2:ϕ_s80.00000°,δ78.00000°, λ21.00000°. Principal axes: T 0.8309, Plg23.0000°, Azm304.0000°; N 0.6876, Plg66.0000°, Azm108.0000°; P -1.5185, Plg6.0000°, Azm212.0000°;*

ISC 01 10:59:54.0±0.5,31°.98S±0°.04×111°.23W±0°.04,h8km±2km, h8km:pP-P,n1632,σ1s94/1178,mb5.7/284,MS5.9/503, 25C-33D,Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**5.11**	**19**	Pn	**Pn**	**11 01 07.6**	**-3.2**
	117nm,0.3s,baz=200,slow=7.6,SNR=50						
RPN				Sn	**Sn**	**11 02 02.6**	**-7.4**
	110nm,0.3s,baz=281,slow=22,SNR=8.2						
RPN	**Rapa Nui**	**5.11**	**19**	P	**Pn**	**11 01 08.3**	**-2.5**
RPN						11 02 06.6	
RPN	**Rapa Nui**	**5.11**	**19**		**Pn**	**11 01 08.3**	**-2.5**
RPN				Sn	**Sn**	**11 02 06.6**	**-3.5**
H03S2	**Juan Fernandez**	**27.12**	**103**	T	T	11 34 05.9	
	baz=264,slow=75,SNR=1468						
H03S3	**Juan Fernandez**	**27.14**	**103**	T	T	11 34 06.4	
	baz=264,slow=75,SNR=802						
H03S1	**Juan Fernandez**	**27.14**	**103**	T	T	11 34 07.7	
	baz=264,slow=75,SNR=1017						
H03N2	**Juan Fernandez**	**27.16**	**102**	T	T	11 34 06.8	
	baz=268,slow=73						
H03N3	**Juan Fernandez**	**27.16**	**102**	T	T	11 34 13.6	
	baz=268,slow=73						
H03N1	**Juan Fernandez**	**27.17**	**102**	T	T	11 34 04.7	
	baz=268,slow=73						
VA04	**Juan Fernndez**	**27.22**	**102**	P	**P**	**11 05 39.6**	**+1.2**
VA04				IAmb	IAmb	11 05 47.1	
	comp=Z,262nm,1.4s						
VA04				IAMs_20	IAMs_20	11 12 56.4	
	comp=Z,26μm,19.0s						
BI03	**Tigo**	**31.74**	**109**	P	**P**	**11 06 19.7**	**+1.2**
BI03				IAmb	IAmb	11 06 29.4	
	comp=Z,132nm,1.4s						
BI03				IAMs_20	IAMs_20	11 15 35.5	
	comp=Z,19μm,19.0s						
LL01	**San Ignacio de**	**32.37**	**120**	P	**P**	**11 06 25.8**	**+1.8**
LL01				IAmb	IAmb	11 06 32.6	
	comp=Z,164nm,1.6s						
LL01				IAMs_20	IAMs_20	11 15 52.7	
	comp=Z,23μm,21.0s						
GO05	**Huala**	**32.77**	**106**	P	**P**	**11 06 28.9**	**+1.3**
BI02	**San Fabin de**	**33.16**	**109**	P	**P**	**11 06 32.4**	**+1.4**
BI02				IAmb	IAmb	11 06 39.4	
	comp=Z,184nm,1.4s						
VA01	**Torpederas**	**33.26**	**103**	P	**P**	**11 06 31.5**	**-0.3**
VA01				IAmb	IAmb	11 06 45.9	
	comp=Z,154nm,1.4s						
MT02	**Curacav**	**33.65**	**103**	P	**P**	**11 06 36.1**	**+0.8**
MT02				IAmb	IAmb	11 06 54.7	
	comp=Z,107nm,1.3s						
PLCA	**Paso Flores**	**33.66**	**117**	P	**P**	**11 06 36.7**	**+1.4**
	comp=Z,33nm,1.2s,baz=273,slow=9.1,SNR=25						
PLCA				LR	LR	11 16 48.3	
	comp=Z,17μm,19.3s,baz=277,slow=30						
PLCA	**Paso Flores**	**33.66**	**117**	P	**P**	**11 06 37.3**	**+1.9**
PLCA				pmax	pmax		
	comp=Z,65nm,1.4s						
PLCA	**Paso Flores**	**33.66**	**117**	P	**P**	**11 06 37.2**	**+1.9**
PLCA	**Paso Flores**	**33.66**	**117**	*eP*	**P**	**11 06 36.9**	**+1.6**
BO02	**Sierra Bellavi**	**33.73**	**106**	P	**P**	**11 06 37.2**	**+1.2**
BO02				IAmb	IAmb	11 06 57.2	
	comp=Z,110nm,1.4s						
ROC1	**El Roble**	**33.80**	**103**	P	**P**	**11 06 37.5**	**+0.6**
MT05	**Renca**	**33.96**	**103**	P	**P**	**11 06 39.9**	**+1.9**
PEL	**Peldehue**	**34.04**	**103**	P	**P**	**11 06 39.8**	**+1.1**
PEL				pmax	pmax		
	comp=Z,219nm,1.4s						
PEL	**Peldehue**	**34.04**	**103**	P	**P**	**11 06 39.8**	**+1.1**
CO02	**Combarbal**	**34.14**	**100**	P	**P**	**11 06 41.3**	**+1.6**
VA03	**San Esteban**	**34.22**	**102**	P	**P**	**11 06 41.4**	**+1.1**
VA03				IAmb	IAmb	11 07 01.0	
	comp=Z,139nm,1.2s						
GO09	**Cerro Castillo**	**34.35**	**136**	IAmb	IAmb	11 06 53.1	
	comp=Z,187nm,1.4s						
CO03	**El Pedregal**	**34.48**	**99**	P	**P**	**11 06 43.4**	**+0.8**
CO03				IAmb	IAmb	11 06 49.6	
	comp=Z,72nm,1.1s						
GO04	**Tololo Observa**	**34.53**	**98**	P	**P**	**11 06 44.8**	**+1.5**
TBI	**Tubuai**	**34.79**	**275**	*eS*	**S**	**11 12 12.3**	**-3.8**
	comp=Z,4μm,27.0s						
TBI				eLQ	LQ	11 14 28.0	
	comp=Z,23μm,27.0s						
TBI				eLR	LR	11 16 00.0	
	comp=Z,12μm,27.5s,baz=108						
TBI	**Tubuai**	**34.79**	**275**	*eT*	T	11 43 17.5	
	comp=Z,14nm,0.3s						
AC04	**Llanos de Chal**	**34.81**	**94**	P	**P**	**11 06 45.7**	**+0.3**
AC04				IAmb	IAmb	11 06 56.6	
	comp=Z,95nm,1.4s						
LCO	**Las Campanas**	**34.91**	**96**	P	**P**	**11 06 47.3**	**+0.8**
LCO				pmax	pmax		
	comp=Z,117nm,1.4s						
LCO	**Las Campanas**	**34.91**	**96**	P	**P**	**11 06 47.3**	**+0.8**
LCO				IAmb	IAmb	11 06 54.2	
	comp=Z,117nm,1.4s						
LCO	**Las Campanas**	**34.91**	**96**	IAMs_20	IAMs_20	11 17 17.5	
	comp=Z,17μm,18.0s						
CO01	**Juntas del Tor**	**35.17**	**98**	P	**P**	**11 06 49.4**	**+0.6**
CO01				IAMs_20	IAMs_20	11 17 09.8	
	comp=Z,16μm,19.0s						
AC05	**El Transito**	**35.31**	**96**	P	**P**	**11 06 50.4**	**+0.5**
AC05				IAMs_20	IAMs_20	11 17 42.3	
	comp=Z,18μm,18.0s						
TAOE	**Nuku Hiva Isla**	**35.34**	**304**	*eP*	**P**	**11 06 46.7**	**-3.4**
	comp=Z,392nm,1.4s						
TAOE				*eS*	**S**	**11 12 20.7**	**-4.2**
	comp=Z,907nm,26.4s						
TAOE				*eLR*	LR	11 16 13.3	
	comp=Z,7μm,26.6s						
GO03	**Copiap**	**35.69**	**94**	P	**P**	**11 06 54.0**	**+0.9**
AC01	**Pan de Azucar**	**35.83**	**91**		**P**	**11 06 55.1**	**+0.9**
AC01				IAmb	IAmb	11 07 10.6	
	comp=Z,94nm,1.3s						
ZON	**Zonda**	**36.01**	**101**	P	**P**	**11 06 57.3**	**+1.6**
ZON				pmax	pmax		
	comp=Z,188nm,1.4s						
ZON	**Zonda**	**36.01**	**101**	P	**P**	**11 06 57.3**	**+1.6**
ZON				IAmb	IAmb	11 07 04.1	
	comp=Z,188nm,1.4s						
MEH	**Mehetia**	**36.05**	**284**	*eT*	T	11 44 49.7	
	comp=Z,64nm,0.2s						
GO02	**Mina Guanaco**	**37.02**	**90**	P	**P**	**11 07 05.8**	**+1.1**
GO02				IAmb	IAmb	11 07 14.9	
	comp=Z,192nm,1.6s						
VAH	**Vaihoa**	**37.07**	**288**	*eP*	**P**	**11 07 01.8**	**-3.0**
	comp=Z,389nm,1.5s						
TVO	**Taravao**	**37.08**	**283**	*eP*	**P**	**11 07 02.4**	**-2.5**
	comp=Z,42nm,1.3s						
TVO	**Taravao**	**37.08**	**283**	*eT*	T	11 45 58.0	
	comp=Z,4.1nm,0.3s						
TIAR	**Tiarei**	**37.26**	**283**	*eP*	**P**	**11 07 03.9**	**-2.6**
	comp=Z,67nm,1.4s						
TIAR	**Tiarei**	**37.26**	**283**	*eT*	T	11 46 20.2	
	comp=Z,13nm,0.3s						
NNA	**Nana**	**37.34**	**66**	P	**P**	**11 07 07.5**	**+0.3**
NNA				pmax	pmax		
	comp=Z,52nm,1.3s						
NNA	**Nana**	**37.34**	**66**	P	**P**	**11 07 07.5**	**+0.3**
NNA	**Nana**	**37.34**	**66**	IAMs_20	IAMs_20	11 18 05.2	
	comp=Z,20μm,20.0s						
PAE	**Paea**	**37.41**	**283**	*eP*	**P**	**11 07 05.1**	**-2.5**
	comp=Z,17nm,1.3s						
PAE	**Paea**	**37.41**	**283**	*eT*	T	11 46 30.3	
	comp=Z,2.8nm,0.3s						
PMOR	**Pomariorio Ree**	**37.41**	**288**	*eP*	**P**	**11 07 04.6**	**-3.1**
	comp=Z,317nm,1.4s						
PPTF	**Pamatai, Papee**	**37.43**	**283**	P	**P**	**11 07 09.9**	**+1.9**
PPT2	**Papeete2**	**37.44**	**283**	*eP*	**P**	**11 07 05.6**	**-2.4**
	comp=Z,192nm,1.6s						
PPT2				*eS*	**S**	**11 12 53.5**	**-3.4**
	comp=Z,4μm,27.0s						
PPT2				eLQ	LQ	11 15 33.8	
	comp=Z,12μm,23.8s						
PPT2				eLR	LR	11 17 05.3	
	comp=Z,16μm,25.0s,baz=120						
PPT2	**Papeete2**	**37.44**	**283**	*eT*	T	11 46 26.8	
	comp=Z,4.8nm,0.3s						
PPT	**Papeete**	**37.45**	**283**	P	**P**	**11 07 06.1**	**-2.0**
	comp=Z,21nm,0.7s,baz=220,slow=17,SNR=2.1						
PPT				LR	LR	11 18 16.9	
	comp=Z,9μm,18.3s,baz=114,slow=30						
USHA	**Ushuaia**	**37.75**	**140**	P	**P**	**11 07 11.1**	**+0.9**
	comp=Z,18nm,0.4s,baz=261,slow=8.4,SNR=6.7						
PB06	**IPOC Station P**	**37.94**	**87**	IAmb	IAmb	11 07 40.6	
	comp=Z,144nm,1.6s						
MG01	**Puerto William**	**38.22**	**140**	IAMs_20	IAMs_20	11 19 10.0	
	comp=Z,13μm,18.0s						
TA01	**Diego Aracena**	**38.31**	**83**	P	**P**	**11 07 15.7**	**+0.3**
LVC	**Limon Verde**	**38.54**	**87**	P	**P**	**11 07 19.2**	**+1.5**
LVC				pmax	pmax		
	comp=Z,147nm,1.6s						
LVC	**Limon Verde**	**38.54**	**87**	P	**P**	**11 07 19.2**	**+1.5**
LVC				IAmb	IAmb	11 07 47.7	
	comp=Z,147nm,1.6s						
LVC	**Limon Verde**	**38.54**	**87**	*eP*	**P**	**11 07 19.3**	**+1.7**
PB09	**IPOC Station P**	**38.59**	**85**	IAmb	IAmb	11 07 40.8	
	comp=Z,154nm,1.4s						
PSGCX	**Pisagua**	**38.79**	**82**	P	**P**	**11 07 20.8**	**+1.3**
PB11	**IPOC Station P**	**39.11**	**82**	P	**P**	**11 07 23.0**	**+0.8**
ATAH	**Atahualpa**	**39.32**	**58**	P	**P**	**11 07 23.7**	**-0.5**
	comp=Z,6.7nm,0.8s,baz=252,slow=5.0,SNR=23						
MNMC	**Minye Minye**	**39.45**	**81**	IAmb	IAmb	11 07 42.0	
	comp=Z,193nm,1.5s						
LPAZ	**La Paz**	**42.02**	**79**	P	**P**	**11 07 47.9**	**+1.0**
	comp=Z,14nm,0.9s,baz=235,slow=7.8,SNR=52						
LPAZ				LR	LR	11 19 49.6	
	comp=Z,3μm,21.5s,baz=241,slow=28						
LPAZ	**La Paz**	**42.02**	**79**	*eP*	**P**	**11 07 47.9**	**+1.0**
LPAZ	**La Paz**	**42.02**	**79**	P	**P**	**11 07 47.9**	**+1.0**
LPAZ	**La Paz**	**42.02**	**79**	*eP*	**P**	**11 07 45.4**	**-1.5**
EFI	**East Falkland**	**43.14**	**133**	*i P*	**P**	**11 07 56.9**	**+2.1**
EFI				pmax	pmax		
	comp=Z,61nm,1.2s						
CZSB	**Cruzeiro do Su**	**43.17**	**64**	*eP*	**P**	**11 07 55.6**	**+0.1**
PMSA	**Palmer Station**	**43.63**	**153**	P	**P**	**11 08 00.9**	**+2.3**
	comp=Z,35nm,1.2s,baz=308,slow=8.8,SNR=6.2						
PMSA	**Palmer Station**	**43.63**	**153**	P	**P**	**11 08 01.7**	**+3.1**
LPA	**La Plata**	**44.13**	**109**	*d iP*	**P**	**11 08 00.9**	**-2.1**
LPA				PCP	**PcP**	**11 09 48.6**	**+0.6**
LPA				PPP	PPP	11 10 24.7	
LPA				S	**S**	**11 14 39.7**	**+3.6**
LPA				SS	**SS**	**11 17 55.3**	**+1.8**
LPA				SSS	SSS	11 18 31.8	
PAC1	**Pacto, Paraso**	**44.37**	**50**	*eP*	**P**	**11 08 04.4**	**-0.9**
CUSE	**Cuicocha Este**	**44.66**	**50**	*eP*	**P**	**11 08 08.4**	**+0.3**
MAPC	**Malpelo**	**45.54**	**44**	*eP*	**P**	**11 08 14.7**	**+0.3**
GCUF	**Volcan Galeras**	**46.04**	**51**	*eP*	**P**	**11 08 19.9**	**+0.9**
PUAC	**Puerto Asis, P**	**46.05**	**52**	*eP*	**P**	**11 08 18.9**	**+0.4**
ITQB	**Itaqui**	**46.53**	**102**	*eP*	**P**	**11 08 22.5**	**+0.4**
ITQB				*eS*	**S**	**11 15 09.9**	**-1.0**
BBAC	**Balboa, Cauca**	**46.70**	**50**	*eP*	**P**	**11 08 23.2**	**-0.6**
PTLC	**Puerto Leguiza**	**46.98**	**54**	*eP*	**P**	**11 08 24.0**	**-1.8**
CPUP	**Villa Florida**	**47.01**	**98**	P	**P**	**11 08 25.7**	**-0.2**
	comp=Z,31nm,1.2s,baz=258,slow=8.4,SNR=22						
CPUP				LR	LR	11 25 11.9	
	comp=Z,7μm,18.7s,baz=258,slow=32						
CPUP	**Villa Florida**	**47.01**	**98**	IAmb	IAmb	11 08 32.7	
	comp=Z,69nm,1.4s						
CPUP	**Villa Florida**	**47.01**	**98**	*eP*	**P**	**11 08 26.2**	**+0.3**
ETMB	**Extrema**	**47.05**	**72**	*eP*	**P**	**11 08 26.0**	**-0.4**
ETMB				*eS*	**S**	**11 15 18.0**	**-0.7**
POPC	**Popayan, Colom**	**47.46**	**50**	*eP*	**P**	**11 08 29.2**	**-0.6**
PCON	**Cinco Dias**	**47.49**	**51**	*eP*	**P**	**11 08 30.9**	**+0.5**
GARC	**Garzon, Huila**	**47.98**	**52**	*eP*	**P**	**11 08 34.1**	**+0.2**
MARP	**Paez Belalcaza**	**48.16**	**51**	*eP*	**P**	**11 08 35.8**	**+0.5**
BETC	**Betania**	**48.38**	**51**	*eP*	**P**	**11 08 37.9**	**+1.2**
PLTB	**Pedras Altas**	**48.41**	**106**	*eP*	**P**	**11 08 37.1**	**+0.2**
YOTC	**Yotoco, Valle**	**48.77**	**49**	*eP*	**P**	**11 08 39.4**	**-0.3**
CPSB	**Cacapava Do Su**	**48.94**	**104**	*eP*	**P**	**11 08 40.3**	**-0.6**
JTS	**Las Juntas de**	**48.98**	**35**	*i P*	**P**	**11 08 41.3**	**+0.1**
JTS				pmax	pmax		
	comp=Z,321nm,2.6s						
JTS	**Las Juntas de**	**48.98**	**35**	P	**P**	**11 08 41.3**	**+0.1**
MACC	**Maicena, Meta**	**49.06**	**53**	*eP*	**P**	**11 08 42.1**	**+0.1**
ORTC	**Ortega, Tolima**	**49.43**	**51**	*eP*	**P**	**11 08 45.1**	**+0.4**
PRAC	**Prado**	**49.52**	**51**	*eP*	**P**	**11 08 45.9**	**+0.5**
ANIL	**Santa Ana**	**49.76**	**50**	*eP*	**P**	**11 08 47.5**	**-0.1**
SOLC	**Bahia Solano**	**49.82**	**46**	*eP*	**P**	**11 08 47.9**	**+0.2**
TOLC	**Tolima**	**49.89**	**50**	*eP*	**P**	**11 08 48.6**	**0.0**
RTAL	**Retalhuleu**	**49.89**	**25**	IAMs_20	IAMs_20	11 24 15.1	
	comp=Z,16μm,21.0s						
PNME	**Penonome**	**49.91**	**42**	*eP*	**P**	**11 08 48.0**	**-0.3**
PTLB	**Pontes e Lacer**	**49.98**	**83**	*eP*	**P**	**11 08 48.9**	**0.0**
SAML	**Samuel**	**50.00**	**74**	IAMs_20	IAMs_20	11 26 18.1	
	comp=Z,10μm,21.0s						
SNET	**Serv Nac Est T**	**50.06**	**28**	P	**P**	**11 08 50.5**	**+1.0**
SNET				IAMs_20	IAMs_20	11 24 46.7	
	comp=Z,15μm,20.0s						
CRIN	**San Cristobal**	**50.10**	**31**	IAMs_20	IAMs_20	11 24 51.9	
	comp=Z,12μm,20.0s						
PTAC	**Punta Ardita,**	**50.30**	**45**	*eP*	**P**	**11 08 51.4**	**+0.1**
ACON	**Acoyapa**	**50.32**	**34**	IAmb	IAmb	11 09 02.4	
	comp=Z,125nm,1.4s						
ACON				IAMs_20	IAMs_20	11 24 59.6	
	comp=Z,12μm,19.0s						
VILB	**Vilhena**	**50.32**	**80**	*eP*	**P**	**11 08 51.7**	**+0.1**
GUY2C	**Guyana, Caldas**	**50.34**	**49**	*eP*	**P**	**11 08 51.9**	**-0.2**
CBOC	**Ciudad Bolivar**	**50.41**	**48**	*eP*	**P**	**11 08 52.8**	**+0.4**
CVER	**Cruz Verde, Cu**	**50.66**	**51**	*eP*	**P**	**11 08 56.7**	**+2.2**
MTO3	**Montecristo**	**50.66**	**28**	P	**P**	**11 08 54.9**	**+0.7**
MTO3				IAmb	IAmb	11 09 00.9	
	comp=Z,149nm,1.2s						
HUEH	**Huehuetenango**	**50.69**	**25**	P	**P**	**11 08 54.8**	**+0.4**
HUEH				IAMs_20	IAMs_20	11 24 51.3	
	comp=Z,16μm,19.0s						
ROSC	**El Rosal**	**50.73**	**51**	P	**P**	**11 08 55.6**	**+0.6**
	comp=Z,32nm,0.8s,baz=233,slow=5.0,SNR=49						
ROSC				LR	LR	11 26 55.6	
	comp=Z,22μm,18.4s,baz=224,slow=32						
ROSC	**El Rosal**	**50.73**	**51**	P	**P**	**11 08 56.9**	**+1.8**
TLIG	**Tlapa**	**50.73**	**16**	IAmb	IAmb	11 09 04.4	
	comp=Z,168nm,1.5s						
TLIG				IAMs_20	IAMs_20	11 25 12.5	
	comp=Z,13μm,18.0s						
UPA	**Univ. de Panam**	**50.76**	**42**	*eP*	**P**	**11 08 52.5**	**-2.2**
MATN	**Matagalpa**	**50.81**	**33**	IAmb	IAmb	11 09 05.8	
	comp=Z,68nm,1.1s						
ESPN	**Las Esperanzas**	**50.94**	**35**	IAmb	IAmb	11 09 07.2	
	comp=Z,215nm,1.6s						
ESPN				IAMs_20	IAMs_20	11 25 04.0	
	comp=Z,15μm,18.0s						
CHIC	**Chingaza**	**50.96**	**51**	*eP*	**P**	**11 08 57.8**	**+1.0**
HELC	**Santa Helena**	**50.97**	**48**	*eP*	**P**	**11 08 56.8**	**0.0**
ITAB	**Concordia**	**51.06**	**101**	*eP*	**P**	**11 08 57.3**	**+0.4**
DBBC	**Dabeiba**	**51.18**	**47**	*eP*	**P**	**11 08 58.4**	**+0.3**
TGUH	**Tegucigalpa,Un**	**51.21**	**30**	*eP*	**P**	**11 08 58.0**	**-0.2**
TGUH	**Tegucigalpa,Un**	**51.21**	**30**	P	**P**	**11 08 58.2**	**0.0**
TGUH				IAmb	IAmb	11 09 13.3	
	comp=Z,132nm,1.3s						
TGUH				IAMs_20	IAMs_20	11 25 07.2	
	comp=Z,14μm,19.0s						
UPD2	**Meteti**	**51.29**	**44**	*eP*	**P**	**11 08 57.6**	**-1.1**
CCIG	**Comitan**	**51.36**	**24**	P	**P**	**11 08 59.2**	**-0.2**
CCIG				IAmb	IAmb	11 09 10.6	
	comp=Z,93nm,0.9s						
CCIG				IAMs_20	IAMs_20	11 25 14.1	
	comp=Z,14μm,21.0s						
CNLB	**Canela**	**51.42**	**104**	*eP*	**P**	**11 09 00.6**	**+0.8**
SPBC	**San Pablo de B**	**51.50**	**50**	*eP*	**P**	**11 08 59.7**	**-0.8**
PTGC	**Puerto Gaitan,**	**51.72**	**53**	*eP*	**P**	**11 09 02.0**	**0.0**
CAPC	**Capurgana**	**51.75**	**45**	*eP*	**P**	**11 09 02.1**	**-0.1**
PTBC	**PUERTO BERRIO,**	**51.92**	**49**	*eP*	**P**	**11 09 03.4**	**-0.1**
PTGB	**Pitanga**	**52.02**	**98**	*eP*	**P**	**11 09 04.9**	**+0.6**
URCC	**San Jos de Ur**	**52.17**	**47**	*eP*	**P**	**11 09 05.2**	**-0.1**
MOIG	**Morelia**	**52.26**	**12**	P	**P**	**11 09 06.0**	**-0.1**
TRCB	**Terra Rica**	**52.29**	**95**	*eP*	**P**	**11 09 06.7**	**+0.5**
UNM	**Universidad Na**	**52.31**	**14**	P	**P**	**11 09 07.8**	**+1.3**
UNM				pmax	pmax		
	comp=Z,217nm,1.3s						
UNM	**Universidad Na**	**52.31**	**14**	P	**P**	**11 09 07.8**	**+1.3**
RUSC	**La Rusia**	**52.33**	**51**	*eP*	**P**	**11 09 06.9**	**-0.2**
LCBC	**Los crdobas,**	**52.52**	**45**	*eP*	**P**	**11 09 10.0**	**+2.1**
PETF	**Flores**	**52.76**	**26**	IAmb	IAmb	11 09 20.4	
	comp=Z,148nm,1.1s						
BARC	**Barichara**	**52.79**	**50**	*eP*	**P**	**11 09 10.0**	**-0.2**
BRRC	**Barranca, Sant**	**52.83**	**49**	*eP*	**P**	**11 09 10.3**	**0.0**
MOTC	**Monteria, Cord**	**52.88**	**46**	*eP*	**P**	**11 09 10.9**	**+0.3**
TAMC	**Tame, Arauca**	**53.59**	**52**	*eP*	**P**	**11 09 13.8**	**-2.1**
PAMC	**Pamplona, Colo**	**53.66**	**50**	*eP*	**P**	**11 09 16.1**	**-0.8**
PCMB	**Pacaembu**	**53.93**	**95**	*eP*	**P**	**11 09 18.8**	**+0.4**
OCAC	**Ocana**	**53.94**	**49**	*eP*	**P**	**11 09 17.0**	**-1.6**
SJCC	**San Jacinto, C**	**54.05**	**46**	*eP*	**P**	**11 09 19.5**	**+0.2**
ARGC	**Ariguani, Magd**	**54.60**	**47**	*eP*	**P**	**11 09 23.2**	**+0.1**
FRTB	**Fartura**	**54.66**	**97**	*eP*	**P**	**11 09 24.2**	**+0.5**
CLDB	**Colider**	**55.08**	**81**	*eP*	**P**	**11 09 25.9**	**-0.9**
XMAS	**Kiritimati**	**55.32**	**299**	P	**P**	**11 09 29.7**	**+1.3**
SLBS	**Sierra La Lagu**	**55.37**	**1**	P	**P**	**11 09 29.6**	**+1.0**
MACA	**Manacapuru-AM**	**55.38**	**70**	*eP*	**P**	**11 09 27.7**	**-1.2**
ITRB	**Iturama**	**55.50**	**93**	*eP*	**P**	**11 09 30.2**	**+0.4**
SMRC	**Santa Marta, M**	**55.62**	**46**	*eP*	**P**	**11 09 29.6**	**-1.0**
LPIG	**La Paz**	**55.77**	**1**	P	**P**	**11 09 29.7**	**-1.8**
	comp=Z,8.7nm,0.3s,baz=163,slow=12,SNR=1.7						
LPIG				LR	LR	11 27 46.8	
	comp=Z,11μm,19.4s,baz=140,slow=30						
ARAG	**Araguaiana, MT**	**56.06**	**88**	*eP*	**P**	**11 09 34.2**	**+0.3**
HOPE	**Hope Point**	**56.08**	**137**	P	**P**	**11 09 34.1**	**+0.8**
HOPE				pmax	pmax		
	comp=Z,139nm,1.1s						
HOPE	**Hope Point**	**56.08**	**137**	P	**P**	**11 09 34.1**	**+0.8**
HOPE	**Hope Point**	**56.08**	**137**	IAMs_20	IAMs_20	11 28 20.1	
	comp=Z,7μm,19.0s						
SDV	**Santo Domingo**	**56.17**	**51**	*eP*	**P**	**11 09 32.8**	**-1.9**
SDV	**Santo Domingo**	**56.17**	**51**	P	**P**	**11 09 33.6**	**-1.2**
SDV				IAmb	IAmb	11 09 45.3	
	comp=Z,

DCZ Deep Cove 62.51 232 IAMs_20 IAMs_20 11 31 03.7
comp=Z,12µm,20.0s
PRPB Parauapebas 62.57 80 eP P **11 10 17.9 -1.1**
JANB Januaria 62.74 91 eP P **11 10 20.3 +0.2**
SPX San Pedro Mart 62.80 356 IAmb IAmb 11 10 30.6
comp=Z,69nm,1.3s
SPX IAMs_20 IAMs_20 11 30 53.8
comp=Z,7µm,20.0s
SMTB Santa Maria do 63.03 83 eP P **11 10 22.2 +0.3**
319A Douglas 63.04 2 IAMs_20 IAMs_20 11 31 50.4
comp=Z,8µm,20.0s
JCT Junction City 63.06 11 P P **11 10 21.4 -0.3**
baz=191,SNR=50
JCT S S **11 18 56.5 +3.9**
baz=191
HKT Hockley 63.30 15 P P **11 10 23.2 0.0**
HKT pmax pmax
comp=Z,161nm,1.5s
HKT Hockley 63.30 15 P P **11 10 23.2 0.0**
HKT Hockley 63.30 15 IAMs_20 IAMs_20 11 35 41.5
comp=Z,10µm,18.0s
TPP Pointe-a-Pierr 63.50 57 eP P **11 10 27.1 +2.2**
SDDR Presa de Saban 63.50 43 IAmb IAmb 11 10 38.2
comp=Z,69nm,1.4s
SDDR IAMs_20 IAMs_20 11 32 51.5
comp=Z,7µm,20.0s
SDBA SAO DESIDERIO 63.52 88 eP P **11 10 25.3 +0.1**
MNTX Cornudas Mount 63.58 6 P P **11 10 24.4 -0.8**
baz=186,SNR=59
MNTX S S **11 19 02.4 +3.4**
baz=186
214A Organ Pipe Nat 63.61 358 P P **11 10 25.6 +0.3**
baz=178,SNR=10
214A S S **11 19 05.1 +5.7**
baz=178
214A Organ Pipe Nat 63.61 358 IAmb IAmb 11 10 41.7
comp=Z,71nm,1.4s
VNA3 Neumayer Olymp 63.66 159 P P **11 10 25.9 +0.5**
KNTN Kanton 63.68 284 P P **11 10 28.0 +1.8**
SJMB Sao Joao De Ma 63.71 96 eP P **11 10 27.0 +0.6**
435B Jarrell 63.75 13 P P **11 10 26.4 +0.2**
baz=193,SNR=16
435B S S **11 19 05.4 +4.3**
baz=193
435B Jarrell 63.75 13 IAMs_20 IAMs_20 11 33 49.2
comp=Z,8µm,20.0s
TRN Trinidad (W) 63.76 57 eP P **11 10 26.7 +0.1**
ESJX Sierra Juarez 63.80 356 IAMs_20 IAMs_20 11 31 22.5
comp=Z,6µm,20.0s
BSFB Barra de Sao F 63.94 97 eP P **11 10 28.6 +0.7**
TUC Tucson 63.95 0 P P **11 10 27.9 +0.3**
TUC pmax pmax
comp=Z,61nm,1.2s
TUC Tucson 63.95 0 P P **11 10 27.9 +0.3**
baz=180
TUC S S **11 19 09.2 +5.5**
baz=180
TUC Tucson 63.95 0 P P **11 10 27.9 +0.3**
TUC IAmb IAmb 11 10 38.7
comp=Z,61nm,1.2s
TUC Tucson 63.95 0 IAMs_20 IAMs_20 11 32 15.4
comp=Z,12µm,20.0s
MCPB Macapa, AP 63.97 73 eP P **11 10 28.0 -0.2**
SC01 Santiago de lo 64.18 43 IAMs_20 IAMs_20 11 32 46.1
comp=Z,8µm,21.0s
121A Cookes Peak, D 64.25 3 P P **11 10 29.9 +0.2**
baz=183,SNR=27
121A S S **11 19 12.3 +4.6**
baz=183
121A Cookes Peak, D 64.25 3 IAmb IAmb 11 10 36.3
comp=Z,54nm,1.1s
VNA1 Neumayer--Stat 64.32 159 P P **11 10 30.8 +1.2**
TJX Tijuana 64.38 355 IAMs_20 IAMs_20 11 31 53.9
comp=Z,7µm,21.0s
UABX UABC, Campus M 64.39 356 IAMs_20 IAMs_20 11 31 42.1
comp=Z,7µm,21.0s
RMX La Rumorosa 64.40 355 IAMs_20 IAMs_20 11 31 38.0
comp=Z,10µm,21.0s
TKX Tecate 64.40 355 IAmb IAmb 11 10 40.6
comp=Z,90nm,1.2s
113A Mohawk Valley, 64.45 358 IAmb IAmb 11 10 38.7
comp=Z,112nm,1.4s
113A IAMs_20 IAMs_20 11 33 17.6
comp=Z,6µm,18.0s
IKP In-Ko-Pah, Jac 64.45 355 P P **11 10 31.2 +0.3**
baz=175,SNR=13
VNA2 Neumayer--Watz 64.47 159 P P **11 10 31.5 +0.9**
BAR Barrett 64.52 355 IAmb IAmb 11 10 42.4
comp=Z,108nm,1.5s
BAR IAMs_20 IAMs_20 11 31 58.6
comp=Z,6µm,20.0s
MONP2 Monument Peak 64.71 355 P P **11 10 33.0 +0.2**
baz=175,SNR=6.1
MONP2 S S **11 19 20.3 +6.9**
baz=175
SWSC Sam W. Stewart 64.72 356 P P **11 10 32.3 -0.3**
baz=176
MSVF Nonsavu 64.72 264 P P **11 10 35.1 +1.9**
MSVF pmax pmax
comp=Z,109nm,1.3s
MSVF Nonsavu 64.72 264 P P **11 10 35.1 +1.9**
109C Camp Elliot, M 64.76 355 P P **11 10 32.7 -0.2**
baz=174
109C S S **11 19 20.4 +6.8**
baz=174
109C Camp Elliot, M 64.76 355 IAMs_20 IAMs_20 11 32 04.0
comp=Z,8µm,20.0s
GLA Glamis 64.77 357 P P **11 10 33.5 +0.5**
baz=177,SNR=7.4
GLA S S **11 19 21.1 +7.3**
baz=177
GLA Glamis 64.77 357 IAmb IAmb 11 10 42.5
comp=Z,65nm,1.4s
GLA IAMs_20 IAMs_20 11 31 55.3
comp=Z,9µm,22.0s
WHTX Lake Whitney, 64.95 13 P P **11 10 33.5 -0.6**
baz=193,SNR=34
WHTX S S **11 19 19.3 +3.3**
baz=193
WHTX Lake Whitney, 64.95 13 IAMs_20 IAMs_20 11 34 13.9
comp=Z,8µm,22.0s
SCI2 San Clemente I 64.98 353 P P **11 10 34.4 +0.2**
baz=173
ABTX Abilene, Hawle 65.18 11 P P **11 10 35.4 -0.3**
baz=191,SNR=23
ABTX S S **11 19 21.8 +2.9**
baz=191
CRPR Cabo Rojo, PR 65.25 47 IAmb IAmb 11 10 41.9
comp=Z,79nm,1.2s
MLPR Magueyes Islan 65.26 47 P P **11 10 36.3 -0.1**
MLPR IAmb IAmb 11 10 42.0
comp=Z,97nm,1.3s
NATX Nacogdoches 65.31 16 P P **11 10 36.6 +0.2**
baz=195,SNR=14
NATX S S **11 19 25.7 +5.3**
baz=195
SNCC San Nicolas Is 65.35 352 P P **11 10 37.2 +0.6**
baz=172
CIS Catalina Islan 65.39 353 P P **11 10 36.3 -0.6**
baz=173
BC3 Big Chuckawall 65.41 356 P P **11 10 38.0 +0.9**
baz=176,SNR=21
BC3 S S **11 19 29.6 +7.8**
baz=176
XPFO Pion Flat 65.43 355 IAMs_20 IAMs_20 11 32 07.7
comp=Z,8µm,22.0s
PFO Pinyon Flats O 65.43 355 LR LR 11 32 31.4
comp=Z,6µm,20.1s,baz=176,slow=30
PFO Pinyon Flats O 65.43 355 *i* P P **11 10 37.9 +0.5**
PFO pmax pmax
comp=Z,325nm,2.8s
PFO Pinyon Flats O 65.43 355 P P **11 10 37.7 +0.4**
baz=175
PFO S S **11 19 30.2 +8.2**
baz=175
PFO Pinyon Flats O 65.43 355 P P **11 10 37.9 +0.5**
PFO IAmb IAmb 11 10 54.5
comp=Z,78nm,1.5s
PFO Pinyon Flats O 65.43 355 IAMs_20 IAMs_20 11 32 07.7
comp=Z,9µm,22.0s
SNAA Sanae 65.47 161 P P **11 10 37.3 +0.1**
SNAA Sanae 65.47 161 P P **11 10 36.8 -0.4**
SNAA pmax pmax
comp=Z,160nm,1.5s
SNAA Sanae 65.47 161 P P **11 10 36.8 -0.4**
MURC Murrieta 65.47 355 P P **11 10 38.0 +0.5**
baz=174,SNR=6.0
MURC S S **11 19 30.3 +7.8**
baz=174
OBIP Obispado Ponce 65.59 47 IAmb IAmb 11 10 40.1
comp=Z,62nm,1.4s
GRTK Grand Turk 65.59 41 IAMs_20 IAMs_20 11 33 18.9
comp=Z,7µm,22.0s
SVB Belmont 65.68 55 eP P 11 10 33.0 -6.2
FMP Fort Macarthur 65.68 354 P P **11 10 39.4 +0.6**
baz=173
BELC Belle Mtn. Jos 65.78 356 P P **11 10 40.0 +0.4**
baz=176,SNR=32
BELC S S **11 19 34.0 +7.6**
baz=176
Y22D IRIS PASSCAL I 65.83 4 P P **11 10 40.3 +0.4**
baz=184,SNR=8.7
Y22D IRIS PASSCAL I 65.83 4 IAMs_20 IAMs_20 11 33 58.2
comp=Z,11µm,19.0s
IRM Iron Mountain 65.89 356 P P **11 10 40.5 +0.3**
baz=176,SNR=24
IRM S S **11 19 34.6 +7.1**
baz=176
SJG San Juan 65.93 48 eP P **11 10 37.7 -3.0**
SJG San Juan 65.93 48 P P **11 10 39.0 -1.7**
SJG pmax pmax
comp=Z,55nm,1.2s
SJG San Juan 65.93 48 P P **11 10 39.0 -1.7**
SJG IAmb IAmb 11 10 45.9
comp=Z,55nm,1.2s
PDPR Patillas Dam, 65.94 48 IAmb IAmb 11 10 45.8
comp=Z,65nm,1.1s
PDMCI Parker Dam,Lak 65.99 357 P P **11 10 41.4 +0.7**
baz=177,SNR=12
PDMCI S S **11 19 35.7 +7.1**
baz=177
X16A Lo Mia Camp, P 66.05 360 IAmb IAmb 11 10 48.0
comp=Z,76nm,1.4s
X16A IAMs_20 IAMs_20 11 33 18.0
comp=Z,11µm,21.0s
MSTX Muleshoe 66.08 8 P P **11 10 40.7 -0.8**
baz=188,SNR=51
MSTX S S **11 19 32.5 +2.5**
baz=188
MSTX Muleshoe 66.08 8 IAMs_20 IAMs_20 11 34 40.9
comp=Z,7µm,18.0s
TMAB Tom-Au,PA,Br 66.08 77 eP P **11 10 42.5 +0.6**
SCZ2 Santa Cruz Isl 66.10 352 P P **11 10 43.0 +1.4**
baz=172
BBRC Big Bear Solar 66.11 355 P P **11 10 42.3 +0.4**
baz=175
PASC Pasadena Art C 66.13 354 IAmb IAmb 11 10 44.4
comp=Z,53nm,1.2s
PASC Pasadena Art C 66.13 354 IAMs_20 IAMs_20 11 32 24.2
comp=Z,9µm,20.0s
BFSC Mount Baldy Ra 66.14 354 P P **11 10 41.8 -0.1**
baz=174,SNR=13
BFSC S S **11 19 37.0 +6.2**
baz=174
MWC Mount Wilson 66.17 354 IAmb IAmb 11 10 51.1
comp=Z,63nm,1.4s
MWC IAMs_20 IAMs_20 11 32 45.2
comp=Z,8µm,20.0s
MCLT Moule a Chique 66.20 55 eP P 11 10 36.8 -5.7
DECC Green Verdugo 66.22 354 P P **11 10 42.3 0.0**
baz=173
CBYP Canovanas 66.23 48 IAmb IAmb 11 10 48.0
comp=Z,62nm,1.2s
Z35A Perchaven, San 66.29 13 IAMs_20 IAMs_20 11 35 40.4
comp=Z,7µm,18.0s
SLAC Saint Lucia, A 66.36 55 eP P **11 10 39.8 -3.7**
SLBI Saint Lucia, B 66.39 55 eP P **11 10 39.9 -3.9**
NEE2 Needles Airpor 66.47 357 P P **11 10 43.9 0.0**
baz=177
GMRC Granite Mounta 66.54 356 P P **11 10 44.7 +0.3**
baz=176,SNR=46
GMRC S S **11 19 42.9 +7.2**
baz=176
OSI Osito Audit: C 66.62 353 P P **11 10 44.5 -0.4**
baz=173
OSI S S **11 19 42.2 +5.9**
baz=173
OSI Osito Audit: C 66.62 353 IAmb IAmb 11 10 56.8
comp=Z,32nm,0.9s
OSI IAMs_20 IAMs_20 11 32 57.1
comp=Z,11µm,20.0s
CUPR Culebra, Puert 66.62 48 P P **11 10 43.2 -1.9**
CUPR IAmb IAmb 11 10 50.0
comp=Z,51nm,1.1s
HEC Hector,Ludlow 66.63 355 P P **11 10 45.3 +0.3**
baz=175,SNR=12
HEC S S **11 19 43.6 +7.0**
baz=175
BIM Bigot 66.67 54 eP P 11 10 40.2 -5.4
Z38A Mt. Pleasant 66.68 15 IAmb IAmb 11 10 51.4
comp=Z,93nm,1.2s
RRX Edison Barstow 66.72 355 P P **11 10 45.7 +0.2**
baz=175
ANMO Albuquerque 66.72 4 P P **11 10 45.6 -0.1**
ANMO pmax pmax
comp=Z,22nm,1.2s
ANMO Albuquerque 66.72 4 P P **11 10 45.2 -0.6**
baz=184
ANMO S S **11 19 42.9 +4.9**
baz=184
ANMO Albuquerque 66.72 4 P P **11 10 45.6 -0.1**
ANMO Albuquerque 66.72 4 IAMs_20 IAMs_20 11 34 09.9
comp=Z,8µm,21.0s
MDP Montagnes des 66.75 68 LR LR 11 37 12.4
comp=Z,6µm,19.4s,baz=246,slow=34
W18A Petrified Fore 66.76 1 P P **11 10 45.9 -0.1**
baz=181,SNR=16
W18A S S **11 19 43.5 +5.1**
baz=181
W18A Petrified Fore 66.76 1 IAmb IAmb 11 10 56.2
comp=Z,48nm,1.4s
W18A IAMs_20 IAMs_20 11 33 46.5
comp=Z,9µm,21.0s
MPOM Morne Pois Mar 66.77 54 eP P 11 10 35.5 -11
FDF Fort de France 66.77 54 eP P **11 10 43.2 -3.0**
BBGH Gun Hill 66.77 56 eP P **11 10 48.6 +2.4**
VBMS Vicksburg 66.79 19 P P **11 10 46.1 +0.2**
baz=199,SNR=5.9
656A Willston 66.83 27 IAMs_20 IAMs_20 11 35 49.0
comp=Z,7µm,19.0s
BRAL Brewton 66.85 22 P P **11 10 46.0 -0.4**
baz=202
BRAL Brewton 66.85 22 IAMs_20 IAMs_20 11 36 47.6
comp=Z,9µm,19.0s
553A Crawfordville 66.85 25 IAMs_20 IAMs_20 11 34 30.7
comp=Z,10µm,21.0s
ILAM Ile Lapin Mar 66.99 54 eP P **11 10 44.7 -2.8**
DRTD Roseau, Domini 67.00 53 eP P 11 10 37.2 -10
PKM Mcpherson Peak 67.00 352 P P **11 10 47.2 -0.3**
baz=172
MDN Morne-Daniel 67.01 53 eP P **11 10 44.7 -3.0**
DSLB Salisbury 67.08 53 eP P **11 10 46.5 -1.6**
AMTX Amarillo 67.11 9 P P **11 10 47.5 -0.6**
baz=189
AMTX S S **11 19 46.2 +3.8**
baz=189
AMTX Amarillo 67.11 9 IAMs_20 IAMs_20 11 35 58.3
comp=Z,8µm,18.0s
DLPL La Plaine 67.12 53 eP P **11 10 46.2 -2.2**
DLPL La Plaine 67.12 53 IAMs_20 IAMs_20 11 38 04.0
comp=Z,6µm,20.0s
GSC Goldstone, Bar 67.13 355 P P **11 10 48.4 +0.2**
baz=175,SNR=35
GSC S S **11 19 49.4 +6.7**
baz=175
GSC Goldstone, Bar 67.13 355 IAmb IAmb 11 10 52.5
comp=Z,83nm,1.1s
GSC IAMs_20 IAMs_20 11 33 01.8
comp=Z,8µm,22.0s
ARVC Arvin 67.14 353 P P **11 10 47.9 -0.1**
baz=173,SNR=6.0
WUAZ Wupatki 67.14 360 P P **11 10 48.4 +0.1**
baz=180,SNR=9.8
WUAZ S S **11 19 50.2 +7.2**
baz=180
WUAZ Wupatki 67.14 360 IAmb IAmb 11 11 15.1
comp=Z,86nm,1.4s
WUAZ IAMs_20 IAMs_20 11 33 34.0
comp=Z,9µm,22.0s
Z41A Richland Creek 67.18 17 P P **11 10 48.2 -0.2**
baz=197,SNR=9.0
TUQ Turquoise Moun 67.21 356 P P **11 10 49.1 +0.4**
baz=176,SNR=10
TUQ S S **11 19 50.8 +7.2**
baz=176
TDBA Terre de Bas, 67.22 53 eP P **11 10 47.6 -1.5**
LRMC Laurel Mtn Rad 67.38 354 P P **11 10 49.8 0.0**
baz=174,SNR=11
WMOK Wichita Mounta 67.39 11 P P **11 10 48.8 -1.0**
baz=191,SNR=11
CBE Ff, Capester 67.40 52 eP P 11 10 35.6 -15
SMMC Simmier 67.44 352 P P **11 10 50.6 +0.5**
baz=172
MLYT Lee's Yard 67.47 52 eP P **11 10 47.3 -3.3**
SEUS St. Eustatius 67.50 50 eP P 11 10 45.5 -5.2
SEUS St. Eustatius 67.50 50 IAMs_20 IAMs_20 11 36 57.9
comp=Z,7µm,20.0s
SKOC St. Kitts, UWI 67.52 51 eP P **11 10 54.6 +3.7**
MAGL Barre de l'ile 67.53 53 eP P **11 10 47.9 -3.1**
ISA Isabella, Lake 67.63 354 P P **11 10 51.1 -0.2**
ISA pmax pmax
comp=Z,106nm,1.5s
ISA Isabella, Lake 67.63 354 P P **11 10 51.2 -0.2**
baz=173,SNR=24
ISA S S **11 19 55.4 +6.8**
baz=173
ISA Isabella, Lake 67.63 354 P P **11 10 51.1 -0.2**
ISA IAmb IAmb 11 10 59.3
comp=Z,106nm,1.5s
SHOC Shoshone, Teco 67.69 356 P P **11 10 51.9 +0.3**
baz=175
ABD La Joyeuse, An 67.77 52 eP P **11 10 50.1 -2.3**
VES Vestal, Richgr 67.87 353 P P **11 10 53.3 +0.6**
baz=173,SNR=17
X37A Clayton 67.88 14 IAmb IAmb 11 10 55.6
comp=Z,101nm,1.3s
X37A IAMs_20 IAMs_20 11 36 11.5
comp=Z,6µm,21.0s
BPA Boggy Peak 67.92 52 eP P **11 10 49.6 -3.9**
MPMC Manual Prospec 67.94 355 P P **11 10 53.6 +0.2**
baz=174,SNR=61
MPMC S S **11 20 00.6 +8.0**
baz=174
ANBD Bethesda, Anti 67.99 52 eP P **11 10 49.6 -4.2**
MIAR Mount Ida 68.23 16 P P **11 10 54.3 -0.7**
baz=196,SNR=18
MIAR S S **11 19 58.1 +2.5**
baz=196
MIAR Mount Ida 68.23 16 IAmb IAmb 11 11 05.3
comp=Z,56nm,1.1s
SHPR Sheep Range 68.23 357 IAMs_20 IAMs_20 11 34 12.8
comp=Z,9µm,21.0s
456A Hilliard 68.23 27 IAMs_20 IAMs_20 11 36 33.3
comp=Z,8µm,20.0s
TIGA Tifton 68.29 25 P P **11 10 54.2 -1.2**
baz=205
TIGA Tifton 68.29 25 IAMs_20 IAMs_20 11 35 13.7
comp=Z,8µm,22.0s
FURC Furnace Creek, 68.30 355 P P **11 10 55.9 +0.5**
baz=175,SNR=16
FURC S S **11 20 04.8 +8.5**
baz=175
X40A Basin Creek Fa 68.34 16 P P **11 10 55.3 -0.4**
baz=197,SNR=10
X40A S S **11 19 59.8 +2.8**
baz=197
CWC Cottonwood Cre 68.37 354 P P **11 10 56.8 +0.7**
baz=174
CWC S S **11 20 04.7 +7.2**
baz=174
VOG Valley Oaks Go 68.37 353 P P **11 10 55.2 -0.7**
baz=172
PMPB Monarch Peak 68.43 352 IAmb IAmb 11 11 24.1
comp=Z,103nm,1.3s
OK025 Westminster Rd 68.46 12 IAmb IAmb 11 11 02.2
comp=Z,39nm,0.9s
LRAL Lakeview Retre 68.59 22 P P **11 10 56.8 -0.5**
baz=202,SNR=11
LRAL S S **11 20 03.0 +3.0**
baz=202
LRAL Lakeview Retre 68.59 22 IAmb IAmb 11 11 03.6
comp=Z,89nm,1.2s
LRAL IAMs_20 IAMs_20 11 37 55.6
comp=Z,7µm,19.0s
Y45A Yeager Farm, C 68.61 19 IAmb IAmb 11 11 04.7
comp=Z,89nm,1.2s
Y45A IAMs_20 IAMs_20 11 39 25.0
comp=Z,6µm,19.0s
OK029 Liberty Lake 68.65 12 IAmb IAmb 11 11 12.0
comp=Z,42nm,1.0s
TPNV Topopah Spring 68.73 356 P P **11 10 58.8 +0.5**
baz=175,SNR=13
TPNV S S **11 20 09.5 +7.6**
baz=175
TPNV Topopah Spring 68.73 356 IAmb IAmb 11 11 11.5
comp=Z,84nm,1.3s
TPNV IAMs_20 IAMs_20 11 34 05.2
comp=Z,7µm,21.0s
UALR University of 68.74 17 IAmb IAmb 11 11 04.3
comp=Z,111nm,1.4s
UALR IAMs_20 IAMs_20 11 39 10.3
comp=Z,6µm,18.0s
W39A Magazine 68.80 15 P P **11 10 57.9 -0.6**
baz=196,SNR=16
W39A S S **11 20 05.7 +3.3**
baz=196
W39A Magazine 68.80 15 IAmb IAmb 11 11 04.7
comp=Z,91nm,1.2s
X43A Marvell 68.86 18 P P **11 10 58.5 -0.4**
baz=198
MVCO Mesa Verde 68.88 2 P P **11 10 58.8 -0.6**
baz=182,SNR=53
MVCO Mesa Verde 68.88 2 IAMs_20 IAMs_20 11 34 49.0
comp=Z,9µm,22.0s
TIN Tinemaha, Big 68.99 354 P P **11 11 00.2 +0.3**
baz=174,SNR=11
SAO San Andreas Ge 69.05 351 P P **11 11 01.3 +1.2**
SAO pmax pmax
comp=Z,73nm,1.5s
SAO San Andreas Ge 69.05 351 P P **11 11 01.3 +1.2**
SAO IAmb IAmb 11 11 06.7
comp=Z,73nm,1.5s
T25A Trinidad 69.06 6 P P **11 11 00.1 -0.3**
baz=186,SNR=26
T25A S S **11 20 11.0 +5.1**
baz=186
T25A Trinidad 69.06 6 IAmb IAmb 11 11 28.0
comp=Z,106nm,1.5s
T25A IAMs_20 IAMs_20 11 36 41.7
comp=Z,6µm,21.0s
TUL1 Leonard 69.07 13 P P **11 10 59.0 -1.2**
baz=194,SNR=28
TUL1 Leonard 69.07 13 IAMs_20 IAMs_20 11 37 28.1
comp=Z,6µm,18.0s
ROSB Rosrio 69.10 80 eP P **11 11 01.4 +0.4**
PRN Pahroc Range 69.12 357 IAmb IAmb 11 11 27.2
comp=Z,70nm,1.3s
PRN IAMs_20 IAMs_20 11 34 41.4
comp=Z,10µm,21.0s
W41B Gary Mavity, V 69.14 17 P P **11 11 00.2 -0.4**
baz=197,SNR=30
W41B S S **11 20 09.4 +3.0**
baz=197
W41B Gary Mavity, V 69.14 17 IAMs_20 IAMs_20 11 39 30.0
comp=Z,5µm,18.0s
WHAR Wooly Hollow 69.24 16 IAMs_20 IAMs_20 11 39 23.7
comp=Z,5µm,18.0s
OXF Oxford 69.25 19 P P **11 10 59.7 -1.6**
baz=200
OXF Oxford 69.25 19 IAmb IAmb 11 11 11.2
comp=Z,110nm,1.4s
HON Honolulu 69.38 313 IAMs_20 IAMs_20 11 37 20.4
comp=Z,8µm,19.0s
Z51A Franklin 69.44 23 IAmb IAmb 11 11 08.6
comp=Z,81nm,1.2s
S22A 4UR Ranch, Cre 69.49 4 P P **11 11 03.1 0.0**
baz=184,SNR=44
S22A S S **11 20 15.9 +4.8**
baz=184
S22A 4UR Ranch, Cre 69.49 4 IAmb IAmb 11 11 17.3
comp=Z,96nm,1.5s
S22A IAMs_20 IAMs_20 11 35 48.1
comp=Z,8µm,20.0s
154A Montrose 69.52 25 IAMs_20 IAMs_20 11 36 03.3
comp=Z,7µm,21.0s
Y49A Blount Mountai 69.54 22 IAmb IAmb 11 11 09.0
comp=Z,47nm,1.1s
Y49A IAMs_20 IAMs_20 11 37 33.7
comp=Z,8µm,20.0s
SDCO Great Sand Dun 69.57 5 P P **11 11 03.4 -0.3**
baz=185,SNR=53
SDCO S S **11 20 16.9 +4.9**

baz=185
SDCO Great Sand Dun 69.57 5 IAMs_20 IAMs_20 11 36 33.3
comp=Z,8µm,19.0s
MLAC Mammoth, Mammo 69.61 354 P **P** **11 11 03.8 0.0**
baz=173,SNR=7.4
MDPB Devils Postpil 69.64 353 IAMs_20 IAMs_20 11 34 45.2
comp=Z,10µm,21.0s
MET Memphis--Engin 69.68 19 IAMs_20 IAMs_20 11 40 40.5
comp=Z,6µm,18.0s
257A Skidaway Islan 69.73 27 IAMs_20 IAMs_20 11 38 18.9
comp=Z,7µm,18.0s
PV01 Paradox Valley 69.80 2 IAmb IAmb 11 11 15.6
comp=Z,50nm,1.4s
PV01 IAMs_20 IAMs_20 11 35 26.3
comp=Z,7µm,21.0s
HHAR Hobbs 69.81 15 IAMs_20 IAMs_20 11 37 43.8
comp=Z,6µm,20.0s
PV13 Radium Mtn., P 69.82 2 IAMs_20 IAMs_20 11 35 15.8
comp=Z,8µm,21.0s
FCAR Ozark Folk Cen 69.85 16 IAmb IAmb 11 11 19.3
comp=Z,67nm,1.4s
PV02 Paradox Valley 69.87 2 IAmb IAmb 11 11 27.6
comp=Z,70nm,1.5s
PV02 IAMs_20 IAMs_20 11 35 58.1
comp=Z,7µm,20.0s
U38A Gravette 69.87 14 IAmb IAmb 11 11 11.0
comp=Z,46nm,1.0s
X48A Hartselle 69.89 21 IAmb IAmb 11 11 12.0
comp=Z,76nm,1.5s
X48A IAMs_20 IAMs_20 11 38 21.9
comp=Z,6µm,20.0s
PV18 Skein Mesa, Pa 69.90 2 IAMs_20 IAMs_20 11 35 17.0
comp=Z,8µm,21.0s
NVL N'lazarevskaya 69.90 163 ⇓ *i*P **P** **11 11 04.6 -0.4**
NVL *i*S **S** **11 20 13.6 -1.1**
NVL pmax pmax
comp=Z,343nm,1.7s
T35A Sooner Cattle 69.91 13 IAmb IAmb 11 11 17.3
comp=Z,115nm,1.5s
PV03 Paradox Valley 69.91 2 IAMs_20 IAMs_20 11 35 17.3
comp=Z,8µm,22.0s
W45A Hickory Valley 69.92 19 IAMs_20 IAMs_20 11 39 57.7
comp=Z,5µm,19.0s
PV17 East Wray Mesa 69.93 2 IAmb IAmb 11 11 09.3
comp=Z,84nm,1.4s
PV17 IAMs_20 IAMs_20 11 35 17.9
comp=Z,10µm,21.0s
PV11 David Mesa, Pa 69.95 2 IAmb IAmb 11 11 15.5
comp=Z,96nm,1.5s
PV11 IAMs_20 IAMs_20 11 35 40.4
comp=Z,10µm,22.0s
PV19 Morning Glory 69.96 2 IAmb IAmb 11 11 20.7
comp=Z,84nm,1.5s
PV19 IAMs_20 IAMs_20 11 35 18.6
comp=Z,8µm,22.0s
PV16 Nyswonger Mesa 69.97 2 IAmb IAmb 11 11 16.5
comp=Z,76nm,1.4s
PV16 IAMs_20 IAMs_20 11 35 40.7
comp=Z,8µm,21.0s
PV12 Saucer Basin, 69.97 2 IAMs_20 IAMs_20 11 35 42.0
comp=Z,9µm,21.0s
PV20 West Nyswonger 69.99 2 IAmb IAmb 11 11 16.7
comp=Z,78nm,1.4s
PV20 IAMs_20 IAMs_20 11 35 41.5
comp=Z,8µm,22.0s
PV15 Paradox Valley 70.01 2 IAmb IAmb 11 11 08.4
comp=Z,104nm,1.2s
PV15 IAMs_20 IAMs_20 11 35 45.9
comp=Z,7µm,21.0s
PV14 Lion Creek, Pa 70.02 2 IAMs_20 IAMs_20 11 35 52.3
comp=Z,9µm,20.0s
PV10 Paradox Valley 70.03 2 IAmb IAmb 11 11 18.8
comp=Z,99nm,1.5s
PV10 IAMs_20 IAMs_20 11 35 18.0
comp=Z,11µm,22.0s
LPAR Lepanto 70.04 18 IAMs_20 IAMs_20 11 40 31.8
comp=Z,6µm,18.0s
PV04 Paradox Valley 70.05 2 IAMs_20 IAMs_20 11 35 22.9
comp=Z,11µm,22.0s
R11A Troy Canyon, C 70.09 356 P **P** **11 11 07.3 +0.6**
baz=176,SNR=41
R11A S **S** **11 20 25.7 +7.8**
baz=176
R11A Troy Canyon, C 70.09 356 IAMs_20 IAMs_20 11 35 10.0
comp=Z,9µm,22.0s
PV07 Paradox Valley 70.10 2 IAMs_20 IAMs_20 11 36 07.4
comp=Z,7µm,20.0s
PV23 Carpenter Ridg 70.10 2 IAMs_20 IAMs_20 11 35 22.4
comp=Z,10µm,22.0s
GOGA Godfrey 70.11 24 P **P** **11 11 06.7 0.0**
baz=205,SNR=8.3
GOGA S **S** **11 20 21.3 +3.3**
baz=205
GOGA Godfrey 70.11 24 IAmb IAmb 11 11 12.7
comp=Z,48nm,1.1s
GOGA Godfrey 70.11 24 IAMs_20 IAMs_20 11 36 23.0
comp=Z,11µm,22.0s
U40A Yellville 70.13 16 P **P** **11 11 05.8 -1.0**
baz=196,SNR=17
U40A Yellville 70.13 16 IAmb IAmb 11 11 08.8
comp=Z,49nm,1.1s
PV22 Blue Mesa, Par 70.19 2 IAmb IAmb 11 11 09.4
comp=Z,63nm,1.1s
PV22 IAMs_20 IAMs_20 11 35 37.7
comp=Z,7µm,21.0s
LHV Little Huntoon 70.20 354 IAmb IAmb 11 11 20.5
comp=Z,74nm,1.1s
LCAR Lake Charles 70.26 17 IAmb IAmb 11 11 13.3
comp=Z,76nm,1.4s
Y52A Lilburn 70.32 24 IAmb IAmb 11 11 14.1
comp=Z,62nm,1.1s
NV11 Mina Array Sit 70.35 354 IAmb IAmb 11 11 15.3
comp=Z,107nm,1.2s
NV11 IAMs_20 IAMs_20 11 34 53.0
comp=Z,10µm,21.0s
NVAR Mina Array Bea 70.36 354 P **P** **11 11 07.9 -0.5**
comp=Z,44nm,0.9s,baz=189,slow=6.7,SNR=140
NVAR LR LR 11 35 14.3
comp=Z,9µm,20.6s,baz=176,slow=30
NVAR Mina Array Bea 70.36 354 P **P** **11 11 07.7 -0.7**
157A Early Branch 70.36 27 P **P** **11 11 08.7 +0.4**
baz=207
FPAL Fort Paine 70.42 22 IAMs_20 IAMs_20 11 37 57.1
comp=Z,8µm,20.0s
WAKR Walker 70.54 353 IAmb IAmb 11 11 25.4
comp=Z,68nm,1.5s
RYN Ryan 70.58 354 IAmb IAmb 11 11 14.1
comp=Z,55nm,1.2s
HALT Halls 70.59 19 IAMs_20 IAMs_20 11 39 46.4
comp=Z,6µm,20.0s
MCCM Marconi Confer 70.61 350 IAMs_20 IAMs_20 11 34 24.9
comp=Z,9µm,20.0s
X51A Calhoun 70.69 23 IAmb IAmb 11 11 16.1
comp=Z,48nm,1.0s
X51A IAMs_20 IAMs_20 11 37 41.2
comp=Z,10µm,20.0s
LNXT Lenox 70.72 19 IAMs_20 IAMs_20 11 39 50.0
comp=Z,5µm,20.0s
Z56A Williston 70.80 26 P **P** **11 11 10.5 -0.4**
baz=206
Z56A Williston 70.80 26 IAmb IAmb 11 11 17.3
comp=Z,56nm,0.8s
Z56A IAMs_20 IAMs_20 11 38 39.2
comp=Z,8µm,18.0s
Q24A Divide 70.81 5 P **P** **11 11 10.6 -0.6**
baz=185
Q24A Divide 70.81 5 IAmb IAmb 11 11 13.5
comp=Z,51nm,1.2s
Q24A IAMs_20 IAMs_20 11 36 38.1
comp=Z,8µm,21.0s
SMCO Snowmass 70.91 3 IAmb IAmb 11 11 18.5
comp=Z,78nm,1.4s
SMCO IAMs_20 IAMs_20 11 36 12.7
comp=Z,10µm,22.0s
GLAT Glass 70.94 19 IAMs_20 IAMs_20 11 39 55.6
comp=Z,6µm,20.0s
SWET Sewanee 70.94 22 IAmb IAmb 11 11 17.3
comp=Z,58nm,1.1s
SWET IAMs_20 IAMs_20 11 38 26.8
comp=Z,7µm,20.0s
KVN Kaiserville 70.96 354 IAMs_20 IAMs_20 11 35 34.0
comp=Z,9µm,21.0s
MGMO Mountain Grove 71.02 16 IAMs_20 IAMs_20 11 38 58.9
comp=Z,5µm,19.0s
Z57A Bowman 71.03 27 P **P** **11 11 11.9 -0.4**
baz=207
NHSC New Hope 71.06 27 IAMs_20 IAMs_20 11 41 55.2
comp=Z,6µm,18.0s

KSCO Kaye Shedlock' 71.08 7 P **P** **11 11 13.3 +0.6**
baz=188,SNR=28
KSCO Kaye Shedlock' 71.08 7 IAMs_20 IAMs_20 11 38 51.3
comp=Z,7µm,18.0s
PBMO Poplar Bluff 71.12 18 IAmb IAmb 11 11 18.6
comp=Z,68nm,1.1s
W50A Signal Mountai 71.12 22 IAMs_20 IAMs_20 11 38 18.7
comp=Z,8µm,20.0s
PNTR Pine Nut 71.14 353 IAmb IAmb 11 11 16.2
comp=Z,51nm,1.0s
V48A Smith Brothers 71.15 21 IAmb IAmb 11 11 18.4
comp=Z,61nm,1.2s
V48A IAMs_20 IAMs_20 11 39 30.3
comp=Z,7µm,19.0s
T42A Van Buren 71.19 17 IAmb IAmb 11 11 18.8
comp=Z,54nm,1.2s
HICK Hickman 71.21 19 IAMs_20 IAMs_20 11 40 02.8
comp=Z,5µm,20.0s
WVT Waverly 71.22 20 P **P** **11 11 12.3 -1.1**
WVT pmax pmax
comp=Z,48nm,1.3s
WVT Waverly 71.22 20 P **P** **11 11 12.7 -0.7**
baz=201
WVT Waverly 71.22 20 P **P** **11 11 12.3 -1.1**
WVT Waverly 71.22 20 IAMs_20 IAMs_20 11 40 19.0
comp=Z,7µm,19.0s
CBKS Cedar Bluff 71.24 9 P **P** **11 11 13.0 -0.5**
baz=190,SNR=17
CBKS S **S** **11 20 34.8 +3.8**
baz=190
CBKS Cedar Bluff 71.24 9 IAMs_20 IAMs_20 11 38 10.5
comp=Z,6µm,19.0s
S39A Bolivar 71.30 15 IAmb IAmb 11 11 19.7
comp=Z,48nm,1.1s
S39A IAMs_20 IAMs_20 11 38 18.1
comp=Z,6µm,22.0s
HENM Henderson Moun 71.31 18 IAMs_20 IAMs_20 11 40 46.5
comp=Z,5µm,18.0s
HOPS Hopland Field 71.47 350 IAmb IAmb 11 11 26.5
comp=Z,101nm,1.4s
W52A Murphy 71.48 23 IAmb IAmb 11 11 21.2
comp=Z,49nm,1.1s
X54A Belton 71.53 25 P **P** **11 11 14.9 -0.4**
baz=206,SNR=5.1
ISCO Idaho Springs 71.61 5 P **P** **11 11 16.0 -0.1**
baz=185,SNR=51
ISCO S **S** **11 20 39.4 +3.6**
baz=185
ISCO Idaho Springs 71.61 5 IAmb IAmb 11 11 27.0
comp=Z,77nm,1.4s
CPCT Cooper Cave 71.61 23 IAmb IAmb 11 11 17.7
comp=Z,41nm,1.1s
CLTN Cedars of Leba 71.62 21 IAMs_20 IAMs_20 11 39 21.9
comp=Z,7µm,20.0s
X55A Gracelyn & Ava 71.72 25 P **P** **11 11 17.0 +0.5**
baz=206,SNR=7.0
X55A S **S** **11 20 41.3 +4.7**
baz=206
PAHR Pah Rah Range 71.73 353 IAMs_20 IAMs_20 11 35 51.5
comp=Z,10µm,20.0s
Y57A Sumter 71.78 27 P **P** **11 11 17.2 +0.3**
baz=207
Y57A Sumter 71.78 27 IAMs_20 IAMs_20 11 39 33.3
comp=Z,7µm,18.0s
O20A White River Ci 71.81 2 P **P** **11 11 16.7 -0.4**
baz=183,SNR=27
O20A White River Ci 71.81 2 IAMs_20 IAMs_20 11 39 07.5
comp=Z,6µm,18.0s
ORV Oroville 71.81 352 IAMs_20 IAMs_20 11 35 29.7
comp=Z,10µm,20.0s
T45A Paducah 71.82 19 IAMs_20 IAMs_20 11 41 15.9
comp=Z,5µm,18.0s
DUG Dugway, Tooele 71.83 359 P **P** **11 11 17.0 -0.2**
baz=178,SNR=34
DUG Dugway, Tooele 71.83 359 IAmb IAmb 11 11 23.8
comp=Z,87nm,1.4s
X56A White Oak 71.97 26 P **P** **11 11 18.4 +0.4**
baz=207,SNR=10
KSU1 Kansas State U 72.01 12 P **P** **11 11 18.4 +0.3**
baz=193,SNR=20
KSU1 S **S** **11 20 43.5 +3.7**
baz=193
TKL Tuckaleechee C 72.05 23 LR LR 11 38 10.8
comp=Z,14µm,21.7s,baz=182,slow=32
W54A Cherokee Point 72.08 25 P **P** **11 11 19.2 +0.5**
baz=206,SNR=9.4
CCM Cathedral Cave 72.13 16 P **P** **11 11 18.6 -0.2**
CCM pmax pmax
comp=Z,46nm,1.2s
CCM Cathedral Cave 72.13 16 P **P** **11 11 17.8 -1.0**
baz=198
CCM Cathedral Cave 72.13 16 P **P** **11 11 18.6 -0.2**
U49A Red Boiling Sp 72.18 21 IAMs_20 IAMs_20 11 39 26.7
comp=Z,7µm,20.0s
T47A Sharon Grove 72.22 20 IAmb IAmb 11 11 25.1
comp=Z,94nm,1.2s
T47A IAMs_20 IAMs_20 11 39 59.8
comp=Z,7µm,20.0s
S44A Carbondale 72.29 18 IAmb IAmb 11 11 21.7
comp=Z,73nm,1.1s
X57A Johnson Farm, 72.29 27 P **P** **11 11 20.1 +0.1**
baz=207
BIRD Birdtown, Kers 72.31 26 IAmb IAmb 11 11 26.4
comp=Z,68nm,1.2s
BIRD IAMs_20 IAMs_20 11 39 32.3
comp=Z,8µm,19.0s
Y59A Loris 72.35 28 P **P** **11 11 20.0 -0.2**
baz=208
Y59A Loris 72.35 28 IAMs_20 IAMs_20 11 39 29.3
comp=Z,6µm,19.0s
V53A Saluda 72.39 24 IAmb IAmb 11 11 22.7
comp=Z,128nm,1.3s
KMSC Kings Mountain 72.44 25 P **P** **11 11 20.3 -0.5**
baz=206,SNR=8.1
KMSC Kings Mountain 72.44 25 IAmb IAmb 11 11 22.9
comp=Z,42nm,1.0s
KMSC IAMs_20 IAMs_20 11 39 09.5
comp=Z,6µm,20.0s
ELK Elko 72.46 357 IAMs_20 IAMs_20 11 36 56.7
comp=Z,8µm,21.0s
O03E Paynes Creek 72.58 352 P **P** **11 11 20.8 -0.8**
baz=171,SNR=12
O02D Mt. Diablo Mer 72.59 351 P **P** **11 11 21.9 +0.3**
baz=170
Y60A Bolivia 72.63 28 P **P** **11 11 21.5 -0.3**
baz=209
Y60A Bolivia 72.63 28 IAMs_20 IAMs_20 11 39 45.6
comp=Z,7µm,18.0s
X58A Rowland 72.67 27 P **P** **11 11 22.3 +0.2**
baz=208
X58A S **SKiKP** **11 20 52.5 -4.4**
baz=208
X58A Rowland 72.67 27 IAMs_20 IAMs_20 11 40 33.6
comp=Z,5µm,18.0s
N23A Red Feather La 72.68 4 P **P** **11 11 22.3 -0.1**
baz=185,SNR=46
N23A Red Feather La 72.68 4 IAmb IAmb 11 11 43.0
comp=Z,113nm,1.4s
W56A Indian Trail 72.70 26 P **P** **11 11 21.5 -0.9**
baz=207,SNR=6.0
V54A Nebo 72.78 25 P **P** **11 11 22.0 -0.9**
baz=206,SNR=9.6
TZTN Tazewell 72.93 23 P **P** **11 11 23.0 -0.7**
baz=204,SNR=9.6
TZTN S **S** **11 20 52.5 +2.1**
baz=204
TZTN Tazewell 72.93 23 IAmb IAmb 11 11 31.3
comp=Z,56nm,1.1s
W57A Gilead 72.94 26 P **P** **11 11 23.3 -0.4**
baz=207,SNR=5.8
W57A Gilead 72.94 26 IAmb IAmb 11 11 30.5
comp=Z,94nm,1.5s
W57A IAMs_20 IAMs_20 11 41 13.9
comp=Z,6µm,18.0s
T50A Nancy 72.94 22 IAMs_20 IAMs_20 11 39 26.8
comp=Z,9µm,21.0s
WDC Whiskeytown Da 72.95 351 IAmb IAmb 11 11 25.8
comp=Z,76nm,1.1s
WDC IAMs_20 IAMs_20 11 35 43.0
comp=Z,10µm,22.0s
X59A McDuffie Farm, 72.97 28 P **P** **11 11 24.3 +0.4**
baz=209
USIN University of 72.97 19 IAmb IAmb 11 11 29.6
comp=Z,93nm,1.1s
USIN IAMs_20 IAMs_20 11 40 59.3
comp=Z,5µm,19.0s
P38A Dawn 73.11 14 IAMs_20 IAMs_20 11 39 46.1
comp=Z,5µm,20.0s

PHWY Pilot Hill 73.11 5 IAmb IAmb 11 11 27.3
comp=Z,135nm,1.4s
PHWY IAMs_20 IAMs_20 11 37 54.0
comp=Z,9µm,22.0s
V55A Taylorsville 73.11 25 P **P** **11 11 24.3 -0.5**
baz=206,SNR=6.8
V55A S **SKiKP** **11 20 56.7 -0.9**
baz=206
V55A Taylorsville 73.11 25 IAMs_20 IAMs_20 11 39 49.4
comp=Z,6µm,19.0s
W58A Raeford 73.12 27 P **P** **11 11 25.3 +0.5**
baz=208,SNR=9.0
X60A Albert Glenn T 73.22 28 P **P** **11 11 25.7 +0.3**
baz=209
HWUT Hardware Ranch 73.22 360 IAMs_20 IAMs_20 11 37 52.0
comp=Z,8µm,20.0s
V56A Mocksville 73.34 26 P **P** **11 11 25.5 -0.6**
baz=207,SNR=6.6
V56A S **SKiKP** **11 20 58.5 +0.6**
baz=207
N02D Trinity Center 73.36 351 P **P** **11 11 26.9 +0.7**
baz=170,SNR=26
JCC Jacoby Creek, 73.40 350 IAMs_20 IAMs_20 11 37 54.7
comp=Z,7µm,18.0s
KHMM Horse Mountain 73.41 350 IAmb IAmb 11 11 34.6
comp=Z,138nm,1.5s
U54A Nelsons Funny 73.50 24 P **P** **11 11 26.3 -0.8**
baz=206,SNR=7.7
U54A Nelsons Funny 73.50 24 IAmb IAmb 11 11 36.6
comp=Z,58nm,1.3s
U54A IAMs_20 IAMs_20 11 38 39.6
comp=Z,8µm,22.0s
W59A Clinton 73.55 28 P **P** **11 11 27.6 +0.2**
baz=209
OLIL Olney 73.57 19 IAmb IAmb 11 11 33.2
comp=Z,46nm,1.1s
OLIL IAMs_20 IAMs_20 11 40 18.4
comp=Z,6µm,20.0s
WCI Wyandotte Cave 73.61 20 P **P** **11 11 27.1 -0.6**
WCI pmax pmax
comp=Z,60nm,1.4s
WCI Wyandotte Cave 73.61 20 P **P** **11 11 27.0 -0.7**
baz=202
WCI S **SKiKP** **11 20 58.7 +0.5**
baz=202
WCI Wyandotte Cave 73.61 20 P **P** **11 11 27.1 -0.6**
WCI IAmb IAmb 11 11 32.7
comp=Z,60nm,1.4s
T53A Wise 73.67 24 P **P** **11 11 27.4 -0.7**
baz=205
V57A Coltrane Farms 73.67 26 P **P** **11 11 27.7 -0.4**
baz=207,SNR=7.3
W60A Pink Hill 73.74 28 P **P** **11 11 28.3 -0.1**
baz=209
M02C Callahan 73.79 351 P **P** **11 11 29.0 +0.2**
baz=170,SNR=19
CNNC Cliffs of the 73.83 28 P **P** **11 11 29.4 +0.4**
baz=209
CNNC Cliffs of the 73.83 28 IAmb IAmb 11 11 31.2
comp=Z,74nm,1.1s
V58A Windy Hill, Pi 73.84 27 P **P** **11 11 29.0 0.0**
baz=208
U56A King 73.86 26 P **P** **11 11 29.3 +0.2**
baz=207
U56A King 73.86 26 IAMs_20 IAMs_20 11 40 57.8
comp=Z,6µm,18.0s
LHI Lord Howe Isla 73.87 243 IAMs_20 IAMs_20 11 40 30.2
comp=Z,7µm,18.0s
MOD Modoc Plateau 73.99 353 IAmb IAmb 11 11 41.3
comp=Z,53nm,1.0s
R49A Shelbyville 74.01 21 IAmb IAmb 11 11 35.2
comp=Z,69nm,1.4s
R49A IAMs_20 IAMs_20 11 40 05.0
comp=Z,7µm,21.0s
BGNE Belgrade 74.02 10 P **P** **11 11 30.1 +0.1**
baz=192
M04C Macdoel 74.05 352 P **P** **11 11 30.7 +0.4**
baz=171,SNR=22
P43A Skaggs, Pawnee 74.05 17 IAMs_20 IAMs_20 11 41 09.1
comp=Z,6µm,19.0s
T54A Tazewell 74.07 24 P **P** **11 11 30.2 -0.2**
baz=206,SNR=6.0
KRMB Red Mountain 74.07 350 IAMs_20 IAMs_20 11 36 54.5
comp=Z,7µm,20.0s
YBH Yreka Blue Hor 74.11 351 P **P** **11 11 29.0 -1.6**
comp=Z,13nm,1.0s,baz=156,slow=3.9,SNR=18
YBH LR LR 11 37 02.3
comp=Z,10µm,19.6s,baz=180,slow=30
YBH Yreka Blue Hor 74.11 351 P **P** **11 11 29.0 -1.6**
W61A Ground Anchor 74.14 29 P **P** **11 11 30.6 -0.2**
baz=210
V59A Middlesex 74.16 27 P **P** **11 11 30.4 -0.5**
baz=209
V59A S **S** **11 21 08.9 +4.6**
baz=209
R50A Paris 74.26 22 IAMs_20 IAMs_20 11 39 37.7
comp=Z,9µm,21.0s
U57A Blanch 74.32 26 P **P** **11 11 32.1 +0.3**
baz=208,SNR=8.9
U57A S **S** **11 21 09.5 +3.4**
baz=208
AHID Auburn Hatcher 74.38 0 IAmb IAmb 11 11 37.7
comp=Z,120nm,1.4s
K22A Casper 74.39 4 P **P** **11 11 32.2 -0.2**
baz=184,SNR=78
K22A S **S** **11 21 10.3 +3.2**
baz=184
BW06 Boulder Array 74.40 1 P **P** **11 11 31.1 -1.4**
baz=181,SNR=68
BW06 Boulder Array 74.40 1 IAMs_20 IAMs_20 11 38 32.1
comp=Z,7µm,19.0s
PDAR Pinedale Array 74.40 1 P **P** **11 11 29.5 -3.0**
comp=Z,43nm,1.1s,baz=166,slow=5.4,SNR=125
PDAR LR LR 11 38 52.6
comp=Z,6µm,19.1s,baz=185,slow=32
PDAR Pinedale Array 74.40 1 P **P** **11 11 30.3 -2.2**
T55A Pulaski 74.40 25 P **P** **11 11 32.6 +0.3**
baz=206,SNR=5.2
BLO Bloomington 74.42 20 IAMs_20 IAMs_20 11 42 12.9
comp=Z,6µm,19.0s
S53A Williamson 74.44 24 P **P** **11 11 30.7 -1.9**
baz=205
RCBR Riachuelo 74.49 87 LR LR 11 42 26.6
comp=Z,2µm,18.5s,baz=230,slow=34
RCBR Riachuelo 74.49 87 P **P** **11 11 34.9 +1.4**
RCBR pmax pmax
comp=Z,74nm,1.4s
RCBR Riachuelo 74.49 87 P **P** **11 11 34.9 +1.4**
RCBR IAmb IAmb 11 11 40.5
comp=Z,74nm,1.4s
RCBR Riachuelo 74.49 87 *e*P **P** **11 11 33.9 +0.4**
L04D Klamath Falls 74.53 351 P **P** **11 11 32.8 -0.3**
baz=170,SNR=14
V60A Jim Taylor Roa 74.54 28 P **P** **11 11 32.6 -0.5**
baz=209,SNR=5.2
V60A Jim Taylor Roa 74.54 28 IAmb IAmb 11 11 35.4
comp=Z,83nm,1.1s
U58A Oxford 74.59 27 P **P** **11 11 33.1 -0.3**
baz=208,SNR=6.4
U58A S **S** **11 21 13.3 +4.2**
baz=208
T56A Rocky Mt 74.59 25 P **P** **11 11 33.1 -0.4**
baz=207
BLA Blacksburg 74.61 25 P **P** **11 11 33.1 -0.5**
baz=207,SNR=9.5
BLA Blacksburg 74.61 25 IAmb IAmb 11 11 44.2
comp=Z,75nm,1.1s
BLA IAMs_20 IAMs_20 11 40 27.1
comp=Z,5µm,20.0s
P46A Rosedale 74.64 19 IAmb IAmb 11 11 35.8
comp=Z,38nm,0.8s
P46A IAMs_20 IAMs_20 11 42 08.8
comp=Z,6µm,20.0s
L02E Cave Junction 74.65 350 P **P** **11 11 33.7 +0.1**
baz=169,SNR=6.7
N41A Harden Midland 74.74 16 IAMs_20 IAMs_20 11 43 13.2
comp=Z,4µm,18.0s
KBO Bosley Butte 74.79 350 IAmb IAmb 11 11 51.9
comp=Z,60nm,1.2s
KBO IAMs_20 IAMs_20 11 37 15.6
comp=Z,7µm,20.0s
O44A Mansfield 74.81 18 IAmb IAmb 11 11 40.3
comp=Z,55nm,1.2s
O44A IAMs_20 IAMs_20 11 41 49.0
comp=Z,5µm,19.0s
S54A Dingess, Beckl 74.82 24 P **P** **11 11 34.2 -0.6**
baz=206
S54A S **S** **11 21 15.9 +4.1**

baz=206
S54A Dingess, Beckl 74.82 24 IAMs_20 IAMs_20 11 39 31.7
comp=Z,8µm,21.0s
V61A Roper 74.84 29 P **P** **11 11 34.6 -0.2**
baz=210
V61A Roper 74.84 29 IAMs_20 IAMs_20 11 40 56.3
comp=Z,7µm,19.0s
L34A Svendsen Farm, 74.84 11 IAmb IAmb 11 11 46.5
comp=Z,79nm,1.1s
U59A Littleton 74.84 27 P **P** **11 11 34.3 -0.6**
baz=209,SNR=11
U59A S **S** **11 21 16.7 +4.8**
baz=209
U59A Littleton 74.84 27 IAmb IAmb 11 11 37.1
comp=Z,75nm,1.1s
T57A Hurt 74.85 26 P **P** **11 11 34.1 -0.8**
baz=208,SNR=6.1
T57A Hurt 74.85 26 IAmb IAmb 11 11 38.4
comp=Z,70nm,1.4s
T57A IAMs_20 IAMs_20 11 41 18.5
comp=Z,5µm,18.0s
K04D Chiloquin, OR 74.87 352 P **P** **11 11 34.9 -0.2**
baz=171,SNR=6.6
K05A Summer Lake 74.87 353 IAmb IAmb 11 12 01.2
comp=Z,105nm,1.2s
HDIL Hopedale 74.97 17 P **P** **11 11 35.2 -0.3**
baz=199,SNR=5.9
HDIL Hopedale 74.97 17 IAmb IAmb 11 11 37.4
comp=Z,96nm,1.2s
HDIL IAMs_20 IAMs_20 11 41 16.4
comp=Z,5µm,19.0s
REDW Red Top Meadow 74.98 0 IAmb IAmb 11 11 53.5
comp=Z,67nm,1.2s
REDW IAMs_20 IAMs_20 11 38 38.4
comp=Z,8µm,21.0s
HUMO Hull Mountain 75.00 351 IAMs_20 IAMs_20 11 37 09.2
comp=Z,9µm,20.0s
P48A Milroy 75.01 20 IAmb IAmb 11 11 45.4
comp=Z,66nm,1.4s
P48A IAMs_20 IAMs_20 11 41 19.5
comp=Z,6µm,20.0s
T58A Grand View Acr 75.08 27 P **P** **11 11 35.3 -0.9**
baz=208,SNR=7.1
T58A S **S** **11 21 18.2 +3.7**
baz=208
SNOW Snow King Moun 75.08 0 IAmb IAmb 11 11 41.4
comp=Z,79nm,1.4s
SNOW IAMs_20 IAMs_20 11 38 42.9
comp=Z,9µm,21.0s
R53A Hurricane 75.08 23 P **P** **11 11 35.7 -0.5**
baz=205
R53A Hurricane 75.08 23 IAmb IAmb 11 11 44.2
comp=Z,67nm,1.4s
S55A Lewisburg 75.08 25 P **P** **11 11 35.8 -0.5**
baz=207,SNR=9.5
TPAW Teton Pass 75.11 0 IAmb IAmb 11 11 38.5
comp=Z,95nm,1.1s
TPAW IAMs_20 IAMs_20 11 38 53.8
comp=Z,8µm,20.0s
K31A O'Neill 75.12 9 IAMs_20 IAMs_20 11 40 28.1
comp=Z,8µm,20.0s
K02D Willamette Mer 75.19 351 P **P** **11 11 37.9 +1.1**
baz=169,SNR=11
U60A Pendleton 75.20 28 P **P** **11 11 37.2 +0.3**
baz=209,SNR=9.3
U60A S **S** **11 21 20.9 +5.0**
baz=209
LOHW Long Hollow 75.23 0 IAmb IAmb 11 11 39.0
comp=Z,141nm,1.4s
LOHW IAMs_20 IAMs_20 11 38 59.1
comp=Z,9µm,21.0s
HLID Hailey 75.23 358 P **P** **11 11 37.2 0.0**
baz=177,SNR=169
HLID S **S** **11 21 22.3 +5.8**
baz=177
HLID Hailey 75.23 358 IAMs_20 IAMs_20 11 39 33.2
comp=Z,7µm,18.0s
Q51A Peebles 75.25 22 IAmb IAmb 11 11 43.7
comp=Z,77nm,1.2s
J08A Circle Bar Ran 75.27 355 IAmb IAmb 11 11 50.4
comp=Z,104nm,1.5s
R54A Victor 75.28 24 P **P** **11 11 37.3 -0.1**
baz=206,SNR=6.0
P49A Miami Univ. Ec 75.29 21 P **P** **11 11 35.6 -1.7**
baz=203,SNR=7.6
P49A Miami Univ. Ec 75.29 21 IAmb IAmb 11 11 42.4
comp=Z,58nm,1.2s
P49A IAMs_20 IAMs_20 11 40 53.9
comp=Z,9µm,21.0s
S56A Natural Bridge 75.34 25 P **P** **11 11 38.1 +0.3**
baz=207,SNR=5.4
U61A Possum Corner 75.36 28 IAMs_20 IAMs_20 11 41 23.1
comp=Z,6µm,19.0s
MOOW Moose Ponds 75.36 0 IAMs_20 IAMs_20 11 39 02.7
comp=Z,9µm,20.0s
SCIA State Center 75.37 14 P **P** **11 11 37.1 -0.7**
baz=196
SCIA State Center 75.37 14 IAMs_20 IAMs_20 11 41 06.9
comp=Z,7µm,19.0s
SFIN Lafayette 75.38 19 P **P** **11 11 36.4 -1.5**
baz=201
SFIN Lafayette 75.38 19 IAMs_20 IAMs_20 11 42 51.3
comp=Z,6µm,19.0s
J05D Fort Rock, OR 75.46 352 P **P** **11 11 38.6 +0.2**
baz=171,SNR=42
T59A Double "B" Far 75.48 27 P **P** **11 11 37.8 -0.7**
baz=209,SNR=8.4
T59A Double "B" Far 75.48 27 IAmb IAmb 11 11 46.0
comp=Z,60nm,1.4s
IMW Indian Meadow 75.51 0 IAmb IAmb 11 11 40.9
comp=Z,85nm,1.1s
IMW IAMs_20 IAMs_20 11 38 56.4
comp=Z,8µm,21.0s
J04D Umpqua Nationa 75.52 352 P **P** **11 11 39.7 +0.8**
baz=170,SNR=9.2
Q52A Bidwell 75.55 23 P **P** **11 11 38.2 -0.6**
baz=205,SNR=7.6
S57A Dark Hollow, R 75.64 26 P **P** **11 11 38.9 -0.5**
baz=208
S57A S **S** **11 21 25.3 +4.5**
baz=208
R55A Marlinton 75.67 25 P **P** **11 11 39.6 -0.1**
baz=207
R55A Marlinton 75.67 25 IAMs_20 IAMs_20 11 41 09.2
comp=Z,7µm,20.0s
J01E Myrtle Point 75.68 350 P **P** **11 11 40.1 +0.6**
baz=169
FLWY Flagg Ranch 75.70 0 IAMs_20 IAMs_20 11 39 14.5
comp=Z,8µm,21.0s
Q53A Leroy 75.70 24 P **P** **11 11 39.4 -0.3**
baz=206,SNR=9.1
Q53A S **S** **11 21 25.6 +4.1**
baz=206
P51A Williamsport 75.76 22 P **P** **11 11 39.2 -0.9**
baz=204
P51A Williamsport 75.76 22 IAmb IAmb 11 11 50.7
comp=Z,102nm,1.5s
S58A Poland Farm, P 75.84 27 P **P** **11 11 40.7 +0.2**
baz=209,SNR=9.7
S58A S **S** **11 21 28.1 +5.1**
baz=209
S58A Poland Farm, P 75.84 27 IAmb IAmb 11 11 42.8
comp=Z,60nm,1.1s
PINE Pine Mountain 75.93 353 IAmb IAmb 11 11 44.2
comp=Z,104nm,1.1s
PINE IAMs_20 IAMs_20 11 38 28.7
comp=Z,6µm,19.0s
T60A Surry 75.94 28 P **P** **11 11 41.3 +0.1**
baz=210
T60A Surry 75.94 28 IAMs_20 IAMs_20 11 42 32.5
comp=Z,7µm,18.0s
L40A Anamosa 75.95 15 IAMs_20 IAMs_20 11 41 55.1
comp=Z,6µm,18.0s
H17A Grant Village 76.01 0 P **P** **11 11 42.0 +0.2**
baz=180,SNR=16
RSSD Black Hills 76.02 5 P **P** **11 11 41.0 -0.7**
RSSD pmax pmax
comp=Z,147nm,1.3s
RSSD Black Hills 76.02 5 P **P** **11 11 41.2 -0.6**
baz=186
RSSD S **S** **11 21 28.2 +3.0**
baz=186
RSSD Black Hills 76.02 5 P **P** **11 11 41.0 -0.7**
RSSD Black Hills 76.02 5 IAMs_20 IAMs_20 11 39 57.8
comp=Z,7µm,21.0s
R56A Bull Pasture M 76.04 25 P **P** **11 11 41.8 0.0**
baz=207,SNR=7.0
Q54A Coxs Mills 76.05 24 P **P** **11 11 40.8 -1.0**
baz=206,SNR=5.1
Q54A S **S** **11 21 29.4 +4.2**
baz=206
Q54A Coxs Mills 76.05 24 IAmb IAmb 11 11 48.1
comp=Z,85nm,1.4s
Q54A IAMs_20 IAMs_20 11 40 09.1
comp=Z,8µm,21.0s
I07A Izee 76.07 354 IAmb IAmb 11 11 55.0
comp=Z,86nm,1.3s
I04A Tendick Farm, 76.10 352 P **P** **11 11 41.2 -0.8**
baz=170,SNR=9.8
I03D Drain, OR 76.12 351 P **P** **11 11 41.8 -0.2**
baz=169
K38A Parkersburg 76.17 14 IAmb IAmb 11 12 08.3
comp=Z,60nm,1.4s
LKWY Lake 76.18 1 IAmb IAmb 11 11 59.4
comp=Z,63nm,1.1s
LKWY IAMs_20 IAMs_20 11 39 34.3
comp=Z,8µm,21.0s
P52A Corning 76.20 23 P **P** **11 11 42.1 -0.5**
baz=205,SNR=9.4
P52A Corning 76.20 23 IAmb IAmb 11 11 48.9
comp=Z,89nm,1.1s
R58B Mineral 76.22 27 P **P** **11 11 42.2 -0.5**
baz=209,SNR=9.1
R58B Mineral 76.22 27 IAmb IAmb 11 11 49.8
comp=Z,69nm,1.1s
N47A Urbana 76.24 20 IAMs_20 IAMs_20 11 42 13.1
comp=Z,6µm,20.0s
S59A Mechanicsville 76.27 27 P **P** **11 11 42.8 -0.1**
baz=209,SNR=9.2
R57A Stanardsville 76.27 26 P **P** **11 11 43.5 +0.4**
baz=208,SNR=9.1
P53A Whipple 76.31 23 P **P** **11 11 42.5 -0.7**
baz=206,SNR=6.9
P53A S **S** **11 21 32.8 +4.7**
baz=206
P53A Whipple 76.31 23 IAmb IAmb 11 11 55.6
comp=Z,86nm,1.4s
Q55A Buckhannon 76.32 25 P **P** **11 11 43.3 -0.1**
baz=207
ACSO Alum Creek Sta 76.47 22 P **P** **11 11 43.7 -0.3**
baz=204
R58A Rapidan 76.47 26 P **P** **11 11 43.4 -0.7**
baz=209,SNR=7.9
R58A S **S** **11 21 35.0 +5.1**
baz=209
S60A Water View 76.47 28 P **P** **11 11 44.5 +0.3**
baz=210
TAU Tasmania Unive 76.49 228 IAMs_20 IAMs_20 11 36 48.9
comp=Z,8µm,22.0s
O51A Pataskala 76.51 22 P **P** **11 11 43.2 -1.2**
baz=205
HQIL Hanson Quary C 76.51 18 IAMs_20 IAMs_20 11 43 33.1
comp=Z,4µm,19.0s
I05D Terrebonne, OR 76.51 353 P **P** **11 11 45.0 +0.7**
baz=171,SNR=26
ECSD EROS Data Cent 76.53 11 P **P** **11 11 44.6 +0.3**
baz=193,SNR=21
ECSD S **S** **11 21 34.0 +3.7**
baz=193
ECSD EROS Data Cent 76.53 11 IAmb IAmb 11 11 50.3
comp=Z,58nm,1.2s
CBN Corbin Frederi 76.62 27 P **P** **11 11 45.4 +0.5**
baz=209
BMO Blue Mountains 76.67 356 IAmb IAmb 11 11 47.9
comp=Z,59nm,1.2s
BMO IAMs_20 IAMs_20 11 39 10.2
comp=Z,8µm,22.0s
Q56A Snyder Ridge, 76.68 25 P **P** **11 11 46.4 +1.0**
baz=208,SNR=7.0
Q56A Snyder Ridge, 76.68 25 IAmb IAmb 11 12 06.0
comp=Z,71nm,1.4s
Q56A IAMs_20 IAMs_20 11 42 53.9
comp=Z,6µm,18.0s
R59A King George, V 76.72 27 P **P** **11 11 44.9 -0.6**
baz=209
N49A Columbus Grove 76.72 21 IAMs_20 IAMs_20 11 42 08.9
comp=Z,7µm,20.0s
P54A Burton 76.72 24 P **P** **11 11 44.9 -0.7**
baz=206,SNR=8.8
O52A Adamsville 76.73 23 P **P** **11 11 46.3 +0.7**
baz=205,SNR=15
RLMT Red Lodge 76.76 1 P **P** **11 11 46.2 +0.3**
baz=182,SNR=38
RLMT S **S** **11 21 36.0 +2.8**
baz=182
RLMT Red Lodge 76.76 1 IAmb IAmb 11 11 48.1
comp=Z,73nm,1.1s
RLMT IAMs_20 IAMs_20 11 39 27.5
comp=Z,5µm,22.0s
PLID Pearl Lake 76.83 357 IAmb IAmb 11 11 48.6
comp=Z,89nm,1.2s
PLID IAMs_20 IAMs_20 11 42 30.2
comp=Z,6µm,19.0s
S61A Accomac 76.84 28 IAMs_20 IAMs_20 11 40 20.1
comp=Z,6µm,22.0s
L44A Lake County Fo 76.85 18 P **P** **11 11 46.0 -0.2**
baz=200
H04D Lebanon 76.86 352 P **P** **11 11 46.6 +0.4**
baz=170
P55A Reedsville 76.87 24 P **P** **11 11 47.1 +0.6**
baz=207,SNR=7.1
SUSD Miller 76.88 9 P **P** **11 11 46.3 0.0**
baz=191
SUSD S **S** **11 21 39.1 +5.0**
baz=191
SUSD Miller 76.88 9 IAMs_20 IAMs_20 11 41 24.7
comp=Z,9µm,20.0s
H04A Detroit Lake 76.95 352 IAmb IAmb 11 11 48.8
comp=Z,86nm,1.2s
H04A IAMs_20 IAMs_20 11 38 27.7
comp=Z,8µm,22.0s
Q57A Strasburg 76.96 26 P **P** **11 11 46.7 -0.2**
baz=208,SNR=12
CASY Casey 76.96 196 P **P** **11 11 47.4 +0.7**
JFWS Jewell Farm 76.98 16 P **P** **11 11 46.9 0.0**
baz=198
JFWS Jewell Farm 76.98 16 IAMs_20 IAMs_20 11 42 30.4
comp=Z,5µm,20.0s
R60A Leonardtown, M 76.98 27 P **P** **11 11 47.4 +0.3**
baz=210
DLMT Dillon 76.99 359 IAmb IAmb 11 11 58.0
comp=Z,111nm,1.4s
COR Corvallis 76.99 351 P **P** **11 11 48.6 +1.7**
COR pmax pmax
comp=Z,176nm,1.2s
COR Corvallis 76.99 351 P **P** **11 11 48.6 +1.7**
MCWV Mont Chateau 77.00 24 P **P** **11 11 46.4 -0.7**
baz=207,SNR=6.8
SYO Syowa Base 77.04 170 ‖ *i*P **P** **11 11 46.0 -1.1**
SYO Syowa Base 77.04 170 ‖ *i*pP **P** **11 11 47.3 +0.2**
SYO Syowa Base 77.04 170 ‖ *i*sP sP 11 11 49.4 0.0
SYO Syowa Base 77.04 170 ‖ *i*PcP **PcP** **11 11 55.0 -3.0**
O53A New Philadelph 77.06 23 P **P** **11 11 47.2 -0.2**
baz=206,SNR=8.8
O53A New Philadelph 77.06 23 IAmb IAmb 11 11 50.0
comp=Z,82nm,1.1s
L46A Eue Claire 77.12 19 IAMs_20 IAMs_20 11 43 13.4
comp=Z,8µm,19.0s
Q58A Fox Den Farm, 77.15 26 P **P** **11 11 48.4 +0.5**
baz=209,SNR=8.9
Q58A S **S** **11 21 43.0 +5.8**
baz=209
BOZ Bozeman (W) 77.21 360 P **P** **11 11 48.0 -0.3**
baz=180,SNR=64
BOZ Bozeman (W) 77.21 360 IAMs_20 IAMs_20 11 41 08.6
comp=Z,6µm,19.0s
P56A Dayton Farm, R 77.22 25 P **P** **11 11 48.5 +0.2**
baz=208,SNR=6.1
G08A Pilot Rock 77.23 354 IAmb IAmb 11 11 59.3
comp=Z,93nm,1.4s
K43A Burlington 77.24 17 IAMs_20 IAMs_20 11 42 41.4
comp=Z,6µm,19.0s
O54A Avella 77.28 24 P **P** **11 11 48.5 -0.2**
baz=206,SNR=5.7
O54A Avella 77.28 24 IAMs_20 IAMs_20 11 42 42.6
comp=Z,7µm,19.0s
N51A Ashland 77.28 22 P **P** **11 11 48.9 +0.2**
baz=205
G05D Wamic, OR 77.40 353 P **P** **11 11 50.1 +0.9**
baz=171,SNR=8.7
N52A McGinn's Farm, 77.41 23 P **P** **11 11 49.0 -0.4**
baz=205
Q59A Harwood 77.47 27 P **P** **11 11 49.1 -0.6**
baz=210
P57A Homestead Farm 77.50 26 P **P** **11 11 50.3 +0.4**
baz=208,SNR=7.6
P57A S **S** **11 21 46.9 +5.8**
baz=208
P57A Homestead Farm 77.50 26 IAmb IAmb 11 11 57.2
comp=Z,73nm,1.2s
L48A N Adams 77.59 20 IAMs_20 IAMs_20 11 41 58.7
comp=Z,5µm,20.0s
G03D McMinnville, O 77.60 351 P **P** **11 11 50.0 -0.3**
baz=170
BBSR BB Station 77.65 39 IAMs_20 IAMs_20 11 39 08.1
comp=Z,6µm,21.0s
O55A Ligonier 77.67 24 P **P** **11 11 50.9 0.0**
baz=207,SNR=5.2
M51A Elyria 77.72 22 P **P** **11 11 51.5 +0.4**
baz=205
P58A Pank, Wackersv 77.77 26 P **P** **11 11 52.0 +0.6**
baz=209,SNR=7.0
P58A S **S** **11 21 48.8 +4.8**
baz=209
F10A Beach Ranch, E 77.78 356 IAmb IAmb 11 12 02.2
comp=Z,96nm,1.4s
F10A IAMs_20 IAMs_20 11 39 56.6
comp=Z,6µm,20.0s
Q60A Greensboro 77.91 27 P **P** **11 11 51.8 -0.3**
baz=210
Q60A Greensboro 77.91 27 IAMs_20 IAMs_20 11 42 47.4
comp=Z,5µm,19.0s
O56A Blue Knob Stat 77.99 25 P **P** **11 11 52.4 -0.3**
baz=208,SNR=8.3
O56A Blue Knob Stat 77.99 25 IAmb IAmb 11 12 07.8
comp=Z,79nm,1.3s
F05D White Salmon 78.05 353 P **P** **11 11 53.2 +0.3**
baz=171,SNR=10
N54A Moraine State 78.11 24 P **P** **11 11 53.4 +0.1**
baz=207,SNR=9.0
N54A Moraine State 78.11 24 IAmb IAmb 11 12 00.2
comp=Z,100nm,1.2s
N54A IAMs_20 IAMs_20 11 43 16.6
comp=Z,8µm,19.0s
AAM Ann Arbor 78.14 21 P **P** **11 11 53.4 -0.1**
baz=204
AAM Ann Arbor 78.14 21 IAmb IAmb 11 11 57.1
comp=Z,76nm,1.1s
AAM IAMs_20 IAMs_20 11 43 02.5
comp=Z,8µm,20.0s
P59A Jarrettsville 78.20 27 P **P** **11 11 53.6 -0.2**
baz=210,SNR=6.1
F04A Amboy 78.21 352 IAMs_20 IAMs_20 11 39 06.0
comp=Z,5µm,22.0s
O57A Amberson 78.28 26 P **P** **11 11 53.5 -0.8**
baz=209,SNR=8.1
N55A Marion Center 78.29 24 P **P** **11 11 54.5 +0.1**
baz=208,SNR=11
M53A Wf Miller and 78.30 23 P **P** **11 11 53.5 -0.9**
baz=206
E09A Wood Farm, Sta 78.38 355 IAmb IAmb 11 12 04.5
comp=Z,72nm,1.5s
F04D Rainier, OR 78.43 352 P **P** **11 11 55.3 +0.4**
baz=170
LAO LASA Array 78.43 4 P **P** **11 11 55.0 -0.1**
baz=184,SNR=59
LAO LASA Array 78.43 4 IAMs_20 IAMs_20 11 43 29.9
comp=Z,7µm,18.0s
O58A Lewisberry 78.47 26 P **P** **11 11 53.8 -1.5**
baz=209
MSO Missoula 78.48 358 P **P** **11 11 55.0 -0.3**
baz=178,SNR=40
MSO Missoula 78.48 358 IAmb IAmb 11 11 57.9
comp=Z,101nm,1.4s
MSO IAMs_20 IAMs_20 11 41 48.2
comp=Z,6µm,18.0s
E07A Sunnyside 78.56 354 IAMs_20 IAMs_20 11 40 09.3
comp=Z,6µm,20.0s
MVL Millersville 78.57 27 IAmb IAmb 11 12 02.2
comp=Z,64nm,1.2s
MVL IAMs_20 IAMs_20 11 43 34.0
comp=Z,8µm,19.0s
F33A 5 Mile Ranch, 78.63 11 IAmb IAmb 11 11 58.1
comp=Z,156nm,1.4s
PAGS Pennsylvania G 78.63 26 IAmb IAmb 11 12 02.3
comp=Z,63nm,1.2s
PAGS IAMs_20 IAMs_20 11 43 01.5
comp=Z,6µm,20.0s
SPMN Marine on St. 78.64 13 P **P** **11 11 55.8 -0.4**
baz=196,SNR=11
SPMN Marine on St. 78.64 13 IAmb IAmb 11 12 02.3
comp=Z,98nm,1.5s
SPMN IAMs_20 IAMs_20 11 43 00.5
comp=Z,6µm,18.0s
N56A West Decatur 78.66 25 P **P** **11 11 56.9 +0.5**
baz=208
J47A Sumner 78.67 19 IAmb IAmb 11 12 00.3
comp=Z,95nm,1.1s
J47A IAMs_20 IAMs_20 11 43 25.3
comp=Z,5µm,20.0s
P60A Greenville 78.69 27 P **P** **11 11 56.0 -0.4**
baz=210
P60A Greenville 78.69 27 IAMs_20 IAMs_20 11 44 32.0
comp=Z,5µm,18.0s
M54A Oil Creek Stat 78.70 24 P **P** **11 11 56.6 0.0**
baz=207
M54A Oil Creek Stat 78.70 24 IAmb IAmb 11 12 03.1
comp=Z,100nm,1.5s
M54A IAMs_20 IAMs_20 11 43 43.4
comp=Z,8µm,19.0s
N57A Milroy 78.78 25 P **P** **11 11 56.5 -0.6**
baz=209,SNR=6.3
E04D Cinebar 78.84 352 P **P** **11 11 57.2 0.0**
baz=170,SNR=17
PSUB Penn St. - Bra 78.86 27 IAMs_20 IAMs_20 11 43 24.6
comp=Z,5µm,19.0s
K50A Casco 78.89 21 IAmb IAmb 11 12 01.0
comp=Z,88nm,1.1s
P61A Hammonton 78.90 28 IAMs_20 IAMs_20 11 42 11.7
comp=Z,6µm,20.0s
L53A Girard 78.90 23 P **P** **11 11 57.7 0.0**
baz=206
O59A Robesonia 78.91 27 P **P** **11 11 58.1 +0.3**
baz=208,SNR=5.6
LON Longmire 78.95 353 IAMs_20 IAMs_20 11 40 32.9
comp=Z,7µm,19.0s
E03A Lebam 78.95 351 IAmb IAmb 11 12 00.4
comp=Z,104nm,1.2s
E03A IAMs_20 IAMs_20 11 40 00.7
comp=Z,6µm,19.0s
M55A Ridgway 78.98 24 IAmb IAmb 11 12 00.5
comp=Z,118nm,1.2s
M55A IAMs_20 IAMs_20 11 43 32.3
comp=Z,8µm,20.0s
I45A Fountain 79.02 18 IAMs_20 IAMs_20 11 43 49.6
comp=Z,6µm,19.0s
H43A Windswept, Lux 79.03 17 IAMs_20 IAMs_20 11 44 14.9
comp=Z,5µm,18.0s
ERPA Erie 79.14 23 P **P** **11 11 58.6 -0.4**
baz=207
ERPA Erie 79.14 23 IAMs_20 IAMs_20 11 42 29.8
comp=Z,8µm,21.0s
N58A Sunbury 79.17 26 P **P** **11 11 59.2 +0.1**
baz=209
N58A Sunbury 79.17 26 IAmb IAmb 11 12 17.2
comp=Z,80nm,1.4s
M56A Emporium 79.20 25 P **P** **11 11 59.1 -0.2**
baz=208,SNR=9.1
M56A Emporium 79.20 25 IAmb IAmb 11 12 06.6
comp=Z,127nm,1.3s
M56A IAMs_20 IAMs_20 11 44 08.5
comp=Z,7µm,19.0s
O60A Telford 79.21 27 P **P** **11 11 59.1 -0.2**
baz=210
G40A Rib Lake 79.22 15 IAmb IAmb 11 12 11.4
comp=Z,122nm,1.4s
CAN Canberra 79.32 235 P **P** **11 12 01.9 +1.5**
CAN pmax pmax
comp=Z,33nm,1.2s
CAN Canberra 79.32 235 P **P** **11 12 01.9 +1.5**
CAN IAMs_20 IAMs_20 11 44 42.3
comp=Z,7µm,18.0s
LTY Liberty 79.33 353 IAMs_20 IAMs_20 11 40 44.6
comp=Z,6µm,20.0s
D05A Enumclaw 79.40 353 IAMs_20 IAMs_20 11 39 46.5
comp=Z,6µm,21.0s
JTMT Jette 79.41 358 IAMs_20 IAMs_20 11 42 24.7
comp=Z,6µm,18.0s
M57A Sunshine Farm, 79.45 25 P **P** **11 12 00.5 -0.2**
baz=209
LUPA Lehigh Univers 79.47 27 IAMs_20 IAMs_20 11 43 45.7
comp=Z,4µm,19.0s
D04E Lakebay 79.48 352 P **P** **11 12 02.1 +1.5**
baz=170,SNR=14

N59A	**State Game Lan**	**79.59**	**27**	P	**P**	**11 12 01.3**	**-0.2**		
	baz=210								
N59A	**State Game Lan**	**79.59**	**27**	IAMs_20	IAMs_20	11 42 43.9			
	comp=Z,5µm,21.0s								
EGMT	**Eagleton**	**79.65**	**1**	P	**P**	**11 12 02.0**	**+0.3**		
	baz=181,SNR=26								
EGMT	**Eagleton**	**79.65**	**1**	IAMs_20	IAMs_20	11 41 32.1			
	comp=Z,7µm,21.0s								
C09A	**Chrisman Ranch**	**79.67**	**355**	IAmb	IAmb	11 12 08.5			
	comp=Z,66nm,1.1s								
D32A	**Dogwood Acres,**	**79.79**	**10**	IAMs_20	IAMs_20	11 43 20.5			
	comp=Z,8µm,20.0s								
N60A	**Cedar Hill Far**	**79.81**	**27**	P	**P**	**11 12 02.5**	**-0.1**		
	baz=210								
NLWA	**Neilton Lookou**	**79.82**	**351**	IAmb	IAmb	11 12 05.4			
	comp=Z,133nm,1.3s								
NLWA				IAMs_20	IAMs_20	11 40 06.8			
	comp=Z,6µm,21.0s								
BRNJ	**Basking Ridge**	**79.85**	**27**	IAMs_20	IAMs_20	11 44 01.9			
	comp=Z,6µm,20.0s								
WVNY	**West Valley, N**	**79.86**	**24**	IAMs_20	IAMs_20	11 44 19.1			
	comp=Z,8µm,19.0s								
D03D	**Eldon**	**79.87**	**352**	P	**P**	**11 12 02.8**	**+0.1**		
	baz=170,SNR=23								
L56A	**Greenwood**	**79.99**	**25**	P	**P**	**11 12 03.3**	**-0.4**		
	baz=208,SNR=13								
L56A	**Greenwood**	**79.99**	**25**	IAmb	IAmb	11 12 10.2			
	comp=Z,110nm,1.1s								
N61A	**South Mountain**	**80.02**	**28**	P	**P**	**11 12 03.6**	**-0.1**		
	baz=211								
NEW	**Newport**	**80.06**	**356**	P	**P**	**11 12 02.8**	**-1.1**		
	comp=Z,71nm,1.1s,baz=167,slow=6.0,SNR=71								
NEW				LR	LR	11 42 08.3			
	comp=Z,7µm,19.1s,baz=186,slow=32								
NEW	**Newport**	**80.06**	**356**	P	**P**	**11 12 03.8**	**-0.1**		
	baz=175,SNR=87								
NEW	**Newport**	**80.06**	**356**	IAMs_20	IAMs_20	11 41 47.8			
	comp=Z,7µm,19.0s								
G45A	**Suttons Bay**	**80.11**	**18**	IAMs_20	IAMs_20	11 44 21.3			
	comp=Z,6µm,19.0s								
L57A	**Andrews Acres**	**80.13**	**25**	P	**P**	**11 12 03.7**	**-0.7**		
	baz=209,SNR=6.7								
KSPA	**Keystone Colle**	**80.14**	**26**	IAMs_20	IAMs_20	11 44 30.6			
	comp=Z,6µm,19.0s								
MDND	**Maddock**	**80.15**	**8**	P	**P**	**11 12 04.6**	**+0.3**		
	baz=190,SNR=5.8								
MDND	**Maddock**	**80.15**	**8**	IAMs_20	IAMs_20	11 43 06.2			
	comp=Z,8µm,22.0s								
F42A	**Maple Grove Fa**	**80.16**	**16**	IAMs_20	IAMs_20	11 45 46.6			
	comp=Z,4µm,19.0s								
ODNJ	**Ogdensburg**	**80.18**	**27**	IAMs_20	IAMs_20	11 44 12.6			
	comp=Z,6µm,20.0s								
GLMI	**Grayling**	**80.19**	**19**	P	**P**	**11 12 05.4**	**+0.8**		
	baz=203								
GLMI	**Grayling**	**80.19**	**19**	IAMs_20	IAMs_20	11 44 44.5			
	comp=Z,7µm,19.0s								
COWI	**Conover**	**80.25**	**15**	IAmb	IAmb	11 12 15.0			
	comp=Z,71nm,1.3s								
COWI				IAMs_20	IAMs_20	11 44 28.0			
	comp=Z,5µm,19.0s								
M59A	**Waymart**	**80.26**	**26**	P	**P**	**11 12 04.6**	**-0.5**		
	baz=210								
B08A	**Colville Reser**	**80.30**	**355**	IAMs_20	IAMs_20	11 41 52.4			
	comp=Z,6µm,19.0s								
I51A	**Listowel**	**80.32**	**22**	P	**P**	**11 12 05.6**	**+0.3**		
	baz=206								
DGMT	**Dagmar**	**80.33**	**5**	P	**P**	**11 12 05.1**	**-0.2**		
	baz=186,SNR=49								
PAL	**Palisades**	**80.39**	**28**	IAMs_20	IAMs_20	11 43 15.1			
	comp=Z,7µm,21.0s								
MMNY	**Mt. Morris Dam**	**80.39**	**24**	IAmb	IAmb	11 12 08.1			
	comp=Z,160nm,1.3s								
MMNY				IAMs_20	IAMs_20	11 44 31.1			
	comp=Z,6µm,18.0s								
B05A	**Bryant**	**80.47**	**353**	P	**P**	**11 12 05.9**	**-0.1**		
	baz=171,SNR=21								
TOO	**Toolangi**	**80.51**	**232**	P	**P**	**11 12 09.5**	**+2.7**		
TOO				pmax	pmax				
	comp=Z,72nm,1.4s								
TOO	**Toolangi**	**80.51**	**232**	P	**P**	**11 12 09.5**	**+2.7**		
TOO				IAmb	IAmb	11 12 12.0			
	comp=Z,72nm,1.4s								
L58A	**Harry Jones Me**	**80.53**	**26**	P	**P**	**11 12 07.3**	**+0.7**		
	baz=210								
K56A	**Middlesex**	**80.57**	**25**	P	**P**	**11 12 06.3**	**-0.5**		
	baz=209								
BINY	**Binghamton**	**80.62**	**26**	IAMs_20	IAMs_20	11 45 47.1			
	comp=Z,7µm,18.0s								
MAW	**Mawson**	**80.62**	**178**	P	**P**	**11 12 06.6**	**-0.1**		
	comp=Z,26nm,1.1s,baz=209,slow=5.7,SNR=38								
MAW				LR	LR	11 45 37.2			
	comp=Z,9µm,18.1s,baz=184,slow=34								
MAW	**Mawson**	**80.62**	**178**	P	**P**	**11 12 08.0**	**+1.2**		
MAW				pmax	pmax				
	comp=Z,6.0nm,1.0s								
MAW	**Mawson**	**80.62**	**178**	P	**P**	**11 12 08.0**	**+1.2**		
B06A	**Marblemount**	**80.66**	**353**	IAMs_20	IAMs_20	11 40 40.8			
	comp=Z,6µm,21.0s								
WALA	**Waterton Lakes**	**80.71**	**358**	IAMs_20	IAMs_20	11 42 25.1			
	comp=Z,5µm,20.0s								
WSPT	**Westport, CT**	**80.76**	**28**	IAMs_20	IAMs_20	11 42 27.9			
	comp=Z,6µm,22.0s								
K57A	**Scipio Center**	**80.89**	**25**	P	**P**	**11 12 07.5**	**-0.9**		
	baz=209								
J55A	**Hilton**	**80.89**	**24**	IAMs_20	IAMs_20	11 44 56.4			
	comp=Z,6µm,18.0s								
L59A	**Walton**	**80.96**	**26**	P	**P**	**11 12 07.9**	**-0.9**		
	baz=210								
A04D	**Lummi Island**	**80.99**	**352**	P	**P**	**11 12 09.8**	**+1.1**		
	baz=170,SNR=16								
PGC	**Sidney**	**81.01**	**352**	IAmb	IAmb	11 12 11.5			
	comp=Z,123nm,1.2s								
E43A	**Lone Tree Farm**	**81.01**	**17**	IAmb	IAmb	11 12 21.2			
	comp=Z,102nm,1.4s								
E43A				IAMs_20	IAMs_20	11 48 56.2			
	comp=Z,5µm,20.0s								
YLE	**Yale**	**81.04**	**28**	IAMs_20	IAMs_20	11 42 00.3			
	comp=Z,6µm,21.0s								
AGMN	**Agassiz Nation**	**81.09**	**10**	P	**P**	**11 12 09.0**	**-0.3**		
	baz=193,SNR=19								
AGMN	**Agassiz Nation**	**81.09**	**10**	IAMs_20	IAMs_20	11 44 09.2			
	comp=Z,8µm,21.0s								
M62A	**Hamden**	**81.16**	**28**	P	**P**	**11 12 08.9**	**-1.0**		
	baz=212								
KSCT	**Kent School, K**	**81.17**	**28**	IAmb	IAmb	11 12 11.8			
	comp=Z,92nm,1.4s								
KSCT				IAMs_20	IAMs_20	11 43 35.7			
	comp=Z,5µm,21.0s								
K58A	**Earlville**	**81.23**	**26**	P	**P**	**11 12 09.8**	**-0.5**		
	baz=210								
K58A	**Earlville**	**81.23**	**26**	IAMs_20	IAMs_20	11 46 15.3			
	comp=Z,6µm,18.0s								
J56A	**Wolcott**	**81.24**	**25**	P	**P**	**11 12 10.2**	**0.0**		
	baz=209								
D41A	**Chassel**	**81.29**	**15**	IAmb	IAmb	11 12 24.3			
	comp=Z,88nm,1.5s								
D41A				IAMs_20	IAMs_20	11 45 09.5			
	comp=Z,4µm,19.0s								
M63A	**Gales Ferry**	**81.47**	**29**	P	**P**	**11 12 10.7**	**-0.8**		
	baz=213								
EYMN	**Ely**	**81.51**	**13**	P	**P**	**11 12 10.6**	**-1.0**		
	baz=197								
EYMN	**Ely**	**81.51**	**13**	IAmb	IAmb	11 12 17.4			
	comp=Z,77nm,1.4s								
L61A	**Hillsdale 1, H**	**81.54**	**27**	P	**P**	**11 12 11.0**	**-0.9**		
	baz=212								
K59A	**Cooperstown**	**81.54**	**26**	P	**P**	**11 12 11.7**	**-0.2**		
	baz=211								
J57A	**Williamstown**	**81.67**	**25**	P	**P**	**11 12 12.1**	**-0.4**		
	baz=210								
J57A	**Williamstown**	**81.67**	**25**	IAMs_20	IAMs_20	11 44 29.8			
	comp=Z,5µm,20.0s								
E46A	**Sault Ste Mari**	**81.69**	**18**	IAmb	IAmb	11 12 25.0			
	comp=Z,131nm,1.4s								
E46A				IAMs_20	IAMs_20	11 45 52.3			
	comp=Z,4µm,20.0s								
SADO	**Sadowa**	**81.78**	**22**	IAmb	IAmb	11 12 19.3			
	comp=Z,60nm,1.1s								
H53A	**Bobcaygeon**	**81.79**	**23**	P	**P**	**11 12 12.5**	**-0.6**		
	baz=208,SNR=5.3								
J58A	**Remsen**	**81.88**	**26**	P	**P**	**11 12 13.3**	**-0.3**		
	baz=210								
J58A	**Remsen**	**81.88**	**26**	IAMs_20	IAMs_20	11 46 43.5			
	comp=Z,5µm,19.0s								
M64A	**Tiverton**	**81.94**	**29**	P	**P**	**11 12 13.5**	**-0.4**		
	baz=213								
TRY	**Troy**	**81.95**	**27**	IAMs_20	IAMs_20	11 43 56.4			
	comp=Z,7µm,20.0s								
L63A	**North Scituate**	**82.03**	**29**	P	**P**	**11 12 13.6**	**-0.9**		
	baz=213								
K61A	**Williamstown**	**82.05**	**27**	P	**P**	**11 12 14.4**	**-0.2**		
	baz=212								
DELO	**Deloro Mine**	**82.06**	**24**	IAmb	IAmb	11 12 20.8			
	comp=Z,55nm,1.1s								
QUA2	**Belchertown**	**82.08**	**28**	IAmb	IAmb	11 12 21.2			
	comp=Z,80nm,1.2s								
QUA2				IAMs_20	IAMs_20	11 42 52.0			
	comp=Z,6µm,22.0s								
BRYW	**Bryant College**	**82.11**	**29**	IAMs_20	IAMs_20	11 42 24.7			
	comp=Z,6µm,22.0s								
M65A	**Busby, Falmout**	**82.18**	**30**	IAMs_20	IAMs_20	11 45 34.7			
	comp=Z,6µm,18.0s								
I57A	**Carthage**	**82.24**	**25**	P	**P**	**11 12 15.6**	**0.0**		
	baz=210,SNR=7.2								
J59A	**Piesco**	**82.26**	**26**	P	**P**	**11 12 14.9**	**-0.8**		
	baz=211								
J59A	**Piesco**	**82.26**	**26**	IAMs_20	IAMs_20	11 43 46.6			
	comp=Z,6µm,22.0s								
I58A	**Old Forge**	**82.28**	**26**	P	**P**	**11 12 15.8**	**0.0**		
	baz=210,SNR=6.0								
L64A	**Middleborough**	**82.41**	**29**	P	**P**	**11 12 16.3**	**-0.1**		
	baz=214								
K62A	**Royalston**	**82.46**	**28**	P	**P**	**11 12 16.5**	**-0.2**		
	baz=213								
K62A	**Royalston**	**82.46**	**28**	IAmb	IAmb	11 12 27.5			
	comp=Z,121nm,1.5s								
K62A				IAMs_20	IAMs_20	11 43 25.8			
	comp=Z,6µm,22.0s								
J60A	**Lant Hill Farm**	**82.48**	**27**	P	**P**	**11 12 17.4**	**+0.6**		
	baz=212								
WES	**Weston**	**82.59**	**29**	IAmb	IAmb	11 12 23.7			
	comp=Z,65nm,1.3s								
WES				IAMs_20	IAMs_20	11 42 50.4			
	comp=Z,6µm,21.0s								
HRV	**Adam Dziewonsk**	**82.59**	**28**	P	**P**	**11 12 17.4**	**0.0**		
	baz=213								
HRV	**Adam Dziewonsk**	**82.59**	**28**	IAMs_20	IAMs_20	11 42 51.5			
	comp=Z,7µm,22.0s								
BCX	**Boston College**	**82.61**	**29**	IAMs_20	IAMs_20	11 45 25.9			
	comp=Z,4µm,19.0s								
G54A	**Lake Saint Pet**	**82.68**	**23**	P	**P**	**11 12 17.5**	**-0.3**		
	baz=208								
PLVO	**Plevna**	**82.71**	**24**	IAmb	IAmb	11 12 24.4			
	comp=Z,68nm,1.3s								
K63A	**Dunstable**	**82.76**	**28**	P	**P**	**11 12 18.1**	**-0.1**		
	baz=213								
I59A	**Olmsteadville**	**82.78**	**26**	P	**P**	**11 12 17.7**	**-0.7**		
	baz=211								
H57A	**Richville**	**82.80**	**25**	P	**P**	**11 12 17.9**	**-0.5**		
	baz=210,SNR=7.4								
NCB	**Newcomb**	**82.80**	**26**	IAmb	IAmb	11 12 23.5			
	comp=Z,53nm,1.2s								
NCB				IAMs_20	IAMs_20	11 44 12.9			
	comp=Z,4µm,22.0s								
J61A	**Chester**	**82.91**	**27**	P	**P**	**11 12 18.3**	**-0.7**		
	baz=212								
ULM	**Lac du Bonnet**	**82.99**	**10**	P	**P**	**11 12 16.6**	**-2.6**		
	comp=Z,28nm,0.9s,baz=205,slow=4.4,SNR=25								
ULM				LR	LR	11 45 37.2			
	comp=Z,8µm,19.1s,baz=185,slow=33								
ULM	**Lac du Bonnet**	**82.99**	**10c**	*i* P	**P**	**11 12 18.1**	**-1.2**		
EIDS	**Eidsvold**	**83.01**	**245**	IAMs_20	IAMs_20	11 42 45.3			
	comp=Z,5µm,21.0s								
I60A	**Shoreham**	**83.04**	**27**	P	**P**	**11 12 19.0**	**-0.6**		
	baz=212								
J62A	**Henniker**	**83.09**	**28**	P	**P**	**11 12 20.0**	**0.0**		
	baz=213								
ALGO	**Algonquin Park**	**83.19**	**23**	P	**P**	**11 12 20.4**	**0.0**		
	baz=208								
H58A	**Gabriels**	**83.20**	**26**	P	**P**	**11 12 20.0**	**-0.5**		
	baz=211,SNR=16								
LONY	**Lake Ozonia**	**83.22**	**25**	P	**P**	**11 12 20.4**	**-0.2**		
	baz=211,SNR=16								
HNH	**Hanover**	**83.31**	**27**	IAmb	IAmb	11 12 27.8			
	comp=Z,44nm,1.3s								
HNH				IAMs_20	IAMs_20	11 43 56.4			
	comp=Z,5µm,22.0s								
FFD	**Franklin Falls**	**83.36**	**28**	P	**P**	**11 12 21.8**	**+0.4**		
FFD				IAmb	IAmb	11 12 28.7			
	comp=Z,90nm,1.2s								
FFD				IAMs_20	IAMs_20	11 44 01.8			
	comp=Z,6µm,21.0s								
J63A	**Strafford**	**83.43**	**28**	P	**P**	**11 12 20.2**	**-1.5**		
	baz=213								
G57A	**Newington**	**83.50**	**25**	P	**P**	**11 12 21.7**	**-0.3**		
	baz=210,SNR=15								
I61A	**Oroboro, Fairl**	**83.53**	**27**	P	**P**	**11 12 21.7**	**-0.5**		
	baz=212,SNR=5.8								
H59A	**Cadyville**	**83.57**	**26**	P	**P**	**11 12 22.0**	**-0.4**		
	baz=211,SNR=8.6								
VT1	**Waterbury**	**83.66**	**27**	P	**P**	**11 12 22.6**	**-0.3**		
VT1				IAmb	IAmb	11 12 33.2			
	comp=Z,76nm,1.5s								
VT1				IAMs_20	IAMs_20	11 44 56.4			
	comp=Z,6µm,20.0s								
FRNY	**Flat Rock**	**83.77**	**26**	P	**P**	**11 12 23.0**	**-0.4**		
FRNY				IAmb	IAmb	11 12 30.0			
	comp=Z,90nm,1.4s								
FRNY				IAMs_20	IAMs_20	11 46 26.2			
	comp=Z,7µm,19.0s								
I62A	**Tamworth**	**83.83**	**28**	P	**P**	**11 12 23.3**	**-0.4**		
	baz=213,SNR=5.4								
I62A	**Tamworth**	**83.83**	**28**	IAMs_20	IAMs_20	11 44 25.1			
	comp=Z,6µm,20.0s								
G58A	**Ormstown**	**83.87**	**25**	P	**P**	**11 12 24.5**	**+0.6**		
	baz=211,SNR=14								
H60A	**Morristown**	**83.88**	**27**	P	**P**	**11 12 23.6**	**-0.4**		
	baz=212,SNR=8.5								
LBNH	**Lisbon**	**83.90**	**27**	P	**P**	**11 12 23.8**	**-0.3**		
LBNH				pmax	pmax				
	comp=Z,78nm,1.4s								
LBNH	**Lisbon**	**83.90**	**27**	P	**P**	**11 12 24.0**	**-0.1**		
	baz=213								
LBNH	**Lisbon**	**83.90**	**27**	P	**P**	**11 12 23.8**	**-0.3**		
LBNH				IAmb	IAmb	11 12 31.4			
	comp=Z,78nm,1.4s								
LBNH				IAMs_20	IAMs_20	11 43 51.1			
	comp=Z,5µm,22.0s								
HNR	**Honiara**	**84.09**	**263**	LR	LR	11 41 47.8			
	comp=Z,5µm,21.9s,baz=134,slow=30								
HNR	**Honiara**	**84.09**	**263**	P	**P**	**11 12 25.6**	**-0.3**		
HNR				pmax	pmax				
	comp=Z,93nm,1.4s								
HNR	**Honiara**	**84.09**	**263**	P	**P**	**11 12 25.6**	**-0.3**		
HNR				IAmb	IAmb	11 12 35.9			
	comp=Z,93nm,1.4s								
H61A	**Lyndonville**	**84.15**	**27**	P	**P**	**11 12 26.1**	**+0.7**		
	baz=213,SNR=9.5								
F57A	**Harrington**	**84.21**	**25**	P	**P**	**11 12 25.3**	**-0.3**		
	baz=210								
I63A	**Otisfield**	**84.28**	**28**	P	**P**	**11 12 25.4**	**-0.6**		
	baz=214								
I63A	**Otisfield**	**84.28**	**28**	IAMs_20	IAMs_20	11 44 12.0			
	comp=Z,5µm,21.0s								
G60A	**Masonville**	**84.47**	**27**	P	**P**	**11 12 26.6**	**-0.4**		
	baz=212								
H62A	**Milan**	**84.48**	**28**	P	**P**	**11 12 26.0**	**-1.1**		
	baz=213,SNR=6.0								
H62A	**Milan**	**84.48**	**28**	P	**P**	**11 12 27.6**	**+0.5**		
H62A				IAmb	IAmb	11 12 41.3			
	comp=Z,60nm,1.3s								
H62A				IAMs_20	IAMs_20	11 43 53.5			
	comp=Z,7µm,22.0s								
I64A	**Boothbay**	**84.55**	**29**	P	**P**	**11 12 26.8**	**-0.6**		
	baz=214								
F58A	**St-Lin Laurent**	**84.57**	**25**	P	**P**	**11 12 27.1**	**-0.3**		
	baz=211								
E56A	**St. Veronique**	**84.72**	**24**	P	**P**	**11 12 28.4**	**+0.2**		
	baz=210,SNR=13								
E57A	**Chemin Saint G**	**84.92**	**25**	P	**P**	**11 12 28.2**	**-1.1**		
	baz=211								
G61A	**St-Isidore-de-**	**84.93**	**27**	P	**P**	**11 12 28.7**	**-0.6**		
	baz=213,SNR=6.1								
F59A	**Saint Guilaume**	**84.94**	**26**	P	**P**	**11 12 28.9**	**-0.4**		
	baz=212,SNR=6.9								
D55A	**Sainte-Anne-du**	**84.98**	**24**	P	**P**	**11 12 29.3**	**-0.2**		
	baz=210,SNR=14								
H63A	**New Sharon**	**85.00**	**28**	P	**P**	**11 12 30.3**	**+0.6**		
	baz=214								
WVL	**Waterville**	**85.07**	**28**	P	**P**	**11 12 30.0**	**0.0**		
WVL				IAmb	IAmb	11 12 42.7			
	comp=Z,57nm,1.3s								
WVL				IAMs_20	IAMs_20	11 48 24.1			
	comp=Z,4µm,20.0s								
BBB	**Bella Bella**	**85.10**	**350**	P	**P**	**11 12 30.2**	**+0.2**		
E58A	**La Victoria**	**85.20**	**25**	P	**P**	**11 12 30.1**	**-0.5**		
	baz=212,SNR=15								
D56A	**ZEC Mazanza, M**	**85.25**	**24**	P	**P**	**11 12 30.3**	**-0.6**		
	baz=210								
G62A	**West of Eustis**	**85.27**	**28**	P	**P**	**11 12 30.3**	**-0.7**		
	baz=214								
G62A	**West of Eustis**	**85.27**	**28**	IAmb	IAmb	11 12 37.1			
	comp=Z,43nm,1.3s								
G62A				IAMs_20	IAMs_20	11 45 58.2			
	comp=Z,6µm,20.0s								
VLDQ	**Val d'Or**	**85.28**	**22**	IAmb	IAmb	11 12 37.0			
	comp=Z,42nm,1.1s								
H64A	**Troy**	**85.31**	**29**	P	**P**	**11 12 30.8**	**-0.4**		
	baz=215								
F60A	**Warwick**	**85.35**	**26**	P	**P**	**11 12 31.1**	**-0.3**		
	baz=213,SNR=8.1								
G63A	**Kingsbury**	**85.54**	**28**	P	**P**	**11 12 30.8**	**-1.6**		
	baz=214								
F61A	**St Evariste**	**85.72**	**27**	P	**P**	**11 12 32.3**	**-0.9**		
	baz=213								
H65A	**Eastbrook**	**85.76**	**29**	P	**P**	**11 12 32.9**	**-0.5**		
	baz=216								
PKME	**Peaks-Kenny Pk**	**85.80**	**28**	P	**P**	**11 12 33.2**	**-0.3**		
	baz=215								
E60A	**Ste Agathe de**	**85.87**	**26**	P	**P**	**11 12 34.2**	**+0.2**		
	baz=213,SNR=5.9								
D58A	**Chemin du LacG**	**85.96**	**25**	P	**P**	**11 12 33.5**	**-0.9**		
	baz=212,SNR=8.2								
G64A	**Maxfield**	**86.00**	**29**	P	**P**	**11 12 33.1**	**-1.5**		
	baz=215								
EMMW	**East Machias**	**86.10**	**30**	P	**P**	**11 12 34.7**	**-0.3**		
EMMW				IAmb	IAmb	11 12 35.3			
	comp=Z,53nm,1.3s								
EMMW				IAMs_20	IAMs_20	11 47 29.3			
	comp=Z,4µm,19.0s								
H66A	**Whiting**	**86.22**	**30**	P	**P**	**11 12 35.0**	**-0.7**		
	baz=216								
F63A	**Nahmakanta, Br**	**86.23**	**28**	P	**P**	**11 12 35.5**	**-0.3**		
	baz=215,SNR=5.6								
F63A	**Nahmakanta, Br**	**86.23**	**28**	P	**P**	**11 12 35.4**	**-0.3**		
F63A				IAmb	IAmb	11 12 41.9			
	comp=Z,55nm,1.1s								
F63A				IAMs_20	IAMs_20	11 47 27.8			
	comp=Z,4µm,21.0s								
LATQ	**La Tuque**	**86.24**	**25**	P	**P**	**11 12 35.8**	**+0.1**		
	baz=212,SNR=5.7								
D59A	**Saint-Raymond**	**86.27**	**26**	P	**P**	**11 12 35.9**	**0.0**		
	baz=213								
LSQQ	**Lebel-sur-Quev**	**86.27**	**22**	P	**P**	**11 12 36.0**	**+0.1**		
	baz=209								
E61A	**Lac Etchemin**	**86.29**	**27**	P	**P**	**11 12 35.2**	**-0.9**		
	baz=214								
STKA	**Stephens Creek**	**86.36**	**235**	P	**P**	**11 12 36.7**	**-0.3**		
	comp=Z,7.6nm,1.0s,baz=113,slow=7.8,SNR=10								
STKA				LR	LR	11 45 10.8			
	comp=Z,3µm,20.4s,baz=127,slow=32								
STKA	**Stephens Creek**	**86.36**	**235**	P	**P**	**11 12 37.6**	**+0.6**		
STKA				pmax	pmax				
	comp=Z,8.0nm,1.4s								
STKA	**Stephens Creek**	**86.36**	**235**	P	**P**	**11 12 37.6**	**+0.6**		
G65A	**Princeton**	**86.45**	**29**	P	**P**	**11 12 36.9**	**+0.1**		
	baz=216								
G65A	**Princeton**	**86.45**	**29**	IAMs_20	IAMs_20	11 47 49.6			
	comp=Z,6µm,20.0s								
D60A	**Saint Jean D'O**	**86.53**	**26**	P	**P**	**11 12 36.3**	**-0.8**		
	baz=213								
F64A	**Sherman**	**86.67**	**28**	P	**P**	**11 12 37.4**	**-0.5**		
	baz=215								
F64A	**Sherman**	**86.67**	**28**	IAMs_20	IAMs_20	11 49 29.3			
	comp=Z,4µm,20.0s								
GGN	**Saint George**	**86.69**	**30**	IAMs_20	IAMs_20	11 46 19.1			
	comp=Z,4µm,20.0s								
FFC	**Flin Flon**	**86.72**	**5**	P	**P**	**11 12 37.4**	**-0.5**		
FFC				pmax	pmax				
	comp=Z,139nm,1.4s								
FFC	**Flin Flon**	**86.72**	**5**	P	**P**	**11 12 37.4**	**-0.5**		
E62A	**Clayton Lake**	**86.82**	**27**	P	**P**	**11 12 37.8**	**-0.9**		
	baz=214,SNR=5.4								
E62A				S	**S**	**11 23 20.2**	**+3.7**		
	baz=214								
E62A	**Clayton Lake**	**86.82**	**27**	IAmb	IAmb	11 12 44.8			
	comp=Z,84nm,1.4s								
E62A				IAMs_20	IAMs_20	11 46 54.3			
	comp=Z,6µm,21.0s								
DIB	**Dawson Inlet,**	**86.82**	**347**	IAMs_20	IAMs_20	11 43 13.0			
	comp=Z,4µm,18.0s								
D61A	**St Aubert, Com**	**87.05**	**27**	P	**P**	**11 12 38.4**	**-1.3**		
	baz=214								
E63A	**Oxbow**	**87.09**	**28**	P	**P**	**11 12 39.2**	**-0.7**		
	baz=215								
E63A	**Oxbow**	**87.09**	**28**	IAMs_20	IAMs_20	11 50 59.5			
	comp=Z,4µm,18.0s								
E64A	**Bridgewater**	**87.33**	**28**	P	**P**	**11 12 38.4**	**-2.7**		
	baz=216								
D62A	**Allapoint, All**	**87.39**	**27**	IAMs_20	IAMs_20	11 47 20.2			
	comp=Z,6µm,20.0s								
PQI	**Presque Isle**	**87.46**	**28**

HIN	**Hinchinbrook I**	**96.49**	**343**	IAMs_20	IAMs_20	11 49 16.8				
	comp=Z,5µm,18.0s									
ASAR	**Alice Springs**	**96.74**	**237**	P	**P**	**11 13 23.9**	**-1.7**			
	comp=Z,1.3nm,0.7s,baz=128,slow=4.5,SNR=22									
ASAR				PKKP	**PKKPbc**	**11 30 07.0**	**-0.2**			
	comp=Z,1.1nm,0.8s,baz=327,slow=2.3,SNR=10									
ASAR				LR	LR	11 54 08.6				
	comp=Z,5µm,18.1s,baz=142,slow=34									
ASAR	**Alice Springs**	**96.74**	**237**	P	**P**	**11 13 23.5**	**-2.1**			
FID	**Port Fidalgo**	**96.79**	**343**	IAMs_20	IAMs_20	11 50 10.1				
	comp=Z,3µm,18.0s									
CNPM	**China Poot**	**96.99**	**341**	IAMs_20	IAMs_20	11 50 18.2				
	comp=Z,4µm,18.0s									
GLI	**Glacier Island**	**97.06**	**343**	IAMs_20	IAMs_20	11 48 59.8				
	comp=Z,3µm,18.0s									
KLU	**Klutina**	**97.31**	**344**	IAmb	IAmb	11 13 28.8				
	comp=Z,24nm,1.0s									
KLU				IAMs_20	IAMs_20	11 50 06.5				
	comp=Z,3µm,18.0s									
BCAR	**Beaver Creek A**	**97.82**	**346**	P	**P**	**11 13 28.0**	**-1.3**			
KNK	**Knik Glacier**	**97.86**	**343**	IAMs_20	IAMs_20	11 51 24.9				
	comp=Z,4µm,18.0s									
SCM	**Sheep Creek Mo**	**97.94**	**344**	IAmb	IAmb	11 13 35.1				
	comp=Z,33nm,1.2s									
GHO	**Glory Hole Cre**	**98.28**	**343**	IAMs_20	IAMs_20	11 50 31.1				
	comp=Z,3µm,18.0s									
WR4	**Warramunga Arr**	**98.69**	**240**	IAMs_20	IAMs_20	11 55 44.5				
	comp=Z,5µm,18.0s									
WR3	**Warramunga Arr**	**98.70**	**240**	IAMs_20	IAMs_20	11 55 54.0				
	comp=Z,4µm,18.0s									
WC3	**Warramunga Arr**	**98.71**	**240**	IAMs_20	IAMs_20	11 55 37.1				
	comp=Z,4µm,18.0s									
WR2	**Warramunga Arr**	**98.72**	**240**	IAMs_20	IAMs_20	12 00 36.5				
	comp=Z,5µm,18.0s									
WC4	**Warramunga Arr**	**98.73**	**240**	IAMs_20	IAMs_20	12 00 11.7				
	comp=Z,5µm,18.0s									
WB2	**Warramunga Arr**	**98.73**	**240**	IAMs_20	IAMs_20	11 55 54.8				
	comp=Z,4µm,18.0s									
WC2	**Warramunga Arr**	**98.73**	**240**	IAMs_20	IAMs_20	11 55 54.8				
	comp=Z,4µm,18.0s									
WRAB	**Tennant Creek**	**98.74**	**240**	IAMs_20	IAMs_20	11 55 45.7				
	comp=Z,4µm,18.0s									
K27K	**Chicken**	**98.74**	**347**	IAmb	IAmb	11 13 35.1				
	comp=Z,27nm,1.4s									
WR1	**Warramunga Arr**	**98.74**	**240**	IAMs_20	IAMs_20	11 55 47.0				
	comp=Z,3µm,18.0s									
WRA	**Warramunga Arr**	**98.74**	**240**	P	**P**	**11 13 33.2**	**-1.5**			
	comp=Z,0.8nm,0.7s,baz=129,slow=4.3,SNR=12									
WRA				PP	**PP**	**11 17 36.8**	**+1.4**			
	comp=Z,1.0nm,1.1s,baz=139,slow=6.7,SNR=6.0									
WRA				PKiKP	**PKiKP**	**11 18 04.3**	**-1.7**			
	comp=Z,0.5nm,0.8s,baz=134,slow=1.9,SNR=4.6									
WRA				PKKP	**PKKPbc**	**11 30 01.8**	**+0.1**			
	comp=Z,1.0nm,0.8s,baz=314,slow=2.2,SNR=9.0									
WRA				LR	LR	11 55 39.5				
	comp=Z,5µm,18.0s,baz=140,slow=34									
WB4	**Warramunga Arr**	**98.75**	**240**	IAMs_20	IAMs_20	11 55 46.2				
	comp=Z,5µm,18.0s									
WC1	**Warramunga Arr**	**98.75**	**240**	IAMs_20	IAMs_20	11 55 46.3				
	comp=Z,4µm,18.0s									
WB5	**Warramunga Arr**	**98.76**	**240**	IAMs_20	IAMs_20	11 55 46.5				
	comp=Z,5µm,18.0s									
DHY	**Denali Highway**	**99.03**	**344**	IAmb	IAmb	11 13 37.9				
	comp=Z,15nm,1.2s									
DHY				IAMs_20	IAMs_20	11 51 11.8				
	comp=Z,3µm,18.0s									
SCRK	**Sand Creek**	**99.08**	**346**	P	**Pdif**	**11 13 36.0**	**+0.9**			
	baz=152,SNR=5.5									
SKT	**Skwentna**	**99.12**	**342**	IAMs_20	IAMs_20	11 48 27.5				
	comp=Z,3µm,20.0s									
CUT	**Chulitna**	**99.15**	**343**	P	**Pdif**	**11 13 36.3**	**+1.1**			
	baz=147,SNR=8.0									
EPYK	**Eagle Plains**	**99.97**	**350**	IAMs_20	IAMs_20	11 54 43.5				
	comp=Z,3µm,18.0s									
TRF	**Thorofare Moun**	**100.04**	**343**	IAMs_20	IAMs_20	11 51 38.6				
	comp=Z,3µm,18.0s									
HDA	**Harding Lake**	**100.08**	**345**	IAMs_20	IAMs_20	11 52 00.8				
	comp=Z,3µm,18.0s									
KTH	**Kantishna Hill**	**100.28**	**343**	IAMs_20	IAMs_20	11 52 11.8				
	comp=Z,3µm,18.0s									
ILAR	**Eielson Array**	**100.39**	**345**	P	**Pdif**	**11 13 39.6**	**-1.1**			
	comp=Z,2.8nm,1.1s,baz=161,slow=4.5,SNR=14									
ILAR				PP	**PP**	**11 17 44.8**	**-2.8**			
	comp=Z,0.6nm,0.9s,baz=154,slow=7.9,SNR=4.6									
WRH	**Wood River Hil**	**100.39**	**345**	IAMs_20	IAMs_20	11 50 45.9				
	comp=Z,3µm,20.0s									
CRZF	**Crozet Islands**	**100.47**	**168**	IAMs_20	IAMs_20	11 56 09.1				
	comp=Z,3µm,19.0s									
CCB	**Clear Creek Bu**	**100.48**	**345**	IAMs_20	IAMs_20	11 52 03.2				
	comp=Z,3µm,18.0s									
COLA	**College**	**100.69**	**345**	*i* P	**Pdif**	**11 13 41.8**	**-0.2**			
COLA				pmax	pmax					
	comp=Z,8.0nm,1.1s									
COLA	**College**	**100.69**	**345**	IAMs_20	IAMs_20	11 52 18.7				
	comp=Z,3µm,18.0s									
TCOL	**CIGO, UAF Yank**	**100.69**	**345**	IAMs_20	IAMs_20	11 53 16.7				
	comp=Z,3µm,18.0s									
NEA2	**Nenana**	**100.72**	**344**	P	**Pdif**	**11 13 42.7**	**+0.5**			
	baz=148,SNR=5.9									
PRP	**Porcupine Dome**	**100.75**	**346**	IAMs_20	IAMs_20	11 52 10.3				
	comp=Z,3µm,19.0s									
POKR	**Poker Plat Res**	**100.80**	**345**	P	**Pdif**	**11 13 42.4**	**-0.2**			
	baz=149									
MDM	**Murphy Dome**	**100.84**	**345**	IAMs_20	IAMs_20	11 52 22.8				
	comp=Z,4µm,18.0s									
NWAO	**Narrogin (SRO)**	**100.88**	**220**	IAMs_20	IAMs_20	11 51 54.3				
	comp=Z,5µm,18.0s									
H01W1	**Cape Leeuwin H**	**100.98**	**217**	T	T	13 06 43.1				
	baz=140,slow=75,SNR=58									
H01W2	**Cape Leeuwin H**	**100.99**	**217**	T	T	13 06 50.5				
	baz=140,slow=75,SNR=49									
H01W3	**Cape Leeuwin H**	**101.00**	**217**	T	T	13 06 51.5				
	baz=140,slow=75,SNR=64									
MBO	**M'Bour**	**101.04**	**80**	IAMs_20	IAMs_20	11 55 54.2				
	comp=Z,5µm,20.0s									
I23K	**Minto, Yukon-K**	**101.26**	**345**	P	**Pdif**	**11 13 44.9**	**+0.4**			
	baz=148,SNR=5.5									
INK	**Inuvik**	**101.36**	**352**	Pdiff	**Pdif**	**11 13 43.5**	**-1.4**			
	comp=Z,4.8nm,1.1s,baz=122,slow=8.4,SNR=4.0									
INK				PP	**PP**	**11 17 53.3**	**-1.5**			
	comp=Z,4.7nm,1.2s,baz=153,slow=9.0,SNR=5.0									
INK	**Inuvik**	**101.36**	**352**	IAMs_20	IAMs_20	11 57 17.2				
	comp=Z,5µm,18.0s									
C36M	**Paulatuk**	**101.47**	**355**	IAMs_20	IAMs_20	11 52 45.0				
	comp=Z,4µm,22.0s									
TOLK	**Toolik Lake Re**	**104.26**	**346**	IAMs_20	IAMs_20	11 54 57.9				
	comp=Z,3µm,18.0s									
BOSA	**Boshof**	**106.90**	**141**	Pdiff	**Pdif**	**11 14 09.2**	**-1.8**			
	comp=Z,4.9nm,1.2s,baz=287,slow=12,SNR=3.4									
A21K	**Barrow**	**107.86**	**346**	IAMs_20	IAMs_20	11 59 47.2				
	comp=Z,2µm,18.0s									
PMOZ	**Porto Moniz, M**	**109.55**	**63**	*e*PP	**PP**	**11 18 57.9**	**+1.4**			
PMOZ	**Porto Moniz, M**	**109.55**	**63**	*e*SS	SS	11 34 23.3	+3.6			
PMOZ	**Porto Moniz, M**	**109.55**	**63**	*e*LR	LR	11 52 34.0				
	comp=Z,2µm,22.0s									
FAKI	**Fak Fak**	**110.63**	**253**	IAMs_20	IAMs_20	11 59 17.2				
	comp=Z,5µm,21.0s									
MMRI	**Maumere**	**114.94**	**241**	IAMs_20	IAMs_20	12 06 04.2				
	comp=Z,4µm,19.0s									
PETK	**Petropavlovsk-**	**115.47**	**318**	PKP	**PKPdf**	**11 18 34.8**	**-1.2**			
	comp=Z,3.0nm,0.8s,baz=131,slow=9.8,SNR=2.1									
TOC5	**Torodi Ar. Sit**	**116.18**	**91**	IAMs_20	IAMs_20	12 02 40.0				
	comp=Z,3µm,22.0s									
TOB4	**Torodi Ar. Sit**	**116.19**	**91**	IAMs_20	IAMs_20	12 02 40.3				
	comp=Z,3µm,21.0s									
TOB5	**Torodi Ar. Sit**	**116.19**	**90**	IAMs_20	IAMs_20	12 02 28.5				
	comp=Z,3µm,22.0s									
TOC4	**Torodi Ar. Sit**	**116.19**	**91**	IAMs_20	IAMs_20	12 02 40.5				
	comp=Z,3µm,21.0s									
TOC7	**Torodi Ar. Sit**	**116.20**	**90**	IAMs_20	IAMs_20	12 02 40.5				
	comp=Z,3µm,21.0s									
TOA3	**Torodi Ar. Sit**	**116.20**	**91**	IAMs_20	IAMs_20	12 02 40.6				
	comp=Z,3µm,22.0s									
TOA0	**Torodi Ar. Sit**	**116.20**	**91**		**PKPdf**	**11 18 37.5**	**-1.0**			
TOA0				IAMs_20	IAMs_20	12 02 40.7				
	comp=Z,3µm,22.0s									
TORD	**Torodi Ar. Bea**	**116.20**	**91**	PKP	**PKPdf**	**11 18 36.8**	**-1.7**			
	comp=Z,4.9nm,0.7s,baz=297,slow=1.5,SNR=28									
TORD				PP	**PP**	**11 19 44.0**	**0.0**			
	comp=Z,2.0nm,1.0s,baz=291,slow=1.9,SNR=3.7									
TORD	**Torodi Ar. Bea**	**116.20**	**91**		**PKPdf**	**11 18 37.1**	**-1.4**			
TOB3	**Torodi Ar. Sit**	**116.21**	**91**	IAMs_20	IAMs_20	12 02 40.8				
	comp=Z,3µm,22.0s									
TOA2	**Torodi Ar. Sit**	**116.21**	**91**	IAMs_20	IAMs_20	12 02 40.8				
	comp=Z,3µm,21.0s									
TOB1	**Torodi Ar. Sit**	**116.21**	**90**	IAMs_20	IAMs_20	12 02 40.8				
	comp=Z,3µm,22.0s									
TOC3	**Torodi Ar. Sit**	**116.22**	**91**	IAMs_20	IAMs_20	12 02 41.1				
	comp=Z,3µm,22.0s									
TOC1	**Torodi Ar. Sit**	**116.22**	**90**	IAMs_20	IAMs_20	12 02 41.2				
	comp=Z,3µm,22.0s									
TOC2	**Torodi Ar. Sit**	**116.23**	**91**	IAMs_20	IAMs_20	12 02 41.4				
	comp=Z,3µm,22.0s									
BILL	**Bilibino**	**116.53**	**335**⇑	*e*PKIKP	**PKPdf**	**11 18 37.2**	**-0.3**			
BILL				*e*		11 19 41.6				
BILL				*e*PPP	PPP	11 22 12.4				
BILL				*e*SS	SS	11 35 48.2	-2.2			
BILL				pmax	pmax					
	comp=Z,3.0nm,1.0s									
PFVI	**Vila Bisbo**	**117.56**	**62**	*e*PP	PP	11 19 55.7	+2.5			
PFVI	**Vila Bisbo**	**117.56**	**62**	*e*SS	SS	11 36 14.5	+9.2			
PFVI	**Vila Bisbo**	**117.56**	**62**	IAMs_20	IAMs_20	12 03 50.4				
	comp=Z,2µm,20.0s									
MORF	**Marmelete**	**117.75**	**62**	*e*PP	PP	11 19 54.1	-0.5			
MORF				*e*SS	SS	11 36 07.7	-0.2			
MORF				AMS	AMS	12 04 24.9				
	comp=E,2µm,25.2s									
MORF	**Marmelete**	**117.75**	**62**	*e*PP	PP	11 19 56.0	+1.4			
MORF	**Marmelete**	**117.75**	**62**	*e*SS	SS	11 36 12.0	+4.1			
PMAFR	**Mafra**	**117.85**	**60**	*e*PP	PP	11 19 59.4	+4.2			
PMAFR	**Mafra**	**117.85**	**60**	*e*SS	SS	11 36 13.1	+4.0			
LIS	**Lisbon**	**117.87**	**60**	*e*PP	PP	11 19 54.9	-0.4			
LIS				AMS	AMS	12 02 00.1				
	comp=E,2µm,16.2s									
PNCL	**Nicolau / Gran**	**118.12**	**61**	*e*PP	PP	11 20 02.0	+4.9			
PNCL	**Nicolau / Gran**	**118.12**	**61**	*e*SS	SS	11 36 18.7	+6.2			
PBDV	**Barranco-do-Ve**	**118.27**	**62**	*e*PP	PP	11 20 00.9	+2.7			
PBDV	**Barranco-do-Ve**	**118.27**	**62**	*e*SS	SS	11 36 20.3	+5.7			
PCVE	**Castro Verde**	**118.32**	**61**	*e*PP	PP	11 20 03.0	+4.5			
PCVE	**Castro Verde**	**118.32**	**61**	*e*SS	SS	11 36 18.4	+3.2			
PSBE	**So Bento**	**118.39**	**59**	*e*SS	SS	11 36 19.7	+3.6			
PVAQ	**Vaqueiros**	**118.48**	**62**	*e*PP	PP	11 20 02.3	+2.7			
PVAQ	**Vaqueiros**	**118.48**	**62**	*e*SS	SS	11 36 25.6	+8.3			
PVAQ	**Vaqueiros**	**118.48**	**62**	*e*LR	LR	11 55 56.9				
	comp=E,2µm,22.0s									
PMTG	**Montargil**	**118.66**	**60**	*e*PP	PP	11 20 04.3	+3.5			
PMTG	**Montargil**	**118.66**	**60**	*e*SS	SS	11 36 22.2	+2.6			
PCAS	**Casmilo, Conde**	**118.79**	**59**	*e*PP	PP	11 20 06.9	+5.2			
PCAS	**Casmilo, Conde**	**118.79**	**59**	*e*SS	SS	11 36 26.3	+5.1			
COI	**Coimbra**	**118.90**	**59**	*e*PP	PP	11 20 07.5	+5.1			
COI	**Coimbra**	**118.90**	**59**	*e*SS	SS	11 36 24.6	+2.0			
COI	**Coimbra**	**118.90**	**59**	IAMs_20	IAMs_20	12 00 40.5				
	comp=Z,2µm,21.0s									
LSZ	**Lusaka**	**119.00**	**134**	IAMs_20	IAMs_20	12 16 21.8				
	comp=Z,2µm,18.0s									
LUWI	**Luwuk**	**119.34**	**248**	IAMs_20	IAMs_20	12 07 12.9				
	comp=Z,4µm,20.0s									
PMRV	**Marv??o**	**119.39**	**60**	*e*PP	PP	11 20 12.1	+6.2			
PMRV	**Marv??o**	**119.39**	**60**	*e*SS	SS	11 36 31.5	+2.5			
PMRV	**Marv??o**	**119.39**	**60**	*e*LQ	LQ	11 54 01.0				
PMRV				*e*LR	LR	11 55 52.5				
	comp=Z,2µm,20.0s									
PGAV	**Gavieira, Arco**	**119.55**	**57**	*e*PP	PP	11 20 11.8	+4.8			
PGAV	**Gavieira, Arco**	**119.55**	**57**	*e*LR	LR	11 56 59.5				
	comp=Z,2µm,20.0s									
MTE	**Manteigas**	**119.59**	**59**	*e*PP	PP	11 20 12.6	+5.3			
MTE	**Manteigas**	**119.59**	**59**	*e*SS	SS	11 36 36.0	+4.4			
MTE	**Manteigas**	**119.59**	**59**	*e*LQ	LQ	11 54 26.8				
MTE				*e*LR	LR	11 57 13.0				
	comp=Z,2µm,22.0s									
MTE	**Manteigas**	**119.59**	**59**	IAMs_20	IAMs_20	12 00 47.8				
	comp=Z,3µm,22.0s									
FOMA	**Nahampoana Res**	**119.66**	**157**	IAMs_20	IAMs_20	12 09 45.4				
	comp=Z,3µm,20.0s									
POLO	**Lamas de Olo**	**119.71**	**57**	*e*SS	SS	11 36 38.6	+5.4			
MVO	**Moncorvo**	**120.20**	**58**	*e*PP	PP	11 20 12.8	+1.4			
MVO	**Moncorvo**	**120.20**	**58**	*e*SS	SS	11 36 45.0	+5.6			
MVO	**Moncorvo**	**120.20**	**58**	*e*LR	LR	11 57 30.8				
	comp=Z,1µm,20.0s									
PBRG	**Bragança**	**120.59**	**57**	*e*PP	PP	11 20 16.7	+2.6			
SEY	**Seymchan**	**120.79**	**328**	PKP	**PKPdf**	**11 18 44.9**	**-1.0**			
	comp=Z,4.0nm,0.7s,baz=141,slow=6.5,SNR=5.2									
SEY	**Seymchan**	**120.79**	**328**	*i* PKIKP	**PKiKP**	**11 18 47.9**	**+1.9**			
MA2	**Magadan**	**120.93**	**324**	*i* PKIKP	**PKiKP**	**11 18 48.1**	**+1.7**			
MA2				pmax	pmax					
	comp=Z,20nm,1.1s									
MA2				MLR	MLR					
	comp=Z,504nm,17.0s									
ERM	**Erimo**	**121.46**	**303**	IAMs_20	IAMs_20	12 02 46.3				
	comp=Z,3µm,20.0s									
JEM	**Erimo**	**121.46**	**303**	IAMs_20	IAMs_20	12 02 38.5				
	comp=Z,3µm,20.0s									
PAB	**San Pablo**	**121.67**	**60**	PKIKP	**PKiKP**	**11 18 50.2**	**+1.6**			
PAB	**San Pablo**	**121.67**	**60**		**PKiKP**	**11 18 50.2**	**+1.6**			
ESDC	**Sonseca Array**	**121.99**	**60**	PKP	**PKPdf**	**11 18 48.3**	**-0.7**			
	comp=Z,3.1nm,0.8s,baz=271,slow=2.0,SNR=20									
JKA	**Kamikawa-asahi**	**122.42**	**305**	IAMs_20	IAMs_20	12 01 55.5				
	comp=Z,2µm,21.0s									
JTM	**Tenmabayashi**	**122.63**	**301**	IAMs_20	IAMs_20	12 00 52.0				
	comp=Z,2µm,21.0s									
YSS	**Yuzh-Sakhalins**	**123.00**	**308**	*i* PKIKP	**PKPdf**	**11 18 49.6**	**-1.0**			
YSS				*e*SS	SS	11 37 05.7	-9.0			
YSS				*e*SSS	SSS	11 41 42.5				
DSB	**Dublin**	**123.52**	**44**	IAMs_20	IAMs_20	12 00 57.2				
	comp=Z,2µm,20.0s									
MJAR	**Matsushiro Arr**	**123.56**	**295**	PKP	**PKPdf**	**11 18 50.6**	**-1.5**			
	comp=Z,1.9nm,0.7s,baz=186,slow=2.8,SNR=4.9									
MJAR	**Matsushiro Arr**	**123.56**	**295**	PKIKP	**PKPdf**	**11 18 51.6**	**-0.5**			
MJAR	**Matsushiro Arr**	**123.56**	**295**		**PKPdf**	**11 18 51.6**	**-0.5**			
XMIS	**Christmas Isla**	**124.98**	**226**	IAMs_20	IAMs_20	12 08 05.1				
	comp=Z,3µm,19.0s									
ABPO	**Ambohimpanom**	**125.25**	**155**	PKIKP	**PKiKP**	**11 18 57.5**	**+1.0**			
ABPO				MLR	MLR					
	comp=Z,3µm,18.0s									
ABPO	**Ambohimpanom**	**125.25**	**155**		**PKiKP**	**11 18 57.5**	**+1.0**			
ABPO	**Ambohimpanom**	**125.25**	**155**	IAMs_20	IAMs_20	12 14 12.5				
	comp=Z,3µm,18.0s									
MYLDM	**Lahad Datu**	**126.47**	**251**	IAMs_20	IAMs_20	12 12 02.0				
	comp=Z,3µm,20.0s									
TEY	**Ternei**	**126.80**	**305**⇓	*e*PKIKP	**PKPdf**	**11 18 57.4**	**-0.5**			
TEY				pmax	pmax					
	comp=Z,10.0nm,1.6s									
CLF	**Chambon-Foret**	**128.17**	**52**	IAMs_20	IAMs_20	12 15 12.1				
	comp=Z,2µm,20.0s									
JOW	**Kunigami**	**128.46**	**280**	IAMs_20	IAMs_20	11 57 38.8				
	comp=Z,4µm,22.0s									
COCO	**West Island**	**128.51**	**216**	IAMs_20	IAMs_20	12 05 25.9				
	comp=Z,3µm,21.0s									
SSB	**Saint Sauveur**	**129.35**	**55**	IAMs_20	IAMs_20	12 07 46.9				
	comp=Z,3µm,20.0s									
TIXI	**Tiksi**	**129.36**	**339**	*i* PKIKP	**PKPdf**	**11 19 01.7**	**-0.3**			
TIXI				pmax	pmax					
	comp=Z,197nm,2.2s									
TIXI	**Tiksi**	**129.36**	**339**	PKPdf	**PKPdf**	**11 19 00.9**	**-1.1**			
SBUM	**Sibu**	**129.70**	**243**	IAMs_20	IAMs_20	12 18 32.8				
	comp=Z,3µm,18.0s									
SNF	**Seneffe**	**129.74**	**49**	PKPdf	**PKiKP**	**11 19 03.8**	**-0.3**			
UCC	**Uccle**	**129.81**	**48**	PKPdf	**PKiKP**	**11 19 03.9**	**-0.4**			
UCC	**Uccle**	**129.81**	**48**	IAMs_20	IAMs_20	12 03 22.1				
	comp=Z,2µm,21.0s									
DOU	**Dourbes**	**129.91**	**49**	PKPdf	**PKPdf**	**11 19 04.0**	**+0.3**			
USA0B	**Ussuriysk Arra**	**129.91**	**303**	*i* PKIKP	**PKPdf**	**11 19 03.7**	**-0.2**			
USRK	**Ussuriysk Ar.**	**129.91**	**303**	PKP	**PKPdf**	**11 19 03.6**	**-0.3**			
	comp=Z,3.4nm,0.9s,baz=90,slow=1.9,SNR=11									
USRK	**Ussuriysk Ar.**	**129.91**	**303**	PKIKP	**PKPdf**	**11 19 04.0**	**+0.1**			
USRK	**Ussuriysk Ar.**	**129.91**	**303**	PKPdf	**PKPdf**	**11 19 04.0**	**+0.1**			
BMRD	**Maredsous**	**130.04**	**49**	PKPdf	**PKPdf**	**11 19 04.1**	**+0.2**			
BGES	**Gesves**	**130.25**	**49**	PKPdf	**PKiKP**	**11 19 05.2**	**0.0**			
RCHB	**Rochefort**	**130.32**	**49**	PKPdf	**PKPdf**	**11 19 03.9**	**-0.6**			
BCLA	**Clavier**	**130.39**	**49**	PKPdf	**PKiKP**	**11 19 05.4**	**0.0**			
KSM	**Kuching**	**130.50**	**241**	PKPdf	**PKPdf**	**11 19 06.2**	**+0.1**			
KSM				IAMs_20	IAMs_20	12 17 39.5				
	comp=Z,2µm,18.0s									
BSTI	**Sart Tilman**	**130.56**	**49**	PKPdf	**PKiKP**	**11 19 05.5**	**-0.3**			
KLR	**Kul'dur**	**130.63**	**310**	*i* PKIKP	**PKiKP**	**11 19 05.5**	**-0.5**			
KLR				pmax	pmax					
	comp=Z,40nm,1.6s									
BEBN	**Eben Emael**	**130.65**	**48**	PKPdf	**PKPdf**	**11 19 04.7**	**-0.4**			
BNI	**Bardonecchia**	**130.82**	**56**	IAMs_20	IAMs_20	12 08 37.8				
	comp=Z,3µm,22.0s									
BHOU	**Houvegnez**	**130.83**	**49**	PKPdf	**PKiKP**	**11 19 06.0**	**-0.4**			
MEM	**Membach**	**130.84**	**48**	PKPdf	**PKPdf**	**11 19 05.1**	**-0.3**			
WLF	**Walferdange**	**130.89**	**50**	PKPdf	**PKiKP**	**11 19 06.2**	**-0.3**			
WLF	**Walferdange**	**130.89**	**50**	*e*PKPdf	**PKPdf**	**11 19 05.3**	**-0.3**			
	baz=270,slow=1.8									
WLF	**Walferdange**	**130.89**	**50**	IAMs_20	IAMs_20	12 12 56.8				
	comp=Z,2µm,20.0s									
BTNL	**Ternell**	**130.92**	**49**	PKPdf	**PKPdf**	**11 19 05.8**	**+0.1**			
KEST	**Kesra**	**131.16**	**68**	PKP	**PKPdf**	**11 19 06.6**	**-0.1**			
	comp=Z,4.9nm,0.8s,baz=205,slow=4.7,SNR=5.8									
YAK	**Yakutsk**	**131.27**	**327**	*e*PKIKP	**PKPdf**	**11 19 04.1**	**-1.8**			
YAK				*e*		11 21 21.1				
	comp=Z,24nm,1.5s									
YAK				pmax	pmax					
	comp=N,4.0nm,1.3s									
YAK				pmax	pmax					
	comp=E,9.0nm,1.5s									
YAK				pmax	pmax					
	comp=N,93nm,3.4s									
YAK				pmax	pmax					
	comp=Z,399nm,4.7s									
YAK				pmax	pmax					
	comp=E,210nm,5.1s									
MNAI	**Manna**	**131.39**	**228**	IAMs_20	IAMs_20	12 09 11.1				
	comp=Z,2µm,22.0s									
SENIN	**Lac Senin/Sane**	**131.40**	**54**	IAMs_20	IAMs_20	12 18 40.8				
	comp=Z,2µm,19.0s									
ECH	**Echery**	**131.46**	**52**	IAMs_20	IAMs_20	12 09 27.0				
	comp=Z,2µm,20.0s									
AHRW	**Bad Neuenahr-A**	**131.52**	**49**	*e*PKPdf	**PKPdf**	**11 19 06.4**	**-0.4**			
	baz=270,slow=1.8									
MBAR	**Mbarara**	**131.59**	**125**	PKIKP	**PKiKP**	**11 19 10.7**	**+1.4**			
MBAR	**Mbarara**	**131.59**	**125**		**PKiKP**	**11 19 10.7**	**+1.4**			
MBAR	**Mbarara**	**131.59**	**125**	IAMs_20	IAMs_20	12 07 58.0				
	comp=Z,3µm,22.0s									
BUG	**Bochum--Univer**	**131.67**	**47**	*e*PKPdf	**PKPdf**	**11 19 06.2**	**-0.8**			

baz=270,slow=1.8
ARCES ARCESS Array B 135.32 20 PKP **PKPdf 11 19 11.6 -1.8**
comp=Z,4.6nm,0.9s,baz=357,slow=3.9,SNR=4.7
ZOU Zoufplan 135.32 54 IAMs_20 IAMs_20 12 16 02.7
comp=Z,3μm,19.0s
FBE Freiberg 135.51 48 *e*PKPdf **PKPdf 11 19 13.6 -0.6**
baz=270,slow=1.8
KMBO Kilima Mbogo 135.56 132 PKP **PKiKP 11 19 16.9 -0.6**
comp=Z,1.1nm,0.3s,baz=168,slow=1.3,SNR=10
KBA Koelnbreinsper 135.59 54 P **PKPdf 11 19 13.5 -1.3**
comp=Z,13nm,1.3s,SNR=6.4
KEV Kevo 135.62 19 IAMs_20 IAMs_20 12 14 17.8
comp=Z,3μm,21.0s
RUE Ruedersdorf 135.66 46 *e*P **PKPdf 11 19 15.0 +0.6**
SSE Sheshan 135.69 283 PKP **PKiKP 11 19 18.6 +1.8**
SSE PP **PP 11 21 59.3 +5.7**
SSE AMB AMB
comp=Z,230nm,8.6s
SSE LR LR
comp=Z,340nm,20.6s
SSE LR LR
comp=Z,270nm,20.6s
INTR Introdacqua 135.72 61 PKPdf **PKPdf 11 19 14.8 -0.3**
KHC Kasperske Hory 135.73 51 *e*PKIKP **PKPdf 11 19 13.4 -1.4**
KHC *e* 11 19 19.2
KHC *e*SS SS 11 39 48.7 -3.0
KHC MLR MLR
comp=Z,2μm,18.9s
KHC Kasperske Hory 135.73 51 *e*PKPDF **PKPdf 11 19 13.4 -1.4**
KHC *e*PKP **sPKPdf 11 19 19.2 +2.0**
KHC *e*SS SS 11 39 48.7 -3.0
KHC AMS AMS 12 14 00.0
comp=Z,2μm,18.9s
PRED Cave del Predi 135.73 54 IAMs_20 IAMs_20 12 14 06.5
comp=Z,2μm,20.0s
SNY Shenyang 135.75 299 ⇓PKP **PKPdf 11 19 15.1 +0.1**
SNY PP **PP 11 21 56.6 +3.0**
SNY AMB AMB
comp=Z,820nm,12.8s
SNY LR LR
comp=Z,560nm,24.2s
SNY LR LR
comp=Z,470nm,18.5s
SNY LR LR
comp=Z,1μm,21.1s
MYKA Terra Mystica 135.79 54 *e*P **PKPdf 11 19 13.7 -1.3**
comp=Z,8.1nm,0.8s
LNIZ Loecknitz 135.81 44 *e*PKPdf **PKPdf 11 19 14.0 -0.7**
baz=270,slow=1.8
GEC2 GERESS Array S 135.82 51 IAMs_20 IAMs_20 12 16 08.3
comp=Z,2μm,20.0s
GERES GERESS Array B 135.82 51 PKhKP PKPpre 11 19 05.4
comp=Z,0.2nm,0.4s,baz=334,slow=11,SNR=2.3
GERES PKP **PKPdf 11 19 14.5 -0.6**
comp=Z,2.1nm,0.7s,baz=301,slow=0.8,SNR=17
TRI Trieste 135.85 56 IAMs_20 IAMs_20 12 20 48.8
comp=Z,2μm,20.0s
BRG Berggiesshubel 135.88 48 *i* PKP **PKPdf 11 19 15.4 +0.4**
comp=Z,371nm,2.8s
BRG *i* 11 19 20.5
comp=Z,34nm,1.4s
comp=N,1μm,20.5s
comp=E,2μm,20.3s
comp=Z,2μm,18.7s
BRG Berggiesshubel 135.88 48 *i* PKIKP **PKPdf 11 19 15.4 +0.4**
BRG *i* 11 19 20.5
BRG pmax pmax
comp=Z,371nm,2.8s
BRG MLR MLR
comp=N,1μm,20.5s
BRG MLR MLR
comp=E,2μm,20.3s
BRG MLR MLR
comp=Z,2μm,18.7s
BRG Berggiesshubel 135.88 48 *e*PKPdf **PKPdf 11 19 14.1 -0.8**
baz=270,slow=1.8
BKNI Bangkinang 136.18 230 IAMs_20 IAMs_20 12 14 28.2
comp=Z,3μm,19.0s
MOA Molln 136.21 52 *e*P **PKPdf 11 19 14.3 -1.4**
comp=Z,23nm,1.8s
PRA Prague 136.24 49 *e*SS SS 11 40 04.0 +6.3
PRA AMS AMS 12 14 40.0
comp=Z,800nm,20.4s
PRU Pruhonice 136.32 49 *e*PKIKP **PKPdf 11 19 15.6 -0.2**
PRU MLR MLR
comp=Z,2μm,18.4s
PRU Pruhonice 136.32 49 *e*PKPDF **PKPdf 11 19 15.6 -0.2**
PRU *e*SS SS 11 39 25.0 -34
PRU AMS AMS 12 14 40.0
comp=Z,2μm,18.4s
OBKA Obir 136.41 54 P **PKPdf 11 19 15.2 -1.0**
comp=Z,35nm,1.9s
SOKA Soboth 136.75 54 *e*P **PKPdf 11 19 15.9 -0.9**
comp=Z,28nm,1.6s,SNR=7.5
CEL Celeste 136.78 66 IAMs_20 IAMs_20 12 13 14.8
comp=Z,2μm,22.0s
DL2 Dalian 136.89 294 PKP **PKPdf 11 19 15.8 -1.4**
DL2 LR LR
comp=Z,330nm,24.0s
DL2 LR LR
comp=Z,1μm,20.6s
DL2 LR LR
comp=Z,2μm,23.9s
TREC Trest 136.97 50 *e*PKIKP **PKPdf 11 19 17.1 0.0**
TREC *e*SS SS 11 40 02.2 -4.3
TREC MLR MLR
comp=Z,2μm,19.8s
TREC Trest 136.97 50 *e*PKPDF **PKPdf 11 19 17.1 0.0**
TREC *e*SS SS 11 40 02.2 -4.3
TREC AMS AMS 12 15 00.0
comp=Z,2μm,19.8s
ARSA Arzberg 137.07 53 *e*P **PKPdf 11 19 15.9 -1.4**
comp=Z,18nm,1.4s
UPC Upice 137.22 48 *e*SS SS 11 40 06.4 -3.0
CHVC Chvalec 137.24 48 AMS AMS 12 17 50.0
comp=Z,1μm,15.6s
CONA Conrad Observa 137.28 52 *i* P **PKPdf 11 19 16.3 -1.5**
comp=Z,22nm,1.3s,SNR=8.3
OSTC Ostas 137.35 48 *e*PKPDF PKPpre 11 19 07.6
OSTC *e*SS SS 11 40 27.8 +17
OSTC AMS AMS 12 06 20.0
comp=Z,3μm,30.7s
KSP Ksiaz 137.37 48 *e*PKP PKPpre 11 19 08.2
DPC Dobruska-Polom 137.43 49 *e*SS SS 11 40 12.3 +0.3
DPC MLR MLR
comp=Z,1μm,18.2s
DPC Dobruska-Polom 137.43 49 *e*PKP PKPpre 11 19 07.8
DPC *e*SS SS 11 40 12.3 +0.3
DPC AMS AMS 12 15 40.0
comp=Z,1μm,18.2s
TIP Timpagrande 137.57 65 IAMs_20 IAMs_20 12 16 40.6
comp=Z,2μm,21.0s
KRUC Moravsky 137.58 51 *e*PKP PKPpre 11 19 08.4
KRUC *e* 11 19 17.9
GKP Gorka Klasztor 137.64 44 *e*PKP **PKPdf 11 19 17.5 -0.6**
VRAC Vranov 137.69 50 *e*PKP PKPpre 11 19 08.7
VRAC *e* 11 19 18.4
KRLC Kraliky 137.75 49 *e*PKHKP PKPpre 11 19 06.7
KRLC *e* 11 19 16.0
KRLC *e*SS SS 11 40 44.1 +28
KRLC MLR MLR
comp=Z,2μm,19.6s
KRLC Kraliky 137.75 49 *e*PKPpre PKPpre 11 19 06.7
KRLC *e*PKPDF **PKPdf 11 19 16.0 -2.5**
KRLC *e*SS SS 11 40 44.1 +28
KRLC AMS AMS 12 16 20.0
comp=Z,2μm,19.6s
NJ2 Nanjing 137.85 284 *e*PKP **PKiKP 11 19 21.0 -0.2**
NJ2 PP **PP 11 22 09.1 +2.0**
NJ2 AMB AMB
comp=Z,550nm,8.5s
NJ2 LR LR
comp=Z,380nm,17.3s
NJ2 LR LR
comp=Z,690nm,18.9s
NJ2 LR LR
comp=Z,1μm,16.6s
MODS Modra-Piesok 138.21 52 *e*PKIKP **PKPdf 11 19 17.1 -2.3**
MODS *e* 11 22 05.1
MODS Modra-Piesok 138.21 52 *e*PKP **PKPdf 11 19 17.1 -2.3**
MODS *e*PP **PP 11 22 05.1 -3.7**
MORC Moravsky Berou 138.27 49 *e*PKP PKPpre 11 19 10.9
MORC *e* 11 19 19.6
MORC Moravsky Berou 138.27 49 IAMs_20 IAMs_20 12 13 03.0
comp=Z,2μm,22.0s
DLV T Lat 138.43 250 IAMs_20 IAMs_20 12 21 40.7
comp=Z,2μm,19.0s
JAVC Velka Javorina 138.43 51 *e*PKP PKPpre 11 19 12.0
JAVC *e* 11 19 20.5
OKC Ostrava-Krasne 138.65 49 AMS AMS 12 15 30.0
comp=Z,1μm,18.2s
APA Apatity 138.82 20 ⇓*i*PKIKP **PKiKP 11 19 21.5 -0.6**
APA pmax pmax
comp=Z,7.0nm,1.1s
LVZ Lovozero 138.95 19 IAMs_20 IAMs_20 12 15 35.7
comp=Z,3μm,20.0s
VYHS Vyhne 139.24 51 *e*PP PP 11 22 13.8 -1.4
RPSI Rantau Prapat 139.35 230 IAMs_20 IAMs_20 12 17 37.8
comp=Z,3μm,20.0s
SLIT Slitere, Latvi 139.38 37 *e*P **PKPdf 11 19 17.5 -3.7**
OJC Ojcow 139.66 48 *e*PKP **PKPdf 11 19 19.4 -2.6**
FIA1 FÍNESS Array S 139.67 30 PKPdf **PKPdf 11 19 21.7 +0.1**
FINES FINESS Array B 139.67 30 PKhKP PKPpre 11 19 13.1
comp=Z,1.5nm,0.8s,baz=270,slow=3.8,SNR=3.8
FINES PKP **PKPdf 11 19 19.9 -1.7**
comp=Z,2.7nm,0.7s,baz=279,slow=2.3,SNR=4.9
BOD Bodaibo 139.95 324 *e*PKHKP PKPpre 11 19 12.3
BOD pmax pmax
comp=Z,66nm,1.8s
BEL Belsk 140.02 46 *e*PKP **PKPdf 11 19 15.2 -7.3**
TIA Tai'an 140.06 290 PKP **PKPdf 11 19 22.7 -0.5**
NIE Niedzica 140.09 50 *e*PKP **PKPdf 11 19 21.0 -1.8**
CRVS Cervenica-Dubn 140.92 50 *e*PKIKP **PKPdf 11 19 23.6 -0.7**
CRVS *e* 11 22 23.7
CRVS Cervenica-Dubn 140.92 50 *e*PKP **PKPdf 11 19 23.6 -0.7**
CRVS *e*PP **PP 11 22 23.7 -1.8**
SUW Suwalki 140.94 42 *e*PKP **PKPdf 11 19 19.0 -5.1**
SUW Suwalki 140.94 42 IAMs_20 IAMs_20 12 16 22.6
comp=Z,2μm,21.0s
PABE Paberze 140.94 40 *e*P **PKPdf 11 19 16.7 -7.4**
QIZ Qiongzhong 140.98 261 PKP **PKPdf 11 19 25.8 +0.5**
QIZ PP **PP 11 22 29.3 +2.8**
QIZ SS SS 11 40 57.8 +3.0
QIZ LR LR
comp=Z,880nm,19.1s
QIZ LR LR
comp=Z,730nm,17.7s
QIZ LR LR
comp=Z,1μm,19.6s
NRIK Noril'sk 141.10 350 PKhKP **PKPdf 11 19 19.5 -4.5**
comp=Z,9.0nm,0.9s,baz=4.0,slow=1.8,SNR=14
NRIK Noril'sk 141.10 350 *i* PKIKP **PKPdf 11 19 23.1 -0.9**
NRIK pmax pmax
comp=Z,23nm,1.1s
NRIK MLR MLR
comp=Z,3μm,19.0s
BJI Beijing 141.20 296 PKP **PKPdf 11 19 24.9 -0.1**
WHN Wuhan 141.23 280 PKP **PKPdf 11 19 25.5 +0.1**
VSU Vasula 141.27 34 *e*P **PKPdf 11 19 22.3 -2.3**
BZS Buzias 141.35 55 ⇑P **PKPdf 11 19 18.1 -7.0**
ITM Ithomi 141.39 69 IAMs_20 IAMs_20 12 19 13.9
comp=Z,2μm,22.0s
KOLS Kolonicke sedl 141.44 50 *e*PKIKP **PKPdf 11 19 24.0 -1.2**
KOLS Kolonicke sedl 141.44 50 *e*PKP **PKPdf 11 19 24.0 -1.2**
UZH Uzhgorod 141.50 51 *e*PKIKP **PKPdf 11 19 22.0 -3.3**
UZH *e* 11 19 29.8
UZH *e* 11 22 31.0
UZH *e* 11 26 38.0
UZH *e*SS SS 11 40 51.0 -8.7
THL Klokotos Trika 141.67 65 P **PKPdf 11 19 19.1 -6.8**
CIT Chita 141.92 315 *e*PKHKP **PKPdf 11 19 19.4 -6.6**
HERR Herculane 141.97 57 ⇓P **PKPdf 11 19 22.0 -4.3**
ISAL Salakas 142.08 39 *e*P **PKPdf 11 19 22.9 -3.2**
IZAR Zarasai 142.08 38 *e*P **PKPdf 11 19 21.6 -4.6**
GZR Gura Zlata 142.19 56 ⇑P **PKPdf 11 19 21.7 -5.1**
GZR Gura Zlata 142.19 56 ⇑PKIKP **PKPdf 11 19 21.7 -5.1**
LVV L'vov 142.42 48 *e*PKIKP **PKPdf 11 19 23.8 -3.1**
LVV *e* 11 22 32.2
LVV *e* 11 25 51.2
LVV *e* 11 41 01.4
LVV MLR MLR
comp=E,900nm,20.0s
LVV MLR MLR
comp=Z,1μm,20.0s
LVV MLR MLR
comp=N,900nm,23.0s
IDID Didziasalis 142.49 39 *e*P **PKPdf 11 19 24.3 -2.6**
LHMI Lhok Sumawe 142.54 231 IAMs_20 IAMs_20 12 23 33.7
comp=Z,2μm,19.0s
HORT Hortiatis 142.54 64 P **PKPdf 11 19 22.8 -4.8**
TMCR Tamitsa 142.54 22 *e*PKIKP **PKiKP 11 19 29.7 0.0**
TMCR pmax pmax
comp=Z,43nm,1.2s
NACGM Naroch 142.66 40 *e* **PKPdf 11 19 22.0 -5.2**
NACGM *e*LQ LQ 12 10 28.0
NACGM *e*LR LR 12 16 34.0
UBPT Khong Chiam 142.72 252 **PKPdf 11 19 28.3 -0.1**
UBPT IAMs_20 IAMs_20 12 21 01.5
comp=Z,3μm,20.0s
SOH Sokhos 142.74 63 P **PKPdf 11 19 23.7 -4.2**
PLG Polygyros 142.80 64 P **PKPdf 11 19 23.7 -4.3**
SRS Serrai 142.93 63 P **PKPdf 11 19 22.3 -5.8**
MICGM Minsk 143.40 40⇑ *e*PKP PKPab 11 19 24.0 -0.6
MICGM ⇑*e*PKP PKPab 11 19 24.0 -0.6
comp=Z,0.3nm,1.5s
MICGM PKPM 11 19 26.0
comp=Z,2.6nm,4.0s
MICGM PKPM 11 19 26.0
MICGM *e*PP **PP 11 22 36.0 -4.2**
MICGM *e*PPP PPP 11 25 40.0
MICGM *e*SKS SKSdf 11 26 20.0 -18
MICGM *e*SKKS SKKSdf 11 35 33.0 -22
MICGM *e*SS **SS 11 41 18.0 -3.1**
MICGM *e*SSS SSS 11 46 44.0
MICGM *e*LR LR 12 14 00.0
MICGM LRM MLR 12 19 50.0
comp=Z,3.4nm,18.0s
MNK Minsk 143.40 40⇑ *e*PKHKP PKPab 11 19 24.0 -0.6
MNK *e* 11 22 36.0
MNK *e*SS SS 11 41 18.0 -3.1
MNK *e*SSS SSS 11 46 44.0
MNK pmax pmax
comp=Z,310nm,1.5s
MNK pmax pmax
comp=Z,3μm,4.0s
IDI Anoyia 143.53 73 ⇓P PKPbc 11 19 26.9 +0.1
IDI Anoyia 143.53 73 PKPdf PKPbc 11 19 27.8 +1.0
IDI Anoyia 143.53 73 P PKPab 11 19 25.5 -0.4
BURAR Bucovina Array 143.59 52 ⇓P PKPbc 11 19 27.4 +0.8
BURAR Bucovina Array 143.59 52 ⇓PKIKP PKPbc 11 19 27.4 +0.8
KAVA Kavala 143.62 63 P PKPab 11 19 23.3 -2.6
VOIR 143.77 55 ⇓P PKPab 11 19 26.3 -0.2
VOIR 143.77 55 ⇓PKIKP PKPab 11 19 26.3 -0.2
THAS Thassos island 143.78 64 P PKPab 11 19 26.6 +0.1
FURI Furi 143.85 123 IAMs_20 IAMs_20 12 25 24.1
comp=Z,2μm,21.0s
DOPR Dopca 143.95 54 ⇓P PKPbc 11 19 28.0 +0.3
TIY Taiyuan 143.96 291 *e*PKP PKPbc 11 19 27.8 -0.2
TIY PP **PP 11 22 48.0 +3.6**
TIY AMB AMB
comp=Z,460nm,6.0s
TIY LR LR
comp=Z,480nm,20.5s
TIY LR LR
comp=Z,910nm,20.9s
TIY LR LR
comp=Z,850nm,17.3s
LAST Lasithi 144.00 73 P PKPbc 11 19 28.6 +0.4
SNT1 Gialos, Santor 144.10 71 P **PKPab 11 19 27.6 -0.3**
ANAF Anafi Island 144.37 71 P **PKPab 11 19 28.5 -0.4**
MLR Muntele Rosu 144.39 55 ⇓P **PKPab 11 19 28.2 -0.7**
MLR Muntele Rosu 144.39 55 PKIKP **PKPab 11 19 28.9 0.0**
MLR Muntele Rosu 144.39 55 PKPdf **PKPab 11 19 28.9 0.0**
MLR IAMs_20 IAMs_20 12 31 43.8
comp=Z,2μm,18.0s
SMTH Samothraki Isl 144.39 64 P **PKPab 11 19 27.5 -1.4**
RDO Rodhopi 144.40 63 P **PKPab 11 19 27.8 -1.0**
STIA Sitia Lasithi 144.50 73 P **PKPab 11 19 28.2 -1.2**
SGRR Singureni 144.55 57 ⇓P **PKPab 11 19 28.5 -0.8**
ZKR Zakros 144.59 73 P **PKPab 11 19 29.5 -0.3**
SIGR SIGRI 144.62 66 P **PKPab 11 19 27.8 -1.9**
NEHR Nehoiu 144.65 55 ⇓P **PKPab 11 19 28.8 -0.9**
GADA Gvkgeada 144.67 64 P **PKPab 11 19 28.3 -1.6**
SULR 144.71 57 ⇓P PKPbc 11 19 29.9 -0.1
HHC Hu-ho-hao-te 144.74 297 *e*PKP **PKPab 11 19 29.3 -1.0**
HHC pPKP PKiKP 11 19 39.9 +4.7
HHC LR LR
comp=Z,520nm,18.2s
HHC LR LR
comp=Z,860nm,19.6s
HHC LR LR
comp=Z,860nm,18.4s
ALN Alexandroupoli 144.78 63 P **PKPab 11 19 29.1 -1.2**
PLOR Plostina 144.84 54 ⇑P PKPbc 11 19 30.4 0.0
PLOR Plostina 144.84 54 ⇑PKIKP PKPbc 11 19 30.4 -0.1
ENEZ Enez 144.87 63 P **PKPab 11 19 29.5 -1.1**
BISRR Bisoca 144.92 55 ⇓P **PKPab 11 19 30.1 -0.6**
PRK Paraskevi 144.95 66 P PKPbc 11 19 31.2 +0.2
RAZG Razgrad 145.00 58 ⇑P **PKPbc 11 19 29.3 -1.7**
EZN Ezine 145.00 65 P **PKPbc 11 19 29.5 -1.6**
EDRB Edirne 145.28 61 P **PKPbc 11 19 30.9 -1.1**
GHRR 145.33 54 ⇓P **PKPbc 11 19 30.7 -1.3**
SMG Samos 145.33 69 P **PKPbc 11 19 30.2 -2.1**
KLMR Klimovskoe 145.34 25 *e*PKIKP **PKPbc 11 19 30.3 -1.2**
KLMR *e*SS SS 11 41 41.6 -1.0
KLMR pmax pmax
comp=Z,551nm,1.5s
KLMR Klimovskoe 145.34 25 *e*PKPdf **PKPbc 11 19 30.4 -1.1**
KLMR AMP 11 19 33.5
comp=Z,551nm,1.5s
KLMR *e*SKPbc **SKPbc 11 23 10.7 -0.9**
KLMR *e*SS **SS 11 41 41.6 -1.0**
KLMR *e*SS **SS 11 41 41.6 -1.0**
KLMR LQ LQ 12 10 59.0
KLMR LQ LQ 12 10 59.0
KLMR LR LR 12 12 13.8
KOSK Kos Island 145.37 70 P **PKPbc 11 19 31.5 -0.9**
KARP Karpathos 145.41 73 **PKPbc 11 19 32.2 -0.4**
KARP Karpathos 145.41 73 P **PKPbc 11 19 32.2 -0.4**
AKASG Malin Array Be 145.43 46 PKPbc **PKPdf 11 19 29.9 -2.2**
comp=Z,13nm,0.6s,baz=284,slow=3.4,SNR=95
AKASG Malin Array Be 145.43 46 PKP2 **PKPdf 11 19 30.2 -2.0**
AKASG Malin Array Be 145.43 46 **PKPdf 11 19 30.2 -2.0**
AKBB Malin Array Si 145.43 46 PKP2 **PKPdf 11 19 30.6 -1.6**
AKBB MLR MLR
comp=Z,3μm,21.0s
AKBB Malin Array Si 145.43 46 **PKPdf 11 19 30.6 -1.6**
AKBB IAMs_20 IAMs_20 12 24 43.0
comp=Z,3μm,21.0s
AMRR Amara 145.48 57 ⇓P **PKPdf 11 19 31.8 -0.6**
AMRR Amara 145.48 57 ⇓PKIKP **PKPdf 11 19 31.8 -0.6**
NISR Nisiros 145.48 71 P **PKPdf 11 19 31.2 -1.5**
NIS1 Nisyros Isl. 145.52 71 P **PKPdf 11 19 30.9 -1.9**
SORM Soroca 145.56 50 ⇑P **PKPdf 11 19 32.3 -0.1**
SORM Soroca 145.56 50 ⇑PKIKP **PKPdf 11 19 32.3 -0.1**
TUDR 145.58 55 ⇓P **PKPdf 11 19 31.2 -1.3**
BODT Bodrum 145.66 70 P **PKPdf 11 19 31.8 -1.2**
SCHL Schela 145.71 55 ⇓P **PKPbc 11 19 33.1 0.0**
ICOR Ion Corvin 145.87 57 ⇓P **PKPdf 11 19 32.9 -0.2**
HARR Harsova 145.89 56 ⇑P **PKPdf 11 19 31.5 -1.6**
HARR Harsova 145.89 56 ⇑PKIKP **PKPdf 11 19 31.5 -1.6**
BTO Baotou 145.91 296 *e*PKPbc **PKPdf 11 19 33.5 0.0**
CFR Carcaliu 145.97 55 ⇓P **PKPdf 11 19 33.4 +0.2**
CFR Carcaliu 145.97 55 ⇓PKP2 **PKPdf 11 19 33.4 +0.2**
TLBR Topalu 145.99 57 ⇓P **PKPdf 11 19 32.6 -0.7**
KIS Kishinev 146.11 52⇑ *i*PKP **PKPdf 11 19 33.4 0.0**
comp=Z,2μm,3.7s
KIS Kishinev 146.11 52*c i*PKP2 **PKPdf 11 19 33.4 0.0**
KIS pmax pmax
comp=Z,2μm,3.7s
KIS MLR MLR
comp=Z,350nm,18.0s
MILM Milestii Mici 146.13 52 ⇑P **PKPbc 11 19 34.2 -0.2**
ARG Arkhangelos 146.25 71 P **PKPdf 11 19 34.5 +0.5**
TIRR Tirgusor 146.26 57 PKP2 **PKPbc 11 19 34.4 -0.5**
TIRR Tirgusor 146.26 57 PKPdf **PKPbc 11 19 34.4 -0.5**
XAN Xi'an 146.42 285 PKPbc **PKPdf 11 19 33.8 -0.6**
XAN PP **PP 11 23 02.0 +2.8**
XAN SKKS 11 29 51.9
XAN AMB AMB
comp=Z,850nm,9.2s
XAN LR LR
comp=Z,700nm,20.2s
XAN LR LR
comp=Z,640nm,20.8s
XAN LR LR
comp=Z,1μm,20.8s
XAN Xi'an 146.42 285 PKIKP **PKPdf 11 19 33.9 -0.6**
XAN Xi'an 146.42 285 **PKPdf 11 19 33.9 -0.6**
XAN Xi'an 146.42 285 IAMs_20 IAMs_20 12 28 21.7
comp=Z,2μm,20.0s
TLCR 146.44 55 ⇑P **PKPdf 11 19 34.5 +0.5**
TLCR 146.44 55 ⇑PKP2 **PKPdf 11 19 34.5 +0.5**
YER Yerkesik 146.44 70 P **PKPdf 11 19 34.7 +0.3**
GYA Guiyang 146.59 270 ⇑PKPbc **PKPdf 11 19 35.5 +0.4**
GYA PP **PP 11 23 05.0 +4.6**
GYA SKKS 11 29 51.3
GYA LR LR
comp=Z,670nm,22.2s
GYA LR LR
comp=Z,530nm,18.6s
GYA LR LR
comp=Z,1μm,22.2s
MANT Manisa 146.71 67 **PKPdf 11 19 35.2 +0.1**
KULA Kula-Manisa 146.80 67 P **PKPdf 11 19 35.7 +0.7**
SLVN Son La 146.99 260 PKPdf **PKPdf 11 19 36.1 +0.2**
SLVN IAMs_20 IAMs_20 12 27 35.5
comp=Z,2μm,20.0s
ULN Ulaanbaatar 147.02 310 PKIKP **PKPdf 11 19 34.4 -0.8**
ULN Ulaanbaatar 147.02 310 **PKPdf 11 19 34.4 -0.8**
ULN Ulaanbaatar 147.02 310 IAMs_20 IAMs_20 12 38 09.7
comp=Z,2μm,22.0s
FETY Fethiye 147.05 71 P **PKPbc 11 19 37.1 -0.4**
ISK Istanbul-Kandi 147.06 63 P **PKPdf 11 19 35.6 +0.4**
IRK Irkutsk 147.25 319 *e*PKIKP **PKPdf 11 19 35.3 +0.1**
IRK pmax pmax
comp=Z,619nm,2.4s
KSL Kastellorizon 147.42 72 P **PKPbc 11 19 38.1 -0.4**
AKAS Kas 147.44 72 PKPdf **PKPdf 11 19 37.0 +0.7**
SONM Songino Array 147.46 310 PKPbc **PKPdf 11 19 35.2 -0.7**
comp=Z,33nm,1.2s,baz=124,slow=1.6,SNR=30
TEND Ethiopian Broa 147.49 122 *i* P **PKPbc 11 19 39.0 -0.3**
OBN Obninsk 147.62 35*c i*PKP2 **PKPbc 11 19 37.0 -1.4**
OBN *e* 11 23 05.9
OBN *e*SSS SSS 11 47 41.2
OBN pmax pmax
comp=Z,471nm,1.7s
OBN Obninsk 147.62 35 PKPdf **PKPdf 11 19 35.3 -0.4**
OBN IAMs_20 IAMs_20 12 23 29.5
comp=Z,3μm,21.0s
ELL Elmali 147.72 71 PKIKP **PKPdf 11 19 37.5 +0.9**
ELL Elmali 147.72 71 PKPdf **PKPdf 11 19 37.5 +0.9**
MOS Moscow 147.78 33 *e*PKHKP **PKPdf 11 19 33.8 -2.1**
MOS *e* 11 23 04.9
MOS pmax pmax
comp=Z,2μm,3.0s
MOS pmax pmax
comp=Z,452nm,2.3s
MOS MLR MLR
comp=Z,2μm,22.0s
TLY Talaya 147.84 318*c i*PKIKP **PKPdf 11 19 34.5 -1.7**
TLY pmax pmax
comp=Z,466nm,1.5s
TLY Talaya 147.84 318 PKPdf **PKPdf 11 19 36.2 -0.1**
TLY IAMs_20 IAMs_20 12 15 13.3
comp=Z,2μm,22.0s
ZAK Zakamensk 148.56 316 *e*PKIKP **PKPdf 11 19 36.9 -0.7**
ZAK pmax pmax
comp=Z,136nm,1.8s
ATD Arta Tunnel 148.62 125 P **PKPbc 11 19 42.8 +0.5**
SNR=18
ATD Arta Tunnel 148.62 125 **PKPbc 11 19 41.7 -0.7**
ATD IAMs_20 IAMs_20 12 30 00.3
comp=Z,2μm,19.0s
MDUB Mudurnu 148.72 64 PKPdf **PKPdf 11 19 38.6 +0.4**
MOY Mondy 149.33 319 *e*PKP2 **PKPbc 11 19 43.4 +0.2**
MOY pmax pmax
comp=Z,502nm,2.6s
KMI Kunming 149.48 266⇓ *e*PKPbc **PKPdf 11 19 40.1 +0.1**
KMI pPKP sPKPdf 11 19 43.2 +0.8
KMI sPKP 11 19 45.2
KMI PP **PP 11 23 21.2 +3.8**
KMI AMB AMB
comp=Z,570nm,5.5s
KMI LR LR
comp=Z,2μm,20.2s
KMI LR LR
comp=Z,1μm,19.9s
KMI LR LR
comp=Z,2μm,20.2s
KMI Kunming 149.48 266 PKP2 **PKiKP 11 19 45.3 -0.3**
KMI MLR MLR

comp=Z,2μm,20.0s
KMI Kunming 149.48 266 PKiKP 11 19 45.3 -0.3
KMI Kunming 149.48 266 IAMs_20 IAMs_20 12 27 10.4
comp=Z,2μm,20.0s
CM31 Chiang Mai Arr 149.68 251 P PKPdf 11 19 31.8 -8.4
SNR=73
CM31 Chiang Mai Arr 149.68 251 PKPdf **PKPdf 11 19 40.2 0.0**
CMAR Chiang Mai Arr 149.68 251 PKP **PKPdf 11 19 40.2 0.0**
comp=Z,3.8nm,0.8s,baz=231,slow=0.8,SNR=16
CMAR PKPbc **PKPbc 11 19 45.0 +0.2**
comp=Z,13nm,0.8s,baz=122,slow=0.9,SNR=24
CMAR Chiang Mai Arr 149.68 251 PKPdf **PKPdf 11 19 40.8 +0.6**
CHTO Chiang Mai 149.87 252 PKHKP **PKPdf 11 19 40.0 -0.5**
CHTO Chiang Mai 149.87 252 PKPdf 11 19 40.0 -0.5
CHTO PKPbc **PKiKP 11 19 46.0 -0.3**
CHTO Chiang Mai 149.87 252 IAMs_20 IAMs_20 12 21 06.1
comp=Z,3μm,21.0s
PBA Port Blair 150.06 233 *e*P PKPbc 11 19 45.2 -0.6
PBA Port Blair 150.06 233 P PKPdf 11 19 35.1 -5.8
SNR=7.9
PBA Port Blair 150.06 233 PKPbc 11 19 46.1 +0.2
LPSR Galich'ya Gora 150.14 38 *e*PKIKP **PKPdf 11 19 39.0 -0.9**
LPSR *i* 11 19 44.6
SIM Simferopol' 150.17 54 *i* PKIKP **PKPbc 11 19 43.7 -1.6**
SIM pmax pmax
comp=Z,118nm,0.8s
CD2 Chengdu 150.21 277 PKPbc **PKPdf 11 19 41.0 +0.2**
CD2 PP **PP 11 23 22.0 +0.6**
CD2 AMB AMB
comp=Z,2μm,11.8s
CD2 LR LR
comp=Z,2μm,20.1s
CD2 LR LR
comp=Z,2μm,20.1s
CD2 LR LR
comp=Z,2μm,23.0s
CSS Mathiatis 150.38 74 PKPbc **PKiKP 11 19 46.9 0.0**
ILGA Ilgaz 150.57 62 PKPdf **PKPdf 11 19 40.7 -0.5**
ILGA PKPab **sPKPab 11 19 57.0 +1.3**
ILGA IAMs_20 IAMs_20 12 36 57.0
comp=Z,2μm,19.0s
BR131 Keskin Array S 150.63 65 PKIKP **PKPdf 11 19 41.9 +0.6**
BR131 11 19 47.3
BR131 Keskin Array S 150.63 65 PKPdf **PKPdf 11 19 41.9 +0.6**
BR131 PKPbc **PKiKP 11 19 47.3 -0.2**
BR131 PKPab **sPKPab 11 19 57.1 +1.2**
BRTR Keskin Array B 150.63 65 PKP **PKPdf 11 19 40.5 -0.8**
comp=Z,4.1nm,0.9s,baz=90,slow=1.5,SNR=10
BRTR PKPbc **PKPbc 11 19 46.3 -0.4**
comp=Z,38nm,1.1s,baz=211,slow=1.4,SNR=38
BRTR Keskin Array B 150.63 65 PKPdf **PKPdf 11 19 40.6 -0.7**
LZH Lanzhou 150.75 288 PKPbc **PKPdf 11 19 41.8 +0.2**
LZH pPKP PKiKP 11 19 48.1 +0.3
LZH LR LR
comp=Z,1μm,16.8s
LZH LR LR
comp=Z,1μm,15.2s
LZH LR LR
comp=Z,1μm,17.3s
VORR Voronezh 150.77 39 *e*PKIKP **PKPdf 11 19 39.0 -1.9**
VORR pmax pmax
comp=Z,550nm,2.0s
VSR Storozhevoye 150.98 40 *e*PKIKP **PKPdf 11 19 40.2 -1.0**
VSR *i* 11 19 45.8
DGPR DIGLIPUR 151.00 235 *e*P **PKPbc 11 19 47.3 -0.8**
DGPR IAmb IAmb 11 20 00.3
comp=Z,126nm,1.2s
VORD Divnogorie 151.18 40 *e*PKIKP **PKPdf 11 19 41.5 0.0**
VORD *i* 11 19 46.3
DAMY Dhamar 151.79 122 P **PKPdf 11 19 46.6 +2.7**
SNR=13
DAMY Dhamar 151.79 122 PKPdf 11 19 44.2 +0.3
DAMY IAMs_20 IAMs_20 12 27 05.5
comp=Z,2μm,20.0s
VRH Novokhopyorsk 152.36 38 *e*PKIKP **PKPdf 11 19 43.5 +0.2**
VRH *i* 11 19 48.9
ANN Anapa 152.48 53 *e*PKIKP **PKPdf 11 19 42.4 -1.3**
ANN *i* 11 19 49.5
ANN *e* 11 26 48.4
ANN pmax pmax
comp=Z,148nm,1.9s
TOKA Tokat 152.74 63 IAMs_20 IAMs_20 12 43 52.6
comp=Z,2μm,22.0s
PALK Pallekele 153.02 207 P **PKPdf 11 19 44.3 -1.2**
GAZ Gaziantep 153.57 70 PKPdf **PKPdf 11 19 46.2 +0.5**
GAZ IAMs_20 IAMs_20 12 44 25.6
comp=Z,1μm,19.0s
GTA Gaotai 153.81 295 PKPbc **PKPdf 11 19 44.8 -1.2**
GTA PP **PP 11 23 46.7 +4.9**
GTA SKKS 11 30 27.4
GTA LR LR
comp=Z,540nm,19.9s
GTA LR LR
comp=Z,830nm,21.5s
GTA LR LR
comp=Z,1μm,22.3s
SOC Sochi 154.41 55 *e*PKIKP **PKPdf 11 19 46.2 -0.3**
SOC *i* 11 19 54.4
SOC *e* 11 23 42.0
SOC *e*PPP PPP 11 27 17.1
SOC *e*SSS SSS 11 49 12.5
SOC pmax pmax
comp=Z,61nm,1.1s
SVE Sverdlovsk 154.52 10 *e*PKIKP **PKPdf 11 19 45.6 -0.6**
SVE pmax pmax
comp=Z,83nm,2.2s
ARU Arti 154.54 13 *i* PKIKP **PKPdf 11 19 45.8 -0.5**
ARU Arti 154.54 13 PKPdf **PKPdf 11 19 45.4 -0.9**
ARU IAMs_20 IAMs_20 12 29 02.3
comp=Z,2μm,20.0s
ZAA0 Zalesovo Array 155.22 337 PKPbc PKPbc 11 19 56.5
ZAA0 PKPab **PKPab 11 20 12.8 +0.7**
ZAA0 IAMs_20 IAMs_20 12 33 14.1
comp=Z,2μm,20.0s
ZALV Zalesovo Beam 155.22 337 PKP **PKPdf 11 19 45.0 -2.3**
comp=Z,36nm,1.3s,baz=27,slow=0.7,SNR=42
ZALV PKPbc PKPbc 11 19 56.5
comp=Z,10.0nm,0.8s,baz=0.0,slow=1.5,SNR=14
ZALV PKPab **PKPab 11 20 12.3 +0.2**
comp=Z,24nm,0.8s,baz=32,slow=4.7,SNR=12
ZALV Zalesovo Beam 155.22 337 PKIKP **PKPdf 11 19 45.0 -2.3**
ZALV Zalesovo Beam 155.22 337 PKPdf **PKPdf 11 19 45.3 -2.0**
KOPT Kop Dagi 155.83 63 PKPdf **PKPdf 11 19 48.9 -0.1**
KOPT IAMs_20 IAMs_20 12 43 19.3
comp=Z,3μm,21.0s
SOCY Socotra 156.06 142 P **PKPdf 11 19 51.0 +1.3**
SNR=7.3
SOCY Socotra 156.06 142 PKPdf **PKPdf 11 19 49.5 -0.2**
GOF Gofitskoye 156.12 49 ⇓ *i* PKIKP **PKPdf 11 19 49.5 +0.7**
GOF pmax pmax
comp=Z,113nm,1.4s
KIV Kislovodsk 156.32 52 *e*PKIKP **PKPdf 11 19 48.9 -0.3**
KIV *e* 11 23 54.7
KIV *e*SS SS 11 43 45.1 -0.9
KIV pmax pmax
comp=Z,39nm,1.0s
MARD Mardin 156.41 69 PKPdf **PKPdf 11 19 49.8 +0.2**
SAIH SAIHA 156.53 252 *e*P **PKPdf 11 19 49.4 -0.8**
KBZ Khabaz 156.54 53 PKP **PKPdf 11 19 48.4 -1.0**
comp=Z,7.0nm,0.7s,baz=4.0,slow=1.4,SNR=14
KBZ PKPab **PKPab 11 20 17.8 -0.4**
comp=Z,11nm,0.9s,baz=247,slow=5.4,SNR=5.2
IMP Imphal 156.77 259 *e*P **PKPdf 11 19 48.0 -2.4**
IMP IAmb IAmb 11 20 21.0
comp=Z,137nm,1.9s
MOKO MOKOCHONG 156.85 263 *e*P **PKPdf 11 19 49.9 -0.6**
KOHI KOHIMA 156.98 261 *e*P **PKPdf 11 19 49.7 -1.0**
KOHI IAmb IAmb 11 19 57.1
comp=Z,28nm,1.0s
ZEI Tsey 157.56 54 *i* PKIKP **PKPdf 11 19 50.5 -0.5**
ZEI pmax pmax
comp=Z,27nm,2.0s
ZIRO ZIRO 157.80 265 *e*P **PKPdf 11 19 50.7 -1.0**
ZIRO *i* x x 11 20 25.1
GEVA Gevas 158.08 66 IAMs_20 IAMs_20 12 46 26.4
comp=Z,2μm,18.0s
BELO BELONIA 158.14 252 *e*P **PKPdf 11 19 51.6 -0.4**
BELO *e*P **sPKPdf 11 19 56.6 +2.2**
TEZP TEZPUR 158.39 262 *e*P **PKPdf 11 19 50.6 -1.6**
AGT Agartala 158.59 253 *e*P **PKPdf 11 19 48.2 -4.3**
SHL Shillong 158.78 258 *e*P **PKPdf 11 19 51.9 -1.1**
SHL Shillong 158.78 258 P PKPdf 11 19 42.9 -10
SNR=12
SHL Shillong 158.78 258 PKP2 **PKPab 11 20 29.0 +0.3**
SHL 12 19 51.4
SHL Shillong 158.78 258 PKPdf **PKPdf 11 19 51.4 -1.5**
SHL PKPab **PKPab 11 20 29.0 +0.3**
BRVK Borovoye 158.91 357 PKIKP **PKPdf 11 19 51.2 -0.8**
BRVK 11 20 28.1
BRVK Borovoye 158.91 357 PKPdf **PKPdf 11 19 51.2 -0.8**
BRVK **PKPab 11 20 28.1 +0.1**
GUWA GUWAHATI 159.17 260 *e*P **PKPdf 11 19 49.4 -3.7**
GUWA IAmb IAmb 11 19 57.0
comp=Z,8.4nm,0.6s
ABTO Aybut 159.79 132 P **PKPdf 11 19 56.0 +1.8**
SNR=10
AKTO Aktyubinsk 159.90 20 PKIKP **PKPdf 11 19 52.9 -0.4**
KURK Kurchatov 159.91 342 PKIKP **PKPdf 11 19 51.8 -1.4**
KURK Kurchatov 159.91 342 PKPdf **PKPdf 11 19 51.8 -1.4**
KURK **PKPab 11 20 32.7 +0.2**
MAK Makhachkala 159.93 51 *e*PKIKP **PKPdf 11 19 48.3 -5.2**
MAK *e* 11 24 11.4
MAK *e* 11 26 52.7
MAK *e*SS SS 11 44 18.7 -5.4
MAK *e*SSS SSS 11 50 24.6
MAK pmax pmax
comp=Z,600nm,1.6s
KURBB Kurchatov Arra 160.02 342 PKIKP **PKPdf 11 19 50.8 -2.6**
ZSN Zaisan 160.26 326 *e*PKP **PKPdf 11 19 53.1 -0.8**
comp=Z,192nm,4.1s,baz=327
ZSN *i* PKPab **PKPab 11 20 33.9 -0.3**
baz=327
ZSN *i* PP **PP 11 24 15.9 -0.4**
comp=Z,153nm,3.2s,baz=327
ZSN Zaisan 160.26 326 *e*PKIKP **PKPdf 11 19 53.0 -0.8**
ZSN *i* 11 24 15.8
ZSN pmax pmax
comp=Z,153nm,3.2s
RBK Rabkut 160.47 134 P **PKPdf 11 19 57.0 +2.0**
SNR=7.0
WHFO Wadi Hawf 160.51 132 P **PKPdf 11 19 56.1 +1.2**
SNR=5.1
LSA Lhasa 160.65 269 PKP **PKPdf 11 19 54.5 -0.8**
LSA AMB AMB
comp=Z,320nm,6.1s
LSA LR LR
comp=Z,1μm,22.1s
LSA LR LR
comp=Z,4μm,22.1s
LSA LR LR
comp=Z,3μm,21.4s
LSA Lhasa 160.65 269 PKIKP **PKPdf 11 19 54.6 -0.8**
LSA Lhasa 160.65 269 PKPdf 11 19 54.6 -0.7
WMQ Urumqi 161.00 314 PKP **PKPdf 11 19 53.4 -1.4**
WMQ pPKP sPKPdf 11 20 00.3 +3.1
WMQ PKPab **sPKPab 11 20 41.2 +1.1**
WMQ PKS **PKSdf 11 23 22.2 -5.9**
WMQ PP **PP 11 24 22.7 +2.0**
WMQ AMB AMB
comp=Z,890nm,8.1s
WMQ LR LR
comp=Z,2μm,21.3s
WMQ LR LR
comp=Z,940nm,22.9s
WMQ LR LR
comp=Z,2μm,29.2s
DMTO DMTO 161.08 135 P **PKPdf 11 19 56.2 +0.7**
AB31 Akbulak array 161.51 18 *i* PKIKP **PKPdf 11 19 54.4 -0.6**
ABKAR Akbulak array 161.51 18 PKPab **PKPab 11 20 40.1 +0.6**
ABKAR Akbulak array 161.51 18 PKPdf **PKPdf 11 19 54.6 -0.4**
ABKAR PKPab **PKPab 11 20 40.0 +0.4**
BRZS Berezniki 161.78 352 *i* PKP **PKPdf 11 19 54.3 -1.1**
comp=Z,130nm,4.5s,baz=352
BRZS LR LR 12 34 30.3
comp=Z,512nm,17.6s,baz=352
BRZS Berezniki 161.78 352 *i* PKIKP **PKPdf 11 19 54.2 -1.1**
MKAR Makanchi Array 161.93 329 PKP **PKPdf 11 19 52.9 -2.7**
comp=Z,5.2nm,1.0s,baz=48,slow=3.6,SNR=12
MKAR PKPab **PKPab 11 20 42.0 +0.5**
comp=Z,9.4nm,1.2s,baz=9.5,slow=3.0,SNR=6.9
MKAR Makanchi Array 161.93 329 **PKPab 11 20 41.6 +0.1**
MAKZ Makanchi 162.06 329 PKIKP **PKPdf 11 19 52.3 -3.4**
GTK Tadong 162.15 260 *e*P **PKPdf 11 19 56.3 -0.3**
GTK IAmb IAmb 11 20 07.4
comp=Z,408nm,2.6s
GTK *i* x x 11 20 43.5
BOK Bokaro 162.83 246 *e*P **PKPdf 11 19 56.1 -1.1**
BOK *i* PP **PP 11 24 28.3 -2.6**
GOA Goa 162.95 197 *e*P **PKPdf 11 19 57.2 -0.3**
GOA *i* x x 11 20 47.4
HYB Hyderabad 163.01 214 *i* PKP **PKPdf 11 19 56.0 -1.6**
HYB *e* 11 20 47.5
HYB *e*PP **PP 11 24 28.0 -2.9**
TDK Taldyqorghan 164.99 333 *e*PKP **PKPdf 11 19 56.3 -2.3**
comp=Z,267nm,2.5s,baz=333
TDK *e*PKPab **PKPab 11 20 53.7 -1.3**
baz=333
TDK LR LR 12 39 25.6
comp=Z,2μm,17.7s,baz=333
TDK Taldyqorghan 164.99 333 *e*PKIKP **PKPdf 11 19 56.2 -2.3**
TDK pmax pmax
comp=Z,267nm,2.5s
NGP Nagpur 165.84 223 IAMs_20 IAMs_20 12 24 25.1
comp=Z,2μm,21.0s
POO Poona 165.84 200 *e*P **PKPdf 11 19 58.1 -1.9**
POO *i* PP **PP 11 24 43.1 -2.4**
SHLS Shalkode 166.00 326 *e*PKP **PKPdf 11 19 58.8 -0.8**
comp=Z,144nm,2.5s,baz=326
SHLS LR LR 12 41 03.0
comp=Z,282nm,15.7s,baz=326
SHLS Shalkode 166.00 326 *e*PKIKP **PKPdf 11 19 58.7 -0.8**
SHLS pmax pmax
comp=Z,144nm,2.5s
ASUD Al Ashush, Dub 166.08 118 P **PKPdf 11 19 58.9 -1.1**
KPKS Kokpek 166.12 329 *i* PKP **PKPdf 11 19 57.2 -2.5**
comp=Z,176nm,2.4s,baz=329
KPKS LR LR 12 41 03.0
comp=Z,1μm,17.2s,baz=329
KPKS Kokpek 166.12 329 *i* PKIKP **PKPdf 11 19 57.1 -2.5**
KPKS pmax pmax
comp=Z,176nm,2.4s
BTLS Baital 166.33 344 *i* PKP **PKPdf 11 19 57.9 -1.8**
comp=Z,91nm,2.6s,baz=345
BTLS Baital 166.33 344 *i* PKIKP **PKPdf 11 19 57.8 -1.8**
BTLS pmax pmax
comp=Z,91nm,2.6s
FAQ Al Faqa, Dubai 166.35 119 P **PKPdf 11 19 58.4 -1.8**
JMDO Jabal Madar 166.53 133 P **PKPdf 11 19 58.9 -1.6**
SATY Saty 166.57 328 *e*PKP **PKPdf 11 19 58.2 -1.8**
comp=Z,60nm,2.0s,baz=329
SATY Saty 166.57 328 *e*PKIKP **PKPdf 11 19 58.2 -1.8**
SATY pmax pmax
comp=Z,60nm,2.0s
ASHO Ashiyiah 166.66 120 P **PKPdf 11 19 59.7 -0.8**
SOHO SOHO 166.67 123 P **PKPdf 11 19 58.9 -1.6**
KUU Kurty 166.70 336 *i* PKP **PKPdf 11 19 57.5 -2.5**
comp=Z,283nm,3.1s,baz=336
KUU Kurty 166.70 336 *i* PKIKP **PKPdf 11 19 57.5 -2.5**
KUU pmax pmax
comp=Z,283nm,3.1s
HOQ Hoqain 166.86 127 P **PKPdf 11 19 58.3 -2.4**
UOSS Minazif 166.92 119 P **PKPdf 11 19 58.8 -1.9**
PRZ Przheval'sk 167.02 327 PKIKP **PKPdf 11 20 00.3 -0.2**
PRZ Przheval'sk 167.02 327 PKPdf 11 20 00.3 -0.2
MDOK Medeo 167.06 332 *e*PKP **PKPdf 11 19 58.9 -1.5**
comp=Z,1μm,2.9s,baz=333
MDOK *i* PKPab **PKPab 11 21 02.9 -1.4**
baz=333
MDOK Medeo 167.06 332 *e*PKIKP **PKPdf 11 19 58.9 -1.5**
MDOK pmax pmax
comp=Z,1μm,2.9s
AAA Alma-Ata 167.07 332 *e*PKP **PKPdf 11 19 59.2 -1.1**
baz=333
AAA *i* PKPab **PKPab 11 21 02.9 -1.4**
baz=333
AAA *e*PP **PP 11 24 51.1 -1.0**
baz=333
AAA Alma-Ata 167.07 332 *e*PKIKP **PKPdf 11 19 59.2 -1.1**
AAA *e* 11 24 51.0
JLN Jalan Bani Buh 167.15 137 P **PKPdf 11 19 59.3 -1.6**
MDH Madha 167.19 118 P **PKPdf 11 19 57.7 -3.2**
WBK Wadi Bani Khal 167.24 135 P **PKPdf 11 19 59.3 -1.7**
BIDO Bidbid 167.36 129 P **PKPdf 11 19 59.7 -1.4**
WSAR Wadi Sarin 167.49 132 P **PKPdf 11 19 58.4 -2.8**
BANOM Banah 167.53 116 P **PKPdf 11 19 58.5 -2.6**
SGDS Sogindy 167.65 340 *i* PKP **PKPdf 11 19 59.4 -1.4**
comp=Z,128nm,2.5s,baz=340
SGDS *e*PKPab **PKPab 11 21 05.1 -1.7**
baz=340
SGDS Sogindy 167.65 340 *i* PKIKP **PKPdf 11 19 59.3 -1.4**
SGDS pmax pmax
comp=Z,128nm,2.5s
TKM2 Tokmak 2 167.81 336 P **PKPdf 11 20 00.0 -1.1**
SNR=19
USP Ospenovka 167.86 340 P **PKPdf 11 20 00.9 +0.1**
SNR=9.4
BOOM Boomskoye usch 168.06 334 PKIKP **PKPdf 11 20 00.5 -0.7**
BOOM Boomskoye usch 168.06 334 PKPdf 11 20 00.5 -0.7
ULHL Ulahol 168.15 332 P **PKPdf 11 20 02.4 +1.0**
SNR=12
BHPL Bhopal 168.40 223 *e*P **PKPdf 11 19 59.3 -2.5**
BHPL *i* x x 11 21 09.7
AAK Ala-Archa 168.43 338 P **PKPdf 11 20 01.1 -0.3**
SNR=6.4
EKS2 Erkin-Say 168.62 341 P **PKPdf 11 20 02.6 +1.1**
SNR=6.5
KK31 Karatay Array 168.81 353 *i* PKIKP **PKPdf 11 20 00.2 -1.3**
KK31 Karatay Array 168.81 353 PKPdf 11 20 00.9 -0.5
KKAR Karatay Array 168.81 353 PKIKP **PKPdf 11 20 00.5 -0.9**
KKAR 11 21 11.3
KKAR Karatay Array 168.81 353 PKPdf 11 20 00.5 -0.9
KKAR **PKPab 11 21 11.3 -0.6**
KKAR Karatay Array 168.81 353 PKPdf 11 20 00.7 -0.8
DZA Taraz 168.92 350 *i* PKP **PKPdf 11 20 00.6 -0.9**
baz=351
DZA Taraz 168.92 350 *i* PKIKP **PKPdf 11 20 00.6 -0.9**
AML Almayashu 169.13 340 P **PKPdf 11 20 02.5 +0.3**
SNR=12
GEYT Alibeck 169.44 53 PKP **PKPdf 11 20 02.2 +0.2**
comp=Z,8.7nm,0.8s,baz=253,slow=4.5,SNR=18
GEYT PKPab **PKPab 11 21 15.9 +0.9**
comp=Z,3.0nm,0.7s,baz=339,slow=7.9,SNR=3.5
GEYT Alibeck 169.44 53 PKPdf 11 20 02.6 +0.6
IUG luzhnay 169.80 355 *i* PKP **PKPdf 11 20 01.6 -0.6**
comp=Z,120nm,2.4s,baz=356
IUG *i* PKPab **PKPab 11 21 15.7 -0.7**
baz=356
IUG *i* PP **PP 11 25 04.5 -1.0**
comp=Z,270nm,2.6s,baz=356
IUG LR LR 12 39 09.1
comp=Z,330nm,15.9s,baz=356
IUG luzhnay 169.80 355 *i* PKIKP **PKPdf 11 20 01.6 -0.6**
IUG *i* 11 25 04.5
IUG pmax pmax
comp=Z,120nm,2.4s
IUG pmax pmax
comp=Z,270nm,2.6s
KSH Kashi 170.47 324 ⇑ *i* PKP **PKPdf 11 20 02.8 +0.1**
KSH PP **PP 11 25 16.4 +6.8**
KSH AMB AMB
comp=Z,1μm,6.3s
KSH LR LR
comp=Z,890nm,12.6s
KSH LR LR
comp=Z,710nm,8.2s
KSH LR LR
comp=Z,2μm,15.5s
DDI Dehra Dun 171.88 261 *e*P **PKPdf 11 20 03.7 +0.1**
DDI IAmb IAmb 11 20 09.6
comp=Z,38nm,0.5s
DHRM DHARAMSHALA 173.61 274 *e*P **PKPdf 11 20 03.8 -0.7**
DHRM IAmb IAmb 11 20 15.2
comp=Z,364nm,2.2s
HRA Herat 174.02 65 PKPdf 11 20 04.2 -0.4
NIL Nilore 175.88 295 PKIKP **PKPdf 11 20 04.3 -0.6**
NIL Nilore 175.88 295 PKPdf 11 20 04.3 -0.6

*NORS **01** 11:05:44.2±0.0, 42.˚34N×44.˚65E, h6km, MPVA3.8*
*TIF **01** 11:05:44.9, 42.˚38N×44.˚71E, h12km±2km*
ISC 01 11:05:46.4±1.1, **42.˚40N**±0.˚03×**44.˚62E**±0.˚03, **h17**km±9km, **n16**, σ1°34/32, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLKR	**Vladikavkaz**	**0.65**	**4**	*e*Pg	**Pg**	**11 05 58.1**	**-1.2**
VLKR				*e*Sg	**Sb**	**11 06 07.9**	**-0.2**
ZEI	**Tsey**	**0.66**	**307**	*e*Pg	**Pg**	**11 05 58.2**	**-1.3**
ZEI				*e*Sg	**Sb**	**11 06 08.6**	**0.0**
KMGR	**Komgaron**	**0.68**	**15**	*e*Pg	**Pg**	**11 05 58.4**	**-1.4**
KMGR				*e*Sg	**Sb**	**11 06 09.4**	**+0.3**
KORR	**Kora**	**0.80**	**330**	*e*Pg	**Pn**	**11 06 02.2**	**-0.8**
KORR				*e*Sg	**Sn**	**11 06 14.3**	**-0.3**
ARNR	**Ardon**	**0.82**	**343**	*e*Pg	**Pb**	**11 06 01.7**	**-0.6**
ARNR				*e*Sg	**Sn**	**11 06 14.7**	**-0.3**
ONI	**Oni**	**0.89**	**283**	P	**Pb**	**11 06 03.0**	**-0.4**
ONI				S	**Sn**	**11 06 17.4**	**+0.7**
DIGR	**Digorskoe uzhe**	**0.92**	**304**	*e*Pg	**Pb**	**11 06 03.4**	**-0.6**
DIGR				*e*Sg	**Sg**	**11 06 16.8**	**+0.4**
TRLG	**Trialeti**	**0.94**	**204**	P	**Pg**	**11 06 03.8**	**-0.9**
TRLG				S	**Sn**	**11 06 19.1**	**+0.9**
BTKR	**Batakoyurt**	**0.98**	**357**	*e*Pg	**Pn**	**11 06 05.1**	**-0.3**
BTKR				*e*Sg	**Sn**	**11 06 20.5**	**+1.6**
STDR	**Stavd-Durt**	**1.05**	**337**	*e*Pg	**Pg**	**11 06 06.8**	**0.0**
STDR				*e*Sg	**Sn**	**11 06 23.7**	**+2.9**
LSNR	**Lesken**	**1.06**	**327**	*e*Pg	**Pn**	**11 06 06.2**	**-0.3**
LSNR				*e*Sg	**Sn**	**11 06 21.9**	**+1.0**
TKB	**Tkibuli**	**1.21**	**268**	P	**Pg**	**11 06 09.2**	**-0.5**
TKB				S	**Sg**	**11 06 27.4**	**+1.9**
LGD	**Lagodekhi**	**1.33**	**114**	P	**Pn**	**11 06 08.9**	**-1.3**
LGD				S	**Sn**	**11 06 26.9**	**-0.6**
BGD	**Bogdanovka**	**1.36**	**214**	P	**Pb**	**11 06 11.3**	**-0.4**
BGD				S	**Sg**	**11 06 30.9**	**+0.4**
PRTR	**Priterechnaya**	**1.38**	**350**	*e*Pg	**Pb**	**11 06 11.4**	**-0.2**
PRTR				*e*Sg	**Sg**	**11 06 32.4**	**+1.5**
DDFL	**Dedoflistskaro**	**1.47**	**130**	P	**Pb**	**11 06 12.7**	**-0.6**
DDFL				S	**Sg**	**11 06 38.2**	**+4.5**

BUC 01 11:17:58.8±0.6, **44.˚41N×28.˚48E, h8**km±3km, **ml1.3**/4, **10C-6D, Error ellipse: s-maj=3.9km s-min=2.9km az=92.0, Romania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIRR	**Tirgusor**	**0.07**	**316**	⇑P	Pg	11 18 00.9	+0.1
TIRR				⇑S	Sg	11 18 02.6	+0.3
TIRR	**Tirgusor**	**0.07**	**316**	⇑P	Pg	11 18 00.9	+0.1
TIRR				⇑S	Sg	11 18 02.6	+0.3
TPGR	**Topolog**	**0.45**	**354**	⇓P	Pg	11 18 07.8	+0.2
TPGR				⇑S	Sg	11 18 14.3	+0.7
TPGR	**Topolog**	**0.45**	**354**	⇓P	Pg	11 18 07.8	+0.2
TPGR				⇑S	Sg	11 18 14.3	+0.7
CFR	**Carcaliu**	**0.81**	**342**	⇓P	Pg	11 18 14.3	-0.2
CFR				⇑S	Sb	11 18 25.7	-0.5
CFR	**Carcaliu**	**0.81**	**342**	⇓P	Pg	11 18 14.3	-0.2
CFR				⇑S	Sb	11 18 25.7	-0.5
TLCR		**0.81**	**17**	⇑P	Pg	11 18 14.6	+0.1
TLCR				⇓S	Sg	11 18 25.7	+0.6
TLCR		**0.81**	**17**	⇑P	Pg	11 18 14.6	+0.1
TLCR				⇓S	Sg	11 18 25.7	+0.6

*NEIC **01** 11:34:02.8±1.9, 6.˚96N±0.˚10×34.˚45W±0.˚07, h10km±1km, mb4.2/4, Error ellipse: s-maj=16.7km s-min=10.9km az=196.0*
*IDC **01** 11:34:02.5±0.9, 7.˚24N×34.˚56W, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.8/46, mbtmp3.9/10, ML3.9/1, Error ellipse: s-maj=33.2km s-min=20.5km az=160.0*
ISC 01 11:34:03.1±0.7, **6.˚98N**±0.˚09×**34.˚4W**±0.˚1, **h10**km, **n19**, σ2°27/16, **mb4.0/9, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**12.81**	**187**	Pn	**Pn**	**11 37 08.0**	**+2.5**
	0.6nm,0.3s,baz=124,slow=8.3,SNR=1.2						
RCBR				Sn	**Sn**	**11 39 23.0**	**-5.2**
	0.2nm,0.3s,baz=108,slow=3.8,SNR=1.7						
RCBR	**Riachuelo**	**12.81**	**187**		**Pn**	**11 37 07.8**	**+2.4**
SACV	**Santiago Islan**	**13.26**	**52**	Pn	**Pn**	**11 37 08.1**	**-3.5**
H10N3	**ASCENSION HYDR**	**24.73**	**126**	T	T	12 05 22.7	
	baz=306,slow=75,SNR=13						
H10N2	**ASCENSION HYDR**	**24.74**	**126**	T	T	12 05 24.5	
	baz=306,slow=75,SNR=14						
H10N1	**ASCENSION HYDR**	**24.75**	**126**	T	T	12 05 22.9	
	baz=306,slow=75,SNR=15						
ASCN	**Ascension**	**24.90**	**126**	P	**P**	**11 39 25.7**	**-0.8**
DBIC	**Dimbokro**	**29.37**	**89**	P	**P**	**11 40 09.2**	**+2.6**
	3.7nm,0.9s,baz=297,slow=14,SNR=2.5						
TORD	**Torodi Ar. Bea**	**36.07**	**77**	P	**P**	**11 41 06.6**	**+1.4**
	2.5nm,1.0s,baz=265,slow=7.9,SNR=8.5						

TORD	Torodi Ar. Bea	36.07	77	P		P		11 41 06.2	+0.9
LPAZ	La Paz	40.58	235	P		P		11 41 45.5	+1.6
	2.9nm,0.9s,baz=40,slow=4.8,SNR=9.4								
LPAZ	La Paz	40.58	235	P		P		11 41 43.3	-0.6
LPAZ				IAmb		IAmb		11 41 54.3	
	comp=Z,6.6nm,1.2s								
AKASG	Malin Array Be	68.08	38	P		P		11 45 03.3	+0.3
	comp=Z,0.2nm,0.3s,baz=261,slow=5.5,SNR=1.8								
AKASG	Malin Array Be	68.08	38	IAmb		IAmb		11 45 12.2	
	comp=Z,3.1nm,1.4s								
TXAR	Lajitas Array	68.52	299	P		P		11 45 05.1	-1.2
	comp=Z,0.2nm,0.5s,baz=110,slow=8.1,SNR=3.9								
BRTR	Keskin Array B	68.73	50	P		P		11 45 07.6	+0.1
	comp=Z,1.4nm,0.8s,baz=242,slow=3.1,SNR=2.9								
FINES	FINESS Array B	70.08	26	P		P		11 45 15.6	+0.4
	comp=Z,1.1nm,0.8s,baz=316,slow=7.8,SNR=1.7								
NVAR	Mina Array Bea	80.91	308	P		P		11 46 18.7	+0.5
	comp=Z,0.1nm,0.5s,baz=96,slow=8.1,SNR=4.0								
ILAR	Eielson Array	93.06	337	P		P		11 47 16.1	-0.7
	comp=Z,0.5nm,0.8s,baz=73,slow=1.5,SNR=4.6								

*IDC **01** 11:35:16.4±2.6,47.89N×153.64E,h82km±24km,mb3.4/11, mb1 3.7/16,mb1mx3.5/51,mbtmp3.8/16,Error ellipse: s-maj=25.5km s-min=15.0km az=148.0*

ISC 01 11:35:18.0±0.9,47.9N±0.1×153.6E±0.1,h100km,n26, σ1§31/17,mb3.6/11,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	5.81	25	P	Pn	11 36 40.3	-1.3
	0.2nm,0.3s,baz=293,slow=7.7,SNR=1.2						
PETK				S	Sn	11 37 58.5	+12
	baz=234,slow=32,SNR=1.3						
ASAJ	Asahikawa	8.56	248	P	Pn	11 37 18.6	-0.3
	1.3nm,0.3s,baz=55,slow=14,SNR=17						
MA2	Magadan	11.79	353	P	Pn	11 38 01.0	-1.7
	0.7nm,0.3s,baz=176,slow=16,SNR=2.2						
KLR	Kul'dur	14.53	283	P	P	11 38 43.4	+1.1
	0.2nm,0.3s,baz=78,slow=19,SNR=5.3						
USRK	Ussuriysk Ar.	15.45	264	P	Pn	11 38 47.9	-2.4
	baz=66,slow=14,SNR=4.3						
MJAR	Matsushiro Arr	16.07	231	P	Pn	11 38 55.9	-2.2
	0.0nm,0.3s,baz=33,slow=11,SNR=3.6						
KSRS	Korea Array	21.49	250	P	P	11 39 59.1	+0.6
	1.0nm,0.8s,baz=57,slow=9.3,SNR=4.0						
H11N2	WAKE ISLAND Hy	30.12	154	T	T	12 13 32.5	
	baz=342,slow=76,SNR=346						
H11N1	WAKE ISLAND Hy	30.13	154	T	T	12 13 20.0	
	baz=342,slow=76,SNR=396						
H11N3	WAKE ISLAND Hy	30.13	154	T	T	12 13 34.9	
	baz=342,slow=76,SNR=398						
H11S1	WAKE ISLAND Hy	31.22	156	T	T	12 14 51.3	
	baz=342,slow=76,SNR=596						
H11S3	WAKE ISLAND Hy	31.23	156	T	T	12 14 52.1	
	baz=342,slow=76,SNR=834						
H11S2	WAKE ISLAND Hy	31.24	156	T	T	12 14 52.5	
	baz=342,slow=76,SNR=578						
SONM	Songino Array	31.28	288	P	P	11 41 29.6	+1.3
	0.7nm,0.4s,baz=39,slow=9.3,SNR=2.5						
ZALV	Zalesovo Beam	42.21	305	P	P	11 43 01.0	+0.4
	0.4nm,0.4s,baz=67,slow=11,SNR=1.6						
MKAR	Makanchi Array	46.71	297	P	P	11 43 35.5	-1.1
	0.8nm,0.6s,baz=66,slow=7.3,SNR=3.3						
CMAR	Chiang Mai Arr	52.98	256	P	P	11 44 25.8	+1.4
	0.9nm,0.6s,baz=35,slow=7.3,SNR=7.2						
NVAR	Mina Array Bea	61.59	63	P	P	11 45 25.7	+0.7
	0.4nm,0.7s,baz=304,slow=6.4,SNR=2.7						
FINES	FINESS Array B	63.12	335	P	P	11 45 34.9	+0.4
	0.9nm,0.5s,baz=28,slow=8.7,SNR=9.3						
PDAR	Pinedale Array	63.78	55	P	P	11 45 40.1	+0.6
	0.6nm,0.7s,baz=325,slow=1.4,SNR=6.4						
NOA	NORSAR Array B	67.23	341	P	P	11 46 01.7	+0.6
	0.5nm,0.8s,baz=52,slow=3.9,SNR=1.6						
WRA	Warramunga Arr	69.73	199	P	P	11 46 16.0	-1.0
	0.4nm,0.7s,baz=14,slow=6.5,SNR=2.8						
TXAR	Lajitas Array	76.62	61	P	P	11 46 58.3	+0.4
	0.6nm,0.7s,baz=290,slow=3.3,SNR=6.9						
H03N2	Juan Fernandez	138.41	89	T	T	14 29 20.2	
	baz=309,slow=77,SNR=15						
H03N1	Juan Fernandez	138.42	89	T	T	14 29 19.2	
	baz=309,slow=77,SNR=12						
H03N3	Juan Fernandez	138.42	89	T	T	14 29 20.7	
	baz=309,slow=77,SNR=11						

*NEIC **01** 11:38:26.5±1.0,18.19S±0.09×175.36W±0.09, h239km±8km,mb4.3/24,Error ellipse: s-maj=13.8km s-min=12.0km az=139.0*

*IDC **01** 11:38:26.2±2.0,18.27S×175.34W,h236km±19km, mb3.7/11,mb1 3.9/12,mb1mx3.7/31,mbtmp4.3/12,Error ellipse: s-maj=19.9km s-min=10.9km az=105.0*

ISC 01 11:38:27.4±0.5,18.19S±0.08×175.34W±0.07,h250km, n47,σ1§19/50,mb4.2/21,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.21	101	Pn	Pn	11 39 44.9	-0.9
NIUE				S	S	11 40 45.9	-2.4
AFI	Afiamalu	5.47	39	P	Pn	11 39 46.8	-2.2
	19nm,0.3s,baz=191,slow=2.7,SNR=31						
AFI				S		11 40 45.2	-8.9
	63nm,0.3s,baz=43,slow=19,SNR=13						
AFI	Afiamalu	5.47	39		Pn	11 39 47.0	-2.0
AFI					S	11 40 45.5	-8.7
MSVF	Nonsavu	6.30	273		Pn	11 40 05.2	+5.8
KNTN	Kanton	15.73	13	P	P	11 41 55.9	+0.6
DZM	Mont Dzumac	17.53	254	P	Pn	11 42 18.9	+1.3
	0.1nm,0.3s,baz=65,slow=20,SNR=2.3						
URZ	Urewera	21.05	197	P	P	11 42 51.5	-0.8
	12nm,0.3s,baz=310,slow=2.3,SNR=25						
URZ				S	S	11 46 29.2	-1.0
	6.5nm,0.7s,baz=80,slow=23,SNR=9.9						
URZ	Urewera	21.05	197	P	P	11 42 52.3	-0.1
URZ				IAmb	IAmb	11 43 18.9	
	comp=Z,13nm,0.9s						
BKZ	Black Stump Fm	22.07	197	P	P	11 43 02.0	0.0
BKZ				IAmb	IAmb	11 43 14.4	
	comp=Z,22nm,1.4s						
BBOO	Buckleboo	45.83	242	P	P	11 46 25.0	+0.2
WR0	Warramunga Arr	47.26	259	P	P	11 46 36.0	-0.1
WB0	Warramunga Arr	47.42	260	P	P	11 46 37.2	-0.1
WB2	Warramunga Arr	47.44	259	P	P	11 46 37.2	-0.2
WB2				IAmb	IAmb	11 46 53.1	
	comp=Z,11nm,1.5s						
WRAB	Tennant Creek	47.44	259	P	P	11 46 37.3	-0.2
WRA	Warramunga Arr	47.45	259	P	P	11 46 37.2	-0.3
	comp=Z,1.9nm,0.4s,baz=98,slow=7.0,SNR=87						
WRA				S	S	11 53 08.6	-4.2
	comp=Z,0.4nm,1.1s,baz=99,slow=12,SNR=2.0						
WRA	Warramunga Arr	47.45	259	P	P	11 46 37.3	-0.3
AS31	Alice Springs	47.52	254	P	P	11 46 38.1	0.0
ASAR	Alice Springs	47.52	254	P	P	11 46 38.1	+0.1
	comp=Z,11nm,0.6s,baz=89,slow=8.6,SNR=246						
ASAR				S	S	11 53 09.9	-3.9
	comp=Z,2.6nm,1.0s,baz=90,slow=16,SNR=13						
ASAR	Alice Springs	47.52	254	P	P	11 46 37.8	-0.3
KNRA	Kununurra	53.36	264	P	P	11 47 21.6	0.0
KNRA				IAmb	IAmb	11 47 22.1	
	comp=Z,5.8nm,0.8s						
FITZ	Fitzroy Crossi	55.85	260	P	P	11 47 39.8	+0.2
FITZ				IAmb	IAmb	11 47 40.7	
	comp=Z,5.7nm,1.4s						
VNDA	Vanda	60.43	186	P	P	11 48 10.9	+0.8
	comp=Z,1.3nm,0.7s,baz=20,slow=6.4,SNR=9.4						
VNDA	Vanda	60.43	186	P	P	11 48 12.1	+1.9
VNDA				IAmb	IAmb	11 48 12.4	
	comp=Z,2.7nm,0.9s						
JHJ2	Mitsune	66.61	320	P	P	11 48 51.7	+0.6
MJAR	Matsushiro Arr	69.91	322	P	P	11 49 11.6	+0.1
	comp=Z,4.7nm,0.8s,baz=158,slow=5.5,SNR=12						
MJAR	Matsushiro Arr	69.91	322	P	P	11 49 11.6	+0.1
QSPA	South Pole Qui	71.87	180	P	P	11 49 23.6	+0.6
QSPA				IAmb	IAmb	11 49 24.4	
	comp=Z,7.3nm,0.9s						
JNU	Nakatsue	72.38	315	P	P	11 49 27.1	+0.7
PEA0B	Petropavlovsk-	74.73	344	P	P	11 49 40.2	+0.7
PETK	Petropavlovsk-	74.73	344	P	P	11 49 39.8	+0.2
	comp=Z,3.6nm,0.7s,baz=114,slow=8.2,SNR=5.1						
KSRS	Korea Array	76.87	317	P	P	11 49 53.6	+1.6
	comp=Z,1.8nm,0.9s,baz=126,slow=6.4,SNR=5.9						
NVAR	Mina Array Bea	77.64	42	P	P	11 49 57.4	+0.9
	comp=Z,0.3nm,0.6s,baz=225,slow=8.9,SNR=1.9						
GHO	Glory Hole Cre	82.43	12	P	P	11 50 22.1	+0.7
GHO				IAmb	IAmb	11 50 32.2	
	comp=Z,15nm,1.2s						
N25K	Chitina, Valde	83.22	14	P	P	11 50 25.8	+0.3
N25K				IAmb	IAmb	11 50 45.1	
	comp=Z,13nm,1.2s						
GLB	Gilahina Butte	83.27	15	P	P	11 50 25.4	-0.2
GLB				IAmb	IAmb	11 50 42.0	
	comp=Z,12nm,1.3s						
TXAR	Lajitas Array	83.70	57	P	P	11 50 29.8	+1.1
	comp=Z,4.4nm,1.4s,baz=218,slow=7.4,SNR=5.9						
TXAR	Lajitas Array	83.70	57	P	P	11 50 30.2	+1.5
MAW	Mawson	84.56	199	P	P	11 50 31.9	-0.2
	comp=Z,2.0nm,0.6s,baz=134,slow=6.5,SNR=12						
MAW	Mawson	84.56	199	P	P	11 50 32.5	+0.4
CCB	Clear Creek Bu	85.25	12	P	P	11 50 35.4	0.0
CCB				IAmb	IAmb	11 50 35.4	
	comp=Z,5.1nm,0.7s						
MDM	Murphy Dome	85.45	11	P	P	11 50 36.2	-0.2
MDM				IAmb	IAmb	11 50 37.2	
	comp=Z,4.1nm,1.1s						
ILAR	Eielson Array	85.53	12	P	P	11 50 36.1	-0.8
	comp=Z,0.7nm,0.6s,baz=224,slow=5.9,SNR=15						
ILAR	Eielson Array	85.53	12	P	P	11 50 36.8	-0.1
DAWY	Dawson	86.58	15	P	P	11 50 42.0	0.0
CLL	Collm	146.30	351	*e*PKPbc	PKPbc	11 57 38.0	-0.4
BRTR	Keskin Array B	147.02	317	PKPbc	PKiKP	11 57 43.4	+0.1
	comp=Z,1.7nm,0.7s,baz=106,slow=3.2,SNR=4.1						
GERES	GERESS Array B	148.55	349	PKPbc	PKPbc	11 57 44.9	+0.1
	comp=Z,0.4nm,0.8s,baz=7.1,slow=5.4,SNR=3.7						

*BJI **01** 12:08:36.8±0.0,46.09N×153.48E,h14km,mB5.1/17, mb4.5/41,Ms5.1/9,Ms7 5.1/9*

*IDC **01** 12:08:40.5±0.6,46.22N×152.97E,h0km,mb4.2/24, mb1 4.3/31,mb1mx4.2/42,mbtmp4.2/31,ML3.4/6,Error ellipse: s-maj=16.9km s-min=12.0km az=143.0*

*MOS **01** 12:08:41.8±1.1,46.10N×153.10E,h25km,mb4.7/25, MS4.1/5,Error ellipse: s-maj=6.7km s-min=5.7km az=92.2*

*NEIC **01** 12:08:41.9±1.4,46.19N±0.09×153.0E±0.1,h10km±1km, mb4.8/43,Error ellipse: s-maj=17.5km s-min=9.9km az=139.0*

*SKHL **01** 12:08:42.1±0.1,45.94N×153.42E,h49km±9km,mb4.8/10*

*JMA **01** 12:08:42.3±0.9,46.12N×153.18E,h30km,M4.6*

ISC 01 12:08:44.6±0.5,46.03N±0.06×153.09E±0.06,h35km,n298, σ1§60/298,mb4.6/72,MS4.9/7,22C-9D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.75	260	*i* P	Pn	12 09 41.0	+1.0
KUR				AMB	AMB	12 09 44.0	
	520nm,0.5s						
KUR				*i* S	Sn	12 10 25.2	+2.3
KUR				A	A	12 10 29.0	
	400nm,0.5s						
KUR				A	A	12 10 29.0	
	250nm,0.5s						
KUR	Kuril'sk	3.75	260	*c i* PN	Pn	12 09 41.4	+1.4
KUR				*i* S	Sn	12 10 25.2	+2.3
KUR				pmax	pmax		
	comp=Z,517nm,0.4s						
KUR				pmax	pmax		
	comp=N,179nm,0.3s						
KUR				pmax	pmax		
	comp=E,44nm,0.3s						
KUR				smax	smax		
	comp=N,400nm,0.5s						
KUR				smax	smax		
	comp=E,247nm,0.3s						
SKR	Severo-Kuril's	5.07	22	*e*P	Pn	12 09 56.2	-1.9
SKR				AMB	AMB	12 10 01.9	
	comp=E,71nm,0.5s						
SKR				*e*S	Sn	12 10 51.8	-3.5
SKR				A	A	12 10 57.2	
	comp=E,60nm,0.3s						
SKR				A	A	12 10 57.2	
	comp=E,90nm,0.3s						
SKR	Severo-Kuril's	5.07	22	*e*PN	Pn	12 09 58.3	+0.2
YUK	Yuzh-Kuril'sk	5.50	251	*e*P	Pn	12 10 05.0	+1.0
YUK				AMB	AMB	12 10 14.0	
	comp=E,157nm,0.4s						
YUK				*i* S	Sn	12 11 07.0	+1.0
YUK				A	A	12 11 11.0	
	comp=E,325nm,0.4s						
YUK				A	A	12 11 11.0	
	comp=E,218nm,0.4s						
YUK	Yuzh-Kuril'sk	5.50	251	*e*PN	Pn	12 10 05.6	+1.6
YUK				pmax	pmax		
	comp=N,58nm,0.4s						
YUK				pmax	pmax		
	comp=E,123nm,0.4s						
YUK				pmax	pmax		
	comp=Z,157nm,0.4s						
GRPR	Tuman	5.58	251	*e*P	Pn	12 10 06.0	+1.0
GRPR				AMB	AMB	12 10 08.0	
	comp=Z,130nm,0.3s						
GRPR				*i* S	Sn	12 11 08.0	+0.1
GRPR				A	A	12 11 17.0	
	comp=Z,248nm,0.4s						
GRPR				A	A	12 11 17.0	
	comp=Z,250nm,0.4s						
GRPR	Tuman	5.58	251	*e*PN	Pn	12 10 06.0	+1.0
GRPR				pmax	pmax		
	comp=Z,130nm,0.3s						
GRPR				pmax	pmax		
	comp=N,53nm,0.2s						
GLVR	Golovnino	5.85	250	*e*P	Pn	12 10 09.0	+0.2
GLVR				AMB	AMB	12 10 15.0	
	comp=N,175nm,0.5s						
GLVR				*i* S	Sn	12 11 14.0	-0.6
GLVR				A	A	12 11 22.0	
	comp=N,342nm,0.4s						
GLVR				A	A	12 11 22.0	
	comp=N,236nm,0.4s						
GLVR	Golovnino	5.85	250	*e*PN	Pn	12 10 09.5	+0.7
GLVR				pmax	pmax		
	comp=Z,175nm,0.5s						
GLVR				pmax	pmax		
	comp=N,110nm,0.4s						
GLVR				pmax	pmax		
	comp=E,129nm,0.4s						
NEM2	Nemuro 2	5.88	246	P	Pn	12 10 07.8	-1.4
NEM2				*e*S	Sn	12 11 09.0	-6.3
NMR	Nemuro--Hokkai	5.89	246	*e*P	Pn	12 10 07.0	-2.3
NMR	Nemuro--Hokkai	5.89	246	*e*PN	Pn	12 10 07.6	-1.7
PAU	Pauzhetka	5.97	23	*e*P	Pn	12 10 08.7	-1.7
PAU				AMB	AMB	12 10 10.4	
	comp=E,40nm,0.4s						
PAU				*e*S	Sn	12 11 12.5	-4.9
PAU				A	A	12 11 16.1	
	comp=E,100nm,0.3s						
PAU				A	A	12 11 16.1	
	comp=E,190nm,0.3s						
JRA	Rausu	6.03	253	P	Pn	12 10 12.3	+1.1
JNK	Nakash	6.44	251	P	Pn	12 10 17.5	+0.6
JAK	Akkeshi	6.73	246	P	Pn	12 10 19.7	-1.1
JAK				*e*S	Sn	12 11 31.0	-5.1
JTKR	Abashiri--Toko	6.83	256	P	Pn	12 10 23.4	+1.2
JAR	Ashorobuto	7.19	251	P	Pn	12 10 27.6	+0.4
JMP	Maruseppu	7.19	257	P	Pn	12 10 28.3	+1.1
YSS	Yuzh-Sakhalins	7.20	281	*e*P	Pn	12 10 30.7	+3.4
YSS				AMB	AMB	12 10 31.7	
	comp=E,30nm,0.8s						
YSS	Yuzh-Sakhalins	7.20	281	‖ *e*PN	Pn	12 10 31.1	+3.8
YSS				*e*S	Sn	12 11 55.0	+7.3
YSS				MLR	MLR		
	comp=Z,1μm,14.0s						
YSS	Yuzh-Sakhalins	7.20	281	Pn	Pn	12 10 30.4	+3.1
JOB	Onbets	7.32	248	*e*S	Sn	12 11 47.6	-3.3
JKK2	Kamakawa 2	7.65	257	P	Pn	12 10 35.0	+1.5
JKA	Kamikawa-asahi	7.67	259	*e*P	Pn	12 10 34.9	+1.1
JKA	Kamikawa-asahi	7.67	259	Pn	Pn	12 10 33.0	-0.8
ASAJ	Asahikawa	7.67	259	Pn	Pn	12 10 34.9	+1.1
	comp=Z,1.8nm,0.3s,baz=78,slow=20,SNR=22						
ASAJ	Asahikawa	7.67	259	P	Pn	12 10 35.7	+1.9
PEA0B	Petropavlovsk-	7.69	21	*i* PN	Pn	12 10 32.2	-1.8
PEA0B	Petropavlovsk-	7.69	21	Pn	Pn	12 10 30.1	-3.8
PETK	Petropavlovsk-	7.69	21	Pn	Pn	12 10 33.0	-1.0
	comp=Z,1.3nm,0.3s,baz=167,slow=12,SNR=31						
PETK	Petropavlovsk-	7.69	21	PN	Pn	12 10 33.0	-1.0
PETK	Petropavlovsk-	7.69	21		Pn	12 10 32.7	-1.3
JCH	Churui	7.77	247	P	Pn	12 10 34.5	-0.6
JCH				*e*S	Sn	12 11 57.0	-4.8
PET	Petropavlovsk	7.88	25	Pn	Pn	12 10 34.2	-2.3
PET				Sn	Sn	12 12 01.4	-2.9
JWK2	Keihoku	7.88	269	P	Pn	12 10 40.7	+4.1
UGL	Uglegorsk	8.06	296	*e*rx	rx	12 09 11.8	
JEM	Erimo	8.21	244		Pn	12 10 29.9	-11
ERM	Erimo	8.21	244	PN	Pn	12 10 40.4	-0.7
ERM	Erimo	8.21	244	Pn	Pn	12 10 40.4	-0.7
ERM				Sn	Sn	12 12 10.7	-1.9
JNBK	Urakawa-nobuka	8.33	247	P	Pn	12 10 41.5	-1.3
JNBK				*e*S	Sn	12 12 09.9	-5.6
TYV	Tymovskoe	8.45	309	*e*P	Pn	12 10 46.4	+1.9
TYV				AMB	AMB	12 10 48.5	
	comp=Z,7.0nm,0.8s						
TYV				*e*S	Sn	12 12 19.6	+1.1
JEW	Eniwo	8.92	253	Pn	Pn	12 10 50.8	-0.2
JNB	Noboribetsu	9.36	252	P	Pn	12 10 57.4	+0.5
JNB				*e*S	Sn	12 12 37.4	-3.4
JKB	Kayabe	9.63	249	P	Pn	12 10 59.5	-1.1
JKB				*e*S	Sn	12 12 40.9	-6.6
JYM2	Yakumo 2	9.96	251	P	Pn	12 11 04.9	-0.2
JANG	Nango	10.17	240	P	Pn	12 11 04.8	-3.2
JANG				*e*S	Sn	12 12 49.8	-11
JTM	Tenmabayashi	10.20	243	P	Pn	12 11 06.1	-2.3
JTM				*e*S	Sn	12 12 51.8	-10
JTM	Tenmabayashi	10.20	243	Pn	Pn	12 11 06.8	-1.6
JTH	Tanohata	10.23	237	*e*S	Sn	12 12 50.9	-11
OFUJ	Ofunato	10.91	235	*e*S	Sn	12 13 09.0	-10
JRG	Rokugo	11.31	239	*e*S	Sn	12 13 18.8	-10
JIO	Ouri	11.53	233	*e*S	Sn	12 13 23.8	-10
TEY	Ternei	11.61	271	*e*P	Pn	12 11 29.4	+1.7
TEY				AMB	AMB	12 11 31.2	
	comp=Z,10.0nm,0.9s						
TEY	Ternei	11.61	271	‖ *e*PN	Pn	12 11 30.3	+2.6
TEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GRNR	Gornyy	12.04	299	⇑ *i* PN	Pn	12 11 28.3	-5.4
GRNR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,390nm,18.0s						
JMM	Marumori	12.25	233	Pn	Pn	12 11 33.2	-3.4
MA2	Magadan	13.64	355	Pn	Pn	12 11 55.8	+0.5
	comp=Z,1.7nm,0.3s,baz=164,slow=13,SNR=5.6						
MA2	Magadan	13.64	355	*e*P	Pn	12 11 54.8	-0.5
MA2	Magadan	13.64	355	*i* P	Pn	12 11 54.8	-0.5
MA2				pmax	pmax		
	comp=Z,2.0nm,0.2s						
MA2				MLR	MLR		
	comp=Z,602nm,17.0s						
MAJO	Matsushiro	14.64	235	*i* P	Pn	12 12 07.3	-1.9
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MJAR	Matsushiro Arr	14.64	235	Pn	Pn	12 12 11.0	+1.8
	comp=Z,0.0nm,0.3s,baz=29,slow=14,SNR=6.3						
KLR	Kul'dur	14.73	290	Pn	Pn	12 12 09.9	-0.4
	comp=Z,0.1nm,0.3s,baz=99,slow=16,SNR=5.7						
KLR	Kul'dur	14.73	290	*e*P	Pn	12 12 11.0	+0.7
KLR	Kul'dur	14.73	290	*ce*P	Pn	12 12 11.0	+0.7
KLR				MLR	MLR		
	comp=Z,545nm,18.0s						
EKMR	Ekimchan	14.82	306	*e*P	Pn	12 12 09.5	-1.9
EKMR				AMB	AMB	12 12 28.9	
	comp=Z,8.0nm,0.8s						
USRK	Ussuriysk Ar.	15.01	271	Pn	Pn	12 12 13.8	-0.2
	baz=66,slow=14,SNR=15						
USRK	Ussuriysk Ar.	15.01	271	P	Pn	12 12 14.0	0.0
USRK	Ussuriysk Ar.	15.01	271	Pn	Pn	12 12 13.9	0.0
MDJ	Mudanjiang	16.58	274	P	P	12 12 35.5	-0.9
MDJ				pmax	pmax		
	comp=Z,18nm,0.9s						
MDJ	Mudanjiang	16.58	274	Pn	Pn	12 12 30.9	-3.3
SEY	Seymchan	16.94	359	Pn	Pn	12 12 38.4	-0.3
	comp=Z,0.2nm,0.3s,baz=195,slow=23,SNR=1.9						
BMKR	Bomnak	17.66	308	*e*P	Pn	12 12 44.0	-3.7
BMKR				AMB	AMB	12 12 55.6	
	comp=Z,10.0nm,0.5s						
ZEA	Zeya	18.27	304	*e*P	P	12 12 56.0	+0.9
ZEA	Zeya	18.27	304	*e*P	P	12 12 56.0	+0.9
KROS	Kirovskiy	18.62	306	*e*P	P	12 12 57.0	-1.9
KROS				AMB	AMB	12 12 58.8	
	comp=Z,4.0nm,0.4s						
CN2	Changchun	19.67	273	*e*P	P	12 13 10.6	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSRS	Korea Array	20.58	254	P	P	12 13 20.9	+0.6
	comp=Z,3.7nm,0.6s,baz=55,slow=11,SNR=19						
KSAR	Wonju Array Be	20.61	254	P	P	12 13 20.8	+0.1
KSAR	Wonju Array Be	20.61	254	P	P	12 13 20.8	+0.1
YAK	Yakutsk	20.92	328	P	P	12 13 21.7	-2.1
	comp=Z,12nm,0.5s,baz=122,slow=0.8,SNR=8.8						
YAK	Yakutsk	20.92	328	*e*P	P	12 13 22.6	-1.2
YAK	Yakutsk	20.92	328	*i* P	P	12 13 22.6	-1.2
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK	Yakutsk	20.92	328	P	P	12 13 22.3	-1.6
YAK				IAmb	IAmb	12 13 23.6	
	comp=Z,26nm,0.6s						
JNU	Nakatsue	21.35	241	P	P	12 13 29.8	+1.1
	comp=Z,6.5nm,0.8s,baz=59,slow=8.6,SNR=6.0						
JNU	Nakatsue	21.35	241	P	P	12 13 29.5	+0.8
JNU				IAmb	IAmb	12 13 57.5	
	comp=Z,53nm,1.5s						
INCN	Inchon	21.43	256	P	P	12 13 27.0	-2.6
INCN				pmax	pmax		
	comp=Z,27nm,1.1s						
INCN	Inchon	21.43	256	P	P	12 13 27.0	-2.6
INCN				IAmb	IAmb	12 13 33.4	
	comp=Z,27nm,1.1s						
ATKA	Atka Island	22.15	62	P	P	12 13 30.8	-6.3
HIA	Hailar	22.59	290	*i* P	P	12 13 42.9	+0.9
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL	Bilibino	23.09	13	*e*P	P	12 13 44.9	-2.0
BILL

XAN LR LR
comp=Z,3μm,20.6s
XAN Xi'an 35.45 266 P **P** **12 15 37.3 -0.2**
XAN pmax pmax
comp=Z,5.0nm,0.6s
XAN Xi'an 35.45 266 P **P** **12 15 37.2 -0.2**
XAN IAmb IAmb 12 15 39.7
comp=Z,5.3nm,0.6s
COLA College 36.71 38 *i* P **P** **12 15 45.5 -2.3**
COLA pmax pmax
comp=Z,34nm,3.4s
ILAR Eielson Array 37.12 38 P **P** **12 15 51.5 +0.1**
comp=Z,2.3nm,1.1s,baz=270,slow=8.5,SNR=9.0
LZH Lanzhou 37.90 273 *e*P **P** **12 15 59.7 +1.2**
LZH pP pP 12 16 04.4 -2.7
LZH sP sP 12 16 06.7 -4.0
LZH pmax pmax
comp=Z,28nm,1.3s
BMAR Burnt Mountain 38.12 34 P **P** **12 16 01.0 +1.1**
GTA Gaotai 39.07 280 P **P** **12 16 09.4 +1.1**
GTA pP pP 12 16 13.4 -3.4
GTA sP sP 12 16 16.8 -3.5
GTA pmax pmax
comp=Z,8.0nm,1.0s
NRIK Noril'sk 39.37 329 *i* P **P** **12 16 10.1 -0.1**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
NRIK MLR MLR
comp=Z,692nm,16.0s
BCAR Beaver Creek A 39.45 41 P **P** **12 16 11.4 +0.4**
GYA Guiyang 41.55 258 ⇓P **P** **12 16 29.8 +0.9**
GYA pmax pmax
comp=Z,12nm,0.8s
INK Inuvik 42.26 32 P **P** **12 16 35.1 +1.0**
comp=Z,1.5nm,0.5s,baz=279,slow=6.7,SNR=10
INK Inuvik 42.26 32 P **P** **12 16 35.3 +1.3**
INK pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 42.26 32 P **P** **12 16 35.3 +1.3**
DGZ Jazzator, Alta 42.94 300 *i* P **P** **12 16 38.4 -1.6**
DGZ pmax pmax
comp=Z,1.0nm,0.9s
ZAA0 Zalesovo Array 43.02 306 P **P** **12 16 38.6 -1.8**
ZALV Zalesovo Beam 43.02 306 P **P** **12 16 38.8 -1.6**
comp=Z,1.3nm,0.4s,baz=74,slow=7.9,SNR=6.1
ZALV PcP **PcP** **12 18 30.9 +0.8**
comp=Z,1.0nm,0.6s,baz=95,slow=3.5,SNR=4.2
ZALV Zalesovo Beam 43.02 306 *i* P **P** **12 16 38.4 -2.0**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 43.02 306 P **P** **12 16 38.1 -2.3**
WMQ Urumqi 45.18 292 *e*P **P** **12 16 59.9 +2.0**
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,73nm,4.9s
WMQ LR LR
comp=Z,2μm,26.1s
WMQ LR LR
comp=Z,650nm,21.1s
WMQ LR LR
comp=Z,2μm,25.1s
MK31 Makanchi Array 47.26 298 P **P** **12 17 13.6 -0.6**
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 47.26 298 P **P** **12 17 13.6 -0.6**
MKAR Makanchi Array 47.26 298 P **P** **12 17 13.4 -0.8**
comp=Z,4.4nm,0.7s,baz=67,slow=7.5,SNR=18
MKAR Makanchi Array 47.26 298 *e*P **P** **12 17 17.7 +3.5**
MKAR Makanchi Array 47.26 298*ce*P **P** **12 17 17.7 +3.5**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 47.26 298 P **P** **12 17 13.6 -0.7**
KURK Kurchatov 47.75 304 *e*P **P** **12 17 16.7 -1.2**
KURK Kurchatov 47.75 304*ce*P **P** **12 17 16.7 -1.2**
KURK pmax pmax
comp=Z,8.0nm,0.8s
KURK Kurchatov 47.75 304 P **P** **12 17 16.5 -1.4**
KURK IAmb IAmb 12 17 17.6
comp=Z,7.9nm,0.8s
BRVK Borovoye 51.35 310 *e*P **P** **12 17 44.9 -0.4**
BRVK Borovoye 51.35 310 P **P** **12 17 44.9 -0.4**
BRVK pmax pmax
comp=Z,9.0nm,1.2s
BRVK Borovoye 51.35 310 P **P** **12 17 44.9 -0.4**
BRVK IAmb IAmb 12 17 45.4
comp=Z,9.1nm,1.2s
RES Resolute Bay 51.52 18 P **P** **12 17 47.3 +1.1**
comp=Z,2.0nm,0.6s,baz=304,slow=7.3,SNR=2.9
RES Resolute Bay 51.52 18 P **P** **12 17 47.3 +1.1**
CHTO Chiang Mai 51.94 257 P **P** **12 17 51.4 +1.2**
CHTO pmax pmax
comp=Z,3.0nm,0.9s
CHTO Chiang Mai 51.94 257 P **P** **12 17 51.4 +1.2**
CM31 Chiang Mai Arr 52.19 257 P **P** **12 17 53.7 +1.7**
CMAR Chiang Mai Arr 52.19 257 P **P** **12 17 53.6 +1.6**
comp=Z,1.7nm,0.8s,baz=36,slow=7.6,SNR=13
CMAR Chiang Mai Arr 52.19 257 *i* P **P** **12 17 54.0 +2.0**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 52.19 257 P **P** **12 17 53.9 +1.9**
SHL Shillong 52.34 269 P **P** **12 17 53.1 -0.2**
SHL pmax pmax
comp=Z,10.0nm,0.5s
SHL Shillong 52.34 269 P **P** **12 17 53.1 -0.2**
SHL IAmb IAmb 12 17 56.2
comp=Z,10nm,0.5s
KDJ Kajisay 52.73 295 P **P** **12 17 55.7 -0.3**
KDJ pmax pmax
comp=Z,6.0nm,0.8s
KDJ Kajisay 52.73 295 P **P** **12 17 55.6 -0.3**
KDJ IAmb IAmb 12 17 57.3
comp=Z,6.3nm,0.8s
ULHL Ulahol 53.26 296 P **P** **12 18 00.3 +0.5**
SNR=7.0
BOOM Boomskoye usch 53.32 296 P **P** **12 18 00.1 -0.1**
BOOM pmax pmax
comp=Z,5.0nm,0.7s
BOOM Boomskoye usch 53.32 296 P **P** **12 18 00.1 -0.1**
BOOM IAmb IAmb 12 18 01.4
comp=Z,5.3nm,0.7s
USP Ospenovka 53.80 297 P **P** **12 18 04.0 +0.4**
SNR=5.8
TAPN Taplejung 54.13 274 *e*P **P** **12 18 07.5 +1.0**
AAK Ala-Archa 54.14 297 P **P** **12 18 06.9 +0.6**
SNR=8.1
AAK Ala-Archa 54.14 297 *e*P **P** **12 18 06.3 0.0**
AAK Ala-Archa 54.14 297*ce*P **P** **12 18 06.3 0.0**
AAK pmax pmax
comp=Z,17nm,0.7s
AAK Ala-Archa 54.14 297 P **P** **12 18 05.9 -0.3**
AAK IAmb IAmb 12 18 07.4
comp=Z,6.1nm,0.8s
EKS2 Erkin-Say 54.57 297 P **P** **12 18 09.8 +0.4**
SNR=10
AML Almayashu 54.91 297 P **P** **12 18 12.4 +0.3**
SNR=6.1
KSH Kashi 54.92 293 *e*P **P** **12 18 15.1 +3.2**
KSH S S 12 25 59.8 +8.7
KSH sS sS 12 26 08.0 +1.4
KSH SS SS 12 29 46.0 +12
KSH pmax pmax
comp=Z,360nm,6.7s
KSH LR LR
comp=Z,540nm,6.0s
KSH LR LR
comp=Z,550nm,6.7s
KSH LR LR
comp=Z,1μm,11.5s
GUN Gumba 55.05 275 *e*P **P** **12 18 14.5 +1.2**
comp=Z,11nm,0.5s
RAMN Ramite 55.15 274 *e*P **P** **12 18 14.6 +0.7**
ARU Arti 55.53 318 *e*P **P** **12 18 15.3 -0.6**
ARU Arti 55.53 318*c i*P **P** **12 18 15.3 -0.6**
ARU S **S** **12 26 02.4 +3.9**
ARU SS **SS** **12 29 48.8 +5.8**
ARU pmax pmax
comp=Z,10.0nm,1.2s
ARU Arti 55.53 318 P **P** **12 18 14.5 -1.4**
ARU IAmb IAmb 12 18 15.1
comp=Z,6.8nm,0.6s
KKN Kakani 55.54 276 *e*P **P** **12 18 18.3 +1.6**
PKI Pulchoki 55.59 275 *e*P **P** **12 18 18.0 +0.9**
comp=Z,6.4nm,0.5s
PKIN Phulchoki 55.59 276 *e*P **P** **12 18 18.2 +1.1**
comp=Z,7.3nm,0.4s
DMN Daman 55.78 276 *e*P **P** **12 18 19.9 +1.5**
comp=Z,24nm,0.8s
GKN Gorkha 55.86 276 *e*P **P** **12 18 20.0 +1.2**
comp=Z,23nm,0.7s
DANN Dangsing 56.25 277 *e*P **P** **12 18 23.3 +1.5**
comp=Z,36nm,0.7s
KK31 Karatay Array 56.34 299 P **P** **12 18 22.0 +0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KK31 Karatay Array 56.34 299 P **P** **12 18 22.0 +0.1**
KKAR Karatay Array 56.34 299 P **P** **12 18 21.9 0.0**
KKAR pmax pmax
comp=Z,4.0nm,0.9s
KKAR Karatay Array 56.34 299 P **P** **12 18 21.9 0.0**
KKAR Karatay Array 56.34 299 P **P** **12 18 22.2 +0.3**
KOLN Koldanda 56.72 277 *e*P **P** **12 18 26.6 +1.6**
comp=Z,31nm,0.8s
PYUN Piuhan 56.94 278 *e*P **P** **12 18 27.8 +1.2**
comp=Z,36nm,0.9s
ARB1 ARCESS Array S 58.52 341 P **P** **12 18 36.8 0.0**
ARCES ARCESS Array B 58.53 341 P **P** **12 18 35.3 -1.6**
comp=Z,3.6nm,0.9s,baz=33,slow=6.3,SNR=9.0
ARCES ARCESS Array B 58.53 341 *e*P **P** **12 18 36.4 -0.5**
GAR Garm 58.81 295 P **P** **12 18 39.7 +0.2**
ABKAR Akbulak array 58.88 310 P **P** **12 18 39.2 -0.4**
ABKAR IAmb IAmb 12 18 39.5
comp=Z,5.0nm,0.6s
ABKAR Akbulak array 58.88 310 P **P** **12 18 39.0 -0.6**
CHGR Chuyangaron 59.74 296 P **P** **12 18 46.2 +0.3**
PLID Pearl Lake 60.10 55 P **P** **12 18 48.9 +0.5**
PLID IAmb IAmb 12 19 02.4
comp=Z,8.6nm,0.9s
NIL Nilore 60.12 289 P **P** **12 18 50.1 +1.6**
NIL pmax pmax
comp=Z,25nm,0.9s
NIL Nilore 60.12 289 P **P** **12 18 50.1 +1.6**
KLMR Klimovskoe 60.71 329 *e*P **P** **12 18 50.5 -1.5**
KLMR pmax pmax
comp=Z,10.0nm,0.8s
KLMR Klimovskoe 60.71 329 *e*P **P** **12 18 50.6 -1.5**
KLMR AMP 12 18 52.5
comp=Z,10.0nm,0.8s
SUMG Summit 61.42 4 P **P** **12 18 57.6 +0.4**
SUMG pmax pmax
comp=Z,12nm,0.7s
SUMG Summit 61.42 4 P **P** **12 18 57.6 +0.4**
LRM Limekiln Ridge 61.64 52 P **P** **12 18 59.8 +0.9**
KBL Kabul 62.32 292 P **P** **12 19 03.4 -0.2**
KBL pmax pmax
comp=Z,10.0nm,0.7s
KBL Kabul 62.32 292 P **P** **12 19 03.4 -0.2**
KVN Kaiserville 62.52 61 P **P** **12 19 06.5 +1.7**
KVN pmax pmax
comp=Z,10.0nm,1.4s
KVN Kaiserville 62.52 61 P **P** **12 19 06.5 +1.7**
KVN IAmb IAmb 12 19 18.3
comp=Z,9.7nm,1.4s
NVAR Mina Array Bea 62.78 62 P **P** **12 19 08.2 +1.6**
comp=Z,0.8nm,0.8s,baz=289,slow=7.5,SNR=6.5
NVAR Mina Array Bea 62.78 62 P **P** **12 19 06.9 +0.3**
AHID Auburn Hatcher 64.31 54 P **P** **12 19 17.0 +0.3**
FIA1 FINESS Array S 64.68 335 P **P** **12 19 18.1 -0.3**
FIA1 IAmb IAmb 12 19 18.2
comp=Z,4.6nm,0.8s
FINES FINESS Array B 64.68 335 P **P** **12 19 17.7 -0.8**
comp=Z,3.1nm,0.4s,baz=34,slow=7.4,SNR=37
FINES FINESS Array B 64.68 335*ce*P **P** **12 19 18.2 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.4s
FINES FINESS Array B 64.68 335 P **P** **12 19 18.1 -0.3**
PDAR Pinedale Array 65.18 54 P **P** **12 19 22.1 -0.3**
comp=Z,0.5nm,0.7s,baz=349,slow=1.5,SNR=3.3
OBN Obninsk 65.89 326 *e*P **P** **12 19 25.8 -0.6**
OBN Obninsk 65.89 326‖*e*P **P** **12 19 25.8 -0.6**
OBN *e* 12 19 53.3
OBN *e* 12 21 51.8
OBN pmax pmax
comp=Z,5.0nm,0.9s
OBN MLR MLR
comp=Z,985nm,22.0s
RDMU Red Mountain 66.61 55 P **P** **12 19 33.1 +1.6**
HRA Herat 66.75 296 P **P** **12 19 32.9 +0.4**
HRA IAmb IAmb 12 19 34.4
comp=Z,7.1nm,0.8s
GEYT Alibeck 66.96 301 P **P** **12 19 34.6 +1.0**
comp=Z,3.8nm,0.8s,baz=5.4,slow=7.9,SNR=4.7
GEYT Alibeck 66.96 301 P **P** **12 19 33.7 +0.1**
GYA0B ALIBECK ARRAY 66.96 301 P **P** **12 19 34.5 +0.9**
GYA0B IAmb IAmb 12 19 38.5
comp=Z,5.1nm,0.8s
WRA Warramunga Arr 67.83 199 P **P** **12 19 40.0 +0.9**
comp=Z,0.4nm,0.7s,baz=14,slow=6.8,SNR=3.5
WRA Warramunga Arr 67.83 199 P **P** **12 19 40.0 +0.9**
NB2 NORSAR Subarra 68.90 341 P **P** **12 19 44.7 -0.7**
comp=Z,1.2nm,0.5s,baz=28,slow=6.2
NOA NORSAR Array B 68.90 341 P **P** **12 19 45.2 -0.2**
comp=Z,1.6nm,0.5s,baz=29,slow=6.6,SNR=19
NORES NORESS Array B 69.10 341 *e*P **P** **12 19 47.4 +0.8**
NACGM Naroch 69.67 330 *e* **P** **12 19 48.0 -2.2**
KIV Kislovodsk 71.29 314 *e*P **P** **12 19 59.6 -0.8**
KIV Kislovodsk 71.29 314 *e*P **P** **12 19 59.6 -0.8**
KIV pmax pmax
comp=Z,21nm,1.1s
KBZ Khabaz 71.35 314 P **P** **12 20 01.3 +0.7**
comp=Z,3.7nm,0.5s,baz=100,slow=5.6,SNR=6.3
KBZ Khabaz 71.35 314 *e*P **P** **12 20 01.9 +1.3**
KBZ Khabaz 71.35 314*ce*P **P** **12 20 01.9 +1.3**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
ASAR Alice Springs 71.52 199 P **P** **12 20 04.0 +2.2**
comp=Z,0.4nm,0.7s,baz=12,slow=5.4,SNR=6.5
ASAR Alice Springs 71.52 199 P **P** **12 20 03.6 +1.8**
ASAR Alice Springs 71.52 199 P **P** **12 20 03.6 +1.8**
AKASG Malin Array Be 72.14 326 P **P** **12 20 04.8 -0.4**
comp=Z,8.6nm,0.5s,baz=36,slow=6.3,SNR=31
AKASG Malin Array Be 72.14 326*ce*P **P** **12 20 04.6 -0.6**
AKASG pmax pmax
comp=Z,9.0nm,0.4s
AKBB Malin Array Si 72.14 326 P **P** **12 20 04.7 -0.5**
AKBB pmax pmax
comp=Z,13nm,0.7s
AKBB Malin Array Si 72.14 326 P **P** **12 20 04.7 -0.5**
SCHQ Schefferville 73.98 23 P **P** **12 20 18.6 +2.5**
comp=Z,1.7nm,0.4s,baz=323,slow=10,SNR=2.2
KWP Kalwaria Pacla 75.43 329 P **P** **12 20 25.1 +0.5**
KWP pmax pmax
comp=Z,19nm,1.0s
KWP Kalwaria Pacla 75.43 329 P **P** **12 20 25.1 +0.5**
BUR08 Bucovina Ar. S 76.16 327 P **P** **12 20 29.1 +0.2**
BUR08 IAmb IAmb 12 20 30.7
comp=Z,6.8nm,0.8s
KOLS Kolonicke sedl 76.17 329 *e*P **P** **12 20 28.3 -0.6**
KOLS Kolonicke sedl 76.17 329 *e*P **P** **12 20 28.3 -0.6**
BURAR Bucovina Array 76.18 327 ⇑P **P** **12 20 29.1 +0.1**
BURAR Bucovina Array 76.18 327 ⇑P **P** **12 20 29.1 +0.1**
BURAR Bucovina Array 76.18 327 P **P** **12 20 29.8 +0.7**
BIZ Bicaz 76.39 326 ⇑P **P** **12 20 31.4 +1.3**
DPC Dobruska-Polom 76.96 333 *e*P **P** **12 20 34.0 +0.7**
DPC Dobruska-Polom 76.96 333 *e*P **P** **12 20 34.0 +0.7**
LANS Liptovska Anna 76.97 331 *e*P **P** **12 20 33.4 0.0**
LANS pmax pmax
comp=Z,3.0nm,0.9s
LANS Liptovska Anna 76.97 331 *e*P **P** **12 20 33.4 0.0**
VRI Vrincioaia 77.02 325 ⇓P P 12 20 45.9 +12
VRI Vrincioaia 77.02 325 ⇓P P 12 20 45.9 +12
KRLC Kraliky 77.05 333 *e*P **P** **12 20 33.7 -0.1**
KRLC Kraliky 77.05 333 *e*P **P** **12 20 33.7 -0.1**
CLL Collm 77.11 336 *i* P **P** **12 20 33.7 -0.4**
comp=Z,5.0nm,0.9s
CLL Collm 77.11 336 *i* P **P** **12 20 33.7 -0.4**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 77.11 336 P **P** **12 20 34.0 0.0**
CLL IAmb IAmb 12 20 35.0
comp=Z,4.3nm,0.8s
TPGR Topolog 77.15 323 ⇑P **P** **12 20 33.5 -1.0**
MLR Muntele Rosu 77.64 325 ⇓P **P** **12 20 38.2 +0.8**
MLR Muntele Rosu 77.64 325 ⇓P **P** **12 20 38.2 +0.8**
VYHS Vyhne 77.75 331 *e*P **P** **12 20 38.2 +0.5**
VYHS Vyhne 77.75 331 *e*P **P** **12 20 38.2 +0.5**
PRU Pruhonice 77.83 334 *e*P **P** **12 20 38.8 +0.7**
PRU Pruhonice 77.83 334 *e*P **P** **12 20 38.8 +0.7**
TX31 Lajitas Ar. Si 77.86 60 P **P** **12 20 39.8 +1.0**
TX31 IAmb IAmb 12 20 52.2
comp=Z,7.7nm,0.7s
TX32 Lajitas Array 77.86 60 P **P** **12 20 39.8 +1.0**
TXAR Lajitas Array 77.86 60 P **P** **12 20 39.8 +1.0**
comp=Z,0.7nm,0.5s,baz=301,slow=4.0,SNR=13
VOIR 78.04 325 ⇓P **P** **12 20 40.2 +0.7**
VOIR 78.04 325 ⇓P **P** **12 20 40.2 +0.7**
MODS Modra-Piesok 78.37 332 *e*P **P** **12 20 41.1 -0.1**
MODS Modra-Piesok 78.37 332 *e*P **P** **12 20 41.1 -0.1**
KHC Kasperske Hory 78.88 334 *e*P **P** **12 20 44.6 +0.6**
KHC Kasperske Hory 78.88 334 *e*P **P** **12 20 44.6 +0.6**
BRTR Keskin Array B 78.90 317 P **P** **12 20 45.7 +1.2**
comp=Z,2.4nm,0.9s,baz=95,slow=4.3,SNR=4.6
BRTR Keskin Array B 78.90 317*ce*P **P** **12 20 46.2 +1.8**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
GZR Gura Zlata 78.96 327 ⇑P **P** **12 20 45.2 +0.7**
GZR Gura Zlata 78.96 327 ⇑P **P** **12 20 45.2 +0.7**
GERES GERESS Array B 79.09 334 P **P** **12 20 45.5 +0.2**
comp=Z,0.9nm,0.5s,baz=42,slow=11,SNR=8.9
GERES GERESS Array B 79.09 334 P **P** **12 20 45.6 +0.3**
BZS Buzias 79.21 328 ⇑P **P** **12 20 46.6 +0.8**
BZS Buzias 79.21 328 ⇑P **P** **12 20 46.6 +0.8**
CONA Conrad Observa 79.22 332 *e*P **P** **12 20 46.6 +0.6**
comp=Z,4.1nm,0.8s
HERR Herculane 79.53 327 ⇑P P 12 20 33.8 -14
MEM Membach 79.61 339 P **P** **12 20 48.8 +0.9**
MOA Molln 79.80 333 *e*P **P** **12 20 50.2 +1.1**
comp=Z,4.5nm,1.1s
BCLA Clavier 79.96 340 P **P** **12 20 51.2 +1.4**
BMRD Maredsous 80.20 340 P **P** **12 20 53.0 +2.0**
SOKA Soboth 80.59 332 *i* P **P** **12 20 54.4 +1.0**
comp=Z,5.0nm,0.8s
KBA Koelnbreinsper 80.78 333 *e*P **P** **12 20 55.0 +0.5**
comp=Z,13nm,1.1s
WATA Walderalm 81.08 335 *i* P **P** **12 20 57.4 +1.3**
comp=Z,8.4nm,0.9s
WTTA Wattenberg 81.13 335 *i* P **P** **12 20 57.9 +1.5**
comp=Z,8.9nm,0.5s
RETA Reutte 81.19 335 *i* P **P** **12 20 57.8 +1.2**
comp=Z,4.3nm,1.0s
MOTA Moosalm 81.22 335 *e*P **P** **12 20 58.1 +1.3**
comp=Z,15nm,1.2s
SQTA Sankt Quirin 81.30 335 *e*P **P** **12 20 58.7 +1.5**
comp=Z,9.8nm,1.1s
PLCA Paso Flores 148.15 96 PKPbc **PKPbc** **12 28 27.9 +1.6**
comp=Z,2.6nm,1.0s,baz=325,slow=2.7,SNR=3.3
PLCA Paso Flores 148.15 96 **PKiKP** **12 28 28.9 +0.9**

*ISK **01** 12:10:39.6,35°.90N×30°.84E,h6km,ML2.7/6*
*NIC **01** 12:10:39.3±0.0,35°.93N×30°.75E,h14km±5km,Ml2.6/2*
*DDA **01** 12:10:39.5,36°.01N×30°.74E,h29km,ML2.4*
ISC 01 12:10:40.0±1.3,**35°.97N**±0°.04×**30°.72E**±0°.02,**h19**km±3km,
n29,σ1°**48**/**48,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKUM	**Antalya-Kumluc**	**0.47**	**319**	*i*	P		**Pg**	**12 10 49.4**	**-0.2**
AKUM					*i* S		**Sg**	**12 10 56.8**	**+0.8**
AKUM					IAML			12 11 04.0	
comp=E,347nm,0.6s									
KSL	**Kastellorizon**	**0.94**	**281**		P		**Pb**	**12 10 58.1**	**+0.4**
KSL					S		**Sg**	**12 11 11.3**	**+0.6**
AKAS	**Kas**	**0.94**	**287**		PG		**Pn**	**12 11 00.1**	**+1.8**
AKAS					SG		**Sn**	**12 11 15.4**	**+4.0**
AKAS	**Kas**	**0.94**	**287**	*i*	P		**Pb**	**12 10 57.8**	**0.0**
ELL	**Elmali**	**1.02**	**320**		P		**Pb**	**12 10 59.6**	**+0.5**
ELL					S		**Sn**	**12 11 15.0**	**+1.8**
KORT	**Korkueli**	**1.07**	**344**	*i*	P		**Pb**	**12 10 59.4**	**-0.7**
KORT					*i* S		**Sb**	**12 11 13.9**	**+0.2**
KORT					IAML			12 11 25.0	
comp=E,67nm,0.5s									
KEPZ	**Antalya-Kepez**	**1.17**	**37**	*i*	P		**Pn**	**12 11 01.7**	**+0.4**
KEPZ					*i* S		**Sb**	**12 11 17.1**	**+0.7**
GAZI	**Gazipasa**	**1.32**	**78**		PN		**Pn**	**12 11 03.5**	**+0.2**
GAZI					SN		**Sg**	**12 11 21.4**	**-1.2**
GAZI	**Gazipasa**	**1.32**	**78**	*i*	P		**Pn**	**12 11 03.0**	**-0.3**
GAZI					*i* S		**Sb**	**12 11 19.0**	**-1.5**
GAZI					IAML			12 11 21.0	
comp=E,67nm,0.2s									
GAZI					IAML			12 11 21.0	
comp=N,73nm,0.4s									
FETY	**Fethiye**	**1.48**	**297**	*i*	P		**Pn**	**12 11 05.8**	**+0.1**
FETY					*i* S		**Sn**	**12 11 19.9**	**-4.6**
GOLH	**Golhisar**	**1.57**	**324**	*i*	P		**Pn**	**12 11 06.8**	**-0.2**
GOLH					IAML			12 11 43.0	
comp=E,94nm,0.7s									
GOLH					IAML			12 11 44.0	
comp=N,28nm,0.8s									
AKMS	**Akamas**	**1.62**	**125**		P		**Pn**	**12 11 07.8**	**+0.3**
AKMS					S		**Sb**	**12 11 28.5**	**-0.8**
AKMS					AML	AML		12 11 33.6	
comp=N,0.3nm,0.5s									
AKMS					AML	AML		12 11 33.6	
comp=N,0.3nm,0.5s									
AKMS					AML	AML		12 11 35.0	
comp=N,0.3nm,0.3s									
AKMS					AML	AML		12 11 35.0	
comp=N,0.3nm,0.3s									
SEYD	**Seydisehir-KON**	**1.69**	**32**		PN		**Pb**	**12 11 10.4**	**-0.1**
SEYD					SN		**Sb**	**12 11 33.1**	**+1.6**
ALFC	**Alefka**	**1.73**	**117**		P		**Pn**	**12 11 08.6**	**-0.5**
ALFC					S		**Sn**	**12 11 30.8**	**+0.2**
ALFC					AML	AML		12 11 37.8	
comp=N,0.2nm,0.3s									
ALFC					AML	AML		12 11 37.8	
comp=N,0.2nm,0.3s									
ALFC					AML	AML		12 11 41.1	
comp=N,0.2nm,0.3s									
ALFC					AML	AML		12 11 41.1	
comp=N,0.2nm,0.3s									
DALY	**Dalyan (Mula)**	**1.87**	**298**	*i*	P		**Pn**	**12 11 08.8**	**-2.2**
DALY					IAML			12 11 32.0	
comp=E,136nm,1.3s									
TEKE	**Tekeli-Mersin**	**1.94**	**84**		PN		**Pn**	**12 11 12.5**	**+0.5**
TEKE					SN		**Sn**	**12 11 37.1**	**+1.2**
BAGO	**Egridir - ISPA**	**2.02**	**1**	*i*	P		**Pn**	**12 11 13.2**	**+0.1**
TAVA	**DENIZLI_Tavas**	**2.09**	**316**	*i*	P		**Pn**	**12 11 14.1**	**+0.1**
TURN	**Turunc**	**2.16**	**293**	*i*	P		**Pn**	**12 11 14.4**	**-0.4**
TURN					*i* S		**Sn**	**12 11 37.4**	**-3.7**
TURN					IAML			12 11 39.0	
comp=E,32nm,0.6s									
TURN					IAML			12 11 42.0	
comp=N,36nm,1.1s									
DOGA	**KONYA_Doganhis**	**2.26**	**19**	*i*	P		**Pn**	**12 11 17.6**	**+1.1**
DOGA					IAML			12 11 51.0	
comp=E,20nm,0.5s									
DOGA					IAML			12 11 51.0	
comp=N,30nm,0.7s									
GULN	**MERSIN_Gulnar**	**2.29**	**84**	*i*	P		**Pn**	**12 11 16.0**	**-0.8**
GULN					*i* S		**Sn**	**12 11 42.4**	**-2.1**
GULN					IAML			12 11 49.0	
comp=E,18nm,0.6s									
AKKU	**Akkuyu-Mersin**	**2.30**	**84**		PN		**Pn**	**12 11 17.7**	**+0.9**
AKKU					SN		**Sn**	**12 11 45.4**	**+0.8**
KZIL	**AFYON_Kizioren**	**2.33**	**349**	*i*	P		**Pn**	**12 11 15.5**	**-1.9**
IKL	**Isikli**	**2.41**	**83**		PN		**Pn**	**12 11 20.1**	**+1.7**
IKL					SN		**Sn**	**12 11 48.4**	**+1.0**
KEBE	**Keben-Mersin**	**2.46**	**78**		PN		**Pn**	**12 11 20.9**	**+1.7**
KEBE					SN		**Sn**	**12 11 49.9**	**+1.1**
OSC1	**CSNet OBS 1**	**2.50**	**169**		S		**Sn**	**12 11 50.6**	**+1.0**
MVOU	**Mavrovouni**	**2.56**	**111**		P		**Pn**	**12 11 19.6**	**-0.8**
KARP	**Karpathos**	**2.93**	**263**		P		**Pn**	**12 11 26.2**	**+0.7**
KARP					S		**Sn**	**12 12 00.3**	**+0.2**
OSC2	**CSNet OBS 4**	**3.15**	**156**		S		**Sn**	**12 12 05.7**	**0.0**

*ATH **01** 12:32:05.7,36°.46N×28°.36E,h29km±1km,ML2.8/3,Error ellipse: s-maj=4.6km s-min=1.6km az=60.0*
*THE **01** 12:32:07.2,36°.50N×28°.26E,h4km±2km,ML2.7/3,Error ellipse: s-maj=2.0km s-min=0.6km az=128.0*
*DDA **01** 12:32:07.0,36°.55N×28°.20E,h7km±3km,ML2.2*
*ISK **01** 12:32:07.4,36°.54N×28°.20E,h5km,ML2.5/13*
ISC 01 12:32:07.4±0.9,**36°.52N**±0°.02×**28°.24E**±0°.02,**h9**km±8km,
n35,σ0°**80**/**57,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRSB	**Marmaris-Mugla**	**0.20**	**351**		PG		**Pg**	**12 32 11.5**	**0.0**
TURN	**Turunc**	**0.25**	**2**		PG		**Pg**	**12 32 12.3**	**-0.2**
TURN					SG		**Sg**	**12 32 17.7**	**+1.7**
TURN	**Turunc**	**0.25**	**2**	*i*	P		**Pg**	**12 32 12.2**	**-0.2**

TURN				*i* S	**Sg**	**12 32 15.0**	**-0.9**	
TURN				IAML		12 32 20.0		
	comp=E,410nm,0.4s							
TURN				IAML		12 32 21.0		
	comp=N,399nm,0.3s							
ARG	**Arkhangelos**	**0.32**	**196**	P	**Pg**	**12 32 13.4**	**-0.4**	
ARG				S	**Sg**	**12 32 18.9**	**+0.9**	
ARG				AML	AML	12 32 19.6		
	comp=E,12451µm,0.3s							
ARG				AML	AML	12 32 19.8		
	comp=N,4221µm,0.3s							
ARG	**Arkhangelos**	**0.32**	**196**	P	**Pg**	**12 32 13.3**	**-0.4**	
ARG				S	**Sg**	**12 32 19.0**	**+1.1**	
	comp=N,4µm,0.3s							
DALY	**Dalyan (Mula)**	**0.45**	**49**	PG	**Pb**	**12 32 16.7**	**-0.8**	
DALY				SG	**Sb**	**12 32 25.5**	**+1.2**	
DALY	**Dalyan (Mula)**	**0.45**	**49**	*i* P	**Pb**	**12 32 16.4**	**-1.0**	
DALY				*i* S	**Sg**	**12 32 22.2**	**+0.2**	
DALY				IAML		12 32 31.0		
	comp=N,204nm,0.6s							
DALY				IAML		12 32 39.0		
	comp=E,218nm,0.8s							
DAT	**Datca**	**0.57**	**292**	PG	**Pg**	**12 32 18.9**	**+0.5**	
DAT	**Datca**	**0.57**	**292**	*i* P	**Pg**	**12 32 17.6**	**-0.8**	
DAT				IAML		12 32 32.0		
	comp=N,97nm,0.3s							
DAT	**Datca**	**0.57**	**292**	P	**Pg**	**12 32 18.9**	**+0.5**	
DAT				S	**Sb**	**12 32 28.5**	**+0.7**	
YER	**Yerkesik**	**0.61**	**4**	PG	**Pg**	**12 32 19.3**	**0.0**	
YER				SG	**Sb**	**12 32 29.8**	**+0.7**	
YER	**Yerkesik**	**0.61**	**4**	P	**Pg**	**12 32 19.3**	**0.0**	
YER				S	**Sb**	**12 32 29.4**	**+0.3**	
FETY	**Fethiye**	**0.69**	**80**	PG	**Pn**	**12 32 22.4**	**-1.0**	
FETY				SG	**Sn**	**12 32 33.6**	**-0.7**	
FETY	**Fethiye**	**0.69**	**80**	*i* P	**Pn**	**12 32 20.4**	**-0.4**	
FETY				*i* S	**Sb**	**12 32 31.2**	**-0.1**	
FETY	**Fethiye**	**0.69**	**80**	P	**Pb**	**12 32 20.8**	**-0.9**	
FETY				S	**Sb**	**12 32 31.0**	**-0.4**	
BDRM	**Kayabasi**	**0.83**	**311**	*i* P	**Pg**	**12 32 21.5**	**-1.9**	
BDRM				*i* S	**Sg**	**12 32 34.0**	**-0.4**	
BDRM				IAML		12 32 38.0		
	comp=E,175nm,0.4s							
MLSB	**Milas**	**0.85**	**335**	PG	**Pn**	**12 32 25.2**	**-0.5**	
NIS1	**Nisyros Isl.**	**0.85**	**276**	P	**Pb**	**12 32 24.5**	**0.0**	
NIS1				S	**Sn**	**12 32 38.1**	**-0.2**	
NIS1				AML	AML	12 32 42.3		
	comp=N,1397µm,0.3s							
NIS1				AML	AML	12 32 45.3		
	comp=E,971µm,0.3s							
NIS1	**Nisyros Isl.**	**0.85**	**276**	PG	**Pb**	**12 32 24.9**	**+0.5**	
NIS1	**Nisyros Isl.**	**0.85**	**276**	P	**Pb**	**12 32 24.8**	**+0.4**	
NIS1				S	**Sb**	**12 32 37.3**	**+1.3**	
	comp=E,692nm,0.4s							
BODT	**Bodrum**	**0.92**	**306**	PG	**Pb**	**12 32 25.5**	**0.0**	
BODT				SG	**Sn**	**12 32 39.5**	**-0.3**	
BODT	**Bodrum**	**0.92**	**306**	P	**Pg**	**12 32 24.9**	**-0.2**	
BODT				S	**Sb**	**12 32 38.9**	**+1.1**	
TAVA	**DENIZLI_Tavas**	**1.09**	**30**	*i* P	**Pb**	**12 32 28.2**	**-0.3**	
TAVA				*i* S	**Sn**	**12 32 44.4**	**+0.2**	
AKAS	**Kas**	**1.14**	**104**	PN	**Pn**	**12 32 31.0**	**+1.3**	
AKAS	**Kas**	**1.14**	**104**	*i* P	**Pn**	**12 32 30.0**	**+0.3**	
AKAS				*i* S	**Sn**	**12 32 46.8**	**+1.2**	
GOLH	**Golhisar**	**1.28**	**56**	*i* P	**Pg**	**12 32 31.7**	**-0.3**	
GOLH				IAML		12 32 56.0		
	comp=E,84nm,1.3s							
GOLH				IAML		12 33 02.0		
	comp=N,45nm,0.9s							
KARP	**Karpathos**	**1.30**	**222**	P	**Pn**	**12 32 30.2**	**-1.6**	
KARP				S	**Sb**	**12 32 48.4**	**-0.6**	
KARP				AML	AML	12 32 54.1		
	comp=E,288µm,0.3s							
KARP				AML	AML	12 32 56.3		
	comp=N,252µm,0.4s							
KARP	**Karpathos**	**1.30**	**222**	PN	**Pg**	**12 32 32.9**	**+0.4**	
KARP	**Karpathos**	**1.30**	**222**	P	**Pn**	**12 32 31.0**	**-0.9**	
KARP				S	**Sb**	**12 32 48.4**	**-0.6**	
	comp=N,230nm,0.5s							
ELL	**Elmali**	**1.36**	**80**	PN	**Pg**	**12 32 35.2**	**+1.6**	
GCAM	**G?zelcaml?**	**1.42**	**326**	PN	**Pg**	**12 32 35.7**	**+1.0**	
GCAM	**G?zelcaml?**	**1.42**	**326**	*i* P	**Pn**	**12 32 33.1**	**-0.3**	
GCAM				*i* S	**Sn**	**12 32 52.5**	**+0.2**	
GCAM				IAML		12 33 02.0		
	comp=E,79nm,0.7s							
GCAM				IAML		12 33 07.0		
	comp=N,76nm,0.7s							
AYDB	**Zeytinkoy-Aydi**	**1.45**	**349**	PN	**Pg**	**12 32 35.4**	**+0.2**	
SMG	**Samos**	**1.63**	**317**	P	**Pn**	**12 32 35.6**	**-0.7**	
KORT	**Korkueli**	**1.77**	**74**	PN	**Pg**	**12 32 41.2**	**-0.1**	

*IDC **01** 12:34:56.6±2.0, 14°.64S×170°.50E, h625km±21km, mb2.9/9, mb1 3.1/10, mb1mx2.9/41, mbtmp3.9/10, Error ellipse: s-maj=24.4km s-min=19.5km az=176.0*
*NEIC **01** 12:34:57.6±1.0, 14°.65S±0°.08×170°.5E±0°.2, h635km±11km, mb4.0/15, Error ellipse: s-maj=22.2km s-min=11.8km az=100.0*

ISC 01 12:34:58.5±0.8,**14°.7S**±0°.1×**170°.5E**±0°.1,**h650**km,**n46,**
σ1§**21**/45,**mb3.8**/16,**Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.25**	**257**	P		**P**	**P**	**12 36 20.2**	**-3.0**
MSVF	**Nonsavu**	**7.86**	**114**	P		P	P	**12 36 57.6**	**-0.9**
DZM	**Mont Dzumac**	**8.27**	**207**	P		P	P	**12 37 01.4**	**-0.7**
	0.3nm,0.3s,baz=3.8,slow=13,SNR=1.5								
CTA	**Charters Tower**	**23.72**	**254**	P		P	**P**	**12 39 23.2**	**-0.1**
	1.1nm,0.4s,baz=80,slow=12,SNR=1.7								
HSRZ	**Hossack Road**	**24.06**	**169**	P		P	P	12 39 14.8	-11
URZ	**Urewera**	**24.18**	**167**	P		P	**P**	**12 39 26.5**	**-0.5**
	5.8nm,0.7s,baz=0.0,slow=8.1,SNR=2.0								
URZ	**Urewera**	**24.18**	**167**	P		P	**P**	**12 39 26.4**	**-0.5**
VRZ	**Vera Road**	**24.61**	**172**	P		P	**P**	**12 39 33.7**	**+2.9**
CNGZ	**Carnagh Statio**	**24.65**	**165**	P		P	P	12 39 41.9	+11
MTHZ	**Maungataniwha**	**24.70**	**168**	P		P	**P**	**12 39 30.9**	**-0.7**
SNGZ	**Shannon Statio**	**24.73**	**167**	P		P	**P**	**12 39 30.2**	**-1.7**
NMHZ	**Naumai**	**24.92**	**168**	P		P	**P**	**12 39 33.4**	**-0.2**
BKZ	**Black Stump Fm**	**24.93**	**169**	P		P	**P**	**12 39 32.7**	**-1.0**
WNVZ	**Wahianoa**	**24.93**	**171**	P		P	**P**	**12 39 34.5**	**+0.7**
MOVZ	**Moawhango**	**25.04**	**170**	P		P	**P**	**12 39 34.3**	**-0.4**
BHHZ	**Black Hill Sta**	**25.17**	**170**	P		P	**P**	**12 39 34.7**	**-1.1**
KRHZ	**Kereru**	**25.37**	**169**	P		P	**P**	**12 39 36.3**	**-1.2**
KAHZ	**Kahuranaki**	**25.61**	**169**	P		P	**P**	**12 39 38.3**	**-1.3**
TSZ	**Takapari Road**	**25.71**	**170**	P		P	**P**	**12 39 39.0**	**-1.5**
PXZ	**Pawanui**	**25.84**	**169**	P		P	**P**	**12 39 39.8**	**-1.7**
BHW	**Baring Head**	**26.88**	**173**	P		P	**P**	**12 39 49.2**	**-1.3**
GSP	**Gladstone Stre**	**29.33**	**181**	*e*P		P	P	12 40 22.7	+11
STKA	**Stephens Creek**	**31.42**	**232**	P		P	**P**	**12 40 30.2**	**+0.5**
	3.0nm,0.4s,baz=67,slow=8.5,SNR=17								
STKA	**Stephens Creek**	**31.42**	**232**	P		P	**P**	**12 40 30.5**	**+0.8**
TOO	**Toolangi**	**31.78**	**220**	P		P	**P**	**12 40 33.7**	**+0.9**
WR0	**Warramunga Arr**	**34.66**	**256**	P		P	**P**	**12 40 56.3**	**-0.7**
WR0				IAmb		IAmb	IAmb	12 40 57.1	
	comp=Z,5.1nm,1.1s								
WB0	**Warramunga Arr**	**34.79**	**256**	P		P	**P**	**12 40 57.6**	**-0.4**
WB0				IAmb		IAmb	IAmb	12 41 23.6	
	comp=Z,6.0nm,1.4s								
WC3	**Warramunga Arr**	**34.82**	**256**	P		P	**P**	**12 40 57.8**	**-0.6**
WC3				IAmb		IAmb	IAmb	12 41 06.6	
	comp=Z,6.2nm,1.3s								
WB2	**Warramunga Arr**	**34.84**	**256**	P		P	**P**	**12 40 58.0**	**-0.5**
WB2				IAmb		IAmb	IAmb	12 41 13.4	
	comp=Z,8.0nm,1.4s								
WRA	**Warramunga Arr**	**34.85**	**256**	P		P	**P**	**12 40 57.6**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=84,slow=8.4,SNR=13								
WRA				ScP		**ScP**	**ScP**	**12 46 00.6**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=91,slow=3.8,SNR=5.0								
WRA	**Warramunga Arr**	**34.85**	**256**	P		P	**P**	**12 40 57.9**	**-0.7**
AS31	**Alice Springs**	**35.59**	**250**	IAmb		IAmb	IAmb	12 41 04.5	
	comp=Z,1.0nm,0.3s								
AS31				P		P	**P**	**12 41 04.6**	**-0.1**
ASAR	**Alice Springs**	**35.59**	**250**	P		P	**P**	**12 41 04.2**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=77,slow=9.2,SNR=34								
ASAR				ScP			**ScP**	**12 46 03.0**	**+2.8**
	comp=Z,0.6nm,0.6s,baz=86,slow=3.9,SNR=10								
ASAR	**Alice Springs**	**35.59**	**250**	P		P	**P**	**12 41 04.6**	**-0.1**
BBOO	**Buckleboo**	**36.08**	**234**	P		P	**P**	**12 41 08.8**	**+0.4**
MTN	**Manton Dam**	**38.23**	**268**	P		P	**P**	**12 41 26.4**	**+0.3**
MTN				IAmb		IAmb	IAmb	12 41 34.0	
	comp=Z,20nm,1.4s								
FITZ	**Fitzroy Crossi**	**43.08**	**259**	P		P	**P**	**12 42 04.6**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=104,slow=8.3,SNR=6.2								
FITZ	**Fitzroy Crossi**	**43.08**	**259**	P		P	**P**	**12 42 03.5**	**-0.8**
FITZ				IAmb		IAmb	IAmb	12 42 07.6	
	comp=Z,5.8nm,1.2s								
VNDA	**Vanda**	**62.98**	**182**	P		P	**P**	**12 44 23.5**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=355,slow=5.4,SNR=6.3								
VNDA	**Vanda**	**62.98**	**182**	P		P	**P**	**12 44 24.0**	**+0.6**
CASY	**Casey**	**64.74**	**203**	P		P	**P**	**12 44 35.2**	**+0.5**
CASY				IAmb		IAmb	IAmb	12 44 44.5	
	comp=Z,4.0nm,1.1s								
QSPA	**South Pole Qui**	**75.32**	**180**	P		P	**P**	**12 45 37.3**	**+0.2**
NVAR	**Mina Array Bea**	**84.92**	**48**	P		P	**P**	**12 46 28.6**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=225,slow=8.9,SNR=3.4								
ILAR	**Eielson Array**	**85.57**	**17**	P		P	**P**	**12 46 29.4**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=229,slow=4.7,SNR=5.9								
ILAR	**Eielson Array**	**85.57**	**17**	P		P	**P**	**12 46 29.8**	**+0.2**
ARCES	**ARCESS Array B**	**120.99**	**346**	PKP		**PKPdf**	**PKPdf**	**12 52 38.1**	**-0.2**
	comp=Z,2.8nm,0.9s,baz=59,slow=2.2,SNR=9.7								

*GCG **01** 12:55:21.1±0.7, 13°.28N×92°.48W, h15km±999km, MD4.3*
*IDC **01** 12:55:25.4±0.9, 13°.97N×91°.70W, h0km, mb4.2/12, mb1 4.4/15, mb1mx4.2/44, mbtmp4.2/15, ML3.8/3, Error ellipse: s-maj=34.9km s-min=15.1km az=50.0*
*UCR **01** 12:55:29.8±1.3, 13°.72N×92°.03W, h28km±8km, ML3.5, MW3.9, mb4.5(NEIC)*
*SNET **01** 12:55:29.2±1.4, 13°.69N×92°.05W, h27km±8km, ML3.6*
*NEIC **01** 12:55:30.3±2.5, 13°.70N±0°.06×92°.04W±0°.06, h35km±2km, mb4.5/85, Error ellipse: s-maj=10.5km s-min=9.6km az=247.0*
*INET **01** 12:55:31.1, 13°.05N×91°.84W, h2km, MW3.6*

ISC 01 12:55:30.1±0.5,**13°.78N**±0°.05×**92°.00W**±0°.06,**h35**km,**n189,**
σ1§**35**/194,**mb4.5**/50,**4C-5D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.78**	**33**	*e*P		P	**Pn**	**12 55 46.5**	**+1.8**
RTAL	**Retalhuleu**	**0.80**	**22**	*i*P		P	**Pn**	**12 55 45.4**	**+0.4**
RTAL				*e*S		S	**Sn**	**12 55 58.4**	**+2.7**
RTAL	**Retalhuleu**	**0.80**	**22**			P	**Pn**	**12 55 45.4**	**+0.4**
RTAL							**Sn**	**12 55 58.2**	**+2.5**
FUG	**Fuego 3**	**1.31**	**59**	*e*P		P	**Pn**	**12 55 53.4**	**+1.3**
PCG	**Pacaya**	**1.49**	**66**	*e*P		P	**Pn**	**12 55 56.7**	**+2.0**
HUEH	**Huehuetenango**	**1.61**	**17**	*e*P		P	**Pn**	**12 55 57.4**	**+1.1**
HUEH				*e*S		S	**Sn**	**12 56 20.5**	**+4.6**
HUEH	**Huehuetenango**	**1.61**	**17**			P	**Pn**	**12 55 57.6**	**+1.4**
NBG	**Las Nubes**	**1.80**	**63**	*e*P		P	**Pn**	**12 56 02.2**	**+3.3**
RTR	**El Retiro**	**2.29**	**87**	*e*P		P	**Pn**	**12 56 07.1**	**+1.5**
RTR	**El Retiro**	**2.29**	**87**	*e*P		P	**Pn**	**12 56 07.1**	**+1.5**
CCIG	**Comitan**	**2.49**	**357**			P	**Pn**	**12 56 11.2**	**+2.8**
TACO	**Tacachico**	**2.58**	**85**	*i*P		P	**Pn**	**12 56 10.2**	**+0.7**
TACO	**Tacachico**	**2.58**	**85**	*i*P		P	**Pn**	**12 56 10.2**	**+0.7**
MRL	**Marmol**	**2.59**	**60**	*e*P		P	**Pn**	**12 56 12.5**	**+2.6**
MRL				*e*S		S	Sn	12 56 52.1	+12
MTO3	**Montecristo**	**2.64**	**76**	*i* P		P	**Pn**	**12 56 11.4**	**+0.9**
MTO3	**Montecristo**	**2.64**	**76**	*i* P		P	**Pn**	**12 56 11.4**	**+0.9**
MTO3	**Montecristo**	**2.64**	**76**			P	**Pn**	**12 56 11.3**	**+0.9**
BOQS	**Boqueron**	**2.65**	**91**	*e*P		P	**Pn**	**12 56 10.4**	**-0.1**
BOQS	**Boqueron**	**2.65**	**91**	*e*P		P	**Pn**	**12 56 10.4**	**-0.1**
SNET	**Serv Nac Est T**	**2.69**	**92**			P	**Pn**	**12 56 12.0**	**+0.9**
ESQI	**Esquipulas**	**2.70**	**73**	*i*P		P	**Pn**	**12 56 12.6**	**+1.4**
ESQI	**Esquipulas**	**2.70**	**73**			P	**Pn**	**12 56 11.7**	**+0.5**
LFRS	**El Faro**	**2.86**	**93**	*i*P		P	**Pn**	**12 56 14.2**	**+0.7**
LFRS	**El Faro**	**2.86**	**93**	*i*P		P	**Pn**	**12 56 14.2**	**+0.7**
LBRS	**Las Brisas**	**2.88**	**90**	*i* P		P	**Pn**	**12 56 14.6**	**+1.0**
LBRS	**Las Brisas**	**2.88**	**90**	*i* P		P	**Pn**	**12 56 14.6**	**+1.0**
PAVA	**Las Pavas**	**2.98**	**91**	*i*P		P	**Pn**	**12 56 16.2**	**+1.1**
PAVA	**Las Pavas**	**2.98**	**91**	*i*P		P	**Pn**	**12 56 16.2**	**+1.1**
COEG	**Centro de Oper**	**3.04**	**93**	*e*P		P	**Pn**	**12 56 16.9**	**+1.1**
COEG	**Centro de Oper**	**3.04**	**93**	*e*P		P	**Pn**	**12 56 16.9**	**+1.1**
COEB	**Comit de Eme**	**3.39**	**94**	*i* P		P	**Pn**	**12 56 21.5**	**+0.9**
COEB	**Comit de Eme**	**3.39**	**94**	*i* P		P	**Pn**	**12 56 21.5**	**+0.9**
TECA	**Tecapa**	**3.42**	**94**	*e*P		P	**Pn**	**12 56 21.9**	**+0.8**
TECA	**Tecapa**	**3.42**	**94**	*e*P		P	**Pn**	**12 56 21.9**	**+0.8**
LCY	**Lacayo**	**3.62**	**95**	*e*P		P	**Pn**	**12 56 25.7**	**+1.8**
LCY	**Lacayo**	**3.62**	**95**	*e*P		P	**Pn**	**12 56 25.7**	**+1.8**
VSM	**San Miguel**	**3.64**	**95**	*e*P		P	**Pn**	**12 56 24.0**	**-0.3**
VSM	**San Miguel**	**3.64**	**95**	*e*P		P	**Pn**	**12 56 24.0**	**-0.3**
PETF	**Flores**	**3.74**	**33**	Pn		P	**Pn**	**12 56 27.1**	**+1.7**
LCND	**La Caada**	**4.03**	**96**	*i* P		P	**Pn**	**12 56 30.2**	**+0.8**
LCND	**La Caada**	**4.03**	**96**	*i* P		P	**Pn**	**12 56 30.2**	**+0.8**
LCND				*e*P				12 56 30.8	
CMIG	**Matias Romero**	**4.31**	**320**	Pn		P	**Pn**	**12 56 31.4**	**-1.9**
	5.8nm,0.3s,baz=132,slow=10.0,SNR=21								
CMIG				Sn			**Sn**	**12 57 24.1**	**+1.8**
	10.0nm,0.3s,baz=138,slow=11,SNR=4.4								
TGUH	**Tegucigalpa,Un**	**4.60**	**86**	Pn		P	**Pn**	**12 56 38.1**	**+0.7**
CRIN	**San Cristobal**	**4.94**	**102**			P	**Pn**	**12 56 42.2**	**+0.2**
MATN	**Matagalpa**	**5.97**	**97**	Pn		P	**Pn**	**12 56 56.4**	**+0.1**
ACON	**Acoyapa**	**6.90**	**104**			P	**Pn**	**12 57 09.1**	**+0.2**
GBS3	**Finca Las Img**	**7.06**	**114**	*e*P		P	**Pn**	**12 57 11.9**	**+0.8**
LAPC	**Finca la Perla**	**7.08**	**114**	*e*P		P	**Pn**	**12 57 11.7**	**+0.2**
GB1A	**Borinquen Arri**	**7.09**	**114**	*e*P		P	**Pn**	**12 57 13.6**	**+2.0**
BUEV	**Buena Vista**	**7.09**	**114**	*e*P		P	**Pn**	**12 57 13.5**	**+1.9**
GPS2	**Hotel Rincn d**	**7.16**	**114**	*i* P		P	**Pn**	**12 57 14.4**	**+1.9**
GUAI	**GUAI**	**7.24**	**118**	*i* P		P	**Pn**	**12 57 14.9**	**+1.3**
COLC	**Colonia**	**7.33**	**114**	*i* P		P	**Pn**	**12 57 16.6**	**+1.8**
HORNC	**Hornillas**	**7.33**	**114**	*i* P		P	**Pn**	**12 57 15.8**	**+0.9**
TLIG	**Tlapa**	**7.36**	**302**	Pn		P	**Pn**	**12 57 14.2**	**-1.0**
CUI	**Cuipilapa**	**7.37**	**114**	*i* P		P	**Pn**	**12 57 17.0**	**+1.6**
ACAL	**Aguas Claras**	**7.49**	**114**	*i* P		P	**Pn**	**12 57 18.6**	**+1.5**
JTS	**Las Juntas de**	**7.72**	**116**	Pn		P	**Pn**	**12 57 21.8**	**+1.6**
	3.1nm,0.3s,baz=36,slow=11,SNR=12								
JTS				Sn			**Sn**	**12 58 48.1**	**+1.7**
	0.8nm,0.3s,baz=317,slow=16,SNR=0.8								
JTS				Lg		Lg	Lg	12 59 26.6	
	baz=231,slow=12,SNR=4.9								
JTS	**Las Juntas de**	**7.72**	**116**	Pn		Pn	**Pn**	**12 57 22.1**	**+2.0**
MOIG	**Morelia**	**10.57**	**305**	Pn		Pn	**Pn**	**12 58 01.4**	**+1.9**
833A	**Chaparral WMA,**	**16.02**	**336**	Pn		Pn	**Pn**	**12 59 12.1**	**-0.8**
545A	**Edgard**	**16.25**	**5**	Pn		Pn	**Pn**	**12 59 14.8**	**-1.0**
HKT	**Hockley**	**16.48**	**348**	Pn		Pn	**Pn**	**12 59 19.1**	**+0.5**
MOTC	**Monteria, Cord**	**16.77**	**106**	*e*P		Pn	**Pn**	**12 59 20.8**	**-1.7**
SJCC	**San Jacinto, C**	**16.91**	**101**	*e*P		Pn	**Pn**	**12 59 24.5**	**+0.2**
DBBC	**Dabeiba**	**16.92**	**112**	*e*P		Pn	**Pn**	**12 59 23.5**	**-0.9**
GTBY	**Guantanamo Bay**	**17.28**	**67**	P		Pn	**Pn**	**12 59 28.2**	**-0.6**
CBOC	**Ciudad Bolivar**	**17.60**	**115**	*e*P		Pn	**Pn**	**12 59 34.1**	**+1.1**
ETX02	**Prairie Street**	**18.18**	**353**	P		P	**P**	**12 59 40.9**	**+1.0**
YOTC	**Yotoco, Valle**	**18.26**	**121**	*e*P		Pn	**Pn**	**12 59 43.3**	**+2.3**
GUY2C	**Guyana, Caldas**	**18.47**	**116**	*e*P		Pn	**Pn**	**12 59 45.3**	**+1.4**
BBAC	**Balboa, Cauca**	**18.69**	**127**	*e*P		P	**P**	**12 59 46.2**	**+0.4**
PTBC	**PUERTO BERRIO,**	**18.70**	**111**	*e*P		P	**P**	**12 59 44.2**	**-1.5**
TOLC	**Tolima**	**18.82**	**117**	*e*P		Pn	**Pn**	**12 59 49.9**	**+1.9**
POPC	**Popayan, Colom**	**18.82**	**125**	*e*P		Pn	**Pn**	**12 59 48.6**	**+0.7**
H06E1	**SOCORRO T-PHAS**	**18.83**	**288**	T		T	T	13 19 01.8	
	SNR=20								
TXAR	**Lajitas Array**	**18.88**	**327**	P		P	**Pn**	**12 59 49.1**	**+0.7**
	0.2nm,0.3s,baz=150,slow=10,SNR=26								
TXAR	**Lajitas Array**	**18.88**	**327**	P		P	**Pn**	**12 59 49.0**	**+0.5**
TX31	**Lajitas Ar. Si**	**18.88**	**327**	P		P	**P**	**12 59 48.3**	**+0.6**
TX31				IAmb		IAmb	IAmb	13 00 02.8	
	comp=Z,28nm,1.1s								
TX32	**Lajitas Array**	**18.88**	**327**	P		P	**P**	**12 59 48.3**	**+0.6**
PCON	**Cinco Dias**	**19.17**	**125**	*e*P		P	**Pn**	**12 59 53.0**	**+0.5**
ORTC	**Ortega, Tolima**	**19.23**	**119**	*e*P		P	**Pn**	**12 59 52.9**	**+0.3**
ROSC	**El Rosal**	**19.56**	**115**	P		P	**P**	**12 59 54.6**	**-1.0**
	comp=Z,2.4nm,0.3s,baz=108,slow=19,SNR=1.8								
ROSC	**El Rosal**	**19.56**	**115**	P		P	**P**	**12 59 56.5**	**+0.9**
ROSC				IAmb		IAmb	IAmb	13 00 03.1	
	comp=Z,25nm,1.1s								
Z47A	**Carrollton**	**19.66**	**10**	P		P	**P**	**12 59 57.0**	**+0.9**
BARC	**Barichara**	**19.84**	**109**	*e*P		P	**P**	**12 59 58.5**	**+0.1**
WLAR	**White Oak Lake**	**19.85**	**357**	P		P	**P**	**12 59 58.6**	**+0.5**
ABTX	**Abilene, Hawle**	**20.02**	**341**	P		P	**P**	**13 00 01.0**	**+1.0**
PAMC	**Pamplona, Colo**	**20.02**	**107**	*e*P		P	**P**	**13 00 00.9**	**+0.3**
CHIC	**Chingaza**	**20.18**	**115**	*e*P		P	Pn	13 00 04.5	+0.2
RUSC	**La Rusia**	**20.21**	**111**	*e*P		P	**P**	**13 00 03.9**	**+1.1**
UALR	**University of**	**20.91**	**359**	P		P	**P**	**13 00 07.8**	**-1.8**
X37A	**Clayton**	**20.94**	**352**			P	**P**	**13 00 10.8**	**+0.8**
X37A				IAmb		IAmb	IAmb	13 00 20.3	
	comp=Z,16nm,1.0s								
X48A	**Hartselle**	**21.07**	**11**	P		P	**P**	**13 00 10.6**	**-0.7**
X48A				IAmb		IAmb	IAmb	13 00 23.7	
	comp=Z,19nm,1.1s								
PLAL	**Pickwick Lake**	**21.41**	**9**	P		P	**P**	**13 00 15.0**	**0.0**
PLAL				IAmb		IAmb	IAmb	13 00 39.8	
	comp=Z,17nm,1.3s								
WHAR	**Wooly Hollow**	**21.42**	**359**	P		P	**P**	**13 00 15.6**	**+0.5**
SDV	**Santo Domingo**	**21.50**	**101**	P		P	**P**	**13 00 13.6**	**-2.8**
	comp=Z,6.2nm,0.5s,baz=89,slow=20,SNR=1.6								
GDL2	**Guadalupe Moun**	**21.55**	**330**	P		P	**P**	**13 00 17.4**	**+0.8**
MNTX	**Cornudas Mount**	**21.65**	**328**	P		P	**P**	**13 00 17.9**	**+0.3**
MNTX				IAmb		IAmb	IAmb	13 00 28.2	
	comp=Z,12nm,0.8s								
W35A	**Tecumseh**	**21.73**	**349**	P		P	**P**	**13 00 16.4**	**-2.1**
WMOK	**Wichita Mounta**	**21.75**	**345**	P		P	**P**	**13 00 18.3**	**-0.4**
FNO	**Franklin**	**21.93**	**348**	P		P	**P**	**13 00 19.8**	**-0.8**
FCAR	**Ozark Folk Cen**	**22.02**	**360**	P		P	**P**	**13 00 21.8**	**+0.3**
SWET	**Sewanee**	**22.04**	**13**	P		P	**P**	**13 00 22.1**	**+0.3**
SWET				IAmb		IAmb	IAmb	13 00 28.1	
	comp=Z,10nm,0.7s								
OK025	**Westminster Rd**	**22.24**	**348**	P		P	**P**	**13 00 22.9**	**-1.0**
OK025				IAmb		IAmb	IAmb	13 00 23.1	
	comp=Z,18nm,0.7s								
MSTX	**Muleshoe**	**22.35**	**336**	P		P	**P**	**13 00 25.5**	**+0.2**
MSTX				IAmb		IAmb	IAmb	13 00 27.6	
	comp=Z,16nm,0.9s								
WVT	**Waverly**	**22.57**	**9**	P		P	**P**	**13 00 26.2**	**-1.2**
CPCT	**Cooper Cave**	**22.61**	**16**	P		P	**P**	**13 00 27.5**	**-0.4**
CPCT				IAmb		IAmb	IAmb	13 00 42.8	
	comp=Z,25nm,1.3s								
AMTX	**Amarillo**	**22.76**	**339**	P		P	**P**	**13 00 29.1**	**-0.5**
V51A	**Loudon**	**22.99**	**16**	P		P	**P**	**13 00 32.4**	**+0.6**
TKL	**Tuckaleechee C**	**23.01**	**17**	P		P	**P**	**13 00 30.9**	**-1.1**
	comp=Z,3.4nm,0.5s,baz=187,slow=10,SNR=5.7								
TKL	**Tuckaleechee C**	**23.01**	**17**	P		P	**P**	**13 00 32.0**	**-0.1**
TKL				IAmb		IAmb	IAmb	13 00 34.4	
	comp=Z,16nm,1.1s								
BIRD	**Birdtown, Kers**	**23.25**	**25**	P		P	**P**	**13 00 34.8**	**+0.3**
BIRD				IAmb		IAmb	IAmb	13 00 36.7	
	comp=Z,36nm,1.5s					

BMAR	**Burnt Mountain**	**63.50**	**340**	P	**P**	**13 05 57.5 +0.9**
TOLK	**Toolik Lake Re**	**65.73**	**340**	P	**P**	**13 06 11.7 +0.6**
TOLK				IAmb	IAmb	13 06 12.4
	comp=Z,4.6nm,0.8s					
EKB3	**Eskdalemuir Ar**	**78.14**	**36**	P	**P**	**13 07 23.4 -2.3**
ESDC	**Sonseca Array**	**79.86**	**52**	P	**P**	**13 07 33.1 -2.4**
	comp=Z,1.1nm,1.0s,baz=273,slow=4.9,SNR=4.7					
ARCES	**ARCESS Array B**	**86.35**	**18**	P	**P**	**13 08 07.3 -1.1**
	comp=Z,1.4nm,0.8s,baz=310,slow=6.2,SNR=1.2					
KSH	**Kashi**	**125.81**	**11**	*e*PKP	**PKPdf**	**13 14 28.9 +0.1**
WRA	**Warramunga Arr**	**135.34**	**256**	PKhKP	**PKPdf**	**13 14 46.0 -1.2**
	comp=Z,0.3nm,0.7s,baz=80,slow=1.1,SNR=5.6					
ASAR	**Alice Springs**	**135.59**	**250**	PKhKP	**PKPdf**	**13 14 46.0 -1.6**
	comp=Z,0.2nm,0.3s,baz=85,slow=2.0,SNR=2.2					
CMAR	**Chiang Mai Arr**	**146.20**	**341**	PKPbc	**PKPdf**	**13 15 07.3 +0.6**
	comp=Z,6.2nm,0.7s,baz=335,slow=3.4,SNR=30					

*JMA **01** 13:01:28.6±0.1,24.72N×122.74E,h118km±1km,M2.1*
*TAP **01** 13:01:29.0,24.71N×122.74E,h117km±1km,ML3.0,C*
ISC 01 13:01:30.1±1.6,24.71N±0.05×122.75E±0.03,h106km±9km,
n67,σ0.91/122,7C-3D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.31**	**145**	P	**Pn**	**13 01 45.5**	**0.0**
JYNG				*e*S	**Sn**	**13 01 58.3**	**+1.4**
YOJ	**Yonaguni jima**	**0.34**	**136**	*i* P	**Pn**	**13 01 45.8**	**+0.2**
	baz=134						
YOJ				*i* S	**Sn**	**13 01 58.4**	**+1.3**
	baz=134						
YOJ	**Yonaguni jima**	**0.34**	**136**	P	**Pn**	**13 01 45.6**	**0.0**
YOJ				*e*S	**Sn**	**13 01 58.5**	**+1.3**
TWC	**Suao**	**0.82**	**263**	P	**Pn**	**13 01 48.7**	**-0.5**
	baz=262						
TWC				*e*S	**Sn**	**13 02 03.0**	**-0.6**
	baz=262						
TIPB	**Shuangxi**	**0.88**	**288**	P	**Pn**	**13 01 49.5**	**-0.3**
	baz=287						
TIPB				*e*S	**Sn**	**13 02 03.9**	**-0.8**
	baz=287						
IRIF	**Iriomote-Funau**	**0.97**	**112**	P	**Pn**	**13 01 50.3**	**-0.3**
IRIF				S	**Sn**	**13 02 06.8**	**+0.7**
TWE	**Neicheng**	**0.98**	**271**	*e*P	**Pn**	**13 01 50.6**	**-0.2**
	baz=270						
TWE				*e*S	**Sn**	**13 02 07.3**	**+0.9**
	baz=270						
ENTT	**Nioudou**	**1.08**	**267**	P	**Pn**	**13 01 52.0**	**+0.1**
	baz=266						
ENTT				*e*S	**Sn**	**13 02 08.7**	**+0.4**
	baz=266						
PCYT	**Pengchaiyu**	**1.10**	**326**	*e*P	**Pn**	**13 01 51.2**	**-0.9**
	baz=326						
NDT	**Datong Townshi**	**1.13**	**265**	*i* P	**Pn**	**13 01 52.7**	**+0.3**
	baz=264						
NDT				*e*S	**Sn**	**13 02 09.7**	**+0.4**
	baz=264						
NWLT	**Wulai**	**1.14**	**274**	*e*P	**Pn**	**13 01 52.2**	**-0.3**
	baz=273						
NWLT				*e*S	**Sn**	**13 02 09.9**	**+0.5**
	baz=273						
YM01	**YM01**	**1.16**	**292**	*e*S	**Sn**	**13 02 09.6**	**-0.2**
	baz=292						
NACB	**Ninganchiao**	**1.18**	**243**	⇑*i* P	**Pn**	**13 01 52.5**	**-0.5**
	baz=242						
NACB				*e*S	**Sn**	**13 02 10.0**	**-0.2**
	baz=242						
TWD	**Chiawan**	**1.22**	**240**	*e*P	**Pn**	**13 01 53.1**	**-0.3**
	baz=238						
TWD				*e*S	**Sn**	**13 02 10.0**	**-1.0**
	baz=238						
JKRS	**Kuro-shima**	**1.24**	**112**	P	**Pn**	**13 01 53.8**	**+0.2**
JKRS				S	**Sn**	**13 02 12.4**	**+1.0**
YHNB	**Yeheng**	**1.25**	**269**	⇑*i* P	**Pn**	**13 01 53.9**	**+0.1**
	baz=268						
YHNB				S	**Sn**	**13 02 11.7**	**0.0**
	baz=268						
ETLH	**Xiulin Townshi**	**1.26**	**247**	⇓*i* P	**Pn**	**13 01 53.4**	**-0.5**
	baz=246						
ETLH				*e*S	**Sn**	**13 02 10.8**	**-1.2**
	baz=246						
NSK	**Sanguang**	**1.27**	**269**	P	**Pn**	**13 01 54.0**	**0.0**
	baz=268						
NSK				S	**Sn**	**13 02 11.8**	**-0.3**
	baz=268						
NNSH	**Datong**	**1.27**	**258**	⇑*i* P	**Pn**	**13 01 54.0**	**-0.1**
	baz=257						
NNSH				*e*S	**Sn**	**13 02 12.0**	**-0.4**
	baz=257						
NNSB	**Datong**	**1.27**	**258**	⇑*i* P	**Pn**	**13 01 54.1**	**-0.1**
	baz=257						
NNSB				*e*S	**Sn**	**13 02 11.5**	**-0.8**
	baz=257						
NNS	**Nan Shan**	**1.28**	**258**	*e*P	**Pn**	**13 01 54.1**	**-0.2**
	baz=257						
NNS				*e*S	**Sn**	**13 02 12.0**	**-0.5**
	baz=257						
JIJ	**Ishigaki jima**	**1.31**	**105**	P	**Pn**	**13 01 54.2**	**-0.3**
JIJ				S	**Sn**	**13 02 12.8**	**-0.2**
JISG	**Ishigakijimahi**	**1.43**	**94**	P	**Pn**	**13 01 55.3**	**-0.5**
JISG				*e*S	**Sn**	**13 02 14.2**	**-1.1**
FUSS	**Fushou**	**1.45**	**252**	*e*P	**Pn**	**13 01 56.3**	**0.0**
	baz=251						
FUSS				*e*S	**Sn**	**13 02 14.9**	**-1.2**
	baz=251						
WHF	**Hehuan Shan**	**1.46**	**248**	⇑*i* P	**Pn**	**13 01 56.6**	**-0.1**
	baz=247						
WHF				*e*S	**Sn**	**13 02 16.5**	**-0.3**
	baz=247						
ESL	**Shilin**	**1.50**	**234**	*e*P	**Pn**	**13 01 56.0**	**-0.7**
	baz=233						
ESL				*e*S	**Sn**	**13 02 15.6**	**-1.2**
	baz=233						
TWT	**Tachien**	**1.50**	**253**	*e*S	**Sn**	**13 02 17.6**	**+0.3**
	baz=252						
TDCB	**Techi**	**1.52**	**253**	*e*P	**Pn**	**13 01 57.5**	**+0.4**
	baz=252						
TDCB				*e*S	**Sn**	**13 02 17.6**	**0.0**
	baz=252						
CHGB	**Renai**	**1.57**	**246**	⇓*i* P	**Pn**	**13 01 58.0**	**+0.2**
	baz=245						
CHGB				*e*S	**Sn**	**13 02 19.0**	**+0.2**
	baz=245						
LIOB	**Emei**	**1.58**	**268**	*e*P	**Pn**	**13 01 57.6**	**-0.1**
	baz=267						
LIOB				*e*S	**Sn**	**13 02 18.2**	**-0.4**
	baz=267						
EGFH	**Guangfu**	**1.59**	**230**	*e*P	**Pn**	**13 01 57.2**	**-0.6**
	baz=229						
EGFH				*e*S	**Sn**	**13 02 18.0**	**-0.8**
	baz=229						
NSTT	**Nanjuang**	**1.59**	**268**	*e*S	**Sn**	**13 02 18.4**	**-0.5**
	baz=267						
WHP	**Taichung City**	**1.70**	**256**	P	**Pn**	**13 01 59.9**	**+0.7**
	baz=255						
WHP				*e*S	**Sn**	**13 02 21.7**	**+0.3**
	baz=255						
HGSD	**Ruisui**	**1.71**	**225**	⇑*i* P	**Pn**	**13 01 59.1**	**-0.2**
	baz=224						
HGSD				*e*S	**Sn**	**13 02 21.4**	**-0.1**
	baz=224						
VWDT	**VWDT**	**1.75**	**237**	⇓*i* P	**Pn**	**13 01 60.0**	**+0.2**
	baz=236						
VWDT				*e*S	**Sn**	**13 02 22.6**	**+0.2**
	baz=236						
EHY	**Hungye**	**1.77**	**228**	⇑*i* P	**Pn**	**13 01 59.3**	**-0.7**
	baz=227						
EHY				*e*S	**Sn**	**13 02 21.5**	**-1.3**
	baz=227						
JTJ	**Tarama**	**1.78**	**92**	S	**Sn**	**13 02 23.1**	**+0.1**
DPDB	**Guoxing**	**1.79**	**248**	*e*P	**Pn**	**13 02 00.5**	**+0.2**
	baz=247						
DPDB				*e*S	**Sn**	**13 02 24.3**	**+0.9**
	baz=247						
TWQ1	**Liyutan**	**1.83**	**259**	*e*S	**Sn**	**13 02 23.6**	**-0.7**
	baz=258						
YULB	**Yu-li**	**1.86**	**226**	*e*P	**Pn**	**13 02 00.4**	**-0.8**
	baz=225						
YULB				*e*S	**Sn**	**13 02 23.9**	**-1.1**
	baz=225						
SMLT	**Sun Moon Lake**	**1.88**	**244**	*e*P	**Pn**	**13 02 01.3**	**-0.2**
	baz=243						
SMLT				*e*S	**Sn**	**13 02 26.2**	**+0.8**
	baz=243						
SSLB	**Suanglung**	**1.88**	**241**	*e*P	**Pn**	**13 02 00.9**	**-0.5**
	baz=240						
SSLB				*e*S	**Sn**	**13 02 25.3**	**0.0**
	baz=240						
TWF1	**Yuli**	**1.89**	**225**	*e*P	**Pn**	**13 02 01.0**	**-0.6**
	baz=224						
TWF1				*e*S	**Sn**	**13 02 24.1**	**-1.5**
	baz=224						
TYC	**Yuchr**	**1.90**	**246**	*e*P	**Pn**	**13 02 02.4**	**+0.7**
	baz=244						
TYC				*e*S	**Sn**	**13 02 26.3**	**+0.5**
	baz=244						
WHYT	**Xinyi Township**	**2.00**	**240**	*e*S	**Sn**	**13 02 28.9**	**+0.8**
	baz=239						
FULB	**Fuli**	**2.01**	**222**	*e*P	**Pn**	**13 02 02.8**	**-0.2**
	baz=221						
FULB				*e*S	**Sn**	**13 02 27.7**	**-0.5**
	baz=221						
CHKT	**Chengkung**	**2.04**	**219**	*e*P	**Pn**	**13 02 02.7**	**-0.7**
	baz=217						
CHKT				*e*S	**Sn**	**13 02 27.8**	**-1.2**
	baz=217						
WJS	**Zhushan**	**2.04**	**245**	*e*S	**Sn**	**13 02 30.3**	**+1.3**
	baz=244						
ALS	**Alishan**	**2.14**	**237**	*e*P	**Pn**	**13 02 05.8**	**+0.7**
	baz=235						
ALS				*e*S	**Sn**	**13 02 32.7**	**+1.0**
	baz=235						
EDH	**Donghe**	**2.18**	**218**	*e*P	**Pn**	**13 02 04.6**	**-0.6**
	baz=217						
EDH				*e*S	**Sn**	**13 02 31.1**	**-1.0**
	baz=217						
ELDTW	**Lidau**	**2.19**	**227**	*e*P	**Pn**	**13 02 05.1**	**-0.4**
	baz=226						
ELDTW				*e*S	**Sn**	**13 02 31.6**	**-0.9**
	baz=226						
CHN5	**Tsauling**	**2.19**	**240**	*e*P	**Pn**	**13 02 06.3**	**+0.8**
	baz=239						
CHN5				*e*S	**Sn**	**13 02 34.5**	**+2.0**
	baz=239						
JIRB	**Irabujima**	**2.21**	**86**	*e*S	**Sn**	**13 02 32.6**	**-0.1**
LONT	**Longtian**	**2.33**	**220**	*e*P	**Pn**	**13 02 06.5**	**-0.7**
	baz=219						
LONT				*e*S	**Sn**	**13 02 34.7**	**-0.9**
	baz=219						
LDUT	**Ludao**	**2.34**	**210**	*e*P	**Pn**	**13 02 06.5**	**-0.9**
	baz=209						
LDUT				*e*S	**Sn**	**13 02 35.1**	**-0.7**
	baz=209						
STYT	**Tauyuan**	**2.38**	**230**	*e*P	**Pn**	**13 02 08.7**	**+0.7**
	baz=229						
STYT				*e*S	**Sn**	**13 02 38.4**	**+1.4**
	baz=229						
CHN4	**Tsaushan**	**2.39**	**236**	*e*P	**Pn**	**13 02 09.2**	**+1.2**
	baz=235						
CHN4				*e*S	**Sn**	**13 02 37.4**	**+0.3**
	baz=235						
TPUB	**Ta-pu**	**2.39**	**235**	*e*P	**Pn**	**13 02 09.1**	**+1.1**
	baz=234						
TPUB				*e*S	**Sn**	**13 02 39.0**	**+1.9**
	baz=234						
TWGBT	**Beinan**	**2.42**	**219**	*e*P	**Pn**	**13 02 07.9**	**-0.5**
	baz=218						
TWGBT				*e*S	**Sn**	**13 02 36.3**	**-1.6**
	baz=218						
TWG	**Pinlang**	**2.43**	**220**	*e*P	**Pn**	**13 02 08.2**	**-0.3**
	baz=218						
TWG				*e*S	**Sn**	**13 02 35.8**	**-2.1**
	baz=218						
WTP	**Ta-pu**	**2.44**	**234**	*e*P	**Pn**	**13 02 09.8**	**+1.2**
	baz=233						
WTP				*e*S	**Sn**	**13 02 39.1**	**+0.9**
	baz=233						
CHN1	**Nanshi**	**2.54**	**234**	*e*P	**Pn**	**13 02 12.0**	**+2.1**
	baz=233						
CHN1				*e*S	**Sn**	**13 02 41.8**	**+1.3**
	baz=233						
SNST	**Tainan City**	**2.54**	**235**	*e*S	**Sn**	**13 02 42.6**	**+2.1**
	baz=234						
SLGT	**Liugui**	**2.57**	**229**	*e*P	**Pn**	**13 02 11.5**	**+1.1**
	baz=228						
SLGT				*e*S	**Sn**	**13 02 44.1**	**+2.8**
	baz=228						
MASBT	**Mashibuluo**	**2.85**	**223**	*e*P	**Pn**	**13 02 14.9**	**+0.8**
	baz=222						
MASBT				*e*S	**Sn**	**13 02 49.9**	**+2.0**
	baz=222						
EAST	**Anshuo**	**2.90**	**217**	*e*P	**Pn**	**13 02 14.5**	**-0.2**
	baz=216						
PHUB	**P'eng-hu**	**3.14**	**248**	*e*S	**Sn**	**13 02 52.1**	**-2.5**
	baz=247						

*NEIC **01** 13:23:25.9±1.1,1.63N±0.09×127.14E±0.09,h123km±8km,*
mb4.4/15, Error ellipse: s-maj=14.3km s-min=11.4km
az=48.0
*DJA **01** 13:23:25.9±0.3,2.N±2.×12.7E±.,h73km±6km,M4.4/14,*
mB5.0/6,mb4.5/8,MLv4.4/14,Mw(mB)4.3/6
*IDC **01** 13:23:25.6±2.2,1.49N×126.85E,h109km±20km,mb3.7/7,*
mb1 3.8/10,mb1mx3.5/36,mbtmp4.1/10,Error ellipse:
s-maj=26.5km s-min=13.9km az=72.0
ISC 01 13:23:23.6±0.6,1.80N±0.04×127.08E±0.06,h100km,n54,
σ1.88/71,mb4.3/14,1D,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.06**	**164**	P	**Pn**	**13 23 47.0**	**+2.3**
TNTI				S	**Sn**	**13 24 00.9**	**+0.3**
TNTI	**Ternate**	**1.06**	**164**	Pn	**Pn**	**13 23 47.1**	**+2.3**
TNTI				Sn	**Sn**	**13 24 02.9**	**+2.3**
SGSI	**Sangihe**	**2.43**	**321**	P	**Pn**	**13 24 02.7**	**+0.8**
SGSI				S	**Sn**	**13 24 31.7**	**+0.5**
KMSI	**Cibinong**	**3.33**	**249**	P	**Pn**	**13 24 15.4**	**+1.7**
KMSI				S	**Sn**	**13 24 51.7**	**-0.8**
SANI	**Sanana**	**3.97**	**196**	P	**Pn**	**13 24 22.4**	**-0.1**
GTOI	**Gorontalo**	**4.23**	**254**	P	**Pn**	**13 24 28.4**	**+2.5**
GTOI				S	**Sn**	**13 25 15.6**	**+1.4**
DDMP	**Don Marcelino,**	**4.49**	**342**	*e*P	**Pn**	**13 24 29.6**	**+0.2**
DDMP				*e*S	**Sn**	**13 25 18.5**	**-2.1**
SIJI	**Sorong**	**4.96**	**122**	P	**Pn**	**13 24 38.3**	**+2.5**
	1.1nm,0.3s,baz=319,slow=19,SNR=3.6						
NLAI	**Namlea**	**5.00**	**180**	P	**Pn**	**13 24 37.5**	**+1.1**
LUWI	**Luwuk**	**5.15**	**237**	P	**Pn**	**13 24 40.3**	**+1.9**
LUWI				S	**Sn**	**13 25 36.9**	**+0.3**
LUWI	**Luwuk**	**5.15**	**237**	Pn	**Pn**	**13 24 40.3**	**+1.9**
LUWI				Sn	**Sn**	**13 25 39.4**	**+2.8**
SKMP	**Bagumbayan, Su**	**5.33**	**332**	*e*P	**Pn**	**13 24 41.6**	**+0.7**
SKMP				*e*S	**Sn**	**13 25 39.0**	**-2.0**
KCP	**Kidapawan**	**5.54**	**339**	⇓*i* P	**Pn**	**13 24 45.2**	**+1.4**
APSI	**Ampana**	**6.06**	**244**	P	**Pn**	**13 24 51.9**	**+1.2**
	0.4nm1μm68nm,0.6s						
APSI				S	**Sn**	**13 25 59.3**	**+0.6**
	0.4nm1μm68nm,0.6s						
BUKP	**Musuan**	**6.37**	**342**	*e*P	**Pn**	**13 24 55.8**	**+0.8**
BUKP				*e*S	**Sn**	**13 26 06.0**	**-0.3**
FAKI	**Fak Fak**	**6.98**	**132**	Pn	**Pn**	**13 25 05.2**	**+2.0**
MPSI	**Mapaga**	**7.32**	**259**	P	**Pn**	**13 25 10.6**	**+2.7**
	0.1nm12nm,0.7s						
TTSI	**Tana Toraja**	**8.71**	**236**	P	**Pn**	**13 25 26.7**	**-0.1**
	1μm94nm,0.6s						
MYLDM	**Lahad Datu**	**9.20**	**292**	Pn	**Pn**	**13 25 37.8**	**+4.4**
SPSI	**Sidrap Palu**	**9.28**	**232**	P	**Pn**	**13 25 35.0**	**+0.4**
	1μm94nm,0.7s						
BNSI	**Bone**	**9.30**	**229**	P	**Pn**	**13 25 35.6**	**+0.8**
	31nm,0.6s						
BKSI	**Bulukumba**	**9.91**	**224**	P	**Pn**	**13 25 44.9**	**+1.7**
	17nm,0.6s						
KAPI	**Kappang**	**9.97**	**227**	P	**Pn**	**13 25 42.8**	**-1.1**
	7.8nm,0.3s,baz=29,slow=6.4,SNR=16						
KAPI				S	**Sn**	**13 27 31.6**	**-2.3**
	2.5nm,0.3s,baz=57,slow=20,SNR=2.3						
KAPI	**Kappang**	**9.97**	**227**	Pn	**Pn**	**13 25 45.4**	**+1.5**
EDFI	**Ende, Flores**	**11.77**	**207**	P	**Pn**	**13 26 11.2**	**+2.7**
	4.2nm,1.1s						
SBUM	**Sibu**	**14.86**	**273**		**P**	**13 26 53.9**	**+1.9**
MTN	**Manton Dam**	**15.09**	**165**	Pn	**Pn**	**13 26 49.7**	**-1.9**
KNRA	**Kununurra**	**17.44**	**175**	P	**P**	**13 27 19.9**	**-0.6**
KNRA				IAmb	IAmb	13 27 21.3	
	comp=Z,24nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.82**	**184**	P	**P**	**13 27 44.8**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=8.0,slow=7.9,SNR=11						
FITZ				S	**S**	**13 31 17.8**	**-6.6**
	comp=Z,0.0nm,0.3s,baz=184,slow=17,SNR=1.6						
FITZ	**Fitzroy Crossi**	**19.82**	**184**	P	**P**	**13 27 45.5**	**-0.9**
TPUB	**Ta-pu**	**22.27**	**344**	P	**P**	**13 28 11.4**	**-1.3**
TPUB				IAmb	IAmb	13 28 13.5	
	comp=Z,24nm,1.1s						
WB0	**Warramunga Arr**	**22.60**	**162**	P	**P**	**13 28 14.8**	**-1.3**
WB0				IAmb	IAmb	13 28 22.1	
	comp=Z,23nm,0.6s						
WRA	**Warramunga Arr**	**22.75**	**162**	P	**P**	**13 28 16.2**	**-1.4**
	comp=Z,4.6nm,0.3s,baz=340,slow=11,SNR=54						
WRA				PcP	**PcP**	**13 32 06.0**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=342,slow=2.1,SNR=1.1						
WRA				S	**S**	**13 32 17.0**	**-2.0**
	comp=Z,0.7nm,1.0s,baz=340,slow=17,SNR=3.6						
WRA	**Warramunga Arr**	**22.75**	**162**	P	**P**	**13 28 15.1**	**-2.5**
WB2	**Warramunga Arr**	**22.75**	**162**	P	**P**	**13 28 16.3**	**-1.3**
WR0	**Warramunga Arr**	**22.83**	**162**	P	**P**	**13 28 17.0**	**-1.4**
WR0				IAmb	IAmb	13 28 25.4	
	comp=Z,8.4nm,0.9s						
PSA00	**Pilbara Seismi**	**24.28**	**197**	P	**P**	**13 28 28.6**	**-3.1**
AS31	**Alice Springs**	**26.17**	**166**	P	**P**	**13 28 48.3**	**-0.5**
AS31				PcP	**PcP**	**13 32 14.9**	**+1.2**
ASAR	**Alice Springs**	**26.17**	**166**	P	**P**	**13 28 48.0**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=347,slow=8.7,SNR=18						
ASAR	**Alice Springs**	**26.17**	**166**	P	**P**	**13 28 48.0**	**-0.9**
ASAR				PcP	**PcP**	**13 32 13.7**	**-0.1**
CTA	**Charters Tower**	**28.75**	**140**	P	**P**	**13 29 13.7**	**+1.7**
	comp=Z,2.2nm,0.7s,baz=308,slow=12,SNR=2.5						
FORT	**Forrest**	**32.41**	**178**	P	**P**	**13 29 40.5**	**-3.5**
NWAO	**Narrogin (SRO)**	**35.77**	**194**	P	**P**	**13 30 12.4**	**-0.7**
	comp=Z,2.9nm,0.5s,baz=49,slow=8.0,SNR=1.9						
NWAO	**Narrogin (SRO)**	**35.77**	**194**	P	**P**	**13 30 12.0**	**-1.1**
STKA	**Stephens Creek**	**36.21**	**159**	P	**P**	**13 30 16.6**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=344,slow=8.4,SNR=6.5						
STKA	**Stephens Creek**	**36.21**	**159**	P	**P**	**13 30 16.3**	**-0.6**
ARMA	**Armidale**	**39.68**	**146**	P	**P**	**13 30 44.7**	**-1.5**
ARMA				IAmb	IAmb	13 31 01.5	
	comp=Z,5.3nm,1.1s						
WMQ	**Urumqi**	**54.50**	**326**	*e*P	**P**	**13 32 44.7**	**+3.5**
MK31	**Makanchi Array**	**59.33**	**326**	P	**P**	**13 33 16.4**	**+1.2**
MK31				IAmb	IAmb	13 33 26.3	
	comp=Z,3.1nm,1.1s						
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**13 33 16.3**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=122,slow=8.3,SNR=13						
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**13 33 16.2**	**+1.0**
MAKZ	**Makanchi**	**59.52**	**326**	P	**P**	**13 33 17.4**	**+0.9**
MAKZ				IAmb	IAmb	13 33 26.5	
	comp=Z,6.0nm,1.1s						
KURK	**Kurchatov**	**63.55**	**328**	P	**P**	**13 33 44.4**	**+0.9**
KURK				IAmb	IAmb	13 33 45.9	
	comp=Z,2.9nm,0.5s						
VNDA	**Vanda**	**81.48**	**173**	P	**P**	**13 35 29.0**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=312,slow=6.8,SNR=3.7						

*DDA **01** 13:33:49.7,34.88N×33.97E,h53km±1km,ML2.9*
*NIC **01** 13:33:51.4±0.0,34.84N×33.89E,h47km±1km,Ml3.3/7*
*GII **01** 13:33:52.3±0.0,34.64N×33.90E,h30km,MD2.3/5*
*ISK **01** 13:33:52.2,35.07N×33.92E,h13km,ML3.3/17*
ISC 01 13:33:50.2±1.2,34.81N±0.02×33.97E±0.03,h52km±7km,
n67,σ1.00/106,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PARAL	**Paralimni**	**0.19**	**18**	P	**Pn**	**13 33 59.6**	**+0.9**
PARAL				S	**Sn**	**13 34 05.5**	**+0.8**
PARAL				AML	AML	13 34 07.5	
	7.0nm,0.5s						
PARAL				AML	AML	13 34 07.5	
	7.0nm,0.5s						
PARAL				AML	AML	13 34 09.2	
	4.3nm,0.3s						
PARAL				AML	AML	13 34 09.2	
	4.3nm,0.3s						
MVOU	**Mavrovouni**	**0.34**	**307**	P	**Pn**	**13 33 59.9**	**0.0**
MVOU				S	**Sn**	**13 34 06.5**	**-0.3**
MVOU				AML	AML	13 34 06.6	
	11nm,0.2s						
MVOU				AML	AML	13 34 06.6	
	11nm,0.2s						
MVOU				AML	AML	13 34 06.7	
	20nm,0.3s						
MVOU				AML	AML	13 34 06.7	
	20nm,0.3s						
AKIN	**Akıncılar- Kıb**	**0.46**	**296**	PG	**Pn**	**13 34 00.7**	**-0.4**
CSS	**Mathiatis**	**0.55**	**286**	PG	**Pn**	**13 34 01.9**	**-0.2**
CSS				SG	**Sn**	**13 34 10.4**	**-0.4**
CSS	**Mathiatis**	**0.55**	**286**	Pg	**Pn**	**13 34 01.9**	**-0.2**
CSS	**Mathiatis**	**0.55**	**286**	P	**Pn**	**13 34 02.0**	**-0.2**
CSS				S	**Sn**	**13 34 10.1**	**-0.7**
CSS				AML	AML	13 34 10.6	
	1.8nm,0.3s						
CSS				AML	AML	13 34 10.6	
	1.8nm,0.3s						
CSS				AML	AML	13 34 10.7	
	2.4nm,0.3s						
CSS				AML	AML	13 34 10.7	
	2.4nm,0.3s						
ATHAL	**Athalassa**	**0.57**	**305**	P	**Pn**	**13 34 02.8**	**+0.3**
ATHAL				S	**Sn**	**13 34 10.2**	**-1.1**
ATHAL				AML	AML	13 34 12.9	
	11nm,0.6s						
ATHAL				AML	AML	13 34 12.9	
	11nm,0.6s						
ATHAL				AML	AML	13 34 17.7	
	6.8nm,0.5s						
ATHAL				AML	AML	13 34 17.7	
	6.8nm,0.5s						
ASGA	**Asgata**	**0.59**	**268**	P	**Pn**	**13 34 02.5**	**-0.2**
ASGA				S	**Sn**	**13 34 11.8**	**+0.1**
ASGA				AML	AML	13 34 12.0	
	4.4nm,0.3s						
ASGA				AML	AML	13 34 12.0	
	4.4nm,0.3s						
ASGA				AML	AML	13 34 13.0	
	5.2nm,0.4s						
ASGA				AML	AML	13 34 13.0	
	5.2nm,0.4s						
EREN	**Erenkoy**	**0.74**	**13**	*i* P	**Pn**	**13 34 04.1**	**-0.4**
EREN				*i* S	**Sn**	**13 34 14.7**	**-0.2**
EREN				IAML		13 34 21.0	
	comp=E,369nm,0.5s						
EREN				IAML		13 34 23.0	
	comp=N,256nm,0.4s						
SZAC	**Souni**	**0.90**	**267**	P	**Pn**	**13 34 06.8**	**+0.2**
SZAC				S	**Sn**	**13 34 18.7**	**0.0**
SZAC				AML	AML	13 34 19.0	
	comp=N,5.6nm,0.2s						
SZAC				AML	AML	13 34 19.0	
	comp=N,5.6nm,0.2s						
AKDN	**Akdeniz- Kıbrı**	**0.95**	**301**	PG	**Pn**	**13 34 08.3**	**+0.9**
ALFC	**Alefka**	**1.18**	**287**	P	**Pn**	**13 34 10.3**	**-0.1**
ALFC				S	**Sn**	**13 34 25.1**	**-0.3**
ALFC				AML	AML

QRWL	**Qaraoun**	**1.90**	**131**	*eP*		**Pn**	**13 34 20.9**	**+0.6**
GAZI	**Gazipasa**	**1.96**	**317**	*i* P		**Pn**	**13 34 21.1**	**+0.1**
GAZI				*i* S		**Sn**	**13 34 42.0**	**-2.5**
GAZI				IAML			13 34 47.0	
	comp=N,66nm,0.4s							
ERMK	**Ermenek**	**2.02**	**335**	*i* P		**Pn**	**13 34 23.4**	**+1.4**
ERMK				*i* S		**Sn**	**13 34 44.5**	**-1.7**
ERMK				IAML			13 34 52.0	
	comp=N,91nm,0.8s							
RCY	**Rachaya**	**2.03**	**130**	*eP*		**Pn**	**13 34 23.2**	**+1.1**
SHBL	**Chebaa**	**2.07**	**134**	*eP*		**Pn**	**13 34 23.6**	**+0.9**
MERS	**Mersin**	**2.10**	**12**	PN		**Pn**	**13 34 24.9**	**+1.9**
GEM	**Giv'at Ha'Em**	**2.13**	**138**	Pn		**Pn**	**13 34 24.3**	**+1.0**
GEM				Sn		**Sn**	**13 34 49.3**	**+0.7**
YAYL	**Yayladag**	**2.13**	**54**	*i* P		**Pn**	**13 34 22.9**	**-0.6**
YAYL				*i* S		**Sn**	**13 34 48.3**	**-0.5**
YAYL				IAML			13 34 53.0	
	comp=E,105nm,0.8s							
YAYL				IAML			13 34 54.0	
	comp=N,152nm,0.4s							
NATI	**Neve Ativ**	**2.13**	**136**	Pn		**Pn**	**13 34 24.3**	**+1.0**
NATI				Sn		**Sn**	**13 34 48.7**	**+0.1**
MMA0B	**Mount Meron ar**	**2.15**	**146**	Pn		**Pn**	**13 34 24.1**	**+0.4**
MMA0B				Sn		**Sn**	**13 34 49.2**	**-0.1**
BLGI	**Bet Lehem HaGe**	**2.31**	**153**	Pn		**Pn**	**13 34 24.4**	**+0.6**
OFRI	**`Ofer**	**2.34**	**159**	Pn		**Pn**	**13 34 26.5**	**+0.2**
OFRI				Sn		**Sn**	**13 34 52.6**	**-1.3**
KRMN	**Karaman**	**2.43**	**347**	PN		**Pn**	**13 34 28.8**	**+1.3**
GULE	**Gulek**	**2.55**	**15**	*i* P		**Pn**	**13 34 30.6**	**+1.2**
GULE				*i* S		**Sn**	**13 34 57.0**	**-2.2**
GULE				IAML			13 35 06.0	
	comp=E,39nm,0.5s							
KERG	**Konya-Eregli**	**2.60**	**3**	*i* P		**Pn**	**13 34 31.3**	**+1.3**
KERG				*i* S		**Sn**	**13 35 00.9**	**+0.5**
KERG				IAML			13 35 08.0	
	comp=N,44nm,0.2s							
MMLI	**Mount Malkishu**	**2.66**	**152**	Pn		**Pn**	**13 34 31.6**	**+1.0**
MMLI				Sn		**Sn**	**13 35 01.7**	**0.0**
SLTI	**Sal'it**	**2.71**	**160**	Pn		**Pn**	**13 34 31.9**	**+0.5**
SLTI				Sn		**Sn**	**13 35 02.1**	**-0.9**
KEPZ	**Antalya-Kepez**	**2.84**	**318**	*i* P		**Pn**	**13 34 33.8**	**+0.7**
HMDT	**Nahal Hemdat**	**2.86**	**153**	Pn		**Pn**	**13 34 34.9**	**+1.5**
HMDT				Sn		**Sn**	**13 35 06.9**	**+0.3**
AKO	**Adana**	**2.90**	**24**	*i* P		**Pn**	**13 34 35.8**	**+1.8**
SEYD	**Seydisehir-KON**	**3.11**	**327**	PN		**Pn**	**13 34 38.9**	**+2.0**
UJAP	**Al Uja**	**3.11**	**156**	Pn		**Pn**	**13 34 37.7**	**+0.9**
KUZU	**Kuzuini**	**3.19**	**51**	*i* P		**Pn**	**13 34 38.4**	**+0.4**
KUZU				*i* S		**Sn**	**13 35 12.9**	**-2.0**
KUZU				IAML			13 35 19.0	
	comp=E,38nm,0.3s							
KUZU				IAML			13 35 22.0	
	comp=N,42nm,0.4s							
KAMA	**Osmaniye**	**3.23**	**42**	*i* P		**Pn**	**13 34 39.7**	**+1.2**
KAMA				*i* S		**Sn**	**13 35 12.4**	**-3.3**
AMAZ	**Amatzia**	**3.36**	**166**	Pn		**Pn**	**13 34 40.7**	**+0.4**
AMAZ				Sn		**Sn**	**13 35 18.1**	**-0.9**
ANDN	**Andirin**	**3.37**	**34**	*i* P		**Pn**	**13 34 41.1**	**+0.8**
DSI	**Dead Sea**	**3.44**	**160**	Pn		**Pn**	**13 34 41.9**	**+0.6**
DSI				Sn		**Sn**	**13 35 20.5**	**-0.4**
HCB	**Kahramanmara**	**3.47**	**42**	*i* P		**Pn**	**13 34 39.5**	**-2.3**
HCB				IAML			13 35 22.0	
	comp=E,25nm,0.3s							
YTIR	**Yattir**	**3.57**	**164**	Pn		**Pn**	**13 34 43.8**	**+0.6**
YTIR				Sn		**Sn**	**13 35 23.6**	**-0.6**
GHAJ	**Ghor Haditha**	**3.75**	**159**	Pn		**Pn**	**13 34 46.7**	**+1.2**
KZIT	**Kziot**	**3.91**	**175**	Pn		**Pn**	**13 34 48.1**	**+0.3**
KARJ	**KARJ**	**3.94**	**159**	Pn		Pn	13 34 37.2	-11
ZFRI	**Zfri**	**4.37**	**166**	Pn		**Pn**	**13 34 54.5**	**+0.5**
PRNI	**Paran**	**4.53**	**169**	Pn		**Pn**	**13 34 56.9**	**+0.6**
KRMI	**Paran Flat**	**4.72**	**172**	Pn		**Pn**	**13 34 58.8**	**-0.2**
HRFI	**Mount Harif**	**4.84**	**169**	Pn		**Pn**	**13 35 01.2**	**+0.6**
HRFI				Sn		**Sn**	**13 35 53.7**	**-1.8**
MBRI	**Mt Berech**	**5.07**	**171**	Pn		**Pn**	**13 35 04.2**	**+0.5**
EIL	**Elat**	**5.19**	**171**	Pn		**Pn**	**13 35 05.8**	**+0.4**
EIL				Sn		**Sn**	**13 36 02.9**	**-1.1**

*TEH **01** 13:36:51.6,32°.74N×47°.85E,h10km,ML2.8*
*ISN **01** 13:36:51.2±1.9,32°.78N×47°.71E,h15km,ML2.6*
ISC 01 13:36:29.3±7.6,31°.5N±0°.4×48°.2E±0°.2,h10km,n10,
σ0s50/10,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKMR	**Kamar-syah**	**2.06**	**4**	*e*		13 37 15.6	
IKMR				*ePg*	**Pg**	**13 37 08.6**	**-0.1**
IKFM	**Kafar-mosalman**	**2.08**	**352**	*e*		13 37 10.8	
IKFM				*ePg*	**Pb**	**13 37 06.9**	**-0.2**
IDOB	**Doab**	**2.32**	**359**	*ePg*	**Pg**	**13 37 12.9**	**-0.9**
IDOB				*e*		13 37 15.6	
IBDR	**Badra**	**2.54**	**311**	*ePg*	**Pg**	**13 37 18.0**	**+0.1**
	baz=102						
IBDR				*eSg*	**Sn**	**13 37 41.0**	**-0.4**
IBDR				AML	AML	13 37 47.2	
	comp=N,87nm,0.3s						
IBDR				AML	AML	13 38 01.0	
	comp=E,102nm,0.6s						
IPIR	**Pirpir**	**2.59**	**61**	*ePn*	Pg	13 37 35.5	+17
IPIR				*e*		13 38 23.1	
HSAM	**Samen**	**2.77**	**7**	*ePg*	**Pg**	**13 37 22.4**	**+0.1**
HSAM				*e*		13 37 24.2	
IKOM	**Komasi**	**2.77**	**348**	*ePg*	**Pb**	**13 37 19.3**	**+0.3**
IKOM				*e*		13 37 23.1	
IGHG	**Ghaleghazi**	**3.18**	**335**	*ePn*	**Pb**	**13 37 25.9**	**-0.1**
IGHG				*e*		13 38 02.2	
IVIS	**Veis**	**3.26**	**340**	*ePn*	**Pb**	**13 37 27.8**	**+0.4**
IVIS				*e*		13 37 58.8	
IRAZ	**Razeghan**	**4.19**	**20**	*e*	**Sg**	**13 38 44.5**	**+0.6**

*IDC **01** 13:44:15.1±0.9,36°.78N×97°.97E,h0km,mb3.8/12,*
mb1 3.9/16,mb1mx3.8/53,mbtmpg3.8/16,ML3.6/4,Error
ellipse: s-maj=31.0km s-min=16.6km az=40.0
ISC 01 13:44:16.5±1.0,36°.8N±0°.2×97°.9E±0°.1,h10km,n17,
σ0s96/17,mb3.8/12,Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**12.73**	**27**	Pn	**Pn**	**13 47 18.4**	**+0.7**
	1.4nm,0.3s,baz=210,slow=17,SNR=12						
MKAR	**Makanchi Array**	**15.31**	**316**	Pn	**Pn**	**13 47 50.1**	**-2.5**
	0.3nm,0.3s,baz=126,slow=14,SNR=10						
ZALV	**Zalesovo Beam**	**19.42**	**336**	P	**P**	**13 48 43.5**	**+0.9**
	0.2nm,0.3s,baz=148,slow=12,SNR=4.9						
KURBB	**Kurchatov Arra**	**19.59**	**321**	P	**P**	**13 48 45.3**	**+0.7**
	0.1nm,0.3s,baz=127,slow=11,SNR=19						
KSRS	**Korea Array**	**23.95**	**79**	P	**P**	**13 49 30.2**	**-0.6**
	0.5nm,0.5s,baz=276,slow=8.4,SNR=6.0						
BVAR	**Borovoye Array**	**25.13**	**319**	P	**P**	**13 49 42.7**	**+1.2**
	1.4nm,0.8s,baz=105,slow=8.2,SNR=6.4						
AKTO	**Aktyubinsk**	**31.52**	**308**	P	**P**	**13 50 39.6**	**+1.0**
	0.8nm,0.4s,baz=104,slow=14,SNR=3.6						
AKASG	**Malin Array Be**	**49.76**	**309**	P	**P**	**13 53 09.4**	**+0.5**
	0.3nm,0.3s,baz=332,slow=25,SNR=1.6						
ARCES	**ARCESS Array B**	**49.95**	**334**	P	**P**	**13 53 10.2**	**+0.1**
	2.3nm,0.9s,baz=79,slow=7.6,SNR=12						
FINES	**FINESS Array B**	**49.96**	**323**	P	**P**	**13 53 10.6**	**+0.3**
	1.5nm,0.3s,baz=91,slow=8.8,SNR=19						
NB2	**NORSAR Subarra**	**57.08**	**325**	P	**P**	**13 54 02.2**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=71,slow=7.4						
NOA	**NORSAR Array B**	**57.08**	**325**	P	**P**	**13 54 02.4**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=70,slow=7.8,SNR=5.5						
WRA	**Warramunga Arr**	**66.09**	**142**	P	**P**	**13 55 03.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=344,slow=7.1,SNR=2.5						
ILAR	**Eielson Array**	**66.95**	**25**	P	**P**	**13 55 07.7**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=295,slow=6.6,SNR=4.1						
INK	**Inuvik**	**68.48**	**18**	P	**P**	**13 55 17.9**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=333,slow=8.1,SNR=4.0						
ASAR	**Alice Springs**	**69.06**	**145**	P	**P**	**13 55 23.1**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=339,slow=6.1,SNR=5.3						
ESDC	**Sonseca Array**	**75.40**	**309**	P	**P**	**13 56 00.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=43,slow=7.1,SNR=4.0						

IDC 01 13:56:40.2±1.5,3°.35S×151°.60E,h336km±22km,mb2.9/3,
mb1 3.2/3,mb1mx2.7/44,mbtmpg3.6/3,Error ellipse:
s-maj=104.0km s-min=31.7km az=124.0,New Ireland
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.04**	**156**	P	Pn	13 57 24.9	+0.3
	4.4nm,0.3s,baz=337,slow=13,SNR=9.4						
KRVT				S	S	13 58 00.4	+0.3
	1.6nm,0.3s,baz=192,slow=22,SNR=1.2						
WRA	**Warramunga Arr**	**23.57**	**224**	P	P	14 01 22.1	+0.2
	0.8nm,0.3s,baz=49,slow=10.0,SNR=18						
ASAR	**Alice Springs**	**26.46**	**219**	P	P	14 01 46.9	-0.9
	0.2nm,0.3s,baz=46,slow=8.1,SNR=7.4						
FITZ	**Fitzroy Crossi**	**29.34**	**238**	P	P	14 02 14.1	+0.9
	0.8nm,0.7s,baz=65,slow=7.0,SNR=1.3						
TORD	**Torodi Ar. Bea**	**148.70**	**290**	PKPbc	PKPbc	14 15 48.6	-0.6
	0.5nm,0.3s,baz=81,slow=2.5,SNR=9.7						

*REY **01** 14:01:12.7,64°.66N×17°.39W,h7km*
*NEIC **01** 14:01:13.8±2.3,64°.4N±0°.2×17°.7W±0°.2,h7km±6km,*
mb4.3/5,Error ellipse: s-maj=28.6km s-min=10.6km
az=190.0
*IDC **01** 14:01:13.8±0.7,64°.57N×17°.59W,h0km,mb3.9/13,*
mb1 4.1/15,mb1mx3.8/61,mbtmpg3.9/15,ML3.3/2,MS3.5/5,
Ms1 3.5/5,ms1mx3.0/47,Error ellipse: s-maj=19.2km
s-min=10.2km az=14.0
ISC 01 14:01:14.1±0.5,64°.67N±0°.02×17°.44W±0°.02,h10km,n87,
σ2s28/95,mb4.0/18,MS3.5/4,Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**14**	P	**Pg**	**14 01 15.6**	**-1.6**
	baz=3.7						
IVON	**Vonarskard**	**0.14**	**273**	P	**Pg**	**14 01 16.1**	**-1.2**
	baz=274						
IVON				S	**Sg**	**14 01 19.1**	**-0.5**
	baz=274						
IGRF	**Grimsfjall**	**0.27**	**164**	P	**Pg**	**14 01 17.7**	**-1.9**
	baz=169						
IGRF				S	**Sg**	**14 01 21.9**	**-1.4**
	baz=169						
IKVE	**Kverkfjoll**	**0.33**	**87**	P	**Pg**	**14 01 19.1**	**-1.7**
	baz=87						
IKVE				S	**Sg**	**14 01 23.4**	**-1.7**
	baz=87						
IHUS	**Husbondi**	**0.38**	**194**	P	**Pg**	**14 01 20.3**	**-1.4**
	baz=198						
IVOT	**Vottur**	**0.41**	**164**	P	**Pg**	**14 01 20.3**	**-1.9**
	baz=167						
IVOT				S	**Sg**	**14 01 26.5**	**-1.2**
	baz=167						
ISKR	**Skrokkalda**	**0.42**	**256**	P	**Pb**	**14 01 21.0**	**-2.7**
	baz=257						
ISKR				S	**Sb**	**14 01 27.8**	**-2.3**
	baz=257						
IJOK	**Jokulheimar**	**0.49**	**224**	P	**Pb**	**14 01 21.8**	**-3.0**
	baz=227						
IJOK				S	**Sb**	**14 01 29.3**	**-2.7**
	baz=227						
IIEY	**Innrieyrar**	**0.65**	**208**	P	**Pg**	**14 01 24.5**	**-2.1**
	baz=210						
IIEY				S	**Sb**	**14 01 33.9**	**-2.6**
	baz=210						
IKSK	**Karasker**	**0.66**	**140**	P	**Pg**	**14 01 23.6**	**-3.2**
	baz=141						
IKSK				S	**Sg**	**14 01 33.6**	**-1.9**
	baz=141						
ISVA	**Svartarkot**	**0.68**	**7**	P	**Pg**	**14 01 24.8**	**-2.4**
	baz=4.6						
ISVA				S	**Sg**	**14 01 34.5**	**-1.6**
	baz=4.6						
IKAL	**Kalfafell**	**0.73**	**189**	P	**Pg**	**14 01 25.7**	**-2.4**
	baz=190						
IKAL				S	**Sg**	**14 01 35.9**	**-1.7**
	baz=190						
IVSH	**V-Sauoahnukur**	**0.75**	**78**	P	**Pg**	**14 01 25.7**	**-2.9**
	baz=78						
IVSH				S	**Sg**	**14 01 36.1**	**-2.2**
	baz=78						
IVAT	**Vatnsfell**	**0.80**	**234**	P	**Pb**	**14 01 27.7**	**-2.4**
	baz=235						
IADA	**Aoalbol**	**0.87**	**65**	P	**Pg**	**14 01 27.7**	**-3.2**
	baz=64						
IHVE	**Hveravellir**	**0.93**	**284**	P	**Pb**	**14 01 29.4**	**-3.0**
	baz=284						
IMEL	**Melhnausar**	**0.97**	**20**	P	**Pg**	**14 01 29.8**	**-2.9**
	baz=18						
IREN	**Reynihlio**	**1.01**	**13**	P	**Pg**	**14 01 30.4**	**-3.2**
	baz=11						
ISNB	**Snabyli**	**1.07**	**210**	P	**Pg**	**14 01 32.1**	**-2.5**
	baz=211						
IKVO	**Krokottuvotn**	**1.08**	**12**	P	**Pg**	**14 01 31.4**	**-3.5**
	baz=11						
ISLY	**Slysaalda**	**1.12**	**222**	P	**Pg**	**14 01 32.9**	**-2.7**
	baz=223						
IGRS	**Grimsstaoir**	**1.12**	**29**	P	**Pb**	**14 01 32.4**	**-3.3**
	baz=28						
IFED	**Fedgar**	**1.17**	**238**	P	**Pn**	**14 01 33.9**	**-2.6**
	baz=239						
IRJU	**Rjupnafell**	**1.18**	**208**	P	**Pb**	**14 01 34.1**	**-2.5**
	baz=209						
IMJO	**Mjoaskard**	**1.22**	**234**	P	**Pn**	**14 01 34.9**	**-2.3**
	baz=235						
ISKI	**Skildingahlsh**	**1.22**	**8**	P	**Pn**	**14 01 33.9**	**-3.4**
	baz=6.9						
IGHA	**Grjothals**	**1.23**	**15**	P	**Pn**	**14 01 33.9**	**-3.4**
	baz=14						
IGRA	**Granastaoir**	**1.26**	**357**	P	**Pn**	**14 01 34.7**	**-3.0**
	baz=356						
IGYG	**Gygjarholskot**	**1.26**	**253**	P	**Pb**	**14 01 34.9**	**-3.0**
	baz=254						
IHVO	**Lagu-Hvolar**	**1.30**	**209**	P	**Pn**	**14 01 35.9**	**-2.4**
	baz=210						
IDIM	**Dimmadalss**	**1.32**	**9**	P	**Pn**	**14 01 35.4**	**-3.2**
	baz=8.1						
IHLA	**Hella**	**1.34**	**343**	P	**Pn**	**14 01 36.0**	**-2.9**
	baz=342						
IALF	**Alftagrof**	**1.41**	**214**	P	**Pb**	**14 01 37.9**	**-2.6**
	baz=215						
IHED	**Heoinshofoi**	**1.42**	**2**	P	**Pn**	**14 01 37.0**	**-3.0**
	baz=1.2						
IESK	**Eystri-Skogar**	**1.45**	**219**	P	**Pn**	**14 01 37.2**	**-3.0**
	baz=219						
ISAU	**Saurbar**	**1.46**	**244**	P	**Pn**	**14 01 38.0**	**-2.5**
	baz=244						
IBRE	**Brettingsstaoi**	**1.48**	**353**	P	**Pn**	**14 01 38.1**	**-2.6**
	baz=352						
IGIL	**Gilhagi**	**1.49**	**17**	P	**Pn**	**14 01 37.9**	**-3.0**
	baz=16						
ISIG	**Siglufjorour**	**1.60**	**338**	P	**Pn**	**14 01 39.9**	**-2.5**
	baz=337						
IASM	**Asmuli**	**1.62**	**240**	P	**Pb**	**14 01 40.7**	**-3.3**
	baz=241						
BORG	**Borgarnes**	**1.67**	**275**	Pg	**Pb**	**14 01 42.3**	**-2.6**
	17nm,0.3s,baz=92,slow=7.3,SNR=36						
BORG				Lg	Lg	14 02 05.7	
	8.4nm,0.3s,baz=46,slow=23,SNR=9.2						
ISOL	**Solvholt**	**1.70**	**246**	P	Pn	**14 01 41.5**	**-2.2**
	baz=246						
IKRO	**Krokur**	**1.70**	**252**	P	**Pb**	**14 01 42.1**	**-3.2**
	baz=252						
IHEI	**Heioarbar**	**1.71**	**256**	P	**Pb**	**14 01 42.1**	**-3.5**
	baz=256						
ILEI	**Leirhofn**	**1.79**	**12**	P	**Pn**	**14 01 42.7**	**-2.3**
	baz=12						
ANGG	**Ammassalik, Gr**	**8.55**	**285**	Pn	**Pn**	**14 03 16.4**	**-1.4**
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn	**Pn**	**14 04 01.2**	**-0.3**
	baz=319,slow=13,SNR=4.3						
NB201	**NORSAR Array S**	**13.54**	**92**	Pn	**Pn**	**14 04 25.0**	**-1.0**
HFS	**Hagfors**	**15.02**	**93**	Pn	**P**	**14 04 52.2**	**+0.6**
	0.1nm,0.3s,baz=330,slow=8.6,SNR=6.2						
ARCES	**ARCESS Array B**	**17.10**	**55**	LR	LR	14 10 46.5	
	comp=Z,88nm,21.3s,baz=215,slow=33						
FINES	**FINESS Array B**	**19.68**	**79**	P	**Pn**	**14 05 46.5**	**+2.2**
	0.1nm,0.3s,baz=284,slow=7.7,SNR=5.2						
FINES	**FINESS Array B**	**19.68**	**79**	P	**Pn**	**14 05 44.2**	**-0.2**
CLL	**Collm**	**20.68**	**116**	*i* P	**P**	**14 05 53.9**	**0.0**
	comp=Z,24nm,1.7s						
CLL				*e*PPP	PPP	14 06 19.0	
CLL	**Collm**	**20.68**	**116**	P	**P**	**14 05 53.2**	**-0.7**
GRF	**Grafenberg Arr**	**21.31**	**121**	*eP*	**P**	**14 06 02.6**	**+1.9**
	comp=Z,23nm,1.5s,baz=325,slow=10.0						
NKC	**Novy Kostel**	**21.33**	**118**	*eP*	**P**	**14 06 05.6**	**+4.7**
STU	**Stuttgart**	**21.35**	**125**	P	**P**	**14 06 00.3**	**-0.8**
STU				IAmb	IAmb	14 06 18.9	
	comp=Z,29nm,1.4s						
BRG	**Berggiesshubel**	**21.39**	**115**	*i* P	**P**	**14 06 02.3**	**+0.8**
	comp=Z,14nm,1.3s						
BFO	**Black Forest**	**21.43**	**127**	P	**P**	**14 06 01.2**	**-0.9**
BFO				IAmb	IAmb	14 06 11.9	
	comp=Z,18nm,1.4s						
CHVC	**Chvalec**	**22.44**	**113**	*eP*	**P**	**14 06 14.8**	**+1.9**
KHC	**Kasperske Hory**	**22.65**	**118**	*eP*	**P**	**14 06 17.4**	**+2.3**
DPC	**Dobruska-Polom**	**22.74**	**113**	*eP*	**P**	**14 06 16.2**	**+0.2**
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**14 06 19.7**	**+1.5**
	comp=Z,1.2nm,0.9s,baz=330,slow=7.7,SNR=7.4						
GERES				LR	LR	14 15 01.5	
	comp=Z,109nm,19.4s,baz=330,slow=36						
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**14 06 17.1**	**-1.0**
KRLC	**Kraliky**	**23.14**	**113**	*eP*	**P**	**14 06 21.7**	**+1.5**
DAVOX	**Davos/Dischmat**	**23.30**	**127**	P	**P**	**14 06 23.6**	**+1.7**
	comp=Z,1.9nm,0.8s,baz=308,slow=16,SNR=4.6						
TUE	**Stuetta**	**23.38**	**128**	P	**P**	**14 06 23.7**	**+0.8**
TUE				IAmb	IAmb	14 06 28.0	
	comp=Z,11nm,1.2s						
VRAC	**Vranov**	**23.67**	**114**	*eP*	**P**	**14 06 26.3**	**+0.8**
MORC	**Moravsky Berou**	**23.67**	**112**	*eP*	**P**	**14 06 26.0**	**+0.5**
KRUC	**Moravsky**	**23.79**	**115**	*eP*	**P**	**14 06 26.7**	**+0.1**
VYHS	**Vyhne**	**25.21**	**112**	*eP*	**P**	**14 06 40.7**	**+1.1**
ESDC	**Sonseca Array**	**26.24**	**156**	P	**P**	**14 06 49.8**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=346,slow=9.6,SNR=11						
KOLS	**Kolonicke sedl**	**26.25**	**108**	*eP*	**P**	**14 06 51.1**	**+2.1**
NRIK	**Noril'sk**	**36.45**	**35**	P	**P**	**14 08 21.1**	**+2.7**
	comp=Z,1.3nm,0.5s,baz=314,slow=6.9,SNR=4.1						
BRTR	**Keskin Array B**	**38.45**	**105**	P	**P**	**14 08 38.6**	**+2.7**
	comp=Z,1.2nm,0.9s,baz=294,slow=7.2,SNR=2.8						
KBZ	**Khabaz**	**39.09**	**92**	P	**P**	**14 08 43.6**	**+2.6**
	comp=Z,4.3nm,1.0s,baz=348,slow=8.0,SNR=3.7						
KBZ				LR	LR	14 24 58.1	
	comp=Z,68nm,19.5s,baz=1.5,slow=36						
TOLK	**Toolik Lake Re**	**42.76**	**336**	P	P	14 09 14.1	+3.1
BMAR	**Burnt Mountain**	**42.91**	**333**	P	**P**	**14 09 14.7**	**+2.4**
ILAR	**Eielson Array**	**45.70**	**332**	P	**P**	**14 09 36.5**	**+1.9**
	comp=Z,3.0nm,1.1s,baz=22,slow=5.9,SNR=14						
ILAR				PcP	**PcP**	**14 11 14.1**	**+1.9**
	comp=Z,1.2nm,1.0s,baz=335,slow=2.1,SNR=6.0						
ILAR				LR	LR	14 33 17.1	
	comp=Z,65nm,18.3s,baz=154,slow=42						
ILAR	**Eielson Array**	**45.70**	**332**	P	P	14 09 37.6	+3.1
ZALV	**Zalesovo Beam**	**47.61**	**51**	P	**P**	**14 09 50.8**	**+1.2**
	comp=Z,1.2nm,0.9s,baz=324,slow=7.3,SNR=4.7						
KURBB	**Kurchatov Arra**	**48.13**	**58**	P	**P**	**14 09 54.5**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=324,slow=7.5,SNR=19						
TORD	**Torodi Ar. Bea**	**53.13**	**156**	P	**P**	**14 10 31.3**	**-0.4**
	comp=Z,1.0nm,0.9s,baz=343,slow=6.8,SNR=5.4						
PDAR	**Pinedale Array**	**53.20**	**293**	P	**P**	**14 10 33.6**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=55,slow=5.6,SNR=11						
SONM	**Songino Array**	**59.62**	**40**	P	**P**	**14 11 19.2**	**+1.2**
	comp=Z,1.2nm,1.0s,baz=324,slow=5.7,SNR=4.6						
JTS	**Las Juntas de**	**71.21**	**254**	LR	LR	14 44 19.3	
	comp=Z,43nm,18.3s,baz=246,slow=36						
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P	**P**	**14 13 46.5**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=320,slow=6.8,SNR=5.3						

IDC 01 14:02:40.2±33.0,9°.34N×105°.26W,h0km,mb3.6/2,
mb1 4.0/3,mb1mx3.7/37,mbtmpg3.5/3,ML4.4/1,MS3.6/7,
Ms1 3.6/7,ms1mx3.3/23,Error ellipse: s-maj=892.9km
s-min=116.4km az=123.0,Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**12.70**	**52**	LR	LR	14 08 25.3	
	comp=Z,80nm,21.2s,baz=236,slow=27						
TXAR	**Lajitas Array**	**19.95**	**4**	P	P	14 07 13.8	-0.3
	0.2nm,0.3s,baz=181,slow=11,SNR=4.4						
TXAR				LR	LR	14 14 26.8	
	comp=Z,100nm,20.0s,baz=0.0,slow=35						
PFO	**Pinyon Flats O**	**26.27**	**339**	LR	LR	14 17 00.8	
	comp=Z,121nm,21.0s,baz=160,slow=33						
ATAH	**Atahualpa**	**31.37**	**121**	LR	LR	14 19 28.3	
	comp=Z,159nm,18.6s,baz=207,slow=32						
PDAR	**Pinedale Array**	**33.51**	**354**	P	P	14 09 22.0	+0.3
	1.2nm,1.0s,baz=158,slow=9.6,SNR=5.6						
SCHQ	**Schefferville**	**54.63**	**26**	LR	LR	14 37 08.1	
	comp=Z,113nm,19.1s,baz=70,slow=38						
ILAR	**Eielson Array**	**62.50**	**341**	P	P	14 13 05.1	-0.2
	0.2nm,0.6s,baz=150,slow=6.0,SNR=2.4						
RAO	**Raoul Island**	**79.71**	**238**	LR	LR	14 40 34.8	
	comp=Z,44nm,21.4s,baz=320,slow=28						
ARCES	**ARCESS Array B**	**94.34**	**15**	LR	LR	14 57 59.7	
	comp=Z,36nm,19.7s,baz=310,slow=35						

*TEH **01** 14:10:41.1,32°.86N×47°.69E,h8km,ML3.4*
*ISN **01** 14:10:41.4±0.8,32°.89N×47°.65E,h14km±5km,ML3.4*
*THR **01** 14:10:43.7±0.4,32°.77N×47°.90E,h14km±5km,

*SOME **01** 14:42:17.3,44˚.75N×82˚.12E,h20km*
*NNC **01** 14:42:18.1±1.6,44˚.66N×82˚.16E,h0km,mb3.5,mpv3.2,*
Error ellipse: s-maj=19.6km s-min=4.3km az=121.0
ISC 01 14:42:17.1±2.8,**44˚.68N**±0˚.06×**82˚.21E**±0˚.09,**h7**km±19km,
n18,σ0⁰**91**/30,**5C-1D**,**Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.77**	**260**	*eP*	**Pn**	**14 42 48.6**	**+0.4**
	8.7nm,0.2s						
DJR				*eS*	**Sn**	**14 43 11.4**	**+0.3**
	8.5nm,0.3s						
DJR	**Jarkent**	**1.77**	**260**	P	**Pb**	**14 42 50.2**	**+0.3**
	8.7nm,0.2s						
DJR				S	**Sg**	**14 43 13.9**	**0.0**
	8.5nm,0.3s						
KTMS	**Ketmen**	**1.82**	**228**	*eP*	**Pb**	**14 42 51.0**	**+0.2**
	1.9nm,0.1s						
KTMS				*eS*	**Sb**	**14 43 15.1**	**+1.2**
	22nm,0.3s						
MK31	**Makanchi Array**	**2.12**	**1**	⇑Pn	**Pb**	**14 42 55.6**	**-0.2**
	14nm,0.5s,baz=189,slow=15,SNR=247						
MK31				⇑Sn	**Sb**	**14 43 23.3**	**+0.9**
	1.9nm,0.2s,baz=183,slow=27,SNR=12						
MAKZ	**Makanchi**	**2.14**	**356**	⇑Pn	**Pb**	**14 42 54.8**	**-1.4**
	5.0nm,0.5s						
MAKZ				⇑Sn	**Sb**	**14 43 23.7**	**+0.8**
	8.7nm,0.4s						
PDGK	**Podgornoye**	**2.38**	**236**	Pg	**Pb**	**14 42 60.0**	**-0.5**
	1.5nm,0.2s						
PDGK				Lg	Lg	14 43 30.8	
	5.2nm,0.3s						
PDGK	**Podgornoye**	**2.38**	**236**	⇓Pn	**Pn**	**14 42 58.3**	**+1.6**
	1.3nm,0.5s						
PDGK				⇑Sn	**Sb**	**14 43 30.3**	**+0.2**
	4.2nm,0.4s						
SHLS	**Shalkode**	**2.50**	**234**	*eP*	**Pn**	**14 42 57.9**	**-0.5**
	6.1nm,0.2s						
SHLS				*eS*	**Sn**	**14 43 27.2**	**-2.0**
	26nm,0.3s						
SHLS	**Shalkode**	**2.50**	**234**	Pg	**Pn**	**14 42 59.0**	**+0.7**
	10.0nm,0.2s						
SHLS				Lg	Lg	14 43 29.1	
	26nm,0.3s						
UZB	**Uzynbulak**	**2.77**	**238**	*eP*	**Pb**	**14 43 05.9**	**-1.1**
	3.7nm,0.2s						
UZB				*eS*	**Sb**	**14 43 40.8**	**-0.4**
	3.0nm,0.2s						
UZB	**Uzynbulak**	**2.77**	**238**	Pg	**Pb**	**14 43 05.9**	**-1.1**
	3.5nm,0.4s						
UZB				Lg	Lg	14 43 40.8	
	5.0nm,0.2s						
MNBS	**Baschi**	**2.80**	**259**	*eP*	**Pb**	**14 43 06.6**	**-0.9**
	3.8nm,0.3s						
MNBS				*eS*	**Sb**	**14 43 42.2**	**+0.1**
	13nm,0.3s						
MNBS	**Baschi**	**2.80**	**259**	Pg	**Pb**	**14 43 06.6**	**-0.9**
	3.8nm,0.3s						
MNBS				Lg	Lg	14 43 42.2	
	13nm,0.3s						
KPKS	**Kokpek**	**2.82**	**246**	*eP*	**Pb**	**14 43 06.8**	**-1.0**
	9.3nm,0.2s						
KPKS				*eS*	**Sb**	**14 43 42.2**	**-0.4**
	19nm,0.3s						
ARXS	**Arharly**	**3.18**	**263**	*eP*	**Pb**	**14 43 13.3**	**-0.6**
	5.0nm,0.4s						
ARXS				*eS*	**Sb**	**14 43 53.7**	**+0.8**
	9.5nm,0.4s						
ARXS	**Arharly**	**3.18**	**263**	Pg	**Pb**	**14 43 13.3**	**-0.6**
	5.0nm,0.4s						
ARXS				Lg	Lg	14 43 53.3	
	9.5nm,0.4s						
SATY	**Saty**	**3.19**	**241**	*eP*	**Pb**	**14 43 14.1**	**-0.1**
	1.9nm,0.2s						
SATY				*eS*	**Sb**	**14 43 54.9**	**+1.5**
	6.7nm,0.2s						
SATY	**Saty**	**3.19**	**241**	Pg	**Pb**	**14 43 14.1**	**-0.1**
	1.9nm,0.2s						
SATY				Lg	Lg	14 43 54.9	
	6.7nm,0.2s						

*IDC **01** 14:57:09.2±1.9, 14˚.65N×143˚.54E, h0km, mb3.5/3,*
mb1 3.8/3, mb1mx3.4/29, mbtmp3.5/3, Error ellipse:
s-maj=260.6km s-min=25.9km az=109.0
*NEIC **01** 14:57:23.7±1.2, 14˚.60N±0˚.06×144˚.7E±0˚.1, h151km±11km,*
mb4.2/8, Error ellipse: s-maj=20.1km s-min=9.3km
az=86.0
ISC 01 14:57:25.4±0.9,**14˚.3N**±0˚.1×**144˚.4E**±0˚.2,**h150**km,**n13**,
σ1⁰**53**/14,**mb3.9**/8,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.87**	**146**		**Pn**	**14 57 49.8**	**+0.6**
GUMO				Sn	**Sn**	**14 58 04.7**	**-2.6**
PATS	**Pohnpei**	**15.59**	**117**		**Pn**	**15 00 56.4**	**-0.8**
JNU	**Nakatsue**	**22.39**	**329**	P	**P**	**15 02 09.8**	**-1.7**
JNU				IAmb	IAmb	15 02 21.1	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**35.26**	**196**	P	**P**	**15 04 07.1**	**+1.2**
WR0	**Warramunga Arr**	**35.40**	**196**	P	**P**	**15 04 08.3**	**+1.2**
WR0				IAmb	IAmb	15 04 21.6	
	comp=Z,2.0nm,1.1s						
WRAB	**Tennant Creek**	**35.43**	**196**	P	**P**	**15 04 06.6**	**-0.8**
WRAB				IAmb	IAmb	15 04 08.6	
	comp=Z,13nm,1.1s						
WB2	**Warramunga Arr**	**35.44**	**196**	P	**P**	**15 04 09.0**	**+1.6**
WB2				IAmb	IAmb	15 04 10.0	
	comp=Z,2.2nm,0.8s						
WRA	**Warramunga Arr**	**35.44**	**196**	P	**P**	**15 04 08.1**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=17,slow=9.2,SNR=15						
WRA	**Warramunga Arr**	**35.44**	**196**	P	**P**	**15 04 08.5**	**+1.0**
AS31	**Alice Springs**	**39.11**	**195**	P	**P**	**15 04 39.1**	**+0.8**
ASAR	**Alice Springs**	**39.11**	**195**	P	**P**	**15 04 39.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=19,slow=6.8,SNR=13						
MAKZ	**Makanchi**	**60.85**	**316**	P	**P**	**15 07 20.9**	**-1.1**
MAKZ				IAmb	IAmb	15 07 27.4	
	comp=Z,7.6nm,1.1s						
ILAR	**Eielson Array**	**68.13**	**25**	P	**P**	**15 08 11.2**	**+2.2**
	comp=Z,0.2nm,0.4s,baz=251,slow=5.8,SNR=6.5						

*SNET **01** 15:12:04.2±1.4, 13˚.25N×91˚.30W, h30km, ML3.2*
*GCG **01** 15:12:14.0±0.5, 14˚.11N×91˚.07W, h84km, MD3.8*
ISC 01 15:12:07.9±2.9,**13˚.2N**±0˚.1×**91˚.2W**±0˚.1,**h35**km,**n15**,
σ1⁰**24**/18,**1D**,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.25**	**14**	*eP*	**Pn**	**15 12 27.8**	**-1.2**
ERG	**Entre ros, C**	**1.27**	**342**	*eP*	**Pn**	**15 12 29.0**	**-0.1**
PCG	**Pacaya**	**1.27**	**25**	*eP*	**Pn**	**15 12 28.1**	**-1.4**
NBG	**Las Nubes**	**1.57**	**30**	*eP*	**Pn**	**15 12 32.8**	**-0.7**
RTR	**El Retiro**	**1.62**	**66**	*i* P	**Pn**	**15 12 32.2**	**-1.9**
BOQS	**Boqueron**	**1.90**	**74**	⇓*i*P	**Pn**	**15 12 37.6**	**-0.4**
TACO	**Tacachico**	**1.91**	**67**	*i* P	**Pn**	**15 12 36.1**	**-1.8**
LFRS	**El Faro**	**2.08**	**79**	*eP*	**Pn**	**15 12 39.7**	**-0.7**
MTO3	**Montecristo**	**2.10**	**56**	*eP*	**Pn**	**15 12 39.7**	**-1.2**
ESQI	**Esquipulas**	**2.21**	**53**	*i* P	**Pn**	**15 12 40.8**	**-1.4**
ESQI				*eS*	**Sn**	**15 13 09.9**	**+1.6**
PAVA	**Las Pavas**	**2.22**	**77**	*eP*	**Pn**	**15 12 42.1**	**-0.2**
COEG	**Centro de Oper**	**2.25**	**80**	*eS*	**Sn**	**15 13 09.9**	**+0.5**
MRL	**Marmol**	**2.33**	**38**	*eP*	**Pn**	**15 12 44.0**	**0.0**
COEB	**Comit de Eme**	**2.58**	**84**	*i* P	**Pn**	**15 12 46.6**	**-0.7**
COEB				*eS*	**Sn**	**15 13 18.9**	**+1.5**
COEB				IAML		15 13 20.4	
	comp=Z,139nm,0.4s						
LCND	**La Caada**	**3.19**	**88**	*eP*	**Pn**	**15 12 54.7**	**-0.9**
LCND				*eS*	**Sn**	**15 13 33.9**	**+1.5**

*AZER **01** 15:25:24.4, 40˚.33N×51˚.92E, h50km, ML3.1*
ISC 01 15:25:20.1±1.3,**40˚.48N**±0˚.08×**52˚.31E**±0˚.08,**h35**km,**n19**,
σ2⁰**46**/27,**2C-2D**,**Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIZA	**Siyzn**	**2.66**	**284**	S	**Sn**	**15 26 33.8**	**+2.2**
PQL	**Pirkuli**	**2.84**	**277**	S	**Sn**	**15 26 38.1**	**+1.8**
IML	**Ismayilli**	**3.15**	**277**	S	**Sn**	**15 26 44.9**	**+1.1**
XNQ	**Khinaliq**	**3.24**	**284**	S	**Sn**	**15 26 45.5**	**-0.6**
LKRN	**Lenkeran, Azer**	**3.25**	**238**	P	**Pn**	**15 26 10.5**	**+2.0**
LKRN				S	**Sn**	**15 26 44.9**	**-1.1**
GLBA	**Clilabad**	**3.26**	**249**	P	**Pn**	**15 26 10.8**	**+2.1**
GLBA				S	**Sn**	**15 26 45.7**	**-0.5**
ASTR	**Astara**	**3.33**	**236**	P	**Pn**	**15 26 11.3**	**+1.6**
ASTR				S	**Sn**	**15 26 46.3**	**-1.6**
QBL	**Gabala**	**3.43**	**279**	S	**Sn**	**15 26 50.0**	**-0.6**
YRD	**Yardimli**	**3.50**	**245**	P	**Pn**	**15 26 13.3**	**+1.0**
YRD				S	**Sn**	**15 26 49.8**	**-2.8**
ZRD	**Zardab**	**3.54**	**268**	S	**Sn**	**15 26 53.0**	**-0.1**
LRK	**Lerik**	**3.57**	**240**	P	**Pn**	**15 26 14.7**	**+1.5**
LRK				S	**Sn**	**15 26 52.0**	**-2.3**
QRD	**Qoradiz**	**3.96**	**257**	S	**Sn**	**15 27 01.5**	**-2.2**
GANJ	**Ganja**	**4.56**	**274**	S	**Sn**	**15 27 14.8**	**-3.7**
GDB	**GEDABAY**	**5.00**	**275**	S	**Sn**	**15 27 25.3**	**-4.0**
ORD	**Ordubad**	**5.11**	**254**	P	**Pn**	**15 26 36.5**	**+2.2**
ORD				S	**Sn**	**15 27 29.4**	**-2.6**
QZX	**Qazax, Azerbai**	**5.30**	**278**	S	**Sn**	**15 27 33.9**	**-2.7**
SBZ	**Shahbuz**	**5.30**	**260**	S	**Sn**	**15 27 33.7**	**-3.2**
AB31	**Akbulak array**	**10.31**	**29**	⇑Pn	**Pn**	**15 27 47.2**	**+1.8**
	0.2nm,0.5s,baz=212,slow=13,SNR=6.4						
AB31				⇓Sn	**Sn**	**15 29 36.6**	**-3.0**
	0.4nm,0.4s,baz=218,slow=25,SNR=7.3						
AKTO	**Aktyubinsk**	**10.73**	**20**	⇓Pn	**Pn**	**15 27 53.4**	**+2.3**
	0.9nm,0.7s						
AKTO				⇑Sn	**Sn**	**15 29 45.2**	**-4.7**
	1.5nm,0.8s						

*IDC **01** 15:34:21.2±2.0, 5˚.52S×154˚.50E, h147km±16km, mb3.5/10,*
mb1 3.6/13, mb1mx3.4/48, mbtmp3.9/13, MS2.1/1,
Ms1 2.1/1, ms1mx2.0/21, Error ellipse: s-maj=21.4km
s-min=14.8km az=85.0
ISC 01 15:34:21.3±0.9,**5˚.46S**±0˚.09×**154˚.5E**±0˚.1,**h150**km,**n14**,
σ0⁰**98**/16,**mb3.6/9**,**Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.75**	**294**	P	**Pn**	**15 35 05.1**	**-0.5**
	18nm,0.3s,baz=238,slow=1.0,SNR=46						
KRVT				S	**Sn**	**15 35 39.3**	**-0.4**
	83nm,0.3s,baz=107,slow=13,SNR=9.0						
KRVT				LR	LR	15 36 20.6	
	comp=Z,31nm,18.5s,baz=119,slow=44						
PMG	**Port Moresby**	**8.30**	**241**	P	**Pn**	**15 36 19.7**	**+1.0**
	1.3nm,0.3s,baz=231,slow=22,SNR=3.0						
PMG				S	**Sn**	**15 37 52.2**	**+1.0**
	2.7nm,0.3s,baz=118,slow=17,SNR=6.6						
CTA	**Charters Tower**	**16.63**	**208**	P	**Pn**	**15 38 05.8**	**+0.1**
	0.1nm,0.3s,baz=14,slow=12,SNR=4.5						
DZM	**Mont Dzumac**	**20.14**	**146**	P	**P**	**15 38 44.0**	**+0.1**
	4.7nm,0.5s,baz=357,slow=6.3,SNR=13						
WRA	**Warramunga Arr**	**24.36**	**232**	P	**P**	**15 39 25.1**	**-0.5**
	1.0nm,0.5s,baz=57,slow=9.7,SNR=22						
ASAR	**Alice Springs**	**26.88**	**226**	P	**P**	**15 39 47.5**	**-0.9**
	0.6nm,0.3s,baz=57,slow=9.2,SNR=25						
STKA	**Stephens Creek**	**28.94**	**203**	P	**P**	**15 40 05.3**	**-1.2**
	2.9nm,1.0s,baz=60,slow=15,SNR=2.4						
FITZ	**Fitzroy Crossi**	**30.89**	**244**	P	**P**	**15 40 22.8**	**-1.1**
	1.2nm,0.6s,baz=277,slow=20,SNR=2.0						
CMAR	**Chiang Mai Arr**	**59.72**	**295**	P	**P**	**15 44 12.1**	**+1.4**
	0.6nm,0.8s,baz=105,slow=3.9,SNR=5.3						
VNDA	**Vanda**	**72.12**	**178**	P	**P**	**15 45 29.2**	**+0.3**
	0.6nm,0.7s,baz=331,slow=6.4,SNR=6.5						
MKAR	**Makanchi Array**	**81.96**	**319**	P	**P**	**15 46 25.4**	**+1.0**
	0.3nm,0.4s,baz=95,slow=9.7,SNR=5.3						
ILAR	**Eielson Array**	**82.12**	**22**	P	**P**	**15 46 25.6**	**+0.8**
	0.4nm,0.7s,baz=236,slow=5.5,SNR=8.0						
MAW	**Mawson**	**85.63**	**203**	P	**P**	**15 46 42.4**	**-0.2**
	1.4nm,0.6s,baz=55,slow=18,SNR=1.8						
TORD	**Torodi Ar. Bea**	**152.16**	**288**	PKPbc	**PKPbc**	**15 53 58.5**	**-1.6**
	0.6nm,0.9s,baz=82,slow=1.8,SNR=2.2						

*IDC **01** 15:41:48.5±1.4, 39˚.01N×71˚.61E, h0km, mb3.9/5,*
mb1 3.7/8, mb1mx3.4/59, mbtmp3.6/8, ML2.8/3, Error
ellipse: s-maj=31.9km s-min=19.7km az=141.0
*KRNET **01** 15:41:50.3±0.1, 39˚.22N×71˚.28E, h16km, mb3.8*
*NNC **01** 15:41:53.0±4.5, 39˚.15N×71˚.40E, h0km, mb4.0, mpv3.7,*
Error ellipse: s-maj=34.7km s-min=22.4km az=8.0
*SOME **01** 15:41:53.8, 39˚.42N×71˚.70E, h15km*
ISC 01 15:41:50.5±1.0,**39˚.30N**±0˚.04×**71˚.24E**±0˚.03,**h3**km±7km,
n41,σ2⁰**91**/58,**mb3.9**/5,**17C-28D**,**Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.78**	**248**	⇓*i*P	**Pb**	**15 42 05.7**	**-1.1**
	baz=54						
GAR				⇓*i*S	**Sb**	**15 42 16.3**	**-1.5**
	baz=54						
BTK	**Batken**	**0.82**	**337**	⇓*i*P	**Pn**	**15 42 08.3**	**-0.8**
	baz=37						
BTK				⇓*i*S	**Sn**	**15 42 21.0**	**-0.9**
	baz=37						
OHH	**Osh**	**1.70**	**44**	⇓*i*P	**Pg**	**15 42 23.0**	**-0.1**
	baz=41						
OHH				⇓*i*S	**Sg**	**15 42 45.9**	**+0.7**
	baz=41						
CHGR	**Chuyangaron**	**1.75**	**249**	⇓*i*P	**Pg**	**15 42 23.5**	**-0.5**
	baz=52						
CHGR				⇓*i*S	**Sg**	**15 42 46.6**	**0.0**
	baz=52						
TAS	**Tashkent**	**2.51**	**324**	⇓*i*P	**Pb**	**15 42 35.2**	**-1.0**
	baz=25						
TAS				⇓*i*S	**Sb**	**15 43 08.1**	**+0.5**
	baz=25						
IUG	**Iuzhnay**	**2.99**	**342**	*eP*	**Pg**	**15 42 48.5**	**+0.8**
	92nm,0.5s						
IUG				*eS*	**Sg**	**15 43 26.6**	**+0.1**
	293nm,0.7s						
MNAS	**Manas**	**3.32**	**16**	⇑*i*P	**Pn**	**15 42 46.3**	**+2.8**
	baz=15						
MNAS				⇑*i*S	**Sb**	**15 43 27.5**	**-3.6**
	baz=15						
AML	**Almayashu**	**3.39**	**33**	⇓*i*P	**Pb**	**15 42 47.5**	**-3.9**
	baz=31						
AML				⇓*i*S	**Sb**	**15 43 29.8**	**-3.3**
	baz=31						
AML	**Almayashu**	**3.39**	**33**	P	**Pb**	**15 42 48.1**	**-3.3**
	SNR=43						
ARLS	**Aral**	**3.47**	**42**	⇑*i*P	**Pn**	**15 42 47.9**	**+2.3**
	baz=40						
ARLS				⇑*i*S	**Sb**	**15 43 30.2**	**-5.1**
	baz=40						
DZA	**Taraz**	**3.59**	**1**	*eP*	**Pb**	**15 42 56.5**	**+1.9**
	39nm,0.1s						
DZA				*eS*	**Sb**	**15 43 40.5**	**+1.9**
	315nm,0.5s						
MRKS	**Merke**	**3.75**	**23**	*eP*	**Pb**	**15 42 58.0**	**+0.5**
	11nm,0.4s						
MRKS				*eS*	**Sb**	**15 43 42.9**	**-0.5**
	39nm,0.5s						
UCH	**Uchtor**	**3.84**	**39**	⇑*i*P	**Pn**	**15 42 53.6**	**+2.7**
	baz=38						
UCH				⇑*i*S	**Sn**	**15 43 40.0**	**+3.3**
	baz=38						
KK31	**Karatay Array**	**3.84**	**352**	⇑Pn	**Pb**	**15 42 54.7**	**-4.2**
	3.8nm,0.4s,baz=183,slow=12,SNR=153						
KK31				⇓Pg	**Pg**	**15 43 02.7**	**-1.4**
	7.8nm,0.3s,baz=172,slow=14,SNR=20						
KK31				⇓Sn	**Sb**	**15 43 46.3**	**+0.5**
	24nm,0.5s,baz=172,slow=22,SNR=5.6						
KK31				⇓Lg	Lg	15 43 57.2	
	28nm,0.4s,baz=149,slow=26,SNR=7.3						
EKS2	**Erkin-Say**	**3.87**	**29**	⇓*i*P	**Pn**	**15 42 53.9**	**+2.9**
	baz=28						
EKS2				⇓*i*S	**Sn**	**15 43 40.9**	**+3.9**
	baz=28						
EKS2	**Erkin-Say**	**3.87**	**29**	P	**Pb**	**15 42 55.5**	**-3.9**
	SNR=22						
BRLS	**Boroldoy**	**3.88**	**345**	*eP*	**Pb**	**15 43 01.1**	**+1.6**
	36nm,0.3s						
BRLS				*eS*	**Sb**	**15 43 48.4**	**+1.6**
	60nm,0.4s						
AAK	**Ala-Archa**	**4.14**	**35**	⇑*i*P	**Pn**	**15 42 58.4**	**+3.6**
	baz=34						
AAK				⇑*i*S	**Sn**	**15 43 47.6**	**+3.7**
	baz=34						
AAK	**Ala-Archa**	**4.14**	**35**	P	**Pb**	**15 42 59.4**	**-4.7**
	SNR=33						
AAK	**Ala-Archa**	**4.14**	**35**	Pn	**Pb**	**15 42 59.2**	**-5.0**
	14nm,0.5s						
AAK				Lg	Lg	15 44 04.3	
	33nm,0.7s						
FRU1	**Bishkek**	**4.34**	**35**	⇓*i*P	**Pn**	**15 43 00.0**	**+2.6**
	baz=34						
FRU1				⇓*i*S	**Sn**	**15 43 51.9**	**+3.3**
	baz=34						
KBK	**Karagaybulak**	**4.37**	**39**	⇑*i*P	**Pn**	**15 43 00.9**	**+3.0**
	baz=38						
KBK				⇑*i*S	**Sn**	**15 43 52.6**	**+3.1**
	baz=38						
KBK	**Karagaybulak**	**4.37**	**39**	P	**Pb**	**15 43 03.0**	**-5.0**
	SNR=30						
CHMS	**Chumysh**	**4.55**	**35**	⇓*i*P	**Pn**	**15 43 03.7**	**+3.5**
	baz=34						
CHMS				⇓*i*S	**Sn**	**15 43 57.6**	**+4.0**
	baz=34						
CHMS	**Chumysh**	**4.55**	**35**	P	Pn	15 43 04.8	+4.6
	SNR=9.5						
BOOM	**Boomskoye usch**	**4.78**	**47**	⇓*i*P	**Pn**	**15 43 06.2**	**+2.7**
	baz=46						
BOOM				⇓*i*S	**Sn**	**15 44 01.9**	**+2.4**
	baz=46						
ULHL	**Ulahol**	**4.80**	**51**	⇑*i*P	**Pn**	**15 43 06.5**	**+2.6**
	baz=50						
ULHL				⇑*i*S	**Sn**	**15 44 02.6**	**+2.4**
	baz=50						
TKM2	**Tokmak 2**	**4.89**	**41**	⇓*i*P	**Pn**	**15 43 08.4**	**+3.3**
	baz=40						
TKM2				⇓*i*S	**Sn**	**15 44 05.9**	**+3.6**
	baz=40						
TKM2	**Tokmak 2**	**4.89**	**41**	P	Pn	15 43 09.4	+4.4
	SNR=12						
TKM2	**Tokmak 2**	**4.89**	**41**	⇑Pn	Pn	15 43 09.1	+4.0
	3.6nm,0.4s						
TKM2				⇑Sn	**Sn**	**15 44 08.0**	**+5.7**
	6.5nm,0.6s						
TKM2				⇓Lg	Lg	15 44 29.5	
	10nm,0.5s						
MKAR	**Makanchi Array**	**11.01**	**44**	Pn	**Pn**	**15 44 27.6**	**-1.3**
	0.1nm,0.3s,baz=242,slow=14,SNR=1.7						
KURBB	**Kurchatov Arra**	**12.43**	**22**	Pn	**Pn**	**15 44 47.6**	**-0.6**
	0.1nm,0.3s,baz=218,slow=12,SNR=6.7						
KURBB				Lg	Lg	15 48 22.4	
	0.0nm,0.3s,baz=215,slow=36,SNR=5.1						
AB31	**Akbulak array**	**12.81**	**325**	⇑Pn	Pn	15 44 59.7	+6.2
	0.7nm,0.4s,baz=131,slow=13,SNR=25						
AB31				⇓Sn	Sn	15 47 26.3	+10
	4.7nm,0.8s,baz=129,slow=25,SNR=15						
AKTO	**Aktyubinsk**	**14.53**	**324**	Sn	**Sn**	**15 47 55.2**	**-3.3**
	0.1nm,0.3s,baz=278,slow=12,SNR=1.3						
AKTO	**Aktyubinsk**	**14.53**	**324**	⇑Pn	**Pn**	**15 45 18.9**	**+2.0**
	2.6nm,0.7s						
AKTO				⇓Sn	**S**	**15 48 09.4**	**-8.9**
	5.2nm,0.8s						
ZALV	**Zalesovo Beam**	**17.32**	**28**	P	**P**	**15 45 54.2**	**-0.4**
	0.2nm,0.3s,baz=238,slow=16,SNR=3.0						
FINES	**FINESS Array B**	**35.30**	**324**	P	**P**	**15 48 48.4**	**+2.0**
	0.8nm,0.4s,baz=120,slow=11,SNR=4.0						
ARCES	**ARCESS Array B**	**38.65**	**336**	P	**P**	**15 49 16.8**	**+2.0**
	2.8nm,1.0s,baz=110,slow=7.8,SNR=1.9						
HFS	**Hagfors**	**41.02**	**320**	P	**P**	**15 49 36.9**	**+2.3**
	0.2nm,0.6s,baz=108,slow=4.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**66.00**	**268**	P	**P**	**15 52 38.0**	**-0.5**
	1.2nm,0.5s,baz=50,slow=6.0,SNR=14						
WRA	**Warramunga Arr**	**83.31**	**122**	P	**P**	**15 54 16.3**	**-2.6**
	0.1nm,0.5s,baz=322,slow=4.7,SNR=1.2						

*NEIC **01** 15:42:41.9±2.0, 64˚.6N±0˚.1×17˚.7W±0˚.2, h7km±5km,*
mb4.3/9, Error ellipse: s-maj=16.1km s-min=10.0km
az=198.0
*REY **01** 15:42:41.4, 64˚.67N×17˚.46W, h3km*
*IDC **01** 15:42:41.8±0.6, 64˚.62N×17˚.60W, h0km, mb3.9/15,*
mb1 4.1/19, mb1mx3.8/74, mbtmp3.9/19, ML3.2/4, Error
ellipse: s-maj=16.4km s-min=10.2km az=11.0
*MOS **01** 15:42:42.1±1.0, 64˚.60N×17˚.58W, h10km, mb4.3/25, Error*
ellipse: s-maj=12.6km s-min=7.8km az=101.5
ISC 01 15:42:42.7±0.4,**64˚.67N**±0˚.02×**17˚.54W**±0˚.02,**h10**km,**n174**,
σ1⁰**93**/188,**mb4.1**/44,**11C**,**Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.09**	**270**	P	**Pg**	**15 42 44.1**	**-1.2**
	baz=271						
IDYN	**Dyngjuhals**	**0.14**	**32**	P	**Pg**	**15 42 44.5**	**-1.5**
	baz=19						
IGRF	**Grimsfjall**	**0.29**	**156**	P	**Pg**	**15 42 47.0**	**-1.6**
	baz=162						
IKVE	**Kverkfjoll**	**0.37**	**89**	P	**Pg**	**15 42 48.2**	**-1.9**
	baz=88						
IKVE				S	**Sg**	**15 42 53.0**	**-2.0**
	baz=88						
ISKR	**Skrokkalda**	**0.38**	**253**	P	**Pb**	**15 42 49.3**	**-2.3**
	baz=255						
ISKR				S	**Sb**	**15 42 56.1**	**-1.5**
	baz=255						
IHUS	**Husbondi**	**0.38**	**188**	P	**Pg**	**15 42 49.0**	**-1.3**
	baz=193						
IVOT	**Vottur**	**0.43**	**159**	P	**Pg**	**15 42 49.6**	**-1.6**
	baz=163						
IJOK	**Jokulheimar**	**0.47**	**220**	P	**Pb**	**15 42 50.7**	**-2.3**
	baz=223						
IIEY	**Innrieyrar**	**0.63**	**204**	P	**Pg**	**15 42 53.1**	**-1.8**
	baz=207						
ISVA	**Svartarkot**	**0.68**	**10**	P	**Pg**	**15 42 53.7**	**-2.1**
	baz=7.4						
ISVA				S	**Sg**	**15 43 03.4**	**-1.2**
	baz=7.4						
IKSK	**Karasker**	**0.69**	**138**	P	**Pg**	**15 42 53.2**	**-2.9**
	baz=140						
IKSK				S	**Sg**	**15 43 02.9**	**-2.2**
	baz=140						
IKAL	**Kalfafell**	**0.73**	**185**	P	**Pg**	**15 42 54.7**	**-2.1**
	baz=188						
IKAL				S	**Sb**	**15 43 05.1**	**-2.4**
	baz=188						
IVAT

baz=2.5
IESK Eystri-Skogar 1.43 217 P **Pb** 15 43 07.1 -2.2
baz=218
ISAU Saurbar 1.43 243 P **Pn** 15 43 06.4 -2.2
baz=243
IMID Miomork 1.45 226 P **Pb** 15 43 07.5 -2.2
baz=227
IBRE Brettingsstaoi 1.46 354 P **Pn** 15 43 06.6 -2.5
baz=353
IGIL Gilhagi 1.49 19 P **Pn** 15 43 06.6 -2.9
baz=18
ISIG Siglufjorour 1.57 339 P **Pn** 15 43 08.4 -2.2
baz=338
ISIG S **Sn** 15 43 29.8 -1.2
baz=338
IASM Asmuli 1.59 239 P **Pb** 15 43 09.4 -2.7
baz=240
BORG Borgarnes 1.63 274 Pg **Pn** 15 43 09.6 -1.8
20nm,0.3s,baz=96,slow=9.2,SNR=47
BORG Lg Lg 15 43 33.4
18nm,0.3s,baz=242,slow=19,SNR=7.2
BORG Borgarnes 1.63 274 Pn **Pn** 15 43 09.3 -2.0
IKRO Krokur 1.66 251 P **Pn** 15 43 10.1 -1.7
baz=252
ISOL Solvholt 1.66 245 P **Pn** 15 43 10.2 -1.6
baz=245
IHEI Heioarbar 1.67 255 P **Pn** 15 43 10.4 -1.6
baz=256
ILEI Leirhofn 1.79 14 P **Pn** 15 43 11.7 -2.0
baz=13
IBJA Bjarnastaoir 1.80 248 P **Pb** 15 43 13.1 -2.5
baz=248
IHRN Hraun 1.80 324 P **Pn** 15 43 12.6 -1.2
baz=324
ISAN Sandskeio 1.86 252 P **Pb** 15 43 13.9 -2.8
baz=253
IKAS Kald??rsel 1.99 253 P **Pb** 15 43 16.2 -2.7
baz=253
SUMG Summit 10.93 325 P **Pn** 15 45 18.5 -0.7
SUMG Summit 10.93 325 Pn **Pn** 15 45 18.5 -0.7
EKA Eskdalemuir Ar 11.78 136 Pn **Pn** 15 45 29.4 -1.1
baz=323,slow=13,SNR=7.6
ESK Eskdalemuir 11.78 136 P **Pn** 15 45 30.7 +0.2
ESK Eskdalemuir 11.78 136 Pn **Pn** 15 45 30.7 +0.2
DAG Danmarks Havn 12.17 359 P **Pn** 15 45 39.7 +4.0
NC204 NORSAR Array S 13.25 92 Pn **Pn** 15 45 47.5 -3.1
NOA NORSAR Array B 13.55 92 Pn **Pn** 15 45 51.8 -2.9
0.0nm,0.3s,baz=299,slow=13,SNR=2.4
NC405 NORSAR Array S 13.73 92 Pn **Pn** 15 45 58.6 +1.5
HFS Hagfors 15.06 93 Pn **Pn** 15 46 15.7 +0.4
0.1nm,0.3s,baz=317,slow=10,SNR=2.1
NOR Nord 17.02 0 P **P** 15 46 44.1 +1.9
ARCES ARCESS Array B 17.13 55 P **Pn** 15 46 43.1 +1.3
baz=14,slow=7.9,SNR=3.6
GRR Gorron 18.63 143 *e*P **Pn** 15 47 00.4 0.0
CLZ Clausthal 19.29 118 P **Pn** 15 47 09.0 +0.6
FINES FINESS Array B 19.72 79 P **P** 15 47 13.1 +1.1
0.1nm,0.3s,baz=134,slow=8.2,SNR=2.3
FINES FINESS Array B 19.72 79 P **P** 15 47 11.0 -0.9
CLL Collm 20.72 116 *i* P **P** 15 47 23.7 +0.8
comp=Z,15nm,1.5s
CLL Collm 20.72 116 *i* P **P** 15 47 23.7 +0.8
CLL pmax pmax
comp=Z,15nm,1.5s
CLL Collm 20.72 116 **P** 15 47 21.0 -1.9
CLL IAmb IAmb 15 47 25.2
comp=Z,14nm,1.4s
GKP Gorka Klasztor 20.93 107 *e*P P 15 47 32.7 +7.6
NKC Novy Kostel 21.37 118 *e*P **P** 15 47 33.0 +3.1
NKC Novy Kostel 21.37 118 *e*P **P** 15 47 33.0 +3.1
BRG Berggiesshubel 21.43 115 *i* P **P** 15 47 31.4 +0.9
comp=Z,15nm,1.2s
BRG Berggiesshubel 21.43 115 *i* P **P** 15 47 31.4 +0.9
BRG pmax pmax
comp=Z,15nm,1.2s
BFO Black Forest 21.47 127 P **P** 15 47 32.5 +1.5
BFO pmax pmax
comp=Z,9.0nm,1.1s
BFO Black Forest 21.47 127 P **P** 15 47 32.5 +1.5
BFO IAmb IAmb 15 47 36.2
comp=Z,9.0nm,1.1s
VSU Vasula 21.58 86 *e*P **P** 15 47 32.7 +0.6
PABE Paberze 22.23 95 *e*P **P** 15 47 40.9 +1.9
PRU Pruhonice 22.37 116 *e*P **P** 15 47 43.4 +2.8
PRU Pruhonice 22.37 116 *e*P **P** 15 47 43.4 +2.8
KSP Ksiaz 22.38 112 *e*P **P** 15 47 41.3 +0.6
CHVC Chvalec 22.49 113 *e*P **P** 15 47 43.8 +1.9
OSTC Ostas 22.57 113 *e*P **P** 15 47 44.8 +2.0
KHC Kasperske Hory 22.69 118 *e*P **P** 15 47 44.5 +0.4
KHC Kasperske Hory 22.69 118 *e*P **P** 15 47 44.5 +0.4
DPC Dobruska-Polom 22.78 113 *e*P **P** 15 47 45.9 +0.9
DPC Dobruska-Polom 22.78 113 *e*P **P** 15 47 45.9 +0.9
DAVA Damuels 22.90 126 *e*P **P** 15 47 49.3 +2.9
comp=Z,6.7nm,1.2s
GERES GERESS Array B 22.97 119 P **P** 15 47 47.5 +0.4
comp=Z,1.5nm,0.9s,baz=323,slow=8.7,SNR=10
GERES GERESS Array B 22.97 119 P **P** 15 47 46.5 -0.7
RETA Reutte 23.04 125 *e*P **P** 15 47 48.4 +0.6
comp=Z,4.5nm,1.1s
ISAL Salakas 23.11 92 *e*P **P** 15 47 50.2 +1.9
KRLC Kraliky 23.18 113 *e*P **P** 15 47 49.9 +0.7
KRLC Kraliky 23.18 113 *e*P **P** 15 47 49.9 +0.7
MOTA Moosalm 23.28 124 *e*P **P** 15 47 52.2 +1.9
comp=Z,5.4nm,1.2s
TREC Trest 23.29 116 *e*P **P** 15 47 51.8 +1.5
TREC Trest 23.29 116 *e*P **P** 15 47 51.8 +1.5
IIGN Ignalina 23.30 93 *e*P **P** 15 47 52.2 +2.0
TMCR Tamitsa 23.36 66 *e*P **P** 15 47 51.0 +0.2
TMCR pmax pmax
comp=Z,14nm,1.3s
SQTA Sankt Quirin 23.42 124 *e*P **P** 15 47 55.2 +3.5
comp=Z,6.2nm,1.6s
FETA Feichten 23.42 125 *e*P **P** 15 47 57.3 +5.5
comp=Z,4.8nm,1.2s
WATA Walderalm 23.45 124 *e*P **P** 15 47 54.2 +2.2
comp=Z,4.3nm,1.0s
WTTA Wattenberg 23.54 124 *e*P **P** 15 47 54.2 +1.3
comp=Z,3.8nm,1.0s
IDID Didziasalis 23.54 92 *e*P **P** 15 47 54.0 +1.4
MORC Moravsky Berou 23.72 112 P **P** 15 47 53.5 -1.0
MORC pmax pmax
comp=Z,6.0nm,1.3s
MORC Moravsky Berou 23.72 112 P **P** 15 47 53.5 -1.0
OJC Ojcow 24.28 109 *e*P **P** 15 48 00.1 +0.3
CONA Conrad Observa 24.55 117 *e*P **P** 15 48 03.8 +1.4
comp=Z,3.5nm,0.9s
CTI Castel Tesino 24.59 125 P **P** 15 48 02.5 -0.2
CTI pmax pmax
comp=Z,5.0nm,0.9s
CTI Castel Tesino 24.59 125 P **P** 15 48 02.5 -0.2
CTI IAmb IAmb 15 48 05.5
comp=Z,5.2nm,0.9s
SMOL Smolenice 24.68 114 *e*P **P** 15 48 05.2 +1.8
SMOL pmax pmax
comp=Z,4.0nm,1.1s
SMOL Smolenice 24.68 114 *e*P **P** 15 48 05.2 +1.8
ARSA Arzberg 24.98 118 *e*P **P** 15 48 06.5 +0.3
comp=Z,2.4nm,0.8s
VYHS Vyhne 25.25 112 *e*P **P** 15 48 09.7 +1.1
VYHS pmax pmax
comp=Z,9.0nm,1.4s
VYHS Vyhne 25.25 112 *e*P **P** 15 48 09.7 +1.1
KLMR Klimovskoe 25.62 72 *e*P **P** 15 48 11.7 0.0
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 25.62 72 *e*P **P** 15 48 11.7 0.0
KLMR AMP 15 48 14.1
comp=Z,12nm,1.2s
ESDC Sonseca Array 26.27 156 P **P** 15 48 17.7 -0.2
comp=Z,1.8nm,0.8s,baz=349,slow=9.5,SNR=12
ESDC Sonseca Array 26.27 156 IAmb IAmb 15 48 22.5
comp=Z,7.2nm,1.5s
KOLS Kolonicke sedl 26.29 108 *e*P **P** 15 48 18.5 +0.5
KOLS Kolonicke sedl 26.29 108 *e*P **P** 15 48 18.5 +0.5
UZH Uzhgorod 26.54 108 *e*P **P** 15 48 20.4 +0.2
UZH *e* 15 48 27.0
AKASG Malin Array Be 27.86 98 P **P** 15 48 32.0 0.0
comp=Z,0.2nm,0.3s,baz=326,slow=9.4,SNR=4.4
AKASG Malin Array Be 27.86 98 *i* P **P** 15 48 35.4 +3.4
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKBB Malin Array Si 27.86 98 *i* P **P** 15 48 35.0 +3.0
AKBB pmax pmax
comp=Z,3.0nm,1.1s
OBN Obninsk 27.90 84↑ *e*P **P** 15 48 33.4 +1.1
OBN *e* 15 49 18.0
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,60nm,16.0s
KIRV Kirov 30.99 69 *ce*P **P** 15 49 01.1 +1.4
MDT Midelt 32.87 160 P **P** 15 49 18.1 +1.5
comp=Z,2.4nm,0.8s,baz=41,slow=7.3,SNR=3.9
ARU Arti 36.09 66 P **P** 15 49 43.1 -1.0
ARU S **S** 15 55 24.1 +1.1
ARU SS **SnSn** 15 57 44.6 -2.9
NRIK Noril'sk 36.46 35 P **P** 15 49 48.5 +1.4
comp=Z,1.7nm,0.7s,baz=276,slow=16,SNR=3.5
NRIK Noril'sk 36.46 35 *ce*P **P** 15 49 48.9 +1.8
NRIK pmax pmax
comp=Z,7.0nm,1.4s
BRTR Keskin Array B 38.50 105 P **P** 15 50 06.5 +1.6
comp=Z,1.6nm,0.8s,baz=329,slow=11,SNR=2.9
BRTR Keskin Array B 38.50 105 P **P** 15 50 05.2 +0.3
KIV Kislovodsk 38.86 92 *e*P **P** 15 50 10.3 +2.5
KIV pmax pmax
comp=Z,26nm,1.0s
KIV MLR MLR
comp=Z,66nm,16.0s
KBZ Khabaz 39.13 92 *ce*P **P** 15 50 12.4 +2.5
KBZ pmax pmax
comp=Z,7.0nm,1.1s
ABKAR Akbulak array 42.01 73 P **P** 15 50 31.7 -1.9
TIXI Tiksi 42.03 15 *ce*P **P** 15 50 36.3 +2.8
TIXI pmax pmax
comp=Z,36nm,1.7s
BMAR Burnt Mountain 42.88 333 P **P** 15 50 40.1 -0.5
BRVK Borovoye 43.14 62 *i* P **P** 15 50 43.7 +0.9
BRVK pmax pmax
comp=Z,4.0nm,0.6s
ILAR Eielson Array 45.67 332 P **P** 15 51 04.0 +1.1
comp=Z,1.9nm,1.0s,baz=23,slow=6.1,SNR=10
ILAR PcP **PcP** 15 52 40.3 -0.3
comp=Z,1.0nm,1.0s,baz=346,slow=2.3,SNR=5.7
ILAR Eielson Array 45.67 332 P **P** 15 51 03.8 +0.9
MDM Murphy Dome 45.77 333 P **P** 15 51 02.8 -0.9
MDM IAmb IAmb 15 51 08.4
comp=Z,10nm,1.3s
IMAR Indian Mountai 45.84 337 P **P** 15 51 04.7 +0.5
BCAR Beaver Creek A 46.09 328 P **P** 15 51 05.9 -0.4
BILL Bilibino 47.54 358↑ *e*P **P** 15 51 19.0 +1.5
BILL *e* 15 52 51.3
BILL *e* 15 53 10.6
BILL *e*S **S** 15 58 07.2 -4.7
BILL pmax pmax
comp=Z,3.0nm,1.2s
BILL MLR MLR
comp=Z,80nm,17.0s
ZALV Zalesovo Beam 47.64 51 P **P** 15 51 19.1 +0.7
comp=Z,0.9nm,0.5s,baz=337,slow=7.1,SNR=4.7
ZALV Zalesovo Beam 47.64 51 *i* P **P** 15 51 19.7 +1.3
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 47.64 51 P **P** 15 51 17.9 -0.5
KURK Kurchatov 48.12 58 *ce*P **P** 15 51 23.4 +1.2
KURK pmax pmax
comp=Z,4.0nm,0.8s
KURK Kurchatov 48.12 58 P **P** 15 51 21.8 -0.4
KURBB Kurchatov Arra 48.17 58 P **P** 15 51 23.4 +0.9
comp=Z,3.5nm,0.9s,baz=325,slow=7.4,SNR=19
KOWA Kowa 50.98 163 P **P** 15 51 44.6 +0.3
comp=Z,2.2nm,0.8s,baz=11,slow=9.3,SNR=3.9
KKAR Karatay Array 51.29 70 P **P** 15 51 46.7 +0.3
KKAR Karatay Array 51.29 70 P **P** 15 51 46.7 +0.3
DGZ Jazzator, Alta 52.09 53 *i* P **P** 15 51 54.3 +1.8
DGZ pmax pmax
comp=Z,10.0nm,3.2s
MKAR Makanchi Array 52.73 58 P **P** 15 51 57.9 +0.7
comp=Z,1.4nm,0.9s,baz=308,slow=6.0,SNR=4.5
MKAR Makanchi Array 52.73 58 *ce*P **P** 15 51 59.0 +1.8
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 52.73 58 P **P** 15 51 58.0 +0.8
TORD Torodi Ar. Bea 53.16 156 P **P** 15 52 00.7 +0.2
comp=Z,2.0nm,1.0s,baz=342,slow=9.3,SNR=6.0
PDAR Pinedale Array 53.16 293 P **P** 15 52 01.6 +1.0
comp=Z,2.0nm,0.9s,baz=61,slow=7.0,SNR=12
PDAR Pinedale Array 53.16 293 P **P** 15 52 00.1 -0.5
AAK Ala-Archa 53.27 67 *ce*P **P** 15 52 03.0 +1.7
AAK pmax pmax
comp=Z,10.0nm,1.3s
SONM Songino Array 59.65 40 P **P** 15 52 47.4 +0.8
comp=Z,0.7nm,0.8s,baz=348,slow=6.5,SNR=4.2
SONM Songino Array 59.65 40 P **P** 15 52 46.8 +0.2
SONM pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 59.65 40 P **P** 15 52 46.8 +0.2
ULN Ulaanbaatar 59.80 40 *ce*P **P** 15 52 50.3 +2.6
ULN pmax pmax
comp=Z,2.0nm,0.8s
HIA Hailar 61.63 30 *i* P **P** 15 53 02.1 +2.1
HIA pmax pmax
comp=Z,7.0nm,2.7s
KLR Kul'dur 63.94 22 *i* P **P** 15 53 17.3 +2.0
KLR pmax pmax
comp=Z,11nm,3.3s
GTA Gaotai 65.31 49 *e*P **P** 15 53 25.5 +0.9
GTA pP sP 15 53 30.2 +0.5
GTA sP pP 15 53 33.4 +5.1
GTA pmax pmax
comp=Z,3.0nm,1.0s
CMAR Chiang Mai Arr 84.14 59 P **P** 15 55 14.5 +0.7
comp=Z,0.9nm,0.7s,baz=319,slow=6.1,SNR=7.7
CMAR Chiang Mai Arr 84.14 59 *ce*P **P** 15 55 15.1 +1.3
CMAR pmax pmax
comp=Z,1.0nm,0.7s
ASAR Alice Springs 134.97 38 PKP **PKiKP** 16 02 03.1 +0.1
comp=Z,0.5nm,0.9s,baz=5.7,slow=2.8,SNR=3.6

*IDC **01** 15:43:50.4±2.7,27.01N×44.18W,h0km,mb3.7/8, mb1 4.0/8,mb1mx3.6/63,mbtmp3.7/8,MS3.5/20, Ms1 3.5/20,ms1mx3.4/36,Error ellipse: s-maj=85.0km s-min=25.8km az=172.0*
ISC 01 15:43:52.0±2.7,27.1N±0.6×44.2W±0.2,h10km,n26, σ0s72/9,mb3.7/8,MS3.4/20,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**22.12**	**251**	LR	LR	15 55 23.0	
	comp=Z,102nm,21.9s,baz=91,slow=31						
MDP	**Montagnes des**	**23.27**	**202**	LR	LR	15 55 59.2	
	comp=Z,38nm,18.0s,baz=353,slow=31						
SDV	**Santo Domingo**	**30.86**	**239**	LR	LR	16 01 26.7	
	comp=Z,26nm,19.8s,baz=80,slow=34						
RCBR	**Riachuelo**	**33.65**	**165**	LR	LR	16 00 28.2	
	comp=Z,83nm,22.0s,baz=2.5,slow=30						
ESDC	**Sonseca Array**	**35.59**	**59**	P	**P**	**15 50 50.5**	**+0.7**
	0.6nm,0.8s,baz=264,slow=8.9,SNR=3.3						
ESDC				LR	LR	16 02 22.2	
	comp=Z,68nm,18.3s,baz=290,slow=31						
ROSC	**El Rosal**	**36.24**	**238**	LR	LR	16 06 43.1	
	comp=Z,58nm,19.0s,baz=76,slow=38						
JTS	**Las Juntas de**	**41.84**	**254**	LR	LR	16 07 07.5	
	comp=Z,31nm,20.4s,baz=112,slow=33						
DBIC	**Dimbokro**	**42.48**	**111**	LR	LR	16 06 52.6	
	comp=Z,117nm,18.1s,baz=278,slow=32						
TORD	**Torodi Ar. Bea**	**45.00**	**99**	LR	LR	16 10 25.4	
	comp=Z,154nm,18.8s,baz=310,slow=35						
KEST	**Kesra**	**46.03**	**65**	LR	LR	16 09 43.4	
	comp=Z,73nm,18.1s,baz=195,slow=34						
ATAH	**Atahualpa**	**47.46**	**229**	LR	LR	16 13 45.3	
	comp=Z,32nm,18.7s,baz=2.1,slow=38						
LPAZ	**La Paz**	**48.95**	**211**	LR	LR	16 12 18.8	
	comp=Z,27nm,18.9s,baz=326,slow=35						
GERES	**GERESS Array B**	**49.25**	**48**	P	**P**	**15 52 39.8**	**-1.0**
	0.2nm,0.3s,baz=262,slow=6.6,SNR=4.2						
TXAR	**Lajitas Array**	**51.98**	**287**	P	**P**	**15 53 01.8**	**0.0**
	0.5nm,0.8s,baz=93,slow=5.7,SNR=2.9						
TXAR				LR	LR	16 13 53.9	
	comp=Z,25nm,19.3s,baz=0.0,slow=35						
PDAR	**Pinedale Array**	**54.57**	**305**	P	**P**	**15 53 21.3**	**+0.4**
	0.5nm,0.6s,baz=72,slow=14,SNR=3.8						
PDAR				LR	LR	16 14 33.5	
	comp=Z,86nm,20.5s,baz=79,slow=34						
FINES	**FINESS Array B**	**57.22**	**33**	P	**P**	**15 53 40.1**	**+0.9**
	1.3nm,1.0s,baz=268,slow=7.2,SNR=1.1						
YKA	**Yellowknife Ar**	**57.36**	**329**	LR	LR	16 16 47.0	
	comp=Z,158nm,21.0s,baz=0.0,slow=34						
ARCES	**ARCESS Array B**	**57.84**	**23**	P	**P**	**15 53 43.6**	**+0.1**
	2.6nm,0.7s,baz=256,slow=4.9,SNR=9.0						
AKASG	**Malin Array Be**	**59.27**	**45**	P	**P**	**15 53 53.5**	**-0.2**
	0.2nm,0.3s,baz=276,slow=6.5,SNR=1.8						
NVAR	**Mina Array Bea**	**61.86**	**301**	LR	LR	16 19 22.2	
	comp=Z,95nm,19.4s,baz=54,slow=34						
BRTR	**Keskin Array B**	**64.34**	**57**	LR	LR	16 20 45.8	
	comp=Z,16nm,18.6s,baz=304,slow=34						
ILAR	**Eielson Array**	**71.06**	**334**	P	**P**	**15 55 09.5**	**-0.5**
	0.3nm,0.6s,baz=60,slow=6.2,SNR=2.6						
PLCA	**Paso Flores**	**71.75**	**201**	LR	LR	16 25 23.9	
	comp=Z,15nm,21.5s,baz=148,slow=35						
BOSA	**Boshof**	**86.57**	**124**	LR	LR	16 30 07.9	
	comp=Z,32nm,18.4s,baz=338,slow=32						
ZALV	**Zalesovo Beam**	**88.11**	**27**	LR	LR	16 34 14.9	
	comp=Z,35nm,19.1s,baz=350,slow=34						
CMAR	**Chiang Mai Arr**	**122.33**	**42**	PKP	**PKPdf**	**16 02 47.8**	**-0.3**
	0.3nm,0.5s,baz=312,slow=3.3,SNR=4.1						

KRSC 01 15:45:13.7±2.2,49.52N×156.83E,h15km±37km,ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.25**	**339**	*e*P	Pn	15 45 35.4	-1.2
SKR				*e*S	Sb	15 45 50.0	-2.9
PAU	**Pauzhetka**	**1.95**	**360**	*e*P	Pb	15 45 48.1	-0.8
PAU				*e*S	Sb	15 46 12.6	-0.4
KDTR	**Khodutka, Kamc**	**2.43**	**19**	*e*P	Pb	15 45 55.5	-1.5
KDTR				*e*S	Sb	15 46 26.3	-0.3
RUS	**Russkaya**	**3.10**	**19**	*e*P	Pn	15 46 04.7	+2.6
RUS				*e*S	Sn	15 46 42.1	+3.2
GRL	**Gorelyy**	**3.14**	**14**	*e*P	Pb	15 46 06.3	-2.9
GRL				*e*S	Sb	15 46 44.7	-2.5
DALK	**Dalny**	**3.72**	**18**	*e*P	Pn	15 46 14.0	+3.5
UGLR	**Uglovaya**	**3.90**	**18**	*e*P	Pn	15 46 16.6	+3.5
AVH	**Avacha**	**3.94**	**17**	*e*P	Pb	15 46 18.2	-4.6
SMAR	**Somma**	**3.95**	**17**	*e*P	Pb	15 46 18.7	-4.3
KRER	**Koryakskii**	**3.98**	**17**	*e*P	Pb	15 46 19.0	-4.5
SDLR	**Sedlovina**	**3.98**	**18**	*e*P	Pn	15 46 17.8	+3.6
KRX	**Arik**	**4.01**	**16**	*e*P	Pn	15 46 19.2	+4.6
SPN	**Mys Shipunski**	**4.11**	**28**	*e*P	Pn	15 46 19.4	+3.6
MKZ	**Mys Kozlova**	**5.88**	**29**	*e*P	Pn	15 46 43.0	+2.8

*JMA **01** 15:49:57.8±0.2,24.79N×121.91E,h95km±2km,M2.0*
*TAP **01** 15:49:58.2,24.85N×121.95E,h93km,ML2.8,B*
ISC 01 15:49:58.8±1.5,24.83N±0.04×121.96E±0.03,h90km±7km, n76,σ0s55/148,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.18**	**9**	P	**Pn**	**15 50 11.6**	**-0.1**
	baz=16						
TWB1				S	**Sn**	**15 50 21.2**	**-0.2**
	baz=16						
TIPB	**Shuangxi**	**0.19**	**320**	P	**Pn**	**15 50 11.7**	**-0.2**
	baz=317						
TIPB				*e*S	**Sn**	**15 50 21.2**	**-0.4**
	baz=317						
ILA	**Ilan**	**0.20**	**252**	*e*P	**Pn**	**15 50 11.9**	**+0.1**
	baz=243						
ILA				*e*S	**Sn**	**15 50 21.6**	**+0.1**
	baz=243						
TWC	**Suao**	**0.24**	**205**	*e*P	**Pn**	**15 50 12.2**	**+0.2**
	baz=198						
TWC				*e*S	**Sn**	**15 50 22.1**	**+0.4**
	baz=198						
TWE	**Neicheng**	**0.28**	**248**	P	**Pn**	**15 50 12.4**	**+0.2**
	baz=241						
TWE				*e*S	**Sn**	**15 50 22.2**	**+0.1**
	baz=241						
NWF	**Wu-fen Shan**	**0.29**	**327**	*e*P	**Pn**	**15 50 12.0**	**-0.3**
	baz=325						
NWF				*e*S	**Sn**	**15 50 22.2**	**-0.2**
	baz=325						
WFSB	**Wu-fen Shan**	**0.29**	**327**	*e*P	**Pn**	**15 50 12.0**	**-0.2**
	baz=325						
WFSB				*e*S	**Sn**	**15 50 22.3**	**+0.1**
	baz=325						
TWA	**Mucha**	**0.37**	**294**	*e*P	**Pn**	**15 50 12.4**	**-0.3**
	baz=291						
TWA				*e*S	**Sn**	**15 50 22.9**	**-0.2**
	baz=291						
ENAH	**Nanao**	**0.40**	**200**	*e*P	**Pn**	**15 50 13.3**	**+0.4**
	baz=197						
ENAH				*e*S	**Sn**	**15 50 24.9**	**+1.6**
	baz=197						
ENTT	**Nioudou**	**0.40**	**243**	P	**Pn**	**15 50 13.3**	**+0.4**
	baz=238						
ENTT				*e*S	**Sn**	**15 50 24.4**	**+1.0**
	baz=238						
NWLT	**Wulai**	**0.42**	**263**	*e*P	**Pn**	**15 50 12.8**	**-0.2**
	baz=259						
NWLT				*e*S	**Sn**	**15 50 23.6**	**0.0**
	baz=259						
TATO	**Taipei**	**0.45**	**289**	*e*P	**Pn**	**15 50 13.2**	**0.0**
	baz=286						
TATO				*e*S	**Sn**	**15 50 23.4**	**-0.5**
	baz=286						
NDT	**Datong Townshi**	**0.46**	**241**	*e*P	**Pn**	**15 50 13.5**	**+0.2**
	baz=238						
NDT				*e*S	**Sn**	**15 50 24.6**	**+0.5**
	baz=238						
TAP	**Taipei**	**0.46**	**297**	*e*P	**Pn**	**15 50 13.0**	**-0.2**
	baz=295						
TAP				*e*S	**Sn**	**15 50 24.1**	**+0.1**
	baz=295						
YM01	**YM01**	**0.47**	**312**	*e*P	**Pn**	**15 50 13.1**	**-0.4**
	baz=310						
YM01				*e*S	**Sn**	**15 50 23.7**	**-0.6**
	baz=310						
YM11	**YM11**	**0.48**	**314**	*e*P	**Pn**	**15 50 13.8**	**+0.2**
	baz=312						
YM11				*e*S	**Sn**	**15 50 25.0**	**+0.5**
	baz=312						
YM10	**YM10**	**0.49**	**312**	*e*P	**Pn**	**15 50 13.5**	**-0.1**
	baz=311						
YM10				*e*S	**Sn**	**15 50 24.6**	**0.0**
	baz=311						
YM08	**YM08**	**0.49**	**317**	*e*P	**Pn**	**15 50 13.5**	**0.0**
	baz=316						
YM08				*e*S	**Sn**	**15 50 23.9**	**-0.6**
	baz=316						
YM04	**YM04**	**0.50**	**310**	P	**Pn**	**15 50 13.4**	**-0.2**
	baz=309						
YM04				*e*S	**Sn**	**15 50 24.0**	**-0.7**
	baz=309						
YM03	**YM03**	**0.52**	**313**	*e*P	**Pn**	**15 50 13.5**	**-0.3**
	baz=311						
YM03				*e*S	**Sn**	**15 50 24.6**	**-0.4**
	baz=311						
ANP	**Anpu**	**0.54**	**312**	*e*P	**Pn**	**15 50 14.3**	**+0.4**
	baz=311						
ANP				*e*S	**Sn**	**15 50 24.6**	**-0.7**
	baz=311						
YHNB	**Yeheng**	**0.55**	**254**	*e*P	**Pn**	**15 50 13.8**	**-0.3**
	baz=250						
YHNB				*e*S	**Sn**	**15 50 25.0**	**-0.5**
	baz=250						
TWS1	**Kuangyinshan**	**0.56**	**299**	*e*P	**Pn**	**15 50 14.2**	**+0.1**
	baz=297						
TWS1				*e*S	**Sn**	**15 50 25.1**	**-0.4**
	baz=297						
NSK	**Sanguang**	**0.57**	**255**	P	**Pn**	**15 50 13.8**	**-0.4**
	baz=251						
NSK				*e*S	**Sn**	**15 50 25.1**	**-0.6**
	baz=251						
NTST	**Danshui**	**0.57**	**306**	*e*P	**Pn**	**15 50 14.5**	**+0.3**
	baz=304						
NTST				*e*S	**Sn**	**15 50 25.9**	**+0.3**
	baz=304						
NNS	**Nan Shan**	**0.66**	**234**	P	**Pn**	**15 50 15.1**	**0.0**
	baz=231						
NNS				*e*S	**Sn**	**15 50 27.3**	**+0.1**
	baz=231						
NNSB	**Datong**	**0.66**	**233**	*e*P	**Pn**	**15 50 15.1**	**0.0**
	baz=230						
NNSB				*e*S	**Sn**	**15 50 27.4**	**+0.2**
	baz=230						
NNSH	**Datong**	**0.66**	**233**	*e*P	**Pn**	**15 50 15.0**	**0.0**
	baz=230						
NNSH				*e*S	**Sn**	**15 50 27.3**	**+0.1**
	baz=230						
NCU	**National Centr**	**0.71**	**282**	*e*P	**Pn**	**15 50 15.4**	**0.0**
	baz=279						
NCU				*e*S	**Sn**	**15 50 28.4**	**+0.5**
	baz=279						

NCUH	**Zhongli** baz=279	**0.72**	**281**	*eP*	**Pn**	**15 50 15.3 -0.2**
NCUH				*eS*	**Sn**	**15 50 28.1 +0.1**
NACB	**Ninganchiao** baz=205	**0.73**	**207**	*eP*	**Pn**	**15 50 15.1 -0.5**
NACB				*eS*	**Sn**	**15 50 28.3 +0.1**
ETLH	**Xiulin Townshi** baz=213	**0.75**	**215**	*eP*	**Pn**	**15 50 15.7 -0.3**
ETLH				*eS*	**Sn**	**15 50 29.0 +0.2**
TWD	**Chiawan** baz=202	**0.81**	**204**	*eP*	**Pn**	**15 50 15.8 -0.7**
TWD				*eS*	**Sn**	**15 50 29.4 -0.2**
FUSS	**Fushou** baz=226	**0.87**	**229**	*eP*	**Pn**	**15 50 17.6 +0.2**
FUSS				*eS*	**Sn**	**15 50 32.2 +1.0**
LIOB	**Emei** baz=256	**0.88**	**258**	*eP*	**Pn**	**15 50 16.9 -0.3**
LIOB				*eS*	**Sn**	**15 50 30.8 -0.1**
NSTT	**Nanjuang** baz=255	**0.89**	**258**	*eP*	**Pn**	**15 50 16.9 -0.5**
NSTT				*eS*	**Sn**	**15 50 30.5 -0.7**
TWT	**Tachien** baz=230	**0.91**	**231**	*eP*	**Pn**	**15 50 18.2 +0.4**
TWT				*eS*	**Sn**	**15 50 33.3 +1.4**
TDCB	**Techi** baz=230	**0.93**	**232**	*eP*	**Pn**	**15 50 18.2 +0.3**
TDCB				*eS*	**Sn**	**15 50 32.8 +0.7**
WHF	**Hehuan Shan** baz=221	**0.93**	**223**	*eP*	**Pn**	**15 50 18.3 +0.1**
WHF				*eS*	**Sn**	**15 50 32.8 +0.2**
JYNG	**Yonagunijimaku**	**0.97**	**112**	P	**Pn**	**15 50 18.1 -0.1**
JYNG				S	**Sn**	**15 50 33.0 +0.3**
YOJ	**Yonaguni jima** baz=111	**1.02**	**111**	*eP*	**Pn**	**15 50 18.7 -0.1**
YOJ				*eS*	**Sn**	**15 50 34.7 +0.9**
YOJ	**Yonaguni jima**	**1.02**	**111**	P	**Pn**	**15 50 18.7 -0.1**
YOJ				*eS*	**Sn**	**15 50 34.0 +0.2**
CHGB	**Renai** baz=221	**1.04**	**223**	*eP*	**Pn**	**15 50 19.5 +0.2**
CHGB				*eS*	**Sn**	**15 50 35.0 +0.4**
WHP	**Taichung City** baz=237	**1.07**	**240**	*eP*	**Pn**	**15 50 19.5 +0.1**
WHP				*eS*	**Sn**	**15 50 34.8 -0.1**
NMLH	**Miaoli** baz=253	**1.10**	**255**	*eP*	**Pn**	**15 50 19.4 -0.3**
NMLH				*eS*	**Sn**	**15 50 35.9 +0.6**
ESL	**Shilin** baz=204	**1.12**	**206**	*eP*	**Pn**	**15 50 18.4 -1.4**
ESL				*eS*	**Sn**	**15 50 34.9 -0.8**
DPDB	**Guoxing** baz=228	**1.23**	**230**	*eP*	**Pn**	**15 50 21.4 +0.1**
DPDB				*eS*	**Sn**	**15 50 39.1 +1.0**
EGFH	**Guangfu** baz=201	**1.25**	**203**	*eP*	**Pn**	**15 50 20.2 -1.3**
EGFH				*eS*	**Sn**	**15 50 37.7 -0.9**
VWDT	**VWDT** baz=213	**1.30**	**215**	*eP*	**Pn**	**15 50 22.4 +0.3**
VWDT				*eS*	**Sn**	**15 50 40.7 +1.0**
SMLT	**Sun Moon Lake** baz=224	**1.35**	**226**	*eP*	**Pn**	**15 50 22.9 +0.1**
SMLT				*eS*	**Sn**	**15 50 42.1 +1.2**
TYC	**Yuchr** baz=226	**1.36**	**228**	*eP*	**Pn**	**15 50 22.8 0.0**
TYC				*eS*	**Sn**	**15 50 41.5 +0.5**
SSLB	**Suanglung** baz=220	**1.38**	**222**	*eP*	**Pn**	**15 50 23.0 -0.1**
SSLB				*eS*	**Sn**	**15 50 42.4 +0.9**
HGSD	**Ruisui** baz=199	**1.42**	**200**	*eP*	**Pn**	**15 50 23.1 -0.5**
HGSD				*eS*	**Sn**	**15 50 42.9 +0.7**
EHY	**Hungye** baz=202	**1.44**	**204**	*eP*	**Pn**	**15 50 23.2 -0.6**
EHY				*eS*	**Sn**	**15 50 41.7 -1.0**
WNT	**Mingjian** baz=229	**1.50**	**231**	*eP*	**Pn**	**15 50 24.5 0.0**
WNT				*eS*	**Sn**	**15 50 44.4 +0.4**
WJS	**Zhushan** baz=227	**1.50**	**229**	*eP*	**Pn**	**15 50 24.5 -0.1**
WJS				*eS*	**Sn**	**15 50 44.3 +0.1**
WHYT	**Xinyi Township** baz=220	**1.51**	**222**	*eP*	**Pn**	**15 50 25.4 +0.7**
WHYT				*eS*	**Sn**	**15 50 44.6 +0.2**
YULB	**Yu-li** baz=202	**1.55**	**203**	*eP*	**Pn**	**15 50 24.0 -1.2**
YULB				*eS*	**Sn**	**15 50 43.7 -1.6**
TWF1	**Yuli** baz=201	**1.59**	**203**	*eP*	**Pn**	**15 50 25.2 -0.5**
TWF1				*eS*	**Sn**	**15 50 45.7 -0.4**
ALS	**Alishan** baz=217	**1.68**	**219**	*eP*	**Pn**	**15 50 27.3 +0.1**
ALS				*eS*	**Sn**	**15 50 49.9 +1.2**
IRIF	**Iriomote-Funau**	**1.69**	**107**	P	**Pn**	**15 50 26.7 -0.2**
IRIF				S	**Sn**	**15 50 48.2 -0.1**
CHN5	**Tsauling** baz=222	**1.69**	**224**	*eP*	**Pn**	**15 50 27.0 -0.1**
CHN5				*eS*	**Sn**	**15 50 49.0 +0.5**
FULB	**Fuli** baz=199	**1.73**	**201**	*eP*	**Pn**	**15 50 27.6 0.0**
FULB				*eS*	**Sn**	**15 50 49.8 +0.5**
ELDTW	**Lidau** baz=206	**1.84**	**208**	*eP*	**Pn**	**15 50 29.0 -0.1**
ELDTW				*eS*	**Sn**	**15 50 52.0 -0.1**
CHN4	**Tsaushan** baz=219	**1.93**	**221**	*eP*	**Pn**	**15 50 30.5 +0.4**
CHN4				*eS*	**Sn**	**15 50 54.1 +0.2**
EDH	**Donghe** baz=197	**1.94**	**198**	*eP*	**Pn**	**15 50 29.6 -0.6**
EDH				*eS*	**Sn**	**15 50 53.1 -1.1**
TPUB	**Ta-pu** baz=217	**1.94**	**219**	*eP*	**Pn**	**15 50 30.7 +0.4**
TPUB				*eS*	**Sn**	**15 50 55.3 +1.0**
JKRS	**Kuro-shima**	**1.96**	**107**	P	**Pn**	**15 50 30.6 +0.2**
JKRS				*eS*	**Sn**	**15 50 54.8 +0.2**
STYT	**Tauyuan** baz=212	**1.99**	**214**	*eP*	**Pn**	**15 50 31.6 +0.7**
WTP	**Ta-pu** baz=217	**2.00**	**218**	*eP*	**Pn**	**15 50 31.2 +0.2**
JIJ	**Ishigaki jima**	**2.04**	**103**	P	**Pn**	**15 50 31.3 -0.2**
JIJ				S	**Sn**	**15 50 55.6 -1.0**
TWK	**Hsinying** baz=219	**2.05**	**221**	*eP*	**Pn**	**15 50 31.7 -0.1**
CHN1	**Nanshi** baz=218	**2.09**	**219**	*eP*	**Pn**	**15 50 32.2 -0.1**
CHN1				*eS*	**Sn**	**15 50 57.6 -0.3**
JISG	**Ishigakijimahi**	**2.15**	**96**	P	**Pn**	**15 50 33.0 0.0**
JISG				*eS*	**Sn**	**15 51 00.1 +0.9**
TWG	**Pinlang** baz=201	**2.15**	**202**	*eP*	**Pn**	**15 50 32.5 -0.6**
TWG				*eS*	**Sn**	**15 50 58.3 -1.0**
JTJ	**Tarama**	**2.50**	**94**	*eS*	**Sn**	**15 51 08.5 +1.1**

*IDC **01** 16:37:46.7±0.9, 9.25°S×125.55°E, h0km, mb3.8/6, mb1 3.9/10,mb1mx3.6/41,mbtmp3.8/10, ML3.8/4, MS2.9/3, Ms1 2.9/3,ms1mx2.5/46, Error ellipse: s-maj=27.3km s-min=18.6km az=94.0*

*DJA **01** 16:37:51.3±0.6, 9°S±3°×12°5E±°, h14km±4km, M4.1/7, mB5.0/1, mb4.4/3, MLv3.9/7, Mw(mB)4.3/1*

*NEIC **01** 16:37:53.5±2.5, 9.54S±0.05×125.45E±0.07, h64km±11km, mb4.4/6, Error ellipse: s-maj=12.1km s-min=3.3km az=59.0*

ISC 01 16:37:51.5±0.6, 9°52S±0.06×125°54E±0.05, h35km, n35, σ2s29/43, mb4.3/9, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
SOEI	**Soe**	**1.28**	**259**	P	**Pn**	**16 38 14.1**	**+1.1**
SOEI				S	**Sn**	**16 38 31.3**	**+2.3**
SOEI	**Soe**	**1.28**	**259**		**Pn**	**16 38 14.1**	**+1.1**
BATI	**Baumata** 15nm,0.3s,baz=81,slow=4.3,SNR=19	**1.97**	**250**	Pn	**Pn**	**16 38 24.3**	**+1.8**
BATI	44nm,0.3s,baz=100,slow=2.6,SNR=9.2			Sn	**Sn**	**16 38 49.1**	**+3.1**
BATI	**Baumata**	**1.97**	**250**	P	**Pn**	**16 38 24.1**	**+1.6**
BATI				S	**Sn**	**16 38 48.3**	**+2.3**
MMRI	**Maumere**	**3.38**	**285**	P	**Pn**	**16 38 44.2**	**+2.4**
MMRI	**Maumere**	**3.38**	**285**		**Pn**	**16 38 42.7**	**+0.9**
EDFI	**Ende, Flores**	**3.88**	**281**	P	**Pn**	**16 38 49.3**	**+0.5**
EDFI				S	**Sn**	**16 39 31.4**	**-1.8**
BASI	**Baing, Sumba**	**4.94**	**261**	P	**Pn**	**16 39 05.2**	**+1.9**
MTN	**Manton Dam**	**6.41**	**122**		**Pn**	**16 39 28.2**	**+4.8**
MTN				Sn	**Sn**	**16 40 36.3**	**+0.9**
KNRA	**Kununurra**	**6.88**	**153**		**Pn**	**16 39 33.7**	**+3.7**
KAPI	**Kappang** comp=Z,96nm,18.3s,baz=76,slow=40	**7.28**	**308**	LR	LR	16 42 35.6	
FITZ	**Fitzroy Crossi** 1.7nm,0.3s,baz=357,slow=9.7,SNR=24	**8.53**	**179**	Pn	**Pn**	**16 39 54.6**	**+2.1**
FITZ	3.4nm,0.3s,baz=106,slow=12,SNR=13			Sn	**Sn**	**16 41 25.9**	**-1.7**
FITZ	comp=Z,45nm,20.4s,baz=257,slow=42			LR	LR	16 43 54.7	
FITZ	**Fitzroy Crossi**	**8.53**	**179**		**Pn**	**16 39 55.4**	**+2.8**
FITZ					**Sn**	**16 41 27.7**	**+0.1**
FAKI	**Fak Fak**	**9.35**	**46**	Pn	**Pn**	**16 40 06.7**	**+2.8**
WB0	**Warramunga Arr**	**13.30**	**141**		**Pn**	**16 40 59.1**	**+1.1**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=321,slow=14,SNR=16	**13.40**	**142**	Pn	**Pn**	**16 40 59.0**	**-0.3**
WRA	0.9nm,0.3s,baz=322,slow=24,SNR=7.8			Sn	**Sn**	**16 43 23.5**	**-3.7**
WRA	**Warramunga Arr**	**13.40**	**142**		**Pn**	**16 41 01.5**	**+2.1**
WRAB	**Tennant Creek**	**13.40**	**142**	Pn	**Pn**	**16 41 02.9**	**+3.5**
WB2	**Warramunga Arr**	**13.41**	**142**	Pn	**Pn**	**16 41 00.9**	**+1.4**
WR0	**Warramunga Arr**	**13.54**	**141**		**Pn**	**16 41 01.4**	**+0.2**
AS31	**Alice Springs**	**16.18**	**151**		**Pn**	**16 41 37.3**	**+0.9**
ASAR	**Alice Springs** 0.6nm,0.3s,baz=320,slow=11,SNR=50	**16.18**	**151**	Pn	**Pn**	**16 41 36.8**	**+0.4**
ASAR	0.4nm,0.3s,baz=312,slow=16,SNR=9.7			Sn	**Sn**	**16 44 29.1**	**-5.8**
ASAR	comp=Z,46nm,18.3s,baz=12,slow=41			LR	LR	16 49 07.0	
ASAR	**Alice Springs**	**16.18**	**151**		**Pn**	**16 41 37.4**	**+1.0**
BBOO	**Buckleboo**	**25.13**	**159**	P	**P**	**16 43 11.5**	**-1.9**
BBOO	comp=Z,17nm,1.2s			IAmb	IAmb	16 43 27.8	
TPUB	**Ta-pu**	**32.97**	**352**	P	**P**	**16 44 21.2**	**-2.0**
CAN	**Canberra**	**33.43**	**144**	P	**P**	**16 44 26.6**	**-0.6**
CAN	comp=Z,3.9nm,0.9s			IAmb	IAmb	16 44 39.8	
KSRS	**Korea Array** comp=Z,0.3nm,0.4s,baz=182,slow=9.5,SNR=1.7	**46.78**	**3**	P	**P**	**16 46 17.4**	**-0.2**
SONM	**Songino Array** comp=Z,0.1nm,0.3s,baz=139,slow=9.0,SNR=1.5	**59.57**	**345**	P	**P**	**16 47 49.1**	**-2.7**
MK31	**Makanchi Array**	**68.02**	**329**	P	**P**	**16 48 46.7**	**-0.6**
MK31	comp=Z,6.8nm,1.4s			IAmb	IAmb	16 48 58.1	
MKAR	**Makanchi Array** comp=Z,1.4nm,0.5s,baz=130,slow=7.6,SNR=22	**68.02**	**329**	P	**P**	**16 48 46.1**	**-1.2**
MKAR	**Makanchi Array**	**68.02**	**329**	P	**P**	**16 48 45.8**	**-1.6**
PETK	**Petropavlovsk-** comp=Z,2.0nm,0.8s,baz=155,slow=3.9,SNR=4.7	**68.14**	**20**	P	**P**	**16 48 47.5**	**-0.3**
VNDA	**Vanda** comp=Z,0.4nm,0.7s,baz=50,slow=5.6,SNR=3.3	**70.53**	**172**	P	**P**	**16 49 05.8**	**+3.4**
ZALV	**Zalesovo Beam** comp=Z,0.3nm,0.3s,baz=106,slow=4.7,SNR=1.9	**71.98**	**336**	P	**P**	**16 49 09.1**	**-2.3**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.7s,baz=78,slow=1.7,SNR=4.2	**124.91**	**279**	PKP	**PKiKP**	**16 56 50.2**	**+1.0**

*SOME **01** 16:38:08.8, 42°.28N×80°.45E, h0km*

*NNC **01** 16:38:09.5±4.1, 42°.76N×81°.02E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=37.4km s-min=16.3km az=177.0*

*KRNET **01** 16:38:14.8±0.1, 42°.76N×80°.56E, mb3.0*

ISC 01 16:38:15.9±2.1, 42°.61N±0°.06×80°.33E±0°.06, h1km±11km, n22, σ2s06/42, 17C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KTMS	**Ketmen** 7.1nm,0.1s	**0.84**	**1**	*eP*	**Pg**	**16 38 31.4**	**-0.5**
KTMS	24nm,0.3s			*eS*	**Sn**	**16 38 47.9**	**0.0**
SHLS	**Shalkode** 13nm,0.1s	**0.84**	**311**	*eP*	**Pg**	**16 38 28.6**	**-3.4**
SHLS	77nm,0.2s			*eS*	**Sg**	**16 38 43.3**	**+0.4**
PDGK	**Podgornoye** 3.6nm,0.4s	**0.95**	**320**	⇓P	**Pg**	**16 38 33.3**	**-0.7**
PDGK	12nm,0.3s			⇑S	**Sn**	**16 38 50.7**	**0.0**
UZB	**Uzynbulak** 5.2nm,0.3s	**1.10**	**300**	*eP*	**Pg**	**16 38 35.0**	**-2.0**
UZB	27nm,0.1s			*eS*	**Sn**	**16 38 53.7**	**-0.8**
PRZ	**Przheval'sk** baz=61	**1.43**	**266**	⇑*eP*	**Pg**	**16 38 44.0**	**+0.7**
PRZ				⇑*iS*	**Sg**	**16 39 05.3**	**+3.4**
KPKS	**Kokpek** 36nm,0.1s	**1.48**	**306**	*eP*	**Pn**	**16 38 43.0**	**-0.7**
KPKS	83nm,0.3s			*eS*	**Sg**	**16 39 07.9**	**+4.4**
SATY	**Saty** 15nm,0.2s	**1.49**	**288**	⇑*eP*	**Pn**	**16 38 41.9**	**-1.9**
SATY	30nm,0.1s			*eS*	**Sg**	**16 39 05.6**	**+1.9**
ZHN	**Zhinishke** 5.0nm,0.2s	**1.50**	**292**	*eP*	**Pn**	**16 38 43.6**	**-0.4**
ZHN	14nm,0.1s			*eS*	**Sg**	**16 39 08.6**	**+4.4**
DJR	**Jarkent** 2.2nm,0.3s	**1.77**	**347**	*eP*	**Pb**	**16 38 48.5**	**-0.6**
DJR	50nm,0.3s			*eS*	**Sg**	**16 39 17.1**	**+4.5**
ANVS	**Anan'yevo** baz=72	**1.97**	**276**	⇑*iP*	**Pb**	**16 38 51.6**	**-1.1**
ANVS				⇑*iS*	**Sg**	**16 39 18.8**	**-0.5**
MNBS	**Baschi** 6.3nm,0.1s	**2.04**	**317**	*eP*	**Pb**	**16 38 52.9**	**-0.8**
MNBS	101nm,0.4s			*eS*	**Sg**	**16 39 24.6**	**+3.3**
KDJ	**Kajisay** baz=57	**2.39**	**259**	⇑*iP*	**Pb**	**16 38 57.9**	**-1.8**
KDJ				⇑*iS*	**Sb**	**16 39 29.3**	**-0.4**
ARXS	**Arharly** 4.0nm,0.2s	**2.43**	**312**	*eP*	**Pb**	**16 38 59.5**	**-0.9**
ARXS	14nm,0.5s			*eS*	**Sg**	**16 39 35.8**	**+1.9**
KOTS	**Kotyrbulak** 8.9nm,0.2s	**2.45**	**286**	*eP*	**Pb**	**16 38 59.4**	**-1.3**
KOTS	35nm,0.5s			*eS*	**Sg**	**16 39 35.8**	**+1.3**
MDOK	**Medeo** 11nm,0.5s	**2.48**	**284**	*eP*	**Pn**	**16 38 58.5**	**+1.0**
MDOK	13nm,0.4s			*eS*	**Sg**	**16 39 34.2**	**-1.3**
IZV	**Izvestkoviy** 18nm,0.8s	**2.77**	**280**	*eP*	**Pn**	**16 39 03.0**	**+1.5**
IZV	11nm,0.4s			*eS*	**Sb**	**16 39 41.9**	**+1.2**
KTBS	**Karatobe** 1.7nm,0.3s	**2.89**	**294**	*eP*	**Pb**	**16 39 06.5**	**-1.7**
KTBS	31nm,0.7s			*eS*	**Sg**	**16 39 47.9**	**-0.7**
ULHL	**Ulahol** baz=62	**3.05**	**265**	⇑*iP*	**Pn**	**16 39 07.1**	**+1.7**
ULHL				⇑*iS*	**Sb**	**16 39 45.4**	**-3.5**
BOOM	**Boomskoye usch** baz=67	**3.25**	**269**	⇑*eP*	**Pn**	**16 39 09.6**	**+1.5**
BOOM				⇑*iS*	**Sn**	**16 39 49.9**	**+2.4**
TKM2	**Tokmak 2** baz=74	**3.50**	**277**	⇑*iP*	**Pn**	**16 39 13.4**	**+1.8**
TKM2				⇑*iS*	**Sn**	**16 39 55.8**	**+2.0**
MAKZ	**Makanchi** 3.6nm,1.1s	**4.36**	**15**	⇑Pg	**Pn**	**16 39 23.4**	**+0.2**
MAKZ	3.6nm,1.1s			⇑Lg	Lg	16 40 23.0	
MK31	**Makanchi Array** 0.4nm,0.3s,baz=202,slow=15,SNR=12	**4.41**	**18**	⇓Pg	**Pn**	**16 39 23.2**	**-0.7**
MK31	1.3nm,0.5s,baz=193,slow=32			⇑Lg	Lg	16 40 23.0	

*SOME **01** 16:47:56.4, 40°.30N×77°.60E, h0km*

*NNC **01** 16:47:56.2±1.4, 40°.25N×77°.59E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=9.7km s-min=6.4km az=168.0*

*KRNET **01** 16:47:58.6±0.1, 40°.35N×77°.80E, mb3.0*

ISC 01 16:47:55.3±2.1, 40°19N±0°09×77°49E±0°04, h10km, n53, σ1s82/80, 18C-13D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KDJ	**Kajisay** baz=46	**1.95**	**353**	⇑*iP*	**Pg**	**16 48 32.7**	**0.0**
KDJ				⇑*iS*	**Sg**	**16 48 57.8**	**-0.3**
ULHL	**Ulahol** baz=29	**2.26**	**336**	⇑*iP*	**Pg**	**16 48 38.8**	**+0.2**
ULHL				⇑*iS*	**Sg**	**16 49 08.6**	**+0.7**
PRZ	**Przheval'sk** baz=12	**2.39**	**16**	⇑*iP*	**Pb**	**16 48 38.2**	**-0.3**
PRZ				⇑*iS*	**Sb**	**16 49 07.3**	**-0.9**
BOOM	**Boomskoye usch** baz=28	**2.58**	**334**	⇓*eP*	**Pg**	**16 48 43.3**	**-1.4**
BOOM				⇓*iS*	**Sg**	**16 49 15.8**	**-2.3**
ANVS	**Anan'yevo** baz=58	**2.59**	**3**	⇓*iP*	**Pb**	**16 48 41.8**	**-0.2**
ANVS				⇓*iS*	**Sb**	**16 49 13.1**	**-0.9**
TNSS	**Tian-Shan** 11nm,0.4s	**2.87**	**352**	*eP*	**Pg**	**16 48 49.2**	**-1.2**
TNSS	18nm,0.8s			*eS*	**Sg**	**16 49 27.3**	**-0.3**
TNSS	**Tian-Shan** 11nm,0.4s	**2.87**	**352**	Pg	**Pb**	**16 48 47.9**	**+1.0**
TNSS	18nm,0.8s			Lg	Lg	16 49 25.5	
IZV	**Izvestkoviy** 4.8nm,0.3s	**2.92**	**347**	*eP*	**Pg**	**16 48 50.1**	**-1.1**
IZV	39nm,0.6s			*eS*	**Sg**	**16 49 28.7**	**-0.4**
IZV	**Izvestkoviy** 2.1nm,0.4s	**2.92**	**347**	Pg	**Pb**	**16 48 48.7**	**+1.2**
IZV	39nm,0.6s			Lg	Lg	16 49 26.8	
ARLS	**Aral** baz=1.0	**2.92**	**306**	⇑*iP*	**Pg**	**16 48 49.9**	**-1.3**
ARLS	baz=1.0			⇑*iS*	**Sg**	**16 49 27.0**	**-2.1**
SATY	**Saty** 6.7nm,0.4s	**2.95**	**13**	*eP*	**Pg**	**16 48 50.0**	**-1.8**
SATY	15nm,0.5s			*eS*	**Sg**	**16 49 28.4**	**-1.6**
SATY	**Saty** 3.2nm,0.4s	**2.95**	**13**	Pg	**Pb**	**16 48 49.5**	**+1.5**
SATY	19nm,0.7s			Lg	Lg	16 49 28.8	
MDOK	**Medeo** 3.6nm,0.5s	**2.99**	**354**	*eP*	**Pg**	**16 48 50.9**	**-1.7**
MDOK	32nm,0.6s			*eS*	**Sg**	**16 49 29.7**	**-1.6**
MDOK	**Medeo** 3.1nm,0.5s	**2.99**	**354**	Pg	**Pb**	**16 48 50.1**	**+1.4**
MDOK	32nm,0.6s			Lg	Lg	16 49 29.1	
UCH	**Uchtor** baz=8.0	**3.03**	**313**	⇓*eP*	**Pb**	**16 48 51.3**	**+1.7**
UCH	baz=8.0			⇓*iS*	**Sb**	**16 49 29.6**	**+2.8**
KOTS	**Kotyrbulak** 16nm,0.4s	**3.06**	**355**	*eP*	**Pg**	**16 48 52.6**	**-1.2**
KOTS	68nm,0.4s			*eS*	**Sg**	**16 49 33.4**	**0.0**
KOTS	**Kotyrbulak** 16nm,0.4s	**3.06**	**355**	Pg	**Pb**	**16 48 51.7**	**+1.8**
KOTS				Lg	Lg	16 49 31.9	
KST	**Kastek** 4.3nm,0.4s	**3.07**	**339**	⇓*iP*	**Pg**	**16 48 52.5**	**-1.7**
KST	17nm,0.6s			*eS*	**Sg**	**16 49 33.4**	**-0.6**
KST	**Kastek** 4.3nm,0.4s	**3.07**	**339**	Pg	**Pg**	**16 48 52.5**	**-1.7**
KST	17nm,0.6s			Lg	Lg	16 49 33.4	
TKM2	**Tokmak 2** baz=28	**3.08**	**333**	⇑*eP*	**Pb**	**16 48 50.1**	**-0.1**
TKM2	baz=28			⇑*iS*	**Sb**	**16 49 28.1**	**+0.2**
TKM2	**Tokmak 2** 2.0nm,0.3s	**3.08**	**333**	⇑Pg	**Pb**	**16 48 51.5**	**+1.3**
TKM2	15nm,0.7s			⇓Lg	Lg	16 49 33.3	
KBK	**Karagaybulak** baz=18	**3.12**	**323**	⇑*eP*	**Pb**	**16 48 52.0**	**+1.1**
KBK	baz=18			⇑*iS*	**Sb**	**16 49 30.3**	**+1.2**
UZB	**Uzynbulak** 1.5nm,0.4s	**3.17**	**21**	*eP*	**Pb**	**16 48 53.8**	**+2.0**
UZB	12nm,0.5s			*eS*	**Sg**	**16 49 34.9**	**-2.2**
UZB	**Uzynbulak** 1.5nm,0.3s	**3.17**	**21**	Pg	**Pb**	**16 48 50.5**	**-1.3**
UZB	12nm,0.5s			Lg	Lg	16 49 29.9	
SHLS	**Shalkode** 2.2nm,0.5s	**3.31**	**26**	*eP*	**Pg**	**16 48 58.5**	**-0.2**
SHLS	17nm,0.7s			*eS*	**Sg**	**16 49 43.0**	**+1.3**
SHLS	**Shalkode** 4.5nm,0.3s	**3.31**	**26**	Pg	**Pg**	**16 48 57.9**	**-0.9**
SHLS	17nm,0.7s			Lg	Lg	16 49 43.0	
AAK	**Ala-Archa** baz=14	**3.33**	**318**	⇓*eP*	**Pb**	**16 48 54.4**	**0.0**
AAK	baz=14			⇓*iS*	**Sb**	**16 49 35.6**	**+0.6**
AAK	**Ala-Archa** 2.7nm,0.5s	**3.33**	**318**	⇑Pg	**Pb**	**16 48 56.8**	**+2.4**
AAK	13nm,0.6s			⇑Lg	Lg	16 49 41.9	
AAK	**Ala-Archa** comp=Z,4.6nm,0.8s	**3.33**	**318**	IAmb	IAmb	16 48 58.3	
AAK	**Ala-Archa**	**3.33**	**318**	P	**Pg**	**16 48 57.3**	**-1.7**
KPKS	**Kokpek** comp=Z,4.3nm,0.3s	**3.39**	**15**	*eP*	**Pb**	**16 48 57.6**	**+2.1**
KPKS	comp=Z,27nm,0.5s			*eS*	**Sg**	**16 49 41.9**	**-2.4**
AML	**Almayashu** baz=1.0	**3.46**	**305**	⇑*iP*	**Pb**	**16 48 57.8**	**+0.9**
AML	baz=1.0			⇑*iS*	**Sb**	**16 49 40.7**	**+1.6**
PDGK	**Podgornoye** comp=Z,1.8nm,0.4s	**3.48**	**25**	Pg	**Pb**	**16 48 58.0**	**+1.0**
PDGK	comp=Z,7.2nm,0.7s			Lg	Lg	16 49 42.5	
PDGK	**Podgornoye** comp=Z,3.7nm,0.8s	**3.48**	**25**	⇓Pg	**Pb**	**16 48 58.1**	**+1.2**
PDGK	comp=Z,14nm,0.7s			⇓Lg	Lg	16 49 43.8	
KTBS	**Karatobe** comp=Z,1.4nm,0.4s	**3.57**	**351**	*eP*	**Pg**	**16 49 02.2**	**-1.5**
KTBS	comp=Z,34nm,0.4s			*eS*	**Sg**	**16 49 49.4**	**-0.6**
KTBS	**Karatobe** comp=Z,1.9nm,0.7s	**3.57**	**351**	Pg	**Pb**	**16 49 00.9**	**+2.3**

KTBS					Lg	Lg	16 49 48.3		
	comp=Z,36nm,0.6s								
KRBS	**Karabastau**	**3.76**	**339**	*eP*	**Pg**	**Pb**	**16 49 06.3**	**-0.9**	
	comp=Z,1.4nm,0.4s								
KRBS					*eS*	**Sg**	**16 49 56.2**	**+0.3**	
	comp=Z,11nm,0.5s								
KRBS	**Karabastau**	**3.76**	**339**	Pg	Pg	**Pb**	**16 49 04.4**	**+2.7**	
	comp=Z,1.4nm,0.4s								
KRBS					Lg	Lg	16 49 53.9		
	comp=Z,11nm,0.5s								
KUU	**Kurty**	**3.80**	**347**	*eP*	**Pg**	**Pb**	**16 49 05.6**	**-2.4**	
	comp=Z,0.4nm,0.2s								
KUU					*eS*	**Sg**	**16 49 55.2**	**-2.0**	
	comp=Z,18nm,0.8s								
KUU	**Kurty**	**3.80**	**347**	Pg	Pg	**Pb**	**16 49 05.1**	**+2.7**	
	comp=Z,1.8nm,0.6s								
KUU					Lg	Lg	16 49 55.2		
	comp=Z,18nm,0.8s								
KTMS	**Ketmen**	**3.89**	**32**	*eP*	**Pb**	**Pb**	**16 49 05.6**	**+1.5**	
	comp=Z,2.0nm,0.3s								
KTMS					*eS*	**Sb**	**16 49 55.2**	**+3.9**	
	comp=Z,6.3nm,0.7s								
KTMS	**Ketmen**	**3.89**	**32**	Pg	Pg	**Pb**	**16 49 05.1**	**+1.0**	
	comp=Z,1.5nm,0.0s								
KTMS					Lg	Lg	16 49 55.2		
	comp=Z,6.3nm,0.7s								
SGDS	**Sogindy**	**3.90**	**328**	Pg	Pg	**Pg**	**16 49 07.7**	**-2.2**	
	comp=Z,4.9nm,0.5s								
SGDS					Lg	Lg	16 49 59.5		
	comp=Z,7.2nm,0.8s								
MNBS	**Baschi**	**3.94**	**10**	*eP*	**Pg**	**Pg**	**16 49 08.5**	**-2.3**	
	comp=Z,1.2nm,0.3s								
MNBS					*eS*	**Sg**	**16 50 00.3**	**-1.6**	
	comp=Z,19nm,0.6s								
MNBS	**Baschi**	**3.94**	**10**	Pg	Pg	**Pb**	**16 49 07.7**	**+2.7**	
	comp=Z,1.2nm,0.3s								
MNBS					Lg	Lg	16 49 59.7		
	comp=Z,19nm,0.6s								
ARXS	**Arharly**	**4.03**	**3**	*eP*	**Pg**	**Pg**	**16 49 10.1**	**-2.3**	
	comp=Z,5.4nm,0.5s								
ARXS					*eS*	**Sg**	**16 50 02.8**	**-1.8**	
	comp=Z,22nm,0.6s								
ARXS	**Arharly**	**4.03**	**3**	Pg	Pg	**Pb**	**16 49 09.2**	**+2.9**	
	comp=Z,5.4nm,0.5s								
ARXS					Lg	Lg	16 50 02.4		
	comp=Z,22nm,0.6s								
MRKS	**Merke**	**4.10**	**310**	*eP*	**Pg**	**Pg**	**16 49 12.1**	**-1.6**	
	comp=Z,0.7nm,0.1s								
MRKS					*eS*	**Sg**	**16 50 06.5**	**-0.3**	
	comp=Z,3.8nm,0.6s								
MRKS	**Merke**	**4.10**	**310**	Pg	Pg	**Pg**	**16 49 11.3**	**-2.4**	
	comp=Z,0.7nm,0.2s								
MRKS					Lg	Lg	16 50 05.9		
	comp=Z,3.6nm,0.7s								
DJR	**Jarkent**	**4.48**	**22**	*eP*	**Pb**	**Pg**	**16 49 17.2**	**+3.2**	
	comp=Z,1.5nm,0.4s								
DJR					*eS*	**Sg**	**16 50 15.5**	**-3.5**	
	comp=Z,4.3nm,0.4s								
DJR	**Jarkent**	**4.48**	**22**	Pg	Pb	**Pb**	**16 49 16.9**	**+2.9**	
	comp=Z,0.8nm,0.2s								
DJR					Lg	Lg	16 50 15.5		
	comp=Z,3.4nm,0.3s								
BTLS	**Baital**	**5.47**	**333**	Pg	Pg	**Pb**	**16 49 35.1**	**+4.2**	
	comp=Z,1.7nm,0.4s								
BTLS					Lg	Lg	16 50 46.9		
	comp=Z,4.8nm,0.7s								
KK31	**Karatay Array**	**5.98**	**301**	⇑Pg		**Pg**	**16 49 46.8**	**-3.0**	
	comp=Z,0.3nm,0.5s,baz=125,slow=16								
KK31					⇓Lg	Lg	16 51 05.4		
	comp=Z,1.2nm,0.6s,baz=119,slow=27,SNR=4.5								

IDC ***01*** *16:58:28.1±1.1, 7.°25N×94.°01E, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.7/55, mbtmp3.9/10, ML4.2/2, MS3.3/9, Ms1 3.3/9, ms1mx3.0/45, Error ellipse: s-maj=50.7km s-min=17.6km az=57.0*

NEIC ***01*** *16:58:35.0±2.0, 7.°4N±0.°1×94.°3E±0.°2, h52km±13km, mb4.3/4, Error ellipse: s-maj=26.3km s-min=11.8km az=53.0*

IDC 01 16:58:34.2±0.8, 7.°4N±0.°1×94.°3E±0.°1, h35km, n36, σ1°38/26, mb3.9/10, MS3.4/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.40**	**129**	Pn	Pn	16 59 19.9	-4.9
PBA	**Port Blair**	**4.50**	**340**	Pn	Pn	16 59 41.2	+1.2
DGPR	**DIGLIPUR**	**5.90**	**347**	*eP*	**Pn**	**17 00 01.9**	**+2.7**
PSI	**Prapat**	**6.49**	**134**	Pn	**Pn**	**17 00 08.7**	**+1.4**
	2.7nm,0.3s,baz=1.4,slow=4.5,SNR=6.8						
PSI				LR	LR	17 03 04.3	
	comp=Z,159nm,20.5s,baz=256,slow=41						
RPSI	**Rantau Prapat**	**6.56**	**135**	Pn	**Pn**	**17 00 09.7**	**+1.5**
KULM	**Kulim**	**6.65**	**108**	Pn	**Pn**	**17 00 09.9**	**+0.4**
IPM	**Ipoh**	**7.29**	**113**	Pn	**Pn**	**17 00 17.9**	**-0.4**
CM31	**Chiang Mai Arr**	**11.89**	**22**	Pn	**Pn**	**17 01 22.6**	**+1.3**
CMAR	**Chiang Mai Arr**	**11.89**	**22**	Pn	**Pn**	**17 01 22.1**	**+0.7**
	0.5nm,0.3s,baz=214,slow=14,SNR=14						
CMAR				LR	LR	17 06 03.9	
	comp=Z,86nm,18.3s,baz=254,slow=38						
CMAR	**Chiang Mai Arr**	**11.89**	**22**	Pn	**Pn**	**17 01 21.3**	**0.0**
CHTO	**Chiang Mai**	**12.22**	**21**	Pn	**Pn**	**17 01 26.1**	**+0.2**
PALK	**Pallekele**	**13.48**	**270**	LR	LR	17 06 20.1	
	comp=Z,135nm,20.8s,baz=198,slow=36						
LEM	**Lembang**	**19.39**	**136**	LR	LR	17 12 18.4	
	comp=Z,156nm,18.1s,baz=265,slow=43						
LSA	**Lhasa**	**22.39**	**353**	P	**P**	**17 03 31.6**	**+1.5**
H08S3	**Diego Garcia H**	**26.38**	**236**	T	T	17 30 55.9	
	baz=54,slow=75,SNR=81						
H08S2	**Diego Garcia H**	**26.38**	**236**	T	T	17 30 56.2	
	baz=54,slow=75,SNR=14						
H08S1	**Diego Carcia H**	**26.40**	**236**	T	T	17 30 56.8	
	baz=54,slow=75,SNR=5.0						
KAPI	**Kappang**	**28.23**	**115**	LR	LR	17 15 52.6	
	comp=Z,37nm,18.6s,baz=256,slow=37						
NIL	**Nilore**	**32.58**	**326**	P	**P**	**17 05 01.5**	**-0.9**
MKAR	**Makanchi Array**	**40.59**	**347**	P	**P**	**17 06 09.5**	**-1.0**
	0.9nm,0.6s,baz=153,slow=8.5,SNR=8.1						
MKAR	**Makanchi Array**	**40.59**	**347**	P	**P**	**17 06 09.2**	**-1.3**
SONM	**Songino Array**	**41.59**	**12**	P	**P**	**17 06 20.1**	**+1.2**
	0.3nm,0.5s,baz=334,slow=18,SNR=1.8						
KSRS	**Korea Array**	**42.72**	**41**	LR	LR	17 26 08.5	
	comp=Z,18nm,20.5s,baz=355,slow=39						
GEYT	**Ailbeck**	**44.66**	**318**	LR	LR	17 28 28.7	
	comp=Z,39nm,18.2s,baz=355,slow=40						
KURK	**Kurchatov**	**45.11**	**346**	P	**P**	**17 06 46.9**	**-0.1**
KURK				IAmb	IAmb	17 06 57.0	
	comp=Z,6.8nm,1.4s						
ZAA0	**Zalesovo Array**	**47.05**	**352**	P	**P**	**17 07 03.0**	**+0.8**
ZAA0				IAmb	IAmb	17 07 10.1	
	comp=Z,4.8nm,1.2s						
ZALV	**Zalesovo Beam**	**47.05**	**352**	P	**P**	**17 07 02.2**	**0.0**
	comp=Z,1.6nm,0.4s,baz=180,slow=7.7,SNR=8.7						
ZALV	**Zalesovo Beam**	**47.05**	**352**	P	**P**	**17 06 58.5**	**-3.7**
WRA	**Warramunga Arr**	**47.86**	**125**	P	**P**	**17 07 08.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=304,slow=8.8,SNR=5.4						
ASAR	**Alice Springs**	**49.49**	**130**	P	**P**	**17 07 21.8**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=299,slow=7.8,SNR=8.4						
ASAR				PcP	**PcP**	**17 08 42.4**	**-1.0**
	comp=Z,0.5nm,1.0s,baz=300,slow=3.3,SNR=1.5						
ABKAR	**Akbulak array**	**50.72**	**331**	P	**P**	**17 07 30.1**	**-0.4**
ARU	**Arti**	**56.39**	**337**	LR	LR	17 34 15.7	
	comp=Z,48nm,19.4s,baz=165,slow=38						
FINES	**FINESS Array B**	**73.20**	**332**	P	**P**	**17 10 00.3**	**-1.1**
	comp=Z,3.4nm,0.9s,baz=39,slow=4.8,SNR=7.9						
FINES	**FINESS Array B**	**73.20**	**332**	P	**P**	**17 09 58.9**	**-2.4**
ARCES	**ARCESS Array B**	**75.77**	**340**	P	**P**	**17 10 16.3**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=98,slow=6.3,SNR=5.3						
ARCES				LR	LR	17 46 23.6	
	comp=Z,26nm,19.9s,baz=90,slow=38						
GERES	**GERESS Array B**	**78.28**	**318**	P	**P**	**17 10 30.4**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=6.0,slow=28,SNR=2.4						

IDC ***01*** *17:13:33.8±1.5, 52.°53N×153.°91E, h403km±18km, mb3.1/7, mb1 3.1/9, mb1mx2.8/37, mbtmp3.7/9, Error ellipse: s-maj=25.2km s-min=18.5km az=79.0*

IDC 01 17:13:33.8±1.0, 52.°6N±0.°2×154.°0E±0.°1, h400km, n9, σ1°03/9, mb3.4/7, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**2.33**	**75**	P	**Pn**	**17 14 32.1**	**+0.2**
	1.2nm,0.3s,baz=46,slow=0.5,SNR=61						
KLR	**Kul'dur**	**14.40**	**265**	P	**P**	**17 16 41.1**	**+1.5**
	0.1nm,0.3s,baz=152,slow=22,SNR=2.3						
INK	**Inuvik**	**36.53**	**37**	P	**P**	**17 20 03.6**	**+0.9**
	2.6nm,1.0s,baz=159,slow=20,SNR=1.6						
ZALV	**Zalesovo Beam**	**39.89**	**301**	P	**P**	**17 20 29.2**	**-1.3**
	0.6nm,0.5s,baz=66,slow=3.6,SNR=1.6						
MKAR	**Makanchi Array**	**44.98**	**293**	P	**P**	**17 21 10.9**	**-0.2**
	0.6nm,0.4s,baz=60,slow=6.2,SNR=12						
ARCES	**ARCESS Array B**	**52.56**	**340**	P	**P**	**17 22 06.9**	**-0.6**
	1.9nm,1.0s,baz=2.3,slow=6.1,SNR=1.2						
FINES	**FINESS Array B**	**59.04**	**334**	P	**P**	**17 22 52.3**	**-0.5**
	1.6nm,0.9s,baz=19,slow=8.3,SNR=4.3						
WRA	**Warramunga Arr**	**74.19**	**199**	P	**P**	**17 24 26.9**	**-1.0**
	0.2nm,0.4s,baz=14,slow=5.9,SNR=4.9						
ASAR	**Alice Springs**	**77.90**	**199**	P	**P**	**17 24 48.3**	**-0.3**
	0.4nm,0.5s,baz=15,slow=4.9,SNR=14						

IDC ***01*** *17:38:31.8±41.0, 24.°56S×178.°33W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.8/23, mbtmp4.1/3, Error ellipse: s-maj=755.3km s-min=143.9km az=88.0*

NEIC ***01*** *17:39:36.7±1.1, 26.°2S±0.°2×179.°4E±0.°2, h505km±24km, mb4.1/12, Error ellipse: s-maj=34.1km s-min=23.6km az=211.0*

IDC 01 17:39:36.4±4.0, 26.°2S±0.°4×179.°4E±0.°4, h500km, n19, σ0°54/17, mb4.0/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**15.69**	**200**	P	**P**	**17 42 53.4**	**-0.2**
PLWZ	**Palliser**	**15.74**	**192**	P	**P**	**17 42 54.5**	**+0.4**
EIDS	**Eidsvold**	**25.50**	**266**	P	**P**	**17 44 24.6**	**+0.2**
EIDS				IAmb	IAmb	17 44 30.0	
	comp=Z,25nm,1.6s						
CTAO	**Charters Tower**	**31.02**	**274**	P	**P**	**17 45 13.5**	**+0.8**
CTAO				IAmb	IAmb	17 45 14.0	
	comp=Z,6.4nm,1.1s						
STKA	**Stephens Creek**	**33.42**	**251**	P	**P**	**17 45 33.2**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=80,slow=11,SNR=9.0						
STKA	**Stephens Creek**	**33.42**	**251**	P	**P**	**17 45 33.2**	**+0.1**
STKA	**Stephens Creek**	**33.42**	**251**	IAmb	IAmb	17 45 35.8	
	comp=Z,1.6nm,1.2s						
BBOO	**Buckleboo**	**38.10**	**250**	P	**P**	**17 46 11.3**	**-0.6**
AS31	**Alice Springs**	**41.18**	**263**	P	**P**	**17 46 37.7**	**+0.8**
ASAR	**Alice Springs**	**41.18**	**263**	P	**P**	**17 46 36.7**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=95,slow=8.4,SNR=55						
ASAR	**Alice Springs**	**41.18**	**263**	P	**P**	**17 46 36.7**	**-0.2**
WR0	**Warramunga Arr**	**41.58**	**269**	P	**P**	**17 46 39.4**	**-0.6**
WR0				IAmb	IAmb	17 47 04.5	
	comp=Z,9.6nm,1.5s						
WB2	**Warramunga Arr**	**41.75**	**269**	P	**P**	**17 46 40.9**	**-0.5**
WB2				IAmb	IAmb	17 46 56.8	
	comp=Z,7.4nm,1.3s						
WRA	**Warramunga Arr**	**41.76**	**269**	P	**P**	**17 46 40.8**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=104,slow=7.9,SNR=17						
WRA	**Warramunga Arr**	**41.76**	**269**	P	**P**	**17 46 40.8**	**-0.8**
WRA	**Warramunga Arr**	**41.76**	**269**	IAmb	IAmb	17 46 41.5	
	comp=Z,0.1nm,0.8s						
WB0	**Warramunga Arr**	**41.77**	**269**	P	**P**	**17 46 41.1**	**-0.4**
WB0				IAmb	IAmb	17 46 42.0	
	comp=Z,5.6nm,1.2s						
KNRA	**Kununurra**	**48.18**	**272**	P	**P**	**17 47 31.0**	**0.0**
KNRA				IAmb	IAmb	17 47 41.2	
	comp=Z,25nm,1.4s						
QSPA	**South Pole Qui**	**63.92**	**180**	P	**P**	**17 49 19.4**	**0.0**
QSPA				IAmb	IAmb	17 49 32.9	
	comp=Z,5.6nm,1.4s						

IDC 01 18:04:43.6±4.7, 24.°17N×94.°56E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/37, mbtmp3.4/3, Error ellipse: s-maj=418.1km s-min=28.1km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**24.63**	**339**	P	P	18 10 05.8	0.0
	0.6nm,0.5s,baz=153,slow=8.2,SNR=6.6						
WRA	**Warramunga Arr**	**58.51**	**135**	P	P	18 14 41.9	-0.2
	0.2nm,0.3s,baz=323,slow=7.3,SNR=9.2						
ASAR	**Alice Springs**	**60.98**	**138**	P	P	18 14 59.1	+0.1
	0.1nm,0.4s,baz=318,slow=6.1,SNR=5.4						

NEIC ***01*** *18:19:49.8±2.7, 22.°44S±0.°04×68.°43W±0.°10, h117km±4km, Error ellipse: s-maj=13.0km s-min=6.0km az=100.0*

IDC ***01*** *18:19:50.2±1.1, 22.°54S×68.°27W, h96km±10km, mb3.5/2, mb1 3.8/4, mb1mx3.5/25, mbtmp4.0/4, Error ellipse: s-maj=40.9km s-min=23.5km az=140.0*

SJA ***01*** *18:19:50.4±0.6, 22.°40S×68.°61W, h130km±4km, ML4.1, MW4.0*

GUC ***01*** *18:19:52.7±0.7, 22.°43S×68.°50W, h104km±4km, ML4.1*

IDC 01 18:19:50.9±0.8, 22.°47S±0.°04×68.°58W±0.°04, h120km±6km, n73, σ1°40/108, 9C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.34**	**245**	P	**Pn**	**18 20 08.7**	**+0.2**
	228nm,0.3s,baz=29,slow=2.6,SNR=2965						
LVC				S	**Sn**	**18 20 20.5**	**-1.1**
	1µm,0.3s,baz=245,slow=22,SNR=41						
LVC	**Limon Verde**	**0.34**	**245**	*eP*	**Pn**	**18 20 08.6**	**+0.2**
LVC				*i* S	**Sn**	**18 20 21.3**	**-0.3**
LVC	**Limon Verde**	**0.34**	**245**	*eP*	**Pn**	**18 20 08.7**	**+0.2**
LVC				*eS*	**Sn**	**18 20 21.6**	**0.0**
LVC				IAML		18 20 22.4	
	comp=Z,4µm,0.2s						
PB09	**IPOC Station P**	**0.91**	**317**	⇓*iP*	**Pn**	**18 20 12.8**	**+0.5**
PB09				*i* S	**Sn**	**18 20 28.2**	**-0.2**
PB09	**IPOC Station P**	**0.91**	**317**		**Pn**	**18 20 12.8**	**+0.5**
PB09				Sn	**Sn**	**18 20 28.1**	**-0.2**
PB09	**IPOC Station P**	**0.91**	**317**	*eP*	**Pn**	**18 20 13.0**	**+0.7**
PB09				*eS*	**Sn**	**18 20 29.2**	**+0.8**
PB09				IAML		18 20 30.6	
	comp=Z,2µm,0.2s						
PB06	**IPOC Station P**	**0.95**	**255**	⇑*iP*	**Pn**	**18 20 13.5**	**+0.9**
PB06				*i* S	**Sn**	**18 20 30.0**	**+1.0**
PB06				IAML		18 20 31.9	
	comp=N,6µm,0.1s						
PB06	**IPOC Station P**	**0.95**	**255**		**Pn**	**18 20 13.3**	**+0.7**
PB06				Sn	**Sn**	**18 20 30.2**	**+1.2**
PB06	**IPOC Station P**	**0.95**	**255**	*eP*	**Pn**	**18 20 13.6**	**+0.9**
PB06				*eS*	**Sn**	**18 20 30.6**	**+1.6**
PB06				IAML		18 20 32.2	
	comp=Z,3µm,0.9s						
PB15	**IPOC Station P**	**1.11**	**228**	⇑*iP*	**Pn**	**18 20 15.7**	**+1.5**
PB15				*i* S	**Sn**	**18 20 34.1**	**+2.3**
PB15	**IPOC Station P**	**1.11**	**228**		**Pn**	**18 20 15.7**	**+1.5**
PB15				Sn	**Sn**	**18 20 34.2**	**+2.3**
PB15	**IPOC Station P**	**1.11**	**228**	*eP*	**Pn**	**18 20 15.7**	**+1.5**
PB15				*eS*	**Sn**	**18 20 34.2**	**+2.3**
PB03	**IPOC Station P**	**1.17**	**291**	⇑*iP*	**Pn**	**18 20 15.4**	**+0.6**
PB03				*i* S	**Sn**	**18 20 33.2**	**+0.4**
PB03				IAML		18 20 34.1	
	comp=E,6µm,0.4s						
PB03	**IPOC Station P**	**1.17**	**291**	*eP*	**Pn**	**18 20 15.4**	**+0.6**
PB03				*eS*	**Sn**	**18 20 33.5**	**+0.6**
PB03				IAML		18 20 35.7	
	comp=Z,4µm,0.3s						
PB07	**IPOC Station P**	**1.42**	**301**	⇑*iP*	**Pn**	**18 20 18.3**	**+0.7**
PB07				*i* S	**Sn**	**18 20 38.2**	**+0.3**
PB07				IAML		18 20 39.2	
	comp=E,5µm,0.1s						
PB07	**IPOC Station P**	**1.42**	**301**		**Pn**	**18 20 17.6**	**0.0**
PB07				Sn	**Sn**	**18 20 37.9**	**0.0**
PB07	**IPOC Station P**	**1.42**	**301**	*eP*	**Pn**	**18 20 18.0**	**+0.4**
PB07				*eS*	**Sn**	**18 20 38.3**	**+0.4**
PB07				IAML		18 20 40.5	
	comp=Z,3µm,0.1s						
PB04	**IPOC Station P**	**1.46**	**275**	⇑*iP*	**Pn**	**18 20 18.8**	**+0.7**
PB04				*i* S	**Sn**	**18 20 39.5**	**+0.8**
PB04				IAML		18 20 44.4	
	comp=E,3µm,0.2s						
PB04	**IPOC Station P**	**1.46**	**275**	Pn	**Pn**	**18 20 18.8**	**+0.7**
PB04				Sn	**Sn**	**18 20 39.5**	**+0.8**
PB04	**IPOC Station P**	**1.46**	**275**	*eP*	**Pn**	**18 20 18.8**	**+0.7**
PB04				*eS*	**Sn**	**18 20 39.9**	**+1.2**
PB04				IAML		18 20 43.1	
	comp=Z,3µm,0.1s						
PB05	**IPOC Station P**	**1.55**	**255**	⇑*iP*	**Pn**	**18 20 19.9**	**+0.8**
PB05				*i* S	**Sn**	**18 20 41.8**	**+1.4**
PB05				IAML		18 20 48.5	
	comp=E,1µm,0.2s						
PB05	**IPOC Station P**	**1.55**	**255**	*eP*	**Pn**	**18 20 19.9**	**+0.8**
PB05				*eS*	**Sn**	**18 20 42.0**	**+1.6**
PB05				IAML		18 20 46.1	
	comp=Z,2µm,0.4s						
PB01	**IPOC Station P**	**1.65**	**329**	⇑*iP*	**Pn**	**18 20 20.5**	**+0.2**
PB01				*i* S	**Sn**	**18 20 42.5**	**0.0**
PB01				IAML		18 20 48.2	
	comp=E,1µm,0.2s						
PB01	**IPOC Station P**	**1.65**	**329**		**Pn**	**18 20 20.4**	**+0.2**
PB01				Sn	**Sn**	**18 20 41.9**	**-0.6**
PB01	**IPOC Station P**	**1.65**	**329**	*eP*	**Pn**	**18 20 20.4**	**+0.2**
PB01				*eS*	**Sn**	**18 20 42.5**	**0.0**
PB01				IAML		18 20 50.6	
	comp=Z,936nm,0.2s						
PB02	**IPOC Station P**	**1.68**	**313**	⇑*iP*	**Pn**	**18 20 21.0**	**+0.5**
PB02				*i* S	**Sn**	**18 20 43.3**	**+0.2**
PB02				IAML		18 20 51.6	
	comp=E,3µm,0.2s						
PB02	**IPOC Station P**	**1.68**	**313**	*eP*	**Pn**	**18 20 20.9**	**+0.4**
PB02				*eS*	**Sn**	**18 20 43.1**	**+0.1**
PB02				IAML		18 20 47.2	
	comp=Z,3µm,0.3s						
PB10	**IPOC Station P**	**2.10**	**240**	⇓*iP*	**Pn**	**18 20 26.5**	**+0.9**
PB10				*i* S	**Sn**	**18 20 51.5**	**-0.7**
PB10				IAML		18 21 07.2	
	comp=N,551nm,0.3s						
PB10	**IPOC Station P**	**2.10**	**240**		**Pn**	**18 20 26.5**	**+0.9**
PB10				Sn	**Sn**	**18 20 51.5**	**-0.7**
PB10	**IPOC Station P**	**2.10**	**240**	*eP*	**Pn**	**18 20 26.7**	**+1.1**
PB10				*eS*	**Sn**	**18 20 51.8**	**-0.4**
PB08	**IPOC Station P**	**2.38**	**347**	*eP*	**Pn**	**18 20 30.5**	**+0.9**
PB08				*eS*	**Sn**	**18 20 59.7**	**+0.7**
PB08	**IPOC Station P**	**2.38**	**347**		**Pn**	**18 20 30.4**	**+0.8**
PB08	**IPOC Station P**	**2.38**	**347**	*eP*	**Pn**	**18 20 30.7**	**+1.2**
PB08				*eS*	**Sn**	**18 21 00.0**	**+1.0**
TA01	**Diego Aracena**	**2.41**	**321**	*eP*	**Pn**	**18 20 28.9**	**-0.6**
TA01				*i* S	**Sn**	**18 20 59.2**	**-0.1**
TA01	**Diego Aracena**	**2.41**	**321**	Pn	**Pn**	**18 20 29.1**	**-0.5**
PB14	**IPOC Station P**	**2.73**	**218**	Pn	**Pn**	**18 20 34.8**	**+0.9**
PB14	**IPOC Station P**	**2.73**	**218**	*eP*	**Pn**	**18 20 34.8**	**+0.9**
PB14				*eS*	**Sn**	**18 21 04.8**	**-2.2**
PB14				IAML		18 21 18.6	
	comp=Z,474nm,0.4s						
GO02	**Mina Guanaco**	**2.84**	**199**	Pn	**Pn**	**18 20 35.9**	**+0.5**
YJA	**Yavi**	**2.85**	**85**	*eP*	**Pn**	**18 20 37.7**	**+2.0**
YJA				*eS*	**Sn**	**18 21 13.2**	**+3.2**
PB11	**IPOC Station P**	**2.88**	**339**	⇑*iP*	**Pn**	**18 20 35.2**	**-0.6**
PB11				*i* S	**Sn**	**18 21 09.8**	**-0.5**
PB11	**IPOC Station P**	**2.88**	**339**	Pn	**Pn**	**18 20 35.2**	**-0.6**
PB11	**IPOC Station P**	**2.88**	**339**	*eP*	**Pn**	**18 20 35.4**	**-0.4**
PB11				*eS*	**Sn**	**18 21 10.0**	**-0.3**
PB11				IAML		18 21 14.8	
	comp=Z,256nm,0.4s						
HJA	**Humahuaca**	**3.01**	**105**	*eP*	**Pn**	**18 20 39.8**	**+2.0**
PSGCX	**Pisagua**	**3.20**	**333**		**Pn**	**18 20 38.3**	**-1.6**
PSGCX	**Pisagua**	**3.20**	**333**	*eP*	**Pn**	**18 20 38.4**	**-1.6**
MNMC	**Minye Minye**	**3.45**	**344**	IAML		18 21 32.5	
	comp=E,407nm,0.4s						
MNMC	**Minye Minye**	**3.45**	**344**		**Pn**	**18 20 42.8**	**-0.7**
MNMCX	**Minye Minye**	**3.45**	**344**	*eP*	**Pn**	**18 20 43.0**	**-0.5**
AC01	**Pan de Azucar**	**4.10**	**206**	Pn	**Pn**	**18 20 51.5**	**-0.3**
PB16	**IPOC Station P**	**4.20**	**348**		**Pn**	**18 20 50.7**	**-3.0**
AC02	**Maricunga**	**4.38**	**186**	Pn	**Pn**	**18 20 55.5**	**-0.5**
GO03	**Copiap**	**5.32**	**196**		**Pn**	**18 21 07.3**	**-0.9**
GO03	**Copiap**	**5.32**	**196**	*eP*	**Pn**	**18 21 07.8**	**-0.4**
GO03				*eS*	Sn	18 21 52.8	-16
AC04	**Llanos de Chal**	**6.14**	**201**	Pn	**Pn**	**18 21 16.6**	**-2.7**
LPAZ	**La Paz**	**6.16**	**4**	P	**Pn**	**18 21 21.4**	**+1.3**
	comp=E,2.1nm,0.3s,baz=180,slow=5.8,SNR=29						
LPAZ	**La Paz**	**6.16**	**4**	Pn	**Pn**	**18 21 19.7**	**-0.5**
AC05	**El Transito**	**6.53**	**193**	Pn	**Pn**	**18 21 23.4**	**-1.1**
LCO	**Las Campanas**	**6.79**	**196**	Pn	**Pn**	**18 21 26.0**	**-2.3**
CO01	**Juntas del Tor**	**7.60**	**190**	Pn	**Pn**	**18 21 36.3**	**-2.9**
GO04	**Tololo Observa**	**7.93**	**194**	Pn	**Pn**	**18 21 40.6**	**-3.1**
CO03	**El Pedregal**	**8.55**	**192**	Pn	**Pn**	**18 21 48.5**	**-3.4**
CO02	**Combarbal**	**8.97**	**193**	Pn	**Pn**	**18 21 53.5**	**-4.1**
SIV	**San Ignacio**	**9.57**	**49**	P	**Pn**	**18 22 01.8**	**-4.0**
	comp=E,3.9nm,0.3s,baz=276,slow=10,SNR=22						
SIV				S	Sn	18 23 39.

WC3	Warramunga Arr	32.29 261	P		P		18 35 45.6	-0.8
WB2	Warramunga Arr	32.31 261	P		P		18 35 45.9	-0.7
WB2			IAmb		IAmb		18 36 11.0	
	comp=Z,11nm,1.6s							
WRA	Warramunga Arr	32.32 261	P		P		18 35 46.0	-0.7
	comp=Z,1.1nm,0.6s,baz=80,slow=6.1,SNR=22							
WRA	Warramunga Arr	32.32 261	IAmb		IAmb		18 35 46.6	
	comp=Z,0.2nm,1.0s							
AS31	Alice Springs	32.77 254	P		P		18 35 50.5	-0.1
ASAR	Alice Springs	32.77 254	P		P		18 35 50.2	-0.3
	comp=Z,5.5nm,0.5s,baz=81,slow=8.7,SNR=193							
ASAR	Alice Springs	32.77 254	P		P		18 35 49.8	-0.8
KNRA	Kununurra	38.04 267	P		P		18 36 35.8	+0.2
KNRA			IAmb		IAmb		18 36 54.9	
	comp=Z,26nm,1.5s							
FAKI	Fak Fak	38.51 289	P		P		18 36 39.9	+0.3
FORT	Forrest	38.78 243	P		P		18 36 41.8	+0.1
FORT			IAmb		IAmb		18 37 07.3	
	comp=Z,22nm,1.1s							
FITZ	Fitzroy Crossi	40.67 263	P		P		18 36 58.3	+0.8
	comp=Z,1.0nm,0.4s,baz=89,slow=6.3,SNR=8.0							
FITZ	Fitzroy Crossi	40.67 263	IAmb		IAmb		18 37 00.9	
	comp=Z,18nm,1.8s							
NWAO	Narrogin (SRO)	48.19 242	P		P		18 37 56.7	-0.3
NWAO	Narrogin (SRO)	48.19 242	P		P		18 37 56.6	-0.3
NWAO			IAmb		IAmb		18 37 59.9	
	comp=Z,27nm,1.4s							
QSPA	South Pole Qui	72.12 180	P		P		18 40 39.5	0.0
QSPA			IAmb		IAmb		18 40 40.2	
	comp=Z,7.0nm,1.0s							
CMAR	Chiang Mai Arr	77.31 294	P		P		18 41 11.3	+1.3
	comp=Z,1.0nm,0.8s,baz=135,slow=4.8,SNR=9.3							
SONM	Songino Array	85.74 323	P		P		18 41 54.4	+0.6
	comp=Z,0.7nm,0.5s,baz=134,slow=4.2,SNR=5.5							
SONM	Songino Array	85.74 323	IAmb		IAmb		18 41 55.1	
	comp=Z,0.8nm,0.7s							
NVAR	Mina Array Bea	88.48 49	P		P		18 42 07.6	+0.2
	comp=Z,1.2nm,0.9s,baz=234,slow=7.7,SNR=5.3							
NVAR	Mina Array Bea	88.48 49	P		P		18 42 07.8	+0.5
ILAR	Eielson Array	89.20 18	P		P		18 42 09.5	-0.3
	comp=Z,0.5nm,1.0s,baz=243,slow=5.2,SNR=4.2							
H03S2	Juan Fernandez	97.76 129	T		T		20 32 40.5	
	baz=243,slow=74,SNR=9.9							
H03S1	Juan Fernandez	97.77 129	T		T		20 32 42.1	
	baz=243,slow=74,SNR=6.7							
H03S3	Juan Fernandez	97.78 129	T		T		20 32 40.5	
	baz=243,slow=74,SNR=8.8							
ARCES	ARCESS Array B	123.62 345	PKP		PKPdf		18 48 10.1	-0.6
	comp=Z,0.5nm,0.3s,baz=64,slow=2.1,SNR=16							
FINES	FINESS Array B	129.10 339	PKP		PKPdf		18 48 21.6	+0.3
	comp=Z,2.1nm,0.9s,baz=349,slow=7.8,SNR=4.8							
GERES	GERESS Array B	142.99 332	PKhKP		PKPdf		18 48 44.3	-3.2
	comp=Z,0.3nm,0.5s,baz=64,slow=2.3,SNR=3.0							
SOKA	Soboth	143.92 328	*i* P		PKPbc		18 48 47.4	-0.1
	comp=Z,2.2nm,0.5s							
KBA	Koelnbreinsper	144.45 330	*i* P		PKPab		18 48 48.6	-0.3
	comp=Z,1.9nm,0.8s							
MYKA	Terra Mystica	144.63 330	*e*P		PKPab		18 48 49.4	-0.1
	comp=Z,2.9nm,0.4s							
WATA	Walderalm	145.07 332	*e*P		PKPbc		18 48 49.9	-1.1
	comp=Z,6.2nm,1.1s							
ABTA	Abfaltersbach	145.08 331	*i* P		PKPbc		18 48 50.5	-0.6
	comp=Z,4.3nm,0.6s							
WTTA	Wattenberg	145.10 332	*e*P		PKPdf		18 48 51.5	+0.1
	comp=Z,4.7nm,0.9s							
MOTA	Moosalm	145.27 333	*i* P		PKPdf		18 48 51.7	+0.1
	comp=Z,6.3nm,0.8s							
SQTA	Sankt Quirin	145.32 332	*e*P		PKPbc		18 48 51.9	+0.1
	comp=Z,7.0nm,0.8s							
FETA	Feichten	145.68 333	*i* P		PKPbc		18 48 53.3	+0.3
	comp=Z,2.5nm,0.7s							
DAVA	Damuels	145.84 334	*e*P		PKPdf		18 48 52.9	+0.3
	comp=Z,5.0nm,0.8s							

*IDC **01** 18:35:39.1±1.8, 1°.77N×125°.61E, h0km, mb4.0/4, mb1 1.4/5, mb1mx3.5/39, mbtmp3.9/5, ML3.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/51, Error ellipse: s-maj=116.5km s-min=25.9km az=66.0*

*DJA **01** 18:35:45.1±0.6, 2°.N±2°.×12°.6E±°, h11km±4km, M3.9/12, mb3.9/6, MLv3.9/12*

*NEIC **01** 18:35:46.9±1.5, 1°.84N±0°.03×125°.93E±0°.07, h66km±12km, mb4.2/11, Error ellipse: s-maj=9.6km s-min=4.5km az=89.0*

ISC 01 18:35:46.4±0.9, 1°.67N±0°.05×125°.95E±0°.04, h35km, n31, σ2s34/39, mb4.2/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	1.68	122	P		Pn	18 36 15.4	+2.2
TNTI				S		Sn	18 36 38.2	+4.7
TNTI	**Ternate**	1.68	122			Pn	18 36 15.5	+2.3
TNTI				Sn		Sn	18 36 37.3	+3.8
SGSI	**Sangihe**	2.04	348	P		Pn	18 36 20.1	+1.8
SGSI				S		Sn	18 36 44.8	+2.2
KMSI	**Cibinong**	2.25	241	P		Pn	18 36 22.4	+1.2
KMSI				S		Sn	18 36 50.4	+2.6
GTOI	**Gorontalo**	3.12	251	P		Pn	18 36 33.1	+0.1
GTOI				S		Sn	18 37 12.6	+3.5
SANI	**Sanana**	3.70	179	P		Pn	18 36 41.5	+0.4
SANI				S		Sn	18 37 19.4	-4.1
LUWI	**Luwuk**	4.17	230	P		Pn	18 36 48.6	+1.1
LUWI				S		Sn	18 37 38.5	+3.4
LUWI	**Luwuk**	4.17	230			Pn	18 36 49.9	+2.3
LUWI				Sn		Sn	18 37 37.5	+2.4
APSI	**Ampana**	5.01	239	P		Pn	18 37 01.1	+2.0
APSI				S		Sn	18 37 59.9	+4.1
NLAI	**Namlea**	5.01	167	P		Pn	18 37 00.3	+1.2
	0.1nm11nm,0.8s							
DAV	**Davao City (W)**	5.37	356	Pn		Pn	18 37 00.4	-3.7
MPSI	**Mapaga**	6.20	258	P		Pn	18 37 16.4	+1.0
	0.1nm7.9nm,0.8s							
TTSI	**Tana Toraja**	7.72	233	P		Pn	18 37 38.7	+2.4
	0.0nm9.7nm,1.1s							
MYLDM	**Lahad Datu**	8.21	295			Pn	18 37 45.2	+2.1
BNSI	**Bone**	8.40	224	P		Pn	18 37 44.3	-1.4
MTN	**Manton Dam**	15.31	161	Pn		Pn	18 39 19.3	-0.7
MTN				IAmb		IAmb	18 39 24.4	
	comp=Z,21nm,1.4s							
KNRA	**Kununurra**	17.46	171	P		P	18 39 48.7	+0.4
FITZ	**Fitzroy Crossi**	19.65	181	P		P	18 40 09.6	-2.7
	comp=Z,0.2nm,0.3s,baz=8.9,slow=8.3,SNR=2.1							
FITZ	**Fitzroy Crossi**	19.65	181	P		P	18 40 10.6	-1.7
WB0	**Warramunga Arr**	22.86	159	P		P	18 40 46.1	-0.8
WB0				IAmb		IAmb	18 40 47.9	
	comp=Z,5.7nm,0.4s							
WRAB	**Tennant Creek**	23.00	159	P		P	18 40 47.9	-0.4
WRAB				IAmb		IAmb	18 41 17.7	
	comp=Z,5.2nm,0.5s							
WRA	**Warramunga Arr**	23.00	159	P		P	18 40 47.4	-1.0
	comp=Z,2.3nm,0.4s,baz=338,slow=10,SNR=56							
WRA	**Warramunga Arr**	23.00	159	P		P	18 40 47.3	-1.0
WB2	**Warramunga Arr**	23.01	159	P		P	18 40 47.6	-0.8
WB2				IAmb		IAmb	18 41 01.5	
	comp=Z,14nm,1.6s							
WC3	**Warramunga Arr**	23.03	159	P		P	18 40 47.9	-0.8
WR0	**Warramunga Arr**	23.09	159	P		P	18 40 48.2	-1.0
WR0				IAmb		IAmb	18 40 59.9	
	comp=Z,15nm,1.6s							
AS31	**Alice Springs**	26.35	163	P		P	18 41 19.1	-0.2
AS31				IAmb		IAmb	18 41 23.3	
	comp=Z,2.1nm,0.2s							
ASAR	**Alice Springs**	26.35	163	P		P	18 41 19.6	+0.2
	comp=Z,1.0nm,0.3s,baz=339,slow=10.0,SNR=31							
JNU	**Nakatsue**	31.62	8	LR		LR	18 55 02.2	
	comp=Z,11nm,18.7s,baz=326,slow=37							
STKA	**Stephens Creek**	36.52	157	P		P	18 42 48.5	-0.1
	comp=Z,2.1nm,0.8s,baz=334,slow=5.7,SNR=4.5							
MKAR	**Makanchi Array**	58.81	326	P		P	18 45 37.5	-3.8
	comp=Z,1.2nm,1.0s,baz=118,slow=7.3,SNR=2.3							

NNC 01 18:46:54.6±8.2, 37°.84N×72°.20E, h0km, mb3.6, mpv3.2, 4C-2D, Error ellipse: s-maj=62.5km s-min=52.6km az=170.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	5.10	19	⇑P		Pn	18 48 13.9	+1.5
	0.9nm,0.5s							
AAK				⇑S		Sn	18 49 15.9	+3.7
	9.7nm,0.9s							
KK31	**Karatay Array**	5.41	347	⇑P		Pn	18 48 16.2	-0.3
	1.3nm,0.3s,baz=156,slow=11,SNR=68							
KK31				⇑S		Sn	18 49 20.1	+0.6
	3.0nm,0.5s,baz=161,slow=18,SNR=16							
TKM2	**Tokmak 2**	5.70	26	⇓P		Pn	18 48 19.5	-1.1
	4.0nm,1.0s							
TKM2				⇓S		Sn	18 49 25.1	-1.7
	2.6nm,0.8s							

*IDC **01** 18:46:54.0±3.8, 22°.09S×175°.55W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.8/26, mbtmp4.3/3, Error ellipse: s-maj=177.6km s-min=50.8km az=153.0*

*NEIC **01** 18:48:09.6±1.1, 21°.2S±0°.2×178°.7W±0°.2, h612km±16km, mb4.3/17, Error ellipse: s-maj=27.7km s-min=27.1km az=54.0*

ISC 01 18:48:08.8±0.9, 21°.0S±0°.2×178°.7W±0°.1, h600km, n27, σ1s17/27, mb4.3/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.51	316	P		P	18 49 43.8	+5.7
NIUE	**Niue**	8.46	78	P		P	18 50 13.3	+0.8
OUZ	**Omahuta**	15.68	204	P		P	18 51 27.0	+4.0
OUZ				IAmb		IAmb	18 51 27.3	
	comp=Z,7.1nm,0.6s							
URZ	**Urewera**	17.54	191	P		P	18 51 38.8	-1.3
KHZ	**Kahutara**	22.30	195	P		P	18 52 22.7	-0.2
LTZ	**Lake Taylor**	22.97	197	P		P	18 52 26.9	-2.0
CTA	**Charters Tower**	32.81	265	P		P	18 53 54.9	+0.3
	comp=Z,2.7nm,0.5s,baz=96,slow=12,SNR=8.7							
CTA	**Charters Tower**	32.81	265	P		P	18 53 54.9	+0.3
CTAO	**Charters Tower**	32.81	265	P		P	18 53 54.8	+0.3
CTAO				IAmb		IAmb	18 54 11.1	
	comp=Z,17nm,1.5s							
BBOO	**Buckleboo**	41.74	244	P		P	18 55 06.9	-0.1
WR0	**Warramunga Arr**	43.71	263	P		P	18 55 21.7	-0.8
AS31	**Alice Springs**	43.78	257	P		P	18 55 22.9	-0.2
ASAR	**Alice Springs**	43.78	257	P		P	18 55 22.9	-0.1
	comp=Z,2.0nm,0.4s,baz=92,slow=7.7,SNR=61							
ASAR				PcP		PcP	18 56 56.3	+0.2
	comp=Z,0.2nm,0.6s,baz=104,slow=3.5,SNR=1.9							
ASAR	**Alice Springs**	43.78	257	P		P	18 55 22.6	-0.5
ASAR	**Alice Springs**	43.78	257			PcP	18 56 56.3	+0.2
WB0	**Warramunga Arr**	43.88	263	P		P	18 55 23.4	-0.4
WB0				IAmb		IAmb	18 55 23.8	
	comp=Z,3.4nm,0.5s							
WB2	**Warramunga Arr**	43.89	263	P		P	18 55 23.4	-0.5
WRA	**Warramunga Arr**	43.90	263	P		P	18 55 23.3	-0.7
	comp=Z,1.2nm,0.3s,baz=96,slow=7.5,SNR=101							
WRA	**Warramunga Arr**	43.90	263	P		P	18 55 23.3	-0.7
FORT	**Forrest**	48.50	247	P		P	18 55 58.0	-0.6
FORT				IAmb		IAmb	18 56 36.0	
	comp=Z,16nm,0.9s							
MTN	**Manton Dam**	48.53	271	P		P	18 55 58.7	-0.3
MTN				IAmb		IAmb	18 56 00.6	
	comp=Z,25nm,1.5s							
KNRA	**Kununurra**	49.99	267	P		P	18 56 09.5	-0.1
KNRA				IAmb		IAmb	18 56 46.1	
	comp=Z,21nm,1.4s							
FITZ	**Fitzroy Crossi**	52.33	263	P		P	18 56 26.8	+0.3
SOEI	**Soe**	55.88	272	P		P	18 56 52.8	+1.2
SOEI				IAmb		IAmb	18 57 30.1	
	comp=Z,14nm,1.1s							
PSA00	**Pilbara Seismi**	56.93	257	P		P	18 56 58.2	-0.3
PSA00				IAmb		IAmb	18 57 32.3	
	comp=Z,27nm,1.4s							
AKASG	**Malin Array Be**	143.17	330	PKPbc		PKPdf	19 06 33.6	-1.6
	comp=Z,1.1nm,0.4s,baz=44,slow=3.8,SNR=7.5							
AKASG	**Malin Array Be**	143.17	330			PKPdf	19 06 33.6	-1.6

*MOS **01** 18:57:20.0±0.9, 19°.65S×177°.83W, h413km, mb6.2/27, Error ellipse: s-maj=7.2km s-min=6.4km az=98.8*

*IDC **01** 18:57:21.2±1.0, 19°.73S×177°.84W, h413km±9km, mb5.7/33, mb1 5.8/35, mb1mx5.8/35, mbtmp6.4/35, Error ellipse: s-maj=8.4km s-min=7.4km az=27.0*

*BJI **01** 18:57:21.5±0.0, 19°.36S×177°.46W, h433km, mB6.6/79, mb6.0/79*

*NEIC **01** 18:57:22.4, 19°.70S×177°.79W, h440km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr=2.31; Mθθ=3.43; Mφφ 1.12; Mrθ=6.02; Mθφ 0.70; Mφr=2.18; Fault plane solution: Mo7.12000×10^19 NP1:ϕs252.09000°, δ79.61000°, λ74.41000°. NP2:ϕs129.20000°, δ18.66000°, λ145.69000°. Principal axes: T 6.9559, Plg53.0000°, Azm144.0000°; N 0.3137, Plg15.0000°, Azm255.0000°; P -7.2696, Plg33.0000°, Azm355.0000°;*

*NEIC **01** 18:57:22.4±1.7, 19°.69S±0°.08×177°.76W±0°.08, h434km±1km, mb6.3/542, Mwb7.2/89, Mwc7.1/88, Mww7.1, Mwc7.1(GCMT) Error ellipse: s-maj=13.3km s-min=12.5km az=354.0*

*PMR **01** 18:57:22±1.8, 19°.73S±0°.08×177°.75W±0°.04, h416km±1km, Error ellipse: s-maj=13.5km s-min=6.9km az=176.0*

*GCMT **01** 18:57:29.4±0.1, 19°.76S±0°.01×177°.61W±0°.01, h445km, MW7.1/171, Moment Tensor Solution. s171,c476; s167,c409; Duration: 8s7 Moment tensor: Scale 10^19Nm; Mrr1.63±.02; Mθθ-3.04±.02; Mφφ 1.40±.02; Mrθ-4.89±.02; Mθφ 0.37±.02; Mφr-1.59±.01; Best double couple: Mo5.74400×10^19 NP1:ϕs130.00000°, δ19.00000°, λ147.00000°. NP2:ϕs252.00000°, δ80.00000°, λ74.00000°. Principal axes: T 5.3240, Plg53.0000°, Azm143.0000°; N 0.8280, Plg16.0000°, Azm255.0000°; P -6.1630, Plg33.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **01** 18:57:29, 19°.83S×177°.58W, h449km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr1.57; Mθθ-2.97; Mφφ 1.41; Mrθ-4.96; Mθφ 0.38; Mφr-1.66; Fault plane solution: Mo5.84000×10^19 NP1:ϕs130.00000°, δ19.00000°, λ148.00000°. NP2:ϕs251.00000°, δ80.00000°, λ74.00000°. Principal axes: T 5.3991, Plg52.0000°, Azm142.0000°; N 0.8042, Plg16.0000°, Azm254.0000°; P -6.2033, Plg33.0000°, Azm355.0000°;*

*NEIC **01** 18:57:30, 19°.69S×177°.91W, h440km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr1.44; Mθθ-2.52; Mφφ 1.08; Mrθ-4.45; Mθφ 0.08; Mφr-1.72; Fault plane solution: Mo5.25000×10^19 NP1:ϕs124.00000°, δ17.00000°, λ144.00000°. NP2:ϕs249.00000°, δ80.00000°, λ76.00000°. Principal axes: T 4.9147, Plg53.0000°, Azm143.0000°; N 0.6099, Plg14.0000°, Azm251.0000°; P -5.5246, Plg34.0000°, Azm351.0000°;*

*NEIC **01** 18:57:42.9, 19°.65S×177°.71W, h457km, Moment Tensor Solution. Moment tensor: Scale 10^19Nm; Mrr1.41; Mθθ-2.74; Mφφ 1.33; Mrθ-4.65; Mθφ 0.55; Mφr-1.79; Fault plane solution: Mo5.53000×10^19 NP1:ϕs249.24000°, δ81.13000°, λ71.61000°. NP2:ϕs134.35000°, δ20.36000°, λ153.67000°. Principal axes: T 5.2605, Plg51.0000°, Azm139.0000°; N 0.5403, Plg18.0000°, Azm252.0000°; P -5.8008, Plg34.0000°, Azm355.0000°;*

ISC 01 18:57:22.4±0.2, 19°.80S±0°.03×177°.83W±0°.03, h435km±1km, h436km:pP-P, n2298, σ1s88/2795, mb6.2/401, 100C-85D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	4.41	297	P		P	18 58 42.4	+2.0
MSVF	**Nonsavu**	4.41	297	P		P	18 58 42.4	+2.0
NIUE	**Niue**	7.50	86	P		P	18 59 10.9	-1.4
NIUE				S		S	19 00 35.4	-6.7
AFI	**Afiamalu**	8.24	46	P		P	18 59 15.4	-5.0
	425nm,0.3s,baz=82,slow=0.6,SNR=247							
AFI				S		S	19 00 44.6	-13
	838nm,0.3s,baz=160,slow=20,SNR=9.1							
AFI	**Afiamalu**	8.24	46	P		P	18 59 15.5	-4.9
AFI				S		S	19 00 42.7	-15
AFI	**Afiamalu**	8.24	46	P		P	18 59 15.5	-5.0
AFI				S		S	19 00 42.6	-15
RIZ	**Raoul Island**	9.40	181	P		P	18 59 33.3	+0.4
RIZ				S		S	19 01 08.7	-12
RAO	**Raoul Island**	9.41	180	P		P	18 59 31.9	-1.0
	3µm,0.3s,baz=85,slow=3.7,SNR=68							
RAO				S		S	19 01 10.6	-10
	4µm,0.3s,baz=112,slow=22,SNR=4.3							
RAO	**Raoul Island**	9.41	180	P		P	18 59 31.9	-1.0
RAO				S		S	19 01 15.8	-4.8
GLKZ	**Green Lake**	9.42	180	P		P	18 59 32.9	-0.1
GLKZ				S		S	19 01 19.2	-1.5
FUNA	**Funafuti**	11.57	345	P		P	18 59 55.1	-1.8

DZM	**Mont Dzumac**	14.86	259	P		P	19 00 34.5	+2.0
	43nm,0.3s,baz=81,slow=18,SNR=220							
SANVU	**Saraoutou**	14.90	285	P		P	19 00 32.9	0.0
RAR	**Rarotonga**	16.98	98	P		P	19 00 54.8	-0.1
	32nm,0.3s,baz=254,slow=7.3,SNR=46							
RAR	**Rarotonga**	16.98	98	P		P	19 00 55.2	+0.3
RAR				pmax		pmax		
	comp=Z,5µm,1.2s							
RAR	**Rarotonga**	16.98	98	P		P	19 00 55.2	+0.3
OUZ	**Omahuta**	17.12	204	P		P	19 00 58.8	+2.5
KNTN	**Kanton**	17.95	20	P		P	19 01 02.9	-2.4
MXZ	**Matakaoa Point**	18.01	190	P		P	19 01 03.2	-2.4
HAZ	**Te Kaha**	18.29	191	P		P	19 01 10.5	+2.1
HAZ				S		S	19 04 08.0	-6.0
PKGZ	**Pakihiroa**	18.37	190	P		P	19 01 13.6	+4.3
PKGZ				S		S	19 04 22.1	+6.6
RUGZ	**Raukumara Rang**	18.52	191	P		P	19 01 09.9	-0.9
RUGZ				S		S	19 04 18.9	+0.9
PUZ	**Puketiti**	18.52	190	P		P	19 01 10.4	-0.3
PUZ				S		S	19 04 17.6	-0.3
WHRZ	**Whale Island**	18.55	193	P		P	19 01 12.8	+1.9
WHRZ				S		S	19 04 24.1	+5.7
TWGZ	**Tauwhareparae**	18.67	190	P		P	19 01 11.2	-1.0
TWGZ				S		S	19 04 16.6	-3.8
EDRZ	**Edgecumbe**	18.84	193	P		P	19 01 14.8	+0.9
MWZ	**Matawai**	18.90	191	P		P	19 01 13.4	-1.0
MWZ				S		S	19 04 24.5	+0.4
URZ	**Urewera**	18.91	192	P		P	19 01 12.3	-2.1
	comp=Z,176nm,0.3s,baz=276,slow=3.2,SNR=161							
URZ				S		S	19 04 22.8	-1.4
	comp=Z,44nm,0.3s,baz=65,slow=7.9,SNR=3.7							
URZ				ScS		ScS	19 11 54.0	-0.1
	comp=Z,2.0nm,0.3s,baz=99,slow=22,SNR=15							
URZ	**Urewera**	18.91	192	P		P	19 01 12.3	-2.1
URZ	**Urewera**	18.91	192	P		P	19 01 11.4	-3.0
CNGZ	**Carnagh Statio**	18.93	190	P		P	19 01 14.5	-0.1
CNGZ				S		S	19 04 27.1	+2.5
TKGZ	**Te Karaka**	18.95	190	P		P	19 01 14.9	+0.1
MUGZ	**Murupara**	19.19	193	P		P	19 01 16.1	-1.0
RIGZ	**Rimuhau**	19.22	191	P		P	19 01 16.6	-0.8
RTZ	**Ruatahuna**	19.28	192	P		P	19 01 17.2	-0.7
RTZ				S		S	19 04 27.9	-2.4
SNGZ	**Shannon Statio**	19.37	191	P		P	19 01 18.3	-0.4
PRGZ	**Paritu Road**	19.41	190	P		P	19 01 19.8	+0.6
KNZ	**Kokohu**	19.54	191	P		P	19 01 20.3	0.0
KNZ				S		S	19 04 35.4	+0.9
RAHZ	**Arahi**	19.55	192	P		P	19 01 19.1	-1.3
RAHZ				S		S	19 04 37.1	+2.5
MRHZ	**Matea Rd**	19.61	193	P		P	19 01 20.7	-0.3
MRHZ				S		S	19 04 35.5	-0.2
WHHZ	**Waihua**	19.68	191	P		P	19 01 21.2	-0.3
WHHZ				S		S	19 04 38.2	+1.6
HIZ	**Hauiti**	19.69	197	P		P	19 01 23.3	+1.6
ARHZ	**Aropaoanui**	19.90	192	P		P	19 01 23.4	-0.1
ARHZ				S		S	19 04 33.4	-6.9
BKZ	**Black Stump Fm**	19.91	193	P		P	19 01 20.6	-3.1
CKHZ	**Cape Kidnapper**	20.27	191	P		P	19 01 27.4	+0.5
CKHZ				S		S	19 04 43.7	-2.6
BHHZ	**Black Hill Sta**	20.31	194	P		P	19 01 25.3	-2.1
BHHZ				S		S	19 04 43.7	-3.4
KRHZ	**Kereru**	20.39	193	P		P	19 01 26.2	-1.9
KAHZ	**Kahuranaki**	20.44	192	P		P	19 01 28.3	-0.2
WPHZ	**Waipukurau**	20.79	192	P		P	19 01 31.9	+0.2
TSZ	**Takapari Road**	20.88	193	P		P	19 01 32.2	-0.3
PRHZ	**Porangahau**	20.94	192	P		P	19 01 33.1	+0.1
PRHZ				S		S	19 04 56.6	-0.5
PRWZ	**Pori Road**	21.35	193	P		P	19 01 37.5	+0.7
BFZ	**Birch Farm**	21.42	192			P	19 01 36.2	-1.2
MTW	**Mount Morrison**	22.03	194	P		P	19 01 43.1	+0.2
MTW				S		S	19 05 13.7	-0.8
MSWZ	**Moikau Station**	22.34	194	P		P	19 01 44.4	-1.3
SNZO	**South Karori**	22.36	195	P		P	19 01 44.0	-1.9
BHW	**Baring Head**	22.41	195			P	19 01 45.5	-0.8
PLWZ	**Palliser**	22.48	194			P	19 01 46.2	-0.9
QRZ	**Quartz Range**	22.52	199	P		P	19 01 46.8	-0.5
NNZ	**Nelson**	22.62	197	P		P	19 01 46.0	-2.2
TUWZ	**Tuamarina**	22.67	196	P		P	19 01 46.9	-1.8
CMWZ	**Cape Campbell**	22.90	195	P		P	19 01 50.7	0.0
TARA	**Tarawa**	22.90	336	P		P	19 01 50.0	-1.1
BSWZ	**Blackbirch Sta**	22.95	196	P		P	19 01 51.1	-0.2
THZ	**Tophouse**	23.26	198			P	19 01 53.1	-1.0
THZ				IAmb		IAmb	19 02 02.3	
	comp=Z,1µm,0.7s							
KHZ	**Kahutara**	23.70	196	P		P	19 01 55.9	-2.0
HNR	**Honiara**	23.81	292	P		P	19 01 58.4	-0.9
	comp=Z,3µm,0.8s,baz=194,slow=3.8,SNR=58							
HNR	**Honiara**	23.81	292	P		P	19 01 57.9	-1.4
HNR				pmax		pmax		
	comp=Z,5µm,1.0s							
HNR	**Honiara**	23.81	292	P		P	19 01 57.9	-1.4
LHI	**Lord Howe Isla**	23.82	236	P		P	19 01 60.0	+0.9
LTZ	**Lake Taylor**	24.38	198	P		P	19 02 02.8	-1.3
MQZ	**McQueen's Vall**	25.13	196	P		P	19 02 09.7	-1.0
RPZ	**Rata Peaks**	25.60	199	P		P	19 02 14.2	-0.7
	comp=Z,276nm,0.6s,baz=19,slow=1.5,SNR=63							
RPZ				S		S	19 06 09.4	-1.3
	comp=Z,405nm,0.9s,baz=194,slow=22,SNR=

PMG **Port Moresby** 35.35 282 P **P** 19 03 40.5 +0.8
comp=Z,2µm,0.9s
PMG S **S** 19 08 43.2 +1.2
comp=Z,58nm,0.9s,baz=227,slow=22,SNR=7.4
PMG Port Moresby 35.35 282 P **P** **19 03 40.4 +0.7**
PATS Pohnpei 35.38 316 P **P** **19 03 39.9 -0.1**
TOO Toolangi 36.44 233 P **P** **19 03 49.8 +1.2**
TOO pmax pmax
comp=Z,2µm,1.0s
TOO Toolangi 36.44 233 P **P** **19 03 49.8 +1.2**
TOO IAmb IAmb 19 03 52.3
comp=Z,2µm,1.0s
JOHN Johnston Islan 37.21 13 P **P** **19 03 54.4 -0.7**
JOHN IAmb IAmb 19 03 56.9
comp=Z,1µm,0.8s
TAU Tasmania Unive 37.23 224 P **P** **19 03 55.6 +0.6**
TAU pmax pmax
comp=Z,2µm,1.6s
TAU Tasmania Unive 37.23 224 P **P** **19 03 55.6 +0.6**
TAU IAmb IAmb 19 03 58.3
comp=Z,2µm,1.6s
TAOE Nuku Hiva Isla 38.01 79‖ *iP* **P** **19 04 02.0 +0.1**
comp=Z,3µm,1.2s
TAOE Nuku Hiva Isla 38.01 79 P **P** **19 04 01.9 -0.1**
TAOE IAmb IAmb 19 04 06.5
comp=Z,2µm,1.4s
STKA Stephens Creek 38.23 243 P **P** **19 04 04.8 +1.4**
comp=Z,947nm,0.6s,baz=92,slow=10,SNR=442
STKA ScS ScS 19 13 27.5 +3.0
comp=Z,14nm,0.8s,baz=13,slow=5.6,SNR=3.0
STKA P3KPbc 19 34 05.7
comp=Z,7.4nm,0.8s,baz=286,slow=6.6,SNR=9.5
STKA Stephens Creek 38.23 243 P **P** **19 04 04.9 +1.4**
STKA 19 13 27.5
STKA pmax pmax
comp=Z,336nm,1.0s
STKA Stephens Creek 38.23 243 P **P** **19 04 04.9 +1.4**
MANU Manus Island 38.31 293 P **P** **19 04 05.0 +0.7**
MCQ Macquarie Isla 38.89 201 P **P** **19 04 10.3 +1.9**
MCQ pmax pmax
comp=Z,4µm,1.1s
MCQ Macquarie Isla 38.89 201 P **P** **19 04 10.3 +1.9**
H11S2 WAKE ISLAND Hy 40.97 337 P **P** **19 04 25.5 0.0**
baz=199,slow=5.3,SNR=75
H11S3 WAKE ISLAND Hy 40.98 337 P **P** **19 04 25.5 -0.1**
baz=199,slow=5.3,SNR=65
H11S1 WAKE ISLAND Hy 40.99 337 P **P** **19 04 25.6 0.0**
baz=199,slow=5.3,SNR=61
WAKE Wake Island 41.72 338 P **P** **19 04 30.7 -0.9**
H11N3 WAKE ISLAND Hy 42.03 338 P **P** **19 04 34.2 +0.4**
baz=179,slow=11,SNR=585
H11N1 WAKE ISLAND Hy 42.03 338 P **P** **19 04 34.6 +0.7**
baz=179,slow=11,SNR=432
H11N2 WAKE ISLAND Hy 42.04 338 P **P** **19 04 34.4 +0.4**
baz=179,slow=11,SNR=422
BBOO Buckleboo 43.00 243 P **P** **19 04 42.5 +0.7**
GENI Genyem 44.42 287 P **P** **19 04 54.3 +1.1**
comp=Z,65µmcomp=Z,52µmcomp=Z,5µm,1.2s
KKH Kailua Kona 44.66 30 P **P** **19 04 54.3 -0.5**
KKH Kailua Kona 44.66 30 P **P** **19 04 54.3 -0.5**
WR0 Warramunga Arr 44.67 261 IAmb IAmb 19 05 04.6
comp=Z,644nm,0.7s
KHLU Kahalu`u 44.67 30 P **P** **19 04 54.6 -0.4**
AIN Ainahou 44.69 31 P **P** **19 04 54.6 -0.7**
AIN IAmb IAmb 19 05 02.1
comp=Z,2µm,1.5s
HLP Hilina Pali 44.69 31 P **P** **19 04 55.2 0.0**
HLP IAmb IAmb 19 05 27.3
comp=Z,918nm,1.1s
MWH Moku'aweowe 44.72 30 P **P** **19 04 55.1 -0.8**
MWH IAmb IAmb 19 05 02.2
comp=Z,2µm,1.4s
MLOA Mauna Loa Obse 44.77 30 P **P** **19 04 55.5 -0.7**
MLOA IAmb IAmb 19 05 02.7
comp=Z,1µm,1.0s
HUH Hualalai 44.77 30 IAmb IAmb 19 05 01.8
comp=Z,1µm,1.1s
SDHHI Sand Hill 44.78 31 IAmb IAmb 19 05 02.5
comp=Z,1µm,1.0s
WRMHI West Rim 44.79 31 IAmb IAmb 19 05 02.5
comp=Z,860nm,0.9s
RIM Rim 44.80 31 IAmb IAmb 19 05 02.5
comp=Z,2µm,1.2s
KKO Keanakako`i 44.80 31 IAmb IAmb 19 05 01.9
comp=Z,1µm,1.2s
PUH Pauahi 44.80 31 IAmb IAmb 19 05 01.8
comp=Z,2µm,1.2s
NPH North Pit 44.81 31 IAmb IAmb 19 05 04.3
comp=Z,2µm,1.8s
UWE Uwekahuna 44.81 31 IAmb IAmb 19 05 02.8
comp=Z,1µm,1.1s
BYL Byron's Ledge 44.82 31 P **P** **19 04 55.3 -0.9**
BYL IAmb IAmb 19 05 08.2
comp=Z,950nm,1.1s
HATHI Halema'uma'u T 44.83 31 IAmb IAmb 19 05 02.7
comp=Z,1µm,1.1s
MLH Mauna Loa 44.83 31 IAmb IAmb 19 05 01.1
comp=Z,1µm,1.0s
WB0 Warramunga Arr 44.83 262 P **P** **19 04 56.0 -0.3**
AS31 Alice Springs 44.83 256 P **P** **19 04 56.9 +0.6**
AS31 IAmb IAmb 19 05 03.9
comp=Z,874nm,0.8s
ASAR Alice Springs 44.83 256 P **P** **19 04 57.0 +0.7**
comp=Z,1µm,0.7s,baz=96,slow=8.7,SNR=3669
ASAR S **S** **19 11 01.6 +0.6**
comp=Z,365nm,0.8s,baz=95,slow=16,SNR=34
ASAR P3KPbc 19 33 39.1
comp=Z,0.8nm,0.5s,baz=286,slow=3.5,SNR=10
ASAR P4KPbc 19 42 43.5
comp=Z,1.5nm,0.6s,baz=98,slow=4.6,SNR=21
ASAR Alice Springs 44.83 256 P **P** **19 04 57.0 +0.7**
WB2 Warramunga Arr 44.84 261 P **P** **19 04 56.3 -0.1**
WB2 IAmb IAmb 19 05 02.9
comp=Z,874nm,0.6s
WRAB Tennant Creek 44.85 261 *ce*P **P** **19 04 56.2 -0.2**
WRAB pmax pmax
comp=Z,2µm,1.7s
WRAB Tennant Creek 44.85 261 P **P** **19 04 56.3 -0.1**
WRAB IAmb IAmb 19 05 00.5
comp=Z,2µm,1.4s
WRA Warramunga Arr 44.86 261 P **P** **19 04 56.5 0.0**
comp=Z,397nm,0.5s,baz=98,slow=5.7,SNR=364
WRA S **S** **19 11 01.2 -0.2**
comp=Z,189nm,1.0s,baz=98,slow=13,SNR=9.7
WRA P3KPbc 19 33 38.1
comp=Z,1.0nm,0.8s,baz=294,slow=2.4,SNR=3.3
WRA P4KPbc 19 42 44.7
comp=Z,3.0nm,0.9s,baz=94,slow=4.1,SNR=11
WRA Warramunga Arr 44.86 261 P **P** **19 04 56.0 -0.5**
WRA pmax pmax
comp=Z,67nm,0.6s
WRA Warramunga Arr 44.86 261 P **P** **19 04 56.0 -0.5**
STCH Steam Cracks 44.86 31 P **P** **19 04 55.7 -0.7**
POHA Pohakuloa 44.98 30 P **P** **19 04 56.6 -1.0**
POHA IAmb IAmb 19 05 10.3
comp=Z,1µm,0.9s
HPAH Hawaii Prepara 45.14 30 P **P** **19 04 58.2 -0.4**
HON Honolulu 45.24 26 IAmb IAmb 19 05 05.1
comp=Z,1µm,0.9s
KIP Kipapa 45.33 26 *de*P **P** **19 04 59.5 -0.4**
KIP pmax pmax
comp=Z,2µm,1.3s
KIP Kipapa 45.33 26 P **P** **19 04 59.7 -0.2**
KIP IAmb IAmb 19 05 04.7
comp=Z,951nm,0.9s
HLK Haleakala 45.51 29 IAmb IAmb 19 05 05.7
comp=Z,1µm,1.0s
OPA Opana 45.56 26 P **P** **19 05 01.1 -0.7**
OPA pmax pmax
comp=Z,2µm,1.4s
OPA Opana 45.56 26 P **P** **19 05 01.1 -0.7**
OPA IAmb IAmb 19 05 07.4
comp=Z,2µm,1.4s
SRPI Serui, Papua 48.28 286 P **P** **19 05 23.7 +1.1**
comp=Z,52µmcomp=Z,28µmcomp=Z,3µm,1.0s
BAKI Biak 48.69 287 P **P** **19 05 27.0 +1.3**
comp=Z,84µmcomp=Z,47µmcomp=Z,5µm,0.8s
MTN Manton Dam 49.32 270 P **P** **19 05 30.2 -0.2**
MTN IAmb IAmb 19 05 33.2
comp=Z,946nm,0.8s
GUMO Guam 49.48 309 P **P** **19 05 32.0 +0.5**
comp=Z,3µm,0.8s,baz=162,slow=6.3,SNR=75
GUMO Guam 49.48 309 P **P** **19 05 32.1 +0.5**
GUMO pmax pmax
comp=Z,3µm,1.0s
GUMO Guam 49.48 309 P **P** **19 05 32.1 +0.5**

FORT Forrest 49.72 246 P **P** **19 05 33.4 +0.3**
SAUI Saumlaki 50.58 276 P **P** **19 05 41.6 +1.8**
comp=Z,56µmcomp=Z,46µmcomp=Z,3µm,1.4s
SAUI Saumlaki 50.58 276 P **P** **19 05 40.2 +0.5**
SAUI **S** **19 12 20.3 -0.7**
KNRA Kununurra 50.86 266 P **P** **19 05 42.2 +0.4**
FAKI Fak Fak 51.50 282 P **P** **19 05 46.9 +0.4**
comp=Z,48µmcomp=Z,22µmcomp=Z,1µm,1.1s
FAKI Fak Fak 51.50 282 P **P** **19 05 46.5 0.0**
BNDI Bandanaira 51.86 279 P **P** **19 05 58.5 +0.7**
comp=Z,45µmcomp=Z,54µmcomp=Z,5µm,1.1s
FITZ Fitzroy Crossi 53.28 262 S **S** **19 12 58.2 +1.1**
comp=Z,34nm,0.9s,baz=246,slow=18,SNR=13
FITZ Fitzroy Crossi 53.28 262 P **P** **19 06 00.0 +0.7**
MSAI Masohi 54.40 280 P **P** **19 06 07.6 +0.2**
comp=Z,5µmcomp=Z,458nm,0.6s
NLAI Namlea 56.14 280 P **P** **19 06 20.1 +0.5**
comp=Z,17µmcomp=Z,784nm,1.6s
SOEI Soe 56.64 271 P **P** **19 06 24.9 +1.7**
comp=Z,45µmcomp=Z,47µmcomp=Z,5µm,0.8s
SOEI Soe 56.64 271 P **P** **19 06 25.3 +2.1**
BATI Baumata 57.08 271 PKPPKP **P'P'df** **19 36 09.0 -1.6**
comp=Z,28nm,1.0s,baz=217,slow=1.0,SNR=4.2
BATI Baumata 57.08 271 P **P** **19 06 28.0 +1.9**
comp=Z,20µmcomp=Z,16µmcomp=Z,1µm,0.8s
TNTI Ternate 57.44 284 P **P** **19 06 29.3 +0.7**
comp=Z,25µmcomp=Z,25µmcomp=Z,2µm,1.5s
TNTI Ternate 57.44 284 P **P** **19 06 29.3 +0.7**
TNTI IAmb IAmb 19 06 32.0
comp=Z,1µm,0.9s
SANI Sanana 57.61 280 P **P** **19 06 29.6 -0.1**
comp=Z,47µmcomp=Z,25µmcomp=Z,2µm,0.8s
PSA00 Pilbara Seismi 57.98 256 P **P** **19 06 32.4 +0.2**
MBWA Marble Bar 58.16 257 P **P** **19 06 33.6 +0.2**
I55US WINDLESS BIGHT 58.41 184 P **P** **19 06 37.1 +3.0**
baz=18,slow=13,SNR=5.3
VNDA Vanda 58.62 185 P **P** **19 06 37.9 +2.3**
comp=Z,439nm,0.9s,baz=2.1,slow=7.1,SNR=412
VNDA PKPPKP **P'P'df** **19 36 04.3 -5.3**
comp=Z,5.2nm,0.9s,baz=262,slow=3.7,SNR=8.5
VNDA Vanda 58.62 185 P **P** **19 06 38.2 +2.6**
VNDA pmax pmax
comp=Z,3µm,1.6s
VNDA Vanda 58.62 185 P **P** **19 06 38.1 +2.6**
NWAO Narrogin (SRO) 58.82 243 P **P** **19 06 38.5 +0.7**
NWAO Narrogin (SRO) 58.82 243 P **P** **19 06 38.5 +0.7**
NWAO pmax pmax
comp=Z,1µm,1.3s
NWAO Narrogin (SRO) 58.82 243 P **P** **19 06 38.2 +0.5**
NWAO IAmb IAmb 19 06 40.8
comp=Z,1µm,1.3s
NWAO Narrogin (SRO) 58.82 243 P **P** **19 06 38.5 +0.7**
NWAO IAmb IAmb 19 06 40.8
comp=Z,1µm,1.3s
MMRI Maumere 58.88 272 P **P** **19 06 38.5 +0.1**
comp=Z,38µmcomp=Z,22µmcomp=Z,2µm,0.8s
MMRI Maumere 58.88 272 P **P** **19 06 38.5 +0.1**
MMRI IAmb IAmb 19 06 44.2
comp=Z,1µm,0.9s
EDFI Ende, Flores 59.37 271 P **P** **19 06 41.4 -0.4**
comp=Z,20µmcomp=Z,11µmcomp=Z,830nm,0.8s
BASI Baing, Sumba 59.98 269 P **P** **19 06 47.0 +1.2**
comp=Z,18µmcomp=Z,19µmcomp=Z,2µm,1.7s
KDI Kendari 60.05 277 P **P** **19 06 47.1 +0.8**
comp=Z,9µmcomp=Z,402nm,1.7s
MORW Morawa 60.24 247 P **P** **19 06 47.7 +0.3**
MORW IAmb IAmb 19 06 50.2
comp=Z,743nm,0.9s
SGSI Sangihe 60.31 286 P **P** **19 06 48.5 +0.5**
comp=Z,16µmcomp=Z,2µm,0.8s
WSI Waingapu 60.40 270 P **P** **19 06 49.3 +0.7**
comp=Z,39µmcomp=Z,3µm,0.6s
KMSI Cibinong 60.46 282 P **P** **19 06 49.6 +0.6**
comp=Z,781nmcomp=Z,9µmcomp=Z,1µm,0.8s
JCJ Chichijima 60.62 319 P **P** **19 06 49.2 -0.5**
JCJ IAmb IAmb 19 06 53.9
comp=Z,1µm,1.0s
LUWI Luwuk 60.96 280 P **P** **19 06 53.4 +1.0**
comp=Z,42µmcomp=Z,27µmcomp=Z,2µm,1.5s
LUWI Luwuk 60.96 280 P **P** **19 06 53.0 +0.7**
DDMP Don Marcelino, 61.20 289 *eP* **P** **19 06 53.6 -0.3**
H01W1 Cape Leeuwin H 61.23 240 P **P** **19 06 55.5 +2.1**
baz=115,slow=7.0,SNR=577
H01W2 Cape Leeuwin H 61.23 240 P **P** **19 06 55.7 +2.1**
baz=115,slow=7.0,SNR=336
H01W3 Cape Leeuwin H 61.23 240 P **P** **19 06 55.6 +2.1**
baz=115,slow=7.0,SNR=402
WBSI Waikabubak, Su 61.26 270 P **P** **19 06 54.7 +0.3**
comp=Z,32µmcomp=Z,18µmcomp=Z,1µm,0.8s
BSSI Bau Bau, Buton 61.31 274 P **P** **19 06 54.7 0.0**
comp=Z,20µmcomp=Z,9µmcomp=Z,592nm,1.7s
DAV Davao City (W) 61.74 290‖*iP* **P** **19 06 58.3 +0.8**
BKSI Bulukumba 61.93 275 P **P** **19 06 58.6 -0.1**
comp=Z,30µmcomp=Z,8µmcomp=Z,484nm,0.8s
APSI Ampana 62.05 280 P **P** **19 07 01.1 +1.6**
comp=Z,23µmcomp=Z,16µmcomp=Z,1µm,1.8s
KCP Kidapawan 62.15 290‖*iP* **P** **19 07 01.3 +1.0**
KCP Kidapawan 62.15 290‖*eP* **S** **19 14 51.1 -0.1**
BNSI Bone 62.25 276 P **P** **19 07 01.3 +0.4**
comp=Z,33µmcomp=Z,15µmcomp=Z,840nm,1.5s
KAPI Kappang 62.38 275 P **P** **19 07 02.1 +0.4**
KAPI Kappang 62.38 275 P **P** **19 07 02.1 +0.4**
KAPI pmax pmax
comp=Z,297nm,0.9s
KAPI Kappang 62.38 275 P **P** **19 07 02.1 +0.4**
SKMP Bagumbayan, Su 62.42 289 *eP* **P** **19 07 02.2 +0.3**
GLSP General Luna, 62.51 293 *eP* **P** **19 07 03.4 +0.9**
SPSI Sidrap Palu 62.72 276 P **P** **19 07 03.3 -0.6**
comp=Z,26µmcomp=Z,8µmcomp=Z,442nm,0.8s
GIRL Giralia 62.89 254 P **P** **19 07 06.2 +1.3**
TTSI Tana Toraja 62.99 277 P **P** **19 07 05.9 +0.2**
comp=Z,25µmcomp=Z,6µmcomp=Z,344nm,0.9s
PLAI Plampang 63.03 270 P **P** **19 07 06.0 +0.1**
comp=Z,31µmcomp=Z,29µmcomp=Z,3µm,0.9s
CGP Cagayan de Oro 63.15 291‖*eP* **P** **19 07 08.9 +2.3**
CGP Cagayan de Oro 63.15 291‖*eP* **S** **19 15 07.4 +4.1**
MSLP Maasin 63.78 293 *eP* **P** **19 07 11.7 +1.0**
TWSI Taliwang, Sumb 63.90 270 P **P** **19 07 11.6 +0.1**
comp=Z,18µmcomp=Z,15µmcomp=Z,949nm,0.8s
BESP Borongan 63.97 294 *eP* **P** **19 07 12.8 +0.9**
PAGZ Pagadian 64.04 290 *eP* **P** **19 07 13.4 +1.0**
MPSI Mapaga 64.14 280 P **P** **19 07 13.2 +0.1**
comp=Z,30µmcomp=Z,14µmcomp=Z,775nm,0.8s
OCLP Ormoc 64.42 293 *eP* **P** **19 07 15.0 +0.1**
LLP Lapu-Lapu 64.64 292‖*eP* **P** **19 07 16.7 +0.5**
LLP *i* S **S** **19 15 23.9 +2.5**
CASY Casey 64.66 205 P **P** **19 07 16.4 +0.9**
CNP Catarman 65.07 295 *eP* **P** **19 07 19.5 +0.6**
CNOP Candoni, Negro 65.58 291 *eP* **P** **19 07 20.5 -1.7**
GUIM Jordan 65.98 292 *eP* **P** **19 07 23.7 -1.0**
PVCP Virac 66.03 296 *eP* **P** **19 07 26.0 +1.0**
KBKI Kotabaru 66.32 275 P **P** **19 07 27.8 +0.9**
comp=Z,2µmcomp=Z,234nm,0.9s
BKB Balikpapan 66.35 278 P **P** **19 07 31.5 +4.4**
BKB Balikpapan 66.35 278 P **P** **19 07 29.2 +2.2**
SMKI Samarinda 66.35 278 P **P** **19 07 31.2 +4.1**
JHJ2 Mitsune 66.36 322 P **P** **19 07 26.7 0.0**
JAGI Jajag, Banyuwa 66.55 269 P **P** **19 07 27.4 -1.0**
comp=Z,25µmcomp=Z,16µmcomp=Z,1µm,0.8s
JAGI Jajag, Banyuwa 66.55 269 P **P** **19 07 27.3 -1.0**
SCSP San Jose Seism 66.59 295 *eP* **P** **19 07 29.5 +1.1**
JAP San Jose, Anti 66.60 292‖*eP* **P** **19 07 28.6 0.0**
ABJI Asem Bagus 66.68 270 P **P** **19 07 30.9 +1.8**
comp=Z,12µmcomp=Z,800nm,0.8s
JMZ Minamidaito 2 67.12 311 P **P** **19 07 31.3 -0.3**
KMMI Kalianget 67.16 271 P **P** **19 07 34.4 +2.3**
comp=Z,11µmcomp=Z,572nm,0.9s
OTRP Odiongan 67.27 293 *eP* **P** **19 07 33.7 +1.0**
GMJI Gumukmas 67.27 269 P **P** **19 07 32.5 -0.3**
comp=Z,23µmcomp=Z,9µmcomp=Z,688nm,0.9s
BLJI Banyuglugur 67.30 270 P **P** **19 07 33.2 +0.3**
comp=Z,26µmcomp=Z,18µmcomp=Z,1µm,0.8s
MYLDM Lahad Datu 67.31 285 P **P** **19 07 35.2 +2.2**
CUYO Cuyo Island 67.46 291 *eP* **P** **19 07 35.5 +1.6**
BBKI Banjar Baru 67.51 275 P **P** **19 07 35.4 +1.1**
comp=Z,18µmcomp=Z,13µmcomp=Z,766nm,1.7s
JCNP Jose Panganiba 67.60 295 *eP* **P** **19 07 35.2 +0.5**
BOAC Boac 67.93 294 *eP* **P** **19 07 38.0 +1.2**
MTKI Muara Teweh, K 68.33 277 P **P** **19 07 40.0 +0.7**
comp=Z,15µmcomp=Z,7µmcomp=Z,356nm,0.9s
JYT Yasato 68.42 324 P **P** **19 07 39.4 +0.1**
JSG Sagara 68.43 322 P **P** **19 07 39.9 +0.5**
POLP Polilio Island 68.45 295 *eP* **P** **19 07 41.1 +1.2**
LQP Lukban 68.50 295‖*eP* **P** **19 07 40.8 +0.3**
GRJI Gresik 68.61 270 P **P** **19 07 43.5 +2.5**
comp=Z,1µmcomp=Z,7µmcomp=Z,720nm,0.9s
BUSP Coron 68.69 292 *eP* **P** **19 07 41.8 +0.4**
PGP Puerto Galera 68.72 294‖*eP* **P** **19 07 41.4 -0.3**
PWJI Pagerwojo 68.90 269 P **P** **19 07 43.0 +0.3**
comp=Z,21µmcomp=Z,11µmcomp=Z,967nm,1.0s
SPMM Sapulut 68.98 283 P **P** **19 07 45.0 +1.7**
ENPP El Nido 69.02 291 *eP* **P** **19 07 44.3 +0.9**
TBJI Tambak Boyo 69.23 270 P **P** **19 07 47.3 +2.5**
comp=Z,18µmcomp=Z,19µmcomp=Z,804nm,1.1s
BALP Baler 69.24 296 *eP* **P** **19 07 45.2 +0.5**
JMM Marumori 69.31 326 P **P** **19 07 44.6 0.0**
JMM IAmb IAmb 19 07 51.2
comp=Z,828nm,0.9s
BATP Bataraza 69.42 288 *eP* **P** **19 07 46.9 +1.0**
LUBP Lubang 69.44 294 *eP* **P** **19 07 45.7 -0.2**
JGF Kuroka 69.56 322 P **P** **19 07 46.8 +0.5**
INU Inuyama 69.58 322 P **P** **19 07 46.4 0.0**
CAUP Cauayan 69.61 297 *eP* **P** **19 07 47.8 +0.9**
MJAR Matsushiro Arr 69.74 323 P **P** **19 07 47.2 -0.2**
comp=Z,494nm,0.8s,baz=158,slow=5.0,SNR=521
MJAR PKP2bc 19 35 46.3
comp=Z,12nm,1.0s,baz=317,slow=3.0,SNR=10
MJAR Matsushiro Arr 69.74 323 P **P** **19 07 46.4 -1.0**
MJAR pmax pmax
comp=Z,267nm,0.8s
MJAR Matsushiro Arr 69.74 323 P **P** **19 07 46.4 -1.0**
MAJO Matsushiro 69.75 323*d* *iP* **P** **19 07 47.1 -0.3**
MAJO pmax pmax
comp=Z,646nm,0.8s
MAJO Matsushiro 69.75 323 P **P** **19 07 47.1 -0.3**
MAJO IAmb IAmb 19 07 54.2
comp=Z,701nm,0.9s
MAT Matsushiro 69.75 323 P **P** **19 07 47.1 -0.3**
MAT S **S** **19 16 21.2 +0.3**
MJB9 Matsu-Tunnel 69.75 323 P **P** **19 07 47.2 -0.2**
MJB9 IAmb IAmb 19 07 53.8
comp=Z,695nm,0.7s
WOJI Wonogiri, Jawa 69.78 269 P **P** **19 07 48.6 +0.5**
comp=Z,13µmcomp=Z,12µmcomp=Z,761nm,1.4s
CVP Callao Caves 69.98 298‖*eP* **P** **19 07 49.5 +0.3**
UGM Wanagama 70.14 269 P **P** **19 07 52.0 +1.7**
comp=Z,32µmcomp=Z,13µmcomp=Z,987nm,0.6s
UGM Wanagama 70.14 269 P **P** **19 07 50.4 +0.1**
QSPA South Pole Qui 70.26 180 P **P** **19 07 52.0 +1.8**
comp=Z,0.9s,baz=9.0,slow=1.0,SNR=1254
QSPA South Pole Qui 70.26 180 P **P** **19 07 51.9 +1.7**
BCP Baguio City 70.38 296‖*iP* **P** **19 07 51.7 0.0**
YOGI Yogyakarta 70.38 269 P **P** **19 07 53.7 +2.0**
comp=Z,10µmcomp=Z,885nm,1.2s
SMRI Semarang 70.48 269 P **P** **19 07 53.7 +1.4**
comp=Z,30µmcomp=Z,16µmcomp=Z,838nm,1.3s
SMRI Semarang 70.48 269 P **P** **19 07 52.5 +0.2**
JWT Wachi 70.49 321 IAmb IAmb 19 07 55.4
comp=Z,712nm,0.8s
APYP Conner 70.54 298 *eP* **P** **19 07 53.4 +0.9**
PBKI Pangkalan Bun 70.74 274 P **P** **19 07 55.8 +1.9**
comp=Z,23µmcomp=Z,2µm,1.1s
JSD Sado 70.79 325 IAmb IAmb 19 08 00.6
comp=Z,808nm,0.9s
ABRA Dolores 70.88 298 *eP* **P** **19 07 55.8 +1.3**
AMKA Amchitka 70.92 358 P **P** **19 07 53.1 -0.9**
BOLP Bolinao 70.95 296 *eP* **P** **19 07 54.7 -0.3**
JSU Suzuyama 71.14 315 IAmb IAmb 19 07 59.6
comp=Z,890nm,0.9s
BBP Basco 71.22 301 *eP* **P** **19 07 55.6 -0.9**
ERM Erimo 71.30 330*d* *iP* **P** **19 07 57.1 +0.7**
ERM pmax pmax
comp=Z,331nm,1.1s
ERM Erimo 71.30 330 P **P** **19 07 56.7 +0.2**
ERM IAmb IAmb 19 08 04.4
comp=Z,544nm,1.1s
JTM Tenmabayashi 71.36 328 IAmb IAmb 19 08 03.7
comp=Z,853nm,0.9s
ADK Adak 71.38 1 P **P** **19 07 55.8 -0.9**
ADK pmax pmax
comp=Z,805nm,0.8s
ADK Adak 71.38 1 P **P** **19 07 55.8 -0.9**
ADK IAmb IAmb 19 07 59.9
comp=Z,805nm,0.8s
GSTR Great Sitkin T 71.60 1 P **P** **19 07 57.0 -1.1**
JHS Saijyo 71.68 319 P **P** **19 07 59.2 +0.2**
YUK Yuzh-Kuril'sk 71.70 333 *eP* **P** **19 07 58.3 -0.5**
YUK 19 08 12.7
YUK *i* *PP **pP** **19 09 32.6 -0.3**
YUK *i* S **S** **19 16 43.9 +1.2**
KPJI Karang Pucung 71.81 269 P **P** **19 08 00.4 +0.2**
comp=Z,20µmcomp=Z,10µmcomp=Z,808nm,0.8s
KUR Kuril'sk 71.86 335*d* *iP* **P** **19 07 59.9 +0.2**
KUR *e* 19 08 18.2
KUR *i* S **S** **19 16 45.9 +1.4**
KUR *i* 19 17 30.1
KUR pmax pmax
comp=Z,2µm,1.9s
KUR pmax pmax
comp=Z,19µm,11.7s
KUR MLR MLR
comp=N,9µm,18.0s
KUR MLR MLR
comp=Z,5µm,18.0s
KUR MLR MLR
comp=E,3µm,17.0s
JNU Nakatsue 71.88 316 PKP2bc **P'P'ab** **19 35 40.0 -1.0**
comp=E,27nm,1.0s,baz=35,slow=8.4,SNR=6.2
JNU Nakatsue 71.88 316 IAmb IAmb 19 08 03.6
comp=Z,658nm,1.1s
STKI Sintang 71.88 277 P **P** **19 08 02.7 +2.1**
comp=Z,8µmcomp=Z,275nm,0.9s
SBUM Sibu 72.05 279 P **P** **19 08 02.5 +0.9**
SBUM Sibu 72.05 279 P **P** **19 08 03.0 +1.5**
CMJI Cimerak 72.13 268 P **P** **19 08 02.7 +0.7**
comp=Z,13µmcomp=Z,8µmcomp=Z,491nm,0.8s
JCJI Jatiwangi 72.70 269 P **P** **19 08 05.9 +0.5**
comp=Z,20µmcomp=Z,29µmcomp=Z,2µm,1.5s
CISI Cisompet, Garu 72.80 268 P **P** **19 08 05.6 -0.4**
comp=Z,15µmcomp=Z,14µmcomp=Z,758nm,1.1s
CISI Cisompet, Garu 72.80 268 P **P** **19 08 05.1 -0.9**
TWG Pinlang 73.14 302 P **P** **19 08 06.2 -1.5**
TWG IAmb IAmb 19 08 11.8
comp=Z,426nm,0.8s
JKA Kamikawa-asahi 73.19 331 P **P** **19 08 08.7 +1.2**
ASAJ Asahikawa 73.19 331 P **P** **19 08 08.7 +1.2**
ASAJ pmax pmax
comp=Z,1µm,1.3s
NACB Ninganchiao 73.42 304 P **P** **19 08 08.7 -0.5**
NACB IAmb IAmb 19 08 12.1
comp=Z,1µm,1.0s
KSM Kuching 73.47 278 IAmb IAmb 19 08 14.2
comp=Z,893nm,0.9s
KSM Kuching 73.47 278 P **P** **19 08 11.0 +1.2**
CNJI Cibinong 73.52 268 P **P** **19 08 10.2 +0.1**
comp=Z,36µmcomp=Z,19µmcomp=Z,2µm,1.0s
JTU Tsushima 73.72 317 P **P** **19 08 10.2 -0.5**
SSLB Suanglung 73.72 303 P **P** **19 08 10.2 -0.9**
SSLB IAmb IAmb 19 08 19.7
comp=Z,463nm,0.7s
SKR Severo-Kuril's 73.84 343*c* *iP* P 19 07 59.4 -12
SKR *e**PP pP 19 09 35.3 -10
SKR pmax pmax
comp=Z,12µm,10.9s
SKR pmax pmax
comp=Z,548nm,0.9s
SKR pmax pmax
comp=Z,8µm,17.6s
YHNB Yeheng 73.84 304 IAmb IAmb 19 08 18.5
comp=Z,1µm,1.0s
TATO Taipei 73.91 305 P **P** **19 08 11.4 -0.7**
XMIS Christmas Isla 73.93 264 P **P** **19 08 12.9 +0.5**
XMIS IAmb IAmb 19 08 15.6
comp=Z,623nm,1.0s
UNV Unalaska Valle 73.99 7 P **P** **19 08 10.7 -1.1**
DBJI Dramaga 74.11 269 P **P** **19 08 13.8 +0.3**
comp=Z,16µmcomp=Z,975nm,1.5s
SKJI Sukabumi 74.15 268 P **P** **19 08 13.9 +0.2**
comp=Z,11µmcomp=Z,19µmcomp=Z,1µm,1.0s
TNG Tangerang 74.33 269 P **P** **19 08 16.9 +2.2**
comp=Z,13µmcomp=Z,24µmcomp=Z,1µm,1.0s
TNG P **P** **19 08 16.9 +2.2**
comp=Z,27µmcomp=Z,36µmcomp=Z,2µm,1.0s
TPI Tanjungpandan 74.50 273 P **P** **19 08 16.4 +0.7**
comp=Z,10µmcomp=Z,669nm,0.9s
SBJI Serang 74.83 269 P **P** **19 08 17.7 +0.1**
comp=Z,29µmcomp=Z,2µm,1.2s
CGJI Cibinong 75.09 268 P **P** **19 08 18.6 -0.4**
comp=Z,420µmcomp=Z,21µmcomp=Z,1µm,0.8s
PET Petropavlovsk 75.33 346 *eP* **P** **19 08 19.7 +0.3**

PET e*PP **pP** **19 09 54.7 +0.1**
PET e*SP **sP** **19 10 36.2 -3.8**
PET eS **S** **19 17 21.7 -0.8**
PET e 19 17 47.1
PET pmax pmax
comp=Z,22µm,11.0s
PET pmax pmax
comp=Z,858nm,2.7s
PET pmax pmax
comp=Z,21µm,13.1s
PET Petropavlovsk 75.33 346 P **P** **19 08 18.6 -0.8**
PET IAmb IAmb 19 08 24.5
comp=Z,477nm,0.7s
YSS Yuzh-Sakhalins 75.34 333k *iP* **P** **19 08 20.9 +1.3**
YSS eS **S** **19 17 27.3 +4.4**
YSS eSS **SS** **19 22 25.7 +0.8**
YSS pmax pmax
comp=Z,18µm,13.6s
YSS Yuzh-Sakhalins 75.34 333 P **P** **19 08 20.2 +0.6**
PEA0B Petropavlovsk- 75.64 345 P **P** **19 08 20.6 -0.6**
PEA0B pmax pmax
comp=Z,1µm,1.0s
PEA0B Petropavlovsk- 75.64 345 P **P** **19 08 20.6 -0.6**
PETK Petropavlovsk- 75.64 345 P **P** **19 08 21.4 +0.2**
comp=Z,873nm,0.9s,baz=130,slow=6.5,SNR=178
PETK PKiKP **PKiKP** **19 14 04.3 +0.1**
comp=Z,9.3nm,1.0s,baz=103,slow=3.5,SNR=5.3
PETK PKP2bc 19 35 29.1
comp=Z,5.6nm,1.0s,baz=282,slow=6.9,SNR=3.7
PETK Petropavlovsk- 75.64 345 P **P** **19 08 20.1 -1.1**
G05D7 G05D7 75.66 37 P **P** **19 08 25.6 +4.7**
G05D7 pP **pwP** **19 09 57.9 -0.8**
G05D7 sP **sP** **19 10 45.9 +5.0**
G05D7 S **S** **19 17 30.0 +4.6**
BLSI Bandar Lampung 75.91 269 P **P** **19 08 23.1 -0.5**
comp=Z,17µmcomp=Z,2µm,0.9s
H06S1 SOCORRO T 75.94 64 P **P** **19 08 25.3 +1.7**
SNR=57
CNBA Chernabura Isl 75.94 11 P **P** **19 08 22.1 -0.6**
CNBA IAmb IAmb 19 08 28.9
comp=Z,1µm,1.3s
H06N1 SOCORRO T-PHAS 75.97 64 P **P** **19 08 26.4 +2.6**
SNR=13
H06E1 SOCORRO T-PHAS 75.99 64 P **P** **19 08 25.3 +1.4**
SNR=84
G13D G13D 76.00 37 P **P** **19 08 24.9 +1.9**
G13D pP **pwP** **19 10 00.1 -0.9**
G13D sP **sP** **19 10 43.8 +0.7**
G13D S **S** **19 17 35.3 +5.9**
KNMB Chin-men Tao 76.09 303 P **P** **19 08 25.0 +0.7**
KNMB IAmb IAmb 19 08 27.6
comp=Z,456nm,0.9s
PPBI Pangkal Pinang 76.13 273 P **P** **19 08 25.8 +1.0**
comp=Z,8µmcomp=Z,15µmcomp=Z,880nm,1.1s
QZH Quanzhou 76.16 303↓ *iP* **P** **19 08 25.8 +1.1**
QZH pP **pP** **19 10 00.8 +0.7**
QZH sP **sP** **19 10 46.6 +1.6**
QZH S **S** **19 17 33.5 +0.8**
QZH sS **sS** **19 20 25.2 +3.4**
QZH pmax pmax
comp=Z,510nm,0.9s
QZH pmax pmax
comp=Z,12µm,9.0s
TJN Taejon 76.17 317 *de*P **P** **19 08 24.7 +0.2**
G04D G04D 76.27 38 P P 19 08 29.1 +4.9
G04D pP pwP 19 10 01.5 -0.8
G04D sP sP 19 10 47.3 +2.9
G04D S **S** **19 17 36.0 +4.0**
SDPT Sand Point 76.30 10 P **P** **19 08 23.7 -1.0**
G22D G22D 76.42 36 P **P** **19 08 27.0 +1.7**
G22D pP **pwP** **19 10 02.9 -0.6**
G22D sP **sP** **19 10 47.3 +1.8**
G22D S **S** **19 17 38.6 +4.7**
KSRS Korea Array 76.47 318 P **P** **19 08 27.3 +1.2**
comp=Z,128nm,0.8s,baz=134,slow=5.5,SNR=124
KSRS PKP2bc 19 35 26.4
comp=Z,3.2nm,1.1s,baz=298,slow=2.6,SNR=4.3
KSAR Wonju Array Be 76.49 318 P **P** **19 08 26.3 +0.1**
KSAR Wonju Array Be 76.49 318 P **P** **19 08 26.3 +0.1**
KSAR **pP** **19 10 04.1 +2.3**
G21D G21D 76.53 37 P **P** **19 08 30.5 +4.7**
G21D pP **pwP** **19 10 04.3 +0.3**
G21D sP **sP** **19 10 49.4 +3.4**
G21D S **S** **19 17 40.6 +5.6**
G03D7 G03D7 76.57 38 P **P** **19 08 27.7 +1.8**
G03D7 pP **pP** **19 10 02.2 +1.3**
G03D7 sP **sP** **19 10 47.3 +1.1**
G03D7 S **S** **19 17 38.6 +3.4**
SNCC San Nicolas Is 76.66 47 P **P** **19 08 29.7 +2.4**
baz=235
SNCC S **S** **19 17 42.3 +4.5**
baz=235
SNCC San Nicolas Is 76.66 47 IAmb IAmb 19 08 34.0
comp=Z,598nm,1.1s
TEY Ternei 76.71 329↓ *iP* **P** **19 08 28.2 +1.0**
TEY *e* 19 09 58.0
TEY *e* 19 17 40.0
TEY pmax pmax
comp=Z,70nm,1.1s
SCZ2 Santa Cruz Isl 77.01 46 P **P** **19 08 30.3 +1.1**
baz=235,SNR=37
SCZ2 S **S** **19 17 45.4 +3.9**
baz=235
G20D G20D 77.08 37 P **P** **19 08 29.1 +0.2**
G20D pP **pwP** **19 10 06.4 -0.8**
G20D sP **sP** **19 10 53.6 +4.4**
G20D S **S** **19 17 44.6 +3.7**
LWLI Liwa 77.14 269 P **P** **19 08 30.2 -0.4**
comp=Z,17µmcomp=Z,2µm,0.8s
PMBI Palembang 77.16 272 P **P** **19 08 32.1 +1.6**
comp=Z,11µmcomp=Z,24µmcomp=Z,2µm,1.2s
PMBI Palembang 77.16 272 P **P** **19 08 31.4 +0.9**
G29D G29D 77.17 36 P **P** **19 08 30.5 +1.1**
G29D pP **pwP** **19 10 06.4 -1.4**
G29D sP **sP** **19 10 52.9 +3.2**
G29D S **S** **19 17 46.0 +4.0**
SCI2 San Clemente I 77.19 48 P **P** **19 08 32.0 +1.8**
baz=236,SNR=14
SCI2 S **S** **19 17 47.8 +4.5**
baz=236
INCN Inchon 77.30 318 P **P** **19 08 31.6 +0.8**
INCN pmax pmax
comp=Z,588nm,1.1s
INCN Inchon 77.30 318 P **P** **19 08 31.6 +0.8**
INCN IAmb IAmb 19 08 38.7
comp=Z,588nm,1.1s
MCCM Marconi Confer 77.34 41 IAmb IAmb 19 08 39.5
comp=Z,585nm,1.1s
SSE Sheshan 77.36 310 P **P** **19 08 32.0 +0.8**
SSE S **S** **19 17 46.8 +1.5**
SSE pmax pmax
comp=Z,120nm,1.1s
SSE pmax pmax
comp=Z,5µm,9.1s
G10D G10D 77.39 38 P **P** **19 08 32.6 +2.0**
G10D pP **pwP** **19 10 08.5 -0.6**
G10D sP **sP** **19 10 50.1 -0.9**
G10D S **S** **19 17 49.3 +4.9**
PKM Mcpherson Peak 77.40 46 P **P** **19 08 33.2 +1.6**
baz=235,SNR=84
PKM S **S** **19 17 49.0 +3.1**
baz=235
SAO San Andreas Ge 77.42 43 P **P** **19 08 32.5 +1.1**
SAO pmax pmax
comp=Z,704nm,1.2s
SAO San Andreas Ge 77.42 43 P **P** **19 08 32.5 +1.1**
SAO IAmb IAmb 19 08 40.3
comp=Z,704nm,1.2s
G01D G01D 77.45 39 P **P** **19 08 35.4 +4.2**
G01D sP **sP** **19 10 55.0 +3.3**
G01D S **S** **19 17 50.6 +5.1**
PMPB Monarch Peak 77.51 44 P **P** **19 08 33.0 +1.0**
PMPB IAmb IAmb 19 08 38.6
comp=Z,761nm,1.1s
CIS Catalina Islan 77.51 48 P **P** **19 08 32.8 +0.8**
baz=236,SNR=18
CIS S **S** **19 17 50.2 +3.3**
baz=236
SMMC Simmler 77.52 45 P **P** **19 08 33.6 +1.6**
baz=235,SNR=33
SMMC S **S** **19 17 51.2 +4.3**
baz=235
FS06D FS06D 77.56 39 P **P** **19 08 34.0 +2.3**
FS06D pP **pwP** **19 10 09.2 -1.0**
FS06D sP **sP** **19 10 52.9 +0.7**
FS06D S **S** **19 17 48.8 +2.4**
PAGB Antelope Grade 77.59 45 IAmb IAmb 19 08 40.1
comp=Z,433nm,1.0s
FS09D FS09D 77.61 39 P **P** **19 08 34.0 +2.1**
FS09D pP **pwP** **19 10 10.6 +0.1**
FS09D sP **sP** **19 10 55.8 +3.3**
FS09D S **S** **19 17 49.6 +2.8**
G37D G37D 77.61 36 P **P** **19 08 34.7 +2.9**
G37D pP **pwP** **19 10 09.9 -0.4**
G37D sP **sP** **19 10 53.6 +1.4**
G37D S **S** **19 17 51.9 +5.3**
FS07D FS07D 77.63 39 P **P** **19 08 34.7 +2.5**
FS07D pP **pwP** **19 10 09.9 -0.8**
FS07D sP **sP** **19 10 55.0 +2.4**
FS07D S **S** **19 17 52.8 +5.5**
FS13D FS13D 77.64 39 P **P** **19 08 35.4 +3.3**
FS13D pP **pwP** **19 10 09.9 -0.7**
FS13D sP **sP** **19 10 55.8 +3.2**
FS13D S **S** **19 17 52.8 +5.6**
FS10D FS10D 77.67 39 P **P** **19 08 33.3 +0.9**
FS10D sP **sP** **19 10 54.3 +1.4**
FS10D S **S** **19 17 52.0 +4.3**
FS16D FS16D 77.70 39 P **P** **19 08 35.4 +2.8**
FS16D pP **pwP** **19 10 14.3 +3.0**
FS16D S **S** **19 17 53.4 +5.2**
G36D G36D 77.73 36 P **P** **19 08 33.3 +1.0**
G36D pP **pwP** **19 10 09.9 -0.9**
G36D sP **sP** **19 10 54.3 +1.6**
G36D S **S** **19 17 53.3 +5.7**
HOPS Hopland Field 77.74 41 IAmb IAmb 19 08 42.0
comp=Z,797nm,1.2s
FS41D FS41D 77.76 39 P **P** **19 08 36.9 +3.9**
FS41D pP **pwP** **19 10 11.3 -0.2**
FS41D sP **sP** **19 10 55.8 +2.3**
FS41D S **S** **19 17 52.8 +4.1**
FMP Fort Macarthur 77.77 47 P **P** **19 08 34.5 +1.1**
baz=236,SNR=9.8
FMP S **S** **19 17 52.5 +3.0**
baz=236
G09D G09D 77.80 38 S **S** **19 17 55.9 +6.7**
G09D P P 19 08 40.6 +7.4
GDXM Geysers 77.80 41 P **P** **19 08 35.1 +1.6**
VLA Vladivostok 77.81 325*d iP* **P** **19 08 34.3 +1.0**
VLA pmax pmax
comp=Z,423nm,0.8s
KCPM Cahto Peak 77.86 40 IAmb IAmb 19 08 43.0
comp=Z,672nm,1.2s
FS44D FS44D 77.87 38 S **S** **19 17 52.8 +2.8**
OSI Osito Audit: C 77.98 46 P **P** **19 08 35.6 +1.0**
baz=236,SNR=29
OSI S **S** **19 17 54.9 +3.0**
baz=236
OSI Osito Audit: C 77.98 46 IAmb IAmb 19 08 41.1
comp=Z,840nm,1.4s
TJX Tijuana 77.98 49 P **P** **19 08 36.4 +1.8**
DECC Green Verdugo 78.04 47 P **P** **19 08 35.4 +0.5**
baz=236,SNR=33
DECC S **S** **19 17 55.2 +2.7**
baz=236
G35D G35D 78.07 36 P **P** **19 08 36.1 +1.9**
G35D pP **pP** **19 10 10.6 +1.0**
G35D sP **sP** **19 10 56.5 +1.6**
G35D S **S** **19 17 53.3 +1.9**
PASC Pasadena Art C 78.10 47 P **P** **19 08 35.7 +0.5**
KMRM Mail Ridge 78.12 39 P **P** **19 08 36.9 +1.6**
109C Camp Elliot, M 78.15 49 P **P** **19 08 36.4 +0.9**
baz=237,SNR=24
109C S **S** **19 17 56.9 +3.4**
baz=237
ARVC Arvin 78.19 46 P **P** **19 08 36.7 +1.0**
baz=235,SNR=67
ARVC S **S** **19 17 56.6 +2.7**
baz=235
MWC Mount Wilson 78.22 47 IAmb IAmb 19 08 47.5
comp=Z,524nm,0.8s
HHU Hamhung 78.24 320 P **P** **19 08 37.1 +1.3**
HHU pP SKiKP 19 17 12.4 +12
HHU S **S** **19 17 58.6 +4.4**
JCC Jacoby Creek, 78.30 39 IAmb IAmb 19 08 45.2
comp=Z,480nm,1.1s
BAR Barrett 78.34 49 P **P** **19 08 36.7 +0.1**
M16D M16D 78.39 38 sP sP 19 10 57.9 +0.9
M16D P P 19 08 44.4 +8.1
MNAI Manna 78.39 270 P **P** **19 08 39.1 +1.9**
comp=Z,21µmcomp=Z,35µmcomp=Z,2µm,1.6s
MNAI Manna 78.39 270 P **P** **19 08 37.0 -0.3**
VES Vestal, Richgr 78.43 45 P **P** **19 08 37.5 +0.7**
baz=235,SNR=185
VES S **S** **19 17 59.4 +3.0**
baz=235
TYV Tymovskoe 78.47 336 *eP* **P** **19 08 38.0 +1.3**
TYV *eS* **S** **19 17 56.0 -0.1**
TYV pmax pmax
comp=Z,13µm,3.5s
TYV pmax pmax
comp=Z,645nm,1.7s
TYV smax smax
comp=N,37µm,10.0s
TYV smax smax
comp=E,190nm,3.6s
MURC Murrieta 78.47 48 P **P** **19 08 38.3 +1.0**
baz=237,SNR=105
MURC S **S** **19 18 00.5 +3.4**
baz=237
USA0B Ussuriysk Arra 78.48 326*d iP* **P** **19 08 37.9 +0.9**
USA0B Ussuriysk Arra 78.48 326 IAmb IAmb 19 08 45.2
comp=Z,723nm,1.0s
USRK Ussuriysk Ar. 78.48 326 P **P** **19 08 38.2 +1.3**
comp=Z,342nm,0.8s,baz=136,slow=2.8,SNR=218
USRK PKKPbc **PKKPbc** **19 27 29.5 -2.3**
comp=Z,4.1nm,0.6s,baz=234,slow=1.2,SNR=12
USRK Ussuriysk Ar. 78.48 326 P **P** **19 08 37.2 +0.3**
HKPS Hong Kong Po S 78.50 299 IAmb IAmb 19 08 41.8
comp=Z,720nm,0.9s
BFSC Mount Baldy Ra 78.50 47 P **P** **19 08 38.1 +0.6**
baz=236,SNR=100
BFSC S **S** **19 18 00.0 +2.5**
baz=236
VOG Valley Oaks Go 78.50 45 P **P** **19 08 37.9 +0.6**
baz=235
VOG S **S** **19 17 59.5 +2.4**
baz=235
EDW2 Edwards Air Fo 78.63 46 P **P** **19 08 39.1 +1.0**
baz=236,SNR=264
EDW2 S **S** **19 18 01.0 +2.4**
baz=236
MONP2 Monument Peak 78.63 49 P **P** **19 08 39.5 +1.1**
baz=237,SNR=147
MONP2 S **S** **19 18 03.4 +4.3**
baz=237
O02D Mt. Diablo Mer 78.64 40 P **P** **19 08 39.7 +1.6**
baz=232,SNR=195
O02D S **S** **19 18 02.7 +4.1**
baz=232
RMX La Rumorosa 78.72 49 IAmb IAmb 19 08 44.4
comp=Z,529nm,1.0s
IKP In-Ko-Pah, Jac 78.73 49 P **P** **19 08 40.0 +1.3**
baz=238,SNR=129
IKP S **S** **19 18 04.2 +4.4**
baz=238
J11D J11D 78.73 35 P **P** **19 08 39.0 +1.2**
J11D pP **pwP** **19 10 15.6 -1.1**
J11D sP **sP** **19 10 60.0 +1.5**
J11D S **S** **19 18 00.6 +2.3**
ISA Isabella, Lake 78.74 46 P **P** **19 08 39.5 +0.8**
ISA pmax pmax
comp=Z,574nm,1.0s
ISA Isabella, Lake 78.74 46 P **P** **19 08 39.8 +1.1**
baz=236,SNR=239
ISA S **S** **19 18 02.8 +3.0**
baz=236
ISA Isabella, Lake 78.74 46 P **P** **19 08 39.5 +0.8**
ISA IAmb IAmb 19 08 47.5
comp=Z,574nm,1.0s
PYAG Pyongyang 78.79 319 P **P** **19 08 40.1 +1.3**
PYAG pP **pP** **19 10 15.9 +1.0**
PYAG sP **sP** **19 11 03.1 +3.0**
PYAG S **S** **19 18 04.8 +4.8**
KRMB Red Mountain 78.82 38 IAmb IAmb 19 08 48.4
comp=Z,838nm,1.5s
PYS Pyongsong 78.85 319 P **P** **19 08 40.4 +1.3**
J20D J20D 78.88 34 P **P** **19 08 40.4 +1.8**
J20D pP **pwP** **19 10 17.0 -0.4**
J20D sP **sP** **19 11 00.7 +1.4**
J20D S **S** **19 17 59.9 +0.1**
SRIG Santa Rosalia 78.91 56 IAmb IAmb 19 08 45.2
comp=Z,889nm,1.1s
KSI Kapahiang 78.97 270 P **P** **19 08 40.0 -0.4**
comp=Z,22µmcomp=Z,2µm,0.9s
PFO Pinyon Flats O 79.00 48*d iP* **P** **19 08 40.8 +0.6**
PFO pmax pmax
comp=Z,346nm,0.9s
PFO Pinyon Flats O 79.00 48 P **P** **19 08 41.0 +0.8**
baz=237,SNR=62
PFO S **S** **19 18 05.9 +3.2**
baz=237
PFO Pinyon Flats O 79.00 48 P **P** **19 08 40.8 +0.6**
PFO IAmb IAmb 19 08 45.6
comp=Z,796nm,1.6s
TPFO Pinon Flats 79.00 48 S **S** **19 18 06.5 +3.8**
baz=237
BBRC Big Bear Solar 79.02 47 P **P** **19 08 41.3 +0.9**
baz=237,SNR=7.2
BBRC S **S** **19 18 06.4 +3.2**
baz=237
SLBS Sierra La Lagu 79.03 60 P **P** **19 08 41.5 +1.0**
G33D G33D 79.03 37 P **P** **19 08 42.5 +2.7**
G33D pP **pP** **19 10 16.2 +0.7**
G33D sP **sP** **19 10 60.0 -0.6**
WDC Whiskeytown Da 79.04 40 P **P** **19 08 40.7 +0.6**
WDC pmax pmax
comp=Z,388nm,1.1s
WDC Whiskeytown Da 79.04 40 P **P** **19 08 40.7 +0.6**
ORV Oroville 79.05 41 IAmb IAmb 19 08 51.7
comp=Z,595nm,1.1s
KBO Bosley Butte 79.07 38 IAmb IAmb 19 08 49.6
comp=Z,1µm,1.9s
SWSC Sam W. Stewart 79.11 49 P **P** **19 08 41.5 +0.9**
baz=238,SNR=75
SWSC S **S** **19 18 07.7 +4.1**
baz=238
LRMC Laurel Mtn Rad 79.17 46 P **P** **19 08 42.0 +0.9**
baz=236,SNR=15
LRMC S **S** **19 18 08.1 +3.6**
baz=236
N02D Trinity Center 79.18 39 P **P** **19 08 42.5 +1.5**
baz=232,SNR=106
N02D S **S** **19 18 08.0 +3.7**
baz=232
J19D J19D 79.21 35 P **P** **19 08 40.4 0.0**
J19D pP **pwP** **19 10 17.7 -1.7**
J19D sP **sP** **19 11 02.8 +1.6**
J19D S **S** **19 18 03.3 0.0**
J28D J28D 79.30 34 P **P** **19 08 42.5 +1.7**
J28D pP **pP** **19 10 17.7 +1.1**
J28D sP **sP** **19 11 02.8 +1.1**
J28D S **S** **19 18 04.6 +0.4**
RRX Edison Barstow 79.31 47 P **P** **19 08 42.3 +0.7**
baz=237
RRX S **S** **19 18 08.5 +2.9**
baz=237
O03E Paynes Creek 79.31 40 P **P** **19 08 42.3 +0.6**
baz=232,SNR=124
O03E S **S** **19 18 07.8 +2.1**
baz=232
M02C Callahan 79.36 39 P **P** **19 08 43.4 +1.6**
baz=232,SNR=142
M02C S **S** **19 18 09.8 +3.8**
baz=232
L02E Cave Junction 79.39 38 P **P** **19 08 43.4 +1.5**
baz=231,SNR=34
L02E S **S** **19 18 10.6 +4.4**
baz=231
KEBM Edson Butte 79.43 37 IAmb IAmb 19 08 50.5
comp=Z,469nm,0.9s
CWC Cottonwood Cre 79.44 45 P **P** **19 08 43.5 +0.9**
baz=236
CWC S **S** **19 18 09.2 +2.0**
baz=236
MDPB Devils Postpil 79.45 44 IAmb IAmb 19 08 54.9
comp=Z,460nm,0.9s
GZH Guangzhou 79.52 299↓ *iP* **P** **19 08 44.8 +1.8**
GZH pP **pP** **19 10 18.0 -0.8**
GZH sP **sP** **19 11 00.2 -3.8**
GZH PP **PP** **19 11 02.8 +0.9**
GZH S **S** **19 18 12.0 +3.8**
GZH sS **sS** **19 20 55.7 -4.4**
GZH SS **SS** **19 23 31.5 +3.4**
GZH pmax pmax
comp=Z,5µm,4.1s
BELC Belle Mtn. Jos 79.53 48 P **P** **19 08 44.1 +1.1**
baz=238,SNR=222
BELC S **S** **19 18 12.0 +3.8**
baz=238
NJ2 Nanjing 79.56 310↓ *iP* **P** **19 08 44.2 +1.2**
NJ2 PcP **PcP** **19 08 48.8 -0.5**
NJ2 pP **pP** **19 10 20.5 +1.3**
NJ2 sP **sP** **19 11 07.2 +2.9**
NJ2 PP **PP** **19 11 51.1 -0.2**
NJ2 S **S** **19 18 11.9 +3.6**
NJ2 SKS **SKSac** **19 18 15.8 -1.7**
NJ2 ScS **ScS** **19 18 27.6 +1.4**
NJ2 pmax pmax
comp=Z,76nm,0.7s
NJ2 pmax pmax
comp=Z,6µm,3.7s
RUBR Rubicon Trail 79.59 42 P **P** **19 08 43.8 +0.4**
MLAC Mammoth, Mammo 79.61 44 P **P** **19 08 44.7 +1.2**
baz=235,SNR=75
MLAC S **S** **19 18 13.4 +4.3**
baz=235
MPMC Manual Prospec 79.62 46 P **P** **19 08 44.4 +0.9**
baz=236,SNR=230
MPMC S **S** **19 18 12.6 +3.3**
baz=236
MYKOM Kota Tinggi 79.62 276 IAmb IAmb 19 08 47.5
comp=Z,591nm,0.9s
MYKOM Kota Tinggi 79.62 276 P **P** **19 08 45.0 +1.2**
J27D J27D 79.63 34 P **P** **19 08 43.9 +1.3**
J27D pP **pP** **19 10 19.1 +0.7**
J27D sP **sP** **19 11 06.3 +2.8**
J27D S **S** **19 18 07.2 -0.4**
YBH Yreka Blue Hor 79.65 39 P **P** **19 08 44.6 +1.2**
comp=Z,283nm,0.8s,baz=204,slow=0.5,SNR=200
YBH Yreka Blue Hor 79.65 39 P **P** **19 08 44.6 +1.2**
YBH IAmb IAmb 19 08 52.4
comp=Z,578nm,1.1s
GSC Goldstone, Bar 79.67 47 P **P** **19 08 44.4 +0.7**
baz=237,SNR=97
GSC S **S** **19 18 12.5 +3.0**
baz=237
GSC Goldstone, Bar 79.67 47 IAmb IAmb 19 08 49.9
comp=Z,1µm,1.9s
TIN Tinemaha, Big 79.68 45 P **P** **19 08 44.8 +1.0**
baz=236,SNR=56
TIN S **S** **19 18 12.9 +3.2**
baz=236
K02D Willamette Mer 79.70 37 P **P** **19 08 44.9 +1.3**
baz=231,SNR=107
K02D S **S** **19 18 14.0 +4.5**
baz=231
BC3 Big Chuckawall 79.73 49 P **P** **19 08 45.3 +1.3**
baz=238,SNR=127
BC3 S **S** **19 18 14.6 +4.3**
baz=238
WAKR Walker 79.73 43 IAmb IAmb 19 08 53.0
comp=Z,843nm,1.1s
HEC Hector,Ludlow 79.74 47 P **P** **19 08 44.7 +0.7**
baz=237,SNR=125
HEC S **S** **19 18 12.9 +2.6**
baz=237
J01E Myrtle Point 79.84 37 P **P** **19 08 45.6 +1.4**
baz=230
J01E S **S** **19 18 13.9 +3.1**
baz=230
GLA Glamis 79.86 49 P **P** **19 08 46.2 +1.5**
baz=238,SNR=79
GLA S **S** **19 18 15.2 +3.8**
baz=238
GLA Glamis 79.86 49 IAmb IAmb 19 08 51.6
comp=Z,597nm,1.1s
BEKR Beckworth 79.94 41 IAmb IAmb 19 08 53.7
comp=Z,644nm,1.2s
MDJ Mudanjiang 80.04 325 P **P** **19 08 46.6 +1.3**
MDJ S **SKSac** **19 18 19.0 -1.3**
MDJ pmax pmax
comp=Z,260nm,1.0s
MDJ pmax pmax
comp=Z,17µm,5.0s

MDJ	**Mudanjiang**	**80.04**	**325**	IAmb	IAmb	19 08 51.0		
	comp=Z,942nm,1.0s							
HUMO	**Hull Mountain**	**80.05**	**38**	IAmb	IAmb	19 08 57.6		
	comp=Z,465nm,1.1s							
PIX	**Pinacate**	**80.08**	**51**	IAmb	IAmb	19 08 51.3		
	comp=Z,722nm,1.4s							
KDAK	**Kodiak Island**	**80.11**	**13**	P	**P**	**19 08 45.2**	**-0.1**	
KDAK				pmax	pmax			
	comp=Z,3µm,1.8s							
KDAK	**Kodiak Island**	**80.11**	**13**	P	**P**	**19 08 45.2**	**-0.1**	
GMRC	**Granite Mounta**	**80.18**	**48**	P	**P**	**19 08 47.3**	**+0.9**	
	baz=238,SNR=158							
GMRC				S	**S**	**19 18 17.6**	**+2.6**	
	baz=238							
LHV	**Little Huntoon**	**80.18**	**43**	IAmb	IAmb	19 08 55.2		
	comp=Z,611nm,1.2s							
L04D	**Klamath Falls**	**80.19**	**38**	P	**P**	**19 08 47.1**	**+0.8**	
	baz=232,SNR=227							
L04D				S	**S**	**19 18 17.1**	**+2.5**	
	baz=232							
M04C	**Macdoel**	**80.19**	**39**	P	**P**	**19 08 47.5**	**+1.2**	
	baz=232,SNR=123							
M04C				S	**S**	**19 18 18.1**	**+3.3**	
	baz=232							
SUJ	**Sinuiju**	**80.20**	**319**	P	**P**	**19 08 47.2**	**+1.0**	
SUJ				pP	**pP**	**19 10 23.6**	**+1.0**	
SUJ				sP	**sP**	**19 11 11.2**	**+3.3**	
SUJ				S	**S**	**19 18 19.2**	**+4.6**	
IRM	**Iron Mountain**	**80.21**	**48**	P	**P**	**19 08 47.7**	**+1.2**	
	baz=238,SNR=238							
IRM				S	**S**	**19 18 18.9**	**+3.8**	
	baz=238							
FURC	**Furnace Creek,**	**80.27**	**46**	P	**P**	**19 08 47.4**	**+0.8**	
	baz=236,SNR=22							
FURC				S	**S**	**19 18 18.4**	**+3.0**	
	baz=236							
TUQ	**Turquoise Moun**	**80.35**	**47**	P	**P**	**19 08 48.2**	**+0.9**	
	baz=237,SNR=74							
TUQ				S	**S**	**19 18 19.3**	**+2.7**	
	baz=237							
SHOC	**Shoshone, Teco**	**80.36**	**46**	P	**P**	**19 08 47.9**	**+0.7**	
	baz=237,SNR=12							
SHOC				S	**S**	**19 18 20.0**	**+3.5**	
	baz=237							
RYN	**Ryan**	**80.38**	**43**	IAmb	IAmb	19 08 56.2		
	comp=Z,853nm,1.5s							
NVAR	**Mina Array Bea**	**80.41**	**43**	P	**P**	**19 08 48.4**	**+0.7**	
	comp=Z,100nm,0.7s,baz=225,slow=8.6,SNR=321							
NVAR				PKKPbc	**PKKPbc**	**19 27 29.4**	**+2.0**	
	comp=Z,2.2nm,0.5s,baz=221,slow=26,SNR=12							
NVAR				PKPPKP	**P'P'df**	**19 35 31.2**	**+1.8**	
	comp=Z,7.8nm,1.0s,baz=100,slow=4.7,SNR=9.3							
NVAR	**Mina Array Bea**	**80.41**	**43**	P	**P**	**19 08 47.4**	**-0.3**	
PAHR	**Pah Rah Range**	**80.46**	**42**	IAmb	IAmb	19 08 56.4		
	comp=Z,642nm,1.1s							
113A	**Mohawk Valley,**	**80.47**	**50**	IAmb	IAmb	19 08 53.7		
	comp=Z,1µm,1.7s							
I02D	**Swisshome**	**80.49**	**36**	P	**P**	**19 08 49.1**	**+1.5**	
	baz=230,SNR=29							
I02D				S	**S**	**19 18 20.5**	**+3.2**	
	baz=230							
I03D	**Drain, OR**	**80.51**	**37**	P	**P**	**19 08 48.8**	**+1.1**	
	baz=231,SNR=56							
I03D				S	**S**	**19 18 20.3**	**+2.8**	
	baz=231							
NV11	**Mina Array Sit**	**80.51**	**43**	IAmb	IAmb	19 08 56.8		
	comp=Z,746nm,1.1s							
QIZ	**Qiongzhong**	**80.72**	**294**	P	**P**	**19 08 51.1**	**+1.7**	
QIZ				pP	**pwP**	**19 10 27.4**	**-1.4**	
QIZ				sP	**sP**	**19 11 13.2**	**+2.8**	
QIZ				S	**S**	**19 18 24.2**	**+3.5**	
QIZ				pmax	pmax			
	comp=Z,110nm,1.7s							
QIZ				pmax	pmax			
	comp=Z,6µm,8.8s							
HSIG		**80.72**	**55**	IAmb	IAmb	19 08 54.7		
	comp=Z,938nm,1.5s							
214A	**Organ Pipe Nat**	**80.76**	**51**	P	**P**	**19 08 51.0**	**+1.6**	
	baz=240							
214A				S	**S**	**19 18 25.3**	**+4.5**	
	baz=240							
K04D	**Chiloquin, OR**	**80.76**	**38**	P	**P**	**19 08 50.4**	**+1.1**	
	baz=232,SNR=26							
K04D				S	**S**	**19 18 23.1**	**+2.6**	
	baz=232							
NEE2	**Needles Airpor**	**80.90**	**48**	P	**P**	**19 08 51.2**	**+1.1**	
	baz=238,SNR=13							
NEE2				S	**S**	**19 18 26.4**	**+4.4**	
	baz=238							
J04D	**Umpqua Nationa**	**80.93**	**38**	P	**P**	**19 08 51.6**	**+1.3**	
	baz=232,SNR=205							
J04D				S	**S**	**19 18 25.0**	**+2.6**	
	baz=232							
TPNV	**Topopah Spring**	**80.94**	**46**	P	**P**	**19 08 51.5**	**+1.0**	
	baz=237,SNR=82							
TPNV				S	**S**	**19 18 26.3**	**+3.6**	
	baz=237							
GRNR	**Gornyy**	**80.96**	**333**	⇓*i*P	**P**	**19 08 51.2**	**+1.2**	
GRNR				*e*		19 10 28.6		
GRNR				*e*S	**S**	**19 18 20.6**	**-1.4**	
GRNR				pmax	pmax			
	comp=Z,60nm,1.2s							
GRNR				pmax	pmax			
	comp=N,90nm,0.9s							
GRNR				smax	smax			
	comp=Z,5.0nm,1.1s							
GRNR				MLR	MLR			
	comp=E,2µm,17.0s							
GRNR				MLR	MLR			
	comp=N,2µm,18.0s							
GRNR				MLR	MLR			
	comp=Z,4µm,18.0s							
SDSI	**Sungai Dareh**	**80.97**	**272**	P	**P**	**19 08 50.6**	**-0.3**	
	comp=Z,4µmcomp=Z,335nm,1.0s							
PDMCI	**Parker Dam,Lak**	**80.99**	**49**	P	**P**	**19 08 51.9**	**+1.3**	
	baz=239,SNR=147							
PDMCI				S	**S**	**19 18 27.4**	**+4.5**	
	baz=239							
NKL	**Nikolayevsk**	**81.03**	**336**	*e*P	**P**	**19 08 50.7**	**+0.5**	
NKL				*e*		19 10 28.5		
NKL				*e*S	**S**	**19 18 22.1**	**-0.3**	
NKL				pmax	pmax			
	comp=N,9.0nm,1.2s							
NKL				pmax	pmax			
	comp=Z,324nm,2.0s							
NKL				pmax	pmax			
	comp=Z,382nm,2.8s							
COR	**Corvallis**	**81.09**	**36**	P	**P**	**19 08 51.7**	**+0.9**	
COR				pmax	pmax			
	comp=Z,474nm,1.0s							
COR	**Corvallis**	**81.09**	**36**	P	**P**	**19 08 51.7**	**+0.9**	
COR				IAmb	IAmb	19 08 59.0		
	comp=Z,474nm,0.9s							
I04A	**Tendick Farm,**	**81.10**	**37**	P	**P**	**19 08 51.6**	**+0.7**	
	baz=232,SNR=144							
I04A				S	**S**	**19 18 25.9**	**+2.2**	
	baz=232							
DL2	**Dalian**	**81.33**	**317**	⇓*i*P	**P**	**19 08 52.3**	**+0.2**	
DL2				pP	**pP**	**19 10 27.0**	**-2.1**	
DL2				sP	**sP**	**19 11 12.2**	**-1.6**	
DL2				S	**S**	**19 18 25.4**	**-0.8**	
DL2				SS	**SS**	**19 23 54.6**	**+0.2**	
DL2				pmax	pmax			
	comp=Z,310nm,1.0s							
DL2				pmax	pmax			
	comp=Z,12µm,8.2s							
H04D	**Lebanon**	**81.37**	**36**	P	**P**	**19 08 53.7**	**+1.5**	
	baz=231,SNR=122							
H04D				S	**S**	**19 18 28.3**	**+2.0**	
	baz=231							
SHPR	**Sheep Range**	**81.44**	**46**	IAmb	IAmb	19 09 02.0		
	comp=Z,901nm,1.8s							
J05D	**Fort Rock, OR**	**81.46**	**38**	P	**P**	**19 08 54.3**	**+1.4**	
	baz=232,SNR=399							
J05D				S	**S**	**19 18 30.3**	**+2.6**	
	baz=232							
G03D	**McMinnville, O**	**81.51**	**36**	P	**P**	**19 08 54.1**	**+1.2**	
	baz=231,SNR=65							
G03D				S	**S**	**19 18 29.8**	**+2.1**	
	baz=231							
COCO	**West Island**	**81.63**	**260**	P	**P**	**19 08 54.9**	**+0.6**	
COCO				pmax	pmax			
	comp=Z,1µm,1.2s							
COCO	**West Island**	**81.63**	**260**	P	**P**	**19 08 54.9**	**+0.6**	
BKNI	**Bangkinang**	**81.76**	**273**	P	**P**	**19 08 55.7**	**+0.7**	
	comp=Z,11µmcomp=Z,16µmcomp=Z,1µm,1.3s							
SNY	**Shenyang**	**81.78**	**320**	⇓P	**P**	**19 08 55.1**	**+0.7**	
SNY				pP	**pP**	**19 10 34.4**	**+3.1**	
SNY				sP	**sP**	**19 11 21.3**	**+4.9**	
SNY				SKS	**SKSac**	**19 18 31.6**	**-0.5**	
SNY				S	**SKKSac**	**19 18 36.5**	**+0.3**	
SNY				pmax	pmax			
	comp=Z,340nm,2.5s							
SNY				pmax	pmax			
	comp=Z,13µm,12.0s							
CN2	**Changchun**	**81.85**	**322**	⇓P	**P**	**19 08 55.5**	**+0.8**	
CN2				*e*pP	pP	19 10 31.6	-0.1	
CN2				*e*sP	sP	19 11 16.9	+0.1	
CN2				PP	**PP**	**19 12 06.7**	**-3.0**	
CN2				SKS	**S**	**19 18 24.8**	**-6.4**	
CN2				pmax	pmax			
	comp=Z,120nm,1.0s							
CN2				pmax	pmax			
	comp=Z,8µm,4.0s							
PMSA	**Palmer Station**	**81.86**	**157**	P	**P**	**19 08 55.9**	**+1.4**	
	comp=Z,632nm,0.9s,baz=232,slow=3.2,SNR=147							
PMSA	**Palmer Station**	**81.86**	**157**	P	**P**	**19 08 55.9**	**+1.4**	
PMSA	**Palmer Station**	**81.86**	**157**	*e*P	**P**	**19 08 55.6**	**+1.2**	
CNPM	**China Poot**	**81.99**	**13**	IAmb	IAmb	19 09 00.3		
	comp=Z,667nm,0.9s							
PRN	**Pahroc Range**	**82.00**	**46**	IAmb	IAmb	19 09 04.9		
	comp=Z,959nm,1.3s							
KLR	**Kul'dur**	**82.01**	**329**	PKKPbc	PKKPbc	19 27 21.8	-2.3	
	comp=Z,25nm,0.6s,baz=324,slow=3.6,SNR=22							
KLR				PKPPKP		19 35 26.9		
	comp=Z,14nm,1.0s,baz=288,slow=3.5,SNR=8.8							
KLR	**Kul'dur**	**82.01**	**329**	*de*P	**P**	**19 08 56.3**	**+0.9**	
KLR				pmax	pmax			
	comp=Z,536nm,1.8s							
HOM	**Homer**	**82.02**	**13**	P	**P**	**19 08 55.2**	**0.0**	
	baz=205,SNR=23							
HOM				S	**S**	**19 18 32.9**	**+0.7**	
	baz=205							
I05D	**Terrebonne, OR**	**82.04**	**37**	P	**P**	**19 08 56.9**	**+1.1**	
	baz=232,SNR=125							
I05D				S	**S**	**19 18 37.3**	**+4.0**	
	baz=232							
R11A	**Troy Canyon, C**	**82.15**	**45**	P	**P**	**19 08 57.2**	**+0.5**	
	baz=237,SNR=257							
R11A				S	**S**	**19 18 37.2**	**+2.3**	
	baz=237							
WHN	**Wuhan**	**82.16**	**306**	⇓*i*P	**P**	**19 08 57.9**	**+1.3**	
WHN				pP	**pwP**	**19 10 34.6**	**-1.3**	
WHN				sP	**sP**	**19 11 19.2**	**+0.9**	
WHN				S	**S**	**19 18 35.0**	**+0.1**	
WHN				pmax	pmax			
	comp=Z,17µm,8.4s							
F04D	**Rainier, OR**	**82.20**	**35**	P	**P**	**19 08 57.8**	**+1.4**	
	baz=231,SNR=52							
F04D				S	**S**	**19 18 39.1**	**+4.5**	
	baz=231							
MAW	**Mawson**	**82.27**	**200**	P	**P**	**19 08 57.5**	**+1.0**	
	comp=Z,167nm,0.5s,baz=128,slow=6.6,SNR=119							
MAW				PKKPbc	**PKKPbc**	**19 27 20.8**	**-2.2**	
	comp=Z,4.0nm,0.6s,baz=53,slow=19,SNR=3.2							
MAW				PKPPKP	**P'P'df**	**19 35 26.4**	**-2.3**	
	comp=Z,11nm,1.0s,baz=320,slow=5.9,SNR=5.6							
MAW	**Mawson**	**82.27**	**200**	P	**P**	**19 08 57.3**	**+0.8**	
BRLK	**Bradley Lake**	**82.28**	**13**	IAmb	IAmb	19 09 01.6		
	comp=Z,778nm,0.8s							
TUC	**Tucson**	**82.43**	**52**	P	**P**	**19 08 59.6**	**+1.5**	
TUC				pmax	pmax			
	comp=Z,2µm,1.7s							
TUC	**Tucson**	**82.43**	**52**	P	**P**	**19 08 59.7**	**+1.7**	
	baz=241							
TUC	**Tucson**	**82.43**	**52**	P	**P**	**19 08 59.6**	**+1.5**	
RSO	**Redoubt South**	**82.53**	**12**	P	**P**	**19 08 57.6**	**-0.5**	
NLWA	**Neilton Lookou**	**82.57**	**34**	IAmb	IAmb	19 09 07.7		
	comp=Z,550nm,1.1s							
H02S1	**DAWSON INLET T**	**82.59**	**26**	P	**P**	**19 08 59.2**	**+1.0**	
	SNR=203							
G05D	**Wamic, OR**	**82.61**	**36**	P	**P**	**19 08 59.6**	**+1.0**	
	baz=232,SNR=79							
E04D	**Cinebar**	**82.73**	**35**	P	**P**	**19 09 00.6**	**+1.4**	
	baz=231							
F05D	**White Salmon**	**82.92**	**36**	P	**P**	**19 09 01.3**	**+1.1**	
	baz=232							
TIA	**Tai'an**	**82.92**	**312**	P	**P**	**19 09 01.3**	**+0.9**	
TIA				S	**S**	**19 18 40.4**	**-1.9**	
TIA				pmax	pmax			
	comp=Z,270nm,1.0s							
TIA				pmax	pmax			
	comp=Z,12µm,9.3s							
I07A	**Izee**	**82.95**	**38**	IAmb	IAmb	19 09 09.2		
	comp=Z,886nm,1.2s							
D04E	**Lakebay**	**83.02**	**34**	P	**P**	**19 09 02.3**	**+1.7**	
	baz=231,SNR=46							
SISI	**Saibi**	**83.04**	**271**	P	**P**	**19 09 03.4**	**+1.9**	
	comp=Z,6µmcomp=Z,267nm,1.7s							
Q23K	**Middleton Isla**	**83.05**	**16**	P	**P**	**19 09 02.7**	**+2.3**	
	baz=210							
D03D	**Eldon**	**83.07**	**34**	P	**P**	**19 09 02.4**	**+1.5**	
	baz=231,SNR=92							
J08A	**Circle Bar Ran**	**83.13**	**39**	IAmb	IAmb	19 09 10.0		
	comp=Z,652nm,1.1s							
CAPN	**Captain Cook N**	**83.13**	**13**	P	**P**	**19 09 03.2**	**+2.5**	
	baz=205							
MA2	**Magadan**	**83.16**	**345**	*de*P	**P**	**19 09 00.3**	**-0.7**	
MA2				pmax	pmax			
	comp=Z,1µm,2.5s							
MA2	**Magadan**	**83.16**	**345**	P	**P**	**19 09 00.2**	**-0.7**	
MA2				IAmb	IAmb	19 09 06.0		
	comp=Z,483nm,0.9s							
O22K	**Cooper Landing**	**83.18**	**14**	P	**P**	**19 09 01.0**	**-0.1**	
	baz=206,SNR=41							
IPM	**Ipoh**	**83.20**	**277**	P	**P**	**19 09 03.0**	**+0.7**	
IPM	**Ipoh**	**83.20**	**277**	P	**P**	**19 09 04.0**	**+1.7**	
MNSI	**Mandailing Nat**	**83.29**	**273**	P	**P**	**19 09 02.1**	**-0.7**	
	comp=Z,5µmcomp=Z,7µmcomp=Z,440nm,1.2s							
WUAZ	**Wupatki**	**83.57**	**49**	P	**P**	**19 09 04.9**	**+1.1**	
	baz=240							
WUAZ				S	**S**	**19 18 54.9**	**+5.8**	
	baz=240							
PGC	**Sidney**	**83.59**	**33**	P	**P**	**19 09 04.3**	**+0.9**	
BBB	**Bella Bella**	**83.72**	**28**	IAmb	IAmb	19 09 12.1		
	comp=Z,342nm,0.8s							
RC01	**Rabbit Creek A**	**83.72**	**13**	P	**P**	**19 09 03.5**	**-0.3**	
	baz=206,SNR=51							
KULM	**Kulim**	**83.83**	**278**	IAmb	IAmb	19 09 09.3		
	comp=Z,445nm,0.8s							
KULM	**Kulim**	**83.83**	**278**	P	**P**	**19 09 07.0**	**+1.6**	
HIN	**Hinchinbrook I**	**83.86**	**15**	IAmb	IAmb	19 09 09.4		
	comp=Z,520nm,0.8s							
HPIG		**83.93**	**59**	IAmb	IAmb	19 09 11.4		
	comp=Z,551nm,1.4s							
G08A	**Pilot Rock**	**83.97**	**37**	IAmb	IAmb	19 09 14.1		
	comp=Z,725nm,1.1s							
A04D	**Lummi Island**	**84.02**	**33**	P	**P**	**19 09 06.8**	**+1.3**	
	baz=231,SNR=134							
A04D				S	**S**	**19 18 54.5**	**+2.0**	
	baz=231							
GO09	**Cerro Castillo**	**84.03**	**143**	IAmb	IAmb	19 09 12.2		
	comp=Z,809nm,1.3s							
B05A	**Bryant**	**84.05**	**34**	P	**P**	**19 09 06.8**	**+1.1**	
	baz=231,SNR=151							
B05A				S	**S**	**19 18 53.8**	**+0.9**	
	baz=231							
FID	**Port Fidalgo**	**84.17**	**15**	IAmb	IAmb	19 09 12.1		
	comp=Z,822nm,1.1s							
E07A	**Sunnyside**	**84.22**	**36**	IAmb	IAmb	19 09 14.5		
	comp=Z,424nm,0.8s							
SUCK	**Suckling Hills**	**84.27**	**16**	IAmb	IAmb	19 09 11.7		
	comp=Z,799nm,1.2s							
HAWA	**Hanford**	**84.30**	**36**	IAmb	IAmb	19 09 15.6		
	comp=Z,931nm,1.3s							
KNK	**Knik Glacier**	**84.30**	**14**	IAmb	IAmb	19 09 11.6		
	comp=Z,621nm,0.7s							
HMT	**Hamilton**	**84.37**	**16**	IAmb	IAmb	19 09 12.6		
	comp=Z,402nm,0.7s							
W18A	**Petrified Fore**	**84.54**	**50**	P	**P**	**19 09 09.8**	**+1.0**	
	baz=241							
W18A				S	**S**	**19 19 05.4**	**+6.7**	
	baz=241							
RPSI	**Rantau Prapat**	**84.55**	**275**	IAmb	IAmb	19 09 11.8		
	comp=Z,395nm,0.9s							
PSI	**Prapat**	**84.59**	**275**	PKKPbc	PKKPbc	19 27 17.5	+1.5	
	comp=Z,8.5nm,0.5s,baz=179,slow=1.6,SNR=6.7							
E08A	**Dider Farm, El**	**84.62**	**36**	IAmb	IAmb	19 09 17.1		
	comp=Z,632nm,1.2s							
USHA	**Ushuaia**	**84.62**	**147**	P	**P**	**19 09 10.3**	**+1.7**	
	comp=Z,151nm,0.9s,baz=266,slow=5.0,SNR=12							
SML	**Sawmill**	**84.67**	**14**	IAmb	IAmb	19 09 14.8		
	comp=Z,468nm,0.9s							
MOIG	**Morelia**	**84.71**	**67**	IAmb	IAmb	19 09 14.5		
	comp=Z,319nm,0.9s							
MFID	**Camas Ranch**	**84.75**	**40**	IAmb	IAmb	19 09 18.0		
	comp=Z,456nm,1.2s							
121A	**Cookes Peak, D**	**84.77**	**53**	P	**P**	**19 09 11.5**	**+1.6**	
	baz=243,SNR=104							
121A				S	**S**	**19 19 08.5**	**+7.5**	
	baz=243							
121A	**Cookes Peak, D**	**84.77**	**53**	P	**P**	**19 09 11.1**	**+1.1**	
CUT	**Chulitna**	**84.80**	**12**	P	**P**	**19 09 08.6**	**-0.5**	
	baz=206,SNR=111							
DUG	**Dugway, Tooele**	**84.95**	**44**	P	**P**	**19 09 10.7**	**+0.1**	
DUG				pmax	pmax			
	comp=Z,225nm,1.5s							
DUG	**Dugway, Tooele**	**84.95**	**44**	P	**P**	**19 09 10.7**	**+0.1**	
	baz=239							
DUG				S	**S**	**19 19 04.5**	**+2.2**	
	baz=239							
DUG	**Dugway, Tooele**	**84.95**	**44**	P	**P**	**19 09 10.7**	**+0.1**	
KLU	**Klutina**	**84.95**	**15**	IAmb	IAmb	19 09 14.4		
	comp=Z,2µm,1.9s							
MG01	**Puerto William**	**84.99**	**147**	IAmb	IAmb	19 09 16.4		
	comp=Z,990nm,1.2s							
WRAK	**Wrangell Islan**	**85.02**	**23**	IAmb	IAmb	19 09 18.5		
	comp=Z,1µm,1.6s							
YAH	**Yahtse**	**85.07**	**17**	IAmb	IAmb	19 09 16.4		
	comp=Z,719nm,0.9s							
TGL	**Tana Glacier**	**85.10**	**16**	IAmb	IAmb	19 09 16.1		
	comp=Z,434nm,0.8s							
ISLE	**Juniper Island**	**85.11**	**17**	IAmb	IAmb	19 09 16.0		
	comp=Z,589nm,0.9s							
E09A	**Wood Farm, Sta**	**85.14**	**37**	IAmb	IAmb	19 09 19.4		
	comp=Z,686nm,1.3s							
TSI	**Tuntungan**	**85.16**	**275**	P	**P**	**19 09 12.6**	**+0.6**	
	comp=Z,9µmcomp=Z,11µmcomp=Z,620nm,0.9s							
TABL	**Table Mountain**	**85.30**	**17**	IAmb	IAmb	19 09 17.2		
	comp=Z,540nm,0.7s							
BCPM	**Bancas Point**	**85.33**	**18**	IAmb	IAmb	19 09 18.6		
	comp=Z,596nm,1.2s							
VRDI	**Verde Repeater**	**85.34**	**16**	IAmb	IAmb	19 09 17.2		
	comp=Z,377nm,0.7s							
GSI	**Gunungsitoli**	**85.35**	**273**	P	**P**	**19 09 14.6**	**+1.6**	
	comp=Z,14µmcomp=Z,21µmcomp=Z,1µm,0.8s							
F10A	**Beach Ranch, E**	**85.36**	**38**	IAmb	IAmb	19 09 23.1		
	comp=Z,776nm,1.0s							
N25K	**Chitina, Valde**	**85.37**	**15**	P	**P**	**19 09 12.2**	**+0.2**	
	baz=211							
N25K				S	**S**	**19 19 04.5**	**-0.9**	
	baz=211							
N25K	**Chitina, Valde**	**85.37**	**15**	IAmb	IAmb	19 09 18.6		
	comp=Z,517nm,0.8s							
M24K	**Tolsona, Glenn**	**85.43**	**14**	P	**P**	**19 09 12.9**	**+0.6**	
	baz=210,SNR=86							
M24K				S	**S**	**19 19 07.0**	**+1.1**	
	baz=210							
GLB	**Gilahina Butte**	**85.43**	**16**	IAmb	IAmb	19 09 18.8		
	comp=Z,914nm,1.2s							
TNA	**Tin City**	**85.43**	**4**	P	**P**	**19 09 12.3**	**+0.2**	
	baz=189							
TNA				S	**S**	**19 19 07.7**	**+2.2**	
	baz=189							
BALM	**Baldy**	**85.47**	**16**	IAmb	IAmb	19 09 17.8		
	comp=Z,454nm,0.7s							
BJT	**Baijiatuau**	**85.50**	**315**	P	**P**	**19 09 13.8**	**+0.7**	
BJT				pmax	pmax			
	comp=Z,1µm,1.7s							
BJT	**Baijiatuau**	**85.50**	**315**	P	**P**	**19 09 13.8**	**+0.7**	
BJT				IAmb	IAmb	19 09 19.9		
	comp=Z,1µm,1.7s							
BJI	**Beijing**	**85.51**	**315**	P	**P**	**19 09 14.2**	**+1.1**	
BJI				pP	**pP**	**19 10 51.1**	**+0.2**	
BJI				sP	**sP**	**19 11 37.0**	**+1.3**	
BJI				SKS	**SKSac**	**19 18 55.1**	**-0.9**	
BJI				S	**ScS**	**19 19 13.9**	**-0.9**	
BJI				sS	**sS**	**19 22 05.5**	**+4.8**	
BJI				SS	**SS**	**19 24 56.7**	**+1.1**	
BJI				pmax	pmax			
	comp=Z,47nm,0.9s							
BJI				pmax	pmax			
	comp=Z,10µm,8.4s							
B08A	**Colville Reser**	**85.57**	**35**	IAmb	IAmb	19 09 20.9		
	comp=Z,604nm,1.3s							
PLID	**Pearl Lake**	**85.57**	**39**	IAmb	IAmb	19 09 21.8		
	comp=Z,653nm,1.3s							
MCARA	**McCarthy VSAT**	**85.58**	**16**	IAmb	IAmb	19 09 21.0		
	comp=Z,325nm,0.7s							
BARN	**Barnard Glacie**	**85.67**	**17**	IAmb	IAmb	19 09 19.1		
	comp=Z,562nm,0.9s							
CTGM	**Chitina Glacie**	**85.68**	**17**	IAmb	IAmb	19 09 20.5		
	comp=Z,532nm,0.9s							
JIS	**Juneau Island**	**85.68**	**21**	IAmb	IAmb	19 09 20.6		
	comp=Z,522nm,1.4s							
HLID	**Hailey**	**85.70**	**41**	P	**P**	**19 09 15.4**	**+1.2**	
	baz=238							
HLID				S	**S**	**19 19 14.5**	**+4.9**	
	baz=238							
HLID	**Hailey**	**85.70**	**41**	P	**P**	**19 09 14.8**	**+0.6**	
HLID				IAmb	IAmb	19 09 23.1		
	comp=Z,856nm,1.8s							
KTH	**Kantishna Hill**	**85.71**	**12**	IAmb	IAmb	19 09 17.6		
	comp=Z,643nm,0.9s							
SEY	**Seymchan**	**85.73**	**347**	PKKPbc	PKKPbc	19 27 12.4	-3.5	
	comp=Z,8.8nm,0.7s,baz=199,slow=4.1,SNR=12							
SEY	**Seymchan**	**85.73**	**347**	*d*P	**P**	**19 09 13.2**	**-0.4**	
HVU	**Hansel Valley**	**85.79**	**43**		pP	19 10 52.3	+0.2	
C09A	**Chrisman Ranch**	**85.82**	**36**	IAmb	IAmb	19 09 22.6		
	comp=Z,745nm,1.4s							
Y22D	**IRIS PASSCAL I**	**86.11**	**52**	P	**P**	**19 09 17.8**	**+1.5**	
	baz=243							
Y22D				S	S	19 19 23.5	+10	
	baz=243							
Y22D	**IRIS PASSCAL I**	**86.11**	**52**	IAmb	IAmb	19 09 28.5		
	comp=Z,704nm,1.1s							
BPAW	**Bear Paw Mtn.**	**86.19**	**11**	IAmb	IAmb	19 09 22.0		
	comp=Z,954nm,1.7s							
TLIG	**Tlapa**	**86.20**	**70**	P	**P**	**19 09 17.5**	**+0.4**	
MNTX	**Cornudas Mount**	**86.22**	**55**	P	**P**	**19 09 17.9**	**+1.1**	
	baz=244,SNR=300							
MNTX				S	**S**	**19 19 22.2**	**+7.5**	
	baz=244							
MNTX	**Cornudas Mount**	**86.22**	**55**	IAmb	IAmb	19 09 24.5		
	comp=Z,395nm,1.1s							
H03S2	**Juan Fernandez**	**86.26**	**125**	P	**P**	**19

HYT	**Haines Junctio**	**86.67**	**19**	IAmb	IAmb	19 09 25.6			
	comp=Z,392nm,1.1s								
PV11	**David Mesa, Pa**	**86.67**	**47**	IAmb	IAmb	19 09 24.9			
	comp=Z,645nm,1.7s								
NEW	**Newport**	**86.72**	**36**	PKKPbc	PKKPbc	19 27 10.9	-2.0		
	comp=Z,4.2nm,0.6s,baz=108,slow=12,SNR=6.2								
NEW	**Newport**	**86.72**	**36**	P	**P**	**19 09 19.5**	**+0.7**		
	baz=235,SNR=114								
ANMO	**Albuquerque**	**86.85**	**51**	*ce*P	**P**	**19 09 20.4**	**+0.5**		
ANMO				pmax	pmax				
	comp=Z,701nm,2.7s								
ANMO	**Albuquerque**	**86.85**	**51**	P	**P**	**19 09 20.6**	**+0.7**		
	baz=243								
ANMO				S	**S**	**19 19 27.0**	**+6.1**		
	baz=243								
ANMO	**Albuquerque**	**86.85**	**51**	P	**P**	**19 09 20.2**	**+0.3**		
L26K	**Log Cabin Wild**	**86.89**	**15**	P	**P**	**19 09 19.5**	**+0.3**		
	baz=212								
L26K				S	**S**	**19 19 19.9**	**+0.1**		
	baz=212								
TIY	**Taiyuan**	**86.93**	**312**	*e*P	**P**	**19 09 21.4**	**+1.3**		
TIY				pP	**pP**	**19 10 59.8**	**+1.5**		
TIY				SKS	**SKSac**	**19 19 03.0**	**-2.1**		
TIY				S	**ScS**	**19 19 24.3**	**-2.6**		
TIY				pmax	pmax				
	comp=Z,490nm,1.1s								
TIY				pmax	pmax				
	comp=Z,5μm,3.7s								
NEA2	**Nenana**	**87.00**	**12**	P	**P**	**19 09 18.5**	**-1.1**		
	baz=207,SNR=166								
NEA2				S	**S**	**19 19 17.3**	**-3.4**		
	baz=207								
MLY	**Manley**	**87.08**	**11**	P	**P**	**19 09 19.2**	**-0.9**		
	baz=205,SNR=92								
MLY				S	**S**	**19 19 17.0**	**-4.5**		
	baz=205								
ZEA	**Zeya**	**87.10**	**331**	*de*P	**P**	**19 09 21.2**	**+0.8**		
ZEA				*e**PP	**pP**	**19 11 00.2**	**+1.2**		
ZEA				*e*S	**SKSac**	**19 19 07.2**	**+2.1**		
ZEA				*e*		19 19 27.7			
ZEA				*e*		19 21 30.8			
ZEA				pmax	pmax				
	comp=N,160nm,1.6s								
ZEA				pmax	pmax				
	comp=E,50nm,1.6s								
ZEA				pmax	pmax				
	comp=Z,330nm,1.6s								
ZEA				smax	smax				
	comp=N,16μm,13.8s								
ZEA				smax	smax				
	comp=E,18μm,13.8s								
LHMI	**Lhok Sumawe**	**87.27**	**277**	P	**P**	**19 09 24.8**	**+2.7**		
	comp=E,13μmcomp=E,20μmcomp=E,2μm,0.9s								
HDA	**Harding Lake**	**87.27**	**13**	P	**P**	**19 09 20.6**	**-0.3**		
	baz=209,SNR=443								
HDA				S	**S**	**19 19 21.2**	**-2.0**		
	baz=209								
HDA				S	**S**	**19 19 21.2**	**-2.0**		
	baz=209								
WHY	**Whitehorse**	**87.34**	**20**	IAmb	IAmb	19 09 28.8			
	comp=Z,378nm,1.1s								
DLBC	**Dease Lake**	**87.35**	**23**	IAmb	IAmb	19 09 29.1			
	comp=Z,604nm,1.3s								
AHID	**Auburn Hatcher**	**87.36**	**43**	IAmb	IAmb	19 09 30.7			
	comp=Z,494nm,1.3s								
SYO	**Syowa Base**	**87.44**	**193**	⇓*i*P	**P**	**19 09 20.4**	**-1.4**		
I23K	**Minto, Yukon-K**	**87.44**	**12**	P	**P**	**19 09 20.9**	**-0.8**		
	baz=207,SNR=93								
I23K				S	**S**	**19 19 21.5**	**-3.2**		
	baz=207								
I23K	**Minto, Yukon-K**	**87.44**	**12**	IAmb	IAmb	19 09 25.3			
	comp=Z,1μm,1.9s								
MLSI	**Meulaboh, Aceh**	**87.45**	**275**	P	**P**	**19 09 24.1**	**+1.1**		
	comp=Z,19μmcomp=Z,2μm,1.0s								
PAYG	**Puerto Ayora**	**87.47**	**90**	*e*P	**P**	**19 09 25.0**	**+1.9**		
PAYG	**Puerto Ayora**	**87.47**	**90**	P	**P**	**19 09 24.1**	**+1.0**		
TCOL	**CIGO, UAF Yank**	**87.49**	**12**	P	**P**	**19 09 21.3**	**-0.6**		
	baz=208,SNR=242								
TCOL				S	**S**	**19 19 22.6**	**-2.6**		
	baz=208								
COLA	**College**	**87.50**	**12**	*d*iP	**P**	**19 09 20.8**	**-1.1**		
COLA				pmax	pmax				
	comp=Z,905nm,1.7s								
COLA	**College**	**87.50**	**12**	P	**P**	**19 09 21.2**	**-0.8**		
SCRK	**Sand Creek**	**87.55**	**14**	P	**P**	**19 09 22.7**	**+0.3**		
	baz=212								
SCRK				S	**S**	**19 19 26.7**	**+0.6**		
	baz=212								
IL31		**87.60**	**13**	P	**P**	**19 09 21.7**	**-0.7**		
IL31				IAmb	IAmb	19 09 28.3			
	comp=Z,537nm,1.1s								
ILAR	**Eielson Array**	**87.60**	**13**	P	**P**	**19 09 22.1**	**-0.4**		
	comp=Z,170nm,0.7s,baz=221,slow=5.1,SNR=511								
ILAR				PKiKP	**PKiKP**	**19 14 23.6**	**+0.9**		
	comp=Z,6.0nm,0.8s,baz=241,slow=3.4,SNR=4.6								
ILAR				PKKPbc	**PKKPbc**	**19 27 08.8**	**-2.8**		
	comp=Z,8.3nm,0.6s,baz=338,slow=2.0,SNR=13								
ILAR				PKPPKP	**P'P'df**	**19 35 08.4**	**-6.6**		
	comp=Z,2.8nm,0.8s,baz=347,slow=3.1,SNR=7.1								
LL01	**San Ignacio de**	**87.67**	**134**	P	**P**	**19 09 24.4**	**+1.0**		
LL01				IAmb	IAmb	19 09 28.5			
	comp=Z,592nm,1.6s								
MSO	**Missoula**	**87.73**	**38**	P	**P**	**19 09 24.3**	**+0.7**		
	baz=238,SNR=43								
MSO				S	**S**	**19 19 29.7**	**+1.2**		
	baz=238								
DLMT	**Dillon**	**87.75**	**40**	IAmb	IAmb	19 09 35.5			
	comp=Z,599nm,1.1s								
POKR	**Poker Flat Res**	**87.80**	**12**	P	**P**	**19 09 22.5**	**-0.9**		
	baz=208,SNR=260								
POKR				S	**S**	**19 19 25.2**	**-2.9**		
	baz=208								
POKR	**Poker Flat Res**	**87.80**	**12**	IAmb	IAmb	19 09 27.7			
	comp=Z,496nm,0.8s								
REDW	**Red Top Meadow**	**87.81**	**42**	IAmb	IAmb	19 09 36.3			
	comp=Z,751nm,1.2s								
TPAW	**Teton Pass**	**87.82**	**42**	IAmb	IAmb	19 09 33.1			
	comp=Z,928nm,1.6s								
XAN	**Xi'an**	**87.84**	**307**	P	**P**	**19 09 25.6**	**+1.2**		
XAN				pP	pP	19 11 07.1	+4.1		
XAN				PP	**PP**	**19 13 02.1**	**+4.0**		
XAN				SKS	**SKSac**	**19 19 09.3**	**-1.3**		
XAN				S	**S**	**19 19 30.4**	**+0.5**		
XAN				SS	**SS**	**19 25 32.5**	**+2.7**		
XAN				pmax	pmax				
	comp=Z,670nm,1.1s								
XAN				pmax	pmax				
	comp=Z,11μm,9.2s								
XAN	**Xi'an**	**87.84**	**307**	IAmb	IAmb	19 09 28.1			
	comp=Z,458nm,0.9s								
S22A	**4UR Ranch, Cre**	**87.84**	**49**	P	**P**	**19 09 25.4**	**+0.8**		
	baz=243,SNR=141								
S22A				S	**S**	**19 19 36.9**	**+6.6**		
	baz=243								
S22A	**4UR Ranch, Cre**	**87.84**	**49**	IAmb	IAmb	19 09 33.2			
	comp=Z,1μm,1.9s								
SNOW	**Snow King Moun**	**87.93**	**42**	IAmb	IAmb	19 09 37.0			
	comp=Z,637nm,1.1s								
O20A	**White River Ci**	**87.97**	**46**	P	**P**	**19 09 25.4**	**+0.4**		
	baz=242,SNR=44								
O20A				S	**S**	**19 19 35.5**	**+4.3**		
	baz=242								
IMW	**Indian Meadow**	**88.03**	**42**	IAmb	IAmb	19 09 37.5			
	comp=Z,421nm,1.0s								
IMW					pP	19 11 03.7	+0.2		
K27K	**Chicken**	**88.05**	**15**	P	**P**	**19 09 25.6**	**+1.0**		
	baz=213								
K27K				S	**S**	**19 19 31.8**	**+1.3**		
	baz=213								
MOOW	**Moose Ponds**	**88.08**	**42**	IAmb	IAmb	19 09 34.1			
	comp=Z,1μm,2.0s								
FLWY	**Flagg Ranch**	**88.27**	**42**	IAmb	IAmb	19 09 38.3			
	comp=Z,514nm,0.9s								
BW06	**Boulder Array**	**88.35**	**43**	P	**P**	**19 09 27.1**	**+0.2**		
	baz=241,SNR=46								
BW06				S	**S**	**19 19 37.2**	**+2.5**		
	baz=241								
BW06	**Boulder Array**	**88.35**	**43**	IAmb	IAmb	19 09 34.7			
	comp=Z,933nm,1.8s								
PD31	**Pinedale Array**	**88.35**	**43**	IAmb	IAmb	19 09 34.7			
	comp=Z,850nm,1.8s								
PDAR	**Pinedale Array**	**88.35**	**43**	P	**P**	**19 09 27.2**	**+0.4**		
	comp=Z,92nm,0.8s,baz=209,slow=2.9,SNR=103								
PDAR				PKKPbc	**PKKPbc**	**19 27 08.9**	**0.0**		
	comp=Z,15nm,0.7s,baz=100,slow=4.2,SNR=22								
PDAR				PKPPKP		19 35 10.7			
	comp=Z,2.5nm,0.8s,baz=116,slow=4.3,SNR=8.0								
PDAR	**Pinedale Array**	**88.35**	**43**	P	**P**	**19 09 26.5**	**-0.4**		
BILL	**Bilibino**	**88.36**	**354**	*d*iP	**P**	**19 09 25.8**	**-0.2**		
BILL				*i* *PP	**pP**	**19 11 04.4**	**0.0**		
BILL				*e*PPP	PPP	19 15 05.9			
BILL				pmax	pmax				
	comp=Z,1μm,2.5s								
BILL	**Bilibino**	**88.36**	**354**	P	**P**	**19 09 25.4**	**-0.5**		
BILL				IAmb	IAmb	19 09 30.8			
	comp=Z,341nm,0.7s								
BOZ	**Bozeman (W)**	**88.46**	**40**	P	**P**	**19 09 28.1**	**+0.9**		
	baz=239,SNR=266								
BOZ				S	**S**	**19 19 38.3**	**+2.9**		
	baz=239								
H17A	**Grant Village**	**88.50**	**41**	P	**P**	**19 09 29.5**	**+2.0**		
	baz=240,SNR=160								
H17A	**Grant Village**	**88.50**	**41**	IAmb	IAmb	19 09 37.1			
	comp=Z,369nm,1.1s								
PRP	**Porcupine Dome**	**88.54**	**13**	IAmb	IAmb	19 09 32.3			
	comp=Z,691nm,1.4s								
PAF	**Port-aux-Franc**	**88.59**	**217**	P	**P**	**19 09 28.3**	**+0.7**		
PAF				pmax	pmax				
	comp=Z,1μm,1.4s								
PAF	**Port-aux-Franc**	**88.59**	**217**	P	**P**	**19 09 28.2**	**+0.7**		
LKWY	**Lake**	**88.69**	**41**	IAmb	IAmb	19 09 41.8			
	comp=Z,519nm,1.1s								
SNAA	**Sanae**	**88.70**	**178**	P	**P**	**19 09 28.1**	**+0.3**		
SNAA	**Sanae**	**88.70**	**178**	P	**P**	**19 09 27.9**	**+0.1**		
	comp=Z,207nm,1.0s,baz=190,slow=5.2,SNR=136								
SNAA				PKKPbc	**PKKPbc**	**19 27 09.5**	**+1.2**		
	comp=Z,9.5nm,1.0s,baz=260,slow=5.8,SNR=4.6								
SNAA	**Sanae**	**88.70**	**178**	*ce*P	**P**	**19 09 27.8**	**0.0**		
SNAA				pmax	pmax				
	comp=Z,1μm,2.5s								
SNAA	**Sanae**	**88.70**	**178**	P	**P**	**19 09 27.6**	**-0.2**		
SNAA				IAmb	IAmb	19 09 36.2			
	comp=Z,526nm,1.3s								
SDCO	**Great Sand Dun**	**88.78**	**49**	P	**P**	**19 09 29.4**	**+0.4**		
	baz=244,SNR=161								
SDCO				S	**S**	**19 19 44.6**	**+5.6**		
	baz=244								
VNA3	**Neumayer Olymp**	**88.82**	**176**	P	**P**	**19 09 28.8**	**+0.5**		
EGAK	**Eagle**	**88.89**	**15**	IAmb	IAmb	19 09 33.8			
	comp=Z,613nm,1.0s								
WALA	**Waterton Lakes**	**88.93**	**36**	IAmb	IAmb	19 09 40.1			
	comp=Z,360nm,1.1s								
HHC	**Hu-ho-hao-te**	**88.98**	**314**	⇓*i*P	**P**	**19 09 31.1**	**+1.5**		
HHC				pP	pP	19 11 12.5	+4.0		
HHC				sP	sP	19 11 57.4	+4.1		
HHC				SKS	**SKSac**	**19 19 16.7**	**-0.5**		
HHC				S	**S**	**19 19 39.1**	**-1.2**		
HHC				pmax	pmax				
	comp=Z,270nm,1.1s								
HHC				pmax	pmax				
	comp=Z,5μm,5.1s								
AIS	**Amsterdam Isla**	**89.00**	**230**	IAmb	IAmb	19 09 32.7			
	comp=Z,394nm,1.0s								
COLD	**Coldfoot**	**89.17**	**10**	P	**P**	**19 09 30.2**	**+0.5**		
	baz=206,SNR=201								
COLD				S	**S**	**19 19 41.7**	**+1.0**		
	baz=206								
KMI	**Kunming**	**89.17**	**297**	⇑*e*P	**P**	**19 09 32.9**	**+1.8**		
KMI				pP	pP	19 11 09.6	+0.2		
KMI				sP	sP	19 11 54.6	+0.7		
KMI				PP	**PP**	**19 13 08.2**	**-0.9**		
KMI				SKS	**SKSac**	**19 19 20.3**	**+1.1**		
KMI				S	**S**	**19 19 44.6**	**+1.6**		
KMI				SS	**SS**	**19 25 49.0**	**-0.7**		
KMI				pmax	pmax				
	comp=Z,410nm,1.0s								
KMI				pmax	pmax				
	comp=Z,6μm,9.5s								
KMI	**Kunming**	**89.17**	**297**	IAmb	IAmb	19 09 35.4			
	comp=Z,340nm,0.9s								
MSTX	**Muleshoe**	**89.17**	**53**	P	**P**	**19 09 31.1**	**+0.4**		
	baz=245								
MSTX				S	**S**	**19 19 48.5**	**+6.1**		
	baz=245								
MSTX	**Muleshoe**	**89.17**	**53**	IAmb	IAmb	19 09 37.5			
	comp=Z,486nm,1.0s								
VNA2	**Neumayer--Watz**	**89.27**	**177**	P	**P**	**19 09 31.1**	**+0.7**		
	baz=181,slow=4.4								
T25A	**Trinidad**	**89.30**	**50**	P	**P**	**19 09 31.3**	**0.0**		
	baz=244,SNR=40								
T25A				S	**S**	**19 19 48.7**	**+5.1**		
	baz=244								
RWWY	**Rawlins**	**89.38**	**45**	IAmb	IAmb	19 09 39.6			
	comp=Z,500nm,1.2s								
NVL	**N'lazarevskaya**	**89.42**	**183**	*e*P	**P**	**19 09 27.1**	**-4.0**		
NVL				pmax	pmax				
	comp=Z,1μm,0.8s								
VNA1	**Neumayer--Stat**	**89.49**	**177**	P	**P**	**19 09 32.1**	**+0.7**		
LC01	**Cunco**	**89.51**	**131**	P	**P**	**19 09 32.8**	**+0.6**		
LC01				IAmb	IAmb	19 09 38.4			
	comp=Z,597nm,1.1s								
FYU	**Fort Yukon**	**89.51**	**12**	IAmb	IAmb	19 09 36.8			
	comp=Z,198nm,0.7s								
BI03	**Tigo**	**89.54**	**129**	P	**P**	**19 09 32.9**	**+0.6**		
BI03				IAmb	IAmb	19 09 37.2			
	comp=Z,863nm,1.6s								
Q24A	**Divide**	**89.57**	**48**	P	**P**	**19 09 33.1**	**+0.5**		
	baz=244,SNR=12								
Q24A				S	**S**	**19 19 51.1**	**+4.9**		
	baz=244								
833A	**Chaparral WMA,**	**89.58**	**60**	P	**P**	**19 09 33.3**	**+0.7**		
	baz=247								
833A				S	**S**	**19 19 49.5**	**+3.5**		
	baz=247								
833A	**Chaparral WMA,**	**89.58**	**60**	IAmb	IAmb	19 09 39.9			
	comp=Z,340nm,1.1s								
ISCO	**Idaho Springs**	**89.61**	**47**	P	**P**	**19 09 33.4**	**+0.5**		
	baz=244,SNR=44								
ISCO				S	**S**	**19 19 51.5**	**+4.9**		
	baz=244								
PLCA	**Paso Flores**	**89.64**	**133**	P	**P**	**19 09 34.0**	**+1.2**		
	comp=Z,183nm,1.1s,baz=250,slow=5.4,SNR=59								
PLCA				PKKPbc	**PKKPbc**	**19 27 04.6**	**-0.3**		
	comp=Z,13nm,0.8s,baz=101,slow=1.5,SNR=18								
PLCA	**Paso Flores**	**89.64**	**133**	P	**P**	**19 09 34.1**	**+1.2**		
PLCA				IAmb	IAmb	19 09 38.0			
	comp=Z,1μm,1.7s								
PLCA	**Paso Flores**	**89.64**	**133**	*e*P	**P**	**19 09 34.0**	**+1.2**		
RLMT	**Red Lodge**	**89.67**	**41**	P	**P**	**19 09 34.1**	**+1.2**		
	baz=241,SNR=143								
RLMT				S	**S**	**19 19 51.2**	**+4.5**		
	baz=241								
RLMT	**Red Lodge**	**89.67**	**41**	IAmb	IAmb	19 09 41.6			
	comp=Z,440nm,1.2s								
N23A	**Red Feather La**	**89.87**	**46**	P	**P**	**19 09 34.7**	**+0.7**		
	baz=243,SNR=70								
N23A				S	**S**	**19 19 53.2**	**+4.4**		
	baz=243								
N23A	**Red Feather La**	**89.87**	**46**	IAmb	IAmb	19 09 46.0			
	comp=Z,268nm,1.0s								
BTO	**Baotou**	**89.92**	**314**	*e*P	**P**	**19 09 34.4**	**+0.4**		
CM31	**Chiang Mai Arr**	**90.03**	**290**	P	**P**	**19 09 36.9**	**+2.0**		
	SNR=189								
CM31	**Chiang Mai Arr**	**90.03**	**290**	IAmb	IAmb	19 09 39.3			
	comp=Z,332nm,0.9s								
CMAR	**Chiang Mai Arr**	**90.03**	**290**	P	**P**	**19 09 36.6**	**+1.7**		
	comp=Z,216nm,0.8s,baz=116,slow=2.6,SNR=320								
CMAR				PKiKP	**PKiKP**	**19 14 30.0**	**+1.8**		
	comp=Z,5.5nm,0.6s,baz=191,slow=0.6,SNR=5.7								
CMAR				PKKPbc	**PKKPbc**	**19 27 04.0**	**+0.7**		
	comp=Z,26nm,0.7s,baz=278,slow=3.9,SNR=38								
CMAR				PKPPKP	**P'P'df**	**19 35 13.5**	**+0.7**		
	comp=Z,5.8nm,0.8s,baz=280,slow=3.0,SNR=13								
CMAR	**Chiang Mai Arr**	**90.03**	**290**	*i* P	**P**	**19 09 36.5**	**+1.7**		
CMAR				pmax	pmax				
	comp=Z,232nm,0.8s								
CMAR	**Chiang Mai Arr**	**90.03**	**290**	P	**P**	**19 09 35.2**	**+0.4**		
JCT	**Junction City**	**90.08**	**58**	P	**P**	**19 09 35.0**	**0.0**		
	baz=247								
JCT				S	**S**	**19 19 55.0**	**+4.3**		
	baz=247								
CHTO	**Chiang Mai**	**90.16**	**290**	P	**P**	**19 09 37.0**	**+1.6**		
CHTO	**Chiang Mai**	**90.16**	**290**	P	**P**	**19 09 36.7**	**+1.2**		
CHTO				pmax	pmax				
	comp=Z,365nm,0.8s								
CHTO	**Chiang Mai**	**90.16**	**290**	P	**P**	**19 09 36.7**	**+1.2**		
CHTO				IAmb	IAmb	19 09 39.5			
	comp=Z,365nm,0.8s								
K22A	**Casper**	**90.27**	**44**	P	**P**	**19 09 36.1**	**+0.4**		
	baz=243,SNR=48								
K22A				S	**S**	**19 19 56.2**	**+4.1**		
	baz=243								
AMTX	**Amarillo**	**90.37**	**53**	P	**P**	**19 09 36.4**	**+0.2**		
	baz=246								
AMTX				S	**S**	**19 19 58.2**	**+5.1**		
	baz=246								
AMTX	**Amarillo**	**90.37**	**53**	IAmb	IAmb	19 09 42.8			
	comp=Z,248nm,1.0s								
KVTX	**Kingsville**	**90.51**	**61**	IAmb	IAmb	19 09 45.5			
	comp=Z,612nm,1.2s								
CD2	**Chengdu**	**90.55**	**303**	P	**P**	**19 09 38.4**	**+1.3**		
CD2				pP	pP	19 11 15.7	-0.3		
CD2				sP	sP	19 12 01.6	+1.0		
CD2				SKS	**SKSac**	**19 19 25.9**	**-0.6**		
CD2				S	**ScS**	**19 19 59.7**	**+2.5**		
CD2				SS	**SS**	**19 26 10.4**	**+1.6**		
CD2				pmax	pmax				
	comp=Z,150nm,0.8s								
CD2				pmax	pmax				
	comp=Z,10μm,8.6s								
TOLK	**Toolik Lake Re**	**90.55**	**10**	P	**P**	**19 09 36.3**	**+0.1**		
	baz=206,SNR=173								
TOLK				S	**S**	**19 19 56.2**	**+3.0**		
	baz=206								
TOLK	**Toolik Lake Re**	**90.55**	**10**	IAmb	IAmb	19 09 41.4			
	comp=Z,508nm,1.1s								
EGMT	**Eagleton**	**90.78**	**39**	P	**P**	**19 09 39.2**	**+1.4**		
	baz=241								
EGMT				S	**S**	**19 19 59.3**	**+3.1**		
	baz=241								
EGMT	**Eagleton**	**90.78**	**39**	IAmb	IAmb	19 09 45.9			
	comp=Z,315nm,1.1s								
BI02	**San Fabin de**	**90.89**	**130**	IAmb	IAmb	19 09 43.2			
	comp=Z,613nm,1.6s								
ABTX	**Abilene, Hawle**	**91.04**	**56**	P	**P**	**19 09 39.6**	**+0.3**		
	baz=247								
ABTX				S	**S**	**19 20 04.5**	**+5.4**		
	baz=247								
ABTX	**Abilene, Hawle**	**91.04**	**56**	IAmb	IAmb	19 09 46.1			
	comp=Z,622nm,1.2s								
735A	**Kenedy**	**91.07**	**60**	IAmb	IAmb	19 09 47.3			
	comp=Z,481nm,1.1s								
GO05	**Huala**	**91.11**	**128**	IAmb	IAmb	19 09 44.1			
	comp=Z,817nm,1.6s								
EPYK	**Eagle Plains**	**91.28**	**15**	P	**P**	**19 09 39.7**	**+0.1**		
	baz=218								
EPYK				S	**S**	**19 19 59.0**	**-0.8**		
	baz=218								
EPYK	**Eagle Plains**	**91.28**	**15**	IAmb	IAmb	19 09 44.7			
	comp=Z,455nm,0.9s								
RTAL	**Retalhuleu**	**91.29**	**75**	IAmb	IAmb	19 09 47.4			
	comp=Z,348nm,1.4s								
KSCO	**Kaye Shedlock'**	**91.36**	**49**	P	**P**	**19 09 40.9**	**+0.2**		
	baz=246								
KSCO				S	**S**	**19 20 06.7**	**+4.8**		
	baz=246								
KSCO	**Kaye Shedlock'**	**91.36**	**49**	IAmb	IAmb	19 09 53.4			
	comp=Z,423nm,1.2s								
YAK	**Yakutsk**	**91.53**	**338**	PKKPbc	PKKPbc	19 26 57.5	-4.0		
	comp=Z,4.3nm,0.3s,baz=123,slow=1.8,SNR=4.5								
YAK	**Yakutsk**	**91.53**	**338**	*d*iP	**P**	**19 09 39.8**	**-0.9**		
YAK				*e**PP	**pP**	**19 11 17.6**	**-2.5**		
YAK				*e*		19 13 20.8			
YAK				*e*S	**SKSac**	**19 19 29.6**	**-0.8**		
YAK				*e*		19 19 58.2			
YAK				pmax	pmax				
	comp=Z,563nm,1.2s								
YAK				pmax	pmax				
	comp=N,44nm,1.1s								
YAK				pmax	pmax				
	comp=E,95nm,1.1s								
YAK				pmax	pmax				
	comp=Z,3μm,4.1s								
YAK				pmax	pmax				
	comp=N,1μm,3.7s								
YAK				pmax	pmax				
	comp=E,1μm,3.3s								
YAK				smax	smax				
	comp=N,7μm,4.2s								
YAK				smax	smax				
	comp=E,1μm,1.8s								
YAK	**Yakutsk**	**91.53**	**338**	P	**P**	**19 09 39.9**	**-0.8**		
EFI	**East Falkland**	**91.58**	**147**	*ce*P	**P**	**19 09 42.4**	**+1.0**		
EFI				pmax	pmax				
	comp=Z,991nm,1.2s								
EFI	**East Falkland**	**91.58**	**147**	P	**P**	**19 09 42.2**	**+0.8**		
435B	**Jarrell**	**91.96**	**58**	P	**P**	**19 09 44.1**	**+0.5**		
	baz=248								
435B				S	**S**	**19 20 13.4**	**+6.1**		
	baz=248								
BO02	**Sierra Bellavi**	**92.06**	**128**	IAmb	IAmb	19 09 48.7			
	comp=Z,632nm,1.6s								
A21K	**Barrow**	**92.06**	**7**	P	**P**	**19 09 42.9**	**-0.2**		
	baz=200,SNR=31								
A21K				S	**S**	**19 20 04.5**	**-1.9**		
	baz=200								
VA01	**Torpederas**	**92.17**	**126**	IAmb	IAmb	19 09 49.1			
	comp=Z,686nm,1.7s								
LAO	**LASA Array**	**92.28**	**41**	P	**P**	**19 09 46.2**	**+1.4**		
	baz=243								
LAO				S	**S**	**19 20 15.3**	**+5.7**		
	baz=243								
LAO	**LASA Array**	**92.28**	**41**	IAmb	IAmb	19 09 52.9			
	comp=Z,314nm,0.9s								
MT02	**Curacav**	**92.45**	**127**	IAmb	IAmb	19 09 50.6			
	comp=Z,468nm,1.8s								
LZH	**Lanzhou**	**92.47**	**307**	*e*P	**P**	**19 09 47.4**	**+1.4**		
LZH				pP	pP	19 11 27.2	+2.0		
LZH				sP	sP	19 12 11.7	+1.9		
LZH				PP	**PP**	**19 13 33.5**	**-1.1**		
LZH				SKS	**SKSac**	**19 19 33.5**	**-3.8**		
LZH				S	**S**	**19 20 10.5**	**-1.4**		
LZH				SS	**SS**	**19 26 32.3**	**-4.0**		
LZH				pmax	pmax				
	comp=Z,330nm,1.1s								
LZH				pmax	pmax				
	comp=Z,5μm,6.0s								
WMOK	**Wichita Mounta**	**92.51**	**54**	P	**P**	**19 09 45.8**	**-0.3**		
	baz=248								
WMOK				S	**S**

CROK	**Carrier**	**93.77**	**53**			pP		19 11 30.2	-0.3
OKCFA	**Oklahoma City**	**93.77**	**54**	IAmb		IAmb		19 09 58.3	
	comp=Z,178nm,1.0s								
237A	**Washetta, Mont**	**93.82**	**57**	P		**P**		**19 09 52.5**	**+0.4**
237A				IAmb		IAmb		19 11 42.8	
	comp=Z,291nm,1.2s								
CO03	**El Pedregal**	**93.84**	**125**	IAmb		IAmb		19 09 57.8	
	comp=Z,429nm,1.6s								
OK029	**Liberty Lake**	**93.91**	**53**			**pP**		**19 11 30.9**	**-0.2**
OK029				IAmb		IAmb		19 11 37.3	
	comp=Z,408nm,1.9s								
GO04	**Tololo Observa**	**94.04**	**124**	P		**P**		**19 09 53.5**	**-0.1**
DGMT	**Dagmar**	**94.29**	**40**	P		**P**		**19 09 54.6**	**+0.8**
	baz=245								
DGMT				S		**S**		**19 20 32.6**	**+5.7**
	baz=245								
OK030	**Cody Creek RV**	**94.46**	**54**	IAmb		IAmb		19 11 39.7	
	comp=Z,405nm,1.8s								
LCO	**Las Campanas**	**94.61**	**123**	P		**P**		**19 09 57.0**	**+0.8**
LCO				pmax		pmax			
	comp=Z,87nm,1.0s								
LCO	**Las Campanas**	**94.61**	**123**	P		**P**		**19 09 57.0**	**+0.8**
NATX	**Nacogdoches**	**94.65**	**58**	P		**P**		**19 09 56.5**	**+0.7**
	baz=250								
NATX				S		**S**		**19 20 37.7**	**+7.1**
	baz=250								
NATX	**Nacogdoches**	**94.65**	**58**	IAmb		IAmb		19 10 03.1	
	comp=Z,383nm,1.6s								
ULN	**Ulaanbaatar**	**94.94**	**319**	*de*P		**P**		**19 09 57.0**	**0.0**
ULN				pmax		pmax			
	comp=Z,168nm,1.7s								
ULN	**Ulaanbaatar**	**94.94**	**319**	P		**P**		**19 09 56.9**	**-0.1**
CRIN	**San Cristobal**	**94.94**	**78**	IAmb		IAmb		19 10 06.1	
	comp=Z,111nm,0.6s								
AC05	**El Transito**	**95.03**	**123**	P		**P**		**19 09 58.1**	**+0.2**
X37A	**Clayton**	**95.07**	**55**	IAmb		IAmb		19 11 42.9	
	comp=Z,232nm,1.6s								
TGUH	**Tegucigalpa,Un**	**95.18**	**77**	*e*P		**P**		**19 09 58.5**	**-0.3**
TUL1	**Leonard**	**95.21**	**54**	P		**P**		**19 09 58.3**	**0.0**
	baz=249								
TUL1				S		**S**		**19 20 40.9**	**+5.6**
	baz=249								
SONM	**Songino Array**	**95.33**	**319**	P		**P**		**19 09 59.2**	**+0.5**
	comp=Z,11nm,0.6s,baz=118,slow=2.5,SNR=60								
SONM				PP		PP		19 13 47.5	-8.9
	comp=Z,22nm,1.0s,baz=125,slow=6.6,SNR=4.3								
SONM				PKiKP		**PKiKP**		**19 14 37.6**	**+1.0**
	comp=Z,7.0nm,0.8s,baz=142,slow=1.1,SNR=0.7								
SONM				PKKPbc		**PKKPdf**		**19 26 49.2**	**-1.8**
	comp=Z,14nm,0.9s,baz=289,slow=2.8,SNR=13								
SONM				PKPPKP				19 35 00.2	
	comp=Z,6.9nm,0.9s,baz=260,slow=1.8,SNR=11								
SONM	**Songino Array**	**95.33**	**319**	P		**P**		**19 09 58.3**	**-0.4**
BGNE	**Belgrade**	**95.45**	**48**	P		**P**		**19 10 00.1**	**+0.8**
	baz=248								
BGNE				S		**S**		**19 20 42.8**	**+5.6**
	baz=248								
BOD	**Bodaibo**	**95.57**	**330**	*e*P		**P**		**19 09 57.8**	**-1.5**
BOD				*e*S		**SKSac**		**19 19 50.2**	**-2.2**
BOD				pmax		pmax			
	comp=Z,128nm,2.4s								
GO03	**Copiap**	**95.59**	**122**	P		**P**		**19 10 01.0**	**+0.6**
E28A	**Huff**	**95.69**	**43**			**pP**		**19 11 39.8**	**+0.7**
E28A				IAmb		IAmb		19 11 54.7	
	comp=Z,443nm,1.6s								
N33A	**J Bar K, Exete**	**95.70**	**49**	IAmb		IAmb		19 10 12.1	
	comp=Z,245nm,1.1s								
KSU1	**Kansas State U**	**95.72**	**51**	P		**P**		**19 10 01.2**	**+0.6**
	baz=249								
KSU1				S		**S**		**19 20 44.1**	**+4.5**
	baz=249								
KSU1	**Kansas State U**	**95.72**	**51**	IAmb		IAmb		19 10 07.7	
	comp=Z,288nm,0.9s								
LKP	**Lekhapani**	**95.74**	**297**	*e*P		**P**		**19 10 01.5**	**+0.7**
LKP				IAmb		IAmb		19 10 16.8	
	comp=N,80nm,0.8s								
LKP				*i* S		**SKSac**		**19 19 49.4**	**-5.3**
LKP				*i* x		x		19 19 54.5	
YKA	**Yellowknife Ar**	**95.82**	**25**	P		**P**		**19 10 00.7**	**+0.4**
	comp=N,30nm,0.8s,baz=244,slow=4.1,SNR=37								
YKA				PP		**PP**		**19 13 56.2**	**-3.3**
	comp=N,33nm,1.1s,baz=236,slow=7.3,SNR=6.3								
YKA				PKiKP		**PKiKP**		**19 14 38.1**	**+1.4**
	comp=N,5.6nm,0.8s,baz=249,slow=0.7,SNR=6.8								
YKA				PKKPbc		**PKKPbc**		**19 26 47.8**	**-2.4**
	comp=N,6.7nm,0.5s,baz=65,slow=3.3,SNR=20								
YKA				PKPPKP		**P'P'df**		**19 35 03.5**	**+3.7**
	comp=N,3.7nm,0.8s,baz=52,slow=2.8,SNR=6.5								
SUSD	**Miller**	**96.02**	**45**	P		**P**		**19 10 01.5**	**-0.2**
	baz=248								
SUSD				S		**S**		**19 20 46.0**	**+4.1**
	baz=248								
SUSD	**Miller**	**96.02**	**45**	IAmb		IAmb		19 11 52.3	
	comp=Z,144nm,1.1s								
NNA	**Nana**	**96.09**	**105**	P		**P**		**19 10 05.1**	**+2.3**
	comp=Z,9.0nm,0.5s,baz=226,slow=6.6,SNR=5.5								
NNA				PP		**PP**		**19 14 00.1**	**-2.4**
	comp=Z,77nm,1.2s,baz=253,slow=5.4,SNR=5.9								
NNA	**Nana**	**96.09**	**105**	*c* iP		**P**		**19 10 01.6**	**-1.3**
NNA				pmax		pmax			
	comp=Z,123nm,1.9s								
NNA	**Nana**	**96.09**	**105**	IAmb		IAmb		19 10 05.9	
	comp=Z,175nm,1.9s								
JTS	**Las Juntas de**	**96.11**	**81**	P		**P**		**19 10 04.8**	**+1.9**
	comp=Z,81nm,0.9s								
JTS	**Las Juntas de**	**96.11**	**81**	*e*P		**P**		**19 10 03.4**	**+0.6**
JTS	**Las Juntas de**	**96.11**	**81**	*c* iP		**P**		**19 10 02.9**	**+0.1**
JTS				pmax		pmax			
	comp=Z,84nm,0.9s								
JTS	**Las Juntas de**	**96.11**	**81**	P		**P**		**19 10 02.9**	**+0.1**
TEIG	**Tepich**	**96.25**	**71**	*e*P		**P**		**19 10 02.9**	**-0.4**
ATAH	**Atahualpa**	**96.41**	**100**	P		**P**		**19 10 06.7**	**+1.9**
	comp=Z,12nm,0.6s,baz=284,slow=3.5,SNR=10								
ATAH				PP		**PP**		**19 14 04.8**	**-0.7**
	comp=Z,54nm,1.3s,baz=259,slow=9.0,SNR=5.3								
ATAH				PKKPbc		**PKKPdf**		**19 26 48.5**	**+0.8**
	comp=Z,9.4nm,0.8s,baz=265,slow=5.0,SNR=3.8								
MIAR	**Mount Ida**	**96.45**	**56**	P		**P**		**19 10 03.8**	**-0.1**
MIAR				pmax		pmax			
	comp=Z,182nm,1.6s								
MIAR	**Mount Ida**	**96.45**	**56**	P		**P**		**19 10 04.6**	**+0.7**
	baz=250								
MIAR				S		**S**		**19 20 52.0**	**+6.0**
	baz=250								
MIAR	**Mount Ida**	**96.45**	**56**	P		**P**		**19 10 03.8**	**-0.1**
U38A	**Gravette**	**96.46**	**54**	IAmb		IAmb		19 11 49.0	
	comp=Z,189nm,1.5s								
W39A	**Magazine**	**96.50**	**55**	P		**P**		**19 10 05.6**	**+1.5**
	baz=250								
W39A				S		**S**		**19 20 53.4**	**+7.0**
	baz=250								
W39A	**Magazine**	**96.50**	**55**	IAmb		IAmb		19 11 50.6	
	comp=Z,513nm,1.9s								
WLAR	**White Oak Lake**	**96.53**	**57**	IAmb		IAmb		19 11 58.1	
	comp=Z,284nm,1.5s								
MOKO	**MOKOCHONG**	**96.54**	**295**	*e*P		**P**		**19 10 04.5**	**-0.2**
MOKO				IAmb		IAmb		19 10 15.9	
	comp=E,59nm,0.8s								
MOKO				*i* S		**SKSac**		**19 19 56.8**	**-2.5**
Z41A	**Richland Creek**	**96.63**	**57**	P		**P**		**19 10 05.4**	**+0.7**
	baz=251								
Z41A				S		**S**		**19 20 54.5**	**+7.0**
	baz=251								
SAIH	**SAIHA**	**96.64**	**291**	*e*P		**P**		**19 10 04.7**	**-0.5**
SAIH				IVmB_BB				19 10 10.5	
	comp=Z,784nm,0.6s								
SAIH				*i* x		x		19 14 06.1	
GTA	**Gaotai**	**96.65**	**309**	P		**P**		**19 10 05.5**	**+0.6**
GTA				pP		pP		19 11 45.3	+1.0
GTA				sP		sP		19 12 25.0	-3.7
GTA				SKS		**SKSac**		**19 19 56.3**	**-2.9**
GTA				S		**ScS**		**19 20 51.2**	**+3.3**
GTA				SS		**SS**		**19 27 31.6**	**-3.5**
GTA				pmax		pmax			
	comp=Z,850nm,9.3s								
KOHI	**KOHIMA**	**96.69**	**295**	*e*P		**P**		**19 10 05.2**	**-0.2**
KOHI				AMP				19 10 14.5	
	comp=Z,2μm,2.0s								
KOHI				IAmb		IAmb		19 10 15.1	
	comp=E,104nm,1.4s								
KOHI				*i* S		**SKSac**		**19 19 56.3**	**-3.8**
PB14	**IPOC Station P**	**96.73**	**119**	P		**P**		**19 10 06.5**	**+0.6**
C36M	**Paulatuk**	**96.74**	**17**	P		**P**		**19 10 05.1**	**+0.7**
	baz=230								
C36M				S		**S**		**19 20 45.4**	**-1.5**
	baz=230								
C36M	**Paulatuk**	**96.74**	**17**	P		**P**		**19 10 04.2**	**-0.2**
C36M						**pP**		**19 11 41.2**	**-2.0**
C36M				IAmb		IAmb		19 11 51.9	
	comp=Z,414nm,1.5s								
HHAR	**Hobbs**	**96.75**	**54**	IAmb		IAmb		19 11 51.1	
	comp=Z,288nm,2.0s								
AC02	**Maricunga**	**96.81**	**122**	P		**P**		**19 10 06.5**	**0.0**
MDND	**Maddock**	**96.87**	**42**	P		**P**		**19 10 06.4**	**+0.9**
	baz=248								
MDND				S		**S**		**19 20 50.5**	**+1.5**
	baz=248								
MDND	**Maddock**	**96.87**	**42**	IAmb		IAmb		19 11 55.3	
	comp=Z,316nm,1.2s								
JORH	**JORHAT**	**96.90**	**296**	*e*P		**P**		**19 10 07.6**	**+1.5**
JORH				*i* x		x		19 19 56.4	
X40A	**Basin Creek Fa**	**97.01**	**56**	P		**P**		**19 10 04.1**	**-2.3**
	baz=251								
X40A				S		**S**		**19 20 57.1**	**+6.4**
	baz=251								
GO02	**Mina Guanaco**	**97.16**	**120**	P		Pdif		19 10 08.3	+0.5
MAPC	**Malpelo**	**97.19**	**88**	*e*P		**P**		**19 10 07.6**	**-0.2**
ECSD	**EROS Data Cent**	**97.34**	**46**	P		Pdif		19 10 08.1	+0.4
	baz=250								
ECSD				S		**S**		**19 20 54.8**	**+1.7**
	baz=250								
ECSD	**EROS Data Cent**	**97.34**	**46**	P		**P**		**19 10 06.7**	**-1.1**
ZIRO	**ZIRO**	**97.48**	**296**	*e*P		**P**		**19 10 08.8**	**-0.1**
UALR	**University of**	**97.48**	**56**			**pP**		**19 11 48.6**	**+1.1**
UALR				IAmb		IAmb		19 11 54.5	
	comp=Z,183nm,1.6s								
SILR	**SILCHAR**	**97.52**	**294**	*e*P		Pdif		19 10 10.4	+1.5
U40A	**Yellville**	**97.60**	**54**	P		**P**		**19 10 08.4**	**-0.6**
	baz=251								
U40A				S		**S**		**19 21 00.7**	**+5.1**
	baz=251								
U40A	**Yellville**	**97.60**	**54**	IAmb		IAmb		19 11 54.9	
	comp=Z,183nm,1.5s								
W41B	**Gary Mavity, V**	**97.69**	**56**	P		**P**		**19 10 07.9**	**-1.6**
	baz=251								
W41B				S		**S**		**19 21 04.3**	**+7.9**
	baz=251								
W41B	**Gary Mavity, V**	**97.69**	**56**	IAmb		IAmb		19 11 56.2	
	comp=Z,456nm,1.9s								
WHAR	**Wooly Hollow**	**97.69**	**55**	P		**P**		**19 10 09.4**	**0.0**
WHAR						**pwP**		**19 11 50.8**	**-0.7**
344A	**Westbrook Farm**	**97.71**	**59**	IAmb		IAmb		19 10 16.5	
	comp=Z,392nm,1.9s								
FCAR	**Ozark Folk Cen**	**98.01**	**55**			**pP**		**19 11 52.0**	**+2.1**
FCAR				IAmb		IAmb		19 11 57.0	
	comp=Z,332nm,1.8s								
TEZP	**TEZPUR**	**98.09**	**295**	*e*P		**P**		**19 10 11.0**	**-0.4**
TEZP				IAmb		IAmb		19 10 16.2	
	comp=Z,62nm,0.9s								
TEZP				*i* S		**SKSac**		**19 20 02.9**	**-3.9**
FFC	**Flin Flon**	**98.10**	**35**	P		Pdif		19 10 11.5	+0.7
FFC				pmax		pmax			
	comp=Z,113nm,1.9s								
FFC	**Flin Flon**	**98.10**	**35**	P		Pdif		19 10 11.5	+0.7
TIXI	**Tiksi**	**98.12**	**345**	*de*P		**P**		**19 10 10.3**	**-0.2**
TIXI				pmax		pmax			
	comp=Z,318nm,0.8s								
TIXI	**Tiksi**	**98.12**	**345**	P		**P**		**19 10 09.7**	**-0.7**
VBMS	**Vicksburg**	**98.12**	**59**	P		**P**		**19 10 10.9**	**-0.5**
	baz=252								
P38A	**Dawn**	**98.15**	**51**	IAmb		IAmb		19 11 58.2	
	comp=Z,292nm,1.7s								
ZAK	**Zakamensk**	**98.19**	**321**	*e*P		Pdif		19 10 12.1	+0.6
ZAK				pmax		pmax			
	comp=Z,36nm,1.7s								
BELO	**BELONIA**	**98.22**	**292**	*e*P		**P**		**19 10 14.6**	**+2.5**
F33A	**5 Mile Ranch,**	**98.28**	**44**	P		**P**		**19 10 12.1**	**+0.3**
F33A				IAmb		IAmb		19 11 57.3	
	comp=Z,277nm,1.6s								
IRK	**Irkutsk**	**98.29**	**323**	*e*P		**P**		**19 10 12.5**	**+0.8**
IRK				*e*				19 14 22.2	
IRK				*e*S		**SKSac**		**19 20 07.5**	**+0.9**
IRK				pmax		pmax			
	comp=Z,94nm,2.6s								
TLY	**Talaya**	**98.45**	**322**	PKKPbc		PKKPbc		19 26 43.3	+0.7
	comp=Z,8.0nm,0.7s,baz=282,slow=5.3,SNR=5.6								
TLY	**Talaya**	**98.45**	**322**	*d* iP		Pdif		19 10 12.0	-0.5
TLY				*e*				19 20 07.1	
TLY				pmax		pmax			
	comp=Z,81nm,1.0s								
X43A	**Marvell**	**98.55**	**56**	P		**P**		**19 10 13.8**	**+0.5**
	baz=252								
SHL	**Shillong**	**98.55**	**294**	*e*P		**P**		**19 10 14.9**	**+1.2**
SHL				IAmb		IAmb		19 10 17.6	
	comp=Z,42nm,0.8s								
SHL				IAmb		IAmb		19 10 17.6	
	comp=Z,43nm,0.8s								
SHL	**Shillong**	**98.55**	**294**	P		**P**		**19 10 14.5**	**+0.7**
	SNR=33								
AGT	**Agartala**	**98.59**	**292**	*e*P		**P**		**19 10 14.4**	**+0.7**
AGT				IAmb		IAmb		19 20 22.6	
	comp=E,334nm,1.4s								
PAC1	**Pacto, Paraso**	**98.60**	**93**	*e*P		Pdif		19 10 14.1	-0.1
N38A	**Joes South For**	**98.74**	**50**			Pdif		19 10 13.6	-0.3
N38A						pP		19 11 54.2	+1.2
LCAR	**Lake Charles**	**98.81**	**55**			Pdif		19 10 13.8	-0.6
LCAR						pP		19 11 54.5	+0.9
LCAR				IAmb		IAmb		19 12 00.5	
	comp=Z,141nm,1.7s								
LVC	**Limon Verde**	**98.83**	**118**	P		**P**		**19 10 17.2**	**+1.9**
	comp=Z,5.7nm,0.5s,baz=190,slow=6.4,SNR=8.2								
LVC				PP		**PP**		**19 14 21.6**	**-1.7**
	comp=Z,12nm,0.9s,baz=242,slow=6.2,SNR=5.5								
LVC	**Limon Verde**	**98.83**	**118**	P		**P**		**19 10 17.3**	**+1.9**
LVC				pmax		pmax			
	comp=Z,255nm,2.0s								
LVC	**Limon Verde**	**98.83**	**118**			**P**		**19 10 17.3**	**+1.9**
LVC				IAmb		IAmb		19 10 26.0	
	comp=Z,255nm,1.9s								
GUWA	**GUWAHATI**	**98.91**	**295**	*e*P		**P**		**19 10 16.1**	**+1.0**
GUWA				AMP				19 11 56.5	
	comp=Z,2μm,6.4s								
CUSE	**Cuicocha Este**	**98.98**	**93**	*e*P		**P**		**19 10 16.5**	**+0.2**
SCIA	**State Center**	**99.10**	**49**	P		**Pdif**		**19 10 14.9**	**-0.7**
	baz=252								
SCIA	**State Center**	**99.10**	**49**			pP		19 11 55.6	+0.9
CCM	**Cathedral Cave**	**99.35**	**53**	P		**Pdif**		**19 10 13.8**	**-3.0**
	baz=252								
AGMN	**Agassiz Nation**	**99.37**	**42**	P		**Pdif**		**19 10 16.6**	**0.0**
	baz=251								
AGMN	**Agassiz Nation**	**99.37**	**42**			pP		19 11 56.5	+0.7
PBMO	**Poplar Bluff**	**99.58**	**54**			pP		19 11 58.8	+1.8
OXF	**Oxford**	**99.70**	**57**	P		**Pdif**		**19 10 17.0**	**-1.4**
	baz=253								
FVM	**French Village**	**99.95**	**53**	P		**Pdif**		**19 10 18.6**	**-0.9**
FVM				pmax		pmax			
	comp=Z,307nm,2.0s								
FVM	**French Village**	**99.95**	**53**			**Pdif**		**19 10 18.6**	**-0.9**
FVM				IAmb		IAmb		19 12 05.6	
	comp=Z,307nm,2.0s								
MOY	**Mondy**	**99.99**	**321**	*e*P		**Pdif**		**19 10 20.8**	**+1.3**
MOY				pmax		pmax			
	comp=Z,110nm,2.8s								
ULM	**Lac du Bonnet**	**100.00**	**40**	P		**Pdif**		**19 10 21.6**	**+2.2**
	comp=Z,14nm,0.8s,baz=267,slow=3.3,SNR=7.3								
ULM				PP		**PP**		**19 14 25.8**	**-5.7**
	comp=Z,20nm,0.9s,baz=203,slow=12,SNR=4.1								
ULM				PKKPbc		**PKKPbc**		**19 26 36.9**	**-1.2**
	comp=Z,12nm,0.8s,baz=63,slow=2.8,SNR=5.6								
ULM	**Lac du Bonnet**	**100.00**	**40**	*d* iP		**Pdif**		**19 10 18.8**	**-0.6**
ULM	**Lac du Bonnet**	**100.00**	**40**	IAmb		IAmb		19 12 06.4	
	comp=Z,127nm,1.6s								
GCUF	**Volcan Galeras**	**100.28**	**92**	*e*P		**Pdif**		**19 10 21.3**	**-0.9**
LSA	**Lhasa**	**100.40**	**298**	P		**Pdif**		**19 10 23.3**	**+1.0**
LSA				SS		SS		19 28 27.5	-0.7
LSA				pmax		pmax			
	comp=Z,31nm,1.3s								
SPMN	**Marine on St.**	**100.41**	**46**	P		**Pdif**		**19 10 21.1**	**-0.2**
	baz=252								
SPMN	**Marine on St.**	**100.41**	**46**			**Pdif**		**19 10 21.0**	**-0.3**
BRAL	**Brewton**	**100.63**	**61**	P		**Pdif**		**19 10 23.9**	**+1.3**
	baz=253								
BBAC	**Balboa, Cauca**	**100.64**	**92**	*e*P		**Pdif**		**19 10 23.6**	**+0.2**
UPA	**Univ. de Panam**	**100.75**	**84**	*e*P		**Pdif**		**19 10 20.4**	**-3.1**
PUAC	**Puerto Asis, P**	**100.78**	**93**	*e*P		**Pdif**		**19 10 24.1**	**+0.3**
LPA	**La Plata**	**101.18**	**133**	*c* iPDIFF		**Pdif**		**19 10 21.3**	**-3.8**
LPA				PPP		PPP		19 16 53.8	
LPA				SKS		**SKSac**		**19 20 12.0**	**-10**
LPA				SDIFF		**Sdif**		**19 21 17.6**	**-8.2**
LPA				PS		**PS**		**19 23 59.1**	**+3.9**
LPA				SSS		SSS		19 32 29.1	
LPA				PPP		PPP		19 34 37.7	
POPC	**Popayan, Colom**	**101.35**	**91**	*e*P		**Pdif**		**19 10 25.2**	**-1.3**
JFWS	**Jewell Farm**	**101.50**	**49**	P		**Pdif**		**19 10 27.7**	**+1.4**
	baz=254								
PCON	**Cinco Dias**	**101.55**	**92**	*e*P		**Pdif**		**19 10 28.2**	**+0.4**
UPD2	**Meteti**	**102.04**	**85**	*e*P		**Pdif**		**19 10 29.6**	**+0.3**
MARP	**Paez Belalcaza**	**102.13**	**91**	*e*P		**Pdif**		**19 10 29.3**	**-0.8**
YOTC	**Yotoco, Valle**	**102.14**	**90**	*e*P		**Pdif**		**19 10 29.7**	**-0.2**
LPAZ	**La Paz**	**102.18**	**112**	Pdiff		**Pdif**		**19 10 34.6**	**+3.9**
	comp=Z,16nm,0.9s,baz=220,slow=2.8,SNR=14								
LPAZ				PP		**PP**		**19 14 42.3**	**-6.5**
	comp=Z,13nm,1.0s,baz=324,slow=3.1,SNR=3.7								
LPAZ				PKKPbc		**PKKPbc**		**19 26 32.0**	**+0.5**
	comp=Z,4.4nm,0.5s,baz=32,slow=4.2,SNR=6.4								
PTLC	**Puerto Leguiza**	**102.32**	**94**	*e*P		**Pdif**		**19 10 30.3**	**-0.3**
GARC	**Garzon, Huila**	**102.35**	**92**	*e*P		**Pdif**		**19 10 31.0**	**0.0**
BETC	**Betania**	**102.56**	**92**	*e*P		**Pdif**		**19 10 32.6**	**+0.9**
TAPN	**Taplejung**	**102.65**	**295**	*e*P		**Pdif**		**19 10 35.6**	**+3.5**
CAPC	**Capurgana**	**102.69**	**85**	*e*P		**Pdif**		**19 10 31.8**	**-0.4**
CBOC	**Ciudad Bolivar**	**103.07**	**88**	*e*P		**Pdif**		**19 10 32.1**	**-2.0**
ORTC	**Ortega, Tolima**	**103.15**	**91**	*e*P		**Pdif**		**19 10 33.1**	**-1.2**
ANIL	**Santa Ana**	**103.19**	**90**	*e*P		**Pdif**		**19 10 34.2**	**-0.6**
DBBC	**Dabeiba**	**103.25**	**87**	*e*P		**Pdif**		**19 10 42.0**	**+7.2**
PRAC	**Prado**	**103.43**	**91**	*e*P		**Pdif**		**19 10 35.0**	**-0.5**
CHLP	**Challavanipeta**	**103.43**	**285**	*e*Pdif		**Pdif**		**19 10 35.0**	**-0.4**
CHLP				*ep*Pdif		**pPdif**		**19 12 15.1**	**+0.7**
CHLP				*es*Pdif		**sPdif**		**19 13 00.6**	**+2.0**
CHLP				*e*PKiKP		**PKiKP**		**19 14 50.5**	**-1.3**
CHLP				*e*PP		**PP**		**19 14 55.5**	**-2.2**
CHLP				*ep*PKiKP		pPKiKP		19 16 24.9	-12
CHLP				*es*PKiKP		sPKiKP		19 17 10.9	-9.1
CHLP				*e*SKSac		**SKSac**		**19 20 33.0**	**+0.3**
CHLP				*e*SKKSac		**SKKSac**		**19 21 13.8**	**-2.8**
CHLP				*e*Sdif		Sdif		19 21 43.0	-2.0
CHLP				*e*SP		SP		19 23 26.6	+1.8
CHLP				*e*SS		SS		19 28 55.1	-14
GUY2C	**Guyana, Caldas**	**103.47**	**89**	*e*P		**Pdif**		**19 10 35.6**	**-0.6**
LCBC	**Los crdobas,**	**103.68**	**85**	*e*P		**Pdif**		**19 10 35.6**	**-0.9**
MACC	**Macarena, Meta**	**103.88**	**93**	*e*P		**Pdif**		**19 10 36.3**	**-1.2**
UREC	**San Jos de Ur**	**104.12**	**87**	*e*P		**Pdif**		**19 10 38.4**	**-0.1**
MOTC	**Monteria, Cord**	**104.31**	**86**	*e*P		**Pdif**		**19 10 38.3**	**-1.1**
GUN	**Gumba**	**104.36**	**295**	*e*P		**Pdif**		**19 10 41.6**	**+1.8**
PKI	**Pulchoki**	**104.68**	**294**	*e*P		**Pdif**		**19 10 42.9**	**+1.7**
	comp=Z,30nm,0.6s								
PKIN	**Phulchoki**	**104.69**	**294**	*e*P		**Pdif**		**19 10 42.8**	**+1.7**
	comp=Z,23nm,0.5s								
PTBC	**PUERTO BERRIO**	**104.75**	**88**	*e*P		**Pdif**		**19 10 39.9**	**-1.4**
CHIC	**Chingaza**	**104.81**	**90**	*e*P		**Pdif**		**19 10 40.6**	**-1.5**
SPBC	**San Pablo de B**	**104.82**	**89**	*e*P		**Pdif**		**19 10 41.3**	**-0.5**
KKN	**Kakani**	**104.84**	**295**	*e*P		**Pdif**		**19 10 43.6**	**+1.9**
	comp=Z,50nm,0.9s								
DMN	**Daman**	**104.95**	**294**	*e*P		**Pdif**		**19 10 44.3**	**+2.0**
	comp=Z,52nm,0.7s								
PVM	**Polavaram**	**105.30**	**283**	*e*Pdif		**Pdif**		**19 10 44.0**	**+0.3**
PVM				*ep*Pdif		**pPdif**		**19 12 23.0**	**+0.3**
PVM				*es*Pdif		**sPdif**		**19 13 08.9**	**+2.0**
PVM				*e*PKiKP		**PKiKP**		**19 14 55.0**	**-0.2**
PVM				*e*PP		**PP**		**19 15 12.0**	**+0.6**
PVM				*e*SKSac		**SKSac**		**19 20 41.9**	**+0.8**
PVM				*e*SKKSac		**SKKSac**		**19 21 28.0**	**-1.8**
PVM				*e*Sdif		**Sdif**		**19 22 02.8**	**+2.2**
PVM				*e*SS		**SS**		**19 29 33.0**	**-1.4**
X54A	**Belton**	**105.31**	**58**	P		**PKiKP**		**19 14 54.7**	**-0.1**
	baz=256								
GKN	**Gorkha**	**105.45**	**295**	*e*P		**Pdif**		**19 10 45.4**	**+1.0**
	comp=Z,41nm,0.7s								
BRRC	**Barranca, Sant**	**105.63**	**88**	*e*P		**Pdif**		**19 10 44.6**	**-0.6**

NJS eSKSac **SKSac** 19 20 49.6 -0.1
NJS eSKKSac **SKKSac** 19 21 41.6 -1.8
NJS eSdif **Sdif** 19 22 19.3 +2.5
NJS eSS **SS** 19 30 01.0 +0.4
U56A King 107.30 57 P **PKiKP** 19 14 59.4 +0.9
baz=258
W57A Gilead 107.35 58 P **PKiKP** 19 14 59.5 +0.9
baz=258
BLA Blacksburg 107.44 56 P **PKiKP** 19 14 59.2 +0.4
baz=258
O53A New Philadelph 107.45 53 P **PKiKP** 19 14 59.2 +0.6
baz=259
Q54A Coxs Mills 107.48 54 P **PKiKP** 19 14 59.4 +0.7
baz=258
V57A Coltrane Farms 107.68 58 P **PKiKP** 19 14 59.7 +0.5
baz=258
T56A Rocky Mt 107.71 56 P **PKiKP** 19 15 00.2 +1.0
baz=258
CUPL Choutuppal 107.80 282 ePdif **Pdif** 19 10 55.1 +0.3
CUPL epPdif **pPdif** 19 12 34.4 +0.5
CUPL esPdif **sPdif** 19 13 19.7 +1.6
CUPL ePKiKP **PKiKP** 19 15 00.1 +0.2
CUPL ePP **PP** 19 15 29.6 0.0
CUPL eSKSac **SKSac** 19 20 51.5 -0.5
CUPL eSKKSac **SKKSac** 19 21 43.7 -3.5
CUPL eSdif **Sdif** 19 22 23.8 +2.3
CUPL eSP SP 19 24 09.0 -0.7
CUPL eSS **SS** 19 30 07.3 -0.9
RPR Rampur 107.87 284 ePdif **Pdif** 19 10 55.2 +0.1
RPR epPdif **pPdif** 19 12 33.6 -0.5
RPR esPdif **sPdif** 19 13 21.3 +2.9
RPR ePKiKP **PKiKP** 19 15 00.7 +0.7
RPR ePP **PP** 19 15 28.5 -1.6
RPR eSKSac **SKSac** 19 20 50.2 -2.1
RPR eSKKSac **SKKSac** 19 21 43.2 -4.5
RPR eSdif **Sdif** 19 22 23.8 +1.7
RPR eSS **SS** 19 30 09.3 +0.3
P54A Burton 107.87 54 P **PKiKP** 19 15 00.2 +0.8
baz=259
R55A Marlinton 107.89 55 P **PKiKP** 19 15 00.8 +1.2
baz=259
W58A Raeford 107.94 59 P **PKiKP** 19 15 00.0 +0.4
baz=258
O54A Avella 108.06 53 P **PKiKP** 19 15 00.6 +0.8
baz=259
HYB Hyderabad 108.17 282 *i* Pdif **Pdif** 19 11 04.0 +7.5
HYB epP **pPdif** 19 12 34.0 -1.5
HYB *e* 19 13 20.0
HYB ePP **PP** 19 15 33.0 +0.7
HYB ePPP PPP 19 17 54.0
HYB eSKS **SKSac** 19 20 53.0 -0.7
HYB eSKKS **SKKSac** 19 21 48.0 -1.9
HYB *e* 19 24 04.0
HYB *e* 19 26 16.0
HYBB Hyderabad (bro 108.17 282 ePdif **Pdif** 19 10 55.4 -1.1
HYBB epPdif **pPdif** 19 12 35.6 +0.1
HYBB esPdif **sPdif** 19 13 20.9 +1.1
HYBB ePKiKP **PKiKP** 19 15 01.2 +0.6
HYBB ePP **PP** 19 15 32.4 +0.1
HYBB epPKiKP **pPKiKP** 19 16 46.0 +0.4
HYBB eSKiKP **SKiKP** 19 17 53.4 -0.7
HYBB eSKSac **SKSac** 19 20 53.1 -0.6
HYBB eSKKSac **SKKSac** 19 21 49.0 -0.9
HYBB eSdif **Sdif** 19 22 26.7 +2.1
HYBB eSS **SS** 19 30 13.6 +0.4
V58A Windy Hill, Pi 108.19 58 P **PKiKP** 19 15 00.8 +0.7
baz=258
S56A Natural Bridge 108.20 56 P **PKiKP** 19 15 00.6 +0.4
baz=259
T57A Hurt 108.32 56 P **PKiKP** 19 15 00.9 +0.6
baz=259
SIV San Ignacio 108.39 115 Pdiff **Pdif** 19 11 02.8 +5.2
comp=Z,2.2nm,1.0s,baz=248,slow=7.2,SNR=6.4
SIV PKiKP **PKiKP** 19 15 01.9 +0.8
comp=Z,11nm,0.9s,baz=233,slow=4.8,SNR=9.4
SIV PKKPbc **PKKPbc** 19 26 11.6 -0.6
comp=Z,12nm,0.7s,baz=84,slow=4.0,SNR=14
R56A Bull Pasture M 108.47 55 P **PKiKP** 19 15 01.2 +0.5
baz=259
N54A Moraine State 108.50 52 P **PKiKP** 19 15 01.4 +0.8
baz=260
URIC Uribia, Colomb 108.64 84 *e*P **Pdif** 19 10 56.5 -2.1
Q56A Snyder Ridge, 108.75 54 P **PKiKP** 19 15 01.2 +0.1
baz=259
U58A Oxford 108.75 57 P **PKiKP** 19 15 01.8 +0.6
baz=259
X60A Albert Glenn T 108.86 59 P **PKiKP** 19 15 02.8 +1.4
baz=259
T58A Grand View Acr 108.87 57 P **PKiKP** 19 15 01.3 -0.1
baz=259
O55A Ligonier 108.88 53 P **PKiKP** 19 15 02.7 +1.4
baz=260
V59A Middlesex 108.88 58 P **PKiKP** 19 15 01.8 +0.4
baz=259
SDV Santo Domingo 109.08 87 Pdiff **Pdif** 19 11 07.6 +6.8
comp=Z,3.6nm,0.8s,baz=346,slow=9.8,SNR=4.1
SDV PKiKP **PKiKP** 19 15 02.3 -0.4
comp=Z,28nm,0.7s,baz=129,slow=7.9,SNR=18
SDV PKKPbc **PKKPbc** 19 26 12.1 +2.1
comp=Z,7.4nm,0.9s,baz=280,slow=4.6,SNR=2.6
SDV Santo Domingo 109.08 87 *e*P **Pdif** 19 10 58.4 -2.4
P56A Dayton Farm, R 109.10 54 P **PKiKP** 19 15 01.1 -0.6
baz=260
ZSN Zaisan 109.18 315 ePdif **Pdif** 19 10 59.5 -0.9
baz=315
ZSN ePKiKP **PKiKP** 19 15 01.4 -0.3
baz=315
ZSN Zaisan 109.18 315 *e*P **Pdif** 19 10 59.4 -0.9
N55A Marion Center 109.21 53 P **PKiKP** 19 15 02.3 +0.3
baz=260
Q57A Strasburg 109.35 55 P **PKiKP** 19 15 02.8 +0.6
baz=260
S58A Poland Farm, P 109.37 56 P **PKiKP** 19 15 03.2 +0.9
baz=260
O56A Blue Knob Stat 109.44 53 P **PKiKP** 19 15 02.7 +0.3
baz=260
T59A Double "B" Far 109.65 57 P **PKiKP** 19 15 02.9 +0.1
baz=260
P57A Homestead Farm 109.73 54 P **PKiKP** 19 15 03.4 +0.5
baz=260
SADO Sadowa 109.74 48 PKKPbc PKKPbc 19 26 06.4 -2.2
comp=Z,12nm,1.0s,baz=128,slow=4.2,SNR=4.5
N56A West Decatur 109.75 53 P **PKiKP** 19 15 03.5 +0.5
baz=261
Q58A Fox Den Farm, 109.89 55 P **PKiKP** 19 15 04.0 +0.8
baz=260
M56A Emporium 109.93 52 P **PKiKP** 19 15 02.7 -0.6
baz=261
NRIK Noril'sk 109.98 338 Pdiff **Pdif** 19 11 05.5 +2.2
comp=Z,9.0nm,1.0s,baz=100,slow=4.2,SNR=12
NRIK PKiKP **PKiKP** 19 15 02.4 -0.1
comp=Z,27nm,0.8s,baz=118,slow=1.9,SNR=9.6
NRIK PKKPbc **PKKPbc** 19 26 06.5 -2.1
comp=Z,7.3nm,0.6s,baz=344,slow=3.0,SNR=5.5
S59A Mechanicsville 109.99 56 P **PKiKP** 19 15 04.0 +0.6
baz=260
ZALV Zalesovo Beam 110.05 321 Pdiff **Pdif** 19 11 05.6 +1.7
comp=Z,3.5nm,0.8s,baz=101,slow=7.7,SNR=9.9
ZALV PKiKP **PKiKP** 19 15 02.5 -0.6
comp=Z,54nm,0.6s,baz=87,slow=0.5,SNR=58
ZALV PP **PP** 19 15 43.3 -1.6
comp=Z,14nm,0.8s,baz=124,slow=4.3,SNR=1.7
ZALV PKKPbc **PKKPbc** 19 26 07.4 -0.5
comp=Z,9.7nm,0.6s,baz=264,slow=3.9,SNR=10
ZALV Zalesovo Beam 110.05 321 P **Pdif** 19 11 01.2 -2.7
ZALV Zalesovo Beam 110.05 321 **Pdif** 19 11 01.2 -2.7
H53A Bobcaygeon 110.10 49 P **PKiKP** 19 15 02.9 -0.6
baz=262
KLRI Killari 110.14 283 ePdif **Pdif** 19 11 05.7 +0.5
KLRI epPdif **pPdif** 19 12 43.2 -1.1
KLRI esPdif **sPdif** 19 13 30.9 +2.4
KLRI ePKiKP **PKiKP** 19 15 01.9 -2.5
KLRI ePP **PP** 19 15 43.8 -2.6
KLRI eSKSac **SKSac** 19 21 00.1 -1.8
KLRI eSKKSac **SKKSac** 19 21 58.9 -4.5
KLRI eSdif **Sdif** 19 22 43.6 +2.5
KLRI eSP **SP** 19 24 27.9 -3.7
KLRI eSS **SS** 19 30 35.6 -3.8
O57A Amberson 110.14 53 P **PKiKP** 19 15 04.1 +0.4
baz=261
N57A Milroy 110.28 53 P **PKiKP** 19 15 03.4 -0.5
baz=261
L56A Greenwood 110.49 51 P **PKiKP** 19 15 04.9 +0.5
baz=262
G54A Lake Saint Pet 110.56 48 P **PKiKP** 19 15 04.5 +0.2
baz=262
BHPL Bhopal 110.64 288 IAmb IAmb 19 15 12.8
comp=E,12nm,0.6s
BHPL IAmb IAmb 19 15 54.3
comp=Z,169nm,1.7s
O58A Lewisberry 110.66 54 P **PKiKP** 19 15 04.5 -0.2
baz=261
ALGO Algonquin Park 110.66 47 P **PKiKP** 19 15 04.5 +0.1
baz=263
M57A Sunshine Farm, 110.69 52 P **PKiKP** 19 15 04.7 0.0
baz=262
K56A Middlesex 110.74 51 P **PKiKP** 19 15 05.3 +0.5
baz=262
MK31 Makanchi Array 110.83 314*c* *i*PKIKP **PKiKP** 19 15 05.6 +0.8
MKAR Makanchi Array 110.83 314 Pdiff **Pdif** 19 11 09.7 +2.1
comp=Z,4.0nm,0.7s,baz=87,slow=6.0,SNR=15
MKAR PKiKP **PKiKP** 19 15 03.8 -1.1
comp=Z,62nm,0.6s,baz=208,slow=0.7,SNR=104
MKAR PKKPbc **PKKPbc** 19 26 05.0 -0.1
comp=Z,18nm,0.7s,baz=271,slow=2.3,SNR=17
MKAR PKPPKP 19 34 30.0
comp=Z,2.7nm,0.9s,baz=333,slow=1.4,SNR=5.0
N58A Sunbury 110.92 53 P **PKiKP** 19 15 04.9 -0.2
baz=262
L57A Andrews Acres 110.99 52 P **PKiKP** 19 15 05.3 0.0
baz=262
MAKZ Makanchi 111.05 314 PKIKP **PKiKP** 19 15 04.1 -1.1
M58A Price's Panora 111.19 52 P **PKiKP** 19 15 05.7 0.0
baz=262
O59A Robesonia 111.25 53 P **PKiKP** 19 15 06.1 +0.3
baz=262
K57A Scipio Center 111.34 51 P **PKiKP** 19 15 06.0 +0.2
baz=262
P60A Greenville 111.59 54 P **PKiKP** 19 15 06.3 -0.1
baz=262
N59A State Game Lan 111.64 53 P **PKiKP** 19 15 07.0 +0.5
baz=262
BINY Binghamton 111.66 51 P **PKiKP** 19 15 07.5 +0.9
baz=262
LSQQ Lebel-sur-Quev 111.73 44 P **PKiKP** 19 15 05.4 -1.0
baz=265
L58A Harry Jones Me 111.73 52 P **PKiKP** 19 15 06.6 0.0
baz=263
J57A Williamstown 111.80 50 P **PKiKP** 19 15 06.2 -0.5
baz=263
O60A Telford 111.84 54 P **PKiKP** 19 15 07.5 +0.6
baz=262
K58A Earlville 111.97 51 P **PKiKP** 19 15 07.8 +0.7
baz=263
M59A Waymart 111.98 52 P **PKiKP** 19 15 08.1 +0.9
baz=263
E55A Montcerf-Lytto 112.10 47 P **PKiKP** 19 15 07.3 +0.1
baz=264,SNR=9.3
I57A Carthage 112.11 50 P **PKiKP** 19 15 07.0 -0.3
baz=263
N60A Cedar Hill Far 112.14 53 P **PKiKP** 19 15 07.8 +0.4
baz=263
J58A Remsen 112.31 50 P **PKiKP** 19 15 08.3 +0.6
baz=263
L59A Walton 112.35 52 P **PKiKP** 19 15 08.8 +0.9
baz=263
H57A Richville 112.36 49 P **PKiKP** 19 15 08.2 +0.4
baz=264
SHLS Shalkode 112.40 309 ePdif **Pdif** 19 11 12.8 -2.1
baz=310
SHLS *i* PKiKP **PKiKP** 19 15 07.2 -0.8
baz=310
SHLS Shalkode 112.40 309 *e*P **Pdif** 19 11 12.7 -2.1
SHLS *i* 19 15 07.2
D55A Sainte-Anne-du 112.55 46 P **PKiKP** 19 15 07.7 -0.4
baz=265,SNR=8.7
M60A Port Jervis 112.56 53 P **PKiKP** 19 15 08.4 +0.2
baz=263
K59A Pepperstown 112.56 51 P **PKiKP** 19 15 08.8 +0.5
baz=264
I58A Old Forge 112.57 50 P **PKiKP** 19 15 08.9 +0.7
baz=264
G57A Newington 112.71 48 P **PKiKP** 19 15 08.6 +0.3
baz=264
POO Poona 112.78 282 *i* x **PKiKP** 19 15 08.3 -1.0
E56A St. Veronique 112.81 47 P **PKiKP** 19 15 08.8 +0.2
baz=265
J59A Pesco 112.89 50 P **PKiKP** 19 15 08.6 -0.2
baz=264
L60A Shokan 112.93 52 P **PKiKP** 19 15 10.0 +1.1
baz=264
LONY Lake Ozonia 112.95 49 P **PKiKP** 19 15 09.3 +0.4
baz=264
KPKS Kokpek 113.00 310 ePdif **Pdif** 19 11 16.6 -1.0
baz=310
KPKS *i* PKiKP **PKiKP** 19 15 08.6 -0.6
baz=310
KPKS Kokpek 113.00 310 *e*P **Pdif** 19 11 16.5 -1.0
KPKS *i* 19 15 08.5
D56A ZEC Mazanza, M 113.04 46 P **PKiKP** 19 15 08.7 -0.3
baz=265
PAL Palisades 113.06 53 P **PKiKP** 19 15 09.7 +0.6
baz=263
BHK Bhakra 113.15 296 *e*P **PKiKP** 19 15 09.5 -0.2
BHK *ex* x 19 16 23.7
SATY Saty 113.16 309 ePdif **Pdif** 19 11 17.6 -0.7
baz=309
SATY *i* PKiKP **PKiKP** 19 15 08.6 -0.9
baz=309
SATY Saty 113.16 309 *e*P **Pdif** 19 11 17.5 -0.7
SATY *i* 19 15 08.5
M61A Granite Spring 113.19 53 P **PKiKP** 19 15 08.9 -0.5
baz=264
H58A Gabriels 113.21 49 P **PKiKP** 19 15 09.7 +0.3
baz=265
TDK Taldyqorghan 113.34 311 ePdif **Pdif** 19 11 18.0 -0.9
baz=311
TDK *i* PKiKP **PKiKP** 19 15 09.3 -0.4
comp=Z,66nm,0.8s,baz=311
TDK *i* PP **PP** 19 16 07.2 -1.3
baz=311
TDK *i* SKSac **SKSac** 19 21 11.6 -1.9
baz=311
TDK *i* SKKSac **SKKSac** 19 22 21.1 -3.1
baz=311
TDK *e*SP **SP** 19 24 59.3 -0.4
baz=311
TDK Taldyqorghan 113.34 311 *e*P **Pdif** 19 11 18.0 -0.9
TDK *i* 19 15 09.2
TDK *i* 19 16 07.1
TDK *i* 19 21 11.6
TDK *e*SP SP 19 24 59.3 -0.4
TDK pmax pmax
comp=Z,66nm,0.8s
G58A Ormstown 113.37 48 P **PKiKP** 19 15 10.2 +0.5
baz=265
I59A Olmsteadville 113.37 50 P **PKiKP** 19 15 10.3 +0.6
baz=265
E57A Chemin Saint G 113.41 47 P **PKiKP** 19 15 09.4 -0.3
baz=266,SNR=10
L61A Hillsdale 1, H 113.45 52 P **PKiKP** 19 15 10.1 +0.2
baz=264
CHGQ Chibougamau 113.49 43 P **PKiKP** 19 15 08.8 -1.0
baz=267
TULEG Thule 113.53 14 *i* P **PKiKP** 19 15 11.2 +2.1
KURK Kurchatov 113.59 318*c* *i*PKIKP **PKiKP** 19 15 10.3 +0.4
KURK pmax pmax
comp=Z,119nm,0.8s
KURK Kurchatov 113.59 318 **SKiKP** 19 18 05.8 +2.3
KURK PKKPbc 19 25 57.1 +0.9
KURBB Kurchatov Arra 113.64 317 SKP **SKPdf** 19 18 05.8 +2.3
comp=Z,15nm,0.9s,baz=92,slow=1.7,SNR=1.4
KURBB PKKPbc PKKPbc 19 25 57.1 +1.1
comp=Z,33nm,0.9s,baz=265,slow=4.0,SNR=20
KURBB SKKPbc **SKKPbc** 19 29 00.9 +0.9
comp=Z,5.7nm,0.8s,baz=283,slow=3.5,SNR=4.9
KURBB PKPPKP 19 34 24.1
comp=Z,2.8nm,1.0s,baz=292,slow=2.5,SNR=4.3
KURBB Kurchatov Arra 113.64 317 PKIKP **PKiKP** 19 15 09.3 -0.7
J60A Lant Hill Farm 113.65 51 P **PKiKP** 19 15 10.6 +0.4
baz=265
K61A Williamstown 113.71 51 P **PKiKP** 19 15 11.0 +0.6
baz=264
I60A Shoreham 113.80 50 P **PKiKP** 19 15 10.0 -0.5
baz=265
M62A Hamden 113.86 53 P **PKiKP** 19 15 11.1 +0.4
baz=264
E58A La Victoria 114.01 47 P PKPdf 19 15 10.8 0.0
baz=266,SNR=10
L61B Northampton 114.12 52 P **PKiKP** 19 15 11.4 +0.2
baz=265
MDOK Medeo 114.16 309 *e*Pdif **Pdif** 19 11 21.3 -1.4
baz=309
MDOK *i* pPdif **pPdif** 19 13 00.2 -2.2
baz=309
MDOK *e*PKP PKPdf 19 15 10.3 -1.1
comp=Z,561nm,2.5s,baz=309
MDOK *i* PP **PP** 19 16 12.7 -1.8
baz=309
MDOK eSKSac **SKSac** 19 21 15.7 -1.4
baz=309
MDOK eSKKSac **SKKSac** 19 22 26.7 -3.3
baz=309
MDOK eSdif Sdif 19 23 11.9 -2.0
baz=309
MDOK *i* SP **SP** 19 25 06.4 -1.1
baz=309
MDOK *e*PS **PS** 19 25 57.5 -1.6
baz=309
MDOK Medeo 114.16 309 *e*P **Pdif** 19 11 21.3 -1.4
MDOK *e* 19 15 10.3
MDOK *i* 19 16 12.6
MDOK *e* 19 21 15.6
MDOK *i* SP SP 19 25 06.3 -1.1
MDOK *e*PS **PS** 19 25 57.4 -1.6
MDOK pmax pmax
comp=Z,561nm,2.5s
AAA Alma-Ata 114.26 309 *e*Pdif **Pdif** 19 11 22.2 -0.9
baz=309
AAA *e*PKP PKPdf 19 15 10.6 -0.9
baz=309
AAA *i* PP **PP** 19 16 13.6 -1.4
baz=309
AAA *i* SKSac **SKSac** 19 21 16.4 -0.9
baz=309
AAA *i* SKKSac **SKKSac** 19 22 27.6 -2.8
baz=309
AAA *i* SP **SP** 19 25 08.1 -0.2
baz=309
AAA Alma-Ata 114.26 309 *e*P **Pdif** 19 11 22.1 -0.9
AAA *e* 19 15 10.6
AAA *i* 19 16 13.6
AAA *i* 19 21 16.4
AAA *i* SP SP 19 25 08.0 -0.3
H60A Morristown 114.28 49 P **PKiKP** 19 15 11.9 +0.5
baz=266
J61A Chester 114.29 51 P **PKiKP** 19 15 12.8 +1.3
baz=265
D58A Chemin du LacG 114.32 46 P PKPdf 19 15 10.7 -0.7
baz=267,SNR=24
LATQ La Tuque 114.41 46 P **PKiKP** 19 15 12.0 +0.5
baz=267
I61A Oroboro, Fairl 114.59 50 P **PKiKP** 19 15 12.6 +0.6
baz=266
KSH Kashi 114.62 305 PKP PKPdf 19 15 11.6 -0.8
KSH PP **PP** 19 16 20.5 +2.8
KSH sPKP 19 17 40.1
KSH AMB AMB
comp=Z,6μm,8.8s
KSH LR LR
comp=Z,5μm,13.7s
KSH LR LR
comp=Z,6μm,13.1s
KSH LR LR
comp=Z,7μm,14.7s
ULHL Ulahol 114.67 308 P **PKiKP** 19 15 14.4 +1.9
SNR=9.0
KUU Kurty 114.73 310 ePdif **Pdif** 19 11 24.2 -0.8
baz=310
KUU *e*PKP PKPdf 19 15 11.3 -1.1
baz=310
KUU *i* PP **PP** 19 16 17.1 -1.1
comp=Z,1μm,3.0s,baz=310
KUU *i* SKSac **SKSac** 19 21 17.6 -1.4
baz=310
KUU *i* SKKSac **SKKSac** 19 22 31.6 -1.8
baz=310
KUU *e*SP **SP** 19 25 12.0 -0.4
baz=310
KUU Kurty 114.73 310 *e*P **Pdif** 19 11 24.2 -0.8
KUU *e* 19 15 11.2
KUU *i* 19 16 17.0
KUU *i* 19 21 17.5
KUU *e*SP SP 19 25 12.0 -0.4
KUU pmax pmax
comp=Z,1μm,3.0s
LBNH Lisbon 114.81 50 PKIKP PKPdf 19 15 12.2 -0.3
LBNH Lisbon 114.81 50 P **PKiKP** 19 15 13.8 +1.4
baz=266
LBNH Lisbon 114.81 50 PKPdf 19 15 12.2 -0.3
J62A Henniker 114.82 51 P **PKiKP** 19 15 14.1 +1.5
baz=266
H61A Lyndonville 114.83 49 P **PKiKP** 19 15 14.0 +1.5
baz=266
CRPR Cabo Rojo, PR 114.87 79 PKPdf 19 15 12.2 -1.1
F60A Warwick 114.90 48 P **PKiKP** 19 15 12.6 0.0
baz=267,SNR=11
BRYW Bryant College 114.92 52 PKPdf 19 15 12.5 -0.2
MLPR Magueyes Islan 114.92 79 PKPdf 19 15 13.0 -0.4
K63A Dunstable 114.99 51 P **PKiKP** 19 15 13.7 +0.9
baz=266
PCRV Puerto La Cruz 115.10 88 PKP **PKiKP** 19 15 14.2 +0.2
M64A Tiverton 115.13 53 P **PKiKP** 19 15 14.2 +1.0
baz=265
PLCV Puerto La Cruz 115.14 88 **PKiKP** 19 15 14.2 +0.2
G61A St-Isidore-de- 115.16 48 P **PKiKP** 19 15 13.3 +0.2
baz=267
TKM2 Tokmak 2 115.20 309 P **PKiKP** 19 15 14.8 +1.3
SNR=29
I62A Tamworth 115.21 50 P **PKiKP** 19 15 14.1 +0.9
baz=266
E60A Ste Agathe de 115.27 47 P **PKPdf** 19 15 12.9 -0.4
baz=267,SNR=10
AOPR Arecibo Observ 115.28 79 *e*P **PKPdf** 19 15 12.0 -2.1
AOPR Arecibo Observ 115.28 79 **PKPdf** 19 15 13.2 -0.9
OBIP Obispado Ponce 115.34 79 **PKPdf** 19 15 12.5 -1.7
H62A Milan 115.38 49 P **PKiKP** 19 15 14.0 +0.5
baz=267
F61A St Evariste 115.57 48 P **PKiKP** 19 15 15.0 +1.1
baz=268
D60A Saint Jean D'O 115.65 47 P **PKPdf** 19 15 13.5 -0.4
baz=268
KBK Karagaybulak 115.66 309 P **PKiKP** 19 15 15.9 +1.5
SNR=28
I63A Otisfield 115.77 50 P **PKiKP** 19 15 14.7 +0.4
baz=267
SJG San Juan 115.78 79 PKP **PKiKP** 19 15 15.6 +0.6
comp=Z,120nm,0.8s,baz=196,slow=1.5,SNR=9.3
SJG PKKPbc **PKKPbc** 19 25 49.0 +1.2
comp=Z,9.3nm,0.6s,baz=7.8,slow=1.4,SNR=4.6
SJG San Juan 115.78 79 *e*P **PKPdf** 19 15 13.8 -1.3
SJG San Juan 115.78 79 **PKPdf** 19 15 14.7 -0.4
CHMS Chumysh 115.82 309 P **PKPdf** 19 15 13.7 -0.8
SNR=31
G62A West of Eustis 115.86 49 P **PKiKP** 19 15 14.6 +0.1
baz=268
FRU1 Bishkek 115.90 309 PKIKP **PKiKP** 19 15 14.9 +0.2
FRU1 Bishkek 115.90 309 **PKiKP** 19 15 14.9 +0.2
E61A Lac Etchemin 115.94 47 P **PKiKP** 19 15 15.1 +0.5
baz=268,SNR=14
SGDS Sogindy 115.94 309 *e*Pdif **Pdif** 19 11 29.5 -1.1
baz=310
SGDS *e*PKP **PKPdf** 19 15 13.6 -1.2
comp=Z,25nm,0.6s,baz=310
SGDS Sogindy 115.94 309 *e*P **Pdif** 19 11 29.4 -1.1
SGDS *e* 19 15 13.5
SGDS pmax pmax
comp=Z,25nm,0.6s
AAK Ala-Archa 115.99 309 *i* PKPdf **PKPdf** 19 15 14.5 -0.6
SNR=22
AAK Ala-Archa 115.99 309*c* *i*PKIKP **PKPdf** 19 15 14.9 -0.1
AAK pmax pmax
comp=Z,185nm,1.3s
NIL Nilore 116.13 298 PKIKP **PKPdf** 19 15 14.9 -0.5
NIL Nilore 116.13 298 **PKPdf** 19 15 14.9 -0.5
D61A St Aubert, Com 116.17 46 P **PKPdf** 19 15 14.6 -0.3
baz=269,SNR=9.7
BTLS Baital 116.43 311 ePdif **Pdif** 19 11 31.8 -0.8
baz=311
BTLS *e*PKP **PKPdf** 19 15 14.4 -1.1
comp=Z,60nm,0.6s,baz=311
BTLS Baital 116.43 311 *e*P **Pdif** 19 11 31.7 -0.8
BTLS *e* 19 15 14.4
BTLS pmax pmax
comp=Z,60nm,0.6s
I64A Boothbay 116.44 50 P **PKiKP** 19 15 16.0 +0.5
baz=267
G63A Kingsbury 116.50 49 P **PKiKP** 19 15 16.0 +0.2

baz=268
EKS2 Erkin-Say 116.52 309 P PKiKP 19 15 17.4 +1.4
SNR=26
AML Almayashu 116.55 308 P PKiKP 19 15 17.6 +1.1
SNR=16
E62A Clayton Lake 116.61 47 P PKiKP 19 15 16.0 +0.2
baz=269,SNR=17
PKME Peaks-Kenny Pk 116.74 49 P PKiKP 19 15 16.8 +0.6
baz=268,SNR=9.8
PKME Peaks-Kenny Pk 116.74 49 PKPdf 19 15 15.8 -0.4
H64A Troy 116.77 49 P PKiKP 19 15 16.3 +0.1
baz=268
F63A Nahmakanta, Br 116.88 48 P PKiKP 19 15 16.9 +0.5
baz=269,SNR=7.8
D62A Allapoint, All 116.94 47 P PKPdf 19 15 16.3 -0.2
baz=269,SNR=11
CDVI St. Croix 116.98 80 *e*P PKPdf 19 15 15.8 -1.6
G64A Maxfield 117.11 49 P PKiKP 19 15 17.4 +0.5
baz=269
E63A Oxbow 117.36 47 P PKiKP 19 15 17.4 0.0
baz=270
E63A Oxbow 117.36 47 PKPdf 19 15 16.5 -0.8
BRZS Berezniki 117.39 317 *e*Pdif Pdif 19 11 35.7 -1.0
baz=317
BRZS *e*PKP PKPdf 19 15 16.2 -1.0
comp=Z,36nm,0.6s,baz=317
BRZS Berezniki 117.39 317 *e*P Pdif 19 11 35.7 -1.0
BRZS *e* 19 15 16.2
BRZS pmax pmax
comp=Z,36nm,0.6s
F64A Sherman 117.41 48 P PKPdf 19 15 17.2 -0.2
baz=269
H65A Eastbrook 117.46 49 P PKiKP 19 15 17.6 +0.1
baz=269
D63A Stockholm 117.58 47 P PKPdf 19 15 17.1 -0.6
baz=270,SNR=8.4
NOR Nord 117.65 3 *i* P PP 19 16 25.3 -12
NOR Nord 117.65 3 *i* P PKPdf 19 15 15.7 -1.2
NOR *e*P PP 19 16 25.3 -12
FOMA Nahampoana Res 117.70 226 PKiKP 19 15 18.9 +0.2
E64A Bridgewater 117.78 47 P PKPdf 19 15 17.9 -0.2
baz=270,SNR=9.6
G65A Princeton 117.96 49 P PKiKP 19 15 18.9 +0.4
baz=270
SCHQ Schefferville 118.03 38 PKP PKiKP 19 15 18.7 +0.3
comp=Z,48nm,1.0s,baz=26,slow=3.2,SNR=9.6
SCHQ PKKPbc PKKPbc 19 25 39.7 -1.3
comp=Z,13nm,0.6s,baz=12,slow=3.6,SNR=6.2
H66A Whiting 118.13 49 P PKPdf 19 15 18.6 -0.2
baz=270
TPP Pointe-a-Pierr 118.14 89 *e*P PKPdf 19 15 19.4 -0.3
TRN Trinidad (W) 118.28 88 *e*P PKiKP 19 15 21.1 +1.1
DZA Taraz 118.33 309 *i* PKP PKPdf 19 15 18.2 -1.1
baz=309
DZA *e*PP PP 19 16 41.5 -1.6
baz=309
DZA *e*SKKSac SKKSac 19 22 55.1 -2.3
baz=309
DZA Taraz 118.33 309 *i* PKIKP PKPdf 19 15 18.2 -1.1
DZA *e* 19 16 41.4
GRGR Grenville 118.46 87 *e*P PKPdf 19 15 17.6 -2.7
GRSS Sisters 118.55 86 *e*P PKiKP 19 15 26.6 +6.1
SEUS St. Eustatius 118.57 80 *e*P PKPpre 19 15 09.8
BRVK Borovoye 118.71 320 *c i*PKIKP PKPdf 19 15 19.4 -0.3
BRVK pmax pmax
comp=Z,135nm,0.7s
BRVK Borovoye 118.71 320 PKPdf 19 15 19.1 -0.5
SKOC St. Kitts, UWI 118.76 81 *e*P PKPpre 19 15 09.7
SKI Saint Kitts 118.76 81 *e*P PKPdf 19 15 18.5 -2.4
SKI Saint Kitts 118.76 81 PKIKP PKPdf 19 15 20.2 -0.6
SKI Saint Kitts 118.76 81 PKPdf 19 15 20.2 -0.6
GCMP Grenada, Carri 118.77 86 *e*P PKiKP 19 15 21.5 +0.5
KK31 Karatay Array 118.93 309 *i* PKIKP PKPdf 19 15 20.0 -0.5
MLYT Lee's Yard 119.13 81 *e*P PKPdf 19 15 20.3 -1.3
SVOC Richmond Hill, 119.14 86 *e*P PKPdf 19 15 19.1 -2.5
SVB Belmont 119.15 86 *e*P PKPdf 19 15 21.0 -0.6
SVV Soufriere Volc 119.19 85 *e*P PKPdf 19 15 21.6 -0.1
SVCV St. Vincent, C 119.25 86 *e*P PKPdf 19 15 21.1 -0.8
SFAN Fancy Village 119.25 85 *e*P PKPpre 19 15 14.7
IUG luzhnay 119.27 308 *e*PKP PKPdf 19 15 20.6 -0.8
comp=Z,64nm,0.6s,baz=308
IUG luzhnay 119.27 308 *e*PKIKP PKPdf 19 15 20.5 -0.8
IUG pmax pmax
comp=Z,63nm,0.6s
TOSP Speyside 119.28 88 *e*P PKPdf 19 15 21.0 -0.9
NUUG Nuugaatsiaq 119.32 17 *i* P PKiKP 19 15 21.8 +1.4
BDFB Brasilia 119.39 122 PKP PKiKP 19 15 22.4 +0.1
comp=Z,60nm,0.6s,baz=221,slow=1.1,SNR=67
BDFB PKKPbc PKKPbc 19 25 37.1 +1.5
comp=Z,15nm,0.6s,baz=58,slow=3.2,SNR=15
BDFB Brasilia 119.39 122 PKPdf 19 15 21.5 -0.7
BRLS Borolday 119.43 309 *e*PKP PKPdf 19 15 20.9 -0.6
baz=309
BRLS Borolday 119.43 309 *e*PKIKP PKPdf 19 15 20.8 -0.6
TBG Guadaloupe-3 119.43 83 *e*P PKiKP 19 15 23.9 +1.7
TDBA Terre de Bas, 119.44 83 *e*P PKPdf 19 15 21.9 -0.3
BBSR BB Station 119.51 63 PKPdf 19 15 21.1 -0.7
BPA Boggy Peak 119.51 81 *e*P PKPdf 19 15 20.6 -1.7
CBE Ff, Capester 119.52 82 *e*P PKPdf 19 15 21.6 -0.8
DSHT Scott's Head 119.53 83 *e*P PKPdf 19 15 22.3 0.0
MDN Morne-Daniel 119.54 83 *e*P PKPdf 19 15 19.5 -2.8
DRTD Roseau, Domini 119.54 83 *e*P PKiKP 19 15 22.9 +0.5
DSLB Salisbury 119.54 83 *e*P PKPdf 19 15 21.3 -1.1
MCLT Moule a Chique 119.55 85 *e*P PKPdf 19 15 19.5 -2.9
SLCP Castries, St. 119.58 85 *e*P PKPpre 19 15 15.0
ANBD Bethesda, Anti 119.60 81 *e*P PKPdf 19 15 18.6 -3.8
SLBI Saint Lucia, B 119.60 85 *e*P PKPdf 19 15 20.7 -1.8
SLPA Patience 119.61 85 *e*P PKiKP 19 15 23.4 +0.7
FDF Fort de France 119.62 84 *e*P PKPdf 19 15 21.1 -1.5
FDF Fort de France 119.62 84 PKIKP PKPdf 19 15 22.0 -0.6
FDF Fort de France 119.62 84 PKPdf 19 15 21.9 -0.6
SLW Petit Monier 119.64 85 *e*P PKPdf 19 15 22.3 -0.3
BIM Bigot 119.64 84 *e*P PKPdf 19 15 21.9 -0.7
DLPL La Plaine 119.68 83 *e*P PKPpre 19 15 16.9
KBL Kabul 119.69 299 PKIKP PKiKP 19 15 22.5 -0.1
KBL Kabul 119.69 299 PKiKP 19 15 22.5 -0.1
ABD La Joyeuse, An 119.72 82 *e*P PKPdf 19 15 20.6 -2.0
MAGL Barre de l'Ile 119.79 83 *e*P PKiKP 19 15 23.7 +0.8
TAS Tashkent 119.81 307 PKIKP PKPdf 19 15 21.5 -0.7
TAS Tashkent 119.81 307 PKPdf 19 15 21.5 -0.7
VOI Vohitsoka 119.83 229 P PKiKP 19 15 23.2 +0.1
SNR=12
H05S1 Guadeloupe/Mar 119.83 84 PKP PKPdf 19 15 22.2 -0.7
SNR=26
CHGR Chuyangaron 119.84 304 PKPdf 19 15 22.1 -0.4
ILAM Ilet Lapin Mar 119.89 84 *e*P PKPdf 19 15 21.6 -1.4
H05N1 Guadeloupe/Mar 120.09 82 PKP PKPdf 19 15 22.7 -0.7
SNR=58
MALB Monte Alegre 120.63 105 *e*P PKiKP 19 15 25.4 +0.7
KBS Kingsbay 120.65 358 *c i*PKIKP PKiKP 19 15 23.9 +1.0
KBS pmax pmax
comp=Z,114nm,1.0s
KBS Kingsbay 120.65 358 PKiKP 19 15 23.0 +0.1
KBS Kingsbay 120.65 358 *e*PKPdf PKPdf 19 15 21.4 -1.3
KBS *e*PP PP 19 16 54.0 -3.6
KBS *e*SP SP 19 26 04.9 +1.5
KBS *e*SS SS 19 32 54.0 +1.5
KBS Kingsbay 120.65 358 *i* P PKiKP 19 15 23.4 +0.5
BBGH Gun Hill 120.70 86 *e*P PKPdf 19 15 20.1 -4.5
ILULI Ilulissat 121.04 20 *i* PKIKP PKPdf 19 15 23.3 -0.3
ILULI Ilulissat 121.04 20 *i* P PKPdf 19 15 23.3 -0.3
ILULI Ilulissat 121.04 20 *i* P PKPdf 19 15 23.4 -0.3
PEXB Peixe 121.06 118 *e*P PKiKP 19 15 25.8 +0.2
SPA0 Spitsbergen Ar 121.18 357 *e*PKPdf PKiKP 19 15 24.1 +0.1
ABPO Ambohimpanom 121.34 232 *i* P PKiKP 19 15 28.2 +2.0
ABPO Ambohimpanom 121.34 232 PKIKP PKPdf 19 15 25.6 -0.4
ABPO Ambohimpanom 121.34 232 PKPdf 19 15 25.6 -0.4
ABPO Ambohimpanom 121.34 232 *i* P PKiKP 19 15 28.2 +2.0
OPO Ambohidratompo 121.65 232 PKP PKPdf 19 15 26.7 +0.1
comp=Z,48nm,0.7s,baz=125,slow=2.1,SNR=44
H09W1 TRISTAN DA CUNI 121.78 166 PKP PKiKP 19 15 27.6 +1.3
SNR=28
DAG Danmarks Havn 122.03 6 *i* PKIKP PKPdf 19 15 24.8 -0.6
DAG Danmarks Havn 122.03 6 *i* P PKPdf 19 15 24.8 -0.6
DAG Danmarks Havn 122.03 6 *i* P PKPdf 19 15 24.9 -0.6
HOPEN Hopen 122.08 354 *e*PP PP 19 17 04.3 -2.9
HOPEN *e*SKSac SKSac 19 21 40.3 -3.3
HOPEN *e*SS SS 19 33 07.0 -3.5
GBN Guysborough 122.22 48 PKPdf 19 15 25.8 -0.8
SFJD Kangerlussuaq 122.24 22 PKKPbc PKKPbc 19 25 25.4 -0.5
comp=Z,24nm,0.7s,baz=114,slow=5.4,SNR=9.8
SFJD Kangerlussuaq 122.24 22 *i* PKIKP PKiKP 19 15 26.4 +0.2
SFJD Kangerlussuaq 122.24 22 PKPdf 19 15 24.7 -1.3
SFJD Kangerlussuaq 122.24 22 *i* P PKiKP 19 15 26.4 +0.2
SFJD Kangerlussuaq 122.24 22 *i* P PKiKP 19 15 26.4 +0.2
HSPB Hornsund (broa 122.37 356 *e*PKP PKPdf 19 15 25.8 -0.3
HSPB *e*PP PP 19 17 04.3 -4.8
HSPB *e*SKSac SKSac 19 21 46.7 +2.2
HSPB *e*SKKSac SKKSac 19 23 20.6 -1.5
HSPB *e*SS SS 19 33 09.5 -4.6
HSPB Hornsund (broa 122.37 356 *e*PKPdf PKPdf 19 15 26.1 0.0
HSPB IVmB_BB 19 15 31.1
comp=Z,878nm,1.7s
HSPB *e*PP PP 19 17 08.4 -0.7
HSPB *e*SKSac SKSac 19 21 44.4 -0.1
HSPB *e*SP SP 19 26 20.8 +5.2
HSPB *e*SS SS 19 33 16.9 +2.7
SUMG Summit 122.44 13 *i* PKIKP PKPdf 19 15 24.8 -2.0
SUMG Summit 122.44 13 *i* P PKPdf 19 15 24.8 -2.0
SUMG Summit 122.44 13 *i* P PKPdf 19 15 24.9 -2.0
SBV Sambava 122.55 239 P PKPdf 19 15 27.8 -0.4
SNR=6.6
JANB Januaria 122.65 124 *e*P PKPdf 19 15 28.4 -0.1
PRPB Parauapebas 122.73 111 *e*P PKPdf 19 15 28.6 0.0
SJMB Sao Joao De Ma 122.80 129 *e*P PKPdf 19 15 28.6 0.0
BSFB Barra de Sao F 122.96 130 *e*P PKPdf 19 15 28.8 -0.1
NUUK Nuuk 123.07 25 *i* P PKiKP 19 15 27.9 0.0
MCPB Macapa, AP 123.25 104 *e*P PKPdf 19 15 29.6 0.0
SMTB Santa Maria do 123.34 115 *e*P PKiKP 19 15 30.7 +0.6
SVE Sverdlovsk 123.50 326 *d i*PKIKP PKPdf 19 15 28.3 -0.5
SVE pmax pmax
comp=Z,227nm,0.7s
SDBA SAO DESIDERIO 123.69 121 *e*P PKPdf 19 15 30.4 -0.1
DY2G Dye2 124.00 21 *i* P PKPdf 19 15 25.1 -4.7
DBG Daneborg 124.13 7 *i* P PKPdf 19 15 27.9 -1.6
BJO1 Bjornoya 124.52 355 *e*PKPdf PKiKP 19 15 30.4 -0.2
BJO1 *e*pPKPdf pPKPdf 19 17 15.4 +0.7
BJO1 *e*SKSac SKSac 19 21 47.8 -3.7
BJO1 *e*SS SS 19 33 43.8 +2.8
ARU Arti 124.72 326 PKKPbc PKKPbc 19 25 15.6 -0.5
comp=Z,16nm,0.7s,baz=233,slow=2.1,SNR=16
ARU SKKPbc SKKPbc 19 28 22.4 -2.6
comp=Z,4.3nm,0.6s,baz=226,slow=5.1,SNR=6.4
ARU Arti 124.72 326 *i* PKIKP PKPdf 19 15 30.5 -0.6
ARU 19 17 22.3
ARU 19 21 53.3
ARU Arti 124.72 326 PKPdf 19 15 30.5 -0.6
MDP Montagnes des 124.77 98 PKP PKiKP 19 15 32.8 -0.1
comp=Z,100nm,0.6s,baz=238,slow=3.0,SNR=67
MDP PKKPbc PKKPab 19 25 16.8 +1.2
comp=Z,13nm,0.7s,baz=74,slow=3.3,SNR=9.7
SUR Sutherland 125.13 199 PKP PKiKP 19 15 33.4 0.0
comp=Z,252nm,0.6s,baz=235,slow=0.4,SNR=82
SUR PKKPbc PKKPbc 19 25 14.3 -0.5
comp=Z,24nm,0.8s,baz=349,slow=4.3,SNR=13
SUR Sutherland 125.13 199 *i* P PKiKP 19 15 34.1 +0.7
SUR Sutherland 125.13 199 PKPdf 19 15 32.8 -0.3
SUR Sutherland 125.13 199 *i* P PKiKP 19 15 34.1 +0.7
HRA Herat 125.29 299 PKPpre 19 15 20.0
HRA PKPdf PKPdf 19 15 32.9 -0.3
AB31 Akbulak array 125.69 317 *i* PKIKP PKPdf 19 15 29.7 -3.5
ABKAR Akbulak array 125.69 317 PKPdf 19 15 31.4 -1.8
TMAB Tom-Au,PA,Br 125.99 108 *e*P PKiKP 19 15 35.5 +0.2
AKTO Aktyubinsk 126.65 319 PKKPbc PKKPbc 19 25 08.3 0.0
comp=Z,12nm,0.9s,baz=308,slow=6.9,SNR=6.0
AKTO PKKP PKKPdf 19 25 52.9 +1.0
comp=Z,11nm,1.1s,baz=107,slow=2.6,SNR=4.1
AKTO Aktyubinsk 126.65 319 PKIKP PKPdf 19 15 33.3 -1.7
JLN Jalan Bani Buh 126.77 283 P PKPdf 19 15 36.2 +0.1
SNR=12
BOSA Boshof 126.95 206 PKhKP PKPpre 19 15 26.5
comp=Z,3.4nm,0.6s,baz=179,slow=2.2,SNR=6.3
BOSA PKP PKiKP 19 15 38.1 +1.0
comp=Z,84nm,0.7s,baz=159,slow=2.1,SNR=64
BOSA PKKPbc PKKPbc 19 25 07.3 -0.3
comp=Z,6.5nm,0.6s,baz=27,slow=1.8,SNR=21
BOSA Boshof 126.95 206 *i* P PKiKP 19 15 38.7 +1.6
BOSA Boshof 126.95 206 *i* P PKiKP 19 15 38.7 +1.6
NRS Narsarsuaq 127.05 27 *i* PKIKP PKiKP 19 15 37.0 +1.1
NRS Narsarsuaq 127.05 27 *i* P PKiKP 19 15 37.0 +1.1
NRS Narsarsuaq 127.05 27 *i* P PKiKP 19 15 37.1 +1.1
WBK Wadi Bani Khal 127.24 284 P PKiKP 19 15 38.1 +0.6
SNR=5.3
HAMF Hammerfest 127.56 351 *e*PKPdf PKPdf 19 15 35.0 -1.1
HAMF IVmB_BB 19 15 37.2
comp=Z,2μm,2.6s
HAMF *e*PP PP 19 17 40.6 -2.8
HAMF *e*SP SP 19 27 04.7 +0.6
HAMF *e*SS SS 19 34 20.4 +1.7
WSAR Wadi Sarin 127.63 284 PKKPbc PKKPbc 19 25 05.0
comp=Z,6.4nm,0.8s,baz=235,slow=7.1,SNR=5.5
WSAR Wadi Sarin 127.63 284 P PKiKP 19 15 38.8 +0.5
SNR=8.9
LVZ Lovozero 127.76 345 *c i*PKIKP PKPdf 19 15 36.8 +0.1
LVZ pmax pmax
comp=Z,143nm,1.7s
LVZ Lovozero 127.76 345 PKPdf 19 15 35.7 -1.0
KEV Kevo 127.82 349 PKIKP PKPdf 19 15 36.5 -0.2
KEV Kevo 127.82 349 PKPdf 19 15 36.5 -0.2
MHTO MHTO 127.91 282 P PKPdf 19 15 37.5 -0.7
SNR=32
JMDO Jabal Madar 128.00 283 P PKPdf 19 15 37.7 -0.8
SNR=12
BIDO Bidbid 128.13 285 P PKPdf 19 15 38.5 -0.1
SNR=12
DQM DQM 128.13 280 P PKPdf 19 15 38.6 -0.2
SNR=19
SMDO Samad 128.14 284 P PKPdf 19 15 38.4 -0.4
SNR=26
ARCES ARCESS Array B 128.27 350 PKhKP PKPpre 19 15 24.3
comp=Z,4.4nm,0.6s,baz=96,slow=1.1,SNR=19
ARCES PKP PKiKP 19 15 38.1 -0.1
comp=Z,43nm,0.4s,baz=37,slow=1.5,SNR=26
ARCES SKPbc SKPbc 19 18 17.6
comp=Z,127nm,1.1s,baz=25,slow=3.2,SNR=8.3
ARCES PKKPbc PKKPbc 19 25 01.2
comp=Z,7.9nm,0.6s,baz=204,slow=3.6,SNR=13
ARCES PKKP PKKPdf 19 25 46.3 -2.7
comp=Z,9.0nm,0.8s,baz=243,slow=0.2,SNR=4.5
ARCES SKKPbc SKKPbc 19 28 10.9 -2.6
comp=Z,14nm,1.0s,baz=198,slow=2.7,SNR=4.3
APA Apatity 128.31 345 *i* PKIKP PKPdf 19 15 36.6 -1.1
APA pmax pmax
comp=Z,57nm,1.0s
JMIC Jan Mayen 128.42 4 *e*PP PP 19 17 45.7 -3.2
JMIC *e*SP SP 19 27 09.8 -1.7
GEYT Alibeck 128.54 303 PKhKP PKPpre 19 15 26.0
comp=Z,7.7nm,0.7s,baz=197,slow=1.5,SNR=9.6
GEYT PKP PKiKP 19 15 40.6 +0.8
comp=Z,57nm,0.6s,baz=249,slow=1.3,SNR=45
GEYT SKPbc SKPbc 19 18 21.1
comp=Z,60nm,1.0s,baz=197,slow=1.5,SNR=4.1
GEYT Alibeck 128.54 303 PKPpre 19 15 24.5
GYA0 ALIBECK ARRAY 128.54 303 PKIKP PKPdf 19 15 38.4 -0.7
BSY Bisya 128.88 284 P PKPdf 19 15 39.4 -0.7
SNR=15
HOQ Hoqain 128.88 285 P PKPdf 19 15 38.9 -1.2
SNR=14
KTK1 Kautokeino 129.10 350 *e*PKPdf PKPdf 19 15 39.1 0.0
KTK1 IVmB_BB 19 15 40.5
comp=Z,2μm,2.6s
KTK1 *e*pPKPdf pPKPdf 19 17 23.9 +0.2
KTK1 *e*SS SS 19 34 39.7 +2.0
TRO Tromso 129.13 353 *e*PKPdf PKPdf 19 15 37.7 -1.4
TRO IVmBBB 19 15 41.8
comp=Z,3μm,2.3s
TRO *e*PP PP 19 17 52.1 -1.4
TRO *e*SS SS 19 34 40.0 +2.1
ROSB Rosrio 129.26 111 *e*P PKiKP 19 15 41.6 -0.3
ARQ Araqi 129.57 284 P PKPdf 19 15 40.4 -1.0
SNR=14
SHAO Shalim 129.57 277 *i* PKPdf PKPdf 19 15 40.9 -0.7
SNR=9.1
SHAO Shalim 129.57 277 P PKPdf 19 15 40.7 -0.8
SNR=9.1
TMCR Tamitsa 129.57 341 *e*PKIKP PKPdf 19 15 38.5 -1.6
TMCR pmax pmax
comp=Z,124nm,0.9s
SOHO SOHO 129.65 285 *i* PKPdf PKPdf 19 15 40.9 -0.6
SNR=42
SOCY Socotra 129.77 270 P PKPdf 19 15 42.0 -0.1
SNR=43
LBTB Lobatse 129.96 208 PKhKP PKPpre 19 15 30.7
comp=Z,3.2nm,0.5s,baz=158,slow=0.8,SNR=5.1
LBTB PKP PKiKP 19 15 44.1 +1.0
comp=Z,53nm,0.6s,baz=163,slow=3.6,SNR=34
LBTB SKPbc SKPbc 19 18 26.9 +3.3
comp=Z,132nm,0.8s,baz=146,slow=4.6,SNR=19
LBTB Lobatse 129.96 208 *i* P PKiKP 19 15 44.1 +1.0
LBTB Lobatse 129.96 208 *i* P PKiKP 19 15 44.1 +1.0
MDH Madha 129.98 287 *i* PKPdf PKPdf 19 15 40.9 -1.2
SNR=7.2
MDH Madha 129.98 287 P PKPdf 19 15 41.1 -1.0
SNR=5.7
UOSS Minazif 130.03 286 *i* PKPdf PKPdf 19 15 41.0 -1.3
SNR=16
UOSS Minazif 130.03 286 PKPdf 19 15 42.3 +0.1
BANOM Banah 130.03 288 *i* PKPdf PKPdf 19 15 41.8 -0.4
SNR=5.5
HATD Hatta, Dubai 130.09 286 *i* PKPdf PKPdf 19 15 41.5 -0.8
SNR=25
HATD Hatta, Dubai 130.09 286 P PKPdf 19 15 41.5 -0.8
SNR=12
MSFE Esma-Masafi 130.11 287 *i* PKPdf PKPdf 19 15 41.7 -0.7
SNR=16
ASHO Ashiyiah 130.14 286 *i* PKPdf PKPdf 19 15 41.7 -0.8
SNR=6.9
ASHO Ashiyiah 130.14 286 P PKPdf 19 15 42.1 -0.4
SNR=12
DMTO DMTO 130.14 277 P PKPdf 19 15 42.5 -0.1
SNR=18
SHME Shamm 130.19 288 *i* PKPdf PKPdf 19 15 42.0 -0.5
SNR=5.6
ALNE Al Ain 130.35 285 *i* PKPdf PKPdf 19 15 42.6 -0.3
SNR=27
NAZ Nazwa, Dubai 130.53 286 *i* PKPdf PKPdf 19 15 42.5 -0.7
SNR=15
NAZ Nazwa, Dubai 130.53 286 P PKPdf 19 15 42.5 -0.7
SNR=5.2
FAQ Al Faqa, Dubai 130.57 286 *i* PKPdf PKPdf 19 15 42.2 -1.1
SNR=9.8
FAQ Al Faqa, Dubai 130.57 286 P PKPdf 19 15 42.0 -1.2
SNR=6.3
ASUD Al Ashush, Dub 130.79 286 *i* PKPdf PKPdf 19 15 43.4 -0.3
SNR=12
RBK Rabkut 130.80 276 P PKPdf 19 15 43.6 -0.3
SNR=53
N2IH Innhavet 131.07 353 *e*PKPdf PKPdf 19 15 43.2 +0.4
AJN Ajban 131.10 286 *i* PKPdf PKPdf 19 15 44.0 -0.3
SNR=8.8
LOF Lofoten 131.15 354 *e*PKPdf PKPdf 19 15 42.3 -0.7
LOF IVmB_BB 19 15 45.5
comp=Z,4μm,2.8s
LOF *e*PP PP 19 18 03.5 -3.0
LOF *e*SS SS 19 35 06.4 +4.0
STEI Steigen 131.18 353 *e*PKPdf PKPdf 19 15 42.1 -0.9
STEI IVmB_BB 19 15 44.6
comp=Z,4μm,2.6s
STEI *e*PP PP 19 18 06.9 +0.3
WHFO Wadi Hawf 131.28 277 P PKPdf 19 15 45.0 +0.2
SNR=42
KLMR Klimovskoe 131.31 337 *e*PKIKP PKPdf 19 15 43.4 -0.1
KLMR *e* 19 18 06.7
KLMR pmax pmax
comp=Z,258nm,1.2s
KLMR Klimovskoe 131.31 337 *e*PKPdf PKPdf 19 15 43.5 -0.1
KLMR AMP 19 15 50.8
comp=Z,258nm,1.2s
KLMR *e*PP PP 19 18 06.8 -1.0
KLMR *e*SKPbc SKPab 19 18 28.0 -0.1
KLMR *e*SKKSac SKKSac 19 24 15.5 -3.3
KLMR *e*SKKSac SKKSac 19 24 15.5 -3.3
KLMR *e*SKKPbc SKKPbc 19 27 52.7 -10
N2TV Tѵrnvik 131.54 353 *e*PKPdf PKPdf 19 15 44.0 +0.2
ABTO Aybut 131.62 276 P PKPdf 19 15 45.3 -0.2
SNR=40
N2VA Vr,y 131.69 355 *e*PKPdf PKPdf 19 15 44.1 +0.1
N2ST Straumen 131.70 353 *e*PKPdf PKPdf 19 15 44.1 0.0
FAUS Fauske 131.70 353 *e*PKPdf PKPdf 19 15 42.0 -2.1
FAUS IVmB_BB 19 15 45.4
comp=Z,3μm,3.2s
FAUS *e*PP PP 19 18 07.7 -2.2
FAUS *e*SS SS 19 35 09.2 +0.2
N2RO R st 131.88 355 *e*PKPdf PKPdf 19 15 43.7 -0.7
NBB30 Fínnes 132.26 354 *e*PKPdf PKiKP 19 15 45.7 -0.6
NBB17 Glomfjord BѰr 132.39 354 *e*PKPdf PKPdf 19 15 45.4 0.0
BORG Borgarnes 132.43 13 SKPbc SKPab 19 18 35.2 +2.4
comp=Z,50nm,0.9s,baz=239,slow=3.7,SNR=3.1
MATP Matopo 132.43 214 PKhKP PKPpre 19 15 28.7
comp=Z,4.3nm,0.6s,baz=185,slow=1.7,SNR=8.8
MATP PKP PKiKP 19 15 48.9 +0.6
comp=Z,97nm,0.8s,baz=184,slow=1.9,SNR=24
MATP SKPbc SKPab 19 18 35.5 +1.2
comp=Z,149nm,0.7s,baz=155,slow=3.5,SNR=19
NBB15 Halsa Church 132.50 354 *e*PKPdf PKPdf 19 15 45.4 -0.2
BLWY Bulawayo 132.60 215 *i* P PKiKP 19 15 49.6 +1.0
BLWY Bulawayo 132.60 215 *i* P PKiKP 19 15 49.6 +1.0
NBMO Morrinhos-CE 132.61 114 *e*P PKPdf 19 15 47.9 +0.5
NBB40 Tonnes 132.78 354 *e*PKPdf PKiKP 19 15 46.9 -0.5
KONS Konsvik 132.78 354 *e*PKPdf PKPdf 19 15 46.1 0.0
KONS *e*PP PP 19 18 17.3 +0.5
MOR8 Moi Rana 132.96 353 *e*PKPdf PKPdf 19 15 43.9 -2.6
MOR8 IVmB_BB 19 15 47.6
comp=Z,4μm,3.1s
MOR8 *e*PP PP 19 18 18.5 +0.5
MOR8 *e*SP SP 19 27 51.2 +0.6
MOR8 *e*SS SS 19 35 19.3 -5.0
RCBR Riachuelo 134.71 120 PKhKP PKPpre 19 15 37.3
comp=Z,14nm,0.6s,baz=246,slow=5.2,SNR=9.1
RCBR PKP PKPdf 19 15 52.2 +0.7
comp=Z,76nm,0.8s,baz=198,slow=3.0,SNR=14
RCBR SKPbc SKPbc 19 18 42.2 +1.9
comp=Z,66nm,0.7s,baz=219,slow=3.7,SNR=11
RCBR Riachuelo 134.71 120 *e*P PKiKP 19 15 52.8 -0.2
NSS Namsos 134.82 354 *e*PKPdf PKPdf 19 15 49.5 -0.5
NSS *e*SKPdf SKPdf 19 18 42.5 -0.6
FINES FINESS Array B 135.15 344 PKhKP PKPpre 19 15 37.0
comp=Z,6.4nm,0.6s,baz=54,slow=3.1,SNR=37
FINES PKP PKPdf 19 15 51.3 +0.6
comp=Z,26nm,0.5s,baz=42,slow=2.3,SNR=11
FINES SKPbc SKPab 19 18 42.5 -2.3
comp=Z,86nm,1.0s,baz=64,slow=4.4,SNR=7.7
FINES PKKPbc 19 24 33.5
comp=Z,3.8nm,0.6s,baz=174,slow=4.2,SNR=1.6
FINES PKP PKKPdf 19 25 33.3 -2.3
comp=Z,1.2nm,0.4s,baz=180,slow=2.5,SNR=5.2
FINES SKKPbc SKKPbc 19 27 44.5 -3.9
comp=Z,15nm,0.8s,baz=186,slow=4.2,SNR=6.4
FINES FINESS Array B 135.15 344 PKPpre 19 15 37.4
PUL Pulkovo 135.28 340 *e*P PKPdf 19 15 51.2 +0.3
PUL Pulkovo 135.28 340 *c i*PKIKP PKiKP 19 15 52.0 -0.6
PUL pmax pmax
comp=Z,260nm,0.7s
MOS Moscow 135.36 332 *e*PKHKP PKPpre 19 15 43.0
MOS *e* 19 15 52.6
MOS *e* 19 18 38.6
MOS pmax pmax
comp=Z,48nm,1.1s
MAK Makhachkala 135.61 312 *c e*P Pdif 19 12 57.7 -0.2
MAK *i* 19 15 54.4
MAK *e* 19 17 37.2
MAK *e* 19 18 35.0
MAK *e*PPP PPP 19 21 36.2
MAK *e* 19 22 24.9
MAK *e*SS SS 19 35 59.3 +1.5
MAK *e*SSS SSS 19 41 07.5
MAK pmax pmax
comp=Z,335nm,1.5s
VRH Novokhopyorsk 135.93 325 *e*PKIKP PKPdf 19 15 53.2 +0.7
VRH *e* 19 18 36.0
VRH *e*SPP SPP 19 30 01.9
VRH pmax pmax
comp=Z,300nm,0.6s
OBN Obninsk 136.22 332 *c e*PKIKP PKPdf 19 15 52.4 -0.5
OBN *e* 19 18 36.2
OBN *e*PPP PPP 19 21 44.2
OBN pmax pmax
comp=Z,82nm,0.8s
OBN Obninsk 136.22 332 PKPpre 19 15 43.3
TBLU Trondheim 136.23 355 *e*PKPdf PKPdf 19 15 51.7 -1.0
TBLU IVmB_BB 19 15 53.0
comp=Z,3μm,3.4s
TBLU *e*pPKPdf pPKPdf 19 17 36.5 -0.6
TBLU *e*PP PP 19 18 38.0 -0.4
TBLU *e*SP SP 19 28 14.2 -4.0
TBLU *e*SS SS 19 36 00.3 -2.8
LPSR Galich'ya Gora 136.63 328 *e*PKIKP PKPdf 19 15 52.7 -1.0
LPSR *e* 19 18 40.7
LPSR pmax pmax
comp=Z,100nm,0.8s
GROC Groznyy 136.72 313 *e*PKIKP PKPdf 19 15 53.1 -1.1

GROC e 19 18 17.5
GROC e 19 18 45.5
GROC pmax pmax
comp=Z,128nm,0.6s
LSZ Lusaka 136.76 218 PKhKP PKPpre 19 15 42.9
comp=Z,6.1nm,0.4s,baz=143,slow=4.7,SNR=0.4
LSZ SKPbc **SKiKP 19 18 49.0 -2.4**
comp=Z,60nm,0.9s,baz=200,slow=5.8,SNR=8.3
VORR Voronezh 137.01 327 ePKIKP **PKPdf 19 15 53.0 -1.5**
VORR pmax pmax
comp=Z,400nm,1.6s
MOL Molde 137.11 356 ePKPdf **PKPdf 19 15 53.3 -1.0**
MOL IVmB_BB 19 15 56.9
comp=Z,4μm,3.5s
MOL e**P**P **PP 19 18 41.3 -2.5**
MOL eSP SP 19 28 26.3 +0.9
MOL eSS **SS 19 36 15.2 +1.9**
VSR Storozhevoye 137.29 326 ePKIKP **PKPdf 19 15 54.9 -0.1**
VSR e 19 18 41.7
VSR eSPP SPP 19 30 11.4
VSR pmax pmax
comp=Z,210nm,1.1s
VORD Divnogorie 137.36 326 ePKIKP **PKiKP 19 15 56.4 -0.7**
VORD e 19 18 43.6
VORD pmax pmax
comp=Z,130nm,0.6s
VSU Vasula 137.44 341 eP **PKPdf 19 15 55.2 +0.2**
VSU Vasula 137.44 341 *i* PKIKP **PKPdf 19 15 52.5 -2.5**
DOMB Dombas 137.52 355 ePKPdf **PKPdf 19 15 54.7 -0.5**
DOMB IVmBBB 19 15 56.3
comp=Z,2μm,3.0s
DOMB e**P**P **PP 19 18 46.0 -0.5**
DOMB eSS SS 19 36 19.0 +0.6
DOMB IVms_BB IVms_BB 19 54 35.2
comp=Z,4μm,33.4s
GOF Gofitskoye 137.92 316⇓ *i* PKIKP **PKiKP 19 15 57.5 -1.0**
GOF pmax pmax
comp=Z,141nm,0.7s
ZEI Tsey 138.17 313 *i* PKIKP **PKiKP 19 16 00.7 +1.3**
ZEI pmax pmax
comp=Z,79nm,0.9s
FOO Floro 138.19 358 ePKPdf **PKPdf 19 15 56.3 0.0**
FOO eSKPdf **SKPdf 19 18 49.3 +0.1**
FOO eSS **SS 19 36 27.0 +1.0**
NB2 NORSAR Subarra138.31 353 PKP PKPpre 19 15 47.1
comp=Z,63nm,1.1s,baz=16,slow=3.2
NB2 NORSAR Subarra138.31 353 PKP PKPpre 19 15 47.1
baz=16,slow=3.2
NOA NORSAR Array B 138.31 353 PKhKP PKPpre 19 15 46.3
comp=Z,27nm,0.9s,baz=16,slow=4.6,SNR=54
NOA SKPbc **SKiKP 19 18 52.6 -0.4**
comp=Z,78nm,1.0s,baz=15,slow=4.5,SNR=7.4
NOA PKKP **PKKPdf 19 25 27.0 -2.5**
comp=Z,0.8nm,0.7s,baz=179,slow=0.5,SNR=4.2
NOA SKKPbc **SKKPbc 19 27 37.9 +1.3**
comp=Z,41nm,1.0s,baz=190,slow=4.3,SNR=17
TSUM Tsumeb 138.39 202 PKhKP PKPpre 19 15 50.3
comp=Z,43nm,0.9s,baz=162,slow=4.1,SNR=18
TSUM SKPbc **SKiKP 19 18 53.8 -0.8**
comp=Z,58nm,0.9s,baz=154,slow=3.2,SNR=12
TSUM Tsumeb 138.39 202 *i* P **PKPdf 19 15 58.1 -0.1**
TSUM Tsumeb 138.39 202 PKPpre 19 15 49.5
TSUM Tsumeb 138.39 202 *i* P **PKPdf 19 15 58.1 -0.1**
KBZ Khabaz 138.52 314 PKhKP PKPpre 19 15 49.6
comp=Z,18nm,0.9s,baz=118,slow=3.0,SNR=11
KBZ SKPbc **SKiKP 19 18 53.6 -0.3**
comp=Z,118nm,1.1s,baz=97,slow=5.1,SNR=10
KBZ Khabaz 138.52 314 *i* PKIKP **PKPdf 19 15 57.1 -0.4**
KBZ pmax pmax
comp=Z,36nm,0.9s
NC602 NORSAR Array S 138.57 353 ePKPdf **PKPdf 19 15 51.2 -5.9**
NC602 e*p*PKPdf **pPKPdf 19 17 40.7 -0.9**
NC602 eSKPdf **SKPbc 19 18 51.2 +1.1**
NC602 eSS **SS 19 36 33.5 +2.9**
KVAR Kislovodsk Arr 138.57 315 SKPbc **SKPab 19 18 57.5 -3.2**
comp=Z,94nm,1.0s,baz=270,slow=19,SNR=6.9
HYA Hoyanger 138.58 357 ePKPdf **PKPdf 19 15 54.5 -2.5**
HYA eSKPdf **SKPbc 19 18 50.3 +0.2**
HYA eSS **SS 19 36 33.0 +2.4**
KIV Kislovodsk 138.58 315 *i* PKPdf **PKPdf 19 15 57.7 -0.1**
SNR=10.0
KIV Kislovodsk 138.58 315 eP **PKPdf 19 15 53.9 -3.9**
KIV Kislovodsk 138.58 315 *i* PKIKP **PKPdf 19 15 56.5 -1.3**
KIV e*P*P **pPKPdf 19 17 34.9 -7.9**
KIV e*S*P **sPKPdf 19 18 16.5 -9.5**
KIV *e* 19 18 50.6
KIV e*P*PP PPP 19 21 57.6
KIV *e* 19 22 22.7
KIV eSS SS 19 36 28.7 -4.1
KIV eSSS SSS 19 41 47.4
KIV pmax pmax
comp=Z,332nm,1.0s
SUE Sulen 138.75 358 ePKPdf **PKPdf 19 15 53.8 -3.5**
SUE IVmB_BB 19 16 00.2
comp=Z,3μm,7.5s
SUE e*p*PKPdf **pPKPdf 19 17 39.6 -2.3**
SUE eSKPdf **SKPbc 19 18 51.1 +0.6**
SUE eSKSdf **SKSdf 19 22 25.1 -0.5**
SUE eSS **SS 19 36 35.8 +3.3**
SKAR Skarslia 138.93 355 ePKPdf **PKPdf 19 15 57.5 -0.3**
SKAR IVmB_BB 19 16 00.6
comp=Z,3μm,4.7s
SKAR eSKPdf **SKPbc 19 18 51.7 +0.5**
SKAR eSS **SS 19 36 33.9 -1.0**
CLDR Calditan 139.29 307 eP **PKPdf 19 15 54.1 -5.3**
ASK Askoy 139.31 358 ePKPdf **PKPdf 19 15 54.6 -3.8**
ASK eSKPdf **SKPbc 19 18 51.8 -0.3**
BER Bergen 139.40 358 IVmB_BB 19 16 01.2
comp=Z,3μm,5.3s
BER eSKSdf **SKSdf 19 22 26.7 0.0**
BER eSS **SS 19 36 41.9 +1.8**
BER IVms_BB IVms_BB 19 55 13.8
comp=Z,5μm,26.1s
DAMY Dhamar 139.40 269 P **PKPdf 19 15 57.6 -2.7**
SNR=24
SLIT Slitere, Latvi 139.42 343 eP **PKPdf 19 15 57.2 -1.4**
OSL Oslo 139.44 353 ePKPdf **PKPdf 19 15 57.3 -1.4**
OSL eSKPdf **SKPdf 19 18 51.5 0.0**
OSL eSS **SS 19 36 43.1 +2.4**
KARS Kars 139.47 310 eP **PKPdf 19 15 54.5 -5.0**
WAL1 Walls 139.50 3 eP **PKPdf 19 15 53.5 -5.2**
LRW Lerwick 139.64 3 eP **PKPdf 19 15 52.6 -6.4**
KMBO Kilima Mbogo 139.80 243 PKhKP **PKPdf 19 15 58.0 -3.1**
comp=Z,26nm,0.9s,baz=90,slow=3.4,SNR=53
KMBO SKPbc **SKiKP 19 19 00.2 +2.4**
comp=Z,186nm,1.2s,baz=90,slow=2.1,SNR=12
KMBO SKKPbc **SKKPbc 19 27 30.8 +3.1**
comp=Z,1.9nm,0.8s,baz=304,slow=1.5,SNR=1.7
IZAR Zarasai 139.80 339 eP **PKPdf 19 15 55.5 -3.9**
ODD1 Odda 139.81 357 ePKPdf **PKPdf 19 15 56.6 -2.8**
ODD1 e*p*PKPdf **pPKPdf 19 17 43.9 -0.1**
ODD1 eSKPdf **SKPdf 19 18 52.4 +0.1**
ODD1 eSS **SS 19 36 44.6 -0.4**
KONO Kongsberg 139.84 354*c* *i*PKIKP **PKPdf 19 15 57.0 -2.4**
KONO Kongsberg 139.84 354 PKPdf 19 15 51.6 -7.8
KONO Kongsberg 139.84 354 ePKPdf **PKPdf 19 15 58.4 -1.0**
KONO e*p*PKPdf **pPKPdf 19 17 42.0 -1.9**
KONO eSKPdf **SKPdf 19 18 52.3 0.0**
KONO eSS **SS 19 36 46.6 +1.3**
AGRB Hanur-Agry 139.85 308 eP **PKPdf 19 15 56.4 -3.9**
IDID Didziasalis 139.98 338 eP **PKPdf 19 15 55.2 -4.5**
ISAL Salakas 139.99 339 eP **PKPdf 19 15 56.2 -3.5**
SENK Senkaya-Erzuru 140.01 310 eP **PKPdf 19 15 56.4 -4.2**
CUKT Cukurca 140.01 305 eP **PKPdf 19 15 54.0 -6.6**
GEVA Gevas 140.16 306 PKPdf 19 15 52.6 -8.4
MICGM Minsk 140.21 337⇑⇑ ePKP PKPdf 19 15 50.0 -10
MICGM ⇑⇑ePKP PKiKP 19 15 54.0 -8.8
MICGM PKPM 19 16 02.0
comp=Z,6.8nm,8.0s
MICGM PKPM 19 16 06.0
comp=Z,0.8nm,2.0s
MICGM e*p*PKP pPKPdf 19 17 40.0 -4.9
MICGM e*s*PKP 19 18 22.0
MICGM e*P*P PP 19 18 52.0 -11
MICGM PPM 19 18 56.0
comp=Z,53nm,8.0s
MICGM PPM 19 19 02.0
comp=Z,96nm,6.0s
MICGM e*P*PP PPP 19 22 06.0
MICGM eSKS **SKSdf 19 22 22.0 -6.3**
MICGM eSKKS **SKKSac 19 25 08.0 -4.1**
MICGM eSS **Sdif 19 26 46.0 -4.3**
MICGM e*P*S 19 29 00.0
MICGM eSSS SSS 19 42 08.0
MNK Minsk 140.21 337*ce*PKHKP PKPdf 19 15 50.0 -10
MNK *e* 19 22 22.0
MNK eSS SS 19 36 46.0 -4.1
MNK eSSS SSS 19 42 08.0
AKDM Akdamar-Van 140.22 307 eP **PKPdf 19 15 55.1 -5.9**
BCA Borcka 140.23 312 eP **PKPdf 19 15 54.5 -6.2**
NACGM Naroch 140.29 338 ePKP **PKPdf 19 15 54.0 -6.4**
NACGM e*p*PKP **pPKPdf 19 17 36.0 -9.0**
NACGM e*p*PKP PP 19 18 54.0 -10
NACGM e*P*PP PPP 19 21 18.0
NACGM eSKS SKSdf 19 22 08.0 -20
NACGM eSKKS **SKKSac 19 25 08.0 -4.6**
NACGM eSP SKKPbc 19 28 14.0 +46
NACGM e*P*S 19 28 58.0
NACGM eSS SS 19 35 52.0 -59
NACGM eSSS SSS 19 39 24.0
BLS5 Blasjo 140.31 357 ePKPdf **PKPdf 19 15 57.5 -2.8**
BLS5 eSKPdf **SKPdf 19 18 52.8 -0.3**
BLS5 eSS **SS 19 36 52.1 +1.3**
MLAZ Malazgirt-MUS 140.31 308 eP **PKPdf 19 15 57.6 -3.5**
KOPR Koprukoy-ERZUR140.56 309 eP **PKPdf 19 15 59.0 -2.6**
KMY Karmoy 140.57 358 ePKPdf **PKPdf 19 15 59.8 -0.9**
SOC Sochi 140.70 316 ePKIKP **PKPdf 19 15 58.0 -3.5**
SOC *e* 19 17 39.4
SOC eSS SS 19 36 55.0 -2.1
SOC pmax pmax
comp=Z,34nm,0.9s
PABE Paberze 140.74 340 eP **PKPdf 19 15 56.7 -4.4**
SIRT Sirnak 140.85 305 eP **PKPdf 19 15 57.2 -4.9**
GURO Guroymak-BITLI 140.87 307 eP **PKPdf 19 15 57.4 -4.7**
PBUR Paburge 140.91 342 eP **PKPdf 19 15 57.6 -3.8**
BIGH Upper Bighouse 141.10 5 eP **PKPdf 19 15 57.8 -3.9**
VRTB Varto-Mus 141.11 308 eP **PKPdf 19 15 59.5 -3.1**
LEWI Lewis, Hebride 141.14 8 eP **PKPdf 19 15 56.0 -5.8**
LINV Loch Inver, As 141.33 6 eP **PKPdf 19 15 57.8 -4.3**
SNART Snartemo 141.34 356 ePKPdf **PKPdf 19 16 01.1 -1.1**
SNART IVmBBB 19 16 03.0
comp=Z,12μm,2.8s
SNART e*p*PKPdf **pPKPdf 19 17 45.8 -0.9**
SNART eSKPdf **SKPdf 19 18 55.8 +0.9**
SNART eSS **SS 19 37 05.4 +2.8**
KARO Karliova-Bingo 141.36 309 eP **PKPdf 19 15 59.0 -4.1**
ANN Anapa 141.61 319*d* *i*PKHKP **PKPdf 19 15 58.7 -4.3**
ANN *i* 19 16 06.0
ANN *e* 19 17 43.2
ANN *e* 19 19 02.2
ANN eSS SS 19 37 04.7 -2.7
ANN eSSS SSS 19 42 29.7
ANN pmax pmax
comp=Z,121nm,1.0s
ANN pmax pmax
comp=Z,199nm,1.0s
SVAN Silvan-Diyarba 141.61 307 eP **PKPdf 19 15 59.9 -3.5**
BAYT Aydıntepe-Bayb 141.65 311 eP **PKPdf 19 16 01.1 -2.4**
YEDI Yedisu-Bingol 141.69 309 eP **PKPdf 19 16 00.7 -2.9**
BNGB Bingl 141.74 308 eP **PKPdf 19 15 59.6 -4.0**
TEND Ethiopian Broa 141.86 264 eP **PKPdf 19 16 00.6 -3.8**
TEND eS SS 19 36 57.4 -15
KAC Achnashellach 141.95 7 eP **PKPdf 19 15 59.3 -4.0**
MCD Coleburn Disti 142.06 5 eP **PKPdf 19 15 59.3 -4.1**
KPL Plockton 142.07 7 eP **PKPdf 19 15 58.8 -4.6**
MDO Dochfour 142.10 6 eP **PKPdf 19 16 00.5 -3.0**
ERZN Erzincan 142.24 310 eP **PKPdf 19 16 01.1 -3.4**
SUW Suwalki 142.24 340 ePKP **PKPdf 19 16 00.9 -2.9**
SUW e*p*PKPdf **pPKPdf 19 17 44.1 -4.5**
SUW eSKPdf **SKPbc 19 18 58.8 -1.0**
SUW eSKKSac **SKKSac 19 25 22.6 -1.3**
MAZI Mazidag 142.38 306 eP **PKPdf 19 16 01.3 -3.6**
GOET G??ttrup 142.45 354 *i* P **PKPdf 19 15 59.9 -4.2**
GOET *i* 19 18 56.0
GOET G??ttrup 142.45 354 *i* P **PKPdf 19 15 59.9 -4.2**
GOET *i* 19 18 56.0
AKASG Malin Array Be 142.48 332 PKhKP **PKPdf 19 15 60.0 -4.4**
comp=Z,90nm,0.5s,baz=41,slow=4.1,SNR=63
AKASG SKPbc **SKiKP 19 19 02.9 +1.1**
comp=Z,79nm,0.9s,baz=37,slow=3.2,SNR=9.8
AKASG SKKPbc **SKKPab 19 27 17.0 -1.6**
comp=Z,22nm,1.1s,baz=238,slow=4.8,SNR=11
AKASG Malin Array Be 142.48 332 PKHKP **PKPdf 19 15 58.8 -5.6**
AKASG Malin Array Be 142.48 332 **PKPdf 19 15 58.8 -5.6**
AKBB Malin Array Si 142.48 332*d* *i*PKHKP **PKPdf 19 16 00.7 -3.7**
DILA Dilla 142.50 254 *i* P **PKPdf 19 16 03.7 -2.1**
DRUM Mains of Drumt 142.78 4 eP **PKPdf 19 16 01.1 -3.6**
SVRC Sivrice-ELAZID 142.95 308 eP **PKPdf 19 16 04.0 -1.9**
MUD Monsted U'grnd 143.03 354 *i* PKIKP **PKPdf 19 16 05.2 +0.1**
MUD Monsted U'grnd 143.03 354 *i* P **PKPdf 19 16 05.2 +0.1**
MUD *i* 19 19 00.0
MUD Monsted U'grnd 143.03 354 *i* P **PKPdf 19 16 05.2 +0.1**
MUD *i* 19 19 00.0
FURI Furi 143.09 258 **PKPdf 19 16 06.5 -0.5**
ILIC ilic-Erzincan 143.12 310 eP PKPbc 19 16 04.3 +0.5
INVG Invergeldie, C 143.14 6 eP PKPab 19 16 02.6 -0.1
LAWE Loch Awe, Argy 143.16 7 eP PKPab 19 16 02.9 +0.1
EAB Aberfoyle 143.34 6 eP PKPab 19 16 03.4 -0.1
COP Copenhagen 143.35 350 *i* PKIKP PKPab 19 16 03.2 -0.3
COP Copenhagen 143.35 350 *i* P PKPab 19 16 03.2 -0.3
COP *i* 19 19 02.0
COP Copenhagen 143.35 350 *i* P PKPab 19 16 03.2 -0.2
COP *i* 19 19 02.0
BSD Bornholm Skovb 143.44 348 *i* PKIKP **PKPdf 19 16 05.2 -0.7**
BSD Bornholm Skovb 143.44 348 *i* P **PKPdf 19 16 05.2 -0.7**
BSD *i* 19 19 04.0
BSD Bornholm Skovb 143.44 348 *i* P **PKPdf 19 16 05.2 -0.7**
BSD *i* 19 19 04.0
SIM Simferopol' 143.56 321 ePKIKP PKPab 19 16 04.5 -0.2
SIM *e* 19 17 47.0
SIM pmax pmax
comp=Z,1μm,0.7s
SHEL Horse Pasture 143.62 167 PKIKP **PKPdf 19 16 07.4 -0.2**
SHEL Horse Pasture 143.62 167 **PKPdf 19 16 07.4 -0.2**
URFA Urfa 143.62 307 eP PKPbc 19 16 06.0 +0.6
MALT Malatya 143.63 308 eP **PKPdf 19 16 06.3 -0.7**
RSDY Resadiye-TOKAT 143.64 312 eP **PKPdf 19 16 06.2 -0.6**
PGBU Glenifferbraes 143.70 6 eP PKPab 19 16 04.3 -0.4
EDI Edinburgh 143.71 5 eP PKPab 19 16 04.0 -0.9
LODK Lodwar 143.76 248 P **PKPdf 19 16 07.7 -0.2**
SNR=224
ESY Stoneypath 143.76 5 eP PKPab 19 16 04.5 -0.5
EBL Broad Law 143.87 5 eP PKPab 19 16 05.3 -0.2
IDCL Inch Island, C 144.03 6 eP PKPbc 19 16 05.3 -0.2
SVSK Karacayir 144.06 312 eP **PKPdf 19 16 07.9 -0.4**
TOKT Tokat 144.22 312 eP **PKPdf 19 16 07.7 -0.2**
CLGH Cloghs, Cushen 144.22 8 eP PKPbc 19 16 03.3 -3.3
DARE Darende-Malaty 144.23 309 eP **PKPdf 19 16 08.4 +0.4**
KVT Kavak 144.23 314 eP **PKPdf 19 16 08.3 +0.4**
TOKA Tokat 144.26 312 **PKPab 19 16 07.6 +0.1**
RGN Rugen 144.28 349 eP **PKPdf 19 16 08.1 +0.7**
RGN Rugen 144.28 349 ePKPdf **PKPdf 19 16 07.6 +0.2**
baz=17,slow=1.6
RGN e*p*PKPbc **PKPdf 19 16 08.1 +0.7**
baz=15,slow=2.6
RGN Rugen 144.28 349 **PKPdf 19 16 07.5 +0.1**
ESK Eskdalemuir 144.31 5 eP PKPbc 19 16 04.8 -2.1
SNOP Sinop 144.37 316 eP **PKPdf 19 16 08.3 +0.3**
NEWG New Galloway 144.41 6 eP PKPbc 19 16 05.9 -1.3
DIKM Dikmen 144.50 315 ⇑P **PKiKP 19 16 11.3 -0.8**
DIKM Dikmen 144.50 315 eP **PKPab 19 16 08.9 +0.6**
GAL1 Galloway 144.60 7 eP PKPbc 19 16 07.5 -0.3
GKP Gorka Klasztor 144.62 344 ePKP **PKPdf 19 16 08.0 0.0**
GKP e*p*PKPdf **pPKPdf 19 17 52.5 -0.2**
GKP eSKPdf **SKPdf 19 19 01.9 +1.4**
GKP eSKKSac **SKKSac 19 25 37.7 +0.2**
SORM Soroca 144.69 329 ⇑P PKPbc 19 16 07.5 -0.8
SORM Soroca 144.69 329 ⇑PKIKP PKPbc 19 16 07.5 -0.8
SKMB Sankelmark Bun 144.71 353 ePKPdf **PKPab 19 16 08.4 -0.1**
baz=17,slow=1.6
SKMB e*p*PKPbc PKPbc 19 16 09.9 +1.8
baz=15,slow=2.6
BEL Belsk 144.86 340 ePKP PKPbc 19 16 08.9 +0.1
BEL e*p*PKPdf pPKPdf 19 17 52.5 -0.8
BEL eSKKSac SKKSac 19 25 40.9 +2.0
BEL eSS **SS 19 37 42.3 -0.9**
GAZ Gaziantep 144.92 307 eP PKPbc 19 16 09.5 -0.1
KESW Keswick, Cumbr 145.04 5 eP **PKPdf 19 16 07.5 -1.2**
GMM Mts of Mourne 145.07 8 eP **PKPbc 19 16 09.4 +0.1**
SARI SarD1z-Kayseri 145.07 309 eP **PKPbc 19 16 09.9 -0.2**
LNIZ Loecknitz 145.11 347 ePKPdf **PKPbc 19 16 09.3 -0.2**
baz=17,slow=1.6
LNIZ e*p*PKPbc **PKPab 19 16 10.8 +0.7**
baz=15,slow=2.6
BZK Bozkurt 145.18 316 ⇓P **PKPab 19 16 11.0 +0.2**
BZK Bozkurt 145.18 316 eP **PKPab 19 16 11.5 +0.7**
ILTH Belurgan, Co L 145.22 9 eP **PKPdf 19 16 08.5 -0.5**
IOMK Kirk Michael 145.22 7 eP **PKPdf 19 16 09.1 0.0**
KIS Kishinev 145.24 327 ePKP **PKPdf 19 16 08.0 -1.3**
comp=Z,4μm,3.4s
KIS e*p*P pPKPab 19 17 51.0 -1.4
KIS Kishinev 145.24 327 ePP PP 19 19 31.0 -2.4
KIS Kishinev 145.24 327 ⇑P **PKPdf 19 16 08.7 -0.6**
KIS Kishinev 145.24 327 ePKIKP **PKPdf 19 16 08.0 -1.3**
KIS *e* 19 17 51.0
KIS *e* 19 19 31.0
KIS *e* 19 22 37.0
KIS pmax pmax
comp=Z,4μm,3.4s
H07N1 FLORES T-PHASB 45.24 48 ePKP **PKPdf 19 16 09.1 -0.5**
H07N1 eP **pPKPdf 19 17 54.4 +0.1**
H07N1 FLORES T-PHASB 45.24 48 PKPbc **PKPab 19 16 11.2 0.0**
SNR=21
IGLA Glengowla, Co 145.28 12 eP **PKPdf 19 16 08.4 -0.8**
MILM Milestii Mici 145.29 327 ⇓P **PKPdf 19 16 09.7 +0.3**
BNN Bunyan 145.31 310 eP **PKPdf 19 16 09.9 0.0**
H07S1 FLORES T-PHASB 45.31 49 ePKP **PKPdf 19 16 10.0 +0.2**
H07S1 eP **pPKPdf 19 17 55.2 +0.7**
H07S1 FLORES T-PHASB 45.31 49 PKPbc **PKPbc 19 16 10.8 +0.2**
SNR=48
LVV L'vov 145.35 335 ePKIKP **PKPbc 19 16 10.0 -0.3**
LVV *i* 19 19 34.0
LVV *i* SS SS 19 37 56.0 +7.0
LVV MLR MLR
comp=Z,6μm,22.0s
BSEG Bad Segeberg 145.36 352 ePKPdf **PKPdf 19 16 09.5 +0.3**
baz=17,slow=1.6
BSEG e*P*PKPbc **PKPab 19 16 11.4 +0.3**
baz=15,slow=2.6
GDLE Glaisdale, N Y 145.37 3 eP **PKPdf 19 16 08.9 -0.4**
HLG Helgoland 145.40 354 ePKPbc **PKPab 19 16 11.8 +0.6**
baz=15,slow=2.6
MBAR Mbarara 145.42 237 *i* P **PKPab 19 16 13.5 +0.7**
MBAR Mbarara 145.42 237 PKIKP **PKPdf 19 16 11.1 +0.2**
MBAR Mbarara 145.42 237 **PKPdf 19 16 11.1 +0.2**
MBAR Mbarara 145.42 237 *i* P **PKPab 19 16 13.5 +0.7**
CORM Corum 145.60 313 eP **PKPdf 19 16 10.9 +0.5**
IAS Iasi 145.73 329 ⇑P **PKPab 19 16 12.4 -0.3**
IAS Iasi 145.73 329 ⇑PKP2 **PKPab 19 16 12.4 -0.3**
KOZT Kozan 145.84 308 eP **PKPdf 19 16 10.6 -0.1**
TAHT Tahtakopru-Hat 145.97 306 eP **PKPdf 19 16 10.8 -0.1**
VASR Vaslui 146.00 328 ⇓P **PKPdf 19 16 10.3 -0.3**
KWP Kalwaria Pacla 146.01 336 ePKPdf **PKPdf 19 16 10.5 -0.1**
KWP e*P*KIKP **PKiKP 19 16 14.4 -0.6**
KWP e*p*PKPdf pPKPbc 19 17 55.7 -0.2
KWP eSKKSac SKKSac 19 25 44.7 -0.8
KURC Kurucasile-Bar 146.05 317 eP **PKPdf 19 16 11.5 +0.6**
CEYT Ceyhan 146.07 308 eP **PKPdf 19 16 11.3 +0.2**
CANT Cankiri 146.09 315 eP **PKPdf 19 16 11.8 +0.7**
RUE Ruedersdorf 146.15 347 eP **PKPbc 19 16 13.2 +0.7**
RUE Ruedersdorf 146.15 347 ePKPdf **PKPdf 19 16 10.9 +0.2**
baz=17,slow=1.6
RUE e*P*KPbc **PKPab 19 16 13.9 -0.3**
baz=15,slow=2.6
WLF1 Llynfaes 146.19 7 eP **PKPdf 19 16 10.9 +0.2**
BIR Birlad 146.34 327 ⇑P **PKPab 19 16 14.3 -0.9**
BIR Birlad 146.34 327 ⇑PKP2 **PKPab 19 16 14.3 -0.9**
LMK Market Rasen 146.35 3 eP **PKPdf 19 16 10.5 -0.4**
CMRD Camardi-Nigde 146.39 309 eP **PKPdf 19 16 12.4 +0.6**
BR131 Keskin Array S 146.48 313 P **PKPdf 19 16 11.1 -0.8**
SNR=120
BRTR Keskin Array B 146.48 313 PKPbc **PKPbc 19 16 14.4 +0.3**
comp=Z,269nm,0.8s,baz=136,slow=2.8,SNR=106
BRTR PP **PP 19 19 38.2 -3.2**
comp=Z,80nm,0.9s,baz=79,slow=2.9,SNR=4.7
BRTR SKKPbc SKKPbc 19 27 02.8 +0.2
comp=Z,15nm,0.9s,baz=215,slow=4.0,SNR=6.7
BRTR Keskin Array B 146.48 313 eP **PKPdf 19 16 11.3 -0.6**
BRTR Keskin Array B 146.48 313 **PKPdf 19 16 10.9 -1.0**
KARA Karaisali 146.50 308 eP **PKPdf 19 16 11.8 0.0**
KRTS Karatas 146.51 307 eP **PKPdf 19 16 11.8 0.0**
BURAR Bucovina Array 146.53 331 ⇓P **PKPdf 19 16 11.6 -0.1**
BURAR Bucovina Array 146.53 331 ⇓PKIKP **PKPdf 19 16 11.6 -0.1**
BURAR Bucovina Array 146.53 331 **PKPdf 19 16 11.3 -0.4**
OJC Ojcow 146.57 339 ePKPdf **PKPdf 19 16 11.3 -0.2**
OJC e*p*PKPdf **pPKPdf 19 17 56.5 +0.1**
OJC e*s*PKPdf sPKPbc 19 18 40.9 0.0
OJC eSKKSac SKKSac 19 25 47.5 -1.1
STNC Stoke 146.60 5 eP **PKPdf 19 16 09.3 -2.1**
BIZ Bicaz 146.61 330 ⇑P **PKPdf 19 16 11.9 +0.2**
LLW Llanuwychllyn 146.71 6 eP **PKPdf 19 16 11.0 -0.6**
FOEL Foel Wylfa 146.71 6 eP **PKPdf 19 16 11.5 -0.2**
YAYX Yaylak 146.71 312 eP **PKPdf 19 16 11.7 -0.5**
KOLS Kolonicke sedl 146.75 336 ePKIKP **PKPdf 19 16 11.0 -0.9**
KOLS *e* 19 16 16.1
KOLS eSS SS 19 38 03.6 -1.1
KOLS Kolonicke sedl 146.75 336 ePKP **PKPdf 19 16 11.0 -0.9**
KOLS *e* 19 16 14.6
KOLS *e* 19 16 16.1
KOLS *e* 19 17 55.6
SCHL Schela 146.75 326 ⇓P **PKPdf 19 16 13.1 +1.2**
NRDL Niedersach Rie 146.79 351 ePKPdf **PKPdf 19 16 11.8 +0.1**
baz=17,slow=1.6
NRDL e*P*KPbc **PKiKP 19 16 15.3 -1.1**
baz=15,slow=2.6
CFR Carcaliu 146.80 326 ⇑P **PKPdf 19 16 11.9 -0.1**
CFR Carcaliu 146.80 326 ⇑PKIKP **PKPdf 19 16 11.9 -0.1**
HWQ Hawqa 146.81 303 eP **PKPdf 19 16 12.0 -0.5**
TPGR Topolog 146.86 325 ⇑P **PKPdf 19 16 11.8 -0.3**
SERE Sereflikochisa 146.88 312 eP **PKPdf 19 16 11.8 -0.7**
ODBI Odobesti 146.97 327 ⇓P **PKPbc 19 16 14.7 -0.3**
UZH Uzhgorod 146.98 335 ePKIKP **PKPdf 19 16 13.0 +0.8**
UZH *e* 19 19 48.2
UZH e*P*PP PPP 19 23 13.6
UZH *i* SS SS 19 38 16.8 +9.5
AFSR Afar-Bala (An 147.00 313 eP **PKPdf 19 16 12.8 +0.1**
LOD Lodumlu 147.00 314 eP **PKPdf 19 16 12.7 0.0**
CWF Charnwood Fore 147.02 4 eP **PKPdf 19 16 11.4 -0.7**
MERS Mersin 147.04 308 eP **PKPdf 19 16 13.6 +0.8**
ASSE Asse, Remlinge 147.06 350 ePKPdf **PKPdf 19 16 12.3 +0.2**
baz=17,slow=1.6
ASSE e*P*KPbc **PKiKP 19 16 16.1 -0.8**
baz=15,slow=2.6
VRI Vrincioaia 147.07 328 ⇑P **PKPdf 19 16 11.2 -1.3**
VRI Vrincioaia 147.07 328 eP **PKPdf 19 16 11.9 -0.6**
VRI Vrincioaia 147.07 328 ⇑PKHKP **PKPdf 19 16 11.7 -1.3**
KSP Ksiaz 147.07 343 ePKPdf **PKPdf 19 16 12.2 -0.1**
KSP e*p*PKPdf **pPKPbc 19 17 58.5 -0.1**
KSP e*s*PKPdf **sPKPab 19 18 43.8 +0.7**
KSP eSKKSac SKKSac 19 25 51.5 +0.1
NIE Niedzica 147.08 338 ePKPdf **PKPdf 19 16 13.0 +0.6**
NIE e*p*PKPdf **pPKPab 19 17 59.6 +0.1**
NIE e*P*P **PP 19 19 43.5 -0.4**
NIE eSKKSac SKKSac 19 25 51.0 -0.5
CRVS Cervenica-Dubn 147.08 336 ePKIKP **PKPdf 19 16 12.6 +0.2**
CRVS *e* 19 16 17.9
CRVS eSS SS 19 38 08.3 -0.2
CRVS Cervenica-Dubn 147.08 336 ePKP **PKPdf 19 16 12.6 +0.2**
CRVS *e* 19 16 17.9
CRVS *e* 19 17 59.3
HLM1 Long Mynd 147.11 6 eP **PKPdf 19 16 11.5 -0.9**
PLOR Plostina 147.12 328 ⇑P **PKPdf 19 16 12.5 -0.1**
PLOR Plostina 147.12 328 ⇑PKIKP **PKPdf 19 16 12.5 -0.1**
RCY Rachaya 147.12 301 eP **PKPdf 19 16 13.4 +0.3**
TIRR Tirgusor 147.12 324 ⇓P **PKPdf 19 16 13.7 +1.1**
TIRR Tirgusor 147.12 324 ⇓P **PKPdf 19 16 13.7 +1.1**
TIRR Tirgusor 147.12 324 ⇓PKIKP **PKPdf 19 16 13.7 +1.1**
TIRR Tirgusor 147.12 324 **PKPdf 19 16 12.7 +0.1**
BHL Bhannes 147.15 302 eP **PKPdf 19 16 12.1 -1.0**
QRWL Qaraoun 147.23 302 eP **PKPdf 19 16 13.9 +0.7**
HARR Harsova 147.23 325 ⇓P **PKPdf 19 16 13.4 +0.7**
HARR Harsova 147.23 325 ⇓PKIKP **PKPdf 19 16 13.4 +0.7**
SULT Sultanhani-AKS 147.24 311 eP **PKPdf 19 16 11.9 -1.2**
EFOR EFORIE 147.24 324 ⇓P **PKPdf 19 16 12.7 -0.1**
YESY Yesilyurt 147.25 310 eP **PKPdf 19 16 12.6 -0.6**
IBBN Ibbenburen 147.27 354 ePKPdf **PKPdf 19 16 12.4 -0.2**
baz=17,slow=1.6
IBBN e*P*KPbc **PKiKP 19 16 16.8 -0.6**
baz=15,slow=2.6
DQRL Deir Qamar 147.28 302 eP **PKPdf 19 16 13.8 +0.4**
GRER 147.28 327 ⇑P **PKPbc 19 16 16.4 +0.5**
BISRR Bisoca 147.30 327 ⇓P **PKPdf 19 16 11.2 -1.7**
ARCR ARCALIA 147.32 331 ⇑P **PKPbc 19 16 16.1 +0.1**
OSTC Ostas 147.35 343 ePKP **PKPdf 19 16 13.6 +0.8**
OSTC *ex* x 19 16 17.5

OSTC ep PKP **pPKPdf** 19 17 51.3 -6.2
OSTC ex x 19 26 55.3
CHVC Chvalec 147.37 344 eP **PKPbc** **19 16 16.8 +0.8**
CHVC ep PKP **pPKPdf** **19 17 54.7 -2.9**
CHVC ex x 19 26 55.0
OZUR 147.37 329 ⇓P **PKPdf** **19 16 12.8 -0.3**
CLZ Clausthal 147.38 351 ePKPdf **PKPdf** **19 16 13.0 +0.1**
baz=17,slow=1.6
CLZ eP PKPbc **PKiKP** **19 16 17.2 -0.5**
baz=15,slow=2.6
PCED Cedros 147.40 48 eP PKP **PKPbc** **19 16 16.2 -0.2**
PCED eP **pPKPab** **19 18 01.2 +0.9**
CALA Caldeira 147.41 48 eP PKP **PKPdf** **19 16 14.5 +1.1**
CALA eP **pPKPab** **19 18 02.3 +1.8**
CLL Collm 147.42 347 ePKPdf **PKPdf** **19 16 13.0 +0.1**
CLL i PKiKP **PKPbc** **19 16 16.9 +0.9**
comp=Z,746nm,0.9s
CLL i PKPab **PKPab** **19 16 20.4 +1.1**
comp=Z,2µm,1.5s
CLL i 19 16 23.4
comp=Z,1µm,1.1s
CLL ep PKiKP **pPKiKP** **19 18 03.0 +0.9**
CLL es PKiKP **sPKiKP** **19 18 45.0 -0.2**
CLL es SKPbc **SKiKP** **19 19 15.0 +3.0**
CLL eP **PP** **19 19 45.0 -0.6**
CLL ep PP 19 21 16.0
CLL es PP 19 22 02.0
CLL eP PPP 19 23 02.0
CLL eP PPP 19 25 22.0
CLL i SKKSac **SKKSac** **19 25 53.9 +0.7**
CLL eSKSP 19 29 23.0
CLL e 19 29 47.0
CLL eP SKS 19 30 00.0
CLL eP PPrev 19 30 32.0
CLL e 19 31 58.0
CLL eP PS PS 19 32 35.0
CLL eSS **SS** **19 38 14.0 +2.3**
CLL eSS SSP 19 38 51.0
CLL es SS 19 41 06.0
CLL eS SS SSS 19 43 48.0
CLL e 19 46 48.0
CLL e 19 54 30.0
CLL Collm 147.42 347 ePIKP **PKPdf** **19 16 13.0 +0.1**
CLL i 19 16 16.9
CLL pmax pmax
comp=Z,746nm,0.9s
CLL Collm 147.42 347 ePKPdf **PKPdf** **19 16 12.7 -0.2**
baz=17,slow=1.6
CLL eP PKPbc **PKiKP** **19 16 17.2 -0.6**
baz=15,slow=2.6
MANR Mangalia 147.43 323 ⇑P **PKPdf** **19 16 13.8 +0.7**
OKC Ostrava-Krasne 147.43 341 ePKIKP **PKPdf** **19 16 13.6 +0.7**
OKC e 19 16 17.0
OKC e 19 17 52.5
OKC Ostrava-Krasne 147.43 341 eP PKP **PKPdf** **19 16 13.6 +0.7**
OKC ex x 19 16 17.0
OKC ep PKP **pPKPdf** **19 17 52.5 -5.3**
OKC eSKKP 19 26 57.3
TSMN Mangalia Port- 147.44 323 ⇑P **PKPbc** **19 16 16.2 -0.1**
UPC Upice 147.45 344 ePKP2 **PKiKP** **19 16 17.3 -0.6**
UPC Upice 147.45 344 eP PKP **PKiKP** **19 16 17.3 -0.6**
UPC ep PKP **pPKPdf** **19 17 55.8 -1.9**
YUVA Yuva-Kibriscik 147.48 316 eP **PKPdf** **19 16 13.9 +0.4**
HOR Horta 147.49 48 eP PKP **PKPbc** **19 16 16.7 +0.1**
DPC Dobruska-Polom 147.51 343 ePKP2 **PKPbc** **19 16 17.1 +0.7**
DPC Dobruska-Polom 147.51 343 eP PKP **PKPbc** **19 16 17.1 +0.7**
DPC ep PKP **pPKPdf** **19 17 52.5 -5.3**
DPC eSKKP 19 26 53.5
CHBY Cihanbeyli 147.52 312 eP **PKPdf** **19 16 12.6 -1.0**
PGOR Pogoanele 147.59 326 ⇓P **PKPbc** **19 16 15.5 -1.2**
LANS Liptovska Anna 147.59 339 ePKIKP **PKPdf** **19 16 14.6 +1.3**
LANS e 19 16 19.9
LANS Liptovska Anna 147.59 339 eP PKP **PKPdf** **19 16 14.6 +1.3**
LANS e 19 16 18.3
LANS e 19 16 19.9
MMAI Mount Meron Ar 147.60 301 PKKP **PKKPdf** **19 25 13.1 +1.8**
comp=Z,2.3nm,0.4s,baz=46,slow=4.2,SNR=9.3
AMRR Amara 147.61 325 ⇓P **PKPdf** **19 16 12.2 -1.2**
AMRR Amara 147.61 325 ⇓PKHKP **PKPdf** **19 16 12.2 -1.2**
MCH1 Michaelchurch 147.62 6 eP **PKPdf** **19 16 12.3 -0.9**
PCAN Candelaria 147.62 48 eP PKP **PKPbc** **19 16 16.9 -0.1**
PCAN eP **pPKPab** **19 18 02.3 +1.1**
BRG Berggiesshubel 147.63 346 i PKP **PKPdf** **19 16 13.4 +0.2**
comp=Z,0.4nm,2.0s
BRG Berggiesshubel 147.63 346 i PKP **PKiKP** **19 16 17.5 -0.7**
comp=Z,1.1nm,1.0s
BRG i pPKP **pPKPab** **19 18 04.1 +3.2**
comp=Z,0.5nm,1.4s
BRG SKP 19 19 16.0
comp=Z,1.8nm,2.5s
BRG SKKS 19 25 57.0
BRG SS SS 19 38 59.0 +45
comp=N,19µm,32.0s
comp=E,11µm,24.8s
comp=Z,9µm,31.7s
BRG Berggiesshubel 147.63 346 i PKIKP **PKPdf** **19 16 13.4 +0.2**
BRG i 19 16 17.5
BRG SS SS 19 38 59.0 +45
BRG MLR MLR
comp=E,11µm,24.8s
BRG Berggiesshubel 147.63 346 ePKPdf **PKPdf** **19 16 13.5 +0.2**
baz=17,slow=1.6
BRG eP PKPbc **PKiKP** **19 16 17.9 -0.3**
baz=15,slow=2.6
KRLC Kraliky 147.63 342 ePKIKP **PKPdf** **19 16 13.9 +0.6**
KRLC e 19 16 17.7
KRLC e 19 17 54.7
KRLC Kraliky 147.63 342 eP PKP **PKPdf** **19 16 13.9 +0.6**
KRLC ex x 19 16 17.7
KRLC ep PKP **pPKPdf** **19 17 54.7 -3.6**
KRLC ex x 19 26 55.0
PICO Pico 147.65 48 eP PKP **PKPdf** **19 16 15.2 +1.5**
PICO eP **pPKPab** **19 18 02.7 +1.4**
DOPR Dopca 147.66 329 ⇓P **PKPdf** **19 16 13.9 +0.4**
MORC Moravsky Berou 147.67 341 ePKP **PKPdf** **19 16 13.5 +0.1**
MORC e 19 16 18.3
MORC ep PKP **pPKPab** **19 18 01.5 -0.3**
MORC e 19 25 56.6
MORC e 19 33 04.4
SRBC Serra Branca 147.67 47 ePKP **PKPdf** **19 16 15.0 +1.3**
SRBC eP **pPKPab** **19 18 01.9 +0.5**
SILI Silifke-Mersin 147.67 307 eP **PKPdf** **19 16 13.6 -0.1**
ROSA Rosais 147.68 48 eP PKP **PKPbc** **19 16 17.0 -0.1**
ROSA eP **pPKPab** **19 18 03.4 +2.0**
ICOR Ion Corvin 147.68 324 ⇑P **PKPdf** **19 16 14.1 +0.6**
ISR Istrita 147.68 327 ⇑P **PKPdf** **19 16 12.8 -0.8**
ISR Istrita 147.68 327 ⇑PKIKP **PKPdf** **19 16 12.8 -0.8**
FBE Freiberg 147.71 347 ePKPdf **PKPdf** **19 16 13.8 +0.4**
baz=17,slow=1.6
FBE eP PKPbc **PKiKP** **19 16 18.7 +0.3**
baz=15,slow=2.6
PGRA Graciosa 147.71 47 eP PKP **PKPdf** **19 16 14.4 +0.7**
PGRA eP **pPKPbc** **19 18 00.0 -0.4**
MLR Muntele Rosu 147.72 328 ⇑P **PKPdf** **19 16 15.3 +1.6**
MLR Muntele Rosu 147.72 328 ⇑PKIKP **PKPdf** **19 16 15.3 +1.6**
GTTG Gottingen 147.73 351 ePKPdf **PKPdf** **19 16 13.4 0.0**
baz=17,slow=1.6
GTTG eP PKPbc **PKiKP** **19 16 18.1 -0.4**
baz=15,slow=2.6
MMLI Mount Malkishu 147.74 300 eP **PKPdf** **19 16 14.7 +0.7**
PSN Preselentsi 147.74 323 eP **PKPdf** **19 16 12.7 -0.9**
NEUB Neuenburg 147.76 349 ePKPdf **PKPdf** **19 16 13.5 +0.1**
baz=17,slow=1.6
NEUB eP PKPbc **PKiKP** **19 16 18.3 -0.2**
baz=15,slow=2.6
MDUB Mudurnu 147.76 316 eP **PKPdf** **19 16 13.4 -0.5**
MDUB Mudurnu 147.76 316 **PKPdf** **19 16 13.6 -0.4**
MONM Monmouth 147.79 6 eP **PKPdf** **19 16 12.9 -0.6**
EREN Erenkoy 147.79 306 eP **PKPdf** **19 16 13.6 -0.4**
KECS Kecovo 147.79 337 ePKP2 **PKPbc** **19 16 17.3 +0.2**
KECS Kecovo 147.79 337 eP PKP **PKPbc** **19 16 17.3 +0.2**
KECS e 19 16 19.7
PVCC Panska Ves 147.80 345 ePKIKP **PKPdf** **19 16 14.0 +0.5**
PVCC e 19 16 18.1
PVCC e 19 17 49.1
PVCC Panska Ves 147.80 345 eP PKP **PKPdf** **19 16 14.0 +0.5**
PVCC ex x 19 16 18.1
PVCC ep PKP **pPKPdf** **19 17 49.1 -9.1**
KEBE Keben-Mersin 147.80 308 eP **PKPdf** **19 16 14.2 +0.1**
KRMN Karaman 147.85 309 eP **PKPdf** **19 16 14.2 0.0**
PID Ribeirinha 147.89 48 eP PKP **PKPdf** **19 16 15.8 +1.7**
PID eP **pPKPab** **19 18 03.8 +1.6**

IKL Isikli 147.90 307 eP **PKPdf** **19 16 13.4 -0.7**
STRD Stroud 147.91 5 eP **PKPdf** **19 16 13.2 -0.5**
SECR 147.98 327 ⇑P **PKPdf** **19 16 14.3 +0.3**
OLDB Oldbury-Upon-S 147.99 6 eP **PKPdf** **19 16 13.2 -0.6**
ASCN Ascension 147.99 148 **PKPdf** **19 16 16.4 +1.4**
H10N3 ASCENSION HYDR 148.00 148 PKPbc **PKPbc** **19 16 18.6 +0.3**
baz=197,slow=3.5,SNR=57
H10N1 ASCENSION HYDR 148.01 148 PKPbc **PKPbc** **19 16 18.7 +0.3**
baz=197,slow=3.5,SNR=57
H10N2 ASCENSION HYDR 148.02 148 PKPbc **PKiKP** **19 16 20.4 +0.6**
baz=197,slow=3.5,SNR=44
AKKU Akkuyu-Mersin 148.03 307 eP **PKPdf** **19 16 13.6 -0.7**
LADK Ladik-KONYA 148.06 311 eP **PKPdf** **19 16 13.4 -1.1**
SVRH Sivrihisar-ESK 148.06 314 eP **PKPdf** **19 16 13.9 -0.5**
KIZT Kizilcal 148.08 313 eP **PKPdf** **19 16 13.6 -0.9**
SULR 148.13 327 ⇓P **PKPdf** **19 16 14.9 +0.7**
BUG Bochum--Univer 148.17 354 ePKPdf **PKPdf** **19 16 14.0 0.0**
baz=17,slow=1.6
BUG eP PKPbc **PKiKP** **19 16 19.0 -0.3**
baz=15,slow=2.6
SAUV Serdivan-Sakar 148.18 317 eP **PKPdf** **19 16 14.0 -0.4**
SWN1 Swindon 148.20 5 eP **PKPdf** **19 16 13.7 -0.5**
VOIR 148.20 329 ⇓P **PKPdf** **19 16 13.4 -1.1**
VOIR 148.20 329 ⇓PKIKP **PKPdf** **19 16 13.4 -1.1**
SPNC Sapanca-Adapaz 148.22 317 eP **PKPdf** **19 16 14.0 -0.5**
GULT Gulveren 148.22 317 eP **PKPdf** **19 16 14.4 -0.3**
BATH Bath 148.23 5 eP **PKPdf** **19 16 13.0 -1.2**
PRA Prague 148.26 345 ePKHKP **PKPdf** **19 16 15.5 +1.2**
PRA Prague 148.26 345 ePKP **PKPdf** **19 16 15.5 +1.2**
PRA ex x 19 16 18.6
PRA ep PKP **pPKPdf** **19 17 58.0 -1.0**
ORH Orhaniye 148.28 318 P **PKPab** **19 16 23.5 +0.3**
PRU Pruhonice 148.31 345 ePKP **PKPdf** **19 16 14.2 -0.2**
PRU ex x 19 16 18.4
PRU ep PKP **pPKPdf** **19 17 51.3 -7.8**
PRU ex x 19 26 53.5
MOX Moxa 148.32 349 ePKPdf **PKPdf** **19 16 14.3 -0.1**
baz=17,slow=1.6
MOX eP PKPbc **PKiKP** **19 16 19.7 0.0**
baz=15,slow=2.6
INCR INCERC-Sediu C 148.34 326 ⇑P **PKPdf** **19 16 16.1 +1.5**
MTUR Matau 148.35 328 ⇓P **PKPdf** **19 16 16.3 +1.6**
SRCK Saricakaya, Es 148.35 316 eP **PKPdf** **19 16 13.8 -1.0**
TEKE Tekeli-Mersin 148.37 307 eP **PKPdf** **19 16 13.4 -1.5**
VRAC Vranov 148.37 342 ⇑P **PKPdf** **19 16 14.5 0.0**
VRAC Vranov 148.37 342 ePKP **PKPdf** **19 16 14.1 -0.4**
VRAC e 19 16 18.8
VRAC ep PKP **pPKPbc** **19 18 02.8 +0.4**
VRAC e 19 25 59.1
VRAC e 19 33 00.1
VRAC Vranov 148.37 342 ⇑PKHKP **PKPdf** **19 16 14.5 0.0**
VYHS Vyhne 148.37 339 ePKIKP **PKPdf** **19 16 14.0 -0.5**
VYHS e 19 16 21.1
VYHS Vyhne 148.37 339 eP PKP **PKPdf** **19 16 14.0 -0.5**
VYHS e 19 16 18.7
VYHS e 19 16 21.1
VYHS e 19 18 03.4
PLN Plauen 148.37 348 ePKPdf **PKPdf** **19 16 14.1 -0.3**
baz=17,slow=1.6
PLN eP PKPbc **PKiKP** **19 16 19.8 0.0**
baz=15,slow=2.6
TANN Tannenbergstha 148.38 347 ePKPdf **PKPdf** **19 16 14.6 +0.1**
baz=17,slow=1.6
TANN eP PKPbc **PKiKP** **19 16 20.1 +0.2**
baz=15,slow=2.6
WERD Werda 148.38 348 ePKPdf **PKPdf** **19 16 14.1 -0.4**
baz=17,slow=1.6
WERD eP PKPbc **PKiKP** **19 16 19.9 +0.1**
baz=15,slow=2.6
SILT Sile 148.39 318 eP **PKPdf** **19 16 14.7 -0.1**
ADH Angra Heroismo 148.40 47 ePKP **PKPbc** **19 16 17.4 -1.6**
ADH eP **pPKPab** **19 18 04.5 +0.3**
CIFT Cifteler, Eski 148.41 314 eP **PKPdf** **19 16 14.4 -0.6**
HTL Hartland 148.43 8 eP **PKPdf** **19 16 14.1 -0.4**
UBBA Unterbreizbach 148.43 350 ePKPdf **PKPdf** **19 16 14.4 0.0**
baz=17,slow=1.6
UBBA eP PKPbc **PKiKP** **19 16 19.8 0.0**
baz=15,slow=2.6
JAVC Velka Javorina 148.44 340 ePKP **PKPdf** **19 16 15.6 +0.9**
JAVC e 19 16 20.3
JAVC e 19 26 01.3
WOL Wolverton 148.44 4 eP **PKPdf** **19 16 14.0 -0.5**
GUNZ Gunzen 148.45 348 ePKPbc **PKiKP** **19 16 20.3 +0.3**
baz=15,slow=2.6
PSCM Serra do Cume 148.46 47 ePKP **PKPdf** **19 16 16.8 +1.8**
PSCM eP **pPKPab** **19 18 04.9 +0.4**
PSZ Piszkesteto 148.48 337 ⇑P **PKPdf** **19 16 14.0 -0.8**
PSZ Piszkesteto 148.48 337 ⇑PKIKP **PKPdf** **19 16 14.0 -0.8**
PRD Provadia 148.49 323 eP **PKPdf** **19 16 15.0 +0.2**
WERN Wernitzgruen 148.52 347 ePKPdf **PKPdf** **19 16 15.1 +0.4**
baz=17,slow=1.6
WERN eP PKPbc **PKiKP** **19 16 20.5 +0.4**
baz=15,slow=2.6
NKC Novy Kostel 148.55 347 ePKP **PKPdf** **19 16 15.1 +0.3**
NKC ex x 19 16 19.8
NKC ep PKP **pPKPdf** **19 17 53.6 -6.0**
NKC ex x 19 26 46.8
CSS Mathiatis 148.63 305 eP **PKPdf** **19 16 15.0 -0.4**
KRUC Moravsky 148.65 342 ePKP **PKPdf** **19 16 14.8 -0.2**
KRUC e 19 16 19.5
KRUC ep PKP **pPKPbc** **19 18 03.1 -0.1**
KRUC e 19 25 59.7
KRUC e 19 32 57.9
TREC Trest 148.70 343 ePKP **PKPdf** **19 16 15.7 +0.6**
TREC ex x 19 16 19.2
TREC ep PKP **pPKPdf** **19 17 55.8 -4.0**
KLYT Kilyos 148.70 319 eP **PKPdf** **19 16 14.0 -1.2**
ELSH Elham, Standar 148.71 1 eP **PKPdf** **19 16 15.2 +0.3**
PBCC Pribram 148.72 345 ePKP **PKPdf** **19 16 15.4 +0.3**
PBCC ex x 19 16 19.6
PBCC ep PKP **pPKPdf** **19 17 55.8 -4.0**
ADVT Abdulvahap 148.72 317 eP **PKPdf** **19 16 14.2 -1.1**
EIL Elat 148.74 295 eP **PKPdf** **19 16 14.2 -1.5**
RAZG Razgrad 148.75 325 ⇓P **PKPdf** **19 16 14.6 -0.7**
CAVI Cavuskoy 148.78 317 eP **PKPdf** **19 16 17.3 +1.8**
SEYD Seydisehir-KON 148.78 310 eP **PKPdf** **19 16 15.3 -0.4**
ISK Istanbul-Kandi 148.80 319 eP **PKPdf** **19 16 14.7 -0.7**
ISK Istanbul-Kandi 148.80 319 P **PKPdf** **19 16 14.3 -1.1**
KAVV Kandilli-Istan 148.80 319 eP **PKPdf** **19 16 14.2 -1.2**
LOT Lotru 148.81 330 eP **PKPdf** **19 16 15.1 -0.4**
SMOL Smolenice 148.82 340 ePKHKP **PKPdf** **19 16 15.9 +0.6**
SMOL Smolenice 148.82 340 ePKP **PKPdf** **19 16 14.9 +0.6**
SMOL e 19 16 20.9
MANZ Manzenberg 148.86 348 ePKPdf **PKPdf** **19 16 15.2 -0.1**
baz=17,slow=1.6
MANZ eP PKPbc **PKiKP** **19 16 21.2 +0.3**
baz=15,slow=2.6
DEV Deva 148.88 331 ⇑P **PKPdf** **19 16 14.4 -1.0**
DEV Deva 148.88 331 ⇑PKIKP **PKPdf** **19 16 14.4 -1.0**
HUMR Humele 148.89 328 ⇑P **PKPdf** **19 16 14.6 -0.9**
BGKT Bogazkoy 148.91 319 eP **PKPdf** **19 16 12.5 -3.1**
GAZI Gazipasa 148.92 308 eP **PKPdf** **19 16 14.5 -1.3**
BEBN Eben Emael 148.95 356 PKPdf **PKPdf** **19 16 15.3 -0.1**
HMNX Herstmonceux 148.97 2 eP **PKPdf** **19 16 15.4 +0.1**
TRML Termal-Yalova 148.99 318 eP **PKPdf** **19 16 14.0 -1.7**
MODS Modra-Piesok 148.99 340 ePKIKP **PKPdf** **19 16 14.9 -0.7**
MODS Modra-Piesok 148.99 340 ePKP **PKPdf** **19 16 14.9 -0.7**
MODS e 19 16 20.5
MODS e 19 18 04.4
UCC Uccle 149.02 357 PKPdf **PKPdf** **19 16 15.5 0.0**
UCC PKiKP **PKPbc** **19 16 20.4 +0.3**
CTYL Yalikoy Yolu 149.03 320 eP **PKPdf** **19 16 14.9 -0.9**
COPA Copaceanca 149.04 327 ⇑P **PKPdf** **19 16 15.3 -0.4**
CTKS Kestanelik-??a 149.04 319 eP **PKPdf** **19 16 14.4 -1.4**
ROTZ Rotzenmuhle 149.04 347 ePKPdf **PKPdf** **19 16 15.4 -0.2**
baz=17,slow=1.6
ROTZ eP PKPbc **PKiKP** **19 16 21.4 +0.2**
baz=15,slow=2.6
AHRW Bad Neuenahr-A 149.08 354 ePKPdf **PKPdf** **19 16 15.7 +0.2**
baz=17,slow=1.6
AHRW eP PKPbc **PKiKP** **19 16 21.3 0.0**
baz=15,slow=2.6
MEM Membach 149.11 355 PKPdf **PKPdf** **19 16 15.6 0.0**
MEM PKiKP **PKiKP** **19 16 21.0 -0.3**
CCA1 Carnmenellis 149.12 9 eP **PKPdf** **19 16 15.4 -0.2**
BTNL Ternell 149.12 355 PKPdf **PKPdf** **19 16 15.4 -0.3**
SIRR Siria 149.13 333 ⇓P **PKPdf** **19 16 15.5 -0.3**
SRO Srobarova 149.14 339 ePKP **PKPdf** **19 16 16.9 +1.2**
SRO e 19 16 21.5
SHUT Suhut-Afyon 149.15 313 eP **PKPdf** **19 16 16.1 -0.2**
BSTI Sart Tilman 149.17 356 PKPdf **PKPdf** **19 16 15.9 +0.2**
BSTI PKiKP **PKiKP** **19 16 21.3 -0.1**

ARMT Armutlu 149.21 318 eP **PKPdf** **19 16 13.4 -2.7**
SLVT Silivri 149.23 320 eP **PKPdf** **19 16 15.1 -1.0**
TNS Taunus Mts 149.24 352 ePKPdf **PKPdf** **19 16 15.9 0.0**
baz=17,slow=1.6
TNS eP PKPbc **PKiKP** **19 16 21.9 +0.2**
baz=15,slow=2.6
SZH Strazhica 149.26 325 eP **PKPdf** **19 16 15.9 -0.2**
ZIMR 149.29 326 ⇓P **PKiKP** **19 16 22.0 +0.1**
ZIMR 149.29 326 ⇓PKP2 **PKiKP** **19 16 22.0 +0.1**
MDNY Mudanya-Bursa 149.30 318 eP **PKPdf** **19 16 14.9 -1.3**
GRF Grafenberg Arr 149.31 348 ePKPdf **PKPdf** **19 16 16.0 -0.1**
baz=17,slow=1.6
GRF eP PKPbc **PKiKP** **19 16 22.4 +0.6**
baz=15,slow=2.6
SNF Seneffe 149.31 357 PKPdf **PKPdf** **19 16 16.1 +0.1**
SNF PKiKP **PKiKP** **19 16 21.6 -0.1**
KHC Kasperske Hory 149.34 345 ePKP **PKPdf** **19 16 16.7 +0.6**
KHC ex x 19 16 22.0
KHC ep PKP **pPKPdf** **19 17 58.9 -2.0**
KHC ex x 19 18 06.0
KHC eSKP 19 19 08.0
KHC ex x 19 26 46.1
BCLA Clavier 149.35 356 PKPdf **PKPdf** **19 16 15.6 -0.4**
BHOU Houvegnez 149.36 355 PKPdf **PKPdf** **19 16 16.5 +0.4**
BHOU PKiKP **PKiKP** **19 16 21.5 -0.4**
BGES Gesves 149.40 356 PKPdf **PKPdf** **19 16 15.9 -0.2**
BGES PKiKP **PKiKP** **19 16 21.6 -0.3**
PHSR Pinarhisar 149.40 321 eP **PKPdf** **19 16 14.2 -2.2**
JMB Yambol 149.42 323 eP **PKPdf** **19 16 16.2 -0.2**
TVSB Tavsanli 149.43 316 eP **PKPdf** **19 16 16.1 -0.5**
WET Wettzell 149.49 346 ePKPdf **PKPdf** **19 16 15.8 -0.5**
baz=17,slow=1.6
WET eP PKPbc **PKiKP** **19 16 22.6 +0.4**
baz=15,slow=2.6
BMRD Maredsous 149.50 357 PKPdf **PKPdf** **19 16 16.3 +0.1**
BMRD PKiKP **PKiKP** **19 16 22.2 +0.1**
ISP Isparta 149.52 312 eP **PKPdf** **19 16 15.9 -0.9**
GEC2 GERESS Array S 149.57 345 ePKPdf **PKPdf** **19 16 16.3 -0.3**
baz=17,slow=1.6
GEC2 eP PKPbc **PKiKP** **19 16 22.7 +0.3**
baz=15,slow=2.6
GERES GERESS Array B 149.57 345 PKPbc **PKiKP** **19 16 22.4 -0.1**
comp=E,344nm,0.9s,baz=29,slow=1.6,SNR=141
GERES PKKP **PKKPdf** **19 25 04.0 -3.5**
comp=E,2.0nm,0.8s,baz=142,slow=2.2,SNR=4.0
GERES SKKPbc 19 26 45.6
comp=E,5.7nm,0.8s,baz=166,slow=5.0,SNR=4.0
CRLT Corlu 149.57 320 eP **PKPdf** **19 16 16.1 -0.6**
PVL Pavlikeni 149.61 325 eP **PKPdf** **19 16 16.9 +0.3**
RCHB Rochefort 149.62 356 PKPdf **PKPdf** **19 16 16.6 +0.2**
BCK Bucak 149.64 311 eP **PKPdf** **19 16 15.8 -1.2**
SRE Strehaia 149.66 330 ⇓P **PKPdf** **19 16 17.1 +0.4**
GEDZ Gediz 149.68 315 eP **PKPdf** **19 16 16.1 -0.9**
DOU Dourbes 149.71 357 PKPdf **PKPdf** **19 16 16.5 -0.1**
DOU PKiKP **PKiKP** **19 16 22.5 -0.1**
EDRB Edirne 149.72 322 eP **PKPdf** **19 16 15.7 -1.2**
EDRB Edirne 149.72 322 P **PKPdf** **19 16 15.4 -1.5**
TIM Timisoara 149.73 333 ⇓P **PKPdf** **19 16 17.7 +0.9**
BASM Basmaki-Afyon 149.81 313 eP **PKPbc** **19 16 22.3 -0.2**
CONA Conrad Observa 149.82 342 eP **PKPdf** **19 16 16.8 -0.1**
comp=E,2µm,3.2s,SNR=39
CONA eP **PKiKP** **19 16 23.1 +0.1**
comp=E,4µm,2.4s
CONA eP **pPKPab** **19 18 10.6 +0.2**
comp=E,460nm,1.3s
PSET Sete Cidades 149.85 48 ePKP **PKPdf** **19 16 19.1 +1.8**
PSET eP **pPKPbc** **19 18 06.8 +0.5**
HERR Herculane 149.87 331 ⇑P **PKPdf** **19 16 16.3 -0.7**
SIMA Simav-Kutahya 149.94 316 eP **PKPbc** **19 16 22.7 -0.1**
EDC Edincik 149.96 319 eP **PKPdf** **19 16 15.7 -1.6**
MRMT Marmara Adasi 149.97 319 eP **PKPdf** **19 16 16.7 -0.7**
GRON Grota Negra 150.00 47 ePKP **PKPdf** **19 16 18.8 +1.3**
GRON eP **pPKPbc** **19 18 07.5 +0.8**
CMLA Cha da Macela 150.01 47 ePKP **PKPdf** **19 16 19.5 +2.0**
CMLA eP **pPKPbc** **19 18 06.0 -0.7**
CMLA Cha da Macela 150.01 47 **PKPdf** **19 16 18.7 +1.2**
PCALD Caldeiras da R 150.02 47 ePKP **PKPdf** **19 16 19.1 +1.6**
PCALD eP **pPKPbc** **19 18 05.3 -1.4**
KORT Korkueli 150.02 311 eP **PKPdf** **19 16 17.1 -0.6**
WLF Walferdange 150.03 355 PKPdf **PKPdf** **19 16 16.7 -0.5**
WLF Walferdange 150.03 355 ePKPdf **PKPdf** **19 16 17.4 +0.3**
baz=17,slow=1.6
WLF eP PKPbc **PKiKP** **19 16 24.2 +1.0**
baz=15,slow=2.6
BANR Banloc 150.05 333 ⇓P **PKPdf** **19 16 17.0 -0.2**
GZKV Gazikoy-Tekird 150.05 320 eP **PKPdf** **19 16 16.3 -1.1**
BAIL Bailesti 150.07 329 ⇑P **PKPdf** **19 16 17.8 +0.4**
MAR3 Marsite Statio 150.07 320 eP **PKPdf** **19 16 15.7 -1.8**
MAR2 Marsite Statio 150.08 320 eP **PKPdf** **19 16 16.9 -0.5**
RKY Sarkoy-Tekirda 150.18 320 eP **PKPdf** **19 16 16.7 -1.0**
UKOP Uzunkopru-Edir 150.24 321 eP **PKPdf** **19 16 17.1 -0.6**
BART Pico Bartolome 150.25 47 ePKP **PKPdf** **19 16 16.2 -1.8**
BART eP **pPKPbc** **19 18 05.7 -1.6**
MDVR Moldovita 150.27 331 ⇓P **PKPdf** **19 16 15.8 -1.9**
MOA Molln 150.35 343 eP **PKPdf** **19 16 17.5 -0.2**
comp=E,2µm,3.5s,SNR=37
MOA eP **PKPbc** **19 16 23.5 +0.1**
comp=E,3µm,2.5s
MOA P **pPKPab** **19 18 10.8 -1.3**
comp=E,162nm,1.1s
MOA eP **PP** **19 20 02.6 +0.1**
comp=E,44nm,1.1s
BALB Balikesir 150.35 317 eP **PKPdf** **19 16 16.5 -1.4**
KULA Kula-Manisa 150.45 315 eP **PKPdf** **19 16 17.5 -0.7**
ELL Elmali 150.45 311 eP **PKPdf** **19 16 17.8 -0.6**
JSA Saint Aubin 150.48 6 eP **PKPdf** **19 16 17.7 -0.1**
ARSA Arzberg 150.53 341 eP **PKPdf** **19 16 17.2 -0.8**
comp=E,2µm,3.3s,SNR=32
ARSA eP **PKPbc** **19 16 23.8 -0.1**
comp=E,3µm,2.9s
ARSA eP **pPKPab** **19 18 13.2 +0.1**
comp=E,136nm,1.4s
STU Stuttgart 150.55 351 ePKPdf **PKPdf** **19 16 18.0 0.0**
baz=17,slow=1.6
STU eP PKPbc **PKiKP** **19 16 24.9 +0.5**
baz=15,slow=2.6
ERIK Erikli-Kesan 150.59 320 eP **PKPdf** **19 16 16.7 -1.5**
KDZ Kurdzhali 150.61 323 eP **PKPdf** **19 16 16.5 -1.8**
KDZ Kurdzhali 150.61 323 eP **PKPdf** **19 16 17.2 -1.1**
LPK Lapseki 150.62 320 eP **PKPdf** **19 16 16.3 -2.0**
PSMA Santa Maria 150.66 49 ePKP **PKPdf** **19 16 19.3 +0.8**
PSMA eP **pPKPbc** **19 18 08.7 +0.4**
PGB Panagyurishte 150.69 326 eP **PKPdf** **19 16 17.9 -0.6**
PSMN Pico do Norte, 150.70 48 ePKP **PKPdf** **19 16 19.6 +1.0**
PSMN eP **pPKPdf** **19 18 03.8 +0.4**
PLD Plovdiv 150.71 324 eP **PKPdf** **19 16 17.1 -1.3**
PLD Plovdiv 150.71 324 eP **PKPdf** **19 16 17.6 -0.8**
ALN Alexandroupoli 150.73 321 eP **PKPdf** **19 16 17.4 -1.1**
ALN Alexandroupoli 150.73 321 PKIKP **PKPdf** **19 16 17.7 -0.7**
ALN Alexandroupoli 150.73 321 **PKPdf** **19 16 17.7 -0.7**
ALN Alexandroupoli 150.73 321 P **PKPdf** **19 16 16.8 -1.6**
FUR Furstenfeldbru 150.76 347 ePKPdf **PKPdf** **19 16 18.1 -0.2**
baz=17,slow=1.6
FUR eP PKPbc **PKiKP** **19 16 25.4 +0.6**
baz=15,slow=2.6
ENEZ Enez 150.76 321 eP **PKPdf** **19 16 17.3 -1.2**
ENEZ Enez 150.76 321 P **PKPdf** **19 16 17.5 -1.0**
GELI Tayfur-Gelibol 150.78 320 eP **PKPdf** **19 16 16.9 -1.6**
FRGS Fruska Gora 150.79 334 ⇑P **PKPdf** **19 16 17.9 -0.6**
CAME Cameli-Denizli 150.79 312 eP **PKiKP** **19 16 26.1 +0.7**
BEHE Becsehely 150.82 339 ⇑P **PKPdf** **19 16 21.0 +2.6**
RJOB Jochberg 150.83 345 ePKPdf **PKPdf** **19 16 16.6 -1.9**
baz=17,slow=1.6
RJOB eP PKPbc **PKiKP** **19 16 24.4 -0.2**
baz=15,slow=2.6
RDO Rodhopi 150.87 322 eP **PKPdf** **19 16 18.1 -0.6**
RDO Rodhopi 150.87 322 P **PKPdf** **19 16 17.7 -1.0**
AKAS Kas 150.91 310 eP **PKPdf** **19 16 17.3 -1.8**
KSL Kastellorizon 150.96 310 P **PKPdf** **19 16 17.8 -1.2**
RZN Rozhen 150.98 324 eP **PKPdf** **19 16 18.5 -0.6**
KOGS Kog 151.02 340 i PKPdf **PKPdf** **19 16 17.9 -0.9**
KOGS i PKPbc **PKPbc** **19 16 24.5 -0.5**
KOGS i PKPab **PKPab** **19 16 36.4 +2.1**
KOGS epPKPdf **pPKPdf** **19 18 02.9 -1.0**
KOGS eP PP **PP** **19 20 00.8 -5.5**
KOGS epPP 19 21 41.7
KOGS e 19 23 29.1
KOGS eSKKSac SKKSac 19 26 08.5 -4.8
KOGS e 19 27 00.6
KOGS e 19 29 42.0
KOGS e 19 30 24.8
KOGS e 19 32 38.0

KOGS e 19 39 40.2
FETY Fethiye 151.09 311 eP **PKPdf** 19 16 15.9 -3.3
FETY Fethiye 151.09 311 P **PKPdf** 19 16 17.9 -1.3
BFO Black Forest 151.11 351 PKIKP **PKPdf** 19 16 18.0 -0.8
BFO Black Forest 151.11 351 ePKPdf **PKPdf** 19 16 18.5 -0.3
baz=17,slow=1.6
BFO ePKPbc **PKiKP** 19 16 26.1 +0.5
baz=15,slow=2.6
BFO Black Forest 151.11 351 **PKPdf** 19 16 18.0 -0.8
VTS Vitosha 151.14 327 eP **PKPdf** 19 16 18.6 -0.6
SOKA Soboth 151.19 341 eP **PKPdf** 19 16 18.5 -0.6
comp=E,2µm,3.3s,SNR=48
SOKA i P **PKPbc** 19 16 24.9 -0.5
comp=E,836nm,1.6s
SOKA eP **pPKPbc** 19 18 10.7 +0.9
comp=E,170nm,1.3s
SOKA eP **PP** 19 20 08.3 +0.8
comp=E,152nm,1.5s
EZN Ezine 151.22 319 eP **PKPdf** 19 16 18.6 -0.6
EZN Ezine 151.22 319 P **PKPdf** 19 16 18.2 -1.0
KALN Kalnik 151.23 339 ePn **PKPbc** 19 16 25.6 0.0
GADA Gvkgeada 151.25 320 eP **PKPdf** 19 16 17.1 -2.2
GADA Gvkgeada 151.25 320 P **PKPdf** 19 16 17.9 -1.4
AYDB Zeytinkoy-Aydi 151.26 314 eP **PKPdf** 19 16 19.0 -0.6
DKL Dikili 151.29 317 eP **PKPdf** 19 16 16.5 -2.9
KBA Koelnbreinsper 151.30 344 eP **PKPdf** 19 16 18.6 -0.8
comp=E,2µm,3.3s,SNR=63
KBA eP **PKPbc** 19 16 24.8 -1.0
comp=E,604nm,1.1s
KBA eP **pPKPab** 19 18 14.2 -2.0
comp=E,95nm,0.9s
KBA P **PP** 19 20 10.6 +2.5
comp=E,144nm,1.6s
SMTH Samothraki Isl 151.30 321 P **PKPdf** 19 16 17.3 -2.1
DALY Dalyan (Mula) 151.31 312 eP **PKPdf** 19 16 18.5 -0.9
BOZC Bozcaada 151.37 319 eP **PKPdf** 19 16 17.9 -1.6
TEKS Tekeris 151.40 334⇑ *i*P **PKPdf** 19 16 19.3 -0.1
YER Yerkesik 151.41 313 eP **PKPdf** 19 16 19.0 -0.7
YER Yerkesik 151.41 313 P **PKPdf** 19 16 18.1 -1.6
UBR Ueberruh 151.45 349 ePKPdf **PKPdf** 19 16 19.0 -0.5
baz=17,slow=1.6
WATA Walderalm 151.48 347 eP **PKPdf** 19 16 19.3 -0.3
comp=E,2µm,3.2s,SNR=49
WATA eP **PKPbc** 19 16 25.5 -0.7
comp=E,838nm,1.4s
WATA P **pPKPbc** 19 18 10.1 -0.2
comp=E,165nm,1.4s
WATA eP **PP** 19 20 08.5 -0.5
comp=E,223nm,1.8s
OBKA Obir 151.49 342 eP **PKPdf** 19 16 18.8 -0.8
comp=E,2µm,3.5s,SNR=16
OBKA eP **PKPbc** 19 16 25.1 -1.1
comp=E,1µm,2.5s
OBKA P **pPKPab** 19 18 13.8 -3.3
comp=E,118nm,1.5s
OBKA eP **PP** 19 20 10.2 +1.1
comp=E,60nm,1.2s
RETA Reutte 151.51 348 eP **PKPdf** 19 16 19.3 -0.2
comp=E,2µm,3.2s,SNR=40
RETA eP **PKPbc** 19 16 26.0 -0.1
comp=E,2µm,2.5s
RETA eP **pPKPbc** 19 18 13.4 +3.1
comp=E,149nm,1.1s
RETA eP **PP** 19 20 07.6 -1.5
comp=E,85nm,1.2s
WTTA Wattenberg 151.54 346 eP **PKPdf** 19 16 19.6 -0.1
comp=E,3µm,3.2s,SNR=68
WTTA eP **PKPbc** 19 16 25.1 -1.3
comp=E,788nm,1.3s
WTTA eP **pPKPbc** 19 18 10.4 -0.2
comp=E,322nm,1.3s
KAVA Kavala 151.55 323 P **PKPdf** 19 16 18.6 -1.1
DIVS Divibare 151.57 332⇑ *i*P **PKPdf** 19 16 19.3 -0.5
MOSL Moslavina 151.58 338 ePn **PKPbc** 19 16 26.4 +0.1
MOTA Moosalm 151.58 347 eP **PKPdf** 19 16 19.4 -0.4
comp=E,2µm,3.4s,SNR=61
MOTA eP **PKPbc** 19 16 26.3 -0.1
comp=E,3µm,2.7s
MOTA eP **pPKPbc** 19 18 10.4 -0.2
comp=E,238nm,1.1s
PTJ Puntijarka 151.59 340 ePn **PKiKP** 19 16 27.2 +0.5
MMB Musomiste 151.59 325 eP **PKPdf** 19 16 18.7 -1.1
PRK Paraskevi 151.59 318 P **PKPdf** 19 16 19.3 -0.5
TURN Turunc 151.62 312 eP **PKPdf** 19 16 19.1 -0.8
MYKA Terra Mystica 151.64 343 eP **PKPdf** 19 16 19.0 -0.8
comp=E,1µm,3.3s,SNR=37
MYKA eP **PKPbc** 19 16 25.4 -1.0
comp=E,408nm,0.9s
MYKA eP **pPKPbc** 19 18 11.3 +0.8
comp=E,180nm,1.3s
MYKA eP **PP** 19 20 10.6 +0.7
comp=E,60nm,1.2s
ZAG Zagreb 151.65 339⇑ *i*P **PKPdf** 19 16 19.8 +0.1
SQTA Sankt Quirin 151.67 347 eP **PKPdf** 19 16 19.7 -0.1
comp=E,2µm,3.3s,SNR=47
SQTA *i* P **PKPbc** 19 16 26.6 0.0
comp=E,3µm,2.7s
SQTA eP **pPKPbc** 19 18 10.2 -0.6
comp=E,197nm,1.3s
SQTA eP **PP** 19 20 06.0 -4.1
comp=E,134nm,1.5s
MLSB Milas 151.68 313 eP **PKPdf** 19 16 19.9 -0.2
NVR Nevrokopi 151.68 324 P **PKPdf** 19 16 18.3 -1.7
THAS Thassos island 151.69 322 P **PKPdf** 19 16 18.1 -1.8
KKB Krupnik 151.75 326 eP **PKPdf** 19 16 19.2 -0.8
ABTA Abfaltersbach 151.82 345 eP **PKPdf** 19 16 19.4 -0.7
comp=E,2µm,3.4s,SNR=94
ABTA *i* P **PKPbc** 19 16 25.5 -1.4
comp=E,487nm,0.8s
ABTA P **pPKPbc** 19 18 13.4 +2.4
comp=E,230nm,1.1s
CRES Cresnjev 151.83 340⇑ *i*P **PKPdf** 19 16 19.7 -0.3
GCAM G?zelcaml? 151.84 315 eP **PKPdf** 19 16 18.9 -1.3
LIA Limnos Island 151.87 320 P **PKPdf** 19 16 18.7 -1.5
DAVA Damuels 151.87 349 eP **PKPdf** 19 16 20.1 -0.1
comp=E,2µm,3.5s,SNR=33
DAVA eP **PKPbc** 19 16 26.6 -0.5
comp=E,2µm,2.7s
DAVA eP **pPKPbc** 19 18 11.2 +0.2
comp=E,279nm,1.2s
SIGR SIGRI 151.87 319 eP **PKPdf** 19 16 18.7 -1.5
SIGR SIGRI 151.87 319 P **PKPdf** 19 16 18.8 -1.5
URLA Izmir 151.90 316 eP **PKPdf** 19 16 19.7 -0.7
LJU Ljubljana 151.92 342 *i* PKPdf **PKPdf** 19 16 19.8 -0.3
LJU *i* PKPbc **PKPbc** 19 16 27.1 +0.1
LJU *i* PKPab **PKPab** 19 16 39.8 +1.7
LJU epPKPdf **pPKPdf** 19 18 03.9 -1.1
LJU epPKPbc **pPKPbc** 19 18 10.2 -0.8
LJU epPKPab **pPKPab** 19 18 20.2 +1.5
LJU *i* 19 18 41.7
LJU esPKPab **sPKPab** 19 19 01.3 -1.6
LJU ePP PP 19 20 03.5 -7.9
LJU epPP 19 21 46.4
LJU esPP 19 22 37.8
LJU eSKKSac SKKSac 19 26 14.5 -3.8
LJU Ljubljana 151.92 342⇑ *i*P **PKPdf** 19 16 19.7 -0.4
FETA Feichten 151.96 347 eP **PKPdf** 19 16 20.2 -0.1
comp=E,2µm,3.4s,SNR=99
FETA eP **PKPbc** 19 16 26.2 -1.1
comp=E,2µm,2.5s
FETA eP **pPKPab** 19 18 17.9 -0.8
comp=E,309nm,1.1s
ARG Arkhangelos 151.97 311 eP **PKPdf** 19 16 18.9 -1.6
ARG Arkhangelos 151.97 311 P **PKPdf** 19 16 19.2 -1.3
SRS Serrai 151.99 324 P **PKPdf** 19 16 17.3 -3.1
BBLS Lazići 152.01 333⇑ *i*P **PKPdf** 19 16 20.0 -0.4
OZLJ Ozalj 152.01 340 ePn **PKiKP** 19 16 27.6 +0.2
HAPS Han Pijesak,BI 152.02 334 eP **PKPdf** 19 16 19.8 -0.7
SMG Samos 152.10 315 P **PKPdf** 19 16 19.3 -1.4
BODT Bodrum 152.12 313 eP **PKPdf** 19 16 18.7 -2.0
BODT Bodrum 152.12 313 P **PKPdf** 19 16 19.2 -1.5
BLY Banja Luka 152.17 337⇑ *i*P **PKPdf** 19 16 20.2 -0.3
BOJS Bojanci 152.18 340 *i* PKPdf **PKPdf** 19 16 20.2 -0.3
BOJS eSKKSac SKKSac 19 26 17.4 -2.2
RUDO Rudo 152.22 333 eP **PKPbc** 19 16 27.4 -0.4
CEY Cerknica 152.22 341⇑ *i*P **PKPdf** 19 16 20.3 -0.3
CIMO Cimolais 152.25 345 **PKPdf** 19 16 19.0 -1.6
OUR Ouranopolis 152.29 322 eP **PKPdf** 19 16 18.9 -1.9
OUR Ouranopolis 152.29 322 P **PKPdf** 19 16 19.0 -1.9
SOH Sokhos 152.32 324 P **PKPdf** 19 16 18.8 -2.1
KNT Kendrikon 152.34 325 eP **PKPdf** 19 16 19.1 -1.8
KNT Kendrikon 152.34 325 P **PKPdf** 19 16 19.4 -1.5
STIP Stip 152.34 326 *i* P **PKPdf** 19 16 19.5 -1.4
DAVOX Davos/Dischmat 152.36 349 PKPbc **PKiKP** 19 16 28.7 +0.3
comp=E,342nm,0.7s,baz=262,slow=5.7,SNR=45
PLE Pljevlja 152.44 332⇑ *i*PKP **PKPdf** 19 16 19.6 -1.5
comp=E,177nm,0.4s
NIS1 Nisyros Isl. 152.45 313 eP **PKPdf** 19 16 19.9 -1.3
NIS1 Nisyros Isl. 152.45 313 P **PKPdf** 19 16 19.4 -1.8
KOSK Kos Island 152.51 313 P **PKPdf** 19 16 18.1 -3.1
SKO Skopje 152.52 328 *i* P **PKPdf** 19 16 20.6 -0.5
PLG Polygyros 152.57 323 P **PKPdf** 19 16 19.5 -1.8
IVA Berane 152.58 331⇑ *i*PKP **PKPdf** 19 16 20.5 -0.8
RIY Rijeka 152.58 341⇑ *i*P **PKPdf** 19 16 20.5 -0.6
RIY Rijeka 152.58 341 ePn **PKiKP** 19 16 29.4 +0.8
HORT Hortiatis 152.62 324 eP **PKPdf** 19 16 18.7 -2.7
HORT Hortiatis 152.62 324 P **PKPdf** 19 16 19.5 -1.9
THE Thessaloniki 152.67 324 P **PKPdf** 19 16 19.1 -2.2
PAIG Paliouri 152.74 322 P **PKPdf** 19 16 19.4 -2.1
UPM Unac-Piva 152.75 333⇑ *i*PKP **PKPdf** 19 16 20.4 -1.3
UPM Unac-Piva 152.75 333 eP **PKPbc** 19 16 28.2 -1.0
KOME Kolasin 152.77 331⇓ *i*PKP **PKPdf** 19 16 21.0 -0.6
UDBI Udbina 152.87 338 ePn **PKiKP** 19 16 29.5 +0.1
KARP Karpathos 152.98 311 eP **PKPdf** 19 16 21.1 -0.9
KARP Karpathos 152.98 311 P **PKPdf** 19 16 20.9 -1.1
NKY Niksic 153.03 332⇑ *i*PKP **PKPdf** 19 16 21.1 -0.9
NKME Niksic 153.08 332⇑ *i*PKP **PKPdf** 19 16 20.9 -1.1
KIJV Kijevo 153.09 337 ePn **PKiKP** 19 16 29.9 +0.1
AOS Alonnisos 153.11 321 eP **PKPdf** 19 16 20.3 -1.7
NVLJ Novalja 153.14 340 ePn **PKPbc** 19 16 29.6 0.0
BRY Bratogost 153.16 333⇑ *i*PKP **PKPdf** 19 16 20.8 -1.4
BRY Bratogost 153.16 333 eP **PKPdf** 19 16 20.9 -1.3
AMGA Kinorgos Island 153.20 314 P **PKPdf** 19 16 20.6 -1.7
PDG Podgorica 153.22 331⇑ P **PKPdf** 19 16 21.4 -0.7
PDG Podgorica 153.22 331⇑ *i*P **PKPdf** 19 16 21.2 -0.9
TTG Podgorica 153.22 331⇑ *i*PKP **PKPdf** 19 16 21.0 -1.1
PHP Peshkopia 153.23 329 P **PKPdf** 19 16 21.0 -1.2
RICI Ricice 153.25 335 ePn **PKPbc** 19 16 30.0 -0.1
CEME Cevo 153.28 332⇓ *i*PKP **PKPdf** 19 16 21.4 -0.9
LIT Litokhoron 153.30 324 P **PKPdf** 19 16 20.4 -1.9
KTI Kastanea 153.30 325 P **PKPdf** 19 16 20.8 -1.7
APE Apeiranthos 153.32 315 eP **PKPdf** 19 16 20.5 -2.0
TREB Trebinje 153.39 333 eP **PKPbc** 19 16 28.4 -1.9
XOR Xorichti 153.39 322 P **PKPdf** 19 16 20.1 -2.4
NEO Neokhori 153.41 321 P **PKPdf** 19 16 20.4 -2.1
DRME Dracevica, Mon 153.44 331⇓ *i*PKP **PKPdf** 19 16 21.5 -0.9
DRME Dracevica, Mon 153.44 331⇑ *i*P **PKPdf** 19 16 21.7 -0.7
MORI Morici 153.47 338 ePn **PKPbc** 19 16 30.4 0.0
MAKA Makarska 153.47 335 ePn **PKPbc** 19 16 30.2 -0.2
OHR Ohrid 153.48 327 *i* P **PKPdf** 19 16 22.2 -0.4
BUM Brajici-Budva 153.48 331⇓ *i*PKP **PKPdf** 19 16 21.8 -0.8
STON Stojici 153.54 334 ePn **PKPbc** 19 16 30.2 -0.4
ANAF Anafi Island 153.54 313 P **PKPdf** 19 16 21.1 -1.7
HCY Herceg Novi 153.54 332⇓ *i*PKP **PKPdf** 19 16 22.0 -0.6
HCY Herceg Novi 153.54 332 eP **PKPdf** 19 16 21.9 -0.6
KZN Kozani 153.55 325 P **PKPdf** 19 16 21.3 -1.5
DUGI Dugi Otok 153.58 339 ePn **PKiKP** 19 16 30.8 +0.1
ULC Ulcinj 153.59 331⇓ *i*PKP **PKPdf** 19 16 21.9 -0.8
THT2 Imerovigli 153.74 314 P **PKPdf** 19 16 21.4 -1.7
SANT Santorini 153.75 314 eP **PKPdf** 19 16 22.2 -0.9
SANT Santorini 153.75 314 P **PKPdf** 19 16 21.4 -1.7
DION Dionisos Attik 153.76 319 P **PKPdf** 19 16 21.4 -1.7
TIR Tirane 153.77 329⇑ P **PKPdf** 19 16 25.5 +2.6
TIR Tirane 153.77 329⇑ PKIKP **PKPdf** 19 16 25.5 +2.6
TIR Tirane 153.77 329 P **PKPdf** 19 16 21.8 -1.1
SAP1 Santorini-Akro 153.80 314 P **PKPdf** 19 16 20.8 -2.3
NEST Nestorio 153.86 326 P **PKPdf** 19 16 22.3 -0.9
ZKR Zakros 153.87 311 eP **PKPdf** 19 16 22.6 +0.7
ZKR Zakros 153.87 311 P **PKPdf** 19 16 22.6 -0.7
STIA Sitia Lasithi 153.91 311 P **PKPdf** 19 16 21.9 -1.4
ATHU Athens Univers 153.92 319 P **PKPdf** 19 16 22.3 -1.0
ATAL Atalanti 153.93 321 P **PKPdf** 19 16 21.6 -1.6
THL Klokotos Trika 153.93 323 P **PKPdf** 19 16 21.1 -2.1
LSTV Lastovo 153.95 335 ePn **PKPbc** 19 16 31.0 -0.5
ATH Athens Observa 153.96 319 P **PKPdf** 19 16 21.8 -1.5
LKR Lokris 153.97 321 P **PKPdf** 19 16 21.5 -1.8
PENT Pentalofos 153.97 325 P **PKPdf** 19 16 22.4 -1.0
VLY Voula,Athens 153.98 318 P **PKPdf** 19 16 20.9 -2.4
VILL Villia 154.09 319 P **PKPdf** 19 16 21.6 -1.9
AXAR Agios Charalam 154.09 321 P **PKPdf** 19 16 22.4 -1.1
AGG Agios Georgios 154.12 322 eP **PKPdf** 19 16 22.5 -1.0
AGG Agios Georgios 154.12 322 P **PKPdf** 19 16 22.1 -1.4
PRMA PARMA 154.20 347 **PKPdf** 19 16 23.2 -0.2
NPS Neapolis 154.22 312 P **PKPdf** 19 16 22.9 -0.9
MAKR Makrakomi, Fth 154.24 322 P **PKPdf** 19 16 21.8 -1.9
LSK Leskovik 154.29 326 P **PKPdf** 19 16 22.6 -1.2
LAST Lasithi 154.37 311 P **PKPdf** 19 16 23.0 -1.1
LTK Loutraki 154.39 320 P **PKPdf** 19 16 22.0 -1.9
LOUT Loutraki 154.41 319 P **PKPdf** 19 16 21.8 -2.1
EVR Evrytania 154.49 322 P **PKPdf** 19 16 23.0 -1.1
JAN Janina 154.51 325 P **PKPdf** 19 16 23.8 -0.3
THAL Thalero 154.56 320 P **PKPdf** 19 16 21.6 -2.5
VLO Vlora 154.62 328 P **PKPdf** 19 16 23.0 -1.1
ANX Ano Chora 154.64 322 P **PKPdf** 19 16 24.1 -0.3
KALE Kalithea 154.65 321 P **PKPdf** 19 16 23.3 -1.0
TRIZ Trizonia 154.70 321 P **PKPdf** 19 16 23.2 -1.1
IDI Anoyia 154.71 312 PKP **PKPdf** 19 16 25.2 +0.7
comp=E,55nm,0.9s,baz=60,slow=3.0,SNR=8.5
IDI PKPbc **PKPbc** 19 16 34.7 +1.2
comp=E,135nm,0.8s,baz=53,slow=1.1,SNR=21
IDI Anoyia 154.71 312⇓ P **PKiKP** 19 16 30.0 -3.5
IDI Anoyia 154.71 312 eP **PKPdf** 19 16 24.5 0.0
IDI Anoyia 154.71 312 P **PKPdf** 19 16 24.0 -0.5
SRN Sarande 154.80 326 P **PKPdf** 19 16 21.5 -2.9
GUR Goura 154.82 320 P **PKPdf** 19 16 23.4 -1.2
KLV Kalavryta, Ach 154.87 321 P **PKPdf** 19 16 23.5 -1.1
IGT Igoumenitsa 154.88 325 P **PKPdf** 19 16 23.4 -1.1
SACV Santiago Islan 154.95 97 **PKPdf** 19 16 25.5 +0.2
KEK Kerkira 155.03 326 P **PKPdf** 19 16 23.3 -1.4
PDO Prodromos 155.06 323 P **PKPdf** 19 16 24.2 -0.6
VAM Vamos 155.13 313 P **PKPdf** 19 16 24.6 -0.4
TRIP Tripoli 155.13 319 P **PKPdf** 19 16 23.9 -1.1
VLX Vlachokerasia 155.16 319 P **PKPdf** 19 16 23.4 -1.7
DRO Drossia 155.19 321 P **PKPdf** 19 16 24.7 -0.3
TSLK Tsoukalades, L 155.20 324 P **PKPdf** 19 16 23.6 -1.4
VLI Veliai 155.21 317 P **PKPdf** 19 16 22.9 -2.2
LKD2 Lefkada island 155.23 324 P **PKPdf** 19 16 23.7 -1.4
IMMV Iera Moni Meta 155.25 314 eP **PKPdf** 19 16 23.9 -1.2
IMMV Iera Moni Meta 155.25 314 P **PKPdf** 19 16 25.2 +0.1
NYDR Nydri-Lefkada 155.26 324 P **PKPdf** 19 16 23.7 -1.3
RLS Riolos of Patr 155.26 321 P **PKPdf** 19 16 24.3 -0.8
BAI Bari 155.34 333 eP **PKPdf** 19 16 25.4 +0.4
EVGI Lefkada island 155.34 323 P **PKPdf** 19 16 23.7 -1.5
CGL1 Ceglie Messapi 155.44 331 eP **PKPdf** 19 16 24.7 -0.5
GVDS Gavdos 155.50 312 eP **PKPdf** 19 16 24.3 -1.2
GVDS Gavdos 155.50 312 P **PKPdf** 19 16 23.4 -2.1
GVD Gavdhos 155.51 312 eP **PKPdf** 19 16 24.3 -1.3
GVD Gavdhos 155.51 312 P **PKPdf** 19 16 24.2 -1.3
FSK Fiskardo 155.51 323 P **PKPdf** 19 16 23.9 -1.5
ITM Ithomi 155.56 319 **PKPdf** 19 16 25.1 -0.4
ITM Ithomi 155.56 319 P **PKPdf** 19 16 24.1 -1.4
KNDR Palaiochora Ch 155.57 313 P **PKPdf** 19 16 27.2 +1.6
AQU L'Aquila 155.59 340⇑ *i*P **PKPdf** 19 16 24.7 -0.8
TAR1 Taranto 155.63 331 eP **PKPdf** 19 16 24.8 -0.7
SGG Sgolgore (BA) 155.64 333 eP **PKPdf** 19 16 26.9 +1.4
VLS Valsamata 155.69 323 P **PKPdf** 19 16 23.4 -2.3
PSDA Pessada-Kefalo 155.74 323 P **PKPdf** 19 16 23.7 -2.0
DMLN Damoulianata-K 155.77 323 P **PKPdf** 19 16 25.1 -0.7
MATE Matera 155.78 332⇑ P **PKPdf** 19 16 26.4 +0.7
PYL PYLOS 155.86 319 P **PKPdf** 19 16 23.2 -2.7
PGAV Gavieira, Arco 156.20 20 ePKPdf **PKPdf** 19 16 26.8 +0.5
PGAV Gavieira, Arco 156.20 20 ePKPab **PKPab** 19 16 57.8 +1.1
PGAV epPKPab **pPKPab** 19 18 37.2 +0.8
PGAV Gavieira, Arco 156.20 20 ePP PP 19 20 45.6 +10
PGAV Gavieira, Arco 156.20 20 eSS SS 19 39 53.6 +5.7
PCAB Cabril 156.51 19 ePKPdf **PKPdf** 19 16 26.9 +0.3
PCAB Cabril 156.51 19 ePKPab **PKPab** 19 16 58.6 +0.7
PCAB epPKPab **pPKPab** 19 18 38.2 +0.5
PBRG Braganca 156.80 17 ePKPdf **PKPdf** 19 16 27.1 +0.1
PBRG Braganca 156.80 17 ePKPab **PKPab** 19 17 00.1 +0.9
PBRG epPKPdf **pPKPdf** 19 18 11.4 -0.6
PBRG Braganca 156.80 17 ePP PP 19 20 41.6 +3.1
PBRG Braganca 156.80 17 eSS SS 19 39 59.0 +4.9
POLO Lamas de Olo 156.88 19 ePKPdf **PKPdf** 19 16 27.4 +0.2
POLO Lamas de Olo 156.88 19 ePKPab **PKPab** 19 17 00.8 +1.2
POLO epPKPdf **pPKPdf** 19 18 12.7 +0.5
POLO epPKPab **pPKPab** 19 18 40.0 +0.6
POLO Lamas de Olo 156.88 19 ePP PP 19 20 44.1 +5.0
POLO Lamas de Olo 156.88 19 eSS SS 19 40 01.2 +6.0
TIP Timpagrande 156.95 330⇓ P **PKPdf** 19 16 27.5 +0.2
PVRL Vila Real 157.00 19 ePKPdf **PKPdf** 19 16 27.7 +0.4
PVRL Vila Real 157.00 19 ePKPab **PKPab** 19 17 01.7 +1.6
PVRL epPKPab **pPKPab** 19 18 40.6 +0.8
MVO Moncorvo 157.31 18 ePKPdf **PKPdf** 19 16 28.6 +0.9
MVO Moncorvo 157.31 18 ePKPab **PKPab** 19 17 02.6 +1.1
MVO epPKPdf **pPKPdf** 19 18 14.8 +2.1
MVO epPKPab **pPKPab** 19 18 41.5 +0.4
MVO Moncorvo 157.31 18 ePP PP 19 20 43.5 +2.2
MVO Moncorvo 157.31 18 eSS SS 19 40 06.9 +7.3
PVIS Viseu 157.45 20 ePKPdf **PKPdf** 19 16 28.2 +0.3
PVIS Viseu 157.45 20 ePKPab **PKPab** 19 17 03.3 +1.2
PVIS epPKPab **pPKPab** 19 18 41.6 -0.1
PVIS Viseu 157.45 20 ePP PP 19 20 44.0 +1.9
COI Coimbra 157.73 22 ePKPdf **PKPdf** 19 16 28.5 +0.3
COI Coimbra 157.73 22 ePKPab **PKPab** 19 17 04.4 +1.2
COI epPKPdf **pPKPdf** 19 18 14.6 +1.5
COI epPKPab **pPKPab** 19 18 43.4 +0.7
COI Coimbra 157.73 22 ePP PP 19 20 43.9 +0.3
COI Coimbra 157.73 22 eSS SS 19 40 10.3 +6.3
PCAS Casmilo, Conde 157.84 22 ePKPdf **PKPdf** 19 16 28.7 +0.4
PCAS Casmilo, Conde 157.84 22 ePKPab **PKPab** 19 17 04.5 +0.8
PCAS epPKPdf **pPKPdf** 19 18 16.2 +2.9
PCAS epPKPab **pPKPab** 19 18 43.0 -0.2
PCAS Casmilo, Conde 157.84 22 ePP PP 19 20 43.6 -0.6
PCAS Casmilo, Conde 157.84 22 eSS SS 19 40 09.7 +4.5
MTE Manteigas 157.85 20 ePKPdf **PKPdf** 19 16 28.9 +0.5
MTE Manteigas 157.85 20 ePKPab **PKPab** 19 17 04.3 +0.5
MTE epPKPdf **pPKPdf** 19 18 13.2 -0.2
MTE epPKPab **pPKPab** 19 18 43.6 +0.2
MTE Manteigas 157.85 20 ePP PP 19 20 47.8 +3.5
MTE Manteigas 157.85 20 eSS SS 19 40 12.0 +6.7
MTE Manteigas 157.85 20 **PKPdf** 19 16 28.5 +0.1
PSBE So Bento 158.20 23 ePKPdf **PKPdf** 19 16 29.4 +0.6
PSBE So Bento 158.20 23 ePKPab **PKPab** 19 17 06.7 +1.4
PSBE epPKPdf **pPKPdf** 19 18 13.6 -0.2
PSBE epPKPab **pPKPab** 19 18 45.9 +1.0
PSBE So Bento 158.20 23 eSS SS 19 40 14.4 +5.2
PCBR Castelo Branco 158.38 20 ePKPdf **PKPdf** 19 16 29.3 +0.3
PCBR Castelo Branco 158.38 20 ePKPab **PKPab** 19 17 07.0 +1.0
PCBR epPKPab **pPKPab** 19 18 45.6 0.0
PCBR Castelo Branco 158.38 20 ePP PP 19 20 47.4 +0.3
PMOZ Porto Moniz, M 158.38 49 ePKPdf **PKPdf** 19 16 30.1 +0.8
PMOZ Porto Moniz, M 158.38 49 ePKPab **PKPab** 19 17 06.9 +0.4
PMOZ Porto Moniz, M 158.38 49 eSS SS 19 40 28.8 +16
PMAFR Mafra 158.50 25 ePKPdf **PKPdf** 19 16 29.7 +0.5
PMAFR Mafra 158.50 25 ePKPab **PKPab** 19 17 07.8 +1.2
PMAFR epPKPdf **pPKPdf** 19 18 14.7 +0.4
PMAFR epPKPab **pPKPab** 19 18 47.8 +1.6
PMAFR Mafra 158.50 25 ePP PP 19 20 48.7 +0.8
PMAFR Mafra 158.50 25 eSS SS 19 40 17.8 +5.5
PMAR Madeira 158.63 49 ePKPdf **PKPdf** 19 16 31.3 +1.6
PMAR Madeira 158.63 49 ePKPab **PKPab** 19 17 07.6 -0.1
FUL Funchal 158.69 49 ePKPdf **PKPdf** 19 16 31.2 +1.7
FUL epPKPdf **pPKPdf** 19 18 12.7 -1.9
FUL Funchal 158.69 49 ePP PP 19 20 53.0 +3.2
LIS Lisbon 158.76 25 ePKPdf **PKPdf** 19 16 29.3 -0.1
PMRV Marv??o 158.78 21 ePKPdf **PKPdf** 19 16 30.0 +0.5
PMRV Marv??o 158.78 21 ePKPab **PKPab** 19 17 09.1 +1.3
PMRV epPKPdf **pPKPdf** 19 18 15.0 +0.5
PMRV epPKPab **pPKPab** 19 18 47.3 0.0
PMRV Marv??o 158.78 21 ePP PP 19 20 51.3 +2.0
PMRV Marv??o 158.78 21 eSS SS 19 40 20.6 +5.6
PMTG Montargil 158.80 23 ePKPdf **PKPdf** 19 16 29.6 +0.1
PMTG Montargil 158.80 23 ePKPab **PKPab** 19 17 08.7 +0.8
PMTG epPKPdf **pPKPdf** 19 18 15.4 +0.9
PMTG epPKPab **pPKPab** 19 18 47.8 +0.3
PMTG Montargil 158.80 23 ePP PP 19 20 51.3 +1.9
PMTG Montargil 158.80 23 eSS SS 19 40 19.8 +4.4
PMPS Porto Santo 158.86 48 ePKPdf **PKPdf** 19 16 30.6 +0.9
PMPS epPKPab **pPKPab** 19 18 48.9 +1.0
UCM Universidad Co 159.04 12 PKP1 **PKPdf** 19 16 28.9 -0.9
UCM Universidad Co 159.04 12 PKP2 **PKPab** 19 17 09.8 -0.8
VAE Valguarnera 159.40 331 PKP **PKPdf** 19 16 30.9 +0.6
comp=E,4.3nm,0.4s,baz=172,slow=0.5,SNR=6.9
ESDC Sonseca Array 159.50 14 PKP **PKPdf** 19 16 30.6 +0.2
comp=E,15nm,0.9s,baz=345,slow=2.8,SNR=61
ESDC PKPab **PKPab** 19 17 11.6 +0.5
comp=E,300nm,1.3s,baz=337,slow=4.1,SNR=18
ESDC PP **PP** 19 20 53.5 +0.4
comp=E,20nm,1.1s,baz=324,slow=3.7,SNR=2.3
ESDC Sonseca Array 159.50 14 **PKPdf** 19 16 29.7 -0.7
PNCL Nicolau / Gran 159.53 25 ePKPdf **PKPdf** 19 16 31.0 +0.7
PNCL Nicolau / Gran 159.53 25 ePKPab **PKPab** 19 17 12.4 +1.3
PNCL epPKPdf **pPKPdf** 19 18 16.2 +0.8
PNCL epPKPab **pPKPab** 19 18 50.9 +0.2
PNCL Nicolau / Gran 159.53 25 ePP PP 19 20 56.0 +2.6
PNCL Nicolau / Gran 159.53 25 eSS SS 19 40 26.9 +3.9
PAB San Pablo 159.54 15 PKIKP **PKPdf** 19 16 30.3 -0.1
PAB San Pablo 159.54 15 **PKPdf** 19 16 30.3 -0.1
PBEJ Beja 159.85 24 ePKPdf **PKPdf** 19 16 31.2 +0.5
PBEJ Beja 159.85 24 ePKPab **PKPab** 19 17 15.0 +2.5
PBEJ Beja 159.85 24 ePP PP 19 20 59.3 +4.2
MAHO Mahon 159.89 355 PKP1 **PKPdf** 19 16 27.9 -2.8
MAHO Mahon 159.89 355 PKP2 **PKPab** 19 17 11.7 -0.9
PTEO Sao Teotonio 159.93 26 ePKPdf **PKPdf** 19 16 31.7 +0.9
PTEO Sao Teotonio 159.93 26 ePKPab **PKPab** 19 17 14.2 +1.3
PTEO epPKPdf **pPKPdf** 19 18 18.7 +2.8
PCVE Castro Verde 160.13 24 ePKPdf **PKPdf** 19 16 31.7 +0.7
PCVE Castro Verde 160.13 24 ePKPab **PKPab** 19 17 14.6 +0.8
PCVE epPKPdf **pPKPdf** 19 18 17.9 +1.8
PCVE epPKPab **pPKPab** 19 18 54.1 +0.8
PCVE Castro Verde 160.13 24 ePP PP 19 20 58.8 +2.2
PCVE Castro Verde 160.13 24 eSS SS 19 40 35.0 +5.6
MORF Marmelete 160.17 26 ePKPdf **PKPdf** 19 16 31.1 -0.1
MORF Marmelete 160.17 26 ePKPdf **PKPdf** 19 16 31.8 +0.6
MORF Marmelete 160.17 26 ePKPab **PKPab** 19 17 15.1 +1.1
MORF epPKPdf **pPKPdf** 19 18 17.3 +1.1
MORF Marmelete 160.17 26 ePP PP 19 20 59.2 +2.3
MORF Marmelete 160.17 26 eSS SS 19 40 34.7 +4.8
PFVI Vila Bisbo 160.24 27 P **PKPdf** 19 16 32.9 +1.8
SNR=10
PFVI Vila Bisbo 160.24 27 ePKPdf **PKPdf** 19 16 31.9 +0.7
PFVI Vila Bisbo 160.24 27 ePKPab **PKPab** 19 17 14.8 +0.5
PFVI epPKPab **pPKPab** 19 18 54.7 +0.9
PFVI Vila Bisbo 160.24 27 ePP PP 19 20 59.8 +2.5
PFVI Vila Bisbo 160.24 27 eSS SS 19 40 35.7 +5.1
PVAQ Vaqueiros 160.46 24 P **PKPdf** 19 16 33.1 +1.7
SNR=9.7
PVAQ Vaqueiros 160.46 24 ePKPdf **PKPdf** 19 16 32.3 +0.9
PVAQ Vaqueiros 160.46 24 ePKPab **PKPab** 19 17 16.8 +1.6
PVAQ epPKPdf **pPKPdf** 19 18 17.8 +1.3
PVAQ epPKPab **pPKPab** 19 18 56.3 +1.6
PVAQ Vaqueiros 160.46 24 ePP PP 19 21 00.8 +2.5
PVAQ Vaqueiros 160.46 24 eSS SS 19 40 36.6 +3.9
PBDV Barranco-do-Ve 160.51 25 ePKPdf **PKPdf** 19 16 32.5 +1.0
PBDV Barranco-do-Ve 160.51 25 ePKPab **PKPab** 19 17 16.3 +0.8
PBDV epPKPdf **pPKPdf** 19 18 16.7 +0.1
PBDV epPKPab **pPKPab** 19 18 55.1 +0.1
PBDV Barranco-do-Ve 160.51 25 ePP PP 19 21 01.2 +2.5
PBDV Barranco-do-Ve 160.51 25

EANR	**'Ain N'Sour**	**163.88**	**3**	P		**PKPdf**	**19 16 35.0 +0.1**
MELI	**Melilla**	**163.92**	**15**	PKP1		**PKPdf**	**19 16 31.4 -3.5**
MELI	**Melilla**	**163.92**	**15**	PKP2		**PKPab**	**19 17 30.0 -0.4**
GOG	**Mont Gurugu** SNR=17	**163.98**	**15**	P		**PKPdf**	**19 16 36.0 +0.9**
AVE	**Averroes**	**164.07**	**31**	PKP1		**PKPdf**	**19 16 32.8 -2.3**
AVE	**Averroes**	**164.07**	**31**	PKP2		**PKPab**	**19 17 32.4 +1.2**
EAH	**EAH** SNR=23	**164.16**	**40**	P		**PKPdf**	**19 16 37.0 +1.8**
SICH	**Sidi Chahed** SNR=38	**164.28**	**24**	P		**PKPdf**	**19 16 37.0 +1.7**
ZHG	**ZHG** SNR=69	**164.31**	**28**	P		**PKPdf**	**19 16 36.4 +1.0**
OJGS	**Djebel Guires**	**164.31**	**4**	P		**PKPdf**	**19 16 36.0 +0.6**
OTSS	**Djebel Tessala**	**164.36**	**9**	P		**PKPdf**	**19 16 38.0 +2.6**
ODJA	**Bouhanifia**	**164.40**	**7**	P		**PKPdf**	**19 16 37.0 +1.6**
ETRT	**Tiaret**	**164.45**	**3**	P		**PKPdf**	**19 16 36.0 +0.4**
TAF	**Taforalt** SNR=30	**164.51**	**14**	P		**PKPdf**	**19 16 36.9 +1.3**
LIC	**Lamto** comp=E,1μm,1.2s	**164.80**	**152**	*e*PKIKP		**PKPdf**	**19 16 34.6 -1.7**
LCRM	**LCR** SNR=59	**164.82**	**23**	P		**PKPdf**	**19 16 38.0 +2.0**
IFR	**Ifrane**	**164.87**	**24**	PKP1		**PKPdf**	**19 16 32.8 -3.3**
IFR	**Ifrane**	**164.87**	**24**	PKP2		**PKPab**	**19 17 32.4 -2.5**
KIC	**Kosan Boka** comp=E,788nm,1.1s	**165.05**	**152**	*e*PKIKP		**PKPdf**	**19 16 34.9 -1.6**
TANT	**Tantan** SNR=8.6	**165.07**	**52**	P		**PKPdf**	**19 16 39.0 +2.8**
TIC	**Toumodi**	**165.18**	**151**	*e*PKIKP		**PKPdf**	**19 16 34.9 -1.7**
DBIC	**Dimbokro** comp=E,226nm,1.0s,baz=120,slow=1.4,SNR=85	**165.27**	**151**	PKP		**PKPdf**	**19 16 36.2 -0.5**
DBIC	comp=E,162nm,0.8s,baz=173,slow=6.3,SNR=11			PKPab		**PKPab**	**19 17 39.2 +2.4**
DBIC	comp=E,67nm,1.2s,baz=177,slow=5.5,SNR=8.7			PP		**PP**	**19 21 21.9 -1.6**
CZD	**Col de Zad** SNR=92	**165.34**	**25**	P		**PKPdf**	**19 16 37.9 +1.3**
OUK	**Oukaimeden** SNR=62	**165.49**	**37**	P		**PKPdf**	**19 16 38.1 +1.2**
MDT	**Midelt** comp=E,87nm,1.0s,baz=3.1,slow=0.5,SNR=84	**165.69**	**24**	PKP		**PKPdf**	**19 16 37.8 +1.2**
MDT	comp=E,59nm,0.8s,baz=318,slow=4.8,SNR=13			PKPab		**PKPab**	**19 17 40.2 +1.8**
MDT	comp=E,23nm,1.2s,baz=319,slow=2.9,SNR=2.2			PP		**PP**	**19 21 24.1 -1.7**
MDT	**Midelt** SNR=118	**165.69**	**24**	P		**PKPdf**	**19 16 37.9 +1.2**
TDRA	**Tendrara** SNR=38	**166.29**	**15**	P		**PKPdf**	**19 16 39.0 +1.7**
OUZM	**OUZ** SNR=45	**166.32**	**34**	P		**PKPdf**	**19 16 39.0 +1.7**
GOLM	**Goulmima** SNR=74	**166.53**	**27**	P		**PKPdf**	**19 16 39.0 +1.6**
TZRR	**Tazzarine** SNR=75	**167.02**	**31**	P		**PKPdf**	**19 16 39.0 +1.3**
ARF	**Arif** SNR=59	**167.07**	**25**	P		**PKPdf**	**19 16 39.0 +1.2**
FIGM	**Figuig** SNR=114	**167.34**	**13**	P		**PKPdf**	**19 16 39.0 +1.1**
ZGR	**Zagora** SNR=94	**167.54**	**33**	P		**PKPdf**	**19 16 39.0 +0.9**
KOWA	**Kowa** comp=E,106nm,0.8s,baz=227,slow=0.5,SNR=100	**172.08**	**131**	PKP		**PKPdf**	**19 16 40.2 -0.8**
KOWA	comp=E,119nm,0.9s,baz=209,slow=2.9,SNR=6.3			PKPab		**PKPab**	**19 18 07.7 +0.6**
KOWA	comp=E,22nm,0.8s,baz=140,slow=2.9,SNR=3.1			PP		**PP**	**19 22 00.0 +1.5**
KOWA	**Kowa**	**172.08**	**131**	PP			19 21 58.6 0.0
KOWA	**Kowa**	**172.08**	**131**			**PKPdf**	**19 16 40.0 -0.9**
TOA0	**Torodi Ar. Sit** SNR=111	**173.37**	**176**	P		**PKPdf**	**19 16 41.0 -0.5**
TORD	**Torodi Ar. Bea** comp=E,114nm,0.9s,baz=329,slow=1.0,SNR=182	**173.37**	**176**	PKP		**PKPdf**	**19 16 40.6 -0.9**
TORD	comp=E,106nm,0.9s,baz=195,slow=3.0,SNR=15			PKPab		**PKPab**	**19 18 14.2 +1.6**
TORD	comp=E,71nm,0.9s,baz=169,slow=4.8,SNR=4.8			PP		**PP**	**19 22 03.6 +0.2**
TORD	**Torodi Ar. Bea**	**173.37**	**176**			**PKPdf**	**19 16 39.6 -1.9**
TORD						**PKPab**	**19 18 12.5 0.0**

*IDC **01** 19:24:36.4±6.5,51.91N×160.55E,h0km,mb3.4/2, mb1 3.8/3,mb1mx3.4/66,mbtmp3.6/3,ML3.4/1,Error ellipse: s-maj=109.2km s-min=43.8km az=85.0*
*KRSC **01** 19:24:47.0±1.3,51.88N×158.99E,h40km±18km,ML3.9*
ISC 01 19:24:48.7±1.8,51.88N±0.05×158.92E±0.05,h30km±14km, n46,σ1°45/55,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.53**	**262**	*e*P	**Pn**	**19 25 00.3**	**+0.1**
KDTR				*e*S	**Sn**	**19 25 08.4**	**+0.3**
RUS	**Russkaya**	**0.61**	**336**	*e*P	**Pn**	**19 25 00.8**	**-0.5**
RUS				*e*S	**Sn**	**19 25 09.2**	**-0.9**
ASAK	**Asacha**	**0.81**	**309**	*e*P	**Pn**	**19 25 04.3**	**+0.2**
ASAK				*e*S	**Sn**	**19 25 15.3**	**+0.2**
GRL	**Gorelyy**	**0.85**	**323**	*e*P	**Pn**	**19 25 04.9**	**+0.1**
GRL				*e*S	**Sn**	**19 25 16.4**	**+0.1**
KRMR	**Karymshinskiy**	**1.07**	**333**	*e*P	**Pb**	**19 25 08.5**	**-0.1**
KRMR				*e*S	**Sn**	**19 25 22.2**	**+0.8**
DALK	**Dalny**	**1.16**	**355**	*e*P	**Pn**	**19 25 08.1**	**-0.7**
DALK				*e*S	**Sn**	**19 25 21.9**	**-1.7**
PET	**Petropavlovsk**	**1.16**	**352**	*e*P	**Pn**	**19 25 08.1**	**-0.7**
PET				*e*S	**Sn**	**19 25 22.0**	**-1.6**
NLC	**Nalytchevo**	**1.32**	**11**	*e*P	**Pn**	**19 25 09.1**	**-1.9**
UGLR	**Uglovaya**	**1.33**	**357**	*e*P	**Pn**	**19 25 10.8**	**-0.6**
PAU	**Pauzhetka**	**1.38**	**253**	*e*P	**Pn**	**19 25 12.1**	**+0.2**
SMAR	**Somma**	**1.39**	**357**	*e*P	**Pn**	**19 25 11.3**	**-0.9**
AVH	**Avacha**	**1.39**	**355**	*e*P	**Pn**	**19 25 11.8**	**-0.3**
AVH				*e*S	**Sn**	**19 25 28.2**	**-1.3**
SPN	**Mys Shipunski**	**1.39**	**28**	*e*P	**Pn**	**19 25 12.0**	**-0.1**
SPN				*e*S	**Sn**	**19 25 29.4**	**0.0**
SDLR	**Sedlovina**	**1.40**	**359**	*e*P	**Pn**	**19 25 11.3**	**-1.0**
KOK	**Koryaka**	**1.42**	**353**	*e*P	**Pn**	**19 25 12.6**	**0.0**
KOK				*e*S	**Sn**	**19 25 30.3**	**-0.1**
KRER	**Koryakskii**	**1.43**	**356**	*e*P	**Pn**	**19 25 12.3**	**-0.5**
KRER				*e*S	**Sn**	**19 25 29.9**	**-0.8**
PETK	**Petropavlovsk-** 59nm,0.3s,baz=124,slow=17,SNR=2575	**1.44**	**329**	Pn	**Pn**	**19 25 13.0**	**+0.3**
PETK				Sn	**Sb**	**19 25 33.3**	**+0.5**
	24nm,0.3s,baz=107,slow=12,SNR=9.3						
KRX	**Arik**	**1.49**	**354**	*e*P	**Pn**	**19 25 13.1**	**-0.5**
KRX				*e*S	**Sn**	**19 25 30.7**	**-1.4**
APC	**Apacha**	**1.50**	**315**	*e*P	**Pn**	**19 25 14.0**	**+0.4**
APC				*e*S	**Sb**	**19 25 33.1**	**-1.5**
GNL	**Ganaly**	**1.91**	**342**	*e*P	**Pn**	**19 25 19.5**	**+0.2**
GNL				*e*S	**Sn**	**19 25 42.2**	**-0.2**
SKR	**Severo-Kuril's**	**2.13**	**237**	*e*P	**Pn**	**19 25 22.4**	**+0.2**
SKR				*e*S	**Sn**	**19 25 46.9**	**-0.7**
KII	**Karymskiy**	**2.18**	**8**	*e*P	**Pn**	**19 25 23.1**	**+0.1**
MKZ	**Mys Kozlova**	**3.17**	**31**	*e*P	**Pn**	**19 25 35.8**	**-0.6**
MKZ				*e*S	**Sn**	**19 26 10.9**	**-2.2**
KZV	**Kizimen**	**3.34**	**14**	*e*P	**Pn**	**19 25 40.2**	**+1.2**
KZV				*e*S	**Sn**	**19 26 18.5**	**+0.8**
TUMD	**Tumrok D**	**3.44**	**14**	*e*P	**Pn**	**19 25 42.0**	**+1.7**
TUMD				*e*S	**Sn**	**19 26 21.1**	**+1.1**
TUMR	**Tumrok**	**3.49**	**12**	*e*P	**Pn**	**19 25 42.9**	**+1.9**
ESO	**Esso**	**4.05**	**358**	*e*P	**Pn**	**19 25 50.0**	**+1.3**
KIRR	**Kirishev**	**4.17**	**11**	*e*P	**Pn**	**19 25 52.5**	**+2.2**
BZWR	**Bezymyannyi-We**	**4.20**	**12**	*e*P	**Pn**	**19 25 53.0**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**4.20**	**14**	*e*P	**Pn**	**19 25 53.1**	**+2.3**
ZLN	**Zelenaya**	**4.29**	**14**	*e*P	**Pn**	**19 25 56.1**	**+4.1**
LGNR	**Loginova**	**4.34**	**13**	*e*P	**Pn**	19 25 57.7	**+4.9**
SRDR	**Sredinnyy**	**4.47**	**6**	*e*P	**Pn**	**19 25 59.2**	**+4.8**
KBTR	**Krutoberegovo**	**4.91**	**26**	*e*P	**Pn**	**19 26 01.0**	**+0.7**
SRKR	**Sorokina**	**4.96**	**14**	*e*P	**Pn**	**19 26 04.5**	**+3.3**
MJAR	**Matsushiro Arr** 0.8nm,0.7s,baz=41,slow=9.1,SNR=5.3	**21.23**	**232**	P	**P**	**19 29 32.6**	**+0.6**
H11N2	**WAKE ISLAND Hy** baz=351,slow=76,SNR=24	**32.69**	**166**	T	T	20 06 04.3	
H11N3	**WAKE ISLAND Hy** baz=351,slow=76,SNR=17	**32.70**	**166**	T	T	20 06 06.3	
H11N1	**WAKE ISLAND Hy** baz=351,slow=76,SNR=21	**32.70**	**166**	T	T	20 06 06.3	
H11S1	**WAKE ISLAND Hy** baz=352,slow=74	**33.86**	**167**	T	T	20 07 46.6	
H11S3	**WAKE ISLAND Hy** baz=352,slow=74	**33.87**	**167**	T	T	20 07 43.7	
H11S2	**WAKE ISLAND Hy** baz=352	**33.88**	**167**	T	T	20 07 47.1	
CMAR	**Chiang Mai Arr** 0.4nm,0.6s,baz=32,slow=6.6,SNR=5.3	**57.23**	**258**	P	**P**	**19 34 32.3**	**-0.9**
H03N2	**Juan Fernandez** baz=314,slow=77,SNR=47	**134.93**	**89**	T	T	22 14 30.9	
H03N1	**Juan Fernandez** baz=314,slow=77,SNR=32	**134.94**	**89**	T	T	22 14 28.5	
H03N3	**Juan Fernandez** baz=314,slow=77,SNR=50	**134.94**	**89**	T	T	22 14 31.6	

*IDC **01** 19:29:27.4±3.8,36.30N×70.92E,h178km±35km,mb3.3/9, mb1 3.4/13,mb1mx3.1/62,mbtmp3.8/13,Error ellipse: s-maj=24.0km s-min=17.7km az=25.0*
ISC 01 19:29:28.9±0.7,36.53N±0.07×70.95E±0.08,h188km,n24, σ1°35/27,mb3.6/8,2C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.67**	**135**	*e*P	**Pn**	**19 30 55.0**	**+3.2**
THN				*e*S	**Sn**	**19 31 56.0**	**-1.0**
KK31	**Karatay Array** 2.1nm,0.3s,baz=187,slow=12,SNR=90	**6.58**	**357**	⇑P	**Pn**	**19 31 03.9**	**+0.4**
KK31				⇑S	**Sn**	**19 32 14.6**	**-3.7**
	4.9nm,0.4s,baz=186,slow=24,SNR=10						
TKM2	**Tokmak 2** 16nm,0.5s	**7.32**	**28**	⇓P	**Pn**	**19 31 13.7**	**+0.3**
TKM2				⇓S	**Sn**	**19 32 35.1**	**-1.1**
	3.3nm,0.6s						
GEYT	**Alibeck** 0.6nm,0.3s,baz=116,slow=8.0,SNR=6.5	**10.33**	**282**	P	**Pn**	**19 31 52.2**	**-0.4**
PYUN	**Piuthan** 14nm,0.3s	**13.19**	**126**	*e*P	**Pn**	**19 32 28.5**	**-1.0**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=222,slow=15,SNR=1.4	**13.29**	**36**	P	**Pn**	**19 32 30.9**	**+0.5**
DANN	**Dangsing** 12nm,0.5s	**13.54**	**123**	*e*P	**Pn**	**19 32 34.1**	**+0.2**
KOLN	**Koldanda** 3.9nm,0.3s	**13.81**	**126**	*e*P	**Pn**	**19 32 35.6**	**-1.6**
GKN	**Gorkha** 8.8nm,0.3s	**14.35**	**122**	*e*P	**Pn**	**19 32 44.0**	**+0.1**
KKN	**Kakani** 8.8nm,0.5s	**14.93**	**122**	*e*P	**Pn**	**19 32 51.5**	**+0.5**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=202,slow=9.4,SNR=1.4	**15.11**	**19**	P	**P**	**19 32 54.6**	**+1.0**
PKIN	**Phulchoki** 6.8nm,0.3s	**15.14**	**122**	*e*P	**Pn**	**19 32 53.4**	**-0.3**
PKI	**Pulchoki** 5.8nm,0.4s	**15.15**	**122**	*e*P	**Pn**	**19 32 53.2**	**-0.7**
GUN	**Gumba** 7.2nm,0.4s	**15.27**	**120**	*e*P	**Pn**	**19 32 54.8**	**-0.5**
AKTO	**Aktyubinsk** 0.3nm,0.3s,baz=144,slow=9.5,SNR=4.5	**16.74**	**330**	P	**Pn**	**19 33 12.8**	**+0.4**
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=223,slow=9.0,SNR=3.4	**19.91**	**25**	P	**P**	**19 33 46.7**	**+0.8**
AKASG	**Malin Array Be** 0.2nm,0.2s,baz=81,slow=7.4,SNR=1.6	**32.90**	**309**	P	**P**	**19 35 46.5**	**+1.4**
FINES	**FINESS Array B** 1.1nm,0.7s,baz=131,slow=7.7,SNR=3.9	**37.44**	**326**	P	**P**	**19 36 23.6**	**-0.1**
ARCES	**ARCESS Array B** 3.0nm,0.9s,baz=112,slow=7.3,SNR=7.0	**41.10**	**338**	P	**P**	**19 36 55.4**	**+1.4**
NOA	**NORSAR Array B** 0.6nm,0.9s,baz=104,slow=7.3,SNR=3.8	**44.33**	**323**	P	**P**	**19 37 20.8**	**+0.8**
TORD	**Torodi Ar. Bea** 0.3nm,0.5s,baz=47,slow=5.8,SNR=5.1	**65.68**	**269**	P	**P**	**19 39 51.8**	**-1.7**
YKA	**Yellowknife Ar** 0.7nm,0.4s,baz=359,slow=5.4,SNR=5.5	**81.22**	**3**	P	**P**	**19 41 24.2**	**+0.9**
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=324,slow=4.9,SNR=16	**82.04**	**122**	P	**P**	**19 41 27.1**	**-1.2**
ASAR	**Alice Springs** 1.1nm,0.6s,baz=313,slow=4.8,SNR=18	**84.30**	**125**	P	**P**	**19 41 39.4**	**-0.4**

*MOS **01** 19:30:57.4±0.0,41.28N×45.47E,h6km,MPVA3.7*
*AZER **01** 19:30:57.9,41.26N×45.54E,h9km,ML3.2*
*DDA **01** 19:30:58.6,41.19N×45.50E,h7km±2km,ML2.8*
*TIF **01** 19:30:58.6,41.23N×45.48E,h8km±1km*
*NORS **01** 19:30:58.9±0.0,41.13N×45.51E,h10km,MPVA3.7*
*DRS **01** 19:30:59.5±0.0,41.32N×45.38E,h14km*
ISC 01 19:30:59.5±0.9,41.25N±0.02×45.50E±0.02,h16km±7km, n55,σ1°30/103,1D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QZX	**Qazax, Azerbai** SNR=664	**0.22**	**206**	P	**Pg**	**19 31 05.0**	**+0.5**
QZX				S	**Sg**	**19 31 08.7**	**+0.7**
DDFL	**Dedoflistskaro**	**0.50**	**67**	P	**Pn**	**19 31 11.7**	**-0.5**
DDFL	**Dedoflistskaro**	**0.50**	**67**	*e*Pg	**Pn**	**19 31 11.7**	**-0.5**
DDFL	**Dedoflistskaro**	**0.50**	**67**	*i*P	**Pn**	**19 31 11.7**	**-0.5**
GDB	**GEDABAY** SNR=14	**0.57**	**160**	P	**Pb**	**19 31 10.4**	**-0.8**
GDB				S	**Sb**	**19 31 18.4**	**-0.7**
LGD	**Lagodekhi**	**0.80**	**44**	P	**Pb**	**19 31 15.2**	**0.0**
LGD				S	**Sn**	**19 31 27.1**	**-0.8**
LGD	**Lagodekhi**	**0.80**	**44**	*e*Pg	**Pb**	**19 31 15.2**	**0.0**
LGD				*e*Sg	**Sn**	**19 31 27.1**	**-0.8**
GANJ	**Ganja** SNR=58	**0.87**	**134**	P	**Pg**	**19 31 15.4**	**-1.0**
GANJ				S	**Sg**	**19 31 27.2**	**-0.7**
ZKTA	**Zakatala** SNR=49	**0.93**	**65**	P	**Pb**	**19 31 17.2**	**-0.1**
ZKTA				S	**Sn**	**19 31 30.7**	**-0.3**
TRLG	**Trialeti**	**1.09**	**286**	P	**Pg**	**19 31 19.0**	**-1.6**
TRLG				S	**Sg**	**19 31 33.6**	**-1.3**
TRLG	**Trialeti**	**1.09**	**286**	*e*Pg	**Pg**	**19 31 19.0**	**-1.6**
SEKA	**Sheki** SNR=45	**1.28**	**91**	Pg	**Pn**	**19 31 22.9**	**0.0**
SEKA				Sg	**Sn**	**19 31 40.5**	**+0.7**
MNGR	**Mingechevir, A**	**1.29**	**111**	P	**Pg**	**19 31 23.4**	**-1.1**
MNGR				S	**Sn**	**19 31 43.0**	**+3.1**
BGD	**Bogdanovka**	**1.43**	**271**	P	**Pg**	**19 31 26.3**	**-0.8**
BGD				S	**Sg**	**19 31 45.5**	**-0.4**
BGD	**Bogdanovka**	**1.43**	**271**	*e*Pg	**Pg**	**19 31 26.5**	**-0.8**
BGD				*e*Sg	**Sg**	**19 31 45.5**	**-0.4**
KMKR	**Kumukh**	**1.48**	**53**	*e*Pg	**Pg**	**19 31 28.0**	**-0.1**
KMKR				*e*Sg	**Sg**	**19 31 48.5**	**+1.0**
BTLR	**Botlikh**	**1.51**	**21**	*e*Pg	**Pg**	**19 31 27.4**	**-1.2**
BTLR				*e*Sg	**Sg**	**19 31 48.4**	**+0.2**
EAK	**Akyaka**	**1.54**	**249**	*i*P	**Pb**	**19 31 27.5**	**-0.3**
EAK				IAML		19 31 48.0	
EAK	comp=E,161nm,1.0s			*i*S	**Sg**	**19 31 48.3**	**-1.0**
EAK	comp=N,110nm,0.3s			IAML		19 31 53.0	
XNZR	**Khunzakh**	**1.57**	**35**	*e*Pg	**Pg**	**19 31 28.7**	**-1.1**
GNBR	**Gunib**	**1.58**	**43**	*e*Pg	**Pg**	**19 31 29.2**	**-0.6**
GNBR				*e*Sg	**Sg**	**19 31 50.6**	**+0.3**
HYR	**Heyderabad**	**1.61**	**198**	Pn	**Pg**	**19 31 30.1**	**-0.4**
HYR				Sn	**Sg**	**19 31 52.9**	**+1.5**
BRDA	**Brd**	**1.61**	**127**	Pn	**Pg**	**19 31 29.6**	**-1.0**
BRDA				Sn	**Sg**	**19 31 53.4**	**+1.9**
AGDM	**Agdam** SNR=13	**1.67**	**133**	Pn	**Pb**	**19 31 29.6**	**-0.4**
AGDM				Sn	**Sg**	**19 31 53.3**	**-0.2**
AKT	**Akhty**	**1.69**	**82**	*e*Pg	**Pb**	**19 31 30.1**	**-0.3**
ARKR	**Arakani**	**1.75**	**39**	*e*Pg	**Pg**	**19 31 32.0**	**-1.2**
ARKR				*e*Sg	**Sg**	**19 31 57.0**	**+1.1**
IGDI	**IGDIR**	**1.76**	**219**	*i*P	**Pb**	**19 31 31.2**	**-0.3**
IGDI				*i*S	**Sg**	**19 31 54.8**	**-1.3**
IGDI	comp=E,115nm,0.3s			IAML		19 31 55.0	
IGDI	comp=N,117nm,0.3s			IAML		19 31 56.0	
DVE	**Vedeno**	**1.76**	**15**	*e*Pg	**Pg**	**19 31 33.2**	**-0.3**
DVE				*e*Sg	**Sg**	**19 31 57.2**	**+0.8**
QBL	**Gabala** SNR=8.2	**1.79**	**99**	Pn	**Pb**	**19 31 31.8**	**-0.3**
QBL				Sn	**Sg**	**19 31 55.8**	**-1.4**
LACR	**Lac**	**1.81**	**331**	*e*Pg	**Pb**	**19 31 32.5**	**+0.1**
LACR				*e*Sg	**Sg**	**19 31 57.5**	**-0.4**
SBZ	**Shahbuz**	**1.85**	**179**	Pn	**Pb**	**19 31 33.6**	**+0.4**
SBZ				Sn	**Sg**	**19 31 58.8**	**-0.5**
KRNR	**Karanay**	**1.89**	**33**	*e*Pg	**Pg**	**19 31 35.0**	**-0.8**
KRNR				*e*Sg	**Sg**	**19 32 02.0**	**+1.6**
ZRD	**Zardab** SNR=19	**1.92**	**120**	Pn	**Pb**	**19 31 33.8**	**-0.4**
ZRD				Sn	**Sg**	**19 32 01.8**	**+0.4**
ZEI	**Tsey**	**1.94**	**323**	*e*Pg	**Pg**	**19 31 35.2**	**-1.6**
ZEI				*e*Sg	**Sg**	**19 32 01.2**	**-0.9**
XNQ	**Khinaliq** SNR=30	**1.99**	**91**	Pn	**Pb**	**19 31 34.8**	**-0.8**
XNQ				Sn	**Sb**	**19 32 01.4**	**+1.1**
KSMR	**Kasumkent**	**2.01**	**79**	*e*Pg	**Pg**	**19 31 37.5**	**-0.5**
KSMR				*e*Sg	**Sg**	**19 32 04.5**	**+0.4**
DBC	**Dubki**	**2.02**	**29**	*e*Pg	**Pg**	**19 31 36.9**	**-1.5**
DBC				*e*Sg	**Sg**	**19 32 04.8**	**+0.1**
ONI	**Oni**	**2.03**	**312**	P	**Pb**	**19 31 36.5**	**+0.4**
ONI				S	**Sg**	**19 32 03.9**	**-1.0**
ONI	**Oni**	**2.03**	**312**	*e*Pg	**Pb**	**19 31 36.5**	**+0.4**
ONI				*e*Sg	**Sg**	**19 32 03.9**	**-1.0**
NAX	**Nakhchivan**	**2.08**	**180**	Pn	**Pg**	**19 31 37.9**	**-1.5**
NAX				Sn	**Sg**	**19 32 07.0**	**+0.6**
IML	**Ismayilli**	**2.08**	**102**	Pn	**Pb**	**19 31 35.5**	**-1.4**
IML				Sn	**Sg**	**19 32 05.5**	**-0.9**
QSAR	**Qusar**	**2.10**	**82**	Pn	**Pb**	**19 31 37.2**	**0.0**
QSAR				Sn	**Sg**	**19 32 05.1**	**-1.8**
TKB	**Tkibuli**	**2.17**	**301**	P	**Pb**	**19 31 38.3**	**-0.2**
TKB				S	**Sb**	**19 32 06.0**	**+0.8**
TKB	**Tkibuli**	**2.17**	**301**	*e*Pg	**Pb**	**19 31 38.3**	**-0.2**
TKB				*e*Sg	**Sb**	**19 32 06.0**	**+0.8**
BLQ	**Beylaqan**	**2.19**	**134**	Pn	**Pb**	**19 31 38.1**	**-0.8**
BLQ				Sn	**Sb**	**19 32 07.2**	**+1.4**
KDMR	**Kurdemir**	**2.22**	**112**	Pn	**Pb**	**19 31 37.9**	**-1.4**
KDMR				Sn	**Sb**	**19 32 07.9**	**+1.5**
QRD	**Qoradiz**	**2.27**	**142**	Pn	**Pb**	**19 31 39.1**	**-1.0**
QRD				Sn	**Sb**	**19 32 09.3**	**+1.4**
ORD	**Ordubad**	**2.35**	**171**	⇓Pn	**Pb**	**19 31 41.2**	**-0.5**
ORD				Sn	**Sg**	**19 32 12.6**	**-2.6**
PQL	**Pirkuli**	**2.38**	**100**	Pn	**Pb**	**19 31 40.5**	**-1.7**
PQL				Sn	**Sb**	**19 32 11.9**	**+0.4**
SIZA	**Siyzn**	**2.57**	**93**	Pn	**Pn**	**19 31 42.6**	**+1.9**
SIZA				Sn	**Sb**	**19 32 16.5**	**-0.3**
ATGJ	**Altiaghaj**	**2.63**	**97**	Pn	**Pn**	**19 31 43.5**	**+2.0**
ATGJ				Sn	**Sb**	**19 32 17.7**	**-0.7**
GBS	**Qobustan**	**2.71**	**104**	Pn	**Pn**	**19 31 44.3**	**+1.8**
GBS				Sg	**Sg**	**19 32 24.5**	**-2.0**
GLBA	**Clilabad**	**2.99**	**131**	Pn	**Pn**	**19 31 48.0**	**+1.7**
GLBA				Sg	**Sg**	**19 32 33.5**	**-2.1**
YRD	**Yardimli**	**3.14**	**137**	Pn	**Pn**	**19 31 51.6**	**+2.4**
YRD				Sg	**Sg**	**19 32 37.3**	**-3.1**
LRK	**Lerik**	**3.40**	**139**	Pn	**Pn**	**19 31 54.8**	**+2.7**
LRK				Sg	**Sb**	**19 32 44.4**	**+3.7**
LKRN	**Lenkeran, Azer**	**3.58**	**134**	Sn	**Sb**	**19 32 41.3**	**-4.3**

IDC 01 19:39:47.5±16.0,21.51S×177.62E,h670km±228km, mb3.1/5,mb1 3.4/5,mb1mx2.8/41,mbtmp4.1/5,Error ellipse: s-maj=108.3km s-min=85.6km az=156.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower** 1.3nm,0.5s,baz=99,slow=14,SNR=2.0	**29.33**	**267**	P	P	19 45 00.6	+0.2
ASAR	**Alice Springs** 1.8nm,0.5s,baz=93,slow=8.0,SNR=48	**40.30**	**258**	P	P	19 46 31.1	+0.5
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=96,slow=6.7,SNR=59	**40.41**	**264**	P	P	19 46 30.9	-0.6
ILAR	**Eielson Array** 0.6nm,0.8s,baz=226,slow=4.8,SNR=5.0	**90.25**	**14**	P	P	19 51 39.8	+1.1
TXAR	**Lajitas Array** 1.3nm,0.8s,baz=228,slow=5.7,SNR=12	**91.06**	**59**	P	P	19 51 42.8	-0.7

*NEIC **01** 20:09:43.2±1.4,12.48S×166.96E±0.2,h207km±10km, mb4.4/17,Error ellipse: s-maj=26.6km s-min=7.7km az=90.0*
*IDC **01** 20:09:45.7±6.3,12.41S×166.84E,h230km±67km,mb3.7/6, mb1 3.8/7,mb1mx3.3/44,mbtmp4.2/7,Error ellipse: s-maj=49.8km s-min=24.6km az=159.0*
ISC 01 20:09:42.6±1.1,12.33S±0.09×166.9E±0.1,h200km,n30, σ1°01/32,mb4.2/13,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.12**	**174**	Pn	**Pn**	**20 10 34.2**	**+0.6**
SANVU					**Sn**	**20 11 11.8**	**-1.9**
DZM	**Mont Dzumac** 0.6nm,0.3s,baz=122,slow=23,SNR=9.1	**9.69**	**182**	P	**Pn**	**20 12 00.5**	**+2.5**
DZM				S	**Sn**	**20 13 46.4**	**-0.1**
	0.2nm,0.3s,baz=144,slow=20,SNR=2.1						
EIDS	**Eidsvold**	**19.75**	**227**	P	**P**	**20 13 58.8**	**+1.3**
CTA	**Charters Tower** 4.9nm,0.5s,baz=80,slow=12,SNR=14	**21.22**	**246**	P	**P**	**20 14 13.6**	**+0.5**
CTAO	**Charters Tower** comp=Z,7.0nm,0.8s	**21.22**	**246**	P	**P**	**20 14 14.3**	**+1.2**
CTAO				IAmb	IAmb	20 14 16.5	
ARMA	**Armidale** comp=Z,13nm,1.2s	**22.87**	**216**	P	**P**	**20 14 29.5**	**+0.5**
ARMA				IAmb	IAmb	20 14 47.3	
STKA	**Stephens Creek** comp=Z,3.4nm,0.8s,baz=54,slow=9.0,SNR=16	**30.30**	**226**	P	**P**	**20 15 35.6**	**+0.3**
STKA	**Stephens Creek**	**30.30**	**226**	P	**P**	**20

0.6nm,0.3s,baz=52,slow=11,SNR=16
ASAR Alice Springs 22.84 219 P P 20 16 30.6 -0.9
1.1nm,0.7s,baz=46,slow=10.0,SNR=8.5
STKA Stephens Creek 26.48 195 P P 20 17 05.6 +0.5
1.7nm,0.6s,baz=32,slow=13,SNR=2.8
TORD Torodi Ar. Bea 147.53 285 PKPbc PKiKP 20 31 14.4 +0.1
0.8nm,0.7s,baz=69,slow=2.7,SNR=4.3

*THE **01** 20:13:55.9, 34°.88N×26°.96E, h132km±4km, ML2.8/4, Error ellipse: s-maj=4.3km s-min=1.9km az=147.0*
*ISK **01** 20:13:55.1, 35°.01N×27°.18E, h7km, ML2.8/9*
*GII **01** 20:13:58.5±0.5, 34°.48N×27°.41E, h104km*
ISC 01 20:13:51.8±1.5, 34°.73N±0°.06×27°.03E±0°.06, h118km±15km, n26, σ1§61/42, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.77**	**301**	P	**Pn**	**20 14 12.2**	**+0.7**
ZKR				S	**Sn**	**20 14 25.3**	**-1.0**
	215nm,0.4s						
KARP	**Karpathos**	**0.83**	**8**	P	**Pn**	**20 14 13.6**	**+1.6**
KARP				S	**Sn**	**20 14 26.5**	**-0.8**
	412nm,0.3s						
NPS	**Neapolis**	**1.28**	**295**	P	**Pn**	**20 14 18.0**	**+1.5**
NPS				S	**Sn**	**20 14 34.8**	**-0.5**
	148nm,0.6s						
LAST	**Lasithi**	**1.34**	**289**	P	**Pn**	**20 14 18.7**	**+1.4**
LAST				S	**Sn**	**20 14 36.8**	**+0.1**
IDI	**Anoyia**	**1.84**	**288**	P	**Pn**	**20 14 24.9**	**+1.7**
IDI				S	**Sn**	**20 14 47.0**	**-0.2**
NIS1	**Nisyros Isl.**	**1.88**	**4**	PN	**Pn**	**20 14 24.4**	**+0.8**
ANAF	**Anafi Island**	**1.92**	**328**	P	**Pn**	**20 14 24.6**	**+0.5**
ANAF				S	**Sn**	**20 14 46.6**	**-2.3**
	332nm,0.3s						
DAT	**Datca**	**2.05**	**12**	PN	**Pn**	**20 14 26.7**	**+0.9**
DAT				SN	**Sn**	**20 14 49.6**	**-2.3**
DATC	**Datca-Mugla**	**2.10**	**14**	PN	**Pn**	**20 14 27.2**	**+0.9**
DATC				SN	**Sn**	**20 14 50.8**	**-1.9**
THR3	**Thira Island,**	**2.14**	**322**	P	**Pn**	**20 14 27.2**	**+0.4**
THR2	**Thira island,**	**2.15**	**323**	P	**Pn**	**20 14 27.7**	**+0.7**
THR5	**Thira Island,**	**2.17**	**321**	P	**Pn**	**20 14 27.6**	**+0.3**
TURN	**Turunc**	**2.27**	**25**	PN	**Pn**	**20 14 29.6**	**+1.1**
TURN				SN	**Sn**	**20 14 54.6**	**-2.1**
AMGA	**Amorgos Island**	**2.29**	**337**	P	**Pn**	**20 14 29.2**	**+0.4**
BODT	**Bodrum**	**2.34**	**6**	PN	**Pn**	**20 14 30.9**	**+1.4**
BODT				SN	**Sn**	**20 14 56.9**	**-1.5**
DALY	**Dalyan (Mula)**	**2.47**	**32**	PN	**Pn**	**20 14 32.6**	**+1.6**
AKAS	**Kas**	**2.59**	**54**	PN	**Pn**	**20 14 34.7**	**+2.0**
AKAS				SN	**Sn**	**20 15 03.8**	**-0.3**
YER	**Yerkesik**	**2.61**	**23**	PN	**Pn**	**20 14 34.5**	**+1.5**
YER				SN	**Sn**	**20 15 03.2**	**-1.4**
MLSB	**Milas**	**2.64**	**13**	PN	**Pn**	**20 14 34.9**	**+1.7**
MLSB				SN	**Sn**	**20 15 04.3**	**-0.8**
CAME	**Cameli-Denizli**	**2.88**	**39**	PN	**Pn**	**20 14 38.5**	**+1.9**
CAME				SN	**Sn**	**20 15 10.3**	**-0.8**
ELL	**Elmali**	**3.09**	**48**	PN	**Pn**	**20 14 41.8**	**+2.5**
KORT	**Korkueli**	**3.53**	**49**	PN	**Pn**	**20 14 47.9**	**+2.8**
KORT				SN	**Sn**	**20 15 26.6**	**+0.3**
MMLI	**Mount Malkishu**	**7.37**	**106**	Sn	**Sn**	**20 16 56.9**	**-1.9**
YTIR	**Yattir**	**7.57**	**114**	Sn	**Sn**	**20 17 01.1**	**-2.7**
PRNI	**Paran**	**8.02**	**121**	Sn	**Sn**	**20 17 11.6**	**-3.1**
MBRI	**Mt Berech**	**8.29**	**124**	Pn	**Pn**	**20 15 50.8**	**+1.5**
MBRI				Sn	**Sn**	**20 17 19.4**	**-1.9**

*IDC **01** 20:15:10.7±3.7, 37°.32N×72°.21E, h181km±32km, mb3.2/6, mb1 3.3/11, mb1mx3.0/47, mbtmp3.7/11, Error ellipse: s-maj=29.6km s-min=18.4km az=157.0*
*NNC **01** 20:15:12.5±10.0, 37°.69N×71°.64E, h146km±144km, mb3.0, mpv3.5, Error ellipse: s-maj=89.9km s-min=49.7km az=12.0*
ISC 01 20:15:08.3±0.6, 37°.51N±0°.06×72°.07E±0°.07, h150km, n25, σ1§80/31, mb3.4/6, 4C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.71**	**348**	⇓P	**Pn**	**20 16 34.6**	**+3.5**
	5.7nm,0.3s,baz=184,slow=16,SNR=216						
KK31				⇑S	**Sn**	**20 17 35.7**	**-0.1**
	24nm,0.4s,baz=174,slow=24,SNR=26						
THN	**Thein Dam**	**5.89**	**148**	*e*P	**Pn**	**20 16 36.0**	**+2.5**
THN				*e*S	**Sn**	**20 17 40.0**	**-0.1**
TKM2	**Tokmak 2**	**6.04**	**25**	⇑P	**Pn**	**20 16 38.1**	**+2.5**
	0.6nm,0.4s						
TKM2				⇓S	**Sn**	**20 17 46.4**	**+2.5**
	3.9nm,0.7s						
GEYT	**Alibeck**	**11.06**	**276**	P	**Pn**	**20 17 44.4**	**+2.1**
	1.0nm,0.3s,baz=120,slow=11,SNR=16						
GEYT				S	**Sn**	**20 19 43.5**	**-1.0**
	0.5nm,0.3s,baz=91,slow=17,SNR=2.5						
MKAR	**Makanchi Array**	**11.97**	**36**	P	**P**	**20 17 58.8**	**-2.0**
	0.1nm,0.3s,baz=219,slow=13,SNR=2.9						
PYUN	**Piuhan**	**13.12**	**133**	*e*P	**Pn**	**20 18 08.3**	**-1.0**
	45nm,0.3s						
DANN	**Dangsing**	**13.40**	**130**	*e*P	**Pn**	**20 18 11.7**	**-1.3**
	41nm,0.4s						
KOLN	**Koldanda**	**13.73**	**132**	*e*P	**Pn**	**20 18 16.5**	**-0.5**
	5.4nm,0.4s						
KURBB	**Kurchatov Arra**	**13.89**	**17**	P	**P**	**20 18 21.9**	**-0.1**
	baz=211,slow=11,SNR=1.3						
GKN	**Gorkha**	**14.19**	**128**	*e*P	**Pn**	**20 18 22.3**	**-0.5**
	24nm,0.3s						
AB31	**Akbulak array**	**14.65**	**327**	⇑P	**P**	**20 18 29.6**	**-0.9**
	1.9nm,0.7s,baz=137,slow=11,SNR=34						
AB31				⇓S	**Sn**	**20 21 06.3**	**-4.4**
	1.6nm,0.7s,baz=136,slow=25,SNR=3.1						
KKN	**Kakani**	**14.75**	**127**	*e*P	**Pn**	**20 18 29.1**	**-0.7**
	18nm,0.4s						
DMN	**Daman**	**14.76**	**128**	*e*P	**Pn**	**20 18 29.5**	**-0.6**
	14nm,0.4s						
PKIN	**Phulchoki**	**14.97**	**128**	*e*P	**Pn**	**20 18 32.3**	**-0.3**
	14nm,0.3s						
PKI	**Pulchoki**	**14.98**	**128**	*e*P	**Pn**	**20 18 32.2**	**-0.6**
	16nm,0.4s						
GUN	**Gumba**	**15.05**	**126**	*e*P	**Pn**	**20 18 33.0**	**-0.7**
	16nm,0.3s						
AKTO	**Aktyubinsk**	**16.37**	**327**	P	**P**	**20 18 52.0**	**+2.6**
	0.2nm,0.3s,baz=113,slow=11,SNR=4.4						
AKTO	**Aktyubinsk**	**16.37**	**327**	⇑P	**Pn**	**20 18 49.1**	**-0.2**
	3.3nm,1.1s						
AKTO				⇓S	**S**	**20 21 48.0**	**-3.0**
	1.4nm,0.7s						
ZALV	**Zalesovo Beam**	**18.64**	**24**	P	**Pn**	**20 19 15.4**	**-1.0**
	0.4nm,0.3s,baz=222,slow=9.7,SNR=9.6						
ARCES	**ARCESS Array B**	**40.54**	**337**	P	**P**	**20 22 34.1**	**+1.7**
	2.2nm,0.9s,baz=113,slow=9.3,SNR=5.4						
ESDC	**Sonseca Array**	**57.74**	**298**	P	**P**	**20 24 44.3**	**+0.8**
	0.2nm,0.5s,baz=64,slow=7.7,SNR=4.5						
TORD	**Torodi Ar. Bea**	**66.59**	**269**	P	**P**	**20 25 42.9**	**+0.1**
	0.9nm,0.5s,baz=47,slow=5.8,SNR=18						
ILAR	**Eielson Array**	**73.57**	**16**	P	**P**	**20 26 23.9**	**-0.5**
	0.4nm,0.9s,baz=319,slow=2.6,SNR=2.8						
YKA	**Yellowknife Ar**	**80.19**	**3**	P	**P**	**20 27 00.7**	**-0.9**
	0.4nm,0.5s,baz=1.8,slow=5.1,SNR=4.5						
WRA	**Warramunga Arr**	**81.81**	**123**	P	**P**	**20 27 08.6**	**-2.1**
	0.1nm,0.5s,baz=327,slow=4.9,SNR=4.8						

*NORS **01** 20:17:21.5±0.0, 42°.33N×44°.67E, h15km, MPVA4.3*
*TIF **01** 20:17:22.6, 42°.42N×44°.72E, h4km±1km*
*ISK **01** 20:17:23.6, 42°.50N×44°.72E, h5km, ML3.2/6*
*DDA **01** 20:17:23.6, 42°.55N×44°.84E, h6km±3km, ML2.7*
*DRS **01** 20:17:23.4±0.0, 42°.34N×45°.03E, h10km*
*MOS **01** 20:17:24.3±1.1, 42°.42N×44°.70E, h9km, mb3.8/1, Error ellipse: s-maj=5.6km s-min=4.1km az=115.9*
ISC 01 20:17:24.3±1.0, 42°.42N±0°.01×44°.69E±0°.01, h6km±9km, n89, σ1§35/166, 4C-3D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LACR	**Lac**	**0.50**	**324**	*i* Pg	**Pg**	**20 17 33.6**	**-0.3**
LACR				*e*Sg	**Sg**	**20 17 40.6**	**+0.2**
LACR	**Lac**	**0.50**	**324**	PG	**Pg**	**20 17 33.6**	**-0.3**
LACR				S	**Sg**	**20 17 40.6**	**+0.2**
VLKR	**Vladikavkaz**	**0.62**	**359**	*e*Pg	**Pg**	**20 17 36.2**	**-0.1**
VLKR				*e*Sg	**Sb**	**20 17 46.7**	**+0.1**
VLKR	**Vladikavkaz**	**0.62**	**359**	*e*PG	**Pg**	**20 17 36.2**	**-0.1**
VLKR				*e*S	**Sb**	**20 17 46.7**	**+0.1**
KMGR	**Komgaron**	**0.65**	**11**	*i* Pg	**Pg**	**20 17 37.2**	**+0.4**
KMGR				*e*Sg	**Sn**	**20 17 48.7**	**-2.0**
KMGR	**Komgaron**	**0.65**	**11**	⇓*i*PG	**Pg**	**20 17 37.2**	**+0.4**
KMGR				*e*S	**Sn**	**20 17 48.7**	**-2.0**
ZEI	**Tsey**	**0.69**	**302**	*i* Pg	**Pg**	**20 17 37.0**	**-0.5**
ZEI				*e*Sg	**Sb**	**20 17 47.7**	**-1.0**
ZEI	**Tsey**	**0.69**	**302**	PG	**Pg**	**20 17 37.1**	**-0.5**
ZEI				S	**Sg**	**20 17 46.4**	**-0.1**
BTNK	**Botanikuri**	**0.74**	**174**	P	**Pg**	**20 17 38.3**	**-0.3**
BTNK				S	**Sb**	**20 17 49.9**	**-0.2**
BTNK	**Botanikuri**	**0.74**	**174**	*e*PG	**Pg**	**20 17 38.3**	**-0.3**
BTNK				*e*S	**Sb**	**20 17 49.9**	**-0.2**
KORR	**Kora**	**0.81**	**325**	*i* Pg	**Pb**	**20 17 40.6**	**-0.2**
KORR				*e*Sg	**Sn**	**20 17 53.3**	**-1.3**
KORR	**Kora**	**0.81**	**325**	⇓*i*PG	**Pb**	**20 17 40.6**	**-0.2**
KORR				*e*S	**Sn**	**20 17 53.3**	**-1.3**
ARNR	**Ardon**	**0.81**	**338**	*e*Pg	**Pb**	**20 17 40.6**	**-0.2**
ARNR				*e*Sg	**Sn**	**20 17 53.8**	**-0.9**
ARNR	**Ardon**	**0.81**	**338**	PG	**Pb**	**20 17 40.7**	**-0.2**
ARNR				S	**Sn**	**20 17 53.8**	**-0.9**
ONI	**Oni**	**0.93**	**281**	P	**Pg**	**20 17 41.6**	**-0.6**
ONI				S	**Sn**	**20 17 56.3**	**-1.4**
ONI	**Oni**	**0.93**	**281**	*e*PG	**Pg**	**20 17 41.6**	**-0.6**
ONI				*e*S	**Sg**	**20 17 54.7**	**+0.4**
DIGR	**Digorskoe uzhe**	**0.95**	**300**	*e*Pg	**Pg**	**20 17 41.7**	**-0.8**
DIGR				*e*Sg	**Sg**	**20 17 55.4**	**+0.6**
DIGR	**Digorskoe uzhe**	**0.95**	**300**	*e*PG	**Pg**	**20 17 41.7**	**-0.8**
DIGR				*e*S	**Sg**	**20 17 55.4**	**+0.6**
BTKR	**Batakoyurt**	**0.95**	**353**	*i* Pg	**Pn**	**20 17 44.0**	**-0.3**
BTKR				*e*Sg	**Sn**	**20 17 59.7**	**+1.5**
BTKR	**Batakoyurt**	**0.95**	**353**	⇓*i*PG	**Pn**	**20 17 44.0**	**-0.3**
BTKR				*e*S	**Sn**	**20 17 59.7**	**+1.5**
STDR	**Stavd-Durt**	**1.05**	**334**	*i* Pg	**Pn**	**20 17 45.6**	**0.0**
STDR				*e*Sg	**Sn**	**20 18 02.8**	**+2.2**
STDR	**Stavd-Durt**	**1.05**	**334**	⇑*i*PG	**Pn**	**20 17 45.6**	**0.0**
STDR				*e*S	**Sn**	**20 18 02.8**	**+2.2**
LSNR	**Lesken**	**1.06**	**324**	*e*Pg	**Pb**	**20 17 45.0**	**-0.2**
LSNR				*e*Sg	**Sn**	**20 18 00.8**	**-0.2**
LSNR	**Lesken**	**1.06**	**324**	*e*PG	**Pb**	**20 17 45.0**	**-0.2**
LSNR				*e*S	**Sn**	**20 18 00.8**	**-0.2**
GROC	**Groznyy**	**1.12**	**46**	*i* Pg	**Pn**	**20 17 46.1**	**-0.5**
GROC				*e*Sg	**Sn**	**20 18 02.8**	**+0.4**
GROC	**Groznyy**	**1.12**	**46**	⇑*i*PG	**Pn**	**20 17 46.1**	**-0.5**
GROC				*e*S	**Sn**	**20 18 02.8**	**+0.4**
BTLR	**Botlikh**	**1.16**	**78**	*e*Pg	**Pg**	**20 17 43.8**	**-2.7**
	79nm,0.6s						
BTLR				*e*Sg	**Sg**	**20 17 59.3**	**-2.1**
	327nm,0.6s						
BTLR	**Botlikh**	**1.16**	**78**	⇓*e*PG	**Pg**	**20 17 44.9**	**-1.6**
BTLR				*e*		20 18 00.4	
BTLR				pmax	pmax		
	comp=Z,79nm,0.7s						
BTLR				smax	smax		
	comp=N,220nm,1.0s						
DVE	**Vedeno**	**1.18**	**63**	*i* Pg	**Pb**	**20 17 46.0**	**-1.1**
DVE				*e*Sg	**Sg**	**20 18 01.7**	**-0.7**
DVE	**Vedeno**	**1.18**	**63**	PG	**Pb**	**20 17 46.1**	**-1.1**
DVE				S	**Sg**	**20 18 01.7**	**-0.7**
TKB	**Tkibuli**	**1.26**	**267**	P	**Pn**	**20 17 48.1**	**-0.4**
TKB				S	**Sn**	**20 18 06.1**	**+0.3**
TKB	**Tkibuli**	**1.26**	**267**	*e*PG	**Pn**	**20 17 48.0**	**-0.4**
TKB				*e*S	**Sn**	**20 18 06.0**	**+0.3**
LGD	**Lagodekhi**	**1.29**	**117**	P	**Pn**	**20 17 47.4**	**-1.5**
LGD				S	**Sg**	**20 17 54.5**	**-0.2**
LGD	**Lagodekhi**	**1.29**	**117**	*e*PG	**Pn**	**20 17 47.5**	**-1.5**
LGD				S	**Sb**	**20 18 05.1**	**-0.8**
TRKR	**Terskaya**	**1.30**	**1**	*e*Pg	**Pg**	**20 17 49.1**	**-0.1**
TRKR				*e*Sg	**Sn**	**20 18 08.7**	**+2.0**
TRKR	**Terskaya**	**1.30**	**1**	*e*PG	**Pg**	**20 17 49.1**	**-0.1**
TRKR				*e*S	**Sn**	**20 18 08.7**	**+2.0**
PRTR	**Priterechnaya**	**1.36**	**347**	*e*Pg	**Pb**	**20 17 50.1**	**0.0**
PRTR				*e*Sg	**Sg**	**20 18 10.8**	**+2.7**
PRTR	**Priterechnaya**	**1.36**	**347**	*e*PG	**Pb**	**20 17 50.2**	**0.0**
PRTR				*e*S	**Sg**	**20 18 10.8**	**+2.7**
BGD	**Bogdanovka**	**1.42**	**216**	P	**Pn**	**20 17 50.1**	**-0.7**
BGD				S	**Sg**	**20 18 10.4**	**+0.5**
BGD	**Bogdanovka**	**1.42**	**216**	*e*PG	**Pn**	**20 17 50.1**	**-0.7**
BGD				*e*S	**Sg**	**20 18 10.4**	**+0.5**
DDFL	**Dedoflistskaro**	**1.45**	**132**	P	**Pg**	**20 17 52.2**	**+0.2**
DDFL				S	**Sg**	**20 18 17.2**	**+6.5**
DDFL	**Dedoflistskaro**	**1.45**	**132**	*i* P	**Pg**	**20 17 52.5**	**+0.5**
DDFL				*i* S	**Sg**	**20 18 16.8**	**+6.1**
DDFL	**Dedoflistskaro**	**1.45**	**132**	*e*PG	**Pg**	**20 17 52.2**	**+0.2**
DDFL				*e*S	**Sg**	**20 18 17.2**	**+6.5**
XNZR	**Khunzakh**	**1.49**	**85**	*e*Pg	**Pn**	**20 17 50.1**	**-1.7**
XNZR				*e*Sg	**Sn**	**20 18 10.1**	**-1.6**
XNZR	**Khunzakh**	**1.49**	**85**	*e*PG	**Pn**	**20 17 50.1**	**-1.7**
XNZR				*e*S	**Sn**	**20 18 10.1**	**-1.6**
DLMR	**Dylym**	**1.57**	**65**	*i* Pg	**Pb**	**20 17 53.0**	**-0.7**
	comp=N,86nm,0.2s						
DLMR				*e*Sg	**Sg**	**20 18 14.0**	**-0.6**
	comp=N,520nm,0.3s						
DLMR	**Dylym**	**1.57**	**65**	*i* PG	**Pb**	**20 17 53.0**	**-0.7**
DLMR				*e*S	**Sg**	**20 18 14.0**	**-0.6**
DLMR				pmax	pmax		
	comp=Z,86nm,0.2s						
ZKTA	**Zakatala**	**1.64**	**118**	PN	**Pn**	**20 17 53.5**	**-0.2**
GNBR	**Gunib**	**1.68**	**90**	*e*Pg	**Pn**	**20 17 54.5**	**+0.2**
	comp=Z,68nm,0.5s						
GNBR				*e*Sg	**Sg**	**20 18 17.8**	**-0.7**
	comp=Z,211nm,0.8s						
GNBR	**Gunib**	**1.68**	**90**	*e*PN	**Pn**	**20 17 54.5**	**+0.2**
GNBR				*e*S	**Sg**	**20 18 17.7**	**-0.7**
GNBR				pmax	pmax		
	comp=Z,68nm,0.5s						
DBC	**Dubki**	**1.68**	**69**	*i* Pg	**Pn**	**20 17 54.3**	**-0.1**
	comp=Z,36nm,0.5s						
DBC				*e*Sg	**Sb**	**20 18 17.0**	**-0.2**
	comp=Z,138nm,0.4s						
DBC	**Dubki**	**1.68**	**69**	*e*PN	**Pn**	**20 17 54.3**	**-0.1**
DBC				*e*S	**Sb**	**20 18 17.2**	**0.0**
KRNR	**Karanay**	**1.68**	**75**	*e*Pg	**Pn**	**20 17 54.5**	**+0.1**
	comp=Z,29nm,0.3s						
KRNR				*i* Sg	**Sb**	**20 18 17.0**	**-0.2**
	comp=Z,80nm,0.3s						
KRNR	**Karanay**	**1.68**	**75**	*e*PN	**Pn**	**20 17 54.5**	**+0.1**
KRNR				*i* S	**Sb**	**20 18 17.0**	**-0.2**
KRNR				pmax	pmax		
	comp=Z,29nm,0.3s						
ARKR	**Arakani**	**1.71**	**83**	*e*Pg	**Pb**	**20 17 55.5**	**-0.7**
	comp=Z,60nm,0.2s						
ARKR				*e*Sg	**Sg**	**20 18 19.5**	**+0.2**
	comp=Z,162nm,0.3s						
ARKR	**Arakani**	**1.71**	**83**	*e*PN	**Pb**	**20 17 55.5**	**-0.7**
ARKR				*e*S	**Sg**	**20 18 19.5**	**+0.2**
ARKR				pmax	pmax		
	comp=Z,60nm,0.2s						
EPOS	**Posof**	**1.73**	**239**	*i* P	**Pb**	**20 17 55.7**	**-0.9**
EPOS				*i* S	**Sg**	**20 18 19.6**	**-0.3**
EPOS				IAML		20 18 22.0	
	comp=N,93nm,0.5s						
KMKR	**Kumukh**	**1.81**	**99**	*i* Pg	**Pb**	**20 17 57.0**	**-1.0**
	comp=N,55nm,0.3s						
KMKR				*e*Sg	**Sg**	**20 18 23.5**	**+1.0**
	comp=N,421nm,0.7s						
KMKR	**Kumukh**	**1.81**	**99**	*i* PN	**Pb**	**20 17 57.0**	**-1.0**
KMKR				*e*S	**Sg**	**20 18 23.5**	**+1.0**
KMKR				pmax	pmax		
	comp=Z,55nm,0.3s						
BUJR	**Buynaksk**	**1.83**	**77**	*e*Pg	**Pb**	**20 17 57.3**	**-0.8**
	comp=Z,59nm,0.6s						
BUJR				*e*Sg	**Sb**	**20 18 21.9**	**+0.5**
	comp=Z,332nm,0.5s						
BUJR	**Buynaksk**	**1.83**	**77**	*e*PN	**Pb**	**20 17 57.3**	**-0.8**
BUJR				*e*S	**Sb**	**20 18 21.8**	**+0.5**
BUJR				pmax	pmax		
	comp=Z,59nm,0.6s						
KBZ	**Khabaz**	**1.85**	**315**	*e*PN	**Pb**	**20 17 57.4**	**-1.1**
KBZ				*e*S	**Sb**	**20 18 22.2**	**+0.3**
EAK	**Akyaka**	**1.92**	**205**	*i* P	**Pn**	**20 17 58.2**	**+0.5**
EAK				*i* S	**Sg**	**20 18 24.9**	**-1.0**
EAK				IAML		20 18 25.0	
	comp=E,137nm,0.4s						
EAK				IAML		20 18 27.0	
	comp=N,93nm,0.9s						
CHVG	**Ch'k'valeri**	**1.95**	**280**	P	**Pb**	**20 17 59.8**	**-0.4**
CHVG				S	**Sg**	**20 18 26.2**	**-0.7**
CHVG	**Ch'k'valeri**	**1.95**	**280**	*e*PN	**Pb**	**20 17 59.8**	**-0.4**
CHVG				*e*S	**Sg**	**20 18 26.2**	**-0.7**
BEYR	**Belyy Ugol+**	**2.10**	**320**	*e*PN	**Pn**	**20 18 00.7**	**+0.7**
BEYR				*e*S	**Sb**	**20 18 28.5**	**-0.6**
KIV	**Kislovodsk**	**2.12**	**317**	*i* PN	**Pn**	**20 18 00.7**	**+0.3**
KIV				*i* S	**Sb**	**20 18 30.0**	**+0.2**
MAK	**Makhachkala**	**2.14**	**75**	*e*PN	**Pn**	**20 17 58.7**	**-1.8**
MAK				*e*		20 18 04.4	
MAK				*e*		20 18 30.6	
MAK				*e*		20 18 36.7	
MAK				pmax	pmax		
	comp=Z,92nm,0.3s						
MAK				MLR	MLR		
	comp=Z,746nm,2.0s						
GANJ	**Ganja**	**2.16**	**145**	PN	**Pn**	**20 18 00.3**	**-0.5**
KARS	**Kars**	**2.17**	**215**	PN	**Pb**	**20 18 02.5**	**-1.4**
KARS				SN	**Sb**	**20 18 30.8**	**-0.3**
KARS	**Kars**	**2.17**	**215**	PN	**Pb**	**20 18 02.6**	**-1.4**
KARS				S	**Sg**	**20 18 33.2**	**-0.7**
URKR	**Urkarakh**	**2.20**	**96**	*e*Pg	**Pb**	**20 18 05.1**	**+0.6**
	comp=Z,39nm,0.5s						
URKR				*e*Sg	**Sg**	**20 18 35.9**	**+1.0**
	comp=Z,91nm,0.7s						
URKR	**Urkarakh**	**2.20**	**96**	*e*PN	**Pb**	**20 18 05.1**	**+0.6**
URKR				*e*S	**Sg**	**20 18 35.9**	**+1.0**
URKR				pmax	pmax		
	comp=Z,39nm,0.5s						
SEKA	**Sheki**	**2.23**	**122**	PN	**Pn**	**20 18 02.3**	**+0.4**
AKT	**Akhty**	**2.46**	**112**	*e*Pg	**Pb**	**20 18 06.7**	**-2.2**
	comp=Z,31nm,0.4s						
AKT				*e*Sg	**Sb**	**20 18 39.0**	**-0.4**
	comp=Z,69nm,0.6s						
AKT	**Akhty**	**2.46**	**112**	*e*PN	**Pb**	**20 18 06.8**	**-2.1**
AKT				*e*S	**Sb**	**20 18 37.8**	**-1.6**
TASB	**TASBURUN-IGDIR**	**2.46**	**188**	PN	**Pn**	**20 18 06.7**	**+1.7**
TASB				SN	**Sb**	**20 18 38.2**	**-1.4**
DAGI	**Agillar**	**2.48**	**238**	*i* P	**Pb**	**20 18 07.9**	**-1.4**
BCA	**Borcka**	**2.49**	**248**	PN	**Pn**	**20 18 06.6**	**+1.2**
DBOC	**Borcka**	**2.50**	**246**	*i* P	**Pb**	**20 18 08.1**	**-1.6**
DBOC				IAML		20 18 43.0	
	comp=E,33nm,0.3s						
DBOC				*i* S	**Sg**	**20 18 43.4**	**-1.3**
SENK	**Senkaya-Erzuru**	**2.56**	**224**	PN	**Pn**	**20 18 07.9**	**+1.4**
IGDI	**IGDIR**	**2.59**	**190**	*i* P	**Pb**	**20 18 07.8**	**+0.9**
IGDI				*i* S	**Sb**	**20 18 44.0**	**+0.6**
IGDI				IAML		20 18 45.0	
	comp=N,22nm,0.6s						
IGDI				IAML		20 18 49.0	
	comp=E,29nm,0.4s						
ALER	**Alexandrovskoy**	**2.67**	**332**	*e*PN	**Pn**	**20 18 08.7**	**+0.8**
ALER				*e*S	**Sb**	**20 18 44.5**	**-1.1**
ARXR	**Arkhyz**	**2.75**	**296**	*e*PN	**Pb**	**20 18 12.5**	**-1.5**
ARXR				*e*S	**Sb**	**20 18 45.8**	**-2.2**
GOF	**Gofitskoye**	**2.89**	**336**	*e*PN	**Pn**	**20 18 12.6**	**+1.7**
GOF				*e*S	**Sb**	**20 18 49.4**	**-2.5**
AGRB	**Hanur-Agry**	**3.12**	**205**	PN	**Pn**	**20 18 16.1**	**+1.9**
KOPR	**Koprukoy-ERZUR**	**3.24**	**222**	PN	**Pn**	**20 18 17.6**	**+1.8**
OBN	**Obninsk**	**13.77**	**340**	⇑*e*P	**Pn**	**20 20 41.3**	**+1.5**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,4μm,20.0s						
ARU	**Arti**	**16.62**	**28**	*i* P	**Pn**	**20 21 18.1**	**+0.4**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						

*SOME **01** 20:31:22.3, 41°.37N×78°.95E, h15km*
*KRNET **01** 20:31:23.8±0.1, 41°.47N×78°.87E, h4km, mb3.2*
*NNC **01** 20:31:23.4±1.1, 41°.43N×78°.88E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=7.2km s-min=4.3km az=160.0*
ISC 01 20:31:19.6±1.7, 41°.21N±0°.07×78°.83E±0°.04, h10km, n53, σ1§34/86, 16C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.32**	**346**	⇑*i*P	**Pb**	**20 31 44.0**	**-0.5**
	baz=42						
PRZ				⇑*i*S	**Sg**	**20 31 59.5**	**-2.5**
	baz=42						
KDJ	**Kajisay**	**1.54**	**307**	⇑*i*P	**Pg**	**20 31 50.7**	**+1.5**
	baz=98						
KDJ				⇑*i*S	**Sg**	**20 32 10.4**	**+1.2**
	baz=98						
ANVS	**Anan'yevo**	**1.80**	**332**	⇑*i*P	**Pg**	**20 31 54.2**	**+0.1**
	baz=26						
ANVS				⇑*i*S	**Sg**	**20 32 15.5**	**-1.9**
	baz=26						
SATY	**Saty**	**1.88**	**351**	*e*P	**Pb**	**20 31 54.0**	**-0.1**
	5.9nm,0.2s						
SATY				*e*S	**Sb**	**20 32 16.9**

	baz=96							
BOOM				⇓*i*S		Sg	20 32 37.8	-2.4
	baz=96							
KST	**Kastek**	**2.81**	**312**	*e*P		Pg	20 32 12.8	-0.7
	30nm,0.5s							
KST				*e*S		Sg	20 32 49.0	-1.0
	94nm,0.6s							
KST	**Kastek**	**2.81**	**312**	Pg		Pg	20 32 12.8	-0.7
	30nm,0.5s							
KST				Lg	Lg		20 32 49.0	
	94nm,0.6s							
MNBS	**Baschi**	**2.89**	**354**	*e*P		Pb	20 32 11.9	+0.6
	38nm,0.4s							
MNBS				*e*S		Sb	20 32 47.7	+1.0
	283nm,0.3s							
MNBS	**Baschi**	**2.89**	**354**	Pg		Pb	20 32 11.9	+0.6
	38nm,0.4s							
MNBS				Lg	Lg		20 32 47.7	
	283nm,0.3s							
TKM2	**Tokmak 2**	**2.95**	**307**	⇑*e*P		Pb	20 32 12.9	+0.5
	baz=2.0							
TKM2				⇑*i*S		Sb	20 32 49.1	+0.4
	baz=2.0							
TKM2	**Tokmak 2**	**2.95**	**307**	⇑Pg		Pb	20 32 14.2	+1.7
	6.1nm,0.4s							
TKM2				⇓Lg	Lg		20 32 54.1	
	20nm,0.5s							
KTBS	**Karatobe**	**2.96**	**328**	*e*P		Pb	20 32 14.3	+1.8
	6.7nm,0.2s							
KTBS				*e*S		Sg	20 32 51.6	-3.2
	226nm,0.3s							
KTBS	**Karatobe**	**2.96**	**328**	Pg		Pb	20 32 14.3	+1.8
	6.7nm,0.2s							
KTBS				Lg	Lg		20 32 51.6	
	226nm,0.3s							
ARXS	**Arharly**	**3.10**	**347**	*e*P		Pb	20 32 15.6	+0.8
	13nm,0.5s							
ARXS				*e*S		Sb	20 32 53.9	+1.3
	183nm,0.5s							
ARXS	**Arharly**	**3.10**	**347**	Pg		Pb	20 32 15.6	+0.8
	13nm,0.5s							
ARXS				Lg	Lg		20 32 53.9	
	183nm,0.5s							
DJR	**Jarkent**	**3.20**	**12**	*e*P		Pb	20 32 16.5	-0.2
	6.7nm,0.4s							
DJR				*e*S		Sb	20 32 55.6	-0.1
	73nm,0.4s							
DJR	**Jarkent**	**3.20**	**12**	Pg		Pb	20 32 16.5	-0.2
	6.7nm,0.4s							
DJR				Lg	Lg		20 32 55.6	
	73nm,0.4s							
KBK	**Karagaybulak**	**3.24**	**298**	⇓*e*P		Pb	20 32 17.1	-0.2
	baz=93							
KBK				⇓*i*S		Sb	20 32 56.7	-0.1
	baz=93							
KUU	**Kurty**	**3.25**	**326**	*e*P		Pg	20 32 21.2	-0.8
	4.6nm,0.4s							
KUU				*e*S		Sg	20 33 03.2	-0.8
	43nm,0.4s							
KUU	**Kurty**	**3.25**	**326**	Pg		Pb	20 32 18.0	+0.5
	6.9nm,0.4s							
KUU				Lg	Lg		20 32 58.1	
	92nm,0.6s							
KRBS	**Karabastau**	**3.41**	**318**	*e*P		Pg	20 32 24.7	-0.3
	6.5nm,0.2s							
KRBS				*e*S		Sg	20 33 09.0	-0.1
	22nm,0.2s							
KRBS	**Karabastau**	**3.41**	**318**	Pg		Pb	20 32 21.0	+0.9
	4.6nm,0.3s							
KRBS				Lg	Lg		20 33 03.1	
	23nm,0.3s							
ARLS	**Aral**	**3.44**	**282**	⇑*e*P		Pb	20 32 20.6	-0.2
	baz=78							
ARLS				⇑*i*S		Sb	20 33 02.1	-0.6
	baz=78							
FRU1	**Bishkek**	**3.51**	**299**	⇑*e*P		Pb	20 32 20.8	-1.1
	baz=94							
FRU1				⇑*i*S		Sb	20 33 02.4	-2.3
	baz=94							
TDK	**Taldyqorghan**	**3.81**	**355**	*e*P		Pb	20 32 27.3	+0.4
	14nm,0.2s							
TDK				*e*S		Sb	20 33 13.8	+0.8
	58nm,0.3s							
TDK	**Taldyqorghan**	**3.81**	**355**	Pg		Pb	20 32 27.3	+0.4
	14nm,0.2s							
TDK				Lg	Lg		20 33 13.8	
	58nm,0.3s							
SGDS	**Sogindy**	**3.84**	**307**	Pg		Pb	20 32 30.9	+3.4
	2.1nm,0.2s							
SGDS				Lg	Lg		20 33 19.9	
	16nm,0.5s							
AML	**Almayashu**	**3.96**	**285**	⇓*i*P		Pb	20 32 28.4	-1.2
	baz=81							
AML				⇓*i*S		Sb	20 33 14.9	-2.8
	baz=81							
EKS2	**Erkin-Say**	**4.04**	**293**	⇓*i*P		Pb	20 32 28.8	-2.1
	baz=89							
EKS2				⇓*i*S		Sb	20 33 16.7	-3.1
	baz=89							
MRKS	**Merke**	**4.45**	**292**	Pg		Pg	20 32 45.3	+0.5
	2.4nm,0.4s							
MRKS				Lg	Lg		20 33 44.7	
	6.4nm,0.3s							
BTLS	**Baital**	**5.19**	**319**	Pg		Pb	20 32 54.5	+4.1
	1.0nm,0.5s							
BTLS				Lg	Lg		20 34 00.6	
	5.1nm,0.5s							
KK31	**Karatay Array**	**6.46**	**290**	⇑Pg		Pg	20 33 23.5	+0.1
	1.4nm,0.8s,baz=96,slow=15,SNR=10							
KK31				⇓Lg	Lg		20 34 48.3	
	2.3nm,0.8s,baz=94,slow=29,SNR=4.5							

IDC 01 20:34:41.8±11.0, 0°.33N×123°.57E, *h*89km±108km, mb3.2/4, mb1 3.5/5, mb1mx3.2/36, mbtmp3.6/5, ML4.1/1, Error ellipse: s-maj=112.7km s-min=19.3km az=56.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.42**	**174**	P	P	20 38 50.6	+0.4
	0.4nm,0.3s,baz=17,slow=9.8,SNR=9.8						
WRA	**Warramunga Arr**	**22.74**	**153**	P	P	20 39 36.9	+0.2
	1.5nm,0.5s,baz=330,slow=11,SNR=48						
ASAR	**Alice Springs**	**25.88**	**158**	P	P	20 40 05.3	-0.1
	0.3nm,0.5s,baz=328,slow=8.3,SNR=2.6						
ASAR				PcP	PcP	20 43 31.7	-0.9
	0.1nm,0.3s,baz=351,slow=1.9,SNR=4.1						
CMAR	**Chiang Mai Arr**	**30.16**	**308**	P	P	20 40 43.8	+0.2
	0.5nm,0.7s,baz=139,slow=7.0,SNR=7.5						
MKAR	**Makanchi Array**	**58.64**	**328**	P	P	20 44 29.6	-0.2
	0.3nm,0.5s,baz=122,slow=8.3,SNR=4.2						

*NEIC **01** 21:21:42.7±1.8, 32°.93N±0°.02×115°.538W±0°.010, h23km±6km, Error ellipse: s-maj=2.6km s-min=0.9km az=199.0*
*ANF **01** 21:21:42.3±0.3, 32°.94N×115°.54W, h18km±2km, ML3.2/20, Error ellipse: s-maj=3.0km s-min=1.7km az=165.0*
*SCEDC **01** 21:21:43.5, 32°.95N×115°.54W, h14km*
*PAS **01** 21:21:43.4±2.7, 32°.951N±0°.009×115°.54W±0°.01, h13km±2km, ML3.4/158, Error ellipse: s-maj=1.6km s-min=1.3km az=88.0*
ISC 01 21:21:43.1±0.8, 32°.93N±0°.02×115°.55W±0°.01, h19km±1km, n106, σ0°97/157, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNR	**Schaffner Ranc**	**0.12**	**128**		Pg	21 21 46.8	-0.2
SNR					Sg	21 21 50.2	+0.6
DREC	**Desert Rsrch C**	**0.15**	**147**		Pg	21 21 47.8	+0.4
DREC					Sg	21 21 52.0	+1.7
COK2	**Cook Ranch 2**	**0.17**	**242**		Pg	21 21 47.9	+0.2
COK2					Sg	21 21 51.6	+0.7
SWSC	**Sam W. Stewart**	**0.21**	**273**	P	Pb	21 21 47.8	-0.2
	baz=89,SNR=572						
SWSC				S	Sb	21 21 51.0	-0.3
	baz=89						
SWSC	**Sam W. Stewart**	**0.21**	**273**		Pb	21 21 48.0	-0.1
SWSC					Sb	21 21 51.4	+0.2
WESC	**Westside Schoo**	**0.23**	**222**		Pg	21 21 48.9	+0.3
WESC					Sg	21 21 53.4	+1.0
SUP	**Superstition M**	**0.24**	**276**		Sb	21 21 51.9	-0.2
SUP	**Superstition M**	**0.24**	**276**		Pb	21 21 48.3	-0.2
UABX	**UABC, Campus M**	**0.31**	**164**		Pg	21 21 50.1	+0.2
UABX					Sb	21 21 56.5	+1.7
SGL	**Mount Signal**	**0.32**	**208**		Pg	21 21 50.0	0.0
CRR	**Carrizo Plain**	**0.36**	**263**		Pg	21 21 50.6	-0.1
CRR					Sg	21 21 56.0	+0.2
COA	**Coachella**	**0.36**	**101**		Pg	21 21 50.7	0.0
YUH	**Yuha Desert**	**0.43**	**228**		Pg	21 21 51.8	-0.1
YUH					Sg	21 21 57.7	-0.1
FRK	**Frink**	**0.47**	**351**		Pg	21 21 52.0	-0.8
RUN	**Ruthven**	**0.48**	**85**		Pg	21 21 52.2	-0.6
RUN					Sg	21 21 59.1	-0.3
SALN	**Salton City**	**0.51**	**313**		Pg	21 21 53.1	-0.3
SALN					Sb	21 22 00.9	+0.5
EMSC	**East Mesa**	**0.51**	**112**		Pg	21 21 53.2	-0.2
CPBX	**Cerro Prieto**	**0.55**	**158**		Pb	21 21 53.5	-0.7
CPBX					Sg	21 22 01.5	-0.1
IKP	**In-Ko-Pah, Jac**	**0.55**	**240**	P	Pb	21 21 54.2	-0.1
	baz=58,SNR=112						
IKP				S	Sg	21 22 01.7	0.0
	baz=58						
IKP	**In-Ko-Pah, Jac**	**0.55**	**240**		Pb	21 21 54.2	-0.1
IKP					Sg	21 22 01.5	-0.2
RMX	**La Rumorosa**	**0.56**	**234**		Pb	21 21 54.2	-0.1
RMX	**La Rumorosa**	**0.56**	**234**		Sg	21 22 01.7	-0.1
CBKC	**Canebrake**	**0.59**	**267**		Pb	21 21 54.8	-0.1
GLA	**Glamis**	**0.61**	**79**	P	Pb	21 21 54.6	-0.7
	baz=260,SNR=149						
GLA				S	Sb	21 22 02.6	-0.9
	baz=260						
GLA	**Glamis**	**0.61**	**79**		Pb	21 21 54.5	-0.7
GLA	**Glamis**	**0.61**	**79**		Sb	21 22 02.8	-0.7
SLH	**Sleepy Hollow**	**0.65**	**294**		Pb	21 21 55.4	-0.5
SLH					Sg	21 22 05.4	+0.7
BC3	**Big Chuckawall**	**0.72**	**6**	P	Pb	21 21 56.6	-0.7
	baz=186,SNR=238						
BC3				S	Sb	21 22 06.5	-0.4
	baz=186						
BC3	**Big Chuckawall**	**0.72**	**6**		Pb	21 21 56.6	-0.7
BC3					Sb	21 22 06.3	-0.6
MONP2	**Monument Peak**	**0.74**	**267**	P	Pb	21 21 57.1	-0.4
	baz=86,SNR=112						
MONP2				S	Sb	21 22 07.2	-0.2
	baz=86						
MONP2	**Monument Peak**	**0.74**	**267**		Pb	21 21 57.2	-0.4
MONP2					Sb	21 22 07.2	-0.2
HAY	**Hayfield**	**0.78**	**351**		Pb	21 21 57.1	-1.0
CTW	**Cottonwood Mou**	**0.79**	**340**		Pb	21 21 57.3	-1.1
CTW					Sb	21 22 08.7	-0.1
BORC	**Borrego Spring**	**0.81**	**295**		Pb	21 21 57.5	-1.0
BORC					Sg	21 22 10.1	+0.5
CTCC	**Cactus City**	**0.81**	**333**		Pb	21 21 57.9	-0.8
CTCC					Sb	21 22 09.0	-0.3
MATG	**Mataguay Scout**	**0.96**	**286**		Pb	21 22 00.4	-0.9
MATG					Sb	21 22 13.3	-0.4
TKX	**Tecate**	**0.97**	**248**	Pg	Pb	21 22 01.2	-0.1
TKX					Sb	21 22 13.4	-0.3
BAR	**Barrett**	**0.98**	**255**		Pb	21 22 00.7	-0.9
BAR	**Barrett**	**0.98**	**255**		Sb	21 22 13.8	-0.3
ESJX	**Sierra Juarez**	**0.99**	**200**		Pb	21 22 01.2	-0.5
ESJX	**Sierra Juarez**	**0.99**	**200**		Sb	21 22 14.8	+0.4
PMD	**Palm Desert**	**1.00**	**316**		Pb	21 22 00.2	-1.7
PMD					Sb	21 22 14.5	-0.2
XPFO	**Pion Flat**	**1.02**	**312**		Pb	21 22 01.0	-1.3
XPFO					Sb	21 22 15.5	+0.1
PFO	**Pinyon Flats O**	**1.02**	**312**	P	Pb	21 22 00.9	-1.5
	baz=131,SNR=68						
PFO				S	Sb	21 22 14.9	-0.6
	baz=131						
PFO	**Pinyon Flats O**	**1.02**	**312**	Pg	Pb	21 22 00.8	-1.5
PFO	**Pinyon Flats O**	**1.02**	**312**		Sb	21 22 15.6	+0.1
FRD	**Ford Ranch, An**	**1.05**	**303**		Pb	21 22 01.4	-1.3
FRD					Sb	21 22 16.8	+0.6
FRD	**Ford Ranch, An**	**1.05**	**303**		Pb	21 22 01.3	-1.4
SNDA	**J Saunders Pla**	**1.09**	**305**		Pb	21 22 02.1	-1.4
SNDA					Sb	21 22 16.9	-0.5
BZNA	**Buzz No.'s Pla**	**1.09**	**301**		Pb	21 22 02.2	-1.4
BZNA					Sb	21 22 16.6	-0.9
DNR	**Dunn Ranch,Anz**	**1.11**	**305**		Pn	21 22 02.4	-1.4
DNR					Sb	21 22 17.8	-0.2
BELC	**Belle Mtn. Jos**	**1.13**	**341**	P	Pn	21 22 02.4	-1.7
	baz=160,SNR=24						
BELC				S	Sb	21 22 16.7	-1.9
	baz=160						
DPP	**Dos Picos Cty**	**1.18**	**274**		Pn	21 22 03.3	-1.4
DPP					Sb	21 22 19.1	-0.7
CRY	**Cary Ranch**	**1.18**	**303**		Pn	21 22 03.2	-1.6
CRY					Sn	21 22 20.8	+0.3
PLM	**Palomar**	**1.18**	**291**		Pn	21 22 03.5	-1.3
HWB	**Hans Werner Br**	**1.19**	**275**		Pn	21 22 03.7	-1.2
SDRC	**San Diego Road**	**1.19**	**261**		Pn	21 22 03.9	-1.0
SDRC					Sb	21 22 19.0	-1.2
OLP	**Otay Lakes Par**	**1.21**	**255**		Pn	21 22 04.4	-0.7
OLP					Sb	21 22 19.9	-0.9
EW2	**E Wide Canyon**	**1.24**	**325**		Pn	21 22 03.9	-1.6
TPC	**Twentynine Pal**	**1.24**	**340**		Pn	21 22 04.1	-1.5
IRM	**Iron Mountain**	**1.27**	**15**	P	Pn	21 22 04.6	-1.3
	baz=195,SNR=213						
IRM				S	Sn	21 22 23.3	+0.9
	baz=195						
IRM	**Iron Mountain**	**1.27**	**15**		Pn	21 22 05.8	-0.1
IRM					Sn	21 22 23.4	+0.9
109C	**Camp Elliot, M**	**1.31**	**269**	P	Pn	21 22 05.5	-0.9
	baz=87,SNR=39						
109C				S	Sn	21 22 23.0	-0.6
	baz=87						
109C	**Camp Elliot, M**	**1.31**	**269**		Pn	21 22 05.6	-0.9
CPE	**Camp Elliot**	**1.31**	**269**		Pn	21 22 05.5	-1.0
CPE					Sb	21 22 24.0	+0.3
BLAC	**Blackrock camp**	**1.33**	**328**		Pn	21 22 06.9	-0.1
TJX	**Tijuana**	**1.34**	**252**		Pn	21 22 07.2	+0.3
POB	**Polly Butte**	**1.38**	**303**		Pn	21 22 06.5	-1.0
DGR	**Domenigoni Val**	**1.42**	**301**		Pn	21 22 07.0	-1.1
CCX	**Cicese**	**1.42**	**222**	Pn	Pn	21 22 08.8	+0.8
BACC	**Bachelor Mtn.**	**1.42**	**299**		Pn	21 22 06.9	-1.2
BACC					Pb	21 22 09.8	+0.7
BACC					Sb	21 22 28.2	+1.2
GORC	**Green Oak Ranc**	**1.43**	**279**		Pn	21 22 07.1	-1.0
GORC					Sn	21 22 25.7	-0.8
HMTC	**Hemet**	**1.45**	**303**		Pn	21 22 07.3	-1.1
HMTC					Sb	21 22 28.5	+0.9
113A	**Mohawk Valley,**	**1.51**	**96**	Pn	Pn	21 22 07.9	-1.2
MURC	**Murrieta**	**1.54**	**296**	Pn	Pn	21 22 08.4	-1.2
	baz=115,SNR=40						
MURC				Pg	Pb	21 22 11.6	+0.6
	baz=115						
MURC				Sb	Sb	21 22 30.9	+0.8
	baz=115						
RMR	**Rimrock**	**1.54**	**326**		Pb	21 22 12.4	+1.3
SME	**Santa Rosa Min**	**1.75**	**301**		Pb	21 22 15.5	+0.7
PDMCI	**Parker Dam,Lak**	**1.80**	**40**	Pg	Pb	21 22 16.0	+0.5
	baz=221,SNR=23						
PDMCI				Sb	Sb	21 22 38.5	+0.8
	baz=221						
GMRC	**Granite Mounta**	**1.85**	**357**	Pg	Pb	21 22 17.2	+0.8
	baz=177,SNR=53						
GMRC				Sb	Sb	21 22 40.8	+1.5
	baz=177						
SPX	**San Pedro Mart**	**1.89**	**178**		Pn	21 22 13.3	-1.4
NEE2	**Needles Airpor**	**1.99**	**23**	P	Pn	21 22 15.1	-0.7
	baz=203,SNR=11						
BFSC	**Mount Baldy Ra**	**2.19**	**307**	Pg	Pb	21 22 23.0	+0.7
	baz=126,SNR=20						
BFSC				Sb	Sb	21 22 50.9	+1.7
	baz=126						
SSK	**Sunset Peak**	**2.20**	**306**		Pb	21 22 22.3	-0.1
PIX	**Pinacate**	**2.23**	**127**	Pn	Pn	21 22 17.7	-1.5
CIS	**Catalina Islan**	**2.45**	**282**	Sb	Sb	21 22 57.2	+0.7
	baz=100						
214A	**Organ Pipe Nat**	**2.51**	**112**	P	Pn	21 22 21.7	-1.3
	baz=294,SNR=6.6						
214A	**Organ Pipe Nat**	**2.51**	**112**	Pn	Pn	21 22 21.8	-1.1
PASC	**Pasadena Art C**	**2.53**	**300**		Pb	21 22 28.4	+0.5
GSC	**Goldstone, Bar**	**2.58**	**336**		Pn	21 22 25.8	+1.8
DECC	**Green Verdugo**	**2.67**	**300**	Sb	Sb	21 23 05.4	+2.4
	baz=118						
EDW2	**Edwards Air Fo**	**2.81**	**314**	Pg	Pb	21 22 34.8	+1.9
	baz=133,SNR=28						
EDW2				Sb	Sb	21 23 09.8	+2.8
	baz=133						
ARVC	**Arvin**	**3.50**	**310**	Pg	Pg	21 22 48.8	-1.3
	baz=128						
SHPR	**Sheep Range**	**3.58**	**5**		Pn	21 22 37.9	0.0
ISA	**Isabella, Lake**	**3.65**	**319**		Pn	21 22 41.4	+2.7
X16A	**Lo Mia Camp, P**	**3.73**	**65**	Pn	Pn	21 22 40.7	+0.8
TPNV	**Topopah Spring**	**4.05**	**352**		Pn	21 22 45.8	+1.5
TUC	**Tucson**	**4.07**	**98**	P	Pn	21 22 44.2	-0.2
	baz=280						
TUC	**Tucson**	**4.07**	**98**	Pn	Pn	21 22 43.7	-0.7
PRN	**Pahroc Range**	**4.48**	**5**		Pn	21 22 51.1	+0.8
LCMT	**Little Creek M**	**4.49**	**24**		Pn	21 22 51.0	+0.7
KNB	**Kanab**	**4.65**	**28**		Pn	21 22 53.4	+0.8
CCUT	**Cedar City**	**4.94**	**21**		Pn	21 22 57.7	+1.1
R11A	**Troy Canyon, C**	**5.41**	**360**	Pg	Pg	21 23 25.6	-1.0
	baz=180						
PSUT	**Pine Spring**	**5.76**	**13**		Pn	21 23 08.6	+0.8
SPR3	**Spring Creek 3**	**6.13**	**9**	Pn	Pn	21 23 12.4	-0.7
121A	**Cookes Peak, D**	**6.55**	**91**	P	Pn	21 23 19.7	+1.0
	baz=276,SNR=6.6						

*REY **01** 21:38:28.6, 64°.68N×17°.39W, h8km*
*IDC **01** 21:38:30.8±1.1, 64°.59N×17°.76W, h0km, mb3.5/4, mb1 3.9/5, mb1mx3.4/62, mbtmp3.6/5, ML2.9/1, MS3.9/1, Ms1 3.9/1, ms1mx3.2/41, Error ellipse: s-maj=32.9km s-min=12.8km az=14.0*
ISC 01 21:38:28.4±0.6, 64°.69N±0°.02×17°.44W±0°.02, h10km, n58, σ1°81/68, mb3.8/5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.11**	**16**	P	Pg	21 38 31.2	0.0
	baz=8.1						
IVON	**Vonarskard**	**0.14**	**265**	S	Sg	21 38 34.6	+0.7
	baz=268						
IGRF	**Grimsfjall**	**0.29**	**165**	P	Pb	21 38 34.3	-1.5
	baz=168						
IKVE	**Kverkfjoll**	**0.33**	**91**	P	Pb	21 38 35.1	-1.3
	baz=90						
IKVE				S	Sb	21 38 39.3	-2.5
	baz=90						
IHUS	**Husbondi**	**0.40**	**194**	P	Pb	21 38 35.9	-1.7
	baz=197						
ISKR	**Skrokkalda**	**0.43**	**253**	P	Pb	21 38 37.2	-0.9
	baz=255						
ISKR				S	Sb	21 38 43.4	-1.2
	baz=255						
IVOT	**Vottur**	**0.43**	**165**	P	Pb	21 38 36.6	-1.5
	baz=167						
IVOT				S	Sb	21 38 42.5	-2.2
	baz=167						
IJOK	**Jokulheimar**	**0.51**	**223**	P	Pb	21 38 38.1	-1.3
	baz=225						
IJOK				S	Sb	21 38 45.5	-1.3
	baz=225						
IMKO	**Mokollar**	**0.55**	**57**	P	Pb	21 38 38.5	-1.6
	baz=56						
IMKO				S	Sb	21 38 46.5	-1.7
	baz=56						
ISVA	**Svartarkot**	**0.66**	**7**	P	Pb	21 38 40.5	-1.5
	baz=5.1						
ISVA				S	Sb	21 38 50.0	-1.2
	baz=5.1						
IIEY	**Innrieyrar**	**0.66**	**207**	P	Pb	21 38 40.3	-1.7
	baz=209						
IIEY				S	Sb	21 38 49.9	-1.4
	baz=209						
IKSK	**Karasker**	**0.67**	**141**	P	Pg	21 38 39.6	-1.8
	baz=142						
IKSK				S	Sb	21 38 49.6	-2.0
	baz=142						
IVSH	**V-Sauoahnukur**	**0.74**	**80**	P	Pg	21 38 41.5	-1.2
	baz=79						
IVSH				S	Sb	21 38 52.0	-1.7
	baz=79						
IKAL	**Kalfafell**	**0.75**	**189**	P	Pb	21 38 41.9	-1.6
	baz=190						
IKAL				S	Sb	21 38 52.4	-1.3
	baz=190						
IVAT	**Vatnsfell**	**0.81**	**233**	P	Pb	21 38 43.5	-1.1
	baz=234						
IVAT				S	Sb	21 38 54.3	-1.4
	baz=234						
IADA	**Aoalbol**	**0.86**	**66**	P	Pg	21 38 43.5	-1.5
	baz=66						
IADA				S	Sb	21 38 55.6	-1.4
	baz=66						
IHVE	**Hveravellir**	**0.93**	**282**	P	Pn	21 38 45.8	-1.8
	baz=283						
IMEL	**Melhnausar**	**0.95**	**20**	P	Pg	21 38 45.2	-1.4
	baz=19						
IREN	**Reynihlio**	**0.99**	**13**	P	Pg	21 38 46.0	-1.5
	baz=12						
IKVO	**Krokottuvotn**	**1.06**	**13**	P	Pg	21 38 47.1	-1.7
	baz=12						
ISNB	**Snabyli**	**1.09**	**209**	P	Pn	21 38 48.1	-1.6
	baz=210						
ISNB				S	Sn	21 39 02.9	-1.8
	baz=210						
IGRS	**Grimsstaoir**	**1.11**	**29**	P	Pb	21 38 47.9	-1.7
	baz=28						
ISLY	**Slysaalda**	**1.13**	**221**	P	Pn	21 38 48.8	-1.5
	baz=222						
IFED	**Fedgar**	**1.18**	**237**	P	Pg	21 38 49.6	-1.5
	baz=238						
IRJU	**Rjupnafell**	**1.20**	**207**	P	Pg	21 38 49.9	-1.5
	baz=208						
ISKI	**Skildingahlsh**	**1.20**	**8**	P	Pb	21 38 49.4	-1.8
	baz=7.2						
IGHA	**Grjothals**	**1.21**	**15**	P	Pn	21 38 49.8	-1.5
	baz=14						
IGHA				S	Sn	21 39 06.8	-0.9
	baz=14						
IMJO	**Mjoaskard**	**1.23**	**233**	P	Pg	21 38 50.8	-1.2
	baz=234						
IGRA	**Granastaoir**	**1.24**	**357**	P	Pb	21 38 50.3	-1.5
	baz=356						
IGYG	**Gygjarholskot**	**1.27**	**253**	P	Pg	21 38 51.5	-1.2
	baz=253						
IDIM	**Dimmadalss**	**1.30**	**9**	P	Pn	21 38 51.0	-1.6
	baz=8.4						
IHAU	**Haukadalur**	**1.31**	**238**	P	Pg	21 38 52.4	-1.2
	baz=239						
IHVO	**Lagu-Hvolar**	**1.32**	**209**	P	Pb	21 38 51.8	-1.4
	baz=210						
IHLA	**Hella**	**1.33**	**343**	P	Pb	21 38 51.6	-1.7
	baz=342						
IHLA				S	Sg	21 39 10.7	-0.3
	baz=342						
IHED	**Heoinshofoi**	**1.40**	**2**	P	Pb	21 38 53.0	-1.6
	baz=1.4						
IALF	**Alftagrof**	**1.42**	**213**	P	Pb	21 38 53.7	-1.2
	baz=214						
IBRE	**Brettingsstaoi**	**1.46**	**352**	P	Pb	21 38 54.2	-1.3
	baz=352						
IESK	**Eystri-Skogar**	**1.46**	**218**	P	Pb	21 38 54.2	-1.4
	baz=219						
IGIL	**Gilhagi**	**1.47**	**18**	P	Pb	21 38 54.5	-1.2
	baz=17						
ISAU	**Saurbar**	**1.47**	**243**	P	Pb	21 38 54.5	-1.3
	baz=244						
IMID	**Miomork**	**1.49**	**227**	P	Pg	21 38 55.1	-1.8
	ba

ILAR	**Eielson Array**	**45.68 332**	P	P	21 46 52.3	+3.6	
	1.3nm,1.1s,baz=24,slow=6.0,SNR=6.7						
PDAR	**Pinedale Array**	**53.19 293**	P	**P**	**21 47 49.3**	**+2.7**	
	1.1nm,0.9s,baz=57,slow=5.5,SNR=6.7						

IDC 01 21:48:34.1±5.9,**19°29S**×**176°68W,h0**km,**mb3.9**/2, **mb1 4.2**/2,**mb1mx3.6**/37,**mbtmp3.9**/2,**Error ellipse: s-maj=302.3km s-min=54.9km az=149.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.01**	**261**	P	P	21 56 59.6	-0.1
	0.4nm,0.3s,baz=97,slow=7.5,SNR=21						
ASAR	**Alice Springs**	**46.01**	**255**	P	P	21 56 59.6	-0.1
	1.4nm,0.6s,baz=96,slow=7.9,SNR=25						
GERES	**GERESS Array B**	**149.34**	**346**	PKPbc	PKPbc	22 08 24.5	-0.6
	0.1nm,0.3s,baz=35,slow=3.9,SNR=1.9						

*IDC **01** 21:50:52.4*±*0.7,5°.86S*×*105°.42E,h0*km*,mb4.1/17, mb1 4.2/17,mb1mx4.0/45,mbtmp4.1/17,Error ellipse: s-maj=33.8km s-min=13.6km az=51.0*

*DJA **01** 21:50:56.4*±*0.3,6°.5*±*3*×*10°.5E*±*°,h10km,M4.1/19,mb4.2/1, MLv4.1/19*

*NEIC **01** 21:51:01.1*±*1.4,5°.9S*±*0°.1*×*105°.49E*±*0°.09,h69km*±*9km, mb4.3/21,Error ellipse: s-maj=19.1km s-min=8.4km az=217.0*

ISC 01 21:50:53.3±1.2,**6°.05S**±0°.04×**105°.30E**±0°.04,**h9**km±7km, **n88,**σ**1$46**/102,**mb4.3**/25,**9C-3D,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**0.68**	**356**	P	**Pn**	**21 51 09.1**	**-0.1**
BLSI				S	**Sb**	**21 51 18.3**	**+1.3**
CGJI	**Cibinong**	**0.68**	**145**	P	**Pg**	**21 51 06.4**	**-0.2**
CGJI				S	**Sg**	**21 51 16.2**	**+0.7**
SBJI	**Serang**	**0.83**	**95**	P	**Pg**	**21 51 09.2**	**-0.1**
SBJI				S	**Sg**	**21 51 19.1**	**-1.1**
TNG	**Tangerang**	**1.35**	**95**	P	**Pn**	**21 51 18.3**	**-0.1**
TNG				P	**Pg**	**21 51 18.5**	**-0.7**
TNG				S	**Sg**	**21 51 36.4**	**-0.3**
TNG				S	**Sg**	**21 51 36.4**	**-0.3**
DBJI	**Dramaga**	**1.53**	**109**	P	**Pn**	**21 51 21.4**	**+0.5**
SKJI	**Sukabumi**	**1.57**	**127**	P	**Pn**	**21 51 22.4**	**+0.9**
SKJI				S	**Sn**	**21 51 41.7**	**-0.3**
CBJI	**Citeko**	**1.59**	**104**	P	**Pg**	**21 51 25.1**	**+1.3**
LWLI	**Liwa**	**1.60**	**310**	P	**Pg**	**21 51 26.2**	**+2.0**
MDSI	**Maura Dua**	**1.91**	**324**	P	**Pg**	**21 51 30.7**	**+0.7**
MDSI				S	**Sg**	**21 51 57.4**	**+2.5**
CNJI	**Cibinong**	**2.21**	**125**	P	**Pn**	**21 51 30.9**	**+0.7**
CNJI				S	**Sn**	**21 51 57.5**	**-0.2**
LEM	**Lembang**	**2.43**	**109**	Pn	**Pb**	**21 51 37.2**	**-0.2**
	41nm,0.3s,baz=349,slow=23,SNR=50						
LEM				Sn	**Sg**	**21 52 11.2**	**-0.3**
	4.6nm,0.3s,baz=340,slow=17,SNR=3.8						
LEM	**Lembang**	**2.43**	**109**	P	**Pn**	**21 51 35.4**	**+1.9**
LHSI	**Lahat**	**2.83**	**321**	P	**Pg**	**21 51 49.3**	**+1.7**
MNAI	**Manna**	**2.87**	**306**	P	**Pb**	**21 51 44.2**	**-0.7**
MNAI	**Manna**	**2.87**	**306**	Pn	**Pg**	**21 51 45.8**	**-2.7**
CISI	**Cisompet, Garu**	**2.91**	**121**	P	**Pn**	**21 51 40.8**	**+0.8**
CISI	**Cisompet, Garu**	**2.91**	**121**		**Pn**	**21 51 40.9**	**+0.9**
CISI				Sn	**Sn**	**21 52 19.3**	**+4.1**
JCJI	**Jatiwangi**	**2.99**	**99**	P	**Pn**	**21 51 43.6**	**+2.6**
PMBI	**Palembang**	**3.15**	**350**	P	**Pb**	**21 51 48.2**	**-1.3**
PMBI	**Palembang**	**3.15**	**350**	Pn	**Pb**	**21 51 47.0**	**-2.5**
CMJI	**Cimerak**	**3.57**	**119**	P	**Pn**	**21 51 51.2**	**+2.2**
KSI	**Kapahiang**	**3.60**	**311**	P	**Pb**	**21 51 54.8**	**-2.4**
KPJI	**Karang Pucung**	**3.83**	**110**	P	**Pn**	**21 51 55.3**	**+2.8**
PPBI	**Pangkal Pinang**	**3.95**	**12**	P	**Pn**	**21 51 57.5**	**+3.3**
TPI	**Tanjungpandan**	**4.03**	**36**	P	**Pn**	**21 51 57.0**	**+1.7**
SMRI	**Semarang**	**5.21**	**101**	P	**Pn**	**21 51 57.7**	**-3.8**
SMRI	**Semarang**	**5.21**	**101**	Pn	**Pn**	**21 52 15.6**	**+4.1**
UGM	**Wanagama**	**5.51**	**110**	Pn	**Pn**	**21 52 19.0**	**+3.3**
PWJI	**Pagerwojo**	**6.75**	**107**	P	**Pn**	**21 52 34.6**	**+1.9**
SOEI	**Soe**	**19.14**	**102**	P	**P**	**21 55 17.1**	**-0.2**
SOEI				IAmb	IAmb	21 55 21.6	
	comp=Z,20nm,1.1s						
FITZ	**Fitzroy Crossi**	**23.18**	**123**	P	**P**	**21 56 00.1**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=62,slow=7.3,SNR=3.6						
FITZ	**Fitzroy Crossi**	**23.18**	**123**	P	**P**	**21 56 00.5**	**-0.1**
KNRA	**Kununurra**	**24.92**	**114**	P	**P**	**21 56 17.5**	**+0.4**
KNRA				IAmb	IAmb	21 56 18.9	
	comp=Z,14nm,0.7s						
CM31	**Chiang Mai Arr**	**25.14**	**346**	P	**P**	**21 56 18.4**	**-0.7**
CMAR	**Chiang Mai Arr**	**25.14**	**346**	P	**P**	**21 56 18.3**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=178,slow=8.4,SNR=5.5						
CMAR	**Chiang Mai Arr**	**25.14**	**346**	P	**P**	**21 56 18.5**	**-0.5**
WRA	**Warramunga Arr**	**31.41**	**119**	P	**P**	**21 57 15.3**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=293,slow=10,SNR=26						
WRA				PcP	**PcP**	**22 00 09.7**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=304,slow=1.9,SNR=7.2						
WRA	**Warramunga Arr**	**31.41**	**119**	P	**P**	**21 57 15.2**	**0.0**
WB2	**Warramunga Arr**	**31.42**	**119**	P	**P**	**21 57 15.3**	**0.0**
WB2				IAmb	IAmb	21 57 16.5	
	comp=Z,6.4nm,1.2s						
WR0	**Warramunga Arr**	**31.59**	**119**	P	**P**	**21 57 17.0**	**+0.2**
WR0				IAmb	IAmb	21 57 17.7	
	comp=Z,2.8nm,0.6s						
ASAR	**Alice Springs**	**32.61**	**125**	P	**P**	**21 57 26.6**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=301,slow=8.2,SNR=27						
ASAR				PcP	**PcP**	**22 00 12.3**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=268,slow=1.4,SNR=6.6						
AS31	**Alice Springs**	**32.61**	**125**	P	**P**	**21 57 26.5**	**+0.7**
LSA	**Lhasa**	**38.05**	**340**	P	**P**	**21 58 12.7**	**-0.2**
LSA				IAmb	IAmb	21 58 14.9	
	comp=Z,1.9nm,0.8s						
PMG	**Port Moresby**	**41.60**	**97**	P	**P**	**21 58 41.0**	**-1.1**
PMG				IAmb	IAmb	21 58 52.9	
	comp=Z,7.3nm,0.8s						
STKA	**Stephens Creek**	**42.53**	**132**	P	**P**	**21 58 49.8**	**+0.2**
	comp=Z,4.4nm,0.5s,baz=300,slow=9.2,SNR=7.1						
STKA	**Stephens Creek**	**42.53**	**132**	P	**P**	**21 58 49.5**	**0.0**
KBL	**Kabul**	**52.92**	**322**	P	**P**	**22 00 10.2**	**-0.2**
KBL				IAmb	IAmb	22 00 25.0	
	comp=Z,3.0nm,1.2s						
SONM	**Songino Array**	**53.66**	**1**	P	**P**	**22 00 15.3**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=176,slow=11,SNR=7.4						
SONM				PcP	**PcP**	**22 01 21.4**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=153,slow=4.7,SNR=4.7						
SONM	**Songino Array**	**53.66**	**1**	P	**P**	**22 00 15.4**	**-0.1**
USRK	**Ussuriysk Ar.**	**55.50**	**23**	P	**P**	**22 00 28.2**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=204,slow=8.4,SNR=5.2						
USRK	**Ussuriysk Ar.**	**55.50**	**23**	P	**P**	**22 00 28.3**	**-0.5**
MKAR	**Makanchi Array**	**56.44**	**341**	P	**P**	**22 00 34.2**	**-1.3**
	comp=Z,1.8nm,1.1s,baz=146,slow=6.7,SNR=4.5						
MKAR	**Makanchi Array**	**56.44**	**341**	P	**P**	**22 00 34.1**	**-1.4**
KLR	**Kul'dur**	**59.69**	**20**	P	**P**	**22 00 58.0**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=162,slow=16,SNR=3.6						
KURBB	**Kurchatov Arra**	**60.99**	**341**	P	**P**	**22 01 05.1**	**-2.0**
	comp=Z,0.7nm,0.9s,baz=159,slow=6.1,SNR=5.1						
KURBB				PcP	**PcP**	**22 01 51.0**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=162,slow=3.5,SNR=5.5						
GEYT	**Alibeck**	**61.94**	**319**	P	**P**	**22 01 14.3**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=141,slow=7.3,SNR=7.0						
GEYT	**Alibeck**	**61.94**	**319**	P	**P**	**22 01 13.5**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**61.94**	**319**	P	**P**	**22 01 13.8**	**0.0**
ZAA0	**Zalesovo Array**	**62.21**	**346**	P	**P**	**22 01 14.6**	**-0.6**
ZAA0				IAmb	IAmb	22 01 15.7	
	comp=Z,3.0nm,1.0s						
ZALV	**Zalesovo Beam**	**62.21**	**346**	P	**P**	**22 01 13.2**	**-2.0**
	comp=Z,1.6nm,0.8s,baz=145,slow=5.4,SNR=7.8						
ZALV	**Zalesovo Beam**	**62.21**	**346**	P	**P**	**22 01 13.8**	**-1.4**
ABKAR	**Akbulak array**	**67.74**	**330**	P	**P**	**22 01 50.5**	**-0.8**
ABKAR	**Akbulak array**	**67.74**	**330**	P	**P**	**22 01 50.9**	**-0.4**
ABKAR				IAmb	IAmb	22 01 51.6	
	comp=Z,3.0nm,0.8s						
YAK	**Yakutsk**	**70.44**	**12**	P	**P**	**22 02 06.5**	**-1.3**
	comp=Z,1.5nm,0.5s,baz=204,slow=2.5,SNR=4.2						
YAK	**Yakutsk**	**70.44**	**12**	P	**P**	**22 02 06.5**	**-1.3**
KBZ	**Khabaz**	**74.82**	**318**	P	**P**	**22 02 34.8**	**+0.6**
	comp=Z,3.4nm,1.1s,baz=129,slow=2.7,SNR=5.2						
BRTR	**Keskin Array B**	**79.94**	**312**	P	**P**	**22 03 03.7**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=142,slow=6.3,SNR=3.8						
BRTR	**Keskin Array B**	**79.94**	**312**	P	**P**	**22 03 02.6**	**-0.7**
HARR	**Harsova**	**85.31**	**316**	⇑P	**P**	**22 03 32.4**	**+1.4**
SORM	**Soroca**	**85.83**	**319**	⇓P	**P**	**22 03 34.1**	**+0.6**
AKASG	**Malin Array Be**	**85.91**	**322**	P	**P**	**22 03 33.8**	**0.0**
	comp=Z,0.3nm,0.3s,baz=88,slow=4.8,SNR=7.5						
AKASG	**Malin Array Be**	**85.91**	**322**	P	**P**	**22 03 33.8**	**0.0**
VRI	**Vrincioaia**	**86.40**	**317**	⇑P	**P**	**22 03 38.1**	**+1.8**
PLOR	**Plostina**	**86.45**	**317**	⇓P	**P**	**22 03 38.8**	**+2.2**
MLR	**Muntele Rosu**	**86.86**	**316**	⇑P	**P**	**22 03 40.1**	**+1.3**
MLR	**Muntele Rosu**	**86.86**	**316**	P	**P**	**22 03 39.6**	**+0.8**
BIZ	**Bicaz**	**87.05**	**318**	⇑P	**P**	**22 03 40.5**	**+1.0**
DOPR	**Dopca**	**87.33**	**317**	⇑P	**P**	**22 03 43.1**	**+2.2**
VOIR		**87.46**	**316**	⇓P	**P**	**22 03 42.7**	**+1.0**
ARR	**Arges**	**87.74**	**316**	⇑P	**P**	**22 03 44.3**	**+1.4**
BURAR	**Bucovina Array**	**87.78**	**318**	⇑P	**P**	**22 03 45.5**	**+2.4**
BURAR	**Bucovina Array**	**87.78**	**318**	P	**P**	**22 03 44.2**	**+1.1**
BUR08	**Bucovina Ar. S**	**87.79**	**318**	P	**P**	**22 03 44.3**	**+1.1**
GZR	**Gura Zlata**	**89.03**	**316**	⇑P	**P**	**22 03 51.6**	**+2.5**
MDVR	**Moldovita**	**89.68**	**315**	⇑P	**P**	**22 03 54.0**	**+1.9**
FINES	**FINESS Array B**	**90.14**	**332**	P	**P**	**22 03 53.9**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=44,slow=4.2,SNR=2.3						
TXAR	**Lajitas Array**	**144.17**	**46**	PKP	PKPbc	22 10 29.7	+1.0
	comp=Z,0.2nm,0.3s,baz=350,slow=3.8,SNR=4.4						
BDFB	**Brasilia**	**145.90**	**231**	PKPbc	**PKPbc**	**22 10 35.2**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=117,slow=4.3,SNR=4.1						

*GII **01** 22:07:02.8*±*0.0,36°.18N*×*35°.78E,h5km*

*ISK **01** 22:07:02.3,36°.10N*×*35°.85E,h21km,ML2.8/20*

*DDA **01** 22:07:03.5,36°.25N*×*35°.87E,h7km*±*5km,ML2.3*

*NIC **01** 22:07:04.1*±*0.0,36°.86N*×*35°.37E,h38km*±*14km,MI3.2/3*

ISC 01 22:07:03.0±1.1,**36°.17N**±0°.02×**35°.82E**±0°.03,**h11**km±9km, **n51,**σ**0$98**/65,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.27**	**120**	PG	**Pg**	**22 07 08.5**	**-0.2**
YAYL				SG	**Sg**	**22 07 12.2**	**-0.2**
TAHT	**Tahtakopru-Hat**	**0.36**	**55**	PG	**Pg**	**22 07 09.7**	**-0.6**
KRTS	**Karatas**	**0.54**	**319**	PG	**Pg**	**22 07 14.7**	**+1.2**
CEYT	**Ceyhan**	**0.84**	**356**	PG	**Pg**	**22 07 20.8**	**+1.5**
DED	**Mersin**	**1.14**	**314**	*i* P	**Pn**	**22 07 23.9**	**-1.0**
DED				*i* S	**Sg**	**22 07 41.2**	**+1.5**
DED				IAML		22 07 45.0	
	comp=E,96nm,0.4s						
DED				IAML		22 07 45.0	
	comp=N,74nm,0.3s						
KAMA	**Osmaniye**	**1.22**	**34**	*i* P	**Pn**	**22 07 25.8**	**-0.4**
KAMA				IAML		22 07 45.0	
	comp=N,56nm,0.3s						
KAMA				IAML		22 07 46.0	
	comp=E,59nm,0.5s						
KARA	**Karaisali**	**1.25**	**331**	PN	**Pn**	**22 07 26.2**	**-0.3**
MERS	**Mersin**	**1.25**	**304**	PN	**Pn**	**22 07 25.9**	**-0.7**
KOZT	**Kozan**	**1.31**	**0**	PN	**Pn**	**22 07 26.9**	**-0.4**
GULE	**Gulek**	**1.39**	**323**	*i* P	**Pn**	**22 07 28.9**	**+0.3**
GULE				IAML		22 07 52.0	
	comp=E,75nm,0.4s						
GULE				IAML		22 07 52.0	
	comp=N,83nm,0.4s						
HCB	**Kahramanmara**	**1.46**	**37**	*i* P	**Pn**	**22 07 29.2**	**-0.3**
HCB				IAML		22 07 51.0	
	comp=N,44nm,0.3s						
HCB				IAML		22 07 53.0	
	comp=E,52nm,0.4s						
ANDN	**Andirin**	**1.47**	**17**	*i* P	**Pn**	**22 07 30.4**	**+0.8**
ANDN				*i* S	**Sn**	**22 07 48.9**	**0.0**
ANDN				IAML		22 07 54.0	
	comp=E,111nm,0.4s						
ANDN				IAML		22 07 57.0	
	comp=N,98nm,0.5s						
EREN	**Erenkoy**	**1.48**	**245**	PN	**Pn**	**22 07 28.2**	**-1.5**
GAZ	**Gaziantep**	**1.50**	**48**	PN	**Pn**	**22 07 29.2**	**-0.8**
GAZ				SN	**Sn**	**22 07 48.8**	**-0.9**
GAZ	**Gaziantep**	**1.50**	**48**	P	**Pn**	**22 07 28.8**	**-1.3**
GAZ				S	**Sn**	**22 07 47.9**	**-1.8**
GAZ				AML	AML	22 07 54.4	
	comp=N,0.4nm,0.4s						
GAZ				AML	AML	22 07 54.4	
	comp=N,0.4nm,0.4s						
GAZ				AML	AML	22 07 55.3	
	comp=N,0.5nm,0.4s						
GAZ				AML	AML	22 07 55.3	
	comp=N,0.5nm,0.4s						
SILI	**Silifke-Mersin**	**1.54**	**278**	PN	**Pn**	**22 07 29.7**	**-0.8**
CMRD	**Camardi-Nigde**	**1.63**	**336**	PN	**Pn**	**22 07 31.3**	**-0.5**
CMRD				SN	**Sn**	**22 07 53.1**	**+0.2**
KAHM	**Kahramanmaras,**	**1.64**	**35**	*i* P	**Pn**	**22 07 32.5**	**+0.6**
KAHM				*i* S	**Sn**	**22 07 52.1**	**-0.9**
KAHM				IAML		22 07 56.0	
	comp=N,86nm,0.3s						
KAHM				IAML		22 07 58.0	
	comp=E,57nm,0.7s						
KEBE	**Keben-Mersin**	**1.72**	**280**	PN	**Pn**	**22 07 33.0**	**0.0**
IKL	**Isikli**	**1.72**	**273**	PN	**Pn**	**22 07 32.4**	**-0.6**
TISA	**Tisan-Mersin**	**1.73**	**270**	PN	**Pn**	**22 07 32.1**	**-1.0**
YESI	**Yesilovacik-Me**	**1.76**	**271**	PN	**Pn**	**22 07 32.7**	**-0.8**
SAIM	**ADANA**	**1.81**	**7**	*i* P	**Pn**	**22 07 35.8**	**+1.5**
SAIM				IAML		22 08 07.0	
	comp=E,26nm,0.2s						
SAIM				IAML		22 08 09.0	
	comp=N,32nm,0.5s						
AKKU	**Akkuyu-Mersin**	**1.83**	**270**	PN	**Pn**	**22 07 33.9**	**-0.6**
AKK2	**Akkuyu-Mersin**	**1.83**	**270**	PN	**Pn**	**22 07 33.5**	**-1.0**
GZT	**Gaziantep**	**1.84**	**49**	*i* P	**Pb**	**22 07 37.1**	**+0.3**
GZT				*i* S	**Sb**	**22 07 60.0**	**+0.2**
AKK1	**Akkuyu-Mersin**	**1.84**	**270**	PN	**Pn**	**22 07 34.1**	**-0.5**
YAHY	**KAYSERI_Yahyal**	**1.96**	**349**	*i* P	**Pn**	**22 07 38.0**	**+1.7**
MVOU	**Mavrovouni**	**2.12**	**238**	P	**Pb**	**22 07 40.3**	**-1.2**
MVOU				AML	AML	22 08 18.9	
	comp=N,0.3nm,0.7s						
MVOU				AML	AML	22 08 21.8	
	comp=N,0.3nm,1.1s						
TEKE	**Tekeli-Mersin**	**2.19**	**270**	PN	**Pn**	**22 07 39.3**	**-0.1**
KRMN	**Karaman**	**2.28**	**297**	PN	**Pn**	**22 07 40.5**	**-0.3**
SARI	**SarD1z-Kayseri**	**2.28**	**12**	PN	**Pn**	**22 07 40.6**	**-0.3**
YESY	**Yesilyurt**	**2.31**	**315**	PN	**Pn**	**22 07 40.9**	**-0.3**
CSS	**Mathiatis**	**2.36**	**240**	Pn	**Pn**	**22 07 41.6**	**-0.1**
ASGA	**Asgata**	**2.51**	**237**	P	**Pb**	**22 07 46.2**	**-2.0**
ASGA				S	**Sb**	**22 08 17.6**	**-1.4**
URFA	**Urfa**	**2.73**	**61**	PN	**Pn**	**22 07 46.2**	**-0.7**
DARE	**Darende-Malaty**	**2.74**	**28**	PN	**Pn**	**22 07 47.5**	**+0.4**
SZAC	**Souni**	**2.78**	**240**	P	**Pn**	**22 07 48.6**	**+1.0**
ALFC	**Alefka**	**2.81**	**250**	P	**Pn**	**22 07 47.2**	**-0.7**
ALFC				S	**Sn**	**22 08 20.6**	**-1.3**
ALFC				AML	AML	22 08 30.2	
	comp=N,0.3nm,0.4s						
ALFC				AML	AML	22 08 30.2	
	comp=N,0.3nm,0.4s						
ALFC				AML	AML	22 08 36.5	
	comp=N,0.3nm,0.5s						
ALFC				AML	AML	22 08 36.5	
	comp=N,0.3nm,0.5s						
NATI	**Neve Ativ**	**2.90**	**181**	Pn	**Pn**	**22 07 49.2**	**0.0**
GEM	**Giv'at Ha'Em**	**2.96**	**182**	Pn	**Pn**	**22 07 50.3**	**+0.4**
MALT	**Malatya**	**2.99**	**43**	PN	**Pn**	**22 07 50.4**	**-0.1**
HNTI	**Hanita**	**3.12**	**190**	Pn	**Pn**	**22 07 52.3**	**0.0**
MMA0B	**Mount Meron ar**	**3.17**	**186**	Pn	**Pn**	**22 07 53.3**	**+0.4**
MMA0B				Sn	**Sn**	**22 08 32.0**	**+1.3**
BLGI	**Bet Lehem HaGe**	**3.47**	**189**	Pn	**Pn**	**22 07 57.8**	**+0.8**
BLGI				Sn	**Sn**	**22 08 40.2**	**+2.2**
OFRI	**`Ofer**	**3.61**	**191**	Pn	**Pn**	**22 07 59.0**	**+0.1**
MMLI	**Mount Malkishu**	**3.74**	**185**	Pn	**Pn**	**22 08 01.6**	**+0.9**
HMDT	**Nahal Hemdat**	**3.92**	**184**	Pn	**Pn**	**22 08 04.4**	**+1.3**
SLTI	**Sal'it**	**3.97**	**190**	Pn	**Pn**	**22 08 04.8**	**+0.9**
SLTI				Sn	**Sn**	**22 08 51.6**	**+1.1**
DSI	**Dead Sea**	**4.60**	**185**	Pn	**Pn**	**22 08 12.7**	**+0.1**
YTIR	**Yattir**	**4.83**	**187**	Pn	**Pn**	**22 08 16.6**	**+0.8**
YTIR				Sn	**Sn**	**22 09 14.4**	**+2.6**

*BJI **01** 22:13:11.3*±*0.0,9°.46S*×*159°.93E,h12km,mB5.5/62, mb5.5/86,Ms5.2/79,Ms7 5.0/76*

*MOS **01** 22:13:12.4*±*0.9,9°.70S*×*159°.64E,h17km,mb5.7/40, MS5.2/39,Error ellipse: s-maj=6.3km s-min=5.3km az=100.8*

*IDC **01** 22:13:14.3*±*1.2,9°.78S*×*159°.69E,h20km*±*8km,mb5.1/25, mb1 5.2/28,mb1mx5.2/32,mbtmp5.2/28,ML4.5/3,MS4.9/29, Ms1 4.9/29,ms1mx4.9/37,Error ellipse: s-maj=14.0km s-min=9.8km az=106.0*

*NEIC **01** 22:13:14.6*±*1.1,9°.78S*±*0°.07×159°.76E*±*0°.07,h24km*±*4km, mb5.6/206,Ms_20 5.3/290,Error ellipse: s-maj=10.0km s-min=9.5km az=55.0*

ISC 01 22:13:14.6±0.4,**9°.81S**±0°.04×**159°.77E**±0°.04,**h26**km±2km, **h26**km:**pP-P,n851,**σ**1$38**/801,**mb5.6**/241,**MS5.2**/210, **48C-3D,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.41**	**25**	Pg	**Pb**	**22 13 23.4**	**-0.1**
	36μm,0.3s,baz=211,slow=3.1,SNR=3056						
HNR				Lg	Lg	22 13 30.0	
	52μm,0.3s,baz=318,slow=10.0,SNR=20						
SANVU	**Saraoutou**	**9.17**	**128**		**Pn**	**22 15 26.0**	**+0.7**
RABL	**Rabaul**	**9.38**	**306**	Pn	**Pn**	**22 15 29.8**	**+1.4**
KRVT	**Keravat (AS076**	**9.43**	**305**	Pn	**Pn**	**22 15 29.3**	**+0.3**
	3.0nm,0.3s,baz=284,slow=7.2,SNR=11						
KRVT				LR	LR	22 18 07.0	
	comp=Z,1μm,20.9s,baz=129,slow=31						
PMG	**Port Moresby**	**12.44**	**271**	Pn	**Pn**	**22 16 13.1**	**+2.9**
	1.2nm,0.3s,baz=66,slow=9.1,SNR=34						
PMG				Sn	**Sn**	**22 18 35.7**	**+7.6**
	0.8nm,0.3s,baz=217,slow=19,SNR=1.4						
PMG				LR	LR	22 20 41.4	
	comp=Z,10μm,20.3s,baz=108,slow=36						
PMG	**Port Moresby**	**12.44**	**271**	P	**Pn**	**22 16 12.5**	**+2.3**
PMG	**Port Moresby**	**12.44**	**271**	Pn	**Pn**	**22 16 12.5**	**+2.3**
DZM	**Mont Dzumac**	**13.77**	**153**	Pn	**Pn**	**22 16 29.8**	**+1.3**
	2.1nm,0.3s,baz=335,slow=20,SNR=16						
MANU	**Manus Island**	**14.54**	**301**		**Pn**	**22 16 38.7**	**-0.3**
CTA	**Charters Tower**	**16.57**	**230**	Pn	**Pn**	**22 17 05.3**	**-0.1**
	2.1nm,0.3s,baz=59,slow=13,SNR=33						
CTA				Sn	**S**	**22 20 20.1**	**+0.3**
	0.5nm,0.3s,baz=138,slow=17,SNR=1.2						
CTA				LR	LR	22 23 05.7	
	comp=Z,5μm,18.9s,baz=52,slow=36						
CTAO	**Charters Tower**	**16.57**	**230**	P	**Pn**	**22 17 05.1**	**-0.3**
CTAO				pmax	pmax		
	comp=Z,542nm,1.1s						
CTAO	**Charters Tower**	**16.57**	**230**	Pn	**Pn**	**22 17 05.1**	**-0.3**
CTAO				IAmb	IAmb	22 17 12.5	
	comp=Z,542nm,1.1s						
PATS	**Pohnpei**	**16.60**	**355**	Pn	**Pn**	**22 17 04.8**	**-1.0**
PATS				IAmb	IAmb	22 17 13.8	
	comp=Z,664nm,1.0s						
MTSU	**Mount Surprise**	**17.12**	**239**	P	**P**	**22 17 13.7**	**-0.2**
	baz=17,SNR=65						
TARA	**Tarawa**	**17.16**	**50**	Pn	**Pn**	**22 17 12.1**	**-0.8**
EIDS	**Eidsvold**	**17.54**	**207**	P	**P**	**22 17 18.7**	**+0.2**
	baz=18,SNR=18						
EIDS	**Eidsvold**	**17.54**	**207**		**P**	**22 17 18.5**	**+0.1**
FUNA	**Funafuti**	**19.22**	**88**		**P**	**22 17 37.5**	**+0.5**
MSVF	**Nonsavu**	**19.41**	**116**	P	**Pn**	**22 17 40.2**	**-0.2**
MSVF				pmax	pmax		
	comp=Z,220nm,1.5s						
MSVF	**Nonsavu**	**19.41**	**116**	P	**Pn**	**22 17 40.2**	**-0.2**
RMQ	**Roma**	**19.59**	**211**	P	**Pn**	**22 17 43.6**	**+1.1**
	baz=20,SNR=81						
KWAJ	**Kwajalein Atol**	**20.07**	**23**	P	**P**	**22 17 46.8**	**+0.5**
KWAJ				pmax	pmax		
	comp=Z,471nm,1.0s						
KWAJ				MLR	MLR		
	comp=Z,4μm,22.0s						
KWAJ	**Kwajalein Atol**	**20.07**	**23**	P	**P**	**22 17 46.8**	**+0.5**
KWAJ				IAmb	IAmb	22 18 04.9	
	comp=Z,471nm,0.9s						
GENI	**Genyem**	**20.75**	**289**	P	**P**	**22 17 53.9**	**+0.2**
	comp=Z,11μmcomp=Z,321nm,1.4s						
LHI	**Lord Howe Isla**	**21.61**	**182**	P	**P**	**22 18 02.6**	**-0.2**
ARMA	**Armidale**	**21.87**	**199**	P	**P**	**22 18 06.6**	**+0.9**
	baz=22,SNR=46						
ARMA	**Armidale**	**21.87**	**199**	P	**P**	**22 18 06.2**	**+0.5**
ARMA				IAmb	IAmb	22 18 10.3	
	comp=Z,224nm,1.2s						
ARMA				IAMs_20	IAMs_20	22 25 41.2	
	comp=Z,7μm,19.0s						
QIS	**Mount Isa**	**22.

ASAR	Alice Springs	28.27	238	P		P		22 19 04.6	-1.6
RAO	Raoul Island	28.47	136	LR		LR		22 29 39.6	
	comp=Z,3µm,18.9s,baz=310,slow=34								
H11S2	WAKE ISLAND Hy	28.94	14	T		T		22 47 56.9	
	baz=194,slow=76,SNR=1544								
H11S3	WAKE ISLAND Hy	28.94	14	T		T		22 47 58.3	
	baz=194,slow=76,SNR=290								
H11S1	WAKE ISLAND Hy	28.96	14	T		T		22 47 58.1	
	baz=194,slow=76,SNR=720								
SIJI	Sorong	29.71	286	P		P		22 19 16.1	-2.9
	comp=Z,39nm,0.7s,baz=89,slow=7.7,SNR=12								
H11N1	WAKE ISLAND Hy	30.16	13	T		T		22 49 35.8	
	baz=194,slow=76,SNR=776								
H11N3	WAKE ISLAND Hy	30.17	13	T		T		22 49 26.9	
	baz=194,slow=76,SNR=541								
H11N2	WAKE ISLAND Hy	30.18	13	T		T		22 49 27.2	
	baz=194,slow=76,SNR=801								
HTT	Hallett	30.34	216	P		P		22 19 24.4	0.0
	baz=30,SNR=25								
TOO	Toolangi	30.50	203	P		P		22 19 27.1	+1.4
	baz=31,SNR=7.7								
TOO	Toolangi	30.50	203	P		P		22 19 26.3	+0.6
TOO				pmax		pmax			
	comp=Z,97nm,1.1s								
TOO				MLR		MLR			
	comp=Z,5µm,19.0s								
TOO	Toolangi	30.50	203	P		P		22 19 26.3	+0.6
TOO				IAmb		IAmb		22 19 28.2	
	comp=Z,96nm,1.1s								
TOO				IAMs_20		IAMs_20		22 30 44.6	
	comp=Z,5µm,19.0s								
KNRA	Kununurra	30.78	256	P		P		22 19 28.4	+0.1
	baz=31,SNR=17								
KNRA	Kununurra	30.78	256	P		P		22 19 28.3	-0.1
KNRA				IAmb		IAmb		22 19 54.6	
	comp=Z,77nm,1.0s								
TOZ	Tahuroa Road	31.21	155	P		P		22 19 33.8	+1.9
ARPS	Mount Arapiles	31.37	208	P		P		22 19 34.1	+0.7
	baz=32,SNR=7.0								
HIZ	Hauiti	31.63	157	IAMs_20		IAMs_20		22 32 36.9	
	comp=Z,3µm,18.0s								
BBOO	Buckleboo	31.66	220	P		P		22 19 35.8	-0.2
	baz=32,SNR=39								
BBOO	Buckleboo	31.66	220	P		P		22 19 35.6	-0.4
BBOO				IAmb		IAmb		22 19 37.7	
	comp=Z,118nm,0.9s								
BBOO				IAMs_20		IAMs_20		22 32 37.3	
	comp=Z,6µm,19.0s								
HAZ	Te Kaha	32.21	153	P		P		22 19 44.1	+3.3
MXZ	Matakaoa Point	32.30	152	P		P		22 19 42.9	+1.4
URZ	Urewera	32.33	154	P		P		22 19 42.6	+0.8
	comp=Z,7.1nm,0.5s,baz=319,slow=1.9,SNR=15								
URZ				LR		LR		22 30 35.4	
	comp=Z,3µm,21.1s,baz=344,slow=32								
URZ	Urewera	32.33	154	P		P		22 19 43.2	+1.4
URZ				S		pP		22 19 48.1	0.0
URZ	Urewera	32.33	154	P		P		22 19 42.0	+0.2
URZ				IAmb		IAmb		22 19 43.4	
	comp=Z,94nm,1.8s								
URZ				IAMs_20		IAMs_20		22 30 02.6	
	comp=Z,5µm,22.0s								
RUGZ	Raukumara Rang	32.34	153	P		P		22 19 42.8	+0.8
WTVZ	West Tongariro	32.43	157	P		P		22 19 45.5	+2.7
PKGZ	Pakihiroa	32.45	152	P		P		22 19 50.7	+7.7
FWVZ	Far West T-bar	32.54	157	P		P		22 19 43.5	-0.4
RTZ	Ruatahuna	32.57	154	P		P		22 19 45.5	+1.5
MWZ	Matawai	32.58	154	P		P		22 19 45.0	+1.0
TWGZ	Tauwhareparae	32.65	153	P		P		22 19 46.4	+1.7
PUZ	Puketiti	32.69	152	P		P		22 19 45.7	+0.7
MOVZ	Moawhango	32.75	157	P		P		22 19 47.3	+1.7
BKZ	Black Stump Fm	32.84	156	P		P		22 19 47.2	+0.9
BKZ				IAmb		IAmb		22 19 48.7	
	comp=Z,80nm,1.5s								
BKZ				IAMs_20		IAMs_20		22 30 44.9	
	comp=Z,8µm,21.0s								
QRZ	Quartz Range	32.90	162	IAMs_20		IAMs_20		22 33 18.4	
	comp=Z,4µm,18.0s								
WRKA	Warakurna	33.52	239	P		P		22 19 51.4	-1.0
	baz=34,SNR=58								
THZ	Tophouse	33.87	162	IAMs_20		IAMs_20		22 30 44.1	
	comp=Z,4µm,22.0s								
TUWZ	Tuamarina	33.89	161	P		P		22 19 55.9	+0.5
TNTI	Ternate	33.92	286	P		P		22 19 58.3	+2.3
	comp=Z,1µmcomp=Z,84nm,1.5s								
TNTI	Ternate	33.92	286	P		P		22 19 56.1	+0.1
TNTI				IAmb		IAmb		22 20 06.0	
	comp=Z,211nm,1.6s								
SNZO	South Karori	34.04	160	P		P		22 19 56.8	+0.1
SNZO				IAmb		IAmb		22 20 06.7	
	comp=Z,63nm,0.8s								
SNZO	South Karori	34.04	160	IAMs_20		IAMs_20		22 32 54.6	
	comp=Z,3µm,19.0s								
BFZ	Birch Farm	34.04	157	IAMs_20		IAMs_20		22 32 26.8	
	comp=Z,4µm,19.0s								
FITZ	Fitzroy Crossi	34.08	252	P		P		22 19 57.1	-0.3
	comp=Z,19nm,0.7s,baz=75,slow=6.7,SNR=49								
FITZ				S		S		22 25 14.8	-7.1
	comp=Z,9.5nm,1.2s,baz=189,slow=23,SNR=1.5								
FITZ	Fitzroy Crossi	34.08	252	P		P		22 19 56.9	-0.5
	baz=34,SNR=34								
FITZ	Fitzroy Crossi	34.08	252	P		P		22 19 57.2	-0.2
BSWZ	Blackbirch Sta	34.12	161	P		P		22 19 57.7	+0.3
MSWZ	Moikau Station	34.32	159	P		P		22 19 58.8	-0.4
MOO	Moorlands	34.33	197	P		P		22 20 01.3	+2.1
	baz=34,SNR=5.5								
SANI	Sanana	34.44	281	P		P		22 20 01.0	+0.4
	comp=Z,1µmcomp=Z,71nm,1.2s								
PLWZ	Palliser	34.46	159	P		P		22 20 00.4	0.0
LTZ	Lake Taylor	34.62	164	P		P		22 20 02.6	+0.8
LTZ				IAmb		IAmb		22 20 06.3	
	comp=Z,187nm,1.9s								
KHZ	Kahutara	34.66	162	P		P		22 20 02.4	+0.4
KHZ				IAmb		IAmb		22 20 04.0	
	comp=Z,78nm,1.1s								
KHZ				IAMs_20		IAMs_20		22 33 35.0	
	comp=Z,4µm,19.0s								
FOZ	Fox Glacier	34.72	167	P		P		22 20 03.0	+0.5
FOZ				IAMs_20		IAMs_20		22 33 12.6	
	comp=Z,4µm,21.0s								
TAU	Tasmania Unive	34.73	196	P		P		22 20 04.0	+1.4
TAU				pmax		pmax			
	comp=Z,148nm,1.0s								
TAU	Tasmania Unive	34.73	196	P		P		22 20 04.0	+1.4
SOEI	Soe	34.98	267	P		P		22 20 07.7	+2.4
	comp=Z,82nm,1.3s								
OXZ	Oxford	35.06	164	P		P		22 20 05.5	0.0
OXZ				IAMs_20		IAMs_20		22 34 56.8	
	comp=Z,7µm,18.0s								
RPZ	Rata Peaks	35.18	166	P		P		22 20 07.0	+0.5
	comp=Z,25nm,0.8s,baz=20,slow=10,SNR=5.8								
RPZ				LR		LR		22 34 54.1	
	comp=Z,5µm,18.1s,baz=314,slow=37								
RPZ	Rata Peaks	35.18	166	IAMs_20		IAMs_20		22 35 00.8	
	comp=Z,6µm,18.0s								
BATI	Baumata	35.55	266	LR		LR		22 35 26.3	
	comp=Z,2µm,18.6s,baz=118,slow=38								
BATI	Baumata	35.55	266	P		P		22 20 09.4	-0.7
	comp=Z,859nmcomp=Z,68nm,0.9s								
LBZ	Lake Benmore	35.61	167	IAMs_20		IAMs_20		22 34 51.3	
	comp=Z,5µm,19.0s								
FORT	Forrest	36.12	230	P		P		22 20 14.8	0.0
FORT				IAmb		IAmb		22 20 15.8	
	comp=Z,94nm,1.1s								
FORT				IAMs_20		IAMs_20		22 35 27.4	
	comp=Z,4µm,19.0s								
ODZ	Otahua Downs	36.34	167	IAMs_20		IAMs_20		22 35 20.6	
	comp=Z,6µm,19.0s								
SGSI	Sangihe	36.65	290	P		P		22 20 20.8	+1.3
	comp=Z,7µmcomp=Z,321nm,1.2s								
MMRI	Maumere	37.05	269	P		P		22 20 24.8	+1.8
	comp=Z,258nm,1.3s								
MMRI	Maumere	37.05	269	P		P		22 20 22.7	-0.3
KMSI	Cibinong	37.08	284	P		P		22 20 26.7	+3.5
	comp=Z,2µmcomp=Z,185nm,1.0s								
EDFI	Ende, Flores	37.58	268	P		P		22 20 27.8	+0.2
	comp=Z,530nmcomp=Z,36nm,1.2s								
LUWI	Luwuk	37.81	281	P		P		22 20 31.5	+2.2
	comp=Z,2µmcomp=Z,135nm,1.1s								
LUWI	Luwuk	37.81	281	P		P		22 20 29.3	0.0
LUWI				IAmb		IAmb		22 20 31.8	
	comp=Z,232nm,1.3s								
DAV	Davao City (W)	37.96	295	P		P		22 20 30.3	-0.4
APSI	Ampana	38.93	281	P		P		22 20 40.5	+1.7
	comp=Z,1µmcomp=Z,116nm,1.1s								
BSSI	Bau Bau, Buton	39.05	272	P		P		22 20 43.7	+3.9
	comp=Z,994nmcomp=Z,79nm,1.6s								
BKSI	Bulukumba	39.53	274	P		P		22 20 46.6	+2.8
	comp=Z,517nmcomp=Z,27nm,1.7s								
BNSI	Bone	39.70	275	P		P		22 20 46.6	+1.4
	comp=Z,926nmcomp=Z,86nm,0.9s								
WBSI	Waikabubak, Su	39.78	267	P		P		22 20 50.8	+4.8
	comp=Z,97nm,0.8s								
KAPI	Kappang	39.95	274	P		P		22 20 48.2	+0.9
	comp=Z,28nm,0.5s,baz=97,slow=4.9,SNR=10								
KAPI	Kappang	39.95	274	P		P		22 20 46.8	-0.5
KAPI				pmax		pmax			
	comp=Z,67nm,0.9s								
KAPI	Kappang	39.95	274	P		P		22 20 46.8	-0.5
PSAB3	Pilbara Seismi	40.05	248	IAMs_20		IAMs_20		22 40 34.6	
	comp=Z,2µm,18.0s								
PSA00	Pilbara Seismi	40.06	248	P		P		22 20 47.1	-1.0
PSA00	Pilbara Seismi	40.06	248	P		P		22 20 47.1	-1.0
PSA00				IAmb		IAmb		22 21 13.4	
	comp=Z,24nm,1.0s								
PSAB1	Pilbara Seismi	40.08	248	IAMs_20		IAMs_20		22 40 28.3	
	comp=Z,2µm,18.0s								
SPSI	Sidrap Palu	40.11	275	P		P		22 20 50.5	+1.9
	comp=Z,49nm,1.3s								
TTSI	Tana Toraja	40.23	277	P		P		22 20 53.3	+3.6
	comp=Z,881nmcomp=Z,31nm,0.8s								
JCJ	Chichijima	40.46	335	P		P		22 20 49.9	-1.3
JCJ				IAMs_20		IAMs_20		22 36 33.1	
	comp=Z,3µm,22.0s								
RAR	Rarotonga	40.48	111	LR		LR		22 34 50.0	
	comp=Z,946nm,21.1s,baz=287,slow=32								
MPSI	Maga	40.94	282	P		P		22 20 55.1	-0.4
	comp=Z,803nmcomp=Z,57nm,0.9s								
KMBL	Kambalda	41.15	233	P		P		22 20 57.4	+0.4
	baz=41,SNR=10								
PLAI	Plampang	41.43	268	P		P		22 20 59.7	+0.1
	comp=Z,2µmcomp=Z,159nm,1.4s								
MEEK	Meekatharra	42.30	241	P		P		22 21 06.3	-0.2
	baz=42,SNR=30								
TWSI	Taliwang, Sumb	42.32	268	P		P		22 21 10.9	+4.1
	comp=Z,598nmcomp=Z,28nm,1.1s								
BKB	Balikpapan	43.46	279	P		P		22 21 28.7	+13
BKB	Balikpapan	43.46	279	P		P		22 21 16.8	+0.7
BKB				IAmb		IAmb		22 21 31.2	
	comp=Z,186nm,1.2s								
MYLDM	Lahad Datu	43.73	288	P		P		22 21 18.7	+0.5
MYLDM				IAmb		IAmb		22 21 21.2	
	comp=Z,311nm,1.6s								
KBKI	Kotabaru	43.76	275	P		P		22 21 18.9	+0.4
	comp=Z,277nmcomp=Z,18nm,0.8s								
KLBR	Kelleberrin	44.51	235	P		P		22 21 24.6	+0.3
	baz=45,SNR=4.5								
JMZ	Minamidaito 2	45.01	322	P		P		22 21 27.6	-0.6
JMZ				IAmb		IAmb		22 21 29.4	
	comp=Z,139nm,1.1s								
JAGI	Jajag, Banyuwa	45.03	268	P		P		22 21 27.7	-1.0
	comp=Z,178nm,0.8s								
JAGI	Jajag, Banyuwa	45.03	268	P		P		22 21 27.2	-1.5
BBKI	Banjar Baru	45.03	275	P		P		22 21 31.0	+2.3
	comp=Z,5µmcomp=Z,65nm,1.3s								
BLDU	Balidu	45.04	236	P		P		22 21 28.9	+0.3
	baz=45,SNR=9.2								
MORW	Morawa	45.15	239	P		P		22 21 29.0	-0.4
	baz=45,SNR=9.3								
MORW	Morawa	45.15	239	P		P		22 21 28.6	-0.8
NWAO	Narrogin (SRO)	45.38	233	P		P		22 21 31.0	-0.2
	comp=Z,16nm,0.9s,baz=52,slow=6.5,SNR=7.1								
NWAO				LR		LR		22 40 38.2	
	comp=Z,2µm,19.3s,baz=86,slow=36								
NWAO	Narrogin (SRO)	45.38	233	P		P		22 21 31.3	+0.1
	baz=86,SNR=4.0								
NWAO	Narrogin (SRO)	45.38	233	P		P		22 21 30.8	-0.4
NWAO				pmax		pmax			
	comp=Z,167nm,2.0s								
NWAO	Narrogin (SRO)	45.38	233	P		P		22 21 30.8	-0.4
NWAO				IAmb		IAmb		22 21 54.3	
	comp=Z,167nm,1.9s								
NWAO	Narrogin (SRO)	45.38	233	IAMs_20		IAMs_20		22 40 27.8	
	comp=Z,2µm,19.0s								
BLJI	Banyuglugur	45.65	269	P		P		22 21 37.9	+4.3
	comp=Z,69nm,0.6s								
GMJI	Gumukmas	45.75	268	P		P		22 21 38.0	+3.7
	comp=Z,34nm,1.1s								
PWJI	Pagerwojo	47.39	268	P		P		22 21 48.5	+1.3
	comp=Z,84nm,1.2s								
WOJI	Wonogiri, Jawa	48.28	268	P		P		22 21 58.8	+4.7
	comp=Z,78nm,1.5s								
PBKI	Pangkalan Bun	48.29	275	P		P		22 22 07.3	+13
UGM	Wanagama	48.66	268	P		P		22 21 56.8	-0.3
SMRI	Semarang	48.84	269	P		P		22 22 06.3	+7.8
SMRI	Semarang	48.84	269	P		P		22 21 58.3	-0.1
SBUM	Sibu	48.90	282	P		P		22 21 58.7	-0.2
SBUM	Sibu	48.90	282	P		P		22 22 00.0	+1.1
YOGI	Yogyakarta	48.90	268	P		P		22 21 59.9	+1.0
	comp=Z,212nm,0.8s								
JYT	Yasato	49.36	339	P		P		22 22 02.0	0.0
JYT				IAMs_20		IAMs_20		22 42 37.0	
	comp=Z,2µm,20.0s								
YOJ	Yonaguni jima	49.47	314	P		P		22 22 02.9	-0.1
YOJ				pmax		pmax			
	comp=Z,408nm,1.3s								
YOJ				MLR		MLR			
	comp=Z,2µm,20.0s								
YOJ	Yonaguni jima	49.47	314	P		P		22 22 02.9	-0.1
YOJ				IAMs_20		IAMs_20		22 41 43.0	
	comp=Z,2µm,20.0s								
PPT	Papeete	49.70	105	LR		LR		22 39 48.4	
	comp=Z,651nm,20.2s,baz=252,slow=32								
PPT2	Papeete2	49.70	105	eLQ		LQ		22 34 21.4	
	comp=Z,2µm,28.2s								
PPT2				eLR		LR		22 36 18.5	
	comp=Z,1µm,26.2s								
JSU	Suzuyama	49.76	327	P		P		22 22 05.0	-0.2
JSU				IAmb		IAmb		22 22 06.8	
	comp=Z,104nm,1.0s								
INU	Inuyama	49.80	336	P		P		22 22 05.2	-0.2
INU				IAmb		IAmb		22 22 07.0	
	comp=Z,111nm,1.1s								
INU				IAMs_20		IAMs_20		22 40 36.3	
	comp=Z,3µm,22.0s								
TWG	Pinlang	49.88	311	P		P		22 22 05.4	-0.8
TWG				IAmb		IAmb		22 22 14.3	
	comp=Z,46nm,1.1s								
JGF	Kuroka	49.88	336	P		P		22 22 05.1	-0.9
JGF				IAmb		IAmb		22 22 07.4	
	comp=Z,82nm,1.0s								
JGF				IAMs_20		IAMs_20		22 41 01.6	
	comp=Z,3µm,22.0s								
TBI	Tubuai	50.24	112	eLQ		LQ		22 34 25.1	
	comp=Z,3µm,29.2s								
TBI				eLR		LR		22 36 33.3	
	comp=Z,1µm,27.0s								
KPJI	Karang Pucung	50.30	269	P		P		22 22 12.7	+3.2
	comp=Z,99nm,1.1s								
NACB	Ninganchiao	50.30	313	P		P		22 22 09.2	-0.2
MJAR	Matsushiro Arr	50.37	337	P		P		22 22 08.5	-1.2
	comp=Z,31nm,0.8s,baz=171,slow=8.8,SNR=110								
MJAR				LR		LR		22 42 08.4	
	comp=Z,2µm,21.9s,baz=100,slow=34								
MJAR	Matsushiro Arr	50.37	337	P		P		22 22 08.4	-1.3
MJAR				pmax		pmax			
	comp=Z,25nm,0.8s								
MJAR	Matsushiro Arr	50.37	337	P		P		22 22 08.4	-1.3
MAJO	Matsushiro	50.37	337	P		P		22 22 08.7	-1.0
MAJO				pmax		pmax			
	comp=Z,73nm,0.9s								
MAJO				MLR		MLR			
	comp=Z,2µm,22.0s								
MAJO	Matsushiro	50.37	337	P		P		22 22 08.7	-1.0
MAJO				IAmb		IAmb		22 22 10.3	
	comp=Z,73nm,0.9s								
MAJO	Matsushiro	50.37	337	IAMs_20		IAMs_20		22 41 23.7	
	comp=Z,2µm,22.0s								
MAT	Matsushiro	50.37	337	P		P		22 22 08.6	-1.1
MAT				S		S		22 29 25.8	+4.4
MJB9	Matsu-Tunnel	50.37	337	IAMs_20		IAMs_20		22 41 14.7	
	comp=Z,2µm,20.0s								
KSM	Kuching	50.50	280	P		P		22 22 10.4	-0.7
KSM				IAmb		IAmb		22 22 36.5	
	comp=Z,55nm,1.2s								
KSM	Kuching	50.50	280	P		P		22 22 11.0	-0.1
SSLB	Suanglung	50.54	312	P		P		22 22 10.8	-0.5
SSLB				IAmb		IAmb		22 22 12.9	
	comp=Z,92nm,0.9s								
SSLB				IAMs_20		IAMs_20		22 42 30.2	
	comp=Z,2µm,21.0s								
JMM	Marumori	50.64	341	P		P		22 22 11.7	0.0
JMM				IAmb		IAmb		22 22 13.3	
	comp=Z,129nm,1.0s								
JMM				IAMs_20		IAMs_20		22 40 55.8	
	comp=Z,3µm,21.0s								
TATO	Taipei	50.87	314	P		P		22 22 13.7	0.0
TATO	Taipei	50.87	314	IAMs_20		IAMs_20		22 42 27.8	
	comp=Z,2µm,20.0s								
JHS	Saijyo	51.21	332	P		P		22 22 15.7	-0.4
JHS				IAmb		IAmb		22 22 17.7	
	comp=Z,217nm,1.8s								
JHS				IAMs_20		IAMs_20		22 42 49.8	
	comp=Z,2µm,19.0s								
CISI	Cisompet, Garu	51.37	268	P		P		22 22 21.3	+3.6
	comp=Z,2µmcomp=Z,154nm,1.0s								
CISI	Cisompet, Garu	51.37	268	P		P		22 22 17.9	+0.2
LEM	Lembang	51.65	269	LR		LR		22 46 49.7	
	comp=Z,536nm,18.1s,baz=132,slow=39								
JSD	Sado	51.67	338	P		P		22 22 19.6	+0.2
JSD				IAmb		IAmb		22 22 20.9	
	comp=Z,110nm,0.8s								
OPA	Opana	51.93	53	P		P		22 22 21.6	-0.1
OPA				pmax		pmax			
	comp=Z,328nm,1.1s								
OPA	Opana	51.93	53	P		P		22 22 21.6	-0.1
TPI	Tanjungpandan	52.22	274	P		P		22 22 27.7	+3.7
	comp=Z,499nmcomp=Z,44nm,1.6s								
CBJI	Citeko	52.46	269	P		P		22 22 25.5	-0.3
KKH	Kailua Kona	52.47	56	P		P		22 22 25.5	-0.2
KKH	Kailua Kona	52.47	56	P		P		22 22 25.5	-0.2
KHLU	Kahalu`u	52.54	56	P		P		22 22 26.3	-0.1
AIN	Ainahou	52.79	57	P		P		22 22 27.7	-0.6
KNMB	Chin-men Tao	52.83	311	P		P		22 22 28.0	-0.3
KNMB				IAmb		IAmb		22 23 59.2	
	comp=Z,49nm,0.8s								
HMH	Humu'ula Sheep	52.88	56	P		P		22 22 29.6	+0.4
POHA	Pohakuloa	52.92	56	P		P		22 22 29.7	+0.4
RIM	Rim	52.95	57	P		P		22 22 28.7	-0.8
RIM				IAmb		IAmb		22 22 31.6	
	comp=Z,123nm,1.0s								
QZH	Quanzhou	52.95	312	P		P		22 22 30.3	+1.1
QZH				S		S		22 29 59.1	+1.8
QZH				pmax		pmax			
	comp=Z,100nm,1.6s								
QZH				LR		LR			
	comp=Z,350nm,18.0s								
QZH				LR		LR			
	comp=Z,530nm,19.0s								
QZH				LR		LR			
	comp=Z,710nm,19.6s								
PUH	Pauahi	52.99	57	P		P		22 22 29.6	-0.1
PUH				IAmb		IAmb		22 22 31.8	
	comp=Z,137nm,1.0s								
JTM	Tenmabayashi	53.22	342	P		P		22 22 30.7	-0.2
JTM				IAmb		IAmb		22 22 32.4	
	comp=Z,107nm,1.1s								
JTM				IAMs_20		IAMs_20		22 43 51.2	
	comp=Z,3µm,20.0s								
CGJI	Cibinong	53.57	269	P		P		22 22 36.0	+2.0
	comp=Z,2µmcomp=Z,165nm,1.3s								
ERM	Erimo	53.78	345	IAMs_20		IAMs_20		22 45 35.7	
	comp=Z,2µm,20.0s								
JEM	Erimo	53.78	345	IAMs_20		IAMs_20		22 45 37.7	
	comp=Z,2µm,21.0s								
PPBI	Pangkal Pinang	53.82	275	P		P		22 22 38.5	+2.7
	comp=Z,3µmcomp=Z,35nm,1.3s								
HKPS	Hong Kong Po S	54.93	306	P		P		22 22 44.2	+0.5
SSE	Sheshan	54.98	319	P		P		22 22 43.8	-0.1
JEW	Eniwo	55.00	344	P		P		22 22 43.6	-0.2
TJN	Taejon	55.14	328	ce	P	P		22 22 43.7	-1.2
DLV	T Lat	55.35	292	P		P		22 22 46.9	-0.3
DLV				IAmb		IAmb		22 22 48.8	
	comp=Z,89nm,1.0s								
MDSI	Maura Dua	55.36	271	P		P		22 22 47.5	+0.5
	comp=Z,39nm,1.3s								
LWLI	Liwa	55.40	271	P		P		22 22 48.2	+0.8
	comp=Z,5µmcomp=Z,57nm,1.1s								
KSRS	Korea Array	55.68	329	P		P		22 22 49.0	+0.2
	comp=Z,70nm,1.1s,baz=146,slow=7.2,SNR=76								
KSRS				LR		LR		22 43 56.2	
	comp=Z,1µm,22.0s,baz=124,slow=33								
KSAR	Wonju Array Be	55.69	329	P		P		22 22 49.2	+0.3
KSAR	Wonju Array Be	55.69	329	P		P		22 22 49.2	+0.3
KS19	Wonju Array Si	55.75	329	P		P		22 22 48.8	-0.5
KS19				IAmb		IAmb		22 22 51.4	
	comp=Z,123nm,1.2s								
JKA	Kamikawa-asahi	55.89	345	P		P		22 22 49.8	-0.3
JKA				IAMs_20		IAMs_20		22 45 41.7	
	comp=Z,2µm,20.0s								
ASAJ	Asahikawa	55.89	345	LR		LR		22 45 53.2	
	comp=Z,2µm,20.3s,baz=176,slow=35								
ASAJ	Asahikawa	55.89	345	P		P		22 22 49.8	-0.4
ASAJ				pmax		pmax			
	comp=Z,516nm,2.0s								
ASAJ				MLR		MLR			
	comp=Z,2µm,20.0s								
INCN	Inchon	56.36	329	P		P		22 22 53.4	-0.3
INCN				pmax		pmax			
	comp=Z,226nm,1.1s								
INCN				MLR		MLR		

BKNI Bangkinang 59.29 276 P P 22 23 15.2 +0.4
USA0B Ussuriysk Arra 59.36 337 P P 22 23 15.0 +0.3
USA0B pmax pmax
comp=Z,140nm,1.2s
USA0B MLR MLR
comp=Z,2μm,19.0s
USA0B Ussuriysk Arra 59.36 337 P P 22 23 15.0 +0.3
USA0B IAMs_20 IAMs_20 22 47 20.6
comp=Z,2μm,19.0s
USRK Ussuriysk Ar. 59.36 337 P P 22 23 14.7 +0.1
comp=Z,34nm,0.8s,baz=154,slow=5.9,SNR=81
USRK LR LR 22 47 01.3
comp=Z,1μm,20.7s,baz=137,slow=34
USRK Ussuriysk Ar. 59.36 337 P P 22 23 14.6 -0.1
DL2 Dalian 60.07 326 P P 22 23 19.8 +0.2
DL2 S S **22 31 31.7 +0.6**
DL2 pmax pmax
comp=Z,120nm,0.8s
DL2 pmax pmax
comp=Z,750nm,5.8s
DL2 LR LR
comp=Z,620nm,18.0s
DL2 LR LR
comp=Z,830nm,17.1s
DL2 LR LR
comp=Z,1μm,18.7s
IPM Ipoh 60.22 281 P P 22 23 21.0 -0.2
IPM IAmb IAmb 22 23 27.2
comp=Z,104nm,1.7s
IPM Ipoh 60.22 281 P P 22 23 21.0 -0.2
SKR Severo-Kuril's 60.32 357 *e*P **P 22 23 21.3 +0.2**
SKR *e* 22 25 37.1
SKR *e*S **S 22 31 41.3 +7.4**
SKR pmax pmax
comp=Z,85nm,1.3s
SKR MLR MLR
comp=Z,1μm,20.0s
SKR MLR MLR
comp=Z,1μm,15.0s
MDJ Mudanjiang 60.66 336 P P 22 23 24.2 +0.7
MDJ pmax pmax
comp=Z,82nm,2.0s
MDJ Mudanjiang 60.66 336 P P 22 23 23.8 +0.3
MDJ IAMs_20 IAMs_20 22 46 16.9
comp=Z,3μm,22.0s
KULM Kulim 60.78 282 P P 22 23 24.2 -0.8
MNSI Mandailing Nat 60.82 276 P P 22 23 25.6 +0.3
comp=Z,161nm,0.8s
TIA Tai'an 60.87 321 P P 22 23 24.2 -1.0
TIA pmax pmax
comp=Z,37nm,1.4s
TIA LR LR
comp=Z,570nm,24.5s
TIA LR LR
comp=Z,550nm,20.6s
TIA LR LR
comp=Z,700nm,24.5s
SNY Shenyang 61.18 330 ⇑P **P 22 23 26.8 -0.3**
SNY S **S 22 31 45.6 +0.3**
SNY pmax pmax
comp=Z,21nm,0.8s
SNY pmax pmax
comp=Z,410nm,3.9s
SNY LR LR
comp=Z,820nm,16.5s
SNY LR LR
comp=Z,710nm,17.3s
SNY LR LR
comp=Z,1μm,24.6s
CN2 Changchun 61.79 332 *e*P **P 22 23 31.1 -0.2**
CN2 pmax pmax
comp=Z,120nm,1.2s
CN2 pmax pmax
comp=Z,560nm,4.0s
CN2 LR LR
comp=Z,880nm,17.0s
CN2 LR LR
comp=Z,790nm,17.0s
CN2 LR LR
comp=Z,1μm,18.0s
RPSI Rantau Prapat 61.85 278 P P 22 23 31.4 -0.9
PSI Prapat 61.88 278 P P 22 23 31.4 -1.2
PSI pmax pmax
comp=Z,28nm,1.0s
TYV Tymovskoe 62.22 348 *e*P **P 22 23 35.2 +1.2**
TYV *e* 22 32 05.3
TYV pmax pmax
comp=Z,73nm,1.5s
TYV pmax pmax
comp=Z,400nm,3.4s
TSI Tuntungan 62.38 279 P P 22 23 36.4 +0.6
comp=Z,103nm,1.1s
PET Petropavlovsk 62.59 359 *e*P **P 22 23 37.2 +0.8**
PET *e*S **S 22 32 02.1 -0.5**
PET pmax pmax
comp=Z,165nm,1.0s
PET MLR MLR
comp=Z,1μm,18.0s
PET MLR MLR
comp=Z,2μm,14.0s
PET Petropavlovsk 62.59 359 P P 22 23 35.8 -0.6
PET IAMs_20 IAMs_20 22 47 19.6
comp=Z,1μm,20.0s
ENH Enshi 62.62 311 P P 22 23 36.2 -0.9
PEA0B Petropavlovsk- 62.69 359 P P 22 23 37.1 0.0
PEA0B pmax pmax
comp=Z,323nm,1.4s
PEA0B MLR MLR
comp=Z,2μm,21.0s
PEA0B Petropavlovsk- 62.69 359 P P 22 23 37.1 0.0
PEA0B IAMs_20 IAMs_20 22 46 12.6
comp=Z,2μm,21.0s
PETK Petropavlovsk- 62.69 359 P P 22 23 37.4 +0.3
comp=Z,94nm,0.9s,baz=156,slow=6.6,SNR=86
PETK LR LR 22 46 56.7
comp=Z,2μm,21.6s,baz=164,slow=32
PETK Petropavlovsk- 62.69 359 P P 22 23 36.8 -0.3
GSI Gunungsitoli 62.88 277 P P 22 23 41.7 +2.5
comp=Z,158nm,1.0s
GSI Gunungsitoli 62.88 277 P P 22 23 38.0 -1.1
GYA Guiyang 62.91 306 ⇑P **P 22 23 39.5 +0.3**
GYA pP pP 22 23 47.9 +1.3
GYA PcP **PcP 22 24 16.3 -1.0**
GYA PP **PP 22 26 00.3 +2.4**
GYA S **S 22 32 05.2 -2.7**
GYA sS sS 22 32 20.9 +0.4
GYA SKS **ScS 22 33 31.0 +0.1**
GYA pmax pmax
comp=Z,85nm,1.2s
GYA pmax pmax
comp=Z,390nm,3.7s
GYA LR LR
comp=Z,240nm,15.1s
GYA LR LR
comp=Z,470nm,19.9s
GYA LR LR
comp=Z,780nm,20.2s
SLVN Son La 62.97 300 P P 22 23 39.5 -0.1
AMKA Amchitka 63.24 14 P P 22 23 40.6 -0.1
GRNR Gornyy 63.65 344 ⇑*i*P **P 22 23 44.3 +0.8**
GRNR *e*S **S 22 32 22.6 +6.5**
GRNR pmax pmax
comp=N,20nm,0.9s
GRNR pmax pmax
comp=Z,50nm,1.1s
GRNR smax smax
comp=N,1.0nm,0.7s
KLR Kul'dur 63.73 340*ce*P **P 22 23 44.2 +0.1**
KLR pmax pmax
comp=Z,127nm,1.4s
BJT Baijiatuau 63.91 324 P P 22 23 45.3 -0.2
BJT pmax pmax
comp=Z,100nm,1.5s
BJT Baijiatuau 63.91 324 P P 22 23 45.3 -0.2
BJT IAmb IAmb 22 23 46.9
comp=Z,100nm,1.5s
BJI Beijing 63.92 324 P P 22 23 46.0 +0.5
BJI pmax pmax
comp=Z,42nm,1.4s
BJI LR LR
comp=Z,520nm,19.4s
BJI LR LR
comp=Z,420nm,23.4s
BJI LR LR
comp=Z,910nm,23.0s
ADK Adak 64.71 16 P P 22 23 51.1 +0.7
ADK pmax pmax
comp=Z,277nm,1.2s
ADK Adak 64.71 16 P P 22 23 51.1 +0.7
TIY Taiyuan 64.75 320 *e*P **P 22 23 51.9 +0.8**
TIY S **S 22 32 32.3 +2.0**
TIY pmax pmax
comp=Z,22nm,0.5s
TIY LR LR
comp=Z,1μm,22.5s
TIY LR LR
comp=Z,840nm,19.2s
TIY LR LR
comp=Z,980nm,18.0s
XAN Xi'an 65.01 315 P P 22 23 52.4 -0.4
XAN sP pP 22 23 59.1 -1.8
XAN PcP **PcP 22 24 20.8 -4.9**
XAN PP **PP 22 26 18.0 +1.8**
XAN S **S 22 32 32.0 -1.6**
XAN SS **SS 22 36 46.1 -0.1**
XAN pmax pmax
comp=Z,120nm,1.1s
XAN pmax pmax
comp=Z,470nm,5.4s
XAN LR LR
comp=Z,600nm,18.2s
XAN LR LR
comp=Z,790nm,20.3s
XAN LR LR
comp=Z,1μm,19.6s
XAN Xi'an 65.01 315 P P 22 23 52.3 -0.6
XAN pmax pmax
comp=Z,69nm,0.7s
XAN MLR MLR
comp=Z,1μm,20.0s
XAN Xi'an 65.01 315 P P 22 23 52.3 -0.6
XAN Xi'an 65.01 315 IAMs_20 IAMs_20 22 51 26.3
comp=Z,1μm,20.0s
GSTR Great Sitkin T 65.07 16 P P 22 23 52.7 -0.1
KMI Kunming 65.50 303‖*e*P **P 22 23 57.0 +0.6**
KMI pP pP 22 24 02.9 -0.9
KMI sP pwP 22 24 03.9 -2.5
KMI PP **PP 22 26 17.7 -3.1**
KMI S **S 22 32 42.0 +1.7**
KMI sS sS 22 32 51.4 -1.5
KMI pmax pmax
comp=Z,130nm,1.3s
KMI LR LR
comp=Z,270nm,18.1s
KMI LR LR
comp=Z,470nm,20.3s
KMI LR LR
comp=Z,770nm,20.5s
KMI Kunming 65.50 303 P P 22 23 56.9 +0.6
KMI pmax pmax
comp=Z,183nm,1.2s
KMI MLR MLR
comp=Z,800nm,19.0s
KMI Kunming 65.50 303 P P 22 23 56.9 +0.6
CM31 Chiang Mai Arr 66.25 295 P P 22 24 01.6 +0.5
CM31 IAmb IAmb 22 24 03.5
comp=Z,52nm,0.8s
CMAR Chiang Mai Arr 66.25 295 P P 22 24 01.9 +0.8
comp=Z,29nm,0.7s,baz=128,slow=4.9,SNR=145
CMAR PKPPKP **P'P'df 22 52 41.3 +5.6**
comp=Z,1.1nm,0.3s,baz=282,slow=5.5,SNR=9.2
CMAR Chiang Mai Arr 66.25 295 P P 22 24 01.4 +0.3
CHTO Chiang Mai 66.37 295 P P 22 24 01.6 -0.3
CHTO pmax pmax
comp=Z,68nm,1.1s
CHTO Chiang Mai 66.37 295 P P 22 24 01.6 -0.3
CHTO IAmb IAmb 22 24 04.0
comp=Z,68nm,1.1s
HHC Hu-ho-hao-te 67.17 322 *e*P **P 22 24 08.0 +1.4**
HHC pP pP 22 24 12.7 -2.0
HHC sP sP 22 24 15.1 -2.6
HHC S **S 22 33 00.2 +0.4**
HHC pmax pmax
comp=Z,58nm,1.4s
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=Z,360nm,17.0s
HHC LR LR
comp=Z,730nm,18.5s
HHC LR LR
comp=Z,970nm,21.0s
CD2 Chengdu 67.23 309 P P 22 24 07.3 +0.1
CD2 S **S 22 33 03.8 +3.0**
CD2 pmax pmax
comp=Z,220nm,0.9s
CD2 LR LR
comp=Z,1μm,19.6s
CD2 LR LR
comp=Z,850nm,19.6s
CD2 LR LR
comp=Z,970nm,19.6s
VNDA Vanda 67.70 180 P P 22 24 10.6 +1.3
comp=Z,18nm,0.9s,baz=345,slow=7.0,SNR=65
VNDA LR LR 22 48 45.8
comp=Z,3μm,20.0s,baz=346,slow=32
VNDA Vanda 67.70 180 P P 22 24 10.2 +0.9
VNDA pmax pmax
comp=Z,39nm,1.1s
VNDA Vanda 67.70 180 P P 22 24 10.2 +0.9
VNDA IAmb IAmb 22 24 12.3
comp=Z,39nm,1.1s
BTO Baotou 67.97 321 *e*P **P 22 24 12.7 +1.0**
HIA Hailar 68.50 333 P P 22 24 14.6 -0.1
HIA pmax pmax
comp=Z,80nm,1.1s
HIA MLR MLR
comp=Z,900nm,20.0s
HIA Hailar 68.50 333 P P 22 24 14.6 -0.1
HIA IAmb IAmb 22 24 16.8
comp=Z,80nm,1.1s
ZEA Zeya 69.05 340 *e*P **P 22 24 18.8 +0.8**
ZEA pmax pmax
comp=E,20nm,0.9s
ZEA pmax pmax
comp=N,60nm,1.0s
ZEA pmax pmax
comp=Z,100nm,1.0s
MA2 Magadan 69.53 355*ce*P **P 22 24 21.4 +0.5**
MA2 pmax pmax
comp=Z,120nm,1.0s
MA2 Magadan 69.53 355 P P 22 24 20.4 -0.5
MA2 IAMs_20 IAMs_20 22 53 17.4
comp=Z,1μm,22.0s
LZH Lanzhou 69.63 314 *e*P **P 22 24 23.3 +1.1**
LZH pP pP 22 24 30.4 +0.8
LZH sP pwP 22 24 34.2 +1.6
LZH S **S 22 33 29.9 +0.5**
LZH sS pS 22 33 38.9 +0.2
LZH SS **SS 22 37 58.0 0.0**
LZH pmax pmax
comp=Z,120nm,1.4s
LZH pmax pmax
comp=Z,580nm,4.9s
LZH LR LR
comp=Z,780nm,15.2s
LZH LR LR
comp=Z,880nm,15.7s
LZH LR LR
comp=Z,880nm,17.3s
PBA Port Blair 69.95 286 P P 22 24 24.0 -0.4
PBA IAmb IAmb 22 24 42.6
comp=Z,55nm,0.9s
LKP Lekhapani 72.05 303 *e*P **P 22 24 36.7 -0.3**
LKP IAmb IAmb 22 24 39.2
comp=Z,86nm,0.9s
SEY Seymchan 72.74 356 *i*P **P 22 24 41.4 +1.1**
MOKO MOKOCHONG 72.80 301 *e*P **P 22 24 41.4 -0.3**
MOKO IAmb IAmb 22 24 45.3
comp=Z,92nm,1.1s
SAIH SAIHA 72.84 297 *e*P **P 22 24 41.5 -0.4**
SAIH IAmb IAmb 22 24 47.1
comp=Z,72nm,0.8s
KOHI KOHIMA 72.94 301 *e*P **P 22 24 41.4 -1.1**
KOHI IAmb IAmb 22 24 48.7
comp=Z,83nm,1.2s
JORH JORHAT 73.17 302 *e*P **P 22 24 44.5 +0.9**
JORH IAmb IAmb 22 24 52.1
comp=Z,62nm,0.5s
CIT Chita 73.24 332 *e*P **P 22 24 44.0 +0.5**
CIT *e* 22 25 04.5
CIT pmax pmax
comp=Z,260nm,1.7s
ZIRO ZIRO 73.78 302 *e*P **P 22 24 47.7 +0.3**
ZIRO IAmb IAmb 22 24 57.8
comp=Z,29nm,0.7s
ULN Ulaanbaatar 73.92 326 P P 22 24 48.6 +0.8
ULN pmax pmax
comp=Z,104nm,1.2s
ULN MLR MLR
comp=Z,1μm,18.0s
ULN Ulaanbaatar 73.92 326 P P 22 24 48.5 +0.8
ULN IAmb IAmb 22 24 50.4
comp=Z,104nm,1.2s
ULN Ulaanbaatar 73.92 326 IAMs_20 IAMs_20 22 59 59.1
comp=Z,1μm,18.0s
GTA Gaotai 74.02 316 P P 22 24 48.6 +0.1
GTA pP pP 22 24 52.7 -3.3
GTA sP sP 22 24 55.7 -3.0
GTA S **S 22 34 19.6 -0.2**
GTA sS pS 22 34 29.9 +0.8
GTA SS **SS 22 39 09.4 +4.3**
GTA pmax pmax
comp=Z,27nm,0.9s
GTA pmax pmax
comp=Z,370nm,8.0s
GTA LR LR
comp=Z,370nm,17.5s
GTA LR LR
comp=Z,590nm,17.5s
GTA LR LR
comp=Z,750nm,21.1s
SONM Songino Array 74.27 326 P P 22 24 50.3 +0.6
comp=Z,31nm,0.8s,baz=142,slow=5.9,SNR=131
SONM LR LR 22 57 44.7
comp=Z,322nm,18.8s,baz=102,slow=36
SONM Songino Array 74.27 326 P P 22 24 49.9 +0.1
TEZP TEZPUR 74.35 301 *e*P **P 22 24 50.3 -0.2**
BELO BELONIA 74.43 297 *e*P **P 22 24 48.9 -2.1**
SHL Shillong 74.78 300 *e*P **P 22 24 53.2 -0.1**
SHL IAmb IAmb 22 25 01.8
comp=Z,66nm,1.3s
SHL Shillong 74.78 300 P P 22 24 52.9 -0.4
SHL pmax pmax
comp=Z,149nm,1.3s
SHL Shillong 74.78 300 P P 22 24 52.9 -0.4
SHL IAmb IAmb 22 24 55.9
comp=Z,149nm,1.3s
GUWA GUWAHATI 75.15 300 *e*P **P 22 24 54.9 -0.2**
GUWA IAmb IAmb 22 24 57.7
comp=Z,58nm,1.0s
YAK Yakutsk 75.36 346*c i*P **P 22 24 55.5 0.0**
YAK *e*'PP **pP 22 25 04.5 +0.6**
YAK *e* 22 25 10.5
YAK *e*S **S 22 34 32.5 -0.9**
YAK *e*'SS **sS 22 34 52.6 +5.6**
YAK pmax pmax
comp=Z,236nm,0.9s
YAK pmax pmax
comp=E,15nm,0.9s
YAK pmax pmax
comp=N,42nm,1.3s
YAK smax smax
comp=N,215nm,4.9s
YAK smax smax
comp=E,101nm,3.4s
YAK Yakutsk 75.36 346 P P 22 24 55.5 0.0
YAK IAMs_20 IAMs_20 22 57 46.5
comp=Z,1μm,20.0s
LSA Lhasa 76.75 304 P P 22 25 05.5 +0.7
LSA S **S 22 34 48.5 -2.6**
LSA pmax pmax
comp=Z,120nm,1.9s
LSA LR LR
comp=Z,530nm,24.2s
LSA LR LR
comp=Z,1μm,27.1s
LSA LR LR
comp=Z,2μm,29.9s
LSA Lhasa 76.75 304 P P 22 25 05.2 +0.4
LSA pmax pmax
comp=Z,41nm,1.2s
LSA Lhasa 76.75 304 P P 22 25 05.2 +0.4
BOD Bodaibo 77.00 337 *e*P **P 22 25 04.1 -0.9**
BOD pmax pmax
comp=Z,61nm,1.4s
ZAK Zakamensk 77.39 327 *e*P **P 22 25 07.0 -0.5**
ZAK pmax pmax
comp=Z,40nm,1.5s
KDAK Kodiak Island 77.71 24 P P 22 25 09.3 +0.3
KDAK pmax pmax
comp=Z,288nm,1.9s
KDAK Kodiak Island 77.71 24 P P 22 25 09.3 +0.3
BILL Bilibino 77.79 2*de*P **P 22 25 10.5 +1.3**
BILL *e* 22 25 21.1
BILL *e* 22 28 08.7
BILL *e*SS SS 22 40 08.8 +8.0
BILL *e*SSS SSS 22 43 27.4
BILL pmax pmax
comp=Z,266nm,2.5s
BILL Bilibino 77.79 2 P P 22 25 09.5 +0.3
IRK Irkutsk 77.89 329 *e*P **P 22 25 09.2 -0.9**
IRK pmax pmax
comp=Z,103nm,1.8s
TLY Talaya 77.90 328*c i*P **P 22 25 10.0 -0.2**
TLY *e*S **S 22 35 01.2 -0.6**
TLY pmax pmax
comp=Z,169nm,1.8s
TLY MLR MLR
comp=Z,1μm,18.0s
TLY Talaya 77.90 328 P P 22 25 10.1 -0.1
TLY IAmb IAmb 22 25 12.1
comp=Z,56nm,1.3s
TAPN Taplejung 78.89 300 *e*P **P 22 25 16.9 +0.3**
TNA Tin City 78.89 13 P P 22 25 15.6 +0.3
baz=212
ODAN Odare 79.02 300 *e*P **P 22 25 17.9 +0.7**
MOY Mondy 79.29 327 *e*P **P 22 25 18.8 +0.8**
MOY pmax pmax
comp=Z,76nm,2.1s
HOM Homer 79.33 23 P P 22 25 18.8 +1.0
baz=229
CNPM China Poot 79.40 23 P P 22 25 18.5 +0.2
RSO Redoubt South 79.45 22 P P 22 25 18.4 -0.4
BOK Bokaro 79.47 296 *e*P **P 22 25 20.5 +1.0**
BOK IAmb IAmb 22 25 40.2
comp=Z,28nm,1.0s
CHLP Challavanipeta 79.78 291 *e*P **P 22 25 21.9 +0.7**
CHLP IVmB_BB 22 25 22.9
comp=Z,392nm,2.6s
QSPA South Pole Qui 80.19 180 P P 22 25 23.4 +0.7
comp=Z,7.3nm,0.6s,baz=354,slow=0.2,SNR=40
QSPA South Pole Qui 80.19 180 P P 22 25 22.8 +0.1
QSPA IAmb IAmb 22 25 45.6
comp=Z,88nm,1.6s
QSPA South Pole Qui 80.19 180 IAMs_20 IAMs_20 22 57 28.4
comp=Z,2μm,19.0s
PALK Pallekele 80.55 279 P P 22 25 25.0 -0.6
PALK pmax pmax
comp=Z,55nm,1.1s
PALK Pallekele 80.55 279 P P 22 25 24.9 -0.6
PALK IAmb IAmb 22 25 45.5
comp=Z,55nm,1.1s
O22K Cooper Landing 80.60 23 P P 22 25 25.7 +1.0
baz=230
O22K Cooper Landing 80.60 23 P P 22 25 25.2 +0.5
GUN Gumba 80.61 300 *e*P **P 22 25 25.9 -0.1**
comp=Z,69nm,0.9s
SUA Susitna One 80.85 22 P P 22 25 26.2 0.0
SUA IAmb IAmb 22 28 19.3
comp=Z,55nm,0.8s
PKI Pulchoki 80.91 300 *e*P **P 22 25 27.3 -0.3**
comp=Z,62nm,1.1s
PKIN Phulchoki 80.92 300 *e*P **P 22 25 27.2 -0.4**
comp=Z,34nm,0.5s
RC01 Rabbit Creek A 80.98 22 P P 22 25 27.3 +0.5
baz=230
KKN Kakani 81.08 300 *e*P **P 22 25 28.2 -0.1**
DMN Daman 81.18 300 *e*P **P 22 25 28.7 -0.2**
comp=Z,196nm,1.4s
CUT Chulitna 81.64 21 P P 22 25 30.2 0.0
baz=230
KNK Knik Glacier 81.67 22 IAMs_20 IAMs_20 22 57 33.8
comp=Z,2μm,20.0s
GKN Gorkha 81.69 300 *e*P **P 22 25 31.2 -0.3**
comp=Z,99nm,0.9s

GHO Glory Hole Cre 81.72 22 P P 22 25 31.1 +0.4
GHO IAmb IAmb 22 25 33.2
comp=Z,63nm,0.8s
PVM Polavaram 81.74 289 *e*P **P 22 25 31.9 +0.1**
PVM IVmB_BB 22 25 32.8
comp=Z,196nm,2.1s
RDOG Red Dog Mine 82.08 13 P P 22 25 33.4 +1.0
RDOG IAmb IAmb 22 25 34.8
comp=Z,77nm,1.3s
KTH Kantishna Hill 82.16 20 P P 22 25 32.7 -0.3
KTH IAmb IAmb 22 25 34.5
comp=Z,69nm,0.9s
TRF Thorofare Moun 82.31 20 P P 22 25 33.6 -0.3
TRF IAmb IAmb 22 25 35.4
comp=Z,45nm,0.8s
SCM Sheep Creek Mo 82.35 22 P P 22 25 34.6 +0.5
SCM pmax pmax
comp=Z,97nm,1.2s
SCM Sheep Creek Mo 82.35 22 P P 22 25 34.6 +0.5
SCM IAmb IAmb 22 25 36.3
comp=Z,97nm,1.2s
KOLN Koldanda 82.51 300 *e*P **P 22 25 35.3 -0.6**
comp=Z,36nm,0.7s
DANN Dangsing 82.53 300 *e*P **P 22 25 35.4 -0.6**
comp=Z,54nm,0.9s
MYLAV Mylavaram 82.56 288 *e*P **P 22 25 36.5 +0.5**
MYLAV IVmBBB 22 25 40.1
comp=Z,243nm,2.8s
RND Reindeer 82.78 21 P P 22 25 36.2 -0.1
RND pmax pmax
comp=Z,99nm,1.2s
RND Reindeer 82.78 21 P P 22 25 36.2 -0.1
RND IAmb IAmb 22 25 37.6
comp=Z,99nm,1.2s
SKHT Srikalahasti 82.80 285 *e*P **P 22 25 37.8 +0.5**
SKHT IVmB_BB 22 25 38.8
comp=Z,234nm,1.4s
IMAR Indian Mountai 82.91 17 P P 22 25 37.1 +0.2
M24K Tolsona, Glenn 82.95 23 P P 22 25 38.4 +1.2
baz=234
M24K Tolsona, Glenn 82.95 23 P P 22 25 37.7 +0.6
M24K IAmb IAmb 22 25 39.9
comp=Z,99nm,1.1s
MCK McKinley 82.95 20 P P 22 25 37.1 -0.1
baz=231
ADKI Addanki 82.99 287 *e*P **P 22 25 38.4 +0.2**
ADKI IVmB_BB 22 25 39.6
comp=Z,186nm,2.5s
DHY Denali Highway 83.09 21 IAMs_20 IAMs_20 23 01 06.5
comp=Z,1μm,19.0s
PYUN Piuthan 83.12 300 *e*P **P 22 25 37.7 -1.3**
comp=Z,42nm,0.8s
GGR Gangavaram 83.19 289 *e*P **P 22 25 39.4 +0.1**
GGR IVmB_BB 22 25 40.2
comp=Z,246nm,2.3s
MLY Manley 83.19 19 P P 22 25 38.9 +0.5
baz=229
N25K Chitina, Valde 83.26 23 P P 22 25 39.1 +0.2
baz=235
NEA2 Nenana 83.46 20 P P 22 25 39.3 -0.4
baz=231
GLB Gilahina Butte 83.48 24 P P 22 25 40.2 +0.3
GLB IAmb IAmb 22 25 42.6
comp=Z,68nm,1.3s
MAW Mawson 83.63 203 P P 22 25 40.2 -0.4
comp=Z,14nm,0.8s,baz=104,slow=6.8,SNR=18
MAW LR LR 22 58 24.1
comp=Z,711nm,21.9s,baz=81,slow=32
MAW Mawson 83.63 203 P P 22 25 40.5 -0.1
MAW pmax pmax
comp=Z,9.0nm,1.1s
MAW Mawson 83.63 203 P P 22 25 40.5 -0.1
WRH Wood River Hil 83.71 20 P P 22 25 40.6 -0.4
WRH IAmb IAmb 22 25 42.1
comp=Z,46nm,0.8s
I23K Minto, Yukon-K 83.72 19 P P 22 25 40.9 0.0
baz=230
NJS Nagarjunasagar 83.76 288 *e*P **P 22 25 42.2 -0.1**
NJS IVmBBB 22 25 43.1
comp=Z,201nm,1.3s
MCARA McCarthy VSAT 83.76 24 P P 22 25 41.9 +0.6
MCARA IAmb IAmb 22 25 45.8
comp=Z,39nm,1.2s
TIXI Tiksi 83.84 351 *ce*P **P 22 25 42.1 +0.7**
TIXI pmax pmax
comp=Z,311nm,2.5s
TIXI Tiksi 83.84 351 P P 22 25 41.4 0.0
TIXI IAmb IAmb 22 25 42.7
comp=Z,88nm,1.6s
TIXI IAMs_20 IAMs_20 23 02 51.3
comp=Z,1μm,21.0s
BALM Baldy 83.85 24 P P 22 25 41.9 0.0
TABL Table Mountain 84.03 25 P P 22 25 43.3 +0.3
TABL IAmb IAmb 22 26 01.9
comp=Z,43nm,0.8s
TCOL CIGO, UAF Yank 84.04 20 P P 22 25 42.4 -0.2
baz=232
TCOL CIGO, UAF Yank 84.04 20 P P 22 25 42.0 -0.6
TCOL IAMs_20 IAMs_20 23 04 15.4
comp=Z,1μm,20.0s
COLA College 84.04 20 P P 22 25 42.2 -0.4
COLA pmax pmax
comp=Z,104nm,1.0s
COLA MLR MLR
comp=Z,1μm,20.0s
COLA College 84.04 20 P P 22 25 42.2 -0.4
COLA College 84.04 20 IAMs_20 IAMs_20 23 04 14.4
comp=Z,1μm,20.0s
WMQ Urumqi 84.10 316 *e*P **P 22 25 43.4 -0.1**
WMQ pP pP 22 25 51.3 +0.2
WMQ sP pwP 22 25 58.4 +4.4
WMQ PP **PP 22 28 57.7 -0.3**
WMQ SKS **SKSac 22 36 04.4 -1.0**
WMQ pmax pmax
comp=Z,59nm,1.5s
WMQ pmax pmax
comp=Z,400nm,3.7s
WMQ LR LR
comp=Z,560nm,18.1s
WMQ LR LR
comp=Z,560nm,22.9s
WMQ LR LR
comp=Z,550nm,27.7s
WMQ Urumqi 84.10 316 P P 22 25 43.1 -0.4
WMQ pmax pmax
comp=Z,90nm,1.3s
WMQ MLR MLR
comp=Z,800nm,20.0s
WMQ Urumqi 84.10 316 P P 22 25 43.1 -0.4
WMQ IAmb IAmb 22 25 45.3
comp=Z,90nm,1.3s
WMQ Urumqi 84.10 316 IAMs_20 IAMs_20 23 05 23.5
comp=Z,798nm,20.0s
BARN Barnard Glacie 84.14 25 P P 22 25 43.8 +0.3
BARN IAmb IAmb 22 25 46.0
comp=Z,23nm,0.9s
CTGM Chitina Glacie 84.22 25 P P 22 25 44.0 +0.1
CTGM IAmb IAmb 22 25 46.2
comp=Z,43nm,1.0s
RPR Rampur 84.26 290 *e*P **P 22 25 44.5 -0.2**
RPR IVmB_BB 22 25 45.5
comp=Z,303nm,1.2s
IL31 84.30 20 P P 22 25 43.3 -0.6
IL31 IAmb IAmb 22 25 44.9
comp=Z,88nm,1.4s
ILAR Eielson Array 84.30 20 P P 22 25 43.1 -0.8
comp=Z,21nm,0.4s,baz=245,slow=5.0,SNR=398
ILAR Eielson Array 84.30 20 P P 22 25 43.5 -0.5
ILAR Eielson Array 84.30 20 P P 22 25 43.5 -0.5
POKR Poker Plat Res 84.33 20 P P 22 25 43.8 -0.4
baz=232
POKR Poker Plat Res 84.33 20 P P 22 25 44.0 -0.1
POKR IAmb IAmb 22 25 45.0
comp=Z,58nm,1.3s
L26K Log Cabin Wild 84.55 23 P P 22 25 46.2 +0.8
baz=236
HYB Hyderabad 84.64 289 *i* P **P 22 25 47.0 +0.2**
HYBB Hyderabad (bro 84.64 289 *e*P **P 22 25 46.3 -0.5**
HYBB IVmBBB 22 25 54.3
comp=Z,230nm,1.8s
COLD Coldfoot 84.80 17 P P 22 25 47.4 +0.9
baz=229
SCRK Sand Creek 84.85 22 P P 22 25 47.6 +0.6
baz=235
NGP Nagpur 84.97 292 *e*P **P 22 25 48.1 -0.2**
NGP IAmb IAmb 22 25 49.4
comp=Z,48nm,0.4s
K27K Chicken 85.58 22 P P 22 25 52.9 +2.5
baz=237
HYT Haines Junctio 85.77 26 P P 22 25 52.4 +0.8
HYT IAmb IAmb 22 25 54.4
comp=Z,84nm,1.2s
TOLK Toolik Lake Re 85.91 17 P P 22 25 52.7 +0.7
baz=230
TOLK Toolik Lake Re 85.91 17 IAMs_20 IAMs_20 22 57 54.6
comp=Z,1μm,22.0s
A21K Barrow 86.00 13 P P 22 25 53.7 +1.3
baz=223
A21K Barrow 86.00 13 P P 22 25 52.2 -0.1
A21K IAmb IAmb 22 25 54.3
comp=Z,66nm,1.1s
JIS Juneau Island 86.02 29 IAMs_20 IAMs_20 23 00 46.3
comp=Z,1μm,20.0s
DGZ Jazzator, Alta 86.25 322 *i* P **P 22 25 54.7 +0.5**
DGZ pmax pmax
comp=Z,37nm,1.2s
EGAK Eagle 86.32 22 P P 22 25 54.5 +0.4
EGAK IAmb IAmb 22 25 57.4
comp=Z,74nm,1.3s
EGAK IAMs_20 IAMs_20 22 58 17.9
comp=Z,1μm,21.0s
KLRI Killari 86.60 289 *e*P **P 22 25 55.5 -1.0**
KLRI IVmBBB 22 25 56.5
comp=Z,189nm,2.4s
BMAR Burnt Mountain 86.64 19 P P 22 25 56.7 +1.1
J01E Myrtle Point 86.82 45 P P 22 25 58.3 +1.3
baz=254
O02D Mt. Diablo Mer 86.82 49 P P 22 25 59.5 +2.3
baz=254,SNR=6.3
K02D Willamette Mer 86.88 46 P P 22 25 59.4 +1.9
baz=254
BHPL Bhopal 86.88 294 *e*P **P 22 25 55.8 -2.0**
BHPL IAmb IAmb 22 26 08.5
comp=Z,8.3nm,0.5s
N02D Trinity Center 87.10 48 P P 22 26 00.4 +1.9
baz=254
M02C Callahan 87.10 47 P P 22 26 00.5 +1.9
baz=254,SNR=5.0
WDC Whiskeytown Da 87.11 48 P P 22 25 58.5 0.0
WDC pmax pmax
comp=Z,27nm,1.6s
WDC MLR MLR
comp=Z,1μm,20.0s
WDC Whiskeytown Da 87.11 48 P P 22 25 58.5 0.0
WDC IAMs_20 IAMs_20 22 59 22.3
comp=Z,1μm,20.0s
ZSN Zaisan 87.14 319 *i* P **P 22 25 58.1 -0.4**
comp=Z,15nm,1.0s,baz=319
ZSN Zaisan 87.14 319 *i* P **P 22 25 58.0 -0.4**
ZSN pmax pmax
comp=Z,15nm,1.0s
YBH Yreka Blue Hor 87.30 47 P P 22 25 59.3 -0.2
YBH pmax pmax
comp=Z,26nm,1.6s
YBH Yreka Blue Hor 87.30 47 P P 22 25 59.3 -0.2
HUMO Hull Mountain 87.36 46 P P 22 26 00.3 +0.7
I03D Drain, OR 87.38 45 P P 22 26 00.0 +0.4
baz=254
O03E Paynes Creek 87.58 49 P P 22 26 02.2 +1.3
baz=255,SNR=9.0
ORV Oroville 87.62 49 P P 22 26 01.2 +0.2
ORV pmax pmax
comp=Z,34nm,1.9s
ORV Oroville 87.62 49 P P 22 26 01.2 +0.2
PAGB Antelope Grade 87.64 53 P P 22 26 01.6 +0.4
PKM Mcpherson Peak 87.79 54 P P 22 26 05.5 +3.4
baz=256
DDI Dehra Dun 87.83 301 *e*P **P 22 26 02.7 +0.4**
DDI IAmb IAmb 22 26 11.8
comp=Z,18nm,0.5s
DDI *ex* x 22 26 13.0
AFDM Forest Hills D 87.86 50 P P 22 26 02.9 +0.7
AFDM IAMs_20 IAMs_20 23 00 47.4
comp=Z,967nm,19.0s
M04C Macdoel 87.94 47 P P 22 26 04.4 +1.8
baz=255
I04A Tendick Farm, 88.06 45 P P 22 26 04.5 +1.5
baz=254
CMB Columbia Colle 88.09 51 P P 22 26 02.6 -0.7
CMB pmax pmax
comp=Z,18nm,1.6s
CMB MLR MLR
comp=Z,1μm,20.0s
CMB Columbia Colle 88.09 51 P P 22 26 02.6 -0.7
CMB IAMs_20 IAMs_20 23 00 58.3
comp=Z,1μm,20.0s
J04D Umpqua Nationa 88.12 46 P P 22 26 05.7 +2.1
baz=255
DLBC Dease Lake 88.19 30 IAMs_20 IAMs_20 23 09 37.6
comp=Z,1μm,19.0s
BEKR Beckworth 88.55 49 P P 22 26 06.2 +0.6
BEKR IAMs_20 IAMs_20 23 01 42.4
comp=Z,1μm,20.0s
VES Vestal, Richgr 88.59 53 P P 22 26 07.5 +1.9
baz=257
OSI Osito Audit: C 88.61 55 P P 22 26 06.5 +0.7
OSI IAmb IAmb 22 26 43.5
comp=Z,26nm,1.1s
MK31 Makanchi Array 88.63 318 P P 22 26 05.6 -0.1
MK31 pmax pmax
comp=Z,24nm,1.0s
MK31 Makanchi Array 88.63 318 P P 22 26 05.6 -0.1
MK31 IAmb IAmb 22 26 06.9
comp=Z,24nm,0.9s
MKAR Makanchi Array 88.63 318 P P 22 26 05.3 -0.4
comp=Z,19nm,0.7s,baz=100,slow=6.0,SNR=101
MKAR LR LR 23 06 18.1
comp=Z,467nm,20.6s,baz=51,slow=36
MKAR Makanchi Array 88.63 318 P P 22 26 04.8 -0.9
J05D Fort Rock, OR 88.75 46 P P 22 26 08.7 +2.2
baz=255
MAKZ Makanchi 88.84 318 P P 22 26 06.4 -0.3
MAKZ pmax pmax
comp=Z,32nm,1.0s
MAKZ Makanchi 88.84 318 P P 22 26 06.4 -0.3
MAKZ IAmb IAmb 22 26 07.9
comp=Z,32nm,0.9s
K05A Summer Lake 88.86 46 P P 22 26 08.5 +1.5
K05A IAmb IAmb 22 26 49.6
comp=Z,37nm,1.2s
PASC Pasadena Art C 88.94 55 P P 22 26 07.3 -0.1
PASC IAmb IAmb 22 26 11.1
comp=Z,62nm,1.6s
MDPB Devils Postpil 89.00 52 IAMs_20 IAMs_20 23 01 17.5
comp=Z,1μm,20.0s
ISA Isabella, Lake 89.03 54 P P 22 26 08.9 +1.1
ISA pmax pmax
comp=Z,16nm,1.3s
ISA Isabella, Lake 89.03 54 P P 22 26 09.5 +1.6
baz=257
ISA Isabella, Lake 89.03 54 P P 22 26 08.9 +1.1
MWC Mount Wilson 89.06 55 P P 22 26 08.6 +0.4
MWC pmax pmax
comp=Z,50nm,1.3s
MWC MLR MLR
comp=Z,2μm,18.0s
MWC Mount Wilson 89.06 55 P P 22 26 08.6 +0.4
MWC IAmb IAmb 22 26 10.9
comp=Z,50nm,1.3s
MOD Modoc Plateau 89.08 47 P P 22 26 09.2 +1.2
PINE Pine Mountain 89.09 45 P P 22 26 09.4 +1.3
ZAA0 Zalesovo Array 89.15 325 P P 22 26 06.7 -1.1
ZALV Zalesovo Beam 89.15 325 P P 22 26 06.7 -1.1
comp=Z,6.9nm,0.7s,baz=106,slow=4.8,SNR=36
ZALV PP **PP 22 29 32.3 -6.1**
comp=Z,1.8nm,0.8s,baz=104,slow=9.5,SNR=3.8
ZALV LR LR 23 07 12.0
comp=Z,368nm,19.3s,baz=90,slow=36
ZALV Zalesovo Beam 89.15 325 *i* P **P 22 26 06.6 -1.3**
ZALV pmax pmax
comp=Z,7.0nm,0.7s
ZALV Zalesovo Beam 89.15 325 P P 22 26 05.9 -1.9
A04D Lummi Island 89.19 40 P P 22 26 09.9 +1.8
baz=254
PAHR Pah Rah Range 89.24 50 P P 22 26 09.6 +0.8
PAHR IAmb IAmb 22 26 11.9
comp=Z,30nm,1.3s
EDW2 Edwards Air Fo 89.25 55 P P 22 26 10.8 +1.9
baz=258,SNR=6.9
BFSC Mount Baldy Ra 89.38 55 P P 22 26 11.5 +1.8
baz=258
CWC Cottonwood Cre 89.52 53 P P 22 26 12.2 +2.0
baz=258
LHV Little Huntoon 89.58 51 P P 22 26 10.9 +0.7
LHV IAmb IAmb 22 26 26.1
comp=Z,58nm,1.8s
SHLS Shalkode 89.65 314 *i* P **P 22 26 09.2 -1.5**
comp=Z,39nm,1.5s,baz=314
SHLS Shalkode 89.65 314 *i* P **P 22 26 09.1 -1.5**
SHLS pmax pmax
comp=Z,39nm,1.5s
DHRM DHARAMSHALA 89.71 303 *e*P **P 22 26 10.4 -0.8**
DHRM IAmb IAmb 22 26 20.5
comp=Z,22nm,0.9s
NVAR Mina Array Bea 89.77 51 P P 22 26 13.0 +1.5
comp=Z,5.0nm,1.0s,baz=238,slow=7.3,SNR=25
NVAR LR LR 23 02 18.3
comp=Z,972nm,18.6s,baz=270,slow=33
NVAR Mina Array Bea 89.77 51 P P 22 26 12.5 +1.1
NV11 Mina Array Sit 89.89 51 P P 22 26 12.9 +1.0
MPMC Manual Prospec 89.90 53 P P 22 26 14.1 +2.0
baz=258,SNR=9.4
B06A Marblemount 89.92 41 IAMs_20 IAMs_20 22 58 19.0
comp=Z,1μm,22.0s
KVN Kaiserville 90.06 50 P P 22 26 13.6 +0.8
KVN pmax pmax
comp=Z,30nm,1.4s
KVN Kaiserville 90.06 50 P P 22 26 13.6 +0.8
MONP2 Monument Peak 90.12 57 P P 22 26 15.9 +2.7
baz=258
LTY Liberty 90.13 42 IAMs_20 IAMs_20 22 59 41.8
comp=Z,1μm,20.0s
I07A Izee 90.16 45 P P 22 26 13.2 +0.2
I07A IAMs_20 IAMs_20 23 01 56.9
comp=Z,1μm,19.0s
PFO Pinyon Flats O 90.23 56 P P 22 26 13.7 +0.1
PFO pmax pmax
comp=Z,13nm,1.3s
PFO MLR MLR
comp=Z,2μm,20.0s
PFO Pinyon Flats O 90.23 56 P P 22 26 13.7 +0.1
PRZ Przheval'sk 90.26 313 P P 22 26 13.6 0.0
PRZ pmax pmax
comp=Z,149nm,1.3s
PRZ Przheval'sk 90.26 313 P P 22 26 13.6 0.0
KPKS Kokpek 90.28 314 *i* P **P 22 26 13.3 -0.3**
comp=Z,48nm,1.6s,baz=314
KPKS Kokpek 90.28 314 *i* P **P 22 26 13.2 -0.3**
KPKS pmax pmax
comp=Z,48nm,1.6s
GSC Goldstone, Bar 90.29 54 P P 22 26 14.5 +0.7
GSC pmax pmax
comp=Z,24nm,1.6s
GSC MLR MLR
comp=Z,1μm,20.0s
GSC Goldstone, Bar 90.29 54 P P 22 26 15.5 +1.7
baz=258
GSC Goldstone, Bar 90.29 54 P P 22 26 14.5 +0.7
GSC IAMs_20 IAMs_20 22 59 42.9
comp=Z,1μm,20.0s
F07A Phinny Hill Vi 90.30 44 P P 22 26 14.4 +1.0
F07A IAmb IAmb 22 26 57.6
comp=Z,43nm,1.8s
ESJX Sierra Juarez 90.33 58 P P 22 26 14.7 +0.5
SATY Saty 90.38 314 *i* P **P 22 26 13.7 -0.4**
comp=Z,18nm,1.1s,baz=314
SATY Saty 90.38 314 *i* P **P 22 26 13.6 -0.4**
SATY pmax pmax
comp=Z,18nm,1.1s
TPH Tonopah 90.53 52 P P 22 26 16.1 +1.1
TPH pmax pmax
comp=Z,57nm,1.2s
TPH Tonopah 90.53 52 P P 22 26 16.1 +1.1
HEC Hector,Ludlow 90.57 55 P P 22 26 17.4 +2.3
baz=258
HAWA Hanford 90.68 43 P P 22 26 15.4 +0.2
BELC Belle Mtn. Jos 90.68 56 P P 22 26 18.0 +2.3
baz=259,SNR=5.4
INK Inuvik 90.70 20 P P 22 26 15.1 +0.4
INK pmax pmax
comp=Z,28nm,1.5s
INK Inuvik 90.70 20 P P 22 26 15.1 +0.4
J08A Circle Bar Ran 90.73 46 P P 22 26 16.5 +0.9
TDK Taldyqorghan 90.82 315 *e*P **P 22 26 15.4 -0.5**
comp=Z,61nm,1.6s,baz=315
TDK *e*S **SKSac 22 36 46.5 +0.3**
baz=315
TDK LR LR 23 03 50.3
comp=Z,479nm,20.2s,baz=315
TDK Taldyqorghan 90.82 315 *e*P **P 22 26 15.3 -0.6**
TDK *e*S **SKSac 22 36 46.4 +0.3**
TDK pmax pmax
comp=Z,61nm,1.6s
TDK MLR MLR
comp=Z,479nm,20.0s
CPBX Cerro Prieto 90.95 57 IAMs_20 IAMs_20 23 09 12.5
comp=Z,1μm,19.0s
E08A Dider Farm, El 91.02 43 IAMs_20 IAMs_20 22 59 18.5
comp=Z,1μm,21.0s
TUQ Turquoise Moun 91.02 54 P P 22 26 18.9 +1.6
baz=259,SNR=5.5
TPNV Topopah Spring 91.06 53 P P 22 26 18.8 +1.4
TPNV pmax pmax
comp=Z,24nm,1.3s
TPNV MLR MLR
comp=Z,2μm,18.0s
TPNV Topopah Spring 91.06 53 P P 22 26 19.1 +1.7
baz=259,SNR=6.5
TPNV Topopah Spring 91.06 53 P P 22 26 18.8 +1.4
BC3 Big Chuckawall 91.06 56 P P 22 26 19.6 +2.2
baz=259
KDJ Kajisay 91.06 312 P P 22 26 17.6 +0.3
KDJ pmax pmax
comp=Z,54nm,1.0s
KDJ Kajisay 91.06 312 P P 22 26 17.6 +0.3
GMRC Granite Mounta 91.11 55 P P 22 26 19.2 +1.6
baz=259,SNR=6.1
SYO Syowa Base 91.18 198 *e*P **P 22 26 15.6 -1.5**
SYO Syowa Base 91.18 198 *e*PcP **P 22 26 16.8 -0.3**
D08A Wollman Farm, 91.24 43 IAMs_20 IAMs_20 22 59 45.3
comp=Z,1μm,21.0s
B08A Colville Reser 91.27 41 IAMs_20 IAMs_20 23 00 00.8
comp=Z,1μm,21.0s
MDOK Medeo 91.37 313 *i* P **P 22 26 18.3 -0.4**
baz=313
MDOK LR LR 23 07 54.9
comp=Z,192nm,18.4s,baz=313
MDOK Medeo 91.37 313 *i* P **P 22 26 18.3 -0.4**
IRM Iron Mountain 91.41 56 P P 22 26 21.3 +2.4
baz=259,SNR=6.1
KSH Kashi 91.42 310 P P 22 26 19.1 +0.1
KSH S **S 22 37 13.9 -3.2**
KSH pmax pmax
comp=Z,65nm,1.0s
KSH pmax pmax
comp=Z,440nm,5.7s
KSH LR LR
comp=Z,400nm,6.8s
KSH LR LR
comp=Z,530nm,11.4s
KSH LR LR
comp=Z,500nm,9.1s
AAA Alma-Ata 91.48 313 *e*P **P 22 26 18.8 -0.3**
comp=Z,12nm,0.6s,baz=313
AAA *e*S **SKSac 22 36 50.4 +0.2**
baz=313
AAA LR LR 23 07 07.8
comp=Z,456nm,22.0s,baz=313
AAA Alma-Ata 91.48 313 *e*P **P 22 26 18.7 -0.3**
AAA *e*S **SKSac 22 36 50.4 +0.2**
AAA pmax pmax
comp=Z,12nm,0.6s
AAA MLR MLR
comp=Z,455nm,22.0s
E09A Wood Farm, Sta 91.64 43 IAMs_20 IAMs_20 23 01 44.9
comp=Z,977nm,19.0s
ULHL Ulahol 91.77 312 P **P 22 26 21.2 +0.6**
SNR=5.7
SHPR Sheep Range 91.83 53 P P 22 26 21.8 +0.8
SHPR IAmb IAmb 22 26 24.3
comp=Z,26nm,1.4s
SHPR IAMs_20 IAMs_20 23 03 55.8
comp=Z,912nm,21.0s
C09A Chrisman Ranch 91.83 42 IAMs_20 IAMs_20 23 03 08.9
comp=Z,975nm,20.0s
R11A Troy Canyon, C 91.85 52 P P 22 26 23.1 +2.0
baz=259,SNR=11
R11A Troy Canyon, C 91.85 52 P P 22 26 21.7 +0.7

R11A IAMs_20 IAMs_20 23 02 52.9
comp=Z,1µm,19.0s
BMO Blue Mountains 91.87 45 P **P** **22 26 22.0 +1.1**
BMO pmax pmax
comp=Z,20nm,1.2s
BMO MLR MLR
comp=Z,1µm,20.0s
BMO Blue Mountains 91.87 45 P **P** **22 26 21.9 +1.1**
BMO IAmb IAmb 22 26 23.4
comp=Z,20nm,1.2s
BMO IAMs_20 IAMs_20 23 03 39.0
comp=Z,1µm,20.0s
KURK Kurchatov 91.96 321 P **P** **22 26 20.2 -0.8**
KURK pmax pmax
comp=Z,32nm,1.1s
KURK MLR MLR
comp=Z,700nm,18.0s
KURK Kurchatov 91.96 321 P **P** **22 26 20.2 -0.8**
KURK IAmb IAmb 22 26 21.6
comp=Z,32nm,1.1s
KURK Kurchatov 91.96 321 IAMs_20 IAMs_20 23 12 11.5
comp=Z,743nm,18.0s
KUU Kurty 92.03 314 *i* P **P** **22 26 20.8 -0.8**
comp=Z,46nm,1.0s,baz=314
KUU *e*S **SKSac** **22 36 53.1 0.0**
baz=314
KUU Kurty 92.03 314 *i* P **P** **22 26 20.7 -0.8**
KUU *e*S **SKSac** **22 36 53.1 0.0**
KUU pmax pmax
comp=Z,46nm,1.0s
BOOM Boomskoye usch 92.04 313 P **P** **22 26 21.6 -0.2**
BOOM pmax pmax
comp=Z,32nm,1.0s
BOOM MLR MLR
comp=Z,700nm,22.0s
BOOM Boomskoye usch 92.04 313 P **P** **22 26 21.6 -0.2**
BOOM IAmb IAmb 22 26 23.5
comp=Z,32nm,1.0s
BOOM IAMs_20 IAMs_20 23 09 42.9
comp=Z,723nm,22.0s
F10A Beach Ranch, E 92.15 44 P **P** **22 26 22.3 +0.2**
F10A IAmb IAmb 22 26 24.4
comp=Z,21nm,0.9s
113A Mohawk Valley, 92.29 57 IAMs_20 IAMs_20 23 04 14.0
comp=Z,1µm,19.0s
PIX Pinacate 92.34 59 IAMs_20 IAMs_20 23 03 43.3
comp=Z,683nm,20.0s
TKM2 Tokmak 2 92.37 313 P **P** **22 26 22.9 -0.5**
SNR=9.0
NIL Nilore 92.49 304 P **P** **22 26 23.0 -0.9**
NIL pmax pmax
comp=Z,20nm,1.2s
NIL Nilore 92.49 304 P **P** **22 26 23.0 -0.9**
NIL IAmb IAmb 22 26 24.7
comp=Z,20nm,1.2s
ELK Elko 92.56 49 P **P** **22 26 24.7 +0.3**
ELK pmax pmax
comp=Z,14nm,1.2s
ELK Elko 92.56 49 P **P** **22 26 24.7 +0.3**
SRIG Santa Rosalia 92.67 63 IAMs_20 IAMs_20 23 00 45.3
comp=Z,969nm,20.0s
NEW Newport 92.69 42 P **P** **22 26 24.6 +0.1**
baz=258
NEW Newport 92.69 42 IAMs_20 IAMs_20 23 03 29.4
comp=Z,1µm,19.0s
KBK Karagaybulak 92.79 313 P **P** **22 26 26.0 +0.7**
SNR=6.7
PLID Pearl Lake 92.82 45 P **P** **22 26 26.1 +0.6**
NRIK Noril'sk 92.94 340 P **P** **22 26 23.8 -1.4**
comp=Z,15nm,1.2s,baz=115,slow=4.4,SNR=14
NRIK LR LR 23 09 16.3
comp=Z,1µm,20.1s,baz=106,slow=36
NRIK Noril'sk 92.94 340 *ce*P **P** **22 26 23.4 -1.8**
NRIK pmax pmax
comp=Z,23nm,1.5s
CHMS Chumysh 92.99 313 P **P** **22 26 25.9 -0.1**
SNR=12
FRU1 Bishkek 93.05 313 P **P** **22 26 26.0 -0.4**
FRU1 pmax pmax
comp=Z,17nm,1.1s
FRU1 Bishkek 93.05 313 P **P** **22 26 26.0 -0.4**
FRU1 IAmb IAmb 22 26 27.6
comp=Z,17nm,1.1s
AAK Ala-Archa 93.11 313 P **P** **22 26 27.0 +0.2**
SNR=10
AAK Ala-Archa 93.11 313 *ce*P **P** **22 26 26.5 -0.3**
AAK pmax pmax
comp=Z,46nm,1.1s
SGDS Sogindy 93.16 313 *e*P **P** **22 26 26.0 -0.9**
comp=Z,9.9nm,1.4s,baz=313
SGDS *e*S **SKSac** **22 36 59.7 +0.1**
baz=313
SGDS Sogindy 93.16 313 *e*P **P** **22 26 26.0 -0.9**
SGDS *e*S **SKSac** **22 36 59.7 +0.1**
SGDS pmax pmax
comp=Z,10.0nm,1.4s
CCUT Cedar City 93.44 53 P **P** **22 26 29.1 +0.6**
AML Almayashu 93.61 312 P **P** **22 26 30.2 +0.9**
SNR=15
EKS2 Erkin-Say 93.64 312 P **P** **22 26 30.3 +1.2**
SNR=11
SZCU Shurtz Canyon 93.66 53 P **P** **22 26 29.2 -0.3**
HLID Hailey 93.67 47 P **P** **22 26 30.8 +1.5**
baz=260
HLID Hailey 93.67 47 P **P** **22 26 29.5 +0.2**
HLID IAMs_20 IAMs_20 23 01 13.7
comp=Z,1µm,22.0s
BTLS Baital 93.86 315 *i* P **P** **22 26 28.1 -1.8**
comp=Z,12nm,1.1s,baz=315
BTLS *i* S **SKSac** **22 37 03.4 +0.2**
baz=315
BTLS Baital 93.86 315 *i* P **P** **22 26 28.9 -1.0**
BTLS *i* S **SKSac** **22 37 03.3 +0.2**
BTLS pmax pmax
comp=Z,12nm,1.1s
JTMT Jette 94.47 42 IAMs_20 IAMs_20 23 01 53.6
comp=Z,1µm,20.0s
X16A Lo Mia Camp, P 94.47 56 IAMs_20 IAMs_20 23 04 12.7
comp=Z,1000nm,19.0s
BCYI Bear Canyon 94.51 46 P **P** **22 26 34.1 +0.8**
HVU Hansel Valley 94.57 49 P **P** **22 26 34.0 +0.5**
HVU pmax pmax
comp=Z,19nm,1.1s
HVU Hansel Valley 94.57 49 P **P** **22 26 34.0 +0.5**
TUC Tucson 94.70 58 IAMs_20 IAMs_20 23 06 16.9
comp=Z,871nm,19.0s
DLMT Dillon 95.24 45 P **P** **22 26 37.2 +0.7**
DLMT IAMs_20 IAMs_20 23 03 23.2
comp=Z,1µm,20.0s
BTK Batken 95.43 310 P **P** **22 26 36.9 -0.5**
BTK pmax pmax
comp=Z,18nm,1.1s
BTK Batken 95.43 310 P **P** **22 26 36.9 -0.5**
BTK IAmb IAmb 22 26 38.3
comp=Z,18nm,1.1s
HWUT Hardware Ranch 95.44 49 IAMs_20 IAMs_20 23 07 59.7
comp=Z,662nm,22.0s
DZA Taraz 95.45 312 *e*P **P** **22 26 36.2 -1.1**
comp=Z,3.4nm,0.9s,baz=312
DZA *e*S **SKSac** **22 37 11.9 0.0**
baz=312
DZA Taraz 95.45 312 *e*P **P** **22 26 36.2 -1.1**
DZA *e*S **SKSac** **22 37 11.9 0.0**
DZA pmax pmax
comp=Z,3.0nm,0.9s
BRZS Berezniki 95.56 320 *e*P **P** **22 26 36.9 -0.8**
comp=Z,6.7nm,1.3s,baz=320
BRZS Berezniki 95.56 320 *e*P **P** **22 26 36.9 -0.8**
BRZS pmax pmax
comp=Z,7.0nm,1.3s
GAR Garm 95.67 308 P **P** **22 26 37.7 -0.8**
GAR IAmb IAmb 22 26 39.5
comp=Z,30nm,1.4s
319A Douglas 95.83 59 IAMs_20 IAMs_20 23 05 50.0
comp=Z,1µm,19.0s
AHID Auburn Hatcher 95.94 48 IAMs_20 IAMs_20 23 04 47.9
comp=Z,1µm,20.0s
BOZ Bozeman (W) 95.95 45 P **P** **22 26 40.5 +0.8**
BOZ pmax pmax
comp=Z,6.0nm,1.1s
BOZ MLR MLR
comp=Z,800nm,20.0s
BOZ Bozeman (W) 95.95 45 P **P** **22 26 40.7 +1.0**
baz=262
BOZ Bozeman (W) 95.95 45 P **P** **22 26 40.5 +0.8**
BOZ IAMs_20 IAMs_20 23 04 04.9
comp=Z,848nm,20.0s
W18A Petrified Fore 95.96 56 IAMs_20 IAMs_20 23 02 18.2
comp=Z,1µm,20.0s
KBL Kabul 96.08 304 P **P** **22 26 39.6 -1.0**
KBL pmax pmax
comp=Z,10.0nm,1.0s
KBL Kabul 96.08 304 P **P** **22 26 39.6 -1.0**
KK31 Karatay Array 96.08 313 P **P** **22 26 39.4 -0.8**
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KK31 Karatay Array 96.08 313 P **P** **22 26 39.4 -0.8**
IUG luzhnay 96.30 312 *e*P **P** **22 26 40.7 -0.6**
comp=Z,27nm,2.4s,baz=312
IUG luzhnay 96.30 312 *e*P **P** **22 26 40.7 -0.6**
IUG pmax pmax
comp=Z,27nm,2.4s
CHGR Chuyangaron 96.52 308 P **P** **22 26 41.6 -0.7**
CHGR IAmb IAmb 22 26 43.1
comp=Z,36nm,1.3s
YKA Yellowknife Ar 96.60 28 P **P** **22 26 41.8 -0.2**
comp=Z,6.1nm,0.9s,baz=260,slow=4.5,SNR=12
YKA LR LR 23 03 04.6
comp=Z,863nm,21.8s,baz=0.0,slow=31
NVL N'lazarevskaya 96.73 190 *e*P **P** **22 26 38.0 -4.5**
NVL *e*S **SKSac** **22 37 14.7 -2.9**
NVL pmax pmax
comp=Z,6.0nm,0.7s
PD31 Pinedale Array 97.07 48 P **P** **22 26 44.9 -0.1**
PDAR Pinedale Array 97.07 48 P Pdif 22 26 46.1 +1.1
comp=Z,2.7nm,1.0s,baz=264,slow=3.0,SNR=11
PDAR LR LR 23 06 15.0
comp=Z,651nm,19.2s,baz=302,slow=33
PDAR Pinedale Array 97.07 48 P **P** **22 26 44.6 -0.3**
PV02 Paradox Valley 97.15 53 IAMs_20 IAMs_20 23 11 08.4
comp=Z,878nm,20.0s
MVCO Mesa Verde 97.22 54 IAMs_20 IAMs_20 23 10 25.3
comp=Z,762nm,20.0s
PV15 Paradox Valley 97.37 52 IAMs_20 IAMs_20 23 10 13.1
comp=Z,938nm,20.0s
BRVK Borovoye 97.45 323 *ce*P **P** **22 26 44.9 -1.2**
BRVK pmax pmax
comp=Z,13nm,1.0s
BRVK Borovoye 97.45 323 P **P** **22 26 44.5 -1.5**
BRVK IAmb IAmb 22 26 46.2
comp=Z,18nm,1.1s
EGMT Eagleton 97.52 43 IAMs_20 IAMs_20 23 06 04.4
comp=Z,810nm,20.0s
SNAA Sanae 97.88 185 *i* P Pdif 22 26 47.9 0.0
SNAA pmax pmax
comp=Z,4.0nm,1.0s
Y22D IRIS PASSCAL I 98.14 57 IAMs_20 IAMs_20 23 09 34.9
comp=Z,1µm,18.0s
EPT El Paso 98.23 59 IAMs_20 IAMs_20 23 06 57.5
comp=Z,1µm,19.0s
ANMO Albuquerque 98.61 56 *i* P Pdif 22 26 52.1 0.0
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 98.61 56 IAMs_20 IAMs_20 23 07 41.4
comp=Z,929nm,18.0s
VNA3 Neumayer Olymp 98.82 183 P **P** **22 26 51.8 -0.2**
MNTX Cornudas Mount 99.18 59 IAMs_20 IAMs_20 23 07 46.5
comp=Z,1µm,20.0s
SDCO Great Sand Dun 99.65 53 IAMs_20 IAMs_20 23 04 46.5
comp=Z,779nm,20.0s
LAO LASA Array 99.80 44 P **Pdif** **22 26 59.3 +2.4**
baz=266
Q24A Divide 100.02 52 IAMs_20 IAMs_20 23 07 33.4
comp=Z,1µm,20.0s
TXAR Lajitas Array 100.42 62 P **Pdif** **22 27 06.3 +6.2**
comp=Z,0.2nm,0.7s,baz=238,slow=8.4,SNR=2.1
TXAR PP **PP** **22 31 03.6 -3.3**
comp=Z,0.2nm,0.6s,baz=208,slow=13,SNR=3.4
TXAR PKKPbc **PKKPdf** **22 43 24.3 +2.3**
comp=Z,0.4nm,0.6s,baz=106,slow=3.4,SNR=4.3
MSTX Muleshoe 101.56 57 IAMs_20 IAMs_20 23 09 58.5
comp=Z,912nm,18.0s
HRA Herat 101.65 303 Pdif **Pdif** **22 27 04.4 -1.2**
KSCO Kaye Shedlock' 101.99 52 IAMs_20 IAMs_20 23 09 05.4
comp=Z,969nm,21.0s
ABKAR Akbulak array 103.77 318 Pdif **Pdif** **22 27 12.6 -1.7**
JCT Junction City 103.85 61 IAMs_20 IAMs_20 23 07 44.4
comp=Z,756nm,20.0s
CBKS Cedar Bluff 104.23 52 IAMs_20 IAMs_20 23 20 24.8
comp=Z,946nm,21.0s
ARU Arti 104.31 326 *d i*P **Pdif** **22 27 15.4 -1.2**
ARU S **SKSac** **22 37 55.4 +0.5**
ARU pmax pmax
comp=Z,9.0nm,1.2s
ARU MLR MLR
comp=Z,626nm,19.0s
GEYT Alibeck 105.13 307 PP **PKiKP** **22 31 33.5 -1.8**
comp=Z,2.1nm,0.9s,baz=74,slow=11,SNR=4.1
435B Jarrell 105.78 61 IAMs_20 IAMs_20 23 08 03.4
comp=Z,922nm,22.0s
WHTX Lake Whitney, 105.93 60 IAMs_20 IAMs_20 23 12 10.2
comp=Z,983nm,20.0s
OK025 Westminster Rd 106.10 56 IAMs_20 IAMs_20 23 12 46.5
comp=Z,1µm,19.0s
OK031 S. Prethren Rd 106.51 55 IAMs_20 IAMs_20 23 09 39.3
comp=Z,1µm,20.0s
KSU1 Kansas State U 106.67 52 IAMs_20 IAMs_20 23 12 52.4
comp=Z,1µm,20.0s
T35A Sooner Cattle 106.77 54 IAMs_20 IAMs_20 23 12 46.2
comp=Z,1µm,20.0s
HKT Hockley 107.26 62 IAMs_20 IAMs_20 23 10 00.7
comp=Z,873nm,20.0s
TUL1 Leonard 107.36 55 IAMs_20 IAMs_20 23 09 11.8
comp=Z,1µm,20.0s
N35A Tabor 107.37 50 IAMs_20 IAMs_20 23 15 43.7
comp=Z,965nm,19.0s
P38A Dawn 109.04 51 IAMs_20 IAMs_20 23 18 06.0
comp=Z,816nm,18.0s
SPMN Marine on St. 109.17 46 IAMs_20 IAMs_20 23 12 39.8
comp=Z,962nm,21.0s
MIAR Mount Ida 109.19 57 IAMs_20 IAMs_20 23 14 52.4
comp=Z,1µm,19.0s
N38A Joes South For 109.20 50 IAMs_20 IAMs_20 23 10 58.1
comp=Z,1µm,21.0s
H03N2 Juan Fernandez 109.59 131 T T 00 30 55.5
baz=240
H03N3 Juan Fernandez 109.59 131 T T 00 31 02.2
baz=240,slow=74,SNR=4.3
H03N1 Juan Fernandez 109.61 131 T T 00 30 50.8
baz=240,slow=74,SNR=4.8
Z41A Richland Creek 109.86 58 IAMs_20 IAMs_20 23 11 46.3
comp=Z,843nm,20.0s
FCAR Ozark Folk Cen 110.33 55 IAMs_20 IAMs_20 23 08 22.6
comp=Z,892nm,20.0s
HBAR Harrisburg 111.54 56 IAMs_20 IAMs_20 23 13 38.6
comp=Z,921nm,20.0s
LC01 Cunco 111.80 139 IAMs_20 IAMs_20 23 07 53.7
comp=Z,568nm,19.0s
APA Apatity 112.37 340 ⇑ *i*PKIKP **PKiKP** **22 31 54.0 +6.1**
APA pmax pmax
comp=Z,6.0nm,1.2s
LNXT Lenox 112.45 55 IAMs_20 IAMs_20 23 14 29.7
comp=Z,990nm,21.0s
MTO3 Montecristo 112.46 78 IAMs_20 IAMs_20 23 14 32.5
comp=Z,522nm,19.0s
HICK Hickman 112.63 55 IAMs_20 IAMs_20 23 15 12.3
comp=Z,913nm,20.0s
MAK Makhachkala 112.89 312 *e*P Pdif **22 27 49.1 -6.0**
MAK *i* 22 31 47.5
MAK *e* 22 32 34.8
MAK *e* 22 38 26.1
MAK *e*PS **PS** **22 42 14.9 +1.5**
MAK *e*SS SS 22 48 13.2 -6.6
MAK *e*SSS SSS 22 52 26.3
MAK pmax pmax
comp=Z,425nm,2.3s
KLMR Klimovskoe 112.99 333 *e*P **Pdif** **22 27 52.4 -2.7**
KLMR *e* 22 32 34.4
KLMR pmax pmax
comp=Z,15nm,1.4s
KLMR Klimovskoe 112.99 333 *e*Pdif **Pdif** **22 27 52.4 -2.7**
KLMR AMP 22 27 55.3
comp=Z,15nm,1.4s
KLMR *e*PP **PP** **22 32 34.5 -3.6**
KLMR LQ LQ 23 12 48.3
KLMR LQ LQ 23 12 48.3
KLMR LR LR 23 15 46.8
ARCES ARCESS Array B 113.60 344 PKiKP **PKiKP** **22 31 49.8 -0.4**
comp=Z,2.1nm,0.7s,baz=93,slow=2.4,SNR=6.1
T47A Sharon Grove 114.29 54 IAMs_20 IAMs_20 23 14 11.1
comp=Z,833nm,20.0s
MT05 Renca 115.58 134 IAMs_20 IAMs_20 23 17 13.0
comp=Z,875nm,18.0s
VA03 San Esteban 116.04 134 IAMs_20 IAMs_20 23 14 12.5
comp=Z,892nm,22.0s
KIV Kislovodsk 116.17 314 *i* PKIKP **PKiKP** **22 31 57.0 +1.0**
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,1µm,22.0s
ATD Arta Tunnel 118.10 278 IAMs_20 IAMs_20 23 25 26.1
comp=Z,438nm,19.0s
FINES FINESS Array B 118.39 337 PKP **PKPdf** **22 31 58.4 -1.2**
comp=Z,5.7nm,1.1s,baz=108,slow=4.2,SNR=5.2
ANN Anapa 119.61 316 *i* PKIKP **PKPdf** **22 32 02.4 0.0**
ANN pmax pmax
comp=Z,140nm,1.8s
PECO Prince Edward 120.48 45 IAMs_20 IAMs_20 23 25 05.1
comp=Z,577nm,20.0s
KMBO Kilima Mbogo 121.76 263 PKP **PKiKP** **22 32 09.1 +1.1**
comp=Z,1.8nm,1.0s,baz=100,slow=6.1,SNR=2.8
BOSA Boshof 121.80 228 PKP **PKiKP** **22 32 09.3 +1.7**
comp=Z,1.6nm,0.7s,baz=64,slow=2.2,SNR=1.3
LATQ La Tuque 122.10 40 IAMs_20 IAMs_20 23 18 25.3
comp=Z,610nm,20.0s
TA01 Diego Aracena 122.35 122 IAMs_20 IAMs_20 23 10 57.9
comp=Z,741nm,21.0s
AKASG Malin Array Be 122.55 325 PKhKP PKPpre 22 32 03.0
comp=Z,2.1nm,0.5s,baz=61,slow=2.1,SNR=4.0
AKASG PKP **PKPdf** **22 32 07.3 -0.6**
comp=Z,2.0nm,0.5s,baz=49,slow=2.4,SNR=6.1
AKASG PP **PP** **22 33 37.2 -7.5**
comp=Z,0.5nm,0.4s,baz=51,slow=5.3,SNR=5.4
BRTR Keskin Array B 123.77 311 PKP **PKPdf** **22 32 10.7 -0.1**
comp=Z,3.5nm,0.9s,baz=119,slow=4.4,SNR=8.2
NB2 NORSAR Subarra 123.85 342 PKPdf **PKPdf** **22 32 09.5 -0.7**
comp=Z,14nm,1.2s,baz=34,slow=1.8
NB2 NORSAR Subarra 123.85 342 PKPdf **PKPdf** **22 32 09.5 -0.7**
baz=34,slow=1.8
NOA NORSAR Array B 123.85 342 PKP **PKPdf** **22 32 09.1 -1.1**
comp=Z,3.1nm,0.8s,baz=40,slow=1.8,SNR=9.5
SORM Soroca 124.22 323 ⇑P **PKiKP** **22 32 11.4 -0.1**
SORM Soroca 124.22 323 ⇑PKIKP **PKiKP** **22 32 11.4 -0.1**
MILM Milestii Mici 124.48 321 ⇑P **PKPdf** **22 32 11.5 -0.2**
CFR Carcaliu 125.64 319 ⇑P **PKiKP** **22 32 14.8 +0.4**
CFR Carcaliu 125.64 319 ⇑PKIKP **PKiKP** **22 32 14.8 +0.4**
MFTR Murfatlar 125.87 318 ⇑P **PKiKP** **22 32 15.1 +0.2**
MANR Mangalia 125.91 318 ⇑P **PKPdf** **22 32 13.6 -1.0**
LPAZ La Paz 125.97 118 PKP **PKiKP** **22 32 16.9 +0.2**
comp=Z,2.7nm,1.1s,baz=257,slow=3.6,SNR=4.4
LPAZ La Paz 125.97 118 *e*P **PKPdf** **22 32 15.6 -0.7**
HARR Harsova 125.98 319 ⇑P **PKiKP** **22 32 15.3 +0.2**
HARR Harsova 125.98 319 ⇑PKIKP **PKiKP** **22 32 15.3 +0.2**
BIZ Bicaz 126.12 322 ⇑P **PKiKP** **22 32 16.5 +1.1**
BURAR Bucovina Array 126.33 323 ⇑P **PKiKP** **22 32 16.3 +0.4**
BURAR Bucovina Array 126.33 323 ⇑PKIKP **PKiKP** **22 32 16.3 +0.4**
BURAR Bucovina Array 126.33 323 PKPdf **PKiKP** **22 32 16.2 +0.4**
BISRR Bisoca 126.39 320 ⇑P **PKiKP** **22 32 16.9 +0.9**
BEL Belsk 126.45 330 *e*PKP **PKiKP** **22 32 16.1 +0.3**
MLR Muntele Rosu 126.89 321 ⇑P **PKiKP** **22 32 17.4 +0.3**
MLR Muntele Rosu 126.89 321 ⇑PKIKP **PKiKP** **22 32 17.4 +0.3**
KOLS Kolonicke sedl 127.33 326 *e*PKIKP **PKiKP** **22 32 18.0 +0.3**
KOLS Kolonicke sedl 127.33 326 *e*PKP **PKiKP** **22 32 18.0 +0.3**
VOIR 127.48 321 ⇑P **PKPdf** **22 32 17.6 -0.1**
VOIR 127.48 321 ⇑PKIKP **PKPdf** **22 32 17.6 -0.1**
UZH Uzhgorod 127.48 326 *e*PKIKP **PKiKP** **22 32 19.4 +1.4**
ARR Arges 127.77 321 ⇑P **PKiKP** **22 32 19.9 +1.2**
OJC Ojcow 127.92 328 *e*PKP **PKiKP** **22 32 19.1 +0.3**
COPA Copaceanca 127.97 319 ⇑P **PKiKP** **22 32 20.3 +1.2**
NIE Niedzica 128.12 327 *e*PKP **PKiKP** **22 32 20.3 +1.0**
DEV Deva 128.57 322 ⇑P **PKiKP** **22 32 20.7 +0.5**
DEV Deva 128.57 322 ⇑PKIKP **PKiKP** **22 32 20.7 +0.5**
LANS Liptovska Anna 128.72 327 *e*PKIKP **PKiKP** **22 32 21.8 +1.3**
LANS Liptovska Anna 128.72 327 *e*PKP **PKiKP** **22 32 21.8 +1.3**
GZR Gura Zlata 128.90 322 ⇑P **PKiKP** **22 32 21.6 +0.6**
GZR Gura Zlata 128.90 322 ⇑PKIKP **PKiKP** **22 32 21.6 +0.6**
OKC Ostrava-Krasne 128.99 329 AMS AMS 23 27 40.0
comp=Z,700nm,24.0s
SIRR Siria 129.11 323 ⇑P **PKiKP** **22 32 21.9 +0.6**
MORC Moravsky Berou 129.34 329 ⇑P **PKiKP** **22 32 22.7 +1.0**
MORC Moravsky Berou 129.34 329 *e*PKP **PKPdf** **22 32 21.3 +0.3**
MORC Moravsky Berou 129.34 329 ⇑PKIKP **PKiKP** **22 32 22.7 +1.0**
MORC Moravsky Berou 129.34 329 IAMs_20 IAMs_20 23 34 47.3
comp=Z,852nm,21.0s
VYHS Vyhne 129.45 327 *e*PKIKP **PKiKP** **22 32 21.8 -0.2**
VYHS Vyhne 129.45 327 *e*PKP **PKiKP** **22 32 21.8 -0.2**
BZS Buzias 129.48 323 ⇑P **PKiKP** **22 32 22.8 +0.7**
BZS Buzias 129.48 323 ⇑PKIKP **PKiKP** **22 32 22.8 +0.7**
OSTC Ostas 129.50 331 *e*PKPDF **PKiKP** **22 32 21.1 -0.2**
OSTC AMS AMS 23 26 40.0
comp=Z,1µm,29.2s
KRLC Kraliky 129.53 330 AMS AMS 23 28 30.0
comp=Z,800nm,23.0s
CHVC Chvalec 129.55 331 *e*PKPDF **PKiKP** **22 32 22.9 +0.8**
CHVC AMS AMS 23 27 00.0
comp=Z,1µm,29.7s
DPC Dobruska-Polom 129.58 330 *e*PKPDF **PKiKP** **22 32 23.0 +0.8**
DPC AMS AMS 23 26 50.0
comp=Z,1µm,28.4s
JAVC Velka Javorina 129.84 328 *e*PKP **PKiKP** **22 32 24.0 +1.2**
MDVR Moldovita 129.86 322 ⇑P **PKiKP** **22 32 22.8 -0.2**
VRAC Vranov 130.11 329 *e*PKP **PKiKP** **22 32 23.2 -0.1**
SDV Santo Domingo 130.29 87 PKPdf **PKPdf** **22 32 23.9 -0.2**
SDV Santo Domingo 130.29 87 *e*P **PKPdf** **22 32 23.6 -0.4**
PVCC Panska Ves 130.30 331 *e*PKIKP **PKiKP** **22 32 24.6 +1.0**
PVCC MLR MLR
comp=Z,1µm,20.3s
PVCC Panska Ves 130.30 331 *e*PKPDF **PKiKP** **22 32 24.6 +1.0**
PVCC AMS AMS 23 30 00.0
comp=Z,1µm,20.3s
MODS Modra-Piesok 130.35 328 *e*PKIKP **PKPdf** **22 32 22.5 -0.4**
MODS Modra-Piesok 130.35 328 *e*PKP **PKPdf** **22 32 22.5 -0.4**
BRG Berggiesshubel 130.36 332 *e*PKP **PKiKP** **22 32 23.7 0.0**
comp=Z,19nm,1.5s
comp=N,696nm,22.5s
comp=E,543nm,21.8s
comp=Z,803nm,19.6s
BRG Berggiesshubel 130.36 332 *e*PKIKP **PKiKP** **22 32 23.7 0.0**
BRG pmax pmax
comp=Z,19nm,1.5s
BRG MLR MLR
comp=N,696nm,22.5s
BRG MLR MLR
comp=E,543nm,21.8s
BRG MLR MLR
comp=Z,803nm,19.6s
KRUC Moravsky 130.37 329 *e*PKP **PKiKP** **22 32 23.4 -0.4**
CLL Collm 130.48 333 *i* PKPdf **PKiKP** **22 32 23.6 -0.3**
comp=Z,16nm,1.6s
CLL *i* pPKPdf **pPKPdf** **22 32 30.9 -0.5**
CLL *e* 22 32 40.0
CLL *i* PP **PP** **22 34 36.7 -0.2**
comp=Z,22nm,1.6s
CLL *e*pPP 22 34 47.0
CLL LmH 23 30 00.0
comp=Z,700nm,22.0s
CLL LmV 23 36 00.0
comp=Z,700nm,20.5s
CLL Collm 130.48 333 *i* PKIKP **PKiKP** **22 32 23.6 -0.3**
CLL *i* 22 32 30.9
CLL pmax pmax
comp=Z,16nm,1.6s
CLL MLR MLR
comp=Z,700nm,20.5s
PRA Prague 130.68 331 AMS AMS 23 30 40.0
comp=Z,600nm,20.9s
TREC Trest 130.68 330 AMS AMS 23 27 10.0
comp=Z,1µm,24.3s
PRU Pruhonice 130.68 331 *e*PKIKP **PKiKP** **22 32 25.0 +0.6**
PRU MLR MLR
comp=Z,1µm,22.0s
PRU Pruhonice 130.68 331 *e*PKPDF **PKiKP** **22 32 25.0 +0.6**
PRU AMS AMS 23 30 40.0
comp=Z,1µm,22.0s
PBCC Pribram 131.14 331 *e*PKPDF **PKiKP** **22 32 25.4 +0.1**
CNLB Canela 131.17 144 *e*P **PKPdf** **22 32 25.1 -0.1**
CONA Conrad Observa 131.37 328 *e*P **PKiKP** **22 32 26.1 +0.1**
comp=Z,14nm,1.8s
NKC Novy Kostel 131.49 332 AMS AMS 23 30 20.0
comp=Z,1µm,28.9s
KHC Kasperske Hory 131.72 331 *e*PKIKP **PKPdf** **22 32 25.6 0.0**
KHC *e* 22 34 44.5
KHC MLR MLR
comp=Z,1µm,21.5s
KHC Kasperske Hory 131.72 331 *e*PKPDF **PKPdf** **22 32 25.6 0.0**
KHC *ex* x 22 34 44.5
KHC *ex* x 22 35 51.5

KHC				AMS	AMS	23 32 20.0		
	comp=Z,1μm,21.5s							
GEC2	**GERESS Array S**	**131.85**	**330**	PKPdf	**PKPdf**	**22 32 25.9**	**+0.1**	
GERES	**GERESS Array B**	**131.85**	**330**	PKP	**PKPdf**	**22 32 26.1**	**+0.2**	
	comp=Z,1.4nm,0.8s,baz=48,slow=2.0,SNR=11							
GERES				PP	**PP**	**22 34 46.9**	**+0.9**	
	comp=Z,0.6nm,0.8s,baz=358,slow=4.7,SNR=4.0							
GERES				SKPbc	**SKPab**	**22 35 51.9**	**+0.9**	
	comp=Z,1.7nm,1.0s,baz=90,slow=2.7,SNR=5.7							
PERS	**Pernice**	**132.58**	**327**	*e*PKPdf	**PKiKP**	**22 32 28.6**	**+0.2**	
PERS				*e*SKPbc	**SKPab**	**22 35 54.1**	**0.0**	
PERS				*e*		22 36 06.5		
SOKA	**Soboth**	**132.59**	**327**	*e*P	**PKiKP**	**22 32 28.0**	**-0.5**	
	comp=Z,12nm,2.2s							
GCIS	**Gornji Cirnik**	**132.78**	**326**	*e*PKPdf	**PKiKP**	**22 32 29.5**	**+0.7**	
GCIS				*e*SKPbc	**SKPab**	**22 35 55.3**	**+0.4**	
GCIS				*e*		22 36 08.3		
KBA	**Koelnbreinsper**	**133.22**	**329**	*e*P	**PKPdf**	**22 32 28.8**	**+0.2**	
	comp=Z,2.2nm,0.7s							
SAML	**Samuel**	**133.36**	**112**	*e*P	**PKPdf**	**22 32 29.6**	**0.0**	
ABTA	**Abfaltersbach**	**133.86**	**329**	*e*P	**PKPdf**	**22 32 30.1**	**+0.4**	
	comp=Z,4.8nm,0.9s							
WATA	**Walderalm**	**133.93**	**330**	*e*P	**PKPdf**	**22 32 29.9**	**0.0**	
	comp=Z,5.4nm,1.1s							
WTTA	**Wattenberg**	**133.95**	**330**	*e*P	**PKPdf**	**22 32 29.5**	**-0.5**	
	comp=Z,6.9nm,1.2s							
MOTA	**Moosalm**	**134.15**	**330**	*e*P	**PKiKP**	**22 32 31.1**	**-0.6**	
	comp=Z,4.3nm,0.9s							
SQTA	**Sankt Quirin**	**134.19**	**330**	*e*P	**PKiKP**	**22 32 31.2**	**-0.5**	
	comp=Z,6.4nm,1.1s							
FETA	**Feichten**	**134.56**	**330**	*e*P	**PKiKP**	**22 32 32.2**	**-0.3**	
	comp=Z,3.8nm,0.9s							
DAVA	**Damuels**	**134.78**	**331**	*e*P	**PKiKP**	**22 32 32.6**	**-0.3**	
	comp=Z,10nm,1.2s							
SGRT	**San Giovanni R**	**135.16**	**321**	IAMs_20	IAMs_20	23 41 55.2		
	comp=Z,749nm,22.0s							
TUE	**Stuetta**	**135.62**	**331**	PKPdf	**PKPdf**	**22 32 32.7**	**-0.5**	
TIP	**Timpagrande**	**135.92**	**318**	IAMs_20	IAMs_20	23 35 49.7		
	comp=Z,465nm,22.0s							
PAOL	**Paolisi**	**136.30**	**321**	IAMs_20	IAMs_20	23 40 15.3		
	comp=Z,720nm,21.0s							
OSSC	**Osservatorio P**	**136.68**	**326**	IAMs_20	IAMs_20	23 39 45.9		
	comp=Z,534nm,19.0s							
CASP	**Castiglione de**	**137.37**	**326**	IAMs_20	IAMs_20	23 36 24.3		
	comp=Z,426nm,18.0s							
SPB	**Sao Paulo**	**137.46**	**142**	*e*P	**PKPdf**	**22 32 37.2**	**+0.2**	
MACA	**Manacapuru-AM**	**137.69**	**106**	*e*P	**PKPdf**	**22 32 37.6**	**-0.1**	
BNI	**Bardonecchia**	**137.93**	**331**	PKIKP	**PKPdf**	**22 32 38.4**	**+1.0**	
BNI	**Bardonecchia**	**137.93**	**331**	PKPdf	**PKPdf**	**22 32 38.4**	**+1.0**	
SKI	**Saint Kitts**	**138.08**	**75**	IAMs_20	IAMs_20	23 18 12.2		
	comp=Z,492nm,22.0s							
VAO	**Valinhos**	**138.19**	**142**	*e*P	**PKPdf**	**22 32 38.0**	**-0.4**	
CLDB	**Colider**	**139.09**	**119**	*e*P	**PKPdf**	**22 32 40.1**	**-0.2**	
SVB	**Belmont**	**139.69**	**81**	IAMs_20	IAMs_20	23 44 09.3		
	comp=Z,403nm,20.0s							
ARAG	**Araguaiana, MT**	**139.74**	**129**	*e*P	**PKPdf**	**22 32 41.8**	**+0.4**	
MCLT	**Moule a Chique**	**139.99**	**80**	IAMs_20	IAMs_20	23 16 40.5		
	comp=Z,521nm,21.0s							
BDFB	**Brasilia**	**142.63**	**132**	PKP	**PKiKP**	**22 32 49.6**	**-0.2**	
	comp=Z,2.9nm,0.6s,baz=271,slow=1.9,SNR=5.4							
KEST	**Kesra**	**142.73**	**318**	PKPdf	**PKPdf**	**22 32 43.0**	**-3.3**	
	comp=Z,4.1nm,0.7s,baz=58,slow=2.8,SNR=11							
PEXB	**Peixe**	**144.62**	**127**	*e*P	**PKPdf**	**22 32 50.2**	**+0.1**	
PBRG	**Braganca**	**145.99**	**342**	*e*PKP	**PKPab**	**22 32 53.6**	**+0.6**	
PGAV	**Gavieira, Arco**	**146.28**	**344**	*e*PKP	**PKPbc**	**22 32 53.8**	**+0.4**	
PCAB	**Cabril**	**146.45**	**343**	*e*PKP	**PKPbc**	**22 32 54.3**	**+0.4**	
PRPB	**Parauapebas**	**146.52**	**117**	*e*P	**PKPdf**	**22 32 52.8**	**-0.6**	
MVO	**Moncorvo**	**146.66**	**342**	*e*PKP	**PKPbc**	**22 32 54.6**	**+0.1**	
POLO	**Lamas de Olo**	**146.70**	**343**	*e*PKP	**PKPbc**	**22 32 55.2**	**+0.5**	
MCPB	**Macapa, AP**	**146.75**	**106**	*e*P	**PKPdf**	**22 32 53.4**	**-0.4**	
PVRL	**Vila Real**	**146.76**	**343**	*e*PKP	**PKPab**	**22 32 55.5**	**-0.5**	
ESDC	**Sonseca Array**	**146.91**	**337**	PKPbc	**PKPbc**	**22 32 54.4**	**-0.9**	
	comp=Z,5.3nm,1.0s,baz=14,slow=3.6,SNR=17							
ESDC				PP	**PP**	**22 36 16.1**	**-2.5**	
	comp=Z,3.0nm,1.1s,baz=24,slow=7.8,SNR=5.5							
ESDC	**Sonseca Array**	**146.91**	**337**		**PKPdf**	**22 32 53.8**	**+0.3**	
SDBA	**SAO DESIDERIO**	**147.02**	**131**	*e*P	**PKPdf**	**22 32 54.5**	**+0.2**	
PVIS	**Viseu**	**147.33**	**342**	*e*PKP	**PKPbc**	**22 32 57.0**	**+0.6**	
MTE	**Manteigas**	**147.52**	**342**	*e*PKP	**PKPab**	**22 32 58.0**	**-1.0**	
MTE	**Manteigas**	**147.52**	**342**		**PKPbc**	**22 32 56.7**	**-0.2**	
PCBR	**Castelo Branco**	**148.01**	**341**	*e*PKP	**PKPbc**	**22 32 58.6**	**+0.4**	
PCAS	**Casmilo, Conde**	**148.12**	**343**	*e*PKP	**PKPbc**	**22 32 59.3**	**+0.8**	
PMRV	**Marv??o**	**148.35**	**341**	*e*PKP	**PKPbc**	**22 32 59.5**	**+0.3**	
PSBE	**So Bento**	**148.71**	**343**	*e*PKP	**PKPbc**	**22 33 00.7**	**+0.6**	
PMTG	**Montargil**	**148.94**	**342**	*e*PKP	**PKPbc**	**22 33 01.1**	**+0.4**	
PBEJ	**Beja**	**149.78**	**340**	*e*PKP	**PKPbc**	**22 33 03.0**	**+0.2**	
PNCL	**Nicolau / Gran**	**149.92**	**341**	*e*PKP	**PKiKP**	**22 33 04.1**	**+0.1**	
PCVE	**Castro Verde**	**150.19**	**340**	*e*PKP	**PKiKP**	**22 33 04.6**	**0.0**	
PVAQ	**Vaqueiros**	**150.29**	**340**	*e*PKP	**PKiKP**	**22 33 05.3**	**+0.4**	
PBDV	**Barranco-do-Ve**	**150.51**	**340**	*e*PKP	**PKPbc**	**22 33 04.7**	**+0.1**	
TORD	**Torodi Ar. Bea**	**158.26**	**281**	PKP	**PKPdf**	**22 33 11.0**	**+0.4**	
	comp=Z,2.7nm,1.0s,baz=2.0,slow=3.5,SNR=8.7							
TORD				PKPab	**PKPab**	**22 33 44.7**	**0.0**	
	comp=Z,5.7nm,1.0s,baz=79,slow=3.4,SNR=8.2							
TORD				PP	**PP**	**22 37 20.6**	**-4.4**	
	comp=Z,1.0nm,0.9s,baz=96,slow=7.4,SNR=1.6							
TORD	**Torodi Ar. Bea**	**158.26**	**281**	PKPdf	**PKPdf**	**22 33 10.2**	**-0.4**	
KOWA	**Kowa**	**163.48**	**288**	PKPdf	**PKPdf**	**22 33 16.1**	**-0.1**	
KOWA				PKPab	**PKPab**	**22 34 07.8**	**+0.3**	
DBIC	**Dimbokro**	**164.47**	**260**	PKPab	**PKPab**	**22 34 13.0**	**+1.1**	
	comp=Z,5.2nm,0.9s,baz=139,slow=14,SNR=3.1							

IDC 01 22:33:37.4±8.5, 7°.73N×94°.63E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.2/46, mbtmp3.3/4, Error ellipse: s-maj=438.9km s-min=26.8km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.83**	**236**	T	T	23 06 00.3	
	baz=55,slow=74,SNR=51						
H08S2	**Diego Garcia H**	**26.84**	**236**	T	T	23 06 00.4	
	baz=55,slow=74,SNR=5.1						
H08S1	**Diego Carcia H**	**26.85**	**236**	T	T	23 05 58.4	
	baz=55						
MKAR	**Makanchi Array**	**40.34**	**347**	P	P	22 41 16.6	-0.2
	0.8nm,0.7s,baz=159,slow=7.3,SNR=4.1						
ZALV	**Zalesovo Beam**	**46.77**	**352**	P	P	22 42 08.3	-0.1
	0.3nm,0.3s,baz=171,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**47.78**	**126**	P	P	22 42 16.4	-0.4
	0.2nm,0.8s,baz=306,slow=8.5,SNR=1.9						
ASAR	**Alice Springs**	**49.45**	**130**	P	P	22 42 29.9	+0.2
	0.2nm,0.8s,baz=302,slow=8.7,SNR=2.3						

*IDC **01** 22:40:09.8±5.2, 10°.70S×121°.54E, h76km±58km, mb3.3/1, mb1 3.5/5, mb1mx3.2/37, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=50.1km s-min=24.9km az=108.0*
*DJA **01** 22:40:11.2±0.4, 10°.S±4°×12°.2E±°, h69km±10km, M3.6/12, mb3.6/1, MLv3.6/12*

ISC 01 22:40:08.3±0.9, 10°.62S±0°.06×121°.56E±0°.04, h78km±14km, n15, σ2°.97/25, Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**1.05**	**292**	P	**Pn**	**22 40 30.4**	**+2.6**
BASI				S	**Sn**	**22 40 44.7**	**+2.3**
WSI	**Waingapu**	**1.56**	**307**	P	**Pn**	**22 40 30.4**	**-4.0**
EDFI	**Ende, Flores**	**1.86**	**4**	P	**Pn**	**22 40 38.5**	**0.0**
EDFI				S	**Sn**	**22 40 58.7**	**-2.6**
MMRI	**Maumere**	**2.08**	**19**	P	**Pn**	**22 40 41.0**	**-0.3**
MMRI				S	**Sn**	**22 41 04.3**	**-2.1**
BATI	**Baumata**	**2.11**	**79**	P	**Pn**	**22 40 44.1**	**+2.5**
	18nm,0.3s,baz=265,slow=11,SNR=16						
BATI				S	**Sn**	**22 41 09.9**	**+2.8**
	19nm,0.3s,baz=16,slow=22,SNR=26						
BATI	**Baumata**	**2.11**	**79**	P	**Pn**	**22 40 44.1**	**+2.5**
BATI				S	**Sn**	**22 41 09.9**	**+2.8**
WBSI	**Waikabubak, Su**	**2.35**	**294**	P	**Pn**	**22 40 46.6**	**+1.7**
WBSI				S	**Sn**	**22 41 12.4**	**-0.5**
SOEI	**Soe**	**2.80**	**72**	P	**Pn**	**22 40 52.8**	**+1.8**
SOEI				S	**Sn**	**22 41 24.4**	**+0.5**
PLAI	**Plampang**	**4.13**	**295**	P	**Pn**	**22 41 11.2**	**+2.1**
PLAI				S	**Sn**	**22 41 55.9**	**-0.4**
BSSI	**Bau Bau, Buton**	**4.57**	**346**	P	**Pn**	**22 41 16.1**	**+1.0**
TWSI	**Taliwang, Sumb**	**4.98**	**292**	P	**Pn**	**22 41 23.7**	**+3.1**
FITZ	**Fitzroy Crossi**	**8.42**	**152**	P	**Pn**	**22 42 09.1**	**+1.5**
	0.3nm,0.3s,baz=322,slow=12,SNR=12						
FITZ				S	**Sn**	**22 43 38.8**	**-2.4**
	1.3nm,0.3s,baz=198,slow=19,SNR=12						
WRA	**Warramunga Arr**	**15.41**	**128**	P	**Pn**	**22 43 40.5**	**-0.9**
	0.2nm,0.3s,baz=301,slow=14,SNR=17						
WRA				S	Sn	22 46 20.2	-11
	0.1nm,0.3s,baz=303,slow=20,SNR=3.9						
ASAR	**Alice Springs**	**17.52**	**139**	P	**Pn**	**22 44 08.8**	**+1.2**
	0.2nm,0.3s,baz=317,slow=13,SNR=13						
ASAR				S	**Sn**	**22 47 13.2**	**-9.1**
	0.2nm,0.3s,baz=320,slow=22,SNR=3.8						
MKAR	**Makanchi Array**	**67.05**	**332**	P	**P**	**22 50 55.2**	**+2.0**
	0.3nm,0.6s,baz=145,slow=5.3,SNR=1.7						

DJA 01 22:40:30.7±0.8, 9°.S±4°×11°.1E±°, h12km±5km, M3.5/13, MLv3.5/13, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**0.86**	**352**	P	**Pn**	22 40 48.2	-0.5
UGM				S	Sb	22 40 59.7	+0.6
UGM	**Wanagama**	**0.86**	**352**	P	Sb	22 40 59.8	+0.7
WOJI	**Wonogiri, Jawa**	**0.97**	**17**	P	Pg	22 40 49.3	-0.1
WOJI				S	Sg	22 41 01.5	-0.5
WOJI	**Wonogiri, Jawa**	**0.97**	**17**	P	Pg	22 40 49.1	-0.3
YOGI	**Yogyakarta**	**1.01**	**340**	P	Pn	22 40 50.6	-0.1
YOGI				S	Sg	22 41 02.9	-0.4
YOGI	**Yogyakarta**	**1.01**	**340**	P	Sg	22 41 02.7	-0.6
PWJI	**Pagerwojo**	**1.37**	**57**	P	Pn	22 40 55.5	-0.2
PWJI				S	Sn	22 41 11.5	-2.3
PWJI	**Pagerwojo**	**1.37**	**57**	P	Pn	22 40 55.7	0.0
SMRI	**Semarang**	**1.72**	**353**	P	Pn	22 41 01.4	+0.9
SMRI				S	Sb	22 41 24.7	+0.8
KPJI	**Karang Pucung**	**2.21**	**310**	P	Pn	22 41 08.1	+0.8
KPJI	**Karang Pucung**	**2.21**	**310**	P	Pb	22 41 11.5	+0.8
CMJI	**Cimerak**	**2.38**	**294**	P	Pn	22 41 08.3	-1.3
GRJI	**Gresik**	**2.59**	**45**	P	Pn	22 41 13.4	+0.9
GMJI	**Gumukmas**	**2.82**	**80**	P	Pn	22 41 16.7	+1.1
GMJI	**Gumukmas**	**2.82**	**80**	P	Pn	22 41 16.2	+0.6
CISI	**Cisompet, Garu**	**3.05**	**293**	P	Pn	22 41 17.8	-1.0
CISI	**Cisompet, Garu**	**3.05**	**293**	P	Pn	22 41 19.8	+1.0
JAGI	**Jajag, Banyuwa**	**3.49**	**85**	P	Pn	22 41 25.2	+0.4
JAGI				S	Sn	22 42 01.3	-4.7
JAGI	**Jajag, Banyuwa**	**3.49**	**85**	P	Pn	22 41 24.1	-0.7
CNJI	**Cibinong**	**3.77**	**292**	P	Pn	22 41 27.1	-1.6

*IDC **01** 22:42:08.3±2.6, 58°.91N×147°.96W, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.5/41, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=33.9km s-min=29.4km az=136.0*
*NEIC **01** 22:42:11.6±1.0, 58°.96N±0°.06×147°.75W±0°.04, h27km±7km, Error ellipse: s-maj=8.4km s-min=3.1km az=170.0*
*AEIC **01** 22:42:13±1.0, 59°.00N±0°.05×147°.76W±0°.06, h33km±7km, ML3.6, Error ellipse: s-maj=7.6km s-min=4.5km az=176.0*

ISC 01 22:42:11.4±1.6, 58°.97N±0°.06×147°.75W±0°.05, h28km±15km, n94, σ0°.73/101, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Q23K	**Middleton Isla**	**0.86**	**57**		**Pb**	**22 42 27.3**	**-0.4**
Q23K					**Sb**	**22 42 38.9**	**+0.1**
SEW	**Seward**	**1.43**	**324**		**Pn**	**22 42 35.3**	**-0.2**
SEW					**Sn**	**22 42 52.1**	**-1.3**
HIN	**Hinchinbrook I**	**1.57**	**23**		**Pn**	**22 42 37.6**	**+0.2**
BRSE	**Bradley Lake S**	**1.72**	**298**		**Pn**	**22 42 39.5**	**+0.1**
BRSE					**Sn**	**22 42 59.8**	**-0.6**
O22K	**Cooper Landing**	**1.82**	**328**		**Pn**	**22 42 41.5**	**+0.7**
O22K					**Sn**	**22 43 02.0**	**-0.9**
CNPM	**China Poot**	**1.88**	**289**		**Pn**	**22 42 41.8**	**+0.2**
CNPM					**Sn**	**22 43 03.9**	**-0.5**
EYAK	**Cordova Ski Ar**	**1.88**	**32**	Pn	**Pn**	**22 42 41.9**	**+0.2**
FID	**Port Fidalgo**	**1.90**	**19**	Pn	**Pn**	**22 42 41.3**	**-0.7**
PWL	**Port Wells**	**1.92**	**351**		**Pn**	**22 42 42.2**	**-0.1**
PWL					**Sn**	**22 43 04.7**	**-0.7**
GLI	**Glacier Island**	**1.95**	**9**		**Pn**	**22 42 42.6**	**0.0**
KAIM	**Kayak Island**	**1.96**	**59**	Pn	**Pn**	**22 42 43.0**	**+0.4**
SLKM	**Skilak Lake**	**1.99**	**322**		**Pn**	**22 42 43.2**	**0.0**
HOM	**Homer**	**2.11**	**291**		**Pn**	**22 42 45.6**	**+0.8**
RAGM	**Ragged Mountai**	**2.11**	**46**	Pn	**Pn**	**22 42 44.9**	**0.0**
HMT	**Hamilton**	**2.24**	**51**		**Pn**	**22 42 46.8**	**+0.1**
SUCK	**Suckling Hills**	**2.31**	**60**		**Pn**	**22 42 48.0**	**+0.5**
KNK	**Knik Glacier**	**2.48**	**352**		**Pn**	**22 42 50.4**	**+0.5**
BMRM	**Bremner River**	**2.56**	**37**		**Pn**	**22 42 51.4**	**+0.4**
GRIN	**Grindle Hills**	**2.61**	**58**		**Pn**	**22 42 52.2**	**+0.5**
KLU	**Klutina**	**2.69**	**19**		**Pn**	**22 42 53.5**	**+0.5**
PMR	**Palmer**	**2.72**	**346**		**Pn**	**22 42 53.8**	**+0.6**
KDAK	**Kodiak Island**	**2.81**	**247**		**Pn**	**22 42 54.1**	**-0.3**
SML	**Sawmill**	**2.87**	**354**		**Pn**	**22 42 56.3**	**+1.1**
GHO	**Glory Hole Cre**	**2.88**	**349**		**Pn**	**22 42 56.6**	**+1.2**
SCM	**Sheep Creek Mo**	**2.88**	**4**		**Pn**	**22 42 56.7**	**+1.2**
ILS	**Iliamna Low So**	**2.89**	**292**		**Pn**	**22 42 56.2**	**+0.6**
SUA	**Susitna One**	**2.92**	**330**		**Pn**	**22 42 56.3**	**+0.3**
CRQM	**Cirque**	**2.94**	**50**		**Pn**	**22 42 56.3**	**-0.1**
RSO	**Redoubt South**	**2.95**	**303**	Pn	**Pn**	**22 42 56.7**	**+0.2**
DFR	**Drift River**	**2.98**	**305**		**Pn**	**22 42 56.9**	**0.0**
RDWB	**Redoubt West**	**3.00**	**303**		**Pn**	**22 42 57.1**	**0.0**
TGL	**Tana Glacier**	**3.06**	**52**		**Pn**	**22 42 58.2**	**+0.2**
N25K	**Chitina, Valde**	**3.08**	**29**		**Pn**	**22 42 58.7**	**+0.5**
VRDI	**Verde Repeater**	**3.13**	**42**	Pn	**Pn**	**22 42 59.2**	**+0.3**
SPCG	**Spurr Capps Gl**	**3.16**	**319**		**Pn**	**22 42 59.9**	**+0.5**
SPCR	**Spurr Chakacha**	**3.16**	**317**		**Pn**	**22 42 59.5**	**+0.2**
GLB	**Gilahina Butte**	**3.17**	**37**	Pn	**Pn**	**22 42 59.5**	**+0.1**
SPCN	**Chakachatna No**	**3.17**	**317**		**Pn**	**22 43 00.2**	**+0.7**
ISLE	**Juniper Island**	**3.19**	**57**		**Pn**	**22 42 59.9**	**+0.1**
SPCP	**Crater Peak Br**	**3.19**	**318**		**Pn**	**22 43 00.1**	**+0.4**
MESA	**MESA**	**3.19**	**65**	Pn	**Pn**	**22 42 59.7**	**-0.1**
M24K	**Tolsona, Glenn**	**3.25**	**13**		**Pn**	**22 43 01.7**	**+1.2**
STLK	**Strandline Lak**	**3.26**	**323**		**Pn**	**22 43 01.3**	**+0.7**
SPBG	**Spurr Blockage**	**3.26**	**317**		**Pn**	**22 43 01.0**	**+0.3**
YAH	**Yahtse**	**3.35**	**63**		**Pn**	**22 43 02.3**	**+0.2**
MCARA	**McCarthy VSAT**	**3.38**	**42**		**Pn**	**22 43 02.7**	**+0.4**
BALM	**Baldy**	**3.42**	**50**		**Pn**	**22 43 03.0**	**+0.1**
OHAK	**Old Harbor**	**3.42**	**242**	Pn	**Pn**	**22 43 01.6**	**-1.4**
SPNN	**North Nagishla**	**3.45**	**316**		**Pn**	**22 43 04.4**	**+1.0**
CHX	**Chaix Hills**	**3.56**	**69**		**Pn**	**22 43 05.5**	**+0.8**
SKT	**Skwentna**	**3.56**	**330**		**Pn**	**22 43 05.8**	**+1.1**
TABL	**Table Mountain**	**3.66**	**63**	Pn	**Pn**	**22 43 06.6**	**+0.3**
BARN	**Barnard Glacie**	**3.71**	**53**		**Pn**	**22 43 07.4**	**+0.5**
SAMH	**Samovar Hills**	**3.73**	**69**		**Pn**	**22 43 07.8**	**+0.6**
CTGM	**Chitina Glacie**	**3.80**	**55**		**Pn**	**22 43 08.5**	**+0.3**
KAKN	**Katmai Knife C**	**3.88**	**263**		**Pn**	**22 43 10.3**	**+1.1**
PCA	**Pinnacle**	**3.98**	**70**		**Pn**	**22 43 10.9**	**+0.3**
KABU	**Katmai Buttres**	**4.00**	**263**		**Pn**	**22 43 12.2**	**+1.4**
DHY	**Denali Highway**	**4.13**	**2**		**Pn**	**22 43 14.1**	**+1.4**
SII	**Sitkinak Islan**	**4.21**	**238**	Pn	**Pn**	**22 43 12.1**	**-1.6**
BCPM	**Bancas Point**	**4.26**	**73**		**Pn**	**22 43 14.4**	**+0.1**
PNL	**Peninsula**	**4.34**	**77**		**Pn**	**22 43 15.1**	**-0.3**
MENT	**Mentasta**	**4.44**	**25**		**Pn**	**22 43 17.4**	**+0.5**
SVW2	**Sparrevohn**	**4.47**	**302**		**Pn**	**22 43 17.0**	**-0.2**
RND	**Reindeer**	**4.49**	**354**	Pn	**Pn**	**22 43 18.2**	**+1.1**
TRF	**Thorne Bay Moun**	**4.66**	**346**	Pn	**Pn**	**22 43 21.3**	**+1.8**
KTH	**Kantishna Hill**	**4.85**	**343**		**Pn**	**22 43 23.9**	**+1.4**
BCAR	**Beaver Creek A**	**5.03**	**33**	Pn	**Pn**	**22 43 25.0**	**+0.1**
BWN	**Browne**	**5.29**	**352**	Pn	**Pn**	**22 43 29.5**	**+1.1**
HYT	**Haines Junctio**	**5.49**	**66**		**Pn**	**22 43 32.0**	**+0.8**
WRH	**Wood River Hil**	**5.53**	**358**		**Pn**	**22 43 32.5**	**+0.8**
TTA	**Tatalina**	**5.66**	**318**	Pn	**Pn**	**22 43 33.2**	**-0.3**
K27K	**Chicken**	**5.76**	**26**		**Pn**	**22 43 35.0**	**+0.1**
IL31		**5.84**	**4**		**Pn**	**22 43 36.3**	**+0.3**
ILAR	**Eielson Array**	**5.84**	**4**	Pn	**Pn**	**22 43 36.2**	**+0.2**
	1.2nm,0.3s,baz=189,slow=13,SNR=32						
ILAR				Sn	**Sn**	**22 44 40.0**	**-1.9**
	4.7nm,0.3s,baz=182,slow=21,SNR=10						
COLA	**College**	**5.93**	**360**		**Pn**	**22 43 38.2**	**+1.0**
TCOL	**CIGO, UAF Yank**	**5.93**	**360**		**Pn**	**22 43 38.1**	**+1.0**
POKR	**Poker Plat Res**	**6.18**	**1**	Pn	**Pn**	**22 43 41.2**	**+0.6**
I23K	**Minto, Yukon-K**	**6.25**	**354**	Pn	**Pn**	**22 43 42.8**	**+1.2**
SKAG	**Skagway**	**6.40**	**80**		**Pn**	**22 43 43.9**	**+0.3**
EGAK	**Eagle**	**6.61**	**25**		**Pn**	**22 43 47.0**	**+0.5**
WHY	**Whitehorse**	**6.71**	**70**		**Pn**	**22 43 48.3**	**+0.2**
JIS	**Juneau Island**	**7.02**	**90**	Pn	**Pn**	**22 43 52.4**	**+0.3**
IMAR	**Indian Mountai**	**7.57**	**341**		**Pn**	**22 43 59.8**	**+0.2**
FYU	**Fort Yukon**	**7.71**	**8**	Pn	**Pn**	**22 44 02.9**	**+1.2**
SDPT	**Sand Point**	**7.81**	**248**	Pn	**Pn**	**22 44 04.1**	**+1.1**
BMAR	**Burnt Mountain**	**8.61**	**8**	Pn	**Pn**	**22 44 14.4**	**+0.3**
DLBC	**Dease Lake**	**9.24**	**86**		**Pn**	**22 44 23.3**	**+0.6**
ANM	**Nome**	**10.04**	**311**	Pn	**Pn**	**22 44 34.5**	**+1.0**
DIB	**Dawson Inlet,**	**10.29**	**118**	Pn	**Pn**	**22 44 35.9**	**-1.1**
INK	**Inuvik**	**11.27**	**28**	Pn	**Pn**	**22 44 51.6**	**+1.4**
	0.2nm,0.3s,baz=222,slow=12,SNR=3.6						
INK	**Inuvik**	**11.27**	**28**		**Pn**	**22 44 50.9**	**+0.7**
YKA	**Yellowknife Ar**	**16.47**	**64**	Pn	**Pn**	**22 46 00.1**	**0.0**
	0.2nm,0.3s,baz=273,slow=9.2,SNR=7.7						
SONM	**Songino Array**	**57.54**	**310**	P	**P**	**22 51 58.3**	**+0.3**
	0.3nm,0.3s,baz=55,slow=7.3,SNR=4.5						

*NEIC **01** 22:44:50.5±1.8, 9°.81S×0°.07×159°.6E±0°.1, h22km±7km, mb4.3/9, Error ellipse: s-maj=15.3km s-min=8.9km az=110.0*
*IDC **01** 22:44:50.8±2.5, 9°.82S×159°.67E, h18km±18km, mb3.7/8, mb1 3.9/8, mb1mx3.8/27, mbtmp3.8/8, Error ellipse: s-maj=35.4km s-min=21.3km az=113.0*

ISC 01 22:44:50.7±0.6, 9°.88S±0°.09×159°.6E±0°.1, h22km, n28, σ1°.34/22, mb4.1/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.54**	**35**	Pg	**Pb**	**22 45 00.5**	**-0.9**
	3μm,0.3s,baz=211,slow=5.8,SNR=504						
HNR				Lg	Lg	22 45 07.0	
	10μm,0.3s,baz=200,slow=19,SNR=36						
SANVU	**Saraoutou**	**9.23**	**128**	Pn	**Pn**	**22 47 03.4**	**+0.9**
PATS	**Pohnpei**	**16.65**	**355**	Pn	**Pn**	**22 48 41.4**	**-1.5**
PATS				IAmb	IAmb	22 48 57.5	
	comp=Z,41nm,1.1s						
ARMA	**Armidale**	**21.76**	**199**	P	**P**	**22 49 37.7**	**-3.3**
ARMA				IAmb	IAmb	22 49 52.9	
	comp=Z,27nm,1.4s						
WR0	**Warramunga Arr**	**26.21**	**245**	P	**P**	**22 50 25.0**	**+0.9**
WR0				IAmb	IAmb	22 50 34.0	
	comp=Z,7.4nm,1.4s						
WB2	**Warramunga Arr**	**26.37**	**245**	P	**P**	**22 50 26.1**	**+0.5**
WRA	**Warramunga Arr**	**26.38**	**245**	P	**P**	**22 50 26.7**	**+1.0**
	comp=Z,1.5nm,0.9s,baz=73,slow=9.8,SNR=7.2						
AS31	**Alice Springs**	**28.13**	**238**	P	**P**	**22 50 41.2**	**-0.2**
ASAR	**Alice Springs**	**28.13**	**238**	P	**P**	**22 50 41.5**	**0.0**
	comp=Z,0.5nm,0.7s,baz=60,slow=10.0,SNR=8.4						
H11S3	**WAKE ISLAND Hy**	**29.04**	**14**	T	T	23 19 32.6	

DDFL	**Dedoflistskaro**	**1.43**	**134**	P	**Pg**	**23**	**23**	**09.9 +1.2**
DDFL				S	**Sg**	**23**	**23**	**32.2 +4.9**
BGD	**Bogdanovka**	**1.45**	**216**	P	**Pn**	**23**	**23**	**07.5 -0.6**
BGD				S	**Sn**	**23**	**23**	**27.6 +0.1**
BGD	**Bogdanovka**	**1.45**	**216**	*e*Pg	**Pn**	**23**	**23**	**07.5 -0.6**
BGD				*e*Sg	**Sn**	**23**	**23**	**27.6 +0.1**
XNZR	**Khunzakh**	**1.46**	**85**	*e*Pg	**Pg**	**23**	**23**	**08.5 -0.7**
XNZR				*e*Sg	**Sg**	**23**	**23**	**29.0 +0.8**
DLMR	**Dylym**	**1.53**	**65**	*e*Pg	**Pg**	**23**	**23**	**10.0 -0.6**
DLMR				*e*Sg	**Sg**	**23**	**23**	**32.0 +1.6**
DBC	**Dubki**	**1.65**	**69**	*e*Pg	**Pg**	**23**	**23**	**11.8 -1.1**
DBC				*e*Sg	**Sg**	**23**	**23**	**34.6 +0.4**
KRNR	**Karanay**	**1.65**	**76**	*e*Pg	**Pg**	**23**	**23**	**12.0 -0.9**
KRNR				*e*Sg	**Sg**	**23**	**23**	**36.0 +1.8**
GNBR	**Gunib**	**1.65**	**91**	*e*Pg	**Pg**	**23**	**23**	**11.3 -1.6**
GNBR				*e*Sg	**Sg**	**23**	**23**	**33.7 -0.5**
ARKR	**Arakani**	**1.67**	**84**	*e*Pg	**Pb**	**23**	**23**	**11.5 -1.0**
ARKR				*e*Sg	**Sg**	**23**	**23**	**34.5 -0.6**
KMKR	**Kumukh**	**1.78**	**99**	*e*Pg	**Pg**	**23**	**23**	**14.0 -1.4**
CHVG	**Ch'k'valeri**	**1.98**	**279**	P	**Pb**	**23**	**23**	**17.2 -0.4**
CHVG	**Ch'k'valeri**	**1.98**	**279**	*e*Pg	**Pb**	**23**	**23**	**17.2 -0.4**

*ISK **01** 23:34:05.2, 38.86N×43.54E, h5km, ML2.5/15*
*DDA **01** 23:34:06.3, 38.86N×43.47E, h7km±1km, ML2.0*
ISC 01 23:34:06.4±1.0, **38.87N**±0.02×**43.51E**±0.04, **h11**km±8km, **n25**, σ1.9**01**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.13**	**23**	*i* P	**Pg**	**23 34 09.8**	**+0.1**
VMUR				IAML		23 34 13.0	
	comp=N,2μm,0.4s						
VMUR				*i* S	**Sg**	**23 34 13.3**	**+1.1**
VMUR				IAML		23 34 15.0	
	comp=E,2μm,0.4s						
VANB	**Van**	**0.29**	**199**	PG	**Pb**	**23 34 13.8**	**+0.2**
TVAN	**Van**	**0.35**	**193**	*i* P	**Pb**	**23 34 13.7**	**-1.0**
TVAN				*i* S	**Sb**	**23 34 20.3**	**-0.1**
TVAN				IAML		23 34 21.0	
	comp=E,543nm,0.9s						
TVAN				IAML		23 34 21.0	
	comp=N,523nm,0.4s						
CLDR	**Caldiran**	**0.42**	**49**	PG	**Pg**	**23 34 14.0**	**-0.8**
CLDR				SG	**Sb**	**23 34 21.7**	**-0.9**
CLDR	**Caldiran**	**0.42**	**49**	*i* P	**Pg**	**23 34 14.1**	**-0.7**
CLDR				*i* S	**Sb**	**23 34 21.9**	**-0.7**
GEVA	**Gevas**	**0.66**	**212**	*i* P	**Pb**	**23 34 18.9**	**-1.1**
GEVA				IAML		23 34 35.0	
	comp=E,104nm,0.5s						
GEVA				IAML		23 34 36.0	
	comp=N,51nm,0.5s						
AKDM	**Akdamar-Van**	**0.68**	**218**	PG	**Pg**	**23 34 19.2**	**-0.4**
DYDN	**Diyadin**	**0.69**	**12**	*i* P	**Pb**	**23 34 20.0**	**-0.6**
DYDN				*i* S	**Sb**	**23 34 31.0**	**+0.8**
DYDN				IAML		23 34 33.0	
	comp=E,80nm,0.2s						
DYDN				IAML		23 34 34.0	
	comp=N,70nm,0.4s						
MLAZ	**Malazgirt-MUS**	**0.79**	**290**	PG	**Pb**	**23 34 22.7**	**+0.4**
AGRB	**Hanur-Agry**	**0.81**	**331**	PG	**Pb**	**23 34 22.4**	**-0.3**
AGRB				SG	**Sb**	**23 34 34.8**	**+1.1**
BASK	**Baskale_VAN**	**0.90**	**154**	*i* P	**Pb**	**23 34 24.2**	**-0.1**
BASK				IAML		23 34 40.0	
	comp=N,67nm,0.4s						
BASK				IAML		23 34 40.0	
	comp=E,54nm,0.5s						
IGDI	**IGDIR**	**1.09**	**24**	*i* P	**Pg**	**23 34 27.0**	**-0.5**
IGDI				IAML		23 34 46.0	
	comp=E,31nm,0.7s						
IGDI				IAML		23 34 48.0	
	comp=N,28nm,0.7s						
BLIS	**Bitlis-Merkez**	**1.18**	**248**	*i* P	**Pb**	**23 34 28.4**	**-0.5**
BLIS				IAML		23 34 48.0	
	comp=E,45nm,0.5s						
BLIS				IAML		23 34 49.0	
	comp=N,81nm,0.6s						
GURO	**Guroymak-BITLI**	**1.20**	**255**	PN	**Pb**	**23 34 28.8**	**-0.4**
TASB	**TASBURUN-IGDIR**	**1.25**	**27**	PN	**Pg**	**23 34 29.9**	**-0.6**
HAKT	**HAKKARI**	**1.32**	**173**	*i* P	**Pn**	**23 34 30.5**	**-0.5**
HAKT				IAML		23 34 55.0	
	comp=N,21nm,0.5s						
HAKT				IAML		23 34 56.0	
	comp=E,20nm,0.5s						
YOVA	**Hakkari_Yksek**	**1.42**	**154**	*i* P	**Pg**	**23 34 33.1**	**-0.6**
YOVA				*i* S	**Sn**	**23 34 54.4**	**+3.2**
YOVA				IAML		23 34 57.0	
	comp=E,28nm,0.8s						
YOVA				IAML		23 34 57.0	
	comp=N,18nm,0.7s						
SIRT	**Sirnak**	**1.60**	**212**	PN	**Pb**	**23 34 35.7**	**-0.4**
CUKT	**Cukurca**	**1.62**	**177**	PN	**Pb**	**23 34 35.7**	**-0.7**
VRTB	**Varto-Mus**	**1.62**	**281**	PN	**Pb**	**23 34 36.5**	**0.0**
KARS	**Kars**	**1.79**	**350**	PN	**Pb**	**23 34 38.7**	**-0.6**
SENK	**Senkaya-Erzuru**	**1.91**	**333**	PN	**Pb**	**23 34 40.9**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.95**	**249**	PN	**Pb**	**23 34 40.9**	**-1.0**
BNGB	**Bingl**	**2.21**	**274**	PN	**Pb**	**23 34 44.9**	**-1.5**
YEDI	**Yedisu-Bingol**	**2.37**	**285**	PN	**Pb**	**23 34 47.4**	**-1.8**

IDC 02 00:09:21.8±2.5, **7.54S**×**114.57E**, **h0**km, **mb3.4**/4, **mb1 3.5**/4, **mb1mx3.3**/35, **mbtmp3.4**/4, **MS3.7**/1, **Ms1 3.7**/1, **ms1mx2.8**/19, **Error ellipse: s-maj=131.9km s-min=23.5km az=53.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.78**	**125**	P	P	00 14 26.1	-0.1
	0.7nm,0.7s,baz=299,slow=12,SNR=13						
ASAR	**Alice Springs**	**24.52**	**133**	P	P	00 14 43.5	+0.2
	0.5nm,0.7s,baz=312,slow=9.4,SNR=6.5						
SONM	**Songino Array**	**55.60**	**353**	P	P	00 18 59.3	-0.1
	0.5nm,0.6s,baz=170,slow=8.8,SNR=3.0						
TLY	**Talaya**	**59.73**	**352**	LR	LR	00 48 03.9	
	comp=Z,64nm,18.6s,baz=358,slow=39						
MKAR	**Makanchi Array**	**61.23**	**335**	P	P	00 19 38.7	0.0
	0.2nm,0.5s,baz=155,slow=5.9,SNR=4.7						

WEL 02 00:10:02.5, **45°S**±3°×**16°8E**±°, **h71**km±6km, **M3.3/9**, **ML3.3/9**, **MLv3.3/9**, **Error ellipse: s-maj=0.0km s-min=0.0km az=71.2, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLZ	**Mavora Lakes**	**0.44**	**135**	P	Pn	00 10 15.5	+0.6
MLZ				S	Sn	00 10 25.9	+1.9
WHZ	**Wether Hill Ro**	**0.86**	**167**	P	Pn	00 10 19.8	+0.5
WHZ				S	Sn	00 10 33.1	+1.3
WKZ	**Wanaka**	**0.98**	**77**	P	Pn	00 10 22.5	+1.8
WKZ				S	Sn	00 10 37.6	+3.3
PYZ	**Puysegur Point**	**1.31**	**212**	P	Pn	00 10 26.4	+1.4
PYZ				S	Sn	00 10 42.2	+0.3
TUZ	**Tuapeka**	**1.64**	**124**	P	Pn	00 10 31.2	+1.9
TUZ				S	Sn	00 10 52.1	+2.4
APZ	**The Paps**	**1.79**	**173**	P	Pn	00 10 32.1	+0.7
APZ				S	Sn	00 10 54.9	+1.7
SYZ	**Scrubby Hill**	**1.80**	**146**	P	Pn	00 10 32.9	+1.5
SYZ				S	Sn	00 10 56.0	+2.6
LBZ	**Lake Benmore**	**1.91**	**70**	P	Pn	00 10 33.4	+0.5
LBZ				S	Sn	00 10 57.3	+1.2
ODZ	**Otahua Downs**	**2.10**	**91**	P	Pn	00 10 36.7	+1.2
ODZ				S	Sn	00 11 01.0	+0.3
FOZ	**Fox Glacier**	**2.16**	**46**	P	Pn	00 10 35.8	-0.4
HHSZ	**Highcliff Hill**	**2.22**	**113**	P	Pn	00 10 39.1	+2.1
HHSZ				S	Sn	00 11 04.8	+1.4

*LDG **02** 00:23:57.6±0.2, 36.50N×2.37W, h13km, Ml3.5/6, Error ellipse: s-maj=5.1km s-min=3.3km az=144.0*
*SFS **02** 00:23:57.0, 36.50N×2.40W, h12km, ML3.8, ALBORAN N.*
*MDD **02** 00:23:57.9±0.4, 36.53N×2.49W, h8km±2km, mbLg3.8/41, Error ellipse: s-maj=3.4km s-min=2.4km az=142.0, PRIMO*
MDD EMS: III-IV INTENSIDAD MAXIMA.
*CRAAG **02** 00:23:58.8, 36.64N×2.50W, ML3.8*
*INMG **02** 00:23:58.0±1.5, 36.51N×2.47W, h14km±3km, ML3.5, Error ellipse: s-maj=2.7km s-min=2.2km az=145.0*
*IGIL **02** 00:23:58.6, 36.52N×2.46W, h10km, ML3.4*
*CNRM **02** 00:24:00.2, 36.47N×2.65W, h48km*
ISC 02 00:23:56.3±1.1, **36.52N**±0.02×**2.47W**±0.02, **h10**km±9km,

n171, σ2.**35**/266, **5C-5D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EXAM	**Almeria**	**0.33**	**2**	Pg	**Pg**	**00 24 04.5**	**+1.7**
	SNR=7.9						
EXAM				Lg	Lg	00 24 08.6	
	SNR=7.9						
ENIJ	**Nijar**	**0.50**	**25**	⇓Pg	**Pg**	**00 24 07.6**	**+1.6**
	690nm,0.2s,SNR=18						
ENIJ				Lg	Lg	00 24 13.8	
	17μm,0.3s,SNR=7.9						
EBER	**Berja**	**0.50**	**318**	⇓Pg	**Pg**	**00 24 07.3**	**+1.1**
	5μm,0.2s,SNR=18						
EBER				Lg	Lg	00 24 13.2	
	18μm,0.3s						
EALB	**Alboran**	**0.74**	**218**	⇑Pg	**Pg**	**00 24 11.5**	**+1.0**
	628nm,0.2s,SNR=18						
EALB				Lg	Lg	00 24 22.1	
	5μm,0.4s,SNR=21						
ELGU	**Los Guajares,**	**0.99**	**291**	Pg	**Pg**	**00 24 15.0**	**-0.3**
	613nm,0.1s,SNR=7.9						
ELGU				Lg	Lg	00 24 26.9	
	4μm,0.1s,SNR=7.9						
EQUE	**Quentar**	**1.03**	**312**	⇓Pg	**Pg**	**00 24 16.9**	**+0.8**
	420nm,0.2s,SNR=18						
EQUE				Lg	Lg	00 24 28.5	
	1μm,0.2s						
GORA	**Gorafe**	**1.06**	**335**	⇓Pg	**Pg**	**00 24 17.6**	**+0.9**
	1μm,0.2s,SNR=18						
GORA				Lg	Lg	00 24 31.9	
	1μm,0.3s,SNR=7.9						
EMEL	**Melilla**	**1.28**	**198**	Pg	**Pn**	**00 24 20.4**	**+0.3**
	193nm,0.1s,SNR=12						
EMEL				Lg	Lg	00 24 36.3	
	716nm,0.1s						
MELI	**Melilla**	**1.28**	**197**	Lg	Lg	00 24 35.5	
	357nm,0.2s,SNR=7.9						
MELI	**Melilla**	**1.28**	**197**	*e*P	**Pg**	**00 24 24.0**	**+3.1**
MELI				*e*S	**Sb**	**00 24 35.1**	**-1.8**
TLOR	**Lorca, Murcia**	**1.29**	**29**	⇑Pg	**Pn**	**00 24 20.7**	**+0.3**
	400nm,0.2s,SNR=18						
TLOR				Lg	Lg	00 24 37.2	
	5μm,0.4s,SNR=7.9						
EQES	**Quesada**	**1.36**	**340**	Pg	**Pn**	**00 24 22.9**	**+1.4**
	137nm,0.2s,SNR=867						
EQES				Lg	Lg	00 24 41.7	
	450nm,0.2s						
GOG	**Mont Gurugu**	**1.36**	**198**	P	**Pn**	**00 24 21.1**	**-0.3**
GOG				S	**Sb**	**00 24 37.3**	**-2.1**
EGOR	**Sierra Gorda,**	**1.44**	**295**	Pg	**Pn**	**00 24 23.8**	**+1.3**
	164nm,0.3s,SNR=7.9						
EGOR				Lg	Lg	00 24 42.5	
	2μm,0.5s,SNR=7.9						
CART	**Cartagena**	**1.59**	**47**	*e*P	**Pn**	**00 24 23.2**	**-1.2**
CART				*e*S	**Sn**	**00 24 40.8**	**-4.1**
EMAL	**Malaga-Limoner**	**1.59**	**279**	*e*P	**Pn**	**00 24 23.6**	**-0.8**
EMAL				*e*S	**Sn**	**00 24 41.8**	**-3.2**
SESP	**Santiago Espad**	**1.60**	**358**	⇓Pg	**Pn**	**00 24 26.2**	**+1.6**
	206nm,0.3s,SNR=18						
SESP				Lg	Lg	00 24 47.2	
	783nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**1.60**	**358**	P	**Pn**	**00 24 26.2**	**+1.6**
SESP				S	**Sn**	**00 24 47.6**	**+2.1**
EMUR	**La Murta**	**1.65**	**36**	⇑Pg	**Pn**	**00 24 25.0**	**-0.2**
	153nm,0.4s,SNR=18						
EMUR				Lg	Lg	00 24 44.7	
	685nm,0.3s						
TAF	**Taforalt**	**1.70**	**178**	P	**Pn**	**00 24 26.9**	**+0.8**
TAF				S	**Sn**	**00 24 47.4**	**-0.5**
USTO	**Oran**	**1.74**	**116**	P	**Pn**	**00 24 29.0**	**+2.5**
PALE	**Palemas**	**1.76**	**223**	P	**Pn**	**00 24 26.6**	**-0.2**
PALE				S	**Sn**	**00 24 47.7**	**-1.6**
OTSS	**Djebel Tessala**	**1.84**	**132**	P	**Pn**	**00 24 31.0**	**+3.0**
PVLZ	**Peæn de**	**2.00**	**228**	*e*P	**Pn**	**00 24 29.3**	**-0.8**
PVLZ				*es*	**Sn**	**00 24 52.4**	**-2.8**
ETRV	**Los Montesinos**	**2.02**	**42**	Pn	**Pn**	**00 24 30.3**	**-0.1**
	56nm,0.2s,SNR=7.9						
ETRV				Pg	**Pb**	**00 24 34.0**	**+0.9**
	139nm,0.2s,SNR=7.9						
ETRV				Sn	**Sn**	**00 24 54.5**	**-1.2**
	450nm,0.3s,SNR=7.9						
ETRV				Lg	Lg	00 25 03.8	
	736nm,0.4s,SNR=7.9						
JBK	**JBK**	**2.18**	**182**	P	**Pn**	**00 24 33.5**	**+0.8**
JBK				S	**Sn**	**00 24 58.4**	**-1.6**
REAL	**Reales**	**2.20**	**270**	*e*P	**Pn**	**00 24 32.8**	**-0.3**
ODJA	**Bouhanifia**	**2.23**	**122**	P	**Pn**	**00 24 35.0**	**+1.8**
ETOB	**Tobarra**	**2.24**	**19**	⇑Pn	**Pn**	**00 24 34.6**	**+1.2**
	59nm,0.3s,SNR=18						
ETOB				Sn	**Sn**	**00 25 01.0**	**-0.2**
	478nm,0.4s,SNR=16						
ETOB				Lg	Lg	00 25 09.0	
	447nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**2.35**	**315**	Pn	**Pn**	**00 24 35.3**	**+0.4**
	5.2nm,0.2s,SNR=112						
EADA				Pg	**Pb**	**00 24 40.9**	**+2.3**
	73nm,0.3s,SNR=7.9						
EADA				Sn	**Sn**	**00 25 04.6**	**+0.9**
	36nm,0.1s,SNR=11						
EADA				Lg	Lg	00 25 10.8	
	226nm,0.2s,SNR=7.9						
ECEU	**Ceuta**	**2.43**	**256**	Pn	**Pn**	**00 24 35.1**	**-0.8**
	10.0nm,0.2s,SNR=7.9						
ECEU				Pg	**Pb**	**00 24 40.2**	**+0.2**
	14nm,0.1s,SNR=7.9						
ECEU				Sn	**Sn**	**00 25 01.7**	**-4.1**
	29nm,0.2s,SNR=7.9						
ECEU				Lg	Lg	00 25 08.6	
	66nm,0.3s,SNR=7.9						
OJBR	**Djebel Berber**	**2.47**	**111**	P	**Pn**	**00 24 36.0**	**-0.6**
SMIR	**Smir Dam**	**2.50**	**251**	P	**Pn**	**00 24 35.9**	**-1.0**
SMIR				S	**Sn**	**00 25 05.5**	**-2.0**
ALJ	**Aljibe**	**2.56**	**271**	*e*P	**Pn**	**00 24 41.0**	**+3.2**
OKGL	**Djebel Kef Gue**	**2.56**	**100**	P	**Pn**	**00 24 37.0**	**-0.8**
OKGL	**Djebel Kef Gue**	**2.56**	**100**	Pn	**Pn**	**00 24 38.5**	**+0.7**
	27nm,0.1s,SNR=7.9						
HORN	**Hornachuelos**	**2.59**	**302**	P	**Pn**	**00 24 38.6**	**+0.4**
HORN				S	**Sn**	**00 25 10.5**	**+0.8**
AFON	**Font Roja**	**2.63**	**35**	Pn	**Pn**	**00 24 38.7**	**-0.1**
	9.4nm,0.2s,SNR=14						
AFON				Sn	**Sn**	**00 25 09.4**	**-1.5**
	84nm,0.2s,SNR=6.8						
ESPR	**Espera**	**2.74**	**278**	Pn	**Pn**	**00 24 41.7**	**+1.4**
	12nm,0.3s,SNR=30						
ESPR				Sn	**Sn**	**00 25 12.4**	**-1.0**
	42nm,0.3s,SNR=4.7						
ESPR				Lg	Lg	00 25 25.0	
	74nm,0.3s,SNR=7.9						
OJGS	**Djebel Guires**	**2.80**	**110**	P	Pn	00 24 34.0	-7.2
EBEN2	**Beniarda presa**	**2.81**	**39**	Pn	**Pn**	**00 24 40.8**	**-0.5**
	4.7nm,0.1s,SNR=7.9						
EBEN2				Pg	**Pb**	**00 24 46.9**	**+0.3**
	90nm,0.5s,SNR=7.9						
EBEN2				Sn	**Sn**	**00 25 12.0**	**-3.2**
	188nm,0.5s,SNR=7.9						
EBEN2				Lg	Lg	00 25 26.5	
	354nm,0.7s,SNR=7.9						
ECAB	**El Cabril**	**2.81**	**304**	Pn	**Pn**	**00 24 41.7**	**+0.4**
	5.7nm,0.2s,SNR=54						
ECAB				Pg	**Pb**	**00 24 49.2**	**+2.6**
	60nm,0.3s,SNR=7.9						
ECAB				Sn	**Sn**	**00 25 14.2**	**-1.1**
	120nm,0.4s,SNR=7.9						
ECAB				Lg	Lg	00 25 26.5	
	248nm,0.5s,SNR=7.9						
CNIL	**Conil**	**2.89**	**268**	*e*S	**Sn**	**00 25 20.0**	**+2.9**
SFS	**San Fernando**	**3.01**	**270**	*e*P	Pn	00 24 35.1	-8.8
SFS				*e*S	**Sn**	**00 25 19.1**	**-0.9**
RSA	**Sarsar**	**3.18**	**240**	P	**Pn**	**00 24 47.2**	**+0.9**
RSA				S	**Sn**	**00 25 22.6**	**-1.7**
ECHE	**Chera**	**3.29**	**21**	Pn	**Pn**	**00 24 48.4**	**+0.6**
	10nm,0.3s,SNR=7.9						
ECHE				Pg	**Pg**	**00 24 59.5**	**+0.3**
	27nm,0.4s,SNR=7.9						
ECHE				Sn	**Sn**	**00 25 24.8**	**-2.2**
	68nm,0.5s,SNR=7.9						
PAB	**San Pablo**	**3.36**	**334**	Pn	**Pn**	**00 24 49.8**	**+1.0**
	7.3nm,0.2s,SNR=7.9						
PAB				Pg	**Pb**	**00 24 59.7**	**+3.7**
	41nm,0.4s,SNR=7.9						
PAB				Lg	Lg	00 25 42.6	
	159nm,0.7s,SNR=7.9						
TDRA	**Tendrara**	**3.49**	**174**	P	**Pn**	**00 24 52.4**	**+1.6**
TDRA				S	**Sn**	**00 25 34.2**	**+2.0**
EMIN	**Mina Concepcio**	**3.58**	**292**	Pn	**Pn**	**00 24 51.5**	**-0.3**
	5.0nm,0.2s,SNR=50						
EMIN				Sn	**Sn**	**00 25 32.4**	**-1.6**
	21nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	00 25 48.1	
	122nm,0.6s,SNR=7.9						
IFR	**Ifrane**	**3.71**	**217**	*e*P	**Pn**	**00 24 54.0**	**+0.4**
IFR				*e*S	**Sn**	**00 25 34.0**	**-3.4**
UCM	**Universidad Co**	**3.83**	**351**	*e*P	**Pn**	**00 24 55.6**	**+0.4**
UCM				*e*S	**Sn**	**00 25 40.3**	**0.0**
EIBI	**Ibiza**	**3.92**	**49**	⇑Pn	**Pn**	**00 24 56.8**	**+0.3**
	25nm,0.3s,SNR=18						
EIBI				Sn	**Sn**	**00 25 40.3**	**-2.3**
	91nm,0.3s,SNR=7.6						
CZD	**Col de Zad**	**4.07**	**212**	P	**Pn**	**00 24 59.6**	**+0.8**
CZD				S	**Sn**	**00 25 46.3**	**-0.4**
MDT	**Midelt**	**4.09**	**206**	P	**Pn**	**00 25 00.4**	**+1.4**
	SNR=18						
MDT				S	**Sn**	**00 25 47.1**	**+0.1**
MD31	**MD31**	**4.10**	**208**	P	**Pn**	**00 25 00.4**	**+1.3**
EGRO	**El Granado**	**4.13**	**286**	Pn	**Pn**	**00 24 59.6**	**+0.2**
	6.7nm,0.1s,SNR=25						
EGRO				Sn	**Sn**	**00 25 44.8**	**-3.0**
	43nm,0.3s,SNR=7.7						
EGRO				Lg	Lg	00 26 06.8	
	52nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.14**	**22**	Pn	**Pn**	**00 25 01.7**	**+1.9**
	4.5nm,0.3s,SNR=30						
EMOS				Pg	**Pg**	**00 25 17.2**	**+1.6**
	43nm,0.7s,SNR=7.9						
EMOS				Sn	**Sn**	**00 25 45.4**	**-2.9**
	58nm,0.9s,SNR=7.9						
EMOS				Lg	Lg	00 26 07.1	
	133nm,0.9s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.29**	**283**	Pn	**Pn**	**00 25 01.6**	**0.0**
PVAQ				Sn	**Sn**	**00 25 48.6**	**-3.0**
	39nm,0.5s						
PVAQ	**Vaqueiros**	**4.29**	**283**	*e*Pn	**Pn**	**00 25 01.6**	**0.0**
PVAQ				*e*Sn	**Sn**	**00 25 48.6**	**-3.0**
PVAQ				A	A	00 25 55.1	
	39nm,0.5s						
ETOR	**Torete**	**4.30**	**4**	Pn	**Pn**	**00 25 03.3**	**+1.5**
	36nm,0.3s,SNR=52						
ETOR				Pg	**Pg**	**00 25 18.3**	**-0.3**
	102nm,0.4s,SNR=7.9						
ETOR				Sn	**Sn**	**00 25 49.7**	**-2.4**
	66nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	00 26 09.7	
	170nm,0.4s,SNR=5.0						
GUD	**Guadarrama**	**4.32**	**343**	Pn	**Pn**	**00 25 02.6**	**+0.5**
	8.0nm,0.6s,SNR=14						
GUD				Pg	**Pg**	**00 25 17.9**	**-1.1**
	41nm,0.3s,SNR=7.1						
GUD				Lg	Lg	00 26 10.7	
	69nm,0.4s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**4.43**	**281**	Pn	**Pn**	**00 25 03.8**	**+0.2**
PBDV				Sn	**Sn**	**00 25 53.1**	**-2.1**
	35nm,0.5s						
PBDV	**Barranco-do-Ve**	**4.43**	**281**	*e*Pn	**Pn**	**00 25 03.8**	**+0.2**
PBDV				*e*Sn	**Sn**	**00 25 53.1**	**-2.1**
PBDV				A	A	00 25 59.5	
	35nm,0.5s						
EPLA	**Plasencia**	**4.53**	**322**	Pn	**Pn**	**00 25 05.3**	**+0.3**
	8.3nm,0.3s,SNR=14						
EPLA				Sn	**Sn**	**00 25 55.0**	**-2.7**
	25nm,0.5s,SNR=7.9						
EPLA				Lg	Lg	00 26 17.4	
	104nm,0.5s,SNR=5.0						
PBEJ	**Beja**	**4.56**	**291**	Pn	**Pn**	**00 25 05.7**	**+0.5**
PBEJ				Sn	**Sn**	**00 25 56.0**	**-2.2**
	14nm,0.6s						
PBEJ	**Beja**	**4.56**	**291**	*e*Pn	**Pn**	**00 25 05.7**	**+0.5**
PBEJ				*e*Sn	**Sn**	**00 25 56.0**	**-2.2**
PBEJ				A	A	00 26 38.3	
	29nm,0.6s						
PCVE	**Castro Verde**	**4.59**	**286**	Pn	**Pn**	**00 25 06.1**	**+0.5**
PCVE				Sn	**Sn**	**00 25 57.3**	**-1.6**
	37nm,0.5s						
PCVE	**Castro Verde**	**4.59**	**286**	*e*Pn	**Pn**	**00 25 06.1**	**+0.5**
PCVE				*e*Sn	**Sn**	**00 25 57.3**	**-1.6**
PCVE				A	A	00 26 26.4	
	37nm,0.5s						
PMRV	**Marv??o**	**4.85**	**308**	Pn	**Pn**	**00 25 10.3**	**+1.0**
PMRV				Lg	Lg	00 26 30.0	
	57nm,0.4s						
PMRV	**Marv??o**	**4.85**	**308**	*e*Pn	**Pn**	**00 25 10.3**	**+1.0**
PMRV				*e*Sg	**Sg**	**00 26 30.0**	**-2.0**
PMRV				A	A	00 26 32.7	
	57nm,0.4s						
ERTA	**Horta de San J**	**4.94**	**25**	Pn	**Pn**	**00 25 12.2**	**+1.7**
	7.5nm,0.3s,SNR=32						
ERTA				Sn	**Sn**	**00 26 04.6**	**-3.1**
	17nm,0.3s,SNR=7.9						
MORF	**Marmelete**	**5.01**	**281**	*e*P	**Pn**	**00 25 11.9**	**+0.4**
MORF				*e*S	**Sn**	**00 26 05.7**	**-3.8**
MORF				AML	AML	00 26 10.5	
	comp=E,54nm,0.4s						
MORF	**Marmelete**	**5.01**	**281**	Pn	**Pn**	**00 25 12.3**	**+0.8**
MORF				Sn	**Sn**	**00 26 07.6**	**-1.9**
	comp=E,24nm,0.4s						
MORF	**Marmelete**	**5.01**	**281**	*e*Pn	**Pn**	**00 25 12.3**	**+0.8**
MORF				*e*Sn	**Sn**	**00 26 07.6**	**-1.9**
MORF				A	A	00 26 17.5	
	comp=E,24nm,0.4s						
PNCL	**Nicolau / Gran**	**5.08**	**290**	Pn	**Pn**	**00 25 12.8**	**+0.4**
PNCL				Sn	**Sn**	**00 26 09.2**	**-1.9**
	comp=E,36nm,0.6s						
PNCL	**Nicolau / Gran**	**5.08**	**290**	*e*Pn	**Pn**	**00 25 12.8

MVO					Lg	Lg	00 27 03.0				
	comp=E,143nm,0.8s,SNR=7.9										
MVO	**Moncorvo**	**5.84**	**324**	*e*Pn	**Pn**	**00 25 24.2 +1.3**					
MVO				*e*Sn	**Sn**	**00 26 29.8 -0.2**					
MVO				*e*Sg	**Sg**	**00 27 00.0 -3.8**					
MVO				A	A	00 27 12.1					
	comp=E,62nm,0.7s										
PCAS	**Casmilo, Conde**	**5.91**	**308**	*e*Pn	**Pn**	**00 25 24.7 +0.9**					
PCAS				*e*Sn	**Sn**	**00 26 28.8 -2.7**					
PCAS				*e*Sg	**Sg**	**00 27 02.6 -3.2**					
PCAS				A	A	00 27 05.9					
	comp=E,55nm,0.6s										
PMAFR	**Mafra**	**5.92**	**296**	Pn	**Pn**	**00 25 24.3 +0.4**					
	comp=E,8.9nm,0.2s,SNR=7.9										
PMAFR				Sn	**Sn**	**00 26 28.0 -3.7**					
	comp=E,82nm,0.5s,SNR=7.9										
PMAFR				Lg	Lg	00 27 04.5					
	comp=E,324nm,1.0s,SNR=7.9										
PMAFR	**Mafra**	**5.92**	**296**	*e*Pn	**Pn**	**00 25 24.9 +1.0**					
PMAFR				*e*Sn	**Sn**	**00 26 29.3 -2.5**					
PMAFR				*e*Sg	**Sg**	**00 27 03.0 -3.2**					
PMAFR				A	A	00 27 14.5					
	comp=E,54nm,0.8s										
COI	**Coimbra**	**5.94**	**310**	*e*Pn	**Pn**	**00 25 25.4 +1.2**					
COI				*e*Sn	**Sn**	**00 26 29.0 -3.3**					
COI				A	A	00 27 15.8					
	comp=E,90nm,0.5s										
PVIS	**Viseu**	**5.96**	**316**	*e*Pn	**Pn**	**00 25 25.7 +1.1**					
PVIS				*e*Sn	**Sn**	**00 26 31.2 -1.7**					
PVIS				*e*Sg	**Sg**	**00 27 03.8 -3.8**					
PVIS				A	A	00 27 15.1					
	comp=E,29nm,0.5s										
PBRG	**Braganca**	**6.23**	**329**	*e*Pn	**Pn**	**00 25 29.6 +1.4**					
PBRG				*e*Sg	**Sg**	**00 27 10.6 -5.6**					
PBRG				A	A	00 27 28.0					
	comp=E,25nm,0.6s										
PVRL	**Vila Real**	**6.26**	**321**	*e*Pn	**Pn**	**00 25 29.9 +1.2**					
PVRL				*e*Sn	**Sn**	**00 26 36.6 -3.7**					
PVRL				*e*Sg	**Sg**	**00 27 15.6 -1.7**					
PVRL				A	A	00 27 22.1					
	comp=E,31nm,0.7s										
EARA	**Aranguren**	**6.28**	**6**	Lg	Lg	00 27 16.2					
	comp=E,93nm,1.2s,SNR=7.9										
ECAL	**Calabor**	**6.34**	**330**	Pn	**Pn**	**00 25 30.1 +0.3**					
	comp=E,4.7nm,0.3s,SNR=7.9										
ECAL				Sn	**Sn**	**00 26 37.2 -5.1**					
	comp=E,17nm,0.4s,SNR=7.9										
ECAL				Lg	Lg	00 27 20.4					
	comp=E,95nm,0.7s,SNR=7.9										
POLO	**Lamas de Olo**	**6.38**	**321**	*e*Pn	**Pn**	**00 25 31.4 +1.1**					
POLO				*e*Sn	**Sn**	**00 26 40.8 -2.4**					
POLO				*e*Sg	**Sg**	**00 27 15.9 -5.0**					
POLO				A	A	00 27 31.5					
	comp=E,17nm,0.6s										
EORO	**Oroz-Betelu**	**6.43**	**8**	Pn	**Pn**	**00 25 33.8 +2.9**					
	comp=E,4.2nm,0.3s,SNR=23										
EORO				Pg	**Pg**	**00 25 59.9 +0.7**					
	comp=E,24nm,0.5s,SNR=7.9										
EORO				Lg	Lg	00 27 21.9					
	comp=E,94nm,0.9s,SNR=7.9										
ECHI	**Chisagues Biel**	**6.47**	**18**	Pn	**Pn**	**00 25 32.7 +1.1**					
	comp=E,2.5nm,0.3s,SNR=7.9										
ECHI				Sn	**Sn**	**00 26 43.6 -2.0**					
	comp=E,7.0nm,0.6s,SNR=7.9										
CSOR	**Sort**	**6.48**	**24**	Pn	**Pn**	**00 25 33.9 +2.2**					
	comp=E,6.4nm,0.2s,SNR=67										
CSOR				Sn	**Sn**	**00 26 43.6 -2.1**					
	comp=E,9.2nm,0.5s,SNR=7.9										
ETSF	**Etsaut**	**6.54**	**12**	Pn	**Pn**	**00 25 34.8 +2.3**					
ETSF	**Etsaut**	**6.54**	**12**	*e*P	**Pn**	**00 25 34.8 +2.3**					
SJPF	**Ste Jean**	**6.65**	**8**	Pn	**Pn**	**00 25 36.7 +2.7**					
SJPF				Lg	Lg	00 27 23.8					
	comp=E,19nm,0.8s										
SJPF	**Ste Jean**	**6.65**	**8**	*e*P	**Pn**	**00 25 36.7 +2.7**					
SJPF				*e*Sg	**Sg**	**00 27 23.8 -6.0**					
	comp=E,38nm,0.8s										
ATE	**Arette**	**6.70**	**11**	Pn	**Pn**	**00 25 36.3 +1.7**					
	comp=E,2.4nm,0.4s,SNR=7.9										
ATE				Sn	**Sn**	**00 26 49.0 -2.0**					
	comp=E,21nm,0.9s,SNR=7.9										
ATE				Lg	Lg	00 27 31.6					
	comp=E,26nm,0.8s,SNR=7.9										
EALK	**Alkurruntz**	**6.73**	**6**	Pn	**Pn**	**00 25 36.8 +1.7**					
	comp=E,10nm,0.4s,SNR=7.9										
EALK				Sn	**Sn**	**00 26 47.2 -4.7**					
	comp=E,20nm,0.3s,SNR=7.9										
EALK				Lg	Lg	00 27 30.1					
	comp=E,66nm,0.7s,SNR=7.9										
ELAN	**Lanestosa**	**6.74**	**354**	Pn	**Pn**	**00 25 36.0 +0.7**					
	comp=E,5.5nm,0.6s,SNR=12										
ELAN				Sn	**Sn**	**00 26 48.1 -4.0**					
	comp=E,25nm,0.9s,SNR=7.9										
ELAN				Lg	Lg	00 27 31.6					
	comp=E,32nm,0.6s,SNR=7.9										
PCAB	**Cabril**	**6.74**	**322**	*e*Pn	**Pn**	**00 25 36.6 +1.3**					
PCAB				*e*Sn	**Sn**	**00 26 50.6 -1.5**					
PCAB				A	A	00 27 39.4					
	comp=E,31nm,0.6s										
EPF	**Esparros**	**6.85**	**18**	Pn	**Pn**	**00 25 38.9 +2.1**					
EPF				Sn	**Sn**	**00 26 48.7 -6.1**					
	comp=E,9.1nm,0.4s										
EPF	**Esparros**	**6.85**	**18**	*e*P	**Pn**	**00 25 38.9 +2.1**					
EPF				*e*Sn	**Sn**	**00 26 48.7 -6.1**					
	comp=E,18nm,0.4s										
CLLI	**Livia**	**6.87**	**29**	Pn	**Pn**	**00 25 38.6 +1.5**					
	comp=E,1.0nm,0.3s,SNR=7.9										
CLLI				Sn	**Sn**	**00 26 49.8 -5.5**					
	comp=E,5.5nm,0.7s,SNR=7.9										
ELOB	**Lobios**	**6.88**	**323**	Pn	**Pn**	**00 25 38.0 +0.8**					
	comp=E,3.0nm,0.2s,SNR=14										
ELOB				Sn	**Sn**	**00 26 51.2 -4.3**					
	comp=E,10nm,0.3s,SNR=7.9										
ELOB				Lg	Lg	00 27 35.4					
	comp=E,86nm,0.8s,SNR=7.9										
PGAV	**Gavieira, Arco**	**7.05**	**322**	*e*Pn	**Pn**	**00 25 41.2 +1.6**					
PGAV				*e*Sn	**Sn**	**00 26 57.9 -2.0**					
PGAV				A	A	00 28 01.2					
	comp=E,28nm,0.7s										
EARI	**Arriondas**	**7.09**	**344**	Pn	**Pn**	**00 25 40.5 +0.5**					
	comp=E,6.0nm,0.5s,SNR=11										
EARI				Sn	**Sn**	**00 26 55.3 -5.3**					
	comp=E,6.8nm,0.5s,SNR=7.9										
EARI				Lg	Lg	00 27 44.3					
	comp=E,87nm,1.1s,SNR=7.9										
EJON	**La Jonquera**	**7.22**	**33**	Sn	**Sn**	**00 27 01.9 -2.1**					
	comp=E,1.8nm,0.4s,SNR=7.9										
EZAM	**Zamans**	**7.40**	**321**	Pn	**Pn**	**00 25 46.1 +1.8**					
	comp=E,8.2nm,0.5s,SNR=7.9										
EZAM				Sn	**Sn**	**00 27 07.0 -1.3**					
	comp=E,11nm,0.6s,SNR=7.9										
EZAM				Lg	Lg	00 27 52.5					
	comp=E,42nm,0.8s,SNR=7.9										
EAGO	**Agolada(Pontev**	**7.62**	**327**	Pn	**Pn**	**00 25 49.4 +2.1**					
	comp=E,0.7nm,0.1s,SNR=7.9										
EAGO				Lg	Lg	00 27 57.4					
	SNR=7.9										
EPON	**Pontenova**	**7.69**	**334**	Pn	Pn	00 25 53.2 +5.0					
	comp=E,1.9nm,0.3s,SNR=7.9										
EPON				Lg	Lg	00 28 02.2					
	comp=E,90nm,1.3s,SNR=7.9										
MTLF	**Montolieu**	**7.70**	**26**	Pn	**Pn**	**00 25 51.4 +3.0**					
MTLF	**Montolieu**	**7.70**	**26**	*e*P	**Pn**	**00 25 51.4 +3.0**					
EMAZ	**Mazaricos**	**8.14**	**324**	Pn	**Pn**	**00 25 56.5 +2.1**					
	comp=E,2.1nm,0.2s,SNR=7.9										
EMAZ				Sn	**Sn**	**00 27 22.1 -4.4**					
	comp=E,5.0nm,0.3s,SNR=7.9										
EMAZ				Lg	Lg	00 28 15.8					
	comp=E,28nm,0.9s,SNR=7.9										
LFF	**La Frestale**	**8.76**	**15**	Pn	**Pn**	**00 26 04.1 +1.3**					
LFF	**La Frestale**	**8.76**	**15**	*e*P	**Pn**	**00 26 04.1 +1.3**					
LASF	**Ste Croix**	**8.96**	**31**	Pn	**Pn**	**00 26 07.7 +2.1**					
LASF	**Ste Croix**	**8.96**	**31**	*e*P	**Pn**	**00 26 07.7 +2.1**					
CAF	**Calviac**	**9.07**	**21**	Pn	**Pn**	**00 26 08.7 +1.5**					
CAF				Sn	**Sn**	**00 27 42.7 -6.7**					
	comp=E,0.9nm,0.5s										
CAF	**Calviac**	**9.07**	**21**	*e*P	**Pn**	**00 26 08.7 +1.5**					
CAF				*e*Sn	**Sn**	**00 27 42.7 -6.7**					
	comp=E,1.8nm,0.5s										
RJF	**Les Rejaudoux**	**9.28**	**18**	Pn	**Pn**	**00 26 13.2 +3.2**					
RJF				Sn	Sn	00 27 44.6 -10					
	comp=E,1.7nm,0.3s										
RJF	**Les Rejaudoux**	**9.28**	**18**	*e*P	**Pn**	**00 26 13.2 +3.2**					
RJF				*e*Sn	Sn	00 27 44.6 -10					
	comp=E,3.3nm,0.3s										
LMR	**La Mourre**	**9.68**	**43**	Pn	**Pn**	**00 26 18.4 +2.8**					
LMR				Sn	Sn	00 27 55.8 -8.5					
	comp=E,1.1nm,0.4s										
LMR	**La Mourre**	**9.68**	**43**	*e*P	**Pn**	**00 26 18.4 +2.8**					
LMR				*e*Sn	Sn	00 27 55.8 -8.5					
	comp=E,2.2nm,0.4s										
FRF	**La Foret Royal**	**9.91**	**42**	Sn	Sn	00 28 00.1 -10					
	comp=E,1.1nm,0.5s										
FRF	**La Foret Royal**	**9.91**	**42**	*e*Sn	Sn	00 28 00.1 -10					
	comp=E,2.2nm,0.5s										
MFF	**Saint Martin d**	**10.22**	**9**	Pn	Pn	00 26 19.8 -3.1					
MFF	**Saint Martin d**	**10.22**	**9**	*e*Pn	Pn	00 26 19.8 -3.1					
MFF	**Saint Martin d**	**10.22**	**9**	*e*P	**Pn**	**00 26 26.0 +3.1**					
TCF	**Toulx Ste Croi**	**10.37**	**18**	Pn	**Pn**	**00 26 25.9 +0.9**					
TCF	**Toulx Ste Croi**	**10.37**	**18**	*e*P	**Pn**	**00 26 25.9 +0.9**					
ORIF	**Oris-en-Rattie**	**10.51**	**34**	Pn	**Pn**	**00 26 30.5 +3.6**					
ORIF	**Oris-en-Rattie**	**10.51**	**34**	*e*P	**Pn**	**00 26 30.5 +3.6**					
SBF	**Sospel**	**10.54**	**43**	Pn	**Pn**	**00 26 30.4 +3.1**					
SBF	**Sospel**	**10.54**	**43**	*e*P	**Pn**	**00 26 30.4 +3.1**					
PGF	**Pioggiola**	**10.71**	**52**	Pn	**Pn**	**00 26 31.9 +2.2**					
PGF				Sn	**Sn**	**00 28 33.1 +3.5**					
	comp=E,7.4nm,0.9s										
PGF	**Pioggiola**	**10.71**	**52**	*e*P	**Pn**	**00 26 31.9 +2.2**					
PGF				*e*S	**Sn**	**00 28 33.1 +3.5**					
	comp=E,15nm,0.9s										
BGF	**Bois d'Agland**	**10.79**	**20**	Pn	**Pn**	**00 26 32.3 +1.6**					
BGF	**Bois d'Agland**	**10.79**	**20**	*e*P	**Pn**	**00 26 32.3 +1.6**					
MBDF	**Montbardon**	**10.79**	**38**	Pn	Pn	00 26 26.0 -4.8					
MBDF	**Montbardon**	**10.79**	**38**	*e*Pn	Pn	00 26 26.0 -4.8					
AVF	**Avril sur Loir**	**11.14**	**21**	Pn	**Pn**	**00 26 37.6 +2.1**					
AVF	**Avril sur Loir**	**11.14**	**21**	*e*P	**Pn**	**00 26 37.6 +2.1**					
SMF	**Signal de Mont**	**11.16**	**23**	Pn	**Pn**	**00 26 37.6 +1.8**					
SMF	**Signal de Mont**	**11.16**	**23**	*e*P	**Pn**	**00 26 37.6 +1.8**					
QUIF	**Quistinic**	**11.40**	**358**	Pn	**Pn**	**00 26 37.4 -1.6**					
QUIF	**Quistinic**	**11.40**	**358**	*e*Pn	**Pn**	**00 26 37.4 -1.6**					
QUIF	**Quistinic**	**11.40**	**358**	*e*P	**Pn**	**00 26 42.6 +3.6**					
SSF	**Saint Saulge**	**11.43**	**21**	Pn	**Pn**	**00 26 43.1 +3.6**					
SSF	**Saint Saulge**	**11.43**	**21**	*e*P	**Pn**	**00 26 43.1 +3.6**					
SGMF	**Saint Gilles**	**11.72**	**360**	Pn	**Pn**	**00 26 41.2 -2.3**					
SGMF	**Saint Gilles**	**11.72**	**360**	*e*Pn	**Pn**	**00 26 41.2 -2.3**					
SGMF	**Saint Gilles**	**11.72**	**360**	*e*P	**Pn**	**00 26 47.8 +4.3**					
MEZF	**Maizieres J'vi**	**13.19**	**22**	Pn	**Pn**	**00 27 04.7 +1.3**					
MEZF	**Maizieres J'vi**	**13.19**	**22**	*e*P	**Pn**	**00 27 04.7 +1.3**					
PAGF	**Fort de Pagny**	**13.45**	**24**	*e*P	Pn	00 27 12.2 +5.2					
BAIF	**Baives**	**14.37**	**18**	Pn	Pn	00 27 15.7 -3.9					
BAIF	**Baives**	**14.37**	**18**	*e*Pn	Pn	00 27 15.7 -3.9					
VYHS	**Vyhne**	**19.67**	**46**	*e*P	**P**	**00 28 26.9 +1.7**					

IDC **02** *00:27:03.0±0.6, 64°.63N×17°.56W, h0km, mb3.9/19, mb1 4.1/23, mb1mx3.9/52, mbtmp3.9/23, ML2.6/3, Error ellipse: s-maj=17.9km s-min=8.9km az=14.0*
REY **02** *00:27:02.8, 64°.67N×17°.45W, h3km*
NEIC **02** *00:27:04.3±1.2, 64°.60N±0°.10×17°.7W±0°.1, h7km±4km, mb4.4/50, Error ellipse: s-maj=14.5km s-min=8.4km az=193.0*

ISC 02 00:27:04.3±0.3, **64°.69N**±0°.02×**17°.55W**±0°.02, **h10**km, **n177**, σ1§**86**/187, **mb4.2**/50, **5C**, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
IVON	**Vonarskard**	**0.09**	**262**	P	**Pg**	**00 27 05.6**	**-1.3**
	baz=271						
IDYN	**Dyngjuhals**	**0.13**	**37**	P	**Pg**	**00 27 05.7**	**-1.8**
	baz=16						
IKVE	**Kverkfjoll**	**0.38**	**91**	P	**Pg**	**00 27 09.3**	**-2.5**
	baz=88						
IKVE				S	**Sg**	**00 27 14.4**	**-2.5**
	baz=88						
ISKR	**Skrokkalda**	**0.38**	**251**	P	**Pg**	**00 27 10.5**	**-1.3**
	baz=255						
IHUS	**Husbondi**	**0.40**	**186**	P	**Pg**	**00 27 10.3**	**-1.8**
	baz=194						
IHUS				S	**Sg**	**00 27 16.0**	**-1.3**
	baz=194						
IVOT	**Vottur**	**0.45**	**159**	P	**Pg**	**00 27 10.7**	**-2.4**
	baz=164						
IJOK	**Jokulheimar**	**0.47**	**218**	P	**Pg**	**00 27 11.9**	**-1.6**
	baz=224						
IJOK				S	**Sb**	**00 27 18.7**	**-3.1**
	baz=224						
IMKO	**Mokollar**	**0.60**	**60**	P	Pg	00 27 13.1	-2.8
	baz=56						
IMKO				S	**Sg**	**00 27 21.2**	**-2.5**
	baz=56						
IIEY	**Innrieyrar**	**0.64**	**203**	P	**Pg**	**00 27 14.5**	**-2.2**
	baz=207						
IIEY				S	**Sg**	**00 27 23.4**	**-1.7**
	baz=207						
ISVA	**Svartarkot**	**0.67**	**11**	P	**Pg**	**00 27 14.9**	**-2.3**
	baz=6.9						
ISVA				S	**Sg**	**00 27 23.4**	**-2.5**
	baz=6.9						
IKSK	**Karasker**	**0.70**	**138**	P	**Pg**	**00 27 14.1**	**-3.8**
	baz=140						
IKSK				S	**Sg**	**00 27 24.6**	**-2.5**
	baz=140						
IKAL	**Kalfafell**	**0.74**	**185**	P	**Pg**	**00 27 15.9**	**-2.7**
	baz=188						
IKAL				S	**Sg**	**00 27 26.1**	**-2.2**
	baz=188						
IVAT	**Vatnsfell**	**0.78**	**230**	P	**Pg**	**00 27 17.3**	**-1.9**
	baz=233						
IVSH	**V-Sauoahnukur**	**0.79**	**80**	P	Pg	00 27 16.0	-3.6
	baz=79						
IVSH				S	**Sg**	**00 27 26.4**	**-3.5**
	baz=79						
IHVE	**Hveravellir**	**0.88**	**283**	P	**Pg**	**00 27 18.7**	**-2.6**
	baz=283						
IHVE				S	**Sb**	**00 27 32.0**	**-1.6**
	baz=283						
IADA	**Aoalbol**	**0.91**	**68**	P	Pg	00 27 17.9	-3.9
	baz=66						
IADA				S	**Sg**	**00 27 30.1**	**-3.5**
	baz=66						
IMEL	**Melhnausar**	**0.97**	**23**	P	Pg	00 27 19.6	-3.3
	baz=20						
IREN	**Reynihlio**	**1.00**	**16**	P	Pg	00 27 20.4	-3.2
	baz=13						
IREN				S	**Sg**	**00 27 33.9**	**-2.7**
	baz=13						
ISNB	**Snabyli**	**1.06**	**207**	P	**Pg**	**00 27 21.8**	**-2.9**
	baz=209						
ISNB				S	**Sg**	**00 27 35.3**	**-3.3**
	baz=209						
IKVO	**Krokottuvotn**	**1.07**	**15**	P	Pb	00 27 21.4	-3.5
	baz=13						
IKVO				S	**Sb**	**00 27 35.7**	**-3.3**
	baz=13						
ISLY	**Slysaalda**	**1.10**	**219**	P	**Pg**	**00 27 22.6**	**-2.9**
	baz=221						
ISLY				S	**Sg**	**00 27 36.4**	**-3.4**
	baz=221						
IGRS	**Grimsstaoir**	**1.13**	**32**	P	Pn	00 27 22.3	-3.9
	baz=29						
IGRS				S	**Sb**	**00 27 36.5**	**-4.2**
	baz=29						
IFED	**Fedgar**	**1.14**	**235**	P	**Pg**	**00 27 23.9**	**-2.4**
	baz=237						
IFED				S	**Sg**	**00 27 37.7**	**-3.4**
	baz=237						
IRJU	**Rjupnafell**	**1.18**	**205**	P	**Pb**	**00 27 23.7**	**-3.0**
	baz=208						
IRJU				S	**Sg**	**00 27 38.3**	**-4.0**
	baz=208						
IMJO	**Mjoaskard**	**1.19**	**232**	P	**Pg**	**00 27 24.5**	**-2.7**
	baz=234						
IMJO				S	**Sg**	**00 27 39.1**	**-3.5**
	baz=234						
ISKI	**Skildingahlsh**	**1.21**	**10**	P	**Pn**	**00 27 23.8**	**-3.5**
	baz=8.2						
ISKI				S	**Sb**	**00 27 39.2**	**-3.7**
	baz=8.2						
IGHA	**Grjothals**	**1.22**	**17**	P	Pn	00 27 23.8	-3.7
	baz=15						
IGYG	**Gygjarholskot**	**1.22**	**252**	P	**Pb**	**00 27 24.6**	**-2.8**
	baz=253						
IGYG				S	**Sb**	**00 27 39.7**	**-3.5**
	baz=253						
IGRA	**Granastaoir**	**1.24**	**360**	P	**Pn**	**00 27 24.2**	**-3.4**
	baz=358						
IGRA				S	**Sb**	**00 27 39.2**	**-4.5**
	baz=358						
IHAU	**Haukadalur**	**1.27**	**237**	P	**Pb**	**00 27 26.2**	**-2.1**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.30**	**207**	P	**Pn**	**00 27 25.7**	**-2.8**
	baz=209						

IDIM	**Dimmadalss**	**1.31**	**11**	P	**Pn**	**00 27 25.3**	**-3.3**
	baz=9.3						
IHLA	**Hella**	**1.31**	**345**	P	**Pn**	**00 27 25.9**	**-2.8**
	baz=343						
IHED	**Heoinshofoi**	**1.41**	**4**	P	**Pn**	**00 27 26.8**	**-3.2**
	baz=2.3						
IESK	**Eystri-Skogar**	**1.43**	**216**	P	**Pn**	**00 27 27.8**	**-2.5**
	baz=218						
IBRE	**Brettingsstaoi**	**1.45**	**354**	P	**Pn**	**00 27 27.7**	**-2.9**
	baz=353						
IBRE				S	**Sn**	**00 27 45.6**	**-4.0**
	baz=353						
IMID	**Miomork**	**1.45**	**226**	P	**Pn**	**00 27 28.5**	**-2.1**
	baz=228						
IGIL	**Gilhagi**	**1.48**	**19**	P	**Pn**	**00 27 27.7**	**-3.3**
	baz=18						
ISIG	**Siglufiorour**	**1.56**	**339**	P	**Pn**	**00 27 29.6**	**-2.4**
	baz=338						
BORG	**Borgarnes**	**1.62**	**274**	Pg	**Pn**	**00 27 30.8**	**-2.1**
	76nm,0.3s,baz=104,slow=8.9,SNR=79						
BORG				Lg	Lg	00 27 55.0	
	41nm,0.3s,baz=58,slow=21,SNR=8.3						
IKRO	**Krokur**	**1.66**	**251**	P	**Pn**	**00 27 31.7**	**-1.7**
	baz=252						
ISOL	**Solvholt**	**1.66**	**244**	P	**Pn**	**00 27 31.4**	**-2.0**
	baz=246						
IHEI	**Heioarbar**	**1.67**	**255**	P	**Pn**	**00 27 31.7**	**-1.9**
	baz=256						
ILEI	**Leirhofn**	**1.78**	**14**	P	**Pn**	**00 27 32.9**	**-2.3**
	baz=12						
IHRN	**Hraun**	**1.79**	**324**	P	**Pn**	**00 27 33.8**	**-1.4**
	baz=323						
IBJA	**Bjarnastaoir**	**1.79**	**247**	P	**Pn**	**00 27 34.2**	**-1.1**
	baz=248						
ISAN	**Sandskeio**	**1.86**	**252**	P	**Pn**	**00 27 34.8**	**-1.4**
	baz=253						
ICESG	**Greenland Ices**	**9.71**	**307**	*e*P	Pn	00 29 30.2	+6.1
DBG	**Daneborg**	**9.71**	**356**	*i* P	Pn	00 29 33.0	+9.1
DBG				IAmb	IAmb	00 29 35.2	
	comp=Z,38nm,1.5s						
SUMG	**Summit**	**10.91**	**325**	Pn	**Pn**	**00 29 39.9**	**-0.7**
SUMG	**Summit**	**10.91**	**325**	*i* P	Pn	00 29 46.0	+5.4
SUMG	**Summit**	**10.91**	**325**	*i* P	Pn	00 29 46.0	+5.4
EKA	**Eskdalemuir Ar**	**11.79**	**136**	Pn	**Pn**	**00 29 51.5**	**-0.8**
	baz=322,slow=13,SNR=20						
ESK	**Eskdalemuir**	**11.79**	**136**	Pn	**Pn**	**00 29 52.6**	**+0.3**
DAG	**Danmarks Havn**	**12.15**	**359**	*i* P	Pn	00 30 02.1	+4.9
	comp=Z,3.7nm,0.8s						
DAG	**Danmarks Havn**	**12.15**	**359**	*i* P	Pn	00 30 02.1	+4.9
DAG				IAmb	IAmb	00 30 04.2	
	comp=Z,3.7nm,0.8s						
NAO01	**NORSAR Array S**	**13.51**	**93**	Pn	**Pn**	**00 30 18.6**	**+2.8**
NOA	**NORSAR Array B**	**13.56**	**92**	Pn	**Pn**	**00 30 14.4**	**-2.1**
	comp=Z,0.0nm,0.3s,baz=296,slow=14,SNR=2.6						
HFS	**Hagfors**	**15.07**	**93**	Pn	**Pn**	**00 30 36.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=174,slow=40,SNR=2.0						
NOR	**Nord**	**17.01**	**0**	*i* P	**P**	**00 31 05.2**	**+1.5**
	comp=Z,19nm,1.3s						
NOR	**Nord**	**17.01**	**0**	*i* P	**P**	**00 31 05.2**	**+1.5**
NOR				IAmb	IAmb	00 31 07.6	
	comp=Z,19nm,1.3s						
FINES	**FINESS Array B**	**19.72**	**79**	P	**P**	**00 31 34.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=277,slow=12,SNR=1.9						
FINES	**FINESS Array B**	**19.72**	**79**	P	**Pn**	**00 31 35.8**	**+0.7**
CLL	**Collm**	**20.73**	**116**	*i* P	**P**	**00 31 44.9**	**+0.2**
	comp=Z,7.0nm,1.1s						
CLL				*e*		00 31 49.0	
CLL	**Collm**	**20.73**	**116**	P	**P**	**00 31 44.9**	**+0.2**
ECH	**Echery**	**21.18**	**129**	P	**P**	**00 31 49.9**	**+0.3**
GRA1	**Grafenberg Arr**	**21.36**	**121**	P	**P**	**00 31 51.8**	**+0.3**
NKC	**Novy Kostel**	**21.38**	**118**	*e*P	**P**	**00 31 54.1**	**+2.4**
STU	**Stuttgart**	**21.40**	**125**	P	**P**	**00 31 51.5**	**-0.4**
STU				IAmb	IAmb	00 31 58.2	
	comp=Z,9.8nm,0.7s						
BRG	**Berggiesshubel**	**21.44**	**115**	*e*P	**P**	**00 31 52.4**	**+0.1**
	comp=Z,5.6nm,1.1s						
BRG				*e*		00 32 02.9	
	comp=Z,21nm,1.6s						
BFO	**Black Forest**	**21.48**	**127**	P

ARR	Arges	30.12	109	⇑P	P	00 33 16.0	+2.1
CFR	Carcaliu	31.71	106	⇑P	P	00 33 29.3	+1.5
NRIK	Noril'sk	36.46	35	P	P	00 34 08.7	0.0
	comp=Z,1.0nm,0.4s,baz=330,slow=5.0,SNR=4.7						
MDUB	Mudurnu	36.87	107	P	P	00 34 14.7	+2.0
BRTR	Keskin Array B	38.51	105	P	P	00 34 26.5	0.0
	comp=Z,1.4nm,0.8s,baz=320,slow=3.8,SNR=2.7						
YKA	Yellowknife Ar	39.18	313	P	P	00 34 32.3	+0.5
	comp=Z,3.3nm,1.1s,baz=42,slow=8.4,SNR=5.2						
INK	Inuvik	39.81	329	P	P	00 34 39.0	+2.0
	comp=Z,3.6nm,0.9s,baz=328,slow=3.8,SNR=3.5						
ABKAR	Akbulak array	42.01	73	P	P	00 34 56.1	+0.9
ABKAR	Akbulak array	42.01	73	P	P	00 34 55.4	+0.2
TIXI	Tiksi	42.02	15	P	P	00 34 57.1	+2.0
TIXI				IAmb	IAmb	00 34 60.0	
	comp=Z,5.3nm,0.9s						
TOLK	Toolik Lake Re	42.72	336	P	P	00 35 02.5	+1.6
G40A	Rib Lake	43.13	280	P	P	00 35 04.6	+0.1
G40A				IAmb	IAmb	00 35 08.1	
	comp=Z,9.7nm,1.0s						
BRVK	Borovoye	43.14	62	P	P	00 35 05.3	+0.8
BRVK				IAmb	IAmb	00 35 10.3	
	comp=Z,8.2nm,1.4s						
IL31		45.66	332	P	P	00 35 24.4	+0.1
ILAR	Eielson Array	45.66	332	P	P	00 35 25.3	+0.8
	comp=Z,2.9nm,1.1s,baz=10,slow=5.6,SNR=11						
ILAR				PcP	PcP	00 37 02.4	+0.1
	comp=Z,0.8nm,0.8s,baz=356,slow=2.6,SNR=4.8						
ILAR	Eielson Array	45.66	332	P	P	00 35 25.8	+1.4
IMAR	Indian Mountai	45.83	337	P	P	00 35 27.6	+1.9
BCAR	Beaver Creek A	46.08	328	P	P	00 35 28.2	+0.4
ZAA0	Zalesovo Array	47.64	51	P	P	00 35 41.7	+1.7
ZAA0				IAmb	IAmb	00 35 45.0	
	comp=Z,2.6nm,1.1s						
ZALV	Zalesovo Beam	47.64	51	P	P	00 35 40.6	+0.6
	comp=Z,1.0nm,0.7s,baz=325,slow=7.2,SNR=3.9						
ZALV	Zalesovo Beam	47.64	51	P	P	00 35 41.1	+1.1
KURK	Kurchatov	48.12	58	P	P	00 35 44.4	+0.6
EGMT	Eagleton	48.84	297	P	P	00 35 49.4	-0.1
GEYT	Alibeck	50.45	84	P	P	00 36 00.5	-1.4
	comp=Z,0.9nm,0.7s,baz=325,slow=13,SNR=3.7						
GEYT	Alibeck	50.45	84	P	P	00 36 02.1	+0.3
GYA0B	ALIBECK ARRAY	50.45	84	P	P	00 36 02.8	+0.9
GYA0B				IAmb	IAmb	00 36 03.8	
	comp=Z,5.7nm,1.1s						
KOWA	Kowa	50.99	163	P	P	00 36 06.2	+0.2
RLMT	Red Lodge	51.06	295	P	P	00 36 07.7	+1.1
KK31	Karatay Array	51.29	70	P	P	00 36 09.2	+1.1
KKAR	Karatay Array	51.29	70	P	P	00 36 09.0	+0.9
KKAR	Karatay Array	51.29	70	P	P	00 36 09.0	+0.9
YNE	Yellowstone No	51.44	295	P	P	00 36 09.0	-0.5
BOZ	Bozeman (W)	51.58	297	P	P	00 36 11.0	+0.7
BOZ				IAmb	IAmb	00 36 16.1	
	comp=Z,7.3nm,1.1s						
MCMT	McKenzie Canyo	52.69	297	P	P	00 36 19.4	+0.6
MKAR	Makanchi Array	52.73	58	P	P	00 36 18.8	0.0
	comp=Z,1.2nm,0.8s,baz=331,slow=8.3,SNR=5.1						
MKAR	Makanchi Array	52.73	58	P	P	00 36 19.4	+0.6
BW06	Boulder Array	53.15	293	P	P	00 36 22.6	+0.4
BW06				IAmb	IAmb	00 36 26.9	
	comp=Z,5.8nm,0.9s						
PD31	Pinedale Array	53.15	293	P	P	00 36 22.3	+0.2
PD31				IAmb	IAmb	00 36 26.9	
	comp=Z,5.4nm,0.9s						
PDAR	Pinedale Array	53.15	293	P	P	00 36 21.9	-0.2
	comp=Z,2.7nm,0.8s,baz=56,slow=6.8,SNR=15						
PDAR	Pinedale Array	53.15	293	P	P	00 36 22.6	+0.4
TOA0	Torodi Ar. Sit	53.17	156	P	P	00 36 22.3	0.0
TORD	Torodi Ar. Bea	53.17	156	P	P	00 36 21.5	-0.8
	comp=Z,1.6nm,0.8s,baz=341,slow=8.6,SNR=7.5						
TORD	Torodi Ar. Bea	53.17	156	P	P	00 36 22.0	-0.3
GAR	Garm	54.67	73	P	P	00 36 34.2	+1.0
HWUT	Hardware Ranch	54.92	294	P	P	00 36 35.1	+0.1
WMQ	Urumqi	57.24	56	eP	P	00 36 55.6	+4.1
MSU	Marysvale	57.81	292	P	P	00 36 56.8	+1.0
JCT	Junction City	59.62	277	P	P	00 37 07.9	-0.3
SONM	Songino Array	59.64	40	P	P	00 37 08.5	+0.3
	comp=Z,0.4nm,0.5s,baz=335,slow=6.4,SNR=3.0						
SONM	Songino Array	59.64	40	P	P	00 37 09.5	+1.2
NVAR	Mina Array Bea	60.27	297	P	P	00 37 12.5	-0.3
NIL	Nilore	60.47	73	P	P	00 37 14.5	+0.6
TXAR	Lajitas Array	62.26	280	P	P	00 37 27.2	+1.0
	comp=Z,0.6nm,0.8s,baz=62,slow=5.8,SNR=4.0						
HHC	Hu-ho-hao-te	67.51	40	eP	P	00 38 02.2	+1.9
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.4s						
NJ2	Nanjing	77.74	37	eP	P	00 39 03.6	+2.5
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	Chiang Mai Arr	84.14	59	P	P	00 39 35.5	+0.1
	comp=Z,0.4nm,0.4s,baz=321,slow=7.0,SNR=4.3						
CMAR	Chiang Mai Arr	84.14	59	P	P	00 39 35.9	+0.5
WRA	Warramunga Arr	131.52	36	PKP	PKPdf	00 46 17.2	+0.5
	comp=Z,0.9nm,1.1s,baz=283,slow=2.2,SNR=2.7						
ASAR	Alice Springs	134.97	38	PKP	PKPdf	00 46 23.3	+0.2
	comp=Z,0.5nm,0.9s,baz=342,slow=1.5,SNR=4.4						

*TRN **02** 00:29:28.8, 17.97N×63.68W, h13km, MD3.6*
*RSPR **02** 00:29:30.8, 18.09N×63.63W, h29km±17km, MD3.0/4*
*NEIC **02** 00:29:30.4±1.5, 18.19N±0.06×63.65W±0.06, h47km±25km, Error ellipse: s-maj=10.4km s-min=5.1km az=222.0*
ISC 02 00:29:29.6±1.2, 18.05N±0.07×63.74W±0.04, h15km±9km, n32, σ0 s75/41, 7C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.91	294⇑	eP	Pg	00 29 46.9	-0.2
TBVI	Tortola	0.91	294⇑	eP	Pg	00 29 46.9	-0.2
TBVI				eS	Sg	00 29 59.3	+0.2
TBVI	Tortola	0.91	294		Pg	00 29 46.9	-0.2
TBVI					Sg	00 29 59.3	+0.2
SEUS	St. Eustatius	0.92	127	eP	Pg	00 29 46.6	-0.8
SEUS				eS	Sg	00 30 01.1	+1.7
SEUS	St. Eustatius	0.92	127	Pn	Pg	00 29 46.9	-0.4
CDVI	St. Croix	1.02	253⇑	eP	Pg	00 29 48.4	-0.9
CDVI	St. Croix	1.02	253⇑	eP	Pg	00 29 48.4	-0.9
CDVI				eS	Sg	00 30 03.1	+0.5
CDVI	St. Croix	1.02	253		Sg	00 30 03.1	+0.5
CDVI	St. Croix	1.02	253		Pg	00 29 49.3	-0.1
SKI	Saint Kitts	1.20	127	eP	Pg	00 29 52.0	-0.7
SKI				eS	Sg	00 30 07.7	-0.6
SKI	Saint Kitts	1.20	127	Pn	Pg	00 29 52.0	-0.7
CUPR	Culebra, Puert	1.48	280⇑	eP	Pn	00 29 55.3	-0.4
CUPR	Culebra, Puert	1.48	280	eS	Sn	00 30 14.7	-0.2
CUPR	Culebra, Puert	1.48	280		Pn	00 29 55.3	-0.4
CUPR					Sn	00 30 14.7	-0.2
MTP	Monte Pirata	1.72	272⇑	eP	Pn	00 29 59.0	0.0
MTP	Monte Pirata	1.72	272⇑	eP	Pn	00 29 59.0	0.0
MTP	Monte Pirata	1.72	272		Pn	00 29 59.0	0.0
CBYP	Canovanas	2.02	276	eS	Sn	00 30 27.4	-0.8
CBYP	Canovanas	2.02	276	eS	Sn	00 30 27.4	-0.8
CBYP	Canovanas	2.02	276	Pn	Pn	00 30 03.9	+0.7
BPA	Boggy Peak	2.06	119	eP	Pn	00 30 03.9	+0.2
BPA				eS	Sn	00 30 29.4	+0.3
ANBD	Bethesda, Anti	2.14	118	eP	Pn	00 30 05.0	+0.3
ANBD				eS	Sn	00 30 30.7	-0.2
PDPR	Patillas Dam,	2.17	269	Pn	Pn	00 30 07.5	+2.3
GCPR	Guaynabo City	2.24	277	Pn	Pn	00 30 06.7	+0.5
ABD	La Joyeuse, An	2.67	126	eP	Pn	00 30 12.4	+0.4
OBIP	Obispado Ponce	2.72	270	Pn	Pn	00 30 14.5	+1.7
CBE	Ff, Capester	2.84	134	eP	Pn	00 30 13.5	-0.9
CBE				eS	Sn	00 30 48.0	-0.4
AOPR	Arecibo Observ	2.88	276	Pn	Pn	00 30 14.9	-0.1
TDBA	Terre de Bas,	2.98	137	eP	Pn	00 30 16.6	+0.3
MAGL	Barre de l'ile	3.15	131	eP	Pn	00 30 19.7	+1.0
MAGL				eS	Sn	00 30 56.0	0.0
CRPR	Cabo Rojo, PR	3.20	270	Pn	Pn	00 30 20.1	+0.7
DSLB	Salisbury	3.42	139	eP	Pn	00 30 22.1	-0.3

*IDC **02** 00:30:24.7±0.9, 67.80N×20.87E, h0km, mb1 3.3/5, mb1mx3.1/47, mbtmp3.3/5, ML2.3/5, Error ellipse:*
s-maj=15.9km s-min=6.9km az=116.0
*HEL **02** 00:30:24.5±0.2, 67.82N×20.20E, h0km, ML2.2, Explosion*
ISC 02 00:30:23.7±0.9, 67.79N±0.03×20.50E±0.05, h0km, n17, σ1 s16/27, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANU	Lannavaara	0.62	65	PG	Pb	00 30 37.2	-0.2
LANU				SG	Sb	00 30 46.7	0.0
KIF	Kilpisjarvi	1.22	5	PG	Pg	00 30 47.1	0.0
	baz=191						
KIF				MSG		00 31 02.4	
	comp=Z,25nm,0.2s						
KIF				SB	Sb	00 31 03.5	-0.5
KIF	Kilpisjarvi	1.22	5	eP	Pg	00 30 46.9	-0.2
ERTU	Ertsjaerv	1.41	151	PG	Pb	00 31 10.1	+0.3
	baz=326						
ERTU				SN	Sn	00 31 11.8	+2.0
KTK1	Kautokeino	1.59	38	eP	Pn	00 30 52.6	-0.5
KALU	Kalix	2.25	148	PB	Pb	00 31 04.5	-0.7
	baz=320						
KALU				SG	Sb	00 31 34.9	+1.5
TOF	Tornio	2.29	137	PG	Pb	00 31 05.6	-0.2
TOF				MSG		00 31 35.0	
	comp=Z,12nm,0.2s						
TOF				SG	Sg	00 31 37.3	+0.2
SGF	Sodankyl	2.33	96	PB	Pb	00 31 05.9	-0.7
SGF				SG	Sg	00 31 39.8	+1.2
RNF	Rovaniemi	2.46	116	PB	Pb	00 31 08.6	-0.1
RNF				SG	Sg	00 31 41.6	-0.9
ARCES	ARCESS Array B	2.53	44	Pn	Pn	00 31 07.8	+1.8
	baz=225,slow=15,SNR=9.5						
ARCES				Lg	Lg	00 31 39.2	
	baz=226,slow=26,SNR=8.1						
BURU	Burvik	3.24	173	PB	Pn	00 31 18.7	+2.9
	baz=359						
OUL	Oulu	3.48	139	PG	Pg	00 31 30.1	-0.2
	baz=325						
KU6	Riekki	4.10	111	PG	Pg	00 31 39.9	-2.3
	baz=298						
KU6				SG	Sg	00 32 35.9	+0.5
FINES	FINESS Array B	6.81	157	Pn	Pn	00 32 05.4	+0.7
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=1.6						
FINES				Sn	Sn	00 33 22.5	-0.3
	comp=Z,0.1nm,0.3s,baz=345,slow=22,SNR=1.7						
FINES				Lg	Lg	00 33 56.9	
	comp=Z,0.4nm,0.3s,baz=345,slow=26,SNR=3.9						
NOA	NORSAR Array B	7.87	215	Pn	Pn	00 32 18.7	-0.7
	comp=Z,0.0nm,0.3s,baz=32,slow=0.8,SNR=1.5						
NOA				Lg	Lg	00 34 32.9	
	comp=Z,0.0nm,0.3s,baz=226,slow=27,SNR=1.5						
HFS	Hagfors	8.25	204	Pn	Pn	00 32 23.4	-1.1
	comp=Z,0.1nm,0.3s,baz=22,slow=19,SNR=0.7						
HFS				Sn	Sn	00 33 56.7	-1.4
	comp=Z,0.3nm,0.3s,baz=28,slow=26,SNR=1.9						
SPITS	Spitsbergen Ar	10.51	355	Pn	Pn	00 32 54.7	-0.6
	baz=157,slow=15,SNR=1.7						

*NEIC **02** 00:41:54.7±1.9, 24.7S±0.1×179.5W±0.2, h470km±13km, mb4.3/30, Error ellipse: s-maj=23.8km s-min=17.0km az=89.0*
*IDC **02** 00:41:56.6±1.8, 24.80S×179.78W, h456km±19km, mb3.6/12, mb1 3.7/15, mb1mx3.5/42, mbtmp4.4/15, Error ellipse: s-maj=16.8km s-min=15.0km az=68.0*
ISC 02 00:41:59.8±0.7, 24.87S±0.08×179.9W±0.1, h500km, n51, σ1 s62/53, mb4.3/25, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.36	344		P	00 43 48.2	-1.7
OUZ	Omahuta	11.76	207		P	00 44 36.8	+1.2
DZM	Mont Dzumac	12.85	280	P	P	00 44 46.7	-0.9
	0.2nm,0.3s,baz=108,slow=18,SNR=3.5						
AFI	Afiamalu	13.31	36	P		00 44 47.2	-5.3
	4.5nm,0.3s,baz=217,slow=4.2,SNR=5.4						
AFI				S	S	00 47 05.3	-10
	3.9nm,0.3s,baz=90,slow=20,SNR=1.8						
AFI	Afiamalu	13.31	36	P	P	00 44 44.0	-8.5
URZ	Urewera	13.59	190	P	P	00 44 51.7	-3.3
	2.2nm,0.3s,baz=270,slow=3.7,SNR=8.7						
URZ				S	S	00 47 16.4	-3.1
	0.8nm,0.3s,baz=192,slow=20,SNR=2.2						
SNZO	South Karori	17.00	194	P	P	00 45 28.8	-1.9
NNZ	Nelson	17.24	197	P	P	00 45 30.9	-2.1
BSWZ	Blackbirch Sta	17.58	196	P	P	00 45 34.5	-1.7
MQZ	McQueen's Vall	19.76	196	P	P	00 45 54.5	-1.5
RPZ	Rata Peaks	20.21	199	P	P	00 46 00.6	+0.4
	12nm,0.5s,baz=135,slow=1.4,SNR=3.3						
RPZ	Rata Peaks	20.21	199	P	P	00 45 59.9	-0.3
WHZ	Wether Hill Ro	23.15	202	P	P	00 46 25.0	-1.7
WHZ				IAmb	IAmb	00 46 37.1	
	comp=Z,10nm,0.9s						
ARMA	Armidale	25.80	251	P	P	00 46 52.1	+1.6
EIDS	Eidsvold	26.27	263	P	P	00 46 54.8	+0.1
EIDS				IAmb	IAmb	00 46 56.8	
	comp=Z,10nm,0.9s						
TARA	Tarawa	26.99	344	P	P	00 46 56.7	-4.3
CAN	Canberra	28.76	241	P	P	00 47 17.8	+1.3
CAN				IAmb	IAmb	00 47 19.1	
	comp=Z,8.9nm,0.9s						
CTAO	Charters Tower	31.60	272	P	P	00 47 42.5	+1.3
TOO	Toolangi	32.02	238	P	P	00 47 45.1	+0.5
TOO				IAmb	IAmb	00 48 00.1	
	comp=Z,13nm,1.1s						
STKA	Stephens Creek	34.47	249	P	P	00 48 06.3	+0.9
	comp=Z,5.4nm,0.4s,baz=94,slow=11,SNR=17						
STKA	Stephens Creek	34.47	249	P	P	00 48 06.2	+0.9
BBOO	Buckleboo	39.17	248	P	P	00 48 44.0	-0.1
BBOO				IAmb	IAmb	00 48 46.2	
	comp=Z,7.9nm,0.9s						
AS31	Alice Springs	41.99	262	P	P	00 49 07.2	+0.4
AS31				IAmb	IAmb	00 49 08.1	
	comp=Z,2.7nm,0.3s						
ASAR	Alice Springs	41.99	262	P	P	00 49 07.2	+0.4
	comp=Z,3.4nm,0.4s,baz=92,slow=7.2,SNR=78						
ASAR				PcP	PcP	00 50 51.2	+0.5
	comp=Z,0.4nm,0.5s,baz=101,slow=4.7,SNR=2.1						
ASAR				ScP	ScP	00 53 57.3	+4.0
	comp=Z,0.7nm,1.0s,baz=116,slow=4.3,SNR=2.4						
ASAR	Alice Springs	41.99	262	P	P	00 49 06.9	+0.1
WR0	Warramunga Arr	42.27	267	P	P	00 49 08.9	-0.1
WR0				IAmb	IAmb	00 49 09.3	
	comp=Z,6.9nm,0.5s						
WB2	Warramunga Arr	42.45	267	P	P	00 49 10.3	-0.1
WRA	Warramunga Arr	42.46	267	P	P	00 49 10.4	-0.1
	comp=Z,11nm,0.4s,baz=100,slow=7.0,SNR=159						
WRA				ScP	ScP	00 54 00.4	+5.3
	comp=Z,2.6nm,0.7s,baz=98,slow=3.8,SNR=16						
WRA	Warramunga Arr	42.46	267	P	P	00 49 09.5	-1.0
FORT	Forrest	46.08	250	P	P	00 49 37.9	-0.6
FORT				IAmb	IAmb	00 49 38.7	
	comp=Z,15nm,0.6s						
MTN	Manton Dam	47.64	275	P	P	00 49 49.5	-0.9
KNRA	Kununurra	48.80	271	P	P	00 49 59.9	+0.8
KNRA				IAmb	IAmb	00 50 00.3	
	comp=Z,23nm,1.0s						
FITZ	Fitzroy Crossi	50.87	266	P	P	00 50 14.6	+0.4
FITZ				IAmb	IAmb	00 50 16.3	
	comp=Z,8.8nm,0.8s						
FAKI	Fak Fak	50.97	288	P	P	00 50 14.1	-1.0
FAKI				IAmb	IAmb	00 50 26.4	
	comp=Z,22nm,1.1s						
VNDA	Vanda	53.43	185	P	P	00 50 32.7	+0.9
	comp=Z,1.0nm,0.7s,baz=4.2,slow=8.3,SNR=11						
VNDA	Vanda	53.43	185	P	P	00 50 32.8	+0.9
NWAO	Narrogin (SRO)	54.94	246	P	P	00 50 42.7	-0.5
NWAO				IAmb	IAmb	00 51 00.8	
	comp=Z,11nm,1.1s						
PSA00	Pilbara Seismi	55.10	260	P	P	00 50 43.6	-0.9
MORW	Morawa	56.65	250	P	P	00 50 55.2	+0.1
CASY	Casey	59.29	206	P	P	00 51 12.1	-0.4
CASY				IAmb	IAmb	00 51 31.7	
	comp=Z,28nm,1.1s						
QSPA	South Pole Qui	65.22	180	P	P	00 51 52.1	+0.9
	comp=Z,5.9nm,0.7s,baz=20,slow=1.8,SNR=17						
QSPA	South Pole Qui	65.22	180	P	P	00 51 52.0	+0.9
QSPA				IAmb	IAmb	00 51 53.4	
	comp=Z,5.6nm,0.8s						
KSM	Kuching	72.38	280	P	P	00 52 34.1	-1.1
KSM				IAmb	IAmb	00 52 36.6	
	comp=Z,7.8nm,0.9s						
MJAR	Matsushiro Ar	72.75	326	P	P	00 52 36.9	0.0
	comp=Z,0.6nm,0.5s,baz=160,slow=7.7,SNR=2.2						
MAW	Mawson	76.88	200	P	P	00 53 00.8	+1.3
	comp=Z,4.0nm,0.6s,baz=114,slow=6.4,SNR=14						
MAW	Mawson	76.88	200	P	P	00 53 00.6	+1.0
KSRS	Korea Array	79.06	320	P	P	00 53 13.2	+1.5
	comp=Z,1.0nm,0.7s,baz=138,slow=4.9,SNR=2.3						
NVAR	Mina Array Bea	85.37	44	P	P	00 53 44.5	+0.4
	comp=Z,0.6nm,0.7s,baz=240,slow=7.2,SNR=4.3						
CMAR	Chiang Mai Arr	89.96	290	P	P	00 54 07.2	+1.3
	comp=Z,0.6nm,0.4s,baz=144,slow=3.6,SNR=4.9						
TXAR	Lajitas Array	90.85	58	P	P	00 54 10.8	+0.9
	comp=Z,0.7nm,0.7s,baz=216,slow=5.6,SNR=9.6						
TORD	Torodi Ar. Bea	168.25	188	PKPab	PKPab	01 02 21.1	0.0
	comp=Z,0.8nm,0.7s,baz=173,slow=4.8,SNR=8.7						

*ATH **02** 00:46:12.2, 38.23N×20.42E, h18km±1km, ML2.6/4, Error ellipse: s-maj=2.5km s-min=1.0km az=260.0*
*THE **02** 00:46:12.5, 38.23N×20.42E, h16km, ML2.7/6, Error ellipse: s-maj=0.9km s-min=0.4km az=257.0*
ISC 02 00:46:12.1±1.3, 38.23N±0.03×20.40E±0.07, h18km±4km, n25, σ0 s29/42, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMLN	Damoulianata-K	0.02	292	P	Pg	00 46 15.4	+0.1
DMLN				S	Sg	00 46 17.7	+0.2
	8μm,0.1s						
KEF4	Livadi, Kephal	0.03	35	P	Pg	00 46 15.4	+0.1
KEF4				S	Sg	00 46 17.7	+0.3
KEF5	Kardakata, Kep	0.07	49	P	Pg	00 46 15.6	0.0
KEF5				S	Sg	00 46 17.7	-0.2
ARG2	Argostoli	0.09	127	P	Pg	00 46 15.7	+0.1
ARG2				S	Sg	00 46 17.9	-0.1
	14μm,0.1s						
VLS	Valsamata	0.16	109	P	Pg	00 46 16.4	-0.1
VLS				S	Sb	00 46 19.4	+0.5
VLS				AML	AML	00 46 19.6	
	comp=E,12478μm,0.1s						
VLS				AML	AML	00 46 19.7	
	comp=N,9301μm,0.1s						
VLS	Valsamata	0.16	109	P	Pg	00 46 16.4	-0.1
VLS				S	Sb	00 46 19.3	+0.5
	comp=N,6μm,0.1s						
PSDA	Pessada-Kefalo	0.19	128	P	Pg	00 46 16.9	0.0
PSDA				S	Sg	00 46 19.9	-0.1
PSDA	Pessada-Kefalo	0.19	128	P	Pg	00 46 16.9	0.0
PSDA				S	Sg	00 46 20.0	-0.1
	comp=N,590nm,0.2s						
VSK1	VASILIKIADES	0.22	36	P	Pg	00 46 17.5	+0.1
VSK1				S	Sb	00 46 21.4	+0.3
	comp=N,2μm,0.2s						
FSK	Fiskardo	0.26	29	P	Pg	00 46 18.1	0.0
FSK				S	Sb	00 46 22.4	0.0
FSK				AML	AML	00 46 22.7	
	comp=N,1933μm,0.2s						
FSK				AML	AML	00 46 22.8	
	comp=E,5868μm,0.1s						
FSK	Fiskardo	0.26	29	P	Pg	00 46 18.1	0.0
FSK				S	Sg	00 46 22.2	+0.1
	comp=E,2μm,0.1s						
VLMS	Volimes, Zakyn	0.41	149	P	Pg	00 46 20.3	-0.3
VLMS				S	Sb	00 46 26.7	-0.1
VLMS				AML	AML	00 46 28.1	
	comp=E,2356μm,0.1s						
VLMS				AML	AML	00 46 28.4	
	comp=N,2454μm,0.2s						
EVGI	Lefkada island	0.44	27	P	Pg	00 46 21.1	-0.1
EVGI				S	Sb	00 46 27.8	+0.2
EVGI	Lefkada island	0.44	27	P	Pg	00 46 21.0	-0.1
EVGI				S	Sb	00 46 27.9	+0.2
MGNA	Meganis	0.53	36	P	Pg	00 46 22.3	-0.4
NYDR	Nydri-Lefkada	0.54	26	P	Pg	00 46 22.5	-0.4
NYDR				S	Sb	00 46 30.8	+0.4
LKD2	Lefkada island	0.59	20	P	Pg	00 46 23.7	-0.3
LKD2	Lefkada island	0.59	20	P	Pg	00 46 23.5	-0.5
TSLK	Tsoukalades, L	0.63	19	P	Pg	00 46 24.3	-0.3
TSLK	Tsoukalades, L	0.63	19	P	Pg	00 46 24.3	-0.3
TSLK				S	Sb	00 46 34.0	+1.0
PDO	Prodromos	0.72	59	P	Pb	00 46 26.0	-0.1
PDO				AML	AML	00 46 41.2	
	comp=E,314μm,0.4s						
PDO				AML	AML	00 46 42.5	
	comp=N,285μm,0.3s						
PDO	Prodromos	0.72	59	P	Pb	00 46 26.0	-0.1
RLS	Riolos of Patr	0.86	101	P	Pb	00 46 28.1	-0.4
DRO	Drossia	1.07	105	P	Pb	00 46 32.1	-0.1
DRO	Drossia	1.07	105	P	Pb	00 46 32.1	-0.1
DRO				S	Sg	00 46 47.0	0.0

WEL 02 00:51:34.0, 40°S±3°×17°6E±°, h44km±7km, M2.0/6, ML2.2/6, MLv2.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=81.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVHZ	Dannevirke	0.15	315	P	Pn	00 51 41.6	+0.2
BFZ	Birch Farm	0.28	189	P	Pn	00 51 42.7	+0.3
PRHZ	Porangahau	0.29	61	P	Pn	00 51 36.1	-6.4
PRWZ	Pori Road	0.29	240	P	Pn	00 51 44.4	+1.8
WPHZ	Waipukurau	0.36	17	P	Pn	00 51 46.5	+3.3
POWZ	Post Office Ro	0.41	272	P	Pn	00 51 44.2	+0.4
TSZ	Takapari Road	0.44	323	P	Pn	00 51 44.1	0.0
PNHZ	Pukenui	0.50	351	P	Pn	00 51 45.3	+0.4
PXZ	Pawanui	0.57	49	P	Pn	00 51 40.6	-5.2
MRZ	Mangatainoka R	0.61	245	P	Pn	00 51 46.7	+0.4
KAHZ	Kahuranaki	0.75	36	P	Pn	00 51 50.1

comp=Z,290nm,13.7s
TEZP TEZPUR 19.21 356 *e*P **Pn** **01 02 36.9 +2.9**
LEM Lembang 19.34 136 LR LR 01 11 44.8
comp=Z,287nm,18.2s,baz=246,slow=42
KMI Kunming 19.40 23⇑ *e*P **Pn** **01 02 38.8 +2.2**
KMI pP pP 01 02 43.8 0.0
KMI sP sP 01 02 47.6 -0.3
KMI pmax pmax
comp=Z,18nm,0.6s
KMI pmax pmax
comp=Z,81nm,3.5s
KMI LR LR
comp=Z,230nm,9.8s
KMI LR LR
comp=Z,240nm,10.4s
KMI LR LR
comp=Z,270nm,17.0s
GYA Guiyang 22.32 30 ⇑P **P** **01 03 12.7 +6.0**
GYA S **S** **01 07 00.6 -10**
GYA pmax pmax
comp=Z,8.0nm,1.1s
GYA LR LR
comp=Z,300nm,15.3s
GYA LR LR
comp=Z,480nm,14.3s
GYA LR LR
comp=Z,210nm,13.4s
LSA Lhasa 22.42 353 P **P** **01 03 08.1 -0.1**
LSA IAmb IAmb 01 03 15.3
comp=Z,13nm,1.1s
MYLDM Lahad Datu 24.11 94 P **P** **01 03 23.5 -1.1**
MYLDM IAmb IAmb 01 03 31.5
comp=Z,16nm,1.0s
CD2 Chengdu 25.03 19 P **P** **01 03 34.0 +1.1**
KAPI Kappang 28.18 115 LR LR 01 14 50.3
comp=Z,91nm,19.8s,baz=276,slow=36
NIL Nilore 32.63 326 P **P** **01 04 38.9 -1.7**
NJ2 Nanjing 33.53 40 *e*P **P** **01 04 50.5 +2.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
KBL Kabul 35.70 323 P **P** **01 05 06.0 -1.4**
KBL IAmb IAmb 01 05 12.5
comp=Z,3.6nm,1.0s
HHC Hu-ho-hao-te 36.71 22 *e*P **P** **01 05 18.0 +2.2**
HHC pmax pmax
comp=Z,19nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.3s
WMQ Urumqi 36.78 352 *e*P **P** **01 05 17.8 +1.5**
GAR Garm 38.21 329 P **P** **01 05 26.8 -1.8**
CHGR Chuyangaron 38.56 328 P **P** **01 05 29.8 -1.7**
MK31 Makanchi Array 40.63 347 P **P** **01 05 47.2 -1.3**
MK31 IAmb IAmb 01 05 52.9
comp=Z,5.3nm,0.9s
MKAR Makanchi Array 40.63 347 P **P** **01 05 47.0 -1.5**
comp=Z,1.4nm,0.5s,baz=163,slow=7.4,SNR=19
MAKZ Makanchi 40.71 347 P **P** **01 05 47.8 -1.4**
KK31 Karatay Array 41.31 333 P **P** **01 05 52.9 -1.3**
KKAR Karatay Array 41.31 333 P **P** **01 05 53.0 -1.2**
KKAR Karatay Array 41.31 333 P **P** **01 05 52.8 -1.4**
KKAR IAmb IAmb 01 05 58.7
comp=Z,1.9nm,0.8s
SONM Songino Array 41.62 12 P **P** **01 05 55.3 -1.5**
comp=Z,0.4nm,0.6s,baz=201,slow=7.7,SNR=1.9
SONM Songino Array 41.62 12 P **P** **01 05 57.3 +0.6**
GEYT Alibeck 44.71 318 P **P** **01 06 21.5 -0.3**
comp=Z,4.1nm,0.7s,baz=158,slow=9.3,SNR=14
GEYT Alibeck 44.71 318 P **P** **01 06 20.9 -0.9**
GYA0B ALIBECK ARRAY 44.71 318 P **P** **01 06 21.1 -0.7**
GYA0B IAmb IAmb 01 06 22.7
comp=Z,6.0nm,0.8s
KURK Kurchatov 45.15 346 P **P** **01 06 24.3 -0.7**
HIA Hailar 46.91 23 P **P** **01 06 40.0 +1.0**
ZAA0 Zalesovo Array 47.09 352 P **P** **01 06 39.5 -0.7**
ZAA0 IAmb IAmb 01 06 45.4
comp=Z,5.3nm,0.9s
ZALV Zalesovo Beam 47.09 352 P **P** **01 06 39.2 -1.0**
comp=Z,1.3nm,0.3s,baz=180,slow=6.8,SNR=11
ZALV Zalesovo Beam 47.09 352 P **P** **01 06 39.3 -0.9**
WB0 Warramunga Arr 47.76 125 P **P** **01 06 46.0 0.0**
WB0 IAmb IAmb 01 07 03.1
comp=Z,2.7nm,0.7s
WRA Warramunga Arr 47.80 125 P **P** **01 06 46.2 -0.1**
comp=Z,0.3nm,0.4s,baz=306,slow=8.5,SNR=16
WRA Warramunga Arr 47.80 125 P **P** **01 06 45.6 -0.7**
ASAR Alice Springs 49.44 130 P **P** **01 06 56.9 -2.0**
comp=Z,0.2nm,0.4s,baz=300,slow=7.3,SNR=2.5
ASAR Alice Springs 49.44 130 P **P** **01 06 58.2 -0.6**
BRVK Borovoye 49.60 341 P **P** **01 06 58.4 -1.2**
BRVK IAmb IAmb 01 07 04.2
comp=Z,2.9nm,0.8s
ABKAR Akbulak array 50.77 331 P **P** **01 07 07.6 -0.9**
ABKAR IAmb IAmb 01 07 14.5
comp=Z,8.1nm,1.4s
ABKAR Akbulak array 50.77 331 P **P** **01 07 08.1 -0.4**
BBOO Buckleboo 56.30 138 P **P** **01 07 49.3 0.0**
ARU Arti 56.44 337 P **P** **01 07 49.3 -0.6**
ARU IAmb IAmb 01 07 54.9
comp=Z,3.9nm,0.8s
KMBO Kilima Mbogo 57.57 264 P **P** **01 08 01.5 +2.5**
comp=Z,2.2nm,0.8s,baz=45,slow=17,SNR=7.4
BRTR Keskin Array B 62.91 311 P **P** **01 08 33.0 -2.1**
comp=Z,1.0nm,0.7s,baz=125,slow=7.4,SNR=2.7
CAN Canberra 66.68 133 P **P** **01 09 00.4 +0.9**
KLMR Klimovskoe 67.00 334 *e*P **P** **01 09 00.4 -0.6**
KLMR AMP 01 09 13.8
comp=Z,18nm,1.5s
TIXI Tiksi 67.69 11 P **P** **01 09 04.4 -0.8**
TIXI IAmb IAmb 01 09 11.3
comp=Z,7.9nm,1.2s
AKASG Malin Array Be 68.68 322 P **P** **01 09 09.8 -2.0**
comp=Z,0.4nm,0.5s,baz=97,slow=5.1,SNR=2.3
BURAR Bucovina Array 70.56 318 P **P** **01 09 22.5 -1.1**
FIA1 FINESS Array S 73.25 332 P **P** **01 09 38.4 -0.9**
FIA1 IAmb IAmb 01 09 38.7
comp=Z,11nm,1.1s
FINES FINESS Array B 73.25 332 P **P** **01 09 38.1 -1.2**
comp=Z,4.0nm,0.9s,baz=99,slow=6.0,SNR=6.0
FINES FINESS Array B 73.25 332 P **P** **01 09 37.9 -1.5**
VYHS Vyhne 74.92 318 *e*P **P** **01 09 51.7 +2.3**
ARCES ARCESS Array B 75.81 340 P **P** **01 09 52.9 -1.2**
comp=Z,1.8nm,0.9s,baz=116,slow=6.1,SNR=1.2
GERES GERESS Array B 78.34 318 P **P** **01 10 07.8 -1.1**
comp=Z,1.3nm,0.8s,baz=90,slow=5.3,SNR=11
GERES GERESS Array B 78.34 318 P **P** **01 10 07.6 -1.2**
PRED Cave del Predi 78.35 316 P **P** **01 10 08.0 -0.9**
PRED IAmb IAmb 01 10 12.2
comp=Z,5.1nm,1.1s
CLL Collm 78.88 321 *e*pP pP 01 10 21.0 -0.8
HFS Hagfors 79.00 330 P **P** **01 10 11.1 -0.9**
comp=Z,1.7nm,0.6s,baz=134,slow=6.2,SNR=1.5
CIMO Cimolais 79.13 316 P **P** **01 10 12.3 -0.8**
CIMO IAmb IAmb 01 10 28.1
comp=Z,5.3nm,1.0s
SQTA Sankt Quirin 79.98 317 *e*P **P** **01 10 16.5 -1.4**
comp=Z,4.8nm,1.2s
MOTA Moosalm 80.05 317 *e*P **P** **01 10 17.5 -0.8**
comp=Z,1.7nm,0.8s
NB2 NORSAR Subarra 80.27 331 P **P** **01 10 17.7 -1.3**
comp=Z,4.6nm,1.1s,baz=91,slow=5.9
NOA NORSAR Array B 80.27 331 P **P** **01 10 17.9 -1.2**
comp=Z,1.3nm,0.8s,baz=92,slow=5.7,SNR=2.9
NOA LR LR 01 50 46.8
comp=Z,20nm,18.1s,baz=295,slow=39
RETA Reutte 80.28 317 *e*P **P** **01 10 18.6 -0.8**
comp=Z,8.4nm,1.8s
FETA Feichten 80.31 316 *e*P **P** **01 10 18.9 -0.8**
comp=Z,5.8nm,1.7s
DAVOX Davos/Dischmat 80.89 316 P **P** **01 10 23.0 +0.1**
comp=Z,1.1nm,0.6s,baz=125,slow=18,SNR=2.6
TORD Torodi Ar. Bea 90.91 283 P **P** **01 11 12.9 +0.1**
comp=Z,0.5nm,0.9s,baz=92,slow=4.5,SNR=2.3
ESDC Sonseca Array 91.70 310 P **P** **01 11 15.3 -0.8**
comp=Z,0.4nm,0.6s,baz=65,slow=4.0,SNR=6.3

IDC ***02*** *01:02:21.6±0.8, 1.82S×152.08E, h0km, mb4.2/13, mb1 4.3/16, mb1mx4.1/40, mbtmp4.2/16, ML3.6/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/29, Error ellipse: s-maj=27.8km s-min=13.7km az=98.0*
NEIC ***02*** *01:02:27.0±1.9, 1.76S±0.06×151.94E±0.09, h34km±5km, mb4.5/24, Error ellipse: s-maj=13.1km s-min=9.3km az=89.0*
ISC 02 01:02:26.9±0.5,**1.78S**±0.06×**151.94E**±0.09,**h35**km,**n58,**
σ0s83/52,**mb4.3**/19,**MS3.4**/3,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.41**	**175**	Pn	**Pn**	**01 03 03.3**	**-0.6**
KRVT	**Keravat (AS076**	**2.51**	**178**	Pn	**Pn**	**01 03 05.2**	**-0.1**
	11nm,0.3s,baz=152,slow=3.2,SNR=33						
KRVT				Sn	**Sn**	**01 03 35.5**	**+0.9**
	15nm,0.3s,baz=221,slow=16,SNR=6.4						
MANU	**Manus Island**	**4.58**	**267**	Pn	**Pn**	**01 03 33.0**	**-0.7**
PMG	**Port Moresby**	**8.95**	**212**	Pn	**Pn**	**01 04 34.0**	**+0.3**
	0.4nm,0.3s,baz=5.7,slow=10,SNR=2.2						
PMG				LR	LR	01 08 23.4	
	comp=Z,77nm,20.1s,baz=80,slow=40						
PATS	**Pohnpei**	**10.66**	**37**		**Pn**	**01 04 55.0**	**-2.3**
CTA	**Charters Tower**	**19.03**	**197**	P	**Pn**	**01 06 46.5**	**-0.5**
	0.1nm,0.3s,baz=39,slow=14,SNR=1.7						
FAKI	**Fak Fak**	**19.71**	**266**	P	**P**	**01 06 52.2**	**-1.3**
SIJI	**Sorong**	**20.69**	**272**	P	Pn	01 07 06.0	-0.6
	25nm,0.8s,baz=98,slow=7.9,SNR=8.0						
WB0	**Warramunga Arr**	**24.78**	**223**	P	**P**	**01 07 45.2**	**-0.5**
WR0	**Warramunga Arr**	**24.82**	**222**		**P**	**01 07 45.6**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**24.83**	**35**	T	T	01 34 19.1	
	baz=225,slow=76						
H11S2	**WAKE ISLAND Hy**	**24.84**	**35**	T	T	01 34 07.0	
	baz=225,slow=76						
H11S1	**WAKE ISLAND Hy**	**24.85**	**35**	T	T	01 34 20.6	
	baz=225,slow=76						
WRAB	**Tennant Creek**	**24.93**	**222**	P	**P**	**01 07 46.1**	**-0.9**
WB2	**Warramunga Arr**	**24.93**	**222**	P	**P**	**01 07 46.4**	**-0.6**
WRA	**Warramunga Arr**	**24.94**	**222**	P	**P**	**01 07 46.3**	**-0.8**
	6.6nm,0.3s,baz=46,slow=9.8,SNR=84						
WRA				PcP	**PcP**	**01 11 23.1**	**+0.9**
	0.7nm,0.8s,baz=35,slow=2.3,SNR=3.9						
WRA				LR	LR	01 18 17.8	
	comp=Z,122nm,20.6s,baz=35,slow=38						
H11N1	**WAKE ISLAND Hy**	**25.92**	**34**	T	T	01 35 20.5	
	baz=218,slow=76						
H11N3	**WAKE ISLAND Hy**	**25.93**	**34**	T	T	01 35 21.1	
	baz=218,slow=76						
H11N2	**WAKE ISLAND Hy**	**25.93**	**34**	T	T	01 35 28.7	
	baz=218,slow=76						
AS31	**Alice Springs**	**27.90**	**217**	P	**P**	**01 08 12.7**	**-1.2**
ASAR	**Alice Springs**	**27.91**	**217**	P	**P**	**01 08 12.8**	**-1.0**
	3.0nm,0.4s,baz=46,slow=8.8,SNR=38						
ASAR				PcP	**PcP**	**01 11 30.1**	**+1.0**
	0.6nm,0.8s,baz=57,slow=3.4,SNR=4.2						
ASAR				LR	LR	01 19 21.6	
	comp=Z,101nm,19.1s,baz=302,slow=36						
ASAR	**Alice Springs**	**27.91**	**217**	P	**P**	**01 08 12.5**	**-1.4**
LUWI	**Luwuk**	**29.17**	**271**	P	**P**	**01 08 24.2**	**-1.1**
STKA	**Stephens Creek**	**31.49**	**197**	P	**P**	**01 08 45.1**	**-0.4**
	2.2nm,0.7s,baz=11,slow=13,SNR=4.5						
SBUM	**Sibu**	**39.93**	**276**	P	**P**	**01 09 57.7**	**-0.5**
SBUM				IAmb	IAmb	01 09 59.3	
	comp=Z,5.2nm,1.0s						
URZ	**Urewera**	**43.02**	**151**	LR	LR	01 26 52.0	
	comp=Z,263nm,18.6s,baz=211,slow=34						
XAN	**Xi'an**	**53.87**	**315**	P	**P**	**01 11 46.7**	**-0.2**
XAN				IAmb	IAmb	01 11 51.0	
	comp=Z,4.3nm,0.6s						
PETK	**Petropavlovsk-**	**54.90**	**4**	P	**P**	**01 11 55.0**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=177,slow=11,SNR=2.1						
CM31	**Chiang Mai Arr**	**55.85**	**294**	P	**P**	**01 12 02.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**55.85**	**294**	P	**P**	**01 12 02.5**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=111,slow=5.6,SNR=12						
CHTO	**Chiang Mai**	**55.95**	**294**	P	**P**	**01 12 02.6**	**+0.5**
CHTO				IAmb	IAmb	01 12 05.8	
	comp=Z,6.1nm,1.3s						
ULN	**Ulaanbaatar**	**63.00**	**328**	P	**P**	**01 12 50.8**	**+0.3**
SONM	**Songino Array**	**63.33**	**327**	P	**P**	**01 12 54.8**	**+2.2**
	comp=Z,0.5nm,0.5s,baz=150,slow=6.1,SNR=5.3						
VNDA	**Vanda**	**75.86**	**178**	P	**P**	**01 14 09.1**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=335,slow=6.2,SNR=6.4						
MKAR	**Makanchi Array**	**77.50**	**319**	P	**P**	**01 14 20.1**	**+1.0**
	comp=Z,3.5nm,1.2s,baz=79,slow=6.3,SNR=6.2						
MKAR	**Makanchi Array**	**77.50**	**319**	P	**P**	**01 14 18.7**	**-0.3**
ZAA0	**Zalesovo Array**	**78.18**	**326**	P	**P**	**01 14 23.1**	**+0.4**
ZAA0				IAmb	IAmb	01 14 25.3	
	comp=Z,3.5nm,1.1s						
ZALV	**Zalesovo Beam**	**78.18**	**326**	P	**P**	**01 14 22.5**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=101,slow=6.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**78.18**	**326**	P	**P**	**01 14 22.9**	**+0.3**
IL31		**79.71**	**22**	P	**P**	**01 14 30.8**	**0.0**
ILAR	**Eielson Array**	**79.71**	**22**	P	**P**	**01 14 30.2**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=246,slow=6.0,SNR=19						
KURK	**Kurchatov**	**80.88**	**322**	P	**P**	**01 14 37.8**	**+0.4**
KURK				IAmb	IAmb	01 14 42.7	
	comp=Z,9.1nm,1.2s						
BCAR	**Beaver Creek A**	**81.04**	**25**	P	**P**	**01 14 38.7**	**+0.6**
NIL	**Nilore**	**81.58**	**304**	P	**P**	**01 14 42.1**	**+0.6**
NRIK	**Noril'sk**	**82.85**	**341**	P	**P**	**01 14 47.6**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=76,slow=4.2,SNR=2.1						
GAR	**Garm**	**84.60**	**309**	P	**P**	**01 14 56.9**	**-0.3**
KK31	**Karatay Array**	**84.95**	**313**	P	**P**	**01 14 59.1**	**+0.4**
KKAR	**Karatay Array**	**84.95**	**313**	P	**P**	**01 14 58.9**	**+0.2**
KBL	**Kabul**	**85.15**	**305**	P	**P**	**01 15 00.8**	**+0.6**
KBL				IAmb	IAmb	01 15 02.6	
	comp=Z,7.0nm,1.4s						
CHGR	**Chuyangaron**	**85.46**	**309**	P	**P**	**01 15 02.0**	**+0.5**
BRVK	**Borovoye**	**86.39**	**323**	P	**P**	**01 15 07.0**	**+1.3**
BRVK				IAmb	IAmb	01 16 02.5	
	comp=Z,2.1nm,0.8s						
YKA	**Yellowknife Ar**	**93.17**	**28**	P	**P**	**01 15 37.5**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=274,slow=4.3,SNR=3.6						
GEYT	**Alibeck**	**94.11**	**308**	P	**P**	**01 15 42.5**	**+0.3**
JLU	**Jordanelle**	**96.18**	**50**	P	**P**	**01 15 51.5**	**-0.4**
CLL	**Collm**	**119.81**	**332**	*e*pPKPdf	pPKPdf	01 21 24.0	+0.3
TOAO	**Torodi Ar. Sit**	**148.46**	**292**		**PKPdf**	**01 22 08.5**	**+1.1**
TORD	**Torodi Ar. Bea**	**148.46**	**292**	PKPbc	**PKPbc**	**01 22 11.0**	**0.0**
	comp=Z,3.3nm,0.8s,baz=48,slow=2.6,SNR=16						
TORD	**Torodi Ar. Bea**	**148.46**	**292**		**PKPbc**	**01 22 10.6**	**-0.4**

MAN 02 01:09:35.4,18.74N×121.10E,h5km,mb4.7,ML3.6,MS3.5,
2C,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**0.88**	**171**	*e*P	Pb	01 09 52.8	-0.4
APYP				*e*S	Sn	01 10 06.6	-1.0
SGCP	**Mt. Cagua**	**1.02**	**118**	*e*P	Pg	01 09 54.4	-0.6
ABRA	**Dolores**	**1.14**	**199**	*e*P	Pg	01 09 55.6	-1.6
ABRA				*e*S	Sn	01 10 14.2	+0.2
CVP	**Callao Caves**	**1.23**	**146**	⇑*i*P	Pg	01 09 58.9	-0.1
CAUP	**Cauayan**	**1.91**	**159**	*e*P	Pb	01 10 10.5	-0.2
CAUP				*e*S	Sg	01 10 40.3	+3.6
SMPP	**San Manuel, Pa**	**2.60**	**189**	*e*P	Pn	01 10 18.8	+0.6
SMPP				*e*S	Sb	01 10 53.8	-1.0
KCP	**Kidapawan**	**12.29**	**161**	⇑*i*P	Pn	01 12 28.3	-2.9

IDC ***02*** *01:10:57.4±0.7, 2.87N×128.85E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.9/44, mbtmp3.9/14, ML3.6/1, Error ellipse: s-maj=35.1km s-min=13.6km az=74.0*
DJA ***02*** *01:11:00.3±1.2, 3.7N±5.5×12.9E±., h19km±13km, M4.3/10, mb4.5/5, MLv4.1/10*
NEIC ***02*** *01:11:02.5±0.8, 2.83N±0.08×129.1E±0.1, h41km±8km, mb4.2/19, Error ellipse: s-maj=16.1km s-min=9.7km az=67.0*
ISC 02 01:11:02.1±0.5,**2.84N**±0.06×**129.08E**±0.07,**h35**km,**n40,**
σ0s95/40,**mb3.9**/16,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.67**	**220**	P	**Pn**	**01 11 42.9**	**+0.2**
TNTI	**Ternate**	**2.67**	**220**		**Pn**	**01 11 42.7**	**0.0**
SGSI	**Sangihe**	**3.65**	**283**	P	**Pn**	**01 11 55.5**	**-0.6**
SGSI				S	**Sn**	**01 12 39.9**	**+2.0**
SIJI	**Sorong**	**4.28**	**149**	Pn	**Pn**	**01 12 05.0**	**+0.3**
	3.3nm,0.3s,baz=134,slow=13,SNR=24						
SIJI				Sn	**Sn**	**01 12 51.8**	**-1.8**
	3.3nm,0.3s,baz=351,slow=24,SNR=5.9						
DAV	**Davao City (W)**	**5.47**	**320**	Pn	**Pn**	**01 12 21.2**	**+0.1**
KMSI	**Cibinong**	**5.57**	**246**	P	**Pn**	**01 12 21.6**	**-1.0**
	0.6nm81nm,0.5s						
SANI	**Sanana**	**5.75**	**213**	P	**Pn**	**01 12 23.3**	**-1.8**
	0.1nm11nm,1.1s						
GTOI	**Gorontalo**	**6.45**	**250**	P	**Pn**	**01 12 33.1**	**-1.5**
	0.1nm27nm,0.7s						
MPSI	**Mapaga**	**9.51**	**255**	P	Pn	01 13 34.6	+18
SPSI	**Sidrap Palu**	**11.50**	**234**	P	**Pn**	**01 13 44.5**	**+0.6**
FITZ	**Fitzroy Crossi**	**21.08**	**189**	P	**P**	**01 15 43.6**	**+0.1**
	1.8nm,0.7s,baz=14,slow=4.5,SNR=2.0						
FITZ	**Fitzroy Crossi**	**21.08**	**189**	IAmb	IAmb	01 16 21.7	

comp=Z,17nm,1.5s
WB0 Warramunga Arr 23.06 167 P **P** **01 16 04.2 -0.4**
WB0 IAmb IAmb 01 16 17.5
comp=Z,5.8nm,0.7s
WRA Warramunga Arr 23.22 167 P **P** **01 16 06.9 +0.7**
comp=Z,2.0nm,0.5s,baz=347,slow=10,SNR=27
WRA Warramunga Arr 23.22 167 P **P** **01 16 06.1 -0.2**
WB2 Warramunga Arr 23.22 167 P **P** **01 16 07.3 +1.1**
WB2 IAmb IAmb 01 16 19.1
comp=Z,7.4nm,0.8s
WR0 Warramunga Arr 23.28 167 P **P** **01 16 07.2 +0.3**
WR0 IAmb IAmb 01 16 26.2
comp=Z,6.3nm,0.9s
UBPT Khong Chiam 26.35 299 P **P** **01 16 34.9 -0.3**
AS31 Alice Springs 26.76 170 P **P** **01 16 39.1 +0.3**
ASAR Alice Springs 26.76 170 P **P** **01 16 40.5 +1.8**
comp=Z,0.9nm,0.6s,baz=353,slow=8.6,SNR=14
CMAR Chiang Mai Arr 33.35 300 P **P** **01 17 36.7 -0.5**
comp=Z,1.0nm,0.3s,baz=131,slow=6.9,SNR=5.7
CHTO Chiang Mai 33.49 300 P **P** **01 17 38.1 -0.4**
MJAR Matsushiro Arr 34.58 13 P **P** **01 17 47.1 -0.6**
comp=Z,0.9nm,0.6s,baz=188,slow=9.5,SNR=4.9
STKA Stephens Creek 36.51 162 P **P** **01 18 05.3 +1.0**
comp=Z,1.0nm,0.5s,baz=360,slow=6.8,SNR=3.5
NWAO Narrogin (SRO) 37.29 197 P **P** **01 18 11.2 +0.3**
BJT Baijiatuau 38.82 344 P **P** **01 18 24.0 +0.3**
USRK Ussuriysk Ar. 41.27 3 P **P** **01 18 45.2 +1.2**
comp=Z,1.0nm,0.5s,baz=185,slow=7.0,SNR=4.8
ULN Ulaanbaatar 48.72 340 P **P** **01 19 43.0 -0.4**
SONM Songino Array 48.92 340 P **P** **01 19 44.6 -0.2**
comp=Z,0.4nm,0.6s,baz=152,slow=6.7,SNR=3.8
PEA0B Petropavlovsk- 55.40 21 P **P** **01 20 32.6 -0.2**
PETK Petropavlovsk- 55.40 21 P **P** **01 20 35.1 +2.3**
comp=Z,2.2nm,0.8s,baz=197,slow=4.5,SNR=2.6
PETK Petropavlovsk- 55.40 21 P **P** **01 20 32.6 -0.2**
MKAR Makanchi Array 59.63 325 P **P** **01 21 02.5 -0.2**
comp=Z,1.4nm,0.5s,baz=116,slow=8.5,SNR=20
ZAA0 Zalesovo Array 62.46 332 P **P** **01 21 21.1 -0.6**
ZALV Zalesovo Beam 62.46 332 P **P** **01 21 20.4 -1.4**
comp=Z,3.0nm,0.4s,baz=108,slow=9.5,SNR=4.0
KURK Kurchatov 63.76 327 P **P** **01 21 30.4 -0.1**
KKAR Karatay Array 65.49 317 P **P** **01 21 41.3 -0.6**
AKTO Aktyubinsk 75.82 321 P **P** **01 22 43.8 -0.9**
comp=Z,1.6nm,0.7s,baz=112,slow=12,SNR=5.2
ARU Arti 76.94 327 P **P** **01 22 49.9 -1.1**
comp=Z,0.4nm,0.4s,baz=155,slow=11,SNR=3.7
I23K Minto, Yukon-K 83.89 25 P **P** **01 23 28.7 +0.7**

VIE ***02*** *01:13:09.6±0.3, 51.45N×16.01E, h0km, mb1.8/2, ml2.5/5, Error ellipse: s-maj=2.4km s-min=1.5km az=10.0 80 km WNW of Wroclaw Suspected Mining induced.*
PRU ***02*** *01:13:10.0±0.0, 51.47N×16.07E, h0km*
ISC 02 01:13:07.5±0.9,**51.58N**±0.03×**16.09E**±0.03,**h0**km,**n27,**
σ0s87/54,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.75**	**170**	*e*Pg	**Pg**	**01 13 22.2**	**+0.4**
KSP				*e*Sg	**Sg**	**01 13 31.1**	**-0.3**
CHVC	**Chvalec**	**0.99**	**181**	*e*PG	**Pg**	**01 13 27.1**	**+0.7**
CHVC				*e*SG	**Sg**	**01 13 37.9**	**-1.4**
	comp=Z,17nm,0.3s						
OSTC	**Ostas**	**1.03**	**176**	*e*PG	**Pb**	**01 13 27.8**	**-0.3**
OSTC				*e*SG	**Sg**	**01 13 39.1**	**-1.3**
	comp=Z,12nm,0.2s						
UPC	**Upice**	**1.07**	**183**	*e*PG	**Pg**	**01 13 28.4**	**+0.4**
UPC				*e*SG	**Sg**	**01 13 40.6**	**-1.3**
	comp=Z,42nm,0.2s						
DPC	**Dobruska-Polom**	**1.24**	**173**	*e*PG	**Pg**	**01 13 31.0**	**-0.2**
DPC				*e*SG	**Sg**	**01 13 46.4**	**-0.8**
	comp=Z,11nm,0.2s						
PVCC	**Panska Ves**	**1.43**	**223**	*e*PG	**Pb**	**01 13 35.4**	**+0.5**
PVCC				*e*SG	**Sg**	**01 13 53.2**	**0.0**
	comp=Z,56nm,0.5s						
BRG	**Berggiesshubel**	**1.53**	**243**	PG	**Pg**	**01 13 37.4**	**+0.8**
BRG				SG	**Sb**	**01 13 57.3**	**+0.9**
	34nm,0.4s						
KRLC	**Kraliky**	**1.57**	**164**	*e*PG	**Pb**	**01 13 37.1**	**-0.2**
KRLC				*e*SG	**Sn**	**01 13 55.9**	**-1.7**
	comp=Z,12nm,0.4s						
PRA	**Prague**	**1.84**	**216**	*e*SG	**Sb**	**01 14 05.9**	**+0.4**
	comp=Z,4.5nm,0.6s						
PRU	**Pruhonice**	**1.87**	**212**	*e*PG	**Pb**	**01 13 42.6**	**+0.1**
PRU				*e*SG	**Sb**	**01 14 06.4**	**0.0**
	comp=Z,10.0nm,0.6s						
CLL	**Collm**	**1.95**	**263**	*e*Pg	**Pb**	**01 13 44.0**	**+0.1**
CLL				*e*Sg	**Sg**	**01 14 11.0**	**+0.8**
	comp=Z,12nm,0.8s						
MORC	**Moravsky Berou**	**2.03**	**152**	*e*PN	**Pn**	**01 13 42.9**	**0.0**
MORC				*e*SG	**Sb**	**01 14 10.4**	**-0.5**
OKC	**Ostrava-Krasne**	**2.18**	**142**	*e*PG	**Pb**	**01 13 48.4**	**+0.7**
OKC				*e*SG	**Sb**	**01 14 15.8**	**+0.6**
	comp=Z,17nm,0.8s						
VRAC	**Vranov**	**2.29**	**172**	*e*PN	**Pn**	**01 13 47.2**	**+0.6**
VRAC				*e*SG	**Sb**	**01 14 19.6**	**+1.0**
PBCC	**Pribram**	**2.32**	**216**	*e*SG	**Sb**	**01 14 19.8**	**+0.5**
TREC	**Trest**	**2.32**	**190**	*e*PG	**Pb**	**01 13 50.7**	**+0.6**
TREC				*e*SG	**Sb**	**01 14 19.5**	**+0.2**
	comp=Z,9.1nm,0.2s						
KRUC	**Moravsky**	**2.53**	**175**	*e*PN	**Pn**	**01 13 49.2**	**-0.5**
KRUC				*e*SG	**Sg**	**01 14 27.4**	**-1.2**
NKC	**Novy Kostel**	**2.67**	**241**	*e*PN	**Pn**	**01 13 53.0**	**+1.2**
NKC				*e*PG	**Pg**	**01 13 58.0**	**-0.6**
NKC				*e*SG	**Sg**	**01 14 33.2**	**-0.1**
	comp=Z,24nm,0.3s						
OJC	**Ojcow**	**2.71**	**119**	*e*Pg	**Pg**	**01 13 59.8**	**+0.4**
OJC				*e*Sg	**Sg**	**01 14 35.1**	**+0.6**
JAVC	**Velka Javorina**	**2.91**	**159**	*e*PN	**Pn**	**01 13 54.9**	**-0.1**
KHC	**Kasperske Hory**	**2.93**	**214**	*e*PN	**Pn**	**01 13 56.2**	**+0.8**
KHC				*e*PG	**Pg**	**01 14 03.0**	**-0.6**
KHC				*e*SN	**Sn**	**01 14 30.5**	**-0.8**
KHC				*e*SG	**Sg**	**01 14 39.7**	**-1.9**
	comp=Z,4.3nm,0.4s						
SMOL	**Smolenice**	**3.19**	**164**	*e*SG	**Sg**	**01 14 49.4**	**-0.4**
LANS	**Liptovska Anna**	**3.25**	**137**	*e*PG	**Pg**	**01 14 11.1**	**+1.3**
LANS				*e*SG	**Sg**	**01 14 51.9**	**0.0**
BSD	**Bornholm Skovb**	**3.61**	**349**	*e*	**Pn**	**01 14 03.8**	**-0.8**
	baz=135,slow=14						
BSD				*i* P	**Pn**	**01 14 05.6**	**+1.0**
BSD				IAML		01 14 34.8	
	comp=Z,1.4nm,0.5s						
BSD				*i* S	**Sn

BO02	**Sierra Bellavi**	**3.80**	**44**	*eP*		**Pn**	**01 20 17.3**	**-0.4**
PLCA	**Paso Flores**	**4.13**	**141**	Pn		**Pn**	**01 20 22.5**	**+0.2**
	comp=E,0.7nm,0.3s,baz=322,slow=12,SNR=40							
PLCA				Lg		Lg	01 21 32.5	
	comp=E,2.2nm,0.3s,baz=30,slow=16,SNR=5.9							
MT09	**Talagante**	**4.51**	**34**	*eP*		**Pn**	**01 20 26.6**	**-0.9**
LMEL	**Las Melosas**	**4.83**	**41**	*eP*		**Pn**	**01 20 31.0**	**-0.9**
MT02	**Curacav**	**4.89**	**29**	*eP*		**Pn**	**01 20 31.0**	**-1.6**
MT02				IAML			01 22 08.0	
	comp=N,39nm,0.6s							
MT05	**Renca**	**4.95**	**33**	*eP*		**Pn**	**01 20 32.5**	**-0.9**
MT03	**Universidad Ad**	**4.96**	**36**	*eP*		**Pn**	**01 20 32.9**	**-0.8**
PEL	**Peldehue**	**5.18**	**32**	*eP*		**Pn**	**01 20 35.2**	**-1.4**
ROCH	**El Roble**	**5.20**	**29**	*eP*		**Pn**	**01 20 35.9**	**-1.2**
H03S1	**Juan Fernandez**	**5.46**	**311**	T		T	01 26 16.5	
	baz=132,slow=74							
H03S3	**Juan Fernandez**	**5.48**	**312**	T		T	01 26 13.6	
	baz=132,slow=74							
H03S2	**Juan Fernandez**	**5.48**	**311**	T		T	01 26 18.1	
	baz=132,slow=74							
LPAZ	**La Paz**	**21.83**	**15**	P		**P**	**01 24 14.9**	**+2.8**
	comp=N,1.1nm,0.7s,baz=212,slow=8,9,SNR=2.7							
SIV	**San Ignacio**	**24.34**	**31**	P		**P**	**01 24 41.2**	**+4.0**
	comp=N,3.0nm,0.9s,baz=219,slow=11,SNR=7.4							
TORD	**Torodi Ar. Bea**	**86.90**	**71**	P		**P**	**01 32 03.3**	**-1.1**
	comp=N,0.5nm,0.9s,baz=219,slow=5.7,SNR=4.5							
ZALV	**Zalesovo Beam**	**158.07**	**35**	PKPab		**PKPab**	**01 39 49.2**	**+0.2**
	comp=N,0.5nm,0.5s,baz=309,slow=4.6,SNR=2.4							

*IDC **02** 01:26:43.5±0.8,27°.55S×70°.85W,h0km,mb4.0/7,*
mb1 4.1/12,mb1mx4.0/30,mbtmp3.9/12,ML4.0/5,MS3.3/7,
Ms1 3.3/7,ms1mx3.1/27,Error ellipse: s-maj=22.1km
s-min=20.8km az=88.0
*NEIC **02** 01:26:47.3±3.1,27°.45S±0°.04×71°.17W±0°.08,h27km±2km,*
Error ellipse: s-maj=10.9km s-min=6.0km az=103.0
*GUC **02** 01:26:47.4±0.7,27°.48S×71°.04W,h26km±3km,ML4.5*

ISC 02 01:26:44.9±1.2,27°.44S±0°.02×70°.99W±0°.05,h10km±8km, n67,σ1§31/73,mb4.2/7,MS3.7/3,5C-1D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	**Copiap**	**0.69**	**103**	*eP*	**Pn**	**01 27 00.9**	**+0.1**
GO03				*eS*	**Sn**	**01 27 10.3**	**-1.3**
GO03				IAML		01 27 12.3	
	comp=N,36μm,0.4s						
GO03	**Copiap**	**0.69**	**103**		**Pn**	**01 27 01.1**	**+0.3**
AC04	**Llanos de Chal**	**0.77**	**185**	*eP*	**Pg**	**01 27 00.3**	**+0.6**
AC04				*i* S	**Sg**	**01 27 10.3**	**+0.5**
AC04	**Llanos de Chal**	**0.77**	**185**		**Pg**	**01 27 00.4**	**+0.6**
AC01	**Pan de Azucar**	**1.33**	**15**	↑*iP*	**Pg**	**01 27 11.0**	**+0.5**
AC01				*eS*	**Sn**	**01 27 28.8**	**+1.4**
AC01				IAML		01 27 37.4	
	comp=E,4μm,0.6s						
AC01	**Pan de Azucar**	**1.33**	**15**	Pn	**Pg**	**01 27 11.3**	**+0.7**
AC05	**El Transito**	**1.53**	**156**	↓*eP*	**Pg**	**01 27 13.9**	**-0.3**
AC05				*eS*	**Sb**	**01 27 33.0**	**0.0**
AC05				IAML		01 27 36.6	
	comp=E,9μm,0.6s						
AC05	**El Transito**	**1.53**	**156**		**Pg**	**01 27 14.0**	**-0.3**
LCO	**Las Campanas**	**1.59**	**171**	Pn	**Pb**	**01 27 14.5**	**0.0**
AC02	**Maricunga**	**1.77**	**71**	↑*iP*	**Pg**	**01 27 19.6**	**+0.7**
AC02				*eS*	**Sg**	**01 27 42.1**	**+0.3**
AC02				IAML		01 27 45.2	
	comp=N,19μm,0.2s						
AC02	**Maricunga**	**1.77**	**71**	Pn	**Pg**	**01 27 19.7**	**+0.8**
GO02	**Mina Guanaco**	**2.59**	**29**	↑*iP*	**Pb**	**01 27 29.9**	**-1.7**
GO02				*i* S	**Sb**	**01 28 04.6**	**+0.8**
GO02				IAML		01 28 16.5	
	comp=E,4μm,0.6s						
GO02	**Mina Guanaco**	**2.59**	**29**	Pn	**Pb**	**01 27 30.0**	**-1.7**
CO01	**Juntas del Tor**	**2.65**	**163**	↑*iP*	**Pn**	**01 27 30.4**	**+2.5**
CO01				*eS*	**Sb**	**01 28 03.0**	**-2.2**
CO01				IAML		01 28 17.6	
	comp=E,1μm,0.6s						
CO01	**Juntas del Tor**	**2.65**	**163**		**Pn**	**01 27 30.4**	**+2.5**
GO04	**Tololo Observa**	**2.73**	**176**	*eP*	**Pn**	**01 27 30.5**	**+1.5**
GO04				*i* S	**Sn**	**01 28 02.9**	**+0.7**
GO04	**Tololo Observa**	**2.73**	**176**	Pn	**Pn**	**01 27 30.8**	**+1.8**
VCA	**Vinchina**	**2.78**	**118**	↑*iP*	**Pb**	**01 27 35.2**	**+0.4**
VCA				*eS*	**Sb**	**01 28 07.3**	**-1.6**
VCA				IAML		01 28 19.9	
	comp=N,2μm,0.5s						
PB14	**IPOC Station P**	**2.85**	**11**	Pn	**Pn**	**01 27 31.4**	**+0.7**
CO03	**El Pedregal**	**3.40**	**176**	*eP*	**Pn**	**01 27 39.5**	**+1.4**
CO03				*i* S	**Sn**	**01 28 21.1**	**+2.6**
CO03	**El Pedregal**	**3.40**	**176**		**Pn**	**01 27 39.3**	**+1.3**
CO02	**Combarbal**	**3.75**	**180**	*i* S	**Sn**	**01 28 29.9**	**+2.7**
CO02	**Combarbal**	**3.75**	**180**		**Pn**	**01 27 43.5**	**+0.6**
PB15	**IPOC Station P**	**4.43**	**18**		**Pn**	**01 27 54.0**	**+1.6**
ZON	**Zonda**	**4.56**	**154**		**Pn**	**01 27 56.7**	**+2.6**
PB06	**IPOC Station P**	**4.89**	**16**		**Pn**	**01 27 59.2**	**+0.6**
LVC	**Limon Verde**	**5.17**	**22**	Pn	**Pn**	**01 28 04.3**	**+1.6**
	comp=N,3.0nm,0.3s,baz=163,slow=8,6,SNR=47						
LVC				Sn	**Sn**	**01 29 05.1**	**+2.6**
	comp=N,18nm,0.3s,baz=167,slow=11,SNR=1.7						
LVC	**Limon Verde**	**5.17**	**22**	Pn	**Pn**	**01 28 04.5**	**+1.9**
VA03	**San Esteban**	**5.32**	**176**	Pn	**Pn**	**01 28 06.1**	**+1.6**
VA01	**Torpederas**	**5.59**	**186**		**Pn**	**01 28 08.5**	**+0.4**
MT02	**Curacav**	**5.80**	**181**		**Pn**	**01 28 11.4**	**+0.4**
PB01	**IPOC Station P**	**6.51**	**13**		**Pn**	**01 28 20.6**	**-0.3**
PB08	**IPOC Station P**	**7.46**	**13**	Pn	**Pn**	**01 28 34.3**	**+0.2**
PB11	**IPOC Station P**	**7.74**	**9**	Pn	**Pn**	**01 28 37.4**	**-0.4**
H03N1	**Juan Fernandez**	**9.08**	**227**	T	T	01 38 25.9	
	baz=53,slow=72						
H03N2	**Juan Fernandez**	**9.09**	**227**	T	T	01 38 24.8	
	baz=53,slow=72						
H03N3	**Juan Fernandez**	**9.10**	**227**	T	T	01 38 23.3	
	baz=53,slow=72						
VA04	**Juan Fernndez**	**9.15**	**226**	Pn	**Pn**	**01 28 54.7**	**-2.3**
LPAZ	**La Paz**	**11.41**	**14**	Pn	**Pn**	**01 29 29.0**	**+0.5**
	comp=N,0.5nm,0.3s,baz=230,slow=3.4,SNR=10						
LPAZ				LR	LR	01 34 46.9	
	comp=N,84nm,20.2s,baz=173,slow=42						
LPAZ	**La Paz**	**11.41**	**14**		**Pn**	**01 29 28.5**	**-0.1**
LC01	**Cunco**	**11.45**	**183**	Pn	**Pn**	**01 29 26.5**	**-1.9**
CPUP	**Villa Florida**	**12.25**	**88**	Pn	**Pn**	**01 29 38.5**	**-0.9**
	comp=N,0.3nm,0.3s,baz=254,slow=10,SNR=6.3						
CPUP				Lg	Lg	01 33 07.0	
	comp=N,0.2nm,0.3s,baz=167,slow=18,SNR=2.5						
CPUP				LR	LR	01 34 56.2	
	comp=N,171nm,18.9s,baz=284,slow=41						
CPUP	**Villa Florida**	**12.25**	**88**	Pn	**Pn**	**01 29 40.6**	**+1.2**
PLCA	**Paso Flores**	**13.27**	**179**	Pn	**Pn**	**01 29 51.7**	**-1.6**
	comp=N,0.1nm,0.3s,baz=131,slow=20,SNR=1.3						
PLCA				LR	LR	01 35 39.7	
	comp=N,43nm,20.0s,baz=342,slow=41						
SIV	**San Ignacio**	**14.64**	**41**	Pn	**Pn**	**01 30 11.4**	**-0.9**
	comp=N,1.0nm,0.3s,baz=242,slow=11,SNR=11						
NNA	**Nana**	**16.32**	**339**	LR	LR	01 35 50.5	
	comp=N,57nm,20.5s,baz=159,slow=33						
ATAH	**Atahualpa**	**21.38**	**339**	LR	LR	01 39 32.9	
	comp=N,62nm,21.3s,baz=159,slow=36						
BDFB	**Brasilia**	**24.34**	**66**	P	**P**	**01 32 01.8**	**-1.3**
	comp=N,1.6nm,0.5s,baz=231,slow=7.4,SNR=5.0						
BDFB				LR	LR	01 42 58.8	
	comp=N,224nm,18.9s,baz=113,slow=40						
BDFB	**Brasilia**	**24.34**	**66**	P	**P**	**01 32 01.6**	**-1.5**
BDFB				IAmb	IAmb	01 32 11.5	
	comp=Z,18nm,1.3s						
SNAA	**Sanae**	**57.35**	**160**	P	**P**	**01 36 33.1**	**+0.3**
SNAA	**Sanae**	**57.35**	**160**	P	**P**	**01 36 32.2**	**-0.7**
	comp=Z,2.8nm,0.6s,baz=236,slow=8.8,SNR=4.5						
SNAA	**Sanae**	**57.35**	**160**	P	**P**	**01 36 32.0**	**-0.9**
TXAR	**Lajitas Array**	**64.54**	**329**	P	**P**	**01 37 23.4**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=153,slow=7.8,SNR=6.6						
Z35A	**Perchaven, San**	**65.38**	**336**	P	**P**	**01 37 25.1**	**-2.4**
MSTX	**Muleshoe**	**68.10**	**332**	P	**P**	**01 37 45.2**	**+0.2**
DBIC	**Dimbokro**	**72.29**	**72**	P	**P**	**01 38 10.7**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=188,slow=5.8,SNR=3.2						
PDAR	**Pinedale Array**	**78.37**	**332**	P	**P**	**01 38 46.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=128,slow=7.0,SNR=3.2						
NVAR	**Mina Array Bea**	**79.07**	**324**	P	**P**	**01 38 51.2**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=86,slow=5.9,SNR=2.3						
RAR	**Rarotonga**	**79.48**	**252**	LR	LR	02 05 33.6	
	comp=Z,82nm,21.5s,baz=242,slow=29						
TORD	**Torodi Ar. Bea**	**81.14**	**70**	P	**P**	**01 39 01.1**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=268,slow=5.4,SNR=29						
TORD	**Torodi Ar. Bea**	**81.14**	**70**	P	**P**	**01 39 00.3**	**-0.7**
NWAO	**Narrogin (SRO)**	**119.46**	**188**		**PKPdf**	**01 45 35.5**	**+0.4**
WRA	**Warramunga Arr**	**126.89**	**210**	PKP	**PKPdf**	**01 45 49.0**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=168,slow=1.8,SNR=7.6						
ZALV	**Zalesovo Beam**	**148.10**	**27**	PKPbc	**PKPbc**	**01 46 30.9**	**+0.5**
	comp=Z,0.9nm,0.4s,baz=329,slow=2.3,SNR=7.3						
ZALV	**Zalesovo Beam**	**148.10**	**27**		**PKPbc**	**01 46 31.3**	**+0.9**
MKAR	**Makanchi Array**	**151.46**	**40**	PKPbc	**PKPbc**	**01 46 39.4**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=360,slow=1.5,SNR=6.5						
MKAR				PKPab	**PKPab**	**01 46 47.7**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=309,slow=1.9,SNR=5.0						
MKAR	**Makanchi Array**	**151.46**	**40**		**PKPbc**	**01 46 39.6**	**+0.6**

RSNC 02 01:26:54.1±1.0,0°.82N×77°.98W,h0km±2km,ML2.6,Mw3.5, 1D,Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMBC	**Cumbal**	**0.20**	**52**	*eP*	Pg	01 26 58.4	+0.5
CMBC				*eS*	Sg	01 27 02.4	+1.9
CUSE	**Cuicocha Este**	**0.66**	**219**	*eP*	Pg	01 27 06.2	-0.5
CUSE				*eS*	Sg	01 27 16.9	+1.6
CCUFI	**Cufio, Nario**	**0.75**	**57**	*eP*	Pg	01 27 08.0	-0.6
GCUF	**Volcan Galeras**	**0.75**	**57**	*eP*	Pg	01 27 08.4	-0.2
GCUF				*i*		01 27 22.8	
	comp=Z,122nm,0.6s						
CPAS1	**Pasto**	**0.76**	**61**	*eP*	Pg	01 27 09.1	+0.4
CPAS1	**Pasto**	**0.76**	**61**	*eS*	Sg	01 27 19.7	+1.3
CPAS2	**Pasto**	**0.83**	**61**	*eP*	Pg	01 27 09.2	-0.9
CPAS2	**Pasto**	**0.83**	**61**	*eS*	Sg	01 27 21.9	+1.0
PAC1	**Pacto, Paraso**	**0.98**	**236**	‖*eP*	Pg	01 27 11.8	-1.1
PAC1				*eS*	Sg	01 27 25.5	-0.1
CRUC	**La Cruz**	**1.27**	**54**	*eP*	Pg	01 27 17.5	-1.0
BBAC	**Balboa, Cauca**	**1.40**	**32**	*eP*	Pg	01 27 19.9	-1.2
BBAC				*eS*	Sg	01 27 38.7	-0.6
BBAC				*i*		01 27 45.8	
	comp=Z,161nm,0.3s						
PUAC	**Puerto Asis, P**	**1.44**	**101**	*eP*	Pn	01 27 20.1	-1.3
PUAC				*eS*	Sg	01 27 39.0	-1.3
PUAC				*i*		01 27 42.1	
	comp=Z,71nm,0.3s						
POPC	**Popayan, Colom**	**2.15**	**37**	*eP*	Pn	01 27 32.6	+1.1
POPC				*eS*	Sg	01 28 06.0	+2.7
POPC				*i*		01 28 15.1	
	comp=Z,24nm,0.8s						
GR1C	**Gorgona, Isla**	**2.18**	**355**	*eP*	Pn	01 27 30.0	-1.6
PCON	**Cinco Dias**	**2.18**	**47**	*eP*	Pb	01 27 34.9	+0.1
GARC	**Garzon, Huila**	**2.83**	**61**	*eP*	Pb	01 27 45.1	-0.6
GARC				*eS*	Sg	01 28 24.2	-1.1
GARC				*i*		01 28 31.5	
	comp=Z,38nm,0.5s						
PTLC	**Puerto Leguiza**	**3.25**	**101**	*eP*	Pn	01 27 49.4	+3.0
YOTC	**Yotoco, Valle**	**3.54**	**27**	*eP*	Pb	01 27 54.2	-3.6
YOTC				*eS*	Sb	01 28 37.6	-3.8
PRAC	**Prado**	**4.22**	**47**	*eP*	Pb	01 28 07.8	-1.5
MACC	**Macarena, Meta**	**4.34**	**72**	*eP*	Pb	01 28 13.1	+1.8
TOLC	**Tolima**	**4.59**	**35**	*eP*	Pn	01 28 10.4	+5.3
GUY2C	**Guyana, Caldas**	**5.10**	**31**	*eP*	Pn	01 28 17.7	+5.5

*IDC **02** 01:46:22.7±1.2,28°.82N×60°.18E,h0km,mb3.5/6,*
mb1 3.7/6,mb1mx3.4/41,mbtmp3.5/6,Error ellipse:
s-maj=38.0km s-min=27.2km az=171.0
*TEH **02** 01:46:23.5,29°.27N×60°.20E,h10km,ML3.9*
*THR **02** 01:46:27.2±0.3,29°.46N×60°.10E,h10km±16km,ML4.1*

ISC 02 01:46:24.7±0.8,29°.19N±0°.07×60°.31E±0°.05,h10km,n28, σ1§54/31,mb3.5/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SZD1	**Zahaedan-tmp**	**0.56**	**58**	*e*Pg	**Pg**	**01 46 35.6**	**-0.1**
ZHSF	**Zahedan**	**0.58**	**44**	*e*Pg	**Pn**	**01 46 39.3**	**+0.1**
ZHSF				*e*Sg	**Sn**	**01 46 48.1**	**-0.8**
KBAM	**BAM**	**1.63**	**269**	*e*Pg	**Pn**	**01 46 52.8**	**-0.8**
KBAM				*e*Sg	**Sn**	**01 47 13.9**	**-0.8**
NHDN	**Nehbandan**	**2.21**	**354**	*e*Pn	**Pn**	**01 47 00.9**	**-0.7**
CHMN	**Cheshme madani**	**2.51**	**286**	*e*Pn	**Pn**	**01 47 04.1**	**-1.8**
KHNJ	**Kahnooj**	**2.61**	**242**	*e*Pn	**Pn**	**01 47 07.5**	**+0.5**
BSRN	**Basiran**	**2.95**	**340**	*e*Pn	**Pn**	**01 47 12.0**	**+0.2**
NGRK	**Negar Kerman**	**3.16**	**279**	*e*	**Sg**	**01 48 11.1**	**+4.8**
KRBR	**Kerman**	**3.19**	**285**	*e*Pn	**Pn**	**01 47 16.4**	**+1.2**
TVBK	**TV Kerman**	**3.19**	**285**	*e*	**Sg**	**01 48 06.0**	**-1.3**
IKOO	**Kooshah**	**3.42**	**341**	*e*Pn	**Pn**	**01 47 17.7**	**-0.6**
IKOO				*e*		01 47 31.2	
KHGB	**Koh Gabri**	**3.54**	**290**	*e*Pn	**Pn**	**01 47 20.6**	**+0.6**
KHGB				*e*		01 48 22.9	
IDAH	**Dahanechah**	**3.56**	**354**	*e*Pn	**Pn**	**01 47 20.4**	**+0.1**
ITEG	**Tejag**	**3.93**	**340**	*e*Pn	**Pn**	**01 47 24.7**	**-0.6**
IMON	**Monand**	**4.03**	**352**	*e*Pn	**Pn**	**01 47 26.4**	**-0.3**
GENO	**Geno**	**4.06**	**245**	*e*	**Pg**	**01 47 42.2**	**-0.4**
AFRZ	**Afriz**	**4.37**	**346**	*e*Pn	**Pn**	**01 47 30.9**	**-0.4**
TPRV	**Parvadeh(Tabas**	**4.93**	**322**	*e*Pn	**Pn**	**01 47 38.5**	**-0.5**
TKDS	**Koohdasht(Taba**	**5.18**	**329**	*e*Pn	**Pn**	**01 47 42.7**	**+0.2**
TABS	**Tabas**	**5.22**	**329**	*e*Pn	**Pn**	**01 47 43.0**	**+0.1**
TNSJ	**Nastanj**	**5.71**	**327**	*e*Pn	**Pn**	**01 47 49.1**	**-0.6**
MKAR	**Makanchi Array**	**24.54**	**38**	P	**P**	**01 51 46.0**	**+1.5**
	0.3nm,0.5s,baz=224,slow=8.9,SNR=1.7						
ZALV	**Zalesovo Beam**	**30.50**	**29**	P	**P**	**01 52 40.9**	**+3.2**
	0.7nm,0.6s,baz=242,slow=6.2,SNR=2.8						
GERES	**GERESS Array B**	**40.44**	**312**	P	**P**	**01 54 05.2**	**+1.8**
	0.3nm,0.8s,baz=104,slow=8.2,SNR=4.1						
CLL	**Collm**	**41.42**	**316**	*eP*	**P**	**01 54 08.0**	**-3.2**
CLL				*e*(sP)	**pP**	**01 54 15.0**	**+0.2**
TORD	**Torodi Ar. Bea**	**56.41**	**267**	P	**P**	**01 56 04.7**	**-2.1**
	1.1nm,0.7s,baz=63,slow=7.0,SNR=11						
WRA	**Warramunga Arr**	**86.45**	**115**	P	**P**	**01 59 07.1**	**-0.8**
	0.2nm,0.7s,baz=304,slow=4.3,SNR=1.6						
ASAR	**Alice Springs**	**88.12**	**118**	P	**P**	**01 59 16.3**	**+0.3**
	0.3nm,0.8s,baz=331,slow=5.5,SNR=1.7						

IDC 02 01:54:58.9±32.0,13°.27S×166°.81E,h127km±148km, mb3.6/3,mb1 3.7/4,mb1mx3.3/36,mbtmp3.9/4,ML3.1/1, Error ellipse: s-maj=686.7km s-min=91.2km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.76**	**182**	P	Pn	01 57 02.6	0.0
	0.2nm,0.3s,baz=0.0,slow=20,SNR=1.3						
DZM				S	Sn	01 58 33.9	-5.8
	0.2nm,0.3s,baz=156,slow=20,SNR=1.7						
STKA	**Stephens Creek**	**29.62**	**227**	P	P	02 00 52.3	-0.1
	2.3nm,0.4s,baz=77,slow=10,SNR=8.2						
WRA	**Warramunga Arr**	**31.78**	**254**	P	P	02 01 11.5	0.0
	0.3nm,0.4s,baz=85,slow=8.9,SNR=9.9						
ASAR	**Alice Springs**	**32.81**	**247**	P	P	02 01 20.4	-0.1
	1.0nm,0.6s,baz=74,slow=9.4,SNR=21						

IDC 02 02:23:19.2±1.5,6°.11S×127°.99E,h394km±18km,mb3.1/2, mb1 3.5/6,mb1mx3.0/38,mbtmp4.2/6,Error ellipse: s-maj=31.5km s-min=12.4km az=74.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.91**	**226**	P	Pn	02 24 50.2	-0.5
	21nm,0.3s,baz=65,slow=1.2,SNR=15						
BATI				S	S	02 25 53.5	-12
	4.3nm,0.3s,baz=60,slow=8.7,SNR=4.3						
SIJI	**Sorong**	**6.14**	**32**	P	Pn	02 24 53.2	0.0
	3.4nm,0.3s,baz=57,slow=23,SNR=7.4						
SIJI				S	S	02 26 04.5	-5.3
	3.3nm,0.3s,baz=18,slow=24,SNR=9.4						
WRA	**Warramunga Arr**	**15.07**	**156**	P	P	02 26 33.3	+0.5
	1.4nm,0.3s,baz=336,slow=11,SNR=120						
WRA				S	S	02 29 11.8	-1.2
	0.1nm,0.3s,baz=336,slow=21,SNR=3.3						
ASAR	**Alice Springs**	**18.36**	**163**	P	P	02 27 08.4	+0.4
	1.3nm,0.3s,baz=344,slow=12,SNR=90						
ASAR				S	S	02 30 17.7	+0.7
	0.1nm,0.3s,baz=343,slow=18,SNR=5.6						
SONM	**Songino Array**	**56.98**	**343**	P	P	02 32 26.0	+0.6
	0.4nm,0.6s,baz=165,slow=6.0,SNR=2.5						
MKAR	**Makanchi Array**	**66.40**	**328**	P	P	02 33 27.1	-0.4
	0.8nm,0.4s,baz=124,slow=7.6,SNR=10						

*ISK **02** 02:29:56.1,36°.97N×27°.72E,h13km,ML2.4/13*
*SOF **02** 02:30:13.8,39°.66N×28°.83E,h90km,MD4.1*

ISC 02 02:29:55.6±0.9,37°.05N±0°.04×27°.65E±0°.04,h10km,n23, σ1§07/22,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.27**	**274**	PG	**Pb**	**02 30 03.0**	**+0.4**
BODT				SG	**Sb**	**02 30 08.8**	**+1.5**
MLSB	**Milas**	**0.27**	**22**	PG	**Pb**	**02 30 02.9**	**+0.3**
MLSB				SG	**Sb**	**02 30 08.4**	**+1.1**
DATC	**Datca-Mugla**	**0.29**	**178**	PG	**Pg**	**02 30 00.9**	**-0.5**
DATC				SG	**Sg**	**02 30 04.8**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.30**	**285**	PG	**Pb**	**02 30 03.8**	**+0.6**
DAT	**Datca**	**0.32**	**190**	PG	**Pg**	**02 30 01.9**	**-0.2**
DAT				SG	**Sg**	**02 30 06.8**	**+0.4**
YER	**Yerkesik**	**0.52**	**80**	PG	**Pg**	**02 30 05.9**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.55**	**127**	PG	**Pg**	**02 30 05.6**	**-0.7**
TURN	**Turunc**	**0.55**	**119**	PG	**Pg**	**02 30 05.6**	**-0.7**
GCAM	**G?zelcaml?**	**0.73**	**333**	PG	**Pn**	**02 30 12.4**	**+0.4**
DALY	**Dalyan (Mula)**	**0.84**	**105**	PG	**Pg**	**02 30 11.2**	**-0.6**
ARG	**Arkhangelos**	**0.91**	**155**	PG	**Pg**	**02 30 12.6**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.92**	**12**	PG	**Pn**	**02 30 15.4**	**+0.6**
CAME	**Cameli-Denizli**	**1.33**	**94**	PN	**Pn**	**02 30 20.6**	**+0.2**
KULA	**Kula-Manisa**	**1.67**	**28**	PN	**Pb**	**02 30 26.7**	**+0.1**
AKAS	**Kas**	**1.77**	**117**	PN	**Pn**	**02 30 26.7**	**+0.2**
KDZ	**Kurdzhali**	**4.91**	**340**	*i* P	Pn	02 31 04.1	-5.4
RZN	**Rozhen**	**5.16**	**335**	*i* P	**Pn**	**02 31 09.9**	**-3.2**
MMB	**Musomiste**	**5.46**	**327**	*i* P	**Pn**	**02 31 17.7**	**+0.6**
PLD	**Plovdiv**	**5.54**	**337**	*i* P	Pn	02 31 13.1	-5.0
PGB	**Panagyurishte**	**6.12**	**335**	*i* P	Pn	02 31 20.9	-5.2
SZH	**Strazhica**	**6.35**	**349**	*i* P	Pn	02 31 16.7	-13
VTS	**Vitosha**	**6.52**	**330**	*i* P	**Pn**	**02 31 29.8**	**-1.9**
PSN	**Preselentsi**	**6.64**	**3**	*i* P	Pn	02 31 13.9	-19

ISK 02 02:30:15.3,36°.98N×27°.70E,h5km,ML2.2/10, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DATC	**Datca-Mugla**	**0.23**	**188**	PG	Pg	02 30 20.9	+1.2
DATC				SG	Sg	02 30 25.2	+2.5
DAT	**Datca**	**0.27**	**201**	PG	Pb	02 30 21.9	-0.8
MLSB	**Milas**	**0.32**	**11**	PG	Pb	02 30 23.0	-0.5
MLSB				SG	Sb	02 30 28.5	-0.5
BODT	**Bodrum**	**0.32**	**284**	PG	Pb	02 30 22.6	-0.9
BODT				SG	Sb	02 30 28.5	-0.5
YKAV	**Yalikavak-Bodr**	**0.36**	**293**	PG	Pb	02 30 23.3	-0.9
YKAV				SG	Sb	02 30 29.2	-0.6
YER	**Yerkesik**	**0.49**	**72**	PG	Pb	02 30 25.7	-0.8
YER				SG	Sg	02 30 32.4	+1.2
KOSK	**Kos Island**	**0.62**	**248**	PG	Pb	02 30 28.7	+0.1
KOSK				SG	Sb	02 30 38.5	+0.9
GCAM	**G?zelcaml?**	**0.81**	**333**	PG	Pb	02 30 32.1	+0.3
AYDB	**Zeytinkoy-Aydi**	**0.97**	**9**	PG	Pn	02 30 35.4	-0.4
CAME	**Cameli-Denizli**	**1.29**	**91**	PN	Pb	02 30 41.5	+1.4
AKAS	**Kas**	**1.71**	**115**	PN	Pb	02 30 47.2	-0.1
KULA	**Kula-Manisa**	**1.71**	**26**	PN	Pb	02 30 47.5	+0.3
ELL	**Elmali**	**1.79**	**97**	PN	Pb	02 30 48.5	-0.1

*ATH **02** 03:10:02.0,37°.81N×21°.16E,h22km±1km,ML3.7/18,Error*
ellipse: s-maj=1.8km s-min=0.7km az=309.0
*THE **02** 03:10:02.7,37°.79N×21°.17E,h0km±1km,ML3.8/26,Error*
ellipse: s-maj=1.3km s-min=0.4km az=219.0
*IDC **02**

GUR	**Goura**	**0.96**	**81**	P		**Pb**	**03 10 19.7**	**-1.5**
GUR				S		**Sn**	**03 10 34.3**	**-0.5**
	comp=N,10μm,0.6s							
KALE	**Kalithea**	**0.99**	**52**	P		**Pb**	**03 10 20.4**	**-1.2**
KALE	**Kalithea**	**0.99**	**52**	P		**Pb**	**03 10 20.5**	**-1.2**
KALE				S		**Sn**	**03 10 36.4**	**+0.9**
	comp=N,5μm,0.5s							
NYDR	**Nydri-Lefkada**	**0.99**	**339**	P		**Pb**	**03 10 20.5**	**-1.1**
NYDR	**Nydri-Lefkada**	**0.99**	**339**	P		**Pb**	**03 10 20.6**	**-1.1**
NYDR				S		**Sn**	**03 10 36.0**	**+0.6**
	comp=N,2μm,0.5s							
PYL	**PYLOS**	**1.01**	**152**	P		**Pb**	**03 10 20.7**	**-1.3**
PYL	**PYLOS**	**1.01**	**152**	P		**Pb**	**03 10 20.7**	**-1.3**
PYL				S		**Sn**	**03 10 36.0**	**+0.2**
	comp=N,2μm,1.0s							
ANX	**Ano Chora**	**1.01**	**37**	P		**Pb**	**03 10 21.0**	**-1.1**
ANX				S		**Sn**	**03 10 37.0**	**+0.9**
VLX	**Vlachokerasia**	**1.06**	**113**	P		**Pb**	**03 10 22.4**	**-0.6**
VLX				AML	AML		03 10 46.6	
	comp=N,7275μm,0.6s							
VLX				AML	AML		03 10 49.7	
	comp=E,8679μm,0.5s							
VLX	**Vlachokerasia**	**1.06**	**113**	P		**Pn**	**03 10 23.0**	**-0.1**
LKD2	**Lefkada island**	**1.07**	**339**	P		**Pb**	**03 10 22.1**	**-1.0**
LKD2				AML	AML		03 10 44.9	
	comp=E,11657μm,0.5s							
LKD2				AML	AML		03 10 45.5	
	comp=N,8496μm,0.6s							
LKD2	**Lefkada island**	**1.07**	**339**	P		**Pb**	**03 10 22.1**	**-1.0**
LKD2				S		**Sn**	**03 10 39.4**	**+1.9**
	comp=N,5μm,0.5s							
TSLK	**Tsoukalades, L**	**1.11**	**340**	P		**Pb**	**03 10 22.9**	**-0.8**
TSLK				AML	AML		03 10 44.8	
	comp=E,6315μm,0.8s							
TSLK				AML	AML		03 10 47.2	
	comp=N,7806μm,0.7s							
TSLK	**Tsoukalades, L**	**1.11**	**340**	P		**Pb**	**03 10 22.9**	**-0.8**
TSLK				S		**Sg**	**03 10 39.7**	**+0.5**
	comp=N,4μm,0.7s							
THAL	**Thalero**	**1.23**	**78**	P		**Pn**	**03 10 24.8**	**-0.4**
THAL				AML	AML		03 10 52.4	
	comp=E,28034μm,0.6s							
THAL				AML	AML		03 10 54.5	
	comp=N,19132μm,0.7s							
THAL	**Thalero**	**1.23**	**78**	P		**Pn**	**03 10 24.8**	**-0.4**
EVR	**Evrytania**	**1.24**	**25**	P		**Pn**	**03 10 25.1**	**-0.5**
EVR				AML	AML		03 10 48.4	
	comp=E,2992μm,0.4s							
EVR				AML	AML		03 10 55.4	
	comp=N,4536μm,0.7s							
EVR	**Evrytania**	**1.24**	**25**	P		**Pn**	**03 10 25.1**	**-0.5**
DLFA	**Delphi**	**1.27**	**57**	P		**Pn**	**03 10 25.3**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.45**	**32**	P		**Pb**	**03 10 29.2**	**-0.3**
MAKR				S		**Sg**	**03 10 50.3**	**+0.2**
	comp=N,4μm,1.0s							
LTK	**Loutraki**	**1.46**	**80**	P		**Pb**	**03 10 29.0**	**-0.7**
LTK				AML	AML		03 10 55.5	
	comp=N,4049μm,0.7s							
LTK				AML	AML		03 10 58.2	
	comp=E,5309μm,0.7s							
LTK	**Loutraki**	**1.46**	**80**	P		**Pb**	**03 10 29.0**	**-0.7**
LTK				S		**Sg**	**03 10 49.1**	**-1.3**
	comp=E,2μm,0.7s							
LOUT	**Loutraki**	**1.46**	**82**	P		**Pb**	**03 10 29.8**	**+0.1**
LOUT				AML	AML		03 11 00.1	
	comp=E,1011μm,0.6s							
LOUT				AML	AML		03 11 04.4	
	comp=N,828μm,1.0s							
LOUT	**Loutraki**	**1.46**	**82**	P		**Pb**	**03 10 29.5**	**-0.2**
LOUT				S		**Sg**	**03 10 50.4**	**0.0**
	comp=N,3μm,0.5s							
AXAR	**Agios Charalam**	**1.54**	**50**	P		**Pn**	**03 10 30.0**	**+0.4**
AXAR				AML	AML		03 11 01.8	
	comp=E,13985μm,1.2s							
AXAR				AML	AML		03 11 02.1	
	comp=N,12908μm,0.6s							
AXAR	**Agios Charalam**	**1.54**	**50**	P		**Pn**	**03 10 30.0**	**+0.4**
AXAR				S		**Sg**	**03 10 52.0**	**-1.0**
AGG	**Agios Georgios**	**1.55**	**37**	P		**Pn**	**03 10 29.8**	**+0.1**
AGG				AML	AML		03 10 57.2	
	comp=E,3771μm,0.8s							
AGG				AML	AML		03 10 57.8	
	comp=N,2743μm,0.8s							
AGG	**Agios Georgios**	**1.55**	**37**	*e*P		**Pb**	**03 10 30.6**	**-0.6**
AGG	**Agios Georgios**	**1.55**	**37**	P		**Pn**	**03 10 30.0**	**+0.3**
AGG				S		**Sg**	**03 10 52.2**	**-1.0**
	comp=N,2μm,0.8s							
EPID	**Epidavros**	**1.57**	**96**	P		**Pb**	**03 10 32.0**	**+0.4**
KRND	**KRANIDI**	**1.64**	**104**	P		**Pb**	**03 10 32.4**	**-0.4**
KRND				AML	AML		03 11 01.7	
	comp=N,3838μm,0.5s							
KRND				AML	AML		03 11 02.5	
	comp=E,3875μm,0.5s							
KRND	**KRANIDI**	**1.64**	**104**	P		**Pb**	**03 10 32.4**	**-0.4**
LKR	**Lokris**	**1.70**	**59**	P		**Pb**	**03 10 33.0**	**-0.7**
LKR				S		**Sg**	**03 10 56.7**	**-1.2**
	comp=E,1μm,1.0s							
ATAL	**Atalanti**	**1.73**	**58**	P		**Pb**	**03 10 33.5**	**-0.8**
ATAL				S		**Sb**	**03 10 55.9**	**+0.2**
	comp=E,2μm,1.4s							
VILL	**Villia**	**1.75**	**77**	P		**Pb**	**03 10 34.4**	**-0.3**
VILL				S		**Sg**	**03 10 57.6**	**-2.2**
VLI	**Veliai**	**1.78**	**126**	P		**Pb**	**03 10 34.5**	**-0.7**
IGT	**Igoumenitsa**	**1.86**	**340**	P		**Pn**	**03 10 35.0**	**+1.1**
IGT	**Igoumenitsa**	**1.86**	**340**	P		**Pb**	**03 10 35.5**	**-0.9**
ATH	**Athens Observa**	**2.04**	**84**	P		**Pb**	**03 10 38.2**	**-1.4**
ATH				S		**Sb**	**03 11 04.2**	**-0.4**
	comp=E,2μm,0.9s							
ATHU	**Athens Univers**	**2.10**	**84**	P		**Pb**	**03 10 39.6**	**-0.9**
VLY	**Voula,Athens**	**2.10**	**87**	P		**Pb**	**03 10 38.8**	**-1.8**
VLY				S		**Sb**	**03 11 05.5**	**-0.7**
	comp=E,1μm,0.7s							
PTL	**Penteli**	**2.17**	**82**	P		**Pb**	**03 10 39.9**	**-1.8**
PTL				S		**Sb**	**03 11 08.5**	**+0.3**
	comp=E,1μm,0.9s							
DION	**Dionisos Attik**	**2.22**	**82**	P		**Pb**	**03 10 41.1**	**-1.6**
DION				S		**Sb**	**03 11 08.9**	**-0.9**
	comp=E,2μm,1.1s							
XOR	**Xorichti**	**2.25**	**45**	P		**Pb**	**03 10 41.2**	**-2.0**
AOS	**Alonnisos**	**2.55**	**56**	*e*P		**Pn**	**03 10 45.1**	**+1.6**
HORT	**Hortiatis**	**3.19**	**28**	*e*P		**Pn**	**03 10 53.9**	**+1.6**
OHR	**Ohrid**	**3.33**	**355**	*e*Pn		**Pn**	**03 10 56.8**	**+2.6**
OUR	**Ouranopolis**	**3.37**	**40**	*e*P		**Pn**	**03 10 56.7**	**+2.0**
APE	**Apeiranthos**	**3.56**	**100**	*e*P		**Pn**	**03 10 59.9**	**+2.5**
KNT	**Kendrikon**	**3.63**	**21**	*e*P		**Pn**	**03 10 59.8**	**+1.5**
TIR	**Tirane**	**3.69**	**345**	⇑P		**Pn**	**03 11 00.4**	**+1.2**
TIP	**Timpagrande**	**3.71**	**293**	⇓P		**Pn**	**03 10 58.2**	**-1.3**
TIP				⇓S		**Sn**	**03 11 42.0**	**-0.7**
IDI	**Anoyia**	**3.91**	**128**	P		**Pn**	**03 11 04.0**	**+1.8**
	comp=E,1.2nm,0.3s,baz=285,slow=10,SNR=6.3							
IDI				S		**Sn**	**03 11 47.8**	**+0.2**
	comp=E,2.9nm,0.3s,baz=72,slow=21,SNR=3.7							
IDI				LR	LR		03 12 35.4	
	comp=E,99nm,19.4s,baz=283,slow=38							
IDI	**Anoyia**	**3.91**	**128**	⇑P		**Pb**	**03 11 08.1**	**-3.4**
SIGR	**SIGRI**	**3.96**	**67**	*e*P		**Pn**	**03 11 05.5**	**+2.7**
MMB	**Musomiste**	**4.29**	**27**	*e*P		**Pn**	**03 11 09.5**	**+2.1**
URLA	**Izmir**	**4.34**	**81**	*e*P		**Pn**	**03 11 11.2**	**+3.2**
KKB	**Krupnik**	**4.34**	**19**	*e*P		Pb	03 11 13.3	-5.5
BOZC	**Bozcaada**	**4.35**	**60**	*e*P		**Pn**	**03 11 11.3**	**+3.2**
GADA	**Gvkgeada**	**4.41**	**56**	*e*P		**Pn**	**03 11 11.8**	**+2.8**
MATE	**Matera**	**4.48**	**311**	⇑P		**Pn**	**03 11 10.0**	**0.0**
MATE				⇑S		**Sn**	**03 11 59.6**	**-1.9**
DRME	**Dracevica, Mon**	**4.65**	**342**	*e*Pn		**Pn**	**03 11 10.8**	**-1.4**
RZN	**Rozhen**	**4.77**	**34**	*e*P		**Pn**	**03 11 16.6**	**+2.5**
RDO	**Rodhopi**	**4.78**	**44**	*e*P		**Pn**	**03 11 16.1**	**+2.1**
PDG	**Podgorica**	**4.86**	**343**	⇑P		**Pn**	**03 11 16.8**	**+1.6**
PDG	**Podgorica**	**4.86**	**343**	*e*Pn		**Pn**	**03 11 14.8**	**-0.3**
GELI	**Tayfur-Gelibol**	**4.90**	**56**	*e*P		**Pn**	**03 11 18.7**	**+3.0**
ALN	**Alexandroupoli**	**4.91**	**49**	*e*P		**Pn**	**03 11 18.7**	**+2.9**
HCY	**Herceg Novi**	**5.08**	**337**	*e*Pn		**Pn**	**03 11 16.9**	**-1.3**
AYDB	**Zeytinkoy-Aydi**	**5.34**	**86**	*e*P		**Pn**	**03 11 25.6**	**+3.7**
VAE	**Valguarnera**	**5.35**	**269**	S		**Sn**	**03 12 22.4**	**-0.7**
	comp=E,8.0nm,0.3s,baz=344,slow=1.0,SNR=2.5							
TREB	**Trebinje**	**5.37**	**337**	*e*Pn		**Pn**	**03 11 19.9**	**-2.3**
BRY	**Bratogost**	**5.48**	**340**	*e*Pn		**Pn**	**03 11 22.3**	**-1.6**
RKY	**Sarkoy-Tekirda**	**5.51**	**56**	*e*P		**Pn**	**03 11 27.6**	**+3.5**
UPM	**Unac-Piva**	**5.67**	**343**	*e*Pn		**Pn**	**03 11 26.8**	**+0.3**
STON	**Ston**	**5.72**	**334**	*e*Pn		**Pn**	**03 11 26.4**	**-0.5**
STON				Sn		**Sn**	**03 12 27.5**	**-4.5**
LSTV	**Lastovo**	**5.95**	**328**	*e*Pn		**Pn**	**03 11 29.3**	**-0.7**
LSTV				Sn		**Sn**	**03 12 32.5**	**-5.1**
BBLS	**Lazići**	**6.22**	**348**	*e*Pn		Pn	03 11 39.0	+5.1
MAKA	**Makarska**	**6.33**	**332**	*e*Pn		**Pn**	**03 11 34.6**	**-0.7**
DIVS	**Divibare**	**6.37**	**352**	*e*Pn		**Pn**	**03 11 35.0**	**-0.9**
RICI	**Ricice**	**6.47**	**333**	*e*Pn		**Pn**	**03 11 35.7**	**-1.5**
HAPS	**Han Pijesak,BI**	**6.51**	**346**	*e*Pn		**Pn**	**03 11 35.4**	**-2.5**
MDVR	**Moldovita**	**7.00**	**3**	⇓P		**Pn**	**03 11 47.2**	**+2.6**
HERR	**Herculane**	**7.15**	**7**	⇑P		**Pn**	**03 11 48.2**	**+1.6**
KIJV	**Kijevo**	**7.17**	**331**	*e*Pn		**Pn**	**03 11 47.3**	**+0.3**
MORI	**Morici**	**7.34**	**328**	*e*Pn		**Pn**	**03 11 47.3**	**-1.9**
AQU	**L'Aquila**	**7.49**	**310**	*e*Pn		**Pn**	**03 11 55.3**	**+4.0**
BLY	**Banja Luka**	**7.57**	**338**	*e*Pn		Pn	03 11 44.6	-7.7
GZR	**Gura Zlata**	**7.70**	**9**	⇓P		**Pn**	**03 11 56.6**	**+2.4**
DUGI	**Dugi Otok**	**7.72**	**325**	*e*Pn		**Pn**	**03 11 55.0**	**+0.5**
BZS	**Buzias**	**7.83**	**2**	⇓P		**Pn**	**03 11 59.0**	**+3.0**
UDBI	**Udbina**	**7.86**	**331**	*e*Pn		**Pn**	**03 11 55.0**	**-1.5**
VOIR		**8.18**	**20**	⇑P		**Pn**	**03 12 04.5**	**+3.7**
NVLJ	**Novalja**	**8.26**	**327**	*e*Pn		**Pn**	**03 12 00.8**	**-1.0**
NVLJ				Sn		Sn	03 13 25.6	-8.9
MLR	**Muntele Rosu**	**8.49**	**23**	P		**Pn**	**03 12 09.0**	**+3.8**
	comp=E,0.1nm,0.3s,baz=205,slow=7.7,SNR=3.1							
MLR	**Muntele Rosu**	**8.49**	**23**	⇓P		**Pn**	**03 12 09.5**	**+4.3**
PLOR	**Plostina**	**9.04**	**25**	⇓P		**Pn**	**03 12 16.5**	**+3.9**
VRI	**Vrincioaia**	**9.08**	**26**	⇑P		**Pn**	**03 12 17.1**	**+4.0**
CRES	**Cresnjev**	**9.08**	**334**	*e*Pn		**Pn**	**03 12 11.8**	**-1.3**
CEY	**Cerknica**	**9.39**	**330**	*e*Pn		**Pn**	**03 12 17.0**	**-0.4**
KEST	**Kesra**	**9.69**	**261**	P		**Pn**	**03 12 22.4**	**+0.9**
	comp=E,0.1nm,0.3s,baz=352,slow=10,SNR=2.3							
BRTR	**Keskin Array B**	**9.95**	**75**	P		**Pn**	**03 12 28.7**	**+3.6**
	baz=264,slow=13,SNR=1.9							
BRTR				LR	LR		03 16 10.3	
	comp=E,33nm,20.8s,baz=247,slow=37							
SOKA	**Soboth**	**9.97**	**335**	*e*Pn		**Pn**	**03 12 25.5**	**+0.1**
	comp=E,0.5nm,0.4s							
OBKA	**Obir**	**9.99**	**333**	*e*Pn		**Pn**	**03 12 27.1**	**+1.5**
ARSA	**Arzberg**	**10.32**	**338**	*e*Pn		**Pn**	**03 12 34.9**	**+4.7**
	comp=E,0.7nm,0.6s							
CONA	**Conrad Observa**	**10.85**	**341**	*e*Pn		**Pn**	**03 12 40.7**	**+3.4**
	comp=E,0.1nm,0.1s							
ABTA	**Abfaltersbach**	**11.00**	**327**	*e*Pn		**Pn**	**03 12 43.5**	**+4.1**
	comp=E,0.7nm,0.4s							
MOA	**Molln**	**11.25**	**336**	*e*Pn		**Pn**	**03 12 44.6**	**+1.8**
	comp=E,0.4nm,0.3s							
WTTA	**Wattenberg**	**11.78**	**327**	*e*Pn		**Pn**	**03 12 51.9**	**+1.7**
	comp=E,0.3nm,0.2s							
WATA	**Walderalm**	**11.86**	**327**	*e*Pn		**Pn**	**03 12 54.5**	**+3.3**
	comp=E,0.3nm,0.2s							
SQTA	**Sankt Quirin**	**11.93**	**325**	*e*Pn		**Pn**	**03 12 54.6**	**+2.3**
	comp=E,0.4nm,0.3s							
FETA	**Feichten**	**12.01**	**324**	*e*Pn		**Pn**	**03 12 55.9**	**+2.6**
	comp=E,0.2nm,0.4s							
MOTA	**Moosalm**	**12.07**	**325**	*e*Pn		**Pn**	**03 12 57.7**	**+3.5**
	comp=E,0.2nm,0.2s							
DAVOX	**Davos/Dischmat**	**12.25**	**321**	P		**Pn**	**03 12 57.9**	**+1.3**
	comp=E,0.1nm,0.3s,baz=357,slow=21,SNR=1.3							
DAVOX				S		**Sn**	**03 15 06.5**	**-6.2**
	comp=E,0.1nm,0.3s,baz=169,slow=24,SNR=1.8							
GERES	**GERESS Array B**	**12.30**	**336**	P		**Pn**	**03 12 58.3**	**+1.1**
	comp=E,0.1nm,0.3s,baz=149,slow=13,SNR=2.2							
GERES				LR	LR		03 18 43.6	
	comp=E,53nm,19.3s,baz=114,slow=42							
DAVA	**Damuels**	**12.60**	**322**	*e*Pn		**Pn**	**03 13 05.1**	**+3.7**
	comp=E,0.5nm,0.3s							
KVAR	**Kislovodsk Arr**	**17.40**	**62**	P		**P**	**03 14 07.0**	**+1.0**
	baz=270,slow=13,SNR=1.6							
ESDC	**Sonseca Array**	**19.66**	**283**	P		**P**	**03 14 31.2**	**+0.3**
	comp=E,0.0nm,0.3s,baz=76,slow=11,SNR=5.2							
HFS	**Hagfors**	**22.87**	**350**	P		**P**	**03 15 05.5**	**+0.4**
	comp=E,1.4nm,0.6s,baz=133,slow=14,SNR=1.7							
FINES	**FINESS Array B**	**23.88**	**6**	P		**P**	**03 15 14.7**	**-0.4**
	comp=E,4.7nm,0.9s,baz=183,slow=10,SNR=14							
EKA	**Eskdalemuir Ar**	**24.03**	**325**	P		**P**	**03 15 16.7**	**+0.1**
	comp=E,1.7nm,0.8s,baz=121,slow=9.5,SNR=0.9							
NB2	**NORSAR Subarra**	**24.10**	**348**	P		**P**	**03 15 18.3**	**+1.0**
	comp=Z,4.2nm,1.2s,baz=159,slow=10							
NOA	**NORSAR Array B**	**24.10**	**348**	P		**P**	**03 15 17.3**	**0.0**
	comp=Z,0.9nm,0.9s,baz=161,slow=8.7,SNR=2.9							
TORD	**Torodi Ar. Bea**	**30.04**	**220**	P		**P**	**03 16 11.5**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=31,slow=9.0,SNR=15							
ARCES	**ARCESS Array B**	**31.90**	**3**	P		**P**	**03 16 26.7**	**-0.2**
	comp=Z,3.5nm,1.0s,baz=186,slow=9.8,SNR=4.6							
KURBB	**Kurchatov Arra**	**42.07**	**53**	P		**P**	**03 17 52.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=214,slow=25,SNR=1.3							
MKAR	**Makanchi Array**	**45.09**	**58**	P		**P**	**03 18 18.6**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=270,slow=7.6,SNR=9.0							
ZALV	**Zalesovo Beam**	**45.59**	**48**	P		**P**	**03 18 20.4**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=289,slow=9.0,SNR=2.6							

DDA ***02*** *03:11:53.7,38.67N×43.02E,h9km×3km,MW3.5*
ISK ***02*** *03:11:53.3,38.67N×43.03E,h5km,ML3.5/24*
TEH ***02*** *03:12:00.9,39.05N×43.74E,h23km,ML2.9*

ISC 02 03:11:54.0±0.9, 38.68N±0.02×43.05E±0.02, h13km±8km, n51,σ0.96/67, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VANB	**Van**	**0.28**	**108**	PG		**Pb**	**03 12 00.5**	**-0.6**
VANB				SG		**Sb**	**03 12 05.6**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.28**	**296**	*i* P		**Pn**	**03 12 04.7**	**+0.6**
ADCV				IAML			03 12 13.0	
	comp=N,3μm,0.4s							
ADCV				IAML			03 12 13.0	
	comp=E,2μm,0.5s							
TVAN	**Van**	**0.32**	**119**	*i* P		**Pg**	**03 12 00.5**	**-0.2**
TVAN				*i* S		**Sg**	**03 12 05.9**	**+0.8**
AKDM	**Akdamar-Van**	**0.36**	**189**	PG		**Pg**	**03 12 00.5**	**-0.8**
AKDM				SG		**Sg**	**03 12 05.6**	**-0.6**
GEVA	**Gevas**	**0.37**	**179**	*i* P		**Pg**	**03 12 00.7**	**-0.8**
GEVA				*i* S		**Sb**	**03 12 07.6**	**-0.8**
GEVA				IAML			03 12 08.0	
	comp=E,4μm,0.6s							
GEVA				IAML			03 12 11.0	
	comp=N,3μm,0.4s							
VMUR	**Van-Muradiye**	**0.51**	**53**	*i* P		**Pg**	**03 12 04.2**	**0.0**
VMUR				*i* S		**Sb**	**03 12 12.5**	**0.0**
VMUR				IAML			03 12 13.0	
	comp=E,4μm,0.5s							
VMUR				IAML			03 12 14.0	
	comp=N,4μm,0.5s							
MLAZ	**Malazgirt-MUS**	**0.60**	**320**	PG		**Pg**	**03 12 05.5**	**-0.3**
MLAZ				SG		**Sb**	**03 12 14.7**	**-0.4**
BLIS	**Bitlis-Merkez**	**0.78**	**250**	*i* P		**Pg**	**03 12 08.4**	**-0.7**
BLIS				*i* S		**Sg**	**03 12 18.5**	**-0.9**
BLIS				IAML			03 12 19.0	
	comp=N,3μm,0.4s							
BLIS				IAML			03 12 20.0	
	comp=E,2μm,0.5s							
GURO	**Guroymak-BITLI**	**0.81**	**261**	PG		**Pg**	**03 12 08.8**	**-0.9**
GURO				SG		**Sg**	**03 12 19.8**	**-0.5**
CLDR	**Caldiran**	**0.82**	**56**	PG		**Pg**	**03 12 09.0**	**-0.9**
CLDR	**Caldiran**	**0.82**	**56**	*i* P		**Pg**	**03 12 09.0**	**-0.9**
CLDR				*i* S		**Sb**	**03 12 22.3**	**+0.9**
CLDR				IAML			03 12 23.0	
	comp=N,527nm,0.3s							
CLDR				IAML			03 12 25.0	
	comp=E,389nm,0.3s							
AGRB	**Hanur-Agry**	**0.89**	**357**	PG		**Pg**	**03 12 10.9**	**-0.5**
AGRB				SG		**Sb**	**03 12 23.6**	**+0.1**
BASK	**Baskale_VAN**	**0.98**	**130**	*i* P		**Pg**	**03 12 11.8**	**-1.2**
BASK				*i* S		**Sb**	**03 12 26.5**	**+0.6**
BASK				IAML			03 12 31.0	
	comp=N,643nm,0.5s							
BASK				IAML			03 12 32.0	
	comp=E,811nm,0.4s							
DYDN	**Diyadin**	**0.99**	**30**	*i* P		**Pb**	**03 12 13.7**	**+0.4**
DYDN				IAML			03 12 32.0	
	comp=N,590nm,0.6s							
DYDN				IAML			03 12 35.0	
	comp=E,468nm,0.5s							
SRTM	**Siirt_Merkez**	**1.12**	**232**	*i* P		**Pb**	**03 12 15.0**	**-0.4**
SRTM				*i* S		**Sn**	**03 12 31.9**	**+0.9**
SRTM				IAML			03 12 34.0	
	comp=N,908nm,0.7s							
SRTM				IAML			03 12 37.0	
	comp=E,694nm,0.9s							
MUSM	**Mu-Merkez**	**1.20**	**272**	*i* P		**Pb**	**03 12 16.8**	**-0.1**
MUSM				IAML			03 12 35.0	
	comp=N,296nm,0.5s							
MUSM				IAML			03 12 37.0	
	comp=E,202nm,0.3s							
HAKT	**HAKKARI**	**1.24**	**155**	*i* P		**Pn**	**03 12 17.1**	**-0.2**
HAKT				IAML			03 12 43.0	
	comp=N,144nm,0.6s							
HAKT				IAML			03 12 45.0	
	comp=E,109nm,0.5s							
EATA	**Eleskirt**	**1.25**	**340**	*i* P		**Pn**	**03 12 17.4**	**-0.3**
EATA				IAML			03 12 37.0	
	comp=E,345nm,0.8s							
EATA				IAML			03 12 45.0	
	comp=N,358nm,0.5s							
SIRT	**Sirnak**	**1.27**	**202**	PN		**Pn**	**03 12 17.9**	**+0.2**
SIRN	**Sirnak**	**1.29**	**203**	*i* P		**Pg**	**03 12 19.0**	**+0.2**
SIRN				*i* S		**Sg**	**03 12 37.6**	**+2.1**
SIRN				IAML			03 12 43.0	
	comp=N,556nm,0.6s							
SIRN				IAML			03 12 44.0	
	comp=E,660nm,0.8s							
VRTB	**Varto-Mus**	**1.33**	**291**	PN		**Pn**	**03 12 18.7**	**+0.2**
VRTB	**Varto-Mus**	**1.33**	**291**	*i* P		**Pb**	**03 12 18.8**	**-0.2**
VRTB				IAML			03 12 40.0	
	comp=N,431nm,0.5s							
VRTB				IAML			03 12 40.0	
	comp=E,709nm,0.7s							
IGDI	**IGDIR**	**1.43**	**34**	*i* P		**Pb**	**03 12 20.4**	**-0.2**
IGDI				*i* S		**Sg**	**03 12 40.8**	**+0.7**
IGDI				IAML			03 12 43.0	
	comp=E,182nm,0.7s							
IGDI				IAML			03 12 44.0	
	comp=N,312nm,1.2s							
YOVA	**Hakkari_Yksek**	**1.47**	**138**	*i* P		**Pb**	**03 12 21.4**	**+0.1**
YOVA				*i* S		**Sg**	**03 12 42.8**	**+1.5**
YOVA				IAML			03 12 44.0	
	comp=N,476nm,0.6s							
YOVA				IAML			03 12 45.0	
	comp=E,416nm,0.6s							
CUKT	**Cukurca**	**1.50**	**163**	PN		**Pn**	**03 12 21.2**	**+0.4**
SVAN	**Silvan-Diyarba**	**1.55**	**251**	PN		**Pn**	**03 12 21.9**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.55**	**251**	*i* P		**Pb**	**03 12 23.0**	**+0.3**
SVAN				IAML			03 12 45.0	
	comp=N,272nm,0.4s							
SVAN				IAML			03 12 45.0	
	comp=E,184nm,0.6s							
TASB	**TASBURUN-IGDIR**	**1.59**	**35**	PN		**Pb**	**03 12 23.0**	**-0.4**
KOPR	**Koprukoy-ERZUR**	**1.60**	**325**	PN		**Pb**	**03 12 23.2**	**-0.5**
BTMN	**Batman**	**1.61**	**241**	*i* P		**Pb**	**03 12 24.0**	**+0.3**
BTMN				IAML			03 12 47.0	
	comp=N,926nm,0.5s							
BTMN				IAML			03 12 54.0	
	comp=E,754nm,0.5s							
HOMI	**Horasan**	**1.62**	**327**	*i* P		**Pg**	**03 12 25.1**	**-0.1**
HOMI				IAML			03 12 57.0	
	comp=E,282nm,0.6s							
HOMI				IAML			03 13 01.0	
	comp=N,284nm,0.5s							
KARO	**Karliova-Bingo**	**1.68**	**292**	PN		**Pn**	**03 12 23.9**	**+0.5**
BNGB	**Bingl**	**1.88**	**280**	PN		**Pn**	**03 12 26.8**	**+0.8**
KARS	**Kars**	**1.94**	**1**	PN		**Pn**	**03 12 27.8**	**+0.8**
SENK	**Senkaya-Erzuru**	**1.95**	**344**	PN		**Pn**	**03 12 28.1**	**+1.0**
EAK	**Akyaka**	**2.05**	**12**	*i* P		**Pg**	**03 12 33.4**	**+0.1**
IMRD	**Marand**	**2.08**	**88**	*e*Pg		**Pn**	**03 12 29.3**	**+0.5**
IMRD				*e*			03 12 33.7	
IMRD				*e*Sg		**Sn**	**03 12 50.6**	**-4.1**
YEDI	**Yedisu-Bingol**	**2.09**	**292**	PN		Pn	**03 12 29.9**	**+0.9**
EMRE	**Erzurum,Aziziy**	**2.10**	**311**	*i* P		**Pg**	**03 12 33.3**	**-1.0**
EMRE				IAML			03 13 14.0	
	comp=N,188nm,0.6s							
EMRE				IAML			03 13 15.0	
	comp=E,129nm,0.6s							
KOPT

HOM					S		Sn	03 23 14.7	+2.5
	baz=11								
HUR	Hurricane	1.74	20				Pn	03 22 51.4	+0.3
ILS	Iliamna Low So	1.75	217				Pn	03 22 51.4	+0.2
WAT7	Susitna Watana	1.78	33				Pn	03 22 52.0	+0.3
SCM	Sheep Creek Mo	1.80	73				Pn	03 22 51.5	-0.4
CNPM	China Poot	1.84	184				Pn	03 22 52.0	-0.4
WAT1	Susitna Watana	1.86	36				Pn	03 22 53.0	+0.3
GLI	Glacier Island	1.94	103				Pn	03 22 52.2	-1.4
WAT2	Susitna Watana	1.96	34				Pn	03 22 54.5	+0.4
OPT	Oil Point	2.05	214				Pn	03 22 55.1	-0.1
TRF	Thorofare Moun	2.12	8				Pn	03 22 57.3	+0.9
CAST	Castle Rocks	2.13	346				Pn	03 22 57.6	+1.2
KTH	Kantishna Hill	2.20	0				Pn	03 22 58.5	+1.1
SVW2	Sparrevohn	2.25	265				Pn	03 22 57.5	-0.5
FID	Port Fidalgo	2.26	104				Pn	03 22 56.2	-1.9
RND	Reindeer	2.28	25				Pn	03 22 59.5	+1.1
AUL	Augustine Lava	2.33	213				Pn	03 22 58.8	-0.2
AUW	Augustine West	2.35	213				Pn	03 22 59.5	+0.3
HIN	Hinchinbrook I	2.38	112				Pn	03 22 59.0	-0.8
M24K	Tolsona, Glenn	2.40	70		P		Pn	03 23 00.3	+0.3
	baz=253,SNR=30								
M24K					S		Sn	03 23 30.0	+1.7
	baz=253								
M24K	Tolsona, Glenn	2.40	70				Pn	03 23 00.3	+0.3
DHY	Denali Highway	2.41	43				Pn	03 23 00.2	+0.1
KLU	Klutina	2.43	85				Pn	03 22 59.3	-1.1
DIV	Divide	2.52	93				Pn	03 23 00.5	-1.2
MCK	McKinley	2.56	21		P		Pn	03 23 03.1	+0.9
	baz=202,SNR=18								
MCK	McKinley	2.56	21				Pn	03 23 02.9	+0.7
CHUM	Lake Minchumin	2.61	347				Pn	03 23 03.4	+0.6
PS11	TAPS Pump St11	2.71	72				Pn	03 23 04.5	+0.3
BPAW	Bear Paw Mtn.	2.75	360				Pn	03 23 05.1	+0.4
TTA	Tatalina	2.85	306				Pn	03 23 06.0	-0.1
BWN	Browne	2.91	13				Pn	03 23 07.5	+0.6
Q23K	Middleton Isla	3.00	128		P		Pn	03 23 07.3	-0.7
	baz=312								
Q23K					S		Sn	03 23 40.9	-1.8
	baz=312								
N25K	Chitina, Valde	3.06	83		P		Pn	03 23 07.7	-1.4
	baz=268								
N25K					S		Sn	03 23 43.8	-0.7
	baz=268								
N25K	Chitina, Valde	3.06	83				Pn	03 23 07.9	-1.2
BMRM	Bremner River	3.11	94				Pn	03 23 08.5	-1.1
NEA2	Nenana	3.36	14		P		Pn	03 23 13.6	+0.5
	baz=196,SNR=7.5								
NEA2					S		Sn	03 23 52.1	+0.4
	baz=196								
NEA2	Nenana	3.36	14				Pn	03 23 13.6	+0.5
WRH	Wood River Hil	3.39	22				Pn	03 23 13.8	+0.3
HMT	Hamilton	3.44	104		Pn		Pn	03 23 14.3	+0.2
GLB	Gilahina Butte	3.44	85				Pn	03 23 12.9	-1.3
HDA	Harding Lake	3.57	29		P		Pn	03 23 17.6	+1.7
	baz=212,SNR=23								
HDA					S		Sn	03 23 59.4	+2.6
	baz=212								
HDA					S		Sn	03 23 59.4	+2.6
	baz=212								
HDA	Harding Lake	3.57	29				Pn	03 23 16.6	+0.7
CCB	Clear Creek Bu	3.60	22				Pn	03 23 16.6	+0.3
VRDI	Verde Repeater	3.63	89				Pn	03 23 16.5	-0.3
KDAK	Kodiak Island	3.68	194				Pn	03 23 15.9	-1.5
MLY	Manley	3.69	1		P		Pn	03 23 18.1	+0.5
	baz=182,SNR=22								
MLY					S		Sn	03 23 59.6	-0.2
	baz=182								
MLY	Manley	3.69	1				Pn	03 23 18.1	+0.5
KAKN	Katmai Knife C	3.70	216				Pn	03 23 17.8	0.0
RIDG	Independent Ri	3.71	47		Pn		Pn	03 23 18.2	+0.4
PS08	TAPS Pump Stn8	3.71	29				Pn	03 23 18.6	+0.7
KABU	Katmai Buttres	3.79	217				Pn	03 23 19.0	+0.1
TCOL	CIGO, UAF Yank	3.80	20		P		Pn	03 23 20.3	+1.3
	baz=203,SNR=12								
TCOL					S		Sn	03 24 02.6	+0.3
	baz=203								
TCOL	CIGO, UAF Yank	3.80	20				Pn	03 23 19.1	+0.1
COLA	College	3.80	20				Pn	03 23 19.3	+0.3
MCARA	McCarthy VSAT	3.82	86				Pn	03 23 19.2	-0.1
MDM	Murphy Dome	3.82	18				Pn	03 23 20.1	+0.7
CRQM	Cirque	3.85	96		Pn		Pn	03 23 20.3	+0.4
I23K	Minto, Yukon-K	3.87	10		P		Pn	03 23 20.9	+0.9
	baz=191,SNR=15								
I23K					S		Sn	03 24 05.4	+1.3
	baz=191								
I23K	Minto, Yukon-K	3.87	10				Pn	03 23 20.4	+0.4
IL31		3.90	27				Pn	03 23 20.8	+0.5
ILAR	Eielson Array	3.90	27		P		Pn	03 23 20.9	+0.5
	3.4nm,0.3s,baz=213,slow=14,SNR=105								
ILAR					S		Sn	03 24 04.5	-0.3
	4.5nm,0.3s,baz=16,slow=38,SNR=6.4								
L26K	Log Cabin Wild	3.94	62		P		Pn	03 23 21.3	+0.3
	baz=248								
L26K	Log Cabin Wild	3.94	62				Pn	03 23 21.1	+0.1
TGL	Tana Glacier	4.00	95		Pn		Pn	03 23 21.3	-0.6
POKR	Poker Plat Res	4.10	21		P		Pn	03 23 24.7	+1.6
	baz=204,SNR=10								
POKR					S		Sn	03 24 11.0	+1.2
	baz=204								
POKR	Poker Plat Res	4.10	21				Pn	03 23 23.0	-0.1
PTPK	Patty Peak	4.11	89				Pn	03 23 22.7	-0.7
SCRK	Sand Creek	4.15	48		P		Pn	03 23 23.8	-0.2
	baz=234								
SCRK	Sand Creek	4.15	48				Pn	03 23 23.6	-0.3
BALM	Baldy	4.18	91				Pn	03 23 23.5	-0.9
KIAG	Kiagna River	4.19	92				Pn	03 23 23.7	-0.9
ISLE	Juniper Island	4.27	96		Pn		Pn	03 23 24.7	-0.9
BARN	Barnard Glacie	4.51	90				Pn	03 23 27.9	-1.0
MESA	MESA	4.58	101		Pn		Pn	03 23 30.1	+0.2
YAH	Yahtse	4.62	98		Pn		Pn	03 23 31.4	+1.0
BCAR	Beaver Creek A	4.62	64				Pn	03 23 30.2	-0.1
CTGM	Chitina Glacie	4.68	91		Pn		Pn	03 23 30.5	-0.7
IMAR	Indian Mountai	4.81	346				Pn	03 23 32.9	+0.2
PRP	Porcupine Dome	4.84	28				Pn	03 23 34.0	+0.7
TABL	Table Mountain	4.88	97		Pn		Pn	03 23 33.8	-0.2
K27K	Chicken	4.89	53				Pn	03 23 34.0	0.0
EGAK	Eagle	5.62	48		Pn		Pn	03 23 43.8	-0.1
COLD	Coldfoot	5.90	3		P		Pn	03 23 49.3	+1.5
	baz=184,SNR=9.8								
COLD					S		Sn	03 24 51.9	-2.0
	baz=184								
BMAR	Burnt Mountain	6.69	22				Pn	03 23 58.1	-0.4
TOLK	Toolik Lake Re	7.34	4		S		Sn	03 25 30.3	+1.3
	baz=185								
INK	Inuvik	10.15	39		P		Pn	03 24 46.5	+0.9
	0.1nm,0.3s,baz=243,slow=28,SNR=0.9								
INK					S		Sn	03 26 37.6	0.0
	0.1nm,0.3s,baz=123,slow=8.3,SNR=2.8								
A21K	Barrow	10.26	350		P		Pn	03 24 47.5	+0.4
	baz=164								
A21K					S		Sn	03 26 36.4	-3.9
	baz=164								
YKA	Yellowknife Ar	17.01	70		P		Pn	03 26 16.4	+0.1
	0.1nm,0.3s,baz=279,slow=9.0,SNR=4.2								
ELK	Elko	29.90	117		P		P	03 28 25.9	+1.3
	0.9nm,0.8s,baz=314,slow=11,SNR=4.6								
NVAR	Mina Array Bea	30.57	124		P		P	03 28 30.9	+0.3
	0.8nm,0.8s,baz=322,slow=8.5,SNR=4.8								
PDAR	Pinedale Array	30.80	108		P		P	03 28 33.1	+0.6
	0.3nm,0.4s,baz=326,slow=5.0,SNR=6.3								
TXAR	Lajitas Array	44.57	114		P		P	03 30 29.4	+0.9
	0.1nm,0.4s,baz=324,slow=6.1,SNR=5.9								
SONM	Songino Array	54.80	306		P		P	03 31 46.2	+0.2
	1.3nm,0.7s,baz=40,slow=7.2,SNR=7.3								
ZALV	Zalesovo Beam	56.86	324		P		P	03 31 59.4	-1.1
	0.4nm,0.3s,baz=49,slow=6.5,SNR=1.7								
EKA	Eskdalemuir Ar	60.91	20		P		P	03 32 27.0	-1.5
	0.6nm,0.4s,baz=332,slow=5.2,SNR=3.8								

HLW **02** *03:28:27.8,34°.55N×23°.76E,h11km±20km,Md4.2*
ISK **02** *03:28:27.9,34°.38N×23°.36E,h75km, ML3.9/17*
THE **02** *03:28:28.9,34°.52N×23°.26E,h2km, ML3.6/5, Error ellipse: s-maj=1.2km s-min=0.9km az=33.0*
NEIC **02** *03:28:30.1±1.6,34°.47N±0°.09×23°.37E±0°.05,h41km±8km, mb4.0/10,ML3.6(THE),Error ellipse: s-maj=13.2km s-min=5.6km az=185.0*
ATH **02** *03:28:31.1,34°.65N×23°.39E,h34km±5km, ML3.6/7, Error ellipse: s-maj=7.3km s-min=2.3km az=36.0*
IDC **02** *03:28:32.6±1.5,34°.63N×23°.31E,h58km±13km, mb3.9/15, mb1 3.8/22,mb1mx3.6/62,mbtmp4.0/22,MS3.3/3,*

Ms1 3.3/3,ms1mx2.6/53,Error ellipse: s-maj=19.3km s-min=10.1km az=166.0
GII **02** *03:28:35.4±0.0,34°.53N×24°.27E,h10km,mb4.1/1, MD3.8/2*

ISC 02 03:28:28.1±1.1,**34°.44N**±0°.05×**23°.26E**±0°.03,**h30**km±7km, **n217,**σ1**90/232,mb4.1**/19,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.79	60	P	Pb	03 28 43.3	+0.1
GVD				AML	AML	03 28 58.2	
	comp=E,26976μm,0.4s						
GVD				AML	AML	03 29 01.0	
	comp=N,27614μm,0.3s						
GVD	Gavdhos	0.79	60	PG	Pn	03 28 43.9	+0.8
GVD				SG	Sn	03 28 56.4	+2.5
GVD	Gavdhos	0.79	60	P	Pb	03 28 43.4	+0.1
GVD				S	Sn	03 28 55.3	+1.4
	comp=N,14μm,0.3s						
KNDR	Palaiochora Ch	0.86	24	PG	Pn	03 28 46.5	+2.3
KNDR				SG	Sn	03 28 59.1	+3.4
IMMV	Iera Moni Meta	1.17	30	P	Pb	03 28 49.4	-0.4
IMMV				AML	AML	03 29 11.5	
	comp=N,6823μm,0.4s						
IMMV				AML	AML	03 29 15.0	
	comp=E,8135μm,0.5s						
IMMV	Iera Moni Meta	1.17	30	PN	Pb	03 28 49.9	+0.1
IMMV				SN	Sn	03 29 06.3	+2.8
IMMV	Iera Moni Meta	1.17	30	P	Pb	03 28 49.4	-0.4
IMMV				S	Sn	03 29 05.9	+2.4
	comp=E,4μm,0.5s						
RODP	Rodopos	1.19	20	PN	Pb	03 28 50.4	+0.4
RODP	Rodopos	1.19	20	P	Pb	03 28 50.7	+0.7
VAM	Vamos	1.23	38	P	Pn	03 28 50.1	+0.8
VAM				S	Sn	03 29 04.4	-0.5
VAM				AML	AML	03 29 19.0	
	comp=N,6160μm,0.5s						
VAM				AML	AML	03 29 24.1	
	comp=E,7651μm,0.6s						
VAM	Vamos	1.23	38	P	Pn	03 28 50.1	+0.8
VAM				S	Sb	03 29 08.1	+1.8
	comp=E,3μm,0.5s						
CHAN	Chania	1.25	31	P	Pb	03 28 50.4	-0.6
PRNS	Prines Rethymn	1.37	48	P	Pn	03 28 52.0	+0.8
PRNS				S	Sb	03 29 10.4	+0.2
TMBK	Timbaki Herakl	1.39	63	P	Pb	03 28 53.7	+0.3
TMBK				S	Sb	03 29 12.5	+1.8
	comp=E,1μm,0.7s						
SIVA	Sivas	1.40	65	P	Pb	03 28 53.9	+0.4
SIVA				AML	AML	03 29 20.8	
	comp=N,6692μm,0.7s						
SIVA				AML	AML	03 29 23.1	
	comp=E,10119μm,0.6s						
SIVA	Sivas	1.40	65	P	Pb	03 28 53.9	+0.4
ANKY	Antikythira Is	1.42	1	P	Pb	03 28 53.9	0.0
ANKY				AML	AML	03 29 17.6	
	comp=E,2862μm,0.5s						
ANKY				AML	AML	03 29 28.1	
	comp=N,2045μm,0.5s						
ANKY	Antikythira Is	1.42	1	P	Pb	03 28 54.0	0.0
ANKY				S	Sb	03 29 12.1	+0.4
	comp=N,1μm,0.7s						
IDI	Anoyia	1.58	57	P	Pb	03 28 56.5	-0.2
	comp=N,104nm,0.3s,baz=246,slow=10,SNR=388						
IDI				S	Sn	03 29 14.8	+1.2
	comp=N,81nm,0.3s,baz=3.5,slow=6.1,SNR=8.6						
IDI				LR	LR	03 29 51.6	
	comp=N,367nm,19.7s,baz=273,slow=54						
IDI	Anoyia	1.58	57	P	Pb	03 28 56.1	-0.6
IDI				AML	AML	03 29 26.3	
	comp=E,1811μm,0.5s						
IDI				AML	AML	03 29 28.2	
	comp=N,1406μm,0.4s						
IDI	Anoyia	1.58	57	PN	Pn	03 28 54.9	+0.8
IDI	Anoyia	1.58	57		Pb	03 28 56.1	-0.6
IDI	Anoyia	1.58	57	P	Pb	03 28 56.1	-0.6
KSTL	Kastelli Herak	1.72	59	P	Pb	03 29 00.8	+1.9
HRKL	Herakleio	1.74	60	PN	Pn	03 28 57.5	+1.2
HRKL	Herakleio	1.74	60	P	Pb	03 28 59.2	-0.2
KTHA	Kythira Island	1.82	355	PN	Pb	03 28 59.4	-1.3
LAST	Lasithi	1.96	68	P	Pb	03 29 01.8	-1.4
LAST	Lasithi	1.96	68	P	Pb	03 29 01.9	-1.2
NPS	Neapolis	2.10	66	P	Pb	03 29 04.1	-1.4
NPS				AML	AML	03 29 40.1	
	comp=N,856μm,0.5s						
NPS				AML	AML	03 29 53.4	
	comp=E,1487μm,0.9s						
NPS	Neapolis	2.10	66	P	Pb	03 29 04.1	-1.4
VLI	Veliai	2.29	353	P	Pb	03 29 06.4	-2.2
VLI	Veliai	2.29	353	P	Pn	03 29 06.6	-2.0
MHLO	Agia Marina, M	2.43	22	P	Pn	03 29 06.8	+1.2
MHLO	Agia Marina, M	2.43	22	P	Pb	03 29 08.8	+0.9
STIA	Sitia Tasithi	2.45	71	P	Pb	03 29 09.4	-2.0
MHLA	Plaka, Milos I	2.48	22	P	Pn	03 29 07.4	+0.9
ZKR	Zakros	2.52	74	P	Pn	03 29 10.0	+3.0
ZKR	Zakros	2.52	74	PN	Pn	03 29 08.2	+1.2
ZKR	Zakros	2.52	74	P	Pn	03 29 10.1	+3.0
THR6	Thira Island,	2.58	42	P	Pn	03 29 09.1	+1.2
THR5	Thira Island,	2.60	40	P	Pn	03 29 08.7	+0.6
SAP3	Santorini-Thir	2.62	40	P	Pn	03 29 09.2	+0.9
THR3	Thira Island,	2.63	41	P	Pn	03 29 09.3	+0.9
SANT	Santorini	2.63	42	P	Pn	03 29 09.2	+0.7
SANT	Santorini	2.63	42	PN	Pn	03 29 09.2	+0.7
SANT	Santorini	2.63	42		Pn	03 29 08.9	+0.4
THT2	Imerovigli	2.66	41	PN	Pn	03 29 10.1	+1.2
THT2	Imerovigli	2.66	41	P	Pn	03 29 10.2	+1.3
THR2	Thira island,	2.67	41	P	Pn	03 29 10.4	+1.3
PYL	PYLOS	2.74	334	P	Pn	03 29 11.9	+1.9
KRND	KRANIDI	2.94	358	P	Pn	03 29 14.5	+1.9
KRND	KRANIDI	2.94	358	P	Pn	03 29 14.6	+1.9
KRND				S	Sn	03 29 49.8	+2.9
ITM	Ithomi	2.94	339	Pn	Pn	03 29 14.8	+2.1
ITM	Ithomi	2.94	339	P	Pn	03 29 15.0	+2.3
EPID	Epidavros	3.17	358	P	Pn	03 29 17.9	+2.0
EPID	Epidavros	3.17	358	P	Pn	03 29 17.9	+2.0
APE	Apeiranthos	3.20	35	PN	Pn	03 29 17.3	+0.9
AMT	Artemida-Makis	3.33	338	P	Pn	03 29 20.6	+2.5
KARP	Karpathos	3.38	70	P	Pn	03 29 20.9	+2.0
KARP	Karpathos	3.38	70	PN	Pn	03 29 19.7	+0.8
KARP	Karpathos	3.38	70		Pn	03 29 20.2	+1.4
KARP	Karpathos	3.38	70	P	Pn	03 29 20.8	+2.0
VLY	Voula,Athens	3.43	7	P	Pn	03 29 20.9	+1.4
ATHU	Athens Univers	3.54	7	P	Pn	03 29 21.8	+0.8
GUR	Goura	3.56	348	P	Pn	03 29 23.5	+2.1
THAL	Thalero	3.62	352	P	Pn	03 29 24.8	+2.7
PTL	Penteli	3.63	8	P	Pn	03 29 23.1	+0.8
DION	Dionisos Attik	3.67	8	P	Pn	03 29 23.8	+1.0
KLV	Kalavryta, Ach	3.70	346	P	Pn	03 29 25.8	+2.4
KLV	Kalavryta, Ach	3.70	346	P	Pn	03 29 25.7	+2.4
VILL	Villia	3.71	1	P	Pn	03 29 24.7	+1.3
DRO	Drossia	3.72	341	P	Pn	03 29 26.1	+2.6
KOSK	Kos Island	3.80	52	PN	Pn	03 29 25.6	+1.0
NIS1	Nisyros Isl.	3.85	55	PN	Pn	03 29 26.4	+1.1
RLS	Riolos of Patr	3.89	339	P	Pn	03 29 28.5	+2.8
TRIZ	Trizonia	4.03	347	P	Pn	03 29 29.4	+1.7
KALE	Kalithea	4.04	347	P	Pn	03 29 29.5	+1.5
DAT	Datca	4.19	56	PN	Pn	03 29 30.9	+0.9
BODT	Bodrum	4.20	50	PN	Pn	03 29 31.5	+1.4
LKR	Lokris	4.20	357	P	Pn	03 29 31.3	+1.2
ATAL	Atalanti	4.25	357	P	Pn	03 29 32.0	+1.3
PSDA	Pessada-Kefalo	4.25	330	P	Pn	03 29 32.0	+1.2
VLS	Valsamata	4.31	331	P	Pn	03 29 32.7	+1.2
AXAR	Agios Charalam	4.34	354	P	Pn	03 29 33.6	+1.6
ARG	Arkhangelos	4.35	65	PN	Pn	03 29 32.9	+0.8
DMLN	Damoulianata-K	4.45	329	P	Pn	03 29 34.5	+1.0
PDO	Propylonnos	4.47	339	P	Pn	03 29 36.2	+2.4
FSK	Fiskardo	4.56	332	P	Pn	03 29 36.5	+1.5
GCAM	G?zelcaml?	4.57	44	PN	Pn	03 29 36.3	+1.2
EVR	Evrytania	4.62	346	P	Pn	03 29 38.0	+2.1
MRSB	Marmaris-Mugla	4.62	59	PN	Pn	03 29 36.8	+1.0
AGG	Agios Georgios	4.63	351		Pn	03 29 37.6	+1.6
AGG	Agios Georgios	4.63	351	P	Pn	03 29 37.4	+1.4
MAKR	Makrakomi, Fth	4.65	349	P	Pn	03 29 38.8	+2.5
TURN	Turunc	4.68	59	PN	Pn	03 29 37.5	+0.9
NYDR	Nydri-Lefkada	4.73	335	P	Pn	03 29 39.0	+1.6
URLA	Izmir	4.74	34	PN	Pn	03 29 38.2	+0.6
LKD2	Lefkada island	4.82	335	P	Pn	03 29 40.4	+1.9
TSLK	Tsoukalades, L	4.85	335	P	Pn	03 29 40.8	+1.8
NEO	Neokhori	4.85	360	P	Pn	03 29 40.1	+1.0
YER	Yerkesik	4.88	55	PN	Pn	03 29 40.2	+0.7
YER	Yerkesik	4.88	55	P	Pn	03 29 41.3	+1.8
DALY	Dalyan (Mula)	4.99	60	PN	Pn	03 29 41.6	+0.7
AYDB	Zeytinkoy-Aydi	5.12	46	PN	Pn	03 29 43.4	+0.6
FETY	Fethiye	5.23	64	PN	Pn	03 29 44.9	+0.7
AKAS	Kas	5.48	69	PN	Pn	03 29 48.2	+0.4
AKAS	Kas	5.48	69		Pn	03 29 48.2	+0.4
CAME	Cameli-Denizli	5.51	61	PN	Pn	03 29 48.6	+0.4
LIT	Litokhoron	5.68	354	Pn	Pn	03 29 51.2	+0.7
LIT	Litokhoron	5.68	354	P	Pn	03 29 51.1	+0.7
ELL	Elmali	5.88	65	PN	Pn	03 29 53.5	+0.2
ELL	Elmali	5.88	65		Pn	03 29 53.8	+0.4
PENT	Pentalofos	5.99	344	P	Pn	03 29 56.5	+1.8
KORT	Korkueli	6.30	64	PN	Pn	03 29 59.2	+0.1
BCK	Bucak	6.66	61	PN	Pn	03 30 03.9	0.0
SCTE	Santa Cesarea	6.79	327	Pn	Pn	03 30 07.1	+1.4
OHR	Ohrid	6.94	344	*i* Pn	Pn	03 30 08.3	+0.7
TIP	Timpagrande	7.04	314		Pn	03 30 10.4	+1.3
SHUT	Suhut-Afyon	7.16	53	PN	Pn	03 30 10.9	+0.1
VAE	Valguarnera	7.79	295	P	Pn	03 30 23.9	+4.5
	comp=E,12nm,0.3s,baz=312,slow=0.3,SNR=1.3						
VAE				S	Sn	03 31 41.8	-4.8
	comp=E,7.0nm,0.3s,baz=107,slow=0.2,SNR=1.9						
DRME	Dracevica, Mon	8.37	339	*e*Pn	Pn	03 30 25.3	-2.0
PDG	Podgorica	8.57	340	*e*Pn	Pn	03 30 26.7	-3.3
HCY	Herceg Novi	8.82	336	*e*Pn	Pn	03 30 30.8	-2.7
TREB	Trebinje	9.11	337	*e*Pn	Pn	03 30 35.0	-2.4
BRY	Bratogost	9.21	338	*e*Pn	Pn	03 30 36.5	-2.5
UPM	Unac-Piva	9.38	340	*e*Pn	Pn	03 30 42.3	+1.0
STON	Ston	9.47	334	*e*Pn	Pn	03 30 40.5	-1.9
LSTV	Lastovo	9.69	331	*e*Pn	Pn	03 30 42.4	-3.0
BRTR	Keskin Array B	9.82	55	P	Pn	03 30 49.4	+2.1
	comp=E,0.3nm,0.3s,baz=244,slow=16,SNR=2.5						
BBLS	Lazići	9.87	344	*e*Pn	Pn	03 30 44.9	-3.1
MAKA	Makarska	10.08	333	*e*Pn	Pn	03 30 46.2	-4.4
SLTI	Sal'it	10.10	99	Pn	Pn	03 30 49.9	-1.1
HAPS	Han Pijesak,Bl	10.19	342	*e*Pn	Pn	03 30 49.2	-3.2
MMA0B	Mount Meron ar	10.21	95	Pn	Pn	03 30 51.9	-0.8
MMAI	Mount Meron Ar	10.21	95	P	Pn	03 30 50.8	-1.9
	comp=E,1.3nm,0.3s,baz=298,slow=12,SNR=7.6						
MMAI				S	Sn	03 32 35.2	-11
	comp=E,1.0nm,0.3s,baz=313,slow=11,SNR=1.4						
RICI	Ricice	10.22	334	*e*Pn	Pn	03 30 48.2	-4.4
MMLI	Mount Malkishu	10.36	98	Pn	Pn	03 30 53.6	-1.0
MMLI				Sn	Sn	03 32 39.7	-10
GEM	Giv'at Ha'Em	10.39	93	Pn	Pn	03 30 54.2	-0.8
YTIR	Yattir	10.43	104	Pn	Pn	03 30 54.4	-1.2
NATI	Neve Ativ	10.44	93	Pn	Pn	03 30 54.1	-1.6
HMDT	Nahal Hemdat	10.49	99	Pn	Pn	03 30 55.0	-1.4
DSI	Dead Sea	10.57	102	Pn	Pn	03 30 56.7	-0.8
DSI				Sn	Sn	03 32 46.3	-8.6
KRMI	Paran Flat	10.62	111	Pn	Pn	03 30 56.8	-1.4
KRMI				Sn	Sn	03 32 48.2	-7.8
PRNI	Paran	10.73	109	Pn	Pn	03 30 58.9	-0.8
PRNI				Sn	Sn	03 32 52.1	-6.7
MBRI	Mt Berech	10.91	112	Pn	Pn	03 31 02.2	0.0
MBRI				Sn	Sn	03 32 57.2	-6.1
KIJV	Kijevo	10.92	333	*e*Pn	Pn	03 30 57.8	-4.5
EIL	Elat	11.00	112	P	Pn	03 31 03.2	-0.2
	comp=E,0.9nm,0.3s,baz=349,slow=7.7,SNR=11						
EIL				S	Sn	03 32 56.3	-9.0
	comp=E,0.6nm,0.3s,baz=337,slow=15,SNR=3.6						
EIL	Elat	11.00	112	Pn	Pn	03 31 02.6	-0.8
MORI	Morici	11.08	330	*e*Pn	Pn	03 31 03.6	-0.8
MLR	Muntele Rosu	11.22	10	P	Pn	03 31 09.1	+2.7
	comp=E,0.3nm,0.3s,baz=227,slow=12,SNR=2.1						
BLY	Banja Luka	11.30	337	*e*Pn	Pn	03 31 04.1	-3.4
DUGI	Dugi Otok	11.46	329	*e*Pn	Pn	03 31 09.1	-0.5
KEST	Kesra	11.47	280	P	Pn	03 31 12.1	+2.2
	comp=E,0.1nm,0.3s,baz=200,slow=17,SNR=2.1						
KEST				S	Sn	03 33 13.4

comp=Z,7.5nm,1.4s
SPITS Spitsbergen Ar 43.94 358 P P 03 36 32.2 +0.4
comp=Z,12nm,1.0s,baz=156,slow=11,SNR=2.3
MK31 Makanchi Array 45.47 56 P P 03 36 44.2 -0.2
MKAR Makanchi Array 45.47 56 P P 03 36 45.1 +0.7
comp=Z,4.3nm,0.3s,baz=268,slow=7.3,SNR=69
MKAR Makanchi Array 45.47 56 P P 03 36 44.3 -0.1
ZAA0 Zalesovo Array 46.62 46 P P 03 36 53.6 +0.3
ZAA0 IAmb IAmb 03 36 56.0
comp=Z,1.7nm,0.7s
ZALV Zalesovo Beam 46.62 46 P P 03 36 53.0 -0.3
comp=Z,2.2nm,0.3s,baz=270,slow=8.9,SNR=13
ZALV Zalesovo Beam 46.62 46 P P 03 36 53.0 -0.3
TSUM Tsumeb 53.62 187 LR LR 04 01 06.1
comp=Z,41nm,18.3s,baz=180,slow=36
SONM Songino Array 61.14 50 P P 03 38 40.7 +1.0
comp=Z,0.5nm,0.4s,baz=288,slow=6.8,SNR=5.7
USRK Ussuriysk Ar. 78.44 44 P P 03 40 26.9 +0.9
comp=Z,1.4nm,0.6s,baz=304,slow=4.4,SNR=5.3

*SJA **02** 03:45:03.0±0.7, 24.°14S×67.°18W, h186km±8km, ML4.1, MW3.8*
*NEIC **02** 03:45:03.7±2.2, 24.°19S±0.°04×67.°29W±0.°10, h189km±7km, Error ellipse: s-maj=13.1km s-min=5.6km az=77.0*
*IDC **02** 03:45:03.1±1.2, 24.°11S×66.°97W, h163km±12km, mb3.9/10, mb1 3.8/16, mb1mx3.6/37, mbtmp4.2/16, MS3.1/2, Ms1 3.1/2, ms1mx2.6/28, Error ellipse: s-maj=18.7km s-min=15.1km az=21.0*
*GUC **02** 03:45:05.2±0.6, 24.°12S×67.°48W, h208km±9km, ML4.4*
*VAO **02** 03:45:06.6±2.2, 24.°10S×67.°42W, h250km, mb4.1*
ISC 02 03:45:03.7±0.7, 24°15S±0'.04×67°24W±0'.04, h184km±6km, n106, σ1°§42/137, mb4.0/11, 5C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.68**	**110**	*eP*	**Pn**	**03 45 37.8**	**0.0**
HJA	**Humahuaca**	**1.92**	**61**	*eP*	**Pn**	**03 45 40.4**	**-0.2**
LVC	**Limon Verde**	**2.17**	**315**	P	**Pn**	**03 45 44.4**	**+1.1**
	21nm,0.3s,baz=124,slow=8.5,SNR=158						
LVC				S	**Sn**	**03 46 13.9**	**-0.1**
	38nm,0.3s,baz=152,slow=4.0,SNR=8.0						
LVC				LR	LR	03 46 31.9	
	comp=Z,106nm,19.0s,baz=274,slow=38						
LVC	**Limon Verde**	**2.17**	**315**	↑*iP*	**Pn**	**03 45 44.4**	**+1.1**
LVC				*i* S	**Sn**	**03 46 14.1**	**+0.2**
LVC	**Limon Verde**	**2.17**	**315**	*eP*	**Pn**	**03 45 44.4**	**+1.1**
LVC				*eS*	**Sn**	**03 46 15.1**	**+1.2**
PB15	**IPOC Station P**	**2.25**	**294**	↑*iP*	**Pn**	**03 45 45.2**	**+1.2**
PB15				*eS*	**Sn**	**03 46 15.0**	**-0.2**
PB15				IAML		03 46 20.0	
	comp=E,4μm,0.3s						
PB15	**IPOC Station P**	**2.25**	**294**		**Pn**	**03 45 45.0**	**+1.0**
PB15	**IPOC Station P**	**2.25**	**294**	*eP*	**Pn**	**03 45 45.2**	**+1.2**
PB15				*eS*	**Sn**	**03 46 16.3**	**+1.0**
PB15				IAML		03 46 19.9	
	comp=Z,1μm,0.3s						
FSA	**Cafayete**	**2.26**	**150**	*eP*	**Pn**	**03 45 44.1**	**0.0**
FSA				*eS*	**Sn**	**03 46 11.6**	**-4.0**
GO02	**Mina Guanaco**	**2.37**	**244**	↑*iP*	**Pn**	**03 45 46.3**	**+0.9**
GO02				*i* S	**Sn**	**03 46 18.5**	**+0.7**
GO02				IAML		03 46 19.0	
	comp=N,2μm,0.3s						
GO02	**Mina Guanaco**	**2.37**	**244**		**Pn**	**03 45 46.3**	**+0.9**
YJA	**Yavi**	**2.52**	**39**	*eP*	**Pn**	**03 45 47.4**	**0.0**
YJA				*eS*	**Sn**	**03 46 23.2**	**+1.9**
PB06	**IPOC Station P**	**2.58**	**303**	*eP*	**Pn**	**03 45 48.6**	**+0.9**
PB06				*i* S	**Sn**	**03 46 21.5**	**-0.4**
PB06				IAML		03 46 23.5	
	comp=N,836nm,0.3s						
PB06	**IPOC Station P**	**2.58**	**303**		**Pn**	**03 45 48.3**	**+0.6**
PB06	**IPOC Station P**	**2.58**	**303**	*eP*	**Pn**	**03 45 48.8**	**+1.1**
PB06				*eS*	**Sn**	**03 46 22.0**	**+0.1**
PB06				IAML		03 46 26.4	
	comp=Z,525nm,0.3s						
PB14	**IPOC Station P**	**2.92**	**260**	*eP*	**Pn**	**03 45 52.4**	**+0.5**
PB14				IAML		03 46 30.1	
	comp=E,268nm,0.5s						
PB14	**IPOC Station P**	**2.92**	**260**		**Pn**	**03 45 51.6**	**-0.3**
PB14	**IPOC Station P**	**2.92**	**260**	*eP*	**Pn**	**03 45 52.4**	**+0.5**
PB14				*eS*	**Sn**	**03 46 29.1**	**-0.4**
PB14				IAML		03 46 31.9	
	comp=Z,249nm,0.5s						
PB09	**IPOC Station P**	**2.98**	**321**	↓*iP*	**Pn**	**03 45 54.1**	**+1.6**
PB09				*i* S	**Sn**	**03 46 30.5**	**0.0**
PB09				IAML		03 46 32.0	
	comp=E,480nm,0.4s						
PB09	**IPOC Station P**	**2.98**	**321**		**Pn**	**03 45 54.2**	**+1.6**
PB09	**IPOC Station P**	**2.98**	**321**	*eP*	**Pn**	**03 45 54.1**	**+1.6**
PB09				*eS*	**Sn**	**03 46 31.2**	**+0.6**
PB09				IAML		03 46 31.7	
	comp=Z,350nm,0.4s						
PB05	**IPOC Station P**	**3.01**	**295**	↑*iP*	**Pn**	**03 45 53.4**	**+0.6**
PB05				*i* S	**Sn**	**03 46 29.7**	**-1.3**
PB05				IAML		03 46 38.3	
	comp=N,270nm,0.3s						
PB05	**IPOC Station P**	**3.01**	**295**	*eP*	**Pn**	**03 45 53.5**	**+0.7**
PB05				*eS*	**Sn**	**03 46 30.0**	**-1.0**
PB05				IAML		03 46 35.0	
	comp=Z,238nm,0.4s						
PB03	**IPOC Station P**	**3.12**	**312**	↑*iP*	**Pn**	**03 45 54.8**	**+0.6**
PB03				*i* S	**Sn**	**03 46 32.1**	**-1.3**
PB03				IAML		03 46 34.9	
	comp=E,760nm,0.3s						
PB03	**IPOC Station P**	**3.12**	**312**	*eP*	**Pn**	**03 45 55.0**	**+0.8**
PB03				*eS*	**Sn**	**03 46 32.3**	**-1.2**
PB03				IAML		03 46 33.9	
	comp=Z,601nm,0.2s						
AHML	**Horco Molle**	**3.14**	**147**	*eP*	**Pn**	**03 45 53.8**	**-0.4**
AHML				*eS*	**Sn**	**03 46 32.0**	**-1.8**
AC02	**Maricunga**	**3.17**	**212**	Pn	**Pn**	**03 45 55.6**	**+0.6**
PB04	**IPOC Station P**	**3.23**	**303**	↓*iP*	**Pn**	**03 45 56.2**	**+0.8**
PB04				*i* S	**Sn**	**03 46 34.5**	**-1.4**
PB04				IAML		03 46 43.0	
	comp=N,806nm,0.3s						
PB04	**IPOC Station P**	**3.23**	**303**		**Pn**	**03 45 55.9**	**+0.4**
PB04	**IPOC Station P**	**3.23**	**303**	*eP*	**Pn**	**03 45 56.3**	**+0.8**
PB04				*eS*	**Sn**	**03 46 35.0**	**-0.9**
PB04				IAML		03 46 39.5	
	comp=Z,371nm,0.3s						
PB07	**IPOC Station P**	**3.43**	**314**	↓*iP*	**Pn**	**03 45 58.5**	**+0.6**
PB07				*i* S	**Sn**	**03 46 38.5**	**-1.9**
PB07	**IPOC Station P**	**3.43**	**314**		**Pn**	**03 45 58.3**	**+0.3**
PB07	**IPOC Station P**	**3.43**	**314**	*eP*	**Pn**	**03 45 58.6**	**+0.6**
PB07				*eS*	**Sn**	**03 46 39.3**	**-1.1**
PB07				IAML		03 46 44.2	
	comp=Z,542nm,0.4s						
AC01	**Pan de Azucar**	**3.64**	**236**	*eP*	**Pn**	**03 45 59.9**	**-0.5**
AC01				*i* S	**Sn**	**03 46 42.4**	**-2.3**
AC01	**Pan de Azucar**	**3.64**	**236**	Pn	**Pn**	**03 46 00.0**	**-0.3**
AC01					**Sn**	**03 46 41.6**	**-3.1**
PB01	**IPOC Station P**	**3.73**	**326**	*eP*	**Pn**	**03 46 01.7**	**+0.1**
PB01				*i* S	**Sn**	**03 46 45.4**	**-1.5**
PB01	**IPOC Station P**	**3.73**	**326**		**Pn**	**03 46 01.8**	**+0.3**
PB01	**IPOC Station P**	**3.73**	**326**	*eP*	**Pn**	**03 46 01.9**	**+0.3**
PB01				*eS*	**Sn**	**03 46 45.4**	**-1.5**
PB01				IAML		03 46 47.6	
	comp=Z,238nm,0.4s						
GO03	**Copiap**	**4.36**	**218**	*eP*	**Pn**	**03 46 08.5**	**-1.1**
GO03				*i* S	**Sn**	**03 46 58.7**	**-2.6**
GO03	**Copiap**	**4.36**	**218**	Pn	**Pn**	**03 46 08.4**	**-1.2**
GO03	**Copiap**	**4.36**	**218**	*eP*	**Pn**	**03 46 08.8**	**-0.8**
GO03				*eS*	**Sn**	**03 46 59.1**	**-2.2**
PB08	**IPOC Station P**	**4.37**	**336**	*eP*	**Pn**	**03 46 10.9**	**+0.8**
PB08				*i* S	**Sn**	**03 47 00.8**	**-1.1**
PB08	**IPOC Station P**	**4.37**	**336**		**Pn**	**03 46 10.5**	**+0.5**
PB08	**IPOC Station P**	**4.37**	**336**	*eP*	**Pn**	**03 46 10.8**	**+0.8**
PB08				*eS*	**Sn**	**03 47 01.1**	**-0.8**
TA01	**Diego Aracena**	**4.49**	**322**	Pn	**Pn**	**03 46 09.9**	**-1.2**
PB11	**IPOC Station P**	**4.91**	**332**	*eP*	**Pn**	**03 46 15.8**	**-1.0**
PB11				*i* S	**Sn**	**03 47 11.2**	**-3.0**
PB11	**IPOC Station P**	**4.91**	**332**	Pn	**Pn**	**03 46 16.2**	**-0.6**
PB11	**IPOC Station P**	**4.91**	**332**	*eS*	**Sn**	**03 47 07.4**	**-6.7**
PSGC	**Pisagua**	**5.26**	**329**	*eP*	**Pn**	**03 46 19.7**	**-1.6**
PSGC				*i* S	Sn	03 47 12.2	-10
PSGCX	**Pisagua**	**5.26**	**329**	Pn	**Pn**	**03 46 19.6**	**-1.6**
PSGCX	**Pisagua**	**5.26**	**329**	*eP*	**Pn**	**03 46 19.7**	**-1.6**
PSGCX				*eS*	Sn	03 47 12.0	-10
AC04	**Llanos de Chal**	**5.31**	**220**	Pn	**Pn**	**03 46 20.2**	**-1.5**
AC05	**El Transito**	**5.40**	**210**	Pn	**Pn**	**03 46 21.9**	**-1.2**
MNMC	**Minye Minye**	**5.45**	**336**		**Pn**	**03 46 23.8**	**-0.2**
LCO	**Las Campanas**	**5.75**	**212**	Pn	**Pn**	**03 46 25.4**	**-2.3**
PB16	**IPOC Station P**	**6.16**	**339**		**Pn**	**03 46 33.5**	**0.0**
PB16	**IPOC Station P**	**6.16**	**339**	*eP*	**Pn**	**03 46 33.3**	**-0.1**
PB16				*eS*	**Sn**	**03 47 42.3**	**-1.8**
GO04	**Tololo Observa**	**6.79**	**207**	Pn	**Pn**	**03 46 39.6**	**-1.6**
TCA	**Tanti**	**7.53**	**162**	*eP*	**Pn**	**03 46 49.2**	**-1.7**
LPAZ	**La Paz**	**7.87**	**354**	P	**Pn**	**03 46 56.6**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=167,slow=6.5,SNR=21						
LPAZ				S	**Sn**	**03 48 23.5**	**-1.2**
	baz=3.0,slow=23,SNR=2.2						
LPAZ	**La Paz**	**7.87**	**354**	Pn	**Pn**	**03 46 56.2**	**+0.3**
LPAZ	**La Paz**	**7.87**	**354**	*eP*	**Pn**	**03 46 56.5**	**+0.7**
ASAL	**Salagasta**	**8.53**	**189**	*eP*	**Pn**	**03 47 04.3**	**+0.4**
CPUP	**Villa Florida**	**9.23**	**106**	P	**Pn**	**03 47 10.1**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=282,slow=12,SNR=4.6						
CPUP	**Villa Florida**	**9.23**	**106**	Pn	**Pn**	**03 47 12.6**	**-0.5**
SIV	**San Ignacio**	**9.97**	**37**	P	**Pn**	**03 47 20.2**	**-2.7**
	comp=Z,0.8nm,0.3s,baz=246,slow=7.4,SNR=13						
PTLB	**Pontes e Lacer**	**11.53**	**43**	*eP*	**Pn**	**03 47 45.5**	**+2.4**
TRCB	**Terra Rica**	**13.47**	**87**	*eP*	**P**	**03 48 10.4**	**-0.4**
CPSB	**Cacapava Do Su**	**13.76**	**120**	*eP*	**P**	**03 48 13.3**	**-0.6**
PTGB	**Pitanga**	**13.84**	**95**	*eP*	**P**	**03 48 15.7**	**+0.9**
FRTB	**Fartura**	**16.20**	**91**	*eP*	**Pn**	**03 48 41.5**	**+0.1**
ARAG	**Araguaiana, MT**	**16.75**	**63**	*eP*	**Pn**	**03 48 48.0**	**+0.1**
PLCA	**Paso Flores**	**16.77**	**189**	P	**Pn**	**03 48 48.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=55,slow=17,SNR=1.8						
PLCA	**Paso Flores**	**16.77**	**189**	IAmb	IAmb	03 49 03.0	
	comp=Z,26nm,1.9s						
CLDB	**Colider**	**17.11**	**41**	*eP*	**P**	**03 48 49.1**	**-2.0**
VAO	**Valinhos**	**18.62**	**91**	*eP*	**P**	**03 49 07.2**	**-0.3**
IPMB	**Ipameri, GO**	**18.78**	**75**	*eP*	**P**	**03 49 09.2**	**-0.1**
SNDB	**Serra Nova Dou**	**19.38**	**54**	*eP*	**P**	**03 49 14.5**	**-1.1**
BDFB	**Brasilia**	**19.94**	**68**	P	**P**	**03 49 20.4**	**-1.5**
	comp=Z,1.8nm,0.3s,baz=239,slow=11,SNR=38						
BDFB	**Brasilia**	**19.94**	**68**	P	**P**	**03 49 21.3**	**-0.6**
PEXB	**Peixe**	**21.59**	**60**	*eP*	**P**	**03 49 38.0**	**-1.2**
ITTB	**Itaituba**	**22.58**	**31**	*eP*	**P**	**03 49 47.2**	**-1.6**
JANB	**Jatuaria**	**23.39**	**71**	*eP*	**P**	**03 49 54.4**	**-1.8**
SDBA	**SAO DESIDERIO**	**24.17**	**65**	*eP*	**P**	**03 50 01.9**	**-1.4**
TXAR	**Lajitas Array**	**63.67**	**325**	P	**P**	**03 55 18.5**	**+2.9**
	comp=Z,0.2nm,0.8s,baz=116,slow=4.1,SNR=3.5						
TXAR	**Lajitas Array**	**63.67**	**325**	P	**P**	**03 55 13.0**	**-2.7**
KOWA	**Kowa**	**72.70**	**65**	P	**P**	**03 56 11.5**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=252,slow=5.8,SNR=5.3						
SUR	**Sutherland**	**75.93**	**119**	P	**P**	**03 56 30.5**	**-0.2**
	comp=Z,6.6nm,0.9s,baz=260,slow=6.1,SNR=1.8						
TOA0	**Torodi Ar. Sit**	**76.83**	**69**	P	**P**	**03 56 35.6**	**0.0**
TOA0				IAmb	IAmb	03 57 27.8	
	comp=Z,24nm,2.0s						
TORD	**Torodi Ar. Bea**	**76.83**	**69**	P	**P**	**03 56 35.1**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=265,slow=5.6,SNR=28						
TORD	**Torodi Ar. Bea**	**76.83**	**69**	P	**P**	**03 56 35.5**	**-0.1**
BOSA	**Boshof**	**80.86**	**117**	P	**P**	**03 56 58.4**	**+0.7**
	comp=Z,2.6nm,0.4s,baz=268,slow=3.8,SNR=15						
MAW	**Mawson**	**81.36**	**163**	P	**P**	**03 57 01.0**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=248,slow=11,SNR=1.4						
MAW	**Mawson**	**81.36**	**163**	P	**P**	**03 56 59.3**	**-0.1**
MAW				IAmb	IAmb	04 00 01.4	
	comp=Z,10nm,1.9s						
LBTB	**Lobatse**	**82.53**	**114**	P	**P**	**03 57 07.4**	**+0.9**
	comp=Z,3.0nm,0.5s,baz=245,slow=7.0,SNR=9.2						
LBTB	**Lobatse**	**82.53**	**114**	P	**P**	**03 57 06.2**	**-0.2**
MATP	**Matopo**	**86.82**	**111**	P	**P**	**03 57 29.4**	**+1.4**
	comp=Z,2.8nm,0.7s,baz=256,slow=4.2,SNR=8.1						
LSZ	**Lusaka**	**88.67**	**106**	P	**P**	**03 57 39.2**	**+2.3**
	comp=Z,0.9nm,0.5s,baz=277,slow=8.1,SNR=4.9						
LSZ	**Lusaka**	**88.67**	**106**	P	**P**	**03 57 38.0**	**+1.1**
YKA	**Yellowknife Ar**	**94.19**	**340**	P	**P**	**03 58 03.8**	**+2.7**
	comp=Z,0.6nm,0.8s,baz=156,slow=3.8,SNR=2.2						
DAVOX	**Danos/Dischmat**	**98.95**	**43**	LR	LR	04 42 32.3	
	comp=Z,29nm,18.6s,baz=272,slow=35						
ASAR	**Alice Springs**	**128.23**	**205**	PKP	**PKiKP**	**04 03 50.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=128,slow=1.4,SNR=5.9						
WRA	**Warramunga Arr**	**131.39**	**207**	PKP	**PKiKP**	**04 03 56.1**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=159,slow=1.7,SNR=9.0						
ZALV	**Zalesovo Beam**	**143.63**	**28**	PKP	**PKPdf**	**04 04 15.5**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=305,slow=3.0,SNR=5.5						
MKAR	**Makanchi Array**	**146.78**	**39**	PKPbc	**PKiKP**	**04 04 25.7**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=304,slow=3.6,SNR=9.5						
MKAR	**Makanchi Array**	**146.78**	**39**		**PKiKP**	**04 04 25.5**	**-1.0**

*GUC **02** 03:51:14.8±0.6, 37.°91S×73.°75W, h38km±3km, ML3.6*
*NEIC **02** 03:51:18.5±0.8, 37.°59S±0.°07×73.°8W±0.°1, h49km±15km, Error ellipse: s-maj=12.6km s-min=9.9km az=108.0*
ISC 02 03:51:14.6±1.3, 37°91S±0'.05×73°81W±0'.07, h35km, n33, σ0°53/38, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI04	**Isla Mocha**	**0.51**	**187**	↑*iP*	**Pn**	**03 51 24.9**	**-0.4**
BI04				*i* S	**Sn**	**03 51 32.7**	**-0.2**
BI04				IAML		03 51 34.8	
	comp=N,24μm,0.2s						
LAJA	**Laja**	**1.07**	**55**	*eP*	**Pn**	**03 51 32.8**	**-0.3**
LAJA				*i* S	**Sn**	**03 51 45.9**	**-0.9**
LAJA				IAML		03 51 49.1	
	comp=E,1μm,0.2s						
BI03	**Tigo**	**1.23**	**31**	↑*iP*	**Pn**	**03 51 35.7**	**+0.4**
BI03				*i* S	**Sn**	**03 51 51.4**	**+0.7**
BI03				IAML		03 51 57.3	
	comp=N,10μm,0.5s						
BI03	**Tigo**	**1.23**	**31**	Pn	**Pn**	**03 51 35.8**	**+0.4**
LC01	**Cunco**	**1.81**	**124**	↑*iP*	**Pn**	**03 51 43.8**	**+0.5**
LC01				*i* S	**Sn**	**03 52 05.8**	**+0.7**
LC01				IAML		03 52 12.0	
	comp=E,404nm,0.6s						
BI02	**San Fabin de**	**2.37**	**59**	*eP*	**Pn**	**03 51 51.6**	**+0.5**
BI02				*i* S	**Sn**	**03 52 19.5**	**+0.5**
BI02				IAML		03 52 32.4	
	comp=N,232nm,0.5s						
BI02	**San Fabin de**	**2.37**	**59**	Pn	**Pn**	**03 51 51.6**	**+0.5**
GO05	**Huala**	**3.26**	**28**	*eP*	**Pn**	**03 52 03.6**	**+0.3**
GO05	**Huala**	**3.26**	**28**		**Pn**	**03 52 03.3**	**+0.1**
BO03	**Pichilemu**	**3.72**	**24**	*eP*	**Pn**	**03 52 09.4**	**0.0**
PLCA	**Paso Flores**	**3.79**	**139**	Pn	**Pn**	**03 52 17.9**	**+7.4**
BO02	**Sierra Bellavi**	**3.95**	**39**	*eP*	**Pn**	**03 52 13.2**	**+0.4**
BO02				*i* S	**Sn**	**03 52 58.3**	**+0.3**
BO02	**Sierra Bellavi**	**3.95**	**39**	Pn	**Pn**	**03 52 13.3**	**+0.4**
MT09	**Talagante**	**4.72**	**30**	*eP*	**Pn**	**03 52 23.3**	**-0.1**
LMEL	**Las Melosas**	**5.00**	**37**	*eP*	**Pn**	**03 52 28.3**	**+1.0**
MT02	**Curacav**	**5.12**	**26**	*eP*	**Pn**	**03 52 28.3**	**-0.5**
MT02	**Curacav**	**5.12**	**26**		**Pn**	**03 52 28.0**	**-0.8**
MT05	**Renca**	**5.15**	**30**	*eP*	**Pn**	**03 52 29.2**	**0.0**
MT05	**Renca**	**5.15**	**30**		**Pn**	**03 52 28.8**	**-0.5**
MT03	**Universidad Ad**	**5.16**	**32**	*eP*	**Pn**	**03 52 29.0**	**-0.3**
VA01	**Torpederas**	**5.18**	**21**		**Pn**	**03 52 29.2**	**-0.4**
PEL	**Peldehue**	**5.39**	**29**		**Pn**	**03 52 31.8**	**-0.8**
ROC1	**El Roble**	**5.42**	**26**		**Pn**	**03 52 33.3**	**+0.1**
ROCH	**El Roble**	**5.43**	**26**	*eP*	**Pn**	**03 52 33.1**	**-0.1**
VA03	**San Esteban**	**5.78**	**28**	Pn	**Pn**	**03 52 37.8**	**-0.2**
VA04	**Juan Fernndez**	**5.89**	**315**	Pn	**Pn**	**03 52 40.5**	**+1.1**
COQ2	**Combarbal**	**7.08**	**20**		**Pn**	**03 52 55.3**	**-0.6**
CO03	**El Pedregal**	**7.51**	**21**		**Pn**	**03 53 01.6**	**0.0**
GO04	**Tololo Observa**	**8.11**	**19**	Pn	**Pn**	**03 53 10.1**	**+0.1**
LCO	**Las Campanas**	**9.24**	**17**		**Pn**	**03 53 25.3**	**-0.3**
GO03	**Copiap**	**10.71**	**17**	Pn	**Pn**	**03 53 44.8**	**-0.8**
AC02	**Maricunga**	**11.72**	**21**	Pn	**Pn**	**03 53 59.3**	**-0.5**
LPAZ	**La Paz**	**22.11**	**15**	P	**P**	**03 56 07.1**	**-0.5**
LPAZ				IAmb	IAmb	03 56 16.8	
	comp=Z,13nm,1.8s						

*IDC **02** 03:54:35.8±2.4, 3.°62N×93.°65E, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.6/41, mbtmp3.7/6, ML4.3/2, Error ellipse: s-maj=71.3km s-min=23.3km az=58.0*
ISC 02 03:54:39.7±1.9, 4°0N±0'.2×94°1E±0'.2, h10km, n12, σ2°§00/7, mb3.7/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.94**	**103**	Pn	**Pn**	**03 55 57.0**	**+2.9**
	3.3nm,0.3s,baz=360,slow=5.1,SNR=9.4						
PSI				Sn	**Sn**	**03 56 49.0**	**-2.4**
	14nm,0.3s,baz=359,slow=1.7,SNR=12						
CMAR	**Chiang Mai Arr**	**15.16**	**18**	Pn	**P**	**03 58 18.9**	**-0.3**
	1.0nm,0.3s,baz=213,slow=11,SNR=8.2						
H08S2	**Diego Garcia H**	**24.46**	**242**	T	T	04 25 08.5	
	baz=61,slow=75,SNR=89						
H08S3	**Diego Garcia H**	**24.46**	**242**	T	T	04 25 09.3	
	baz=61,slow=75,SNR=365						
H08S1	**Diego Carcia H**	**24.48**	**242**	T	T	04 25 11.1	
	baz=61,slow=75,SNR=29						
H01W3	**Cape Leeuwin H**	**42.98**	**156**	T	T	04 48 24.0	
	baz=330,slow=76,SNR=4.5						
H01W2	**Cape Leeuwin H**	**42.99**	**156**	T	T	04 48 25.2	
	baz=330,slow=76,SNR=4.6						
H01W1	**Cape Leeuwin H**	**43.00**	**156**	T	T	04 48 22.9	
	baz=330,slow=76,SNR=4.6						
MKAR	**Makanchi Array**	**43.88**	**348**	P	**P**	**04 02 46.0**	**-0.4**
	1.6nm,0.5s,baz=166,slow=8.2,SNR=12						
SONM	**Songino Array**	**44.97**	**12**	P	**P**	**04 02 55.5**	**+0.2**
	0.4nm,0.7s,baz=186,slow=12,SNR=2.3						
WRA	**Warramunga Ar**	**46.10**	**123**	P	**P**	**04 03 03.6**	**-0.9**
	0.3nm,0.3s,baz=300,slow=9.3,SNR=5.2						
ASAR	**Alice Springs**	**47.51**	**127**	P	**P**	**04 03 14.6**	**-0.9**
	0.5nm,0.8s,baz=297,slow=8.2,SNR=5.1						

*MOS **02** 03:56:30.5±0.0, 41.°26N×45.°51E, h10km, MPVA3.3*
*NORS **02** 03:56:31.4±0.0, 41.°13N×45.°53E, h10km, MPVA3.3*
*TIF **02** 03:56:31.5, 41.°23N×45.°51E, h10km±1km*
*DRS **02** 03:56:32.8±0.0, 41.°67N×45.°93E, h2km*
*DDA **02** 03:56:34.0, 41.°37N×45.°39E, h6km±20km, ML2.1*
ISC 02 03:56:32.1±1.3, 41°26N±0'.05×45°52E±0'.03, h17km±10km, n20, σ0°§83/36, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDFL	**Dedoflistskaro**	**0.49**	**67**	P	**Pn**	**03 56 44.3**	**-0.2**
DDFL	**Dedoflistskaro**	**0.49**	**67**	*i* P	**Pn**	**03 56 44.3**	**-0.2**
BTNK	**Botanikuri**	**0.69**	**309**	P	**Pg**	**03 56 45.5**	**-0.1**
BTNK	**Botanikuri**	**0.69**	**309**	*eP*	**Pg**	**03 56 45.5**	**-0.1**
SEAG	**Tbilisi Sea**	**0.74**	**314**	P	**Pg**	**03 56 46.5**	**0.0**
SEAG				S	**Sb**	**03 56 57.2**	**+0.8**
SEAG	**Tbilisi Sea**	**0.74**	**314**	*eP*	**Pg**	**03 56 46.5**	**0.0**
SEAG				*eS*	**Sb**	**03 56 57.2**	**+0.8**
LGD	**Lagodekhi**	**0.79**	**43**	P	**Pn**	**03 56 48.1**	**-0.5**
LGD				S	**Sn**	**03 56 59.3**	**-0.8**
LGD	**Lagodekhi**	**0.79**	**43**	*eP*	**Pn**	**03 56 48.1**	**-0.5**
LGD				*eS*	**Sn**	**03 56 59.3**	**-0.8**
BGD	**Bogdanovka**	**1.45**	**271**	P	**Pb**	**03 56 59.1**	**+0.4**
BGD				S	**Sb**	**03 57 17.9**	**+1.0**
BGD	**Bogdanovka**	**1.45**	**271**	*eP*	**Pb**	**03 56 59.1**	**+0.4**
BGD				*eS*	**Sb**	**03 57 17.9**	**+1.0**
KMKR	**Kumukh**	**1.47**	**53**	*eP*	**Pg**	**03 57 00.0**	**-0.5**
KMKR				*eS*	**Sg**	**03 57 20.0**	**+0.3**
BTLR	**Botlikh**	**1.50**	**20**	*eP*	**Pg**	**03 57 00.6**	**-0.5**
BTLR				*eS*	**Sg**	**03 57 21.3**	**+0.7**
EAK	**Akyaka**	**1.55**	**249**	*i* P	**Pb**	**03 57 00.8**	**+0.3**
EAK				*i* S	**Sb**	**03 57 21.2**	**+1.2**
EAK				IAML		03 57 24.0	
	comp=N,24nm,0.4s						
EAK				IAML		03 57 28.0	
	comp=E,25nm,1.1s						
XNZR	**Khunzakh**	**1.56**	**34**	*eP*	**Pg**	**03 57 02.8**	**+0.7**
XNZR				*eS*	**Sg**	**03 57 24.9**	**+2.4**
GNBR	**Gunib**	**1.57**	**43**	*eP*	**Pg**	**03 57 01.3**	**-0.9**
GNBR				*eS*	**Sg**	**03 57 22.9**	**+0.3**
AKT	**Akhty**	**1.68**	**82**	*eP*	**Pb**	**03 57 03.0**	**+0.3**
AKT				*eS*	**Sg**	**03 57 25.2**	**-1.1**
LACR	**Lac**	**1.81**	**330**	*eP*	**Pb**	**03 57 05.

IADA	**Aoalbol** baz=66	**0.91**	**65**	P	Pg	04 30 34.1	-2.1
IADA	baz=66			S	**Sg**	**04 30 46.2**	**-1.8**
IMEL	**Melhnausar** baz=20	**1.00**	**21**	P	Pb	04 30 35.8	-2.7
ISNB	**Snabyli** baz=209	**1.03**	**209**	P	**Pn**	**04 30 37.9**	**-1.8**
IREN	**Reynihlio** baz=13	**1.04**	**14**	P	Pn	04 30 36.5	-3.3
IREN	baz=13			S	**Sb**	**04 30 50.1**	**-2.9**
ISLY	**Slysaalda** baz=221	**1.08**	**221**	P	**Pn**	**04 30 38.7**	**-1.7**
IKVO	**Krokottuvotn** baz=13	**1.11**	**14**	P	Pn	04 30 37.6	-3.2
IFED	**Fedgar** baz=237	**1.13**	**238**	P	**Pn**	**04 30 39.8**	**-1.3**
IRJU	**Rjupnafell** baz=207	**1.15**	**207**	P	Pn	04 30 39.9	-1.4
IGRS	**Grimsstaoir** baz=29	**1.16**	**30**	P	**Pn**	**04 30 38.5**	**-3.0**
IGRS	baz=29			S	**Sb**	**04 30 54.7**	**-1.8**
IMJO	**Mjoaskard** baz=234	**1.18**	**234**	P	**Pn**	**04 30 40.7**	**-1.1**
ISKI	**Skildingahlsh** baz=8.2	**1.25**	**9**	P	Pn	04 30 40.0	-2.8
IGHA	**Grjothals** baz=15	**1.26**	**16**	P	Pn	04 30 39.9	-3.0
IHAU	**Haukadalur** baz=238	**1.26**	**239**	P	**Pn**	**04 30 42.1**	**-0.7**
IHVO	**Lagu-Hvolar** baz=209	**1.26**	**208**	P	**Pn**	**04 30 41.9**	**-1.0**
IGRA	**Granastaoir** baz=358	**1.28**	**359**	P	Pn	04 30 40.4	-2.7
IGRA	baz=358			S	**Sn**	**04 30 57.9**	**-2.7**
IDIM	**Dimmadalss** baz=9.3	**1.35**	**10**	P	Pn	04 30 41.5	-2.6
IHLA	**Hella** baz=343	**1.36**	**345**	P	**Pn**	**04 30 42.0**	**-2.2**
IALF	**Alftagrof** baz=214	**1.37**	**213**	P	**Pg**	**04 30 43.5**	**-1.4**
IESK	**Eystri-Skogar** baz=218	**1.41**	**218**	P	**Pg**	**04 30 43.9**	**-1.8**
ISAU	**Saurbar** baz=243	**1.42**	**244**	P	**Pg**	**04 30 43.8**	**-2.1**
IMID	**Miomork** baz=228	**1.43**	**227**	P	**Pg**	**04 30 44.7**	**-1.5**
IHED	**Heoinshofoi** baz=2.3	**1.45**	**3**	P	**Pn**	**04 30 43.0**	**-2.4**
IHED	baz=2.3			S	**Sn**	**04 31 01.9**	**-2.8**
IBRE	**Brettingsstaoi** baz=353	**1.50**	**354**	P	**Pn**	**04 30 43.9**	**-2.2**
IGIL	**Gilhagi** baz=18	**1.52**	**18**	P	Pn	04 30 43.9	-2.5
ISIG	**Siglufjorour** baz=338	**1.61**	**339**	P	**Pn**	**04 30 45.8**	**-1.8**
ISIG	baz=338			S	**Sn**	**04 31 07.2**	**-1.4**
BORG	**Borgarnes** 14nm,0.3s,baz=100,slow=7.7,SNR=29	**1.64**	**275**	Pg	**Pn**	**04 30 46.0**	**-2.0**
BORG	5.2nm,0.3s,baz=194,slow=23,SNR=2.7			Lg	Lg	04 31 08.9	
ISOL	**Solvholt** baz=246	**1.66**	**246**	P	**Pg**	**04 30 47.6**	**-2.9**
IKRO	**Krokur** baz=252	**1.66**	**252**	P	**Pb**	**04 30 47.5**	**-2.1**
IHEI	**Heioarbar** baz=256	**1.67**	**256**	P	**Pg**	**04 30 48.4**	**-2.4**
ILEI	**Leirhofn** baz=12	**1.82**	**13**	P	**Pn**	**04 30 48.8**	**-1.7**
EKA	**Eskdalemuir Ar** baz=324,slow=13,SNR=5.4	**11.75**	**136**	Pn	**Pn**	**04 33 06.2**	**-0.5**
HFS	**Hagfors** baz=34,slow=5.8,SNR=1.8	**15.05**	**93**	Pn	**Pn**	**04 33 53.4**	**+1.7**
CLL	**Collm** comp=Z,21nm,1.8s	**20.70**	**116**	*e*(P)	Pn	04 35 01.0	-0.6
BRG	**Berggiesshubel** comp=Z,8.9nm,1.3s	**21.41**	**115**	*e*P	**P**	**04 35 09.1**	**+2.1**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**04 35 22.0**	**+1.5**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**04 35 23.9**	**+2.5**
GERES	**GERESS Array B** comp=Z,0.4nm,0.8s,baz=344,slow=9.0,SNR=5.3	**22.95**	**119**	P	**P**	**04 35 24.0**	**+0.5**
DAVOX	**Davos/Dischmat** comp=Z,1.4nm,0.8s,baz=205,slow=7.8,SNR=2.9	**23.31**	**127**	P	**P**	**04 35 27.6**	**+0.3**
ESDC	**Sonseca Array** comp=Z,0.9nm,0.8s,baz=353,slow=8.4,SNR=6.9	**26.23**	**156**	P	**P**	**04 35 54.4**	**+0.1**
AKASG	**Malin Array Be** comp=Z,0.3nm,0.4s,baz=315,slow=9.6,SNR=1.8	**27.85**	**97**	P	**P**	**04 36 09.2**	**+0.6**
BRTR	**Keskin Array B** comp=Z,0.6nm,0.8s,baz=324,slow=6.1,SNR=1.3	**38.48**	**105**	P	**P**	**04 37 43.9**	**+2.5**
ILAR	**Eielson Array** comp=Z,0.8nm,1.0s,baz=23,slow=7.9,SNR=5.2	**45.70**	**332**	P	**P**	**04 38 42.6**	**+2.8**
MKAR	**Makanchi Array** comp=Z,0.8nm,0.9s,baz=356,slow=4.6,SNR=2.6	**52.74**	**58**	P	**P**	**04 39 35.0**	**+1.0**
TORD	**Torodi Ar. Bea** comp=Z,1.4nm,1.1s,baz=332,slow=7.9,SNR=4.6	**53.12**	**156**	P	**P**	**04 39 36.6**	**-0.4**
PDAR	**Pinedale Array** comp=Z,1.0nm,0.9s,baz=63,slow=7.2,SNR=5.2	**53.18**	**293**	P	**P**	**04 39 39.0**	**+1.5**
SONM	**Songino Array** comp=Z,0.2nm,0.4s,baz=331,slow=12,SNR=1.5	**59.66**	**40**	P	**P**	**04 40 25.1**	**+1.6**
TXAR	**Lajitas Array** comp=Z,0.5nm,0.9s,baz=66,slow=7.0,SNR=2.9	**62.28**	**280**	P	**P**	**04 40 43.3**	**+1.9**

IDC ***02*** *04:31:03.9±1.1, 17°.85S×178°.20W, h628km±13km, mb3.6/25, mb1 3.8/27, mb1mx3.7/36, mbtmp4.6/27, Error ellipse: s-maj=13.4km s-min=8.6km az=132.0*

NEIC ***02*** *04:31:05.9±1.4, 17°.8S±0°.1×178°.3W±0°.1, h651km±7km, mb4.3/91, Error ellipse: s-maj=19.4km s-min=15.2km az=138.0*

ISC 02 04:31:01.9±0.4**, 17°.76S**±0°.09×**178°.34W**±0°.08**, h600**km**,**
n195, σ**1°13/171, mb4.3/55, 12C-10D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.44**	**270**	P	P	04 32 32.5	+8.8
AFI	**Afiamalu** 8.2nm,0.3s,baz=84,slow=2.4,SNR=8.3	**7.38**	**60**	P	**P**	**04 32 57.2**	**+1.6**
AFI	1.8nm,0.3s,baz=176,slow=22,SNR=1.4			S	**S**	**04 34 32.9**	**+4.4**
AFI	**Afiamalu**	**7.38**	**60**	P	**P**	**04 32 58.1**	**+2.5**
NIUE	**Niue**	**8.10**	**101**	P	P	04 33 07.7	+5.6
DZM	**Mont Dzumac** 0.2nm,0.3s,baz=143,slow=16,SNR=1.8	**14.94**	**251**	P	**P**	**04 34 13.3**	**+3.7**
OUZ	**Omahuta**	**18.82**	**201**	P	**P**	**04 34 47.7**	**+3.0**
URZ	**Urewera** 6.2nm,0.3s,baz=280,slow=2.3,SNR=15	**20.81**	**190**	P	**P**	**04 35 01.2**	**-1.5**
LTZ	**Lake Taylor**	**26.19**	**196**	P	**P**	**04 35 50.4**	**-0.1**
RPZ	**Rata Peaks** 11nm,0.4s,baz=53,slow=6.3,SNR=5.3	**27.39**	**197**	P	**P**	**04 36 00.2**	**-0.6**
CTA	**Charters Tower** 1.7nm,0.3s,baz=79,slow=8.4,SNR=3.3	**33.53**	**260**	P	**P**	**04 36 55.9**	**+2.2**
STKA	**Stephens Creek** 1.7nm,0.4s,baz=94,slow=11,SNR=8.6	**38.76**	**241**	P	**P**	**04 37 38.0**	**+1.6**
WB0	**Warramunga Arr**	**44.69**	**260**	P	**P**	**04 38 23.6**	**+0.5**
WB0	comp=Z,7.5nm,0.5s			IAmb	IAmb	04 38 25.0	
WB2	**Warramunga Arr**	**44.71**	**259**	P	**P**	**04 38 24.8**	**+1.4**
WB2	comp=Z,14nm,1.2s			IAmb	IAmb	04 38 25.2	
WRA	**Warramunga Arr** comp=Z,4.2nm,0.4s,baz=95,slow=7.5,SNR=244	**44.72**	**259**	P	**P**	**04 38 24.8**	**+1.4**
WRA	comp=Z,0.9nm,0.4s,baz=91,slow=3.2,SNR=5.9			PcP	**PcP**	**04 39 52.2**	**-0.3**
WRA	comp=Z,0.6nm,0.8s,baz=97,slow=12,SNR=3.8			S	**S**	**04 44 12.4**	**-5.5**
WRA	**Warramunga Arr**	**44.72**	**259**	P	**P**	**04 38 23.6**	**+0.2**
AS31	**Alice Springs**	**44.89**	**254**	P	**P**	**04 38 25.4**	**+0.7**
ASAR	**Alice Springs** comp=Z,6.1nm,0.5s,baz=89,slow=7.5,SNR=122	**44.89**	**254**	P	**P**	**04 38 26.2**	**+1.5**
ASAR	comp=Z,2.9nm,0.6s,baz=101,slow=4.2,SNR=13			PcP	**PcP**	**04 39 52.6**	**-0.5**
ASAR	comp=Z,2.5nm,0.8s,baz=90,slow=15,SNR=15			S	**S**	**04 44 19.2**	**-1.0**
ASAR	**Alice Springs**	**44.89**	**254**	P	**P**	**04 38 25.6**	**+0.9**
SOEI	**Soe**	**56.13**	**270**	P	**P**	**04 39 47.8**	**+1.4**
PSA00	**Pilbara Seismi**	**58.01**	**255**		pP	04 41 56.4	+3.6
VNDA	**Vanda** comp=Z,1.4nm,0.5s,baz=359,slow=7.9,SNR=23	**60.60**	**185**	P	**P**	**04 40 15.6**	**+0.4**
VNDA	**Vanda**	**60.60**	**185**	P	**P**	**04 40 15.0**	**-0.2**
JYT	**Yasato**	**66.48**	**324**	P	**P**	**04 40 53.7**	**+0.5**
MJAR	**Matsushiro Arr** comp=Z,6.8nm,0.5s,baz=162,slow=5.9,SNR=35	**67.82**	**323**	P	**P**	**04 41 01.6**	**+0.2**
MJAR	**Matsushiro Arr**	**67.82**	**323**	P	**P**	**04 41 01.8**	**+0.4**
MAJO	**Matsushiro**	**67.82**	**323**	P	**P**	**04 41 02.1**	**+0.7**
MAT	**Matsushiro**	**67.82**	**323**	P	**P**	**04 41 01.7**	**+0.3**
JNU	**Nakatsue** comp=Z,7.0nm,0.7s,baz=117,slow=4.5,SNR=1.8	**70.07**	**316**	P	**P**	**04 41 15.2**	**+0.1**
ASAJ	**Asahikawa** comp=Z,5.2nm,0.6s,baz=239,slow=5.7,SNR=7.8	**71.17**	**331**	P	**P**	**04 41 22.8**	**+1.6**
QSPA	**South Pole Qui**	**72.30**	**180**	P	**P**	**04 41 27.5**	**0.0**
QSPA	comp=Z,9.0nm,0.9s			IAmb	IAmb	04 41 28.4	
KSM	**Kuching**	**72.73**	**277**	P	**P**	**04 41 31.0**	**+0.2**
KSM	comp=Z,13nm,1.0s			IAmb	IAmb	04 41 33.1	
PETK	**Petropavlovsk-** comp=Z,8.4nm,0.6s,baz=106,slow=7.8,SNR=15	**73.55**	**345**	P	**P**	**04 41 34.8**	**+0.2**
PETK	**Petropavlovsk-**	**73.55**	**345**	P	**P**	**04 41 34.9**	**+0.3**
KSRS	**Korea Array** comp=Z,1.5nm,0.8s,baz=129,slow=6.8,SNR=2.4	**74.63**	**318**	P	**P**	**04 41 42.3**	**+1.3**
USRK	**Ussuriysk Ar.** comp=Z,1.7nm,0.6s,baz=112,slow=3.5,SNR=5.2	**76.53**	**326**	P	**P**	**04 41 52.7**	**+1.3**
ISA	**Isabella, Lake**	**77.67**	**46**	P	**P**	**04 41 58.5**	**+0.7**
ISA	comp=Z,8.1nm,0.9s			IAmb	IAmb	04 41 59.1	
CMB	**Columbia Colle**	**77.68**	**43**	P	**P**	**04 41 58.1**	**+0.3**
AFDM	**Forest Hills D**	**77.82**	**42**	P	**P**	**04 41 58.9**	**+0.3**
MDPB	**Devils Postpil**	**78.32**	**44**	P	**P**	**04 42 02.1**	**+0.6**
MDPB	comp=Z,6.8nm,0.9s			IAmb	IAmb	04 42 02.7	
OMMB	**Old Mammoth Mi**	**78.36**	**44**	P	**P**	**04 42 02.4**	**+0.5**
WAKR	**Walker** comp=Z,7.3nm,0.9s	**78.57**	**43**	IAmb	IAmb	04 42 04.2	
BEKR	**Beckworth**	**78.73**	**42**	P	**P**	**04 42 03.0**	**-0.6**
BEKR	comp=Z,4.6nm,0.6s			IAmb	IAmb	04 42 04.2	
PNTR	**Pine Nut** comp=Z,12nm,0.9s	**78.78**	**43**	IAmb	IAmb	04 42 05.2	
LHV	**Little Huntoon** comp=Z,8.8nm,1.1s	**79.04**	**44**	IAmb	IAmb	04 42 10.1	
NVAR	**Mina Array Bea** comp=Z,3.6nm,0.7s,baz=224,slow=8.8,SNR=28	**79.27**	**44**	P	**P**	**04 42 06.7**	**+0.2**
NVAR	**Mina Array Bea**	**79.27**	**44**	P	**P**	**04 42 06.5**	**0.0**
MOD	**Modoc Plateau** comp=Z,7.6nm,0.7s	**79.93**	**40**	IAmb	IAmb	04 42 10.8	
K05A	**Summer Lake**	**80.04**	**39**	P	**P**	**04 42 10.9**	**+0.5**
PRN	**Pahroc Range** comp=Z,8.1nm,0.9s	**80.92**	**46**	IAmb	IAmb	04 42 16.5	
TUC	**Tucson**	**81.56**	**52**	P	**P**	**04 42 18.4**	**0.0**
I07A	**Izee** comp=Z,8.5nm,0.8s	**81.65**	**39**	IAmb	IAmb	04 42 19.8	
319A	**Douglas** comp=Z,10nm,0.9s	**82.28**	**54**	IAmb	IAmb	04 42 23.9	
G08A	**Pilot Rock**	**82.65**	**38**	P	**P**	**04 42 23.6**	**0.0**
G08A	comp=Z,15nm,1.5s			IAmb	IAmb	04 42 24.6	
HAWA	**Hanford** comp=Z,7.7nm,0.9s	**82.94**	**37**	IAmb	IAmb	04 42 25.9	
E08A	**Dider Farm, El** comp=Z,5.8nm,0.8s	**83.27**	**37**	IAmb	IAmb	04 42 27.3	
MFID	**Camas Ranch** comp=Z,20nm,1.9s	**83.52**	**41**	IAmb	IAmb	04 42 58.7	
SEY	**Seymchan** comp=Z,7.4nm,0.4s,baz=148,slow=6.6,SNR=17	**83.64**	**347**	P	**P**	**04 42 27.8**	**-0.1**
D08A	**Wollman Farm,** comp=Z,5.1nm,0.7s	**83.67**	**36**	IAmb	IAmb	04 42 29.1	
E09A	**Wood Farm, Sta** comp=Z,10nm,1.2s	**83.81**	**37**	IAmb	IAmb	04 42 29.9	
TRF	**Thorofare Moun**	**83.85**	**12**	P	**P**	**04 42 28.2**	**-0.9**
MAW	**Mawson** comp=Z,1.1nm,0.4s,baz=123,slow=8.9,SNR=7.1	**84.03**	**200**	P	**P**	**04 42 29.4**	**-0.4**
B08A	**Colville Reser** comp=Z,7.8nm,0.9s	**84.18**	**35**	IAmb	IAmb	04 42 31.2	
HLID	**Hailey**	**84.47**	**41**	P	**P**	**04 42 31.9**	**-0.8**
HLID	comp=Z,4.8nm,0.8s			IAmb	IAmb	04 42 34.0	
NEW	**Newport** comp=Z,2.3nm,0.7s,baz=235,slow=3.3,SNR=5.9	**85.35**	**36**	P	**P**	**04 42 35.9**	**-0.8**
IMAR	**Indian Mountai**	**85.52**	**10**	P	**P**	**04 42 36.3**	**-0.7**
MDM	**Murphy Dome** comp=Z,9.6nm,1.1s	**85.61**	**12**	IAmb	IAmb	04 42 37.6	
COLA	**College**	**85.61**	**13**	P	**P**	**04 42 36.5**	**-0.9**
DLBC	**Dease Lake** comp=Z,3.3nm,1.0s,baz=250,slow=12,SNR=3.2	**85.67**	**23**	P	**P**	**04 42 35.9**	**-2.1**
ILAR	**Eielson Array** comp=Z,3.3nm,0.4s,baz=220,slow=4.8,SNR=65	**85.72**	**13**	P	**P**	**04 42 36.7**	**-1.3**
TX32	**Lajitas Array** comp=Z,5.8nm,0.8s	**85.86**	**58**	IAmb	IAmb	04 42 40.9	
TXAR	**Lajitas Array** comp=Z,4.8nm,0.8s,baz=220,slow=6.0,SNR=50	**85.86**	**58**	P	**P**	**04 42 40.4**	**+0.8**
TXAR	**Lajitas Array**	**85.86**	**58**	P	**P**	**04 42 39.8**	**+0.2**
XAN	**Xi'an**	**86.22**	**307**	P	**P**	**04 42 42.6**	**+1.5**
XAN				pP	PcP	04 42 48.5	+5.7
XAN	comp=Z,12nm,1.1s			pmax	pmax		
XAN	**Xi'an**	**86.22**	**307**	P	**P**	**04 42 41.2**	**+0.1**
REDW	**Red Top Meadow** comp=Z,6.4nm,1.0s	**86.63**	**42**	IAmb	IAmb	04 42 44.1	
SNOW	**Snow King Moun** comp=Z,5.5nm,0.8s	**86.74**	**42**	IAmb	IAmb	04 42 45.3	
IMW	**Indian Meadow** comp=Z,6.6nm,0.9s	**86.83**	**42**	IAmb	IAmb	04 42 45.2	
BW06	**Boulder Array** comp=Z,3.3nm,0.7s	**87.20**	**43**	IAmb	IAmb	04 42 45.7	
PD31	**Pinedale Array** comp=Z,3.0nm,0.7s	**87.20**	**43**	IAmb	IAmb	04 42 45.7	
PDAR	**Pinedale Array** comp=Z,2.9nm,0.6s,baz=222,slow=2.8,SNR=28	**87.20**	**43**	P	**P**	**04 42 45.2**	**-0.6**
PDAR	**Pinedale Array**	**87.20**	**43**	P	**P**	**04 42 45.0**	**-0.8**
HHC	**Hu-ho-hao-te**	**87.21**	**314**	*e*P	**P**	**04 42 44.5**	**-1.2**
HHC	comp=Z,20nm,1.0s			pmax	pmax		
HHC	comp=Z,62nm,5.3s			pmax	pmax		
BMAR	**Burnt Mountain**	**88.50**	**12**	P	**P**	**04 42 50.8**	**-0.2**
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,0.4s,baz=119,slow=3.1,SNR=13	**88.89**	**290**	P	**P**	**04 42 54.9**	**+1.0**
CMAR	**Chiang Mai Arr**	**88.89**	**290**	P	**P**	**04 42 54.2**	**+0.2**
CHTO	**Chiang Mai**	**89.01**	**290**	P	**P**	**04 42 53.4**	**-1.0**
CHTO	comp=Z,3.8nm,0.6s			IAmb	IAmb	04 42 56.0	
SNAA	**Sanae**	**90.75**	**179**	P	**P**	**04 43 00.0**	**-1.6**
VNA3	**Neumayer Olymp**	**90.89**	**176**	P	**P**	**04 43 01.4**	**-0.8**
INK	**Inuvik** comp=Z,3.7nm,0.7s,baz=259,slow=4.7,SNR=12	**91.72**	**15**	P	**P**	**04 43 04.5**	**-1.3**
SONM	**Songino Array** comp=Z,0.3nm,0.3s,baz=130,slow=4.3,SNR=2.2	**93.48**	**319**	P	**P**	**04 43 13.5**	**-1.0**
YKA	**Yellowknife Ar** comp=Z,1.0nm,0.6s,baz=234,slow=3.8,SNR=6.5	**94.17**	**25**	P	**P**	**04 43 15.9**	**-1.1**
MKAR	**Makanchi Array** comp=Z,0.9nm,0.5s,baz=119,slow=0.4,SNR=6.1	**109.08**	**314**	PKiKP	**PKiKP**	**04 48 22.2**	**-2.1**
ARCES	**ARCESS Array B** comp=Z,1.4nm,0.5s,baz=117,slow=0.7,SNR=16	**126.18**	**350**	PKP	**PKPdf**	**04 48 55.0**	**-1.4**
GEYT	**Alibeck** comp=Z,1.6nm,0.5s,baz=284,slow=7.5,SNR=3.9	**127.01**	**304**	PKP	**PKPdf**	**04 48 58.8**	**-0.2**
FINES	**FINESS Array B** comp=Z,5.3nm,1.0s,baz=101,slow=2.8,SNR=4.6	**133.06**	**344**	PKP	**PKPdf**	**04 49 07.5**	**-2.2**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=12,slow=2.4	**136.23**	**353**	PKP	**PKPdf**	**04 49 15.9**	**+0.2**
NOA	**NORSAR Array B** comp=Z,0.8nm,0.6s,baz=14,slow=4.0,SNR=3.5	**136.23**	**353**	PKP	**PKPdf**	**04 49 15.6**	**-0.1**
AKASG	**Malin Array Be** comp=Z,0.7nm,0.3s,baz=43,slow=4.1,SNR=5.9	**140.45**	**332**	PKhKP	PKPpre	04 49 16.1	
BEL	**Belsk**	**142.78**	**340**	*e*PKP	**PKPdf**	**04 49 25.4**	**-2.3**
BSEG	**Bad Segeberg** baz=14,slow=2.8	**143.27**	**351**	*e*PKPbc	PKPab	04 49 26.4	-0.4
GAZ	**Gaziantep**	**143.29**	**309**	PKPdf	PKPbc	04 49 27.6	-0.2
KWP	**Kalwaria Pacla**	**143.96**	**337**	*e*PKP	PKPab	04 49 29.1	-0.5
PRAR	**RASCA**	**144.24**	**331**	⇓P	PKPbc	04 49 27.2	-3.1
TLCR		**144.48**	**326**	⇓P	**PKPdf**	**04 49 29.3**	**-1.6**
OJC	**Ojcow**	**144.49**	**340**	*e*PKP	**PKPdf**	**04 49 30.4**	**-0.3**
BURAR	**Bucovina Array**	**144.51**	**332**	PKPdf	PKPbc	04 49 31.0	-0.2
BIZ	**Bicaz**	**144.61**	**331**	⇑P	**PKPab**	**04 49 31.5**	**-0.7**
GHRR		**144.61**	**329**	⇑P	**PKPab**	**04 49 31.7**	**-0.5**
NRDL	**Niedersach Rie** baz=14,slow=2.8	**144.70**	**351**	*e*PKPbc	**PKPdf**	**04 49 30.8**	**-0.1**
BR131	**Keskin Array S**	**144.72**	**315**	PKPdf	**PKPdf**	**04 49 31.2**	**-0.5**
BRTR	**Keskin Array B** comp=Z,5.9nm,0.7s,baz=116,slow=3.9,SNR=17	**144.72**	**315**	PKP	**PKPdf**	**04 49 31.5**	**-0.2**
CFR	**Carcaliu**	**144.84**	**327**	⇓P	**PKPdf**	**04 49 31.1**	**-0.4**
TPGR	**Topolog**	**144.91**	**326**	⇑P	**PKPab**	**04 49 32.6**	**-0.8**
KSP	**Ksiaz**	**144.98**	**344**	*e*PKP	PKPbc	04 49 32.4	0.0
ODBI	**Odobesti**	**144.99**	**328**	⇑P	**PKPab**	**04 49 32.9**	**-0.8**
NIE	**Niedzica**	**145.01**	**339**	*e*PKP	**PKPab**	**04 49 32.8**	**-0.9**
VRI	**Vrincioaia**	**145.08**	**329**	⇑P	**PKPbc**	**04 49 32.2**	**-0.8**
PLOR	**Plostina**	**145.13**	**329**	⇓P	**PKPdf**	**04 49 32.0**	**-0.1**
OSTC	**Ostas**	**145.26**	**344**	*e*PKP	**PKPbc**	**04 49 32.4**	**-0.9**
CHVC	**Chvalec**	**145.28**	**344**	*e*PKP	**PKPbc**	**04 49 33.1**	**-0.3**
CLZ	**Clausthal** baz=14,slow=2.8	**145.30**	**350**	*e*PKPbc	**PKPbc**	**04 49 32.9**	**-0.5**
CLL	**Collm** comp=Z,23nm,0.9s	**145.33**	**347**	⇓*i*PKPbc	**PKPbc**	**04 49 32.9**	**-0.6**
CLL	**Collm** baz=14,slow=2.8	**145.33**	**347**	*e*PKPbc	**PKPbc**	**04 49 32.8**	**-0.6**
OKC	**Ostrava-Krasne**	**145.35**	**341**	*e*PKP	**PKPbc**	**04 49 32.7**	**-0.8**
UPC	**Upice**	**145.36**	**344**	*e*PKP	**PKPbc**	**04 49 33.1**	**-0.5**
OZUR		**145.37**	**330**	⇓P	**PKPbc**	**04 49 33.1**	**-0.7**
DPC	**Dobruska-Polom**	**145.42**	**343**	*e*PKP	**PKPbc**	**04 49 33.5**	**-0.3**
BRG	**Berggiesshubel** comp=Z,9.6nm,0.7s	**145.53**	**346**	*i* PKP	**PKPbc**	**04 49 33.4**	**-0.6**
BRG	**Berggiesshubel** baz=14,slow=2.8	**145.53**	**346**	*e*PKPbc	**PKPbc**	**04 49 33.6**	**-0.5**
KRLC	**Kraliky**	**145.54**	**343**	*e*PKP	**PKPbc**	**04 49 34.0**	**-0.2**
MORC	**Moravsky Berou**	**145.59**	**342**	⇑P	**PKPbc**	**04 49 33.8**	**-0.6**
MORC	**Moravsky Berou**	**145.59**	**342**	*e*PKP	**PKPbc**	**04 49 33.9**	**-0.4**
MORC	**Moravsky Berou**	**145.59**	**342**		**PKPbc**	**04 49 33.9**	**-0.4**
FBE	**Freiberg** baz=14,slow=2.8	**145.62**	**347**	*e*PKPbc	**PKPbc**	**04 49 34.1**	**-0.2**
DOPR	**Dopca**	**145.66**	**330**	⇑P	**PKPbc**	**04 49 34.4**	**-0.2**
ISR	**Istrita**	**145.70**	**328**	⇑P	**PKPbc**	**04 49 34.2**	**-0.6**
PVCC	**Panska Ves**	**145.71**	**345**	*e*PKP	**PKPbc**	**04 49 34.4**	**-0.2**
MLR	**Muntele Rosu**	**145.73**	**329**	⇓P	**PKPbc**	**04 49 34.9**	**-0.1**
PRA	**Prague**	**146.16**	**345**	*e*PKP	**PKPbc**	**04 49 35.6**	**-0.2**
VOIR		**146.21**	**330**	⇓P	**PKPbc**	**04 49 35.8**	**-0.4**
PRU	**Pruhonice**	**146.21**	**345**	*e*PKP	**PKPbc**	**04 49 35.4**	**-0.6**
PRU				*ex*	x	04 49 38.2	
PLN	**Plauen** baz=14,slow=2.8	**146.28**	**348**	*e*PKPbc	**PKPbc**	**04 49 35.7**	**-0.5**
TANN	**Tannenbergstha** baz=14,slow=2.8	**146.28**	**348**	*e*PKPbc	**PKPbc**	**04 49 35.7**	**-0.6**
JAVC	**Velka Javorina**	**146.36**	**341**	*e*PKP	**PKPbc**	**04 49 36.9**	**+0.4**
GUNZ	**Gunzen** baz=14,slow=2.8	**146.36**	**348**	*e*PKPbc	**PKPbc**	**04 49 36.1**	**-0.3**
PSZ	**Piszkesteto**	**146.42**	**338**		**PKPbc**	**04 49 35.9**	**-0.8**
ARR	**Arges**	**146.46**	**330**	⇓P	**PKPbc**	**04 49 36.5**	**-0.4**
NKC	**Novy Kostel**	**146.46**	**347**	*e*PKP	**PKPbc**	**04 49 36.1**	**-0.6**
KRUC	**Moravsky**	**146.56**	**342**	*e*PKP	**PKPbc**	**04 49 36.4**	**-0.6**
TREC	**Trest**	**146.61**	**343**	*e*PKP	**PKPbc**	**04 49 36.4**	**-0.7**
MANZ	**Manzenberg** baz=14,slow=2.8	**146.76**	**348**	*e*PKPbc	**PKPbc**	**04 49 37.1**	**-0.4**
ROTZ	**Rotzenmuhle** baz=14,slow=2.8	**146.95**	**347**	*e*PKPbc	**PKPbc**	**04 49 37.4**	**-0.5**
MEM	**Membach**	**147.04**	**355**	PKiKP	**PKPbc**	**04 49 37.6**	**-0.6**
BTNL	**Ternell**	**147.05**	**355**	PKiKP	**PKPbc**	**04 49 37.6**	**-0.6**
SIRR	**Siria**	**147.09**	**334**	⇑P	**PKPbc**	**04 49 37.8**	**-0.7**
BSTI	**Sart Tilman**	**147.10**	**355**	PKiKP	**PKPbc**	**04 49 38.1**	**-0.2**
TNS	**Taunus Mts** baz=14,slow=2.8	**147.15**	**352**	*e*PKPbc	**PKPbc**	**04 49 38.1**	**-0.5**
KHC	**Kasperske Hory**	**147.25**	**345**	*e*PKP	**PKPbc**	**04 49 38.2**	**-0.6**
KHC				*ex*	x	04 49 42.5	
GZR	**Gura Zlata**	**147.29**	**332**	⇓P	**PKPbc**	**04 49 38.2**	**-0.9**
BMRD	**Maredsous**	**147.43**	**356**	PKiKP	**PKPbc**	**04 49 38.9**	**-0.3**
GEC2	**GERESS Array S** baz=14,slow=2.8	**147.48**	**345**	*e*PKPbc	**PKPbc**	**04 49 38.8**	**-0.7**
GEC2	**GERESS Array S**	**147.48**	**345**		**PKPbc**	**04 49 38.9**	**-0.7**
GERES	**GERESS Array B** comp=Z,5.5nm,0.5s,baz=26,slow=3.2,SNR=78	**147.48**	**345**	PKPbc	**PKPbc**	**04 49 38.9**	**-0.7**
GERES	comp=Z,0.1nm,0.4s,baz=48,slow=1.5,SNR=2.2			SKPbc	**SKPbc**	**04 52 18.6**	**-2.3**
GERES	**GERESS Array B**	**147.48**	**345**		**PKPbc**	**04 49 38.6**	**-0.9**
BZS	**Buzias**	**147.62**	**333**	⇑P	**PKPbc**	**04 49 38.5**	**-1.4**
DOU	**Dourbes**	**147.65**	**356**	PKiKP	**PKPbc**	**04 49 39.1**	**-0.6**
CONA	**Conrad Observa** comp=Z,6.7nm,0.6s,SNR=6.0	**147.74**	**342**	*i* P	**PKPbc**	**04 49 39.7**	**-0.5**
HERR	**Herculane**	**147.85**	**332**	⇑P	**PKPbc**	**04 49 39.6**	**-0.8**
WLF	**Walferdange**	**147.96**	**354**	PKiKP	**PKPbc**	**04 49 40.4**	**-0.1**
WLF	**Walferdange** baz=14,slow=2.8	**147.96**	**354**	*e*PKPbc	**PKPbc**	**04 49 40.5**	**-0.1**
MDVR	**Moldovita**	**148.24**	**332**	⇑P	**PKPbc**	**04 49 40.5**	**-1.0**
MOA	**Molln** comp=Z,1.5nm,0.6s	**148.26**	**344**	*e*P	**PKPbc**	**04 49 40.4**	**-1

BNGB	**Bingl**	**1.21**	**65**	PN	**Pg**	**04 59 09.2**	**-0.3**
ATAB	**Bozova**	**1.27**	**218**	*i* P	**Pb**	**04 59 11.5**	**+0.7**
ATAB				*i* S	**Sn**	**04 59 27.8**	**-0.4**
ATAB				IAML		04 59 30.0	
	comp=E,609nm,0.3s						
SANL	**SANLIURFA_Merk**	**1.33**	**190**	*i* P	**Pg**	**04 59 11.6**	**-0.2**
SANL				*i* S	**Sn**	**04 59 30.4**	**+0.9**
SANL				IAML		04 59 34.0	
	comp=N,912nm,0.7s						
SANL				IAML		04 59 34.0	
	comp=E,752nm,0.5s						
YEDI	**Yedisu-Bingol**	**1.37**	**46**	PN	**Pn**	**04 59 12.1**	**-0.2**
MAZI	**Mazidag**	**1.38**	**137**	PN	**Pn**	**04 59 11.8**	**-0.4**
DARE	**Darende-Malaty**	**1.41**	**274**	PN	**Pn**	**04 59 11.7**	**-1.0**
SVAN	**Silvan-Diyarba**	**1.55**	**102**	PN	**Pn**	**04 59 14.1**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.55**	**102**	*i* P	**Pn**	**04 59 14.3**	**-0.2**
SVAN				IAML		04 59 37.0	
	comp=N,786nm,0.5s						
SVAN				IAML		04 59 44.0	
	comp=E,382nm,0.6s						
KARO	**Karliova-Bingo**	**1.61**	**59**	PN	**Pn**	**04 59 15.6**	**+0.1**
CUKAN	**kangal_SIVAS**	**1.64**	**301**	*i* P	**Pg**	**04 59 18.0**	**+0.2**
CUKAN				IAML		04 59 46.0	
	comp=N,498nm,0.7s						
CUKAN				IAML		04 59 51.0	
	comp=E,431nm,0.9s						
MARD	**Mardin**	**1.66**	**134**	*i* P	**Pn**	**04 59 15.8**	**-0.4**
MARD				IAML		04 59 42.0	
	comp=N,4μm,0.5s						
MARD				IAML		04 59 43.0	
	comp=E,1μm,0.9s						
BTMN	**Batman**	**1.68**	**110**	*i* P	**Pn**	**04 59 16.1**	**-0.2**
BTMN				IAML		04 59 44.0	
	comp=N,948nm,0.5s						
BTMN				IAML		04 59 50.0	
	comp=E,1μm,1.1s						
ELBS	**KAHRAMANMARAS1**	**1.69**	**265**	*i* P	**Pb**	**04 59 17.5**	**-0.5**
ELBS				IAML		04 59 48.0	
	comp=E,712nm,0.9s						
ELBS				IAML		04 59 49.0	
	comp=N,719nm,1.4s						
GZT	**Gaziantep**	**1.76**	**231**	*i* P	**Pn**	**04 59 17.6**	**+0.1**
GZT				IAML		04 59 45.0	
	comp=N,673nm,0.7s						
GZT				IAML		04 59 50.0	
	comp=E,505nm,0.4s						
MUSM	**Mu-Merkez**	**1.77**	**81**	*i* P	**Pn**	**04 59 18.3**	**+0.6**
MUSM				IAML		04 59 50.0	
	comp=N,206nm,0.6s						
MUSM				IAML		04 59 51.0	
	comp=E,274nm,0.8s						
CUZAR	**Zara_SIVAS**	**1.83**	**321**	*i* P	**Pg**	**04 59 21.5**	**+0.1**
CUZAR				IAML		04 59 53.0	
	comp=E,537nm,1.5s						
CUZAR				IAML		04 59 58.0	
	comp=N,239nm,1.0s						
VRTB	**Varto-Mus**	**1.83**	**68**	PN	**Pn**	**04 59 18.4**	**-0.1**
KHMN	**Narli-Kahraman**	**2.00**	**238**	PN	**Pn**	**04 59 20.4**	**-0.3**
BAYT	**Aydıntepe-Bayb**	**2.02**	**19**	PN	**Pn**	**04 59 21.4**	**+0.2**
KAHM	**Kahramanmaras,**	**2.05**	**243**	*i* P	**Pg**	**04 59 26.6**	**+1.0**
KAHM				IAML		04 59 57.0	
	comp=E,153nm,1.1s						
KAHM				IAML		04 59 59.0	
	comp=N,138nm,0.9s						
GAZ	**Gaziantep**	**2.09**	**232**	PN	**Pn**	**04 59 21.7**	**-0.4**
GURO	**Guroymak-BITLI**	**2.16**	**87**	PN	**Pn**	**04 59 23.3**	**+0.2**
SARI	**SarD1z-Kayseri**	**2.25**	**269**	PN	**Pn**	**04 59 24.2**	**-0.1**
SVSK	**Karacayir**	**2.28**	**310**	PN	**Pn**	**04 59 24.4**	**-0.1**
RSDY	**Resadiye-TOKAT**	**2.44**	**322**	PN	**Pn**	**04 59 26.6**	**-0.2**
KOPR	**Koprukoy-ERZUR**	**2.50**	**52**	PN	**Pn**	**04 59 27.7**	**-0.1**
SIRT	**Sirnak**	**2.68**	**110**	PN	**Pn**	**04 59 30.2**	**0.0**

NEIC ***02*** *05:02:06.8± 1.3, 36°.44N± 0°.05× 141°.34E± 0°.08, h44km± 11km, mb4.2/2, Error ellipse: s-maj=10.6km s-min=6.4km az=121.0*

IDC ***02*** *05:02:07.5± 2.3, 36°.51N× 141°.32E, h46km± 22km, mb3.6/7, mb1 3.8/11, mb1mx3.6/44, mbtmp3.9/11, ML3.8/4, MS2.8/4, Ms1 2.8/4, ms1mx2.6/47, Error ellipse: s-maj=19.6km s-min=16.3km az=93.0*

JMA ***02*** *05:02:07.6± 0.1, 36°.51N× 141°.22E, h50km± 2km, M4.1*

JMA Felt II J1.

NIED ***02*** *05:02:07.7, 36°.51N× 141°.23E, h50km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr 0.01; Mθθ 1.54; Mϕϕ -1.55; Mrθ -0.28; Mθϕ -0.35; Mϕr 0.02; Fault plane solution: M0 1.61000×10^15 NP1: ϕs 231.00000°, δ 84.00000°, λ 173.00000°. NP2: ϕs 322.00000°, δ 83.00000°, λ 6.00000°.*

ISC 02 05:02:06.8± 1.0, 36°.48N± 0°.04× 141°.35E± 0°.07, h42km± 9km, n50, σ 1°.22/61, mb4.0/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.63**	**257**	P	**Pn**	**05 02 19.4**	**0.0**
JHYU				*e*S	**Sn**	**05 02 27.8**	**-0.6**
JHO	**Hitachi**	**0.64**	**282**	P	**Pn**	**05 02 19.3**	**-0.3**
JHO				*e*S	**Sn**	**05 02 27.7**	**-1.0**
ONAJ	**Iwakimizuishiy**	**0.76**	**324**	P	**Pn**	**05 02 20.9**	**-0.3**
ONAJ				S	**Sn**	**05 02 30.6**	**-1.0**
JIHU	**Itakohorinouch**	**0.84**	**233**	P	**Pn**	**05 02 23.1**	**+0.8**
JIHU				eS	**Sn**	**05 02 34.4**	**+0.9**
JFFD	**Fukushimafurud**	**0.88**	**314**	P	**Pn**	**05 02 22.6**	**-0.2**
JFFD				*e*S	**Sn**	**05 02 33.1**	**-1.3**
JFK	**Kawauchi**	**0.96**	**337**	P	**Pn**	**05 02 23.8**	**-0.1**
JFK				S	**Sn**	**05 02 35.7**	**-0.7**
JYT	**Yasato**	**0.97**	**255**	P	**Pn**	**05 02 23.6**	**-0.4**
JYT				S	**Sn**	**05 02 35.0**	**-1.5**
JYT	**Yasato**	**0.97**	**255**	Pn	**Pn**	**05 02 23.7**	**-0.2**
JYT				Sn	**Sn**	**05 02 34.9**	**-1.6**
JFT	**Otama**	**1.31**	**322**	P	**Pn**	**05 02 29.6**	**+0.9**
JFT				S	**Sn**	**05 02 45.6**	**+0.5**
JMM	**Marumori**	**1.45**	**342**	P	**Pn**	**05 02 30.8**	**+0.2**
JMM				*e*S	**Sn**	**05 02 48.3**	**-0.1**
JMM	**Marumori**	**1.45**	**342**		**Pn**	**05 02 31.0**	**+0.5**
JMM				Sn	**Sn**	**05 02 48.1**	**-0.2**
JAG	**Ashikaga**	**1.53**	**268**	P	**Pn**	**05 02 31.5**	**-0.2**
JFY	**Yanaizu**	**1.61**	**305**	P	**Pn**	**05 02 33.2**	**+0.4**
JKT	**Katashina**	**1.72**	**280**	P	**Pn**	**05 02 34.8**	**+0.5**
JKT				S	**Sn**	**05 02 55.1**	**0.0**
MJAR	**Matsushiro Arr**	**2.53**	**272**	P	**Pn**	**05 02 46.4**	**+1.0**
	11nm,0.3s,baz=96,slow=9.3,SNR=587						
MJAR				S	**Sn**	**05 03 15.1**	**0.0**
	2.2nm,0.3s,baz=98,slow=12,SNR=4.9						
MJAR				LR	LR	05 04 07.2	
	comp=Z,120nm,18.1s,baz=85,slow=48						
MJAR	**Matsushiro Arr**	**2.53**	**272**		**Pn**	**05 02 45.7**	**+0.2**
MAJO	**Matsushiro**	**2.54**	**272**	Pn	**Pn**	**05 02 46.4**	**+0.9**
MAT	**Matsushiro**	**2.54**	**272**	P	**Pn**	**05 02 46.0**	**+0.5**
MAT				S	**Sn**	**05 03 16.0**	**+0.9**
JSD	**Sado**	**2.91**	**303**	Pn	**Pn**	**05 02 51.3**	**+0.7**
JGF	**Kuroka**	**3.36**	**256**	Pn	**Pn**	**05 02 59.3**	**+2.6**
JHJ2	**Mitsune**	**3.59**	**201**	Pn	**Pn**	**05 03 00.5**	**+0.5**
JHJ	**Hachijo jima 2**	**3.60**	**202**	P	**Pn**	**05 03 00.6**	**+0.6**
	58nm,0.3s,baz=329,slow=16,SNR=63						
JHJ				S	**Sn**	**05 03 38.6**	**-2.6**
	79nm,0.3s,baz=233,slow=21,SNR=9.7						
INU	**Inuyama**	**3.70**	**253**		**Pn**	**05 03 02.2**	**+0.8**
JTM	**Tenmabayashi**	**4.30**	**357**	Pn	**Pn**	**05 03 11.0**	**+1.3**
JWT	**Wachi**	**4.98**	**258**	Pn	**Pn**	**05 03 19.6**	**+0.6**
ERM	**Erimo**	**5.70**	**14**	Pn	**Pn**	**05 03 28.8**	**-0.1**
JHS	**Saijyo**	**6.86**	**260**		**Pn**	**05 03 48.6**	**+3.7**
ASAJ	**Asahikawa**	**7.68**	**7**	P	**Pn**	**05 03 54.5**	**-1.6**
	2.4nm,0.3s,baz=199,slow=9.1,SNR=14						
ASAJ				S	**Sn**	**05 05 19.2**	**-2.5**
	0.4nm,0.3s,baz=50,slow=34,SNR=1.3						
ASAJ				LR	LR	05 07 23.1	
	comp=Z,64nm,20.0s,baz=215,slow=41						
JKA	**Kamikawa-asahi**	**7.68**	**7**		**Pn**	**05 03 54.5**	**-1.6**
JKA					**Sn**	**05 05 19.2**	**-2.5**
JCJ	**Chichijima**	**9.39**	**175**	Pn	**Pn**	**05 04 17.6**	**-1.9**
KSRS	**Korea Array**	**10.79**	**279**	P	**Pn**	**05 04 41.2**	**+2.6**
	0.1nm,0.3s,baz=90,slow=14,SNR=4.3						
KSRS				LR	LR	05 08 39.1	
	comp=Z,48nm,18.4s,baz=105,slow=36						
KLR	**Kul'dur**	**14.54**	**334**	LR	LR	05 10 29.8	
	comp=Z,44nm,20.2s,baz=53,slow=35						
MA2	**Magadan**	**23.90**	**12**	P	**P**	**05 07 16.6**	**+0.3**
	2.4nm,0.4s,baz=200,slow=15,SNR=1.4						
H11N2	**WAKE ISLAND Hy**	**27.91**	**120**	T	T	05 37 55.6	
	baz=312,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**27.92**	**120**	T	T	05 37 54.4	
	baz=312,slow=75,SNR=39						
H11N3	**WAKE ISLAND Hy**	**27.93**	**120**	T	T	05 37 56.2	
	baz=312,slow=75,SNR=33						
SONM	**Songino Array**	**28.05**	**305**	P	**P**	**05 07 52.4**	**-1.8**
	0.8nm,0.8s,baz=104,slow=9.3,SNR=4.7						
H11S1	**WAKE ISLAND Hy**	**28.61**	**122**	T	T	05 38 50.6	
	baz=314,slow=75,SNR=89						
H11S3	**WAKE ISLAND Hy**	**28.61**	**122**	T	T	05 38 51.8	
	baz=314,slow=75,SNR=55						
H11S2	**WAKE ISLAND Hy**	**28.62**	**122**	T	T	05 38 52.3	
	baz=314,slow=75,SNR=70						
MKAR	**Makanchi Array**	**44.37**	**303**	P	**P**	**05 10 14.1**	**+1.1**
	0.5nm,0.7s,baz=76,slow=9.0,SNR=4.2						
KURK	**Kurchatov**	**46.23**	**309**	P	**P**	**05 10 27.3**	**-0.3**
KURK				IAmb	IAmb	05 10 28.9	
	comp=Z,2.7nm,0.9s						
KURBB	**Kurchatov Arra**	**46.30**	**308**	P	**P**	**05 10 28.0**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=84,slow=8.4,SNR=8.9						
ILAR	**Eielson Array**	**49.98**	**32**	P	**P**	**05 10 57.9**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=316,slow=33,SNR=2.0						
ILAR				pP	**pP**	**05 11 09.3**	**+1.2**
	comp=Z,1.4nm,0.9s,baz=268,slow=6.8,SNR=8.0						
ILAR	**Eielson Array**	**49.98**	**32**	P	**P**	**05 10 56.5**	**+0.2**
WRA	**Warramunga Arr**	**56.51**	**188**	P	**P**	**05 11 44.8**	**0.0**
	comp=Z,1.8nm,0.5s,baz=5.4,slow=7.6,SNR=42						
WRA	**Warramunga Arr**	**56.51**	**188**	P	**P**	**05 11 44.0**	**-0.7**
ASAR	**Alice Springs**	**60.24**	**188**	P	**P**	**05 12 11.3**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=9.6,slow=6.9,SNR=17						
ASAR	**Alice Springs**	**60.24**	**188**	P	**P**	**05 12 10.2**	**-0.6**
CLL	**Collm**	**81.55**	**330**	*e*P	**P**	**05 14 19.0**	**-0.8**

IDC ***02*** *05:02:08.2± 3.1, 28°.50N× 52°.71E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/43, mbtmp3.8/4, Error ellipse: s-maj=82.8km s-min=31.2km az=148.0*

TEH ***02*** *05:02:09.7, 28°.58N× 53°.11E, h8km, ML3.4*

ISC 02 05:02:09.5± 0.8, 28°.48N± 0°.05× 53°.03E± 0°.06, h10km, n22, σ 1°.55/22, mb3.9/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**0.49**	**87**	*e*Pg	**Pg**	**05 02 17.5**	**-1.5**
JHRM				*e*		05 02 33.5	
LMD1	**Lamerd**	**1.15**	**174**	*e*Pg	**Pn**	**05 02 33.9**	**+2.3**
LMD1				*e*		05 03 11.7	
SHI	**Shiraz**	**1.24**	**339**	*e*Pg	**Pg**	**05 02 33.2**	**-0.1**
LAR1	**LAR**	**1.44**	**124**	*e*Pg	**Pg**	**05 02 37.1**	**-0.1**
KAZ1	**Kazerun**	**1.66**	**314**	*e*Pg	**Pb**	**05 02 40.2**	**-0.1**
KLNJ	**Kolanjah**	**2.81**	**334**	*e*Pn	**Pn**	**05 02 55.8**	**+1.0**
KLNJ				*e*		05 03 50.0	
IMEH	**Mehriz**	**3.21**	**25**	*e*Pn	**Pn**	**05 03 01.5**	**+1.3**
IRAM	**Ramesheh**	**3.36**	**351**	*e*Pn	**Pn**	**05 03 05.0**	**+2.7**
KHGB	**Koh Gabri**	**3.55**	**57**	*e*Pn	**Pn**	**05 03 06.3**	**+1.4**
KHGB				*e*		05 04 09.4	
ICHK	**Chekchek**	**3.94**	**17**	*e*Pn	**Pn**	**05 03 11.2**	**+1.0**
IZEF	**Zefreh**	**4.44**	**352**	*e*Pn	**Pn**	**05 03 19.1**	**+1.9**
ANAR	**Anarak**	**4.73**	**7**	*e*Pn	**Pn**	**05 03 22.7**	**+1.6**
TPRV	**Parvadeh(Tabas**	**5.52**	**34**	*e*Pn	**Pn**	**05 03 34.1**	**+2.3**
TKDS	**Koohdasht(Taba**	**6.21**	**33**	*e*Pn	**Pn**	**05 03 42.3**	**+1.0**
TNSJ	**Nastanj**	**6.27**	**28**	*e*Pn	**Pn**	**05 03 43.5**	**+1.4**
KURBB	**Kurchatov Arra**	**29.33**	**34**	P	**P**	**05 08 13.9**	**+1.6**
	0.3nm,0.7s,baz=237,slow=8.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**34.42**	**33**	P	**P**	**05 08 58.0**	**+1.2**
	0.6nm,0.3s,baz=237,slow=8.5,SNR=4.2						
WTTA	**Wattenberg**	**37.14**	**312**	*e*P	**P**	**05 09 19.3**	**-1.3**
	1.2nm,0.6s						
SQTA	**Sankt Quirin**	**37.41**	**312**	*e*P	**P**	**05 09 21.8**	**-1.0**
	1.1nm,0.4s						
MOTA	**Moosalm**	**37.51**	**312**	*e*P	**P**	**05 09 23.2**	**-0.4**
	0.6nm,0.3s						
FINES	**FINESS Array B**	**37.52**	**339**	P	**P**	**05 09 22.5**	**-0.8**
	3.4nm,0.8s,baz=138,slow=9.5,SNR=8.1						
TORD	**Torodi Ar. Bea**	**49.98**	**263**	P	**P**	**05 11 02.3**	**-1.9**
	0.6nm,0.7s,baz=55,slow=6.8,SNR=4.5						

BJI ***02*** *05:05:55.7± 0.0, 26°.68N× 143°.83E, h7km, mB5.0/24, mb4.5/35, Ms4.4/2, Ms7 4.2/2*

MOS ***02*** *05:05:56.3± 1.3, 26°.91N× 144°.00E, h10km, mb4.7/23, Error ellipse: s-maj=13.4km s-min=6.3km az=110.7*

IDC ***02*** *05:05:56.6± 0.5, 26°.86N× 143°.98E, h0km, mb4.2/22, mb1 4.4/27, mb1mx4.3/42, mbtmp4.3/27, ML3.5/4, MS3.1/1, Ms1 3.3/1, ms1mx2.3/41, Error ellipse: s-maj=16.8km s-min=12.0km az=89.0*

NEIC ***02*** *05:05:58.5± 1.6, 26°.96N± 0°.08× 143°.97E± 0°.08, h10km± 1km, mb4.8/30, Error ellipse: s-maj=14.4km s-min=11.1km az=159.0*

NIED ***02*** *05:06:00.3, 27°.18N× 143°.91E, h46km, MW4.0, Moment Tensor Solution. s1 Moment tensor: Scale 10^15 Nm; Mrr 1.22; Mθθ 0.11; Mϕϕ 1.33; Mrθ -0.09; Mθϕ 0.10; Mϕr 0.32; Fault plane solution: M0 1.32000×10^15 NP1: ϕs 178.00000°, δ 52.00000°, λ -97.00000°. NP2: ϕs 10.00000°, δ 38.00000°, λ -81.00000°.*

JMA ***02*** *05:06:00.3± 0.4, 27°.18N× 143°.91E, h46km, M4.4*

ISC 02 05:05:58.6± 0.5, 27°.00N± 0°.06× 143°.96E± 0°.06, h10km, n129, σ 1°.68/143, mb4.6/57, 12C, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.58**	**274**	P	**Pn**	**05 06 26.0**	**-0.7**
CBIJ				*e*S	**Sn**	**05 06 45.2**	**-2.0**
JCJ	**Chichijima**	**1.58**	**274**	Pn	**Pn**	**05 06 26.4**	**-0.3**
JCJ				Sn	**Sn**	**05 06 46.1**	**-1.1**
JHH2	**Haha-jima-NKT2**	**1.63**	**258**	P	**Pn**	**05 06 27.1**	**-0.3**
JHH2				*e*S	**Sb**	**05 06 48.6**	**-0.8**
JHJ2	**Mitsune**	**7.07**	**331**	Pn	**Pn**	**05 07 42.9**	**+0.7**
JHJ2				Sn	**Sn**	**05 09 00.5**	**-2.0**
JHJ	**Hachijo jima 2**	**7.09**	**330**	Pn	**Pn**	**05 07 43.0**	**+0.6**
	6.0nm,0.3s,baz=57,slow=19,SNR=6.0						
JHJ				Sn	**Sn**	**05 08 57.4**	**-5.7**
	11nm,0.3s,baz=30,slow=18,SNR=1.8						
JHU	**Hanno**	**9.69**	**337**	P	**Pn**	**05 08 17.2**	**-0.8**
JHU				*e*S	**Sn**	**05 10 00.0**	**-6.9**
JYT	**Yasato**	**9.74**	**342**	Pn	**Pn**	**05 08 18.7**	**-0.1**
JRY	**Ryogami san**	**9.97**	**336**	P	**Pn**	**05 08 21.5**	**-0.4**
JRY				*e*S	**Sn**	**05 10 09.8**	**-4.1**
JHO	**Hitachi**	**10.01**	**344**	P	**Pn**	**05 08 20.5**	**-1.9**
INU	**Inuyama**	**10.22**	**326**	Pn	**Pn**	**05 08 23.5**	**-1.9**
JGF	**Kuroka**	**10.26**	**319**	Pn	**Pn**	**05 08 25.0**	**-1.0**
MJAR	**Matsushiro Arr**	**10.70**	**334**	Pn	**Pn**	**05 08 31.6**	**-0.3**
	0.5nm,0.3s,baz=157,slow=10,SNR=19						
MJAR				Sn	**Sn**	**05 10 27.1**	**-4.5**
	0.1nm,0.3s,baz=158,slow=18,SNR=4.7						
MAJO	**Matsushiro**	**10.70**	**334**	*i* P	**Pn**	**05 08 31.9**	**0.0**
MAJO	**Matsushiro**	**10.70**	**334**		**Pn**	**05 08 32.4**	**+0.5**
MAT	**Matsushiro**	**10.70**	**334**	P	**Pn**	**05 08 31.3**	**-0.6**
MAT				S	**Sn**	**05 10 25.7**	**-6.0**
JWT	**Wachi**	**11.04**	**321**	Pn	**Pn**	**05 08 38.1**	**+1.6**
JMM	**Marumori**	**11.16**	**347**		**Pn**	**05 08 36.6**	**-1.6**
JSD	**Sado**	**12.01**	**338**	Pn	**Pn**	**05 08 49.0**	**-0.8**
ERM	**Erimo**	**15.00**	**358**	*i* P	**Pn**	**05 09 31.2**	**+0.7**
ERM	**Erimo**	**15.00**	**358**	Pn	**Pn**	**05 09 28.6**	**-2.0**
KSRS	**Korea Array**	**17.08**	**312**	P	**P**	**05 09 60.0**	**+0.8**
	0.2nm,0.3s,baz=121,slow=10,SNR=9.6						
KSRS	**Korea Array**	**17.08**	**312**	P	**P**	**05 10 00.0**	**+0.8**
KSRS	**Korea Array**	**17.08**	**312**	P	**P**	**05 10 00.0**	**+0.8**
JKA	**Kamikawa-asahi**	**17.12**	**357**	P	**Pn**	**05 09 57.0**	**-0.8**
ASAJ	**Asahikawa**	**17.12**	**357**	P	**Pn**	**05 09 57.0**	**-0.8**
	0.2nm,0.3s,baz=85,slow=25,SNR=2.1						
USRK	**Ussuriysk Ar.**	**19.69**	**334**	P	**Pn**	**05 10 29.1**	**-0.3**
	baz=152,slow=11,SNR=3.6						
SSLB	**Suanglung**	**21.02**	**266**	P	**P**	**05 10 43.5**	**+0.9**
SSLB				IAmb	IAmb	05 10 51.1	
	comp=Z,21nm,0.7s						
NJ2	**Nanjing**	**22.39**	**289**	*e*P	**P**	**05 10 55.6**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KLR	**Kul'dur**	**24.12**	**340**	P	**P**	**05 11 15.3**	**+0.8**
	comp=Z,4.0nm,0.7s,baz=137,slow=7.5,SNR=13						
KLR	**Kul'dur**	**24.12**	**340**	*ce*P	**P**	**05 11 15.8**	**+1.3**
KLR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**30.03**	**306**	*e*P	**P**	**05 12 08.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.3s						
XAN	**Xi'an**	**30.88**	**292**	P	**P**	**05 12 14.1**	**-1.2**
XAN				sP	pwP	05 12 21.2	-3.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LZH	**Lanzhou**	**35.16**	**295**	*e*P	**P**	**05 12 54.8**	**+1.9**
LZH				pP	pwP	05 12 58.6	-3.4
LZH				sP	sP	05 13 01.6	+7.0
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
CD2	**Chengdu**	**35.26**	**286**	P	**P**	**05 12 52.8**	**-0.8**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
ULN	**Ulaanbaatar**	**35.48**	**316**	*ce*P	**P**	**05 12 57.3**	**+1.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	**Songino Array**	**35.88**	**316**	P	**P**	**05 13 00.5**	**+1.6**
	comp=Z,1.5nm,0.5s,baz=121,slow=8.2,SNR=11						
SONM	**Songino Array**	**35.88**	**316**	P	**P**	**05 12 59.2**	**+0.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**35.88**	**316**	P	**P**	**05 12 59.2**	**+0.3**
YAK	**Yakutsk**	**36.30**	**349**	*i* P	**P**	**05 13 02.9**	**+0.8**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SEY	**Seymchan**	**36.36**	**6**	P	**P**	**05 13 03.2**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=202,slow=13,SNR=4.5						
KMI	**Kunming**	**36.96**	**277**	*e*P	**P**	**05 13 09.0**	**+0.6**
KMI				pP	sP	05 13 11.7	+1.5
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,4.5s						
KMI				LR	LR		
	comp=Z,140nm,4.9s						
KMI				LR	LR		
	comp=Z,110nm,4.9s						
KMI				LR	LR		
	comp=Z,110nm,5.6s						
ZAK	**Zakamensk**	**38.73**	**318**	*e*P	**P**	**05 13 24.1**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	**Talaya**	**39.02**	**320**	*i* P	**P**	**05 13 26.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**42.20**	**268**	P	**P**	**05 13 51.4**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=63,slow=8.6,SNR=5.9						
CMAR				LR	LR	05 31 30.7	
	comp=Z,26nm,19.2s,baz=341,slow=36						
BILL	**Bilibino**	**43.21**	**12**	*i* P	**P**	**05 13 56.8**	**-2.7**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KNRA	**Kununurra**	**44.91**	**201**	P	**P**	**05 14 13.8**	**+0.2**
TIXI	**Tiksi**	**45.48**	**353**	P	**P**	**05 14 17.1**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TIXI	**Tiksi**	**45.48**	**353**	P	**P**	**05 14 17.1**	**-0.4**
TIXI				IAmb	IAmb	05 14 18.6	
	comp=Z,3.5nm,0.5s						
CTA	**Charters Tower**	**46.86**	**177**	P	**P**	**05 14 26.5**	**-2.5**
	comp=Z,2.9nm,0.9s,baz=27,slow=8.8,SNR=3.7						
WB0	**Warramunga Arr**	**47.40**	**192**	P	**P**	**05 14 31.7**	**-1.6**
WB0				IAmb	IAmb	05 14 35.1	
	comp=Z,9.3nm,1.1s						
WR0	**Warramunga Arr**	**47.56**	**192**	P	**P**	**05 14 33.0**	**-1.5**
WR0				IAmb	IAmb	05 14 36.4	
	comp=Z,8.0nm,1.1s						
WB2	**Warramunga Arr**	**47.58**	**192**	P	**P**	**05 14 33.1**	**-1.6**
WB2				IAmb	IAmb	05 14 43.6	
	comp=Z,11nm,1.0s						
WRA	**Warramunga Arr**	**47.58**	**192**	P	**P**	**05 14 32.9**	**-1.8**
	comp=Z,4.8nm,0.7s,baz=13,slow=8.6,SNR=29						
WRA				PcP	**PcP**	**05 16 03.6**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=11,slow=3.7,SNR=1.5						
WRA	**Warramunga Arr**	**47.58**	**192**	P	**P**	**05 14 32.9**	**-1.8**
WMQ	**Urumqi**	**47.91**	**306**	*e*P	**P**	**05 14 39.3**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,85nm,5.9s						
FITZ	**Fitzroy Crossi**	**48.22**	**204**	P	**P**	**05 14 38.4**	**-1.2**
	comp=Z,5.8nm,0.7s,baz=21,slow=7.1,SNR=12						
DGZ	**Jazzator, Alta**	**48.47**	**314**	*i* P	**P**	**05 14 42.3**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PSI	**Prapat**	**49.33**	**249**	P	**P**	**05 14 47.7**	**-0.8**
	comp=Z,3.0nm,0.5s,baz=359,slow=6.4,SNR=2.3						
RPSI	**Rantau Prapat**	**49.38**	**249**	P	**P**	**05 14 47.7**	**-1.1**
ZALV	**Zalesovo Beam**	**50.60**	**319**	P	**P**	**05 14 57.2**	**-0.2**
	comp=

YBH					pmax	pmax			
	comp=Z,7.0nm,1.2s								
YBH	**Yreka Blue Hor**	**74.89**	**51**	P	**P**	**05 17 40.8**	**+1.0**
PINE	**Pine Mountain**	**75.29**	**48**	P	**P**	**05 17 42.7**	**+0.4**
PINE				IAmb	IAmb	05 17 44.3	
	comp=Z,7.6nm,0.8s						
K05A	**Summer Lake**	**75.75**	**49**	P	**P**	**05 17 45.5**	**+0.6**
K05A				IAmb	IAmb	05 17 46.8	
	comp=Z,9.5nm,0.9s						
BEKR	**Beckworth**	**77.28**	**52**	P	**P**	**05 17 54.0**	**+0.4**
BEKR				IAmb	IAmb	05 17 54.8	
	comp=Z,7.7nm,0.8s						
OBN	**Obninsk**	**77.50**	**326**	*e*P	**P**	**05 17 56.3**	**+2.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CMB	**Columbia Colle**	**78.02**	**53**	P	**P**	**05 17 57.8**	**+0.2**
CMB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CMB	**Columbia Colle**	**78.02**	**53**	P	**P**	**05 17 57.8**	**+0.2**
CMB				IAmb	IAmb	05 17 59.0	
	comp=Z,6.1nm,0.8s						
PNTR	**Pine Nut**	**78.14**	**52**	P	**P**	**05 17 58.5**	**+0.1**
PNTR				IAmb	IAmb	05 18 00.0	
	comp=Z,6.4nm,0.8s						
FINES	**FINESS Array B**	**78.72**	**334**	P	**P**	**05 18 00.8**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=81,slow=6.0,SNR=7.3						
FINES	**FINESS Array B**	**78.72**	**334**	*ce*P	**P**	**05 18 02.7**	**+1.8**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**79.22**	**314**	P	**P**	**05 18 05.2**	**+1.3**
	comp=Z,9.8nm,0.8s,baz=115,slow=4.4,SNR=12						
KBZ	**Khabaz**	**79.22**	**314**	*ce*P	**P**	**05 18 05.5**	**+1.5**
KIV	**Kislovodsk**	**79.26**	**314**	*e*P	**P**	**05 18 05.0**	**+0.7**
KIV				pmax	pmax		
	comp=Z,25nm,1.0s						
NVAR	**Mina Array Bea**	**79.33**	**52**	P	**P**	**05 18 05.8**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=288,slow=5.8,SNR=23						
NVAR	**Mina Array Bea**	**79.33**	**52**	P	**P**	**05 18 04.8**	**-0.2**
LRM	**Limekiln Ridge**	**79.86**	**44**	P	**P**	**05 18 06.9**	**-0.9**
RLMT	**Red Lodge**	**82.15**	**43**	P	**P**	**05 18 19.6**	**-0.4**
RLMT				IAmb	IAmb	05 18 21.8	
	comp=Z,4.9nm,0.6s						
PDAR	**Pinedale Array**	**83.17**	**45**	P	**P**	**05 18 25.4**	**0.0**
	comp=Z,0.9nm,0.7s,baz=283,slow=2.2,SNR=8.4						
AKASG	**Malin Array Be**	**83.62**	**324**	P	**P**	**05 18 26.5**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=50,slow=5.0,SNR=5.9						
AKASG	**Malin Array Be**	**83.62**	**324**	*i* P	**P**	**05 18 30.7**	**+3.5**
AKASG	**Malin Array Be**	**83.62**	**324**	IAmb	IAmb	05 18 27.6	
	comp=Z,1.3nm,0.9s						
BRTR	**Keskin Array B**	**87.22**	**314**	P	**P**	**05 18 44.7**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=32,slow=7.5,SNR=4.7						
BRTR	**Keskin Array B**	**87.22**	**314**	*ce*P	**P**	**05 18 46.4**	**+0.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VYHS	**Vyhne**	**90.25**	**327**	*e*P	**P**	**05 18 59.2**	**-0.3**
VYHS	**Vyhne**	**90.25**	**327**	*e*P	**P**	**05 18 59.2**	**-0.3**
CLL	**Collm**	**90.89**	**332**	*e*P	**P**	**05 18 59.0**	**-3.5**
CLL				pmax	pmax		
	comp=Z,12nm,1.5s						
TXAR	**Lajitas Array**	**94.39**	**54**	P	**P**	**05 19 19.9**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=310,slow=2.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**125.82**	**313**	PKP	**PKPdf**	**05 25 00.8**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=344,slow=1.7,SNR=2.5						
LPAZ	**La Paz**	**148.41**	**77**	PKPbc	**PKPbc**	**05 25 47.1**	**+0.2**
	comp=Z,4.8nm,0.8s,baz=284,slow=1.8,SNR=13						
LPAZ	**La Paz**	**148.41**	**77**	PKP2	**PKPbc**	**05 25 47.3**	**+0.4**
LPAZ	**La Paz**	**148.41**	**77**		**PKPbc**	**05 25 47.3**	**+0.4**
PLCA	**Paso Flores**	**148.46**	**125**	PKPbc	**PKPbc**	**05 25 45.3**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=271,slow=6.9,SNR=4.5						
PLCA	**Paso Flores**	**148.46**	**125**	PKP2	**PKPbc**	**05 25 45.9**	**+0.3**
PLCA	**Paso Flores**	**148.46**	**125**		**PKPbc**	**05 25 45.9**	**+0.3**

*BJI **02** 05:13:43.0±0.0,26°.30N×144°.02E, h6km, mB4.9/14, mb4.5/20, Ms4.4/1, Ms7 4.2/1*
*IDC **02** 05:13:46.6±0.5,26°.88N×143°.99E, h0km, mb4.2/23, mb1 4.3/28, mb1mx4.3/45, mbtmp4.2/28, ML3.5/5, MS2.8/3, Ms1 2.8/3, ms1mx2.6/37, Error ellipse: s-maj=17.4km s-min=11.4km az=82.0*
*NEIC **02** 05:13:48.1±1.6,26°.93N±0°.08×143°.99E±0°.07, h10km±1km, mb4.6/27, Error ellipse: s-maj=13.4km s-min=11.0km az=168.0*
*NIED **02** 05:13:50.0,27°.27N×143°.83E, h18km, MW4.1, Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁵Nm; Mrr=1.21; Mθθ 1.03; Mφφ 0.18; Mrθ 0.74; Mrφ 0.29; Mθφ 0.22; Fault plane solution: Mo 1.40000×10¹⁵ NP1: φs253.00000°, δ62.00000°, λ-90.00000°. NP2:φs72.00000°, δ28.00000°, λ-91.00000°.*
*JMA **02** 05:13:49.9±0.1,27°.27N×143°.83E, h18km, M4.5*

ISC 02 05:13:48.2±0.5,27°.00N±0°.06×143°.94E±0°.06, h10km, n90, σ1s45/98, mb4.5/37, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.57**	**274**	P		**Pn**		**05 14 16.0**	**-0.1**
CBIJ				*e*S		**Sn**		**05 14 35.4**	**-1.2**
JCJ	**Chichijima**	**1.57**	**274**			**Pn**		**05 14 16.7**	**+0.6**
JCJ				Sn		**Sn**		**05 14 34.8**	**-1.8**
JHH2	**Haha-jima-NKT2**	**1.62**	**258**	P		**Pb**		**05 14 17.9**	**-0.3**
JHH2				S		**Sn**		**05 14 38.4**	**+0.7**
JHJ2	**Mitsune**	**7.07**	**331**	*e*S		**Sn**		**05 16 48.5**	**-3.6**
JHJ2	**Mitsune**	**7.07**	**331**	Pn		**Pn**		**05 15 32.1**	**+0.4**
JHJ2				Sn		**Sn**		**05 16 53.1**	**+1.0**
JHJ	**Hachijo jima 2**	**7.09**	**330**	Pn		**Pn**		**05 15 32.1**	**+0.1**
	5.5nm,0.3s,baz=229,slow=23,SNR=7.5								
JHJ				Sn		**Sn**		**05 16 47.4**	**-5.2**
	12nm,0.3s,baz=88,slow=22,SNR=2.1								
JHU	**Hanno**	**9.68**	**337**	P		**Pn**		**05 16 07.3**	**-0.3**
JHU				*e*S		Sn		05 17 48.9	-7.5
JYT	**Yasato**	**9.74**	**342**	Pn		**Pn**		**05 16 09.8**	**+1.5**
JRY	**Ryogami san**	**9.97**	**336**	P		**Pn**		**05 16 11.6**	**+0.1**
JRY				*e*S		**Sn**		**05 17 58.4**	**-5.0**
JGF	**Kuroka**	**10.26**	**328**	Pn		**Pn**		**05 16 15.9**	**+0.4**
MJAR	**Matsushiro Arr**	**10.69**	**334**	Pn		**Pn**		**05 16 21.5**	**+0.1**
	0.4nm,0.3s,baz=157,slow=11,SNR=44								
MJAR				LR		LR		05 22 24.0	
	comp=Z,25nm,19.2s,baz=180,slow=48								
MJAR	**Matsushiro Arr**	**10.69**	**334**			**Pn**		**05 16 20.1**	**-1.3**
MAJO	**Matsushiro**	**10.69**	**334**	Pn		**Pn**		**05 16 22.3**	**+0.9**
MAT	**Matsushiro**	**10.69**	**334**	P		**Pn**		**05 16 21.6**	**+0.2**
MAT				S		**Sn**		**05 18 15.3**	**-5.9**
JWT	**Wachi**	**11.03**	**321**	Pn		**Pn**		**05 16 27.1**	**+1.0**
JMM	**Marumori**	**11.16**	**347**			**Pn**		**05 16 26.4**	**-1.3**
GUMO	**Guam**	**13.37**	**176**	LR		LR		05 21 33.9	
	comp=Z,54nm,19.5s,baz=340,slow=35								
ERM	**Erimo**	**15.00**	**358**	Pn		**Pn**		**05 17 19.7**	**-0.4**
ERM				IAmb		IAmb		05 17 41.4	
	comp=Z,35nm,1.1s								
KSRS	**Korea Array**	**17.08**	**312**	P		**P**		**05 17 50.3**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=258,slow=31,SNR=6.1								
JKA	**Kamikawa-asahi**	**17.12**	**357**	P		**Pn**		**05 17 49.0**	**+1.6**
JKA	**Kamikawa-asahi**	**17.12**	**357**	IAmb		IAmb		05 17 52.5	
	comp=Z,13nm,1.2s								
ASAJ	**Asahikawa**	**17.12**	**357**	P		**Pn**		**05 17 49.0**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=195,slow=12,SNR=2.2								
USRK	**Ussuriysk Ar.**	**19.69**	**334**	P		**Pn**		**05 18 20.2**	**+1.3**
	baz=139,slow=44,SNR=4.2								
USRK	**Ussuriysk Ar.**	**19.69**	**334**	P		**P**		**05 18 17.8**	**+0.3**
YHNB	**Yeheng**	**20.44**	**269**	P		**P**		**05 18 25.8**	**-0.1**
YHNB				IAmb		IAmb		05 18 37.1	
	comp=Z,88nm,1.5s								
YULB	**Yu-li**	**20.80**	**265**	P		**P**		**05 18 30.8**	**+1.1**
SSLB	**Suanglung**	**21.01**	**266**	P		**P**		**05 18 32.5**	**+0.5**
SSLB				IAmb		IAmb		05 18 48.0	
	comp=Z,23nm,1.0s								
NJ2	**Nanjing**	**22.39**	**289**	*e*P		**P**		**05 18 47.3**	**+0.6**
NJ2				pmax		pmax			
	comp=Z,9.0nm,0.5s								
KLR	**Kul'dur**	**24.12**	**340**	P		**P**		**05 19 06.0**	**+1.9**
	comp=Z,1.2nm,0.5s,baz=144,slow=12,SNR=5.4								
HHC	**Hu-ho-hao-te**	**30.02**	**306**	*e*P		**P**		**05 19 58.2**	**+0.8**
HHC				pmax		pmax			
	comp=Z,18nm,1.0s								
HHC				pmax		pmax			
	comp=Z,81nm,5.0s								
XAN	**Xi'an**	**30.87**	**292**	P		P		05 19 58.6	-6.2
XAN				sP		pP		05 20 06.9	+0.8
XAN				pmax		pmax			
	comp=Z,4.0nm,0.8s								
LZH	**Lanzhou**	**35.15**	**295**	*e*P		**P**		**05 20 40.9**	**-1.5**
LZH				pP		pP		05 20 44.5	+0.9
LZH				sP		sP		05 20 47.1	+3.0
LZH				pmax		pmax			
	comp=Z,16nm,1.2s								
CD2	**Chengdu**	**35.25**	**286**	*e*P		**P**		**05 20 43.0**	**-0.1**
SONM	**Songino Array**	**35.88**	**316**	P		**P**		**05 20 49.4**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=130,slow=8.0,SNR=5.9								
SONM	**Songino Array**	**35.88**	**316**	P		**P**		**05 20 49.8**	**+1.4**
CMAR	**Chiang Mai Arr**	**42.19**	**268**	P		**P**		**05 21 42.0**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=58,slow=7.6,SNR=6.7								
CTA	**Charters Tower**	**46.86**	**177**	P		**P**		**05 22 17.4**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=348,slow=10,SNR=4.6								
CTAO	**Charters Tower**	**46.86**	**177**	P		**P**		**05 22 17.7**	**-0.9**
CTAO				IAmb		IAmb		05 22 23.3	
	comp=Z,8.6nm,1.4s								
WB0	**Warramunga Arr**	**47.40**	**192**	P		**P**		**05 22 21.8**	**-1.0**
WB0				IAmb		IAmb		05 22 25.5	
	comp=Z,8.2nm,1.1s								
WB2	**Warramunga Arr**	**47.58**	**192**	P		**P**		**05 22 23.3**	**-0.9**
WB2				IAmb		IAmb		05 22 23.8	
	comp=Z,6.8nm,0.8s								
WRA	**Warramunga Arr**	**47.58**	**192**	P		**P**		**05 22 23.2**	**-1.0**
	comp=Z,4.5nm,0.7s,baz=13,slow=8.6,SNR=37								
WRA				PcP		**PcP**		**05 23 53.0**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=9.9,slow=3.9,SNR=1.7								
WMQ	**Urumqi**	**47.91**	**306**	*e*P		**P**		**05 22 29.1**	**+2.4**
FITZ	**Fitzroy Crossi**	**48.22**	**204**	P		**P**		**05 22 28.8**	**-0.4**
	comp=Z,6.1nm,0.7s,baz=11,slow=8.6,SNR=11								
FITZ	**Fitzroy Crossi**	**48.22**	**204**	P		**P**		**05 22 28.8**	**-0.4**
ZALV	**Zalesovo Beam**	**50.59**	**319**	P		**P**		**05 22 47.9**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=102,slow=6.8,SNR=6.2								
ZALV				PcP		**PcP**		**05 24 04.6**	**0.0**
	comp=Z,1.2nm,0.4s,baz=50,slow=2.3,SNR=4.6								
ZALV				LR		LR		05 45 50.4	
	comp=Z,14nm,20.0s,baz=336,slow=38								
ZALV	**Zalesovo Beam**	**50.59**	**319**	P		**P**		**05 22 48.0**	**+1.1**
ASAR	**Alice Springs**	**51.29**	**192**	P		**P**		**05 22 51.2**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=13,slow=6.4,SNR=16								
ASAR				PcP		**PcP**		**05 24 07.0**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=24,slow=3.9,SNR=5.0								
MK31	**Makanchi Array**	**51.75**	**310**	P		**P**		**05 22 57.1**	**+1.3**
MKAR	**Makanchi Array**	**51.75**	**310**	P		**P**		**05 22 57.1**	**+1.2**
	comp=Z,2.5nm,0.6s,baz=87,slow=9.8,SNR=18								
MKAR				PcP		**PcP**		**05 24 09.7**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=78,slow=7.5,SNR=2.3								
NRIK	**Noril'sk**	**53.32**	**338**	P		**P**		**05 23 08.1**	**+1.1**
	comp=Z,1.4nm,0.4s,baz=125,slow=7.2,SNR=3.8								
DZM	**Mont Dzumac**	**53.42**	**154**	P		**P**		**05 23 08.4**	**-0.1**
	comp=Z,6.8nm,0.8s,baz=222,slow=23,SNR=2.5								
KURK	**Kurchatov**	**54.17**	**315**	P		**P**		**05 23 13.8**	**+0.2**
KURK				IAmb		IAmb		05 23 15.4	
	comp=Z,3.2nm,0.6s								
SKT	**Skwentna**	**54.60**	**32**	P		**P**		**05 23 17.0**	**+0.4**
SKT				IAmb		IAmb		05 23 18.6	
	comp=Z,14nm,1.4s								
SCM	**Sheep Creek Mo**	**56.56**	**32**	P		**P**		**05 23 31.1**	**+0.3**
KSH	**Kashi**	**56.97**	**301**	*e*P		**P**		**05 23 37.5**	**+3.4**
KSH				pmax		pmax			
	comp=Z,190nm,5.2s								
ILAR	**Eielson Array**	**57.05**	**29**	P		**P**		**05 23 34.1**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=254,slow=6.6,SNR=8.0								
ILAR				PcP		**PcP**		**05 24 27.5**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=273,slow=4.2,SNR=2.8								
ILAR	**Eielson Array**	**57.05**	**29**	P		**P**		**05 23 34.5**	**+0.5**
KLU	**Klutina**	**57.21**	**32**	P		**P**		**05 23 36.9**	**+1.5**
AAK	**Ala-Archa**	**57.60**	**305**	P		**P**		**05 23 40.2**	**+1.7**
STKA	**Stephens Creek**	**58.59**	**182**	P		**P**		**05 23 43.2**	**-1.9**
	comp=Z,2.7nm,1.0s,baz=134,slow=22,SNR=2.8								
STKA	**Stephens Creek**	**58.59**	**182**	P		**P**		**05 23 44.4**	**-0.8**
K27K	**Chicken**	**59.08**	**30**	P		**P**		**05 23 49.9**	**+1.6**
K27K				IAmb		IAmb		05 24 17.8	
	comp=Z,5.3nm,1.4s								
BRVK	**Borovoye**	**59.24**	**318**	P		**P**		**05 23 51.1**	**+1.5**
BRVK				IAmb		IAmb		05 23 51.3	
	comp=Z,3.3nm,0.7s								
BBOO	**Buckleboo**	**59.95**	**188**	P		**P**		**05 23 53.2**	**-1.4**
KK31	**Karatay Array**	**60.41**	**306**	P		**P**		**05 23 57.9**	**0.0**
KK31				IAmb		IAmb		05 24 00.6	
	comp=Z,3.7nm,0.9s								
KKAR	**Karatay Array**	**60.41**	**306**	P		**P**		**05 23 58.7**	**+0.8**
CHGR	**Chuyangaron**	**62.34**	**301**	P		**P**		**05 24 12.0**	**+0.9**
INK	**Inuvik**	**62.47**	**25**	P		**P**		**05 24 12.2**	**+0.9**
	comp=Z,2.3nm,0.5s,baz=281,slow=5.7,SNR=20								
INK	**Inuvik**	**62.47**	**25**	P		**P**		**05 24 12.0**	**+0.7**
ABKAR	**Akbulak array**	**66.28**	**315**	P		**P**		**05 24 37.3**	**+0.7**
ABKAR				IAmb		IAmb		05 24 37.9	
	comp=Z,2.9nm,0.7s								
YKA	**Yellowknife Ar**	**71.48**	**29**	P		**P**		**05 25 09.3**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=306,slow=6.0,SNR=6.0								
B08A	**Colville Reser**	**74.53**	**43**	P		**P**		**05 25 26.9**	**-0.2**
B08A				IAmb		IAmb		05 25 29.1	
	comp=Z,4.8nm,0.9s								
FINES	**FINESS Array B**	**78.72**	**334**	P		**P**		**05 25 50.9**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=75,slow=2.2,SNR=9.8								
KBZ	**Khabaz**	**79.22**	**314**	P		**P**		**05 25 54.8**	**+1.3**
	comp=Z,6.0nm,0.7s,baz=77,slow=5.1,SNR=9.2								
NVAR	**Mina Array Bea**	**79.34**	**52**	P		**P**		**05 25 55.0**	**+0.3**
	comp=Z,2.5nm,0.7s,baz=284,slow=5.6,SNR=21								
NVAR	**Mina Array Bea**	**79.34**	**52**	P		**P**		**05 25 53.5**	**-1.2**
NV11	**Mina Array Sit**	**79.45**	**52**	P		**P**		**05 25 54.9**	**-0.3**
HRY	**Holter Researc**	**79.82**	**43**	P		**P**		**05 25 56.0**	**-1.0**
PDAR	**Pinedale Array**	**83.17**	**45**	P		**P**		**05 26 15.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=335,slow=0.6,SNR=8.5								
PDAR	**Pinedale Array**	**83.17**	**45**	P		**P**		**05 26 14.1**	**-0.9**
AKASG	**Malin Array Be**	**83.62**	**324**	P		**P**		**05 26 16.1**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=48,slow=5.4,SNR=7.4								
AKASG	**Malin Array Be**	**83.62**	**324**	IAmb		IAmb		05 26 17.6	
	comp=Z,1.3nm,1.1s								
NOA	**NORSAR Array B**	**84.28**	**339**	P		**P**		**05 26 19.3**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=348,slow=14,SNR=2.7								
BRTR	**Keskin Array B**	**87.21**	**314**	P		**P**		**05 26 34.1**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=59,slow=5.9,SNR=4.9								
BURAR	**Bucovina Array**	**87.58**	**324**	P		**P**		**05 26 35.7**	**-1.0**
TXAR	**Lajitas Array**	**94.40**	**54**	P		**P**		**05 27 09.1**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=242,slow=1.9,SNR=3.0								
TORD	**Torodi Ar. Bea**	**125.82**	**313**	PKP		**PKPdf**		**05 32 50.6**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=6.5,slow=2.2,SNR=1.8								
LPAZ	**La Paz**	**148.43**	**77**	PKPbc		**PKiKP**		**05 33 37.2**	**-0.9**
	comp=Z,4.4nm,0.8s,baz=303,slow=3.2,SNR=12								
LPAZ	**La Paz**	**148.43**	**77**			**PKiKP**		**05 33 37.4**	**-0.7**
PLCA	**Paso Flores**	**148.47**	**125**	PKPbc		**PKPbc**		**05 33 35.6**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=274,slow=3.1,SNR=5.9								

IDC 02 05:15:00.5±4.5,30°.37S×138°.33E, h0km, mb1 2.8/3, mb1mx2.8/24, mbtmp2.6/3, ML2.6/3, Error ellipse: s-maj=116.4km s-min=19.6km az=41.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.18**	**119**	Pn		Pn	Pn	05 15 51.6	-0.2
	0.3nm,0.3s,baz=298,slow=13,SNR=7.6								
STKA				Sn		Sn	Sn	05 16 27.7	-2.7
	1.3nm,0.3s,baz=94,slow=2.1,SNR=7.1								
STKA				Lg		Lg	Lg	05 16 41.8	
	1.3nm,0.3s,baz=20,slow=21,SNR=5.3								
ASAR	**Alice Springs**	**7.75**	**328**	Pn		Pn	Pn	05 16 54.2	-0.5
	0.1nm,0.3s,baz=153,slow=12,SNR=2.1								
ASAR				Sn		Sn	Sn	05 18 21.2	-2.1
	0.0nm,0.3s,baz=152,slow=22,SNR=1.9								
WRA	**Warramunga Arr**	**10.99**	**340**	Pn		Pn	Pn	05 17 39.8	+0.7
	0.1nm,0.3s,baz=158,slow=13,SNR=2.3								

*IDC **02** 05:31:16.9±0.8,55°.06S×27°.87W, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.9/27, mbtmp4.0/8, ML3.9/1, MS3.5/2, Ms1 3.5/2, ms1mx3.1/17, Error ellipse: s-maj=26.9km s-min=20.9km az=79.0*
*NEIC **02** 05:31:18.9±0.8,55°.1S±0°.1×28°.1W±0°.2, h10km±1km, mb4.4/7, Error ellipse: s-maj=23.9km s-min=12.0km az=31.0*

ISC 02 05:31:18.3±0.7,55°.1S±0°.1×27°.95W±0°.09, h10km, n26, σ0s63/21, mb4.2/6, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.02**	**275**				**Pn**	**05 32 34.2**	**+0.6**
HOPE				Sn			**Sn**	**05 33 30.4**	**-1.1**
SNAA	**Sanae**	**19.82**	**157**	P			**Pn**	**05 35 49.7**	**-0.6**
	0.4nm,0.3s,baz=304,slow=12,SNR=4.0								
SNAA	**Sanae**	**19.82**	**157**	P		**P**		**05 35 49.0**	**+0.3**
PMSA	**Palmer Station**	**20.24**	**227**	P		**P**		**05 35 52.8**	**-0.4**
	18nm,1.0s,baz=244,slow=6.1,SNR=2.6								
PMSA				LR		LR		05 42 04.1	
	comp=Z,75nm,18.2s,baz=256,slow=32								
PMSA	**Palmer Station**	**20.24**	**227**	P		**P**		**05 35 53.4**	**+0.2**
QSPA	**South Pole Qui**	**35.19**	**180**	P		**P**		**05 38 12.3**	**+0.1**
	1.9nm,0.8s,baz=182,slow=1.9,SNR=5.3								
QSPA	**South Pole Qui**	**35.19**	**180**	P		**P**		**05 38 12.6**	**+0.4**
QSPA				IAmb		IAmb		05 38 26.6	
	comp=Z,8.4nm,1.4s								
CPUP	**Villa Florida**	**35.84**	**311**	P		**P**		**05 38 18.3**	**+0.4**
	comp=Z,3.1nm,1.1s,baz=114,slow=10,SNR=3.8								
CPUP	**Villa Florida**	**35.84**	**311**	P		**P**		**05 38 18.2**	**+0.4**
CPUP				IAmb		IAmb		05 38 19.5	
	comp=Z,12nm,1.4s								
ROC1	**El Roble**	**37.22**	**288**	P		**P**		**05 38 29.3**	**-0.6**
BOSA	**Boshof**	**46.16**	**77**	P		**P**		**05 39 41.8**	**-1.3**
	comp=Z,1.6nm,0.8s,baz=152,slow=6.7,SNR=3.6								
BOSA				LR		LR		05 55 39.0	
	comp=Z,94nm,18.4s,baz=217,slow=32								
H10S2	**ASCENSION HYDR**	**47.19**	**18**	T		T		06 30 41.2	
H10S3	**ASCENSION HYDR**	**47.19**	**18**	T		T		06 30 41.5	
	SNR=9.9								
VNDA	**Vanda**	**47.54**	**183**	P		**P**		**05 39 52.8**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=195,slow=5.2,SNR=8.2								
VNDA	**Vanda**	**47.54**	**183**	P		**P**		**05 39 54.0**	**+0.9**
VNDA				IAmb		IAmb		05 40 05.4	
	comp=Z,2.3nm,0.9s								
H10N1	**ASCENSION HYDR**	**48.31**	**18**	T		T		06 32 05.5	
	baz=189,slow=75,SNR=10								
H10N3	**ASCENSION HYDR**	**48.31**	**18**	T		T		06 32 05.4	
	baz=189,slow=75,SNR=7.3								
H10N2	**ASCENSION HYDR**	**48.32**	**18**	T		T		06 32 06.7	
	baz=189,slow=75,SNR=10								
LPAZ	**La Paz**	**49.45**	**305**	P		**P**		**05 40 09.2**	**0.0**
	comp=Z,1.5nm,0.6s,baz=185,slow=8.1,SNR=4.4								
LPAZ	**La Paz**	**49.45**	**305**	IAmb		IAmb		05 40 31.5	
	comp=Z,4.2nm,1.1s								
TORD	**Torodi Ar. Bea**	**72.42**	**30**	P		**P**		**05 42 44.6**	**0.0**
	comp=Z,0.8nm,0.9s,baz=195,slow=6.5,SNR=4.6								
TORD	**Torodi Ar. Bea**	**72.42**	**30**	P		**P**		**05 42 45.5**	**+0.9**
ILAR	**Eielson Array**	**149.13**	**313**	PKPbc		**PKPbc**		**05 51 06.0**	**+0.6**
	comp=Z,2.9nm,0.8s,baz=127,slow=1.9,SNR=28								
ILAR	**Eielson Array**	**149.13**	**313**			**PKiKP**		**05 51 06.6**	**+0.1**
SONM	**Songino Array**	**151.09**	**85**	PKPbc		**PKPbc**		**05 51 11.1**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=212,slow=3.8,SNR=6.8								
SONM	**Songino Array**	**151.09**	**85**			**PKiKP**		**05 51 11.3**	**0.0**

*TAP **02** 05:38:23.8,24°.22N×122°.01E, h27km, ML3.4, C*
*JMA **02** 05:38:23.5,24°.13N×121°.98E, h25km±2km, M2.6*

ISC 02 05:38:24.0±1.0,24°.16N±0°.02×122°.02E±0°.02, h25km±10km, n102, σ1s13/193, 1C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.34**	**326**	*i* P		**Pb**		**05 38 30.9**	**-0.7**
	baz=325								
ENAH				*i* S		**Sb**		**05 38 37.3**	**+

EHY	**Hungye**	**0.92**	**225**	*i* P	**Pn**	**05 38 39.9**	**-1.3**
	baz=219						
EHY				*e*S	**Sn**	**05 38 53.6**	**0.0**
	baz=219						
NWF	**Wu-fen Shan**	**0.93**	**346**	*i* P	**Pb**	**05 38 41.5**	**0.0**
	baz=2.0						
NWF				*i* S	**Sn**	**05 38 54.1**	**-0.1**
	baz=2.0						
WFSB	**Wu-fen Shan**	**0.93**	**346**	P	**Pb**	**05 38 41.7**	**+0.2**
	baz=3.0						
WFSB				S	**Sn**	**05 38 54.7**	**+0.6**
	baz=3.0						
TATO	**Taipei**	**0.94**	**329**	P	**Pb**	**05 38 41.3**	**-0.3**
	baz=314						
TATO				S	**Sn**	**05 38 54.5**	**+0.1**
	baz=314						
YOJ	**Yonaguni jima**	**0.95**	**72**	P	**Pb**	**05 38 42.0**	**+0.3**
	baz=86						
YOJ				S	**Sn**	**05 38 55.2**	**+0.7**
	baz=86						
YOJ	**Yonaguni jima**	**0.95**	**72**	P	**Pn**	**05 38 41.6**	**-0.2**
YOJ				*e*S	**Sb**	**05 38 54.2**	**+0.2**
TAP1	**Taipei**	**0.98**	**333**	*e*P	**Pb**	**05 38 42.5**	**+0.1**
	baz=317						
TAP1				*e*S	**Sn**	**05 38 55.9**	**+0.6**
	baz=317						
WHP	**Taichung City**	**0.99**	**277**	P	**Pb**	**05 38 42.7**	**+0.2**
	baz=273						
WHP				S	**Sn**	**05 38 55.7**	**+0.1**
	baz=273						
TAP	**Taipei**	**0.99**	**332**	*e*P	**Pb**	**05 38 42.5**	**0.0**
	baz=318						
TAP				S	**Sn**	**05 38 56.3**	**+0.8**
	baz=318						
DPDB	**Guoxing**	**1.01**	**263**	P	**Pb**	**05 38 42.5**	**-0.3**
	baz=249						
DPDB				S	**Sn**	**05 38 57.0**	**+0.9**
	baz=249						
YULB	**Yu-li**	**1.01**	**221**	P	**Pn**	**05 38 41.6**	**-1.1**
	baz=216						
YULB				*e*S	**Sn**	**05 38 57.2**	**+1.1**
	baz=216						
LIOB	**Emei**	**1.03**	**298**	*i* P	**Pb**	**05 38 43.3**	**+0.1**
	baz=295						
LIOB				S	**Sn**	**05 38 58.5**	**+1.9**
	baz=295						
NSTT	**Nanjuang**	**1.04**	**297**	*i* P	**Pb**	**05 38 43.3**	**0.0**
	baz=294						
NSTT				*i* S	**Sn**	**05 38 56.8**	**0.0**
	baz=294						
TWF1	**Yuli**	**1.04**	**220**	*i* P	**Pn**	**05 38 41.6**	**-1.5**
	baz=229						
TWF1				S	**Sn**	**05 38 59.1**	**+2.3**
	baz=229						
SSLB	**Suanglung**	**1.04**	**249**	P	**Pb**	**05 38 42.8**	**-0.6**
	baz=245						
SSLB				S	**Sn**	**05 38 58.1**	**+1.2**
	baz=245						
SMLT	**Sun Moon Lake**	**1.06**	**255**	*i* P	**Pb**	**05 38 43.8**	**0.0**
	baz=242						
SMLT				*i* S	**Sn**	**05 38 59.4**	**+1.9**
	baz=242						
YM01	**YM01**	**1.06**	**337**	P	**Pb**	**05 38 43.7**	**0.0**
	baz=352						
YM01				*e*S	**Sn**	**05 38 58.1**	**+0.8**
	baz=352						
YM10	**YM10**	**1.07**	**337**	P	**Pb**	**05 38 43.8**	**-0.1**
	baz=351						
YM10				S	**Sn**	**05 38 59.1**	**+1.5**
	baz=351						
YM11	**YM11**	**1.08**	**338**	*e*P	**Pn**	**05 38 43.1**	**-0.5**
	baz=352						
YM11				S	**Sn**	**05 38 59.6**	**+1.8**
	baz=352						
YM04	**YM04**	**1.08**	**336**	P	**Pb**	**05 38 44.0**	**0.0**
	baz=338						
YM04				*e*S	**Sb**	**05 38 58.1**	**+0.3**
	baz=338						
TWS1	**Kuangyinshan**	**1.08**	**330**	P	**Pb**	**05 38 44.2**	**+0.2**
	baz=317						
TWS1				S	**Sb**	**05 38 58.7**	**+1.0**
	baz=317						
YM08	**YM08**	**1.09**	**339**	P	**Pb**	**05 38 43.5**	**-0.7**
	baz=353						
YM08				*e*S	**Sb**	**05 38 58.1**	**0.0**
	baz=353						
TYC	**Yuchr**	**1.09**	**257**	P	**Pb**	**05 38 43.9**	**-0.3**
	baz=241						
TYC				S	**Sb**	**05 39 00.2**	**+2.2**
	baz=241						
YM03	**YM03**	**1.10**	**337**	*e*P	**Pb**	**05 38 43.5**	**-0.9**
	baz=337						
NCUH	**Zhongli**	**1.10**	**317**	*e*P	**Pn**	**05 38 43.3**	**-0.6**
	baz=316						
NCUH				S	**Sb**	**05 39 00.0**	**+1.6**
	baz=316						
ANP	**Anpu**	**1.12**	**336**	*e*P	**Pb**	**05 38 44.4**	**-0.3**
	baz=337						
NTST	**Danshui**	**1.12**	**333**	*e*P	**Pb**	**05 38 44.6**	**-0.1**
	baz=351						
NTST				*e*S	**Sb**	**05 39 01.3**	**+2.4**
	baz=351						
SBCB	**Hsinchu**	**1.13**	**304**	*e*P	**Pb**	**05 38 44.6**	**-0.2**
	baz=301						
SBCB				*e*S	**Sb**	**05 39 01.1**	**+1.9**
	baz=301						
TWQ1	**Liyutan**	**1.15**	**279**	P	**Pb**	**05 38 45.8**	**+0.6**
	baz=275						
TWQ1				S	**Sb**	**05 39 02.0**	**+2.2**
	baz=275						
FULB	**Fuli**	**1.17**	**215**	P	**Pb**	**05 38 44.9**	**-0.7**
	baz=201						
TWY	**Chenhua**	**1.17**	**341**	P	**Pn**	**05 38 43.8**	**-1.0**
	baz=344						
TWY				*e*S	**Sn**	**05 38 59.3**	**-0.7**
	baz=344						
NSY	**Sanyi**	**1.18**	**283**	P	**Pb**	**05 38 46.4**	**+0.7**
	baz=278						
NSY				S	**Sb**	**05 39 03.3**	**+2.8**
	baz=278						
NMLH	**Miaoli**	**1.18**	**289**	P	**Pb**	**05 38 46.1**	**+0.4**
	baz=285						
NMLH				S	**Sb**	**05 39 03.5**	**+2.9**
	baz=285						
TCU	**Taichung**	**1.23**	**270**	P	**Pb**	**05 38 46.8**	**+0.3**
	baz=264						
WJS	**Zhushan**	**1.23**	**254**	P	**Pb**	**05 38 47.3**	**+0.8**
	baz=250						
WJS				S	**Sb**	**05 39 04.8**	**+2.8**
	baz=250						
WNT	**Mingjian**	**1.25**	**257**	P	**Pb**	**05 38 47.2**	**+0.3**
	baz=238						
WNT				S	**Sb**	**05 39 05.0**	**+2.3**
	baz=238						
WDJ	**Dajia District**	**1.27**	**279**	*e*P	**Pb**	**05 38 47.7**	**+0.4**
	baz=274						
WDJ				S	**Sb**	**05 39 04.6**	**+1.4**
	baz=274						
ALS	**Alishan**	**1.29**	**240**	P	**Pb**	**05 38 47.5**	**-0.2**
	baz=222						
ALS				S	**Sb**	**05 39 04.6**	**+0.6**
	baz=222						
ELDTW	**Lidau**	**1.34**	**224**	P	**Pb**	**05 38 47.7**	**-0.7**
	baz=208						
ELDTW				S	**Sb**	**05 39 05.2**	**+0.1**
	baz=208						
WCHH	**Zhanghua**	**1.34**	**267**	*e*P	**Pb**	**05 38 48.5**	**+0.2**
	baz=261						
WCHH				*e*S	**Sb**	**05 39 08.7**	**+3.6**
	baz=261						
CHN5	**Tsauling**	**1.35**	**246**	*i* P	**Pb**	**05 38 48.8**	**+0.1**
	baz=226						
CHN5				*i* S	**Sb**	**05 39 08.9**	**+3.3**
	baz=226						
EDH	**Donghe**	**1.35**	**209**	*e*P	**Pn**	**05 38 46.8**	**-0.5**
	baz=193						
WGK	**Gukeng**	**1.42**	**251**	*e*S	**Sb**	**05 39 08.9**	**+1.5**
	baz=245						
WDLH	**Douliu**	**1.44**	**251**	*e*P	**Pb**	**05 38 49.8**	**-0.2**
	baz=246						
WDLH				*e*S	**Sb**	**05 39 10.0**	**+2.1**
	baz=246						
LONT	**Longtian**	**1.49**	**213**	*e*P	**Pn**	**05 38 49.0**	**-0.3**
	baz=208						
LONT				*e*S	**Sb**	**05 39 08.5**	**-1.1**
	baz=208						
STYT	**Tauyuan**	**1.53**	**230**	P	**Pb**	**05 38 50.7**	**-0.9**
	baz=213						
STYT				S	**Sb**	**05 39 11.7**	**+1.1**
	baz=213						
TPUB	**Ta-pu**	**1.54**	**236**	*e*P	**Pb**	**05 38 50.7**	**-1.1**
	baz=222						
TPUB				*e*S	**Sb**	**05 39 12.2**	**+1.3**
	baz=222						
CHN4	**Tsaushan**	**1.54**	**239**	P	**Pb**	**05 38 51.4**	**-0.4**
	baz=223						
CHN4				S	**Sb**	**05 39 13.9**	**+3.1**
	baz=223						
RLNB	**Erlin**	**1.54**	**260**	*e*S	**Sb**	**05 39 12.8**	**+1.9**
	baz=255						
WTK	**Tuku**	**1.57**	**253**	*e*P	**Pb**	**05 38 51.4**	**-0.9**
	baz=248						
WTK				*e*S	**Sb**	**05 39 13.0**	**+1.4**
	baz=248						
LDUT	**Ludao**	**1.57**	**199**	*e*P	**Pn**	**05 38 48.8**	**-1.5**
	baz=195						
LDUT				S	**Sn**	**05 39 08.7**	**-1.0**
	baz=195						
IRIF	**Iriomote-Funau**	**1.57**	**83**	P	**Pn**	**05 38 50.3**	**0.0**
IRIF				*e*S	**Sn**	**05 39 10.4**	**+0.6**
TWGBT	**Beinan**	**1.59**	**213**	*e*P	**Pn**	**05 38 50.3**	**-0.4**
	baz=208						
TWGBT				*e*S	**Sn**	**05 39 09.6**	**-0.9**
	baz=208						
TWG	**Pinlang**	**1.59**	**213**	P	**Pn**	**05 38 50.5**	**-0.2**
	baz=208						
TWG				*e*S	**Sn**	**05 39 09.8**	**-0.7**
	baz=208						
CHY	**Chiayi**	**1.60**	**246**	*e*P	**Pb**	**05 38 52.4**	**-0.5**
	baz=241						
CHY				*e*S	**Sb**	**05 39 14.3**	**+1.6**
	baz=241						
HATJ	**Hateruma jima**	**1.63**	**93**	P	**Pn**	**05 38 50.5**	**-0.6**
HATJ				*e*S	**Sn**	**05 39 12.4**	**+1.0**
TWK	**Hsinying**	**1.66**	**238**	P	**Pb**	**05 38 52.9**	**-1.1**
	baz=219						
TWK				S	**Sb**	**05 39 16.1**	**+1.5**
	baz=219						
CHN1	**Nanshi**	**1.68**	**235**	P	**Pb**	**05 38 52.6**	**-1.6**
	baz=229						
CHN1				S	**Sb**	**05 39 15.6**	**+0.7**
	baz=229						
SNST	**Tainan City**	**1.68**	**236**	*e*P	**Pb**	**05 38 53.1**	**-1.2**
	baz=231						
SNST				*e*S	**Sb**	**05 39 17.1**	**+2.1**
	baz=231						
SGST	**Jiashian**	**1.70**	**231**	P	**Pn**	**05 38 52.4**	**+0.3**
	baz=225						
SGST				S	**Sb**	**05 39 16.5**	**+0.9**
	baz=225						
SLGT	**Liugui**	**1.72**	**228**	P	**Pb**	**05 38 54.2**	**-0.7**
	baz=213						
SLGT				*e*S	**Sb**	**05 39 16.1**	**+0.1**
	baz=213						
ICHU	**Yijhu**	**1.78**	**244**	*e*P	**Pb**	**05 38 55.0**	**-0.9**
	baz=238						
ICHU				*e*S	**Sb**	**05 39 18.9**	**+1.0**
	baz=238						
JKRS	**Kuro-shima**	**1.82**	**87**	P	**Pn**	**05 38 54.5**	**+0.8**
JKRS				*e*S	**Sn**	**05 39 16.3**	**+0.4**
ECL	**Taimali**	**1.84**	**212**	P	**Pn**	**05 38 52.0**	**-2.0**
	baz=207						
ECL				*e*S	**Sn**	**05 39 14.3**	**-2.2**
	baz=207						
SSD	**Sandimen**	**1.90**	**222**	P	**Pb**	**05 38 56.3**	**-1.6**
	baz=202						
SSD				S	**Sb**	**05 39 23.2**	**+1.9**
	baz=202						
TSMG	**Majia**	**1.92**	**221**	*e*P	**Pb**	**05 38 56.8**	**-1.6**
	baz=215						
TSMG				*e*S	**Sb**	**05 39 23.0**	**+1.1**
	baz=215						
JIJ	**Ishigaki jima**	**1.95**	**84**	P	**Pn**	**05 38 56.2**	**+0.7**
JIJ				*e*S	**Sn**	**05 39 18.6**	**-0.5**
MASBT	**Mashibuluo**	**2.00**	**220**	P	**Pb**	**05 38 58.5**	**-1.2**
	baz=213						
MASBT				*e*S	**Sb**	**05 39 24.3**	**+0.1**
	baz=213						
JISG	**Ishigakijimahi**	**2.13**	**78**	S	**Sn**	**05 39 23.6**	**-0.1**
SCZT	**Fangliau**	**2.20**	**216**	*e*P	**Pb**	**05 39 00.9**	**-2.2**
	baz=198						
JTJ	**Tarama**	**2.49**	**78**	S	**Sn**	**05 39 33.0**	**+0.5**

IDC ***02*** *05:40:59.1±0.8, 27.°01N×93.°95E, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.8/49, mbtmp3.8/13, ML3.9/1, MS2.6/1, Ms1 2.6/1, ms1mx2.3/39, Error ellipse: s-maj=27.6km s-min=15.5km az=51.0*

NDI ***02*** *05:41:04.6±2.3, 26.°78N×94.°07E, h44km±13km, ML4.1*

NEIC ***02*** *05:41:04.3±1.4, 26.°71N±0.°06×94.°05E±0.°08, h57km±4km, mb4.3/15, Error ellipse: s-maj=11.4km s-min=7.9km az=55.0*

ISC 02 05:41:04.1±0.8, 26.°79N±0.°04×93.°95E±0.°04, h49km±9km, n59, σ1§56/72, mb4.0/15, Northeastern India

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JORH	**JORHAT**	**0.28**	**99**		*e*P		**Pn**	**05 41 12.0**	**-0.9**
JORH					*e*S		**Sn**	**05 41 18.0**	**-1.2**
MOKO	**MOKOCHONG**	**0.69**	**132**		*e*P		**Pn**	**05 41 17.6**	**-0.2**
MOKO					*e*S		**Sn**	**05 41 27.7**	**0.0**
MOKO					IAML			05 41 27.8	
	comp=N,14μm,0.1s								
MOKO					IAML			05 41 27.9	
	comp=E,20μm,0.2s								
ZIRO	**ZIRO**	**0.74**	**353**		*e*P		**Pn**	**05 41 18.8**	**+0.3**
ZIRO					*e*S		**Sn**	**05 41 28.9**	**-0.2**
ZIRO					IAML			05 41 30.3	
	comp=E,17μm,0.6s								
ZIRO					IAML			05 41 31.6	
	comp=N,20μm,0.6s								
TEZP	**TEZPUR**	**1.04**	**261**		*e*S		**Sn**	**05 41 38.4**	**+2.6**
KOHI	**KOHIMA**	**1.07**	**172**		*e*P		**Pn**	**05 41 23.6**	**+0.7**
KOHI					*e*S		**Sn**	**05 41 38.2**	**+1.5**
KOHI					IAML			05 41 38.7	
	comp=N,4μm,0.3s								
KOHI					IAML			05 41 38.8	
	comp=E,2μm,0.2s								
LKP	**Lekhapani**	**1.78**	**72**		*e*P		**Pn**	**05 41 32.4**	**0.0**
LKP					IAML			05 41 32.8	
	comp=N,282nm,0.3s								
LKP					*e*S		**Sn**	**05 41 51.6**	**-2.2**
TAWA	**Tawang**	**2.02**	**294**		*e*P		**Pn**	**05 41 38.5**	**+2.5**
TAWA					*e*S		**Sn**	**05 42 04.1**	**+3.8**
TAWA					IAML			05 42 04.5	
	comp=E,4μm,0.4s								
GUWA	**GUWAHATI**	**2.11**	**254**		*e*P		**Pn**	**05 41 37.8**	**+1.0**
GUWA					*e*S		**Sn**	**05 42 03.4**	**+1.5**
SHL	**Shillong**	**2.22**	**237**		*e*P		**Pn**	**05 41 39.5**	**+0.9**
SHL					*e*S		**Sn**	**05 42 06.7**	**+1.8**
SHL					IAML			05 42 07.6	
	comp=E,1μm,0.2s								
SHL	**Shillong**	**2.22**	**237**				**Pn**	**05 41 39.5**	**+0.9**
SHL						Sn	**Sn**	**05 42 04.4**	**-0.4**
SILR	**SILCHAR**	**2.25**	**208**		*e*S		**Sn**	**05 42 07.5**	**+2.2**
SILR					IAML			05 42 16.0	
	comp=Z,628nm,0.8s								
LSA	**Lhasa**	**3.81**	**320**				**Pn**	**05 42 03.9**	**+3.2**
LSA						Sn	**Sn**	**05 42 45.1**	**+0.6**
GTK	**Tadong**	**4.80**	**278**		*e*S		**Sn**	**05 43 07.5**	**-0.9**
TAPN	**Taplejung**	**5.59**	**277**		*e*Pn		**Pn**	**05 42 25.7**	**+0.7**
ODAN	**Odare**	**5.86**	**272**		*e*Pn		**Pn**	**05 42 29.5**	**+0.9**
ODAN					*e*Sn		**Sn**	**05 43 33.8**	**-0.8**
	comp=Z,283nm,0.2s								
RAMN	**Ramite**	**6.56**	**273**		*e*Pn		**Pn**	**05 42 39.5**	**+1.2**
GUN	**Gumba**	**7.26**	**281**		*e*Pn		**Pn**	**05 42 48.5**	**+0.6**
GUN					*e*Sn		**Sn**	**05 44 06.5**	**-2.8**
	comp=Z,245nm,0.4s								
PKI	**Pulchoki**	**7.64**	**278**		*e*Pn		**Pn**	**05 42 53.5**	**+0.3**
PKIN	**Phulchoki**	**7.66**	**278**		*e*Pn		**Pn**	**05 42 53.5**	**+0.2**
KKN	**Kakani**	**7.78**	**279**		*e*Pn		**Pn**	**05 42 55.7**	**+0.8**
BOK	**Bokaro**	**7.88**	**250**		*e*P		**Pn**	**05 42 56.8**	**+0.7**
BOK					*i* x		x	05 42 58.0	
BOK					*e*S		**Sn**	**05 44 20.2**	**-3.8**
DMN	**Daman**	**7.92**	**278**		*e*Pn		**Pn**	**05 42 57.5**	**+0.7**
DMN					*e*Sn		**Sn**	**05 44 22.0**	**-3.2**
	comp=Z,91nm,0.5s								
GKN	**Gorkha**	**8.37**	**280**		*e*Pn		**Pn**	**05 43 03.3**	**+0.4**
DANN	**Dangsing**	**9.17**	**282**		*e*Pn		**Pn**	**05 43 13.4**	**-0.7**
KOLN	**Koldanda**	**9.26**	**278**		*e*Pn		**Pn**	**05 43 14.8**	**-0.4**
KOLN					*e*Sn		**Sn**	**05 44 54.2**	**-3.9**
	comp=Z,70nm,0.3s								
CMAR	**Chiang Mai Arr**	**9.48**	**150**			Pn	**Pn**	**05 43 17.8**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=326,slow=13,SNR=4.8								
PYUN	**Piuthan**	**9.82**	**280**		*e*Pn		**Pn**	**05 43 21.5**	**-1.4**
PYUN					*e*Sn		**Sn**	**05 45 07.0**	**-4.9**
	comp=Z,127nm,0.4s								
ENH	**Enshi**	**14.10**	**72**				**P**	**05 44 27.1**	**-0.3**
XAN	**Xi'an**	**14.79**	**57**			Pn	**Pn**	**05 44 29.5**	**-0.9**
PBA	**Port Blair**	**15.09**	**185**			Pn	Pn	05 44 32.8	-1.5
QIZ	**Qiongzhong**	**16.54**	**115**			Pn	**Pn**	**05 44 51.2**	**-1.6**
QIZ						IAmb	IAmb	05 44 52.5	
	comp=Z,31nm,1.4s								
NIL	**Nilore**	**19.13**	**296**				**P**	**05 45 23.6**	**+0.4**
NIL						IAmb	IAmb	05 45 38.7	
	comp=Z,11nm,0.8s								
MK31	**Makanchi Array**	**22.00**	**338**			P	**P**	**05 45 54.4**	**+0.4**
MKAR	**Makanchi Array**	**22.00**	**338**			P	**P**	**05 45 54.5**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=149,slow=13,SNR=15								
MKAR	**Makanchi Array**	**22.00**	**338**			P	**P**	**05 45 54.3**	**+0.2**
MAKZ	**Makanchi**	**22.11**	**338**			P	**P**	**05 45 55.5**	**+0.2**
KNMB	**Chin-men Tao**	**22.15**	**91**			P	**P**	**05 45 54.0**	**-1.9**
KBL	**Kabul**	**22.74**	**296**			P	**P**	**05 46 04.0**	**+1.7**
PALK	**Pallekele**	**23.13**	**215**			LR	LR	05 56 31.7	
	comp=Z,16nm,20.5s,baz=104,slow=40								
SONM	**Songino Array**	**23.17**	**22**			P	**P**	**05 46 05.6**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=207,slow=12,SNR=5.0								
SONM	**Songino Array**	**23.17**	**22**			P	**P**	**05 46 05.9**	**-0.5**
GAR	**Garm**	**23.21**	**308**				**P**	**05 46 07.5**	**+0.6**
GAR						IAmb	IAmb	05 46 09.6	
	comp=Z,19nm,1.2s								
CHGR	**Chuyangaron**	**23.90**	**306**			P	**P**	**05 46 13.3**	**-0.1**
CHGR						IAmb	IAmb	05 46 23.2	
	comp=Z,7.9nm,0.8s								
KKAR	**Karatay Array**	**25.06**	**317**			P	**P**	**05 46 24.5**	**+0.7**
KURBB	**Kurchatov Arra**	**26.56**	**338**			P	**P**	**05 46 38.1**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=151,slow=9.9,SNR=8.7								
KURK	**Kurchatov**	**26.61**	**338**			P	**P**	**05 46 38.1**	**+0.4**
AB07	**Akbulak array**	**34.48**	**320**			P	**P**	**05 47 47.8**	**+0.6**
ABKAR	**Akbulak array**	**34.50**	**320**			P	**P**	**05 47 47.6**	**+0.3**
MJAR	**Matsushiro Arr**	**38.62**	**64**			P	**P**	**05 48 22.1**	**-0.5**
	comp=Z,2.8nm,1.1s,baz=275,slow=9.6,SNR=4.9								
BRTR	**Keskin Array B**	**51.18**	**301**			P	**P**	**05 50 03.9**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=116,slow=3.4,SNR=2.1								
PETK	**Petropavlovsk-**	**53.42**	**42**			P	**P**	**05 50 18.2**	**-0.6**
	comp=Z,3.0nm,0.9s,baz=280,slow=8.6,SNR=2.0								
AKASG	**Malin Array Be**	**53.94**	**315**			P	**P**	**05 50 22.2**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=80,slow=7.1,SNR=5.5								
ARCES	**ARCESS Array B**	**57.65**	**337**			P	**P**	**05 50 49.4**	**+0.4**
	comp=Z,4.0nm,1.0s,baz=105,slow=6.8,SNR=2.2								
WB0	**Warramunga Arr**	**60.66**	**136**			P	**P**	**05 51 09.5**	**-0.9**
WB0						IAmb	IAmb	05 51 31.0	
	comp=Z,4.7nm,1.1s								
WRA	**Warramunga Arr**	**60.76**	**136**			P	**P**	**05 51 13.7**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=320,slow=7.7,SNR=13								
ASAR	**Alice Springs**	**63.30**	**139**			P	P	05 51 32.9	+4.8
	comp=Z,0.5nm,0.5s,baz=322,slow=7.0,SNR=13								
GERES	**GERESS Array B**	**64.12**	**314**			P	**P**	**05 51 33.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=70,slow=7.2,SNR=7.1								
GERES	**GERESS Array B**	**64.12**	**314**			P	**P**	**05 51 33.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**86.15**	**283**			P	**P**	**05 53 40.9**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=49,slow=5.2,SNR=4.0								

SOME ***02*** *05:50:00.7, 44.°60N×82.°18E, h20km*

NNC ***02*** *05:50:01.0±2.1, 44.°66N×82.°00E, h0km, mb3.0, mpv2.5, Error ellipse: s-maj=33.1km s-min=6.1km az=116.0*

ISC 02 05:50:01.4±2.0, 44.°68N±0.°09×82.°2E±0.°1, h10km, n12, σ1§10/17, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.75**	**259**		*e*P		**Pb**	**05 50 32.5**	**-1.1**
	2.5nm,0.2s								
DJR					*e*S		**Sb**	**05 50 55.2**	**-0.4**
	2.6nm,0.2s								
MK31	**Makanchi Array**	**2.12**	**2**	⇑	Pn		**Pb**	**05 50 38.9**	**-1.0**
	1.8nm,0.3s,baz=179,slow=13,SNR=19								
MK31				⇓	Sn		**Sb**	**05 51 06.0**	**-0.3**
	1.0nm,0.3s,baz=181,slow=26,SNR=7.0								
MAKZ	**Makanchi**	**2.14**	**356**	⇑	Pn		**Pn**	**05 50 38.2**	**+1.1**
	3.7nm,1.0s								
MAKZ				⇓	Sn		**Sb**	**05 51 06.9**	**+0.1**
	2.1nm,0.4s								
PDGK	**Podgornoye**	**2.36**	**236**	⇑	Pg		**Pn**	**05 50 41.5**	**+1.2**
	1.2nm,0.6s								
PDGK				⇓	Lg		Lg	05 51 13.5	
	3.0nm,0.5s								
UZB	**Uzynbulak**	**2.75**	**237**		*e*P		**Pb**	**05 50 49.1**	**-1.6**
	1.6nm,0.3s								
UZB					*e*S		**Sb**	**05 51 24.0**	**-0.5**
	2.0nm,0.3s								
UZB	**Uzynbulak**	**2.75**	**237**		Lg		Lg	05 51 20.8	
	2.2nm,0.2s								
UZB	**Uzynbulak**	**2.75**	**237**		Pg		**Pn**	**05 50 47.2**	**+1.6**
	1.5nm,0.2s								
MNBS	**Baschi**	**2.78**	**259**		*e*P		**Pb**	**05 50 49.6**	**-1.5**
	1.7nm,0.3s								
MNBS					*e*S		**Sb**	**05 51 25.1**	**-0.2**
	4.8nm,0.2s								
KPKS	**Kokpek**	**2.80**	**246**		*e*P		**Pb**	**05 50 50.6**	**-0.9**
	2.0nm,0.1s								
KPKS					*e*S		**Sb**	**05 51 26.4**	**+0.6**
	7.1nm,0.4s								
ARXS	**Arharly**	**3.15**	**263**		*e*P		**Pb**	**05 50 56.6**	**-1.0**
	2.4nm,0.3s								
ARXS					*e*S		**Sb**	**05 51 37.2**	**+1.1**
	2.9nm,0.3s								
ARXS	**Arharly**	**3.15**	**263**		Lg		Lg	05 51 37.2	
	2.4nm,0.2s								
ARXS	**Arharly**	**3.15**	**263**		Pg		**Pb**	**05 50 56.6**	**-1.0**
	2.4nm,0.3s								

IDC ***02*** *06:40:36.7±1.7, 7.°18S×129.°01E, h0km, mb4.1/1, mb1 4.3/4, mb1mx3.8/28, mbtmp4.1/4, ML4.3/3, MS2.9/1, Ms1 3.1/1, ms1mx2.4/30, Error ellipse: s-maj=64.2km s-min=28.7km az=78.0*

DJA ***02*** *06:40:46.5±0.4, 7.°5S±3.°×13.°0E±.°, h168km±8km, M4.3/9, mB4.9/6, mb4.2/7, MLv4.4/9, Mw(mB)4.1/6*

ISC 02 06:40:45.8±1.0, 6.°96S±0.°05×130.°05E±0.°08, h150km, n11, σ3§10/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.60**	**129**			P	**Pn**	**06 41 17.7**

WKZ	**Wanaka**	**0.94**	**248**	P	Pb	06 45 48.0	-0.1
WKZ				S	Sg	06 46 00.7	0.0
RPZ	**Rata Peaks**	**0.96**	**37**	P	Pb	06 45 48.0	-0.4
RPZ				S	Sg	06 46 01.7	+0.5
FOZ	**Fox Glacier**	**1.00**	**342**	P	Pb	06 45 48.9	-0.2
FOZ				S	Sn	06 46 05.4	+2.0
JCZ	**Jackson Bay**	**1.13**	**291**	P	Pn	06 45 51.6	+0.2
JCZ				S	Sn	06 46 06.9	+0.2
GCSZ	**Gaunt Creek Bo**	**1.17**	**3**	P	Pb	06 45 52.0	+0.1
WACZ	**Wakanui South**	**1.26**	**65**	P	Pb	06 45 53.5	0.0
WACZ				S	Sg	06 46 11.9	+1.1
MHCZ	**Mount Hutt**	**1.35**	**45**	P	Pb	06 45 54.7	-0.3
HHSZ	**Highcliff Hill**	**1.42**	**170**	P	Pb	06 45 56.5	+0.3
HHSZ				S	Sg	06 46 15.8	0.0
WVZ	**Waitaha Valley**	**1.46**	**14**	P	Pb	06 45 56.6	-0.1
TUZ	**Tuapeka**	**1.53**	**196**	P	Pb	06 45 58.0	-0.1
TUZ				S	Sn	06 46 16.6	+0.2
RACZ	**Rakaia**	**1.56**	**61**	P	Pn	06 45 57.5	+0.4
MSZ	**Milford Sound**	**1.67**	**263**	P	Pg	06 46 01.6	-0.5
OXZ	**Oxford**	**1.74**	**49**	P	Pn	06 45 59.7	+0.1
OXZ				S	Sg	06 46 26.3	+0.4
MLZ	**Mavora Lakes**	**1.75**	**239**	P	Pn	06 46 00.6	+0.7
MLZ				S	Sg	06 46 26.3	-0.2
MQZ	**McQueen's Vall**	**1.90**	**67**	P	Pn	06 46 01.9	+0.1
MQZ				S	Sg	06 46 30.1	-1.0
INZ	**Inchbonnie**	**1.96**	**27**	P	Pn	06 46 03.5	+0.8
WHZ	**Wether Hill Ro**	**2.15**	**228**	P	Pn	06 46 05.1	-0.2
OKCZ	**Okains Bay**	**2.16**	**70**	P	Pg	06 46 12.1	+0.7
AMCZ	**Amberley**	**2.17**	**54**	P	Pg	06 46 12.8	+1.1
SYZ	**Scrubby Hill**	**2.19**	**201**	P	Pn	06 46 05.9	+0.1
LTZ	**Lake Taylor**	**2.25**	**41**	P	Pn	06 46 07.2	+0.5
APZ	**The Paps**	**2.83**	**213**	P	Pn	06 46 15.1	+0.4
DSZ	**Denniston Nort**	**2.97**	**23**	P	Pn	06 46 15.0	-1.6
KHZ	**Kahutara**	**3.16**	**50**	P	Pn	06 46 19.6	+0.4
THZ	**Tophouse**	**3.34**	**36**	P	Pn	06 46 22.6	+0.8
QRZ	**Quartz Range**	**4.03**	**25**	P	Pn	06 46 32.1	+1.0
LREZ	**Lake Rotokare**	**5.90**	**33**	P	Pn	06 47 02.7	+5.9
PKE	**Pukeiti**	**5.98**	**29**	P	Pn	06 47 00.7	+2.7

IDC 02 06:51:00.3±7.3, 18°.95S×176°.77W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.4/32, mbtmp3.4/2, Error ellipse: s-maj=295.3km s-min=118.0km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.98**	**260**	P	P	06 59 25.8	+0.1
	0.1nm,0.3s,baz=97,slow=7.6,SNR=8.4						
ASAR	**Alice Springs**	**46.02**	**255**	P	P	06 59 25.7	-0.3
	0.4nm,0.5s,baz=91,slow=8.6,SNR=8.0						
AKASG	**Malin Array Be**	**142.19**	**333**	PKP	PKPdf	07 10 33.6	-0.9
	0.5nm,0.4s,baz=44,slow=4.3,SNR=4.2						

MAN ***02*** *06:53:57.8, 7°.01N×125°.63E, h69km, mb4.6, ML3.5, MS3.3*
IDC ***02*** *06:54:03.6±2.3, 5°.90N×126°.04E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/38, mbtmp3.5/4, Error ellipse: s-maj=141.7km s-min=26.2km az=69.0*
ISC 02 06:54:00.1±1.0, 7°.00N±0°.04×125°.53E±0°.04, h61km±10km, n14, σ1§72/22, mb3.5/4, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.44**	**271**	⇓*i*P	**Pn**	**06 54 12.0**	**+0.4**
KCP				*i*S	**Sn**	**06 54 20.2**	**+0.2**
MATI	**Mati**	**0.72**	**94**	*e*P	**Pn**	**06 54 13.5**	**-1.2**
MATI				*e*S	**Sn**	**06 54 24.6**	**-0.7**
DDMP	**Don Marcelino,**	**0.91**	**169**	*e*P	**Pn**	**06 54 16.8**	**-0.3**
DDMP				*e*S	**Sn**	**06 54 30.9**	**+1.4**
BUKP	**Musuan**	**0.99**	**332**	*e*P	**Pn**	**06 54 18.0**	**-0.2**
BUKP				*e*S	**Sn**	**06 54 32.4**	**+1.0**
SKMP	**Bagumbayan, Su**	**1.09**	**244**	*e*P	**Pn**	**06 54 18.5**	**-0.9**
SKMP				*e*S	**Sn**	**06 54 32.8**	**-1.0**
BIP	**Bislig**	**1.41**	**30**	⇓*e*P	**Pn**	**06 54 23.9**	**+0.3**
BIP				*e*S	**Sn**	**06 54 41.6**	**+0.3**
CGP	**Cagayan de Oro**	**1.67**	**330**	⇓*e*P	**Pn**	**06 54 28.8**	**+1.6**
CGP				*e*S	**Sn**	**06 54 50.7**	**+3.2**
PAGZ	**Pagadian**	**2.29**	**292**	*e*P	**Pn**	**06 54 34.9**	**-0.7**
PAGZ				*e*S	**Sn**	**06 55 00.2**	**-2.6**
MSLP	**Maasin**	**3.19**	**348**	*e*P	**Pn**	**06 54 46.7**	**-1.1**
MSLP				*e*S	**Sn**	**06 55 19.8**	**-4.8**
CNOP	**Candoni, Negro**	**4.01**	**315**	*e*P	**Pn**	**06 54 59.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**24.94**	**180**	P	**P**	**06 59 18.2**	**+0.3**
	1.1nm,0.3s,baz=8.8,slow=7.5,SNR=9.3						
WRA	**Warramunga Arr**	**28.14**	**162**	P	**P**	**06 59 47.3**	**+0.6**
	0.2nm,0.5s,baz=346,slow=9.1,SNR=2.2						
ASAR	**Alice Springs**	**31.56**	**165**	P	**P**	**07 00 17.7**	**+0.7**
	0.2nm,0.4s,baz=341,slow=7.3,SNR=10						
MKAR	**Makanchi Array**	**54.21**	**325**	P	sP	07 03 39.7	-3.1
	0.6nm,0.7s,baz=135,slow=9.6,SNR=4.6						

WEL 02 06:54:34.4, 42°.S±1°.×17°.4E±°, h13km±2km, M2.7/11, ML2.9/11, MLv2.7/11, Error ellipse: s-maj=0.0km s-min=0.0km az=137.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.10**	**132**	P	Pg	06 54 37.7	+0.4
CMWZ				S	Sg	06 54 40.5	+1.0
BSWZ	**Blackbirch Sta**	**0.18**	**260**	P	Pb	06 54 39.1	-0.5
BSWZ				S	Sb	06 54 42.6	-0.5
TUWZ	**Tuamarina**	**0.29**	**333**	P	Pb	06 54 41.3	0.0
TUWZ				S	Sb	06 54 46.4	+0.3
TCW	**Tory Channel**	**0.49**	**14**	P	Pb	06 54 44.5	-0.3
TCW				S	Sb	06 54 52.0	+0.2
BHW	**Baring Head**	**0.63**	**64**	P	Pb	06 54 47.2	0.0
BHW				S	Sb	06 54 56.9	+1.0
NNZ	**Nelson**	**0.72**	**310**	P	Pb	06 54 49.0	+0.1
NNZ				S	Sb	06 54 59.2	+0.5
KHZ	**Kahutara**	**0.85**	**210**	P	Pb	06 54 51.2	+0.3
KHZ				S	Sn	06 55 04.0	-0.3
PLWZ	**Palliser**	**0.86**	**83**	P	Pb	06 54 51.2	0.0
MSWZ	**Moikau Station**	**0.89**	**73**	P	Pn	06 54 52.2	-0.4
DUWZ	**D'Urville Isla**	**0.89**	**350**	P	Pb	06 54 51.7	0.0
THZ	**Tophouse**	**0.91**	**265**	P	Pb	06 54 52.0	0.0
CAW	**Cannon Point**	**0.92**	**51**	P	Pb	06 54 52.4	+0.3
KIW	**Kapiti Island**	**1.02**	**36**	P	Pb	06 54 53.8	0.0
PAWZ	**Paruwai Farm**	**1.03**	**73**	P	Pb	06 54 53.7	-0.3
MTW	**Mount Morrison**	**1.17**	**64**	P	Pb	06 54 55.6	-0.8
OGWZ	**Otaki Gorge**	**1.18**	**43**	P	Pb	06 54 56.6	+0.1
TRWZ	**Traveller**	**1.21**	**77**	P	Pn	06 54 55.7	-1.4
TMWZ	**Te Maipa**	**1.45**	**67**	P	Pn	06 54 59.4	-1.0
QRZ	**Quartz Range**	**1.47**	**305**	P	Pb	06 55 02.0	+0.4
MRZ	**Mangatainoka R**	**1.50**	**48**	P	Pn	06 55 00.7	-0.3
GVZ	**Greta Valley S**	**1.51**	**212**	P	Pn	06 55 00.3	-0.9
LTZ	**Lake Taylor**	**1.76**	**231**	P	Pn	06 55 01.9	-2.7
POWZ	**Post Office Ro**	**1.79**	**45**	P	Pn	06 55 04.8	-0.2
PRWZ	**Pori Road**	**1.80**	**52**	P	Pn	06 55 05.3	+0.3
AMCZ	**Amberley**	**1.84**	**216**	P	Pg	06 55 11.7	+1.9
WAZ	**Wanganui**	**2.04**	**19**	P	Pg	06 55 12.4	-1.0
DVHZ	**Dannevirke**	**2.08**	**49**	P	Pb	06 55 11.0	-1.0
TSZ	**Takapari Road**	**2.14**	**41**	P	Pb	06 55 12.9	-0.2
INZ	**Inchbonnie**	**2.24**	**241**	P	Pn	06 55 12.3	+1.1
OXZ	**Oxford**	**2.25**	**222**	P	Pn	06 55 10.0	-1.3
MQZ	**McQueen's Vall**	**2.29**	**208**	P	Pn	06 55 09.2	-2.6
PNHZ	**Pukenui**	**2.37**	**42**	P	Pn	06 55 12.4	-0.6
NBEZ	**Newall Road No**	**2.42**	**355**	P	Pg	06 55 20.7	-0.1
PKE	**Pukeiti**	**2.49**	**358**	P	Pb	06 55 20.1	+1.1
MOVZ	**Moawhango**	**2.59**	**29**	P	Pb	06 55 19.8	-0.9
VRZ	**Vera Road**	**2.60**	**11**	P	Pn	06 55 19.1	-1.7
BHHZ	**Black Hill Sta**	**2.65**	**35**	P	Pb	06 55 22.3	+0.7
FWVZ	**Far West T-bar**	**2.66**	**25**	P	Pb	06 55 22.9	+0.9
KRHZ	**Kereru**	**2.66**	**41**	P	Pg	06 55 23.8	-1.6
OTVZ	**Oturere**	**2.78**	**26**	P	Pb	06 55 24.9	+0.9
WTVZ	**West Tongariro**	**2.80**	**24**	P	Pb	06 55 24.6	+0.3
ETVZ	**East Tongariro**	**2.82**	**26**	P	Pb	06 55 25.9	+1.3
KRVZ	**Karewarewa**	**2.84**	**25**	P	Pb	06 55 25.4	+0.5
TMVZ	**Te Maari**	**2.84**	**26**	P	Pb	06 55 25.2	+0.3

NAO ***02*** *07:15:02.5±1.2, 67°.66N×33°.73E, ML2.5*
HEL ***02*** *07:15:03.5±0.1, 67°.72N×33°.66E, h0km, ML1.8, Explosion*
ISC 02 07:15:02.8±0.9, 67.72N±0°.04×33.61E±0°.04, h0km, n22, σ1§57/39, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	**Apatity**	**0.17**	**207**	Pg	**Pg**	**07 15 05.7**	**-0.3**
APZ9				Lg	Lg	07 15 07.9	
APZ9				Rg	Rg	07 15 08.9	
APZ9	**Apatity**	**0.17**	**207**	Pg	**Pg**	**07 15 05.7**	**-0.3**
APZ9				Sg	**Sg**	**07 15 07.9**	**-0.3**
APA0	**Apatity Array**	**0.26**	**244**	Pg	**Pg**	**07 15 08.0**	**+0.2**
	baz=85,slow=16						
APA0				Lg	Lg	07 15 12.0	
	baz=80,slow=37						
APA0				Rg	Rg	07 15 13.4	
	baz=74,slow=56						
APA0	**Apatity Array**	**0.26**	**244**	Pg	**Pg**	**07 15 08.0**	**+0.2**
	baz=85,slow=16						
APA0				Sg	**Sg**	**07 15 12.0**	**+0.8**
	baz=80,slow=37						
LVZ	**Lovozero**	**0.43**	**65**	*e*P	**Pg**	**07 15 10.8**	**-0.3**
LVZ				*e*S	**Sg**	**07 15 16.6**	**-0.1**
VRF	**Varrio**	**1.52**	**273**	*e*P	**Pn**	**07 15 30.9**	**-0.4**
VRF				MSG		07 15 47.3	
	comp=Z,9.6nm,0.2s						
VRF				*e*S	**Sg**	**07 15 50.7**	**-1.0**
KU6	**Riekki**	**2.25**	**223**	*e*P	**Pn**	**07 15 41.8**	**+0.6**
KU6				*e*SB	**Sb**	**07 16 11.8**	**-0.7**
KU6				MSG		07 16 16.3	
	comp=Z,3.8nm,0.2s						
MSF	**Maaselka**	**2.56**	**227**	*e*P	**Pn**	**07 15 46.6**	**+1.1**
MSF				*e*SB	**Sb**	**07 16 21.3**	**-0.3**
SGF	**Sodankyl**	**2.73**	**267**	*e*PB	**Pb**	**07 15 51.7**	**-0.7**
SGF				*e*SB	**Sb**	**07 16 26.4**	**0.0**
KEV	**Kevo**	**3.16**	**313**	*e*P	**Pn**	**07 15 54.6**	**+1.0**
KEV				*e*S	**Sn**	**07 16 32.8**	**+0.9**
RNF	**Rovaniemi**	**3.17**	**253**	*e*P	**Pn**	**07 15 54.0**	**+0.2**
ARA0	**ARCESS Array S**	**3.48**	**305**	Pn	**Pn**	**07 15 58.8**	**+0.6**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**07 16 06.8**	**+1.6**
	baz=114,slow=16						
ARA0				Sn	**Sn**	**07 16 40.0**	**0.0**
	baz=123,slow=28						
ARA0				Lg	Lg	07 16 50.5	
	baz=117,slow=37						
ARA0	**ARCESS Array S**	**3.48**	**305**	*e*P	**Pn**	**07 15 58.5**	**+0.4**
ARA0				*e*S	**Sn**	**07 16 39.8**	**-0.2**
ARA0	**ARCESS Array S**	**3.48**	**305**	Pn	**Pn**	**07 15 58.8**	**+0.6**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**07 16 06.8**	**+1.6**
	baz=114,slow=16						
ARA0				Sn	**Sn**	**07 16 40.0**	**0.0**
	baz=123,slow=28						
ARA0				Sg	**Sb**	**07 16 50.5**	**+2.5**
	baz=117,slow=37						
KTK1	**Kautokeino**	**4.05**	**293**	*e*P	**Pn**	**07 16 04.1**	**-1.9**
KTK1				*e*S	**Sn**	**07 16 50.5**	**-3.6**
KTK1				IAML		07 17 12.6	
	comp=Z,4.3nm,0.5s						
KIF	**Kilpisjarvi**	**4.91**	**291**	Pn	**Pn**	**07 16 17.6**	**-0.1**
KIF				Sn	**Sn**	**07 17 13.0**	**-2.1**
KIF				Lg	Lg	07 17 32.4	
KIF	**Kilpisjarvi**	**4.91**	**291**	Pn	**Pn**	**07 16 17.6**	**-0.1**
KIF				Sn	**Sn**	**07 17 13.0**	**-2.1**
KIF				Sg	**Sb**	**07 17 32.4**	**+3.3**
TRO	**Tromso**	**5.69**	**296**	Sn	**Sn**	**07 17 32.3**	**-1.9**
TRO				Lg	Lg	07 18 00.2	
FIA0	**FINESS Array S**	**7.08**	**211**	Lg	Lg	07 18 36.0	
	baz=25,slow=28						
FIA0	**FINESS Array S**	**7.08**	**211**	Sg	**Sb**	**07 18 36.0**	**+4.6**
	baz=25,slow=28						
SPA0	**Spitsbergen Ar**	**11.57**	**342**	Pn	**Pn**	**07 17 46.9**	**-2.1**
	baz=145,slow=16						
SPA0	**Spitsbergen Ar**	**11.57**	**342**	Pn	**Pn**	**07 17 46.9**	**-2.1**
	baz=145,slow=16						

IDC ***02*** *07:18:28.7±0.9, 50°.04N×78°.75E, h0km, mb1 2.8/3, mb1mx2.8/51, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=9.6km s-min=6.2km az=55.0*
NNC ***02*** *07:18:28.0±0.5, 50°.14N×79°.12E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=9.4km s-min=2.3km az=56.0, Suspected Mining explosion.*
ISC 02 07:18:21.8±1.0, 50°.39N±0°.06×79°.80E±0°.05, h0km, n18, σ0§98/30, 15C-12D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR14	**Kurchatov Arra**	**0.80**	**287**	⇓P	**Pn**	**07 18 39.6**	**-0.7**
KUR14				⇓S	**Sg**	**07 18 48.3**	**+0.8**
KURK	**Kurchatov**	**0.82**	**294**	⇑P	**Pn**	**07 18 41.3**	**+0.7**
	7.2nm,0.5s						
KURK				⇑S	**Sb**	**07 18 50.0**	**-0.4**
	22nm,0.5s						
KUR15	**Kurchatov Arra**	**0.82**	**286**	⇑P	**Pn**	**07 18 39.9**	**-0.8**
KUR15				⇑S	**Sg**	**07 18 48.9**	**+0.8**
KUR06	**Kurchatov Arra**	**0.84**	**285**	⇑P	**Pb**	**07 18 39.6**	**+0.4**
KUR06				⇓S	**Sg**	**07 18 48.2**	**-0.5**
KUR07	**Kurchatov Arra**	**0.84**	**284**	⇑P	**Pb**	**07 18 39.2**	**0.0**
KUR07				⇓S	**Sg**	**07 18 47.9**	**-0.9**
KURBB	**Kurchatov Arra**	**0.84**	**286**	Pg	**Pb**	**07 18 39.7**	**+0.4**
	1.9nm,0.3s,baz=167,slow=17,SNR=74						
KURBB				Lg	Lg	07 18 48.8	
	2.9nm,0.3s,baz=169,slow=35,SNR=13						
KURBB	**Kurchatov Arra**	**0.84**	**286**	⇑P	**Pb**	**07 18 39.9**	**+0.6**
	11nm,0.3s						
KURBB				⇑S	**Sg**	**07 18 48.9**	**+0.1**
	96nm,0.5s						
KUR05	**Kurchatov Arra**	**0.84**	**288**	⇑P	**Pn**	**07 18 40.2**	**-0.7**
KUR05				⇑S	**Sg**	**07 18 49.4**	**+0.5**
KUR04	**Kurchatov Arra**	**0.84**	**289**	⇓P	**Pn**	**07 18 40.5**	**-0.5**
KUR04				⇑S	**Sg**	**07 18 49.8**	**+0.9**
KUR16	**Kurchatov Arra**	**0.86**	**286**	⇓P	**Pb**	**07 18 40.1**	**+0.4**
KUR16				⇑S	**Sg**	**07 18 49.1**	**-0.3**
KUR17	**Kurchatov Arra**	**0.88**	**286**	⇓P	**Pb**	**07 18 40.2**	**+0.3**
KUR17				⇑S	**Sg**	**07 18 49.9**	**-0.2**
MAKZ	**Makanchi**	**3.87**	**157**	⇓Pg	**Pg**	**07 19 35.5**	**-0.4**
	2.5nm,0.7s						
MAKZ				⇓Lg	Lg	07 20 28.8	
	3.9nm,0.6s						
MK31	**Makanchi Array**	**3.96**	**154**	⇓Pn	**Pb**	**07 19 32.1**	**-0.5**
	0.6nm,0.4s,baz=280,slow=7.1,SNR=11						
MK31				⇓Pg	**Pg**	**07 19 40.0**	**+2.2**
	0.7nm,0.5s,baz=327,slow=15,SNR=8.7						
MK31				⇑Lg	Lg	07 20 33.8	
	4.5nm,0.6s,baz=328,slow=27,SNR=8.7						
MKAR	**Makanchi Array**	**3.96**	**154**	Pn	**Pb**	**07 19 32.2**	**-0.4**
	0.3nm,0.3s,baz=322,slow=10,SNR=16						
MKAR				Pg	**Pg**	**07 19 38.2**	**+0.4**
	0.6nm,0.3s,baz=321,slow=13,SNR=9.5						
MKAR				Lg	Lg	07 20 33.0	
	1.5nm,0.3s,baz=327,slow=26,SNR=12						
ZALV	**Zalesovo Beam**	**4.71**	**39**	Pn	**Pg**	**07 19 52.2**	**+0.1**
	0.7nm,0.3s,baz=231,slow=13,SNR=9.6						
ZALV				Lg	Lg	07 21 20.6	
	0.3nm,0.3s,baz=232,slow=25,SNR=2.5						
I46RU	**ZALESOVO INFRA**	**4.72**	**39**	*i*		07 51 13.4	
	baz=224,slow=318,SNR=1.0						
BVAR	**Borovoye Array**	**6.41**	**298**	Pn	**Pn**	**07 19 59.1**	**+1.6**
	0.2nm,0.3s,baz=115,slow=21,SNR=2.3						
BVAR				Sn	**Sn**	**07 21 08.1**	**-3.3**
	0.6nm,0.3s,baz=103,slow=31,SNR=3.8						
BVAR				Lg	Lg	07 21 37.3	
	0.4nm,0.3s,baz=118,slow=33,SNR=2.3						
BRVK	**Borovoye**	**6.49**	**298**	⇓Sn	**Sn**	**07 21 13.5**	**+0.4**
	1.7nm,0.6s						
BRVK				⇑Lg	Lg	07 21 43.6	
	1.0nm,0.4s						

PMR ***02*** *07:18:32±2.3, 59°.78N±0°.04×153°.10W±0°.09, h136km±1km, Error ellipse: s-maj=8.4km s-min=5.8km az=295.0*
NEIC ***02*** *07:18:33.0±1.2, 59°.82N±0°.04×153°.09W±0°.09, h124km±2km, Error ellipse: s-maj=7.0km s-min=5.1km az=110.0*
ANF ***02*** *07:18:34.5±0.8, 59°.92N×152°.84W, h130km±7km, ML4.2/11, Error ellipse: s-maj=8.5km s-min=6.4km az=97.0*
AEIC ***02*** *07:18:34±2.0, 59°.80N±0°.04×153°.07W±0°.05, h120km±3km, ML3.8, mb4.4/8(NEIC), Error ellipse: s-maj=6.2km s-min=1.9km az=144.0*
IDC ***02*** *07:18:35.0±3.5, 60°.07N×153°.11W, h132km±27km, mb3.9/13, mb1 3.8/17, mb1mx3.5/62, mbtmp4.2/17, Error ellipse: s-maj=30.3km s-min=21.3km az=175.0*
ISC 02 07:18:33.0±0.6, 59°.83N±0°.03×153°.04W±0°.04, h129km±4km, n184, σ1§01/232, mb4.2/17, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILS	**Iliamna Low So**	**0.13**	**353**		**Pn**	**07 18 50.1**	**-0.6**
ILS					**Sn**	**07 19 02.6**	**-1.6**
IVE	**Iliamna Volcan**	**0.19**	**3**		**Pn**	**07 18 50.2**	**-0.6**
IVE					**Sn**	**07 19 03.1**	**-1.3**
OPT	**Oil Point**	**0.20**	**209**		**Pn**	**07 18 50.3**	**-0.5**
AU22	**Augustine Moun**	**0.49**	**199**		**Pn**	**07 18 51.4**	**-0.5**
AU22					**Sn**	**07 19 04.8**	**-1.3**
AU2	**Augustine Isla**	**0.49**	**201**		**Pn**	**07 18 51.5**	**-0.5**
AUL	**Augustine Lava**	**0.49**	**204**		**Pn**	**07 18 51.6**	**-0.4**
AUL					**Sn**	**07 19 05.3**	**-0.9**
AUH	**Augustine H**	**0.51**	**204**		**Pn**	**07 18 51.7**	**-0.5**
AUW	**Augustine West**	**0.51**	**206**		**Pn**	**07 18 51.6**	**-0.4**
AUCH	**Augustine Cone**	**0.51**	**204**		**Pn**	**07 18 51.7**	**-0.5**
RED	**Redoubt Volcan**	**0.60**	**13**		**Pn**	**07 18 52.5**	**-0.2**
RED					**Sn**	**07 19 06.6**	**-1.0**
RSO	**Redoubt South**	**0.65**	**13**		**Pn**	**07 18 52.9**	**-0.3**
RDWB	**Redoubt West**	**0.67**	**8**		**Pn**	**07 18 52.6**	**-0.6**
RDWB					**Sn**	**07 19 07.2**	**-1.4**
REF	**Redoubt East F**	**0.68**	**14**		**Pn**	**07 18 53.1**	**-0.2**
REF					**Sn**	**07 19 07.8**	**-1.0**
HOM	**Homer**	**0.73**	**103**	P	**Pn**	**07 18 53.7**	**+0.3**
	baz=282,SNR=27						
HOM				S	**Sn**	**07 19 09.1**	**+0.2**
	baz=282						
HOM	**Homer**	**0.73**	**103**		**Pn**	**07 18 53.8**	**+0.3**
HOM					**Sn**	**07 19 09.0**	**+0.1**
NCT	**North Crescent**	**0.73**	**4**		**Pn**	**07 18 53.2**	**-0.4**
NCT					**Sn**	**07 19 07.9**	**-1.4**
DFR	**Drift River**	**0.78**	**13**		**Pn**	**07 18 53.7**	**-0.3**
DFR					**Sn**	**07 19 09.2**	**-0.8**
RDT	**Redoubt**	**0.81**	**23**		**Pn**	**07 18 54.0**	**-0.2**
CNPM	**China Poot**	**0.96**	**108**		**Pn**	**07 18 55.6**	**+0.1**
CNPM					**Sn**	**07 19 12.1**	**-0.5**
BRLK	**Bradley Lake**	**1.09**	**93**		**Pn**	**07 18 56.8**	**+0.1**
BRLK					**Sn**	**07 19 14.2**	**-0.4**
BRSE	**Bradley Lake S**	**1.17**	**93**		**Pn**	**07 18 57.6**	**+0.2**
BRSE					**Sn**	**07 19 15.2**	**-0.8**
CAPN	**Captain Cook N**	**1.33**	**44**	P	**Pn**	**07 19 01.0**	**+2.0**
	baz=225,SNR=6.2						
CAPN	**Captain Cook N**	**1.33**	**44**		**Pn**	**07 19 00.8**	**+1.8**
KAPH	**Katmai Pasha**	**1.41**	**209**		**Pn**	**07 18 59.9**	**-0.2**
KAPH					**Sn**	**07 19 19.3**	**-1.4**
SPCR	**Spurr Chakacha**	**1.43**	**16**		**Pn**	**07 19 00.4**	**+0.1**
CKT	**Bend**	**1.43**	**16**		**Pn**	**07 19 00.4**	**+0.1**
SPCN	**Chakachatna No**	**1.46**	**16**		**Pn**	**07 19 00.9**	**+0.3**
SPCN					**Sn**	**07 19 22.9**	**+1.3**
SPBG	**Spurr Blockage**	**1.47**	**13**		**Pn**	**07 19 01.1**	**+0.4**
SPBG					**Sn**	**07 19 22.3**	**+0.3**
SPCP	**Crater Peak Br**	**1.50**	**17**		**Pn**	**07 19 01.5**	**+0.3**
CRP	**Crater Peak**	**1.50**	**16**		**Pn**	**07 19 01.6**	**+0.4**
SPCG	**Spurr Capps Gl**	**1.55**	**18**		**Pn**	**07 19 01.9**	**+0.2**
SPNN	**North Nagishla**	**1.55**	**6**		**Pn**	**07 19 01.7**	**0.0**
KAHG	**Katmai Hook Gl**	**1.55**	**211**		**Pn**	**07 19 01.5**	**-0.2**
KAHG					**Sn**	**07 19 22.2**	**-1.3**
SLKM	**Skilak Lake**	**1.56**	**63**		**Pn**	**07 19 01.6**	**-0.1**
KARR	**Katmai Rainbow**	**1.59**	**213**		**Pn**	**07 19 01.9**	**-0.2**
STLK	**Strandline Lak**	**1.77**	**19**		**Pn**	**07 19 04.5**	**+0.2**
O22K	**Cooper Landing**	**1.78**	**67**	P	**Pn**	**07 19 04.8**	**+0.6**
	baz=249,SNR=51						
O22K				S	**Sn**	**07 19 27.5**	**-0.6**
	baz=249						
O22K	**Cooper Landing**	**1.78**	**67**		**Pn**	**07 19 05.0**	**+0.8**
SEW	**Seward**	**1.82**	**80**		**Pn**	**07 19 05.1**	**+0.4**
SEW	**Seward**	**1.82**	**80**		**Sn**	**07 19 27.7**	**-1.3**
KAKN	**Katmai Knife C**	**1.86**	**215**		**Pn**	**07 19 04.8**	**-0.5**
KAKN					**Sn**	**07 19 27.7**	**-2.3**
KCG	**Knife Ck. Glac**	**1.87**	**216**		**Pn**	**07 19 04.9**	**-0.4**
KCG					**Sn**	**07 19 28.8**	**-1.3**
FIS	**Fire Island**	**1.92**	**45**		**Pn**	**07 19 06.6**	**+0.7**
KABU	**Katmai Buttres**	**1.95**	**217**		**Pn**	**07 19 06.2**	**-0.2**
KABU					**Sn**	**07 19 30.3**	**-1.6**
SUA	**Susitna One**	**1.99**	**34**		**Pn**	**07 19 07.3**	**+0.5**
RC01	**Rabbit Creek A**	**2.06**	**51**	P	**Pn**	**07 19 07.8**	**+0.1**
	baz=233,SNR=60						
RC01				S	**Sn**	**07 19 33.6**	**-0.7**

ISLE	**Juniper Island**	**5.39**	**77**			**Pn**	07 19 51.9	+0.6
PTPK	**Patty Peak**	**5.40**	**71**			**Pn**	07 19 51.9	+0.4
HDA	**Harding Lake**	**5.41**	**29**	P		**Pn**	07 19 50.8	-0.7
	baz=215,SNR=31							
HDA				S		**Sn**	07 20 50.1	-2.4
	baz=215							
HDA				S		**Sn**	07 20 50.1	-2.4
	baz=215							
HDA	**Harding Lake**	**5.41**	**29**			**Pn**	07 19 50.7	-0.7
KIAG	**Kiagna River**	**5.41**	**74**			**Pn**	07 19 52.0	+0.4
CCB	**Clear Creek Bu**	**5.41**	**25**			**Pn**	07 19 50.6	-0.9
BALM	**Baldy**	**5.43**	**73**			**Pn**	07 19 52.6	+0.8
RIDG	**Independent Ri**	**5.52**	**41**			**Pn**	07 19 53.2	+0.3
PS08	**TAPS Pump Stn8**	**5.55**	**29**			**Pn**	07 19 52.5	-0.8
MESA	**MESA**	**5.58**	**82**			**Pn**	07 19 54.9	+1.0
I23K	**Minto, Yukon-K**	**5.60**	**16**	P		**Pn**	07 19 53.6	-0.4
	baz=199,SNR=27							
I23K				S		**Sn**	07 20 54.5	-2.6
	baz=199							
I23K	**Minto, Yukon-K**	**5.60**	**16**			**Pn**	07 19 53.6	-0.4
TCOL	**CIGO, UAF Yank**	**5.60**	**23**	P		**Pn**	07 19 53.5	-0.5
	baz=208,SNR=41							
TCOL				S		**Sn**	07 20 54.3	-2.8
	baz=208							
TCOL	**CIGO, UAF Yank**	**5.60**	**23**			**Pn**	07 19 53.5	-0.5
COLA	**College**	**5.61**	**23**			**Pn**	07 19 53.5	-0.5
MDM	**Murphy Dome**	**5.61**	**21**			**Pn**	07 19 53.4	-0.8
L26K	**Log Cabin Wild**	**5.64**	**51**	P		**Pn**	07 19 55.0	+0.4
	baz=240,SNR=22							
L26K	**Log Cabin Wild**	**5.64**	**51**			**Pn**	07 19 54.7	+0.1
YAH	**Yahtse**	**5.68**	**80**			**Pn**	07 19 56.5	+1.3
YAH						**Sn**	07 21 01.4	+2.1
GRNC	**Granite Creek**	**5.69**	**76**			**Pn**	07 19 55.9	+0.6
IL31		**5.72**	**27**			**Pn**	07 19 54.8	-0.8
ILAR	**Eielson Array**	**5.72**	**27**	P		**Pn**	07 19 54.7	-1.0
	10nm,0.3s,baz=216,slow=14,SNR=478							
ILAR				S		**Sn**	07 20 58.0	-2.1
	7.0nm,0.3s,baz=213,slow=24,SNR=12							
ILAR	**Eielson Array**	**5.72**	**27**			**Pn**	07 19 54.5	-1.2
ILAR					Sn	**Sn**	07 20 57.2	-2.9
BARN	**Barnard Glacie**	**5.77**	**73**			**Pn**	07 19 57.7	+1.3
BARN					Sn	**Sn**	07 21 00.4	-1.1
RKAV	**Rock Avalanche**	**5.88**	**80**			**Pn**	07 19 58.4	+0.5
POKR	**Poker Plat Res**	**5.91**	**24**	P		**Pn**	07 19 57.6	-0.5
	baz=209,SNR=18							
POKR				S		**Sn**	07 21 01.0	-3.4
	baz=209							
POKR	**Poker Plat Res**	**5.91**	**24**			**Pn**	07 19 57.6	-0.5
POKR					Sn	**Sn**	07 21 03.5	-0.9
CTGM	**Chitina Glacie**	**5.91**	**74**			**Pn**	07 19 59.4	+1.0
CTGM					Sn	**Sn**	07 21 03.5	-1.4
SCRK	**Sand Creek**	**5.96**	**42**	P		**Pn**	07 19 58.2	-0.8
	baz=230,SNR=12							
SCRK	**Sand Creek**	**5.96**	**42**			**Pn**	07 19 58.2	-0.8
TABL	**Table Mountain**	**5.98**	**79**			**Pn**	07 20 00.2	+1.0
IMAR	**Indian Mountai**	**6.18**	**357**			**Pn**	07 20 01.5	-0.3
BCAR	**Beaver Creek A**	**6.29**	**54**			**Pn**	07 20 02.8	-0.6
PRP	**Porcupine Dome**	**6.67**	**28**			**Pn**	07 20 08.5	0.0
EGAK	**Eagle**	**7.42**	**43**	Pn		**Pn**	07 20 18.0	-0.5
COLD	**Coldfoot**	**7.53**	**8**	P		**Pn**	07 20 19.5	-0.5
	baz=191,SNR=11							
DAWY	**Dawson**	**7.70**	**51**	Pn		**Pn**	07 20 22.7	+0.5
HYT	**Haines Junctio**	**7.77**	**76**			**Pn**	07 20 24.8	+1.5
BMAR	**Burnt Mountain**	**8.49**	**23**			**Pn**	07 20 32.1	-0.8
TOLK	**Toolik Lake Re**	**8.97**	**8**	P		**Pn**	07 20 40.5	+1.2
	baz=191							
TOLK				S		**Sn**	07 22 19.6	+1.1
	baz=191							
TOLK	**Toolik Lake Re**	**8.97**	**8**	Pn		**Pn**	07 20 40.9	+1.6
WHY	**Whitehorse**	**9.06**	**77**			**Pn**	07 20 42.2	+1.5
WHY						**Sn**	07 22 19.3	-1.7
DLBC	**Dease Lake**	**11.88**	**87**	P		**Pn**	07 21 21.3	+3.1
	0.9nm,0.3s,baz=288,slow=7.0,SNR=18							
DLBC				S		**Sn**	07 23 23.2	-5.8
	0.2nm,0.3s,baz=335,slow=18,SNR=1.7							
INK	**Inuvik**	**11.98**	**37**	P		**Pn**	07 21 18.9	-0.4
	0.2nm,0.3s,baz=229,slow=16,SNR=11							
YKA	**Yellowknife Ar**	**18.54**	**65**	P		**Pn**	07 22 41.0	+0.1
	0.5nm,0.3s,baz=279,slow=8.8,SNR=13							
LTY	**Liberty**	**22.71**	**109**	P		**P**	07 23 23.0	-0.6
PETK	**Petropavlovsk-**	**27.46**	**278**	P		**P**	07 24 06.6	0.0
	3.8nm,1.0s,baz=68,slow=12,SNR=2.5							
PETK	**Petropavlovsk-**	**27.46**	**278**	P		**P**	07 24 07.1	+0.5
PV03	**Paradox Valley**	**35.19**	**108**	P		**P**	07 25 13.4	-1.2
PV03				IAmb		IAmb	07 25 38.8	
	comp=Z,4.7nm,0.8s							
SPITS	**Spitsbergen Ar**	**42.08**	**3**	P		**P**	07 26 11.1	-0.3
	comp=Z,10nm,1.0s,baz=28,slow=6.5,SNR=9.6							
NRIK	**Noril'sk**	**44.04**	**334**	P		**P**	07 26 27.5	+0.4
	comp=Z,2.1nm,0.5s,baz=36,slow=7.4,SNR=5.8							
SONM	**Songino Array**	**54.87**	**306**	P		**P**	07 27 51.3	+1.5
	comp=Z,1.7nm,0.5s,baz=43,slow=7.0,SNR=12							
SONM	**Songino Array**	**54.87**	**306**	P		**P**	07 27 51.2	+1.5
ZAA0	**Zalesovo Array**	**57.50**	**324**	P		**P**	07 28 08.6	+0.5
ZALV	**Zalesovo Beam**	**57.50**	**324**	P		**P**	07 28 08.2	+0.1
	comp=Z,6.6nm,0.5s,baz=31,slow=7.3,SNR=26							
ZALV	**Zalesovo Beam**	**57.50**	**324**	P		**P**	07 28 09.0	+0.9
FINES	**FINESS Array B**	**59.05**	**0**	P		**P**	07 28 18.6	-0.2
	comp=Z,3.9nm,1.0s,baz=354,slow=10,SNR=1.9							
ARU	**Arti**	**61.40**	**341**	P		**P**	07 28 34.6	-0.2
	comp=Z,1.1nm,0.4s,baz=70,slow=9.8,SNR=3.9							
ARU	**Arti**	**61.40**	**341**	P		**P**	07 28 34.9	+0.1
ARU				IAmb		IAmb	07 28 35.4	
	comp=Z,3.1nm,0.5s							
KURK	**Kurchatov**	**62.16**	**326**	P		**P**	07 28 40.3	+0.4
KURK				IAmb		IAmb	07 28 40.8	
	comp=Z,2.5nm,0.5s							
BRVK	**Borovoye**	**62.20**	**332**	P		**P**	07 28 41.0	+0.8
BRVK				IAmb		IAmb	07 28 41.5	
	comp=Z,4.2nm,0.9s							
BVAR	**Borovoye Array**	**62.21**	**332**	P		**P**	07 28 40.5	+0.2
	comp=Z,1.5nm,0.5s,baz=239,slow=14,SNR=16							
KURBB	**Kurchatov Arra**	**62.27**	**326**	P		**P**	07 28 41.1	+0.5
	comp=Z,2.9nm,0.5s,baz=30,slow=6.5,SNR=10.0							
EKA	**Eskdalemuir Ar**	**62.70**	**19**	P		**P**	07 28 43.2	-0.2
	comp=Z,2.0nm,0.6s,baz=326,slow=5.4,SNR=6.9							
MK31	**Makanchi Array**	**64.55**	**321**	P		**P**	07 28 56.2	+0.4
MK31				IAmb		IAmb	07 29 18.5	
	comp=Z,3.0nm,1.2s							
MKAR	**Makanchi Array**	**64.55**	**321**	P		**P**	07 28 55.9	+0.1
	comp=Z,1.3nm,0.5s,baz=40,slow=6.8,SNR=16							
MKAR	**Makanchi Array**	**64.55**	**321**	P		**P**	07 28 56.2	+0.4
AKTO	**Aktyubinsk**	**67.24**	**339**	P		**P**	07 29 13.1	+0.1
	comp=Z,0.6nm,0.4s,baz=34,slow=7.3,SNR=2.7							
AB06	**Akbulak array**	**68.00**	**337**	P		**P**	07 29 18.4	+0.7
ABKAR	**Akbulak array**	**68.01**	**337**	P		**P**	07 29 18.6	+0.8
KKAR	**Karatay Array**	**71.36**	**328**	P		**P**	07 29 39.3	+0.8
CMAR	**Chiang Mai Arr**	**82.92**	**295**	P		**P**	07 30 43.6	+0.4
	comp=Z,0.7nm,0.4s,baz=22,slow=5.1,SNR=1.2							
BOSA	**Boshof**	**148.77**	**3**	PKPbc		**PKPbc**	07 38 04.8	0.0
	comp=Z,1.2nm,0.5s,baz=17,slow=2.1,SNR=5.1							
BOSA	**Boshof**	**148.77**	**3**	PKPbc		**PKPbc**	07 38 05.1	+0.3

ROM 02 07:26:58.1±0.6, 36°37N±0.04×13°42E±0.04, h87km±5km, ML2.4/2,1C, Error ellipse: s-maj=4.3km s-min=2.1km az=315.0, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLTA	**Licata**	**0.90**	**29**	P	Pn	07 27 16.1	-0.3
FAVR	**Favara**	**0.92**	**12**	P	Pn	07 27 17.0	+0.3
FAVR				AML	AML		
	comp=N,182μm,1.6s						
FAVR				AML	AML		
	comp=E,202μm,1.5s						
RAFF	**Raffo Rosso**	**1.14**	**41**	P	Pn	07 27 18.2	-1.0
HMDC	**Modica**	**1.24**	**61**	P	Pn	07 27 20.4	0.0
HMDC				AML	AML		
	comp=N,141μm,1.6s						
HMDC				AML	AML		
	comp=E,106μm,1.4s						
MMGO	**Monte Magaggia**	**1.34**	**345**	P	Pn	07 27 22.2	+0.6
HPAC	**Pachino**	**1.40**	**76**	P	Pn	07 27 22.0	-0.4
MEU	**Monte Lauro**	**1.41**	**59**	P↑	Pn	07 27 22.2	-0.5
MEU				S	Sn	07 27 40.1	-1.2
MEU				AML	AML		
	comp=E,170μm,0.8s						
MEU				AML	AML		
	comp=N,207μm,1.5s						
HAVL	**Avola**	**1.49**	**66**	P	Pn	07 27 23.9	+0.3
HLNI	**Lentini**	**1.52**	**50**	P	Pn	07 27 24.1	+0.2
HLNI				S	Sn	07 27 43.8	+0.4
HLNI				AML	AML		
	comp=E,75μm,1.4s						
HLNI				AML	AML		
	comp=N,69μm,1.6s						
SSY	**Sortino**	**1.54**	**59**	P	Pn	07 27 25.0	+0.8
PETRA	**Petralia Sopra**	**1.56**	**21**	P	Pn	07 27 26.7	+2.1
PETRA				AML	AML		
	comp=N,74μm,1.5s						
PETRA				AML	AML		
	comp=E,52μm,1.6s						
HCRL	**Carlentini**	**1.58**	**54**	P	Pn	07 27 25.4	+0.6
HCRL				S	Sn	07 27 46.1	+1.2
HAGA	**Augusta**	**1.66**	**56**	P	Pn	07 27 26.7	+1.0
MSFR	**San Fratello**	**1.90**	**29**	P	Pn	07 27 31.2	+2.2

IDC 02 07:36:49.1±7.7, 6°64S×146°77E, h74km±77km, mb2.8/1, mb1 3.4/4, mb1mx3.1/31, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=80.6km s-min=55.4km az=111.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.77**	**172**	P	Pn	07 37 31.6	+0.3
	8.6nm,0.3s,baz=349,slow=6.3,SNR=23						
PMG				S	Sn	07 38 04.3	+0.6
	8.3nm,0.3s,baz=165,slow=21,SNR=8.4						
CTA	**Charters Tower**	**13.38**	**182**	P	Pn	07 39 56.5	+0.7
	0.4nm,0.3s,baz=359,slow=13,SNR=2.0						
WRA	**Warramunga Arr**	**17.90**	**221**	P	P	07 40 52.4	-0.5
	0.1nm,0.3s,baz=42,slow=12,SNR=6.0						
ASAR	**Alice Springs**	**20.96**	**215**	P	P	07 41 26.4	+0.1
	0.5nm,0.6s,baz=54,slow=8.7,SNR=14						
TORD	**Torodi Ar. Bea**	**145.02**	**283**	PKPbc	PKPbc	07 56 17.5	-1.0
	0.2nm,0.5s,baz=77,slow=3.2,SNR=1.7						

*IDC **02** 07:40:09.4±2.2,1°.88N×126°.31E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/41, mbtmp3.5/3, Error ellipse: s-maj=176.2km s-min=27.6km az=65.0*
*DJA **02** 07:40:19.3±0.5,1°N±5°×12°6E±°, h46km±41km, M3.7/7, MLv3.7/7*
ISC 02 07:40:18.2±1.2,1°.26N±0°.08×126°.19E±0°.07, h54km, n9, σ35°20/9, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.27**	**112**	P	Pn	07 40 40.9	+1.3
LBMI	**Labuha**	**2.29**	**145**	P	Pn	07 40 52.7	-0.9
KMSI	**Cibinong**	**2.31**	**253**	P	Pn	07 40 52.4	-1.5
SGSI	**Sangihe**	**2.50**	**345**	P	Pn	07 40 58.2	+1.8
GTOI	**Gorontalo**	**3.24**	**259**	P	Pn	07 41 09.8	+3.2
LUWI	**Luwuk**	**4.12**	**236**	P	Pn	07 41 19.6	+1.0
WRA	**Warramunga Arr**	**22.53**	**160**	P	**P**	07 45 16.0	+2.2
	0.8nm,0.3s,baz=339,slow=11,SNR=38						
ASAR	**Alice Springs**	**25.89**	**164**	P	**P**	07 45 49.1	+3.9
	0.4nm,0.5s,baz=343,slow=10,SNR=7.7						
MKAR	**Makanchi Array**	**59.28**	**326**	P	**P**	07 50 09.7	-4.7
	0.4nm,0.9s,baz=117,slow=8.2,SNR=1.6						

*OSPL **02** 07:55:10.6±0.9, 17°.65N×69°.01W, h32km±999km, ML2.6*
*NEIC **02** 07:55:11.5±0.6, 17°.8N±0°.3×68°.8W±0°.1, h107km±31km, Error ellipse: s-maj=41.6km s-min=13.7km az=170.0*
*RSPR **02** 07:55:11.6, 17°.79N×68°.70W, h124km±2km, MD3.8/16*
ISC 02 07:55:08.1±1.9, 17°.8N±0°.2×68°.95W±0°.06, h116km±23km, n55, σ19°08/71, 18C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**1.76**	**84**	**↑eP**	**Pn**	07 55 39.1	+0.8
CRPR	**Cabo Rojo, PR**	**1.76**	**84**	*eS*	**Sn**	07 56 00.6	-0.8
CRPR	**Cabo Rojo, PR**	**1.76**	**84**		**Pn**	07 55 39.5	+1.2
CRPR					**Sn**	07 56 00.3	-1.1
MPR	**Mayaguez**	**1.76**	**78**		**Pn**	07 55 38.8	+0.5
MPR	**Mayaguez**	**1.76**	**78**	*i* P	**Pn**	07 55 39.0	+0.6
MPR				*eS*	**Sn**	07 55 59.8	-1.6
MPR				IAML		07 56 05.3	
	comp=Z,49nm,0.1s						
LSP	**Las Mesas**	**1.80**	**79**	**↑eP**	**Pn**	07 55 39.8	+0.9
LSP	**Las Mesas**	**1.80**	**79**		**Pn**	07 55 39.8	+0.9
MLPR	**Magueyes Islan**	**1.82**	**86**	**↑eP**	**Pn**	07 55 39.8	+0.8
MLPR	**Magueyes Islan**	**1.82**	**86**	*eS*	**Sn**	07 56 02.0	-0.7
MLPR	**Magueyes Islan**	**1.82**	**86**		**Pn**	07 55 39.9	+0.8
MLPR					**Sn**	07 56 01.5	-1.2
AGPR	**Aguadilla, PR**	**1.85**	**70**	**↑eP**	**Pn**	07 55 40.6	+1.1
AGPR	**Aguadilla, PR**	**1.85**	**70**		**Pn**	07 55 40.6	+1.1
AGPR					**Sn**	07 56 03.0	-0.5
AGPR	**Aguadilla, PR**	**1.85**	**70**	*i* P	**Pn**	07 55 40.6	+1.1
AGPR				*eS*	**Sn**	07 56 03.4	-0.1
AGPR				IAML		07 56 09.1	
	comp=Z,152nm,0.2s						
GBPR	**Guanica, Bosqu**	**1.97**	**86**	**↑eP**	**Pn**	07 55 42.6	+1.6
GBPR	**Guanica, Bosqu**	**1.97**	**86**	*eS*	**Sn**	07 56 05.6	-0.6
GBPR	**Guanica, Bosqu**	**1.97**	**86**		**Pn**	07 55 42.6	+1.6
GBPR					**Sn**	07 56 05.6	-0.6
AOPR	**Arecibo Observ**	**2.15**	**76**	**↑eP**	**Pn**	07 55 43.8	+0.6
AOPR	**Arecibo Observ**	**2.15**	**76**	*eS*	**Sn**	07 56 09.8	-0.3
AOPR	**Arecibo Observ**	**2.15**	**76**		**Pn**	07 55 43.8	+0.6
AOPR					**Sn**	07 56 09.5	-0.6
OBIP	**Obispado Ponce**	**2.24**	**84**	**↑eP**	**Pn**	07 55 45.3	+1.0
OBIP	**Obispado Ponce**	**2.24**	**84**	*eS*	**Sn**	07 56 11.2	-1.0
OBIP	**Obispado Ponce**	**2.24**	**84**		**Pn**	07 55 45.1	+0.7
OBIP					**Sn**	07 56 10.8	-1.3
CELP	**Cerrillos**	**2.27**	**84**	**↑eP**	**Pn**	07 55 45.5	+0.8
CELP	**Cerrillos**	**2.27**	**84**	*eS*	**Sn**	07 56 11.9	-0.9
CELP	**Cerrillos**	**2.27**	**84**		**Pn**	07 55 45.8	+0.8
CELP					**Sn**	07 56 11.9	-0.9
ICMP	**Isla Caja de M**	**2.31**	**88**	**↑eP**	**Pn**	07 55 46.2	+1.0
ICMP	**Isla Caja de M**	**2.31**	**88**	*eS*	**Sn**	07 56 13.2	-0.5
ICMP	**Isla Caja de M**	**2.31**	**88**		**Pn**	07 55 46.1	+1.0
ICMP					**Sn**	07 56 12.7	-0.9
EMPR	**Esperanza - Ma**	**2.38**	**74**	**↑eP**	**Pn**	07 55 47.3	+1.1
EMPR	**Esperanza - Ma**	**2.38**	**74**	*eS*	**Sn**	07 56 15.8	+0.3
EMPR	**Esperanza - Ma**	**2.38**	**74**		**Pn**	07 55 47.2	+1.1
EMPR					**Sn**	07 56 14.5	-0.9
SDDR	**Presa de Saban**	**2.50**	**297**	*i* P	**Pn**	07 55 48.9	+1.2
SDDR				*eS*	**Sn**	07 56 16.2	-2.0
SDDR				IAML		07 56 22.1	
	comp=Z,22nm,0.3s						
SJG	**San Juan**	**2.68**	**84**		**Pn**	07 55 50.7	+0.7
IGPR	**InterUniversit**	**2.71**	**87**	**↑eP**	**Pn**	07 55 51.1	+0.8
IGPR	**InterUniversit**	**2.71**	**87**	*eS*	**Sn**	07 56 21.8	-1.2
IGPR	**InterUniversit**	**2.71**	**87**	Pn	**Pn**	07 55 52.6	+2.2
IGPR					**Sn**	07 56 21.8	-1.2
GCPR	**Guaynabo City**	**2.76**	**80**	**↑eP**	**Pn**	07 55 51.7	+0.6
GCPR	**Guaynabo City**	**2.76**	**80**	*eS*	**Sn**	07 56 22.9	-1.4
GCPR	**Guaynabo City**	**2.76**	**80**		**Pn**	07 55 51.8	+0.6
GCPR					**Sn**	07 56 23.3	-1.0
PDPR	**Patillas Dam,**	**2.79**	**86**	**↑eP**	**Pn**	07 55 52.2	+0.7
PDPR	**Patillas Dam,**	**2.79**	**86**	*eS*	**Sn**	07 56 23.7	-1.2
PDPR	**Patillas Dam,**	**2.79**	**86**		**Pn**	07 55 52.8	+1.4
PDPR					**Sn**	07 56 23.1	-1.8
HUMP	**Col San Antoni**	**2.96**	**84**	**↑eP**	**Pn**	07 55 55.0	+1.2
HUMP	**Col San Antoni**	**2.96**	**84**	*eS*	**Sn**	07 56 28.7	-0.3
HUMP	**Col San Antoni**	**2.96**	**84**		**Pn**	07 55 55.2	+1.5
CBYP	**Canovanas**	**2.97**	**81**	**↑eP**	**Pn**	07 55 54.4	+0.5
CBYP	**Canovanas**	**2.97**	**81**	*eS*	**Sn**	07 56 27.9	-1.3
CBYP	**Canovanas**	**2.97**	**81**		**Pn**	07 55 54.6	+0.6
MTP	**Monte Pirata**	**3.24**	**85**	**↑eP**	**Pn**	07 55 58.9	+1.5
MTP	**Monte Pirata**	**3.24**	**85**		**Pn**	07 55 58.4	+1.0
MTP					**Sn**	07 56 33.6	-1.9
CUPR	**Culebra, Puert**	**3.52**	**82**	**↑eP**	**Pn**	07 56 01.6	+0.5
CUPR	**Culebra, Puert**	**3.52**	**82**	*eS*	**Sn**	07 56 41.6	-0.4
CUPR	**Culebra, Puert**	**3.52**	**82**	Pn	**Pn**	07 56 02.1	+1.0
CDVI	**St. Croix**	**3.98**	**91**	**↑eP**	**Pn**	07 56 07.7	+0.4
CDVI	**St. Croix**	**3.98**	**91**	*eS*	**Sn**	07 56 51.8	-1.5

*TAP **02** 08:17:56.0, 24°.25N×122°.92E, h33km, ML3.1, D*
*JMA **02** 08:17:56.4±0.1, 24°.22N×122°.81E, h18km±3km, M2.9*
ISC 02 08:17:56.3±1.1, 24°.22N±0°.03×122°.84E±0°.02, h21km±2km, n70, σ08°81/110, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.24**	**22**	P	**Pb**	**08 18 02.0**	**-0.4**
JYNG				S	**Sb**	**08 18 06.1**	**-0.6**
YOJ	**Yonaguni jima**	**0.28**	**33**	P	**Pb**	**08 18 03.0**	**+0.2**
	baz=20						
YOJ				S	**Sn**	**08 18 08.5**	**-2.4**
	baz=20						
YOJ	**Yonaguni jima**	**0.28**	**33**	P	**Pb**	**08 18 02.9**	**+0.1**
YOJ				S	**Sb**	**08 18 07.6**	**+0.3**
IRIF	**Iriomote-Funau**	**0.82**	**82**	P	**Pb**	**08 18 12.4**	**-0.2**
IRIF				S	**Sn**	**08 18 23.9**	**-0.2**
HATJ	**Hateruma jima**	**0.90**	**100**	P	**Pb**	**08 18 13.5**	**-0.2**
HATJ				*eS*	**Sn**	**08 18 26.3**	**+0.3**
ENAH	**Nanao**	**0.97**	**284**	*i* P	**Pb**	**08 18 14.2**	**-0.5**
	baz=292						
ENAH				S	**Sb**	**08 18 26.9**	**+0.2**
	baz=292						
TWC	**Suao**	**0.98**	**293**	*i* P	**Pb**	**08 18 13.8**	**-1.1**
	baz=301						
TWC				*i* S	**Sb**	**08 18 26.2**	**-1.0**
	baz=301						
JKRS	**Kuro-shima**	**1.06**	**89**	P	**Pb**	**08 18 16.7**	**+0.7**
JKRS				S	**Sn**	**08 18 31.7**	**+1.5**
TWB1	**Santiao Chiao**	**1.10**	**315**	*eP*	**Pb**	**08 18 16.9**	**+0.2**
	baz=311						
TWB1				S	**Sn**	**08 18 29.9**	**-1.2**
	baz=311						
NTC	**Toucheng**	**1.12**	**304**	*eP*	**Pn**	**08 18 16.5**	**-0.2**
	baz=300						
NTC				*eS*	**Sb**	**08 18 31.6**	**+0.7**
	baz=300						
NACB	**Ninganchiao**	**1.14**	**268**	P	**Pb**	**08 18 17.3**	**0.0**
	baz=249						
NACB				*eS*	**Sb**	**08 18 32.7**	**+1.0**
	baz=249						
TWD	**Chiawan**	**1.15**	**263**	*i* P	**Pn**	**08 18 17.2**	**+0.1**
	baz=246						
TWD				S	**Sb**	**08 18 33.0**	**+1.1**
	baz=246						
HWA	**Hwalien**	**1.16**	**258**	S	**Sb**	**08 18 33.9**	**+1.8**
	baz=255						
TWE	**Neicheng**	**1.18**	**295**	*i* P	**Pb**	**08 18 18.0**	**0.0**
	baz=302						
TWE				*i* S	**Sn**	**08 18 32.8**	**-0.3**
	baz=302						
TIPB	**Shuangxi**	**1.19**	**309**	P	**Pb**	**08 18 18.2**	**0.0**
	baz=316						
TIPB				S	**Sn**	**08 18 32.6**	**-0.7**
	baz=316						
JIJ	**Ishigaki jima**	**1.19**	**83**	P	**Pb**	**08 18 17.8**	**-0.4**
JIJ				*eS*	**Sb**	**08 18 34.3**	**+1.1**
ENTT	**Nioudou**	**1.24**	**290**	*i* P	**Pb**	**08 18 18.7**	**-0.2**
	baz=296						
ENTT				*i* S	**Sb**	**08 18 34.7**	**+0.2**
	baz=296						
ETLH	**Xiulin Townshi**	**1.24**	**270**	P	**Pb**	**08 18 19.1**	**0.0**
	baz=266						
NDT	**Datong Townshi**	**1.27**	**288**	*i* P	**Pb**	**08 18 19.7**	**+0.2**
	baz=294						
NDT				*i* S	**Sb**	**08 18 36.4**	**+0.9**
	baz=294						
NWF	**Wu-fen Shan**	**1.28**	**311**	P	**Pb**	**08 18 19.5**	**-0.3**
	baz=307						
WFSB	**Wu-fen Shan**	**1.28**	**311**	*eP*	**Pb**	**08 18 19.3**	**-0.4**
	baz=307						
NWLT	**Wulai**	**1.34**	**295**	*eP*	**Pb**	**08 18 20.6**	**-0.1**
	baz=303						
NWLT				*eS*	**Sb**	**08 18 37.9**	**+0.4**
	baz=303						
NNSB	**Datong**	**1.35**	**279**	P	**Pb**	**08 18 20.8**	**-0.1**
	baz=263						
NNSB				S	**Sb**	**08 18 38.1**	**+0.3**
	baz=263						
NNSH	**Datong**	**1.35**	**279**	*eP*	**Pb**	**08 18 21.0**	**+0.1**
	baz=263						
NNSH				*eS*	**Sb**	**08 18 37.9**	**+0.1**
	baz=263						
ESL	**Shilin**	**1.35**	**253**	*eP*	**Pn**	**08 18 20.1**	**+0.1**
	baz=240						
NNS	**Nan Shan**	**1.36**	**279**	P	**Pb**	**08 18 21.4**	**+0.3**
	baz=263						
NNS				S	**Sb**	**08 18 38.7**	**+0.6**
	baz=263						
TWA	**Mucha**	**1.37**	**304**	P	**Pb**	**08 18 21.6**	**+0.3**
	baz=299						
JISG	**Ishigakijimahi**	**1.39**	**75**	P	**Pb**	**08 18 20.4**	**-1.1**
JISG				S	**Sb**	**08 18 39.0**	**+0.

baz=238
WJS Zhushan 1.98 259 *e*P **Pb 08 18 31.2 -0.3**
baz=256
ALS Alishan 2.00 250 P **Pn 08 18 30.5 +1.4**
ALS baz=247 S **Sn 08 18 54.8 +1.2**
baz=247
WNT Mingjian 2.00 261 *e*P **Pb 08 18 31.1 -1.0**
baz=257
CHN5 Tsauling 2.08 253 *e*P **Pb 08 18 32.2 -1.1**
baz=242
CHN5 *e*S **Sb 08 18 57.6 -1.1**
baz=242
WDLH Douliu 2.17 256 *e*P **Pb 08 18 33.7 -1.2**
baz=254
TPUB Ta-pu 2.23 246 *e*P **Pn 08 18 33.2 +1.1**
baz=245
TPUB *e*S **Sb 08 19 02.4 -0.6**
baz=245
SLGT Liugui 2.36 239 *e*P **Pn 08 18 35.6 +1.8**
baz=230
TWK Hsinying 2.36 247 *e*P **Pn 08 18 35.6 +1.8**
baz=245
CHN1 Nanshi 2.36 244 *e*P **Pn 08 18 35.6 +1.8**
baz=243
SGST Jiashian 2.36 242 P **Pn 08 18 36.0 +2.1**
baz=240
SGST S **Sb 08 19 06.2 -0.8**
baz=240

MOS **02** *08:41:37.2±0.9, 40.°53N×141.°64E, h118km, mb4.4/18, Error ellipse: s-maj=7.7km s-min=5.6km az=92.8*

IDC **02** *08:41:38.8±1.6, 40.°48N×141.°47E, h117km±15km, mb3.7/21,mb1 3.8/27,mb1mx3.8/42,mbtmp4.0/27,MS2.4/1, Ms1 2.4/1,ms1mx2.0/51, Error ellipse: s-maj=13.9km s-min=11.7km az=105.0*

NIED **02** *08:41:38.2, 40.°53N×141.°63E, h106km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.24; Mθθ-0.07; Mφφ-0.18; Mrθ 0.15; Mθφ 0.01; Mφr 1.43; Fault plane solution: M0 1.45000×10^15 NP1: φs 6.00000°, δ 86.00000°, λ 91.00000°. NP2: φs 175.00000°, δ 4.00000°, λ 79.00000°.*

JMA **02** *08:41:38.2±0.1, 40.°53N×141.°63E, h106km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs 179.00000°, δ 8.00000°, λ 90.00000°. NP2: φs 359.00000°, δ 82.00000°, λ 90.00000°. Principal axes: T Plg 53.0000°, Azm 269.0000°; N Plg 0.0000°, Azm 179.0000°; P Plg 37.0000°, Azm 89.0000°;*

JMA Felt III J1.

NEIC **02** *08:41:38.1±2.2, 40.°53N±0.°06×141.°5E±0.°1, h107km±6km, mb4.5/27 Error ellipse: s-maj=12.6km s-min=7.9km az=110.0*

ISC 02 08:41:37.7±0.5, 40.°54N±0.°03×141.°69E±0.°05, h106km±4km, n163, σ1°28/175, mb4.4/43, 12C-17D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JANG	**Nango**	**0.22**	**219**	⇑P	**Pn**	**08 41 53.2**	**+0.5**
JANG				S	**Sn**	**08 42 03.8**	**-0.1**
JKEN	**Kujiedanarisaw**	**0.34**	**178**	⇑P	**Pn**	**08 41 53.8**	**+0.6**
JKEN				S	**Sn**	**08 42 05.3**	**+0.6**
JTM	**Tenmabayashi**	**0.54**	**297**	⇓P	**Pn**	**08 41 54.5**	**+0.2**
JTM				S	**Sn**	**08 42 06.8**	**-0.1**
JTM	**Tenmabayashi**	**0.54**	**297**		**Pn**	**08 41 54.5**	**+0.2**
JAH	**Hinai**	**0.88**	**247**	⇓P	**Pn**	**08 41 57.5**	**+0.1**
JAH				S	**Sn**	**08 42 12.0**	**-0.2**
JOT	**Ohata**	**0.97**	**330**	⇓P	**Pn**	**08 41 58.5**	**+0.3**
JOT				S	**Sn**	**08 42 13.8**	**0.0**
JOM	**Ohasama**	**1.11**	**196**	⇓P	**Pn**	**08 42 00.0**	**+0.2**
JOM				S	**Sn**	**08 42 15.6**	**-0.8**
JIW	**Iwasaki**	**1.29**	**273**	⇓P	**Pn**	**08 42 02.1**	**+0.4**
JSR	**Shiriuchi**	**1.38**	**316**	⇓P	**Pn**	**08 42 02.9**	**+0.1**
JRG	**Rokugo**	**1.41**	**216**	⇓P	**Pn**	**08 42 03.6**	**+0.5**
JRG				S	**Sn**	**08 42 22.9**	**+0.5**
JKB	**Kayabe**	**1.43**	**340**	⇓P	**Pn**	**08 42 04.0**	**+0.6**
JKB				S	**Sn**	**08 42 23.5**	**+0.5**
JOMM	**Oshimamatsumae**	**1.61**	**308**	⇓P	**Pn**	**08 42 05.5**	**-0.1**
JMK	**Ichinoseki**	**1.63**	**193**	⇓P	**Pn**	**08 42 05.8**	**-0.1**
JMK				S	**Sn**	**08 42 25.9**	**-1.3**
ERM	**Erimo**	**1.84**	**36**	*c* *i*P	**Pn**	**08 42 09.9**	**+1.5**
ERM	**Erimo**	**1.84**	**36**	Pn	**Pn**	**08 42 09.9**	**+1.5**
JYK	**Kaneyama**	**1.92**	**213**	⇓P	**Pn**	**08 42 09.5**	**0.0**
JYK				*e*S	**Sn**	**08 42 32.9**	**-0.9**
JEW	**Eniwo**	**2.30**	**356**	Pn	**Pn**	**08 42 15.5**	**+1.2**
JMM	**Marumori**	**2.76**	**195**		**Pn**	**08 42 20.1**	**-0.3**
ASAJ	**Asahikawa**	**3.63**	**10**	P	**Pn**	**08 42 33.1**	**+1.1**
	4.2nm,0.3s,baz=216,slow=14,SNR=48						
ASAJ				S	**Sn**	**08 43 12.7**	**-1.4**
	7.9nm,0.3s,baz=229,slow=28,SNR=8.2						
JKA	**Kamikawa-asahi**	**3.63**	**10**	Pn	**Pn**	**08 42 33.1**	**+1.1**
JSD	**Sado**	**3.66**	**228**	Pn	**Pn**	**08 42 32.4**	**+0.1**
NMR	**Nemuro--Hokkai**	**4.13**	**45**	*e*P	**Pn**	**08 42 38.3**	**-0.3**
NMR				*i* S	**Sn**	**08 43 23.0**	**-2.8**
GLVR	**Golovnino**	**4.28**	**40**	*e*P	**Pn**	**08 42 41.6**	**+1.0**
GLVR				*i* S	**Sn**	**08 43 28.4**	**-1.0**
GLVR				smax	smax		
	comp=N,3μm,0.2s						
GLVR				smax	smax		
	comp=E,1μm,0.2s						
JYT	**Yasato**	**4.47**	**196**		**Pn**	**08 42 42.9**	**-0.3**
GRPR	**Tuman**	**4.59**	**40**	*e*P	**Pn**	**08 42 44.4**	**-0.4**
GRPR				*i* S	**Sn**	**08 43 34.8**	**-2.2**
GRPR				pmax	pmax		
	comp=N,56nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,174nm,0.2s						
GRPR				smax	smax		
	comp=E,2μm,0.4s						
GRPR				smax	smax		
	comp=N,3μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.66**	**40**	*e*P	**Pn**	**08 42 46.8**	**+1.0**
YUK				*e*S	**Sn**	**08 43 36.7**	**-2.0**
MAJO	**Matsushiro**	**4.84**	**216**	P	**Pn**	**08 42 48.4**	**+0.1**
MAJO	**Matsushiro**	**4.84**	**216**	Pn	**Pn**	**08 42 48.4**	**+0.1**
MAT	**Matsushiro**	**4.84**	**216**	P	**Pn**	**08 42 48.5**	**+0.2**
MAT				*e*S	**Sn**	**08 43 45.1**	**+1.9**
MJAR	**Matsushiro Arr**	**4.84**	**215**	P	**Pn**	**08 42 48.4**	**+0.1**
	comp=N,0.2nm,0.3s,baz=26,slow=13,SNR=16						
MJAR	**Matsushiro Arr**	**4.84**	**215**	P	**Pn**	**08 42 49.2**	**+0.9**
MJAR	**Matsushiro Arr**	**4.84**	**215**		**Pn**	**08 42 49.2**	**+0.9**
TEY	**Ternei**	**5.85**	**322**	⇑ *i*P	**Pn**	**08 43 02.3**	**+0.5**
TEY				*e*		08 44 01.9	
TEY				pmax	pmax		
	comp=E,30nm,0.6s						
TEY				pmax	pmax		
	comp=Z,40nm,0.6s						
TEY				pmax	pmax		
	comp=N,30nm,0.6s						
JGF	**Kuroka**	**6.00**	**216**		**Pn**	**08 43 04.3**	**+0.2**
INU	**Inuyama**	**6.37**	**217**		**Pn**	**08 43 07.1**	**-1.9**
YSS	**Yuzh-Sakhalins**	**6.46**	**6**	*e*P	Pn	08 43 13.9	+3.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.46**	**6**	Pn	**Pn**	**08 43 08.9**	**-1.1**
KUR	**Kuril'sk**	**6.52**	**42**	P	**Pn**	**08 43 12.3**	**+1.3**
KUR				*e*S	**Sn**	**08 44 23.0**	**-0.8**
KUR				pmax	pmax		
	comp=Z,54nm,1.0s						
KUR				smax	smax		
	comp=E,212nm,0.3s						
KUR				smax	smax		
	comp=N,114nm,0.2s						
JWT	**Wachi**	**7.23**	**225**	Pn	**Pn**	**08 43 21.8**	**+1.1**
JHJ	**Hachijo jima 2**	**7.56**	**192**	P	**Pn**	**08 43 23.8**	**-1.4**
	comp=N,8.7nm,0.3s,baz=114,slow=19,SNR=2.0						
JHJ				S	Sn	08 44 41.2	-8.2
	comp=N,8.9nm,0.3s,baz=84,slow=22,SNR=1.8						
JHJ2	**Mitsune**	**7.57**	**192**	Pn	**Pn**	**08 43 23.8**	**-1.5**
VLA	**Vladivostok**	**7.76**	**293**	⇑ *e*P	**Pn**	**08 43 29.5**	**+1.6**
USA0B	**Ussuriysk Arra**	**8.06**	**300**	⇑ *i*P	**Pn**	**08 43 33.4**	**+1.5**
USA0B	**Ussuriysk Arra**	**8.06**	**300**	Pn	**Pn**	**08 43 33.4**	**+1.5**
USRK	**Ussuriysk Ar.**	**8.06**	**300**	P	**Pn**	**08 43 32.6**	**+0.7**
	baz=103,slow=14,SNR=20						
USRK	**Ussuriysk Ar.**	**8.06**	**300**	P	**Pn**	**08 43 33.4**	**+1.5**
USRK	**Ussuriysk Ar.**	**8.06**	**300**	Pn	**Pn**	**08 43 33.4**	**+1.5**
JHS	**Saijyo**	**8.76**	**234**	Pn	**Pn**	**08 43 42.4**	**+0.9**
JMN	**Monobe**	**9.23**	**225**	Pn	**Pn**	**08 43 47.4**	**-0.4**
KSRS	**Korea Array**	**11.15**	**258**	P	**Pn**	**08 44 13.4**	**-0.5**
	comp=N,0.1nm,0.3s,baz=67,slow=14,SNR=2.7						
KSRS				LR	LR	08 48 18.0	
	comp=N,19nm,21.2s,baz=20,slow=36						
KLR	**Kul'dur**	**11.18**	**324**	P	**Pn**	**08 44 14.3**	**+0.2**
	comp=N,0.2nm,0.3s,baz=138,slow=14,SNR=2.8						
KLR	**Kul'dur**	**11.18**	**324**	⇓ *e*P	**Pn**	**08 44 15.4**	**+1.2**
BJT	**Baijiatuau**	**19.47**	**277**	P	**P**	**08 45 55.0**	**-1.0**
BJT				pmax	pmax		
	comp=Z,15nm,1.0s						
BJT	**Baijiatuau**	**19.47**	**277**	P	**P**	**08 45 55.0**	**-1.0**
MA2	**Magadan**	**19.89**	**14**	⇑ *e*P	**Pn**	**08 46 01.7**	**-1.3**
MA2				pmax	pmax		
	comp=Z,18nm,1.3s						
YAK	**Yakutsk**	**22.72**	**345**	*de*P	**P**	**08 46 29.8**	**-0.4**
YAK				pmax	pmax		
	comp=Z,19nm,0.7s						
YAK	**Yakutsk**	**22.72**	**345**	P	**P**	**08 46 29.5**	**-0.7**
YAK				IAmb	IAmb	08 46 30.9	
	comp=Z,20nm,0.7s						
ULN	**Ulaanbaatar**	**25.73**	**298**	⇓ *e*P	**P**	**08 46 57.1**	**-1.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM	**Songino Array**	**26.17**	**298**	P	**P**	**08 47 00.6**	**-1.6**
	comp=Z,2.5nm,0.7s,baz=99,slow=8.3,SNR=9.6						
SONM	**Songino Array**	**26.17**	**298**	P	**P**	**08 47 00.6**	**-1.6**
XAN	**Xi'an**	**26.77**	**267**	P	**P**	**08 47 05.8**	**-1.8**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XAN	**Xi'an**	**26.77**	**267**	P	**P**	**08 47 05.8**	**-1.8**
XAN				IAmb	IAmb	08 47 09.7	
	comp=Z,6.2nm,0.6s						
ENH	**Enshi**	**28.04**	**259**	P	**P**	**08 47 16.3**	**-2.7**
ENH				IAmb	IAmb	08 47 19.4	
	comp=Z,11nm,0.9s						
TLY	**Talaya**	**28.32**	**306**	P	**P**	**08 47 20.5**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=74,slow=11,SNR=4.3						
TLY	**Talaya**	**28.32**	**306**	*d* *i*P	**P**	**08 47 21.3**	**+0.1**
TLY				*i* *PP	**pP**	**08 47 48.7**	**+4.1**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	**Talaya**	**28.32**	**306**	P	**P**	**08 47 20.3**	**-0.9**
ZAK	**Zakamensk**	**28.40**	**303**	*e*P	**P**	**08 47 21.1**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**29.91**	**126**	T	T	09 18 36.2	
	baz=318,slow=75,SNR=106						
H11N1	**WAKE ISLAND Hy**	**29.92**	**126**	T	T	09 18 40.1	
	baz=318,slow=75,SNR=154						
H11N3	**WAKE ISLAND Hy**	**29.92**	**126**	T	T	09 18 40.8	
	baz=318,slow=75,SNR=300						
H11S1	**WAKE ISLAND Hy**	**30.72**	**128**	T	T	09 20 45.1	
	baz=321,slow=74						
H11S3	**WAKE ISLAND Hy**	**30.72**	**128**	T	T	09 20 35.3	
	baz=321,slow=74						
H11S2	**WAKE ISLAND Hy**	**30.74**	**128**	T	T	09 21 15.0	
	baz=321						
SLVN	**Son La**	**37.28**	**251**	P	**P**	**08 48 38.3**	**-1.2**
SLVN				IAmb	IAmb	08 48 40.7	
	comp=Z,4.5nm,0.8s						
DGZ	**Jazzator, Alta**	**38.61**	**302**	*c* *i*P	**P**	**08 48 51.0**	**+0.6**
DGZ				*i* *PP	**pP**	**08 49 19.2**	**+4.5**
DGZ				pmax	pmax		
	comp=Z,22nm,0.7s						
ZAA0	**Zalesovo Array**	**39.79**	**309**	P	**P**	**08 48 59.4**	**-0.5**
ZAA0				IAmb	IAmb	08 49 00.4	
	comp=Z,6.5nm,0.8s						
ZALV	**Zalesovo Beam**	**39.79**	**309**	P	**P**	**08 48 59.8**	**-0.2**
	comp=Z,5.5nm,0.6s,baz=85,slow=8.0,SNR=25						
ZALV	**Zalesovo Beam**	**39.79**	**309**	P	**P**	**08 48 59.6**	**-0.4**
NRIK	**Noril'sk**	**40.20**	**334**	P	**P**	**08 49 02.6**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=121,slow=5.9,SNR=2.7						
CHTO	**Chiang Mai**	**42.47**	**252**	P	**P**	**08 49 21.6**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CHTO	**Chiang Mai**	**42.47**	**252**	P	**P**	**08 49 21.6**	**-0.8**
CHTO				IAmb	IAmb	08 49 23.0	
	comp=Z,7.2nm,0.8s						
MK31	**Makanchi Array**	**42.53**	**299**	P	**P**	**08 49 22.1**	**-0.5**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MK31	**Makanchi Array**	**42.53**	**299**	P	**P**	**08 49 22.1**	**-0.5**
MK31				IAmb	IAmb	08 49 23.0	
	comp=Z,5.5nm,0.8s						
MKAR	**Makanchi Array**	**42.53**	**299**	P	**P**	**08 49 21.8**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=84,slow=9.7,SNR=37						
MKAR	**Makanchi Array**	**42.53**	**299**	*i* P	**P**	**08 49 22.2**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MKAR	**Makanchi Array**	**42.53**	**299**	P	**P**	**08 49 22.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**42.70**	**252**	P	**P**	**08 49 22.8**	**-1.4**
	comp=Z,2.3nm,0.7s,baz=44,slow=7.1,SNR=13						
CMAR	**Chiang Mai Arr**	**42.70**	**252**	*i* P	**P**	**08 49 24.5**	**+0.3**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**42.70**	**252**	P	**P**	**08 49 23.6**	**-0.6**
MAKZ	**Makanchi**	**42.73**	**299**	P	**P**	**08 49 24.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAKZ	**Makanchi**	**42.73**	**299**	P	**P**	**08 49 24.0**	**-0.2**
MAKZ				IAmb	IAmb	08 49 24.3	
	comp=Z,5.6nm,0.7s						
IMAR	**Indian Mountai**	**43.55**	**32**	P	**P**	**08 49 32.8**	**+2.3**
KURK	**Kurchatov**	**44.01**	**305**	*c* *i*P	**P**	**08 49 33.8**	**-0.6**
KURK				pmax	pmax		
	comp=Z,25nm,0.8s						
KURK	**Kurchatov**	**44.01**	**305**	P	**P**	**08 49 33.8**	**-0.6**
ILAR	**Eielson Array**	**46.44**	**34**	P	**P**	**08 49 54.7**	**+1.4**
	comp=Z,11.1nm,0.7s,baz=266,slow=6.1,SNR=14						
ILAR	**Eielson Array**	**46.44**	**34**	P	**P**	**08 49 54.4**	**+1.1**
RAMN	**Ramite**	**47.07**	**271**	*e*P	**P**	**08 49 59.0**	**-0.1**
GUN	**Gumba**	**47.12**	**273**	*e*P	**P**	**08 49 59.2**	**-0.4**
	comp=Z,58nm,0.5s						
BMAR	**Burnt Mountain**	**47.18**	**30**	P	**P**	**08 50 02.0**	**+2.9**
KKN	**Kakani**	**47.64**	**273**	*e*P	**P**	**08 50 03.5**	**0.0**
	comp=Z,22nm,0.5s						
PKI	**Pulchoki**	**47.65**	**272**	*e*P	**P**	**08 50 04.0**	**+0.3**
	comp=Z,4.9nm,0.2s						
GKN	**Gorkha**	**48.02**	**273**	*e*P	**P**	**08 50 05.8**	**-0.5**
	comp=Z,12nm,0.3s						
BOOM	**Boomskoye usch**	**48.15**	**295**	P	**P**	**08 50 07.2**	**+0.1**
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BOOM	**Boomskoye usch**	**48.15**	**295**	P	**P**	**08 50 07.2**	**+0.1**
BRVK	**Borovoye**	**48.48**	**310**	*c* *i*P	**P**	**08 50 08.9**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK	**Borovoye**	**48.48**	**310**	P	**P**	**08 50 09.4**	**0.0**
DANN	**Dangsing**	**48.51**	**274**	*e*P	**P**	**08 50 10.3**	**0.0**
	comp=Z,52nm,0.4s						
KOLN	**Koldanda**	**48.93**	**274**	*e*P	**P**	**08 50 13.1**	**-0.2**
	comp=Z,8.7nm,0.3s						
AAK	**Ala-Archa**	**49.09**	**296**	⇑ *e*P	**P**	**08 50 13.9**	**-0.4**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
INK	**Inuvik**	**51.18**	**28**	P	**P**	**08 50 31.2**	**+1.7**
	comp=Z,2.4nm,0.7s,baz=280,slow=5.9,SNR=11						
INK	**Inuvik**	**51.18**	**28**	P	**P**	**08 50 31.8**	**+2.3**
INK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
INK	**Inuvik**	**51.18**	**28**	P	**P**	**08 50 31.8**	**+2.3**
INK				IAmb	IAmb	08 50 41.9	
	comp=Z,8.0nm,1.4s						
HYT	**Haines Junctio**	**51.38**	**38**	P	**P**	**08 50 34.6**	**+3.3**
KKAR	**Karatay Array**	**51.62**	**298**	P	**P**	**08 50 32.8**	**-0.4**
KKAR	**Karatay Array**	**51.62**	**298**	P	**P**	**08 50 32.8**	**-0.4**
NIL	**Nilore**	**53.79**	**286**	P	**P**	**08 50 49.8**	**+0.4**
NIL				pmax	pmax		
	comp=Z,19nm,1.4s						
NIL	**Nilore**	**53.79**	**286**	P	**P**	**08 50 49.8**	**+0.4**
ARU	**Arti**	**53.91**	**317**	*c* *i*P	**P**	**08 50 49.8**	**0.0**
ARU				*PP	**sP**	**08 51 21.0**	**-6.1**
ARU						08 51 54.2	
ARU						08 52 48.5	
ARU				S	**S**	**08 58 17.0**	**+0.2**
ARU				SS	**SKiKP**	**09 01 53.5**	**+2.1**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CHGR	**Chuyangaron**	**54.42**	**293**	P	**P**	**08 50 52.9**	**-1.0**
ABKAR	**Akbulak array**	**55.89**	**308**	P	**P**	**08 51 03.9**	**-0.3**
ABKAR				IAmb	IAmb	08 51 13.8	
	comp=Z,3.6nm,0.4s						
ABKAR	**Akbulak array**	**55.89**	**308**	P	**P**	**08 51 04.0**	**-0.1**
KIRV	**Kirov**	**57.61**	**322**	*de*P	**P**	**08 51 16.2**	**+0.1**
WB0	**Warramunga Arr**	**60.38**	**188**	P	**P**	**08 51 35.0**	**-0.7**
WB0				IAmb	IAmb	08 52 04.1	
	comp=Z,4.8nm,1.1s						
WR0	**Warramunga Arr**	**60.56**	**188**	P	**P**	**08 51 36.2**	**-0.7**
WR0				IAmb	IAmb	08 52 02.9	
	comp=Z,4.1nm,0.9s						
WB2	**Warramunga Arr**	**60.56**	**188**	P	**P**	**08 51 36.1**	**-0.8**
WB2				IAmb	IAmb	08 52 03.3	
	comp=Z,7.8nm,1.3s						
WRA	**Warramunga Arr**	**60.56**	**188**	P	**P**	**08 51 35.8**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=6.2,slow=7.1,SNR=16						
WRA	**Warramunga Arr**	**60.56**	**188**	P	**P**	**08 51 36.4**	**-0.5**
WRA	**Warramunga Arr**	**60.56**	**188**	P	**P**	**08 51 36.4**	**-0.5**
YKA	**Yellowknife Ar**	**60.68**	**31**	P	**P**	**08 51 38.4**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=293,slow=9.8,SNR=2.3						
ARCES	**ARCESS Array B**	**60.80**	**339**	P	**P**	**08 51 37.1**	**-0.9**
	comp=Z,3.5nm,0.8s,baz=57,slow=6.9,SNR=2.7						
ASAR	**Alice Springs**	**64.29**	**188**	P	**P**	**08 52 01.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=1.6,slow=6.8,SNR=8.3						
FINES	**FINESS Array B**	**65.83**	**332**	P	**P**	**08 52 10.8**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=44,slow=9.0,SNR=11						
FINES	**FINESS Array B**	**65.83**	**332**	P	**P**	**08 52 10.4**	**-0.8**
K05A	**Summer Lake**	**68.58**	**52**	P	**P**	**08 52 32.0**	**+2.8**
KIV	**Kislovodsk**	**68.80**	**310**	*e*P	**P**	**08 52 30.6**	**+0.2**
KIV				pmax	pmax		
	comp=Z,29nm,0.9s						
KBZ	**Khabaz**	**68.81**	**310**	P	**P**	**08 52 29.9**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=52,slow=14,SNR=2.2						
KBZ	**Khabaz**	**68.81**	**310**	⇓ *e*P	**P**	**08 52 27.6**	**-2.7**
KBZ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
NC405	**NORSAR Array S**	**70.84**	**337**	P	**P**	**08 52 42.7**	**+0.2**
NB2	**NORSAR Subarra**	**71.04**	**337**	P	**P**	**08 52 43.0**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=42,slow=6.2						
NOA	**NORSAR Array B**	**71.04**	**337**	P	**P**	**08 52 43.3**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=39,slow=6.1,SNR=4.3						
HRY	**Holter Researc**	**71.27**	**44**	P	**P**	**08 52 48.3**	**+2.8**
AKASG	**Malin Array Be**	**71.67**	**322**	P	**P**	**08 52 46.8**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=46,slow=5.9,SNR=12						
AKASG	**Malin Array Be**	**71.67**	**322**	*i* P	**P**	**08 52 47.2**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NVAR	**Mina Array Bea**	**72.73**	**54**	P	**P**	**08 52 55.9**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=286,slow=5.2,SNR=4.9						
NVAR	**Mina Array Bea**	**72.73**	**54**	P	**P**	**08 52 56.9**	**+2.4**
PDAR	**Pinedale Array**	**75.07**	**46**	P	**P**	**08 53 08.4**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=286,slow=1.7,SNR=5.9						
PDAR	**Pinedale Array**	**75.07**	**46**	P	**P**	**08 53 08.9**	**+0.9**
BURAR	**Bucovina Array**	**75.71**	**321**	P	**P**	**08 53 11.8**	**+0.4**
BRTR	**Keskin Array B**	**76.70**	**311**	P	**P**	**08 53 16.5**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=55,slow=5.5,SNR=2.4						
GERES	**GERESS Array B**	**79.85**	**328**	P	**P**	**08 53 33.3**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=35,slow=5.6,SNR=5.0						
GERES	**GERESS Array B**	**79.85**	**328**	P	**P**	**08 53 34.8**	**+0.4**
GERES	**GERESS Array B**	**79.85**	**328**	P	**P**	**08 53 34.8**	**+0.4**
FUORN	**Ofenpass-Fuorn**	**83.02**	**329**	P	**P**	**08 53 52.3**	**+0.9**
TEOL	**Teolo**	**83.47**	**327**	P	**P**	**08 53 53.0**	**-0.4**
TXAR	**Lajitas Array**	**87.81**	**53**	P	**P**	**08 54 16.6**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=301,slow=2.5,SNR=5.1						
TXAR	**Lajitas Array**	**87.81**	**53**	P	**P**	**08 54 17.4**	**+2.1**
TXAR	**Lajitas Array**	**87.81**	**53**	P	**P**	**08 54 17.4**	**+2.1**
LPAZ	**La Paz**	**144.63**	**56**	PKP	**PKPdf**	**09 01 02.2**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=326,slow=3.6,SNR=6.9						
LPAZ	**La Paz**	**144.63**	**56**	PKiKP	**PKPdf**	**09 01 02.4**	**-0.5**
LPAZ	**La Paz**	**144.63**	**56**		**PKPdf**	**09 01 02.4**	**-0.5**
H03N2	**Juan Fernandez**	**147.01**	**91**	T	T	11 46 24.2	
	baz=300,slow=77,SNR=5.3						
H03N3	**Juan Fernandez**	**147.02**	**91**	T	T	11 46 24.3	
	baz=300,slow=77,SNR=6.8						
H03N1	**Juan Fernandez**	**147.03**	**91**	T	T	11 46 24.6	
	baz=300,slow=77,SNR=7.2						

IDC **02** *08:54:58.9±2.3, 19.°59S×177.°71W, h382km±25km, mb3.2/8, mb1 3.5/10,mb1mx3.3/37,mbtmp4.1/10, Error ellipse: s-maj=27.6km s-min=14.3km az=147.0*

ISC 02 08:54:59.8±0.8, 19.°5S±0.°2×177.°6W±0.°2, h400km, n20, σ1°33/21, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.89**	**46**	P	**Pn**	**08 56 53.9**	**+0.2**
	4.4nm,0.3s,baz=219,slow=6.3,SNR=7.0						
AFI				S	**S**	**08 58 24.2**	**-2.7**
	2.0nm,0.3s,baz=350,slow=20,SNR=1.7						
URZ	**Urewera**	**19.24**	**193**	P	**P**	**08 58 55.9**	**-1.2**
	1.0nm,0.3s,baz=312,slow=6.7,SNR=6.3						
CTA	**Charters Tower**	**33.96**	**263**	P	**P**	**09 01 08.1**	**+0.2**
	3.5nm,0.5s,baz=85,slow=9.1,SNR=11						
STKA	**Stephens Creek**	**38.55**	**243**	P	**P**	**09 01 45.9**	**-0.2**
	0.9nm,0.3s,baz=88,slow=10,SNR=6.3						
WRA	**Warramunga Arr**	**45.10**	**261**	P	**P**	**09 02 37.7**	**-1.0**
	0.8nm,0.3s,baz=97,slow=7.3,SNR=47						
ASAR	**Alice Springs**	**45.11**	**256**	P	**P**	**09 02 38.3**	**-0.3**
	4.1nm,0.8s,baz=93,slow

66nm,0.3s
PCAN Candelaria 7.03 200 *e*P **Pn 09 04 42.0 +4.0**
PCAN *e*S **Sn 09 05 55.4 -2.5**
PCAN A A 09 06 01.2
34nm,0.3s
PSET Sete Cidades 7.30 182 *e*P **Pn 09 04 43.6 +1.9**
PSET *e*S Sn 09 05 55.6 -9.0
PSET A A 09 06 05.3
48nm,0.3s
PCALD Caldeiras da R 7.32 180 *e*P **Pn 09 04 43.7 +1.7**
BART Pico Bartolome 7.35 178 *e*P **Pn 09 04 43.7 +1.3**
BART *e*S **Sn 09 05 58.8 -7.0**
BART A A 09 06 02.8
38nm,0.2s
GRON Grota Negra 7.35 180 *e*P **Pn 09 04 43.9 +1.5**
CMLA Cha da Macela 7.36 180 *e*P **Pn 09 04 44.2 +1.7**
CMLA *e*S **Sn 09 05 59.3 -6.7**
CMLA A A 09 06 05.7
68nm,0.3s
CMLA Cha da Macela 7.36 180 Pn **Pn 09 04 43.8 +1.3**
CMLA Sn **Sn 09 06 05.4 -0.6**
PDA Ponta Delgada 7.38 181 *e*P **Pn 09 04 44.6 +1.9**
PSMN Pico do Norte, 8.12 178 *e*P **Pn 09 04 54.5 +1.6**
PSMN *e*S **Sn 09 06 17.4 -7.4**
PSMN A A 09 06 21.1
15nm,0.3s
PSMA Santa Maria 8.13 178 *e*P **Pn 09 04 54.4 +1.4**
PSMA *e*S **Sn 09 06 17.7 -7.2**
PSMA A A 09 06 22.7
11nm,0.1s
PGAV Gavieira, Arco 12.87 98 *e*P **Pn 09 05 57.0 -1.0**
72nm,0.9s
PGAV *e*S Sn 09 08 08.4 -13
PCAB Cabril 13.13 99 *e*P **Pn 09 06 00.8 -0.7**
65nm,1.7s
POLO Lamas de Olo 13.42 100 *e*P **Pn 09 06 04.6 -0.9**
33nm,1.9s
POLO *e*S Sn 09 08 22.8 -12
COI Coimbra 13.47 105 Pn **Pn 09 06 09.1 +2.9**
PCAS Casmilo, Conde 13.49 106 *e*P **Pn 09 06 04.9 -1.5**
56nm,1.8s
PCAS *e*S Sn 09 08 20.1 -16
PMAFR Mafra 13.51 111 *e*P **Pn 09 06 05.5 -1.2**
42nm,0.3s
PMAFR *e*S Sn 09 08 21.5 -15
PSBE So Bento 13.54 109 *e*P Pn 09 06 05.3 -1.9
79nm,2.0s
PSBE *e*S Sn 09 08 22.2 -15
PVIS Viseu 13.61 103 *e*P **Pn 09 06 06.8 -1.3**
39nm,1.6s
PMOZ Porto Moniz, M 13.86 150 Pn **Pn 09 06 15.6 +4.1**
MTE Manteigas 13.98 103 *e*P **Pn 09 06 12.5 -0.7**
MTE Manteigas 13.98 103 **Pn 09 06 18.0 +4.8**
PBRG Braganca 14.00 97 *e*P **Pn 09 06 12.9 -0.5**
40nm,1.9s
MVO Moncorvo 14.03 100 *e*P **Pn 09 06 12.7 -1.1**
40nm,1.2s
MVO *e*S Sn 09 08 34.9 -15
PMTG Montargil 14.15 109 *e*P **Pn 09 06 14.3 -1.1**
32nm,1.1s
PMTG *e*S Sn 09 08 35.0 -17
PCBR Castelo Branco 14.28 105 *e*P **Pn 09 06 16.1 -1.1**
PNCL Nicolau / Gran 14.47 113 *e*P **Pn 09 06 19.5 -0.2**
PNCL *e*S Sn 09 08 45.9 -14
PMRV Marv??o 14.53 107 *e*P Pn 09 06 19.1 -1.6
25nm,1.6s
PMRV *e*S Sn 09 08 46.4 -15
PTEO Sao Teotonio 14.67 115 *e*P **Pn 09 06 25.6 +3.1**
98nm,1.5s
PTEO *e*S Sn 09 08 51.9 -13
PCVE Castro Verde 15.06 114 *e*P **Pn 09 06 27.5 -0.3**
PCVE *e*S Sn 09 09 00.4 -14
PBDV Barranco-do-Ve 15.35 115 *e*P **Pn 09 06 33.5 +1.8**
PBDV *e*S Sn 09 09 08.9 -13
PVAQ Vaqueiros 15.40 114 *e*P **Pn 09 06 33.4 +1.1**
PVAQ *e*S Sn 09 09 07.4 -15
PAB San Pablo 16.57 102 **Pn 09 06 49.0 +1.6**
ESBB Sonseca Array 16.78 101 Pn **Pn 09 06 51.1 +1.1**
ESDC Sonseca Array 16.78 101 Pn **Pn 09 06 50.2 +0.2**
0.7nm,0.3s,baz=296,slow=12,SNR=53
ESDC Sn Sn 09 09 42.6 -14
0.1nm,0.3s,baz=288,slow=24,SNR=1.4
ESDC LR LR 09 11 48.7
comp=Z,94nm,20.8s,baz=120,slow=32
EKA Eskdalemuir Ar 17.47 46 P **Pn 09 06 55.9 -2.7**
baz=239,slow=13,SNR=2.8
EKA S Sn 09 09 53.9 -19
baz=246,slow=21,SNR=2.9
CLF Chambon-Foret 19.24 71 P **P 09 07 22.5 +3.2**
CLF IAmb IAmb 09 07 24.6
comp=Z,54nm,1.1s
MDT Midelt 20.29 120 P **P 09 07 34.5 +3.7**
comp=Z,2.3nm,0.8s,baz=330,slow=12,SNR=3.9
MDT LR LR 09 14 32.6
comp=Z,50nm,18.8s,baz=306,slow=34
SSB Saint Sauveur 21.09 79 P **P 09 07 41.5 +2.0**
DRLN Deer Lake 22.06 292 P **P 09 07 49.3 -0.5**
DRLN IAmb IAmb 09 08 14.1
comp=Z,45nm,1.2s
ECH Echery 22.51 70 P **P 09 07 57.4 +2.7**
ECH IAmb IAmb 09 08 00.5
comp=Z,10.0nm,0.9s
SENIN Lac Senin/Sane 22.82 75 P **P 09 08 00.8 +2.6**
DAVA Damuels 24.43 72 *e*P **P 09 08 15.9 +2.0**
comp=Z,8.3nm,1.0s
DAVOX Davos/Dischmat 24.51 73 P **P 09 08 14.7 0.0**
comp=Z,3.0nm,0.8s,baz=324,slow=17,SNR=2.4
DAVOX LR LR 09 17 02.4
comp=Z,120nm,18.1s,baz=270,slow=35
RETA Reutte 25.00 72 *e*P **P 09 08 23.9 +5.0**
comp=Z,4.9nm,1.1s
FETA Feichten 25.05 73 *e*P **P 09 08 22.1 +2.7**
comp=Z,14nm,2.0s
MOTA Moosalm 25.25 72 *e*P **P 09 08 23.9 +2.6**
comp=Z,10nm,1.1s
SQTA Sankt Quirin 25.34 72 *e*P **P 09 08 25.1 +3.1**
comp=Z,14nm,1.0s
WATA Walderalm 25.57 72 *e*P **P 09 08 28.9 +4.8**
comp=Z,7.9nm,1.0s
WTTA Wattenberg 25.62 72 *e*P **P 09 08 30.0 +5.3**
comp=Z,12nm,1.1s
ZCCA Zocca 25.77 79 P **P 09 08 28.4 +2.6**
CTI Castel Tesino 25.85 75 P **P 09 08 29.3 +2.6**
CTI IAmb IAmb 09 08 38.4
comp=Z,8.2nm,1.1s
OSSC Osservatorio P 26.18 80 P **P 09 08 33.4 +3.9**
OSSC IAmb IAmb 09 08 43.4
comp=Z,14nm,1.3s
ABTA Abfaltersbach 26.30 73 *e*P **P 09 08 36.0 +5.3**
comp=Z,3.3nm,1.1s
KHC Kasperske Hory 26.66 67 *e*P **P 09 08 40.2 +6.3**
KHC *ex* x 09 09 04.6
NOA NORSAR Array B 26.71 40 LR LR 09 17 18.0
comp=Z,61nm,20.7s,baz=245,slow=33
BRG Berggiesshubel 26.75 63 *e*(P) **P 09 08 41.5 +6.9**
comp=Z,5.7nm,1.5s
GEC2 GERESS Array S 26.77 68 P **P 09 08 37.0 +2.0**
GERES GERESS Array B 26.77 68 P **P 09 08 33.9 -1.1**
comp=Z,0.3nm,0.7s,baz=290,slow=6.2,SNR=2.5
GERES PP **PnPn 09 09 14.6 -1.5**
comp=Z,1.5nm,0.7s,baz=279,slow=13,SNR=5.8
GERES GERESS Array B 26.77 68 P **P 09 08 36.8 +1.8**
KBA Koelnbreinsper 26.80 72 *e*P **P 09 08 40.2 +4.9**
comp=Z,4.5nm,1.3s
LATE Laterza 26.84 82 P **P 09 08 37.0 +1.5**
LATE IAmb IAmb 09 08 44.4
comp=Z,10.0nm,1.4s
PRED Cave del Predi 27.07 73 P **P 09 08 39.5 +1.9**
PRED IAmb IAmb 09 09 07.2
comp=Z,7.2nm,1.3s
MYKA Terra Mystica 27.08 73 *e*P **P 09 08 42.2 +4.4**
comp=Z,5.3nm,1.4s
MOA Molln 27.29 70 *e*P **P 09 08 43.2 +3.7**
comp=Z,4.3nm,1.3s
HFS Hagfors 27.60 43 LR LR 09 18 08.4
comp=Z,170nm,19.6s,baz=266,slow=33
OBKA Obir 27.72 73 *e*P **P 09 08 46.3 +2.8**
comp=Z,3.5nm,0.8s
KEST Kesra 27.93 97 LR LR 09 18 25.6
comp=Z,132nm,19.7s,baz=320,slow=33
SOKA Soboth 28.01 72 *e*P **P 09 08 50.0 +3.9**
comp=Z,3.4nm,1.5s
INTR Introdacqua 28.50 82 P **P 09 08 51.7 +1.2**
INTR IAmb IAmb 09 09 00.1
comp=Z,4.3nm,0.8s

VRAC Vranov 28.60 66 LR LR 09 19 10.1
comp=Z,117nm,19.4s,baz=279,slow=34
EMMW East Machias 29.50 284 P **P 09 08 59.7 +0.6**
FRB Frobisher Bay 30.39 323 LR LR 09 17 46.5
comp=Z,163nm,18.9s,baz=82,slow=30
ACCN Adirondack Com 34.16 285 P **P 09 09 40.1 0.0**
ACCN IAmb IAmb 09 10 04.8
comp=Z,27nm,1.4s
YLE Yale 34.41 281 P **P 09 09 42.9 +0.6**
ARCES ARCESS Array B 35.12 28 P **P 09 09 45.5 -2.7**
comp=Z,2.4nm,0.7s,baz=261,slow=11,SNR=4.2
ARCES LR LR 09 21 28.0
comp=Z,65nm,21.4s,baz=300,slow=32
AKASG Malin Array Be 36.36 61 P **P 09 09 57.6 -1.4**
comp=Z,0.4nm,0.3s,baz=279,slow=8.7,SNR=3.4
TORD Torodi Ar. Bea 39.36 135 P **P 09 10 27.1 +2.5**
comp=Z,2.2nm,1.1s,baz=332,slow=7.6,SNR=5.7
TORD LR LR 09 25 42.6
comp=Z,129nm,19.0s,baz=335,slow=34
TORD Torodi Ar. Bea 39.36 135 P **P 09 10 27.6 +3.0**
MDUB Mudurnu 41.11 76 P **P 09 10 42.4 +3.2**
BRTR Keskin Array B 43.12 76 P **P 09 10 55.6 0.0**
comp=Z,1.2nm,0.8s,baz=300,slow=6.5,SNR=1.4
KBZ Khabaz 47.49 66 LR LR 09 33 42.0
comp=Z,50nm,18.0s,baz=196,slow=39
PCRV Puerto La Cruz 48.37 236 LR LR 09 30 14.3
comp=Z,266nm,19.1s,slow=34
Z41A Richland Creek 52.11 282 P **P 09 12 04.4 -0.9**
Z41A IAmb IAmb 09 12 25.7
comp=Z,22nm,1.4s
SDV Santo Domingo 53.01 241 P **P 09 12 11.9 -0.4**
SDV IAmb IAmb 09 12 20.9
comp=Z,4.1nm,1.2s
H10N2 ASCENSION HYDR 53.63 166 T T 10 10 21.8
baz=348
H10N3 ASCENSION HYDR 53.64 166 T T 10 10 05.4
baz=348
H10N1 ASCENSION HYDR 53.65 166 T T 10 10 14.9
baz=348
OK025 Westminster Rd 53.93 287 P **P 09 12 19.0 +0.2**
OK025 IAmb IAmb 09 12 41.3
comp=Z,3.7nm,0.8s
H10S3 ASCENSION HYDR 54.70 167 T T 10 11 30.7
baz=230,slow=74,SNR=6.3
H10S2 ASCENSION HYDR 54.71 167 T T 10 11 25.3
baz=350,slow=74,SNR=3.3
INK Inuvik 54.97 334 LR LR 09 32 23.3
comp=Z,79nm,18.7s,baz=35,slow=32
NRIK Noril'sk 55.80 23 P **P 09 12 30.3 -1.5**
comp=Z,2.2nm,0.2s,baz=14,slow=2.2,SNR=4.1
ROSC El Rosal 58.44 242 LR LR 09 36 37.1
comp=Z,47nm,19.4s,baz=43,slow=34
RDMU Red Mountain 59.13 298 P **P 09 12 56.8 +0.9**
GEYT Alibeck 60.34 65 LR LR 09 41 49.1
comp=Z,18nm,18.8s,baz=20,slow=39
ILAR Eielson Array 61.32 335 P **P 09 13 08.9 -1.4**
comp=Z,0.1nm,0.7s,baz=42,slow=7.1,SNR=1.2
TXAR Lajitas Array 61.92 284 P **P 09 13 14.8 -0.2**
comp=Z,0.9nm,0.7s,baz=70,slow=7.1,SNR=12
TXAR LR LR 09 40 22.5
comp=Z,68nm,18.0s,baz=0.0,slow=36
BWN Browne 62.51 336 P **P 09 13 15.9 -2.4**
KKAR Karatay Array 64.73 54 P **P 09 13 33.3 0.0**
MKAR Makanchi Array 68.60 45 P **P 09 13 57.1 -0.9**
comp=Z,0.6nm,0.8s,baz=308,slow=5.3,SNR=2.7
LPAZ La Paz 72.36 223 LR LR 09 42 43.4
comp=Z,35nm,18.7s,baz=20,slow=33
SONM Songino Array 78.25 31 P **P 09 14 53.8 -1.1**
comp=Z,0.3nm,0.4s,baz=340,slow=6.9,SNR=1.9
WRA Warramunga Arr 149.83 40 PKPbc **PKPbc 09 22 44.9 -0.5**
comp=Z,0.5nm,0.7s,baz=322,slow=2.4,SNR=2.1
ASAR Alice Springs 152.80 45 PKPbc **PKPbc 09 22 51.5 -0.8**
comp=Z,0.3nm,0.8s,baz=338,slow=2.1,SNR=1.7

*IDC **02** 09:08:22.4±1.3, 36.98N×135.52E, h349km±23km, mb2.7/1, mb1 2.8/4, mb1mx2.5/55, mbtmp3.2/4, Error ellipse: s-maj=48.3km s-min=26.6km az=42.0*
*JMA **02** 09:08:24.2±0.1, 37.06N×135.81E, h346km, M3.2*
ISC 02 09:08:22.1±1.3, 37.1N±0.1×135.7E±0.1, h350km, n11, σ1s63/13, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**2.08**	**105**	P	**Pn**	**09 09 15.5**	**+1.5**
MJAR	**Matsushiro Arr**	**2.08**	**105**	P	**Pn**	**09 09 15.5**	**+1.4**
	0.2nm,0.3s,baz=280,slow=9.1,SNR=19						
JHK	**Hiroka**	**2.65**	**86**	P	**Pn**	**09 09 20.0**	**+1.6**
JNS	**Sasagawa**	**2.96**	**75**	P	**Pn**	**09 09 22.6**	**+1.5**
JAG	**Ashikaga**	**3.08**	**101**	P	**Pn**	**09 09 23.4**	**+1.2**
JMM	**Marumori**	**4.12**	**78**	P	**Pn**	**09 09 33.7**	**+1.4**
JFK	**Kawauchi**	**4.13**	**85**	P	**Pn**	**09 09 33.4**	**+0.9**
JFK				*e*S	**S**	**09 10 28.4**	**-0.8**
JMK	**Ichinoseki**	**4.73**	**65**	P	**Pn**	**09 09 40.2**	**+1.5**
JMK				*e*S	**S**	**09 10 37.8**	**-2.8**
KSRS	**Korea Array**	**6.22**	**276**	P	**Pn**	**09 09 54.4**	**-1.0**
	0.1nm,0.3s,baz=96,slow=11,SNR=1.6						
USRK	**Ussuriysk Ar.**	**7.63**	**339**	P	**Pn**	**09 10 12.7**	**+0.9**
	baz=145,slow=11,SNR=6.8						
WRA	**Warramunga Arr**	**56.75**	**182**	P	**P**	**09 17 30.1**	**-0.6**
	0.2nm,0.3s,baz=360,slow=7.6,SNR=8.5						

IDC 02 09:13:29.5±10.0, 3.55N×127.40E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/47, mbtmp3.4/3, Error ellipse: s-maj=169.5km s-min=143.9km az=157.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.32**	**164**	P	P	09 18 49.2	+0.1
	0.2nm,0.4s,baz=343,slow=10,SNR=13						
ASAR	**Alice Springs**	**27.78**	**167**	P	P	09 19 20.7	+0.3
	0.2nm,0.4s,baz=350,slow=7.0,SNR=11						
STKA	**Stephens Creek**	**37.73**	**160**	P	P	09 20 46.5	-0.7
	0.5nm,0.4s,baz=337,slow=7.7,SNR=3.1						

*BJI **02** 09:20:27.5±0.0, 2.81S×147.47E, h4km, mB5.0/21, mb4.8/30, Ms4.7/12, Ms7 4.5/13*
*IDC **02** 09:20:27.3±0.6, 3.07S×147.64E, h0km, mb4.2/17, mb1 4.3/19, mb1mx4.2/38, mbtmp4.2/19, ML1.2/1, MS4.1/28, Ms1 4.1/28, ms1mx4.0/32, Error ellipse: s-maj=24.0km s-min=13.5km az=97.0*
*NEIC **02** 09:20:28.4±1.6, 2.91S±0.04×147.61E±0.06, h10km±1km, mb4.8/27, Error ellipse: s-maj=11.4km s-min=5.4km az=60.0*
*DJA **02** 09:20:31.0±0.4, 3.3S±3.3×14.8E±*, h21km±3km, M4.7/18, mb4.6/18, mB5.3/6, MLv4.8/4, Mw(mB)4.7/6*
*GCMT **02** 09:20:32.4±0.2, 3.03S±0.01×147.66E±0.02, h15km±1km, MW5.0/102, Moment Tensor Solution. s20,c23; s102,c151; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.12±.12; Mθθ0.77±.12; Mϕϕ-0.64±.12; Mθϕ-0.80±.25; Mϕθ3.18±.11; Mϕr0.39±.21; Best double couple: Mo3.37900×10¹⁶ NP1:ϕs187.00000°, δ76.00000°, λ-175.00000°. NP2:ϕs96.00000°, δ85.00000°, λ-15.00000°. Principal axes: T 3.3610, Plg6.0000°, Azm142.0000°; N 0.0350, Plg75.0000°, Azm256.0000°; P -3.3960, Plg14.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 09:20:28.8±0.4, 2.91S±0.04×147.61E±0.05, h10km, n96, σ1s24/83, mb4.6/37, MS4.1/31, 2C, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**0.90**	**344**		**Pg**	**09 20 45.9**	**-0.2**
MANU				Sn	**Sn**	**09 21 01.0**	**+0.4**
KRVT	**Keravat (AS076**	**4.62**	**108**	Pn	**Pn**	**09 21 38.5**	**-0.2**
	13nm,0.3s,baz=147,slow=3.6,SNR=12						
RABL	**Rabaul**	**4.72**	**106**	Pn	**Pn**	**09 21 40.1**	**0.0**
RABL				Sn	**Sn**	**09 22 35.2**	**+0.3**
PMG	**Port Moresby**	**6.47**	**184**	Pn	**Pn**	**09 22 03.2**	**-0.9**
	0.3nm,0.3s,baz=87,slow=23,SNR=1.8						
PMG				Sn	**Sn**	**09 23 19.5**	**+1.5**
	0.3nm,0.3s,baz=308,slow=16,SNR=3.5						
PMG				LR	LR	09 24 08.8	
	comp=Z,515nm,21.5s,baz=10,slow=35						
PMG	**Port Moresby**	**6.47**	**184**		**Pn**	**09 22 04.8**	**+0.6**
PMG				Sn	**Sn**	**09 23 18.8**	**+0.7**
GENI	**Genyem**	**7.44**	**272**	P	**Pn**	**09 22 19.2**	**+1.7**

1.0nm154nm,1.1s
HNR Honiara 13.87 118 LR LR 09 29 05.8
comp=Z,1μm,18.1s,baz=300,slow=38
PATS Pohnpei 14.42 48 P **P 09 23 57.2 -2.8**
FAKI Fak Fak 15.34 270 P **Pn 09 24 05.8 +0.2**
52nm,1.2s
FAKI Fak Fak 15.34 270 **Pn 09 24 04.8 -0.8**
FAKI IAmb IAmb 09 24 14.3
comp=Z,81nm,1.3s
GUMO Guam 16.62 351 LR LR 09 29 16.4
comp=Z,559nm,20.4s,baz=168,slow=32
GUMO Guam 16.62 351 P **P 09 24 24.0 -0.5**
GUMO IAmb IAmb 09 24 25.7
comp=Z,164nm,1.3s
SAUI Saumlaki 17.00 252 P **P 09 24 27.1 -1.6**
CTA Charters Tower 17.12 184 Pn **P 09 24 29.4 -0.7**
comp=Z,0.2nm,0.3s,baz=11,slow=12,SNR=5.1
CTA LR LR 09 31 47.5
comp=Z,798nm,19.3s,baz=300,slow=40
CTAO Charters Tower 17.12 184 P **P 09 24 31.9 +1.8**
MSAI Masohi 18.66 268 P **P 09 24 46.2 -0.9**
comp=Z,7.5nm,1.2s
MTN Manton Dam 19.06 238 P **Pn 09 24 51.5 -0.8**
WB0 Warramunga Arr 21.15 217 P **P 09 25 13.6 -0.6**
WB0 IAmb IAmb 09 25 31.7
comp=Z,44nm,1.2s
WR0 Warramunga Arr 21.21 216 P **P 09 25 13.8 -1.1**
WR0 IAmb IAmb 09 25 30.1
comp=Z,31nm,0.9s
WB2 Warramunga Arr 21.31 216 P **P 09 25 15.2 -0.7**
WB2 IAmb IAmb 09 25 31.1
comp=Z,35nm,0.9s
WRA Warramunga Arr 21.32 216 P **P 09 25 14.9 -1.1**
comp=Z,8.7nm,0.7s,baz=43,slow=11,SNR=72
WRA PcP **PcP 09 29 20.3 -0.4**
comp=Z,0.5nm,1.0s,baz=30,slow=1.8,SNR=1.8
WRA LR LR 09 34 21.7
comp=Z,824nm,18.4s,baz=35,slow=39
WRA Warramunga Arr 21.32 216 P **P 09 25 14.6 -1.5**
SANI Sanana 21.62 272 P **P 09 25 19.5 +0.2**
comp=Z,33nm,1.4s
KNRA Kununurra 22.48 234 P **P 09 25 28.7 +0.1**
KNRA IAmb IAmb 09 25 35.1
comp=Z,74nm,1.4s
SOEI Soe 24.16 253 P **P 09 25 43.2 -2.4**
comp=Z,1μmcomp=Z,38nm,1.0s
AS31 Alice Springs 24.52 212 P **P 09 25 49.2 +0.5**
ASAR Alice Springs 24.52 212 P **P 09 25 48.5 -0.3**
comp=Z,15nm,0.9s,baz=42,slow=6.8,SNR=51
ASAR LR LR 09 36 03.4
comp=Z,574nm,18.0s,baz=39,slow=38
ASAR Alice Springs 24.52 212 P **P 09 25 48.9 +0.1**
LUWI Luwuk 24.89 274 P **P 09 25 53.6 +1.4**
comp=Z,2μmcomp=Z,127nm,1.0s
LUWI Luwuk 24.89 274 P **P 09 25 51.9 -0.2**
APSI Ampana 26.02 274 P **P 09 26 02.5 +0.1**
comp=Z,33nm,1.3s
FITZ Fitzroy Crossi 26.30 233 P **P 09 26 03.6 -1.2**
comp=Z,9.1nm,0.9s,baz=66,slow=9.9,SNR=9.5
FITZ LR LR 09 37 19.8
comp=Z,947nm,18.5s,baz=59,slow=39
FITZ Fitzroy Crossi 26.30 233 P **P 09 26 04.1 -0.7**
FITZ IAmb IAmb 09 26 08.3
comp=Z,27nm,1.3s
DZM Mont Dzumac 26.41 138 LR LR 09 35 06.5
comp=Z,969nm,20.4s,baz=320,slow=34
EDFI Ende, Flores 26.42 256 P **P 09 26 04.3 -1.8**
comp=Z,9.6nm,1.1s
BNSI Bone 27.49 266 P **P 09 26 16.6 +1.0**
comp=Z,622nmcomp=Z,25nm,1.1s
ARMA Armidale 27.62 172 P **P 09 26 18.1 +1.3**
ARMA IAmb IAmb 09 26 18.9
comp=Z,28nm,1.3s
TTSI Tana Toraja 27.75 269 P P 09 26 33.8 +16
KAPI Kappang 27.87 265 LR LR 09 38 08.8
comp=Z,139nm,21.6s,baz=94,slow=38
H11S3 WAKE ISLAND Hy 28.38 41 T T 09 56 10.7
baz=223,slow=75,SNR=403
H11S2 WAKE ISLAND Hy 28.39 41 T T 09 56 08.5
baz=223,slow=75,SNR=320
H11S1 WAKE ISLAND Hy 28.40 41 T T 09 56 11.5
baz=223,slow=75,SNR=329
STKA Stephens Creek 29.36 190 P **P 09 26 30.9 -1.2**
comp=Z,0.5nm,0.3s,baz=0.0,slow=12,SNR=1.4
STKA LR LR 09 38 52.4
comp=Z,456nm,19.4s,baz=7.2,slow=38
H11N1 WAKE ISLAND Hy 29.40 39 T T 09 57 25.8
baz=221,slow=76,SNR=134
H11N3 WAKE ISLAND Hy 29.41 39 T T 09 57 32.1
baz=221,slow=76,SNR=194
H11N2 WAKE ISLAND Hy 29.42 39 T T 09 57 27.1
baz=221,slow=76,SNR=250
PSAB1 Pilbara Seismi 32.77 233 P **P 09 27 02.4 +0.1**
PSAB1 IAmb IAmb 09 27 08.7
comp=Z,16nm,1.1s
PSAD3 Pilbara Seismi 32.84 233 P **P 09 27 01.9 -1.0**
MSVF Nonsavu 33.29 118 P **P 09 27 07.1 +0.2**
MSVF IAmb IAmb 09 27 15.2
comp=Z,11nm,1.1s
SBUM Sibu 35.78 278 P **P 09 27 28.0 -0.5**
KSM Kuching 37.54 276 P **P 09 27 42.6 -1.0**
KNMB Chin-men Tao 39.33 315 P **P 09 27 56.1 -2.4**
INU Inuyama 39.34 346 P **P 09 27 56.7 -1.6**
INU IAmb IAmb 09 28 02.7
comp=Z,30nm,1.4s
MJAR Matsushiro Arr 40.22 348 P **P 09 28 07.5 +1.8**
comp=Z,2.8nm,1.1s,baz=161,slow=7.7,SNR=4.5
MJAR LR LR 09 42 41.0
comp=Z,106nm,19.0s,baz=175,slow=33
AFI Afiamalu 41.56 108 LR LR 09 43 43.9
comp=Z,203nm,18.9s,baz=110,slow=34
RAO Raoul Island 41.92 132 LR LR 09 43 01.2
comp=Z,247nm,20.6s,baz=91,slow=32
QIZ Qiongzhong 43.07 302 P **P 09 28 27.0 -2.3**
QIZ S **S 09 34 56.6 +1.0**
QIZ LR LR
comp=Z,170nm,25.0s
QIZ LR LR
comp=Z,260nm,23.5s
QIZ LR LR
comp=Z,350nm,23.0s
QIZ Qiongzhong 43.07 302 P **P 09 28 28.7 -0.6**
QIZ IAmb IAmb 09 28 44.1
comp=Z,31nm,1.5s
JTM Tenmabayashi 43.90 353 P **P 09 28 35.7 +0.1**
KSRS Korea Array 44.13 337 LR LR 09 45 13.2
comp=Z,271nm,19.1s,baz=158,slow=34
NJ2 Nanjing 44.21 324 *e*P **P 09 28 37.0 -1.3**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
URZ Urewera 44.32 146 LR LR 09 44 33.7
comp=Z,530nm,21.3s,baz=30,slow=33
USRK Ussuriysk Ar. 48.95 345 P **P 09 29 15.1 -0.1**
comp=Z,2.2nm,0.9s,baz=161,slow=9.2,SNR=2.0
USRK LR LR 09 49 06.8
comp=Z,110nm,19.1s,baz=144,slow=35
XAN Xi'an 51.74 319 P **P 09 29 37.9 +1.2**
XAN sP sP 09 29 44.9 +4.2
XAN S **S 09 36 59.7 +1.0**
XAN pmax pmax
comp=Z,11nm,1.2s
XAN pmax pmax
comp=Z,170nm,4.9s
XAN LR LR
comp=Z,340nm,16.1s
XAN LR LR
comp=Z,270nm,14.5s
XAN LR LR
comp=Z,450nm,18.1s
XAN Xi'an 51.74 319 P **P 09 29 36.2 -0.6**
XAN IAmb IAmb 09 29 43.7
comp=Z,12nm,1.0s
CMAR Chiang Mai Arr 52.40 296 P **P 09 29 43.5 +1.7**
comp=Z,1.3nm,0.5s,baz=113,slow=5.9,SNR=10
CMAR LR LR 09 49 36.3
comp=Z,54nm,21.7s,baz=165,slow=33
CMAR Chiang Mai Arr 52.40 296 P **P 09 29 40.2 -1.6**
KLR Kul'dur 53.73 347 P **P 09 29 53.0 +2.0**
comp=Z,1.5nm,0.9s,baz=168,slow=9.8,SNR=1.8
HHC Hu-ho-hao-te 54.57 327 *e*P **P 09 29 57.9 +0.4**
HHC S **S 09 37 36.4 -0.8**
HHC pmax pmax
comp=Z,17nm,1.0s
HHC pmax pmax
comp=Z,120nm,4.8s
HHC LR LR

	comp=Z,310nm,16.7s							
HHC					LR	LR		
	comp=Z,310nm,16.3s							
HHC					LR	LR		
	comp=Z,330nm,16.1s							
LZH	**Lanzhou**	**56.32**	**318**	*e*P	**P**		**09 30 12.8**	**+2.5**
LZH				pP	sP		09 30 17.6	+3.3
LZH				sP	pP		09 30 20.5	+7.3
LZH				pmax	pmax			
	comp=Z,17nm,1.0s							
PETK	**Petropavlovsk-**	**56.46**	**7**	P	**P**		**09 30 12.6**	**+1.9**
	comp=Z,7.6nm,1.0s,baz=157,slow=5.3,SNR=9.9							
GTA	**Gaotai**	**60.80**	**319**	*e*P	**P**		**09 30 42.1**	**+0.7**
GTA				pP	sP		09 30 46.3	+0.8
GTA				sP	pP		09 30 49.8	+5.4
GTA				pmax	pmax			
	comp=Z,5.0nm,1.1s							
GTA				pmax	pmax			
	comp=Z,64nm,9.2s							
GTA				LR	LR			
	comp=Z,110nm,14.3s							
GTA				LR	LR			
	comp=Z,100nm,16.3s							
GTA				LR	LR			
	comp=Z,150nm,15.9s							
SONM	**Songino Array**	**62.04**	**330**	P	**P**		**09 30 51.4**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=152,slow=9.4,SNR=5.6							
SONM				LR	LR		09 55 54.1	
	comp=Z,209nm,21.5s,baz=130,slow=34							
SONM	**Songino Array**	**62.04**	**330**	P	**P**		**09 30 49.7**	**+0.1**
PPT	**Papeete**	**63.23**	**108**	LR	LR		09 53 33.3	
	comp=Z,42nm,19.8s,baz=333,slow=31							
PPT2	**Papeete2**	**63.23**	**108**	*e*LR	LR		09 49 44.4	
	comp=Z,130nm,23.5s							
TBI	**Tubuai**	**64.05**	**114**	*e*LR	LR		09 50 12.6	
	comp=Z,338nm,30.5s							
WMQ	**Urumqi**	**70.88**	**318**	*e*P	**P**		**09 31 47.7**	**+1.4**
TAOE	**Nuku Hiva Isla**	**72.02**	**98**	*e*LR	LR		09 53 51.5	
	comp=Z,2μm,28.0s							
VNDA	**Vanda**	**74.94**	**177**	P	**P**		**09 32 08.0**	**-1.7**
	comp=Z,2.2nm,0.8s,baz=331,slow=5.4,SNR=13							
VNDA				LR	LR		10 03 10.2	
	comp=Z,80nm,18.6s,baz=351,slow=34							
VNDA	**Vanda**	**74.94**	**177**	P	**P**		**09 32 09.6**	**0.0**
MKAR	**Makanchi Array**	**75.53**	**320**	P	**P**		**09 32 14.4**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=107,slow=7.7,SNR=4.4							
MKAR				LR	LR		10 06 04.6	
	comp=Z,140nm,18.9s,baz=87,slow=36							
MKAR	**Makanchi Array**	**75.53**	**320**	P	**P**		**09 32 13.2**	**-0.4**
ZALV	**Zalesovo Beam**	**76.75**	**327**	P	**P**		**09 32 20.6**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=112,slow=6.6,SNR=3.8							
ZALV				LR	LR		10 06 00.7	
	comp=Z,158nm,19.6s,baz=111,slow=36							
ZALV	**Zalesovo Beam**	**76.75**	**327**	P	**P**		**09 32 19.4**	**-0.9**
PRZ	**Przheval'sk**	**76.81**	**315**	P	**P**		**09 32 20.3**	**-0.9**
ILAR	**Eielson Array**	**82.42**	**23**	P	**P**		**09 32 50.9**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=246,slow=5.7,SNR=7.6							
ILAR				LR	LR		10 04 11.5	
	comp=Z,57nm,21.2s,baz=268,slow=32							
NRIK	**Noril'sk**	**82.55**	**342**	P	**P**		**09 32 52.0**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=146,slow=5.8,SNR=5.0							
NRIK				LR	LR		10 09 35.5	
	comp=Z,76nm,19.8s,baz=14,slow=36							
KKAR	**Karatay Array**	**82.59**	**314**	P	**P**		**09 32 52.2**	**-0.2**
MAW	**Mawson**	**85.31**	**203**	P	**P**		**09 33 05.8**	**+0.1**
	comp=Z,1.7nm,1.0s,baz=63,slow=9.0,SNR=4.1							
MAW				LR	LR		10 11 09.1	
	comp=Z,59nm,18.1s,baz=60,slow=36							
GEYT	**Alibeck**	**91.37**	**308**	LR	LR		10 16 40.7	
	comp=Z,64nm,19.8s,baz=210,slow=37							
SYO	**Syowa Base**	**93.68**	**200**⇑	*e*P	**P**		**09 33 44.4**	**-0.9**
SYO	**Syowa Base**	**93.68**	**200**⇑	*e*pP	**P**		**09 33 49.2**	**+3.9**
NVAR	**Mina Array Bea**	**95.00**	**52**	P	**P**		**09 33 53.9**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=270,slow=3.6,SNR=4.1							
NVAR				LR	LR		10 08 01.4	
	comp=Z,146nm,21.5s,baz=271,slow=30							
YKA	**Yellowknife Ar**	**96.17**	**28**	LR	LR		10 14 06.6	
	comp=Z,68nm,20.5s,baz=0.0,slow=33							
TORD	**Torodi Ar. Bea**	**144.80**	**289**	PKP		**PKPdf**	**09 40 06.3**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=54,slow=3.4,SNR=4.4							

SKHL ***02*** *09:23:17.7±0.7, 47.61N×147.62E, h395km±15km, mb4.5/9, msh4.8/5*
MOS ***02*** *09:23:17.7±1.2, 47.69N×147.43E, h405km, mb4.0/5, Error ellipse: s-maj=17.5km s-min=8.5km az=66.4*
IDC ***02*** *09:23:18.4±1.1, 47.75N×147.24E, h394km±13km, mb3.2/12, mb1 3.4/18, mb1mx3.2/50, mbtmp4.0/18, Error ellipse: s-maj=17.3km s-min=10.4km az=124.0*
NEIC ***02*** *09:23:18.9±1.1, 47.8N±0.1×147.2E±0.2, h401km±8km, mb4.1/24, Error ellipse: s-maj=19.8km s-min=13.8km az=136.0*

ISC 02 09:23:18.6±0.4, **47.61N**±0.05×**147.51E**±0.06, **h400**km, **n95**, σ1§**30**/102, **mb3.9**/27, **5C-2D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**2.39**	**174**	*e*P		**Pn**	**09 24 17.0**	**-0.2**
KUR				AMB		AMB	09 24 21.2	
	170nm,1.0s							
KUR				*e*S		**S**	**09 25 03.0**	**-1.5**
KUR				A		A	09 25 08.0	
	140nm,1.0s							
KUR				A		A	09 25 08.0	
	160nm,1.0s							
KUR	**Kuril'sk**	**2.39**	**174**	PN		**Pn**	**09 24 16.2**	**-1.0**
KUR				S		**S**	**09 25 05.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**3.31**	**260**	*i* P		**Pn**	**09 24 25.0**	**+0.7**
YSS				AMB		AMB	09 24 25.9	
	20nm,0.9s							
YSS				*e*S		**S**	**09 25 16.9**	**-0.7**
YSS				A		A	09 25 17.4	
	40nm,1.0s							
YSS				A		A	09 25 17.4	
	40nm,1.0s							
YSS	**Yuzh-Sakhalins**	**3.31**	**260**⇓	*i* PN		**Pn**	**09 24 25.0**	**+0.7**
YSS				*e*S		**S**	**09 25 16.9**	**-0.7**
YSS				pmax	pmax			
	comp=Z,20nm,0.9s							
YSS				smax	smax			
	comp=N,40nm,1.0s							
YSS				smax	smax			
	comp=E,40nm,1.0s							
YSS	**Yuzh-Sakhalins**	**3.31**	**260**			**Pn**	**09 24 23.3**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**3.76**	**198**	*e*P		**Pn**	**09 24 28.6**	**+0.2**
YUK				AMB		AMB	09 24 34.8	
	comp=E,390nm,0.9s							
YUK				*e*S		**S**	**09 25 23.6**	**-1.4**
YUK				A		A	09 25 25.1	
	comp=E,760nm,0.8s							
YUK				A		A	09 25 25.1	
	comp=E,570nm,0.8s							
GRPR	**Tuman**	**3.82**	**199**	*e*P		**Pn**	**09 24 30.0**	**+1.0**
GRPR				AMB		AMB	09 24 33.0	
	comp=E,63nm,0.4s							
GRPR				*e*S		**S**	**09 25 27.0**	**+0.9**
GRPR				A		A	09 25 30.0	
	comp=E,95nm,0.4s							
GRPR				A		A	09 25 30.0	
	comp=E,125nm,0.4s							
GRPR	**Tuman**	**3.82**	**199**	*e*PN		**Pn**	**09 24 30.4**	**+1.4**
GRPR				*e*S		**S**	**09 25 27.7**	**+1.6**
GRPR				pmax	pmax			
	comp=E,62nm,0.4s							
GRPR				pmax	pmax			
	comp=E,63nm,0.4s							
GRPR				pmax	pmax			
	comp=N,34nm,0.1s							
GRPR				smax	smax			
	comp=E,125nm,0.4s							
GRPR				smax	smax			
	comp=N,95nm,0.3s							
UGL	**Uglegorsk**	**3.92**	**294**	*e*P		**Pn**	**09 24 28.2**	**-1.5**
UGL				AMB		AMB	09 24 29.0	
	comp=N,41nm,1.0s							
GLVR	**Golovnino**	**4.12**	**201**	*e*P		**Pn**	**09 24 33.0**	**+1.2**
GLVR				AMB		AMB	09 24 36.0	
	comp=N,133nm,0.4s							
GLVR				*e*S		**S**	**09 25 33.0**	**+1.8**
GLVR	**Golovnino**	**4.12**	**201**	PN		**Pn**	**09 24 33.8**	**+2.0**
GLVR				S		**S**	**09 25 33.2**	**+2.0**
GLVR				pmax	pmax			
	comp=Z,133nm,0.4s							
NMR	**Nemuro--Hokkai**	**4.42**	**197**	*e*P		**Pn**	**09 24 32.0**	**-2.8**
NMR	**Nemuro--Hokkai**	**4.42**	**197**	*e*PN		**Pn**	**09 24 32.0**	**-2.8**
TYV	**Tymovskoe**	**4.55**	**317**	*e*P		**Pn**	**09 24 37.1**	**+1.2**
TYV				AMB		AMB	09 24 55.2	
	comp=Z,15nm,1.0s							
TYV				*e*S		**S**	**09 25 38.5**	**-0.2**
TYV				A		A	09 25 39.2	
	comp=Z,8.0nm,0.9s							
TYV				A		A	09 25 39.2	
	comp=Z,11nm,0.9s							
JKA	**Kamikawa-asahi**	**4.90**	**226**	*e*P		**Pn**	**09 24 39.6**	**+0.1**
JKA	**Kamikawa-asahi**	**4.90**	**226**			**Pn**	**09 24 39.6**	**+0.1**
ASAJ	**Asahikawa**	**4.90**	**226**	P		**Pn**	**09 24 39.6**	**0.0**
	comp=Z,1.0nm,0.3s,baz=36,slow=6.6,SNR=14							
ASAJ				S		**S**	**09 25 41.5**	**-3.9**
	comp=Z,1.6nm,0.3s,baz=353,slow=29,SNR=1.9							
ERM	**Erimo**	**6.39**	**211**	*c i* PN		Pn	09 24 49.5	-6.0
PAU	**Pauzhetka**	**7.17**	**54**	*e*P		**Pn**	**09 25 03.9**	**-0.1**
PAU				AMB		AMB	09 25 04.8	
	comp=Z,70nm,0.6s							
PAU				*e*S		**S**	**09 26 26.2**	**-4.0**
PEA0B	**Petropavlovsk-**	**8.52**	**46**	PN		**P**	**09 25 19.7**	**+0.2**
PEA0B	**Petropavlovsk-**	**8.52**	**46**	P		**P**	**09 25 19.7**	**+0.2**
PETK	**Petropavlovsk-**	**8.52**	**46**	P		**Pn**	**09 25 19.3**	**0.0**
	comp=Z,1.1nm,0.3s,baz=224,slow=8.7,SNR=74							
PETK				S		S	09 26 44.6	-14
	comp=Z,0.3nm,0.3s,baz=153,slow=2.3,SNR=4.1							
PETK	**Petropavlovsk-**	**8.52**	**46**	P		**Pn**	**09 25 19.2**	**-0.2**
PET	**Petropavlovsk**	**8.95**	**49**	*e*P		**P**	**09 25 25.0**	**+0.7**
KLR	**Kul'dur**	**10.61**	**285**	P		**P**	**09 25 41.9**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=85,slow=9.0,SNR=10							
KLR	**Kul'dur**	**10.61**	**285**	*e*P		**Pn**	**09 25 43.1**	**-0.4**
KLR	**Kul'dur**	**10.61**	**285**	*i* PN		**Pn**	**09 25 43.1**	**-0.4**
KLR				pmax	pmax			
	comp=Z,2.0nm,0.4s							
EKMR	**Ekimchan**	**10.79**	**306**	*e*P		**Pn**	**09 25 45.9**	**+0.4**
EKMR				AMB		AMB	09 25 47.8	
	comp=Z,14nm,0.9s							
JMM	**Marumori**	**10.92**	**209**	P		**Pn**	**09 25 47.0**	**-0.2**
USRK	**Ussuriysk Ar.**	**11.34**	**258**	P		**P**	**09 25 50.7**	**-0.3**
	baz=69,slow=13,SNR=8.0							
USRK	**Ussuriysk Ar.**	**11.34**	**258**	P		P	09 25 45.0	-5.9
VLA	**Vladivostok**	**11.87**	**254**	*e*P		**Pn**	**09 25 59.0**	**+0.8**
VLA	**Vladivostok**	**11.87**	**254**	*i* PN		**Pn**	**09 25 59.0**	**+0.8**
MJA0	**Matsu Arr-Jizo**	**13.01**	**215**	*e*PN		**P**	**09 26 10.6**	**+1.1**
MAJO	**Matsushiro**	**13.03**	**215**⇓	*e*PN		**Pn**	**09 26 11.4**	**-0.3**
MJAR	**Matsushiro Arr**	**13.03**	**215**	P		**P**	**09 26 10.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=13,slow=11,SNR=20							
MJAR	**Matsushiro Arr**	**13.03**	**215**	P		**P**	**09 26 09.6**	**0.0**
BMKR	**Bomnak**	**13.68**	**308**	*e*P		**P**	**09 26 16.0**	**-0.4**
BMKR				AMB		AMB	09 26 17.0	
	comp=Z,8.0nm,1.0s							
KROS	**Kirovskiy**	**14.59**	**306**	*e*P		**P**	**09 26 26.3**	**-0.1**
KROS				AMB		AMB	09 26 27.2	
	comp=Z,6.0nm,0.3s							
KSRS	**Korea Array**	**17.60**	**242**	P		**P**	**09 26 59.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=40,slow=12,SNR=8.6							
KSRS	**Korea Array**	**17.60**	**242**	*e*P		**P**	**09 27 00.6**	**+1.8**
KSRS	**Korea Array**	**17.60**	**242**	*e*P		**P**	**09 27 00.7**	**+1.9**
TLY	**Talaya**	**28.37**	**295**⇑	*e*P		**P**	**09 28 41.8**	**+4.0**
TLY				pmax	pmax			
	comp=Z,4.0nm,0.8s							
ENH	**Enshi**	**33.86**	**253**	P		**P**	**09 29 23.4**	**-2.1**
ENH				lAmb	lAmb		09 29 42.0	
	comp=Z,15nm,1.3s							
IMAR	**Indian Mountai**	**35.36**	**37**	P		**P**	**09 29 38.1**	**+0.4**
NRIK	**Noril'sk**	**36.04**	**329**⇑	*e*P		**P**	**09 29 46.0**	**+2.6**
NRIK				pmax	pmax			
	comp=Z,5.0nm,1.5s							
TRF	**Thorofare Moun**	**36.91**	**41**	P		**P**	**09 29 51.5**	**+0.6**
TRF				lAmb	lAmb		09 29 55.9	
	comp=Z,13nm,1.5s							
TOLK	**Toolik Lake Re**	**37.06**	**33**	P		**P**	**09 29 52.1**	**+0.1**
TOLK				lAmb	lAmb		09 30 07.0	
	comp=Z,11nm,1.4s							
GHO	**Glory Hole Cre**	**37.72**	**44**	P		**P**	**09 29 58.5**	**+0.9**
GHO				lAmb	lAmb		09 30 04.6	
	comp=Z,18nm,1.4s							
KNK	**Knik Glacier**	**37.99**	**45**	P		**P**	**09 30 00.7**	**+1.0**
KNK				lAmb	lAmb		09 30 05.7	
	comp=Z,21nm,1.4s							
DHY	**Denali Highway**	**38.26**	**42**	P		**P**	**09 30 02.2**	**+0.2**
IL31		**38.27**	**39**	P		**P**	**09 30 02.1**	**+0.2**
ILAR	**Eielson Array**	**38.27**	**39**	P		**P**	**09 30 02.2**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=251,slow=5.6,SNR=17							
HDA	**Harding Lake**	**38.28**	**40**	P		**P**	**09 30 01.5**	**-0.6**
SCM	**Sheep Creek Mo**	**38.46**	**44**	P		**P**	**09 30 04.7**	**+1.0**
SCM				pmax	pmax			
	comp=Z,22nm,1.3s							
SCM	**Sheep Creek Mo**	**38.46**	**44**	P		**P**	**09 30 04.7**	**+1.0**
SCM				lAmb	lAmb		09 30 05.3	
	comp=Z,22nm,1.3s							
KLU	**Klutina**	**39.18**	**44**	P		**P**	**09 30 10.4**	**+0.9**
KLU				lAmb	lAmb		09 30 34.8	
	comp=Z,15nm,1.3s							
VRDI	**Verde Repeater**	**40.40**	**44**	P		**P**	**09 30 19.8**	**+0.2**
EGAK	**Eagle**	**40.70**	**38**	P		**P**	**09 30 21.8**	**+0.1**
BCAR	**Beaver Creek A**	**40.77**	**41**	P		**P**	**09 30 23.5**	**+1.1**
CTGM	**Chitina Glacie**	**41.46**	**44**	P		**P**	**09 30 29.0**	**+1.0**
INK	**Inuvik**	**42.97**	**32**	P		**P**	**09 30 39.9**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=296,slow=9.5,SNR=22							
INK	**Inuvik**	**42.97**	**32**			lAmb	lAmb	09 30 41.6
	comp=Z,7.8nm,1.4s							
HYT	**Haines Junctio**	**43.30**	**44**	P		**P**	**09 30 44.8**	**+2.1**
HYT				lAmb	lAmb		09 30 50.4	
	comp=Z,6.6nm,1.1s							
AAK	**Ala-Archa**	**50.00**	**293**	*e*P		**P**	**09 31 34.2**	**0.0**
AAK	**Ala-Archa**	**50.00**	**293**⇑	*e*P		**P**	**09 31 34.2**	**0.0**
AAK				pmax	pmax			
	comp=Z,2.0nm,1.0s							
RES	**Resolute Bay**	**51.20**	**18**	P		**P**	**09 31 40.9**	**-1.4**
RES				pmax	pmax			
	comp=Z,27nm,1.5s							
RES	**Resolute Bay**	**51.20**	**18**	P		**P**	**09 31 40.9**	**-1.4**
AB07	**Akbulak array**	**54.90**	**307**	P		**P**	**09 32 08.7**	**-0.5**
ABKAR	**Akbulak array**	**54.90**	**307**	P		**P**	**09 32 08.6**	**-0.6**
K05A	**Summer Lake**	**61.06**	**57**	P		**P**	**09 32 53.6**	**+1.8**
K05A				lAmb	lAmb		09 33 00.3	
	comp=Z,4.9nm,1.4s							
FINES	**FINESS Array B**	**61.56**	**332**	P		**P**	**09 32 53.0**	**-1.6**
	comp=Z,2.9nm,0.7s,baz=28,slow=8.6,SNR=10							
FINES	**FINESS Array B**	**61.56**	**332**	*i* P		**P**	**09 32 53.2**	**-1.4**
FINES				pmax	pmax			
	comp=Z,3.0nm,0.7s							
NVAR	**Mina Array Bea**	**65.35**	**60**	P		**P**	**09 33 20.9**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=303,slow=8.2,SNR=1.9							
NC405	**NORSAR Array S**	**65.91**	**338**	P		**P**	**09 33 21.4**	**-1.2**
NB2	**NORSAR Subarra**	**66.10**	**338**	P		**P**	**09 33 22.7**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=33,slow=6.5							
NOA	**NORSAR Array B**	**66.10**	**338**	P		**P**	**09 33 22.6**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=32,slow=6.7,SNR=5.9							
NOA	**NORSAR Array B**	**66.10**	**338**	*e*P		**P**	**09 33 22.9**	**-0.9**
NOA				pmax	pmax			
	comp=Z,1.0nm,0.4s							
BW06	**Boulder Array**	**67.25**	**51**	P		**P**	**09 33 32.4**	**+0.8**
BW06				lAmb	lAmb		09 33 53.0	
	comp=Z,4.3nm,1.2s							
PDAR	**Pinedale Array**	**67.25**	**51**	P		**P**	**09 33 32.5**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=21,slow=1.1,SNR=16							
WB0	**Warramunga Arr**	**68.09**	**193**	P		**P**	**09 33 36.8**	**+0.2**
WB0				lAmb	lAmb		09 33 37.7	
	comp=Z,2.7nm,0.7s							
WRA	**Warramunga Arr**	**68.28**	**193**	P		**P**	**09 33 38.0**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=8.2,slow=6.6,SNR=27							
WRA	**Warramunga Arr**	**68.28**	**193**	*i* P		**P**	**09 33 37.9**	**+0.1**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**68.28**	**193**	lAmb	lAmb		09 33 38.8	
	comp=Z,0.1nm,0.7s							
AKASG	**Malin Array Be**	**68.63**	**323**	P		**P**	**09 33 38.1**	**-1.5**
	comp=Z,0.9nm,0.4s,baz=37,slow=6.6,SNR=3.9							
AKASG	**Malin Array Be**	**68.63**	**323**	lAmb	lAmb		09 33 39.5	
	comp=Z,1.6nm,1.3s							
AS31	**Alice Springs**	**72.00**	**193**	P		**P**	**09 34 00.2**	**+0.2**
ASAR	**Alice Springs**	**72.00**	**193**	P		**P**	**09 34 01.4**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=6.7,slow=5.6,SNR=13							
BURAR	**Bucovina Array**	**72.69**	**323**	P		**P**	**09 34 02.7**	**-1.3**
CLL	**Collm**	**74.01**	**332**	*i* P		**P**	**09 34 09.6**	**-1.8**
CLL				Lm		MLR	10 31 00.0	
	comp=Z,200nm,21.2s							
CLL	**Collm**	**74.01**	**332**	*i* P		**P**	**09 34 09.6**	**-1.8**
GERES	**GERESS Array B**	**75.92**	**331**	P		**P**	**09 34 21.2**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=40,slow=6.4,SNR=3.8							
TXAR	**Lajitas Array**	**80.31**	**57**	P		**P**	**09 34 47.1**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=297,slow=4.1,SNR=6.8							
TKL	**Tuckaleechee C**	**85.25**	**40**	P		**P**	**09 35 11.7**	**+0.3**
	comp=Z,4.1nm,0.9s,baz=350,slow=17,SNR=1.9							
PLCA	**Paso Flores**	**152.06**	**90**	PKPbc		**PKiKP**	**09 42 27.5**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=333,slow=6.3,SNR=4.6							

INET ***02*** *09:26:36.5, 10.61N×87.22W, h18km, MW3.8*
UCR ***02*** *09:26:37.2±1.2, 10.69N×87.10W, h30km, MW4.1, mb4.3(NEIC)*
IDC ***02*** *09:26:38.9±6.5, 10.65N×87.03W, h30km±47km, mb3.9/11, mb1 4.2/14, mb1mx3.9/40, mbtmp4.1/14, ML3.1/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/26, Error ellipse: s-maj=45.6km s-min=13.8km az=30.0*
NEIC ***02*** *09:26:40.6±1.5, 10.78N±0.08×86.87W±0.07, h46km±4km, mb4.3/18, Error ellipse: s-maj=14.0km s-min=6.8km az=216.0*

ISC 02 09:26:39.8±0.7, **10.69N**±0.06×**87.00W**±0.05, **h39**km±3km, **n96**, σ1§**07**/103, **mb4.3**/20, **5C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HZTE	**Horizontes, Gu**	**1.38**	**89**	*e*P		**Pn**	**09 27 01.5**	**-1.0**
HZTE				*e*S		**Sn**	**09 27 21.4**	**+1.8**
GBS3	**Finca Las Img**	**1.52**	**87**⇑	*i* P		**Pn**	**09 27 03.2**	**-1.3**
GUAI	**GUAI**	**1.52**	**106**⇑	*i* P		**Pn**	**09 27 02.2**	**-2.3**
LAPC	**Finca la Perla**	**1.54**	**87**	*i* P		**Pn**	**09 27 03.4**	**-1.4**
LAPC				*i* S		**Sn**	**09 27 24.6**	**+1.0**
ORTG	**Ortega, Santa**	**1.55**	**102**	*e*P		**Pn**	**09 27 03.0**	**-1.9**
GB1A	**Borinquen Arri**	**1.58**	**85**	*e*P		**Pn**	**09 27 04.6**	**-0.8**
GB1A				*e*S		**Sn**	**09 27 26.4**	**+1.8**
DUNO	**Dulce Nombre,**	**1.60**	**112**	*e*P		**Pn**	**09 27 03.0**	**-2.6**
GPS3	**Bodega del ICE**	**1.60**	**88**	*i* P		**Pn**	**09 27 04.6**	**-1.2**
GPS3				*i* S		**Sn**	**09 27 26.1**	**+0.8**
GPS2	**Hotel Rincn d**	**1.62**	**88**	*i* P		**Pn**	**09 27 04.9**	**-1.0**
GPS2				*e*S		**Sn**	**09 27 27.1**	**+1.5**
GPS1	**Guardaparques**	**1.62**	**87**⇑	*i* P		**Pn**	**09 27 04.8**	**-1.1**
GPS1				*i* S		**Sn**	**09 27 26.9**	**+1.3**
BUAI	**Buenos Aires**	**1.65**	**83**	*i* P		**Pn**	**09 27 05.8**	**-0.4**
LIM1	**Limonal**	**1.72**	**90**	*i* P		**Pn**	**09 27 06.2**	**-1.0**
COLC	**Colonia**	**1.76**	**91**⇑	*i* P		**Pn**	**09 27 06.8**	**-1.1**
HORNC	**Hornillas**	**1.79**	**89**	*i* P		**Pn**	**09 27 07.2**	**-1.1**
CUI	**Cuipilapa**	**1.80**	**91**	*i* P		**Pn**	**09 27 07.7**	**-0.8**
ACAL	**Aguas Claras**	**1.93**	**92**⇑	*i* P		**Pn**	**09 27 09.1**	**-1.1**
ACAL				*i* S		**Sn**	**09 27 35.0**	**+1.7**
CRIN	**San Cristobal**	**2.00**	**359**			**Pn**	**09 27 11.1**	**0.0**
CRIN					Sn	**Sn**	**09 27 32.4**	**-2.5**
JTS	**Las Juntas de**	**2.05**	**101**	Pn		**Pn**	**09 27 10.6**	**-1.2**
	8.1nm,0.3s,baz=9.5,slow=20,SNR=28							
JTS					Sn	**Sn**	**09 27 35.1**	**-1.1**
	50nm,0.3s,baz=18,slow=19,SNR=7.8							
JTS				LR		LR	09 27 38.4	
	comp=Z,92nm,21.2s,baz=340,slow=29							
JTS	**Las Juntas de**	**2.05**	**101**	*e*P		**Pn**	**09 27 10.2**	**-1.6**
ACON	**Acoyapa**	**2.19**	**55**	*e*P		**Pn**	**09 27 13.2**	**-0.5**
ACON	**Acoyapa**	**2.19**	**55**			**Pn**	**09 27 12.9**	**-0.8**
ACON					Sn	**Sn**	**09 27 36.0**	**-3.7**
ARE1	**Arenal 1**	**2.25**	**96**	*e*P		**Pn**	**09 27 14.9**	**+0.3**
CEDE	**Laguna Cedeo**	**2.27**	**95**	*e*P		**Pn**	**09 27 14.3**	**-0.5**
FORC	**Fortuna**	**2.30**	**95**	*i* P		**Pn**	**09 27 15.2**	**0.0**
CSGN	**Cosiguina Volc**	**2.33**	**346**			**Pn**	**09 27 15.3**	**-0.4**
MATN	**Matagalpa**	**2.46**	**25**	Pn		**Pn**	**09 27 16.9**	**-0.5**
JACO	**JACO, Garabito**	**2.52**	**114**	*e*P		**Pn**	**09 27 17.6**	**-0.6**
SRA1	**San Ramn**	**2.55**	**103**	*e*P		**Pn**	**09 27 18.5**	**-0.2**
COVE	**Coope Vega, Sa**	**2.55**	**89**	*e*P		**Pn**	**09 27 18.1**	**-0.6**
HDC	**Heredia**	**2.92**	**103**	*e*P		**Pn**	**09 27 24.2**	**+0.3**
HDC	**Heredia**	**2.92**	**103**			**Pn**	**09 27 24.2**	**+0.3**
HDC3	**Heredia 3**	**2.92**	**103**	*e*P		**Pn**	**09 27 23.9**	**0.0**
SJS	**Escuela Geolog**	**2.99**	**104**	*e*P		**Pn**	**09 27 25.9**	**+1.1**
ESPN	**Las Esperanzas**	**3.04**	**60**	*e*P		**Pn**	**09 27 25.5**	**+0.1**
ESPN	**Las Esperanzas**	**3.04**	**60**			**Pn**	**09 27 25.5**	**+0.1**
LCR2	**La Lucha 2**

ESDC	**Sonseca Array**	**77.92**	**52**	P	**P**	**09 38 35.3**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=268,slow=4.1,SNR=2.1						
BMRD	**Maredsous**	**82.99**	**40**	P	**P**	**09 38 58.9**	**-2.1**
TORD	**Torodi Ar. Bea**	**86.36**	**77**	P	**P**	**09 39 17.2**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=294,slow=6.8,SNR=1.5						
ASAR	**Alice Springs**	**139.00**	**246**	PKP	**PKiKP**	**09 46 06.4**	**+1.0**
	comp=Z,0.3nm,0.9s,baz=114,slow=2.2,SNR=1.8						
WRA	**Warramunga Arr**	**139.18**	**252**	PKP	**PKPdf**	**09 46 02.5**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=94,slow=2.4,SNR=6.3						

*ISK **02** 09:34:37.7, 40.40N×26.14E, h17km, ML2.2/12*
*DDA **02** 09:34:38.0, 40.41N×26.14E, h7km±2km, ML2.5*
*ATH **02** 09:34:38.1, 40.42N×26.09E, h26km±2km, ML1.7/2, Error ellipse: s-maj=3.4km s-min=1.1km az=308.0*

ISC 02 09:34:38.0±0.9, 40.41N±0.02×26.13E±0.02, h18km±6km, n29, σ0923/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.26**	**92**	PG		**Pg**	**Pg**	**09 34 43.9**	**0.0**
GELI				SG		**Sg**	**Sg**	**09 34 47.9**	**0.0**
GOKA	**anakkale-Gk**	**0.28**	**219**	*i* P		**Pg**	**Pg**	**09 34 44.2**	**+0.1**
GOKA				*i* S		**Sg**	**Sg**	**09 34 48.4**	**+0.1**
GOKA				IAML				09 34 49.0	
	comp=N,1μm,0.8s								
GOKA				IAML				09 34 49.0	
	comp=E,643nm,0.4s								
GADA	**Gvkgeada**	**0.28**	**220**	PG		**Pb**	**Pb**	**09 34 44.5**	**0.0**
GADA				SG		**Sb**	**Sb**	**09 34 48.7**	**-0.2**
ENEZ	**Enez**	**0.33**	**3**	PG		**Pb**	**Pb**	**09 34 45.5**	**+0.1**
ENEZ				SG		**Sb**	**Sb**	**09 34 50.6**	**+0.2**
ERIK	**Erikli-Kesan**	**0.39**	**48**	PG		**Pg**	**Pg**	**09 34 46.2**	**+0.1**
ERIK				SG		**Sg**	**Sg**	**09 34 51.8**	**+0.2**
SMTH	**Samothraki Isl**	**0.46**	**278**	P		**Pg**	**Pg**	**09 34 47.5**	**+0.1**
SMTH				S		**Sb**	**Sb**	**09 34 54.1**	**-0.2**
SMTH				AML	AML			09 34 58.0	
	comp=E,366μm,0.1s								
SMTH				AML	AML			09 34 58.2	
	comp=N,354μm,0.1s								
LPK	**Lapseki**	**0.48**	**94**	PG		**Pb**	**Pb**	**09 34 47.9**	**-0.1**
LPK				SG		**Sb**	**Sb**	**09 34 54.8**	**+0.1**
ALN	**Alexandroupoli**	**0.49**	**352**	P		**Pb**	**Pb**	**09 34 48.4**	**+0.2**
ALN				S		**Sb**	**Sb**	**09 34 55.4**	**+0.2**
ALN				AML	AML			09 34 56.1	
	comp=E,183μm,0.3s								
ALN				AML	AML			09 34 56.1	
	comp=N,101μm,0.2s								
ALN	**Alexandroupoli**	**0.49**	**352**	PG		**Pb**	**Pb**	**09 34 48.2**	**0.0**
ALN				SG		**Sb**	**Sb**	**09 34 55.7**	**+0.5**
BOZC	**Bozcaada**	**0.57**	**186**	PG		**Pg**	**Pg**	**09 34 49.2**	**-0.1**
BOZC	**Bozcaada**	**0.57**	**186**	*i* P		**Pg**	**Pg**	**09 34 49.1**	**-0.1**
BOZC				*i* S		**Sg**	**Sg**	**09 34 56.6**	**-0.2**
KESN	**Edirne-Kesan**	**0.59**	**45**	*i* P		**Pg**	**Pg**	**09 34 49.5**	**-0.4**
KESN				*i* S		**Sg**	**Sg**	**09 34 57.5**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.74**	**154**	*i* P		**Pg**	**Pg**	**09 34 52.5**	**0.0**
BAYC				*i* S		**Sb**	**Sb**	**09 35 01.9**	**-0.2**
UKOP	**Uzunkopru-Edir**	**0.82**	**28**	PG		**Pg**	**Pg**	**09 34 54.1**	**+0.1**
RDO	**Rodhopi**	**0.87**	**329**	P		**Pg**	**Pg**	**09 34 54.8**	**-0.1**
RDO	**Rodhopi**	**0.87**	**329**	PG		**Pg**	**Pg**	**09 34 54.8**	**-0.1**
LIA	**Limnos Island**	**0.89**	**235**	P		**Pg**	**Pg**	**09 34 55.4**	**+0.2**
MAR3	**Marsite Statio**	**0.95**	**69**	PG		**Pg**	**Pg**	**09 34 56.2**	**-0.2**
GZKV	**Gazikoy-Tekird**	**0.97**	**69**	PG		**Pg**	**Pg**	**09 34 57.1**	**+0.2**
THAS	**Thassos island**	**1.10**	**281**	P		**Pg**	**Pg**	**09 34 59.0**	**-0.2**
MRMT	**Marmara Adasi**	**1.13**	**80**	PN		**Pn**	**Pn**	**09 34 58.9**	**-0.2**
PRK	**Paraskevi**	**1.16**	**175**	P		**Pg**	**Pg**	**09 35 01.0**	**+0.5**
AYVA	**Ayvalik**	**1.18**	**158**	*i* P		**Pg**	**Pg**	**09 35 00.6**	**-0.2**
AYVA				*i* S		**Sn**	**Sn**	**09 35 15.5**	**+0.3**
AYVA				IAML				09 35 17.0	
	comp=E,91nm,0.6s								
AYVA				IAML				09 35 19.0	
	comp=N,112nm,0.6s								
SIGR	**SIGRI**	**1.21**	**190**	P		**Pb**	**Pb**	**09 35 00.8**	**+0.3**
SIGR				S		**Sg**	**Sg**	**09 35 17.3**	**+0.1**
SIGR	**SIGRI**	**1.21**	**190**	PN		**Pn**	**Pn**	**09 34 59.8**	**-0.3**
MAR9	**Marsite Statio**	**1.22**	**79**	PN		**Pn**	**Pn**	**09 35 00.0**	**-0.1**
BALY	**Balya**	**1.32**	**120**	*i* P		**Pg**	**Pg**	**09 35 03.3**	**-0.2**
BALY				*i* S		**Sb**	**Sb**	**09 35 19.1**	**+0.1**
KAVA	**Kavala**	**1.36**	**296**	P		**Pb**	**Pb**	**09 35 02.7**	**-0.4**
EDRB	**Edirne**	**1.51**	**18**	PN		**Pn**	**Pn**	**09 35 04.4**	**+0.2**

*MEX **02** 09:43:22.0±0.7, 13.60N×92.40W, h15km, MD3.9*
*GCG **02** 09:43:29.5±0.9, 14.41N×92.32W, h63km±25km, MD3.9*

ISC 02 09:43:21.6±3.3, 13.6N±0.2×92.5W±0.1, h32km±20km, n8, σ0992/14, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**1.17**	**47**	*eP*		**Pb**	**Pb**	**09 43 44.4**	**+1.2**
THIG		**1.27**	**8**	*i* P		**Pg**	**Pg**	**09 43 42.5**	**-0.6**
THIG				*i* S		**Sn**	**Sn**	**09 43 58.1**	**-0.9**
FUG	**Fuego 3**	**1.76**	**63**	*eP*		**Pb**	**Pb**	**09 43 52.9**	**-0.5**
FUG				*eS*		**Sn**	**Sn**	**09 44 12.7**	**+1.4**
PCG	**Pacaya**	**1.94**	**67**	*eP*		**Pb**	**Pb**	**09 43 57.3**	**+0.8**
PCG				*eS*		**Sb**	**Sb**	**09 44 19.6**	**-0.8**
PCIG		**2.18**	**340**	*eP*		**Pn**	**Pn**	**09 43 54.8**	**-0.8**
PCIG				*i* S		**Sn**	**Sn**	**09 44 21.8**	**+0.4**
NBG	**Las Nubes**	**2.25**	**65**	*eP*		**Pb**	**Pb**	**09 44 01.3**	**-0.4**
CCIG	**Comitan**	**2.64**	**7**	*i* P		**Pn**	**Pn**	**09 44 01.8**	**-0.3**
CCIG				*i* S		**Sn**	**Sn**	**09 44 33.2**	**+0.1**
TGIG		**3.18**	**348**	*eP*		**Pn**	**Pn**	**09 44 09.9**	**+0.4**
TGIG				*i* S		**Sn**	**Sn**	**09 44 47.4**	**+1.1**

IDC 02 09:46:23.4±1.8, 16.07S×175.46W, h307km±37km, mb3.0/3, mb1 3.2/4, mb1mx3.0/36, mbtmp3.7/4, Error ellipse: s-maj=165.2km s-min=25.6km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.16**	**59**	P		P	Pn	09 47 33.3	+1.5
	3.0nm,0.3s,baz=249,slow=8.6,SNR=4.5								
AFI				S		S		09 48 26.2	-0.5
	3.2nm,0.3s,baz=211,slow=19,SNR=1.6								
WRA	**Warramunga Arr**	**47.76**	**257**	P		P		09 54 30.6	-0.2
	0.2nm,0.5s,baz=93,slow=7.1,SNR=12								
WRA				PcP		PcP		09 55 54.1	-0.4
	0.2nm,0.6s,baz=94,slow=3.5,SNR=1.1								
ASAR	**Alice Springs**	**48.02**	**252**	P		P		09 54 32.5	-0.2
	1.5nm,0.8s,baz=87,slow=8.2,SNR=22								
ILAR	**Eielson Array**	**83.49**	**12**	P		P		09 58 16.8	+0.1
	0.3nm,0.5s,baz=215,slow=6.3,SNR=5.7								

*IDC **02** 09:58:57.7±1.0, 2.92S×122.76E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/43, mbtmp3.8/9, ML3.2/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/32, Error ellipse: s-maj=32.5km s-min=17.5km az=74.0*
*DJA **02** 09:58:59.7±1.4, 3°S±3°×12°3E±°, h11km±13km, M4.1/12, mb4.2/1, MLv4.0/12*
*NEIC **02** 09:59:03.5±1.1, 2.83S±0.06×122.65E±0.06, h55km±10km, mb4.3/8, Error ellipse: s-maj=9.0km s-min=7.2km az=132.0*

ISC 02 09:59:02.2±0.6, 2.90S±0.05×122.73E±0.06, h35km, n37, σ1921/40, mb4.2/9, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.05**	**186**	P		**Pn**	**Pn**	**09 59 19.9**	**-0.6**
LUWI	**Luwuk**	**1.85**	**1**	P		**Pn**	**Pn**	**09 59 30.8**	**-0.6**
LUWI	**Luwuk**	**1.85**	**1**	Pn		**Pn**	**Pn**	**09 59 31.5**	**+0.1**
LUWI				Sn		**Sn**	**Sn**	**09 59 53.6**	**+0.1**
APSI	**Ampana**	**2.25**	**331**	P		**Pn**	**Pn**	**09 59 36.5**	**-0.5**
TTSI	**Tana Toraja**	**2.91**	**267**	P		**Pn**	**Pn**	**09 59 44.8**	**-1.2**
BNSI	**Bone**	**3.01**	**240**	P		**Pn**	**Pn**	**09 59 49.2**	**+1.8**
SPSI	**Sidrap Palu**	**3.14**	**250**	P		**Pn**	**Pn**	**09 59 49.2**	**+0.1**
SANI	**Sanana**	**3.37**	**76**	P		**Pn**	**Pn**	**09 59 51.2**	**-1.1**
GTOI	**Gorontalo**	**3.52**	**5**	P		**Pn**	**Pn**	**09 59 56.4**	**+1.9**
BKSI	**Bulukumba**	**3.54**	**227**	P		**Pn**	**Pn**	**09 59 57.4**	**+2.7**
KAPI	**Kappang**	**3.64**	**235**	Pn		**Pn**	**Pn**	**09 59 55.5**	**-0.5**
	2.1nm,0.3s,baz=57,slow=19,SNR=1.9								
KAPI				Sn		**Sn**	**Sn**	**10 00 37.8**	**0.0**
	3.4nm,0.3s,baz=200,slow=22,SNR=5.7								
KAPI				LR		LR	LR	10 01 07.7	
	comp=Z,64nm,21.2s,baz=62,slow=36								
KAPI	**Kappang**	**3.64**	**235**	Pn		**Pn**	**Pn**	**09 59 57.1**	**+1.1**
KAPI				Sn		**Sn**	**Sn**	**10 00 38.2**	**+0.4**
BSSI	**Bau Bau, Buton**	**3.92**	**215**	P		**Pn**	**Pn**	**10 00 00.4**	**+0.5**
MPSI	**Mapaga**	**4.28**	**319**	P		**Pn**	**Pn**	**10 00 05.4**	**+0.5**
TNTI	**Ternate**	**5.90**	**52**	Pn		**Pn**	**Pn**	**10 00 28.9**	**+1.7**
EDFI	**Ende, Flores**	**5.90**	**190**	P		**Pn**	**Pn**	**10 00 26.9**	**-0.4**
SOEI	**Soe**	**6.98**	**167**	Pn		**Pn**	**Pn**	**10 00 43.7**	**+1.6**
MYLDM	**Lahad Datu**	**9.07**	**332**	Pn		**Pn**	**Pn**	**10 01 09.2**	**-1.5**
JAGI	**Jajag, Banyuwa**	**10.17**	**237**	Pn		**Pn**	**Pn**	**10 01 27.8**	**+2.0**
FITZ	**Fitzroy Crossi**	**15.37**	**169**	Pn		**P**	**Pn**	**10 02 40.1**	**-0.7**
	0.3nm,0.3s,baz=8.7,slow=7.9,SNR=14								
FITZ	**Fitzroy Crossi**	**15.37**	**169**	P		**P**	**P**	**10 02 41.4**	**+0.5**
FITZ				IAmb		IAmb		10 02 42.4	
	comp=Z,7.4nm,0.8s								
XMIS	**Christmas Isla**	**18.55**	**245**	P		**P**	**P**	**10 03 14.8**	**-1.2**
XMIS				IAmb		IAmb		10 03 22.3	
	comp=Z,95nm,1.2s								
WB0	**Warramunga Arr**	**20.27**	**147**	P		**P**	**P**	**10 03 35.4**	**+0.5**
WRA	**Warramunga Arr**	**20.38**	**147**	P		**P**	**P**	**10 03 36.0**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=325,slow=12,SNR=14								
IPM	**Ipoh**	**22.89**	**289**	P		**P**	**P**	**10 04 01.8**	**-1.4**
IPM				IAmb		IAmb	IAmb	10 04 21.4	
	comp=Z,13nm,1.3s								
AS31	**Alice Springs**	**23.30**	**153**	P		**P**	**P**	**10 04 08.1**	**+0.9**
ASAR	**Alice Springs**	**23.30**	**153**	P		**P**	**P**	**10 04 08.1**	**+0.8**
	comp=Z,1.5nm,0.8s,baz=333,slow=11,SNR=17								
ASAR				LR		LR	LR	10 15 13.7	
	comp=Z,37nm,18.9s,baz=42,slow=42								
ASAR	**Alice Springs**	**23.30**	**153**	P		**P**	**P**	**10 04 08.0**	**+0.8**
RPSI	**Rantau Prapat**	**24.43**	**283**	P		**P**	**P**	**10 04 16.6**	**-1.2**
RPSI				IAmb		IAmb	IAmb	10 04 19.9	
	comp=Z,12nm,1.1s								
TPUB	**Ta-pu**	**26.12**	**356**	P		**P**	**P**	**10 04 30.3**	**-2.8**
CMAR	**Chiang Mai Arr**	**31.61**	**313**	P		**P**	**P**	**10 05 22.6**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=138,slow=6.8,SNR=7.0								
STKA	**Stephens Creek**	**33.85**	**150**	P		**P**	**P**	**10 05 40.6**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=322,slow=11,SNR=2.6								
MJAR	**Matsushiro Arr**	**41.81**	**19**	P		**P**	**P**	**10 06 48.9**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=193,slow=9.8,SNR=5.4								
USRK	**Ussuriysk Ar.**	**47.62**	**9**	P		**P**	**P**	**10 07 35.4**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=183,slow=6.3,SNR=5.1								
SONM	**Songino Array**	**52.51**	**346**	P		**P**	**P**	**10 08 13.9**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=164,slow=7.5,SNR=3.2								
PETK	**Petropavlovsk-**	**63.05**	**23**	P		**P**	**P**	**10 09 26.7**	**+0.9**
	comp=Z,2.4nm,0.8s,baz=194,slow=5.5,SNR=4.1								
YAK	**Yakutsk**	**64.97**	**4**	P		**P**	**P**	**10 09 37.5**	**-0.6**

*NEIC **02** 10:03:56.0±1.7, 7.57S±0.05×128.46E±0.06, h164km±19km, mb4.1/4, Error ellipse: s-maj=11.0km s-min=3.5km az=128.0*
*IDC **02** 10:03:57.0±1.9, 7.72S×128.39E, h154km±20km, mb3.4/5, mb1 3.6/10, mb1mx3.3/46, mbtmp4.1/10, Error ellipse: s-maj=21.3km s-min=16.5km az=103.0*

ISC 02 10:03:55.9±0.6, 7.68S±0.05×128.46E±0.06, h150km, n30, σ1996/38, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.83**	**96**	Pn		**Pn**	**Pn**	**10 04 39.5**	**-1.6**
SOEI	**Soe**	**4.63**	**243**	Pn		**Pn**	**Pn**	**10 05 05.9**	**+1.4**
SOEI				Sn		**Sn**	**Sn**	**10 06 01.5**	**+3.5**
BATI	**Baumata**	**5.36**	**242**	P		**Pn**	**Pn**	**10 05 16.1**	**+1.9**
	14nm,0.3s,baz=326,slow=3.3,SNR=14								
BATI				S		**Sn**	**Sn**	**10 06 14.5**	**-0.8**
	24nm,0.3s,baz=142,slow=22,SNR=12								
MTN	**Manton Dam**	**5.77**	**153**			**Pn**	**Pn**	**10 05 23.1**	**+3.5**
MTN				Sn		**Sn**	**Sn**	**10 06 27.9**	**+2.9**
FAKI	**Fak Fak**	**6.05**	**39**			**Pn**	**Pn**	**10 05 22.5**	**-0.8**
FAKI				Sn		**Sn**	**Sn**	**10 06 31.0**	**-0.7**
MMRI	**Maumere**	**6.23**	**261**	Pn		**Pn**	**Pn**	**10 05 24.7**	**-1.0**
SIJI	**Sorong**	**7.32**	**23**	P		**Pn**	**Pn**	**10 05 41.6**	**+1.3**
	4.5nm,0.3s,baz=141,slow=9.6,SNR=24								
SIJI				S		**Sn**	**Sn**	**10 06 58.7**	**-3.6**
	0.9nm,0.3s,baz=244,slow=23,SNR=1.1								
KNRA	**Kununurra**	**7.96**	**178**			**Pn**	**Pn**	**10 05 51.0**	**+2.3**
TNTI	**Ternate**	**8.46**	**353**	Pn		**Pn**	**Pn**	**10 05 54.0**	**-1.6**
LUWI	**Luwuk**	**8.69**	**319**	Pn		**Pn**	**Pn**	**10 05 57.0**	**-1.6**
KAPI	**Kappang**	**9.05**	**286**	Pn		**Pn**	**Pn**	**10 06 03.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**10.72**	**195**	P		**Pn**	**Pn**	**10 06 25.1**	**-0.2**
	2.1nm,0.3s,baz=20,slow=9.8,SNR=108								
FITZ				S		**Sn**	**Sn**	**10 08 19.7**	**-4.2**
	2.9nm,0.3s,baz=14,slow=4.6,SNR=7.2								
FITZ	**Fitzroy Crossi**	**10.72**	**195**	Pn		**Pn**	**Pn**	**10 06 25.3**	**-0.1**
WB0	**Warramunga Arr**	**13.33**	**155**			**Pn**	**Pn**	**10 06 59.9**	**+0.5**
WRA	**Warramunga Arr**	**13.46**	**156**	P		**Pn**	**Pn**	**10 07 01.6**	**+0.5**
	1.2nm,0.3s,baz=322,slow=14,SNR=66								
WRA				S		**Sn**	**Sn**	**10 09 25.1**	**-5.1**
	3.1nm,0.3s,baz=333,slow=22,SNR=14								
WRA	**Warramunga Arr**	**13.46**	**156**			**Pn**	**Pn**	**10 07 00.5**	**-0.5**
WB2	**Warramunga Arr**	**13.47**	**155**	Pn		**Pn**	**Pn**	**10 07 01.8**	**+0.7**
WR0	**Warramunga Arr**	**13.56**	**155**			**Pn**	**Pn**	**10 07 02.6**	**+0.3**
PSA00	**Pilbara Seismi**	**16.12**	**210**	P		**Pn**	**Pn**	**10 07 34.7**	**+0.5**
PSA00				IAmb		IAmb	IAmb	10 07 50.4	
	comp=Z,24nm,1.3s								
AS31	**Alice Springs**	**16.74**	**162**			**Pn**	**Pn**	**10 07 43.5**	**+1.8**
AS31				IAmb		IAmb	IAmb	10 07 48.5	
	comp=Z,2.2nm,0.5s								
ASAR	**Alice Springs**	**16.74**	**162**	P		**Pn**	**Pn**	**10 07 43.8**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=341,slow=10,SNR=65								
ASAR				S		**S**	**S**	**10 10 45.7**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=320,slow=16,SNR=5.9								
ASAR	**Alice Springs**	**16.74**	**162**			**P**	**P**	**10 07 41.9**	**+0.5**
CISI	**Cisompet, Garu**	**20.46**	**269**	P		**P**	**P**	**10 08 20.7**	**-1.3**
STKA	**Stephens Creek**	**27.01**	**155**	P		**P**	**P**	**10 09 24.7**	**+0.7**
KSRS	**Korea Array**	**44.90**	**359**	P		**P**	**P**	**10 11 56.6**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=184,slow=8.9,SNR=1.6								
USRK	**Ussuriysk Ar.**	**51.73**	**3**	P		**P**	**P**	**10 12 49.0**	**+1.3**
	comp=Z,1.6nm,0.9s,baz=192,slow=8.4,SNR=4.3								
SONM	**Songino Array**	**58.61**	**343**	P		**P**	**P**	**10 13 38.5**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=293,slow=41,SNR=2.4								
MKAR	**Makanchi Array**	**67.96**	**328**	P		**P**	**P**	**10 14 39.1**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=119,slow=8.3,SNR=13								
ZALV	**Zalesovo Beam**	**71.52**	**335**	P		**P**	**P**	**10 14 59.3**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=151,slow=7.1,SNR=3.6								
TORD	**Torodi Ar. Bea**	**127.43**	**281**	PKP		**PKiKP**	**PKiKP**	**10 22 45.1**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=81,slow=2.5,SNR=1.7								

*ISK **02** 10:17:27.9, 41.68N×32.50E, h5km, ML2.7/8*
*DDA **02** 10:17:29.1, 41.57N×32.36E, h9km±1km, ML2.6*

ISC 02 10:17:27.4±0.9, 41.67N±0.03×32.44E±0.02, h15km±6km, n30, σ0989/46, 6C-8D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MASR	**Amasra-Bartin**	**0.09**	**13**	PG		**Pg**	**Pg**	**10 17 30.4**	**-0.2**
BTIN	**Bartın**	**0.15**	**256**	*i* P		**Pg**	**Pb**	**10 17 32.0**	**+0.1**
BTIN				*i* P				10 17 32.0	
BTIN				*i* S		**Sg**		**10 17 34.1**	**+0.3**
BTIN				*i* S				10 17 34.1	
BTIN				IAML				10 17 35.0	
	comp=N,3μm,0.6s								
BTIN				IAML				10 17 35.0	
	comp=E,3μm,0.2s								
KURC	**Kurucasile-Bar**	**0.28**	**52**	PG		**Pg**	**Pg**	**10 17 33.0**	**-0.4**
KURC				SG		**Sg**	**Sg**	**10 17 37.5**	**0.0**
KBUK	**KARABUK-Merkez**	**0.46**	**162**	*i* P		**Pg**	**Pb**	**10 17 37.1**	**-0.1**
KBUK				*i* S		**Sg**	**Sb**	**10 17 42.8**	**-1.0**
KBUK				IAML				10 17 45.0	
	comp=N,799nm,0.3s								
SAFT	**Safranbolu**	**0.47**	**157**	PG		**Pb**	**Pb**	**10 17 37.5**	**+0.1**
BCAM	**Yenicaga**	**0.90**	**198**	*i* P		**Pn**	**Pn**	**10 17 45.8**	**+0.1**
BCAM				*i* S		**Sg**		**10 17 56.0**	**-0.7**
YIGI	**Dzce**	**1.03**	**227**	*i* P		**Pg**		**10 17 47.4**	**+0.1**
YIGI				*i* S		**Sg**		**10 18 00.4**	**-0.3**
ILGA	**Ilgaz**	**1.14**	**122**	*i* P		**Pg**		**10 17 50.3**	**+0.9**
ILGA				*i* S		**Sg**		**10 18 03.9**	**-0.5**
ILGA				IAML				10 18 08.0	
	comp=N,98nm,0.3s								
ILGA				IAML				10 18 13.0	
	comp=E,142nm,0.5s								
CMDR	**Camlidere-ANKA**	**1.18**	**179**	*i* P		**Pg**		**10 17 50.5**	**+0.4**
CMDR				*i* S		**Sg**		**10 18 06.2**	**+0.7**
CMDR				IAML				10 18 13.0	
	comp=E,107nm,0.5s								
BZK	**Bozkurt**	**1.20**	**76**	↑P		**Pg**		**10 17 51.2**	**+0.6**
BZK				↑S		**Sg**		**10 18 08.4**	**+2.1**
BZK	**Bozkurt**	**1.20**	**76**	PN		**Pb**		**10 17 50.2**	**+0.3**
BZK				SN		**Sg**		**10 18 07.4**	**+1.2**
KIBS	**BOLU**	**1.33**	**200**	*i* P		**Pg**		**10 17 53.6**	**+0.6**
KIBS				*i* S		**Sg**		**10 18 10.7**	**+0.5**
CANT	**Cankiri**	**1.39**	**140**	PN		**Pg**		**10 17 54.5**	**+0.4**
YUVA	**Yuva-Kibriscik**	**1.40**	**204**	PN		**Pg**		**10 17 55.2**	**+0.9**
SAHE	**Sakarya_HENDEK**	**1.45**	**236**	*i* P		**Pb**		**10 17 54.5**	**+0.4**
MDUB	**Mudurnu**	**1.52**	**218**	PN		**Pg**		**10 17 57.1**	**+0.4**
KAND	**Kocaeli-Kandir**	**1.79**	**252**	*i* P		**Pb**		**10 17 59.2**	**-0.6**
KAND				*i* S		**Sn**		**10 18 20.3**	**+0.1**
DELI	**KIRIKKALE**	**2.01**	**146**	*i* P		**Pg**		**10 18 05.3**	**-0.7**
DELI				*i* S		**Sn**		**10 18 14.6**	**-11**
DIKM	**Dikmen**	**2.11**	**90**	↓S		**Sg**		**10 18 34.7**	**-0.5**
SRCK	**Saricakaya, Es**	**2.13**	**221**	PN		**Pb**		**10 18 05.7**	**0.0**
BRTR	**Keskin Array B**	**2.15**	**155**	PN		**Pb**		**10 18 05.7**	**-0.4**
CORM	**Corum**	**2.23**	**131**	PN		**Pb**		**10 18 05.9**	**-1.6**
BORA	**Eskisehir**	**2.34**	**221**	*i* P		**Pb**		**10 18 07.6**	**-1.8**
BORA				*i* S		**Sn**		**10 18 34.9**	**+0.9**
MFTR	**Murfatlar**	**3.87**	**312**	↓P		**Pn**		**10 18 27.7**	**+1.3**
TIRR	**Tirgusor**	**4.06**	**315**	↓P		**Pn**		**10 18 29.7**	**+0.8**
TIRR				↓S		**Sn**		**10 19 14.9**	**-1.3**
TPGR	**Topolog**	**4.33**	**319**	↑P		**Pn**		**10 18 33.0**	**+0.3**
TPGR				↓S		**Sn**		**10 19 21.8**	**-1.2**
TLCR		**4.39**	**324**	↑P		**Pn**		**10 18 33.8**	**+0.3**
TLCR				↓S		**Sn**		**10 19 23.7**	**-0.7**
HARR	**Harsova**	**4.47**	**314**	↓P		**Pn**		**10 18 35.2**	**+0.6**
CFR	**Carcaliu**	**4.70**	**320**	↓P		**Pn**		**10 18 38.5**	**+0.7**
CFR				↑S		**Sn**		**10 19 30.0**	**-2.0**
VOIR		**6.56**	**308**	↓P		**Pn**		**10 19 04.9**	**+1.6**

IDC 02 10:45:37.3±7.0, 15.37S×13.71W, h0km, mb4.2/3, mb1 4.2/3, mb1mx3.6/31, mbtmp4.2/3, MS3.5/6, Ms1 3.4/6, ms1mx3.1/28, Error ellipse: s-maj=407.0km s-min=142.8km az=115.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**32.17**	**29**	P		P		10 52 07.0	0.0
	3.2nm,0.8s,baz=203,slow=8.7,SNR=12								
BOSA	**Boshof**	**38.28**	**117**	LR		LR		11 05 22.0	
	comp=Z,56nm,19.1s,baz=270,slow=31								
LPAZ	**La Paz**	**52.24**	**261**	LR		LR		11 16 06.4	
	comp=Z,28nm,19.3s,baz=56,slow=35								
PLCA	**Paso Flores**	**55.10**	**231**	LR		LR		11 15 33.0	
	comp=Z,32nm,19.7s,baz=341,slow=33								
PMSA	**Palmer Station**	**59.88**	**202**	LR		LR		11 14 39.9	
	comp=Z,17nm,20.4s,baz=104,slow=29								
ROSC	**El Rosal**	**63.28**	**284**	LR		LR		11 21 55.4	
	comp=Z,67nm

IMEL	Melhnausar	0.96	22	P		Pg	11 12 29.0	-2.3
	baz=20							
IREN	Reynihlio	1.00	15	P		Pg	11 12 29.8	-2.3
	baz=13							
IREN				S		Sg	11 12 43.5	-1.5
	baz=13							
IKVO	Krokottuvotn	1.06	14	P		Pb	11 12 30.8	-2.6
	baz=13							
ISLY	Slysaalda	1.11	220	P		Pg	11 12 31.8	-2.5
	baz=221							
IGRS	Grimsstaoir	1.12	31	P		Pb	11 12 31.8	-2.6
	baz=30							
IFED	Fedgar	1.16	236	P		Pg	11 12 33.0	-2.1
	baz=237							
IRJU	Rjupnafell	1.19	206	P		Pb	11 12 33.1	-2.4
	baz=207							
ISKI	Skildingahlsh	1.21	10	P		Pn	11 12 33.3	-2.6
	baz=8.6							
IMJO	Mjoaskard	1.21	232	P		Pb	11 12 33.7	-2.2
	baz=233							
IGHA	Grjothals	1.22	17	P		Pn	11 12 33.2	-2.8
	baz=16							
IGRA	Granastaoir	1.24	359	P		Pn	11 12 33.6	-2.6
	baz=358							
IGYG	Gygjarholskot	1.24	252	P		Pb	11 12 34.0	-2.3
	baz=253							
IHAU	Haukadalur	1.29	237	P		Pb	11 12 35.5	-1.7
	baz=238							
IDIM	Dimmadalss	1.30	11	P		Pn	11 12 34.7	-2.4
	baz=9.6							
IHVO	Lagu-Hvolar	1.30	207	P		Pn	11 12 35.2	-2.0
	baz=208							
IHED	Heoinshofoi	1.40	3	P		Pn	11 12 36.4	-2.1
	baz=2.6							
IALF	Alftagrof	1.41	212	P		Pn	11 12 36.8	-1.8
	baz=213							
IESK	Eystri-Skogar	1.44	217	P		Pn	11 12 37.3	-1.8
	baz=218							
ISAU	Saurbar	1.44	242	P		Pn	11 12 36.9	-2.1
	baz=243							
IBRE	Brettingsstaoi	1.45	354	P		Pn	11 12 37.4	-1.8
	baz=353							
IMID	Miomork	1.47	226	P		Pn	11 12 38.1	-1.3
	baz=227							
IGIL	Gilhagi	1.48	19	P		Pn	11 12 37.2	-2.3
	baz=18							
ISIG	Siglufjorour	1.56	339	P		Pn	11 12 39.0	-1.7
	baz=338							
IASM	Asmuli	1.60	239	P		Pn	11 12 39.8	-1.4
	baz=240							
BORG	Borgarnes	1.64	274	Pg		Pn	11 12 40.0	-1.7
	20nm,0.3s,baz=108,slow=8.4,SNR=44							
BORG				Lg		Lg	11 13 02.8	
	8.9nm,0.3s,baz=352,slow=14,SNR=6.2							
BORG	Borgarnes	1.64	274	Pn		Pn	11 12 40.3	-1.4
IKRO	Krokur	1.67	251	P		Pn	11 12 40.7	-1.5
	baz=252							
ISOL	Solvholt	1.68	245	P		Pn	11 12 40.8	-1.5
	baz=245							
IHEI	Heioarbar	1.69	255	P		Pn	11 12 41.0	-1.4
	baz=256							
ANGG	Ammassalik, Gr	8.52	285	Pn		Pn	11 14 16.5	+0.4
ANGG				Sn		Sn	11 15 47.3	-4.8
SUMG	Summit	10.92	325	Pn		Pn	11 14 49.3	-0.1
EKA	Eskdalemuir Ar	11.78	136	Pn		Pn	11 15 01.2	+0.4
	baz=323,slow=13,SNR=7.3							
ESK	Eskdalemuir	11.78	136	Pn		Pn	11 15 02.3	+1.5
DSB	Dublin	12.80	148	Pn		Pn	11 15 14.3	-0.4
NOA	NORSAR Array B	13.54	92	Pn		Pn	11 15 22.2	-2.7
	0.0nm,0.3s,baz=296,slow=15,SNR=2.1							
HFS	Hagfors	15.06	93	Pn		P	11 15 50.7	-0.1
	0.0nm,0.3s,baz=292,slow=9.0,SNR=5.2							
ARCES	ARCESS Array B	17.11	55	P		P	11 16 14.3	+0.8
	baz=292,slow=12,SNR=1.7							
LVZ	Lovozero	20.69	58	P		Pn	11 16 56.1	+1.1
CLL	Collm	20.72	116	*i* P		P	11 16 54.4	+1.3
	comp=Z,11nm,1.3s							
CLL				*i*			11 17 08.8	
CLL	Collm	20.72	116	P		P	11 16 54.2	+1.1
GRF	Grafenberg Arr	21.35	121	*e*P		P	11 17 04.0	+4.0
	comp=Z,21nm,1.2s,baz=325,slow=9.3							
STU	Stuttgart	21.39	125	P		P	11 17 01.4	+1.0
STU				IAmb		IAmb	11 17 03.7	
	comp=Z,14nm,1.0s							
BRG	Berggiesshubel	21.43	115	*i* P		P	11 17 02.0	+1.2
	comp=Z,12nm,1.2s							
BFO	Black Forest	21.47	127	P		P	11 17 02.6	+1.4
BFO				IAmb		IAmb	11 17 06.7	
	comp=Z,17nm,1.3s							
PRU	Pruhonice	22.37	116	*e*P		P	11 17 13.8	+3.0
KHC	Kasperske Hory	22.69	118	*e*P		P	11 17 15.4	+1.0
DPC	Dobruska-Polom	22.78	113	*e*P		P	11 17 17.3	+2.1
DAVA	Damuels	22.90	126	*e*P		P	11 17 19.1	+2.4
	comp=Z,6.8nm,1.1s							
GEC2	GERESS Array S	22.97	119	P		P	11 17 18.5	+1.1
GERES	GERESS Array B	22.97	119	P		P	11 17 19.3	+1.9
	comp=Z,1.9nm,1.0s,baz=321,slow=7.6,SNR=6.9							
GERES	GERESS Array B	22.97	119	P		P	11 17 18.0	+0.6
MOTA	Moosalm	23.28	124	*e*P		P	11 17 23.5	+2.9
	comp=Z,7.9nm,1.4s							
DAVOX	Davos/Dischmat	23.34	127	P		P	11 17 21.5	+0.3
	comp=Z,2.1nm,0.9s,baz=92,slow=4.5,SNR=3.0							
SQTA	Sankt Quirin	23.42	124	*e*P		P	11 17 24.1	+2.1
	comp=Z,10.0nm,1.3s							
FETA	Feichten	23.43	125	*e*P		P	11 17 25.4	+3.4
	comp=Z,3.6nm,1.0s							
WATA	Walderalm	23.45	124	*e*P		P	11 17 23.1	+0.8
	comp=Z,7.9nm,1.4s							
WTTA	Wattenberg	23.54	124	*e*P		P	11 17 25.4	+2.2
	comp=Z,9.7nm,1.7s							
VRAC	Vranov	23.71	114	P		P	11 17 26.1	+1.5
	comp=Z,1.1nm,0.5s,baz=311,slow=17,SNR=2.0							
OJC	Ojcow	24.28	109	P		P	11 17 29.9	0.0
OJC				IAmb		IAmb	11 17 33.0	
	comp=Z,11nm,1.5s							
ABTA	Abfaltersbach	24.29	123	*e*P		P	11 17 34.0	+3.8
	comp=Z,4.5nm,1.3s							
KBA	Koelnbreinsper	24.31	122	*e*P		P	11 17 31.1	+0.6
	comp=Z,2.8nm,1.0s							
CONA	Conrad Observa	24.55	117	*e*P		P	11 17 33.8	+1.3
	comp=Z,4.4nm,1.0s							
CTI	Castel Tesino	24.59	125	P		P	11 17 34.8	+1.8
SMOL	Smolenice	24.68	114	*e*P		P	11 17 35.1	+1.5
MODS	Modra-Piesok	24.73	115	*e*P		P	11 17 35.7	+1.6
PRED	Cave del Predi	24.93	122	P		P	11 17 37.6	+1.6
PRED				IAmb		IAmb	11 17 42.4	
	comp=Z,11nm,1.4s							
LANS	Liptovska Anna	24.98	111	*e*P		P	11 17 38.1	+1.7
ARSA	Arzberg	24.98	118	*e*P		P	11 17 38.8	+2.4
	comp=Z,2.8nm,1.0s							
OBKA	Obir	25.24	121	*e*P		P	11 17 39.9	+1.2
	comp=Z,0.9nm,0.6s							
VYHS	Vyhne	25.25	112	*e*P		P	11 17 40.0	+1.2
SOKA	Soboth	25.27	120	*e*P		P	11 17 40.9	+1.8
	comp=Z,1.9nm,0.9s							
KWP	Kalwaria Pacla	25.92	106	P		P	11 17 47.8	+2.9
KWP				IAmb		IAmb	11 18 01.5	
	comp=Z,12nm,0.9s							
SCHQ	Schefferville	26.03	271	P		P	11 17 45.1	-0.7
	comp=Z,7.1nm,0.9s,baz=73,slow=6.4,SNR=3.4							
SCHQ	Schefferville	26.03	271	P		P	11 17 44.9	-1.0
SCHQ				IAmb		IAmb	11 17 53.2	
	comp=Z,9.4nm,1.1s							
ESDC	Sonseca Array	26.28	156	P		P	11 17 49.2	+0.9
	comp=Z,1.1nm,0.9s,baz=351,slow=9.8,SNR=6.6							
KOLS	Kolonicke sedl	26.29	108	*e*P		P	11 17 48.8	+0.6
OSSC	Osservatorio P	26.66	129	P		P	11 17 54.1	+2.6
OSSC				IAmb		IAmb	11 17 57.0	
	comp=Z,9.2nm,1.0s							
AKASG	Malin Array Be	27.85	98	P		P	11 18 03.4	+1.1
	comp=Z,0.2nm,0.3s,baz=322,slow=9.5,SNR=2.0							
ITM	Ithomi	36.05	120	P		P	11 19 12.7	-1.5
ABKAR	Akbulak array	41.99	73	P		P	11 20 04.2	+0.4
ABKAR	Akbulak array	41.99	73	P		P	11 20 04.9	+1.2
TOLK	Toolik Lake Re	42.73	336	P		P	11 20 11.1	+1.5
TOLK				IAmb		IAmb	11 20 13.7	
	comp=Z,14nm,1.2s							
BMAR	Burnt Mountain	42.87	333	P		P	11 20 11.8	+1.1
ILAR	Eielson Array	45.66	332	P		P	11 20 35.5	+2.4
	comp=Z,2.5nm,1.1s,baz=25,slow=6.1,SNR=13							
ILAR	Eielson Array	45.66	332	P		P	11 20 34.9	+1.9
MDM	Murphy Dome	45.76	333	P		P	11 20 35.3	+1.4
MDM				IAmb		IAmb	11 21 02.8	
	comp=Z,6.1nm,1.3s							
IMAR	Indian Mountai	45.83	337	P		P	11 20 35.8	+1.3
CCB	Clear Creek Bu	45.95	333	P		P	11 20 34.1	-1.3
CNNC	Cliffs of the	46.16	261	P		P	11 20 36.2	-1.1
ZALV	Zalesovo Beam	47.63	51	P		P	11 20 50.4	+1.8
	comp=Z,0.8nm,0.6s,baz=316,slow=6.2,SNR=4.6							
ZALV	Zalesovo Beam	47.63	51	P		P	11 20 49.8	+1.3
KK31	Karatay Array	51.28	70	P		P	11 21 18.7	+2.1
KK31				IAmb		IAmb	11 21 22.1	
	comp=Z,3.4nm,1.1s							
KKAR	Karatay Array	51.28	70	P		P	11 21 18.2	+1.6
YNE	Yellowstone No	51.46	295	P		P	11 21 16.5	-1.7
BOZ	Bozeman (W)	51.59	297	P		P	11 21 19.6	+0.6
MKAR	Makanchi Array	52.72	58	P		P	11 21 28.8	+1.5
	comp=Z,1.4nm,0.9s,baz=300,slow=5.2,SNR=6.1							
BW06	Boulder Array	53.16	293	P		P	11 21 31.6	+0.7
BW06				IAmb		IAmb	11 21 33.7	
	comp=Z,5.2nm,1.2s							
PD31	Pinedale Array	53.16	293	P		P	11 21 30.9	0.0
PD31				IAmb		IAmb	11 21 33.7	
	comp=Z,5.0nm,1.2s							
PDAR	Pinedale Array	53.16	293	P		P	11 21 31.9	+1.0
	comp=Z,2.2nm,1.0s,baz=56,slow=6.3,SNR=10							
PDAR	Pinedale Array	53.16	293	P		P	11 21 31.1	+0.3
TORD	Torodi Ar. Bea	53.16	156	P		P	11 21 31.3	+0.5
	comp=Z,1.7nm,1.1s,baz=326,slow=6.3,SNR=5.3							
TORD	Torodi Ar. Bea	53.16	156	P		P	11 21 30.0	-0.8
KAN10	Anthony SW Sta	53.21	280	P		P	11 21 31.3	+0.2
BTK	Batken	53.96	72	P		P	11 21 38.3	+1.7
WMQ	Urumqi	57.23	56	*e*P		P	11 22 04.3	+4.3
MSU	Marysvale	57.83	293	P		P	11 22 04.7	+0.2
TCRU	Three Creeks R	57.85	293	P		P	11 22 05.8	+1.1
SONM	Songino Array	59.63	40	P		P	11 22 18.5	+1.8
	comp=Z,0.9nm,1.0s,baz=335,slow=6.6,SNR=4.0							
TXAR	Lajitas Array	62.27	280	P		P	11 22 36.1	+1.2
	comp=Z,0.9nm,0.9s,baz=41,slow=4.0,SNR=5.4							
TXAR	Lajitas Array	62.27	280	P		P	11 22 35.4	+0.5
HHC	Hu-ho-hao-te	67.50	40	*e*P		P	11 23 11.2	+2.4
HHC				pmax		pmax		
	comp=Z,13nm,0.9s							
HHC				pmax		pmax		
	comp=Z,100nm,5.0s							
CMAR	Chiang Mai Arr	84.13	59	P		P	11 24 45.4	+1.4
	comp=Z,1.0nm,0.8s,baz=318,slow=5.6,SNR=8.1							
CMAR	Chiang Mai Arr	84.13	59	P		P	11 24 44.5	+0.5
ASAR	Alice Springs	134.95	38	PKP		PKiKP	11 31 34.7	+1.5
	comp=Z,0.4nm,0.9s,baz=344,slow=3.1,SNR=2.8							

IDC ***02*** *11:37:27.5±2.4, 6.75N×92.47E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.4/49, mbtmp3.4/6, ML3.8/1, Error ellipse: s-maj=89.9km s-min=24.6km az=61.0*
NEIC ***02*** *11:37:31.2±2.6, 7.6N±0.1×94.6E±0.2, h10km±1km, mb4.0/5, Error ellipse: s-maj=35.2km s-min=5.5km az=233.0*

ISC 02 11:37:30.5±1.5, 7.5N±0.1×94.5E±0.2, h10km, n22, σ1s31/17, mb3.6/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.35	132	Pn	Pn	11 38 23.7	+0.8
PBA	Port Blair	4.46	338	Pn	Pn	11 38 40.2	+1.9
RPSI	Rantau Prapat	6.53	137	Pn	Pn	11 39 07.1	+0.5
KULM	Kulim	6.54	109	Pn	Pn	11 39 07.1	+0.3
IPM	Ipoh	7.19	114	Pn	Pn	11 39 15.3	-0.5
MYKOM	Kota Tinggi	10.95	121	Pn	Pn	11 40 06.0	-1.2
CMAR	Chiang Mai Arr	11.74	21	Pn	Pn	11 40 37.1	+19
	0.2nm,0.3s,baz=228,slow=13,SNR=4.4						
CMAR	Chiang Mai Arr	11.74	21		Pn	11 40 18.6	+0.4
KDJ	Kajisay	37.73	339	P	P	11 44 43.8	-2.8
KDJ				IAmb	IAmb	11 44 53.9	
	comp=Z,2.5nm,1.1s						
MK31	Makanchi Array	40.52	347		P	11 45 09.2	-0.6
MKAR	Makanchi Array	40.52	347	P	P	11 45 09.9	+0.2
	comp=Z,0.2nm,0.4s,baz=161,slow=6.6,SNR=2.6						
MKAR	Makanchi Array	40.52	347	P	P	11 45 09.5	-0.3
KURBB	Kurchatov Arra	44.99	346	P	P	11 45 46.5	+0.6
	comp=Z,0.3nm,0.4s,baz=172,slow=7.2,SNR=5.3						
KURK	Kurchatov	45.05	346	P	P	11 45 46.5	+0.1
KURK	Kurchatov	45.05	346	IAmb	IAmb	11 45 59.8	
	comp=Z,4.2nm,1.5s						
ZALV	Zalesovo Beam	46.97	352	P	P	11 46 04.8	+3.3
	comp=Z,0.5nm,0.5s,baz=152,slow=6.5,SNR=1.8						
ZALV	Zalesovo Beam	46.97	352	P	P	11 46 00.7	-0.8
WRA	Warramunga Arr	47.79	125	P	P	11 46 16.4	+7.9
	comp=Z,0.3nm,0.7s,baz=303,slow=8.9,SNR=2.1						
WRA	Warramunga Arr	47.79	125	P	P	11 46 08.6	+0.1
WB2	Warramunga Arr	47.80	125	P	P	11 46 08.8	+0.3
ASAR	Alice Springs	49.44	130	P	P	11 46 27.7	+6.6
	comp=Z,0.3nm,0.8s,baz=307,slow=7.9,SNR=2.3						
ASAR	Alice Springs	49.44	130	P	P	11 46 20.3	-0.8

IDC ***02*** *11:38:17.7±0.5, 7.53N×94.39E, h0km, mb4.1/20, mb1 4.2/21, mb1mx4.1/47, mbtmp4.1/21, ML4.0/1, MS3.9/9, Ms1 3.9/9, ms1mx3.5/30, Error ellipse: s-maj=20.4km s-min=12.9km az=55.0*
NEIC ***02*** *11:38:21.3±1.2, 7.47N±0.07×94.35E±0.06, h30km±4km, mb4.6/35, Error ellipse: s-maj=12.1km s-min=6.0km az=215.0*
KLM ***02*** *11:38:21.0, 6.88N×94.33E, h10km, mb4.8*
NDI ***02*** *11:38:21.5±1.7, 7.65N×94.72E, h15km, mb4.3, mb4.6(NEIC)*
DJA ***02*** *11:38:23.2±0.7, 7.1N±4×9.5E±1.1°, h16km±5km, M4.4/10, mb4.4/10, mB4.8/5, MLv4.6/7, Mw(mB)4.1/5*
BJI ***02*** *11:38:23.0±0.0, 7.40N×94.30E, h46km, mB4.9/19, mb4.5/34, Ms4.4/16, Ms7 4.1/12*

ISC 02 11:38:19.1±0.3, 7.48N±0.05×94.36E±0.05, h10km, n159, σ1s43/153, mb4.4/50, MS4.0/11, 1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.40	131	P	Pn	11 39 13.5	+1.2
LHMI	Lhok Sumawe	3.40	131		Pn	11 39 12.6	+0.3
MLSI	Meulaboh, Aceh	3.78	147	P	Pn	11 39 18.4	+0.9
PBA	Port Blair	4.45	339	Pn	Pn	11 39 27.8	+1.1
SURT	Suratani	4.63	71	P	Pn	11 39 31.3	+2.2
KRAB	Krabi	4.85	81	P	Pn	11 39 34.4	+2.2
TPTI		5.04	146	P	Pn	11 39 37.5	+2.7
TRTT	Trang	5.29	86	P	Pn	11 39 39.7	+1.4
SRIT	Nakonsritamara	5.31	78	P	Pn	11 39 40.7	+2.2
PSI	Prapat	6.50	135	Pn	Pn	11 39 56.4	+1.5
	3.4nm,0.3s,baz=4.2,slow=9.5,SNR=12						
PSI				Sn	Sn	11 41 10.4	+1.2
	1.0nm,0.3s,baz=0.4,slow=23,SNR=1.3						
RPSI	Rantau Prapat	6.57	136		Pn	11 39 56.2	+0.4
RPSI	Rantau Prapat	6.57	136		Pn	11 39 56.4	+0.5
RPSI					Sn	11 41 10.4	-0.5
KULM	Kulim	6.62	109	Pn	Pn	11 39 56.5	+0.1
KULM				Sn	Sn	11 41 09.9	-2.1
KULM	Kulim	6.62	109	P	Pn	11 39 56.0	-0.5
IPM	Ipoh	7.27	114	Pn	Pn	11 40 04.5	-0.9
IPM				Sn	Sn	11 41 27.3	-0.8
IPM	Ipoh	7.27	114	P	Pn	11 40 04.0	-1.4
PHET	Kaeng Krachan	7.49	43	P	Pn	11 40 10.0	+1.6
MNSI	Mandailing Nat	8.43	142	P	Pn	11 40 23.5	+2.1
	27nm,0.7s						
MYKOM	Kota Tinggi	11.01	120		Pn	11 40 57.0	+0.2
MYKOM	Kota Tinggi	11.01	120	P	Pn	11 40 57.0	+0.2
SUKH	Sukhothai	11.20	27	P	Pn	11 41 02.2	+2.9
CHAI	Chaiyaphum	11.22	41	P	Pn	11 41 02.5	+2.9
PHIT	Phitsanulok	11.32	31	P	Pn	11 41 03.5	+2.5
CM05	Chiang Mai Arr	11.74	22	P	Pn	11 41 10.0	+3.3
CM31	Chiang Mai Arr	11.79	22	Pn	Pn	11 41 09.0	+1.5
CMAR	Chiang Mai Arr	11.79	22	Pn	Pn	11 41 09.6	+2.1
	1.3nm,0.3s,baz=210,slow=14,SNR=16						
CMAR	Chiang Mai Arr	11.79	22	Pn	Pn	11 41 09.7	+2.2
CHTO	Chiang Mai	12.12	21	Pn	Pn	11 41 14.4	+2.5
PALK	Pallekele	13.55	270	LR	LR	11 46 07.9	
	comp=Z,685nm,21.9s,baz=192,slow=35						
PALK	Pallekele	13.55	270	Pn	Pn	11 41 30.7	-0.9
SAIH	SAIHA	14.99	355	*e*P	Pn	11 41 51.2	0.0
SAIH				IAmb	IAmb	11 41 56.4	
	comp=Z,8.3nm,0.9s						
SLVN	Son La	16.58	33	P	P	11 42 15.6	+1.2
KSM	Kuching	16.97	110	P	Pn	11 42 18.3	+1.5
KSM				IAmb	IAmb	11 42 23.9	
	comp=Z,35nm,1.1s						
KSM	Kuching	16.97	110	P	Pn	11 42 16.0	-0.8
KOHI	KOHIMA	18.15	359	*e*P	Pn	11 42 30.6	-0.9
KOHI				IAmb	IAmb	11 42 39.8	
	comp=Z,16nm,0.6s						
SHL	Shillong	18.15	353	*e*P	Pn	11 42 30.8	-0.7
SHL	Shillong	18.15	353		P	11 42 31.7	-0.2
BOK	Bokaro	18.15	334	*e*P	P	11 42 33.6	+1.9
BOK				IAmb	IAmb	11 42 37.9	
	comp=Z,24nm,1.0s						
HYB	Hyderabad	18.31	304	*i* P	P	11 42 34.0	+0.4
HYB	Hyderabad	18.31	304	*e*P	P	11 42 38.9	+5.3
SBUM	Sibu	18.47	105	P	P	11 42 34.8	-0.6
SBUM	Sibu	18.47	105	P	P	11 42 35.0	-0.3
QIZ	Qiongzhong	18.93	51	P	P	11 42 40.0	-0.3
QIZ				S	Sn	11 46 12.2	-0.8
QIZ				LR	LR		
	comp=Z,2μm,14.1s						
QIZ				LR	LR		
	comp=Z,630nm,13.7s						
QIZ				LR	LR		
	comp=Z,350nm,10.6s						
KMI	Kunming	19.29	24	*e*P	Pn	11 42 48.5	+3.0
KMI				pP	pwP	11 42 53.6	+4.1
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,89nm,4.4s						
KMI				LR	LR		
	comp=Z,400nm,13.4s						
KMI				LR	LR		
	comp=Z,430nm,13.4s						
ODAN	Odare	20.39	342	*e*P	Pn	11 42 58.9	+0.4
RAMN	Ramite	20.72	340	*e*P	Pn	11 43 01.3	-1.2
	comp=Z,73nm,0.9s						
TAPN	Taplejung	20.75	343	*e*P	P	11 43 00.9	+0.5
	comp=Z,130nm,1.0s						
PKI	Pulchoki	21.71	338	*e*P	P	11 43 12.3	+1.4
PKIN	Phulchoki	21.72	338	*e*P	P	11 43 12.3	+1.4
GUN	Gumba	21.85	339	*e*P	P	11 43 12.7	+0.3
DMN	Daman	21.86	337	*e*P	P	11 43 13.0	+0.6
GYA	Guiyang	22.21	30	‖P	P	11 43 19.5	+3.5
GYA				S	S	11 47 18.5	-2.3
GYA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GYA				LR	LR		
	comp=Z,500nm,13.2s						
GYA				LR	LR		
	comp=Z,920nm,12.4s						
GYA				LR	LR		
	comp=Z,380nm,13.8s						
LSA	Lhasa	22.31	353	P	P	11 43 19.1	+1.7
LSA				pmax	pmax		
	comp=Z,53nm,0.9s						
LSA	Lhasa	22.31	353	P	P	11 43 16.4	-1.0
LSA				IAmb	IAmb	11 43 24.3	
	comp=Z,13nm,0.7s						
GKN	Gorkha	22.39	337	*e*P	P	11 43 17.6	-0.4
BHPL	Bhopal	22.59	316	*e*P	P	11 43 21.2	+1.2
BHPL				IAmb	IAmb	11 43 27.1	
	comp=Z,18nm,0.9s						
KOLN	Koldanda	22.61	335	*e*P	P	11 43 20.3	-0.1
DANN	Dangsing	23.05	336	*e*P	P	11 43 24.2	-0.9
PYUN	Piuthan	23.16	334	*e*P	P	11 43 26.4	+0.3
MYLDM	Lahad Datu	24.10	94	P	P	11 43 35.1	-0.1
H08S3	Diego Garcia H	26.48	236	T	T	12 10 38.7	
	baz=54,slow=75,SNR=172						
H08S2	Diego Garcia H	26.48	236	T	T	12 10 47.0	
	baz=54,slow=75,SNR=7.0						
H08S1	Diego Carcia H	26.49	236	T	T	12 10 44.1	
	baz=54,slow=75,SNR=5.2						
LUWI	Luwuk	29.57	105	P	P	11 44 24.0	-0.5
LZH	Lanzhou	29.77	16	*e*P	P	11 44 34.8	+8.6
LZH				pP	pwP	11 44 40.2	+8.8
LZH				sP	sP	11 44 43.6	+14
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA	Gaotai	32.17	8	*e*P	P	11 44 48.5	+1.2
GTA				pP	pwP	11 45 00.0	+7.4
GTA				sP	sP	11 45 05.6	+15
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,82nm,9.2s						
GTA				LR	LR		
	comp=Z,110nm,13.9s						
GTA				LR	LR		
	comp=Z,150nm,15.5s						
GTA				LR	LR		
	comp=Z,190nm,15.1s						
NIL	Nilore	32.55	326	P	P	11 44 48.7	-1.8
NJ2	Nanjing	33.43	40	*e*P	P	11 44 57.1	-1.1
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
KBL	Kabul	35.62	323	P	P	11 45 15.8	-1.6
KBL				IAmb	IAmb	11 45 25.0	
	comp=Z,6.0nm,0.8s						
HHC	Hu-ho-hao-te	36.60	22	*e*P	P	11 45 25.5	-0.1
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.4s						
HHC				LR	LR		
	comp=Z,250nm,12.3s						
HHC				LR	LR		
	comp=Z,420nm,13.4s						
HHC				LR	LR		
	comp=Z,210nm,13.9s						
WMQ	Urumqi	36.67	352	*e*P	P	11 45 27.7	+1.6
PRZ	Przheval'sk	37.61	341	P	P	11 45 33.9	-0.4
PRZ				IAmb	IAmb	11 45 48.5	
	comp=Z,14nm,1.1s						
WSAR	Wadi Sarin	37.71	299	P	P	11 45 36.1	+0.9
	comp=Z,4.3nm,0.8s,baz=89,slow=8.8,SNR=2.0						
WSAR	Wadi Sarin	37.71	299	P	P	11

comp=Z,1.7nm,0.9s,baz=299,slow=8.1,SNR=8.2
ASAR PcP **PcP** **11 48 32.4 +0.2**
comp=Z,0.2nm,0.5s,baz=313,slow=2.8,SNR=0.9
ASAR Alice Springs 49.49 130 P **P** **11 47 09.3 -0.8**
ASAR Alice Springs 49.49 130 **PcP** **11 48 32.4 +0.2**
BRVK Borovoye 49.50 341 P **P** **11 47 09.4 -0.3**
BRVK IAmb IAmb 11 47 15.9
comp=Z,6.5nm,0.8s
ABKAR Akbulak array 50.68 331 P **P** **11 47 18.0 -0.7**
ABKAR IAmb IAmb 11 47 25.8
comp=Z,9.9nm,1.1s
ABKAR Akbulak array 50.68 331 P **P** **11 47 17.4 -1.3**
ATD Arta Tunnel 50.91 279 P **P** **11 47 22.2 +1.1**
comp=Z,2.5nm,0.3s,baz=87,slow=18,SNR=2.0
ATD Arta Tunnel 50.91 279 P **P** **11 47 22.2 +1.1**
OPO Ambohidratompo 53.24 240 P **P** **11 47 37.8 -0.7**
comp=Z,1.2nm,0.6s,baz=72,slow=13,SNR=2.6
OPO Ambohidratompo 53.24 240 P **P** **11 47 37.8 -0.7**
ARU Arti 56.34 337 P **P** **11 47 59.4 -0.8**
KMBO Kilima Mbogo 57.60 264 LR LR 12 09 33.8
comp=Z,114nm,20.4s,baz=95,slow=33
BRTR Keskin Array B 62.85 311 LR LR 12 19 29.5
comp=Z,39nm,19.1s,baz=118,slow=39
KLMR Klimovskoe 66.91 334 *eP* **P** **11 49 13.8 +2.4**
KLMR AMP 11 49 25.8
comp=Z,16nm,1.3s
PETK Petropavlovsk- 68.20 35 LR LR 12 20 20.9
comp=Z,62nm,21.1s,baz=212,slow=37
FINES FINESS Array B 73.16 332 P **P** **11 49 49.0 -0.8**
comp=Z,3.1nm,0.6s,baz=117,slow=8.1,SNR=13
FINES LR LR 12 23 30.7
comp=Z,94nm,18.3s,baz=62,slow=37
FINES FINESS Array B 73.16 332 P **P** **11 49 47.9 -1.9**
BOSA Boshof 75.56 238 P **P** **11 50 04.9 +0.4**
comp=Z,3.4nm,0.9s,baz=106,slow=6.9,SNR=3.6
BOSA Boshof 75.56 238 P **P** **11 50 03.7 -0.9**
BOSA IAmb IAmb 11 50 22.5
comp=Z,10nm,1.4s
ARSA Arzberg 76.97 317 *eP* **P** **11 50 10.1 -2.1**
comp=Z,5.8nm,1.8s
SOKA Soboth 77.28 316 *eP* **P** **11 50 11.9 -2.1**
comp=Z,3.5nm,1.0s
OBKA Obir 77.61 316 *eP* **P** **11 50 14.1 -1.7**
comp=Z,4.6nm,1.5s
MOA Molln 77.85 317 *eP* **P** **11 50 16.2 -0.9**
comp=Z,6.0nm,1.6s
MAW Mawson 78.19 192 P **P** **11 50 18.3 -0.1**
comp=Z,1.5nm,0.9s,baz=52,slow=7.3,SNR=3.2
MAW Mawson 78.19 192 P **P** **11 50 18.3 -0.1**
MAW Mawson 78.19 192 IAmb IAmb 11 50 27.8
comp=Z,0.9nm,0.9s
GERES GERESS Array B 78.27 318 P **P** **11 50 18.8 -0.7**
comp=Z,0.9nm,0.7s,baz=118,slow=2.0,SNR=6.7
GERES GERESS Array B 78.27 318 P **P** **11 50 18.2 -1.2**
PRED Cave del Predi 78.28 316 P **P** **11 50 17.1 -2.5**
PRED IAmb IAmb 11 50 32.8
comp=Z,4.9nm,0.9s
KBA Koelnbreinsper 78.45 316 *eP* **P** **11 50 18.3 -2.3**
comp=Z,5.6nm,1.4s
ABTA Abfaltersbach 79.02 316 *eP* **P** **11 50 21.9 -1.7**
comp=Z,3.9nm,1.6s
CIMO Cimolais 79.06 316 P **P** **11 50 20.4 -3.4**
CIMO IAmb IAmb 11 50 30.6
comp=Z,6.9nm,0.8s
WTTA Wattenberg 79.62 317 *eP* **P** **11 50 24.5 -2.5**
comp=Z,3.9nm,0.9s
WATA Walderalm 79.66 317 *eP* **P** **11 50 25.5 -1.7**
comp=Z,2.1nm,0.8s
SQTA Sankt Quirin 79.91 317 *eP* **P** **11 50 26.0 -2.6**
comp=Z,3.3nm,1.0s
MOTA Moosalm 79.98 317 *eP* **P** **11 50 26.8 -2.1**
comp=Z,7.4nm,1.2s
NB2 NORSAR Subarra 80.18 331 P **P** **11 50 28.4 -1.2**
comp=Z,9.4nm,1.2s,baz=95,slow=5.1
NOA NORSAR Array B 80.18 331 P **P** **11 50 28.4 -1.2**
comp=Z,0.7nm,0.7s,baz=92,slow=5.6,SNR=3.3
RETA Reutte 80.22 317 *eP* **P** **11 50 28.1 -2.0**
comp=Z,9.5nm,1.3s
TORD Torodi Ar. Bea 90.90 283 P **P** **11 51 24.3 +0.4**
comp=Z,0.1nm,0.4s,baz=171,slow=36,SNR=2.3
TORD LR LR 12 33 36.5
comp=Z,43nm,18.4s,baz=285,slow=36
TORD Torodi Ar. Bea 90.90 283 P **P** **11 51 24.3 +0.4**
TORD Torodi Ar. Bea 90.90 283 IAmb IAmb 11 51 31.6
comp=Z,1.6nm,1.0s
ESDC Sonseca Array 91.64 310 P **P** **11 51 27.4 +0.5**
comp=Z,0.7nm,0.8s,baz=306,slow=38,SNR=3.5
ESDC Sonseca Array 91.64 310 P **P** **11 51 27.4 +0.5**
IMAR Indian Mountai 91.91 22 P **P** **11 51 26.1 -1.4**
VNDA Vanda 92.50 168 P **P** **11 51 32.1 +2.2**
comp=Z,0.2nm,0.4s,baz=251,slow=6.8,SNR=1.5
VNDA LR LR 12 30 23.7
comp=Z,44nm,18.1s,baz=308,slow=34
ILAR Eielson Array 95.03 22 LR LR 12 36 21.3
comp=Z,33nm,18.0s,baz=14,slow=37
AFI Afiamalu 95.49 103 P **P** **11 51 44.2 -0.9**
comp=Z,28nm,0.8s,baz=297,slow=13,SNR=9.4
DBIC Dimbokro 98.21 278 LR LR 12 36 24.8
comp=Z,66nm,18.1s,baz=88,slow=36
PDAR Pinedale Array 125.45 22 PKP **PKiKP** **11 57 22.1 +0.6**
comp=Z,0.1nm,0.3s,baz=36,slow=38,SNR=1.8
PDAR Pinedale Array 125.45 22 **PKiKP** **11 57 22.1 +0.6**
PLCA Paso Flores 144.25 200 PKP **PKiKP** **11 57 57.8 -1.6**
comp=Z,5.0nm,1.1s,baz=162,slow=3.2,SNR=3.3
PLCA Paso Flores 144.25 200 **PKPab** **11 57 53.4 -0.2**
CPUP Villa Florida 147.19 232 PKPbc **PKPab** **11 58 03.9 -1.1**
comp=Z,1.6nm,0.7s,baz=119,slow=4.1,SNR=2.6
CPUP Villa Florida 147.19 232 **PKPab** **11 58 03.9 -1.1**

IDC ***02*** *11:43:29.0±1.0, 33.48S×179.61W, h0km, mb4.4/6, mb1 4.5/10, mb1mx4.2/30, mbtmp4.5/10, ML4.7/3, MS3.5/5, Ms1 3.5/5, ms1mx3.2/25, Error ellipse: s-maj=29.8km s-min=19.0km az=94.0*
NEIC ***02*** *11:43:29.2±1.6, 33.46S±0.06×179.2W±0.1, h10km±1km, mb4.6/11, Error ellipse: s-maj=19.6km s-min=5.8km az=114.0*
WEL ***02*** *11:43:33.4±1.3, 34.5S±16°×17.9W±1.7, h202km±46km, M4.6/13, mB5.0/9, ML5.0/7, MLv5.0/13, Mw(mB)4.4/9, Error ellipse: s-maj=0.0km s-min=0.0km az=68.0*

ISC 02 11:43:29.2±0.6, 33.47S±0.05×179.14W±0.1, h10km, n77, σ1s80/74, mb4.5/11, MS3.5/6, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.33**	**14**	Pn			**Pn**	**11 44 37.7**	**+2.6**
	94nm,0.3s,baz=62,slow=23,SNR=2.5								
RAO				Sn			**Sn**	**11 45 21.6**	**-4.1**
	345nm,0.3s,baz=73,slow=18,SNR=8.5								
RAO				LR			LR	11 46 12.5	
	comp=Z,805nm,19.9s,baz=226,slow=37								
RAO	**Raoul Island**	**4.33**	**14**	Pn			**Pn**	**11 44 34.0**	**-1.2**
RAO	**Raoul Island**	**4.33**	**14**	Sn			**Sn**	**11 45 24.8**	**-0.9**
MXZ	**Matakaoa Point**	**4.58**	**206**	P			**Pn**	**11 44 37.9**	**-0.7**
MXZ				S			**Sn**	**11 45 28.9**	**-2.9**
MXZ	**Matakaoa Point**	**4.58**	**206**				**Pn**	**11 44 38.4**	**-0.2**
MXZ				Sn			**Sn**	**11 45 30.7**	**-1.2**
WMGZ	**Waiomatatini S**	**4.77**	**204**	P			**Pn**	**11 44 41.6**	**+0.4**
WMGZ				S			**Sn**	**11 45 35.8**	**-0.8**
PKGZ	**Pakihiroa**	**4.96**	**206**	P			Pn	11 44 49.2	+5.5
PKGZ				S			**Sn**	**11 45 45.0**	**+3.9**
HAZ	**Te Kaha**	**4.96**	**210**	P			**Pn**	**11 44 43.0**	**-0.6**
HAZ				S			**Sn**	**11 45 39.8**	**-1.2**
PUZ	**Puketiti**	**5.05**	**204**	P			**Pn**	**11 44 44.5**	**-0.6**
PUZ				S			**Sn**	**11 45 43.2**	**-0.3**
GRZ	**Great Barrier**	**5.24**	**237**	P			**Pn**	**11 44 48.8**	**+1.2**
TWGZ	**Tauwhareparae**	**5.25**	**206**	P			**Pn**	**11 44 47.7**	**0.0**
TWGZ				S			**Sn**	**11 45 47.3**	**-0.9**
KUZ	**Kuaotunu**	**5.33**	**231**	P			**Pn**	**11 44 50.8**	**+2.0**
WHRZ	**Whale Island**	**5.40**	**215**	P			**Pn**	**11 44 52.1**	**+2.4**
WHRZ				S			**Sn**	**11 45 54.8**	**+2.8**
CNGZ	**Carnagh Statio**	**5.45**	**203**	P			**Pn**	**11 44 50.4**	**0.0**
CNGZ				S			**Sn**	**11 45 52.6**	**-0.5**
TKGZ	**Te Karaka**	**5.53**	**205**	P			**Pn**	**11 44 50.3**	**-1.2**
TKGZ				S			**Sn**	**11 45 53.5**	**-1.6**
MWZ	**Matawai**	**5.56**	**208**	P			**Pn**	**11 44 51.1**	**-0.8**
MWZ				S			**Sn**	**11 45 53.7**	**-2.2**
OPRZ	**Ohinepanea**	**5.60**	**218**	P			**Pn**	**11 44 53.6**	**+1.2**
OPRZ				S			**Sn**	**11 45 53.4**	**-3.4**
MARZ	**Manawahe**	**5.65**	**216**	P			**Pn**	**11 44 55.4**	**+2.2**
TGRZ	**Tauranga**	**5.67**	**220**	P			**Pn**	**11 44 54.8**	**+1.4**
URZ	**Urewera**	**5.67**	**211**	Pn			**Pn**	**11 44 51.9**	**-1.5**
	18nm,0.3s,baz=34,slow=6.2,SNR=78								
URZ				Sn			**Sn**	**11 45 55.1**	**-3.4**
	42nm,0.3s,baz=196,slow=20,SNR=7.7								
URZ	**Urewera**	**5.67**	**211**	P			**Pn**	**11 44 53.2**	**-0.2**
URZ				S			**Sn**	**11 45 55.1**	**-3.4**
URZ	**Urewera**	**5.67**	**211**				**Pn**	**11 44 54.0**	**+0.6**
RAGZ	**Rawiri**	**5.74**	**208**	P			**Pn**	**11 44 56.1**	**+1.6**
PRGZ	**Paritu Road**	**5.95**	**203**	P			**Pn**	**11 44 55.8**	**-1.6**
PRGZ				S			**Sn**	**11 46 00.2**	**-5.4**
SNGZ	**Shannon Statio**	**6.02**	**207**	P			**Pn**	**11 44 58.6**	**+0.3**
SNGZ				S			**Sn**	**11 46 04.5**	**-2.7**
OUZ	**Omahuta**	**6.26**	**252**				**Pn**	**11 45 01.9**	**+0.3**
BKZ	**Black Stump Fm**	**6.69**	**211**				**Pn**	**11 45 07.3**	**-0.2**
HIZ	**Hauiti**	**7.00**	**222**				**Pn**	**11 45 11.9**	**+0.1**
BFZ	**Birch Farm**	**7.09**	**206**	Pn			**Pn**	**11 45 23.7**	**-3.0**
RPZ	**Rata Peaks**	**12.78**	**214**	Pn			**Pn**	**11 46 29.2**	**-1.7**
	2.1nm,0.3s,baz=60,slow=10,SNR=2.8								
RPZ				Sn			Sn	11 48 39.1	-14
	2.3nm,0.3s,baz=114,slow=14,SNR=2.2								
MSVF	**Nonsavu**	**15.88**	**350**				**Pn**	**11 47 12.7**	**-0.2**
MSVF				IAmb			IAmb	11 47 22.5	
	comp=Z,29nm,1.0s								
DZM	**Mont Dzumac**	**17.06**	**308**	Pn			**Pn**	**11 47 26.4**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=128,slow=10,SNR=4.3								
AFI	**Afiamalu**	**20.59**	**21**	P			**P**	**11 48 08.7**	**+0.2**
SANVU	**Saraoutou**	**21.79**	**322**	P			**P**	**11 48 20.9**	**-0.5**
TBI	**Tubuai**	**27.90**	**77**	*e*LR			LR	11 56 20.0	
	comp=Z,163nm,34.0s								
TBI	**Tubuai**	**27.90**	**77**	*e*T			T	12 18 25.5	
	comp=Z,42nm,0.3s								
HNR	**Honiara**	**30.71**	**316**	LR			LR	12 00 04.4	
	comp=Z,42nm,19.4s,baz=98,slow=33								
PAE	**Paea**	**30.82**	**67**	*e*T			T	12 21 52.9	
	comp=Z,9.5nm,0.2s								
PPT2	**Papeete2**	**30.86**	**67**	*e*LR			LR	11 57 34.8	
	comp=Z,214nm,30.0s								
PPT2	**Papeete2**	**30.86**	**67**	*e*T			T	12 21 56.9	
	comp=Z,14nm,0.3s								
PPT	**Papeete**	**30.88**	**66**	LR			LR	11 58 57.2	
	comp=Z,30nm,21.6s,baz=176,slow=30								
TVO	**Taravao**	**31.00**	**67**	*e*T			T	12 22 07.6	
	comp=Z,1.3nm,0.2s								
TIAR	**Tiarei**	**31.06**	**67**	*e*T			T	12 22 11.7	
	comp=Z,3.3nm,0.3s								
MEH	**Mehetia**	**31.86**	**69**	*e*T			T	12 23 13.5	
	comp=Z,42nm,0.3s								
STKA	**Stephens Creek**	**32.96**	**262**	LR			LR	12 03 20.4	
	comp=Z,114nm,18.2s,baz=49,slow=37								
PMOR	**Pomariorio Ree**	**33.72**	**65**	*e*T			T	12 25 29.1	
	comp=Z,4.4nm,0.3s								
VAH	**Vaihoa**	**33.77**	**65**	*e*T			T	12 25 33.8	
	comp=Z,50nm,0.2s								
KRVT	**Keravat (AS076**	**39.55**	**311**	P			**P**	**11 51 00.2**	**-0.4**
	comp=Z,16nm,0.6s,baz=62,slow=16,SNR=2.6								
AS31	**Alice Springs**	**42.08**	**271**	P			**P**	**11 51 20.6**	**-0.9**
ASAR	**Alice Springs**	**42.08**	**271**	P			**P**	**11 51 20.1**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=107,slow=7.8,SNR=36								
ASAR				PcP			**PcP**	**11 53 14.3**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=112,slow=4.6,SNR=1.2								
ASAR	**Alice Springs**	**42.08**	**271**	P			**P**	**11 51 20.6**	**-0.9**
WR0	**Warramunga Arr**	**43.18**	**276**	P			**P**	**11 51 30.5**	**+0.1**
WR0				IAmb			IAmb	11 51 39.6	
	comp=Z,14nm,1.4s								
WB2	**Warramunga Arr**	**43.34**	**276**	P			**P**	**11 51 31.9**	**+0.2**
WB2				IAmb			IAmb	11 51 40.4	
	comp=Z,12nm,0.5s								
WRA	**Warramunga Arr**	**43.35**	**276**	P			**P**	**11 51 29.0**	**-2.8**
	comp=Z,2.7nm,0.5s,baz=116,slow=7.7,SNR=109								
WRA				PcP			**PcP**	**11 53 23.0**	**+2.5**
	comp=Z,1.4nm,0.9s,baz=118,slow=3.2,SNR=2.2								
WB0	**Warramunga Arr**	**43.39**	**276**	P			**P**	**11 51 31.7**	**-0.4**
WB0				IAmb			IAmb	11 51 41.0	
	comp=Z,11nm,0.5s								
VNDA	**Vanda**	**44.95**	**186**	P			**P**	**11 51 44.2**	**+0.3**
VNDA				IAmb			IAmb	11 51 49.3	
	comp=Z,2.7nm,1.4s								
FITZ	**Fitzroy Crossi**	**51.47**	**273**	P			**P**	**11 52 34.9**	**-0.1**
QSPA	**South Pole Qui**	**56.65**	**180**	P			**P**	**11 53 14.6**	**+2.3**
	comp=Z,3.7nm,0.6s,baz=54,slow=3.5,SNR=42								
QSPA	**South Pole Qui**	**56.65**	**180**	P			**P**	**11 53 15.3**	**+3.0**
QSPA				IAmb			IAmb	11 53 26.6	
	comp=Z,7.4nm,0.7s								
MAW	**Mawson**	**69.10**	**201**	P			**P**	**11 54 34.2**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=149,slow=5.7,SNR=6.1								
MAW	**Mawson**	**69.10**	**201**	P			**P**	**11 54 35.0**	**0.0**
SYO	**Syowa Base**	**73.91**	**194**	*e*P			P	11 55 09.3	+5.3
SNAA	**Sanae**	**75.12**	**179**	P			**P**	**11 55 13.2**	**+2.1**
SNAA				IAmb			IAmb	11 55 22.9	
	comp=Z,3.2nm,0.8s								
H03S2	**Juan Fernandez**	**79.58**	**124**	T			T	13 23 56.5	
	baz=234,slow=74,SNR=26								
H03S1	**Juan Fernandez**	**79.59**	**124**	T			T	13 23 53.4	
	baz=234,slow=74,SNR=28								
H03S3	**Juan Fernandez**	**79.59**	**124**	T			T	13 23 59.5	
	baz=234,slow=74,SNR=26								
H03N3	**Juan Fernandez**	**79.78**	**123**	T			T	13 23 54.4	
	baz=240,slow=72,SNR=161								
H03N2	**Juan Fernandez**	**79.79**	**123**	T			T	13 23 50.6	
	baz=240,slow=72,SNR=89								
H03N1	**Juan Fernandez**	**79.80**	**123**	T			T	13 24 04.9	
	baz=240,slow=72,SNR=224								
PETK	**Petropavlovsk-**	**88.55**	**346**	P			**P**	**11 56 22.0**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=119,slow=8.8,SNR=4.3								
PETK	**Petropavlovsk-**	**88.55**	**346**	P			**P**	**11 56 20.8**	**-0.8**
NVAR	**Mina Array Bea**	**91.14**	**43**	LR			LR	12 31 55.1	
	comp=Z,77nm,18.6s,baz=272,slow=32								
KURBB	**Kurchatov Arra**	**122.47**	**312**	PKP			**PKiKP**	**12 02 25.9**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=125,slow=1.7,SNR=2.0								
FINES	**FINESS Array B**	**147.65**	**338**	PKPbc			**PKPbc**	**12 03 12.8**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=44,slow=4.6,SNR=7.5								
NB2	**NORSAR Subarra**	**151.61**	**349**	PKP			**PKiKP**	**12 03 24.3**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=17,slow=4.1								
NOA	**NORSAR Array B**	**151.61**	**349**	PKPbc			**PKiKP**	**12 03 24.4**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=16,slow=3.7,SNR=2.1								
CLL	**Collm**	**160.10**	**337**	*e*PKPab			**PKPab**	**12 04 09.0**	**+0.9**

TAP ***02*** *11:50:51.1,24.4N×122.78E, h40km, ML3.1, C*
JMA ***02*** *11:50:52.1,24.52N×122.68E, h18km±1km, M2.7*

ISC 02 11:50:51.8±0.9, 24.51N±0.03×122.70E±0.02, h26km±8km, n67, σ0s69/97, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.23**	**105**	P			**Pb**	**11 50 57.7**	**-0.3**
YOJ	**Yonaguni jima**	**0.29**	**100**	*i* P			**Pb**	**11 50 58.6**	**-0.1**
	baz=91								
YOJ				*i* S			**Sn**	**11 51 04.0**	**-1.7**
	baz=91								
YOJ	**Yonaguni jima**	**0.29**	**100**	P			**Pb**	**11 50 58.7**	**-0.1**
YOJ				S			**Sb**	**11 51 03.4**	**-0.1**
TWC	**Suao**	**0.78**	**277**	P			**Pn**	**11 51 05.8**	**-1.2**
	baz=277								
TWC				*e*S			**Sb**	**11 51 16.4**	**-0.5**
	baz=277								
ENAH	**Nanao**	**0.81**	**266**	P			**Pn**	**11 51 06.8**	**-0.7**
	baz=276								
ENAH				*e*S			**Sb**	**11 51 17.2**	**-0.7**
	baz=276								
TWB1	**Santiao Chiao**	**0.81**	**308**	P			**Pn**	**11 51 07.0**	**-0.6**
	baz=315								
TWB1				*e*S			**Sb**	**11 51 17.1**	**-0.8**
	baz=315								
NTC	**Toucheng**	**0.86**	**294**	P			**Pn**	**11 51 08.1**	**-0.1**
	baz=292								
NTC				S			**Sb**	**11 51 19.4**	**+0.2**
	baz=292								
ILA	**Ilan**	**0.90**	**287**	*e*P			**Pb**	**11 51 09.8**	**+1.0**
	baz=286								
ILA				*e*S			**Sb**	**11 51 21.5**	**+1.1**
	baz=286								
TIPB	**Shuangxi**	**0.92**	**300**	*e*P			**Pn**	**11 51 08.9**	**-0.1**
	baz=308								
TIPB				*e*S			**Sn**	**11 51 21.1**	**-0.2**
	baz=308								
IRIF	**Iriomote-Funau**	**0.96**	**100**	P			**Pb**	**11 51 10.4**	**+0.7**
IRIF				S			**Sb**	**11 51 23.7**	**+1.7**
TWE	**Neicheng**	**0.96**	**283**	*e*P			**Pn**	**11 51 09.4**	**-0.2**
	baz=282								
TWE				*e*S			**Sn**	**11 51 21.9**	**-0.5**
	baz=282								
NWF	**Wu-fen Shan**	**1.00**	**304**	P			**Pn**	**11 51 10.4**	**+0.2**
	baz=310								
NWF				*e*S			**Sn**	**11 51 22.7**	**-0.9**
	baz=310								
WFSB	**Wu-fen Shan**	**1.00**	**304**	*e*P			**Pb**	**11 51 10.5**	**-0.1**
	baz=310								
WFSB				*e*S			**Sn**	**11 51 23.0**	**-0.4**
	baz=310								
ENTT	**Nioudou**	**1.04**	**277**	*e*P			**Pb**	**11 51 11.1**	**0.0**
	baz=277								
ENTT				*e*S			**Sb**	**11 51 24.9**	**+0.5**
	baz=277								
NACB	**Ninganchiao**	**1.06**	**252**	P			**Pb**	**11 51 11.4**	**-0.1**
	baz=258								
NACB				S			**Sn**	**11 51 24.7**	**-0.1**
	baz=258								
NDT	**Datong Townshi**	**1.08**	**275**	*e*P			**Pb**	**11 51 11.9**	**0.0**
	baz=281								
NDT				*e*S			**Sn**	**11 51 26.0**	**+0.5**
	baz=281								
TWD	**Chiawan**	**1.09**	**247**	*e*P			**Pb**	**11 51 12.9**	**+0.9**
	baz=248								
TWD				*e*S			**Sb**	**11 51 27.6**	**+1.7**
	baz=248								
HATJ	**Hateruma jima**	**1.11**	**114**	P			**Pb**	**11 51 13.1**	**+0.8**
TWA	**Mucha**	**1.12**	**295**	*e*P			**Pb**	**11 51 12.3**	**-0.2**
	baz=304								
TWA				*e*S			**Sn**	**11 51 26.6**	**+0.4**
	baz=304								
NWLT	**Wulai**	**1.12**	**284**	*e*P			**Pb**	**11 51 12.5**	**-0.1**
	baz=283								
NWLT				*e*S			**Sn**	**11 51 26.6**	**+0.2**
	baz=283								
ETLH	**Xiulin Townshi**	**1.15**	**255**	*e*P			**Pb**	**11 51 12.9**	**-0.1**
	baz=256								
ETLH				*e*S			**Sn**	**11 51 27.6**	**+0.4**
	baz=256								
TATO	**Taipei**	**1.19**	**293**	P			**Pb**	**11 51 13.5**	**-0.3**
	baz=292								
TATO				S			**Sn**	**11 51 28.6**	**+0.5**
	baz=292								
NNSB	**Datong**	**1.20**	**266**	P			**Pb**	**11 51 13.9**	**-0.1**
	baz=272								
NNSB				*e*S			**Sb**	**11 51 29.4**	**+0.2**
	baz=272								
NNSH	**Datong**	**1.20**	**266**	P			**Pb**	**11 51 13.9**	**-0.1**
	baz=273								
YM01	**YM01**	**1.21**	**302**	*e*S			**Sn**	**11 51 28.2**	**-0.3**
	baz=300								
NNS	**Nan Shan**	**1.21**	**267**	P			**Pb**	**11 51 14.0**	**-0.1**
	baz=273								
NNS				*e*S			**Sn**	**11 51 29.1**	**+0.4**
	baz=273								
YM08	**YM08**	**1.21**	**304**	*e*P			**Pb**	**11 51 13.8**	**-0.3**
	baz=293								
YM11	**YM11**	**1.21**	**303**	*e*P			**Pn**	**11 51 13.4**	**+0.3**
	baz=292								
YHNB	**Yeheng**	**1.21**	**278**	*e*P			**Pb**	**11 51 14.1**	**-0.1**
	baz=286								
YHNB				*e*S			**Sn**	**11 51 29.3**	**+0.5**
	baz=286								
YM10	**YM10**	**1.22**	**302**	*e*P			**Pn**	**11 51 13.4**	**+0.3**
	baz=300								
JKRS	**Kuro-shima**	**1.23**	**103**	P			**Pb**	**11 51 14.5**	**+0.2**
JKRS				S			**Sb**	**11 51 30.8**	**+1.1**
NSK	**Sanguang**	**1.23**	**278**	*e*P			**Pb**	**11 51 14.4**	**-0.1**
	baz=285								
NSK				*e*S			**Sn**	**11 51 29.9**	**+0.8**
	baz=285								
YM04	**YM04**	**1.23**	**302**	*e*P			**Pn**	**11 51 13.6**	**+0.3**
	baz=300								
YM03	**YM03**	**1.25**	**303**	*e*P			**Pb**	**11 51 14.6**	**-0.1**
	baz=292								
YM03				*e*S			**Sn**	**11 51 30.0**	**+0.4**
	baz=292								
ANP	**Anpu**	**1.27**	**302**	*e*P			**Pb**	**11 51 15.0**	**0.0**
	baz=292								
TWS1	**Kuangyinshan**	**1.30**	**297**	*e*P			**Pb**	**11 51 16.0**	**+0.3**
	baz=296								
JIJ	**Ishigaki jima**	**1.32**	**96**	P			**Pb**	**11 51 15.5**	**-0.5**
JIJ				S			**Sb**	**11 51 32.2**	**-0.4**
FUSS	**Fushou**	**1.35**	**259**	*e*P			**Pb**	**11 51 16.8**	**+0.2**
	baz=260								
WHF	**Hehuan Shan**	**1.36**	**255**	*e*P			**Pb**	**11 51 16.7**	**-0.1**
	baz=256								
TWT	**Tachien**	**1.41**	**260**	*e*P			**Pb**	**11 51 18.4**	**+0.8**
	baz=261								
TDCB	**Techi**	**1.43**	**260**	*e*P			**Pb**	**11 51 18.1**	**+0.3**
	baz=261								
CHGB	**Renai**	**1.46**	**252**	*e*P			**Pb**	**11 51 18.4**	**-0.1**
	baz=242								
JISG	**Ishigakijimahi**	**1.47**	**87**	P			**Pb**	**11 51 18.5**	**0.0**
LIOB	**Emei**	**1.54**	**275**	*e*P			**Pb**	**11 51 19.9**	**+0.2**
	baz=276								
HGSD	**Ruisui**	**1.54**	**229**	*e*P			**Pb**	**11 51 19.6**	**-0.1**
	baz=231								
NSTT	**Nanjuang**	**1.55**	**275**	*e*P			**Pb**	**11 51 20.2**	**+0.4**
	baz=287								
SBCB	**Hsinchu**	**1.58**	**281**	*e*P			**Pb**	**11 51 19.9**	**-0.5**
	baz=293								
VWDT	**VWDT**	**1.61**	**242**	*e*P			**Pb**	**11 51 19.8**	**-1.1**
	baz=244								
WHP	**Taichung City**	**1.61**	**262**	*e*P			**Pb**	**11 51 21.9**	**+0.9**
	baz=252								
DPDB	**Guoxing**	**1.69**	**254**	*e*P			**Pb**	**11 51 22.6**	**+0.4**
	baz=246								
YULB	**Yu-li**	**1.70**	**229**	*e*P			**Pn**	**11 51 20.3**	**+0.6**
	baz=222								
TWF1	**Yuli**	**1.72**	**228**	*e*P			**Pn**	**11 51 20.8**	**+0.7**
	baz=218								
TWF1	

*THR **02** 11:55:17.8±0.3,27.36N×54.82E,h14km±8km, ML4.1*
*NEIC **02** 11:55:20.2±2.3,27.28N±0.07×54.85E±0.02,h44km±8km, Error ellipse: s-maj=10.4km s-min=1.5km az=193.0*
*OMAN **02** 11:55:21.2,26.98N×54.73E,h10km,mb5.9/8,ml3.8/10, ms3.3/1*

ISC 02 11:55:17.2±0.9,**27°26N**±0°03×**54°81E**±0°03,**h17**km±6km, **n150,**σ1**9**57/161,**mb4.1**/33,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LAR1	**LAR**	**0.56**	**317**	*e*Pg		**Pg**	**11 55 28.4**	**0.0**
LAR1				*e*			11 55 43.7	
BNDS	**Bandar-Abbas**	**1.22**	**83**	*e*Pg		**Pb**	**11 55 40.3**	**+0.4**
BNDS				*e*Sg		**Sg**	**11 55 56.7**	**-0.1**
BNDS				IAML			11 56 00.7	
	comp=N,2μm,0.3s							
BNDS	**Bandar-Abbas**	**1.22**	**83**	*e*Pg		**Pb**	**11 55 40.3**	**+0.4**
GENO	**Geno**	**1.22**	**83**	*e*Pg		**Pn**	**11 55 39.9**	**+0.3**
GENO				*e*Sg		**Sg**	**11 55 58.3**	**+1.5**
GENO				*e*			11 56 01.6	
LMD1	**Lamerd**	**1.47**	**274**	*e*Pg		**Pg**	**11 55 45.9**	**+0.5**
JHRM	**Jahrom**	**1.65**	**319**	*e*Pg		**Pb**	**11 55 47.6**	**+0.4**
SHME	**Shamm**	**1.69**	**135**	*e*P		**Pn**	**11 55 46.9**	**+0.9**
	SNR=12							
BANOM	**Banah**	**1.89**	**135**	*e*P		**Pn**	**11 55 50.0**	**+1.4**
	SNR=51							
BANOM				S		**Sg**	**11 56 19.3**	**+1.4**
BANOM	**Banah**	**1.89**	**135**	P		**Pb**	**11 55 50.9**	**-0.3**
	SNR=52							
BANOM				S		**Sb**	**11 56 16.4**	**+2.0**
BANOM	**Banah**	**1.89**	**135**	*e*Pn		**Pn**	**11 55 50.0**	**+1.4**
UMQ	**Umm Al-Quwin**	**1.89**	**156**	*e*Pn		**Pn**	**11 55 49.5**	**+0.9**
MSFE	**Esma-Masafi**	**2.25**	**147**	*e*P		**Pn**	**11 55 55.2**	**+1.5**
	SNR=9.3							
MSFE	**Esma-Masafi**	**2.25**	**147**	*e*Pn		**Pn**	**11 55 55.5**	**+1.9**
MDH	**Madha**	**2.37**	**145**	*e*P		**Pn**	**11 55 56.4**	**+1.2**
	SNR=9.4							
MDH	**Madha**	**2.37**	**145**	P		**Pn**	**11 55 57.9**	**+2.7**
	SNR=5.8							
MDH				S		**Sn**	**11 56 26.0**	**+2.2**
MDH	**Madha**	**2.37**	**145**	*e*Pn		**Pn**	**11 55 57.2**	**+2.0**
NAZ	**Nazwa, Dubai**	**2.39**	**161**	P		**Pn**	**11 55 58.0**	**+2.5**
NAZ	**Nazwa, Dubai**	**2.39**	**161**	P		**Pb**	**11 55 59.3**	**-0.4**
	SNR=5.1							
NAZ	**Nazwa, Dubai**	**2.39**	**161**	*e*Pn		**Pb**	**11 55 58.3**	**-1.4**
FAQ	**Al Faqa, Dubai**	**2.60**	**164**	*i* P		**Pn**	**11 56 01.0**	**+2.6**
	SNR=11							
FAQ	**Al Faqa, Dubai**	**2.60**	**164**	P		**Pb**	**11 56 01.8**	**-1.6**
	SNR=11							
FAQ	**Al Faqa, Dubai**	**2.60**	**164**	*e*Pn		**Pn**	**11 56 01.2**	**+2.8**
UOSS	**Minazif**	**2.62**	**151**	*i* P		**Pn**	**11 56 00.6**	**+1.9**
	SNR=20							
UOSS	**Minazif**	**2.62**	**151**	P		**Pn**	**11 56 00.8**	**+2.0**
UOSS	**Minazif**	**2.62**	**151**	*e*Pn		**Pn**	**11 56 00.3**	**+1.5**
UOSS	**Minazif**	**2.62**	**151**	Pn		**Pn**	**11 56 00.8**	**+2.0**
KHNJ	**Kahnooj**	**2.66**	**74**	*e*Pn		**Pb**	**11 56 02.8**	**-1.6**
ASUD	**Al Ashush, Dub**	**2.66**	**170**	P		**Pn**	**11 56 02.4**	**+3.1**
ASUD	**Al Ashush, Dub**	**2.66**	**170**	*e*Pn		**Pn**	**11 56 01.5**	**+2.2**
AJN	**Ajban**	**2.69**	**177**	*i* P		**Pb**	**11 56 03.1**	**-1.8**
	SNR=13							
AJN	**Ajban**	**2.69**	**177**	P		**Pb**	**11 56 03.4**	**-1.4**
	SNR=13							
AJN	**Ajban**	**2.69**	**177**	*e*Pn		**Pn**	**11 56 02.4**	**+2.7**
HATD	**Hatta, Dubai**	**2.70**	**154**	P		**Pn**	**11 56 01.4**	**+1.6**
HATD	**Hatta, Dubai**	**2.70**	**154**	*e*Pn		**Pn**	**11 56 01.9**	**+2.1**
NGRK	**Negar Kerman**	**2.92**	**35**	*e*Pn		**Pn**	**11 56 04.8**	**+1.6**
NGRK				*e*			11 57 03.6	
TVBK	**TV Kerman**	**3.21**	**32**	*e*Pn		**Pn**	**11 56 09.3**	**+2.1**
TVBK				*e*			11 57 08.3	
ALNE	**Al Ain**	**3.30**	**165**	P		**Pn**	**11 56 10.6**	**+2.5**
ALNE	**Al Ain**	**3.30**	**165**	*e*Pn		**Pn**	**11 56 10.5**	**+2.4**
KHGB	**Koh Gabri**	**3.43**	**25**	*e*Pn		**Pn**	**11 56 12.4**	**+2.3**
KHGB				*e*			11 57 18.3	
SOHO	**SOHO**	**3.48**	**153**	P		**Pn**	**11 56 11.6**	**+1.1**
SOHO	**SOHO**	**3.48**	**153**	*e*Pn		**Pn**	**11 56 12.5**	**+2.0**
CHMN	**Cheshme madani**	**3.53**	**42**	*e*Pn		**Pn**	**11 56 14.2**	**+2.6**
CHMN				*e*			11 56 58.3	
KBAM	**BAM**	**3.72**	**59**	*e*Pn		**Pn**	**11 56 16.0**	**+2.1**
IMEH	**Mehriz**	**4.12**	**358**	*e*Pn		**Pn**	**11 56 21.7**	**+2.1**
ARQ	**Araqi**	**4.20**	**158**	P		**Pn**	**11 56 22.9**	**+2.4**
	SNR=51							
IBAF	**Bafgh**	**4.37**	**9**	*e*Pn		**Pn**	**11 56 25.0**	**+2.1**
UMZA	**Um Al Zommool**	**4.54**	**176**	*e*Pn		**Pn**	**11 56 27.4**	**+2.3**
IRAM	**Ramesheh**	**5.00**	**336**	*e*Pn		**Pn**	**11 56 33.1**	**+1.4**
SMDO	**Samad**	**5.11**	**144**	P		**Pn**	**11 56 35.5**	**+2.4**
	SNR=6.5							
SMDO				S		**Sn**	**11 57 33.3**	**+1.6**
YZKH	**Yazd**	**5.12**	**358**	*e*Pn		**Pn**	**11 56 35.3**	**+2.1**
YZKH	**Yazd**	**5.12**	**358**	*e*Pn		**Pn**	**11 56 35.3**	**+2.1**
WSAR	**Wadi Sarin**	**5.29**	**138**	P		**Pn**	**11 56 37.1**	**+1.6**
	comp=N,1.4nm,0.3s,baz=334,slow=4.4,SNR=24							
WSAR				Sn		**Sn**	**11 57 35.5**	**-0.6**
	comp=N,2.6nm,0.3s,baz=223,slow=19,SNR=1.8							
WSAR	**Wadi Sarin**	**5.29**	**138**	P		**Pn**	**11 56 37.1**	**+1.6**
	SNR=16							
IGAR	**Gharneh**	**5.66**	**336**	*e*Pn		**Pn**	**11 56 42.6**	**+1.8**
ZHSF	**Zahedan**	**5.75**	**65**	*e*Pn		**Pn**	**11 56 44.5**	**+2.6**
ZHSF	**Zahedan**	**5.75**	**65**	*e*Pn		**Pn**	**11 56 44.5**	**+2.6**
NASN	**Na'in**	**5.79**	**343**	*e*Pn		**Pn**	**11 56 44.4**	**+1.8**
NASN	**Na'in**	**5.79**	**343**	*e*Pn		**Pn**	**11 56 44.4**	**+1.8**
WBK	**Wadi Bani Khal**	**5.97**	**140**	P		**Pn**	**11 56 46.1**	**+1.2**
	SNR=15							
WBK				S		**Sn**	**11 57 54.1**	**+1.2**
TPRV	**Parvadeh(Tabas**	**5.97**	**15**	*e*Pn		**Pn**	**11 56 46.3**	**+1.4**
ANAR	**Anarak**	**5.99**	**351**	*e*Pn		**Pn**	**11 56 46.5**	**+1.4**
IZEF	**Zefreh**	**6.01**	**340**	*e*Pn		**Pn**	**11 56 46.3**	**+0.7**
NHDN	**Nehbandan**	**6.16**	**47**	*e*Pn		**Pn**	**11 56 48.8**	**+1.3**
ITEG	**Tejag**	**6.57**	**30**	*e*Pn		**Pn**	**11 56 54.6**	**+1.4**
TKDS	**Koohdasht(Tabas**	**6.64**	**17**	*e*Pn		**Pn**	**11 56 55.3**	**+1.2**
TABS	**Tabas**	**6.67**	**17**	*e*Pn		**Pn**	**11 56 56.2**	**+1.7**
TABS	**Tabas**	**6.67**	**17**	*e*Pn		**Pn**	**11 56 56.3**	**+1.7**
TNSJ	**Nastanj**	**6.86**	**13**	*e*Pn		**Pn**	**11 56 57.9**	**+0.8**
MHTO	**MHTO**	**6.88**	**155**	P		**Pn**	**11 56 58.6**	**+1.3**
	SNR=7.2							
KRSH	**Karshahi**	**7.07**	**342**	*e*Pn		**Pn**	**11 57 00.7**	**+0.6**
AFRZ	**Afriz**	**7.14**	**30**	*e*Pn		**Pn**	**11 57 02.9**	**+1.9**
KHMZ	**Khomeyn**	**7.69**	**328**	*e*Pn		**Pn**	**11 57 10.9**	**+2.2**
KHMZ				IAML			11 58 44.3	
	comp=E,45nm,0.9s							
KHMZ	**Khomeyn**	**7.69**	**328**	*e*Pn		**Pn**	**11 57 10.9**	**+2.2**
DQM	**DQM**	**7.71**	**160**	P		**Pn**	**11 57 09.4**	**+0.7**
	SNR=6.0							
IVRN	**Varamin**	**8.15**	**342**	*e*Pn		**Pn**	**11 57 15.9**	**+1.1**
IDOB	**Doab**	**8.66**	**320**	*e*Pn		**Pn**	**11 57 22.7**	**+0.8**
SHAO	**Shalim**	**9.22**	**175**	P		**Pn**	**11 57 30.1**	**+0.7**
	SNR=27							
SHAO				S		**Sn**	**11 59 11.1**	**-1.8**
IKOM	**Komasi**	**9.32**	**319**	*e*Pn		**Pn**	**11 57 31.8**	**+0.9**
WHFO	**Wadi Hawf**	**9.35**	**186**	P		**Pn**	**11 57 31.7**	**+0.5**
	SNR=21							
DMTO	**DMTO**	**9.50**	**179**	P		**Pn**	**11 57 33.4**	**+0.1**
	SNR=7.2							
HRA	**Herat**	**9.55**	**40**	Pn		**Pn**	**11 57 35.1**	**+0.9**
HRA				Sn		**Sn**	**11 59 19.4**	**-1.8**
ABTO	**Aybut**	**9.96**	**188**	P		**Pn**	**11 57 39.9**	**+0.3**
	SNR=23							
ABTO				P		**Pn**	**11 57 39.9**	**+0.3**
	SNR=23							
IMYA	**Miami**	**10.11**	**25**	*e*Pn		**Pn**	**11 57 44.1**	**+2.4**
GEYT	**Alibeck**	**11.00**	**14**	Pn		**Pn**	**11 57 55.3**	**+1.5**
	baz=180,slow=19,SNR=2.4							
GEYT				LR		LR	12 02 58.4	
	comp=E,690nm,18.6s,baz=205,slow=42							
GEYT	**Alibeck**	**11.00**	**14**	Pn		**Pn**	**11 57 55.5**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**11.00**	**14**	Pn		**Pn**	**11 57 55.7**	**+1.9**
KBL	**Kabul**	**14.21**	**56**	Pn		**Pn**	**11 58 36.6**	**-1.1**
GEVA	**Gevas**	**14.79**	**321**	Pn		**Pn**	**11 58 49.1**	**+3.4**
SOCY	**Socotra**	**15.01**	**183**			**Pn**	**11 58 45.1**	**-3.7**
MARD	**Mardin**	**15.52**	**314**	P		**Pn**	**11 58 57.9**	**+2.6**
ASF	**Jabal al Asfar**	**16.31**	**292**	Pn		**Pn**	**11 59 07.5**	**+2.0**
	comp=E,0.3nm,0.3s,baz=114,slow=7.2,SNR=2.3							
ASF				Sn		**Sn**	**12 02 05.8**	**-0.4**
	comp=E,0.3nm,0.3s,baz=80,slow=21,SNR=1.9							
NIL	**Nilore**	**17.12**	**64**	Pn		**Pn**	**11 59 13.8**	**-1.9**
MMAI	**Mount Meron Ar**	**17.73**	**294**	P		**P**	**11 59 24.7**	**+0.6**
	comp=E,0.6nm,0.3s,baz=93,slow=18,SNR=5.0							
BTK	**Batken**	**18.42**	**42**	P		**P**	**11 59 31.2**	**-0.4**
KBZ	**Khabaz**	**19.05**	**333**	P		**P**	**11 59 38.3**	**-0.1**
	comp=E,0.1nm,0.3s,baz=240,slow=22,SNR=2.6							
KBZ				LR		LR	12 08 26.1	
	comp=E,99nm,20.1s,baz=136,slow=42							
KIV	**Kislovodsk**	**19.32**	**333**	P		**P**	**11 59 42.0**	**+0.4**
KK31	**Karatay Array**	**20.31**	**35**	P		**P**	**11 59 50.1**	**-2.1**
KK31				IAmb		IAmb	11 59 58.5	
	comp=Z,7.8nm,1.0s							
KKAR	**Karatay Array**	**20.31**	**35**	P		**P**	**11 59 51.1**	**-1.2**
KKAR				IAmb		IAmb	11 59 58.5	
	comp=Z,7.8nm,1.0s							
KKAR	**Karatay Array**	**20.31**	**35**	P		**P**	**11 59 49.7**	**-2.6**
BRTR	**Keskin Array B**	**21.53**	**311**	P		**P**	**12 00 05.6**	**0.0**
	comp=Z,3.4nm,0.8s,baz=128,slow=13,SNR=9.1							
BRTR	**Keskin Array B**	**21.53**	**311**	P		**P**	**12 00 05.8**	**+0.2**
BR131	**Keskin Array S**	**21.53**	**311**	P		**P**	**12 00 06.3**	**+0.7**
BR131				IAmb		IAmb	12 00 22.3	
	comp=Z,6.6nm,1.0s							
ABKAR	**Akbulak array**	**22.32**	**9**	P		**P**	**12 00 13.2**	**-0.6**
ABKAR				IAmb		IAmb	12 00 16.2	
	comp=Z,7.9nm,0.9s							
ABKAR	**Akbulak array**	**22.32**	**9**	P		**P**	**12 00 12.8**	**-1.0**
BOOM	**Boomskoye usch**	**22.96**	**43**	P		**P**	**12 00 17.6**	**-3.3**
BOOM				IAmb		IAmb	12 00 40.5	
	comp=Z,5.7nm,1.0s							
AKAS	**Kas**	**23.17**	**299**	P		**P**	**12 00 21.7**	**-1.4**
AKAS				IAmb		IAmb	12 00 29.7	
	comp=Z,18nm,1.3s							
AKTO	**Aktyubinsk**	**23.27**	**5**	P		**P**	**12 00 24.7**	**+0.9**
	comp=Z,3.0nm,0.5s,baz=170,slow=13,SNR=10							
IDI	**Anoyia**	**26.72**	**295**	P		**P**	**12 00 55.9**	**+0.1**
	comp=Z,12nm,0.8s,baz=198,slow=19,SNR=2.0							
BVAR	**Borovoye Array**	**28.23**	**20**	P		**P**	**12 01 08.7**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=238,slow=5.4,SNR=9.3							
MK31	**Makanchi Array**	**29.12**	**41**	P		**P**	**12 01 15.9**	**-1.1**
MK31				IAmb		IAmb	12 01 22.2	
	comp=Z,6.4nm,1.4s							
MKAR	**Makanchi Array**	**29.12**	**41**	P		**P**	**12 01 17.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=228,slow=9.4,SNR=5.0							
MLR	**Muntele Rosu**	**29.28**	**316**	P		**P**	**12 01 18.9**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=355,slow=22,SNR=1.8							
MLR	**Muntele Rosu**	**29.28**	**316**	IAmb		IAmb	12 01 42.5	
	comp=Z,2.9nm,0.9s							
KURBB	**Kurchatov Arra**	**29.50**	**31**	P		**P**	**12 01 20.6**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=232,slow=8.5,SNR=6.5							
KURK	**Kurchatov**	**29.61**	**31**	P		**P**	**12 01 19.9**	**-1.4**
AKASG	**Malin Array Be**	**30.44**	**327**	P		**P**	**12 01 28.2**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=134,slow=7.9,SNR=2.2							
AKASG	**Malin Array Be**	**30.44**	**327**	P		**P**	**12 01 27.3**	**-1.4**
BURAR	**Bucovina Array**	**30.77**	**319**	P		**P**	**12 01 32.0**	**+0.3**
TIR	**Tirane**	**31.87**	**305**	P		**P**	**12 01 38.7**	**-2.7**
KOLS	**Kolonicke sedl**	**33.13**	**320**	*e*P		**P**	**12 01 53.3**	**+0.9**
ZAA0	**Zalesovo Array**	**34.60**	**31**	P		**P**	**12 02 03.6**	**-1.5**
ZALV	**Zalesovo Beam**	**34.60**	**31**	P		**P**	**12 02 04.8**	**-0.3**
	comp=Z,4.1nm,0.5s,baz=235,slow=9.2,SNR=22							
ZALV	**Zalesovo Beam**	**34.60**	**31**	P		**P**	**12 02 04.0**	**-1.0**
NRCA	**Norcia**	**37.10**	**306**	P		**P**	**12 02 27.9**	**+1.2**
NRCA				IAmb		IAmb	12 02 39.0	
	comp=Z,7.7nm,1.2s							
CHVC	**Chvalec**	**37.48**	**319**	*e*P		**P**	**12 02 29.1**	**-0.7**
KBA	**Koelnbreinsper**	**37.95**	**313**	*e*P		**P**	**12 02 34.0**	**-0.1**
	comp=Z,3.2nm,1.0s							
GERES	**GERESS Array B**	**38.27**	**315**	P		**P**	**12 02 36.0**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=130,slow=6.0,SNR=6.1							
GERES	**GERESS Array B**	**38.27**	**315**	P		**P**	**12 02 35.0**	**-1.5**
KHC	**Kasperske Hory**	**38.44**	**316**	*e*P		**P**	**12 02 37.5**	**-0.4**
WTTA	**Wattenberg**	**39.13**	**312**	*e*P		**P**	**12 02 43.3**	**-0.5**
	comp=Z,1.7nm,0.4s							
WATA	**Walderalm**	**39.19**	**312**	*e*P		**P**	**12 02 43.8**	**-0.6**
	comp=Z,1.7nm,0.5s							
FINES	**FINESS Array B**	**39.23**	**339**	P		**P**	**12 02 44.2**	**0.0**
	comp=Z,2.1nm,0.4s,baz=145,slow=9.8,SNR=26							
KEST	**Kesra**	**39.39**	**294**	P		**P**	**12 02 48.0**	**+1.9**
	comp=Z,1.0nm,0.4s,baz=114,slow=10.0,SNR=2.2							
KEST	**Kesra**	**39.39**	**294**	IAmb		IAmb	12 02 53.4	
	comp=Z,3.9nm,1.0s							
SQTA	**Sankt Quirin**	**39.40**	**312**	*e*P		**P**	**12 02 45.6**	**-0.5**
	comp=Z,4.8nm,0.5s							
VSL	**Villasalto**	**39.47**	**300**	P		**P**	**12 02 46.8**	**+0.2**
VSL				IAmb		IAmb	12 02 55.7	
	comp=Z,7.4nm,0.9s							
MOTA	**Moosalm**	**39.50**	**312**	*e*P		**P**	**12 02 46.7**	**-0.3**
	comp=Z,1.9nm,0.5s							
CLL	**Collm**	**39.54**	**319**	*e*P		**P**	**12 02 47.0**	**0.0**
CLL				*i* pP		**pP**	**12 02 51.1**	**-1.5**
	comp=Z,6.0nm,1.0s							
CLL				*e*PP		**PnPn**	**12 04 20.0**	**-0.8**
FETA	**Feichten**	**39.66**	**312**	*e*P		**P**	**12 02 47.9**	**-0.5**
	comp=Z,1.5nm,0.5s							
DAVA	**Damuels**	**40.29**	**312**	*e*P		**P**	**12 02 53.0**	**-0.5**
	comp=Z,9.2nm,0.4s							
CMAR	**Chiang Mai Arr**	**41.43**	**93**	P		**P**	**12 03 04.4**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=303,slow=8.5,SNR=1.4							
ESDC	**Sonseca Array**	**49.77**	**300**	P		**P**	**12 04 08.9**	**0.0**
	comp=Z,1.4nm,0.8s,baz=78,slow=7.0,SNR=13							
TORD	**Torodi Ar. Bea**	**51.43**	**265**	P		**P**	**12 04 21.7**	**0.0**
	comp=Z,2.5nm,0.6s,baz=61,slow=8.0,SNR=10							
DBIC	**Dimbokro**	**60.05**	**262**	P		**P**	**12 05 23.6**	**0.0**
	comp=Z,2.2nm,0.7s,baz=38,slow=9.2,SNR=4.4							
DBIC	**Dimbokro**	**60.05**	**262**	P		**P**	**12 05 22.8**	**-0.8**
BOSA	**Boshof**	**62.37**	**209**	P		**P**	**12 05 40.0**	**+0.9**
	comp=Z,3.1nm,0.7s,baz=22,slow=6.5,SNR=8.3							
BOSA	**Boshof**	**62.37**	**209**	P		**P**	**12 05 39.2**	**+0.1**
MJAR	**Matsushiro Arr**	**69.36**	**59**	LR		LR	12 40 21.1	
	comp=Z,54nm,19.0s,baz=275,slow=39							
WRA	**Warramunga Arr**	**90.13**	**112**	P		**P**	**12 08 16.2**	**-0.6**
	comp=Z,0.4nm,1.0s,baz=313,slow=4.2,SNR=2.5							
ASAR	**Alice Springs**	**91.57**	**116**	P		**P**	**12 08 23.0**	**-0.5**
	comp=Z,0.8nm,1.1s,baz=306,slow=5.3,SNR=3.4							

*VAO **02** 12:08:26.9±0.8,9.79S×74.41W,h10km,mb4.4*
*IDC **02** 12:08:42.2±4.7,9.875S×73.73W,h140km±53km,mb3.2/5, mb1 3.4/6,mb1mx3.2/30,mbtmp3.6/6,MS3.0/2,Ms1 3.0/2, ms1mx2.6/8,Error ellipse: s-maj=77.8km s-min=24.7km az=30.0*

ISC 02 12:08:31.1±1.0,**9°9S**±0°1×**74°2W**±0°1,**h35**km,**n20,** σ1**9**97/18,**mb3.5**/5,**Central Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CZSB	**Cruzeiro do Su**	**2.54**	**34**	*e*P		**Pn**	**12 09 10.0**	**0.0**
ETMB	**Extrema**	**7.83**	**90**	*e*P		**Pn**	**12 10 25.0**	**+2.4**
LPAZ	**La Paz**	**8.69**	**138**	P		Pn	12 10 41.6	+6.6
	0.2nm,0.3s,baz=302,slow=6.9,SNR=7.1							
LPAZ				S		Sn	12 12 24.0	+12
	0.5nm,0.3s,baz=281,slow=14,SNR=1.7							
LPAZ				LR		LR	12 14 46.8	
	comp=Z,63nm,21.4s,baz=275,slow=43							
LPAZ	**La Paz**	**8.69**	**138**	*e*P		**Pn**	**12 10 36.7**	**+1.8**
SAML	**Samuel**	**10.86**	**86**	*e*P		**Pn**	**12 11 05.3**	**+1.1**
VILB	**Vilhena**	**14.03**	**104**	*e*P		**Pn**	**12 11 48.8**	**+1.3**
MACA	**Manacapuru-AM**	**14.94**	**64**	*e*P		**Pn**	**12 12 00.1**	**+0.3**
PTLB	**Pontes e Lacer**	**15.67**	**112**	*e*P		**Pn**	**12 12 11.4**	**+1.9**
NPGB	**Novo Progresso**	**18.80**	**83**	*e*P		**P**	**12 12 49.2**	**+1.3**
ITTB	**Itaituba**	**19.07**	**75**	*e*P		**P**	**12 12 52.3**	**+1.6**
MALB	**Monte Alegre**	**21.31**	**69**	*e*P		**P**	**12 13 15.9**	**+0.9**
CPUP	**Villa Florida**	**22.86**	**138**	LR		LR	12 23 50.3	
	comp=Z,52nm,18.6s,baz=322,slow=40							
MCPB	**Macapa, AP**	**23.92**	**68**	*e*P		**P**	**12 13 42.6**	**+0.4**
TXAR	**Lajitas Array**	**48.24**	**325**	P		**P**	**12 17 10.5**	**+1.7**
	0.2nm,0.5s,baz=145,slow=9.5,SNR=2.1							
PDAR	**Pinedale Array**	**61.54**	**331**	P		**P**	**12 18 45.8**	**+0.8**
	0.2nm,0.5s,baz=154,slow=6.5,SNR=2.0							
NVAR	**Mina Array Bea**	**63.24**	**322**	P		**P**	**12 18 59.0**	**+2.5**
	0.2nm,0.5s,baz=129,slow=7.1,SNR=1.2							
DBIC	**Dimbokro**	**70.95**	**79**	P		**P**	**12 19 42.5**	**-3.2**
	2.4nm,0.8s,baz=278,slow=6.1,SNR=1.3							
TORD	**Torodi Ar. Bea**	**78.68**	**74**	P		**P**	**12 20 27.6**	**-2.8**
	1.1nm,0.9s,baz=262,slow=4.8,SNR=6.6							
ASAR	**Alice Springs**	**136.85**	**219**	PKP		**PKPdf**	**12 27 48.6**	**-2.4**
	0.3nm,0.9s,baz=118,slow=2.2,SNR=2.5							
WRA	**Warramunga Arr**	**139.22**	**223**	PKP		**PKPdf**	**12 27 53.5**	**-2.0**
	0.2nm,0.6s,baz=125,slow=2.0,SNR=1.4							

*MEX **02** 12:11:20.9±0.7, 13°87N×92°40W,h101km±29km, MD3.9*
*IDC **02** 12:11:21.2±2.8, 13°52N×93°12W,h0km, mb3.3/2, mb1 3.7/4,mb1mx3.5/37,mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=164.6km s-min=45.4km az=61.0*
*GCG **02** 12:11:30.9±1.1, 14°90N×91°84W,h0km±204km, MD3.9*

ISC 02 12:11:26.4±1.4,**14°0N**±0°1×**92°46W**±0°07,**h35**km,**n13,** σ2**9**10/17,**Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
THIG		**0.93**	**12**	*i* P		**Pn**	**12 11 40.5**	**-2.5**
THIG				*i* S		**Sn**	**12 11 56.0**	**+1.0**
ERG	**Entre ros, C**	**0.97**	**63**	*e*P		**Pn**	**12 11 42.4**	**-1.2**
FUG	**Fuego 3**	**1.63**	**74**	*e*P		**Pn**	**12 11 51.1**	**-1.7**
FUG				*e*S		**Sn**	**12 12 12.0**	**-0.8**
PCG	**Pacaya**	**1.84**	**77**	*e*P		**Pn**	**12 11 55.8**	**+0.1**
PCG				*e*S		**Sn**	**12 12 15.5**	**-2.5**
PCIG		**1.85**	**337**	*e*P		**Pn**	**12 11 51.9**	**-3.8**
PCIG				*e*S		**Sn**	**12 12 16.9**	**-1.0**
NBG	**Las Nubes**	**2.13**	**74**	*e*P		**Pn**	**12 11 59.5**	**-0.4**
CCIG	**Comitan**	**2.30**	**8**	*e*P		**Pn**	**12 12 02.9**	**+0.9**
MRL	**Marmol**	**2.90**	**68**	*e*P		Pn	12 12 17.1	+6.7
CMIG	**Matias Romero**	**3.87**	**323**	Pn		**Pn**	**12 12 21.0**	**-2.5**
	1.4nm,0.3s,baz=156,slow=12,SNR=15							
CMIG				Sn		**Sn**	**12 13 10.9**	**+3.3**
	4.7nm,0.3s,baz=93,slow=18,SNR=5.5							
TXAR	**Lajitas Array**	**18.46**	**328**	P		**Pn**	**12 15 39.8**	**+0.2**
	0.0nm,0.3s,baz=144,slow=11,SNR=3.7							
NVAR	**Mina Array Bea**	**33.40**	**322**	P		**P**	**12 18 01.4**	**-0.5**
	0.3nm,0.6s,baz=128,slow=12,SNR=1.4							
ILAR	**Eielson Array**	**62.67**	**337**	P		**P**	**12 21 50.4**	**+3.1**
	0.2nm,0.5s,baz=109,slow=6.6,SNR=1.5							
CMAR	**Chiang Mai Arr**	**145.85**	**340**	PKPbc		**PKPdf**	**12 31 02.1**	**-0.4**
	0.5nm,0.6s,baz=336,slow=2.7,SNR=4.8							

*IDC **02** 12:12:11.7±0.9, 7°35N×94°15E,h0km,mb3.9/11, mb1 4.0/13,mb1mx3.8/42,mbtmp3.9/13, ML4.1/2, MS3.4/12, Ms1 3.5/12,ms1mx3.2/35, Error ellipse: s-maj=39.9km s-min=17.2km az=55.0*
*NEIC **02** 12:12:12.7±2.0, 7°.6N±0°.1×94°.63E±0°.07, h10km±1km, mb4.4/15, Error ellipse: s-maj=23.6km s-min=4.0km az=209.0*

ISC 02 12:12:14.8±0.6,**7°41N**±0°09×**94°43E**±0°09,**h24**km,**n62,** σ2**8**19/55,**mb4.2**/17,**MS3.4**/8,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LHMI	**Lhok Sumawe**	**3.31**	**131**	Pn		**Pn**	**12 13 07.4**	**+2.2**
LHMI				Sn		**Sn**	**12 13 43.4**	**-0.3**
SURT	**Suratani**	**4.59**	**70**	P		**Pn**	**12

NIUE	**Niue**	**3.00**	**125**	Pn	**Pn**	**12 24 36.5**	**-0.6**
NIUE				Sn	**Sn**	**12 25 10.1**	**-3.1**
AFI	**Afiamalu**	**3.51**	**12**	Pn	**Pn**	**12 24 43.0**	**-1.1**
	5.6nm,0.3s,baz=189,slow=3.5,SNR=10						
AFI				Sn	**Sn**	**12 25 21.8**	**-4.1**
	24nm,0.3s,baz=163,slow=20,SNR=7.4						
AFI	**Afiamalu**	**3.51**	**12**	Pn	**Pn**	**12 24 43.1**	**-1.1**
AFI				Sn	**Sn**	**12 25 23.9**	**-2.0**
DZM	**Mont Dzumac**	**20.33**	**253**	LR	LR	12 34 15.9	
	comp=Z,68nm,19.4s,baz=33,slow=31						
OUZ	**Omahuta**	**21.66**	**212**	P	**P**	**12 28 36.9**	**-3.2**
PPT	**Papeete**	**21.90**	**94**	LR	LR	12 35 52.7	
	comp=Z,67nm,18.1s,baz=142,slow=33						
URZ	**Urewera**	**22.71**	**202**	P	**P**	**12 28 53.5**	**+2.2**
	8.3nm,0.6s,baz=308,slow=4.9,SNR=7.6						
URZ	**Urewera**	**22.71**	**202**	P	**P**	**12 28 49.1**	**-2.2**
BKZ	**Black Stump Fm**	**23.74**	**202**	P	**P**	**12 29 00.9**	**-0.9**
ARMA	**Armidale**	**35.10**	**242**	P	**P**	**12 30 41.4**	**-1.8**
WR0	**Warramunga Arr**	**50.05**	**258**	P	**P**	**12 32 43.4**	**-1.3**
WR0				IAmb	IAmb	12 32 56.0	
	comp=Z,5.6nm,1.4s						
WB0	**Warramunga Arr**	**50.20**	**258**	P	**P**	**12 32 44.3**	**-1.6**
WB0				IAmb	IAmb	12 32 52.6	
	comp=Z,4.8nm,1.1s						
WB2	**Warramunga Arr**	**50.22**	**258**	P	**P**	**12 32 45.2**	**-0.8**
WB2				IAmb	IAmb	12 33 01.4	
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**50.24**	**258**	P	**P**	**12 32 46.9**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=96,slow=7.4,SNR=16						
WRA	**Warramunga Arr**	**50.24**	**258**	P	**P**	**12 32 46.3**	**+0.2**
AS31	**Alice Springs**	**50.32**	**253**	P	**P**	**12 32 46.7**	**-0.2**
ASAR	**Alice Springs**	**50.32**	**253**	P	**P**	**12 32 48.6**	**+1.8**
	comp=Z,4.0nm,0.7s,baz=89,slow=8.5,SNR=93						
ASAR				PcP	**PcP**	**12 34 10.1**	**+4.5**
	comp=Z,0.5nm,0.6s,baz=92,slow=5.6,SNR=1.1						
ASAR	**Alice Springs**	**50.32**	**253**	P	**P**	**12 32 47.1**	**+0.3**
KNRA	**Kununurra**	**56.12**	**263**	P	**P**	**12 33 29.6**	**+0.1**
QSPA	**South Pole Qui**	**72.69**	**180**	P	**P**	**12 35 16.6**	**-0.8**
NVAR	**Mina Array Bea**	**75.24**	**41**	P	**P**	**12 35 34.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=216,slow=4.5,SNR=3.0						
BMO	**Blue Mountains**	**79.69**	**36**	P	**P**	**12 35 58.4**	**+1.0**
BMO				IAmb	IAmb	12 36 10.9	
	comp=Z,2.6nm,0.8s						
TXAR	**Lajitas Array**	**81.02**	**56**	P	**P**	**12 36 06.0**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=208,slow=3.1,SNR=1.5						
PDAR	**Pinedale Array**	**83.17**	**41**	P	**P**	**12 36 19.9**	**+3.8**
	comp=Z,0.2nm,0.5s,baz=224,slow=3.8,SNR=2.1						
ILAR	**Eielson Array**	**84.20**	**11**	P	**P**	**12 36 23.1**	**+2.4**
	comp=Z,1.0nm,1.1s,baz=212,slow=6.4,SNR=3.0						
KHC	**Kasperske Hory**	**147.93**	**352**	*e*PKPAB	**PKPab**	**12 43 40.1**	**+2.6**
GERES	**GERESS Array B**	**148.19**	**352**	PKPbc	**PKPab**	**12 43 38.2**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=43,slow=2.0,SNR=4.6						
DAVOX	**Davos/Dischmat**	**150.60**	**357**	PKPbc	**PKPab**	**12 43 45.0**	**-3.6**
	baz=318,slow=12						

*KRNET **02** 12:48:38.3±0.1,41.°08N×75.°58E,h15km,mb3.4*
*SOME **02** 12:48:38.2,41.°08N×75.°55E,h15km*
*NNC **02** 12:48:40.0±0.9,41.°19N×75.°53E,h0km,mb4.0,mpv3.7,*
Error ellipse: s-maj=6.0km s-min=3.6km az=2.0
ISC 02 12:48:38.3±1.5,41.°13N±0.°06×75.°40E±0.°02,h7km±11km,
n71,σ1§43/111,31C-9D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**1.09**	**312**	⇑*iP*		**Pn**	**12 49 00.1**	**0.0**
	baz=5.0							
ARLS				⇑*iS*		**Sn**	**12 49 16.1**	**+0.6**
	baz=5.0							
ULHL	**Ulahol**	**1.28**	**29**	⇓*iP*		**Pn**	**12 49 00.1**	**-2.6**
	baz=26							
ULHL				⇓*iS*		**Sb**	**12 49 16.0**	**-3.5**
	baz=26							
ULHL	**Ulahol**	**1.28**	**29**	P		**Pn**	**12 49 00.4**	**-2.3**
	SNR=26							
BOOM	**Boomskoye usch**	**1.42**	**16**	⇑*iP*		**Pn**	**12 49 03.0**	**-1.6**
	baz=12							
BOOM				⇑*iS*		**Sn**	**12 49 21.2**	**-2.4**
	baz=12							
KBK	**Karagaybulak**	**1.56**	**348**	⇑*iP*		**Pb**	**12 49 06.9**	**-0.7**
	baz=42							
KBK				⇑*iS*		**Sb**	**12 49 27.7**	**+0.1**
	baz=42							
KBK	**Karagaybulak**	**1.56**	**348**	P		**Pg**	**12 49 08.0**	**-0.2**
	SNR=13							
AML	**Almayashu**	**1.62**	**309**	⇑*iP*		**Pg**	**12 49 10.1**	**+0.7**
	baz=3.0							
AML				⇑*iS*		**Sg**	**12 49 33.5**	**+3.0**
	baz=3.0							
AML	**Almayashu**	**1.62**	**309**	P		**Pg**	**12 49 10.1**	**+0.7**
	SNR=91							
AAK	**Ala-Archa**	**1.65**	**336**	⇑*iP*		**Pb**	**12 49 09.1**	**0.0**
	baz=30							
AAK				⇑*iS*		**Sg**	**12 49 31.2**	**-0.2**
	baz=30							
AAK	**Ala-Archa**	**1.65**	**336**	P		**Pg**	**12 49 09.8**	**-0.2**
	SNR=65							
AAK	**Ala-Archa**	**1.65**	**336**	⇑P		**Pg**	**12 49 09.6**	**-0.4**
	18nm,0.3s							
AAK				⇓S		**Sg**	**12 49 32.1**	**+0.7**
	57nm,0.3s							
KDJ	**Kajisay**	**1.66**	**53**	⇑*iP*		**Pn**	**12 49 06.7**	**-1.3**
	baz=53							
KDJ				⇑*iS*		**Sn**	**12 49 27.8**	**-1.9**
	baz=53							
FRU1	**Bishkek**	**1.77**	**341**	⇑*iP*		**Pb**	**12 49 11.0**	**-0.1**
	baz=36							
FRU1				⇑*iS*		**Sg**	**12 49 35.0**	**-0.3**
	baz=36							
TKM2	**Tokmak 2**	**1.79**	**5**	⇑*eP*		**Pb**	**12 49 10.3**	**-1.3**
	baz=0.0							
TKM2				⇑*iS*		**Sb**	**12 49 33.8**	**-0.5**
	baz=0.0							
TKM2	**Tokmak 2**	**1.79**	**5**	P		**Pb**	**12 49 11.1**	**-0.5**
	SNR=48							
TKM2	**Tokmak 2**	**1.79**	**5**	⇓P		**Pb**	**12 49 11.0**	**-0.5**
	7.7nm,0.2s							
TKM2				⇓S		**Sb**	**12 49 35.1**	**+0.8**
	43nm,0.4s							
CHMS	**Chumysh**	**1.93**	**346**	⇑*iP*		**Pb**	**12 49 13.4**	**-0.3**
	baz=41							
CHMS				⇑*iS*		**Sb**	**12 49 39.1**	**+1.1**
	baz=41							
CHMS	**Chumysh**	**1.93**	**346**	P		**Pg**	**12 49 15.2**	**0.0**
	SNR=17							
EKS2	**Erkin-Say**	**1.95**	**322**	⇑*iP*		**Pg**	**12 49 15.0**	**-0.7**
	baz=17							
EKS2				⇑*iS*		**Sg**	**12 49 42.0**	**+1.0**
	baz=17							
EKS2	**Erkin-Say**	**1.95**	**322**	P		**Pg**	**12 49 16.1**	**+0.4**
	SNR=36							
KST	**Kastek**	**1.96**	**12**	*e*P		**Pb**	**12 49 14.4**	**+0.1**
	32nm,0.4s							
KST				*e*S		**Sb**	**12 49 40.5**	**+1.6**
	104nm,0.3s							
KST	**Kastek**	**1.96**	**12**	P		**Pb**	**12 49 15.1**	**+0.8**
	32nm,0.4s							
KST				S		**Sb**	**12 49 40.5**	**+1.6**
	104nm,0.3s							
IZV	**Izvestkoviy**	**2.10**	**25**	*e*P		**Pb**	**12 49 16.6**	**-0.3**
	9.5nm,0.2s							
IZV				*e*S		**Sb**	**12 49 44.0**	**+0.7**
	60nm,0.6s							
IZV	**Izvestkoviy**	**2.10**	**25**	Pg		**Pb**	**12 49 17.2**	**+0.3**
	9.5nm,0.2s							
IZV				Lg		Lg	12 49 44.0	
	60nm,0.6s							
MTBS	**Maitube**	**2.14**	**21**	*e*P		**Pb**	**12 49 17.4**	**+0.1**
	16nm,0.1s							
MTBS				*e*S		**Sb**	**12 49 45.0**	**+0.9**
	50nm,0.2s							
TNSS	**Tian-Shan**	**2.22**	**31**	*e*P		**Pb**	**12 49 18.6**	**-0.4**
	13nm,0.2s							
TNSS				*e*S		**Sb**	**12 49 47.7**	**+0.8**
	18nm,0.2s							
TNSS	**Tian-Shan**	**2.22**	**31**	Pg		**Pb**	**12 49 19.3**	**+0.3**
	13nm,0.2s							
TNSS				Lg		Lg	12 49 47.7	
	18nm,0.2s							
USP	**Ospenovka**	**2.24**	**343**	⇑*iP*		**Pb**	**12 49 18.2**	**-0.8**
	baz=39							
USP				⇑*iS*		**Sb**	**12 49 47.5**	**+0.6**
	baz=39							
USP	**Ospenovka**	**2.24**	**343**	P		**Pb**	**12 49 19.8**	**+0.8**
	SNR=60							
MRKS	**Merke**	**2.29**	**316**	*e*P		**Pg**	**12 49 22.0**	**-0.1**
	58nm,0.3s							
MRKS				*e*S		**Sg**	**12 49 53.0**	**+1.2**
	40nm,0.3s							
MRKS	**Merke**	**2.29**	**316**	Pg		**Pg**	**12 49 22.0**	**-0.1**
	58nm,0.3s							
MRKS				Lg		Lg	12 49 52.1	
	40nm,0.3s							
ANVS	**Anan'yevo**	**2.36**	**45**	⇑*iP*		**Pn**	**12 49 18.1**	**+0.5**
	baz=44							
ANVS				⇑*iS*		**Sn**	**12 49 47.4**	**+0.5**
	baz=44							
MDOK	**Medeo**	**2.37**	**31**	*e*P		**Pb**	**12 49 20.6**	**-0.8**
	14nm,0.5s							
MDOK				*e*S		**Sb**	**12 49 51.0**	**+0.2**
	23nm,0.4s							
MDOK	**Medeo**	**2.37**	**31**	Pg		**Pb**	**12 49 21.2**	**-0.2**
	14nm,0.5s							
MDOK				Lg		Lg	12 49 50.8	
	23nm,0.4s							
KNDC	**Almaty**	**2.39**	**29**	⇓Pg		**Pg**	**12 49 24.1**	**+0.1**
	21nm,0.4s							
KNDC				⇓Lg		Lg	12 49 54.3	
	45nm,0.4s							
SGDS	**Sogindy**	**2.39**	**346**	Pg		**Pg**	**12 49 22.7**	**-1.3**
	89nm,0.5s							
SGDS				Lg		Lg	12 49 53.6	
	72nm,0.3s							
KOTS	**Kotyrbulak**	**2.46**	**31**	*e*P		**Pb**	**12 49 22.5**	**-0.3**
	63nm,0.5s							
KOTS				*e*S		**Sb**	**12 49 54.2**	**+0.9**
	157nm,0.5s							
KOTS	**Kotyrbulak**	**2.46**	**31**	Pg		**Pb**	**12 49 22.5**	**-0.3**
	63nm,0.5s							
KOTS				Lg		Lg	12 49 53.1	
	157nm,0.5s							
MNAS	**Manas**	**2.56**	**303**	⇑*eP*		**Pb**	**12 49 24.2**	**-0.3**
	baz=0.0							
MNAS				⇑*iS*		**Sg**	**12 49 57.7**	**-2.7**
	baz=0.0							
KRBS	**Karabastau**	**2.57**	**4**	*e*P		**Pb**	**12 49 25.2**	**+0.4**
	76nm,0.3s							
KRBS				*e*S		**Sb**	**12 49 59.0**	**+2.5**
	126nm,0.5s							
KRBS	**Karabastau**	**2.57**	**4**	Pg		**Pb**	**12 49 25.2**	**+0.4**
	76nm,0.3s							
KRBS				Lg		Lg	12 49 57.8	
	126nm,0.5s							
PRZ	**Przheval'sk**	**2.62**	**58**	⇑*iP*		**Pn**	**12 49 21.8**	**+0.7**
	baz=58							
PRZ				⇑*iS*		**Sn**	**12 49 53.7**	**+0.5**
	baz=58							
KTBS	**Karatobe**	**2.75**	**20**	*e*P		**Pb**	**12 49 27.7**	**0.0**
	52nm,0.3s							
KTBS				*e*S		**Sb**	**12 50 03.2**	**+1.6**
	166nm,0.6s							
KTBS	**Karatobe**	**2.75**	**20**	Pg		**Pb**	**12 49 27.9**	**+0.2**
	52nm,0.3s							
KTBS				Lg		Lg	12 50 02.6	
	166nm,0.6s							
KUU	**Kurty**	**2.84**	**14**	*e*P		**Pb**	**12 49 29.8**	**+0.4**
	12nm,0.4s							
KUU				*e*S		**Sb**	**12 50 06.6**	**+2.3**
	92nm,0.7s							
KUU	**Kurty**	**2.84**	**14**	Pg		**Pb**	**12 49 30.4**	**+1.0**
	9.9nm,0.2s							
KUU				Lg		Lg	12 50 06.6	
	92nm,0.7s							
SATY	**Saty**	**2.95**	**48**	*e*P		**Pb**	**12 49 31.4**	**+0.1**
	4.8nm,0.3s							
SATY				*e*S		**Sb**	**12 50 09.6**	**+2.0**
	39nm,0.4s							
SATY	**Saty**	**2.95**	**48**	Pg		**Pb**	**12 49 31.6**	**+0.3**
	4.8nm,0.3s							
SATY				Lg		Lg	12 50 08.6	
	39nm,0.4s							
ZHN	**Zhinishke**	**3.04**	**47**	*e*P		**Pb**	**12 49 32.6**	**-0.1**
	28nm,0.3s							
ZHN				*e*S		**Sb**	**12 50 11.4**	**+1.4**
	26nm,0.2s							
ZHN	**Zhinishke**	**3.04**	**47**	Pg		**Pb**	**12 49 33.1**	**+0.4**
	28nm,0.3s							
ZHN				Lg		Lg	12 50 11.1	
	26nm,0.2s							
KURS	**Kuram**	**3.12**	**40**	*e*P		**Pb**	**12 49 34.1**	**-0.1**
	4.8nm,0.5s							
KURS				*e*S		**Sb**	**12 50 14.1**	**+1.6**
	23nm,0.5s							
KURS	**Kuram**	**3.12**	**40**	Pg		**Pb**	**12 49 34.9**	**+0.7**
	4.8nm,0.5s							
KURS				Lg		Lg	12 50 14.1	
	23nm,0.5s							
UZB	**Uzymbulak**	**3.36**	**52**	*e*P		**Pb**	**12 49 37.3**	**-0.9**
	4.4nm,0.2s							
UZB				*e*S		**Sb**	**12 50 20.1**	**+0.7**
	26nm,0.6s							
UZB	**Uzynbulak**	**3.36**	**52**	Pg		**Pb**	**12 49 38.2**	**0.0**
	4.4nm,0.2s							
UZB				Lg		Lg	12 50 19.7	
	26nm,0.6s							
KPKS	**Kokpek**	**3.37**	**45**	*e*P		**Pb**	**12 49 38.1**	**-0.3**
	12nm,0.2s							
KPKS				*e*S		**Sb**	**12 50 20.6**	**+1.0**
	88nm,0.5s							
ARXS	**Arharly**	**3.56**	**29**	*e*P		**Pb**	**12 49 41.4**	**-0.2**
	11nm,0.3s							
ARXS				*e*S		**Sb**	**12 50 27.5**	**+2.5**
	31nm,0.5s							
ARXS	**Arharly**	**3.56**	**29**	Pg		**Pb**	**12 49 42.7**	**+1.1**
	11nm,0.3s							
ARXS				Lg		Lg	12 50 27.5	
	31nm,0.5s							
SHLS	**Shalkode**	**3.63**	**55**	*e*P		**Pg**	**12 49 46.6**	**-1.3**
	6.1nm,0.3s							
SHLS				*e*S		**Sg**	**12 50 36.4**	**+1.4**
	33nm,0.6s							
SHLS	**Shalkode**	**3.63**	**55**	Pg		**Pg**	**12 49 47.9**	**0.0**
	6.1nm,0.3s							
SHLS				Lg		Lg	12 50 36.4	
	33nm,0.6s							
MNBS	**Baschi**	**3.68**	**36**	*e*P		**Pb**	**12 49 44.4**	**+0.7**
MNBS				*e*S		**Sb**	**12 50 32.7**	**+4.1**
MNBS	**Baschi**	**3.68**	**36**	Pg		**Pb**	**12 49 45.6**	**+1.9**
	0.1nm,0.3s							
MNBS				Lg		Lg	12 50 32.7	
	0.7nm,0.4s							
PDGK	**Podgornoye**	**3.75**	**53**	⇑Pg		**Pg**	**12 49 48.2**	**-1.9**
	4.9nm,0.6s							
PDGK				⇓Lg		Lg	12 50 38.5	
	35nm,1.2s							
BTLS	**Baital**	**4.03**	**346**	*e*P		**Pb**	**12 49 51.8**	**+2.2**
	3.6nm,0.4s							
BTLS				*e*S		**Sg**	**12 50 45.3**	**-2.4**
	14nm,0.4s							
BTLS	**Baital**	**4.03**	**346**	Pg		**Pg**	**12 49 52.9**	**-2.6**
	3.6nm,0.4s							
BTLS				Lg		Lg	12 50 45.3	
	14nm,0.4s							
KK31	**Karatay Array**	**4.14**	**300**	⇑Pg		**Pg**	**12 49 55.8**	**-1.8**
	3.7nm,0.6s,baz=120,slow=16,SNR=30							
KK31				⇓Lg		Lg	12 50 51.7	
	4.9nm,0.5s,baz=120,slow=28,SNR=5.5							
IUG	**Iuzhnay**	**4.15**	**286**	*e*P		**Pg**	**12 49 56.0**	**-1.8**
	7.5nm,0.2s							
IUG				*e*S		**Sg**	**12 50 52.6**	**+1.0**
	35nm,0.6s							
IUG	**Iuzhnay**	**4.15**	**286**	Pg		**Pg**	**12 49 56.7**	**-1.1**
	7.5nm,0.2s							
IUG				Lg		Lg	12 50 51.6	
	35nm,0.6s							
TDK	**Taldyqorghan**	**4.45**	**29**	*e*P		**Pb**	**12 49 58.2**	**+1.5**
	33nm,0.2s							
TDK				*e*S		**Sb**	**12 50 56.5**	**+6.0**
	37nm,0.1s							
TDK	**Taldyqorghan**	**4.45**	**29**	Pg		**Pb**	**12 49 59.3**	**+2.6**
	33nm,0.2s							
TDK				Lg		Lg	12 50 56.3	
	37nm,0.1s							
BRLS	**Boroldaу**	**4.56**	**296**	*e*P		**Pg**	**12 50 03.8**	**-1.7**
	14nm,0.2s							
BRLS				*e*S		**Sg**	**12 51 06.1**	**+1.5**
	14nm,0.5s							
BRLS	**Boroldaу**	**4.56**	**296**	Pg		**Pg**	**12 50 04.5**	**-1.1**
	14nm,0.2s							
BRLS				Lg		Lg	12 51 04.7	
	14nm,0.5s							

IDC 02 12:51:10.1±1.3,30.°32N×140.°32E,h0km,mb3.7/4,
mb1 3.9/5,mb1mx3.6/41,mbtmp3.5/5,MS3.0/2,Ms1 3.0/2,
ms1mx2.5/35,Error ellipse: s-maj=79.4km
s-min=24.4km az=101.0,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**6.45**	**345**	Pn		Pn	12 52 46.2	-0.2
	baz=162,slow=11,SNR=2.8							
KSRS	**Korea Array**	**12.51**	**308**	LR		LR	12 58 08.0	
	comp=Z,23nm,19.4s,baz=145,slow=33							
H11N2	**WAKE ISLAND Hy**	**26.23**	**108**	T		T	13 24 10.4	
	baz=300,slow=75,SNR=128							
H11N1	**WAKE ISLAND Hy**	**26.23**	**108**	T		T	13 24 09.3	
	baz=300,slow=75,SNR=78							
H11N3	**WAKE ISLAND Hy**	**26.24**	**108**	T		T	13 24 12.4	
	baz=300,slow=75,SNR=84							
H11S3	**WAKE ISLAND Hy**	**26.67**	**110**	T		T	13 24 44.6	
	baz=302,slow=75,SNR=38							
H11S1	**WAKE ISLAND Hy**	**26.68**	**110**	T		T	13 24 43.3	
	baz=302,slow=75,SNR=26							
H11S2	**WAKE ISLAND Hy**	**26.69**	**110**	T		T	13 24 43.8	
	baz=302,slow=75,SNR=22							
WRA	**Warramunga Arr**	**50.30**	**187**	P		P	13 00 08.2	-0.3
	0.9nm,0.8s,baz=5.8,slow=8.0,SNR=7.5							
ASAR	**Alice Springs**	**54.03**	**187**	P		P	13 00 36.2	0.0
	0.3nm,0.7s,baz=16,slow=12,SNR=6.4							
ILAR	**Eielson Array**	**55.71**	**30**	P		P	13 00 47.1	-0.9
	0.7nm,1.0s,baz=282,slow=6.3,SNR=3.5							
NWAO	**Narrogin (SRO)**	**66.59**	**201**	LR		LR	13 30 40.3	
	comp=Z,24nm,18.5s,baz=213,slow=36							
TXAR	**Lajitas Array**	**94.95**	**52**	P		P	13 04 35.8	+0.9
	0.4nm,0.8s,baz=277,slow=3.1,SNR=3.9							

*IDC **02** 13:21:11.0±0.6,4.°29S×102.°14E,h0km,mb4.6/23,*
mb1 4.6/23,mb1mx4.5/34,mbtmp4.6/23,MS3.5/20,
Ms1 3.5/20,ms1mx3.4/40,Error ellipse: s-maj=22.0km
s-min=11.7km az=54.0
*NEIC **02** 13:21:16.6±1.4,4.°44S±0.°06×102.°15E±0.°05,h48km±2km,*
mb4.9/70,Error ellipse: s-maj=8.3km s-min=7.5km
az=198.0
*DJA **02** 13:21:18.5±0.3,4.°3S±3.°10.°2E±.°,h46km±3km,M4.8/38,*
mb4.9/38,mB5.3/13,MLv4.9/20,Mw(mB)4.7/13,Mwp7.6/1
*KLM **02** 13:21:19.0,4.°38S×102.°02E,h55km,mb4.7*
ISC 02 13:21:15.6±0.4,4.°44S±0.°05×102.°09E±0.°05,h35km,n228,
σ1§67/218,mb4.8/71,MS3.5/19,6C-3D,Southern
Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.87**	**85**	P		**Pn**	**13 21 32.7**	**+1.3**
MNAI				S		**Sn**	**13 21 44.7**	**+1.8**
MNAI	**Manna**	**0.87**	**85**			**Pn**	**13 21 32.8**	**+1.3**
MNAI				Sn		**Sn**	**13 21 42.2**	**-0.7**
KSI	**Kapahiang**	**0.93**	**33**	P		**Pn**	**13 21 33.6**	**+1.3**
LWLI	**Liwa**	**2.05**	**106**	P		**Pn**	**13 21 49.9**	**+2.2**
KRJI	**Kerinci**	**2.42**	**345**	P		**Pn**	**13 21 56.0**	**+3.2**
KLSI		**2.65**	**95**	P		**Pn**	**13 21 58.3**	**+2.4**
PMBI	**Palembang**	**3.07**	**61**	P		**Pn**	**13 22 05.7**	**+4.0**
PMBI	**Palembang**	**3.07**	**61**			**Pn**	**13 22 01.4**	**-0.3**
BLSI	**Bandar Lampung**	**3.28**	**106**	P		**Pn**	**13 22 09.1**	**+4.5**
SDSI	**Sungai Dareh**	**3.55**	**349**	P		**Pn**	**13 22 11.8**	**+3.5**
CGJI	**Cibinong**	**4.19**	**121**	P		**Pn**	**13 22 20.9**	**+3.8**
SISI	**Saibi**	**4.30**	**316**	P		**Pn**	**13 22 22.3**	**+3.6**
SBJI	**Serang**	**4.36**	**113**	P		**Pn**	**13 22 23.1**	**+3.7**
PPBI	**Pangkal Pinang**	**4.63**	**61**	P		**Pn**	**13 22 25.7**	**+2.5**
BKNI	**Bangkinang**	**4.85**	**348**	P		**Pn**	**13 22 30.6**	**+4.4**
BKNI	**Bangkinang**	**4.85**	**348**	Pn		**Pn**	**13 22 28.1**	**+1.9**
DBJI	**Dramaga**	**5.09**	**115**	P		Pn	13 22 34.4	+4.8
	1.4nm19µm113nm,0.8s							
SKJI	**Sukabumi**	**5.12**	**120**	P		**Pn**	**13 22 34.7**	**+4.7**
	2.4nm3µm190nm,0.8s							
CNJI	**Cibinong**	**5.77**	**120**	P		**Pn**	**13 22 42.0**	**+3.2**
	1.6nm2µm171nm,1.1s							
MNSI	**Mandailing Nat**	**5.77**	**334**	P		**Pn**	**13 22 41.4**	**+2.5**
	0.5nm2µm80nm,0.6s							
LEM	**Lembang**	**5.99**	**114**	Pn		Pn	13 22 48.2	+6.1
	7.1nm,0.3s,baz=340,slow=21,SNR=9.3							
LEM				Sn		Sn	13 24 02.5	+13
	4.9nm,0.3s,baz=342,slow=20,SNR=1.6							
LEM				LR		LR	13 25 31.9	
	comp=Z,460nm,19.5s,baz=280,slow=43							
LEM	**Lembang**	**5.99**	**114**	P		Pn	13 22 47.2	+5.2
	0.4nm923nm91nm,0.8s							
MYKOM	**Kota Tinggi**	**6.44**	**16**			**Pn**	**13 22 49.5**	**+1.5**
MYKOM	**Kota Tinggi**	**6.44**	**16**	P		**Pn**	**13 22 51.0**	**+3.0**
CISI	**Cisompet, Garu**	**6.48**	**119**	P		**Pn**	**13 22 51.2**	**+2.5**
	1.3nm3µm191nm,0.6s							
CISI	**Cisompet, Garu**	**6.48**	**119**	Pn		**Pn**	**13 22 49.7**	**+1.0**
XMIS	**Christmas Isla**	**6.96**	**150**	Pn		**Pn**	**13 22 53.6**	**-1.6**
CMJI	**Cimerak**	**7.14**	**118**	P		**Pn**	**13 23 00.3**	**+2.6**
	0.3nm55nm,0.7s							
GSI	**Gunungsitoli**	**7.27**	**322**	P		**Pn**	**13 23 01.8**	**+2.3**
	0.5nm92nm,0.4s							
GSI	**Gunungsitoli**	**7.27**	**322**	Pn		**Pn**	**13 23 01.3**	**+1.8**
KPJI	**Karang Pucung**	**7.39**	**113**	P		**Pn**	**13 23 05.7**	**+4.6**
	0.2nm64nm,0.8s							
RPSI	**Rantau Prapat**	**7.76**	**336**			**Pn**	**13 23 05.5**	**-0.7**
RPSI	**Rantau Prapat**	**7.76**	**336**	Pn		**Pn**	**13 23 07.5**	**+1.3**
PSI	**Prapat**	**7.86**	**336**	Pn		**Pn**	**13 23 07.5**	**-0.2**
	2.5nm,0.3s,baz=180,slow=14,SNR=7.2							
PSI				LR		LR	13 26 35.0	
	comp=Z,579nm,20.1s,baz=200,slow=42							
IPM	**Ipoh**	**8.93**	**353**	Pn		**Pn**	**13 23 23.1**	**+0.9**

comp=Z,122nm,21.0s,baz=221,slow=34
QIZ Qiongzhong 24.54 18 P **P** **13 26 32.4 +0.2**
QIZ S **S** **13 30 52.5 +1.7**
QIZ pmax pmax
comp=Z,28nm,2.0s
QIZ LR LR
comp=Z,220nm,20.1s
QIZ LR LR
comp=Z,190nm,18.1s
QIZ LR LR
comp=Z,190nm,19.1s
SLVN Son La 25.68 4 P **P** **13 26 41.9 -0.6**
DAV Davao City (W) 26.09 64 LR LR 13 37 58.8
comp=Z,68nm,20.1s,baz=234,slow=39
FITZ Fitzroy Crossi 26.74 122 P **P** **13 26 52.9 +0.7**
comp=Z,8.6nm,0.7s,baz=313,slow=7.1,SNR=22
FITZ LR LR 13 38 42.4
comp=Z,63nm,19.1s,baz=309,slow=39
FITZ Fitzroy Crossi 26.74 122 P **P** **13 26 52.2 0.0**
KNRA Kununurra 28.50 115 P **P** **13 27 07.2 -0.8**
KNRA IAmb IAmb 13 27 24.4
comp=Z,15nm,0.8s
KMI Kunming 29.39 1⇑ *eP* **P** **13 27 20.6 +4.6**
KMI pmax pmax
comp=Z,9.0nm,0.7s
KMI pmax pmax
comp=Z,140nm,4.0s
KMI LR LR
comp=Z,230nm,5.7s
KMI LR LR
comp=Z,220nm,6.0s
KMI LR LR
comp=Z,120nm,4.5s
H08S2 Diego Garcia H 29.59 262 T T 13 57 52.8
baz=86,slow=75,SNR=15
H08S3 Diego Garcia H 29.60 262 T T 13 57 49.1
baz=86,slow=75,SNR=83
H08S1 Diego Garcia H 29.61 262 T T 13 57 50.8
baz=86,slow=75,SNR=8.4
GYA Guiyang 31.04 8 ⇓P **P** **13 27 30.8 +0.4**
GYA pmax pmax
comp=Z,9.0nm,0.9s
SHL Shillong 31.43 342 P **P** **13 27 33.1 -0.9**
SHL IAmb IAmb 13 27 34.5
comp=Z,19nm,0.6s
NWAO Narrogin (SRO) 31.68 155 P **P** **13 27 35.4 -0.5**
NWAO IAmb IAmb 13 27 46.6
comp=Z,24nm,1.2s
H01W3 Cape Leeuwin H 32.28 161 T T 14 01 41.1
baz=338,slow=76,SNR=69
H01W2 Cape Leeuwin H 32.30 161 T T 14 01 40.6
baz=338,slow=76,SNR=72
H01W1 Cape Leeuwin H 32.30 161 T T 14 01 38.7
baz=338,slow=76,SNR=59
NACB Ninganchiao 34.21 33 P **P** **13 27 57.0 -1.1**
ODAN Odare 34.21 336 *eP* **P** **13 27 59.4 +1.0**
comp=Z,74nm,0.6s
YHNB Yeheng 34.49 32 P **P** **13 27 59.4 -1.2**
TAPN Taplejung 34.52 337 *eP* **P** **13 28 02.6 +1.5**
comp=Z,39nm,0.4s
RAMN Ramite 34.62 335 *eP* **P** **13 28 03.0 +1.1**
comp=Z,16nm,0.3s
WB0 Warramunga Arr 34.97 119 P **P** **13 28 03.9 -0.8**
WB0 IAmb IAmb 13 28 22.8
comp=Z,7.7nm,0.8s
WRA Warramunga Arr 34.98 119 P **P** **13 28 04.9 0.0**
comp=Z,3.7nm,0.8s,baz=300,slow=9.6,SNR=47
WRA PcP **PcP** **13 30 37.5 +0.5**
comp=Z,0.7nm,0.6s,baz=301,slow=1.9,SNR=2.2
WRA S **S** **13 33 31.3 -3.5**
comp=Z,1.3nm,1.0s,baz=295,slow=16,SNR=5.0
WRA Warramunga Arr 34.98 119 P **P** **13 28 04.3 -0.6**
WB2 Warramunga Arr 34.99 119 P **P** **13 28 04.0 -1.0**
WB2 IAmb IAmb 13 28 24.2
comp=Z,8.0nm,0.8s
WR0 Warramunga Arr 35.16 119 P **P** **13 28 06.4 -0.1**
WR0 IAmb IAmb 13 28 32.3
comp=Z,7.1nm,0.8s
CD2 Chengdu 35.19 2 *eP* **P** **13 28 06.9 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
JIRN Jiri 35.41 335 *eP* **P** **13 28 10.2 +1.3**
LSA Lhasa 35.53 343 P **P** **13 28 10.3 +0.3**
LSA IAmb IAmb 13 28 11.9
comp=Z,12nm,0.9s
PKI Pulchoki 35.67 334 *eP* **P** **13 28 11.7 +0.7**
comp=Z,14nm,0.5s
PKIN Phulchoki 35.68 334 *eP* **P** **13 28 11.7 +0.7**
comp=Z,14nm,0.4s
GUN Gumba 35.76 335 *eP* **P** **13 28 12.7 +0.8**
comp=Z,71nm,0.4s
DMN Daman 35.83 334 *eP* **P** **13 28 13.0 +0.6**
comp=Z,22nm,0.6s
KKN Kakani 35.91 334 *eP* **P** **13 28 14.0 +1.0**
comp=Z,32nm,0.4s
AS31 Alice Springs 36.15 125 P **P** **13 28 13.8 -1.1**
ASAR Alice Springs 36.15 125 P **P** **13 28 15.7 +0.8**
comp=Z,3.4nm,0.8s,baz=298,slow=8.0,SNR=55
ASAR PcP **PcP** **13 30 41.2 +0.9**
comp=Z,0.7nm,0.7s,baz=304,slow=2.0,SNR=2.6
ASAR S **S** **13 33 51.1 -1.6**
comp=Z,0.9nm,0.9s,baz=292,slow=18,SNR=4.4
ASAR LR LR 13 44 14.8
comp=Z,66nm,19.9s,baz=296,slow=38
ASAR Alice Springs 36.15 125 P **P** **13 28 13.8 -1.1**
GKN Gorkha 36.38 333 *eP* **P** **13 28 18.0 +1.1**
comp=Z,40nm,0.6s
KOLN Koldanda 36.66 332 *eP* **P** **13 28 20.6 +1.3**
comp=Z,58nm,0.8s
DANN Dangsing 37.07 333 *eP* **P** **13 28 24.2 +1.2**
comp=Z,82nm,0.4s
PYUN Piuthan 37.22 331 *eP* **P** **13 28 25.4 +1.2**
comp=Z,31nm,0.4s
XAN Xi'an 38.81 9 P **P** **13 28 36.4 -0.9**
XAN pP pP 13 28 48.7 +1.3
XAN pmax pmax
comp=Z,13nm,0.9s
XAN pmax pmax
comp=Z,220nm,5.1s
XAN Xi'an 38.81 9 P **P** **13 28 36.2 -1.1**
XAN IAmb IAmb 13 28 36.9
comp=Z,7.6nm,0.7s
NJ2 Nanjing 39.64 23 *eP* **P** **13 28 44.7 +0.5**
NJ2 pmax pmax
comp=Z,14nm,0.5s
LZH Lanzhou 40.35 2 *eP* **P** **13 28 51.1 +0.9**
LZH pP sP 13 29 06.9 +2.4
LZH pmax pmax
comp=Z,15nm,1.0s
GTA Gaotai 43.68 357 *eP* **P** **13 29 17.3 -0.1**
GTA pP sP 13 29 32.4 +0.9
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,87nm,10.0s
GTA LR LR
comp=Z,140nm,16.7s
GTA LR LR
comp=Z,87nm,15.5s
GTA LR LR
comp=Z,190nm,17.5s
CTAO Charters Tower 45.70 114 P **P** **13 29 32.6 -1.0**
CTAO IAmb IAmb 13 29 35.8
comp=Z,16nm,1.0s
HHC Hu-ho-hao-te 45.90 10 *eP* **P** **13 29 35.4 +0.4**
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,59nm,4.9s
STKA Stephens Creek 45.98 131 P **P** **13 29 37.3 +1.6**
comp=Z,3.6nm,0.6s,baz=306,slow=6.4,SNR=11
STKA LR LR 13 51 05.0
comp=Z,54nm,18.9s,baz=348,slow=39
STKA Stephens Creek 45.98 131 P **P** **13 29 35.2 -0.4**
GUMO Guam 46.09 66 P **P** **13 29 35.1 -1.6**
BJI Beijing 46.12 15 P **P** **13 29 36.8 +0.3**
BJI pmax pmax
comp=Z,9.0nm,0.5s
JNU Nakatsue 46.26 34 P **P** **13 29 37.4 -0.5**
JNU IAmb IAmb 13 29 56.9
comp=Z,35nm,1.2s
NIL Nilore 46.67 326 P **P** **13 29 41.3 +0.2**
NIL IAmb IAmb 13 29 42.6
comp=Z,29nm,1.0s
KSRS Korea Array 48.12 28 P **P** **13 29 52.8 +0.6**
comp=Z,5.0nm,0.8s,baz=218,slow=7.3,SNR=9.8
KSRS LR LR 13 49 16.5
comp=Z,15nm,21.1s,baz=215,slow=35
JHS Saijyo 48.89 34 P **P** **13 29 57.9 -0.3**
KBL Kabul 49.72 324 P **P** **13 30 04.4 -0.4**
WMQ Urumqi 49.76 346 *eP* **P** **13 30 06.2 +1.4**
WMQ pP sP 13 30 18.7 -0.4
WMQ sP pP 13 30 24.8 +10
WMQ pmax pmax
comp=Z,42nm,0.9s
WMQ pmax pmax
comp=Z,110nm,5.3s
KSH Kashi 49.93 334 *eP* **P** **13 30 05.8 -0.4**
KSH pmax pmax
comp=Z,170nm,4.5s
KDJ Kajisay 51.59 336 P **P** **13 30 19.6 +0.9**
SHLS Shalkode 51.61 339⇑ *iP* **P** **13 30 18.9 +0.1**
comp=Z,7.5nm,0.4s,baz=339
JGF Kuroka 51.77 37 P **P** **13 30 19.0 -1.1**
JGF IAmb IAmb 13 30 41.4
comp=Z,17nm,1.1s
SATY Saty 51.91 338⇑ *iP* **P** **13 30 22.1 +1.0**
comp=Z,6.5nm,0.9s,baz=337
KPKS Kokpek 52.16 339 *i* P **P** **13 30 23.6 +0.7**
comp=Z,9.7nm,1.0s,baz=338
SONM Songino Array 52.19 4 P **P** **13 30 23.9 +0.9**
comp=Z,12nm,0.8s,baz=183,slow=9.3,SNR=61
SONM PcP **PcP** **13 31 34.6 +0.2**
comp=Z,1.3nm,0.5s,baz=191,slow=3.8,SNR=1.5
SONM LR LR 13 54 47.6
comp=Z,58nm,19.1s,baz=211,slow=39
SONM Songino Array 52.19 4 P **P** **13 30 22.9 -0.1**
ULN Ulaanbaatar 52.27 4 P **P** **13 30 22.5 -1.2**
ULN IAmb IAmb 13 30 25.2
comp=Z,7.0nm,0.9s
BOOM Boomskoye usch 52.39 336 P **P** **13 30 24.4 -0.3**
BOOM IAmb IAmb 13 30 26.3
comp=Z,11nm,1.1s
CN2 Changchun 52.43 21 *eP* **P** **13 30 23.0 -1.8**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
MDOK Medeo 52.52 337 *eP* **P** **13 30 26.3 +0.7**
baz=336
CHGR Chuyangaron 52.60 328 P **P** **13 30 25.5 -0.8**
CHGR IAmb IAmb 13 30 27.0
comp=Z,21nm,1.1s
AAA Alma-Ata 52.61 337 *eP* **P** **13 30 26.2 0.0**
baz=336
MAJO Matsushiro 52.92 37 P **P** **13 30 26.6 -1.9**
MAJO IAmb IAmb 13 30 37.8
comp=Z,29nm,1.5s
MJAR Matsushiro Arr 52.92 37 P **P** **13 30 26.9 -1.6**
comp=Z,5.8nm,0.9s,baz=212,slow=7.8,SNR=15
MJAR LR LR 13 53 22.7
comp=Z,26nm,20.4s,baz=240,slow=37
MJAR Matsushiro Arr 52.92 37 P **P** **13 30 26.3 -2.2**
KUU Kurty 53.41 337 *i* P **P** **13 30 32.1 +0.1**
comp=Z,12nm,0.9s,baz=336
TDK Taldyqorghan 53.59 339 *i* P **P** **13 30 33.2 -0.1**
baz=339
ZSN Zaisan 53.85 346 *i* P **P** **13 30 36.0 +0.8**
comp=Z,12nm,0.8s,baz=345
MK31 Makanchi Array 53.94 343 P **P** **13 30 35.3 -0.5**
MK31 IAmb IAmb 13 30 36.8
comp=Z,13nm,0.8s
MKAR Makanchi Array 53.94 343 P **P** **13 30 36.0 +0.1**
comp=Z,19nm,0.7s,baz=154,slow=8.8,SNR=141
MKAR LR LR 13 56 18.0
comp=Z,23nm,18.3s,baz=145,slow=39
MKAR Makanchi Array 53.94 343 P **P** **13 30 35.4 -0.5**
MAKZ Makanchi 54.04 343 P **P** **13 30 35.9 -0.7**
MAKZ IAmb IAmb 13 30 37.5
comp=Z,7.4nm,0.8s
DZA Taraz 54.72 333 *eP* **P** **13 30 41.4 -0.2**
baz=332
IUG Iuzhnay 54.76 331 *eP* **P** **13 30 42.4 +0.4**
comp=Z,6.6nm,0.9s,baz=331
KK31 Karatay Array 55.27 332 P **P** **13 30 45.0 -0.6**
KKAR Karatay Array 55.27 332 P **P** **13 30 44.9 -0.6**
KKAR Karatay Array 55.27 332 P **P** **13 30 44.9 -0.6**
BTLS Baital 55.27 336 *iP* **P** **13 30 45.1 -0.4**
comp=Z,1.1nm,0.4s,baz=336
JMM Marumori 55.34 37 P **P** **13 30 45.1 -1.0**
USA0B Ussuriysk Arra 55.38 26 P **P** **13 30 45.5 -0.7**
USA0B IAmb IAmb 13 30 46.8
comp=Z,15nm,1.1s
USRK Ussuriysk Ar. 55.38 26 P **P** **13 30 45.9 -0.3**
comp=Z,7.2nm,0.5s,baz=218,slow=4.6,SNR=40
USRK Ussuriysk Ar. 55.38 26 P **P** **13 30 45.5 -0.8**
JTM Tenmabayashi 57.42 35 P **P** **13 30 59.7 -1.2**
KURK Kurchatov 58.53 343 P **P** **13 31 08.1 -0.4**
KURK IAmb IAmb 13 31 09.5
comp=Z,18nm,0.9s
GEYT Alibeck 58.64 320 P **P** **13 31 09.5 -0.1**
comp=Z,3.8nm,0.7s,baz=180,slow=10,SNR=9.2
GEYT Alibeck 58.64 320 P **P** **13 31 08.8 -0.8**
GYA0B ALIBECK ARRAY 58.64 320 P **P** **13 31 09.4 -0.2**
GYA0B IAmb IAmb 13 31 11.5
comp=Z,6.8nm,1.0s
ERM Erimo 59.41 35 P **P** **13 31 14.1 -0.7**
BRZS Berezniki 59.87 338 *eP* **P** **13 31 17.5 -0.3**
baz=338
ZAA0 Zalesovo Array 59.95 348 P **P** **13 31 17.6 -0.6**
ZALV Zalesovo Beam 59.95 348 P **P** **13 31 18.0 -0.2**
comp=Z,20nm,0.4s,baz=167,slow=4.9,SNR=103
ZALV LR LR 14 00 13.6
comp=Z,66nm,20.4s,baz=148,slow=39
ZALV Zalesovo Beam 59.95 348 P **P** **13 31 17.8 -0.5**
JKA Kamikawa-asahi 60.49 33 P **P** **13 31 21.6 -0.5**
YSS Yuzh-Sakhalins 62.48 30 P **P** **13 31 34.5 -1.0**
BRVK Borovoye 63.25 339 P **P** **13 31 39.8 -0.7**
BRVK IAmb IAmb 13 31 41.0
comp=Z,6.8nm,0.7s
DZM Mont Dzumac 64.60 112 LR LR 14 01 39.5
comp=Z,42nm,18.0s,baz=32,slow=38
ABKAR Akbulak array 64.77 331 P **P** **13 31 50.3 -0.3**
ABKAR Akbulak array 64.77 331 P **P** **13 31 50.3 -0.3**
MAW Mawson 68.47 195 P **P** **13 32 16.6 +2.7**
comp=Z,0.9nm,0.9s,baz=315,slow=13,SNR=1.9
MAW LR LR 13 56 57.0
comp=Z,82nm,18.3s,baz=57,slow=31
YAK Yakutsk 69.59 13 P **P** **13 32 19.2 -1.7**
MLZ Mavora Lakes 70.12 137 P **P** **13 32 22.0 -2.6**
WHZ Wether Hill Ro 70.13 137 P **P** **13 32 23.5 -1.1**
ARU Arti 70.27 336 P **P** **13 32 24.8 -0.4**
ARU IAmb IAmb 13 32 26.2
comp=Z,21nm,1.1s
MARD Mardin 70.41 312 P **P** **13 32 28.4 +1.7**
MARD IAmb IAmb 13 32 29.1
comp=Z,18nm,0.7s
KBZ Khabaz 71.50 319 P **P** **13 32 33.9 +1.0**
comp=Z,4.3nm,0.8s,baz=146,slow=3.6,SNR=4.4
LTZ Lake Taylor 72.49 133 P **P** **13 32 35.1 -3.9**
PEA0B Petropavlovsk- 73.85 31 P **P** **13 32 45.6 -1.1**
PETK Petropavlovsk- 73.85 31 P **P** **13 32 45.6 -1.2**
comp=Z,3.7nm,0.8s,baz=234,slow=8.6,SNR=8.1
PETK Petropavlovsk- 73.85 31 P **P** **13 32 45.8 -1.0**
NRIK Noril'sk 74.30 355 P **P** **13 32 48.0 -1.0**
comp=Z,2.8nm,0.4s,baz=166,slow=6.2,SNR=9.0
PET Petropavlovsk 74.31 32 P **P** **13 32 48.4 -0.9**
BKZ Black Stump Fm 75.12 129 P **P** **13 32 55.1 +0.5**
BKZ IAmb IAmb 13 33 09.6
comp=Z,16nm,0.7s
CSS Mathiatis 75.35 308 P **P** **13 32 57.5 +1.6**
CSS IAmb IAmb 13 32 58.5
comp=Z,13nm,1.0s
SYO Syowa Base 76.25 199⇑ *eP* **P** **13 33 00.5 +0.2**
SYO Syowa Base 76.25 199⇑ *e*PcP **PcP** **13 33 12.0 -0.1**
BOSA Boshof 76.33 242 LR LR 14 00 01.8
comp=Z,89nm,20.3s,baz=60,slow=30
BR131 Keskin Array S 76.50 312 P **P** **13 33 02.5 0.0**
BRTR Keskin Array B 76.50 312 P **P** **13 33 03.0 +0.5**
comp=Z,4.3nm,0.8s,baz=132,slow=7.5,SNR=11
BRTR LR LR 14 10 19.4
comp=Z,18nm,18.4s,baz=108,slow=39
BRTR Keskin Array B 76.50 312 P **P** **13 33 02.4 0.0**
TIXI Tiksi 77.94 8 P **P** **13 33 07.8 -1.9**
TIXI IAmb IAmb 13 33 09.0
comp=Z,14nm,1.2s
VNDA Vanda 79.38 169 P **P** **13 33 19.6 +2.0**
comp=Z,0.8nm,0.9s,baz=264,slow=4.3,SNR=4.5
VNDA LR LR 14 03 47.7
comp=Z,30nm,18.8s,baz=302,slow=32
VNDA Vanda 79.38 169 P **P** **13 33 15.3 -2.3**
KLMR Klimovskoe 80.92 334 *eP* **P** **13 33 25.4 -0.7**
KLMR AMP 13 33 27.7
comp=Z,25nm,1.5s
AKASG Malin Array Be 82.68 322 P **P** **13 33 34.5 -1.1**
comp=Z,1.0nm,0.4s,baz=85,slow=4.8,SNR=6.1
VRI Vrincioaia 83.05 317 ⇓P **P** **13 33 39.6 +1.9**
MLR Muntele Rosu 83.49 317 ⇓P **P** **13 33 41.9 +1.7**
MLR Muntele Rosu 83.49 317 P **P** **13 33 40.3 +0.1**
BURAR Bucovina Array 84.46 319 ⇑P **P** **13 33 47.0 +2.0**
BURAR Bucovina Array 84.46 319 P **P** **13 33 46.5 +1.6**
BUR08 Bucovina Ar. S 84.47 319 P **P** **13 33 46.6 +1.5**
LIT Litokhoron 84.91 311 P **P** **13 33 47.5 +0.2**
KOLS Kolonicke sedl 86.65 319 *eP* **P** **13 33 56.9 +1.2**
CRVS Cervenica-Dubn 87.17 319 *eP* **P** **13 33 57.7 -0.6**
FINES FINESS Array B 87.23 332 P **P** **13 33 58.6 +0.4**
comp=Z,6.0nm,0.9s,baz=109,slow=5.2,SNR=13
ARCES ARCESS Array B 89.46 340 P **P** **13 34 08.9 +0.2**
comp=Z,7.6nm,0.8s,baz=93,slow=5.7,SNR=18
ARCES LR LR 14 21 51.9
comp=Z,41nm,18.2s,baz=310,slow=41
GCIS Gornji Cirnik 90.69 316 *i* P **P** **13 34 16.5 +1.6**
CRES Cresnjev 90.80 316 *i* P **P** **13 34 16.9 +1.4**
BOJS Bojanci 90.92 315 *i* P **P** **13 34 17.4 +1.4**
PRED Cave del Predi 92.17 316 P **P** **13 34 21.7 -0.2**
PRED IAmb IAmb 13 34 23.9
comp=Z,4.5nm,1.0s
GERES GERESS Array B 92.25 319 P **P** **13 34 22.8 +0.6**
comp=Z,0.9nm,0.9s,baz=64,slow=3.1,SNR=4.8
CIMO Cimolais 92.93 316 P **P** **13 34 25.8 +0.4**
CIMO IAmb IAmb 13 34 27.4
comp=Z,4.4nm,1.0s
NVAR Mina Array Bea 130.09 42 PKP **PKPdf** **13 40 22.3 -0.3**
comp=Z,0.2nm,0.5s,baz=268,slow=2.5,SNR=2.5
PDAR Pinedale Array 132.62 32 PKhKP **PKPdf** **13 40 24.7 -2.6**
comp=Z,0.3nm,0.6s,baz=38,slow=4.6,SNR=2.3
TXAR Lajitas Array 145.25 42 PKPbc **PKPdf** **13 40 51.1 +0.6**
comp=Z,8.0nm,0.5s,baz=270,slow=0.9,SNR=79

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*MAN **02** 13:51:08.8, 18°.27N×120°.45E, h29km, mb5.1, ML4.0, MS4.0*
MAN Intensity II - Paoay, Ilocos Norte.
*IDC **02** 13:51:14.1±2.6, 18°.11N×120°.56E, h98km±26km, mb3.3/9, mb1 3.5/10, mb1mx3.3/47, mbtmp3.7/10, MS2.6/1, Ms1 2.8/1, ms1mx2.3/27, Error ellipse: s-maj=32.2km s-min=14.1km az=70.0*
ISC 02 13:51:05.4±1.6, 18°.23N±0°.05×120°.35E±0°.05, h15km±10km, n20, σ1°.95/30, mb3.6/7, 3D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ABRA	**Dolores**	**0.67**	**149**	*eP*	Pn		**13 51 21.8**	**+1.4**
ABRA				*eS*	**Sn**		**13 51 32.6**	**+2.0**
APYP	**Conner**	**0.93**	**113**	*eP*	**Pn**		**13 51 24.7**	**+0.9**
APYP				*eS*	**Sb**		**13 51 36.8**	**+1.5**
CVP	**Callao Caves**	**1.50**	**110**	⇓*iP*	**Pg**		**13 51 33.8**	**-0.5**
CVP				*i* S	**Sg**		**13 51 53.8**	**0.0**
SGCP	**Mt. Cagua**	**1.61**	**89**	*eP*	**Pn**		**13 51 34.6**	**+1.3**
SGCP				*eS*	**Sn**		**13 51 53.1**	**-0.8**
BCP	**Baguio City**	**1.82**	**172**	⇓*iP*	**Pg**		**13 51 39.7**	**-0.7**
BCP				*i* S	**Sg**		**13 52 09.3**	**+5.3**
BOLP	**Bolinao**	**1.88**	**193**	*eP*	**Pg**		**13 51 40.0**	**-1.6**
BOLP				*eS*	**Sg**		**13 52 07.2**	**+1.1**
CAUP	**Cauayan**	**1.90**	**132**	*eP*	**Pg**		**13 51 41.5**	**-0.4**
CAUP				*eS*	**Sn**		**13 51 59.4**	**-1.5**
SMPP	**San Manuel, Pa**	**2.09**	**171**	*eP*	**Pb**		**13 51 41.6**	**-1.5**
SMPP				*eS*	**Sb**		**13 52 08.4**	**-0.4**
BALP	**Baler**	**2.74**	**154**	*eP*	**Pb**		**13 51 53.1**	**-1.0**
BALP				*eS*	**Sb**		**13 52 27.7**	**+0.2**
TGY	**Tagaytay City**	**4.14**	**172**	P	**Pb**		**13 52 15.1**	**-3.0**
TGY	45nm,0.3s,baz=299,slow=10,SNR=3.6			S	**Sn**		**13 52 59.5**	**+3.1**
LQP	21nm,0.3s,baz=300,slow=20,SNR=1.4 **Lukban**	**4.25**	**164**	⇓*eP*	**Pb**		**13 52 17.6**	**-2.4**
KSRS	**Korea Array**	**20.27**	**18**	P	**P**		**13 55 40.6**	**+0.2**
	0.8nm,0.4s,baz=198,slow=11,SNR=2.0							
CMAR	**Chiang Mai Arr**	**20.32**	**274**	P	Pn		13 55 45.4	+2.2
CMAR	0.6nm,0.3s,baz=92,slow=8.4,SNR=8.7			LR	LR		14 02 59.8	
SONM	comp=Z,19nm,21.6s,baz=315,slow=34 **Songino Array**	**31.66**	**342**	P	**P**		**13 57 30.2**	**+2.1**
	0.3nm,0.4s,baz=163,slow=11,SNR=2.2							
WRA	**Warramunga Arr**	**40.34**	**159**	P	**P**		**13 58 39.5**	**-3.2**
WRA	0.2nm,0.4s,baz=341,slow=9.0,SNR=5.3			PcP	**PcP**		**14 00 44.0**	**-2.0**
MKAR	1.1nm,1.3s,baz=342,slow=3.0,SNR=2.1 **Makanchi Array**	**42.26**	**321**	P	**P**		**13 58 58.0**	**-0.2**
	0.7nm,0.7s,baz=94,slow=8.0,SNR=4.8							
ASAR	**Alice Springs**	**43.69**	**162**	P	**P**		**13 59 08.0**	**-2.0**
	0.4nm,0.4s,baz=338,slow=7.0,SNR=22							
ZALV	**Zalesovo Beam**	**44.93**	**331**	P	**P**		**13 59 20.9**	**+1.4**
	0.3nm,0.2s,baz=115,slow=6.7,SNR=3.8							
NRIK	**Noril'sk**	**54.95**	**346**	P	**P**		**14 00 35.9**	**+0.5**
	0.9nm,0.4s,baz=149,slow=8.7,SNR=3.6							
ILAR	**Eielson Array**	**74.86**	**26**	P	**P**		**14 02 45.3**	**+0.3**
	0.3nm,0.6s,baz=264,slow=5.0,SNR=2.6							

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*IDC **02** 13:59:04.5±0.9, 12°.44N×143°.99E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.7/37, mbtmp3.6/6, MS3.2/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=34.2km s-min=16.7km az=119.0*
*NEIC **02** 13:59:08.0±1.2, 12°.45N±0°.06×143°.9E±0°.1, h24km±4km, mb4.4/10, Error ellipse: s-maj=19.3km s-min=6.9km az=110.0*
ISC 02 13:59:08.2±0.6, 12°.46N±0°.10×144°.0E±0°.1, h27km, n30, σ0°.98/23, mb4.0/12, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GUMO	**Guam**	**1.41**	**37**		Pn		**13 59 32.8**	**-1.0**
GUMO	70nm,0.3s,baz=268,slow=3.6,SNR=109				Sn		**13 59 51.6**	**+0.3**
GUMO	82nm,0.3s,baz=223,slow=20,SNR=14 **Guam**	**1.41**	**37**			**Pb**	**13 59 32.5**	**-1.3**
H11S3	**WAKE ISLAND Hy**	**22.66**	**72**	T		T	14 27 38.6	
	baz=258,slow=75,SNR=20							
H11S1	**WAKE ISLAND Hy**	**22.68**	**72**	T		T	14 27 37.0	
	baz=258,slow=75,SNR=9.1							
H11S2	**WAKE ISLAND Hy**	**22.68**	**72**	T		T	14 27 37.0	
	baz=258,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**23.13**	**69**	T		T	14 28 09.7	
	baz=255,slow=75,SNR=34							
H11N2	**WAKE ISLAND Hy**	**23.14**	**69**	T		T	14 28 11.1	
	baz=255,slow=75,SNR=25							
H11N3	**WAKE ISLAND Hy**	**23.15**	**69**	T		T	14 28 11.5	
	baz=255,slow=75,SNR=27							
KKM	**Kota Kinabalu**	**28.14**	**259**	P		**P**	**14 04 56.2**	**-2.3**
KKM						IAmb	IAmb	14 05 03.4
	comp=Z,13nm,1.2s							
ASAJ	**Asahikawa**	**31.57**	**358**	LR		LR	14 20 11.3	
	comp=Z,27nm,18.1s,baz=314,slow=40							
WR0	**Warramunga Arr**	**33.53**	**196**	P		**P**	**14 05 45.8**	**0.0**
WR0						IAmb	IAmb	14 06 05.5
	comp=Z,6.1nm,1.4s							
WB2	**Warramunga Arr**	**33.57**	**197**	P		**P**	**14 05 46.0**	**-0.1**
WB2						IAmb	IAmb	14 05 54.5
	comp=Z,6.5nm,1.4s							
WRA	**Warramunga Arr**	**33.57**	**197**	P		**P**	**14 05 45.9**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=19,slow=9.6,SNR=8.2							
AS31	**Alice Springs**	**37.24**	**195**	P		**P**	**14 06 17.7**	**0.0**
ASAR	**Alice Springs**	**37.24**	**195**	P		**P**	**14 06 18.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=19,slow=11,SNR=11							
EIDS	**Eidsvold**	**38.23**	**170**	P		**P**	**14 06 26.0**	**+0.1**
EIDS						IAmb	IAmb	14 06 33.2
	comp=Z,11nm,1.2s							
CMAR	**Chiang Mai Arr**	**43.74**	**284**	P		**P**	**14 07 11.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=81,slow=5.9,SNR=2.1							
FORT	**Forrest**	**45.64**	**199**	P		**P**	**14 07 26.4**	**-0.1**
BBOO	**Buckleboo**	**45.65**	**189**	P		**P**	**14 07 26.6**	**+0.1**
MKAR	**Makanchi Array**	**61.72**	**317**	P		**P**	**14 09 26.1**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=80,slow=10.0,SNR=3.7							
MKAR	**Makanchi Array**	**61.72**	**317**	P		**P**	**14 09 25.7**	**+1.5**
ZALV	**Zalesovo Beam**	**62.05**	**325**	PcP		**PcP**	**14 10 06.8**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=96,slow=3.0,SNR=3.8							
ILAR	**Eielson Array**	**69.94**	**25**	P		**P**	**14 10 16.0**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=260,slow=5.4,SNR=3.0							
ILAR	**Eielson Array**	**69.94**	**25**	P		**P**	**14 10 16.0**	**-0.8**
BCAR	**Beaver Creek A**	**71.83**	**27**	P		**P**	**14 10 28.8**	**+0.5**
HYT	**Haines Junctio**	**73.60**	**30**	P		**P**	**14 10 39.1**	**+0.1**
ABKAR	**Akbulak array**	**76.81**	**318**	P		**P**	**14 10 58.1**	**+0.6**
ABKAR						IAmb	IAmb	14 10 58.7
	comp=Z,0.9nm,0.7s							
NVAR	**Mina Array Bea**	**88.28**	**51**	P		**P**	**14 11 59.3**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=268,slow=7.4,SNR=4.3							
VNDA	**Vanda**	**90.40**	**176**	LR		LR	14 51 55.1	

comp=Z,19nm,18.2s,baz=306,slow=35
FINES FINESS Array B 91.82 335 P **P** **14 12 12.7 -0.8**
comp=Z,5.2nm,1.1s,baz=93,slow=5.0,SNR=4.8

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*BJI **02** 14:04:24.3±0.0,6˚76S×130˚53E,h153km,mB4.9/19, mb4.5/27*
*IDC **02** 14:04:25.3±2.0,6˚35S×130˚24E,h112km±19km,mb4.0/22, mb1 4.1/24,mb1mx4.0/37,mbtmp4.4/24,MS3.3/5, Ms1 3.2/5,ms1mx3.0/25,Error ellipse: s-maj=14.8km s-min=9.6km az=83.0*
*NEIC **02** 14:04:26.1±1.9,6˚32S±0˚06×130˚19E±0˚08,h124km±5km, mb4.7/49,Error ellipse: s-maj=11.4km s-min=8.8km az=82.0*
*DJA **02** 14:04:26.1±0.2,6˚S±2˚×13˚0E±˚,h109km±3km,M4.9/38, mb5.0/38,mB5.3/19,MLv5.4/15,Mw(mB)4.7/19*
ISC 02 14:04:28.1±0.3,6˚41S±0˚05×130˚22E±0˚05,h146km,n176, σ1§46/162,mb4.6/44,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.90**	**350**	P	**Pn**	**14 04 58.9**	**-2.9**
SAUI	**Saumlaki**	**1.90**	**146**	P	**Pn**	**14 04 59.1**	**-2.7**
SAUI	**Saumlaki**	**1.90**	**146**		**Pn**	**14 04 59.0**	**-2.8**
MSAI	**Masohi**	**3.30**	**337**	P	**Pn**	**14 05 17.8**	**-1.4**
FAKI	**Fak Fak**	**4.01**	**30**	P	Pn	14 05 23.6	-4.8
FAKI	**Fak Fak**	**4.01**	**30**	Pn	Pn	14 05 23.4	-5.0
NLAI	**Namlea**	**4.42**	**315**	P	**Pn**	**14 05 33.1**	**-0.7**
SIJI	**Sorong**	**5.60**	**11**	P	Pn	14 05 44.1	-5.3
	69nm,0.3s,baz=187,slow=7.9,SNR=77						
SIJI				S	Sn	14 06 42.6	-10
	65nm,0.3s,baz=189,slow=17,SNR=5.7						
SANI	**Sanana**	**6.04**	**316**	P	**Pn**	**14 05 54.4**	**-1.0**
	0.7nm2µm233nm,0.8s						
MTN	**Manton Dam**	**6.46**	**172**	P	Pn	14 05 57.2	-3.7
	baz=6.5,SNR=1000						
MTN				S	Sn	14 07 06.3	-7.3
	baz=6.5						
MTN	**Manton Dam**	**6.46**	**172**	Pn	**Pn**	**14 05 57.4**	**-3.5**
KDU	**Kakadu**	**6.62**	**161**	P	Pn	14 05 59.1	-4.0
	baz=6.6,SNR=1000						
SOEI	**Soe**	**6.77**	**240**	P	**Pn**	**14 06 03.7**	**-1.5**
	2.6nm6µm624nm,0.9s						
SOEI	**Soe**	**6.77**	**240**	Pn	**Pn**	**14 06 03.5**	**-1.6**
SRPI	**Serui, Papua**	**7.50**	**53**	P	**Pn**	**14 06 12.3**	**-2.6**
	2.3nm88nm,0.5s						
BATI	**Baumata**	**7.51**	**239**	P	**Pn**	**14 06 13.4**	**-1.6**
	68nm,0.3s,baz=117,slow=3.7,SNR=67						
BATI				S	**Sn**	**14 07 35.6**	**-3.2**
	59nm,0.3s,baz=102,slow=19,SNR=4.3						
BATI	**Baumata**	**7.51**	**239**	P	**Pn**	**14 06 13.4**	**-1.6**
	0.9nm3µm198nm,0.8s						
TNTI	**Ternate**	**7.68**	**338**	P	**Pn**	**14 06 14.6**	**-2.6**
	1.2nm3µm423nm,0.7s						
TNTI	**Ternate**	**7.68**	**338**	Pn	**Pn**	**14 06 14.4**	**-2.8**
BAKI	**Biak**	**7.83**	**49**	P	**Pn**	**14 06 17.1**	**-2.1**
	2.1nm4µm306nm,0.8s						
KDI	**Kendari**	**7.95**	**287**	P	**Pn**	**14 06 24.7**	**+3.8**
MMRI	**Maumere**	**8.22**	**254**	P	**Pn**	**14 06 24.9**	**+0.4**
	172nm,1.1s						
MMRI	**Maumere**	**8.22**	**254**	Pn	**Pn**	**14 06 24.4**	**-0.1**
EDFI	**Ende, Flores**	**8.77**	**254**	P	**Pn**	**14 06 31.8**	**-0.2**
	484nm31nm,1.0s						
WAMI	**Wamena**	**8.82**	**74**	P	**Pn**	**14 06 31.9**	**-0.6**
	4µm547nm,0.9s						
LUWI	**Luwuk**	**9.14**	**305**	Pn	**Pn**	**14 06 35.5**	**-1.3**
KMSI	**Cibinong**	**9.32**	**318**	P	**Pn**	**14 06 37.6**	**-1.6**
	2µm182nm,1.0s						
KNRA	**Kununurra**	**9.32**	**189**	S	Sn	14 08 12.4	-10
	baz=9.4						
KNRA	**Kununurra**	**9.32**	**189**	Pn	Pn	14 06 34.5	-4.7
BSSI	**Bau Bau, Buton**	**9.68**	**271**	P	**Pn**	**14 06 41.5**	**-2.4**
	71nm,0.9s						
BKSI	**Bulukumba**	**10.11**	**276**	P	**Pn**	**14 06 49.3**	**-0.3**
	733nm33nm,0.8s						
APSI	**Ampana**	**10.15**	**302**	P	**Pn**	**14 06 50.7**	**+0.6**
	598nm64nm,0.9s						
BNSI	**Bone**	**10.27**	**281**	P	**Pn**	**14 06 50.3**	**-1.4**
	31nm,0.8s						
GENI	**Genyem**	**10.61**	**70**	P	**Pn**	**14 06 53.7**	**-2.6**
	2µm180nm,1.1s						
TTSI	**Tana Toraja**	**10.89**	**287**	P	Pn	14 07 10.6	+11
SGSI	**Sangihe**	**11.06**	**335**	P	**Pn**	**14 07 01.0**	**-1.3**
	104nm,0.7s						
MPSI	**Mapaga**	**12.29**	**303**	P	**Pn**	**14 07 19.5**	**+1.2**
FITZ	**Fitzroy Crossi**	**12.45**	**201**	P	Pn	14 07 14.6	-5.8
	5.1nm,0.3s,baz=23,slow=8.9,SNR=130						
FITZ				S	Sn	14 09 22.4	-16
	12nm,0.3s,baz=74,slow=17,SNR=8.8						
WB0	**Warramunga Arr**	**13.89**	**163**	Pn	Pn	14 07 32.6	-6.2
WRA	**Warramunga Arr**	**14.04**	**164**	P	Pn	14 07 34.5	-6.2
	20nm,0.3s,baz=343,slow=14,SNR=240						
WRA				S	Sn	14 10 01.9	-14
	15nm,0.3s,baz=352,slow=22,SNR=7.8						
WRA	**Warramunga Arr**	**14.04**	**164**	Pn	Pn	14 07 33.9	-6.8
WB2	**Warramunga Arr**	**14.04**	**164**	Pn	Pn	14 07 34.2	-6.6
WR0	**Warramunga Arr**	**14.11**	**163**	Pn	Pn	14 07 35.1	-6.5
KBKI	**Kotabaru**	**14.34**	**282**	P	**P**	**14 07 49.0**	**+1.7**
BBKI	**Banjar Baru**	**15.60**	**280**	P	**P**	**14 08 02.9**	**+1.6**
	96nm,0.8s						
JAGI	**Jajag, Banyuwa**	**16.07**	**262**	Pn	**Pn**	**14 08 03.1**	**-2.9**
JAGI				IAmb	IAmb	14 08 09.1	
	comp=Z,48nm,1.3s						
MTKI	**Muara Teweh, K**	**16.22**	**289**	P	**P**	**14 08 12.0**	**+3.8**
MYLDM	**Lahad Datu**	**16.41**	**314**	Pn	**Pn**	**14 08 05.9**	**-4.2**
MYLDM				IAmb	IAmb	14 08 21.3	
	comp=Z,28nm,1.1s						
BLJI	**Banyuglugur**	**16.55**	**264**	P	**Pn**	**14 08 14.5**	**+2.6**
	comp=Z,2µmcomp=Z,89nm,0.9s						
QIS	**Mount Isa**	**16.75**	**148**	P	**P**	**14 08 12.3**	**-1.8**
	baz=17,SNR=58						
QIS				S	S	14 11 05.4	-16
	baz=17						
PMG	**Port Moresby**	**17.04**	**101**	P	**P**	**14 08 17.7**	**+0.6**
	comp=Z,2.4nm,0.3s,baz=305,slow=11,SNR=7.7						
PMG				S	S	14 11 14.2	-13
	comp=Z,1.6nm,0.3s,baz=342,slow=20,SNR=1.8						
PMG	**Port Moresby**	**17.04**	**101**	P	**P**	**14 08 17.8**	**+0.6**
PMG				IAmb	IAmb	14 08 34.9	
	comp=Z,26nm,0.8s						
AS31	**Alice Springs**	**17.52**	**169**	P	**P**	**14 08 20.9**	**-1.6**
AS31				IAmb	IAmb	14 08 25.3	
	comp=Z,28nm,0.6s						
ASAR	**Alice Springs**	**17.52**	**169**	P	**P**	**14 08 20.4**	**-2.1**
	comp=Z,12nm,0.3s,baz=344,slow=8.9,SNR=344						
ASAR				S	S	14 11 27.0	-10
	comp=Z,2.1nm,0.3s,baz=348,slow=26,SNR=4.0						
ASAR				LR	LR	14 15 57.5	
	comp=Z,51nm,21.2s,baz=336,slow=39						
MTSU	**Mount Surprise**	**18.02**	**132**	P	**P**	**14 08 27.4**	**-0.6**
	baz=18,SNR=118						
PSA00	**Pilbara Seismi**	**18.11**	**213**		**P**	**14 08 29.6**	**+0.7**
PSA00				IAmb	IAmb	14 08 30.6	
	comp=Z,35nm,0.6s						
PSA00	**Pilbara Seismi**	**18.11**	**213**		**P**	**14 08 28.6**	**-0.4**
PSA00				IAmb	IAmb	14 08 30.4	
	comp=Z,20nm,0.6s						
WRKA	**Warakurna**	**18.62**	**185**	P	**P**	**14 08 34.1**	**-0.3**
	baz=19,SNR=220						
STKI	**Sintang**	**19.78**	**288**	P	**Pn**	**14 08 49.3**	**-0.8**
SBUM	**Sibu**	**20.01**	**296**	P	**P**	**14 08 49.8**	**+0.2**
CTA	**Charters Tower**	**20.67**	**133**	P	**P**	**14 08 57.3**	**+0.7**
	comp=Z,9.6nm,0.8s,baz=300,slow=13,SNR=12						
CTAO	**Charters Tower**	**20.67**	**133**	P	**P**	**14 08 56.9**	**+0.2**
CTAO				IAmb	IAmb	14 09 06.3	
	comp=Z,40nm,1.4s						
KPJI	**Karang Pucung**	**21.16**	**266**	P	**P**	**14 09 06.1**	**+4.2**
	comp=Z,52nm,0.8s						
KSM	**Kuching**	**21.36**	**291**	P	**P**	**14 09 04.5**	**+0.4**
KRVT	**Keravat (AS076**	**21.81**	**86**	P	**P**	**14 09 09.4**	**+0.6**
	comp=Z,13nm,0.7s,baz=239,slow=22,SNR=3.9						
CISI	**Cisompet, Garu**	**22.27**	**266**	P	**P**	**14 09 14.1**	**+0.6**
	comp=Z,158nm,0.9s						
CISI	**Cisompet, Garu**	**22.27**	**266**	P	**P**	**14 09 12.1**	**-1.4**
GIRL	**Giralia**	**22.32**	**222**	P	**P**	**14 09 15.0**	**+1.1**
	baz=22,SNR=6.4						
GIRL	**Giralia**	**22.32**	**222**	P	**P**	**14 09 14.3**	**+0.4**
TGY	**Tagaytay City**	**22.36**	**336**	P	**P**	**14 09 14.4**	**0.0**
	comp=Z,166nm,0.7s,baz=90,slow=6.1,SNR=7.6						
LEM	**Lembang**	**22.46**	**268**	P	**P**	**14 09 16.6**	**+1.1**
	comp=Z,55nm,0.8s,baz=143,slow=20,SNR=7.2						
CNJI	**Cibinong**	**22.95**	**266**	P	**P**	**14 09 20.4**	**+0.5**
	comp=Z,287nm,1.2s						
MEEK	**Meekatharra**	**22.96**	**207**	P	**P**	**14 09 20.2**	**+0.3**
	baz=23,SNR=8.4						
CBJI	**Citeko**	**23.23**	**269**	P	**P**	**14 09 22.8**	**+0.3**
	comp=Z,92nm,0.8s						
QLP	**Quilpie**	**24.10**	**148**	P	**P**	**14 09 31.1**	**+0.8**
	baz=24,SNR=14						
FORT	**Forrest**	**24.33**	**185**	P	**P**	**14 09 33.2**	**+0.9**
	baz=24,SNR=12						
FORT	**Forrest**	**24.33**	**185**	P	**P**	**14 09 32.6**	**+0.2**
CGJI	**Cibinong**	**24.37**	**268**	P	**P**	**14 09 33.2**	**+0.3**
	comp=Z,94nm,1.1s						
XMIS	**Christmas Isla**	**24.63**	**259**	P	**P**	**14 09 33.7**	**-1.6**
KMBL	**Kambalda**	**26.03**	**196**	P	**P**	**14 09 48.5**	**+0.8**
	baz=26,SNR=7.4						
MORW	**Morawa**	**26.22**	**209**	P	**P**	**14 09 49.9**	**+0.4**
	baz=26,SNR=7.7						
MORW	**Morawa**	**26.22**	**209**	P	**P**	**14 09 49.4**	**0.0**
MORW				IAmb	IAmb	14 09 51.7	
	comp=Z,40nm,1.4s						
RMQ	**Roma**	**26.66**	**141**	P	**P**	**14 09 53.9**	**+0.4**
	baz=27,SNR=5.6						
BBOO	**Buckleboo**	**26.83**	**169**	P	**P**	**14 09 55.3**	**+0.5**
	baz=27,SNR=41						
BBOO	**Buckleboo**	**26.83**	**169**	P	**P**	**14 09 55.0**	**+0.2**
BBOO				IAmb	IAmb	14 10 21.1	
	comp=Z,24nm,1.2s						
BLDU	**Ballidu**	**27.22**	**206**	P	**P**	**14 09 59.6**	**+1.2**
	baz=27,SNR=15						
STKA	**Stephens Creek**	**27.48**	**159**	P	**P**	**14 10 01.0**	**+0.3**
	comp=Z,4.3nm,0.4s,baz=341,slow=7.9,SNR=44						
STKA				pP	**pP**	**14 10 27.2**	**-3.8**
	comp=Z,13nm,0.7s,baz=348,slow=12,SNR=6.5						
STKA				LR	LR	14 22 10.6	
	comp=Z,89nm,18.4s,baz=12,slow=39						
STKA	**Stephens Creek**	**27.48**	**159**	P	**P**	**14 10 01.2**	**+0.6**
	baz=28,SNR=34						
STKA	**Stephens Creek**	**27.48**	**159**	P	**P**	**14 10 01.0**	**+0.3**
KLBR	**Kellerberrin**	**27.64**	**203**	P	**P**	**14 10 02.9**	**+0.8**
	baz=28,SNR=17						
HTT	**Hallett**	**28.08**	**164**	P	**P**	**14 10 06.7**	**+0.7**
	baz=28,SNR=13						
DLV	**T Lat**	**28.28**	**310**	P	**P**	**14 10 06.5**	**-1.7**
DLV				IAmb	IAmb	14 10 17.0	
	comp=Z,20nm,1.2s						
MUN	**Mundaring**	**28.61**	**205**	P	**P**	**14 10 11.4**	**+0.7**
	baz=29,SNR=3.9						
CMSA	**Cobar Meteorol**	**28.89**	**152**	P	**P**	**14 10 14.2**	**+1.0**
	baz=29,SNR=46						
NWAO	**Narrogin (SRO)**	**29.02**	**203**	P	**P**	**14 10 14.8**	**+0.4**
	comp=Z,5.6nm,0.4s,baz=47,slow=6.9,SNR=15						
NWAO	**Narrogin (SRO)**	**29.02**	**203**	P	**P**	**14 10 15.2**	**+0.9**
	baz=29,SNR=9.7						
NWAO	**Narrogin (SRO)**	**29.02**	**203**	P	**P**	**14 10 15.0**	**+0.7**
NWAO				IAmb	IAmb	14 10 39.5	
	comp=Z,33nm,1.1s						
NWAO	**Narrogin (SRO)**	**29.02**	**203**	P	**P**	**14 10 15.1**	**+0.7**
NWAO				IAmb	IAmb	14 10 39.5	
	comp=Z,26nm,1.1s						
SDSI	**Sungai Dareh**	**29.23**	**280**	P	P	14 10 28.0	+12
KULM	**Kulim**	**31.72**	**291**	P	**P**	**14 10 37.6**	**-0.8**
KULM				IAmb	IAmb	14 10 42.0	
	comp=Z,19nm,1.5s						
ARPS	**Mount Arapiles**	**32.03**	**162**	P	**P**	**14 10 42.3**	**+1.5**
	baz=32,SNR=18						
RPSI	**Rantau Prapat**	**32.53**	**285**	P	**P**	**14 10 43.9**	**-1.6**
RPSI				IAmb	IAmb	14 10 52.4	
	comp=Z,9.9nm,0.9s						
CAN	**Canberra**	**33.57**	**152**	P	**P**	**14 10 55.9**	**+1.6**
TOO	**Toolangi**	**33.99**	**158**	P	**P**	**14 10 59.8**	**+1.9**
TOO				IAmb	IAmb	14 11 20.5	
	comp=Z,21nm,1.2s						
JCJ	**Chichijima**	**35.26**	**19**	P	**P**	**14 11 06.8**	**-2.0**
CMAR	**Chiang Mai Arr**	**39.52**	**309**	P	**P**	**14 11 45.8**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=142,slow=7.2,SNR=22						
CMAR	**Chiang Mai Arr**	**39.52**	**309**	P	**P**	**14 11 44.6**	**-0.3**
CHTO	**Chiang Mai**	**39.73**	**310**	P	**P**	**14 11 44.7**	**-1.9**
CHTO				IAmb	IAmb	14 11 48.4	
	comp=Z,7.5nm,0.8s						
NJ2	**Nanjing**	**39.75**	**345**	*eP*	**P**	**14 11 48.3**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JMN	**Monobe**	**40.06**	**5**	P	**P**	**14 11 49.6**	**+0.4**
JHS	**Saijyo**	**41.27**	**4**	P	**P**	**14 11 59.1**	**+0.1**
JWT	**Wachi**	**41.75**	**6**	P	**P**	**14 12 03.1**	**+0.2**
MJAR	**Matsushiro Arr**	**43.37**	**9**	P	**P**	**14 12 14.8**	**-1.2**
	comp=Z,4.3nm,0.7s,baz=189,slow=9.4,SNR=19						
MJAR				LR	LR	14 28 45.4	
	comp=Z,30nm,20.6s,baz=225,slow=34						
MJAR	**Matsushiro Arr**	**43.37**	**9**	P	**P**	**14 12 14.4**	**-1.6**
MAJO	**Matsushiro**	**43.37**	**9**	P	**P**	**14 12 14.9**	**-1.1**
MAJO				IAmb	IAmb	14 12 16.0	
	comp=Z,7.7nm,0.8s						
MAT	**Matsushiro**	**43.37**	**9**	P	**P**	**14 12 14.4**	**-1.6**
MJB9	**Matsu-Tunnel**	**43.38**	**9**	P	**P**	**14 12 15.2**	**-0.8**
KSRS	**Korea Array**	**43.68**	**357**	P	**P**	**14 12 19.0**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=176,slow=9.4,SNR=6.0						
KSRS				LR	LR	14 28 13.5	
	comp=Z,33nm,20.8s,baz=126,slow=33						
LZH	**Lanzhou**	**48.99**	**332**	*eP*	**P**	**14 13 04.3**	**+4.2**
LZH				pP	pP	14 13 34.2	+2.1
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.7s						
HHC	**Hu-ho-hao-te**	**50.05**	**342**	*eP*	**P**	**14 13 08.4**	**+0.4**
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,58nm,5.4s						
USRK	**Ussuriysk Ar.**	**50.40**	**2**	P	**P**	**14 13 10.7**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=183,slow=6.7,SNR=8.1						
ASAJ	**Asahikawa**	**51.52**	**11**	P	**P**	**14 13 18.9**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=214,slow=3.6,SNR=2.3						
JKA	**Kamikawa-asahi**	**51.52**	**11**	P	**P**	**14 13 18.9**	**+0.1**
JKA	**Kamikawa-asahi**	**51.52**	**11**	IAmb	IAmb	14 13 37.0	
	comp=Z,26nm,1.3s						
OXZ	**Oxford**	**51.95**	**142**	P	**P**	**14 13 22.9**	**+0.8**
TUWZ	**Tuamarina**	**52.18**	**139**	P	**P**	**14 13 24.4**	**+0.6**
KHZ	**Kahutara**	**52.41**	**140**	P	**P**	**14 13 26.0**	**+0.5**
ODAN	**Odare**	**53.04**	**311**	*eP*	**P**	**14 13 29.1**	**-1.5**
TAPN	**Taplejung**	**53.06**	**311**	*eP*	**P**	**14 13 29.6**	**-1.3**
	comp=Z,15nm,0.4s						
RAMN	**Ramite**	**53.68**	**310**	*eP*	**P**	**14 13 34.7**	**-0.7**
GUN	**Gumba**	**54.73**	**311**	*eP*	**P**	**14 13 42.9**	**-0.2**
	comp=Z,20nm,0.6s						
PKI	**Pulchoki**	**54.91**	**310**	*eP*	**P**	**14 13 44.0**	**-0.3**
	comp=Z,7.5nm,0.5s						
PKIN	**Phulchoki**	**54.92**	**310**	*eP*	**P**	**14 13 44.2**	**-0.1**
KKN	**Kakani**	**55.12**	**310**	*eP*	**P**	**14 13 45.4**	**-0.3**
DMN	**Daman**	**55.16**	**310**	*eP*	**P**	**14 13 45.6**	**-0.4**
KLR	**Kul'dur**	**55.42**	**1**	P	**P**	**14 13 47.6**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=192,slow=14,SNR=3.5						
GKN	**Gorkha**	**55.72**	**310**	*eP*	**P**	**14 13 49.9**	**0.0**
	comp=Z,14nm,0.4s						
KOLN	**Koldanda**	**56.39**	**309**	*eP*	**P**	**14 13 55.0**	**+0.2**
DANN	**Dangsing**	**56.56**	**310**	*eP*	**P**	**14 13 56.1**	**+0.1**
PYUN	**Piuthan**	**57.03**	**309**	*eP*	**P**	**14 13 59.4**	**+0.2**
ULN	**Ulaanbaatar**	**57.77**	**342**	P	**P**	**14 14 03.6**	**-0.4**
ULN				IAmb	IAmb	14 14 06.1	
	comp=Z,4.9nm,0.7s						
SONM	**Songino Array**	**57.95**	**341**	P	**P**	**14 14 06.1**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=154,slow=9.9,SNR=6.5						
SONM	**Songino Array**	**57.95**	**341**	P	**P**	**14 14 05.3**	**0.0**
WMQ	**Urumqi**	**63.02**	**327**	*eP*	**P**	**14 14 40.8**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.5s						
PEA0B	**Petropavlovsk-**	**63.69**	**18**	P	**P**	**14 14 44.7**	**+0.9**
PETK	**Petropavlovsk-**	**63.69**	**18**	P	**P**	**14 14 44.6**	**+0.9**
	comp=Z,3.5nm,0.7s,baz=143,slow=5.6,SNR=8.2						
PETK	**Petropavlovsk-**	**63.69**	**18**	P	**P**	**14 14 44.8**	**+1.0**
MK31	**Makanchi Array**	**67.85**	**327**	P	**P**	**14 15 11.8**	**+1.2**
MKAR	**Makanchi Array**	**67.85**	**327**	P	**P**	**14 15 11.8**	**+1.2**
	comp=Z,4.5nm,0.5s,baz=116,slow=7.5,SNR=48						
MKAR	**Makanchi Array**	**67.85**	**327**	P	**P**	**14 15 11.5**	**+0.9**
MAKZ	**Makanchi**	**68.03**	**326**	P	**P**	**14 15 12.7**	**+1.0**
MAKZ				IAmb	IAmb	14 15 13.9	
	comp=Z,14nm,1.4s						
YAK	**Yakutsk**	**68.23**	**360**	P	**P**	**14 15 12.9**	**+0.4**
ZALV	**Zalesovo Beam**	**71.15**	**334**	P	**P**	**14 15 30.6**	**0.0**
	comp=Z,0.9nm,0.4s,baz=126,slow=7.5,SNR=5.5						
ZALV				pP	**pP**	**14 16 01.3**	**-4.0**
	comp=Z,0.5nm,0.3s,baz=123,slow=8.7,SNR=2.2						
ZALV	**Zalesovo Beam**	**71.15**	**334**	P	**P**	**14 15 30.5**	**-0.1**
SEY	**Seymchan**	**71.19**	**11**	P	**P**	**14 15 31.8**	**+1.2**
	comp=Z,4.1nm,0.7s,baz=185,slow=8.7,SNR=8.2						
GAR	**Garm**	**71.41**	**315**	P	**P**	**14 15 33.1**	**+0.4**
GAR				IAmb	IAmb	14 15 37.0	
	comp=Z,17nm,1.4s						
KURBB	**Kurchatov Arra**	**72.12**	**328**	P	**P**	**14 15 37.1**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=123,slow=4.8,SNR=3.2						
KURK	**Kurchatov**	**72.13**	**328**	P	**P**	**14 15 37.1**	**+0.6**
VNDA	**Vanda**	**73.01**	**173**	P	**P**	**14 15 42.6**	**+1.3**
	comp=Z,2.7nm,0.6s,baz=321,slow=7.1,SNR=38						
VNDA	**Vanda**	**73.01**	**173**	P	**P**	**14 15 42.3**	**+1.0**
KK31	**Karatay Array**	**73.04**	**319**	P	**P**	**14 15 42.0**	**-0.2**
KKAR	**Karatay Array**	**73.04**	**319**	P	**P**	**14 15 42.5**	**+0.3**
KKAR	**Karatay Array**	**73.04**	**319**	P	**P**	**14 15 42.2**	**0.0**
KKAR				IAmb	IAmb	14 15 50.1	
	comp=Z,1.8nm,1.1s						
MAW	**Mawson**	**75.58**	**201**	P	**P**	**14 15 57.8**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=87,slow=5.3,SNR=17						
MAW				LR	LR	14 47 08.3	
	comp=Z,28nm,20.9s,baz=57,slow=34						
MAW	**Mawson**	**75.58**	**201**	P	**P**	**14 15 58.2**	**+1.8**
	baz=76,SNR=14						
MAW	**Mawson**	**75.58**	**201**	P	**P**	**14 15 57.7**	**+1.3**
SOCY	**Socotra**	**78.00**	**284**	P	**P**	**14 16 11.3**	**+0.2**
SOCY				IAmb	IAmb	14 16 12.1	
	comp=Z,16nm,0.9s						
GEYT	**Alibeck**	**80.00**	**310**	P	**P**	**14 16 22.5**	**+1.0**
	comp=Z,1.8nm,0.6s,baz=138,slow=6.6,SNR=2.7						
GEYT	**Alibeck**	**80.00**	**310**	IAmb	IAmb	14 16 26.6	
	comp=Z,1.8nm,0.9s						
NRIK	**Noril'sk**	**81.04**	**346**	P	**P**	**14 16 26.4**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=135,slow=7.4,SNR=1.6						
SYO	**Syowa Base**	**84.29**	**201**	eP	**P**	**14 16 43.2**	**+0.1**
ILAR	**Eielson Array**	**92.72**	**25**	P	**P**	**14 17 24.6**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=263,slow=4.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**128.91**	**282**	PKP	**PKPdf**	**14 23 20.0**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=63,slow=1.9,SNR=3.6						
TORD				SKPbc	SKPbc	14 26 28.1	
	comp=Z,0.5nm,0.8s,baz=76,slow=3.8,SNR=5.5						
CPUP	**Villa Florida**	**146.65**	**168**	PKPbc	**PKPbc**	**14 23 54.0**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=213,slow=2.9,SNR=4.4						
LPAZ	**La Paz**	**151.05**	**141**	PKPbc	**PKiKP**	**14 24 07.5**	**+1.3**
	comp=Z,1.1nm,0.4s,baz=146,slow=1.7,SNR=11						
LPAZ	**La Paz**	**151.05**	**141**		**PKiKP**	**14 24 07.0**	**+0.8**

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*IDC **02** 14:14:38.0±1.0,38˚36N×142˚84E,h0km,mb3.7/7, mb1 3.9/10,mb1mx3.6/45,mbtmp3.7/10,ML3.2/3,Error ellipse: s-maj=28.3km s-min=20.3km az=93.0*
*JMA **02** 14:14:40.4±0.1,38˚43N×142˚69E,h26km±2km,M4.0*
*NIED **02** 14:14:40.4,38˚43N×142˚69E,h26km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr-3.41; Mθθ0.58; Mφφ2.83; Mrθ-0.12; Mθφ-1.46; Mφr1.48; Fault plane solution: M0 3.78000×10^14^ NP1: φs162.00000°,δ56.00000°,λ-80.00000°. NP2: φs325.00000°,δ35.00000°,λ-104.00000°.*
*NEIC **02** 14:14:41.1±1.1,38˚34N±0˚06×142˚7E±0˚1,h20km±5km, mb4.3/9 Error ellipse: s-maj=12.9km s-min=8.3km az=112.0*
ISC 02 14:14:41.9±3.9,38˚40N±0˚04×142˚73E±0˚06,h29km±29km, n56,σ1§72/57,mb3.8/11,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**1.00**	**265**	P	**Pn**	**14 14 58.0**	**-2.0**
JIKH				*eS*	**Sn**	**14 15 10.8**	**-2.4**
JKMT	**Kesennumamotoy**	**1.07**	**293**	P	**Pn**	**14 14 58.8**	**-2.2**
JKMT				S	**Sn**	**14 15 12.6**	**-2.2**
OFUJ	**Ofunato**	**1.07**	**310**	P	**Pn**	**14 14 59.0**	**-2.1**
JIO	**Ouri**	**1.09**	**273**	P	**Pn**	**14 14 59.4**	**-1.8**
JIO				S	**Sn**	**14 15 12.5**	**-2.8**
JMK	**Ichinoseki**	**1.31**	**295**	P	**Pn**	**14 15 02.6**	**-1.6**
JMK				*eS*	**Sn**	**14 15 19.1**	**-1.6**
JOM	**Ohasama**	**1.55**	**314**	P	**Pn**

s-min=4.9km az=123.0

ISC 02 14:20:55.3±1.2,**58°02N**±0°05×**152°12W**±0°04,**h38**km±2km, **n102**,σ1°**30**/113,**mb3.8**/5,**Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**0.34**	**226**		**Pn**	**14 21 03.9**	**+0.2**
KDAK					**Sn**	**14 21 09.6**	**-0.8**
OHAK	**Old Harbor**	**1.02**	**219**		**Pn**	**14 21 13.1**	**+0.1**
OHAK					**Sn**	**14 21 27.9**	**+1.9**
KAPH	**Katmai Pasha**	**1.31**	**297**		**Pn**	**14 21 16.9**	**-0.2**
AU22	**Augustine Moun**	**1.50**	**335**		**Pn**	**14 21 20.4**	**+0.8**
AU22					**Sn**	**14 21 38.9**	**+1.0**
AUP	**Augustine Pinn**	**1.51**	**334**		**Pn**	**14 21 21.0**	**+1.2**
AUW	**Augustine West**	**1.53**	**333**		**Pn**	**14 21 21.0**	**+1.0**
AUL	**Augustine Lava**	**1.53**	**334**		**Pn**	**14 21 21.0**	**+1.0**
CNPM	**China Poot**	**1.58**	**17**		**Pn**	**14 21 22.1**	**+1.4**
CNPM					**Sn**	**14 21 41.8**	**+1.9**
KAKN	**Katmai Knife C**	**1.58**	**281**		**Pn**	**14 21 20.6**	**-0.2**
KAKN					**Sn**	**14 21 40.2**	**+0.1**
KCG	**Knife Ck. Glac**	**1.61**	**282**		**Pn**	**14 21 21.6**	**+0.4**
KCG					**Sn**	**14 21 41.0**	**+0.3**
KBM	**Katmai Bkd Mtn**	**1.66**	**280**		**Pn**	**14 21 22.3**	**+0.5**
HOM	**Homer**	**1.66**	**8**		**Pn**	**14 21 23.4**	**+1.6**
HOM					**Sn**	**14 21 44.5**	**+2.7**
CAHL	**Cahill**	**1.69**	**272**		**Pn**	**14 21 22.4**	**0.0**
KABU	**Katmai Buttres**	**1.70**	**280**		**Pn**	**14 21 22.9**	**+0.5**
KABU					**Sn**	**14 21 44.0**	**+1.1**
OPT	**Oil Point**	**1.74**	**341**		**Pn**	**14 21 24.1**	**+1.2**
KJL	**Kejulik**	**1.84**	**273**		**Pn**	**14 21 24.5**	**+0.2**
SII	**Sitkinak Islan**	**1.84**	**218**		**Pn**	**14 21 24.5**	**+0.1**
BRLK	**Bradley Lake**	**1.86**	**20**		**Pn**	**14 21 25.5**	**+0.9**
BRLK					**Sn**	**14 21 47.0**	**+0.1**
BRSE	**Bradley Lake S**	**1.87**	**22**		**Pn**	**14 21 25.7**	**+1.0**
ILS	**Iliamna Low So**	**2.00**	**346**		**Pn**	**14 21 27.3**	**+0.7**
IVE	**Iliamna Volcan**	**2.06**	**347**		**Pn**	**14 21 28.2**	**+0.8**
RSO	**Redoubt South**	**2.47**	**353**	Pn	**Pn**	**14 21 34.3**	**+1.1**
RDWB	**Redoubt West**	**2.50**	**352**		**Pn**	**14 21 34.4**	**+0.9**
SEW	**Seward**	**2.50**	**32**		**Pn**	**14 21 33.7**	**+1.4**
SEW					**Sn**	**14 22 00.6**	**-1.9**
NCT	**North Crescent**	**2.58**	**351**		**Pn**	**14 21 35.3**	**+0.7**
DFR	**Drift River**	**2.60**	**354**		**Pn**	**14 21 35.5**	**+0.7**
SLKM	**Skilak Lake**	**2.68**	**21**		**Pn**	**14 21 36.6**	**+0.8**
SLKM					**Sn**	**14 22 06.5**	**-0.5**
O22K	**Cooper Landing**	**2.76**	**25**		**Pn**	**14 21 37.8**	**+0.9**
CHIR	**Chirikof Islan**	**2.92**	**223**	Pn	**Pn**	**14 21 38.7**	**-0.4**
BGL	**Barrier Glacie**	**3.26**	**358**		**Pn**	**14 21 45.0**	**+1.2**
SPCP	**Crater Peak Br**	**3.26**	**360**		**Pn**	**14 21 45.2**	**+1.3**
SPCG	**Spurr Capps Gl**	**3.28**	**1**		**Pn**	**14 21 45.5**	**+1.3**
RC01	**Rabbit Creek A**	**3.31**	**20**		**Pn**	**14 21 45.6**	**+1.1**
SPNN	**North Nagishla**	**3.37**	**355**		**Pn**	**14 21 46.8**	**+1.4**
PWL	**Port Wells**	**3.44**	**33**		**Pn**	**14 21 47.1**	**+0.8**
STLK	**Strandline Lak**	**3.49**	**2**		**Pn**	**14 21 48.5**	**+1.5**
SUA	**Susitna One**	**3.52**	**11**	Pn	**Pn**	**14 21 47.8**	**+0.3**
SVW2	**Sparrevohn**	**3.55**	**332**		**Pn**	**14 21 47.8**	**-0.1**
HIN	**Hinchinbrook I**	**3.74**	**48**	Pn	**Pn**	**14 21 50.8**	**+0.3**
GLI	**Glacier Island**	**3.85**	**40**		**Pn**	**14 21 52.4**	**+0.6**
KNK	**Knik Glacier**	**3.88**	**27**	Pn	**Pn**	**14 21 52.9**	**+0.7**
FID	**Port Fidalgo**	**3.98**	**44**		**Pn**	**14 21 53.8**	**+0.1**
SKT	**Skwentna**	**3.98**	**4**	Pn	**Pn**	**14 21 54.6**	**+0.8**
GHO	**Glory Hole Cre**	**4.09**	**22**		**Pn**	**14 21 55.6**	**+0.3**
DIV	**Divide**	**4.49**	**43**		**Pn**	**14 22 02.1**	**+1.4**
RAGM	**Ragged Mountai**	**4.50**	**55**	Pn	**Pn**	**14 22 02.8**	**+1.9**
SCM	**Sheep Creek Mo**	**4.52**	**30**		**Pn**	**14 22 02.5**	**+1.3**
HMT	**Hamilton**	**4.66**	**57**	Pn	**Pn**	**14 22 04.8**	**+1.8**
KLU	**Klutina**	**4.68**	**39**		**Pn**	**14 22 04.8**	**+1.4**
BMRM	**Bremner River**	**4.84**	**49**		**Pn**	**14 22 06.6**	**+1.2**
PS12	**TAPS Pump St12**	**4.94**	**43**		**Pn**	**14 22 08.4**	**+1.5**
M24K	**Tolsona, Glenn**	**5.07**	**33**		**Pn**	**14 22 10.2**	**+1.6**
WAT6	**Susitna Watana**	**5.07**	**24**		**Pn**	**14 22 09.4**	**+0.7**
N25K	**Chitina, Valde**	**5.23**	**43**		**Pn**	**14 22 12.2**	**+1.4**
WAT2	**Susitna Watana**	**5.26**	**18**		**Pn**	**14 22 12.5**	**+1.2**
CRQM	**Cirque**	**5.35**	**55**		**Pn**	**14 22 13.8**	**+1.3**
GLB	**Gilahina Butte**	**5.42**	**47**		**Pn**	**14 22 15.3**	**+0.8**
VRDI	**Verde Repeater**	**5.45**	**50**	Pn	**Pn**	**14 22 15.1**	**+1.1**
TGL	**Tana Glacier**	**5.48**	**56**		**Pn**	**14 22 15.9**	**+1.5**
BARK	**Barkley Ridge**	**5.49**	**60**		**Pn**	**14 22 16.2**	**+1.7**
TRF	**Thorofare Moun**	**5.52**	**9**	Pn	**Pn**	**14 22 16.0**	**+1.1**
KTH	**Kantishna Hill**	**5.58**	**6**	Pn	**Pn**	**14 22 16.6**	**+0.9**
DHY	**Denali Highway**	**5.58**	**23**		**Pn**	**14 22 16.7**	**+0.9**
RND	**Reindeer**	**5.64**	**15**	Pn	**Pn**	**14 22 17.5**	**+1.1**
ISLE	**Juniper Island**	**5.64**	**59**		**Pn**	**14 22 18.2**	**+1.7**
MESA	**MESA**	**5.67**	**63**	Pn	**Pn**	**14 22 18.6**	**+1.6**
MCARA	**McCarthy VSAT**	**5.71**	**50**	Pn	**Pn**	**14 22 19.1**	**+1.7**
BALM	**Baldy**	**5.82**	**55**		**Pn**	**14 22 20.4**	**+1.4**
YAH	**Yahtse**	**5.83**	**62**		**Pn**	**14 22 21.3**	**+2.1**
BARN	**Barnard Glacie**	**6.13**	**56**	Pn	**Pn**	**14 22 25.1**	**+1.8**
TABL	**Table Mountain**	**6.13**	**62**	Pn	**Pn**	**14 22 25.4**	**+2.0**
CTGM	**Chitina Glacie**	**6.24**	**57**	Pn	**Pn**	**14 22 26.5**	**+1.8**
PCA	**Pinnacle**	**6.46**	**66**	Pn	**Pn**	**14 22 29.9**	**+2.1**
BCPM	**Bancas Point**	**6.71**	**66**	Pn	**Pn**	**14 22 33.3**	**+1.9**
HDA	**Harding Lake**	**6.88**	**19**		**Pn**	**14 22 34.3**	**+0.9**
CCB	**Clear Creek Bu**	**6.96**	**15**		**Pn**	**14 22 35.1**	**+0.5**
COLA	**College**	**7.17**	**15**	Pn	**Pn**	**14 22 38.5**	**+1.1**
BCAR	**Beaver Creek A**	**7.17**	**41**	Pn	**Pn**	**14 22 39.1**	**+1.6**
MDM	**Murphy Dome**	**7.21**	**13**	Pn	**Pn**	**14 22 39.1**	**+1.1**
IL31		**7.22**	**18**		**Pn**	**14 22 38.4**	**+0.3**
ILAR	**Eielson Array**	**7.22**	**18**	Pn	**Pn**	**14 22 38.8**	**+0.6**
	0.3nm,0.3s,baz=203,slow=13,SNR=12						
ILAR					**Sn**	**14 23 55.3**	**-3.4**
	0.5nm,0.3s,baz=206,slow=22,SNR=6.0						
ILAR	**Eielson Array**	**7.22**	**18**		**Pn**	**14 22 39.0**	**+0.8**
I23K	**Minto, Yukon-K**	**7.27**	**9**	Pn	**Pn**	**14 22 40.0**	**+1.2**
K27K	**Chicken**	**7.75**	**35**	Pn	**Pn**	**14 22 46.6**	**+1.3**
HYT	**Haines Junctio**	**7.96**	**63**	Pn	**Pn**	**14 22 50.8**	**+2.4**
IMAR	**Indian Mountai**	**8.03**	**355**	Pn	**Pn**	**14 22 50.3**	**+1.1**
EGAK	**Eagle**	**8.57**	**33**	Pn	**Pn**	**14 22 57.6**	**+1.1**
WHY	**Whitehorse**	**9.19**	**66**	Pn	**Pn**	**14 23 07.3**	**+2.0**
JIS	**Juneau Island**	**9.38**	**81**	Pn	**Pn**	**14 23 09.0**	**+1.3**
BMAR	**Burnt Mountain**	**10.05**	**17**	Pn	**Pn**	**14 23 17.5**	**+0.7**
TOLK	**Toolik Lake Re**	**10.72**	**5**	Pn	**Pn**	**14 23 27.5**	**+1.5**
DLBC	**Dease Lake**	**11.64**	**79**	Pn	**Pn**	**14 23 41.4**	**+2.7**
	0.4nm,0.3s,baz=233,slow=10,SNR=7.4						
DLBC					**Sn**	**14 25 44.9**	**-2.3**
	0.1nm,0.3s,baz=180,slow=18,SNR=1.7						
DLBC	**Dease Lake**	**11.64**	**79**		**Pn**	**14 23 39.7**	**+1.0**
INK	**Inuvik**	**13.23**	**31**	Pn	**P**	**14 24 09.0**	**-0.4**
	0.1nm,0.3s,baz=219,slow=13,SNR=1.6						
YKA	**Yellowknife Ar**	**18.94**	**61**	P	**Pn**	**14 25 15.7**	**+2.2**
	0.1nm,0.3s,baz=275,slow=11,SNR=4.4						
MA2	**Magadan**	**28.85**	**298**	LR	LR	14 37 28.8	
	comp=Z,34nm,18.0s,baz=106,slow=35						
SONM	**Songino Array**	**56.34**	**308**	P	**P**	**14 30 31.5**	**-0.7**
	0.5nm,0.7s,baz=48,slow=8.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**59.25**	**325**	P	**P**	**14 30 51.2**	**-1.0**
	1.3nm,0.7s,baz=42,slow=5.7,SNR=4.6						
KURK	**Kurchatov**	**63.93**	**327**	P	**P**	**14 31 23.2**	**-0.6**
KURK	**Kurchatov**	**63.93**	**327**	IAmb	IAmb	14 31 38.5	
	comp=Z,2.1nm,1.2s						
KURBB	**Kurchatov Arra**	**64.04**	**327**	P	**P**	**14 31 23.2**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=30,slow=6.5,SNR=4.3						
MKAR	**Makanchi Array**	**66.27**	**322**	P	**P**	**14 31 38.1**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=38,slow=7.3,SNR=2.7						

*IDC **02** 14:28:55.6±2.3,40°.74N×141°.83E,h111km±23km,mb3.2/5, mb1 3.3/8,mb1mx3.1/35,mbtmp3.5/8,Error ellipse: s-maj=31.2km s-min=17.7km az=107.0*

*JMA **02** 14:28:55.1±0.1,40°.81N×141°.89E,h101km±1km,M3.2 JMA Felt I J1.*

ISC 02 14:28:55.0±0.9,**40°.80N**±0°.04×**141°.86E**±0°.06,**h102**km±6km, **n29**,σ0°**67**/37,**mb3.6**/5,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.43**	**300**	P	**Pn**	**14 29 10.6**	**+0.1**
JARK				S	**Sn**	**14 29 22.2**	**+0.1**
JANG	**Nango**	**0.49**	**212**	P	**Pn**	**14 29 11.1**	**+0.1**
JANG				S	**Sn**	**14 29 22.7**	**-0.3**
JTM	**Tenmabayashi**	**0.60**	**269**	P	**Pn**	**14 29 11.6**	**-0.1**
JTM				S	**Sn**	**14 29 24.0**	**-0.3**
JKEN	**Kujiedanarisaw**	**0.60**	**191**	P	**Pn**	**14 29 12.1**	**+0.3**
JKEN				S	**Sn**	**14 29 24.6**	**+0.3**
JAHD	**Aomorihigashid**	**0.61**	**320**	P	**Pn**	**14 29 12.1**	**+0.3**
JAHD				S	**Sn**	**14 29 24.7**	**+0.2**
JOT	**Ohata**	**0.85**	**314**	P	**Pn**	**14 29 13.7**	**-0.3**
JOT				S	**Sn**	**14 29 28.4**	**+0.2**
JAH	**Hinai**	**1.11**	**237**	P	**Pn**	**14 29 17.4**	**+0.6**
JAH				S	**Sn**	**14 29 34.4**	**+1.2**
JKB	**Kayabe**	**1.25**	**331**	P	**Pn**	**14 29 18.4**	**0.0**
JKB				S	**Sn**	**14 29 35.8**	**-0.3**
JSR	**Shiriuchi**	**1.31**	**305**	P	**Pn**	**14 29 19.1**	**+0.1**
JSR				S	**Sn**	**14 29 36.7**	**-0.6**
JOM	**Ohasama**	**1.39**	**198**	P	**Pn**	**14 29 20.2**	**+0.2**
JOM				S	**Sn**	**14 29 38.7**	**-0.3**
JIW	**Iwasaki**	**1.42**	**262**	P	**Pn**	**14 29 21.2**	**+0.8**
JEM	**Erimo**	**1.56**	**38**	P	**Pn**	**14 29 22.4**	**+0.3**
JEM				S	**Sn**	**14 29 42.0**	**-0.7**
JNBK	**Urakawa-nobuka**	**1.63**	**24**	P	**Pn**	**14 29 23.7**	**+0.8**
JNBK				S	**Sn**	**14 29 45.4**	**+1.2**
JRG	**Rokugo**	**1.68**	**214**	P	**Pn**	**14 29 24.5**	**+0.9**
JRG				S	**Sn**	**14 29 46.7**	**+1.3**
JMK	**Ichinoseki**	**1.91**	**195**	P	**Pn**	**14 29 26.5**	**+0.1**
JMK				S	**Sn**	**14 29 49.8**	**-0.6**
ASAJ	**Asahikawa**	**3.36**	**9**	P	**Pn**	**14 29 46.1**	**+0.5**
	0.4nm,0.3s,baz=193,slow=14,SNR=7.0						
MJAR	**Matsushiro Arr**	**5.12**	**215**	P	**Pn**	**14 30 10.0**	**+0.7**
	0.1nm,0.3s,baz=38,slow=12,SNR=4.8						
USRK	**Ussuriysk Ar.**	**8.04**	**298**	P	**Pn**	**14 30 50.4**	**+1.4**
	baz=101,slow=15,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**29.96**	**127**	T	T	15 05 58.4	
	baz=318,slow=75,SNR=8.9						
H11N1	**WAKE ISLAND Hy**	**29.97**	**127**	T	T	15 06 07.8	
	baz=318,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**29.98**	**127**	T	T	15 05 58.0	
	baz=318,slow=75,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**30.78**	**129**	T	T	15 07 16.3	
	baz=318						
H11S3	**WAKE ISLAND Hy**	**30.79**	**129**	T	T	15 07 09.5	
	baz=318						
H11S2	**WAKE ISLAND Hy**	**30.80**	**129**	T	T	15 07 03.0	
	baz=318						
MKAR	**Makanchi Array**	**42.51**	**299**	P	**P**	**14 36 39.5**	**-0.6**
	0.4nm,0.4s,baz=80,slow=10.0,SNR=6.0						
ILAR	**Eielson Array**	**46.16**	**34**	P	**P**	**14 37 09.1**	**+0.3**
	0.2nm,0.6s,baz=279,slow=7.2,SNR=1.8						
INK	**Inuvik**	**50.90**	**28**	P	**P**	**14 37 46.0**	**+0.9**
	2.5nm,1.0s,baz=304,slow=3.6,SNR=2.4						
WRA	**Warramunga Arr**	**60.83**	**188**	P	**P**	**14 38 55.4**	**-1.1**
	0.5nm,0.8s,baz=6.5,slow=7.1,SNR=7.1						
ASAR	**Alice Springs**	**64.56**	**188**	P	**P**	**14 39 20.3**	**-0.8**
	0.4nm,0.8s,baz=3.5,slow=7.6,SNR=5.2						

*BJI **02** 15:12:19.6±0.0,23°.94S×179°.21W,h521km,mB5.0/8, mb4.4/11*

*IDC **02** 15:12:21.2±1.2,23°.83S×179°.90W,h501km±11km, mb3.7/17,mb1 3.9/18,mb1mx3.8/22,mbtmp4.6/18,Error ellipse: s-maj=13.1km s-min=12.2km az=146.0*

*NEIC **02** 15:12:22.0±1.6,23°.80S±0°.10×179°.9W±0°.1,h516km±5km, mb4.8/72,Error ellipse: s-maj=14.9km s-min=13.5km az=129.0*

ISC 02 15:12:20.2±0.3,**23°.93S**±0°.05×**179°.83W**±0°.06,**h500**km, **n206**,σ1°**70**/241,**mb4.7**/50,**25C-2D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.56**	**163**	P	**P**	**15 13 56.6**	**+4.4**
RIZ				S	**S**	**15 15 02.0**	**-5.5**
RAO	**Raoul Island**	**5.57**	**163**	P	**P**	**15 13 55.5**	**+3.3**
	95nm,0.3s,baz=284,slow=2.2,SNR=3.1						
RAO				S	**S**	**15 15 05.8**	**-1.8**
	175nm,0.3s,baz=70,slow=18,SNR=6.3						
RAO	**Raoul Island**	**5.57**	**163**	P	**P**	**15 13 54.9**	**+2.6**
GLKZ	**Green Lake**	**5.58**	**163**	P	**P**	**15 13 55.1**	**+2.8**
GLKZ				S	**S**	**15 15 00.3**	**-7.4**
NIUE	**Niue**	**10.41**	**64**	P	**P**	**15 14 41.6**	**-0.3**
AFI	**Afiamalu**	**12.54**	**39**	P	**P**	**15 15 01.5**	**-3.3**
	4.8nm,0.3s,baz=192,slow=5.7,SNR=11						
AFI				S	S	15 17 09.4	-11
	6.0nm,0.3s,baz=180,slow=20,SNR=1.8						
AFI	**Afiamalu**	**12.54**	**39**	P	**P**	**15 15 01.4**	**-3.4**
OUZ	**Omahuta**	**12.61**	**205**	P	**P**	**15 15 07.8**	**+2.7**
DZM	**Mont Dzumac**	**12.78**	**276**	P	**P**	**15 15 10.3**	**+3.1**
	0.8nm,0.3s,baz=71,slow=22,SNR=8.9						
MXZ	**Matakaoa Point**	**13.68**	**186**	P	**P**	**15 15 17.5**	**+1.2**
HAZ	**Te Kaha**	**13.93**	**188**	P	**P**	**15 15 18.9**	**0.0**
HAZ				S	**S**	**15 17 45.3**	**-1.1**
TWGZ	**Tauwhareparae**	**14.32**	**187**	P	**P**	**15 15 25.9**	**+2.7**
TWGZ				S	**S**	**15 17 52.2**	**-1.8**
URZ	**Urewera**	**14.52**	**190**	P	**P**	**15 15 21.7**	**-3.4**
	16nm,0.3s,baz=19,slow=18,SNR=79						
URZ				S	**S**	**15 17 54.3**	**-3.4**
	4.9nm,0.3s,baz=63,slow=21,SNR=27						
URZ	**Urewera**	**14.52**	**190**	P	**S**	**15 15 24.4**	**-0.7**
URZ				S	**S**	**15 17 56.0**	**-1.7**
URZ	**Urewera**	**14.52**	**190**	P	**S**	**15 15 23.0**	**-2.1**
URZ				S	**S**	**15 17 58.1**	**+0.4**
MWZ	**Matawai**	**14.53**	**188**	P	**P**	**15 15 25.6**	**+0.2**
MWZ				S	**S**	**15 17 55.4**	**-2.7**
RIGZ	**Rimuhau**	**14.87**	**187**	P	**P**	**15 15 29.6**	**+0.7**
PRGZ	**Paritu Road**	**15.07**	**187**	P	**P**	**15 15 32.0**	**+1.0**
PRGZ				S	**S**	**15 18 06.1**	**-2.2**
RAHZ	**Arahi**	**15.17**	**189**	P	**P**	**15 15 30.5**	**-1.5**
RAHZ				S	**S**	**15 18 06.4**	**-3.8**
KNZ	**Kokohu**	**15.19**	**187**	S	**S**	**15 18 08.1**	**-2.5**
HIZ	**Hauiti**	**15.22**	**196**	P	**P**	**15 15 37.2**	**+4.6**
WHHZ	**Waihua**	**15.30**	**189**	P	**P**	**15 15 34.6**	**+1.2**
WHHZ				S	**S**	**15 18 11.0**	**-1.8**
BKZ	**Black Stump Fm**	**15.50**	**191**	P	**P**	**15 15 34.6**	**-1.0**
BKZ				S	**S**	**15 18 07.0**	**-10**
BKZ	**Black Stump Fm**	**15.50**	**191**	P	**P**	**15 15 33.6**	**-2.0**
KWHZ	**Kaweka Forest**	**15.77**	**191**	P	**P**	**15 15 37.7**	**-0.6**
KWHZ				S	**S**	**15 18 18.8**	**-2.9**
BHHZ	**Black Hill Sta**	**15.89**	**192**	P	**P**	**15 15 36.6**	**-3.0**
BHHZ				S	**S**	**15 18 20.6**	**-3.5**
PNHZ	**Pukenui**	**16.28**	**191**	P	**P**	**15 15 41.2**	**-2.5**
PNHZ				S	**S**	**15 18 27.2**	**-4.0**
PXZ	**Pawanui**	**16.29**	**189**	P	**P**	**15 15 41.2**	**-2.5**
PXZ				S	**S**	**15 18 27.5**	**-3.7**
BFZ	**Birch Farm**	**17.02**	**190**	P	**P**	**15 15 49.2**	**-2.1**
MSWZ	**Moikau Station**	**17.91**	**192**	P	**P**	**15 15 57.4**	**-2.2**
SNZO	**South Karori**	**17.92**	**193**	P	**P**	**15 15 57.6**	**-2.0**
BHW	**Baring Head**	**17.98**	**193**	P	**P**	**15 15 58.0**	**-2.2**
QRZ	**Quartz Range**	**18.02**	**199**	P	**P**	**15 16 01.3**	**+0.7**
PLWZ	**Palliser**	**18.06**	**192**	P	**P**	**15 15 58.9**	**-2.1**
NNZ	**Nelson**	**18.15**	**197**	P	**P**	**15 16 00.8**	**-0.9**
TUWZ	**Tuamarina**	**18.21**	**195**	P	**P**	**15 16 01.1**	**-1.2**
CMWZ	**Cape Campbell**	**18.45**	**194**	P	**P**	**15 16 05.5**	**+1.0**
BSWZ	**Blackbirch Sta**	**18.49**	**195**	P	**P**	**15 16 04.5**	**-0.4**
THZ	**Tophouse**	**18.78**	**197**	P	**P**	**15 16 07.1**	**-0.5**
KHZ	**Kahutara**	**19.24**	**195**	P	**P**	**15 16 11.1**	**-0.5**
LTZ	**Lake Taylor**	**19.90**	**197**	P	**P**	**15 16 16.5**	**-1.3**
LTZ				IAmb	IAmb	15 16 20.6	
	comp=Z,37nm,0.8s						
OXZ	**Oxford**	**20.47**	**197**	P	**P**	**15 16 21.4**	**-1.6**
MQZ	**McQueen's Vall**	**20.67**	**196**	P	**P**	**15 16 23.9**	**-0.8**
MQZ				IAmb	IAmb	15 16 33.4	
	comp=Z,49nm,1.1s						
RPZ	**Rata Peaks**	**21.11**	**199**	P	**P**	**15 16 29.3**	**+0.6**
	comp=Z,18nm,0.5s,baz=24,slow=4.1,SNR=9.2						
RPZ	**Rata Peaks**	**21.11**	**199**	P	**P**	**15 16 28.7**	**0.0**
FOZ	**Fox Glacier**	**21.33**	**201**	P	**P**	**15 16 30.2**	**-0.4**
LBZ	**Lake Benmore**	**21.98**	**199**	P	**P**	**15 16 35.9**	**-0.7**
LBZ				IAmb	IAmb	15 16 48.0	
	comp=Z,26nm,1.2s						
ODZ	**Otahua Downs**	**22.44**	**198**	P	**P**	**15 16 41.0**	**+0.3**
ODZ				IAmb	IAmb	15 16 54.3	
	comp=Z,61nm,1.5s						
WKZ	**Wanaka**	**22.74**	**201**	P	**P**	**15 16 42.6**	**-0.8**
WKZ				IAmb	IAmb	15 16 46.6	
	comp=Z,15nm,0.9s						
MLZ	**Mavora Lakes**	**23.52**	**202**	P	**P**	**15 16 50.3**	**0.0**
MLZ				IAmb	IAmb	15 16 57.0	
	comp=Z,34nm,1.2s						
WHZ	**Wether Hill Ro**	**24.04**	**201**	P	**P**	**15 16 54.5**	**-0.4**
WHZ				IAmb	IAmb	15 16 57.3	
	comp=Z,32nm,0.9s						
ARMA	**Armidale**	**26.16**	**249**	P	**P**	**15 17 15.9**	**+1.9**
EIDS	**Eidsvold**	**26.45**	**261**	P	**P**	**15 17 17.8**	**+1.2**
EIDS				IAmb	IAmb	15 17 18.8	
	comp=Z,32nm,1.4s						
PPT	**Papeete**	**28.95**	**83**	P	**P**	**15 17 40.1**	**+1.4**
	comp=Z,14nm,0.7s,baz=225,slow=12,SNR=1.5						
PPTF	**Pamatai, Papee**	**28.96**	**83**	P	**P**	**15 17 39.2**	**+0.5**
CAN	**Canberra**	**29.26**	**240**	P	**P**	**15 17 42.8**	**+1.7**
CAN				IAmb	IAmb	15 17 44.5	
	comp=Z,30nm,1.2s						
CTA	**Charters Tower**	**31.63**	**270**	P	**P**	**15 18 02.8**	**+1.0**
	comp=Z,15nm,0.4s,baz=95,slow=11,SNR=14						
CTAO	**Charters Tower**	**31.63**	**270**	P	**P**	**15 18 02.9**	**+1.1**
CTAO				IAmb	IAmb	15 18 03.4	
	comp=Z,19nm,0.5s						
TOO	**Toolangi**	**32.56**	**237**	P	**P**	**15 18 10.9**	**+1.3**
TAU	**Tasmania Unive**	**33.02**	**227**	P	**P**	**15 18 14.8**	**+1.5**
RABL	**Rabaul**	**33.38**	**302**	P	**P**	**15 18 17.1**	**+0.4**
PMG	**Port Moresby**	**34.65**	**289**	P	**P**	**15 18 25.8**	**-1.6**
PMG				IAmb	IAmb	15 18 28.8	
	comp=Z,36nm,1.4s						
STKA	**Stephens Creek**	**34.85**	**248**	P	**P**	**15 18 29.7**	**+0.7**
	comp=Z,2.6nm,0.3s,baz=81,slow=7.9,SNR=25						
STKA				PcP	**PcP**	**15 20 49.1**	**+0.9**
	comp=Z,1.7nm,0.4s,baz=75,slow=5.7,SNR=3.8						
STKA	**Stephens Creek**	**34.85**	**248**	P	**P**	**15 18 29.6**	**+0.7**
BBOO	**Buckleboo**	**39.57**	**247**	P	**P**	**15 19 07.7**	**0.0**
BBOO				IAmb	IAmb	15 19 08.2	
	comp=Z,29nm,1.2s						
AS31	**Alice Springs**	**42.18**	**261**	P	**P**	**15 19 28.8**	**+0.1**
ASAR	**Alice Springs**	**42.18**	**261**	P	**P**	**15 19 29.0**	**+0.3**
	comp=Z,4.5nm,0.3s,baz=96,slow=7.1,SNR=232						
ASAR				PcP	**PcP**	**15 21 12.2**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=111,slow=4.5,SNR=5.3						
ASAR				ScP	**ScP**	**15 24 15.6**	**+1.2**
	comp=Z,2.4nm,0.8s,baz=106,slow=4.1,SNR=11						
ASAR				S	**S**	**15 25 10.4**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=97,slow=15,SNR=7.1						
ASAR	**Alice Springs**	**42.18**	**261**	P	**P**	**15 19 28.4**	**-0.3**
WR0	**Warramunga Arr**	**42.37**	**266**	P	**P**	**15 19 29.8**	**-0.4**
WR0				IAmb	IAmb	15 19 30.4	
	comp=Z,8.4nm,0.5s						
WB2	**Warramunga Arr**	**42.55**	**266**	P	**P**	**15 19 31.4**	**-0.2**
WB2				IAmb	IAmb	15 19 31.9	
	comp=Z,16nm,0.5s						
WB0	**Warramunga Arr**	**42.55**	**266**	P	**P**	**15 19 31.3**	**-0.4**
WB0				IAmb	IAmb	15 19 31.9	
	comp=Z,21nm,0.3s						
WRA	**Warramunga Arr**	**42.56**	**266**	P	**P**	**15 19 31.5**	**-0.2**
	comp=Z,11nm,0.4s,baz=103,slow=8.3,SNR=291						
WRA				PcP	**PcP**	**15 21 13.0**	**0.0**
	comp=Z,1.2nm,0.4s,baz=109,slow=3.4,SNR=6.9						
WRA				ScP	**ScP**	**15 24 18.2**	**+2.3**
	comp=Z,2.5nm,0.9s,baz=97,slow=3.6,SNR=8.9						
WRA				S	**S**	**15 25 13.4**	**-4.3**
	comp=Z,5.1nm,1.1s,baz=103,slow=14,SNR=7.6						
WRA	**Warramunga Arr**	**42.56**	**266**	P	**P**	**15 19 30.6**	**-1.1**
WAKE	**Wake Island**	**44.93**	**342**	P	**P**	**15 19 47.4**	**-2.5**
FORT	**Forrest**	**46.44**	**250**	P	**P**	**15 20 01.3**	**

MKAR	**Makanchi Array**	**112.29**	**313**	PKiKP	**PKiKP**	**15**	**29**	**58.0 -0.7**
	comp=Z,0.5nm,0.4s,baz=111,slow=3.2,SNR=10							
GAR	**Garm**	**119.67**	**302**	PKPdf	**PKPdf**	**15**	**30**	**12.9 -0.3**
KK31	**Karatay Array**	**120.01**	**307**	PKPdf	**PKPdf**	**15**	**30**	**13.1 -0.5**
KKAR	**Karatay Array**	**120.01**	**307**	PKPdf	**PKPdf**	**15**	**30**	**12.9 -0.7**
KKAR	**Karatay Array**	**120.01**	**307**	PKPdf	**PKPdf**	**15**	**30**	**13.0 -0.7**
BRVK	**Borovoye**	**120.63**	**319**		**PKPdf**	**15**	**30**	**13.9 -0.6**
BOSA	**Boshof**	**122.44**	**206**	PKP	**PKiKP**	**15**	**30**	**19.8 +0.6**
	comp=Z,1.8nm,0.8s,baz=202,slow=5.4,SNR=2.1							
GEYT	**Allbeck**	**129.12**	**300**	PKP	**PKiKP**	**15**	**30**	**32.0 0.0**
	comp=Z,2.0nm,0.7s,baz=69,slow=8.3,SNR=4.3							
ARCES	**ARCESS Array B**	**131.95**	**348**	PKP	**PKPdf**	**15**	**30**	**35.3 -0.4**
	comp=Z,1.3nm,0.5s,baz=44,slow=1.5,SNR=14							
ARCES				SKPbc	**SKPbc**	**15**	**33**	**13.5 -1.3**
	comp=Z,0.9nm,0.5s,baz=42,slow=4.8,SNR=4.4							
FINES	**FINESS Array B**	**138.53**	**342**	PKhKP	PKPpre	15	30	39.1
	comp=Z,2.6nm,0.9s,baz=68,slow=4.9,SNR=7.1							
FINES				PKP	**PKPdf**	**15**	**30**	**48.6 +0.6**
	comp=Z,4.2nm,0.9s,baz=350,slow=1.7,SNR=4.2							
FINES				SKPbc	**SKPbc**	**15**	**33**	**34.5 -0.8**
	comp=Z,2.5nm,0.8s,baz=61,slow=1.7,SNR=8.5							
NB2	**NORSAR Subarra**	**142.14**	**351**	PKP	**PKPdf**	**15**	**30**	**51.1 -3.6**
	comp=Z,0.6nm,0.6s,baz=9.3,slow=3.1							
NOA	**NORSAR Array B**	**142.14**	**351**	PKhKP	**PKPdf**	**15**	**30**	**51.0 -3.6**
	comp=Z,0.7nm,0.5s,baz=17,slow=4.3,SNR=2.7							
MARD	**Mardin**	**142.88**	**301**	PKPpre	**PKPdf**	**15**	**30**	**54.1 -2.7**
AKASG	**Malin Array Be**	**145.08**	**327**	PKP	**PKPdf**	**15**	**30**	**60.0 0.0**
	comp=Z,4.9nm,0.6s,baz=42,slow=4.1,SNR=24							
AKASG				SKPbc	**SKPbc**	**15**	**33**	**51.8 -0.3**
	comp=Z,0.7nm,0.5s,baz=43,slow=3.3,SNR=3.0							
AKASG	**Malin Array Be**	**145.08**	**327**		**PKPdf**	**15**	**30**	**59.6 -0.4**
AKBB	**Malin Array Si**	**145.08**	**327**	PKPdf	**PKPdf**	**15**	**30**	**59.9 -0.1**
SORM	**Soroca**	**147.12**	**324**	↑P	**PKPbc**	**15**	**31**	**06.4 -0.1**
BRTR	**Keskin Array B**	**147.72**	**307**	PKPbc	**PKPbc**	**15**	**31**	**08.5 -0.1**
	comp=Z,1.5nm,0.4s,baz=132,slow=2.1,SNR=7.7							
TLCR		**148.55**	**319**	↑P	**PKPbc**	**15**	**31**	**09.7 -0.6**
KWP	**Kalwaria Pacla**	**148.87**	**331**	*e*PKP	**PKiKP**	**15**	**31**	**11.6 -0.3**
CFR	**Carcaliu**	**148.96**	**320**	↑P	**PKiKP**	**15**	**31**	**11.8 -0.4**
TPGR	**Topolog**	**148.97**	**319**	↑P	**PKiKP**	**15**	**31**	**12.1 -0.2**
BIZ	**Bicaz**	**149.05**	**324**	↑P	**PKiKP**	**15**	**31**	**12.5 +0.1**
BURAR	**Bucovina Array**	**149.08**	**326**	↑P	**PKiKP**	**15**	**31**	**13.4 +0.8**
BURAR	**Bucovina Array**	**149.08**	**326**		**PKPbc**	**15**	**31**	**12.0 +0.3**
CSS	**Mathiatis**	**149.23**	**299**		**PKPbc**	**15**	**31**	**12.1 -0.3**
HARR	**Harsova**	**149.35**	**319**	↑P	**PKiKP**	**15**	**31**	**13.5 +0.4**
VRI	**Vrincioaia**	**149.37**	**322**	↑P	**PKiKP**	**15**	**31**	**12.2 -0.1**
OJC	**Ojcow**	**149.63**	**335**	*e*PKP	**PKiKP**	**15**	**31**	**12.9 +0.1**
OJC	**Ojcow**	**149.63**	**335**		**PKPbc**	**15**	**31**	**12.5 -0.2**
MLR	**Muntele Rosu**	**150.03**	**322**	↑P	**PKiKP**	**15**	**31**	**15.1 +0.5**
MLR	**Muntele Rosu**	**150.03**	**322**		**PKPbc**	**15**	**31**	**13.5 -0.6**
DOPR	**Dopca**	**150.05**	**323**	↑P	**PKiKP**	**15**	**31**	**15.6 +1.1**
NIE	**Niedzica**	**150.06**	**333**	*e*PKP	**PKiKP**	**15**	**31**	**14.7 +0.2**
KSP	**Ksiaz**	**150.37**	**339**	*e*PKP	**PKiKP**	**15**	**31**	**15.1 +0.1**
CJR	**Cluj-Napoca**	**150.51**	**326**	↑P	**PKiKP**	**15**	**31**	**16.4 +0.9**
VOIR		**150.56**	**323**	↑P	**PKiKP**	**15**	**31**	**16.1 +0.4**
OKC	**Ostrava-Krasne**	**150.57**	**336**	↑*e*PKP	**PKiKP**	**15**	**31**	**15.7 +0.3**
OSTC	**Ostas**	**150.64**	**339**	↑*e*PKP	**PKiKP**	**15**	**31**	**16.2 +0.6**
CHVC	**Chvalec**	**150.67**	**339**	↑*e*PKP	**PKPbc**	**15**	**31**	**14.5 -0.7**
UPC	**Upice**	**150.75**	**339**	↑*e*PKP	**PKiKP**	**15**	**31**	**16.0 +0.2**
DPC	**Dobruska-Polom**	**150.78**	**339**	↑*e*PKP	**PKiKP**	**15**	**31**	**16.1 +0.1**
DPC				*e*PKPAB	**PKPab**	**15**	**31**	**25.1 +0.2**
MORC	**Moravsky Berou**	**150.84**	**337**	↑P	**PKiKP**	**15**	**31**	**17.1 +1.1**
MORC	**Moravsky Berou**	**150.84**	**337**	*e*PKP	**PKiKP**	**15**	**31**	**16.4 +0.3**
MORC	**Moravsky Berou**	**150.84**	**337**		**PKPbc**	**15**	**31**	**15.4 -0.3**
KRLC	**Kraliky**	**150.86**	**338**	↑*e*PKP	**PKPbc**	**15**	**31**	**15.9 +0.2**
CLL	**Collm**	**150.93**	**343**	*i* PKPbc	**PKPbc**	**15**	**31**	**15.9 +0.2**
	comp=Z,17nm,0.8s							
CLL				*i* PKPab	**PKPab**	**15**	**31**	**25.0 -0.3**
	comp=Z,5.0nm,1.0s							
CLL				*e*pPKPab	**pPKPab**	**15**	**33**	**20.0 +2.4**
CLL	**Collm**	**150.93**	**343**		**PKPbc**	**15**	**31**	**15.4 -0.3**
BRG	**Berggiesshubel**	**151.06**	**342**	*i* PKP	**PKPbc**	**15**	**31**	**16.3 +0.2**
	comp=Z,9.3nm,0.7s							
JAVC	**Velka Javorina**	**151.55**	**335**	*e*PKP	**PKiKP**	**15**	**31**	**19.1 +1.5**
VRAC	**Vranov**	**151.57**	**337**	*e*PKP	**PKiKP**	**15**	**31**	**17.8 +0.2**
PRU	**Pruhonice**	**151.67**	**340**	↑*e*PKP	**PKPbc**	**15**	**31**	**16.9 -0.6**
GZR	**Gura Zlata**	**151.82**	**325**	↑P	**PKPbc**	**15**	**31**	**18.0 0.0**
KRUC	**Moravsky**	**151.85**	**337**	*e*PKP	**PKiKP**	**15**	**31**	**18.4 +0.3**
BZS	**Buzias**	**152.26**	**327**	↑P	**PKiKP**	**15**	**31**	**19.5 +0.4**
HERR	**Herculane**	**152.35**	**325**	↑P	**PKiKP**	**15**	**31**	**20.0 +0.7**
KHC	**Kasperske Hory**	**152.72**	**341**	↑*e*PKP	**PKPbc**	**15**	**31**	**18.8 -1.1**
KHC				*ex*	x	15	31	33.3
MDVR	**Moldovita**	**152.79**	**325**	↑P	**PKiKP**	**15**	**31**	**20.3 +0.1**
GERES	**GERESS Array B**	**152.94**	**340**	PKPbc	**PKiKP**	**15**	**31**	**20.7 +0.2**
	comp=Z,1.0nm,0.8s,baz=29,slow=2.2,SNR=8.8							
GERES				PKPab	**PKPab**	**15**	**31**	**33.9 -0.2**
	comp=Z,0.3nm,0.4s,baz=42,slow=4.6,SNR=2.3							
CONA	**Conrad Observa**	**153.00**	**336**	*e*P	**PKiKP**	**15**	**31**	**21.1 +0.4**
	comp=Z,4.4nm,0.7s							
CONA				*e*P	**PKPab**	**15**	**31**	**33.2 -1.2**
	comp=Z,4.4nm,0.7s							
MOA	**Molln**	**153.63**	**338**	*e*P	**PKiKP**	**15**	**31**	**22.5 +0.6**
	comp=Z,4.6nm,1.2s							
SOKA	**Soboth**	**154.35**	**336**	*e*P	**PKPab**	**15**	**31**	**39.5 -0.7**
	comp=Z,2.4nm,0.8s							
OBKA	**Obir**	**154.68**	**336**	*e*P	**PKPab**	**15**	**31**	**40.7 -0.9**
	comp=Z,3.5nm,1.0s							
WATA	**Walderalm**	**154.93**	**341**	*e*P	**PKPab**	**15**	**31**	**38.8 -3.9**
	comp=Z,8.4nm,1.7s							
WTTA	**Wattenberg**	**154.98**	**341**	*e*P	**PKPab**	**15**	**31**	**42.8 -0.1**
	comp=Z,2.9nm,0.6s							
MOTA	**Moosalm**	**155.06**	**342**	*e*P	**PKPdf**	**15**	**31**	**13.3 -2.4**
	comp=Z,8.1nm,1.6s							
SQTA	**Sankt Quirin**	**155.14**	**342**	*e*P	**PKPab**	**15**	**31**	**42.3 -1.3**
	comp=Z,2.3nm,0.8s							
ABTA	**Abfaltersbach**	**155.17**	**340**	*e*P	**PKPdf**	**15**	**31**	**15.2 -0.6**
	comp=Z,6.0nm,1.6s							
ABTA				*e*P	**PKPab**	**15**	**31**	**42.0 -1.7**
	comp=Z,5.9nm,1.2s							
FUORN	**Ofenpass-Fuorn**	**155.95**	**343**		**PKPab**	**15**	**31**	**47.5 +0.2**
TORD	**Torodi Ar. Bea**	**169.18**	**188**	PKP	**PKPdf**	**15**	**31**	**29.6 -0.8**
	comp=Z,2.2nm,1.0s,baz=245,slow=1.0,SNR=7.2							
TORD				PKPab	**PKPab**	**15**	**32**	**45.4 -0.2**
	comp=Z,3.0nm,0.8s,baz=180,slow=3.3,SNR=15							
TORD				PP	**PP**	**15**	**36**	**34.7 0.0**
	comp=Z,1.9nm,1.1s,baz=201,slow=3.9,SNR=6.3							

*IDC **02** 15:27:42.8±3.2, 31°.43N×139°.78E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.2/39, mbtmp3.2/3, ML1.9/1, Error ellipse: s-maj=115.3km s-min=32.2km az=75.0*
*JMA **02** 15:27:46.6±0.3, 32°.13N×141°.02E, h35km, M3.4*
ISC 02 15:27:44.2±1.8, 31°.9N±0°.1×141°.0E±0°.2, h35km, n9, σ2§33/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.20**	**299**	P	**Pn**	**15 28 06.2**	**+1.7**
JHJ2	**Mitsune**	**1.58**	**321**	P	**Pn**	**15 28 10.7**	**+1.0**
JHJ2				*eS*	**Sn**	**15 28 28.0**	**-1.0**
JHJ	**Hanno**	**4.21**	**341**	*eS*	**Sn**	**15 29 30.5**	**-3.3**
MJAR	**Matsushiro Arr**	**5.19**	**334**	Pn	**Pn**	**15 29 02.6**	**+3.2**
	0.0nm,0.3s,baz=163,slow=15,SNR=1.2						
MJAR				Sn	**Sn**	**15 29 57.7**	**-0.3**
	0.0nm,0.3s,baz=140,slow=22,SNR=4.3						
H11S3	**WAKE ISLAND Hy**	**26.71**	**114**	T	T	16 02 24.4	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**26.71**	**114**	T	T	16 02 11.8	
	baz=304						
H11S2	**WAKE ISLAND Hy**	**26.73**	**114**	T	T	16 02 11.9	
	baz=304						
MKAR	**Makanchi Array**	**46.73**	**306**	P	**P**	**15 36 08.9**	**-0.9**
	0.5nm,0.5s,baz=85,slow=9.8,SNR=7.0						
WRA	**Warramunga Arr**	**51.93**	**188**	P	**P**	**15 36 49.0**	**-0.6**
	0.2nm,0.6s,baz=4.0,slow=7.5,SNR=1.5						

IDC 02 15:37:40.1±2.0, 32°.60N×93°.45E, h0km, mb3.2/3, mb1 3.4/5, mb1mx3.2/39, mbtmp3.2/5, ML3.0/2, Error ellipse: s-maj=84.5km s-min=25.8km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**16.55**	**332**	Pn	Pn	15 41 31.1	-2.5
	0.1nm,0.3s,baz=152,slow=16,SNR=1.3						
SONM	**Songino Array**	**18.10**	**29**	P	Pn	15 41 52.7	-0.4
	0.1nm,0.3s,baz=219,slow=11,SNR=2.3						
ZALV	**Zalesovo Beam**	**22.21**	**346**	P	P	15 42 38.3	+0.3
	0.3nm,0.3s,baz=148,slow=11,SNR=1.6						
WRA	**Warramunga Arr**	**65.26**	**137**	P	P	15 48 23.4	-0.4
	0.3nm,0.8s,baz=329,slow=5.9,SNR=1.9						
ASAR	**Alice Springs**	**67.98**	**140**	P	P	15 48 41.5	+0.3
	0.2nm,0.6s,baz=323,slow=6.3,SNR=7.2						

IDC 02 15:48:02.6±2.2, 1°.76N×126°.47E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/36, mbtmp3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/22, Error ellipse: s-maj=170.1km s-min=27.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**20.66**	**245**	LR	LR	16 01 42.0	
	comp=Z,62nm,18.0s,baz=104,slow=40						
WRA	**Warramunga Arr**	**22.91**	**161**	P	P	15 53 07.9	-0.4
	0.8nm,0.5s,baz=340,slow=11,SNR=24						
ASAR	**Alice Springs**	**26.29**	**164**	P	P	15 53 40.3	+0.3
	0.2nm,0.4s,baz=335,slow=7.3,SNR=7.6						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	15 58 04.3	0.0
	0.2nm,0.5s,baz=124,slow=7.3,SNR=1.8						

*NEIC **02** 15:49:44.5±1.0, 19°.8S±0°.1×177°.8W±0°.2, h382km±5km, mb4.0/15, Error ellipse: s-maj=24.5km s-min=14.6km az=123.0*
*IDC **02** 15:49:45.4±2.6, 19°.77S×177°.86W, h390km±29km, mb3.1/12, mb1 3.4/14, mb1mx3.2/48, mbtmp3.9/14, Error ellipse: s-maj=24.5km s-min=13.9km az=143.0*
ISC 02 15:49:41.6±0.6, 19°.8S±0°.1×177°.8W±0°.1, h350km, n31, σ0§81/28, mb3.5/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.21**	**46**	P	**P**	**15 51 43.1**	**+1.8**
	3.4nm,0.3s,baz=312,slow=23,SNR=1.4						
AFI				S	**S**	**15 53 13.4**	**-0.4**
	2.0nm,0.3s,baz=141,slow=20,SNR=1.6						
URZ	**Urewera**	**18.95**	**192**	P	**P**	**15 53 38.8**	**+0.2**
	0.7nm,0.3s,baz=64,slow=11,SNR=2.2						
URZ	**Urewera**	**18.95**	**192**	IAmb	IAmb	15 54 04.4	
	comp=Z,18nm,1.1s						
BKZ	**Black Stump Fm**	**19.96**	**193**	P	**P**	**15 53 49.4**	**+0.2**
BKZ				IAmb	IAmb	15 54 10.7	
	comp=Z,18nm,1.1s						
KHZ	**Kahutara**	**23.74**	**196**	P	**P**	**15 54 23.1**	**-0.4**
WHZ	**Wether Hill Ro**	**28.58**	**201**	P	**P**	**15 55 06.8**	**+0.2**
CTA	**Charters Tower**	**33.72**	**263**	P	**P**	**15 55 53.0**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=69,slow=14,SNR=1.4						
STKA	**Stephens Creek**	**38.25**	**243**	P	**P**	**15 56 30.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=87,slow=12,SNR=4.2						
STKA	**Stephens Creek**	**38.25**	**243**	IAmb	IAmb	15 56 33.8	
	comp=Z,2.8nm,1.4s						
BBOO	**Buckleboo**	**43.02**	**243**	P	**P**	**15 57 08.0**	**-0.1**
BBOO				IAmb	IAmb	15 57 14.9	
	comp=Z,22nm,1.4s						
WR0	**Warramunga Arr**	**44.67**	**261**	P	**P**	**15 57 21.3**	**+0.1**
WR0				IAmb	IAmb	15 57 46.0	
	comp=Z,3.3nm,1.2s						
WB0	**Warramunga Arr**	**44.83**	**262**	P	**P**	**15 57 22.1**	**-0.5**
WB0				IAmb	IAmb	15 57 28.3	
	comp=Z,5.4nm,1.3s						
AS31	**Alice Springs**	**44.84**	**256**	P	**P**	**15 57 22.7**	**+0.1**
ASAR	**Alice Springs**	**44.84**	**256**	P	**P**	**15 57 22.8**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=100,slow=8.1,SNR=18						
WB2	**Warramunga Arr**	**44.85**	**261**	P	**P**	**15 57 22.5**	**-0.1**
WB2				IAmb	IAmb	15 57 49.9	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**44.86**	**261**	P	**P**	**15 57 22.0**	**-0.7**
	comp=Z,2.0nm,0.3s,baz=97,slow=7.2,SNR=12						
FITZ	**Fitzroy Crossi**	**53.28**	**262**	P	**P**	**15 58 25.9**	**0.0**
	comp=Z,3.6nm,1.2s,baz=69,slow=8.6,SNR=1.9						
VNDA	**Vanda**	**58.66**	**185**	P	**P**	**15 59 03.1**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=27,slow=6.8,SNR=1.9						
VNDA	**Vanda**	**58.66**	**185**	P	**P**	**15 59 01.7**	**-1.1**
MJAR	**Matsushiro Arr**	**69.70**	**323**	P	**P**	**16 00 14.1**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=155,slow=5.7,SNR=6.1						
MJAR	**Matsushiro Arr**	**69.70**	**323**	IAmb	IAmb	16 00 15.5	
	comp=Z,7nm,1.4s						
MAJO	**Matsushiro**	**69.70**	**323**	P	**P**	**16 00 14.3**	**-0.2**
QSPA	**South Pole Qui**	**70.31**	**180**	P	**P**	**16 00 17.3**	**-0.6**
QSPA				IAmb	IAmb	16 00 20.6	
	comp=Z,3.8nm,1.1s						
PETK	**Petropavlovsk-**	**75.59**	**345**	P	**P**	**16 00 48.7**	**+0.3**
	comp=Z,6.3nm,1.1s,baz=143,slow=8.4,SNR=4.3						
NVAR	**Mina Array Bea**	**80.38**	**43**	P	**P**	**16 01 15.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=226,slow=8.3,SNR=4.4						
TXAR	**Lajitas Array**	**86.53**	**57**	P	**P**	**16 01 46.7**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=225,slow=5.1,SNR=3.6						
ILAR	**Eison Array**	**87.56**	**13**	P	**P**	**16 01 48.8**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=229,slow=5.1,SNR=13						
PDAR	**Pinedale Array**	**88.32**	**43**	P	**P**	**16 01 54.3**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=226,slow=2.4,SNR=1.6						
DPC	**Dobruska-Polom**	**147.46**	**343**	*e*PKP	PKPab	16 08 57.1	+9.4
KHC	**Kasperske Hory**	**149.29**	**345**	*e*PKP	**PKPab**	**16 08 54.0**	**-1.2**
GERES	**GERESS Array B**	**149.53**	**345**	PKPbc	**PKPbc**	**16 08 48.2**	**-1.8**
	comp=Z,0.3nm,0.6s,baz=20,slow=3.1,SNR=4.8						

*IDC **02** 16:03:52.0±0.7, 64°.60N×17°.76W, h0km, mb3.7/15, mb1 4.0/17, mb1mx3.8/56, mbtmp3.8/17, ML3.2/2, MS4.4/1, Ms1 4.4/1, ms1mx3.7/32, Error ellipse: s-maj=20.8km s-min=12.8km az=16.0*
*NEIC **02** 16:03:53.3±1.5, 64°.55N±0°.07×17°.7W±0°.2, h8km±4km, mb4.2/13, Error ellipse: s-maj=10.9km s-min=9.6km az=51.0*
ISC 02 16:03:53.6±0.5, 64°.60N±0°.10×17°.78W±0°.05, h10km, n44, σ1§33/44, mb3.8/20, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.53**	**277**	Pn	**Pn**	**16 04 18.8**	**-2.2**
	18nm,0.3s,baz=103,slow=8.5,SNR=31						
BORG				Sn	**Sg**	**16 04 43.1**	**+0.2**
	9.3nm,0.3s,baz=21,slow=18,SNR=6.2						
BORG	**Borgarnes**	**1.53**	**277**	Pn	**Pn**	**16 04 19.1**	**-1.9**
EKA	**Eskdalemuir Ar**	**11.79**	**135**	Pn	**Pn**	**16 06 40.0**	**-1.7**
	baz=325,slow=13,SNR=6.0						
NRS	**Narsarsaq**	**13.01**	**267**	Pn	**Pn**	**16 06 59.1**	**+0.9**
FINES	**FINESS Array B**	**19.84**	**79**	P	**P**	**16 08 23.8**	**-0.4**
	0.1nm,0.3s,baz=299,slow=14,SNR=2.6						
CLL	**Collm**	**20.78**	**115**	*e*P	**P**	**16 08 34.0**	**-0.5**
	comp=Z,8.0nm,1.3s						
BRG	**Berggiesshubel**	**21.49**	**115**	*e*P	**P**	**16 08 41.9**	**-0.3**
	comp=Z,8.2nm,1.1s						
GERES	**GERESS Array B**	**23.03**	**118**	P	**P**	**16 08 58.0**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=308,slow=9.9,SNR=5.7						
GERES	**GERESS Array B**	**23.03**	**118**	P	**P**	**16 08 57.9**	**-0.7**
ESDC	**Sonseca Array**	**26.24**	**155**	P	**P**	**16 09 28.8**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=351,slow=10,SNR=7.3						
DUGI	**Dugi Otok**	**27.62**	**122**	Sg	**S**	**16 14 28.7**	**+6.4**
AKASG	**Malin Array Be**	**27.95**	**97**	P	**P**	**16 09 45.0**	**+1.2**
	comp=Z,0.2nm,0.2s,baz=337,slow=9.3,SNR=1.9						
NRIK	**Noril'sk**	**36.58**	**35**	P	**P**	**16 10 59.0**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=305,slow=4.3,SNR=3.6						
BRTR	**Keskin Array B**	**38.58**	**105**	P	**P**	**16 11 16.5**	**0.0**
	comp=Z,1.1nm,0.8s,baz=330,slow=8.3,SNR=3.3						
KBZ	**Khabaz**	**39.23**	**92**	P	**P**	**16 11 22.2**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=321,slow=6.5,SNR=4.0						
AKTO	**Aktyubinsk**	**40.42**	**73**	P	**P**	**16 11 30.6**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=332,slow=11,SNR=3.1						
ABKAR	**Akbulak array**	**42.13**	**73**	P	**P**	**16 11 44.0**	**-1.5**
TIXI	**Tiksi**	**42.13**	**15**	P	**P**	**16 11 45.7**	**+0.5**
TIXI				IAmb	IAmb	16 11 47.8	
	comp=Z,6.1nm,1.1s						
TOLK	**Toolik Lake Re**	**42.76**	**336**	P	**P**	**16 11 51.8**	**+1.3**
TOLK				IAmb	IAmb	16 11 53.4	
	comp=Z,7.4nm,1.1s						
BMAR	**Burnt Mountain**	**42.90**	**333**	P	**P**	**16 11 53.1**	**+1.4**
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**16 12 14.2**	**+0.2**
	comp=Z,1.4nm,1.1s,baz=25,slow=5.1,SNR=7.7						
ILAR				PcP	**PcP**	**16 13 51.6**	**0.0**
	comp=Z,0.6nm,0.9s,baz=345,slow=3.6,SNR=4.3						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**16 12 15.0**	**+1.0**
IMAR	**Indian Mountai**	**45.87**	**337**	P	**P**	**16 12 16.6**	**+1.2**
ZALV	**Zalesovo Beam**	**47.77**	**51**	P	**P**	**16 12 30.1**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=348,slow=6.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**47.77**	**51**	P	**P**	**16 12 29.5**	**-0.8**
KURK	**Kurchatov**	**48.25**	**58**	P	**P**	**16 12 33.1**	**-1.0**
KKAR	**Karatay Array**	**51.41**	**69**	P	**P**	**16 12 58.0**	**-0.3**
KKAR	**Karatay Array**	**51.41**	**69**	P	**P**	**16 12 58.2**	**-0.1**
KKAR				IAmb	IAmb	16 12 59.4	
	comp=Z,1.2nm,1.0s						
OXF	**Oxford**	**51.61**	**271**	P	**P**	**16 13 00.2**	**+0.4**
MKAR	**Makanchi Array**	**52.86**	**58**	P	**P**	**16 13 08.2**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=351,slow=7.4,SNR=4.2						
BW06	**Boulder Array**	**53.09**	**293**	P	**P**	**16 13 11.2**	**+0.1**
BW06				IAmb	IAmb	16 13 13.7	
	comp=Z,2.9nm,1.2s						
PDAR	**Pinedale Array**	**53.09**	**293**	P	**P**	**16 13 11.2**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=35,slow=5.4,SNR=5.9						
PDAR	**Pinedale Array**	**53.09**	**293**	P	**P**	**16 13 11.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**53.13**	**156**	P	**P**	**16 13 10.8**	**-0.5**
	comp=Z,1.3nm,1.0s,baz=342,slow=6.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**53.13**	**156**	IAmb	IAmb	16 13 11.9	
	comp=Z,1.0nm,0.9s						
D05A	**Enumclaw**	**54.02**	**305**	P	**P**	**16 13 17.1**	**-0.3**
KDJ	**Kajisay**	**54.88**	**65**	P	**P**	**16 13 24.1**	**0.0**
TLY	**Talaya**	**55.53**	**40**	P	**P**	**16 13 28.7**	**+0.3**
TLY				IAmb	IAmb	16 13 29.4	
	comp=Z,2.2nm,0.7s						
MA2	**Magadan**	**55.84**	**7**	LR	LR	16 38 37.6	
	comp=Z,291nm,18.1s,baz=346,slow=37						
PV13	**Radium Mtn., P**	**56.71**	**289**	P	**P**	**16 13 38.0**	**+0.8**
MSU	**Marysvale**	**57.76**	**292**	P	**P**	**16 13 43.9**	**-0.8**
SONM	**Songino Array**	**59.77**	**40**	P	**P**	**16 13 58.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=324,slow=9.4,SNR=2.5						
TXAR	**Lajitas Array**	**62.18**	**280**	P	**P**	**16 14 16.3**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=35,slow=3.3,SNR=2.5						
CMAR	**Chiang Mai Arr**	**84.27**	**58**	P	**P**	**16 16 24.9**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=318,slow=7.1,SNR=5.1						

*REY **02** 16:05:41.7, 64°.69N×17°.40W, h5km*
*MOS **02** 16:05:44.9±1.1, 64°.59N×17°.18W, h14km, mb5.2/98, MS4.7/39, Error ellipse: s-maj=7.4km s-min=4.5km az=106.0*
*BJI **02** 16:05:44.2±0.0, 64°.84N×17°.16W, h6km, mB5.5/49, mb4.8/53, Ms5.4/50, Ms7 5.1/50*
*IDC **02** 16:05:44.4±0.4, 64°.60N×17°.24W, h0km, mb4.5/33, mb1 4.6/38, mb1mx4.5/52, mbtmp4.5/38, ML3.0/4, MS5.0/40, Ms1 5.0/40, ms1mx5.0/42, Error ellipse: s-maj=13.0km s-min=8.5km az=23.0*
*BGS **02** 16:05:45.0±1.8, 64°.57N×17°.07W, h5km, MS5.0*
*NEIC **02** 16:05:46.1±1.8, 64°.57N±0°.08×17°.1W±0°.1, h10km±1km, mb5.2/317, Mww5.4, Mwc5.4(GCMT), Error ellipse: s-maj=13.6km s-min=9.5km az=195.0*
*NEIC **02** 16:05:49, 64°.57N×16°.96W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.58; Mθθ 0.95; Mθφ 0.63; Mrθ

baz=1.5
ISAU Saurbar 1.52 248 P Pn 16 06 08.5 -5.0
baz=243
IGIL Gilhagi 1.54 13 P Pn 16 06 07.6 -6.2
baz=17
IBRE Brettingsstaoi 1.57 350 P Pn 16 06 08.7 -5.5
baz=352
ISIG Siglufjorour 1.71 336 P Pn 16 06 10.1 -6.1
baz=337
IKRO Krokur 1.77 256 P Pn 16 06 12.3 -4.7
baz=252
BORG Borgarnes 1.77 277 Pn Pn 16 06 11.1 -5.9
65nm,0.3s,baz=88,slow=6.6,SNR=40
BORG Sn **Sn 16 06 37.5 -2.2**
121nm,0.3s,baz=191,slow=22,SNR=9.4
BORG Borgarnes 1.77 277 Pn 16 06 11.5 -5.6
BORG Sn **Sn 16 06 38.8 -0.9**
IHEI Heioarbar 1.79 259 P Pn 16 06 12.7 -4.5
baz=255
IBJA Bjarnastaoir 1.90 252 P **Pn 16 06 15.0 -3.7**
baz=248
ISAN Sandskeio 1.97 256 P **Pn 16 06 16.0 -3.7**
baz=252
JMIC Jan Mayen 7.22 23 LR LR 16 09 52.1
comp=Z,18µm,18.7s,baz=246,slow=34
LEWI Lewis, Hebride 8.14 138 *eP* **Pn 16 07 43.0 -1.5**
LEWI IAMs_20 IAMs_20 16 11 20.1
comp=Z,11µm,13.5s
LINV Loch Inver, As 8.65 133 *eP* **Pn 16 07 49.9 -1.5**
ANGG Ammassalik, Gr 8.67 286 Pn **Pn 16 07 53.2 +1.6**
ANGG Ammassalik, Gr 8.67 286 IAMs_20 IAMs_20 16 12 10.0
comp=Z,23µm,6.1s
LRW Lerwick 8.68 114 IAMs_20 IAMs_20 16 11 33.6
comp=Z,15µm,15.5s
BIGH Upper Bighouse 8.80 128 *eP* **Pn 16 07 52.6 -0.9**
BIGH IAMs_20 IAMs_20 16 11 25.4
comp=Z,8µm,13.2s
BIGH Upper Bighouse 8.80 128 *eP* **Pn 16 07 53.5 +0.1**
KAC Achmashellach 9.15 135 *eP* **Pn 16 07 57.0 -1.3**
KPL Plockton 9.18 137 *eP* **Pn 16 07 57.1 -1.5**
KPL IAMs_20 IAMs_20 16 11 44.2
comp=Z,13µm,13.4s
KPL Plockton 9.18 137 *eP* **Pn 16 07 57.9 -0.7**
MDO Dochfour 9.49 133 *eP* **Pn 16 08 01.6 -1.2**
MCD Coleburn Disti 9.73 130 *eP* **Pn 16 08 05.1 -1.1**
DBG Daneborg 9.82 355 *iP* Pn 16 08 19.6 +12
DBG IAMs_20 IAMs_20 16 14 50.2
comp=Z,8µm,7.0s
ICESG Greenland Ices 9.88 307 *iP* Pn 16 08 19.2 +11
INVG Invergeldie, C 10.42 136 *eP* **Pn 16 08 14.2 -1.5**
INVG IAMs_20 IAMs_20 16 12 23.1
comp=Z,12µm,15.6s
FOO Floro 10.50 96 *eP* **Pn 16 08 15.5 -1.2**
DRUM Mains of Drumt 10.52 130 *eP* **Pn 16 08 15.9 -1.1**
EAB Aberfoyle 10.54 137 *eP* **Pn 16 08 16.1 -1.1**
SUE Sulen 10.63 99 *eP* **Pn 16 08 15.6 -2.9**
PGBU Glenifferbraes 10.82 138 *eP* **Pn 16 08 20.2 -0.9**
CLGH Cloghs, Cushen 11.03 145 *eP* **Pn 16 08 22.5 -1.4**
CLGH IAMs_20 IAMs_20 16 14 10.4
comp=Z,11µm,12.0s
SUMG Summit 11.08 325 *iP* **Pn 16 08 25.6 +0.7**
SUMG MLR MLR
comp=Z,27µm,12.0s
SUMG Summit 11.08 325 Pn **Pn 16 08 24.8 -0.1**
SUMG Summit 11.08 325 *iP* **Pn 16 08 25.6 +0.7**
comp=Z,27µm,12.0s
SUMG Summit 11.08 325 *iP* **Pn 16 08 25.6 +0.7**
SUMG IAMs_20 IAMs_20 16 12 35.3
comp=Z,27µm,12.0s
ASK Askoy 11.11 101 *eP* **Pn 16 08 23.6 -1.3**
EDI Edinburgh 11.11 135 *eP* **Pn 16 08 22.7 -2.3**
EDI IAMs_20 IAMs_20 16 12 37.2
comp=Z,10µm,16.0s
EDI Edinburgh 11.11 135 P Pn 16 08 28.9 +3.9
EDI Edinburgh 11.11 135 *eP* **Pn 16 08 23.5 -1.5**
HYA Hoyanger 11.19 97 *eP* **Pn 16 08 27.1 +1.0**
BER Bergen 11.22 102 *eP* **Pn 16 08 25.5 -1.0**
EBL Broad Law 11.28 135 *eP* **Pn 16 08 26.6 -0.8**
NEWG New Galloway 11.50 140 *eP* **Pn 16 08 28.2 -2.1**
NEWG IAMs_20 IAMs_20 16 13 15.5
comp=Z,12µm,12.5s
EKA Eskdalemuir Ar 11.62 136 Pn **Pn 16 08 30.7 -1.3**
baz=320,slow=13,SNR=46
EKA LR LR 16 12 59.9
comp=Z,8µm,18.1s,baz=325,slow=37
ESK Eskdalemuir 11.62 137 *eP* **Pn 16 08 30.5 -1.5**
ESK IAMs_20 IAMs_20 16 13 09.3
comp=Z,11µm,14.6s
ESK Eskdalemuir 11.62 137 P **Pn 16 08 31.3 -0.8**
ESK Eskdalemuir 11.62 137 Pn **Pn 16 08 31.3 -0.8**
KMY Karmoy 11.84 107 *eP* **Pn 16 08 34.6 -0.4**
BLS5 Blasjo 12.22 104 *eP* **Pn 16 08 38.6 -1.6**
DAG Danmarks Havn 12.26 358⇑ *iP* **Pn 16 08 44.0 +3.4**
DAG MLR MLR
comp=Z,9µm,22.0s
DAG Danmarks Havn 12.26 358⇑ *iP* **Pn 16 08 44.0 +3.4**
comp=Z,9µm,22.0s
DAG Danmarks Havn 12.26 358⇑ *iP* **Pn 16 08 44.0 +3.4**
DAG IAMs_20 IAMs_20 16 12 08.0
comp=Z,9µm,22.0s
DSB Dublin 12.65 149 Pn **Pn 16 08 46.5 +0.4**
NC204 NORSAR Array S 13.11 92 Pn **Pn 16 08 50.8 -1.6**
NBO00 NORSAR Array S 13.23 93 **Pn 16 08 52.0 -2.0**
NAO01 NORSAR Array S 13.36 93 Pn **Pn 16 08 52.9 -2.9**
NC303 NORSAR Array S 13.39 91 Pn **Pn 16 08 53.0 -3.2**
NB2 NORSAR Subarra 13.41 92 Pn **Pn 16 08 54.5 -2.0**
comp=Z,137nm,2.0s,baz=297,slow=14
NB2 NORSAR Subarra 13.41 92 Pn **Pn 16 08 54.5 -2.0**
baz=297,slow=14
NOA NORSAR Array B 13.41 92 Pn **Pn 16 08 54.1 -2.4**
comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=8.7
NOA LR LR 16 13 57.6
comp=Z,3µm,21.3s,baz=300,slow=37
NB201 NORSAR Array S 13.44 92 Pn **Pn 16 08 55.2 -1.7**
NC405 NORSAR Array S 13.59 92 Pn **Pn 16 08 57.5 -1.4**
NC602 NORSAR Array S 13.70 93 Pn **Pn 16 08 58.8 -1.5**
SFJD Kangerlussuaq 13.81 295 LR LR 16 13 48.6
comp=Z,12µm,19.8s,baz=88,slow=35
SFJD Kangerlussuaq 13.81 295 P **Pn 16 09 01.7 -0.1**
SFJD Kangerlussuaq 13.81 295 **Pn 16 09 01.7 -0.1**
SFJD Kangerlussuaq 13.81 295 *iP* **Pn 16 09 05.2 +3.4**
comp=Z,1µm,16.0s
SFJD Kangerlussuaq 13.81 295 *iP* **Pn 16 09 05.3 +3.4**
SFJD IAMs_20 IAMs_20 16 13 44.3
comp=Z,1µm,16.0s
ILULI Ilulissat 13.94 304 P **Pn 16 09 06.2 +2.6**
ILULI Ilulissat 13.94 304 **Pn 16 09 06.2 +2.6**
ILULI Ilulissat 13.94 304 IAMs_20 IAMs_20 16 14 07.9
comp=Z,15µm,11.3s
HLM1 Long Mynd 14.18 142 *eP* **Pn 16 09 05.7 -1.3**
HLM1 IAMs_20 IAMs_20 16 16 02.1
comp=Z,10µm,10.3s
CWF Charnwood Fore 14.42 138 *eP* **Pn 16 09 08.8 -1.4**
CWF IAMs_20 IAMs_20 16 14 46.5
comp=Z,7µm,17.7s
NUUK Nuuk 14.82 284 *eP* **P 16 09 22.8 +1.2**
NUUK IAMs_20 IAMs_20 16 14 52.3
comp=Z,9µm,9.5s
NUUG Nuugaatsiaq 14.90 313 *iP* **P 16 09 25.2 +2.8**
NUUG IAMs_20 IAMs_20 16 14 54.7
comp=Z,14µm,9.9s
HFS Hagfors 14.92 93 Pn **Pn 16 09 16.2 -0.9**
comp=Z,0.1nm,0.3s,baz=353,slow=7.8,SNR=2.1
HFS LR LR 16 14 54.2
comp=Z,4µm,20.9s,baz=284,slow=37
MUD Monsted U'grnd 15.22 110 *iP* P 16 09 34.2 +8.1
comp=Z,4µm,14.0s
MUD Monsted U'grnd 15.22 110 *iP* P 16 09 34.2 +8.1
MUD IAMs_20 IAMs_20 16 17 18.2
comp=Z,4µm,14.0s
UPNV Upernavik 16.02 317 *iP* **P 16 09 38.5 +3.7**
UPNV IAMs_20 IAMs_20 16 15 27.0
comp=Z,10µm,11.2s
KBS Kingsbay 16.68 19⇑ *eP* **P 16 09 43.1 +1.0**
KBS pmax pmax
comp=Z,16nm,1.0s
KBS Kingsbay 16.68 19⇑ *iP* **P 16 09 43.0 +1.0**
KBS IAMs_20 IAMs_20 16 13 52.8
comp=Z,13µm,22.4s
SPA0 Spitsbergen Ar 16.89 23 P **P 16 09 44.5 0.0**
SPITS Spitsbergen Ar 16.89 23 LR LR 16 14 38.5
comp=Z,6µm,19.8s,baz=230,slow=32
ARCES ARCESS Array B 17.07 54 P **P 16 09 45.7 -0.8**
baz=275,slow=9.5,SNR=4.5
ARCES LR LR 16 15 09.5
comp=Z,6µm,20.7s,baz=285,slow=33
COP Copenhagen 17.09 108 IAMs_20 IAMs_20 16 19 12.8
comp=Z,2µm,9.1s
NOR Nord 17.11 0⇑ *iP* **P 16 09 46.5 -0.3**
NOR Nord 17.11 0⇑ *iP* **P 16 09 46.5 -0.3**
NOR Nord 17.11 0⇑ *iP* **P 16 09 46.5 -0.3**
KEV Kevo 17.57 54 P **P 16 09 51.3 -0.7**
KEV pmax pmax
comp=Z,58nm,1.1s
KEV Kevo 17.57 54 P **P 16 09 51.3 -0.7**
SNF Seneffe 18.08 131 Pn **Pn 16 09 56.4 -1.0**
SNF Seneffe 18.08 131 P P 16 10 05.3 +7.5
RGN Rugen 18.25 109 *eP* **P 16 10 00.1 +0.5**
RGN *eS* S 16 13 38.9 +11
BEBN Eben Emael 18.30 128 Pn **Pn 16 09 57.0 -3.1**
BSTI Sart Tilman 18.44 129 P **P 16 10 06.2 +4.5**
BGES Gesves 18.45 130 Pn **Pn 16 09 59.7 -2.2**
BCLA Clavier 18.49 129 Pn **P 16 10 00.5 -1.8**
BCLA Clavier 18.49 129 P **Pn 16 10 07.9 +5.5**
BSD Bornholm Skovb 18.51 106 *i* P **P 16 10 00.8 -1.6**
BSD MLR MLR
comp=Z,3µm,23.0s
BSD Bornholm Skovb 18.51 106 *i* P **P 16 10 00.8 -1.6**
comp=Z,3µm,23.0s
BSD Bornholm Skovb 18.51 106 *i* P **P 16 10 00.8 -1.6**
BSD IAMs_20 IAMs_20 16 15 59.2
comp=Z,3µm,22.7s
DOU Dourbes 18.54 131 P **Pn 16 10 07.6 +4.7**
MEM Membach 18.57 128 Pn **P 16 10 01.6 -1.5**
MEM Membach 18.57 128 P **Pn 16 10 08.7 +5.4**
BTNL Ternell 18.63 128 P **Pn 16 10 08.3 +4.2**
BHOU Houvegnez 18.79 128 Pn **P 16 10 03.3 -2.3**
BHOU Houvegnez 18.79 128 P **Pn 16 10 11.1 +5.1**
WLF Walferdange 19.42 129 P **Pn 16 10 15.8 +2.1**
WLF Walferdange 19.42 129 P **Pn 16 10 13.2 -0.4**
WLF Walferdange 19.42 129 P **Pn 16 10 13.2 -0.4**
FINES FINESS Array B 19.60 79 P **Pn 16 10 14.6 -1.1**
comp=Z,0.3nm,0.3s,baz=307,slow=11,SNR=11
FINES LR LR 16 17 38.2
comp=Z,2µm,20.7s,baz=292,slow=36
FINES FINESS Array B 19.60 79 P **Pn 16 10 14.7 -1.0**
FIA1 FINESS Array S 19.60 79 Pn **Pn 16 10 15.1 -0.5**
CLF Chambon-Foret 19.66 138 P **Pn 16 10 14.9 -1.5**
CLF IAmb IAmb 16 10 22.1
comp=Z,247nm,1.5s
RUE Ruedersdorf 19.96 113 *eP* **P 16 10 18.0 -0.3**
TULEG Thule 19.98 327 P Pn 16 10 20.6 +0.5
TULEG IAmb IAmb 16 10 26.4
comp=Z,260nm,1.5s
TULEG Thule 19.98 327 IAMs_20 IAMs_20 16 17 49.0
comp=Z,12µm,13.4s
SLIT Slitere, Latvi 20.02 92 *eP* **Pn 16 10 19.6 -1.2**
SLIT *eS* **Sn 16 14 08.1 +2.5**
APA Apatity 20.27 59⇑ *iP* Pn 16 10 22.6 -0.9
APA *iS* **S 16 14 08.0 -0.5**
APA pmax pmax
comp=Z,31nm,0.8s
CLL Collm 20.56 116⇓ *iP* Pn 16 10 25.5 -1.6
comp=Z,63nm,1.5s
CLL *iP* sP 16 10 28.2 -1.1
comp=Z,151nm,1.6s
CLL *e*Pmax 16 10 30.0
CLL *i* 16 10 34.3
CLL *eS* Sn 16 14 21.0 +2.3
CLL *eSS* **SnSn 16 14 35.0 +2.0**
CLL *e*SSS SSS 16 14 42.0
CLL Lmax 16 19 00.0
CLL Collm 20.56 116⇓ *iP* Pn 16 10 25.5 -1.6
CLL *i* 16 10 28.2
CLL pmax pmax
comp=Z,63nm,1.5s
CLL Collm 20.56 116 P **P 16 10 24.8 -0.1**
CLL IAmb IAmb 16 10 35.5
comp=Z,101nm,1.3s
GKP Gorka Klasztor 20.78 107 *eP* **P 16 10 26.2 -1.0**
GKP *eS* Sn 16 14 30.3 +6.5
PBUR Paburge 20.87 96 *eP* **P 16 10 26.6 -1.6**
PBUR *eS* Sn 16 14 22.8 -3.3
ECH Echery 21.01 130 P **P 16 10 29.5 -0.3**
ECH pmax pmax
comp=Z,84nm,1.1s
ECH Echery 21.01 130 P **P 16 10 29.4 -0.3**
ECH IAmb IAmb 16 10 40.8
comp=Z,84nm,1.1s
GRA1 Grafenberg Arr 21.19 121 P **P 16 10 31.9 +0.2**
GRA1 IAmb IAmb 16 10 54.0
comp=Z,90nm,1.0s
GRF Grafenberg Arr 21.19 121 P **P 16 10 31.9 +0.2**
GRF pmax pmax
comp=Z,90nm,1.0s
NKC Novy Kostel 21.21 119 *eP* **P 16 10 31.8 -0.1**
NKC *e* 16 10 34.9
NKC *eS* Sn 16 14 37.8 +3.5
NKC MLR MLR
comp=Z,5µm,16.9s
NKC Novy Kostel 21.21 119 *eP* **P 16 10 31.8 -0.1**
NKC *eP* **pP 16 10 34.9 0.0**
NKC *eS* Sn 16 14 37.8 +3.5
NKC AMS AMS 16 19 00.0
comp=Z,5µm,16.9s
STU Stuttgart 21.23 126 P **P 16 10 32.6 +0.5**
STU Stuttgart 21.23 126 P **P 16 10 32.6 +0.5**
BRG Berggiesshubel 21.27 115 *iP* **P 16 10 33.0 +0.5**
comp=Z,51nm,1.2s
BRG *i* 16 10 35.9
comp=Z,5.8nm,2.5s
BRG S Sn 16 14 41.0 +5.3
comp=N,4µm,15.7s
comp=E,1µm,17.2s
comp=Z,5µm,16.1s
BRG Berggiesshubel 21.27 115 *iP* **P 16 10 33.0 +0.5**
BRG *i* 16 10 35.9
BRG S Sn 16 14 41.0 +5.3
BRG pmax pmax
comp=Z,51nm,1.3s
BRG MLR MLR
comp=N,4µm,15.7s
BRG MLR MLR
comp=E,1µm,17.2s
BRG MLR MLR
comp=Z,5µm,16.1s
BFO Black Forest 21.31 128 P **P 16 10 32.8 -0.2**
BFO pmax pmax
comp=Z,140nm,1.3s
BFO Black Forest 21.31 128 P **P 16 10 32.8 -0.2**
BFO IAmb IAmb 16 10 44.2
comp=Z,140nm,1.3s
VSU Vasula 21.45 86 *eP* **P 16 10 34.0 -0.5**
VSU Vasula 21.45 86 *iP* **P 16 10 33.9 -0.5**
PVCC Panska Ves 21.79 115 *eP* **P 16 10 42.5 +4.4**
PVCC *e* 16 10 47.5
PVCC MLR MLR
comp=Z,4µm,17.0s
PVCC Panska Ves 21.79 115 *eP* **P 16 10 42.5 +4.4**
PVCC *ex* x 16 10 47.5
PVCC *eS* Sn 16 14 50.8 +2.7
PVCC AMS AMS 16 20 10.0
comp=Z,4µm,17.0s
FRB Frobisher Bay 21.89 291 P **P 16 10 37.5 -1.5**
comp=Z,19nm,1.1s,baz=70,slow=10,SNR=4.9
FRB LR LR 16 18 38.1
comp=Z,4µm,19.6s,baz=71,slow=35
PABE Paberze 22.08 95 *eP* **P 16 10 40.2 -1.0**
PABE *eS* Sn 16 14 52.7 -2.5
PRA Prague 22.10 116 *eP* **P 16 10 39.6 -1.8**
PRA MLR MLR
comp=Z,2µm,17.8s
PRA Prague 22.10 116 *eP* **P 16 10 39.6 -1.8**
PRA *eS* Sn 16 14 52.2 -3.4
PRA AMS AMS 16 20 30.0
comp=Z,2µm,17.8s
PRU Pruhonice 22.21 116 *eP* **P 16 10 42.5 -0.1**
PRU *eS* **S 16 14 45.5 -1.4**
PRU MLR MLR
comp=Z,4µm,16.6s
PRU Pruhonice 22.21 116 *eP* **P 16 10 42.5 -0.1**
PRU *eS* **S 16 14 45.5 -1.4**
PRU AMS AMS 16 20 30.0
comp=Z,4µm,16.6s
KSP Ksiaz 22.22 112 *eP* **P 16 10 42.9 +0.2**
KSP *eS* **S 16 14 50.8 +3.7**
PBCC Pribram 22.24 117 *eS* Sn 16 14 53.7 -5.3
CHVC Chvalec 22.33 113 *eP* **P 16 10 43.7 -0.2**
CHVC *ex* x 16 10 52.4
CHVC *eS* Sn 16 14 59.0 -2.1
CHVC AMS AMS 16 19 30.0
comp=Z,4µm,20.7s
UPC Upice 22.37 113 *eP* **P 16 10 46.1 +1.7**
UPC *e* 16 10 52.8
UPC MLR MLR
comp=Z,4µm,18.1s
UPC Upice 22.37 113 *eP* **P 16 10 46.1 +1.7**
UPC *ex* x 16 10 52.8
UPC *eS* Sn 16 14 58.5 -3.7
UPC AMS AMS 16 19 50.0
comp=Z,4µm,18.1s
OSTC Ostas 22.41 113 *eP* **P 16 10 46.7 +1.9**
OSTC *ex* x 16 10 52.5
OSTC *eS* Sn 16 14 58.0 -5.2
OSTC AMS AMS 16 19 40.0
comp=Z,4µm,20.4s
KHC Kasperske Hory 22.53 119 *eP* **P 16 10 45.8 -0.3**
KHC *e* 16 10 54.6
KHC MLR MLR
comp=Z,4µm,21.3s
KHC Kasperske Hory 22.53 119 *eP* **P 16 10 45.8 -0.3**
KHC *ex* x 16 10 54.6
KHC *eS* Sn 16 15 00.5 -5.5
KHC AMS AMS 16 19 10.0
comp=Z,4µm,21.3s
DPC Dobruska-Polom 22.62 113 *eP* **P 16 10 46.9 -0.1**
DPC MLR MLR
comp=Z,4µm,18.9s
DPC Dobruska-Polom 22.62 113 *eP* **P 16 10 46.9 -0.1**
DPC *eS* Sn 16 15 01.8 -6.3
DPC AMS AMS 16 20 10.0
comp=Z,4µm,18.9s
SENIN Lac Senin/Sane 22.68 132 P **P 16 10 47.5 -0.4**
SENIN IAmb IAmb 16 11 01.1
comp=Z,90nm,1.4s
DAVA Damuels 22.74 127 *iP* **P 16 10 49.4 +0.9**
comp=Z,59nm,1.6s,SNR=16
SUW Suwalki 22.75 98 *eP* **P 16 10 47.2 -1.1**
SUW *eS* **S 16 14 59.9 +3.0**
SUW Suwalki 22.75 98 P **P 16 10 47.0 -1.3**
SUW pmax pmax
comp=Z,84nm,0.9s
SUW Suwalki 22.75 98 P **P 16 10 47.0 -1.3**
SUW IAmb IAmb 16 11 14.3
comp=Z,84nm,0.9s
SSB Saint Sauveur 22.81 138 P **P 16 10 48.2 -0.9**
SSB pmax pmax
comp=Z,118nm,1.5s
SSB Saint Sauveur 22.81 138 P **P 16 10 48.1 -0.9**
SSB IAmb IAmb 16 10 58.4
comp=Z,118nm,1.5s
GEC2 GERESS Array S 22.81 119 P **P 16 10 48.1 -1.0**
GEC2 IAmb IAmb 16 10 57.5
comp=Z,119nm,1.5s
GERES GERESS Array B 22.81 119 P **P 16 10 48.9 -0.3**
comp=Z,10.0nm,1.1s,baz=330,slow=7.7,SNR=19
GERES LR LR 16 20 56.7
comp=Z,4µm,18.7s,baz=328,slow=40
GERES GERESS Array B 22.81 119 P **P 16 10 49.2 0.0**
GERES GERESS Array B 22.81 119 P **P 16 10 49.2 0.0**
RETA Reutte 22.87 125 *eP* **P 16 10 50.4 +0.6**
comp=Z,61nm,1.4s
IZAR Zarasai 22.91 92 *eP* **P 16 10 49.9 0.0**
ISAL Salakas 22.97 93 *eP* **P 16 10 50.0 -0.6**
KRLC Kraliky 23.02 113 *eP* **P 16 10 55.7 +4.5**
KRLC MLR MLR
comp=Z,3µm,18.7s
KRLC Kraliky 23.02 113 *eP* **P 16 10 55.7 +4.5**
KRLC *eS* Sn 16 15 08.6 -9.1
KRLC AMS AMS 16 20 20.0
comp=Z,3µm,18.7s
MOTA Moosalm 23.12 125 *iP* **P 16 10 53.4 +1.0**
comp=Z,69nm,1.5s,SNR=26
TREC Trest 23.13 116 *eP* **P 16 10 53.1 +0.7**
TREC MLR MLR
comp=Z,4µm,16.9s
TREC Trest 23.13 116 *eP* **P 16 10 53.1 +0.7**
TREC *eS* Sn 16 15 11.9 -8.4
TREC AMS AMS 16 21 00.0
comp=Z,4µm,16.9s
IIGN Ignalina 23.16 93 *eP* **P 16 10 52.8 +0.2**
DAVOX Davos/Dischmat 23.18 127 P **P 16 10 52.9 -0.1**
comp=Z,6.0nm,0.9s,baz=320,slow=11,SNR=12
DAVOX LR LR 16 20 54.5
comp=Z,4µm,19.1s,baz=325,slow=39
PGAV Gavieira, Arco 23.24 163 *eP* **P 16 10 54.8 +1.2**
comp=Z,107nm,1.2s
PGAV *eS* **S 16 15 12.0 +6.4**
PGAV *e*LR LR 16 17 06.3
comp=Z,6µm,20.0s
SQTA Sankt Quirin 23.26 125 *iP* **P 16 10 54.5 +0.7**
comp=Z,69nm,2.1s,SNR=23
TUE Stuetta 23.26 128 P **P 16 10 52.8 -1.2**
FETA Feichten 23.26 126 *eP* **P 16 10 57.1 +3.2**
comp=Z,60nm,1.4s
TMCR Tamitsa 23.27 66 *eP* **P 16 10 53.4 -0.2**
TMCR pmax pmax
comp=Z,125nm,1.5s
WATA Walderalm 23.29 124 *iP* **P 16 10 55.2 +1.0**
comp=Z,69nm,1.9s,SNR=19
BEL Belsk 23.31 105 *eP* **P 16 10 54.4 +0.3**
BEL *eS* Sn 16 15 14.1 -10
WTTA Wattenberg 23.38 124 *iP* **P 16 10 56.2 +1.2**
comp=Z,80nm,1.9s,SNR=23
IDID Didziasalis 23.40 92 *eP* **P 16 10 54.8 -0.2**
FUORN Ofenpass-Fuorn 23.45 127 P **P 16 10 55.7 -0.1**
VRAC Vranov 23.55 114 P **P 16 10 56.7 0.0**
comp=Z,3.4nm,0.5s,baz=325,slow=12,SNR=15
VRAC LR LR 16 21 21.8
comp=Z,4µm,18.1s,baz=332,slow=40
VRAC Vranov 23.55 114⇓ *iP* **P 16 10 57.5 +0.9**
VRAC Vranov 23.55 114 *eP* **P 16 10 56.6 0.0**
VRAC *eS* Sn 16 15 20.9 -9.5
MORC Moravsky Berou 23.56 112⇑ *iP* **P 16 10 57.8 +1.1**
MORC Moravsky Berou 23.56 112 *eP* **P 16 10 56.7 0.0**
MORC *eS* Sn 16 15 19.5 -11
MORC Moravsky Berou 23.56 112 P **P 16 10 56.9 +0.2**
MORC pmax pmax
comp=Z,90nm,1.5s
MORC Moravsky Berou 23.56 112 P **P 16 10 56.9 +0.2**
MORC IAmb IAmb 16 11 25.7
comp=Z,90nm,1.5s
PBRG Braganca 23.61 160 *eP* **P 16 10 57.9 +0.7**
comp=Z,72nm,1.5s
PBRG *eS* **S 16 15 17.9 +6.4**
BNI Bardonecchia 23.66 134 P **P 16 10 57.6 -0.2**
BNI pmax pmax
comp=Z,96nm,1.5s
BNI Bardonecchia 23.66 134 P **P 16 10 57.6 -0.2**
BNI IAmb IAmb 16 11 25.3
comp=Z,96nm,1.5s
KRUC Moravsky 23.67 115 *eP* **P 16 10 57.1 -0.6**
KRUC *eS* Sn 16 15 23.2 -10
NACGM Naroch 23.69 93 *eP* **P 16 10 57.0 -0.9**
NACGM *eS* **S 16 15 10.0 -2.6**
NACGM *e*LQ LQ 16 18 04.0
NACGM *e*LR LR 16 20 44.0
OKC Ostrava-Krasne 23.75 111 *eP* **P 16 10 58.4 -0.1**
OKC *e* 16 11 01.4
OKC MLR MLR
comp=Z,2µm,19.6s
OKC Ostrava-Krasne 23.75 111 *eP* **P 16 10 58.4 -0.1**
OKC *ep*P **pP 16 11 01.4 -0.3**
OKC AMS AMS 16 20 20.0
comp=Z,2µm,19.6s
MOA Molln 23.85 120 *iP* **P 16 11 00.1 +0.6**
comp=Z,43nm,1.4s,SNR=14
POLO Lamas de Olo 23.88 162 *eP* **P 16 11 01.7 +1.8**
comp=Z,47nm,1.8s
POLO *eS* **S 16 15 25.7 +10**
OJC Ojcow 24.12 109 *eP* **P 16 11 01.7 -0.3**
OJC *eS* **S 16 15 20.9 +1.4**
OJC Ojcow 24.12 109 P **P 16 11 00.0 -2.0**
OJC pmax pmax
comp=Z,36nm,1.3s
OJC Ojcow 24.12 109 P **P 16 10 60.0 -2.0**
ABTA Abfaltersbach 24.13 123 *iP* **P 16 11 04.2 +2.0**
comp=Z,30nm,1.8s,SNR=12
KBA Koelnbreinsper 24.15 122 *iP* **P 16 11 04.0 +1.5**
comp=Z,43nm,1.6s,SNR=15
MVO Moncorvo 24.19 161 *eP* **P 16 11 04.2 +1.4**
comp=Z,105nm,1.8s
MVO *eS* S 16 15 32.6 +12

MVO eLR LR 16 17 41.0
comp=Z,3µm,20.0s
JAVC Velka Javorina 24.34 114 eP **P** **16 11 05.9 +1.8**
JAVC eS S 16 15 37.1 +14
CONA Conrad Observa 24.39 117 *i* P **P** **16 11 04.9 +0.3**
comp=Z,32nm,1.1s,SNR=10
CTI Castel Tesino 24.42 126 P **P** **16 11 04.7 -0.2**
CTI pmax pmax
comp=Z,52nm,1.1s
CTI Castel Tesino 24.42 126 P **P** **16 11 04.7 -0.2**
CTI IAmb IAmb 16 11 16.3
comp=Z,52nm,1.1s
MICGM Minsk 24.44 93 eP **P** **16 11 05.0 +0.2**
MICGM ePP **PnPn** **16 11 44.0 +8.9**
MICGM eS **S** **16 15 24.0 -0.5**
MICGM eSS SnSn 16 16 56.0 +48
MICGM eLR LR 16 18 30.0
MNK Minsk 24.44 93 eP **P** **16 11 05.0 +0.2**
MNK *e* 16 11 44.0
ZOU Zoufplan 24.46 123 P **P** **16 11 05.7 +0.3**
CIMO Cimolais 24.48 124 P **P** **16 11 04.9 -0.5**
PVIS Viseu 24.52 163 eP **P** **16 11 10.0 +4.2**
comp=Z,78nm,1.8s
SMOL Smolenice 24.52 114 eP **P** **16 11 06.6 +0.9**
SMOL pmax pmax
comp=Z,34nm,1.2s
SMOL Smolenice 24.52 114 eP **P** **16 11 06.5 +0.9**
MODS Modra-Piesok 24.57 115 eP **P** **16 11 05.6 -0.6**
MODS Modra-Piesok 24.57 115 eP **P** **16 11 05.6 -0.6**
STAL STALIGIAL 24.62 124 P **P** **16 11 06.5 -0.1**
MYKA Terra Mystica 24.64 122 *i* P **P** **16 11 08.3 +1.4**
comp=Z,56nm,2.3s,SNR=6.1
PRED Cave del Predi 24.77 122 P **P** **16 11 07.8 -0.2**
PRED IAmb IAmb 16 11 18.1
comp=Z,110nm,1.5s
ARSA Arzberg 24.82 119 *i* P **P** **16 11 08.6 +0.2**
comp=Z,34nm,1.2s,SNR=18
LANS Liptovska Anna 24.82 111 eP **P** **16 11 09.9 +1.5**
LANS pmax pmax
comp=Z,30nm,1.0s
LANS Liptovska Anna 24.82 111 eP **P** **16 11 09.9 +1.5**
MTE Manteigas 24.88 162 eP **P** **16 11 11.1 +2.1**
comp=Z,139nm,1.6s
MTE eS S 16 15 45.4 +14
MTE eLR LR 16 17 53.3
comp=Z,6µm,20.0s
MTE Manteigas 24.88 162 P **P** **16 11 08.2 -0.8**
NIE Niedzica 24.95 109 eP **P** **16 11 08.6 -1.0**
NIE eS **S** **16 15 35.6 +2.7**
COI Coimbra 24.95 164 P **P** **16 11 10.9 +1.3**
COI pmax pmax
comp=Z,138nm,1.2s
COI Coimbra 24.95 164 eP **P** **16 11 14.4 +4.8**
COI eS S 16 15 44.4 +11
COI Coimbra 24.95 164 P **P** **16 11 10.9 +1.3**
CADS Cadrg 25.02 122 *i* P **P** **16 11 10.1 -0.1**
CADS *i* S **S** **16 15 37.4 +3.4**
TEOL Teolo 25.03 126 P **P** **16 11 09.8 -0.5**
TEOL IAmb IAmb 16 11 20.0
comp=Z,44nm,1.1s
OBKA Obir 25.07 121 eP **P** **16 11 11.5 +0.7**
comp=Z,19nm,1.1s
VYHS Vyhne 25.09 113 eP **P** **16 11 11.4 +0.6**
VYHS pmax pmax
comp=Z,72nm,1.5s
VYHS Vyhne 25.09 113 eP **P** **16 11 11.4 +0.6**
PCAS Casmilo, Conde 25.10 164 eP **P** **16 11 13.4 +2.5**
comp=Z,122nm,1.5s
PCAS eS **S** **16 15 40.9 +5.6**
SOKA Soboth 25.11 120 *i* P **P** **16 11 11.5 +0.3**
comp=Z,45nm,1.5s,SNR=27
PERS Pernice 25.18 120 *i* P **P** **16 11 12.1 +0.4**
PERS eS **S** **16 15 39.9 +3.2**
MOZS Mozjanca 25.22 121 eP **P** **16 11 12.1 +0.1**
MOZS *i* pP **sP** **16 11 16.1 -0.5**
PCBR Castelo Branco 25.43 162 eP **P** **16 11 16.7 +2.7**
comp=Z,96nm,1.6s
SRO Srobarova 25.43 114 eP **P** **16 11 15.3 +1.4**
SRO pmax pmax
comp=Z,93nm,1.5s
SRO Srobarova 25.43 114 eP **P** **16 11 15.3 +1.4**
LJU Ljubljana 25.46 122 eP **P** **16 11 14.2 0.0**
LJU *i* pP **sP** **16 11 17.9 -0.8**
SRO2 Moca 25.51 114 eP **P** **16 11 15.0 +0.4**
SRO2 Moca 25.51 114 eP **P** **16 11 15.0 +0.4**
KLMR Klimovskoe 25.51 72 eP **P** **16 11 12.3 -2.2**
KLMR *e* 16 14 47.3
KLMR eS **S** **16 15 40.3 -1.3**
KLMR pmax pmax
comp=Z,87nm,1.4s
KLMR Klimovskoe 25.51 72 eP **P** **16 11 12.4 -2.1**
KLMR AMP 16 11 24.9
comp=Z,87nm,1.4s
KLMR ePcP **PcP** **16 14 47.4 +1.9**
KLMR eS **S** **16 15 40.4 -1.2**
KLMR eS **S** **16 15 40.4 -1.2**
KLMR LQ LQ 16 18 16.4
KLMR LQ LQ 16 18 16.4
KLMR LR LR 16 19 25.5
PSBE So Bento 25.59 165 eS S 16 15 57.4 +14
UCM Universidad Co 25.64 155 eP **P** **16 11 15.4 -0.5**
UCM eS S 16 15 54.2 +10
VLC Villacollemand 25.64 130 P **P** **16 11 15.9 0.0**
ZCCA Zocca 25.67 129 P **P** **16 11 15.4 -0.7**
ZCCA IAmb IAmb 16 11 36.7
comp=Z,84nm,1.3s
KWP Kalwaria Pacla 25.77 106 eP **P** **16 11 17.2 +0.2**
KWP Kalwaria Pacla 25.77 106 P **P** **16 11 16.4 -0.6**
KWP pmax pmax
comp=Z,235nm,1.4s
KWP Kalwaria Pacla 25.77 106 P **P** **16 11 16.4 -0.6**
CRVS Cervenica-Dubn 25.83 109 eP **P** **16 11 18.2 +0.7**
CRVS pmax pmax
comp=Z,83nm,1.3s
CRVS Cervenica-Dubn 25.83 109 eP **P** **16 11 18.2 +0.7**
PMRV Marv??o 25.85 162 eP **P** **16 11 19.7 +1.9**
comp=Z,98nm,1.4s
PMRV eS **S** **16 15 56.8 +10**
PMRV eLR LR 16 18 25.7
comp=Z,6µm,20.0s
PSZ Piszkesteto 25.98 112 ⇓P **P** **16 11 19.9 +0.9**
PSZ Piszkesteto 25.98 112 P **P** **16 11 18.5 -0.4**
PSZ Piszkesteto 25.98 112 P **P** **16 11 18.5 -0.4**
PMAFR Mafra 26.09 166 eP **P** **16 11 23.2 +3.2**
comp=Z,109nm,1.6s
PMAFR eS **S** **16 15 59.5 +8.4**
PMTG Montargil 26.10 164 eP **P** **16 11 24.4 +4.4**
comp=Z,62nm,1.5s
PMTG eS **S** **16 15 58.6 +7.4**
ESDC Sonseca Array 26.13 156 P **P** **16 11 19.4 -1.0**
comp=Z,4.1nm,0.9s,baz=349,slow=9.1,SNR=16
ESDC LR LR 16 21 40.4
comp=Z,4µm,18.3s,baz=330,slow=37
KOLS Kolonicke sedl 26.14 108 eP **P** **16 11 19.5 -0.8**
KOLS pmax pmax
comp=Z,75nm,1.5s
KOLS Kolonicke sedl 26.14 108 eP **P** **16 11 19.5 -0.8**
SCHQ Schefferville 26.16 272 P **P** **16 11 20.5 0.0**
comp=Z,27nm,0.8s,baz=33,slow=9.4,SNR=9.9
SCHQ LR LR 16 20 09.4
comp=Z,2µm,19.1s,baz=54,slow=33
SCHQ Schefferville 26.16 272 P **P** **16 11 21.6 +1.1**
SCHQ IAmb IAmb 16 11 28.5
comp=Z,33nm,0.9s
LVV L'vov 26.18 105 eP **P** **16 11 20.8 +0.1**
LVV *e* 16 12 02.1
LVV eS **S** **16 15 49.2 -3.1**
LVV pmax pmax
comp=Z,300nm,1.6s
LVV smax smax
comp=N,4µm,6.0s
LVV smax smax
comp=E,2µm,6.0s
LVV MLR MLR
comp=N,1µm,14.0s
LVV MLR MLR
comp=E,2µm,14.0s
LVV MLR MLR
comp=Z,3µm,14.0s
PAB San Pablo 26.19 157 P **P** **16 11 21.1 +0.2**
PAB pmax pmax
comp=Z,62nm,1.3s
PAB San Pablo 26.19 157 P **P** **16 11 21.1 +0.2**
PAB IAmb IAmb 16 11 33.5
comp=Z,62nm,1.3s
DRLN Deer Lake 26.21 254 P **P** **16 11 22.0 +1.0**
DRLN IAmb IAmb 16 11 40.2
comp=Z,79nm,1.5s
LIS Lisbon 26.34 166 eP **P** **16 11 21.8 -0.4**
LIS AMS AMS 16 20 41.1
comp=Z,5µm,20.0s
LIS Lisbon 26.34 166 eP **P** **16 11 21.8 -0.4**
UZH Uzhgorod 26.38 108 *d* P **P** **16 11 21.7 -0.8**
UZH *i* 16 11 25.2
UZH *i* 16 11 30.1
UZH *e* 16 12 13.6
UZH *i* S **S** **16 15 50.3 -5.2**
UZH MLR MLR
comp=N,400nm,15.0s
UZH MLR MLR
comp=E,200nm,15.0s
UZH MLR MLR
comp=Z,200nm,15.0s
OSSC Osservatorio P 26.50 129 P **P** **16 11 23.5 -0.1**
OSSC IAmb IAmb 16 11 34.6
comp=Z,55nm,1.0s
RES Resolute Bay 26.60 325 LR LR 16 21 46.7
comp=Z,4µm,19.5s,baz=74,slow=36
RES Resolute Bay 26.60 325 P **P** **16 11 26.4 +2.2**
RES pmax pmax
comp=Z,44nm,1.5s
RES Resolute Bay 26.60 325 P **P** **16 11 26.4 +2.2**
MURB Monte Urbino 27.16 127 P **P** **16 11 29.1 -0.5**
MURB IAmb IAmb 16 11 53.1
comp=Z,96nm,1.2s
LATE Laterza 27.49 129 P **P** **16 11 31.5 -1.1**
PCVE Castro Verde 27.54 164 eS S 16 16 26.4 +12
AKASG Malin Array Be 27.71 98 P **P** **16 11 32.8 -1.6**
comp=Z,5.0nm,0.8s,baz=324,slow=9.6,SNR=11
AKASG LR LR 16 22 20.3
comp=Z,2µm,21.9s,baz=315,slow=36
AKASG Malin Array Be 27.71 98 P **P** **16 11 31.7 -2.7**
AKASG pmax pmax
comp=Z,4.0nm,1.0s
AKASG Malin Array Be 27.71 98 P **P** **16 11 31.7 -2.7**
AKBB Malin Array Si 27.71 98 P **P** **16 11 31.4 -3.0**
AKBB pmax pmax
comp=Z,27nm,1.2s
AKBB Malin Array Si 27.71 98 P **P** **16 11 31.4 -3.0**
MAHO Mahon 27.72 143 eP **P** **16 11 34.7 +0.1**
MAHO eS S 16 16 30.9 +14
NRCA Norcia 27.74 127 P **P** **16 11 33.8 -1.1**
OBN Obninsk 27.77 84 P **P** **16 11 34.2 -0.7**
comp=Z,3.1nm,0.5s,baz=318,slow=14,SNR=1.9
OBN LR LR 16 22 23.2
comp=Z,314nm,21.8s,baz=340,slow=36
OBN Obninsk 27.77 84 ⇓P **P** **16 11 39.0 +4.2**
OBN Obninsk 27.77 84⇑ eP **P** **16 11 35.0 +0.1**
OBN *e* 16 12 19.8
OBN eS **S** **16 16 18.2 +1.0**
OBN pmax pmax
comp=Z,43nm,1.0s
OBN MLR MLR
comp=Z,1µm,17.0s
OBN Obninsk 27.77 84 P **P** **16 11 32.1 -2.8**
OBN IAmb IAmb 16 11 47.7
comp=Z,63nm,1.1s
MORF Marmelete 27.79 165 eP **P** **16 11 34.8 -0.5**
MORF eS **S** **16 16 18.5 +0.5**
MORF AMS AMS 16 21 15.5
comp=Z,5µm,21.1s
MORF Marmelete 27.79 165 eP **P** **16 11 34.8 -0.5**
MORF eS **S** **16 16 18.5 +0.5**
MORF Marmelete 27.79 165 eS S 16 16 32.0 +14
PVAQ Vaqueiros 27.80 164 eS **S** **16 16 27.6 +10**
PVAQ eLR LR 16 19 18.2
comp=Z,4µm,20.0s
MOS Moscow 27.81 82 eP **P** **16 11 38.2 +3.0**
MOS pmax pmax
comp=Z,57nm,1.7s
MOS MLR MLR
comp=Z,1µm,17.0s
PBDV Barranco-do-Ve 27.94 164 eS S 16 16 32.6 +12
PFVI Vila Bisbo 27.95 166 eS S 16 16 35.8 +15
AQU L'Aquila 28.27 127 P **P** **16 11 39.2 -0.3**
AQU pmax pmax
comp=Z,25nm,1.0s
AQU L'Aquila 28.27 127 P **P** **16 11 39.2 -0.3**
BUR08 Bucovina Ar. S 28.36 106 P **P** **16 11 38.8 -1.6**
BURAR Bucovina Array 28.39 106 ⇑P **P** **16 11 42.3 +1.7**
BURAR Bucovina Array 28.39 106 P **P** **16 11 38.7 -1.9**
CJR Cluj-Napoca 28.44 109 ⇓P **P** **16 11 42.6 +1.6**
BZS Buzias 28.54 113 ⇓P **P** **16 11 42.6 +0.7**
CART Cartagena 28.71 152 eP **P** **16 11 44.3 +0.9**
CART eS S 16 16 45.4 +13
INTR Introdacqua 28.74 127 P **P** **16 11 43.2 -0.6**
SFS San Fernando 28.93 161 eP **P** **16 11 44.9 -0.4**
SFS eS S 16 16 49.1 +13
DIVS Divibare 29.17 117 P **P** **16 11 46.8 -0.8**
GZR Gura Zlata 29.19 112 ⇑P **P** **16 11 49.3 +1.6**
MDVR Moldovita 29.27 114 ⇓P **P** **16 11 49.4 +1.0**
BIZ Bicaz 29.29 106 ⇑P **P** **16 11 50.4 +1.8**
HERR Herculane 29.46 113 ⇑P **P** **16 11 51.2 +1.2**
CEU Ceuta 29.60 160 eP **P** **16 11 51.6 +0.3**
CEU eS S 16 16 56.7 +10
DOPR Dopca 29.78 108 ⇑P **P** **16 11 55.1 +2.3**
OZUR 29.84 107 ⇑P **P** **16 11 55.5 +2.1**
PAOL Paolisi 29.84 127 P **P** **16 11 52.1 -1.4**
SRE Strehaia 29.96 112 ⇑P **P** **16 11 56.4 +2.0**
VOIR 30.07 109 ⇑P **P** **16 11 56.9 +1.4**
VASR Vaslui 30.23 105 ⇑P **P** **16 11 59.6 +2.8**
PDG Podgorica 30.31 119 ⇑P **P** **16 11 57.3 -0.3**
PDG Podgorica 30.31 119 P **P** **16 11 56.6 -0.9**
KIS Kishinev 30.38 103 eP **P** **16 11 58.0 -0.1**
comp=Z,200nm,3.0s
KIS Kishinev 30.38 103 ePP PP 16 13 03.0 -3.5
KIS Kishinev 30.38 103 eP **P** **16 11 58.0 -0.1**
KIS *e* 16 13 03.0
KIS *e* 16 14 57.0
KIS eS **S** **16 16 54.0 -4.4**
KIS eSS **ScP** **16 18 39.0 -0.7**
KIS pmax pmax
comp=Z,200nm,3.0s
KIS MLR MLR
comp=Z,500nm,16.0s
KIS MLR MLR
comp=N,800nm,16.0s
PLOR Plostina 30.39 107 ⇑P **P** **16 11 59.5 +1.2**
MLR Muntele Rosu 30.39 108 P **P** **16 11 59.3 +0.9**
comp=N,7.3nm,1.0s,baz=339,slow=2.2,SNR=4.1
MLR LR LR 16 25 56.7
comp=N,2µm,18.3s,baz=324,slow=40
MLR Muntele Rosu 30.39 108 ⇑P **P** **16 11 59.9 +1.5**
MLR Muntele Rosu 30.39 108 P **P** **16 11 58.0 -0.4**
VRI Vrincioaia 30.41 107 ⇑P **P** **16 11 59.8 +1.3**
MILM Milestii Mici 30.44 103 ⇓P **P** **16 12 01.3 +2.7**
PVLZ Peæn de 30.47 159 eP **P** **16 11 59.1 +0.1**
PVLZ eS S 16 17 09.7 +10
LPSR Galich'ya Gora 30.52 86 eP **P** **16 11 58.6 -0.7**
LPSR eS **S** **16 17 06.2 +5.8**
LPSR pmax pmax
comp=Z,10.0nm,1.2s
LPSR smax smax
comp=E,390nm,8.8s
LPSR MLR MLR
comp=Z,1µm,23.0s
MELI Melilla 30.58 157 eP **P** **16 11 57.5 -2.5**
BISRR Bisoca 30.66 107 ⇑P **P** **16 12 02.6 +1.9**
KIRV Kirov 30.90 69 P **P** **16 12 01.3 -1.3**
comp=Z,10nm,0.7s,baz=301,slow=17,SNR=4.6
KIRV LR LR 16 24 09.7
comp=Z,4µm,19.9s,baz=310,slow=36
KIRV Kirov 30.90 69⇑ eP **P** **16 12 02.0 -0.6**
MATE Matera 30.93 124 ⇑P **P** **16 12 02.6 -0.4**
SULR 31.18 109 ⇑P **P** **16 12 06.5 +1.2**
MPEP Malo Peshtene 31.26 113 P **P** **16 12 02.2 -3.8**
SKO Skopje 31.54 117 *i* P **P** **16 12 09.0 +0.6**
VSR Storozhevoye 31.61 88 eP **P** **16 12 08.2 -0.8**
VSR eS **S** **16 17 11.9 -5.7**
VSR pmax pmax
comp=Z,30nm,1.6s
VSR smax smax
comp=E,520nm,7.3s
VSR MLR MLR
comp=Z,470nm,15.0s
VTS Vitosha 31.68 114 *i* P **P** **16 12 10.6 +0.7**
PMOZ Porto Moniz, M 31.79 180 eLR LR 16 20 44.3
comp=Z,2µm,20.0s
HARR Harsova 31.86 107 ⇑P **P** **16 12 12.7 +1.5**
AVE Averroes 31.89 164 eP **P** **16 12 08.7 -2.9**
AVE eS S 16 17 33.4 +11
OHR Ohrid 32.03 119 *i* P **P** **16 12 16.3 +3.5**
SZH Strazhica 32.22 110 *i* P **P** **16 12 14.0 -0.4**
CORL Corleone 32.24 131 P **P** **16 12 14.6 -0.1**
TIP Timpagrande 32.25 126 ⇑P **P** **16 12 14.0 -0.7**
TIP Timpagrande 32.25 126 P **P** **16 12 13.7 -1.1**
KKB Krupnik 32.26 115 *i* P **P** **16 12 16.6 +1.8**
CLTB Caltabellotta 32.50 131 P **P** **16 12 17.0 0.0**
CLTB IAmb IAmb 16 12 29.3
comp=Z,52nm,1.1s
PLD Plovdiv 32.70 113 *i* P **P** **16 12 17.0 -1.6**
VRH Novokhopyorsk 32.73 85 eP **P** **16 12 18.3 -0.4**
VRH eS **S** **16 17 36.7 +1.8**
VRH pmax pmax
comp=Z,30nm,1.3s
VRH smax smax
comp=N,1µm,10.5s
VRH MLR MLR
comp=Z,1µm,15.0s
MDT Midelt 32.74 160 P **P** **16 12 19.2 +0.1**
comp=Z,15nm,1.0s,baz=3.9,slow=10,SNR=14
MMB Musomiste 32.75 115 *i* P **P** **16 12 20.0 +0.9**
CHGQ Chibougamau 32.91 271 P **P** **16 12 21.9 +1.5**
baz=42
KEST Kesra 33.02 138 P **P** **16 12 21.4 -0.2**
comp=Z,9.4nm,1.1s,baz=288,slow=7.1,SNR=14
KEST LR LR 16 26 02.0
comp=Z,3µm,18.1s,baz=311,slow=37
KEST Kesra 33.02 138 P **P** **16 12 21.2 -0.3**
KEST IAmb IAmb 16 12 26.5
comp=Z,68nm,1.5s
LIT Litokhoron 33.55 118 P **P** **16 12 24.7 -1.4**
LIT Litokhoron 33.55 118 P **P** **16 12 24.7 -1.4**
ALN Alexandroupoli 34.26 113 P **P** **16 12 31.3 -0.9**
ALN Alexandroupoli 34.26 113 P **P** **16 12 31.3 -0.9**
E60A Ste Agathe de 34.36 265 P **P** **16 12 34.0 +1.0**
baz=38
D58A Chemin du LacG 34.41 267 P **P** **16 12 36.4 +3.0**
baz=39
AGG Agios Georgios 34.43 119 P **P** **16 12 33.3 -0.4**
AGG Agios Georgios 34.43 119 P **P** **16 12 33.3 -0.4**
F61A St Evariste 34.47 264 P **P** **16 12 37.1 +3.1**
baz=38
LSQQ Lebel-sur-Quev 34.67 273 P **P** **16 12 37.6 +1.9**
baz=41
D56A ZEC Mazanza, M 35.25 268 P **P** **16 12 41.4 +0.6**
baz=39
E57A Chemin Saint G 35.49 267 P **P** **16 12 43.5 +0.7**
baz=38
MOQ Mont Orford 35.54 264 P **P** **16 12 45.4 +2.1**
D55A Sainte-Anne-du 35.59 269 P **P** **16 12 45.4 +1.8**
baz=39
E56A St. Veronique 35.77 268 P **P** **16 12 45.6 +0.5**
baz=39
ANN Anapa 35.78 97 eP P 16 12 51.0 +5.7
ANN pmax pmax
comp=Z,22nm,0.7s
ANN MLR MLR
comp=N,960nm,18.0s
ANN MLR MLR
comp=Z,2µm,18.0s
ANN MLR MLR
comp=E,1µm,18.0s
ARU Arti 36.00 66 P **P** **16 12 46.2 -0.8**
comp=E,1.8nm,0.7s,baz=324,slow=7.1,SNR=5.0
ARU Arti 36.00 66 *d* P **P** **16 12 47.1 0.0**
ARU 16 14 03.9
ARU PPP PPP 16 14 24.1
ARU S **S** **16 18 28.5 +3.1**
ARU SS **SnSn** **16 20 52.9 +3.8**
ARU pmax pmax
comp=Z,26nm,1.8s
ARU MLR MLR
comp=Z,3µm,19.0s
ARU Arti 36.00 66 P **P** **16 12 46.1 -1.0**
NRIK Noril'sk 36.45 35 P **P** **16 12 50.5 -0.2**
comp=Z,7.6nm,1.0s,baz=300,slow=4.3,SNR=6.6
NRIK LR LR 16 29 46.2
comp=Z,2µm,18.4s,baz=354,slow=40
NRIK Noril'sk 36.45 35⇑ eP **P** **16 12 51.5 +0.7**
NRIK pmax pmax
comp=Z,48nm,1.7s
SVE Sverdlovsk 36.54 65 eP **P** **16 12 52.0 +0.4**
SVE eS **S** **16 18 39.0 +5.4**
SVE pmax pmax
comp=Z,15nm,1.2s
SVE MLR MLR
comp=Z,3µm,20.0s
G57A Newington 36.88 267 P **P** **16 12 57.1 +2.5**
baz=37
C36M Paulatuk 36.96 326 P **P** **16 12 57.6 +2.6**
baz=43
C36M Paulatuk 36.96 326 P **P** **16 12 56.5 +1.4**
C36M IAmb IAmb 16 12 59.6
comp=Z,77nm,1.4s
LONY Lake Ozonia 37.09 266 P **P** **16 12 59.5 +3.0**
baz=37
SOC Sochi 37.74 96 eP **P** **16 13 00.4 -1.5**
SOC *e* 16 14 23.9
SOC eS **S** **16 18 52.3 +0.2**
SOC eSS **SnSn** **16 21 32.1 +0.7**
SOC MLR MLR
comp=Z,1µm,18.0s
G54A Lake Saint Pet 37.98 270 P **P** **16 13 07.3 +3.3**
baz=38
GOF Gofitskoye 37.99 91⇑ eP **P** **16 13 05.1 +1.0**
GOF pmax pmax
comp=Z,64nm,1.3s
I57A Carthage 38.10 266 P **P** **16 13 08.2 +3.2**
baz=36
BR131 Keskin Array S 38.34 105 P **P** **16 13 07.3 0.0**
BR131 pmax pmax
comp=Z,13nm,1.0s
BR131 Keskin Array S 38.34 105 P **P** **16 13 07.3 0.0**
BRTR Keskin Array B 38.34 105 P **P** **16 13 07.4 +0.1**
comp=Z,6.4nm,0.8s,baz=336,slow=5.7,SNR=15
BRTR LR LR 16 30 05.0
comp=Z,430nm,21.8s,baz=311,slow=38
IDI Anoyia 38.68 119 P **P** **16 13 10.2 +0.1**
comp=Z,15nm,1.0s,baz=7.6,slow=12,SNR=1.4
IDI Anoyia 38.68 119 IAmb IAmb 16 13 18.4
comp=Z,28nm,0.9s
KIV Kislovodsk 38.72 93 eP **P** **16 13 10.7 +0.4**
KIV *e* 16 14 38.5
KIV eS **S** **16 19 08.0 +0.9**
KIV pmax pmax
comp=Z,298nm,3.5s
KIV pmax pmax
comp=Z,48nm,1.1s
KIV MLR MLR
comp=Z,3µm,16.0s
KBZ Khabaz 38.99 93 P **P** **16 13 13.4 +1.0**
comp=Z,12nm,0.9s,baz=314,slow=11,SNR=8.6
KBZ LR LR 16 29 31.7
comp=Z,2µm,21.8s,baz=328,slow=37
KBZ Khabaz 38.99 93⇑ eP **P** **16 13 12.6 +0.2**
KBZ pmax pmax
comp=Z,33nm,1.3s
YKA Yellowknife Ar 39.35 313 P **P** **16 13 16.3 +1.0**
comp=Z,8.7nm,1.0s,baz=38,slow=8.8,SNR=7.0
YKA LR LR 16 29 25.9
comp=Z,2µm,18.9s,baz=0.0,slow=36
ELL Elmali 39.36 112 P **P** **16 13 15.4 -0.4**
ELL pmax pmax
comp=Z,165nm,1.3s
ELL Elmali 39.36 112 P **P** **16 13 15.4 -0.4**
AKAS Kas 39.68 113 P **P** **16 13 16.8 -1.7**
E46A Sault Ste Mari 39.90 276 P **P** **16 13 20.5 +0.5**
E46A IAmb IAmb 16 13 24.4
comp=Z,70nm,1.2s
INK Inuvik 39.97 329 P **P** **16 13 19.8 -0.6**
comp=Z,21nm,1.1s,baz=33,slow=11,SNR=16
INK Inuvik 39.97 329 P **P** **16 13 19.0 -1.4**
INK pmax pmax
comp=Z,62nm,1.4s
INK Inuvik 39.97 329 P **P** **16 13 19.0 -1.4**
INK IAmb IAmb 16 13 24.3
comp=Z,62nm,1.4s
ZEI Tsey 40.18 93 eP P 16 13 14.0 -8.7
ZEI pmax pmax
comp=Z,17nm,1.5s
AKTO Aktyubinsk 40.19 73 P **P** **16 13 21.5 -1.0**
comp=Z,4.0nm,0.9s,baz=311,slow=8.8,SNR=9.9

WVNY West Valley, N 40.61 267 P P 16 13 27.0 +1.0
WVNY IAmb IAmb 16 13 29.7
comp=Z,90nm,1.4s
N59A State Game Lan 40.61 263 P P 16 13 27.2 +1.2
GROC Groznyy 40.66 90 eP P 16 13 24.8 -1.6
GROC e 16 15 00.3
GROC eS S 16 19 41.7 +5.6
GROC pmax pmax
comp=Z,53nm,1.1s
FFC Flin Flon 40.74 298 P P 16 13 28.9 +2.0
FFC pmax pmax
comp=Z,86nm,1.5s
FFC Flin Flon 40.74 298 P P 16 13 28.9 +2.0
FFC IAmb IAmb 16 13 31.4
comp=Z,86nm,1.4s
M57A Sunshine Farm, 40.84 265 P P 16 13 30.4 +2.5
baz=35
D41A Chassel 41.17 280 P P 16 13 31.5 +1.0
D41A IAmb IAmb 16 13 37.5
comp=Z,87nm,1.3s
M56A Emporium 41.18 266 P P 16 13 33.3 +2.6
baz=35
GLMI Grayling 41.25 275 P P 16 13 32.0 +0.7
GLMI IAmb IAmb 16 13 35.7
comp=Z,86nm,1.2s
ERPA Erie 41.44 268 P P 16 13 34.6 +1.8
ERPA IAmb IAmb 16 13 48.4
comp=Z,66nm,1.2s
A21K Barrow 41.54 342 P P 16 13 35.9 +2.6
baz=25,SNR=9.7
A21K Barrow 41.54 342 P P 16 13 34.8 +1.5
MAK Makhachkala 41.60 89 eP P 16 13 29.8 -4.2
MAK e 16 15 08.2
MAK eS S 16 19 45.0 -4.9
MAK eSS SS 16 22 52.7 -1.7
MAK pmax pmax
comp=Z,210nm,1.2s
MAK MLR MLR
comp=Z,1μm,17.0s
N56A West Decatur 41.69 266 P P 16 13 38.5 +3.6
baz=34
EYMN Ely 41.72 283 P P 16 13 36.8 +1.8
baz=38
EYMN Ely 41.72 283 P P 16 13 36.2 +1.2
ULM Lac du Bonnet 41.74 289 P P 16 13 35.5 +0.3
comp=Z,11nm,1.1s,baz=41,slow=7.8,SNR=6.6
ULM LR LR 16 31 03.1
comp=Z,624nm,18.6s,baz=44,slow=36
ULM Lac du Bonnet 41.74 289 P P 16 13 35.6 +0.4
ULM pmax pmax
comp=Z,56nm,1.5s
ULM Lac du Bonnet 41.74 289 P P 16 13 35.6 +0.4
ULM IAmb IAmb 16 13 42.8
comp=Z,56nm,1.4s
M54A Oil Creek Stat 41.80 268 P P 16 13 39.4 +3.6
baz=35
M54A Oil Creek Stat 41.80 268 P P 16 13 35.7 0.0
M54A IAmb IAmb 16 13 44.9
comp=Z,55nm,1.2s
ABKAR Akbulak array 41.90 73 P P 16 13 35.5 -1.0
K50A Casco 42.04 271 P P 16 13 38.5 +0.9
K50A IAmb IAmb 16 13 46.9
comp=Z,52nm,1.2s
TIXI Tiksi 42.08 15 eP P 16 13 36.8 -0.8
TIXI pmax pmax
comp=Z,49nm,1.0s
TIXI Tiksi 42.08 15 P P 16 13 37.2 -0.4
TIXI IAmb IAmb 16 13 43.6
comp=Z,88nm,1.4s
N55A Marion Center 42.10 266 P P 16 13 41.1 +2.8
baz=34
EPYK Eagle Plains 42.27 329 P P 16 13 41.6 +2.2
baz=34
CSS Mathiatis 42.29 110 P P 16 13 39.2 -0.6
B35A Bob, Littlefor 42.33 286 P P 16 13 39.6 -0.3
B35A IAmb IAmb 16 13 46.5
comp=Z,52nm,1.4s
N54A Moraine State 42.38 267 P P 16 13 41.9 +1.4
baz=35
O55A Ligonier 42.71 266 P P 16 13 46.0 +2.8
baz=34
TOLK Toolik Lake Re 42.87 337 P P 16 13 43.9 -0.3
baz=28,SNR=31
TOLK Toolik Lake Re 42.87 337 P P 16 13 44.5 +0.3
AAM Ann Arbor 42.87 272 P P 16 13 45.3 +0.9
AAM pmax pmax
comp=Z,56nm,1.4s
AAM Ann Arbor 42.87 272 P P 16 13 45.3 +0.9
AAM IAmb IAmb 16 13 46.2
comp=Z,56nm,1.4s
BRVK Borovoye 43.06 62 eP P 16 13 45.7 -0.2
BRVK pmax pmax
comp=Z,7.0nm,1.1s
BRVK Borovoye 43.06 62 P P 16 13 45.0 -0.9
O54A Avella 43.19 267 P P 16 13 50.2 +3.1
baz=34
AGMN Agassiz Nation 43.26 287 P P 16 13 50.4 +2.8
baz=38,SNR=6.4
AGMN Agassiz Nation 43.26 287 P P 16 13 48.9 +1.3
AGMN IAmb IAmb 16 13 51.8
comp=Z,49nm,1.4s
G40A Rib Lake 43.29 280 P P 16 13 49.1 +1.2
G40A IAmb IAmb 16 13 54.5
comp=Z,57nm,1.4s
M50A Fremont 43.34 271 P P 16 13 48.3 +0.1
M50A IAmb IAmb 16 13 52.9
comp=Z,65nm,1.2s
MARD Mardin 43.38 100 P P 16 13 48.1 -0.6
MARD IAmb IAmb 16 13 54.8
comp=Z,44nm,1.0s
MCWV Mont Chateau 43.40 266 P P 16 13 50.9 +2.2
baz=34
N51A Ashland 43.45 270 P P 16 13 51.6 +2.5
baz=35
N51A Ashland 43.45 270 P P 16 13 48.6 -0.5
L48A N Adams 43.50 272 P P 16 13 49.8 +0.3
O53A New Philadelph 43.50 268 P P 16 13 52.7 +3.2
baz=34
O53A New Philadelph 43.50 268 P P 16 13 50.5 +0.9
O53A IAmb IAmb 16 13 55.2
comp=Z,72nm,1.4s
P55A Reedsville 43.51 266 P P 16 13 53.8 +4.1
baz=34
O52A Adamsville 43.88 268 P P 16 13 53.7 +1.1
baz=34
O52A Adamsville 43.88 268 P P 16 13 53.5 +0.9
O52A IAmb IAmb 16 13 59.9
comp=Z,70nm,1.2s
FYU Fort Yukon 43.90 333 P P 16 13 53.2 +0.8
O51A Pataskala 44.18 269 P P 16 13 55.8 +0.7
baz=34
P53A Whipple 44.20 267 P P 16 13 58.4 +3.2
baz=34
F36A Milaca 44.22 283 P P 16 13 54.8 -0.5
N49A Columbus Grove 44.23 271 P P 16 13 54.1 -1.2
COLD Coldfoot 44.24 336 P P 16 13 58.1 +2.9
baz=27,SNR=14
L46A Eue Claire 44.24 274 P P 16 13 56.0 +0.5
R56A Bull Pasture M 44.25 265 P P 16 13 56.8 +1.1
baz=33
ACSO Alum Creek Sta 44.27 270 P P 16 13 57.2 +1.4
baz=34
ACSO Alum Creek Sta 44.27 270 P P 16 13 56.5 +0.7
ACSO IAmb IAmb 16 14 00.2
comp=Z,50nm,1.3s
TAM Tamanrasset 44.38 149 P P 16 13 56.3 -0.7
TAM pmax pmax
comp=Z,28nm,1.5s
TAM Tamanrasset 44.38 149 P P 16 13 56.3 -0.7
Q54A Coxs Mills 44.38 267 P P 16 13 59.2 +2.5
baz=34
Q54A Coxs Mills 44.38 267 P P 16 13 57.2 +0.5
P52A Corning 44.40 268 P P 16 13 59.9 +3.1
baz=34
SPMN Marine on St. 44.42 282 P P 16 13 59.9 +3.0
baz=37
K43A Burlington 44.55 276 P P 16 13 58.9 +0.8
K43A IAmb IAmb 16 14 07.0
comp=Z,43nm,1.1s
I40A Norwalk 44.57 279 P P 16 13 59.0 +0.9
I40A IAmb IAmb 16 14 06.7
comp=Z,30nm,1.1s
EGAK Eagle 44.61 330 P P 16 13 59.2 +1.0
EGAK IAmb IAmb 16 14 02.3
comp=Z,58nm,1.4s
Q53A Leroy 44.78 267 P P 16 14 03.3 +3.4
baz=33
PRP Porcupine Dome 44.88 332 P P 16 14 01.2 +0.7
O49A Covington 44.90 271 P P 16 14 01.3 +0.5
P51A Williamsport 44.93 269 P P 16 14 00.6 -0.4
baz=34
Q52A Bidwell 45.02 268 P P 16 14 04.6 +2.9
baz=34
MDND Maddock 45.15 290 P P 16 14 06.1 +3.4
baz=37
MDND Maddock 45.15 290 P P 16 14 04.5 +1.8
JFWS Jewell Farm 45.20 278 P P 16 14 03.7 +0.5
JFWS pmax pmax
comp=Z,18nm,1.3s
JFWS Jewell Farm 45.20 278 P P 16 14 03.7 +0.5
S55A Lewisburg 45.25 265 P P 16 14 02.0 -1.6
baz=33
T57A Hurt 45.37 264 P P 16 14 08.6 +4.0
baz=32
R53A Hurricane 45.41 267 P P 16 14 08.4 +3.6
baz=33
R53A Hurricane 45.41 267 P P 16 14 04.6 -0.3
R53A IAmb IAmb 16 14 12.3
comp=Z,45nm,1.3s
RDOG Red Dog Mine 45.41 343 P P 16 14 03.6 -1.0
Q51A Peebles 45.43 269 P P 16 14 05.2 +0.1
K27K Chicken 45.46 330 P P 16 14 04.3 -0.6
baz=30
M44A Midewin, Midew 45.51 275 P P 16 14 05.5 0.0
S54A Dingess, Beckl 45.58 266 P P 16 14 08.6 +2.4
baz=33
P49A Miami Univ. Ec 45.60 271 P P 16 14 06.0 -0.4
baz=34
POKR Poker Plat Res 45.61 333 P P 16 14 09.7 +3.6
baz=27,SNR=9.6
IL31 45.81 333 P P 16 14 06.7 -0.9
ILAR Eielson Array 45.81 333 P P 16 14 06.7 -1.0
comp=Z,11nm,1.0s,baz=22,slow=5.5,SNR=35
ILAR PcP PcP 16 15 44.3 -0.6
comp=Z,3.4nm,0.8s,baz=4.1,slow=0.7,SNR=11
ILAR LR LR 16 35 45.5
comp=Z,2μm,19.6s,baz=34,slow=39
ILAR Eielson Array 45.81 333 P P 16 14 06.6 -1.2
MDM Murphy Dome 45.91 333 P P 16 14 08.3 -0.2
COLA College 45.91 333 eP P 16 14 11.3 +2.9
COLA pmax pmax
comp=Z,76nm,1.4s
COLA College 45.91 333 P P 16 14 09.3 +0.9
TCOL CIGO, UAF Yank 45.91 333 P P 16 14 11.3 +2.8
baz=27,SNR=7.7
SCRK Sand Creek 45.92 331 P P 16 14 11.7 +3.0
baz=29,SNR=8.1
T55A Pulaski 45.92 265 P P 16 14 12.8 +3.8
baz=32
SFIN Lafayette 45.93 273 P P 16 14 11.6 +2.7
baz=34
SFIN Lafayette 45.93 273 P P 16 14 09.8 +0.8
I23K Minto, Yukon-K 45.95 334 P P 16 14 12.7 +3.9
baz=26,SNR=14
I23K Minto, Yukon-K 45.95 334 P P 16 14 07.8 -1.0
P48A Milroy 45.97 271 P P 16 14 09.2 -0.1
P48A IAmb IAmb 16 14 13.3
comp=Z,47nm,1.1s
S53A Williamson 46.03 267 P P 16 14 13.5 +3.7
baz=33
CCB Clear Creek Bu 46.10 333 P P 16 14 10.3 +0.3
HDA Harding Lake 46.15 332 P P 16 14 12.9 +2.6
baz=27,SNR=14
HDA Harding Lake 46.15 332 P P 16 14 10.5 +0.1
RIDG Independent Ri 46.31 331 P P 16 14 12.3 +0.6
T54A Tazewell 46.31 266 P P 16 14 13.0 +1.0
baz=32
MLY Manley 46.31 335 P P 16 14 14.4 +2.7
baz=26,SNR=14
L40A Anamosa 46.32 278 P P 16 14 13.4 +1.5
L40A IAmb IAmb 16 14 20.2
comp=Z,24nm,1.1s
WRH Wood River Hil 46.32 333 P P 16 14 10.7 -1.0
WRH IAmb IAmb 16 14 19.5
comp=Z,22nm,1.2s
NEA2 Nenana 46.40 334 P P 16 14 14.8 +2.5
baz=26,SNR=8.7
U56A King 46.40 264 P P 16 14 16.7 +4.0
baz=32
BRZS Berezniki 46.41 63 i P P 16 14 12.0 -0.6
comp=Z,114nm,4.4s,baz=63
BRZS Berezniki 46.41 63 i P P 16 14 12.0 -0.6
DGMT Dagmar 46.49 294 P P 16 14 16.5 +3.2
baz=36
DGMT Dagmar 46.49 294 P P 16 14 13.1 -0.2
P46A Rosedale 46.61 273 P P 16 14 14.0 -0.2
E28A Huff 46.61 289 P P 16 14 14.6 +0.3
E28A IAmb IAmb 16 14 24.0
comp=Z,40nm,1.2s
L26K Log Cabin Wild 46.62 330 P P 16 14 17.9 +3.8
baz=28,SNR=6.7
WHY Whitehorse 46.65 323 P P 16 14 14.6 +0.1
WHY IAmb IAmb 16 14 28.7
comp=Z,43nm,1.5s
O44A Mansfield 46.71 274 P P 16 14 15.9 +0.9
HDIL Hopedale 46.73 275 P P 16 14 16.9 +1.7
baz=34
HDIL Hopedale 46.73 275 P P 16 14 15.8 +0.7
T53A Wise 46.79 267 P P 16 14 18.1 +2.2
baz=32
R49A Shelbyville 46.83 270 P P 16 14 16.8 +0.7
R49A IAmb IAmb 16 14 30.1
comp=Z,27nm,1.4s
U54A Nelsons Funny 46.87 266 P P 16 14 17.0 +0.5
U54A IAmb IAmb 16 14 17.2
comp=Z,39nm,1.4s
V56A Mocksville 46.91 264 P P 16 14 16.2 -0.4
baz=32
MCK McKinley 47.15 333 P P 16 14 20.5 +2.3
baz=26,SNR=13
HYT Haines Junctio 47.17 325 P P 16 14 19.8 +1.2
HYT IAmb IAmb 16 14 23.3
comp=Z,45nm,1.4s
V55A Taylorsville 47.18 265 P P 16 14 21.9 +3.1
baz=32
V55A Taylorsville 47.18 265 P P 16 14 19.8 +1.0
V55A IAmb IAmb 16 14 22.9
comp=Z,35nm,1.3s
ECSD EROS Data Cent 47.23 284 P P 16 14 20.4 +1.3
baz=35,SNR=5.3
N41A Hardin Midland 47.27 277 P P 16 14 21.0 +1.6
WCI Wyandotte Cave 47.37 271 P P 16 14 18.7 -1.5
WCI pmax pmax
comp=Z,27nm,1.0s
WCI Wyandotte Cave 47.37 271 P P 16 14 19.3 -0.9
baz=33
WCI Wyandotte Cave 47.37 271 P P 16 14 18.7 -1.5
WCI IAmb IAmb 16 14 28.4
comp=Z,27nm,1.0s
RND Reindeer 47.42 333 P P 16 14 21.4 +1.0
RND pmax pmax
comp=Z,14nm,1.1s
RND Reindeer 47.42 333 P P 16 14 21.4 +1.0
RND IAmb IAmb 16 14 26.1
comp=Z,14nm,1.1s
DHY Denali Highway 47.43 332 P P 16 14 21.1 +0.5
DHY IAmb IAmb 16 14 32.4
comp=Z,23nm,1.4s
W56A Indian Trail 47.52 263 P P 16 14 24.5 +3.1
baz=32
V54A Nebo 47.56 265 P P 16 14 22.1 +0.3
baz=32
P43A Skaggs, Pawnee 47.58 275 P P 16 14 22.1 +0.3
ZAA0 Zalesovo Array 47.59 52 P P 16 14 20.0 -1.8
ZAA0 IAmb IAmb 16 14 26.9
comp=Z,26nm,1.4s
ZALV Zalesovo Beam 47.59 52 P P 16 14 20.4 -1.3
comp=Z,1.3nm,0.6s,baz=316,slow=5.8,SNR=11
ZALV PcP PcP 16 15 51.0 -0.3
comp=Z,1.9nm,0.9s,baz=337,slow=3.4,SNR=3.5
ZALV LR LR 16 37 05.0
comp=Z,837nm,19.1s,baz=326,slow=40
ZALV Zalesovo Beam 47.59 52 P P 16 14 19.6 -2.1
TZTN Tazewell 47.60 267 P P 16 14 24.7 +2.7
baz=32
BILL Bilibino 47.63 358 i P P 16 14 23.8 +1.9
BILL i 16 15 53.6
BILL i S S 16 21 07.0 -10
BILL pmax pmax
comp=Z,21nm,1.3s
BILL MLR MLR
comp=Z,960nm,17.0s
BILL Bilibino 47.63 358 i P P 16 14 21.1 -0.8
BILL IAmb IAmb 16 14 32.4
comp=Z,19nm,1.4s
TRF Thorofare Moun 47.66 334 P P 16 14 22.3 -0.2
KTH Kantishna Hill 47.69 334 P P 16 14 21.6 -1.0
KTH IAmb IAmb 16 14 26.4
comp=Z,31nm,1.3s
T50A Nancy 47.75 269 P P 16 14 23.2 0.0
T50A IAmb IAmb 16 14 31.6
comp=Z,34nm,1.4s
Q44A Meyer Farm, Va 47.98 274 P P 16 14 25.3 +0.4
KURK Kurchatov 48.05 58 eP P 16 14 24.2 -1.2
KURK pmax pmax
comp=Z,11nm,1.0s
KURK Kurchatov 48.05 58 P P 16 14 23.9 -1.5
KURK IAmb IAmb 16 14 35.8
comp=Z,16nm,0.9s
GLB Gilahina Butte 48.12 329 P P 16 14 26.6 +0.7
N25K Chitina, Valde 48.15 329 P P 16 14 28.8 +2.7
baz=27
USIN University of 48.18 272 P P 16 14 26.5 -0.1
W54A Cherokee Point 48.24 265 P P 16 14 30.8 +3.7
baz=32
X56A White Oak 48.26 263 P P 16 14 30.5 +3.4
baz=31
PAULI Pauline 48.31 264 P P 16 14 28.3 +0.8
X55A Gracelyn & Ava 48.53 264 P P 16 14 29.7 +0.5
baz=31
SCM Sheep Creek Mo 48.53 331 P P 16 14 29.9 +0.8
SCM pmax pmax
comp=Z,61nm,1.2s
SCM Sheep Creek Mo 48.53 331 P P 16 14 29.9 +0.8
U49A Red Boiling Sp 48.59 269 P P 16 14 30.1 +0.4
U49A IAmb IAmb 16 14 38.4
comp=Z,26nm,1.1s
CUT Chulitna 48.61 333 P P 16 14 31.4 +1.9
baz=25
SLM Saint Louis 48.73 275 P P 16 14 31.0 +0.3
SLM pmax pmax
comp=Z,26nm,0.8s
SLM Saint Louis 48.73 275 P P 16 14 31.0 +0.3
SLM IAmb IAmb 16 14 37.2
comp=Z,26nm,0.8s
LAO LASA Array 48.74 294 P P 16 14 33.9 +3.1
baz=35,SNR=13
LAO LASA Array 48.74 294 P P 16 14 31.1 +0.2
T47A Sharon Grove 48.76 271 P P 16 14 30.3 -0.7
GHO Glory Hole Cre 48.92 332 P P 16 14 32.5 +0.5
EGMT Eagleton 49.02 297 P P 16 14 35.7 +2.7
baz=35,SNR=25
EGMT Eagleton 49.02 297 P P 16 14 32.4 -0.6
S44A Carbondale 49.09 273 P P 16 14 33.6 0.0
S44A IAmb IAmb 16 14 41.6
comp=Z,30nm,1.2s
KNK Knik Glacier 49.15 331 P P 16 14 34.0 +0.3
KNK IAmb IAmb 16 14 39.2
comp=Z,42nm,1.2s
CLTN Cedars of Leba 49.18 269 P P 16 14 34.4 +0.2
CLTN IAmb IAmb 16 14 43.1
comp=Z,24nm,1.3s
SKT Skwentna 49.24 334 P P 16 14 33.3 -1.1
SKT IAmb IAmb 16 14 38.4
comp=Z,33nm,1.2s
FVM French Village 49.35 274 P P 16 14 36.4 +0.9
FVM pmax pmax
comp=Z,42nm,1.5s
FVM French Village 49.35 274 P P 16 14 36.4 +0.9
FVM IAmb IAmb 16 14 46.1
comp=Z,42nm,1.4s
W50A Signal Mountai 49.49 268 P P 16 14 37.1 +0.4
SUA Susitna One 49.56 333 P P 16 14 37.5 +0.5
CCM Cathedral Cave 49.65 275 P P 16 14 38.6 +0.9
CCM pmax pmax
comp=Z,4.0nm,0.9s
CCM Cathedral Cave 49.65 275 P P 16 14 38.9 +1.1
baz=33
CCM Cathedral Cave 49.65 275 P P 16 14 38.6 +0.9
V48A Smith Brothers 49.69 270 P P 16 14 39.1 +1.0
V48A IAmb IAmb 16 14 47.0
comp=Z,42nm,1.4s
RC01 Rabbit Creek A 49.70 332 P P 16 14 41.2 +3.3
baz=24
WALA Waterton Lakes 49.73 301 P P 16 14 39.1 +0.6
WALA IAmb IAmb 16 14 46.2
comp=Z,25nm,1.4s
RSSD Black Hills 49.98 290 P P 16 14 39.4 -1.1
RSSD pmax pmax
comp=Z,16nm,1.3s
RSSD Black Hills 49.98 290 P P 16 14 40.4 -0.1
baz=34
RSSD Black Hills 49.98 290 P P 16 14 39.4 -1.1
FPAL Fort Paine 50.18 268 P P 16 14 42.2 +0.2
FPAL IAmb IAmb 16 14 50.6
comp=Z,45nm,1.4s
GOGA Godfrey 50.22 265 P P 16 14 45.5 +3.4
baz=31
GEYT Alibeck 50.31 84 P P 16 14 42.7 -0.2
comp=Z,3.3nm,0.8s,baz=308,slow=7.1,SNR=5.1
GEYT LR LR 16 38 38.6
comp=Z,1μm,19.4s,baz=340,slow=39
GEYT Alibeck 50.31 84 P P 16 14 42.2 -0.7
GYA0B ALIBECK ARRAY 50.31 84 P P 16 14 42.1 -0.8
PBMO Poplar Bluff 50.37 274 P P 16 14 42.7 -0.6
T42A Van Buren 50.44 274 P P 16 14 44.1 +0.3
T42A IAmb IAmb 16 14 47.4
comp=Z,51nm,1.4s
GCMT Greycliff 50.83 296 P P 16 14 47.0 +0.1
MGMO Mountain Grove 50.84 275 P P 16 14 45.9 -1.0
MGMO IAmb IAmb 16 14 50.5
comp=Z,29nm,1.4s
S39A Bolivar 50.84 277 P P 16 14 46.5 -0.4
KOWA Kowa 50.85 163 P P 16 14 44.2 -2.9
PLAL Pickwick Lake 50.87 270 P P 16 14 47.2 +0.2
PLAL IAmb IAmb 16 14 55.0
comp=Z,49nm,1.4s
GNAR Gosnell 50.88 273 P P 16 14 47.6 +0.5
HRY Holter Researc 50.90 298 P P 16 14 46.1 -1.2
JTMT Jette 50.96 300 P P 16 14 47.6 -0.2
BTLS Baital 50.99 66 i P P 16 14 48.0 +0.1
comp=Z,130nm,4.9s,baz=66
BTLS eS S 16 22 06.1 +1.4
baz=66
BTLS LR LR 16 35 29.5
comp=Z,381nm,16.1s,baz=66
BTLS Baital 50.99 66 i P P 16 14 48.0 +0.1
BTLS eS S 16 22 06.0 +1.4
BTLS MLR MLR
comp=Z,381nm,16.0s
KSU1 Kansas State U 51.06 281 P P 16 14 48.9 +0.4
baz=33
KK31 Karatay Array 51.19 70 P P 16 14 48.7 -0.7
KK31 pmax pmax
comp=Z,15nm,1.1s
KK31 Karatay Array 51.19 70 P P 16 14 48.7 -0.7
KKAR Karatay Array 51.19 70 P P 16 14 49.1 -0.3
KKAR pmax pmax
comp=Z,15nm,1.1s
KKAR Karatay Array 51.19 70 P P 16 14 49.1 -0.3
KKAR Karatay Array 51.19 70 P P 16 14 48.5 -0.9
RLMT Red Lodge 51.23 295 P P 16 14 52.4 +2.5
baz=34,SNR=20
RLMT Red Lodge 51.23 295 P P 16 14 51.7 +1.8
LCAR Lake Charles 51.28 274 P P 16 14 51.6 +1.5
YAK Yakutsk 51.31 19 eP P 16 14 50.6 +0.6
YAK e*PP sP 16 14 58.6 +4.0
YAK e 16 16 47.6
YAK eS S 16 22 07.5 -1.0
YAK e*SS sS 16 22 28.1 +14
YAK eSS SS 16 25 40.9 -2.2
YAK pmax pmax
comp=Z,11nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.4s
YAK pmax pmax
comp=E,8.0nm,1.5s
YAK pmax pmax
comp=Z,82nm,2.3s
YAK pmax pmax
comp=N,65nm,3.0s
YAK pmax pmax
comp=E,177nm,3.3s
YAK smax smax
comp=N,350nm,17.9s
YAK smax smax
comp=E,135nm,18.4s

YAK MLR MLR
comp=Z,928nm,21.0s
YAK MLR MLR
comp=N,591nm,18.0s
YAK MLR MLR
comp=E,171nm,17.0s
YAK Yakutsk 51.31 19 P **P** **16 14 50.1 +0.2**
YAK IAmb IAmb 16 14 53.5
comp=Z,31nm,1.5s
MSO Missoula 51.60 300 P **P** **16 14 52.4 -0.1**
baz=33,SNR=13
MSO Missoula 51.60 300 P **P** **16 14 52.1 -0.4**
MSO IAmb IAmb 16 14 56.1
comp=Z,36nm,1.4s
YNE Yellowstone No 51.62 295 P **P** **16 14 52.0 -0.8**
BOZ Bozeman (W) 51.75 297 P **P** **16 14 52.9 -0.8**
BOZ pmax pmax
comp=Z,105nm,1.5s
BOZ Bozeman (W) 51.75 297 P **P** **16 14 53.4 -0.3**
baz=33,SNR=28
BOZ Bozeman (W) 51.75 297 P **P** **16 14 52.9 -0.8**
U40A Yellville 51.77 275 P **P** **16 14 53.4 -0.4**
baz=32,SNR=5.9
U40A Yellville 51.77 275 P **P** **16 14 53.3 -0.4**
U40A IAmb IAmb 16 14 56.6
comp=Z,38nm,1.4s
IUG luzhnay 51.79 71 *e*P **P** **16 14 54.4 +0.3**
comp=Z,118nm,4.1s,baz=71
IUG luzhnay 51.79 71 *e*P **P** **16 14 54.4 +0.3**
LRM Limekiln Ridge 51.88 298 P **P** **16 14 55.3 +0.5**
YMP Mirror Lake Pl 51.90 295 P **P** **16 14 56.4 +1.4**
DGZ Jazzator, Alta 52.03 53‖ *e*P **P** **16 14 55.8 0.0**
LRAL Lakeview Retre 52.07 268 P **P** **16 14 55.6 -0.4**
baz=31
LRAL Lakeview Retre 52.07 268 P **P** **16 14 55.6 -0.4**
LRAL IAmb IAmb 16 15 03.3
comp=Z,51nm,1.4s
YNR Norris Junctio 52.12 296 P **P** **16 14 56.4 -0.3**
YHH Holmes Hill 52.13 296 P **P** **16 14 58.5 +1.8**
YHL Hebgen Lake 52.20 296 P **P** **16 14 57.7 +0.4**
K22A Casper 52.20 291 P **P** **16 14 57.8 +0.6**
baz=33,SNR=7.0
YMR Madison River 52.27 296 P **P** **16 14 58.0 +0.2**
B08A Colville Reser 52.28 304 P **P** **16 14 58.0 +0.5**
YHB Horse Butte 52.29 296 P **P** **16 14 58.3 +0.4**
HHAR Hobbs 52.30 276 P **P** **16 14 58.3 +0.5**
QLMT Earthquake Lak 52.31 296 P **P** **16 14 57.6 -0.4**
DLMT Dillon 52.32 298 P **P** **16 14 59.5 +1.5**
DLMT IAmb IAmb 16 15 07.9
comp=Z,37nm,1.5s
H17A Grant Village 52.35 295 P **P** **16 15 02.6 +4.2**
baz=33,SNR=13
U38A Gravette 52.35 277 P **P** **16 14 59.1 +0.9**
C09A Chrisman Ranch 52.38 303 P **P** **16 14 58.2 +0.1**
BOD Bodaibo 52.42 31 *e*P **P** **16 14 56.7 -1.6**
BOD pmax pmax
comp=Z,14nm,2.3s
X43A Marvell 52.48 272 P **P** **16 15 00.5 +1.5**
W41B Gary Mavity, V 52.51 274 P **P** **16 14 59.5 +0.2**
baz=32,SNR=5.2
W41B Gary Mavity, V 52.51 274 P **P** **16 15 00.8 +1.5**
MAKZ Makanchi 52.54 59 P **P** **16 14 58.2 -1.2**
MAKZ pmax pmax
comp=Z,28nm,1.5s
MAKZ Makanchi 52.54 59 P **P** **16 14 58.2 -1.2**
SGDS Sogindy 52.55 66 *e*P **P** **16 14 59.9 +0.2**
comp=Z,109nm,4.4s,baz=66
SGDS *e*S **S** **16 22 27.6 +1.4**
baz=66
SGDS Sogindy 52.55 66 *e*P **P** **16 14 59.8 +0.2**
SGDS *e*S **S** **16 22 27.6 +1.4**
SEY Seymchan 52.55 6‖ *e*P **P** **16 15 03.2 +4.0**
250A Grady 52.66 267 P **P** **16 15 00.5 0.0**
MK31 Makanchi Array 52.66 58 P **P** **16 14 58.3 -2.1**
MK31 pmax pmax
comp=Z,15nm,1.4s
MK31 Makanchi Array 52.66 58 P **P** **16 14 58.3 -2.1**
MKAR Makanchi Array 52.66 58 P **P** **16 14 59.1 -1.3**
comp=Z,2.4nm,0.8s,baz=319,slow=6.8,SNR=12
MKAR LR LR 16 37 43.6
comp=Z,937nm,21.4s,baz=317,slow=36
MKAR Makanchi Array 52.66 58 P **P** **16 14 58.8 -1.5**
TDK Taldyqorghan 52.72 63 *e*P **P** **16 15 00.9 +0.1**
baz=62
TDK *e*S **S** **16 22 30.0 +1.6**
baz=62
TDK LR LR 16 35 47.8
comp=Z,946nm,19.1s,baz=62
TDK Taldyqorghan 52.72 63 *e*P **P** **16 15 00.9 +0.1**
TDK *e*S **S** **16 22 30.0 +1.6**
TDK MLR MLR
comp=Z,946nm,19.0s
KUU Kurty 52.85 65 *i* P **P** **16 15 01.4 -0.4**
comp=Z,238nm,3.1s,baz=65
KUU LR LR 16 36 34.6
baz=65
KUU Kurty 52.85 65 *i* P **P** **16 15 01.3 -0.4**
KUU pmax pmax
comp=Z,238nm,3.1s
T35A Sooner Cattle 52.86 279 P **P** **16 15 00.9 -1.0**
T35A IAmb IAmb 16 15 04.8
comp=Z,44nm,1.3s
MCMT McKenzie Canyo 52.86 297 P **P** **16 15 02.6 +0.5**
PHWY Pilot Hill 52.90 289 P **P** **16 15 02.6 +0.1**
PHWY IAmb IAmb 16 15 06.5
comp=Z,31nm,1.2s
IMW Indian Meadow 52.91 295 P **P** **16 15 02.8 +0.2**
IMW IAmb IAmb 16 15 07.4
comp=Z,50nm,1.5s
TOA0 Torodi Ar. Sit 53.02 157 P **P** **16 15 01.3 -1.9**
TORD Torodi Ar. Bea 53.02 157 P **P** **16 15 01.8 -1.5**
comp=Z,12nm,1.0s,baz=344,slow=8.7,SNR=17
TORD LR LR 16 39 23.7
comp=Z,1μm,18.0s,baz=340,slow=38
TORD Torodi Ar. Bea 53.02 157 P **P** **16 15 01.3 -1.9**
ZSN Zaisan 53.04 56 *e*P **P** **16 15 02.6 -0.5**
comp=Z,107nm,3.6s,baz=56
ZSN *e*S **S** **16 22 33.6 +0.8**
baz=56
ZSN LR LR 16 37 18.0
comp=Z,374nm,15.1s,baz=56
ZSN Zaisan 53.04 56 *e*P **P** **16 15 02.6 -0.5**
ZSN *e*S **S** **16 22 33.5 +0.8**
ZSN pmax pmax
comp=Z,107nm,3.6s
ZSN MLR MLR
comp=Z,374nm,15.0s
W39A Magazine 53.15 275 P **P** **16 15 05.6 +1.6**
baz=32
AAK Ala-Archa 53.18 67 *de*P **P** **16 15 05.1 +0.7**
AAK pmax pmax
comp=Z,23nm,1.1s
SNOW Snow King Moun 53.20 295 P **P** **16 15 04.5 -0.1**
SNOW IAmb IAmb 16 15 09.4
comp=Z,44nm,1.3s
D08A Wollman Farm, 53.24 303 P **P** **16 15 04.8 +0.3**
TPAW Teton Pass 53.26 295 P **P** **16 15 05.1 0.0**
TPAW IAmb IAmb 16 15 09.9
comp=Z,44nm,1.4s
RWWY Rawlins 53.29 291 P **P** **16 15 05.4 0.0**
BW06 Boulder Array 53.32 293 P **P** **16 15 05.3 -0.2**
baz=32,SNR=25
BW06 Boulder Array 53.32 293 P **P** **16 15 03.3 -2.2**
PD31 Pinedale Array 53.32 293 P **P** **16 15 03.0 -2.5**
PDAR Pinedale Array 53.32 293 P **P** **16 15 03.5 -2.1**
comp=Z,13nm,1.0s,baz=55,slow=6.1,SNR=31
PDAR LR LR 16 37 14.3
comp=Z,2μm,20.8s,baz=26,slow=36
PDAR Pinedale Array 53.32 293 P **P** **16 15 03.2 -2.3**
X40A Basin Creek Fa 53.34 274 P **P** **16 15 07.6 +2.2**
baz=31
KAN10 Anthony SW Sta 53.36 280 P **P** **16 15 06.3 +0.7**
N23A Red Feather La 53.44 289 P **P** **16 15 07.4 +0.9**
baz=32,SNR=22
N23A Red Feather La 53.44 289 P **P** **16 15 07.3 +0.8**
BCYI Bear Canyon 53.51 297 P **P** **16 15 07.7 +0.8**
MIAR Mount Ida 53.61 275 P **P** **16 15 07.0 -0.4**
MIAR pmax pmax
comp=Z,24nm,1.3s
MIAR Mount Ida 53.61 275 P **P** **16 15 07.1 -0.4**
baz=31
MIAR Mount Ida 53.61 275 P **P** **16 15 07.0 -0.4**
MIAR IAmb IAmb 16 15 15.2
comp=Z,24nm,1.2s
AAA Alma-Ata 53.65 65 *e*P **P** **16 15 07.8 +0.1**
baz=65
AAA *e*S **S** **16 22 42.4 +1.1**
baz=65
AAA LR LR 16 36 51.7
comp=Z,1μm,15.3s,baz=65
AAA Alma-Ata 53.65 65 *e*P **P** **16 15 07.8 +0.1**
AAA *e*S **S** **16 22 42.3 +1.1**
AAA MLR MLR
comp=Z,1μm,15.0s
KSCO Kaye Shedlock' 53.67 285 P **P** **16 15 09.0 +1.0**
baz=32
KSCO Kaye Shedlock' 53.67 285 P **P** **16 15 07.5 -0.5**
MDOK Medeo 53.74 65 *e*P **P** **16 15 08.9 +0.3**
baz=65
MDOK LR LR 16 37 03.1
comp=Z,1μm,16.4s,baz=65
MDOK Medeo 53.74 65 *e*P **P** **16 15 08.8 +0.3**
MDOK MLR MLR
comp=Z,1μm,16.0s
ECR Eagle Creek 53.79 295 P **P** **16 15 10.1 +1.2**
PLID Pearl Lake 53.84 300 P **P** **16 15 07.9 -1.4**
PLID IAmb IAmb 16 15 12.1
comp=Z,39nm,1.4s
BTK Batken 53.87 72 P **P** **16 15 09.0 -0.4**
BTK Batken 53.87 72 P **P** **16 15 09.0 -0.4**
BOOM Boomskoye usch 53.88 66 P **P** **16 15 07.9 -1.6**
BOOM pmax pmax
comp=Z,16nm,1.1s
BOOM Boomskoye usch 53.88 66 P **P** **16 15 07.9 -1.6**
AHID Auburn Hatcher 53.93 295 P **P** **16 15 11.0 +1.1**
AHID IAmb IAmb 16 15 14.1
comp=Z,41nm,1.5s
E07A Sunnyside 54.00 304 P **P** **16 15 11.5 +1.3**
KPKS Kokpek 54.12 63 *e*P **P** **16 15 11.2 0.0**
comp=Z,128nm,3.6s,baz=63
KPKS LR LR 16 37 14.6
comp=Z,343nm,14.4s,baz=63
KPKS Kokpek 54.12 63 *e*P **P** **16 15 11.2 0.0**
KPKS pmax pmax
comp=Z,128nm,3.6s
KPKS MLR MLR
comp=Z,343nm,14.0s
WLAR White Oak Lake 54.15 274 P **P** **16 15 11.6 +0.2**
WLAR IAmb IAmb 16 15 15.1
comp=Z,32nm,1.0s
OK029 Liberty Lake 54.21 279 P **P** **16 15 11.4 -0.4**
OK029 IAmb IAmb 16 15 16.0
comp=Z,26nm,1.0s
ISCO Idaho Springs 54.23 288 P **P** **16 15 12.9 +0.6**
baz=32,SNR=7.2
143A Socs Landing, 54.25 272 P **P** **16 15 13.3 +1.2**
OK025 Westminster Rd 54.34 279 P **P** **16 15 12.6 -0.2**
SATY Saty 54.36 64 *e*P **P** **16 15 13.0 0.0**
comp=Z,88nm,3.4s,baz=64
SATY LR LR 16 37 36.2
comp=Z,256nm,13.0s,baz=64
SATY Saty 54.36 64 *e*P **P** **16 15 12.9 0.0**
SATY pmax pmax
comp=Z,88nm,3.4s
SATY MLR MLR
comp=Z,256nm,13.0s
W35A Tecumseh 54.51 278 P **P** **16 15 14.4 +0.4**
BMO Blue Mountains 54.52 301 P **P** **16 15 14.1 0.0**
BMO pmax pmax
comp=Z,33nm,1.4s
BMO Blue Mountains 54.52 301 P **P** **16 15 14.1 0.0**
BMO IAmb IAmb 16 15 17.4
comp=Z,34nm,1.4s
HLID Hailey 54.53 298 P **P** **16 15 16.8 +2.5**
baz=32,SNR=14
346A Big Creek Wild 54.54 269 P **P** **16 15 13.9 -0.4**
MOY Mondy 54.64 42 *e*P **P** **16 15 14.9 0.0**
MOY pmax pmax
comp=Z,131nm,3.5s
KDJ Kajisay 54.67 65 P **P** **16 15 14.7 -0.6**
KDJ pmax pmax
comp=Z,19nm,1.3s
KDJ Kajisay 54.67 65 P **P** **16 15 14.7 -0.6**
SHLS Shalkode 54.68 63 *e*P **P** **16 15 17.2 +1.8**
comp=Z,124nm,3.6s,baz=63
SHLS LR LR 16 37 26.0
comp=Z,205nm,14.8s,baz=63
SHLS Shalkode 54.68 63 *e*P **P** **16 15 17.1 +1.8**
SHLS pmax pmax
comp=Z,124nm,3.6s
SHLS MLR MLR
comp=Z,205nm,15.0s
Q24A Divide 54.75 287 P **P** **16 15 14.9 -1.2**
O20A White River Ci 55.02 291 P **P** **16 15 17.9 0.0**
baz=32,SNR=12
344A Westbrook Farm 55.03 270 P **P** **16 15 17.7 -0.1**
344A IAmb IAmb 16 15 20.3
comp=Z,19nm,1.1s
IRK Irkutsk 55.05 40 *e*P **P** **16 15 16.5 -1.2**
HRA Herat 55.08 83 P **P** **16 15 16.4 -2.0**
HWUT Hardware Ranch 55.09 294 P **P** **16 15 17.4 -1.0**
RDMU Red Mountain 55.18 292 P **P** **16 15 17.6 -1.4**
SMCO Snowmass 55.32 289 P **P** **16 15 19.9 -0.4**
SMCO IAmb IAmb 16 15 24.6
comp=Z,25nm,1.4s
TLY Talaya 55.38 40 *c i* P **P** **16 15 21.3 +1.2**
TLY *e* 16 17 26.1
TLY *e*PPP PPP 16 18 39.5
TLY *e*S **S** **16 23 10.7 +6.5**
TLY pmax pmax
comp=Z,33nm,1.5s
TLY MLR MLR
comp=Z,3μm,11.0s
TLY Talaya 55.38 40 P **P** **16 15 20.1 -0.1**
TCUT Toone Canyon 55.45 294 P **P** **16 15 21.1 +0.1**
WMOK Wichita Mounta 55.68 279 P **P** **16 15 21.8 -0.7**
WMOK pmax pmax
comp=Z,34nm,1.4s
WMOK Wichita Mounta 55.68 279 P **P** **16 15 22.9 +0.4**
baz=31,SNR=7.8
WMOK Wichita Mounta 55.68 279 P **P** **16 15 21.8 -0.7**
WMOK IAmb IAmb 16 15 26.5
comp=Z,34nm,1.4s
SPUT South Promonto 55.69 295 P **P** **16 15 23.3 +0.6**
MA2 Magadan 55.82 7‖ *e*P **P** **16 15 25.1 +2.0**
MA2 pmax pmax
comp=Z,15nm,1.0s
JLU Jordanelle 55.90 294 P **P** **16 15 24.6 +0.2**
SDCO Great Sand Dun 55.93 287 P **P** **16 15 26.9 +2.3**
baz=31
I07A Izee 56.00 302 P **P** **16 15 25.1 +0.4**
T25A Trinidad 56.00 286 P **P** **16 15 26.6 +1.6**
baz=31,SNR=6.7
J08A Circle Bar Ran 56.24 301 P **P** **16 15 27.3 +0.8**
BGU Big Grassy Mou 56.25 295 P **P** **16 15 28.5 +1.8**
KSH Kashi 56.42 68 P **P** **16 15 30.6 +2.8**
KSH PP **PP** **16 17 36.6 +3.6**
KSH S **S** **16 23 17.4 -1.1**
KSH SS **SS** **16 27 04.0 -0.8**
KSH pmax pmax
comp=Z,120nm,1.6s
KSH pmax pmax
comp=Z,1μm,3.9s
KSH LR LR
comp=Z,990nm,11.1s
KSH LR LR
comp=Z,660nm,9.8s
KSH LR LR
comp=Z,5μm,18.4s
ZAK Zakamensk 56.44 41 *e*P **P** **16 15 27.1 -0.7**
ZAK pmax pmax
comp=Z,15nm,1.4s
MPU Maple Canyon 56.48 293 P **P** **16 15 29.3 +1.0**
S22A 4UR Ranch, Cre 56.48 288 P **P** **16 15 29.4 +0.9**
baz=31,SNR=9.1
S22A 4UR Ranch, Cre 56.48 288 P **P** **16 15 29.2 +0.7**
MTP Monte Pirata 56.54 238 P **P** **16 15 27.9 -0.8**
MTP IAmb IAmb 16 15 32.5
comp=Z,23nm,1.1s
GCPR Guaynabo City 56.54 239 P **P** **16 15 27.3 -1.4**
P17A Butcher Ranch, 56.59 292 P **P** **16 15 28.4 -0.7**
PV22 Blue Mesa, Par 56.60 290 P **P** **16 15 29.8 +0.6**
PV22 IAmb IAmb 16 15 33.3
comp=Z,28nm,1.2s
PV07 Paradox Valley 56.63 290 P **P** **16 15 30.8 +1.3**
PV07 IAmb IAmb 16 15 40.1
comp=Z,30nm,1.4s
237A Washetta, Mont 56.75 275 P **P** **16 15 31.3 +1.2**
PV23 Carpenter Ridg 56.76 290 P **P** **16 15 30.2 -0.3**
PV23 IAmb IAmb 16 15 39.0
comp=Z,22nm,0.9s
PV04 Paradox Valley 56.77 290 P **P** **16 15 30.8 +0.3**
PV04 IAmb IAmb 16 15 34.6
comp=Z,49nm,1.4s
DUG Dugway, Tooele 56.79 294 P **P** **16 15 31.3 +0.8**
DUG pmax pmax
comp=Z,64nm,1.5s
DUG Dugway, Tooele 56.79 294 P **P** **16 15 32.7 +2.2**
baz=31,SNR=20
DUG Dugway, Tooele 56.79 294 P **P** **16 15 31.3 +0.8**
PV12 Saucer Basin, 56.79 290 P **P** **16 15 31.4 +0.7**
SRU San Rafael Swe 56.81 292 P **P** **16 15 31.6 +0.9**
SRU pmax pmax
comp=Z,36nm,1.3s
SRU San Rafael Swe 56.81 292 P **P** **16 15 31.6 +0.9**
PV14 Lion Creek, Pa 56.84 290 P **P** **16 15 31.6 +0.6**
PV14 IAmb IAmb 16 15 39.0
comp=Z,29nm,1.0s
PV11 David Mesa, Pa 56.84 290 P **P** **16 15 31.2 +0.3**
PV10 Paradox Valley 56.84 290 P **P** **16 15 31.7 +0.7**
PV20 West Nyswonger 56.84 290 P **P** **16 15 30.9 0.0**
PV20 IAmb IAmb 16 15 35.0
comp=Z,29nm,1.3s
PV16 Nyswonger Mesa 56.85 290 P **P** **16 15 31.2 +0.2**
PV16 IAmb IAmb 16 15 35.1
comp=Z,43nm,1.2s
PV01 Paradox Valley 56.86 290 P **P** **16 15 30.6 -0.6**
PV02 Paradox Valley 56.86 290 P **P** **16 15 30.5 -0.6**
PV03 Paradox Valley 56.87 290 P **P** **16 15 30.2 -1.0**
PV19 Morning Glory 56.87 290 P **P** **16 15 30.9 -0.3**
PV19 IAmb IAmb 16 15 35.3
comp=Z,24nm,1.1s
PV17 East Wray Mesa 56.89 290 P **P** **16 15 30.7 -0.6**
PV18 Skein Mesa, Pa 56.90 290 P **P** **16 15 31.7 +0.3**
TMUT Trail Mountain 56.92 293 P **P** **16 15 31.8 +0.1**
WMQ Urumqi 57.18 56 *e*P **P** **16 15 34.6 +1.5**
WMQ pP sP 16 15 37.8 +0.1
WMQ sP pP 16 15 40.3 +3.9
WMQ S **S** **16 23 30.4 +2.1**
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ pmax pmax
comp=Z,610nm,4.7s
WMQ LR LR
comp=Z,1μm,18.7s
WMQ LR LR
comp=Z,1μm,19.5s
WMQ LR LR
comp=Z,1μm,21.7s
MLPR Magueyes Islan 57.21 240 P **P** **16 15 33.7 +0.2**
MLPR IAmb IAmb 16 15 37.3
comp=Z,39nm,1.1s
Q16A Castle Valley 57.23 292 P **P** **16 15 34.9 +1.2**
ELK Elko 57.26 297 P **P** **16 15 36.0 +2.1**
ELK pmax pmax
comp=Z,32nm,1.5s
ELK Elko 57.26 297 P **P** **16 15 36.0 +2.1**
ELK IAmb IAmb 16 15 38.2
comp=Z,32nm,1.5s
J05D Fort Rock, OR 57.32 303 P **P** **16 15 36.9 +2.7**
baz=30,SNR=9.8
DR12 Loma Pena Alta 57.35 243 P **P** **16 15 35.4 +0.9**
WHTX Lake Whitney, 57.47 277 P **P** **16 15 36.0 +0.8**
WHTX IAmb IAmb 16 15 38.9
comp=Z,39nm,1.3s
MVCO Mesa Verde 57.62 289 P **P** **16 15 39.4 +2.8**
baz=31,SNR=9.6
MVCO Mesa Verde 57.62 289 P **P** **16 15 36.3 -0.2**
MVCO IAmb IAmb 16 15 41.2
comp=Z,45nm,1.5s
KBL Kabul 57.83 77 P **P** **16 15 36.4 -1.6**
KBL pmax pmax
comp=Z,12nm,1.3s
KBL Kabul 57.83 77 P **P** **16 15 36.4 -1.6**
ABTX Abilene, Hawle 57.86 279 P **P** **16 15 40.2 +2.2**
baz=30
ABTX Abilene, Hawle 57.86 279 P **P** **16 15 38.6 +0.6**
ABTX IAmb IAmb 16 15 41.9
comp=Z,53nm,1.4s
SDDR Presa de Saban 57.91 245 P **P** **16 15 38.3 -0.1**
SDDR IAmb IAmb 16 15 48.6
comp=Z,28nm,1.3s
MSU Marysvale 57.98 293 P **P** **16 15 38.4 -0.7**
MSU Marysvale 57.98 293 P **P** **16 15 38.4 -0.7**
MVU Marysvale 58.00 293 P **P** **16 15 38.5 -0.7**
TCRU Three Creeks R 58.01 293 P **P** **16 15 38.5 -0.7**
MSTX Muleshoe 58.02 282 P **P** **16 15 39.7 +0.5**
baz=30
MOD Modoc Plateau 58.17 301 P **P** **16 15 41.1 +0.9**
MOD IAmb IAmb 16 15 44.6
comp=Z,31nm,1.4s
MTPU Mount Pierson 58.39 293 P **P** **16 15 42.9 +0.8**
DBIC Dimbokro 58.48 166 P **P** **16 15 41.4 -1.1**
comp=Z,10nm,1.0s,baz=358,slow=8.5,SNR=4.7
DBIC LR LR 16 41 40.8
comp=Z,2μm,18.9s,baz=344,slow=37
DBIC Dimbokro 58.48 166 IAmb IAmb 16 15 47.0
comp=Z,28nm,1.2s
TIC Toumodi 58.49 166 *e*PKP1 **P** **16 15 41.7 -0.8**
HKT Hockley 58.53 274‖ *e*P **P** **16 15 43.4 +0.8**
HKT pmax pmax
comp=Z,2.0nm,0.4s
HKT Hockley 58.53 274 P **P** **16 15 42.4 -0.2**
PSUT Pine Spring 58.63 294 P **P** **16 15 43.7 +0.2**
L04D Klamath Falls 58.63 303 P **P** **16 15 45.2 +1.8**
baz=29
K02D Willamette Mer 58.70 304 P **P** **16 15 46.4 +2.5**
baz=29
ANMO Albuquerque 58.73 286‖ *e*P **P** **16 15 47.4 +3.2**
ANMO pmax pmax
comp=Z,31nm,2.5s
ANMO Albuquerque 58.73 286 P **P** **16 15 45.5 +1.2**
baz=30
ANMO Albuquerque 58.73 286 P **P** **16 15 44.1 -0.2**
ANMO IAmb IAmb 16 15 49.2
comp=Z,19nm,1.4s
KIC Kosan Boka 58.80 165 *e*PKP1 **P** **16 15 43.0 -1.7**
comp=Z,88nm,1.4s
M04C Macdoel 58.84 302 P **P** **16 15 45.8 +0.9**
baz=29
ZEA Zeya 58.86 24 *e*P **P** **16 15 47.1 +2.4**
ZEA *e*S S 16 24 01.8 +12
ZEA pmax pmax
comp=Z,100nm,5.4s
ZEA smax smax
comp=E,300nm,13.6s
ZEA smax smax
comp=N,300nm,16.2s
ZEA MLR MLR
comp=E,200nm,17.0s
ZEA MLR MLR
comp=N,500nm,18.0s
ZEA MLR MLR
comp=Z,500nm,15.0s
LIC Lamto 58.91 166 *e*PKP1 **P** **16 15 43.0 -2.4**
comp=Z,24nm,0.6s
SZCU Shurtz Canyon 59.14 293 P **P** **16 15 45.9 -1.2**
CCUT Cedar City 59.28 293 P **P** **16 15 47.4 -0.7**
R11A Troy Canyon, C 59.47 295 P **P** **16 15 50.2 +0.9**
baz=30,SNR=27
R11A Troy Canyon, C 59.47 295 P **P** **16 15 49.2 -0.1**
R11A IAmb IAmb 16 15 58.0
comp=Z,24nm,1.2s
BNM Barren Site 59.48 286 P **P** **16 15 48.8 -0.7**
KNB Kanab 59.53 292 P **P** **16 15 49.0 -0.8**
KNB pmax pmax
comp=Z,41nm,1.5s
KNB Kanab 59.53 292 P **P** **16 15 49.0 -0.8**
SONM Songino Array 59.62 41 P **P** **16 15 49.3 -0.9**
comp=Z,2.4nm,1.0s,baz=322,slow=7.2,SNR=9.3
SONM LR LR 16 44 00.5
comp=Z,2μm,20.3s,baz=340,slow=38
SONM Songino Array 59.62 41 P **P** **16 15 48.6 -1.6**
SONM pmax pmax
comp=Z,4.0nm,1.0s
SONM Songino Array 59.62 41 P **P** **16 15 48.6 -1.6**
LCMT Little Creek M 59.70 293 P **P** **16 15 50.4 -0.6**
PAHR Pah Rah Range 59.74 299 P **P** **16 15 51.0 -0.2**
PAHR IAmb IAmb 16 15 55.8
comp=Z,38nm,1.4s
JCT Junction City 59.77 278 P **P** **16 15 50.6 -0.8**
JCT pmax pmax
comp=Z,85nm,1.4s
JCT Junction City 59.77 278 P **P** **16 15 51.7 +0.4**
baz=30,SNR=8.1

JCT	**Junction City**	**59.77**	**278**	P	**P**	**16 15 50.6**	**-0.8**
ULN	**Ulaanbaatar**	**59.78**	**40**	⇑*e*P	**P**	**16 15 51.5**	**+0.2**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**59.78**	**40**	P	**P**	**16 15 49.0**	**-2.3**
KVN	**Kaiserville**	**59.83**	**298**	P	**P**	**16 15 51.3**	**-0.5**
KVN				pmax	pmax		
	comp=Z,47nm,1.5s						
KVN	**Kaiserville**	**59.83**	**298**	P	**P**	**16 15 51.2**	**-0.5**
N02D	**Trinity Center**	**59.87**	**302**	P	**P**	**16 15 52.6**	**+0.7**
	baz=29						
W18A	**Petrified Fore**	**59.93**	**289**	P	**P**	**16 15 52.5**	**-0.1**
W18A				IAmb	IAmb	16 15 58.0	
	comp=Z,34nm,1.4s						
BEKR	**Beckworth**	**59.97**	**300**	P	**P**	**16 15 53.1**	**+0.4**
O03E	**Paynes Creek**	**60.13**	**301**	P	**P**	**16 15 54.1**	**+0.4**
	baz=29						
WDC	**Whiskeytown Da**	**60.15**	**302**	P	**P**	**16 15 53.8**	**+0.1**
WDC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WDC	**Whiskeytown Da**	**60.15**	**302**	P	**P**	**16 15 53.8**	**+0.1**
WUAZ	**Wupatki**	**60.25**	**290**	P	**P**	**16 15 54.9**	**+0.2**
	baz=30,SNR=13						
WUAZ	**Wupatki**	**60.25**	**290**	P	**P**	**16 15 54.2**	**-0.5**
TPH	**Tonopah**	**60.34**	**297**	P	**P**	**16 15 55.6**	**+0.3**
TPH				pmax	pmax		
	comp=Z,61nm,1.3s						
TPH	**Tonopah**	**60.34**	**297**	P	**P**	**16 15 55.6**	**+0.3**
NIL	**Nilore**	**60.36**	**74**	P	**P**	**16 15 53.7**	**-1.6**
NIL				pmax	pmax		
	comp=Z,35nm,1.2s						
NIL	**Nilore**	**60.36**	**74**	P	**P**	**16 15 53.6**	**-1.6**
NIL				IAmb	IAmb	16 16 03.5	
	comp=Z,35nm,1.1s						
NV11	**Mina Array Sit**	**60.39**	**298**	P	**P**	**16 15 56.2**	**+0.7**
NVAR	**Mina Array Bea**	**60.45**	**298**	P	**P**	**16 15 55.0**	**-1.0**
	comp=Z,3.8nm,1.0s,baz=47,slow=5.9,SNR=12						
NVAR				LR	LR	16 42 07.6	
	comp=Z,5μm,18.9s,baz=30,slow=36						
ORV	**Oroville**	**60.67**	**301**	P	**P**	**16 15 57.8**	**+0.5**
ORV				pmax	pmax		
	comp=Z,20nm,1.5s						
ORV	**Oroville**	**60.67**	**301**	P	**P**	**16 15 57.8**	**+0.5**
ORV				IAmb	IAmb	16 16 06.3	
	comp=Z,20nm,1.5s						
SHPR	**Sheep Range**	**60.90**	**294**	P	**P**	**16 15 58.8**	**-0.3**
TPNV	**Topopah Spring**	**60.94**	**295**	P	**P**	**16 15 58.7**	**-0.7**
TPNV				pmax	pmax		
	comp=Z,18nm,1.2s						
TPNV	**Topopah Spring**	**60.94**	**295**	P	**P**	**16 16 00.9**	**+1.5**
	baz=29,SNR=9.3						
TPNV	**Topopah Spring**	**60.94**	**295**	P	**P**	**16 15 58.7**	**-0.7**
TPNV				IAmb	IAmb	16 16 08.3	
	comp=Z,18nm,1.2s						
AFDM	**Forest Hills D**	**61.00**	**300**	P	**P**	**16 15 58.8**	**-0.8**
AFDM				IAmb	IAmb	16 16 03.3	
	comp=Z,18nm,1.4s						
MNTX	**Cornudas Mount**	**61.09**	**283**	P	**P**	**16 16 01.2**	**+0.9**
	baz=29						
MNTX	**Cornudas Mount**	**61.09**	**283**	P	**P**	**16 15 59.5**	**-0.8**
X16A	**Lo Mia Camp, P**	**61.23**	**290**	P	**P**	**16 16 01.2**	**-0.2**
121A	**Cookes Peak, D**	**61.37**	**286**	P	**P**	**16 16 03.8**	**+1.5**
	baz=29						
121A	**Cookes Peak, D**	**61.37**	**286**	P	**P**	**16 16 02.8**	**+0.4**
121A				IAmb	IAmb	16 16 06.5	
	comp=Z,30nm,1.4s						
OMMB	**Old Mammoth Mi**	**61.42**	**298**	P	**P**	**16 16 02.9**	**0.0**
OMMB				IAmb	IAmb	16 16 08.0	
	comp=Z,38nm,1.5s						
MDPB	**Devils Postpil**	**61.44**	**298**	P	**P**	**16 16 02.9**	**0.0**
MDPB				IAmb	IAmb	16 16 07.1	
	comp=Z,27nm,1.4s						
833A	**Chaparral WMA,**	**61.47**	**276**	P	**P**	**16 16 05.0**	**+2.1**
	baz=29						
833A	**Chaparral WMA,**	**61.47**	**276**	P	**P**	**16 16 03.3**	**+0.5**
FURC	**Furnace Creek,**	**61.60**	**295**	P	**P**	**16 16 06.3**	**+2.7**
	baz=29						
CWC	**Cottonwood Cre**	**62.10**	**296**	P	**P**	**16 16 09.9**	**+2.7**
	baz=28						
MPMC	**Manual Prospec**	**62.20**	**296**	P	**P**	**16 16 10.6**	**+2.7**
	baz=28,SNR=6.1						
PDMCI	**Parker Dam,Lak**	**62.42**	**292**	P	**P**	**16 16 12.1**	**+2.9**
	baz=29,SNR=8.7						
TX31	**Lajitas Ar. Si**	**62.42**	**280**	P	**P**	**16 16 08.0**	**-1.3**
TX31				IAmb	IAmb	16 16 17.9	
	comp=Z,29nm,1.2s						
TX32	**Lajitas Array**	**62.42**	**280**	P	**P**	**16 16 07.9**	**-1.5**
TXAR	**Lajitas Array**	**62.42**	**280**	P	**P**	**16 16 08.2**	**-1.1**
	comp=Z,2.8nm,0.9s,baz=49,slow=4.1,SNR=11						
TXAR				LR	LR	16 42 40.8	
	comp=Z,3μm,19.1s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**62.42**	**280**	P	**P**	**16 16 07.8**	**-1.6**
PETK	**Petropavlovsk-**	**62.57**	**3**	P	**P**	**16 16 10.6**	**+0.6**
	comp=Z,9.6nm,1.0s,baz=15,slow=6.2,SNR=5.1						
GSC	**Goldstone, Bar**	**62.60**	**295**	P	**P**	**16 16 10.8**	**+0.3**
GSC				pmax	pmax		
	comp=Z,16nm,1.3s						
GSC	**Goldstone, Bar**	**62.60**	**295**	P	**P**	**16 16 13.8**	**+3.3**
	baz=28						
GSC	**Goldstone, Bar**	**62.60**	**295**	P	**P**	**16 16 10.8**	**+0.3**
GSC				IAmb	IAmb	16 16 19.5	
	comp=Z,16nm,1.3s						
GMRC	**Granite Mounta**	**62.60**	**294**	P	**P**	**16 16 13.1**	**+2.6**
	baz=29,SNR=14						
PET	**Petropavlovsk**	**62.68**	**3**	*e*P	**P**	**16 16 11.9**	**+1.3**
PET				*e*		16 18 30.9	
PET				*e*S	**S**	**16 24 34.6**	**-4.0**
PET				*e*SS	**SS**	**16 28 37.2**	**-4.7**
PET				pmax	pmax		
	comp=Z,200nm,13.0s						
PET				pmax	pmax		
	comp=Z,400nm,9.5s						
PET				MLR	MLR		
	comp=Z,800nm,18.0s						
PET				MLR	MLR		
	comp=Z,800nm,20.0s						
LRMC	**Laurel Mtn Rad**	**62.79**	**296**	P	**P**	**16 16 14.8**	**+3.0**
	baz=28						
TUC	**Tucson**	**62.80**	**288**	P	**P**	**16 16 15.0**	**+3.1**
	baz=29						
HEC	**Hector,Ludlow**	**62.83**	**294**	P	**P**	**16 16 14.6**	**+2.6**
	baz=28						
ISA	**Isabella, Lake**	**62.93**	**296**	P	**P**	**16 16 15.8**	**+3.1**
	baz=28,SNR=7.4						
IRM	**Iron Mountain**	**62.95**	**293**	P	**P**	**16 16 15.5**	**+2.8**
	baz=28,SNR=6.4						
319A	**Douglas**	**62.99**	**286**	P	**P**	**16 16 13.0**	**-0.2**
BELC	**Belle Mtn. Jos**	**63.42**	**293**	P	**P**	**16 16 19.5**	**+3.5**
	baz=28,SNR=15						
EDW2	**Edwards Air Fo**	**63.43**	**295**	P	**P**	**16 16 18.5**	**+2.5**
	baz=28						
BC3	**Big Chuckawall**	**63.51**	**293**	P	**P**	**16 16 19.6**	**+3.1**
	baz=28,SNR=9.6						
GLA	**Glamis**	**63.79**	**292**	P	**P**	**16 16 17.2**	**-1.1**
GLA				pmax	pmax		
	comp=Z,16nm,1.0s						
GLA	**Glamis**	**63.79**	**292**	P	**P**	**16 16 17.2**	**-1.1**
GLA				IAmb	IAmb	16 16 37.8	
	comp=Z,16nm,1.0s						
GTA	**Gaotai**	**65.26**	**49**	*e*P	**P**	**16 16 27.4**	**-0.6**
GTA				pP	pP	16 16 31.8	+0.4
GTA				sP	sP	16 16 34.8	+2.1
GTA				S	**S**	**16 25 08.8**	**-2.5**
GTA				SS	**SS**	**16 29 20.5**	**-2.6**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,430nm,8.8s						
GTA				LR	LR		
	comp=Z,750nm,18.7s						
GTA				LR	LR		
	comp=Z,930nm,19.5s						
GTA				LR	LR		
	comp=Z,1μm,18.3s						
HSIG		**65.75**	**287**	P	**P**	**16 16 31.3**	**+0.2**
SPX	**San Pedro Mart**	**65.81**	**291**	P	**P**	**16 16 31.6**	**-0.3**
SPX				IAmb	IAmb	16 16 36.9	
	comp=Z,30nm,1.3s						
BTO	**Baotou**	**67.29**	**41**	*e*P	**P**	**16 16 43.6**	**+2.6**
HHC	**Hu-ho-hao-te**	**67.50**	**40**	*e*P	**P**	**16 16 42.0**	**-0.3**
HHC				S	**S**	**16 25 35.7**	**-2.7**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,5.1s						
HHC				LR	LR		
	comp=Z,1μm,17.1s						
HHC				LR	LR		
	comp=Z,470nm,17.1s						
HHC				LR	LR		
	comp=Z,1μm,15.5s						
SJCC	**San Jacinto, C**	**67.69**	**245**	*e*P	**P**	**16 16 43.4**	**-0.3**
YSS	**Yuzh-Sakhalins**	**67.70**	**15**	*e*P	**P**	**16 16 46.7**	**+3.4**
YSS				*e**SP	**sP**	**16 16 52.8**	**+4.8**
YSS				*e*		16 17 04.0	
YSS				*e*		16 19 12.3	
YSS				*e*S	**S**	**16 25 44.7**	**+4.4**
YSS				*e*PS	**PnS**	**16 25 57.2**	**-4.6**
YSS				*e*PPS	PPS	16 26 14.7	
YSS				*e*SS	**SS**	**16 29 57.4**	**-2.7**
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
YSS				MLR	MLR		
	comp=N,500nm,17.0s						
YSS				MLR	MLR		
	comp=E,700nm,18.0s						
ZAIG	**Zacatecas**	**67.70**	**276**	P	**P**	**16 16 43.2**	**-0.7**
ZAIG				IAmb	IAmb	16 16 49.5	
	comp=Z,19nm,1.2s						
MOTC	**Monteria, Cord**	**68.90**	**245**	*e*P	P	16 16 42.5	-8.7
BJI	**Beijing**	**69.48**	**37**	P	**P**	**16 16 55.4**	**+0.9**
BJI				S	**S**	**16 26 00.5**	**-1.2**
BJI				pmax	pmax		
	comp=Z,10.0nm,2.3s						
BJI				LR	LR		
	comp=Z,2μm,16.9s						
BJI				LR	LR		
	comp=Z,900nm,18.0s						
BJI				LR	LR		
	comp=Z,1μm,17.9s						
BJT	**Baijiatuan**	**69.50**	**37**	P	**P**	**16 16 52.9**	**-1.8**
BJT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BJT	**Baijiatuan**	**69.50**	**37**	P	**P**	**16 16 52.9**	**-1.8**
LZH	**Lanzhou**	**69.59**	**48**	*e*P	**P**	**16 16 55.3**	**-0.2**
LZH				pP	sP	16 17 00.6	+0.4
LZH				sP	pP	16 17 03.0	+4.1
LZH				SS	SS	16 30 29.8	-0.5
LZH				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH				LR	LR		
	comp=Z,960nm,14.1s						
LZH				LR	LR		
	comp=Z,830nm,13.6s						
LZH				LR	LR		
	comp=Z,980nm,16.3s						
PTBC	**PUERTO BERRIO,**	**70.48**	**242**	*e*P	P	16 16 53.1	-7.9
RUSC	**La Rusia**	**70.56**	**241**	*e*P	**P**	**16 16 59.1**	**-2.9**
TLIG	**Tlapa**	**70.58**	**270**	P	**P**	**16 17 02.7**	**+1.0**
TLIG				IAmb	IAmb	16 17 06.6	
	comp=Z,34nm,1.4s						
LSA	**Lhasa**	**70.95**	**61**	P	**P**	**16 17 02.1**	**-2.2**
LSA				pmax	pmax		
	comp=Z,17nm,1.4s						
LSA	**Lhasa**	**70.95**	**61**	P	**P**	**16 17 02.1**	**-2.2**
LSA				IAmb	IAmb	16 17 09.5	
	comp=Z,17nm,1.4s						
HELC	**Santa Helena**	**71.22**	**243**	*e*P	**P**	**16 17 05.0**	**-0.8**
CBOC	**Ciudad Bolivar**	**71.70**	**244**	*e*P	**P**	**16 17 07.3**	**-1.2**
DL2	**Dalian**	**71.89**	**33**	P	**P**	**16 17 05.7**	**-3.5**
DL2				S	**S**	**16 26 26.1**	**-3.7**
DL2				pmax	pmax		
	comp=Z,29nm,1.6s						
DL2				pmax	pmax		
	comp=Z,310nm,5.6s						
DL2				LR	LR		
	comp=Z,2μm,19.2s						
DL2				LR	LR		
	comp=Z,670nm,16.4s						
DL2				LR	LR		
	comp=Z,1μm,24.3s						
CHIC	**Chingaza**	**71.96**	**241**	*e*P	**P**	**16 17 08.1**	**-2.3**
ROSC	**El Rosal**	**71.99**	**242**	P	**P**	**16 17 11.5**	**+1.0**
	comp=Z,9.1nm,0.6s,baz=45,slow=4.8,SNR=10						
GUY2C	**Guyana, Caldas**	**72.04**	**243**	*e*P	**P**	**16 17 09.6**	**-1.4**
JEM	**Erimo**	**72.62**	**15**	P	P	16 16 60.0	-14
XAN	**Xi'an**	**73.06**	**45**	P	**P**	**16 17 19.3**	**+2.9**
XAN				pP	sP	16 17 24.9	+3.8
XAN				S	**S**	**16 26 38.7**	**-4.8**
XAN				ScS	**SKKSac**	**16 27 22.4**	**+0.2**
XAN				pmax	pmax		
	comp=Z,17nm,1.5s						
XAN				pmax	pmax		
	comp=Z,420nm,8.1s						
XAN				LR	LR		
	comp=Z,1μm,24.5s						
XAN				LR	LR		
	comp=Z,1μm,19.6s						
XAN				LR	LR		
	comp=Z,2μm,24.0s						
XAN	**Xi'an**	**73.06**	**45**	P	**P**	**16 17 14.6**	**-1.8**
XAN				pmax	pmax		
	comp=Z,17nm,1.3s						
XAN	**Xi'an**	**73.06**	**45**	P	**P**	**16 17 14.6**	**-1.8**
XAN				IAmb	IAmb	16 17 26.6	
	comp=Z,17nm,1.3s						
ORTC	**Ortega, Tolima**	**73.20**	**242**	*e*P	**P**	**16 17 13.2**	**-4.1**
PRAC	**Prado**	**73.24**	**242**	*e*P	P	16 17 08.4	-9.1
CD2	**Chengdu**	**74.32**	**50**	P	**P**	**16 17 20.8**	**-3.0**
CD2				S	**S**	**16 26 55.7**	**-2.1**
CD2				sS	sS	16 27 06.0	+2.5
CD2				SS	**SS**	**16 31 40.2**	**-2.4**
CD2				pmax	pmax		
	comp=Z,380nm,5.9s						
CD2				LR	LR		
	comp=Z,1μm,16.9s						
CD2				LR	LR		
	comp=Z,1μm,15.5s						
CD2				LR	LR		
	comp=Z,1μm,16.1s						
SHL	**Shillong**	**74.95**	**62**	P	**P**	**16 17 25.8**	**-1.9**
SHL				pmax	pmax		
	comp=Z,26nm,1.4s						
SHL	**Shillong**	**74.95**	**62**	P	**P**	**16 17 25.8**	**-1.9**
SHL				IAmb	IAmb	16 17 32.1	
	comp=Z,26nm,1.4s						
KMBO	**Kilima Mbogo**	**76.52**	**123**	LR	LR	16 54 47.7	
	comp=Z,624nm,19.6s,baz=276,slow=38						
HYB	**Hyderabad**	**76.88**	**77**	*i* P	**P**	**16 17 38.0**	**-0.6**
NJ2	**Nanjing**	**77.73**	**37**	*e*P	**P**	**16 17 41.9**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,2μm,19.4s						
NJ2				LR	LR		
	comp=Z,650nm,12.3s						
NJ2				LR	LR		
	comp=Z,2μm,17.5s						
WHN	**Wuhan**	**77.93**	**41**	P	**P**	**16 17 47.2**	**+3.0**
KMI	**Kunming**	**79.31**	**53**	⇑*e*P	P	16 17 57.2	+5.0
KMI				pP	PcP	16 17 59.5	-0.9
KMI				PP	**PP**	**16 20 54.9**	**+3.5**
KMI				S	**S**	**16 27 58.2**	**+5.5**
KMI				SS	**SS**	**16 32 55.9**	**-2.5**
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				pmax	pmax		
	comp=Z,190nm,4.3s						
KMI				LR	LR		
	comp=Z,470nm,22.0s						
KMI				LR	LR		
	comp=Z,530nm,20.2s						
KMI				LR	LR		
	comp=Z,580nm,27.6s						
GYA	**Guiyang**	**79.39**	**49**	⇑P	**P**	**16 17 56.1**	**+3.6**
GYA				sP	PcP	16 18 02.3	+1.7
GYA				S	**S**	**16 27 54.9**	**+1.5**
GYA				pmax	pmax		
	comp=Z,16nm,1.1s						
GYA				LR	LR		
	comp=Z,760nm,17.9s						
GYA				LR	LR		
	comp=Z,410nm,14.9s						
GYA				LR	LR		
	comp=Z,750nm,18.8s						
JNU	**Nakatsue**	**79.44**	**27**	LR	LR	16 59 03.8	
	comp=Z,466nm,18.9s,baz=330,slow=40						
SAML	**Samuel**	**80.97**	**226**	P	**P**	**16 17 59.9**	**-1.0**
SAML				pmax	pmax		
	comp=Z,12nm,1.3s						
SAML	**Samuel**	**80.97**	**226**	P	**P**	**16 17 59.9**	**-1.0**
BDFB	**Brasilia**	**83.37**	**210**	LR	LR	16 48 55.9	
	comp=Z,1μm,21.2s,baz=343,slow=31						
CHTO	**Chiang Mai**	**83.75**	**59**	P	**P**	**16 18 12.5**	**-3.0**
CHTO				pmax	pmax		
	comp=Z,24nm,1.5s						
CHTO	**Chiang Mai**	**83.75**	**59**	P	**P**	**16 18 12.5**	**-3.0**
CHTO				IAmb	IAmb	16 18 19.1	
	comp=Z,24nm,1.5s						
CMAR	**Chiang Mai Arr**	**84.07**	**59**	P	**P**	**16 18 15.9**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=318,slow=6.3,SNR=12						
CMAR				PP	**PP**	**16 21 32.4**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=332,slow=7.5,SNR=5.7						
CMAR				LR	LR	16 58 39.9	
	comp=Z,474nm,19.5s,baz=2.5,slow=38						
CMAR	**Chiang Mai Arr**	**84.07**	**59**	P	**P**	**16 18 15.2**	**-2.0**
CMAR						16 21 32.4	
CMAR	**Chiang Mai Arr**	**84.07**	**59**	P	**P**	**16 18 15.2**	**-2.0**
QIZ	**Qiongzhong**	**87.34**	**49**	P	**P**	**16 18 30.4**	**-3.0**
QIZ				pP	**PcP**	**16 18 35.0**	**-0.5**
QIZ				S	**S**	**16 29 09.2**	**-4.5**
QIZ				sS	**pS**	**16 29 17.2**	**-1.0**
QIZ				SS	**SS**	**16 34 58.8**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,240nm,6.5s						
QIZ				LR	LR		
	comp=Z,380nm,22.6s						
QIZ				LR	LR		
	comp=Z,510nm,19.6s						
QIZ				LR	LR		
	comp=Z,470nm,23.5s						
CPUP	**Villa Florida**	**95.84**	**216**	LR	LR	16 58 19.4	
	comp=Z,619nm,19.0s,baz=24,slow=33						
BOSA	**Boshof**	**98.63**	**143**	LR	LR	17 06 36.7	
	comp=Z,1μm,18.1s,baz=344,slow=37						
WRA	**Warramunga Arr**	**131.51**	**37**	PKP	**PKPdf**	**16 24 56.9**	**-1.9**
	comp=Z,0.8nm,1.0s,baz=360,slow=2.9,SNR=3.8						
ASAR	**Alice Springs**	**134.95**	**39**	PKP	**PKPdf**	**16 25 03.4**	**-1.8**
	comp=Z,0.9nm,0.9s,baz=358,slow=2.7,SNR=6.6						
SYO	**Syowa Base**	**139.15**	**153**	⇑*e*X	**Pdif**	**16 22 20.4**	**-3.8**
SYO	**Syowa Base**	**139.15**	**153**	⇑*e*X	**Pdif**	**16 22 25.0**	**+0.8**
MAW	**Mawson**	**143.59**	**141**	PKP	PKPbc	16 25 16.4	-0.5
	comp=Z,1.2nm,0.9s,baz=318,slow=6.0,SNR=2.4						
STKA	**Stephens Creek**	**144.72**	**32**	PKP	**PKPab**	**16 25 20.7**	**-0.7**
	comp=Z,7.3nm,1.1s,baz=315,slow=6.4,SNR=5.7						
STKA	**Stephens Creek**	**144.72**	**32**	PKIKP	**PKPdf**	**16 25 22.2**	**-0.4**
STKA	**Stephens Creek**	**144.72**	**32**	PKPdf	**PKPdf**	**16 25 22.2**	**-0.4**
QSPA	**South Pole Qui**	**154.51**	**180**	PKPdf	**PKPdf**	**16 25 38.1**	**+1.0**

*IDC **02** 16:10:35.5±0.8, 64°.63N×17°.70W, h0km, mb3.6/9, mb1 3.9/10, mb1mx3.7/41, mbtmp3.6/10, ML3.9/1, Error ellipse: s-maj=27.0km s-min=14.9km az=20.0*
*NEIC **02** 16:10:36.4±1.4, 64°.62N±0°.08×17°.7W±0°.1, h7km±4km, mb4.2/14, Error ellipse: s-maj=11.0km s-min=8.5km az=172.0*

ISC 02 16:10:36.8±0.6, 64°.6N±0°.1×17°.70W±0°.06, h10km, n31, σ0°.77/31, mb3.8/13, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.57**	**277**	Pn	**Pn**	**16 11 03.1**	**-1.6**
	14nm,0.3s,baz=87,slow=7.8,SNR=14						
BORG				Sn	**Sg**	**16 11 27.4**	**+0.2**
	13nm,0.3s,baz=30,slow=20,SNR=11						
EKA	**Eskdalemuir Ar**	**11.78**	**135**	Pn	**Pn**	**16 13 23.7**	**-0.9**
	baz=322,slow=14,SNR=4.9						
ARD8	**ARCESS Array S**	**17.21**	**54**	P	**P**	**16 14 39.2**	**+0.7**
ARD8				IAmb	IAmb	16 14 46.9	
	comp=Z,20nm,1.4s						
FIA1	**FINESS Array S**	**19.80**	**79**	P	**Pn**	**16 15 07.8**	**-0.6**
FIA1				IAmb	IAmb	16 15 36.9	
	comp=Z,36nm,1.4s						
FINES	**FINESS Array B**	**19.80**	**79**	P	**Pn**	**16 15 07.6**	**-0.9**
GERES	**GERESS Array B**	**23.00**	**118**	P	**P**	**16 15 43.3**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=338,slow=9.6,SNR=2.4						
GERES	**GERESS Array B**	**23.00**	**118**	P	**P**	**16 15 42.5**	**+0.9**
CTI	**Castel Tesino**	**24.60**	**125**	P	**P**	**16 15 57.9**	**+0.9**
CTI				IAmb	IAmb	16 15 58.3	
	comp=Z,5.3nm,1.3s						
PSZ	**Piszkesteto**	**26.18**	**112**	P	**P**	**16 16 10.9**	**-0.3**
PSZ				IAmb	IAmb	16 16 26.6	
	comp=Z,4.0nm,1.0s						
ESDC	**Sonseca Array**	**26.23**	**156**	P	**P**	**16 16 12.3**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=343,slow=12,SNR=2.6						
AKASG	**Malin Array Be**	**27.92**	**97**	P	**P**	**16 16 26.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=324,slow=9.4,SNR=3.0						
AKASG	**Malin Array Be**	**27.92**	**97**	IAmb	IAmb	16 16 31.4	
	comp=Z,0.6nm,0.8s						
AKBB	**Malin Array Si**	**27.92**	**97**	P	**P**	**16 16 27.0**	**+0.3**
MVL	**Millersville**	**41.41**	**263**	P	**P**	**16 18 23.3**	**+0.3**
ABKAR	**Akbulak array**	**42.09**	**73**	P	**P**	**16 18 27.4**	**-1.0**
ABKAR	**Akbulak array**	**42.09**	**73**	P	**P**	**16 18 28.2**	**-0.3**
BRVK	**Borovoye**	**43.23**	**62**	P	**P**	**16 18 37.2**	**-0.4**
BRVK				IAmb	IAmb	16 18 51.4	
	comp=Z,2.4nm,0.7s						
ILAR	**Eielson Array**	**45.70**	**332**	P	**P**	**16 18 57.3**	**+0.1**
	comp=Z,1.6nm,1.2s,baz=22,slow=7.3,SNR=5.7						
Y60A	**Bolivia**	**47.27**	**260**	P	**P**	**16 19 09.4**	**-0.4**
ZALV	**Zalesovo Beam**	**47.74**	**51**	P	**P**	**16 19 13.7**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=329,slow=9.4,SNR=1.8						
ZALV	**Zalesovo Beam**	**47.74**	**51**	P	**P**	**16 19 13.3**	**+0.1**
HRY	**Holter Researc**	**50.71**	**298**	P	**P**	**16 19 37.6**	**+1.3**
KKAR	**Karatay Array**	**51.38**	**70**	P	**P**	**16 19 41.6**	**+0.3**
MAKZ	**Makanchi**	**52.70**	**58**	P	**P**	**16 19 50.4**	**-0.7**
MAKZ				IAmb	IAmb	16 20 13.8	
	comp=Z,10.0nm,1.5s						
MKAR	**Makanchi Array**	**52.83**	**58**	P	**P**	**16 19 51.2**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=331,slow=5.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**53.12**	**156**	P	**P**	**16 19 54.4**	**0.0**
	comp=Z,0.6nm,0.8s,baz=338,slow=7.8,SNR=2.9						
PDAR	**Pinedale Array**	**53.12**	**293**	P	**P**	**16 19 55.0**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=27,slow=7.0,SNR=4.5						
PDAR	**Pinedale Array**	**53.12**	**293**	P	**P**	**16 19 54.1**	**-0.3**
D05A	**Enumclaw**	**54.04**	**305**	P	**P**	**16 20 00.6**	**-0.2**
TCUT	**Toone Canyon**	**55.25**	**293**	P	**P**	**16 20 09.8**	**-0.3**
TXAR	**Lajitas Array**	**62.21**	**280**	P	**P**	**16 20 59.5**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=11,slow=5.8,SNR=2.1						

IDC 02 16:24:52.5±3.3, 30°.62N×140°.59E, h0km, mb3.4/2, mb1 3.5/4, mb1mx3.3/34, mbtmp3.4/4, ML2.6/2, Error ellipse: s-maj=218.2km s-min=23.7km az=82.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.59**	**345**	Pn	Pn	16 25 34.4	-1.3
	5.3nm,0.3s,baz=229,slow=20,SNR=2.0						
JHJ				Sn	Sn	16 26 05.0	-2.9
	5.1nm,0.3s,baz=90,slow=20,SNR=1.4						
**

H11N3	**WAKE ISLAND Hy**	**21.82**	**69**	T	T	17 18 30.7		
	baz=256,slow=75,SNR=66							
WB0	**Warramunga Arr**	**34.16**	**199**	P	**P**	**16 56 38.6**	**-0.6**	
WB0				IAmb	IAmb	16 56 44.6		
	comp=Z,5.7nm,1.3s							
WR0	**Warramunga Arr**	**34.29**	**198**	P	**P**	**16 56 39.8**	**-0.6**	
WR0				IAmb	IAmb	16 57 00.5		
	comp=Z,5.3nm,1.1s							
WRAB	**Tennant Creek**	**34.33**	**198**	P	**P**	**16 56 40.5**	**-0.2**	
WRAB				IAmb	IAmb	16 57 00.7		
	comp=Z,6.1nm,1.4s							
WB2	**Warramunga Arr**	**34.34**	**198**	P	**P**	**16 56 40.4**	**-0.3**	
WRA	**Warramunga Arr**	**34.34**	**198**	P	**P**	**16 56 40.1**	**-0.7**	
	comp=Z,1.1nm,0.7s,baz=20,slow=9.9,SNR=12							
WRA	**Warramunga Arr**	**34.34**	**198**	IAmb	IAmb	16 56 41.5		
	comp=Z,0.2nm,0.9s							
AS31	**Alice Springs**	**37.98**	**197**	P	**P**	**16 57 12.4**	**+0.5**	
ASAR	**Alice Springs**	**37.98**	**197**	P	**P**	**16 57 11.5**	**-0.4**	
	comp=Z,0.4nm,0.6s,baz=18,slow=10,SNR=9.2							
STKA	**Stephens Creek**	**44.63**	**184**	P	**P**	**16 58 06.6**	**+0.3**	
STKA				IAmb	IAmb	16 58 13.6		
	comp=Z,1.7nm,1.3s							
YAK	**Yakutsk**	**50.37**	**351**	LR	LR	17 19 19.8		
	comp=Z,71nm,18.1s,baz=220,slow=35							
ILAR	**Eielson Array**	**69.04**	**25**	P	**P**	**17 00 59.6**	**+0.6**	
	comp=Z,0.4nm,0.9s,baz=251,slow=5.7,SNR=4.8							

MAN ***02*** *17:10:57.5, 10˚.70N×126˚.76E, h19km, mb4.6, ML3.4, MS3.3*

IDC ***02*** *17:11:47.4±8.7, 8˚.58N×127˚.09E, h376km±64km, mb2.9/3, mb1 3.2/5, mb1mx2.7/55, mbtmp4.0/5, Error ellipse: s-maj=78.4km s-min=69.6km az=37.0*

ISC 02 17:10:56.3±1.3, 10˚.74N±0˚.08×126˚.78E±0˚.08, h10km, n11, σ1§57/17, mb3.8/4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**1.14**	**214**	*eP*	**Pb**	**17 11 16.1**	**-2.1**
GLSP				*eS*	**Sb**	**17 11 30.1**	**-2.9**
MSLP	**Maasin**	**1.98**	**253**	*eP*	**Pn**	**17 11 30.1**	**+0.2**
MSLP				*eS*	**Sn**	**17 11 54.5**	**-0.2**
OCLP	**Ormoc**	**2.15**	**279**	*eP*	**Pn**	**17 11 32.6**	**+0.4**
OCLP				*eS*	**Sn**	**17 11 59.8**	**+0.8**
CGP	**Cagayan de Oro**	**3.06**	**222**	*eP*	**Pg**	**17 11 57.5**	**+2.5**
CGP				*eS*	**Sn**	**17 12 21.2**	**-0.2**
BUKP	**Musuan**	**3.31**	**211**	*eP*	**Pn**	**17 11 49.5**	**+1.3**
BUKP				*eS*	**Sn**	**17 12 29.3**	**+1.7**
CNOP	**Candoni, Negro**	**4.17**	**258**	*eP*	**Pn**	**17 12 00.2**	**+0.2**
SIJI	**Sorong**	**12.36**	**159**	P	Pn	17 14 08.8	+16
	1.2nm,0.3s,baz=330,slow=14,SNR=22						
SIJI				S	Sn	17 15 59.0	-12
	0.4nm,0.3s,baz=270,slow=20,SNR=5.6						
BATI	**Baumata**	**21.04**	**189**	P	**P**	**17 15 43.1**	**+2.5**
	2.0nm,0.3s,baz=20,slow=3.3,SNR=4.3						
WRA	**Warramunga Arr**	**31.38**	**166**	P	**P**	**17 17 16.3**	**-1.3**
	0.3nm,0.7s,baz=347,slow=10.0,SNR=3.2						
WRA				PcP	**PcP**	**17 20 11.4**	**0.0**
	0.3nm,0.6s,baz=339,slow=2.9,SNR=2.0						
ASAR	**Alice Springs**	**34.90**	**169**	P	**P**	**17 17 47.2**	**-1.0**
	0.5nm,0.6s,baz=351,slow=6.7,SNR=9.3						
ASAR				PcP	**PcP**	**17 20 20.9**	**-0.3**
	0.4nm,0.7s,baz=347,slow=3.3,SNR=4.3						
STKA	**Stephens Creek**	**44.68**	**162**	P	**P**	**17 19 09.2**	**-0.4**
	2.0nm,0.9s,baz=340,slow=9.8,SNR=3.8						

IDC ***02*** *17:13:00.3±0.7, 27˚.30N×103˚.77E, h0km, mb3.7/13, mb1 3.9/14, mb1mx3.7/56, mbtmp3.7/14, ML3.6/1, Error ellipse: s-maj=23.2km s-min=14.3km az=63.0*

BJI ***02*** *17:13:01.5±0.0, 27˚.11N×103˚.30E, h12km, ML3.8/17*

ISC 02 17:13:02.4±0.6, 27˚.24N±0˚.04×103˚.51E±0˚.06, h10km, n20, σ1§74/27, mb3.8/13, 2D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**2.22**	**198**	↓*i*Pg	**Pn**	**17 13 38.6**	**-0.9**
KMI				Sg	**Sn**	**17 14 06.6**	**-0.5**
KMI				smax	smax		
	comp=N,230nm,1.0s						
KMI				smax	smax		
	comp=E,320nm,1.0s						
GYA	**Guiyang**	**2.93**	**105**	↓Pn	**Pn**	**17 13 53.0**	**+3.8**
GYA				Sn	**Sb**	**17 14 29.5**	**-1.2**
GYA				Sg	**Sg**	**17 14 39.0**	**+2.5**
GYA				smax	smax		
	comp=N,370nm,0.8s						
GYA				smax	smax		
	comp=E,330nm,0.8s						
CD2	**Chengdu**	**3.66**	**3**	Pn	**Pn**	**17 14 01.4**	**+2.2**
CD2				Pg	**Pg**	**17 14 11.5**	**-1.1**
CD2				Sn	**Sn**	**17 14 41.2**	**-1.3**
CD2				Sg	**Sg**	**17 15 03.0**	**+3.0**
CD2				smax	smax		
	comp=N,890nm,0.6s						
CD2				smax	smax		
	comp=E,880nm,0.6s						
XAN	**Xi'an**	**8.22**	**33**	P	**Pn**	**17 15 02.8**	**+0.9**
XAN				S	**Sn**	**17 16 34.9**	**0.0**
XAN				smax	smax		
	comp=N,120nm,1.2s						
XAN				smax	smax		
	comp=E,120nm,1.0s						
CMAR	**Chiang Mai Arr**	**9.70**	**207**	Pn	**Pn**	**17 15 24.9**	**+2.8**
	0.1nm,0.3s,baz=18,slow=12,SNR=4.2						
CMAR				Pg		17 16 01.8	
	0.1nm,0.3s,baz=6.4,slow=17,SNR=6.2						
CMAR				Lg	Lg	17 18 11.3	
	0.1nm,0.3s,baz=111,slow=19,SNR=1.2						
SONM	**Songino Array**	**20.68**	**6**	P	**P**	**17 17 42.4**	**-0.2**
	0.3nm,0.4s,baz=184,slow=10,SNR=4.5						
WMQ	**Urumqi**	**20.90**	**326**	*eP*	**P**	**17 17 44.6**	**-0.3**
KSRS	**Korea Array**	**22.95**	**58**	P	**P**	**17 18 04.0**	**-2.9**
	0.9nm,0.6s,baz=247,slow=9.4,SNR=4.4						
MKAR	**Makanchi Array**	**25.70**	**325**	P	**P**	**17 18 32.4**	**-0.3**
	1.4nm,0.9s,baz=112,slow=9.6,SNR=7.8						
ZALV	**Zalesovo Beam**	**30.03**	**338**	P	**P**	**17 19 11.1**	**-0.2**
	0.3nm,0.3s,baz=126,slow=7.4,SNR=2.7						
KURBB	**Kurchatov Arra**	**30.11**	**328**	P	**P**	**17 19 11.6**	**-0.5**
	0.6nm,0.4s,baz=142,slow=8.2,SNR=1.6						
GEYT	**Alibeck**	**39.36**	**297**	P	**P**	**17 20 33.3**	**+1.2**
	1.0nm,0.5s,baz=74,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**55.61**	**144**	P	**P**	**17 22 36.8**	**-1.8**
	1.0nm,0.5s,baz=333,slow=8.4,SNR=2.2						
ASAR	**Alice Springs**	**58.51**	**147**	P	**P**	**17 22 58.5**	**-0.6**
	0.7nm,0.7s,baz=329,slow=7.0,SNR=15						
AKASG	**Malin Array Be**	**59.68**	**315**	P	**P**	**17 23 08.0**	**+1.1**
	0.2nm,0.4s,baz=70,slow=6.4,SNR=3.6						
FINES	**FINESS Array B**	**60.50**	**327**	P	**P**	**17 23 13.1**	**+0.8**
	5.1nm,0.9s,baz=43,slow=8.4,SNR=5.9						
ARCES	**ARCESS Array B**	**60.57**	**337**	P	**P**	**17 23 12.3**	**-0.5**
	1.5nm,0.9s,baz=89,slow=8.4,SNR=1.0						
HNR	**Honiara**	**65.70**	**116**	P	**P**	**17 23 45.4**	**-2.2**
	38nm,0.7s,baz=14,slow=6.3,SNR=2.4						
NOA	**NORSAR Array B**	**67.64**	**328**	P	**P**	**17 23 57.5**	**-1.8**
	0.4nm,0.5s,baz=74,slow=6.3,SNR=3.2						
GERES	**GERESS Array B**	**69.89**	**315**	P	**P**	**17 24 14.2**	**+0.6**
	0.2nm,0.5s,baz=85,slow=4.2,SNR=1.7						

IDC ***02*** *17:17:03.4±0.4, 61˚.15S×154˚.22E, h0km, mb4.8/21, mb1 4.9/21, mb1mx4.8/36, mbtmp4.8/21, MS5.3/22, Ms1 5.3/22, ms1mx5.3/23, Error ellipse: s-maj=19.8km s-min=11.8km az=86.0*

NEIC ***02*** *17:17:04.4±1.9, 61˚.22S±0˚.05×154˚.3E±0˚.2, h10km±1km, mb5.3/49, Ms_20 5.6/370, Mwb6.0/36, Mww6.0, Mwc6.0(GCMT), Error ellipse: s-maj=19.5km s-min=6.9km az=71.0*

MOS ***02*** *17:17:04.7±1.8, 60˚.98S×154˚.66E, h10km, mb5.4/13, MS5.5/9, Error ellipse: s-maj=41.4km s-min=8.7km az=95.2*

NEIC ***02*** *17:17:05.7, 61˚.16S×153˚.79E, h13km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.12; Mθθ=0.83; Mφφ=-0.95; Mrθ=0.10; Mrφ=-0.56; Mθφ=0.02; Fault plane solution: M0=1.06000×10¹⁸ NP1:φs=60.98000°, δ=87.58000°, λ=174.37000°. NP2:φs=151.21000°, δ=84.38000°, λ=2.43000°. Principal axes: T 0.9977, Plg6.0000°, Azm16.0000°; N 0.1128, Plg84.0000°, Azm218.0000°; P -1.1105, Plg2.0000°, Azm106.0000°;*

BJI ***02*** *17:17:07.0±0.0, 61˚.00S×154˚.10E, h20km, mB5.7/6, mb5.2/7, Ms5.7/15, Ms7 5.4/17*

NEIC ***02*** *17:17:08, 61˚.36S×154˚.15E, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.02; Mθθ=1.10; Mφφ=-1.09; Mrθ=0.31; Mrφ=-0.74; Mθφ=0.50; Fault plane solution: M0=1.45000×10¹⁸ NP1:φs=150.00000°, δ=70.00000°, λ=-10.00000°. NP2:φs=243.00000°, δ=80.00000°, λ=-160.00000°. Principal axes: T 1.3482, Plg7.0000°, Azm16.0000°; N 0.1809, Plg68.0000°, Azm268.0000°; P -1.5291, Plg21.0000°, Azm108.0000°;*

NEIC ***02*** *17:17:12, 61˚.03S×153˚.88E, h19km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=0.13; Mθθ=1.08; Mφφ=-0.95; Mrθ=0.23; Mφφ=-0.83; Mrφ=0.26; Fault plane solution: M0=1.37000×10¹⁸ NP1:φs=154.00000°, δ=76.00000°, λ=-7.00000°. NP2:φs=246.00000°, δ=83.00000°, λ=-166.00000°. Principal axes: T 1.3910, Plg5.0000°, Azm19.0000°; N -0.0508, Plg74.0000°, Azm271.0000°; P -1.3402, Plg15.0000°, Azm110.0000°;*

GCMT ***02*** *17:17:12.4±0.1, 61˚.02S×153˚.77E, h19km, MW6.0/154, Moment Tensor Solution. s153,c333; s154,c480; Duration: 25 Moment tensor: Scale 10¹⁸Nm; Mrr=0.14±.01; Mθθ=1.04±.01; Mφφ=-0.90±.01; Mrθ=0.08±.02; Mθφ=-0.82±.01; Mrφ=0.24±.02; Best double couple: M0=1.30100×10¹⁸ NP1:φs=246.00000°, δ=81.00000°, λ=-171.00000°. NP2:φs=154.00000°, δ=81.00000°, λ=-9.00000°. Principal axes: T 1.3430, Plg0.0000°, Azm200.0000°; N -0.0840, Plg77.0000°, Azm291.0000°; P -1.2600, Plg13.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

ISC 02 17:17:04.6±0.3, 61˚.26S±0˚.05×154˚.29E±0˚.08, h10km, n406, σ1§64/217, mb5.2/48, MS5.6/213, 20C-11D, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**7.22**	**22**	P	**Pn**	**17 18 46.7**	**-3.3**
	baz=6.9,SNR=14						
MCQ	**Macquarie Isla**	**7.22**	**22**	P	**Pn**	**17 18 46.5**	**-3.6**
MCQ	**Macquarie Isla**	**7.22**	**22**	Pn	**Pn**	**17 18 46.5**	**-3.6**
VNDA	**Vanda**	**16.52**	**174**	Pn	**Pn**	**17 20 50.5**	**-5.5**
VNDA	0.4nm,0.3s,baz=346,slow=11,SNR=22			LR	LR	17 26 39.0	
	comp=Z,13μm,20.9s,baz=352,slow=35						
VNDA	**Vanda**	**16.52**	**174**		**Pn**	**17 20 51.0**	**-4.9**
WHZ	**Wether Hill Ro**	**17.34**	**34**	P	**P**	**17 21 08.4**	**+0.6**
WHZ				IAmb	IAmb	17 21 38.9	
	comp=Z,455nm,1.9s						
MLZ	**Mavora Lakes**	**17.87**	**33**		**P**	**17 21 15.9**	**+2.2**
MLZ				IAmb	IAmb	17 21 16.9	
	comp=Z,555nm,1.8s						
WKZ	**Wanaka**	**18.61**	**35**		**Pn**	**17 21 24.4**	**+2.3**
WKZ				IAmb	IAmb	17 21 27.8	
	comp=Z,479nm,1.6s						
TAU	**Tasmania Unive**	**18.85**	**344**	P	**Pn**	**17 21 24.6**	**-0.4**
TAU				pmax	pmax		
	comp=Z,202nm,1.3s						
TAU	**Tasmania Unive**	**18.85**	**344**		**Pn**	**17 21 24.6**	**-0.4**
TAU				IAmb	IAmb	17 21 28.2	
	comp=Z,202nm,1.2s						
ODZ	**Otahua Downs**	**18.88**	**38**	P	**Pn**	**17 21 27.1**	**+1.7**
ODZ				IAmb	IAmb	17 21 58.7	
	comp=Z,328nm,1.8s						
MOO	**Moorlands**	**19.33**	**344**	P	**P**	**17 21 28.1**	**-1.6**
	baz=19,SNR=7.3						
LBZ	**Lake Benmore**	**19.35**	**36**		**P**	**17 21 29.9**	**0.0**
LBZ				IAmb	IAmb	17 22 12.0	
	comp=Z,355nm,1.8s						
RPZ	**Rata Peaks**	**20.21**	**37**	P	**P**	**17 21 40.1**	**+0.7**
	comp=Z,35nm,0.8s,baz=156,slow=4.8,SNR=7.1						
RPZ				LR	LR	17 27 43.7	
	comp=Z,29μm,21.8s,baz=187,slow=32						
RPZ	**Rata Peaks**	**20.21**	**37**	IAmb	IAmb	17 21 44.5	
	comp=Z,64nm,1.0s						
RPZ				IAMs_20	IAMs_20	17 27 33.0	
	comp=Z,28μm,22.0s						
OXZ	**Oxford**	**20.86**	**39**	P	**P**	**17 21 45.3**	**-1.0**
OXZ				IAmb	IAmb	17 21 54.7	
	comp=Z,147nm,1.4s						
OXZ				IAMs_20	IAMs_20	17 28 59.2	
	comp=Z,24μm,18.0s						
LTZ	**Lake Taylor**	**21.43**	**38**	IAMs_20	IAMs_20	17 28 32.1	
	comp=Z,23μm,20.0s						
KHZ	**Kahutara**	**22.15**	**40**	P	**P**	**17 21 59.7**	**-0.4**
KHZ				IAmb	IAmb	17 22 06.2	
	comp=Z,157nm,1.0s						
KHZ				IAMs_20	IAMs_20	17 29 38.3	
	comp=Z,26μm,19.0s						
THZ	**Tophouse**	**22.55**	**39**	P	**P**	**17 22 05.2**	**+0.6**
THZ				IAmb	IAmb	17 22 10.6	
	comp=Z,126nm,1.1s						
NNZ	**Nelson**	**23.19**	**39**	IAMs_20	IAMs_20	17 30 40.8	
	comp=Z,25μm,18.0s						
QRZ	**Quartz Range**	**23.30**	**37**	IAMs_20	IAMs_20	17 29 51.6	
	comp=Z,30μm,20.0s						
SNZO	**South Karori**	**23.52**	**41**	IAMs_20	IAMs_20	17 30 41.6	
	comp=Z,25μm,18.0s						
TOO	**Toolangi**	**24.35**	**343**	P	**P**	**17 22 23.7**	**+1.3**
	baz=24,SNR=8.4						
TOO	**Toolangi**	**24.35**	**343**	P	**P**	**17 22 23.7**	**+1.3**
TOO				pmax	pmax		
	comp=Z,438nm,2.0s						
TOO				MLR	MLR		
	comp=Z,23μm,18.0s						
TOO	**Toolangi**	**24.35**	**343**	P	**P**	**17 22 23.6**	**+1.3**
TOO				IAMs_20	IAMs_20	17 29 44.5	
	comp=Z,23μm,18.0s						
ARPS	**Mount Arapiles**	**25.74**	**337**	P	**P**	**17 22 35.3**	**+0.3**
	baz=25,SNR=12						
BKZ	**Black Stump Fm**	**26.04**	**42**	IAMs_20	IAMs_20	17 32 53.2	
	comp=Z,14μm,18.0s						
HIZ	**Hauiti**	**26.12**	**39**	IAMs_20	IAMs_20	17 31 20.4	
	comp=Z,23μm,21.0s						
CAN	**Canberra**	**26.18**	**350**	P	**P**	**17 22 39.2**	**+0.2**
CAN				pmax	pmax		
	comp=Z,80nm,1.3s						
CAN				MLR	MLR		
	comp=Z,14μm,20.0s						
CAN	**Canberra**	**26.18**	**350**	P	**P**	**17 22 39.2**	**+0.2**
CAN				IAmb	IAmb	17 23 10.6	
	comp=Z,80nm,1.3s						
CAN				IAMs_20	IAMs_20	17 30 02.4	
	comp=Z,14μm,20.0s						
URZ	**Urewera**	**27.06**	**42**	P	**P**	**17 22 46.5**	**-0.3**
	comp=Z,37nm,0.8s,baz=262,slow=4.3,SNR=12						
URZ				LR	LR	17 34 03.6	
	comp=Z,12μm,18.8s,baz=214,slow=38						
URZ	**Urewera**	**27.06**	**42**	P	**P**	**17 22 48.2**	**+1.3**
URZ				IAmb	IAmb	17 22 50.6	
	comp=Z,37nm,0.8s						
YNG	**Young**	**27.25**	**349**	P	**P**	**17 22 49.9**	**+1.3**
	baz=27,SNR=5.4						
QSPA	**South Pole Qui**	**28.83**	**180**	P	**P**	**17 23 03.4**	**+0.7**
	comp=Z,2.8nm,1.0s,baz=354,slow=8.5,SNR=2.8						
QSPA				LR	LR	17 34 52.7	
	comp=Z,6μm,20.3s,baz=14,slow=37						
QSPA	**South Pole Qui**	**28.83**	**180**	P	**P**	**17 23 03.3**	**+0.7**
QSPA				IAmb	IAmb	17 23 48.0	
	comp=Z,40nm,1.1s						
HTT	**Hallett**	**29.57**	**333**	P	**P**	**17 23 09.9**	**+0.6**
	baz=29,SNR=5.8						
LHI	**Lord Howe Isla**	**29.91**	**8**	IAMs_20	IAMs_20	17 31 26.3	
	comp=Z,17μm,22.0s						
CMSA	**Cobar Meteorol**	**30.26**	**345**	P	**P**	**17 23 15.5**	**+0.1**
	baz=30,SNR=8.7						
STKA	**Stephens Creek**	**30.55**	**338**	P	**P**	**17 23 18.1**	**+0.1**
	comp=Z,18nm,0.8s,baz=156,slow=8.0,SNR=26						
STKA				LR	LR	17 32 47.9	
	comp=Z,10μm,21.9s,baz=160,slow=31						
STKA	**Stephens Creek**	**30.55**	**338**	P	**P**	**17 23 18.4**	**+0.4**
	baz=30,SNR=24						
STKA	**Stephens Creek**	**30.55**	**338**	*eP*	**P**	**17 23 17.4**	**-0.5**
STKA	**Stephens Creek**	**30.55**	**338**	P	**P**	**17 23 17.4**	**-0.5**
BBOO	**Buckleboo**	**30.83**	**329**	P	**P**	**17 23 20.6**	**+0.2**
	baz=30,SNR=17						
BBOO	**Buckleboo**	**30.83**	**329**	P	**P**	**17 23 19.9**	**-0.5**
BBOO				IAmb	IAmb	17 23 23.0	
	comp=Z,50nm,0.9s						
BBOO				IAMs_20	IAMs_20	17 32 43.7	
	comp=Z,11μm,18.0s						
ARMA	**Armidale**	**30.90**	**356**	P	**P**	**17 23 21.7**	**+0.5**
ARMA				IAMs_20	IAMs_20	17 32 31.9	
	comp=Z,17μm,20.0s						
RMQ	**Roma**	**34.97**	**351**	P	**P**	**17 23 56.9**	**+0.3**
	baz=35,SNR=47						
QLP	**Quilpie**	**35.33**	**344**	P	**P**	**17 23 59.6**	**-0.2**
	baz=35,SNR=11						
EIDS	**Eidsvold**	**35.95**	**355**	P	**P**	**17 24 05.7**	**+0.7**
	baz=36,SNR=3.2						
EIDS	**Eidsvold**	**35.95**	**355**	P	**P**	**17 24 04.7**	**-0.3**
MAW	**Mawson**	**36.48**	**220**	P	**P**	**17 24 10.6**	**+1.5**
	comp=Z,8.0nm,1.1s,baz=128,slow=9.8,SNR=9.7						
MAW				PP	**PP**	**17 25 32.5**	**+0.7**
	comp=Z,9.7nm,1.0s,baz=52,slow=8.0,SNR=15						
MAW				LR	LR	17 39 19.3	
	comp=Z,10μm,18.1s,baz=110,slow=37						
MAW	**Mawson**	**36.48**	**220**	P	**P**	**17 24 11.0**	**+1.8**
	baz=36,SNR=20						
MAW	**Mawson**	**36.48**	**220**	P	**P**	**17 24 09.1**	**-0.1**
MAW				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MAW				MLR	MLR		
	comp=Z,2μm,21.0s						
MAW	**Mawson**	**36.48**	**220**	P	**P**	**17 24 09.1**	**-0.1**
H01W1	**Cape Leeuwin H**	**36.65**	**297**	T	T	18 02 57.7	
	baz=148,slow=75,SNR=3012						
H01W2	**Cape Leeuwin H**	**36.65**	**297**	T	T	18 03 10.5	
	baz=148,slow=75,SNR=3735						
H01W3	**Cape Leeuwin H**	**36.67**	**297**	T	T	18 03 04.1	
	baz=148,slow=75,SNR=2872						
RAO	**Raoul Island**	**36.95**	**43**	IAMs_20	IAMs_20	17 36 50.1	
	comp=Z,14μm,22.0s						
NWAO	**Narrogin (SRO)**	**37.06**	**303**	IAMs_20	IAMs_20	17 35 33.4	
	comp=Z,11μm,22.0s						
DZM	**Mont Dzumac**	**40.06**	**18**	P	**P**	**17 24 39.5**	**-0.4**
	comp=Z,28nm,1.0s,baz=204,slow=11,SNR=9.1						
ASAR	**Alice Springs**	**40.11**	**330**	P	**P**	**17 24 39.4**	**-0.8**
	comp=Z,20nm,0.8s,baz=171,slow=5.7,SNR=72						
ASAR				PcP	**PcP**	**17 26 43.6**	**-1.0**
	comp=Z,6.0nm,0.9s,baz=152,slow=3.5,SNR=7.0						
ASAR				ScP	**ScP**	**17 30 33.0**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=142,slow=6.2,SNR=4.0						
AS31	**Alice Springs**	**40.11**	**330**	P	**P**	**17 24 39.4**	**-0.8**
WRKA	**Warakurna**	**40.31**	**322**	P	**P**	**17 24 41.1**	**-0.7**
	baz=40,SNR=16						
MORW	**Morawa**	**40.94**	**304**	IAMs_20	IAMs_20	17 38 17.1	
	comp=Z,8μm,20.0s						
CTA	**Charters Tower**	**41.52**	**349**	P	**P**	**17 24 51.5**	**-0.3**
	comp=Z,32nm,1.1s,baz=181,slow=9.9,SNR=15						
CTAO	**Charters Tower**	**41.52**	**349**	P	**P**	**17 24 52.2**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,185nm,1.9s						
CTAO				MLR	MLR		
	comp=Z,12μm,21.0s						
CTAO	**Charters Tower**	**41.52**	**349**	P	**P**	**17 24 52.2**	**+0.3**
CTAO	**Charters Tower**	**41.52**	**349**	IAMs_20	IAMs_20	17 38 56.6	
	comp=Z,12μm,21.0s						
SYO	**Syowa Base**	**41.94**	**209**	↓*e*P	**P**	**17 24 54.2**	**-0.5**
SYO	**Syowa Base**	**41.94**	**209**	↑*i*pP	pP	17 24 57.0	0.0
SYO	**Syowa Base**	**41.94**	**209**	↓*e*PP	PP	17 26 29.0	-2.3
SYO	**Syowa Base**	**41.94**	**209**	↑*e*PnPn	PnPn	17 26 37.0	+0.6
QIS	**Mount Isa**	**41.95**	**339**	P	**P**	**17 24 54.4**	**-1.0**
	baz=42,SNR=13						
MEEK	**Meekatharra**	**42.11**	**309**	P	**P**	**17 24 56.6**	**-0.1**
	baz=42,SNR=4.8						
WR0	**Warramunga Arr**	**43.53**	**333**	P	**P**	**17 25 07.0**	**-1.2**
WR0				IAMs_20	IAMs_20	17 40 13.2	
	comp=Z,8μm,19.0s						
WR9	**Warramunga Arr**	**43.54**	**332**	IAMs_20	IAMs_20	17 40 13.4	
	comp=Z,8μm,20.0s						
WR8	**Warramunga Arr**	**43.55**	**332**	IAMs_20	IAMs_20	17 40 21.5	
	comp=Z,8μm,21.0s						
WR6	**Warramunga Arr**	**43.56**	**332**	IAMs_20	IAMs_20	17 40 21.9	
	comp=Z,8μm,21.0s						
WR5	**Warramunga Arr**	**43.56**	**332**	IAMs_20	IAMs_20	17 40 15.1	
	comp=Z,7μm,20.0s						
WR4	**Warramunga Arr**	**43.57**	**332**	IAMs_20	IAMs_20	17 40 22.2	
	comp=Z,7μm,20.0s						
WC4	**Warramunga Arr**	**43.58**	**332**	IAMs_20	IAMs_20	17 42 52.3	
	comp=Z,7μm,20.0s						
WB1	**Warramunga Ar.**	**43.58**	**332**	IAMs_20	IAMs_20	17 42 53.4	
	comp=Z,7μm,18.0s						
WR3	**Warramunga Arr**	**43.58**	**332**	IAMs_20	IAMs_20	17 40 22.4	
	comp=Z,8μm,21.0s						
WB2	**Warramunga Arr**	**43.59**	**332**	P	**P**	**17 25 07.3**	**-1.4**
WB2				IAmb	IAmb	17 25 10.3	
	comp=Z,39nm,1.1s						
WB2				IAMs_20	IAMs_20	17 42 52.8	
	comp=Z,7μm,19.0s						
WRA	**Warramunga Arr**	**43.59**	**332**	P	**P**	**17 25 07.3**	**-1.4**
	comp=Z,17nm,0.9s,baz=162,slow=7.0,SNR=72						
WRA				PcP	**PcP**	**17 26 55.2**	**-0.9**
	comp=Z,5.0nm,0.9s,baz=177,slow=3.2,SNR=7.6						
WRA				LR	LR	17 43 01.8	
	comp=Z,5μm,18.2s,baz=150,slow=36						
WRA	**Warramunga Arr**	**43.59**	**332**	P	**P**	**17 25 06.7**	**-2.0**
WRA	**Warramunga Arr**	**43.59**	**332**	P	**P**	**17 25 06.7**	**-2.0**
WRAB	**Tennant Creek**	**43.60**	**332**	P	**P**	**17 25 07.4**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,35nm,1.0s						
WRAB				MLR	MLR		
	comp=Z,8μm,21.0s						
WRAB	**Tennant Creek**	**43.60**	**332**	P	**P**	**17 25 07.4**	**-1.3**
WRAB				IAmb	IAmb	17 25 09.7	
	comp=Z,35nm,1.0s						
WRAB				IAMs_20	IAMs_20	17 40 22.9	
	comp=Z,7μm,21.0s						
WC2	**Warramunga Arr**	**43.61**	**332**	IAMs_20	IAMs_20	17 40 24.1	
	comp=Z,8μm,21.0s						
WB3	**Warramunga Arr**	**43.61**	**332**	IAMs_20	IAMs_20	17 42 22.2	

comp=Z,82nm,0.8s,baz=205,slow=7.4,SNR=5.6
PMG Port Moresby 52.02 351 P **P** **17 26 14.0 -0.1**
comp=Z,36nm,0.8s,baz=161,slow=4.6,SNR=12
PMG Port Moresby 52.02 351 P **P** **17 26 13.9 -0.1**
PMG pmax pmax
comp=Z,47nm,0.9s
PMG MLR MLR
comp=Z,10µm,20.0s
PMG Port Moresby 52.02 351 P **P** **17 26 13.9 -0.1**
PMG IAmb IAmb 17 26 16.5
comp=Z,47nm,0.9s
TBI Tubuai 53.72 71 *e*S **S** **17 34 04.1 +3.7**
comp=Z,935nm,27.5s
TBI *e*LQ LQ 17 39 00.6
comp=Z,8µm,29.0s
TBI *e*LR LR 17 41 46.5
comp=Z,6µm,28.5s,baz=199
BATI Baumata 55.70 323 LR LR 17 48 38.4
comp=Z,5µm,21.8s,baz=198,slow=34
SAUI Saumlaki 55.84 332 IAMs_20 IAMs_20 17 51 22.4
comp=Z,5µm,19.0s
SOEI Soe 55.95 323 P P 17 26 54.7 +12
KRVT Keravat (AS076 56.85 357 P **P** **17 26 48.1 -1.0**
comp=Z,8.0nm,0.7s,baz=198,slow=6.4,SNR=2.3
KRVT LR LR 17 47 08.0
comp=Z,2µm,20.8s,baz=182,slow=32
RABL Rabaul 56.96 357 P **P** **17 26 49.5 -0.5**
RABL IAmb IAmb 17 26 53.5
comp=Z,22nm,0.8s
RABL IAMs_20 IAMs_20 17 51 37.5
comp=Z,4µm,18.0s
MMRI Maumere 57.61 322 P P 17 27 03.7 +9.2
MMRI Maumere 57.61 322 P **P** **17 26 52.8 -1.7**
EDFI Ende, Flores 57.67 321 P P 17 27 02.0 +6.9
PAE Paea 58.62 68 *e*T T 18 30 21.0
comp=Z,9.1nm,0.3s
TVO Taravao 58.66 68 *e*T T 18 30 24.4
comp=Z,6.4nm,0.3s
PPT2 Papeete2 58.68 68 *e*S **S** **17 35 09.3 +2.7**
comp=Z,617nm,26.0s
PPT2 *e*LQ LQ 17 41 41.7
comp=Z,10µm,25.2s
PPT2 *e*LR LR 17 44 13.7
comp=Z,6µm,27.0s,baz=207
PPT2 Papeete2 58.68 68 *e*T T 18 30 25.6
comp=Z,9.0nm,0.2s
PPT Papeete 58.70 68 LR LR 17 47 49.3
comp=Z,2µm,18.1s,baz=216,slow=32
TIAR Tiarei 58.81 68 *e*T T 18 30 27.2
comp=Z,4.0nm,0.2s
MEH Mehetia 59.11 70 *e*T T 18 30 57.5
comp=Z,22nm,0.2s
FAKI Fak Fak 60.55 335 P **P** **17 27 16.5 +1.6**
comp=Z,1µmcomp=Z,113nm,0.9s
FAKI Fak Fak 60.55 335 P **P** **17 27 14.9 +0.1**
NLAI Namlea 61.42 329 P **P** **17 27 22.9 +2.1**
comp=Z,924nmcomp=Z,49nm,1.6s
VAH Vaihoa 61.62 69 *e*T T 18 34 06.0
comp=Z,131nm,0.3s
PMOR Pomariorio Ree 61.71 68 *e*T T 18 34 12.6
comp=Z,4.4nm,0.3s
KAPI Kappang 61.79 320 LR LR 17 52 36.5
comp=Z,4µm,18.6s,baz=162,slow=35
UGM Wanagama 62.26 309 IAMs_20 IAMs_20 17 49 55.1
comp=Z,5µm,22.0s
SIJI Sorong 62.74 334 P **P** **17 27 28.9 -0.8**
comp=Z,16nm,0.8s,baz=45,slow=5.0,SNR=14
SIJI LR LR 17 53 12.6
comp=Z,2µm,20.7s,baz=129,slow=35
SPSI Sidrap Palu 62.78 321 P **P** **17 27 31.0 +1.1**
comp=Z,894nmcomp=Z,34nm,1.1s
SANI Sanana 62.85 328 P **P** **17 27 30.6 +0.2**
comp=Z,23nm,1.3s
KPJI Karang Pucung 63.39 308 P **P** **17 27 34.9 +0.9**
comp=Z,34nm,0.8s
LEM Lembang 64.36 307 LR LR 17 51 31.6
comp=Z,3µm,20.4s,baz=152,slow=32
EFI East Falkland 64.48 158⇑ *e*P **P** **17 27 37.3 -3.4**
EFI pmax pmax
comp=Z,177nm,2.0s
LUWI Luwuk 64.67 325 P **P** **17 27 41.8 -0.6**
BBKI Banjar Baru 64.84 316 P **P** **17 27 44.5 +0.9**
comp=Z,1µmcomp=Z,42nm,1.4s
MPSI Mapaga 66.81 322 P **P** **17 27 55.4 -0.8**
comp=Z,566nmcomp=Z,20nm,1.3s
MTKI Muara Teweh, K 67.18 316 P **P** **17 28 00.2 +1.6**
comp=Z,1µmcomp=Z,24nm,2.1s
PMBI Palembang 69.03 306 IAMs_20 IAMs_20 17 52 48.0
comp=Z,3µm,22.0s
KWAJ Kwajalein Atol 70.63 14 IAMs_20 IAMs_20 17 52 28.8
comp=Z,4µm,21.0s
TAOE Nuku Hiva Isla 70.64 72 *e*LQ LQ 17 46 18.0
comp=Z,9µm,26.5s
TAOE *e*LR LR 17 49 31.7
comp=Z,3µm,26.8s,baz=234
KSM Kuching 71.02 313 P **P** **17 28 21.5 -0.8**
KSM IAmb IAmb 17 28 53.2
comp=Z,38nm,1.4s
DAV Davao City (W) 71.72 330 LR LR 18 02 16.1
comp=Z,680nm,18.5s,baz=58,slow=38
MYLDM Lahad Datu 71.82 322 P **P** **17 28 26.9 -0.3**
MYLDM IAmb IAmb 17 29 14.7
comp=Z,43nm,1.4s
PLCA Paso Flores 72.03 146 P **P** **17 28 29.1 +0.7**
comp=Z,7.4nm,1.0s,baz=226,slow=6.1,SNR=10
PLCA LR LR 17 53 22.9
comp=Z,1µm,20.2s,baz=208,slow=30
PLCA Paso Flores 72.03 146 P **P** **17 28 29.4 +1.1**
PLCA pmax pmax
comp=Z,11nm,1.0s
PLCA Paso Flores 72.03 146 P **P** **17 28 29.4 +1.1**
LC01 Cunco 73.37 144 P **P** **17 28 37.5 +1.2**
MNSI Mandailing Nat 74.50 302 P **P** **17 28 46.2 +3.1**
comp=Z,23nm,1.0s
GUMO Guam 74.98 351 LR LR 18 00 37.5
comp=Z,1µm,18.7s,baz=182,slow=35
H03S2 Juan Fernandez 75.86 137 T T 18 52 51.2
baz=201,slow=74,SNR=117
H03S1 Juan Fernandez 75.86 137 T T 18 52 52.5
baz=201,slow=74,SNR=136
H03S3 Juan Fernandez 75.88 137 T T 18 52 52.0
baz=201,slow=74,SNR=123
H03N3 Juan Fernandez 76.21 136 T T 18 54 00.2
SNR=7.6
H03N2 Juan Fernandez 76.22 136 T T 18 53 25.4
baz=215,slow=74,SNR=12
H03N1 Juan Fernandez 76.23 136 T T 18 53 52.7
baz=47,slow=74,SNR=8.4
RPSI Rantau Prapat 76.50 302 IAMs_20 IAMs_20 17 57 50.3
comp=Z,2µm,19.0s
PSI Prapat 76.59 302 P **P** **17 28 54.4 -0.9**
comp=Z,4.6nm,0.5s,baz=181,slow=11,SNR=3.8
PSI LR LR 17 58 01.4
comp=Z,2µm,20.1s,baz=93,slow=32
BO02 Sierra Bellavi 77.51 143 P **P** **17 29 00.9 +0.8**
BO02 IAmb IAmb 17 29 04.6
comp=Z,29nm,1.1s
KULM Kulim 78.16 305 P **P** **17 29 02.9 -0.9**
KULM IAmb IAmb 17 29 20.7
comp=Z,36nm,1.2s
SUR Sutherland 79.33 219 IAMs_20 IAMs_20 18 00 13.7
comp=Z,3µm,22.0s
H08S2 Diego Garcia H 79.39 274 T T 18 56 36.5
baz=150,slow=76,SNR=30
H08S1 Diego Carcia H 79.40 273 T T 18 56 38.0
baz=150,slow=76,SNR=21
H08S3 Diego Garcia H 79.41 274 T T 18 56 38.6
baz=150,slow=76,SNR=302
BOSA Boshof 81.40 224 P **P** **17 29 22.1 +0.6**
comp=Z,22nm,1.4s,baz=106,slow=7.4,SNR=2.9
BOSA LR LR 18 03 38.9
comp=Z,1µm,18.7s,baz=158,slow=34
BOSA Boshof 81.40 224 IAmb IAmb 17 29 33.6
comp=Z,60nm,1.8s
PBA Port Blair 87.14 300 IAMs_20 IAMs_20 18 02 20.4
comp=Z,2µm,21.0s
QIZ Qiongzhong 87.55 318 P **P** **17 29 51.9 -0.5**
QIZ S **S** **17 40 33.3 -0.2**
QIZ SS **SS** **17 46 21.8 +2.1**
QIZ LR LR
comp=Z,1µm,36.3s
PALK Pallekele 88.54 288⇓ *e*P P 17 29 52.1 -5.2
PALK pmax pmax
comp=Z,80nm,2.1s
PALK Pallekele 88.54 288 IAMs_20 IAMs_20 18 05 04.4
comp=Z,2µm,19.0s
CPUP Villa Florida 89.03 152 P **P** **17 30 00.3 +0.8**
comp=Z,0.8nm,0.3s,baz=244,slow=2.4,SNR=3.4
CPUP LR LR 18 06 34.0
comp=Z,1µm,19.4s,baz=196,slow=33
CMAR Chiang Mai Arr 90.84 309 P **P** **17 30 08.2 +0.3**
comp=Z,3.3nm,1.0s,baz=186,slow=4.7,SNR=13
CMAR LR LR 18 09 57.3
comp=Z,1µm,18.9s,baz=190,slow=35
CMAR Chiang Mai Arr 90.84 309 *i*P **P** **17 30 08.8 +0.9**
CMAR pmax pmax
comp=Z,3.0nm,0.9s
TA01 Diego Aracena 91.00 139 P **P** **17 30 06.3 -2.5**
TA01 IAMs_20 IAMs_20 18 00 58.8
comp=Z,2µm,18.0s
CHTO Chiang Mai 91.16 309 P **P** **17 30 09.0 -0.3**
CHTO pmax pmax
comp=Z,7.0nm,1.0s
CHTO MLR MLR
comp=Z,2µm,21.0s
CHTO Chiang Mai 91.16 309 P **P** **17 30 09.0 -0.3**
TSUM Tsumeb 92.65 220 IAMs_20 IAMs_20 18 08 43.6
comp=Z,2µm,22.0s
KMI Kunming 95.58 315⇑ *e*P **P** **17 30 29.4 -0.4**
KMI PP **PP** **17 34 22.9 +1.6**
KMI S **S** **17 41 45.4 -1.1**
KMI pmax pmax
comp=Z,13nm,0.5s
KMI LR LR
comp=Z,240nm,16.5s
KMI LR LR
comp=Z,260nm,13.2s
KMI LR LR
comp=Z,2µm,28.5s
LPAZ La Paz 95.66 139 P **P** **17 30 31.5 +0.4**
comp=Z,2.0nm,0.8s,baz=249,slow=3.5,SNR=5.6
LPAZ LR LR 18 04 15.0
comp=Z,862nm,21.7s,baz=150,slow=30
LPAZ La Paz 95.66 139 P **P** **17 30 31.5 +0.4**
JMN Monobe 96.10 343 IAMs_20 IAMs_20 18 06 29.7
comp=Z,2µm,20.0s
NJ2 Nanjing 97.35 330 *e*P Pdif 17 30 37.5 0.0
NJ2 SS SS 17 48 40.3 +0.1
NJ2 pmax pmax
comp=Z,14nm,0.5s
NJ2 LR LR
comp=Z,2µm,18.5s
NJ2 LR LR
comp=Z,850nm,20.4s
NJ2 LR LR
comp=Z,2µm,19.9s
JYT Yasato 97.82 349 IAMs_20 IAMs_20 18 11 27.5
comp=Z,2µm,21.0s
MJAR Matsushiro Arr 98.34 347 LR LR 18 14 03.6
comp=Z,853nm,18.9s,baz=170,slow=35
CD2 Chengdu 100.57 318 *e*P **Pdif** **17 30 51.0 -0.9**
ERM Erimo 103.32 352 IAMs_20 IAMs_20 18 12 16.2
comp=Z,2µm,20.0s
JEM Erimo 103.32 352 IAMs_20 IAMs_20 18 12 17.6
comp=Z,2µm,21.0s
H06S1 SOCORRO T 108.51 85 T T 19 32 51.5
SNR=15
HIA Hailar 113.62 336 IAMs_20 IAMs_20 18 24 53.0
comp=Z,1µm,20.0s
PET Petropavlovsk 113.99 3 IAMs_20 IAMs_20 18 17 43.5
comp=Z,2µm,21.0s
SONM Songino Array 115.38 326 PKP **PKiKP** **17 35 46.3 +0.9**
comp=Z,0.6nm,0.9s,baz=207,slow=1.0,SNR=2.3
ZAIG Zacatecas 116.00 90 IAMs_20 IAMs_20 18 14 39.5
comp=Z,2µm,20.0s
HSIG 117.24 79 IAMs_20 IAMs_20 18 19 02.4
comp=Z,1µm,19.0s
TJX Tijuana 117.31 72 IAMs_20 IAMs_20 18 11 22.1
comp=Z,2µm,20.0s
KBL Kabul 117.45 292 IAMs_20 IAMs_20 18 18 14.3
comp=Z,1µm,22.0s
WMQ Urumqi 117.71 311 *e*PKP **PKPdf** **17 35 49.6 -0.3**
WMQ LR LR
comp=Z,380nm,20.3s
WMQ LR LR
comp=Z,580nm,18.7s
WMQ LR LR
comp=Z,400nm,20.3s
HPIG 118.02 85 IAMs_20 IAMs_20 18 14 39.0
comp=Z,2µm,22.0s
UABX UABC, Campus M 118.15 73 IAMs_20 IAMs_20 18 32 15.5
comp=Z,1µm,20.0s
SDV Santo Domingo 118.20 128 IAMs_20 IAMs_20 18 17 32.1
comp=Z,2µm,22.0s
KSH Kashi 118.63 300 *e*PKP **PKiKP** **17 35 54.1 +2.1**
KSH *e*PP **PP** **17 37 15.3 +5.0**
KSH SKS **SKSdf** **17 43 00.9 -2.7**
KSH SKKS **SKKSac** **17 44 05.5 -4.2**
KSH LR LR
comp=Z,290nm,6.4s
KSH LR LR
comp=Z,290nm,5.0s
KSH LR LR
comp=Z,960nm,18.6s
PMPB Monarch Peak 118.71 67 IAMs_20 IAMs_20 18 25 23.7
comp=Z,2µm,19.0s
GLA Glamis 118.78 73 IAMs_20 IAMs_20 18 17 10.3
comp=Z,2µm,20.0s
TLY Talaya 119.62 326 IAMs_20 IAMs_20 18 25 36.6
comp=Z,2µm,22.0s
319A Douglas 119.99 79 IAMs_20 IAMs_20 18 20 55.3
comp=Z,1µm,19.0s
HOPS Hopland Field 120.03 63 IAMs_20 IAMs_20 18 22 41.1
comp=Z,2µm,19.0s
TUC Tucson 120.06 77 IAMs_20 IAMs_20 18 15 20.0
comp=Z,1µm,20.0s
KCPM Cahto Peak 120.38 62 IAMs_20 IAMs_20 18 18 51.6
comp=Z,2µm,20.0s
MA2 Magadan 120.54 358 IAMs_20 IAMs_20 18 32 20.2
comp=Z,1µm,18.0s
GAR Garm 120.61 296 IAMs_20 IAMs_20 18 23 48.8
comp=Z,1µm,21.0s
MDPB Devils Postpil 120.65 67 IAMs_20 IAMs_20 18 18 51.7
comp=Z,1µm,21.0s
OMMB Old Mammoth Mi 120.67 67 IAMs_20 IAMs_20 18 18 54.2
comp=Z,2µm,20.0s
CHGR Chuyangaron 120.83 295 IAMs_20 IAMs_20 18 23 13.7
comp=Z,2µm,21.0s
TXAR Lajitas Array 120.98 85 PKP **PKPdf** **17 35 56.6 -0.2**
comp=Z,0.3nm,0.9s,baz=172,slow=7.3,SNR=1.7
JCC Jacoby Creek, 121.13 61 IAMs_20 IAMs_20 18 23 43.4
comp=Z,2µm,19.0s
ORV Oroville 121.17 64 IAMs_20 IAMs_20 18 19 46.5
comp=Z,1µm,20.0s
WAKR Walker 121.21 66 IAMs_20 IAMs_20 18 20 09.5
comp=Z,1µm,22.0s
RUBR Rubicon Trail 121.34 65 IAMs_20 IAMs_20 18 19 06.1
comp=Z,1µm,19.0s
TPNV Topopah Spring 121.36 70 IAMs_20 IAMs_20 18 17 14.4
comp=Z,2µm,20.0s
LHV Little Huntoon 121.42 67 IAMs_20 IAMs_20 18 21 01.9
comp=Z,1µm,20.0s
WDC Whiskeytown Da 121.57 63 IAMs_20 IAMs_20 18 19 42.0
comp=Z,1µm,20.0s
PNTR Pine Nut 121.62 66 IAMs_20 IAMs_20 18 20 40.3
comp=Z,1µm,22.0s
EPT El Paso 121.64 81 IAMs_20 IAMs_20 18 21 25.0
comp=Z,1µm,18.0s
NVAR Mina Array Bea 121.65 67 PKP **PKPdf** **17 35 57.3 -0.6**
comp=Z,0.4nm,0.6s,baz=149,slow=3.9,SNR=3.0
NV11 Mina Array Sit 121.72 67 IAMs_20 IAMs_20 18 21 02.0
comp=Z,2µm,19.0s
VCNR Virginia City 121.77 66 IAMs_20 IAMs_20 18 19 20.3
comp=Z,1µm,20.0s
AAK Ala-Archa 121.84 301⇑ *i*PKIKP **PKiKP** **17 35 59.0 +0.8**
BEKR Beckworth 121.93 65 IAMs_20 IAMs_20 18 22 50.4
comp=Z,1µm,19.0s
MNTX Cornudas Mount 122.12 82 IAMs_20 IAMs_20 18 21 35.6
comp=Z,1µm,20.0s
833A Chaparral WMA, 122.20 89 IAMs_20 IAMs_20 18 19 06.8
comp=Z,1µm,20.0s
PAHR Pah Rah Range 122.22 66 IAMs_20 IAMs_20 18 19 44.4
comp=Z,1µm,21.0s
MK31 Makanchi Array 122.24 309⇑ *i*PKIKP **PKPdf** **17 35 58.1 -0.4**
MKAR Makanchi Array 122.24 309 PKP **PKPdf** **17 35 57.5 -1.0**
comp=Z,1.6nm,0.9s,baz=90,slow=3.6,SNR=6.3
KVN Kaiserville 122.25 67 IAMs_20 IAMs_20 18 21 46.0
comp=Z,1µm,21.0s
WUAZ Wupatki 122.42 75 IAMs_20 IAMs_20 18 21 07.7
comp=Z,1µm,21.0s
YBH Yreka Blue Hor 122.45 62 IAMs_20 IAMs_20 18 26 19.2
comp=Z,1µm,19.0s
DGZ Jazzator, Alta 122.85 315⇓ *i*PKIKP **PKPdf** **17 35 59.2 -0.5**
MOD Modoc Plateau 123.62 63 IAMs_20 IAMs_20 18 24 50.2
comp=Z,1µm,18.0s
K05A Summer Lake 124.03 62 IAMs_20 IAMs_20 18 26 22.2
comp=Z,1µm,18.0s
ANMO Albuquerque 124.27 79 PKP **PKPdf** **17 36 03.8 +0.8**
comp=Z,0.4nm,0.3s,baz=346,slow=4.2,SNR=3.0
YAK Yakutsk 124.39 346⇑ *i*PKIKP **PKPdf** **17 36 02.2 +0.2**
YAK Yakutsk 124.39 346 IAMs_20 IAMs_20 18 23 23.2
comp=Z,1µm,22.0s
COR Corvallis 124.53 59 IAMs_20 IAMs_20 18 20 04.6
comp=Z,2µm,21.0s
435B Jarrell 125.12 89 IAMs_20 IAMs_20 18 21 49.5
comp=Z,1µm,20.0s
ASHT Ashkhabad 125.12 286 IAMs_20 IAMs_20 18 24 57.4
comp=Z,2µm,22.0s
MVCO Mesa Verde 125.14 76 IAMs_20 IAMs_20 18 22 27.2
comp=Z,1µm,20.0s
MSTX Muleshoe 125.23 83 IAMs_20 IAMs_20 18 18 53.0
comp=Z,2µm,21.0s
GEYT Alibeck 125.24 286 PKP **PKPdf** **17 36 04.1 -0.4**
comp=Z,3.4nm,0.9s,baz=176,slow=4.0,SNR=5.1
GEYT Alibeck 125.24 286 PKPdf **PKiKP** **17 36 07.0 +2.1**
GYA0B ALIBECK ARRAY 125.24 286 IAMs_20 IAMs_20 18 25 01.4
comp=Z,2µm,22.0s
HKT Hockley 125.28 91 IAMs_20 IAMs_20 18 20 18.4
comp=Z,1µm,21.0s
DUG Dugway, Tooele 125.56 70 IAMs_20 IAMs_20 18 20 58.6
comp=Z,2µm,20.0s
J08A Circle Bar Ran 125.59 64 IAMs_20 IAMs_20 18 25 36.3
comp=Z,2µm,19.0s
ABTX Abilene, Hawle 125.64 86 IAMs_20 IAMs_20 18 19 33.8
comp=Z,2µm,20.0s
I07A Izee 125.73 62 IAMs_20 IAMs_20 18 28 27.0
comp=Z,1µm,20.0s
PV19 Morning Glory 125.81 74 IAMs_20 IAMs_20 18 25 33.2
comp=Z,1µm,20.0s
F04A Amboy 125.99 59 IAMs_20 IAMs_20 18 21 07.2
comp=Z,1µm,20.0s
PV22 Blue Mesa, Par 126.08 74 IAMs_20 IAMs_20 18 22 03.4
comp=Z,1µm,22.0s
NLWA Neilton Lookou 126.57 57 IAMs_20 IAMs_20 18 21 45.5
comp=Z,1µm,20.0s
KURK Kurchatov 126.85 310⇓ *i*PKIKP **PKPdf** **17 36 05.5 -1.6**
LON Longmire 126.89 59 IAMs_20 IAMs_20 18 21 33.2
comp=Z,2µm,22.0s
T25A Trinidad 127.01 79 IAMs_20 IAMs_20 18 26 06.2
comp=Z,1µm,19.0s
D05A Enumclaw 127.17 58 IAMs_20 IAMs_20 18 21 59.5
comp=Z,1µm,20.0s
BMO Blue Mountains 127.29 63 IAMs_20 IAMs_20 18 28 56.3
comp=Z,2µm,20.0s
ZALV Zalesovo Beam 127.30 316 PKP **PKPdf** **17 36 06.0 -1.9**
comp=Z,0.5nm,0.7s,baz=184,slow=4.2,SNR=1.8
TORD Torodi Ar. Bea 128.01 215 PKP **PKiKP** **17 36 11.6 +0.5**
comp=Z,1.5nm,0.9s,baz=155,slow=4.8,SNR=6.1
TOC1 Torodi Ar. Sit 128.03 215 IAMs_20 IAMs_20 18 42 27.2
comp=Z,964nm,20.0s
D08A Wollman Farm, 128.34 61 IAMs_20 IAMs_20 18 22 28.6
comp=Z,2µm,21.0s
BW06 Boulder Array 129.08 71 IAMs_20 IAMs_20 18 23 17.0
comp=Z,1µm,20.0s
KSCO Kaye Shedlock' 129.35 79 IAMs_20 IAMs_20 18 25 37.2
comp=Z,1µm,19.0s
SUA Susitna One 129.40 31 IAMs_20 IAMs_20 18 24 26.3
comp=Z,2µm,22.0s
SKT Skwentna 129.65 30 IAMs_20 IAMs_20 18 27 25.0
comp=Z,1µm,20.0s
GLI Glacier Island 129.83 33 IAMs_20 IAMs_20 18 29 19.7
comp=Z,1µm,20.0s
PHWY Pilot Hill 129.83 75 IAMs_20 IAMs_20 18 19 56.7
comp=Z,1µm,19.0s
FID Port Fidalgo 129.88 33 IAMs_20 IAMs_20 18 23 25.8
comp=Z,2µm,20.0s
KNK Knik Glacier 129.93 32 IAMs_20 IAMs_20 18 27 27.3
comp=Z,2µm,21.0s
NEW Newport 130.05 61 IAMs_20 IAMs_20 18 23 18.3
comp=Z,2µm,21.0s
SML Sawmill 130.29 32 IAMs_20 IAMs_20 18 29 51.0
comp=Z,1µm,20.0s
BOZ Bozeman (W) 130.36 67 IAMs_20 IAMs_20 18 31 02.6
comp=Z,2µm,18.0s
K22A Casper 130.39 73 IAMs_20 IAMs_20 18 21 29.4
comp=Z,1µm,20.0s
SCM Sheep Creek Mo 130.57 32 IAMs_20 IAMs_20 18 26 38.4
comp=Z,1µm,19.0s
KLU Klutina 130.65 33 IAMs_20 IAMs_20 18 30 04.6
comp=Z,1µm,19.0s
KOWA Kowa 130.75 208 IAMs_20 IAMs_20 18 29 34.4
comp=Z,2µm,20.0s
TGL Tana Glacier 130.88 35 IAMs_20 IAMs_20 18 25 35.6
comp=Z,2µm,21.0s
ISLE Juniper Island 130.89 36 IAMs_20 IAMs_20 18 27 02.0
comp=Z,2µm,20.0s
VRDI Verde Repeater 131.10 35 IAMs_20 IAMs_20 18 25 45.4
comp=Z,1µm,18.0s
M24K Tolsona, Glenn 131.10 33 IAMs_20 IAMs_20 18 22 04.9
comp=Z,2µm,20.0s
N25K Chitina, Valde 131.10 34 IAMs_20 IAMs_20 18 24 05.4
comp=Z,1µm,22.0s
KTH Kantishna Hill 131.15 29 IAMs_20 IAMs_20 18 30 04.5
comp=Z,2µm,20.0s
GLB Gilahina Butte 131.18 34 IAMs_20 IAMs_20 18 23 45.5
comp=Z,1µm,21.0s
BALM Baldy 131.25 35 IAMs_20 IAMs_20 18 25 36.4
comp=Z,1µm,19.0s
MCARA McCarthy VSAT 131.34 35 IAMs_20 IAMs_20 18 26 14.9
comp=Z,1µm,19.0s
RND Reindeer 131.52 30 IAMs_20 IAMs_20 18 30 36.3
comp=Z,1µm,21.0s
BPAW Bear Paw Mtn. 131.60 29 IAMs_20 IAMs_20 18 32 20.4
comp=Z,1µm,21.0s
DHY Denali Highway 131.60 31 IAMs_20 IAMs_20 18 26 02.7
comp=Z,1µm,21.0s
BRVK Borovoye 131.88 306⇓ *i*PKIKP **PKiKP** **17 36 19.0 +1.4**
WRH Wood River Hil 132.60 30 IAMs_20 IAMs_20 18 31 28.9
comp=Z,1µm,21.0s
CCB Clear Creek Bu 132.81 30 IAMs_20 IAMs_20 18 26 47.5
comp=Z,1µm,20.0s
HDA Harding Lake 132.82 30 IAMs_20 IAMs_20 18 27 51.8
comp=Z,1µm,21.0s
MDM Murphy Dome 132.97 29 IAMs_20 IAMs_20 18 26 52.0
comp=Z,2µm,22.0s
MARD Mardin 133.01 271 IAMs_20 IAMs_20 18 26 20.2
comp=Z,1µm,22.0s
ILAR Eielson Array 133.14 30 PKP **PKPdf** **17 36 18.5 -0.2**
comp=Z,1.8nm,1.0s,baz=275,slow=3.8,SNR=8.6
K27K Chicken 133.75 33 IAMs_20 IAMs_20 18 21 18.1
comp=Z,1µm,19.0s
TIXI Tiksi 133.80 349⇑ *i*PKIKP **PKPdf** **17 36 19.3 -0.4**
TIXI Tiksi 133.80 349 IAMs_20 IAMs_20 18 36 05.5
comp=Z,2µm,20.0s
PRP Porcupine Dome 134.08 30 IAMs_20 IAMs_20 18 23 38.1
comp=Z,2µm,21.0s
MAK Makhachkala 134.18 281 *e*P **Pdif** **17 33 16.6 -4.4**
MAK *i* 17 36 22.9
MAK *e* 17 38 54.0
MAK *e* 17 43 28.8
MAK pmax pmax
comp=Z,307nm,1.2s
FYU Fort Yukon 135.00 29 IAMs_20 IAMs_20 18 32 51.4
comp=Z,1µm,21.0s
TAM Tamanrasset 135.94 223 IAMs_20 IAMs_20 18 49 34.1
comp=Z,1µm,22.0s
Y58A Scranton 136.27 103 IAMs_20 IAMs_20 18 23 18.2
comp=Z,1µm,22.0s
A21K Barrow 136.62 21 IAMs_20 IAMs_20 18 35 24.2
comp=Z,1µm,20.0s
NRIK Noril'sk 138.65 330⇑ *i*PKIKP **PKPdf** **17 36 29.1 +0.3**
ARU Arti 139.00 303⇑ *i*PKIKP **PKiKP** **17 36 31.2 -0.8**
ARU Arti 139.00 303 IAMs_20 IAMs_20 18 36 11.4
comp=Z,917nm,22.0s
B35A Bob, Littlefor 140.62 77 IAMs_20 IAMs_20 18 33 57.4
comp=Z,1µm,20.0s
ITM Ithomi 141.89 253 IAMs_20 IAMs_20 18 44 25.3
comp=Z,1µm,22.0s
VSR Storozhevoye 144.06 284 *e*PKIKP **PKiKP** **17 36 41.7 -0.8**
VSR pmax pmax
comp=Z,10.0nm,1.3s
KIRV Kirov 144.17 300⇓ *i*PKIKP **PKiKP** **17 36 42.5 0.0**
TIRR Tirgusor 144.47 267⇑ P **PKPdf** **17 36 39.6 -0.4**
HARR Harsova 144.88 267⇑ P **PKPdf** **17 36 41.0 +0.4**
SADO Sadowa 145.04 93 PKP **PKPbc** **17 36 39.2 -1.2**
comp=Z,6.9nm,0.8s,baz=219,slow=6.5,SNR=2.1
SADO PKPbc **PKPdf** **17 36 42.3 +1.4**
comp=Z,11nm,0.9s,baz=211,slow=4.4,SNR=5.0
LPSR Galich'ya Gora 145.08 286 *e*PKP2 **PKPdf** **17 36 40.5 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
CFR Carcaliu 145.14 268⇑ P **PKPdf** **17 36 42.1 +1.0**

K58A	Earlville	145.22	99		PKPbc	17 36 40.9	-0.2
BISRR	Bisoca	146.09	267	⇑P	PKiKP	17 36 45.6	-1.5
CLTB	Caltabellotta	146.13	244	IAMs_20	IAMs_20	18 56 15.5	
	comp=Z,1μm,18.0s						
KEST	Kesra	146.19	237	PKPbc	PKiKP	17 36 46.6	-1.0
	comp=Z,6.8nm,1.0s,baz=316,slow=6.9,SNR=6.3						
KEST	Kesra	146.19	237	IAMs_20	IAMs_20	18 38 12.8	
	comp=Z,1μm,22.0s						
VRI	Vrinceioaia	146.32	267	⇓P	PKPab	17 36 46.1	+0.8
PLOR	Plostina	146.34	267	⇑P	PKiKP	17 36 47.9	+0.4
MLR	Muntele Rosu	146.42	266	PKPbc	PKPbc	17 36 44.9	+0.1
MLR	Muntele Rosu	146.42	266	⇓P	PKPab	17 36 45.3	-0.5
OZUR		146.94	267	⇓P	PKiKP	17 36 49.7	+1.0
DOPR	Dopca	147.04	266	⇑P	PKPab	17 36 47.6	-0.4
MATE	Matera	147.09	251	⇓P	PKPbc	17 36 47.0	+0.3
MOS	Moscow	147.63	289	ePKP2	PKPab	17 36 48.9	-1.1
MOS				MLR	MLR		
	comp=Z,500nm,20.0s						
OBN	Obninsk	147.75	288	PKP	PKPdf	17 36 44.1	-1.1
	comp=Z,2.0nm,0.4s,baz=198,slow=3.2,SNR=1.7						
OBN				PKPbc	PKPbc	17 36 48.6	+0.7
	comp=Z,4.4nm,0.7s,baz=90,slow=6.1,SNR=4.5						
OBN	Obninsk	147.75	288	⇑iPKP2	PKPbc	17 36 48.7	+0.7
OBN				e		17 40 24.9	
OBN				i SS	SS	17 59 26.6	+6.3
OBN				pmax	pmax		
	comp=Z,22nm,0.8s						
BURAR	Bucovina Array	148.29	268	⇑P	PKPab	17 36 54.2	+1.2
BURAR	Bucovina Array	148.29	268	PKPab	PKPab	17 36 54.3	+1.2
AKASG	Malin Array Be	148.45	276	PKPbc	PKPbc	17 36 49.5	-0.6
	comp=Z,3.6nm,0.8s,baz=103,slow=2.3,SNR=13						
AKBB	Malin Array Si	148.45	276	⇑iPKIKP	PKPbc	17 36 49.7	-0.3
VSL	Villasalto	149.38	241	IAMs_20	IAMs_20	18 48 23.4	
	comp=Z,966nm,19.0s						
KLMR	Klimovskoe	149.60	299	ePKHKP	PKPbc	17 36 52.5	0.0
KLMR				pmax	pmax		
	comp=Z,103nm,1.4s						
KLMR	Klimovskoe	149.60	299	e	PKPbc	17 36 52.6	0.0
KLMR				AMP		17 37 08.5	
	comp=Z,103nm,1.4s						
AQU	L'Aquila	149.95	249	IAMs_20	IAMs_20	18 51 00.5	
	comp=Z,817nm,21.0s						
LVV	L'vov	150.37	270	ePKIKP	PKPbc	17 36 55.0	+0.1
LVV				MLR	MLR		
	comp=E,700nm,25.0s						
LVV				MLR	MLR		
	comp=N,400nm,23.0s						
LVV				MLR	MLR		
	comp=Z,800nm,22.0s						
UZH	Uzhgorod	150.41	267	ePKIKP	PKPbc	17 36 54.5	-0.5
UZH				e		17 36 56.8	
UZH				i		17 37 04.0	
KOLS	Kolonicke sedl	150.63	267	ePKIKP	PKPab	17 37 01.2	-1.3
KOLS				e		17 37 05.4	
KOLS	Kolonicke sedl	150.63	267	ePKP	PKPab	17 37 01.2	-1.3
KOLS				e		17 37 05.4	
CRVS	Cervenica-Dubn	151.00	267	ePKIKP	PKPab	17 37 01.1	-2.9
CRVS				e		17 37 06.4	
CRVS				eSS	SS	17 59 58.7	+1.9
CRVS	Cervenica-Dubn	151.00	267	ePKP	PKPab	17 37 01.1	-2.9
CRVS				e		17 37 06.4	
CRVS				eSS	SS	17 59 58.7	+1.9
CART	Cartagena	151.70	224	IAMs_20	IAMs_20	18 42 41.7	
	comp=Z,826nm,20.0s						
OSSC	Osservatorio P	151.84	248	IAMs_20	IAMs_20	18 50 08.6	
	comp=Z,1μm,20.0s						
VYHS	Vyhne	151.98	263	ePKIKP	PKPbc	17 36 56.1	-2.6
VYHS				e		17 37 04.5	
VYHS				eSS	SS	18 00 18.5	+11
VYHS	Vyhne	151.98	263	ePKP	PKPbc	17 36 56.1	-2.6
VYHS				e		17 37 04.5	
VYHS				eSS	SS	18 00 18.5	+11
SOKA	Soboth	152.50	257	eP	PKPbc	17 36 59.8	-0.2
	comp=Z,8.8nm,1.6s						
OBKA	Obir	152.60	256	eP	PKiKP	17 37 03.6	+3.1
	comp=Z,1.9nm,0.6s						
ZCCA	Zocca	152.61	249	IAMs_20	IAMs_20	18 25 48.1	
	comp=Z,826nm,19.0s						
ARSA	Arzberg	152.68	258	eP	PKPab	17 37 09.5	-1.7
	comp=Z,12nm,1.3s						
VLC	Villacollemand	152.73	248	IAMs_20	IAMs_20	19 01 10.0	
	comp=Z,984nm,22.0s						
CONA	Conrad Observa	153.00	259	eP	PKPdf	17 36 52.8	-0.9
	comp=Z,4.9nm,1.0s						
PRED	Cave del Predi	153.01	255	IAMs_20	IAMs_20	18 52 47.6	
	comp=Z,858nm,22.0s						
MYKA	Terra Mystica	153.11	255	eP	PKiKP	17 37 03.1	+1.6
	comp=Z,8.9nm,1.0s						
ZOU	Zoufplan	153.37	254	IAMs_20	IAMs_20	18 55 31.1	
	comp=Z,845nm,20.0s						
SUW	Suwalki	153.41	276	IAMs_20	IAMs_20	18 59 35.0	
	comp=Z,1μm,22.0s						
CIMO	Cimolais	153.44	253	IAMs_20	IAMs_20	19 02 00.8	
	comp=Z,1μm,22.0s						
KBA	Koelnbreinsper	153.58	255	eP	PKiKP	17 37 04.4	+1.8
	comp=Z,2.8nm,0.8s						
CTI	Castel Tesino	153.60	252	IAMs_20	IAMs_20	18 56 37.4	
	comp=Z,778nm,20.0s						
MOA	Molln	153.70	258	eP	PKPab	17 37 12.2	-3.2
	comp=Z,4.2nm,0.9s						
ABTA	Abfaltersbach	153.73	254	eP	PKPab	17 37 12.5	-3.1
	comp=Z,9.0nm,1.6s						
WTTA	Wattenberg	154.51	254	eP	PKPab	17 37 14.7	-4.4
	comp=Z,13nm,1.6s						
WATA	Walderalm	154.59	254	eP	PKiKP	17 37 06.7	+2.0
	comp=Z,6.8nm,1.2s						
FUORN	Ofenpass-Fuorn	154.67	251	IAMs_20	IAMs_20	18 48 06.4	
	comp=Z,1μm,22.0s						
GEC2	GERESS Array S	154.67	259	IAMs_20	IAMs_20	19 01 20.5	
	comp=Z,1μm,22.0s						
GERES	GERESS Array B	154.67	259	PKPbc	PKiKP	17 37 07.2	+2.6
	comp=Z,0.1nm,0.4s,baz=152,slow=2.7,SNR=2.5						
SQTA	Sankt Quirin	154.68	253	eP	PKiKP	17 37 07.2	+2.5
	comp=Z,13nm,1.4s						
FETA	Feichten	154.75	252	eP	PKiKP	17 37 07.5	+2.5
	comp=Z,7.8nm,1.9s						
MOTA	Moosalm	154.82	253	eP	PKiKP	17 37 06.9	+1.8
	comp=Z,7.6nm,1.3s						
KHC	Kasperske Hory	154.93	259	ePKIKP	PKiKP	17 37 06.2	+1.1
KHC				e		17 37 22.6	
KHC				e		17 44 03.4	
KHC	Kasperske Hory	154.93	259	⇑ePKP	PKiKP	17 37 06.2	+1.1
KHC				ePKPAB	pPKPab	17 37 22.6	-0.5
KHC				eSKP		17 44 03.4	
TUE	Stuetta	154.97	250	IAMs_20	IAMs_20	19 01 52.5	
	comp=Z,1μm,21.0s						
BNI	Bardonecchia	155.07	244	IAMs_20	IAMs_20	18 54 55.9	
	comp=Z,1μm,20.0s						
RETA	Reutte	155.08	253	eP	PKPab	17 37 19.3	-2.0
	comp=Z,7.3nm,1.4s						
DAVA	Damuels	155.34	252	eP	PKPab	17 37 20.4	-2.2
	comp=Z,8.4nm,1.4s						
SENIN	Lac Senin/Sane	155.81	247	IAMs_20	IAMs_20	19 00 48.7	
	comp=Z,1μm,20.0s						
CLL	Collm	156.66	262	e(PKPdf)	PKPdf	17 37 04.0	+5.5
CLL				e		17 37 23.0	
CLL				ePKPab	sPKPab	17 37 31.0	-0.3
CLL				e		17 37 38.0	
	comp=Z,28nm,2.0s						
CLL				ePSKS		17 51 29.0	
CLL				ePPS	PPS	17 54 18.0	
CLL				e		17 56 42.0	
CLL				e		17 58 06.0	
CLL				eSS	SS	18 01 05.0	+6.5
CLL				e		18 02 33.0	
CLL				eSSS	SSS	18 06 42.0	
CLL				e		18 07 43.0	
CLL				eSSPrev		18 10 06.0	
CLL				eSSSS		18 10 42.0	
CLL				LmV		19 03 00.0	
	comp=Z,1μm,20.5s						
CLL	Collm	156.66	262	ePKIKP	PKPdf	17 37 04.0	+5.5
CLL				MLR	MLR		
	comp=Z,1μm,20.5s						
CLL	Collm	156.66	262	IAMs_20	IAMs_20	19 03 36.2	
	comp=Z,1μm,20.0s						
STU	Stuttgart	156.74	253	IAMs_20	IAMs_20	18 59 07.1	
	comp=Z,1μm,22.0s						
ARCES	ARCESS Array B	157.82	313	PKPab	PKPab	17 37 32.5	0.0
	comp=Z,8.2nm,0.9s,baz=46,slow=3.5,SNR=6.7						

WEL 02 17:25:01.4, 39°S±2′×17°5E±°, h152km±2km, M2.7/34, MLv2.7/34, Error ellipse: s-maj=0.0km s-min=0.0km

az=155.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.27	63	P	Pn	17 25 22.1	-0.1
TWVZ				S	Sn	17 25 37.2	-0.8
VRZ	Vera Road	0.30	284	P	Pn	17 25 20.7	-1.4
VRZ				S	Sn	17 25 37.6	-0.2
MTVZ	Mangateitei	0.32	126	P	Pn	17 25 22.4	+0.1
MTVZ				S	Sn	17 25 37.4	-0.9
FWVZ	Far West T-bar	0.33	101	P	Pn	17 25 22.7	+0.1
FWVZ				S	Sn	17 25 37.5	-1.1
WTVZ	West Tongariro	0.36	78	P	Pn	17 25 22.6	0.0
WTVZ				S	Sn	17 25 37.8	-0.8
WNVZ	Wahianoa	0.39	110	P	Pn	17 25 22.8	+0.2
WNVZ				S	Sn	17 25 37.9	-1.0
KRVZ	Karewarewa	0.41	76	P	Pn	17 25 22.7	0.0
KRVZ				S	Sn	17 25 38.1	-0.7
OTVZ	Oturere	0.42	86	P	Pn	17 25 22.9	+0.1
OTVZ				S	Sn	17 25 38.1	-0.9
TMVZ	Te Maari	0.45	80	P	Pn	17 25 23.4	+0.5
KATZ	Kakaramea	0.49	64	P	Pn	17 25 23.3	+0.2
MOVZ	Moawhango	0.53	114	P	Pn	17 25 23.0	-0.2
MOVZ				S	Sn	17 25 37.8	-2.0
WAZ	Wanganui	0.57	191	P	Pn	17 25 23.7	+0.4
WAZ				S	Sn	17 25 40.0	-0.2
LREZ	Lake Rotokare	0.62	245	P	Pn	17 25 24.0	+0.4
WATZ	Wairara	0.68	44	P	Pn	17 25 24.1	+0.1
WATZ				S	Sn	17 25 41.0	-0.2
HIZ	Hauiti	0.71	342	P	Pn	17 25 23.6	-0.6
PREZ	Palmer Road	0.77	259	P	Pn	17 25 24.8	+0.2
NEZ	North Egmont	0.81	264	P	Pn	17 25 25.1	+0.2
KHEZ	Kahui Hut	0.87	263	P	Pn	17 25 25.6	+0.2
KUTZ	Kaahu Road	0.89	38	P	Pn	17 25 25.6	+0.2
PKEZ	Pukeiti	0.89	270	P	Pn	17 25 25.4	-0.1
KWHZ	Caweka Forest	1.03	103	P	Pn	17 25 27.2	+0.5
BKZ	Black Stump Fm	1.06	89	P	Pn	17 25 26.7	-0.2
BKZ				S	Sn	17 25 44.6	-1.7
KRHZ	Kereru	1.06	115	P	Pn	17 25 27.2	+0.3
KRHZ				S	Sn	17 25 45.3	-1.0
MRHZ	Matea Rd	1.06	71	P	Pn	17 25 26.5	-0.5
MRHZ				S	Sn	17 25 44.0	-2.4
TSZ	Takapari Road	1.07	144	P	Pn	17 25 27.3	+0.3
TSZ				S	Sn	17 25 45.4	-1.3
PNHZ	Pukenui	1.09	131	P	Pn	17 25 27.4	+0.3
HSRZ	Hossack Road	1.24	45	P	Pn	17 25 28.4	-0.1
MCHZ	McNeill Hill	1.24	102	P	Pn	17 25 29.4	+0.9
POWZ	Post Office Ro	1.29	158	P	Pn	17 25 28.9	-0.1
NMHZ	Naumai	1.31	86	P	Pn	17 25 30.1	+0.9
WPHZ	Waipukurau	1.33	131	P	Pn	17 25 29.6	+0.2
DVHZ	Dannevirke	1.36	144	P	Pn	17 25 29.6	-0.1
RRRZ	Republican Roa	1.38	52	P	Pn	17 25 27.4	-2.5
KMRZ	Kaimai	1.49	25	P	Pn	17 25 31.2	+0.1
TOZ	Tahunoa Road	1.49	110	P	Pn	17 25 30.7	-0.3
MRZ	Mangatainoka R	1.50	167	P	Pn	17 25 30.8	-0.3
PRWZ	Pori Road	1.50	155	P	Pn	17 25 31.3	+0.2
RAHZ	Arahi	1.55	80	P	Pn	17 25 31.8	+0.2
RTZ	Ruatahuna	1.55	69	P	Pn	17 25 31.3	-0.5
PXZ	Pawanui	1.58	123	P	Pn	17 25 32.1	+0.2
PRHZ	Porangahau	1.58	133	P	Pn	17 25 32.1	+0.2
OGWZ	Otaki Gorge	1.62	179	P	Pn	17 25 32.2	-0.1
KIW	Kapiti Island	1.67	186	P	Pn	17 25 32.3	-0.6
BFZ	Birch Farm	1.71	150	P	Pn	17 25 33.1	-0.3
URZ	Urewera	1.81	60	P	Pn	17 25 33.4	-1.1
DUWZ	D'Urville Isla	1.85	210	P	Pn	17 25 34.2	-0.7
CPWZ	Castlepoint	1.90	155	P	Pn	17 25 35.6	+0.2
CAW	Cannon Point	1.91	181	P	Pn	17 25 35.0	-0.6
MTW	Mount Morrison	1.98	172	P	Pn	17 25 35.5	-0.8
KNZ	Kokohu	1.98	86	P	Pn	17 25 36.1	-0.3
TMWZ	Te Maipa	2.00	163	P	Pn	17 25 36.0	-0.6
MWZ	Matawai	2.06	66	P	Pn	17 25 36.6	-0.7
MKAZ	Moumakai	2.09	1	P	Pn	17 25 37.4	-0.3
RIGZ	Rimuhau	2.11	77	P	Pn	17 25 37.7	-0.2
TCW	Tory Channel	2.12	198	P	Pn	17 25 37.2	-0.8
MHGZ	Mahia Peninsul	2.16	90	P	Pn	17 25 38.6	+0.1
PRGZ	Paritu Road	2.16	84	P	Pn	17 25 38.2	-0.3
PAWZ	Paruwai Farm	2.20	174	P	Pn	17 25 38.0	-1.0
BHW	Baring Head	2.22	185	P	Pn	17 25 38.1	-1.0
MSWZ	Moikau Station	2.22	178	P	Pn	17 25 38.2	-1.0
TRWZ	Traveller	2.24	169	P	Pn	17 25 38.6	-0.8
TKGZ	Te Karaka	2.25	71	P	Pn	17 25 37.0	-2.6
PLWZ	Palliser	2.37	178	P	Pn	17 25 39.8	-1.2
TUWZ	Tuamarina	2.41	202	P	Pn	17 25 40.1	-1.3
NNZ	Nelson	2.42	213	P	Pn	17 25 40.4	-1.2
TWGZ	Tauwhareparae	2.45	66	P	Pn	17 25 41.9	-0.2
KUZ	Kuaotunu	2.49	11	P	Pn	17 25 42.4	-0.1
HAZ	Te Kaha	2.53	56	P	Pn	17 25 41.4	-1.6
QRZ	Quartz Range	2.58	230	P	Pn	17 25 41.7	-1.9
CMWZ	Cape Campbell	2.65	195	P	Pn	17 25 44.0	-0.3
PKGZ	Pakihiroa	2.65	61	P	Pn	17 25 47.6	+3.1
BSWZ	Blackbirch Sta	2.69	200	P	Pn	17 25 44.0	-1.0
WMGZ	Waiomatatini S	2.92	63	P	Pn	17 25 46.6	-1.2
MXZ	Matakaoa Point	2.98	58	P	Pn	17 25 47.8	-0.8
THZ	Tophouse	3.08	213	P	Pn	17 25 48.4	-1.4
KHZ	Kahutara	3.44	200	P	Pn	17 25 53.0	-1.3
GVZ	Greta Valley S	4.09	202	P	Pn	17 26 00.7	-2.1
MQZ	McQueen's Vall	4.88	202	P	Pn	17 26 09.7	-3.4

*IDC **02** 17:27:38.1±0.8, 52.°05N×173.°38W, h0km, mb3.7/9, mb1 4.0/10, mb1mx3.6/61, mbtmpg3.7/10, ML4.2/1, Error ellipse: s-maj=38.2km s-min=17.6km az=174.0*
*AEIC **02** 17:27:49±1.6, 52.°2N±0.°1×173.°29W±0.°08, h101km±5km, ML3.6, mb4.0/18(NEIC), Error ellipse: s-maj=21.4km s-min=6.4km az=170.0*
*NEIC **02** 17:27:50.4±1.6, 52.°3N±0.°2×173.°34W±0.°09, h103km±5km, Error ellipse: s-maj=23.6km s-min=6.6km az=168.0*

ISC 02 17:27:50.1±0.8, 52.°3N±0.°2×173.°30W±0.°05, h100km, n65, σ1§13/59, mb3.7/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	Korovin Southe	0.47	281		Pn	17 28 06.0	+0.3
KOFP	Korovin Flat P	0.49	272		Pn	17 28 06.4	+0.6
KONE	Korovin Northe	0.52	285		Pn	17 28 06.3	+0.3
ATKA	Atka Island	0.56	264		Pn	17 28 06.2	0.0
ATKA					Sn	17 28 18.6	+0.3
KOKL	Mount Kliuchef	0.56	277		Pn	17 28 07.0	+0.6
KOKL					Sn	17 28 20.2	+1.6
KOWE	Korovin West	0.59	281		Pn	17 28 07.0	+0.4
GSTR	Great Sitkin T	1.71	266		Pn	17 28 19.5	+0.5
GSMY	Great Sitkin M	1.71	264		Pn	17 28 19.1	+0.1
GSTD	Great Sitkin T	1.77	264		Pn	17 28 19.6	-0.1
GSTD					Sn	17 28 43.2	+1.0
GSSP	Great Sitkin S	1.78	266		Pn	17 28 20.1	+0.3
ADAG	Mount Adagdak	2.06	263		Pn	17 28 24.3	+1.0
ADK	Adak	2.12	261		Pn	17 28 24.2	0.0
KIMD	Kanaga Island	2.48	260		Pn	17 28 29.6	+0.6
NIKH	Nikolski High	2.80	73		Pn	17 28 33.4	+0.3
NIKH					Sn	17 29 07.0	+0.7
TASE	Tanaga Southea	2.96	264		Pn	17 28 36.1	+0.8
OKSP	Okmok Steeple	3.20	70		Pn	17 28 39.3	+0.8
OKWE	Okmok W'ng Wal	3.30	66		Pn	17 28 40.9	+1.1
OKTU	Okmok Mt. Tuli	3.38	68		Pn	17 28 41.9	+0.9
OKFG	Magazine Ridge	3.46	68		Pn	17 28 43.3	+1.3
MAPS	Pakushin South	4.14	65		Pn	17 28 51.9	+0.8
MREP	Makushin Rep't	4.25	66		Pn	17 28 53.5	+0.9
MSW	Makushin Switc	4.26	65		Pn	17 28 53.4	+0.7
MNAT	Makushin Natee	4.31	65		Pn	17 28 54.2	+0.8
UNV	Unalaska Valle	4.39	66		Pn	17 28 55.3	+0.8
AMKA	Amchitka	4.67	262		Pn	17 28 58.6	+0.4
AKMO	Akutan Morgan	4.75	64		Pn	17 29 00.7	+1.4
ZRO	Akutan Zero	4.77	64		Pn	17 29 01.0	+1.4
OHAK	Old Harbor	12.56	59	Pn	Pn	17 30 42.0	-3.0
KDAK	Kodiak Island	13.08	57	Pn	Pn	17 30 50.3	-1.5
CNPM	China Poot	14.31	51	Pn	Pn	17 31 07.1	-0.5
BRLK	Bradley Lake	14.56	50	Pn	Pn	17 31 09.8	-1.1
GHO	Glory Hole Cre	16.23	45	Pn	Pn	17 31 30.4	-1.6
GHO				IAmb	IAmb	17 31 34.6	
	comp=Z,16nm,1.3s						
KTH	Kantishna Hill	16.30	37		P	17 31 34.4	+0.4
KTH				IAmb	IAmb	17 31 35.8	
	comp=Z,26nm,1.5s						
TRF	Thorofare Moun	16.48	38		Pn	17 31 35.5	+0.3
TRF				IAmb	IAmb	17 31 49.5	
	comp=Z,5.4nm,1.2s						
GLI	Glacier Island	16.71	49		Pn	17 31 37.6	-0.3
SCM	Sheep Creek Mo	16.95	45	Pn	Pn	17 31 38.6	-2.3
SCM				IAmb	IAmb	17 31 48.3	
	comp=Z,25nm,1.4s						

FID	Port Fidalgo	16.96	49	Pn	Pn	17 31 37.0	-3.8
DHY	Denali Highway	17.45	42	P	P	17 31 45.9	-0.8
M24K	Tolsona, Glenn	17.56	45	P	P	17 31 46.2	-1.7
I23K	Minto, Yukon-K	17.77	34		P	17 31 50.6	+0.6
I23K				IAmb	IAmb	17 31 56.8	
	comp=Z,3.8nm,0.8s						
CCB	Clear Creek Bu	18.04	37	P	P	17 31 51.7	-1.3
N25K	Chitina, Valde	18.09	48	P	P	17 31 52.3	-1.4
N25K				IAmb	IAmb	17 32 09.7	
	comp=Z,24nm,1.5s						
HDA	Harding Lake	18.24	38	P	P	17 31 54.6	-0.6
HDA				IAmb	IAmb	17 31 56.0	
	comp=Z,11nm,1.2s						
IL31		18.45	37	P	P	17 31 56.9	-0.5
ILAR	Eielson Array	18.45	37	P	P	17 31 56.5	-1.0
	comp=Z,0.8nm,0.3s,baz=232,slow=9.1,SNR=42						
BALM	Baldy	18.98	50	P	P	17 32 01.4	-2.1
BALM				IAmb	IAmb	17 32 15.5	
	comp=Z,9.8nm,1.2s						
H11N2	WAKE ISLAND Hy	35.95	213	T	T	18 12 56.7	
	baz=21,slow=76,SNR=4.6						
H11N3	WAKE ISLAND Hy	35.96	213	T	T	18 13 02.3	
	baz=21,slow=76,SNR=4.5						
H11N1	WAKE ISLAND Hy	35.97	213	T	T	18 13 04.3	
	baz=21,slow=76,SNR=3.9						
H11S1	WAKE ISLAND Hy	37.16	213	T	T	18 14 14.7	
	baz=20,slow=76,SNR=4.2						
H11S2	WAKE ISLAND Hy	37.17	212	T	T	18 14 16.6	
	baz=20,slow=76,SNR=4.6						
H11S3	WAKE ISLAND Hy	37.18	213	T	T	18 14 13.0	
	baz=20,slow=76,SNR=3.1						
MJAR	Matsushiro Arr	37.28	265	P	P	17 34 51.9	-0.3
	comp=Z,2.0nm,1.1s,baz=62,slow=2.9,SNR=1.9						
MJAR	Matsushiro Arr	37.28	265	IAmb	IAmb	17 34 53.1	
	comp=Z,3.5nm,1.1s						
NVAR	Mina Array Bea	40.08	88	P	P	17 35 16.5	+0.8
	comp=Z,0.5nm,0.7s,baz=293,slow=7.7,SNR=4.8						
ELK	Elko	40.54	83	P	P	17 35 20.2	+0.7
	comp=Z,0.5nm,0.4s,baz=298,slow=8.6,SNR=5.4						
ELK	Elko	40.54	83	IAmb	IAmb	17 35 21.8	
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	42.78	76	P	P	17 35 37.9	+0.1
	comp=Z,0.3nm,0.6s,baz=280,slow=5.4,SNR=2.3						
SONM	Songino Array	49.26	299	P	P	17 36 28.8	+0.4
	comp=Z,0.4nm,0.6s,baz=119,slow=1.9,SNR=4.0						
SONM	Songino Array	49.26	299	IAmb	IAmb	17 36 30.5	
	comp=Z,1.7nm,1.2s						
TXAR	Lajitas Array	55.16	86	P	P	17 37 12.3	+0.1
	comp=Z,0.6nm,0.4s,baz=294,slow=5.1,SNR=8.5						
MKAR	Makanchi Array	52.09	311	P	P	17 38 00.7	+0.8
	comp=Z,1.5nm,1.0s,baz=101,slow=7.5,SNR=3.5						
WRA	Warramunga Arr	85.09	228	P	P	17 40 13.8	-0.8
	comp=Z,0.2nm,0.5s,baz=34,slow=5.8,SNR=5.5						
WRA	Warramunga Arr	85.09	228	IAmb	IAmb	17 40 20.2	
	comp=Z,0.1nm,1.1s						
ASAR	Alice Springs	88.52	227	P	P	17 40 31.4	+0.3
	comp=Z,0.5nm,0.7s,baz=24,slow=5.5,SNR=6.7						

*REY **02** 17:38:59.2, 64.°62N×17.°41W, h3km*
*IDC **02** 17:39:01.0±0.8, 64.°28N×17.°79W, h0km, mb3.5/9, mb1 3.9/10, mb1mx3.6/57, mbtmp3.6/10, ML4.1/1, Error ellipse: s-maj=30.2km s-min=11.1km az=23.0*
*NEIC **02** 17:39:01.3±2.0, 64.°3N±0.°2×18.°0W±0.°2, h9km±5km, mb4.1/8, Error ellipse: s-maj=25.2km s-min=11.7km az=204.0*

ISC 02 17:38:59.9±0.6, 64.°63N±0.°02×17.°50W±0.°02, h10km, n64, σ1§98/74, mb3.8/14, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	Vonarskard	0.12	292	P	Pg	17 39 02.5	-0.3
	baz=291						
IVON				S	Sg	17 39 05.9	+1.0
	baz=291						
IDYN	Dyngjuhals	0.17	20	P	Pg	17 39 03.1	-0.6
	baz=5.5						
IGRF	Grimsfjall	0.24	156	P	Pg	17 39 03.9	-1.1
	baz=163						
IGRF				S	Sg	17 39 07.7	-0.7
	baz=163						
IKVE	Kverkfjoll	0.36	82	S	Sg	17 39 10.1	-1.8
	baz=78						
IVOT	Vottur	0.39	159	P	Pg	17 39 06.5	-1.1
	baz=164						
ISKR	Skrokkalda	0.39	260	P	Pb	17 39 07.3	-1.7
	baz=263						
IJOK	Jokulheimar	0.45	225	P	Pb	17 39 08.0	-1.9
	baz=230						
IJOK				S	Sb	17 39 14.9	-1.7
	baz=230						
IKRE	Kreppuhraun	0.51	72	P	Pg	17 39 08.2	-1.5
	baz=69						
IKRE				S	Sg	17 39 14.8	-1.6
	baz=69						

IMID	**Miomork** baz=230	**1.43**	**228**	P	**Pg**	**17 39 24.9**	**-2.4**
IASM	**Asmuli** baz=242	**1.58**	**241**	P	**Pb**	**17 39 27.1**	**-2.1**
BORG	**Borgarnes** 21nm,0.3s,baz=92,slow=8.2,SNR=34	**1.65**	**276**	Pg	**Pb**	**17 39 28.2**	**-2.2**
BORG	11nm,0.3s,baz=36,slow=19,SNR=11			Lg	Lg	17 39 53.2	
BORG	**Borgarnes**	**1.65**	**276**		**Pg**	**17 39 29.3**	**-2.2**
ISOL	**Solvholt** baz=248	**1.66**	**246**	P	**Pg**	**17 39 29.4**	**-2.3**
IKRO	**Krokur** baz=254	**1.66**	**253**	P	**Pg**	**17 39 29.3**	**-2.5**
IHEI	**Heioarbar** baz=258	**1.68**	**257**	P	**Pg**	**17 39 29.3**	**-2.7**
IVME	**Vestmannaeyjar** baz=228	**1.72**	**227**	P	**Pb**	**17 39 29.9**	**-1.7**
IBJA	**Bjarnastaoir** baz=250	**1.79**	**249**	P	**Pg**	**17 39 31.4**	**-2.9**
EKA	**Eskdalemuir Ar** baz=323,slow=12,SNR=3.7	**11.73**	**136**	Pn	**Pn**	**17 41 47.7**	**+0.6**
ARD9	**ARCESS Array S**	**17.13**	**54**	P	**P**	**17 43 05.3**	**+4.6**
CLL	**Collm**	**20.69**	**116**	P	Pn	17 43 42.6	+0.5
GRA1	**Grafenberg Arr**	**21.31**	**121**	P	**P**	**17 43 46.1**	**-0.4**
BRG	**Berggiesshubel** 6.7nm,1.1s	**21.40**	**115**	*e*(P)	**P**	**17 43 50.1**	**+2.7**
GERES	**GERESS Array B** 0.5nm,0.8s,baz=336,slow=12,SNR=3.1	**22.94**	**119**	P	**P**	**17 44 05.5**	**+1.5**
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**17 44 05.2**	**+1.2**
MORC	**Moravsky Berou**	**23.68**	**112**	P	**P**	**17 44 13.5**	**+2.1**
MORC	comp=Z,8.9nm,1.5s			IAmb	IAmb	17 44 18.0	
CTI	**Castel Tesino**	**24.55**	**125**	P	**P**	**17 44 19.4**	**-0.2**
CTI	comp=Z,4.0nm,1.0s			IAmb	IAmb	17 44 25.8	
ZOU	**Zoufplan**	**24.58**	**123**	P	**P**	**17 44 21.8**	**+1.8**
ZOU	comp=Z,7.8nm,1.3s			IAmb	IAmb	17 44 31.0	
PRED	**Cave del Predi**	**24.89**	**122**	P	**P**	**17 44 24.3**	**+1.6**
PRED	comp=Z,7.8nm,1.5s			IAmb	IAmb	17 44 29.7	
VLC	**Villacollemand**	**25.77**	**129**	P	**P**	**17 44 32.1**	**+1.6**
ESDC	**Sonseca Array** comp=Z,0.3nm,0.4s,baz=297,slow=5.6,SNR=1.5	**26.22**	**156**	P	**P**	**17 44 35.1**	**+0.3**
AKASG	**Malin Array Be** comp=Z,0.3nm,0.5s,baz=295,slow=10,SNR=1.8	**27.84**	**97**	P	**P**	**17 44 51.5**	**+2.5**
ILAR	**Eielson Array** comp=Z,1.0nm,1.1s,baz=16,slow=6.6,SNR=6.4	**45.72**	**332**	P	P	17 47 26.8	+6.2
ILAR	**Eielson Array**	**45.72**	**332**	P	P	17 47 25.0	+4.5
MKAR	**Makanchi Array** comp=Z,0.5nm,0.8s,baz=299,slow=5.9,SNR=2.5	**52.71**	**58**	P	P	17 48 19.9	+5.4
TORD	**Torodi Ar. Bea** comp=Z,1.1nm,0.8s,baz=333,slow=7.3,SNR=4.7	**53.11**	**156**	P	**P**	**17 48 19.2**	**+1.8**
PDAR	**Pinedale Array** comp=Z,1.3nm,0.9s,baz=81,slow=5.6,SNR=5.5	**53.19**	**293**	P	**P**	**17 48 19.7**	**+1.6**
TXAR	**Lajitas Array** comp=Z,0.1nm,0.3s,baz=10,slow=5.5,SNR=3.2	**62.29**	**280**	P	**P**	**17 49 23.7**	**+1.7**
CMAR	**Chiang Mai Arr** comp=Z,0.2nm,0.3s,baz=310,slow=5.6,SNR=2.1	**84.15**	**59**	P	**P**	**17 51 34.0**	**+2.9**

IDC ***02*** *17:44:36.1±2.9, 2°.50N×128°.57E, h200km±32km, mb3.0/7, mb1 3.1/8, mb1mx2.9/43, mbtmp3.5/8, Error ellipse: s-maj=53.8km s-min=15.6km az=81.0*

ISC 02 17:44:35.9±0.9, 2°.5N±0°.1×128°.5E±0°.3, h200km, n8, σ1§44/9, mb3.4/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong** 2.3nm,0.3s,baz=329,slow=2.9,SNR=9.6	**4.37**	**140**	P		**Pn**	**17 45 43.3**	**+0.9**
FITZ	**Fitzroy Crossi** 2.0nm,1.1s,baz=8.1,slow=22,SNR=2.2	**20.67**	**188**	P		**P**	**17 48 59.0**	**-1.6**
WRA	**Warramunga Arr** 0.7nm,0.8s,baz=344,slow=10,SNR=12	**23.05**	**166**	P		**P**	**17 49 24.0**	**+0.2**
ASAR	**Alice Springs** 0.3nm,0.9s,baz=351,slow=8.1,SNR=5.3	**26.55**	**169**	P		**P**	**17 49 54.5**	**-1.1**
ASAR	0.2nm,0.8s,baz=346,slow=2.0,SNR=0.9			PcP		**PcP**	**17 53 16.1**	**+1.3**
MJAR	**Matsushiro Arr** 1.6nm,1.0s,baz=122,slow=13,SNR=1.4	**35.03**	**14**	P		**P**	**17 51 07.7**	**-1.9**
SONM	**Songino Array** 0.2nm,0.4s,baz=130,slow=10,SNR=2.1	**49.01**	**340**	P		**P**	**17 53 03.2**	**+0.7**
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=118,slow=8.7,SNR=5.7	**59.55**	**325**	P		**P**	**17 54 19.8**	**+1.3**
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=116,slow=9.8,SNR=2.0	**62.46**	**333**	P		**P**	**17 54 38.0**	**+0.2**

MAN 02 17:44:42.2, 8°.15N×127°.26E, h1km, mb4.4, ML3.2, MS2.9, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BIP	**Bislig**	**1.00**	**274**	⇑*i*	P	Pg	17 44 59.8	-1.7
BIP				*i*	S	Sg	17 45 08.4	-6.2
MATI	**Mati**	**1.56**	**220**	*e*	P	Pn	17 45 09.9	-1.2
MATI				*e*	S	Sn	17 45 25.8	-6.2
GLSP	**General Luna,**	**1.97**	**325**	*e*	P	Pn	17 45 17.4	+0.6
GLSP				*e*	S	Sn	17 45 42.4	+0.2
BUKP	**Musuan**	**2.19**	**263**	*e*	P	Pb	17 45 21.7	-1.1
BUKP				*e*	S	Sn	17 45 48.7	+0.9
KCP	**Kidapawan**	**2.43**	**242**	⇓*e*	P	Pb	17 45 27.4	+0.5
DDMP	**Don Marcelino,**	**2.55**	**217**	*e*	P	Pn	17 45 25.4	+0.6
DDMP				*e*	S	Sn	17 45 55.0	-1.5
CGP	**Cagayan de Oro**	**2.56**	**277**	⇓*e*	P	Pb	17 45 27.4	-1.5
CGP				*i*	S	Sn	17 45 57.9	+1.2
MSLP	**Maasin**	**3.08**	**310**	*e*	P	Pn	17 45 33.5	+1.4
MSLP				*e*	S	Sg	17 46 22.6	+1.3
SKMP	**Bagumbayan, Su**	**3.15**	**239**	*e*	P	Pn	17 45 34.6	+1.6
SKMP				*e*	S	Sn	17 45 54.6	-17
CNOP	**Candoni, Negro**	**4.86**	**290**	*e*	P	Pn	17 45 58.0	+1.4

IDC ***02*** *17:51:31.0±1.7, 8°.20N×127°.15E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/50, mbtmp3.4/4, MS4.3/1, Ms1 4.3/1, ms1mx3.6/28, Error ellipse: s-maj=28.7km s-min=19.0km az=150.0*

MAN ***02*** *17:51:31.7, 8°.06N×127°.13E, h1km, mb4.8, ML3.7, MS3.7*

ISC 02 17:51:31.7±2.4, 8°.05N±0°.05×127°.03E±0°.09, h1km±14km, n13, σ1§28/19, mb3.5/4, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BIP	**Bislig**	**0.79**	**283**	⇓*i*	P	**Pg**	**17 51 47.0**	**+0.1**
BIP				*i*	S	**Sg**	**17 51 55.6**	**-1.5**
MATI	**Mati**	**1.34**	**215**	*e*	P	**Pn**	**17 51 56.8**	**-0.8**
MATI				*e*	S	**Sn**	**17 52 14.7**	**-1.3**
DAV	**Davao City (W)** 61nm,0.3s,baz=231,slow=6.5,SNR=4.4	**1.73**	**236**	Pn		**Pg**	**17 52 06.3**	**+1.4**
DAV	56nm,0.3s,baz=242,slow=22,SNR=19			Lg	Lg		17 52 32.0	
BUKP	**Musuan**	**1.95**	**265**	*e*	P	**Pb**	**17 52 08.4**	**+0.2**
BUKP				*e*	S	**Sb**	**17 52 34.7**	**+1.6**
KCP	**Kidapawan**	**2.18**	**242**	⇓*e*	P	**Pb**	**17 52 12.1**	**+0.1**
KCP				*i*	S	**Sb**	**17 52 39.6**	**-0.1**
CGP	**Cagayan de Oro**	**2.34**	**280**	⇑*i*	P	**Pb**	**17 52 14.7**	**-0.1**
CGP				*i*	S	**Sb**	**17 52 43.9**	**-0.4**
MSLP	**Maasin**	**2.98**	**314**	*e*	P	**Pn**	**17 52 20.9**	**+0.8**
PAGZ	**Pagadian**	**3.62**	**267**	*e*	P	**Pn**	**17 52 30.8**	**+1.9**
OCLP	**Ormoc**	**3.82**	**322**	*e*	P	**Pn**	**17 52 33.5**	**+1.8**
OCLP				*e*	S	**Sg**	**17 53 32.1**	**-2.3**
FITZ	**Fitzroy Crossi** 1.3nm,0.6s,baz=348,slow=11,SNR=2.0	**26.02**	**183**	P		**P**	**17 57 06.0**	**-0.5**
WRA	**Warramunga Arr** 0.1nm,0.6s,baz=342,slow=8.2,SNR=1.2	**28.73**	**166**	P		**P**	**17 57 31.1**	**+0.2**
ASAR	**Alice Springs** 0.2nm,0.3s,baz=341,slow=7.4,SNR=20	**32.23**	**168**	P		**P**	**17 58 02.6**	**+0.8**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=127,slow=7.5,SNR=2.7	**54.24**	**323**	P		**P**	**18 00 58.3**	**-1.1**
MKAR	comp=Z,293nm,21.3s,baz=120,slow=38			LR		LR	18 26 11.8	

IDC ***02*** *18:25:38.9±0.4, 10°.93S×29°.72E, h0km, mb4.8/43, mb1 4.8/48, mb1mx4.8/57, mbtmp4.8/48, ML5.3/4, MS4.8/27, Ms1 4.8/27, ms1mx4.7/41, Error ellipse: s-maj=13.8km s-min=8.4km az=102.0*

MOS ***02*** *18:25:39.3±0.9, 10°.85S×29°.68E, h9km, mb5.4/45, MS4.8/18, Error ellipse: s-maj=9.6km s-min=4.3km az=82.7*

NEIC ***02*** *18:25:41.0±1.7, 10°.96S±0°.06×29°.74E±0°.07, h10km±1km, mb5.3/75, Error ellipse: s-maj=12.2km s-min=9.4km*

az=278.0

BJI ***02*** *18:25:41.1±0.0, 10°.85S×29°.24E, h30km, mB5.4/37, mb4.9/44, Ms5.1/21, Ms7 4.9/21*

GCMT ***02*** *18:25:46.0±0.2, 10°.79S±0°.02×29°.71E±0°.02, h36km, MW5.4/101, Moment Tensor Solution. s72,c97; s101,c133; Duration: 1§2 Moment tensor: Scale 10¹⁷ Nm; Mrr=1.59±.06; Mθθ=0.38±.04; Mϕϕ=1.21±.04; Mrθ=0.06±.03; Mθϕ=0.63±.02; Mϕr=0.34±.04; Best double couple: Mo=1.60700×10¹⁷ NP1:ϕ=35.00000°, δ=41.00000°, λ=79.00000°. NP2:ϕ=201.00000°, δ=50.00000°, λ=99.00000°. Principal axes: T 1.5750, Plg=5.0000°, Azm=298.0000°; N 0.0680, Plg=7.0000°, Azm=207.0000°; P =1.6400, Plg=81.0000°, Azm=63.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

LSZ ***02*** *18:25:51.9±19.0, 11°.61S×30°.01E, h40km, MD5.0*

ISC 02 18:25:40.4±7.7, 10°.96S×29°.76E, h7km, n39, ML5.3, 41C-38D, Zambia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MZUN	**Kiwira**	**4.12**	**65**	*i*	P	**Pn**	**18 26 47.9**	**+3.9**
MZUN				*i*	S	**Sn**	**18 27 35.3**	**+2.9**
MZUN	comp=Z,25μm,0.6s			IAML			18 28 01.4	
LSZ	**Lusaka** comp=Z,50nm,0.3s,baz=11,slow=14,SNR=330	**4.56**	**199**	Pn		**Pn**	**18 26 50.3**	**+0.3**
LSZ	comp=Z,651nm,0.3s,baz=257,slow=22,SNR=16			Sn		**Sn**	**18 27 41.8**	**-1.5**
LSZ	comp=Z,2μm,0.3s,baz=79,slow=13,SNR=11			Lg	Lg		18 28 09.1	
LSZ	comp=Z,13μm,19.4s,baz=356,slow=42			LR	LR		18 28 49.7	
LSZ	**Lusaka**	**4.56**	**199**	*i*	P	**Pn**	**18 26 46.7**	**-3.3**
LSZ				*i*	S	**Sn**	**18 27 34.9**	**-8.4**
LSZ	**Lusaka**	**4.56**	**199**	P		**Pn**	**18 26 51.9**	**+1.9**
LSZ							18 27 41.8	
LSZ	**Lusaka**	**4.56**	**199**	*e*	Pn	**Pn**	**18 26 52.4**	**+2.4**
LSZ	baz=26,slow=14			*e*			18 26 52.4	
LSZ				*e*	Pg	**Pg**	**18 27 06.9**	**-1.0**
LSZ				*e*	S	Pg	18 27 15.4	+7.5
LSZ				*e*	Sg	**Sn**	**18 27 39.4**	**-3.9**
LSZ				Lg	Lg		18 28 10.9	
LSZ	**Lusaka**	**4.56**	**199**			**Pn**	**18 26 51.9**	**+1.9**
LSZ	**Lusaka**	**4.56**	**199**	*i*	P	**Pn**	**18 26 46.7**	**-3.3**
LSZ				*i*	S	**Sn**	**18 27 34.9**	**-8.4**
LSZ	**Lusaka**	**4.56**	**199**	*i*	P	**Pn**	**18 26 51.7**	**+1.7**
LSZ	comp=Z,11μm,1.1s			IAML			18 28 13.9	
MAKE	**Makete**	**4.59**	**69**	*i*	P	**Pn**	**18 26 53.3**	**+2.8**
MAKE				*i*	S	**Sn**	**18 27 46.4**	**+2.1**
MAKE	comp=Z,10μm,0.5s			IAML			18 28 18.5	
DODT	**Dodoma, Tanzan**	**7.58**	**52**	*i*	P	**Pn**	**18 27 32.7**	**+1.1**
DODT				*i*	S	**Sn**	**18 28 54.3**	**-3.6**
KOND	**Kondoa**	**8.47**	**45**	*i*	P	**Pn**	**18 27 43.9**	**+0.1**
KOND				*i*	S	**Sn**	**18 29 12.6**	**-7.2**
BLWY	**Bulawayo**	**9.20**	**187**	*i*	P	**Pn**	**18 27 49.5**	**-4.2**
BLWY				*i*	S	**Sn**	**18 29 32.8**	**-4.9**
BLWY	**Bulawayo**	**9.20**	**187**	*i*	P	**Pn**	**18 27 49.5**	**-4.2**
BLWY				*i*	S	**Sn**	**18 29 32.8**	**-4.9**
MATP	**Matopo** comp=Z,42nm,0.3s,baz=356,slow=13,SNR=184	**9.49**	**187**	Pn		**Pn**	**18 27 56.9**	**-0.9**
MATP	comp=Z,162nm,0.3s,baz=171,slow=14,SNR=10			Sn		**Sn**	**18 29 38.7**	**-6.2**
MATP	comp=Z,141nm,0.3s,baz=92,slow=22,SNR=6.0			Lg	Lg		18 30 41.7	
MATP	comp=Z,8μm,19.0s,baz=10,slow=39			LR	LR		18 31 52.5	
MW44	**Karatu Welwel**	**9.56**	**38**	*i*	P	**Pn**	**18 27 59.2**	**+0.4**
MW44				*i*	S	**Sn**	**18 29 39.3**	**-7.5**
MW44	comp=Z,2μm,0.7s			IAML			18 30 57.4	
NG56	**Ngoile bomas**	**9.61**	**36**	*i*	P	**Pn**	**18 28 00.6**	**+1.1**
NG56				*i*	S	**Sn**	**18 29 41.0**	**-6.9**
NG56	comp=Z,4μm,0.9s			IAML			18 31 14.0	
PR61	**Kiloki Boma**	**9.63**	**35**	*i*	P	**Pn**	**18 28 00.2**	**+0.5**
PR61				*i*	S	Sn	18 29 38.6	-10
PR61	comp=Z,1μm,0.8s			IAML			18 30 53.2	
PR62	**Oldupai Boma**	**9.68**	**36**	*i*	P	**Pn**	**18 28 01.0**	**+0.6**
PR62				*i*	S	Sn	18 29 40.5	-9.2
PR62	comp=Z,3μm,0.8s			IAML			18 30 54.0	
NG55	**Lemala Gate**	**9.74**	**38**	*i*	P	**Pn**	**18 28 01.8**	**+0.5**
NG55				*i*	S	**Sn**	**18 29 44.2**	**-7.0**
NG55	comp=Z,2μm,0.4s			IAML			18 31 23.8	
PR63	**Meshili Boma**	**9.75**	**36**	*i*	P	**Pn**	**18 28 02.0**	**+0.6**
PR63				*i*	S	Sn	18 29 41.6	-10
PR63	comp=Z,2μm,1.0s			IAML			18 31 12.1	
NG54	**Nasera Bomas**	**9.88**	**35**	*i*	P	**Pn**	**18 28 03.6**	**+0.4**
NG54				*i*	S	Sn	18 29 43.0	-12
NG54	comp=Z,891nm,0.8s			IAML			18 31 02.9	
PR52	**Alailelai Boma**	**9.89**	**37**	*i*	P	**Pn**	**18 28 05.6**	**+2.1**
LL66	**Piyaya bomas**	**10.05**	**35**	*i*	P	**Pn**	**18 28 06.3**	**+0.8**
PR31	**Engaruka Boma**	**10.13**	**38**	*i*	P	**Pn**	**18 28 06.8**	**+0.2**
MW41	**Ole Sokoine**	**10.14**	**41**	*i*	P	**Pn**	**18 28 07.3**	**+0.5**
LL65	**Arash bomas**	**10.18**	**34**	*i*	P	**Pn**	**18 28 08.0**	**+0.6**
LL22	**Malambo SS**	**10.19**	**35**	*i*	P	**Pn**	**18 28 07.7**	**+0.4**
PR32	**Iloiriento PS**	**10.25**	**39**	*i*	P	**Pn**	**18 28 08.5**	**+0.2**
PR33	**Engutoto Boma**	**10.25**	**39**	*i*	P	**Pn**	**18 28 08.6**	**+0.4**
LN34	**Lwondulwo boma**	**10.27**	**38**	*i*	P	**Pn**	**18 28 09.0**	**+0.6**
LN26	**Engaresero PS**	**10.28**	**37**	⇑*i*	P	**Pn**	**18 28 09.1**	**+0.6**
MBAR	**Mbarara**	**10.33**	**5**	*i*	P	**Pn**	**18 28 09.8**	**+0.4**
MBAR				*i*	S	**Sn**	**18 30 01.4**	**-4.2**
MBAR	**Mbarara**	**10.33**	**5**	*d*	P	**Pn**	**18 28 09.3**	**0.0**
MBAR	**Mbarara**	**10.33**	**5**	Pn		**Pn**	**18 28 09.3**	**0.0**
MBAR	**Mbarara**	**10.33**	**5**	*i*	P	**Pn**	**18 28 09.8**	**+0.4**
MBAR				*i*	S	**Sn**	**18 30 01.4**	**-4.2**
MBAR	**Mbarara**	**10.33**	**5**	*i*	P	**Pn**	**18 28 09.9**	**+0.5**
LN35	**Magadini PS**	**10.34**	**37**	*i*	P	**Pn**	**18 28 10.3**	**+1.0**
PR11	**Kitumbeine SS**	**10.36**	**39**	*i*	P	**Pn**	**18 28 09.8**	**+0.1**
LN25	**Lake Natron SS**	**10.37**	**36**	*i*	P	**Pn**	**18 28 10.6**	**+0.8**
LL23	**Sali PS**	**10.42**	**35**	*i*	P	**Pn**	**18 28 11.5**	**+1.0**
LL23				*i*	S	Sn	18 29 54.9	-13
LL23	comp=Z,1μm,1.1s			IAML			18 31 23.6	
LN15	**Lekule Girls S**	**10.45**	**38**	*i*	P	**Pn**	**18 28 12.0**	**+1.1**
LN46	**New Vision PS**	**10.46**	**41**	*i*	P	**Pn**	**18 28 11.8**	**+0.7**
LL24	**Masusu PS**	**10.52**	**35**	*i*	P	**Pn**	**18 28 12.4**	**+0.6**
LL21	**Loliondo SS**	**10.54**	**33**	*i*	P	**Pn**	**18 28 12.9**	**+0.6**
LN16	**Kitarini PS**	**10.62**	**39**	*i*	P	**Pn**	**18 28 13.1**	**-0.3**
LN14	**Matela PS**	**10.73**	**38**	*i*	P	**Pn**	**18 28 14.8**	**-0.1**
KEN4	**Ngurumani**	**11.05**	**35**	*i*	P	**Pn**	**18 28 20.1**	**+1.0**
KEN2	**Magadi Soda Va**	**11.07**	**36**	*i*	P	**Pn**	**18 28 20.2**	**+0.8**
TEBE	**Entebbe**	**11.27**	**14**	*i*	P	**Pn**	**18 28 22.0**	**-0.1**
KIBK	**Kibwezi** SNR=24	**11.87**	**44**	P		**Pn**	**18 28 29.6**	**-0.7**
KMBO	**Kilima Mbogo** comp=Z,8.9nm,0.3s,baz=208,slow=14,SNR=118	**12.28**	**38**	Pn		**Pn**	**18 28 34.8**	**-1.3**
KMBO	comp=Z,15nm,0.3s,baz=304,slow=24,SNR=3.4			Sn		**Sn**	**18 30 45.3**	**-8.1**
KMBO	comp=Z,7.5nm,0.3s,baz=98,slow=23,SNR=3.2			Lg	Lg		18 32 08.0	
KMBO	comp=Z,8μm,18.5s,baz=214,slow=38			LR	LR		18 33 31.6	
I35NA	**TSUMEB INFRASO1** baz=76,slow=37,SNR=1.4	**14.32**	**234**	Lg	Lg		18 33 11.0	
TSUM	**Tsumeb** comp=Z,8.2nm,0.3s,baz=42,slow=14,SNR=50	**14.32**	**234**	Pn		**Pn**	**18 29 01.3**	**-2.7**
TSUM	comp=Z,10.0nm,0.3s,baz=347,slow=14,SNR=3.8			Sn	Sn		18 31 32.0	-11
TSUM	comp=Z,14nm,0.3s,baz=122,slow=18,SNR=4.3			Lg	Lg		18 33 22.6	
TSUM	comp=Z,7μm,19.0s,baz=51,slow=38			LR	LR		18 34 46.9	
TSUM	**Tsumeb**	**14.32**	**234**	*i*	P	**Pn**	**18 29 01.8**	**-2.1**
TSUM				*i*	S	**Sn**	**18 31 44.6**	**+1.4**
TSUM	**Tsumeb**	**14.32**	**234**			**Pn**	**18 29 02.2**	**-1.7**
TSUM	**Tsumeb**	**14.32**	**234**	*i*	P	**Pn**	**18 29 01.8**	**-2.1**
TSUM				*i*	S	**Sn**	**18 31 44.6**	**+1.4**
TSUM	**Tsumeb**	**14.32**	**234**	*i*	P	**Pn**	**18 29 02.7**	**-1.2**
LBTB	**Lobatse** comp=Z,35nm,0.3s,baz=21,slow=13,SNR=242	**14.53**	**195**	Pn		**Pn**	**18 29 03.0**	**-3.8**
LBTB	comp=Z,41nm,0.3s,baz=287,slow=23,SNR=8.1			Sn	Sn		18 31 36.1	-12
LBTB				Lg	Lg		18 33 17.4	
LBTB	comp=Z,19nm,0.3s,baz=279,slow=22,SNR=1.4			LR	LR		18 34 57.0	
LBTB	**Lobatse** comp=Z,4μm,18.4s,baz=20,slow=38	**14.53**	**195**	*i*	P	**Pn**	**18 29 02.9**	**-3.8**
LBTB	**Lobatse**	**14.53**	**195**		Pn	**Pn**	**18 29 04.2**	**-2.5**
LBTB	**Lobatse**	**14.53**	**195**	*i*	P	**Pn**	**18 29 02.9**	**-3.8**
LBTB	**Lobatse**	**14.53**	**195**	*i*	P	**Pn**	**18 29 04.8**	**-1.8**
LODK	**Lodwar** SNR=22	**15.33**	**22**	P		**Pn**	**18 29 15.0**	**-2.5**
BOSA	**Boshof** comp=Z,2.3nm,0.3s,baz=20,slow=11,SNR=66	**18.07**	**193**	P		**Pn**	**18 29 48.2**	**-4.0**
BOSA	comp=Z,7.0nm,0.3s,baz=118,slow=14,SNR=2.1			Lg	Lg		18 35 08.3	
BOSA	comp=Z,3μm,18.1s,baz=19,slow=38			LR	LR		18 37 03.7	
BOSA	**Boshof**	**18.07**	**193**	*i*	P	**Pn**	**18 29 48.1**	**-4.0**
BOSA	**Boshof**	**18.07**	**193**	P		**Pn**	**18 29 48.2**	**-4.0**
BOSA	comp=Z,182nm,0.8s			pmax	pmax			
BOSA	**Boshof**	**18.07**	**193**			**Pn**	**18 29 48.2**	**-4.0**
BOSA	comp=Z,182nm,0.8s			IAmb	IAmb		18 30 04.7	
BOSA	**Boshof**	**18.07**	**193**	*i*	P	**Pn**	**18 29 48.1**	**-4.0**
BOSA	**Boshof**	**18.07**	**193**	*i*	P	**Pn**	**18 29 48.8**	**-3.4**
OPO	**Ambohidratompo** comp=Z,5.3nm,0.3s,baz=285,slow=12,SNR=34	**18.47**	**116**	P		**P**	**18 29 56.7**	**-0.4**
OPO	comp=Z,1.2nm,0.3s,baz=312,slow=17,SNR=1.2			S	Sn		18 33 11.0	-13
OPO	comp=Z,1μm,18.7s,baz=119,slow=38			LR	LR		18 37 19.4	
ABPO	**Ambohimpanom**	**18.67**	**117**	*i*	P	**P**	**18 29 53.4**	**-6.0**
ABPO				*i*	S	Sn	18 33 18.4	-10
ABPO	**Ambohimpanom**	**18.67**	**117**	P		**Pn**	**18 30 00.6**	**+0.9**
ABPO	comp=Z,270nm,1.4s			pmax	pmax			
ABPO	**Ambohimpanom**	**18.67**	**117**	P		**Pn**	**18 30 00.6**	**+0.9**
ABPO	comp=Z,270nm,1.4s			IAmb	IAmb		18 30 19.7	
ABPO	**Ambohimpanom**	**18.67**	**117**	*i*	P	**P**	**18 29 53.4**	**-6.0**
ABPO				*i*	S	Sn	18 33 18.4	-10
SBV	**Sambava** SNR=12	**19.86**	**99**	P		Pn	18 30 22.9	+9.0
FOMA	**Nahampoana Res** SNR=5.5	**21.48**	**133**	P		P	18 30 44.6	+15
FOMA	**Nahampoana Res**	**21.48**	**133**	P		**P**	**18 30 30.7**	**+1.0**
ANKE	**Ethiopia-Afar**	**22.70**	**26**	*e*	P	**P**	**18 30 44.1**	**+0.8**
SUR	**Sutherland** comp=Z,33nm,0.5s,baz=14,slow=11,SNR=79	**22.86**	**200**	P		**P**	**18 30 43.1**	**-1.5**
SUR	comp=Z,116nm,1.0s,baz=23,slow=16,SNR=3.4			S		**S**	**18 34 58.1**	**+3.3**
SUR	comp=Z,4μm,18.4s,baz=28,slow=37			LR	LR		18 39 40.8	
SUR	**Sutherland**	**22.86**	**200**	*i*	P	**P**	**18 30 40.9**	**-3.8**
SUR	**Sutherland**	**22.86**	**200**	P		**P**	**18 30 44.5**	**-0.1**
SUR	**Sutherland**	**22.86**	**200**	*i*	P	**P**	**18 30 40.9**	**-3.8**
ATD	**Arta Tunnel** comp=Z,7.0nm,0.8s,baz=241,slow=12,SNR=3.6	**25.85**	**31**	Lg	Lg		18 39 19.6	
ATD	comp=Z,3μm,19.7s,baz=197,slow=37			LR	LR		18 41 34.6	
SOCY	**Socotra**	**33.28**	**47**	P		**P**	**18 32 21.3**	**+2.3**
SOCY	comp=Z,33nm,1.1s			IAmb	IAmb		18 32 24.6	
ABTO	**Aybut** SNR=9.9	**36.50**	**40**	P		**P**	**18 32 48.9**	**+2.2**
ABTO	SNR=9.9			P		**P**	**18 32 48.9**	**+2.2**
TOA0	**Torodi Ar. Sit** SNR=9.3	**36.73**	**310**	P		**P**	**18 32 48.7**	**0.0**
TOA0	**Torodi Ar. Sit** comp=Z,41nm,1.1s	**36.73**	**310**	P		**P**	**18 32 48.7**	**0.0**
TOA0				IAmb	IAmb		18 33 00.6	
TORD	**Torodi Ar. Bea** comp=Z,4.5nm,0.4s,baz=122,slow=8.3,SNR=58	**36.73**	**310**	P		**P**	**18 32 48.1**	**-0.5**
TORD	comp=Z,1μm,22.0s,baz=125,slow=36			LR	LR		18 47 54.0	
TORD	**Torodi Ar. Bea**	**36.73**	**310**	P		**P**	**18 32 48.6**	**-0.1**
DMTO	**DMTO** SNR=5.3	**37.82**	**41**	P		**P**	**18 32 59.3**	**+1.5**
DMTO	SNR=5.3			P		**P**	**18 32 59.3**	**+1.5**
KIC	**Kosan Boka** comp=Z,36nm,0.9s	**38.41**	**295**	*e*	P	**P**	**18 33 02.2**	**-0.7**
SHAO	**Shalim**	**38.49**	**42**	P		**P**	**18 33 04.3**	**+0.8**
LIC	**Lamto** comp=Z,1.0nm,0.1s	**38.60**	**295**	*e*	P	**P**	**18 33 03.6**	**-0.9**
DBIC	**Dimbokro** comp=Z,4.6nm,0.7s,baz=109,slow=8.6,SNR=5.9	**38.65**	**295**	P		**P**	**18 33 04.2**	**-0.7**
DBIC	comp=Z,3μm,18.5s,baz=84,slow=36			LR	LR		18 49 01.2	
DBIC	**Dimbokro** comp=Z,10.0nm,0.9s	**38.65**	**295**	P		**P**	**18 33 04.2**	**-0.7**
DBIC				pmax	pmax			
TIC	**Toumodi**	**38.78**	**295**	*e*	P	**P**	**18 33 05.4**	**-0.7**
EIL	**Elat** comp=Z,4.9nm,0.8s,baz=28,slow=1.3,SNR=5.5	**40.70**	**7**	P		**P**	**18 33 20.2**	**-1.5**
TAM	**Tamanrasset** comp=Z,17nm,1.8s	**41.09**	**325**	P

YER Yerkesik 47.85 358 P **P** 18 34 21.4 +2.4
APE Apeiranthos 47.93 355⇓ *e*P **P** 18 34 18.8 -0.8
APE pmax pmax
comp=Z,34nm,0.7s
ITM Ithomi 48.44 352 P **P** 18 34 22.9 -0.6
ITM IAmb IAmb 18 34 26.1
comp=Z,27nm,1.0s
AGG Agios Georgios 50.20 352 P **P** 18 34 36.6 -0.4
AGG pmax pmax
comp=Z,40nm,1.9s
KEST Kesra 50.28 338 P **P** 18 34 37.0 -0.7
comp=Z,5.6nm,0.8s,baz=297,slow=2.7,SNR=7.2
VAE Valguarnera 50.28 344 P **P** 18 34 38.0 +0.3
comp=Z,6.9nm,0.7s,baz=140,slow=4.4,SNR=3.0
BR131 Keskin Array S 50.55 4 *de*P **P** 18 34 39.7 0.0
BRTR Keskin Array B 50.55 4 P **P** 18 34 39.9 +0.1
comp=Z,13nm,0.8s,baz=178,slow=8.5,SNR=26
BRTR LR LR 18 59 04.6
comp=Z,153nm,18.1s,baz=183,slow=40
BRTR Keskin Array B 50.55 4 *i* P **P** 18 34 40.2 +0.5
BRTR pmax pmax
comp=Z,13nm,0.8s
BRTR Keskin Array B 50.55 4 P **P** 18 34 39.6 -0.2
TRD Trivandrum 50.79 70 *e*P **P** 18 34 42.8 +1.0
TRD IAmb IAmb 18 34 44.5
comp=Z,68nm,0.7s
TRD *i* x x 18 34 58.4
LIT Litokhoron 51.24 353 P **P** 18 34 44.9 +0.1
LIT pmax pmax
comp=Z,36nm,1.5s
LIT Litokhoron 51.24 353 P **P** 18 34 44.9 +0.1
NAX Nakhchivan 51.98 16 P **P** 18 34 51.8 +1.4
OHR Ohrid 52.46 351 *i* P **P** 18 34 55.9 +1.9
LKRN Lenkeran, Azer 52.50 19 P **P** 18 34 55.1 +0.9
STIP Stip 52.85 353 *i* P **P** 18 34 57.4 +0.7
SKO Skopje 53.22 352 *i* P **P** 18 34 59.8 +0.4
GANJ Ganja 53.58 16 P **P** 18 35 03.4 +1.2
PALK Pallekele 53.84 73⇑ *e*P **P** 18 35 05.5 +0.9
PALK pmax pmax
comp=Z,39nm,1.1s
MNGR Mingechevir, A 53.91 16 P **P** 18 35 05.7 +1.2
PDG Podgorica 53.99 350 ⇑P **P** 18 35 06.2 +1.1
DDFL Dedoflistskaro 54.28 15 P **P** 18 35 11.0 +3.7
ZKTA Zakatala 54.59 15 P **P** 18 35 09.9 +0.4
HRA Herat 54.63 33 P **P** 18 35 11.7 +1.6
ICOR Ion Corvin 54.84 358 ⇑P **P** 18 35 11.8 +0.6
COPA Copaceanca 54.98 356 ⇑P **P** 18 35 12.6 +0.3
SGRR Singureni 55.02 357 ⇑P **P** 18 35 13.1 +0.5
ZEI Tsey 55.03 13 *e*P **P** 18 35 13.3 +0.4
ZEI pmax pmax
comp=Z,14nm,1.1s
SOC Sochi 55.03 9 *e*P **P** 18 35 08.0 -4.6
SOC *e* 18 37 14.9
SOC *e*PPP PPP 18 38 25.1
SOC *e*S **S** 18 42 48.5 -6.7
SOC pmax pmax
comp=Z,55nm,0.8s
SOC MLR MLR
comp=Z,269nm,14.0s
TIRR Tirgusor 55.16 359 ⇑P **P** 18 35 14.3 +0.8
HUMR Humele 55.39 356 ⇑P **P** 18 35 15.8 +0.6
GEYT Alibeck 55.41 27 P **P** 18 35 15.9 +0.4
comp=Z,14nm,0.8s,baz=204,slow=9.8,SNR=27
GEYT LR LR 19 00 23.6
comp=Z,1μm,20.7s,baz=210,slow=38
GEYT Alibeck 55.41 27 P **P** 18 35 15.9 +0.4
HARR Harsova 55.41 358 ⇓P **P** 18 35 15.9 +0.6
SULR 55.46 357 ⇓P **P** 18 35 16.4 +0.8
DIVS Divibare 55.51 351 P **P** 18 35 17.6 +1.4
DIVS IAmb IAmb 18 35 19.6
comp=Z,66nm,1.3s
TPGR Topolog 55.56 359 ⇓P **P** 18 35 16.8 +0.4
SRE Strehaia 55.67 354 ⇑P **P** 18 35 18.3 +1.1
KBZ Khabaz 55.72 12⇓ *e*P **P** 18 35 18.5 +0.9
LATE Laterza 55.79 344 P **P** 18 35 18.7 +0.6
HYB Hyderabad 55.84 60 *i* P **P** 18 35 18.0 -1.0
ISR Istrita 55.89 357 ⇑P **P** 18 35 19.7 +0.9
CFR Carcaliu 55.89 359 ⇑P **P** 18 35 19.1 +0.4
KIV Kislovodsk 55.90 11 *e*P **P** 18 35 19.6 +0.6
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,1μm,17.0s
MDVR Moldovita 55.95 353 ⇑P **P** 18 35 19.9 +0.6
HERR Herculane 55.97 354 ⇑P **P** 18 35 19.8 +0.4
ARR Arges 56.25 356 ⇑P **P** 18 35 21.8 +0.4
MLR Muntele Rosu 56.29 357 P **P** 18 35 21.5 -0.3
comp=Z,18nm,0.8s,baz=191,slow=9.7
MLR Muntele Rosu 56.29 357 ⇓P **P** 18 35 22.4 +0.6
MLR Muntele Rosu 56.29 357 P **P** 18 35 22.4 +0.6
MLR pmax pmax
comp=Z,22nm,0.8s
MLR Muntele Rosu 56.29 357 P **P** 18 35 22.4 +0.6
MLR IAmb IAmb 18 35 24.5
comp=Z,22nm,0.8s
VOIR 56.29 356 ⇑P **P** 18 35 21.9 +0.2
LOT Lotru 56.40 355 ⇑P **P** 18 35 22.5 +0.9
GZR Gura Zlata 56.44 354 ⇑P **P** 18 35 23.4 +0.6
PLOR Plostina 56.61 357 ⇑P **P** 18 35 24.3 +0.3
VRI Vrincioaia 56.62 357 ⇑P **P** 18 35 24.4 +0.3
BZS Buzias 56.78 353 ⇓P **P** 18 35 25.8 +0.6
DOPR Dopca 56.80 356 ⇑P **P** 18 35 25.0 -0.3
OZUR 56.90 357 ⇑P **P** 18 35 25.8 -0.3
GOF Gofitskoye 57.03 11⇑ *e*P P 18 35 21.4 -5.5
VASR Vaslui 57.36 358 ⇑P **P** 18 35 29.8 +0.6
SIRR Siria 57.42 353 ⇑P **P** 18 35 30.5 +0.8
MILM Milestii Mici 57.62 359 ⇓P **P** 18 35 31.2 +0.2
CJR Cluj-Napoca 57.67 355 ⇑P **P** 18 35 32.0 +0.5
BHPL Bhopal 57.71 54 *e*P **P** 18 35 32.5 +0.3
BHPL *i* x x 18 35 48.2
BIZ Bicaz 57.72 357 ⇓P **P** 18 35 32.1 +0.3
IAS Iasi 57.92 358 ⇓P **P** 18 35 33.9 +0.8
ARCR ARCALIA 57.98 356 ⇓P **P** 18 35 33.8 +0.3
NGP Nagpur 57.99 57 *e*P **P** 18 35 35.4 +1.2
NGP IAmb IAmb 18 35 36.9
comp=Z,11nm,0.9s
PRAR RASCA 58.14 357 ⇑P **P** 18 35 34.8 +0.1
SYO Syowa Base 58.35 176⇑ *i*P **P** 18 35 35.2 -0.7
BURAR Bucovina Array 58.45 356 ⇑P **P** 18 35 37.8 +0.8
BURAR Bucovina Array 58.45 356 P **P** 18 35 38.4 +1.4
BUR08 Bucovina Ar. S 58.48 356 P **P** 18 35 38.0 +0.8
OBKA Obir 58.81 348 *i* P **P** 18 35 40.1 +0.7
comp=Z,23nm,1.5s,SNR=6.4
SOKA Soboth 58.87 348 *i* P **P** 18 35 40.1 +0.2
comp=Z,31nm,1.3s,SNR=24
PRED Cave del Predi 58.95 347 P **P** 18 35 41.3 +0.8
PRED IAmb IAmb 18 35 43.6
comp=Z,48nm,1.2s
CIMO Cimolais 59.09 346 P **P** 18 35 41.1 -0.3
CIMO IAmb IAmb 18 35 44.2
comp=Z,47nm,1.4s
MYKA Terra Mystica 59.12 347 *i* P **P** 18 35 42.7 +1.1
comp=Z,30nm,1.6s,SNR=6.9
ZOU Zoufplan 59.20 347 P **P** 18 35 43.5 +1.2
ZOU IAmb IAmb 18 35 45.5
comp=Z,55nm,1.2s
PSZ Piszkesteto 59.26 352 ⇑P **P** 18 35 43.0 +0.4
PSZ Piszkesteto 59.26 352 P **P** 18 35 42.3 -0.3
PSZ pmax pmax
comp=Z,25nm,0.9s
PSZ Piszkesteto 59.26 352 P **P** 18 35 42.3 -0.3
PSZ IAmb IAmb 18 35 45.0
comp=Z,24nm,0.9s
ESDC Sonseca Array 59.31 330 LR LR 19 03 19.3
comp=Z,838nm,19.6s,baz=355,slow=38
ARSA Arzberg 59.32 349 *i* P **P** 18 35 43.5 +0.6
comp=Z,13nm,1.0s,SNR=9.5
SRO2 Moca 59.32 351 *e*P **P** 18 35 42.3 -0.6
SRO2 pmax pmax
comp=Z,18nm,0.8s
SRO2 Moca 59.32 351 *e*P **P** 18 35 42.3 -0.6
SRO Srobarova 59.39 351 *e*P **P** 18 35 44.2 +0.9
SRO pmax pmax
comp=Z,64nm,1.9s
SRO Srobarova 59.39 351 *e*P **P** 18 35 44.2 +0.9
ABTA Abfaltersbach 59.48 346 *i* P **P** 18 35 44.9 +0.8
comp=Z,23nm,1.4s,SNR=11
BNI Bardonecchia 59.52 341 P **P** 18 35 45.5 +0.9
BNI pmax pmax
comp=Z,21nm,1.2s
BNI Bardonecchia 59.52 341 P **P** 18 35 45.5 +0.9
KBA Koelnbreinsper 59.60 347 *i* P **P** 18 35 45.8 +0.7
comp=Z,20nm,1.3s,SNR=12

UZH Uzhgorod 59.69 354 *d i*P **P** 18 35 46.1 +0.7
UZH *e* 18 35 50.9
KECS Kecovo 59.74 353 *e*P **P** 18 35 47.6 +1.8
KECS pmax pmax
comp=Z,9.0nm,1.1s
KECS Kecovo 59.74 353 *e*P **P** 18 35 47.6 +1.8
CONA Conrad Observa 59.91 349 *i* P **P** 18 35 47.5 +0.4
comp=Z,21nm,1.1s,SNR=9.8
FUORN Ofenpass-Fuorn 59.92 345 P **P** 18 35 44.2 -3.1
FUORN IAmb IAmb 18 35 50.2
comp=Z,19nm,1.1s
VYHS Vyhne 59.97 352 *e*P **P** 18 35 47.3 -0.1
VYHS pmax pmax
comp=Z,21nm,1.0s
VYHS Vyhne 59.97 352 *e*P **P** 18 35 47.3 -0.1
KOLS Kolonicke sedl 59.99 354 *e*P **P** 18 35 47.2 -0.3
KOLS pmax pmax
comp=Z,20nm,1.5s
KOLS Kolonicke sedl 59.99 354 *e*P **P** 18 35 47.2 -0.3
CRVS Cervenica-Dubn 60.05 354 *e*P **P** 18 35 48.1 +0.2
CRVS pmax pmax
comp=Z,62nm,1.3s
CRVS Cervenica-Dubn 60.05 354 *e*P **P** 18 35 48.1 +0.2
MODS Modra-Piesok 60.09 350 *e*P **P** 18 35 47.3 -1.0
MODS pmax pmax
comp=Z,42nm,1.6s
MODS Modra-Piesok 60.09 350 *e*P **P** 18 35 47.3 -1.0
MOA Molln 60.14 348 *i* P **P** 18 35 49.0 +0.4
comp=Z,16nm,0.6s,SNR=19
DAVOX Davos/Dischmat 60.17 344 P **P** 18 35 49.3 +0.3
comp=Z,18nm,0.7s,baz=119,slow=13,SNR=19
FETA Feichten 60.17 345 *i* P **P** 18 35 48.7 -0.3
comp=Z,24nm,1.1s,SNR=13
WTTA Wattenberg 60.17 346 *i* P **P** 18 35 49.4 +0.4
comp=Z,45nm,1.2s,SNR=16
SQTA Sankt Quirin 60.23 346 *i* P **P** 18 35 49.6 +0.2
comp=Z,21nm,0.7s,SNR=12
WATA Walderalm 60.25 346 *i* P **P** 18 35 49.8 +0.2
comp=Z,38nm,1.2s,SNR=14
MOTA Moosalm 60.38 346 *i* P **P** 18 35 50.2 -0.2
comp=Z,35nm,1.3s,SNR=13
JAVC Velka Javorina 60.50 351 *e*P **P** 18 35 52.0 +0.9
SENIN Lac Senin/Sane 60.51 342 P **P** 18 35 51.1 -0.3
LANS Liptovska Anna 60.53 352 *e*P **P** 18 35 52.0 +0.7
LANS pmax pmax
comp=Z,16nm,1.1s
LANS Liptovska Anna 60.53 352 *e*P **P** 18 35 52.0 +0.7
RETA Reutte 60.59 345 *i* P **P** 18 35 51.4 -0.3
comp=Z,56nm,1.9s,SNR=12
DAVA Damuels 60.63 345 *i* P **P** 18 35 52.3 +0.2
comp=Z,76nm,1.0s,SNR=20
KWP Kalwaria Pacla 60.64 355 *e*P **P** 18 35 52.4 +0.4
KWP Kalwaria Pacla 60.64 355 P **P** 18 35 52.7 +0.7
KWP pmax pmax
comp=Z,44nm,0.8s
KWP Kalwaria Pacla 60.64 355 P **P** 18 35 52.7 +0.7
MAW Mawson 60.69 166 P **P** 18 35 52.7 +0.7
comp=Z,14nm,0.5s,baz=319,slow=6.7,SNR=102
MAW LR LR 18 57 50.1
comp=Z,894nm,21.9s,baz=344,slow=32
MAW Mawson 60.69 166 P **P** 18 35 53.6 +1.6
MAW pmax pmax
comp=Z,15nm,1.4s
MAW Mawson 60.69 166 P **P** 18 35 53.5 +1.6
NIE Niedzica 60.69 353 *e*P **P** 18 35 52.8 +0.5
LVV L'vov 60.72 356 *e*P **P** 18 35 52.1 -0.4
LVV *e* 18 44 03.7
NVL N'lazarevskaya 60.80 187 *e*P **P** 18 35 52.0 -0.8
NVL *e*S **S** 18 44 09.7 -0.5
NVL *e*SS **SS** 18 48 14.9 +6.0
NVL pmax pmax
comp=Z,98nm,1.4s
KRUC Moravsky 60.91 350 *e*P **P** 18 35 52.3 -1.5
KRUC *e* 18 36 33.1
VRAC Vranov 61.11 350 P **P** 18 35 54.7 -0.5
comp=Z,9.8nm,1.0s,baz=162,slow=5.8,SNR=12
VRAC Vranov 61.11 350 ⇑P **P** 18 35 54.9 -0.3
VRAC Vranov 61.11 350 *e*P **P** 18 35 54.8 -0.3
VRAC *e* 18 36 35.6
GEC2 GERESS Array S 61.21 348 P **P** 18 35 57.1 +1.2
GERES GERESS Array B 61.21 348 P **P** 18 35 55.2 -0.7
comp=Z,6.1nm,0.7s,baz=169,slow=7.7,SNR=62
GERES GERESS Array B 61.21 348 P **P** 18 35 56.4 +0.4
GERES GERESS Array B 61.21 348 P **P** 18 35 56.4 +0.4
TREC Trest 61.29 349 AMS AMS 19 07 10.0
comp=Z,1μm,29.8s
OKC Ostrava-Krasne 61.38 351 *e*P **P** 18 35 56.3 -0.7
OKC MLR MLR
comp=Z,900nm,20.9s
OKC Ostrava-Krasne 61.38 351 *e*P **P** 18 35 56.3 -0.7
OKC AMS AMS 18 58 30.0
comp=Z,900nm,20.9s
AKASG Malin Array Be 61.40 360 P **P** 18 35 56.5 -0.5
comp=Z,9.0nm,0.6s,baz=182,slow=6.1,SNR=38
AKASG Malin Array Be 61.40 360 P **P** 18 35 57.0 -0.1
AKBB Malin Array Si 61.40 360 P **P** 18 35 57.2 +0.1
AKBB pmax pmax
comp=Z,14nm,0.8s
AKBB Malin Array Si 61.40 360 P **P** 18 35 57.1 +0.1
AKBB IAmb IAmb 18 35 58.2
comp=Z,14nm,0.8s
MORC Moravsky Berou 61.42 351 ⇑P **P** 18 35 57.4 +0.1
MORC Moravsky Berou 61.42 351 *e*P **P** 18 35 57.4 +0.1
MORC Moravsky Berou 61.42 351 P **P** 18 35 57.0 -0.3
MORC pmax pmax
comp=Z,40nm,1.3s
MORC Moravsky Berou 61.42 351 P **P** 18 35 57.0 -0.3
MORC IAmb IAmb 18 35 59.5
comp=Z,40nm,1.3s
KHC Kasperske Hory 61.50 348 *e*P **P** 18 35 56.7 -1.2
KHC MLR MLR
comp=Z,1μm,18.5s
KHC Kasperske Hory 61.50 348 *e*P **P** 18 35 56.7 -1.2
KHC *ex* x 18 36 18.5
KHC *ex* x 18 37 19.6
KHC AMS AMS 19 05 20.0
comp=Z,1μm,18.5s
CHGR Chuyangaron 61.53 34 P **P** 18 35 57.3 -1.1
OJC Ojcow 61.54 353 *e*P **P** 18 35 57.5 -0.5
OJC Ojcow 61.54 353 P **P** 18 35 56.8 -1.2
OJC pmax pmax
comp=Z,19nm,1.0s
OJC Ojcow 61.54 353 P **P** 18 35 56.8 -1.2
OJC IAmb IAmb 18 36 00.2
comp=Z,19nm,1.0s
SMLA Simla 61.78 46 *e*P **P** 18 36 00.6 +0.5
SMLA IAmb IAmb 18 36 03.0
comp=Z,27nm,0.7s
KRLC Kraliky 61.83 351 *e*P **P** 18 36 00.1 +0.1
KRLC MLR MLR
comp=Z,900nm,25.1s
KRLC Kraliky 61.83 351 *e*P **P** 18 36 00.1 +0.1
KRLC AMS AMS 19 02 00.0
comp=Z,900nm,25.1s
DHRM DHARAMSHALA 61.83 44 *e*P **P** 18 36 00.9 +0.3
DHRM IAmb IAmb 18 36 03.5
comp=Z,15nm,0.7s
COI Coimbra 61.98 328 P **P** 18 36 01.1 -0.1
COI pmax pmax
comp=Z,51nm,0.9s
COI Coimbra 61.98 328 P **P** 18 36 01.1 -0.1
PRU Pruhonice 62.13 349 *e*P **P** 18 36 01.1 -0.9
PRU MLR MLR
comp=Z,1μm,19.8s
PRU Pruhonice 62.13 349 *e*P **P** 18 36 01.1 -0.9
PRU AMS AMS 18 59 30.0
comp=Z,1μm,19.8s
DPC Dobruska-Polom 62.17 350 *e*P **P** 18 36 01.7 -0.6
DPC *e* 18 36 42.0
DPC MLR MLR
comp=Z,1μm,19.5s
DPC Dobruska-Polom 62.17 350 *e*P **P** 18 36 01.7 -0.6
DPC *e*PCP **PcP** 18 36 42.0 -0.4
DPC AMS AMS 18 54 50.0
comp=Z,1μm,19.5s
VORD Divnogorie 62.22 7 *e*P **P** 18 36 02.7 +0.1
VORD pmax pmax
comp=Z,10.0nm,0.7s
ECH Echery 62.23 343 P **P** 18 36 01.9 -0.8
ECH pmax pmax
comp=Z,21nm,1.0s
ECH Echery 62.23 343 P **P** 18 36 01.9 -0.8
ECH IAmb IAmb 18 36 04.5
comp=Z,21nm,1.0s

PRA Prague 62.23 349 AMS AMS 19 03 20.0
comp=Z,700nm,20.5s
UPC Upice 62.37 350 *e*P **P** 18 36 03.4 -0.2
UPC MLR MLR
comp=Z,1μm,23.1s
UPC Upice 62.37 350 *e*P **P** 18 36 03.4 -0.2
UPC AMS AMS 18 59 40.0
comp=Z,1μm,23.1s
OSTC Ostas 62.38 350 *e*P **P** 18 36 02.3 -1.4
OSTC *ex* x 18 36 14.6
OSTC AMS AMS 18 59 40.0
comp=Z,1μm,18.1s
GAR Garm 62.42 35 P **P** 18 36 05.2 +0.8
CHVC Chvalec 62.44 350 *e*P **P** 18 36 03.9 -0.2
CHVC AMS AMS 18 59 40.0
comp=Z,1μm,19.9s
VSR Storozhevoye 62.45 7 *e*P **P** 18 36 02.8 -1.3
VSR pmax pmax
comp=Z,10.0nm,1.2s
GRA1 Grafenberg Arr 62.54 347 P **P** 18 36 04.9 +0.1
GRF Grafenberg Arr 62.54 347 P **P** 18 36 04.9 +0.1
GRF pmax pmax
comp=Z,65nm,1.2s
GRF Grafenberg Arr 62.54 347 *e*P **P** 18 36 05.1 +0.2
comp=Z,91nm,1.4s,baz=159,slow=6.7
PVCC Panska Ves 62.65 349 AMS AMS 19 02 40.0
comp=Z,1μm,19.5s
KSP Ksiaz 62.65 350 *e*P **P** 18 36 04.8 -0.7
VRH Novokhopyorsk 62.77 8 *e*P **P** 18 36 06.0 -0.2
VRH pmax pmax
comp=Z,30nm,0.8s
NKC Novy Kostel 62.78 348 *e*P **P** 18 36 06.6 +0.2
NKC MLR MLR
comp=Z,1μm,20.0s
NKC Novy Kostel 62.78 348 *e*P **P** 18 36 06.6 +0.2
NKC AMS AMS 19 00 20.0
comp=Z,1μm,20.0s
BRG Berggiesshubel 63.09 349 *e*P **P** 18 36 09.2 +0.7
comp=Z,25nm,1.5s
comp=N,722nm,21.0s
comp=E,632nm,24.5s
comp=Z,1μm,16.9s
BRG Berggiesshubel 63.09 349 *e*P **P** 18 36 09.1 +0.7
BRG pmax pmax
comp=Z,25nm,1.5s
BRG MLR MLR
comp=N,722nm,21.0s
BRG MLR MLR
comp=E,632nm,24.5s
BRG MLR MLR
comp=Z,1μm,16.9s
TAS Tashkent 63.50 32 P **P** 18 36 12.6 +1.2
CLF Chambon-Foret 63.59 340 P **P** 18 36 12.0 +0.2
CLL Collm 63.69 348⇑ *i*P **P** 18 36 12.7 +0.3
comp=Z,18nm,1.3s
CLL *e*PP **PP** 18 38 33.0 +0.4
CLL Collm 63.69 348⇑ *i*P **P** 18 36 12.7 +0.3
CLL *e*S **S** 18 44 43.0 -3.9
CLL pmax pmax
comp=Z,18nm,1.3s
SNAA Sanae 63.84 191 P **P** 18 36 14.6 +1.4
SNAA Sanae 63.84 191 *de*P **P** 18 36 14.4 +1.2
SNAA pmax pmax
comp=Z,48nm,1.3s
SNAA Sanae 63.84 191 P **P** 18 36 14.5 +1.2
VNA1 Neumayer--Stat 64.16 193 P **P** 18 36 16.7 +1.5
VNA2 Neumayer--Watz 64.17 193 P **P** 18 36 16.5 +1.2
baz=31,slow=6.3
IUG luzhnay 64.47 32⇓ *i*P **P** 18 36 18.7 +0.8
comp=Z,106nm,2.5s,baz=32
IUG luzhnay 64.47 32 *d i*P **P** 18 36 18.7 +0.8
IUG pmax pmax
comp=Z,106nm,2.5s
PYUN Piuthan 64.48 52 *e*P **P** 18 36 18.0 -0.3
comp=Z,211nm,1.4s
BHOU Houvegnez 64.48 343 P **P** 18 36 17.6 0.0
DOU Dourbes 64.66 342 P **P** 18 36 18.1 -0.7
DOU pP **pP** 18 36 21.4 -0.1
DOU sP **sP** 18 36 22.9 +0.3
DOU PcP **PcP** 18 36 56.9 +4.4
MEM Membach 64.71 344 P **P** 18 36 18.6 -0.5
MEM PcP **PcP** 18 36 52.8 +0.1
BCLA Clavier 64.74 343 P **P** 18 36 19.8 +0.5
comp=Z,29nm,2.2s
BCLA PcP **PcP** 18 36 50.0 -2.9
BGES Gesves 64.77 343 P **P** 18 36 19.6 +0.1
BGES PcP **PcP** 18 36 53.5 +0.5
BMRD Maredsous 64.79 343 PcP **PcP** 18 36 55.3 +2.3
KOLN Koldanda 64.79 52 *e*P **P** 18 36 20.0 -0.4
comp=Z,50nm,0.9s
BOK Bokaro 64.81 57 *e*P **P** 18 36 20.6 +0.3
GKP Gorka Klasztor 64.86 352 *e*P **P** 18 36 21.7 +1.8
VNA3 Neumayer Olymp 64.91 193 P **P** 18 36 21.0 +0.8
SUW Suwalki 64.95 356 *e*P **P** 18 36 20.3 -0.3
BEBN Eben Emael 64.97 343 P **P** 18 36 21.8 +1.0
BRLS Borolday 65.00 31 *e*P **P** 18 36 20.6 -0.6
comp=Z,22nm,1.6s,baz=31
BRLS Borolday 65.00 31 *e*P **P** 18 36 20.6 -0.6
BRLS pmax pmax
comp=Z,22nm,1.6s
SNF Seneffe 65.12 342 P **P** 18 36 22.2 +0.5
DANN Dangsing 65.19 52 *e*P **P** 18 36 22.7 -0.4
comp=Z,89nm,0.7s
KK31 Karatay Array 65.40 32 P **P** 18 36 24.3 +0.5
KK31 pmax pmax
comp=Z,66nm,1.0s
KK31 Karatay Array 65.40 32 P **P** 18 36 24.3 +0.5
KKAR Karatay Array 65.40 32 P **P** 18 36 23.7 -0.1
KKAR pmax pmax
comp=Z,66nm,1.0s
KKAR Karatay Array 65.40 32 P **P** 18 36 23.7 -0.1
KKAR Karatay Array 65.40 32 P **P** 18 36 24.9 +1.2
ABKAR Akbulak array 65.57 21 P **P** 18 36 25.6 +0.9
ABKAR Akbulak array 65.57 21 P **P** 18 36 25.1 +0.4
NACGM Naroch 65.66 358 *e* P **P** 18 36 24.0 -1.1
NACGM *e*LR LR 18 55 40.0
DZA Taraz 65.68 32⇓ *i*P **P** 18 36 26.3 +0.7
comp=Z,21nm,0.8s,baz=32
DZA Taraz 65.68 32 *d i*P **P** 18 36 26.3 +0.7
DZA pmax pmax
comp=Z,21nm,0.8s
GKN Gorkha 65.71 53 *e*P **P** 18 36 25.9 -0.4
comp=Z,36nm,0.6s
DMN Daman 65.89 53 *e*P **P** 18 36 27.3 -0.3
comp=Z,48nm,1.1s
AKTO Aktyubinsk 65.92 19 P **P** 18 36 26.3 -0.7
comp=Z,6.7nm,0.8s,baz=209,slow=6.1,SNR=21
KSH Kashi 66.05 38 *e*P **P** 18 36 26.2 -2.0
KSH *ep*P sP 18 36 32.4 +0.4
KSH pmax pmax
comp=Z,540nm,5.7s
IDID Didziasalis 66.07 358 *e*P **P** 18 36 28.4 +0.7
OBN Obninsk 66.07 4 P **P** 18 36 27.4 -0.4
comp=Z,1.9nm,0.4s,baz=210,slow=9.8,SNR=4.8
OBN Obninsk 66.07 4⇑ *i*P **P** 18 36 27.7 0.0
OBN *e* 18 36 58.8
OBN *e* 18 38 52.3
OBN *e*S **S** 18 45 15.8 -0.2
OBN pmax pmax
comp=Z,37nm,1.7s
OBN MLR MLR
comp=Z,338nm,19.0s
OBN Obninsk 66.07 4 IAmb IAmb 18 36 41.4
comp=Z,29nm,1.2s
PKIN Phulchoki 66.11 53 *e*P **P** 18 36 28.2 -0.8
comp=Z,35nm,0.8s
KKN Kakani 66.11 53 *e*P **P** 18 36 28.6 -0.4
comp=Z,25nm,0.6s
PKI Pulchoki 66.11 53 *e*P **P** 18 36 28.4 -0.7
comp=Z,60nm,1.2s
IIGN Ignalina 66.12 358 *e*P **P** 18 36 28.4 +0.3
ISAL Salakas 66.35 358 *e*P **P** 18 36 28.4 -1.1
PABE Paberze 66.39 356 *e*P **P** 18 36 29.1 -0.7
AML Almayashu 66.43 34 P **P** 18 36 31.6 +0.6
SNR=15
IZAR Zarasai 66.52 358 *e*P **P** 18 36 28.5 -2.1
GUN Gumba 66.64 53 *e*P **P** 18 36 32.2 -0.3
comp=Z,87nm,1.0s
MOS Moscow 66.77 5 *e*P **P** 18 36 30.1 -2.1
MOS *e* 18 39 06.7
MOS pmax pmax
comp=Z,58nm,1.7s
EKS2 Erkin-Say 66.83 34 P **P** 18 36 33.9 +0.7
SNR=9.4
AAK Ala-Archa 67.21 34 P **P** 18 36 36.5 +0.9

SNR=7.4
AAK Ala-Archa 67.21 34 *i* P P 18 36 36.1 +0.6
SNR=9.8
AAK Ala-Archa 67.21 34*d* *i* P P 18 36 36.2 +0.6
AAK pmax pmax
comp=Z,71nm,1.7s
AAK MLR MLR
comp=Z,2μm,18.0s
ODAN Odare 67.37 55 *e*P P 18 36 37.7 +0.7
KBK Karagaybulak 67.48 35 P P 18 36 38.2 +0.9
SNR=10
CHMS Chumysh 67.59 34 P P 18 36 38.5 +0.7
SNR=11
USP Ospenovka 67.63 34 P P 18 36 38.6 +0.5
SNR=19
SGDS Sogindy 67.83 34⇓ *i* P P 18 36 39.6 +0.2
comp=Z,55nm,2.5s,baz=34
SGDS Sogindy 67.83 34*d* *i* P P 18 36 39.6 +0.2
SGDS pmax pmax
comp=Z,55nm,2.5s
TAPN Taplejung 67.84 54 *e*P P 18 36 41.0 +0.9
BOOM Boomskoye usch 67.92 35 P P 18 36 41.8 +1.7
BOOM pmax pmax
comp=Z,8.0nm,0.9s
BOOM Boomskoye usch 67.92 35 P P 18 36 41.8 +1.7
TKM2 Tokmak 2 68.01 35 P P 18 36 41.3 +0.6
SNR=23
BSFB Barra de Sao F 68.32 254 *e*P P 18 36 43.6 +0.7
KDJ Kajisay 68.41 36 P P 18 36 44.7 +1.5
KDJ pmax pmax
comp=Z,8.0nm,0.8s
KDJ Kajisay 68.41 36 P P 18 36 44.7 +1.5
GTK Tadong 68.54 55 *e*P P 18 36 44.5 +0.3
GTK IAmb IAmb 18 36 47.5
comp=Z,7.9nm,0.5s
BTLS Baital 68.58 32⇓ *i* P P 18 36 44.4 +0.5
comp=Z,55nm,2.1s,baz=32
BTLS Baital 68.58 32*d* *i* P P 18 36 44.4 +0.5
BTLS pmax pmax
comp=Z,55nm,2.1s
SJMB Sao Joao De Ma 68.65 254 *e*P P 18 36 45.6 +0.6
LHMI Lhok Sumawe 68.77 80 P P 18 36 45.9 +0.1
AAA Alma-Ata 68.94 35⇓ *i* P P 18 36 46.8 +0.5
comp=Z,13nm,1.0s,baz=35
AAA LR LR 19 07 43.1
comp=Z,330nm,19.1s,baz=35
AAA Alma-Ata 68.94 35*d* *i* P P 18 36 46.8 +0.5
AAA pmax pmax
comp=Z,13nm,1.0s
AAA MLR MLR
comp=Z,330nm,19.0s
MDOK Medeo 68.98 35 *e*P P 18 36 47.2 +0.4
baz=35
MDOK LR LR 19 08 12.8
comp=Z,306nm,18.4s,baz=35
MDOK Medeo 68.98 35 *e*P P 18 36 47.1 +0.4
MDOK MLR MLR
comp=Z,306nm,18.0s
KUU Kurty 69.05 34 *e*P P 18 36 46.9 0.0
comp=Z,126nm,2.5s,baz=34
KUU LR LR 19 08 08.7
comp=Z,317nm,16.2s,baz=34
KUU Kurty 69.05 34 *e*P P 18 36 46.9 0.0
KUU pmax pmax
comp=Z,126nm,2.5s
KUU MLR MLR
comp=Z,317nm,16.0s
NBMO Morrinhos-CE 69.55 271 *e*P P 18 36 52.0 +1.3
SATY Saty 69.69 36 *i* P P 18 36 51.8 +0.6
comp=Z,65nm,2.5s,baz=36
SATY Saty 69.69 36 *i* P P 18 36 51.7 +0.6
SATY pmax pmax
comp=Z,65nm,2.5s
KPKS Kokpek 70.10 36 *e*P P 18 36 54.0 +0.4
comp=Z,61nm,2.5s,baz=36
KPKS Kokpek 70.10 36 *e*P P 18 36 53.9 +0.4
KPKS pmax pmax
comp=Z,61nm,2.5s
SAIH SAIHA 70.29 61 *e*P P 18 36 55.9 +0.8
SAIH *i* x x 18 37 12.5
MNSI Mandailing Nat 70.36 85 P P 18 36 58.8 +3.2
comp=Z,24nm,1.0s
SHLS Shalkode 70.36 36⇓ *i* P P 18 36 57.5 +2.3
comp=Z,59nm,2.1s,baz=36
SHLS Shalkode 70.36 36*d* *i* P P 18 36 57.5 +2.3
SHLS pmax pmax
comp=Z,59nm,2.1s
SHL Shillong 70.51 58 *e*P P 18 36 56.2 -0.4
SHL IAmb IAmb 18 36 58.8
comp=Z,7.8nm,0.4s
TDK Taldyqorghan 70.90 34 *e*P P 18 36 58.5 +0.2
comp=Z,117nm,2.2s,baz=34
TDK LR LR 19 08 29.3
comp=Z,461nm,19.8s,baz=34
TDK Taldyqorghan 70.90 34 *e*P P 18 36 58.5 +0.2
TDK pmax pmax
comp=Z,117nm,2.2s
TDK MLR MLR
comp=Z,461nm,20.0s
KIRV Kirov 71.12 11 P P 18 36 58.4 -0.8
comp=Z,24nm,0.8s,baz=201,slow=2.9,SNR=12
KIRV Kirov 71.12 11 *de*P P 18 36 58.9 -0.3
ARU Arti 71.27 16 P P 18 36 59.7 -0.5
comp=Z,5.8nm,0.8s,baz=216,slow=2.1,SNR=23
ARU Arti 71.27 16*d* *i* P P 18 37 00.4 +0.1
ARU 18 37 17.9
ARU S S 18 46 20.9 +3.0
ARU pmax pmax
comp=Z,65nm,1.5s
ARU MLR MLR
comp=Z,761nm,20.0s
ARU Arti 71.27 16 P P 18 37 00.9 +0.7
BRZS Berezniki 71.33 28⇓ *i* P P 18 37 01.9 +1.0
comp=Z,58nm,1.8s,baz=28
BRZS Berezniki 71.33 28*d* *i* P P 18 37 01.8 +1.0
BRZS pmax pmax
comp=Z,58nm,1.8s
ESAR Angra dos Reis 71.35 249 *e*P P 18 37 02.8 +1.3
EKA Eskdalemuir Ar 71.58 341 P P 18 37 01.9 -0.2
comp=Z,8.0nm,0.8s,baz=143,slow=6.3,SNR=12
ESK Eskdalemuir 71.58 341 P P 18 37 03.0 +0.9
ESK pmax pmax
comp=Z,17nm,0.9s
ESK Eskdalemuir 71.58 341 P P 18 37 03.0 +0.9
ESK IAmb IAmb 18 37 04.0
comp=Z,16nm,0.8s
LSA Lhasa 71.58 54 P P 18 37 03.9 +0.6
BKNI Bangkinang 71.69 86 P P 18 37 05.2 +1.5
comp=Z,2μmcomp=Z,118nm,0.7s
SDSI Sungai Dareh 71.83 87 P P 18 37 06.0 +1.4
comp=Z,51nm,0.7s
JANB Januaria 71.99 258 *e*P P 18 37 06.4 +0.9
KLMR Klimovskoe 71.99 5 *e*P P 18 37 02.6 -1.9
KLMR pmax pmax
comp=Z,61nm,1.3s
KLMR Klimovskoe 71.99 5 *e*P P 18 37 02.6 -1.9
KLMR AMP 18 37 06.5
comp=Z,61nm,1.3s
HFS Hagfors 72.01 352 P P 18 37 04.3 -0.3
comp=Z,7.6nm,1.0s,baz=170,slow=8.8,SNR=2.8
SVE Sverdlovsk 72.21 17 *e*P P 18 37 06.0 +0.1
SVE pmax pmax
comp=Z,43nm,1.6s
FINES FINESS Array B 72.22 358 P P 18 37 04.8 -1.0
comp=Z,5.2nm,0.8s,baz=162,slow=4.9,SNR=11
FINES FINESS Array B 72.22 358 *i* P P 18 37 05.5 -0.3
FINES pmax pmax
comp=Z,5.0nm,0.8s
FINES FINESS Array B 72.22 358 P P 18 37 05.7 -0.1
KULM Kulim 72.37 81 P P 18 37 07.6 -0.2
KULM IAmb IAmb 18 37 10.1
comp=Z,26nm,1.0s
KULM Kulim 72.37 81 P P 18 37 08.0 +0.2
PARB Paraibuna 72.41 249 *e*P P 18 37 08.8 +0.8
KOHI KOHIMA 72.42 59 *e*P P 18 37 08.4 +0.3
KOHI IAmb IAmb 18 37 11.5
comp=Z,8.6nm,0.8s
BRVK Borovoye 72.54 24*de*P P 18 37 08.3 +0.3
BRVK pmax pmax
comp=Z,60nm,2.5s
BRVK MLR MLR
comp=Z,552nm,20.0s
BRVK Borovoye 72.54 24 P P 18 37 08.8 +0.8
BRVK IAmb IAmb 18 37 10.2
comp=Z,20nm,0.9s
IPM IAmb IAmb 18 37 11.1
comp=Z,39nm,0.9s
IPM Ipoh 72.56 82 P P 18 37 09.0 +0.1
BVAR Borovoye Array 72.56 24 P P 18 37 07.2 -0.9
comp=Z,10nm,0.8s,baz=237,slow=25,SNR=31
ZIRO ZIRO 72.89 57 *e*P P 18 37 11.0 +0.2
ZIRO IAmb IAmb 18 37 13.7
comp=Z,26nm,1.1s
SDBA SAO DESIDERIO 72.90 260 *e*P P 18 37 12.2 +1.2
MOKO MOKOCHONG 72.99 58 *e*P P 18 37 11.7 +0.3
NB2 NORSAR Subarra 73.25 351 P P 18 37 12.0 -0.1
comp=Z,1.9nm,0.7s,baz=164,slow=5.3
NOA NORSAR Array B 73.25 351 P P 18 37 10.7 -1.3
comp=Z,5.8nm,1.1s,baz=165,slow=5.3,SNR=9.4
ROSB Rosrio 73.64 270 *e*P P 18 37 16.0 +0.7
VAO Valinhos 73.67 249 *e*P P 18 37 16.9 +1.4
MAKZ Makanchi 73.98 34 P P 18 37 17.3 +0.7
MAKZ pmax pmax
comp=Z,39nm,0.9s
MAKZ Makanchi 73.98 34 P P 18 37 17.3 +0.7
MAKZ IAmb IAmb 18 37 19.0
comp=Z,39nm,0.8s
SPB Sao Paulo 74.04 248 *e*P P 18 37 19.7 +2.1
MK31 Makanchi Array 74.14 35 P P 18 37 18.5 +0.9
MK31 pmax pmax
comp=Z,25nm,0.9s
MK31 Makanchi Array 74.14 35 P P 18 37 18.5 +0.9
MK31 IAmb IAmb 18 37 19.9
comp=Z,25nm,0.8s
MKAR Makanchi Array 74.14 35 P P 18 37 18.1 +0.4
comp=Z,29nm,0.7s,baz=230,slow=5.6,SNR=151
MKAR LR LR 19 13 38.9
comp=Z,803nm,18.3s,baz=276,slow=39
MKAR Makanchi Array 74.14 35 P P 18 37 18.5 +0.9
CMAR Chiang Mai Arr 74.23 67 P P 18 37 18.7 0.0
comp=Z,5.9nm,0.9s,baz=260,slow=7.2,SNR=48
CMAR LR LR 19 05 58.6
comp=Z,182nm,21.6s,baz=292,slow=33
CMAR Chiang Mai Arr 74.23 67 *i* P P 18 37 19.0 +0.3
CMAR pmax pmax
comp=Z,6.0nm,0.8s
CMAR Chiang Mai Arr 74.23 67 P P 18 37 18.2 -0.4
CHTO Chiang Mai 74.34 67 P P 18 37 19.6 +0.3
CHTO pmax pmax
comp=Z,14nm,0.8s
CHTO Chiang Mai 74.34 67 P P 18 37 19.6 +0.3
KLSI 74.39 92 P P 18 37 21.6 +1.9
comp=Z,8.2nm,0.9s
LKP Lekhapani 74.46 58 *e*P P 18 37 20.1 +0.3
LKP IAmb IAmb 18 37 22.8
comp=Z,13nm,0.5s
KURBB Kurchatov Arra 74.53 30 P P 18 37 19.9 +0.2
comp=Z,6.0nm,0.6s,baz=236,slow=6.3,SNR=52
KURK Kurchatov 74.64 30 P P 18 37 19.9 -0.4
KURK Kurchatov 74.64 30 P P 18 37 21.1 +0.8
KURK IAmb IAmb 18 37 22.7
comp=Z,44nm,1.4s
MYKOM Kota Tinggi 74.74 85 P P 18 37 22.0 +0.2
BB19B Bebedouro 75.30 251 *e*P P 18 37 26.1 +1.1
IPMB Ipameri, GO 75.36 254 *e*P P 18 37 26.3 +0.9
BDFB Brasilia 75.46 257 P P 18 37 25.9 -0.2
comp=Z,5.2nm,0.9s,baz=95,slow=6.7,SNR=6.1
BDFB LR LR 19 05 07.9
comp=Z,550nm,22.0s,baz=88,slow=31
WMQ Urumqi 75.70 39 P P 18 37 28.2 +1.5
WMQ pP sP 18 37 32.8 +2.2
WMQ PcP PcP 18 37 43.6 +4.1
WMQ pmax pmax
comp=Z,29nm,1.3s
WMQ pmax pmax
comp=Z,320nm,4.9s
WMQ LR LR
comp=Z,350nm,17.7s
WMQ LR LR
comp=Z,540nm,22.1s
WMQ LR LR
comp=Z,410nm,25.9s
ZSN Zaisan 75.96 35⇓ *i* P P 18 37 29.1 +1.0
comp=Z,69nm,2.5s,baz=35
ZSN Zaisan 75.96 35*d* *i* P P 18 37 29.0 +1.0
ZSN pmax pmax
comp=Z,69nm,2.5s
FRTB Fartura 76.02 249 *e*P P 18 37 30.7 +1.7
SMTB Santa Maria do 76.03 264 *e*P P 18 37 30.3 +1.1
CBJI Citeko 76.17 94 P P 18 37 32.4 +2.4
comp=Z,106nm,0.8s
PEXB Peixe 76.23 260 *e*P P 18 37 31.9 +1.6
ITRB Iturama 77.17 252 *e*P P 18 37 37.1 +1.6
TMAB Tom-Au,PA,Br 77.63 270 *e*P P 18 37 39.9 +1.7
PCMB Pacaembu 77.77 250 *e*P P 18 37 41.5 +2.6
ITAB Concordia 77.92 244 *e*P P 18 37 41.6 +2.0
PTGB Pitanga 78.14 247 *e*P P 18 37 43.0 +2.0
DGZ Jazzator, Alta 78.62 34*d* *i* P P 18 37 44.0 +0.9
DGZ pmax pmax
comp=Z,8.0nm,0.8s
PRPB Parauapebas 78.64 266 *e*P P 18 37 45.1 +1.2
PLTB Pedras Altas 78.72 240 *e*P P 18 37 46.3 +2.3
CPSB Cacapava Do Su 78.72 241 *e*P P 18 37 46.3 +2.3
TRCB Terra Rica 78.89 249 *e*P P 18 37 46.9 +1.8
ARAG Araguaiana, MT 79.08 256 *e*P P 18 37 48.2 +2.0
QSPA South Pole Qui 79.15 180 LR LR 19 10 41.2
comp=Z,333nm,21.8s,baz=260,slow=34
QSPA South Pole Qui 79.15 180 P P 18 37 46.6 +0.8
QSPA IAmb IAmb 18 37 48.0
comp=Z,41nm,1.2s
UGM Wanagama 79.52 96 P P 18 37 48.1 -0.6
KMI Kunming 79.58 62⇑ *e*P P 18 37 50.0 +1.0
KMI pmax pmax
comp=Z,9.0nm,0.5s
KMI pmax pmax
comp=Z,150nm,5.2s
KMI LR LR
comp=Z,240nm,16.5s
KMI LR LR
comp=Z,260nm,13.2s
KMI LR LR
comp=Z,300nm,23.6s
ZAA0 Zalesovo Array 79.62 30 P P 18 37 48.7 +0.4
ZALV Zalesovo Beam 79.62 30 P P 18 37 47.6 -0.6
comp=Z,8.6nm,0.7s,baz=251,slow=5.0,SNR=42
ZALV PP PP 18 40 50.1 +0.9
comp=Z,3.6nm,0.7s,baz=241,slow=8.8,SNR=6.0
ZALV Zalesovo Beam 79.62 30 *i* P P 18 37 48.0 -0.3
ZALV pmax pmax
comp=Z,9.0nm,0.7s
ZALV Zalesovo Beam 79.62 30 P P 18 37 48.4 +0.1
ARCES ARCESS Array B 80.35 358 P P 18 37 51.7 -0.2
comp=Z,6.0nm,0.7s,baz=170,slow=4.4,SNR=12
ARD1 ARCESS Array S 80.36 358 P P 18 37 52.5 +0.5
ARD1 IAmb IAmb 18 38 04.3
comp=Z,41nm,1.4s
PWJI Pagerwojo 80.75 96 P P 18 37 56.1 +0.8
comp=Z,32nm,0.7s
GIRL Giralia 80.82 111 P P 18 37 54.6 -0.9
KSM Kuching 81.00 87 P P 18 37 56.7 0.0
KSM IAmb IAmb 18 38 14.4
comp=Z,40nm,1.2s
MORW Morawa 81.55 118 P P 18 37 59.5 +0.2
MORW IAmb IAmb 18 38 01.0
comp=Z,24nm,0.8s
PMSA Palmer Station 81.80 206 *e*P P 18 38 02.9 +3.1
MCPB Macapa, AP 81.89 271 *e*P P 18 38 02.3 +0.9
GTA Gaotai 81.95 47 P P 18 38 02.0 +0.7
GTA pmax pmax
comp=Z,11nm,1.7s
GTA pmax pmax
comp=Z,160nm,8.4s
GTA LR LR
comp=Z,180nm,17.1s
GTA LR LR
comp=Z,240nm,18.7s
GTA LR LR
comp=Z,190nm,19.9s
NWAO Narrogin (SRO) 82.04 122 P P 18 38 02.3 +0.5
NWAO pmax pmax
comp=Z,14nm,0.8s
NWAO Narrogin (SRO) 82.04 122 P P 18 38 02.3 +0.5
CD2 Chengdu 82.18 57 *e*P P 18 38 03.5 +0.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CPUP Villa Florida 82.64 245 P P 18 38 03.5 -1.5
comp=Z,2.6nm,1.0s,baz=49,slow=6.7,SNR=2.5
CPUP LR LR 19 10 36.6
comp=Z,605nm,20.0s,baz=65,slow=33
CPUP Villa Florida 82.64 245 *e*P P 18 38 06.1 +1.1
JAGI Jajag, Banyuwa 82.96 97 P P 18 38 08.3 +1.3
comp=Z,61nm,0.8s
JAGI Jajag, Banyuwa 82.96 97 P P 18 38 06.2 -0.7
SBUM Sibu 83.07 86 P P 18 38 07.5 0.0
SBUM IAmb IAmb 18 38 10.0
comp=Z,16nm,0.9s
SBUM Sibu 83.07 86 P P 18 38 09.0 +1.5
GYA Guiyang 83.35 62 ⇑P P 18 38 09.9 +1.0
GYA pmax pmax
comp=Z,14nm,0.8s
CLDB Colider 83.68 260 *e*P P 18 38 11.6 +1.0
MALB Monte Alegre 83.78 269 *e*P P 18 38 12.3 +1.1
LZH Lanzhou 83.84 52 *e*P P 18 38 12.5 +1.3
LZH pP PcP 18 38 18.4 +3.1
LZH sP sP 18 38 22.2 +7.2
LZH pmax pmax
comp=Z,15nm,1.1s
LZH pmax pmax
comp=Z,53nm,4.3s
LZH LR LR
comp=Z,250nm,13.0s
LZH LR LR
comp=Z,350nm,16.3s
LZH LR LR
comp=Z,290nm,15.2s
NPGB Novo Progresso 83.92 264 *e*P P 18 38 12.6 +0.7
QIZ Qiongzhong 84.33 69 P P 18 38 13.3 -0.6
QIZ S S 18 48 40.4 -0.1
QIZ LR LR
comp=Z,320nm,20.1s
QIZ LR LR
comp=Z,330nm,20.6s
QIZ LR LR
comp=Z,370nm,30.4s
TRQA Tornquist 84.70 232 *e*P P 18 38 17.7 +2.2
ITTB Itaituba 84.77 267 *e*P P 18 38 16.6 +0.4
TWSI Taliwang, Sumb 85.57 98 P P 18 38 19.9 -0.3
comp=Z,763nmcomp=Z,93nm,0.8s
PTLB Pontes e Lacer 86.09 255 *e*P P 18 38 24.4 +1.7
PSA00 Pilbara Seismi 86.12 111 P P 18 38 22.7 -0.2
PSA00 IAmb IAmb 18 38 24.0
comp=Z,31nm,0.9s
PSA00 Pilbara Seismi 86.12 111 P P 18 38 22.6 -0.2
PSA00 IAmb IAmb 18 38 24.9
comp=Z,27nm,0.9s
XAN Xi'an 87.24 55 P P 18 38 28.3 +0.2
XAN pP sP 18 38 36.8 +4.9
XAN pmax pmax
comp=Z,9.0nm,0.9s
VILB Vilhena 87.55 257 *e*P P 18 38 31.9 +2.0
VNDA Vanda 87.64 171 P P 18 38 28.6 -0.6
comp=Z,1.9nm,0.8s,baz=271,slow=5.2,SNR=17
VNDA LR LR 19 14 26.7
comp=Z,454nm,21.9s,baz=235,slow=33
VNDA Vanda 87.64 171 P P 18 38 29.5 +0.3
VNDA pmax pmax
comp=Z,3.0nm,0.9s
VNDA Vanda 87.64 171 P P 18 38 29.4 +0.3
TLY Talaya 88.74 37⇑ *e*P P 18 38 34.5 -0.3
TLY pmax pmax
comp=Z,4.0nm,1.1s
SONM Songino Array 89.23 41 P P 18 38 37.5 +0.2
comp=Z,2.0nm,0.7s,baz=242,slow=4.8,SNR=14
SONM PP PP 18 42 04.7 -3.2
comp=Z,1.1nm,0.9s,baz=255,slow=8.4,SNR=3.6
SONM Songino Array 89.23 41 P P 18 38 37.3 0.0
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM Songino Array 89.23 41 P P 18 38 37.3 0.0
SPITS Spitsbergen Ar 89.30 357 P P 18 38 35.9 -1.0
comp=Z,12nm,0.9s,baz=140,slow=7.0,SNR=3.7
NRIK Noril'sk 89.47 17 P P 18 38 38.1 +0.4
comp=Z,5.7nm,0.7s,baz=185,slow=2.7,SNR=10
NRIK Noril'sk 89.47 17⇓ *e*P P 18 38 38.3 +0.5
NRIK pmax pmax
comp=Z,13nm,1.0s
ULN Ulaanbaatar 89.67 41⇑ *e*P P 18 38 40.2 +0.8
ULN pmax pmax
comp=Z,6.0nm,1.7s
MPSI Mapaga 90.20 90 P P 18 38 47.0 +4.6
comp=Z,22nm,1.8s
EDFI Ende, Flores 90.24 99 P P 18 38 42.5 -0.3
comp=Z,11nm,0.8s
PLCA Paso Flores 90.62 228 P P 18 38 43.2 -0.8
comp=Z,6.5nm,1.2s,baz=123,slow=3.9,SNR=4.9
PLCA LR LR 19 15 34.6
comp=Z,238nm,20.1s,baz=108,slow=33
PLCA Paso Flores 90.62 228 *e*P P 18 38 45.9 +1.9
HHC Hu-ho-hao-te 90.97 49 *e*P P 18 38 45.9 +0.4
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.1s
SAML Samuel 91.18 261 *e*P P 18 38 47.8 +0.8
FORT Forrest 91.48 122 P P 18 38 48.6 +0.5
BATI Baumata 91.87 101 P P 18 38 50.5 +0.3
comp=Z,29nm,0.6s,baz=301,slow=2.2,SNR=12
BATI Baumata 91.87 101 P P 18 38 52.4 +2.2
comp=Z,24nm,0.9s
FITZ Fitzroy Crossi 92.14 109 P P 18 38 49.9 -1.5
comp=Z,7.2nm,0.9s,baz=227,slow=6.0,SNR=10
FITZ LR LR 19 15 16.7
comp=Z,504nm,20.7s,baz=260,slow=32
FITZ Fitzroy Crossi 92.14 109 P P 18 38 50.0 -1.3
FITZ IAmb IAmb 18 38 53.5
comp=Z,17nm,1.1s
SOEI Soe 92.54 100 P P 18 38 55.6 +2.1
comp=Z,62nm,0.8s
SOEI Soe 92.54 100 P P 18 38 53.3 -0.1
LVC Limon Verde 93.70 246 *e*P P 18 39 00.5 +1.5
ETMB Extrema 93.94 259 *e*P P 18 39 00.8 +1.1
LPAZ La Paz 94.41 253 P P 18 39 02.2 -0.4
comp=Z,5.1nm,1.2s,baz=60,slow=3.3,SNR=12
LPAZ LR LR 19 19 06.7
comp=Z,931nm,19.4s,baz=70,slow=34
LPAZ La Paz 94.41 253 *e*P P 18 39 02.7 +0.1
NJ2 Nanjing 94.97 58 *e*P P 18 39 01.4 -2.6
NJ2 pmax pmax
comp=Z,18nm,0.5s
DAV Davao City (W) 97.00 84 LR LR 19 18 19.9
comp=Z,460nm,19.7s,baz=234,slow=33
ASAR Alice Springs 98.32 116 P P 18 39 19.1 -0.5
comp=Z,3.6nm,0.9s,baz=256,slow=4.5,SNR=18
ASAR PKKPbc PKKPbc 18 55 51.0 +0.1
comp=Z,0.4nm,0.6s,baz=78,slow=2.4,SNR=8.2
ASAR LR LR 19 18 47.4
comp=Z,715nm,21.4s,baz=269,slow=32
WRA Warramunga Arr 99.70 113 P Pdif 18 39 25.3 -0.5
comp=Z,0.7nm,0.9s,baz=257,slow=2.6,SNR=7.1
WRA LR LR 19 21 10.7
comp=Z,464nm,19.5s,baz=230,slow=33
WRA Warramunga Arr 99.70 113 P Pdif 18 39 26.0 +0.2
WRA Warramunga Ar 99.70 113 Pdif 18 39 26.0 +0.2
CZSB Cruzeiro do Su 100.65 260 *e*P Pdif 18 39 30.6 +0.6
SDV Santo Domingo 101.77 277 *e*P Pdif 18 39 35.7 +0.4
BILL Bilibino 116.29 17⇑ *i* PKIKP PKPdf 18 44 24.6 +0.4
BILL 18 45 31.1
BILL pmax pmax
comp=Z,5.0nm,1.0s
ULM Lac du Bonnet 120.80 323⇑ *i* PKIKP PKPdf 18 44 32.4 -1.0
PETK Petropavlovsk- 120.97 34 PKP PKPdf 18 44 32.8 -0.9
comp=Z,2.4nm,0.8s,baz=336,slow=14,SNR=1.8
URZ Urewera 122.31 150 PKP PKPdf 18 44 36.4 -0.3
comp=Z,10nm,0.6s,baz=69,slow=3.9,SNR=5.5
YKA Yellowknife Ar 122.53 341 PKP PKiKP 18 44 36.5 -0.1
comp=Z,2.2nm,0.7s,baz=224,slow=46,SNR=2.7
IMAR Indian Mountai 124.99 2 PKiKP 18 44 42.3 +0.9
COLA College 126.13 359⇑ *i* PKIKP PKPdf 18 44 41.9 -1.3
ILAR Eielson Array 126.21 358 PKP PKPdf 18 44 43.0 -0.4
comp=Z,2.5nm,0.7s,baz=337,slow=3.2,SNR=22
ILAR Eielson Array 126.21 358 PKIKP PKiKP 18 44 43.9 +0.1
ILAR Eielson Array 126.21 358 PKiKP 18 44 43.9 +0.1
PDAR Pinedale Array 132.54 319 PKP PKPdf 18 44 55.0 -1.3
comp=Z,1.3nm,0.9s,baz=96,slow=3.0,SNR=7.6
TXAR Lajitas Array 132.96 300 PKP PKPdf 18 44 55.0 -2.4
comp=Z,2.6nm,1.1s,baz=170,slow=1.6,SNR=5.3
TXAR Lajitas Array 132.96 300 PKIKP PKPdf 18 44 55.0 -2.4
ANMO Albuquerque 133.64 308⇑ *i* PKIKP PKiKP 18 44 59.4 -0.5
NVAR Mina Array Bea 140.48 319 PKhKP PKPpre 18 45 04.3
comp=Z,1.5nm,0.7s,baz=73,slow=4.6,SNR=6.5

*CNRM **02** 18:32:06.9±2.0.4, 35°.72N×4°.47W, h114km±5km, Error ellipse: s-maj=3.8km s-min=3.6km az=12.0*
*NEIC **02** 18:32:06.9±2.0, 35°.74N±0°.05×4°.47W±0°.04, h111km±4km,*

mb4.1/11,Error ellipse: s-maj=6.7km s-min=4.4km az=188.0
*IDC **02** 18:32:06.5±1.3,35°.74N×4°.45W,h104km±13km,mb3.8/26, mb1 3.9/30,mb1mx3.8/49,mbtmp4.1/30,Error ellipse: s-maj=14.1km s-min=10.2km az=100.0*
*LDG **02** 18:32:07.4,35°.84N×4°.56W,h102km*
*SFS **02** 18:32:07.0,35°.75N×4°.53W,h102km,ML4.1,ALBORAN W.*
*MDD **02** 18:32:08.1±0.5,35°.77N×4°.51W,h102km±6km,mb4.0/54, Error ellipse: s-maj=5.0km s-min=3.3km az=178.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA.
*INMG **02** 18:32:08.1±2.4,35°.74N×4°.52W,h97km±11km,MD3.8, ML4.4,Error ellipse: s-maj=3.2km s-min=3.1km az=105.0*
*IGIL **02** 18:32:08.2,35°.78N×4°.60W,h20km,ML4.4*
ISC 02 18:32:06.6±0.6,35°.79N±0°.03×4°.52W±0°.02,h109km±5km, n290,σ2s21/428,mb4.1/29,20C-15D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
PVLZ	**Peæn de**	**0.65**	**164**	⇓*i*	**Pn**	**18 32 24.1**	**-0.2**
PVLZ				*e*	**Sn**	**18 32 35.2**	**-2.6**
ECEU	**Ceuta**	**0.70**	**279**	⇑	**Pn**	**18 32 25.8**	**+1.0**
	2µm,0.2s,SNR=18						
ECEU				S	**Sn**	**18 32 38.1**	**-0.5**
	633nm,0.2s,SNR=7.9						
ECEU	**Ceuta**	**0.70**	**279**		**Pn**	**18 32 25.8**	**+1.0**
ECEU					**Sn**	**18 32 38.1**	**-0.5**
SMIR	**Smir Dam**	**0.71**	**261**	P	**Pn**	**18 32 26.6**	**+1.7**
SMIR				S	**Sn**	**18 32 41.9**	**+3.2**
PALE	**Palemas**	**0.75**	**140**	P	**Pn**	**18 32 25.6**	**+0.3**
PALE				S	**Sn**	**18 32 39.1**	**-0.2**
REAL	**Reales**	**0.88**	**321**	P	**Pn**	**18 32 27.3**	**+0.6**
REAL				S	**Sn**	**18 32 37.9**	**-4.0**
REAL	**Reales**	**0.88**	**321**	*e*P	**Pn**	**18 32 27.3**	**+0.6**
REAL				*e*S	**Sn**	**18 32 37.9**	**-4.0**
EMAL	**Malaga-Limoner**	**0.97**	**4**	P	**Pn**	**18 32 27.4**	**+0.1**
EMAL				S	**Sn**	**18 32 41.4**	**-1.7**
EMAL	**Malaga-Limoner**	**0.97**	**4**	*e*P	**Pn**	**18 32 27.4**	**+0.1**
EMAL				*e*S	**Sn**	**18 32 41.4**	**-1.7**
CPS	**Cap Spartel**	**1.12**	**270**	P	**Pn**	**18 32 31.4**	**+2.4**
CPS				S	**Sn**	**18 32 49.3**	**+3.3**
ALJ	**Aljibe**	**1.17**	**309**	P	**Pn**	**18 32 31.7**	**+2.1**
ALJ				S	**Sn**	**18 32 44.7**	**-2.2**
ALJ	**Aljibe**	**1.17**	**309**	*e*P	**Pn**	**18 32 31.7**	**+2.1**
ALJ				*e*S	**Sn**	**18 32 44.7**	**-2.2**
EALB	**Alboran**	**1.22**	**83**	⇓P	**Pn**	**18 32 30.2**	**+0.2**
	751nm,0.1s,SNR=18						
EALB				S	**Sn**	**18 32 46.6**	**-1.1**
	2µm,0.6s,SNR=16						
EALB	**Alboran**	**1.22**	**83**		**Pn**	**18 32 30.2**	**+0.2**
EALB					**Sn**	**18 32 45.7**	**-2.0**
ELGU	**Los Guajares,**	**1.29**	**34**	⇑P	**Pn**	**18 32 30.8**	**-0.2**
	206nm,0.1s,SNR=18						
ELGU				S	**Sn**	**18 32 47.8**	**-1.6**
	2µm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**1.29**	**34**		**Pn**	**18 32 30.8**	**-0.2**
ELGU					**Sn**	**18 32 47.1**	**-2.4**
EGOR	**Sierra Gorda,**	**1.35**	**14**	⇑P	**Pn**	**18 32 33.1**	**+1.3**
	119nm,0.2s,SNR=18						
EGOR				S	**Sn**	**18 32 51.7**	**+0.9**
	2µm,0.4s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.35**	**14**		**Pn**	**18 32 33.1**	**+1.3**
EGOR					**Sn**	**18 32 52.8**	**+2.0**
CNIL	**Conil**	**1.37**	**295**	P	**Pn**	**18 32 33.8**	**+2.0**
CNIL				S	**Sn**	**18 32 50.4**	**-0.4**
CNIL	**Conil**	**1.37**	**295**	*e*P	**Pn**	**18 32 33.8**	**+2.0**
CNIL				*e*S	**Sn**	**18 32 50.4**	**-0.4**
EMEL	**Melilla**	**1.37**	**111**	⇓P	**Pn**	**18 32 31.9**	**+0.2**
	3µm,0.2s,SNR=18						
EMEL				S	**Sn**	**18 32 49.4**	**-1.5**
	4µm,0.4s,SNR=7.9						
GOG	**Mont Gurugu**	**1.37**	**114**	P	**Pn**	**18 32 31.7**	**-0.2**
GOG				S	**Sn**	**18 32 50.6**	**-0.5**
EMLI	**Melilla**	**1.38**	**111**		**Pn**	**18 32 31.9**	**+0.1**
EMLI					**Sn**	**18 32 50.8**	**-0.2**
MELI	**Melilla**	**1.39**	**111**	⇓P	**Pn**	**18 32 32.0**	**0.0**
	973nm,0.1s,SNR=18						
MELI				S	**Sn**	**18 32 49.5**	**-1.7**
	866nm,0.3s,SNR=7.9						
MELI	**Melilla**	**1.39**	**111**	⇓*i*P	**Pn**	**18 32 31.9**	**0.0**
MELI				*e*S	**Sn**	**18 32 49.5**	**-1.7**
MELI	**Melilla**	**1.39**	**111**		**Pn**	**18 32 32.0**	**0.0**
MELI					**Sn**	**18 32 49.5**	**-1.7**
RSA	**Sarsar**	**1.40**	**230**	P	**Pn**	**18 32 34.1**	**+2.0**
RSA				S	**Sn**	**18 32 53.5**	**+2.0**
SFS	**San Fernando**	**1.52**	**297**	P	**Pn**	**18 32 35.3**	**+1.8**
SFS				S	**Sn**	**18 32 56.5**	**+2.6**
SFS	**San Fernando**	**1.52**	**297**	⇑*i*P	**Pn**	**18 32 35.3**	**+1.8**
SFS				*i* S	**Sn**	**18 32 56.5**	**+2.6**
SFS	**San Fernando**	**1.52**	**297**		**Pn**	**18 32 35.2**	**+1.8**
ESPR	**Espera**	**1.52**	**315**	⇑P	**Pn**	**18 32 34.9**	**+1.4**
	507nm,0.2s,SNR=18						
ESPR				S	**Sn**	**18 32 54.7**	**+0.7**
	828nm,0.2s,SNR=7.9						
ESPR	**Espera**	**1.52**	**315**		**Pn**	**18 32 34.9**	**+1.4**
ESPR					**Sn**	**18 32 55.5**	**+1.5**
EQUE	**Quentar**	**1.66**	**31**	⇑P	**Pn**	**18 32 36.8**	**+1.5**
	127nm,0.3s,SNR=18						
EQUE				S	**Sn**	**18 32 57.2**	**0.0**
	338nm,0.5s,SNR=34						
EBER	**Berja**	**1.72**	**50**	⇓P	**Pn**	**18 32 36.5**	**+0.3**
	210nm,0.2s,SNR=18						
EBER				S	**Sn**	**18 32 57.2**	**-1.5**
	874nm,0.4s,SNR=13						
EBER	**Berja**	**1.72**	**50**		**Pn**	**18 32 36.5**	**+0.3**
SICH	**Sidi Chahed**	**1.81**	**201**	P	**Pn**	**18 32 37.9**	**+0.8**
SICH				S	**Sn**	**18 32 59.3**	**-1.1**
TAF	**Taforalt**	**1.98**	**119**	P	**Pn**	**18 32 39.6**	**+0.2**
TAF				S	**Sn**	**18 33 03.6**	**-0.8**
GORA	**Gorafe**	**2.06**	**35**	⇓P	**Pn**	**18 32 42.5**	**+2.1**
	116nm,0.2s,SNR=18						
GORA				S	**Sn**	**18 33 06.5**	**+0.3**
	116nm,0.2s,SNR=7.9						
LCRM	**LCR**	**2.12**	**188**	P	**Pn**	**18 32 41.9**	**+0.6**
HORN	**Hornachuelos**	**2.13**	**344**	P	**Pn**	**18 32 42.0**	**+0.8**
JBK	**JBK**	**2.17**	**132**	P	**Pn**	**18 32 41.9**	**0.0**
JBK				S	**Sn**	**18 33 06.9**	**-1.9**
ENIJ	**Nijar**	**2.21**	**57**	⇓P	**Pn**	**18 32 42.4**	**+0.3**
	304nm,0.6s,SNR=18						
ENIJ				S	**Sn**	**18 33 08.2**	**-1.3**
	216nm,0.4s,SNR=7.9						
ENIJ	**Nijar**	**2.21**	**57**		**Pn**	**18 32 42.4**	**+0.3**
EQES	**Quesada**	**2.32**	**30**	⇑P	**Pn**	**18 32 45.1**	**+1.4**
	31nm,0.1s,SNR=18						
EQES				S	**Sn**	**18 33 11.6**	**-0.6**
	168nm,0.2s,SNR=6.8						
EQES	**Quesada**	**2.32**	**30**		**Pn**	**18 32 45.1**	**+1.4**
IFR	**Ifrane**	**2.33**	**193**	*e*P	**Pn**	**18 32 43.8**	**-0.1**
IFR				*e*S	**Sn**	**18 33 09.5**	**-2.9**
EADA	**Adamuz**	**2.37**	**359**	⇑P	**Pn**	**18 32 45.3**	**+1.0**
	266nm,0.0s,SNR=18						
EADA				S	**Sn**	**18 33 12.1**	**-1.1**
	2µm,0.2s,SNR=6.0						
ECAB	**El Cabril**	**2.39**	**343**	⇑P	**Pn**	**18 32 45.0**	**+0.5**
	74nm,0.1s,SNR=18						
ECAB				S	**Sn**	**18 33 12.0**	**-1.6**
	900nm,0.2s,SNR=45						
EMIN	**Mina Concepcio**	**2.62**	**319**	⇓P	**Pn**	**18 32 48.1**	**+0.6**
	229nm,0.1s,SNR=18						
EMIN				S	**Sn**	**18 33 17.0**	**-1.9**
	2µm,0.2s,SNR=36						
RTC	**Rabat Centre**	**2.63**	**227**	P	**Pn**	**18 32 48.2**	**+0.5**
RTC	**Rabat Centre**	**2.63**	**227**	Pn	**Pn**	**18 32 48.5**	**+0.8**
RTC				Sn	**Sn**	**18 33 17.7**	**-1.6**
CZD	**Col de Zad**	**2.79**	**189**	P	**Pn**	**18 32 50.5**	**+0.4**
CZD				S	**Sn**	**18 33 21.9**	**-1.5**
SESP	**Santiago Espad**	**2.81**	**34**	⇑P	**Pn**	**18 32 51.2**	**+1.1**
	36nm,0.2s,SNR=18						
SESP				S	**Sn**	**18 33 22.8**	**-0.9**
	209nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**2.81**	**34**	P	**Pn**	**18 32 51.3**	**+1.1**
SESP				S	**Sn**	**18 33 24.2**	**+0.5**
ZHG	**ZHG**	**2.92**	**217**	P	**Pn**	**18 32 51.6**	**0.0**
MD31	**MD31**	**2.93**	**184**	P	**Pn**	**18 32 52.0**	**+0.3**
MD31				S	**Sn**	**18 33 24.6**	**-1.8**
TLOR	**Lorca, Murcia**	**2.94**	**50**	⇓P	**Pn**	**18 32 53.1**	**+1.4**
	84nm,0.2s,SNR=18						
TLOR				S	**Sn**	**18 33 26.6**	**+0.1**
	533nm,0.6s,SNR=7.9						
EGRO	**El Granado**	**2.95**	**307**	P	**Pn**	**18 32 52.2**	**+0.5**
	531nm,0.1s,SNR=2331						
EGRO				S	**Sn**	**18 33 24.9**	**-1.7**
	1µm,0.1s,SNR=32						
EGRO	**El Granado**	**2.95**	**307**		**Pn**	**18 32 52.2**	**+0.5**
MDT	**Midelt**	**2.97**	**181**	P	**Pn**	**18 32 52.0**	**-0.4**
	42nm,0.3s,baz=27,slow=10,SNR=982						
MDT				S	**Sn**	**18 33 26.4**	**-1.1**
	157nm,0.3s,baz=65,slow=9.3,SNR=35						
MDT	**Midelt**	**2.97**	**181**	P	**Pn**	**18 32 52.4**	**+0.1**
MDT				S	**Sn**	**18 33 26.0**	**-1.5**
PVAQ	**Vaqueiros**	**3.03**	**303**	P	**Pn**	**18 32 53.0**	**+0.2**
PVAQ	**Vaqueiros**	**3.03**	**303**	*e*P	**Pn**	**18 32 53.1**	**+0.2**
PVAQ				*e*S	**Sn**	**18 33 26.9**	**-1.8**
PVAQ				A	A	18 33 29.0	
	2µm,0.5s						
PVAQ	**Vaqueiros**	**3.03**	**303**		**Pn**	**18 32 53.2**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.10**	**299**	⇑*e*P	**Pn**	**18 32 54.3**	**+0.4**
PBDV				*e*S	**Sn**	**18 33 29.0**	**-1.4**
PBDV				A	A	18 33 31.8	
	1µm,0.3s						
PBAR	**Barrancos**	**3.12**	**320**	*e*P	**Pn**	**18 32 54.9**	**+0.9**
PBAR				*e*S	**Sn**	**18 33 28.9**	**-1.7**
PBAR				A	A	18 33 32.4	
	1µm,0.3s						
EMUR	**La Murta**	**3.33**	**51**	P	**Pn**	**18 32 57.4**	**+0.4**
	31nm,0.4s,SNR=49						
EMUR				S	**Sn**	**18 33 35.7**	**-0.2**
	50nm,0.4s						
CART	**Cartagena**	**3.35**	**57**	P	**Pn**	**18 32 56.7**	**-0.4**
CART				S	**Sn**	**18 33 33.9**	**-2.3**
CART	**Cartagena**	**3.35**	**57**	⇓*i*P	**Pn**	**18 32 56.7**	**-0.4**
CART				*e*S	**Sn**	**18 33 33.9**	**-2.3**
CART	**Cartagena**	**3.35**	**57**		**Pn**	**18 32 56.7**	**-0.4**
PCVE	**Castro Verde**	**3.37**	**304**	*e*P	**Pn**	**18 32 57.8**	**+0.4**
PCVE				*e*S	**Sn**	**18 33 34.7**	**-2.0**
PCVE				A	A	18 33 36.9	
	1µm,0.4s						
TDRA	**Tendrara**	**3.44**	**142**	P	**Pn**	**18 32 59.2**	**+0.7**
AVE	**Averroes**	**3.45**	**225**	P	**Pn**	**18 32 58.9**	**+0.4**
AVE	**Averroes**	**3.45**	**225**	*e*P	**Pn**	**18 32 59.0**	**+0.4**
AVE				*e*S	**Sn**	**18 33 36.3**	**-2.3**
PBEJ	**Beja**	**3.48**	**311**	*e*P	**Pn**	**18 32 59.5**	**+0.6**
PBEJ				*e*S	**Sn**	**18 33 37.6**	**-1.9**
PBEJ				A	A	18 33 39.0	
	656nm,0.4s						
MORF	**Marmelete**	**3.65**	**296**	*e*P	**Pn**	**18 33 01.3**	**+0.1**
MORF				*e*S	**Sn**	**18 33 40.5**	**-3.0**
MORF				AML	AML	18 33 42.4	
	comp=N,2µm,0.4s						
MORF	**Marmelete**	**3.65**	**296**	P	**Pn**	**18 33 01.3**	**+0.1**
MORF				S	**Sn**	**18 33 40.5**	**-3.0**
	comp=N,2µm,0.4s						
MORF	**Marmelete**	**3.65**	**296**	⇑*e*P	**Pn**	**18 33 01.4**	**+0.1**
MORF				*e*S	**Sn**	**18 33 42.0**	**-1.5**
MORF				A	A	18 33 43.4	
	comp=N,974nm,0.1s						
ETOB	**Tobarra**	**3.71**	**39**	⇑P	**Pn**	**18 33 03.1**	**+1.1**
	comp=N,115nm,0.3s,SNR=18						
ETOB				S	**Sn**	**18 33 44.1**	**-0.7**
	comp=N,42nm,0.2s,SNR=5.5						
PFVI	**Vila Bisbo**	**3.72**	**292**	⇑P	**Pn**	**18 33 02.3**	**+0.2**
	comp=N,130nm,0.1s,SNR=18						
PFVI				S	**Sn**	**18 33 43.1**	**-2.0**
	comp=N,1µm,0.2s,SNR=11						
PFVI	**Vila Bisbo**	**3.72**	**292**	P	**Pn**	**18 33 02.1**	**+0.1**
PFVI	**Vila Bisbo**	**3.72**	**292**	⇑*i*P	**Pn**	**18 33 02.2**	**+0.1**
PFVI				*e*S	**Sn**	**18 33 43.0**	**-2.0**
PFVI				A	A	18 33 46.4	
	comp=N,698nm,0.2s						
PFVI	**Vila Bisbo**	**3.72**	**292**		**Pn**	**18 33 02.2**	**+0.1**
ETRV	**Los Montesinos**	**3.74**	**52**	P	**Pn**	**18 33 03.2**	**+0.8**
	comp=N,57nm,0.3s,SNR=7.9						
ETRV				S	**Sn**	**18 33 44.2**	**-1.4**
	comp=N,17nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**3.75**	**2**	⇑P	**Pn**	**18 33 03.1**	**+0.5**
	comp=N,27nm,0.2s,SNR=18						
PAB				S	**Sn**	**18 33 43.1**	**-2.8**
	comp=N,1µm,0.5s,SNR=7.9						
PAB	**San Pablo**	**3.75**	**2**		**Pn**	**18 33 03.1**	**+0.5**
PTEO	**Sao Teotonio**	**3.80**	**299**	*e*P	**Pn**	**18 33 03.9**	**+0.7**
PTEO				*e*S	**Sn**	**18 33 45.9**	**-1.2**
PTEO				A	A	18 33 47.9	
	comp=N,761nm,0.4s						
ESDC	**Sonseca Array**	**3.90**	**6**	P	**Pn**	**18 33 04.8**	**+0.2**
	comp=N,4.9nm,0.3s,baz=186,slow=12,SNR=260						
ESDC				S	**Sn**	**18 33 43.9**	**-5.6**
	comp=N,36nm,0.3s,baz=188,slow=23,SNR=42						
ESBB	**Sonseca Array**	**3.90**	**6**	Pn	**Pn**	**18 33 05.1**	**+0.5**
PNCL	**Nicolau / Gran**	**3.96**	**307**	⇓*e*P	**Pn**	**18 33 05.7**	**+0.5**
PNCL				*e*S	**Sn**	**18 33 48.4**	**-2.3**
PNCL				A	A	18 33 49.5	
	comp=N,449nm,0.3s						
GOLM	**Goulmima**	**4.09**	**185**	P	**Pn**	**18 33 09.3**	**+2.0**
OKGL	**Djebel Kef Gue**	**4.20**	**85**	P	**Pn**	**18 33 09.1**	**+0.5**
	comp=N,21nm,0.2s,SNR=7.9						
OKGL	**Djebel Kef Gue**	**4.20**	**85**		**Pn**	**18 33 09.1**	**+0.5**
AFON	**Font Roja**	**4.28**	**47**	P	**Pn**	**18 33 11.3**	**+1.6**
	comp=N,31nm,0.3s,SNR=34						
AFON				S	**Sn**	**18 33 58.1**	**-0.5**
	comp=N,38nm,0.4s						
PMRV	**Marv??o**	**4.28**	**329**	*e*P	**Pn**	**18 33 10.4**	**+0.7**
PMRV				*e*S	**Sn**	**18 33 55.9**	**-2.8**
PMRV				A	A	18 34 11.9	
	comp=N,702nm,0.3s						
ARF	**Arif**	**4.36**	**177**	P	**Pn**	**18 33 10.7**	**-0.1**
PMTG	**Montargil**	**4.40**	**319**	*e*P	**Pn**	**18 33 11.7**	**+0.5**
PMTG				*e*S	**Sn**	**18 33 59.0**	**-2.4**
PMTG				A	A	18 34 02.8	
	comp=N,396nm,0.9s						
EPLA	**Plasencia**	**4.44**	**344**	⇑P	**Pn**	**18 33 12.7**	**+1.0**
	comp=N,96nm,0.2s,SNR=18						
EPLA				S	**Sn**	**18 33 59.3**	**-3.1**
	comp=N,183nm,0.3s,SNR=7.0						
EBEN2	**Beniarda presa**	**4.50**	**49**	P	**Pn**	**18 33 14.0**	**+1.4**
	comp=N,21nm,0.4s,SNR=7.9						
EBEN2				S	**Sn**	**18 34 02.2**	**-1.7**
	comp=N,15nm,0.2s,SNR=7.9						
FIGM	**Figuig**	**4.55**	**142**	P	**Pn**	**18 33 14.4**	**+1.0**
UCM	**Universidad Co**	**4.62**	**12**	P	**Pn**	**18 33 15.1**	**+0.9**
UCM				S	**Sn**	**18 34 03.7**	**-3.0**
UCM	**Universidad Co**	**4.62**	**12**	⇓*i*P	**Pn**	**18 33 15.1**	**+0.9**
UCM				*e*S	**Sn**	**18 34 03.7**	**-3.0**
PCBR	**Castelo Branco**	**4.67**	**331**	⇑*e*P	**Pn**	**18 33 15.6**	**+0.8**
PCBR				*e*S	**Sn**	**18 34 04.9**	**-3.0**
PCBR				A	A	18 34 21.9	
	comp=N,336nm,0.3s						
LIS	**Lisbon**	**4.70**	**310**	*e*P	**Pn**	**18 33 15.8**	**+0.5**
LIS				*e*S	**Sn**	**18 34 05.2**	**-3.6**
LIS				AML	AML	18 34 09.9	
	comp=N,329nm,0.2s						
LIS	**Lisbon**	**4.70**	**310**	P	**Pn**	**18 33 15.8**	**+0.5**
LIS				S	**Sn**	**18 34 05.2**	**-3.6**
	comp=N,329nm,0.2s						
ECHE	**Chera**	**4.72**	**36**	⇑P	**Pn**	**18 33 16.2**	**+0.6**
	comp=N,48nm,0.4s,SNR=18						
ECHE				S	**Sn**	**18 34 05.9**	**-3.4**
	comp=N,11nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**4.85**	**3**	P	**Pn**	**18 33 18.0**	**+0.6**
	comp=N,10nm,0.2s,SNR=75						
GUD				S	**Sn**	**18 34 09.7**	**-2.8**
	comp=N,49nm,0.2s,SNR=5.6						
PMAFR	**Mafra**	**4.93**	**311**	⇓P	**Pn**	**18 33 18.7**	**+0.3**
	comp=N,40nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**18 34 11.5**	**-2.8**
	comp=N,728nm,0.2s,SNR=9.8						
PMAFR	**Mafra**	**4.93**	**311**	*e*P	**Pn**	**18 33 18.7**	**+0.3**
PMAFR				*e*S	**Sn**	**18 34 11.4**	**-2.9**
PMAFR				A	A	18 34 15.2	
	comp=N,340nm,0.3s						
PMAFR	**Mafra**	**4.93**	**311**		**Pn**	**18 33 18.8**	**+0.3**
PSBE	**So Bento**	**5.03**	**319**	*e*P	**Pn**	**18 33 20.4**	**+0.7**
PSBE				*e*S	**Sn**	**18 34 15.0**	**-1.7**
PSBE				A	A	18 34 28.7	
	comp=N,255nm,0.4s						
TZRR	**Tazzarine**	**5.07**	**190**	P	**Pn**	**18 33 21.4**	**+0.9**
MTE	**Manteigas**	**5.18**	**334**	*e*P	**Pn**	**18 33 22.8**	**+1.0**
MTE				*e*S	**Sn**	**18 34 18.6**	**-1.8**
MTE				A	A	18 34 45.1	
	comp=N,555nm,0.6s						
MTE	**Manteigas**	**5.18**	**334**		**Pn**	**18 33 22.3**	**+0.5**
OUZM	**OUZ**	**5.22**	**202**	P	**Pn**	**18 33 23.3**	**+0.9**
PCAS	**Casmilo, Conde**	**5.29**	**325**	*e*P	**Pn**	**18 33 23.8**	**+0.6**
PCAS				*e*S	**Sn**	**18 34 19.6**	**-3.3**
PCAS				A	A	18 34 24.4	
	comp=N,317nm,0.3s						
OUK	**Oukaimeden**	**5.36**	**212**	P	**Pn**	**18 33 24.6**	**+0.1**
COI	**Coimbra**	**5.37**	**326**	*e*P	**Pn**	**18 33 25.8**	**+1.5**
COI				*e*S	**Sn**	**18 34 22.8**	**-2.1**
COI				A	A	18 34 27.8	
	comp=N,407nm,0.3s						
COI	**Coimbra**	**5.37**	**326**		**Pn**	**18 33 25.4**	**+1.0**
ETOR	**Torete**	**5.38**	**20**	⇓P	**Pn**	**18 33 25.3**	**+0.8**
	comp=N,95nm,0.1s,SNR=18						
ETOR				S	**Sn**	**18 34 21.6**	**-3.7**
	comp=N,319nm,0.2s,SNR=11						
EMOS	**Mosqueruela**	**5.57**	**34**	⇓P	**Pn**	**18 33 28.6**	**+1.4**
	comp=N,19nm,0.4s,SNR=18						
EMOS				S	**Sn**	**18 34 27.1**	**-2.9**
	comp=N,13nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**5.58**	**333**	*e*P	**Pn**	**18 33 27.7**	**+0.4**
PVIS				*e*S	**Sn**	**18 34 28.5**	**-1.6**
PVIS				A	A	18 34 30.7	
	comp=N,131nm,0.2s						
EIBI	**Ibiza**	**5.68**	**54**	P	**Pn**	**18 33 29.5**	**+1.0**
	comp=N,17nm,0.4s,SNR=24						
EIBI				S	**Sn**	**18 34 30.5**	**-1.8**
	comp=N,6.0nm,0.4s						
EIBI	**Ibiza**	**5.68**	**54**		**Pn**	**18 33 29.5**	**+1.0**
MVO	**Moncorvo**	**5.71**	**341**	P	**Pn**	**18 33 29.6**	**+0.6**
	comp=N,20nm,0.1s,SNR=120						
MVO				S	**Sn**	**18 34 30.2**	**-3.0**
	comp=N,102nm,0.3s,SNR=11						
MVO	**Moncorvo**	**5.71**	**341**	*e*P	**Pn**	**18 33 29.6**	**+0.6**
MVO				*e*S	**Sn**	**18 34 29.5**	**-3.7**
MVO				A	A	18 35 00.1	
	comp=N,314nm,0.6s						
ZGR	**Zagora**	**5.73**	**190**	P	**Pn**	**18 33 30.1**	**+0.7**
EAH	**EAH**	**5.91**	**227**	P	**Pn**	**18 33 32.0**	**+0.3**
PVRL	**Vila Real**	**6.02**	**336**	*e*P	**Pn**	**18 33 33.0**	**-0.1**
PVRL				*e*S	**Sn**	**18 34 38.5**	**-2.2**
PVRL				A	A	18 34 40.3	
	comp=N,354nm,0.2s						
POLO	**Lamas de Olo**	**6.13**	**336**	*e*P	**Pn**	**18 33 35.8**	**+1.1**
POLO				*e*S	**Sn**	**18 34 40.1**	**-3.4**
POLO				A	A	18 34 55.4	
	comp=N,58nm,0.8s						
TTIG	**Tnine Tigouga,**	**6.18**	**213**	P	**Pn**	**18 33 33.7**	**-1.8**
PBRG	**Braganca**	**6.25**	**345**	*e*P	**Pn**	**18 33 37.0**	**+0.8**
PBRG				*e*S	**Sn**	**18 34 42.7**	**-3.5**
PBRG				A	A	18 35 20.0	
	comp=N,96nm,0.7s						
ECAL	**Calabor**	**6.38**	**345**	P	**Pn**	**18 33 39.6**	**+1.6**
	comp=N,26nm,0.2s,SNR=6.3						
ECAL				S	**Sn**	**18 34 47.2**	**-2.2**
	comp=N,102nm,0.3s,SNR=9.2						
ERTA	**Horta de San J**	**6.41**	**35**	P	**Pn**	**18 33 40.2**	**+1.7**
	comp=N,7.9nm,0.2s,SNR=23						
ERTA				S	**Sn**	**18 34 48.2**	**-2.0**
	comp=N,24nm,0.5s,SNR=7.9						
ELOB	**Lobios**	**6.66**	**337**	P	**Pn**	**18 33 43.3**	**+1.4**
	comp=N,24nm,0.2s,SNR=111						
ELOB				S	**Sn**	**18 34 52.5**	**-3.9**
	comp=N,62nm,0.2s,SNR=12						
ELOB	**Lobios**	**6.66**	**337**		**Pn**	**18 33 43.5**	**+1.6**
ESAC	**San Caprasio**	**6.71**	**27**	P	**Pn**	**18 33 43.9**	**+1.3**
	comp=N,5.1nm,0.2s,SNR=7.9						
ESAC				S	**Sn**	**18 34 54.5**	**-3.1**
	comp=N,76nm,0.4s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.82**	**336**	*e*P	**Pn**	**18 33 45.1**	**+1.1**
PGAV				*e*S	**Sn**	**18 34 55.9**	**-4.3**
PGAV				A	A	18 34 59.8	
	comp=N,111nm,0.7s						
ETOS	**Mallorca**	**7.03**	**53**	P	**Pn**	**18 33 48.4**	**+1.5**
	comp=N,10nm,0.6s,SNR=7.9						
EPOB	**Poblet**	**7.07**	**37**	P	**Pn**	**18 33 48.7**	**+1.2**
	comp=N,9.1nm,0.3s,SNR=16						
EPOB				S	**Sn**	**18 35 03.7**	**-2.7**
	comp=N,4.1nm,0.4s,SNR=7.9						
EZAM	**Zamans**	**7.13**	**334**	P	**Pn**	**18 33 49.4**	**+1.2**
	comp=N,16nm,0.2s,SNR=7.9						
EZAM				S	**Sn**	**18 35 03.4**	**-4.1**
	comp=N,33nm,0.3s,SNR=7.9						
EARA	**Aranguren**	**7.33**	**17**	P	**Pn**	**18 33 53.2**	**+2.3**
	comp=N,5.3nm,0.2s,SNR=5.8						
EARA				S	**Sn**	**18 35 08.2**	**-4.3**
	comp=N,29nm,0.2s,SNR=6.5						
ELAN	**Lanestosa**	**7.47**	**6**	P	**Pn**	**18 33 55.0**	**+2.1**
	comp=N,7.4nm,0.2s,SNR=26						
ELAN				S	**Sn**	**18 35 11.3**	**-4.7**
	comp=N,12nm,0.2s,SNR=6.9						
EORO	**Oroz-Betelu**	**7.51**

comp=N,2.6nm,0.2s
LFF La Frestale 9.97 22 *e*Pn **Pn 18 34 27.2 +0.5**
LFF La Frestale 9.97 22 *e*P **Pn 18 34 29.0 +2.3**
LFF *e*Sn **Sn 18 36 11.5 -5.1**
comp=N,5.1nm,0.2s
EFAM Famara 10.10 231 S **Sn 18 36 12.8 -7.1**
comp=N,13nm,0.3s,SNR=7.9
PMPS Porto Santo 10.13 258 *e*P **Pn 18 34 29.9 +1.0**
PMPS *e*S Sn 18 36 11.3 -9.2
PMPS A A 18 36 21.6
comp=N,31nm,0.5s
CAF Calviac 10.41 27 P **Pn 18 34 32.9 +0.2**
CAF S **Sn 18 36 22.5 -4.8**
comp=N,1.1nm,0.2s
CAF Calviac 10.41 27 *e*Pn **Pn 18 34 32.9 +0.2**
CAF Calviac 10.41 27 *e*P **Pn 18 34 35.2 +2.5**
CAF *e*Sn **Sn 18 36 22.5 -4.8**
comp=N,2.2nm,0.2s
LASF Ste Croix 10.47 35 P **Pn 18 34 34.3 +0.8**
LASF Ste Croix 10.47 35 *e*Pn **Pn 18 34 34.3 +0.8**
RJF Les Rejaudoux 10.55 24 P **Pn 18 34 33.0 -1.5**
RJF S Sn 18 36 23.3 -7.3
comp=N,6.2nm,0.4s
RJF Les Rejaudoux 10.55 24 *e*Pn **Pn 18 34 33.0 -1.5**
RJF *e*Sn Sn 18 36 23.3 -7.3
comp=N,12nm,0.4s
CFUE Fuerteventura 10.69 231 P **Pn 18 34 36.5 0.0**
comp=N,7.4nm,0.3s,SNR=7.9
CFUE S **Sn 18 36 27.6 -6.5**
comp=N,12nm,0.3s,SNR=7.9
PMAR Madeira 10.70 257 P **Pn 18 34 36.7 -0.1**
PMAR Madeira 10.70 257 *e*P **Pn 18 34 38.8 +2.0**
PMAR *e*S Sn 18 36 25.8 -8.9
PMAR A A 18 36 33.1
comp=N,67nm,0.4s
PMOZ Porto Moniz, M 10.89 258 P **Pn 18 34 39.5 +0.1**
comp=N,38nm,0.5s,SNR=7.9
PMOZ S Sn 18 36 30.1 -9.1
comp=N,101nm,0.5s,SNR=7.9
PMOZ Porto Moniz, M 10.89 258 P **Pn 18 34 40.0 +0.6**
SMRF Simiane la Rot 11.26 40 P **Pn 18 34 46.5 +2.4**
SMRF Simiane la Rot 11.26 40 *e*P **Pn 18 34 46.5 +2.4**
KEST Kesra 11.27 86 Pn Pn 18 34 38.4 -6.0
MFF Saint Martin d 11.29 16 P **Pn 18 34 44.8 +0.4**
MFF S **Sn 18 36 42.6 -5.9**
comp=N,7.2nm,0.6s
MFF Saint Martin d 11.29 16 *e*Pn **Pn 18 34 44.8 +0.4**
MFF Saint Martin d 11.29 16 *e*P **Pn 18 34 47.1 +2.7**
MFF *e*Sn **Sn 18 36 42.6 -5.9**
comp=N,14nm,0.6s
LMR La Mourre 11.36 45 P **Pn 18 34 48.3 +2.9**
LMR La Mourre 11.36 45 *e*P **Pn 18 34 48.3 +2.9**
VIVF Saint-Julien-l 11.45 35 P **Pn 18 34 46.8 +0.2**
VIVF Saint-Julien-l 11.45 35 *e*Pn **Pn 18 34 46.8 +0.2**
FRF La Foret Royal 11.58 45 P **Pn 18 34 51.7 +3.4**
FRF La Foret Royal 11.58 45 *e*P **Pn 18 34 51.7 +3.4**
VSL Villasalto 11.62 67 P **Pn 18 34 51.8 +2.8**
TCF Toulx Ste Croi 11.64 24 P **Pn 18 34 51.5 +2.3**
TCF Toulx Ste Croi 11.64 24 *e*P **Pn 18 34 51.5 +2.3**
TCF *e*Sg Sn 18 36 48.7 -8.5
comp=N,3.0nm,0.4s
ORIF Oris-en-Rattie 12.07 38 P **Pn 18 34 55.5 +0.5**
ORIF Oris-en-Rattie 12.07 38 *e*Pn **Pn 18 34 55.5 +0.5**
ORIF Oris-en-Rattie 12.07 38 *e*P **Pn 18 34 58.5 +3.5**
BGF Bois d'Agland 12.09 25 P **Pn 18 34 54.6 -0.5**
BGF S **Sn 18 37 01.7 -6.4**
comp=N,9.6nm,0.5s
BGF Bois d'Agland 12.09 25 *e*Pn **Pn 18 34 54.6 -0.5**
BGF *e*Sn **Sn 18 37 01.7 -6.4**
comp=N,19nm,0.5s
GGC Guia, Gran Can 12.14 234 S Sn 18 37 00.1 -9.4
comp=N,18nm,0.3s,SNR=4.0
QUIF Quistinic 12.15 4 P **Pn 18 34 56.7 +0.8**
QUIF S Sn 18 37 01.4 -8.1
comp=N,2.9nm,0.2s
QUIF Quistinic 12.15 4 *e*Pn **Pn 18 34 56.7 +0.8**
QUIF Quistinic 12.15 4 *e*P **Pn 18 34 58.3 +2.4**
QUIF *e*Sn Sn 18 37 01.4 -8.1
comp=N,5.8nm,0.2s
SBF Sospel 12.21 45 *e*P **Pn 18 34 59.4 +2.6**
EBAJ Bajamar 12.35 237 S Sn 18 37 03.4 -11
comp=N,6.6nm,0.3s,SNR=4.0
MBDF Montbardon 12.40 41 P **Pn 18 35 00.3 +1.0**
MBDF Montbardon 12.40 41 *e*Pn **Pn 18 35 00.3 +1.0**
PGF Pioggiola 12.47 53 *e*P **Pn 18 35 03.1 +2.9**
AVF Avril sur Loir 12.47 26 P **Pn 18 35 00.9 +0.8**
AVF S **Sn 18 37 11.1 -6.1**
comp=N,0.3nm,0.3s
AVF Avril sur Loir 12.47 26 *e*Pn **Pn 18 35 00.9 +0.8**
AVF *e*Sn **Sn 18 37 11.1 -6.1**
comp=N,0.6nm,0.3s
SMF Signal de Mont 12.53 28 *e*Pn **Pn 18 35 01.8 +1.0**
SGMF Saint Gilles 12.54 6 *e*Pn **Pn 18 35 01.0 +0.1**
SGMF Saint Gilles 12.54 6 *e*P **Pn 18 35 03.8 +2.9**
SGMF *e*Sn Sn 18 37 11.5 -7.2
comp=N,7.5nm,0.5s
CGUI Guimar, Teneri 12.55 237 S Sn 18 37 09.9 -10
comp=N,73nm,0.7s,SNR=7.9
ROSF Rostrenen 12.57 4 *e*Pn **Pn 18 35 01.1 -0.2**
ROSF *e*Sn Sn 18 37 10.4 -9.1
comp=N,25nm,0.5s
HYF Humbligny 12.65 23 *e*P **Pn 18 35 05.1 +2.7**
SSF Saint Saulge 12.76 26 *e*Pn **Pn 18 35 05.3 +1.4**
SSF *e*Sn **Sn 18 37 18.6 -5.5**
comp=N,1.5nm,0.5s
GRR Gorron 12.87 11 *e*P **Pn 18 35 08.1 +2.8**
GRR *e*Sn Sn 18 37 18.3 -8.6
comp=N,26nm,0.6s
LPG La Plagne 12.92 38 *e*P **Pn 18 35 09.5 +3.3**
LPG *e*Sn **Sn 18 37 22.7 -5.7**
comp=N,0.1nm,0.2s
LPL La Plagne 12.92 38 *e*P **Pn 18 35 08.7 +2.5**
LPL *e*Sn **Sn 18 37 22.1 -6.3**
comp=N,0.3nm,0.2s
LOR Lormes 13.06 26 *e*P **Pn 18 35 10.8 +3.0**
baz=208
LOR *e*Sn **Sn 18 37 25.2 -6.2**
comp=N,1.5nm,0.5s
LDF La Druitiere 13.20 13 *e*Pn **Pn 18 35 12.3 +2.8**
LDF *e*Sn Sn 18 37 27.1 -7.6
comp=N,8.3nm,0.6s
FLN La Foliniere 13.30 12 *e*P **Pn 18 35 13.6 +2.7**
baz=192
FLN *e*Sn Sn 18 37 28.4 -8.7
comp=N,3.5nm,0.3s
CABF La Chapelle 13.42 33 *e*P **Pn 18 35 15.9 +3.3**
SFTF Sexfontaines 14.28 27 *e*P **P 18 35 28.2 +0.7**
MEZF Maizieres J'vi 14.53 26 *e*P **Pn 18 35 30.2 +3.4**
HAU Haudompre 14.62 30 *e*P **Pn 18 35 31.7 +3.7**
HINF Hinteralfeld 14.69 32 *e*P **Pn 18 35 32.3 +3.5**
TUE Stuetta 14.91 40 **P 18 35 37.1 +2.4**
CDF Champ du Feu 15.33 31 *e*P **P 18 35 41.4 +2.2**
DAVOX Davos/Dischmat 15.39 40 P **P 18 35 42.6 +2.6**
comp=N,2.0nm,0.3s,baz=238,slow=7.7,SNR=32
BAIF Baives 15.61 21 *e*P **Pn 18 35 43.8 +1.6**
GIVF Givet 15.83 23 *e*P **Pn 18 35 45.2 +2.1**
WLF Walferdange 15.90 26 Pn **Pn 18 35 43.8 -0.1**
WLF IAmb IAmb 18 35 52.8
comp=Z,10nm,1.0s
CTI Castel Tesino 15.92 45 P **Pn 18 35 42.2 -2.1**
CTI Castel Tesino 15.92 45 **Pn 18 35 42.2 -2.1**
CTI Castel Tesino 15.92 45 pmax pmax
comp=Z,24nm,0.9s
CIMO Cimolais 16.52 45 P **Pn 18 35 53.8 +2.1**
CIMO IAmb IAmb 18 35 54.6
comp=Z,11nm,0.9s
TIP Timpagrande 17.22 72 P **Pn 18 36 02.5 +2.2**
TIP IAmb IAmb 18 36 04.0
comp=Z,13nm,1.0s
PRED Cave del Predi 17.25 46 **P 18 36 01.4 +0.9**
GEC2 GERESS Array S 18.69 40 P **P 18 36 17.0 +0.7**
GERES GERESS Array B 18.69 40 P **P 18 36 16.9 +0.7**
comp=Z,1.9nm,0.3s,baz=222,slow=11,SNR=50
GERES GERESS Array B 18.69 40 P **P 18 36 15.2 -1.1**
EKA Eskdalemuir Ar 19.56 2 P **P 18 36 27.1 +1.6**
baz=177,slow=12,SNR=6.7
CLL Collm 19.96 34 *e*(P) **P 18 36 30.0 +0.1**
CLL *e* 18 36 35.0
VRAC Vranov 20.51 42 P **P 18 36 36.2 +0.3**
comp=Z,14nm,1.0s,baz=228,slow=8.5,SNR=9.0
LIT Litokhoron 21.70 70 P **P 18 36 47.6 -1.1**
LIT IAmb IAmb 18 37 05.4
comp=Z,6.7nm,0.9s
TOA0 Torodi Ar. Sit 23.23 164 P **P 18 37 02.0 -2.3**
TOA0 IAmb IAmb 18 37 12.0
comp=Z,9.8nm,0.8s
TORD Torodi Ar. Bea 23.23 164 P **P 18 37 04.2 -0.1**
comp=Z,2.9nm,0.4s,baz=340,slow=9.8,SNR=8.6
IDI Anoyia 23.90 83 P **P 18 37 10.8 +0.5**
comp=Z,10.0nm,0.5s,baz=267,slow=4.8,SNR=8.0
IDI Anoyia 23.90 83 P **P 18 37 11.7 +1.4**
MLR Muntele Rosu 24.94 58 P **P 18 37 20.3 +0.6**
comp=Z,18nm,0.9s,baz=292,slow=5.4,SNR=3.8
HFS Hagfors 27.05 20 P **P 18 37 38.8 +0.4**
comp=Z,2.5nm,0.7s,baz=180,slow=8.2,SNR=6.0
NOA NORSAR Array B 27.19 17 P **P 18 37 40.6 +1.0**
comp=Z,0.5nm,0.6s,baz=130,slow=10,SNR=2.4
AKASG Malin Array Be 28.45 48 P **P 18 37 49.2 -1.7**
comp=Z,3.9nm,0.9s,baz=247,slow=9.0,SNR=2.7
NACGM Naroch 28.77 39 *e* P 18 37 50.0 -3.7
DBIC Dimbokro 28.99 181 P **P 18 37 55.0 -1.0**
comp=Z,3.6nm,0.7s,baz=2.3,slow=9.6,SNR=1.0
FINES FINESS Array B 32.12 27 P **P 18 38 22.8 -0.4**
comp=Z,4.6nm,0.9s,baz=190,slow=5.4,SNR=1.9
MMAI Mount Meron Ar 32.90 83 P **P 18 38 30.6 +0.1**
comp=Z,2.8nm,0.5s,baz=282,slow=8.5,SNR=6.3
ASF Jabal al Asfar 34.35 84 P **P 18 38 43.2 +0.1**
comp=Z,1.3nm,0.5s,baz=0.0,slow=3.0,SNR=1.6
ARCES ARCESS Array B 37.57 17 P **P 18 39 10.6 +0.7**
comp=Z,1.4nm,0.5s,baz=212,slow=9.9,SNR=6.7
SFJD Kangerlussuaq 40.80 334 P **P 18 39 37.7 +1.0**
comp=Z,2.6nm,0.4s,baz=20,slow=3.2,SNR=2.0
SPITS Spitsbergen Ar 43.41 6 P **P 18 39 58.6 +0.7**
comp=Z,20nm,1.2s,baz=168,slow=10.0,SNR=5.4
GEYT Alibeck 49.32 68 P **P 18 40 44.2 -0.4**
comp=Z,0.9nm,0.3s,baz=258,slow=5.5,SNR=2.1
GEYT Alibeck 49.32 68 P **P 18 40 43.3 -1.3**
WSAR Wadi Sarin 55.52 85 P **P 18 41 30.2 -0.3**
comp=Z,2.8nm,0.8s,baz=297,slow=4.5,SNR=1.6
KURBB Kurchatov Arra 59.23 47 P **P 18 41 56.2 0.0**
comp=Z,2.2nm,0.5s,baz=294,slow=7.5,SNR=13
KURK Kurchatov 59.26 47 P **P 18 41 55.4 -0.9**
KURK IAmb IAmb 18 41 58.5
comp=Z,2.7nm,0.8s
ZALV Zalesovo Beam 61.63 42 P **P 18 42 12.9 +0.5**
comp=Z,0.7nm,0.3s,baz=296,slow=5.8,SNR=2.5
MKAR Makanchi Array 62.99 50 P **P 18 42 21.9 +0.3**
comp=Z,1.0nm,0.6s,baz=296,slow=5.3,SNR=5.3
ULM Lac du Bonnet 64.27 315 P **P 18 42 30.6 +0.6**
comp=Z,1.3nm,0.3s,baz=31,slow=11,SNR=2.1
ULM Lac du Bonnet 64.27 315 P **P 18 42 29.1 -0.9**
YKA Yellowknife Ar 67.29 332 P **P 18 42 49.9 +0.8**
comp=Z,1.5nm,0.8s,baz=70,slow=7.8,SNR=4.2
ILAR Eielson Array 75.51 344 P **P 18 43 40.9 +2.4**
comp=Z,0.5nm,0.6s,baz=18,slow=5.3,SNR=7.7
ILAR Eielson Array 75.51 344 P **P 18 43 40.7 +2.2**
PDAR Pinedale Array 76.19 313 P **P 18 43 43.5 +0.4**
comp=Z,0.3nm,0.4s,baz=73,slow=5.6,SNR=5.9
TXAR Lajitas Array 80.15 299 P **P 18 44 05.1 0.0**
comp=Z,0.1nm,0.5s,baz=57,slow=6.7,SNR=2.1
NVAR Mina Array Bea 84.09 314 P **P 18 44 26.4 +0.8**
comp=Z,0.2nm,0.4s,baz=67,slow=6.9,SNR=3.2
CMAR Chiang Mai Arr 89.80 67 P **P 18 44 54.0 +0.8**
comp=Z,0.6nm,0.8s,baz=298,slow=3.9,SNR=2.2
PETK Petropavlovsk- 90.12 11 P **P 18 44 55.9 +1.8**
comp=Z,6.6nm,1.0s,baz=294,slow=16,SNR=2.6
ASAR Alice Springs 142.19 83 PKhKP PKPpre 18 51 21.2
comp=Z,0.3nm,0.3s,baz=307,slow=2.0,SNR=7.4
ASAR PKP **PKPdf 18 51 24.8 -1.6**
comp=Z,0.3nm,0.3s,baz=350,slow=1.8,SNR=16
STKA Stephens Creek 151.67 92 PKP **PKPdf 18 51 43.0 +1.1**
comp=Z,3.0nm,0.8s,baz=325,slow=22,SNR=5.0
STKA PKPbc **PKPbc 18 51 48.1 -0.2**
comp=Z,2.8nm,0.9s,baz=344,slow=24,SNR=4.4

IDC 02 18:32:43.6±1.7, 5.47S×147.82E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/33, mbtmpb3.5/5, ML3.5/2, Error ellipse: s-maj=51.7km s-min=27.5km az=135.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.35**	**75**	Pn	Pn	18 33 50.0	-1.1
	2.1nm,0.3s,baz=251,slow=18,SNR=3.5						
WRA	**Warramunga Arr**	**19.46**	**221**	P	Pn	18 37 13.2	-0.1
	0.2nm,0.3s,baz=42,slow=12,SNR=15						
ASAR	**Alice Springs**	**22.51**	**215**	P	P	18 37 46.0	+0.8
	1.1nm,0.7s,baz=43,slow=7.7,SNR=34						
FITZ	**Fitzroy Crossi**	**25.03**	**238**	P	P	18 38 08.0	-1.8
	0.7nm,0.4s,baz=45,slow=11,SNR=8.4						
MKAR	**Makanchi Array**	**77.61**	**320**	P	P	18 44 42.9	+1.0
	0.2nm,0.4s,baz=119,slow=6.4,SNR=1.1						

*IDC **02** 18:40:26.3±5.5, 61.15S×154.56E, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.6/22, mbtmpb3.5/3, ML3.7/1, Error ellipse: s-maj=358.2km s-min=38.4km az=75.0*
*NEIC **02** 18:40:27.5±0.6, 61.1S±0.1×154.9E±0.6, h10km±2km, mb4.1/7, Error ellipse: s-maj=49.9km s-min=19.0km az=95.0*

ISC 02 18:40:27.4±1.2, 61.1S±0.1×154.8E±0.2, h10km, n14, σ06 61/10, mb3.6/5, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**7.00**	**20**	Pn	**Pn**	**18 42 10.3**	**+0.5**
PYZ	**Puysegur Point**	**16.51**	**30**	Pn	**Pn**	**18 44 18.1**	**-0.7**
VNDA	**Vanda**	**16.63**	**175**	Pn	**Pn**	**18 44 20.3**	**+0.1**
	0.2nm,0.3s,baz=345,slow=13,SNR=12						
VNDA	**Vanda**	**16.63**	**175**	Pn	**Pn**	**18 44 20.3**	**+0.1**
WHZ	**Wether Hill Ro**	**17.08**	**33**	Pn	**Pn**	**18 44 26.0**	**-0.1**
WHZ				IAmb	IAmb	18 44 38.6	
	comp=Z,39nm,1.4s						
H01W1	**Cape Leeuwin H**	**36.83**	**297**	T	T	19 26 17.6	
	baz=148,slow=75,SNR=17						
H01W2	**Cape Leeuwin H**	**36.83**	**297**	T	T	19 26 18.0	
	baz=148,slow=75,SNR=15						
H01W3	**Cape Leeuwin H**	**36.84**	**297**	T	T	19 26 18.9	
	baz=148,slow=75,SNR=47						
ASAR	**Alice Springs**	**40.12**	**329**	P	**P**	**18 48 03.3**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=163,slow=9.7,SNR=4.4						
AS31	**Alice Springs**	**40.12**	**329**	P	**P**	**18 48 03.7**	**+0.5**
AS31				IAmb	IAmb	18 48 07.3	
	comp=Z,1.6nm,1.2s						
WB2	**Warramunga Arr**	**43.60**	**331**	P	**P**	**18 48 30.4**	**-1.2**
WB2				IAmb	IAmb	18 48 37.7	
	comp=Z,4.2nm,1.2s						
WRA	**Warramunga Arr**	**43.60**	**331**	P	**P**	**18 48 31.5**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=164,slow=7.2,SNR=8.5						
WRA	**Warramunga Arr**	**43.60**	**331**	IAmb	IAmb	18 48 39.4	
	comp=Z,0.2nm,1.1s						
WB0	**Warramunga Arr**	**43.76**	**332**	P	**P**	**18 48 33.1**	**+0.2**
WB0				IAmb	IAmb	18 48 43.3	
	comp=Z,5.5nm,1.3s						

*IDC **02** 19:02:49.7±1.7, 43.87N×105.54W, h0km, mb1 3.8/3, mb1mx3.4/41, mbtmpb3.5/3, ML3.4/3, Error ellipse: s-maj=54.5km s-min=8.1km az=149.0*
*NEIC **02** 19:02:51±1.1, 43.79N±0.05×105.28W±0.04, h0km±2km, ML3.2/35, Error ellipse: s-maj=9.7km s-min=4.2km az=341.0*

ISC 02 19:02:50.1±1.0, 43.77N±0.05×105.32W±0.05, h0km, n28, σ1 9 41/29, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.99**	**69**	Pg	**Pg**	**19 03 09.1**	**0.0**
K22A	**Casper**	**1.42**	**219**		**Pg**	**19 03 16.8**	**-0.5**
K22A				IAML		19 03 40.5	
	comp=E,224nm,0.4s						
K22A				IAML		19 03 43.8	
	comp=N,242nm,0.6s						
PHWY	**Pilot Hill**	**2.46**	**182**	Pn	**Pn**	**19 03 32.8**	**+1.0**
RWWY	**Rawlins**	**2.50**	**215**		**Pb**	**19 03 34.5**	**-1.5**
RWWY				IAML		19 04 12.1	
	comp=N,120nm,0.5s						
RWWY				IAML		19 04 13.8	
	comp=N,146nm,0.8s						
N23A	**Red Feather La**	**2.91**	**189**		**Pn**	**19 03 39.6**	**+1.8**
N23A				IAML		19 04 22.3	
	comp=N,66nm,0.6s						
N23A				IAML		19 04 32.5	
	comp=E,54nm,0.9s						
LAQ	**LASA Array**	**2.99**	**348**		**Pn**	**19 03 39.4**	**+0.5**
RLMT	**Red Lodge**	**3.14**	**297**		**Pn**	**19 03 42.1**	**+1.1**
RLMT				IAML		19 04 37.4	
	comp=E,36nm,1.2s						
RLMT				IAML		19 04 46.6	
	comp=E,49nm,1.5s						
BW06	**Boulder Array**	**3.25**	**254**		**Pn**	**19 03 43.8**	**+1.2**
PD31	**Pinedale Array**	**3.25**	**254**		**Pn**	**19 03 43.7**	**+1.1**
PDAR	**Pinedale Array**	**3.25**	**254**	Pn	**Pn**	**19 03 43.3**	**+0.7**
	comp=E,3.2nm,0.3s,baz=66,slow=16,SNR=75						
PDAR				Pg	**Pb**	**19 03 48.0**	**-0.8**
	comp=E,6.9nm,0.3s,baz=67,slow=16,SNR=47						
PDAR				Lg	Lg	19 04 30.0	
	comp=E,11nm,0.3s,baz=70,slow=30,SNR=14						
PDAR	**Pinedale Array**	**3.25**	**254**		**Pn**	**19 03 43.5**	**+0.9**
YNE	**Yellowstone No**	**3.58**	**292**		**Pn**	**19 03 47.9**	**+0.7**
YMP	**Mirror Lake Pl**	**3.61**	**287**		**Pn**	**19 03 47.9**	**+0.3**
GCMT	**Greycliff**	**3.70**	**305**		**Pn**	**19 03 50.0**	**+1.3**
H17A	**Grant Village**	**3.84**	**281**		**Pn**	**19 03 53.0**	**+2.4**
H17A				IAML		19 04 17.6	
	comp=E,27nm,4.6s						
FLWY	**Flagg Ranch**	**3.90**	**277**		**Pn**	**19 03 53.3**	**+1.9**
FLWY				IAML		19 05 06.9	
	comp=E,44nm,1.9s						
ISCO	**Idaho Springs**	**3.97**	**183**		**Pn**	**19 03 54.2**	**+1.7**
ISCO				IAML		19 05 04.0	
	comp=E,19nm,0.9s						
TPAW	**Teton Pass**	**4.10**	**268**	Pn	**Pn**	**19 03 56.2**	**+1.9**
TPAW				IAML		19 05 12.1	
	comp=E,34nm,4.3s						
TPAW				IAML		19 05 38.7	
	comp=E,19nm,4.5s						
O20A	**White River Ci**	**4.23**	**212**		**Pn**	**19 03 57.3**	**+1.3**
O20A				IAML		19 05 54.5	
	comp=E,41nm,3.8s						
E28A	**Huff**	**4.31**	**48**	Pn	**Pn**	**19 03 57.9**	**+0.9**
BOZ	**Bozeman (W)**	**4.86**	**294**		**Pn**	**19 04 06.4**	**+1.8**
BOZ				IAML		19 06 07.2	
	comp=E,18nm,4.6s						
BOZ				IAML		19 06 15.1	
	comp=E,21nm,4.6s						
HWUT	**Hardware Ranch**	**5.08**	**247**		**Pn**	**19 04 08.8**	**+1.1**
HWUT				IAML		19 05 37.8	
	comp=E,20nm,2.7s						
HRY	**Holter Researc**	**5.46**	**305**		**Pn**	**19 04 14.0**	**+1.2**
SRU	**San Rafael Swe**	**6.08**	**222**		**Pn**	**19 04 22.0**	**+0.6**
TMUT	**Trail Mountain**	**6.28**	**227**		**Pn**	**19 04 26.2**	**+2.0**
Q16A	**Castle Valley**	**6.54**	**224**		**Pn**	**19 04 29.0**	**+1.2**
ULM	**Lac du Bonnet**	**9.14**	**42**	Pn	**Pn**	**19 05 01.8**	**-1.4**
	comp=E,1.4nm,0.3s,baz=232,slow=11,SNR=13						
ULM				Lg	Lg	19 07 30.1	
	comp=E,0.4nm,0.3s,baz=228,slow=8.2,SNR=1.8						
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn	**Pn**	**19 05 33.0**	**+2.1**
	comp=E,0.1nm,0.3s,baz=50,slow=14,SNR=1.4						

IDC 02 19:05:39.8±21.0, 49.42S×113.21E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/36, mbtmpb3.6/3, Error ellipse: s-maj=767.9km s-min=27.9km az=101.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.53**	**3**	T	T	19 24 53.7	
	baz=178,SNR=40						
H01W1	**Cape Leeuwin H**	**14.53**	**3**	T	T	19 24 55.8	
	baz=178						
H01W3	**Cape Leeuwin H**	**14.54**	**3**	T	T	19 24 54.8	
	baz=178						
ASAR	**Alice Springs**	**30.41**	**40**	P	P	19 11 53.5	-0.3
	0.5nm,1.0s,baz=208,slow=7.9,SNR=4.5						
VNDA	**Vanda**	**33.59**	**163**	P	P	19 12 21.0	0.0
	0.8nm,0.5s,baz=287,slow=13,SNR=17						
WRA	**Warramunga Arr**	**33.92**	**37**	P	P	19 12 24.7	+0.2
	0.4nm,0.8s,baz=203,slow=10,SNR=5.0						

*DJA **02** 19:08:58.3±2.0, 6°S±3°×14°E±°, h15km±15km, M4.7/19, mb4.7/19, mB5.1/6, MLv4.9/3, Mw(mB)4.5/6, Mwp5.8/1*
*NEIC **02** 19:08:59.1±2.4, 6.03S±0.08×146.61E±0.10, h44km±7km, mb4.5/24, Error ellipse: s-maj=14.2km s-min=11.3km az=118.0*
*IDC **02** 19:09:00.2±2.0, 6.05S×146.64E, h51km±20km, mb4.0/14, mb1 4.2/20, mb1mx4.1/41, mbtmp4.4/20, ML4.2/5, MS3.8/4, Ms1 3.8/4, ms1mx3.3/42, Error ellipse: s-maj=18.0km s-min=12.0km az=87.0*

ISC 02 19:08:58.8±0.4, 6.02S±0.05×146.67E±0.06, h35km, n74, σ1 9 79/70, mb4.6/28, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.40**	**172**	P	**Pn**	**19 09 49.9**	**+0.6**
	27nm,0.3s,baz=42,slow=5.3,SNR=50						
PMG				S	**Sn**	**19 10 29.4**	**+1.0**
	54nm,0.3s,baz=100,slow=12,SNR=3.0						
PMG				LR	LR	19 11 33.1	
	comp=Z,2μm,18.7s,baz=3.0,slow=45						
KRVT	**Keravat (AS076**	**5.60**	**73**	P	**Pn**	**19 10 23.1**	**+3.4**
	22nm,0.3s,baz=255,slow=1.1,SNR=37						
RABL	**Rabaul**	**5.77**	**72**	Pn	**Pn**	**19 10 22.2**	**+0.3**
GENI	**Genyem**	**7.32**	**297**	P	Pn	19 11 01.3	+18
HNR	**Honiara**	**13.58**	**105**	P	**Pn**	**19 12 11.5**	**+2.4**
	3.2nm,0.3s,baz=152,slow=7.4,SNR=2.4						
HNR				LR	LR	19 16 55.6	
	comp=Z,209nm,20.6s,baz=295,slow=35						
HNR	**Honiara**	**13.58**	**105**		**Pn**	**19 12 08.7**	**-0.4**
CTA	**Charters Tower**	**13.99**	**182**	P	**Pn**	**19 12 17.1**	**+2.5**
	0.4nm,0.3s,baz=346,slow=12,SNR=3.6						
CTAO	**Charters Tower**	**13.99**	**182**	Pn	**Pn**	**19 12 14.9**	**+0.3**
SIJI	**Sorong**	**16.20**	**288**	P	**P**	**19 12 45.4**	**-1.3**
	1.1nm,0.3s,baz=65,slow=12,SNR=15						
MTN	**Manton Dam**	**16.75**	**245**	P	**P**	**19 12 52.2**	**-0.7**
MTN				IAmb	IAmb	19 13 10.4	
	comp=Z,13nm,0.8s						
WB0	**Warramunga Arr**	**18.14**	**220**		**Pn**	**19 13 06.7**	**-1.4**
WR0	**Warramunga Arr**	**18.19**	**219**	P	**P**	**19 13 08.3**	**-0.4**
WRAB	**Tennant Creek**	**18.29**	**220**	P	**Pn**	**19 13 09.7**	**-0.2**
WRAB				IAmb	IAmb	19 13 22.8	
	comp=Z,12nm,0.8s						
WB2	**Warramunga Arr**	**18.30**	**220**		**Pn**	**19 13 09.8**	**-0.2**
WRA	**Warramunga Arr**	**18.30**	**220**	P	**P**	**19 13 09.4**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=45,slow=12,SNR=32						
WRA				PcP	**PcP**	**19 17 41.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=24,slow=1.6,SNR=5.6						
WRA	**Warramunga Arr**	**18.30**	**220**	P	**P**	**19 13 08.4**	**-1.6**
NLAI	**Namlea**	**19.70**	**277**	P	**Pn**	**19 13 30.3**	**+3.4**
	comp=Z,1μmcomp=Z,24nm,0.7s						
KNRA	**Kununurra**	**20.02**	**240**	P	**P**	**19 13 25.6**	**-3.1**
KNRA				IAmb	IAmb	19 13 42.6	
	comp=Z,16nm,0.8s						
SANI	**Sanana**	**21.00**	**280**	P	**P**	**19 13 43.2**	**+3.8**
	comp=Z,28nm,1.0s						
AS31	**Alice Springs**	**21.41**	**214**	P	**P**	**19 13 43.9**	**0.0**
ASAR	**Alice Springs**	**21.42**	**214**	P	**P**	**19 13 43.9**	**0.0**
	comp=Z,1.4nm,0.5s,baz=57,slow=8.6,SNR=21						
ASAR	**Alice Springs**	**21.42**	**214**	P	**P**	**19 13 43.1**	**-0.7**
SANVU	**Saraoutou**	**22.22**	**117**	P	**P**	**19 13 49.5**	**-3.0**
BATI	**Baumata**	**23.15**	**258**	P	**P**	**19 14 05.6**	**+3.3**
	comp=Z,30nm,0.6s,baz=83,slow=21,SNR=2.6						
BATI				LR	LR	19 25 19.4	
	comp=Z,268nm,21.6s,baz=92,slow=42						
BATI	**Baumata**	**23.15**	**258**	P	**P**	**19 14 06.1**	**+3.8**
	comp=Z,31nm,0.8s						
FITZ	**Fitzroy Crossi**	**23.77**	**238**	P	**P

	comp=Z,108nm,0.4s							
MORW	**Morawa**	**36.91**	**228**	P	**P**	**19 16 04.3**	**-0.1**
MORW				IAmb	IAmb	19 16 19.2	
	comp=Z,23nm,1.3s							
TPUB	**Ta-pu**	**38.69**	**320**	P	**P**	**19 16 18.9**	**-0.6**
JNU	**Nakatsue**	**41.72**	**340**	P	**P**	**19 16 43.5**	**-1.0**
	comp=Z,18nm,0.9s,baz=68,slow=3.8,SNR=4.3							
JNU	**Nakatsue**	**41.72**	**340**	P	**P**	**19 16 41.0**	**-3.5**
URZ	**Urewera**	**42.33**	**144**	LR	LR	19 33 25.1	
	comp=Z,200nm,19.9s,baz=24,slow=35							
KSRS	**Korea Array**	**46.66**	**339**	P	**P**	**19 17 23.8**	**-0.2**
	comp=Z,5.3nm,1.0s,baz=156,slow=9.5,SNR=8.8							
IPM	**Ipoh**	**46.76**	**282**	P	**P**	**19 17 24.5**	**-0.7**
IPM				IAmb	IAmb	19 17 28.1	
	comp=Z,8.5nm,0.6s							
KULM	**Kulim**	**47.30**	**283**	P	**P**	**19 17 29.3**	**-0.1**
KULM				IAmb	IAmb	19 17 31.2	
	comp=Z,6.8nm,0.7s							
USRK	**Ussuriysk Ar.**	**51.72**	**347**	P	**P**	**19 18 02.5**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=178,slow=8.7,SNR=2.5							
USRK	**Ussuriysk Ar.**	**51.72**	**347**	P	**P**	**19 18 00.8**	**-1.7**
CMAR	**Chiang Mai Arr**	**52.97**	**298**	P	**P**	**19 18 13.5**	**+1.2**
	comp=Z,2.6nm,0.9s,baz=120,slow=5.7,SNR=14							
XAN	**Xi'an**	**53.49**	**321**	P	**P**	**19 18 17.6**	**+1.6**
XAN				pP	pP	19 18 28.1	+1.1
XAN				pmax	pmax			
	comp=Z,13nm,1.1s							
PETK	**Petropavlovsk-**	**59.65**	**8**	P	**P**	**19 19 00.5**	**+1.2**
	comp=Z,10nm,1.1s,baz=182,slow=4.5,SNR=4.1							
GTA	**Gaotai**	**62.55**	**320**	*eP*	**P**	**19 19 19.7**	**+0.2**
GTA				pP	pP	19 19 23.8	-7.1
GTA				sP	sP	19 19 27.1	-8.1
GTA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**64.27**	**331**	P	**P**	**19 19 30.5**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=145,slow=5.3,SNR=9.1							
SONM	**Songino Array**	**64.27**	**331**	P	**P**	**19 19 31.8**	**+1.1**
VNDA	**Vanda**	**71.91**	**177**	P	**P**	**19 20 18.1**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=324,slow=6.5,SNR=15							
VNDA	**Vanda**	**71.91**	**177**	P	**P**	**19 20 18.5**	**+0.6**
VNDA				IAmb	IAmb	19 20 32.6	
	comp=Z,2.3nm,0.8s							
MKAR	**Makanchi Array**	**77.31**	**321**	P	**P**	**19 20 48.0**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=86,slow=6.7,SNR=4.3							
MKAR	**Makanchi Array**	**77.31**	**321**	P	**P**	**19 20 47.0**	**-2.8**
ZALV	**Zalesovo Beam**	**78.86**	**328**	P	**P**	**19 20 56.1**	**-2.1**
	comp=Z,0.8nm,0.6s,baz=109,slow=6.3,SNR=4.0							
QSPA	**South Pole Qui**	**83.94**	**180**	P	**P**	**19 21 24.2**	**-0.9**
QSPA				IAmb	IAmb	19 21 32.1	
	comp=Z,7.3nm,1.4s							
RND	**Reindeer**	**84.27**	**24**	P	**P**	**19 21 25.4**	**-1.4**
RND				IAmb	IAmb	19 21 29.3	
	comp=Z,16nm,1.2s							
IL31		**85.63**	**23**	P	**P**	**19 21 32.1**	**-1.2**
IL31				IAmb	IAmb	19 21 32.8	
	comp=Z,2.9nm,0.7s							
ILAR	**Eielson Array**	**85.63**	**23**	P	**P**	**19 21 31.5**	**-2.0**
	comp=Z,2.1nm,0.7s,baz=250,slow=5.1,SNR=21							
ILAR	**Eielson Array**	**85.63**	**23**	P	**P**	**19 21 31.3**	**-2.2**
LPAZ	**La Paz**	**139.05**	**123**	PKP	**PKiKP**	**19 28 24.4**	**-1.5**
	comp=Z,2.5nm,0.7s,baz=270,slow=1.5,SNR=8.7							
TORD	**Torodi Ar. Bea**	**144.78**	**284**	PKP	**PKPdf**	**19 28 32.3**	**-0.8**
	comp=Z,3.7nm,0.7s,baz=73,slow=3.0,SNR=30							
TORD	**Torodi Ar. Bea**	**144.78**	**284**		**PKPdf**	**19 28 32.5**	**-0.6**
KIC	**Kosan Boka**	**151.58**	**272**	*e*PKP1	**PKiKP**	**19 28 50.3**	**-0.6**
	comp=Z,8.7nm,0.6s							
DBIC	**Dimbokro**	**151.69**	**273**	PKPbc	**PKiKP**	**19 28 51.0**	**-0.1**
	comp=Z,4.6nm,0.6s,baz=88,slow=3.6,SNR=14							
DBIC	**Dimbokro**	**151.69**	**273**		**PKiKP**	**19 28 51.2**	**+0.1**
TIC	**Toumodi**	**151.86**	**273**	*e*PKP1	**PKPbc**	**19 28 50.9**	**-0.2**
LIC	**Lamto**	**151.86**	**272**	*e*PKP1	**PKiKP**	**19 28 51.0**	**-0.5**
	comp=Z,25nm,0.7s							
BDFB	**Brasilia**	**154.02**	**146**	PKPbc	**PKPbc**	**19 28 55.1**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=335,slow=1.9,SNR=3.4							

*IDC **02** 19:13:40.6±2.4,6.°10S×146.°70E,h66km±23km,mb3.7/9, mb1 3.9/14,mb1mx3.7/45,mbtmp4.0/14,Error ellipse: s-maj=23.9km s-min=16.2km az=94.0*

ISC 02 19:13:38.1±1.0,**6.00S**±0.°07×**146.5E**±0.°1,**h35**km,**n15**, σ1⁹**20**/16,**mb3.9**/9,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.44**	**169**	P	**Pn**	**19 14 29.5**	**+0.2**
	9.9nm,0.3s,baz=309,slow=7.9,SNR=10.0						
PMG				S	**Sn**	19 15 09.2	+0.3
	20nm,0.3s,baz=277,slow=19,SNR=1.7						
KRVT	**Keravat (AS076**	**5.76**	**73**	P	**Pn**	**19 15 02.3**	**+1.1**
	3.0nm,0.3s,baz=339,slow=22,SNR=2.8						
CTA	**Charters Tower**	**14.00**	**181**	P	**Pn**	**19 16 55.7**	**+1.6**
	0.3nm,0.3s,baz=352,slow=12,SNR=2.4						
SIJI	**Sorong**	**16.03**	**288**	P	**P**	**19 17 24.3**	**+0.2**
	0.4nm,0.3s,baz=206,slow=8.5,SNR=5.0						
WRA	**Warramunga Arr**	**18.21**	**219**	P	**Pn**	**19 17 47.5**	**-0.7**
	0.4nm,0.3s,baz=42,slow=12,SNR=7.7						
ASAR	**Alice Springs**	**21.33**	**213**	P	**P**	**19 18 21.8**	**-0.5**
	1.3nm,0.7s,baz=52,slow=8.8,SNR=6.9						
FITZ	**Fitzroy Crossi**	**23.64**	**238**	P	**P**	**19 18 47.1**	**+0.9**
	10nm,0.6s,baz=47,slow=8.3,SNR=16						
STKA	**Stephens Creek**	**26.14**	**189**	P	**P**	**19 19 08.8**	**-0.3**
	1.4nm,0.5s,baz=355,slow=11,SNR=3.9						
CMAR	**Chiang Mai Arr**	**52.81**	**290**	P	**P**	**19 22 52.5**	**+2.1**
	1.7nm,0.9s,baz=124,slow=5.8,SNR=13						
SONM	**Songino Array**	**64.16**	**331**	P	**P**	**19 24 09.8**	**+0.6**
	0.1nm,0.3s,baz=107,slow=28,SNR=2.3						
VNDA	**Vanda**	**71.94**	**177**	P	**P**	**19 24 56.5**	**-1.0**
	0.9nm,0.7s,baz=321,slow=7.5,SNR=6.6						
MKAR	**Makanchi Array**	**77.18**	**321**	P	**P**	**19 25 27.9**	**-0.5**
	1.0nm,1.0s,baz=102,slow=6.3,SNR=3.6						
MAW	**Mawson**	**82.05**	**203**	P	**P**	**19 25 53.4**	**-1.0**
	1.3nm,0.8s,baz=123,slow=1.8,SNR=4.4						
ILAR	**Eielson Array**	**85.68**	**23**	P	**P**	**19 26 10.5**	**-2.5**
	1.1nm,0.8s,baz=252,slow=4.9,SNR=7.4						
TORD	**Torodi Ar. Bea**	**144.60**	**284**	PKP	**PKPab**	**19 33 10.5**	**-0.2**
	1.1nm,0.6s,baz=70,slow=3.3,SNR=11						

*IDC **02** 19:20:29.0±0.8,7.°81N×94.°93E,h0km,mb3.9/10, mb1 4.0/11,mb1mx3.8/52,mbtmp3.9/11,ML3.9/1,MS3.9/2, Ms1 3.9/2,ms1mx3.1/45,Error ellipse: s-maj=31.5km s-min=19.5km az=59.0*

*NEIC **02** 19:20:31.7±2.3,7.°8N±0.°1×94.°6E±0.°1,h16km±5km, mb4.4/10,Error ellipse: s-maj=22.9km s-min=6.7km az=49.0*

ISC 02 19:20:30.7±0.6,**7.82N**±0.°09×**94.81E**±0.°09,**h10**km,**n37**, σ1⁹**77**/33,**mb4.3**/17,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.33**	**140**		**Pn**	**19 21 24.1**	**+1.2**
KULM	**Kulim**	**6.32**	**113**		**Pn**	**19 22 06.7**	**+2.7**
PSI	**Prapat**	**6.45**	**140**	Pn	**Pn**	**19 22 09.6**	**+3.7**
	0.8nm,0.3s,baz=142,slow=2.1,SNR=4.2						
RPSI	**Rantau Prapat**	**6.53**	**141**		**Pn**	**19 22 09.6**	**+2.7**
RPSI	**Rantau Prapat**	**6.53**	**141**	Pn	**Pn**	**19 22 08.5**	**+1.6**
IPM	**Ipoh**	**7.01**	**118**		**Pn**	**19 22 14.9**	**+1.4**
GSI	**Gunungsitoli**	**7.03**	**157**	Pn	**Pn**	**19 22 13.6**	**-0.2**
PALK	**Pallekele**	**14.00**	**269**	Pn	**Pn**	**19 23 51.1**	**+1.8**
	0.5nm,0.3s,baz=192,slow=11,SNR=4.3						
SBUM	**Sibu**	**18.13**	**106**	P	**Pn**	**19 24 39.8**	**-3.0**
LEM	**Lembang**	**19.36**	**138**	LR	LR	19 32 40.1	
	comp=Z,171nm,18.6s,baz=160,slow=38						
LSA	**Lhasa**	**22.04**	**351**	P	**P**	**19 25 24.8**	**-1.3**
H08S3	**Diego Garcia H**	**27.04**	**236**	T	T	19 52 54.4	
	baz=53,slow=74,SNR=251						
H08S2	**Diego Garcia H**	**27.04**	**236**	T	T	19 52 50.2	
	baz=53,slow=74,SNR=12						
H08S1	**Diego Carcia H**	**27.06**	**236**	T	T	19 52 50.5	
	baz=53,slow=74,SNR=5.5						
MK31	**Makanchi Array**	**40.29**	**347**		**P**	**19 28 07.8**	**-0.3**
MK31				IAmb	IAmb	19 28 25.4	
	comp=Z,6.2nm,1.5s						
MKAR	**Makanchi Array**	**40.29**	**347**	P	**P**	**19 28 08.1**	**0.0**
	comp=Z,0.9nm,0.5s,baz=167,slow=7.6,SNR=14						
MKAR	**Makanchi Array**	**40.29**	**347**	P	**P**	**19 28 07.8**	**-0.3**
MAKZ	**Makanchi**	**40.38**	**346**	P	**P**	**19 28 09.0**	**+0.2**
MAKZ				IAmb	IAmb	19 28 09.2	
	comp=Z,9.5nm,1.5s						
SONM	**Songino Array**	**41.07**	**12**	P	**P**	**19 28 16.0**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=131,slow=48,SNR=2.1						
GEYT	**Alibeck**	**44.69**	**318**	P	**P**	**19 28 44.1**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=134,slow=11,SNR=4.5						
KURK	**Kurchatov**	**44.83**	**345**	P	**P**	**19 28 45.2**	**+0.4**
KURK				IAmb	IAmb	19 28 51.7	
	comp=Z,6.3nm,1.1s						
ZALV	**Zalesovo Beam**	**46.70**	**352**	P	**P**	**19 29 00.0**	**+0.4**
	comp=Z,1.7nm,0.4s,baz=169,slow=7.1,SNR=8.5						
ZALV	**Zalesovo Beam**	**46.70**	**352**	P	**P**	**19 28 60.0**	**+0.4**
WB0	**Warramunga Arr**	**47.64**	**126**	P	**P**	**19 29 09.4**	**+1.9**
WRA	**Warramunga Arr**	**47.69**	**126**	P	**P**	**19 29 07.3**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=305,slow=8.5,SNR=5.1						
WB2	**Warramunga Arr**	**47.70**	**126**	P	**P**	**19 29 10.5**	**+2.6**
WB2				IAmb	IAmb	19 29 20.0	
	comp=Z,3.8nm,1.1s						
ASAR	**Alice Springs**	**49.37**	**130**	P	**P**	**19 29 18.4**	**-2.4**
	comp=Z,0.3nm,0.8s,baz=325,slow=7.9,SNR=2.8						
ASAR				PcP	**PcP**	**19 30 42.9**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=301,slow=36,SNR=1.2						
RAYN	**Ar Rayn**	**49.72**	**294**	P	**P**	**19 29 21.7**	**-1.8**
RAYN				IAmb	IAmb	19 29 28.5	
	comp=Z,6.4nm,0.8s						
ABKAR	**Akbulak array**	**50.60**	**331**	P	**P**	**19 29 29.5**	**-0.2**
BBOO	**Buckleboo**	**56.33**	**138**	P	**P**	**19 30 09.4**	**-2.6**
TIXI	**Tiksi**	**67.16**	**11**	P	**P**	**19 31 25.1**	**+0.7**
TIXI				IAmb	IAmb	19 31 31.8	
	comp=Z,8.3nm,1.5s						
FINES	**FINESS Array B**	**73.07**	**332**	P	**P**	**19 31 59.4**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=111,slow=8.4,SNR=8.4						
ARCES	**ARCESS Array B**	**75.54**	**340**	P	**P**	**19 32 17.3**	**+2.2**
	comp=Z,1.9nm,0.7s,baz=64,slow=2.8,SNR=3.7						
BOSA	**Boshof**	**76.12**	**238**	P	**P**	**19 32 21.2**	**+1.9**
	comp=Z,4.0nm,0.8s,baz=93,slow=5.4,SNR=6.3						
GERES	**GERESS Array B**	**78.31**	**318**	P	**P**	**19 32 30.1**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=103,slow=4.2,SNR=3.6						
NB2	**NORSAR Subarra**	**80.11**	**331**	P	**P**	**19 32 38.7**	**-2.1**
	comp=Z,1.8nm,0.8s,baz=91,slow=5.1						
URZ	**Urewera**	**88.79**	**129**	LR	LR	20 13 38.3	
	comp=Z,118nm,21.6s,baz=43,slow=36						

*NNC **02** 19:25:56.4±13.0,37.°13N×70.°59E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=107.9km s-min=94.1km az=169.0*

ISC 02 19:25:54.1±1.8,**36.63N**±0.°08×**71.1E**±0.°2,**h200**km,**n16**, σ1⁹**67**/22,**4C-2D**,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**4.99**	**140**	*eP*	**Pn**	**19 27 09.7**	**+1.3**
JMU				*ex*	x	19 27 56.1	
THN	**Thein Dam**	**5.64**	**137**	*eP*	**Pn**	**19 27 19.5**	**+2.7**
THN				*eS*	**Sn**	**19 28 22.5**	**+0.5**
DHRM	**DHARAMSHALA**	**6.11**	**134**	*eP*	**Pn**	**19 27 24.5**	**+1.5**
DHRM				*eS*	**Sn**	**19 28 31.3**	**-2.0**
DHRM				IAML		19 28 34.0	
	comp=E,102nm,1.0s						
DHRM				IAML		19 28 35.6	
	comp=N,104nm,0.0s						
KK31	**Karatay Array**	**6.49**	**356**	⇑Pn	**Pn**	**19 27 28.9**	**+1.3**
	comp=N,0.5nm,0.3s,baz=193,slow=16,SNR=9.5						
KK31				⇓Sn	**Sn**	**19 28 37.4**	**-4.3**
	comp=N,22nm,1.1s,baz=188,slow=22,SNR=13						
AAK	**Ala-Archa**	**6.54**	**22**	⇓Pn	**Pn**	**19 27 30.2**	**+1.8**
	comp=N,2.7nm,0.8s						
AAK				⇑Sn	**Sn**	**19 28 43.5**	**+0.3**
	comp=N,7.5nm,0.6s						
TKM2	**Tokmak 2**	**7.17**	**27**	⇑Pn	**Pn**	**19 27 37.7**	**+1.1**
	comp=N,1.4nm,0.5s						
TKM2				⇑Sn	**Sn**	**19 28 57.8**	**-0.2**
	comp=N,3.3nm,1.1s						
SMLA	**Simla**	**7.43**	**136**	*eP*	**Pn**	**19 27 40.6**	**+0.6**
SMLA				*eS*	**Sn**	**19 29 00.9**	**-3.2**
PYUN	**Piuthan**	**13.14**	**127**	*eP*	**Pn**	**19 28 54.0**	**+0.5**
	comp=N,18nm,0.3s						
DANN	**Dangsing**	**13.47**	**124**	*eP*	**Pn**	**19 28 57.8**	**0.0**
	comp=N,6.5nm,0.3s						
KOLN	**Koldanda**	**13.76**	**126**	*eP*	**Pn**	**19 29 01.2**	**0.0**
	comp=N,11nm,0.5s						
GKN	**Gorkha**	**14.29**	**123**	*eP*	**P**	**19 29 08.3**	**-1.0**
	comp=N,11nm,0.3s						
DMN	**Daman**	**14.86**	**123**	*eP*	**P**	**19 29 15.6**	**-0.1**
	comp=N,15nm,0.5s						
KKN	**Kakani**	**14.86**	**122**	*eP*	**P**	**19 29 15.0**	**-0.7**
PKIN	**Phulchoki**	**15.07**	**123**	*eP*	**P**	**19 29 17.6**	**-0.5**
PKI	**Pulchoki**	**15.09**	**123**	*eP*	**P**	**19 29 18.3**	**0.0**
	comp=N,16nm,0.7s						
GUN	**Gumba**	**15.19**	**121**	*eP*	**P**	**19 29 19.7**	**+0.2**

*IDC **02** 19:28:13.6±1.6,25.°49N×109.°37W,h0km,mb1 3.5/3, mb1mx3.4/48,mbtmp3.0/3,ML3.5/3,Error ellipse: s-maj=33.9km s-min=11.9km az=126.0*

*MEX **02** 19:28:18.1±0.4,25.°72N×109.°91W,h10km,MD3.9*

ISC 02 19:28:14.0±1.1,**25.58N**±0.°05×**109.58W**±0.°06,**h11**km,**n8**, σ1⁹**93**/13,**Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSIG	**Topolobambo**	**0.48**	**88**	*i* P	**Pn**	**19 28 26.9**	**+0.1**
TSIG				*i* S	**Sb**	**19 28 36.9**	**+5.3**
LPIG	**La Paz**	**1.62**	**204**	Pn	**Pg**	**19 28 45.3**	**+0.3**
	12nm,0.3s,baz=56,slow=20,SNR=5.2						
LPIG				Lg	Lg	19 29 03.5	
	12nm,0.3s,baz=205,slow=23,SNR=5.0						
CSIG	**Choix**	**1.65**	**41**	*i* P	**Pg**	**19 28 45.3**	**-0.3**
CSIG				*i* S	**Sg**	**19 29 07.0**	**0.0**
SSIG	**Sanalona**	**2.33**	**108**	*i* P	**Pg**	**19 28 57.9**	**-0.8**
SSIG				*i* S	**Sg**	**19 29 29.9**	**+0.9**
PDIG	**Papasquiaro**	**3.82**	**97**	*i* P	**Pb**	**19 29 19.8**	**-1.8**
PDIG				*i* S	**Sb**	**19 30 06.0**	**-1.9**
TXAR	**Lajitas Array**	**6.44**	**53**	Pn	**Pn**	**19 29 49.9**	**+1.0**
	0.2nm,0.3s,baz=227,slow=14,SNR=8.1						
TXAR				Sn	**Sn**	**19 31 02.4**	**-0.1**
	0.5nm,0.3s,baz=234,slow=17,SNR=3.6						
TXAR				Lg	Lg	19 31 30.2	
	0.6nm,0.3s,baz=235,slow=15,SNR=3.9						
NVAR	**Mina Array Bea**	**14.78**	**332**	Pn	**P**	**19 31 48.8**	**-0.4**
	0.1nm,0.3s,baz=133,slow=37,SNR=2.3						
PDAR	**Pinedale Array**	**17.14**	**0**	P	**P**	**19 32 15.5**	**+0.1**
	0.0nm,0.3s,baz=150,slow=9.3,SNR=3.3						

*NEIC **02** 19:31:46.9±2.0,22.°9S±0.°1×178.°1W±0.°2,h443km±22km, mb4.3/21, Error ellipse: s-maj=29.4km s-min=21.1km az=99.0*

*IDC **02** 19:32:05.7±11.0,23.°88S×179.°55W,h550km±127km, mb3.6/3,mb1 3.7/4,mb1mx3.0/33,mbtmp4.6/4, Error ellipse: s-maj=94.4km s-min=36.5km az=32.0*

ISC 02 19:31:47.6±0.8,**23.0S**±0.°1×**178.1W**±0.°1,**h450**km,**n31**, σ1⁹**63**/31,**mb4.2**/12,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**6.25**	**178**	P	**P**	**19 33 22.3**	**-2.0**
NIUE	**Niue**	**8.57**	**65**	P	**P**	**19 33 48.1**	**-1.1**
OUZ	**Omahuta**	**14.18**	**209**	P	**P**	**19 34 52.1**	**+2.3**
SANVU	**Saraoutou**	**15.76**	**296**	P	**P**	**19 35 06.4**	**-0.6**
URZ	**Urewera**	**15.77**	**194**	P	**P**	**19 35 09.5**	**+2.8**
	4.1nm,0.3s,baz=317,slow=2.4,SNR=13						
URZ				S	S	19 37 37.9	-13
	0.7nm,0.3s,baz=142,slow=13,SNR=1.2						
URZ	**Urewera**	**15.77**	**194**	P	**P**	**19 35 10.9**	**+4.2**
BKZ	**Black Stump Fm**	**16.78**	**195**	P	**P**	**19 35 18.6**	**+1.2**
BKZ				IAmb	IAmb	19 35 25.7	
	comp=Z,17nm,1.1s						
QRZ	**Quartz Range**	**19.46**	**202**	P	**P**	**19 35 44.6**	**+0.7**
RPZ	**Rata Peaks**	**22.53**	**201**	P	**P**	**19 36 12.9**	**+1.1**
	comp=Z,14nm,0.5s,baz=262,slow=1.6,SNR=7.2						
LBZ	**Lake Benmore**	**23.42**	**201**	P	**P**	**19 36 17.7**	**-2.1**
LBZ				IAmb	IAmb	19 36 29.1	
	comp=Z,20nm,1.1s						
ARMA	**Armidale**	**27.97**	**248**	P	**P**	**19 36 59.8**	**-0.6**
ARMA				IAmb	IAmb	19 37 03.4	
	comp=Z,13nm,1.1s						
EIDS	**Eidsvold**	**28.18**	**259**	P	**P**	**19 37 01.4**	**-0.8**
CAN	**Canberra**	**31.10**	**239**	P	**P**	**19 37 26.8**	**-0.8**
CAN				IAmb	IAmb	19 37 28.5	
	comp=Z,8.8nm,1.0s						
CTAO	**Charters Tower**	**33.23**	**268**	P	**P**	**19 37 47.0**	**+1.1**
CTAO				IAmb	IAmb	19 37 47.6	
	comp=Z,7.8nm,0.7s						
PATS	**Pohnpei**	**37.55**	**319**	P	**P**	**19 38 21.3**	**-0.9**
BBOO	**Buckleboo**	**41.40**	**246**	P	**P**	**19 38 52.7**	**-0.6**
BBOO				IAmb	IAmb	19 39 04.4	
	comp=Z,16nm,1.1s						
AS31	**Alice Springs**	**43.91**	**259**	P	**P**	**19 39 13.0**	**-0.2**
ASAR	**Alice Springs**	**43.91**	**259**	P	**P**	**19 39 12.8**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=96,slow=7.2,SNR=34						
ASAR	**Alice Springs**	**43.91**	**259**	P	**P**	**19 39 12.3**	**-0.9**
WR0	**Warramunga Arr**	**44.03**	**265**	P	**P**	**19 39 14.0**	**-0.1**
WB2	**Warramunga Arr**	**44.20**	**265**	P	**P**	**19 39 15.3**	**-0.2**
WB2				IAmb	IAmb	19 39 16.0	
	comp=Z,6.3nm,0.9s						
WB0	**Warramunga Arr**	**44.20**	**265**	P	**P**	**19 39 15.3**	**-0.2**
WB0				IAmb	IAmb	19 39 15.9	
	comp=Z,7.1nm,0.8s						
WRAB	**Tennant Creek**	**44.21**	**265**	P	**P**	**19 39 15.3**	**-0.2**
WRAB				IAmb	IAmb	19 39 15.6	
	comp=Z,4.8nm,0.5s						
WRA	**Warramunga Arr**	**44.21**	**265**	P	**P**	**19 39 15.4**	**-0.3**
	comp=Z,4.8nm,0.6s,baz=96,slow=8.3,SNR=68						
WRA	**Warramunga Arr**	**44.21**	**265**	P	**P**	**19 39 15.3**	**-0.3**
FORT	**Forrest**	**48.26**	**249**	P	**P**	**19 39 45.0**	**-1.4**
MTN	**Manton Dam**	**49.13**	**273**	P	**P**	**19 39 53.9**	**+0.8**
MTN				IAmb	IAmb	19 39 55.6	
	comp=Z,16nm,1.1s						
KNRA	**Kununurra**	**50.44**	**268**	P	**P**	**19 40 04.0**	**+1.3**
FITZ	**Fitzroy Crossi**	**52.64**	**264**	P	**P**	**19 40 20.0**	**+1.2**
AKASG	**Malin Array Be**	**145.11**	**329**	PKPbc	**PKiKP**	**19 50 40.9**	**+4.3**
	comp=Z,0.2nm,0.3s,baz=52,slow=4.8,SNR=1.8						
CLL	**Collm**	**150.44**	**346**	*e*PKPbc	**PKiKP**	**19 50 49.0**	**+1.4**

*TIR **02** 19:42:02.6,42.°02N×21.°22E,h7km±16km,Md2.6*
*SKO **02** 19:42:02.5,42.°08N×21.°23E,h15km*
*BEO **02** 19:42:04.4±0.2,42.°09N×21.°25E,h0km,ML1.9/12*

ISC 02 19:42:03.3±1.0,**42.09N**±0.°03×**21.23E**±0.°02,**h7**km±9km, **n19**,σ0⁹**87**/34,**2C-1D**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKO	**Skopje**	**0.20**	**125**	*e*Pg	**Pg**	**19 42 07.1**	**-0.1**
SKO				*e*Sg	**Sg**	**19 42 09.3**	**-0.6**
SKO	**Skopje**	**0.20**	**125**	⇑*i*Pg	**Pg**	**19 42 07.1**	**-0.1**
SKO				*i* Sg	**Sg**	**19 42 10.4**	**+0.6**
SKO				*e*Lg	Lg	19 42 10.6	
	comp=E,18nm,0.3s						
PHP	**Peshkopia**	**0.71**	**236**	P	**Pg**	**19 42 16.1**	**-0.8**
	baz=241						
PHP				S	**Sg**	**19 42 26.4**	**+0.3**
	baz=241						
STIP	**Stip**	**0.82**	**118**	⇑*i*Pg	**Pn**	**19 42 21.1**	**-0.1**
STIP				*i* Sg	**Sn**	**19 42 35.3**	**+1.8**
STIP				*e*Lg	Lg	19 42 36.7	
	comp=N,9.3nm,0.2s						
BCI	**Bajram Curri**	**0.91**	**289**	P	**Pb**	**19 42 21.0**	**-0.3**
	baz=293						
BCI				S	**Sn**	**19 42 34.6**	**-1.1**
	baz=293						
PUK	**Puka**	**0.99**	**268**	P	**Pg**	**19 42 21.9**	**-0.5**
	baz=272						
PUK				S	**Sn**	**19 42 36.7**	**-1.3**
	baz=272						
BOSS	**Bosilegrad**	**1.02**	**66**	*e*Pg	**Pg**	**19 42 22.5**	**-0.3**
BOSS				*e*Sg	**Sg**	**19 42 35.7**	**-0.3**
OHR	**Ohrid**	**1.02**	**198**	⇓*i*Pg	**Pg**	**19 42 22.6**	**-0.3**
OHR				*i* Sg	**Sn**	**19 42 37.9**	**-0.8**
OHR				*e*Lg	Lg	19 42 40.4	
	comp=E,25nm,0.5s						
SELS	**Selova**	**1.14**	**356**	*e*Pg	**Pg**	**19 42 24.5**	**-0.6**
SELS				*e*Sg	**Sg**	**19 42 39.3**	**-0.6**
SJES	**Sjenica**	**1.50**	**322**	*e*Pg	**Pg**	**19 42 31.9**	**-0.1**
SJES				*e*Sg	**Sg**	**19 42 51.2**	**-0.2**
PDG	**Podgorica**	**1.50**	**284**	*e*Pn	**Pg**	**19 42 31.9**	**-0.2**
PDG				*e*Sg	**Sg**	**19 42 53.8**	**+2.2**
ZAPS	**Zavoj**	**1.58**	**41**	*e*Pg	**Pg**	**19 42 33.7**	**+0.2**
ZAPS				*e*Sg	**Sg**	**19 42 54.5**	**+0.5**
BOVS	**Bovan**	**1.59**	**13**	*e*Pg	**Pn**	**19 42 31.7**	**-

RLMT				IAML			20 06 25.7	
	comp=N,58nm,0.5s							
RLMT				IAML			20 06 45.7	
	comp=N,46nm,3.4s							
PD31	**Pinedale Array**	**3.31 257**	Pn	**Pn**			**20 05 27.9**	**+0.2**
PDAR	**Pinedale Array**	**3.31 257**	Pn	**Pn**			**20 05 27.9**	**+0.2**
	comp=N,2.4nm,0.3s,baz=98,slow=10,SNR=38							
PDAR			Pg	**Pb**			**20 05 32.7**	**-1.5**
	comp=N,2.4nm,0.3s,baz=76,slow=18,SNR=23							
PDAR			Lg	Lg			20 06 14.3	
	comp=N,7.6nm,0.3s,baz=270,slow=31,SNR=4.1							
PDAR	**Pinedale Array**	**3.31 257**		**Pn**			**20 05 31.0**	**+3.3**
BW06	**Boulder Array**	**3.32 257**	Pn	**Pn**			**20 05 28.0**	**+0.3**
BW06			IAML				20 07 29.6	
	comp=N,36nm,4.4s							
YNE	**Yellowstone No**	**3.74 294**	Pn	**Pn**			**20 05 34.0**	**+0.4**
H17A	**Grant Village**	**3.98 283**	Pn	**Pn**			**20 05 38.3**	**+1.5**
H17A			IAML				20 06 07.7	
	comp=E,21nm,4.9s							
H17A			IAML				20 06 45.9	
	comp=N,26nm,0.5s							
REDW	**Red Top Meadow**	**4.14 269**		**Pn**			**20 05 42.5**	**+3.4**
SMCO	**Snowmass**	**4.63 198**		**Pn**			**20 05 46.5**	**+0.5**
SMCO			IAML				20 07 26.9	
	comp=N,22nm,4.8s							
SMCO			IAML				20 08 50.4	
	comp=N,24nm,4.1s							
BOZ	**Bozeman (W)**	**5.02 296**		**Pn**			**20 05 50.3**	**-0.8**
BOZ			IAML				20 07 19.9	
	comp=N,23nm,3.2s							
I10CA	**LAC DU BONNET**	**9.09 40**	*i*				21 01 10.0	
	baz=220,slow=312,SNR=1.8							
ULM	**Lac du Bonnet**	**9.19 40**	Pn	**Pn**			**20 06 49.9**	**+1.7**
	comp=N,0.8nm,0.3s,baz=229,slow=14,SNR=5.5							
ULM			Lg	Lg			20 09 31.9	
	comp=N,0.2nm,0.3s,baz=145,slow=22,SNR=3.0							
NEW	**Newport**	**9.54 303**	Pn	**Pn**			**20 06 55.1**	**+2.2**
	comp=N,0.1nm,0.3s,baz=100,slow=17,SNR=1.9							

*IDC **02** 20:08:40.9±2.0, 18°.90S×176°.75W, h0km, mb4.1/6, mb1 4.2/6, mb1mx3.8/43, mbtmp4.1/6, Error ellipse: s-maj=48.7km s-min=40.6km az=3.0*
ISC 02 20:08:41.1±2.3, 18°.7S±0°.4×176°.6W±0°.3, h10km, n7, σ1§15/7, mb4.1/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CTA	**Charters Tower**	**35.03**	**262**	P		**P**	**20 15 36.0**	**+1.8**
	1.4nm,0.4s,baz=92,slow=12,SNR=6.0							
STKA	**Stephens Creek**	**39.77**	**242**	P		**P**	**20 16 13.8**	**-0.6**
	1.8nm,0.4s,baz=92,slow=11,SNR=14							
WRA	**Warramunga Arr**	**46.19**	**260**	P		**P**	**20 17 05.8**	**-0.8**
	1.1nm,0.3s,baz=97,slow=7.1,SNR=37							
ASAR	**Alice Springs**	**46.24**	**255**	P		**P**	**20 17 06.2**	**-0.8**
	1.8nm,0.5s,baz=91,slow=8.3,SNR=32							
FITZ	**Fitzroy Crossi**	**54.60**	**261**	P		**P**	**20 18 09.6**	**-0.6**
	1.7nm,1.0s,baz=70,slow=6.9,SNR=8.5							
VNDA	**Vanda**	**59.79**	**185**	P		**P**	**20 18 46.3**	**+0.3**
	0.2nm,0.4s,baz=4.7,slow=6.9,SNR=3.8							
GERES	**GERESS Array B**	**148.82**	**347**	PKPbc		**PKiKP**	**20 28 30.4**	**-0.1**
	0.8nm,0.8s,baz=8.7,slow=1.3,SNR=6.2							

*DJA **02** 20:09:00.6±0.8, 3°.5S×152°.8E±°, h31km±15km, M4.0/8, mB4.8/1, mb4.7/1, MLv3.6/8, Mw(mB)4.0/1*
*IDC **02** 20:09:01.1±1.7, 3°.39S×128°.60E, h0km, mb3.5/2, mb1 4.0/5, mb1mx3.5/56, mbtmp3.7/5, ML3.7/3, Error ellipse: s-maj=33.7km s-min=24.4km az=97.0*
ISC 02 20:09:00.7±1.1, 3°.05S±0°.09×128°.03E±0°.05, h35km, n12, σ1§36/12, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
NLAI	**Namlea**	**0.94**	**258**	P		**Pn**	**20 09 18.0**	**+0.5**
MSAI	**Masohi**	**0.95**	**108**	P		**Pn**	**20 09 17.6**	**0.0**
SANI	**Sanana**	**2.26**	**296**	P		**Pn**	**20 09 35.2**	**-0.5**
SANI				S		**Sn**	**20 10 01.2**	**-1.2**
BNDI	**Bandanaira**	**2.38**	**128**	P		**Pn**	**20 09 37.4**	**+0.1**
SIJI	**Sorong**	**3.90**	**56**	Pn		**Pn**	**20 09 59.3**	**+1.1**
	13nm,0.3s,baz=74,slow=9.2,SNR=43							
SIJI				Sn		**Sn**	**20 10 43.4**	**+0.6**
	6.9nm,0.3s,baz=70,slow=22,SNR=19							
FAKI	**Fak Fak**	**4.22**	**88**	P		**Pn**	**20 10 03.4**	**+0.8**
APSI	**Ampana**	**6.72**	**288**	P		**Pn**	**20 10 40.1**	**+3.2**
BKSI	**Bulukumba**	**8.20**	**254**	P		Pn	20 11 09.0	+12
FITZ	**Fitzroy Crossi**	**15.14**	**189**	Pn		**Pn**	**20 12 32.3**	**+0.2**
	0.1nm,0.3s,baz=14,slow=18,SNR=1.5							
WRA	**Warramunga Arr**	**17.89**	**160**	P		**Pn**	**20 13 05.5**	**-1.5**
	0.6nm,0.3s,baz=340,slow=12,SNR=52							
ASAR	**Alice Springs**	**21.27**	**165**	P		**P**	**20 13 43.8**	**-0.5**
	2.6nm,0.6s,baz=348,slow=12,SNR=31							
CMAR	**Chiang Mai Arr**	**35.73**	**308**	P		P	20 16 07.8	+11
	0.3nm,0.7s,baz=114,slow=6.0,SNR=2.0							

*IDC **02** 20:14:03.3±1.2, 7°.29N×94°.25E, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.6/62, mbtmp3.7/10, ML3.5/2, MS3.0/3, Ms1 3.1/3, ms1mx2.8/33, Error ellipse: s-maj=48.3km s-min=19.0km az=55.0*
*NEIC **02** 20:14:11.1±2.0, 7°.4N±0°.1×94°.6E±0°.2, h52km±9km, mb4.1/6, Error ellipse: s-maj=26.3km s-min=10.3km az=61.0*
ISC 02 20:14:09.2±0.9, 7°.4N±0°.1×94°.4E±0°.1, h35km, n23, σ1§07/19, mb3.9/10, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.31**	**130**	Pn		**Pn**	**20 14 59.8**	**+1.1**
PSI	**Prapat**	**6.41**	**135**	Pn		**Pn**	**20 15 42.9**	**+1.6**
	0.4nm,0.3s,baz=2.3,slow=5.4,SNR=2.9							
PSI				LR		LR	20 18 32.7	
	comp=Z,122nm,18.6s,baz=64,slow=41							
RPSI	**Rantau Prapat**	**6.48**	**136**			**Pn**	**20 15 42.9**	**+0.7**
KULM	**Kulim**	**6.54**	**108**			**Pn**	**20 15 43.1**	**0.0**
IPM	**Ipoh**	**7.19**	**113**			**Pn**	**20 15 50.8**	**-1.2**
CMAR	**Chiang Mai Arr**	**11.85**	**21**	Pn		**Pn**	**20 16 56.7**	**+0.8**
	0.2nm,0.3s,baz=212,slow=14,SNR=5.3							
CMAR				LR		LR	20 21 38.4	
	comp=Z,69nm,18.1s,baz=7.5,slow=38							
PALK	**Pallekele**	**13.60**	**270**	LR		LR	20 22 05.3	
	comp=Z,74nm,18.9s,baz=200,slow=36							
LSA	**Lhasa**	**22.40**	**353**	P		**P**	**20 19 07.3**	**+2.0**
LSA				IAmb		IAmb	20 19 08.7	
	comp=Z,4.4nm,0.6s							
H08S3	**Diego Garcia H**	**26.47**	**236**	T		T	20 46 20.3	
	baz=62,SNR=20							
H08S2	**Diego Garcia H**	**26.47**	**236**	T		T	20 46 22.6	
	baz=62							
H08S1	**Diego Garcia H**	**26.49**	**236**	T		T	20 46 19.3	
	baz=62							
MKAR	**Makanchi Array**	**40.61**	**347**	P		**P**	**20 21 44.9**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=168,slow=8.0,SNR=15							
MAKZ	**Makanchi**	**40.70**	**347**	P		**P**	**20 21 45.8**	**-0.7**
SONM	**Songino Array**	**41.57**	**12**	P		**P**	**20 21 54.3**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=210,slow=8.3,SNR=2.4							
GEYT	**Alibeck**	**44.73**	**318**	P		**P**	**20 22 19.5**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=153,slow=10.0,SNR=3.9							
GEYT	**Alibeck**	**44.73**	**318**	P		**P**	**20 22 19.8**	**+0.4**
KURK	**Kurchatov**	**45.14**	**346**	P		**P**	**20 22 21.0**	**-1.3**
KURK				IAmb		IAmb	20 22 28.8	
	comp=Z,3.1nm,0.9s							
ZALV	**Zalesovo Beam**	**47.07**	**352**	P		**P**	**20 22 37.3**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=171,slow=7.3,SNR=6.9							
WB0	**Warramunga Arr**	**47.72**	**125**	P		**P**	**20 22 42.3**	**-0.7**
WRA	**Warramunga Arr**	**47.77**	**125**	P		**P**	**20 22 43.4**	**-0.1**
	comp=Z,0.8nm,1.1s,baz=304,slow=8.4,SNR=2.8							
ASAR	**Alice Springs**	**49.40**	**130**	P		**P**	**20 22 54.6**	**-1.4**
	comp=Z,0.9nm,0.9s,baz=295,slow=7.7,SNR=5.1							
FINES	**FINESS Array B**	**73.26**	**332**	P		**P**	**20 25 35.2**	**-1.5**
	comp=Z,2.8nm,0.8s,baz=50,slow=3.0,SNR=3.8							
GERES	**GERESS Array B**	**78.36**	**318**	P		**P**	**20 26 06.2**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=72,slow=3.2,SNR=2.7							

IDC 02 20:40:29.4±4.4, 22°.54S×68°.60E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/36, mbtmp3.7/5, MS3.6/2, Ms1 3.6/2, ms1mx2.9/32, Error ellipse: s-maj=128.3km s-min=34.9km az=56.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
H08S1	**Diego Garcia H**	**15.27**	**15**	T		T	20 59 14.6	
	baz=191,slow=76,SNR=10							
H08S2	**Diego Garcia H**	**15.28**	**15**	T		T	20 59 16.7	
	baz=191,slow=76,SNR=17							
H08S3	**Diego Garcia H**	**15.29**	**15**	T		T	20 59 18.0	
	baz=191,slow=76,SNR=49							
LSZ	**Lusaka**	**38.81**	**273**	LR		LR	21 01 37.3	
	comp=Z,61nm,18.5s,baz=99,slow=33							
CMAR	**Chiang Mai Arr**	**50.40**	**38**	P		P	20 49 28.6	-0.3
	0.8nm,0.9s,baz=236,slow=6.3,SNR=5.5							
ASAR	**Alice Springs**	**59.58**	**105**	P		P	20 50 35.4	0.0
	0.4nm,0.7s,baz=268,slow=6.3,SNR=4.8							
ASAR				LR		LR	21 13 05.2	
	comp=Z,54nm,20.4s,baz=323,slow=33							
WRA	**Warramunga Arr**	**60.88**	**101**	P		P	20 50 44.3	0.0
	1.2nm,1.1s,baz=255,slow=6.4,SNR=5.0							
MKAR	**Makanchi Array**	**70.11**	**10**	P		P	20 51 43.2	-0.2
	0.6nm,0.7s,baz=190,slow=6.2,SNR=4.5							
ZALV	**Zalesovo Beam**	**77.45**	**10**	P		P	20 52 26.7	+0.4
	0.7nm,0.6s,baz=212,slow=5.3,SNR=5.2							

*IDC **02** 21:00:24.2±1.7, 43°.70N×105°.42W, h0km, mb3.9/7, mb1 4.0/12, mb1mx3.8/43, mbtmp3.9/12, ML3.2/4, Error ellipse: s-maj=50.2km s-min=8.1km az=149.0*
*ANF **02** 21:00:25.9±0.9, 43°.75N×105°.30W, h4km±9km, ML3.8/13, Error ellipse: s-maj=5.6km s-min=4.3km az=82.0*
*NEIC **02** 21:00:25.6±0.6, 43°.78N±0°.05×105°.24W±0°.05, h0km±2km, ML3.6/70, Error ellipse: s-maj=9.2km s-min=4.3km az=324.0*
ISC 02 21:00:25.0±0.6, 43°.75N±0°.03×105°.26W±0°.04, h0km, n112, σ1§24/123, mb4.0/7, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.95**	**67**	P		**Pb**	**21 00 44.4**	**-0.1**
	baz=248							
RSSD	**Black Hills**	**0.95**	**67**			**Pb**	**21 00 44.2**	**-0.3**
RSSD				Sn		**Sn**	**21 00 59.6**	**-0.7**
K22A	**Casper**	**1.44**	**221**	P		**Pn**	**21 00 51.3**	**-1.2**
	baz=38,SNR=497							
K22A				S		**Sg**	**21 01 11.4**	**+0.2**
	baz=38							
K22A	**Casper**	**1.44**	**221**			**Pn**	**21 00 51.4**	**-1.1**
K22A				Sn		**Sn**	**21 01 13.7**	**+1.5**
K22A				IAML			21 01 16.1	
	comp=N,804nm,0.5s							
RWWY	**Rawlins**	**2.52**	**216**			**Pn**	**21 01 08.3**	**+0.9**
RWWY				IAML			21 01 44.0	
	comp=N,316nm,0.6s							
RWWY				IAML			21 01 44.5	
	comp=N,327nm,0.8s							
N23A	**Red Feather La**	**2.90**	**190**	P		**Pn**	**21 01 14.1**	**+1.5**
	baz=9.2,SNR=69							
N23A				Sb		**Sb**	**21 01 55.3**	**+1.5**
	baz=9.2							
N23A	**Red Feather La**	**2.90**	**190**	Pn		**Pn**	**21 01 13.5**	**+0.9**
N23A				IAML			21 01 56.9	
	comp=N,208nm,0.6s							
N23A				IAML			21 02 02.7	
	comp=E,156nm,0.7s							
LAO	**LASA Array**	**3.02**	**347**	P		**Pn**	**21 01 14.1**	**+0.1**
	baz=167							
LAO				Sb		**Sb**	**21 01 57.6**	**+0.7**
	baz=167							
LAO	**LASA Array**	**3.02**	**347**	Pn		**Pn**	**21 01 14.3**	**+0.3**
LAO				IAML			21 02 04.8	
	comp=E,252nm,0.5s							
RLMT	**Red Lodge**	**3.18**	**297**	Pn		**Pn**	**21 01 16.8**	**+0.3**
	baz=114,SNR=47							
RLMT				Pb		**Pb**	**21 01 22.8**	**+0.3**
	baz=114							
RLMT	**Red Lodge**	**3.18**	**297**	Pn		**Pn**	**21 01 16.7**	**+0.3**
RLMT				IAML			21 02 15.8	
	comp=E,109nm,1.0s							
BW06	**Boulder Array**	**3.29**	**254**	Pn		**Pn**	**21 01 18.4**	**+0.4**
	baz=71,SNR=68							
BW06				Pb		**Pb**	**21 01 24.1**	**-0.3**
	baz=71							
BW06	**Boulder Array**	**3.29**	**254**			**Pn**	**21 01 18.6**	**+0.5**
BW06				IAML			21 02 08.2	
	comp=E,88nm,0.6s							
PD31	**Pinedale Array**	**3.29**	**254**	Pn		**Pn**	**21 01 18.4**	**+0.3**
PDAR	**Pinedale Array**	**3.29**	**254**	Pn		**Pn**	**21 01 18.3**	**+0.3**
	comp=E,9.8nm,0.3s,baz=69,slow=16,SNR=142							
PDAR				Lg		Lg	21 02 02.1	
	comp=E,16nm,0.3s,baz=72,slow=34,SNR=1.7							
YNE	**Yellowstone No**	**3.63**	**292**			**Pn**	**21 01 22.9**	**+0.2**
YMP	**Mirror Lake Pl**	**3.66**	**287**			**Pn**	**21 01 23.7**	**+0.6**
GCMT	**Greycliff**	**3.75**	**305**			**Pn**	**21 01 24.7**	**+0.5**
LKWY	**Lake**	**3.79**	**284**	Pn		**Pn**	**21 01 22.6**	**-2.2**
LKWY				IAML			21 01 56.8	
	comp=E,106nm,0.6s							
H17A	**Grant Village**	**3.89**	**281**	P		**Pn**	**21 01 28.2**	**+2.0**
	baz=98,SNR=5.7							
H17A	**Grant Village**	**3.89**	**281**			**Pn**	**21 01 27.0**	**+0.8**
H17A				IAML			21 02 29.3	
	comp=N,66nm,0.6s							
FLWY	**Flagg Ranch**	**3.95**	**277**			**Pn**	**21 01 27.3**	**+0.3**
FLWY				IAML			21 02 36.7	
	comp=N,77nm,1.4s							
FLWY				IAML			21 02 42.5	
	comp=N,61nm,1.7s							
ISCO	**Idaho Springs**	**3.96**	**184**	P		**Pn**	**21 01 28.7**	**+1.5**
	baz=3.2,SNR=12							
ISCO				Sb		**Sb**	**21 02 27.2**	**+2.8**
	baz=3.2							
ISCO	**Idaho Springs**	**3.96**	**184**	Pn		**Pn**	**21 01 28.2**	**+1.0**
SNOW	**Snow King Moun**	**4.00**	**268**			**Pn**	**21 01 28.4**	**+0.6**
SNOW				IAML			21 02 46.9	
	comp=N,61nm,0.8s							
SNOW				IAML			21 02 47.3	
	comp=N,64nm,1.1s							
YNR	**Norris Junctio**	**4.01**	**286**	Pn		**Pn**	**21 01 30.8**	**+2.8**
YPP	**Pitchstone Pla**	**4.04**	**279**			**Pn**	**21 01 29.0**	**+0.7**
REDW	**Red Top Meadow**	**4.09**	**266**			**Pn**	**21 01 29.9**	**+1.0**
REDW				IAML			21 02 50.5	
	comp=N,59nm,1.5s							
IMW	**Indian Meadow**	**4.12**	**274**			**Pn**	**21 01 29.9**	**+0.6**
IMW				IAML			21 01 59.1	
	comp=N,59nm,0.5s							
TPAW	**Teton Pass**	**4.14**	**268**			**Pn**	**21 01 30.6**	**+0.9**
TPAW				IAML			21 02 49.5	
	comp=N,39nm,0.8s							
TPAW				IAML			21 02 57.0	
	comp=N,54nm,1.0s							
YHH	**Holmes Hill**	**4.15**	**286**	Pn		**Pn**	**21 01 29.9**	**+0.1**
YMR	**Madison River**	**4.21**	**285**	Pn		**Pn**	**21 01 31.0**	**+0.4**
O20A	**White River Ci**	**4.25**	**213**	P		**Pn**	**21 01 32.3**	**+1.2**
	baz=30,SNR=19							
O20A	**White River Ci**	**4.25**	**213**	Pn		**Pn**	**21 01 32.1**	**+1.0**
O20A				IAML			21 02 42.4	
	comp=E,83nm,0.6s							
O20A				IAML			21 02 44.8	
	comp=N,70nm,0.7s							
E28A	**Huff**	**4.29**	**47**	Pn		**Pn**	**21 01 31.3**	**-0.2**
AHID	**Auburn Hatcher**	**4.38**	**259**			**Pn**	**21 01 33.8**	**+0.9**
AHID				IAML			21 02 46.4	
	comp=E,53nm,1.3s							
YHB	**Horse Butte**	**4.38**	**285**	Pn		**Pn**	**21 01 33.1**	**+0.1**
YHL	**Hebgen Lake**	**4.39**	**287**			**Pn**	**21 01 33.2**	**0.0**
ECR	**Eagle Creek**	**4.51**	**263**			**Pn**	**21 01 34.9**	**+0.2**
RDMU	**Red Mountain**	**4.51**	**227**			**Pn**	**21 01 35.8**	**+1.0**
QLMT	**Earthquake Lak**	**4.56**	**286**			**Pn**	**21 01 36.2**	**+0.8**
SUSD	**Miller**	**4.59**	**79**	P		**Pn**	**21 01 37.1**	**+1.5**
	baz=264							
SUSD	**Miller**	**4.59**	**79**			**Pn**	**21 01 36.0**	**+0.4**
DGMT	**Dagmar**	**4.78**	**9**	P		**Pn**	**21 01 39.9**	**+1.7**
	baz=190							
DGMT				Sb		**Sb**	**21 02 51.8**	**+4.3**
	baz=190							
DGMT	**Dagmar**	**4.78**	**9**			**Pn**	**21 01 38.3**	**+0.1**
Q24A	**Divide**	**4.79**	**179**			**Pn**	**21 01 39.1**	**+0.5**
Q24A				IAML			21 03 03.4	
	comp=E,41nm,0.8s							
BOZ	**Bozeman (W)**	**4.91**	**294**	Pn		**Pn**	**21 01 40.0**	**-0.1**
	baz=110							
BOZ				Pb		**Pb**	**21 01 53.0**	**+1.2**
	baz=110,SNR=6.4							
BOZ				Sb		**Sb**	**21 02 55.2**	**+3.8**
	baz=110							
BOZ	**Bozeman (W)**	**4.91**	**294**			**Pn**	**21 01 39.8**	**-0.3**
BOZ				IAML			21 02 58.6	
	comp=E,35nm,1.1s							
BOZ				IAML			21 03 01.9	
	comp=E,25nm,1.1s							
HWUT	**Hardware Ranch**	**5.12**	**247**			**Pn**	**21 01 43.7**	**+0.6**
HWUT				IAML			21 03 22.0	
	comp=E,50nm,0.8s							
HWUT				IAML			21 03 22.3	
	comp=E,41nm,0.7s							
KSCO	**Kaye Shedlock'**	**5.13**	**156**	P		**Pn**	**21 01 44.3**	**+1.1**
	baz=338,SNR=6.8							
KSCO	**Kaye Shedlock'**	**5.13**	**156**	Pn		**Pn**	**21 01 43.9**	**+0.7**
TCUT	**Toone Canyon**	**5.26**	**242**			**Pn**	**21 01 45.9**	**+0.9**
EGMT	**Eagleton**	**5.30**	**325**	Pn		**Pn**	**21 01 45.3**	**-0.2**
DLMT	**Dillon**	**5.49**	**290**	Pn		**Pn**	**21 01 48.8**	**+0.8**
HRY	**Holter Researc**	**5.50**	**305**			**Pn**	**21 01 48.4**	**+0.1**
LRM	**Limekiln Ridge**	**5.52**	**294**	Pn		**Pn**	**21 01 47.7**	**-0.9**
MCMT	**McKenzie Canyo**	**5.56**	**284**	Pn		**Pn**	**21 01 49.3**	**+0.2**
JLU	**Jordanelle**	**5.58**	**238**			**Pn**	**21 01 50.2**	**+0.9**
MDND	**Maddock**	**5.69**	**42**	Pn		**Pn**	**21 01 51.4**	**+0.7**
	baz=226,SNR=7.2							
MDND				Pb		**Pb**	**21 02 09.2**	**+4.1**
	baz=226							
CTU	**Camp Tracy**	**5.71**	**240**			**Pn**	**21 01 51.7**	**+0.5**
SPUT	**South Promonto**	**5.85**	**248**	Pn		**Pn**	**21 01 54.0**	**+0.9**
PV22	**Blue Mesa, Par**	**5.85**	**208**			**Pn**	**21 01 54.5**	**+1.3**
HVU	**Hansel Valley**	**5.88**	**253**	Pn		**Pn**	**21 01 54.1**	**+0.7**
PV07	**Paradox Valley**	**5.89**	**207**	Pn		**Pn**	**21 01 54.6**	**+0.9**
BCYI	**Bear Canyon**	**5.90**	**278**			**Pn**	**21 01 54.7**	**+0.8**
PV15	**Paradox Valley**	**5.93**	**205**			**Pn**	**21 01 54.7**	**+0.4**
P17A	**Butcher Ranch,**	**5.93**	**226**			**Pn**	**21 01 55.1**	**+0.9**
SDCO	**Great Sand Dun**	**6.00**	**182**			**Pn**	**21 01 55.2**	**-0.1**
PV23	**Carpenter Ridg**	**6.01**	**209**			**Pn**	**21 01 56.3**	**+1.0**
PV04	**Paradox Valley**	**6.02**	**208**			**Pn**	**21 01 56.4**	**+0.9**
PV12	**Saucer Basin,**	**6.05**	**207**			**Pn**	**21 01 57.1**	**+1.1**
PV14	**Lion Creek, Pa**	**6.08**	**209**			**Pn**	**21 01 57.2**	**+0.9**
PV20	**West Nyswonger**	**6.09**	**209**			**Pn**	**21 01 57.4**	**+1.0**
PV11	**David Mesa, Pa**	**6.09**	**208**			**Pn**	**21 01 57.4**	**+1.0**
SRU	**San Rafael Swe**	**6.10**	**222**	Pn		**Pn**	**21 01 56.7**	**+0.2**
PV16	**Nyswonger Mesa**	**6.10**	**208**			**Pn**	**21 01 57.9**	**+1.3**
S22A	**4UR Ranch, Cre**	**6.12**	**192**	Pn		**Pn**	**21 01 58.7**	**+1.8**
PV19	**Morning Glory**	**6.12**	**209**			**Pn**	**21 01 57.8**	**+0.9**
PV03	**Paradox Valley**	**6.13**	**208**			**Pn**	**21 01 57.9**	**+1.0**
PV02	**Paradox Valley**	**6.13**	**207**			**Pn**	**21 01 58.4**	**+1.4**
PV01	**Paradox Valley**	**6.15**	**205**			**Pn**	**21 01 58.4**	**+1.2**
PV18	**Skein Mesa, Pa**	**6.16**	**208**	Pn		**Pn**	**21 01 58.3**	**+0.9**
PV13	**Radium Mtn., P**	**6.21**	**207**			**Pn**	**21 01 59.5**	**+1.4**
ECSD	**EROS Data Cent**	**6.26**	**87**	P		**Pn**	**21 01 60.0**	**+1.4**
	baz=273							
ECSD	**EROS Data Cent**	**6.26**	**87**	Pn		**Pn**	**21 01 58.5**	**-0.1**
TMUT	**Trail Mountain**	**6.30**	**227**			**Pn**	**21 02 00.4**	**+0.9**
CBKS	**Cedar Bluff**	**6.45**	**138**	Pn		**Pn**	**21 02 01.9**	**+0.7**
Q16A	**Castle Valley**	**6.57**	**225**			**Pn**	**21 02 03.8**	**+0.8**
T25A	**Trinidad**	**6.64**	**174**	P		**Pn**	**21 02 04.9**	**+1.0**
	baz=354							
HLID	**Hailey**	**6.65**	**272**	P		**Pn**	**21 02 06.1**	**+2.0**
	baz=85							
HLID	**Hailey**	**6.65**	**272**			**Pn**	**21 02 04.7**	**+0.7**
DUG	**Dugway, Tooele**	**6.66**	**240**	P		**Pn**	**21 02 04.4**	**+0.2**
	baz=55,SNR=7.0							
DUG	**Dugway, Tooele**	**6.66**	**240**	Pn		**Pn**	**21 02 04.5**	**+0.4**
F33A	**5 Mile Ranch,**	**6.71**	**69**	Pn		**Pn**	**21 02 03.9**	**-0.9**
MSO	**Missoula**	**6.85**	**300**			**Pn**	**21 02 06.7**	**-0.1**
MVCO	**Mesa Verde**	**6.99**	**202**	P		**Pn**	**21 02 11.6**	**+2.9**
	baz=19,SNR=5.0							
MVCO	**Mesa Verde**	**6.99**	**202**	Pn		**Pn**	**21 02 09.7**	**+0.9**
MSU	**Marysvale**	**7.39**	**227**			**Pn**	**21 02 15.1**	**+0.8**
MTPU	**Mount Pierson**	**7.75**	**225**	Pn		**Pn**	**21 02 20.0**	**+0.7**
ELK	**Elko**	**7.99**	**251**	Pn		**Pn**	**21 02 23.4**	**+0.8**
	comp=E,0.7nm,0.3s,baz=63,slow=9.2,SNR=8.9							
I10CA	**LAC DU BONNET**	**9.02**	**41**	*i*			21 54 40.0	
	baz=222,slow=312,SNR=3.9							
ULM	**Lac du Bonnet**	**9.12**	**41**	Pn		**Pn**	**21 02 37.1**	**-0.7**
	comp=E,3.1nm,0.3s,baz=235,slow=12,SNR=21							
ULM				Pg			21 03 07.6	
	comp=E,1.1nm,0.3s,baz=220,slow=14,SNR=3.0							
ULM				Lg		Lg	21 05 04.2	
	comp=E,0.7nm,0.3s,baz=323,slow=21,SNR=1.4							
WMOK	**Wichita Mounta**	**10.30**	**149**	P		**Pn**	**21 02 52.9**	**-1.2**
	baz=333							
NVAR	**Mina Array Bea**	**11.19**	**246**	Pn		**Pn**	**21 03 06.8**	**+0.5**
	comp=E,0.2nm,0.3s,baz=54,sl

ACON	Acoyapa	1.20	71	*eP*		Pn	21	35	07.5	+0.4
ACON	Acoyapa	1.20	71			Pn	21	35	07.1	0.0
ACON					Sn	Sn	21	35	23.4	-0.1
GPS1	Guardaparques	1.25	130	*i* P		Pn	21	35	08.0	+0.1
GPS2	Hotel Rincn d	1.27	130	*eP*		Pn	21	35	08.3	+0.2
CRIN	San Cristobal	1.31	328	*eP*		Pn	21	35	09.3	+0.7
CRIN	San Cristobal	1.31	328			Pn	21	35	08.6	-0.1
CRIN					Sn	Sn	21	35	25.8	-0.3
LIM1	Limonal	1.38	129	*i* P		Pn	21	35	09.6	+0.2
GUAB	Guayabo de Bag	1.39	129	*i* P		Pn	21	35	09.8	+0.2
MATN	Matagalpa	1.40	17	Pn		Pn	21	35	10.0	+0.3
MATN					Sn	Sn	21	35	28.6	+0.6
HORNC	Hornillas	1.43	127	*i* P		Pn	21	35	09.9	-0.1
HORNC				*i* S		Sn	21	35	28.8	+0.2
CUI	Cuipilapa	1.47	129	*i* P		Pn	21	35	10.9	+0.3
CUI				*i* S		Sn	21	35	29.5	-0.1
ORTG	Ortega, Santa	1.48	145	*eP*		Pn	21	35	11.3	+0.5
GUAI	GUAI	1.53	148	⇓*i* P		Pn	21	35	11.7	+0.4
PLVR	Palo Verde	1.56	142	*eP*		Pn	21	35	12.6	+0.8
ACAL	Aguas Claras	1.58	126	*i* P		Pn	21	35	12.3	+0.2
DUNO	Dulce Nombre,	1.71	151	*eP*		Pn	21	35	14.5	+0.9
CSGN	Cosiguina Volc	1.83	319	*eP*		Pn	21	35	16.2	+0.9
CSGN	Cosiguina Volc	1.83	319	*eP*		Pn	21	35	16.2	+0.9
CSGN	Cosiguina Volc	1.83	319			Pn	21	35	15.8	+0.5
JTS	Las Juntas de	1.87	133	Pn		Pn	21	35	15.2	-0.5
JTS					Sn	Sn	21	35	35.4	-3.3
CEDE	Laguna Cedeo	1.94	124	*eP*		Pn	21	35	17.1	+0.5
ARE1	Arenal 1	1.94	125	*eP*		Pn	21	35	17.6	+0.9
CASO	Castillo	1.94	126	*i* P		Pn	21	35	17.1	+0.4
COVE	Coope Vega, Sa	2.08	114	*eP*		Pn	21	35	18.3	-0.2
ESPN	Las Esperanzas	2.08	73			Pn	21	35	18.8	+0.3
ESPN					Sn	Sn	21	35	44.1	+0.3
LAFE	Finca La Fe, P	2.25	141	*eP*		Pn	21	35	21.1	+0.3
LCND	La Caada	2.29	319	⇓*i* P		Pn	21	35	22.0	+0.6
LCND				*eS*		Sn	21	35	49.8	+1.0
LCND					IAML		21	35	51.8	
	comp=Z,1μm,0.3s									
LCND	La Caada	2.29	319	⇓*i* P		Pn	21	35	22.0	+0.6
LCND				*eP*		Pn	21	35	22.3	+0.9
LCND				*eS*		Sn	21	35	49.8	+1.0
LCND					IAML		21	35	51.8	
	comp=Z,1μm,0.3s									
SRA1	San Ramn	2.35	129	*eP*		Pn	21	35	22.9	+0.7
JUCU	Jucuarn	2.50	312	*eP*		Pn	21	35	24.8	+0.6
JUCU				*eS*		Sn	21	35	54.5	+0.6
JUCU					IAML		21	36	02.8	
	comp=Z,1μm,0.2s									
JUCU	Jucuarn	2.50	312	*eP*		Pn	21	35	24.8	+0.6
JUCU				*eS*		Sn	21	35	54.5	+0.6
JUCU					IAML		21	36	02.8	
	comp=Z,1μm,0.2s									
JACO	JACO, Garabito	2.52	139	*eP*		Pn	21	35	25.3	+1.0
TGUH	Tegucigalpa,Un	2.63	340	⇓*i* P		Pn	21	35	27.5	+1.6
TGUH	Tegucigalpa,Un	2.63	340	⇓*i* P		Pn	21	35	27.5	+1.6
TGUH	Tegucigalpa,Un	2.63	340	Pn		Pn	21	35	26.8	+0.9
LCY	Lacayo	2.65	314	*eP*		Pn	21	35	27.5	+1.3
LCY	Lacayo	2.65	314	*eP*		Pn	21	35	27.5	+1.3
HDC	Heredia	2.69	126	*eP*		Pn	21	35	27.7	+0.9
HDC	Heredia	2.69	126			Pn	21	35	27.2	+0.5
PACA	Pacayal	2.70	314	*eP*		Pn	21	35	29.1	+2.2
PACA	Pacayal	2.70	314	*eP*		Pn	21	35	29.1	+2.2
ALJI	Alcalda de J	2.79	309	*eS*		Sn	21	35	59.9	-0.8
TECA	Tecapa	2.85	312	*eP*		Pn	21	35	30.4	+1.4
TECA	Tecapa	2.85	312	*eP*		Pn	21	35	30.4	+1.4
COEB	Comit de Eme	2.87	312	*eP*		Pn	21	35	30.5	+1.3
COEB					IAML		21	36	07.9	
	comp=Z,666nm,0.2s									
COEB	Comit de Eme	2.87	312	*eP*		Pn	21	35	30.5	+1.3
COEB					IAML		21	36	07.9	
	comp=Z,666nm,0.2s									
LCR2	La Lucha 2	2.93	128	*eP*		Pn	21	35	30.7	+0.6
CVTR	Volcan Turrial	2.97	121	*eP*		Pn	21	35	32.3	+1.5
RIMA	Rio Macho	3.02	126	*eP*		Pn	21	35	32.2	+0.8
COEG	Centro de Oper	3.21	309	*eP*		Pn	21	35	35.1	+1.4
COEG					IAML		21	36	16.4	
	comp=Z,636nm,0.2s									
COEG	Centro de Oper	3.21	309	*eP*		Pn	21	35	35.1	+1.4
COEG				*eS*		Sn	21	36	10.7	-0.3
COEG					IAML		21	36	16.4	
	comp=Z,636nm,0.2s									
CDM	Cerro de Muert	3.23	128	*eP*		Pn	21	35	35.7	+1.4
EDDO	Dominical	3.35	133	*eP*		Pn	21	35	37.3	+1.7
PEZE	Perez Zeledon,	3.41	130	*eP*		Pn	21	35	38.4	+2.0
SNET	Serv Nac Est T	3.52	307			Pn	21	35	38.5	+0.6
SNET						Sn	21	36	19.1	+0.6
EDLM	Las Mercedes	3.54	130	*eP*		Pn	21	35	40.1	+1.9
BOQS	Boqueron	3.58	307	*eP*		Pn	21	35	41.4	+2.4
BOQS	Boqueron	3.58	307	*eP*		Pn	21	35	41.4	+2.4
TACO	Tacachico	3.78	309	*eP*		Pn	21	35	42.7	+1.2
TACO	Tacachico	3.78	309	*eP*		Pn	21	35	42.7	+1.2
DRK0	Durika	3.81	127	*eP*		Pn	21	35	43.5	+1.5
EDPN	Palmar Norte	3.85	132	*eP*		Pn	21	35	44.7	+2.4
EDBA	Buenos Aires	3.85	128	*eP*		Pn	21	35	43.7	+1.3
RIOS	Rincon, Osa	3.99	136	*eP*		Pn	21	35	46.0	+1.8
MTO3	Montecristo	4.07	314			Pn	21	35	45.9	+0.3
ESQI	Esquipulas	4.17	316	*eP*		Pn	21	35	48.9	+2.2
ESQI	Esquipulas	4.17	316	Pn		Pn	21	35	46.8	0.0
ESQI					Sn	Sn	21	36	35.1	+0.7
BRU2	Volcan	4.53	127	*eP*		Pn	21	35	53.3	+1.5
RTAL	Retalhuleu	5.99	300	Pn		Pn	21	36	12.6	+1.1
CCIG	Comitan	7.32	310			Pn	21	36	30.0	+0.2
CMIG	Matias Romero	9.93	304	P		Pn	21	37	07.2	+1.9
	comp=Z,2.9nm,0.3s,baz=155,slow=11,SNR=33									
CMIG				S		Sn	21	38	48.2	-6.8
	comp=Z,0.2nm,0.3s,baz=344,slow=15,SNR=1.2									
TLIG	Tlapa	13.25	298	Pn		Pn	21	37	52.1	+1.9
SDV	Santo Domingo	15.68	98	LR		LR	21	46	20.4	
	comp=Z,22nm,18.7s,baz=252,slow=45									
ATAH	Atahualpa	20.20	157	P		Pn	21	39	16.2	-0.4
	comp=Z,8.4nm,0.8s,baz=32,slow=4.2,SNR=4.7									
ATAH				LR		LR	21	46	10.3	
	comp=Z,39nm,19.7s,baz=36,slow=34									
833A	Chaparral WMA,	20.66	326	P		P	21	39	19.3	+0.9
833A				IAmb		IAmb	21	39	22.7	
	comp=Z,20nm,0.7s									
152A	Waverly Hall	21.04	4	P		P	21	39	21.3	-1.2
152A				IAmb		IAmb	21	39	27.3	
	comp=Z,27nm,0.8s									
Y49A	Blount Mountai	22.17	360	P		P	21	39	35.6	+1.0
Y49A				IAmb		IAmb	21	39	36.7	
	comp=Z,12nm,0.6s									
PLAL	Pickwick Lake	23.35	356	P		P	21	39	46.7	+0.3
PLAL				IAmb		IAmb	21	39	48.0	
	comp=Z,10nm,0.7s									
W50A	Signal Mountai	23.53	2	P		P	21	39	48.5	+0.4
W50A				IAmb		IAmb	21	39	50.8	
	comp=Z,15nm,0.7s									
CPCT	Cooper Cave	23.82	4	P		P	21	39	51.1	+0.4
CPCT				IAmb		IAmb	21	39	54.2	
	comp=Z,15nm,0.9s									
TXAR	Lajitas Array	23.94	320	P		P	21	39	52.8	+0.9
	comp=Z,13nm,0.8s,baz=137,slow=10,SNR=134									
TXAR				PcP		PcP	21	43	34.5	+2.1
	comp=Z,0.2nm,0.5s,baz=140,slow=5.5,SNR=4.1									
TXAR	Lajitas Array	23.94	320	P		P	21	39	50.5	-1.4
TX31	Lajitas Ar. Si	23.94	320	P		P	21	39	52.4	+0.5
TX32	Lajitas Array	23.94	320	P		P	21	39	52.8	+0.9
TX32				IAmb		IAmb	21	39	54.0	
	comp=Z,13nm,0.8s									
V48A	Smith Brothers	24.06	359	P		P	21	39	53.2	+0.5
V48A				IAmb		IAmb	21	39	55.2	
	comp=Z,6.7nm,0.7s									
TKL	Tuckaleechee C	24.08	5	P		P	21	39	53.6	+0.6
	comp=Z,5.7nm,0.7s,baz=188,slow=12,SNR=7.2									
V53A	Saluda	24.19	7	P		P	21	39	54.9	+0.9
V53A				IAmb		IAmb	21	39	57.7	
	comp=Z,12nm,0.7s									
WHAR	Wooly Hollow	24.21	348	P		P	21	39	54.1	-0.1
WHAR				IAmb		IAmb	21	39	55.9	
	comp=Z,11nm,1.0s									
X37A	Clayton	24.34	342	P		P	21	39	55.5	+0.1
X37A				IAmb		IAmb	21	39	57.0	
	comp=Z,9.2nm,0.7s									
CLTN	Cedars of Leba	24.40	0	P		P	21	39	56.6	+0.8
CLTN				IAmb		IAmb	21	39	59.0	
	comp=Z,11nm,0.6s									
U54A	Nelsons Funny	25.16	9	P		P	21	40	03.9	+1.0
WMOK	Wichita Mounta	25.69	336	P		P	21	40	07.6	0.0
WMOK				IAmb		IAmb	21	40	10.5	
	comp=Z,7.7nm,0.8s									
LPIG	La Paz	25.94	302	LR		LR	21	50	37.1	
	comp=Z,70nm,20.3s,baz=160,slow=36									
MNTX	Cornudas Mount	26.64	322	P		P	21	40	16.5	+0.3
S39A	Bolivar	26.74	348	P		P	21	40	16.5	-0.6
MSTX	Muleshoe	26.87	329	P		P	21	40	18.9	+0.5
MSTX				IAmb		IAmb	21	40	19.9	
	comp=Z,9.3nm,0.8s									
Q51A	Peebles	27.46	5	P		P	21	40	24.2	+0.7
O53A	New Philadelph	28.91	8	P		P	21	40	37.0	+0.7
N49A	Columbus Grove	29.29	3	P		P	21	40	40.3	+0.6
ANMO	Albuquerque	29.59	325	P		P	21	40	43.9	+1.2
	comp=Z,1.8nm,0.7s,baz=129,slow=7.2,SNR=7.9									
ANMO	Albuquerque	29.59	325	P		P	21	40	42.4	-0.3
X16A	Lo Mia Camp, P	32.24	319	P		P	21	41	06.8	+0.6
SADO	Sadowa	33.64	9	P		P	21	41	17.5	-0.4
	comp=Z,9.5nm,0.6s,baz=204,slow=7.8,SNR=9.6									
SPMN	Marine on St.	33.98	352	P		P	21	41	19.7	-1.1
SRU	San Rafael Swe	34.84	326	P		P	21	41	28.9	+0.3
MTPU	Mount Pierson	35.05	323	P		P	21	41	28.8	-1.8
P17A	Butcher Ranch,	35.22	326	P		P	21	41	32.0	+0.2
PDAR	Pinedale Array	37.05	331	P		P	21	41	47.5	0.0
	comp=Z,0.7nm,0.6s,baz=126,slow=9.8,SNR=6.6									
SIV	San Ignacio	37.09	137	P		P	21	41	47.3	-0.5
	comp=Z,2.2nm,0.6s,baz=314,slow=9.0,SNR=13									
SIV				LR		LR	21	57	49.9	
	comp=Z,44nm,19.8s,baz=338,slow=37									
REDW	Red Top Meadow	38.12	331	P		P	21	41	56.7	+0.2
ELK	Elko	38.61	324	P		P	21	42	01.1	+0.5
NVAR	Mina Array Bea	39.07	319	P		P	21	42	05.8	+1.3
	comp=Z,1.0nm,0.6s,baz=127,slow=7.5,SNR=7.8									
NVAR	Mina Array Bea	39.07	319	P		P	21	42	04.8	+0.3
KVN	Kaiserville	39.30	320	P		P	21	42	06.8	+0.4
ULM	Lac du Bonnet	39.35	350	P		P	21	42	04.2	-2.2
	comp=Z,1.7nm,0.4s,baz=159,slow=9.8,SNR=5.5									
EGMT	Eagleton	41.28	336	P		P	21	42	23.1	+0.6
SCHQ	Schefferville	45.80	16	P		P	21	42	57.3	-1.3
	comp=Z,7.4nm,0.5s,baz=218,slow=5.5,SNR=23									
ILAR	Eielson Array	67.25	336	P		P	21	45	29.2	-1.4
	comp=Z,0.3nm,0.5s,baz=140,slow=4.5,SNR=8.2									
ARCES	ARCESS Array B	86.65	19	P		P	21	47	16.8	-2.5
	comp=Z,3.8nm,0.9s,baz=293,slow=6.3,SNR=2.1									
STKA	Stephens Creek	131.56	238	PKP		PKiKP	21	53	49.5	-0.4
	comp=Z,0.9nm,0.5s,baz=53,slow=8.3,SNR=3.8									
ASAR	Alice Springs	139.95	247	PKhKP	PKPpre		21	53	58.5	
	comp=Z,1.3nm,0.7s,baz=112,slow=2.6,SNR=4.4									
ASAR				PKP		PKPdf	21	54	04.8	+0.1
	comp=Z,1.4nm,0.7s,baz=96,slow=1.7,SNR=9.8									
ASAR				SKP		SKPdf	21	57	32.7	+0.5
	comp=Z,1.0nm,1.0s,baz=140,slow=4.5,SNR=5.6									
WRA	Warramunga Arr	140.07	253	PKhKP	PKPpre		21	53	58.6	
	comp=Z,0.3nm,0.6s,baz=103,slow=3.3,SNR=6.1									
WRA				PKP		PKPdf	21	54	05.1	0.0
	comp=Z,1.9nm,0.7s,baz=92,slow=2.2,SNR=31									
WRA				SKP		SKPdf	21	57	33.5	+1.0
	comp=Z,0.6nm,0.9s,baz=87,slow=1.8,SNR=5.0									
CMAR	Chiang Mai Arr	149.70	350	PKPbc		PKPdf	21	54	23.7	+2.1
	comp=Z,0.4nm,0.3s,baz=339,slow=4.8,SNR=1.5									

*IDC **02** 22:02:48.9±1.7, 14.7°56S×73.°53W, h88km±19km, mb3.2/2, mb1 3.7/6, mb1mx3.4/38, mbtmp3.9/6, Error ellipse: s-maj=58.0km s-min=13.5km az=35.0*

ISC 02 22:02:48.3±1.0, 14.7S±0.2°×73.6W±0.1, h87km, n7, σ1°33/8, Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	Nana	4.16	310	P		Pn		22 03 50.0	+0.5
	22nm,0.3s,baz=139,slow=11,SNR=29								
NNA				S		Sn		22 04 36.7	-0.3
	7.4nm,0.3s,baz=14,slow=19,SNR=2.6								
LPAZ	La Paz	5.50	107	P		Pn		22 04 10.5	+2.3
	3.2nm,0.3s,baz=293,slow=9.4,SNR=78								
LVC	Limon Verde	9.04	151	P		Pn		22 04 57.4	+1.1
	0.8nm,0.3s,baz=2.7,slow=9.2,SNR=11								
SIV	San Ignacio	12.14	98	P		Pn		22 05 37.0	-1.3
	0.8nm,0.3s,baz=289,slow=15,SNR=16								
TXAR	Lajitas Array	52.53	327	P		P		22 11 53.0	0.0
	0.3nm,0.6s,baz=149,slow=6.7,SNR=6.2								
TORD	Torodi Ar. Bea	79.49	73	P		P		22 14 45.3	-0.7
	0.5nm,0.7s,baz=263,slow=4.7,SNR=6.0								
SONM	Songino Array	146.96	0	PKPbc		PKPbc		22 22 21.3	+0.2
	0.6nm,0.6s,baz=326,slow=2.7,SNR=3.9								

*NEIC **02** 22:06:32.2±1.9, 2.°50N±0.°08×127.°2E±0.°1, h48km±9km, mb4.4/28, Error ellipse: s-maj=17.8km s-min=10.5km az=69.0*

*MAN **02** 22:06:34.0, 2.°82N×126.°71E, h2km, mb5.1, ML4.0, MS4.1*

*IDC **02** 22:06:33.8±3.6, 2.°36N×126.°76E, h56km±35km, mb3.9/14, mb1 4.1/15, mb1mx3.9/31, mbtmp4.2/15, ML3.9/1, MS3.2/8, Ms1 3.2/8, ms1mx2.9/33, Error ellipse: s-maj=30.9km s-min=12.2km az=77.0*

*DJA **02** 22:06:33.9±0.5, 2.°N±4.°×12.°7E±.°, h39km±7km, M4.3/12, mB4.7/2, mb4.6/6, MLv4.2/12, Mw(mB)3.9/2*

ISC 02 22:06:31.7±0.4, 2.°42N±0.°05×126.°81E±0.°09, h35km, n82, σ1°40/74, mb4.4/28, MS3.1/7, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	Ternate	1.73	161	P		Pn		22 07 00.2	+0.9
TNTI	Ternate	1.73	161			Pn		22 06 59.9	+0.6
TNTI					Sn	Sn		22 07 21.3	+1.2
SGSI	Sangihe	1.79	314	P		Pn		22 07 01.4	+1.2
KMSI	Cibinong	3.37	237	P		Pn		22 07 28.0	+6.1
DDMP	Don Marcelino,	3.82	343	*eP*		Pn		22 07 28.9	+0.9
DDMP				*eS*		Sn		22 08 06.4	-5.3
GTOI	Gorontalo	4.19	245	P		Pn		22 07 38.5	+5.3
SANI	Sanana	4.52	190	P		Pn		22 07 39.0	+1.3
MATI	Mati	4.53	353	*eP*		Pn		22 07 40.0	+2.3
SKMP	Bagumbayan, Su	4.66	331	*eP*		Pn		22 07 40.7	+1.2
SKMP				*eS*		Sn		22 08 33.0	+0.6
KCP	Kidapawan	4.87	339	⇓*eP*		Pn		22 07 46.9	+4.4
LUWI	Luwuk	5.31	230	P		Pn		22 08 00.4	+12
LUWI	Luwuk	5.31	230			Pn		22 07 53.8	+5.3
SIJI	Sorong	5.53	126	P		Pn		22 07 54.8	+3.3
	3.7nm,0.3s,baz=315,slow=8.1,SNR=8.2								
SIJI				S		Sn		22 08 52.4	-1.5
	0.1nm,0.3s,baz=161,slow=23,SNR=1.0								
SIJI				LR		LR		22 10 30.0	
	comp=Z,270nm,21.1s,baz=328,slow=43								
BUKP	Musuan	5.69	342	*eP*		Pn		22 07 55.8	+1.9
BUKP				*eS*		Sn		22 08 57.7	-0.3
APSI	Ampana	6.13	237	P		Pn		22 08 16.1	+16
MPSI	Mapaga	7.21	253	P		Pn		22 08 20.0	+5.3
	0.1nm616nm20nm,0.7s								
MYLDM	Lahad Datu	8.73	289			Pn		22 08 40.6	+5.1
TTSI	Tana Toraja	8.85	232	P		Pn		22 08 54.3	+17
SBUM	Sibu	14.58	270	Pn		P		22 10 01.3	-0.2
TWSI	Taliwang, Sumb	14.86	222	P		P		22 10 09.3	+4.6
KNRA	Kununurra	18.09	174	P		P		22 10 40.3	-0.2
FITZ	Fitzroy Crossi	20.42	183	P		Pn		22 11 06.5	-1.8
	4.8nm,0.6s,baz=350,slow=7.4,SNR=16								
FITZ	Fitzroy Crossi	20.42	183			P		22 11 06.2	+0.1
GUMO	Guam	21.02	57	LR		LR		22 18 25.8	
	comp=Z,74nm,20.0s,baz=244,slow=34								
YULB	Yu-li	21.52	346	P		P		22 11 14.9	-3.0
YULB				IAmb		IAmb		22 11 29.1	
	comp=Z,13nm,0.8s								
WB0	Warramunga Arr	23.27	162	P		P		22 11 34.8	-1.6
WB0				IAmb		IAmb		22 11 47.4	
	comp=Z,11nm,0.8s								
WRAB	Tennant Creek	23.42	162	P		P		22 11 37.8	+0.1
WRAB				IAmb		IAmb		22 11 43.5	
	comp=Z,11nm,0.8s								
WRA	Warramunga Arr	23.42	162	P		P		22 11 37.0	-0.8
	comp=Z,5.8nm,0.6s,baz=341,slow=10,SNR=59								
WRA	Warramunga Arr	23.42	162	P		P		22 11 36.1	-1.7
WB2	Warramunga Arr	23.43	162	P		P		22 11 36.2	-1.7
WB2				IAmb		IAmb		22 11 43.2	
	comp=Z,13nm,0.7s								
PMG	Port Moresby	23.43	120	LR		LR		22 22 14.2	
	comp=Z,63nm,20.7s,baz=322,slow=40								
WR0	Warramunga Arr	23.50	162	P		P		22 11 37.0	-1.6
WR0				IAmb		IAmb		22 11 42.6	
	comp=Z,6.2nm,0.6s								
PSA00	Pilbara Seismi	24.80	196	P		P		22 11 51.5	+0.9
PSA00				IAmb		IAmb		22 12 02.9	
	comp=Z,9.8nm,1.1s								
KRVT	Keravat (AS076	26.07	105	LR		LR		22 21 16.4	
	comp=Z,54nm,20.6s,baz=280,slow=34								
ASAR	Alice Springs	26.84	165	P		P		22 12 08.1	-1.0
	comp=Z,1.2nm,0.4s,baz=345,slow=7.1,SNR=21								
ASAR				PcP		PcP		22 15 31.5	+0.2
	comp=Z,0.8nm,0.7s,baz=350,slow=2.4,SNR=5.6								
PSI	Prapat	27.86	271	LR		LR		22 24 42.3	
	comp=Z,45nm,20.5s,baz=124,slow=39								
CMAR	Chiang Mai Arr	31.62	302	P		P		22 12 51.5	-0.1
	comp=Z,5.4nm,0.8s,baz=114,slow=6.6,SNR=28								
CMAR				LR		LR		22 26 21.4	
	comp=Z,22nm,21.1s,baz=174,slow=38								
CHTO	Chiang Mai	31.78	303	P		P		22 12 52.7	-0.3
CHTO				IAmb		IAmb		22 12 54.0	
	comp=Z,7.8nm,0.8s								
FORT	Forrest	33.04	178	P		P		22 13 03.3	-0.6
KSRS	Korea Array	34.88	2	P		P		22 13 20.8	+1.0
	comp=Z,4.7nm,0.8s,baz=180,slow=9.8,SNR=11								
MJAR	Matsushiro Arr	35.55	16	P		P		22 13 25.4	-0.2
	comp=Z,2.6nm,0.8s,baz=200,slow=8.5,SNR=3.3								
BBOO	Buckleboo	36.12	167	P		P		22 13 27.9	-2.6
BBOO				IAmb		IAmb		22 13 29.8	
	comp=Z,7.1nm,0.9s								
STKA	Stephens Creek	36.89	159	P		P		22 13 36.5	-0.5
	comp=Z,10nm,0.9s,baz=334,slow=9.2,SNR=11								
STKA				LR		LR		22 29 43.5	
	comp=Z,33nm,18.5s,baz=24,slow=38								
STKA	Stephens Creek	36.89	159	P		P		22 13 36.2	-0.9
HHC	Hu-ho-hao-te	40.66	342	*eP*		P		22 14 10.0	+1.3
HHC				pmax		pmax			
	comp=Z,6.0nm,0.9s								
HHC				pmax		pmax			
	comp=Z,96nm,5.4s								
SHL	Shillong	40.72	308	P		P		22 14 08.6	-1.0
SHL				IAmb		IAmb		22 14 10.6	
	comp=Z,5.6nm,0.7s								
USRK	Ussuriysk Ar.	41.85	6	P		P		22 14 18.4	+0.1
	comp=Z,6.5nm,0.7s,baz=186,slow=7.0,SNR=15								
USRK	Ussuriysk Ar.	41.85	6	P		P		22 14 17.7	-0.6
LSA	Lhasa	43.37	312	P		P		22 14 31.4	-0.1
GTA	Gaotai	44.26	330	*eP*		P		22 14 38.7	+0.7
GTA				pP		pP		22 14 42.9	-4.9
GTA				sP		pwP		22 14 46.1	-4.3
GTA				pmax		pmax			
	comp=Z,3.0nm,1.1s								
RAMN	Ramite	45.57	306	*eP*		P		22 14 49.1	+0.2
GUN	Gumba	46.56	307	*eP*		P		22 14 56.1	-0.7
	comp=Z,21nm,0.7s								
PKI	Pulchoki	46.80	306	*eP*		P		22 14 57.7	-0.9
	comp=Z,4.7nm,0.5s								
PKIN	Phulchoki	46.81	306	*eP*		P		22 14 58.2	-0.4
	comp=Z,6.6nm,0.6s								
KKN	Kakani	46.99	307

baz=333,slow=76,SNR=135
H01W1 Cape Leeuwin H 38.89 157 T T 23 44 33.1
baz=333,slow=76,SNR=132
WRA Warramunga Arr 41.98 121 P **P** **23 03 42.3 -0.8**
1.0nm,0.7s,baz=300,slow=9.0,SNR=9.1
ASAR Alice Springs 43.29 127 P **P** **23 03 53.0 -0.8**
0.3nm,0.6s,baz=305,slow=7.9,SNR=5.2
SONM Songino Array 47.66 9 P **P** **23 04 28.8 +0.7**
0.7nm,0.8s,baz=175,slow=5.4,SNR=4.0
SONM PcP **PcP** **23 05 57.3 -0.2**
0.3nm,0.8s,baz=194,slow=3.8,SNR=1.8
MKAR Makanchi Array 47.67 346 P **P** **23 04 27.9 -0.1**
1.1nm,0.8s,baz=163,slow=7.9,SNR=6.0
ZALV Zalesovo Beam 54.01 351 P **P** **23 05 15.7 +0.1**
1.2nm,0.5s,baz=181,slow=5.9,SNR=5.8
VNDA Vanda 85.38 169 LR LR 23 44 24.6
comp=Z,23nm,18.3s,baz=324,slow=34

*IDC **02** 22:56:18.1±1.0,34.°69S×179.°49W,h0km,mb4.5/6, mb1 4.6/7,mb1mx4.2/34,mbtmp4.5/7,ML4.3/1,MS3.5/3, Ms1 3.5/3,ms1mx3.0/23,Error ellipse: s-maj=31.3km s-min=28.2km az=12.0*
*NEIC **02** 22:56:26.5±2.0,35.°14S±0.°09×179.°9W±0.°2,h86km±10km, mb4.6/7,ML4.6(WEL),Error ellipse: s-maj=19.7km s-min=11.1km az=112.0*
*WEL **02** 22:56:27.7±1.0,36.°5S±13.°×17.°9W±1.°7,h149km±27km, M4.6/30,mB5.1/7,ML4.9/26,MLv4.7/30,Mw(mB)4.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=120.2*
ISC 02 22:56:29.0±0.7,35.°21S±0.°06×179.°79W±0.°10,h100km, n105,σ2§16/104,mb4.5/10,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.81**	**213**	P	**Pn**	**22 57 10.1**	**-2.1**
MXZ	**Matakaoa Point**	**2.81**	**213**	Pn	**Pn**	**22 57 10.0**	**-2.1**
MXZ				Sn	**Sn**	**22 57 41.3**	**-4.1**
WMGZ	**Waiomatatini S**	**2.98**	**209**	P	**Pn**	**22 57 14.2**	**-0.3**
PKGZ	**Pakihiroa**	**3.18**	**212**	P	Pn	22 57 21.9	+4.8
PKGZ				S	Sn	22 58 02.0	+7.7
HAZ	**Te Kaha**	**3.21**	**217**	P	**Pn**	**22 57 17.0**	**-0.5**
HAZ				S	**Sn**	**22 57 57.3**	**+2.4**
PUZ	**Puketiti**	**3.26**	**208**	P	**Pn**	**22 57 17.0**	**-1.2**
PUZ				S	**Sn**	**22 57 57.7**	**+1.4**
RUGZ	**Raukumara Rang**	**3.43**	**216**	P	**Pn**	**22 57 20.4**	**-0.1**
RUGZ				S	**Sn**	**22 58 00.5**	**+0.2**
TWGZ	**Tauwhareparae**	**3.46**	**211**	P	**Pn**	**22 57 20.0**	**-1.0**
TWGZ				S	**Sn**	**22 58 03.7**	**+2.5**
CNGZ	**Carnagh Statio**	**3.65**	**206**	P	**Pn**	**22 57 22.9**	**-0.4**
CNGZ				S	**Sn**	**22 58 08.9**	**+3.5**
TKGZ	**Te Karaka**	**3.74**	**210**	P	**Pn**	**22 57 24.6**	**0.0**
TKGZ				S	**Sn**	**22 58 06.7**	**-1.0**
MWZ	**Matawai**	**3.79**	**214**	P	**Pn**	**22 57 24.2**	**-1.1**
MWZ				S	**Sn**	**22 58 10.4**	**+1.4**
URZ	**Urewera**	**3.94**	**218**	Pn	**Pn**	**22 57 25.9**	**-1.3**
	15nm,0.3s,baz=266,slow=3.1,SNR=47						
URZ				Sn	**Sn**	**22 58 11.6**	**-0.8**
	31nm,0.3s,baz=222,slow=8.3,SNR=8.5						
URZ	**Urewera**	**3.94**	**218**	P	**Pn**	**22 57 26.0**	**-1.3**
URZ				S	**Sn**	**22 58 09.7**	**-2.7**
URZ	**Urewera**	**3.94**	**218**	Pn	**Pn**	**22 57 25.3**	**-2.0**
URZ				Sn	**Sn**	**22 58 09.2**	**-3.2**
RAGZ	**Rawiri**	**3.98**	**214**	P	**Pn**	**22 57 27.7**	**-0.1**
RIGZ	**Rimuhau**	**4.01**	**209**	P	**Pn**	**22 57 27.7**	**-0.6**
EDRZ	**Edgecumbe**	**4.02**	**223**	P	Pn	22 57 35.8	+7.3
PRGZ	**Paritu Road**	**4.15**	**206**	P	**Pn**	**22 57 28.6**	**-1.6**
OMRZ	**Omania**	**4.23**	**226**	P	**Pn**	**22 57 32.4**	**+1.1**
TARZ	**Mount Tarawera**	**4.24**	**223**	P	**Pn**	**22 57 32.5**	**+1.0**
SNGZ	**Shannon Statio**	**4.25**	**212**	P	**Pn**	**22 57 30.9**	**-0.6**
SNGZ				S	**Sn**	**22 58 19.7**	**-0.3**
KARZ	**Kaharoa**	**4.25**	**227**	P	**Pn**	**22 57 30.6**	**-1.0**
RRRZ	**Republican Roa**	**4.31**	**222**	P	**Pn**	**22 57 31.6**	**-0.7**
KNZ	**Kokohu**	**4.32**	**207**	P	**Pn**	**22 57 30.6**	**-1.7**
MHGZ	**Mahia Peninsul**	**4.35**	**204**	P	**Pn**	**22 57 31.1**	**-1.8**
WIAZ	**Waiheke Island**	**4.41**	**247**	P	**Pn**	**22 57 32.7**	**-1.0**
HSRZ	**Hossack Road**	**4.44**	**225**	P	**Pn**	**22 57 37.2**	**+3.0**
RAHZ	**Arahi**	**4.47**	**213**	P	**Pn**	**22 57 33.6**	**-0.8**
PRRZ	**Plateau Road**	**4.49**	**222**	P	**Pn**	**22 57 33.7**	**-1.1**
MKAZ	**Moumakai**	**4.50**	**244**	P	**Pn**	**22 57 33.6**	**-1.4**
MTHZ	**Maungataniwha**	**4.53**	**216**	P	**Pn**	**22 57 34.8**	**-0.5**
WHHZ	**Waihua**	**4.54**	**211**	P	**Pn**	**22 57 34.9**	**-0.5**
ALRZ	**Allen Road**	**4.56**	**222**	P	**Pn**	**22 57 36.5**	**+0.7**
MRHZ	**Matea Rd**	**4.72**	**219**	P	**Pn**	**22 57 36.6**	**-1.4**
ARHZ	**Aropaoanui**	**4.79**	**211**	P	**Pn**	**22 57 38.0**	**-0.9**
ARHZ				S	**Sn**	**22 58 31.2**	**-2.0**
KUTZ	**Kaahu Road**	**4.81**	**226**	P	**Pn**	**22 57 39.8**	**+0.7**
BKZ	**Black Stump Fm**	**4.94**	**216**	P	**Pn**	**22 57 39.8**	**-1.1**
BKZ	**Black Stump Fm**	**4.94**	**216**	Pn	**Pn**	**22 57 38.5**	**-2.5**
MCHZ	**McNeill Hill**	**5.07**	**212**	P	**Pn**	**22 57 41.2**	**-1.4**
RATZ	**Rangitukua**	**5.09**	**223**	P	**Pn**	**22 57 43.1**	**+0.1**
CKHZ	**Cape Kidnapper**	**5.10**	**208**	P	**Pn**	**22 57 40.4**	**-2.5**
CKHZ				S	**Sn**	**22 58 37.8**	**-2.7**
RITZ	**Rihia Road**	**5.13**	**221**	P	**Pn**	**22 57 45.9**	**+2.6**
KWHZ	**Kaweka Forest**	**5.18**	**215**	P	**Pn**	**22 57 42.8**	**-1.4**
KAHZ	**Kahuranaki**	**5.29**	**209**	P	**Pn**	**22 57 43.1**	**-2.6**
TMVZ	**Te Maari**	**5.31**	**221**	P	**Pn**	**22 57 48.5**	**+2.5**
ETVZ	**East Tongariro**	**5.32**	**221**	P	Pn	22 57 54.1	+8.0
OTVZ	**Oturere**	**5.36**	**221**	P	Pn	22 57 52.5	+5.8
WTVZ	**West Tongariro**	**5.37**	**222**	P	Pn	22 57 55.5	+8.7
KRHZ	**Kereru**	**5.38**	**213**	P	**Pn**	**22 57 44.6**	**-2.2**
BHHZ	**Black Hill Sta**	**5.40**	**216**	P	**Pn**	**22 57 45.8**	**-1.3**
NGZ	**Ngauruhoe**	**5.41**	**222**	P	Pn	22 57 55.8	+8.5
HIZ	**Hauiti**	**5.42**	**231**	Pn	**Pn**	**22 57 43.6**	**-3.7**
OUZ	**Omahuta**	**5.42**	**268**	Pn	**Pn**	**22 57 44.0**	**-3.3**
TWVZ	**Taurewa**	**5.42**	**223**	P	Pn	22 57 51.6	+4.2
MOVZ	**Moawhango**	**5.50**	**219**	P	**Pn**	**22 57 47.6**	**-0.8**
PXZ	**Pawanui**	**5.50**	**208**	P	**Pn**	**22 57 45.8**	**-2.6**
WNVZ	**Wahianoa**	**5.52**	**220**	P	Pn	22 57 56.2	+7.4
VRZ	**Vera Road**	**5.85**	**226**	P	Pn	22 57 59.0	+5.8
RAO	**Raoul Island**	**6.14**	**15**	Pn	**Pn**	**22 58 54.3**	**-2.9**
WAZ	**Wanganui**	**6.15**	**221**	P	**Pn**	**22 58 00.3**	**+3.0**
BFZ	**Birch Farm**	**6.30**	**209**	P	**Pn**	**22 57 55.5**	**-3.8**
BFZ	**Birch Farm**	**6.30**	**209**	Pn	**Pn**	**22 57 56.1**	**-3.2**
KHEZ	**Kahui Hut**	**6.41**	**229**	P	Pn	22 58 04.9	+4.1
MRZ	**Mangatainoka R**	**6.56**	**213**	P	**Pn**	**22 57 60.0**	**-2.9**
KIW	**Kapiti Island**	**7.03**	**215**	P	**Pn**	**22 58 07.9**	**-1.3**
MSWZ	**Moikau Station**	**7.32**	**211**	Pn	**Pn**	**22 58 09.6**	**-3.6**
PLWZ	**Palliser**	**7.45**	**210**	Pn	**Pn**	**22 58 11.8**	**-3.1**
SNZO	**South Karori**	**7.48**	**214**	Pn	**Pn**	**22 58 13.5**	**-1.7**
NNZ	**Nelson**	**8.06**	**220**	P	**Pn**	**22 58 24.9**	**+1.8**
THZ	**Tophouse**	**8.70**	**219**	P	**Pn**	**22 58 28.9**	**-3.0**
THZ	**Tophouse**	**8.70**	**219**	Pn	**Pn**	**22 58 29.3**	**-2.6**
LTZ	**Lake Taylor**	**9.76**	**217**	P	**Pn**	**22 58 45.0**	**-1.4**
LTZ	**Lake Taylor**	**9.76**	**217**	Pn	**Pn**	**22 58 43.0**	**-3.4**
MQZ	**McQueen's Vall**	**10.30**	**212**	P	**Pn**	**22 58 50.9**	**-2.8**
RPZ	**Rata Peaks**	**11.05**	**217**	Pn	**Pn**	**22 58 59.3**	**-4.6**
	0.8nm,0.3s,baz=47,slow=23,SNR=2.1						
RPZ				Sn	Sn	23 00 53.9	-11
	2.1nm,0.3s,baz=133,slow=23,SNR=7.3						
RPZ	**Rata Peaks**	**11.05**	**217**	P	**Pn**	**22 59 02.8**	**-1.1**
ODZ	**Otahua Downs**	**12.24**	**214**	P	**Pn**	**22 59 17.5**	**-2.3**
JCZ	**Jackson Bay**	**12.48**	**221**	P	**P**	**22 59 27.3**	**-3.4**
MSVF	**Nonsavu**	**17.51**	**353**	P	**P**	**23 00 24.1**	**-2.5**
MSVF				IAmb	IAmb	23 00 31.5	
	comp=Z,18nm,1.1s						
SANVU	**Saraoutou**	**22.88**	**326**	P	**P**	**23 01 20.5**	**-3.6**
SANVU				IAmb	IAmb	23 01 25.8	
	comp=Z,27nm,0.7s						
STKA	**Stephens Creek**	**32.22**	**265**	P	**P**	**23 02 51.5**	**+3.8**
	comp=Z,2.0nm,0.5s,baz=100,slow=8.4,SNR=8.0						
STKA				LR	LR	23 15 17.4	
	comp=Z,50nm,18.1s,baz=36,slow=35						
CTA	**Charters Tower**	**33.45**	**288**	P	**P**	**23 03 01.0**	**+2.5**
	comp=Z,1.8nm,0.3s,baz=133,slow=5.7,SNR=3.8						
AS31	**Alice Springs**	**41.60**	**273**	P	**P**	**23 04 05.7**	**-1.6**
AS31				IAmb	IAmb	23 04 12.4	
	comp=Z,4.5nm,0.5s						
ASAR	**Alice Springs**	**41.60**	**273**	P	**P**	**23 04 09.2**	**+1.9**
	comp=Z,9.0nm,0.6s,baz=116,slow=7.5,SNR=79						
ASAR				LR	LR	23 21 02.5	
	comp=Z,81nm,19.8s,baz=107,slow=36						
ASAR	**Alice Springs**	**41.60**	**273**	P	**P**	**23 04 04.6**	**-2.7**
WR0	**Warramunga Arr**	**42.86**	**278**	P	**P**	**23 04 15.1**	**-2.4**
WR0				IAmb	IAmb	23 04 20.1	
	comp=Z,6.0nm,0.9s						
WB2	**Warramunga Arr**	**43.02**	**278**	P	**P**	**23 04 16.4**	**-2.4**
WRA	**Warramunga Arr**	**43.03**	**278**	P	**P**	**23 04 20.4**	**+1.5**
	comp=Z,6.9nm,0.5s,baz=120,slow=7.6,SNR=44						
WB0	**Warramunga Arr**	**43.08**	**279**	P	**P**	**23 04 18.0**	**-1.3**
WB0				IAmb	IAmb	23 04 23.4	
	comp=Z,8.5nm,0.6s						

VNDA	**Vanda**	**43.18**	**186**	LR	LR	23 17 33.9	
	comp=Z,98nm,21.3s,baz=10,slow=29						
MAW	**Mawson**	**67.30**	**202**	P	P	23 07 18.5	+6.1
	comp=Z,2.1nm,0.9s,baz=117,slow=6.7,SNR=5.4						
MAW	**Mawson**	**67.30**	**202**	P	**P**	**23 07 11.8**	**-0.6**
SNAA	**Sanae**	**73.40**	**179**	P	**P**	**23 07 49.2**	**-0.5**
H03N3	**Juan Fernandez**	**79.29**	**123**	T	T	00 36 48.6	
	baz=237,slow=72,SNR=17						
H03N2	**Juan Fernandez**	**79.29**	**123**	T	T	00 36 49.6	
	baz=237,slow=72,SNR=17						
H03N1	**Juan Fernandez**	**79.30**	**123**	T	T	00 36 52.8	
	baz=237,slow=72,SNR=16						
CMAR	**Chiang Mai Arr**	**93.59**	**290**	P	**P**	**23 09 36.0**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=129,slow=2.2,SNR=5.0						
ARCES	**ARCESS Array B**	**142.91**	**346**	PKP	**PKPdf**	**23 15 50.4**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=38,slow=1.0,SNR=6.8						
FINES	**FINESS Array B**	**149.03**	**336**	PKPbc	**PKiKP**	**23 16 06.5**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=21,slow=4.4,SNR=20						
DBIC	**Dimbokro**	**151.22**	**169**	PKPbc	**PKiKP**	**23 16 14.5**	**+2.7**
	comp=Z,3.2nm,0.9s,baz=165,slow=4.1,SNR=1.6						
BRTR	**Keskin Array B**	**153.18**	**290**	PKPbc	**PKiKP**	**23 16 16.3**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=145,slow=4.5,SNR=6.6						
NB2	**NORSAR Subarra**	**153.20**	**348**	PKP	**PKiKP**	**23 16 16.1**	**+1.7**
	comp=Z,2.1nm,0.7s,baz=23,slow=2.0						
NOA	**NORSAR Array B**	**153.20**	**348**	PKPbc	**PKiKP**	**23 16 16.6**	**+2.1**
	comp=Z,1.7nm,0.7s,baz=18,slow=4.2,SNR=8.0						
AKASG	**Malin Array Be**	**153.34**	**315**	PKPbc	**PKiKP**	**23 16 18.0**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=59,slow=2.4,SNR=6.3						
TORD	**Torodi Ar. Bea**	**158.00**	**184**	PKPab	**PKPab**	**23 16 52.7**	**+4.7**
	comp=Z,1.3nm,0.8s,baz=171,slow=4.0,SNR=5.6						

*UPA **02** 23:00:57.8±2.2,6.°00N×82.°56W,h0km±17km,MW4.2*
ISC 02 23:00:59.0±1.2,5.°95N±0.°05×82.°50W±0.°08,h14km,n21, σ1§96/27,South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAPC	**Malpelo**	**2.12**	**155**	*e*S	**Pg**	**23 01 41.3**	**+1.5**
MAPC				*i*	**Sb**	**23 02 01.9**	**-1.7**
	comp=Z,79nm,0.4s						
CACAO	**El Cacao, Vera**	**2.14**	**49**	*e*P	**Pn**	**23 01 32.8**	**-1.5**
CACAO				*e*S	**Sn**	**23 02 01.3**	**+0.6**
CDITO	**Canoas**	**2.64**	**352**	*e*P	**Pn**	**23 01 39.6**	**-1.6**
CDITO				*e*S	**Sb**	**23 02 15.8**	**-2.5**
PTJ1	**Puerto Jimnez**	**2.69**	**343**	*e*P	**Pn**	**23 01 41.1**	**-0.9**
PTJ1				*e*S	**Sb**	**23 02 17.3**	**-2.7**
BRU2	**Volcan**	**2.84**	**356**	*e*P	**Pn**	**23 01 43.1**	**-1.0**
AZU	**Azuero**	**2.87**	**50**	*e*P	**Pn**	**23 01 43.4**	**-1.0**
AZU				*e*S	**Sn**	**23 02 20.4**	**+1.6**
PNME	**Penonome**	**3.32**	**40**	*e*P	**Pn**	**23 01 52.0**	**+1.5**
VTON	**El Valle, Cocl**	**3.55**	**42**	*e*S	**Sn**	**23 02 38.7**	**+3.0**
UPA	**Univ. de Panam**	**4.21**	**44**	*e*P	**Pn**	**23 02 03.8**	**+1.0**
UPA				*e*S	**Sn**	**23 02 50.9**	**-1.0**
BATAN	**Batan**	**4.22**	**348**	*e*P	**Pn**	**23 02 03.9**	**+1.0**
HDC	**Heredia**	**4.34**	**338**	*e*P	**Pn**	**23 02 03.7**	**-1.0**
HDC				*e*S	**Sn**	**23 02 57.7**	**+2.5**
GR1C	**Gorgona, Isla**	**5.21**	**124**	*e*P	Pn	23 02 10.3	-6.4
GR1C				*e*S	Sn	23 03 02.3	-14
CAP2	**Capurgana**	**5.76**	**62**	*e*P	**Pn**	**23 02 25.7**	**+1.5**
CAPC	**Capurgana**	**5.76**	**62**	*e*P	**Pn**	**23 02 26.2**	**+2.0**
CAPC				*e*S	Pb	23 02 33.2	-6.2
CAPC				*i*		23 02 33.8	
	comp=Z,30nm,0.2s						
DBBC	**Dabeiba**	**6.34**	**80**	*e*P	**Pn**	**23 02 33.0**	**+0.8**
BBAC	**Balboa, Cauca**	**6.53**	**126**	*e*P	Pn	23 02 27.8	-7.1
HELC	**Santa Helena**	**6.94**	**88**	*e*S	**Sn**	**23 04 02.0**	**+2.4**
PCON	**Cinco Dias**	**7.07**	**120**	*e*P	**Pn**	**23 02 38.8**	**-3.9**
ANIL	**Santa Ana**	**7.21**	**101**	*e*P	**Pn**	**23 02 43.1**	**-1.2**
TOLC	**Tolima**	**7.27**	**100**	*e*P	**Pn**	**23 02 44.4**	**-0.9**
TOLC				*e*S	**Sn**	**23 04 05.9**	**-2.0**
GARC	**Garzon, Huila**	**7.92**	**118**	*e*P	**Pn**	**23 02 51.2**	**-2.8**

*IDC **02** 23:05:37.6±4.3,24.°70S×68.°65W,h91km±39km,mb3.8/3, mb1 3.8/4,mb1mx3.5/25,mbtmp4.1/4,MS3.0/1,Ms1 2.9/1, ms1mx2.6/18,Error ellipse: s-maj=45.8km s-min=28.6km az=123.0*
*GUC **02** 23:05:37.6±0.7,24.°67S×68.°99W,h110km±5km,ML4.0*
*NEIC **02** 23:05:37.1±2.8,24.°64S±0.°05×69.°1W±0.°1,h122km±5km, mb4.0/5,Error ellipse: s-maj=17.5km s-min=6.4km az=96.0*
*VAO **02** 23:05:40.8±2.1,24.°44S×68.°90W,h136km,mb4.1*
ISC 02 23:05:37.2±0.7,24.°67S±0.°04×68.°97W±0.°08,h116km±8km, n65,σ1§30/75,mb3.9/3,5C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.75**	**229**	*i*P	**Pn**	**23 05 57.7**	**+0.7**
GO02				*i*S	**Sn**	**23 06 11.9**	**+0.1**
GO02				IAML		23 06 14.2	
	comp=E,7µm,0.2s						
GO02	**Mina Guanaco**	**0.75**	**229**		**Pn**	**23 05 57.7**	**+0.7**
GO02				Sn	**Sn**	**23 06 12.5**	**+0.6**
PB14	**IPOC Station P**	**1.31**	**272**	*i*P	**Pn**	**23 06 03.5**	**+1.0**
PB14				*i*S	**Sn**	**23 06 22.5**	**+0.8**
PB14	**IPOC Station P**	**1.31**	**272**		**Pn**	**23 06 03.5**	**+1.0**
PB15	**IPOC Station P**	**1.53**	**342**	⇓*i*P	**Pn**	**23 06 06.0**	**+1.0**
PB15				*i*S	**Sn**	**23 06 26.8**	**+0.8**
PB15	**IPOC Station P**	**1.53**	**342**		**Pn**	**23 06 05.8**	**+0.8**
PB15				Sn	**Sn**	**23 06 26.8**	**+0.8**
PB06	**IPOC Station P**	**2.03**	**344**	*i*P	**Pn**	**23 06 12.3**	**+1.2**
PB06				*i*S	**Sn**	**23 06 37.9**	**+1.0**
PB06				IAML		23 06 45.8	
	comp=E,1µm,0.3s						
PB06	**IPOC Station P**	**2.03**	**344**		**Pn**	**23 06 12.4**	**+1.2**
LVC	**Limon Verde**	**2.05**	**1**		**Pn**	**23 06 12.2**	**+0.7**
LVC	**Limon Verde**	**2.05**	**1**	*e*P	**Pn**	**23 06 12.3**	**+0.7**
LVC				*e*S	**Sn**	**23 06 38.2**	**+0.5**
AC01	**Pan de Azucar**	**2.08**	**225**	⇓*i*P	**Pn**	**23 06 12.4**	**+0.9**
AC01				*e*S	**Sn**	**23 06 38.6**	**+0.8**
AC01				IAML		23 06 43.3	
	comp=N,487nm,0.4s						
AC01	**Pan de Azucar**	**2.08**	**225**		**Pn**	**23 06 11.4**	**-0.2**
PB05	**IPOC Station P**	**2.13**	**328**	⇑*i*P	**Pn**	**23 06 13.3**	**+1.0**
PB05				*e*S	**Sn**	**23 06 39.9**	**+0.8**
PB05				IAML		23 06 47.2	
	comp=E,1µm,0.3s						
AC02	**Maricunga**	**2.16**	**184**	⇑*i*P	**Pn**	**23 06 14.3**	**+1.2**
AC02				*e*S	**Sn**	**23 06 42.4**	**+2.0**
AC02				IAML		23 06 44.2	
	comp=E,430nm,0.3s						
AC02	**Maricunga**	**2.16**	**184**		**Pn**	**23 06 14.4**	**+1.3**
PB04	**IPOC Station P**	**2.57**	**335**	⇑*i*P	**Pn**	**23 06 18.7**	**+0.8**
PB04				*e*S	**Sn**	**23 06 50.4**	**+1.2**
PB04				IAML		23 07 03.9	
	comp=E,807nm,0.3s						
PB04	**IPOC Station P**	**2.57**	**335**		**Pn**	**23 06 18.9**	**+1.0**
PB03	**IPOC Station P**	**2.71**	**344**	⇓*i*P	**Pn**	**23 06 20.8**	**+1.0**
PB03				*e*S	**Sn**	**23 06 52.2**	**-0.3**
PB03				IAML		23 06 59.4	
	comp=N,703nm,0.3s						
PB09	**IPOC Station P**	**2.87**	**355**	⇑*i*P	**Pn**	**23 06 23.4**	**+1.5**
PB09				*e*S	**Sn**	**23 06 58.2**	**+1.9**
PB09				IAML		23 07 06.0	
	comp=E,462nm,0.6s						
PB09	**IPOC Station P**	**2.87**	**355**		**Pn**	**23 06 23.3**	**+1.4**
PB07	**IPOC Station P**	**3.05**	**344**		**Pn**	**23 06 24.9**	**+0.7**
GO03	**Copiap**	**3.13**	**201**	Pn	**Pn**	**23 06 25.2**	**+0.1**
PB01	**IPOC Station P**	**3.64**	**352**		**Pn**	**23 06 32.3**	**+0.3**
AC04	**Llanos de Chal**	**4.00**	**208**	Pn	**Pn**	**23 06 35.4**	**-1.2**
TA01	**Diego Aracena**	**4.24**	**344**	Pn	**Pn**	**23 06 38.8**	**-1.1**
AC05	**El Transito**	**4.31**	**195**	Pn	**Pn**	**23 06 41.0**	**0.0**
PB08	**IPOC Station P**	**4.51**	**358**		**Pn**	**23 06 43.2**	**-0.7**
LCO	**Las Campanas**	**4.59**	**199**	Pn	**Pn**	**23 06 43.8**	**-1.1**
PB11	**IPOC Station P**	**4.93**	**352**	Pn	**Pn**	**23 06 48.6**	**-0.7**
GO01	**Chusmiza**	**4.98**	**208**		**Pn**	**23 06 49.3**	**-1.1**
PSGCX	**Pisagua**	**5.16**	**348**	Pn	**Pn**	**23 06 51.0**	**-1.4**
CO01	**Juntas del Tor**	**5.38**	**190**		**Pn**	**23 06 55.1**	**-0.4**
GO04	**Tololo Observa**	**5.72**	**196**	Pn	**Pn**	**23 06 58.7**	**-1.4**
PB16	**IPOC Station P**	**6.32**	**355**		**Pn**	**23 07 08.1**	**-0.5**
CO02	**Combarbal**	**6.75**	**195**	Pn	**Pn**	**23 07 11.6**	**-2.3**
VA03	**San Esteban**	**8.18**	**189**	Pn	**Pn**	**23 07 30.3**	**-2.9**
LPAZ	**La Paz**	**8.38**	**6**	P	**Pn**	**23 07 37.1**	**+0.7**
	comp=E,0.7nm,0.3s,baz=169,slow=3.8,SNR=28						
LPAZ	**La Paz**	**8.38**	**6**	Pn	**Pn**	**23 07 36.0**	**-0.4**
LPAZ	**La Paz**	**8.38**	**6**	*e*P	**Pn**	**23 07 36.7**	**+0.3**
ROC1	**El Roble**	**8.47**	**192**	Pn	**Pn**	**23 07 36.9**	**-0.4**
MT02	**Curacav**	**8.77**	**192**	Pn	**Pn**	**23 07 38.4**	**-2.7**
MT05	**Renca**	**8.83**	**190**	Pn	**Pn**	**23 07 40.8**	**-1.1**
BO02	**Sierra Bellavi**	**10.21**	**188**	Pn	**Pn**	**23 07 59.1**	**-1.6**

LC01	**Cunco**	**14.40**	**189**	Pn	**Pn**	**23 08 52.2**	**-3.3**
TRCB	**Terra Rica**	**15.07**	**86**	*e*P	**P**	**23 09 06.9**	**+0.2**
PLCA	**Paso Flores**	**16.07**	**184**	LR	LR	23 15 45.0	
	comp=E,46nm,18.7s,baz=144,slow=38						
SAML	**Samuel**	**16.58**	**20**	Pn	**Pn**	**23 09 21.4**	**-1.5**
ARAG	**Araguaiana, MT**	**18.39**	**64**	*e*P	**Pn**	**23 09 44.3**	**-0.5**
CLDB	**Colider**	**18.57**	**45**	*e*P	**P**	**23 09 43.5**	**-1.7**
IPMB	**Ipameri, GO**	**20.43**	**75**	*e*P	**P**	**23 10 05.1**	**-0.4**
BDFB	**Brasilia**	**21.60**	**69**	P	**P**	**23 10 17.0**	**-1.1**
	comp=E,1.7nm,0.5s,baz=261,slow=9.8,SNR=4.6						
BDFB	**Brasilia**	**21.60**	**69**	P	**P**	**23 10 16.9**	**-1.1**
BDFB				IAmb	IAmb	23 10 20.2	
	comp=Z,3.2nm,0.8s						
MACA	**Manacapuru-AM**	**22.83**	**22**	*e*P	**P**	**23 10 30.3**	**-0.2**
ITTB	**Itaituba**	**23.87**	**34**	*e*P	**P**	**23 10 40.0**	**-0.1**
MALB	**Monte Alegre**	**26.76**	**34**	*e*P	**P**	**23 11 06.5**	**+0.2**
PMSA	**Palmer Station**	**40.23**	**177**	P	**P**	**23 13 01.0**	**-1.1**
QSPA	**South Pole Qui**	**65.54**	**180**	P	**P**	**23 16 11.3**	**+3.2**
	comp=Z,2.3nm,0.7s,baz=161,slow=1.4,SNR=11						
QSPA	**South Pole Qui**	**65.54**	**180**	IAmb	IAmb	23 16 12.1	
	comp=Z,2.9nm,0.8s						
TORD	**Torodi Ar. Bea**	**78.48**	**70**	P	**P**	**23 17 27.9**	**+2.0**
	comp=Z,1.4nm,0.6s,baz=263,slow=5.1,SNR=13						
TORD	**Torodi Ar. Bea**	**78.48**	**70**	IAmb	IAmb	23 17 28.2	
	comp=Z,1.4nm,0.7s						
ASAR	**Alice Springs**	**127.08**	**207**	PKP	**PKiKP**	**23 24 30.8**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=176,slow=2.1,SNR=4.9						
WRA	**Warramunga Arr**	**130.19**	**209**	PKP	**PKiKP**	**23 24 37.3**	**+2.1**
	comp=Z,0.3nm,0.4s,baz=157,slow=1.9,SNR=2.9						
ZALV	**Zalesovo Beam**	**144.81**	**27**	PKP	**PKiKP**	**23 25 02.4**	**-1.5**
	comp=Z,2.9nm,0.6s,baz=306,slow=4.8,SNR=11						
ZALV	**Zalesovo Beam**	**144.81**	**27**		**PKiKP**	**23 25 01.9**	**-1.9**
MKAR	**Makanchi Array**	**148.17**	**39**	PKPbc	**PKPab**	**23 25 12.4**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=329,slow=2.5,SNR=15						

*NEIC **02** 23:08:20.9±2.3,19.°84S±0.°07×174.°46W±0.°10,h42km±6km, mb4.7/59,Error ellipse: s-maj=13.8km s-min=9.9km az=113.0*
*IDC **02** 23:08:27.3±3.0,19.°75S×174.°74W,h97km±26km,mb4.0/14, mb1 4.3/15,mb1mx4.1/31,mbtmp4.4/15,MS3.3/5, Ms1 3.2/5,ms1mx2.9/27,Error ellipse: s-maj=18.8km s-min=12.4km az=134.0*
**ISC 02 23:08:20.0±0.

CTAO				IAmb	IAmb	23 15 30.2	
	comp=Z,8.1nm,1.1s						
TOO	**Toolangi**	**39.06**	**234**	P	**P**	**23 15 42.9**	**-0.2**
MCQ	**Macquarie Isla**	**40.16**	**204**	P	**P**	**23 15 49.6**	**-2.3**
STKA	**Stephens Creek**	**41.15**	**244**	P	**P**	**23 15 59.9**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=91,slow=10,SNR=8.4						
STKA				LR	LR	23 30 48.1	
	comp=Z,50nm,19.9s,baz=24,slow=33						
STKA	**Stephens Creek**	**41.15**	**244**	P	**P**	**23 16 00.2**	**-0.2**
BBOO	**Buckleboo**	**45.90**	**243**	P	**P**	**23 16 40.3**	**+1.6**
BBOO				IAmb	IAmb	23 17 00.1	
	comp=Z,9.7nm,1.1s						
WR0	**Warramunga Arr**	**47.87**	**261**	P	**P**	**23 16 54.3**	**+0.1**
AS31	**Alice Springs**	**47.98**	**256**	P	**P**	**23 16 56.3**	**+1.2**
ASAR	**Alice Springs**	**47.98**	**256**	P	**P**	**23 16 53.5**	**-1.6**
	comp=Z,1.6nm,0.4s,baz=98,slow=8.1,SNR=27						
ASAR				S	**S**	**23 23 43.2**	**-7.1**
	comp=Z,0.7nm,0.7s,baz=92,slow=16,SNR=5.1						
ASAR	**Alice Springs**	**47.98**	**256**	P	**P**	**23 16 55.5**	**+0.3**
WB0	**Warramunga Arr**	**48.04**	**261**	P	**P**	**23 16 55.5**	**-0.1**
WB0				IAmb	IAmb	23 16 59.9	
	comp=Z,5.6nm,0.9s						
WB2	**Warramunga Arr**	**48.05**	**261**	IAmb	IAmb	23 16 59.2	
	comp=Z,4.7nm,0.7s						
WRA	**Warramunga Arr**	**48.06**	**261**	P	**P**	**23 16 54.3**	**-1.4**
	comp=Z,1.6nm,0.4s,baz=98,slow=7.6,SNR=46						
WRA				S	**S**	**23 23 44.5**	**-7.1**
	comp=Z,0.5nm,0.9s,baz=27,slow=35,SNR=2.5						
WRA	**Warramunga Arr**	**48.06**	**261**	P	**P**	**23 16 55.4**	**-0.3**
FORT	**Forrest**	**52.69**	**246**	P	**P**	**23 17 32.1**	**+1.6**
FITZ	**Fitzroy Crossi**	**56.49**	**261**	P	**P**	**23 17 58.7**	**+0.4**
VNDA	**Vanda**	**58.95**	**186**	P	**P**	**23 18 16.8**	**+2.2**
	comp=Z,3.5nm,0.8s,baz=359,slow=7.4,SNR=20						
VNDA	**Vanda**	**58.95**	**186**	P	**P**	**23 18 16.8**	**+2.2**
VNDA				IAmb	IAmb	23 18 17.7	
	comp=Z,5.0nm,0.9s						
SOEI	**Soe**	**59.88**	**270**	P	**P**	**23 18 21.2**	**-1.0**
PSA00	**Pilbara Seismi**	**61.13**	**256**	P	**P**	**23 18 29.7**	**-0.8**
PSA00				IAmb	IAmb	23 18 42.8	
	comp=Z,9.3nm,1.0s						
CASY	**Casey**	**66.06**	**205**	P	**P**	**23 19 01.8**	**-0.4**
CASY				IAmb	IAmb	23 19 02.9	
	comp=Z,7.0nm,1.1s						
QSPA	**South Pole Qui**	**70.29**	**180**	P	**P**	**23 19 30.2**	**+1.3**
	comp=Z,16nm,0.8s,baz=354,slow=0.4,SNR=68						
QSPA	**South Pole Qui**	**70.29**	**180**	P	**P**	**23 19 30.1**	**+1.2**
AMKA	**Amchitka**	**71.06**	**356**	P	**P**	**23 19 32.9**	**-0.6**
MJAR	**Matsushiro Arr**	**71.71**	**321**	P	**P**	**23 19 37.1**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=159,slow=5.7,SNR=7.4						
H06S1	**SOCORRO T**	**73.04**	**62**	T	T	00 40 03.6	
	SNR=12						
H06E1	**SOCORRO T-PHAS**	**73.09**	**62**	T	T	00 40 12.3	
	SNR=12						
KMRM	**Mail Ridge**	**76.08**	**38**	P	**P**	**23 20 06.1**	**+2.7**
KMRM				IAmb	IAmb	23 20 18.2	
	comp=Z,16nm,1.1s						
SSLB	**Suanglung**	**76.45**	**302**	P	**P**	**23 20 05.0**	**-0.8**
SSLB				IAmb	IAmb	23 20 07.4	
	comp=Z,5.3nm,0.4s						
OMMB	**Old Mammoth Mi**	**77.27**	**42**	P	**P**	**23 20 11.6**	**+1.1**
KEBM	**Edson Butte**	**77.50**	**35**	P	**P**	**23 20 11.1**	**-0.2**
WAKR	**Walker**	**77.54**	**41**	P	**P**	**23 20 13.2**	**+1.4**
PNTR	**Pine Nut**	**77.80**	**41**	P	**P**	**23 20 12.8**	**-0.5**
PNTR				IAmb	IAmb	23 20 21.5	
	comp=Z,4.5nm,0.9s						
NVAR	**Mina Array Bea**	**78.20**	**42**	P	**P**	**23 20 17.5**	**+2.0**
	comp=Z,3.0nm,0.7s,baz=224,slow=8.6,SNR=13						
NV11	**Mina Array Sit**	**78.30**	**42**	P	**P**	**23 20 18.0**	**+2.0**
NV11				IAmb	IAmb	23 20 19.1	
	comp=Z,4.8nm,1.1s						
TPNV	**Topopah Spring**	**78.65**	**44**	P	**P**	**23 20 19.9**	**+2.0**
TPH	**Tonopah**	**78.68**	**43**	P	**P**	**23 20 19.2**	**+1.1**
K05A	**Summer Lake**	**79.32**	**37**	P	**P**	**23 20 23.1**	**+1.6**
CCUT	**Cedar City**	**80.89**	**45**	P	**P**	**23 20 32.9**	**+2.8**
MAW	**Mawson**	**83.36**	**199**	P	**P**	**23 20 42.5**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=140,slow=6.7,SNR=8.4						
MAW	**Mawson**	**83.36**	**199**	P	**P**	**23 20 43.0**	**+0.7**
H03S2	**Juan Fernandez**	**83.58**	**124**	T	T	00 53 05.3	
	baz=249,slow=75,SNR=369						
H03S1	**Juan Fernandez**	**83.59**	**124**	T	T	00 53 12.6	
	baz=249,slow=75,SNR=383						
H03S3	**Juan Fernandez**	**83.60**	**124**	T	T	00 53 11.3	
	baz=249,slow=75,SNR=372						
HLID	**Hailey**	**83.60**	**39**	P	**P**	**23 20 46.0**	**+1.8**
H03N2	**Juan Fernandez**	**83.71**	**123**	T	T	00 53 09.6	
	baz=257,slow=71,SNR=170						
H03N3	**Juan Fernandez**	**83.71**	**123**	T	T	00 53 10.8	
	baz=257,slow=71,SNR=116						
H03N1	**Juan Fernandez**	**83.72**	**123**	T	T	00 53 15.9	
	baz=257,slow=71,SNR=90						
GHO	**Glory Hole Cre**	**83.78**	**12**	P	**P**	**23 20 45.3**	**+0.8**
GHO				IAmb	IAmb	23 20 47.0	
	comp=Z,8.5nm,1.0s						
TXAR	**Lajitas Array**	**83.83**	**56**	P	**P**	**23 20 47.7**	**+2.1**
	comp=Z,1.0nm,0.9s,baz=209,slow=7.2,SNR=7.5						
TXAR	**Lajitas Array**	**83.83**	**56**	P	**P**	**23 20 46.4**	**+0.9**
SCM	**Sheep Creek Mo**	**84.16**	**13**	P	**P**	**23 20 47.6**	**+1.2**
ANMO	**Albuquerque**	**84.33**	**50**	P	**P**	**23 20 50.7**	**+2.7**
ANMO				IAmb	IAmb	23 20 51.5	
	comp=Z,4.4nm,1.0s						
PDAR	**Pinedale Array**	**86.14**	**42**	P	**P**	**23 20 58.1**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=242,slow=3.2,SNR=4.2						
RIDG	**Independent Ri**	**86.38**	**13**		pP	23 21 10.8	+0.6
ILAR	**Eielson Array**	**86.90**	**11**	P	**P**	**23 21 01.4**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=239,slow=6.1,SNR=7.3						
SYO	**Syowa Base**	**88.14**	**192**⇑	*eP*	**P**	**23 21 04.2**	**-1.8**
SYO	**Syowa Base**	**88.14**	**192**⇑	*e*PcP	**PcP**	**23 21 07.8**	**+0.1**
VNA3	**Neumayer Olymp**	**88.60**	**175**	P	**P**	**23 21 08.7**	**+0.5**
SNAA	**Sanae**	**88.60**	**177**	P	**P**	**23 21 08.3**	**0.0**
SNAA	**Sanae**	**88.60**	**177**	P	**P**	**23 21 08.5**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=184,slow=3.6,SNR=14						
SNAA	**Sanae**	**88.60**	**177**	P	**P**	**23 21 08.5**	**+0.2**
SNAA				IAmb	IAmb	23 21 09.2	
	comp=Z,4.2nm,0.8s						
VNA2	**Neumayer--Watz**	**89.08**	**176**	P	**P**	**23 21 11.1**	**+0.6**
	baz=166,slow=6.3						
VNA1	**Neumayer--Stat**	**89.29**	**175**	P	**P**	**23 21 11.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**93.09**	**288**	P	**P**	**23 21 31.0**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=107,slow=2.7,SNR=8.8						
ARCES	**ARCESS Array B**	**128.78**	**351**	PKP	**PKPdf**	**23 27 22.4**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=17,slow=1.6,SNR=13						
FINES	**FINESS Array B**	**135.97**	**346**	PKP	**PKPdf**	**23 27 36.1**	**+0.2**
	comp=Z,14nm,1.3s,baz=351,slow=2.5,SNR=6.1						
AKASG	**Malin Array Be**	**143.93**	**334**	PKP	PKPbc	23 27 48.7	+0.1
	comp=Z,0.7nm,0.4s,baz=39,slow=4.6,SNR=7.5						
CLL	**Collm**	**148.00**	**351**	*i* PKPbc	**PKiKP**	**23 28 02.0**	**-0.6**
DPC	**Dobruska-Polom**	**148.33**	**347**⇑	*e*PKP	**PKPab**	**23 28 04.8**	**-0.1**
BRTR	**Keskin Array B**	**148.79**	**316**	PKPbc	**PKPbc**	**23 28 03.6**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=130,slow=3.2,SNR=2.9						
KHC	**Kasperske Hory**	**150.03**	**349**⇓	*e*PKP	**PKiKP**	**23 28 07.7**	**+0.8**
GERES	**GERESS Array B**	**150.28**	**349**	PKPbc	**PKiKP**	**23 28 07.2**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=0.0,slow=1.1,SNR=7.1						
CONA	**Conrad Observa**	**150.71**	**346**	*e*P	**PKiKP**	**23 28 08.9**	**+0.5**
	comp=Z,1.6nm,0.9s						
MOA	**Molln**	**151.13**	**348**	*e*P	**PKiKP**	**23 28 09.7**	**+0.5**
	comp=Z,1.3nm,0.5s						
SOKA	**Soboth**	**152.08**	**346**	*e*P	**PKPbc**	**23 28 10.7**	**-0.2**
	comp=Z,2.8nm,1.3s						
WATA	**Walderalm**	**152.09**	**351**	*e*P	**PKiKP**	**23 28 11.6**	**+0.2**
	comp=Z,1.2nm,0.5s						
MOTA	**Moosalm**	**152.14**	**352**	*e*P	**PKiKP**	**23 28 12.9**	**+1.4**
	comp=Z,3.4nm,1.3s						
WTTA	**Wattenberg**	**152.15**	**351**	*e*P	**PKiKP**	**23 28 11.8**	**+0.3**
	comp=Z,3.6nm,0.5s						
SQTA	**Sankt Quirin**	**152.25**	**352**	*e*P	**PKPbc**	**23 28 11.5**	**+0.1**
	comp=Z,2.8nm,0.8s						
OBKA	**Obir**	**152.35**	**347**	*e*P	**PKiKP**	**23 28 13.6**	**+1.8**
FETA	**Feichten**	**152.51**	**352**	*e*P	**PKiKP**	**23 28 12.6**	**+0.4**
	comp=Z,1.7nm,0.7s						
ABTA	**Abfaltersbach**	**152.51**	**350**	*e*P	**PKPbc**	**23 28 12.1**	**+0.1**
	comp=Z,2.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**172.41**	**150**	PKPab	**PKPab**	**23 29 49.8**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=210,slow=4.2,SNR=2.6						

*DNK **02** 23:38:20.0±1.1, 70.68N×7.62W, h15km*
*BER **02** 23:38:21.0±0.5, 71.01N×6.68W, h0km±473km, ML2.9, Confirmed Earthquake*

ISC 02 23:38:20.6±4.5, 71.0N±0.3×6.6W±0.2, h10km, n8, σ0.57/14, 4C, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.55**	**265**⇑	*i*P	**Pb**	**23 38 32.2**	**0.0**
JNE				*e*S	**Sb**	**23 38 40.6**	**+0.6**
JNE				IAML		23 38 43.8	
	comp=Z,814nm,0.2s						
JNW	**Jan Mayen West**	**0.58**	**269**⇑	*i*P	**Pb**	**23 38 32.8**	**0.0**
JNW				*e*		23 38 39.8	
JNW				*e*S	**Sb**	**23 38 41.2**	**0.0**
JNW				IAML		23 38 43.2	
	comp=Z,854nm,0.2s						
JMIC	**Jan Mayen**	**0.61**	**265**⇑	*i*P	**Pb**	**23 38 33.0**	**-0.3**
JMIC				*e*S	**Sb**	**23 38 42.0**	**0.0**
JMIC				IAML		23 38 42.7	
	comp=Z,318nm,0.3s						
JMI	**Jan Mayen**	**0.70**	**261**⇑	*i*P	**Pb**	**23 38 34.5**	**-0.3**
JMI				*e*S	**Sb**	**23 38 44.7**	**+0.3**
JMI				IAML		23 38 47.4	
	comp=Z,371nm,0.3s						
DBG	**Daneborg**	**5.21**	**315**	*e*	**Pn**	**23 39 38.0**	**-0.3**
	baz=129,slow=12						
DBG				*i* P	**Pn**	**23 39 38.4**	**+0.1**
DAG	**Danmarks Havn**	**6.63**	**335**	*e*	**Pn**	**23 39 56.4**	**-1.5**
	baz=143,slow=16						
DAG				*i* P	**Pn**	**23 39 58.5**	**+0.7**
NOR	**Nord**	**10.84**	**352**	*i* P	**Pn**	**23 40 55.8**	**+0.3**
NOR	**Nord**	**10.84**	**352**	*i* P	**Pn**	**23 40 55.8**	**+0.3**

*NEIC **03** 00:06:53.1±1.3, 2.79N±0.10×128.8E±0.1, h210km±9km, mb4.3/22, Error ellipse: s-maj=18.2km s-min=13.1km az=67.0*
*DJA **03** 00:06:55.9±0.7, 3.N±6.×12.9E±.°, h220km±4km, M4.5/8, mB4.9/3, mb4.3/8, MLv4.6/8, Mw(mB)4.2/3*
*IDC **03** 00:06:56.6±3.7, 2.63N×128.73E, h240km±31km, mb3.5/7, mb1 3.7/8, mb1mx3.3/43, mbtmp4.1/8, Error ellipse: s-maj=48.2km s-min=12.7km az=61.0*

ISC 03 00:06:52.2±0.6, 2.77N±0.07×128.89E±0.09, h200km, n48, σ1$33/50, mb4.1/15, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.50**	**217**	P	**Pn**	**00 07 38.6**	**+2.5**
SGSI	**Sangihe**	**3.47**	**285**	P	**Pn**	**00 07 49.4**	**+1.8**
SGSI				S	**Sn**	**00 08 30.7**	**-0.2**
DDMP	**Don Marcelino,**	**4.58**	**316**	*e*P	**Pn**	**00 08 02.7**	**+1.3**
DAV	**Davao City (W)**	**5.40**	**323**	Pn	**Pn**	**00 08 11.9**	**+0.2**
SANI	**Sanana**	**5.59**	**211**	P	**Pn**	**00 08 14.6**	**+0.3**
	0.7nm4µm149nm,0.5s						
KCP	**Kidapawan**	**5.66**	**318**⇑	*i*P	**Pn**	**00 08 18.3**	**+3.0**
SKMP	**Bagumbayan, Su**	**5.71**	**311**	*e*P	**Pn**	**00 08 16.7**	**+0.9**
GTOI	**Gorontalo**	**6.24**	**250**	P	**Pn**	**00 08 23.6**	**+0.9**
	0.1nm39nm,0.6s						
BUKP	**Musuan**	**6.35**	**323**	*e*P	**Pn**	**00 08 26.3**	**+2.2**
LUWI	**Luwuk**	**7.19**	**238**	P	**Pn**	**00 08 34.9**	**-0.1**
	0.4nm99nm,0.7s						
LUWI	**Luwuk**	**7.19**	**238**		**Pn**	**00 08 35.8**	**+0.8**
APSI	**Ampana**	**8.10**	**243**	P	**Pn**	**00 08 48.1**	**+1.2**
	0.2nm750nm55nm,0.6s						
MPSI	**Mapaga**	**9.30**	**255**	P	**Pn**	**00 09 02.7**	**+0.2**
	7.4nm,1.1s						
TTSI	**Tana Toraja**	**10.74**	**238**	P	**Pn**	**00 09 21.3**	**+0.1**
	31nm,0.8s						
KAPI	**Kappang**	**11.96**	**230**	P	**Pn**	**00 09 37.8**	**+1.2**
	0.2nm,0.3s,baz=20,slow=12,SNR=1.7						
KAPI	**Kappang**	**11.96**	**230**		**Pn**	**00 09 37.5**	**+0.9**
MTN	**Manton Dam**	**15.67**	**172**		**Pn**	**00 10 23.5**	**+0.9**
MTN				IAmb	IAmb	00 10 27.5	
	comp=Z,14nm,0.9s						
SBUM	**Sibu**	**16.65**	**269**	P	**P**	**00 10 32.9**	**-0.6**
SBUM				IAmb	IAmb	00 10 36.9	
	comp=Z,23nm,0.8s						
KNRA	**Kununurra**	**18.32**	**180**	P	**P**	**00 10 53.0**	**+1.3**
FITZ	**Fitzroy Crossi**	**20.98**	**189**	P	**P**	**00 11 19.6**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=7.4,slow=11,SNR=12						
FITZ	**Fitzroy Crossi**	**20.98**	**189**	P	**P**	**00 11 19.8**	**-0.3**
UGM	**Wanagama**	**21.17**	**240**	P	**P**	**00 11 21.3**	**-0.9**
PMG	**Port Moresby**	**21.86**	**124**	P	**P**	**00 11 31.3**	**+2.1**
PMG				IAmb	IAmb	00 11 49.2	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**23.04**	**167**	P	**P**	**00 11 40.9**	**+0.8**
WB0				IAmb	IAmb	00 11 49.5	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**23.19**	**167**	P	**P**	**00 11 41.3**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=346,slow=10,SNR=37						
WRA	**Warramunga Arr**	**23.19**	**167**	P	**P**	**00 11 41.8**	**+0.3**
WB2	**Warramunga Arr**	**23.20**	**167**	P	**P**	**00 11 42.2**	**+0.7**
WB2				IAmb	IAmb	00 11 45.6	
	comp=Z,4.8nm,0.7s						
WC3	**Warramunga Arr**	**23.22**	**167**	P	**P**	**00 11 42.8**	**+1.1**
WR0	**Warramunga Arr**	**23.26**	**166**	P	**P**	**00 11 41.5**	**-0.6**
AS31	**Alice Springs**	**26.72**	**170**	P	**P**	**00 12 13.7**	**+0.3**
ASAR	**Alice Springs**	**26.72**	**170**	P	**P**	**00 12 13.6**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=355,slow=7.7,SNR=36						
ASAR				PcP	**PcP**	**00 15 31.1**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=359,slow=2.3,SNR=2.1						
ASAR				ScP	**ScP**	**00 18 47.0**	**-5.8**
	comp=Z,0.4nm,0.5s,baz=338,slow=2.9,SNR=4.6						
ASAR	**Alice Springs**	**26.72**	**170**	P	**P**	**00 12 13.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**33.21**	**300**	P	**P**	**00 13 11.2**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=108,slow=7.7,SNR=9.4						
FORT	**Forrest**	**33.37**	**181**	P	**P**	**00 13 11.4**	**-0.2**
EIDS	**Eidsvold**	**35.29**	**144**	P	**P**	**00 13 27.7**	**-0.5**
EIDS				IAmb	IAmb	00 13 39.8	
	comp=Z,4.6nm,0.9s						
BBOO	**Buckleboo**	**36.03**	**170**	P	**P**	**00 13 34.5**	**0.0**
BBOO				IAmb	IAmb	00 13 40.8	
	comp=Z,5.3nm,1.0s						
STKA	**Stephens Creek**	**36.51**	**162**	P	**P**	**00 13 39.0**	**+0.5**
	comp=Z,2.5nm,0.4s,baz=344,slow=7.0,SNR=8.1						
STKA	**Stephens Creek**	**36.51**	**162**	P	**P**	**00 13 38.8**	**+0.2**
PBA	**Port Blair**	**36.89**	**286**	P	P	00 13 39.3	-2.7
NWAO	**Narrogin (SRO)**	**37.17**	**196**	P	**P**	**00 13 44.5**	**+0.4**
NWAO				IAmb	IAmb	00 13 52.3	
	comp=Z,10nm,1.1s						
ARMA	**Armidale**	**39.50**	**148**	P	**P**	**00 14 02.0**	**-1.7**
ARMA				IAmb	IAmb	00 14 20.2	
	comp=Z,11nm,1.0s						
SHL	**Shillong**	**42.18**	**306**	P	**P**	**00 14 25.3**	**-0.5**
SHL				IAmb	IAmb	00 14 26.2	
	comp=Z,10nm,0.5s						
MKAR	**Makanchi Array**	**59.58**	**325**	P	**P**	**00 16 34.7**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=122,slow=8.5,SNR=10						
KURK	**Kurchatov**	**63.71**	**327**	P	**P**	**00 17 01.9**	**-0.5**
KURK				IAmb	IAmb	00 17 02.4	
	comp=Z,1.6nm,0.6s						
ABKAR	**Akbulak array**	**74.25**	**321**	P	**P**	**00 18 06.3**	**-1.1**
CNBA	**Chernabura Isl**	**77.16**	**34**	P	**P**	**00 18 24.4**	**+0.8**
VNDA	**Vanda**	**82.21**	**173**	P	**P**	**00 18 50.1**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=299,slow=6.9,SNR=5.3						
VNDA	**Vanda**	**82.21**	**173**	P	**P**	**00 18 50.1**	**-0.3**

*IDC **03** 00:10:47.2±0.4, 39.94N×143.63E, h0km, mb4.5/35, mb1 4.6/42, mb1mx4.6/53, mbtmp4.5/42, ML3.7/7, MS4.2/33, Ms1 4.2/33, ms1mx4.1/45, Error ellipse: s-maj=12.8km s-min=9.7km az=107.0*
*BJI **03** 00:10:47.5±0.0, 39.90N×143.44E, h10km, mB5.2/57, mb4.9/74, Ms4.8/71, Ms7 4.6/69*
*JMA **03** 00:10:49.9±0.2, 40.02N×143.51E, h20km±4km, M4.8*
*NIED **03** 00:10:50.0, 40.02N×143.51E, h20km, MW4.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr 1.09; Mθθ 0.61; Mϕϕ -1.70; Mrθ 1.18; Mϕθ -0.52; Mϕr 0.99; Fault plane solution: Mo 2.20000×10^16 NP1:ϕs 41.00000°, δ 72.00000°, λ 120.00000°. NP2:ϕs 160.00000°, δ 35.00000°, λ 33.00000°.*
*MOS **03** 00:10:49.8±1.1, 39.98N×143.55E, h27km, mb5.1/64, MS4.6/17 Error ellipse: s-maj=5.9km s-min=3.9km az=109.2*
*NEIC **03** 00:10:53.1±1.4, 39.91N±0.01×143.4E±0.1, h36km±6km, mb4.9/185, Error ellipse: s-maj=11.8km s-min=1.1km az=99.0*
*GCMT **03** 00:10:55.2±0.4, 40.06N±0.03×143.95E±0.03, h30km±1km, MW4.9/81, Moment Tensor Solution. s20, c21; s81, c114; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.06±.20; Mθθ 0.36±. 13; Mϕϕ -2.42±. 12; Mrθ 0.87±. 17; Mϕϕ -0.60±. 07; Mϕr 1.94±. 13; Best double couple: Mo 3.14100×10^16 NP1:ϕs 179.00000°, δ 25.00000°, λ 70.00000°. NP2: ϕs 21.00000°, δ 67.00000°, λ 99.00000°. Principal axes: T 2.9310, Plg67.0000°, Azm308.0000°; N 0.4180, Plg8.0000°, Azm198.0000°; P -3.3510, Plg21.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **03** 00:10:57.3±0.0, 40.35N×143.28E, h32km±2km, mb4.9*

ISC 03 00:10:51.0±0.5, 39.93N±0.04×143.66E±0.04, h26km±3km, h26km:pP-P, n554, σ1$52/565, mb4.8/196, MS4.5/68, 21C-16D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.39**	**271**	P	**Pn**	**00 11 12.6**	**-2.0**
JTH				*e*S	**Sn**	**00 11 28.8**	**-3.3**
MIYJ	**Miyakonagasawa**	**1.47**	**257**	P	**Pn**	**00 11 14.4**	**-1.3**
MIYJ				*e*S	**Sn**	**00 11 31.8**	**-2.3**
JKEN	**Kujiedanarisaw**	**1.52**	**281**	P	**Pn**	**00 11 14.3**	**-2.2**
JANG	**Nango**	**1.71**	**286**	P	**Pn**	**00 11 17.2**	**-1.8**
JANG				*e*S	**Sn**	**00 11 36.8**	**-3.2**
JOM	**Ohasama**	**1.89**	**257**	P	**Pn**	**00 11 20.9**	**-0.6**
JOM				*e*S	**Sn**	**00 11 43.6**	**-0.9**
ERM	**Erimo**	**2.12**	**350**	P	**Pn**	**00 11 24.6**	**-0.1**
ERM	**Erimo**	**2.12**	**350**	Pn	**Pn**	**00 11 24.6**	**-0.1**
JMK	**Ichinoseki**	**2.13**	**243**	P	**Pn**	**00 11 24.0**	**-0.9**
JTM	**Tenmabayashi**	**2.16**	**294**	P	**Pn**	**00 11 24.3**	**-1.0**
JTM	**Tenmabayashi**	**2.16**	**294**	Pn	**Pn**	**00 11 24.9**	**-0.3**
JAH	**Hinai**	**2.34**	**277**	P	**Pn**	**00 11 27.2**	**-0.5**
JNBK	**Urakawa-nobuka**	**2.44**	**344**	P	**Pn**	**00 11 29.0**	**-0.2**
JOT	**Ohata**	**2.46**	**307**	P	**Pn**	**00 11 28.3**	**-1.1**
JCH	**Churui**	**2.69**	**355**	P	**Pn**	**00 11 31.5**	**-1.0**
JCH				*e*S	**Sn**	**00 12 01.6**	**-2.6**
JYK	**Kaneyama**	**2.75**	**249**	P	**Pn**	**00 11 33.1**	**-0.3**
JMM	**Marumori**	**3.05**	**228**		**Pn**	**00 11 36.1**	**-1.4**
JAK	**Akkeshi**	**3.16**	**14**	P	**Pn**	**00 11 37.6**	**-1.4**
JAK				*e*S	**Sn**	**00 12 13.5**	**-2.3**
JEW	**Eniwo**	**3.35**	**331**	Pn	**Pn**	**00 11 42.2**	**+0.6**
NMR	**Nemuro--Hokkai**	**3.77**	**24**	*e*P	**Pn**	**00 11 45.1**	**-2.2**
NMR				*e*S	**Sn**	**00 12 27.3**	**-3.5**
JKA	**Kamikawa-asahi**	**4.25**	**350**	Pn	**Pn**	**00 11 54.0**	**-0.1**
JKA	**Kamikawa-asahi**	**4.25**	**350**		**Sn**	**00 12 42.5**	**-0.4**
ASAJ	**Asahikawa**	**4.25**	**350**	Pn	**Pn**	**00 11 54.0**	**-0.1**
	8.7nm,0.3s,baz=133,slow=5.6,SNR=12						
ASAJ				Sn	**Sn**	**00 12 42.5**	**-0.4**
	16nm,0.3s,baz=173,slow=22,SNR=4.3						
GRPR	**Tuman**	**4.35**	**20**	*e*P	**Pn**	**00 11 53.4**	**-2.0**
GRPR				*e*S	**Sn**	**00 12 40.1**	**-5.1**
GRPR				pmax	pmax		
	comp=Z,195nm,0.4s						
GRPR				smax	smax		
	comp=N,1µm,0.4s						
GRPR				smax	smax		
	comp=E,2µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.41**	**21**	*e*P	**Pn**	**00 11 54.7**	**-1.5**
YUK				*e*S	**Sn**	**00 12 43.3**	**-3.4**
YUK				pmax	pmax		
	comp=Z,411nm,0.3s						
YUK				smax	smax		
	comp=N,560nm,0.3s						
YUK				smax	smax		
	comp=E,418nm,0.3s						
JYT	**Yasato**	**4.60**	**218**	Pn	**Pn**	**00 11 56.3**	**-2.5**
JSD	**Sado**	**4.62**	**248**	Pn	**Pn**	**00 11 56.8**	**-2.3**
MJAR	**Matsushiro Arr**	**5.47**	**233**	Pn	**Pn**	**00 12 10.7**	**-0.1**
	comp=E,1.6nm,0.3s,baz=38,slow=12,SNR=78						
MJAR				LR	LR	00 14 17.0	
	comp=E,1µm,20.1s,baz=75,slow=39						
MJAR	**Matsushiro Arr**	**5.47**	**233**	Pn	**Pn**	**00 12 10.1**	**-0.7**
MAJO	**Matsushiro**	**5.47**	**233**	*c iP*	**Pn**	**00 12 10.8**	**0.0**
MAJO	**Matsushiro**	**5.47**	**233**	Pn	**Pn**	**00 12 10.0**	**-0.8**
MAT	**Matsushiro**	**5.47**	**233**	P	**Pn**	**00 12 11.2**	**+0.4**
MAT				*e*S	**Sn**	**00 13 13.2**	**+0.3**
KUR	**Kuril'sk**	**6.14**	**29**	*e*P	**Pn**	**00 12 19.6**	**-0.3**
KUR				*e*S	**Sn**	**00 13 25.6**	**-3.6**
KUR	

	comp=Z,2µm,16.0s								
OKH					MLR	MLR			
	comp=N,3µm,17.0s								
CN2	**Changchun**	**14.11**	**292**	*e*P		**Pn**	**00**	**14**	**10.4 +1.3**
CN2					pmax	pmax			
	comp=N,10.0nm,0.7s								
CN2					pmax	pmax			
	comp=N,200nm,3.0s								
CN2					LR	LR			
	comp=N,2µm,13.0s								
CN2					LR	LR			
	comp=N,1µm,13.0s								
CN2					LR	LR			
	comp=N,1µm,17.0s								
PEA0B	**Petropavlovsk-**	**16.30**	**31⇑**	*e*P		**Pn**	**00**	**14**	**39.5 +1.6**
PETK	**Petropavlovsk-**	**16.30**	**31**	Pn		**Pn**	**00**	**14**	**36.6 -1.3**
	comp=N,0.2nm,0.3s,baz=229,slow=15,SNR=1.9								
PETK					LR	LR	00	20	26.9
	comp=N,546nm,20.1s,baz=218,slow=36								
PET	**Petropavlovsk**	**16.63**	**33⇑**	*e*P		**Pn**	**00**	**14**	**42.4 +0.4**
PET					pmax	pmax			
	comp=Z,220nm,1.5s								
DL2	**Dalian**	**17.06**	**274**	P		**Pn**	**00**	**14**	**47.0 -0.6**
DL2				S		**Sn**	**00**	**17**	**55.8 -0.6**
DL2					pmax	pmax			
	comp=Z,68nm,1.1s								
DL2					pmax	pmax			
	comp=Z,400nm,8.8s								
DL2					LR	LR			
	comp=Z,1µm,12.7s								
DL2					LR	LR			
	comp=Z,710nm,11.8s								
DL2					LR	LR			
	comp=Z,1µm,15.5s								
ZEA	**Zeya**	**17.73**	**327**	*de*P		**Pn**	**00**	**14**	**52.9 -3.0**
ZEA					pmax	pmax			
	comp=Z,30nm,1.0s								
ZEA					MLR	MLR			
	comp=E,1µm,16.0s								
ZEA					MLR	MLR			
	comp=N,1µm,11.0s								
ZEA					MLR	MLR			
	comp=Z,2µm,15.0s								
HIA	**Hailar**	**19.35**	**307⇑**	*e*P		**P**	**00**	**15**	**12.4 -2.0**
HIA					pmax	pmax			
	comp=Z,18nm,1.2s								
MA2	**Magadan**	**20.17**	**11**	P		**P**	**00**	**15**	**22.8 -0.4**
	comp=Z,22nm,0.8s,baz=188,slow=14,SNR=3.4								
MA2					LR	LR	00	24	00.9
	comp=Z,683nm,19.0s,baz=191,slow=39								
MA2	**Magadan**	**20.17**	**11**	IAmb		IAmb	00	15	32.1
	comp=Z,63nm,1.2s								
SSE	**Sheshan**	**20.27**	**251**	P		**P**	**00**	**15**	**23.5 -1.0**
SSE				S		**S**	**00**	**19**	**07.7 -2.9**
SSE					pmax	pmax			
	comp=Z,14nm,0.6s								
SSE					LR	LR			
	comp=Z,470nm,11.2s								
SSE					LR	LR			
	comp=Z,300nm,10.2s								
SSE					LR	LR			
	comp=Z,470nm,9.6s								
BJI	**Beijing**	**21.04**	**279**	P		**P**	**00**	**15**	**30.5 -2.2**
BJI				S		**S**	**00**	**19**	**27.0 +1.4**
BJI					pmax	pmax			
	comp=Z,24nm,2.1s								
BJI					LR	LR			
	comp=Z,980nm,14.4s								
BJI					LR	LR			
	comp=Z,960nm,14.6s								
BJI					LR	LR			
	comp=Z,540nm,23.7s								
BJT	**Baijiatuau**	**21.05**	**279**	P		**P**	**00**	**15**	**31.0 -1.9**
BJT					pmax	pmax			
	comp=Z,31nm,1.0s								
BJT	**Baijiatuau**	**21.05**	**279**	P		**P**	**00**	**15**	**31.0 -1.9**
BJT					IAmb	IAmb	00	15	38.8
	comp=Z,32nm,1.0s								
TIA	**Tai'an**	**21.19**	**268**	P		**P**	**00**	**15**	**32.2 -2.3**
TIA				S		**S**	**00**	**19**	**31.4 +2.6**
TIA					pmax	pmax			
	comp=Z,36nm,1.0s								
TIA					LR	LR			
	comp=Z,850nm,14.2s								
TIA					LR	LR			
	comp=Z,2µm,13.7s								
TIA					LR	LR			
	comp=Z,3µm,13.9s								
NJ2	**Nanjing**	**21.51**	**256**	*e*P		**P**	**00**	**15**	**34.4 -3.5**
NJ2				S		S	00	19	23.7 -11
NJ2					pmax	pmax			
	comp=Z,20nm,0.6s								
NJ2					pmax	pmax			
	comp=Z,730nm,4.1s								
NJ2					LR	LR			
	comp=Z,1µm,12.3s								
NJ2					LR	LR			
	comp=Z,1µm,14.2s								
NJ2					LR	LR			
	comp=Z,1µm,14.7s								
SEY	**Seymchan**	**23.62**	**10**	P		**P**	**00**	**15**	**59.2 -0.4**
	comp=Z,26nm,0.8s,baz=195,slow=8.1,SNR=24								
SEY					LR	LR	00	25	05.8
	comp=Z,277nm,21.1s,baz=194,slow=36								
SEY	**Seymchan**	**23.62**	**10⇑**	*e*P		**P**	**00**	**15**	**59.5 -0.1**
YAK	**Yakutsk**	**23.71**	**344**	P		**P**	**00**	**15**	**59.1 -1.4**
	comp=Z,46nm,0.7s,baz=5.5,slow=2.3,SNR=28								
YAK					LR	LR	00	25	49.0
	comp=Z,504nm,18.4s,baz=144,slow=38								
YAK	**Yakutsk**	**23.71**	**344**	*e*P		**P**	**00**	**15**	**59.0 -1.4**
YAK				*e**PP		**pP**	**00**	**16**	**06.8 -0.4**
YAK				*e*			00	16	28.4
YAK				*e*PPP		PPP	00	16	39.7
YAK				*e*			00	19	40.3
YAK				*e*S		**S**	**00**	**20**	**12.4 -1.3**
YAK				*e*SS		**SnSn**	**00**	**20**	**53.9 +1.5**
YAK				*e*SSS		SSS	00	21	07.2
YAK				*e*			00	27	03.8
YAK					pmax	pmax			
	comp=Z,60nm,0.9s								
YAK					pmax	pmax			
	comp=N,18nm,1.0s								
YAK					pmax	pmax			
	comp=Z,241nm,2.4s								
YAK					pmax	pmax			
	comp=N,104nm,2.2s								
YAK					pmax	pmax			
	comp=E,231nm,2.3s								
YAK					smax	smax			
	comp=N,178nm,2.1s								
YAK					smax	smax			
	comp=E,230nm,2.5s								
YAK	**Yakutsk**	**23.71**	**344**	P		**P**	**00**	**15**	**58.9 -1.5**
NACB	**Ninganchiao**	**24.33**	**236**	P		**P**	**00**	**16**	**05.7 -1.0**
NACB					IAmb	IAmb	00	16	20.4
	comp=Z,36nm,1.1s								
HHC	**Hu-ho-hao-te**	**24.40**	**283**	*e*P		**P**	**00**	**16**	**06.9 -0.4**
HHC				S		**S**	**00**	**20**	**17.0 -8.4**
HHC					pmax	pmax			
	comp=Z,11nm,0.7s								
HHC					pmax	pmax			
	comp=Z,170nm,6.6s								
HHC					LR	LR			
	comp=Z,550nm,12.9s								
HHC					LR	LR			
	comp=Z,1µm,15.3s								
HHC					LR	LR			
	comp=Z,1µm,15.8s								
YULB	**Yu-li**	**25.08**	**236**	P		**P**	**00**	**16**	**12.8 -0.7**
YULB					IAmb	IAmb	00	16	21.6
	comp=Z,67nm,1.3s								
BTO	**Baotou**	**25.59**	**282**	*e*P		**P**	**00**	**16**	**17.0 -1.1**
WHN	**Wuhan**	**25.62**	**258**	⇓P		**P**	**00**	**16**	**18.2 0.0**
WHN				S		**S**	**00**	**20**	**44.8 0.0**
WHN					pmax	pmax			
	comp=Z,190nm,1.0s								
WHN					LR	LR			
	comp=Z,4µm,15.9s								
WHN					LR	LR			
	comp=Z,3µm,14.6s								
WHN					LR	LR			
	comp=Z,3µm,13.1s								
TWG	**Pinlang**	**25.64**	**235**	P		**P**	**00**	**16**	**18.3 -0.2**
QZH	**Quanzhou**	**25.79**	**242**	*e*P		P	00	16	29.4 +10
QZH				S		**S**	**00**	**20**	**56.7 +9.1**
QZH					LR	LR			
	comp=Z,1µm,13.7s								
BOD	**Bodaibo**	**26.15**	**323**	*e*P		**P**	**00**	**16**	**22.5 -0.3**
BOD					pmax	pmax			
	comp=Z,28nm,1.2s								
ULN	**Ulaanbaatar**	**27.34**	**299**	*c i*P		**P**	**00**	**16**	**34.0 +0.2**
ULN					pmax	pmax			
	comp=Z,48nm,1.3s								
ULN	**Ulaanbaatar**	**27.34**	**299**	P		**P**	**00**	**16**	**34.1 +0.2**
ULN				IAmb		IAmb	00	16	35.6
	comp=Z,31nm,0.9s								
SONM	**Songino Array**	**27.78**	**299**	P		**P**	**00**	**16**	**38.1 +0.3**
	comp=Z,12nm,0.6s,baz=88,slow=8.9,SNR=82								
SONM					LR	LR	00	28	27.5
	comp=Z,1µm,19.0s,baz=100,slow=38								
SONM	**Songino Array**	**27.78**	**299**	P		**P**	**00**	**16**	**37.2 -0.6**
SONM					pmax	pmax			
	comp=Z,17nm,0.8s								
SONM	**Songino Array**	**27.78**	**299**	P		**P**	**00**	**16**	**37.2 -0.6**
XAN	**Xi'an**	**28.25**	**269**	P		**P**	**00**	**16**	**41.6 -0.3**
XAN				pP		pwP	00	16	51.2 0.0
XAN				PP		**PnPn**	**00**	**17**	**32.7 +2.1**
XAN				S		**S**	**00**	**21**	**24.3 -2.1**
XAN					pmax	pmax			
	comp=Z,26nm,1.5s								
XAN					pmax	pmax			
	comp=Z,330nm,5.5s								
XAN					LR	LR			
	comp=Z,330nm,11.2s								
XAN					LR	LR			
	comp=Z,1µm,15.3s								
XAN					LR	LR			
	comp=Z,1µm,14.2s								
XAN	**Xi'an**	**28.25**	**269**	P		**P**	**00**	**16**	**41.7 -0.3**
XAN					pmax	pmax			
	comp=Z,44nm,1.4s								
XAN	**Xi'an**	**28.25**	**269**	P		**P**	**00**	**16**	**41.7 -0.3**
XAN					IAmb	IAmb	00	16	43.6
	comp=Z,44nm,1.4s								
H11N2	**WAKE ISLAND Hy**	**28.34**	**128**	T		T	00	46	27.9
	baz=321								
H11N1	**WAKE ISLAND Hy**	**28.35**	**129**	T		T	00	46	28.2
	baz=321,slow=74								
H11N3	**WAKE ISLAND Hy**	**28.36**	**128**	T		T	00	46	21.9
	baz=321,slow=74								
H11S1	**WAKE ISLAND Hy**	**29.17**	**130**	T		T	00	47	29.6
	baz=322								
H11S3	**WAKE ISLAND Hy**	**29.17**	**130**	T		T	00	47	32.6
	baz=322								
H11S2	**WAKE ISLAND Hy**	**29.19**	**130**	T		T	00	47	38.1
	baz=322								
ENH	**Enshi**	**29.43**	**262**	P		**P**	**00**	**16**	**52.1 -0.3**
TLY	**Talaya**	**29.90**	**307**	P		**P**	**00**	**16**	**57.0 +0.6**
	comp=Z,1.4nm,0.3s,baz=55,slow=12,SNR=1.7								
TLY	**Talaya**	**29.90**	**307⇓**	*e*P		**P**	**00**	**16**	**56.9 +0.5**
TLY					pmax	pmax			
	comp=Z,10.0nm,1.1s								
TLY	**Talaya**	**29.90**	**307**	P		**P**	**00**	**16**	**56.6 +0.2**
TLY					IAmb	IAmb	00	17	12.1
	comp=Z,23nm,1.3s								
ZAK	**Zakamensk**	**29.99**	**304**	*e*P		**P**	**00**	**16**	**56.8 -0.5**
ZAK					pmax	pmax			
	comp=Z,11nm,1.2s								
BILL	**Bilibino**	**30.75**	**16⇓**	*e*P		**P**	**00**	**17**	**04.5 +0.8**
BILL				*e*			00	17	10.9
BILL				*e*			00	17	18.2
BILL				*e*PPP		PPP	00	18	15.6
BILL							00	20	03.0
BILL				*e*S		S	00	22	12.7 +7.8
BILL				SS		**SnSn**	**00**	**23**	**45.0 +1.0**
BILL					pmax	pmax			
	comp=Z,3.0nm,0.8s								
BILL					MLR	MLR			
	comp=Z,331nm,17.0s								
BILL	**Bilibino**	**30.75**	**16**	P		**P**	**00**	**17**	**06.8 +3.1**
BILL					IAmb	IAmb	00	17	22.0
	comp=Z,11nm,0.9s								
LZH	**Lanzhou**	**31.43**	**276**	*e*P		**P**	**00**	**17**	**11.3 +1.0**
LZH				pP		pwP	00	17	19.1 -1.0
LZH				S		**S**	**00**	**22**	**23.0 +6.5**
LZH					pmax	pmax			
	comp=Z,27nm,1.0s								
LZH					pmax	pmax			
	comp=Z,280nm,4.9s								
LZH					LR	LR			
	comp=Z,790nm,11.0s								
LZH					LR	LR			
	comp=Z,1µm,13.0s								
LZH					LR	LR			
	comp=Z,1µm,12.4s								
MOY	**Mondy**	**31.54**	**306**	*e*P		**P**	**00**	**17**	**11.4 +0.4**
MOY					pmax	pmax			
	comp=Z,35nm,1.4s								
TIXI	**Tiksi**	**32.66**	**351⇓**	*e*P		**P**	**00**	**17**	**19.8 -0.6**
GTA	**Gaotai**	**33.50**	**284**	*e*P		**P**	**00**	**17**	**28.5 +0.1**
GTA				pP		pP	00	17	33.4 -2.0
GTA				sP		pwP	00	17	36.2 -2.0
GTA				S		**S**	**00**	**22**	**46.7 -2.0**
GTA				sS		pS	00	22	56.2 -0.6
GTA					pmax	pmax			
	comp=Z,29nm,1.4s								
GTA					pmax	pmax			
	comp=Z,220nm,8.8s								
GTA					LR	LR			
	comp=Z,590nm,14.7s								
GTA					LR	LR			
	comp=Z,1µm,15.5s								
GTA					LR	LR			
	comp=Z,1µm,16.7s								
GYA	**Guiyang**	**33.51**	**258**	⇓P		**P**	**00**	**17**	**28.4 -0.1**
GYA				pP		pP	00	17	36.8 +1.3
GYA				PP		**PnPn**	**00**	**18**	**40.4 +0.4**
GYA				S		**S**	**00**	**22**	**47.7 -1.2**
GYA					pmax	pmax			
	comp=Z,24nm,1.6s								
GYA					LR	LR			
	comp=Z,470nm,11.7s								
GYA					LR	LR			
	comp=Z,640nm,13.9s								
GYA					LR	LR			
	comp=Z,670nm,16.6s								
CD2	**Chengdu**	**33.51**	**267**	P		**P**	**00**	**17**	**27.9 -0.5**
CD2				S		**S**	**00**	**22**	**47.4 -1.4**
CD2					pmax	pmax			
	comp=Z,20nm,0.8s								
CD2					LR	LR			
	comp=Z,1µm,15.7s								
CD2					LR	LR			
	comp=Z,1µm,13.2s								
CD2					LR	LR			
	comp=Z,2µm,15.2s								
QIZ	**Qiongzhong**	**35.76**	**244**	P		**P**	**00**	**17**	**48.0 +0.2**
QIZ				S		**S**	**00**	**23**	**23.6 +0.2**
QIZ				LR		LR			
	comp=Z,600nm,16.2s								
QIZ					LR	LR			
	comp=Z,660nm,14.7s								
QIZ					LR	LR			
	comp=Z,580nm,15.7s								
KMI	**Kunming**	**37.19**	**259⇓**	*e*P		**P**	**00**	**18**	**01.2 +0.9**
KMI				pP		pP	00	18	04.4 -3.0
KMI					pmax	pmax			
	comp=Z,18nm,0.5s								
KMI					pmax	pmax			
	comp=Z,250nm,4.9s								
KMI					LR	LR			
	comp=Z,680nm,13.8s								
KMI					LR	LR			
	comp=Z,870nm,14.1s								
KMI					LR	LR			
	comp=Z,1µm,15.3s								
RDOG	**Red Dog Mine**	**40.12**	**28**	P		**P**	**00**	**18**	**24.4 +0.2**
DGZ	**Jazzator, Alta**	**40.20**	**303**	*ce*P		**P**	**00**	**18**	**25.8 +0.5**
DGZ					pmax	pmax			
	comp=Z,32nm,1.0s								
WMQ	**Urumqi**	**41.18**	**294**	*e*P		**P**	**00**	**18**	**34.6 +1.3**
WMQ				pP		pwP	00	18	43.2 0.0
WMQ				sP		sP	00	18	45.8 +2.4
WMQ					pmax	pmax			
	comp=Z,23nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,140nm,4.7s								
WMQ					LR	LR			
	comp=Z,580nm,18.1s								
WMQ					LR	LR			
	comp=Z,570nm,19.1s								
WMQ					LR	LR			
	comp=Z,390nm,23.1s								
WMQ	**Urumqi**	**41.18**	**294**	P		**P**	**00**	**18**	**33.6 +0.3**
WMQ					pmax	pmax			
	comp=Z,40nm,1.0s								
WMQ	**Urumqi**	**41.18**	**294**	P		**P**	**00**	**18**	**33.5 +0.3**
ZAA0	**Zalesovo Array**	**41.34**	**310**	P		**P**	**00**	**18**	**34.6 +0.3**
ZAA0					IAmb	IAmb	00	18	43.5
	comp=Z,16nm,0.8s								
ZALV	**Zalesovo Beam**	**41.34**	**310**	P		**P**	**00**	**18**	**34.5 +0.2**
	comp=Z,12nm,0.9s,baz=86,slow=7.9,SNR=38								
ZALV					PcP	**PcP**	**00**	**20**	**32.6 +0.4**
	comp=Z,5.6nm,0.8s,baz=71,slow=2.4,SNR=4.0								
ZALV					LR	LR	00	36	31.1
	comp=Z,376nm,20.7s,baz=76,slow=37								
MYLDM	**Lahad Datu**	**41.37**	**220**	P		**P**	**00**	**18**	**35.6 +0.7**
NRIK	**Noril'sk**	**41.42**	**334**	P		**P**	**00**	**18**	**34.9 +0.1**
	comp=Z,4.9nm,0.8s,baz=108,slow=12,SNR=10.0								
NRIK					LR	LR	00	36	04.0
	comp=Z,453nm,21.2s,baz=146,slow=37								
NRIK	**Noril'sk**	**41.42**	**334⇓**	*e*P		**P**	**00**	**18**	**33.9 -0.9**
NRIK					pmax	pmax			
	comp=Z,16nm,1.2s								
ZSN	**Zaisan**	**42.28**	**300**	*i* P		**P**	**00**	**18**	**42.6 +0.5**
	comp=Z,20nm,1.5s,baz=300								
ZSN	**Zaisan**	**42.28**	**300**	*i* P		**P**	**00**	**18**	**42.6 +0.5**
ZSN					pmax	pmax			
	comp=Z,20nm,1.5s								
A21K	**Barrow**	**43.10**	**24**	P		**P**	**00**	**18**	**50.8 +2.4**
A21K					IAmb	IAmb	00	18	59.1
	comp=Z,35nm,1.2s								
IMAR	**Indian Mountai**	**43.26**	**32**	P		**P**	**00**	**18**	**52.5 +2.7**
CHTO	**Chiang Mai**	**43.74**	**255**	P		**P**	**00**	**18**	**54.0 -0.3**
CHTO					pmax	pmax			
	comp=Z,15nm,1.2s								
CHTO	**Chiang Mai**	**43.74**	**255**	P		**P**	**00**	**18**	**54.0 -0.3**
CHTO					IAmb	IAmb	00	19	08.8
	comp=Z,15nm,1.1s								
LSA	**Lhasa**	**43.76**	**273**	P		**P**	**00**	**18**	**55.4 +0.6**
LSA					pmax	pmax			
	comp=Z,14nm,1.1s								
LSA	**Lhasa**	**43.76**	**273**	P		**P**	**00**	**18**	**55.4 +0.6**
LSA					IAmb	IAmb	00	18	59.7
	comp=Z,14nm,1.1s								
CMAR	**Chiang Mai Arr**	**43.96**	**254**	P		**P**	**00**	**18**	**56.0 -0.1**
	comp=Z,1.3nm,0.3s,baz=42,slow=7.2,SNR=10								
CMAR					LR	LR	00	37	50.6
	comp=Z,140nm,18.8s,baz=92,slow=37								
CMAR	**Chiang Mai Arr**	**43.96**	**254**	*ce*P		**P**	**00**	**18**	**57.0 +0.9**
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**43.96**	**254**	P		**P**	**00**	**18**	**55.9 -0.1**
MK31	**Makanchi Array**	**44.14**	**300**	*c i*P		**P**	**00**	**18**	**56.5 -0.7**
MK31					pmax	pmax			
	comp=Z,22nm,1.2s								
MKAR	**Makanchi Array**	**44.14**	**300**	P		**P**	**00**	**18**	**57.0 -0.2**
	comp=Z,6.9nm,0.8s,baz=82,slow=9.1,SNR=30								
MKAR					LR	LR	00	38	16.3
	comp=Z,358nm,20.9s,baz=70,slow=37								
MKAR	**Makanchi Array**	**44.14**	**300**	*ce*P		**P**	**00**	**18**	**57.0 -0.2**
MKAR					pmax	pmax			
	comp=Z,7.0nm,0.9s								
MKAR	**Makanchi Array**	**44.14**	**300**	P		**P**	**00**	**18**	**56.5 -0.7**
MAKZ	**Makanchi**	**44.34**	**300**	P		**P**	**00**	**18**	**58.2 -0.7**
MAKZ					pmax	pmax			
	comp=Z,22nm,1.3s								
MAKZ	**Makanchi**	**44.34**	**300**	P		**P**	**00**	**18**	**58.1 -0.7**
MAKZ					IAmb	IAmb	00	19	16.5
	comp=Z,22nm,1.2s								
SANI	**Sanana**	**44.81**	**206**	P		**P**	**00**	**19**	**04.0 +1.2**
	comp=Z,14nm,0.9s								
BWN	**Browne**	**45.00**	**35**	P		**P**	**00**	**19**	**07.8 +3.9**
TOLK	**Toolik Lake Re**	**45.09**	**28**	P		**P**	**00**	**19**	**06.0 +1.5**
TOLK					IAmb	IAmb	00	19	16.8
	comp=Z,11nm,0.9s								
MDM	**Murphy Dome**	**45.53**	**34**	P		**P**	**00**	**19**	**10.0 +2.0**
MDM					IAmb	IAmb	00	19	19.8
	comp=Z,13nm,1.0s								
KURK	**Kurchatov**	**45.59**	**306**	*c i*P		**P**	**00**	**19**	**08.1 -0.5**
KURK					pmax	pmax			
	comp=Z,34nm,1.0s								
KURK	**Kurchatov**	**45.59**	**306**	P		**P**	**00**	**19**	**08.3 -0.3**
WRH	**Wood River Hil**	**45.60**	**34**	P		**P**	**00**	**19**	**10.7 +2.2**
KURBB	**Kurchatov Arra**	**45.67**	**306**	P		**P**	**00**	**19**	**08.1 -1.1**
COLA	**College**	**45.69**	**34⇓**	*e*P		**P**	**00**	**19**	**11.5 +2.3**
COLA					pmax	pmax			
	comp=Z,2.0nm,0.9s								
CCB	**Clear Creek Bu**	**45.72**	**34**	P		**P**	**00**	**19**	**11.7 +2.2**
POKR	**Poker Plat Res**	**45.86**	**33**	P		**P**	**00**	**19**	**13.2 +2.6**
POKR					IAmb	IAmb	00	19	22.6
	comp=Z,23nm,0.9s								
HDA	**Harding Lake**	**46.09**	**34**	P		**P**	**00**	**19**	**14.2 +1.7**
IL31		**46.10**	**34**	P		**P**	**00**	**19**	**14.1 +1.6**
IL31					IAmb	IAmb	00	19	25.4
	comp=Z,11nm,0.9s								
ILAR	**Eielson Array**	**46.10**	**34**	P		**P**	**00**	**19**	**13.0 +0.5**
	comp=Z,2.4nm,0.8s,baz=262,slow=6.6,SNR=22								
ILAR	**Eielson Array**	**46.10**	**34**	P		**P**	**00**	**19**	**12.8 +0.3**
IL18	**Eielson Array**	**46.15**	**34**	P		**P**	**00**	**19**	**14.7 +1.8**
FYU	**Fort Yukon**	**46.72**	**31**	P		**P**	**00**	**19**	**20.7 +3.4**
BMAR	**Burnt Mountain**	**46.94**	**30**	P		**P**	**00**	**19**	**21.4 +2.3**
SBUM	**Sibu**	**46.96**	**225**	P		**P**	**00**	**19**	**20.0 +0.2**
PDGK	**Podgornoye**	**47.03**	**296**	P		**P**	**00**	**19**	**19.7 -0.6**
SHLS	**Shalkode**	**47.11**	**296**	*e*P		**P**	**00**	**19**	**18.1 -2.7**
	comp=Z,42nm,2.3s,baz=296								
SHLS					LR	LR	00	39	19.6
	comp=Z,271nm,15.3s,baz=296								
SHLS	**Shalkode**	**47.11**	**296**	*e*P		**P**	**00**	**19**	**18.1 -2.7**
SHLS					pmax	pmax			
	comp=Z,42nm,2.3s								
SHLS					MLR	MLR			
	comp=Z,271nm,15.0s								
TDK	**Taldyqorghan**	**47.24**	**299**	*e*P		**P**	**00**	**19**	**21.8 0.0**
	comp=Z,43nm,1.4s,baz=299								
TDK					LR	LR	00	39	22.4
	comp=Z,191nm,11.7s,baz=299								
TDK	**Taldyqorghan**	**47.24**	**299**	*e*P		**P**	**00**	**19**	**21.7 0.0**
TDK					pmax	pmax			
	comp=Z,43nm,1.4s								
TDK					MLR	MLR			
	comp=Z,191nm,12.0s								
TAPN	**Taplejung**	**47.54**	**273**	*e*P		**P**	**00**	**19**	**25.7 +1.1**
	comp=Z,35nm,0.8s								
KPKS	**Kokpek**	**47.54**	**297**	*e*P		**P**	**00**	**19**	**23.9 -0.3**
	comp=Z,17nm,1.1s,baz=296								
KPKS	**Kokpek**	**47.54**	**297**	*e*P		**P**	**00**	**19**	**23.9 -0.3**
KPKS					pmax	pmax			
	comp=Z,17nm,1.1s								
SATY	**Saty**	**47.87**	**296**	*e*P		**P**	**00**	**19**	**27.2 +0.4**
	comp=Z,21nm,2.1s,baz=296								
SATY	**Saty**	**47.87**	**296**	*e*P		**P**	**00**	**19**	**27.2 +0.4**
SATY					pmax	pmax			
	comp=Z,21nm,2.1s								
ODAN	**Odare**	**48.03**	**272**	*e*P		**P**	**00**	**19**	**29.5 +1.1**
	comp=Z,68nm,1.0s								
K27K	**Chicken**	**48.25**	**35**	P		**P**	**00**	**19**	**32.9 +3.7**
K27K					IAmb	IAmb	00	19	40.1
	comp=Z,6.6nm,0.9s								
BCAR	**Beaver Creek A**	**48.51**	**36**	P		**P**	**00**	**19**	**33.8 +2.5**
RAMN	**Ramite**	**48.59**	**273**	*e*P		**P**	**00**	**19**	**32.8 +0.1**
	comp=Z,81nm,1.0s								
GUN	**Gumba**	**

comp=Z,18nm,0.9s
BNSI Bone 49.15 212 P P 00 19 49.2 +13
KKN Kakani 49.18 275 *e*P **P** **00 19 37.4 +0.2**
comp=Z,72nm,0.8s
PKI Pulchoki 49.20 274 *e*P **P** **00 19 37.6 +0.2**
PKIN Phulchoki 49.20 274 *e*P **P** **00 19 37.6 +0.2**
TABL Table Mountain 49.26 39 P P **00 19 35.7 -1.6**
DMN Daman 49.41 274 *e*P **P** **00 19 39.0 0.0**
BRZS Berezniki 49.46 307 *e*P **P** **00 19 38.5 -0.3**
comp=Z,7.0nm,1.1s,baz=306
BRZS Berezniki 49.46 307 *e*P **P** **00 19 38.4 -0.3**
BRZS pmax pmax
comp=Z,7.0nm,1.1s
GKN Gorkha 49.57 275 *e*P **P** **00 19 40.4 +0.3**
TKM2 Tokmak 2 49.85 297 P **P** **00 19 42.6 +0.6**
SNR=38
TKM2 Tokmak 2 49.85 297 P **P** **00 19 42.9 +0.8**
KAPI Kappang 49.85 212 P **P** **00 19 42.0 0.0**
comp=Z,6.7nm,0.6s,baz=24,slow=9.0,SNR=4.2
KAPI Kappang 49.85 212 P **P** **00 19 42.2 +0.2**
KAPI pmax pmax
comp=Z,25nm,1.3s
KAPI Kappang 49.85 212 P **P** **00 19 42.2 +0.2**
KAPI lAmb lAmb 00 19 45.8
comp=Z,25nm,1.3s
BRVK Borovoye 50.02 311 *ce*P **P** **00 19 43.3 +0.3**
BRVK pmax pmax
comp=Z,16nm,1.3s
BRVK Borovoye 50.02 311 P **P** **00 19 43.5 +0.6**
DANN Dangsing 50.07 276 *e*P **P** **00 19 44.3 +0.3**
comp=Z,80nm,0.6s
BTLS Baital 50.15 300 *e*P **P** **00 19 43.5 -0.6**
comp=Z,18nm,2.8s,baz=300
BTLS Baital 50.15 300 *e*P **P** **00 19 43.5 -0.6**
BTLS pmax pmax
comp=Z,18nm,2.8s
SGDS Sogindy 50.32 298 *e*P **P** **00 19 45.4 -0.1**
comp=Z,42nm,4.3s,baz=298
SGDS Sogindy 50.32 298 *e*P **P** **00 19 45.3 -0.1**
KBK Karagaybulak 50.39 297 P **P** **00 19 46.6 +0.4**
SNR=13
KOLN Koldanda 50.48 275 *e*P **P** **00 19 47.3 +0.3**
AAK Ala-Archa 50.71 297 P **P** **00 19 48.4 -0.1**
SNR=7.3
AAK Ala-Archa 50.71 297 *de*P **P** **00 19 48.8 +0.3**
AAK pmax pmax
comp=Z,21nm,1.1s
PYUN Piuthan 50.78 276 *e*P **P** **00 19 49.5 +0.2**
HYT Haines Junctio 50.93 38 P **P** **00 19 53.4 +3.6**
INK Inuvik 51.00 28 P **P** **00 19 50.9 +0.8**
comp=Z,3.7nm,0.6s,baz=283,slow=6.3,SNR=18
INK Inuvik 51.00 28 lAmb lAmb 00 20 02.3
comp=Z,7.8nm,0.8s
EKS2 Erkin-Say 51.19 297 P **P** **00 19 52.9 +0.8**
SNR=7.4
AML Almayashu 51.45 297 P **P** **00 19 54.9 +0.5**
SNR=19
KULM Kulim 51.80 240 P **P** **00 19 56.2 -0.6**
KULM lAmb lAmb 00 19 58.8
comp=Z,15nm,1.0s
IPM Ipoh 52.15 239 P **P** **00 19 59.0 -0.5**
IPM lAmb lAmb 00 20 00.8
comp=Z,14nm,0.9s
MMRI Maumere 52.24 207 P **P** **00 20 00.2 +0.3**
EDFI Ende, Flores 52.54 208 P **P** **00 20 01.8 -0.5**
comp=Z,13nm,0.8s
DZA Taraz 52.77 298 *e*P **P** **00 20 03.9 +0.1**
comp=Z,6.4nm,0.8s,baz=298
DZA LR LR 00 42 55.4
comp=Z,62nm,13.1s,baz=298
DZA Taraz 52.77 298 *e*P **P** **00 20 03.8 +0.1**
DZA pmax pmax
comp=Z,6.0nm,0.8s
DZA MLR MLR
comp=Z,62nm,13.0s
KK05 Karatay Array 53.22 299 P **P** **00 20 06.7 -0.3**
BATI Baumata 53.22 205 P **P** **00 20 07.5 +0.2**
comp=Z,12nm,0.3s,baz=333,slow=3.6,SNR=1.8
KK06 Karatay Array 53.23 299 P **P** **00 20 06.3 -0.8**
KK02 Karatay Array 53.23 299 P **P** **00 20 07.0 -0.2**
KK31 Karatay Array 53.23 299 P **P** **00 20 05.5 -1.7**
KK31 Karatay Array 53.23 299 lAmb lAmb 00 20 16.1
comp=Z,8.3nm,0.8s
KKAR Karatay Array 53.23 299 P **P** **00 20 06.6 -0.5**
KKAR Karatay Array 53.23 299 P **P** **00 20 06.6 -0.5**
KKAR Karatay Array 53.23 299 lAmb lAmb 00 20 16.1
comp=Z,8.3nm,0.8s
KK09 Karatay Array 53.24 299 P **P** **00 20 07.0 -0.2**
KK04 Karatay Array 53.24 299 P **P** **00 20 07.0 -0.2**
KK01 Karatay Array 53.24 299 P **P** **00 20 07.0 -0.2**
KK03 Karatay Array 53.24 299 P **P** **00 20 06.2 -1.1**
KK07 Karatay Array 53.25 299 P **P** **00 20 06.6 -0.6**
KK08 Karatay Array 53.25 299 P **P** **00 20 07.4 +0.1**
MTN Manton Dam 53.78 195 P **P** **00 20 11.7 +0.4**
WSI Waingapu 53.90 209 P **P** **00 20 12.5 +0.4**
IUG Iuzhnay 53.94 298 *e*P **P** **00 20 12.9 +0.4**
comp=Z,11nm,1.2s,baz=298
IUG Iuzhnay 53.94 298 *e*P **P** **00 20 12.9 +0.4**
IUG pmax pmax
comp=Z,11nm,1.2s
SVE Sverdlovsk 54.17 318 *e*P **P** **00 20 14.6 +0.9**
SVE pmax pmax
comp=Z,26nm,1.3s
SVE MLR MLR
comp=Z,2μm,14.0s
PSI Prapat 54.79 239 P **P** **00 20 17.9 -1.0**
PSI pmax pmax
comp=Z,9.0nm,0.8s
RPSI Rantau Prapat 54.87 239 P **P** **00 20 17.9 -1.4**
RPSI lAmb lAmb 00 20 20.7
comp=Z,9.2nm,0.8s
ARU Arti 55.38 318 *c* iP **P** **00 20 22.8 +0.3**
ARU 00 21 20.9
ARU 00 22 28.0
ARU S **S** **00 28 07.9 +2.8**
ARU SS **SS** **00 31 49.3 +0.1**
ARU pmax pmax
comp=Z,34nm,1.4s
ARU MLR MLR
comp=Z,1μm,15.0s
ARU Arti 55.38 318 P **P** **00 20 22.6 0.0**
NIL Nilore 55.41 287 P **P** **00 20 23.9 +0.7**
NIL pmax pmax
comp=Z,33nm,0.9s
NIL Nilore 55.41 287 P **P** **00 20 23.9 +0.7**
PWJI Pagerwojo 56.07 219 P **P** **00 20 29.6 +1.7**
comp=Z,37nm,0.7s
KNRA Kununurra 57.04 197 P **P** **00 20 34.8 +0.1**
AB06 Akbulak array 57.43 309 P **P** **00 20 37.6 +0.4**
AB05 Akbulak array 57.44 309 P **P** **00 20 37.0 -0.3**
AB02 Akbulak array 57.44 309 P **P** **00 20 37.6 +0.3**
AB07 Akbulak array 57.44 309 P **P** **00 20 37.2 -0.1**
AB01 Akbulak array 57.45 309 P **P** **00 20 38.0 +0.7**
AB31 Akbulak array 57.45 309 *i* P **P** **00 20 37.2 -0.1**
AB31 Akbulak array 57.45 309 P **P** **00 20 37.5 +0.1**
AB31 lAmb lAmb 00 20 38.7
comp=Z,11nm,0.7s
ABKAR Akbulak array 57.45 309 P **P** **00 20 37.2 -0.1**
ABKAR Akbulak array 57.45 309 lAmb lAmb 00 20 38.7
comp=Z,11nm,0.7s
AB03 Akbulak array 57.45 309 P **P** **00 20 36.9 -0.4**
AB04 Akbulak array 57.45 309 P **P** **00 20 37.5 +0.1**
AB09 Akbulak array 57.46 309 P **P** **00 20 37.3 -0.1**
AB08 Akbulak array 57.46 309 P **P** **00 20 37.6 +0.1**
SPB1 Spitsbergen Ar 58.02 349 P **P** **00 20 41.4 +0.4**
SPA2 Spitsbergen Ar 58.02 349 P **P** **00 20 41.3 +0.3**
KBL Kabul 58.05 290 P **P** **00 20 41.7 -0.4**
KBL pmax pmax
comp=Z,13nm,0.9s
KBL Kabul 58.05 290 P **P** **00 20 41.7 -0.4**
KBL lAmb lAmb 00 20 50.8
comp=Z,13nm,0.8s
KIRV Kirov 59.02 322 *de*P **P** **00 20 48.8 +0.7**
RES Resolute Bay 59.35 15 P **P** **00 20 50.0 -0.2**
comp=Z,7.4nm,0.9s,baz=330,slow=4.5,SNR=6.4
RES Resolute Bay 59.35 15 lAmb lAmb 00 21 02.1
comp=Z,19nm,1.2s
CTA Charters Tower 59.76 177 P **P** **00 20 53.2 -0.4**
comp=Z,0.5nm,0.3s,baz=288,slow=6.4,SNR=1.6
WB0 Warramunga Arr 60.02 190 P **P** **00 20 55.2 -0.2**
HYB Hyderabad 60.06 268 *i* P **P** **00 20 53.0 -3.0**
FITZ Fitzroy Crossi 60.13 200 P **P** **00 20 56.4 +0.2**
comp=Z,6.5nm,0.8s,baz=6.8,slow=3.1,SNR=13
FITZ Fitzroy Crossi 60.13 200 P **P** **00 20 57.2 +1.0**
FITZ lAmb lAmb 00 21 06.7
comp=Z,14nm,1.0s
WR0 Warramunga Arr 60.19 190 P **P** **00 20 56.3 -0.3**
WR0 lAmb lAmb 00 21 05.8
comp=Z,9.6nm,0.7s
WB2 Warramunga Arr 60.20 190 P **P** **00 20 56.4 -0.3**
WB2 lAmb lAmb 00 21 06.9
comp=Z,10nm,0.8s
WRA Warramunga Arr 60.20 190 P **P** **00 20 56.5 -0.2**
comp=Z,6.5nm,0.5s,baz=8.1,slow=7.0,SNR=73
WRA LR LR 00 47 39.4
comp=Z,60nm,19.7s,baz=15,slow=37
WRA Warramunga Arr 60.20 190 P **P** **00 20 55.5 -1.2**
WC3 Warramunga Arr 60.21 190 P **P** **00 20 55.6 -1.1**
YKA Yellowknife Ar 60.42 32 P **P** **00 20 56.8 -1.0**
comp=Z,1.9nm,0.8s,baz=299,slow=6.3,SNR=1.9
YKA LR LR 00 50 19.8
comp=Z,72nm,18.9s,baz=0.0,slow=39
ARCES ARCESS Array B 61.91 339 P **P** **00 21 07.1 -0.6**
comp=Z,6.3nm,0.9s,baz=58,slow=3.2,SNR=8.4
ARCES LR LR 00 51 03.1
comp=Z,288nm,21.4s,baz=50,slow=39
KLMR Klimovskoe 62.26 328 *e*P **P** **00 21 08.0 -2.2**
KLMR *e* 00 23 24.6
KLMR pmax pmax
comp=Z,37nm,1.4s
KLMR Klimovskoe 62.26 328 *e*P **P** **00 21 08.0 -2.2**
KLMR AMP 00 21 11.7
comp=Z,37nm,1.4s
KLMR *e*PP **PP** **00 23 24.6 -2.2**
KLMR LQ LQ 00 44 53.5
KLMR LQ LQ 00 44 53.5
KLMR LR LR 00 48 49.5
HRA Herat 62.98 293 P **P** **00 21 16.6 +0.8**
HRA lAmb lAmb 00 21 17.5
comp=Z,7.3nm,1.0s
DAG Danmarks Havn 63.03 355 *i* P **P** **00 21 15.0 -0.1**
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 63.03 355 *i* P **P** **00 21 15.0 -0.1**
comp=Z,5.4nm,0.9s
DAG Danmarks Havn 63.03 355 *i* P **P** **00 21 15.0 -0.1**
DAG lAmb lAmb 00 21 16.9
comp=Z,5.4nm,0.9s
KAD Karad 63.48 271 ||*i*P **P** **00 21 19.3 +0.3**
AS31 Alice Springs 63.92 190 P **P** **00 21 22.1 +0.5**
ASAR Alice Springs 63.92 190 P **P** **00 21 21.9 +0.3**
comp=Z,3.5nm,0.7s,baz=11,slow=6.7,SNR=27
ASAR Alice Springs 63.92 190 P **P** **00 21 21.4 -0.3**
GYA2 ALIBECK ARRAY 63.98 299 P **P** **00 21 21.3 -0.8**
GYA2 lAmb lAmb 00 21 38.0
comp=Z,11nm,0.9s
GYB1 ALIBECK ARRAY 63.99 299 P **P** **00 21 21.3 -0.8**
GYB1 lAmb lAmb 00 21 23.4
comp=Z,10nm,1.0s
GEYT Alibeck 63.99 299 P **P** **00 21 21.9 -0.2**
comp=Z,5.6nm,0.8s,baz=81,slow=8.9,SNR=12
GEYT LR LR 00 50 14.3
comp=Z,114nm,20.7s,baz=40,slow=37
GEYT Alibeck 63.99 299 P **P** **00 21 22.3 +0.2**
GYA0 ALIBECK ARRAY 63.99 299 P **P** **00 21 21.8 -0.4**
GYA0 pmax pmax
comp=Z,16nm,1.1s
GYA0 ALIBECK ARRAY 63.99 299 P **P** **00 21 21.8 -0.4**
GYA0 lAmb lAmb 00 21 35.1
comp=Z,16nm,1.1s
GYA0B ALIBECK ARRAY 63.99 299 P **P** **00 21 21.2 -0.9**
GYA0B lAmb lAmb 00 21 35.1
comp=Z,16nm,1.1s
GYA3 ALIBECK ARRAY 63.99 299 P **P** **00 21 21.9 -0.2**
GYA3 lAmb lAmb 00 21 35.1
comp=Z,14nm,1.2s
GYA1 ALIBECK ARRAY 63.99 299 P **P** **00 21 20.9 -1.2**
GYA1 lAmb lAmb 00 21 35.2
comp=Z,10nm,1.1s
GYB4 ALIBECK ARRAY 64.00 299 P **P** **00 21 22.0 -0.2**
GYB4 lAmb lAmb 00 21 23.4
comp=Z,8.4nm,0.8s
GYB5 ALIBECK ARRAY 64.00 299 P **P** **00 21 21.4 -0.8**
GYB5 lAmb lAmb 00 21 35.8
comp=Z,11nm,1.1s
E03A Lebam 64.09 50 P **P** **00 21 21.4 -1.2**
MOS Moscow 65.97 323 *e*P P 00 21 27.7 -7.0
MOS MLR MLR
comp=N,500nm,16.0s
MOS MLR MLR
comp=Z,700nm,16.0s
MOS MLR MLR
comp=E,400nm,15.0s
E07A Sunnyside 66.24 49 P **P** **00 21 38.3 +1.7**
E07A lAmb lAmb 00 21 43.9
comp=Z,6.4nm,1.1s
C09A Chrisman Ranch 66.45 47 P **P** **00 21 39.2 +1.3**
C09A lAmb lAmb 00 21 51.3
comp=Z,6.4nm,0.9s
VRH Novokhopyorsk 66.62 318 *e*P **P** **00 21 37.8 -1.1**
VRH pmax pmax
comp=Z,20nm,1.5s
NEW Newport 66.83 46 P **P** **00 21 40.7 +0.3**
comp=Z,2.4nm,0.8s,baz=297,slow=3.7,SNR=4.8
OBN Obninsk 66.83 323 ||*i*P **P** **00 21 39.6 -0.5**
OBN *e**PP **pP** **00 21 46.7 -0.8**
OBN *e**SP **sP** **00 21 51.7 +1.4**
OBN 00 22 07.0
OBN 00 24 13.0
OBN *e*S **S** **00 30 34.7 +3.9**
OBN *e*SS **SS** **00 34 46.5 -1.7**
OBN pmax pmax
comp=Z,23nm,1.7s
OBN MLR MLR
comp=Z,786nm,15.0s
FIA1 FINESS Array S 67.07 332 P **P** **00 21 40.9 -0.6**
FINES FINESS Array B 67.07 332 P **P** **00 21 41.5 -0.1**
comp=Z,8.9nm,0.8s,baz=50,slow=6.1,SNR=22
FINES LR LR 00 54 02.4
comp=Z,525nm,18.6s,baz=31,slow=39
FINES FINESS Array B 67.07 332 *i* P **P** **00 21 42.2 +0.7**
FINES pmax pmax
comp=Z,9.0nm,0.8s
FINES FINESS Array B 67.07 332 P **P** **00 21 42.3 +0.7**
PINE Pine Mountain 67.14 51 lAmb lAmb 00 21 50.5
comp=Z,8.3nm,0.9s
YBH Yreka Blue Hor 67.19 54 P **P** **00 21 44.3 +1.4**
comp=Z,1.7nm,0.8s,baz=65,slow=2.4,SNR=6.2
LPSR Galich'ya Gora 67.21 320 *e*P **P** **00 21 41.3 -1.3**
LPSR pmax pmax
comp=Z,10.0nm,0.9s
E09A Wood Farm, Sta 67.25 48 P **P** **00 21 44.3 +1.3**
E09A lAmb lAmb 00 21 54.7
comp=Z,7.1nm,0.9s
K05A Summer Lake 67.76 52 P **P** **00 21 49.2 +2.7**
K05A lAmb lAmb 00 21 59.5
comp=Z,14nm,1.1s
SUMG Summit 67.78 1 *i* P **P** **00 21 47.3 +0.9**
SUMG pmax pmax
comp=Z,17nm,0.8s
SUMG Summit 67.78 1 P **P** **00 21 48.1 +1.7**
SUMG lAmb lAmb 00 21 48.9
comp=Z,8.0nm,0.8s
SUMG Summit 67.78 1 *i* P **P** **00 21 47.3 +0.9**
comp=Z,17nm,0.8s
SUMG Summit 67.78 1 *i* P **P** **00 21 47.3 +0.9**
SUMG lAmb lAmb 00 21 49.0
comp=Z,17nm,0.8s
VSR Storozhevoye 67.91 319 *e*P **P** **00 21 46.1 -1.0**
VSR pmax pmax
comp=Z,10.0nm,1.2s
MAK Makhachkala 68.06 308 *e*P **P** **00 21 45.1 -3.0**
MAK *e* 00 24 17.3
MAK *e*PPP PPP 00 25 54.4
MAK *e*S **S** **00 30 43.6 -2.4**
MAK *e*SS **SS** **00 35 06.6 -1.2**
MAK pmax pmax
comp=Z,205nm,1.1s
MAK MLR MLR
comp=Z,478nm,13.0s
BMO Blue Mountains 68.68 49 P **P** **00 21 53.0 +0.8**
BMO pmax pmax
comp=Z,3.0nm,0.9s
BMO Blue Mountains 68.68 49 P **P** **00 21 53.0 +0.8**
J08A Circle Bar Ran 68.86 51 P **P** **00 21 54.8 +1.5**
J08A lAmb lAmb 00 22 05.9
comp=Z,6.7nm,1.0s
ORV Oroville 69.18 56 P **P** **00 21 57.7 +2.5**
ORV pmax pmax
comp=Z,3.0nm,0.8s
ORV Oroville 69.18 56 P **P** **00 21 57.7 +2.5**
GOF Gofitskoye 69.48 312 ||*e*P **P** **00 21 58.4 +1.4**
GOF pmax pmax
comp=Z,25nm,0.8s
ZEI Tsey 70.32 310 *e*P **P** **00 22 01.7 -0.8**
ZEI pmax pmax
comp=Z,9.0nm,1.0s
KIV Kislovodsk 70.34 311 *e*P **P** **00 22 03.7 +1.3**
KIV pmax pmax
comp=Z,103nm,1.0s
KIV Kislovodsk 70.34 311 P **P** **00 22 03.9 +1.5**
KBZ Khabaz 70.35 311 P **P** **00 22 03.4 +1.0**
comp=Z,14nm,0.9s,baz=66,slow=5.2,SNR=12
KBZ Khabaz 70.35 311 *ce*P **P** **00 22 03.1 +0.8**
KBZ pmax pmax
comp=Z,26nm,1.0s
MFID Camas Ranch 70.39 50 P **P** **00 22 04.2 +1.5**
PAHR Pah Rah Range 70.42 54 P **P** **00 22 04.9 +1.8**
HRY Holter Researc 70.65 45 P **P** **00 22 05.2 +0.9**
PNTR Pine Nut 70.65 55 P **P** **00 22 06.4 +1.9**
IZAR Zarasai 70.90 328 *e*P **P** **00 22 06.5 +1.0**
IDID Didziasalis 71.00 327 *e*P **P** **00 22 06.2 +0.2**
DLMT Dillon 71.05 46 lAmb lAmb 00 22 14.9
comp=Z,6.5nm,0.9s
ISAL Salakas 71.08 328 *e*P **P** **00 22 06.3 -0.2**
IIGN Ignalina 71.19 328 *e*P **P** **00 22 06.6 -0.6**
MCMT McKenzie Canyo 71.24 47 P **P** **00 22 09.4 +1.3**
ICESG Greenland Ices 71.27 1 *i* P **P** **00 22 09.5 +1.6**
ICESG lAmb lAmb 00 22 10.3
comp=Z,14nm,0.9s
NACGM Naroch 71.27 327 *e* **P** **00 22 08.0 +0.3**
NACGM eLR LR 00 55 43.0
BOZ Bozeman (W) 71.44 46 lAmb lAmb 00 22 20.8
comp=Z,7.3nm,0.8s
STKA Stephens Creek 71.47 182 P **P** **00 22 09.8 +0.8**
comp=Z,1.7nm,0.6s,baz=315,slow=8.6,SNR=1.7
STKA LR LR 00 58 30.0
comp=Z,41nm,18.3s,baz=21,slow=40
LHV Little Huntoon 71.84 55 P **P** **00 22 13.6 +2.2**
LHV lAmb lAmb 00 22 19.6
comp=Z,9.3nm,1.1s
MDPB Devils Postpil 71.84 56 P **P** **00 22 13.6 +1.8**
NVAR Mina Array Bea 71.86 55 P **P** **00 22 12.8 +0.9**
comp=Z,2.7nm,0.8s,baz=264,slow=6.3,SNR=13
NVAR LR LR 00 54 24.0
comp=Z,25nm,19.1s,baz=270,slow=36
NVAR Mina Array Bea 71.86 55 P **P** **00 22 14.1 +2.3**
NC303 NORSAR Array S 71.99 338 P **P** **00 22 13.1 +1.1**
PABE Paberze 72.00 329 *e*P **P** **00 22 12.6 +0.6**
NB201 NORSAR Array S 72.15 338 P **P** **00 22 12.8 -0.2**
YHL Hebgen Lake 72.16 46 P **P** **00 22 14.3 +0.7**
HFS Hagfors 72.16 336 LR LR 00 57 20.2
comp=Z,265nm,19.1s,baz=30,slow=39
NB2 NORSAR Subarra 72.19 338 P **P** **00 22 13.1 -0.1**
comp=Z,8nm,1.1s,baz=37,slow=6.2
NB2 NORSAR Subarra 72.19 338 P **P** **00 22 13.1 -0.1**
baz=37,slow=6.2
NOA NORSAR Array B 72.19 338 P **P** **00 22 13.3 +0.1**
comp=Z,5.8nm,0.8s,baz=36,slow=6.0,SNR=16
NOA LR LR 01 00 01.6
comp=Z,299nm,18.3s,baz=25,slow=41
YHB Horse Butte 72.21 46 P **P** **00 22 15.8 +1.9**
NBO00 NORSAR Array S 72.32 338 P **P** **00 22 14.8 +0.8**
YHH Holmes Hill 72.38 46 P **P** **00 22 15.8 +0.8**
YNE Yellowstone No 72.70 45 P **P** **00 22 18.8 +2.0**
SFJD Kangerlussuaq 72.84 6 LR LR 00 55 14.6
comp=Z,234nm,18.3s,baz=346,slow=37
IMW Indian Meadow 72.89 47 lAmb lAmb 00 22 30.5
comp=Z,6.5nm,0.8s
AKASG Malin Array Be 73.08 323 P **P** **00 22 18.3 -0.3**
comp=Z,3.9nm,0.6s,baz=44,slow=6.0,SNR=19
AKASG LR LR 00 56 18.3
comp=Z,214nm,18.9s,baz=30,slow=37
AKASG Malin Array Be 73.08 323 *ce*P **P** **00 22 19.2 +0.6**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 73.08 323 P **P** **00 22 19.3 +0.7**
AKBB Malin Array Si 73.08 323 P **P** **00 22 19.2 +0.6**
AKBB pmax pmax
comp=Z,8.0nm,0.9s
AKBB Malin Array Si 73.08 323 P **P** **00 22 19.2 +0.6**
AKBB lAmb lAmb 00 22 19.8
comp=Z,8.3nm,0.9s
FRB Frobisher Bay 73.54 14 LR LR 00 58 22.3
comp=Z,238nm,19.3s,baz=350,slow=39
R11A Troy Canyon, C 73.60 54 P **P** **00 22 23.8 +1.6**
LAO LASA Array 73.64 42 lAmb lAmb 00 22 34.3
comp=Z,18nm,1.3s
SPR3 Spring Creek 3 73.97 52 P **P** **00 22 26.7 +2.2**
HWUT Hardware Ranch 73.98 49 P **P** **00 22 26.0 +1.6**
PDAR Pinedale Array 74.39 47 P **P** **00 22 27.5 +0.7**
comp=Z,1.3nm,0.7s,baz=280,slow=1.6,SNR=12
PDAR Pinedale Array 74.39 47 P **P** **00 22 27.9 +1.1**
PRN Pahroc Range 74.52 54 P **P** **00 22 29.9 +2.4**
PSUT Pine Spring 74.55 53 P **P** **00 22 29.4 +1.6**
GSC Goldstone, Bar 74.71 57 P **P** **00 22 30.9 +2.3**
GSC pmax pmax
comp=Z,3.0nm,0.9s
GSC Goldstone, Bar 74.71 57 P **P** **00 22 30.9 +2.3**
MPU Maple Canyon 74.95 50 P **P** **00 22 32.1 +2.1**
SHPR Sheep Range 75.01 55 P **P** **00 22 32.0 +1.7**
CCUT Cedar City 75.47 53 P **P** **00 22 34.9 +1.8**
MARD Mardin 75.57 307 P **P** **00 22 34.9 +1.3**
MVU Marysvale 75.57 52 P **P** **00 22 35.3 +1.6**
SZCU Shurtz Canyon 75.61 53 P **P** **00 22 35.7 +1.8**
TMUT Trail Mountain 75.67 51 P **P** **00 22 36.3 +2.0**
KIS Kishinev 75.82 320 *e*P **P** **00 22 32.0 -2.6**
comp=Z,170nm,5.0s
KIS Kishinev 75.82 320 *e*LR LR 00 59 13.0
comp=Z,240nm,13.0s
KIS Kishinev 75.82 320 *e*P **P** **00 22 32.0 -2.6**
KIS *e*S S 00 32 05.0 -10
KIS *e*PS **PnS** **00 32 43.0 -10**
KIS pmax pmax
comp=Z,170nm,5.0s
KIS MLR MLR
comp=Z,240nm,13.0s
KIS Kishinev 75.82 320 *e*PS 00 32 43.0
P17A Butcher Ranch, 75.83 50 P **P** **00 22 37.9 +2.9**
MTPU Mount Pierson 75.88 52 P **P** **00 22 36.3 +0.7**
LCMT Little Creek M 75.89 54 P **P** **00 22 37.6 +2.2**
Q16A Castle Valley 75.93 51 P **P** **00 22 37.4 +1.7**
BEL Belsk 75.97 328 *e*P **P** **00 22 37.0 +1.6**
PFO Pinyon Flats O 75.98 58 ||*e*P **P** **00 22 33.9 -2.1**
PFO pmax pmax
comp=Z,7.0nm,1.3s
LVV L'vov 76.06 325 *e*P **P** **00 22 35.9 -0.1**
LVV MLR MLR
comp=N,600nm,14.0s
LVV MLR MLR
comp=E,500nm,14.0s
LVV MLR MLR
comp=Z,700nm,14.0s
ULM Lac du Bonnet 76.11 35 P **P** **00 22 36.5 +0.3**
comp=Z,2.8nm,0.8s,baz=300,slow=8.1,SNR=2.3
KNB Kanab 76.14 53 P **P** **00 22 38.6 +1.7**
KNB pmax pmax
comp=Z,6.0nm,1.0s
KNB Kanab 76.14 53 P **P** **00 22 38.6 +1.7**
KWP Kalwaria Pacla 76.79 325 *e*P **P** **00 22 41.1 +1.0**
BUR08 Bucovina Ar. S 77.10 322 P **P** **00 22 42.9 +0.9**
BUR08 lAmb lAmb 00 22 46.1
comp=Z,7.5nm,0.8s
BURAR Bucovina Array 77.11 322 P **P** **00 22 42.0 -0.1**
KOLS Kolonicke sedl 77.50 325 *e*P **P** **00 22 44.3 +0.2**
KOLS Kolonicke sedl 77.50 325 *e*P **P** **00 22 44.3 +0.2**
PV10 Paradox Valley 77.55 50 P **P** **00 22 47.1 +2.2**
PV10 lAmb lAmb 00 22 57.2
comp=Z,17nm,0.9s
PV14 Lion Creek, Pa 77.56 50 P **P** **00 22 47.0 +2.1**
PV14 lAmb lAmb 00 22 57.4
comp=Z,11nm,0.9s
PV22 Blue Mesa, Par 77.59 50 P **P** **00 22 47.4 +2.3**
PV22 lAmb lAmb 00 22 57.5
comp=Z,7.1nm,0.9s
OJC Ojcow 77.60 327 *e*P **P** **00 22 45.8 +1.2**
PV20 West Nyswonger 77.61 50 P **P** **00 22 46.6 +1.4**
PV20 lAmb lAmb 00 22 57.6
comp=Z,19nm,1.3s
PV19 Morning Glory 77.63 50 P **P** **00 22 46.2 +1.0**
PV19 lAmb lAmb 00 22 56.9
comp=Z,8.1nm,0.9s
UZH Uzhgorod 77.71 325 *e*P **P** **00 22 44.6 -0.6**

UZH e 00 22 54.3
PV13 Radium Mtn., P 77.82 50 P **P 00 22 47.2 +0.8**
PV13 IAmb IAmb 00 22 58.8
comp=Z,7.6nm,1.0s
GAZ Gaziantep 77.84 308 P **P 00 22 47.0 +0.7**
GAZ IAmb IAmb 00 22 49.0
comp=Z,11nm,0.8s
PV02 Paradox Valley 77.84 50 P **P 00 22 48.8 +2.4**
PV02 IAmb IAmb 00 23 03.8
comp=Z,7.5nm,1.0s
CRVS Cervenica-Dubn 77.88 325 eP **P 00 22 47.1 +0.9**
CRVS Cervenica-Dubn 77.88 325 eP **P 00 22 47.1 +0.9**
NIE Niedzica 77.99 326 eP **P 00 22 48.7 +1.8**
WUAZ Wupatki 78.00 54 IAmb IAmb 00 22 59.6
comp=Z,8.4nm,0.8s
BR131 Keskin Array S 78.23 312 P **P 00 22 49.1 +0.6**
BR131 pmax pmax
comp=Z,6.0nm,1.3s
BR131 Keskin Array S 78.23 312 P **P 00 22 49.1 +0.6**
BRTR Keskin Array B 78.23 312 P **P 00 22 49.5 +1.0**
comp=Z,1.8nm,0.8s,baz=111,slow=6.8,SNR=6.9
BRTR LR LR 01 04 17.3
comp=Z,78nm,18.3s,baz=18,slow=41
BRTR Keskin Array B 78.23 312 P **P 00 22 48.8 +0.3**
KSP Ksiaz 78.55 329 eP **P 00 22 51.0 +1.1**
LANS Liptovska Anna 78.55 326 eP **P 00 22 52.2 +2.2**
LANS pmax pmax
comp=Z,7.0nm,1.2s
LANS Liptovska Anna 78.55 326 eP **P 00 22 52.2 +2.2**
OKC Ostrava-Krasne 78.58 327 eP **P 00 22 51.6 +1.6**
OKC MLR MLR
comp=Z,400nm,15.6s
OKC Ostrava-Krasne 78.58 327 eP **P 00 22 51.6 +1.6**
OKC AMS AMS 01 02 40.0
comp=Z,400nm,15.6s
X16A Lo Mia Camp, P 78.68 55 P **P 00 22 52.2 +1.1**
OSTC Ostas 78.80 329 eP **P 00 22 52.6 +1.3**
CHVC Chvalec 78.84 329 eP **P 00 22 52.9 +1.4**
CHVC ex x 00 23 01.4
CHVC AMS AMS 01 02 50.0
comp=Z,500nm,17.0s
MORC Moravsky Berou 78.88 328 eP **P 00 22 53.0 +1.2**
MORC Moravsky Berou 78.88 328 IAmb IAmb 00 22 54.0
comp=Z,13nm,1.0s
DPC Dobruska-Polom 78.92 329 eP **P 00 22 53.0 +1.0**
DPC MLR MLR
comp=Z,400nm,19.8s
DPC Dobruska-Polom 78.92 329 eP **P 00 22 53.0 +1.0**
DPC AMS AMS 01 03 00.0
comp=Z,400nm,19.8s
UPC Upice 78.92 329 AMS AMS 01 02 50.0
comp=Z,600nm,17.6s
KRLC Kraliky 78.95 328 AMS AMS 01 01 40.0
comp=Z,500nm,15.9s
PSZ Piszkesteto 79.31 325 P **P 00 22 54.4 +0.2**
PSZ Piszkesteto 79.31 325 P **P 00 22 54.4 +0.2**
VYHS Vyhne 79.32 326 eP **P 00 22 54.8 +0.6**
VYHS Vyhne 79.32 326 eP **P 00 22 54.8 +0.6**
214A Organ Pipe Nat 79.40 57 P **P 00 22 57.7 +2.8**
Q24A Divide 79.41 48 IAmb IAmb 00 23 00.2
comp=Z,9.9nm,1.1s
BRG Berggiesshubel 79.44 330 eP **P 00 22 55.6 +0.8**
comp=Z,6.7nm,1.1s
comp=N,417nm,15.0s
comp=E,387nm,15.9s
comp=Z,618nm,16.3s
BRG Berggiesshubel 79.44 330 eP **P 00 22 55.6 +0.8**
BRG pmax pmax
comp=Z,7.0nm,1.1s
BRG MLR MLR
comp=N,417nm,15.0s
BRG MLR MLR
comp=E,387nm,15.9s
BRG MLR MLR
comp=Z,618nm,16.3s
CLL Collm 79.44 331 *i* P **P 00 22 55.0 +0.3**
comp=Z,12nm,1.0s
CLL *i* PcP **pP 00 23 03.5 +1.3**
comp=Z,11nm,0.9s
CLL ePP **PP 00 25 53.0 -1.4**
CLL LmH 00 56 00.0
comp=N,400nm,19.4s
CLL LmH 00 56 00.0
comp=E,700nm,21.7s
CLL LmV 01 01 00.0
comp=Z,400nm,19.1s
CLL Collm 79.44 331 *i* P **P 00 22 55.0 +0.3**
CLL *i* 00 23 03.5
CLL pmax pmax
comp=Z,12nm,1.0s
CLL MLR MLR
comp=Z,400nm,19.1s
CLL Collm 79.44 331 eP **P 00 22 54.9 +0.1**
comp=Z,12nm,1.0s,baz=36,slow=4.5
CLL epP **pP 00 23 04.1 +1.8**
CLL Collm 79.44 331 P **P 00 22 54.9 +0.1**
CLL IAmb IAmb 00 22 56.4
comp=Z,9.6nm,0.9s
PVCC Panska Ves 79.47 330 AMS AMS 01 01 20.0
comp=Z,600nm,14.9s
JAVC Velka Javorina 79.53 327 eP **P 00 22 57.7 +2.3**
FBE Freiberg 79.62 331 eP **P 00 22 56.4 +0.6**
comp=Z,26nm,1.6s,baz=36,slow=4.5
VRAC Vranov 79.63 328 LR LR 01 01 03.8
comp=Z,213nm,18.2s,baz=18,slow=38
VRAC Vranov 79.63 328 eP **P 00 22 56.7 +0.9**
PRA Prague 79.89 330 AMS AMS 01 01 40.0
comp=Z,300nm,14.4s
KRUC Moravsky 79.90 328 eP **P 00 22 58.3 +1.0**
PRU Pruhonice 79.91 329 eP **P 00 22 59.0 +1.7**
PRU *e* 00 23 07.0
PRU MLR MLR
comp=Z,500nm,16.1s
PRU Pruhonice 79.91 329 eP **P 00 22 59.0 +1.7**
PRU epP **pP 00 23 07.0 +2.2**
PRU AMS AMS 01 01 30.0
comp=Z,500nm,16.1s
CLZ Clausthal 79.96 333 eP **P 00 22 58.4 +0.8**
comp=Z,13nm,0.8s,baz=36,slow=4.5
NEUB Neuenburg 79.98 332 eP **P 00 22 58.4 +0.7**
comp=Z,18nm,1.0s,baz=36,slow=4.5
NEUB epP **pwP 00 23 07.5 -0.9**
SRO Srobarova 80.07 326 eP **P 00 22 59.9 +1.7**
SRO pmax pmax
comp=Z,19nm,1.1s
SRO Srobarova 80.07 326 eP **P 00 22 59.9 +1.7**
MODS Modra-Piesok 80.08 327 eP **P 00 22 59.0 +0.7**
MODS pmax pmax
comp=Z,15nm,1.4s
MODS Modra-Piesok 80.08 327 eP **P 00 22 59.0 +0.7**
SRO2 Moca 80.08 326 eP **P 00 22 58.8 +0.6**
SRO2 pmax pmax
comp=Z,11nm,1.2s
SRO2 Moca 80.08 326 eP **P 00 22 58.8 +0.6**
TREC Trest 80.09 329 eP **P 00 23 00.0 +1.7**
TREC Trest 80.09 329 eP **P 00 23 00.0 +1.7**
GTTG Gottingen 80.35 333 eP **P 00 23 01.0 +1.3**
comp=Z,22nm,1.1s,baz=36,slow=4.5
TANN Tannenbergstha 80.37 331 eP **P 00 23 00.4 +0.5**
comp=Z,25nm,1.5s,baz=36,slow=4.5
PBCC Pribram 80.37 330 eP **P 00 23 01.1 +1.3**
GUNZ Gunzen 80.46 331 eP **P 00 23 00.9 +0.6**
comp=Z,39nm,2.0s,baz=36,slow=4.5
IBBN Ibbenburen 80.47 334 eP **P 00 23 01.6 +1.3**
comp=Z,40nm,1.4s,baz=36,slow=4.5
MOX Moxa 80.49 331 eP **P 00 23 01.3 +0.8**
comp=Z,9.7nm,0.7s,baz=36,slow=4.5
WERN Wernitzgruen 80.50 331 eP **P 00 23 01.1 +0.5**
comp=Z,7.5nm,1.1s,baz=36,slow=4.5
WERN epP **pP 00 23 10.3 +2.2**
DGAR Diego Garcia 80.58 252 *c*eP **P 00 23 03.3 +1.9**
DGAR pmax pmax
comp=Z,52nm,1.7s
DGAR Diego Garcia 80.58 252 P **P 00 23 00.7 -0.7**
EKB10 Eskdalemuir Ar 80.92 342 P **P 00 23 04.0 +1.3**
KHC Kasperske Hory 80.97 329 eP **P 00 23 04.4 +1.3**
KHC *e* 00 23 12.9
KHC MLR MLR
comp=Z,500nm,16.6s
KHC Kasperske Hory 80.97 329 eP **P 00 23 04.4 +1.3**
KHC epP **pP 00 23 12.9 +2.3**
KHC AMS AMS 01 02 20.0
comp=Z,500nm,16.6s
ROTZ Rotzenmuhle 80.99 331 eP **P 00 23 04.0 +0.8**
comp=Z,18nm,1.6s,baz=36,slow=4.5
ROTZ epP **pwP 00 23 13.0 -0.9**
CONA Conrad Observa 81.01 327 *i* P **P 00 23 04.2 +0.8**
comp=Z,7.4nm,1.0s,SNR=5.7
GEC2 GERESS Array S 81.16 329 P **P 00 23 04.3 +0.2**
GEC2B GERESS ARRAY S81.16 329 P **P 00 23 03.9 -0.3**
GERES GERESS Array B 81.16 329 P **P 00 23 04.7 +0.5**
comp=Z,1.9nm,0.8s,baz=31,slow=6.2,SNR=15
GERES LR LR 01 02 39.4
comp=Z,302nm,18.1s,baz=12,slow=38
GERES GERESS Array B 81.16 329 P **P 00 23 03.9 -0.3**
RAYN Ar Rayn 81.17 293 P **P 00 23 04.1 -0.5**
RAYN pmax pmax
comp=Z,13nm,1.3s
RAYN Ar Rayn 81.17 293 P **P 00 23 04.1 -0.5**
RAYN IAmb IAmb 00 23 06.0
comp=Z,13nm,1.2s
WET Wettzell 81.24 330 eP **P 00 23 05.2 +0.7**
comp=Z,14nm,1.2s,baz=36,slow=4.5
ANMO Albuquerque 81.39 51 P **P 00 23 07.5 +1.7**
ANMO pmax pmax
comp=Z,6.0nm,1.1s
ANMO Albuquerque 81.39 51 P **P 00 23 07.5 +1.7**
GRA1 Grafenberg Arr 81.42 331 P **P 00 23 06.2 +0.8**
GRA1 IAmb IAmb 00 23 16.1
comp=Z,16nm,0.8s
GRF Grafenberg Arr 81.42 331 P **P 00 23 06.2 +0.8**
GRF pmax pmax
comp=Z,16nm,0.8s
GRF Grafenberg Arr 81.42 331 eP **P 00 23 07.1 +1.7**
comp=Z,32nm,1.3s,baz=36,slow=4.5
GRF epP **pwP 00 23 15.5 -0.8**
ARSA Arzberg 81.69 327 eP **P 00 23 07.0 +0.1**
comp=Z,4.6nm,1.0s
ARSA Arzberg 81.69 327 eP **P 00 23 08.2 +1.3**
baz=36,slow=4.5
MOA Molln 81.73 328 eP **P 00 23 07.3 +0.2**
comp=Z,9.6nm,1.5s
BNM Barren Site 81.82 52 P **P 00 23 10.0 +1.8**
SOCY Socotra 82.05 279 P **P 00 23 08.3 -1.1**
SOCY IAmb IAmb 00 23 09.4
comp=Z,19nm,1.0s
DIVS Divibare 82.17 323 P **P 00 23 09.6 0.0**
GROS Grobnik 82.32 327 *i* P **P 00 23 10.5 +0.2**
PERS Pernice 82.35 327 *i* P **P 00 23 10.8 +0.3**
SOKA Soboth 82.35 327 P **P 00 23 10.8 +0.3**
comp=Z,10nm,0.8s,SNR=16
RJOB Jochberg 82.41 329 eP **P 00 23 11.5 +0.7**
comp=Z,8.4nm,1.0s,baz=36,slow=4.5
OBKA Obir 82.69 327 *i* P **P 00 23 12.8 +0.6**
comp=Z,4.3nm,0.8s,SNR=6.5
KBA Koelnbreinsper 82.72 328 eP **P 00 23 12.5 0.0**
comp=Z,9.7nm,1.1s
KBA Koenbreinsper 82.72 328 eP **P 00 23 13.3 +0.8**
baz=36,slow=4.5
MYKA Terra Mystica 82.96 328 eP **P 00 23 13.9 +0.3**
comp=Z,6.0nm,0.9s
WATA Walderalm 83.22 329 eP **P 00 23 15.3 +0.2**
comp=Z,12nm,1.4s
WTTA Wattenberg 83.25 329 eP **P 00 23 15.8 +0.6**
comp=Z,5.8nm,1.0s
WTTA Wattenberg 83.25 329 eP **P 00 23 15.8 +0.6**
baz=36,slow=4.5
ZOU Zoufplan 83.29 328 IAmb IAmb 00 23 16.3
comp=Z,14nm,1.3s
ABTA Abfaltersbach 83.32 329 eP **P 00 23 15.9 +0.3**
comp=Z,6.2nm,1.1s
JAVS Javornik 83.38 327 *i* P **P 00 23 15.7 -0.1**
MOTA Moosalm 83.39 330 eP **P 00 23 16.5 +0.5**
comp=Z,16nm,1.1s
RETA Reutte 83.41 330 *i* P **P 00 23 16.3 +0.4**
comp=Z,13nm,1.0s,SNR=7.3
SQTA Sankt Quirin 83.45 330 eP **P 00 23 16.7 +0.4**
comp=Z,7.6nm,0.9s
CIMO Cimolais 83.71 328 IAmb IAmb 00 23 17.7
comp=Z,7.1nm,1.2s
PMOR Pomariorio Ree 83.77 115 *e*T T 01 55 30.8
comp=Z,2.7nm,0.2s
FETA Feichten 83.80 330 *i* P **P 00 23 18.6 +0.5**
comp=Z,7.7nm,0.9s,SNR=6.7
DAVA Damuels 83.91 330 eP **P 00 23 19.0 +0.4**
comp=Z,10nm,0.9s
DAVA Damuels 83.91 330 eP **P 00 23 19.7 +1.0**
baz=36,slow=4.5
CTI Castel Tesino 84.24 329 IAmb IAmb 00 23 20.9
comp=Z,9.2nm,1.1s
PPT Papeete 84.40 118 LR LR 01 01 50.2
comp=Z,156nm,18.4s,baz=324,slow=36
PPT2 Papeete2 84.41 118 *e*LR LR 00 49 47.8
comp=Z,306nm,22.2s,baz=309
GDL2 Guadalupe Moun 84.54 52 P **P 00 23 23.2 +1.2**
TUE Stuetta 84.79 330 IAmb IAmb 00 23 25.0
comp=Z,14nm,1.1s
TEOL Teolo 84.80 328 P **P 00 23 23.0 +0.1**
TEOL IAmb IAmb 00 23 34.0
comp=Z,9.1nm,0.9s
TAOE Nuku Hiva Isla 85.20 106 *e*LR LR 00 50 16.5
comp=Z,227nm,20.3s
PRMA PARMA 85.83 329 P **P 00 23 28.8 +0.7**
ZCCA Zocca 85.91 328 P **P 00 23 29.0 +0.4**
ZCCA IAmb IAmb 00 23 37.5
comp=Z,16nm,1.4s
NRCA Norcia 86.25 326 IAmb IAmb 00 23 32.2
comp=Z,12nm,1.1s
S39A Bolivar 86.74 42 IAmb IAmb 00 23 42.6
comp=Z,6.0nm,0.8s
TX31 Lajitas Ar. Si 86.97 54 IAmb IAmb 00 23 45.5
comp=Z,9.1nm,0.8s
TXAR Lajitas Array 86.97 54 P **P 00 23 35.3 +1.1**
comp=Z,1.7nm,0.7s,baz=299,slow=3.7,SNR=23
TXAR LR LR 00 56 32.2
comp=Z,36nm,21.9s,baz=0.0,slow=32
TXAR Lajitas Array 86.97 54 P **P 00 23 35.6 +1.4**
TXAR Lajitas Array 86.97 54 P **P 00 23 35.6 +1.4**
LATE Laterza 86.99 327 P **P 00 23 33.3 -0.6**
LATE IAmb IAmb 00 23 35.0
comp=Z,6.6nm,1.5s
CCM Cathedral Cave 87.50 40 P **P 00 23 37.8 +1.4**
CCM pmax pmax
comp=Z,13nm,1.0s
CCM Cathedral Cave 87.50 40 P **P 00 23 37.8 +1.4**
TBI Tubuai 88.53 122 *e*LR LR 00 51 52.9
comp=Z,152nm,25.5s
ESDC Sonseca Array 95.43 335 P **P 00 24 13.9 +0.6**
comp=Z,0.3nm,0.4s,baz=0.0,slow=5.1,SNR=3.1
ESDC LR LR 01 13 14.7
comp=Z,231nm,18.6s,baz=5.0,slow=39
TORD Torodi Ar. Bea 116.45 318 PKP **PKPdf 00 29 32.8 -0.1**
comp=Z,0.5nm,1.0s,baz=256,slow=2.4,SNR=2.7
LPAZ La Paz 143.69 59 PKP **PKPdf 00 30 24.1 -0.6**
comp=Z,2.1nm,0.8s,baz=12,slow=4.2,SNR=7.9
LPAZ La Paz 143.69 59 **PKiKP 00 30 28.0 -0.1**
SNAA Sanae 144.03 197 PKPdf **PKPab 00 30 20.6 +0.1**
SNAA Sanae 144.03 197 *i* PKIKP **PKPab 00 30 20.9 +0.4**
VNA2 Neumayer--Watz 145.59 196 PKPdf **PKPbc 00 30 26.3 +0.4**
VNA3 Neumayer Olymp 145.82 195 PKPdf **PKPdf 00 30 26.5 +0.5**
VNA1 Neumayer--Stat 145.99 196 PKPdf **PKPdf 00 30 26.3 +0.1**

*NEIC **03** 00:46:40.5±1.9, 64.2°N±0.1°×17.72°W±0.06, h7km±5km, mb4.4/19, Error ellipse: s-maj=18.6km s-min=4.0km az=179.0*
*IDC **03** 00:46:41.9±0.9, 64.34°N×17.75°W, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.5/37, mbtmp3.6/8, ML3.7/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/38, Error ellipse: s-maj=28.2km s-min=11.7km az=22.0*

ISC 03 00:46:41.5±0.5, 64.4°N±0.1°×17.68°W±0.07, h10km, n41, σ1§63/40, mb4.1/17, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.62**	**285**	P*g*	**Pn**	**00 47 09.3**	**-0.8**
	24nm,0.3s,baz=87,slow=8.0,SNR=53						
BORG				Lg	Lg	00 47 34.0	
	11nm,0.3s,baz=221,slow=23,SNR=12						
BORG	**Borgarnes**	**1.62**	**285**	Pn	**Pn**	**00 47 09.6**	**-0.6**
EKA	**Eskdalemuir Ar**	**11.60**	**135**	Pn	**Pn**	**00 49 28.2**	**+1.3**
	baz=327,slow=14,SNR=5.4						
NB201	**NORSAR Array S**	**13.63**	**91**	Pn	**Pn**	**00 49 52.0**	**-2.7**
NC405	**NORSAR Array S**	**13.79**	**90**	Pn	**Pn**	**00 49 53.7**	**-3.1**
ARD6	**ARCESS Array S**	**17.35**	**54**	Pn	**Pn**	**00 50 43.0**	**-0.4**
CLL	**Collm**	**20.64**	**115**	P	**P**	**00 51 20.0**	**-0.9**
GRA1	**Grafenberg Arr**	**21.24**	**120**	P	**P**	**00 51 25.6**	**-1.8**
GRA1				IAmb	IAmb	00 51 37.0	
	comp=Z,6.9nm,0.8s						
STU	**Stuttgart**	**21.26**	**124**	P	**P**	**00 51 25.7**	**-1.9**
STU				IAmb	IAmb	00 51 27.1	
	comp=Z,7.8nm,0.7s						
KHC	**Kasperske Hory**	**22.60**	**118**	e*P*	**P**	**00 51 44.5**	**+2.5**
GERES	**GERESS Array B**	**22.88**	**118**	P	**P**	**00 51 45.8**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=308,slow=11,SNR=3.0						
GERES	**GERESS Array B**	**22.88**	**118**	P	**P**	**00 51 45.2**	**+0.3**
DAVOX	**Davos/Dischmat**	**23.20**	**126**	LR	LR	01 01 00.6	
	comp=Z,160nm,20.3s,baz=63,slow=37						
CIMO	**Cimolais**	**24.52**	**123**	P	**P**	**00 52 02.3**	**+1.5**
ESDC	**Sonseca Array**	**26.01**	**155**	P	**P**	**00 52 17.3**	**+2.9**
	comp=Z,1.0nm,0.9s,baz=353,slow=10,SNR=4.5						
PSZ	**Piszkesteto**	**26.08**	**111**	P	**P**	**00 52 16.7**	**+1.7**
PSZ				IAmb	IAmb	00 52 21.1	
	comp=Z,8.3nm,1.3s						
ABKAR	**Akbulak array**	**42.16**	**72**	P	**P**	**00 54 34.1**	**+0.4**
BMAR	**Burnt Mountain**	**43.13**	**333**	P	**P**	**00 54 42.8**	**+1.3**
MARD	**Mardin**	**43.53**	**99**	P	**P**	**00 54 44.3**	**-0.9**
MARD				IAmb	IAmb	00 54 48.5	
	comp=Z,12nm,0.9s						
JSRW	**J. Sargeant Re**	**43.97**	**263**	P	**P**	**00 54 45.2**	**-3.3**
ILAR	**Eielson Array**	**45.92**	**332**	P	**P**	**00 55 05.5**	**+1.8**
	comp=Z,0.8nm,1.0s,baz=26,slow=6.2,SNR=6.1						
IMAR	**Indian Mountai**	**46.11**	**337**	P	**P**	**00 55 05.5**	**+0.3**
BCAR	**Beaver Creek A**	**46.33**	**329**	P	**P**	**00 55 07.2**	**+0.3**
ZAA0	**Zalesovo Array**	**47.88**	**51**	P	**P**	**00 55 18.9**	**-0.3**
ZALV	**Zalesovo Beam**	**47.88**	**51**	P	**P**	**00 55 21.5**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=324,slow=9.5,SNR=1.8						
BALM	**Baldy**	**48.23**	**328**	P	**P**	**00 55 21.6**	**-0.3**
W52A	**Murphy**	**48.78**	**266**	P	**P**	**00 55 25.6**	**-0.8**
EYAK	**Cordova Ski Ar**	**49.44**	**329**	P	**P**	**00 55 32.3**	**+1.3**
MBO	**M'Bour**	**49.92**	**179**	P	**P**	**00 55 33.0**	**-2.0**
KK31	**Karatay Array**	**51.45**	**69**	P	**P**	**00 55 46.9**	**+0.4**
KK31				IAmb	IAmb	00 55 53.9	
	comp=Z,3.5nm,1.4s						
KKAR	**Karatay Array**	**51.45**	**69**	P	**P**	**00 55 46.9**	**+0.4**
KKAR				IAmb	IAmb	00 55 53.9	
	comp=Z,3.5nm,1.4s						
T35A	**Sooner Cattle**	**52.70**	**279**	P	**P**	**00 55 57.2**	**+1.4**
T35A				IAmb	IAmb	00 55 58.2	
	comp=Z,6.2nm,0.8s						
TORD	**Torodi Ar. Bea**	**52.89**	**156**	P	**P**	**00 55 58.9**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=348,slow=7.6,SNR=2.8						
MKAR	**Makanchi Array**	**52.95**	**58**	P	**P**	**00 56 00.4**	**+2.8**
	comp=Z,0.9nm,0.9s,baz=324,slow=7.1,SNR=2.8						
PD31	**Pinedale Array**	**53.23**	**293**	P	**P**	**00 56 01.4**	**+1.4**
PD31				IAmb	IAmb	00 56 04.3	
	comp=Z,4.0nm,1.3s						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**00 56 01.2**	**+1.3**
	comp=Z,1.1nm,0.9s,baz=46,slow=5.9,SNR=6.1						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**00 56 00.8**	**+0.9**
CHGR	**Chuyangaron**	**54.62**	**73**	P	**P**	**00 56 10.7**	**+0.6**
CHGR				IAmb	IAmb	00 56 14.0	
	comp=Z,15nm,1.5s						
GAR	**Garm**	**54.81**	**72**	P	**P**	**00 56 11.6**	**+0.2**
GAR				IAmb	IAmb	00 56 17.6	
	comp=Z,7.2nm,1.2s						
344A	**Westbrook Farm**	**54.84**	**270**	P	**P**	**00 56 10.2**	**-1.3**
344A				IAmb	IAmb	00 56 22.7	
	comp=Z,9.3nm,0.9s						
DLV	**T Lat**	**93.79**	**52**	P	**P**	**00 59 57.1**	**-1.8**

*IDC **03** 01:19:09.5±1.4, 35.68°N×20.66°E, h0km, mb3.7/4, mb1 3.6/6, mb1mx3.4/35, mbtmp3.5/6, ML3.6/2, Error ellipse: s-maj=42.2km s-min=24.3km az=120.0*
*ATH **03** 01:19:22.0, 36.60°N×21.31°E, h30km±2km, ML3.3/2, Error ellipse: s-maj=5.2km s-min=1.8km az=30.0*
*THE **03** 01:19:22.0, 36.58°N×21.25°E, h4km, ML3.3/10, Error ellipse: s-maj=1.3km s-min=0.7km az=17.0*
*BEO **03** 01:19:22.2±0.9, 36.79°N×21.33°E, h0km, ML3.3/8*
*NEIC **03** 01:19:26.4±3.0, 36.88°N±0.04°×21.42°E±0.08, h40km±12km, mb4.0/3, Error ellipse: s-maj=9.1km s-min=5.0km az=101.0*

ISC 03 01:19:22.9±1.2, 36.64°N±0.05°×21.25°E±0.04, h32km±8km, n117, σ1§68/136, mb3.7/7, 1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.47**	**56**	P	**Pb**	**01 19 32.1**	**-0.8**
PYL				S	**Sb**	**01 19 38.6**	**-1.3**
PYL				AML	AML	01 19 39.5	
	comp=N,6009μm,0.3s						
PYL				AML	AML	01 19 41.3	
	comp=E,7385μm,0.3s						
PYL	**PYLOS**	**0.47**	**56**	P	**Pb**	**01 19 32.1**	**-0.8**
PYL				S	**Sb**	**01 19 38.6**	**-1.3**
	comp=E,4μm,0.4s						
ITM	**Ithomi**	**0.77**	**45**	P	**Pb**	**01 19 37.1**	**-0.7**
ITM				S	**Sb**	**01 19 48.5**	**+0.5**
ITM				AML	AML	01 19 49.4	
	comp=N,4610μm,0.4s						
ITM				AML	AML	01 19 51.9	
	comp=E,4763μm,0.5s						
ITM	**Ithomi**	**0.77**	**45**		**Pb**	**01 19 36.8**	**-1.0**
ITM	**Ithomi**	**0.77**	**45**	P	**Pb**	**01 19 37.1**	**-0.7**
ITM				S	**Sb**	**01 19 48.5**	**+0.5**
	comp=E,2μm,0.4s						
AMT	**Artemida-Makis**	**0.97**	**22**	P	**Pn**	**01 19 41.0**	**+0.7**
AMT				S	**Sn**	**01 19 56.1**	**+3.2**
	comp=E,2μm,0.5s						
KRI1	**kERI**	**1.08**	**341**	P	**Pb**	**01 19 42.9**	**-0.2**
KRI1				S	**Sn**	**01 20 00.2**	**+4.5**
	comp=E,2μm,0.4s						
VLX	**Vlachokerasia**	**1.16**	**51**	P	**Pb**	**01 19 44.0**	**-0.5**
VLX	**Vlachokerasia**	**1.16**	**51**	P	**Pb**	**01 19 44.0**	**-0.5**
VLX				S	**Sb**	**01 20 02.4**	**+3.1**
	comp=E,2μm,0.5s						
TRIP	**Tripoli**	**1.21**	**42**	P	**Pb**	**01 19 44.8**	**-0.4**
TRIP	**Tripoli**	**1.21**	**42**	P	**Pb**	**01 19 44.8**	**-0.4**
TRIP				S	**Sb**	**01 20 02.5**	**+2.0**
	comp=E,778nm,0.8s						
VLMS	**Volimes, Zakyn**	**1.32**	**339**	P	**Pb**	**01 19 46.4**	**-0.8**
VLI	**Veliai**	**1.36**	**86**	P	**Pb**	**01 19 47.1**	**-0.6**
VLI	**Veliai**	**1.36**	**86**	P	**Pb**	**01 19 47.1**	**-0.6**
VLI				S	**Sb**	**01 20 07.3**	**+2.6**
	comp=E,458nm,0.6s						
DRO	**Drossia**	**1.36**	**15**	P	**Pb**	**01 19 47.4**	**-0.4**
DRO	**Drossia**	**1.36**	**15**	P	**Pb**	**01 19 47.4**	**-0.4**
DRO				S	**Sb**	**01 20 07.7**	**+2.8**
	comp=E,898nm,0.5s						
RLS	**Riolos of Patr**	**1.43**	**7**	P	**Pb**	**01 19 48.7**	**-0.2**
RLS	**Riolos of Patr**	**1.43**	**7**	P	**Pb**	**01 19 48.7**	**-0.2**
MNVA	**Monemvasia**	**1.44**	**87**	P	**Pb**	**01 19 48.3**	**-0.7**
KTHA	**Kythira Island**	**1.51**	**104**	P	**Pn**	**01 19 48.5**	**+0.9**
KTHA	**Kythira Island**	**1.51**	**104**	P	**Pn**	**01 19 48.5**	**+0.9**
KTHA				S	**Sb**	**01 20 10.2**	**+1.2**
	comp=E,470nm,0.7s						
GUR	**Goura**	**1.56**	**33**	P	**Pb**	**01 19 50.3**	**-0.9**
GUR	**Goura**	**1.56**	**33**	P	**Pb**	**01 19 50.3**	**-0.9**
GUR				S	**Sb**	**01 20 12.9**	**+2.2**
	comp=E,758nm,0.5s						
PSDA	**Pessada-Kefalo**	**1.57**	**340**	P	**Pb**	**01 19 50.3**	**-1.0**
PSDA	**Pessada-Kefalo**	**1.57**	**340**	P	**Pb**	**01 19 50.3**	**-1.0**
KLV	**Kalavryta, Ach**	**1.58**	**27**	P	**Pb**	**01 19 50.5**	**-1.0**
KLV	**Kalavryta, Ach**	**1.58**	**27**	P	**Pb**	**01 19 50.5**	**-1.0**
VLS	**Valsamata**	**1.63**	**341**	P	**Pb**	**01 19 51.2**	**-1.1**
VLS	**Valsamata**	**1.63**	**341**	P	**Pb**	**01 19 51.2**	**-1.1**
KEF5	**Kardakata, Kep**	**1.75**	**339**	P	**Pb**	**01 19 52.6**	**-1.8**
EPID	**Epidavros**	**1.78**	**56**	P	**Pn**	**01 19 52.2**	**+0.7**
EPID	**Epidavros**	**1.78**	**56**	P	**Pn**	**01 19 52.7**	**+1.2**
THAL	**Thalero**	**1.79**	**38**	P	**Pn**	**01 19 53.0**	**+1.4**
THAL	**Thalero**	**1.79**	**38**	P	**Pn**	**01 19 53.0**	**+1.4**
TRIZ	**Trizonia**	**1.85**	**20**	P	**Pn**	**01 19 54.6**	**-1.3**
TRIZ	**Trizonia**	**1.85**	**20**	P	**Pn**	**01 19 54.6**	**-1.3**
EFP	**Efpalio**	**1.86**	**16**	P	**Pb**	**01 19 55.0**	**-1.2**
EFP	**Efpalio**	**1.86**	**16**	P	**Pb**	**01 19 55.0**	**-1.2**
KALE	**Kalithea**	**1.89**	**22**	P	**Pb**	**01 19 55.5**	**-1.2**
KALE	**Kalithea**	**1.89**	**22**	P	**Pb**	**01 19 55.5**	**-1.2**
FSK	**Fiskardo**	**1.90**	**343**	P	**Pb**	**01 19 55.5**	**-1.4**
FSK	**Fiskardo**	**1.90**	**343**	P	**Pb**	**01 19 55.5**	**-1.4**
LTK	**Loutraki**	**1.94**	**44**	P	**Pn**	**01 19 54.3**	**+0.6**
LTK	**Loutraki**	**1.94**	**44**	P	**Pn**	**01 19 55.1**	**+1.4**
PDO	**Prodromos**	**1.96**	**358**	P	**Pb**	**01 19 56.7**	**-1.2**
PDO	**Prodromos**	**1.96**	**358**	P	**Pb**	**01 19 56.7**	**-1.2**
EVGI	**Lefkada island**	**2.04**	**347**	P	**Pb**	**01 19 57.6**	**-1.6**
EVGI	**Lefkada island**	**2.04**	**347**	P	**Pb**	**01 19 57.6**	**-1.6**
LKD2	**Lefkada island**	**2.20**	**348**	P	**Pb**	**01 19 59.7**	**-2.3**
LKD2	**Lefkada island**	**2.20**	**348**	P	**Pb**	**01 19 59.7**	**-2.3**
TSLK	**Tsoukalades, L**	**2.24**	**348**	P	**Pb**	**01 20 00.4**	**-2.2**
TSLK	**Tsoukalades, L**	**2.24**	**348**	P	**Pb**	**01 20 00.4**	**-2.2**
VIL2	**Platees**	**2.25**	**45**	P	**Pn**	**01 19 58.0**	**+0.2**
PDO	**Prodromos**	**1.96**	**358**	P	**Pb**	**01 19 56.7**	**-1.2**
EVR	**Evrytania**	**2.32**	**11**	P	**Pn**	**01 20 00.8**	**+1.9**

EVR	Evrytania	2.32	11	P		Pn	01 20 00.8	+1.9	
VLY	Voula,Athens	2.36	58	P		Pn	01 19 59.8	+0.4	
AXAR	Agios Charalam	2.40	27	P		Pn	01 20 01.5	+1.5	
AXAR	Agios Charalam	2.40	27	P		Pn	01 20 01.5	+1.5	
ATHU	Athens Univers	2.42	56	P		Pn	01 20 00.6	+0.5	
MAKR	Makrakomi, Fth	2.47	16	P		Pn	01 20 03.8	+2.8	
MAKR	Makrakomi, Fth	2.47	16	P		Pn	01 20 03.8	+2.8	
ATAL	Atalanti	2.49	34	P		Pn	01 20 02.4	+1.3	
ATAL	Atalanti	2.49	34	P		Pn	01 20 02.4	+1.3	
AGG	Agios Georgios	2.53	19	P		Pn	01 20 04.2	+2.4	
AGG	Agios Georgios	2.53	19			Pn	01 20 03.6	+1.8	
AGG	Agios Georgios	2.53	19	P		Pn	01 20 04.2	+2.4	
DION	Dionisos Attik	2.58	55	P		Pn	01 20 02.6	+0.2	
IGT	Igoumenitsa	2.98	346	*e*Pn		Pn	01 20 09.6	+1.7	
IGT				*e*Sn		Sn	01 20 44.9	+2.3	
IGT	Igoumenitsa	2.98	346	P		Pn	01 20 09.6	+1.7	
IGT	Igoumenitsa	2.98	346	P		Pn	01 20 09.6	+1.7	
THL	Klokotos Trika	2.98	11	P		Pn	01 20 10.1	+2.1	
THL	Klokotos Trika	2.98	11	P		Pn	01 20 10.1	+2.1	
IDI	Anoyia	3.24	113	Pn		Pb	01 20 17.9	-1.9	
KEK	Kerkira	3.28	340	P		Pn	01 20 13.4	+1.4	
LIT	Litokhoron	3.59	15	Pn		Pn	01 20 18.4	+2.0	
SCTE	Santa Cesarea	4.07	328	Pn		Pn	01 20 24.3	+1.4	
TIP	Timpagrande	4.37	307	Pn		Pn	01 20 29.1	+2.1	
OHR	Ohrid	4.48	356	*i* Pn		Pn	01 20 30.8	+2.2	
TIR	Tirane	4.83	347	*e*Pn		Pn	01 20 34.7	+1.4	
TIR				*e*Sn		Sn	01 21 28.4	+0.3	
TIR	Tirane	4.83	347	Pn		Pn	01 20 35.2	+1.9	
TAR1	Taranto	4.97	323	*e*Pn		Pn	01 20 36.8	+1.5	
TAR1				Sn		Sn	01 21 28.7	-3.0	
CGL1	Ceglie Messapi	4.98	325	*e*Pn		Pn	01 20 36.7	+1.3	
CGL1				Sn		Sn	01 21 29.2	-2.7	
STIP	Stip	5.10	8	*i* Pn		Pn	01 20 35.9	-1.2	
RAFF	Raffo Rosso	5.55	278	Pn		Pn	01 20 46.6	+3.4	
BAI	Bari	5.62	324	⇓*i* Pn		Pn	01 20 45.4	+1.3	
BAI				Sn		Sn	01 21 43.3	-4.2	
PDG	Podgorica	5.99	346	*e*Pn		Pn	01 20 49.6	+0.4	
PDG				*e*Sn		Sn	01 21 54.6	-2.1	
PDG	Podgorica	5.99	346	Pn		Pn	01 20 49.8	+0.5	
CORL	Corleone	6.46	284	Pn		Pn	01 21 01.4	+5.6	
TREB	Trebinje	6.47	341	*e*Pn		Pn	01 20 55.2	-0.7	
SELS	Selova	6.58	359	*e*Pn		Pn	01 20 56.1	-1.2	
SGRT	San Giovanni R	6.67	322	Pn		Pn	01 20 59.5	+0.9	
SJES	Sjenica	6.69	352	*e*Pn		Pn	01 20 59.6	+0.6	
SJES				*e*Sn		Sn	01 22 12.0	-2.1	
AKAS	Kas	6.75	91	Pn		Pn	01 21 01.2	+1.5	
PAOL	Paolisi	6.82	312	Pn		Pn	01 21 04.2	+3.5	
IVAS	Ivanjica	6.98	353	*e*Pn		Pn	01 21 02.5	-0.4	
GRUS	Gruza	7.26	357	*e*Pn		Pn	01 21 05.8	-0.8	
DIVS	Divibare	7.52	353	*e*Pn		Pn	01 21 09.6	-0.7	
DIVS				*e*Sn		Sn	01 22 31.2	-3.2	
DIVS	Divibare	7.52	353	Pn		Pn	01 21 09.8	-0.4	
HAPS	Han Pijesak,BI	7.65	347	*e*Pn		Pn	01 21 12.2	+0.1	
HAPS				*e*Sn		Sn	01 22 33.7	-3.9	
INTR	Introdacqua	7.82	316	Pn		Pn	01 21 17.8	+3.3	
NRCA	Norcia	8.81	317	Pn		Pn	01 21 31.1	+3.2	
SOKA	Soboth	11.05	337	*e*Pn		Pn	01 21 59.1	+0.3	
	comp=E,0.7nm,0.3s								
OBKA	Obir	11.06	335	*e*Pn		Pn	01 22 00.2	+1.3	
	comp=E,0.2nm,0.2s								
ABTA	Abfaltersbach	12.02	330	*e*Pn		Pn	01 22 12.1	+0.1	
	comp=E,0.1nm,0.2s								
MOA	Molln	12.34	337	*e*Pn		Pn	01 22 17.0	+0.8	
	comp=E,0.3nm,0.2s								
GERES	GERESS Array B	13.39	338	Pn		Pn	01 22 30.7	0.0	
	comp=E,0.1nm,0.3s,baz=153,slow=15,SNR=1.8								
AKASG	Malin Array Be	15.18	20	Pn		P	01 22 58.5	-0.9	
	comp=E,0.7nm,0.3s,baz=209,slow=9.6,SNR=4.0								
FINES	FINESS Array B	25.02	5	P		P	01 24 43.2	-0.4	
	comp=E,2.0nm,0.9s,baz=172,slow=12,SNR=8.2								
FINES	FINESS Array B	25.02	5	P		P	01 24 44.5	+0.9	
TORD	Torodi Ar. Bea	29.23	222	P		P	01 25 04.2	-18	
	comp=E,0.1nm,0.3s,baz=21,slow=9.0,SNR=5.5								
ARU	Arti	31.85	40	P		P	01 25 45.3	+0.7	
ARU				IAmb	IAmb		01 25 55.8		
	comp=Z,3.2nm,0.9s								
BRVK	Borovoye	37.62	48	P		P	01 26 35.1	+0.6	
BRVK				IAmb	IAmb		01 26 37.3		
	comp=Z,1.3nm,1.1s								
KKAR	Karatay Array	37.91	65	P		P	01 26 36.9	-0.2	
MK31	Makanchi Array	45.63	57	P		P	01 27 39.3	-0.9	
MK31				IAmb	IAmb		01 27 48.5		
	comp=Z,3.1nm,1.4s								
MKAR	Makanchi Array	45.63	57	P		P	01 27 38.8	-1.3	
	comp=Z,0.4nm,0.5s,baz=270,slow=6.3,SNR=5.3								
ZALV	Zalesovo Beam	46.30	47	P		P	01 27 44.1	-1.1	
	comp=Z,1.0nm,0.4s,baz=262,slow=8.5,SNR=5.2								
ZALV	Zalesovo Beam	46.30	47	P		P	01 27 45.2	0.0	

IDC 03 02:07:02.0±13.0, **11°33S**×**167°07E**, **h0**km, **mb4.0**/4, **mb1 4.2**/4, **mb1mx3.7**/30, **mbtmp4.0**/4, **MS2.9**/2, **Ms1 2.9**/2, **ms1mx2.6**/32, **Error ellipse: s-maj=216.4km s-min=107.5km az=60.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	10.70	183	LR	LR	02 12 56.4	
	comp=Z,37nm,20.6s,baz=27,slow=33						
KRVT	Keravat (AS076	16.45	294	LR	LR	02 16 19.8	
	comp=Z,72nm,20.2s,baz=123,slow=34						
CTA	Charters Tower	21.83	244	P	P	02 11 55.7	-0.5
	1.1nm,0.5s,baz=68,slow=12,SNR=11						
STKA	Stephens Creek	31.15	225	P	P	02 13 20.7	-1.9
	1.0nm,0.6s,baz=27,slow=4.5,SNR=3.2						
WRA	Warramunga Arr	32.61	251	P	P	02 13 36.0	+0.3
	3.2nm,0.7s,baz=80,slow=9.3,SNR=25						
ASAR	Alice Springs	33.84	244	P	P	02 13 47.5	+1.2
	0.6nm,0.6s,baz=69,slow=9.5,SNR=11						

IDC ***03*** *02:20:40.6*±*1.1, 39°82N*×*143°55E, h0*km*, mb3.8/8, mb1 3.9/11, mb1mx3.8/36, mbtmp3.8/11, ML2.9/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/39, Error ellipse: s-maj=28.8km s-min=19.1km az=89.0*

JMA ***03*** *02:20:42.7*±*0.2, 40°00N*×*143°56E, h22*km*, M4.0*

NIED ***03*** *02:20:42.7, 40°00N*×*143°56E, h22*km*, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10*15*Nm; Mrr1.06; Mθθ0.28; Mφφ-1.34; Mrθ1.16; Mθφ-0.46; Mφr1.04; Fault plane solution: M0.2.04000×10*15 *NP1:*φs*41.00000°, δ73.00000°, λ112.00000°. NP2:*φs*167.00000°, δ28.00000°, λ40.00000°.*

NEIC ***03*** *02:20:45.8*±*2.9, 39°71N*±*0°07*×*143°6E*±*0°1, h35*km*±2*km*, mb4.6/7 Error ellipse: s-maj=19.0km s-min=10.2km az=107.0*

ISC 03 02:20:45.9±2.1, **39°97N**±0°05×**143°50E**±0°08, **h32**km±14km, **n53**, σ1°**43**/52, **mb3.9**/11, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	1.26	269	P	Pn	02 21 05.7	-1.6
JTH				*e*S	Sn	02 21 22.9	-0.2
MIYJ	Miyakonagasawa	1.35	254	P	Pn	02 21 07.5	-1.1
MIYJ				*e*S	Sn	02 21 25.0	-0.4
JKEN	Kujiedanarisaw	1.39	280	P	Pn	02 21 07.9	-1.2
JKEN				*e*S	Sn	02 21 26.2	-0.2
JANG	Nango	1.57	285	P	Pn	02 21 10.4	-1.2
JANG				*e*S	Sn	02 21 30.5	-0.3
JOM	Ohasama	1.77	254	P	Pn	02 21 14.1	-0.2
JTM	Tenmabayashi	2.03	294	P	Pn	02 21 17.4	-0.4
JMK	Ichinoseki	2.04	241	P	Pn	02 21 17.1	-0.9
JMK				*e*S	Sn	02 21 42.8	+0.5
ERM	Erimo	2.06	353	Pn	Pb	02 21 24.3	+1.7
JCH	Churui	2.64	358	P	Pn	02 21 24.8	-1.5
JCH				*e*S	Sn	02 21 55.6	-1.6
JYK	Kaneyama	2.65	248	P	Pn	02 21 26.2	-0.2
JKB	Kayabe	2.68	317	*e*S	Sn	02 21 58.6	+0.6
JMM	Marumori	2.98	226	Pn	Pn	02 21 28.9	-2.0
JEW	Eniwo	3.25	332	Pn	Pb	02 21 41.2	-1.8
JKA	Kamikawa-asahi	4.20	351	Pn	Pn	02 21 50.7	+3.0
ASAJ	Asahikawa	4.20	351	Pn	Pn	02 21 47.5	-0.2
	1.1nm,0.3s,baz=162,slow=9.6,SNR=1.7						
ASAJ				Sn	Sn	02 22 36.8	+1.2
	1.7nm,0.3s,baz=114,slow=20,SNR=5.5						
MJAR	Matsushiro Arr	5.39	232	Pn	Pn	02 22 02.0	-2.1
	0.2nm,0.3s,baz=35,slow=12,SNR=11						
MJAR	Matsushiro Arr	5.39	232	Pn	Pn	02 22 04.3	+0.2
MAJO	Matsushiro	5.39	232	Pn	Pn	02 22 02.2	-1.9
MAT	Matsushiro	5.39	232	P	Pn	02 22 04.2	+0.1
MAT				*e*S	Sn	02 23 06.7	+1.7
JGF	Kuroka	6.53	230	Pn	Pn	02 22 21.6	+1.8
JHJ	Hachijo jima 2	7.46	205	LR	LR	02 25 43.6	
	comp=Z,163nm,18.7s,baz=106,slow=41						
JWT	Wachi	7.95	236	Pn	Pn	02 22 41.0	+1.8
USA0B	Ussuriysk Arra	9.54	300	Pn	Pn	02 22 59.6	-1.4
USRK	Ussuriysk Ar.	9.54	300	Pn	Pn	02 23 02.7	+1.7
	baz=97,slow=14,SNR=6.6						
USRK	Ussuriysk Ar.	9.54	300	Pn	Pn	02 23 05.1	+4.1
SEY	Seymchan	23.61	10	P	P	02 25 53.2	-0.5
	2.8nm,0.8s,baz=45,slow=20,SNR=2.4						
SONM	Songino Array	27.65	299	P	P	02 26 31.3	+0.6
	1.9nm,0.7s,baz=85,slow=8.7,SNR=9.2						
SONM	Songino Array	27.65	299	P	P	02 26 31.4	+0.7
H11N2	WAKE ISLAND Hy	28.46	128	T	T	02 56 22.3	
	baz=318,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	28.47	128	T	T	02 56 21.8	
	baz=318,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	28.48	128	T	T	02 56 21.2	
	baz=318,slow=76,SNR=13						
H11S1	WAKE ISLAND Hy	29.29	130	T	T	02 57 26.2	
	baz=322,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	29.29	130	T	T	02 57 30.1	
	baz=322,slow=76,SNR=4.4						
H11S2	WAKE ISLAND Hy	29.31	130	T	T	02 57 27.7	
	baz=322,slow=76,SNR=4.1						
ZALV	Zalesovo Beam	41.22	310	P	P	02 28 27.9	+0.5
	1.4nm,0.7s,baz=90,slow=7.4,SNR=5.5						
ZALV	Zalesovo Beam	41.22	310	P	P	02 28 26.8	-0.7
MKAR	Makanchi Array	44.01	300	P	P	02 28 49.9	-0.4
	0.7nm,0.8s,baz=88,slow=8.8,SNR=3.6						
MKAR	Makanchi Array	44.01	300	P	P	02 28 54.2	+3.9
KURK	Kurchatov	45.47	306	P	P	02 29 01.3	-0.5
ILAR	Eielson Array	46.15	34	P	P	02 29 08.9	+2.0
	0.4nm,0.8s,baz=278,slow=7.2,SNR=2.3						
INK	Inuvik	51.03	28	P	P	02 29 44.9	+0.5
INK				IAmb	IAmb	02 29 50.9	
	comp=Z,10nm,1.5s						
KKAR	Karatay Array	53.11	299	P	P	02 30 00.1	-0.2
ABKAR	Akbulak array	57.32	309	P	P	02 30 30.8	+0.2
WB0	Warramunga Arr	60.03	190	P	P	02 30 48.0	-1.7
WB0				IAmb	IAmb	02 30 48.6	
	comp=Z,6.8nm,1.4s						
WR0	Warramunga Arr	60.20	190	P	P	02 30 49.1	-1.6
WR0				IAmb	IAmb	02 31 04.4	
	comp=Z,6.0nm,1.4s						
WRA	Warramunga Arr	60.21	190	P	P	02 30 49.1	-1.7
	comp=Z,0.7nm,0.7s,baz=8.8,slow=7.2,SNR=12						
WRA	Warramunga Arr	60.21	190	P	P	02 30 48.2	-2.6
ASAR	Alice Springs	63.94	190	P	P	02 31 14.5	-1.3
	comp=Z,0.5nm,0.8s,baz=25,slow=7.1,SNR=1.9						
ASAR	Alice Springs	63.94	190	P	P	02 31 14.1	-1.7
FINES	FINESS Array B	66.98	332	P	P	02 31 34.7	-0.3
	comp=Z,4.7nm,1.1s,baz=101,slow=5.8,SNR=2.1						
FINES	FINESS Array B	66.98	332	P	P	02 31 34.9	-0.2
NWAO	Narrogin (SRO)	76.50	203	LR	LR	03 04 53.7	
	comp=Z,17nm,19.6s,baz=64,slow=35						
BURAR	Bucovina Array	77.01	322	P	P	02 32 36.0	+0.5

BJI ***03*** *02:28:05.3*±*0.0, 42°53N*×*141°74E, h37*km*, mB5.0/14, mb4.5/23, Ms4.4/9, Ms7 4.1/8*

IDC ***03*** *02:28:05.7*±*0.6, 42°49N*×*141°80E, h29*km*±3*km*, mb3.9/22, mb1 4.1/25, mb1mx4.0/37, mbtmp4.1/25, ML3.4/3, MS3.8/25, Ms1 3.8/25, ms1mx3.6/50, Error ellipse: s-maj=14.4km s-min=11.7km az=140.0*

JMA ***03*** *02:28:06.9*±*0.1, 42°59N*×*141°84E, h29*km*±1*km*, M4.6 Broadband fault plane solution: P waves. NP1:* φs*159.00000°, δ40.00000°, λ139.00000°. NP2:* φs*283.00000°, δ65.00000°, λ58.00000°. Principal axes: T Plg57.0000°, Azm149.0000°; N Plg29.0000°, Azm298.0000°; P Plg14.0000°, Azm36.0000°;*

JMA Felt IV J1.

NIED ***03*** *02:28:07.0, 42°59N*×*141°84E, h29*km*, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10*15*Nm; Mrr4.03; Mθθ-1.03; Mφφ-3.00; Mrθ-3.90; Mθφ7.75; Mφr-2.19; Fault plane solution: M0.9.64000×10*15 *NP1:* φs*281.00000°, δ67.00000°, λ33.00000°. NP2:* φs*177.00000°, δ60.00000°, λ153.00000°.*

MOS ***03*** *02:28:06.0*±*0.9, 42°50N*×*141°73E, h43*km*, mb4.8/34 Error ellipse: s-maj=7.7km s-min=6.2km az=74.7*

NEIC ***03*** *02:28:07.3*±*1.4, 42°57N*±*0°04*×*141°77E*±*0°06, h37*km±2*km, mb4.7/96, Error ellipse: s-maj=6.7km s-min=4.6km az=64.0*

SKHL ***03*** *02:28:08.4*±*0.4, 42°32N*×*141°89E, h75*km±6*km, mb4.8/10, Ms4.6/2*

ISC 03 02:28:06.2±0.5, **42°55N**±0°03×**141°80E**±0°03, **h30**km±3km, **h29**km; **pP-P, n343**, σ1°**26**/330, **mb4.7**/101, **MS3.9**/23, **13C-16D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIAM	Iburiatsuma	0.12	51	⇑P	Pb	02 28 11.5	-0.1
JIAM				*e*S	Sb	02 28 15.8	+0.5
JEW	Eniwo	0.39	319	⇑P	Pn	02 28 15.7	-0.1
JEW	Eniwo	0.39	319		Pn	02 28 15.7	-0.1
JEW				Sn	Sn	02 28 22.4	+0.2
JBT2	Biratori 2	0.48	61	⇓P	Pb	02 28 15.9	-0.4
JSHD	Hidakashinhida	0.52	105	⇑P	Pn	02 28 17.4	-0.1
JNB	Noboribetsu	0.57	262	⇓P	Pb	02 28 18.2	+0.5
JNB				*e*S	Sn	02 28 26.7	+0.1
JNBK	Urakawa-nobuka	0.76	110	⇑P	Pn	02 28 20.4	-0.5
JISS	Ishikarishitsu	0.78	339	⇑P	Pn	02 28 21.2	0.0
JFR	Furan	0.85	43	P	Pn	02 28 21.5	-0.7
JKB	Kayabe	0.87	221	⇓P	Pb	02 28 22.9	+0.1
JKB				*e*S	Sb	02 28 35.3	+1.2
JAB	Ashibetsu	1.00	18	⇓P	Pn	02 28 24.3	0.0
ERM	Erimo	1.14	117	PN	Pn	02 28 26.5	+0.3
ERM						02 28 42.8	
ERM	Erimo	1.14	117	Pn	Pn	02 28 26.5	+0.3
ERM				Sn	Sb	02 28 42.8	+1.1
JEM	Erimo	1.14	117	P	Pn	02 28 26.0	-0.2
JYM2	Yakumo 2	1.14	248	⇓P	Pb	02 28 27.5	+0.2
JCH	Churui	1.16	86	⇑P	Pn	02 28 25.9	-0.5
JCH				*e*S	Sn	02 28 40.9	-0.3
JHR	Hokuryu	1.20	358	P	Pn	02 28 27.1	+0.2
ASAJ	Asahikawa	1.67	20	Pn	Pn	02 28 34.2	+0.7
	234nm,0.3s,baz=230,slow=10,SNR=377						
ASAJ				Sn	Sn	02 28 54.4	+0.4
	472nm,0.3s,baz=147,slow=31,SNR=5.8						
ASAJ				LR	LR	02 29 23.3	
	comp=Z,3μm,18.1s,baz=167,slow=45						
JKA	Kamikawa-asahi	1.67	20	*e*P	Pn	02 28 34.2	+0.7
JKA	Kamikawa-asahi	1.67	20	Pn	Pn	02 28 34.0	+0.5
JTM	Tenmabayashi	1.84	197	Pn	Pn	02 28 37.1	+1.3
JTM				Sn	Sn	02 28 59.9	+1.7
GLVR	Golovnino	2.97	65	*e*P	Pn	02 28 53.2	+1.9
GLVR				*e*S	Sn	02 29 27.6	+1.6
GLVR				A	A	02 29 29.7	
	6μm,0.4s						
GLVR				A	A	02 29 29.7	
	4μm,0.4s						
GLVR	Golovnino	2.97	65	*e*PN	Pn	02 28 53.2	+1.9
GLVR				*e*S	Sn	02 29 27.6	+1.6
GLVR				smax	smax		
	comp=N,6μm,0.3s						
GLVR				smax	smax		
	comp=E,4μm,0.4s						
NMR	Nemuro--Hokkai	3.00	73	*e*P	Pn	02 28 50.8	-0.9
NMR	Nemuro--Hokkai	3.00	73	*e*PN	Pn	02 28 50.8	-0.9
GRPR	Tuman	3.24	62	*e*P	Pn	02 28 57.4	+2.3
GRPR				AMB	AMB	02 28 59.6	
	comp=E,4μm,0.3s						
GRPR				AMB	AMB	02 28 59.6	
	comp=E,3μm,0.3s						
GRPR				AMB	AMB	02 28 59.6	
	comp=E,470nm,0.3s						
GRPR	Tuman	3.24	62	*e*PN	Pn	02 28 57.4	+2.3
GRPR				*e*S	Sn	02 29 36.2	+3.6
GRPR				pmax	pmax		
	comp=Z,472nm,0.3s						
GRPR				smax	smax		
	comp=N,4μm,0.3s						
GRPR				smax	smax		
	comp=E,3μm,0.3s						
YUK	Yuzh-Kuril'sk	3.32	62	*e*P	Pn	02 28 59.3	+3.2
YUK				AMB	AMB	02 29 02.3	
	comp=E,370nm,0.5s						
YUK				*e*S	Sn	02 29 36.7	+2.2
YUK				A	A	02 29 42.0	
	comp=E,3μm,0.5s						
YUK				A	A	02 29 42.0	
	comp=E,2μm,0.5s						
YUK	Yuzh-Kuril'sk	3.32	62	⇓*e*PN	Pn	02 28 59.6	+3.5
YUK				*e*S	Sn	02 29 37.9	+3.4
YSS	Yuzh-Sakhalins	4.46	8	*e*P	Pn	02 29 16.9	+5.2
YSS				AMB	AMB	02 29 21.4	
	comp=E,70nm,0.9s						
YSS				*e*S	Sn	02 30 08.6	+6.0
YSS				A	A	02 30 09.8	
	comp=E,90nm,1.0s						
YSS				A	A	02 30 09.8	
	comp=E,50nm,1.0s						
YSS				AMS	AMS	02 31 18.0	
	comp=E,3μm,13.0s						
YSS				AMS	AMS	02 31 18.0	
	comp=E,3μm,13.0s						
YSS				AMS	AMS	02 31 18.0	
	comp=E,5μm,13.0s						
YSS	Yuzh-Sakhalins	4.46	8	*e*PN	Pn	02 29 16.9	+5.2
YSS				*e*S	Sn	02 30 08.6	+6.0
YSS				pmax	pmax		
	comp=Z,70nm,0.9s						
YSS				smax	smax		
	comp=N,90nm,1.3s						
YSS				smax	smax		
	comp=E,50nm,1.3s						
YSS				MLR	MLR		
	comp=Z,5μm,14.0s						
YSS				MLR	MLR		
	comp=N,3μm,11.0s						
YSS				MLR	MLR		
	comp=E,3μm,11.0s						
YSS	Yuzh-Sakhalins	4.46	8	Pn	Pn	02 29 13.8	+2.1
TEY	Ternei	4.51	305	*e*P	Pb	02 29 20.0	-4.6
TEY				AMB	AMB	02 29 20.8	
	comp=E,40nm,1.0s						
TEY				AMB	AMB	02 29 20.8	
	comp=E,110nm,1.0s						
TEY				AMB	AMB	02 29 20.8	
	comp=E,70nm,1.0s						
TEY	Ternei	4.51	305	⇑*e*PN	Pb	02 29 20.0	-4.6
TEY				pmax	pmax		
	comp=E,110nm,1.1s						
TEY				pmax	pmax		
	comp=N,40nm,1.3s						
TEY				pmax	pmax		
	comp=Z,70nm,1.2s						
JMM	Marumori	4.74	190	Pn	Pn	02 29 17.6	+1.9
KUR	Kuril'sk	5.14	56	*e*P	Pn	02 29 26.1	+5.0
KUR				AMB	AMB	02 29 41.6	
	comp=Z,160nm,0.4s						
KUR				AMB	AMB	02 29 41.6	
	comp=Z,62nm,0.4s						
KUR				AMB	AMB	02 29 41.6	
	comp=Z,214nm,0.4s						
KUR				*e*S	Sn	02 30 21.5	+2.1
KUR				A	A	02 30 39.4	
	comp=Z,320nm,0.3s						
KUR				A	A	02 30 39.4	
	comp=Z,150nm,0.3s						
KUR				AMS	AMS	02 31 41.6	
	comp=Z,4μm,11.0s						
KUR	Kuril'sk	5.14	56	*e*PN	Pn	02 29 26.7	+5.6
KUR				*e*S	Sn	02 30 25.0	+5.6
KUR				pmax	pmax		
	comp=Z,94nm,0.3s						
KUR				pmax	pmax		
	comp=N,32nm,0.4s						
KUR				smax	smax		
	comp=E,320nm,0.3s						
KUR				smax	smax		
	comp=N,108nm,0.2s						
JSD	Sado	5.25	212	Pn	Pn	02 29 26.0	+3.3
MAJO	Matsushiro	6.61	206	⇓*e*PN	Pn	02 29 42.1	+0.8
MAJO	Matsushiro	6.61	206	Pn	Pn	02 29 45.7	+4.4
MAT	Matsushiro	6.61	206	P	Pn	02 29 45.3	+4.0
MAT				*e*S	Sn	02 30 55.5	-0.2
MJAR	Matsushiro Arr	6.61	206	Pn	Pn	02 29 44.8	+3.5
	comp=N,0.4nm,0.3s,baz=19,slow=15,SNR=4.1						
MJAR				LR	LR	02 32 33.0	
	comp=N,906nm,19.8s,baz=25,slow=41						
MJAR	Matsushiro Arr	6.61	206	PN	Pn	02 29 45.7	+4.4
MJAR	Matsushiro Arr	6.61	206	Pn	Pn	02 29 45.7	+4.4
VLA	Vladivostok	7.31	276	⇓*e*PN	Pn	02 29 50.1	-0.8
VLA				pmax	pmax		
	comp=Z,34nm,0.8s						
USA0B	Ussuriysk Arra	7.33	286	PN	Pn	02 29 54.2	+2.9
USA0B	Ussuriysk Arra	7.33	286	Pn	Pn	02 29 54.2	+2.9
USRK	Ussuriysk Ar.	7.33	286	Pn	Pn	02 29 55.8	+4.6
	baz=88,slow=15,SNR=12						
USRK				LR	LR	02 32 43.5	
	comp=Z,654nm,19.9s,baz=97,slow=38						
USRK	Ussuriysk Ar.	7.33	286	PN	Pn	02 29 56.8	+5.5
USRK	Ussuriysk Ar.	7.33	286	Pn	Pn	02 29 56.8	+5.6
JGF	Kuroka	7.75	208	Pn	Pn	02 30 02.2	+5.1
INU	Inuyama	8.10	209	Pn	Pn	02 30 05.5	+3.7
JHJ	Hachijo jima 2	9.55	190	Pn	Pn	02 30 19.2	-2.4
	comp=Z,5.2nm,0.3s,baz=50,slow=18,SNR=1.7						
KLR	Kul'dur	9.68	317	Pn	Pn	02 30 24.2	+0.9
	comp=Z,0.2nm,0.3s,baz=137,slow=18,SNR=2.7						
KLR				LR	LR	02 34 29.4	
	comp=Z,584nm,18.1s,baz=174,slow=39						
KLR	Kul'dur	9.68	317	⇓*e*PN	Pn	02 30 20.1	-3.2
KL

NJ2 pmax pmax
comp=E,10.0nm,0.5s
SEY Seymchan 21.34 13 P **P 02 32 50.0 -0.6**
comp=E,3.4nm,0.8s,baz=146,slow=9.9,SNR=4.6
SEY LR LR 02 42 28.3
comp=E,268nm,18.0s,baz=182,slow=40
SEY Seymchan 21.34 13‖ *e*P **P 02 32 49.7 -0.9**
HHC Hu-ho-hao-te 22.58 276 *e*P **P 02 33 04.5 +0.2**
HHC pmax pmax
comp=E,24nm,0.7s
HHC pmax pmax
comp=E,260nm,5.7s
ULN Ulaanbaatar 24.91 294 *e*P **P 02 33 26.8 +0.2**
ULN Ulaanbaatar 24.91 294‖ *e*P **P 02 33 26.8 +0.2**
ULN pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 25.35 294 P **P 02 33 31.5 +0.9**
comp=Z,1.3nm,0.4s,baz=81,slow=8.8,SNR=9.5
SONM LR LR 02 44 18.1
comp=Z,361nm,18.1s,baz=96,slow=38
SONM Songino Array 25.35 294 P **P 02 33 30.8 +0.2**
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 25.35 294 P **P 02 33 30.8 +0.2**
XAN Xi'an 27.03 263 P P 02 33 58.4 +13
XAN pP sP 02 34 07.1 +9.1
XAN pmax pmax
comp=Z,8.0nm,0.7s
TLY Talaya 27.25 303 LR LR 02 45 18.6
comp=Z,265nm,20.8s,baz=94,slow=38
TLY Talaya 27.25 303 *e*P **P 02 33 47.7 +0.1**
TLY Talaya 27.25 303‖ *e*P **P 02 33 47.7 +0.1**
TLY pmax pmax
comp=Z,7.0nm,1.0s
GUMO Guam 28.98 174 LR LR 02 45 01.6
comp=Z,46nm,21.8s,baz=18,slow=35
LZH Lanzhou 29.88 270 *e*P **P 02 34 12.5 +1.2**
LZH pmax pmax
comp=Z,16nm,1.3s
H11N2 WAKE ISLAND Hy 31.08 129 T T 03 07 42.4
baz=322,slow=76,SNR=1637
H11N1 WAKE ISLAND Hy 31.09 129 T T 03 07 43.7
baz=322,slow=76,SNR=2218
H11N3 WAKE ISLAND Hy 31.09 129 T T 03 07 44.6
baz=322,slow=76,SNR=1372
H11S1 WAKE ISLAND Hy 31.94 131 T T 03 08 45.8
baz=324,slow=76,SNR=1902
H11S3 WAKE ISLAND Hy 31.94 131 T T 03 08 45.8
baz=324,slow=76,SNR=1088
H11S2 WAKE ISLAND Hy 31.96 131 T T 03 08 45.8
baz=324,slow=76,SNR=1312
CD2 Chengdu 32.37 262 *e*P **P 02 34 32.8 -0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
DGZ Jazzator, Alta 37.63 300‖ *e*P **P 02 35 19.3 +0.9**
DGZ pmax pmax
comp=Z,3.0nm,1.0s
NRIK Noril'sk 38.45 332 LR LR 02 52 13.2
comp=Z,320nm,20.2s,baz=142,slow=38
ZAA0 Zalesovo Array 38.60 307 P **P 02 35 24.9 -1.4**
ZAA0 IAmb IAmb 02 35 36.2
comp=Z,12nm,1.1s
ZALV Zalesovo Beam 38.60 307 P **P 02 35 26.7 +0.3**
comp=Z,1.4nm,0.5s,baz=81,slow=9.2,SNR=6.0
ZALV pP **pP 02 35 36.0 +0.9**
comp=Z,1.6nm,0.3s,baz=91,slow=8.9,SNR=5.9
ZALV PcP **PcP 02 37 38.1 -0.1**
comp=Z,1.5nm,0.5s,baz=50,slow=2.3,SNR=3.8
ZALV pPcP 02 37 47.2
comp=Z,2.4nm,0.7s,baz=100,slow=3.5,SNR=4.9
ZALV ScP **ScP 02 41 23.9 -0.1**
comp=Z,0.9nm,0.6s,baz=95,slow=4.9,SNR=6.1
ZALV LR LR 02 52 07.6
comp=Z,135nm,20.6s,baz=69,slow=37
ZALV Zalesovo Beam 38.60 307 P **P 02 35 25.7 -0.7**
WMQ Urumqi 38.88 291 *e*P **P 02 35 30.6 +1.7**
WMQ Urumqi 38.88 291 P **P 02 35 29.2 +0.3**
WMQ pmax pmax
comp=Z,14nm,0.4s
WMQ Urumqi 38.88 291 P **P 02 35 29.1 +0.3**
MK31 Makanchi Array 41.65 297 P **P 02 35 51.9 +0.1**
MK31 pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 41.65 297 P **P 02 35 51.9 +0.1**
MKAR Makanchi Array 41.65 297 P **P 02 35 51.6 -0.2**
comp=Z,1.7nm,0.7s,baz=82,slow=8.7,SNR=9.9
MKAR PcP **PcP 02 37 48.1 -0.1**
comp=Z,0.4nm,0.3s,baz=69,slow=5.3,SNR=5.6
MKAR pPcP 02 37 57.6
comp=Z,0.7nm,0.3s,baz=72,slow=5.4,SNR=9.3
MKAR LR LR 02 54 36.9
comp=Z,164nm,18.1s,baz=100,slow=38
MKAR Makanchi Array 41.65 297 P **P 02 35 52.2 +0.4**
IMAR Indian Mountai 41.83 34 P **P 02 35 51.7 -1.2**
KDAK Kodiak Island 42.92 46 P **P 02 36 01.5 -0.4**
KDAK pmax pmax
comp=Z,22nm,1.1s
KDAK Kodiak Island 42.92 46 P **P 02 36 01.5 -0.4**
KDAK IAmb IAmb 02 36 11.2
comp=Z,22nm,1.1s
SKT Skwentna 42.94 40 P **P 02 36 02.8 +0.7**
KURK Kurchatov 42.94 304 *e*P **P 02 36 01.7 -0.4**
KURK Kurchatov 42.94 304 *c i*P **P 02 36 01.7 -0.4**
KURK pmax pmax
comp=Z,10.0nm,1.0s
KURK Kurchatov 42.94 304 P **P 02 36 02.3 +0.2**
KURK IAmb IAmb 02 36 14.2
comp=Z,13nm,0.7s
KTH Kantishna Hill 43.09 37 P **P 02 36 03.8 +0.4**
KTH IAmb IAmb 02 36 13.6
comp=Z,18nm,1.1s
CNPM China Poot 43.36 43 P **P 02 36 04.7 -0.8**
CNPM IAmb IAmb 02 36 18.0
comp=Z,22nm,1.1s
SUA Susitna One 43.36 40 P **P 02 36 05.2 -0.4**
SUA IAmb IAmb 02 36 21.0
comp=Z,30nm,1.3s
TRF Thorofare Moun 43.39 37 P **P 02 36 04.8 -1.0**
CMAR Chiang Mai Arr 43.43 250 P **P 02 36 07.0 +0.6**
comp=Z,1.1nm,0.3s,baz=36,slow=7.8,SNR=5.1
CMAR LR LR 02 55 33.2
comp=Z,158nm,18.7s,baz=90,slow=38
CMAR Chiang Mai Arr 43.43 250 P **P 02 36 06.8 +0.3**
TOLK Toolik Lake Re 43.48 30 P **P 02 36 06.1 -0.3**
BRLK Bradley Lake 43.51 43 P **P 02 36 06.5 -0.2**
BRLK IAmb IAmb 02 36 23.5
comp=Z,22nm,1.2s
GHO Glory Hole Cre 44.19 40 P **P 02 36 12.2 0.0**
GHO IAmb IAmb 02 36 13.3
comp=Z,26nm,1.2s
WRH Wood River Hil 44.26 36 P **P 02 36 13.2 +0.5**
WRH IAmb IAmb 02 36 22.3
comp=Z,14nm,1.3s
COLA College 44.33 35‖ *e*P **P 02 36 14.2 +1.1**
COLA pmax pmax
comp=Z,9.0nm,1.6s
CCB Clear Creek Bu 44.37 35 P **P 02 36 13.4 -0.1**
KNK Knik Glacier 44.46 40 P **P 02 36 14.3 +0.1**
KNK IAmb IAmb 02 36 27.9
comp=Z,22nm,1.2s
DHY Denali Highway 44.73 38 P **P 02 36 16.6 0.0**
DHY IAmb IAmb 02 36 17.5
comp=Z,16nm,1.2s
IL31 44.75 35 P **P 02 36 17.1 +0.6**
ILAR Eielson Array 44.75 35 P **P 02 36 16.8 +0.2**
comp=Z,0.6nm,0.3s,baz=256,slow=5.6,SNR=13
ILAR pP **pP 02 36 25.3 -0.1**
comp=Z,5.5nm,1.0s,baz=259,slow=5.6,SNR=17
ILAR Eielson Array 44.75 35 P **P 02 36 16.3 -0.2**
HDA Harding Lake 44.76 36 P **P 02 36 16.2 -0.5**
SCM Sheep Creek Mo 44.93 39 P **P 02 36 19.0 +0.9**
SCM pmax pmax
comp=Z,18nm,1.3s
SCM Sheep Creek Mo 44.93 39 P **P 02 36 19.0 +0.9**
SCM IAmb IAmb 02 36 32.2
comp=Z,18nm,1.3s
BMAR Burnt Mountain 45.42 31 P **P 02 36 22.1 +0.2**
M24K Tolsona, Glenn 45.43 39 P **P 02 36 23.0 +1.0**
KLU Klutina 45.65 40 P **P 02 36 24.3 +0.5**
KLU IAmb IAmb 02 36 39.2
comp=Z,11nm,1.1s
TAPN Taplejung 46.10 269 *e*P **P 02 36 28.7 +0.7**
N25K Chitina, Valde 46.25 39 P **P 02 36 29.5 +0.9**
ODAN Odare 46.61 269 *e*P **P 02 36 32.4 +0.4**
VRDI Verde Repeater 46.87 40 P **P 02 36 33.7 +0.2**

VRDI IAmb IAmb 02 36 48.1
comp=Z,17nm,1.2s
K27K Chicken 46.93 36 P **P 02 36 33.9 +0.2**
MCARA McCarthy VSAT 47.04 39 P **P 02 36 36.5 +1.9**
RAMN Ramite 47.14 269 *e*P **P 02 36 36.5 +0.4**
GUN Gumba 47.14 271 *e*P **P 02 36 36.7 +0.4**
EGAK Eagle 47.18 35 P **P 02 36 35.3 -0.3**
EGAK IAmb IAmb 02 36 44.3
comp=Z,15nm,1.2s
BCAR Beaver Creek A 47.25 37 P **P 02 36 36.1 -0.1**
BRVK Borovoye 47.27 309 *e*P **P 02 36 36.7 +0.2**
BRVK Borovoye 47.27 309 P **P 02 36 36.7 +0.2**
BRVK pmax pmax
comp=Z,9.0nm,1.3s
BRVK Borovoye 47.27 309 P **P 02 36 36.7 +0.2**
BRVK IAmb IAmb 02 36 47.6
comp=Z,8.8nm,1.2s
TGL Tana Glacier 47.27 40 P **P 02 36 37.0 +0.4**
BALM Baldy 47.44 40 P **P 02 36 38.0 +0.1**
ISLE Juniper Island 47.54 40 P **P 02 36 38.8 +0.2**
KKN Kakani 47.65 271 *e*P **P 02 36 40.0 -0.1**
PKI Pulchoki 47.67 271 *e*P **P 02 36 40.2 -0.2**
PKIN Phulchoki 47.68 271 *e*P **P 02 36 40.5 +0.1**
comp=Z,14nm,0.6s
BARN Barnard Glacie 47.75 40 P **P 02 36 40.9 +0.5**
BARN IAmb IAmb 02 36 46.1
comp=Z,9.3nm,1.2s
DMN Daman 47.88 271 *e*P **P 02 36 41.9 0.0**
CTGM Chitina Glacie 47.93 40 P **P 02 36 42.5 +0.7**
GKN Gorkha 48.01 272 *e*P **P 02 36 43.0 +0.2**
comp=Z,10.0nm,0.3s
AAK Ala-Archa 48.31 294 *e*P **P 02 36 44.2 -0.7**
AAK Ala-Archa 48.31 294‖ *e*P **P 02 36 44.2 -0.7**
AAK pmax pmax
comp=Z,5.0nm,1.0s
DANN Dangsing 48.47 273 *e*P **P 02 36 47.2 +0.7**
comp=Z,28nm,0.3s
KOLN Koldanda 48.90 272 *e*P **P 02 36 50.0 +0.3**
PYUN Piuthan 49.17 273 *e*P **P 02 36 52.3 +0.5**
comp=Z,9.9nm,0.3s
INK Inuvik 49.39 29 P **P 02 36 52.2 -0.4**
comp=Z,1.6nm,0.3s,baz=288,slow=7.1,SNR=19
INK LR LR 02 59 01.6
comp=Z,91nm,20.3s,baz=172,slow=38
INK Inuvik 49.39 29 P **P 02 36 52.8 +0.2**
INK pmax pmax
comp=Z,14nm,1.5s
INK Inuvik 49.39 29 P **P 02 36 52.8 +0.2**
INK IAmb IAmb 02 37 02.9
comp=Z,14nm,1.4s
HYT Haines Junctio 49.77 39 P **P 02 36 57.2 +1.4**
KKAR Karatay Array 50.77 296 P **P 02 37 03.2 -0.3**
KKAR Karatay Array 50.77 296 P **P 02 37 03.2 -0.3**
WHY Whitehorse 51.05 39 P **P 02 37 06.8 +1.4**
WHY IAmb IAmb 02 37 16.8
comp=Z,15nm,1.4s
SVE Sverdlovsk 51.30 316 *e*P P 02 37 16.0 +8.8
SVE pmax pmax
comp=Z,17nm,1.2s
C36M Paulatuk 52.34 27 P **P 02 37 14.7 -0.1**
ARU Arti 52.51 316 *c i*P P 02 37 25.7 +9.4
ARU S S 02 45 00.7 +20
ARU pmax pmax
comp=Z,15nm,1.5s
GAR Garm 52.76 292 P **P 02 37 17.7 -0.8**
GAR IAmb IAmb 02 37 32.5
comp=Z,14nm,1.3s
CHGR Chuyangaron 53.72 292 P **P 02 37 27.2 +1.7**
DLBC Dease Lake 54.17 40 P **P 02 37 29.5 +1.0**
comp=Z,2.5nm,0.9s,baz=284,slow=4.2,SNR=2.1
DLBC Dease Lake 54.17 40 P **P 02 37 29.9 +1.4**
DLBC IAmb IAmb 02 37 30.9
comp=Z,12nm,1.4s
ABKAR Akbulak array 54.72 307 P **P 02 37 32.8 +0.2**
SPITS Spitsbergen Ar 55.18 348 LR LR 03 03 31.3
comp=Z,118nm,18.2s,baz=20,slow=38
KIRV Kirov 56.09 321‖ *e*P **P 02 37 42.1 -0.1**
RES Resolute Bay 57.20 15 P **P 02 37 49.5 -0.4**
comp=Z,14nm,0.4s,baz=305,slow=2.6,SNR=9.3
RES Resolute Bay 57.20 15 P **P 02 37 48.9 -1.0**
RES pmax pmax
comp=Z,22nm,1.2s
RES Resolute Bay 57.20 15 P **P 02 37 48.9 -1.0**
YKA Yellowknife Ar 58.93 32 P **P 02 38 01.8 -0.4**
comp=Z,3.3nm,0.9s,baz=309,slow=5.6,SNR=6.9
ARCES ARCESS Array B 58.96 338 P **P 02 38 02.1 -0.2**
comp=Z,3.5nm,0.9s,baz=35,slow=8.0,SNR=1.9
ARCES LR LR 03 07 35.0
comp=Z,106nm,18.9s,baz=0.0,slow=40
KLMR Klimovskoe 59.30 326 *e*P P 02 38 11.3 +6.6
KLMR pmax pmax
comp=Z,22nm,1.3s
KLMR Klimovskoe 59.30 326 *e*P P 02 38 11.3 +6.6
KLMR AMP 02 38 14.8
comp=Z,22nm,1.3s
GEYT Alibeck 61.53 297 LR LR 03 06 57.6
comp=Z,181nm,19.0s,baz=350,slow=38
WB0 Warramunga Arr 62.38 188 P **P 02 38 25.2 -0.9**
WB0 IAmb IAmb 02 38 38.3
comp=Z,9.8nm,1.2s
WB2 Warramunga Ar 62.56 188 P **P 02 38 26.7 -0.6**
WB2 IAmb IAmb 02 38 39.7
comp=Z,14nm,1.4s
WRA Warramunga Arr 62.56 188 P **P 02 38 26.2 -1.1**
comp=Z,2.0nm,1.0s,baz=5.8,slow=7.1,SNR=20
WRA Warramunga Arr 62.56 188 P **P 02 38 26.9 -0.4**
WRA Warramunga Arr 62.56 188 P **P 02 38 26.9 -0.4**
VRH Novokhopyorsk 63.74 316 *e*P **P 02 38 34.2 -0.7**
VRH pmax pmax
comp=Z,10.0nm,1.4s
OBN Obninsk 63.90 322‖ *e*P P 02 38 43.9 +8.1
OBN pmax pmax
comp=Z,19nm,1.2s
FIA1 FINESS Array S 64.10 331 P **P 02 38 36.7 -0.4**
FINES FINESS Array B 64.10 331 P **P 02 38 36.2 -0.8**
comp=Z,2.6nm,0.4s,baz=55,slow=7.4,SNR=47
FINES LR LR 03 08 53.2
comp=Z,254nm,19.4s,baz=42,slow=38
FINES FINESS Array B 64.10 331 P **P 02 38 36.6 -0.5**
FINES FINESS Array B 64.10 331 P **P 02 38 36.6 -0.5**
LPSR Galich'ya Gora 64.31 319 *e*P P 02 38 44.4 +5.8
LPSR pmax pmax
comp=Z,10.0nm,0.9s
LON Longmire 64.37 49 P **P 02 38 39.5 +0.3**
LON pmax pmax
comp=Z,8.0nm,1.2s
LON Longmire 64.37 49 P **P 02 38 39.5 +0.3**
LON IAmb IAmb 02 38 51.5
comp=Z,7.8nm,1.1s
LTY Liberty 64.70 48 P **P 02 38 41.6 +0.2**
LTY IAmb IAmb 02 38 45.4
comp=Z,8.6nm,1.3s
VSR Storozhevoye 65.03 317 *e*P **P 02 38 44.3 +1.0**
VSR pmax pmax
comp=Z,8.0nm,1.1s
SUMG Summit 65.18 0 P **P 02 38 44.2 -0.3**
SUMG pmax pmax
comp=Z,2.0nm,0.9s
SUMG Summit 65.18 0 P **P 02 38 44.2 -0.3**
NEW Newport 66.02 46 P **P 02 38 50.5 +0.6**
NEW pmax pmax
comp=Z,7.0nm,1.2s
NEW Newport 66.02 46 P **P 02 38 50.5 +0.6**
NEW IAmb IAmb 02 39 00.1
comp=Z,7.1nm,1.1s
E08A Dider Farm, El 66.05 48 P **P 02 38 50.6 +0.6**
E08A IAmb IAmb 02 39 00.9
comp=Z,7.1nm,1.0s
HUMO Hull Mountain 66.14 54 P **P 02 38 51.8 +1.1**
ASAR Alice Springs 66.28 188 P **P 02 38 50.3 -1.4**
comp=Z,0.8nm,0.8s,baz=9.8,slow=6.0,SNR=8.4
ASAR Alice Springs 66.28 188 P **P 02 38 51.0 -0.7**
ASAR Alice Springs 66.28 188 P **P 02 38 51.0 -0.7**
E09A Wood Farm, Sta 66.54 48 P **P 02 38 53.0 -0.1**
PINE Pine Mountain 66.61 52 P **P 02 38 54.7 +0.8**
PINE IAmb IAmb 02 38 55.3
comp=Z,11nm,1.2s
YBH Yreka Blue Hor 66.81 54 P **P 02 38 55.3 +0.2**
YBH pmax pmax
comp=Z,4.0nm,1.2s
YBH Yreka Blue Hor 66.81 54 P **P 02 38 55.3 +0.2**
K05A Summer Lake 67.28 52 P **P 02 38 59.0 +0.7**
KIV Kislovodsk 67.57 310 *e*P **P 02 39 01.0 +1.1**
KIV pmax pmax
comp=Z,70nm,1.1s

KIV MLR MLR
comp=Z,278nm,17.0s
KIV Kislovodsk 67.57 310 P **P 02 39 02.2 +2.3**
KBZ Khabaz 67.59 309 LR LR 03 10 46.6
comp=Z,66nm,18.4s,baz=64,slow=38
JTMT Jette 67.84 45 P **P 02 39 01.9 +0.3**
JTMT IAmb IAmb 02 39 12.3
comp=Z,9.2nm,1.0s
BMO Blue Mountains 68.03 49 P **P 02 39 02.2 -0.5**
BMO pmax pmax
comp=Z,5.0nm,1.1s
BMO Blue Mountains 68.03 49 P **P 02 39 02.2 -0.5**
BMO IAmb IAmb 02 39 13.3
comp=Z,5.2nm,1.1s
IDID Didziasalis 68.04 326 *e*P **P 02 39 02.4 -0.1**
ISAL Salakas 68.12 327 *e*P **P 02 39 02.6 -0.3**
IIGN Ignalina 68.23 326 *e*P **P 02 39 03.5 -0.1**
J08A Circle Bar Ran 68.29 51 P **P 02 39 03.2 -1.2**
J08A IAmb IAmb 02 39 15.9
comp=Z,6.6nm,1.1s
PLID Pearl Lake 68.60 48 P **P 02 39 06.3 -0.2**
NC405 NORSAR Array S 69.03 337 P **P 02 39 07.9 -0.6**
NB2 NORSAR Subarra 69.23 337 P **P 02 39 08.9 -1.0**
comp=Z,11nm,1.1s,baz=35,slow=6.2
NOA NORSAR Array B 69.23 337 P **P 02 39 09.0 -0.8**
comp=Z,0.4nm,0.6s,baz=198,slow=2.8,SNR=10
NOA pP **pP 02 39 18.4 -0.7**
comp=Z,4.7nm,0.9s,baz=36,slow=6.2,SNR=9.1
NOA LR LR 03 12 33.6
comp=Z,55nm,20.6s,baz=35,slow=38
BEKR Beckworth 69.36 55 P **P 02 39 10.8 -0.4**
AKASG Malin Array Be 70.15 321 P **P 02 39 14.6 -1.0**
comp=Z,0.8nm,0.3s,baz=42,slow=7.2,SNR=8.3
AKASG pP **pP 02 39 24.1 -0.8**
comp=Z,2.3nm,0.4s,baz=44,slow=7.0,SNR=9.4
AKASG Malin Array Be 70.15 321 P **P 02 39 15.4 -0.2**
AKASG pmax pmax
comp=Z,6.0nm,1.2s
AKASG Malin Array Be 70.15 321 P **P 02 39 15.4 -0.2**
AKBB Malin Array Si 70.15 321 P **P 02 39 14.3 -1.3**
AKBB pmax pmax
comp=Z,13nm,1.1s
AKBB Malin Array Si 70.15 321 P **P 02 39 14.3 -1.3**
AKBB IAmb IAmb 02 39 25.0
comp=Z,13nm,1.1s
DLMT Dillon 70.27 46 P **P 02 39 16.8 +0.2**
DLMT IAmb IAmb 02 39 27.2
comp=Z,13nm,1.1s
HLID Hailey 70.45 49 P **P 02 39 17.9 +0.1**
CMB Columbia Colle 70.49 56 P **P 02 39 18.7 +0.7**
CMB pmax pmax
comp=Z,6.0nm,1.3s
CMB Columbia Colle 70.49 56 P **P 02 39 18.7 +0.7**
BOZ Bozeman (W) 70.62 46 P **P 02 39 19.0 +0.1**
BOZ pmax pmax
comp=Z,7.0nm,1.0s
BOZ Bozeman (W) 70.62 46 P **P 02 39 19.0 +0.1**
BOZ IAmb IAmb 02 39 29.4
comp=Z,6.9nm,0.9s
WAKR Walker 70.77 55 P **P 02 39 20.4 +0.5**
KVN Kaiserville 71.23 54 P **P 02 39 23.0 +0.3**
KVN pmax pmax
comp=Z,4.0nm,1.0s
KVN Kaiserville 71.23 54 P **P 02 39 23.0 +0.3**
YHL Hebgen Lake 71.36 46 P **P 02 39 24.9 +1.4**
NVAR Mina Array Bea 71.50 55 P **P 02 39 24.7 +0.3**
comp=Z,1.4nm,0.8s,baz=289,slow=5.4,SNR=8.4
NVAR pP **pP 02 39 33.1 -0.5**
comp=Z,1.5nm,0.8s,baz=302,slow=5.9,SNR=6.2
NVAR Mina Array Bea 71.50 55 P **P 02 39 24.3 -0.1**
R11A Troy Canyon, C 73.18 53 P **P 02 39 34.3 -0.1**
BW06 Boulder Array 73.63 47 P **P 02 39 36.9 -0.1**
BW06 IAmb IAmb 02 39 37.8
comp=Z,7.4nm,1.4s
PD31 Pinedale Array 73.63 47 P **P 02 39 37.0 -0.1**
PDAR Pinedale Array 73.63 47 P **P 02 39 36.5 -0.6**
comp=Z,1.1nm,0.4s,baz=74,slow=1.0,SNR=19
PDAR pP **pP 02 39 46.0 -0.3**
comp=Z,0.8nm,0.4s,baz=339,slow=1.4,SNR=6.1
PDAR LR LR 03 15 04.6
comp=Z,34nm,18.2s,baz=10,slow=38
PDAR Pinedale Array 73.63 47 P **P 02 39 35.8 -1.2**
TPNV Topopah Spring 73.70 55 P **P 02 39 37.7 +0.2**
TPNV pmax pmax
comp=Z,11nm,1.3s
TPNV Topopah Spring 73.70 55 P **P 02 39 37.7 +0.2**
TPNV IAmb IAmb 02 39 55.1
comp=Z,11nm,1.3s
STKA Stephens Creek 74.06 180 LR LR 03 12 23.2
comp=Z,32nm,19.8s,baz=24,slow=36
BUR08 Bucovina Ar. S 74.18 321 P **P 02 39 39.6 -0.4**
BUR08 IAmb IAmb 02 39 50.1
comp=Z,5.3nm,0.9s
BURAR Bucovina Array 74.19 321 P **P 02 39 39.4 -0.7**
OJC Ojcow 74.64 326 *e*P **P 02 39 42.6 +0.1**
OJC *e*pP **pP 02 39 51.4 -0.4**
OJC Ojcow 74.64 326 P **P 02 39 42.0 -0.5**
OJC pmax pmax
comp=Z,24nm,1.2s
OJC Ojcow 74.64 326 P **P 02 39 42.0 -0.5**
ULM Lac du Bonnet 74.76 34 P **P 02 39 43.4 +0.2**
comp=Z,2.8nm,1.0s,baz=342,slow=3.2,SNR=2.4
ULM Lac du Bonnet 74.76 34 P **P 02 39 42.1 -1.0**
ULM pmax pmax
comp=Z,20nm,1.5s
ULM Lac du Bonnet 74.76 34 P **P 02 39 42.1 -1.0**
ULM IAmb IAmb 02 39 52.3
comp=Z,20nm,1.4s
CCUT Cedar City 75.02 53 P **P 02 39 46.5 +1.3**
MSU Marysvale 75.06 51 P **P 02 39 46.5 +1.1**
MSU Marysvale 75.06 51 P **P 02 39 46.5 +1.1**
P17A Butcher Ranch, 75.23 50 P **P 02 39 46.5 +0.2**
Q16A Castle Valley 75.36 50 P **P 02 39 47.4 +0.2**
MTPU Mount Pierson 75.38 52 P **P 02 39 48.0 +0.6**
BRTR Keskin Array B 75.45 311 LR LR 03 19 40.5
comp=Z,26nm,19.4s,baz=34,slow=41
RSSD Black Hills 75.55 43 P **P 02 39 47.8 -0.3**
RSSD pmax pmax
comp=Z,7.0nm,1.3s
RSSD Black Hills 75.55 43 P **P 02 39 47.8 -0.3**
RSSD IAmb IAmb 02 39 57.8
comp=Z,7.0nm,1.3s
SRU San Rafael Swe 75.60 50 P **P 02 39 48.7 +0.3**
SRU pmax pmax
comp=Z,12nm,1.0s
SRU San Rafael Swe 75.60 50 P **P 02 39 48.7 +0.3**
MORC Moravsky Berou 75.92 326 *e*P **P 02 39 50.7 +0.8**
DPC Dobruska-Polom 75.96 327 *e*P **P 02 39 50.3 +0.2**
DPC *e* 02 39 59.2
DPC Dobruska-Polom 75.96 327 *e*P **P 02 39 50.3 +0.2**
DPC *e*pP **pP 02 39 59.2 -0.2**
CLL Collm 76.47 330 *e*P **P 02 39 52.0 -0.9**
CLL *i* (pP) **pP 02 40 01.9 -0.4**
comp=Z,7.0nm,0.9s
CLL Lm MLR 03 16 00.0
comp=Z,100nm,19.3s
CLL Collm 76.47 330 *e*P **P 02 39 52.0 -0.9**
CLL *i* 02 40 01.9
VRAC Vranov 76.67 327 *e*P **P 02 39 54.8 +0.7**
KRUC Moravsky 76.94 327 *e*P **P 02 39 56.2 +0.6**
KRUC *e* 02 40 05.3
PRU Pruhonice 76.95 328 *e*P **P 02 39 55.9 +0.3**
PRU *e* 02 40 03.4
PRU Pruhonice 76.95 328 *e*P **P 02 39 55.9 +0.3**
PRU *e*pP **pP 02 40 03.4 -1.6**
PV04 Paradox Valley 77.01 50 P **P 02 39 56.2 -0.3**
PV04 IAmb IAmb 02 39 57.6
comp=Z,6.7nm,1.0s
PV03 Paradox Valley 77.14 50 P **P 02 39 57.3 +0.1**
KHC Kasperske Hory 78.01 328 *e*P **P 02 40 01.7 +0.1**
KHC *e* 02 40 09.3
KHC Kasperske Hory 78.01 328 *e*P **P 02 40 01.7 +0.1**
KHC *ex* x 02 40 09.3
CONA Conrad Observa 78.06 326 *e*P **P 02 39 58.7 -3.3**
comp=Z,8.3nm,1.2s
GERES GERESS Array B 78.19 328 P **P 02 40 02.4 -0.3**
comp=Z,0.2nm,0.5s,baz=34,slow=11,SNR=3.2
GERES pP **PcP 02 40 11.7 -0.5**
comp=Z,0.6nm,0.3s,baz=38,slow=5.6,SNR=8.0
GERES GERESS Array B 78.19 328 P **P 02 40 01.3 -1.5**
EYMN Ely 78.36 33 P **P 02 40 02.7 -0.8**
GRF Grafenberg Arr 78.45 330 *e*P P 02 40 13.8 +10
comp=Z,8.7nm,1.0s,baz=35,slow=4.6
ARSA Arzberg 78.73 326 *e*P **P 02 40 05.7 0.0**

	comp=Z,2.8nm,0.8s								
SDCO	**Great Sand Dun**	**79.36**	**48**	P		**P**	**02 40 09.6**	**0.0**	
SOKA	**Soboth**	**79.39**	**326**	*eP*		**P**	**02 40 09.5**	**+0.1**	
	comp=Z,8.4nm,1.2s								
ECSD	**EROS Data Cent**	**79.42**	**39**	P		**P**	**02 40 09.0**	**-0.5**	
ECSD				IAmb		IAmb	02 40 18.6		
	comp=Z,12nm,1.4s								
KBA	**Koelnbreinsper**	**79.76**	**327**	*eP*		**P**	**02 40 12.2**	**+0.7**	
	comp=Z,5.9nm,0.8s								
MYKA	**Terra Mystica**	**80.00**	**327**	*eP*		**P**	**02 40 14.3**	**+1.6**	
	comp=Z,1.0nm,0.4s								
WATA	**Walderalm**	**80.25**	**328**	*eP*		**P**	**02 40 12.0**	**-2.1**	
	comp=Z,9.3nm,1.1s								
WTTA	**Wattenberg**	**80.29**	**328**	*eP*		**P**	**02 40 14.6**	**+0.3**	
	comp=Z,6.8nm,1.2s								
ABTA	**Abfaltersbach**	**80.36**	**327**	*eP*		**P**	**02 40 14.3**	**-0.3**	
	comp=Z,3.2nm,1.1s								
MOTA	**Moosalm**	**80.43**	**328**	*eP*		**P**	**02 40 15.0**	**0.0**	
	comp=Z,12nm,1.1s								
RETA	**Reutte**	**80.44**	**329**	*eP*		**P**	**02 40 14.9**	**-0.1**	
	comp=Z,7.5nm,1.3s								
SQTA	**Sankt Quirin**	**80.49**	**328**	*eP*		**P**	**02 40 14.2**	**-1.1**	
	comp=Z,7.7nm,1.1s								
ANMO	**Albuquerque**	**80.83**	**51**	*eP*		**P**	**02 40 18.3**	**+0.8**	
ANMO				pmax		pmax			
	comp=Z,3.0nm,1.1s								
FETA	**Feichten**	**80.84**	**328**	*eP*		**P**	**02 40 14.5**	**-2.7**	
	comp=Z,6.4nm,1.9s								
PDG	**Podgorica**	**80.87**	**321**	P		**P**	**02 40 17.1**	**-0.2**	
PDG				IAmb		IAmb	02 40 34.0		
	comp=Z,7.8nm,1.0s								
DAVA	**Damuels**	**80.94**	**329**	*eP*		**P**	**02 40 17.4**	**-0.3**	
	comp=Z,8.0nm,1.1s								
FUORN	**Ofenpass-Fuorn**	**81.35**	**329**	P		**P**	**02 40 20.7**	**+0.6**	
FUORN				IAmb		IAmb	02 40 30.2		
	comp=Z,10nm,1.1s								
IDI	**Anoyia**	**83.46**	**313**	P		**P**	**02 40 30.4**	**-0.7**	
ITM	**Ithomi**	**83.60**	**316**	P		**P**	**02 40 30.6**	**-1.1**	
PMOR	**Pomariorio Ree**	**86.14**	**114**	*eT*		T	04 15 47.9		
	comp=Z,10nm,0.2s								
TX31	**Lajitas Ar. Si**	**86.53**	**53**	P		**P**	**02 40 47.1**	**+0.4**	
TX32	**Lajitas Array**	**86.53**	**53**	P		**P**	**02 40 47.1**	**+0.4**	
TX32				IAmb		IAmb	02 40 57.1		
	comp=Z,3.9nm,1.1s								
TXAR	**Lajitas Array**	**86.53**	**53**	P		**P**	**02 40 47.1**	**+0.5**	
	comp=Z,0.5nm,0.4s,baz=294,slow=3.5,SNR=17								
TXAR				pP		**pP**	**02 40 56.4**	**+0.2**	
	comp=Z,0.9nm,0.7s,baz=283,slow=4.9,SNR=7.8								
TXAR	**Lajitas Array**	**86.53**	**53**	P		**P**	**02 40 45.8**	**-0.9**	
PPT	**Papeete**	**86.86**	**117**	LR		LR	03 13 27.3		
	comp=Z,80nm,21.8s,baz=341,slow=31								
PPT2	**Papeete2**	**86.88**	**117**	*e*LR		LR	03 08 17.1		
	comp=Z,153nm,24.0s								
PPT2	**Papeete2**	**86.88**	**117**	*eT*		T	04 16 43.5		
	comp=Z,3.3nm,0.3s								
TAOE	**Nuku Hiva Isla**	**87.24**	**105**	*e*LR		LR	03 08 32.7		
	comp=Z,117nm,22.8s								
MEH	**Mehetia**	**88.08**	**116**	*eT*		T	04 18 13.2		
	comp=Z,24nm,0.3s								
ESDC	**Sonseca Array**	**92.47**	**334**	P		**P**	**02 41 14.0**	**-0.4**	
	comp=Z,0.5nm,1.0s,baz=18,slow=4.0,SNR=1.9								
TORD	**Torodi Ar. Bea**	**113.58**	**317**	PKiKP		**PKiKP**	**02 46 40.8**	**-1.1**	
	comp=Z,0.4nm,0.8s,baz=15,slow=2.7,SNR=4.3								
PB16	**IPOC Station P**	**144.13**	**57**	PKPdf		**PKPdf**	**02 47 39.8**	**-0.2**	
MNMC	**Minye Minye**	**144.67**	**58**	PKPdf		**PKPdf**	**02 47 40.0**	**-0.5**	
PB11	**IPOC Station P**	**145.10**	**59**			**PKPab**	**02 47 40.9**	**+0.2**	
PB08	**IPOC Station P**	**145.70**	**59**			**PKPab**	**02 47 43.1**	**-0.1**	
SNAA	**Sanae**	**146.08**	**199**	PKPdf		**PKPbc**	**02 47 42.0**	**-0.1**	
SNAA	**Sanae**	**146.08**	**199**	PKP2		**PKPbc**	**02 47 42.3**	**+0.2**	
SNAA	**Sanae**	**146.08**	**199**	PKPbc		**PKPbc**	**02 47 42.3**	**+0.2**	
PB01	**IPOC Station P**	**146.14**	**61**	PKPbc		**PKPdf**	**02 47 43.2**	**+0.4**	
VNA2	**Neumayer--Watz**	**147.67**	**198**	PKPdf		**PKPbc**	**02 47 46.4**	**-0.2**	
	baz=117,slow=2.6								
VNA3	**Neumayer Olymp**	**147.94**	**197**	PKPdf		**PKPdf**	**02 47 44.9**	**+0.7**	
VNA1	**Neumayer--Stat**	**148.07**	**198**	PKPbc		**PKPbc**	**02 47 48.3**	**+0.8**	
AC05	**El Transito**	**150.77**	**73**	PKPbc		**PKiKP**	**02 47 57.0**	**+0.6**	
CO01	**Juntas del Tor**	**151.56**	**74**	PKPbc		**PKiKP**	**02 47 58.0**	**-0.2**	
MT02	**Curacav**	**152.55**	**81**	PKPbc		**PKPbc**	**02 47 59.1**	**-0.4**	
BO02	**Sierra Bellavi**	**153.53**	**84**	PKPbc		**PKiKP**	**02 48 02.0**	**+0.2**	

NEIC ***03*** *02:47:00.9±2.0,25.65N±0.09×128.48E±0.07,h10km±1km, mb4.6/11, Error ellipse: s-maj=15.1km s-min=9.9km az=199.0*

IDC ***03*** *02:47:00.9±1.2,25.98N×128.43E,h0km,mb3.9/10, mb1 4.0/11,mb1mx3.8/45,mbtmp3.9/11,ML3.3/1,MS2.9/2, Ms1 2.9/2,ms1mx2.6/39,Error ellipse: s-maj=58.3km s-min=18.2km az=71.0*

JMA ***03*** *02:47:03.4±0.3,25.96N×128.57E,h47km,M3.4*

ISC 03 02:47:02.0±1.8,25.90N±0.06×128.58E±0.04,h12km±10km, n45,σ1§58/51,mb4.0/14,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.76**	**289**	P	**Pn**	**02 47 17.7**	**-0.8**
JJT3				S	**Sb**	**02 47 28.5**	**+1.1**
JNTH	**Nagotoyohara**	**0.80**	**321**	P	**Pg**	**02 47 17.2**	**-0.2**
JNTH				S	**Sg**	**02 47 27.9**	**+0.1**
JOW	**Kunigami**	**0.97**	**344**	P	**Pb**	**02 47 20.2**	**-0.6**
JYRO	**Yoronjima**	**1.13**	**354**	P	**Pn**	**02 47 22.3**	**-1.3**
JIH	**Iheya**	**1.26**	**334**	P	**Pn**	**02 47 24.5**	**-0.9**
JIH				S	**Sn**	**02 47 39.4**	**-2.9**
JAGN	**Aguni-jima**	**1.38**	**300**	P	**Pn**	**02 47 26.6**	**-0.5**
JAGN				S	**Sn**	**02 47 43.0**	**-2.4**
JOKE	**Okinoerabujima**	**1.46**	**360**	P	**Pn**	**02 47 27.3**	**-0.9**
JOKE				S	**Sn**	**02 47 44.5**	**-2.7**
JKE	**Kume jima 2**	**1.67**	**285**	P	**Pn**	**02 47 30.2**	**-0.9**
JKE				S	**Sn**	**02 47 49.9**	**-2.5**
JTK	**Tokunoshima**	**1.91**	**10**	P	**Pn**	**02 47 33.6**	**-0.8**
JTK				S	Sn	02 47 54.5	-3.9
JMZ	**Minamidaito 2**	**2.38**	**91**	P	**Pn**	**02 47 40.2**	**-0.7**
JMZ				S	**Sn**	**02 48 05.9**	**-4.1**
JMZ	**Minamidaito 2**	**2.38**	**91**	Pn	**Pn**	**02 47 40.4**	**-0.5**
JKDJ	**Kitadaitoujima**	**2.45**	**88**	P	**Pn**	**02 47 41.2**	**-0.6**
JKDJ				S	**Sn**	**02 48 09.2**	**-2.4**
YULB	**Yu-li**	**7.08**	**251**	Pn	**Pn**	**02 48 42.1**	**-3.4**
SSLB	**Suanglung**	**7.24**	**255**	Pn	**Pn**	**02 48 45.2**	**-2.5**
JNU	**Nakatsue**	**7.47**	**15**	Pn	**Pn**	**02 48 51.8**	**+0.9**
	0.5nm,0.3s,baz=236,slow=7.3,SNR=3.7						
JNU	**Nakatsue**	**7.47**	**15**		**Pn**	**02 48 51.9**	**+1.0**
KSRS	**Korea Array**	**11.53**	**357**	LR	LR	02 54 00.1	
	comp=Z,32nm,21.2s,baz=200,slow=37						
ERM	**Erimo**	**20.07**	**33**	Pn	Pn	02 51 41.0	+4.0
ERM				IAmb	IAmb	02 51 41.4	
	comp=Z,74nm,0.9s						
YSS	**Yuzh-Sakhalins**	**23.84**	**25**	P	**P**	**02 52 18.4**	**+3.5**
SONM	**Songino Array**	**28.00**	**327**	P	**P**	**02 52 53.5**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=141,slow=11,SNR=7.8						
SONM	**Songino Array**	**28.00**	**327**	P	**P**	**02 52 55.0**	**+2.1**
MK31	**Makanchi Array**	**41.99**	**312**	P	**P**	**02 54 52.9**	**-0.1**
MKAR	**Makanchi Array**	**41.99**	**312**	P	**P**	**02 54 52.0**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=101,slow=11,SNR=8.0						
MKAR	**Makanchi Array**	**41.99**	**312**	P	**P**	**02 54 53.0**	**0.0**
ZALV	**Zalesovo Beam**	**42.70**	**323**	P	**P**	**02 54 58.3**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=89,slow=12,SNR=2.4						
ZALV				LR	LR	03 15 48.9	
	comp=Z,33nm,18.1s,baz=50,slow=41						
ZALV	**Zalesovo Beam**	**42.70**	**323**	P	**P**	**02 54 58.7**	**0.0**
KURK	**Kurchatov**	**45.27**	**317**	P	**P**	**02 55 19.5**	**+0.1**
KURBB	**Kurchatov Arra**	**45.31**	**317**	P	**P**	**02 55 19.1**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=104,slow=8.5,SNR=5.4						
WRA	**Warramunga Ar**	**45.91**	**172**	P	**P**	**02 55 26.0**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=353,slow=8.4,SNR=10						
ASAR	**Alice Springs**	**49.54**	**174**	P	**P**	**02 55 54.6**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=355,slow=8.8,SNR=6.4						
KKAR	**Karatay Array**	**49.86**	**306**	P	**P**	**02 55 55.8**	**+0.7**
GAR	**Garm**	**50.10**	**300**	P	**P**	**02 55 55.8**	**-1.4**
GAR				IAmb	IAmb	02 55 56.5	
	comp=Z,5.3nm,1.1s						
ABKAR	**Akbulak array**	**57.10**	**313**	P	**P**	**02 56 48.5**	**+0.3**
ABKAR				IAmb	IAmb	02 56 57.2	
	comp=Z,2.2nm,0.8s						
FINES	**FINESS Array B**	**73.31**	**331**	P	**P**	**02 58 31.8**	**-1.4**
	comp=Z,3.8nm,0.9s,baz=57,slow=14,SNR=4.1						
FINES	**FINESS Array B**	**73.31**	**331**	P	**P**	**02 58 33.3**	**+0.2**
AKASG	**Malin Array Be**	**75.99**	**320**	P	**P**	**02 58 48.6**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=56,slow=6.3,SNR=6.9						
AKASG	**Malin Array Be**	**75.99**	**320**	P	**P**	**02 58 48.4**	**-0.5**
AKBB	**Malin Array Si**	**75.99**	**320**	P	**P**	**02 58 48.2**	**-0.7**
AKBB				IAmb	IAmb	02 58 50.7	
	comp=Z,8.9nm,1.4s						
BRTR	**Keskin Array B**	**77.48**	**308**	P	**P**	**02 58 58.8**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=134,slow=5.3,SNR=4.2						
BRTR	**Keskin Array B**	**77.48**	**308**	P	**P**	**02 58 58.5**	**+0.7**
BUR08	**Bucovina Ar. S**	**79.68**	**318**	P	**P**	**02 59 10.9**	**+1.2**
BUR08				IAmb	IAmb	02 59 27.6	
	comp=Z,7.8nm,1.4s						
BURAR	**Bucovina Array**	**79.69**	**318**	P	**P**	**02 59 11.0**	**+1.2**
NOA	**NORSAR Array B**	**79.75**	**334**	P	**P**	**02 59 09.0**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=48,slow=5.8,SNR=3.2						
NC204	**NORSAR Array S**	**79.79**	**334**	P	**P**	**02 59 09.9**	**0.0**
CLL	**Collm**	**84.60**	**325**	*e*(P)	**P**	**02 59 33.0**	**-2.3**

IDC ***03*** *03:10:27.8±1.1,3.04S×129.71E,h0km,mb4.0/4, mb1 4.3/7,mb1mx3.9/29,mbtmp4.1/7,ML4.0/3,MS3.1/7, Ms1 3.1/7,ms1mx2.9/31,Error ellipse: s-maj=29.5km s-min=19.1km az=78.0*

NEIC ***03*** *03:10:31.7±3.0,2.96S±0.09×129.59E±0.08,h33km±10km, mb4.0/7,Error ellipse: s-maj=16.4km s-min=7.0km az=139.0*

DJA ***03*** *03:10:32.6±0.3,3.5S±3×13.0E±°,h67km±13km,M4.1/7, mb4.2/3,MLv4.0/7*

ISC 03 03:10:32.7±0.7,2.96S±0.06×129.61E±0.06,h35km,n29, σ1§61/28,mb3.8/3,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.58**	**169**	P	**Pn**	**03 11 00.2**	**+2.0**
BNDI				S	**Sn**	**03 11 19.7**	**+2.4**
FAKI	**Fak Fak**	**2.64**	**89**	P	**Pn**	**03 11 13.3**	**+0.6**
FAKI				S	**Sn**	**03 11 45.1**	**+1.6**
FAKI	**Fak Fak**	**2.64**	**89**	Pn	**Pn**	**03 11 13.1**	**+0.4**
SIJI	**Sorong**	**2.66**	**39**	Pn	**Pn**	**03 11 13.6**	**+0.5**
	24nm,0.3s,baz=70,slow=9.7,SNR=42						
SIJI				Sn	**Sn**	**03 11 44.2**	**+0.1**
	27nm,0.3s,baz=236,slow=21,SNR=15						
SIJI				LR	LR	03 12 50.8	
	comp=Z,352nm,18.7s,baz=155,slow=54						
SANI	**Sanana**	**3.73**	**284**	P	**Pn**	**03 11 27.1**	**-0.7**
GTOI	**Gorontalo**	**7.50**	**298**	P	**Pn**	**03 12 21.4**	**+1.7**
	0.1nm12nm,0.8s						
MMRI	**Maumere**	**9.25**	**232**	Pn	**Pn**	**03 12 41.3**	**-2.3**
BATI	**Baumata**	**9.31**	**219**	LR	LR	03 16 36.6	
	comp=Z,269nm,20.4s,baz=74,slow=40						
MTN	**Manton Dam**	**9.93**	**171**	Pn	**Pn**	**03 12 54.8**	**+1.8**
KAPI	**Kappang**	**10.04**	**258**	LR	LR	03 17 48.3	
	comp=Z,79nm,18.3s,baz=86,slow=44						
DAV	**Davao City (W)**	**10.75**	**338**	LR		03 18 07.6	
	comp=Z,142nm,19.8s,baz=150,slow=42						
KNRA	**Kununurra**	**12.66**	**184**	Pn	**Pn**	**03 13 32.7**	**+2.3**
FITZ	**Fitzroy Crossi**	**15.54**	**194**	Pn	**Pn**	**03 14 08.4**	**-0.8**
	0.3nm,0.3s,baz=34,slow=8.3,SNR=11						
FITZ				LR	LR	03 20 00.5	
	comp=Z,53nm,18.6s,baz=22,slow=37						
FITZ	**Fitzroy Crossi**	**15.54**	**194**	Pn	**Pn**	**03 14 08.7**	**-0.6**
FITZ				IAmb	IAmb	03 14 17.5	
	comp=Z,12nm,1.3s						
WB0	**Warramunga Ar**	**17.34**	**165**		**Pn**	**03 14 29.5**	**-2.7**
WRAB	**Tennant Creek**	**17.49**	**165**		**P**	**03 14 33.0**	**-1.8**
WRA	**Warramunga Ar**	**17.50**	**165**	P	**Pn**	**03 14 31.2**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=352,slow=12,SNR=29						
WRA	**Warramunga Arr**	**17.50**	**165**		**P**	**03 14 33.0**	**-1.9**
WB2	**Warramunga Arr**	**17.50**	**165**		**Pn**	**03 14 32.3**	**-1.7**
WB2				IAmb	IAmb	03 14 36.4	
	comp=Z,8.1nm,0.8s						
WR0	**Warramunga Arr**	**17.57**	**164**		**P**	**03 14 34.2**	**-1.4**
WR0				IAmb	IAmb	03 14 36.4	
	comp=Z,16nm,1.4s						
PMG	**Port Moresby**	**18.58**	**111**	LR	LR	03 23 59.9	
	comp=Z,43nm,19.0s,baz=182,slow=44						
AS31	**Alice Springs**	**21.00**	**169**	P	**P**	**03 15 12.7**	**-0.5**
AS31				IAmb	IAmb	03 15 14.4	
	comp=Z,6.8nm,0.9s						
ASAR	**Alice Springs**	**21.00**	**169**	P	**P**	**03 15 12.6**	**-0.6**
	comp=Z,13nm,0.6s,baz=347,slow=11,SNR=104						
ASAR				PcP	**PcP**	**03 19 19.1**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=358,slow=1.2,SNR=6.5						
ASAR	**Alice Springs**	**21.00**	**169**	P	**P**	**03 15 12.4**	**-0.8**
CTA	**Charters Tower**	**23.53**	**138**	P	**P**	**03 15 39.0**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=330,slow=13,SNR=5.1						
CMAR	**Chiang Mai Arr**	**36.95**	**306**	P	**P**	**03 17 40.2**	**+1.5**
	comp=Z,1.0nm,0.4s,baz=136,slow=7.7,SNR=6.5						
PETK	**Petropavlovsk-**	**60.65**	**19**	LR	LR	03 47 08.2	
	comp=Z,16nm,19.4s,baz=329,slow=36						
MKAR	**Makanchi Array**	**64.67**	**326**	P	**P**	**03 21 08.2**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=123,slow=7.7,SNR=3.8						
MKAR	**Makanchi Array**	**64.67**	**326**	P	**P**	**03 21 07.0**	**-0.1**

WEL 03 03:15:26.3,42°S±1°×17°2E±°,h81km±4km,M3.1/21, ML3.2/21,MLv3.1/21,Error ellipse: s-maj=0.0km s-min=0.0km az=98.1,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THZ	**Tophouse**	**0.55**	**48**	P	Pn	03 15 40.8	+0.1
THZ				S	Sn	03 15 51.8	+0.5
DSZ	**Denniston Nort**	**0.57**	**313**	P	Pn	03 15 40.6	-0.2
DSZ				S	Sn	03 15 49.9	-1.6
LTZ	**Lake Taylor**	**0.65**	**186**	P	Pn	03 15 42.2	+0.6
LTZ				S	Sn	03 15 53.0	0.0
INZ	**Inchbonnie**	**0.90**	**228**	P	Pn	03 15 44.7	+0.5
INZ				S	Sn	03 15 57.5	-0.1
KHZ	**Kahutara**	**0.92**	**108**	P	Pn	03 15 45.1	+0.7
KHZ				S	Sn	03 15 57.9	-0.1
GVZ	**Greta Valley S**	**0.97**	**149**	P	Pn	03 15 45.9	+0.7
NNZ	**Nelson**	**1.19**	**40**	P	Pn	03 15 48.5	+0.8
NNZ				S	Sn	03 16 04.5	+0.8
BSWZ	**Blackbirch Sta**	**1.21**	**70**	P	Pn	03 15 49.2	+1.3
OXZ	**Oxford**	**1.22**	**191**	P	Pn	03 15 48.0	-0.1
OXZ				S	Sn	03 16 03.1	-1.2
QRZ	**Quartz Range**	**1.31**	**6**	P	Pn	03 15 49.2	0.0
QRZ				S	Sn	03 16 05.1	-1.3
TUWZ	**Tuamarina**	**1.38**	**60**	P	Pn	03 15 50.9	+0.8
MHCZ	**Mount Hutt**	**1.52**	**202**	P	Pn	03 15 52.1	+0.2
WVZ	**Waitaha Valley**	**1.52**	**231**	P	Pn	03 15 52.5	+0.6
WVZ				S	Sn	03 16 10.8	-0.5
MQZ	**McQueen's Vall**	**1.59**	**172**	P	Pn	03 15 52.5	-0.3
MQZ				S	Sn	03 16 10.3	-2.5
RACZ	**Rakaia**	**1.60**	**186**	P	Pn	03 15 52.9	0.0
OKCZ	**Okains Bay**	**1.67**	**162**	P	Pn	03 15 54.2	+0.3
OKCZ				S	Sn	03 16 12.9	-1.9
TCW	**Tory Channel**	**1.71**	**58**	P	Pn	03 15 54.9	+0.5
TCW				S	Sn	03 16 14.6	-1.0
DUWZ	**D'Urville Isla**	**1.77**	**42**	P	Pn	03 15 57.1	+1.8
DUWZ				S	Sn	03 16 19.1	+1.9
WACZ	**Wakanui South**	**1.85**	**192**	P	Pn	03 15 56.1	-0.1
GCSZ	**Gaunt Creek Bo**	**1.91**	**231**	P	Pn	03 15 57.6	+0.6
CAW	**Cannon Point**	**2.27**	**64**	P	Pn	03 16 01.5	-0.4
MSWZ	**Moikau Station**	**2.28**	**73**	P	Pn	03 16 01.1	-0.8
KIW	**Kapiti Island**	**2.30**	**57**	P	Pn	03 16 02.4	+0.1
FOZ	**Fox Glacier**	**2.34**	**232**	P	Pn	03 16 03.0	+0.4
OGWZ	**Otaki Gorge**	**2.49**	**59**	P	Pn	03 16 04.5	-0.2
MTW	**Mount Morrison**	**2.55**	**69**	P	Pn	03 16 10.4	+4.9
LBZ	**Lake Benmore**	**2.76**	**214**	P	Pn	03 16 07.5	-0.9
ODZ	**Otahua Downs**	**3.17**	**203**	P	Pn	03 16 13.7	-0.2
JCZ	**Jackson Bay**	**3.26**	**232**	P	Pn	03 16 15.4	+0.2

JMA ***03*** *03:24:27.3,38.64N×141.91E,h48km±1km,M3.6*

JMA Felt I J1.

IDC ***03*** *03:24:30.9±3.1,39.14N×140.54E,h0km,mb3.6/2, mb1 3.7/3,mb1mx3.4/27,mbtmp3.5/3,ML2.2/1,Error ellipse: s-maj=77.2km s-min=35.5km az=69.0*

ISC 03 03:24:27.1±2.2,38.65N±0.05×142.0E±0.1,h35km,n20, σ1§62/21,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.43**	**292**	P	**Pn**	**03 24 37.1**	**+0.3**
JKMT				S	**Sn**	**03 24 43.8**	**+0.3**
OFUJ	**Ofunato**	**0.50**	**330**	P	**Pn**	**03 24 38.3**	**+0.6**
OFUJ				S	**Sn**	**03 24 45.8**	**+0.7**
JIKH	**Ishinomakikobu**	**0.53**	**231**	P	**Pn**	**03 24 38.1**	**-0.1**
JIKH				S	**Sn**	**03 24 45.5**	**-0.4**
JIO	**Ouri**	**0.54**	**249**	P	**Pn**	**03 24 38.1**	**-0.1**
JIO				*i* S	**Sn**	**03 24 45.5**	**-0.5**
JMK	**Ichinoseki**	**0.67**	**297**	P	**Pn**	**03 24 40.1**	**0.0**
JMK				S	**Sn**	**03 24 49.1**	**-0.3**
JOM	**Ohasama**	**0.99**	**327**	P	**Pn**	**03 24 44.7**	**+0.2**
JOU	**Okura**	**1.07**	**255**	P	**Pn**	**03 24 45.2**	**-0.5**
JOU				S	**Sn**	**03 24 58.6**	**-0.8**
JMM	**Marumori**	**1.22**	**231**	P	**Pn**	**03 24 46.8**	**-0.9**
JMM				S	**Sn**	**03 25 01.2**	**-1.7**
JRG	**Rokugo**	**1.29**	**306**	P	**Pn**	**03 24 48.7**	**0.0**
JYK	**Kaneyama**	**1.30**	**283**	P	**Pn**	**03 24 48.5**	**-0.3**
MJAR	**Matsushiro Arr**	**3.66**	**236**	Pn	**Pn**	**03 25 22.1**	**+0.8**
	0.3nm,0.3s,baz=39,slow=12,SNR=12						
MAT	**Matsushiro**	**3.66**	**236**	P	**Pn**	**03 25 22.5**	**+1.2**
MAT				*e*S	**Sn**	**03 26 09.4**	**+6.1**
H11N2	**WAKE ISLAND Hy**	**28.63**	**124**	T	T	04 00 35.6	
	baz=317,slow=75,SNR=244						
H11N1	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	04 00 36.8	
	baz=317,slow=75,SNR=325						
H11N3	**WAKE ISLAND Hy**	**28.65**	**124**	T	T	04 00 41.0	
	baz=317,slow=75,SNR=157						
H11S1	**WAKE ISLAND Hy**	**29.40**	**126**	T	T	04 01 33.9	
	baz=318,slow=76,SNR=85						
H11S3	**WAKE ISLAND Hy**	**29.40**	**126**	T	T	04 01 32.4	
	baz=318,slow=76,SNR=114						
H11S2	**WAKE ISLAND Hy**	**29.41**	**126**	T	T	04 01 33.3	
	baz=318,slow=76,SNR=69						
MKAR	**Makanchi Array**	**43.66**	**301**	P	**P**	**03 32 27.1**	**-1.2**
	0.5nm,0.6s,baz=72,slow=7.8,SNR=4.4						
WRA	**Warramunga Arr**	**58.72**	**188**	P	P	03 34 32.9	+12
	0.6nm,0.9s,baz=5.3,slow=7.4,SNR=3.6						

IDC ***03*** *03:39:36.8±0.5,34.86N×11.32W,h0km,mb4.2/20, mb1 4.4/22,mb1mx4.2/47,mbtmp4.2/22,ML5.2/3,MS3.8/29, Ms1 3.8/29,ms1mx3.6/48,Error ellipse: s-maj=15.8km s-min=11.1km az=116.0*

MOS ***03*** *03:39:38.0±0.9,34.86N×11.28W,h20km,mb4.7/20,Error ellipse: s-maj=11.3km s-min=5.1km az=57.4*

NEIC ***03*** *03:39:39±2.6,34.86N±0.05×11.40W±0.07,h20km±3km, mb4.6/70,Error ellipse: s-maj=8.4km s-min=6.8km az=127.0*

CNRM ***03*** *03:39:40.4,34.93N×11.41W,h28km*

MED_RC ***03*** *03:39:40.7±1.1,34.96N×11.39W,h50km±3km,MW4.6/20, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s20,c29; Duration: 1ꝉ0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.18±.12; Mϑϑ-0.38±.08; Mϕϕ 0.55±.06; Mrϑ 0.56±.04; Mϑϕ-0.61±.07; Mϕr 0.35±.04; Best double couple: M₀0.99000×10¹⁶ NP1:ϕs295.00000°,δ63.00000°, λ-157.00000°. NP2:ϕs194.00000°,δ70.00000°, λ-29.00000°. Principal axes: T 0.8600, Plg5.0000°, Azm246.0000°; N 0.2700, Plg55.0000°, Azm343.0000°; P -1.1300, Plg35.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

LDG ***03*** *03:39:40.0±0.2,34.97N×11.20W,h30km,Ml4.8/32, ms3.4/6 Error ellipse: s-maj=5.7km s-min=3.8km az=109.0*

MDD ***03*** *03:39:41.3±0.7,34.91N×11.40W,h37km±18km,mb5.6/56, Error ellipse: s-maj=7.5km s-min=4.0km az=139.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

IGIL ***03*** *03:39:42.5,34.95N×11.35W,h30km,ML5.3*

INMG ***03*** *03:39:44.2±1.0,35.02N×11.32W,h31km,MD4.0,ML4.9, Error ellipse: s-maj=4.1km s-min=3.0km az=87.0*

ISC 03 03:39:38.8±0.9,34.92N±0.03×11.37W±0.03,h15km±5km, n513,σ2§14/579,mb4.4/65,MS3.8/26,47C-7D,Madeira Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.02**	**42**	⇑P	**Pn**	**03 40 26.7**	**+0.7**
	568nm,0.2s,SNR=18						
PFVI				S	**Sn**	**03 40 57.9**	**-4.0**
	4µm,0.2s,SNR=12						
PFVI	**Vila Bisbo**	**3.02**	**42**	P	**Pn**	**03 40 26.4**	**+0.3**
PFVI	**Vila Bisbo**	**3.02**	**42**	⇑*i*P	**Pn**	**03 40 26.8**

INMG eS Sn 03 41 28.6 -3.5
INMG A A 03 41 38.5
comp=E,2µm,0.4s
PMAFR **Mafra** 4.36 22 P Pn 03 40 44.8 +0.3
comp=E,240nm,0.1s,SNR=185
PMAFR S Sn 03 41 30.9 -4.1
comp=E,8µm,0.4s,SNR=7.5
PMAFR **Mafra** 4.36 22⇑eP Pn 03 40 44.8 +0.3
PMAFR eS Sn 03 41 30.8 -4.2
PMAFR A A 03 41 36.0
comp=E,4µm,0.2s
PMAFR **Mafra** 4.36 22 Pn 03 40 44.9 +0.3
PMAFR Sn 03 41 32.0 -3.0
SFS **San Fernando** 4.47 68 P Pn 03 40 47.2 +1.2
SFS S Sn 03 41 34.7 -3.1
SFS **San Fernando** 4.47 68 P Pn 03 40 46.4 +0.3
SFS **San Fernando** 4.47 68 *i* P Pn 03 40 47.2 +1.2
SFS eS Sn 03 41 34.7 -3.1
SFS **San Fernando** 4.47 68 Pn 03 40 46.4 +0.3
PMPS **Porto Santo** 4.53 247 P Pn 03 40 46.5 -0.3
PMPS S Sn 03 41 33.2 -5.9
comp=E,318nm,0.2s
PMPS **Porto Santo** 4.53 247⇑eP Pn 03 40 46.5 -0.3
PMPS eS Sn 03 41 33.2 -5.9
PMPS A A 03 41 39.8
comp=E,637nm,0.2s
CPS **Cap Spartel** 4.54 78 P Pn 03 40 47.9 +0.8
RSA **Sarsar** 4.56 89 P Pn 03 40 48.0 +0.7
CNIL **Conil** 4.56 70 P Pn 03 40 49.2 +2.0
CNIL S Sb 03 41 50.0 -3.3
CNIL **Conil** 4.56 70⇑*i*P Pn 03 40 49.2 +2.0
CNIL eS Sb 03 41 50.0 -3.3
OUK **Oukaimeden** 4.73 141 P Pn 03 40 50.7 +0.7
EMIN **Mina Concepcio** 4.73 52 ⇑P Pn 03 40 50.2 +0.5
comp=E,151nm,0.3s,SNR=18
EMIN S Sn 03 41 39.9 -4.4
comp=E,651nm,0.2s,SNR=17
EMIN **Mina Concepcio** 4.73 52 Pn 03 40 50.2 +0.5
EMIN Sn 03 41 39.9 -4.4
PBAR **Barrancos** 4.76 46 P Pn 03 40 50.7 +0.7
PBAR S Sn 03 41 40.5 -4.4
comp=E,817nm,0.5s
PBAR **Barrancos** 4.76 46 eP Pn 03 40 50.7 +0.7
PBAR eS Sn 03 41 40.5 -4.4
PBAR A A 03 41 53.4
comp=E,817nm,0.5s
PMTG **Montargil** 4.84 30 P Pn 03 40 51.3 +0.2
PMTG S Sn 03 41 42.1 -4.8
comp=E,1µm,0.5s
PMTG **Montargil** 4.84 30 eP Pn 03 40 51.3 +0.2
PMTG eS Sn 03 41 42.1 -4.8
PMTG A A 03 41 48.8
comp=E,1µm,0.5s
ESPR **Espera** 4.88 65 ⇑P Pn 03 40 52.1 +0.5
comp=E,1µm,0.4s,SNR=18
ESPR S Sn 03 41 43.2 -4.5
comp=E,2µm,0.3s,SNR=7.9
ESPR **Espera** 4.88 65 Pn 03 40 52.1 +0.5
ESPR Sn 03 41 43.8 -3.9
SMIR **Smir Dam** 4.95 79 P Pn 03 40 54.6 +1.9
ECEU **Ceuta** 4.99 77 ⇓P Pn 03 40 54.0 +0.8
comp=E,177nm,0.2s,SNR=18
ECEU S Sn 03 41 47.4 -3.1
comp=E,80nm,0.2s,SNR=7.9
ECEU **Ceuta** 4.99 77 Pn 03 40 54.3 +1.2
ECEU Sn 03 41 47.5 -3.1
CEU **Ceuta** 4.99 77 P Pn 03 40 55.0 +1.8
CEU S Sn 03 41 45.0 -5.6
CEU **Ceuta** 4.99 77⇑*i*P Pn 03 40 55.0 +1.8
CEU eS Sn 03 41 45.0 -5.6
PSBE **So Bento** 5.02 23⇑eP Pn 03 40 54.1 +0.5
PSBE eS Sn 03 41 47.5 -3.9
PSBE A A 03 41 50.8
comp=E,1µm,0.4s
PMAR **Madeira** 5.11 246 P Pn 03 40 54.9 -0.1
PMAR S Sn 03 41 50.0 -3.8
comp=E,422nm,0.5s
PMAR **Madeira** 5.11 246 P Pn 03 40 54.4 -0.6
PMAR **Madeira** 5.11 246 eP Pn 03 40 54.9 -0.1
PMAR eS Sn 03 41 50.0 -3.8
PMAR A A 03 42 00.4
comp=E,844nm,0.5s
FUL **Funchal** 5.13 245 P Pn 03 40 54.6 -0.5
FUL S Sn 03 41 48.8 -5.2
comp=E,434nm,0.2s
FUL **Funchal** 5.13 245 eP Pn 03 40 54.6 -0.5
FUL eS Sn 03 41 48.8 -5.2
FUL A A 03 41 53.9
comp=E,867nm,0.2s
REAL **Reales** 5.25 71 P Pn 03 40 58.3 +1.5
REAL S Sn 03 41 55.0 -2.2
REAL **Reales** 5.25 71⇑*i*P Pn 03 40 58.3 +1.5
REAL eS Sn 03 41 55.0 -2.2
PMOZ **Porto Moniz, M** 5.28 248 P Pn 03 40 57.4 +0.1
comp=E,1µm,0.6s,SNR=7.9
PMOZ S Sn 03 41 53.1 -4.9
comp=E,3µm,0.6s,SNR=7.9
PMOZ **Porto Moniz, M** 5.28 248 P Pn 03 40 57.1 -0.2
PMOZ **Porto Moniz, M** 5.28 248⇑eP Pn 03 40 57.4 +0.1
PMOZ eS Sn 03 41 53.9 -4.1
PMOZ A A 03 42 05.1
comp=E,995nm,0.4s
PMOZ **Porto Moniz, M** 5.28 248 Pn 03 40 56.5 -0.8
IFR **Ifrane** 5.36 103⇑*i*P Pn 03 40 58.6 +0.2
IFR eS Sn 03 41 52.4 -7.5
PMRV **Marv??o** 5.50 34 P Pn 03 41 00.5 +0.3
PMRV S Sn 03 41 57.7 -5.6
comp=E,920nm,0.7s
PMRV **Marv??o** 5.50 34⇑eP Pn 03 41 00.5 +0.3
PMRV eS Sn 03 41 57.7 -5.6
PMRV A A 03 42 01.6
comp=E,920nm,0.7s
OUZM **OUZ** 5.57 135 P Pn 03 41 02.0 +0.7
CZD **Col de Zad** 5.58 108 P Pn 03 41 02.3 +0.7
PCAS **Casmilo, Conde** 5.61 23 P Pn 03 41 01.9 +0.3
PCAS S Sn 03 42 00.1 -5.7
comp=E,1µm,1.0s
PCAS **Casmilo, Conde** 5.61 23⇑eP Pn 03 41 01.9 +0.3
PCAS eS Sn 03 42 00.1 -5.7
PCAS A A 03 42 04.2
comp=E,1µm,1.0s
HORN **Hornachuelos** 5.73 58 P Pn 03 41 03.6 +0.3
ECAB **El Cabril** 5.73 55 ⇑P Pn 03 41 03.8 +0.4
comp=E,219nm,0.2s,SNR=18
ECAB S Sn 03 42 02.0 -6.9
comp=E,518nm,0.2s,SNR=6.6
ECAB **El Cabril** 5.73 55 Pn 03 41 03.8 +0.4
ECAB Sn 03 42 02.0 -6.9
COI **Coimbra** 5.77 23 P Pn 03 41 04.3 +0.4
COI S Sn 03 42 04.2 -5.7
comp=E,1µm,0.4s
COI **Coimbra** 5.77 23 P Pn 03 41 03.7 -0.2
COI **Coimbra** 5.77 23 eP Pn 03 41 04.3 +0.4
COI eS Sn 03 42 04.2 -5.7
COI A A 03 42 07.6
comp=E,2µm,0.4s
COI **Coimbra** 5.77 23 Pn 03 41 03.7 -0.2
PVLZ **Peæn de** 5.80 86 P Pn 03 41 04.9 +0.6
PVLZ S Sn 03 42 03.5 -7.0
PVLZ **Peæn de** 5.80 86⇑*i*P Pn 03 41 04.9 +0.6
PVLZ eS Sn 03 42 03.5 -7.0
PCBR **Castelo Branco** 5.80 31 P Pn 03 41 04.8 +0.5
PCBR S Sn 03 42 04.6 -6.0
comp=E,244nm,0.6s
PCBR **Castelo Branco** 5.80 31⇑*i*P Pn 03 41 04.8 +0.5
PCBR eS Sn 03 42 04.6 -6.0
PCBR A A 03 42 11.4
comp=E,488nm,0.6s
MD31 **MD31** 5.87 109 P Pn 03 41 06.2 +0.9
EMAL **Malaga-Limoner** 5.93 70 P Pn 03 41 06.2 +0.1
EMAL S Sn 03 42 08.9 -4.8
EMAL **Malaga-Limoner** 5.93 70 *i* P Pn 03 41 06.2 +0.1
EMAL eS Sn 03 42 08.9 -4.8
MDT **Midelt** 6.00 109 Pn Pn 03 41 08.0 +0.7
comp=E,90nm,0.3s,baz=285,slow=7.5,SNR=2626
MDT Sn Sn 03 42 08.7 -7.0
comp=E,560nm,0.3s,baz=42,slow=20,SNR=36
MDT LR LR 03 43 32.1
comp=E,746nm,21.1s,baz=310,slow=40
MDT **Midelt** 6.00 109 P Pn 03 41 07.9 +0.7
EFAM **Famara** 6.06 198 P Pn 03 41 05.4 -2.5
comp=E,24nm,0.2s,SNR=7.9
EFAM S Sn 03 42 10.0 -7.0
comp=E,388nm,0.6s,SNR=7.9
EFAM **Famara** 6.06 198 Pn 03 41 05.4 -2.5
EFAM Sn 03 42 10.0 -7.0
PALE **Palemas** 6.10 85 P Pn 03 41 08.4 0.0
MTE **Manteigas** 6.25 28 P Pn 03 41 10.6 0.0
MTE S Sn 03 42 15.3 -6.4
comp=E,264nm,0.4s
MTE **Manteigas** 6.25 28 eP Pn 03 41 10.6 0.0
MTE eS Sn 03 42 15.3 -6.4
MTE A A 03 42 32.1
comp=E,527nm,0.4s
MTE **Manteigas** 6.25 28 Pn 03 41 10.5 -0.1
GOLM **Goulmima** 6.26 119 P Pn 03 41 12.0 +1.3
EGOR **Sierra Gorda,** 6.27 68 ⇑P Pn 03 41 11.6 +0.7
comp=E,61nm,0.2s,SNR=18
EGOR S Sn 03 42 18.8 -3.6
comp=E,328nm,0.5s,SNR=7.9
EGOR **Sierra Gorda,** 6.27 68 Pn 03 41 11.6 +0.7
EGOR Sn 03 42 18.8 -3.6
EADA **Adamuz** 6.35 57 ⇑P Pn 03 41 12.2 +0.3
comp=E,188nm,0.3s,SNR=18
EADA S Sn 03 42 18.3 -5.9
comp=E,499nm,0.2s,SNR=7.9
EADA **Adamuz** 6.35 57 Pn 03 41 12.2 +0.3
EADA Sn 03 42 18.3 -5.9
TZRR **Tazzarine** 6.39 129 P Pn 03 41 13.0 +0.5
PVIS **Viseu** 6.40 24 P Pn 03 41 12.7 +0.1
PVIS S Sn 03 42 18.8 -6.6
comp=E,285nm,0.5s
PVIS **Viseu** 6.40 24 eP Pn 03 41 12.7 +0.1
PVIS eS Sn 03 42 18.8 -6.6
PVIS A A 03 42 25.6
comp=E,570nm,0.5s
ELGU **Los Guajares,** 6.58 71 P Pn 03 41 14.3 -0.7
comp=E,82nm,0.3s,SNR=7.9
ELGU S Sn 03 42 25.6 -4.2
comp=E,235nm,0.3s,SNR=7.9
ELGU **Los Guajares,** 6.58 71 Pn 03 41 14.3 -0.7
ELGU Sn 03 42 25.6 -4.2
CFUE **Fuerteventura** 6.63 200 P Pn 03 41 12.5 -3.2
comp=E,23nm,0.1s,SNR=7.9
CFUE S Sn 03 42 23.4 -7.6
comp=E,157nm,0.1s,SNR=7.9
CFUE **Fuerteventura** 6.63 200 Pn 03 41 12.5 -3.2
CFUE Sn 03 42 23.4 -7.6
EPLA **Plasencia** 6.63 38 P Pn 03 41 15.7 -0.1
comp=E,96nm,0.3s,SNR=313
EPLA S Sn 03 42 25.3 -5.8
comp=E,782nm,0.2s,SNR=7.9
EPLA **Plasencia** 6.63 38 Pn 03 41 15.9 +0.2
EPLA Sn 03 42 26.4 -4.6
EQUE **Quentar** 6.81 68 ⇑P Pn 03 41 18.8 +0.5
comp=E,106nm,0.4s,SNR=18
EQUE S Sn 03 42 30.6 -5.0
comp=E,120nm,0.3s,SNR=7.9
ZGR **Zagora** 6.82 133 P Pn 03 41 18.5 +0.1
GOG **Mont Gurugu** 6.87 85 P Pn 03 41 18.1 -1.0
EALB **Alboran** 6.88 79 P Pn 03 41 18.3 -0.8
comp=E,36nm,0.2s,SNR=4.0
EALB S Sn 03 42 29.4 -7.6
comp=E,91nm,0.2s,SNR=7.9
EALB **Alboran** 6.88 79 Pn 03 41 18.3 -0.8
EALB Sn 03 42 30.0 -7.1
EMEL **Melilla** 6.90 84 ⇑P Pn 03 41 18.6 -0.8
comp=E,243nm,0.2s,SNR=18
EMEL S Sn 03 42 30.5 -7.2
comp=E,260nm,0.2s,SNR=7.9
EMLI **Melilla** 6.91 84 Pn 03 41 18.7 -0.8
EMLI Sn 03 42 30.5 -7.3
MELI **Melilla** 6.92 85 P Pn 03 41 18.7 -0.9
comp=E,95nm,0.2s,SNR=4.0
MELI S Sn 03 42 31.2 -6.9
comp=E,288nm,0.4s,SNR=7.9
MELI **Melilla** 6.92 85⇑*i*P Pn 03 41 18.7 -0.9
MELI eS Sn 03 42 28.9 -9.2
MELI **Melilla** 6.92 85 Pn 03 41 18.7 -0.9
MELI Sn 03 42 31.2 -6.9
PVRL **Vila Real** 6.96 23 P Pn 03 41 20.3 0.0
PVRL S Sn 03 42 32.1 -7.2
comp=E,492nm,0.6s
PVRL **Vila Real** 6.96 23 eP Pn 03 41 20.3 0.0
PVRL eS Sn 03 42 32.1 -7.2
PVRL A A 03 42 38.5
comp=E,983nm,0.6s
POLO **Lamas de Olo** 7.03 23 P Pn 03 41 21.2 0.0
POLO S Sn 03 42 33.4 -7.5
comp=E,301nm,0.4s
POLO **Lamas de Olo** 7.03 23⇓eP Pn 03 41 21.2 0.0
POLO eS Sn 03 42 33.4 -7.5
POLO A A 03 42 38.4
comp=E,301nm,0.4s
MVO **Moncorvo** 7.11 27 P Pn 03 41 22.1 -0.2
comp=E,151nm,0.2s,SNR=219
MVO S Sn 03 42 36.1 -6.7
comp=E,653nm,0.3s,SNR=6.2
MVO **Moncorvo** 7.11 27⇑eP Pn 03 41 21.9 -0.4
MVO eS Sn 03 42 35.7 -7.2
MVO A A 03 42 40.9
comp=E,476nm,0.4s
MVO **Moncorvo** 7.11 27 Pn 03 41 22.1 -0.2
MVO Sn 03 42 36.1 -6.7
EBER **Berja** 7.16 72 P Pn 03 41 22.1 -1.0
comp=E,67nm,0.4s,SNR=103
EBER S Sn 03 42 39.6 -4.6
comp=E,308nm,0.8s,SNR=7.9
EBER **Berja** 7.16 72 Pn 03 41 22.1 -1.0
EBER Sn 03 42 39.6 -4.6
GORA **Gorafe** 7.20 67 ⇑P Pn 03 41 24.2 +0.6
comp=E,169nm,0.3s,SNR=18
GORA S Sn 03 42 40.1 -5.0
comp=E,191nm,0.2s,SNR=7.9
PAB **San Pablo** 7.25 48 ⇑P Pn 03 41 24.1 -0.3
comp=E,37nm,0.1s,SNR=18
PAB S Sn 03 42 39.4 -7.1
comp=E,181nm,0.3s,SNR=7.9
PAB **San Pablo** 7.25 48 P Pn 03 41 23.8 -0.5
PAB **San Pablo** 7.25 48 Pn 03 41 23.8 -0.5
PCAB **Cabril** 7.27 20 P Pn 03 41 24.4 -0.1
PCAB S Sn 03 42 39.0 -7.7
comp=E,360nm,0.4s
PCAB **Cabril** 7.27 20 eP Pn 03 41 24.4 -0.1
PCAB eS Sn 03 42 39.0 -7.7
PCAB A A 03 42 55.1
comp=E,720nm,0.4s
JBK **JBK** 7.28 92 P Pn 03 41 23.8 -0.9
EQES **Quesada** 7.28 64 ⇑P Pn 03 41 25.0 +0.3
comp=E,228nm,0.5s,SNR=18
EQES S Sn 03 42 42.0 -5.3
comp=E,112nm,0.3s,SNR=7.9
EQES **Quesada** 7.28 64 Pn 03 41 25.0 +0.3
EQES Sn 03 42 42.8 -4.4
ELOB **Lobios** 7.40 20 P Pn 03 41 26.3 0.0
comp=E,21nm,0.1s,SNR=157
ELOB S Sn 03 42 42.4 -7.7
comp=E,1µm,0.5s,SNR=7.9
ELOB **Lobios** 7.40 20 Pn 03 41 26.3 0.0
ELOB Sn 03 42 44.5 -5.7
PGAV **Gavieira, Arco** 7.44 18 P Pn 03 41 27.0 +0.1
PGAV S Sn 03 42 44.1 -6.9
comp=E,571nm,0.5s
PGAV **Gavieira, Arco** 7.44 18 eP Pn 03 41 27.0 +0.1
PGAV eS Sn 03 42 44.1 -6.9
PGAV A A 03 42 50.0
comp=E,571nm,0.5s
EZAM **Zamans** 7.51 15 ⇑P Pn 03 41 27.9 +0.1
comp=E,39nm,0.1s,SNR=18
EZAM S Sn 03 42 45.4 -7.3
comp=E,3µm,0.3s,SNR=7.9
EZAM **Zamans** 7.51 15 Pn 03 41 27.8 0.0
EZAM Sn 03 42 45.9 -6.8
ESDC **Sonseca Array** 7.57 49 Pn Pn 03 41 28.1 -0.5
comp=E,32nm,0.3s,baz=239,slow=13,SNR=478
ESDC Sn Sn 03 42 48.0 -6.1
comp=E,87nm,0.3s,baz=239,slow=24,SNR=26
ESDC LR LR 03 44 40.7
comp=E,400nm,18.3s,baz=250,slow=40
ESBB **Sonseca Array** 7.57 49 Pn Pn 03 41 28.0 -0.6
EBAJ **Bajamar** 7.64 215 P Pn 03 41 25.5 -4.1
comp=E,19nm,0.2s,SNR=25
EBAJ S Sn 03 42 47.1 -8.9
comp=E,0.3nm,0.4s,SNR=7.9
EBAJ **Bajamar** 7.64 215 Pn 03 41 25.6 -4.1
EBAJ Sn 03 42 47.1 -8.9
GGC **Guia, Gran Can** 7.70 209 S Sn 03 42 48.2 -9.2
comp=E,458nm,0.7s,SNR=7.9
GGC **Guia, Gran Can** 7.70 209 Sn 03 42 48.2 -9.2
ENIJ **Nijar** 7.71 72 P Pn 03 41 30.3 -0.2
comp=E,141nm,0.6s,SNR=7.9
ENIJ S Sn 03 42 50.7 -6.8
comp=E,64nm,0.4s,SNR=7.9
ENIJ **Nijar** 7.71 72 P Pn 03 41 30.3 -0.2
ENIJ 03 42 52.8
ENIJ **Nijar** 7.71 72 Pn 03 41 30.2 -0.2
ENIJ Sn 03 42 52.8 -4.7
PBRG **Braganca** 7.77 26 P Pn 03 41 31.1 -0.3
PBRG S Sn 03 42 52.3 -6.8
comp=E,144nm,0.4s
PBRG **Braganca** 7.77 26 eP Pn 03 41 31.1 -0.3
PBRG eS Sn 03 42 52.3 -6.8
PBRG A A 03 42 57.2
comp=E,288nm,0.4s
SESP **Santiago Espad** 7.79 63 ⇑P Pn 03 41 31.5 -0.2
comp=E,92nm,0.3s,SNR=18
SESP S Sn 03 42 53.1 -6.5
comp=E,132nm,0.3s,SNR=7.9
CGUI **Guimar, Teneri** 7.87 215 P Pn 03 41 28.6 -4.3
comp=E,10nm,0.1s,SNR=7.9
CGUI S Sn 03 42 52.4 -9.4
comp=E,189nm,0.2s,SNR=7.9
ECAL **Calabor** 7.89 26 ⇑P Pn 03 41 32.6 -0.5
comp=E,151nm,0.5s,SNR=18
ECAL S Sn 03 42 53.9 -8.3
comp=E,1µm,0.5s,SNR=7.9
ECAL **Calabor** 7.89 26 Pn 03 41 32.8 -0.3
ECAL Sn 03 42 58.2 -4.0
MACI **Morro de la Ar** 7.97 215 P Pn 03 41 29.7 -4.5
comp=E,3.9nm,0.2s,SNR=4.0
MACI S Sn 03 42 54.3 -10
comp=E,213nm,0.7s,SNR=7.9
CRAJ **Montana Rajada** 8.00 215 S Sn 03 42 54.8 -10
comp=E,228nm,0.4s,SNR=7.9
CRAJ **Montana Rajada** 8.00 215 Sn 03 42 54.8 -10
GUD **Guadarrama** 8.07 43 P Pn 03 41 35.2 -0.4
comp=E,165nm,0.4s,SNR=398
GUD S Sn 03 42 59.6 -7.1
comp=E,409nm,0.4s,SNR=7.9
GUD **Guadarrama** 8.07 43 Pn 03 41 35.2 -0.4
GUD Sn 03 43 00.6 -6.1
EMAZ **Mazaricos** 8.23 12 P Pn 03 41 37.3 -0.3
comp=E,26nm,0.2s,SNR=7.9
EMAZ S Sn 03 43 00.2 -10
comp=E,989nm,0.5s,SNR=7.9
EMAZ **Mazaricos** 8.23 12 Pn 03 41 37.3 -0.3
EMAZ Sn 03 43 00.2 -10
EAGO **Agolada(Pontev** 8.27 17 P Pn 03 41 38.2 0.0
comp=E,32nm,0.1s,SNR=7.9
EAGO S Sn 03 43 03.3 -8.1
SNR=7.9
EAGO **Agolada(Pontev** 8.27 17 Pn 03 41 38.2 0.0
EAGO Sn 03 43 04.2 -7.2
TLOR **Lorca, Murcia** 8.28 68 ⇓P Pn 03 41 38.7 +0.4
comp=E,136nm,0.3s,SNR=18
TLOR S Sn 03 43 05.0 -6.6
comp=E,326nm,0.3s,SNR=7.9
TBT **Taburiente** 8.35 224 P Pn 03 41 34.3 -5.0
comp=E,4.5nm,0.2s,SNR=7.9
TBT S Sn 03 43 01.9 -11
comp=E,90nm,0.4s,SNR=7.9
TBT **Taburiente** 8.35 224 Pn 03 41 34.3 -5.0
TBT Sn 03 43 01.9 -11
EGOM **La Gomera** 8.38 218 P Pn 03 41 35.2 -4.6
comp=E,18nm,0.2s,SNR=7.5
EGOM S Sn 03 43 02.7 -11
comp=E,106nm,0.2s,SNR=7.9
EGOM **La Gomera** 8.38 218 Pn 03 41 35.2 -4.6
EGOM Sn 03 43 02.7 -11
EHIG **Higuera** 8.38 223 S Sn 03 43 03.1 -11
comp=E,146nm,0.2s,SNR=7.9
EHIG **Higuera** 8.38 223 Sn 03 43 04.2 -10
UCM **Universidad Co** 8.39 48 P Pn 03 41 40.7 +0.8
UCM S Sn 03 43 05.7 -8.6
UCM **Universidad Co** 8.39 48 *i* P Pn 03 41 40.7 +0.8
UCM eS Sn 03 43 05.7 -8.6
EMUR **La Murta** 8.67 67 P Pn 03 41 42.9 -0.8
comp=E,37nm,0.4s,SNR=51
EMUR S Sn 03 43 14.3 -6.9
comp=E,76nm,0.5s,SNR=7.9
EMUR **La Murta** 8.67 67 Pn 03 41 43.2 -0.6
EMUR Sn 03 43 13.2 -8.0
ETOB **Tobarra** 8.71 62 ⇑P Pn 03 41 43.5 -0.8
comp=E,83nm,0.4s,SNR=18
ETOB S Sn 03 43 14.2 -8.0
comp=E,57nm,0.3s,SNR=7.9
ETOB **Tobarra** 8.71 62 Pn 03 41 43.5 -0.8
ETOB Sn 03 43 14.2 -8.0
CART **Cartagena** 8.79 69 Pn Pn 03 41 43.9 -1.3
EPON **Pontenova** 9.01 20 P Pn 03 41 48.7 +0.4
comp=E,16nm,0.1s,SNR=94
EPON S Sn 03 43 21.9 -7.6
comp=E,162nm,0.3s,SNR=7.9
EPON **Pontenova** 9.01 20 Pn 03 41 48.7 +0.4
EPON Sn 03 43 23.5 -5.9
CTIG **El Hierro** 9.05 220 S Sn 03 43 20.3 -10
comp=E,57nm,0.2s,SNR=7.9
CTIG **El Hierro** 9.05 220 Sn 03 43 20.3 -10
ETRV **Los Montesinos** 9.08 67 P Pn 03 41 49.6 +0.3
comp=E,91nm,0.4s,SNR=7.9
CHIE **El Hierro** 9.12 220 S Sn 03 43 21.5 -11
comp=E,7.4nm,0.4s,SNR=7.9
CHIE **El Hierro** 9.12 220 Sn 03 43 21.5 -11
CCUM **Cumbre, El Hie** 9.14 220 S Sn 03 43 22.9 -10
comp=E,144nm,0.4s,SNR=7.9
CTAN **El Hierro** 9.15 220 S Sn 03 43 23.6 -9.4
comp=E,489nm,0.6s,SNR=7.9
CMCL **Mercadel, El H** 9.16 220 S Sn 03 43 24.1 -9.5
comp=E,44nm,0.2s,SNR=7.9
CTAD **Las Tabladas,** 9.17 221 S Sn 03 43 24.6 -8.9
comp=E,427nm,0.4s,SNR=7.9
CJUL **El Julan, El H** 9.18 221 S Sn 03 43 23.8 -10
comp=E,477nm,0.5s,SNR=7.9
ETOR **Torete** 9.42 49 ⇑P Pn 03 41 54.3 +0.2
comp=E,366nm,0.4s,SNR=18
ETOR S Sn 03 43 31.8 -8.0
comp=E,579nm,0.3s,SNR=7.9
AFON **Font Roja** 9.45 64 P Pn 03 41 54.0 -0.5
comp=E,168nm,0.7s,SNR=115
AFON S Sn 03 43 33.3 -7.3
comp=E,77nm,0.3s,SNR=7.9
AFON **Font Roja** 9.45 64 Pn 03 41 54.0 -0.5
AFON Sn 03 43 34.1 -6.4
ECHE **Chera** 9.51 58 ⇓P Pn 03 41 55.4 +0.2
comp=E,34nm,0.4s,SNR=18
ECHE S Sn 03 43 35.2 -6.6
comp=E,45nm,0.3s,SNR=7.9
ECHE **Chera** 9.51 58 Pn 03 41 55.6 +0.4
ECHE Sn 03 43 36.1 -5.6
EARI **Arriondas** 9.63 28 P Pn 03 41 58.3 +1.3
comp=E,20nm,0.4s,SNR=73
EARI S Sn 03 43 37.5 -7.4
comp=E,202nm,0.7s,SNR=7.9
EARI **Arriondas** 9.63 28 Pn 03 41 58.3 +1.3
EARI Sn 03 43 39.2 -5.7
EBEN2 **Beniarda presa** 9.71 64 P Pn 03 41 57.7 -0.3
comp=E,33nm,0.4s,SNR=7.9
EBEN2 S Sn 03 43 38.8 -8.0
comp=E,80nm,0.3s,SNR=7.9
EBEN2 **Beniarda presa** 9.71 64 Pn 03 41 57.7 -0.3
EBEN2 Sn 03 43 38.8 -8.0
EMOS **Mosqueruela** 10.20 55 P Pn 03 42 05.5 +0.6
comp=E,122nm,0.7s,SNR=7.9
EMOS S Sn 03 43 50.2 -8.8
comp=E,102nm,0.3s,SNR=7.9
EMOS **Mosqueruela** 10.20 55 Pn 03 42 06.1 +1.3
EMOS Sn 03 43 52.4 -6.6
EANR **'Ain N'Sour** 10.22 81 P Pn 03 42 06.1 +1.0
ELAN **Lanestosa** 10.33 34 P Pn 03 42 07.4 +0.9
comp=E,14nm,0.4s,SNR=7.9
ELAN S Sn 03 43 54.1 -7.9
comp=E,196nm,1.1s,SNR=7.9
ELAN **Lanestosa** 10.33 34 Pn 03 42 07.4 +0.9
ELAN Sn 03 43 54.1 -7.9
ETRT **Tiaret** 10.38 84 P Pn 03 42 09.4 +2.1
ECHA **Ech Chlef** 10.45 80 P Pn 03 42 08.2 +0.1
EBNR **Beni Rached** 10.59 79 P Pn 03 42 10.1 0.0
ESAC **San Caprasio** 10.92 48 P Pn 03 42 15.0 +0.5
comp=E,56nm,0.3s,SNR=7.9
ESAC S Sn 03 44 06.6 -10
comp=E,346nm,0.3s,SNR=7.9
ESAC **San Caprasio** 10.92 48 Pn 03 42 15.0 +0.5
EARA **Aranguren** 10.93 41 P Pn 03 42 15.4 +0.7

comp=E,48nm,0.4s,SNR=7.9
EARA S Sn 03 44 08.7 -8.0
comp=E,96nm,0.4s,SNR=7.9
EARA Aranguren 10.93 41 Pn 03 42 15.4 +0.7
EARA Sn 03 44 08.7 -8.0
EIBI Ibiza 10.96 64 P **Pn 03 42 14.1 -0.9**
comp=E,9.5nm,0.3s,SNR=4.0
EIBI S Sn 03 44 07.8 -10
comp=E,13nm,0.2s,SNR=7.9
EIBI Ibiza 10.96 64 Pn 03 42 14.1 -0.9
EIBI Sn 03 44 09.0 -8.4
ERTA Horta de San J 11.02 53 P **Pn 03 42 17.0 +1.0**
comp=E,38nm,0.6s,SNR=7.9
ERTA Horta de San J 11.02 53 Pn 03 42 17.0 +1.0
EORO Oroz-Betelu 11.16 42 P **Pn 03 42 18.6 +0.7**
comp=E,31nm,0.5s,SNR=49
EORO S Sn 03 44 14.7 -7.7
comp=E,98nm,0.3s,SNR=7.9
EORO Oroz-Betelu 11.16 42 Pn 03 42 18.6 +0.7
EORO Sn 03 44 14.7 -7.7
EALK Alkurruntz 11.28 40 P **Pn 03 42 19.9 +0.4**
comp=E,39nm,0.4s,SNR=7.9
EALK S Sn 03 44 16.0 -9.2
comp=E,212nm,0.6s,SNR=7.9
EALK Alkurruntz 11.28 40 Pn 03 42 19.9 +0.4
EALK Sn 03 44 16.1 -9.2
PSMN Pico do Norte, 11.29 285 *e*P **Pn 03 42 16.4 -3.3**
PSMN Pico do Norte, 11.29 285 *e*T T 03 53 13.1
PSMA Santa Maria 11.34 284 *e*P **Pn 03 42 17.8 -2.5**
PSMA Santa Maria 11.34 284 *e*T T 03 53 16.0
SJPF Ste Jean 11.36 41 *e*P **Pn 03 42 21.3 +0.8**
SJPF *e*Sn Sn 03 44 13.9 -13
comp=E,125nm,0.4s
BART Pico Bartolome 11.49 288 *e*P **Pn 03 42 20.8 -1.6**
BART Pico Bartolome 11.49 288 *e*T T 03 53 30.8
ETSF Etsaut 11.58 43 *e*P **Pn 03 42 24.0 +0.4**
ETSF *e*Sn Sn 03 44 18.8 -14
comp=E,118nm,0.4s
ATE Arette 11.62 42 P **Pn 03 42 24.4 +0.3**
comp=E,31nm,0.4s,SNR=7.9
ATE S Sn 03 44 24.6 -9.0
comp=E,70nm,0.3s,SNR=7.9
ATE Arette 11.62 42 Pn 03 42 24.4 +0.3
ATE Sn 03 44 24.6 -9.0
EPOB Poblet 11.71 53 P **Pn 03 42 25.5 +0.2**
comp=E,13nm,0.4s,SNR=7.9
EPOB Poblet 11.71 53 Pn 03 42 25.5 +0.2
CMLA Cha da Macela 11.76 288 *e*P **Pn 03 42 27.3 +1.2**
CMLA Cha da Macela 11.76 288 P **Pn 03 42 27.3 +1.2**
CMLA Cha da Macela 11.76 288 Pn **Pn 03 42 27.3 +1.2**
GRON Gorta Negra 11.77 288 *e*P **Pn 03 42 25.7 -0.5**
ECHI Chisagues Biel 11.87 46 P **Pn 03 42 28.1 +0.4**
comp=E,32nm,0.5s,SNR=7.9
ECHI S Sn 03 44 31.2 -8.6
comp=E,72nm,0.4s,SNR=7.9
ECHI Chisagues Biel 11.87 46 Pn 03 42 28.2 +0.6
ECHI Sn 03 44 31.2 -8.6
EPF Esparros 12.18 45 *e*P **Pn 03 42 32.4 +0.6**
EPF *e*Sn Sn 03 44 33.3 -14
comp=E,89nm,0.5s
CSOR Sort 12.27 49 P **Pn 03 42 32.9 -0.2**
comp=E,25nm,0.4s,SNR=37
CSOR S Sn 03 44 40.6 -9.1
comp=E,62nm,0.6s,SNR=7.9
CSOR Sort 12.27 49 Pn 03 42 33.0 -0.2
CSOR Sn 03 44 40.6 -9.1
ETOS Mallorca 12.28 63 P **Pn 03 42 33.0 0.0**
comp=E,6.5nm,0.4s,SNR=7.9
ETOS S Sn 03 44 40.5 -9.1
comp=E,7.9nm,0.4s,SNR=7.9
ETOS Mallorca 12.28 63 Pn 03 42 33.0 0.0
ETOS Sn 03 44 40.5 -9.1
EMIR Miracle 12.28 52 P **Pn 03 42 33.1 -0.1**
comp=E,41nm,0.5s,SNR=6.2
EMIR S Sn 03 44 42.3 -7.4
comp=E,60nm,0.4s,SNR=7.9
EMIR Miracle 12.28 52 Pn 03 42 33.1 -0.1
EMIR Sn 03 44 42.3 -7.4
CFON Fontmartina 12.80 54 P **Pn 03 42 40.9 +0.6**
comp=E,14nm,0.3s,SNR=29
CFON Fontmartina 12.80 54 Pn 03 42 41.4 +1.1
CLLI Llivia 12.86 50 P **Pn 03 42 41.4 +0.3**
comp=E,26nm,0.5s,SNR=41
CLLI S Sn 03 44 56.0 -8.0
comp=E,52nm,0.5s,SNR=8.7
CLLI Llivia 12.86 50 Pn 03 42 41.4 +0.3
CLLI Sn 03 44 56.0 -8.0
EJON La Jonquera 13.42 52 P **Pn 03 42 48.7 -0.1**
comp=E,9.2nm,0.3s,SNR=7.9
EJON S Sn 03 45 09.1 -8.5
comp=E,22nm,0.7s,SNR=7.9
EJON La Jonquera 13.42 52 Pn 03 42 48.7 -0.1
EJON Sn 03 45 09.1 -8.5
MTLF Montolieu 13.47 47 *e*P **Pn 03 42 49.7 +0.3**
MTLF *e*Sn Sn 03 45 04.4 -14
comp=E,67nm,0.9s
LFF La Frestale 13.64 39 *e*P **Pn 03 42 50.8 -0.8**
LFF *e*Sn Sn 03 45 08.5 -14
comp=E,25nm,0.3s
RJF Les Rejaudoux 14.29 40 *e*P **Pn 03 42 58.7 -1.8**
RJF *e*Sn Sn 03 45 24.3 -14
comp=E,38nm,0.5s
RJF *e*R
comp=E,433nm,18.8s
CAF Calviac 14.33 42 *e*P **Pn 03 43 00.2 -1.0**
CAF *e*Sn Sn 03 45 25.4 -14
comp=E,137nm,1.1s
QUIF Quistinic 14.35 23 *e*P **Pn 03 43 02.3 +0.9**
QUIF *e*Sn Sn 03 45 26.4 -14
comp=E,80nm,0.6s
MFF Saint Martin d 14.42 33 *e*P **Pn 03 43 01.5 -0.8**
MFF *e*Sn Sn 03 45 27.8 -14
comp=E,26nm,0.5s
ROSF Rostrenen 14.69 22 *e*P **Pn 03 43 06.3 +0.3**
ROSF *e*Sn Sn 03 45 34.8 -14
comp=E,94nm,0.6s
SGMF Saint Gilles 14.85 24 *e*P **Pn 03 43 07.8 -0.3**
SGMF *e*Sn Sn 03 45 37.9 -14
comp=E,71nm,0.8s
LASF Ste Croix 14.87 48 *e*P **Pn 03 43 07.8 -0.7**
LASF *e*Sn Sn 03 45 38.0 -15
comp=E,38nm,0.8s
TCF Toulx Ste Croi 15.31 38 *e*P **Pn 03 43 12.9 -1.4**
TCF *e*Sn Sn 03 45 49.2 -14
comp=E,34nm,0.5s
GRR Gorron 15.56 27 *e*P **Pn 03 43 17.5 0.0**
GRR *e*Sn Sn 03 45 57.9 -12
comp=E,42nm,0.6s
VIVF Saint-Julien-l 15.78 46 *e*P **Pn 03 43 20.5 0.0**
VIVF *e*Sn Sn 03 45 59.7 -15
comp=E,21nm,0.7s
BGF Bois d'Agland 15.82 38 S Sn 03 46 00.8 -15
comp=E,42nm,0.5s
BGF Bois d'Agland 15.82 38 *e*Sn Sn 03 46 00.8 -15
comp=E,83nm,0.5s
SMRF Simiane la Rot 15.88 50 P **Pn 03 43 23.3 +1.5**
SMRF Simiane la Rot 15.88 50 *e*P **Pn 03 43 23.3 +1.5**
SSB Saint Sauveur 15.95 45 P **Pn 03 43 22.3 -0.3**
SSB pmax pmax
comp=Z,13nm,0.8s
SSB Saint Sauveur 15.95 45 Pn **Pn 03 43 22.3 -0.3**
LDF La Druitiere 16.00 28 *e*P **Pn 03 43 21.9 -1.4**
LDF *e*Sn Sn 03 46 06.5 -14
comp=Z,34nm,0.6s
FLN La Foliniere 16.01 27 P **Pn 03 43 24.0 +0.7**
FLN S Sn 03 46 07.8 -13
comp=Z,29nm,0.9s
FLN La Foliniere 16.01 27 *e*P **Pn 03 43 24.0 +0.7**
baz=204
FLN *e*Sn Sn 03 46 07.8 -13
comp=Z,57nm,0.9s
FLN *e*R
comp=Z,512nm,20.8s
LMR La Mourre 16.19 53 P **Pn 03 43 26.0 +0.3**
LMR S Sn 03 46 09.2 -16
comp=Z,31nm,1.6s
LMR La Mourre 16.19 53 *e*P **Pn 03 43 26.0 +0.3**
LMR *e*Sn Sn 03 46 09.2 -16
comp=Z,62nm,1.6s
HYF Humbligny 16.20 36 P **Pn 03 43 25.6 -0.2**
HYF S Sn 03 46 09.9 -15
HYF Humbligny 16.20 36 *e*P **Pn 03 43 25.6 -0.2**
HYF *e*Sn Sn 03 46 09.9 -15
AVF Avril sur Loir 16.23 39 P **Pn 03 43 25.6 -0.6**
AVF S Sn 03 46 10.4 -16
comp=Z,8.8nm,0.5s
AVF Avril sur Loir 16.23 39 *e*P **Pn 03 43 25.6 -0.6**
AVF *e*Sn Sn 03 46 10.4 -16
comp=Z,18nm,0.5s
FRF La Foret Royal 16.38 53 P **Pn 03 43 28.7 +0.6**
FRF La Foret Royal 16.38 53 *e*P **Pn 03 43 28.7 +0.6**
SMF Signal de Mont 16.39 40 P **Pn 03 43 28.6 +0.3**
SMF S Sn 03 46 14.5 -15
comp=Z,14nm,0.9s
SMF Signal de Mont 16.39 40 *e*P **Pn 03 43 28.6 +0.3**
SMF *e*Sn Sn 03 46 14.5 -15
comp=Z,29nm,0.9s
SSF Saint Saulge 16.49 38 P **Pn 03 43 29.2 -0.3**
SSF S Sn 03 46 15.3 -17
comp=Z,16nm,0.8s
SSF Saint Saulge 16.49 38 *e*P **Pn 03 43 29.2 -0.3**
SSF *e*Sn Sn 03 46 15.3 -17
comp=Z,31nm,0.8s
ORIF Oris-en-Rattie 16.54 48 P **Pn 03 43 30.9 +0.6**
ORIF S Sn 03 46 17.8 -16
comp=Z,4.9nm,0.7s
ORIF Oris-en-Rattie 16.54 48 *e*P **Pn 03 43 30.9 +0.6**
ORIF *e*Sn Sn 03 46 17.8 -16
comp=Z,9.9nm,0.7s
ORIF *e*R
comp=Z,276nm,21.0s
CLF Chambon-Foret 16.57 34 P **Pn 03 43 32.5 +2.0**
CLF IAmb IAmb 03 43 33.6
comp=Z,43nm,0.8s
LOR Lormes 16.81 38 P **Pn 03 43 33.0 -0.6**
LOR S Sn 03 46 23.1 -17
comp=Z,22nm,1.1s
LOR Lormes 16.81 38 *e*P **Pn 03 43 33.0 -0.6**
baz=222
LOR *e*Sn Sn 03 46 23.1 -17
comp=Z,43nm,1.1s
LOR *e*R
comp=Z,192nm,16.0s
KEST Kesra 16.93 81 Pn **Pn 03 43 36.2 +1.0**
comp=Z,1.0nm,0.3s,baz=239,slow=1.9,SNR=17
KEST LR LR 03 50 43.6
comp=Z,116nm,20.9s,baz=247,slow=40
KEST Kesra 16.93 81 P **Pn 03 43 37.1 +1.9**
KEST IAmb IAmb 03 43 53.3
comp=Z,27nm,0.8s
MBDF Montbardon 17.00 49 P **Pn 03 43 37.6 +1.5**
MBDF S Sn 03 46 29.0 -16
comp=Z,12nm,1.2s
MBDF Montbardon 17.00 49 *e*P **Pn 03 43 37.6 +1.5**
MBDF *e*Sn Sn 03 46 29.0 -16
comp=Z,24nm,1.2s
SBF Sospel 17.03 53 P **Pn 03 43 36.7 +0.3**
SBF S Sn 03 46 29.3 -16
comp=Z,8.2nm,0.7s
SBF Sospel 17.03 53 *e*P **Pn 03 43 36.7 +0.3**
SBF *e*Sn Sn 03 46 29.3 -16
comp=Z,16nm,0.7s
BNI Bardonecchia 17.10 48 P **P 03 43 41.5 +2.5**
BNI pmax pmax
comp=Z,7.0nm,0.8s
BNI Bardonecchia 17.10 48 P **P 03 43 41.5 +2.5**
VSL Villasalto 17.14 68 P **Pn 03 43 39.8 +2.0**
LPL La Plagne 17.37 47 P **P 03 43 43.8 +1.7**
LPL S Sn 03 46 37.7 -16
comp=Z,43nm,1.9s
LPL La Plagne 17.37 47 *e*P **P 03 43 43.8 +1.7**
LPL *e*Sn Sn 03 46 37.7 -16
comp=Z,86nm,1.9s
LPG La Plagne 17.37 47 P **Pn 03 43 41.8 +0.9**
LPG S Sn 03 46 35.4 -19
comp=Z,1.9nm,0.3s
LPG La Plagne 17.37 47 *e*P **Pn 03 43 41.8 +0.9**
LPG *e*Sn Sn 03 46 35.4 -19
comp=Z,3.7nm,0.3s
CABF La Chapelle 17.59 43 P **Pn 03 43 43.8 +0.3**
CABF La Chapelle 17.59 43 *e*P **Pn 03 43 43.8 +0.3**
PGF Pioggiola 17.59 58 P **Pn 03 43 44.1 +0.6**
PGF Pioggiola 17.59 58 *e*P **Pn 03 43 44.1 +0.6**
SFTF Sexfontaines 18.03 38 P **P 03 43 50.9 +1.8**
SFTF Sexfontaines 18.03 38 *e*P **P 03 43 50.9 +1.8**
baz=214
SENIN Lac Senin/Sane 18.15 45 P **Pn 03 43 51.9 +1.4**
MEZF Maizieres J'vi 18.23 37 P **Pn 03 43 51.9 +0.7**
MEZF Maizieres J'vi 18.23 37 *e*P **Pn 03 43 51.9 +0.7**
baz=213
HAU Haudompre 18.57 40 P **P 03 43 55.8 +0.7**
HAU Haudompre 18.57 40 *e*P **P 03 43 55.8 +0.7**
HAU *e*R
comp=Z,266nm,18.8s
PAGF Fort de Pagny 18.60 38 *e*P **P 03 43 57.0 +1.6**
HINF Hinteralfeld 18.73 41 P **P 03 43 57.1 +0.2**
HINF Hinteralfeld 18.73 41 *e*P **P 03 43 57.1 +0.2**
BAIF Baives 18.93 32 P **P 03 43 59.8 +0.8**
BAIF S Sn 03 47 21.6 -10
comp=Z,41nm,1.4s
BAIF Baives 18.93 32 *e*P **P 03 43 59.8 +0.8**
BAIF *e*Sn Sn 03 47 21.6 -10
comp=Z,82nm,1.4s
TAM Tamanrasset 19.07 125 P **P 03 44 00.3 -0.6**
TAM pmax pmax
comp=Z,27nm,1.0s
TAM Tamanrasset 19.07 125 P **P 03 44 00.3 -0.6**
TAM IAmb IAmb 03 44 17.6
comp=Z,27nm,1.0s
DOU Dourbes 19.13 33 x x 03 44 03.0
DOU pP **Pn 03 44 04.3 +2.3**
ECH Echery 19.13 40 P **P 03 44 02.8 +1.5**
ECH pmax pmax
comp=Z,8.0nm,1.0s
ECH Echery 19.13 40 P **P 03 44 02.8 +1.5**
GIVF Givet 19.24 33 P **P 03 44 03.8 +1.4**
GIVF S Sn 03 47 25.7 -13
comp=Z,15nm,0.8s
GIVF Givet 19.24 33 *e*P **P 03 44 03.8 +1.4**
GIVF *e*Sn Sn 03 47 25.7 -13
comp=Z,30nm,0.8s
SNF Seneffe 19.30 31 Pn **P 03 44 04.4 +1.4**
CDF Champ du Feu 19.31 40 P **P 03 44 05.2 +1.9**
CDF Champ du Feu 19.31 40 *e*P **P 03 44 05.2 +1.9**
BMRD Maredsous 19.36 33 Pn **P 03 44 05.3 +1.7**
BMRD pP **Pn 03 44 07.9 +3.1**
TUE Stuetta 19.42 47 P **Pn 03 44 07.4 +1.5**
OSSC Osservatorio P 19.47 57 P **P 03 44 06.2 +1.2**
OSSC IAmb IAmb 03 44 07.5
comp=Z,19nm,0.9s
UCC Uccle 19.55 31 Pn **P 03 44 07.1 +1.4**
UCC pPn **Pn 03 44 08.8 +1.8**
UCC Uccle 19.55 31 P **P 03 44 06.7 +1.0**
UCC pmax pmax
comp=Z,53nm,0.9s
UCC Uccle 19.55 31 P **P 03 44 06.7 +1.0**
UCC IAmb IAmb 03 44 10.1
comp=Z,52nm,0.9s
WLF Walferdange 19.55 36 P **P 03 44 07.0 +1.2**
WLF pmax pmax
comp=Z,36nm,1.0s
WLF Walferdange 19.55 36 P **P 03 44 07.0 +1.2**
WLF IAmb IAmb 03 44 11.4
comp=Z,36nm,1.0s
BGES Gesves 19.56 33 P **P 03 44 05.2 -0.6**
BGES Pn **pP 03 44 06.5 -2.7**
BGES pP **Pn 03 44 09.3 +2.1**
LATE Laterza 19.59 60 P **P 03 44 06.2 -0.2**
BFO Black Forest 19.83 42 P **P 03 44 09.6 +0.7**
BFO pmax pmax
comp=Z,22nm,1.0s
BFO Black Forest 19.83 42 P **P 03 44 09.6 +0.7**
BFO IAmb IAmb 03 44 13.4
comp=Z,22nm,1.0s
DAVOX Davos/Dischmat 19.89 47 P **P 03 44 11.9 +2.1**
comp=Z,0.3nm,0.3s,baz=244,slow=8.6,SNR=13
DAVOX LR LR 03 52 38.8
comp=Z,228nm,18.8s,baz=246,slow=39
BSTI Sart Tilman 19.91 33 Pn **P 03 44 10.8 +1.0**
BSTI PnPn **PnPn 03 44 25.7 +0.2**
FUORN Ofenpass-Fuorn 20.05 48 P **P 03 44 12.4 +0.8**
CORL Corleone 20.06 74 P **P 03 44 11.7 +0.1**
CORL IAmb IAmb 03 44 31.0
comp=Z,15nm,0.8s
MEM Membach 20.13 34 P **P 03 44 13.0 +0.9**
MEM PnPn **PnPn 03 44 28.1 -0.4**
DAVA Damuels 20.14 46 *i* P Pn 03 44 16.1 +1.8
comp=Z,13nm,0.8s,SNR=8.0
BTNL Ternell 20.17 34 P **P 03 44 13.5 +0.9**
BTNL pP Pn 03 44 15.9 +1.4
MURB Monte Urbino 20.28 59 P **P 03 44 15.4 +1.6**
MURB IAmb IAmb 03 44 20.9
comp=Z,32nm,1.2s
TEOL Teolo 20.40 52 P **P 03 44 14.9 -0.2**
TEOL IAmb IAmb 03 44 16.4
comp=Z,27nm,0.9s
FETA Feichten 20.52 47 *e*P **P 03 44 16.8 +0.2**
comp=Z,0.4nm,0.4s
STU Stuttgart 20.55 41 P **P 03 44 18.5 +1.7**
STU pmax pmax
comp=Z,23nm,1.0s
STU Stuttgart 20.55 41 P **P 03 44 18.4 +1.7**
STU IAmb IAmb 03 44 19.3
comp=Z,23nm,1.0s
NRCA Norcia 20.58 60 P **P 03 44 17.6 +0.4**
NRCA IAmb IAmb 03 44 31.5
comp=Z,47nm,1.9s
CTI Castel Tesino 20.66 51 P **P 03 44 19.0 +0.9**
CTI pmax pmax
comp=Z,22nm,1.1s
CTI Castel Tesino 20.66 51 P **P 03 44 19.0 +0.9**
CTI IAmb IAmb 03 44 23.1
comp=Z,22nm,1.1s
AQU L'Aquila 20.68 62 P **P 03 44 19.2 +1.0**
AQU pmax pmax
comp=Z,16nm,0.9s
AQU L'Aquila 20.68 62 P **P 03 44 19.2 +1.0**
AQU IAmb IAmb 03 44 25.8
comp=Z,16nm,0.9s
RETA Reutte 20.77 46 *e*P **P 03 44 20.1 +0.9**
comp=Z,7.9nm,0.8s
MOTA Moosalm 20.90 47 *e*P **P 03 44 20.9 +0.2**
comp=Z,5.8nm,0.9s
SQTA Sankt Quirin 20.90 47 *e*P **P 03 44 20.2 -0.5**
comp=Z,5.9nm,0.7s
VAE Valguarnera 20.94 75 P Pn 03 44 24.2 +0.6
comp=Z,8.6nm,0.5s,baz=312,slow=3.8,SNR=2.6
INTR Introdacqua 20.97 63 P **P 03 44 21.6 +0.2**
INTR IAmb IAmb 03 44 23.3
comp=Z,16nm,1.0s
ESK Eskdalemuir 21.16 13 P **P 03 44 25.2 +1.9**
ESK pmax pmax
comp=Z,27nm,0.8s
ESK Eskdalemuir 21.16 13 P **P 03 44 25.2 +1.9**
ESK IAmb IAmb 03 44 26.1
comp=Z,27nm,0.8s
WATA Walderalm 21.18 47 *i* P **P 03 44 23.3 -0.4**
comp=Z,6.9nm,0.8s,SNR=4.5
WTTA Wattenberg 21.18 47 *i* P **P 03 44 23.8 +0.1**
comp=Z,11nm,0.8s,SNR=9.1
EKA Eskdalemuir Ar 21.19 13 P **P 03 44 25.6 +2.2**
comp=Z,20nm,0.8s,baz=191,slow=10,SNR=25
EKA S **S 03 48 11.6 -6.8**
comp=Z,2.8nm,0.6s,baz=206,slow=22,SNR=6.8
CIMO Cimolais 21.27 50 P **P 03 44 25.3 +0.8**
PAOL Paolisi 21.29 66 P **P 03 44 23.8 -1.0**
KOWA Kowa 21.39 160 P **P 03 44 25.2 -0.8**
comp=Z,31nm,0.6s,baz=346,slow=9.5,SNR=82
KOWA S S 03 48 07.4 -16
comp=Z,16nm,0.6s,baz=65,slow=19,SNR=10
KOWA LR LR 03 53 24.5
comp=Z,288nm,18.6s,baz=319,slow=39
KOWA Kowa 21.39 160 P **P 03 44 24.5 -1.5**
STAL STALIGIAL 21.42 51 P **P 03 44 26.2 0.0**
ABTA Abfaltersbach 21.50 49 *e*P **P 03 44 27.2 +0.2**
comp=Z,5.1nm,0.7s
ZOU Zoufplan 21.71 50 P **P 03 44 29.5 +0.1**
PRED Cave del Predi 22.04 51 P **P 03 44 32.4 -0.4**
KBA Koelnbreinsper 22.15 49 *e*P **P 03 44 32.9 -1.3**
comp=Z,0.3nm,0.3s
MYKA Terra Mystica 22.16 51 *e*P **P 03 44 34.7 +0.6**
comp=Z,13nm,1.6s
OBKA Obir 22.69 51 *e*P **P 03 44 39.5 -0.3**
comp=Z,10nm,1.4s
TIP Timpagrande 22.80 71 P **P 03 44 39.5 -1.6**
MOA Molln 23.04 48 *e*P **P 03 44 41.9 -1.5**
comp=Z,2.3nm,0.6s
SOKA Soboth 23.06 51 *e*P **P 03 44 43.0 -0.7**
comp=Z,7.3nm,1.1s
GEC2 GERESS Array S 23.14 45 P **P 03 44 44.7 +0.2**
GERES GERESS Array B 23.14 45 P **P 03 44 44.5 0.0**
comp=Z,2.3nm,0.8s,baz=235,slow=9.4,SNR=18
GERES GERESS Array B 23.14 45 P **P 03 44 44.0 -0.5**
KHC Kasperske Hory 23.20 45 *e*P **P 03 44 44.7 -0.4**
KHC *e* 03 44 54.9
KHC Kasperske Hory 23.20 45 *e*P **P 03 44 47.7 -0.4**
KHC *e*pP **pwP 03 44 54.9 +1.3**
ARSA Arzberg 23.59 50 *e*P **P 03 44 47.9 -1.0**
comp=Z,3.1nm,0.8s
CLL Collm 24.01 40 *e*pP **pP 03 44 56.0 -0.2**
CLL *e*(S) S 03 49 34.0 +25
CLL Collm 24.01 40 *e*P pP 03 44 56.0 -0.2
CONA Conrad Observa 24.05 49 *e*P **P 03 44 52.6 -0.8**
comp=Z,8.1nm,0.8s
TOA0 Torodi Ar. Sit 24.69 148 P **P 03 44 58.9 -0.5**
TOA0 IAmb IAmb 03 45 01.6
comp=Z,29nm,0.9s
TORD Torodi Ar. Bea 24.69 148 P **P 03 44 58.6 -0.8**
comp=Z,24nm,0.9s,baz=327,slow=8.4,SNR=69
TORD S **S 03 49 26.3 +5.6**
comp=Z,1.1nm,0.7s,baz=323,slow=16,SNR=2.2
TORD LR LR 03 54 51.0
comp=Z,302nm,21.1s,baz=325,slow=37
TORD Torodi Ar. Bea 24.69 148 P **P 03 44 56.9 -2.5**
VRAC Vranov 25.05 46 P **P 03 45 01.8 -0.6**
comp=Z,2.1nm,0.7s,baz=274,slow=14,SNR=3.0
DPC Dobruska-Polom 25.35 44 *e*P **P 03 45 03.7 -1.4**
DPC Dobruska-Polom 25.35 44 *e*P **P 03 45 03.7 -1.4**
DIVS Divibare 25.74 60 P **P 03 45 09.6 +0.8**
MORC Moravsky Berou 25.81 46 P **P 03 45 10.0 +0.7**
MORC pmax pmax
comp=Z,4.0nm,1.0s
MORC Moravsky Berou 25.81 46 P **P 03 45 09.9 +0.7**
TIC Toumodi 28.74 167 *e*P **P 03 45 35.0 -0.8**
DBIC Dimbokro 28.75 166 P **P 03 45 35.7 -0.2**
comp=Z,20nm,0.6s,baz=339,slow=9.2,SNR=34
DBIC LR LR 03 57 05.3
comp=Z,168nm,21.2s,baz=344,slow=37
DBIC Dimbokro 28.75 166 P **P 03 45 35.6 -0.3**
DBIC pmax pmax
comp=Z,65nm,1.3s
DBIC Dimbokro 28.75 166 P **P 03 45 35.6 -0.3**
KIC Kosan Boka 29.07 166 *e*P **P 03 45 38.0 -0.8**
comp=Z,42nm,0.7s
LIC Lamto 29.15 167 *e*P **P 03 45 38.6 -0.8**
comp=Z,64nm,0.8s
LIC Lamto 29.15 167 *e*P **P 03 45 39.3 -0.1**
comp=Z,30nm,0.6s,baz=13
LIC *e*R
comp=Z,246nm,18.5s
NB2 NORSAR Subarra 29.88 22 P **P 03 45 45.8 +0.2**
comp=Z,7.6nm,1.2s,baz=218,slow=9.3
NOA NORSAR Array B 29.88 22 P **P 03 45 45.7 +0.2**
comp=Z,2.0nm,0.8s,baz=218,slow=8.4,SNR=5.0
NOA LR LR 03 57 01.0
comp=Z,45nm,21.3s,baz=215,slow=35
HFS Hagfors 30.01 25 P **P 03 45 47.1 +0.4**
comp=Z,5.2nm,1.0s,baz=204,slow=14,SNR=6.2
HFS LR LR 03 57 45.0
comp=Z,137nm,20.9s,baz=232,slow=36
MLR Muntele Rosu 30.14 58 P **P 03 45 51.6 +3.4**
comp=Z,0.8nm,0.7s,baz=135,slow=19,SNR=2.1
MLR LR LR 04 00 02.8
comp=Z,93nm,18.7s,baz=291,slow=41
BORG Borgarnes 30.46 352 LR LR 03 55 06.1
comp=Z,104nm,19.5s,baz=154,slow=30
AKASG Malin Array Be 33.22 49 LR LR 04 00 45.4
comp=Z,77nm,19.4s,baz=300,slow=38
VSU Vasula 34.44 35⇑ *e*P **P 03 46 25.1 -0.4**
VSU pmax pmax
comp=Z,41nm,1.1s
FINES FINESS Array B 35.58 30 P **P 03 46 35.4 +0.1**
comp=Z,3.3nm,0.6s,baz=240,slow=7.5,SNR=12
FINES LR LR 04 01 39.0
comp=Z,144nm,19.8s,baz=237,slow=37
FINES FINESS Array B 35.58 30 P **P 03 46 35.7 +0.4**
FINES FINESS Array B 35.58 30 P **P 03 46 35.7 +0.4**
FIA1 FINESS Array S 35.59 30 P **P 03 46 35.8 +0.5**
OBN Obninsk 38.49 43⇑ *e*P **P 03 46 59.9 -0.1**
OBN *e* 03 47 04.1
OBN pmax pmax
comp=Z,22nm,1.4s
VSR Storozhevoye 39.51 50 *e*P **P 03 47 07.7 -0.9**
VSR pmax pmax
comp=Z,10.0nm,1.8s

ARD7 ARCESS Array S 40.11 19 P P 03 47 13.9 +0.4
ARCES ARCESS Array B 40.12 19 P P 03 47 14.0 +0.5
comp=Z,8.3nm,0.8s,baz=227,slow=8.8,SNR=42
ARCES LR LR 04 05 44.1
comp=Z,40nm,18.6s,baz=225,slow=39
LVZ Lovozero 41.97 24⇓ *eP* **P 03 47 31.4 +2.5**
LVZ pmax pmax
comp=Z,25nm,1.1s
LVZ Lovozero 41.97 24 P P 03 47 29.0 +0.1
KIV Kislovodsk 42.05 61 *eP* **P 03 47 31.0 +1.1**
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,76nm,16.0s
SCHQ Schefferville 42.75 315 LR LR 04 02 38.4
comp=Z,147nm,19.2s,baz=116,slow=32
F64A Sherman 43.90 302 P P 03 47 45.6 +0.8
KIRV Kirov 45.93 40⇑ *eP* **P 03 48 00.7 +0.1**
MDP Montagnes des 48.28 242 P P 03 48 20.6 +1.1
comp=Z,2.6nm,0.6s,baz=60,slow=5,SNR=3.9
MBAR Mbarara 52.87 123⇑ *eP* **P 03 48 55.0 +0.6**
MBAR pmax pmax
comp=Z,6.0nm,1.0s
ABKAR Akbulak array 52.91 51 P P 03 48 54.7 +0.6
O53A New Philadelph 54.30 298 P P 03 49 05.2 +0.7
P52A Corning 55.17 297 P P 03 49 11.7 +0.9
L48A N Adams 56.08 301 P P 03 49 18.1 +0.8
L48A IAmb IAmb 03 49 18.7
comp=Z,9.2nm,0.8s
S51A Beattyville 56.93 296 P P 03 49 24.8 +1.4
S51A IAmb IAmb 03 49 36.2
comp=Z,4.6nm,0.9s
TZTN Tazewell 57.29 294 P P 03 49 27.3 +1.3
KMBO Kilima Mbogo 57.86 118 LR LR 04 15 06.2
comp=Z,130nm,18.4s,baz=238,slow=37
BRVK Borovoye 58.24 45⇓ *eP* **P 03 49 32.5 +0.1**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
CLTN Cedars of Leba 59.54 295 P P 03 49 43.1 +1.4
TSUM Tsumeb 60.45 148 P P 03 49 49.2 +1.1
TSUM IAmb IAmb 03 49 53.7
comp=Z,12nm,1.6s
X48A Hartselle 60.73 293 P P 03 49 51.1 +1.2
NRIK Noril'sk 60.82 24 LR LR 04 18 53.3
comp=Z,55nm,19.3s,baz=129,slow=39
NRIK Noril'sk 60.82 24⇓ *eP* **P 03 49 51.0 +1.1**
NRIK pmax pmax
comp=Z,10.0nm,1.8s
ULM Lac du Bonnet 60.83 313 LR LR 04 12 22.1
comp=Z,149nm,20.5s,baz=66,slow=32
BDFB Brasilia 61.15 221 P P 03 49 53.0 +0.1
comp=Z,1.5nm,0.8s,baz=85,slow=11,SNR=3.1
BDFB Brasilia 61.15 221 P P 03 49 53.0 +0.1
PLAL Pickwick Lake 61.29 294 P P 03 49 54.6 +0.9
LSZ Lusaka 62.47 136 P P 03 50 01.9 +0.1
LSZ pmax pmax
comp=Z,8.0nm,0.7s
LSZ Lusaka 62.47 136 P P 03 50 01.9 +0.1
LSZ IAmb IAmb 03 50 02.5
comp=Z,7.9nm,0.7s
R40A Maddies Statio 63.01 299 P P 03 50 04.8 -0.3
R40A IAmb IAmb 03 50 15.2
comp=Z,8.1nm,1.1s
KURK Kurchatov 63.90 45⇑ *eP* **P 03 50 10.2 -0.6**
KURK pmax pmax
comp=Z,1.0nm,0.8s
U40A Yellville 64.24 298 P P 03 50 13.6 +0.3
AAK Ala-Archa 64.64 55⇑ *eP* **P 03 50 14.7 -1.3**
AAK pmax pmax
comp=Z,3.0nm,0.9s
ROSC El Rosal 65.16 258 LR LR 04 16 49.5
comp=Z,71nm,18.2s,baz=63,slow=34
YKA Yellowknife Ar 65.33 330 LR LR 04 16 02.1
comp=Z,78nm,18.1s,baz=0.0,slow=33
ZALV Zalesovo Beam 65.96 40 P P 03 50 24.9 +0.7
comp=Z,0.8nm,0.4s,baz=312,slow=6.7,SNR=3.3
ZALV LR LR 04 20 58.5
comp=Z,60nm,18.6s,baz=292,slow=38
ZALV Zalesovo Beam 65.96 40 P P 03 50 23.9 -0.2
MKAR Makanchi Array 67.79 48 P P 03 50 36.0 +0.1
comp=Z,0.7nm,0.6s,baz=286,slow=5.8,SNR=5.1
MKAR LR LR 04 20 36.7
comp=Z,60nm,20.3s,baz=304,slow=36
MKAR Makanchi Array 67.79 48 P P 03 50 35.9 -0.1
LBTB Lobatse 69.14 144 P P 03 50 44.5 -0.2
LBTB pmax pmax
comp=Z,12nm,1.0s
LBTB Lobatse 69.14 144 P P 03 50 44.5 -0.2
DGZ Jazzator, Alta 69.40 43⇑ *eP* **P 03 50 47.2 +1.0**
DGZ pmax pmax
comp=Z,2.0nm,0.8s
TIXI Tiksi 70.09 12⇑ *eP* **P 03 50 51.0 +1.2**
BOSA Boshof 72.04 147 P P 03 51 01.9 -0.4
comp=Z,5.0nm,0.6s,baz=335,slow=7.1,SNR=19
BOSA LR LR 04 23 18.4
comp=Z,144nm,18.2s,baz=312,slow=36
BOSA Boshof 72.04 147 P P 03 51 01.7 -0.6
BOSA pmax pmax
comp=Z,21nm,1.4s
BOSA Boshof 72.04 147 P P 03 51 01.7 -0.6
BOSA IAmb IAmb 03 51 11.1
comp=Z,21nm,1.4s
TOLK Toolik Lake Re 72.19 345 P P 03 51 03.3 +0.6
TOLK IAmb IAmb 03 51 16.0
comp=Z,7.0nm,1.1s
WMQ Urumqi 72.57 49 *eP* **P 03 51 06.9 +1.5**
PDAR Pinedale Array 72.58 310 P P 03 51 05.3 -0.4
comp=Z,0.6nm,0.6s,baz=59,slow=6.7,SNR=7.3
PDAR LR LR 04 20 25.9
comp=Z,113nm,18.1s,baz=75,slow=34
PDAR Pinedale Array 72.58 310 P P 03 51 04.9 -0.8
SUR Sutherland 73.46 152 P P 03 51 11.1 +0.4
LPAZ La Paz 74.12 237 P P 03 51 15.6 +0.2
comp=Z,1.1nm,1.0s,baz=61,slow=5.8,SNR=3.1
LPAZ La Paz 74.12 237 P P 03 51 15.2 -0.2
LPAZ pmax pmax
comp=Z,3.0nm,1.3s
LPAZ La Paz 74.12 237 P P 03 51 15.2 -0.2
WHY Whitehorse 74.19 335 P P 03 51 15.7 +1.0
WHY IAmb IAmb 03 51 16.5
comp=Z,10nm,1.1s
ILAR Eielson Array 74.72 342 P P 03 51 18.6 +1.1
comp=Z,0.9nm,0.6s,baz=22,slow=5.1,SNR=14
ILAR LR LR 04 22 26.7
comp=Z,40nm,19.7s,baz=94,slow=34
ILAR Eielson Array 74.72 342 P P 03 51 17.3 -0.2
CPUP Villa Florida 74.86 222 P P 03 51 19.1 +0.3
comp=Z,1.1nm,0.7s,baz=39,slow=13,SNR=3.0
CPUP LR LR 04 22 37.4
comp=Z,38nm,18.0s,baz=43,slow=34
CPUP Villa Florida 74.86 222 P P 03 51 18.2 -0.6
CPUP pmax pmax
comp=Z,11nm,1.4s
CPUP Villa Florida 74.86 222 P P 03 51 18.2 -0.6
CPUP IAmb IAmb 03 51 37.3
comp=Z,11nm,1.4s
HDA Harding Lake 75.02 342 P P 03 51 20.6 +1.2
HDA IAmb IAmb 03 51 38.8
comp=Z,23nm,2.0s
B08A Colville Reser 75.19 319 P P 03 51 20.9 +0.2
B08A IAmb IAmb 03 51 21.6
comp=Z,2.9nm,0.8s
TX31 Lajitas Ar. Si 75.58 296 P P 03 51 23.6 +0.3
TX31 IAmb IAmb 03 51 39.5
comp=Z,20nm,1.6s
TX32 Lajitas Array 75.58 296 P P 03 51 24.7 +1.4
TX32 IAmb IAmb 03 51 39.4
comp=Z,8.3nm,1.7s
TXAR Lajitas Array 75.58 296 P P 03 51 25.0 +1.7
comp=Z,1.4nm,0.7s,baz=76,slow=6.4,SNR=15
TXAR LR LR 04 24 31.1
comp=Z,51nm,18.1s,baz=0.0,slow=36
TXAR Lajitas Array 75.58 296 P P 03 51 23.5 +0.2
BMO Blue Mountains 76.11 315 P P 03 51 26.6 +0.5
BMO pmax pmax
comp=Z,6.0nm,1.5s
BMO Blue Mountains 76.11 315 P P 03 51 26.6 +0.5
BMO IAmb IAmb 03 51 28.6
comp=Z,5.5nm,1.5s
N25K Chitina, Valde 76.61 339 P P 03 51 30.2 +1.7
N25K IAmb IAmb 03 51 37.7
comp=Z,16nm,1.4s
TRF Thorofare Moun 76.66 342 P P 03 51 29.4 +0.5
TRF IAmb IAmb 03 51 30.8
comp=Z,5.9nm,0.9s

KTH Kantishna Hill 76.73 343 P P 03 51 29.8 +0.7
LON Longmire 77.50 319 P P 03 51 34.1 +0.3
LON pmax pmax
comp=Z,14nm,1.5s
LON Longmire 77.50 319 P P 03 51 34.1 +0.3
LON IAmb IAmb 03 51 40.2
comp=Z,14nm,1.4s
CNPM China Poot 80.21 341 P P 03 51 49.5 +1.1
NVAR Mina Array Bea 80.52 310 LR LR 04 24 59.4
comp=Z,74nm,21.4s,baz=80,slow=34
SONM Songino Array 80.61 37 P P 03 51 52.1 +1.2
comp=Z,0.6nm,0.6s,baz=305,slow=5.1,SNR=2.8
SONM Songino Array 80.61 37 P P 03 51 51.9 +1.0
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 80.61 37 P P 03 51 51.9 +1.0
HHC Hu-ho-hao-te 88.14 40 *eP* **P 03 52 29.8 +0.6**
HHC pmax pmax
comp=Z,11nm,0.8s
HHC pmax pmax
comp=Z,120nm,5.7s
USRK Ussuriysk Ar. 94.49 26 LR LR 04 39 56.2
comp=Z,65nm,18.0s,baz=328,slow=38
WRA Warramunga Arr 146.29 73 PKPbc PKPdf 03 59 18.8 +0.6
comp=Z,4.9nm,0.7s,baz=314,slow=2.7,SNR=117
WRA Warramunga Arr 146.29 73 PKPdf 03 59 18.4 +0.3
ASAR Alice Springs 147.85 79 PKPbc PKPdf 03 59 23.2 +2.6
comp=Z,5.9nm,0.8s,baz=308,slow=2.5,SNR=48
ASAR Alice Springs 147.85 79 PKPdf 03 59 22.7 +2.0

KRNET ***03*** *04:09:28.1±0.1, 43.04°N×78.41°E, h30km, mb2.3*
SOME ***03*** *04:09:29.0, 43.12°N×78.20°E, h15km*
NNC ***03*** *04:09:30.1±0.4, 43.10°N×78.48°E, h12km±2km, mb2.5, mpv2.6, Error ellipse: s-maj=4.2km s-min=2.2km az=169.0*
ISC 03 04:09:29.1±0.9, 43.06N±0.03×78.40E±0.03, h23km±4km, n20, σ0.84/40, 15C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.01**	**103**	*eP*		**Pb**	**04 09 33.3**	**0.0**
	baz=55							
SATY				*eS*		**Sb**	**04 09 36.5**	**+0.3**
	baz=55							
SATY	**Saty**	**0.01**	**103**	*eP*		**Pb**	**04 09 33.3**	**0.0**
	27nm,0.1s							
SATY				*eS*		**Sb**	**04 09 36.5**	**+0.3**
	384nm,0.1s							
SATY	**Saty**	**0.01**	**103**	P		**Pb**	**04 09 33.3**	**0.0**
	27nm,0.1s							
SATY				S		**Sb**	**04 09 36.5**	**+0.3**
	384nm,0.1s							
ZHN	**Zhinishke**	**0.11**	**14**	*eP*		**Pb**	**04 09 33.4**	**-0.5**
	baz=8.0							
ZHN				*eS*		**Sb**	**04 09 36.3**	**-0.7**
	baz=8.0							
ZHN	**Zhinishke**	**0.11**	**14**	*eP*		**Pb**	**04 09 33.4**	**-0.5**
	16nm,0.1s							
ZHN				*eS*		**Sb**	**04 09 36.3**	**-0.7**
	40nm,0.1s							
ZHN	**Zhinishke**	**0.11**	**14**	P		**Pb**	**04 09 33.4**	**-0.5**
	16nm,0.1s							
ZHN				S		**Sb**	**04 09 36.3**	**-0.7**
	40nm,0.1s							
KPKS	**Kokpek**	**0.46**	**27**	*eP*		**Pb**	**04 09 38.0**	**-0.6**
	baz=25							
KPKS				*eS*		**Sb**	**04 09 44.7**	**-0.4**
	baz=25							
KPKS	**Kokpek**	**0.46**	**27**	*eP*		**Pb**	**04 09 38.0**	**-0.6**
	6.0nm,0.1s							
KPKS				*eS*		**Sb**	**04 09 44.7**	**-0.4**
	60nm,0.2s							
UZB	**Uzynbulak**	**0.47**	**79**	P		**Pb**	**04 09 39.0**	**+0.3**
	3.0nm,0.1s							
UZB				S		**Sb**	**04 09 46.3**	**+0.9**
	24nm,0.1s							
PRZ	**Przheval'sk**	**0.58**	**180⇑**	*iP*		**Pb**	**04 09 39.7**	**-1.0**
	baz=79							
PRZ				*iS*		**Sb**	**04 09 46.6**	**-2.0**
	baz=79							
ANVS	**Anan'yevo**	**0.60**	**243⇑**	*iP*		**Pb**	**04 09 40.6**	**-0.6**
	baz=46							
ANVS				*iS*		**Sb**	**04 09 48.3**	**-1.0**
	baz=46							
PDGK	**Podgornoye**	**0.84**	**71**	P		**Pb**	**04 09 45.2**	**0.0**
	2.1nm,0.2s							
PDGK				S		**Sb**	**04 09 56.8**	**+0.7**
	2.7nm,0.2s							
PDGK	**Podgornoye**	**0.84**	**71**	⇑P		**Pb**	**04 09 45.0**	**-0.2**
	1.2nm,0.3s							
PDGK				⇑S		**Sn**	**04 09 57.0**	**-0.3**
	3.6nm,0.5s							
MNBS	**Baschi**	**1.02**	**0**	*eP*		**Pn**	**04 09 47.7**	**-0.4**
	6.1nm,0.1s							
MNBS				*eS*		**Sb**	**04 10 01.0**	**-0.2**
	24nm,0.2s							
MNBS	**Baschi**	**1.02**	**0**	P		**Pn**	**04 09 47.7**	**-0.4**
	6.1nm,0.1s							
MNBS				S		**Sb**	**04 10 01.0**	**-0.2**
	24nm,0.2s							
KDJ	**Kajisay**	**1.29**	**224⇑**	*iP*		**Pn**	**04 09 51.8**	**-0.1**
	baz=25							
KDJ				⇑*iS*		**Sn**	**04 10 08.2**	**-0.3**
	baz=25							
ULHL	**Ulahol**	**1.79**	**244⇑**	*iP*		**Pn**	**04 09 59.7**	**+1.0**
	baz=44							
ULHL				⇑*iS*		**Sn**	**04 10 21.6**	**+0.8**
	baz=44							
BOOM	**Boomskoye usch**	**1.90**	**253⇑**	*iP*		**Pn**	**04 10 01.3**	**+1.1**
	baz=54							
BOOM				⇑*iS*		**Sn**	**04 10 24.5**	**+1.1**
	baz=54							
TKM2	**Tokmak 2**	**2.06**	**267⇑**	*iP*		**Pb**	**04 10 04.4**	**-1.5**
	baz=68							
TKM2				⇑*iS*		**Sn**	**04 10 28.6**	**+1.1**
	baz=68							
TKM2	**Tokmak 2**	**2.06**	**267**	⇑P		**Pb**	**04 10 05.1**	**-0.8**
	0.6nm,0.4s							
TKM2				⇓S		**Sb**	**04 10 33.4**	**+2.2**
	0.7nm,0.2s							

IDC ***03*** *04:14:39.4±0.5, 3.03S×129.55E, h0km, mb4.3/15, mb1 4.5/18, mb1mx4.4/31, mbtmp4.3/18, ML4.3/3, MS3.6/12, Ms1 3.5/12, ms1mx3.3/42, Error ellipse: s-maj=22.5km s-min=10.8km az=76.0*
NEIC ***03*** *04:14:44.2±2.3, 2.95S±0.06×129.60E±0.06, h31km±4km, mb4.4/25, Error ellipse: s-maj=9.2km s-min=9.1km az=122.0*
DJA ***03*** *04:14:44.5±0.2, 3°S±3°×131°0E±°, h69km±14km, M4.6/12, mb4.6/12, mB5.2/6, MLv4.7/9, Mw(mB)4.5/6*
ISC 03 04:14:44.9±0.4, 2.98S±0.05×129.60E±0.05, h35km, n90, σ1§42/90, mb4.3/20, MS3.5/7, Seram

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.56**	**169**	P		**Pn**	**04 15 11.5**	**+1.4**
FAKI	**Fak Fak**	**2.65**	**89**	P		**Pn**	**04 15 25.0**	**-0.1**
FAKI				S		**Sn**	**04 15 56.8**	**+0.7**
FAKI	**Fak Fak**	**2.65**	**89**	Pn		**Pn**	**04 15 25.5**	**+0.3**
SIJI	**Sorong**	**2.68**	**39**	Pn		**Pn**	**04 15 25.0**	**-0.6**
	106nm,0.3s,baz=220,slow=23,SNR=138							
SIJI					Sn	**Sn**	**04 15 57.0**	**+0.1**
	74nm,0.3s,baz=42,slow=20,SNR=5.9							
SIJI					LR	LR	04 17 01.3	
	comp=Z,1μm,19.3s,baz=315,slow=52							
SANI	**Sanana**	**3.72**	**284**	P		**Pn**	**04 15 37.9**	**-2.0**
SANI				S		**Sn**	**04 16 20.4**	**-2.1**
TNTI	**Ternate**	**4.34**	**329**	P		**Pn**	**04 15 47.0**	**-1.4**
BAKI	**Biak**	**6.75**	**75**	P		**Pn**	**04 16 20.6**	**-0.9**
	0.4nm122nm,0.7s							
LUWI	**Luwuk**	**7.09**	**286**	P		**Pn**	**04 16 25.0**	**-1.1**
	0.6nm5μm66nm,0.6s							
LUWI	**Luwuk**	**7.09**	**286**	Pn		**Pn**	**04 16 24.8**	**-1.4**
GTOI	**Gorontalo**	**7.50**	**299**	P		**Pn**	**04 16 33.1**	**+1.3**
	0.3nm558nm41nm,0.7s							
APSI	**Ampana**	**8.20**	**284**	P		**Pn**	**04 16 39.7**	**-1.8**
	1μm90nm,0.5s							
SOEI	**Soe**	**8.56**	**218**	P		**Pn**	**04 16 47.9**	**+1.4**
	90nm,1.0s							
BATI	**Baumata**	**9.28**	**219**	Pn		Pn	04 17 02.4	+6.1
	7.0nm,0.3s,baz=288,slow=3.2,SNR=5.8							
BATI					LR	LR	04 20 39.5	
	comp=Z,743nm,21.9s,baz=104,slow=39							
BSSI	**Bau Bau, Buton**	**9.60**	**251**	P		**Pn**	**04 17 01.2**	**+0.5**
	56nm,1.2s							

EDFI Ende, Flores 9.73 234 P **Pn 04 17 03.8 +1.3**
17nm,1.0s
BKSI Bulukumba 9.73 256 P **Pn 04 17 03.2 +0.8**
1μm35nm,0.7s
TTSI Tana Toraja 9.76 269 P **Pn 04 17 03.4 +0.5**
1μm20nm,0.9s
SPSI Sidrap Palu 9.86 264 P Pn 04 17 11.6 +7.4
MTN Manton Dam 9.91 171 Pn **Pn 04 17 05.1 +0.1**
KAPI Kappang 10.03 258 Pn **Pn 04 17 07.8 +1.4**
2.2nm,0.3s,baz=65,slow=6.8,SNR=12
KAPI LR LR 04 22 01.6
comp=Z,284nm,18.9s,baz=76,slow=44
KAPI Kappang 10.03 258 Pn **Pn 04 17 10.2 +3.7**
MPSI Mapaga 10.24 289 P **Pn 04 17 09.3 -0.1**
946nm25nm,0.8s
SMKI Samarinda 12.63 281 P **P 04 17 54.9 +1.8**
KNRA Kununurra 12.64 184 Pn **Pn 04 17 42.0 -0.2**
MYLDM Lahad Datu 13.73 306 Pn **Pn 04 17 59.8 +2.6**
FITZ Fitzroy Crossi 15.51 194 Pn **Pn 04 18 20.4 -0.7**
0.7nm,0.3s,baz=24,slow=10,SNR=13
FITZ Sn **Sn 04 21 14.1 +2.1**
0.1nm,0.3s,baz=100,slow=4.5,SNR=3.3
FITZ LR LR 04 24 36.5
comp=Z,136nm,20.1s,baz=16,slow=39
FITZ Fitzroy Crossi 15.51 194 Pn **Pn 04 18 20.1 -1.0**
JAGI Jajag, Banyuwa 16.30 250 Pn **Pn 04 18 31.6 +0.4**
JAGI IAmb IAmb 04 18 36.1
comp=Z,27nm,0.6s
BLJI Banyuglugur 16.61 253 P **P 04 18 40.8 +3.4**
WB0 Warramunga Arr 17.33 165 Pn **Pn 04 18 41.0 -3.2**
WB0 IAmb IAmb 04 18 46.4
comp=Z,30nm,1.1s
WRAB Tennant Creek 17.48 165 Pn **Pn 04 18 43.7 -2.3**
WRAB IAmb IAmb 04 18 48.2
comp=Z,22nm,0.9s
WRA Warramunga Arr 17.48 165 P **Pn 04 18 42.6 -3.4**
comp=Z,0.9nm,0.3s,baz=339,slow=13,SNR=37
WRA S **Sn 04 21 56.8 -3.0**
comp=Z,0.3nm,0.3s,baz=352,slow=24,SNR=3.6
WRA Warramunga Arr 17.48 165 Pn **Pn 04 18 41.6 -4.5**
WB2 Warramunga Arr 17.48 165 Pn **Pn 04 18 44.1 -2.0**
WB2 IAmb IAmb 04 18 48.3
comp=Z,28nm,1.0s
WR0 Warramunga Arr 17.55 164 Pn **Pn 04 18 44.2 -2.7**
SBUM Sibu 18.19 287 P **P 04 18 55.1 +0.3**
SBUM IAmb IAmb 04 18 57.4
comp=Z,28nm,1.4s
PWJI Pagerwojo 18.40 253 P **Pn 04 18 58.7 +1.4**
PMG Port Moresby 18.58 111 LR LR 04 27 47.2
comp=Z,152nm,18.7s,baz=290,slow=42
WOJI Wonogiri, Jawa 19.20 255 P **Pn 04 19 08.5 +1.5**
KSM Kuching 19.78 283 P **P 04 19 12.9 +0.6**
KSM IAmb IAmb 04 19 14.1
comp=Z,19nm,0.9s
AS31 Alice Springs 20.98 169 P **P 04 19 24.5 -0.7**
AS31 IAmb IAmb 04 19 29.7
comp=Z,19nm,0.6s
ASAR Alice Springs 20.98 169 P **P 04 19 24.5 -0.7**
comp=Z,61nm,0.9s,baz=347,slow=11,SNR=292
ASAR S **S 04 23 14.8 -2.5**
comp=Z,4.0nm,0.9s,baz=350,slow=22,SNR=12
ASAR PcP **PcP 04 23 32.1 +0.2**
comp=Z,1.5nm,0.5s,baz=2.3,slow=1.3,SNR=8.2
ASAR LR LR 04 28 41.9
comp=Z,200nm,18.6s,baz=344,slow=40
ASAR Alice Springs 20.98 169 P **P 04 19 24.8 -0.4**
KRVT Keravat (AS076 22.42 94 LR LR 04 28 30.4
comp=Z,122nm,19.7s,baz=282,slow=37
CTA Charters Tower 23.52 138 P **P 04 19 52.0 0.0**
comp=Z,14nm,0.9s,baz=321,slow=12,SNR=18
CTAO Charters Tower 23.52 138 P **P 04 19 52.4 +0.4**
CTAO IAmb IAmb 04 19 54.0
comp=Z,22nm,1.0s
FORT Forrest 27.68 183 P **P 04 20 28.2 -1.5**
BKNI Bangkinang 28.73 276 P P 04 20 49.5 +10
MORW Morawa 28.97 205 P **P 04 20 43.0 +1.7**
MORW IAmb IAmb 04 20 59.6
comp=Z,7.2nm,1.1s
BBOO Buckleboo 30.29 169 P **P 04 20 51.9 -0.9**
BBOO IAmb IAmb 04 21 03.0
comp=Z,8.0nm,0.8s
HNR Honiara 30.83 103 LR LR 04 34 53.5
comp=Z,80nm,18.6s,baz=250,slow=39
STKA Stephens Creek 30.88 160 P **P 04 20 57.9 -0.2**
comp=Z,4.7nm,1.0s,baz=350,slow=9.0,SNR=6.3
STKA LR LR 04 34 10.6
comp=Z,105nm,18.8s,baz=347,slow=38
STKA Stephens Creek 30.88 160 P **P 04 20 57.9 -0.2**
RPSI Rantau Prapat 31.17 280 P **P 04 21 00.2 -0.7**
PSI Prapat 31.19 280 P **P 04 21 00.2 -1.0**
comp=Z,4.7nm,0.4s,baz=182,slow=6.8,SNR=5.7
CMAR Chiang Mai Arr 36.95 306 P **P 04 21 51.0 +0.1**
comp=Z,2.2nm,0.6s,baz=139,slow=7.3,SNR=14
CMAR Chiang Mai Arr 36.95 306 P **P 04 21 51.2 +0.3**
CHTO Chiang Mai 37.13 307 P **P 04 21 53.1 +0.6**
CHTO IAmb IAmb 04 21 54.0
comp=Z,8.9nm,0.8s
MJAR Matsushiro Arr 40.13 11 P **P 04 22 16.0 -1.5**
comp=Z,1.9nm,0.7s,baz=183,slow=8.3,SNR=4.5
SHL Shillong 46.26 310 P **P 04 23 06.3 -1.0**
USRK Ussuriysk Ar. 47.02 2 P **P 04 23 12.3 -0.4**
comp=Z,1.2nm,0.7s,baz=102,slow=7.8,SNR=4.8
USRK Ussuriysk Ar. 47.02 2 P **P 04 23 13.3 +0.5**
GTA Gaotai 50.30 330 *eP* **P 04 23 39.2 +1.0**
GTA pP pP 04 23 43.6 -5.1
GTA sP sP 04 23 46.4 -6.5
GTA pmax pmax
comp=Z,4.0nm,0.6s
SONM Songino Array 54.53 341 P **P 04 24 09.2 -0.3**
comp=Z,0.8nm,0.6s,baz=154,slow=7.1,SNR=5.4
SONM LR LR 04 48 38.0
comp=Z,26nm,18.1s,baz=106,slow=37
SONM Songino Array 54.53 341 P **P 04 24 09.7 +0.2**
LBZ Lake Benmore 54.56 145 P **P 04 24 11.2 +1.5**
RPZ Rata Peaks 54.67 144 LR LR 04 47 56.5
comp=Z,46nm,20.4s,baz=256,slow=36
PETK Petropavlovsk- 60.67 19 P **P 04 24 52.9 +0.5**
comp=Z,8.9nm,0.9s,baz=201,slow=7.9,SNR=4.1
PETK Petropavlovsk- 60.67 19 P **P 04 24 53.5 +1.1**
MK31 Makanchi Array 64.68 326 P **P 04 25 19.1 -0.2**
MK31 IAmb IAmb 04 25 25.9
comp=Z,3.1nm,1.0s
MKAR Makanchi Array 64.68 326 P **P 04 25 19.0 -0.3**
comp=Z,1.7nm,0.7s,baz=124,slow=7.8,SNR=11
ZALV Zalesovo Beam 67.83 333 P **P 04 25 38.7 -0.6**
comp=Z,1.7nm,0.7s,baz=104,slow=6.3,SNR=8.7
ZALV Zalesovo Beam 67.83 333 P **P 04 25 39.8 +0.5**
KURK Kurchatov 68.91 328 P **P 04 25 46.0 -0.2**
KKAR Karatay Array 70.09 318 P **P 04 25 54.2 +0.6**
VNDA Vanda 76.46 173 P **P 04 26 29.7 -0.9**
comp=Z,0.8nm,0.5s,baz=321,slow=6.4,SNR=8.5
VNDA Vanda 76.46 173 P **P 04 26 30.0 -0.6**
SOCY Socotra 76.59 283 P **P 04 26 31.8 -0.8**
NRIK Noril'sk 77.59 346 P **P 04 26 37.6 +0.7**
comp=Z,1.6nm,0.4s,baz=111,slow=4.3,SNR=4.4
MAW Mawson 78.52 201 P **P 04 26 41.6 -0.6**
comp=Z,1.5nm,0.6s,baz=40,slow=8.4,SNR=5.3
MAW LR LR 04 58 53.5
comp=Z,30nm,19.1s,baz=60,slow=34
MAW Mawson 78.52 201 P **P 04 26 42.3 +0.1**
ABKAR Akbulak array 79.14 321 P **P 04 26 45.2 -0.8**
ABKAR IAmb IAmb 04 26 52.8
comp=Z,4.7nm,1.1s
ILAR Eielson Array 89.91 25 P **P 04 27 39.3 -0.8**
comp=Z,0.4nm,0.8s,baz=233,slow=5.6,SNR=3.7
VYHS Vyhne 105.91 320 *e*PDIFF **Pdif 04 28 51.9 -0.9**
TORD Torodi Ar. Bea 127.54 284 PKP **PKPdf 04 33 46.6 -0.7**
comp=Z,0.7nm,0.9s,baz=91,slow=2.0,SNR=3.5
TORD Torodi Ar. Bea 127.54 284 PKPdf 04 33 46.2 -1.1
CPUP Villa Florida 150.10 167 PKPbc **PKiKP 04 34 33.4 -0.2**
comp=Z,3.5nm,0.6s,baz=219,slow=2.6,SNR=9.8
CPUP Villa Florida 150.10 167 PKPbc 04 34 32.9 +0.1
ATAH Atahualpa 150.31 110 PKPbc **PKiKP 04 34 36.3 +1.4**
comp=Z,6.3nm,0.7s,baz=82,slow=5.0,SNR=4.4
SIV San Ignacio 158.40 151 PKPab **PKPab 04 35 14.6 +0.6**
comp=Z,1.3nm,0.7s,baz=141,slow=5.9,SNR=3.9

NEIC ***03*** *04:28:14.8±2.2, 21.61S±0.03×69.55W±0.06, h76km±4km, mb4.0/6, ML4.6(GUC), Error ellipse: s-maj=7.9km s-min=4.1km az=87.0*
SJA ***03*** *04:28:14.1±0.7, 21.61S×69.55W, h73km±3km, ML4.3, MW4.0*
GUC ***03*** *04:28:15.5±0.5, 21.63S×69.50W, h73km±2km, ML4.4*

*IDC **03** 04:28:16.0±1.5,21.65S×69.34W,h88km±12km,mb3.4/4, mb1 3.7/7,mb1mx3.5/27,mbtmp3.9/7,MS2.9/3,Ms1 2.9/3, ms1mx2.7/13,Error ellipse: s-maj=30.5km s-min=17.1km az=98.0*

*VAO **03** 04:28:16.6±0.5,21.54S×69.25W,h78km,mb4.3*

ISC 03 04:28:14.1±0.6,21.62S±0.02×69.56W±0.04,h75km±5km, n105,σ1§52/129,mb3.8/4,10C-4D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB07	**IPOC Station P**	**0.32**	**250**	⇑*iP*	**Pn**	**04 28 27.2**	**+1.1**
PB07				*eS*	**Sn**	**04 28 36.2**	**+1.2**
PB07				IAML		04 28 37.3	
	comp=E,76μm,0.4s						
PB07	**IPOC Station P**	**0.32**	**250**		**Pn**	**04 28 26.6**	**+0.5**
PB07				Sn	**Sn**	**04 28 36.3**	**+1.3**
PB07	**IPOC Station P**	**0.32**	**250**	*eP*	**Pn**	**04 28 27.1**	**+0.9**
PB07				*eS*	**Sn**	**04 28 35.0**	**0.0**
PB07				IAML		04 28 37.0	
	comp=Z,32μm,0.4s						
PB09	**IPOC Station P**	**0.35**	**121**	⇓*eP*	**Pn**	**04 28 27.2**	**+0.8**
PB09				*eS*	**Sn**	**04 28 36.0**	**+0.6**
PB09				IAML		04 28 37.1	
	comp=N,19μm,0.4s						
PB09	**IPOC Station P**	**0.35**	**121**		**Pn**	**04 28 27.1**	**+0.8**
PB09				Sn	**Sn**	**04 28 36.3**	**+1.0**
PB09	**IPOC Station P**	**0.35**	**121**	*eP*	**Pn**	**04 28 27.1**	**+0.8**
PB09				*eS*	**Sn**	**04 28 36.0**	**+0.6**
PB09				IAML		04 28 37.4	
	comp=Z,8μm,0.8s						
PB03	**IPOC Station P**	**0.47**	**203**	⇑*iP*	**Pn**	**04 28 28.1**	**+0.9**
PB03				*i* S	**Sn**	**04 28 38.0**	**+1.1**
PB03				IAML		04 28 38.3	
	comp=E,48μm,0.1s						
PB03	**IPOC Station P**	**0.47**	**203**	*eP*	**Pn**	**04 28 27.9**	**+0.6**
PB03				*eS*	**Sn**	**04 28 38.0**	**+1.1**
PB03				IAML		04 28 40.0	
	comp=Z,17μm,0.1s						
PB01	**IPOC Station P**	**0.57**	**7**	⇓*iP*	**Pn**	**04 28 28.9**	**+0.7**
PB01				*eS*	**Sn**	**04 28 39.6**	**+1.0**
PB01				IAML		04 28 40.0	
	comp=E,50μm,0.2s						
PB01	**IPOC Station P**	**0.57**	**7**		**Pn**	**04 28 28.9**	**+0.7**
PB01				Sn	**Sn**	**04 28 39.5**	**+0.9**
PB01	**IPOC Station P**	**0.57**	**7**	*eP*	**Pn**	**04 28 28.8**	**+0.7**
PB01				*eS*	**Sn**	**04 28 39.7**	**+1.1**
PB01				IAML		04 28 40.1	
	comp=Z,16μm,0.2s						
PB04	**IPOC Station P**	**0.90**	**217**	⇑*iP*	**Pn**	**04 28 32.8**	**+1.0**
PB04				*eS*	**Sn**	**04 28 46.3**	**+1.3**
PB04				IAML		04 28 47.8	
	comp=E,15μm,0.2s						
PB04	**IPOC Station P**	**0.90**	**217**		**Pn**	**04 28 32.8**	**+1.0**
PB04					**Sn**	**04 28 46.6**	**+1.6**
PB04	**IPOC Station P**	**0.90**	**217**	*eP*	**Pn**	**04 28 32.8**	**+1.0**
PB04				*eS*	**Sn**	**04 28 47.1**	**+2.1**
PB04				IAML		04 28 51.1	
	comp=Z,7μm,0.1s						
PB06	**IPOC Station P**	**1.08**	**181**	⇑*iP*	**Pn**	**04 28 35.1**	**+1.0**
PB06				*eS*	**Sn**	**04 28 50.3**	**+1.3**
PB06				IAML		04 28 51.0	
	comp=E,32μm,0.6s						
PB06	**IPOC Station P**	**1.08**	**181**	Pn	**Pn**	**04 28 35.0**	**+0.9**
PB06				Sn	**Sn**	**04 28 50.1**	**+1.2**
PB06	**IPOC Station P**	**1.08**	**181**	*eP*	**Pn**	**04 28 35.1**	**+1.0**
PB06				*eS*	**Sn**	**04 28 50.5**	**+1.6**
PB06				IAML		04 28 51.2	
	comp=Z,13μm,0.3s						
LVC	**Limon Verde**	**1.16**	**149**	P	**Pn**	**04 28 36.7**	**+1.6**
	comp=Z,312nm,0.3s,baz=0.2,slow=9.0,SNR=4231						
LVC				S	**Sn**	**04 28 51.9**	**+1.0**
	comp=Z,1μm,0.3s,baz=322,slow=12,SNR=140						
LVC				LR	LR	04 29 00.4	
	comp=Z,92nm,18.9s,baz=302,slow=43						
LVC	**Limon Verde**	**1.16**	**149**	⇓*eP*	**Pn**	**04 28 36.7**	**+1.6**
LVC				*eS*	**Sn**	**04 28 52.0**	**+1.1**
LVC	**Limon Verde**	**1.16**	**149**	Pn	**Pn**	**04 28 36.8**	**+1.6**
LVC				Sn	**Sn**	**04 28 53.0**	**+2.1**
LVC	**Limon Verde**	**1.16**	**149**	*eP*	**Pn**	**04 28 36.6**	**+1.5**
LVC				*eS*	**Sn**	**04 28 52.9**	**+2.0**
LVC				IAML		04 28 54.0	
	comp=Z,3μm,0.2s						
LVC	**Limon Verde**	**1.16**	**149**	*eP*	**Pn**	**04 28 36.8**	**+1.6**
LVC				*eS*	**Sn**	**04 28 53.3**	**+2.4**
TA01	**Diego Aracena**	**1.20**	**331**	⇑*iP*	**Pn**	**04 28 36.3**	**+1.0**
TA01				*eS*	**Sn**	**04 28 52.4**	**+1.2**
TA01	**Diego Aracena**	**1.20**	**331**	Pn	**Pn**	**04 28 36.4**	**+1.3**
TA01				Sn	**Sn**	**04 28 53.2**	**+2.1**
PB05	**IPOC Station P**	**1.37**	**206**	⇓*eP*	**Pn**	**04 28 38.6**	**+1.0**
PB05				*eS*	**Sn**	**04 28 56.3**	**+1.0**
PB05				IAML		04 29 01.6	
	comp=E,10μm,0.6s						
PB05	**IPOC Station P**	**1.37**	**206**	*eP*	**Pn**	**04 28 38.7**	**+1.0**
PB05				*eS*	**Sn**	**04 28 57.4**	**+2.1**
PB05				IAML		04 29 04.9	
	comp=Z,3μm,0.5s						
TA02	**Huaiquique**	**1.44**	**338**	⇑*iP*	**Pn**	**04 28 39.6**	**+1.2**
TA02				*eS*	**Sn**	**04 28 58.5**	**+1.7**
TA02				IAML		04 29 00.8	
	comp=N,7μm,0.4s						
PB08	**IPOC Station P**	**1.52**	**15**	⇑*iP*	**Pn**	**04 28 40.8**	**+1.0**
PB08				*eS*	**Sn**	**04 29 00.7**	**+1.6**
PB08				IAML		04 29 01.7	
	comp=N,3μm,0.3s						
PB08	**IPOC Station P**	**1.52**	**15**		**Pn**	**04 28 40.9**	**+1.0**
PB08				Sn	**Sn**	**04 29 00.4**	**+1.2**
PB08	**IPOC Station P**	**1.52**	**15**	*eP*	**Pn**	**04 28 40.8**	**+1.0**
PB08				*eS*	**Sn**	**04 29 00.8**	**+1.7**
PB08				IAML		04 29 01.2	
	comp=Z,2μm,0.5s						
PB15	**IPOC Station P**	**1.59**	**177**	⇑*iP*	**Pn**	**04 28 41.7**	**+1.1**
PB15				*eS*	**Sn**	**04 29 01.9**	**+1.4**
PB15	**IPOC Station P**	**1.59**	**177**		**Pn**	**04 28 42.0**	**+1.4**
PB15				Sn	**Sn**	**04 29 02.9**	**+2.4**
PB15	**IPOC Station P**	**1.59**	**177**	*eP*	**Pn**	**04 28 41.9**	**+1.4**
PB15				*eS*	**Sn**	**04 29 02.9**	**+2.4**
PB11	**IPOC Station P**	**1.85**	**357**	⇑*iP*	**Pn**	**04 28 44.5**	**+0.5**
PB11				*eS*	**Sn**	**04 29 08.0**	**+1.4**
PB11				IAML		04 29 17.5	
	comp=N,2μm,0.6s						
PB11	**IPOC Station P**	**1.85**	**357**	Pn	**Pn**	**04 28 44.8**	**+0.8**
PB11				Sn	**Sn**	**04 29 08.1**	**+1.4**
PB11	**IPOC Station P**	**1.85**	**357**	*eP*	**Pn**	**04 28 44.6**	**+0.6**
PB11				*eS*	**Sn**	**04 29 08.6**	**+1.9**
GO01	**Chusmiza**	**1.97**	**10**	⇑*iP*	**Pn**	**04 28 46.8**	**+0.9**
GO01				*eS*	**Sn**	**04 29 11.3**	**+1.2**
GO01				IAML		04 29 16.4	
	comp=N,3μm,0.2s						
GO01	**Chusmiza**	**1.97**	**10**	Pn	**Pn**	**04 28 46.8**	**+0.9**
PSGCX	**Pisagua**	**2.08**	**345**	Pn	**Pn**	**04 28 46.8**	**-0.2**
MNMC	**Minye Minye**	**2.47**	**359**	IAML		04 29 31.0	
	comp=E,3μm,0.8s						
MNMC	**Minye Minye**	**2.47**	**359**	Pn	**Pn**	**04 28 53.1**	**+0.6**
MNMCX	**Minye Minye**	**2.47**	**359**	*eP*	Pn	04 28 42.2	-10
PB14	**IPOC Station P**	**3.09**	**194**	Pn	**Pn**	**04 29 00.3**	**-0.6**
PB14	**IPOC Station P**	**3.09**	**194**	*eP*	**Pn**	**04 29 00.3**	**-0.6**
PB14				*eS*	Sn	04 29 24.4	-13
PB14				IAML		04 29 50.7	
	comp=Z,672nm,0.4s						
PB16	**IPOC Station P**	**3.27**	**1**	Pn	**Pn**	**04 29 05.0**	**+1.4**
GO02	**Mina Guanaco**	**3.53**	**180**	Pn	**Pn**	**04 29 07.2**	**+0.3**
VJA	**Yavi**	**3.80**	**99**	*eP*	**Pn**	**04 29 13.5**	**+3.9**
HJA	**Humahuaca**	**4.16**	**113**	*eP*	**Pn**	**04 29 19.3**	**+3.9**
AC01	**Pan de Azucar**	**4.61**	**192**	Pn	**Pn**	**04 29 19.3**	**-2.0**
SLA	**San Lorenzo**	**4.85**	**130**	*eP*	**Pn**	**04 29 28.2**	**+3.6**
AC02	**Maricunga**	**5.21**	**176**	Pn	**Pn**	**04 29 30.3**	**+0.4**
LPAZ	**La Paz**	**5.47**	**15**	P	**Pn**	**04 29 36.6**	**+3.0**
	comp=Z,2.5nm,0.3s,baz=197,slow=6.4,SNR=54						
LPAZ				LR	LR	04 32 06.5	
	comp=Z,73nm,21.5s,baz=246,slow=42						
LPAZ	**La Paz**	**5.47**	**15**	Pn	**Pn**	**04 29 36.3**	**+2.7**
LPAZ	**La Paz**	**5.47**	**15**	*eP*	**Pn**	**04 29 35.2**	**+1.6**
GO03	**Copiap**	**5.98**	**186**	Pn	**Pn**	**04 29 37.7**	**-2.4**
AHML	**Horco Molle**	**6.43**	**144**	*eP*	**Pn**	**04 29 49.2**	**+3.0**
AC04	**Llanos de Chal**	**6.70**	**192**	Pn	Pn	04 29 45.6	-4.4
AC05	**El Transito**	**7.22**	**185**	Pn	**Pn**	**04 29 54.6**	**-2.4**
LCO	**Las Campanas**	**7.43**	**188**	Pn	**Pn**	**04 29 57.1**	**-3.0**
CO01	**Juntas del Tor**	**8.34**	**183**	Pn	**Pn**	**04 30 10.1**	**-2.3**
GO04	**Tololo Observa**	**8.59**	**187**	Pn	Pn	04 30 11.2	-4.7
CO03	**El Pedregal**	**9.24**	**186**	Pn	Pn	04 30 20.4	-4.2
CO02	**Combarbal**	**9.63**	**187**	Pn	Pn	04 30 25.4	-4.6
SIV	**San Ignacio**	**9.79**	**57**	P	**Pn**	**04 30 30.5**	**-1.7**
	comp=Z,2.8nm,0.3s,baz=260,slow=9.1,SNR=86						
SIV				LR	LR	04 34 58.2	
	comp=Z,41nm,21.5s,baz=264,slow=42						
PTLB	**Pontes e Lacer**	**11.63**	**60**	*eP*	**Pn**	**04 30 54.6**	**-2.7**
CPUP	**Villa Florida**	**12.12**	**115**	Pn	**Pn**	**04 31 00.3**	**-3.6**
ETMB	**Extrema**	**12.17**	**16**	*eP*	**Pn**	**04 31 05.3**	**+0.8**
VILB	**Vilhena**	**12.41**	**48**	*eP*	**Pn**	**04 31 07.3**	**-0.5**
AQDB	**Aquidauana**	**12.99**	**87**	*eP*	**Pn**	**04 31 14.5**	**-1.2**
SAML	**Samuel**	**14.01**	**27**	Pn	**Pn**	**04 31 28.1**	**-1.0**
H03N1	**Juan Fernandez**	**14.39**	**213**	T	T	04 45 57.1	
	baz=37,slow=72,SNR=96						
H03N2	**Juan Fernandez**	**14.40**	**213**	T	T	04 45 55.6	
	baz=37,slow=72,SNR=85						
H03N3	**Juan Fernandez**	**14.41**	**213**	T	T	04 45 56.1	
	baz=37,slow=72,SNR=7.0						
TRCB	**Terra Rica**	**15.72**	**97**	*eP*	**Pn**	**04 31 49.4**	**-1.8**
CLDB	**Colider**	**16.98**	**53**	*eP*	**Pn**	**04 32 05.0**	**-1.9**
PCMB	**Pacaembu**	**17.02**	**93**	*eP*	**Pn**	**04 32 07.0**	**-0.4**
LC01	**Cunco**	**17.34**	**186**		**Pn**	**04 32 10.1**	**-1.0**
ARAG	**Araguaiana, MT**	**17.81**	**74**	*eP*	**P**	**04 32 16.5**	**-0.3**
FRTB	**Fartura**	**18.56**	**99**	*eP*	**P**	**04 32 25.0**	**0.0**
PLCA	**Paso Flores**	**19.08**	**182**	P	**P**	**04 32 30.1**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=353,slow=12,SNR=5.8						
PLCA	**Paso Flores**	**19.08**	**182**		**P**	**04 32 30.2**	**-0.4**
PLCA				IAmb	IAmb	04 33 07.1	
	comp=Z,18nm,1.7s						
SNDB	**Serra Nova Dou**	**19.92**	**64**	*eP*	**P**	**04 32 38.5**	**-1.5**
NPGB	**Novo Progresso**	**19.95**	**46**	*eP*	**P**	**04 32 40.1**	**-0.2**
MACA	**Manacapuru-AM**	**20.27**	**26**	*eP*	**P**	**04 32 44.6**	**+0.9**
LL01	**San Ignacio de**	**20.84**	**186**	P	**P**	**04 32 50.7**	**+1.1**
LL01				IAmb	IAmb	04 33 21.6	
	comp=Z,12nm,1.3s						
BDFB	**Brasilia**	**21.25**	**77**	P	**P**	**04 32 53.3**	**-1.2**
	comp=Z,1.8nm,0.4s,baz=256,slow=15,SNR=6.9						
BDFB	**Brasilia**	**21.25**	**77**	P	**P**	**04 32 56.0**	**+1.6**
ITTB	**Itaituba**	**21.77**	**40**	*eP*	**P**	**04 32 57.5**	**-2.3**
MALB	**Monte Alegre**	**24.65**	**39**	*eP*	**P**	**04 33 28.4**	**+0.5**
SMTB	**Santa Maria do**	**24.66**	**62**	*eP*	**P**	**04 33 27.5**	**-0.5**
JANB	**Januaria**	**24.82**	**79**	*eP*	**P**	**04 33 28.2**	**-1.4**
ROSC	**El Rosal**	**26.70**	**349**	LR	LR	04 44 43.4	
	comp=Z,71nm,18.7s,baz=56,slow=37						
MCPB	**Macapa, AP**	**27.16**	**41**	*eP*	**P**	**04 33 50.3**	**-0.3**
TXAR	**Lajitas Array**	**60.38**	**326**	P	**P**	**04 38 15.9**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=141,slow=3.5,SNR=2.5						
TXAR	**Lajitas Array**	**60.38**	**326**	P	**P**	**04 38 16.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**77.97**	**71**	P	**P**	**04 40 03.7**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=255,slow=5.3,SNR=11						
TORD	**Torodi Ar. Bea**	**77.97**	**71**	P	**P**	**04 40 04.0**	**-0.7**
MAW	**Mawson**	**84.39**	**163**	P	**P**	**04 40 38.7**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=249,slow=8.6,SNR=2.9						
MAW	**Mawson**	**84.39**	**163**	P	**P**	**04 40 38.8**	**+1.0**
MAW				IAmb	IAmb	04 43 29.3	
	comp=Z,3.0nm,1.8s						
H11S2	**WAKE ISLAND Hyl**	**27.29**	**277**	T	T	07 07 11.5	
	baz=103,slow=75,SNR=138						
H11S1	**WAKE ISLAND Hyl**	**27.30**	**277**	T	T	07 07 09.4	
	baz=103,SNR=145						
H11S3	**WAKE ISLAND Hyl**	**27.31**	**277**	T	T	07 07 10.9	
	baz=103,slow=75,SNR=95						
WRA	**Warramunga Arr**	**132.54**	**211**	PKP	**PKPdf**	**04 47 21.3**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=148,slow=1.9,SNR=6.9						
MKAR	**Makanchi Array**	**146.08**	**36**	PKPbc	**PKPbc**	**04 47 46.6**	**+1.1**
	comp=Z,1.0nm,1.0s,baz=306,slow=4.8,SNR=2.9						
MKAR	**Makanchi Array**	**146.08**	**36**	PKPdf	**PKPdf**	**04 47 45.2**	**+0.7**

*IDC **03** 05:00:36.2±1.5,27.33N×91.28E,h0km,mb3.7/8, mb1 3.9/8,mb1mx3.7/29,mbtmp3.8/8,Error ellipse: s-maj=43.5km s-min=27.9km az=54.0*

ISC 03 05:00:37.8±1.3,27.3N±0.2×91.3E±0.3,h10km,n8,σ0§35/8, mb3.7/7,Bhutan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**20.67**	**342**	P	**P**	**05 05 18.3**	**+0.5**
	1.8nm,0.8s,baz=151,slow=12,SNR=9.9						
SONM	**Songino Array**	**23.62**	**26**	P	**P**	**05 05 48.9**	**-0.2**
	0.3nm,0.4s,baz=234,slow=9.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**27.00**	**352**	P	**P**	**05 06 19.7**	**-0.1**
	1.0nm,0.6s,baz=180,slow=8.3,SNR=4.7						
AKASG	**Malin Array Be**	**51.85**	**314**	P	**P**	**05 09 45.7**	**-0.4**
	0.4nm,0.4s,baz=85,slow=6.2,SNR=2.2						
FINES	**FINESS Array B**	**54.55**	**328**	P	**P**	**05 10 06.2**	**+0.4**
	1.9nm,0.8s,baz=120,slow=8.2,SNR=1.9						
ARCES	**ARCESS Array B**	**56.22**	**337**	P	**P**	**05 10 17.8**	**+0.1**
	6.4nm,1.1s,baz=92,slow=8.1,SNR=1.5						
GERES	**GERESS Array B**	**62.01**	**313**	P	**P**	**05 10 58.2**	**-0.1**
	0.5nm,0.4s,baz=74,slow=7.2,SNR=6.9						
WRA	**Warramunga Arr**	**62.84**	**134**	P	**P**	**05 11 04.1**	**+0.1**
	0.5nm,0.9s,baz=317,slow=8.1,SNR=1.4						

*TEH **03** 05:31:49.6,32.79N×47.62E,h8km,ML3.2*
*ISN **03** 05:31:51.6±1.0,32.90N×47.60E,h14km±5km,ML2.9*

ISC 03 05:31:50.9±0.9,32.78N±0.04×47.62E±0.04,h10km,n25, σ1§13/28,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.77**	**14**	*e*		05 32 17.1	
IKFM				*e*Pg	**Pg**	**05 32 04.0**	**-1.7**
IKMR	**Kamar-syah**	**0.97**	**41**	*e*		05 32 25.6	
IKMR				*e*Pg	**Pg**	**05 32 07.7**	**-1.9**
IDOB	**Doab**	**1.11**	**25**	*e*Pg	**Pg**	**05 32 11.1**	**-1.1**
IDOB				*e*		05 32 30.5	
BMDN	**Meydan**	**1.34**	**48**	*e*Pg	**Pb**	**05 32 16.2**	**-0.1**
BMDN				*e*		05 32 43.0	
IKOM	**Komasi**	**1.39**	**356**	*e*Pg	**Pn**	**05 32 16.4**	**-0.2**
IKOM				*e*		05 32 18.1	
IBDR	**Badra**	**1.46**	**283**	*e*Pg	**Pn**	**05 32 17.0**	**-0.3**
IBDR				*e*Sg	**Sn**	**05 32 37.0**	**+0.5**
IBDR				AML	AML	05 32 40.2	
	comp=N,229nm,0.5s						
IBDR				AML	AML	05 32 40.6	
	comp=E,239nm,0.3s						
KCHF	**Cheshme Sefid,**	**1.57**	**342**	*e*Pg	**Pn**	**05 32 19.1**	**+0.1**
KCHF				*e*		05 32 45.0	
KER	**Kermanshah**	**1.65**	**346**	*e*Pn	**Pn**	**05 32 20.7**	**+0.6**
AHWZ	**Ahwaz**	**1.69**	**149**	*e*Pg	**Pb**	**05 32 22.1**	**+0.1**
IGHG	**Ghaleghazi**	**1.78**	**331**	*e*Pn	**Pn**	**05 32 22.9**	**+1.0**
IGHG				*e*		05 32 59.6	
IVIS	**Veis**	**1.86**	**340**	*e*Pn	**Pn**	**05 32 23.9**	**+1.0**
NSR	**Nassriya**	**2.17**	**216**	*e*Pn	**Pb**	**05 32 30.0**	**-0.3**
NSR				*e*Sn	**Sb**	**05 32 57.0**	**-0.2**
IDHR	**Dehrash**	**2.17**	**332**	*e*Pn	**Pn**	**05 32 28.6**	**+1.2**
IDHR				*e*		05 33 02.0	
ILIN	**Lien**	**2.20**	**346**	*e*Pn	**Pn**	**05 32 29.2**	**+1.4**
HAGD	**Aghdareh**	**2.40**	**31**	*e*Pn	**Pn**	**05 32 32.0**	**+1.6**
HAGD				*e*		05 32 37.1	
IPIR	**Pirpir**	**2.76**	**91**	*e*Pn	**Pn**	**05 32 36.4**	**+1.0**
BHD	**Baghdad**	**2.77**	**281**	*e*Pn	**Pn**	**05 32 37.0**	**+1.7**
BHD				*e*Sn	**Sn**	**05 33 10.0**	**+1.2**
IRAZ	**Razeghan**	**3.24**	**36**	*e*Pn	**Pn**	**05 32 43.4**	**+1.4**
QABG	**Abgarm-Qazvin**	**3.34**	**29**	*e*Pn	**Pn**	**05 32 44.8**	**+1.4**
IKLH	**Kolahrood**	**3.36**	**80**	*e*Pn	**Pn**	**05 32 45.1**	**+1.3**
IKLH				*e*		05 33 48.2	
KLNJ	**Kolanjah**	**3.81**	**117**	*e*Pn	**Pn**	**05 32 50.5**	**+0.5**
KRSH	**Karshahi**	**3.96**	**71**	*e*Pn	**Pn**	**05 32 53.2**	**+1.4**
IZEF	**Zefreh**	**3.96**	**87**	*e*Pn	**Pn**	**05 32 53.2**	**+1.2**
IVRN	**Varamin**	**4.07**	**56**	*e*Pn	**Pn**	**05 32 54.4**	**+1.2**
IRAM	**Rameshe'**	**4.14**	**102**	*e*Pn	**Pn**	**05 32 54.5**	**0.0**

*NEIC **03** 05:41:29.6±1.9,64.7N±0.1×17.6W±0.1,h8km±4km, mb4.7/20,Error ellipse: s-maj=15.2km s-min=8.4km az=189.0*
*REY **03** 05:41:29.1,64.67N×17.46W,h7km*
*IDC **03** 05:41:29.2±0.7,64.66N×17.59W,h0km,mb3.7/12, mb1 3.9/13,mb1mx3.8/41,mbtmp3.7/13,ML4.0/1,Error ellipse: s-maj=21.6km s-min=12.8km az=22.0*

ISC 03 05:41:29.6±0.4,64.69N±0.02×17.50W±0.02,h10km,n84, σ1§47/93,mb4.0/23,Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.11**	**260**	P	**Pg**	**05 41 31.9**	**-0.6**
	baz=270						
IDYN	**Dyngjuhals**	**0.12**	**31**	P	**Pg**	**05 41 32.0**	**-0.5**
	baz=19						
IGRF	**Grimsfjall**	**0.30**	**160**	P	**Pg**	**05 41 34.4**	**-1.4**
	baz=163						
IKVE	**Kverkfjoll**	**0.35**	**92**	P	**Pg**	**05 41 35.6**	**-1.1**
	baz=89						
ISKR	**Skrokkalda**	**0.40**	**251**	P	**Pg**	**05 41 36.9**	**-0.7**
	baz=254						
IHUS	**Husbondi**	**0.40**	**190**	P	**Pg**	**05 41 36.6**	**-1.0**
	baz=193						
THOR	**Thorvaldshraun**	**0.43**	**55**	P	**Pg**	**05 41 37.1**	**-0.9**
	baz=52						
IKRE	**Kreppuhraun**	**0.49**	**79**	P	**Pg**	**05 41 37.6**	**-1.6**
	baz=76						
IKRE				S	**Sg**	**05 41 44.6**	**-1.0**
	baz=76						
IJOK	**Jokulheimar**	**0.49**	**220**	P	**Pg**	**05 41 38.1**	**-1.1**
	baz=223						
IASK	**Askja**	**0.51**	**45**	P	**Pg**	**05 41 38.5**	**-1.1**
	baz=42						
ISVA	**Svartarkot**	**0.66**	**9**	P	**Pg**	**05 41 41.2**	**-1.1**
	baz=7.4						
ISVA				S	**Sg**	**05 41 50.9**	**0.0**
	baz=7.4						
IKSK	**Karasker**	**0.69**	**140**	P	**Pg**	**05 41 40.5**	**-2.5**
	baz=140						
IKAL	**Kalfafell**	**0.75**	**186**	P	**Pg**	**05 41 42.4**	**-1.7**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**81**	P	**Pg**	**05 41 42.3**	**-2.1**
	baz=79						
IVSH				S	**Sg**	**05 41 52.9**	**-1.6**
	baz=79						
IADA	**Aoalbol**	**0.89**	**67**	P	**Pg**	**05 41 44.4**	**-2.3**
	baz=66						
IADA				S	**Sg**	**05 41 56.4**	**-1.8**
	baz=66						
IHVE	**Hveravellir**	**0.90**	**282**	P	**Pg**	**05 41 45.2**	**-1.8**
	baz=283						
IHVE				S	**Sg**	**05 41 58.1**	**-0.6**
	baz=283						
IMEL	**Melhnausar**	**0.95**	**22**	P	**Pg**	**05 41 46.0**	**-2.0**
	baz=20						
IREN	**Reynihlio**	**0.99**	**14**	P	**Pg**	**05 41 46.7**	**-2.0**
	baz=13						
IKVO	**Krokottuvotn**	**1.06**	**14**	P	**Pg**	**05 41 47.8**	**-2.2**
	baz=13						
ISNB	**Snabyli**	**1.08**	**208**	P	**Pg**	**05 41 48.1**	**-2.2**
	baz=209						
IGRS	**Grimsstaoir**	**1.11**	**31**	P	**Pb**	**05 41 48.7**	**-2.3**
	baz=30						
IGRS				S	**Sg**	**05 42 05.0**	**-0.5**
	baz=30						
ISLY	**Slysaalda**	**1.12**	**220**	P	**Pb**	**05 41 48.9**	**-2.2**
	baz=221						
IFED	**Fedgar**	**1.16**	**236**	P	**Pb**	**05 41 50.1**	**-1.7**
	baz=237						
IRJU	**Rjupnafell**	**1.20**	**206**	P	**Pb**	**05 41 50.1**	**-2.2**
	baz=207						
ISKI	**Skildingahlsh**	**1.20**	**9**	P	**Pb**	**05 41 50.1**	**-2.3**
	baz=8.4						
IMJO	**Mjoaskard**	**1.21**	**232**	P	**Pb**	**05 41 50.9**	**-1.8**
	baz=233						
IGRA	**Granastaoir**	**1.23**	**359**	P	**Pn**	**05 41 50.6**	**-2.3**
	baz=358						
IGYG	**Gygjarholskot**	**1.25**	**252**	P	**Pn**	**05 41 50.8**	**-2.2**
	baz=253						
IHED	**Heoinshofoi**	**1.40**	**3**	P	**Pn**	**05 41 53.2**	**-2.0**
	baz=2.5						
IHED				S	**Sn**	**05 42 12.4**	**-1.2**
	baz=2.5						
BORG	**Borgarnes**	**1.64**	**274**	Pn	**Pn**	**05 41 57.3**	**-1.1**
	21nm,0.3s,baz=98,slow=9.3,SNR=52						
BORG				Sn	**Sg**	**05 42 21.0**	**-1.4**
	7.9nm,0.3s,baz=62,slow=18,SNR=3.0						
BORG	**Borgarnes**	**1.64**	**274**	Pn	**Pn**	**05 41 57.4**	**-1.1**
BORG					**Sb**	**05 42 20.1**	**-0.5**
SUMG	**Summit**	**10.92**	**325**	Pn	**Pn**	**05 44 08.5**	**+2.5**
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn	**Pn**	**05 44 18.2**	**+0.8**
	baz=323,slow=13,SNR=7.8						
ESK	**Eskdalemuir**	**11.78**	**136**	Pn	**Pn**	**05 44 17.8**	**+0.3**
NBO00	**NORSAR Array S**	**13.35**	**93**	Pn	**Pn**	**05 44 39.1**	**+0.2**
SFJD	**Kangerlussuaq**	**13.65**	**295**	Pn	**P**	**05 44 47.4**	**-4.5**
	0.2nm,0.3s,baz=105,slow=20,SNR=3.7						
SFJD	**Kangerlussuaq**

Ms1 3.2/11,ms1mx3.0/45,Error ellipse: s-maj=45.0km s-min=22.0km az=44.0
*ANF **03** 05:54:09.3±1.1,43.96N×128.96W,h0km,ML3.8/8,Error ellipse: s-maj=10.9km s-min=7.9km az=76.0*
*NEIC **03** 05:54:11.6±2.4,44.11N±0.07×129.10W±0.1,h10km±2km, mb4.1/18,Error ellipse: s-maj=15.5km s-min=11.4km az=243.0*

ISC 03 05:54:08.6±1.0,**44.04N**±0.07×**129.23W**±0.0,**h10**km, **n142**,σ1$41/148,**MS3.2**/6,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**3.75**	**106**		Pn		**Pn**	**05 55 04.7**	**-1.9**
KEBM					Sn		**Sn**	**05 55 48.8**	**-2.0**
I02D	**Swisshome**	**3.88**	**87**	P	Pn		**Pn**	**05 55 07.7**	**-0.5**
	baz=273,SNR=97								
I02D				S	Sn		**Sn**	**05 55 52.4**	**-1.4**
	baz=273								
J01E	**Myrtle Point**	**3.95**	**101**	P	Pn		**Pn**	**05 55 07.6**	**-1.6**
	baz=286,SNR=22								
J01E				S	Sn		**Sn**	**05 55 53.5**	**-2.0**
	baz=286								
KBO	**Bosley Butte**	**4.09**	**115**	Pn	Pn		**Pn**	**05 55 09.7**	**-1.6**
KBO				Sn	Sn		**Sn**	**05 56 00.0**	**+0.8**
I03D	**Drain, OR**	**4.27**	**93**	P	Pn		**Pn**	**05 55 12.6**	**-0.9**
	baz=278,SNR=22								
I03D				S	Sn		**Sn**	**05 56 02.4**	**-1.0**
	baz=278								
K02D	**Willamette Mer**	**4.27**	**106**	P	Pn		**Pn**	**05 55 11.8**	**-1.9**
	baz=291,SNR=54								
K02D				S	Sn		**Sn**	**05 56 01.2**	**-2.5**
	baz=291								
COR	**Corvallis**	**4.29**	**81**				**Pn**	**05 55 13.0**	**-0.8**
COR					Sn		**Sn**	**05 56 03.6**	**-0.3**
G03D	**McMinnville, O**	**4.42**	**73**	P	Pn		**Pn**	**05 55 15.2**	**-0.5**
	baz=259,SNR=5.6								
G03D				S	Sn		**Sn**	**05 56 06.6**	**-0.5**
	baz=259								
L02E	**Cave Junction**	**4.53**	**113**	P	Pn		**Pn**	**05 55 15.9**	**-1.4**
	baz=297,SNR=16								
L02E				S	Sn		**Sn**	**05 56 06.9**	**-3.1**
	baz=297								
KRMB	**Red Mountain**	**4.66**	**121**	Pn	Pn		**Pn**	**05 55 17.9**	**-1.2**
H04D	**Lebanon**	**4.69**	**82**	P	Pn		**Pn**	**05 55 19.6**	**+0.2**
	baz=268,SNR=9.9								
H04D				S	Sn		**Sn**	**05 56 13.8**	**+0.1**
	baz=268								
E03A	**Lebam**	**4.72**	**56**	Pn	Pn		**Pn**	**05 55 19.3**	**-0.5**
E03A				Sn	Sn		**Sn**	**05 56 12.9**	**-1.6**
HUMO	**Hull Mountain**	**4.79**	**105**		Pn		**Pn**	**05 55 19.9**	**-1.0**
HUMO				Sn	Sn		**Sn**	**05 56 16.0**	**-0.5**
F04D	**Rainier, OR**	**4.86**	**63**	P	Pn		**Pn**	**05 55 21.6**	**0.0**
	baz=250								
I04A	**Tendick Farm,**	**4.93**	**91**	P	Pn		**Pn**	**05 55 21.9**	**-0.9**
	baz=277,SNR=69								
JCC	**Jacoby Creek,**	**5.02**	**128**	Pn	Pn		**Pn**	**05 55 26.1**	**+2.2**
NLWA	**Neilton Lookou**	**5.03**	**46**	Pn	Pn		**Pn**	**05 55 24.2**	**+0.1**
NLWA				Sn	Sn		**Sn**	**05 56 21.5**	**-0.8**
H04A	**Detroit Lake**	**5.09**	**80**		Pn		**Pn**	**05 55 25.6**	**+0.7**
H04A				Sn	Sn		**Sn**	**05 56 23.4**	**-0.4**
KHMM	**Horse Mountain**	**5.15**	**126**	Pn	Pn		**Pn**	**05 55 27.4**	**+1.5**
F04A	**Amboy**	**5.19**	**66**		Pn		**Pn**	**05 55 27.2**	**+1.0**
J04D	**Umpqua Nationa**	**5.23**	**96**	P	Pn		**Pn**	**05 55 28.2**	**+1.2**
	baz=283,SNR=21								
YBH	**Yreka Blue Hor**	**5.32**	**113**	Pn	Pn		**Pn**	**05 55 28.1**	**0.0**
	0.9nm,0.3s,baz=314,slow=12,SNR=34								
YBH					Sn		Sn	05 56 19.1	-10
	0.2nm,0.3s,baz=333,slow=11,SNR=2.7								
YBH					LR		LR	05 56 25.7	
	comp=Z,36nm,21.8s,baz=296,slow=26								
YBH	**Yreka Blue Hor**	**5.32**	**113**		Pn		**Pn**	**05 55 28.5**	**+0.4**
E04D	**Cinebar**	**5.33**	**60**	P	Pn		**Pn**	**05 55 28.3**	**+0.1**
	baz=247,SNR=27								
L04D	**Klamath Falls**	**5.38**	**107**	P	Pn		**Pn**	**05 55 28.9**	**-0.2**
	baz=293,SNR=20								
M02C	**Callahan**	**5.39**	**117**	P	Pn		**Pn**	**05 55 28.5**	**-0.6**
	baz=302,SNR=5.9								
D04E	**Lakebay**	**5.51**	**53**	P	Pn		**Pn**	**05 55 30.1**	**-0.5**
	baz=240								
D03D	**Eldon**	**5.54**	**49**	P	Pn		**Pn**	**05 55 30.2**	**-0.8**
	baz=236,SNR=16								
KMRM	**Mail Ridge**	**5.60**	**131**	Pn	Pn		**Pn**	**05 55 33.8**	**+1.7**
I05D	**Terrebonne, OR**	**5.68**	**84**	P	Pn		**Pn**	**05 55 32.8**	**-0.2**
	baz=271								
G05D	**Wamic, OR**	**5.77**	**75**	P	Pn		**Pn**	**05 55 35.6**	**+1.3**
	baz=263,SNR=8.9								
F05D	**White Salmon**	**5.81**	**69**	P	Pn		**Pn**	**05 55 35.7**	**+0.9**
	baz=256,SNR=23								
J05D	**Fort Rock, OR**	**5.85**	**95**	P	Pn		**Pn**	**05 55 36.0**	**+0.6**
	baz=281,SNR=28								
LON	**Longmire**	**5.88**	**60**				**Pn**	**05 55 36.3**	**+0.4**
D05A	**Enumclaw**	**5.97**	**56**				**Pn**	**05 55 38.0**	**+0.9**
PINE	**Pine Mountain**	**5.99**	**90**				**Pn**	**05 55 38.6**	**+1.1**
PGC	**Sidney**	**6.10**	**39**	Pn	Pn		**Pn**	**05 55 38.3**	**-0.5**
K05A	**Summer Lake**	**6.21**	**99**	Pn	Pn		**Pn**	**05 55 41.1**	**+0.6**
B05A	**Bryant**	**6.51**	**47**	P	Pn		**Pn**	**05 55 44.3**	**0.0**
	baz=234,SNR=34								
LTY	**Liberty**	**6.81**	**59**				**Pn**	**05 55 49.5**	**+1.0**
HOPS	**Hopland Field**	**6.84**	**135**	Pn	Pn		**Pn**	**05 55 50.8**	**+1.8**
B06A	**Marblemount**	**6.99**	**47**				**Pn**	**05 55 51.7**	**+0.6**
I07A	**Idaho**	**7.01**	**86**				**Pn**	**05 55 52.9**	**+1.5**
E07A	**Sunnyside**	**7.07**	**66**	Pn	Pn		**Pn**	**05 55 53.2**	**+1.0**
HAWA	**Hanford**	**7.24**	**68**				**Pn**	**05 55 56.2**	**+1.7**
ORV	**Oroville**	**7.31**	**125**	Pn	Pn		**Pn**	**05 55 58.7**	**+3.3**
G08A	**Pilot Rock**	**7.43**	**77**				**Pn**	**05 55 57.8**	**+0.7**
BEKR	**Beckworth**	**7.81**	**119**	Pn	Pn		**Pn**	**05 56 02.8**	**+0.3**
J08A	**Circle Bar Ran**	**7.83**	**91**				**Pn**	**05 56 03.6**	**+1.0**
D08A	**Wollman Farm,**	**7.84**	**64**	Pn	Pn		**Pn**	**05 56 03.6**	**+1.0**
AFDM	**Forest Hills D**	**8.02**	**127**	Pn	Pn		**Pn**	**05 56 06.9**	**+1.8**
B08A	**Colville Reser**	**8.11**	**54**	Pn	Pn		**Pn**	**05 56 06.7**	**+0.4**
BBB	**Bella Bella**	**8.18**	**5**	Pn	Pn		**Pn**	**05 56 10.2**	**+2.9**
	0.5nm,0.3s,baz=117,slow=22,SNR=6.1								
BBB	**Bella Bella**	**8.18**	**5**				**Pn**	**05 56 08.9**	**+1.6**
E09A	**Wood Farm, Sta**	**8.20**	**69**				**Pn**	**05 56 08.8**	**+1.2**
C09A	**Chrisman Ranch**	**8.51**	**60**	Pn	Pn		**Pn**	**05 56 12.1**	**+0.2**
BMO	**Blue Mountains**	**8.57**	**80**				**Pn**	**05 56 13.8**	**+1.0**
F10A	**Beach Ranch, E**	**8.72**	**73**				**Pn**	**05 56 15.8**	**+0.9**
PNTR	**Pine Nut**	**8.75**	**121**				**Pn**	**05 56 18.8**	**+3.5**
CMB	**Columbia Colle**	**8.98**	**129**	Pn	Pn		**Pn**	**05 56 21.3**	**+3.0**
WAKR	**Walker**	**9.21**	**124**				**Pn**	**05 56 24.3**	**+2.6**
NEW	**Newport**	**9.40**	**59**	Pn	Pn		**Pn**	**05 56 23.3**	**-0.9**
	0.9nm,0.3s,baz=246,slow=12,SNR=15								
NEW	**Newport**	**9.40**	**59**	P	Pn		**Pn**	**05 56 23.2**	**-0.5**
	baz=249								
NEW	**Newport**	**9.40**	**59**	Pn	Pn		**Pn**	**05 56 23.6**	**-0.5**
PLID	**Pearl Lake**	**9.50**	**79**	Pn	Pn		**Pn**	**05 56 27.0**	**+1.3**
LHV	**Little Huntoon**	**9.94**	**122**	Pn	Pn		**Pn**	**05 56 34.2**	**+2.8**
HLID	**Hailey**	**10.72**	**87**	P	Pn		**Pn**	**05 56 43.9**	**+1.6**
	baz=278,SNR=12								
HLID	**Hailey**	**10.72**	**87**				**Pn**	**05 56 43.6**	**+1.2**
ELK	**Elko**	**10.86**	**103**	Pn	Pn		**Pn**	**05 56 45.8**	**+1.5**
	0.1nm,0.3s,baz=266,slow=8.8,SNR=2.2								
ELK					LR		LR	06 01 10.8	
	comp=Z,90nm,20.8s,baz=296,slow=39								
JTMT	**Jette**	**11.05**	**65**				**Pn**	**05 56 46.7**	**-0.2**
MSO	**Missoula**	**11.10**	**70**	P	Pn		**Pn**	**05 56 48.2**	**+0.8**
	baz=262								
MSO	**Missoula**	**11.10**	**70**				**Pn**	**05 56 48.3**	**+0.8**
BCYI	**Bear Canyon**	**11.37**	**83**	Pn	Pn		**Pn**	**05 56 53.2**	**+2.0**
WALA	**Waterton Lakes**	**11.67**	**59**	Pn	Pn		**Pn**	**05 56 56.2**	**+0.9**
MCMT	**McKenzie Canyo**	**11.74**	**80**	Pn	Pn		**Pn**	**05 56 58.8**	**+2.5**
ISA	**Isabella, Lake**	**11.75**	**132**	Pn	Pn		**Pn**	**05 56 58.9**	**+2.5**
DLMT	**Dillon**	**11.91**	**78**				**Pn**	**05 57 00.4**	**+1.8**
BOZ	**Bozeman (W)**	**12.60**	**77**	P	Pn		**Pn**	**05 57 07.8**	**-0.1**
	baz=270,SNR=5.4								
BOZ	**Bozeman (W)**	**12.60**	**77**				**Pn**	**05 57 09.7**	**+1.7**
PRN	**Pahroc Range**	**12.62**	**117**	Pn	Pn		**Pn**	**05 57 10.1**	**+1.7**
QLMT	**Earthquake Lak**	**12.75**	**80**	Pn	Pn		**Pn**	**05 57 10.9**	**+0.8**
YHB	**Horse Butte**	**12.92**	**81**				**Pn**	**05 57 13.1**	**+0.7**
YHL	**Hebgen Lake**	**12.92**	**80**				**Pn**	**05 57 13.5**	**+0.9**
GSC	**Goldstone, Bar**	**12.94**	**128**				**Pn**	**05 57 15.0**	**+2.4**
SHPR	**Sheep Range**	**13.11**	**120**	Pn	Pn		**Pn**	**05 57 18.0**	**+3.0**
YHH	**Holmes Hill**	**13.16**	**80**				**Pn**	**05 57 17.4**	**+1.6**
IMW	**Indian Meadow**	**13.18**	**84**				**Pn**	**05 57 17.5**	**+1.5**
YPP	**Pitchstone Pla**	**13.24**	**83**				**Pn**	**05 57 17.8**	**+1.0**
REDW	**Red Top Meadow**	**13.32**	**87**	Pn	Pn		**Pn**	**05 57 19.7**	**+1.8**
FLWY	**Flagg Ranch**	**13.33**	**83**				**Pn**	**05 57 18.8**	**+0.8**
H17A	**Grant Village**	**13.39**	**82**				**Pn**	**05 57 18.9**	**+0.1**
CCUT	**Cedar City**	**13.65**	**113**				**Pn**	**05 57 22.6**	**+0.2**
SZCU	**Shurtz Canyon**	**13.81**	**112**				**Pn**	**05 57 26.8**	**+2.2**
MSU	**Marysvale**	**13.96**	**107**				**Pn**	**05 57 26.6**	**0.0**
LCMT	**Little Creek M**	**14.03**	**115**				**Pn**	**05 57 28.3**	**+0.8**
EGMT	**Eagleton**	**14.10**	**67**	Pn	Pn		**Pn**	**05 57 27.2**	**-1.1**
RLMT	**Red Lodge**	**14.27**	**79**				**Pn**	**05 57 30.5**	**-0.4**
TMUT	**Trail Mountain**	**14.27**	**103**				**Pn**	**05 57 31.5**	**+0.5**
KNB	**Kanab**	**14.30**	**114**	Pn			**Pn**	**05 57 31.8**	**+0.5**
PDAR	**Pinedale Array**	**14.36**	**88**	Pn			**Pn**	**05 57 34.5**	**+2.4**
	0.1nm,0.3s,baz=276,slow=13,SNR=5.7								
PDAR				LR			LR	06 02 50.0	
	comp=Z,164nm,19.3s,baz=280,slow=37								
PDAR	**Pinedale Array**	**14.36**	**88**				**Pn**	**05 57 35.1**	**+3.0**
PFO	**Pinyon Flats O**	**14.39**	**132**	LR			LR	06 02 19.9	
	comp=Z,109nm,18.6s,baz=324,slow=34								
DLBC	**Dease Lake**	**14.43**	**358**	LR			LR	06 02 25.3	
	comp=Z,175nm,19.5s,baz=36,slow=35								
Q16A	**Castle Valley**	**14.46**	**105**				**Pn**	**05 57 33.6**	**+0.1**
RDMU	**Red Mountain**	**14.95**	**97**				**Pn**	**05 57 41.9**	**+1.7**
MONP2	**Monument Peak**	**14.96**	**134**	P			**Pn**	**05 57 41.7**	**+1.4**
	baz=322,SNR=5.6								
O20A	**White River Ci**	**16.05**	**97**				**P**	**05 57 56.6**	**-1.4**
O20A				IAmb			IAmb	05 58 08.0	
	comp=Z,12nm,0.9s								
WUAZ	**Wupatki**	**16.13**	**116**				**Pn**	**05 57 56.5**	**+1.0**
PV23	**Carpenter Ridg**	**16.18**	**103**				**Pn**	**05 57 57.3**	**+1.0**
PV23				IAmb			IAmb	05 58 07.5	
	comp=Z,32nm,1.5s								
MVCO	**Mesa Verde**	**17.13**	**106**	P			**P**	**05 58 09.7**	**-0.2**
MVCO				IAmb			IAmb	05 58 24.8	
	comp=Z,7.0nm,0.9s								
SMCO	**Snowmass**	**17.32**	**99**	P			**P**	**05 58 12.7**	**+0.4**
W18A	**Petrified Fore**	**17.44**	**114**	P			**P**	**05 58 13.7**	**+0.4**
W18A				IAmb			IAmb	05 58 25.2	
	comp=Z,12nm,1.1s								
N23A	**Red Feather La**	**17.45**	**92**				**P**	**05 58 13.9**	**+0.4**
N23A				IAmb			IAmb	05 58 27.1	
	comp=Z,17nm,1.4s								
RSSD	**Black Hills**	**18.09**	**81**	P			**P**	**05 58 20.4**	**-0.1**
SDCO	**Great Sand Dun**	**18.98**	**101**	P			**Pn**	**05 58 32.0**	**+1.0**
	baz=297,SNR=6.9								
SDCO	**Great Sand Dun**	**18.98**	**101**	P			**P**	**05 58 29.7**	**-0.7**
SDCO				IAmb			IAmb	05 58 41.4	
	comp=Z,11nm,1.2s								
ANMO	**Albuquerque**	**19.73**	**110**	P			**Pn**	**05 58 42.0**	**+2.0**
	baz=306,slow=12,SNR=1.8								
ANMO	**Albuquerque**	**19.73**	**110**	P			**P**	**05 58 38.8**	**+0.3**
T25A	**Trinidad**	**20.02**	**102**	P			**Pn**	**05 58 43.7**	**+0.2**
	baz=298,SNR=6.4								
T25A	**Trinidad**	**20.02**	**102**				**P**	**05 58 41.9**	**+0.1**
T25A				IAmb			IAmb	05 58 48.8	
	comp=Z,13nm,1.1s								
BNM	**Barren Site**	**20.07**	**112**	P			**P**	**05 58 41.9**	**-0.4**
121A	**Cookes Peak, D**	**20.32**	**117**	P			**P**	**05 58 45.1**	**+0.2**
FFC	**Flin Flon**	**20.58**	**49**	P			**P**	**05 58 47.4**	**0.0**
FFC				IAmb			IAmb	05 58 55.7	
	comp=Z,21nm,1.2s								
K31A	**O'Neill**	**22.16**	**83**				**P**	**05 59 04.9**	**+0.4**
ILAR	**Eielson Array**	**23.01**	**341**	P			**P**	**05 59 11.8**	**-1.6**
	comp=Z,2.2nm,1.1s,baz=156,slow=7.9,SNR=11								
ILAR				LR			LR	06 06 51.0	
	comp=Z,82nm,18.1s,baz=158,slow=33								
ILAR	**Eielson Array**	**23.01**	**341**	P			**P**	**05 59 14.1**	**+0.7**
F33A	**5 Mile Ranch,**	**23.30**	**74**	P			**P**	**05 59 18.4**	**+2.0**
F33A				IAmb			IAmb	05 59 24.4	
	comp=Z,8.1nm,0.7s								
ULM	**Lac du Bonnet**	**23.38**	**63**	P			**P**	**05 59 14.8**	**-2.4**
	comp=Z,4.4nm,1.1s,baz=285,slow=12,SNR=2.8								
ULM				LR			LR	06 08 29.2	
	comp=Z,77nm,20.6s,baz=280,slow=37								
ULM	**Lac du Bonnet**	**23.38**	**63**	P			**P**	**05 59 18.9**	**+1.6**
ULM				IAmb			IAmb	05 59 21.1	
	comp=Z,6.4nm,1.0s								
L34A	**Svendsen Farm,**	**24.03**	**83**	P			**P**	**05 59 27.1**	**+3.5**
INK	**Inuvik**	**24.43**	**356**	LR			LR	06 07 49.8	
	comp=Z,44nm,21.9s,baz=186,slow=34								
KSU1	**Kansas State U**	**24.80**	**90**	P			**P**	**05 59 31.9**	**+1.3**
BMAR	**Burnt Mountain**	**24.84**	**346**	P			**P**	**05 59 31.3**	**+0.5**
TXAR	**Lajitas Array**	**25.08**	**117**	P			**P**	**05 59 33.5**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=317,slow=6.4,SNR=3.0								
TXAR				LR			LR	06 09 48.6	
	comp=Z,44nm,20.2s,baz=0.0,slow=38								
TXAR	**Lajitas Array**	**25.08**	**117**	P			**P**	**05 59 34.2**	**+0.9**
LPIG	**La Paz**	**25.21**	**136**	LR			LR	06 08 21.6	
	comp=Z,69nm,18.4s,baz=322,slow=34								
H11N3	**WAKE ISLAND Hy**	**57.88**	**267**	T			T	07 06 33.5	
	baz=49,slow=75,SNR=1833								
H11N2	**WAKE ISLAND Hy**	**57.88**	**267**	T			T	07 06 32.5	
	baz=49,slow=75,SNR=879								
H11N1	**WAKE ISLAND Hy**	**57.90**	**267**	T			T	07 06 30.8	
	baz=49,slow=75,SNR=871								
KIRV	**Kirov**	**77.73**	**1**	LR			LR	06 47 24.2	
	comp=Z,23nm,18.0s,baz=265,slow=41								
HHC	**Hu-ho-hao-te**	**79.37**	**318**	*eP*			**P**	**06 06 12.5**	**-2.3**
HHC				pmax			pmax		
	comp=Z,13nm,0.8s								
HHC				pmax			pmax		
	comp=Z,610nm,6.6s								
WMQ	**Urumqi**	**86.52**	**334**	*eP*			**P**	**06 06 51.3**	**-0.4**

*IDC **03** 06:03:11.1±1.4,8.94S×150.23E,h0km,mb3.7/4, mb1 3.9/8,mb1mx3.8/28,mbtmp3.8/8,ML3.1/3,MS3.1/8, Ms1 3.1/8,ms1mx2.9/25,Error ellipse: s-maj=32.1km s-min=21.3km az=126.0*

ISC 03 06:03:12.8±0.9,**9.0S**±0.1×**150.3E**±0.1,**h10**km,**n14**, σ0$95/11,**mb3.7/4**,**MS3.0**/5,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.11**	**262**	Pn	Pn		**Pn**	**06 04 01.3**	**-0.6**
	25nm,0.3s,baz=43,slow=8.4,SNR=14								
PMG					Sn		**Sn**	**06 04 40.6**	**+1.5**
	20nm,0.3s,baz=124,slow=14,SNR=3.4								
PMG					LR		LR	06 05 21.8	
	comp=Z,357nm,22.0s,baz=122,slow=42								
KRVT	**Keravat (AS076**	**4.95**	**21**	Pn	Pn		**Pn**	**06 04 27.1**	**-0.1**
	22nm,0.3s,baz=216,slow=2.1,SNR=8.0								
KRVT					Sn		**Sn**	**06 05 25.5**	**+0.9**
	36nm,0.3s,baz=307,slow=23,SNR=8.3								
HNR	**Honiara**	**9.56**	**94**	LR	LR		LR	06 08 38.1	
	comp=Z,86nm,21.4s,baz=264,slow=34								
CTA	**Charters Tower**	**11.72**	**199**	Pn	Pn		**Pn**	**06 06 01.1**	**+0.9**
	0.2nm,0.3s,baz=45,slow=13,SNR=1.6								
WRA	**Warramunga Arr**	**18.88**	**233**	P	P		**P**	**06 07 33.1**	**-0.4**
	0.1nm,0.3s,baz=58,slow=11,SNR=17								
WRA					LR		LR	06 14 31.5	
	comp=Z,46nm,18.4s,baz=135,slow=36								
DZM	**Mont Dzumac**	**20.28**	**132**	LR	LR		LR	06 14 14.4	
	comp=Z,172nm,19.9s,baz=274,slow=33								
SIJI	**Sorong**	**20.57**	**292**	LR	LR		LR	06 18 05.5	
	comp=Z,30nm,18.5s,baz=339,slow=44								
ASAR	**Alice Springs**	**21.42**	**225**	P	P		**P**	**06 08 01.2**	**0.0**
	1.1nm,0.6s,baz=60,slow=9.6,SNR=18								
STKA	**Stephens Creek**	**24.18**	**198**	P	P		**P**	**06 08 28.6**	**-0.8**
	1.6nm,0.7s,baz=3.5,slow=9.8,SNR=2.9								
STKA					LR		LR	06 17 18.9	
	comp=Z,48nm,19.4s,baz=27,slow=35								
FITZ	**Fitzroy Crossi**	**25.58**	**247**	P	P		**P**	**06 08 41.5**	**-0.9**
	2.3nm,0.6s,baz=82,slow=7.7,SNR=5.8								
BATI	**Baumata**	**26.27**	**265**	LR	LR		LR	06 20 00.0	
	comp=Z,76nm,21.2s,baz=65,slow=38								
CMAR	**Chiang Mai Arr**	**57.51**	**299**	LR	LR		LR	06 39 21.9	
	comp=Z,3.9nm,18.2s,baz=100,slow=38								
VNDA	**Vanda**	**68.79**	**177**	P	P		**P**	**06 14 17.2**	**+0.5**
	0.3nm,0.5s,baz=326,slow=4.8,SNR=4.0								
TORD	**Torodi Ar. Bea**	**148.90**	**281**	PKPbc		**PKPbc**		**06 23 00.8**	**-1.1**
	0.9nm,0.6s,baz=59,slow=1.9,SNR=5.1								

*NEIC **03** 06:25:08.3±1.8,4.77N±0.09×32.65W±0.10,h10km±1km, mb4.9/90,Error ellipse: s-maj=17.5km s-min=13.6km az=308.0*
*IDC **03** 06:25:08.4±0.5,4.83N×32.64W,h0km,mb4.3/20, mb1 4.4/22,mb1mx4.2/54,mbtmp4.3/22,ML3.6/2,MS4.0/32, Ms1 4.0/32,ms1mx4.0/34,Error ellipse: s-maj=18.5km s-min=12.8km az=146.0*
*GCMT **03** 06:25:12.3±0.2,4.80N±0.02×32.66W±0.01,h12km, MW4.9/112,Moment Tensor Solution. s34,c39; s112,c166; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=2.67±.07; Mθθ=0.12±.08; Mϕϕ2.79±.06; Mrθ=-1.12±.32; Mθϕ0.01±.06; Mϕr0.80±.22; Best double couple: M0 3.05000×10^16^ NP1:ϕs 19.00000°,δ40.00000°, λ-59.00000°. NP2:ϕs161.00000°,δ57.00000°, λ-113.00000°. Principal axes: T 2.9120, Plg9.0000°, Azm267.0000°; N 0.2730, Plg19.0000°, Azm174.0000°; P -3.1880, Plg69.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 06:25:09.4±0.3,**4.87N**±0.07×**32.67W**±0.06,**h10**km,**n195**, σ1$55/167,**mb4.8**/65,**MS4.1**/30,**Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NBMO	**Morrinhos-CE**	**10.96**	**222**	*eP*			**Pn**	**06 27 46.6**	**+0.1**
RCBR	**Riachuelo**	**11.10**	**197**	Pn			**Pn**	**06 27 47.9**	**-0.5**
	0.3nm,0.3s,baz=15,slow=16,SNR=3.8								
RCBR					Sn		Sn	06 29 43.6	-9.1
	0.3nm,0.3s,baz=102,slow=20,SNR=3.9								
RCBR					LR		LR	06 31 09.5	
	comp=Z,670nm,20.4s,baz=9.0,slow=33								
RCBR	**Riachuelo**	**11.10**	**197**				**Pn**	**06 27 46.4**	**-2.0**
SACV	**Santiago Islan**	**13.43**	**41**	Pn			**Pn**	**06 28 19.6**	**-0.6**
ROSB	**Rosrio**	**13.80**	**236**	*eP*			**Pn**	**06 28 22.6**	**-2.6**
TMAB	**Tom-Au,PA,Br**	**17.00**	**245**	*eP*			**Pn**	**06 29 06.4**	**-1.1**
MBO	**M'Bour**	**18.14**	**57**	P			**Pn**	**06 29 18.7**	**-3.0**
MBO				IAmb			IAmb	06 29 35.0	
	comp=Z,110nm,1.4s								
MDP	**Montagnes des**	**19.89**	**272**	P			**P**	**06 29 41.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=89,slow=13,SNR=7.6								
MDP					LR		LR	06 35 45.0	
	comp=Z,511nm,21.1s,baz=103,slow=32								
MCPB	**Macapa, AP**	**20.05**	**256**	*eP*			**P**	**06 29 42.2**	**-0.7**
SMTB	**Santa Maria do**	**20.18**	**228**	*eP*			**P**	**06 29 45.0**	**+0.6**
PRPB	**Parauapebas**	**20.33**	**238**	*eP*			**P**	**06 29 46.4**	**+0.4**
SDBA	**SAO DESIDERIO**	**21.03**	**215**	*eP*			**P**	**06 29 56.7**	**+3.1**
H10N3	**ASCENSION HYDR**	**22.09**	**125**	T			T	06 52 47.6	
	baz=304,slow=75,SNR=83								
H10N2	**ASCENSION HYDR**	**22.09**	**125**	T			T	06 52 47.9	
	baz=304,slow=75,SNR=111								
H10N1	**ASCENSION HYDR**	**22.11**	**125**	T			T	06 52 49.1	
	baz=304,slow=75,SNR=83								
MALB	**Monte Alegre**	**22.58**	**253**	*eP*			**P**	**06 30 10.3**	**+0.1**
H10S3	**ASCENSION HYDR**	**22.60**	**127**	T			T	06 53 35.7	
	baz=304,slow=74,SNR=79								
H10S2	**ASCENSION HYDR**	**22.62**	**127**	T			T	06 53 30.3	
	baz=276,slow=74,SNR=40								
PEXB	**Peixe**	**22.93**	**223**	*eP*			**P**	**06 30 15.0**	**+1.1**
ITTB	**Itaituba**	**24.80**	**249**	*eP*			**P**	**06 30 34.1**	**+2.3**
BDFB	**Brasilia**	**25.41**	**216**	P			**P**	**06 30 38.3**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=147,slow=6.9,SNR=4.1								
BDFB					LR		LR	06 39 29.3	
	comp=Z,551nm,21.1s,baz=27,slow=34								
BDFB	**Brasilia**	**25.41**	**216**	P			**P**	**06 30 33.7**	**-3.8**
NPGB	**Novo Progresso**	**25.55**	**243**	*eP*

comp=Z,3.8nm,0.7s
SOKA Soboth 58.48 37 *e*P P **06 35 06.9 +1.0**
comp=Z,8.8nm,1.0s
MOA Molln 58.63 35 *e*P P **06 35 07.7 +0.9**
comp=Z,2.8nm,0.9s
GEC2 GERESS Array S 58.84 34 P P **06 35 07.6 -0.8**
GERES GERESS Array B 58.84 34 P P **06 35 07.3 -1.1**
comp=Z,3.2nm,1.0s,baz=235,slow=4.7,SNR=14
GERES GERESS Array B 58.84 34 P P **06 35 07.6 -0.8**
T47A Sharon Grove 59.03 311 P P **06 35 11.1 +1.3**
T47A IAmb IAmb 06 35 12.0
comp=Z,11nm,0.9s
LL01 San Ignacio de 59.26 213 P P **06 35 10.3 -0.9**
LL01 IAmb IAmb 06 35 17.4
comp=Z,12nm,1.1s
143A Socs Landing, 61.22 305 P P **06 35 24.5 -0.4**
CCM Cathedral Cave 62.49 311 P P **06 35 32.8 -0.5**
CCM IAmb IAmb 06 35 41.1
comp=Z,18nm,1.3s
WLAR White Oak Lake 62.84 305 P P **06 35 35.0 -0.7**
MGMO Mountain Grove 63.02 309 P P **06 35 36.2 -0.8**
LSZ Lusaka 63.50 110 P P **06 35 39.6 -1.0**
LSZ IAmb IAmb 06 35 42.8
comp=Z,19nm,1.4s
NATX Nacogdoches 63.72 303 P P **06 35 41.9 +0.3**
BOSA Boshof 64.85 125 P P **06 35 49.2 0.0**
comp=Z,7.4nm,1.0s,baz=311,slow=7.8,SNR=5.1
BOSA LR LR 06 58 05.4
comp=Z,229nm,21.5s,baz=284,slow=30
BOSA Boshof 64.85 125 P P **06 35 48.6 -0.6**
BOSA IAmb IAmb 06 35 58.4
comp=Z,14nm,1.1s
MLR Muntele Rosu 64.86 42 P P **06 35 49.4 +0.5**
NOA NORSAR Array B 64.97 22 P P **06 35 49.8 +0.6**
comp=Z,2.0nm,0.8s,baz=230,slow=6.3,SNR=4.4
NOA LR LR 07 01 57.2
comp=Z,92nm,18.8s,baz=235,slow=34
Z35A Perchaven, San 66.16 304 P P **06 35 57.0 -0.5**
JCT Junction City 67.86 301 P P **06 36 08.2 -0.2**
JCT IAmb IAmb 06 36 16.5
comp=Z,22nm,1.4s
R32A Long Quarter, 68.28 309 P P **06 36 10.5 -0.4**
BGNE Belgrade 68.49 313 P P **06 36 11.7 -0.4**
AKASG Malin Array Be 68.68 37 P P **06 36 13.8 +0.7**
comp=Z,3.5nm,0.8s,baz=250,slow=7.1,SNR=4.4
AKASG LR LR 07 06 14.4
comp=Z,84nm,18.7s,baz=235,slow=36
AKASG Malin Array Be 68.68 37 P P **06 36 12.7 -0.4**
BR131 Keskin Array S 68.75 49 P P **06 36 13.4 -0.5**
BR131 IAmb IAmb 06 36 16.3
comp=Z,9.4nm,1.1s
BRTR Keskin Array B 68.75 49 P P **06 36 15.2 +1.2**
comp=Z,6.1nm,0.9s,baz=246,slow=5.1,SNR=15
BRTR LR LR 07 06 54.3
comp=Z,19nm,21.7s,baz=260,slow=36
BRTR Keskin Array B 68.75 49 P P **06 36 13.5 -0.5**
ULM Lac du Bonnet 69.33 322 LR LR 07 00 28.2
comp=Z,67nm,20.9s,baz=112,slow=31
KMBO Kilima Mbogo 70.10 93 LR LR 07 04 45.9
comp=Z,262nm,18.6s,baz=276,slow=34
MSTX Muleshoe 70.81 304 P P **06 36 26.2 -0.5**
MSTX IAmb IAmb 06 36 45.5
comp=Z,22nm,1.4s
TXAR Lajitas Array 71.07 299 P P **06 36 29.4 +1.1**
comp=Z,2.0nm,1.1s,baz=90,slow=6.3,SNR=6.4
TXAR LR LR 07 05 34.9
comp=Z,72nm,21.9s,baz=0.0,slow=34
TXAR Lajitas Array 71.07 299 P P **06 36 28.0 -0.4**
TX31 Lajitas Ar. Si 71.07 299 P P **06 36 27.6 -0.7**
FINES FINESS Array B 71.20 26 LR LR 07 04 50.8
comp=Z,38nm,20.6s,baz=258,slow=33
T25A Trinidad 72.53 307 P P **06 36 38.1 +0.9**
T25A IAmb IAmb 06 36 45.8
comp=Z,12nm,1.1s
MNTX Cornudas Mount 72.75 302 P P **06 36 38.0 -0.3**
Q24A Divide 73.34 309 P P **06 36 43.3 +1.2**
SDCO Great Sand Dun 73.47 308 P P **06 36 44.3 +1.5**
ISCO Idaho Springs 73.80 310 P P **06 36 46.4 +1.7**
ISCO IAmb IAmb 06 36 53.6
comp=Z,11nm,1.0s
PHWY Pilot Hill 73.88 311 P P **06 36 46.2 +1.0**
PHWY IAmb IAmb 06 36 54.2
comp=Z,12nm,1.4s
ANMO Albuquerque 73.94 305 P P **06 36 47.0 +1.5**
BNM Barren Site 74.01 304 P P **06 36 44.8 -1.2**
DGMT Dagmar 74.15 319 P P **06 36 45.6 -0.6**
N23A Red Feather La 74.19 311 P P **06 36 46.3 -0.6**
S22A 4UR Ranch, Cre 74.51 308 P P **06 36 47.6 -1.3**
S22A IAmb IAmb 06 36 58.4
comp=Z,16nm,1.4s
ARCES ARCESS Array B 74.71 18 LR LR 07 06 45.9
comp=Z,27nm,19.1s,baz=210,slow=33
SMCO Snowmass 74.78 309 P P **06 36 49.9 -0.7**
SMCO IAmb IAmb 06 36 59.9
comp=Z,26nm,1.3s
121A Cookes Peak, D 74.85 302 P P **06 36 51.4 +0.6**
121A IAmb IAmb 06 37 00.5
comp=Z,20nm,1.3s
K22A Casper 74.85 313 P P **06 36 50.1 -0.5**
LAO LASA Array 75.20 317 P P **06 36 52.4 -0.1**
MVCO Mesa Verde 75.79 307 P P **06 36 56.1 -0.1**
O20A White River Ci 75.85 310 P P **06 36 55.4 -1.1**
PV01 Paradox Valley 75.92 308 P P **06 36 56.4 -0.5**
PV01 IAmb IAmb 06 37 06.5
comp=Z,11nm,1.1s
PV13 Radium Mtn., P 76.12 308 P P **06 36 56.0 -2.1**
PV13 IAmb IAmb 06 37 07.6
comp=Z,17nm,1.2s
KBZ Khabaz 76.23 46 LR LR 07 15 28.8
comp=Z,30nm,18.2s,baz=266,slow=40
W18A Petrified Fore 76.64 305 P P **06 36 59.8 -1.2**
W18A IAmb IAmb 06 37 10.0
comp=Z,22nm,1.5s
RDMU Red Mountain 76.90 310 P P **06 37 01.8 -0.7**
BW06 Boulder Array 77.08 313 P P **06 37 02.4 -1.1**
PD31 Pinedale Array 77.08 313 P P **06 37 03.0 -0.4**
PDAR Pinedale Array 77.08 313 P P **06 37 04.0 +0.6**
comp=Z,0.9nm,0.8s,baz=95,slow=6.4,SNR=6.7
PDAR LR LR 07 07 24.6
comp=Z,161nm,20.7s,baz=124,slow=33
PDAR Pinedale Array 77.08 313 P P **06 37 02.4 -1.1**
RLMT Red Lodge 77.11 315 P P **06 37 02.5 -1.0**
RLMT IAmb IAmb 06 37 11.7
comp=Z,8.9nm,0.9s
VNA1 Neumayer--Stat 77.11 172 P P **06 37 03.9 +1.2**
TUC Tucson 77.37 302 P P **06 37 03.7 -1.4**
VNA3 Neumayer Olymp 77.47 173 P P **06 37 05.0 +0.4**
VNA2 Neumayer--Watz 77.49 172 P P **06 37 05.5 +0.7**
SRU San Rafael Swe 77.52 309 P P **06 37 04.1 -1.8**
YNE Yellowstone No 77.62 315 P P **06 37 04.2 -2.2**
WUAZ Wupatki 77.99 305 P P **06 37 06.7 -1.9**
WUAZ IAmb IAmb 06 37 18.2
comp=Z,17nm,1.2s
X16A Lo Mia Camp, P 78.00 304 P P **06 37 07.2 -1.5**
X16A IAmb IAmb 06 37 18.8
comp=Z,16nm,1.4s
SNOW Snow King Moun 78.02 313 P P **06 37 06.7 -2.0**
SNOW IAmb IAmb 06 37 16.9
comp=Z,8.3nm,1.0s
FLWY Flagg Ranch 78.03 314 P P **06 37 07.4 -1.3**
YPP Pitchstone Pla 78.12 314 P P **06 37 07.2 -2.1**
TPAW Teton Pass 78.16 313 P P **06 37 08.4 -1.1**
TPAW IAmb IAmb 06 37 14.5
comp=Z,13nm,1.4s
YHH Holmes Hill 78.20 315 P P **06 37 08.6 -1.1**
AHID Auburn Hatcher 78.22 313 P P **06 37 08.0 -1.8**
JLU Jordanelle 78.33 310 P P **06 37 09.3 -1.2**
TCUT Toone Canyon 78.33 311 P P **06 37 10.0 -0.5**
YHL Hebgen Lake 78.44 315 P P **06 37 09.0 -2.1**
HWUT Hardware Ranch 78.48 311 P P **06 37 11.3 +0.1**
HWUT IAmb IAmb 06 37 19.3
comp=Z,13nm,0.9s
CTU Camp Tracy 78.56 310 P P **06 37 09.9 -1.8**
MTPU Mount Pierson 78.76 308 P P **06 37 10.2 -2.8**
MSU Marysvale 78.78 308 P P **06 37 13.1 +0.1**
MVU Marysvale 78.80 308 P P **06 37 10.7 -2.4**
SNAA Sanae 78.84 171 P P **06 37 12.8 +0.4**
SNAA Sanae 78.84 171 P P **06 37 09.8 -2.5**
TCRU Three Creeks R 78.99 308 P P **06 37 12.2 -1.9**
DUG Dugway, Tooele 79.35 310 P P **06 37 14.8 -1.1**
DUG IAmb IAmb 06 37 25.2
comp=Z,16nm,1.2s
SZCU Shurtz Canyon 79.46 307 P P **06 37 15.0 -1.7**
DLMT Dillon 79.47 315 P P **06 37 16.7 +0.2**
DLMT IAmb IAmb 06 37 26.0
comp=Z,17nm,1.4s
BGU Big Grassy Mou 79.55 311 P P **06 37 16.4 -0.6**
CCUT Cedar City 79.67 307 P P **06 37 16.6 -1.3**
PRN Pahroc Range 81.01 307 P P **06 37 21.7 -3.2**
PRN IAmb IAmb 06 37 35.1
comp=Z,20nm,1.2s
ELK Elko 81.21 310 P P **06 37 23.7 -2.4**
YKA Yellowknife Ar 81.98 332 LR LR 07 09 37.0
comp=Z,82nm,21.8s,baz=0.0,slow=32
BMO Blue Mountains 82.79 314 P P **06 37 32.0 -2.1**
BMO IAmb IAmb 06 37 43.1
comp=Z,18nm,1.5s
NVAR Mina Array Bea 83.58 308 P P **06 37 39.8 +1.3**
comp=Z,2.0nm,1.1s,baz=95,slow=4.5,SNR=6.6
NVAR LR LR 07 12 20.5
comp=Z,80nm,19.4s,baz=90,slow=34
NVAR Mina Array Bea 83.58 308 P P **06 37 36.3 -2.2**
PNTR Pine Nut 84.58 309 P P **06 37 40.7 -2.9**
BEKR Beckworth 85.14 309 P P **06 37 44.4 -1.9**
BEKR IAmb IAmb 06 37 55.5
comp=Z,20nm,1.4s
ARU Arti 86.67 34 P P **06 37 55.1 +1.8**
comp=Z,0.6nm,0.3s,baz=330,slow=1.4,SNR=4.7
GEYT Alibeck 87.67 52 LR LR 07 19 50.7
comp=Z,44nm,21.5s,baz=345,slow=37
ILAR Eielson Array 95.68 337 P P **06 38 35.4 +0.2**
comp=Z,0.9nm,1.0s,baz=93,slow=4.2,SNR=4.9
ILAR LR LR 07 20 22.1
comp=Z,75nm,18.6s,baz=103,slow=35
NRIK Noril'sk 95.70 18 LR LR 07 19 22.4
comp=Z,69nm,20.6s,baz=15,slow=34
MAW Mawson 96.59 157 LR LR 07 16 16.5
comp=Z,56nm,18.1s,baz=240,slow=32
LZH Lanzhou 122.43 41 *e*PKP **PKPdf 06 44 01.9 -3.9**
LZH pPKP sPKPdf 06 44 11.4 +2.5
LZH sPKP 06 44 16.7
CD2 Chengdu 125.27 47 PKP **PKPdf 06 44 10.5 -0.7**
CMAR Chiang Mai Arr 126.99 63 PKP **PKiKP 06 44 15.8 +0.6**
comp=Z,3.4nm,0.3s,baz=305,slow=3.2,SNR=5.3
STKA Stephens Creek 152.80 169 PKPbc **PKPbc 06 45 05.1 -1.8**
comp=Z,3.6nm,0.8s,baz=234,slow=2.7,SNR=3.7
ASAR Alice Springs 157.26 147 PKP **PKPdf 06 45 06.3 -0.3**
comp=Z,1.2nm,1.0s,baz=281,slow=1.1,SNR=6.9
ASAR PKPab **PKPab 06 45 37.1 -0.2**
comp=Z,1.6nm,1.0s,baz=198,slow=4.9,SNR=6.8
WRA Warramunga Arr 160.39 141 PKP **PKPdf 06 45 10.1 -0.3**
comp=Z,1.0nm,1.0s,baz=255,slow=1.5,SNR=4.7

*SOME **03** 06:31:59.7, 45°.52N×78°.28E, h5km*
*NNC **03** 06:32:00.1±2.5, 45°.46N×78°.34E, h0km, mb2.6, mpv2.5, Error ellipse: s-maj=18.9km s-min=12.4km az=141.0*
*IDC **03** 06:32:04.7±4.8, 45°.22N×79°.52E, h0km, mb1 1.8/1, mb1mx1.8/46, mbtmp1.8/1, ML1.8/1, Error ellipse: s-maj=45.9km s-min=40.7km az=142.0*
ISC 03 06:31:57.6±1.6, 45°.57N±0'.05×78°.34E±0'.04, h9km±12km, n17, σ1°34/26, 1C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TDK	**Taldyqorghan**	**0.56**	**175**	*e*P	P	**Pn**	**06 32 11.4**	**-0.5**
	32nm,0.1s							
TDK				*e*S		**Sn**	**06 32 19.8**	**-1.5**
	47nm,0.3s							
KAPS	**Kapalarasan**	**0.77**	**111**	*e*P	P	**Pg**	**06 32 11.3**	**-1.0**
KAPS				*e*S		**Sg**	**06 32 19.6**	**-2.8**
ARXS	**Arharly**	**1.40**	**195**	*e*P	P	**Pg**	**06 32 25.1**	**+0.7**
	2.0nm,0.3s							
ARXS				*e*S		**Sg**	**06 32 43.2**	**+0.6**
	1.7nm,0.3s							
ARXS	**Arharly**	**1.40**	**195**	P		**Pg**	**06 32 25.1**	**+0.7**
	2.0nm,0.3s							
ARXS				S		**Sg**	**06 32 43.2**	**+0.6**
	1.7nm,0.3s							
MNBS	**Baschi**	**1.49**	**178**	*e*P		**Pg**	**06 32 25.0**	**-1.0**
	2.1nm,0.1s							
MNBS				*e*S		**Sb**	**06 32 43.9**	**-0.6**
	3.1nm,0.4s							
MNBS	**Baschi**	**1.49**	**178**	P		**Pg**	**06 32 25.8**	**-0.3**
	1.7nm,0.1s							
MNBS				S		**Sg**	**06 32 44.1**	**-1.2**
	3.1nm,0.4s							
DJR	**Jarkent**	**1.60**	**140**	*e*P		**Pg**	**06 32 29.9**	**+1.5**
	0.7nm,0.3s							
DJR				*e*S		**Sg**	**06 32 51.5**	**+2.3**
	2.0nm,0.4s							
DJR	**Jarkent**	**1.60**	**140**	P		**Pg**	**06 32 29.6**	**+1.3**
	1.4nm,0.3s							
DJR				S		**Sg**	**06 32 50.4**	**+1.3**
	2.0nm,0.4s							
KPKS	**Kokpek**	**2.11**	**173**	*e*P		**Pg**	**06 32 39.2**	**+1.1**
	1.2nm,0.3s							
KPKS				*e*S		**Sg**	**06 33 07.0**	**+1.6**
	4.4nm,0.5s							
KUU	**Kurty**	**2.20**	**221**	*e*P		**Pg**	**06 32 39.6**	**-0.1**
	0.8nm,0.2s							
KUU				*e*S		**Sg**	**06 33 07.9**	**-0.3**
	2.1nm,0.3s							
KUU	**Kurty**	**2.20**	**221**	Pg		**Pg**	**06 32 39.6**	**-0.1**
	0.8nm,0.2s							
KUU				Lg		Lg	06 33 07.9	
	2.1nm,0.3s							
KTBS	**Karatobe**	**2.20**	**213**	*e*P		**Pg**	**06 32 39.5**	**-0.2**
	0.4nm,0.3s							
KTBS				*e*S		**Sg**	**06 33 07.8**	**-0.4**
	5.0nm,0.6s							
PDGK	**Podgornoye**	**2.38**	**159**	⇓Pg		**Pg**	**06 32 41.4**	**-1.8**
	1.0nm,0.8s							
PDGK				⇓Lg		Lg	06 33 12.0	
	1.8nm,0.6s							
MK31	**Makanchi Array**	**3.00**	**64**	⇑Pg		**Pg**	**06 32 54.4**	**-0.8**
	0.2nm,0.3s,baz=228,slow=12,SNR=11							
MK31				⇓Lg		Lg	06 33 34.9	
	0.5nm,0.6s,baz=226,slow=2.1,SNR=4.7							
MKAR	**Makanchi Array**	**3.00**	**64**	Pn		**Pn**	**06 32 47.6**	**+2.2**
	0.2nm,0.3s,baz=232,slow=12,SNR=10							
MKAR				Lg		Lg	06 33 24.5	
	0.1nm,0.3s,baz=233,slow=38,SNR=1.4							
I46RU	**ZALESOVO INFRA**	**9.38**	**24**	*i*			07 26 00.0	
	baz=198,slow=321,SNR=0.7							
I34MN	**SONGINO INFRAS**	**19.34**	**73**	*i*			08 23 10.0	
	baz=274,slow=320,SNR=0.5							

IDC 03 06:35:11.2±2.7, 5°.72S×147°.24E, h170km±27km, mb3.4/2, mb1 3.5/4, mb1mx3.0/36, mbtmp3.8/4, Error ellipse: s-maj=69.6km s-min=24.4km az=99.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.66**	**181**	P		Pn	06 36 08.0	+0.3
	10nm,0.3s,baz=23,slow=4.3,SNR=8.9							
PMG				S		Sn	06 36 51.7	-0.1
	4.3nm,0.3s,baz=216,slow=20,SNR=7.8							
WRA	**Warramunga Arr**	**18.90**	**220**	P		P	06 39 20.2	+1.2
	0.2nm,0.3s,baz=42,slow=10,SNR=13							
ASAR	**Alice Springs**	**21.98**	**214**	P		P	06 39 52.7	+0.9
	1.1nm,0.7s,baz=45,slow=8.2,SNR=9.3							
ASAR				S		S	06 43 43.0	+0.5
	1.0nm,0.8s,baz=30,slow=21,SNR=4.6							
FITZ	**Fitzroy Crossi**	**24.41**	**238**	P		P	06 40 13.4	-0.8
	2.4nm,0.4s,baz=52,slow=12,SNR=19							
TORD	**Torodi Ar. Bea**	**145.25**	**285**	PKPbc		PKPdf	06 54 28.8	-0.9
	0.3nm,0.7s,baz=83,slow=3.6,SNR=1.9							

*MOS **03** 07:18:06.9±1.1, 4°.58N×32°.52W, h10km, mb5.0/35, MS4.6/7, Error ellipse: s-maj=11.6km s-min=8.9km az=143.2*
*IDC **03** 07:18:07.8±0.4, 4°.71N×32°.56W, h0km, mb4.4/28, mb1 4.5/29, mb1mx4.4/38, mbtmp4.4/29, ML3.9/1, MS4.5/31, Ms1 4.5/31, ms1mx4.5/31, Error ellipse: s-maj=13.6km s-min=11.1km az=147.0*
*NEIC **03** 07:18:08.4±1.2, 4°.63N±0°.08×32°.57W±0°.09, h10km±1km, mb5.1/123, Ms_20 4.9/151, Error ellipse: s-maj=16.8km s-min=12.4km az=302.0*
*BJI **03** 07:18:09.1±0.0, 5°.31N×33°.19W, h15km, mB5.9/2, Ms5.4/1*
*GCMT **03** 07:18:12.4±0.1, 4°.84N±0°.01×32°.66W±0°.01, h12km, MW5.2/137, Moment Tensor Solution. s67,c90; s137,c239; Duration: 1⁹0 Moment tensor: Scale 10¹⁷ Nm; M_{rr}-0.73±.01; $M_{\theta\theta}$0.01±.01; $M_{\phi\phi}$0.71±.01; $M_{r\theta}$0.04±.04; $M_{\theta\phi}$0.01±.01; $M_{r\phi}$0.21±.03; Best double couple: $M_0$0.75500×10¹⁷ NP1:$\phi_0$357.00000°, δ37.00000°, λ-95.00000°. NP2:$\phi_0$183.00000°, δ53.00000°, λ-86.00000°. Principal axes: T 0.7470, Plg8.0000°, Azm271.0000°; N 0.0160, Plg3.0000°, Azm1.0000°; P -0.7630, Plg82.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 07:18:09.5±0.3, 4°.63N±0'.05×32°.54W±0'.05, h10km, n413, σ1⁹60/333, mb5.0/95, MS4.9/110, 8C-2D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**10.92**	**198**	P	n	**Pn**	**07 20 44.2**	**-1.7**
	0.9nm,0.3s,baz=5.9,slow=16,SNR=8.2							
RCBR				S	n	**Sn**	**07 22 42.0**	**-6.2**
	0.8nm,0.3s,baz=270,slow=21,SNR=7.8							
RCBR				LR		LR	07 24 09.8	
	comp=Z,2μm,20.4s,baz=7.5,slow=33							
RCBR	**Riachuelo**	**10.92**	**198**			**Pn**	**07 20 43.8**	**-2.1**
RCBR						**Sn**	**07 22 46.7**	**-1.5**
SACV	**Santiago Islan**	**13.52**	**40**	Pn		**Pn**	**07 21 20.2**	**-1.3**
ROSB	**Rosrio**	**13.78**	**237**	*e*P		**Pn**	**07 21 27.2**	**+2.2**
TMAB	**Tom-Au,PA,Br**	**17.03**	**246**	*e*P		**Pn**	**07 22 07.8**	**-0.1**
MDP	**Montagnes des**	**20.04**	**272**	P		P	**07 22 40.5**	**-2.4**
	13nm,0.9s,baz=86,slow=13,SNR=8.3							
MDP				LR		LR	07 28 45.5	
	comp=Z,2μm,21.2s,baz=106,slow=32							
MCPB	**Macapa, AP**	**20.12**	**256**	*e*P		P	**07 22 43.2**	**-0.5**
PRPB	**Parauapebas**	**20.32**	**238**	*e*P		P	**07 22 46.1**	**+0.2**
SDBA	**SAO DESIDERIO**	**20.92**	**216**	*e*P		Pn	07 22 54.7	-0.3
H10N3	**ASCENSION HYDR**	**21.85**	**124**	T		T	07 45 48.1	
	baz=304,slow=75,SNR=370							
H10N2	**ASCENSION HYDR**	**21.85**	**124**	T		T	07 45 48.4	
	baz=304,slow=75,SNR=447							
H10N1	**ASCENSION HYDR**	**21.87**	**124**	T		T	07 45 49.6	
	baz=304,slow=75,SNR=491							
H10S3	**ASCENSION HYDR**	**22.35**	**127**	T		T	07 46 32.2	
	baz=304,slow=74,SNR=343							
H10S2	**ASCENSION HYDR**	**22.37**	**127**	T		T	07 46 33.7	
	baz=276,slow=74,SNR=95							
MALB	**Monte Alegre**	**22.64**	**254**	*e*P		P	**07 23 12.1**	**+1.1**
NAN01	**Guarapari, ES**	**23.55**	**198**	*e*P		P	**07 23 24.4**	**+4.1**
SJMB	**Sao Joao De Ma**	**24.70**	**200**	*e*P		P	**07 23 36.4**	**+5.4**
BSFB	**Barra de Sao F**	**24.71**	**199**	*e*P		P	**07 23 35.2**	**+4.1**
ITTB	**Itaituba**	**24.84**	**249**	*e*P		P	**07 23 32.3**	**0.0**
RIB01	**Linhares ES**	**25.02**	**198**	*e*P		P	**07 23 38.8**	**+5.0**
BDFB	**Brasilia**	**25.31**	**217**	P		P	**07 23 36.5**	**-0.2**
	2.8nm,0.8s,baz=40,slow=7.9,SNR=3.4							
BDFB				LR		LR	07 32 29.7	
	comp=Z,2μm,21.5s,baz=36,slow=34							
BDFB	**Brasilia**	**25.31**	**217**	P		P	**07 23 33.9**	**-2.7**
BDFB				pmax		pmax		
	comp=Z,25nm,1.2s							
BDFB				MLR		MLR		
	comp=Z,2μm,21.0s							
BDFB	**Brasilia**	**25.31**	**217**	P		P	**07 23 33.9**	**-2.7**
NPGB	**Novo Progresso**	**25.56**	**243**	*e*P		P	**07 23 38.9**	**0.0**
IPMB	**Ipameri, GO**	**27.27**	**214**	*e*P		P	**07 23 58.1**	**+3.8**
DBIC	**Dimbokro**	**27.62**	**84**	P		P	**07 23 57.5**	**+0.1**
	comp=Z,6.7nm,1.0s,baz=232,slow=12,SNR=3.2							
DBIC				LR		LR	07 32 20.8	
	comp=Z,2μm,21.9s,baz=252,slow=31							
DBIC	**Dimbokro**	**27.62**	**84**	P		P	**07 23 56.4**	**-1.1**
DBIC				pmax		pmax		
	comp=Z,15nm,1.2s							
DBIC	**Dimbokro**	**27.62**	**84**	P		P	**07 23 56.4**	**-1.1**
ARAG	**Araguaiana, MT**	**27.79**	**223**	*e*P		P	**07 24 02.9**	**+4.0**
CLDB	**Colider**	**27.81**	**236**	*e*P		P	**07 24 02.3**	**+3.1**
BSCB	**Bom Sucesso**	**28.16**	**205**	*e*P		P	07 24 07.8	+5.5
VAS01	**Vassouras-RJ**	**28.79**	**201**	*e*P		P	07 24 14.1	+6.3
MACA	**Manacapuru-AM**	**29.17**	**255**	*e*P		P	**07 24 12.8**	**+1.5**
MAN01	**Angra dos Reis**	**29.52**	**202**	*e*P		P	**07 24 18.0**	**+3.7**
H05S1	**Guadeloupe/Mar**	**29.52**	**291**	T		T	07 54 51.1	
	SNR=54							
KOWA	**Kowa**	**29.75**	**69**	P		P	**07 24 16.2**	**-0.2**
	comp=Z,3.8nm,0.7s,baz=250,slow=4.7,SNR=9.8							
KOWA				LR		LR	07 35 05.8	
	comp=Z,5μm,18.8s,baz=256,slow=34							
KOWA	**Kowa**	**29.75**	**69**	P		P	**07 24 16.1**	**-0.4**
ESAR	**Angra dos Reis**	**29.84**	**202**	*e*P		P	**07 24 21.1**	**+4.0**
ITRB	**Iturama**	**29.86**	**215**	*e*P		P	**07 24 21.8**	**+4.4**
H05N1	**Guadeloupe/Mar**	**30.30**	**295**	T		T	07 55 51.5	
	SNR=23							
SPB	**Sao Paulo**	**31.59**	**207**	*e*P		P	**07 24 35.1**	**+2.6**
PCMB	**Pacaembu**	**31.88**	**214**	*e*P		P	**07 24 38.6**	**+3.4**
FRTB	**Fartura**	**32.39**	**210**	*e*P		P	**07 24 43.9**	**+4.2**
VILB	**Vilhena**	**32.56**	**237**	*e*P		P	**07 24 43.4**	**+2.2**
PSMA	**Santa Maria**	**32.92**	**11**	*e*T		T	07 58 45.0	
PSMN	**Pico do Norte,**	**32.94**	**11**	*e*T		T	07 58 45.6	
PTLB	**Pontes e Lacer**	**33.04**	**232**	*e*P		P	**07 24 48.9**	**+3.5**
SAML	**Samuel**	**33.40**	**246**	P		P	**07 24 49.3**	**+0.8**
SAML				pmax		pmax		
	comp=Z,27nm,1.2s							
SAML				MLR		MLR		
	comp=Z,2μm,20.0s							
SAML	**Samuel**	**33.40**	**246**	P		P	**07 24 49.3**	**+0.8**
SAML				IAmb		IAmb	07 24 56.4	
	comp=Z,27nm,1.1s							
SAML	**Samuel**	**33.40**	**246**	IAMs_20		IAMs_20	07 37 06.8	
	comp=Z,2μm,20.0s							
BART	**Pico Bartolome**	**33.67**	**11**	*e*T		T	07 59 43.9	
TOC5	**Torodi Ar. Sit**	**34.80**	**74**	IAMs_20		IAMs_20	07 37 01.6	
	comp=Z,2μm,21.0s							
PTGB	**Pitanga**	**34.81**	**212**	*e*P		P	**07 25 04.0**	**+3.2**
TOA0	**Torodi Ar. Sit**	**34.83**	**74**	P		P	**07 25 00.9**	**0.0**
TOA0				IAMs_20		IAMs_20	07 37 12.2	
	comp=Z,2μm,19.0s							
TOC4	**Torodi Ar. Sit**	**34.83**	**74**	IAMs_20		IAMs_20	07 37 02.2	
	comp=Z,2μm,20.0s							
TORD	**Torodi Ar. Bea**	**34.83**	**74**	P		P	**07 25 01.0**	**+0.1**
	comp=Z,9.0nm,0.9s,baz=266,slow=8.6,SNR=23							
TORD				PcP		**PcP**	**07 27 34.4**	**0.0**
	comp=Z,1.9nm,1.1s,baz=306,slow=3.4,SNR=3.9							
TORD				LR		LR	07 37 23.3	
	comp=Z,2μm,19.8s,baz=260,slow=33							
TORD	**Torodi Ar. Bea**	**34.83**	**74**	P		P	**07 25 00.3**	**-0.6**
TOB1	**Torodi Ar. Sit**	**34.83**	**74**	IAMs_20		IAMs_20	07 37 02.3	
	comp=Z,2μm,21.0s							
TOA2	**Torodi Ar. Sit**	**34.83**	**74**	IAMs_20		IAMs_20	07 37 02.4	
	comp=Z,2μm,20.0s							
TOB3	**Torodi Ar. Sit**	**34.83**	**74**	IAMs_20		IAMs_20	07 37 02.4	
	comp=Z,2μm,21.0s							
TOC1	**Torodi Ar. Sit**	**34.84**	**74**	IAMs_20		IAMs_20	07 37 12.5	
	comp=Z,2μm,19.0s							
TOC3	**Torodi Ar. Sit**	**34.85**	**74**	IAMs_20		IAMs_20	07 37 12.8	
	comp=Z,2μm,20.0s							
TOC2	**Torodi Ar. Sit**	**34.85**	**74**	IAMs_20		IAMs_20	07 37 03.9	
	comp=Z,2μm,20.0s							
SIV	**San Ignacio**	**34.88**	**233**	P		P	**07 25 03.0**	**+1.6**
	comp=Z,4.6nm,1.1s,baz=96,slow=11,SNR=9.2							
PDPR	**Patillas Dam,**	**35.34**	**295**	P		P	**07 25 05.2**	**-0.2**
PDPR				IAmb		IAmb	07 25 10.9	
	comp=Z,27nm,1.2s							
AOPR	**Arecibo Observ**	**36.10**	**295**	P		P	**07 25 12.5**	**+0.5**
AOPR				IAmb		IAmb	07 25 26.8	
	comp=Z,27nm,1.1s							
ETMB	**Extrema**	**36.49**	**247**	*e*P		P	**07 25 15.8**	**+0.5**
ITAB	**Concordia**	**36.91**	**210**	*e*P		P	07 25 23.4	+4.8
RTC	**Rabat Centre**	**37.72**	**36**	IAMs_20		IAMs_20	07 38 08.3	
	comp=Z,2μm,20.0s							
**SDV

comp=Z,1µm,18.4s,baz=57,slow=36
LPAZ La Paz 40.88 239 P **P** **07 25 52.5 -0.3**
LPAZ pmax pmax
comp=Z,10.0nm,1.1s
LPAZ La Paz 40.88 239 P **P** **07 25 52.5 -0.3**
LPAZ La Paz 40.88 239 *e*P **P** **07 25 54.2 +1.4**
TAM Tamanrasset 40.96 60 P **P** **07 25 53.5 +0.6**
TAM pmax pmax
comp=Z,10.0nm,1.1s
TAM MLR MLR
comp=Z,1µm,18.0s
TAM Tamanrasset 40.96 60 P **P** **07 25 53.5 +0.6**
TAM IAMs_20 IAMs_20 07 42 14.7
comp=Z,1µm,18.0s
CHIC Chingaza 41.05 272 *e*P **P** **07 25 54.5 +0.4**
ROSC El Rosal 41.63 272 P **P** **07 26 01.8 +2.9**
comp=Z,7.7nm,0.8s,baz=130,slow=10,SNR=5.6
ROSC LR LR 07 44 21.1
comp=Z,2µm,18.6s,baz=76,slow=38
ROSC El Rosal 41.63 272 P **P** **07 25 58.3 -0.5**
ROSC IAMs_20 IAMs_20 07 44 02.1
comp=Z,2µm,18.0s
PTBC PUERTO BERRIO, 41.75 275 *e*P **P** **07 25 57.1 -2.3**
CZSB Cruzeiro do Su 41.91 253 *e*P **P** **07 25 59.8 -0.9**
PRAC Prado 42.24 270 *e*P **P** **07 26 01.7 -1.7**
ORTC Ortega, Tolima 42.59 271 *e*P **P** **07 26 04.0 -2.3**
TOLC Tolima 42.64 272 *e*P **P** **07 26 06.6 -0.4**
GUY2C Guyana, Caldas 42.67 273 *e*P **P** **07 26 05.8 -1.6**
HELC Santa Helena 42.82 274 *e*P **P** **07 26 07.2 -1.3**
PB16 IPOC Station P 43.00 237 P **P** **07 26 09.8 -0.2**
CBOC Ciudad Bolivar 43.30 274 *e*P **P** **07 26 10.8 -1.3**
ESDC Sonseca Array 43.40 32 P **P** **07 26 12.5 +0.1**
comp=Z,7.0nm,1.2s,baz=227,slow=8.3,SNR=10
ESDC LR LR 07 42 37.6
comp=Z,274nm,18.8s,baz=215,slow=34
DBBC Dabeiba 43.50 275 *e*P **P** **07 26 12.8 -0.9**
PB11 IPOC Station P 43.81 235 IAMs_20 IAMs_20 07 44 00.7
comp=Z,1µm,20.0s
PCON Cinco Dias 43.83 269 *e*P **P** **07 26 15.2 -1.7**
POPC Popayan, Colom 44.09 269 *e*P **P** **07 26 15.5 -3.1**
BBAC Balboa, Cauca 44.70 268 *e*P **P** **07 26 21.5 -2.0**
PB06 IPOC Station P 45.25 232 P **P** **07 26 25.8 -1.9**
PB06 IAmb IAmb 07 26 40.9
comp=Z,22nm,1.0s
PB15 IPOC Station P 45.44 231 P **P** **07 26 27.5 -1.7**
PB15 IAmb IAmb 07 26 35.9
comp=Z,28nm,1.1s
PB15 IAMs_20 IAMs_20 07 46 30.0
comp=Z,2µm,18.0s
NNA Nana 47.04 249 *ce*P **P** **07 26 40.1 -1.7**
NNA pmax pmax
comp=Z,63nm,1.7s
KEST Kesra 49.43 46 P **P** **07 27 01.5 +1.6**
comp=Z,3.1nm,0.7s,baz=32,slow=8.7,SNR=4.2
KEST LR LR 07 48 07.3
comp=Z,2µm,19.2s,baz=190,slow=36
KEST Kesra 49.43 46 IAMs_20 IAMs_20 07 47 56.5
comp=Z,2µm,20.0s
NHSC New Hope 52.61 309 IAMs_20 IAMs_20 07 44 24.5
comp=Z,1µm,18.0s
BO02 Sierra Bellavi 53.22 220 P **P** **07 27 27.3 -1.0**
BO02 IAmb IAmb 07 27 45.6
comp=Z,22nm,1.1s
BO02 IAMs_20 IAMs_20 07 50 37.9
comp=Z,1µm,18.0s
656A Willston 53.24 303 IAMs_20 IAMs_20 07 45 03.4
comp=Z,1µm,22.0s
456A Hilliard 53.24 305 IAMs_20 IAMs_20 07 44 33.5
comp=Z,2µm,22.0s
Z56A Williston 53.61 308 IAMs_20 IAMs_20 07 45 05.2
comp=Z,1µm,21.0s
255A Hazlehurst 54.01 306 IAMs_20 IAMs_20 07 44 45.6
comp=Z,1µm,21.0s
TSUM Tsumeb 54.71 117 P **P** **07 27 39.8 +0.3**
comp=Z,12nm,1.2s,baz=282,slow=8.4,SNR=5.7
TSUM Tsumeb 54.71 117 P **P** **07 27 38.7 -0.9**
TSUM IAmb IAmb 07 27 42.4
comp=Z,16nm,1.2s
TSUM Tsumeb 54.71 117 IAMs_20 IAMs_20 07 45 32.0
comp=Z,1µm,20.0s
BI02 San Fabin de 54.72 218 IAMs_20 IAMs_20 07 51 33.7
comp=Z,646nm,18.0s
154A Montrose 54.74 307 IAMs_20 IAMs_20 07 45 19.0
comp=Z,1µm,22.0s
TIGA Tifton 54.75 306 IAMs_20 IAMs_20 07 45 31.2
comp=Z,2µm,21.0s
CEL Celeste 55.24 46 P **P** **07 27 42.7 -0.4**
CEL IAmb IAmb 07 27 42.9
comp=Z,11nm,0.4s
GOGA Godfrey 55.29 308 IAMs_20 IAMs_20 07 45 22.6
comp=Z,1µm,22.0s
NRCA Norcia 55.47 40 P **P** **07 27 43.5 -1.2**
352A Blakely 55.85 305 IAMs_20 IAMs_20 07 46 04.4
comp=Z,2µm,22.0s
Y52A Lilburn 55.91 308 IAMs_20 IAMs_20 07 45 45.0
comp=Z,1µm,22.0s
BI03 Tigo 55.92 219 IAMs_20 IAMs_20 07 52 01.6
comp=Z,988nm,20.0s
STU Stuttgart 56.48 32 IAMs_20 IAMs_20 07 50 15.7
comp=Z,2µm,21.0s
Z51A Franklin 56.61 307 IAMs_20 IAMs_20 07 46 15.5
comp=Z,2µm,21.0s
MTO3 Montecristo 56.74 284 IAMs_20 IAMs_20 07 47 20.5
comp=Z,693nm,19.0s
PLCA Paso Flores 57.00 214 P **P** **07 27 55.0 -0.5**
comp=Z,1.2nm,0.9s,baz=30,slow=8.1,SNR=2.5
PLCA LR LR 07 52 11.2
comp=Z,985nm,21.2s,baz=48,slow=36
PLCA Paso Flores 57.00 214 P **P** **07 27 54.7 -0.9**
PLCA pmax pmax
comp=Z,13nm,1.3s
PLCA Paso Flores 57.00 214 P **P** **07 27 54.7 -0.9**
PLCA Paso Flores 57.00 214 *e*P **P** **07 27 58.5 +2.9**
STAL STALIGIAL 57.00 36 P **P** **07 27 54.9 -0.6**
250A Grady 57.09 305 IAMs_20 IAMs_20 07 47 14.2
comp=Z,1µm,20.0s
SCHQ Schefferville 57.19 337 P **P** **07 27 56.2 -0.4**
comp=Z,16nm,0.8s,baz=171,slow=8.8,SNR=5.7
SCHQ LR LR 07 50 18.5
comp=Z,247nm,18.1s,baz=117,slow=34
SCHQ Schefferville 57.19 337 P **P** **07 27 56.1 -0.5**
SCHQ IAmb IAmb 07 28 02.8
comp=Z,18nm,0.8s
Q51A Peebles 57.25 314 P **P** **07 27 56.5 -0.9**
Q51A IAmb IAmb 07 28 04.4
comp=Z,19nm,1.1s
SWET Sewanee 57.81 309 P **P** **07 27 59.9 -1.5**
SWET IAmb IAmb 07 28 07.8
comp=Z,21nm,1.0s
U49A Red Boiling Sp 58.12 311 P **P** **07 28 03.0 -0.5**
U49A IAmb IAmb 07 28 06.3
comp=Z,34nm,1.4s
P49A Miami Univ. Ec 58.43 314 P **P** **07 28 07.3 +1.7**
baz=112
X48A Hartselle 58.44 308 IAMs_20 IAMs_20 07 47 34.0
comp=Z,1µm,22.0s
V48A Smith Brothers 58.67 309 P **P** **07 28 05.7 -1.7**
V48A IAmb IAmb 07 28 14.0
comp=Z,15nm,0.9s
Z47A Carrollton 58.89 306 P **P** **07 28 08.1 -0.8**
Z47A IAmb IAmb 07 28 16.1
comp=Z,19nm,0.9s
GEC2 GERESS Array S 58.96 34 P **P** **07 28 08.3 -1.0**
GERES GERESS Array B 58.96 34 P **P** **07 28 07.7 -1.6**
comp=Z,2.4nm,1.0s,baz=250,slow=3.8,SNR=11
GERES LR LR 07 50 42.1
comp=Z,301nm,20.4s,baz=243,slow=33
GERES GERESS Array B 58.96 34 P **P** **07 28 08.1 -1.2**
GERES GERESS Array B 58.96 34 P **P** **07 28 08.1 -1.2**
KHC Kasperske Hory 59.05 34 *e*P **P** **07 28 09.0 -0.8**
KHC Kasperske Hory 59.05 34 *e*P **P** **07 28 09.0 -0.8**
WCI Wyandotte Cave 59.10 312 P **P** **07 28 11.6 +1.3**
baz=110
LL01 San Ignacio de 59.14 214 P **P** **07 28 08.6 -1.8**
LL01 IAmb IAmb 07 28 17.3
comp=Z,20nm,1.2s
LL01 IAMs_20 IAMs_20 07 51 51.5
comp=Z,631nm,21.0s
T47A Sharon Grove 59.29 311 P **P** **07 28 10.4 -1.2**
PLAL Pickwick Lake 59.41 308 IAMs_20 IAMs_20 07 47 42.6
comp=Z,1µm,21.0s
146A Union 59.54 305 IAMs_20 IAMs_20 07 50 09.1
comp=Z,1µm,19.0s
CLL Collm 59.96 31 *e*(P) **P** **07 28 17.0 +1.0**
CLL *e*S **S** **07 36 31.0 +2.7**
CLL *e*SSS SSS 07 43 11.0
CLL LmV 07 53 00.0
comp=Z,300nm,18.5s
CLL Collm 59.96 31 *e*P **P** **07 28 17.0 +1.0**
CLL *e*S **S** **07 36 31.0 +2.7**
CLL MLR MLR
comp=Z,300nm,18.5s
EFI East Falkland 60.17 198 *i* P **P** **07 28 17.2 -0.1**
EFI pmax pmax
comp=Z,18nm,0.8s
OXF Oxford 60.33 307 IAMs_20 IAMs_20 07 48 31.9
comp=Z,1µm,21.0s
W45A Hickory Valley 60.33 308 IAMs_20 IAMs_20 07 49 36.1
comp=Z,1µm,18.0s
VBMS Vicksburg 60.62 304 IAMs_20 IAMs_20 07 48 52.9
comp=Z,1µm,19.0s
IDI Anoyia 60.98 52 IAMs_20 IAMs_20 07 54 35.6
comp=Z,707nm,22.0s
HDBT Hernando Brdge 61.02 308 IAMs_20 IAMs_20 07 55 56.2
comp=Z,1µm,21.0s
Q44A Meyer Farm, Va 61.34 312 IAMs_20 IAMs_20 07 50 06.6
comp=Z,854nm,19.0s
143A Socs Landing, 61.47 305 P **P** **07 28 26.7 +0.1**
143A IAMs_20 IAMs_20 07 52 11.3
comp=Z,1µm,19.0s
X43A Marvell 61.50 307 P **P** **07 28 25.5 -1.3**
SANT Santorini 61.73 51 IAMs_20 IAMs_20 07 54 56.3
comp=Z,670nm,20.0s
LCAR Lake Charles 62.12 309 P **P** **07 28 31.7 +0.7**
SUR Sutherland 62.57 130 P **P** **07 28 34.6 +0.4**
comp=Z,9.4nm,0.9s,baz=293,slow=9.5,SNR=5.5
SUR Sutherland 62.57 130 P **P** **07 28 33.4 -0.8**
SUR IAmb IAmb 07 28 36.6
comp=Z,9.1nm,0.9s
UALR University of 62.73 307 P **P** **07 28 33.3 -1.8**
UALR IAmb IAmb 07 28 40.7
comp=Z,18nm,1.0s
CCM Cathedral Cave 62.75 311 P **P** **07 28 34.4 -0.7**
CCM pmax pmax
comp=Z,26nm,1.2s
CCM Cathedral Cave 62.75 311 P **P** **07 28 34.0 -1.1**
baz=107
CCM Cathedral Cave 62.75 311 P **P** **07 28 34.4 -0.7**
W41B Gary Mavity, V 62.75 307 P **P** **07 28 35.4 +0.2**
W41B IAmb IAmb 07 28 40.3
comp=Z,9.4nm,1.0s
FCAR Ozark Folk Cen 62.84 308 P **P** **07 28 34.5 -1.3**
FCAR IAMs_20 IAMs_20 07 50 39.4
comp=Z,976nm,20.0s
KARP Karpathos 62.84 52 IAMs_20 IAMs_20 07 54 53.8
comp=Z,752nm,22.0s
WLAR White Oak Lake 63.09 305 P **P** **07 28 35.9 -1.5**
N41A Harden Midland 63.25 314 P **P** **07 28 37.3 -1.2**
MGMO Mountain Grove 63.28 309 P **P** **07 28 37.7 -1.1**
MGMO IAmb IAmb 07 28 44.4
comp=Z,19nm,0.9s
LSZ Lusaka 63.29 110 P **P** **07 28 37.0 -2.3**
LSZ pmax pmax
comp=Z,17nm,1.3s
LSZ Lusaka 63.29 110 P **P** **07 28 37.0 -2.3**
LSZ IAmb IAmb 07 28 42.0
comp=Z,17nm,1.3s
MBAR Mbarara 63.42 93 *e*P **P** **07 28 42.9 +2.6**
MBAR pmax pmax
comp=Z,4.0nm,1.0s
MBAR Mbarara 63.42 93 IAMs_20 IAMs_20 07 53 22.3
comp=Z,1µm,20.0s
U40A Yellville 63.53 308 P **P** **07 28 39.3 -1.1**
U40A IAmb IAmb 07 28 45.5
comp=Z,11nm,0.9s
U40A IAMs_20 IAMs_20 07 50 40.6
comp=Z,990nm,20.0s
R40A Maddies Statio 63.59 311 P **P** **07 28 39.5 -1.2**
R40A IAmb IAmb 07 28 46.2
comp=Z,22nm,1.1s
MIAR Mount Ida 63.66 306 IAMs_20 IAMs_20 07 50 36.3
comp=Z,1µm,21.0s
P40A Paris 63.77 312 P **P** **07 28 40.0 -1.9**
NATX Nacogdoches 63.96 303 P **P** **07 28 42.1 -1.2**
W39A Magazine 63.98 307 P **P** **07 28 43.1 -0.3**
baz=103
W39A Magazine 63.98 307 P **P** **07 28 42.0 -1.3**
W39A IAmb IAmb 07 28 49.5
comp=Z,13nm,1.0s
S39A Bolivar 64.23 310 P **P** **07 28 43.5 -1.5**
S39A IAmb IAmb 07 28 50.0
comp=Z,13nm,1.0s
Z38A Mt. Pleasant 64.53 305 IAMs_20 IAMs_20 07 53 22.2
comp=Z,1µm,19.0s
BOSA Boshof 64.60 125 P **P** **07 28 48.4 +0.7**
comp=Z,9.8nm,1.0s,baz=279,slow=3.6,SNR=9.6
BOSA LR LR 07 51 16.2
comp=Z,671nm,21.2s,baz=290,slow=31
BOSA Boshof 64.60 125 P **P** **07 28 46.0 -1.7**
BOSA pmax pmax
comp=Z,37nm,1.3s
BOSA Boshof 64.60 125 P **P** **07 28 46.0 -1.7**
HKT Hockley 64.62 301 *i* P **P** **07 28 48.8 +1.2**
HKT pmax pmax
comp=Z,5.0nm,1.4s
P38A Dawn 64.90 312 P **P** **07 28 47.8 -1.4**
P38A IAmb IAmb 07 28 54.6
comp=Z,7.5nm,0.8s
MLR Muntele Rosu 64.94 41 P **P** **07 28 48.7 -0.9**
MLR pmax pmax
comp=Z,77nm,1.5s
MLR Muntele Rosu 64.94 41 P **P** **07 28 48.7 -0.9**
NOA NORSAR Array B 65.14 22 P **P** **07 28 49.8 -0.7**
comp=Z,2.8nm,1.0s,baz=230,slow=6.5,SNR=4.4
NOA LR LR 07 55 07.1
comp=Z,285nm,18.7s,baz=235,slow=34
BURAR Bucovina Array 65.24 39 P **P** **07 28 50.2 -1.3**
ELL Elmali 65.29 52 P **P** **07 28 50.7 -1.3**
ELL pmax pmax
comp=Z,67nm,0.9s
ELL MLR MLR
comp=Z,1µm,21.0s
ELL Elmali 65.29 52 P **P** **07 28 50.6 -1.3**
TUL1 Leonard 65.73 307 P **P** **07 28 53.4 -1.4**
baz=102
TUL1 Leonard 65.73 307 P **P** **07 28 53.2 -1.5**
TUL1 IAmb IAmb 07 29 00.7
comp=Z,18nm,1.0s
ISP Isparta 66.01 51 IAMs_20 IAMs_20 07 57 49.5
comp=Z,576nm,22.0s
SPMN Marine on St. 66.04 318 P **P** **07 28 56.2 -0.3**
baz=109
SPMN Marine on St. 66.04 318 P **P** **07 28 55.7 -0.9**
SPMN IAmb IAmb 07 29 01.5
comp=Z,12nm,0.9s
435B Jarrell 66.25 302 IAMs_20 IAMs_20 07 53 39.0
comp=Z,700nm,19.0s
WHTX Lake Whitney, 66.34 303 IAMs_20 IAMs_20 07 53 52.3
comp=Z,909nm,19.0s
T35A Sooner Cattle 66.52 308 P **P** **07 28 59.0 -0.9**
T35A IAmb IAmb 07 29 05.5
comp=Z,16nm,0.9s
N35A Tabor 66.78 313 P **P** **07 28 60.0 -1.4**
OK029 Liberty Lake 67.03 307 P **P** **07 29 01.3 -1.8**
KSU1 Kansas State U 67.08 311 P **P** **07 29 01.7 -1.6**
baz=103
833A Chaparral WMA, 67.47 299 P **P** **07 29 04.5 -1.5**
L34A Svendsen Farm, 67.59 314 P **P** **07 29 06.0 -0.5**
KAN14 Manchester OK 67.66 308 P **P** **07 29 06.0 -1.1**
KAN08 Anthony NE Sta 67.72 308 P **P** **07 29 07.5 +0.1**
WMOK Wichita Mounta 67.90 306 P **P** **07 29 09.2 +0.5**
baz=100
SUMG Summit 67.97 358 P **P** **07 29 08.0 -0.8**
SUMG pmax pmax
comp=Z,22nm,1.1s
SUMG Summit 67.97 358 P **P** **07 29 08.0 -0.8**
SUMG IAmb IAmb 07 29 11.4
comp=Z,22nm,1.1s
JCT Junction City 68.10 301 P **P** **07 29 09.2 -0.8**
JCT pmax pmax
comp=Z,13nm,1.1s
JCT Junction City 68.10 301 P **P** **07 29 10.5 +0.5**
baz=98
JCT Junction City 68.10 301 P **P** **07 29 09.2 -0.8**
JCT IAmb IAmb 07 29 16.0
comp=Z,13nm,1.1s
ECSD EROS Data Cent 68.22 315 P **P** **07 29 10.3 -0.2**
baz=105
ECSD EROS Data Cent 68.22 315 P **P** **07 29 09.7 -0.7**
ECSD IAmb IAmb 07 29 15.8
comp=Z,12nm,0.9s
ABTX Abilene, Hawle 68.27 303 P **P** **07 29 10.5 -0.5**
ABTX IAMs_20 IAMs_20 07 56 23.3
comp=Z,825nm,20.0s
R32A Long Quarter, 68.54 309 P **P** **07 29 11.3 -1.3**
BGNE Belgrade 68.75 313 P **P** **07 29 13.0 -0.8**
baz=103
BGNE Belgrade 68.75 313 P **P** **07 29 12.4 -1.5**
AKASG Malin Array Be 68.79 37 P **P** **07 29 13.2 -0.6**
comp=Z,2.3nm,0.7s,baz=250,slow=6.6,SNR=12
AKASG LR LR 07 59 05.6
comp=Z,184nm,19.2s,baz=255,slow=36
AKASG Malin Array Be 68.79 37 P **P** **07 29 12.8 -1.1**
AKASG pmax pmax
comp=Z,8.0nm,1.4s
AKASG Malin Array Be 68.79 37 P **P** **07 29 12.8 -1.1**
AKBB Malin Array Si 68.79 37 P **P** **07 29 13.2 -0.6**
AKBB pmax pmax
comp=Z,26nm,1.5s
AKBB Malin Array Si 68.79 37 P **P** **07 29 13.2 -0.6**
AKBB IAmb IAmb 07 29 16.0
comp=Z,26nm,1.5s
BR131 Keskin Array S 68.81 49 P **P** **07 29 13.7 -0.7**
BR131 pmax pmax
comp=Z,38nm,1.4s
BR131 Keskin Array S 68.81 49 P **P** **07 29 13.7 -0.7**
BRTR Keskin Array B 68.81 49 P **P** **07 29 15.1 +0.7**
comp=Z,5.3nm,0.9s,baz=228,slow=4.8,SNR=14
BRTR LR LR 07 59 32.0
comp=Z,90nm,21.9s,baz=250,slow=36
BRTR Keskin Array B 68.81 49 P **P** **07 29 13.7 -0.7**
K31A O'Neill 69.46 314 P **P** **07 29 16.8 -1.5**
ULM Lac du Bonnet 69.60 322 P **P** **07 29 18.1 -0.8**
comp=Z,2.4nm,0.8s,baz=114,slow=10.0,SNR=2.6
ULM LR LR 07 56 12.6
comp=Z,231nm,18.9s,baz=114,slow=33
ULM Lac du Bonnet 69.60 322 *i* P **P** **07 29 21.8 +2.9**
KMBO Kilima Mbogo 69.96 93 P **P** **07 29 25.0 +2.9**
comp=Z,1.9nm,0.8s,baz=266,slow=9.6,SNR=5.9
KMBO LR LR 07 57 36.6
comp=Z,833nm,18.9s,baz=276,slow=34
FURI Furi 70.76 82 IAMs_20 IAMs_20 07 57 26.8
comp=Z,533nm,22.0s
MSTX Muleshoe 71.05 304 P **P** **07 29 27.5 -0.8**
baz=97
TXAR Lajitas Array 71.30 299 P **P** **07 29 29.7 -0.1**
comp=Z,2.0nm,1.0s,baz=79,slow=4.7,SNR=9.9
TXAR LR LR 07 58 13.3
comp=Z,176nm,22.0s,baz=0.0,slow=34
TXAR Lajitas Array 71.30 299 P **P** **07 29 28.9 -1.0**
TXAR Lajitas Array 71.30 299 P **P** **07 29 28.9 -1.0**
FINES FINESS Array B 71.35 26 LR LR 07 59 35.5
comp=Z,100nm,18.5s,baz=239,slow=35
KSCO Kaye Shedlock' 71.66 309 P **P** **07 29 32.1 +0.2**
baz=99
KSCO Kaye Shedlock' 71.66 309 P **P** **07 29 30.6 -1.2**
E28A Huff 71.71 318 P **P** **07 29 30.7 -1.1**
T25A Trinidad 72.78 307 P **P** **07 29 39.4 +0.6**
baz=97
T25A Trinidad 72.78 307 P **P** **07 29 39.2 +0.4**
T25A IAmb IAmb 07 29 45.9
comp=Z,11nm,1.0s
MNTX Cornudas Mount 72.99 302 P **P** **07 29 39.4 -0.5**
baz=95
PMSA Palmer Station 73.04 194 *e*P **P** **07 29 43.0 +3.8**
Q24A Divide 73.59 309 P **P** **07 29 43.8 +0.1**
baz=97
Q24A Divide 73.59 309 P **P** **07 29 42.8 -0.8**
Q24A IAmb IAmb 07 29 51.0
comp=Z,26nm,1.0s
SDCO Great Sand Dun 73.72 308 P **P** **07 29 44.2 -0.2**
baz=97
ISCO Idaho Springs 74.06 310 P **P** **07 29 46.5 +0.2**
ISCO pmax pmax
comp=Z,24nm,1.4s
ISCO Idaho Springs 74.06 310 P **P** **07 29 46.6 +0.3**
baz=97
ISCO Idaho Springs 74.06 310 P **P** **07 29 46.5 +0.2**
ISCO IAmb IAmb 07 29 59.0
comp=Z,24nm,1.4s
ANMO Albuquerque 74.19 305 *ce*P **P** **07 29 47.5 +0.5**
ANMO pmax pmax
comp=Z,21nm,2.5s
ANMO Albuquerque 74.19 305 P **P** **07 29 47.9 +0.9**
baz=95
OBN Obninsk 74.34 34 ‖ *e*P **P** **07 29 48.8 +1.6**
OBN *e* 07 29 55.6
OBN 07 30 06.0
OBN *e*S **S** **07 39 26.3 +4.8**
OBN pmax pmax
comp=Z,7.0nm,1.0s
OBN MLR MLR
comp=Z,141nm,20.0s
DGMT Dagmar 74.42 319 P **P** **07 29 46.8 -1.1**
N23A Red Feather La 74.45 311 P **P** **07 29 49.1 +0.5**
baz=97
N23A Red Feather La 74.45 311 P **P** **07 29 47.4 -1.2**
S22A 4UR Ranch, Cre 74.76 308 P **P** **07 29 51.4 +0.9**
baz=96
ARCES ARCESS Array B 74.89 18 LR LR 07 58 51.1
comp=Z,95nm,19.8s,baz=230,slow=33
SMCO Snowmass 75.03 309 P **P** **07 29 51.7 -0.4**
SMCO IAmb IAmb 07 29 59.4
comp=Z,16nm,1.0s
MOS Moscow 75.08 33 *e*P **P** **07 29 51.2 -0.3**
MOS *e* 07 30 04.9
LAO LASA Array 75.47 317 P **P** **07 29 54.7 +0.6**
baz=99
LAO LASA Array 75.47 317 P **P** **07 29 54.0 -0.1**
LAO IAmb IAmb 07 30 01.3
comp=Z,30nm,1.1s
RWWY Rawlins 75.50 312 P **P** **07 29 53.2 -1.4**
RWWY IAmb IAmb 07 30 01.7
comp=Z,14nm,0.9s
MVCO Mesa Verde 76.03 307 P **P** **07 29 57.3 -0.5**
baz=95
MVCO Mesa Verde 76.03 307 P **P** **07 29 56.3 -1.5**
MVCO IAmb IAmb 07 30 10.3
comp=Z,24nm,1.4s
O20A White River Ci 76.10 310 P **P** **07 29 58.4 +0.4**
baz=96
O20A White River Ci 76.10 310 P **P** **07 29 57.8 -0.2**
O20A IAmb IAmb 07 30 05.2
comp=Z,27nm,1.0s
KIV Kislovodsk 76.17 46 *e*P **P** **07 29 58.7 +0.6**
KIV pmax pmax
comp=Z,54nm,1.0s
KIV MLR MLR
comp=Z,247nm,18.0s
PV01 Paradox Valley 76.17 308 IAMs_20 IAMs_20 08 02 53.4
comp=Z,690nm,19.0s
DAMY Dhamar 76.21 76 IAMs_20 IAMs_20 08 00 28.0
comp=Z,545nm,21.0s
KBZ Khabaz 76.30 46 P **P** **07 29 59.9 +1.2**
comp=Z,4.0nm,0.8s,baz=262,slow=7.1,SNR=2.2
KBZ LR LR 08 05 49.7
comp=Z,99nm,20.6s,baz=271,slow=38
KBZ Khabaz 76.30 46 *i* P **P** **07 29 59.2 +0.5**
KBZ pmax pmax
comp=Z,5.0nm,0.9s
VNA1 Neumayer--Stat 76.86 172 P **P** **07 30 02.9 +1.6**
VNA3 Neumayer Olymp 77.22 173 P **P** **07 30 04.3 +1.0**
VNA2 Neumayer--Watz 77.24 172 P **P** **07 30 04.0 +0.5**
KLMR Klimovskoe 77.28 29 *e*P **P** **07 30 01.9 -2.0**
KLMR pmax pmax
comp=Z,22nm,1.4s
KLMR Klimovskoe 77.28 29 *e*P **P** **07 30 01.9 -2.0**
KLMR AMP 07 30 05.6
comp=Z,22nm,1.4s
BW06 Boulder Array 77.34 313 P **P** **07 30 05.4 +0.4**
baz=95
BW06 Boulder Array 77.34 313 P **P** **07 30 04.1 -0.9**
PDAR Pinedale Array 77.34 313 P **P** **07 30 04.4 -0.6**
comp=Z,3.6nm,0.9s,baz=90,slow=7.4,SNR=11
PDAR LR LR 08 00 14.5
comp=Z,440nm,21.2s,baz=115,slow=33
PDAR Pinedale Array 77.34 313 P **P** **07 30 03.9 -1.1**
RLMT Red Lodge 77.37 315 P **P** **07 30 04.7 -0.4**
baz=96
TUC Tucson 77.61 302 P **P** **07 30 05.8 -0.7**
TUC pmax pmax
comp=Z,11nm,1.1s
TUC Tucson 77.61 302 P **P** **07 30 07.3 +0.8**
baz=92
TUC Tucson 77.61 302 P **P** **07 30 05.8 -0.7**
SRU San Rafael Swe 77.77 309 P **P** **07 30 06.3 -1.1**
SRU pmax pmax
comp=Z,19nm,1.3s

SRU	**San Rafael Swe**	**77.77**	**309**	P	**P**	**07 30 06.3**	**-1.1**
YNE	**Yellowstone No**	**77.88**	**315**	P	**P**	**07 30 06.7**	**-1.3**
YMP	**Mirror Lake Pl**	**77.96**	**315**	P	**P**	**07 30 06.9**	**-1.6**
P17A	**Butcher Ranch,**	**77.97**	**309**	P	**P**	**07 30 07.6**	**-0.9**
H17A	**Grant Village**	**78.23**	**314**	P	**P**	**07 30 08.6**	**-1.3**
WUAZ	**Wupatki**	**78.24**	**305**	P	**P**	**07 30 10.7**	**+0.6**
	baz=93						
WUAZ	**Wupatki**	**78.24**	**305**	P	**P**	**07 30 09.3**	**-0.7**
WUAZ				IAmb	IAmb	07 30 17.8	
	comp=Z,18nm,0.9s						
X16A	**Lo Mia Camp, P**	**78.25**	**304**	P	**P**	**07 30 08.4**	**-1.7**
SNOW	**Snow King Moun**	**78.28**	**313**	P	**P**	**07 30 08.4**	**-1.8**
SNOW				IAmb	IAmb	07 30 17.1	
	comp=Z,18nm,1.1s						
TMUT	**Trail Mountain**	**78.31**	**309**	P	**P**	**07 30 09.8**	**-0.8**
YPP	**Pitchstone Pla**	**78.38**	**314**	P	**P**	**07 30 09.0**	**-1.8**
YHH	**Holmes Hill**	**78.46**	**315**	P	**P**	**07 30 10.1**	**-1.1**
YMR	**Madison River**	**78.53**	**314**	P	**P**	**07 30 10.0**	**-1.5**
TCUT	**Toone Canyon**	**78.59**	**311**	P	**P**	**07 30 10.6**	**-1.4**
SNAA	**Sanae**	**78.59**	**171**	P	**P**	**07 30 11.8**	**+0.8**
SNAA	**Sanae**	**78.59**	**171**	P	**P**	**07 30 11.6**	**+0.6**
	comp=Z,4.0nm,0.9s,baz=339,slow=6.2,SNR=12						
SNAA	**Sanae**	**78.59**	**171**	*ce*P	**P**	**07 30 10.5**	**-0.5**
SNAA				pmax	pmax		
	comp=Z,11nm,1.7s						
SNAA	**Sanae**	**78.59**	**171**	P	**P**	**07 30 10.7**	**-0.4**
YHB	**Horse Butte**	**78.70**	**315**	P	**P**	**07 30 11.7**	**-0.8**
HWUT	**Hardware Ranch**	**78.74**	**311**	P	**P**	**07 30 11.4**	**-1.3**
HWUT				IAmb	IAmb	07 30 19.8	
	comp=Z,21nm,0.9s						
CTU	**Camp Tracy**	**78.82**	**310**	P	**P**	**07 30 12.5**	**-0.6**
QLMT	**Earthquake Lak**	**78.87**	**315**	P	**P**	**07 30 12.2**	**-1.3**
MTPU	**Mount Pierson**	**79.01**	**308**	P	**P**	**07 30 13.8**	**-0.7**
MVU	**Marysvale**	**79.05**	**308**	P	**P**	**07 30 12.7**	**-1.9**
BOZ	**Bozeman (W)**	**79.08**	**315**	P	**P**	**07 30 14.1**	**-0.4**
	baz=94						
TCRU	**Three Creeks R**	**79.24**	**308**	P	**P**	**07 30 14.4**	**-1.2**
DUG	**Dugway, Tooele**	**79.60**	**310**	P	**P**	**07 30 17.5**	**+0.1**
	baz=93						
SZCU	**Shurtz Canyon**	**79.70**	**307**	P	**P**	**07 30 17.4**	**-0.8**
BGU	**Big Grassy Mou**	**79.80**	**311**	P	**P**	**07 30 16.5**	**-2.0**
HLID	**Hailey**	**80.94**	**313**	P	**P**	**07 30 24.8**	**+0.2**
	baz=92						
PRN	**Pahroc Range**	**81.26**	**307**	P	**P**	**07 30 25.7**	**-0.7**
PRN				IAmb	IAmb	07 30 34.6	
	comp=Z,19nm,1.0s						
IRM	**Iron Mountain**	**81.31**	**304**	P	**P**	**07 30 27.2**	**+0.6**
	baz=90						
SHPR	**Sheep Range**	**81.34**	**306**	P	**P**	**07 30 25.2**	**-1.7**
ELK	**Elko**	**81.47**	**310**	P	**P**	**07 30 26.4**	**-1.2**
ELK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ELK	**Elko**	**81.47**	**310**	P	**P**	**07 30 26.4**	**-1.2**
ELK				IAMs_20	IAMs_20	08 00 13.5	
	comp=Z,722nm,22.0s						
R11A	**Troy Canyon, C**	**81.70**	**308**	P	**P**	**07 30 29.1**	**+0.4**
	baz=91						
GMRC	**Granite Mounta**	**81.73**	**304**	P	**P**	**07 30 29.0**	**+0.1**
	baz=90						
KIRV	**Kirov**	**81.87**	**32**	*ce*P	**P**	**07 30 29.6**	**+0.7**
TUQ	**Turquoise Moun**	**81.95**	**305**	P	**P**	**07 30 30.4**	**+0.3**
	baz=90						
TPNV	**Topopah Spring**	**82.22**	**307**	P	**P**	**07 30 29.6**	**-1.9**
TPNV				pmax	pmax		
	comp=Z,19nm,1.4s						
TPNV	**Topopah Spring**	**82.22**	**307**	P	**P**	**07 30 32.3**	**+0.8**
	baz=90						
TPNV	**Topopah Spring**	**82.22**	**307**	P	**P**	**07 30 29.6**	**-1.9**
TPNV				IAmb	IAmb	07 30 44.5	
	comp=Z,19nm,1.4s						
YKA	**Yellowknife Ar**	**82.25**	**332**	P	**P**	**07 30 31.3**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=84,slow=5.7,SNR=3.5						
YKA				LR	LR	08 03 25.6	
	comp=Z,124nm,20.8s,baz=0.0,slow=33						
YKA	**Yellowknife Ar**	**82.25**	**332**	*ce*P	**P**	**07 30 33.9**	**+3.1**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HEC	**Hector,Ludlow**	**82.29**	**304**	P	**P**	**07 30 32.7**	**+1.0**
	baz=90						
GSC	**Goldstone, Bar**	**82.67**	**305**	P	**P**	**07 30 31.1**	**-2.7**
GSC				pmax	pmax		
	comp=Z,14nm,1.5s						
GSC	**Goldstone, Bar**	**82.67**	**305**	P	**P**	**07 30 35.5**	**+1.7**
	baz=89						
GSC	**Goldstone, Bar**	**82.67**	**305**	P	**P**	**07 30 31.1**	**-2.7**
GSC				IAmb	IAmb	07 30 46.4	
	comp=Z,14nm,1.4s						
TJX	**Tijuana**	**82.91**	**302**	IAMs_20	IAMs_20	08 09 53.2	
	comp=Z,721nm,20.0s						
NEW	**Newport**	**82.96**	**318**	P	**P**	**07 30 33.1**	**-1.9**
NEW				pmax	pmax		
	comp=Z,16nm,1.5s						
NEW	**Newport**	**82.96**	**318**	P	**P**	**07 30 33.8**	**-1.1**
	baz=91						
NEW	**Newport**	**82.96**	**318**	P	**P**	**07 30 33.1**	**-1.9**
NEW				IAmb	IAmb	07 30 37.0	
	comp=Z,16nm,1.4s						
BMO	**Blue Mountains**	**83.05**	**314**	P	**P**	**07 30 34.0**	**-1.6**
BMO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BMO	**Blue Mountains**	**83.05**	**314**	P	**P**	**07 30 34.0**	**-1.6**
MPMC	**Manual Prospec**	**83.22**	**306**	P	**P**	**07 30 37.4**	**+0.6**
	baz=89						
EDW2	**Edwards Air Fo**	**83.65**	**304**	P	**P**	**07 30 39.0**	**+0.2**
	baz=89						
KVN	**Kaiserville**	**83.66**	**309**	P	**P**	**07 30 36.9**	**-2.1**
KVN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KVN	**Kaiserville**	**83.66**	**309**	P	**P**	**07 30 36.9**	**-2.1**
CWC	**Cottonwood Cre**	**83.69**	**306**	P	**P**	**07 30 40.5**	**+1.4**
	baz=89						
NV11	**Mina Array Sit**	**83.72**	**308**	P	**P**	**07 30 38.5**	**-0.7**
NV11				IAmb	IAmb	07 30 48.8	
	comp=Z,11nm,1.4s						
NVAR	**Mina Array Bea**	**83.83**	**308**	P	**P**	**07 30 38.6**	**-1.3**
	comp=Z,2.5nm,1.0s,baz=99,slow=6.4,SNR=10						
NVAR				LR	LR	08 05 21.1	
	comp=Z,164nm,19.9s,baz=91,slow=34						
NVAR	**Mina Array Bea**	**83.83**	**308**	P	**P**	**07 30 37.5**	**-2.4**
LHV	**Little Huntoon**	**83.99**	**308**	P	**P**	**07 30 38.3**	**-2.0**
LHV				IAmb	IAmb	07 30 53.1	
	comp=Z,25nm,1.3s						
ISA	**Isabella, Lake**	**84.03**	**305**	P	**P**	**07 30 41.5**	**+0.8**
	baz=88						
ISA	**Isabella, Lake**	**84.03**	**305**	IAMs_20	IAMs_20	08 03 41.5	
	comp=Z,915nm,22.0s						
MDPB	**Devils Postpil**	**84.46**	**307**	P	**P**	**07 30 40.7**	**-2.5**
MDPB				IAmb	IAmb	07 30 55.1	
	comp=Z,12nm,1.4s						
MDPB				IAMs_20	IAMs_20	08 04 12.9	
	comp=Z,753nm,19.0s						
PNT	**Penticton**	**84.61**	**319**	P	**P**	**07 30 42.8**	**-0.6**
PNT				pmax	pmax		
	comp=Z,32nm,1.5s						
PAHR	**Pah Rah Range**	**84.64**	**309**	IAMs_20	IAMs_20	08 08 54.7	
	comp=Z,521nm,20.0s						
PNTR	**Pine Nut**	**84.83**	**309**	P	**P**	**07 30 42.8**	**-2.2**
VCNR	**Virginia City**	**84.86**	**309**	IAMs_20	IAMs_20	08 05 58.4	
	comp=Z,519nm,18.0s						
MOD	**Modoc Plateau**	**85.28**	**312**	P	**P**	**07 30 45.3**	**-1.8**
MOD				IAmb	IAmb	07 30 54.9	
	comp=Z,18nm,1.1s						
BEKR	**Beckworth**	**85.39**	**310**	P	**P**	**07 30 46.3**	**-1.4**
BEKR				IAmb	IAmb	07 30 55.0	
	comp=Z,14nm,1.1s						
CMB	**Columbia Colle**	**85.48**	**308**	IAMs_20	IAMs_20	08 04 09.9	
	comp=Z,605nm,21.0s						
AFDM	**Forest Hills D**	**85.90**	**309**	P	**P**	**07 30 49.1**	**-1.0**
I05D	**Terrebonne, OR**	**85.94**	**314**	P	**P**	**07 30 50.9**	**+0.8**
	baz=87						
F05D	**White Salmon**	**85.96**	**316**	P	**P**	**07 30 50.7**	**+0.5**
	baz=88						
ORV	**Oroville**	**86.28**	**309**	P	**P**	**07 30 50.5**	**-1.4**
ORV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ORV	**Oroville**	**86.28**	**309**	P	**P**	**07 30 50.5**	**-1.4**
B05A	**Bryant**	**86.28**	**318**	P	**P**	**07 30 52.2**	**+0.5**
	baz=87						
J04D	**Umpqua Nationa**	**86.55**	**313**	P	**P**	**07 30 53.2**	**-0.2**
	baz=87						
I04A	**Tendick Farm,**	**86.74**	**314**	P	**P**	**07 30 55.3**	**+1.2**
	baz=87						
ARU	**Arti**	**86.79**	**34**	*c i*P	**P**	**07 30 57.0**	**+3.0**
ARU						07 34 11.1	
ARU				S	**SKSac**	**07 41 23.2**	**+2.2**
ARU					SS	**SS**	**07 47 11.9**	**-1.3**
ARU					pmax	pmax		
	comp=Z,21nm,1.4s						
UOSS	**Minazif**	**86.93**	**65**	IAMs_20	IAMs_20	08 10 31.6	
	comp=Z,787nm,20.0s						
GEYT	**Alibeck**	**87.70**	**52**	LR	LR	08 13 02.2	
	comp=Z,169nm,21.1s,baz=345,slow=38						
SYO	**Syowa Base**	**87.97**	**160**	*e*PcP	**P**	**07 30 59.0**	**-0.3**
SYO	**Syowa Base**	**87.97**	**160**	*i*pP	pP	07 31 01.4	-0.4
SYO	**Syowa Base**	**87.97**	**160**	*e*pPKiKP	**PKiKP**	**07 36 04.2**	**+2.6**
NRIK	**Noril'sk**	**95.88**	**18**	LR	LR	08 11 37.4	
	comp=Z,176nm,21.7s,baz=15,slow=34						
ILAR	**Eielson Array**	**95.95**	**337**	P	**P**	**07 31 35.6**	**-0.9**
	comp=Z,1.6nm,1.1s,baz=39,slow=3.3,SNR=7.3						
ILAR				LR	LR	08 12 15.9	
	comp=Z,267nm,19.8s,baz=82,slow=34						
MAW	**Mawson**	**96.32**	**157**	LR	LR	08 09 06.4	
	comp=Z,176nm,18.0s,baz=242,slow=32						
GHO	**Glory Hole Cre**	**98.05**	**335**	IAMs_20	IAMs_20	08 09 59.8	
	comp=Z,432nm,18.0s						
NIL	**Nilore**	**100.49**	**55**	IAMs_20	IAMs_20	08 21 46.1	
	comp=Z,410nm,20.0s						
KSH	**Kashi**	**101.19**	**48**	*e*P	**Pdif**	**07 32 00.9**	**+0.2**
TAOE	**Nuku Hiva Isla**	**108.08**	**262**	*e*LR	LR	08 08 22.8	
	comp=Z,198nm,23.1s						
TBI	**Tubuai**	**116.51**	**246**	*e*SS	SS	07 54 06.4	-0.9
	comp=Z,112nm,28.5s						
TBI	**Tubuai**	**116.51**	**246**	*e*LR	LR	08 12 14.9	
	comp=Z,180nm,22.0s						
PPT2	**Papeete2**	**117.15**	**253**	*e*SS	SS	07 54 18.8	+2.7
	comp=Z,271nm,28.5s						
PPT2	**Papeete2**	**117.15**	**253**	*e*LR	LR	08 12 35.6	
	comp=Z,293nm,22.0s						
SHL	**Shillong**	**118.33**	**58**	IAMs_20	IAMs_20	08 30 24.8	
	comp=Z,450nm,20.0s						
LZH	**Lanzhou**	**122.51**	**42**	*e*PKP	**PKPdf**	**07 37 04.9**	**-1.1**
HHC	**Hu-ho-hao-te**	**124.08**	**32**	*e*PKP	**PKiKP**	**07 37 10.5**	**+1.4**
CD2	**Chengdu**	**125.34**	**47**	PKP	**PKPdf**	**07 37 10.5**	**-0.9**
CHTO	**Chiang Mai**	**126.85**	**62**	IAMs_20	IAMs_20	08 37 25.7	
	comp=Z,188nm,19.0s						
CMAR	**Chiang Mai Arr**	**126.97**	**63**	PKP	**PKiKP**	**07 37 14.9**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=290,slow=3.1,SNR=6.1						
KULM	**Kulim**	**132.22**	**79**	IAMs_20	IAMs_20	08 29 39.4	
	comp=Z,192nm,20.0s						
IPM	**Ipoh**	**132.74**	**80**	IAMs_20	IAMs_20	08 30 56.2	
	comp=Z,317nm,22.0s						
NJ2	**Nanjing**	**134.49**	**35**	*e*PKP	**PKPdf**	**07 37 27.3**	**-1.4**
SBUM	**Sibu**	**144.09**	**79**		PKPbc	07 37 45.0	+0.3
STKA	**Stephens Creek**	**152.34**	**169**	PKPbc	**PKPbc**	**07 38 05.5**	**-0.9**
	comp=Z,5.7nm,1.1s,baz=204,slow=6.2,SNR=6.0						
MMRI	**Maumere**	**154.64**	**100**	IAMs_20	IAMs_20	08 51 40.6	
	comp=Z,211nm,19.0s						
FITZ	**Fitzroy Crossi**	**154.81**	**124**	PKPbc	**PKPbc**	**07 38 11.4**	**-0.7**
	comp=Z,4.9nm,1.0s,baz=231,slow=4.6,SNR=4.9						
ASAR	**Alice Springs**	**156.99**	**147**	PKP	**PKPdf**	**07 38 05.8**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=172,slow=1.9,SNR=8.8						
ASAR				PKPab	**PKPab**	**07 38 36.4**	**0.0**
	comp=Z,1.5nm,0.8s,baz=203,slow=4.3,SNR=8.6						
WRA	**Warramunga Arr**	**160.12**	**141**	PKP	**PKPdf**	**07 38 09.3**	**-0.9**
	comp=Z,1.5nm,1.1s,baz=239,slow=1.5,SNR=5.2						
WRA				PKPab	**PKPab**	**07 38 50.0**	**+0.1**
	comp=Z,2.3nm,1.1s,baz=205,slow=2.6,SNR=6.5						

*IDC **03** 07:30:48.6±4.1, 41.5°S±1.7°×174.7°E±1.0, **h13**km±1km, **M3.2**/13, **ML3.5**/13, **MLv3.2**/13, **Error ellipse: s-maj=0.0km s-min=0.0km az=174.6, Cook Strait***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.13**	**100**	P	Pb	07 30 53.0	+0.1
KIW				S	Sb	07 30 55.6	-0.2
OGWZ	**Otaki Gorge**	**0.33**	**86**	P	Pb	07 30 55.9	-0.3
OGWZ				S	Sg	07 31 00.6	+0.8
CAW	**Cannon Point**	**0.36**	**138**	P	Pb	07 30 56.9	0.0
CAW				S	Sb	07 31 02.2	-0.3
WEL	**Wellington**	**0.45**	**177**	P	Pb	07 30 58.4	+0.1
TCW	**Tory Channel**	**0.51**	**223**	P	Pg	07 30 59.0	+0.3
TCW				S	Sg	07 31 05.7	+0.2
BHW	**Baring Head**	**0.58**	**170**	P	Pb	07 31 00.7	+0.2
BHW				S	Sg	07 31 08.1	+0.5
HOWZ	**Holdsworth Sta**	**0.59**	**96**	P	Pb	07 31 00.9	+0.1
HOWZ				S	Sb	07 31 08.6	-0.5
DUWZ	**D'Urville Isla**	**0.62**	**273**	P	Pb	07 31 01.6	+0.2
DUWZ				S	Sb	07 31 10.8	+0.9
MTW	**Mount Morrison**	**0.66**	**119**	P	Pb	07 31 02.2	+0.3
MTW				S	Sb	07 31 12.0	+1.0
MSWZ	**Moikau Station**	**0.69**	**147**	P	Pb	07 31 03.3	+0.8
MSWZ				S	Sb	07 31 12.9	+0.9
PAWZ	**Paruwai Farm**	**0.75**	**137**	P	Pn	07 31 04.4	-0.5
PAWZ				S	Sn	07 31 14.9	-1.2
OHWZ	**Ohakea**	**0.77**	**35**	P	Pb	07 31 04.1	+0.4
OHWZ				S	Sb	07 31 14.4	+0.4
PLWZ	**Palliser**	**0.83**	**152**	P	Pn	07 31 05.6	-0.3
PLWZ				S	Sn	07 31 17.5	-0.5
TUWZ	**Tuamarina**	**0.84**	**225**	P	Pg	07 31 04.5	-0.4
TUWZ				S	Sg	07 31 16.1	+0.1
TIWZ	**Tintock**	**0.87**	**86**	P	Pn	07 31 06.1	-0.4
TIWZ				S	Sb	07 31 17.3	+0.2
POWZ	**Post Office Ro**	**0.90**	**61**	P	Pg	07 31 06.0	0.0
POWZ				S	Sg	07 31 17.1	-0.7
TRWZ	**Traveller**	**0.91**	**128**	P	Pn	07 31 07.7	+0.7
TMWZ	**Te Maipa**	**0.91**	**108**	P	Pn	07 31 07.1	0.0
PRWZ	**Pori Road**	**0.98**	**74**	P	Pn	07 31 07.9	0.0
BSWZ	**Blackbirch Sta**	**1.09**	**216**	P	Pb	07 31 09.4	+0.1
NNZ	**Nelson**	**1.10**	**249**	P	Pn	07 31 09.5	-0.1
WAZ	**Wanganui**	**1.10**	**10**	P	Pg	07 31 09.7	0.0
CPWZ	**Castlepoint**	**1.11**	**94**	P	Pg	07 31 12.4	+2.4
BFZ	**Birch Farm**	**1.15**	**83**	P	Pb	07 31 10.3	-0.1
TSZ	**Takapari Road**	**1.21**	**51**	P	Pn	07 31 11.3	0.0
ANWZ	**Angora Road**	**1.37**	**75**	P	Pg	07 31 14.8	-0.2
PNHZ	**Pukenui**	**1.45**	**51**	P	Pn	07 31 14.8	+0.3
PKVZ	**Pokaka**	**1.61**	**17**	P	Pb	07 31 18.4	+0.1
MOVZ	**Moawhango**	**1.63**	**29**	P	Pn	07 31 17.6	+0.6
KHEZ	**Kahui Hut**	**1.64**	**340**	P	Pb	07 31 18.7	0.0
NEZ	**North Egmont**	**1.64**	**342**	P	Pb	07 31 18.6	-0.1
WNWZ	**Wahianoa**	**1.65**	**24**	P	Pb	07 31 18.6	-0.2
THZ	**Tophouse**	**1.66**	**326**	P	Pb	07 31 18.7	-0.4
QRZ	**Quartz Range**	**1.68**	**270**	P	Pb	07 31 18.9	-0.4
DRZ	**Dome Shelter**	**1.68**	**22**	P	Pb	07 31 19.5	-0.1
WHVZ	**Whangaehu Hut**	**1.68**	**23**	P	Pb	07 31 19.3	-0.2
BHHZ	**Black Hill Sta**	**1.69**	**37**	P	Pb	07 31 18.7	-0.7
FWVZ	**Far West T-bar**	**1.70**	**22**	P	Pb	07 31 19.6	-0.2
NBEZ	**Newall Road No**	**1.71**	**337**	P	Pb	07 31 20.5	+0.8
VRZ	**Vera Road**	**1.71**	**0**	P	Pb	07 31 19.1	-0.7
TUVZ	**Tukino**	**1.72**	**24**	P	Pb	07 31 19.6	-0.4
KRHZ	**Kereru**	**1.73**	**47**	P	Pn	07 31 18.5	+0.2
PKE	**Pukeiti**	**1.74**	**340**	P	Pb	07 31 20.5	+0.2
NGZ	**Ngauruhoe**	**1.79**	**22**	P	Pb	07 31 21.0	-0.3
KHZ	**Kahutara**	**1.82**	**209**	P	Pb	07 31 21.1	-0.6
OTVZ	**Oturere**	**1.82**	**23**	P	Pb	07 31 21.5	-0.2
WTVZ	**West Tongariro**	**1.84**	**21**	P	Pb	07 31 21.9	-0.2
TWVZ	**Taurewa**	**1.84**	**17**	P	Pb	07 31 21.4	-0.8
ETVZ	**East Tongariro**	**1.86**	**24**	P	Pb	07 31 21.6	-0.8
TMVZ	**Te Maari**	**1.87**	**24**	P	Pb	07 31 22.1	-0.6
KRVZ	**Karewarewa**	**1.87**	**22**	P	Pb	07 31 22.6	-0.1
KWHZ	**Kaweka Forest**	**1.91**	**43**	P	Pb	07 31 23.1	-0.2
MCHZ	**McNeill Hill**	**2.05**	**48**	P	Pg	07 31 28.2	+0.3
RITZ	**Rihia Road**	**2.05**	**25**	P	Pb	07 31 26.0	+0.4
RATZ	**Rangitukua**	**2.12**	**22**	P	Pb	07 31 27.5	+0.6
BKZ	**Black Stump Fm**	**2.15**	**39**	P	Pn	07 31 25.2	+1.2
HIZ	**Hauiti**	**2.32**	**2**	P	Pb	07 31 29.2	-1.1
DSZ	**Denniston Nort**	**2.39**	**247**	P	Pn	07 31 29.1	+1.6
MTHZ	**Maungataniwha**	**2.56**	**40**	P	Pn	07 31 29.8	+0.1
TLZ	**Tolley Road**	**2.58**	**14**	P	Pb	07 31 33.7	-1.0
LTZ	**Lake Taylor**	**2.68**	**223**	P	Pn	07 31 31.7	+0.2
MUGZ	**Murupara**	**2.83**	**34**	P	Pb	07 31 39.2	+0.2
INZ	**Inchbonnie**	**3.10**	**232**	P	Pn	07 31 37.7	+0.5
TOZ	**Tahuroa Road**	**3.16**	**11**	P	Pb	07 31 44.5	0.0

IDC 03 07:31:38.8±4.2, 6.43N×91.98E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/41, mbtmp3.6/4, Error ellipse: s-maj=149.8km s-min=32.4km az=60.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**23.94**	**235**	T	T	08 03 54.9	
	baz=55,slow=75,SNR=9.0						
H08S2	**Diego Garcia H**	**23.94**	**235**	T	T	08 03 55.4	
	baz=55,slow=75,SNR=3.4						
H08S1	**Diego Garcia H**	**23.96**	**235**	T	T	08 03 56.5	
	baz=55,slow=75,SNR=8.4						
MKAR	**Makanchi Array**	**41.08**	**350**	P	P	07 39 23.9	-0.3
	0.6nm,0.6s,baz=167,slow=8.4,SNR=5.6						
SONM	**Songino Array**	**43.06**	**14**	P	P	07 39 40.6	0.0
	0.5nm,0.7s,baz=201,slow=7.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**47.74**	**354**	P	P	07 40 17.4	0.0
	0.7nm,0.3s,baz=156,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**49.22**	**123**	P	P	07 40 29.2	-0.2
	0.3nm,0.7s,baz=304,slow=8.3,SNR=2.4						

*IDC **03** 07:38:16.5±3.0, 19.06S×169.50E, h254km±28km, mb3.5/8, mb1 3.6/9, mb1mx3.4/25, mbtmp4.1/9, Error ellipse: s-maj=52.0km s-min=21.7km az=143.0*

ISC 03 07:38:15.9±1.7, 19.25S±0.2×169.6E±0.3, h250km, n11, σ1°41/13, mb3.8/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.11**	**225**	P	**Pn**	**07 39 22.8**	**+1.8**
	2.9nm,0.3s,baz=310,slow=21,SNR=26						
DZM				S	**S**	**07 40 09.7**	**-3.0**
	3.9nm,0.3s,baz=108,slow=20,SNR=2.7						
CTA	**Charters Tower**	**21.96**	**264**	P	**P**	**07 42 50.5**	**+0.8**
	0.6nm,0.3s,baz=70,slow=13,SNR=1.6						
STKA	**Stephens Creek**	**28.14**	**238**	P	**P**	**07 43 45.6**	**+0.5**
	3.2nm,0.7s,baz=76,slow=11,SNR=10.0						
WRA	**Warramunga Arr**	**33.16**	**263**	P	**P**	**07 44 28.0**	**-1.2**
	0.3nm,0.3s,baz=80,slow=6.3,SNR=23						
WRA				PcP	**PcP**	**07 47 07.4**	**+1.3**
	0.3nm,0.9s,baz=86,slow=3.2,SNR=1.5						
ASAR	**Alice Springs**	**33.43**	**256**	P	**P**	**07 44 31.6**	**-0.1**
	3.0nm,0.6s,baz=82,slow=8.9,SNR=51						
PETK	**Petropavlovsk-**	**72.69**	**353**	P	**P**	**07 49 16.1**	**-0.1**
	5.2nm,0.8s,baz=123,slow=5.5,SNR=5.9						
CMAR	**Chiang Mai Arr**	**78.74**	**294**	P	**P**	**07 49 52.1**	**+0.9**
	0.6nm,0.4s,baz=126,slow=3.7,SNR=5.4						
SONM	**Songino Array**	**87.33**	**323**	P	**P**	**07 50 34.7**	**+0.1**
	1.5nm,0.7s,baz=140,slow=5.4,SNR=7.4						
ILAR	**Eielson Array**	**90.07**	**17**	P	**P**	**07 50 45.4**	**-1.5**
	0.6nm,0.5s,baz=235,slow=5.1,SNR=9.8						
ARCES	**ARCESS Array B**	**125.07**	**345**	PKP	**PKPdf**	**07 56 45.4**	**-0.3**
	3.5nm,0.9s,baz=46,slow=3.5,SNR=5.0						
GERES	**GERESS Array B**	**144.56**	**332**	PKP	**PKPab**	**07 57 21.2**	**-0.6**
	0.4nm,0.3s,baz=63,slow=6.1,SNR=3.9						

*NEIC **03** 07:49:12.3±1.1, 5.1N±0.1×32.6W±0.1, h10km±1km, mb4.7/25, Error ellipse: s-maj=23.8km s-min=3.2km az=135.0*

*IDC **03** 07:49:12.4±1.3, 5.20N×32.42W, h0km, mb3.9/8, mb1 4.2/8, mb1mx3.9/38, mbtmp3.9/8, MS3.8/4, Ms1 3.8/4, ms1mx3.2/34, Error ellipse: s-maj=55.1km s-min=22.7km az=159.0*

ISC 03 07:49:12.6±0.6, 5.1N±0.1×32.6W±0.1, h10km, n48, σ1°04/38, mb4.3/15, MS3.8/4, 2C, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	**22.15**	**125**	T	T	08 17 04.4	
	baz=304,slow=75,SNR=15						
H10N2	**ASCENSION HYDR**	**22.16**	**125**	T	T	08 17 02.8	
	baz=304,slow=75,SNR=41						
H10N1	**ASCENSION HYDR**	**22.17**	**125**	T	T	08 17 05.9	
	baz=304,slow=75,SNR=31						
ASCN	**Ascension**	**22.32**	**125**	P	**P**	**07 54 10.1**	**-0.6**
H10S3	**ASCENSION HYDR**	**22.67**	**128**	T	T	08 17 34.7	
	baz=304,slow=74,SNR=25						
H10S2	**ASCENSION HYDR**	**22.69**	**128**	T	T	08 17 36.0	
	baz=276,slow=74,SNR=7.5						
BDFB	**Brasilia**	**25.67**	**216**	P	**P**	**07 54 42.8**	**-0.3**
DBIC	**Dimbokro**	**27.61**	**85**	LR	LR	08 03 49.2	
	comp=Z,87nm,18.7s,baz=320,slow=32						
H05S1	**Guadeloupe/Mar**	**29.32**	**290**	T	T	08 25 56.5	

0.6nm,0.5s,baz=222,slow=4.9,SNR=5.4

*MOS **03** 08:23:53.2± 1.5, 4.˚69N× 32.˚86W, h10km, mb5.5/55, MS5.0/16, Error ellipse: s-maj=8.1km s-min=5.8km az=53.3*

*NEIC **03** 08:23:53.6± 2.0, 4.˚67N± 0.˚08× 32.˚68W± 0.˚09, h10km± 1km, mb5.5/207, Ms_20 5.3/551, Mwb5.7/18, Mww5.5, Mwc5.6(GCMT), Error ellipse: s-maj=16.7km s-min=12.4km az=121.0*

*BJI **03** 08:23:54.0± 0.0, 4.˚80N× 32.˚80W, h5km, mB6.1/5, Ms6.6/3, Ms7 6.4/3*

*IDC **03** 08:23:54.6± 0.3, 4.˚71N× 32.˚66W, h0km, mb4.6/37, mb1 4.6/39, mb1mx4.6/45, mbtmp4.6/39, ML3.9/2, MS5.0/29, Ms1 5.0/29, ms1mx5.0/39, Error ellipse: s-maj=11.3km s-min=9.5km az=155.0*

*NEIC **03** 08:23:55.4, 4.˚66N× 32.˚66W, h1km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=1.67; Mθθ=0.04; Mθφ=1.63; Mrθ=0.16; Mφφ=0.15; Mφr=4.07; Fault plane solution: Mo=4.40000×10^17^ NP1:φs=348.02000°, δ=11.30000°, λ=-103.42000°. NP2:φs=181.69000°, δ=79.01000°, λ=-87.35000°. Principal axes: T 4.3776, Plg34.0000°, Azm269.0000°; N 0.0462, Plg3.0000°, Azm1.0000°; P -4.4238, Plg56.0000°, Azm95.0000°;*

*NEIC **03** 08:23:58, 4.˚76N× 32.˚56W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=1.92; Mθθ=0.13; Mφφ=2.05; Mrθ=-0.29; Mφφ=0.21; Mφr=0.50; Fault plane solution: Mo=2.09000×10^17^ NP1:φs=16.00000°, δ=39.00000°, λ=-74.00000°. NP2:φs=175.00000°, δ=52.00000°, λ=-102.00000°. Principal axes: T 2.1286, Plg7.0000°, Azm274.0000°; N -0.0901, Plg10.0000°, Azm183.0000°; P -2.0385, Plg78.0000°, Azm38.0000°;*

*GCMT **03** 08:23:59.7± 0.1, 4.˚86N± 0.˚01× 32.˚60W± 0.˚01, h12km, MW5.5/127, Moment Tensor Solution. s98,c159; s127,c276; Duration: 1!4 Moment tensor: Scale 10^17^ Nm; Mrr=2.58±.04; Mθθ=0.02±.04; Mφφ=2.55±.03; Mrθ=0.44±.12; Mθφ=-0.01±.03; Mφr=0.06±.10; Best double couple: Mo=2.60100×10^17^ NP1:φs=351.00000°, δ=45.00000°, λ=-103.00000°. NP2:φs=189.00000°, δ=46.00000°, λ=-77.00000°. Principal axes: T 2.5510, Plg1.0000°, Azm270.0000°; N 0.0950, Plg9.0000°, Azm0.0000°; P -2.6520, Plg81.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **03** 08:24:01, 4.˚85N× 32.˚62W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr=2.69; Mθθ=0.07; Mφφ=2.76; Mrθ=0.33; Mφφ=-0.12; Mφr=0.45; Fault plane solution: Mo=2.79000×10^17^ NP1:φs=350.00000°, δ=41.00000°, λ=-101.00000°. NP2:φs=185.00000°, δ=50.00000°, λ=-80.00000°. Principal axes: T 2.8001, Plg5.0000°, Azm268.0000°; N -0.0286, Plg7.0000°, Azm359.0000°; P -2.7714, Plg81.0000°, Azm146.0000°;*

ISC 03 08:23:55.5± 0.2, 4.˚65N± 0.˚04× 32.˚75W± 0.˚05, h10km, n961, σ1§64/754, mb5.4/208, MS5.3/323, 27C, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**10.87**	**197**	Pn	**Pn**	**08 26 31.9**	**+0.5**
	0.7nm,0.3s,baz=0.1,slow=14,SNR=5.9						
RCBR				Sn	**Sn**	**08 28 28.8**	**-4.5**
	0.7nm,0.3s,baz=106,slow=17,SNR=4.6						
RCBR				LR	LR	08 29 56.5	
	comp=Z,6μm,20.5s,baz=9.0,slow=33						
RCBR	**Riachuelo**	**10.87**	**197**	P	**Pn**	**08 26 29.6**	**-1.8**
RCBR						08 28 31.2	
RCBR	**Riachuelo**	**10.87**	**197**		**Pn**	**08 26 29.6**	**-1.8**
RCBR					**Sn**	**08 28 31.2**	**-2.1**
ROSB	**Rosrio**	**13.61**	**237**	*eP*	**Pn**	**08 27 09.8**	**+1.0**
SACV	**Santiago Islan**	**13.64**	**41**	Pn	**Pn**	**08 27 05.9**	**-3.4**
TMAB	**Tom-Au,PA,Br**	**16.84**	**246**	*eP*	**P**	**08 27 53.8**	**+0.1**
MBO	**M'Bour**	**18.33**	**57**		**Pn**	**08 28 06.2**	**-3.9**
MBO				IAmb	IAmb	08 28 45.4	
	comp=Z,576nm,1.9s						
GDU01	**Guandu, BA**	**19.47**	**200**	*eP*	**Pn**	**08 28 24.5**	**+0.6**
MDP	**Montagnes des**	**19.82**	**272**	P	**Pn**	**08 28 28.2**	**0.0**
	comp=Z,0.5nm,0.3s,baz=86,slow=12,SNR=15						
MDP				LR	LR	08 34 32.0	
	comp=Z,5μm,21.3s,baz=105,slow=32						
MCPB	**Macapa, AP**	**19.91**	**256**	*eP*	**Pn**	**08 28 29.3**	**0.0**
SMTB	**Santa Maria do**	**19.97**	**228**	*eP*	**Pn**	**08 28 30.5**	**+0.5**
SDBA	**SAO DESIDERIO**	**20.81**	**215**	*eP*	Pn	08 28 38.6	-1.2
H10N3	**ASCENSION HYDR**	**22.04**	**124**	T	T	08 51 40.2	
	baz=304,slow=75,SNR=680						
H10N2	**ASCENSION HYDR**	**22.04**	**124**	T	T	08 51 40.7	
	baz=304,slow=75,SNR=516						
H10N1	**ASCENSION HYDR**	**22.06**	**124**	T	T	08 51 41.7	
	baz=304,slow=75,SNR=813						
ASCN	**Ascension**	**22.20**	**124**	P	**P**	**08 28 48.9**	**-3.4**
MALB	**Monte Alegre**	**22.44**	**254**	*eP*	**P**	**08 28 55.8**	**+0.8**
H10S3	**ASCENSION HYDR**	**22.54**	**127**	T	T	08 52 16.3	
	baz=304,slow=74,SNR=365						
H10S2	**ASCENSION HYDR**	**22.55**	**127**	T	T	08 52 17.6	
	baz=276,slow=74,SNR=119						
JANB	**Januaria**	**22.68**	**210**	*eP*	**P**	**08 28 58.3**	**+0.8**
NAN01	**Guarapari, ES**	**23.51**	**198**	*eP*	**P**	**08 29 08.5**	**+2.7**
ITTB	**Itaituba**	**24.64**	**249**	*eP*	**P**	**08 29 18.1**	**+1.4**
SJMB	**Sao Joao De Ma**	**24.65**	**199**	*eP*	**P**	**08 29 18.4**	**+1.8**
BSFB	**Barra de Sao F**	**24.66**	**199**	*eP*	**P**	**08 29 19.3**	**+2.7**
SNDB	**Serra Nova Dou**	**24.75**	**228**	*eP*	**P**	**08 29 19.1**	**+1.5**
RIB01	**Linhares ES**	**24.97**	**197**	*eP*	**P**	**08 29 22.1**	**+2.6**
BDFB	**Brasilia**	**25.20**	**217**	P	**P**	**08 29 22.9**	**+1.3**
	comp=Z,4.7nm,1.0s,baz=29,slow=15,SNR=5.0						
BDFB				LR	LR	08 38 16.2	
	comp=Z,5μm,21.5s,baz=32,slow=34						
BDFB	**Brasilia**	**25.20**	**217**	P	**P**	**08 29 21.0**	**-0.6**
BDFB				pmax	pmax		
	comp=Z,73nm,1.6s						
BDFB				MLR	MLR		
	comp=Z,5μm,21.0s						
BDFB	**Brasilia**	**25.20**	**217**	P	**P**	**08 29 21.0**	**-0.6**
NPGB	**Novo Progresso**	**25.38**	**243**	*eP*	**P**	**08 29 23.5**	**+0.2**
IPMB	**Ipameri, GO**	**27.17**	**214**	*eP*	**P**	**08 29 40.6**	**+1.1**
CLDB	**Colider**	**27.64**	**236**	*eP*	**P**	**08 29 45.4**	**+1.6**
LIC	**Lamto**	**27.64**	**85**	*eP*	**P**	**08 29 44.8**	**+1.0**
	comp=Z,79nm,1.4s						
ARAG	**Araguaiana, MT**	**27.66**	**223**	*eP*	**P**	**08 29 46.0**	**+2.2**
ARAG				*eS*	**S**	**08 34 28.7**	**+2.7**
TIC	**Toumodi**	**27.67**	**85**	*eP*	**P**	**08 29 49.7**	**+5.7**
DBIC	**Dimbokro**	**27.83**	**85**	P	**P**	**08 29 45.0**	**-0.4**
	comp=Z,11nm,1.0s,baz=255,slow=10,SNR=5.8						
DBIC				PcP	**PcP**	**08 33 02.1**	**+0.4**
	comp=Z,5.4nm,0.7s,baz=189,slow=4.3,SNR=5.8						
DBIC				LR	LR	08 38 17.3	
	comp=Z,6μm,19.8s,baz=252,slow=31						
DBIC	**Dimbokro**	**27.83**	**85**	P	**P**	**08 29 43.9**	**-1.5**
DBIC				pmax	pmax		
	comp=Z,38nm,1.3s						
DBIC	**Dimbokro**	**27.83**	**85**	P	**P**	**08 29 42.2**	**-3.2**
KIC	**Kosan Boka**	**27.93**	**85**	*eP*	**P**	**08 29 47.5**	**+1.1**
	comp=Z,45nm,1.2s						
BSCB	**Bom Sucesso**	**28.09**	**204**	*eP*	**P**	**08 29 50.0**	**+2.3**
VAS01	**Vassouras-RJ**	**28.74**	**201**	*eP*	**P**	**08 29 54.8**	**+1.4**
VAS01				*eS*	**S**	**08 34 47.2**	**+4.3**
MACA	**Manacapuru-AM**	**28.96**	**255**	*eP*	**P**	**08 29 56.8**	**+1.3**
H05S1	**Guadeloupe/Mar**	**29.31**	**291**	T	T	09 00 41.4	
	SNR=164						
MAN01	**Angra dos Reis**	**29.46**	**201**	*eP*	**P**	**08 30 02.7**	**+2.9**
FDF	**Fort de France**	**29.69**	**292**	P	**P**	**08 29 58.1**	**-3.9**
FDF				pmax	pmax		
	comp=Z,65nm,1.0s						
FDF				MLR	MLR		
	comp=Z,2μm,20.0s						
FDF	**Fort de France**	**29.69**	**292**	P	**P**	**08 29 58.1**	**-3.9**
FDF				IAmb	IAmb	08 30 48.3	
	comp=Z,64nm,1.0s						
ITRB	**Iturama**	**29.76**	**215**	*eP*	**P**	**08 30 05.2**	**+2.7**
ESAR	**Angra dos Reis**	**29.78**	**202**	*eP*	**P**	**08 30 04.3**	**+1.7**
KOWA	**Kowa**	**29.94**	**69**	P	**P**	**08 30 03.6**	**-0.6**
	comp=Z,9.2nm,0.9s,baz=250,slow=7.6,SNR=16						
KOWA				LR	LR	08 40 52.5	
	comp=Z,17μm,18.8s,baz=255,slow=34						
KOWA	**Kowa**	**29.94**	**69**	P	P	08 29 59.4	-4.8
KOWA				IAmb	IAmb	08 30 11.1	
	comp=Z,104nm,1.7s						
H05N1	**Guadeloupe/Mar**	**30.10**	**295**	T	T	09 01 34.3	
	SNR=74						
PARB	**Paraibuna**	**30.52**	**204**	*eP*	**P**	**08 30 10.4**	**+1.2**
SPB	**Sao Paulo**	**31.51**	**206**	*eP*	**P**	**08 30 20.3**	**+2.4**
PMOZ	**Porto Moniz, M**	**31.57**	**26**	*eS*	**S**	**08 35 34.1**	**+6.7**
PMOZ				*eLQ*	LQ	08 37 14.8	
PMOZ				*eLR*	LR	08 38 21.3	
	comp=Z,2μm,20.0s						
PCMB	**Pacaembu**	**31.78**	**214**	*eP*	**P**	**08 30 23.0**	**+2.7**
SKI	**Saint Kitts**	**31.95**	**296**	P	**P**	**08 30 20.7**	**-1.3**
SKI				pmax	pmax		
	comp=Z,246nm,1.6s						
SKI	**Saint Kitts**	**31.95**	**296**	P	**P**	**08 30 20.7**	**-1.3**
FRTB	**Fartura**	**32.30**	**210**	*eP*	**P**	**08 30 26.8**	**+1.9**
VILB	**Vilhena**	**32.39**	**237**	*eP*	**P**	**08 30 26.1**	**+0.2**
PTLB	**Pontes e Lacer**	**32.88**	**232**	*eP*	**P**	**08 30 31.3**	**+1.2**
SAML	**Samuel**	**33.21**	**246**	P	**P**	**08 30 32.4**	**-0.6**
SAML				pmax	pmax		
	comp=Z,134nm,1.7s						
SAML				MLR	MLR		
	comp=Z,6μm,20.0s						
SAML	**Samuel**	**33.21**	**246**	P	**P**	**08 30 32.4**	**-0.6**
SAML				IAmb	IAmb	08 30 48.5	
	comp=Z,134nm,1.7s						
SAML	**Samuel**	**33.21**	**246**	IAMs_20	IAMs_20	08 42 52.9	
	comp=Z,6μm,20.0s						
TRCB	**Terra Rica**	**33.49**	**215**	*eP*	**P**	**08 30 36.1**	**+0.7**
CDVI	**St. Croix**	**33.92**	**295**	P	**P**	**08 30 38.6**	**-0.4**
CDVI				IAmb	IAmb	08 30 53.0	
	comp=Z,95nm,1.1s						
CUPR	**Culebra, Puert**	**34.56**	**296**	P	**P**	**08 30 43.6**	**-1.0**
CUPR				IAmb	IAmb	08 30 58.4	
	comp=Z,85nm,1.2s						
PTGB	**Pitanga**	**34.71**	**212**	*eP*	**P**	**08 30 48.4**	**+2.4**
SIV	**San Ignacio**	**34.73**	**233**	P	**P**	**08 30 48.7**	**+2.6**
	comp=Z,6.5nm,1.0s,baz=94,slow=8.4,SNR=17						
MTP	**Monte Pirata**	**34.74**	**295**	P	**P**	**08 30 45.8**	**-0.4**
MTP				IAmb	IAmb	08 31 00.1	
	comp=Z,86nm,1.1s						
TOC5	**Torodi Ar. Sit**	**35.00**	**74**	IAMs_20	IAMs_20	08 42 47.8	
	comp=Z,8μm,20.0s						
TOB4	**Torodi Ar. Sit**	**35.01**	**74**	IAMs_20	IAMs_20	08 42 49.1	
	comp=Z,7μm,21.0s						
TOB5	**Torodi Ar. Sit**	**35.01**	**74**	IAMs_20	IAMs_20	08 42 48.1	
	comp=Z,7μm,20.0s						
TOC7	**Torodi Ar. Sit**	**35.01**	**74**	IAMs_20	IAMs_20	08 42 49.1	
	comp=Z,6μm,20.0s						
HUMP	**Col San Antoni**	**35.02**	**295**	P	**P**	**08 30 47.1**	**-1.5**
HUMP				IAmb	IAmb	08 31 02.7	
	comp=Z,118nm,1.3s						
TOA3	**Torodi Ar. Sit**	**35.02**	**74**	IAMs_20	IAMs_20	08 42 48.3	
	comp=Z,6μm,20.0s						
TOA0	**Torodi Ar. Sit**	**35.03**	**74**	P	**P**	**08 30 46.1**	**-2.6**
TOA0				IAMs_20	IAMs_20	08 42 48.4	
	comp=Z,6μm,20.0s						
TOC4	**Torodi Ar. Sit**	**35.03**	**74**	IAMs_20	IAMs_20	08 42 48.4	
	comp=Z,7μm,20.0s						
TORD	**Torodi Ar. Bea**	**35.03**	**74**	P	**P**	**08 30 47.0**	**-1.7**
	comp=Z,14nm,1.0s,baz=267,slow=8.7,SNR=38						
TORD				PcP	**PcP**	**08 33 20.6**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=290,slow=2.6,SNR=4.5						
TORD				LR	LR	08 43 00.0	
	comp=Z,7μm,20.6s,baz=260,slow=33						
TORD	**Torodi Ar. Bea**	**35.03**	**74**	P	**P**	**08 30 46.6**	**-2.2**
TOB1	**Torodi Ar. Sit**	**35.03**	**74**	IAMs_20	IAMs_20	08 42 48.4	
	comp=Z,6μm,20.0s						
TOA2	**Torodi Ar. Sit**	**35.03**	**74**	IAMs_20	IAMs_20	08 42 48.5	
	comp=Z,7μm,20.0s						
TOB3	**Torodi Ar. Sit**	**35.03**	**74**	IAMs_20	IAMs_20	08 42 48.6	
	comp=Z,7μm,20.0s						
TOC1	**Torodi Ar. Sit**	**35.04**	**74**	IAMs_20	IAMs_20	08 42 48.7	
	comp=Z,8μm,20.0s						
TOC3	**Torodi Ar. Sit**	**35.05**	**74**	IAMs_20	IAMs_20	08 42 50.0	
	comp=Z,7μm,20.0s						
TOC2	**Torodi Ar. Sit**	**35.05**	**74**	IAMs_20	IAMs_20	08 42 50.1	
	comp=Z,7μm,21.0s						
PDPR	**Patillas Dam,**	**35.14**	**295**	P	**P**	**08 30 48.1**	**-1.5**
PDPR				IAmb	IAmb	08 31 03.5	
	comp=Z,135nm,1.4s						
SJG	**San Juan**	**35.28**	**295**	P	**P**	**08 30 51.8**	**+0.9**
	comp=Z,13nm,0.8s,baz=50,slow=6.5,SNR=5.1						
SJG	**San Juan**	**35.28**	**295**	P	**P**	**08 30 49.8**	**-1.1**
SJG				pmax	pmax		
	comp=Z,124nm,1.4s						
SJG	**San Juan**	**35.28**	**295**	P	**P**	**08 30 49.8**	**-1.1**
SJG				IAmb	IAmb	08 31 04.7	
	comp=Z,124nm,1.4s						
GCPR	**Guaynabo City**	**35.28**	**295**	P	**P**	**08 30 49.2**	**-1.7**
AOPR	**Arecibo Observ**	**35.90**	**295**	P	**P**	**08 30 55.8**	**-0.4**
AOPR				IAmb	IAmb	08 31 09.3	
	comp=Z,59nm,1.1s						
MPR	**Mayaguez**	**36.21**	**295**	P	**P**	**08 30 57.3**	**-1.5**
MPR				IAmb	IAmb	08 31 13.4	
	comp=Z,87nm,1.3s						
ETMB	**Extrema**	**36.30**	**247**	*eP*	**P**	**08 31 01.7**	**+2.0**
ITAB	**Concordia**	**36.82**	**210**	*eP*	**P**	**08 31 05.2**	**+1.3**
RTC	**Rabat Centre**	**37.83**	**36**	IAMs_20	IAMs_20	08 43 56.4	
	comp=Z,7μm,21.0s						
SDV	**Santo Domingo**	**37.84**	**278**	P	**P**	**08 31 14.4**	**+1.4**
	comp=Z,5.1nm,0.4s,baz=77,slow=3.2,SNR=5.9						
SDV	**Santo Domingo**	**37.84**	**278**	P	**P**	**08 31 12.7**	**-0.3**
SDV	**Santo Domingo**	**37.84**	**278**	*eP*	**P**	**08 31 15.1**	**+2.1**
MDT	**Midelt**	**38.41**	**40**	P	**P**	**08 31 18.9**	**+1.4**
	comp=Z,13nm,1.2s,baz=253,slow=8.8,SNR=13						
MDT	**Midelt**	**38.41**	**40**	P	**P**	**08 31 17.0**	**-0.6**
	SNR=13						
CPUP	**Villa Florida**	**38.93**	**216**	P	**P**	**08 31 23.2**	**+1.4**
	comp=Z,1.7nm,0.6s,baz=68,slow=5.5,SNR=4.5						
CPUP				PcP	**PcP**	**08 33 33.6**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=323,slow=5.1,SNR=3.2						
CPUP				LR	LR	08 47 12.3	
	comp=Z,4μm,19.3s,baz=44,slow=36						
CPUP	**Villa Florida**	**38.93**	**216**	P	**P**	**08 31 20.1**	**-1.7**
CPUP				pmax	pmax		
	comp=Z,65nm,2.0s						
CPUP	**Villa Florida**	**38.93**	**216**	P	**P**	**08 31 20.1**	**-1.7**
CPUP	**Villa Florida**	**38.93**	**216**	*eP*	**P**	**08 31 23.1**	**+1.4**
PFVI	**Villa Bisbo**	**39.05**	**31**	*eS*	**S**	**08 37 29.1**	**+7.0**
BANI	**BANI**	**39.19**	**294**	P	**P**	**08 31 22.6**	**-1.6**
MORF	**Marmelete**	**39.28**	**31**	*eP*	**P**	**08 31 23.8**	**-0.9**
MORF				AMS	AMS	08 45 29.8	
	comp=Z,2μm,18.0s						
MORF	**Marmelete**	**39.28**	**31**	*eP*	**P**	**08 31 23.8**	**-0.9**
MORF	**Marmelete**	**39.28**	**31**	*eP*	**P**	**08 31 25.5**	**+0.8**
	comp=Z,65nm,1.6s						
MORF				*eS*	**S**	**08 37 32.7**	**+7.2**
URIC	**Uribia, Colomb**	**39.43**	**283**	*eP*	**P**	**08 31 22.5**	**-3.7**
PBDV	**Barranco-do-Ve**	**39.60**	**32**	*eP*	**P**	**08 31 28.5**	**+1.2**
SC01	**Santiago de lo**	**39.81**	**295**	P	**P**	**08 31 28.2**	**-1.1**
SC01				IAmb	IAmb	08 31 44.1	
	comp=Z,197nm,1.2s						
PVAQ	**Vaqueiros**	**39.84**	**32**	*eP*	**P**	**08 31 31.1**	**+1.9**
	comp=Z,69nm,1.5s						
PVAQ				*eS*	S	08 37 42.6	+8.8
PVAQ				*eLQ*	LQ	08 40 26.3	
PVAQ				*eLR*	LR	08 42 13.7	
	comp=Z,2μm,20.0s						
PVAQ	**Vaqueiros**	**39.84**	**32**	P	**P**	**08 31 28.7**	**-0.6**
CPSB	**Cacapava Do Su**	**40.09**	**208**	*eP*	**P**	**08 31 32.9**	**+1.5**
LIS	**Lisbon**	**40.12**	**29**	*eP*	**P**	**08 31 30.8**	**-0.8**
LIS				AMS	AMS	08 44 27.6	
	comp=Z,2μm,20.9s						
LIS	**Lisbon**	**40.12**	**29**	*eP*	**P**	**08 31 30.8**	**-0.8**
RUSC	**La Rusia**	**40.17**	**274**	*eP*	**P**	**08 31 32.7**	**-0.2**
SDDR	**Presa de Saban**	**40.19**	**294**	IAMs_20	IAMs_20	08 44 43.2	
	comp=Z,4μm,22.0s						
FIGM	**Figuig**	**40.20**	**43**	P	**P**	**08 31 34.8**	**+2.2**
	SNR=5.5						
PMAFR	**Mafra**	**40.24**	**29**	*eS*	**S**	**08 37 46.9**	**+7.0**
BARC	**Barichara**	**40.27**	**275**	*eP*	**P**	**08 31 35.2**	**+1.8**
OCAC	**Ocana**	**40.45**	**277**	*eP*	**P**	**08 31 35.3**	**+0.4**
JBK	**JBK**	**40.70**	**40**	P	**P**	**08 31 38.6**	**+1.9**
	SNR=7.0						
LPAZ	**La Paz**	**40.71**	**238**	P	**P**	**08 31 39.9**	**+2.4**
	comp=Z,3.8nm,0.7s,baz=48,slow=5.1,SNR=18						
LPAZ				LR	LR	08 48 00.8	
	comp=Z,4μm,18.7s,baz=57,slow=35						
LPAZ	**La Paz**	**40.71**	**238**	P	**P**	**08 31 35.6**	**-1.8**
LPAZ				pmax	pmax		
	comp=Z,176nm,2.0s						
LPAZ	**La Paz**	**40.71**	**238**	P	**P**	**08 31 35.6**	**-1.8**
LPAZ				IAmb	IAmb	08 31 54.1	
	comp=Z,176nm,1.9s						
LPAZ	**La Paz**	**40.71**	**238**	*eP*	**P**	**08 31 36.4**	**-1.1**
BRRC	**Barranca, Sant**	**40.81**	**275**	*eP*	P	08 31 44.8	+7.2
CHIC	**Chingaza**	**40.84**	**272**	*eP*	**P**	**08 31 36.5**	**-1.9**
PMTG	**Montargil**	**40.85**	**30**	*eP*	**P**	**08 31 38.3**	**+0.7**
	comp=Z,58nm,1.7s						
PMTG				*eS*	S	08 37 57.9	+9.0
PSBE	**So Bento**	**40.92**	**29**	*eS*	S	08 37 59.6	+10
GOG	**Mont Gurugu**	**41.00**	**38**	P	**P**	**08 31 42.0**	**+2.9**
	SNR=5.9						
TAF	**Taforalt**	**41.10**	**39**	P	**P**	**08 31 42.3**	**+2.5**
	SNR=6.3						
TAM	**Tamanrasset**	**41.14**	**60**	P	**P**	**08 31 39.6**	**-0.9**
TAM				pmax	pmax		
	comp=Z,65nm,1.6s						
TAM				MLR	MLR		
	comp=Z,4μm,19.0s						
TAM	**Tamanrasset**	**41.14**	**60**	P	**P**	**08 31 39.5**	**-0.9**
TAM				IAMs_20	IAMs_20	08 47 52.2	
	comp=Z,4μm,19.0s						
SPBC	**San Pablo de B**	**41.16**	**273**	*eP*	**P**	**08 31 39.3**	**-1.3**
PLTB	**Pedras Altas**	**41.30**	**207**	*eP*	**P**	**08 31 43.0**	**+1.6**
ROSC	**El Rosal**	**41.42**	**272**	P	**P**	**08 31 45.6**	**+2.5**
	comp=Z,17nm,0.8s,baz=86,slow=3.0,SNR=9.5						
ROSC				LR	LR	08 50 07.6	
	comp=Z,6μm,18.6s,baz=97,slow=38						
ROSC	**El Rosal**	**41.42**	**272**	P	**P**	**08 31 42.6**	**-0.6**
ROSC				IAmb	IAmb	08 31 59.3	
	comp=Z,233nm,1.9s						
PCAS	**Casmilo, Conde**	**41.48**	**28**	*eS*	S	08 38 08.2	+10
PMRV	**Marv??o**	**41.54**	**30**	*eP*	**P**	**08 31 44.2**	**+0.9**
	comp=Z,60nm,1.6s						
PMRV				*eS*	**S**	**08 38 01.4**	**+2.2**
PMRV				*eLR*	LR	08 42 58.0	
	comp=Z,2μm,22.0s						
PTBC	**PUERTO BERRIO,**	**41.54**	**275**	*eP*	**P**	**08 31 40.5**	**-3.2**
COI	**Coimbra**	**41.64**	**28**	*eS*	S	08 38 10.2	+10
CZSB	**Cruzeiro do Su**	**41.71**	**253**	*eP*	**P**	**08 31 46.0**	**+0.9**
PRAC	**Prado**	**42.03**	**270**	*eP*	**P**	**08 31 48.8**	**+1.0**
MTE	**Manteigas**	**42.21**	**29**	*eS*	S	08 38 18.7	+10
MTE				*eLQ*	LQ	08 41 24.4	
MTE				*eLR*	LR	08 43 24.5	
	comp=Z,2μm,20.0s						
PTLC	**Puerto Leguiza**	**42.23**	**265**	*eP*	**P**	**08 31 49.5**	**+0.2**
ORTC	**Ortega, Tolima**	**42.38**	**271**	*eP*	**P**	**08 31 50.7**	**+0.2**
TOLC	**Tolima**	**42.42**	**272**	*eP*	**P**	**08 31 51.3**	**0.0**
GUY2C	**Guyana, Caldas**	**42.45**	**273**	*eP*	**P**	**08 31 51.4**	**-0.3**
ANIL	**Santa Ana**	**42.51**	**272**	*eP*	**P**	**08 31 50.1**	**-1.8**
HELC	**Santa Helena**	**42.60**	**274**	*eP*	**P**	**08 31 52.6**	**-0.1**
URIEC	**San Jos de Ur**	**42.63**	**276**	*eP*	**P**	**08 31 50.0**	**-2.6**
BETC	**Betania**	**42.64**	**269**	*eP*	P	08 31 58.0	+5.3
MOTC	**Monteria, Cord**	**42.79**	**278**	*eP*	P	08 31 45.2	-8.7
PB16	**IPOC Station P**	**42.83**	**237**	P	**P**	**08 31 53.4**	**-1.3**
PB16				IAMs_20	IAMs_20	08 49 15.7	
	comp=Z,5μm,20.0s						
MVO	**Moncorvo**	**43.05**	**29**	*eS*	S	08 38 30.8	+9.3
MVO				*eLQ*	LQ	08 41 36.3	
MVO				*eLR*	LR	08 43 40.0	
	comp=Z,2μm,18.0s						
CBOC	**Ciudad Bolivar**	**43.09**	**274**	*eP*	**P**	**08 31 57.2**	**+0.7**
PGAV	**Gavieira, Arco**	**43.10**	**27**	*eS*	**S**	**08 38 25.3**	**+3.0**
PGAV				*eLR*	LR	08 43 44.9	
	comp=Z,2μm,20.0s						
DBBC	**Dabeiba**	**43.28**	**275**	*eP*	**P**	**08 31 58.4**	**+0.4**
PB08	**IPOC Station P**	**43.43**	**234**	IAMs_20	IAMs_20	08 49 34.5	
	comp=Z,4μm,22.0s						
ESDC	**Sonseca Array**	**43.50**	**33**	P	**P**	**08 32 00.4**	**+1.1**
	comp=Z,9.1nm,1.2s,baz=226,slow=9.1,SNR=19						
ESDC				LR	LR	08 48 24.0	
	comp=Z,952nm,18.6s,baz=220,slow=34						
ESBB	**Sonseca Array**	**43.50**	**33**	P	**P**	**08 31 57.2**	**-2.1**
PCON	**Cinco Dias**	**43.62**	**269**	*eP*	**P**	**08 31 59.0**	**-2.2**
POPC	**Popayan, Colom**	**43.88**	**269**	*eP*	**P**	**08 32 02.2**	**-0.8**
PUAC	**Puerto Asis, P**	**43.95**	**266**	*eP*	**P**	**08 32 03.2**	**-0.1**
BBAC	**Balboa, Cauca**	**44.49**	**268**	*eP*	**P**	**08 32 08.0**	**+0.2**
LVC	**Limon Verde**	**44.53**	**231**	*eP*	**P**	**08 32 09.8**	**+1.6**
PB06	**IPOC Station P**	**45.10**	**231**	P	**P**	**08 32 11.4**	**-1.1**
PB15	**IPOC Station P**	**45.29**	**231**	P	**P**	**08 32 12.7**	**-1.4**
PB15				IAmb	IAmb	08 32 29.2	
	comp=Z,131nm,1.7s						
PB15				IAMs_20	IAMs_20	08 51 57.7	
	comp=Z,5μm,21.0s						
PB04	**IPOC Station P**	**45.35**	**232**	IAMs_20	IAMs_20	08 52 07.4	
	comp=Z,4μm,21.0s						
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BNI Bardonecchia 52.95 34 P **P** **08 33 10.7 -1.6**
L59A Walton 53.00 321 P **P** **08 33 13.5 +0.9**
baz=123
656A Willston 53.05 303 IAMs_20 IAMs_20 08 50 51.3
comp=Z,3µm,20.0s
G60A Masonville 53.06 326 P **P** **08 33 14.0 +1.0**
baz=127
Q58A Fox Den Farm, 53.08 316 P **P** **08 33 12.5 -0.7**
baz=118
BO02 Sierra Bellavi 53.10 219 P **P** **08 33 11.9 -1.6**
U57A Blanch 53.12 313 P **P** **08 33 13.7 +0.1**
baz=115
CLTB Caltabellotta 53.18 46 P **P** **08 33 11.5 -2.7**
K59A Cooperstown 53.20 322 P **P** **08 33 14.6 +0.5**
baz=123
BIRD Birdtown, Kers 53.23 310 P **P** **08 33 12.2 -2.3**
BIRD IAmb IAmb 08 33 28.6
comp=Z,103nm,1.6s
T57A Hurt 53.30 314 IAMs_20 IAMs_20 08 50 35.3
comp=Z,2µm,21.0s
J59A Piesco 53.37 323 P **P** **08 33 15.6 +0.3**
baz=124
CORL Corleone 53.38 45 IAMs_20 IAMs_20 08 54 19.1
comp=Z,4µm,21.0s
L58A Harry Jones Me 53.42 321 P **P** **08 33 15.3 -0.5**
baz=122
Z56A Williston 53.43 309 IAMs_20 IAMs_20 08 50 53.0
comp=Z,3µm,20.0s
M58A Price's Panora 53.46 320 P **P** **08 33 16.3 +0.2**
baz=121
W56A Indian Trail 53.52 311 P **P** **08 33 16.6 0.0**
baz=113
BINY Binghamton 53.59 321 P **P** **08 33 17.2 +0.2**
baz=122
X56A White Oak 53.61 310 P **P** **08 33 17.5 +0.3**
baz=112
Q57A Strasburg 53.62 316 P **P** **08 33 16.9 -0.3**
baz=118
O57A Amberson 53.65 318 P **P** **08 33 17.0 -0.5**
baz=119
K58A Earlville 53.68 322 P **P** **08 33 18.1 +0.5**
baz=123
JSC Jenkinsville 53.70 310 P **P** **08 33 15.6 -2.3**
JSC pmax pmax
comp=Z,57nm,1.6s
JSC Jenkinsville 53.70 310 P **P** **08 33 15.6 -2.3**
255A Hazlehurst 53.82 307 IAMs_20 IAMs_20 08 50 43.4
comp=Z,4µm,22.0s
T56A Rocky Mt 53.88 313 P **P** **08 33 19.5 +0.3**
baz=115
GO05 Huala 53.97 220 P **P** **08 33 19.2 -0.6**
GO05 IAmb IAmb 08 33 29.0
comp=Z,66nm,1.6s
GO05 IAMs_20 IAMs_20 08 56 41.2
comp=Z,3µm,19.0s
X55A Gracelyn & Ava 54.06 310 P **P** **08 33 20.5 0.0**
baz=112
KMSC Kings Mountain 54.09 311 IAMs_20 IAMs_20 08 50 53.1
comp=Z,2µm,21.0s
Q56A Snyder Ridge, 54.16 316 IAMs_20 IAMs_20 08 50 43.8
comp=Z,2µm,21.0s
K57A Scipio Center 54.21 321 P **P** **08 33 22.2 +0.7**
baz=122
BLA Blacksburg 54.24 313 P **P** **08 33 22.1 +0.2**
baz=115
BLA Blacksburg 54.24 313 IAMs_20 IAMs_20 08 51 56.0
comp=Z,2µm,20.0s
V55A Taylorsville 54.27 311 P **P** **08 33 23.0 +0.9**
baz=113
V55A Taylorsville 54.27 311 P **P** **08 33 20.0 -2.1**
V55A IAmb IAmb 08 33 36.5
comp=Z,56nm,1.4s
O56A Blue Knob Stat 54.31 318 P **P** **08 33 22.9 +0.6**
baz=118
PAULI Pauline 54.33 310 IAMs_20 IAMs_20 08 50 59.6
comp=Z,2µm,22.0s
E58A La Victoria 54.36 326 P **P** **08 33 24.0 +1.6**
baz=127
N56A West Decatur 54.44 318 P **P** **08 33 23.4 +0.1**
baz=119
HODGE Hodges 54.45 309 IAMs_20 IAMs_20 08 50 39.0
comp=Z,3µm,22.0s
T55A Pulaski 54.46 313 P **P** **08 33 23.5 0.0**
baz=114
R55A Marlinton 54.48 315 IAMs_20 IAMs_20 08 51 04.3
comp=Z,2µm,21.0s
D58A Chemin du LacG 54.58 327 P **P** **08 33 23.8 -0.3**
baz=128
BI02 San Fabin de 54.61 218 P **P** **08 33 25.0 +0.4**
BI02 IAMs_20 IAMs_20 08 57 13.1
comp=Z,2µm,18.0s
M56A Emporium 54.64 319 P **P** **08 33 24.1 -0.5**
baz=120
LATQ La Tuque 54.71 328 P **P** **08 33 26.3 +1.3**
baz=128
W54A Cherokee Point 54.71 310 P **P** **08 33 25.6 +0.3**
baz=112
Q55A Buckhannon 54.76 315 P **P** **08 33 25.9 +0.3**
baz=116
O55A Ligonier 54.78 317 P **P** **08 33 25.8 +0.1**
baz=118
V54A Nebo 54.79 311 P **P** **08 33 25.4 -0.5**
baz=113
N55A Marion Center 54.83 318 P **P** **08 33 26.0 -0.1**
baz=118
E57A Chemin Saint G 54.86 326 P **P** **08 33 26.5 +0.3**
baz=126
553A Crawfordville 54.87 304 IAMs_20 IAMs_20 08 51 58.4
comp=Z,3µm,20.0s
TSUM Tsumeb 54.91 117 P **P** **08 33 29.0 +1.9**
comp=Z,4.6nm,0.9s,baz=280,slow=7.1,SNR=5.1
TSUM Tsumeb 54.91 117 P **P** **08 33 25.0 -2.1**
TSUM Tsumeb 54.91 117 IAMs_20 IAMs_20 08 51 29.5
comp=Z,3µm,20.0s
U54A Nelsons Funny 54.98 312 P **P** **08 33 27.0 -0.3**
baz=113
T54A Tazewell 55.02 313 P **P** **08 33 26.6 -1.0**
baz=114
ZCCA Zocca 55.05 37 P **P** **08 33 25.4 -2.2**
ZCCA IAmb IAmb 08 33 36.4
comp=Z,94nm,1.4s
R54A Victor 55.06 314 P **P** **08 33 26.7 -1.1**
baz=115
GOGA Godfrey 55.11 308 IAMs_20 IAMs_20 08 51 33.4
comp=Z,3µm,20.0s
S54A Dingess, Beckl 55.13 314 P **P** **08 33 27.7 -0.6**
baz=114
S54A Dingess, Beckl 55.13 314 IAMs_20 IAMs_20 08 52 24.5
comp=Z,2µm,20.0s
ECH Echery 55.16 32 IAMs_20 IAMs_20 08 55 30.2
comp=Z,2µm,18.0s
BG3 Lake Jocassee 55.24 310 P **P** **08 33 28.6 -0.6**
Q54A Coxs Mills 55.29 315 P **P** **08 33 29.2 -0.2**
baz=116
Q54A Coxs Mills 55.29 315 P **P** **08 33 27.5 -1.8**
Q54A IAmb IAmb 08 33 43.4
comp=Z,66nm,1.5s
P54A Burton 55.31 316 P **P** **08 33 28.2 -1.4**
baz=116
E56A St. Veronique 55.44 326 P **P** **08 33 29.5 -0.8**
baz=126
D56A ZEC Mazanza, M 55.58 326 P **P** **08 33 31.4 0.0**
baz=126
WLF Walferdange 55.58 30 IAMs_20 IAMs_20 08 56 16.2
comp=Z,2µm,19.0s
N54A Moraine State 55.59 318 P **P** **08 33 32.0 +0.4**
baz=118
NRCA Norcia 55.59 40 P **P** **08 33 29.7 -1.8**
M54A Oil Creek Stat 55.63 318 P **P** **08 33 31.2 -0.6**
baz=118
PAOL Paolisi 55.68 42 IAMs_20 IAMs_20 08 56 05.8
comp=Z,2µm,20.0s
T53A Wise 55.69 312 P **P** **08 33 31.2 -1.2**
baz=113
Y52A Lilburn 55.73 308 P **P** **08 33 31.0 -1.6**
Y52A IAmb IAmb 08 33 47.1
comp=Z,90nm,1.8s
Y52A IAMs_20 IAMs_20 08 51 29.8
comp=Z,4µm,22.0s
BI03 Tigo 55.81 219 IAMs_20 IAMs_20 08 58 14.9
comp=Z,3µm,18.0s
R53A Hurricane 55.81 314 P **P** **08 33 34.1 +1.0**
baz=114
ESK Eskdalemuir 55.82 20 IAMs_20 IAMs_20 08 53 13.6
comp=Z,2µm,19.0s
BFO Black Forest 55.85 32 *e*P **P** **08 33 33.9 +0.7**
comp=Z,100nm,2.4s,baz=235,slow=6.8
152A Waverly Hall 55.86 307 P **P** **08 33 32.4 -1.2**
152A IAMs_20 IAMs_20 08 51 44.3
comp=Z,4µm,22.0s
P53A Whipple 55.89 315 P **P** **08 33 33.8 +0.1**
baz=115
P53A Whipple 55.89 315 IAMs_20 IAMs_20 08 52 11.6
comp=Z,2µm,20.0s
D55A Sainte-Anne-du 55.96 326 P **P** **08 33 34.8 +0.8**
baz=125
W52A Murphy 56.04 310 IAMs_20 IAMs_20 08 52 24.1
comp=Z,2µm,20.0s
V52A Sevierville 56.06 311 IAMs_20 IAMs_20 08 52 05.4
comp=Z,2µm,20.0s
DAVA Damuels 56.07 34 *e*P **P** **08 33 34.4 -0.6**
comp=Z,18nm,1.3s
451A Vernon 56.08 304 IAMs_20 IAMs_20 08 52 15.4
comp=Z,3µm,21.0s
N53A Lisbon 56.09 317 P **P** **08 33 33.5 -1.6**
N53A IAmb IAmb 08 33 49.1
comp=Z,60nm,1.4s
O53A New Philadelph 56.10 316 P **P** **08 33 35.1 -0.1**
baz=116
TKL Tuckaleechee C 56.13 310 IAMs_20 IAMs_20 08 52 15.2
comp=Z,2µm,20.0s
TZTN Tazewell 56.28 311 P **P** **08 33 37.0 +0.4**
baz=112
TZTN Tazewell 56.28 311 IAMs_20 IAMs_20 08 51 27.2
comp=Z,2µm,19.0s
Q52A Bidwell 56.29 315 P **P** **08 33 35.7 -0.8**
baz=114
CTI Castel Tesino 56.38 36 P **P** **08 33 35.5 -1.7**
CTI pmax pmax
comp=Z,46nm,1.9s
CTI Castel Tesino 56.38 36 P **P** **08 33 35.5 -1.7**
FETA Feichten 56.39 34 *e*P **P** **08 33 37.3 0.0**
comp=Z,14nm,1.2s
UBR Ueberruh 56.42 33 *e*P **P** **08 33 38.6 +1.2**
comp=Z,28nm,1.4s,baz=235,slow=6.8
H53A Bobcaygeon 56.45 322 P **P** **08 33 37.8 +0.2**
baz=121
O52A Adamsville 56.47 316 P **P** **08 33 37.7 -0.1**
O52A Adamsville 56.47 316 P **P** **08 33 36.3 -1.6**
P52A Corning 56.47 315 P **P** **08 33 36.8 -1.1**
baz=115
X51A Calhoun 56.58 309 IAMs_20 IAMs_20 08 52 07.4
comp=Z,3µm,22.0s
AHRW Bad Neuenahr-A 56.60 29 *e*P **P** **08 33 40.1 +1.5**
comp=Z,59nm,1.8s,baz=235,slow=6.8
V51A Loudon 56.62 310 IAMs_20 IAMs_20 08 52 21.2
comp=Z,2µm,22.0s
CPCT Cooper Cave 56.62 310 IAMs_20 IAMs_20 08 52 10.4
comp=Z,2µm,21.0s
RETA Reutte 56.67 34 *e*P **P** **08 33 39.1 -0.2**
comp=Z,11nm,1.2s
S51A Beattyville 56.73 313 IAMs_20 IAMs_20 08 53 23.9
comp=Z,2µm,19.0s
SQTA Sankt Quirin 56.77 34 *e*P **P** **08 33 39.3 -0.7**
comp=Z,13nm,1.0s
MOTA Moosalm 56.78 34 *e*P **P** **08 33 39.2 -0.9**
comp=Z,13nm,1.2s
ALGO Algonquin Park 56.85 324 P **P** **08 33 39.8 -0.6**
baz=122
PLCA Paso Flores 56.90 214 P **P** **08 33 42.2 +1.4**
comp=Z,1.9nm,0.8s,baz=96,slow=3.1,SNR=4.6
PLCA LR LR 08 57 57.7
comp=Z,3µm,21.2s,baz=66,slow=36
PLCA Paso Flores 56.90 214 P **P** **08 33 39.6 -1.3**
PLCA pmax pmax
comp=Z,49nm,1.8s
PLCA Paso Flores 56.90 214 P **P** **08 33 39.6 -1.3**
PLCA Paso Flores 56.90 214 *e*P **P** **08 33 41.4 +0.5**
250A Grady 56.90 305 P **P** **08 33 38.5 -2.6**
CIMO Cimolais 56.98 36 P **P** **08 33 38.8 -2.6**
WTTA Wattenberg 57.04 35 *e*P **P** **08 33 41.8 -0.1**
comp=Z,22nm,1.4s
WTTA Wattenberg 57.04 35 *e*P **P** **08 33 41.5 -0.5**
baz=235,slow=6.8
WATA Walderalm 57.04 35 *e*P **P** **08 33 41.9 -0.1**
comp=Z,21nm,1.5s
P51A Williamsport 57.06 315 P **P** **08 33 42.1 +0.1**
baz=114
P51A Williamsport 57.06 315 P **P** **08 33 40.2 -1.8**
P51A IAmb IAmb 08 33 51.1
comp=Z,122nm,1.6s
TNS Taunus Mts 57.08 30 *e*P **P** **08 33 42.9 +0.8**
comp=Z,34nm,1.5s,baz=235,slow=6.8
Q51A Peebles 57.09 314 P **P** **08 33 41.3 -0.9**
Q51A IAmb IAmb 08 33 50.5
comp=Z,46nm,1.3s
SCHQ Schefferville 57.09 337 P **P** **08 33 41.4 -0.6**
comp=Z,12nm,0.7s,baz=136,slow=6.9,SNR=11
SCHQ LR LR 08 55 55.1
comp=Z,667nm,18.7s,baz=148,slow=34
SCHQ Schefferville 57.09 337 P **P** **08 33 40.0 -2.0**
CHGQ Chibougamau 57.10 329 P **P** **08 33 42.7 +0.6**
baz=128
STAL STALIGIAL 57.11 36 P **P** **08 33 40.9 -1.4**
W50A Signal Mountai 57.15 309 P **P** **08 33 41.3 -1.5**
W50A IAmb IAmb 08 33 52.5
comp=Z,137nm,1.9s
W50A IAMs_20 IAMs_20 08 52 58.3
comp=Z,3µm,19.0s
FPAL Fort Paine 57.16 308 P **P** **08 33 41.0 -1.9**
FPAL IAmb IAmb 08 33 58.0
comp=Z,136nm,1.8s
FPAL IAMs_20 IAMs_20 08 52 35.7
comp=Z,3µm,22.0s
N51A Ashland 57.19 317 P **P** **08 33 43.6 +0.7**
baz=115
ABTA Abfaltersbach 57.26 36 *i* P **P** **08 33 44.0 +0.6**
comp=Z,22nm,1.1s,SNR=8.7
BRAL Brewton 57.31 304 P **P** **08 33 44.0 +0.1**
baz=106
ACSO Alum Creek Sta 57.32 316 P **P** **08 33 44.8 +1.0**
baz=114
ACSO Alum Creek Sta 57.32 316 P **P** **08 33 42.9 -0.9**
ACSO IAmb IAmb 08 33 52.1
comp=Z,75nm,1.4s
ACSO IAMs_20 IAMs_20 08 53 13.3
comp=Z,3µm,22.0s
ZOU Zoufplan 57.42 36 P **P** **08 33 42.8 -1.9**
R50A Paris 57.51 313 P **P** **08 33 43.6 -1.6**
R50A IAmb IAmb 08 33 59.5
comp=Z,82nm,1.6s
R50A IAMs_20 IAMs_20 08 53 57.5
comp=Z,2µm,20.0s
ROBS Robic 57.57 36 *i* P **P** **08 33 46.4 +0.8**
SWET Sewanee 57.63 309 P **P** **08 33 44.3 -1.9**
SWET IAmb IAmb 08 34 00.3
comp=Z,83nm,1.4s
SWET IAMs_20 IAMs_20 08 53 23.1
comp=Z,3µm,20.0s
PRED Cave del Predi 57.71 36 P **P** **08 33 46.0 -0.5**
PAYG Puerto Ayora 57.72 266 IAMs_20 IAMs_20 08 58 14.4
comp=Z,2µm,19.0s
LRAL Lakeview Retre 57.80 306 P **P** **08 33 48.1 +0.8**
baz=107
MYKA Terra Mystica 57.85 36 *i* P **P** **08 33 48.5 +0.9**
comp=Z,26nm,1.5s,SNR=7.6
KBA Koelnbreinsper 57.91 36 *e*P **P** **08 33 49.6 +1.4**
comp=Z,8.5nm,1.2s
KBA Koelnbreinsper 57.91 36 *e*P **P** **08 33 47.5 -0.7**
comp=Z,24nm,1.6s,baz=235,slow=6.8
U49A Red Boiling Sp 57.95 311 P **P** **08 33 47.0 -1.4**
U49A IAmb IAmb 08 34 02.5
comp=Z,59nm,1.4s
U49A IAMs_20 IAMs_20 08 53 14.4
comp=Z,2µm,22.0s
RJOB Jochberg 57.95 35 *e*P **P** **08 33 47.5 -0.7**
comp=Z,68nm,2.2s,baz=235,slow=6.8
LSQQ Lebel-sur-Quev 57.96 327 P **P** **08 33 48.8 +0.6**
baz=125
LJU Ljubljana 58.08 37 *i* P **P** **08 33 50.5 +1.4**
R49A Shelbyville 58.12 313 IAMs_20 IAMs_20 08 53 24.9
comp=Z,3µm,19.0s
GRF Grafenberg Arr 58.19 32 *e*P **P** **08 33 51.0 +1.1**
comp=Z,102nm,1.8s,baz=235,slow=6.8
GRF *e*L L 08 57 03.7
comp=Z,1µm,18.7s
CLTN Cedars of Leba 58.23 310 P **P** **08 33 48.9 -1.4**
CLTN IAmb IAmb 08 33 59.7
comp=Z,132nm,2.0s
CLTN IAMs_20 IAMs_20 08 53 31.8
comp=Z,2µm,22.0s
UBBA Unterbreizbach 58.23 30 *e*P **P** **08 33 51.1 +1.2**
comp=Z,120nm,2.7s,baz=235,slow=6.8
O49A Covington 58.25 315 IAMs_20 IAMs_20 08 53 41.0
comp=Z,2µm,20.0s
BOJS Bojanci 58.25 38 *i* P **P** **08 33 51.7 +1.4**
X48A Hartselle 58.26 308 IAMs_20 IAMs_20 08 53 09.8
comp=Z,4µm,22.0s
P49A Miami Univ. Ec 58.26 314 P **P** **08 33 50.8 +0.3**
baz=113
P49A Miami Univ. Ec 58.26 314 P **P** **08 33 48.5 -2.1**
P49A IAmb IAmb 08 34 04.0
comp=Z,111nm,1.6s
P49A IAMs_20 IAMs_20 08 53 52.5
comp=Z,2µm,20.0s
OBKA Obir 58.33 37 *e*P **P** **08 33 51.8 +0.8**
comp=Z,9.5nm,0.8s
V48A Smith Brothers 58.49 309 P **P** **08 33 52.1 -0.1**
V48A IAmb IAmb 08 34 06.1
comp=Z,74nm,1.4s
V48A IAMs_20 IAMs_20 08 53 48.8
comp=Z,2µm,20.0s
AAM Ann Arbor 58.65 318 P **P** **08 33 53.1 0.0**
AAM pmax pmax
comp=Z,97nm,1.5s
AAM Ann Arbor 58.65 318 P **P** **08 33 53.7 +0.6**
baz=115
AAM Ann Arbor 58.65 318 P **P** **08 33 53.1 0.0**
GTTG Gottingen 58.65 30 *e*P **P** **08 33 54.3 +1.3**
comp=Z,29nm,1.1s,baz=235,slow=6.8
SOKA Soboth 58.70 37 *i* P **P** **08 33 53.9 +0.3**
comp=Z,23nm,1.3s,SNR=9.9
Z47A Carrollton 58.70 306 P **P** **08 33 54.0 +0.3**
P48A Milroy 58.74 314 IAMs_20 IAMs_20 08 54 27.2
comp=Z,2µm,20.0s
ROTZ Rotzenmuhle 58.76 32 *e*P **P** **08 33 53.8 0.0**
comp=Z,28nm,1.3s,baz=235,slow=6.8
WET Wettzell 58.77 33 *e*P **P** **08 33 53.5 -0.5**
comp=Z,20nm,1.5s,baz=235,slow=6.8
MOA Molln 58.85 35 *e*P **P** **08 33 54.6 +0.1**
comp=Z,19nm,1.6s
WCI Wyandotte Cave 58.93 312 P **P** **08 33 55.2 0.0**
baz=111
WCI Wyandotte Cave 58.93 312 IAMs_20 IAMs_20 08 54 02.2
comp=Z,3µm,22.0s
MOX Moxa 58.95 31 *e*P **P** **08 33 55.9 +0.8**
comp=Z,46nm,1.8s,baz=235,slow=6.8
MOX *e*L L 08 56 02.1
comp=Z,1µm,20.2s
CLZ Clausthal 59.04 30 *e*P **P** **08 33 56.5 +0.7**
comp=Z,24nm,1.4s,baz=235,slow=6.8
LL01 San Ignacio de 59.04 213 P **P** **08 33 54.8 -0.9**
LL01 IAmb IAmb 08 34 04.5
comp=Z,111nm,2.0s
GEC2 GERESS Array S 59.06 34 *e*P **P** **08 33 55.6 -0.4**
comp=Z,37nm,1.4s,baz=235,slow=6.8
GEC2 GERESS Array S 59.06 34 P **P** **08 33 53.4 -2.6**
GERES GERESS Array B 59.06 34 P **P** **08 33 56.4 +0.3**
comp=Z,7.1nm,1.0s,baz=225,slow=5.5,SNR=22
GERES LR LR 08 56 28.7
comp=Z,1µm,20.6s,baz=244,slow=33
GERES GERESS Array B 59.06 34 P **P** **08 33 54.5 -1.5**
GERES GERESS Array B 59.06 34 P **P** **08 33 54.5 -1.5**
T47A Sharon Grove 59.11 311 P **P** **08 33 54.8 -1.6**
T47A IAmb IAmb 08 34 10.2
comp=Z,77nm,1.3s
PLN Plauen 59.14 32 *e*P **P** **08 33 57.0 +0.6**
comp=Z,30nm,1.3s,baz=235,slow=6.8
WERN Wernitzgruen 59.14 32 *e*P **P** **08 33 56.4 -0.1**
comp=Z,49nm,1.5s,baz=235,slow=6.8
KHC Kasperske Hory 59.15 34 *e*P **P** **08 33 56.6 0.0**
KHC *e*S **S** **08 42 10.3 +6.2**
KHC MLR MLR
comp=Z,1µm,15.8s
KHC Kasperske Hory 59.15 34 *e*P **P** **08 33 56.6 0.0**
KHC *ex* x 08 42 10.3
KHC AMS AMS 09 00 00.0
comp=Z,1µm,15.8s
NKC Novy Kostel 59.15 32 AMS AMS 08 57 30.0
comp=Z,1µm,19.6s
GUNZ Gunzen 59.16 32 *e*P **P** **08 33 57.0 +0.4**
comp=Z,60nm,1.6s,baz=235,slow=6.8
PLAL Pickwick Lake 59.23 308 P **P** **08 33 54.5 -2.8**
PLAL IAmb IAmb 08 34 11.6
comp=Z,86nm,1.7s
PLAL IAMs_20 IAMs_20 08 54 33.4
comp=Z,3µm,20.0s
TANN Tannenbergstha 59.26 32 *e*P **P** **08 33 56.8 -0.6**
comp=Z,105nm,1.4s,baz=235,slow=6.8
ARSA Arzberg 59.28 36 *e*P **P** **08 33 57.7 +0.2**
comp=Z.2.6nm,0.7s
NRDL Niedersach Rie 59.31 29 *e*P **P** **08 33 58.6 +1.2**
comp=Z,51nm,1.7s,baz=235,slow=6.8
146A Union 59.35 305 P **P** **08 33 56.3 -1.9**
146A IAMs_20 IAMs_20 08 54 38.3
comp=Z,3µm,20.0s
ASSE Asse, Remlinge 59.36 30 *e*P **P** **08 33 58.2 +0.4**
comp=Z,13nm,0.8s,baz=235,slow=6.8
NEUB Neuenburg 59.36 31 *e*P **P** **08 33 58.3 +0.4**
comp=Z,35nm,1.3s,baz=235,slow=6.8
WVT Waverly 59.39 310 P **P** **08 33 56.3 -2.1**
WVT pmax pmax
comp=Z,51nm,1.6s
WVT Waverly 59.39 310 P **P** **08 33 58.6 +0.2**
baz=108
WVT Waverly 59.39 310 P **P** **08 33 56.3 -2.1**
WVT IAmb IAmb 08 34 06.2
comp=Z,51nm,1.6s
WVT Waverly 59.39 310 IAMs_20 IAMs_20 08 54 16.6
comp=Z,2µm,19.0s
BLO Bloomington 59.43 313 IAMs_20 IAMs_20 08 54 06.4
comp=Z,2µm,21.0s
CONA Conrad Observa 59.82 36 *i* P **P** **08 34 01.9 +0.7**
comp=Z,11nm,1.5s,SNR=5.4
USIN University of 59.85 312 P **P** **08 34 00.2 -1.4**
FBE Freiberg 60.02 32 *e*P **P** **08 34 03.5 +1.0**
comp=Z,55nm,1.6s,baz=235,slow=6.8
CLL Collm 60.05 31 *e*(P) **P** **08 34 04.0 +1.3**
CLL *e*S **S** **08 42 20.0 +4.5**
CLL *e*SSS SSS 08 48 47.0
CLL LmV 08 59 00.0
comp=Z,1µm,18.0s
CLL Collm 60.05 31 *e*P **P** **08 34 04.0 +1.3**
CLL *e*S **S** **08 42 20.0 +4.5**
CLL MLR MLR
comp=Z,1µm,18.0s
CLL Collm 60.05 31 *e*P **P** **08 34 03.8 +1.2**
comp=Z,21nm,1.5s,baz=235,slow=6.8
P46A Rosedale 60.08 314 P **P** **08 34 01.2 -1.9**
P46A IAMs_20 IAMs_20 08 55 27.7
comp=Z,2µm,21.0s
PRA Prague 60.13 33 AMS AMS 08 59 00.0
comp=Z,600nm,17.8s
EFI East Falkland 60.13 198 *i* P **P** **08 34 06.2 +3.1**
EFI pmax pmax
comp=Z,116nm,1.8s
OXF Oxford 60.14 307 P **P** **08 34 03.5 -0.1**
baz=106
PRU Pruhonice 60.14 33 *e*S **S** **08 42 23.6 +6.9**
PRU AMS AMS 08 56 10.0
comp=Z,1µm,18.2s
W45A Hickory Valley 60.15 308 P **P** **08 34 01.3 -2.4**
W45A IAMs_20 IAMs_20 08 55 09.8
comp=Z,3µm,21.0s
SFIN Lafayette 60.27 314 P **P** **08 34 04.9 +0.5**
baz=111
SFIN Lafayette 60.27 314 IAMs_20 IAMs_20 08 55 23.7
comp=Z,3µm,20.0s
T45A Paducah 60.29 310 IAMs_20 IAMs_20 08 54 56.4
comp=Z,2µm,21.0s
BSEG Bad Segeberg 60.30 28 *e*P **P** **08 34 04.8 +0.6**
comp=Z,52nm,1.4s,baz=235,slow=6.8
TREC Trest 60.30 34 *e*P **P** **08 34 04.9 +0.5**
TREC MLR MLR
comp=Z,1µm,17.9s
TREC Trest 60.30 34 *e*P **P** **08 34 04.9 +0.5**
TREC AMS AMS 08 59 10.0
comp=Z,1µm,17.9s
BRG Berggiesshubel 60.30 32 *e*P **P** **08 34 05.0 +0.6**
comp=Z,30nm,1.6s
BRG S **S** **08 42 27.0 +8.3**
comp=N,1µm,18.1s
comp=E,469nm,16.6s
comp=Z,1µm,15.6s
BRG Berggiesshubel 60.30 32 *e*P **P** **08 34 05.0 +0.6**
BRG pmax pmax
comp=Z,31nm,1.6s
BRG MLR MLR
comp=N,1µm,18.1s
BRG MLR MLR
comp=E,469nm,16.6s

BRG MLR MLR
comp=Z,1µm,15.6s
BRG Berggiesshubel 60.30 32 *e*P **P 08 34 04.2 -0.2**
comp=Z,31nm,1.6s,baz=235,slow=6.8
344A Westbrook Farm 60.43 304 P **P 08 34 03.0 -2.6**
OLIL Olney 60.43 312 IAMs_20 IAMs_20 08 57 59.0
comp=Z,2µm,20.0s
PVCC Panska Ves 60.45 33 AMS AMS 08 58 10.0
comp=Z,1µm,17.2s
HALT Halls 60.49 309 IAMs_20 IAMs_20 08 54 28.8
comp=Z,2µm,21.0s
GLAT Glass 60.55 309 IAMs_20 IAMs_20 08 55 02.5
comp=Z,2µm,20.0s
HICK Hickman 60.59 310 IAMs_20 IAMs_20 08 54 32.4
comp=Z,2µm,22.0s
DIVS Divibare 60.62 41 P **P 08 34 04.5 -2.3**
DIVS IAmb IAmb 08 34 09.2
comp=Z,53nm,1.9s
LNXT Lenox 60.66 309 IAMs_20 IAMs_20 08 54 33.3
comp=Z,2µm,22.0s
KRUC Moravsky 60.69 35 *e*P **P 08 34 07.3 +0.2**
MET Memphis--Engin 60.73 308 P **P 08 34 06.6 -1.0**
MET IAMs_20 IAMs_20 08 54 24.1
comp=Z,3µm,22.0s
HENM Henderson Moun 60.83 310 IAMs_20 IAMs_20 08 55 23.7
comp=Z,2µm,20.0s
MODS Modra-Piesok 60.86 36 *e*P **P 08 34 06.3 -2.0**
MODS pmax pmax
comp=Z,80nm,2.0s
MODS Modra-Piesok 60.86 36 *e*P **P 08 34 06.3 -2.0**
PENMO Penman 60.87 309 IAMs_20 IAMs_20 08 54 29.8
comp=Z,2µm,22.0s
PVMO Portageville 60.91 309 IAMs_20 IAMs_20 08 54 55.0
comp=Z,2µm,21.0s
VRAC Vranov 60.93 35 *e*P **P 08 34 09.0 +0.3**
PEBM Pemiscott Bayo 60.95 309 IAMs_20 IAMs_20 08 55 04.0
comp=Z,2µm,20.0s
PARMO Parma 61.03 310 IAMs_20 IAMs_20 08 55 07.0
comp=Z,2µm,20.0s
GNAR Gosnell 61.03 309 IAMs_20 IAMs_20 08 55 37.1
comp=Z,2µm,20.0s
IDI Anoyia 61.14 52 IAMs_20 IAMs_20 09 00 54.6
comp=Z,2µm,21.0s
LPAR Lepanto 61.15 308 IAMs_20 IAMs_20 08 55 41.3
comp=Z,3µm,20.0s
Q44A Meyer Farm, Va 61.16 312 IAMs_20 IAMs_20 08 56 30.4
comp=Z,3µm,20.0s
O44A Mansfield 61.18 314 IAMs_20 IAMs_20 08 56 13.7
comp=Z,2µm,19.0s
SRO Srobarova 61.20 37 *e*P **P 08 34 12.0 +1.4**
SRO Srobarova 61.20 37 *e*P **P 08 34 12.0 +1.4**
UPC Upice 61.22 33 *e*P **P 08 34 11.9 +1.2**
UPC MLR MLR
comp=Z,1µm,16.9s
UPC Upice 61.22 33 *e*P **P 08 34 11.9 +1.2**
UPC AMS AMS 08 59 20.0
comp=Z,1µm,16.9s
143A Socs Landing, 61.28 305 P **P 08 34 11.9 +0.5**
143A IAMs_20 IAMs_20 08 55 39.1
comp=Z,3µm,22.0s
CHVC Chvalec 61.28 33 *e*P **P 08 34 12.0 +0.9**
DPC Dobruska-Polom 61.31 33 *e*P **P 08 34 12.4 +1.1**
DPC *e*S S 08 42 41.9 +10
DPC MLR MLR
comp=Z,1µm,16.6s
DPC Dobruska-Polom 61.31 33 *e*P **P 08 34 12.4 +1.1**
DPC *ex* x 08 42 41.9
DPC AMS AMS 08 56 40.0
comp=Z,1µm,16.6s
M44A Midewin, Midew 61.31 315 IAMs_20 IAMs_20 08 55 36.0
comp=Z,2µm,21.0s
X43A Marvell 61.31 307 P **P 08 34 11.8 +0.2**
baz=105
X43A Marvell 61.31 307 P **P 08 34 10.8 -0.8**
OSTC Ostas 61.35 33 AMS AMS 08 59 30.0
comp=Z,1µm,17.9s
HBAR Harrisburg 61.41 308 IAMs_20 IAMs_20 08 56 30.3
comp=Z,3µm,20.0s
KRLC Kraliky 61.42 34 AMS AMS 08 59 00.0
comp=Z,900nm,17.2s
KSP Ksiaz 61.54 33 *e*P **P 08 34 14.2 +1.4**
PBMO Poplar Bluff 61.58 310 IAMs_20 IAMs_20 08 55 56.7
comp=Z,2µm,21.0s
MORC Moravsky Berou 61.70 35 *e*P **P 08 34 14.8 +0.8**
342A Flagon Creek P 61.74 303 P **P 08 34 13.0 -1.5**
P43A Skaggs, Pawnee 61.77 313 IAMs_20 IAMs_20 08 57 19.5
comp=Z,2µm,19.0s
VYHS Vyhne 61.83 36 *e*P **P 08 34 15.7 +0.8**
VYHS Vyhne 61.83 36 *e*P **P 08 34 15.6 +0.7**
KKB Krupnik 61.86 44 P **P 08 34 15.4 +0.2**
SANT Santorini 61.88 51 IAMs_20 IAMs_20 08 59 58.2
comp=Z,2µm,22.0s
HDIL Hopedale 61.91 314 P **P 08 34 15.2 -0.3**
baz=110
HDIL Hopedale 61.91 314 IAMs_20 IAMs_20 08 56 25.0
comp=Z,2µm,20.0s
FVM French Village 61.93 311 IAMs_20 IAMs_20 08 55 02.8
comp=Z,2µm,21.0s
LCAR Lake Charles 61.94 309 P **P 08 34 14.2 -1.7**
LCAR IAmb IAmb 08 34 28.4
comp=Z,45nm,1.4s
LCAR IAMs_20 IAMs_20 08 55 12.3
comp=Z,3µm,21.0s
SLM Saint Louis 61.98 312 IAMs_20 IAMs_20 08 56 05.2
comp=Z,3µm,21.0s
T42A Van Buren 62.16 310 P **P 08 34 16.6 -0.7**
T42A IAmb IAmb 08 34 24.0
comp=Z,38nm,1.4s
T42A IAMs_20 IAMs_20 08 55 20.0
comp=Z,3µm,22.0s
PSZ Piszkesteto 62.20 37 ⇑P **P 08 34 18.4 +1.0**
PSZ Piszkesteto 62.20 37 P **P 08 34 14.5 -2.9**
PSZ pmax pmax
comp=Z,48nm,1.5s
PSZ Piszkesteto 62.20 37 P **P 08 34 14.5 -2.9**
PSZ IAmb IAmb 08 34 19.7
comp=Z,48nm,1.5s
MMB Musomiste 62.22 45 P **P 08 34 18.9 +1.3**
VTS Vitosha 62.23 44 P **P 08 34 17.6 -0.2**
UALR University of 62.54 307 P **P 08 34 17.9 -1.9**
UALR IAmb IAmb 08 34 32.9
comp=Z,60nm,1.4s
Z41A Richland Creek 62.55 305 P **P 08 34 20.2 +0.3**
baz=103
W41B Gary Mavity, V 62.57 307 P **P 08 34 20.2 +0.1**
baz=105
W41B Gary Mavity, V 62.57 307 P **P 08 34 20.1 +0.1**
W41B IAmb IAmb 08 34 32.9
comp=Z,50nm,1.4s
CCM Cathedral Cave 62.57 311 P **P 08 34 18.3 -1.7**
CCM pmax pmax
comp=Z,112nm,1.8s
CCM Cathedral Cave 62.57 311 P **P 08 34 19.2 -0.8**
baz=107
CCM Cathedral Cave 62.57 311 P **P 08 34 18.2 -1.7**
CCM IAMs_20 IAMs_20 08 55 24.7
comp=Z,2µm,22.0s
WHAR Wooly Hollow 62.63 307 P **P 08 34 17.5 -2.9**
WHAR IAmb IAmb 08 34 33.1
comp=Z,73nm,1.5s
WHAR IAMs_20 IAMs_20 08 56 07.6
comp=Z,3µm,21.0s
FCAR Ozark Folk Cen 62.65 308 P **P 08 34 17.8 -2.8**
FCAR IAmb IAmb 08 34 32.9
comp=Z,48nm,1.7s
FCAR IAMs_20 IAMs_20 08 55 55.2
comp=Z,3µm,21.0s
L42A Oliver, Polo 62.66 315 P **P 08 34 20.6 +0.1**
L42A IAmb IAmb 08 34 28.7
comp=Z,49nm,1.3s
SUR Sutherland 62.74 130 P **P 08 34 22.1 +0.7**
comp=Z,5.7nm,0.7s,baz=302,slow=12,SNR=7.9
SUR LR LR 08 55 32.0
comp=Z,2µm,21.4s,baz=298,slow=30
SUR Sutherland 62.74 130 IAMs_20 IAMs_20 08 55 00.6
comp=Z,2µm,21.0s
I42A Draeger Farm, 62.81 318 P **P 08 34 20.2 -1.3**
I42A IAmb IAmb 08 34 29.3
comp=Z,69nm,1.3s
MPEP Malo Peshtene 62.84 43 P **P 08 34 21.9 +0.2**
PGB Panagyurishte 62.85 44 P **P 08 34 23.2 +1.3**
WLAR White Oak Lake 62.90 306 P **P 08 34 20.1 -2.2**
GZR Gura Zlata 62.96 41 ⇑P **P 08 34 23.3 +0.8**
GZR Gura Zlata 62.96 41 ⇑P **P 08 34 23.3 +0.8**
KARP Karpathos 62.99 52 IAMs_20 IAMs_20 09 00 51.8
comp=Z,2µm,22.0s

PLD Plovdiv 63.08 45 P **P 08 34 24.5 +1.2**
N41A Harden Midland 63.08 314 P **P 08 34 22.3 -1.0**
N41A IAmb IAmb 08 34 30.8
comp=Z,64nm,1.2s
MGMO Mountain Grove 63.10 309 P **P 08 34 21.4 -2.2**
MGMO IAmb IAmb 08 34 30.9
comp=Z,56nm,1.2s
MGMO IAMs_20 IAMs_20 08 55 58.9
comp=Z,2µm,22.0s
NIE Niedzica 63.11 36 *e*P **P 08 34 24.6 +1.2**
OJC Ojcow 63.19 35 *e*P **P 08 34 24.6 +0.7**
U40A Yellville 63.34 308 P **P 08 34 24.8 -0.4**
baz=105,SNR=5.8
U40A Yellville 63.34 308 P **P 08 34 24.6 -0.6**
U40A IAmb IAmb 08 34 37.6
comp=Z,59nm,1.4s
U40A IAMs_20 IAMs_20 08 56 16.4
comp=Z,2µm,21.0s
JFWS Jewell Farm 63.38 316 P **P 08 34 24.7 -0.6**
JFWS pmax pmax
comp=Z,47nm,1.2s
JFWS Jewell Farm 63.38 316 P **P 08 34 24.7 -0.6**
baz=110
JFWS Jewell Farm 63.38 316 P **P 08 34 24.7 -0.6**
JFWS IAmb IAmb 08 34 32.6
comp=Z,46nm,1.2s
R40A Maddies Statio 63.41 311 P **P 08 34 25.3 -0.2**
R40A IAmb IAmb 08 34 38.3
comp=Z,45nm,1.3s
R40A IAMs_20 IAMs_20 08 55 60.0
comp=Z,2µm,21.0s
SFJD Kangerlussuaq 63.45 352 P **P 08 34 25.2 -0.1**
comp=Z,5.7nm,0.8s,baz=180,slow=10,SNR=2.8
SFJD LR LR 08 56 15.3
comp=Z,984nm,19.7s,baz=156,slow=31
SFJD Kangerlussuaq 63.45 352 P **P 08 34 25.4 +0.1**
SFJD pmax pmax
comp=Z,67nm,1.4s
SFJD Kangerlussuaq 63.45 352 P **P 08 34 25.4 +0.1**
SFJD IAmb IAmb 08 34 31.9
comp=Z,67nm,1.4s
MIAR Mount Ida 63.48 306 P **P 08 34 25.9 -0.2**
MIAR pmax pmax
comp=Z,80nm,1.9s
MIAR Mount Ida 63.48 306 P **P 08 34 26.2 +0.1**
baz=103
MIAR Mount Ida 63.48 306 P **P 08 34 25.9 -0.2**
MIAR IAmb IAmb 08 34 43.7
comp=Z,80nm,1.9s
MIAR IAMs_20 IAMs_20 08 56 45.1
comp=Z,3µm,21.0s
LSZ Lusaka 63.50 110 P **P 08 34 28.3 +1.6**
comp=Z,3.3nm,0.8s,baz=295,slow=6.3,SNR=7.6
LSZ Lusaka 63.50 110 P **P 08 34 25.7 -1.0**
LSZ pmax pmax
comp=Z,49nm,1.6s
LSZ Lusaka 63.50 110 P **P 08 34 25.7 -1.0**
LSZ IAmb IAmb 08 34 35.6
comp=Z,49nm,1.6s
LSZ Lusaka 63.50 110 IAMs_20 IAMs_20 08 57 48.0
comp=Z,2µm,18.0s
CRVS Cervenica-Dubn 63.57 37 *e*P **P 08 34 28.0 +1.5**
CRVS Cervenica-Dubn 63.57 37 *e*P **P 08 34 28.0 +1.5**
P40A Paris 63.60 312 P **P 08 34 26.2 -0.6**
P40A IAmb IAmb 08 34 33.8
comp=Z,44nm,1.1s
P40A IAMs_20 IAMs_20 08 56 56.8
comp=Z,2µm,21.0s
MBAR Mbarara 63.64 93 *i* P **P 08 34 30.1 +2.4**
MBAR pmax pmax
comp=Z,4.0nm,1.1s
NATX Nacogdoches 63.77 303 P **P 08 34 28.0 0.0**
baz=101
NATX Nacogdoches 63.77 303 P **P 08 34 28.1 0.0**
NATX IAMs_20 IAMs_20 08 58 13.1
comp=Z,3µm,21.0s
L40A Anamosa 63.77 315 P **P 08 34 28.0 +0.1**
L40A IAmb IAmb 08 34 40.4
comp=Z,60nm,1.4s
L40A IAMs_20 IAMs_20 08 57 12.3
comp=Z,2µm,20.0s
W39A Magazine 63.79 307 P **P 08 34 28.0 -0.2**
baz=104
LBTB Lobatse 63.85 121 P **P 08 34 27.8 -1.1**
comp=Z,5.2nm,1.0s,baz=274,slow=9.9,SNR=4.6
I40A Norwalk 63.96 317 P **P 08 34 27.7 -1.4**
S39A Bolivar 64.05 310 P **P 08 34 29.4 -0.4**
S39A IAmb IAmb 08 34 37.0
comp=Z,48nm,1.4s
S39A IAMs_20 IAMs_20 08 56 30.0
comp=Z,2µm,22.0s
ARR Arges 64.16 41 ⇑P **P 08 34 32.0 +1.5**
G40A Rib Lake 64.17 319 P **P 08 34 29.8 -0.7**
G40A IAmb IAmb 08 35 36.3
comp=Z,70nm,1.9s
HHAR Hobbs 64.17 308 IAMs_20 IAMs_20 08 56 30.5
comp=Z,3µm,22.0s
SZH Strazhica 64.32 44 P **P 08 34 30.9 -0.6**
HKT Hockley 64.43 301 *i* P **P 08 34 34.6 +2.3**
HKT pmax pmax
comp=Z,47nm,2.4s
VOIR 64.46 41 ⇑P **P 08 34 32.8 +0.3**
VOIR 64.46 41 ⇑P **P 08 34 32.8 +0.3**
ICESG Greenland Ices 64.51 357 *i* P **P 08 34 31.5 -1.1**
ICESG IAmb IAmb 08 34 39.6
comp=Z,79nm,1.4s
U38A Gravette 64.56 308 IAMs_20 IAMs_20 08 56 54.7
comp=Z,2µm,21.0s
KWP Kalwaria Pacla 64.62 36 *e*P **P 08 34 35.6 +2.2**
P38A Dawn 64.72 312 P **P 08 34 34.0 -0.2**
P38A IAmb IAmb 08 34 46.8
comp=Z,33nm,1.3s
P38A IAMs_20 IAMs_20 08 57 28.7
comp=Z,2µm,22.0s
237A Washetta, Mont 64.77 303 P **P 08 34 31.3 -3.3**
237A IAMs_20 IAMs_20 08 58 43.6
comp=Z,3µm,21.0s
BOSA Boshof 64.79 124 P **P 08 34 34.1 -0.9**
comp=Z,9.6nm,0.9s,baz=292,slow=7.2,SNR=13
BOSA Boshof 64.79 124 P **P 08 34 33.9 -1.1**
BOSA pmax pmax
comp=Z,53nm,1.7s
BOSA Boshof 64.79 124 P **P 08 34 33.9 -1.1**
BOSA IAmb IAmb 08 34 41.4
comp=Z,53nm,1.6s
N38A Joes South For 64.83 313 P **P 08 34 35.0 +0.1**
N38A IAmb IAmb 08 34 41.8
comp=Z,51nm,1.1s
N38A IAMs_20 IAMs_20 09 00 42.4
comp=Z,2µm,19.0s
MATP Matopo 65.06 115 P **P 08 34 36.3 -0.5**
comp=Z,3.2nm,1.2s,baz=279,slow=18,SNR=1.8
MLR Muntele Rosu 65.07 42 ⇑P **P 08 34 37.0 +0.5**
MLR Muntele Rosu 65.07 42 P **P 08 34 36.1 -0.4**
MLR pmax pmax
comp=Z,197nm,1.5s
MLR MLR MLR
comp=Z,2µm,20.0s
MLR Muntele Rosu 65.07 42 P **P 08 34 36.0 -0.4**
MLR IAMs_20 IAMs_20 09 02 37.4
comp=Z,2µm,20.0s
NB2 NORSAR Subarra 65.20 22 P **P 08 34 36.2 -0.7**
comp=Z,96nm,2.0s,baz=230,slow=6.5
NB2 NORSAR Subarra 65.20 22 P **P 08 34 36.2 -0.7**
baz=230,slow=6.5
NOA NORSAR Array B 65.20 22 P **P 08 34 36.4 -0.5**
comp=Z,5.5nm,0.9s,baz=231,slow=6.4,SNR=8.6
NOA LR LR 09 00 35.1
comp=Z,942nm,18.9s,baz=240,slow=34
BUR08 Bucovina Ar. S 65.36 39 P **P 08 34 35.2 -3.1**
BUR08 IAmb IAmb 08 34 46.8
comp=Z,53nm,1.9s
BURAR Bucovina Array 65.36 39 P **P 08 34 36.7 -1.6**
NC405 NORSAR Array S 65.43 22 P **P 08 34 35.8 -2.6**
ELL Elmali 65.44 52 P **P 08 34 37.1 -2.0**
ELL pmax pmax
comp=Z,382nm,1.5s
ELL MLR MLR
comp=Z,5µm,21.0s
ELL Elmali 65.44 52 P **P 08 34 37.1 -2.0**
TUL1 Leonard 65.55 307 P **P 08 34 39.7 0.0**
baz=103
TUL1 Leonard 65.55 307 P **P 08 34 38.0 -1.7**
TUL1 IAmb IAmb 08 34 52.4
comp=Z,56nm,1.2s
TUL1 IAMs_20 IAMs_20 08 57 46.9

comp=Z,3µm,22.0s
BIZ Bicaz 65.68 40 ⇑P **P 08 34 41.6 +1.4**
VRI Vrincioaia 65.71 41 ⇑P **P 08 34 41.2 +0.7**
VRI Vrincioaia 65.71 41 ⇑P **P 08 34 41.2 +0.7**
KVTX Kingsville 65.85 298 IAMs_20 IAMs_20 09 00 50.6
comp=Z,2µm,21.0s
SPMN Marine on St. 65.88 318 P **P 08 34 41.6 0.0**
baz=109
SPMN Marine on St. 65.88 318 P **P 08 34 41.4 -0.2**
SPMN IAmb IAmb 08 34 48.5
comp=Z,44nm,1.3s
I37A Lemond, Waseca 65.90 316 P **P 08 34 41.3 -0.5**
EYMN Ely 65.96 321 P **P 08 34 42.1 +0.1**
baz=111
435B Jarrell 66.06 302 P **P 08 34 42.2 -0.8**
435B IAmb IAmb 08 34 55.9
comp=Z,74nm,1.6s
435B IAMs_20 IAMs_20 09 01 04.8
comp=Z,2µm,19.0s
WHTX Lake Whitney, 66.15 303 P **P 08 34 43.6 0.0**
baz=100
WHTX Lake Whitney, 66.15 303 P **P 08 34 43.9 +0.3**
WHTX IAMs_20 IAMs_20 08 59 27.1
comp=Z,3µm,21.0s
ISP Isparta 66.16 51 IAMs_20 IAMs_20 09 03 35.4
comp=Z,2µm,22.0s
Z35A Perchaven, San 66.22 304 P **P 08 34 43.9 -0.1**
T35A Sooner Cattle 66.33 308 P **P 08 34 44.8 +0.1**
T35A IAmb IAmb 08 34 57.6
comp=Z,64nm,1.3s
T35A IAMs_20 IAMs_20 08 58 09.6
comp=Z,3µm,21.0s
OK030 Cody Creek RV 66.34 307 P **P 08 34 44.5 -0.2**
OK030 IAMs_20 IAMs_20 08 57 57.8
comp=Z,3µm,22.0s
OK031 S. Brethren Rd 66.39 307 P **P 08 34 44.0 -1.0**
OK031 IAMs_20 IAMs_20 08 58 23.1
comp=Z,2µm,22.0s
CFR Carcaliu 66.43 42 ⇑P **P 08 34 45.3 +0.3**
CFR Carcaliu 66.43 42 ⇑P **P 08 34 45.3 +0.3**
TPGR Topolog 66.52 43 ⇑P **P 08 34 45.5 -0.2**
F36A Milaca 66.56 318 P **P 08 34 45.9 0.0**
F36A IAmb IAmb 08 35 23.2
comp=Z,75nm,1.9s
N35A Tabor 66.61 313 P **P 08 34 45.6 -0.8**
N35A IAmb IAmb 08 34 53.9
comp=Z,43nm,1.0s
N35A IAMs_20 IAMs_20 08 59 51.5
comp=Z,3µm,20.0s
OK025 Westminster Rd 66.71 307 P **P 08 34 47.5 +0.3**
OK025 IAMs_20 IAMs_20 08 58 34.7
comp=Z,3µm,22.0s
SUW Suwalki 66.76 32 *e*P **P 08 34 47.4 +0.3**
OK029 Liberty Lake 66.85 307 P **P 08 34 48.1 +0.1**
OK029 IAMs_20 IAMs_20 08 59 37.3
comp=Z,3µm,22.0s
KSU1 Kansas State U 66.90 311 P **P 08 34 47.4 -0.9**
baz=103
BCOK Bluff Creek, N 66.94 307 P **P 08 34 48.5 -0.1**
833A Chaparral WMA, 67.27 299 P **P 08 34 50.6 -0.2**
baz=97,SNR=6.9
833A Chaparral WMA, 67.27 299 P **P 08 34 49.0 -1.8**
MDUB Mudurnu 67.30 48 P **P 08 34 49.9 -1.0**
CROK Carrier 67.41 308 P **P 08 34 48.9 -2.7**
L34A Svendsen Farm, 67.42 314 P **P 08 34 50.6 -1.0**
L34A IAMs_20 IAMs_20 08 59 08.0
comp=Z,2µm,21.0s
KAN14 Manchester OK 67.48 308 P **P 08 34 49.3 -2.7**
B35A Bob, Littlefor 67.51 321 P **P 08 34 50.6 -1.3**
SORM Soroca 67.52 39 ⇑P **P 08 34 51.5 -0.4**
SORM Soroca 67.52 39 ⇑P **P 08 34 51.5 -0.4**
KAN08 Anthony NE Sta 67.54 308 P **P 08 34 50.4 -2.0**
WMOK Wichita Mounta 67.72 306 P **P 08 34 52.8 -0.8**
baz=100
JCT Junction City 67.90 301 P **P 08 34 52.5 -2.3**
JCT pmax pmax
comp=Z,81nm,1.5s
JCT Junction City 67.90 301 P **P 08 34 54.7 -0.1**
baz=98,SNR=7.8
JCT Junction City 67.90 301 P **P 08 34 52.5 -2.3**
N33A J Bar K, Exete 67.91 312 IAMs_20 IAMs_20 08 59 08.0
comp=Z,2µm,21.0s
SUMG Summit 67.94 358 *i* P **P 08 34 55.0 +0.3**
SUMG pmax pmax
comp=Z,340nm,1.6s
SUMG Summit 67.94 358 *i* P **P 08 34 55.0 +0.3**
comp=Z,339nm,1.6s
SUMG Summit 67.94 358 *i* P **P 08 34 55.0 +0.3**
SUMG IAmb IAmb 08 35 01.6
comp=Z,339nm,1.6s
ECSD EROS Data Cent 68.05 315 P **P 08 34 55.4 -0.1**
baz=105,SNR=7.6
ECSD EROS Data Cent 68.05 315 P **P 08 34 52.7 -2.8**
ABTX Abilene, Hawle 68.08 303 P **P 08 34 55.7 -0.1**
baz=99
ABTX Abilene, Hawle 68.08 303 IAMs_20 IAMs_20 09 02 08.2
comp=Z,2µm,19.0s
U32A Winter Ranch, 68.19 307 IAMs_20 IAMs_20 08 59 07.8
comp=Z,2µm,22.0s
R32A Long Quarter, 68.36 309 IAMs_20 IAMs_20 08 59 14.0
comp=Z,2µm,22.0s
F33A 5 Mile Ranch, 68.40 318 IAMs_20 IAMs_20 08 59 48.5
comp=Z,2µm,20.0s
BGNE Belgrade 68.58 313 P **P 08 34 58.3 -0.6**
baz=103,SNR=5.9
BGNE Belgrade 68.58 313 P **P 08 34 56.9 -1.9**
BGNE IAMs_20 IAMs_20 09 00 02.6
comp=Z,3µm,21.0s
AGMN Agassiz Nation 68.84 320 P **P 08 35 00.1 -0.2**
baz=108
AGMN Agassiz Nation 68.84 320 P **P 08 34 58.2 -2.0**
AKASG Malin Array Be 68.90 37 P **P 08 35 00.3 -0.2**
comp=Z,6.4nm,0.8s,baz=253,slow=6.4,SNR=26
AKASG LR LR 09 04 52.0
comp=Z,608nm,19.4s,baz=250,slow=36
AKASG Malin Array Be 68.90 37 P **P 08 34 58.1 -2.5**
AKASG pmax pmax
comp=Z,20nm,1.4s
AKASG Malin Array Be 68.90 37 P **P 08 34 58.1 -2.5**
AKBB Malin Array Si 68.90 37 P **P 08 34 57.6 -3.0**
AKBB pmax pmax
comp=Z,121nm,2.0s
AKBB Malin Array Si 68.90 37 P **P 08 34 57.6 -3.0**
BR131 Keskin Array S 68.95 49 P **P 08 34 59.5 -1.9**
BR131 pmax pmax
comp=Z,99nm,1.5s
BR131 Keskin Array S 68.95 49 P **P 08 34 59.5 -1.9**
BRTR Keskin Array B 68.95 49 P **P 08 35 01.4 0.0**
comp=Z,8.1nm,0.8s,baz=243,slow=5.4,SNR=22
BRTR LR LR 09 05 18.3
comp=Z,272nm,21.5s,baz=182,slow=36
BRTR Keskin Array B 68.95 49 *ce*P **P 08 35 01.7 +0.3**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
NACGM Naroch 69.05 32 *e* **P 08 35 02.0 +0.6**
NACGM *e*LR LR 08 58 46.0
CBKS Cedar Bluff 69.22 310 P **P 08 35 02.9 0.0**
baz=101
CBKS Cedar Bluff 69.22 310 IAMs_20 IAMs_20 09 00 10.9
comp=Z,2µm,20.0s
K31A O'Neill 69.29 314 P **P 08 35 01.4 -1.9**
K31A IAmb IAmb 08 35 10.5
comp=Z,56nm,1.1s
ULM Lac du Bonnet 69.45 322 P **P 08 35 03.0 -1.0**
comp=Z,3.2nm,1.0s,baz=104,slow=6.2,SNR=3.4
ULM LR LR 09 01 58.7
comp=Z,813nm,19.3s,baz=112,slow=33
ULM Lac du Bonnet 69.45 322 *i* P **P 08 35 06.9 +2.9**
ZAIG Zacatecas 69.61 292 P **P 08 35 04.3 -1.6**
ZAIG IAmb IAmb 08 35 21.1
comp=Z,74nm,1.8s
SUSD Miller 69.86 316 P **P 08 35 06.8 +0.1**
baz=104
DBG Daneborg 69.98 4 *i* P **P 08 35 06.0 -0.8**
DBG IAmb IAmb 08 35 14.4
comp=Z,37nm,1.4s
AMTX Amarillo 70.09 305 P **P 08 35 08.7 +0.3**
baz=98
KMBO Kilima Mbogo 70.17 93 P **P 08 35 12.9 +3.4**
comp=Z,0.9nm,0.3s,baz=269,slow=5.2,SNR=10.0
ASF Jabal al Asfar 70.33 58 LR LR 09 08 26.9
comp=Z,626nm,18.0s,baz=188,slow=38
MSTX Muleshoe 70.86 304 P **P 08 35 14.2 +1.0**
baz=97
MSTX Muleshoe 70.86 304 IAMs_20 IAMs_20 09 02 14.8
comp=Z,3µm,20.0s

FURI Furi 70.97 82 IAMs_20 IAMs_20 09 05 01.3
comp=Z,2µm,20.0s
TXAR Lajitas Array 71.10 299 P **P** **08 35 15.6 +0.9**
comp=Z,2.7nm,1.1s,baz=99,slow=6.5,SNR=11
TXAR LR LR 09 03 59.7
comp=Z,620nm,21.9s,baz=0.0,slow=34
TXAR Lajitas Array 71.10 299 P **P** **08 35 14.8 +0.1**
TXAR Lajitas Array 71.10 299 P **P** **08 35 14.8 +0.1**
MDND Maddock 71.13 319 P **P** **08 35 15.0 +0.6**
baz=104
MDND Maddock 71.13 319 P **P** **08 35 11.8 -2.5**
FINES FINESS Array B 71.43 26 P **P** **08 35 16.1 +0.2**
comp=Z,4.3nm,0.8s,baz=207,slow=7.7,SNR=5.4
FINES LR LR 09 05 31.4
comp=Z,286nm,18.6s,baz=292,slow=35
KSCO Kaye Shedlock' 71.48 310 P **P** **08 35 17.3 +0.5**
baz=99
KSCO Kaye Shedlock' 71.48 310 IAMs_20 IAMs_20 09 01 32.6
comp=Z,2µm,21.0s
E28A Huff 71.55 318 P **P** **08 35 15.1 -1.9**
E28A IAMs_20 IAMs_20 09 01 20.7
comp=Z,2µm,21.0s
DAG Danmarks Havn 72.48 3 *i* P **P** **08 35 22.0 +0.1**
DAG pmax pmax
comp=Z,26nm,1.3s
DAG Danmarks Havn 72.48 3 *i* P **P** **08 35 22.0 +0.1**
comp=Z,26nm,1.3s
DAG Danmarks Havn 72.48 3 *i* P **P** **08 35 22.0 +0.1**
DAG IAmb IAmb 08 35 28.5
comp=Z,26nm,1.3s
T25A Trinidad 72.60 307 P **P** **08 35 24.7 +1.0**
baz=97
T25A Trinidad 72.60 307 P **P** **08 35 21.9 -1.8**
T25A IAmb IAmb 08 35 38.1
comp=Z,90nm,1.6s
T25A IAMs_20 IAMs_20 09 03 55.5
comp=Z,2µm,22.0s
ANN Anapa 72.72 45 *e*P **P** **08 35 23.4 -0.5**
ANN pmax pmax
comp=Z,86nm,1.3s
MNTX Cornudas Mount 72.80 302 P **P** **08 35 24.8 +0.1**
baz=95,SNR=7.4
MNTX Cornudas Mount 72.80 302 P **P** **08 35 23.6 -1.2**
MNTX IAMs_20 IAMs_20 09 08 40.2
comp=Z,1µm,20.0s
RSSD Black Hills 73.37 315 P **P** **08 35 28.6 +0.4**
baz=100
RSSD Black Hills 73.37 315 IAMs_20 IAMs_20 09 02 14.2
comp=Z,2µm,22.0s
Q24A Divide 73.41 309 P **P** **08 35 29.6 +0.9**
baz=98,SNR=9.5
Q24A Divide 73.41 309 P **P** **08 35 28.1 -0.5**
Q24A IAMs_20 IAMs_20 09 03 15.9
comp=Z,2µm,22.0s
SDCO Great Sand Dun 73.53 308 P **P** **08 35 29.9 +0.6**
baz=97,SNR=7.5
SDCO Great Sand Dun 73.53 308 P **P** **08 35 27.0 -2.4**
SDCO IAMs_20 IAMs_20 09 02 29.2
comp=Z,2µm,21.0s
EPT El Paso 73.76 302 IAMs_20 IAMs_20 09 05 53.7
comp=Z,2µm,19.0s
ISCO Idaho Springs 73.88 310 P **P** **08 35 29.7 -1.7**
ISCO pmax pmax
comp=Z,52nm,1.3s
ISCO Idaho Springs 73.88 310 P **P** **08 35 32.3 +1.0**
baz=98,SNR=14
ISCO Idaho Springs 73.88 310 P **P** **08 35 29.7 -1.7**
ISCO IAmb IAmb 08 35 40.4
comp=Z,52nm,1.2s
ISCO IAMs_20 IAMs_20 09 03 33.2
comp=Z,2µm,20.0s
PHWY Pilot Hill 73.96 312 P **P** **08 35 29.5 -2.3**
PHWY IAMs_20 IAMs_20 09 02 27.3
comp=Z,2µm,21.0s
ANMO Albuquerque 74.00 305 P **P** **08 35 30.2 -1.8**
ANMO Albuquerque 74.00 305 P **P** **08 35 32.8 +0.8**
baz=96
ANMO Albuquerque 74.00 305 P **P** **08 35 30.2 -1.8**
ANMO IAmb IAmb 08 35 46.5
comp=Z,60nm,1.6s
SOC Sochi 74.13 46 *e*P **P** **08 35 31.1 -1.2**
SOC *e* 08 38 22.0
SOC *e*S **S** **08 45 05.3 -0.3**
SOC pmax pmax
comp=Z,70nm,1.0s
DGMT Dagmar 74.26 319 P **P** **08 35 33.5 +0.4**
baz=101,SNR=8.8
DGMT Dagmar 74.26 319 P **P** **08 35 32.5 -0.5**
N23A Red Feather La 74.27 311 P **P** **08 35 33.8 +0.2**
baz=98,SNR=15
N23A Red Feather La 74.27 311 P **P** **08 35 32.0 -1.6**
N23A IAmb IAmb 08 35 43.0
comp=Z,61nm,1.1s
FFC Flin Flon 74.29 326 P **P** **08 35 32.0 -1.0**
FFC pmax pmax
comp=Z,86nm,1.5s
FFC Flin Flon 74.29 326 P **P** **08 35 32.0 -1.0**
FFC IAmb IAmb 08 35 41.2
comp=Z,86nm,1.4s
OBN Obninsk 74.45 34 LR LR 09 07 55.6
comp=Z,123nm,18.6s,baz=224,slow=36
OBN Obninsk 74.45 34‖ *e*P **P** **08 35 35.9 +2.0**
OBN *e* 08 35 39.2
OBN 08 35 49.0
OBN *e*S **S** **08 45 11.3 +2.6**
OBN *e* 08 45 52.6
OBN pmax pmax
comp=Z,12nm,1.0s
OBN MLR MLR
comp=Z,384nm,15.0s
TULEG Thule 74.51 352 IAMs_20 IAMs_20 09 02 44.4
comp=Z,1µm,18.0s
S22A 4UR Ranch, Cre 74.58 308 P **P** **08 35 35.9 +0.5**
baz=96,SNR=16
S22A 4UR Ranch, Cre 74.58 308 P **P** **08 35 33.1 -2.4**
S22A IAMs_20 IAMs_20 09 05 24.9
comp=Z,2µm,21.0s
SMCO Snowmass 74.85 309 P **P** **08 35 35.1 -2.0**
SMCO IAmb IAmb 08 35 52.4
comp=Z,74nm,1.4s
SMCO IAMs_20 IAMs_20 09 03 53.9
comp=Z,2µm,20.0s
121A Cookes Peak, D 74.89 302 P **P** **08 35 37.5 +0.2**
baz=94
121A Cookes Peak, D 74.89 302 P **P** **08 35 35.2 -2.1**
121A IAMs_20 IAMs_20 09 06 17.8
comp=Z,2µm,20.0s
K22A Casper 74.94 313 P **P** **08 35 37.1 -0.2**
baz=98
K22A Casper 74.94 313 IAMs_20 IAMs_20 09 03 43.9
comp=Z,1µm,21.0s
ARCES ARCESS Array B 74.94 18 P **P** **08 35 36.5 0.0**
comp=Z,4.3nm,0.8s,baz=354,slow=5.5,SNR=5.7
VSR Storozhevoye 75.10 38 *e*P **P** **08 35 37.0 -0.8**
VSR pmax pmax
comp=Z,50nm,1.7s
VORD Divnogorie 75.13 38 *e*P **P** **08 35 37.3 -0.6**
VORD pmax pmax
comp=Z,10.0nm,0.7s
MOS Moscow 75.18 33 *e*P **P** **08 35 38.8 +0.7**
MOS *e* 08 35 50.7
MOS pmax pmax
comp=Z,59nm,1.5s
MOS MLR MLR
comp=Z,600nm,17.0s
LPSR Galich'ya Gora 75.23 37 *e*P **P** **08 35 37.7 -0.8**
LPSR pmax pmax
comp=Z,40nm,1.8s
LAO LASA Array 75.31 317 P **P** **08 35 39.6 +0.5**
baz=99,SNR=8.3
LAO LASA Array 75.31 317 IAMs_20 IAMs_20 09 03 40.3
comp=Z,1µm,20.0s
MVCO Mesa Verde 75.85 307 P **P** **08 35 43.8 +1.1**
baz=95
MVCO Mesa Verde 75.85 307 P **P** **08 35 40.9 -1.9**
MVCO IAmb IAmb 08 35 52.8
comp=Z,121nm,1.9s
MVCO IAMs_20 IAMs_20 09 04 33.6
comp=Z,2µm,21.0s
O20A White River Ci 75.92 310 P **P** **08 35 43.4 +0.4**
baz=96,SNR=9.2
O20A White River Ci 75.92 310 P **P** **08 35 41.7 -1.3**
O20A IAmb IAmb 08 35 52.5
comp=Z,59nm,1.2s
O20A IAMs_20 IAMs_20 09 04 19.3
comp=Z,2µm,21.0s

PV15 Paradox Valley 75.94 308 P **P** **08 35 41.6 -1.6**
PV01 Paradox Valley 75.99 308 P **P** **08 35 41.9 -1.6**
319A Douglas 76.09 301 IAMs_20 IAMs_20 09 08 25.6
comp=Z,1µm,21.0s
PV02 Paradox Valley 76.12 308 IAMs_20 IAMs_20 09 12 02.8
comp=Z,2µm,22.0s
PV03 Paradox Valley 76.22 308 IAMs_20 IAMs_20 09 05 39.2
comp=Z,2µm,20.0s
PV18 Skein Mesa, Pa 76.26 308 IAMs_20 IAMs_20 09 05 58.5
comp=Z,2µm,20.0s
PV16 Nyswonger Mesa 76.28 308 IAMs_20 IAMs_20 09 05 34.8
comp=Z,2µm,21.0s
KIV Kislovodsk 76.31 46 *e*P **P** **08 35 46.6 +1.6**
KIV *e*S **S** **08 45 31.8 +1.7**
KIV pmax pmax
comp=Z,119nm,1.1s
KIV pmax pmax
comp=Z,234nm,3.5s
KIV Kislovodsk 76.31 46 P **P** **08 35 43.8 -1.2**
KIV IAmb IAmb 08 35 53.4
comp=Z,82nm,1.4s
KBZ Khabaz 76.44 46 P **P** **08 35 46.3 +0.8**
comp=Z,13nm,1.1s,baz=288,slow=6.5,SNR=7.8
KBZ Khabaz 76.44 46 *ce*P **P** **08 35 46.5 +1.0**
KBZ pmax pmax
comp=Z,10.0nm,1.1s
VRH Novokhopyorsk 76.68 39 *e*P **P** **08 35 46.8 0.0**
VRH pmax pmax
comp=Z,10.0nm,0.7s
W18A Petrified Fore 76.69 305 P **P** **08 35 48.6 +1.1**
baz=94
GOF Gofitskoye 76.69 45‖ *e*P **P** **08 35 49.3 +2.3**
GOF pmax pmax
comp=Z,47nm,0.6s
APA Apatity 76.76 21‖ *i*P **P** **08 35 45.3 -1.6**
APA pmax pmax
comp=Z,16nm,1.0s
VNA1 Neumayer--Stat 76.91 172 P **P** **08 35 49.7 +2.0**
PD31 Pinedale Array 77.17 313 P **P** **08 35 48.5 -1.6**
PDAR Pinedale Array 77.17 313 P **P** **08 35 50.1 0.0**
comp=Z,3.5nm,0.9s,baz=85,slow=7.2,SNR=17
PDAR LR LR 09 06 11.4
comp=Z,2µm,20.9s,baz=110,slow=33
PDAR Pinedale Array 77.17 313 P **P** **08 35 48.8 -1.3**
BW06 Boulder Array 77.17 313 P **P** **08 35 50.3 +0.2**
baz=96,SNR=13
BW06 Boulder Array 77.17 313 P **P** **08 35 48.5 -1.6**
BW06 IAmb IAmb 08 35 58.9
comp=Z,44nm,1.4s
BW06 IAMs_20 IAMs_20 09 06 00.0
comp=Z,2µm,21.0s
RLMT Red Lodge 77.20 315 P **P** **08 35 50.7 +0.5**
baz=96,SNR=10
RLMT Red Lodge 77.20 315 P **P** **08 35 48.9 -1.3**
NOR Nord 77.26 2 *i* P **P** **08 35 49.1 -0.4**
NOR pmax pmax
comp=Z,41nm,1.4s
NOR Nord 77.26 2 *i* P **P** **08 35 49.1 -0.4**
comp=Z,41nm,1.4s
NOR Nord 77.26 2 *i* P **P** **08 35 49.1 -0.4**
NOR IAmb IAmb 08 35 56.4
comp=Z,41nm,1.4s
VNA3 Neumayer Olymp 77.27 173 P **P** **08 35 49.8 +0.1**
VNA2 Neumayer--Watz 77.29 172 P **P** **08 35 51.1 +1.3**
baz=339,slow=1.5
KLMR Klimovskoe 77.36 29 *e*P **P** **08 35 49.7 -0.7**
KLMR pmax pmax
comp=Z,58nm,1.5s
KLMR Klimovskoe 77.36 29 *e*P **P** **08 35 49.8 -0.7**
KLMR AMP 08 36 04.9
comp=Z,58nm,1.5s
TUC Tucson 77.42 302 P **P** **08 35 50.7 -0.8**
TUC pmax pmax
comp=Z,22nm,1.2s
TUC MLR MLR
comp=Z,2µm,18.0s
TUC Tucson 77.42 302 P **P** **08 35 52.7 +1.2**
baz=92
TUC Tucson 77.42 302 P **P** **08 35 50.6 -0.8**
TUC Tucson 77.42 302 IAMs_20 IAMs_20 09 10 06.5
comp=Z,1µm,18.0s
HSIG 77.44 299 IAMs_20 IAMs_20 09 06 04.5
comp=Z,1µm,21.0s
YNE Yellowstone No 77.72 315 P **P** **08 35 51.8 -1.3**
P17A Butcher Ranch, 77.78 309 P **P** **08 35 52.0 -1.5**
EGMT Eagleton 77.87 318 IAMs_20 IAMs_20 09 06 15.9
comp=Z,1µm,19.0s
WUAZ Wupatki 78.05 305 P **P** **08 35 55.5 +0.4**
baz=93,SNR=8.8
WUAZ Wupatki 78.05 305 P **P** **08 35 53.0 -2.0**
H17A Grant Village 78.06 314 P **P** **08 35 55.6 +0.5**
baz=95
Q16A Castle Valley 78.08 309 P **P** **08 35 52.7 -2.5**
FLWY Flagg Ranch 78.12 314 P **P** **08 35 53.1 -2.2**
TMUT Trail Mountain 78.14 309 P **P** **08 35 53.9 -1.7**
TPAW Teton Pass 78.25 313 P **P** **08 35 54.5 -1.6**
TPAW IAmb IAmb 08 36 05.2
comp=Z,66nm,1.6s
IMW Indian Meadow 78.28 314 P **P** **08 35 55.4 -0.9**
IMW IAmb IAmb 08 36 05.3
comp=Z,84nm,1.6s
AHID Auburn Hatcher 78.30 313 P **P** **08 35 53.9 -2.4**
AHID IAmb IAmb 08 36 05.2
comp=Z,94nm,1.8s
AHID IAMs_20 IAMs_20 09 06 37.0
comp=Z,2µm,20.0s
YMR Madison River 78.36 315 P **P** **08 35 55.8 -0.8**
RES Resolute Bay 78.38 346 P **P** **08 35 54.6 -1.3**
RES pmax pmax
comp=Z,47nm,1.4s
RES Resolute Bay 78.38 346 P **P** **08 35 54.6 -1.3**
RES IAmb IAmb 08 36 03.3
comp=Z,47nm,1.4s
SNAA Sanae 78.64 171 P **P** **08 35 58.0 +0.6**
SNAA Sanae 78.64 171 P **P** **08 35 58.4 +1.0**
comp=Z,2.3nm,0.6s,baz=306,slow=5.6,SNR=19
SNAA Sanae 78.64 171 *ce*P **P** **08 35 58.6 +1.2**
SNAA pmax pmax
comp=Z,23nm,1.8s
MSU Marysvale 78.84 308 P **P** **08 35 57.4 -2.1**
MSU Marysvale 78.84 308 P **P** **08 35 57.4 -2.1**
MVU Marysvale 78.87 308 P **P** **08 35 58.0 -1.6**
BOZ Bozeman (W) 78.91 315 P **P** **08 35 56.8 -2.8**
BOZ pmax pmax
comp=Z,36nm,1.8s
BOZ Bozeman (W) 78.91 315 P **P** **08 35 60.0 +0.4**
baz=95
BOZ Bozeman (W) 78.91 315 P **P** **08 35 56.8 -2.8**
BOZ IAMs_20 IAMs_20 09 08 17.7
comp=Z,1µm,19.0s
TCRU Three Creeks R 79.06 308 P **P** **08 35 59.0 -1.7**
214A Organ Pipe Nat 79.12 302 P **P** **08 36 01.5 +0.6**
baz=91
214A Organ Pipe Nat 79.12 302 P **P** **08 35 57.8 -3.1**
214A IAMs_20 IAMs_20 09 08 34.8
comp=Z,1µm,20.0s
DUG Dugway, Tooele 79.42 310 P **P** **08 36 00.3 -2.2**
DUG pmax pmax
comp=Z,117nm,1.8s
DUG Dugway, Tooele 79.42 310 P **P** **08 36 02.9 +0.4**
baz=93,SNR=11
DUG Dugway, Tooele 79.42 310 P **P** **08 36 00.3 -2.2**
DUG IAmb IAmb 08 36 12.1
comp=Z,117nm,1.8s
DUG IAMs_20 IAMs_20 09 07 17.9
comp=Z,2µm,20.0s
LRM Limekiln Ridge 79.50 316 P **P** **08 36 01.2 -1.8**
SZCU Shurtz Canyon 79.52 307 P **P** **08 36 00.9 -2.3**
DLMT Dillon 79.57 315 P **P** **08 36 01.5 -1.7**
DLMT IAmb IAmb 08 36 12.8
comp=Z,101nm,1.7s
MCMT McKenzie Canyo 79.71 315 P **P** **08 36 01.4 -2.7**
MAK Makhachkala 79.72 47 *e*P **P** **08 35 59.8 -4.0**
MAK *e* 08 39 00.3
MAK *e*S **S** **08 45 59.0 -7.6**
MAK *e*SS **SS** **08 51 10.6 -4.6**
MAK *e*SSS SSS 08 54 35.9
MAK pmax pmax
comp=Z,247nm,1.4s
MAK MLR MLR
comp=Z,997nm,16.0s
113A Mohawk Valley, 79.95 302 IAMs_20 IAMs_20 09 10 12.5
comp=Z,1µm,19.0s
BCYI Bear Canyon 80.08 314 P **P** **08 36 03.2 -2.9**
PDMCI Parker Dam,Lak 80.28 304 P **P** **08 36 08.4 +1.3**

baz=91
MSO Missoula 80.59 317 P **P** **08 36 09.0 +0.4**
baz=93,SNR=5.2
MSO Missoula 80.59 317 IAMs_20 IAMs_20 09 06 50.2
comp=Z,2µm,20.0s
HLID Hailey 80.77 313 P **P** **08 36 10.4 +0.7**
baz=92,SNR=10
GLA Glamis 80.84 303 P **P** **08 36 09.0 -1.2**
baz=90
GLA Glamis 80.84 303 IAMs_20 IAMs_20 09 11 43.2
comp=Z,1µm,19.0s
IRM Iron Mountain 81.11 304 P **P** **08 36 12.8 +1.2**
baz=90
ELK Elko 81.29 310 P **P** **08 36 11.1 -1.6**
ELK pmax pmax
comp=Z,89nm,2.0s
ELK Elko 81.29 310 P **P** **08 36 11.1 -1.6**
ELK IAmb IAmb 08 36 22.1
comp=Z,89nm,2.0s
ELK IAMs_20 IAMs_20 09 07 48.3
comp=Z,1µm,22.0s
BC3 Big Chuckawall 81.37 303 P **P** **08 36 14.1 +1.1**
baz=90
R11A Troy Canyon, C 81.51 308 P **P** **08 36 14.2 +0.3**
baz=91,SNR=9.7
R11A Troy Canyon, C 81.51 308 P **P** **08 36 12.9 -0.9**
GMRC Granite Mounta 81.54 304 P **P** **08 36 14.2 +0.2**
baz=90
TUQ Turquoise Moun 81.76 305 P **P** **08 36 15.8 +0.6**
baz=90
MFID Camas Ranch 81.79 313 IAMs_20 IAMs_20 09 08 40.3
comp=Z,2µm,20.0s
BELC Belle Mtn. Jos 81.82 304 P **P** **08 36 16.3 +0.8**
baz=90
RMX La Rumorosa 81.89 302 IAMs_20 IAMs_20 09 12 31.0
comp=Z,1µm,19.0s
IKP In-Ko-Pah, Jac 81.92 302 P **P** **08 36 16.4 +0.4**
baz=90
KIRV Kirov 81.97 32 LR LR 09 12 16.9
comp=Z,577nm,18.1s,baz=265,slow=36
KIRV Kirov 81.97 32 *ce*P **P** **08 36 17.2 +1.7**
TPNV Topopah Spring 82.03 307 P **P** **08 36 15.2 -1.4**
TPNV pmax pmax
comp=Z,32nm,1.3s
TPNV Topopah Spring 82.03 307 P **P** **08 36 16.9 +0.4**
baz=90
TPNV Topopah Spring 82.03 307 P **P** **08 36 15.2 -1.4**
TPNV IAMs_20 IAMs_20 09 08 12.3
comp=Z,2µm,22.0s
HEC Hector,Ludlow 82.10 304 P **P** **08 36 17.4 +0.5**
baz=90,SNR=6.6
YKA Yellowknife Ar 82.13 332 P **P** **08 36 16.7 +0.4**
comp=Z,1.8nm,0.7s,baz=95,slow=6.6,SNR=5.5
YKA LR LR 09 09 41.6
comp=Z,514nm,20.0s,baz=0.0,slow=34
YKA Yellowknife Ar 82.13 332 *ce*P **P** **08 36 17.3 +1.0**
YKA pmax pmax
comp=Z,2.0nm,0.7s
MONP2 Monument Peak 82.18 302 P **P** **08 36 18.4 +0.9**
baz=90
XPFO Pion Flat 82.20 303 IAMs_20 IAMs_20 09 09 26.2
comp=Z,2µm,20.0s
PFO Pinyon Flats O 82.21 303 P **P** **08 36 18.5 +1.0**
baz=90
PFO Pinyon Flats O 82.21 303 IAMs_20 IAMs_20 09 09 26.2
comp=Z,2µm,20.0s
BAR Barrett 82.39 302 IAMs_20 IAMs_20 09 11 38.4
comp=Z,1µm,19.0s
GSC Goldstone, Bar 82.48 305 P **P** **08 36 17.1 -1.8**
GSC pmax pmax
comp=Z,23nm,1.3s
GSC Goldstone, Bar 82.48 305 P **P** **08 36 18.9 0.0**
baz=90
GSC Goldstone, Bar 82.48 305 P **P** **08 36 17.1 -1.8**
FURC Furnace Creek, 82.52 306 P **P** **08 36 19.3 +0.4**
baz=90
NEW Newport 82.80 318 P **P** **08 36 20.4 +0.2**
baz=91,SNR=5.1
NEW Newport 82.80 318 IAMs_20 IAMs_20 09 08 29.5
comp=Z,1µm,20.0s
MURC Murrieta 82.82 303 P **P** **08 36 19.7 -0.9**
baz=89
BMO Blue Mountains 82.88 314 IAMs_20 IAMs_20 09 08 32.9
comp=Z,1µm,20.0s
MPMC Manual Prospec 83.03 306 P **P** **08 36 21.7 -0.1**
baz=89,SNR=9.0
BFSC Mount Baldy Ra 83.20 304 P **P** **08 36 22.8 +0.1**
baz=89
EDW2 Edwards Air Fo 83.46 304 P **P** **08 36 25.3 +1.4**
baz=89
KVN Kaiserville 83.48 309 IAMs_20 IAMs_20 09 08 01.5
comp=Z,1µm,22.0s
CWC Cottonwood Cre 83.50 306 P **P** **08 36 24.9 +0.7**
baz=89
C09A Chrisman Ranch 83.57 317 IAMs_20 IAMs_20 09 09 02.9
comp=Z,2µm,21.0s
NVAR Mina Array Bea 83.65 308 P **P** **08 36 26.1 +1.1**
comp=Z,1.9nm,0.9s,baz=101,slow=5.8,SNR=14
NVAR LR LR 09 11 17.8
comp=Z,545nm,19.7s,baz=140,slow=34
J08A Circle Bar Ran 83.72 313 P **P** **08 36 22.8 -2.3**
J08A IAmb IAmb 08 36 41.0
comp=Z,59nm,1.8s
LHV Little Huntoon 83.81 308 P **P** **08 36 23.7 -1.8**
LHV IAMs_20 IAMs_20 09 08 22.3
comp=Z,2µm,21.0s
RYN Ryan 83.82 308 P **P** **08 36 22.6 -3.2**
ISA Isabella, Lake 83.84 305 P **P** **08 36 22.7 -3.1**
ISA pmax pmax
comp=Z,82nm,1.8s
ISA Isabella, Lake 83.84 305 P **P** **08 36 26.6 +0.7**
baz=89,SNR=8.5
ISA Isabella, Lake 83.84 305 P **P** **08 36 22.7 -3.1**
ISA IAmb IAmb 08 36 40.8
comp=Z,82nm,1.8s
D08A Wollman Farm, 84.01 317 P **P** **08 36 23.3 -3.1**
D08A IAmb IAmb 08 36 34.4
comp=Z,50nm,1.6s
D08A IAMs_20 IAMs_20 09 11 08.6
comp=Z,1µm,21.0s
G08A Pilot Rock 84.05 315 IAMs_20 IAMs_20 09 13 45.9
comp=Z,2µm,19.0s
B08A Colville Reser 84.28 318 IAMs_20 IAMs_20 09 09 03.5
comp=Z,2µm,21.0s
MDPB Devils Postpil 84.28 307 P **P** **08 36 25.0 -3.3**
VES Vestal, Richgr 84.33 305 P **P** **08 36 29.7 +1.5**
baz=88
PAHR Pah Rah Range 84.47 309 IAMs_20 IAMs_20 09 13 47.5
comp=Z,1µm,19.0s
WAKR Walker 84.54 308 P **P** **08 36 27.2 -2.3**
WAKR IAmb IAmb 08 36 40.0
comp=Z,91nm,2.0s
WAKR IAMs_20 IAMs_20 09 13 28.5
comp=Z,1µm,19.0s
PNTR Pine Nut 84.65 309 IAMs_20 IAMs_20 09 11 33.4
comp=Z,1µm,20.0s
VCNR Virginia City 84.68 309 IAMs_20 IAMs_20 09 11 33.2
comp=Z,2µm,20.0s
PKM Mcpherson Peak 84.96 304 P **P** **08 36 32.0 +0.3**
baz=88
RUBR Rubicon Trail 85.08 309 IAMs_20 IAMs_20 09 11 57.8
comp=Z,2µm,20.0s
SMMC Simmler 85.09 305 P **P** **08 36 32.1 0.0**
baz=88
BEKR Beckworth 85.21 309 IAMs_20 IAMs_20 09 10 32.2
comp=Z,1µm,22.0s
PAGB Antelope Grade 85.28 305 IAMs_20 IAMs_20 09 10 55.5
comp=Z,2µm,20.0s
CMB Columbia Colle 85.30 308 IAMs_20 IAMs_20 09 13 45.7
comp=Z,1µm,20.0s
K05A Summer Lake 85.51 312 IAMs_20 IAMs_20 09 11 30.7
comp=Z,1µm,20.0s
G05D Wamic, OR 85.72 315 P **P** **08 36 34.7 -0.3**
baz=88
AFDM Forest Hills D 85.72 309 P **P** **08 36 32.0 -3.3**
AFDM IAMs_20 IAMs_20 09 14 23.7
comp=Z,1µm,19.0s
J05D Fort Rock, OR 85.74 313 P **P** **08 36 35.5 +0.2**
baz=88
I05D Terrebonne, OR 85.77 314 P **P** **08 36 36.4 +1.0**
baz=88
F05D White Salmon 85.79 316 P **P** **08 36 35.9 +0.5**
baz=88,SNR=12
ORV Oroville 86.10 309 P **P** **08 36 34.1 -3.0**
ORV pmax pmax
comp=Z,92nm,2.0s
ORV Oroville 86.10 309 P **P** **08 36 34.1 -3.0**

ORV					IAmb	IAmb	08 36 46.1		
	comp=Z,92nm,1.9s								
ORV					IAMs_20	IAMs_20	09 12 18.8		
	comp=Z,1µm,20.0s								
B05A	**Bryant**	**86.13**	**318**	P	**P**		**08 36 36.8**	**-0.2**	
	baz=87								
K04D	**Chiloquin, OR**	**86.15**	**312**	P	**P**		**08 36 37.8**	**+0.4**	
	baz=87								
M04C	**Macdoel**	**86.25**	**311**	P	**P**		**08 36 38.9**	**+1.0**	
	baz=87								
O03E	**Paynes Creek**	**86.30**	**310**	P	**P**		**08 36 38.3**	**+0.2**	
	baz=87								
H04A	**Detroit Lake**	**86.36**	**314**	IAMs_20	IAMs_20		09 10 56.0		
	comp=Z,1µm,21.0s								
J04D	**Umpqua Nationa**	**86.38**	**313**	P	**P**		**08 36 38.9**	**+0.3**	
	baz=87,SNR=7.0								
F04A	**Amboy**	**86.46**	**316**	IAMs_20	IAMs_20		09 11 02.5		
	comp=Z,1µm,19.0s								
E04D	**Cinebar**	**86.53**	**316**	P	**P**		**08 36 39.1**	**+0.1**	
	baz=87								
I04A	**Tendick Farm,**	**86.57**	**313**	P	**P**		**08 36 39.1**	**-0.2**	
	baz=87								
L04D	**Klamath Falls**	**86.58**	**312**	P	**P**		**08 36 39.6**	**+0.1**	
	baz=87								
H04D	**Lebanon**	**86.76**	**314**	P	**P**		**08 36 41.7**	**+1.5**	
	baz=87								
D03D	**Eldon**	**86.83**	**317**	P	**P**		**08 36 40.2**	**-0.3**	
	baz=86								
WDC	**Whiskeytown Da**	**86.85**	**310**	IAMs_20	IAMs_20		09 15 49.4		
	comp=Z,1µm,20.0s								
ARU	**Arti**	**86.89**	**34**	LR	LR		09 13 00.8		
	comp=Z,1µm,21.7s,baz=246,slow=34								
ARU	**Arti**	**86.89**	**34***c i*	P	**P**		**08 36 42.7**	**+2.2**	
ARU							08 39 59.8		
ARU				S	**SKSac**		**08 47 08.9**	**+1.3**	
ARU				SS	**SS**		**08 52 58.4**	**-2.3**	
ARU				pmax	pmax				
	comp=Z,40nm,1.9s								
ARU	**Arti**	**86.89**	**34**	P	**P**		**08 36 36.8**	**-3.7**	
ARU				IAmb	IAmb		08 36 49.4		
	comp=Z,45nm,1.5s								
ARU				IAMs_20	IAMs_20		09 16 04.2		
	comp=Z,1µm,19.0s								
N02D	**Trinity Center**	**86.95**	**311**	P	**P**		**08 36 41.1**	**-0.1**	
	baz=86								
M02C	**Callahan**	**87.03**	**311**	P	**P**		**08 36 42.2**	**+0.5**	
	baz=86								
HUMO	**Hull Mountain**	**87.03**	**312**	IAMs_20	IAMs_20		09 12 01.1		
	comp=Z,1µm,20.0s								
O02D	**Mt. Diablo Mer**	**87.06**	**310**	P	**P**		**08 36 41.3**	**-0.5**	
	baz=86								
GDXM	**Geysers**	**87.15**	**309**	IAMs_20	IAMs_20		09 14 46.6		
	comp=Z,1µm,20.0s								
E03A	**Lebam**	**87.22**	**316**	IAMs_20	IAMs_20		09 11 30.4		
	comp=Z,2µm,21.0s								
MCCM	**Marconi Confer**	**87.26**	**308**	IAMs_20	IAMs_20		09 11 51.6		
	comp=Z,1µm,19.0s								
HOPS	**Hopland Field**	**87.35**	**309**	IAMs_20	IAMs_20		09 16 52.0		
	comp=Z,2µm,20.0s								
NLWA	**Neilton Lookou**	**87.37**	**317**	IAMs_20	IAMs_20		09 11 13.4		
	comp=Z,2µm,19.0s								
L02E	**Cave Junction**	**87.54**	**312**	P	**P**		**08 36 44.3**	**+0.2**	
	baz=86								
K02D	**Willamette Mer**	**87.55**	**312**	P	**P**		**08 36 43.9**	**-0.3**	
	baz=86								
KHMM	**Horse Mountain**	**87.73**	**311**	IAMs_20	IAMs_20		09 15 36.7		
	comp=Z,1µm,19.0s								
KRMB	**Red Mountain**	**87.82**	**311**	IAMs_20	IAMs_20		09 13 12.9		
	comp=Z,1µm,22.0s								
GYA0B	**ALIBECK ARRAY**	**87.86**	**52**	IAMs_20	IAMs_20		09 20 07.0		
	comp=Z,1µm,20.0s								
SVE	**Sverdlovsk**	**88.00**	**33**	*e*P	**P**		**08 36 47.1**	**+1.2**	
SVE				pmax	pmax				
	comp=Z,31nm,1.5s								
SYO	**Syowa Base**	**88.06**	**160**↑	*e*PcP	**P**		**08 36 44.8**	**-1.0**	
SYO	**Syowa Base**	**88.06**	**160**↑	*e*pP	**P**		**08 36 46.1**	**+0.3**	
INK	**Inuvik**	**89.68**	**339**	IAMs_20	IAMs_20		09 12 36.2		
	comp=Z,1µm,19.0s								
BMAR	**Burnt Mountain**	**93.94**	**339**	P	**P**		**08 37 10.1**	**-3.3**	
BRVK	**Borovoye**	**94.10**	**36***ce*	P	**P**		**08 37 16.3**	**+2.0**	
BRVK				pmax	pmax				
	comp=Z,2.0nm,1.2s								
K27K	**Chicken**	**94.18**	**335**	IAMs_20	IAMs_20		09 14 29.4		
	comp=Z,1µm,22.0s								
BCPM	**Bancas Point**	**94.36**	**331**	IAMs_20	IAMs_20		09 16 24.7		
	comp=Z,1µm,19.0s								
BCAR	**Beaver Creek A**	**94.38**	**334**	P	**P**		**08 37 12.6**	**-2.9**	
FYU	**Fort Yukon**	**94.51**	**338**	IAMs_20	IAMs_20		09 18 31.8		
	comp=Z,1µm,20.0s								
QSPA	**South Pole Qui**	**94.69**	**180**	P	**P**		**08 37 17.8**	**+1.0**	
	comp=Z,5.4nm,1.1s,baz=206,slow=1.9,SNR=15								
QSPA	**South Pole Qui**	**94.69**	**180**	P	**P**		**08 37 14.9**	**-2.0**	
SCRK	**Sand Creek**	**94.99**	**336**	P	**P**		**08 37 18.7**	**+0.3**	
	baz=69								
TOLK	**Toolik Lake Re**	**95.15**	**341**	P	**P**		**08 37 20.3**	**+1.4**	
	baz=63								
TOLK	**Toolik Lake Re**	**95.15**	**341**	P	**P**		**08 37 16.3**	**-2.7**	
TOLK				IAmb	IAmb		08 37 26.8		
	comp=Z,28nm,1.4s								
RIDG	**Independent Ri**	**95.43**	**336**	IAMs_20	IAMs_20		09 14 31.4		
	comp=Z,1µm,21.0s								
MCARA	**McCarthy VSAT**	**95.49**	**333**	IAMs_20	IAMs_20		09 16 16.3		
	comp=Z,1µm,19.0s								
TGL	**Tana Glacier**	**95.61**	**332**	IAMs_20	IAMs_20		09 17 16.7		
	comp=Z,905nm,20.0s								
VRDI	**Verde Repeater**	**95.74**	**333**	IAMs_20	IAMs_20		09 16 18.5		
	comp=Z,1µm,22.0s								
CRQM	**Cirque**	**95.76**	**332**	IAMs_20	IAMs_20		09 20 00.9		
	comp=Z,953nm,22.0s								
GLB	**Gilahina Butte**	**95.82**	**333**	IAMs_20	IAMs_20		09 19 06.1		
	comp=Z,1µm,20.0s								
ILAR	**Eielson Array**	**95.85**	**337**	P	**P**		**08 37 22.6**	**+0.5**	
	comp=Z,1.0nm,0.9s,baz=53,slow=4.3,SNR=9.0								
ILAR	**Eielson Array**	**95.85**	**337**	P	**P**		**08 37 19.6**	**-2.5**	
ILAR	**Eielson Array**	**95.85**	**337**	P	**P**		**08 37 19.6**	**-2.5**	
A21K	**Barrow**	**95.89**	**344**	IAMs_20	IAMs_20		09 23 20.8		
	comp=Z,984nm,18.0s								
TAS	**Tashkent**	**95.95**	**48**	IAMs_20	IAMs_20		09 12 32.9		
	comp=Z,1µm,18.0s								
HDA	**Harding Lake**	**96.02**	**337**	P	**P**		**08 37 23.1**	**+0.2**	
	baz=66								
HDA	**Harding Lake**	**96.02**	**337**	IAMs_20	IAMs_20		09 19 02.9		
	comp=Z,948nm,19.0s								
N25K	**Chitina, Valde**	**96.12**	**333**	IAMs_20	IAMs_20		09 17 56.8		
	comp=Z,1µm,21.0s								
COLA	**College**	**96.18**	**337**	IAMs_20	IAMs_20		09 16 58.2		
	comp=Z,1µm,20.0s								
TCOL	**CIGO, UAF Yank**	**96.19**	**337**	IAMs_20	IAMs_20		09 16 59.2		
	comp=Z,1µm,20.0s								
CCB	**Clear Creek Bu**	**96.26**	**337**	IAMs_20	IAMs_20		09 18 14.2		
	comp=Z,1µm,20.0s								
MDM	**Murphy Dome**	**96.29**	**337**	IAMs_20	IAMs_20		09 18 07.0		
	comp=Z,1µm,20.0s								
WRH	**Wood River Hil**	**96.44**	**337**	IAMs_20	IAMs_20		09 18 29.1		
	comp=Z,1µm,19.0s								
I23K	**Minto, Yukon-K**	**96.64**	**338**	IAMs_20	IAMs_20		09 16 30.2		
	comp=Z,2µm,21.0s								
DHY	**Denali Highway**	**96.74**	**335**	IAMs_20	IAMs_20		09 18 12.0		
	comp=Z,1µm,20.0s								
BWN	**Browne**	**97.11**	**337**	IAMs_20	IAMs_20		09 20 48.1		
	comp=Z,1µm,20.0s								
SCM	**Sheep Creek Mo**	**97.23**	**334**	IAMs_20	IAMs_20		09 18 18.1		
	comp=Z,1µm,20.0s								
HIN	**Hinchinbrook I**	**97.43**	**333**	IAMs_20	IAMs_20		09 21 58.8		
	comp=Z,1µm,20.0s								
GLI	**Glacier Island**	**97.51**	**333**	IAMs_20	IAMs_20		09 17 37.7		
	comp=Z,1µm,20.0s								
SML	**Sawmill**	**97.67**	**334**	IAMs_20	IAMs_20		09 16 16.8		
	comp=Z,1µm,20.0s								
BPAW	**Bear Paw Mtn.**	**97.74**	**337**	IAMs_20	IAMs_20		09 18 29.4		
	comp=Z,1µm,20.0s								
TRF	**Thorofare Moun**	**97.77**	**336**	IAMs_20	IAMs_20		09 20 27.1		
	comp=Z,866nm,21.0s								
GHO	**Glory Hole Cre**	**97.94**	**334**	IAMs_20	IAMs_20		09 18 14.0		
	comp=Z,1µm,20.0s								
KTH	**Kantishna Hill**	**97.97**	**337**	IAMs_20	IAMs_20		09 18 34.5		
	comp=Z,869nm,21.0s								
O22K	**Cooper Landing**	**98.85**	**333**	IAMs_20	IAMs_20		09 19 20.1		
	comp=Z,1µm,21.0s								
SUA	**Susitna One**	**98.86**	**335**	IAMs_20	IAMs_20		09 17 43.2		
	comp=Z,1µm,21.0s								
SKT	**Skwentna**	**98.95**	**335**	IAMs_20	IAMs_20		09 31 11.6		
	comp=Z,993nm,20.0s								
RDOG	**Red Dog Mine**	**99.61**	**343**	IAMs_20	IAMs_20		09 29 27.2		
	comp=Z,856nm,20.0s								
BRLK	**Bradley Lake**	**99.69**	**333**	IAMs_20	IAMs_20		09 19 14.8		
	comp=Z,1µm,20.0s								
KURK	**Kurchatov**	**99.72**	**37**	IAMs_20	IAMs_20		09 14 18.6		
	comp=Z,1µm,21.0s								
CNPM	**China Poot**	**99.96**	**333**	IAMs_20	IAMs_20		09 19 41.2		
	comp=Z,1µm,20.0s								
KSH	**Kashi**	**101.33**	**48**	*e*P	**Pdif**		**08 37 49.2**	**+1.8**	
KSH				pmax	pmax				
	comp=Z,450nm,5.5s								
ANM	**Nome**	**102.64**	**341**	IAMs_20	IAMs_20		09 30 04.4		
	comp=Z,1µm,20.0s								
BILL	**Bilibino**	**106.25**	**353**	IAMs_20	IAMs_20		09 26 18.6		
	comp=Z,940nm,20.0s								
TAOE	**Nuku Hiva Isla**	**107.87**	**262**	*e*SS	SS		08 57 52.4	-6.7	
	comp=Z,259nm,25.6s								
TAOE	**Nuku Hiva Isla**	**107.87**	**262**	*e*LR	LR		09 13 55.4		
	comp=Z,1µm,28.1s								
TBI	**Tubuai**	**116.33**	**246**	*e*SS	SS		08 59 46.2	-4.7	
	comp=Z,344nm,32.8s								
TBI	**Tubuai**	**116.33**	**246**	*e*LR	LR		09 17 57.0		
	comp=Z,2µm,31.2s								
PPT2	**Papeete2**	**116.95**	**253**	*e*SS	SS		08 59 56.5	-3.1	
	comp=Z,873nm,27.8s								
PPT2	**Papeete2**	**116.95**	**253**	*e*LR	LR		09 18 04.4		
	comp=Z,3µm,29.5s								
LZH	**Lanzhou**	**122.64**	**41**	PKP	PKPpre		08 42 45.1		
LZH				pPKP	sPKPdf		08 42 55.9	+0.6	
LZH				sPKP			08 43 00.5		
LZH				LR	LR				
	comp=N,290nm,14.1s								
LZH				LR	LR				
	comp=E,290nm,15.7s								
LZH				LR	LR				
	comp=Z,320nm,15.9s								
HHC	**Hu-ho-hao-te**	**124.17**	**32**	*e*PKP	**PKiKP**		**08 42 55.4**	**0.0**	
HHC				LR	LR				
	comp=Z,4µm,18.9s								
HHC				LR	LR				
	comp=Z,2µm,19.8s								
HHC				LR	LR				
	comp=Z,840nm,11.4s								
CD2	**Chengdu**	**125.48**	**47**	PKP	**PKPdf**		**08 42 56.0**	**-1.8**	
CMAR	**Chiang Mai Arr**	**127.16**	**63**	PKP	**PKiKP**		**08 43 01.6**	**-0.1**	
	comp=Z,1.3nm,0.4s,baz=278,slow=3.1,SNR=11								
CMAR	**Chiang Mai Arr**	**127.16**	**63**	PKIKP	**PKiKP**		**08 43 02.3**	**+0.6**	
XAN	**Xi'an**	**127.19**	**40**	PKP	**PKPdf**		**08 43 00.5**	**-0.5**	
KMI	**Kunming**	**127.62**	**53**	*e*PKP	**PKPdf**		**08 42 59.0**	**-3.2**	
KMI				AMB	AMB				
	comp=Z,140nm,5.0s								
KMI				LR	LR				
	comp=Z,4µm,15.7s								
KMI				LR	LR				
	comp=Z,4µm,15.0s								
KMI				LR	LR				
	comp=Z,6µm,16.8s								
NJ2	**Nanjing**	**134.59**	**35**	*e*PKP	**PKPdf**		**08 43 13.1**	**-1.8**	
STKA	**Stephens Creek**	**152.40**	**170**	PKPbc	**PKiKP**		**08 43 53.1**	**+0.2**	
	comp=Z,5.6nm,1.0s,baz=4.2,slow=3.4,SNR=6.3								
KAPI	**Kappang**	**152.60**	**92**	PKPbc	**PKPbc**		**08 43 53.3**	**-0.3**	
	comp=Z,13nm,0.6s,baz=46,slow=6.4,SNR=6.1								
FITZ	**Fitzroy Crossi**	**155.00**	**124**	PKP	**PKPdf**		**08 43 50.3**	**+0.5**	
	comp=Z,3.3nm,1.0s,baz=86,slow=4.7,SNR=3.5								
FITZ				PKPbc	PKPbc		08 44 00.4	+1.8	
	comp=Z,4.6nm,1.0s,baz=153,slow=2.6,SNR=5.3								
ASAR	**Alice Springs**	**157.13**	**147**	PKP	**PKPdf**		**08 43 52.5**	**0.0**	
	comp=Z,1.3nm,0.9s,baz=158,slow=0.9,SNR=11								
ASAR				PKPab	**PKPab**		**08 44 22.9**	**-0.1**	
	comp=Z,2.5nm,0.7s,baz=207,slow=2.6,SNR=4.7								
WRA	**Warramunga Arr**	**160.28**	**141**	PKP	**PKPdf**		**08 43 56.0**	**-0.4**	
	comp=Z,1.3nm,1.0s,baz=234,slow=1.2,SNR=6.5								
WRA				PKPab	**PKPab**		**08 44 36.3**	**-0.4**	
	comp=Z,3.7nm,1.2s,baz=216,slow=3.3,SNR=8.5								
CTA	**Charters Tower**	**164.62**	**176**	PKP	**PKPdf**		**08 44 01.1**	**+0.4**	
	comp=Z,5.2nm,1.2s,baz=162,slow=3.2,SNR=3.6								

NEIC ***03*** *08:27:05.5±2.0,4.°84N±0.°10×32.°7W±0.°1,h10km±1km, mb5.1/97,Error ellipse: s-maj=18.5km s-min=14.6km az=307.0*

IDC ***03*** *08:27:05.9±0.5,4.°82N×32.°67W,h0km,mb4.3/19, mb1 4.5/21,mb1mx4.3/48,mbtmp4.3/21,ML3.8/2,Error ellipse: s-maj=17.3km s-min=14.4km az=154.0*

ISC 03 08:27:06.1±0.4,**4.°69N**±0.°06×**32.°75W**±0.°07,**h10km**,**n197,** σ1**968**/191,**mb5.1**/57,**2C**,**Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
RCBR	**Riachuelo**	**10.91**	**197**	Pn	**Pn**	**08**	**29**	**43.6**	**+1.1**
	0.9nm,0.3s,baz=9.1,slow=16,SNR=4.7								
RCBR				Sn	**Sn**	**08**	**31**	**37.1**	**-7.6**
	0.4nm,0.3s,baz=0.0,slow=11,SNR=2.1								
SACV	**Santiago Islan**	**13.61**	**41**	Pn	**Pn**	**08**	**30**	**16.7**	**-2.7**
MDP	**Montagnes des**	**19.82**	**272**	P	**Pn**	**08**	**31**	**38.8**	**+0.1**
	0.2nm,0.3s,baz=110,slow=9.0,SNR=4.5								
H10N3	**ASCENSION HYDR**	**22.05**	**124**	T	T	08	54	47.9	
	baz=304,slow=75,SNR=30								
H10N2	**ASCENSION HYDR**	**22.06**	**124**	T	T	08	54	48.2	
	baz=304,slow=75,SNR=26								
H10N1	**ASCENSION HYDR**	**22.07**	**124**	T	T	08	54	47.9	
	baz=304,slow=75,SNR=25								
H10S3	**ASCENSION HYDR**	**22.56**	**127**	T	T	08	55	22.6	
	baz=303,slow=74,SNR=28								
H10S2	**ASCENSION HYDR**	**22.57**	**127**	T	T	08	55	23.7	
	baz=277,slow=74,SNR=22								
BDFB	**Brasilia**	**25.23**	**217**	P	**P**	**08**	**32**	**32.1**	**-0.4**
DBIC	**Dimbokro**	**27.82**	**85**	P	**P**	**08**	**32**	**57.7**	**+1.8**
	2.7nm,0.7s,baz=309,slow=13,SNR=2.1								
DBIC	**Dimbokro**	**27.82**	**85**	P	**P**	**08**	**32**	**53.9**	**-2.0**
H05S1	**Guadeloupe/Mar**	**29.30**	**291**	T	T	09	03	49.3	
	SNR=17								
H05N1	**Guadeloupe/Mar**	**30.09**	**295**	T	T	09	04	43.9	
SAML	**Samuel**	**33.23**	**246**	P	**P**	**08**	**33**	**42.9**	**-0.8**
SAML				IAmb	IAmb	08	33	48.8	
	comp=Z,33nm,1.4s								
SIV	**San Ignacio**	**34.75**	**233**	P	**P**	**08**	**34**	**00.3**	**+3.4**
	comp=Z,4.7nm,1.0s,baz=102,slow=7.1,SNR=5.5								
HUMP	**Col San Antoni**	**35.01**	**295**	P	**P**	**08**	**33**	**57.3**	**-1.8**
HUMP				IAmb	IAmb	08	34	02.5	
	comp=Z,28nm,1.1s								
TORD	**Torodi Ar. Bea**	**35.01**	**74**	P	**P**	**08**	**33**	**58.5**	**-0.7**
	comp=Z,5.3nm,1.0s,baz=266,slow=8.4,SNR=5.0								
TORD	**Torodi Ar. Bea**	**35.01**	**74**	P	**P**	**08**	**33**	**56.9**	**-2.3**
CBYP	**Canovanas**	**35.05**	**295**	P	**P**	**08**	**33**	**58.3**	**-1.2**
CBYP				IAmb	IAmb	08	34	02.8	
	comp=Z,27nm,1.1s								
PDPR	**Patillas Dam,**	**35.12**	**295**	P	**P**	**08**	**34**	**00.6**	**+0.5**
LPAZ	**La Paz**	**40.73**	**238**	P	**P**	**08**	**34**	**51.7**	**+3.6**
	comp=Z,1.4nm,0.6s,baz=66,slow=4.1,SNR=5.5								
LPAZ	**La Paz**	**40.73**	**238**	P	**P**	**08**	**34**	**47.5**	**-0.7**
ESDC	**Sonseca Array**	**43.46**	**33**	P	**P**	**08**	**35**	**10.2**	**+0.6**
	comp=Z,3.2nm,1.2s,baz=238,slow=7.4,SNR=4.3								
LVC	**Limon Verde**	**44.56**	**231**	P	**P**	**08**	**35**	**18.7**	**-0.2**
TSUM	**Tsumeb**	**54.92**	**117**	P	**P**	**08**	**36**	**39.2**	**+1.5**
	comp=Z,1.6nm,0.6s,baz=267,slow=10,SNR=3.0								
TSUM	**Tsumeb**	**54.92**	**117**	P	**P**	**08**	**36**	**38.6**	**+0.9**
TSUM				IAmb	IAmb	08	36	45.5	
	comp=Z,21nm,1.4s								
152A	**Waverly Hall**	**55.84**	**307**	P	**P**	**08**	**36**	**42.3**	**-1.7**
LC01	**Cuenco**	**56.46**	**216**	P	**P**	**08**	**36**	**46.4**	**-1.8**
ACSO	**Alum Creek Sta**	**57.29**	**316**	P	**P**	**08**	**36**	**56.5**	**+2.3**
	baz=114								
LSQQ	**Lebel-sur-Quev**	**57.93**	**327**	P	**P**	**08**	**36**	**60.0**	**+1.5**
	baz=125								
GERES	**GERESS Array B**	**59.03**	**34**	P	**P**	**08**	**37**	**06.8**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=235,slow=4.7,SNR=6.9								
GERES	**GERESS Array B**	**59.03**	**34**	P	**P**	**08**	**37**	**03.8**	**-2.5**
LL01	**San Ignacio de**	**59.07**	**213**	P	**P**	**08**	**37**	**07.9**	**+1.4**
T47A	**Sharon Grove**	**59.09**	**311**	P	**P**	**08**	**37**	**05.4**	**-1.4**
WVT	**Waverly**	**59.37**	**310**	P	**P**	**08**	**37**	**09.4**	**+0.7**
	baz=108								
CLL	**Collm**	**60.02**	**31**	*e*P	**P**	**08**	**37**	**12.0**	**-1.0**
T42A	**Van Buren**	**62.14**	**310**	P	**P**	**08**	**37**	**27.9**	**+0.2**
T42A				IAmb	IAmb	08	37	54.6	
	comp=Z,26nm,1.6s								
CCM	**Cathedral Cave**	**62.55**	**311**	P	**P**	**08**	**37**	**31.3**	**+0.9**
	baz=107								
CCM	**Cathedral Cave**	**62.55**	**311**	P	**P**	**08**	**37**	**31.1**	**+0.7**
CCM				IAmb	IAmb	08	37	31.9	
	comp=Z,21nm,1.2s								
W41B	**Gary Mavity, V**	**62.55**	**307**	P	**P**	**08**	**37**	**31.5**	**+1.1**
	baz=104								
WLAR	**White Oak Lake**	**62.88**	**305**	P	**P**	**08**	**37**	**31.2**	**-1.5**
N41A	**Harden Midland**	**63.06**	**314**	P	**P**	**08**	**37**	**33.8**	**+0.1**
MGMO	**Mountain Grove**	**63.08**	**309**	P	**P**	**08**	**37**	**33.6**	**-0.4**
MGMO				IAmb	IAmb	08	37	36.2	
	comp=Z,17nm,1.1s								
U40A	**Yellville**	**63.32**	**308**	P	**P**	**08**	**37**	**36.2**	**+0.6**
	baz=105								
R40A	**Maddies Statio**	**63.39**	**311**	P	**P**	**08**	**37**	**36.1**	**+0.1**
R40A				IAmb	IAmb	08	37	38.0	
	comp=Z,27nm,1.4s								
LSZ	**Lusaka**	**63.51**	**110**	P	**P**	**08**	**37**	**38.9**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=275,slow=4.1,SNR=3.7								
LSZ	**Lusaka**	**63.51**	**110**	P	**P**	**08**	**37**	**38.8**	**+1.5**
LSZ				IAmb	IAmb	08	37	44.3	
	comp=Z,32nm,1.6s								
P40A	**Paris**	**63.58**	**312**	P	**P**	**08**	**37**	**37.7**	**+0.5**
P40A				IAmb	IAmb	08	37	39.0	
	comp=Z,18nm,1.2s								
NATX	**Nacogdoches**	**63.75**	**303**	P	**P**	**08**	**37**	**40.1**	**+1.7**
	baz=101								
W39A	**Magazine**	**63.77**	**307**	P	**P**	**08**	**37**	**40.2**	**+1.6**
	baz=103								
S39A	**Bolivar**	**64.03**	**310**	P	**P**	**08**	**37**	**40.5**	**+0.2**
S39A				IAmb	IAmb	08	37	41.7	
	comp=Z,14nm,1.2s								
BOSA	**Boshof**	**64.81**	**125**	P	**P**	**08**	**37**	**46.5**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=278,slow=6.3,SNR=3.1								
BOSA	**Boshof**	**64.81**	**125**	P	**P**	**08**	**37**	**46.0**	**+0.3**
MLR	**Muntele Rosu**	**65.04**	**42**	P	**P**	**08**	**37**	**47.1**	**+0.3**
NOA	**NORSAR Array B**	**65.16**	**22**	P	**P**	**08**	**37**	**47.8**	**+0.6**
	comp=Z,3.1nm,1.1s,baz=231,slow=6.0,SNR=3.0								
ELL	**Elmali**	**65.42**	**52**	P	**P**	**08**	**37**	**49.1**	**-0.3**
SPMN	**Marine on St.**	**65.85**	**318**	P	**P**	**08**	**37**	**51.6**	**-0.4**
SPMN				IAmb	IAmb	08	37	53.7	
	comp=Z,25nm,1.4s								
Z35A	**Perchaven, San**	**66.20**	**304**	P	**P**	**08**	**37**	**53.2**	**-1.2**
OK029	**Liberty Lake**	**66.83**	**307**	P	**P**	**08**	**37**	**57.6**	**-0.8**
833A	**Chaparral WMA,**	**67.25**	**299**	P	**P**	**08**	**38**	**03.2**	**+2.0**
	baz=97								
KAN14	**Manchester OK**	**67.46**	**308**	P	**P**	**08**	**38**	**02.2**	**-0.2**
WMOK	**Wichita Mounta**	**67.70**	**306**	P	**P**	**08**	**38**	**04.6**	**+0.7**
	baz=100								
WMOK	**Wichita Mounta**	**67.70**	**306**	P	**P**	**08**	**38**	**03.3**	**-0.7**
WMOK				IAmb	IAmb	08	38	05.3	
	comp=Z,21nm,1.5s								
JCT	**Junction City**	**67.89**	**301**	P	**P**	**08**	**38**	**06.8**	**+1.5**
	baz=98								
JCT	**Junction City**	**67.89**	**301**	P	**P**	**08**	**38**	**04.5**	**-0.7**
JCT				IAmb	IAmb	08	38	07.2	
	comp=Z,23nm,1.3s								
ECSD	**EROS Data Cent**	**68.03**	**315**	P	**P**	**08**	**38**	**05.5**	**-0.3**
ECSD				IAmb	IAmb	08	38	06.9	
	comp=Z,19nm,1.3s								
ABTX	**Abilene, Hawle**	**68.06**	**303**	P	**P**	**08**	**38**	**07.6**	**+1.3**
	baz=99								
R32A	**Long Quarter,**	**68.34**	**309**	P	**P**	**08**	**38**	**07.5**	**-0.4**
BGNE	**Belgrade**	**68.56**	**313**	P	**P**	**08**	**38**	**10.5**	**+1.3**
	baz=103								
BGNE	**Belgrade**	**68.56**	**313**	P	**P**	**08**	**38**	**08.8**	**-0.4**
AGMN	**Agassiz Nation**	**68.81**	**320**	P	**P**	**08**	**38**	**11.2**	**+0.6**
	baz=107								
AKASG	**Malin Array Be**	**68.87**	**37**	P	**P**	**08**	**38**	**10.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=252,slow=6.6,SNR=4.7								
AKASG	**Malin Array Be**	**68.87**	**37**	P	**P**	**08**	**38**	**09.8**	**-1.1**
BRTR	**Kesk

comp=Z,18nm,1.2s
FLWY Flagg Ranch 78.10 314 P **P** **08 39 05.1 -0.6**
FLWY IAmb IAmb 08 39 09.2
comp=Z,32nm,1.4s
REDW Red Top Meadow 78.15 313 P **P** **08 39 04.0 -2.0**
REDW IAmb IAmb 08 39 09.1
comp=Z,21nm,1.3s
IMW Indian Meadow 78.25 314 P **P** **08 39 05.1 -1.7**
IMW IAmb IAmb 08 39 10.0
comp=Z,22nm,1.3s
AHID Auburn Hatcher 78.28 313 P **P** **08 39 05.0 -1.8**
AHID IAmb IAmb 08 39 12.4
comp=Z,37nm,1.9s
YMR Madison River 78.34 315 P **P** **08 39 07.1 +0.1**
JLU Jordanelle 78.39 310 P **P** **08 39 06.5 -0.9**
TCUT Toone Canyon 78.39 311 P **P** **08 39 07.0 -0.5**
MPU Maple Canyon 78.49 310 P **P** **08 39 07.1 -0.9**
HWUT Hardware Ranch 78.54 311 P **P** **08 39 08.0 -0.2**
HWUT IAmb IAmb 08 39 11.2
comp=Z,26nm,1.4s
SNAA Sanae 78.68 171 P **P** **08 39 10.2 +2.1**
SNAA Sanae 78.68 171 P **P** **08 39 10.2 +2.1**
comp=Z,5.2nm,1.1s,baz=330,slow=2.5,SNR=6.3
SNAA Sanae 78.68 171 P **P** **08 39 07.0 -1.1**
MSU Marysvale 78.82 308 P **P** **08 39 08.5 -1.4**
MVU Marysvale 78.85 308 P **P** **08 39 08.2 -1.9**
DUG Dugway, Tooele 79.40 310 P **P** **08 39 15.2 +2.3**
baz=93
DUG Dugway, Tooele 79.40 310 P **P** **08 39 12.6 -0.4**
DUG IAmb IAmb 08 39 16.8
comp=Z,26nm,1.4s
SZCU Shurtz Canyon 79.50 307 P **P** **08 39 11.5 -2.1**
BGU Big Grassy Mou 79.60 311 P **P** **08 39 12.0 -2.0**
CCUT Cedar City 79.72 307 P **P** **08 39 12.9 -1.9**
PSUT Pine Spring 80.14 308 P **P** **08 39 15.0 -2.1**
HLID Hailey 80.75 313 P **P** **08 39 22.4 +2.2**
baz=92
IRM Iron Mountain 81.10 304 P **P** **08 39 24.8 +2.8**
baz=90
R11A Troy Canyon, C 81.49 308 P **P** **08 39 26.3 +2.0**
baz=90
TPNV Topopah Spring 82.01 307 P **P** **08 39 29.8 +2.8**
baz=90
HEC Hector,Ludlow 82.08 304 P **P** **08 39 30.1 +2.8**
baz=90
TPH Tonopah 82.78 308 P **P** **08 39 30.6 -0.5**
BMO Blue Mountains 82.86 314 P **P** **08 39 29.8 -1.4**
BMO IAmb IAmb 08 39 33.8
comp=Z,18nm,1.5s
MPMC Manual Prospec 83.01 306 P **P** **08 39 34.8 +2.5**
baz=89
LRMC Laurel Mtn Rad 83.18 305 P **P** **08 39 35.5 +2.5**
baz=89
EDW2 Edwards Air Fo 83.44 304 P **P** **08 39 36.6 +2.3**
baz=89
KVN Kaiserville 83.46 309 **P** **08 39 32.9 -1.6**
CWC Cottonwood Cre 83.49 306 P **P** **08 39 37.0 +2.3**
baz=89
NVAR Mina Array Bea 83.63 308 P **P** **08 39 36.7 +1.2**
comp=Z,4.0nm,1.1s,baz=99,slow=6.4,SNR=10
NVAR Mina Array Bea 83.63 308 P **P** **08 39 33.3 -2.1**
LHV Little Huntoon 83.79 308 P **P** **08 39 34.6 -1.3**
LHV IAmb IAmb 08 39 45.1
comp=Z,15nm,1.2s
ISA Isabella, Lake 83.82 305 P **P** **08 39 39.2 +2.9**
baz=88
OMMB Old Mammoth Mi 84.20 307 **P** **08 39 36.5 -2.0**
MDPB Devils Postpil 84.26 307 **P** **08 39 36.5 -2.2**
PNTR Pine Nut 84.63 309 P **P** **08 39 38.0 -2.6**
PNTR IAmb IAmb 08 39 44.6
comp=Z,22nm,1.2s
MOD Modoc Plateau 85.08 312 P **P** **08 39 42.3 -0.4**
MOD IAmb IAmb 08 39 46.8
comp=Z,22nm,1.2s
BEKR Beckworth 85.19 309 P **P** **08 39 42.4 -0.9**
BEKR IAmb IAmb 08 39 47.0
comp=Z,19nm,1.4s
PINE Pine Mountain 85.48 313 P **P** **08 39 42.9 -1.8**
AFDM Forest Hills D 85.70 309 P **P** **08 39 43.8 -1.9**
J05D Fort Rock, OR 85.72 313 P **P** **08 39 48.4 +2.6**
baz=87
F05D White Salmon 85.77 316 P **P** **08 39 48.3 +2.4**
baz=88
ORV Oroville 86.08 309 P **P** **08 39 45.7 -1.8**
K04D Chiloquin, OR 86.12 312 P **P** **08 39 50.0 +2.2**
baz=87
M04C Macdoel 86.23 311 P **P** **08 39 50.8 +2.5**
baz=87
O03E Paynes Creek 86.28 310 P **P** **08 39 50.5 +1.9**
baz=87
J04D Umpqua Nationa 86.36 313 P **P** **08 39 51.1 +2.1**
baz=87
SYO Syowa Base 88.10 160 *eP* **P** **08 39 54.8 -1.7**
SYO Syowa Base 88.10 160 *eP* cP **P** **08 39 57.3 +0.8**
BMAR Burnt Mountain 93.91 339 P **P** **08 40 21.9 -1.9**
QSPA South Pole Qui 94.73 180 P **P** **08 40 29.3 +1.7**
comp=Z,3.4nm,1.1s,baz=254,slow=0.9,SNR=7.9
QSPA South Pole Qui 94.73 180 P **P** **08 40 27.6 0.0**
ILAR Eielson Array 95.81 337 P **P** **08 40 32.2 -0.3**
comp=Z,2.3nm,1.2s,baz=73,slow=3.1,SNR=6.2
ILAR Eielson Array 95.81 337 P **P** **08 40 30.3 -2.2**
KSH Kashi 101.31 48 *eP* **Pdif** **08 40 56.6 -1.3**
KSH pmax pmax
comp=Z,400nm,4.6s
CD2 Chengdu 125.45 47 PKP **PKPdf** **08 46 06.5 -1.7**
CMAR Chiang Mai Arr 127.14 63 PKP **PKiKP** **08 46 13.1 +0.8**
comp=Z,0.8nm,0.3s,baz=276,slow=3.1,SNR=6.1
TOO Toolangi 147.23 177 **PKPab** **08 46 52.1 +0.2**
ASAR Alice Springs 157.16 147 PKPab **PKPab** **08 47 34.4 +0.8**
comp=Z,1.3nm,1.0s,baz=210,slow=4.2,SNR=6.0
ASAR Alice Springs 157.16 147 **PKPab** **08 47 33.6 -0.1**
WRA Warramunga Arr 160.30 141 PKPab **PKPab** **08 47 48.8 +1.5**
comp=Z,1.8nm,1.1s,baz=218,slow=4.0,SNR=4.5
WRA Warramunga Arr 160.30 141 **PKPab** **08 47 46.6 -0.7**

*IDC **03** 08:41:34.0±1.1, 41.°60S×79.°71E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.9/38, mbtmp4.0/8, Error ellipse: s-maj=36.4km s-min=19.2km az=120.0*
*NEIC **03** 08:41:35.4±1.3, 41.°60S±0.°07×79.°7E±0.°1, h10km±1km, mb4.7/14, Error ellipse: s-maj=13.5km s-min=11.4km az=290.0*
ISC 03 08:41:35.2±0.5, **41.°58S**±0.°07×**79.°61E**±0.°09, **h10km, n33, s0 9 8 3**/34, **mb4.4**/13, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**4.09**	**337**	Pn	**Pn**	**08 42 40.0**	**+2.2**
AIS				Sn	**Sn**	**08 43 23.6**	**-2.1**
PAF	**Port-aux-Franc**	**10.19**	**217**	Pn	**Pn**	**08 44 01.2**	**-0.1**
PAF				Sn	**Sn**	**08 45 55.2**	**-0.3**
CRZF	**Crozet Islands**	**20.49**	**247**	P	**P**	**08 46 11.6**	**-1.5**
MAW	**Mawson**	**27.62**	**194**	P	**P**	**08 47 22.8**	**+0.4**
	2.6nm,1.0s,baz=345,slow=8.7,SNR=4.9						
MAW	**Mawson**	**27.62**	**194**	P	**P**	**08 47 22.6**	**+0.2**
H01W2	**Cape Leeuwin H**	**27.79**	**87**	T	T	09 15 55.2	
	baz=246,slow=74,SNR=78						
H01W3	**Cape Leeuwin H**	**27.80**	**87**	T	T	09 15 54.9	
	baz=246,slow=74,SNR=83						
H01W1	**Cape Leeuwin H**	**27.81**	**87**	T	T	09 15 55.5	
	baz=246,slow=74,SNR=86						
RPSI	**Rantau Prapat**	**47.44**	**27**	P	**P**	**08 50 09.2**	**-0.8**
RPSI				IAmb	IAmb	08 50 11.2	
	comp=Z,12nm,1.3s						
VNDA	**Vanda**	**48.13**	**163**	P	**P**	**08 50 15.3**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=291,slow=4.3,SNR=4.4						
VNDA	**Vanda**	**48.13**	**163**	P	**P**	**08 50 15.3**	**+0.5**
VNDA				IAmb	IAmb	08 50 32.2	
	comp=Z,4.7nm,1.4s						
ASAR	**Alice Springs**	**48.29**	**86**	P	**P**	**08 50 16.1**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=233,slow=6.6,SNR=16						
ASAR				PcP	**PcP**	**08 51 45.0**	**+1.5**
	comp=Z,0.8nm,0.9s,baz=236,slow=4.0,SNR=2.5						
ASAR	**Alice Springs**	**48.29**	**86**	P	**P**	**08 50 16.9**	**+0.2**
AS31	**Alice Springs**	**48.29**	**86**	P	**P**	**08 50 16.9**	**+0.2**
QSPA	**South Pole Qui**	**48.58**	**180**	P	**P**	**08 50 18.5**	**0.0**
	comp=Z,5.2nm,1.1s,baz=306,slow=4.6,SNR=6.8						
QSPA	**South Pole Qui**	**48.58**	**180**	P	**P**	**08 50 19.3**	**+0.8**
QSPA				IAmb	IAmb	08 50 37.3	
	comp=Z,9.6nm,1.1s						
SNAA	**Sanae**	**48.82**	**205**	P	**P**	**08 50 20.0**	**-0.2**
	comp=Z,1.3nm,1.0s,baz=38,slow=12,SNR=3.0						
SNAA	**Sanae**	**48.82**	**205**	P	**P**	**08 50 20.3**	**+0.1**
SNAA				IAmb	IAmb	08 50 42.5	
	comp=Z,5.0nm,1.4s						
STKA	**Stephens Creek**	**49.66**	**100**	P	**P**	**08 50 25.8**	**-1.3**
	comp=Z,2.7nm,0.9s,baz=250,slow=8.6,SNR=3.9						
STKA	**Stephens Creek**	**49.66**	**100**	P	**P**	**08 50 26.9**	**-0.3**
TOO	**Toolangi**	**49.83**	**108**	P	**P**	**08 50 27.5**	**-0.8**
SOEI	**Soe**	**50.41**	**64**	P	**P**	**08 50 32.1**	**-0.9**
SOEI				IAmb	IAmb	08 50 40.8	
	comp=Z,12nm,0.9s						
KULM	**Kulim**	**50.45**	**28**	P	**P**	**08 50 33.3**	**+0.1**
WRA	**Warramunga Arr**	**50.82**	**82**	P	**P**	**08 50 35.8**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=232,slow=7.6,SNR=15						
WRA				PcP	**PcP**	**08 51 53.0**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=225,slow=2.9,SNR=1.4						
WB2	**Warramunga Arr**	**50.83**	**82**	P	**P**	**08 50 35.6**	**-0.4**
WB2				IAmb	IAmb	08 50 37.9	
	comp=Z,16nm,1.5s						
WRAB	**Tennant Creek**	**50.84**	**82**	P	**P**	**08 50 36.0**	**-0.1**
WRAB				IAmb	IAmb	08 50 47.8	
	comp=Z,11nm,1.2s						
WB0	**Warramunga Arr**	**50.97**	**82**	P	**P**	**08 50 37.0**	**-0.1**
WB0				IAmb	IAmb	08 50 43.7	
	comp=Z,7.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**62.36**	**21**	P	**P**	**08 51 58.0**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=210,slow=6.8,SNR=9.7						
CMAR	**Chiang Mai Arr**	**62.36**	**21**	P	**P**	**08 51 58.9**	**+0.9**
ILAR	**Eielson Array**	**144.96**	**33**	PKP	**PKPab**	**09 01 10.4**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=260,slow=2.8,SNR=5.8						
ILAR	**Eielson Array**	**144.96**	**33**		**PKPdf**	**09 01 11.8**	**+0.4**
INK	**Inuvik**	**147.93**	**23**	PKPbc	**PKPbc**	**09 01 19.5**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=3.9,slow=10,SNR=4.2						
NVAR	**Mina Array Bea**	**165.91**	**97**	PKPab	**PKPab**	**09 02 40.4**	**0.0**
	comp=Z,0.5nm,0.9s,baz=225,slow=5.0,SNR=3.0						

*IDC **03** 08:48:28.8±0.3, 41.°96S×80.°12E, h0km, mb4.9/42, mb1 4.9/42, mb1mx4.9/52, mbtmp4.9/42, MS6.1/31, Ms1 6.1/31, ms1mx6.0/35, Error ellipse: s-maj=9.0km s-min=8.1km az=155.0*
*NEIC **03** 08:48:28.5, 41.°66S×79.°69E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.16; $M_{\theta\theta}$2.25; $M_{\phi\phi}$-2.41; $M_{r\theta}$-0.29; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.62; Fault plane solution: $M_0$2.46000×10^{18} NP1:ϕ_s229.96000°, δ74.74000°, λ-177.64000°. NP2:ϕ_s139.34000°, δ87.72000°, λ-15.27000°. Principal axes: T 2.3320, Plg9.0000°, Azm186.0000°; N 0.2363, Plg75.0000°, Azm311.0000°; P -2.5683, Plg12.0000°, Azm94.0000°;*
*MOS **03** 08:48:28.8±1.0, 41.°79S×80.°11E, h12km, mb5.7/37, MS6.2/9 Error ellipse: s-maj=12.0km s-min=7.6km az=89.1*
*BJI **03** 08:48:28.0±0.0, 41.°72S×79.°73E, h11km, mB5.9/58, mb5.3/66, Ms6.4/72, Ms7 6.2/67*
*NEIC **03** 08:48:29.7±2.3, 41.°73S±0.°07×80.°0E±0.°1, h10km±1km, mb5.7/91, Ms_20 6.2/445, Mwb6.2/54, Mww6.3, Mwc6.3(GCMT), Error ellipse: s-maj=14.4km s-min=11.9km az=281.0*
*GCMT **03** 08:48:35.7±0.0, 41.°66S×79.°97E, h12km, MW6.3/159, Moment Tensor Solution. s158,c365; s159,c614; Duration: 3s3 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.21±.01; $M_{\theta\theta}$3.13±.01; $M_{\phi\phi}$-3.01±.01; $M_{r\theta}$0.32±.03; $M_{\theta\phi}$-0.50±.01; $M_{\phi r}$0.02±.03; Best double couple: $M_0$3.12600×10^{18} NP1:ϕ_s140.00000°,δ86.00000°, λ3.00000°. NP2:ϕ_s50.00000°,δ87.00000°,λ176.00000°. Principal axes: T 3.2010, Plg5.0000°, Azm5.0000°; N -0.1510, Plg84.0000°, Azm193.0000°; P -3.0520, Plg1.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **03** 08:48:37, 41.°66S×79.°92E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.05; $M_{\theta\theta}$3.36; $M_{\phi\phi}$-3.31; $M_{r\theta}$0.34; $M_{\theta\phi}$-0.61; $M_{\phi r}$-0.01; Fault plane solution: $M_0$3.41000×10^{18} NP1:ϕ_s140.00000°, δ86.00000°, λ4.00000°. NP2:ϕ_s50.00000°,δ86.00000°, λ176.00000°. Principal axes: T 3.4503, Plg6.0000°, Azm5.0000°; N -0.0859, Plg84.0000°, Azm188.0000°; P -3.3644, Plg0.0000°, Azm95.0000°;*
*NEIC **03** 08:48:37, 41.°76S×79.°69E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}0.25; $M_{\theta\theta}$3.66; $M_{\phi\phi}$-3.41; $M_{r\theta}$0.54; $M_{\theta\phi}$-0.12; $M_{\phi r}$0.52; Fault plane solution: $M_0$3.63000×10^{18} NP1:ϕ_s136.00000°, δ78.00000°, λ-1.00000°. NP2:ϕ_s226.00000°, δ89.00000°, λ-167.00000°. Principal axes: T 3.7375, Plg8.0000°, Azm0.0000°; N -0.2349, Plg78.0000°, Azm232.0000°; P -3.5026, Plg9.0000°, Azm92.0000°;*
ISC 03 08:48:29.7±0.5, **41.°82S**±0.°04×**80.°04E**±0.°04, **h7km**±2km, **h8km**:**pP-P, n729**, σ1.9**88**/603, **mb5.5**/136, **MS6.2**/290, **8C-4D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AIS	**Amsterdam Isla**	**4.45**	**334**	Pn	**Pn**	**08 49 35.4**	**-2.1**
PAF	**Port-aux-Franc**	**10.20**	**219**	P	**Pn**	**08 50 54.1**	**-2.2**
PAF	**Port-aux-Franc**	**10.20**	**219**	Pn	**Pn**	**08 50 54.1**	**-2.2**
CRZF	**Crozet Islands**	**20.69**	**248**	P	**P**	**08 53 10.0**	**-0.2**
CRZF				IAmb	IAmb	08 53 23.5	
	comp=Z,240nm,0.9s						
MAW	**Mawson**	**27.47**	**194**	P	**P**	**08 54 15.0**	**-0.9**
	comp=Z,23nm,0.9s,baz=22,slow=9.1,SNR=28						
MAW				S	**S**	**08 58 55.2**	**-1.2**
	comp=Z,2.5nm,1.2s,baz=270,slow=20,SNR=1.3						
MAW				LR	LR	09 02 43.5	
	comp=Z,42μm,21.7s,baz=14,slow=31						
MAW	**Mawson**	**27.47**	**194**	P	**P**	**08 54 15.7**	**-0.2**
	baz=28,SNR=26						
MAW	**Mawson**	**27.47**	**194**	P	**P**	**08 54 15.9**	**0.0**
H01W2	**Cape Leeuwin H**	**27.48**	**87**	T	T	09 22 46.8	
	baz=246,slow=74,SNR=1052						
H01W3	**Cape Leeuwin H**	**27.49**	**87**	T	T	09 22 44.5	
	baz=246,slow=74,SNR=748						
H01W1	**Cape Leeuwin H**	**27.50**	**87**	T	T	09 22 48.5	
	baz=246,slow=74,SNR=760						
RER	**Riviere de l'E**	**29.04**	**308**	P	**P**	**08 54 27.1**	**-3.4**
RER				IAmb	IAmb	08 55 08.9	
	comp=Z,176nm,1.5s						
CASY	**Casey**	**29.76**	**156**	P	**P**	**08 54 38.2**	**+1.9**
CASY				IAmb	IAmb	08 54 43.8	
	comp=Z,297nm,1.9s						
CASY	**Casey**	**29.76**	**156**	IAMs_20	IAMs_20	09 03 19.0	
	comp=Z,60μm,22.0s						
NWAO	**Narrogin (SRO)**	**30.66**	**85**	S	**S**	**08 59 44.5**	**-3.0**
	comp=Z,2.8nm,0.7s,baz=158,slow=19,SNR=1.6						
NWAO				LR	LR	09 04 10.5	
	comp=Z,57μm,21.8s,baz=253,slow=31						
NWAO	**Narrogin (SRO)**	**30.66**	**85**	P	**P**	**08 54 42.8**	**-2.0**
NWAO				P	**P**	**08 54 42.8**	**-2.0**
NWAO				S	**S**	**08 59 53.7**	**+6.3**
NWAO				S	**S**	**08 59 53.7**	**+6.3**
NWAO	**Narrogin (SRO)**	**30.66**	**85**	P	**P**	**08 54 42.7**	**-2.0**
NWAO				pmax	pmax		
	comp=Z,140nm,1.7s						
NWAO	**Narrogin (SRO)**	**30.66**	**85**	P	**P**	**08 54 44.8**	**0.0**
NWAO				IAmb	IAmb	08 54 52.6	
	comp=Z,174nm,1.6s						
NWAO	**Narrogin (SRO)**	**30.66**	**85**	P	**P**	**08 54 42.7**	**-2.1**
NWAO				IAmb	IAmb	08 54 52.6	
	comp=Z,140nm,1.6s						
NWAO				IAMs_20	IAMs_20	09 03 57.4	
	comp=Z,40μm,21.0s						
BLDU	**Ballidu**	**31.41**	**81**	P	**P**	**08 54 53.3**	**+1.9**
	baz=32,SNR=5.5						
KLBR	**Kellerberrin**	**31.69**	**84**	P	P	08 54 57.8	+4.0
	baz=32,SNR=4.0						
MORW	**Morawa**	**31.73**	**78**	P	**P**	**08 54 55.8**	**+1.6**
	baz=32,SNR=6.5						
MORW	**Morawa**	**31.73**	**78**	P	**P**	**08 54 54.8**	**+0.6**
MORW				IAmb	IAmb	08 55 02.3	
	comp=Z,159nm,1.4s						
MORW				IAMs_20	IAMs_20	09 04 47.6	
	comp=Z,32μm,19.0s						
FOMA	**Nahampoana Res**	**32.06**	**291**	IAMs_20	IAMs_20	09 04 11.2	
	comp=Z,48μm,21.0s						
GIRL	**Giralia**	**34.36**	**67**	IAMs_20	IAMs_20	09 05 16.7	
	comp=Z,38μm,21.0s						
SYO	**Syowa Base**	**34.45**	**204**	*eP*	**P**	**08 55 15.4**	**-2.0**
SYO	**Syowa Base**	**34.45**	**204**	*ipP*	pP	08 55 20.6	+1.8
SYO	**Syowa Base**	**34.45**	**204**	*iPnPn*	PnPn	08 56 32.6	+0.6
H08S2	**Diego Garcia H**	**34.69**	**347**	T	T	09 31 36.9	
	baz=170,slow=76,SNR=40						
H08S1	**Diego Garcia H**	**34.69**	**347**	T	T	09 31 36.9	
	baz=170,slow=76,SNR=49						
H08S3	**Diego Garcia H**	**34.71**	**347**	T	T	09 31 38.3	
	baz=170,slow=76,SNR=52						
KMBL	**Kambalda**	**34.87**	**86**	P	**P**	**08 55 22.2**	**+0.6**
	baz=35,SNR=11						
DGAR	**Diego Garcia**	**34.92**	**347**	P	**P**	**08 55 25.3**	**+3.2**
DGAR				pmax	pmax		
	comp=Z,148nm,1.5s						
DGAR	**Diego Garcia**	**34.92**	**347**	P	**P**	**08 55 19.2**	**-2.9**
MEEK	**Meekatharra**	**34.98**	**77**	P	**P**	**08 55 23.3**	**+0.7**
	baz=35,SNR=11						
ABPO	**Ambohimpanom**	**35.96**	**299**	P	**P**	**08 55 30.0**	**-1.2**
ABPO				pmax	pmax		
	comp=Z,61nm,1.7s						
ABPO	**Ambohimpanom**	**35.96**	**299**	P	**P**	**08 55 30.0**	**-1.2**
ABPO	**Ambohimpanom**	**35.96**	**299**	IAMs_20	IAMs_20	09 05 59.2	
	comp=Z,28μm,21.0s						
OPO	**Ambohidratompo**	**36.30**	**300**	P	**P**	**08 55 37.1**	**+3.0**
	comp=Z,6.4nm,0.9s,baz=114,slow=10,SNR=4.5						
PSAD3	**Pilbara Seismi**	**38.89**	**71**	IAMs_20	IAMs_20	09 10 03.0	
	comp=Z,33μm,18.0s						
PSAC3	**Pilbara Seismi**	**38.94**	**71**	IAMs_20	IAMs_20	09 10 03.3	
	comp=Z,30μm,18.0s						
PSAB1	**Pilbara Seismi**	**38.97**	**71**	IAMs_20	IAMs_20	09 09 56.0	
	comp=Z,31μm,18.0s						
PSAA1	**Pilbara Seismi**	**38.97**	**71**	IAMs_20	IAMs_20	09 10 14.2	
	comp=Z,34μm,18.0s						
PSAB3	**Pilbara Seismi**	**38.98**	**71**	IAMs_20	IAMs_20	09 10 05.2	
	comp=Z,32μm,18.0s						
PSAC1	**Pilbara Seismi**	**38.98**	**71**	IAMs_20	IAMs_20	09 10 04.4	
	comp=Z,37μm,18.0s						
PSA00	**Pilbara Seismi**	**38.98**	**71**	P	**P**	**08 55 55.4**	**-1.2**
PSA00				IAMs_20	IAMs_20	09 10 05.5	
	comp=Z,32μm,18.0s						
PSA00	**Pilbara Seismi**	**38.98**	**71**	P	**P**	**08 55 56.6**	**0.0**
PSA00				IAmb	IAmb	08 56 06.6	
	comp=Z,28nm,0.8s						
PSAA3	**Pilbara Seismi**	**38.99**	**71**	IAMs_20	IAMs_20	09 10 05.5	
	comp=Z,32μm,18.0s						
PSAA2	**Pilbara Seismi**	**38.99**	**71**	IAMs_20	IAMs_20	09 09 57.6	
	comp=Z,30μm,18.0s						
PSAB2	**Pilbara Seismi**	**39.01**	**71**	IAMs_20	IAMs_20	09 10 05.0	
	comp=Z,33μm,18.0s						
PSAC2	**Pilbara Seismi**	**39.03**	**71**	IAMs_20	IAMs_20	09 10 06.6	
	comp=Z,33μm,18.0s						
PSAD2	**Pilbara Seismi**	**39.04**	**71**	IAMs_20	IAMs_20	09 07 58.9	
	comp=Z,32μm,22.0s						
PSAD1	**Pilbara Seismi**	**39.05**	**71**	IAMs_20	IAMs_20	09 10 06.1	
	comp=Z,37μm,18.0s						
MBWA	**Marble Bar**	**39.17**	**71**	P	**P**	**08 55 56.3**	**-1.8**
MBWA				P	**P**	**08 55 56.3**	**-1.8**
MBWA				S	**S**	**09 01 58.0**	**-0.6**
MBWA				S	**S**	**09 01 58.0**	**-0.6**
MBWA	**Marble Bar**	**39.17**	**71**	IAMs_20	IAMs_20	09 10 09.3	
	comp=Z,33μm,18.0s						
FORT	**Forrest**	**39.77**	**90**	P	**P**	**08 56 05.0**	**+1.9**
	baz=40,SNR=15						
FORT	**Forrest**	**39.77**	**90**	P	**P**	**08 56 04.4**	**+1.2**
FORT				IAmb	IAmb	08 56 15.2	
	comp=Z,145nm,0.8s						
FORT				IAMs_20	IAMs_20	09 08 47.7	
	comp=Z,53μm,20.0s						
LEM	**Lembang**	**42.58**	**43**	P	**P**	**08 56 27.9**	**+1.4**
	comp=Z,43nm,0.8s,baz=174,slow=10.0,SNR=8.5						
LEM				S	**S**	**09 02 57.7**	**+8.1**
	comp=Z,13nm,0.4s,baz=323,slow=20,SNR=1.5						
WRKA	**Warakurna**	**43.02**	**83**	P	**P**	**08 56 32.0**	**+2.1**
	baz=43,SNR=11						
PWJI	**Pagerwojo**	**43.82**	**49**	P	**P**	**08 56 40.0**	**+3.6**
	comp=Z,2.1μmcomp=Z,78nm,2.1s						
NVL	**N'lazarevskaya**	**44.05**	**206**	*eP*	P	08 56 41.3	+3.7
NVL				pmax	pmax		
	comp=Z,91nm,1.3s						
GMJI	**Gumukmas**	**44.56**	**51**	P	**P**	**08 56 45.4**	**+3.1**
	comp=Z,2μmcomp=Z,82nm,2.2s						
BBOO	**Buckleboo**	**44.76**	**97**	P	**P**	**08 56 44.6**	**+0.9**
	baz=45,SNR=41						
BBOO	**Buckleboo**	**44.76**	**97**	P	**P**	**08 56 43.7**	**-0.1**
BBOO				IAmb	IAmb	08 56 55.1	
	comp=Z,97nm,0.9s						
JAGI	**Jajag, Banyuwa**	**44.81**	**52**	P	**P**	**08 56 43.1**	**-1.2**
JAGI				IAmb	IAmb	08 57 19.8	
	comp=Z,186nm,1.5s						
FITZ	**Fitzroy Crossi**	**45.37**	**73**	P	**P**	**08 56 49.4**	**+0.7**
	comp=Z,11nm,0.9s,baz=231,slow=6.9,SNR=15						
FITZ				S	**S**	**09 03 31.5**	**+1.5**
	comp=Z,2.5nm,0.8s,baz=198,slow=19,SNR=1.4						
FITZ				LR	LR	09 12 39.0	
	comp=Z,19μm,21.8s,baz=244,slow=32						
FITZ	**Fitzroy Crossi**	**45.37**	**73**	P	**P**	**08 56 50.0**	**+1.3**
	baz=46,SNR=11						
FITZ	**Fitzroy Crossi**	**45.37**	**73**	P	**P**	**08 56 48.1**	**-0.7**
FITZ				IAmb	IAmb	08 57 05.5	
	comp=Z,38nm,1.1s						
FITZ				IAMs_20	IAMs_20	09 12 26.6	
	comp=Z,20μm,21.0s						
ABJI	**Asem Bagus**	**45.40**	**51**	P	P	08 56 52.9	+3.9
	comp=Z,2μmcomp=Z,152nm,1.3s						
SRBI	**Singaraja**	**45.75**	**53**	P	**P**	**08 56 55.2**	**+3.5**
	comp=Z,3μmcomp=Z,141nm,1.2s						
BOSA	**Boshof**	**45.94**	**268**	P	**P**	**08 56 54.4**	**+1.1**
	comp=Z,7.4nm,0.7s,baz=123,slow=7.6,SNR=17						
BOSA				S	**S**	**09 03 40.0**	**+1.7**
	comp=Z,2.7nm,1.1s,baz=135,slow=20,SNR=1.6						
BOSA				LR	LR	09 12 19.5	
	comp=Z,37μm,19.7s,baz=126,slow=31						
BOSA	**Boshof**	**45.94**	**268**	P	**P**	**08 56 53.4**	**0.0**
BOSA				IAmb	IAmb	08 57 21.6	
	comp=Z,104nm,1.6s						
BKNI	**Bangkinang**	**46.05**	**30**	P	**P**	**08 56 54.8**	**+0.7**
TWSI	**Taliwang, Sumb**	**46.24**	**55**	P	P	08 57 08.2	+13
HTT	**Hallett**	**46.58**	**100**	P	**P**	**08 56 59.1**	**+0.9**
	baz=47,SNR=39						
DSRI	**Dabo**	**46.73**	**35**	P	P	08 57 03.6	+4.2
	comp=Z,3μmcomp=Z,6μmcomp=Z,36nm,1.7s						
ARPS	**Mount Arapiles**	**47.19**	**105**	P	**P**	**08 57 04.4**	**+1.6**
	baz=47,SNR=12						
SUR	**Sutherland**	**47.34**	**261**	P	**P**	**08 57 05.4**	**+1.0**
	comp=Z,0.7s,baz=120,slow=8.6,SNR=21						
SUR	**Sutherland**	**47.34**	**261**	P	**P**	**08 57 07.0**	**+2.6**
SUR				S	**S**	**09 03 59.3**	**+0.8**
SUR	**Sutherland

comp=Z,20µm,20.0s
MYKOM **Kota Tinggi** 48.48 33 P P 08 57 15.0 +2.0
TAU Tasmania Unive 48.48 115 IAMs_20 IAMs_20 09 12 54.4
comp=Z,19µm,19.0s
SNAA Sanae 48.74 205 P P 08 57 14.4 -0.1
SNAA Sanae 48.74 205 P P 08 57 14.3 -0.2
comp=Z,3.9nm,0.9s,baz=128,slow=12,SNR=15
SNAA Sanae 48.74 205 *i* P P 08 57 14.9 +0.4
SNAA pmax pmax
comp=Z,55nm,1.7s
SNAA Sanae 48.74 205 P P 08 57 14.3 -0.2
PALK Pallekele 48.86 1 P P 08 57 16.9 +1.0
comp=Z,13nm,1.1s,baz=230,slow=3.1,SNR=3.1
PALK S S 09 04 19.2 -0.5
comp=Z,3.2nm,0.5s,baz=180,slow=20,SNR=1.9
PALK LR LR 09 13 41.5
comp=Z,41µm,19.6s,baz=284,slow=31
PALK Pallekele 48.86 1 P P 08 57 15.9 -0.1
PALK pmax pmax
comp=Z,218nm,1.9s
PALK Pallekele 48.86 1 P P 08 57 15.9 -0.1
PALK IAmb IAmb 08 57 34.2
comp=Z,218nm,1.9s
KNRA Kununurra 49.20 73 P P 08 57 19.3 +0.7
baz=49,SNR=22
KNRA Kununurra 49.20 73 P P 08 57 18.1 -0.5
KNRA IAMs_20 IAMs_20 09 14 21.3
comp=Z,30µm,21.0s
EDFI Ende, Flores 49.27 60 P P 08 57 19.7 +0.4
comp=Z,2µmcomp=Z,2µmcomp=Z,83nm,1.3s
STKA Stephens Creek 49.30 99 P P 08 57 20.4 +1.1
comp=Z,24nm,0.7s,baz=248,slow=5.1,SNR=35
STKA S S 09 04 24.8 -1.1
comp=Z,14nm,0.8s,baz=302,slow=11,SNR=6.5
STKA LR LR 09 14 02.1
comp=Z,60µm,21.8s,baz=251,slow=31
STKA Stephens Creek 49.30 99 P P 08 57 20.2 +0.9
baz=49,SNR=39
STKA Stephens Creek 49.30 99 P P 08 57 20.3 +1.0
STKA pmax pmax
comp=Z,12nm,0.9s
STKA Stephens Creek 49.30 99 P P 08 57 20.3 +1.0
STKA IAmb IAmb 08 57 30.8
comp=Z,12nm,0.9s
STKA IAMs_20 IAMs_20 09 13 40.1
comp=Z,13µm,22.0s
TOO Toolangi 49.45 108 P P 08 57 23.4 +3.1
baz=50,SNR=5.3
TOO Toolangi 49.45 108 P P 08 57 22.5 +2.1
TOO pmax pmax
comp=Z,218nm,1.7s
TOO Toolangi 49.45 108 P P 08 57 22.4 +2.1
TOO IAmb IAmb 08 57 43.5
comp=Z,218nm,1.7s
BATI Baumata 49.49 63 P P 08 57 21.8 +0.9
comp=Z,102nm,0.8s,baz=149,slow=3.4,SNR=13
BATI S S 09 04 34.8 +6.0
comp=Z,31nm,0.5s,baz=93,slow=19,SNR=3.0
BATI LR LR 09 14 15.3
comp=Z,16µm,21.5s,baz=228,slow=31
BATI Baumata 49.49 63 P P 08 57 24.1 +3.2
comp=Z,2µmcomp=Z,2µmcomp=Z,162nm,1.2s
MMRI Maumere 49.71 61 P P 08 57 21.9 -0.6
IPM Ipoh 49.89 28 IAMs_20 IAMs_20 09 13 46.3
comp=Z,35µm,21.0s
IPM Ipoh 49.89 28 P P 08 57 26.0 +2.1
TRD Trivandrum 50.16 356 *eP* P 08 57 27.1 +1.3
TRD IAmb IAmb 08 57 30.9
comp=Z,328nm,1.3s
SOEI Soe 50.22 63 P P 08 57 28.9 +2.3
comp=Z,3µmcomp=Z,180nm,1.3s
SOEI Soe 50.22 63 P P 08 57 26.1 -0.4
VNA2 Neumayer--Watz 50.33 205 P P 08 57 26.5 0.0
baz=102,slow=8.1
KULM Kulim 50.52 27 P P 08 57 25.1 -3.4
KULM IAMs_20 IAMs_20 09 13 51.9
comp=Z,30µm,21.0s
KULM Kulim 50.52 27 P P 08 57 32.0 +3.4
WC4 Warramunga Arr 50.52 82 IAMs_20 IAMs_20 09 16 38.4
comp=Z,22µm,21.0s
WB1 Warramunga Ar. 50.53 82 IAMs_20 IAMs_20 09 16 38.5
comp=Z,20µm,20.0s
WRA Warramunga Arr 50.53 82 P P 08 57 29.1 +0.3
comp=Z,50nm,1.1s,baz=230,slow=7.8,SNR=52
WRA PcP PcP 08 58 46.2 -0.5
comp=Z,3.3nm,0.6s,baz=233,slow=2.9,SNR=5.8
WRA S S 09 04 38.6 -4.7
comp=Z,0.8nm,0.9s,baz=239,slow=13,SNR=3.1
WRA LR LR 09 16 49.7
comp=Z,18µm,19.8s,baz=235,slow=34
WRA Warramunga Arr 50.53 82 P P 08 57 27.9 -0.9
WRA pmax pmax
comp=Z,10.0nm,1.3s
WRA Warramunga Arr 50.53 82 P P 08 57 27.9 -0.9
WR1 Warramunga Arr 50.53 82 IAMs_20 IAMs_20 09 16 38.7
comp=Z,17µm,19.0s
WB2 Warramunga Arr 50.54 82 P P 08 57 28.3 -0.5
WB2 IAMs_20 IAMs_20 09 16 38.9
comp=Z,20µm,19.0s
WC1 Warramunga Arr 50.55 82 IAMs_20 IAMs_20 09 16 39.0
comp=Z,21µm,19.0s
WRAB Tennant Creek 50.55 82 *ce* P P 08 57 29.2 +0.3
WRAB pmax pmax
comp=Z,213nm,1.6s
WRAB Tennant Creek 50.55 82 P P 08 57 29.2 +0.3
WRAB Tennant Creek 50.55 82 IAMs_20 IAMs_20 09 16 39.2
comp=Z,20µm,19.0s
WC3 Warramunga Arr 50.55 82 IAMs_20 IAMs_20 09 16 39.0
comp=Z,19µm,19.0s
WR2 Warramunga Arr 50.55 82 IAMs_20 IAMs_20 09 16 39.0
comp=Z,17µm,20.0s
WB3 Warramunga Arr 50.56 82 IAMs_20 IAMs_20 09 16 39.3
comp=Z,21µm,19.0s
WC2 Warramunga Arr 50.56 82 IAMs_20 IAMs_20 09 16 39.5
comp=Z,20µm,19.0s
WR3 Warramunga Arr 50.57 82 IAMs_20 IAMs_20 09 16 39.5
comp=Z,19µm,20.0s
WB4 Warramunga Arr 50.57 82 IAMs_20 IAMs_20 09 16 39.7
comp=Z,21µm,19.0s
WR4 Warramunga Arr 50.58 82 IAMs_20 IAMs_20 09 16 39.9
comp=Z,18µm,19.0s
WB5 Warramunga Arr 50.59 82 IAMs_20 IAMs_20 09 16 40.2
comp=Z,18µm,19.0s
WR5 Warramunga Arr 50.60 82 IAMs_20 IAMs_20 09 16 40.3
comp=Z,18µm,20.0s
WB6 Warramunga Arr 50.61 82 IAMs_20 IAMs_20 09 16 40.6
comp=Z,22µm,19.0s
WR6 Warramunga Arr 50.61 82 IAMs_20 IAMs_20 09 16 40.7
comp=Z,17µm,19.0s
WB7 Warramunga Arr 50.63 82 IAMs_20 IAMs_20 09 16 42.1
comp=Z,20µm,19.0s
WR7 Warramunga Arr 50.63 82 IAMs_20 IAMs_20 09 16 42.1
comp=Z,17µm,20.0s
WB8 Warramunga Arr 50.64 82 IAMs_20 IAMs_20 09 16 51.6
comp=Z,23µm,19.0s
WR8 Warramunga Arr 50.65 82 IAMs_20 IAMs_20 09 16 41.6
comp=Z,16µm,20.0s
WB9 Warramunga Arr 50.66 82 IAMs_20 IAMs_20 09 16 52.0
comp=Z,24µm,18.0s
WR0 Warramunga Arr 50.67 82 P P 08 57 28.2 -1.6
WR0 IAmb IAmb 08 57 36.8
comp=Z,252nm,1.6s
VNA1 Neumayer--Stat 50.67 206 P P 08 57 29.6 +0.5
WB0 Warramunga Arr 50.68 82 P P 08 57 30.2 +0.3
WB0 IAmb IAmb 08 57 40.8
comp=Z,127nm,0.9s
WB0 IAMs_20 IAMs_20 09 16 43.6
comp=Z,25µm,19.0s
BKSI Bulukumba 50.90 56 P P 08 57 32.9 +1.4
comp=Z,2µmcomp=Z,2µmcomp=Z,82nm,1.1s
KAPI Kappang 50.91 55 P P 08 57 33.0 +1.4
comp=Z,19nm,0.9s,baz=186,slow=2.9,SNR=5.0
KAPI S S 09 04 43.7 -4.8
comp=Z,4.4nm,0.2s,baz=244,slow=10,SNR=2.4
KAPI Kappang 50.91 55 P P 08 57 32.6 +1.0
KAPI pmax pmax
comp=Z,89nm,1.3s
KAPI Kappang 50.91 55 P P 08 57 32.6 +1.0
VNA3 Neumayer Olymp 50.96 205 P P 08 57 31.5 +0.2
KSM Kuching 51.07 40 P P 08 57 30.2 -2.5
KSM Kuching 51.07 40 P P 08 57 35.0 +2.2
BNSI Bone 51.61 55 P P 08 57 39.4 +2.6
comp=Z,2µmcomp=Z,84nm,1.5s
LSZ Lusaka 51.72 285 P P 08 57 39.2 +1.3
LSZ P P 08 57 39.2 +1.3
LSZ S S 09 05 02.2 +2.2
LSZ S S 09 05 02.2 +2.2
LSZ Lusaka 51.72 285 P P 08 57 37.6 -0.2
LSZ pmax pmax
comp=Z,116nm,1.6s
LSZ Lusaka 51.72 285 P P 08 57 37.6 -0.2
LSZ IAmb IAmb 08 57 52.9
comp=Z,116nm,1.6s
LSZ Lusaka 51.72 285 IAMs_20 IAMs_20 09 15 13.0
comp=Z,16µm,21.0s
SPSI Sidrap Palu 51.75 54 P P 08 57 39.1 +1.2
comp=Z,2µmcomp=Z,84nm,1.6s
BKB Balikpapan 52.23 49 IAMs_20 IAMs_20 09 16 20.2
comp=Z,16µm,20.0s
PKDT Phuket 52.24 23 P P 08 57 43.1 +1.6
CMSA Cobar Meteorol 52.49 101 P P 08 57 44.3 +1.1
baz=53,SNR=8.8
TTSI Tana Toraja 52.51 54 P P 08 57 44.7 +1.2
comp=Z,2µmcomp=Z,135nm,1.3s
TRTT Trang 52.60 25 P P 08 57 43.6 -0.5
MTN Manton Dam 52.80 72 P P 08 57 46.8 +1.1
baz=53,SNR=13
MTN Manton Dam 52.80 72 P P 08 57 43.3 -2.4
MTN IAmb IAmb 08 57 58.9
comp=Z,232nm,1.6s
MTN IAMs_20 IAMs_20 09 16 40.6
comp=Z,23µm,20.0s
KRAB Krabi 52.81 24 P P 08 57 56.2 +11
SBUM Sibu 52.85 42 P P 08 57 44.5 -1.6
SBUM IAmb IAmb 08 58 03.0
comp=Z,116nm,1.4s
SBUM Sibu 52.85 42 P P 08 57 47.0 +0.9
CAN Canberra 53.00 107 P P 08 57 47.5 +0.4
CAN pmax pmax
comp=Z,88nm,1.4s
CAN Canberra 53.00 107 P P 08 57 47.5 +0.4
CNB Canberra Magne 53.26 107 P P 08 57 52.2 +3.2
baz=53,SNR=7.0
SURT Suratani 53.38 23 P P 08 57 49.7 -0.1
KDU Kakadu 53.86 73 P P 08 57 53.9 +0.4
baz=54,SNR=9.5
QLP Quilpie 54.05 95 P P 08 57 56.9 +2.1
baz=54,SNR=6.8
QIS Mount Isa 54.07 86 P P 08 57 56.0 +0.9
baz=54,SNR=21
PBA Port Blair 54.48 15 IAMs_20 IAMs_20 09 15 41.6
comp=Z,39µm,21.2s
MDRS Chennai 54.62 0 *eP* P 08 57 57.1 -1.8
MDRS *eS* S 09 05 36.3 -2.5
MDRS IAMs_20 IAMs_20 09 16 54.1
comp=Z,42µm,18.5s
MPSI Mapaga 55.26 51 P P 08 58 11.3 +7.7
SKHT Srikalahasti 55.29 360 *eP* P 08 58 03.8 +0.1
SKHT IVmBBB 08 58 19.5
comp=Z,437nm,2.6s
SKHT *eS* S 09 05 48.6 +0.8
SKHT IVMs_BB IVMs_BB 09 19 18.0
comp=Z,3µm,16.3s
APSI Ampana 55.30 54 P P 08 58 11.9 +8.0
KMBO Kilima Mbogo 55.85 305 P P 08 58 10.5 +2.3
comp=Z,1.5nm,0.5s,baz=130,slow=6.5,SNR=7.2
KMBO S S 09 06 02.2 +6.1
comp=Z,0.9nm,0.3s,baz=135,slow=18,SNR=1.7
KMBO LR LR 09 17 15.5
comp=Z,13µm,19.9s,baz=128,slow=31
DGPR DIGLIPUR 56.00 15 *ex* S 09 06 02.3 +4.9
DGPR IAMs_20 IAMs_20 09 16 47.8
comp=Z,37µm,20.7s
SAUI Saumlaki 56.29 68 P P 08 58 10.9 -0.2
SPMM Sapulut 56.96 45 P P 08 58 19.0 +3.2
TSUM Tsumeb 57.06 273 IAMs_20 IAMs_20 09 18 39.5
comp=Z,27µm,22.0s
SANI Sanana 57.11 59 P P 08 58 17.2 +0.3
comp=Z,145nm,1.1s
GOA Goa 57.31 353 *eP* P 08 58 19.0 +0.9
GOA IAMs_20 IAMs_20 09 17 31.1
comp=Z,26µm,21.9s
GTOI Gorontalo 57.35 54 P P 08 58 20.3 +1.8
comp=Z,2µmcomp=Z,79nm,1.2s
ADKI Addanki 57.38 360 *eP* P 08 58 18.5 0.0
ADKI IVmB_BB 08 58 34.3
comp=Z,535nm,2.7s
ADKI *eS* S 09 06 14.8 -0.7
ADKI IVMs_BB IVMs_BB 09 17 46.6
comp=Z,7µm,20.8s
PHET Kaeng Krachan 57.38 23 P P 08 58 18.2 -0.5
ARMA Armidale 57.41 103 P P 08 58 20.5 +1.5
baz=58,SNR=13
ARMA Armidale 57.41 103 P P 08 58 20.5 +1.5
ARMA IAmb IAmb 08 58 48.3
comp=Z,160nm,1.7s
PATY Pattaya 57.76 24 P P 08 58 23.2 +1.9
NJS Nagarjunasagar 58.09 359 *eP* P 08 58 22.8 -0.8
NJS IVmBBB 08 58 44.8
comp=Z,645nm,2.2s
NJS *eS* S 09 06 24.3 -0.5
NJS IVMs_BB IVMs_BB 09 19 00.2
comp=Z,5µm,19.7s
MYLAV Mylavaram 58.28 1 *eP* P 08 58 24.4 -0.5
MYLAV IVmBBB 08 58 42.4
comp=Z,610nm,2.7s
MYLAV *eS* S 09 06 27.6 +0.2
MYLAV IVMs_BB IVMs_BB 09 16 11.2
comp=Z,4µm,32.1s
MYLDM Lahad Datu 58.44 47 P P 08 58 25.1 -1.1
SRDT SRDT 58.60 22 P P 08 58 28.3 +1.1
PVM Polavaram 58.79 2 *eP* P 08 58 29.2 +0.7
PVM IVmBBB 08 58 44.3
comp=Z,656nm,2.9s
PVM *eS* S 09 06 34.4 +0.4
PVM IVMs_BB IVMs_BB 09 16 22.8
comp=Z,4µm,31.0s
CUPL Choutuppal 58.83 359 *eP* P 08 58 28.3 -0.5
CUPL IVmBBB 08 58 43.9
comp=Z,429nm,2.8s
CUPL *eS* S 09 06 31.7 -2.9
CUPL IVMs_BB IVMs_BB 09 25 47.5
comp=Z,6µm,14.9s
SOCY Socotra 58.86 330 IAMs_20 IAMs_20 09 18 23.2
comp=Z,22µm,18.0s
HYB Hyderabad 58.96 358 *i* P P 08 58 29.0 -0.7
HYB *e*PP PP 09 00 40.0 -0.3
HYB *e*S S 09 06 32.0 -4.2
HYB *e*LR LR
comp=Z,29nm,16.0s
HYB Hyderabad 58.96 358 *eP* P 08 58 29.0 -0.7
HYB IAmb IAmb 08 58 34.0
comp=Z,39nm,1.1s
HYB *i* x x 09 17 45.6
HYB IAMs_20 IAMs_20 09 19 57.5
comp=Z,44µm,17.3s
HYBB Hyderabad (bro 58.96 358 *eP* P 08 58 29.2 -0.5
HYBB IVmBBB 08 58 50.4
comp=Z,529nm,1.9s
HYBB *e*S S 09 06 34.6 -1.7
HYBB IVMs_BB IVMs_BB 09 19 52.7
comp=Z,8µm,18.2s
MTSU Mount Surprise 59.07 87 P P 08 58 32.2 +1.6
baz=59,SNR=12
SRAK Srakaew 59.15 25 P P 08 58 28.8 -2.3
CTA Charters Tower 59.32 90 P P 08 58 33.0 +0.6
comp=Z,24nm,1.1s,baz=240,slow=6.7,SNR=11
CTA S S 09 06 45.5 +4.2
comp=Z,0.8nm,0.3s,baz=65,slow=18,SNR=2.1
CTA LR LR 09 21 44.0
comp=Z,15µm,19.2s,baz=231,slow=34
CTAO Charters Tower 59.32 90 P P 08 58 32.2 -0.2
CTAO pmax pmax
comp=Z,63nm,1.2s
CTAO Charters Tower 59.32 90 P P 08 58 32.2 -0.2
CTAO IAmb IAmb 08 58 54.2
comp=Z,63nm,1.1s
CTAO Charters Tower 59.32 90 IAMs_20 IAMs_20 09 21 22.5
comp=Z,16µm,19.0s
PYZ Puysegur Point 59.46 126 IAMs_20 IAMs_20 09 18 19.6
comp=Z,14µm,20.0s
DLV T Lat 59.57 33 P P 08 58 34.9 +0.7
KLRI Killari 59.67 356 *eP* P 08 58 33.3 -1.4
KLRI IVmB_BB 08 58 49.8
comp=Z,800nm,2.9s
KLRI *eS* S 09 06 44.9 -0.6
KLRI IVMs_BB IVMs_BB 09 19 37.5
comp=Z,7µm,20.2s
EIDS Eidsvold 59.81 98 P P 08 58 37.6 +1.8
baz=60,SNR=3.6
EIDS Eidsvold 59.81 98 P P 08 58 36.0 +0.3
EIDS IAmb IAmb 08 59 03.1
comp=Z,192nm,1.9s
DCZ Deep Cove 60.10 126 IAMs_20 IAMs_20 09 18 34.5
comp=Z,13µm,21.0s
CHLP Challavanipeta 60.14 4 *eP* P 08 58 36.9 -0.8
CHLP IVmB_BB 08 58 53.7
comp=Z,597nm,3.0s
CHLP *eS* S 09 06 50.8 -0.5
CHLP IVMs_BB IVMs_BB 09 20 33.1
comp=Z,6µm,18.6s
TNTI Ternate 60.15 58 P P 08 58 36.5 -1.6
POO Poona 60.32 353 IAMs_20 IAMs_20 09 19 23.8
comp=Z,31µm,21.3s
RPR Rampur 60.38 359 *eP* P 08 58 38.7 -0.7
RPR IVmBBB 08 58 48.2
comp=Z,355nm,4.4s
RPR *eS* S 09 06 51.6 -2.8
RPR IVMs_BB IVMs_BB 09 19 56.4
comp=Z,4µm,18.7s
LODK Lodwar 60.59 306 P P 08 58 44.1 +2.9
SNR=5.6
FAKI Fak Fak 60.59 65 P P 08 58 47.9 +6.8
comp=Z,3µmcomp=Z,106nm,1.7s
FAKI Fak Fak 60.59 65 P P 08 58 39.5 -1.6
MLZ Mavora Lakes 60.73 126 IAMs_20 IAMs_20 09 18 56.3
comp=Z,15µm,21.0s
CHAI Chaiyaphum 60.91 24 P P 08 58 43.6 +0.4
SIJI Sorong 61.44 63 P P 08 58 47.7 +0.8
comp=Z,15nm,0.8s,baz=276,slow=2.9,SNR=9.3
SIJI LR LR 09 26 07.3
comp=Z,2µm,18.1s,baz=226,slow=37
UBPT Khong Chiam 61.48 28 P P 08 58 40.1 -6.8
UBPT Khong Chiam 61.48 28 P P 08 58 45.3 -1.6
WKZ Wanaka 61.56 126 IAMs_20 IAMs_20 09 19 29.1
comp=Z,18µm,21.0s
PHIT Phitsanulok 61.66 22 P P 08 58 48.7 +0.5
SUKH Sukhothai 61.73 21 P P 08 58 49.5 +0.9
MHMT Maesarieng 61.95 19 P P 08 58 50.9 +0.8
LHI Lord Howe Isla 62.15 109 IAMs_20 IAMs_20 09 19 14.1
comp=Z,19µm,22.0s
UTTA Uttaradit 62.23 22 P P 08 58 51.8 -0.2
ODZ Otahua Downs 62.42 127 IAMs_20 IAMs_20 09 20 10.9
comp=Z,14µm,20.0s
CM05 Chiang Mai Arr 62.42 20 P P 08 58 52.9 -0.4
CM04 Chiang Mai Arr 62.43 20 P P 08 58 53.3 -0.1
CM13 Chiang Mai Arr 62.43 20 P P 08 58 53.2 -0.2
CM01 Chiang Mai Arr 62.44 20 P P 08 58 53.5 +0.1
CM02 Chiang Mai Arr 62.45 20 P P 08 58 52.7 -0.8
CM15 Chiang Mai Arr 62.47 20 P P 08 58 53.9 +0.3
CM09 Chiang Mai Arr 62.48 20 P P 08 58 53.7 0.0
CM31 Chiang Mai Arr 62.48 20 P P 08 58 53.6 0.0
CM31 P P 08 58 53.6 0.0
CM31 Chiang Mai Arr 62.48 20 P P 08 58 53.2 -0.4
CM31 IAmb IAmb 08 58 55.7
comp=Z,66nm,1.1s
CMAR Chiang Mai Arr 62.48 20 P P 08 58 53.4 -0.3
comp=Z,23nm,1.0s,baz=211,slow=6.3,SNR=63
CMAR LR LR 09 21 24.0
comp=Z,22µm,21.5s,baz=251,slow=32
CMAR Chiang Mai Arr 62.48 20 *ce* P P 08 58 53.7 +0.1
CMAR pmax pmax
comp=Z,31nm,1.1s
CMAR Chiang Mai Arr 62.48 20 P P 08 58 52.5 -1.2
LBZ Lake Benmore 62.50 126 IAMs_20 IAMs_20 09 20 08.0
comp=Z,19µm,20.0s
CHTO Chiang Mai 62.82 20 P P 08 58 55.2 -0.7
CHTO pmax pmax
comp=Z,64nm,1.5s
CHTO Chiang Mai 62.82 20 P P 08 58 55.2 -0.7
CHTO IAmb IAmb 08 58 57.7
comp=Z,64nm,1.5s
CHTO Chiang Mai 62.82 20 IAMs_20 IAMs_20 09 21 22.3
comp=Z,20µm,21.0s
CMMT Chiang Mai 62.82 20 P P 08 58 55.6 -0.4
NONG Nongkai 63.30 25 P P 08 58 60.0 +0.8
RPZ Rata Peaks 63.39 126 LR LR 09 20 44.1
comp=Z,13µm,21.7s,baz=234,slow=31
RPZ Rata Peaks 63.39 126 IAMs_20 IAMs_20 09 20 22.6
comp=Z,13µm,22.0s
PAYA Payao 63.58 21 P P 08 58 50.9 -10
DMTO DMTO 63.63 333 P P 08 59 01.5 +0.2
SNR=8.9
DMTO P P 08 59 01.5 +0.2
SNR=8.9
DMTO S S 09 07 38.0 +2.4
DMTO S S 09 07 38.0 +2.4
RBK Rabkut 63.68 332 P P 08 59 04.7 +2.9
SNR=10
RBK P P 08 59 04.7 +2.9
SNR=10
RBK S S 09 07 36.3 0.0
RBK S S 09 07 36.3 0.0
SHAO Shalim 63.69 334 P P 08 59 02.7 +1.0
SNR=7.0
SHAO P P 08 59 02.7 +1.0
SNR=7.0
SHAO S S 09 07 35.3 -1.0
SHAO S S 09 07 35.3 -1.0
ABTO Aybut 63.87 331 P P 08 59 02.7 -0.3
SNR=6.8
ABTO P P 08 59 02.7 -0.3
SNR=6.8
DAV Davao City (W) 64.00 52 LR LR 09 24 59.3
comp=Z,5µm,19.6s,baz=204,slow=34
WHFO Wadi Hawf 64.22 332 P P 08 59 04.9 -0.4
SNR=12
WHFO P P 08 59 04.9 -0.4
SNR=12
WHFO S S 09 07 40.4 -2.6
WHFO S S 09 07 40.4 -2.6
MQZ McQueen's Vall 64.36 127 IAMs_20 IAMs_20 09 21 17.3
comp=Z,14µm,21.0s
BHPL Bhopal 64.78 357 *eP* P 08 59 10.0 +1.2
BHPL *ex* x 09 07 55.1
BHPL IAMs_20 IAMs_20 09 21 37.2
comp=Z,17µm,23.8s
DQM DQM 64.88 337 P P 08 59 09.6 +0.1
SNR=23
DAMY Dhamar 65.04 322 P P 08 59 14.1 +3.1
SNR=16
BHUJ Bhuj 65.46 349 *eP* P 08 59 14.5 +1.3
BHUJ *ex* x 09 08 12.6
BHUJ IAMs_20 IAMs_20 09 19 42.5
comp=Z,28µm,31.3s
BOK Bokaro 65.51 6 *eP* P 08 59 13.6 +0.1
BOK IAMs_20 IAMs_20 09 20 19.9
comp=Z,37µm,28.1s
BELO BELONIA 65.60 12 *eP* P 08 59 14.7 +0.7
BELO *ex* x 09 07 60.0
THZ Tophouse 65.61 125 IAMs_20 IAMs_20 09 21 24.5
comp=Z,11µm,21.0s
MHTO MHTO 65.75 337 P P 08 59 14.6 -0.5
SNR=22
MHTO P P 08 59 14.6 -0.5
SNR=22
MHTO S S 09 07 59.9 -1.8
MHTO S S 09 07 59.9 -1.8
QRZ Quartz Range 65.92 124 IAMs_20 IAMs_20 09 21 28.6
comp=Z,14µm,21.0s
AGT Agartala 66.19 11 *eP* P 08 59 19.0 +1.1
AGT *ex* x 09 08 08.4
AGT IAMs_20 IAMs_20 09 21 32.1
comp=Z,14µm,27.3s
NNZ Nelson 66.22 125 IAMs_20 IAMs_20 09 21 51.5
comp=Z,12µm,20.0s
JLN Jalan Bani Buh 66.46 339 P P 08 59 19.3 -0.4
SNR=8.4
QIZ Qiongzhong 66.53 31 P P 08 59 20.7 +0.5
QIZ S S 09 08 12.6 +1.3
QIZ SS SS 09 12 31.5 +2.7
QIZ pmax pmax
comp=Z,830nm,14.5s
QIZ LR LR
comp=Z,13µm,21.1s
QIZ LR LR
comp=Z,7µm,19.6s
QIZ LR LR
comp=Z,17µm,21.1s
QIZ Qiongzhong 66.53 31 IAMs_20 IAMs_20 09 25 08.4
comp=Z,21µm,20.0s
SLVN Son La 66.61 24 P P 08 59 18.9 -1.8
SLVN IAmb IAmb 08 59 58.5
comp=Z,64nm,1.6s
SLVN IAMs_20 IAMs_20 09 25 32.9
comp=Z,21µm,19.0s
PMG Port Moresby 66.75 82 P P 08 59 21.7 -0.1
comp=Z,38nm,0.8s,baz=238,slow=4.5,SNR=7.3

PMG LR LR 09 27 18.8
comp=Z,31µm,18.0s,baz=224,slow=35
PMG Port Moresby 66.75 82 P **P** **08 59 21.9 0.0**
PMG pmax pmax
comp=Z,147nm,1.1s
PMG Port Moresby 66.75 82 P **P** **08 59 21.9 0.0**
SNZO South Karori 66.97 125 IAMs_20 IAMs_20 09 22 51.5
comp=Z,10µm,20.0s
WBK Wadi Bani Khal 67.01 339 P **P** **08 59 25.0 +1.8**
SNR=6.9
WBK P **P** **08 59 25.0 +1.8**
SNR=6.9
SILR SILCHAR 67.31 13 *e*S **S** **09 08 22.4 +1.9**
BSY Bisya 67.64 337 P **P** **08 59 29.6 +2.4**
SNR=11
SMDO Samad 67.69 338 P **P** **08 59 27.8 +0.2**
SNR=12
WSAR Wadi Sarin 67.70 339 P **P** **08 59 27.5 -0.1**
comp=Z,16nm,1.0s,baz=167,slow=7.9,SNR=9.1
WSAR Wadi Sarin 67.70 339 P **P** **08 59 27.5 -0.1**
SNR=7.9
SHL Shillong 67.94 12 *e*P **P** **08 59 29.1 -0.2**
SHL *ex* x 09 08 22.4
SHL Shillong 67.94 12 P **P** **08 59 29.9 +0.7**
SNR=33
SHL Shillong 67.94 12 P **P** **08 59 29.0 -0.2**
SHL pmax pmax
comp=Z,178nm,1.5s
SHL Shillong 67.94 12 P **P** **08 59 29.0 -0.2**
BFZ Birch Farm 68.29 126 IAMs_20 IAMs_20 09 24 04.3
comp=Z,11µm,19.0s
GUWA GUWAHATI 68.53 11 *e*P **P** **08 59 31.6 -1.0**
GUWA *ex* x 09 08 37.8
MOKO MOKOCHONG 69.11 14 *e*P **P** **08 59 33.5 -3.0**
MOKO *ex* x 09 08 35.5
GTK Tadong 69.25 8 *e*P **P** **08 59 37.4 +0.1**
GTK IAmb IAmb 08 59 40.5
comp=Z,66nm,1.3s
BKZ Black Stump Fm 69.35 124 P P 08 59 42.3 +4.4
BKZ IAmb IAmb 08 59 51.0
comp=Z,86nm,1.1s
BKZ IAMs_20 IAMs_20 09 23 52.0
comp=Z,12µm,21.0s
JORH JORHAT 69.48 14 *ex* **S** **09 08 48.6 +2.4**
KMI Kunming 69.85 22 ⇓*i*P **P** **08 59 42.4 +1.3**
KMI pP pwP 08 59 45.6 -1.2
KMI S **S** **09 08 49.6 -1.5**
KMI sS sS 09 08 57.2 +3.9
KMI SS **SS** **09 13 17.2 -3.3**
KMI pmax pmax
comp=Z,34nm,1.1s
KMI pmax pmax
comp=Z,600nm,3.8s
KMI LR LR
comp=Z,12µm,18.3s
KMI LR LR
comp=Z,8µm,17.8s
KMI LR LR
comp=Z,16µm,19.6s
KMI Kunming 69.85 22 IAMs_20 IAMs_20 09 27 07.0
comp=Z,17µm,20.0s
HOPE Hope Point 69.98 214 IAMs_20 IAMs_20 09 24 19.1
comp=Z,16µm,21.0s
UOSS Minazif 70.00 337 IAMs_20 IAMs_20 09 25 14.4
comp=Z,10µm,18.0s
PMSA Palmer Station 70.07 196 IAMs_20 IAMs_20 09 29 11.4
comp=Z,22µm,22.0s
ZIRO ZIRO 70.17 13 *e*P **P** **08 59 42.7 -0.4**
URZ Urewera 70.29 124 LR LR 09 25 06.3
comp=Z,11µm,20.0s,baz=228,slow=31
URZ Urewera 70.29 124 P **P** **08 59 45.0 +1.4**
URZ IAMs_20 IAMs_20 09 24 55.3
comp=Z,11µm,20.0s
LKP Lekhapani 70.35 15 *e*P **P** **08 59 43.9 0.0**
LKP *ex* x 09 08 55.2
HKPS Hong Kong Po S 71.16 33 IAMs_20 IAMs_20 09 26 07.3
comp=Z,13µm,20.0s
MXZ Matakaoa Point 71.46 124 IAMs_20 IAMs_20 09 25 43.4
comp=Z,13µm,20.0s
GZH Guangzhou 71.56 32 *e*P P 08 59 58.0 +6.7
GZH S **SKiKP** **09 09 21.0 -10**
GZH SS SS 09 14 00.4 +14
GZH LR LR
comp=Z,12µm,21.1s
GZH LR LR
comp=Z,8µm,19.9s
DDI Dehra Dun 71.81 358 *e*P **P** **08 59 52.6 -0.2**
DDI *ex* x 09 09 11.4
LSA Lhasa 71.90 10 P **P** **08 59 54.0 +0.1**
LSA pP **pwP** **09 00 00.4 +0.8**
LSA S S 09 09 03.6 -12
LSA pmax pmax
comp=Z,100nm,1.7s
LSA Lhasa 71.90 10 P **P** **08 59 52.3 -1.6**
LSA pmax pmax
comp=Z,81nm,1.4s
LSA Lhasa 71.90 10 P **P** **08 59 52.3 -1.6**
LSA IAmb IAmb 09 00 29.5
comp=Z,81nm,1.4s
GYA Guiyang 72.27 25 ⇑P **P** **08 59 56.0 +0.3**
GYA sP pwP 09 00 03.4 +2.0
GYA PP **PP** **09 02 35.5 -1.2**
GYA S **S** **09 09 18.8 -0.1**
GYA SS **SS** **09 13 51.4 -6.1**
GYA pmax pmax
comp=Z,29nm,1.3s
GYA pmax pmax
comp=Z,890nm,4.3s
GYA LR LR
comp=Z,10µm,24.2s
GYA LR LR
comp=Z,4µm,19.4s
GYA LR LR
comp=Z,16µm,25.4s
RAYN Ar Rayn 72.45 327 P **P** **08 59 57.1 +0.3**
RAYN pmax pmax
comp=Z,165nm,1.9s
RAYN Ar Rayn 72.45 327 P **P** **08 59 57.1 +0.3**
RAYN IAmb IAmb 09 00 55.1
comp=Z,165nm,1.9s
RAYN IAMs_20 IAMs_20 09 26 59.4
comp=Z,12µm,19.0s
BHK Bhakra 72.95 357 *ex* **P** **09 00 03.2 +3.7**
DZM Mont Dzumac 73.04 105 P **P** **08 59 58.9 -1.6**
comp=Z,5.3nm,0.9s,baz=243,slow=2.3,SNR=2.2
KRVT Keravat (AS076 73.73 81 P **P** **09 00 04.3 -0.3**
comp=Z,13nm,0.5s,baz=62,slow=17,SNR=3.5
KRVT LR LR 09 30 39.5
comp=Z,14µm,19.9s,baz=221,slow=34
DHRM DHARAMSHALA 73.79 357 *e*P **P** **09 00 04.1 -0.6**
RABL Rabaul 73.91 81 IAMs_20 IAMs_20 09 30 24.2
comp=Z,13µm,19.0s
NIL Nilore 75.36 354 P **P** **09 00 12.6 -1.0**
NIL pmax pmax
comp=Z,112nm,1.6s
NIL Nilore 75.36 354 P **P** **09 00 12.6 -1.0**
NIL IAmb IAmb 09 00 28.3
comp=Z,112nm,1.6s
NIL Nilore 75.36 354 IAMs_20 IAMs_20 09 27 56.5
comp=Z,21µm,22.0s
QZH Quanzhou 75.40 36 *e*P **P** **09 00 16.0 +2.1**
QZH S **S** **09 09 56.2 +2.1**
QZH LR LR
comp=Z,2µm,13.7s
QZH LR LR
comp=Z,4µm,15.2s
QZH LR LR
comp=Z,4µm,14.7s
SSLB Suanglung 75.47 38 P **P** **09 00 11.6 -2.8**
CD2 Chengdu 75.61 21 P **P** **09 00 14.8 -0.3**
CD2 pP sP 09 00 18.9 +2.0
CD2 PcP **PcP** **09 00 25.1 -2.8**
CD2 S **S** **09 09 54.7 -1.6**
CD2 SKS **SKKSac** **09 10 24.6 -1.0**
CD2 SS **SS** **09 14 50.6 +2.4**
CD2 pmax pmax
comp=Z,70nm,0.6s
CD2 pmax pmax
comp=Z,850nm,6.3s
CD2 LR LR
comp=Z,24µm,23.1s
CD2 LR LR
comp=Z,12µm,17.8s
CD2 LR LR
comp=Z,26µm,22.8s

HNR Honiara 76.26 90 P **P** **09 00 19.1 -0.1**
comp=Z,32nm,0.3s,baz=256,slow=4.2,SNR=3.1
HNR LR LR 09 30 57.2
comp=Z,7µm,20.8s,baz=234,slow=33
HNR Honiara 76.26 90 P **P** **09 00 18.9 -0.4**
HNR pmax pmax
comp=Z,130nm,0.8s
HNR Honiara 76.26 90 P **P** **09 00 18.9 -0.4**
KBL Kabul 76.66 351 P **P** **09 00 20.2 -1.0**
KBL pmax pmax
comp=Z,123nm,1.1s
KBL Kabul 76.66 351 P **P** **09 00 20.2 -1.0**
KBL IAmb IAmb 09 00 31.7
comp=Z,123nm,1.1s
ENH Enshi 76.71 26 P **P** **09 00 21.0 -0.3**
ENH IAmb IAmb 09 00 26.4
comp=Z,93nm,1.4s
ENH IAMs_20 IAMs_20 09 30 25.2
comp=Z,13µm,21.0s
SANVU Saraoutou 77.79 100 IAMs_20 IAMs_20 09 31 32.6
comp=Z,16µm,20.0s
WHN Wuhan 78.66 30 ⇓P **P** **09 00 32.8 +0.7**
WHN S **S** **09 10 30.4 +1.1**
WHN pmax pmax
comp=Z,88nm,1.2s
WHN LR LR
comp=Z,29µm,17.1s
WHN LR LR
comp=Z,24µm,22.5s
WHN LR LR
comp=Z,48µm,19.4s
MG01 Puerto William 79.74 198 IAMs_20 IAMs_20 09 35 07.0
comp=Z,12µm,20.0s
XAN Xi'an 80.02 24 P **P** **09 00 38.8 -0.8**
XAN sP PcP 09 00 45.7 -1.3
XAN PP **PP** **09 03 42.2 +0.3**
XAN S **S** **09 10 41.1 -2.7**
XAN ScS **SKKSac** **09 10 59.5 +0.7**
XAN SS **SS** **09 15 54.6 0.0**
XAN pmax pmax
comp=Z,54nm,1.4s
XAN pmax pmax
comp=Z,990nm,8.6s
XAN LR LR
comp=Z,2µm,21.2s
XAN LR LR
comp=Z,12µm,20.0s
XAN LR LR
comp=Z,17µm,26.0s
XAN Xi'an 80.02 24 P **P** **09 00 38.0 -1.6**
XAN pmax pmax
comp=Z,53nm,1.0s
XAN Xi'an 80.02 24 P **P** **09 00 38.0 -1.6**
XAN Xi'an 80.02 24 IAMs_20 IAMs_20 09 33 15.4
comp=Z,10µm,20.0s
LZH Lanzhou 80.54 19 *e*P **P** **09 00 42.4 -0.1**
LZH pP PcP 09 00 49.2 -0.1
LZH sP pwP 09 00 53.1 +4.9
LZH S **S** **09 10 46.3 -3.2**
LZH SS **SS** **09 16 01.7 -0.9**
LZH pmax pmax
comp=Z,38nm,1.2s
LZH pmax pmax
comp=Z,690nm,6.0s
LZH LR LR
comp=Z,10µm,16.2s
LZH LR LR
comp=Z,9µm,15.0s
LZH LR LR
comp=Z,10µm,17.2s
CHGR Chuyangaron 80.71 351 IAmb IAmb 09 00 53.0
comp=Z,106nm,1.2s
KSH Kashi 81.05 357 P **P** **09 00 40.8 -4.2**
KSH sP pwP 09 00 49.4 -1.4
KSH PP **PP** **09 03 46.7 -3.8**
KSH S **S** **09 10 46.7 -7.8**
KSH pmax pmax
comp=Z,76nm,1.2s
KSH pmax pmax
comp=Z,1µm,4.7s
KSH LR LR
comp=Z,6µm,14.3s
KSH LR LR
comp=Z,6µm,14.3s
KSH LR LR
comp=Z,8µm,14.9s
NJ2 Nanjing 81.74 33 *e*P **P** **09 00 49.1 +0.4**
NJ2 sP **pwP** **09 00 54.5 0.0**
NJ2 S **S** **09 11 02.4 +0.7**
NJ2 pmax pmax
comp=Z,29nm,0.9s
NJ2 pmax pmax
comp=Z,850nm,3.7s
NJ2 LR LR
comp=Z,8µm,20.8s
NJ2 LR LR
comp=Z,4µm,18.9s
NJ2 LR LR
comp=Z,12µm,24.6s
ASHT Ashkhabad 81.81 343 IAMs_20 IAMs_20 09 32 38.1
comp=Z,11µm,20.0s
GEYT Alibeck 81.86 343 P **P** **09 00 50.2 +1.0**
comp=Z,4.6nm,0.7s,baz=183,slow=3.0,SNR=7.4
GEYT LR LR 09 32 59.7
comp=Z,13µm,19.1s,baz=170,slow=33
GEYT Alibeck 81.86 343 P **P** **09 00 48.9 -0.4**
GYA0B ALIBECK ARRAY 81.86 343 P **P** **09 00 48.5 -0.8**
GYA0B IAmb IAmb 09 01 12.8
comp=Z,107nm,1.6s
GYA0B IAMs_20 IAMs_20 09 32 38.4
comp=Z,15µm,20.0s
SSE Sheshan 81.87 35 P **P** **09 00 49.7 +0.3**
SSE S **S** **09 11 02.0 -1.1**
SSE SS **SS** **09 16 26.4 +4.2**
SSE pmax pmax
comp=Z,12nm,0.8s
SSE pmax pmax
comp=Z,150nm,3.9s
SSE LR LR
comp=Z,2µm,16.0s
SSE Sheshan 81.87 35 IAMs_20 IAMs_20 09 37 04.0
comp=Z,4µm,20.0s
BTK Batken 81.93 353 IAmb IAmb 09 01 19.8
comp=Z,161nm,1.4s
EIL Elat 82.41 322 P **P** **09 00 54.5 +2.2**
comp=Z,34nm,1.2s,baz=341,slow=1.6,SNR=7.5
GTA Gaotai 82.83 15 *e*P **P** **09 00 54.5 +0.1**
GTA pP pwP 09 00 59.2 -1.0
GTA sP PcP 09 01 02.1 +2.9
GTA S **S** **09 11 10.7 -2.2**
GTA sS SKKSac 09 11 20.8 +0.8
GTA SS **SS** **09 16 38.5 +1.9**
GTA pmax pmax
comp=Z,24nm,1.1s
GTA pmax pmax
comp=Z,870nm,9.2s
GTA LR LR
comp=Z,8µm,19.5s
GTA LR LR
comp=Z,6µm,16.7s
GTA LR LR
comp=Z,9µm,18.7s
ASF Jabal al Asfar 83.66 324 P **P** **09 01 00.8 +2.0**
comp=Z,18nm,0.9s,baz=68,slow=3.0,SNR=8.4
ULHL Ulaho 83.76 357 P **P** **09 00 59.8 +0.5**
SNR=18
IUG Iuzhnay 84.08 353 *e*P **P** **09 01 01.1 +0.3**
IUG comp=Z,45nm,2.6s,baz=352 *e*S **SKSac** **09 11 23.4 -0.6**
baz=352
IUG Iuzhnay 84.08 353 *e*P **P** **09 01 01.0 +0.3**
IUG *e*S **SKSac** **09 11 23.4 -0.6**
IUG pmax pmax
comp=Z,45nm,2.6s
MSVF Nonsavu 84.15 108 IAMs_20 IAMs_20 09 30 03.9
comp=Z,9µm,22.0s
GO09 Cerro Castillo 84.21 197 IAMs_20 IAMs_20 09 36 51.1
comp=Z,12µm,21.0s
KBK Karagaybulak 84.22 356 P **P** **09 01 02.4 +0.8**
SNR=6.3
AAK Ala-Archa 84.23 356 P **P** **09 01 02.2 +0.6**
SNR=7.8
EKS2 Erkin-Say 84.29 355 P **P** **09 01 02.4 +0.5**
SNR=9.7
TKM2 Tokmak 2 84.46 357 P **P** **09 01 02.9 +0.1**
SNR=8.4

SATY Saty 84.51 359 *i*P **P** **09 01 02.5 -0.5**
comp=Z,23nm,1.2s,baz=359
SATY Saty 84.51 359 *i*P **P** **09 01 02.5 -0.5**
SATY pmax pmax
comp=Z,23nm,1.2s
CHMS Chumysh 84.57 356 P **P** **09 01 03.6 +0.4**
SNR=8.4
SHLS Shalkode 84.60 360 *e*P **P** **09 01 03.4 -0.1**
comp=Z,43nm,1.6s,baz=360
SHLS *e*S **SKSac** **09 11 26.3 -1.1**
baz=360
SHLS Shalkode 84.60 360 *e*P **P** **09 01 03.3 -0.1**
SHLS *e*S **SKSac** **09 11 26.3 -1.1**
SHLS pmax pmax
comp=Z,43nm,1.6s
MDOK Medeo 84.65 358 *e*P **P** **09 01 03.3 -0.4**
baz=358
MDOK *e*S **SKSac** **09 11 26.6 -1.2**
baz=358
MDOK Medeo 84.65 358 *e*P **P** **09 01 03.3 -0.4**
MDOK *e*S **SKSac** **09 11 26.6 -1.2**
AAA Alma-Ata 84.70 358 *e*P **P** **09 01 03.7 -0.2**
baz=358
AAA *e*S **SKSac** **09 11 27.0 -1.0**
baz=358
AAA Alma-Ata 84.70 358 *e*P **P** **09 01 03.6 -0.2**
AAA *e*S **SKSac** **09 11 26.9 -1.0**
DZA Taraz 84.70 354 *e*P **P** **09 01 03.5 -0.3**
baz=353
DZA Biraz 84.70 354 *e*P **P** **09 01 03.5 -0.3**
TIA Tai'an 84.75 29 P **P** **09 01 03.8 -0.4**
TIA S **S** **09 11 29.9 -2.2**
TIA pmax pmax
comp=Z,23nm,1.0s
TIA pmax pmax
comp=Z,440nm,3.8s
TIA LR LR
comp=Z,14µm,18.6s
TIA LR LR
comp=Z,6µm,18.6s
TIA LR LR
comp=Z,22µm,19.6s
USP Ospenovka 84.86 356 P **P** **09 01 04.6 0.0**
SNR=11
KPKS Kokpek 84.92 359 *e*P **P** **09 01 04.1 -0.8**
baz=359
KPKS Kokpek 84.92 359 *e*P **P** **09 01 04.1 -0.8**
KK31 Karatay Array 84.98 353 P **P** **09 01 04.9 -0.3**
KK31 pmax pmax
comp=Z,54nm,1.1s
KK31 Karatay Array 84.98 353 P **P** **09 01 04.9 -0.3**
KK31 IAmb IAmb 09 01 14.7
comp=Z,54nm,1.1s
KKAR Karatay Array 84.98 353 P **P** **09 01 05.1 -0.1**
KKAR pmax pmax
comp=Z,54nm,1.1s
KKAR Karatay Array 84.98 353 P **P** **09 01 05.1 -0.1**
KKAR IAmb IAmb 09 01 14.8
comp=Z,54nm,1.1s
SGDS Sogindy 85.03 356 *i*P **P** **09 01 04.9 -0.6**
comp=Z,19nm,1.7s,baz=356
SGDS *e*S **SKSac** **09 11 28.6 -1.5**
baz=356
SGDS Sogindy 85.03 356 *i*P **P** **09 01 04.9 -0.6**
SGDS *e*S **SKSac** **09 11 28.5 -1.5**
SGDS pmax pmax
comp=Z,19nm,1.7s
MMAI Mount Meron Ar 85.03 324 P **P** **09 01 07.0 +1.2**
comp=Z,16nm,0.9s,baz=145,slow=3.0,SNR=8.3
KUU Kurty 85.40 357 *e*P **P** **09 01 06.9 -0.4**
comp=Z,84nm,1.9s,baz=357
KUU Kurty 85.40 357 *e*P **P** **09 01 06.8 -0.4**
KUU pmax pmax
comp=Z,84nm,1.9s
WMQ Urumqi 85.54 6 *e*P **P** **09 01 08.3 +0.3**
WMQ pP sP 09 01 10.7 +0.8
WMQ sP pwP 09 01 16.6 +2.8
WMQ PP **PP** **09 04 26.7 -0.5**
WMQ S **S** **09 11 36.5 -3.2**
WMQ SS **SS** **09 17 14.6 -1.8**
WMQ pmax pmax
comp=Z,33nm,1.3s
WMQ pmax pmax
comp=Z,810nm,4.7s
WMQ LR LR
comp=Z,14µm,22.5s
WMQ LR LR
comp=Z,11µm,20.3s
WMQ LR LR
comp=Z,22µm,26.5s
WMQ Urumqi 85.54 6 IAMs_20 IAMs_20 09 39 39.8
comp=Z,11µm,18.0s
BTO Baotou 86.43 22 *e*P **P** **09 01 12.6 0.0**
TDK Taldyqorghan 86.45 359 *e*P **P** **09 01 11.7 -0.8**
baz=359
TDK Taldyqorghan 86.45 359 *e*P **P** **09 01 11.6 -0.8**
BTLS Baital 86.65 356 *e*P **P** **09 01 12.9 -0.5**
comp=Z,31nm,1.6s,baz=356
BTLS Baital 86.65 356 *e*P **P** **09 01 12.9 -0.5**
BTLS pmax pmax
comp=Z,31nm,1.6s
HHC Hu-ho-hao-te 87.11 23 *e*P **P** **09 01 14.5 -1.4**
HHC S **S** **09 11 52.5 -2.7**
HHC pmax pmax
comp=Z,18nm,0.7s
HHC pmax pmax
comp=Z,290nm,6.6s
HHC LR LR
comp=Z,14µm,21.1s
HHC LR LR
comp=Z,8µm,19.5s
HHC LR LR
comp=Z,17µm,20.8s
CSS Mathiatis 87.60 323 IAMs_20 IAMs_20 09 37 14.4
comp=Z,11µm,19.0s
GAZ Gaziantep 87.81 327 IAMs_20 IAMs_20 09 38 09.2
comp=Z,9µm,18.0s
BJT Baijiatuao 87.82 27 P **P** **09 01 17.3 -1.9**
BJT pmax pmax
comp=Z,13nm,0.9s
BJT Baijiatuao 87.82 27 P **P** **09 01 17.3 -1.9**
BJT Baijiatuao 87.82 27 IAMs_20 IAMs_20 09 36 59.0
comp=Z,10µm,21.0s
BJI Beijing 87.84 27 P **P** **09 01 19.3 +0.1**
BJI S **S** **09 12 04.1 +2.1**
BJI pmax pmax
comp=Z,13nm,1.2s
BJI LR LR
comp=Z,6µm,23.0s
BJI LR LR
comp=Z,7µm,20.6s
BJI LR LR
comp=Z,10µm,22.4s
JNU Nakatsue 88.00 41 P **P** **09 01 20.8 +0.5**
comp=Z,10.0nm,0.8s,baz=200,slow=15,SNR=3.2
MK31 Makanchi Array 88.26 2 *e*P **P** **09 01 19.8 -1.3**
MK31 Makanchi Array 88.26 2 P **P** **09 01 19.8 -1.3**
MK31 IAmb IAmb 09 01 39.9
comp=Z,52nm,1.6s
MKAR Makanchi Array 88.26 2 P **P** **09 01 20.6 -0.5**
comp=Z,2.3nm,0.8s,baz=179,slow=4.9,SNR=21
MKAR LR LR 09 38 30.5
comp=Z,15µm,20.5s,baz=180,slow=34
MKAR Makanchi Array 88.26 2 P **P** **09 01 19.2 -2.0**
MAKZ Makanchi 88.27 1 P **P** **09 01 19.0 -2.2**
MAKZ pmax pmax
comp=Z,73nm,1.6s
MAKZ Makanchi 88.27 1 P **P** **09 01 19.0 -2.2**
MAKZ IAmb IAmb 09 01 40.0
comp=Z,73nm,1.6s
JTU Tsushima 88.44 39 IAMs_20 IAMs_20 09 42 08.5
comp=Z,4µm,20.0s
DL2 Dalian 88.82 31 *e*P **P** **09 01 22.8 -1.1**
DL2 PP **PP** **09 04 54.5 +0.9**
DL2 S **S** **09 12 09.2 -2.1**
DL2 SS **SS** **09 18 00.7 -3.6**
DL2 pmax pmax
comp=Z,40nm,1.3s
DL2 LR LR
comp=Z,4µm,18.1s
DL2 LR LR
comp=Z,4µm,19.5s
DL2 LR LR
comp=Z,7µm,24.6s
ZSN Zaisan 88.99 3 *e*P **P** **09 01 24.2 -0.4**
baz=3.1

ZSN Zaisan 88.99 3 *eP* **P 09 01 24.2 -0.4**
MAK Makhachkala 89.35 337 *eP* **P 09 01 21.7 -4.6**
MAK *e* 09 11 48.5
MAK *eSS* SS 09 18 04.8 -7.1
MAK pmax pmax
comp=Z,222nm,1.2s
MAK MLR MLR
comp=Z,4μm,18.0s
INCN Inchon 89.65 35 IAMs_20 IAMs_20 09 46 16.8
comp=Z,5μm,18.0s
KSAR Wonju Array Be 90.17 36 P **P 09 01 29.5 -0.8**
KSAR Wonju Array Be 90.17 36 P **P 09 01 29.5 -0.8**
TORD Torodi Ar. Bea 90.18 287 P **P 09 01 31.7 +0.8**
comp=Z,2.0nm,0.7s,baz=111,slow=4.4,SNR=11
TORD PP PP 09 04 49.6 -15
comp=Z,1.1nm,0.8s,baz=138,slow=7.0,SNR=3.7
TORD LR LR 09 39 45.3
comp=Z,26μm,20.3s,baz=120,slow=34
TORD Torodi Ar. Bea 90.18 287 P **P 09 01 30.3 -0.6**
KSRS Korea Array 90.19 36 P **P 09 01 30.2 -0.2**
comp=Z,5.0nm,0.8s,baz=212,slow=5.1,SNR=11
KSRS LR LR 09 41 04.5
comp=Z,3μm,19.4s,baz=232,slow=35
KIC Kosan Boka 90.32 278 *eP* **P 09 01 33.6 +1.9**
comp=Z,49nm,1.4s
LIC Lamto 90.44 278 *eP* **P 09 01 33.4 +1.2**
comp=Z,86nm,1.4s
DBIC Dimbokro 90.61 278 P **P 09 01 32.3 -0.7**
comp=Z,4.6nm,1.1s,baz=90,slow=2.0,SNR=2.6
DBIC LR LR 09 38 02.5
comp=Z,14μm,20.1s,baz=120,slow=33
DBIC Dimbokro 90.61 278 P **P 09 01 31.9 -1.1**
DBIC pmax pmax
comp=Z,44nm,1.4s
DBIC Dimbokro 90.61 278 P **P 09 01 31.9 -1.1**
DBIC IAmb IAmb 09 01 47.0
comp=Z,44nm,1.4s
JHS Saijyo 90.61 41 IAMs_20 IAMs_20 09 49 33.7
comp=Z,3μm,18.0s
TIC Toumodi 90.72 278 *eP* **P 09 01 36.7 +3.2**
DGZ Jazzator, Alta 91.37 5 *i P* **P 09 01 36.6 +0.8**
DGZ pmax pmax
comp=Z,13nm,1.6s
BR131 Keskin Array S 91.46 326 P **P 09 01 36.4 0.0**
BR131 pmax pmax
comp=Z,15nm,1.1s
BR131 Keskin Array S 91.46 326 P **P 09 01 36.4 0.0**
BRTR Keskin Array B 91.46 326 P **P 09 01 36.6 +0.2**
comp=Z,8.3nm,1.1s,baz=170,slow=7.5,SNR=13
BRTR LR LR 09 39 35.5
comp=Z,4μm,19.2s,baz=142,slow=34
BRTR Keskin Array B 91.46 326 *ceP* **P 09 01 37.4 +1.0**
BRTR pmax pmax
comp=Z,8.0nm,1.1s
BRTR Keskin Array B 91.46 326 P **P 09 01 36.3 -0.2**
KBZ Khabaz 91.47 334 P **P 09 01 36.6 +0.4**
comp=Z,7.2nm,1.1s,baz=180,slow=10,SNR=2.4
KBZ LR LR 09 41 13.7
comp=Z,5μm,18.0s,baz=148,slow=34
BRZS Berezniki 91.65 355 *eP* **P 09 01 36.4 -0.6**
baz=355
BRZS *eS* **SKSac 09 12 08.5 -0.9**
baz=355
BRZS Berezniki 91.65 355 *eP* **P 09 01 36.3 -0.6**
BRZS *eS* **SKSac 09 12 08.4 -0.9**
KIV Kislovodsk 91.75 334 *eP* **P 09 01 38.6 +1.0**
KIV *e* 09 12 11.2
KIV *eSS* SS 09 18 47.1 +0.3
KIV pmax pmax
comp=Z,56nm,1.1s
KIV pmax pmax
comp=Z,137nm,4.8s
KIV MLR MLR
comp=Z,13μm,20.0s
ANTO Ankara 91.93 326 IAMs_20 IAMs_20 09 44 31.1
comp=Z,6μm,18.0s
KURBB Kurchatov Arra 92.08 359 P **P 09 01 38.5 -0.3**
comp=Z,4.5nm,0.8s,baz=192,slow=4.4,SNR=20
KURK Kurchatov 92.17 359 P **P 09 01 38.1 -1.1**
KURK pmax pmax
comp=Z,22nm,1.2s
KURK MLR MLR
comp=Z,11μm,19.0s
KURK Kurchatov 92.17 359 P **P 09 01 38.1 -1.1**
KURK Kurchatov 92.17 359 IAMs_20 IAMs_20 09 42 16.0
comp=Z,11μm,19.0s
SONM Songino Array 92.28 17 P **P 09 01 40.0 0.0**
comp=Z,2.6nm,0.9s,baz=206,slow=4.0,SNR=11
SONM PP **PP 09 05 19.0 -2.0**
comp=Z,3.7nm,1.2s,baz=190,slow=5.9,SNR=3.5
SONM LR LR 09 43 17.7
comp=Z,11μm,18.2s,baz=195,slow=36
SONM Songino Array 92.28 17 P **P 09 01 39.1 -0.9**
SONM pmax pmax
comp=Z,8.0nm,1.1s
SONM Songino Array 92.28 17 P **P 09 01 39.1 -0.9**
ABKAR Akbulak array 92.41 347 P **P 09 01 37.4 -3.0**
ULN Ulaanbaatar 92.45 18 P **P 09 01 39.6 -1.3**
ULN pmax pmax
comp=Z,34nm,1.5s
ULN MLR MLR
comp=Z,17μm,19.0s
ULN Ulaanbaatar 92.45 18 P **P 09 01 39.6 -1.3**
ULN Ulaanbaatar 92.45 18 IAMs_20 IAMs_20 09 42 40.4
comp=Z,17μm,19.0s
ILGA Ilgaz 92.54 327 P **P 09 01 42.2 +0.7**
ILGA IAmb IAmb 09 01 57.9
comp=Z,49nm,1.1s
LL01 San Ignacio de 92.57 200 IAMs_20 IAMs_20 09 43 25.3
comp=Z,10μm,20.0s
GOF Gofitskoye 92.61 335 *eP* **P 09 01 41.9 +0.4**
GOF pmax pmax
comp=Z,37nm,1.4s
TARA Tarawa 93.05 91 IAMs_20 IAMs_20 09 39 44.2
comp=Z,10μm,20.0s
PLCA Paso Flores 93.61 202 P **P 09 01 46.8 +0.1**
comp=Z,1.4nm,0.7s,baz=119,slow=5.0,SNR=2.8
PLCA LR LR 09 42 09.7
comp=Z,4μm,20.2s,baz=170,slow=34
PLCA Paso Flores 93.61 202 P **P 09 01 45.8 -0.8**
PLCA pmax pmax
comp=Z,18nm,1.2s
PLCA Paso Flores 93.61 202 P **P 09 01 45.8 -0.8**
AKTO Aktyubinsk 93.88 346 P **P 09 01 47.1 -0.1**
comp=Z,1.5nm,0.4s,baz=168,slow=6.1,SNR=5.0
AFI Afiamalu 93.88 112 IAMs_20 IAMs_20 09 44 50.4
comp=Z,3μm,19.0s
KWAJ Kwajalein Atol 94.00 82 IAMs_20 IAMs_20 09 40 29.4
comp=Z,7μm,22.0s
ZAK Zakamensk 94.05 15 *eP* **P 09 01 47.5 -0.6**
ZAK pmax pmax
comp=Z,10.0nm,1.7s
TAM Tamanrasset 94.12 297 IAMs_20 IAMs_20 09 42 01.5
comp=Z,7μm,20.0s
ANN Anapa 94.30 331 *eP* **P 09 01 50.7 +1.5**
ANN pmax pmax
comp=Z,42nm,0.9s
ANN MLR MLR
comp=Z,5μm,17.0s
MAT Matsushiro 94.38 43 P **P 09 01 47.8 -2.1**
MAT S **S 09 13 01.2 -0.7**
MJAR Matsushiro Arr 94.38 43 P **P 09 01 49.7 -0.1**
comp=Z,5.5nm,0.9s,baz=200,slow=5.5,SNR=6.4
MJAR Matsushiro Arr 94.38 43 P **P 09 01 49.5 -0.4**
MJAR pmax pmax
comp=Z,12nm,1.3s
MJAR Matsushiro Arr 94.38 43 P **P 09 01 49.5 -0.4**
CN2 Changchun 94.49 31 *eP* **P 09 01 51.4 +1.3**
CN2 *eS* **S 09 13 02.4 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,5μm,18.0s
CN2 LR LR
comp=Z,6μm,18.0s
CN2 LR LR
comp=Z,7μm,19.0s
BVAR Borovoye Array 94.84 354 P **P 09 01 51.4 -0.1**
comp=Z,0.3nm,0.4s,baz=242,slow=27,SNR=6.4
BRVK Borovoye 94.88 354 P **P 09 01 50.3 -1.4**
BRVK pmax pmax
comp=Z,9.0nm,1.0s
BRVK Borovoye 94.88 354 P **P 09 01 50.3 -1.4**
BRVK Borovoye 94.88 354 IAMs_20 IAMs_20 09 41 23.0
comp=Z,9μm,21.0s
TLY Talaya 95.36 14 *eP* **P 09 01 54.5 +0.5**
TLY *e* 09 05 47.0
TLY *eS* **SKSac 09 12 31.0 +1.3**
TLY *ePS* **PS 09 14 36.5 +7.9**
TLY *eSS* **SS 09 19 30.8 -7.4**
TLY pmax pmax
comp=Z,14nm,1.3s
TLY MLR MLR
comp=Z,15μm,16.0s
ZAA0 Zalesovo Array 95.49 3 IAMs_20 IAMs_20 09 42 48.0
comp=Z,7μm,20.0s
ZALV Zalesovo Beam 95.49 3 P **P 09 01 52.8 -1.6**
comp=Z,0.4nm,0.3s,baz=173,slow=7.6,SNR=3.5
ZALV LR LR 09 43 09.9
comp=Z,6μm,20.3s,baz=184,slow=34
ZALV Zalesovo Beam 95.49 3 *i P* **P 09 01 55.0 +0.6**
ZALV Zalesovo Beam 95.49 3 *i P* **P 09 01 52.4 -2.0**
MDJ Mudanjiang 96.82 33 P **P 09 02 00.5 -0.2**
MDJ pmax pmax
comp=Z,16nm,1.9s
MDJ pmax pmax
comp=Z,1μm,4.6s
MDJ Mudanjiang 96.82 33 IAMs_20 IAMs_20 09 45 39.6
comp=Z,7μm,19.0s
HIA Hailar 97.20 25 IAMs_20 IAMs_20 09 47 18.0
comp=Z,7μm,19.0s
BI02 San Fabin de 97.60 203 IAMs_20 IAMs_20 09 46 43.6
comp=Z,9μm,20.0s
SPB Sao Paulo 98.79 227 IAMs_20 IAMs_20 09 37 38.7
comp=Z,6μm,21.0s
BO02 Sierra Bellavi 99.19 204 IAMs_20 IAMs_20 09 46 49.7
comp=Z,7μm,20.0s
GO05 Huala 99.33 203 IAMs_20 IAMs_20 09 47 19.4
comp=Z,11μm,20.0s
MLR Muntele Rosu 99.43 325 P **Pdif 09 02 17.0 +4.3**
comp=Z,2.1nm,0.9s,baz=288,slow=19,SNR=2.6
MLR Muntele Rosu 99.43 325 P **Pdif 09 02 11.5 -1.2**
MLR pmax pmax
comp=Z,29nm,1.8s
MLR MLR MLR
comp=Z,8μm,21.0s
MLR Muntele Rosu 99.43 325 P **Pdif 09 02 11.5 -1.2**
MLR IAmb IAmb 09 06 10.2
comp=Z,29nm,1.8s
MLR IAMs_20 IAMs_20 09 44 43.7
comp=Z,8μm,21.0s
ARU Arti 99.56 348 PP **PP 09 06 16.2 -0.9**
comp=Z,0.7nm,0.3s,baz=185,slow=4.7,SNR=5.0
SVE Sverdlovsk 99.64 349 *eP* **Pdif 09 02 13.4 +0.3**
CLTB Caltabellotta 99.78 312 IAMs_20 IAMs_20 09 47 34.0
comp=Z,6μm,20.0s
WAKE Wake Island 100.16 73 IAMs_20 IAMs_20 09 46 40.6
comp=Z,4μm,20.0s
TBI Tubuai 100.62 135 *eS* **Sdif 09 13 50.9 -5.2**
comp=Z,2μm,30.0s
TBI *eSS* **SS 09 20 54.0 +3.0**
comp=Z,5μm,30.8s
TBI Tubuai 100.62 135 *eLQ* LQ 09 30 57.9
comp=Z,6μm,35.0s
TBI *eLR* LR 09 35 12.2
comp=Z,8μm,25.8s,baz=219
KEST Kesra 100.68 309 IAMs_20 IAMs_20 09 46 52.0
comp=Z,6μm,19.0s
MT02 Curacav 100.72 204 IAMs_20 IAMs_20 09 46 39.2
comp=Z,7μm,22.0s
VA03 San Esteban 101.00 205 IAMs_20 IAMs_20 09 45 16.2
comp=Z,8μm,22.0s
ZON Zonda 101.51 207 IAMs_20 IAMs_20 09 48 52.7
comp=Z,7μm,20.0s
KNTN Kanton 101.64 104 IAMs_20 IAMs_20 09 39 30.6
comp=Z,5μm,19.0s
AKBB Malin Array Si 102.27 330 IAMs_20 IAMs_20 09 48 37.5
comp=Z,5μm,19.0s
CO02 Combarbal 102.58 205 IAMs_20 IAMs_20 09 47 27.2
comp=Z,11μm,22.0s
CO03 El Pedregal 102.82 206 IAMs_20 IAMs_20 09 48 25.5
comp=Z,9μm,21.0s
CO01 Juntas del Tor 103.42 206 IAMs_20 IAMs_20 09 47 15.4
comp=Z,8μm,22.0s
OBN Obninsk 103.42 336 IAMs_20 IAMs_20 09 54 10.0
comp=Z,5μm,19.0s
GO04 Tololo Observa 103.47 206 IAMs_20 IAMs_20 09 48 53.7
comp=Z,9μm,21.0s
CRVS Cervenica-Dubn 104.01 325 *eSS* SS 09 21 41.9 +2.7
LCO Las Campanas 104.51 206 IAMs_20 IAMs_20 09 50 23.3
comp=Z,8μm,21.0s
VYHS Vyhne 104.87 323 *eSS* SS 09 21 51.3 +0.3
PPT2 Papeete2 105.21 131 *eS* **Sdif 09 14 30.2 -4.5**
comp=Z,2μm,26.2s
PPT2 *eSS* **SKKPbc 09 21 56.9 -0.4**
comp=Z,3μm,29.5s
PPT2 Papeete2 105.21 131 *eLQ* LQ 09 32 54.1
comp=Z,22μm,34.5s
PPT2 *eLR* LR 09 37 25.7
comp=Z,7μm,23.2s,baz=213
AC04 Llanos de Chal 105.38 206 IAMs_20 IAMs_20 09 49 48.7
comp=Z,9μm,22.0s
GO03 Copiap 105.66 207 IAMs_20 IAMs_20 09 50 25.0
comp=Z,9μm,22.0s
ZCCA Zocca 105.74 316 IAMs_20 IAMs_20 09 54 14.8
comp=Z,7μm,19.0s
AC02 Maricunga 105.97 208 IAMs_20 IAMs_20 09 52 14.9
comp=Z,7μm,21.0s
OKC Ostrava-Krasne 106.16 324 AMS AMS 09 52 20.0
comp=Z,3μm,15.4s
KRLC Kraliky 106.94 323 AMS AMS 09 50 50.0
comp=Z,4μm,18.7s
TREC Trest 106.98 322 AMS AMS 09 50 10.0
comp=Z,3μm,23.5s
AC01 Pan de Azucar 107.12 207 IAMs_20 IAMs_20 09 50 49.2
comp=Z,6μm,22.0s
SUW Suwalki 107.17 329 IAMs_20 IAMs_20 09 57 01.2
comp=Z,6μm,20.0s
DPC Dobruska-Polom 107.34 323 AMS AMS 10 02 00.0
comp=Z,2μm,18.7s
GERES GERESS Array B 107.50 321 PP **PP 09 07 21.7 +4.9**
comp=Z,0.3nm,0.4s,baz=103,slow=2.9,SNR=3.9
KLMR Klimovskoe 107.53 341 P **Pdif 09 02 50.9 +2.8**
KLMR *e* 09 07 19.7
KLMR *eSS* SS 09 22 32.5 +5.9
KLMR pmax pmax
comp=Z,13nm,1.4s
KLMR Klimovskoe 107.53 341 Pdif **Pdif 09 02 50.9 +2.8**
KLMR AMP 09 02 57.3
comp=Z,13nm,1.4s
KLMR *ePP* **PP 09 07 19.8 +3.2**
KLMR *eSS* **SS 09 22 32.6 +6.0**
KLMR *eSS* **SS 09 22 32.6 +6.0**
UPC Upice 107.60 323 AMS AMS 10 00 20.0
comp=Z,3μm,19.8s
CHVC Chvalec 107.64 323 AMS AMS 10 00 30.0
comp=Z,3μm,18.7s
GO02 Mina Guanaco 107.67 209 IAMs_20 IAMs_20 09 51 04.8
comp=Z,7μm,22.0s
KHC Kasperske Hory 107.75 321 *eSP* SP 09 16 38.6 -0.8
KHC AMS AMS 09 53 40.0
comp=Z,3μm,19.5s
PRU Pruhonice 107.90 322 AMS AMS 09 55 40.0
comp=Z,4μm,18.4s
PRA Prague 108.01 322 AMS AMS 09 55 40.0
comp=Z,2μm,19.1s
CART Cartagena 108.12 304 IAMs_20 IAMs_20 09 48 36.3
comp=Z,5μm,22.0s
VAH Vaihoa 108.20 131 *eT* T 11 04 23.4
comp=Z,11nm,0.3s
NKC Novy Kostel 109.05 321 AMS AMS 10 02 10.0
comp=Z,4μm,17.6s
PB15 IPOC Station P 109.41 210 IAMs_20 IAMs_20 09 55 07.0
comp=Z,6μm,20.0s
CLL Collm 109.52 322 *ePP* **PP 09 07 35.0 +3.6**
CLL *eSdif* Sdif 09 15 04.0 -4.7
CLL *ePS* **PS 09 16 55.0 -3.5**
CLL *ePPS* PPS 09 18 06.0
CLL *eSS* SS 09 22 41.0 -13
CLL *eSSS* SSS 09 26 55.0
CLL *eSSSS* 09 30 06.0
CLL LmV 09 53 00.0
comp=Z,4μm,21.2s
LVC Limon Verde 109.74 210 IAMs_20 IAMs_20 09 56 08.8
comp=Z,4μm,20.0s
PB06 IPOC Station P 109.90 210 IAMs_20 IAMs_20 09 55 20.2
comp=Z,5μm,20.0s
SACV Santiago Islan 109.94 272 IAMs_20 IAMs_20 09 44 32.0
comp=Z,7μm,22.0s
SFS San Fernando 110.72 301 IAMs_20 IAMs_20 09 53 20.0
comp=Z,8μm,22.0s
TMCR Tamitsa 110.72 342 *eP* **Pdif 09 03 02.0 -0.2**
TMCR pmax pmax
comp=Z,26nm,1.1s
RPN Rapa Nui 110.85 171 IAMs_20 IAMs_20 09 45 38.5
comp=Z,10μm,21.0s
PAB San Pablo 111.40 304 IAMs_20 IAMs_20 09 59 45.9
comp=Z,4μm,18.0s
PB08 IPOC Station P 112.07 211 IAMs_20 IAMs_20 09 53 08.7
comp=Z,5μm,22.0s
PVAQ Vaqueiros 112.25 301 IAMs_20 IAMs_20 09 56 19.5
comp=Z,5μm,20.0s
CLF Chambon-Foret 112.72 315 IAMs_20 IAMs_20 09 58 49.6
comp=Z,5μm,20.0s
MTE Manteigas 113.88 303 IAMs_20 IAMs_20 09 53 35.8
comp=Z,5μm,20.0s
COI Coimbra 114.32 303 IAMs_20 IAMs_20 09 56 51.3
comp=Z,6μm,21.0s
LVZ Lovozero 114.60 343 IAMs_20 IAMs_20 09 54 23.4
comp=Z,9μm,20.0s
APA Apatity 114.62 342 *i* PKIKP **PKiKP 09 07 09.0 -0.3**
APA *i* PPS PPS 09 17 39.0
APA *i* SS SS 09 24 10.0 +8.9
APA pmax pmax
comp=Z,8.0nm,1.1s
JOHN Johnston Islan 116.11 91 IAMs_20 IAMs_20 09 50 04.4
comp=Z,11μm,21.0s
PET Petropavlovsk 116.12 41 IAMs_20 IAMs_20 10 03 41.8
comp=Z,5μm,19.0s
KONO Kongsberg 116.44 328 IAMs_20 IAMs_20 10 02 45.4
comp=Z,5μm,19.0s
MA2 Magadan 116.51 32 IAMs_20 IAMs_20 10 00 41.3
comp=Z,6μm,18.0s
TAOE Nuku Hiva Isla 117.56 134 *eSP* SP 09 18 10.8 -1.6
comp=Z,1μm,28.1s
TAOE *eSS* **SS 09 24 45.0 +5.4**
comp=Z,4μm,28.5s
TAOE Nuku Hiva Isla 117.56 134 *eLQ* LQ 09 38 02.0
comp=Z,6μm,36.9s
TAOE *eLR* LR 09 43 13.8
comp=Z,7μm,23.0s
TAOE Nuku Hiva Isla 117.56 134 IAMs_20 IAMs_20 09 47 04.8
comp=Z,4μm,21.0s
KEV Kevo 117.80 342 IAMs_20 IAMs_20 09 56 29.9
comp=Z,7μm,20.0s
TIXI Tiksi 118.31 16 IAMs_20 IAMs_20 09 57 43.0
comp=Z,7μm,20.0s
SAML Samuel 119.26 223 IAMs_20 IAMs_20 09 51 59.4
comp=Z,4μm,20.0s
NNA Nana 122.38 207 IAMs_20 IAMs_20 09 59 21.6
comp=Z,3μm,18.0s
BILL Bilibino 126.66 28 IAMs_20 IAMs_20 10 06 48.1
comp=Z,7μm,20.0s
KBS Kingsbay 126.72 347 IAMs_20 IAMs_20 10 06 34.5
comp=Z,5μm,18.0s
ADK Adak 128.88 51 IAMs_20 IAMs_20 10 02 46.6
comp=Z,5μm,20.0s
NOR Nord 132.07 349 *i* PKIKP **PKiKP 09 07 43.7 +0.2**
NOR pmax pmax
comp=Z,4.0nm,0.8s
NOR Nord 132.07 349 *i P* **PKiKP 09 07 43.7 +0.2**
comp=Z,3.8nm,0.8s
NOR Nord 132.07 349 *i P* **PKiKP 09 07 44.0 +0.5**
NOR Nord 132.07 349 *i P* **PKiKP 09 07 43.7 +0.2**
NOR IAmb IAmb 09 07 45.9
comp=Z,3.8nm,0.8s
NOR Nord 132.07 349 *i P* **PKiKP 09 07 44.1 +0.5**
DAG Danmarks Havn 132.26 342 *e* PKIKP **PKPdf 09 07 40.2 -2.7**
DAG *i* 09 10 04.9
DAG Danmarks Havn 132.26 342 *i P* **PKPdf 09 07 40.2 -2.7**
DAG *e* 09 08 28.6
DAG *i* 09 10 04.9
DAG Danmarks Havn 132.26 342 *i P* PKiKP 09 07 57.2 +13
DAG Danmarks Havn 132.26 342 *i P* PKiKP 09 07 57.2 +13
DAG Danmarks Havn 132.26 342 *eP* **PKPdf 09 07 40.2 -2.7**
DAG *e* 09 08 28.6
DAG *i* 09 10 05.0
DAG Danmarks Havn 132.26 342 *i* **PKPdf 09 07 38.8 -4.1**
BBGH Gun Hill 134.80 243 IAMs_20 IAMs_20 10 02 21.9
comp=Z,5μm,21.0s
ROSC El Rosal 136.65 219 IAMs_20 IAMs_20 10 04 31.9
comp=Z,6μm,21.0s
ANM Nome 137.18 35 IAMs_20 IAMs_20 10 14 48.1
comp=Z,7μm,19.0s
ALE Alert 137.42 353 IAMs_20 IAMs_20 10 12 47.2
comp=Z,4μm,18.0s
SUMG Summit 137.81 337 *i* PKIKP **PKiKP 09 07 57.5 +1.6**
SUMG Summit 137.81 337 IAMs_20 IAMs_20 10 15 27.9
comp=Z,5μm,20.0s
SUMG Summit 137.81 337 *i P* **PKiKP 09 07 57.5 +1.6**
SUMG Summit 137.81 337 *i P* PKiKP 09 08 04.7 +8.8
SUMG Summit 137.81 337 *i P* **PKiKP 09 07 57.5 +1.6**
SUMG Summit 137.81 337 *i P* PKiKP 09 08 04.7 +8.8
RDOG Red Dog Mine 138.02 30 IAMs_20 IAMs_20 10 11 46.7
comp=Z,7μm,20.0s
SDV Santo Domingo 138.24 227 IAMs_20 IAMs_20 10 03 12.2
comp=Z,5μm,21.0s
ICESG Greenland Ices 138.85 332 *i P* **PKiKP 09 08 04.5 +6.5**
CNBA Chernabura Isl 139.51 50 IAMs_20 IAMs_20 10 13 43.6
comp=Z,4μm,20.0s
CHIR Chirikof Islan 141.85 49 IAMs_20 IAMs_20 10 20 58.2
comp=Z,5μm,18.0s
IMAR Indian Mountai 141.89 32 PKPdf **PKPdf 09 08 01.0 0.0**
TOLK Toolik Lake Re 142.71 27 P **PKPdf 09 08 00.9 -1.5**
baz=290
TOLK Toolik Lake Re 142.71 27 PKPdf **PKPdf 09 08 00.2 -2.2**
TULEG Thule 142.73 348 IAMs_20 IAMs_20 10 20 46.4
comp=Z,6μm,19.0s
SJG San Juan 142.74 241 IAMs_20 IAMs_20 10 04 27.4
comp=Z,5μm,22.0s
ILULI Ilulissat 142.76 334 IAMs_20 IAMs_20 10 15 59.9
comp=Z,6μm,20.0s
SFJD Kangerlussuaq 143.35 330 IAMs_20 IAMs_20 10 17 47.6
comp=Z,6μm,20.0s
BPAW Bear Paw Mtn. 143.45 35 IAMs_20 IAMs_20 10 21 26.7
comp=Z,6μm,19.0s
KTH Kantishna Hill 143.59 36 IAMs_20 IAMs_20 10 16 25.6
comp=Z,6μm,20.0s
SKT Skwentna 143.61 39 IAMs_20 IAMs_20 10 16 58.4
comp=Z,7μm,21.0s
I23K Minto, Yukon-K 143.87 33 P **PKPdf 09 08 03.6 -0.8**
baz=286
I23K Minto, Yukon-K 143.87 33 **PKPdf 09 08 03.6 -0.8**
I23K IAMs_20 IAMs_20 10 22 21.6
comp=Z,6μm,18.0s
TRF Thorofare Moun 143.89 36 PKPdf **PKPdf 09 08 04.9 +0.1**
TRF IAMs_20 IAMs_20 10 18 34.6
comp=Z,5μm,20.0s
BWN Browne 144.08 35 IAMs_20 IAMs_20 10 16 47.2
comp=Z,5μm,19.0s
CNPM China Poot 144.08 43 IAMs_20 IAMs_20 10 20 10.4
comp=Z,4μm,20.0s
NEA2 Nenana 144.14 34 P **PKPdf 09 08 04.4 -0.6**
baz=286
BRLK Bradley Lake 144.23 42 IAMs_20 IAMs_20 10 19 19.1
comp=Z,5μm,19.0s
MDM Murphy Dome 144.38 33 **PKPdf 09 08 04.4 -1.1**
MDM IAMs_20 IAMs_20 10 18 39.7
comp=Z,6μm,19.0s
MCK McKinley 144.41 35 P **PKPdf 09 08 04.6 -0.9**
baz=285
RND Reindeer 144.53 36 PKIKP **PKPdf 09 08 04.7 -1.1**
RND Reindeer 144.53 36 **PKPdf 09 08 04.7 -1.1**
RND IAMs_20 IAMs_20 10 16 10.0
comp=Z,4μm,20.0s
TCOL CIGO, UAF Yank 144.56 33 **PKPdf 09 08 04.6 -1.1**
TCOL IAMs_20 IAMs_20 10 18 33.8
comp=Z,5μm,19.0s
COLA College 144.56 33 IAMs_20 IAMs_20 10 18 33.8
comp=Z,5μm,20.0s
WRH Wood River Hil 144.58 34 PKPbc 09 08 03.5 -1.0
WRH IAMs_20 IAMs_20 10 15 42.4
comp=Z,5μm,21.0s
RC01 Rabbit Creek A 144.60 40 P **PKPdf 09 08 05.9 0.0**
baz=280
CCB Clear Creek Bu 144.65 33 **PKPdf 09 08 04.7 -1.1**
CCB IAMs_20 IAMs_20 10 17 23.2
comp=Z,5μm,20.0s
POKR Poker Plat Res 144.66 33 P **PKPdf 09 08 05.0 -0.9**
baz=288
POKR Poker Plat Res 144.66 33 **PKPdf 09 08 04.9 -1.0**
GHO Glory Hole Cre 144.86 39 PKPdf PKPbc 09 08 04.7 -0.9
GHO IAMs_20 IAMs_20 10 14 40.5
comp=Z,6μm,21.0s
BMAR Burnt Mountain 144.91 28 **PKPdf 09 08 06.0 -0.3**
IL31 144.98 33 **PKPab 09 08 04.9 -0.8**
ILAR Eielson Array 144.98 33 PKPbc **PKPbc 09 08 04.0 -1.8**

comp=Z,6.7nm,0.7s,baz=286,slow=3.6,SNR=46
ILAR Eielson Array 144.98 33 PKIKP PKPbc 09 08 04.2 -1.6
ILAR Eielson Array 144.98 33 PKPdf PKPbc 09 08 04.2 -1.6
HDA Harding Lake 145.07 34 P PKPdf 09 08 06.0 -0.6
baz=288
HDA Harding Lake 145.07 34 PKPbc 09 08 04.8 -1.3
HDA IAMs_20 IAMs_20 10 17 17.4
comp=Z,5μm,21.0s
SML Sawmill 145.13 38 IAMs_20 IAMs_20 10 14 43.6
comp=Z,5μm,22.0s
KNK Knik Glacier 145.15 39 IAMs_20 IAMs_20 10 18 15.0
comp=Z,5μm,20.0s
DHY Denali Highway 145.26 36 PKPab 09 08 07.1 0.0
DHY IAMs_20 IAMs_20 10 19 31.8
comp=Z,5μm,20.0s
PRP Porcupine Dome 145.28 32 PKPab 09 08 07.5 +0.4
PRP IAMs_20 IAMs_20 10 21 40.8
comp=Z,5μm,19.0s
HDC Heredia 145.37 208 IAMs_20 IAMs_20 10 09 21.0
comp=Z,4μm,20.0s
SCM Sheep Creek Mo 145.59 38 IAMs_20 IAMs_20 10 18 56.7
comp=Z,5μm,19.0s
GLI Glacier Island 145.91 40 IAMs_20 IAMs_20 10 14 10.2
comp=Z,5μm,22.0s
JTS Las Juntas de 145.93 207 IAMs_20 IAMs_20 10 07 20.9
comp=Z,3μm,20.0s
M24K Tolsona, Glenn 146.05 37 P PKiKP 09 08 11.2 -1.4
baz=286
M24K Tolsona, Glenn 146.05 37 IAMs_20 IAMs_20 10 16 45.8
comp=Z,6μm,22.0s
RIDG Independent Ri 146.16 34 IAMs_20 IAMs_20 10 19 17.2
comp=Z,6μm,20.0s
KLU Klutina 146.32 38 IAMs_20 IAMs_20 10 20 14.1
comp=Z,6μm,20.0s
SCRK Sand Creek 146.44 34 P PKiKP 09 08 11.4 -2.0
baz=291
SC01 Santiago de lo 146.64 237 IAMs_20 IAMs_20 10 08 01.8
comp=Z,9μm,20.0s
SDDR Presa de Saban 146.65 236 IAMs_20 IAMs_20 10 06 03.2
comp=Z,4μm,22.0s
N25K Chitina, Valde 146.90 38 P PKiKP 09 08 13.5 -0.9
baz=286
N25K Chitina, Valde 146.90 38 IAMs_20 IAMs_20 10 19 52.5
comp=Z,4μm,20.0s
RES Resolute Bay 146.96 358 PKP2 PKPbc 09 08 11.1 -0.5
RES MLR MLR
comp=Z,7μm,22.0s
RES Resolute Bay 146.96 358 PKPbc PKPbc 09 08 11.1 -0.5
L26K Log Cabin Wild 147.03 35 P PKiKP 09 08 14.0 -0.6
baz=290
K27K Chicken 147.20 33 P PKiKP 09 08 14.2 -0.7
baz=293
K27K Chicken 147.20 33 PKPbc 09 08 11.3 -1.3
EGAK Eagle 147.27 31 PKPab 09 08 12.9 -1.6
GLB Gilahina Butte 147.31 38 IAMs_20 IAMs_20 10 20 42.3
comp=Z,6μm,20.0s
VRDI Verde Repeater 147.54 38 IAMs_20 IAMs_20 10 20 50.3
comp=Z,5μm,20.0s
MCARA McCarthy VSAT 147.69 38 IAMs_20 IAMs_20 10 21 46.3
comp=Z,4μm,20.0s
CRQM Cirque 147.82 39 PKPbc PKiKP 09 08 15.2 -1.3
INK Inuvik 148.02 23 IAMs_20 IAMs_20 10 18 20.2
comp=Z,6μm,20.0s
BALM Baldy 148.11 38 IAMs_20 IAMs_20 10 16 47.4
comp=Z,4μm,20.0s
EPYK Eagle Plains 148.14 27 P PKiKP 09 08 16.1 -0.7
baz=303
EPYK Eagle Plains 148.14 27 IAMs_20 IAMs_20 10 18 41.8
comp=Z,5μm,20.0s
ISLE Juniper Island 148.24 39 PKPab 09 08 17.4 -1.3
ISLE IAMs_20 IAMs_20 10 22 51.0
comp=Z,4μm,20.0s
GRTK Grand Turk 148.43 239 IAMs_20 IAMs_20 10 15 23.0
comp=Z,3μm,20.0s
MATN Matagalpa 148.72 207 IAMs_20 IAMs_20 10 08 37.8
comp=Z,3μm,22.0s
C36M Paulatuk 149.67 17 P PKiKP 09 08 18.9 -0.9
baz=323
C36M Paulatuk 149.67 17 PKiKP 09 08 18.9 -0.9
C36M IAMs_20 IAMs_20 10 15 16.0
comp=Z,6μm,22.0s
BCPM Bancas Point 149.72 40 IAMs_20 IAMs_20 10 20 07.9
comp=Z,5μm,20.0s
TGUH Tegucigalpa,Un 150.22 205 IAMs_20 IAMs_20 10 09 30.6
comp=Z,5μm,21.0s
SNET Serv Nac Est T 150.46 202 IAMs_20 IAMs_20 10 13 13.8
comp=Z,5μm,18.0s
MTO3 Montecristo 151.17 202 IAMs_20 IAMs_20 10 12 54.0
comp=Z,6μm,19.0s
ESQI Esquipulas 151.32 202 IAMs_20 IAMs_20 10 13 07.9
comp=Z,5μm,19.0s
HUEH Huehuetenango 152.60 198 IAMs_20 IAMs_20 10 16 16.5
comp=Z,4μm,19.0s
CCIG Comitan 153.67 197 IAMs_20 IAMs_20 10 13 01.0
comp=Z,4μm,21.0s
DLBC Dease Lake 154.86 38 IAMs_20 IAMs_20 10 20 27.8
comp=Z,6μm,21.0s
TEIG Tepich 156.30 208 IAMs_20 IAMs_20 10 13 42.6
comp=Z,4μm,20.0s
YKA Yellowknife Ar 157.54 18 PKPab PKPab 09 08 57.9 +0.4
comp=Z,4.0nm,1.0s,baz=331,slow=4.5,SNR=3.7
061Z Ochoppi 157.63 231 IAMs_20 IAMs_20 10 17 47.2
comp=Z,4μm,22.0s
060A Indiantown 158.19 234 IAMs_20 IAMs_20 10 23 49.9
comp=Z,5μm,20.0s
BBB Bella Bella 158.31 52 IAMs_20 IAMs_20 10 27 32.2
comp=Z,6μm,21.0s
YLE Yale 159.80 278 IAMs_20 IAMs_20 10 32 50.4
comp=Z,6μm,22.0s
LATQ La Tuque 159.92 295 IAMs_20 IAMs_20 10 15 38.5
comp=Z,3μm,22.0s
B08A Colville Reser 164.85 58 PKPdf PKPdf 09 08 31.1 -2.8
B08A **pPKPab 09 09 30.9 -0.5**
NVAR Mina Array Bea 165.56 98 PKP PKPdf 09 08 37.1 +2.1
comp=Z,2.6nm,1.1s,baz=240,slow=2.5,SNR=9.4
NVAR PKPab **pPKPab 09 09 34.1 -1.0**
comp=Z,2.4nm,0.7s,baz=226,slow=8.1,SNR=7.0
NVAR Mina Array Bea 165.56 98 PKPdf 09 08 37.0 +2.1
NVAR **pPKPab 09 09 34.4 -0.6**
TUC Tucson 167.17 134 P PKPdf 09 08 38.6 +2.3
baz=219
TXAR Lajitas Array 167.18 165 PKP PKPdf 09 08 38.4 +2.0
comp=Z,1.1nm,1.0s,baz=194,slow=2.1,SNR=7.1
TXAR PKPab **sPKPab 09 09 42.0 -0.5**
comp=Z,1.6nm,0.9s,baz=187,slow=6.4,SNR=3.6
TXAR Lajitas Array 167.18 165 PKIKP PKPdf 09 08 36.3 -0.1
TXAR Lajitas Array 167.18 165 PKPdf 09 08 36.2 -0.1
TXAR **sPKPab 09 09 42.0 -0.5**
R11A Troy Canyon, C 167.54 101 P PKPdf 09 08 40.0 +3.5
baz=249
ELK Elko 168.45 90 PKIKP PKPdf 09 08 37.8 +0.7
ELK PKP PKPab 09 09 44.5 -1.9
ELK Elko 168.45 90 PKPdf 09 08 37.8 +0.7
ELK PKPab PKPab 09 09 44.5 -1.9
JCT Junction City 168.68 181 PKP2 PKPab 09 09 47.8 +0.6
JCT Junction City 168.68 181 PKPab 09 09 47.8 +0.6
MNTX Cornudas Mount 169.00 155 P PKPdf 09 08 39.7 +2.3
baz=201
MNTX Cornudas Mount 169.00 155 PKPdf 09 08 37.8 +0.3
HLID Hailey 169.22 76 P PKPdf 09 08 39.9 +2.5
baz=276
WHTX Lake Whitney, 169.99 192 P PKPdf 09 08 40.2 +2.2
baz=168
MSU Marysvale 170.08 105 PKIKP PKPdf 09 08 37.6 -0.6
MSU Marysvale 170.08 105 PKPdf 09 08 37.6 -0.6
PBMO Poplar Bluff 171.06 239 PKPab 09 09 56.1 -1.6
ULM Lac du Bonnet 171.11 343 PKPab PKPab 09 09 58.5 +1.1
comp=Z,4.8nm,1.0s,baz=337,slow=3.1,SNR=2.7
ULM Lac du Bonnet 171.11 343 PKP2 PKPab 09 09 54.2 -3.2
ULM Lac du Bonnet 171.11 343 PKPab 09 09 54.2 -3.2
WHAR Wooly Hollow 171.14 225 PKPab 09 09 58.6 +0.6
ANMO Albuquerque 171.45 141 PKIKP PKPdf 09 08 37.8 -1.2
ANMO Albuquerque 171.45 141 P PKPdf 09 08 41.0 +2.0
baz=214
ANMO Albuquerque 171.45 141 PKPdf 09 08 37.8 -1.2
U40A Yellville 172.24 228 P PKPdf 09 08 40.6 +1.6
baz=135
U40A Yellville 172.24 228 PKPdf 09 08 39.2 +0.2
RLMT Red Lodge 172.47 61 P PKPdf 09 08 41.9 +2.8
baz=295
HHAR Hobbs 172.75 222 PKPdf 09 08 39.7 +0.4
BW06 Boulder Array 172.82 79 P PKPdf 09 08 41.6 +2.2
baz=276
PDAR Pinedale Array 172.82 79 PKP PKPdf 09 08 41.5 +2.1
comp=Z,1.3nm,0.8s,baz=215,slow=1.8,SNR=10
PDAR PKPab **pPKPab 09 10 06.5 -0.7**
comp=Z,2.8nm,1.0s,baz=228,slow=2.3,SNR=2.6
PDAR Pinedale Array 172.82 79 PKPdf 09 08 40.0 +0.6
PDAR **pPKPab 09 10 06.5 -0.7**
WMOK Wichita Mounta 172.87 188 PKIKP PKPdf 09 08 38.3 -1.1
WMOK Wichita Mounta 172.87 188 P PKPdf 09 08 41.1 +1.7
baz=171
WMOK Wichita Mounta 172.87 188 PKPdf 09 08 38.2 -1.1
WMOK PKPab **pPKPab 09 10 06.5 -0.5**
R40A Maddies Statio 173.13 242 PKPdf 09 08 37.5 -1.8
TUL1 Leonard 173.26 210 P PKPdf 09 08 41.0 +1.6
baz=150
LAO LASA Array 173.38 41 P PKPdf 09 08 41.1 +1.8
baz=318
S39A Bolivar 173.43 233 PKPdf 09 08 38.6 -0.9
OK030 Cody Creek RV 173.61 204 PKPdf 09 08 36.8 -2.8
E28A Huff 175.22 6 PKPdf 09 08 40.4 +0.6
ISCO Idaho Springs 175.25 113 P PKPdf 09 08 42.6 +2.2
baz=244
RSSD Black Hills 176.23 51 PKIKP PKPdf 09 08 38.1 -2.3
RSSD Black Hills 176.23 51 P PKPdf 09 08 41.1 +0.7
baz=311
RSSD Black Hills 176.23 51 PKPdf 09 08 38.0 -2.3
RSSD PKPab **PKPab 09 10 20.3 -0.5**

*NEIC **03** 08:53:34.8±0.7, 34.02N±0.01×117.24W±0.01, h20km,*
Error ellipse: s-maj=2.0km s-min=1.3km az=50.0
*ANF **03** 08:53:34.4±0.1, 34.01N×117.23W, h17km±1km, ML3.2/35,*
Error ellipse: s-maj=1.0km s-min=0.8km az=36.0
*SCEDC **03** 08:53:35.5, 34.02N×117.23W, h18km*
*PAS **03** 08:53:35.5±0.8, 34.018N±0.009×117.232W±0.010,*
h18km±1km, ML3.3/239, Error ellipse: s-maj=1.3km
s-min=1.2km az=219.0

ISC 03 08:53:35.0±0.8, 34.00N±0.01×117.23W±0.01, h19km±1km,
n148, s0978/236, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RSBC	**Riverside Bore**	**0.08**	**249**			**Pg**	**08 53 38.6**	**-0.2**
RSBC						**Sg**	**08 53 41.1**	**-0.2**
RSBC	**Riverside Bore**	**0.08**	**249**			**Pg**	**08 53 38.6**	**-0.2**
RSBC						**Sg**	**08 53 41.1**	**-0.2**
CFT	**Crafton Hills**	**0.11**	**73**			**Pb**	**08 53 38.8**	**+2.4**
CFSC	**Central Fire S**	**0.11**	**338**			**Pb**	**08 53 38.8**	**+2.4**
CFSC						**Sb**	**08 53 41.7**	**+4.6**
CLTC	**Calectric**	**0.11**	**322**			**Pg**	**08 53 42.4**	**+3.3**
HLNC	**Highland**	**0.12**	**6**			**Pg**	**08 53 38.7**	**-0.4**
HLNC						**Sg**	**08 53 41.4**	**-0.5**
RVR	**Riverside**	**0.12**	**265**			**Pg**	**08 53 38.8**	**-0.3**
RVR						**Sg**	**08 53 41.5**	**-0.4**
PEC	**Perris**	**0.13**	**152**			**Sg**	**08 53 42.0**	**-0.1**
SVD	**Seven Oaks Dam**	**0.15**	**48**			**Pg**	**08 53 39.1**	**-0.5**
SVD						**Sg**	**08 53 42.2**	**-0.4**
FON	**Fontana**	**0.20**	**299**			**Pg**	**08 53 39.8**	**-0.3**
FON						**Sg**	**08 53 43.0**	**-0.5**
SME	**Santa Rosa Min**	**0.21**	**209**			**Pg**	**08 53 40.3**	**0.0**
BBSC	**Beaumont Base**	**0.23**	**111**			**Pg**	**08 53 40.7**	**+0.1**
BBSC						**Sg**	**08 53 44.8**	**+0.4**
MLSC	**Mira Loma**	**0.27**	**270**			**Pg**	**08 53 41.1**	**-0.2**
MLSC						**Sg**	**08 53 45.3**	**-0.2**
SS2	**San Sevaine**	**0.30**	**313**			**Pg**	**08 53 41.5**	**-0.2**
CRNC	**Corona**	**0.30**	**245**			**Pg**	**08 53 41.6**	**-0.1**
CRNC						**Sg**	**08 53 46.4**	**+0.1**
BTL	**Butler Peak**	**0.32**	**37**			**Pg**	**08 53 41.8**	**-0.4**
HMTC	**Hemet**	**0.35**	**147**			**Pg**	**08 53 42.4**	**-0.2**
HMTC						**Sg**	**08 53 47.6**	**-0.1**
BBRC	**Big Bear Solar**	**0.37**	**45**	P		**Pg**	**08 53 42.5**	**-0.5**
	baz=227,SNR=51							
BBRC				S		**Sg**	**08 53 47.5**	**-0.8**
	baz=227							
BBRC	**Big Bear Solar**	**0.37**	**45**			**Pg**	**08 53 42.5**	**-0.5**
BBRC						**Sg**	**08 53 47.6**	**-0.7**
CHNC	**Chino**	**0.37**	**269**			**Pg**	**08 53 42.8**	**-0.1**
CHNC						**Sg**	**08 53 48.3**	**0.0**
ELS	**Elsinore Mount**	**0.39**	**204**			**Pg**	**08 53 43.2**	**-0.1**
ELS						**Sg**	**08 53 49.4**	**+0.6**
DGR	**Domenigoni Val**	**0.40**	**152**			**Pg**	**08 53 43.1**	**-0.3**
DGR						**Sg**	**08 53 48.8**	**-0.2**
MURC	**Murrieta**	**0.40**	**175**	P		**Pg**	**08 53 43.5**	**0.0**
	baz=356,SNR=339							
MURC				S		**Sg**	**08 53 49.3**	**+0.1**
	baz=356							
MURC	**Murrieta**	**0.40**	**175**			**Pg**	**08 53 43.5**	**0.0**
MURC						**Sg**	**08 53 49.5**	**+0.3**
POB	**Polly Butte**	**0.41**	**141**			**Pg**	**08 53 43.4**	**-0.2**
POB						**Sg**	**08 53 49.2**	**-0.1**
BACC	**Bachelor Mtn.**	**0.42**	**158**			**Pg**	**08 53 43.5**	**-0.3**
BACC						**Sg**	**08 53 49.6**	**-0.2**
BFSC	**Mount Baldy Ra**	**0.42**	**304**	P		**Pg**	**08 53 43.2**	**-0.7**
	baz=122,SNR=182							
BFSC				S		**Sg**	**08 53 49.0**	**-0.8**
	baz=122							
BFSC	**Mount Baldy Ra**	**0.42**	**304**			**Pg**	**08 53 43.2**	**-0.7**
BFSC						**Sg**	**08 53 49.1**	**-0.8**
SSK	**Sunset Peak**	**0.43**	**299**			**Pg**	**08 53 43.7**	**-0.4**
PSRC	**Puddingstone R**	**0.48**	**281**			**Pg**	**08 53 44.5**	**-0.4**
PSRC						**Sg**	**08 53 51.6**	**0.0**
DEVC	**Devers**	**0.55**	**97**			**Pg**	**08 53 46.0**	**-0.1**
DEVC						**Sg**	**08 53 53.2**	**-0.3**
PEM	**Pine Mountain**	**0.55**	**287**			**Pg**	**08 53 45.8**	**-0.4**
VTV	**Victorville**	**0.56**	**352**			**Pg**	**08 53 45.7**	**-0.7**
VTV						**Sg**	**08 53 53.2**	**-0.7**
ADO	**Adelanto Recei**	**0.57**	**343**			**Pg**	**08 53 46.1**	**-0.4**
ADO						**Sg**	**08 53 54.0**	**-0.3**
GVDA	**Garner Valley**	**0.57**	**125**			**Sg**	**08 53 53.7**	**-0.7**
GVDA	**Garner Valley**	**0.57**	**125**			**Pg**	**08 53 46.1**	**-0.5**
XTL	**Crystal Lake,**	**0.60**	**299**			**Pg**	**08 53 46.2**	**-0.9**
CRY	**Cary Ranch**	**0.60**	**136**			**Pg**	**08 53 46.7**	**-0.4**
CRY						**Sg**	**08 53 54.9**	**-0.3**
RHC	**Rose Hills Cem**	**0.65**	**270**			**Pg**	**08 53 47.6**	**-0.3**
BREC	**Barre Substati**	**0.65**	**253**			**Pb**	**08 53 48.6**	**+0.9**
DNR	**Dunn Ranch,Anz**	**0.67**	**131**			**Pg**	**08 53 47.9**	**-0.4**
DNR						**Sg**	**08 53 57.1**	**-0.1**
SNDA	**J Saunders Pla**	**0.69**	**131**			**Pg**	**08 53 48.3**	**-0.4**
SNDA						**Sb**	**08 53 58.4**	**+0.9**
EW2	**E Wide Canyon**	**0.69**	**95**			**Pg**	**08 53 48.3**	**-0.4**
EW2						**Sg**	**08 53 57.4**	**-0.5**
BZNA	**Buzz No.'s Pla**	**0.70**	**137**			**Pg**	**08 53 48.5**	**-0.4**
BZNA						**Sg**	**08 53 58.0**	**-0.2**
BLAC	**Blackrock camp**	**0.70**	**84**			**Pg**	**08 53 48.5**	**-0.5**
BLAC						**Sg**	**08 53 57.7**	**-0.7**
MWC	**Mount Wilson**	**0.72**	**288**			**Pg**	**08 53 48.5**	**-0.8**
MWC	**Mount Wilson**	**0.72**	**288**			**Sg**	**08 53 58.3**	**-0.6**
PLM	**Palomar**	**0.72**	**154**			**Pg**	**08 53 48.5**	**-0.8**
PLM						**Sg**	**08 53 58.7**	**-0.2**
FRD	**Ford Ranch, An**	**0.73**	**134**			**Pb**	**08 53 49.0**	**-0.2**
FRD						**Sb**	**08 53 59.0**	**+0.1**
FRD	**Ford Ranch, An**	**0.73**	**134**			**Pb**	**08 53 49.0**	**-0.2**
FRD						**Sb**	**08 53 58.8**	**0.0**
CHFC	**Chilao Flat St**	**0.73**	**297**			**Pb**	**08 53 48.5**	**-0.9**
CHFC						**Sg**	**08 53 58.3**	**-1.1**
GVRC	**Garvey Reservo**	**0.74**	**274**			**Pb**	**08 53 49.1**	**-0.1**
JNH	**Juniper Hills**	**0.74**	**307**			**Pb**	**08 53 48.7**	**-0.7**
JNH						**Sb**	**08 53 58.6**	**-0.7**
CACC	**Caltech Cellar**	**0.75**	**280**			**Pb**	**08 53 49.1**	**-0.3**
PFO	**Pinyon Flats O**	**0.75**	**121**	P		**Pb**	**08 53 49.2**	**-0.4**
	baz=302,SNR=119							
PFO				S		**Sb**	**08 53 59.0**	**-0.5**
	baz=302							
PFO	**Pinyon Flats O**	**0.75**	**121**			**Pb**	**08 53 49.2**	**-0.4**
PFO	**Pinyon Flats O**	**0.75**	**121**			**Pb**	**08 53 49.2**	**-0.4**
PFO						**Sb**	**08 53 59.1**	**-0.5**
XPFO	**Pion Flat**	**0.76**	**121**			**Pb**	**08 53 49.2**	**-0.5**
XPFO						**Sb**	**08 53 59.1**	**-0.5**
GTM	**Goat Mountain**	**0.78**	**68**			**Pb**	**08 53 49.4**	**-0.7**
GTM						**Sb**	**08 53 59.4**	**-0.9**
PMD	**Palm Desert**	**0.80**	**116**			**Pb**	**08 53 49.9**	**-0.3**
PMD						**Sb**	**08 54 00.2**	**-0.4**
PASC	**Pasadena Art C**	**0.81**	**282**			**Pb**	**08 53 49.8**	**-0.7**
PASC	**Pasadena Art C**	**0.81**	**282**			**Sb**	**08 54 00.6**	**-0.3**
LRRC	**Littlerock Res**	**0.84**	**309**			**Pb**	**08 53 50.6**	**-0.4**
LRRC						**Sb**	**08 54 01.8**	**0.0**
SBB	**Saddle Back Bu**	**0.84**	**325**			**Pb**	**08 53 50.4**	**-0.6**
SBB						**Sb**	**08 54 01.0**	**-0.9**
GORC	**Green Oak Ranc**	**0.85**	**180**			**Pb**	**08 53 50.5**	**-0.6**
GORC						**Sb**	**08 54 01.9**	**-0.2**
RRX	**Edison Barstow**	**0.89**	**13**	P		**Pb**	**08 53 51.5**	**-0.4**
	baz=193							
RRX				S		**Sb**	**08 54 03.6**	**+0.2**
	baz=193							
RRX	**Edison Barstow**	**0.89**	**13**			**Pb**	**08 53 51.7**	**-0.2**
RRX						**Sb**	**08 54 03.3**	**-0.1**
GR2C	**Griffith Obs.**	**0.89**	**278**			**Pb**	**08 53 51.9**	**0.0**
HYS	**Haystack Butte**	**0.90**	**342**			**Pb**	**08 53 51.8**	**-0.3**
HYS						**Sb**	**08 54 03.4**	**-0.4**
CJV	**Casa Juvan**	**0.92**	**305**			**Pb**	**08 53 51.8**	**-0.6**
CJV						**Sb**	**08 54 04.1**	**-0.2**
FMP	**Fort Macarthur**	**0.93**	**252**	P		**Pb**	**08 53 52.4**	**-0.1**
	baz=71							
FMP				S		**Sb**	**08 54 04.5**	**+0.1**
	baz=71							
FMP	**Fort Macarthur**	**0.93**	**252**			**Pb**	**08 53 52.3**	**-0.2**
FMP						**Sb**	**08 54 04.5**	**+0.1**
MATG	**Mataguay Scout**	**0.94**	**148**			**Pb**	**08 53 52.6**	**-0.1**
MATG						**Sb**	**08 54 05.1**	**+0.3**
DECC	**Green Verdugo**	**0.95**	**286**	P		**Pb**	**08 53 52.4**	**-0.5**
	baz=104,SNR=12							
DECC				S		**Sb**	**08 54 05.1**	**+0.1**
	baz=104							
DECC	**Green Verdugo**	**0.95**	**286**			**Pb**	**08 53 52.4**	**-0.5**
DECC						**Sb**	**08 54 05.3**	**+0.3**
TPC	**Twentynine Pal**	**0.99**	**84**			**Pb**	**08 53 53.4**	**-0.1**
BORC	**Borrego Spring**	**1.00**	**137**			**Pb**	**08 53 53.7**	**-0.1**
BORC						**Sb**	**08 54 06.8**	**+0.2**
HWB	**Hans Werner Br**	**1.00**	**167**			**Pb**	**08 53 53.1**	**-0.7**
HWB						**Sb**	**08 54 06.1**	**-0.4**
RPV	**Rancho Palos V**	**1.01**	**255**			**Pb**	**08 53 53.7**	**-0.1**
RPV						**Sb**	**08 54 06.9**	**+0.1**
DJJ	**Donna J Jenkin**	**1.02**	**276**			**Pb**	**08 53 53.3**	**-0.7**
BELC	**Belle Mtn. Jos**	**1.03**	**90**	P		**Pb**	**08 53 54.2**	**0.0**
	baz=271,SNR=133							
BELC				S		**Sb**	**08 54 07.6**	**+0.2**
	baz=271							
BELC	**Belle Mtn. Jos**	**1.03**	**90**			**Pb**	**08 53 54.3**	**0.0**
BELC						**Sb**	**08 54 07.8**	**+0.4**
DPP	**Dos Picos Cty**	**1.03**	**166**			**Pb**	**08 53 53.6**	**-0.7**
DPP						**Sb**	**08 54 07.0**	**-0.5**
IR2C	**Iron Canyon**	**1.04**	**292**			**Pb**	**08 53 53.7**	**-0.7**
IR2C						**Sb**	**08 54 07.5**	**-0.2**
EDW2	**Edwards Air Fo**	**1.08**	**325**	P		**Pb**	**08 53 54.7**	**-0.4**
	baz=144,SNR=95							
EDW2				S		**Sb**	**08 54 08.6**	**-0.2**
	baz=144							
EDW2	**Edwards Air Fo**	**1.08**	**325**			**Pb**	**08 53 54.7**	**-0.4**
EDW2						**Sb**	**08 54 08.7**	**-0.1**
LEOC	**Leona Valley**	**1.08**	**306**			**Pb**	**08 53 54.8**	**-0.4**
CTCC	**Cactus City**	**1.09**	**108**			**Pb**	**08 53 55.1**	**-0.2**
CTCC						**Sb**	**08 54 10.2**	**+1.0**
HEC	**Hector,Ludlow**	**1.11**	**42**	P		**Pb**	**08 53 55.3**	**-0.4**
	baz=223,SNR=56							
HEC				S		**Sb**	**08 54 09.9**	**+0.1**
	baz=223							
HEC	**Hector,Ludlow**	**1.11**	**42**			**Pb**	**08 53 55.3**	**-0.4**
HEC						**Sb**	**08 54 09.8**	**+0.1**
ALPC	**Antelope**	**1.11**	**308**			**Sb**	**08 54 10.4**	**+0.5**
109C	**Camp Elliot, M**	**1.12**	**174**	P		**Pn**	**08 53 55.0**	**-0.6**
	baz=355,SNR=32							
109C				S		**Sb**	**08 54 09.7**	**-0.1**
	baz=355							
109C	**Camp Elliot, M**	**1.12**	**174**			**Pn**	**08 53 55.0**	**-0.6**
CPE	**Camp Elliot**	**1.12**	**174**			**Pn**	**08 53 55.4**	**-0.2**
CPE						**Sb**	**08 54 09.7**	**-0.1**
CIAC	**Catalina I. Ai**	**1.15**	**239**			**Pn**	**08 53 56.1**	**-0.1**
CIS	**Catalina Islan**	**1.15**	**239**	P		**Pn**	**08 53 55.9**	**-0.2**
	baz=58,SNR=6.2							
CIS				S		**Sb**	**08 54 11.5**	**+0.6**
	baz=58							
OAT	**Oat Mountain**	**1.19**	**287**			**Pn**	**08 53 56.9**	**+0.1**
TPO	**Tropico Hills**	**1.20**	**317**			**Pn**	**08 53 57.0**	**+0.1**
BLCC	**Black Canyon**	**1.22**	**282**			**Pn**	**08 53 56.6**	**-0.4**
SALN	**Salton City**	**1.27**	**124**			**Pn**	**08 53 58.5**	**+0.8**
SDRC	**San Diego Road**	**1.29**	**169**			**Pn**	**08 53 57.7**	**-0.3**
SDRC						**Sb**	**08 54 14.3**	**-0.5**
MONP2	**Monument Peak**	**1.30**	**148**	P		**Pn**	**08 53 58.7**	**+0.4**
	baz=329,SNR=76							
MONP2				S		**Sb**	**08 54 15.6**	**+0.2**
	baz=329							
MONP2	**Monument Peak**	**1.30**	**148**			**Pn**	**08 53 58.8**	**+0.4**
MONP2						**Sb**	**08 54 16.0**	**+0.6**
PT2	**Point Dume**	**1.31**	**270**			**Pn**	**08 53 58.2**	**0.0**
CCAC	**Calif City Air**	**1.32**	**331**			**Pn**	**08 53 58.4**	**0.0**
GSC	**Goldstone, Bar**	**1.34**	**15**	P		**Pn**	**08 53 58.9**	**0.0**
	baz=195,SNR=70							
GSC					Sb	**Sn**	**08 54 17.3**	**+1.1**
	baz=195							
GSC	**Goldstone, Bar**	**1.34**	**15**		Pn	**Pn**	**08 53 58.8**	**0.0**
GSC	**Goldstone, Bar**	**1.34**	**15**			**Sn**	**08 54 15.6**	**-0.6**
OSI	**Osito Audit: C**	**1.38**	**297**	P		**Pn**	**08 53 59.2**	**-0.1**
	baz=115							
OSI				S		**Sn**	**08 54 17.4**	**+0.5**
	baz=115							
BAR	**Barrett**	**1.40**	**160**		Pn	**Pn**	**08 53 59.6**	**0.0**
BAR	**Barrett**	**1.40**	**160**			**Sn**	**08 54 17.7**	**+0.2**
OLP	**Otay Lakes Par**	**1.42**	**170**			**Sn**	**08 54 18.4**	**+0.5**
THC	**Tehachapi Micr**	**1.49**	**308**			**Pn**	**08 54 00.9**	**0.0**
TJX	**Tijuana**	**1.50**	**174**			**Pn**	**08 54 01.7**	**+0.8**
SCI2	**San Clemente I**	**1.50**	**227**	Pg		**Pb**	**08 54 03.1**	**+0.9**
	baz=46							
GMRC	**Granite Mounta**	**1.52**	**59**	P		**Pn**	**08 54 00.8**	**-0.6**
	baz=240,SNR=24							
GMRC					Sb	**Sb**	**08 54 22.4**	**+0.9**
	baz=240							
GMRC	**Granite Mounta**	**1.52**	**59**			**Pn**	**08 54 00.7**	**-0.6**
LRMC	**Laurel Mtn Rad**	**1.52**	**346**	Pg		**Pb**	**08 54 03.6**	**+0.9**
	baz=166							
LRMC					Sb	**Sb**	**08 54 22.3**	**+0.7**
	baz=166							
BC3	**Big Chuckawall**	**1.52**	**103**	P		**Pn**	**08 54 00.9**	**-0.4**
	baz=284,SNR=48							
BC3					Sb	**Sb**	**08 54 22.7**	**+1.0**
	baz=284							
SWSC	**Sam W. Stewart**	**1.60**	**131**	Pg		**Pb**	**08 54 04.8**	**+0.8**
	baz=312							
SWSC					Sb	**Sb**	**08 54 25.0**	**+1.3**
	baz=312							
IKP	**In-Ko-Pah, Jac**	**1.65**	**145**	P		**Pn**	**08 54 02.9**	**-0.1**
	baz=326,SNR=52							
IKP					Sb	**Sb**	**08 54 26.4**	**+1.2**
	baz=326							
RMX	**La Rumorosa**	**1.70**	**145**			**Pn**	**08 54 05.0**	**+1.2**
**ARVC

baz=119
SHPR Sheep Range 3.02 34 Pn 08 54 22.6 +0.6
TPNV Topopah Spring 3.05 15 P **Pn 08 54 23.4 +1.0**
baz=196
TPNV S **Sn 08 54 58.8 +0.4**
baz=196
TPNV Topopah Spring 3.05 15 Pn 08 54 23.3 +1.0
113A Mohawk Valley, 3.15 112 Pn **Pn 08 54 23.6 0.0**
SPX San Pedro Mart 3.31 153 Pn 08 54 28.0 +1.8
PRN Pahroc Range 3.83 27 Pn 08 54 34.4 +1.3
OMMB Old Mammoth Mi 3.88 339 Pn 08 54 35.2 +1.3
MDPB Devils Postpil 3.92 338 Pn **Pn 08 54 36.9 +2.5**
X16A Lo Mia Camp, P 4.82 83 Pn **Pn 08 54 47.4 +0.7**

IDC 03 08:55:46.4±5.4, 5.70S×147.01E, h200km±54km, mb3.5/2, mb1 3.6/4, mb1mx3.2/44, mbtmp4.0/4, Error ellipse: s-maj=80.1km s-min=47.5km az=128.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.68**	**178**	P	Pn	08 56 44.4	+0.1
	8.8nm,0.3s,baz=330,slow=5.5,SNR=11						
PMG				S	Sn	08 57 30.0	+0.2
	3.5nm,0.3s,baz=52,slow=23,SNR=5.9						
WRA	**Warramunga Arr**	**18.76**	**220**	P	P	08 59 51.2	+0.5
	0.7nm,0.3s,baz=45,slow=11,SNR=22						
ASAR	**Alice Springs**	**21.87**	**214**	P	P	09 00 24.0	+0.5
	2.1nm,0.8s,baz=50,slow=7.5,SNR=5.8						
FITZ	**Fitzroy Crossi**	**24.23**	**238**	P	P	09 00 44.6	-0.5
	3.8nm,0.4s,baz=50,slow=9.9,SNR=18						
TORD	**Torodi Ar. Bea**	**145.02**	**285**	PKPbc	PKPbc	09 14 59.8	-1.0
	0.4nm,0.9s,baz=58,slow=3.6,SNR=1.6						

*DJA **03** 08:56:29.0±0.3,8°S±2°×10°6E±°, h10km, M4.9/19, mB5.7/2, mb5.1/4, MLv4.8/19, Mw(mB)5.2/2*
*NEIC **03** 08:56:30.8±1.5, 7.41S±0.07×105.97E±0.03, h25km, mb5.0/51, Error ellipse: s-maj=9.6km s-min=4.8km az=169.0*
*BJI **03** 08:56:32.0±0.0, 7.50S×106.00E, h35km, mB5.6/13, mb5.0/22, Ms5.2/3, Ms7 4.9/3*
*MOS **03** 08:56:32.6±1.1, 7.36S×106.01E, h52km, mb5.1/35, MS5.5/6, Error ellipse: s-maj=12.4km s-min=6.4km az=117.7*
*IDC **03** 08:56:36.0±2.2, 7.40S×106.08E, h65km±20km, mb4.3/33, mb1 4.3/34, mb1mx4.2/56, mbtmp4.6/34, MS5.7/1, Ms1 5.7/1, ms1mx3.8/45, Error ellipse: s-maj=16.8km s-min=9.7km az=60.0*
ISC 03 08:56:32.5±0.3, 7.59S±0.04×105.97E±0.05, h39km±2km, n283, σ1°48/304, mb4.8/77, MS5.2/11, 9C-15D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.82**	**45**	P	**Pn**	**08 56 46.1**	**-1.5**
SKJI				S	**Sn**	**08 57 00.3**	**+1.8**
SKJI	**Sukabumi**	**0.82**	**45**	P	**Pn**	**08 56 46.1**	**-1.5**
CGJI	**Cibinong**	**1.01**	**344**	P	**Pn**	**08 56 50.1**	**0.0**
CGJI				S	**Sn**	**08 57 05.6**	**+2.6**
CGJI	**Cibinong**	**1.01**	**344**	P	**Pn**	**08 56 50.3**	**+0.2**
CNJI	**Cibinong**	**1.18**	**77**	P	**Pn**	**08 56 50.9**	**-1.7**
CNJI	**Cibinong**	**1.18**	**77**	P	**Pn**	**08 56 50.8**	**-1.7**
DBJI	**Dramaga**	**1.28**	**37**	P	**Pn**	**08 56 54.2**	**+0.2**
DBJI	**Dramaga**	**1.28**	**37**	P	**Pn**	**08 56 53.8**	**-0.2**
SBJI	**Serang**	**1.47**	**6**	P	**Pn**	**08 56 57.4**	**+1.0**
SBJI				S	**Sn**	**08 57 18.5**	**+4.1**
SBJI	**Serang**	**1.47**	**6**	P	**Pn**	**08 56 57.5**	**+1.0**
TNG	**Tangerang**	**1.56**	**25**	P	**Pn**	**08 56 58.6**	**+0.9**
TNG				P	**Pn**	**08 56 58.1**	**+0.4**
TNG	**Tangerang**	**1.56**	**25**	P	**Pn**	**08 56 59.5**	**+1.8**
TNG				P	**Pn**	**08 56 59.5**	**+1.8**
LEM	**Lembang**	**1.80**	**65**	P	**Pn**	**08 57 02.5**	**+1.4**
	313nm,0.3s,baz=287,slow=7.5,SNR=72						
LEM				S	**Sn**	**08 57 23.4**	**+0.5**
	387nm,0.3s,baz=343,slow=19,SNR=6.0						
LEM				LR	LR	08 58 00.3	
	comp=Z,6μm,20.5s,baz=310,slow=52						
LEM	**Lembang**	**1.80**	**65**	P	**Pn**	**08 57 02.1**	**+0.9**
CISI	**Cisompet, Garu**	**1.83**	**89**	P	**Pn**	**08 57 00.3**	**-1.2**
CISI	**Cisompet, Garu**	**1.83**	**89**	P	**Pn**	**08 57 00.2**	**-1.2**
CISI	**Cisompet, Garu**	**1.83**	**89**	Pn	**Pn**	**08 57 00.0**	**-1.4**
CISI				S	**Sn**	**08 57 24.0**	**+0.6**
CMJI	**Cimerak**	**2.46**	**95**	P	**Pn**	**08 57 09.1**	**-1.0**
CMJI	**Cimerak**	**2.46**	**95**	P	**Pn**	**08 57 11.4**	**+1.3**
JCJI	**Jatiwangi**	**2.53**	**65**	P	**Pn**	**08 57 09.5**	**-1.5**
KPJI	**Karang Pucung**	**2.95**	**85**	P	**Pn**	**08 57 16.9**	**+0.1**
KPJI	**Karang Pucung**	**2.95**	**85**	P	**Pn**	**08 57 18.9**	**+2.1**
KLSI		**3.13**	**337**	P	**Pn**	**08 57 22.0**	**+2.6**
KLSI		**3.13**	**337**	P	**Pn**	**08 57 22.2**	**+2.8**
MNAI	**Manna**	**4.39**	**317**	P	**Pn**	**08 57 37.3**	**+0.6**
MNAI	**Manna**	**4.39**	**317**	Pn	**Pn**	**08 57 33.4**	**-3.3**
SMRI	**Semarang**	**4.46**	**83**	Pn	**Pn**	**08 57 35.8**	**-1.9**
UGM	**Wanagama**	**4.52**	**94**	P	**Pn**	**08 57 37.4**	**-1.1**
UGM	**Wanagama**	**4.52**	**94**	P	Pn	08 57 51.5	+13
UGM	**Wanagama**	**4.52**	**94**	Pn	**Pn**	**08 57 37.2**	**-1.2**
WOJI	**Wonogiri, Jawa**	**4.91**	**93**	P	**Pn**	**08 57 43.4**	**-0.4**
TPI	**Tanjungpandan**	**5.08**	**19**	P	**Pn**	**08 57 47.1**	**+0.9**
	0.6nm147nm,0.7s						
TPI	**Tanjungpandan**	**5.08**	**19**	P	Pn	08 57 53.3	+7.1
KSI	**Kapahiang**	**5.16**	**319**	P	**Pn**	**08 57 47.9**	**+0.6**
	1.0nm147nm,0.7s						
KSI	**Kapahiang**	**5.16**	**319**	P	Pn	08 57 55.3	+8.0
PPBI	**Pangkal Pinang**	**5.39**	**2**	P	**Pn**	**08 57 52.5**	**+2.0**
	1.7nm14μm120nm,0.9s						
PPBI	**Pangkal Pinang**	**5.39**	**2**	P	Pn	08 57 55.4	+4.9
PWJI	**Pagerwojo**	**5.79**	**95**	P	**Pn**	**08 57 56.5**	**+0.5**
JAGI	**Jajag, Banyuwa**	**8.15**	**97**	P	**Pn**	**08 58 30.0**	**+1.7**
JAGI	**Jajag, Banyuwa**	**8.15**	**97**	Pn	**Pn**	**08 58 29.1**	**+0.8**
SRBI	**Singaraja**	**9.17**	**94**	P	**Pn**	**08 58 43.5**	**+1.2**
COCO	**West Island**	**10.10**	**242**	P	**Pn**	**08 58 54.4**	**-0.6**
COCO	**West Island**	**10.10**	**242**	Pn	**Pn**	**08 58 54.4**	**-0.6**
GSI	**Gunungsitoli**	**12.17**	**316**	Pn	**Pn**	**08 59 18.8**	**-4.6**
MMRI	**Maumere**	**16.14**	**95**	Pn	**Pn**	**09 00 17.6**	**+1.0**
MMRI				IAmb	IAmb	09 00 20.6	
	comp=Z,107nm,0.6s						
GIRL	**Giralia**	**16.95**	**153**	Pn	**Pn**	**09 00 25.8**	**-1.0**
BATI	**Baumata**	**17.67**	**100**	P	**P**	**09 00 39.0**	**+2.5**
	comp=Z,12nm,0.3s,baz=98,slow=2.8,SNR=2.5						
BATI				S	**Sn**	**09 03 51.6**	**-0.3**
	comp=Z,5.7nm,0.3s,baz=344,slow=7.4,SNR=1.6						
MYLDM	**Lahad Datu**	**17.81**	**45**	P	**Pn**	**09 00 34.4**	**-3.1**
MYLDM				IAmb	IAmb	09 01 00.8	
	comp=Z,92nm,1.4s						
SOEI	**Soe**	**18.21**	**98**	P	**P**	**09 00 41.5**	**-1.1**
SOEI				IAmb	IAmb	09 01 05.0	
	comp=Z,89nm,0.8s						
PSAC1	**Pilbara Seismi**	**19.25**	**138**	P	**P**	**09 00 53.5**	**-0.3**
PSAC1				IAmb	IAmb	09 01 10.9	
	comp=Z,52nm,1.1s						
PSAB1	**Pilbara Seismi**	**19.29**	**138**	P	**P**	**09 00 54.8**	**+0.6**
PSAA2	**Pilbara Seismi**	**19.30**	**138**	P	**Pn**	**09 00 55.5**	**-0.1**
PSA00	**Pilbara Seismi**	**19.30**	**138**	P	**P**	**09 00 54.3**	**0.0**
PSAA3	**Pilbara Seismi**	**19.31**	**138**	P	**Pn**	**09 00 55.5**	**-0.3**
PSAC2	**Pilbara Seismi**	**19.33**	**137**	P	**Pn**	**09 00 55.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**21.81**	**121**	P	**P**	**09 01 23.2**	**+1.7**
	comp=Z,7.2nm,0.8s,baz=310,slow=6.1,SNR=5.7						
FITZ	**Fitzroy Crossi**	**21.81**	**121**	P	**P**	**09 01 22.1**	**+0.6**
FITZ				IAmb	IAmb	09 01 40.6	
	comp=Z,42nm,1.2s						
TNTI	**Ternate**	**22.90**	**70**	P	**P**	**09 01 32.6**	**-0.6**
TNTI				IAmb	IAmb	09 01 48.4	
	comp=Z,115nm,1.3s						
SIJI	**Sorong**	**26.08**	**76**	P	**P**	**09 02 03.2**	**+0.4**
	comp=Z,11nm,0.6s,baz=323,slow=15,SNR=3.0						
FAKI	**Fak Fak**	**26.57**	**81**	P	**P**	**09 02 05.8**	**-1.4**
FAKI				IAmb	IAmb	09 02 25.6	
	comp=Z,60nm,1.4s						
CMAR	**Chiang Mai Arr**	**26.79**	**345**	P	**P**	**09 02 08.8**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=180,slow=9.2,SNR=5.5						
CMAR	**Chiang Mai Arr**	**26.79**	**345**	P	**P**	**09 02 07.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**26.79**	**345**	P	**P**	**09 02 07.6**	**-1.5**
H01W3	**Cape Leeuwin H**	**28.18**	**166**	T	T	09 32 02.4	
	baz=344,slow=76,SNR=93						
H01W1	**Cape Leeuwin H**	**28.20**	**166**	T	T	09 32 03.4	
	baz=344,slow=76,SNR=71						
H01W2	**Cape Leeuwin H**	**28.20**	**166**	T	T	09 32 07.2	
	baz=344,slow=76,SNR=87						
WB0	**Warramunga Arr**	**30.09**	**117**	P	**P**	**09 02 39.1**	**+0.5**
WB0				IAmb	IAmb	09 02 53.1	
	comp=Z,28nm,1.4s						
WRA	**Warramunga Arr**	**30.10**	**117**	P	**P**	**09 02 39.2**	**+0.4**
WRA				PcP	**PcP**	**09 05 40.6**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=289,slow=10,SNR=10						
WRA	**Warramunga Arr**	**30.10**	**117**	P	**P**	**09 02 39.2**	**+0.4**
WRA				PcP	**PcP**	**09 05 40.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=305,slow=2.0,SNR=2.8						
WRAB	**Tennant Creek**	**30.11**	**117**	*i* P	**P**	**09 02 39.6**	**+0.8**
WRAB	**Tennant Creek**	**30.11**	**117**	P	**P**	**09 02 39.6**	**+0.8**
WRAB				IAmb	IAmb	09 02 54.8	
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	**30.11**	**117**	P	**P**	**09 02 39.5**	**+0.7**
WR0	**Warramunga Arr**	**30.29**	**117**	P	**P**	**09 02 41.2**	**+0.9**
AS31	**Alice Springs**	**31.19**	**124**	P	**P**	**09 02 49.2**	**+0.9**
ASAR	**Alice Springs**	**31.19**	**124**	P	**P**	**09 02 49.1**	**+0.8**
	comp=Z,2.0nm,0.6s,baz=303,slow=7.9,SNR=18						
ASAR				PP	**PnPn**	**09 03 47.5**	**-3.5**
	comp=Z,2.5nm,0.9s,baz=303,slow=12,SNR=1.7						
ASAR				PcP	**PcP**	**09 05 42.5**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=149,slow=1.0,SNR=4.6						
ASAR	**Alice Springs**	**31.19**	**124**	P	**P**	**09 02 48.9**	**+0.6**
ASAR						09 05 41.7	
ASAR	**Alice Springs**	**31.19**	**124**	P	**P**	**09 02 48.9**	**+0.6**
ASAR				PcP	**PcP**	**09 05 41.7**	**-1.0**
KMI	**Kunming**	**32.67**	**355**	*ie* P	**P**	**09 03 04.3**	**+2.9**
KMI				pP	pP	09 03 08.0	-3.5
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
KMI				pmax	pmax		
	comp=Z,540nm,5.5s						
KMI				LR	LR		
	comp=Z,2μm,17.3s						
KMI				LR	LR		
	comp=Z,2μm,15.8s						
KMI				LR	LR		
	comp=Z,3μm,19.5s						
H08S2	**Diego Garcia H**	**33.18**	**268**	T	T	09 38 25.8	
	baz=92,slow=75,SNR=175						
H08S3	**Diego Garcia H**	**33.19**	**268**	T	T	09 38 21.9	
	baz=92,slow=75,SNR=200						
H08S1	**Diego Garcia H**	**33.20**	**268**	T	T	09 38 21.9	
	baz=92,slow=75,SNR=186						
CD2	**Chengdu**	**38.34**	**357**	*eP*	**P**	**09 03 51.0**	**+1.2**
CTA	**Charters Tower**	**40.92**	**112**	P	**P**	**09 04 11.5**	**0.0**
	comp=Z,5.9nm,0.9s,baz=289,slow=11,SNR=4.5						
CTAO	**Charters Tower**	**40.92**	**112**	P	**P**	**09 04 10.4**	**-1.1**
CTAO				pmax	pmax		
	comp=Z,20nm,1.2s						
CTAO	**Charters Tower**	**40.92**	**112**	P	**P**	**09 04 10.4**	**-1.1**
CTAO				IAmb	IAmb	09 04 27.3	
	comp=Z,20nm,1.1s						
STKA	**Stephens Creek**	**41.02**	**131**	P	**P**	**09 04 12.7**	**+0.6**
	comp=Z,4.1nm,0.5s,baz=302,slow=7.0,SNR=14						
STKA	**Stephens Creek**	**41.02**	**131**	P	**P**	**09 04 13.2**	**+1.0**
STKA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
STKA	**Stephens Creek**	**41.02**	**131**	P	**P**	**09 04 13.2**	**+1.0**
NJ2	**Nanjing**	**41.29**	**17**	*eP*	**P**	**09 04 17.4**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JMZ	**Minamidaito 2**	**41.29**	**36**	P	**P**	**09 04 12.8**	**-1.6**
CAN	**Canberra**	**48.08**	**131**	P	**P**	**09 05 10.2**	**+1.7**
CAN				pmax	pmax		
	comp=Z,12nm,1.0s						
CAN	**Canberra**	**48.08**	**131**	P	**P**	**09 05 10.2**	**+1.7**
CAN				IAmb	IAmb	09 05 37.2	
	comp=Z,12nm,1.0s						
HHC	**Hu-ho-hao-te**	**48.47**	**6**	*eP*	**P**	**09 05 12.3**	**+0.9**
HHC				SS	SS	09 15 34.1	-6.3
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,480nm,6.6s						
HHC				LR	LR		
	comp=Z,1μm,16.1s						
HHC				LR	LR		
	comp=Z,820nm,19.0s						
KSRS	**Korea Array**	**49.28**	**23**	P	**P**	**09 05 17.2**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=220,slow=8.4,SNR=4.8						
JHS	**Saijyo**	**49.51**	**30**	P	**P**	**09 05 19.7**	**+0.3**
NIL	**Nilore**	**51.44**	**325**	P	**P**	**09 05 33.2**	**-0.8**
NIL				pmax	pmax		
	comp=Z,42nm,1.2s						
NIL	**Nilore**	**51.44**	**325**	P	**P**	**09 05 33.2**	**-0.8**
NIL				IAmb	IAmb	09 05 49.5	
	comp=Z,42nm,1.1s						
WMQ	**Urumqi**	**53.78**	**344**	*eP*	**P**	**09 05 51.9**	**+0.7**
WMQ				sP	sP	09 06 06.5	+0.2
WMQ				pmax	pmax		
	comp=Z,26nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,310nm,4.5s						
WMQ				LR	LR		
	comp=Z,2μm,17.7s						
WMQ				LR	LR		
	comp=Z,1μm,24.9s						
WMQ				LR	LR		
	comp=Z,2μm,23.3s						
CN2	**Changchun**	**54.11**	**17**	*eP*	**P**	**09 05 56.0**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH	**Kashi**	**54.48**	**332**	P	**P**	**09 05 53.9**	**-2.6**
KSH				PP	**PP**	**09 08 01.3**	**+2.2**
KSH				S	**S**	**09 13 24.1**	**-8.8**
KSH				pmax	pmax		
	comp=Z,15nm,0.7s						
KSH				pmax	pmax		
	comp=Z,760nm,5.7s						
KBL	**Kabul**	**54.54**	**322**	P	**P**	**09 05 53.8**	**-3.3**
KBL				pmax	pmax		
	comp=Z,28nm,1.1s						
KBL	**Kabul**	**54.54**	**322**	P	**P**	**09 05 53.8**	**-3.3**
KBL				IAmb	IAmb	09 06 13.6	
	comp=Z,28nm,1.1s						
SONM	**Songino Array**	**55.18**	**0**	P	**P**	**09 06 00.9**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=183,slow=10,SNR=4.7						
SONM				PcP	**PcP**	**09 07 02.4**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=181,slow=4.3,SNR=7.3						
SONM	**Songino Array**	**55.18**	**0**	P	**P**	**09 06 00.0**	**-1.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**55.18**	**0**	P	**P**	**09 06 00.0**	**-1.4**
ULN	**Ulaanbaatar**	**55.22**	**1**	*i* P	**P**	**09 06 01.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SHLS	**Shalkode**	**55.96**	**337**	*eP*	**P**	**09 06 05.3**	**-1.8**
	comp=Z,3.0nm,0.6s,baz=337						
SHLS				LR	LR	09 32 35.6	
	comp=Z,979nm,18.5s,baz=337						
SHLS	**Shalkode**	**55.96**	**337**	*eP*	**P**	**09 06 05.3**	**-1.8**
SHLS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SHLS				MLR	MLR		
	comp=Z,979nm,18.0s						
MDJ	**Mudanjiang**	**56.16**	**20**	P	**P**	**09 06 08.0**	**-0.3**
MDJ				pmax	pmax		
	comp=Z,14nm,1.3s						
SATY	**Saty**	**56.30**	**336**	*eP*	**P**	**09 06 08.8**	**-0.7**
	baz=336						
SATY				*eS*	**S**	**09 13 57.2**	**+0.1**
	baz=336						
SATY	**Saty**	**56.30**	**336**	*eP*	**P**	**09 06 08.8**	**-0.7**
SATY				*eS*	**S**	**09 13 57.1**	**+0.1**
KPKS	**Kokpek**	**56.53**	**336**	*eP*	**P**	**09 06 09.5**	**-1.6**
	comp=Z,3.6nm,0.8s,baz=337						
KPKS	**Kokpek**	**56.53**	**336**	*eP*	**P**	**09 06 09.4**	**-1.6**
KPKS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**56.66**	**22**	P	**P**	**09 06 10.7**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=184,slow=3.7,SNR=5.0						
USRK	**Ussuriysk Ar.**	**56.66**	**22**	P	**P**	**09 06 10.5**	**-1.3**
USRK	**Ussuriysk Ar.**	**56.66**	**22**	P	**P**	**09 06 10.5**	**-1.3**
MDOK	**Medeo**	**56.94**	**335**	*eP*	**P**	**09 06 12.7**	**-1.5**
	baz=335						
MDOK				*eS*	**S**	**09 14 04.8**	**-0.8**
	baz=335						
MDOK				LR	LR	09 31 50.1	
	comp=Z,5μm,17.7s,baz=335						
MDOK	**Medeo**	**56.94**	**335**	*eP*	**P**	**09 06 12.6**	**-1.5**
MDOK				*eS*	**S**	**09 14 04.8**	**-0.8**
MDOK				MLR	MLR		
	comp=Z,5μm,18.0s						
CHGR	**Chuyangaron**	**57.33**	**326**	P	**P**	**09 06 15.2**	**-1.7**
BTK	**Batken**	**57.45**	**328**	P	**P**	**09 06 17.1**	**-0.6**
BTK				pmax	pmax		
	comp=Z,33nm,1.4s						
BTK	**Batken**	**57.45**	**328**	P	**P**	**09 06 17.1**	**-0.6**
BTK				IAmb	IAmb	09 06 33.6	
	comp=Z,32nm,1.4s						
KUU	**Kurty**	**57.84**	**335**	*eP*	**P**	**09 06 18.6**	**-1.7**
	comp=Z,4.6nm,0.7s,baz=335						
KUU				LR	LR	09 34 37.5	
	comp=Z,6μm,17.3s,baz=335						
KUU	**Kurty**	**57.84**	**335**	*eP*	**P**	**09 06 18.5**	**-1.7**
KUU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KUU				MLR	MLR		
	comp=Z,6μm,17.0s						
ZSN	**Zaisan**	**57.90**	**343**	*eP*	**P**	**09 06 20.1**	**-0.5**
	comp=Z,3.9nm,0.9s,baz=343						
ZSN				LR	LR	09 35 24.7	
	comp=Z,5μm,18.5s,baz=343						
ZSN	**Zaisan**	**57.90**	**343**	*eP*	**P**	**09 06 20.1**	**-0.5**
ZSN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MK31	**Makanchi Array**	**58.10**	**341**	P	**P**	**09 06 21.0**	**-1.0**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MK31	**Makanchi Array**	**58.10**	**341**	P	**P**	**09 06 21.0**	**-1.0**
MKAR	**Makanchi Array**	**58.10**	**341**	P	**P**	**09 06 21.3**	**-0.7**
	comp=Z,6.4nm,0.7s,baz=148,slow=9.4,SNR=29						
MKAR	**Makanchi Array**	**58.10**	**341**	*i* P	**P**	**09 06 21.2**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR	**Makanchi Array**	**58.10**	**341**	P	**P**	**09 06 20.7**	**-1.3**
SGDS	**Sogindy**	**58.22**	**334**	*eP*	**P**	**09 06 21.9**	**-1.1**
	comp=Z,5.1nm,1.5s,baz=334						
SGDS	**Sogindy**	**58.22**	**334**	*eP*	**P**	**09 06 21.8**	**-1.1**
SGDS				pmax	pmax		
	comp=Z,5.0nm,1.5s						
DGZ	**Jazzator, Alta**	**59.30**	**346**	*i* P	**P**	**09 06 29.9**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,15nm,0.7s						
IUG	**Iuzhnay**	**59.39**	**330**	*eP*	**P**	**09 06 30.2**	**-1.1**
	comp=Z,3.7nm,0.8s,baz=330						
IUG				LR	LR	09 33 22.8	
	comp=Z,1μm,15.7s,baz=330						
IUG	**Iuzhnay**	**59.39**	**330**	*eP*	**P**	**09 06 30.1**	**-1.1**
IUG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
IUG				MLR	MLR		
	comp=Z,1μm,16.0s						
KK31	**Karatay Array**	**59.86**	**331**	P	**P**	**09 06 30.9**	**-3.4**
KK31				pmax	pmax		
	comp=Z,12nm,1.4s						
KK31	**Karatay Array**	**59.86**	**331**	P	**P**	**09 06 30.9**	**-3.4**
KK31				IAmb	IAmb	09 06 52.3	
	comp=Z,12nm,1.4s						
KKAR	**Karatay Array**	**59.86**	**331**	P	**P**	**09 06 32.9**	**-1.4**
KKAR	**Karatay Array**	**59.86**	**331**	P	**P**	**09 06 32.9**	**-1.4**
BRLS	**Boroldaу**	**60.14**	**330**	LR	LR	09 35 03.5	
	comp=Z,939nm,15.6s,baz=330						
KLR	**Kul'dur**	**60.91**	**19**	*i* P	**P**	**09 06 42.7**	**+1.4**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**62.66**	**341**	P	**P**	**09 06 52.5**	**-0.5**
	comp=Z,5.3nm,0.7s,baz=157,slow=6.1,SNR=26						
KURK	**Kurchatov**	**62.71**	**341**	P	**P**	**09 06 53.0**	**-0.4**
KURK				pmax	pmax		
	comp=Z,17nm,1.0s						
KURK	**Kurchatov**	**62.71**	**341**	P	**P**	**09 06 53.0**	**-0.4**
KURK				IAmb	IAmb	09 07 09.6	
	comp=Z,18nm,1.0s						
GEYT	**Alibeck**	**63.53**	**319**	P	**P**	**09 06 59.6**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=142,slow=5.6,SNR=4.7						
GEYT	**Alibeck**	**63.53**	**319**	P	**P**	**09 06 56.4**	**-2.8**
GYA0	**ALIBECK ARRAY**	**63.53**	**319**	P	**P**	**09 06 57.1**	**-2.1**
GYA0				pmax	pmax		
	comp=Z,21nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**63.53**	**319**	P	**P**	**09 06 57.1**	**-2.1**
GYA0B				IAmb	IAmb	09 07 19.4	
	comp=Z,21nm,1.1s						
ZALV	**Zalesovo Beam**	**63.85**	**346**	P	**P**	**09 06 59.7**	**-1.2**
	comp=Z,2.3nm,0.3s,baz=150,slow=6.3,SNR=8.6						
ZALV	**Zalesovo Beam**	**63.85**	**346**	*i* P	**P**	**09 07 00.2**	**-0.7**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRZS	**Berezniki**	**64.23**	**337**	*eP*	**P**	**09 07 02.7**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=337						
BRZS				*eS*	**S**	**09 15 38.3**	**0.0**
	baz=337						
BRZS				LR	LR	09 36 55.7	
	comp=Z,1μm,15.7s,baz=337						
BRZS	**Berezniki**	**64.23**	**337**	*eP*	**P**	**09 07 02.6**	**-0.9**
BRZS				*eS*	**S**	**09 15 38.3**	**0.0**
BRZS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRZS				MLR	MLR		
	comp=Z,1μm,16.0s						
MAW	**Mawson**	**66.51**	**197**	P	**P**	**09 07 19.8**	**+1.9**
	comp=Z,2.5nm,0.5s,baz=53,slow=5.7,SNR=15						
MAW	**Mawson**	**66.51**	**197**	P	**P**	**09 07 20.0**	**+2.0**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MAW	**Mawson**	**66.51**	**197**	P	**P**	**09 07 20.0**	**+2.0**
BVAR	**Borovoye Array**	**67.51**	**338**	P	**P**	**09 07 24.1**	**-0.4**
	comp=Z,2.9nm,0.6s,baz=77,slow=14,SNR=23						
BRVK	**Borovoye**	**67.58**	**338**	*i* P	**P**	**09 07 24.2**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRVK	**Borovoye**	**67.58**	**338**	P	**P**	**09 07 24.4**	**-0.6**
BRVK				IAmb	IAmb	09 07 40.6	
	comp=Z,16nm,1.2s

VNDA	**Vanda**	**75.58**	**169**	P	**P**	09 08 13.7	+0.9	
VNDA				pmax	pmax			
	comp=Z,15nm,1.5s							
VNDA	**Vanda**	**75.58**	**169**	P	**P**	09 08 13.7	+0.9	
VNDA				IAmb	IAmb	09 08 28.5		
	comp=Z,15nm,1.4s							
MATP	**Matopo**	**75.69**	**251**	P	**P**	09 08 16.5	+1.8	
	comp=Z,3.2nm,0.6s,baz=166,slow=0.6,SNR=10							
KBZ	**Khabaz**	**76.40**	**318**	P	**P**	09 08 17.5	-0.5	
	comp=Z,10nm,0.9s,baz=127,slow=4.8,SNR=9.8							
KBZ	**Khabaz**	**76.40**	**318**	*i* P	**P**	09 08 18.6	+0.6	
KBZ				pmax	pmax			
	comp=Z,19nm,1.0s							
KIV	**Kislovodsk**	**76.64**	**318**	*e*P	**P**	09 08 16.4	-3.1	
KIV				pmax	pmax			
	comp=Z,30nm,1.0s							
ASF	**Jabal al Asfar**	**76.66**	**306**	P	**P**	09 08 19.7	-0.2	
	comp=Z,4.5nm,0.8s,baz=296,slow=1.7,SNR=4.9							
EIL	**Elat**	**77.53**	**303**	P	**P**	09 08 24.6	-0.1	
	comp=Z,3.4nm,0.7s,baz=93,slow=6.2,SNR=2.3							
NRIK	**Noril'sk**	**77.81**	**353**	P	**P**	09 08 24.5	-0.9	
	comp=Z,2.7nm,0.3s,baz=135,slow=4.5,SNR=9.5							
NRIK	**Noril'sk**	**77.81**	**353**	*i* P	**P**	09 08 24.7	-0.7	
NRIK				pmax	pmax			
	comp=Z,10.0nm,0.9s							
MMAI	**Mount Meron Ar**	**78.11**	**306**	P	**P**	09 08 30.2	+2.2	
	comp=Z,7.7nm,0.9s,baz=90,slow=8.6,SNR=4.3							
BOSA	**Boshof**	**78.28**	**242**	P	**P**	09 08 30.4	+1.3	
	comp=Z,2.5nm,0.7s,baz=116,slow=3.7,SNR=6.4							
BOSA	**Boshof**	**78.28**	**242**	P	**P**	09 08 31.4	+2.3	
BOSA				pmax	pmax			
	comp=Z,14nm,1.3s							
BOSA	**Boshof**	**78.28**	**242**	P	**P**	09 08 31.4	+2.3	
BOSA				IAmb	IAmb	09 08 51.2		
	comp=Z,14nm,1.3s							
KIRV	**Kirov**	**79.95**	**334**	P	**P**	09 08 37.5	+0.2	
	comp=Z,19nm,0.7s,baz=219,slow=0.9,SNR=6.1							
KIRV	**Kirov**	**79.95**	**334**	*i* P	**P**	09 08 36.7	-0.6	
VRH	**Novokhopyorsk**	**80.27**	**325**	*e*P	**P**	09 08 37.4	-1.8	
VRH				pmax	pmax			
	comp=Z,20nm,0.8s							
CSS	**Mathiatis**	**80.32**	**307**	P	**P**	09 08 39.9	0.0	
TIXI	**Tiksi**	**80.51**	**7**	P	**P**	09 08 39.0	-1.1	
TIXI				pmax	pmax			
	comp=Z,12nm,0.8s							
TIXI	**Tiksi**	**80.51**	**7**	P	**P**	09 08 39.0	-1.1	
TIXI				IAmb	IAmb	09 08 39.3		
	comp=Z,12nm,0.8s							
BR131	**Keskin Array S**	**81.46**	**312**	P	**P**	09 08 46.3	+0.3	
BR131				pmax	pmax			
	comp=Z,10.0nm,0.8s							
BR131	**Keskin Array S**	**81.46**	**312**	P	**P**	09 08 46.3	+0.3	
BR131				IAmb	IAmb	09 08 47.3		
	comp=Z,9.6nm,0.8s							
BRTR	**Keskin Array B**	**81.46**	**312**	P	**P**	09 08 46.4	+0.3	
	comp=Z,9.1nm,0.7s,baz=138,slow=6.7,SNR=27							
BRTR	**Keskin Array B**	**81.46**	**312**	P	**P**	09 08 45.4	-0.7	
VORD	**Divnogorie**	**81.57**	**324**	*e*P	**P**	09 08 45.5	-0.7	
VORD				pmax	pmax			
	comp=Z,9.0nm,0.6s							
VSR	**Storozhevoye**	**81.75**	**324**	*e*P	**P**	09 08 46.1	-1.0	
VSR				pmax	pmax			
	comp=Z,20nm,0.7s							
LPSR	**Galich'ya Gora**	**82.42**	**325**	*e*P	**P**	09 08 49.8	-0.8	
LPSR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
OBN	**Obninsk**	**84.66**	**327**	*e*P	**P**	09 09 02.9	+0.9	
OBN				*e**SP	**sP**	09 09 18.1	+0.8	
OBN				pmax	pmax			
	comp=Z,11nm,0.9s							
OBN				MLR	MLR			
	comp=Z,3µm,18.0s							
KLMR	**Klimovskoe**	**85.44**	**333**	*e*P	**P**	09 09 04.9	-0.9	
KLMR				pmax	pmax			
	comp=Z,73nm,1.5s							
KLMR	**Klimovskoe**	**85.44**	**333**	*e*P	**P**	09 09 04.9	-0.9	
KLMR				AMP		09 09 22.8		
	comp=Z,73nm,1.5s							
KLMR				LQ	LQ	09 44 01.7		
KLMR				LQ	LQ	09 44 01.7		
KLMR				LR	LR	09 46 48.6		
KLMR				AMP		09 51 49.0		
	comp=Z,2µm,17.7s							
CFR	**Carcaliu**	**86.85**	**316**	⇓P	**P**	09 09 14.5	+1.4	
CFR	**Carcaliu**	**86.85**	**316**	⇓P	**P**	09 09 14.5	+1.4	
HARR	**Harsova**	**86.87**	**316**	⇑P	**P**	09 09 14.2	+1.0	
HARR	**Harsova**	**86.87**	**316**	⇑P	**P**	09 09 14.2	+1.0	
AKASG	**Malin Array Be**	**87.52**	**322**	P	**P**	09 09 16.1	-0.2	
	comp=Z,1.2nm,0.6s,baz=86,slow=4.6,SNR=6.6							
AKASG				LR	LR	09 54 47.7		
	comp=Z,3µm,18.7s,baz=135,slow=40							
AKASG	**Malin Array Be**	**87.52**	**322**	P	**P**	09 09 16.0	-0.2	
AKASG				pmax	pmax			
	comp=Z,6.0nm,1.4s							
AKASG	**Malin Array Be**	**87.52**	**322**	P	**P**	09 09 16.0	-0.3	
VRI	**Vrincioaia**	**87.97**	**317**	⇓P	**P**	09 09 20.5	+2.0	
VRI	**Vrincioaia**	**87.97**	**317**	⇓P	**P**	09 09 20.5	+2.0	
PLOR	**Plostina**	**88.02**	**317**	⇑P	**P**	09 09 21.0	+2.2	
PLOR	**Plostina**	**88.02**	**317**	⇑P	**P**	09 09 21.0	+2.2	
MLR	**Muntele Rosu**	**88.42**	**316**	P	**P**	09 09 22.3	+1.4	
	comp=Z,9.0nm,0.8s,baz=121,slow=2.7,SNR=8.8							
MLR	**Muntele Rosu**	**88.42**	**316**	⇓P	**P**	09 09 22.6	+1.7	
MLR	**Muntele Rosu**	**88.42**	**316**	P	**P**	09 09 20.0	-0.9	
MLR				pmax	pmax			
	comp=Z,68nm,1.3s							
MLR	**Muntele Rosu**	**88.42**	**316**	P	**P**	09 09 20.0	-0.9	
OZUR		**88.66**	**317**	⇓P	**P**	09 09 24.5	+2.7	
SNAA	**Sanae**	**88.66**	**197**	P	**P**	09 09 23.4	+2.0	
SNAA	**Sanae**	**88.66**	**197**	P	**P**	09 09 23.4	+2.0	
SNAA				pmax	pmax			
	comp=Z,20nm,1.4s							
SNAA	**Sanae**	**88.66**	**197**	P	**P**	09 09 23.4	+2.0	
SNAA				IAmb	IAmb	09 09 39.9		
	comp=Z,20nm,1.4s							
VOIR		**89.03**	**316**	⇓P	**P**	09 09 25.2	+1.5	
VOIR		**89.03**	**316**	⇓P	**P**	09 09 25.2	+1.5	
ARR	**Arges**	**89.30**	**316**	⇓P	**P**	09 09 22.7	-2.3	
BURAR	**Bucovina Array**	**89.36**	**318**	⇑P	**P**	09 09 27.4	+2.2	
BURAR	**Bucovina Array**	**89.36**	**318**	⇑P	**P**	09 09 27.4	+2.2	
BURAR	**Bucovina Array**	**89.36**	**318**	P	**P**	09 09 25.6	+0.4	
BUR08	**Bucovina Ar. S**	**89.38**	**318**	P	**P**	09 09 25.1	-0.2	
BUR08				IAmb	IAmb	09 09 42.0		
	comp=Z,6.2nm,1.3s							
GZR	**Gura Zlata**	**90.59**	**316**	⇓P	**P**	09 09 32.9	+2.0	
GZR	**Gura Zlata**	**90.59**	**316**	⇓P	**P**	09 09 32.9	+2.0	
FINES	**FINESS Array B**	**91.80**	**332**	P	**P**	09 09 35.9	-0.2	
	comp=Z,2.3nm,0.8s,baz=41,slow=4.4,SNR=2.1							
FINES	**FINESS Array B**	**91.80**	**332**	*i* P	P	09 09 44.9	+8.8	
FINES				pmax	pmax			
	comp=Z,3.0nm,0.8s							
ARCES	**ARCESS Array B**	**93.73**	**340**	P	**P**	09 09 44.4	-0.5	
	comp=Z,10.0nm,1.0s,baz=86,slow=3.7,SNR=3.7							
NVAR	**Mina Array Bea**	**129.69**	**45**	PKP	**PKPdf**	09 15 38.3	+0.1	
	comp=Z,1.4nm,1.0s,baz=244,slow=3.0,SNR=4.5							
NVAR	**Mina Array Bea**	**129.69**	**45**		**PKPdf**	09 15 37.9	-0.4	
PDAR	**Pinedale Array**	**133.07**	**36**	PKP	**PKPdf**	09 15 45.0	+0.4	
	comp=Z,0.6nm,0.6s,baz=247,slow=1.1,SNR=4.0							
PDAR	**Pinedale Array**	**133.07**	**36**		**PKPdf**	09 15 42.8	-1.7	
ULM	**Lac du Bonnet**	**133.73**	**19**	PKP	**PKiKP**	09 15 46.7	+0.2	
	comp=Z,1.6nm,0.7s,baz=315,slow=5.7,SNR=1.7							
TX31	**Lajitas Ar. Si**	**144.72**	**48**		**PKPdf**	09 16 06.3	+0.3	
TX32	**Lajitas Array**	**144.72**	**48**		**PKPdf**	09 16 06.5	+0.5	
TXAR	**Lajitas Array**	**144.72**	**48**	PKP	**PKPdf**	09 16 06.5	+0.5	
	comp=Z,3.1nm,0.7s,baz=266,slow=0.8,SNR=32							
R40A	**Maddies Statio**	**145.27**	**26**		**PKPdf**	09 16 06.5	0.0	
S39A	**Bolivar**	**145.30**	**27**	PKPbc	**PKPdf**	09 16 07.2	+0.6	
BDFB	**Brasilia**	**145.41**	**228**	PKPbc	**PKPab**	09 16 09.4	+1.8	
	comp=Z,4.6nm,0.7s,baz=213,slow=4.7,SNR=6.3							
U38A	**Gravette**	**145.80**	**30**		**PKPbc**	09 16 08.0	0.0	
CCM	**Cathedral Cave**	**145.90**	**25**	P	**PKPbc**	09 16 08.4	+0.2	
	baz=329							
M56A	**Emporium**	**146.04**	**6**	P	**PKPab**	09 16 08.9	-0.3	
	baz=353							
MGMO	**Mountain Grove**	**146.22**	**27**		**PKPbc**	09 16 09.4	+0.1	
M58A	**Price's Panora**	**146.29**	**3**	P	**PKPab**	09 16 09.8	-0.3	
	baz=356							
ACSO	**Alum Creek Sta**	**146.52**	**12**	P	**PKPbc**	09 16 09.8	-0.3	
	baz=344							
N56A	**West Decatur**	**146.59**	**6**	P	**PKPbc**	09 16 10.4	+0.1	
	baz=352							
U40A	**Yellville**	**146.60**	**28**	P	**PKPdf**	09 16 09.4	+0.4	
	baz=325							
U40A	**Yellville**	**146.60**	**28**	PKPbc	**PKPbc**	09 16 10.0	-0.4	
N58A	**Sunbury**	**146.80**	**4**	P	**PKPab**	09 16 11.9	-0.1	
	baz=355							
JCT	**Junction City**	**146.81**	**43**	PKIKP	**PKPdf**	09 16 08.7	-0.8	
JCT	**Junction City**	**146.81**	**43**	P	**PKPbc**	09 16 11.1	-0.1	
	baz=308							
JCT	**Junction City**	**146.81**	**43**	PKPdf	**PKPdf**	09 16 08.7	-0.8	
T42A	**Van Buren**	**146.83**	**25**		**PKPdf**	09 16 09.6	+0.4	
T42A					**PKPbc**	09 16 11.3	+0.3	
WCI	**Wyandotte Cave**	**147.54**	**18**	PKP2	**PKPab**	09 16 14.9	-0.2	
WCI	**Wyandotte Cave**	**147.54**	**18**	PKPbc	**PKPbc**	09 16 12.0	-1.0	
WCI				PKPab	**PKPab**	09 16 14.9	-0.2	
LCAR	**Lake Charles**	**147.61**	**26**	PKPdf	**PKPdf**	09 16 10.5	0.0	
LCAR					**PKPab**	09 16 15.6	+0.1	
Q53A	**Leroy**	**148.14**	**11**	P	**PKPbc**	09 16 15.3	+0.7	
	baz=346							
Q54A	**Coxs Mills**	**148.15**	**10**	P	**PKPbc**	09 16 15.0	+0.4	
	baz=347							
Q55A	**Buckhannon**	**148.26**	**9**	P	**PKPbc**	09 16 15.3	+0.4	
	baz=349							
237A	**Washetta, Mont**	**148.36**	**37**	PKPdf	**PKPdf**	09 16 12.9	+1.0	
T47A	**Sharon Grove**	**148.41**	**20**		**PKPbc**	09 16 15.1	-0.3	
Q57A	**Strasburg**	**148.44**	**7**	P	**PKPbc**	09 16 14.9	-0.5	
	baz=352							
WVT	**Waverly**	**148.91**	**22**	PKP2	**PKPbc**	09 16 15.3	-1.4	
WVT	**Waverly**	**148.91**	**22**	P	**PKPbc**	09 16 16.8	+0.1	
	baz=333							
WVT	**Waverly**	**148.91**	**22**		**PKPbc**	09 16 15.3	-1.4	
WVT				PKPab	**PKPab**	09 16 19.9	-0.7	
CLTN	**Cedars of Leba**	**149.48**	**20**	PKPdf	**PKPdf**	09 16 12.8	-0.8	
CLTN				PKPbc	**PKPbc**	09 16 18.0	-0.1	
CLTN				PKPab	**PKPab**	09 16 21.9	-1.0	
V48A	**Smith Brothers**	**149.63**	**21**	PKPbc	**PKPbc**	09 16 18.0	-0.5	
SWET	**Sewanee**	**150.41**	**20**		**PKPbc**	09 16 18.9	-1.6	
X48A	**Hartselle**	**150.70**	**22**		**PKPbc**	09 16 19.8	-1.3	
V53A	**Saluda**	**150.91**	**15**	PKPbc	**PKPbc**	09 16 21.8	+0.2	
KMSC	**Kings Mountain**	**151.77**	**13**	P	**PKiKP**	09 16 24.0	+0.1	
	baz=345							
LRAL	**Lakeview Retre**	**151.97**	**24**	P	**PKiKP**	09 16 24.5	0.0	
	baz=332							
X54A	**Belton**	**152.09**	**15**	P	**PKiKP**	09 16 25.0	+0.3	
	baz=342							
GOGA	**Godfrey**	**152.86**	**17**	P	**PKiKP**	09 16 26.4	+0.1	
	baz=340							

NNC 03 08:58:02.1±3.7, 36°83N×70°80E, h109km±98km, mb3.0, mpv3.7, 2C-2D, Error ellipse: s-maj=33.8km s-min=29.2km az=65.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.27**	**358**	P	Pn	08 59 32.1	-0.1
	2.1nm,0.3s,baz=183,slow=13,SNR=50						
KK31				⇑S	Sn	09 00 43.3	+0.9
	1.5nm,0.4s,baz=188,slow=24,SNR=9.0						
AAK	**Ala-Archa**	**6.46**	**25**	⇑P	Pn	08 59 35.2	+0.4
	1.5nm,0.3s						
AAK				⇓S	Sn	09 00 47.5	+0.2
	6.5nm,0.8s						
TKM2	**Tokmak 2**	**7.12**	**30**	⇓P	Pn	08 59 43.4	-0.3
	3.5nm,0.5s						
AB31	**Akbulak array**	**14.72**	**331**	P	Pn	09 01 24.8	0.0
	0.2nm,0.3s,baz=142,slow=16,SNR=16						

*REY **03** 09:04:41.4, 64°69N×17°50W, h5km*
*IDC **03** 09:04:42.6±0.7, 64°75N×17°65W, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/44, mbtmp3.6/5, Error ellipse: s-maj=19.1km s-min=12.2km az=106.0*

ISC 03 09:04:40.3±0.9, 64°69N±0°03×17°50W±0°03, h15km±7km, n29, σ0°99/31, mb3.6/5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.11**	**261**	P	**Pg**	09 04 43.8	0.0
	baz=263						
IDYN	**Dyngjuhals**	**0.12**	**30**	P	**Pg**	09 04 44.0	+0.1
	baz=28						
IURH	**Urdarhals**	**0.20**	**49**	P	**Pg**	09 04 45.3	+0.2
	baz=48						
IGRF	**Grimsfjall**	**0.30**	**160**	P	**Pb**	09 04 47.1	-0.4
	baz=161						
IKVE	**Kverkfjoll**	**0.35**	**92**	P	**Pb**	09 04 48.1	-0.3
	baz=91						
IHUS	**Husbondi**	**0.40**	**190**	P	**Pb**	09 04 49.1	0.0
	baz=190						
IHUS				S	**Sb**	09 04 54.8	-0.3
	baz=190						
ISKR	**Skrokkalda**	**0.40**	**251**	P	**Pb**	09 04 48.9	-0.3
	baz=252						
THOR	**Thorvaldshraun**	**0.43**	**55**	P	**Pb**	09 04 49.6	0.0
	baz=54						
IJOK	**Jokulheimar**	**0.49**	**220**	P	**Pb**	09 04 50.3	-0.3
	baz=221						
IJOK				S	**Sb**	09 04 57.0	-0.6
	baz=221						
IASK	**Askja**	**0.52**	**45**	S	**Sb**	09 04 58.1	-0.3
	baz=44						
IASK				P	**Pb**	09 04 50.6	-0.5
	baz=44						
IIEY	**Innrieyrar**	**0.66**	**205**	P	**Pg**	09 04 52.7	-0.4
	baz=205						
IIEY				S	**Sg**	09 05 02.1	+0.3
	baz=205						
ISVA	**Svartarkot**	**0.66**	**9**	P	**Pg**	09 04 53.2	0.0
	baz=8.8						
IKSK	**Karasker**	**0.69**	**139**	P	**Pb**	09 04 53.0	-1.1
	baz=140						
IKAL	**Kalfafell**	**0.75**	**186**	P	**Pg**	09 04 54.4	-0.5
	baz=186						
IKAL				S	**Sg**	09 05 04.5	-0.2
	baz=186						
IVSH	**V-Saudaahnukur**	**0.77**	**80**	P	**Pb**	09 04 54.4	-1.1
	baz=80						
IVSH				S	**Sg**	09 05 05.4	-0.1
	baz=80						
IADA	**Aoalbol**	**0.89**	**67**	P	**Pb**	09 04 56.3	-1.1
	baz=67						
IHVE	**Hveravellir**	**0.90**	**282**	P	**Pg**	09 04 57.3	-0.5
	baz=283						
IMEL	**Melhnausar**	**0.95**	**22**	P	**Pb**	09 04 57.9	-0.6
	baz=21						
IREN	**Reynihlio**	**0.99**	**14**	P	**Pg**	09 04 59.3	-0.2
	baz=14						
IKVO	**Krokttuvotn**	**1.06**	**14**	P	**Pn**	09 05 00.2	-0.5
	baz=14						
ISNB	**Snabyli**	**1.08**	**208**	S	**Sn**	09 05 14.1	-1.3
	baz=208						
IGRS	**Grimsstaoir**	**1.12**	**31**	P	**Pb**	09 05 00.6	-0.7
	baz=31						
ISKI	**Skildingahlsh**	**1.20**	**9**	P	**Pb**	09 05 02.1	-0.7
	baz=9.2						
IGHA	**Grjothals**	**1.21**	**17**	P	**Pb**	09 05 02.3	-0.6
	baz=16						
ESDC	**Sonseca Array**	**26.28**	**156**	P	**P**	09 10 18.9	+4.1
	0.4nm,0.3s,baz=352,slow=9.2,SNR=4.8						
KURBB	**Kurchatov Arra**	**48.15**	**58**	P	P	09 13 23.4	+4.2
	1.0nm,0.7s,baz=321,slow=7.7,SNR=8.2						
MKAR	**Makanchi Array**	**52.71**	**58**	P	P	09 13 59.1	+5.3
	0.5nm,0.9s,baz=317,slow=8.3,SNR=3.3						
PDAR	**Pinedale Array**	**53.16**	**293**	P	P	09 14 01.3	+3.8
	0.8nm,0.9s,baz=46,slow=6.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	P	09 14 03.3	+5.9
	0.6nm,0.8s,baz=345,slow=8.5,SNR=2.2						

IDC 03 09:18:04.1±1.6, 41°71S×79°40E, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.9/35, mbtmp4.2/5, Error ellipse: s-maj=43.9km s-min=29.3km az=106.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**27.96**	**87**	T	T	09 52 39.5	
	baz=245,slow=74,SNR=15						
H01W3	**Cape Leeuwin H**	**27.97**	**87**	T	T	09 52 40.7	
	baz=245,slow=74,SNR=16						
H01W1	**Cape Leeuwin H**	**27.98**	**87**	T	T	09 52 41.3	
	baz=245,slow=74,SNR=14						
QSPA	**South Pole Qui**	**48.45**	**180**	P	P	09 26 48.1	+0.1
	7.8nm,1.0s,baz=293,slow=4.7,SNR=14						
ASAR	**Alice Springs**	**48.46**	**86**	P	P	09 26 48.2	-0.2
	3.1nm,1.0s,baz=233,slow=7.6,SNR=14						
STKA	**Stephens Creek**	**49.80**	**100**	P	P	09 26 58.8	+0.2
	2.4nm,0.9s,baz=269,slow=10,SNR=3.7						
WRA	**Warramunga Arr**	**51.00**	**82**	P	P	09 27 07.6	-0.2
	3.1nm,0.9s,baz=231,slow=7.6,SNR=14						
CMAR	**Chiang Mai Arr**	**62.54**	**21**	P	P	09 28 30.2	+0.6
	1.7nm,0.8s,baz=207,slow=6.7,SNR=8.4						
ILAR	**Eielson Array**	**145.15**	**33**	PKPbc	PKPbc	09 37 40.0	-2.0
	0.6nm,0.8s,baz=304,slow=4.7,SNR=6.8						

*IDC **03** 09:28:52.6±0.9, 41°59S×80°13E, h0km, mb4.3/9, mb1 4.4/9, mb1mx4.1/39, mbtmp4.3/9, MS4.9/3, Ms1 4.9/3, ms1mx4.2/44, Error ellipse: s-maj=28.5km s-min=18.6km az=123.0*
*NEIC **03** 09:28:53.4±2.1, 41°6S±0°1×80°1E±0°1, h10km±1km, mb4.8/15, Error ellipse: s-maj=19.5km s-min=17.5km az=318.0*

ISC 03 09:28:53.6±0.7, 41°6S±0°1×80°0E±0°1, h10km, n33, σ1°17/25, mb4.5/10, MS5.0/3, 1C-1D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAF	**Port-aux-Franc**	**10.35**	**218**	Pn	**Pn**	09 31 19.2	-2.8
H01W2	**Cape Leeuwin H**	**27.52**	**87**	T	T	10 03 00.9	
	baz=246,slow=74,SNR=54						
H01W3	**Cape Leeuwin H**	**27.53**	**87**	T	T	10 03 01.5	
	baz=246,slow=74,SNR=49						
H01W1	**Cape Leeuwin H**	**27.54**	**87**	T	T	10 03 02.2	
	baz=246,slow=74,SNR=53						
MAW	**Mawson**	**27.69**	**194**	P	**P**	09 34 41.2	-0.2
	4.6nm,1.0s,baz=27,slow=12,SNR=7.0						
MAW				LR	LR	09 42 36.2	
	comp=Z,1µm,21.4s,baz=52,slow=30						
MAW	**Mawson**	**27.69**	**194**	P	**P**	09 34 41.8	+0.4
H08S2	**Diego Garcia H**	**34.44**	**347**	T	T	10 11 56.3	
	baz=169,slow=76,SNR=4.4						
H08S1	**Diego Carcia H**	**34.44**	**347**	T	T	10 11 55.1	
	baz=169,slow=76,SNR=5.8						
H08S3	**Diego Garcia H**	**34.46**	**347**	T	T	10 11 58.5	
	baz=169,slow=76,SNR=6.9						
SYO	**Syowa Base**	**34.65**	**204**	⇑*e*P	**P**	09 35 43.6	+1.0
SYO	**Syowa Base**	**34.65**	**204**	⇓*e*pP	pP	09 35 45.6	+0.8
BBOO	**Buckleboo**	**44.84**	**98**	P	**P**	09 37 07.1	-0.8
ASAR	**Alice Springs**	**48.02**	**86**	P	**P**	09 37 32.5	-0.5
	3.0nm,0.9s,baz=229,slow=6.6,SNR=12						
ASAR	**Alice Springs**	**48.02**	**86**	P	**P**	09 37 32.2	-0.8
VNDA	**Vanda**	**48.06**	**163**	P	**P**	09 37 32.4	-0.2
	2.4nm,1.0s,baz=274,slow=6.4,SNR=9.2						
VNDA				LR	LR	09 56 04.5	
	comp=Z,2µm,18.2s,baz=338,slow=34						
VNDA	**Vanda**	**48.06**	**163**	P	**P**	09 37 33.2	+0.7
VNDA				IAmb	IAmb	09 37 35.8	
	comp=Z,13nm,1.5s						
QSPA	**South Pole Qui**	**48.58**	**180**	P	**P**	09 37 37.1	+0.3
	comp=Z,17nm,1.1s,baz=296,slow=4.0,SNR=22						
QSPA				LR	LR	09 56 53.3	
	comp=Z,1µm,18.9s,baz=336,slow=35						
QSPA	**South Pole Qui**	**48.58**	**180**	P	**P**	09 37 37.2	+0.3
SNAA	**Sanae**	**48.94**	**205**	P	**P**	09 37 41.3	+1.9
	comp=Z,3.5nm,1.1s,baz=131,slow=9.3,SNR=2.9						
SNAA	**Sanae**	**48.94**	**205**	P	**P**	09 37 40.5	+1.0
STKA	**Stephens Creek**	**49.40**	**100**	P	**P**	09 37 42.9	-0.5
	comp=Z,5.2nm,1.0s,baz=213,slow=9.9,SNR=6.0						
STKA	**Stephens Creek**	**49.40**	**100**	IAmb	IAmb	09 37 50.9	
	comp=Z,4.5nm,1.5s						
VNA2	**Neumayer--Watz**	**50.52**	**205**	P	**P**	09 37 53.3	+1.8
	baz=120,slow=9.2						
WRA	**Warramunga Arr**	**50.55**	**82**	P	**P**	09 37 52.1	-0.3
	comp=Z,6.4nm,1.0s,baz=230,slow=7.4,SNR=20						
VNA3	**Neumayer Olymp**	**51.16**	**205**	P	**P**	09 37 56.7	+0.5
CMAR	**Chiang Mai Arr**	**62.27**	**20**	P	**P**	09 39 15.7	0.0
	comp=Z,2.7nm,0.8s,baz=208,slow=6.8,SNR=14						
KBL	**Kabul**	**76.41**	**351**	P	**P**	09 40 42.0	-1.2
BTK	**Batken**	**81.68**	**353**	P	**P**	09 41 11.5	-0.3
BTK				IAmb	IAmb	09 41 27.3	
	comp=Z,11nm,1.2s						
KKAR	**Karatay Array**	**84.73**	**353**	P	**P**	09 41 26.7	-0.7
TORD	**Torodi Ar. Bea**	**90.05**	**287**	P	**P**	09 41 55.4	+1.7
	comp=Z,0.7nm,0.9s,baz=131,slow=7.9,SNR=3.4						
ILAR	**Eielson Array**	**144.81**	**33**	PKP	**PKPab**	09 48 27.4	-1.2
	comp=Z,0.9nm,1.0s,baz=300,slow=3.3,SNR=6.3						
ILAR	**Eielson Array**	**144.81**	**33**		**PKPdf**	09 48 29.5	0.0
NVAR	**Mina Array Bea**	**165.64**	**97**	PKPab	**PKPab**	09 49 59.6	+2.1
	comp=Z,0.9nm,0.8s,baz=243,slow=5.2,SNR=5.5						

*IDC **03** 09:33:21.5±3.3, 6°24S×149°27E, h56km±44km, mb3.2/2, mb1 3.6/5, mb1mx3.3/28, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=110.0km s-min=16.6km az=131.0*

**ISC 03 09:33:20.5±1.3, 6°0S±0°3×149°0E±0°3, h

WBSI	**Waikabubak, Su**	**6.02**	**238**	P		**P**	**10 04 28.4**	**-0.7**
	8µm351nm,0.5s							
SAUI	**Saumlaki**	**6.85**	**103**	P		**P**	**10 04 37.6**	**+1.1**
	1.1nm174nm,0.5s							
SAUI	**Saumlaki**	**6.85**	**103**	P		**P**	**10 04 37.1**	**+0.6**
PLAI	**Plampang**	**7.12**	**250**	P		**P**	**10 04 37.8**	**-1.2**
	0.9nm2µm63nm,0.5s							
GTOI	**Gorontalo**	**7.22**	**348**	P		**P**	**10 04 42.7**	**+2.8**
	0.2nm51nm,0.6s							
TWSI	**Taliwang, Sumb**	**7.94**	**253**	P		**P**	**10 04 46.6**	**0.0**
	42nm,0.5s							
MPSI	**Mapaga**	**8.20**	**325**	P		**P**	**10 04 50.7**	**+1.6**
	23nm,0.7s							
FAKI	**Fak Fak**	**8.43**	**66**	P		**P**	**10 04 52.0**	**+0.7**
	4µm250nm,0.5s							
FAKI	**Fak Fak**	**8.43**	**66**	P		**P**	**10 04 53.0**	**+1.8**
FAKI						**S**	**10 06 32.8**	**+0.3**
SIJI	**Sorong**	**8.69**	**51**	P		**P**	**10 04 55.1**	**+1.3**
	9.7nm,0.3s,baz=243,slow=10,SNR=17							
SIJI				S		**S**	**10 06 38.8**	**+1.7**
	1.7nm,0.3s,baz=111,slow=21,SNR=7.7							
KBKI	**Kotabaru**	**8.94**	**290**	P		**P**	**10 04 57.2**	**+1.0**
	32nm,0.8s							
MTN	**Manton Dam**	**9.06**	**135**	P		**P**	**10 04 57.9**	**+0.6**
KNRA	**Kununurra**	**10.04**	**156**	P		**P**	**10 05 07.1**	**+0.2**
SGSI	**Sangihe**	**10.13**	**5**	P		**P**	**10 05 08.4**	**+0.5**
	183nm,0.4s							
BBKI	**Banjar Baru**	**10.13**	**287**	P		**P**	**10 05 08.9**	**+0.9**
	183nm,0.8s							
JAGI	**Jajag, Banyuwa**	**10.51**	**258**	P		**P**	**10 05 10.3**	**-1.4**
	3µm95nm,0.8s							
JAGI	**Jajag, Banyuwa**	**10.51**	**258**	P		**P**	**10 05 10.1**	**-1.7**
FITZ	**Fitzroy Crossi**	**11.61**	**175**	P		**P**	**10 05 23.1**	**+0.5**
	29nm,0.3s,baz=6.9,slow=8.1,SNR=893							
FITZ				S		**S**	**10 07 28.9**	**-1.0**
	0.6nm,0.3s,baz=0.1,slow=17,SNR=5.5							
FITZ	**Fitzroy Crossi**	**11.61**	**175**	P		**P**	**10 05 22.4**	**-0.2**
FITZ						**S**	**10 07 29.9**	**0.0**
PWJI	**Pagerwojo**	**12.75**	**262**	P		**P**	**10 05 34.7**	**+0.5**
	48nm,0.6s							
WOJI	**Wonogiri, Jawa**	**13.60**	**263**	P		**P**	**10 05 43.2**	**+0.4**
	66nm,0.7s							
SPMM	**Sapulut**	**13.73**	**324**	P		**P**	**10 05 47.0**	**+2.9**
UGM	**Wanagama**	**14.01**	**263**	P		**P**	**10 05 45.5**	**-1.3**
SBUM	**Sibu**	**15.17**	**305**	P		**P**	**10 05 56.6**	**-1.0**
SBUM					IAmb	IAmb	10 05 60.0	
	comp=Z,71nm,1.4s							
SBUM	**Sibu**	**15.17**	**305**	P		**P**	**10 05 59.0**	**+1.3**
KPJI	**Karang Pucung**	**15.54**	**266**	P		**P**	**10 06 01.0**	**0.0**
	comp=Z,254nm,0.8s							
PSA00	**Pilbara Seismi**	**15.70**	**196**	P		**P**	**10 06 02.5**	**+0.1**
PSA00	**Pilbara Seismi**	**15.70**	**196**	P		**P**	**10 06 02.8**	**+0.4**
PSA00					IAmb	IAmb	10 06 03.4	
	comp=Z,28nm,0.5s							
GENI	**Genyem**	**16.02**	**77**	P		**P**	**10 06 07.2**	**+1.7**
	comp=Z,141nm,0.5s							
CMJI	**Cimerak**	**16.05**	**264**	P		**P**	**10 06 05.4**	**-0.2**
	comp=Z,1µmcomp=Z,88nm,0.7s							
KSM	**Kuching**	**16.27**	**299**	P		**P**	**10 06 08.5**	**+0.8**
KSM	**Kuching**	**16.27**	**299**	P		**P**	**10 06 10.0**	**+2.3**
WB0	**Warramunga Arr**	**16.31**	**145**	P		**P**	**10 06 08.1**	**+0.1**
WB0					IAmb	IAmb	10 06 09.1	
	comp=Z,23nm,0.6s							
WRAB	**Tennant Creek**	**16.42**	**146**	P		**P**	**10 06 09.3**	**+0.2**
WRAB					IAmb	IAmb	10 06 10.9	
	comp=Z,29nm,1.2s							
WRA	**Warramunga Arr**	**16.42**	**146**	P		**P**	**10 06 08.4**	**-0.6**
	comp=Z,6.9nm,0.3s,baz=259,slow=5.7,SNR=607							
WRA				S		**S**	**10 08 49.8**	**-3.2**
	comp=Z,0.7nm,0.3s,baz=324,slow=16,SNR=5.9							
WRA	**Warramunga Arr**	**16.42**	**146**	P		**P**	**10 06 08.9**	**-0.2**
WB2	**Warramunga Arr**	**16.43**	**146**	P		**P**	**10 06 09.4**	**+0.3**
WB2					IAmb	IAmb	10 06 10.9	
	comp=Z,18nm,1.0s							
WR0	**Warramunga Arr**	**16.55**	**145**	P		**P**	**10 06 10.6**	**+0.3**
CISI	**Cisompet, Garu**	**16.66**	**265**	P		**P**	**10 06 10.7**	**-0.7**
	comp=Z,261nm,0.7s							
CISI	**Cisompet, Garu**	**16.66**	**265**	P		**P**	**10 06 10.5**	**-0.8**
LEM	**Lembang**	**16.84**	**268**	P		**P**	**10 06 13.8**	**+0.7**
	comp=Z,9.8nm,0.3s,baz=45,slow=13,SNR=3.7							
CBJI	**Citeko**	**17.60**	**269**	P		**P**	**10 06 21.1**	**+1.2**
	comp=Z,15µmcomp=Z,137nm,0.4s							
GIRL	**Giralia**	**18.92**	**211**	P		**P**	**10 06 32.2**	**+0.4**
AS31	**Alice Springs**	**19.32**	**153**	P		**P**	**10 06 36.1**	**+0.6**
AS31					IAmb	IAmb	10 06 38.3	
	comp=Z,6.6nm,0.3s							
ASAR	**Alice Springs**	**19.32**	**153**	P		**P**	**10 06 36.7**	**+1.2**
	comp=Z,2.7nm,0.3s,baz=343,slow=12,SNR=138							
ASAR				S		**S**	**10 09 38.7**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=339,slow=20,SNR=8.6							
ASAR				ScP		**ScP**	**10 13 05.3**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=349,slow=2.2,SNR=9.9							
ASAR	**Alice Springs**	**19.32**	**153**	P		**P**	**10 06 35.7**	**+0.3**
PMG	**Port Moresby**	**22.57**	**99**	P		**P**	**10 07 05.5**	**+0.8**
	comp=Z,20nm,0.5s,baz=128,slow=0.3,SNR=8.1							
PMG	**Port Moresby**	**22.57**	**99**	P		**P**	**10 07 05.4**	**+0.7**
PMG					IAmb	IAmb	10 07 05.7	
	comp=Z,25nm,0.7s							
FORT	**Forrest**	**24.41**	**173**	P		**P**	**10 07 21.0**	**+0.2**
FORT					IAmb	IAmb	10 07 30.9	
	comp=Z,42nm,1.0s							
CTA	**Charters Tower**	**25.04**	**125**	P		**P**	**10 07 27.1**	**+0.7**
	comp=Z,8.5nm,0.7s,baz=301,slow=9.6,SNR=11							
CTAO	**Charters Tower**	**25.04**	**125**	P		**P**	**10 07 27.2**	**+0.8**
CTAO					IAmb	IAmb	10 07 27.9	
	comp=Z,13nm,0.9s							
IPM	**Ipoh**	**25.89**	**294**	P		**P**	**10 07 34.0**	**-0.1**
KULM	**Kulim**	**26.57**	**296**	P		**P**	**10 07 40.0**	**0.0**
RPSI	**Rantau Prapat**	**27.17**	**289**	P		**P**	**10 07 45.2**	**0.0**
RPSI	**Rantau Prapat**	**27.17**	**289**	P		**P**	**10 07 45.2**	**0.0**
PSI	**Prapat**	**27.20**	**289**	P		**P**	**10 07 45.2**	**-0.5**
	comp=Z,51nm,0.7s,baz=180,slow=4.9,SNR=48							
BBOO	**Buckleboo**	**28.32**	**159**	P		**P**	**10 07 55.5**	**+0.5**
BBOO					IAmb	IAmb	10 08 05.6	
	comp=Z,21nm,1.2s							
TPUB	**Ta-pu**	**29.83**	**353**	P		**P**	**10 08 07.1**	**-1.0**
STKA	**Stephens Creek**	**29.88**	**150**	P		**P**	**10 08 09.0**	**+0.6**
	comp=Z,4.7nm,0.4s,baz=326,slow=8.8,SNR=13							
STKA	**Stephens Creek**	**29.88**	**150**	P		**P**	**10 08 09.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**35.38**	**315**	P		**P**	**10 08 55.6**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=146,slow=7.3,SNR=5.2							
CMAR				PcP		**PcP**	**10 11 08.3**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=175,slow=2.6,SNR=5.7							
CAN	**Canberra**	**36.47**	**145**	P		**P**	**10 09 05.6**	**+1.8**
CAN					IAmb	IAmb	10 09 14.5	
	comp=Z,21nm,1.4s							
GYA	**Guiyang**	**37.05**	**333**	⇑P		**P**	**10 09 09.0**	**+0.3**
GYA					pmax	pmax		
	comp=Z,11nm,1.1s							
KMI	**Kunming**	**37.90**	**327**	⇓*e*P		**P**	**10 09 16.8**	**+1.0**
KMI					pmax	pmax		
	comp=Z,13nm,0.6s							
KMI					pmax	pmax		
	comp=Z,650nm,12.9s							
WHN	**Wuhan**	**38.08**	**346**	⇓P		**P**	**10 09 17.3**	**+0.5**
WHN					pmax	pmax		
	comp=Z,52nm,0.6s							
NJ2	**Nanjing**	**38.68**	**352**	*e*P		**P**	**10 09 21.4**	**-0.3**
NJ2					pmax	pmax		
	comp=Z,36nm,0.5s							
NJ2					pmax	pmax		
	comp=Z,630nm,5.2s							
ENH	**Enshi**	**39.28**	**339**	P		**P**	**10 09 26.4**	**-0.2**
ENH					IAmb	IAmb	10 09 27.1	
	comp=Z,22nm,0.8s							
JNU	**Nakatsue**	**39.82**	**8**	P		**P**	**10 09 30.7**	**-0.1**
	comp=Z,14nm,0.7s,baz=211,slow=8.7,SNR=8.2							
JNU	**Nakatsue**	**39.82**	**8**	IAmb		IAmb	10 09 48.2	
	comp=Z,46nm,1.3s							
XAN	**Xi'an**	**42.92**	**341**	P		**P**	**10 09 54.0**	**-1.2**
XAN				sP		sP	10 12 42.6	-4.0
XAN				S		**S**	**10 15 35.5**	**-2.4**
XAN				pmax		pmax		
	comp=Z,38nm,0.7s							
XAN				pmax		pmax		
	comp=Z,1µm,13.7s							
XAN	**Xi'an**	**42.92**	**341**	IAmb		IAmb	10 09 54.9	
	comp=Z,24nm,0.7s							
DZM	**Mont Dzumac**	**43.27**	**115**	P		**P**	**10 09 59.0**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=288,slow=19,SNR=1.6							
KSAR	**Wonju Array Be**	**43.79**	**4**	P		**P**	**10 10 02.2**	**+0.4**
KSRS	**Korea Array**	**43.80**	**4**	P		**P**	**10 10 02.3**	**+0.4**
	comp=Z,8.8nm,0.6s,baz=181,slow=9.2,SNR=31							
KSRS				PcP		**PcP**	**10 11 34.6**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=176,slow=3.6,SNR=4.1							
KS19	**Wonju Array Si**	**43.84**	**4**	P		**P**	**10 10 01.8**	**-0.4**
KS19					IAmb	IAmb	10 10 03.2	
	comp=Z,19nm,1.0s							
MAJO	**Matsushiro**	**44.65**	**16**	P		**P**	**10 10 07.5**	**-1.0**
MAJO					IAmb	IAmb	10 10 08.6	
	comp=Z,14nm,0.7s							
MAT	**Matsushiro**	**44.65**	**16**	P		**P**	**10 10 07.7**	**-0.8**
MJAR	**Matsushiro Arr**	**44.65**	**16**	P		**P**	**10 10 07.9**	**-0.6**
	comp=Z,14nm,0.6s,baz=191,slow=9.1,SNR=32							
MJAR	**Matsushiro Arr**	**44.65**	**16**	P		**P**	**10 10 07.5**	**-0.9**
LZH	**Lanzhou**	**46.58**	**337**	*e*P		**P**	**10 10 24.0**	**+0.7**
LZH				pP		pP	10 12 13.3	+2.8
LZH				sP		sP	10 13 20.6	+4.2
LZH				pmax		pmax		
	comp=Z,22nm,1.1s							
LZH				pmax		pmax		
	comp=Z,87nm,4.7s							
BJT	**Baijiatuan**	**46.89**	**351**	P		**P**	**10 10 24.7**	**-0.7**
BJT					IAmb	IAmb	10 10 25.4	
	comp=Z,8.6nm,0.6s							
BJI	**Beijing**	**46.91**	**351**	P		**P**	**10 10 24.8**	**-0.7**
BJI					pmax	pmax		
	comp=Z,11nm,0.6s							
HHC	**Hu-ho-hao-te**	**48.57**	**347**	*e*P		**P**	**10 10 39.0**	**+1.0**
HHC					pmax	pmax		
	comp=Z,7.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,350nm,6.6s							
USA0B	**Ussuriysk Arra**	**50.87**	**7**	P		**P**	**10 10 54.5**	**-0.1**
USA0B					IAmb	IAmb	10 10 55.0	
	comp=Z,16nm,0.6s							
USRK	**Ussuriysk Ar.**	**50.87**	**7**	P		**P**	**10 10 54.5**	**-0.1**
	comp=Z,16nm,0.6s,baz=188,slow=7.2,SNR=50							
MDJ	**Mudanjiang**	**51.05**	**5**	IAmb		IAmb	10 10 57.4	
	comp=Z,38nm,1.0s							
GTA	**Gaotai**	**51.06**	**335**	*e*P		**P**	**10 10 56.4**	**+0.2**
GTA					pmax	pmax		
	comp=Z,7.0nm,1.0s							
ASAJ	**Asahikawa**	**52.91**	**16**	P		**P**	**10 11 09.6**	**+0.4**
	comp=Z,16nm,0.7s,baz=214,slow=12,SNR=8.7							
ULN	**Ulaanbaatar**	**56.26**	**346**	P		**P**	**10 11 32.3**	**-0.3**
SONM	**Songino Array**	**56.39**	**345**	P		**P**	**10 11 33.5**	**0.0**
	comp=Z,3.6nm,0.5s,baz=164,slow=8.2,SNR=22							
SONM	**Songino Array**	**56.39**	**345**	P		**P**	**10 11 33.4**	**-0.1**
BKZ	**Black Stump Fm**	**56.86**	**133**	P		**P**	**10 11 36.8**	**0.0**
URZ	**Urewera**	**57.00**	**132**	P		**P**	**10 11 37.6**	**-0.1**
	comp=Z,3.0nm,0.5s,baz=221,slow=20,SNR=1.2							
URZ	**Urewera**	**57.00**	**132**	IAmb		IAmb	10 11 49.8	
	comp=Z,29nm,1.3s							
WMQ	**Urumqi**	**60.11**	**330**	*e*P		**P**	**10 11 59.6**	**+1.0**
WMQ					pmax	pmax		
	comp=Z,22nm,0.7s							
WMQ					pmax	pmax		
	comp=Z,260nm,7.3s							
TLY	**Talaya**	**60.63**	**345**	P		**P**	**10 12 02.2**	**+0.4**
	comp=Z,4.2nm,0.5s,baz=204,slow=6.8,SNR=4.0							
TLY	**Talaya**	**60.63**	**345**	IAmb		IAmb	10 12 02.4	
	comp=Z,4.9nm,0.5s							
MK31	**Makanchi Array**	**64.92**	**329**	P		**P**	**10 12 29.1**	**-0.3**
MKAR	**Makanchi Array**	**64.92**	**329**	P		**P**	**10 12 29.1**	**-0.2**
	comp=Z,9.1nm,0.5s,baz=127,slow=7.9,SNR=107							
MKAR	**Makanchi Array**	**64.92**	**329**	P		**P**	**10 12 28.9**	**-0.4**
PEA0B	**Petropavlovsk-**	**65.64**	**21**	P		**P**	**10 12 34.1**	**+0.4**
PEA0B					IAmb	IAmb	10 12 53.4	
	comp=Z,56nm,1.2s							
PETK	**Petropavlovsk-**	**65.64**	**21**	P		**P**	**10 12 34.4**	**+0.7**
	comp=Z,8.7nm,0.5s,baz=207,slow=1.4,SNR=27							
YAK	**Yakutsk**	**68.41**	**3**	P		**P**	**10 12 49.3**	**-1.1**
ZALV	**Zalesovo Beam**	**68.81**	**336**	P		**P**	**10 12 51.8**	**-1.2**
	comp=Z,8.8nm,0.6s,baz=142,slow=5.3,SNR=30							
KURK	**Kurchatov**	**69.33**	**331**	P		**P**	**10 12 55.9**	**-0.3**
KURK					IAmb	IAmb	10 12 56.2	
	comp=Z,13nm,0.3s							
BVAR	**Borovoye Array**	**74.80**	**330**	P		**P**	**10 13 26.8**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=69,slow=18,SNR=18							
BRVK	**Borovoye**	**74.87**	**329**	P		**P**	**10 13 27.7**	**-0.4**
BRVK					IAmb	IAmb	10 13 28.1	
	comp=Z,9.4nm,0.5s							
TIXI	**Tiksi**	**78.00**	**1**	P		**P**	**10 13 43.5**	**-1.3**
ABKAR	**Akbulak array**	**78.78**	**323**	P		**P**	**10 13 48.5**	**-0.9**
ABKAR	**Akbulak array**	**78.78**	**323**	IAmb		IAmb	10 13 49.2	
	comp=Z,6.8nm,1.2s							
NRIK	**Noril'sk**	**79.80**	**347**	P		**P**	**10 13 54.2**	**-0.2**
	comp=Z,2.6nm,0.4s,baz=143,slow=6.0,SNR=5.0							
AKTO	**Aktyubinsk**	**80.39**	**323**	P		**P**	**10 13 57.4**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=90,slow=5.7,SNR=10							
ARU	**Arti**	**82.44**	**329**	P		**P**	**10 14 07.1**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=173,slow=1.5,SNR=6.0							
ARU	**Arti**	**82.44**	**329**	IAmb		IAmb	10 14 08.1	
	comp=Z,5.2nm,0.9s							
QSPA	**South Pole Qui**	**83.51**	**180**	P		**P**	**10 14 12.7**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=315,slow=1.3,SNR=7.5							
QSPA	**South Pole Qui**	**83.51**	**180**	IAmb		IAmb	10 14 14.1	
	comp=Z,0.7nm,0.7s							
ILAR	**Eielson Array**	**95.18**	**25**	P		**P**	**10 15 05.3**	**-2.4**
	comp=Z,0.5nm,0.6s,baz=236,slow=5.3,SNR=8.9							
ARCES	**ARCESS Array B**	**99.19**	**339**	P		**Pdif**	**10 15 23.8**	**-1.8**
	comp=Z,5.7nm,1.1s,baz=69,slow=4.9,SNR=4.6							
PDAR	**Pinedale Array**	**120.30**	**44**	PKP		**PKPdf**	**10 20 31.3**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=212,slow=3.2,SNR=2.5							
TORD	**Torodi Ar. Bea**	**123.41**	**281**	PKP		**PKPdf**	**10 20 37.8**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=56,slow=1.5,SNR=6.0							
ULM	**Lau Bonnet**	**124.84**	**30**	PKP		**PKPdf**	**10 20 39.0**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=284,slow=4.2,SNR=2.0							
TXAR	**Lajitas Array**	**129.24**	**57**	PKP		**PKPdf**	**10 20 49.6**	**0.0**
	comp=Z,0.3nm,0.6s,baz=204,slow=3.6,SNR=7.6							
TXAR				SKPab		SKPab	10 23 14.5	-1.4
	comp=Z,0.9nm,0.8s,baz=260,slow=3.0,SNR=10							
Z56A	**Williston**	**144.03**	**39**			PKPbc	10 21 16.3	+0.2
LPAZ	**La Paz**	**154.14**	**151**	PKPab		**PKPab**	**10 21 59.7**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=191,slow=5.2,SNR=3.6							

*IDC **03** 10:24:13.6±8.3, 22.°06S×178.°64W, h571km±77km, mb3.0/3, mb1 3.3/5, mb1mx3.0/23, mbtmp4.2/5, Error ellipse: s-maj=85.9km s-min=46.2km az=46.0*
*NEIC **03** 10:24:21.5±1.2, 22.°5S±0.°2×179.°3W±0.°1, h620km±15km, mb4.3/24, Error ellipse: s-maj=24.9km s-min=19.8km az=166.0*
ISC 03 10:24:20.7±0.7, 22.°5S±0.°1×179.°34W±0.°10, h600km, n51,
σ1§68/50, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.35**	**332**	P		**P**	**10 25 56.8**	**+0.1**
NIUE	**Niue**	**9.45**	**70**	P		**P**	**10 26 35.7**	**+1.7**
AFI	**Afiamalu**	**11.17**	**41**	P		**P**	**10 26 53.1**	**+1.7**
DZM	**Mont Dzumac**	**13.17**	**269**	P		**P**	**10 27 11.8**	**+0.4**
	0.2nm,0.3s,baz=127,slow=20,SNR=2.8							
OUZ	**Omahuta**	**14.08**	**204**	P		**P**	**10 27 19.0**	**-1.1**
SANVU	**Saraoutou**	**14.54**	**297**	P		**P**	**10 27 25.4**	**+0.6**
WIAZ	**Waiheke Island**	**15.01**	**197**	P		**P**	**10 27 35.5**	**+6.7**
HAZ	**Te Kaha**	**15.39**	**189**	P		**P**	**10 27 32.7**	**+0.5**
PUZ	**Puketiti**	**15.64**	**187**	P		**P**	**10 27 36.1**	**+1.5**
TWGZ	**Tauwhareparae**	**15.78**	**188**	P		**P**	**10 27 37.9**	**+2.1**
TOZ	**Tahuroa Road**	**15.80**	**195**	P		**P**	**10 27 37.7**	**+1.7**
URZ	**Urewera**	**15.98**	**190**	P		**P**	**10 27 36.8**	**-0.9**
	1.8nm,0.3s,baz=24,slow=3.0,SNR=11							
URZ	**Urewera**	**15.98**	**190**	P		**P**	**10 27 36.8**	**-0.9**
MWZ	**Matawai**	**15.99**	**189**	P		**P**	**10 27 38.8**	**+1.0**
BKZ	**Black Stump Fm**	**16.97**	**191**	P		**P**	**10 27 46.7**	**-0.1**
BKZ					IAmb	IAmb	10 27 54.3	
	comp=Z,21nm,1.2s							
RAR	**Rarotonga**	**18.21**	**90**	P		**P**	**10 27 56.5**	**-1.8**
BFZ	**Birch Farm**	**18.49**	**191**	P		**P**	**10 28 02.2**	**+1.7**
BFZ	**Birch Farm**	**18.49**	**191**	P		**P**	**10 28 01.2**	**+0.6**
BHW	**Baring Head**	**19.45**	**193**	P		**P**	**10 28 09.9**	**+0.6**
QRZ	**Quartz Range**	**19.50**	**199**	P		**P**	**10 28 11.6**	**+1.9**
QRZ	**Quartz Range**	**19.50**	**199**	P		**P**	**10 28 11.2**	**+1.5**
NNZ	**Nelson**	**19.63**	**197**	P		**P**	**10 28 11.4**	**+0.5**
NNZ	**Nelson**	**19.63**	**197**	P		**P**	**10 28 10.9**	**+0.1**
TUWZ	**Tuamarina**	**19.68**	**195**	P		**P**	**10 28 12.1**	**+0.7**
TUWZ	**Tuamarina**	**19.68**	**195**	P		**P**	**10 28 11.3**	**-0.1**
THZ	**Tophouse**	**20.26**	**197**	P		**P**	**10 28 17.4**	**+0.7**
THZ	**Tophouse**	**20.26**	**197**	P		**P**	**10 28 16.5**	**-0.1**
DSZ	**Denniston Nort**	**20.56**	**199**	P		**P**	**10 28 24.4**	**+5.1**
KHZ	**Kahutara**	**20.71**	**195**	P		**P**	**10 28 20.2**	**-0.4**
KHZ	**Kahutara**	**20.71**	**195**	P		**P**	**10 28 20.2**	**-0.4**
LTZ	**Lake Taylor**	**21.38**	**197**	P		**P**	**10 28 26.3**	**-0.3**
LTZ	**Lake Taylor**	**21.38**	**197**	P		**P**	**10 28 26.4**	**-0.3**
LTZ					IAmb	IAmb	10 28 35.1	
	comp=Z,27nm,1.3s							
OXZ	**Oxford**	**21.95**	**197**	P		**P**	**10 28 31.4**	**-0.3**
ARMA	**Armidale**	**27.10**	**247**	P		**P**	**10 29 17.2**	**-0.3**
ARMA					IAmb	IAmb	10 29 32.1	
	comp=Z,19nm,1.5s							
CAN	**Canberra**	**30.37**	**238**	P		**P**	**10 29 45.8**	**+0.2**
CTAO	**Charters Tower**	**32.11**	**268**	P		**P**	**10 30 00.8**	**+0.3**
CTAO					IAmb	IAmb	10 30 16.1	
	comp=Z,13nm,1.4s							
TOO	**Toolangi**	**33.72**	**236**	P		**P**	**10 30 14.0**	**+0.2**
TOO					IAmb	IAmb	10 30 14.8	
	comp=Z,5.7nm,0.8s							
STKA	**Stephens Creek**	**35.81**	**246**	P		**P**	**10 30 31.6**	**+0.3**
	comp=Z,2.9nm,0.7s,baz=85,slow=11,SNR=5.7							
BBOO	**Buckleboo**	**40.55**	**245**	P		**P**	**10 31 08.8**	**-0.8**
BBOO					IAmb	IAmb	10 31 18.0	
	comp=Z,36nm,1.5s							
AS31	**Alice Springs**	**42.87**	**259**	P		**P**	**10 31 28.5**	**+0.5**
ASAR	**Alice Springs**	**42.88**	**259**	P		**P**	**10 31 28.6**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=95,slow=7.1,SNR=18							
ASAR	**Alice Springs**	**42.88**	**259**	P		**P**	**10 31 28.0**	**0.0**
WR0	**Warramunga Arr**	**42.94**	**264**	P		**P**	**10 31 28.0**	**-0.4**
WR0					IAmb	IAmb	10 31 36.2	
	comp=Z,10.0nm,1.4s							
WB0	**Warramunga Arr**	**43.11**	**265**	P		**P**	**10 31 29.6**	**-0.2**
WB2	**Warramunga Arr**	**43.11**	**264**	P		**P**	**10 31 29.5**	**-0.3**
WRAB	**Tennant Creek**	**43.12**	**264**	P		**P**	**10 31 29.6**	**-0.2**
WRAB					IAmb	IAmb	10 31 36.7	
	comp=Z,5.6nm,1.4s							
WRA	**Warramunga Arr**	**43.12**	**264**	P		**P**	**10 31 29.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=95,slow=8.1,SNR=49							
WRA	**Warramunga Arr**	**43.12**	**264**	IAmb		IAmb	10 31 37.7	
	comp=Z,0.1nm,1.2s							
FORT	**Forrest**	**47.37**	**248**	P		**P**	**10 32 01.3**	**-0.7**
FORT					IAmb	IAmb	10 32 18.2	
	comp=Z,20nm,0.8s							
FITZ	**Fitzroy Crossi**	**51.55**	**264**	P		**P**	**10 32 33.3**	**+0.4**
FITZ					IAmb	IAmb	10 32 36.0	
	comp=Z,4.8nm,1.3s							
ARCES	**ARCESS Array B**	**130.66**	**349**	PKP		**PKPdf**	**10 42 18.7**	**-5.0**
	comp=Z,1.0nm,0.7s,baz=52,slow=5.8,SNR=3.6							

*IDC **03** 10:37:54.2±1.3, 0.°17N×124.°88E, h0km, mb3.6/3, mb1 3.9/5, mb1mx3.5/42, mbtmp3.8/5, ML3.9/2, Error ellipse: s-maj=50.7km s-min=22.6km az=68.0*
*DJA **03** 10:38:07.1±3.7, 1.°S±4.°×12.°4E±.°, h29km±42km, M3.8/6, MLv3.8/6*
ISC 03 10:38:06.7±1.0, 0.°37S±0.°06×124.°41E±0.°08, h100km, n10,
σ1§56/13, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.04**	**336**	P		**Pn**	**10 38 27.0**	**-0.5**
KMSI				S		**Sn**	**10 38 42.2**	**-1.0**
GTOI	**Gorontalo**	**1.72**	**306**	P		**Pn**	**10 38 37.4**	**+1.7**
LUWI	**Luwuk**	**1.77**	**248**	P		**Pn**	**10 38 37.5**	**+1.2**
SANI	**Sanana**	**2.29**	**137**	P		**Pn**	**10 38 42.4**	**-0.7**
APSI	**Ampana**	**2.81**	**259**	P		**Pn**	**10 38 48.6**	**-1.4**
KAPI	**Kappang**	**6.55**	**225**	Pn		**Pn**	**10 39 41.0**	**+0.5**
	4.9nm,0.3s,ba

ISC 03 11:02:05.2±0.6,**24°01S**±0'.04×**66°.85W**±0'.04,**h201**km±6km, **n103**,σ1°**48**/141,**mb4.1**/9,**9C-2D**,**Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.42**	**120**	⇓*iP*	**Pn**	**11 02 39.0**	**+0.6**
SLA				*i* S	**Sn**	**11 03 04.1**	**-0.2**
SLA	**San Lorenzo**	**1.42**	**120**	*eP*	**Pn**	**11 02 39.0**	**+0.6**
SLA				*eS*	**Sn**	**11 03 04.9**	**+0.6**
HJA	**Humahuaca**	**1.54**	**59**	*eP*	**Pn**	**11 02 40.1**	**+0.2**
HJA				*eS*	**Sn**	**11 03 07.8**	**+1.2**
YJA	**Yavi**	**2.20**	**34**	*eP*	**Pn**	**11 02 47.3**	**+0.9**
YJA				*eS*	**Sn**	**11 03 18.9**	**+0.5**
FSA	**Cafayete**	**2.24**	**159**	*eP*	**Pn**	**11 02 46.7**	**+0.2**
LVC	**Limon Verde**	**2.35**	**306**	P	**Pn**	**11 02 49.5**	**+1.6**
	83nm,0.3s,baz=125,slow=7.5,SNR=625						
LVC				S	**Sn**	**11 03 22.3**	**+1.3**
	86nm,0.3s,baz=286,slow=18,SNR=27						
LVC	**Limon Verde**	**2.35**	**306**	*eP*	**Pn**	**11 02 49.3**	**+1.4**
LVC				*i* S	**Sn**	**11 03 21.7**	**+0.7**
LVC	**Limon Verde**	**2.35**	**306**	*eP*	**Pn**	**11 02 49.5**	**+1.6**
LVC				*eS*	**Sn**	**11 03 22.8**	**+1.8**
PB15	**IPOC Station P**	**2.53**	**288**	*eP*	**Pn**	**11 02 51.5**	**+1.8**
PB15				*i* S	**Sn**	**11 03 25.5**	**+1.1**
PB15	**IPOC Station P**	**2.53**	**288**		**Pn**	**11 02 51.3**	**+1.6**
PB15	**IPOC Station P**	**2.53**	**288**	*eP*	**Pn**	**11 02 51.4**	**+1.8**
PB15				*eP*		11 02 51.6	
PB15				*eS*	**Sn**	**11 03 25.6**	**+1.3**
GO02	**Mina Guanaco**	**2.75**	**245**	*eP*	**Pn**	**11 02 53.9**	**+1.7**
GO02				*i* S	**Sn**	**11 03 30.3**	**+1.4**
GO02				IAML		11 03 31.4	
	comp=N,680nm,0.2s						
GO02	**Mina Guanaco**	**2.75**	**245**		**Pn**	**11 02 53.9**	**+1.7**
PB06	**IPOC Station P**	**2.81**	**297**	⇑*iP*	**Pn**	**11 02 54.5**	**+1.6**
PB06				*eS*	**Sn**	**11 03 30.1**	**0.0**
PB06				IAML		11 03 35.4	
	comp=N,974nm,0.3s						
PB06	**IPOC Station P**	**2.81**	**297**		**Pn**	**11 02 54.4**	**+1.4**
PB06	**IPOC Station P**	**2.81**	**297**	*eP*	**Pn**	**11 02 54.5**	**+1.6**
PB06				*eS*	**Sn**	**11 03 30.7**	**+0.6**
PB06				IAML		11 03 33.1	
	comp=Z,552nm,0.2s						
AHML	**Horco Molle**	**3.09**	**154**	*eP*	**Pn**	**11 02 55.8**	**-0.2**
AHML				*eS*	**Sn**	**11 03 34.8**	**-1.0**
PB09	**IPOC Station P**	**3.11**	**315**	⇑*iP*	**Pn**	**11 02 58.1**	**+1.6**
PB09				*eS*	**Sn**	**11 03 36.8**	**+0.4**
PB09				IAML		11 03 39.9	
	comp=N,401nm,0.2s						
PB09	**IPOC Station P**	**3.11**	**315**		**Pn**	**11 02 58.1**	**+1.6**
PB09	**IPOC Station P**	**3.11**	**315**	*eP*	**Pn**	**11 02 58.1**	**+1.6**
PB09				*eS*	**Sn**	**11 03 38.1**	**+1.6**
PB09				IAML		11 03 40.4	
	comp=Z,457nm,0.3s						
PB05	**IPOC Station P**	**3.28**	**290**	⇑*iP*	**Pn**	**11 02 59.3**	**+0.9**
PB05				*i* S	**Sn**	**11 03 39.0**	**-0.9**
PB05	**IPOC Station P**	**3.28**	**290**	*eP*	**Pn**	**11 02 59.5**	**+1.1**
PB05				*eS*	**Sn**	**11 03 39.0**	**-0.9**
PB05				*eS*	S	11 03 40.3	+1.0
PB05				IAML		11 03 41.4	
	comp=Z,333nm,0.3s						
PB14	**IPOC Station P**	**3.30**	**259**	*eP*	**Pn**	**11 03 00.2**	**+1.4**
PB14				*i* S	**Sn**	**11 03 40.0**	**-0.5**
PB14	**IPOC Station P**	**3.30**	**259**	Pn	**Pn**	**11 02 59.9**	**+1.2**
PB14	**IPOC Station P**	**3.30**	**259**	*eP*	**Pn**	**11 02 60.0**	**+1.2**
PB14				*eS*	**Sn**	**11 03 40.3**	**-0.3**
PB03	**IPOC Station P**	**3.31**	**306**	⇑*iP*	**Pn**	**11 02 59.8**	**+1.0**
PB03				*eS*	**Sn**	**11 03 39.8**	**-0.7**
PB03	**IPOC Station P**	**3.31**	**306**	*eP*	**Pn**	**11 02 59.8**	**+1.0**
PB03				*eS*	**Sn**	**11 03 40.2**	**-0.4**
PB03				IAML		11 03 44.1	
	comp=Z,754nm,0.2s						
PB10	**IPOC Station P**	**3.43**	**278**		**Pn**	**11 03 01.2**	**+1.3**
PB04	**IPOC Station P**	**3.46**	**298**	⇑*iP*	**Pn**	**11 03 01.5**	**+0.9**
PB04				*eS*	**Sn**	**11 03 43.1**	**-0.8**
PB04	**IPOC Station P**	**3.46**	**298**		**Pn**	**11 03 01.6**	**+1.0**
PB04	**IPOC Station P**	**3.46**	**298**	*eP*	**Pn**	**11 03 01.5**	**+0.9**
PB04				*eS*	**Sn**	**11 03 44.2**	**+0.3**
PB04				IAML		11 03 45.9	
	comp=Z,382nm,0.3s						
AC02	**Maricunga**	**3.49**	**216**	Pn	**Pn**	**11 03 01.9**	**+0.7**
AC02					**Sn**	**11 03 46.8**	**+1.7**
PB07	**IPOC Station P**	**3.60**	**308**	⇑*iP*	**Pn**	**11 03 03.2**	**+0.8**
PB07				*eS*	**Sn**	**11 03 45.6**	**-1.4**
PB07	**IPOC Station P**	**3.60**	**308**		**Pn**	**11 03 02.9**	**+0.6**
PB01	**IPOC Station P**	**3.83**	**320**	⇑*iP*	**Pn**	**11 03 05.4**	**+0.4**
PB01				*i* S	**Sn**	**11 03 50.7**	**-1.2**
PB01	**IPOC Station P**	**3.83**	**320**		**Pn**	**11 03 05.4**	**+0.4**
AC01	**Pan de Azucar**	**4.01**	**237**	*eP*	**Pn**	**11 03 07.2**	**0.0**
AC01				*i* S	**Sn**	**11 03 54.1**	**-1.7**
AC01	**Pan de Azucar**	**4.01**	**237**	Pn	**Pn**	**11 03 07.7**	**+0.5**
PB08	**IPOC Station P**	**4.40**	**331**	⇑*iP*	**Pn**	**11 03 13.5**	**+1.1**
PB08				*eS*	**Sn**	**11 04 04.6**	**-0.7**
PB08	**IPOC Station P**	**4.40**	**331**		**Pn**	**11 03 13.5**	**+1.1**
TA01	**Diego Aracena**	**4.61**	**317**	*eP*	**Pn**	**11 03 14.1**	**-0.5**
TA01				*i* S	**Sn**	**11 04 04.3**	**-5.0**
TA01	**Diego Aracena**	**4.61**	**317**	Pn	**Pn**	**11 03 15.0**	**+0.4**
GO03	**Copiap**	**4.70**	**220**	*eP*	**Pn**	**11 03 15.6**	**-0.1**
GO03				*i* S	**Sn**	**11 04 09.6**	**-1.9**
GO03	**Copiap**	**4.70**	**220**	Pn	**Pn**	**11 03 15.7**	**-0.1**
GO03	**Copiap**	**4.70**	**220**	*eP*	**Pn**	**11 03 16.2**	**+0.4**
GO03				*eS*	**Sn**	**11 04 09.7**	**-1.7**
TA02	**Huaiquique**	**4.80**	**320**	*eP*	**Pn**	**11 03 17.3**	**+0.1**
TA02				*i* S	**Sn**	**11 04 11.3**	**-2.5**
GO01	**Chusmiza**	**4.83**	**333**	*eP*	**Pn**	**11 03 18.3**	**+0.3**
GO01				*i* S	**Sn**	**11 04 14.0**	**-1.4**
GO01	**Chusmiza**	**4.83**	**333**		**Pn**	**11 03 18.3**	**+0.3**
VCA	**Vinchina**	**4.86**	**194**	*eP*	**Pn**	**11 03 19.5**	**+1.5**
VCA				*eS*	**Sn**	**11 04 18.4**	**+2.9**
PB11	**IPOC Station P**	**4.96**	**328**	⇑*eP*	**Pn**	**11 03 18.7**	**-0.7**
PB11				*eS*	**Sn**	**11 04 14.4**	**-3.4**
PB11	**IPOC Station P**	**4.96**	**328**	Pn	**Pn**	**11 03 18.7**	**-0.7**
PSGC	**Pisagua**	**5.34**	**325**	⇓*eP*	**Pn**	**11 03 22.4**	**-1.6**
PSGC				*i* S	**Sn**	**11 04 20.1**	**-6.2**
PSGCX	**Pisagua**	**5.34**	**325**	Pn	**Pn**	**11 03 22.3**	**-1.8**
ACLC	**CERRO LA CRUZ**	**5.40**	**181**	*eP*	**Pn**	**11 03 24.7**	**-0.1**
ACLC				*eS*	**Sn**	**11 04 27.8**	**0.0**
MNMC	**Minye Minye**	**5.48**	**332**	*eP*	**Pn**	**11 03 25.6**	**-0.6**
MNMC				*eS*	**Sn**	**11 04 26.7**	**-3.3**
MNMC	**Minye Minye**	**5.48**	**332**		**Pn**	**11 03 26.0**	**-0.1**
AC04	**Llanos de Chal**	**5.64**	**221**	Pn	**Pn**	**11 03 27.3**	**-0.6**
AC05	**El Transito**	**5.70**	**212**		**Pn**	**11 03 28.4**	**-0.4**
LCO	**Las Campanas**	**6.06**	**214**	Pn	**Pn**	**11 03 32.0**	**-1.5**
APLL	**PUNTA DE LOS L**	**6.37**	**177**	*eP*	**Pn**	**11 03 36.4**	**-0.9**
APLL				IAML		11 04 49.5	
	comp=Z,820nm,3.4s						
GO04	**Tololo Observa**	**7.08**	**209**	Pn	**Pn**	**11 03 44.7**	**-1.9**
TCA	**Tanti**	**7.57**	**165**	*eP*	**Pn**	**11 03 51.6**	**-1.3**
TCA				*eS*	**Sn**	**11 05 17.0**	**-1.6**
CO03	**El Pedregal**	**7.61**	**206**		**Pn**	**11 03 52.2**	**-1.2**
ZON	**Zonda**	**7.68**	**192**		**Pn**	**11 03 53.6**	**-0.7**
LPAZ	**La Paz**	**7.77**	**351**	P	**Pn**	**11 03 56.4**	**+0.2**
	comp=Z,8.5nm,0.3s,baz=168,slow=6.1,SNR=186						
LPAZ				S	**Sn**	**11 05 23.0**	**-1.3**
	baz=43,slow=19,SNR=1.3						
RTCV	**Cerro Valdivia**	**7.97**	**190**	*eP*	**Pn**	**11 03 56.8**	**-1.2**
RTCV				*eS*	**Sn**	**11 05 22.3**	**-5.6**
RTCV				IAML		11 05 49.0	
	comp=Z,29nm,3.7s						
CO02	**Combarbal**	**8.06**	**206**	Pn	**Pn**	**11 03 57.1**	**-2.1**
CPUP	**Villa Florida**	**8.93**	**107**	P	**Pn**	**11 04 07.7**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=319,slow=9.3,SNR=3.0						
VA03	**San Esteban**	**9.31**	**200**	Pn	**Pn**	**11 04 15.5**	**0.0**
SIV	**San Ignacio**	**9.65**	**35**	P	**Pn**	**11 04 17.4**	**-2.6**
	comp=Z,1.9nm,0.3s,baz=226,slow=13,SNR=48						
ROC1	**El Roble**	**9.65**	**201**	Pn	**Pn**	**11 04 19.0**	**-1.2**
BO02	**Sierra Bellavi**	**11.28**	**197**		**Pn**	**11 04 41.0**	**+0.1**
SAML	**Samuel**	**15.38**	**14**		**Pn**	**11 05 30.9**	**-1.3**
SAML				IAmb	IAmb	11 05 32.4	
	comp=Z,8.9nm,0.7s						
PLCA	**Paso Flores**	**16.96**	**190**	P	**P**	**11 05 50.6**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=12,slow=13,SNR=8.2						
PLCA	**Paso Flores**	**16.96**	**190**		**P**	**11 05 49.5**	**-0.2**
LL01	**San Ignacio de**	**18.89**	**193**	P	**P**	**11 06 10.5**	**0.0**
LL01				IAmb	IAmb	11 06 15.0	
	comp=Z,18nm,1.2s						
BDFB	**Brasilia**	**19.56**	**68**	P	**P**	**11 06 17.5**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=243,slow=9.7,SNR=4.2						
SNAA	**Sanae**	**59.30**	**161**	P	**P**	**11 11 46.1**	**+0.6**
SNAA				IAmb	IAmb	11 11 47.7	
	comp=Z,5.9nm,1.4s						
LRAL	**Lakeview Retre**	**59.89**	**340**	P	**P**	**11 11 49.8**	**-0.1**
LRAL				IAmb	IAmb	11 11 52.6	
	comp=Z,7.0nm,1.2s						
833A	**Chaparral WMA,**	**60.74**	**327**	P	**P**	**11 11 57.1**	**+1.4**
WVT	**Waverly**	**63.01**	**341**	P	**P**	**11 12 10.6**	**-0.1**
TXAR	**Lajitas Array**	**63.76**	**324**	P	**P**	**11 12 17.4**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=146,slow=6.9,SNR=11						
TXAR	**Lajitas Array**	**63.76**	**324**	P	**P**	**11 12 16.5**	**+0.6**
TX31	**Lajitas Ar. Si**	**63.76**	**324**	P	**P**	**11 12 16.8**	**+0.9**
TX32	**Lajitas Array**	**63.76**	**324**	P	**P**	**11 12 16.8**	**+0.9**
TX32				IAmb	IAmb	11 12 30.9	
	comp=Z,5.5nm,1.5s						
QSPA	**South Pole Qui**	**66.20**	**180**	P	**P**	**11 12 32.8**	**+1.6**
S39A	**Bolivar**	**66.23**	**337**	P	**P**	**11 12 32.0**	**+0.5**
R40A	**Maddies Statio**	**66.40**	**338**	P	**P**	**11 12 31.9**	**-0.7**
ECSD	**EROS Data Cent**	**72.74**	**338**	P	**P**	**11 13 11.5**	**+0.3**
TOA0	**Torodi Ar. Sit**	**76.45**	**69**	P	**P**	**11 13 31.8**	**-1.4**
TOA0				IAmb	IAmb	11 13 33.8	
	comp=Z,7.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**76.45**	**69**	P	**P**	**11 13 32.2**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=257,slow=5.3,SNR=15						
TORD	**Torodi Ar. Bea**	**76.45**	**69**	IAmb	IAmb	11 13 33.8	
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**77.22**	**329**	P	**P**	**11 13 38.7**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=133,slow=8.4,SNR=7.1						
PDAR	**Pinedale Array**	**77.22**	**329**	P	**P**	**11 13 36.9**	**-0.3**
ULM	**Lac du Bonnet**	**78.28**	**341**	P	**P**	**11 13 42.9**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=172,slow=7.1,SNR=6.5						
ULM	**Lac du Bonnet**	**78.28**	**341**	P	**P**	**11 13 42.0**	**-0.5**
ULM				IAmb	IAmb	11 13 52.0	
	comp=Z,9.7nm,1.4s						
NVAR	**Mina Array Bea**	**78.63**	**321**	P	**P**	**11 13 47.2**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=129,slow=5.0,SNR=4.5						
ASAR	**Alice Springs**	**128.50**	**205**	PKP	**PKPdf**	**11 20 49.4**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=143,slow=1.6,SNR=17						
WRA	**Warramunga Arr**	**131.68**	**207**	PKP	**PKPdf**	**11 20 55.6**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=153,slow=2.0,SNR=27						
ZALV	**Zalesovo Beam**	**143.34**	**28**	PKP	PKPbc	11 21 12.8	-0.1
	comp=Z,1.8nm,0.6s,baz=318,slow=4.3,SNR=8.9						
KSH	**Kashi**	**145.09**	**55**	*e*PKP	PKPbc	11 21 19.2	+0.4
KSH				*ep*PKP	pPKPdf	11 22 04.2	-8.3
MKAR	**Makanchi Array**	**146.44**	**40**	PKPbc	**PKPdf**	**11 21 22.2**	**+1.4**
	comp=Z,2.8nm,0.6s,baz=306,slow=2.7,SNR=23						
MKAR	**Makanchi Array**	**146.44**	**40**		**PKPdf**	**11 21 21.9**	**+1.0**

*ATH **03** 11:31:58.5,37°.21N×28°.67E,h9km±2km,ML3.5/4,Error ellipse: s-maj=2.8km s-min=0.9km az=98.0*
*DDA **03** 11:31:58.6,37°.17N×28°.68E,h8km±4km,MW3.7*
*ISK **03** 11:31:58.4,37°.16N×28°.71E,h7km,ML3.5/22*
*HLW **03** 11:31:59.9,37°.18N×28°.35E,h10km±33km,Md4.2*
*THE **03** 11:31:59.5,37°.13N×28°.66E,h0km±1km,ML3.6/3,Error ellipse: s-maj=3.0km s-min=1.1km az=26.0*

ISC 03 11:31:59.2±1.0,**37.15N**±0'.02×**28.67E**±0'.02,**h10**km±8km, **n70**,σ1°**41**/103,**4C-2D**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.31**	**268**	PG	**Pb**	**11 32 05.8**	**-1.2**
YER				SG	**Sb**	**11 32 11.1**	**-1.1**
YER	**Yerkesik**	**0.31**	**268**	P	**Pb**	**11 32 06.0**	**-1.0**
DALY	**Dalyan (Mula)**	**0.33**	**183**	PG	**Pg**	**11 32 05.7**	**-0.1**
DALY				SG	**Sg**	**11 32 11.1**	**+0.9**
DALY	**Dalyan (Mula)**	**0.33**	**183**	⇑*iP*	**Pg**	**11 32 05.6**	**-0.1**
DALY				*i* S	**Sb**	**11 32 12.3**	**-0.3**
DALY				IAML		11 32 13.0	
	comp=E,2μm,0.4s						
DALY				IAML		11 32 19.0	
	comp=N,3μm,0.6s						
TAVA	**DENIZLI_Tavas**	**0.37**	**31**	⇑*iP*	**Pg**	**11 32 05.4**	**-1.2**
TAVA				*i* S	**Sg**	**11 32 10.6**	**-0.9**
TAVA				IAML		11 32 12.0	
	comp=E,3μm,0.4s						
TAVA				IAML		11 32 13.0	
	comp=N,3μm,0.3s						
TURN	**Turunc**	**0.51**	**223**	PG	**Pg**	**11 32 08.8**	**-0.3**
TURN				SG	**Sb**	**11 32 17.3**	**-0.4**
TURN	**Turunc**	**0.51**	**223**	⇑*iP*	**Pg**	**11 32 08.8**	**-0.3**
TURN				*i* S	**Sb**	**11 32 16.6**	**-1.0**
TURN				IAML		11 32 18.0	
	comp=E,1μm,0.3s						
TURN				IAML		11 32 21.0	
	comp=N,2μm,0.4s						
CAME	**Cameli-Denizli**	**0.54**	**112**	PG	**Pg**	**11 32 08.8**	**-1.0**
MRSB	**Marmaris-Mugla**	**0.58**	**222**	PG	**Pg**	**11 32 10.5**	**+0.1**
FETY	**Fethiye**	**0.61**	**147**	PG	**Pg**	**11 32 10.1**	**-0.9**
FETY	**Fethiye**	**0.61**	**147**	⇑*iP*	**Pg**	**11 32 10.0**	**-1.0**
FETY				*i* S	**Sb**	**11 32 21.1**	**+0.4**
FETY				IAML		11 32 23.0	
	comp=N,821nm,0.6s						
GOLH	**Golhisar**	**0.71**	**83**	*i* P	**Pg**	**11 32 12.0**	**-1.0**
GOLH				*i* S	**Sn**	**11 32 25.4**	**-1.2**
GOLH				IAML		11 32 39.0	
	comp=N,666nm,0.5s						
MLSB	**Milas**	**0.73**	**282**	PG	**Pb**	**11 32 13.6**	**-0.5**
AYDN	**Tasoluk**	**0.81**	**309**	*i* P	**Pb**	**11 32 14.7**	**-0.8**
AYDN				*i* S	**Sb**	**11 32 26.4**	**-0.2**
AYDN				IAML		11 32 30.0	
	comp=N,2μm,0.4s						
AYDN				IAML		11 32 30.0	
	comp=E,3μm,0.4s						
DATC	**Datca-Mugla**	**0.90**	**245**	PG	**Pb**	**11 32 16.8**	**-0.1**
DAT	**Datca**	**0.97**	**245**	PG	**Pb**	**11 32 18.1**	**-0.2**
DAT	**Datca**	**0.97**	**245**	*i* P	**Pb**	**11 32 17.8**	**-0.4**
DAT				*i* S	**Sn**	**11 32 32.8**	**-0.3**
DAT				IAML		11 32 42.0	
	comp=N,368nm,0.6s						
DAT				IAML		11 32 43.0	
	comp=E,343nm,0.6s						
DAT	**Datca**	**0.97**	**245**	P	**Pg**	**11 32 17.4**	**-0.5**
DAT				S	**Sn**	**11 32 33.1**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.01**	**322**	PG	**Pb**	**11 32 18.0**	**-0.9**
ARG	**Arkhangelos**	**1.03**	**206**	P	**Pg**	**11 32 18.3**	**-0.7**
ARG				S	**Sn**	**11 32 33.9**	**-0.3**
ARG				AML	AML	11 32 38.6	
	comp=E,2509μm,0.4s						
ARG				AML	AML	11 32 39.6	
	comp=N,3345μm,0.4s						
ARG	**Arkhangelos**	**1.03**	**206**	PG	**Pg**	**11 32 18.3**	**-0.7**
ARG	**Arkhangelos**	**1.03**	**206**	P	**Pg**	**11 32 18.3**	**-0.7**
ARG				S	**Sn**	**11 32 33.9**	**-0.3**
	comp=N,1μm,0.5s						
ELL	**Elmali**	**1.07**	**112**	PG	**Pg**	**11 32 18.9**	**-0.8**
BODT	**Bodrum**	**1.09**	**266**	PN	**Pn**	**11 32 20.1**	**-0.6**
BODT	**Bodrum**	**1.09**	**266**	P	**Pn**	**11 32 19.8**	**-0.5**
BODT				S	**Sn**	**11 32 36.8**	**+0.9**
YKAV	**Yalikavak-Bodr**	**1.11**	**269**	PN	**Pn**	**11 32 20.7**	**-0.2**
AKAS	**Kas**	**1.18**	**140**	PN	**Pg**	**11 32 21.5**	**-0.4**
AKAS	**Kas**	**1.18**	**140**	⇓*iP*	**Pg**	**11 32 21.6**	**-0.3**
AKAS				*i* S	**Sn**	**11 32 41.4**	**+3.2**
AKAS				IAML		11 32 44.0	
	comp=E,732nm,0.7s						
BRDR	**BURDUR-Merkez**	**1.23**	**63**	*i* P	**Pb**	**11 32 22.1**	**-0.6**
BRDR				*i* S	**Sn**	**11 32 40.5**	**+1.1**
BRDR				IAML		11 32 46.0	
	comp=E,536nm,0.6s						
BRDR				IAML		11 32 48.0	
	comp=N,598nm,0.7s						
KSL	**Kastellorizon**	**1.24**	**143**	P	**Pg**	**11 32 22.6**	**-0.3**
KSL				S	**Sn**	**11 32 40.4**	**+1.1**
KSL				AML	AML	11 32 45.6	
	comp=N,6245μm,0.5s						
KSL				AML	AML	11 32 45.6	
	comp=E,7229μm,0.8s						
KSL	**Kastellorizon**	**1.24**	**143**	P	**Pg**	**11 32 22.6**	**-0.3**
KSL				S	**Sn**	**11 32 40.4**	**+1.1**
	comp=E,3μm,0.6s						
GCAM	**G?zelcami?**	**1.27**	**296**	PN	**Pg**	**11 32 22.7**	**-0.9**
GCAM	**G?zelcami?**	**1.27**	**296**	*i* P	**Pn**	**11 32 22.6**	**-0.5**
GCAM				*i* S	**Sn**	**11 32 41.6**	**+1.3**
GCAM				IAML		11 32 44.0	
	comp=N,1μm,0.4s						
GCAM				IAML		11 32 45.0	
	comp=E,890nm,0.6s						
NIS1	**Nisyros Isl.**	**1.32**	**246**	P	**Pg**	**11 32 24.4**	**-0.2**
NIS1				S	**Sn**	**11 32 42.2**	**+0.8**
NIS1	**Nisyros Isl.**	**1.32**	**246**	PN	**Pg**	**11 32 24.3**	**-0.2**
NIS1	**Nisyros Isl.**	**1.32**	**246**	P	**Pg**	**11 32 24.2**	**-0.3**
NIS1				S	**Sn**	**11 32 42.2**	**+0.8**
	comp=E,5μm,0.7s						
BASM	**Basmaki-Afyon**	**1.34**	**54**	PN	**Pn**	**11 32 23.6**	**-0.5**
KORT	**Korkueli**	**1.35**	**96**	PN	**Pb**	**11 32 24.3**	**-0.4**
KORT	**Korkueli**	**1.35**	**96**	*i* P	**Pg**	**11 32 24.6**	**-0.5**
KORT				*i* S	**Sn**	**11 32 45.9**	**+3.5**
KORT				IAML		11 32 53.0	
	comp=N,336nm,0.6s						
KORT				IAML		11 32 56.0	
	comp=E,551nm,0.6s						
KULA	**Kula-Manisa**	**1.36**	**360**	PN	**Pn**	**11 32 23.5**	**-1.0**
KOSK	**Kos Island**	**1.42**	**254**	PN	**Pg**	**11 32 26.1**	**-0.3**
BCK	**Bucak**	**1.56**	**78**	PN	**Pn**	**11 32 26.5**	**-0.6**
SMG	**Samos**	**1.57**	**291**	P	**Pn**	**11 32 26.6**	**-0.6**
SMG	**Samos**	**1.57**	**291**	P	**Pn**	**11 32 26.6**	**-0.6**
AKUM	**Antalya-Kumluc**	**1.57**	**121**	⇓*iP*	**Pg**	**11 32 29.0**	**-0.4**
AKUM				*i* S	**Sg**	**11 32 52.8**	**+3.0**
AKUM				IAML		11 33 04.0	
	comp=N,156nm,0.5s						
AKUM				IAML		11 33 05.0	
	comp=E,244nm,0.8s						
USAK	**Uak-Merkez**	**1.59**	**10**	*i* P	**Pn**	**11 32 26.5**	**-1.0**
USAK				*i* S	**Sg**	**11 32 53.1**	**+2.8**
USAK				IAML		11 32 57.0	
	comp=E,156nm,0.5s						
KZIL	**AFYON_Kizioren**	**1.61**	**46**	*i* P	**Pn**	**11 32 27.6**	**-0.2**
KZIL				*i* S	**Sg**	**11 32 53.3**	**+2.5**
KZIL				IAML		11 32 56.0	
	comp=N,241nm,0.7s						
KZIL				IAML		11 33 04.0	
	comp=E,261nm,0.9s						
ISP	**Isparta**	**1.62**	**65**	P	**Pb**	**11 32 28.3**	**-0.9**
ISP				S	**Sg**	**11 32 50.8**	**-0.4**
ISP				AML	AML	11 33 01.2	
	comp=N,1908μm,0.8s						
ISP				AML	AML	11 33 01.4	
	comp=E,2043μm,1.2s						
ISP	**Isparta**	**1.62**	**65**	PN	**Pn**	**11 32 27.7**	**-0.2**
DGB	**zmir**	**1.69**	**303**	*i* P	**Pn**	**11 32 27.8**	**-0.9**
DGB				*i* S	**Sg**	**11 32 56.6**	**+3.2**
DGB				IAML		11 33 01.0	
	comp=N,361nm,0.7s						
DGB				IAML		11 33 05.0	
	comp=E,250nm,0.7s						
BLCB	**Balcova**	**1.79**	**314**	PN	**Pb**	**11 32 30.9**	**-1.2**
BLCB	**Balcova**	**1.79**	**314**	P	**Pn**	**11 32 29.9**	**-0.3**
BAGO	**Egridir - ISPA**	**1.88**	**63**	*i* P	**Pn**	**11 32 31.8**	**+0.2**
BAGO				*i* S	**Sg**	**11 33 02.3**	**+2.7**
KARP	**Karpathos**	**2.01**	**218**	P	**Pb**	**11 32 35.5**	**-0.4**
KARP				S	**Sg**	**11 33 02.5**	**-1.4**
KARP				AML	AML	11 33 05.2	
	comp=E,2137μm,0.5s						
KARP				AML	AML	11 33 12.9	
	comp=N,1990μm,0.4s						
KARP	**Karpathos**	**2.01**	**218**	PN	**Pn**	**11 32 33.8**	**+0.5**
GDZ	**Gediz**	**2.04**	**18**	*i* P	**Pn**	**11 32 33.5**	**-0.3**
GDZ				*i* S	**Sg**	**11 33 07.0**	**+2.3**
KEPZ	**Antalya-Kepez**	**2.36**	**95**	*i* P	**Pn**	**11 32 39.2**	**+1.1**
KEPZ				*i* S	**Sg**	**11 33 13.1**	**-1.8**
PRK	**Paraskevi**	**2.82**	**319**	P	**Pn**	**11 32 45.3**	**+0.9**
PRK	**Paraskevi**	**2.82**	**319**	P	**Pn**	**11 32 45.3**	**+0.9**
GAZI	**Gazipasa**	**3.06**	**106**	*i* P	**Pn**	**11 32 48.2**	**+0.4**
GAZI				*i* S	**Sn**	**11 33 26.5**	**+2.0**
GAZI				IAML		11 33 44.0	
	comp=N,74nm,0.6s						
GAZI				IAML		11 33 53.0	
	comp=E,58nm,0.9s						
NPS	**Neapolis**	**3.11**	**234**	P	**Pn**	**11 32 50.7**	**+2.3**
LAST	**Lasithi**	**3.26**	**233**	P	**Pn**	**11 32 52.8**	**+2.3**
IDI	**Anoyia**	**3.58**	**240**	P	**Pn**	**11 32 57.4**	**+2.5**
CSS	**Mathiatis**	**4.36**	**119**	P	**Pn**	**11 33 07.3**	**

ASF					Sn	**Sn**	**11 37 16.0**	**-3.9**	
	comp=E,0.3nm,0.3s,baz=143,slow=20,SNR=3.1								
ASF					Lg	Lg	11 38 16.3		
	comp=E,0.5nm,0.3s,baz=90,slow=18,SNR=2.8								
ASF	**Jabal al Asfar**	**9.23**	**271**		P	**Pn**	**11 35 36.0**	**+0.1**	
MAK	**Makhachkala**	**10.43**	**359**	*eP*		Pn	11 35 47.8	-4.3	
MAK				*eS*		**Sn**	**11 37 45.2**	**-3.7**	
MAK					pmax	pmax			
	comp=Z,303nm,1.6s								
MAK					MLR	MLR			
	comp=Z,188nm,16.0s								
UOSS	**Minazif**	**10.54**	**134**		Pn	**Pn**	**11 35 53.7**	**-0.1**	
UOSS						**Sn**	**11 37 46.3**	**-5.7**	
KIV	**Kislovodsk**	**12.10**	**342**	*eP*		**Pn**	**11 36 12.8**	**-2.3**	
KIV					pmax	pmax			
	comp=Z,24nm,1.1s								
WSAR	**Wadi Sarin**	**13.30**	**131**		Pn	**Pn**	**11 36 33.6**	**+2.2**	
	comp=Z,0.8nm,0.3s,baz=337,slow=15,SNR=6.2								
BR131	**Keskin Array S**	**13.51**	**306**	*i*	P	**Pn**	**11 36 33.7**	**-0.7**	
KBL	**Kabul**	**17.82**	**78**		P	**Pn**	**11 37 31.9**	**+1.0**	
KBL					pmax	pmax			
	comp=Z,8.0nm,1.1s								
KBL	**Kabul**	**17.82**	**78**		P	**Pn**	**11 37 31.9**	**+1.0**	
ABKAR	**Akbulak array**	**19.03**	**25**		P	**P**	**11 37 44.6**	**+0.1**	
ABKAR	**Akbulak array**	**19.03**	**25**		P	**P**	**11 37 44.4**	**-0.2**	
VRH	**Novokhopyorsk**	**19.20**	**348**	*eP*		**P**	**11 37 46.5**	**+0.1**	
VRH					pmax	pmax			
	comp=Z,50nm,1.2s								
IDI	**Anoyia**	**19.21**	**285**		P	**Pn**	**11 37 48.8**	**+1.1**	
	comp=Z,0.5nm,0.3s,baz=50,slow=7.9,SNR=3.5								
IDI	**Anoyia**	**19.21**	**285**		P	**Pn**	**11 37 48.4**	**+0.7**	
AKTO	**Aktyubinsk**	**19.43**	**20**		P	**P**	**11 37 49.5**	**+0.5**	
	comp=Z,0.3nm,0.3s,baz=213,slow=13,SNR=8.5								
VORD	**Divnogorie**	**19.47**	**344**	*eP*		**P**	**11 37 47.9**	**-1.5**	
VORD					pmax	pmax			
	comp=Z,8.0nm,0.5s								
VSR	**Storozhevoye**	**19.73**	**344**	*eP*		**P**	**11 37 50.7**	**-1.5**	
VSR					pmax	pmax			
	comp=Z,10.0nm,1.2s								
BTK	**Batken**	**19.98**	**61**		P	**P**	**11 37 56.0**	**+0.8**	
BTK					pmax	pmax			
	comp=Z,5.0nm,0.7s								
BTK	**Batken**	**19.98**	**61**		P	**P**	**11 37 56.0**	**+0.8**	
KK31	**Karatay Array**	**20.76**	**53**		P	**P**	**11 38 04.2**	**+0.7**	
KK31					pmax	pmax			
	comp=Z,6.0nm,0.9s								
KK31	**Karatay Array**	**20.76**	**53**		P	**P**	**11 38 04.2**	**+0.7**	
KK31					IAmb	IAmb	11 38 07.9		
	comp=Z,6.3nm,0.9s								
KKAR	**Karatay Array**	**20.76**	**53**		P	**P**	**11 38 04.5**	**+1.0**	
KKAR					pmax	pmax			
	comp=Z,6.0nm,0.9s								
KKAR	**Karatay Array**	**20.76**	**53**		P	**P**	**11 38 04.5**	**+1.0**	
KKAR	**Karatay Array**	**20.76**	**53**		P	**P**	**11 38 04.5**	**+1.0**	
KKAR					IAmb	IAmb	11 38 07.9		
	comp=Z,6.3nm,0.9s								
VRI	**Vrincioaia**	**21.00**	**315**	⇓	P	**P**	**11 38 08.8**	**+2.7**	
VRI	**Vrincioaia**	**21.00**	**315**	⇓	P	**P**	**11 38 08.8**	**+2.7**	
PLOR	**Plostina**	**21.04**	**315**	⇑	P	**P**	**11 38 08.2**	**+1.7**	
PLOR	**Plostina**	**21.04**	**315**	⇑	P	**P**	**11 38 08.2**	**+1.7**	
LPSR	**Galich'ya Gora**	**21.08**	**345**	*eP*		**P**	**11 38 05.9**	**-0.9**	
LPSR					pmax	pmax			
	comp=Z,10.0nm,0.6s								
MLR	**Muntele Rosu**	**21.28**	**314**		P	**P**	**11 38 13.4**	**+4.3**	
	comp=Z,9.3nm,0.8s,baz=109,slow=3.0,SNR=12								
MLR	**Muntele Rosu**	**21.28**	**314**	⇑	P	**P**	**11 38 13.5**	**+4.3**	
MLR	**Muntele Rosu**	**21.28**	**314**		P	**P**	**11 38 10.2**	**+1.0**	
MLR					pmax	pmax			
	comp=Z,12nm,0.9s								
MLR	**Muntele Rosu**	**21.28**	**314**		P	**P**	**11 38 10.2**	**+1.0**	
MLR					IAmb	IAmb	11 38 16.5		
	comp=Z,12nm,0.9s								
NIL	**Nilore**	**21.34**	**80**		P	**P**	**11 38 08.8**	**-1.1**	
NIL					pmax	pmax			
	comp=Z,11nm,0.8s								
NIL	**Nilore**	**21.34**	**80**		P	**P**	**11 38 08.8**	**-1.1**	
NIL					IAmb	IAmb	11 38 12.0		
	comp=Z,10nm,0.8s								
SORM	**Soroca**	**21.43**	**322**	⇑	P	**P**	**11 38 12.5**	**+1.9**	
SORM	**Soroca**	**21.43**	**322**	⇑	P	**P**	**11 38 12.5**	**+1.9**	
VOIR		**21.80**	**313**	⇓	P	**P**	**11 38 16.6**	**+1.8**	
VOIR		**21.80**	**313**	⇓	P	**P**	**11 38 16.6**	**+1.8**	
DOPR	**Dopca**	**21.86**	**314**	⇑	P	**P**	**11 38 16.2**	**+0.9**	
BIZ	**Bicaz**	**21.95**	**317**	⇑	P	**P**	**11 38 19.5**	**+3.3**	
LOT	**Lotru**	**22.61**	**312**	⇓	P	**P**	**11 38 23.4**	**-0.1**	
AKASG	**Malin Array Be**	**22.76**	**328**		P	**P**	**11 38 23.6**	**-1.3**	
	comp=Z,1.0nm,0.5s,baz=134,slow=9.5,SNR=7.7								
AKASG	**Malin Array Be**	**22.76**	**328**	*ce*	P	**P**	**11 38 23.0**	**-1.8**	
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.3s								
AKASG	**Malin Array Be**	**22.76**	**328**		IAmb	IAmb	11 38 26.0		
	comp=Z,1.4nm,1.0s								
AKBB	**Malin Array Si**	**22.76**	**328**	*i*	P	**P**	**11 38 24.0**	**-0.8**	
BURAR	**Bucovina Array**	**22.82**	**318**	⇑	P	**P**	**11 38 26.7**	**+1.1**	
BURAR	**Bucovina Array**	**22.82**	**318**	⇑	P	**P**	**11 38 26.7**	**+1.1**	
BURAR	**Bucovina Array**	**22.82**	**318**		P	**P**	**11 38 25.5**	**-0.2**	
GZR	**Gura Zlata**	**23.21**	**311**	⇑	P	**P**	**11 38 26.2**	**-3.5**	
OBN	**Obninsk**	**23.94**	**344**	⇑	*eP*	**P**	**11 38 37.1**	**+0.5**	
OBN					*e*		11 38 44.4		
OBN					pmax	pmax			
	comp=Z,8.0nm,0.9s								
OBN					MLR	MLR			
	comp=Z,154nm,17.0s								
ARU	**Arti**	**25.05**	**14**		P	**P**	**11 38 46.1**	**-0.6**	
	comp=Z,3.0nm,0.8s,baz=189,slow=13,SNR=7.2								
ARU	**Arti**	**25.05**	**14**	*c*	*iP*	**P**	**11 38 45.3**	**-1.4**	
ARU					S	**S**	**11 43 11.1**	**+0.3**	
ARU					pmax	pmax			
	comp=Z,11nm,0.9s								
ARU	**Arti**	**25.05**	**14**		P	**P**	**11 38 47.5**	**+0.7**	
KDJ	**Kajisay**	**25.15**	**59**		P	**P**	**11 38 48.6**	**+0.5**	
KDJ					pmax	pmax			
	comp=Z,4.0nm,1.0s								
KDJ	**Kajisay**	**25.15**	**59**		P	**P**	**11 38 48.6**	**+0.5**	
KDJ					IAmb	IAmb	11 38 52.1		
	comp=Z,4.4nm,0.9s								
KIRV	**Kirov**	**26.09**	**2**	*ce*	P	**P**	**11 38 55.4**	**-0.7**	
PSZ	**Piszkesteto**	**26.09**	**314**		P	**P**	**11 38 57.6**	**+1.2**	
PSZ					pmax	pmax			
	comp=Z,12nm,0.9s								
PSZ	**Piszkesteto**	**26.09**	**314**		P	**P**	**11 38 57.6**	**+1.2**	
BRVK	**Borovoye**	**26.14**	**32**	*ce*	P	**P**	**11 38 57.0**	**+0.3**	
BRVK					pmax	pmax			
	comp=Z,8.0nm,1.0s								
BRVK	**Borovoye**	**26.14**	**32**		P	**P**	**11 38 56.8**	**+0.1**	
BRVK					IAmb	IAmb	11 39 00.5		
	comp=Z,6.2nm,0.8s								
BVAR	**Borovoye Array**	**26.16**	**32**		P	**P**	**11 38 56.4**	**-0.5**	
	comp=Z,2.4nm,0.8s,baz=243,slow=28,SNR=7.4								
KURBB	**Kurchatov Arra**	**28.95**	**42**		P	**P**	**11 39 23.3**	**+1.4**	
	comp=Z,1.2nm,0.2s,baz=248,slow=9.9,SNR=1.9								
KURK	**Kurchatov**	**29.05**	**42**	*ce*	P	**P**	**11 39 23.4**	**+0.6**	
KURK					pmax	pmax			
	comp=Z,3.0nm,1.0s								
KURK	**Kurchatov**	**29.05**	**42**		P	**P**	**11 39 23.3**	**+0.6**	
KURK	**Kurchatov**	**29.05**	**42**		IAmb	IAmb	11 39 25.1		
	comp=Z,3.3nm,0.9s								
MK31	**Makanchi Array**	**29.87**	**51**	*ce*	P	**P**	**11 39 30.0**	**-0.2**	
MK31	**Makanchi Array**	**29.87**	**51**		P	**P**	**11 39 30.0**	**-0.2**	
MK31					IAmb	IAmb	11 39 32.1		
	comp=Z,3.6nm,0.8s								
MKAR	**Makanchi Array**	**29.87**	**51**		P	**P**	**11 39 30.6**	**+0.4**	
	comp=Z,3.8nm,0.8s,baz=251,slow=7.3,SNR=27								
MKAR	**Makanchi Array**	**29.87**	**51**		P	**P**	**11 39 30.7**	**+0.6**	
MKAR	**Makanchi Array**	**29.87**	**51**		P	**P**	**11 39 30.7**	**+0.6**	
CLL	**Collm**	**31.58**	**317**	*eP*		**P**	**11 39 45.0**	**-0.1**	
CLL	**Collm**	**31.58**	**317**	*eP*		**P**	**11 39 45.0**	**-0.1**	
FINES	**FINESS Array B**	**32.19**	**340**		P	**P**	**11 39 50.1**	**-0.2**	
	comp=Z,1.1nm,0.3s,baz=146,slow=8.9,SNR=13								
ZAA0	**Zalesovo Array**	**33.87**	**40**		P	**P**	**11 40 04.9**	**-0.2**	
ZAA0					IAmb	IAmb	11 40 06.4		
	comp=Z,5.0nm,1.1s								
ZALV	**Zalesovo Beam**	**33.87**	**40**		P	**P**	**11 40 05.3**	**+0.1**	
	comp=Z,2.0nm,0.5s,baz=253,slow=9.1,SNR=9.9								
ZALV	**Zalesovo Beam**	**33.87**	**40**	*i*	P	**P**	**11 40 05.3**	**+0.1**	
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ZALV	**Zalesovo Beam**	**33.87**	**40**		P	**P**	**11 40 04.3**	**-0.8**	
DGZ	**Jazzator, Alta**	**33.96**	**48**	*i*	P	**P**	**11 40 05.4**	**-0.8**	
DGZ					pmax	pmax			
	comp=Z,2.0nm,0.8s								
KMBO	**Kilima Mbogo**	**34.92**	**199**	*i*	P	**P**	**11 40 13.0**	**-1.9**	
KMBO					pmax	pmax			
	comp=Z,1.0nm,0.3s								
ARCES	**ARCESS Array B**	**39.13**	**348**		P	**P**	**11 40 49.8**	**0.0**	
	comp=Z,6.9nm,1.1s,baz=150,slow=9.2,SNR=4.8								
ESDC	**Sonseca Array**	**41.95**	**295**		P	**P**	**11 41 14.2**	**+0.5**	
	comp=Z,1.4nm,0.8s,baz=59,slow=8.1,SNR=5.7								
NRIK	**Noril'sk**	**43.05**	**19**	*i*	P	**P**	**11 41 22.2**	**+0.1**	
NRIK					pmax	pmax			
	comp=Z,2.0nm,1.0s								
SONM	**Songino Array**	**46.21**	**53**		P	**P**	**11 41 48.0**	**+0.2**	
	comp=Z,0.3nm,0.3s,baz=274,slow=9.5,SNR=3.2								
TORD	**Torodi Ar. Bea**	**46.25**	**256**		P	**P**	**11 41 50.1**	**+1.8**	
	comp=Z,0.5nm,0.8s,baz=56,slow=7.4,SNR=3.1								
ULN	**Ulaanbaatar**	**46.65**	**53**	*i*	P	**P**	**11 41 51.4**	**+0.1**	
ULN					pmax	pmax			
	comp=Z,3.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**47.82**	**94**		P	**P**	**11 42 00.2**	**-0.3**	
	comp=Z,0.6nm,0.5s,baz=287,slow=9.3,SNR=5.2								
TIXI	**Tiksi**	**56.70**	**22**	*i*	P	**P**	**11 43 04.3**	**-1.5**	
YAK	**Yakutsk**	**58.12**	**33**	*i*	P	**P**	**11 43 15.5**	**-0.5**	
YAK					pmax	pmax			
	comp=Z,7.0nm,1.0s								

MAN ***03*** *11:34:51.7, 6.˚79N × 126.˚82E, h105km, mb4.7, ML3.6, MS3.5*
NEIC ***03*** *11:34:51.7±0.8, 6.˚84N±0.˚06 × 126.˚83E±0.˚07, h131km±8km, mb4.2/17, Error ellipse: s-maj=10.2km s-min=7.4km az=121.0*
IDC ***03*** *11:34:51.9±1.5, 6.˚80N × 126.˚78E, h131km±12km, mb3.6/13, mb1 3.8/15, mb1mx3.6/49, mbtmp4.1/15, Error ellipse: s-maj=31.8km s-min=10.7km az=65.0*
DJA ***03*** *11:34:52.1±1.8, 7.˚1N±14.˚1 × 12.˚7E±.˚1, h29km±33km, M4.8/7, mB5.5/6, mb4.7/7, MLv4.9/7, Mw(mB)4.9/6*
ISC 03 11:34:51.3±0.7**, 6.75N**±0.˚05×**126.77E**±0.˚07**, h125**km±6km**, n54**,σ1°**31/66, mb4.0/18, 1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.55**	**290**	*eP*			**Pn**	**11 35 10.5**	**+0.4**
MATI				*eS*			**Sn**	**11 35 24.3**	**0.0**
DAV	**Davao City (W)**	**1.23**	**285**	P			**Pn**	**11 35 17.4**	**+1.4**
	857nm,0.3s,baz=78,slow=0.8,SNR=50								
DAV				S			**Sn**	**11 35 36.0**	**+1.2**
	407nm,0.3s,baz=270,slow=20,SNR=4.8								
DAV	**Davao City (W)**	**1.23**	**285**				**Pn**	**11 35 17.2**	**+1.2**
DAV						Sn	**Sn**	**11 35 35.2**	**+0.4**
DDMP	**Don Marcelino,**	**1.24**	**239**	*eP*			**Pn**	**11 35 16.3**	**+0.1**
DDMP				*eS*			**Sn**	**11 35 34.5**	**-0.5**
BIP	**Bislig**	**1.55**	**340**	⇓*eP*			**Pn**	**11 35 19.5**	**-0.1**
BIP				*eS*			**Sn**	**11 35 39.8**	**-1.5**
KCP	**Kidapawan**	**1.69**	**279**	⇓*iP*			**Pn**	**11 35 21.5**	**+0.2**
KCP				*i*	S		**Sn**	**11 35 38.1**	**-6.1**
BUKP	**Musuan**	**2.03**	**303**	*eP*			**Pn**	**11 35 25.5**	**+0.1**
BUKP				*eS*			**Sn**	**11 35 50.7**	**-0.9**
SKMP	**Bagumbayan, Su**	**2.23**	**264**	*eP*			**Pn**	**11 35 27.1**	**-0.8**
SKMP				*eS*			**Sn**	**11 35 53.6**	**-2.3**
CGP	**Cagayan de Oro**	**2.67**	**309**	⇑*eP*			**Pn**	**11 35 34.1**	**+0.7**
CGP				*i*	S		**Sn**	**11 36 05.5**	**-0.3**
GLSP	**General Luna,**	**3.08**	**348**	*eP*			**Pn**	**11 35 39.0**	**+0.2**
GLSP				*eS*			**Sn**	**11 36 16.9**	**+1.4**
SGSI	**Sangihe**	**3.29**	**202**	P			**Pn**	**11 35 41.6**	**0.0**
TBP	**Tagbilaran**	**4.10**	**316**	⇓*eP*			**Pn**	**11 35 54.7**	**+2.4**
TNTI	**Ternate**	**5.97**	**174**	P			**Pn**	**11 36 17.7**	**+0.3**
	0.2nm48nm,0.9s								
TNTI	**Ternate**	**5.97**	**174**				**Pn**	**11 36 18.9**	**+1.5**
KMSI	**Cibinong**	**6.74**	**205**	P			**Pn**	**11 36 28.4**	**+0.6**
	0.7nm6µm156nm,0.7s								
GTOI	**Gorontalo**	**7.14**	**212**	P			**Pn**	**11 36 33.0**	**-0.2**
	0.3nm866nm55nm,0.5s								
MYLDM	**Lahad Datu**	**8.38**	**260**				**Pn**	**11 36 51.6**	**+1.7**
LUWI	**Luwuk**	**8.71**	**207**	P			**Pn**	**11 36 56.0**	**+1.6**
	2um118nm,0.9s								
LUWI	**Luwuk**	**8.71**	**207**				**Pn**	**11 36 55.7**	**+1.2**
SANI	**Sanana**	**8.78**	**185**	P			**Pn**	**11 36 52.9**	**-2.4**
SIJI	**Sorong**	**8.80**	**149**	P			**Pn**	**11 36 57.1**	**+1.5**
	3.5nm,0.3s,baz=339,slow=12,SNR=13								
SIJI				S			**Sn**	**11 38 30.2**	**-3.0**
	1.5nm,0.3s,baz=197,slow=19,SNR=3.6								
TTSI	**Tana Toraja**	**11.96**	**216**	P			**Pn**	**11 37 39.5**	**+1.6**
KAPI	**Kappang**	**13.63**	**211**	P			**Pn**	**11 37 59.3**	**-0.3**
	0.1nm,0.3s,baz=102,slow=1.2,SNR=4.7								
SBUM	**Sibu**	**15.12**	**254**				**Pn**	**11 38 19.5**	**+0.9**
SOEI	**Soe**	**16.59**	**189**	P			**P**	**11 38 38.3**	**+1.2**
SOEI					IAmb	IAmb	11 38 51.3		
	comp=Z,16nm,0.8s								
KSM	**Kuching**	**17.24**	**253**	P			**Pn**	**11 38 45.5**	**+1.0**
KSM					IAmb	IAmb	11 38 46.8		
	comp=Z,8.4nm,0.7s								
MTN	**Manton Dam**	**19.95**	**167**	P			**P**	**11 39 13.5**	**-0.1**
MTN					IAmb	IAmb	11 39 26.6		
	comp=Z,12nm,0.7s								
KNRA	**Kununurra**	**22.37**	**175**	P			**P**	**11 39 40.4**	**+1.1**
KNRA					IAmb	IAmb	11 39 42.6		
	comp=Z,10nm,0.7s								
FITZ	**Fitzroy Crossi**	**24.72**	**183**	P			**P**	**11 40 01.6**	**+0.5**
	comp=Z,5.0nm,0.6s,baz=357,slow=8.2,SNR=32								
FITZ	**Fitzroy Crossi**	**24.72**	**183**	P			**P**	**11 40 01.8**	**+0.7**
FITZ					IAmb	IAmb	11 40 04.8		
	comp=Z,7.4nm,0.9s								
WB0	**Warramunga Arr**	**27.40**	**164**	P			**P**	**11 40 25.8**	**+0.5**
WB0					IAmb	IAmb	11 40 44.7		
	comp=Z,8.7nm,1.5s								
WRAB	**Tennant Creek**	**27.55**	**164**	P			**P**	**11 40 27.6**	**+1.1**
WRAB					IAmb	IAmb	11 40 43.5		
	comp=Z,6.2nm,1.4s								
WRA	**Warramunga Arr**	**27.55**	**164**	P			**P**	**11 40 26.9**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=346,slow=11,SNR=10								
WRA					ScP		**ScP**	**11 47 09.9**	**-1.0**
	comp=Z,0.8nm,1.1s,baz=343,slow=3.0,SNR=4.8								
WB2	**Warramunga Arr**	**27.56**	**164**	P			**P**	**11 40 26.9**	**+0.2**
WR0	**Warramunga Arr**	**27.62**	**164**	P			**P**	**11 40 28.6**	**+1.3**
WR0					IAmb	IAmb	11 40 36.0		
	comp=Z,4.9nm,1.2s								
CMAR	**Chiang Mai Arr**	**29.49**	**296**	P			**P**	**11 40 44.8**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=114,slow=9.4,SNR=1.3								
AS31	**Alice Springs**	**31.03**	**167**	P			**P**	**11 40 57.8**	**+0.4**
ASAR	**Alice Springs**	**31.03**	**167**	P			**P**	**11 40 57.6**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=336,slow=7.2,SNR=39								
ASAR	**Alice Springs**	**31.03**	**167**	P			**P**	**11 40 57.3**	**0.0**
MORW	**Morawa**	**37.09**	**196**	P			**P**	**11 41 50.0**	**+0.4**
BBOO	**Buckleboo**	**40.33**	**168**	P			**P**	**11 42 17.3**	**+0.8**
NWAO	**Narrogin (SRO)**	**40.49**	**192**	P			**P**	**11 42 18.8**	**+0.8**
STKA	**Stephens Creek**	**40.94**	**161**	P			**P**	**11 42 21.9**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=336,slow=16,SNR=1.5								
MK31	**Makanchi Array**	**55.13**	**324**	P			**P**	**11 44 10.0**	**-0.7**
MK31					IAmb	IAmb	11 44 11.3		
	comp=Z,1.2nm,0.7s								
MKAR	**Makanchi Array**	**55.13**	**324**	P			**P**	**11 44 10.9**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=120,slow=7.7,SNR=8.3								
MKAR	**Makanchi Array**	**55.13**	**324**	P			**P**	**11 44 10.3**	**-0.4**
ZALV	**Zalesovo Beam**	**57.94**	**332**	P			**P**	**11 44 29.7**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=134,slow=4.2,SNR=1.4								
KURBB	**Kurchatov Arra**	**59.25**	**326**	P			**P**	**11 44 39.5**	**0.0**
	comp=Z,2.2nm,0.6s,baz=125,slow=6.2,SNR=7.7								
AKTO	**Aktyubinsk**	**71.34**	**321**	P			**P**	**11 45 56.4**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=47,slow=7.9,SNR=4.0								
ARU	**Arti**	**72.43**	**327**	P			**P**	**11 46 03.2**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=139,slow=7.9,SNR=3.1								
ILAR	**Eielson Array**	**82.37**	**26**	P			**P**	**11 46 58.5**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=227,slow=5.5,SNR=6.9								
VNDA	**Vanda**	**86.40**	**173**	P			**P**	**11 47 19.0**	**0.0**
	comp=Z,0.4nm,0.7s,baz=305,slow=3.9,SNR=3.3								
ARCES	**ARCESS Array B**	**87.64**	**340**	P			**P**	**11 47 24.4**	**-0.9**
	comp=Z,4.5nm,1.0s,baz=95,slow=6.4,SNR=1.6								
TXAR	**Lajitas Array**	**119.69**	**51**	PKP			**PKPdf**	**11 53 27.1**	**-0.3**
	comp=Z,0.2nm,0.9s,baz=219,slow=0.6,SNR=2.7								

KRNET ***03*** *11:38:38.3±0.1, 40.˚95N × 74.˚22E, h17km, mb3.1*
SOME ***03*** *11:38:39.7, 41.˚03N × 74.˚15E, h5km*
NNC ***03*** *11:38:40.6±0.6, 40.˚98N × 74.˚16E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=4.5km s-min=2.9km az=174.0*
KNET ***03*** *11:38:41.5±1.0, 41.˚10N × 74.˚21E, h4km±5km, ml2.4, Error ellipse: s-maj=7.4km s-min=4.9km az=23.0*
ISC 03 11:38:38.9±1.3**, 40.˚98N**±0.˚04×**74.˚27E**±0.˚02**, h5**km±11km**, n63,σ1°20/102, 32C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.88**	**3**	⇓*iP*			**Pg**	**11 38 55.8**	**-0.1**
	baz=5.0								
ARLS				⇓*iS*			**Sb**	**11 39 08.7**	**-0.3**
	baz=5.0								
OHH	**Osh**	**1.22**	**249**	⇑*iP*			**Pb**	**11 39 00.2**	**-2.2**
	baz=49								
OHH				⇑*iS*			**Sb**	**11 39 16.4**	**-2.1**
	baz=49								
AML	**Almayashu**	**1.23**	**340**	⇑*iP*			**Pb**	**11 39 02.0**	**-0.9**
	baz=42								
AML				⇑*iS*			**Sn**	**11 39 19.2**	**-1.1**
	baz=42								
AML	**Almayashu**	**1.23**	**340**	⇓*iP*			**Pb**	**11 39 02.2**	**-0.6**
	80nm,0.3s,SNR=52								
AML				⇓*iS*			**Sn**	**11 39 19.2**	**-1.1**
	39nm,0.2s								
UCH	**Uchtor**	**1.26**	**8**	⇓*iP*			**Pn**	**11 39 02.8**	**-0.8**
	baz=10.0								
UCH				⇓*iS*			**Sn**	**11 39 20.6**	**-0.6**
	baz=10.0								
UCH	**Uchtor**	**1.26**	**8**	⇓*iP*			**Pg**	**11 39 03.9**	**+0.8**
	12nm,0.2s,SNR=14								
AAK	**Ala-Archa**	**1.67**	**6**	*i*	P		**Pb**	**11 39 09.9**	**-0.3**
	baz=7.0								
AAK				*i*	S		**Sg**	**11 39 32.6**	**+0.1**
	baz=7.0								
AAK	**Ala-Archa**	**1.67**	**6**	⇑	P		**Pg**	**11 39 11.2**	**+0.3**
	25nm,0.3s,SNR=22								
AAK				⇑	S		**Sg**	**11 39 34.2**	**+1.7**
	14nm,0.2s								
AAK	**Ala-Archa**	**1.67**	**6**	⇑	P		**Pg**	**11 39 11.0**	**+0.2**
	13nm,0.5s								
AAK				⇑	S		**Sg**	**11 39 34.1**	**+1.7**
	17nm,0.6s								
EKS2	**Erkin-Say**	**1.72**	**348**	⇓*iP*			**Pb**	**11 39 10.9**	**-0.2**
	baz=49								
EKS2				⇓*iS*			**Sg**	**11 39 34.0**	**-0.3**
	baz=49								
EKS2	**Erkin-Say**	**1.72**	**348**	⇓	P		**Pg**	**11 39 11.4**	**-0.5**
	8.3nm,0.1s,SNR=40								
KBK	**Karagaybulak**	**1.75**	**17**	⇑*iP*			**Pg**	**11 39 11.7**	**-0.8**
	baz=18								
KBK				⇑*iS*			**Sg**	**11 39 35.7**	**+0.5**
	baz=18								
FRU1	**Bishkek**	**1.85**	**8**	⇑*iP*			**Pb**	**11 39 13.1**	**-0.1**
	baz=9.0								
FRU1				⇑*iS*			**Sg**	**11 39 38.7**	**+0.3**
	baz=9.0								
MRKS	**Merke**	**1.93**	**336**	*eP*			**Pg**	**11 39 15.3**	**-0.6**
	113nm,0.3s								
MRKS				*eS*			**Sg**	**11 39 40.3**	**-0.7**
	16nm,0.3s								
MRKS	**Merke**	**1.93**	**336**	P			**Pg**	**11 39 15.3**	**-0.6**
	113nm,0.3s								
MRKS				S			**Sg**	**11 39 40.3**	**-0.7**
	16nm,0.3s								
ULHL	**Ulahol**	**1.95**	**49**	⇓*iP*			**Pb**	**11 39 15.0**	**0.0**
	baz=49								
ULHL				⇓*iS*			**Sg**	**11 39 41.4**	**-0.1**
	baz=49								
ULHL	**Ulahol**	**1.95**	**49**	⇑*iP*			**Pg**	**11 39 16.6**	**+0.4**
	12nm,0.2s,SNR=44							

KTBS					Lg	Lg	11 40 24.3		
	26nm,0.4s								
KUU	**Kurty**	**3.29**	**27**	*eP*	**Pg**	**Pg**	**11 39 41.3**	**-0.6**	
	3.2nm,0.3s								
KUU				*eS*	**Sg**	**Sg**	**11 40 24.8**	**+0.2**	
	37nm,0.6s								
KUU	**Kurty**	**3.29**	**27**	Pg	**Pg**	**Pg**	**11 39 41.3**	**-0.6**	
	3.2nm,0.3s								
KUU				Lg	Lg	Lg	11 40 24.8		
	37nm,0.6s								
IUG	**luzhnay**	**3.39**	**292**	*eP*	**Pb**	**Pb**	**11 39 40.5**	**+1.0**	
	5.1nm,0.2s								
IUG				*eS*	**Sb**	**Sb**	**11 40 23.4**	**+2.4**	
	57nm,0.4s								
IUG	**luzhnay**	**3.39**	**292**	Pg	**Pb**	**Pb**	**11 39 40.5**	**+1.0**	
	5.1nm,0.2s								
IUG				Lg	Lg	Lg	11 40 23.4		
	57nm,0.4s								
KK31	**Karatay Array**	**3.52**	**308**	⇓Pg	**Pb**	**Pb**	**11 39 42.4**	**+0.8**	
	1.4nm,0.5s,baz=125,slow=15,SNR=7.7								
KK31				Lg	Lg	Lg	11 40 29.6		
	3.7nm,0.3s,baz=124,slow=28,SNR=12								
SATY	**Saty**	**3.72**	**55**	*eP*	**Pg**	**Pg**	**11 39 50.2**	**+0.1**	
	4.7nm,0.3s								
SATY				*eS*	**Sg**	**Sg**	**11 40 39.9**	**+1.6**	
	24nm,0.6s								
SATY	**Saty**	**3.72**	**55**	Pg	**Pg**	**Pg**	**11 39 50.2**	**+0.1**	
	4.7nm,0.3s								
SATY				Lg	Lg	Lg	11 40 39.9		
	24nm,0.6s								
BRLS	**Borolday**	**3.89**	**303**	*eP*	**Pb**	**Pb**	**11 39 49.6**	**+1.6**	
	17nm,0.3s								
BRLS				*eS*	**Sb**	**Sb**	**11 40 38.9**	**+3.6**	
	14nm,0.6s								
BRLS	**Borolday**	**3.89**	**303**	Pg	**Pb**	**Pb**	**11 39 49.6**	**+1.6**	
	17nm,0.3s								
BRLS				Lg	Lg	Lg	11 40 38.9		
	14nm,0.6s								
BTLS	**Baital**	**4.07**	**358**	*eP*	**Pg**	**Pg**	**11 39 54.7**	**-2.1**	
	2.9nm,0.4s								
BTLS				*eS*	**Sg**	**Sg**	**11 40 48.4**	**-1.1**	
	4.3nm,0.8s								
BTLS	**Baital**	**4.07**	**358**	Pg	**Pg**	**Pg**	**11 39 54.7**	**-2.1**	
	2.9nm,0.4s								
BTLS				Lg	Lg	Lg	11 40 48.4		
	4.3nm,0.8s								
KPKS	**Kokpek**	**4.11**	**51**	*eP*	**Pg**	**Pg**	**11 39 56.6**	**-1.1**	
	4.2nm,0.4s								
KPKS				*eS*	**Sg**	**Sg**	**11 40 50.9**	**-0.1**	
	32nm,0.6s								
UZB	**Uzynbulak**	**4.15**	**57**	*eP*	**Pg**	**Pg**	**11 39 56.7**	**-1.6**	
	2.4nm,0.4s								
UZB				*eS*	**Sg**	**Sg**	**11 40 51.1**	**-1.0**	
	8.3nm,0.6s								
UZB	**Uzynbulak**	**4.15**	**57**	Pg	**Pg**	**Pg**	**11 39 56.7**	**-1.6**	
	2.4nm,0.4s								
UZB				Lg	Lg	Lg	11 40 51.1		
	8.3nm,0.6s								
ARXS	**Arharly**	**4.16**	**38**	*eP*	**Pg**	**Pg**	**11 39 57.2**	**-1.5**	
	4.8nm,0.3s								
ARXS				*eS*	**Sg**	**Sg**	**11 40 52.2**	**-0.4**	
	10nm,0.6s								
ARXS	**Arharly**	**4.16**	**38**	Pg	**Pg**	**Pg**	**11 39 57.2**	**-1.5**	
	4.8nm,0.3s								
ARXS				Lg	Lg	Lg	11 40 52.2		
	10nm,0.6s								
PDGK	**Podgornoye**	**4.54**	**57**	⇑Pg	**Pg**	**Pg**	**11 40 04.4**	**-1.4**	
	2.1nm,0.6s								
PDGK				⇑Lg	Lg	Lg	11 41 08.9		
	13nm,0.9s								

*SJA **03** 11:50:47.2±0.6,31°.77S×71°.84W,h41km±12km,ML3.6, MW4.0*
*GUC **03** 11:50:49.8±0.8,31°.80S×71°.47W,h55km±4km,ML3.9*
*IDC **03** 11:50:49.3±3.3,31°.88S×71°.25W,h47km±32km,mb3.6/3, mb1 3.8/7,mb1mx3.6/22,mbtmp3.8/7,ML3.8/4,MS3.4/1, Ms1 3.4/1,ms1mx2.9/20,Error ellipse: s-maj=37.6km s-min=27.7km az=114.0*

ISC 03 11:50:49.5±1.0,31°.81S±0°.03×71°.66W±0°.05,h52km±12km, n51,σ1§64/69,mb3.9/3,10C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CO02	**Combarbal**	**0.82**	**43**	⇑*iP*	**Pn**	**11 51 04.4**	**-0.6**
CO02				*eS*	**Sn**	**11 51 14.7**	**-1.7**
VA01	**Torpederas**	**1.21**	**180**	⇑*iP*	**Pn**	**11 51 10.8**	**+0.7**
VA01				*eS*	**Sn**	**11 51 26.6**	**+1.1**
VA01				*eS*		11 51 26.6	
VA01				IAML		11 51 29.1	
	comp=N,2μm,0.1s						
CO03	**El Pedregal**	**1.27**	**41**	⇑*iP*	**Pn**	**11 51 10.5**	**-0.6**
CO03				⇑*e*		11 51 10.5	
CO03				*eS*	**Sn**	**11 51 25.6**	**-1.5**
CO03				IAML		11 51 28.1	
	comp=E,5μm,0.4s						
ROCH	**El Roble**	**1.28**	**155**	*eP*	**Pn**	**11 51 11.8**	**+0.4**
ROCH				*i* S	**Sn**	**11 51 27.9**	**+0.3**
ROCH				IAML		11 51 29.9	
	comp=N,3μm,0.5s						
VA03	**San Esteban**	**1.33**	**136**	⇑*iP*	**Pn**	**11 51 11.7**	**-0.2**
VA03				*eS*	**Sn**	**11 51 27.4**	**-1.3**
VA03				IAML		11 51 30.1	
	comp=E,5μm,0.2s						
MT02	**Curacav**	**1.51**	**163**	⇑*iP*	**Pn**	**11 51 14.5**	**+0.3**
MT02				*eS*	**Sn**	**11 51 33.1**	**+0.3**
PEL	**Peldehue**	**1.56**	**149**	⇑*iP*	**Pn**	**11 51 15.3**	**+0.3**
PEL				*eS*	**Sn**	**11 51 34.1**	**0.0**
PEL				IAML		11 51 37.8	
	comp=E,1μm,0.3s						
PEL	**Peldehue**	**1.56**	**149**	*eP*	**Pn**	**11 51 15.7**	**+0.7**
MT05	**Renca**	**1.76**	**154**	⇑*iP*	**Pn**	**11 51 18.0**	**+0.3**
MT05				*eS*	**Sn**	**11 51 39.1**	**+0.1**
MT05				IAML		11 51 44.5	
	comp=E,2μm,0.3s						
GO04	**Tololo Observa**	**1.79**	**24**	*eP*	**Pn**	**11 51 18.1**	**-0.1**
GO04				*i* S	**Sn**	**11 51 40.1**	**+0.2**
GO04				IAML		11 51 42.3	
	comp=E,5μm,0.5s						
GO04	**Tololo Observa**	**1.79**	**24**	*eP*	**Pn**	**11 51 18.3**	**+0.1**
MT03	**Universidad Ad**	**1.94**	**150**	⇑*iP*	**Pn**	**11 51 19.9**	**-0.3**
MT03				*eS*	**Sn**	**11 51 43.1**	**-0.3**
MT03				IAML		11 51 47.5	
	comp=E,2μm,0.1s						
AUSP	**Uspallata**	**1.97**	**103**	*eP*	**Pn**	**11 51 21.8**	**+1.0**
MT09	**Talagante**	**2.04**	**164**	⇑*iP*	**Pn**	**11 51 22.7**	**+1.1**
MT09				*eS*	**Sn**	**11 51 47.0**	**+1.0**
MT09				IAML		11 51 49.4	
	comp=N,1μm,0.5s						
CO01	**Juntas del Tor**	**2.27**	**37**	*eP*	**Pn**	**11 51 24.9**	**+0.2**
CO01				*eS*	**Sn**	**11 51 51.0**	**-0.7**
CO01				IAML		11 51 51.7	
	comp=E,681nm,0.2s						
LMEL	**Las Melosas**	**2.37**	**149**	*eP*	**Pn**	**11 51 27.3**	**+1.2**
LMEL				*i* S	**Sn**	**11 51 55.5**	**+1.4**
LMEL				IAML		11 51 57.3	
	comp=N,1μm,0.2s						
AROD	**Rodeo**	**2.49**	**49**	*eP*	Pn	11 51 34.4	+6.5
AROD				*eS*	**Sn**	**11 52 00.5**	**+3.3**
ASAL	**Salagasta**	**2.52**	**109**	*eP*	**Pn**	**11 51 30.2**	**+2.2**
ASAL				IAML		11 52 05.3	
	comp=Z,157nm,0.5s						
ARCO	**CERRO ARCO**	**2.52**	**115**	*eP*	**Pn**	**11 51 30.7**	**+2.5**
ARCO				IAML		11 52 06.3	
	comp=Z,208nm,0.8s						
ACCO	**Cerro Coronel**	**2.53**	**62**	*eP*	Pn	11 51 35.8	+7.3
ACCO				IAML		11 52 21.3	
	comp=Z,234nm,1.1s						
ZON	**Zonda**	**2.55**	**85**	*eP*	**Pn**	**11 51 30.2**	**+1.7**
ZON				IAML		11 52 05.2	
	comp=Z,186nm,0.8s						
RTCV	**Cerro Valdivia**	**2.65**	**92**	*eP*	**Pn**	**11 51 30.9**	**+1.1**
RTCV				IAML		11 52 06.6	
	comp=Z,171nm,0.7s						
BO03	**Pichilemu**	**2.69**	**185**	*eP*	**Pn**	**11 51 30.9**	**+0.5**
BO03				*i* S	**Sn**	**11 52 00.2**	**-1.5**
AAGR	**Agrelo**	**2.71**	**119**	*eP*	**Pn**	**11 51 33.4**	**+2.7**
AAGR				IAML		11 52 33.3	
	comp=Z,159nm,1.0s						
ACDV	**Cuesta del Vie**	**2.72**	**54**	*eP*	Pn	11 51 34.5	+3.6
ACDV				IAML		11 52 17.4	
	comp=Z,135nm,1.0s						
RTLL	**Cerro Villicun**	**2.76**	**81**	*eP*	**Pn**	**11 51 33.2**	**+1.9**
RTLL				*eS*	**Sn**	**11 52 07.1**	**+3.7**
RTLL				IAML		11 52 10.1	
	comp=Z,176nm,0.4s						
BO02	**Sierra Bellavi**	**3.06**	**166**	*eP*	**Pn**	**11 51 36.2**	**+0.6**
BO02				*i* S	**Sn**	**11 52 11.4**	**+0.4**
AC05	**El Transito**	**3.19**	**22**	*eP*	**Pn**	**11 51 37.5**	**+0.1**
AC05				*i* S	**Sn**	**11 52 13.6**	**-0.7**
AC05				IAML		11 52 31.3	
	comp=N,560nm,0.7s						
GO05	**Huala**	**3.20**	**184**	*eP*	**Pn**	**11 51 37.6**	**+0.3**
GO05				*i* S	**Sn**	**11 52 12.4**	**-1.9**
GO05	**Huala**	**3.20**	**184**	*eP*	**Pn**	**11 51 37.9**	**+0.5**
GO05				*eS*	**Sn**	**11 52 13.2**	**-1.1**
COIS	**El Sosneado**	**3.71**	**153**	*eP*	**Pn**	**11 51 45.9**	**+1.5**
LAMA	**Las Malvinas**	**3.73**	**147**	*eP*	**Pn**	**11 51 47.6**	**+3.0**
VCA	**Vinchina**	**4.28**	**45**	*eP*	**Pn**	**11 51 53.7**	**+1.5**
VCA				IAML		11 53 06.7	
	comp=Z,215nm,1.3s						
GO03	**Copiap**	**4.38**	**17**	*eP*	**Pn**	**11 51 54.2**	**+0.6**
GO03				*eS*	**Sn**	**11 52 45.3**	**+2.0**
ACLC	**CERRO LA CRUZ**	**4.70**	**61**	*eP*	**Pn**	**11 51 58.4**	**+0.3**
ACLC				IAML		11 53 12.8	
	comp=Z,104nm,0.9s						
BI02	**San Fabin de**	**4.85**	**176**	*eP*	**Pn**	**11 52 01.1**	**+1.0**
BI02				*i* S	**Sn**	**11 52 54.7**	**-0.3**
TCA	**Tanti**	**6.04**	**87**	*eP*	**Pn**	**11 52 15.0**	**-1.4**
TCA				*eS*	**Sn**	**11 53 19.2**	**-5.2**
TCA				IAML		11 54 11.5	
	comp=Z,30nm,0.6s						
H03N1	**Juan Fernandez**	**6.33**	**253**	P	**Pn**	**11 52 23.4**	**+3.4**
H03N1				T	T	11 59 05.7	
	baz=81,slow=72,SNR=652						
H03N3	**Juan Fernandez**	**6.35**	**253**	P	**Pn**	**11 52 23.3**	**+3.0**
H03N3				T	T	11 59 03.5	
	baz=81,slow=72,SNR=614						
H03N2	**Juan Fernandez**	**6.35**	**253**	P	**Pn**	**11 52 23.4**	**+3.1**
H03N2				T	T	11 59 03.5	
	baz=81,slow=72,SNR=668						
H03S3	**Juan Fernandez**	**6.43**	**250**	P	**Pn**	**11 52 23.4**	**+2.0**
H03S3				T	T	11 59 02.9	
	baz=84,slow=74,SNR=9.0						
H03S1	**Juan Fernandez**	**6.43**	**250**	T	T	11 59 04.1	
	baz=84,slow=74,SNR=5.2						
H03S2	**Juan Fernandez**	**6.45**	**250**	P	**Pn**	**11 52 23.8**	**+2.2**
H03S2				T	T	11 59 04.0	
	baz=84,slow=74,SNR=7.8						
PLCA	**Paso Flores**	**8.95**	**175**	P	**Pn**	**11 52 55.1**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=321,slow=15,SNR=4.8						
CPUP	**Villa Florida**	**13.66**	**70**	P	Pn	11 53 55.2	-5.4
	comp=Z,0.2nm,0.3s,baz=245,slow=9.7,SNR=3.3						
CPUP				LR	LR	11 59 49.4	
	comp=Z,134nm,18.2s,baz=105,slow=40						
LPAZ	**La Paz**	**15.78**	**13**	P	**Pn**	**11 54 29.0**	**0.0**
	comp=Z,0.1nm,0.3s,baz=197,slow=9.6,SNR=4.4						
SIV	**San Ignacio**	**18.46**	**34**	P	**P**	**11 54 59.8**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=210,slow=12,SNR=8.5						
BDFB	**Brasilia**	**26.88**	**59**	P	**P**	**11 56 23.9**	**-1.8**
	comp=Z,4.4nm,0.9s,baz=217,slow=12,SNR=3.9						
TXAR	**Lajitas Array**	**67.99**	**330**	P	**P**	**12 01 45.3**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=152,slow=5.9,SNR=2.5						
TORD	**Torodi Ar. Bea**	**83.16**	**70**	P	**P**	**12 03 09.5**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=242,slow=3.0,SNR=4.9						
WRA	**Warramunga Arr**	**122.83**	**209**	PKP	**PKPdf**	**12 09 39.9**	**-0.5**
	comp=Z,0.4nm,1.1s,baz=178,slow=4.1,SNR=1.4						

IDC 03 12:16:53.4±2.0,55°.45S×126°.18W,h0km,mb3.7/4, mb1 4.0/4,mb1mx3.8/25,mbtmp3.7/4,Error ellipse: s-maj=86.0km s-min=37.8km az=116.0,Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**32.80**	**202**	P	P	12 23 27.8	0.0
	0.5nm,0.9s,baz=113,slow=7.7,SNR=3.0						
H03S2	**Juan Fernandez**	**38.98**	**76**	T	T	13 03 42.5	
	baz=218,slow=74,SNR=21						
H03S1	**Juan Fernandez**	**38.99**	**76**	T	T	13 03 43.6	
	baz=218,slow=74,SNR=31						
H03S3	**Juan Fernandez**	**39.00**	**76**	T	T	13 03 42.9	
	baz=218,slow=74,SNR=26						
H03N3	**Juan Fernandez**	**39.27**	**76**	T	T	13 04 02.5	
	baz=221,slow=72,SNR=59						
H03N2	**Juan Fernandez**	**39.27**	**76**	T	T	13 04 03.2	
	baz=221,slow=72,SNR=120						
H03N1	**Juan Fernandez**	**39.28**	**76**	T	T	13 04 02.7	
	baz=221,slow=72,SNR=40						
ASAR	**Alice Springs**	**76.22**	**248**	P	P	12 28 42.4	-1.3
	1.0nm,1.0s,baz=157,slow=5.0,SNR=5.0						
WRA	**Warramunga Arr**	**79.02**	**251**	P	P	12 29 00.4	+1.1
	1.5nm,0.9s,baz=144,slow=4.9,SNR=7.8						
TXAR	**Lajitas Array**	**86.62**	**20**	P	P	12 29 38.3	0.0
	0.4nm,0.9s,baz=194,slow=6.5,SNR=3.4						

*NIC **03** 12:21:11.0±0.0,35°.78N×31°.08E,h49km±13km,Ml2.9/2*
*DDA **03** 12:21:11.0,35°.66N×31°.37E,h24km±10km,ML2.5*
*ISK **03** 12:21:18.8,35°.87N×31°.68E,h9km,ML2.6/10*

ISC 03 12:21:12.8±1.3,35°.79N±0°.04×31°.36E±0°.04,h19km±3km, n22,σ1§40/30,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.90**	**60**	PG	**Pg**	**12 21 31.2**	**+0.9**
GAZI				SG	**Sb**	**12 21 40.8**	**-0.5**
GAZI	**Gazipasa**	**0.90**	**60**	*i* P	**Pg**	**12 21 30.8**	**+0.5**
GAZI				*i* S	**Sn**	**12 21 43.7**	**+0.8**
AKUM	**Antalya-Kumluc**	**0.98**	**303**	*i* P	**Pg**	**12 21 31.4**	**-0.5**
AKUM				*i* S	**Sn**	**12 21 49.2**	**+4.3**
AKMS	**Akamas**	**1.11**	**134**	P	Pn	**12 21 32.7**	**-0.6**
AKMS				S	**Sg**	**12 21 49.3**	**+0.5**
AKMS				AML	AML	12 21 52.0	
	0.8nm,0.3s						
AKMS				AML	AML	12 21 52.0	
	0.8nm,0.3s						
AKMS				AML	AML	12 21 52.3	
	0.6nm,0.8s						
AKMS				AML	AML	12 21 52.3	
	0.6nm,0.8s						
KEPZ	**Antalya-Kepez**	**1.13**	**10**	*i* P	**Pg**	**12 21 34.8**	**+0.1**
KEPZ				IAML		12 21 54.0	
	comp=N,58nm,0.6s						
ALFC	**Alefka**	**1.19**	**121**	P	**Pb**	**12 21 34.3**	**-0.5**
ALFC				S	**Sg**	**12 21 52.1**	**+0.5**
ALFC				AML	AML	12 21 57.9	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	12 21 57.9	
	comp=N,0.5nm,0.2s						
ALFC				AML	AML	12 21 58.9	
	comp=N,0.5nm,0.5s						
ALFC				AML	AML	12 21 58.9	
	comp=N,0.5nm,0.5s						
LEF	**Lefka**	**1.42**	**118**	PN	**Pg**	**12 21 42.5**	**+2.3**
LEF	**Lefka**	**1.42**	**118**	*i* P	**Pn**	**12 21 36.4**	**-1.1**
LEF				*i* S	**Sn**	**12 21 56.1**	**+0.4**
KORT	**Korkueli**	**1.46**	**326**	PN	Pg	12 21 47.5	+6.5
TEKE	**Tekeli-Mersin**	**1.47**	**75**	PN	**Pg**	**12 21 42.3**	**+1.2**
TEKE				SN	**Sb**	**12 21 59.0**	**+1.2**
BERE	**Bereket-Mersin**	**1.61**	**69**	PN	**Pg**	**12 21 44.4**	**+0.5**
SZAC	**Souni**	**1.62**	**129**	S	**Sb**	**12 22 02.4**	**+0.3**
TEVE	**Tevekalti-Mers**	**1.81**	**68**	PN	**Pg**	**12 21 46.7**	**-0.9**
CSS	**Mathiatis**	**1.81**	**116**	PN	**Pg**	**12 21 48.4**	**+0.8**
CSS	**Mathiatis**	**1.81**	**116**	P	**Pn**	**12 21 42.5**	**-0.5**
AKKU	**Akkuyu-Mersin**	**1.82**	**78**	PN	**Pg**	**12 21 47.2**	**-0.6**
GULN	**MERSIN_Gulnar**	**1.82**	**77**	*i* P	**Pb**	**12 21 45.1**	**-0.3**
GULN				*i* S	**Sb**	**12 22 09.7**	**+1.9**
IKL	**Isikli**	**1.94**	**76**	PN	**Pg**	**12 21 49.1**	**-1.0**
MVOU	**Mavrovouni**	**2.01**	**112**	P	**Pn**	**12 21 45.0**	**-0.7**
KEBE	**Keben-Mersin**	**2.02**	**70**	PN	**Pg**	**12 21 50.1**	**-1.5**
OSC1	**CSNet OBS 1**	**2.28**	**182**	S	**Sn**	**12 22 14.4**	**-2.7**
GULE	**Gulek**	**3.13**	**61**	*i* P	**Pb**	**12 22 06.4**	**-1.6**
GULE				*i* S	**Sb**	**12 22 45.9**	**0.0**
GULE				IAML		12 22 50.0	
	comp=N,19nm,0.5s						

IDC 03 12:23:58.9±3.6,6°.91S×152°.48E,h0km,mb3.4/3, mb1 3.6/4,mb1mx3.4/32,mbtmp3.4/4,ML3.4/1,Error ellipse: s-maj=113.6km s-min=26.9km az=106.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.62**	**350**	Pn	Pn	12 24 41.2	-1.3
	6.4nm,0.3s,baz=217,slow=2.6,SNR=11						
KRVT				Sn	Sg	12 25 23.9	+0.7
	4.6nm,0.3s,baz=129,slow=23,SNR=5.7						

WRA	**Warramunga Arr**	**21.86**	**232**	P		P	12 28 53.0	-0.3	
	0.5nm,0.8s,baz=56,slow=9.6,SNR=5.4								
ASAR	**Alice Springs**	**24.41**	**225**	P		P	12 29 19.5	+0.2	
	0.4nm,1.0s,baz=59,slow=9.8,SNR=3.4								
MKAR	**Makanchi Array**	**81.70**	**319**	P		P	12 36 20.9	+1.5	
	0.7nm,0.6s,baz=104,slow=4.9,SNR=6.4								
TORD	**Torodi Ar. Bea**	**150.59**	**284**	PKPbc		PKPbc	12 43 52.5	-1.4	
	0.5nm,0.7s,baz=66,slow=3.2,SNR=2.7								

*TEH **03** 12:28:34.6,32°.38N×47°.84E,h10km,ML2.8*
*ISN **03** 12:28:35.5±0.8,32°.38N×47°.80E,h14km±5km,ML2.6*

ISC 03 12:28:35.1±1.8,32°.32N±0°.07×47°.9E±0°.1,h10km,n6, σ0§47/11,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**1.20**	**357**	*ePg*	**Pb**	**12 28 58.1**	**+0.2**
IKFM				*eSg*	**Sg**	**12 29 13.5**	**-0.2**
IKFM				*e*		12 29 16.1	
IDOB	**Doab**	**1.48**	**8**	*e*		12 29 03.5	
IDOB				*ePg*	**Pn**	**12 29 01.6**	**-0.4**
IDOB				*eSg*	**Sg**	**12 29 22.6**	**0.0**
IBDR	**Badra**	**1.85**	**296**	*ePg*	**Pn**	**12 29 07.0**	**+0.1**
IBDR				*eSg*	**Sn**	**12 29 30.0**	**-0.3**
IBDR				AML	AML	12 29 37.6	
	comp=N,86nm,0.4s						
IBDR				AML	AML	12 29 38.9	
	comp=E,60nm,0.8s						
IKOM	**Komasi**	**1.88**	**350**	*e*		12 29 37.4	
IKOM				*ePg*	**Pn**	**12 29 08.1**	**+0.7**
NSR	**Nassriya**	**2.00**	**230**	*ePn*	**Pn**	**12 29 09.0**	**0.0**
NSR				*eSn*	**Sn**	**12 29 34.0**	**-0.1**
BHD	**Baghdad**	**3.13**	**289**	*ePn*	**Pn**	**12 29 25.0**	**+0.6**
BHD				*eSn*	**Sn**	**12 30 01.0**	**-0.8**

*IDC **03** 12:36:16.2±0.5,41°.80S×80°.01E,h0km,mb4.5/15, mb1 4.5/15,mb1mx4.4/27,mbtmp4.4/15,MS4.3/31, Ms1 4.3/31,ms1mx4.1/46,Error ellipse: s-maj=19.0km s-min=16.0km az=136.0*
*NEIC **03** 12:36:17.7±1.6,41°.85S±0°.1×80°.0E±0°.1,h10km±1km, mb5.1/35,Error ellipse: s-maj=19.8km s-min=15.2km az=314.0*
*BJI **03** 12:36:17.0±0.0,41°.80S×79°.70E,h6km,mB5.4/24, mb5.0/34,Ms5.2/9,Ms7 4.8/6*
*GCMT **03** 12:36:19.7±0.2,41°.79S±0°.02×79°.90E±0°.02,h16km±1km, MW5.1/96,Moment Tensor Solution. s26,c32; s96,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.09±.18; $M_{\theta\theta}$5.22±.19; $M_{\phi\phi}$-4.13±.16; $M_{r\theta}$1.02±.45; $M_{\phi\theta}$-0.73±.13; $M_{\theta f}$1.40±.48; Best double couple: $M_0$5.09900×10^{16} NP1:φs138.00000°,δ68.00000°,λ-10.00000°. NP2: φs232.00000°,δ80.00000°,λ-158.00000°. Principal axes: T 5.4090, Plg8.0000°, Azm3.0000°; N -0.6200, Plg66.0000°, Azm254.0000°; P -4.7890, Plg22.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 03 12:36:17.9±0.4,41°.92S±0°.08×79°.94E±0°.08,h10km,n130, σ1§10/108,mb5.0/42,MS4.4/34,3C-1D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAF	**Port-aux-Franc**	**10.07**	**219**	Pn	**Pn**	**12 38 39.9**	**-2.6**
MAW	**Mawson**	**27.35**	**194**	P	**P**	**12 42 02.7**	**0.0**
	2.3nm,1.1s,baz=44,slow=16,SNR=3.5						
MAW				LR	LR	12 50 22.7	
	comp=Z,1μm,21.3s,baz=45,slow=31						
MAW	**Mawson**	**27.35**	**194**	P	**P**	**12 42 04.0**	**+1.3**
H01W2	**Cape Leeuwin H**	**27.57**	**87**	T	T	13 10 51.2	
	baz=245,slow=74,SNR=30						
H01W3	**Cape Leeuwin H**	**27.57**	**87**	T	T	13 10 51.0	
	baz=245,slow=74,SNR=37						
H01W1	**Cape Leeuwin H**	**27.58**	**87**	T	T	13 10 50.0	
	baz=245,slow=74,SNR=35						
MORW	**Morawa**	**31.83**	**78**	P	**P**	**12 42 43.9**	**+0.9**
	baz=31,SNR=6.3						
MORW	**Morawa**	**31.83**	**78**	P	**P**	**12 42 43.0**	**+0.1**
MORW				IAmb	IAmb	12 42 45.2	
	comp=Z,33nm,1.1s						
SYO	**Syowa Base**	**34.32**	**204**	⇑*eP*	**P**	**12 43 05.0**	**+0.8**
SYO	**Syowa Base**	**34.32**	**204**	⇓*ePnPn*	PnPn	12 44 20.2	+1.8
MEEK	**Meekatharra**	**35.08**	**77**	P	**P**	**12 43 11.9**	**+0.6**
	baz=34,SNR=6.8						
PSA00	**Pilbara Seismi**	**39.09**	**71**	P	**P**	**12 43 45.4**	**+0.1**
FORT	**Forrest**	**39.85**	**90**	P	**P**	**12 43 51.1**	**-0.5**
FORT				IAmb	IAmb	12 43 54.1	
	comp=Z,38nm,0.8s						
WRKA	**Warakurna**	**43.11**	**83**	P	**P**	**12 44 18.7**	**+0.2**
	baz=42,SNR=6.0						
BBOO	**Buckleboo**	**44.82**	**97**	P	**P**	**12 44 31.4**	**-0.6**
	baz=43,SNR=6.4						
BBOO	**Buckleboo**	**44.82**	**97**	P	**P**	**12 44 32.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**45.47**	**73**	LR	LR	13 02 47.0	
	comp=Z,209nm,18.1s,baz=258,slow=35						
FITZ	**Fitzroy Crossi**	**45.47**	**73**	P	**P**	**12 44 38.0**	**+0.7**
	baz=45,SNR=4.6						
FITZ	**Fitzroy Crossi**	**45.47**	**73**	P	**P**	**12 44 37.1**	**-0.2**
FITZ				IAmb	IAmb	12 44 39.0	
	comp=Z,18nm,1.4s						
BOSA	**Boshof**	**45.86**	**269**	P	**P**	**12 44 40.6**

comp=Z,33nm,1.1s
WRA **Warramunga Arr** **50.62** **82** P **P** **12 45 17.2 -0.1**
comp=Z,20nm,1.0s,baz=230,slow=7.4,SNR=74
WRA PcP **PcP** **12 46 33.3 -1.5**
comp=Z,0.4nm,0.6s,baz=229,slow=2.9,SNR=4.7
WRA LR LR 13 04 27.8
comp=Z,181nm,20.1s,baz=320,slow=34
WRA **Warramunga Arr** **50.62** **82** P **P** **12 45 15.9 -1.4**
WB2 **Warramunga Arr** **50.63** **82** P **P** **12 45 17.5 +0.1**
WRAB **Tennant Creek** **50.64** **82** P **P** **12 45 17.6 +0.2**
WRAB IAmb IAmb 12 45 18.8
comp=Z,46nm,1.2s
WR0 **Warramunga Arr** **50.76** **82** P **P** **12 45 17.8 -0.6**
WR0 IAmb IAmb 12 45 19.6
comp=Z,29nm,1.1s
WB0 **Warramunga Arr** **50.77** **82** P **P** **12 45 17.9 -0.5**
VNA3 **Neumayer Olymp** **50.84** **205** P **P** **12 45 18.8 +0.5**
LSZ **Lusaka** **51.67** **285** P **P** **12 45 25.1 -0.3**
LSZ IAmb IAmb 12 45 35.1
comp=Z,27nm,1.7s
CMSA **Cobar Meteorol** **52.54** **101** P **P** **12 45 30.3 -1.2**
baz=51,SNR=6.8
SBUM **Sibu** **52.98** **42** P **P** **12 45 35.1 +0.3**
SBUM IAmb IAmb 12 45 36.2
comp=Z,22nm,1.1s
QLP **Quilpie** **54.12** **95** P **P** **12 45 42.9 -0.2**
baz=53,SNR=6.6
QIS **Mount Isa** **54.16** **86** P **P** **12 45 44.1 +0.6**
baz=53,SNR=11
KMBO **Kilima Mbogo** **55.84** **305** LR LR 13 04 57.9
comp=Z,179nm,19.9s,baz=94,slow=31
ARMA **Armidale** **57.46** **103** IAmb IAmb 12 46 09.7
comp=Z,29nm,1.1s
RMQ **Roma** **57.52** **98** P **P** **12 46 07.2 -0.4**
baz=56,SNR=4.7
MTSU **Mount Surprise** **59.15** **87** P **P** **12 46 20.6 +1.6**
baz=58,SNR=5.3
CM31 **Chiang Mai Arr** **62.59** **20** P **P** **12 46 40.9 -1.4**
CM31 IAmb IAmb 12 46 42.7
comp=Z,10nm,0.8s
CMAR **Chiang Mai Arr** **62.59** **20** P **P** **12 46 41.5 -0.8**
comp=Z,6.9nm,0.9s,baz=211,slow=6.7,SNR=32
CMAR LR LR 13 09 24.1
comp=Z,294nm,20.9s,baz=242,slow=32
CMAR **Chiang Mai Arr** **62.59** **20** P **P** **12 46 40.9 -1.4**
QIZ **Qiongzhong** **66.66** **31** P **P** **12 47 10.8 +2.0**
QIZ S **S** **12 56 02.4 +2.1**
QIZ pmax pmax
comp=Z,470nm,5.1s
QIZ LR LR
comp=Z,430nm,18.6s
PMG **Port Moresby** **66.85** **82** P **P** **12 47 09.0 -1.2**
KMI **Kunming** **69.97** **22**⇑*e*P **P** **12 47 32.9 +3.2**
KMI pP pwP 12 47 36.9 +0.8
KMI pmax pmax
comp=Z,8.0nm,0.6s
KMI pmax pmax
comp=Z,200nm,4.9s
KMI LR LR
comp=Z,250nm,12.4s
KMI LR LR
comp=Z,240nm,12.0s
KMI LR LR
comp=Z,300nm,13.5s
URZ **Urewera** **70.30** **124** LR LR 13 13 11.7
comp=Z,139nm,19.4s,baz=212,slow=32
GYA **Guiyang** **72.39** **25** ⇑P **P** **12 47 43.9 -0.3**
GYA sP pwP 12 47 49.7 -0.9
GYA pmax pmax
comp=Z,8.0nm,0.8s
KRVT **Keravat (AS076** **73.83** **81** LR LR 13 18 18.4
comp=Z,186nm,19.8s,baz=220,slow=34
CD2 **Chengdu** **75.73** **21** *e*P **P** **12 48 05.0 +1.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HNR **Honiara** **76.34** **90** LR LR 13 18 46.8
comp=Z,133nm,19.9s,baz=212,slow=33
KBL **Kabul** **76.75** **351** P **P** **12 48 08.8 -0.7**
KBL IAmb IAmb 12 48 10.2
comp=Z,18nm,1.1s
RAO **Raoul Island** **79.25** **120** LR LR 13 17 16.6
comp=Z,41nm,19.1s,baz=158,slow=31
XAN **Xi'an** **80.14** **24** P **P** **12 48 26.8 -1.3**
XAN pP pwP 12 48 32.8 -1.7
XAN pmax pmax
comp=Z,17nm,1.1s
XAN pmax pmax
comp=Z,140nm,6.3s
XAN **Xi'an** **80.14** **24** P **P** **12 48 26.7 -1.3**
XAN IAmb IAmb 12 48 27.7
comp=Z,12nm,0.9s
LZH **Lanzhou** **80.66** **19** *e*P **P** **12 48 30.7 -0.2**
LZH pP pwP 12 48 35.8 -1.6
LZH sP PcP 12 48 39.7 +2.0
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,68nm,4.5s
KSH **Kashi** **81.14** **357** *e*P **P** **12 48 34.8 +1.5**
KSH pmax pmax
comp=Z,420nm,5.7s
NJ2 **Nanjing** **81.86** **33** *e*P **P** **12 48 38.7 +1.5**
NJ2 pmax pmax
comp=Z,12nm,0.5s
GEYT **Alibeck** **81.93** **343** LR LR 13 20 56.3
comp=Z,147nm,18.9s,baz=200,slow=33
BTK **Batken** **82.02** **353** P **P** **12 48 37.4 -0.6**
EIL **Elat** **82.44** **322** LR LR 13 20 26.5
comp=Z,126nm,19.1s,baz=106,slow=32
GTA **Gaotai** **82.95** **15** *e*P **P** **12 48 42.2 -0.6**
GTA pP PcP 12 48 46.5 -1.0
GTA sP pwP 12 48 49.5 +0.2
GTA pmax pmax
comp=Z,9.0nm,1.0s
AAK **Ala-Archa** **84.32** **356** P **P** **12 48 48.5 -1.4**
AAK IAmb IAmb 12 48 56.5
comp=Z,9.5nm,1.3s
KK31 **Karatay Array** **85.07** **353** P **P** **12 48 52.4 -1.0**
KKAR **Karatay Array** **85.07** **353** P **P** **12 48 51.7 -1.7**
KKAR **Karatay Array** **85.07** **353** P **P** **12 48 51.6 -1.9**
MMAI **Mount Meron Ar** **85.07** **324** LR LR 13 22 29.6
comp=Z,156nm,18.5s,baz=185,slow=33
WMQ **Urumqi** **85.64** **6** *e*P **P** **12 48 57.9 +1.5**
WMQ pP sP 12 49 00.0 +0.5
WMQ sP pwP 12 49 03.4 +0.6
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,190nm,4.7s
WMQ LR LR
comp=Z,450nm,16.5s
WMQ LR LR
comp=Z,350nm,22.5s
HHC **Hu-ho-hao-te** **87.23** **23** *e*P **P** **12 49 04.0 -0.3**
HHC pmax pmax
comp=Z,25nm,0.8s
HHC pmax pmax
comp=Z,130nm,6.6s
JNU **Nakatsue** **88.13** **41** LR LR 13 29 34.0
comp=Z,50nm,18.1s,baz=272,slow=36
MKAR **Makanchi Array** **88.36** **2** P **P** **12 49 07.4 -2.0**
comp=Z,1.2nm,0.9s,baz=167,slow=7.2,SNR=6.4
MKAR LR LR 13 26 29.7
comp=Z,205nm,20.1s,baz=184,slow=34
TORD **Torodi Ar. Bea** **90.14** **288** P **P** **12 49 20.9 +2.4**
comp=Z,0.7nm,0.9s,baz=129,slow=3.9,SNR=3.0
TORD LR LR 13 27 47.0
comp=Z,398nm,19.6s,baz=125,slow=34
KSRS **Korea Array** **90.32** **36** P **P** **12 49 17.6 -1.2**
comp=Z,2.7nm,0.8s,baz=240,slow=4.7,SNR=6.2
KSRS LR LR 13 29 04.1
comp=Z,53nm,18.9s,baz=222,slow=35
DBIC **Dimbokro** **90.55** **278** LR LR 13 25 43.0
comp=Z,254nm,19.9s,baz=131,slow=33
BRTR **Keskin Array B** **91.50** **326** P **P** **12 49 24.4 0.0**
comp=Z,1.9nm,0.8s,baz=175,slow=5.7,SNR=7.1
BRTR LR LR 13 27 32.6
comp=Z,65nm,19.1s,baz=143,slow=34
BRTR **Keskin Array B** **91.50** **326** P **P** **12 49 23.5 -0.9**
KBZ **Khabaz** **91.53** **334** LR LR 13 26 39.0
comp=Z,147nm,19.7s,baz=150,slow=33
SONM **Songino Array** **92.39** **17** P **P** **12 49 27.2 -1.2**
comp=Z,1.0nm,0.9s,baz=207,slow=6.2,SNR=4.8
SONM LR LR 13 30 49.2
comp=Z,140nm,18.7s,baz=190,slow=36
SONM **Songino Array** **92.39** **17** IAmb IAmb 12 49 27.6
comp=Z,1.3nm,1.0s
PLCA **Paso Flores** **93.49** **202** LR LR 13 29 49.8
comp=Z,87nm,20.0s,baz=160,slow=34
AFI **Afiamalu** **93.92** **112** LR LR 13 24 08.2
comp=Z,54nm,20.1s,baz=52,slow=31
AKTO **Aktyubinsk** **93.96** **346** LR LR 13 27 42.3
comp=Z,115nm,19.6s,baz=157,slow=33
MJAR **Matsushiro Arr** **94.50** **43** P **P** **12 49 36.3 -2.0**
comp=Z,2.9nm,0.8s,baz=198,slow=5.5,SNR=4.7
ZALV **Zalesovo Beam** **95.59** **3** LR LR 13 31 40.1
comp=Z,82nm,19.4s,baz=192,slow=35
USRK **Ussuriysk Ar.** **97.61** **35** LR LR 13 31 36.2
comp=Z,43nm,20.2s,baz=195,slow=34
ARU **Arti** **99.64** **348** LR LR 13 34 06.0
comp=Z,158nm,18.0s,baz=160,slow=35
BMAR **Burnt Mountain** **145.03** **28** **PKPab** **12 55 53.4 -0.3**
ILAR **Eielson Array** **145.11** **33** PKP **PKPbc** **12 55 51.8 -2.3**
comp=Z,4.5nm,0.9s,baz=284,slow=3.6,SNR=39
RES **Resolute Bay** **147.06** **357** PKPbc **PKPbc** **12 55 59.4 -0.3**
comp=Z,8.4nm,0.9s,baz=360,slow=6.2,SNR=8.1
GLB **Gilahina Butte** **147.44** **38** **PKPbc** **12 56 01.4 +0.3**
VRDI **Verde Repeater** **147.66** **38** **PKPbc** **12 56 02.2 +0.2**
BCAR **Beaver Creek A** **147.81** **35** **PKPbc** **12 56 01.4 -0.7**
INK **Inuvik** **148.15** **23** **PKPbc** **12 56 01.9 -0.8**
C36M **Paulatuk** **149.79** **17** **PKPbc** **12 56 05.5 -1.4**
NVAR **Mina Array Bea** **165.62** **98** PKP **PKPdf** **12 56 24.0 +1.1**
comp=Z,0.5nm,0.9s,baz=207,slow=6.0,SNR=4.0
NVAR PKPab **PKPab** **12 57 21.2 -0.6**
comp=Z,3.3nm,0.9s,baz=226,slow=8.7,SNR=17
NVAR **Mina Array Bea** **165.62** **98** **PKPdf** **12 56 22.9 +0.1**
KVN **Kaiserville** **165.97** **96** PKPab **PKPab** **12 57 23.4 +0.1**
E09A **Wood Farm, Sta** **166.25** **64** **PKPab** **12 57 24.7 +0.8**
TXAR **Lajitas Array** **167.10** **166** PKP **PKPdf** **12 56 23.7 -0.4**
comp=Z,0.4nm,0.9s,baz=199,slow=1.9,SNR=3.5
TXAR PKPab **PKPab** **12 57 28.0 -0.1**
comp=Z,0.5nm,1.0s,baz=184,slow=3.5,SNR=3.7
R11A **Troy Canyon, C** **167.59** **102** **PKPdf** **12 56 25.1 +0.8**
PRN **Pahroc Range** **167.60** **106** **PKPab** **12 57 30.9 +0.5**
X16A **Lo Mia Camp, P** **168.33** **126** PKPab **PKPab** **12 57 34.7 +1.0**
MNTX **Cornudas Mount** **168.94** **156** **PKPdf** **12 56 25.6 +0.4**
HLID **Hailey** **169.31** **76** **PKPdf** **12 56 27.1 +1.8**
BOZ **Bozeman (W)** **170.86** **62** **PKPab** **12 57 44.7 +0.1**
PDAR **Pinedale Array** **172.91** **80** PKPab **PKPab** **12 57 52.7 -1.3**
comp=Z,2.2nm,1.0s,baz=245,slow=2.8,SNR=9.3
PDAR **Pinedale Array** **172.91** **80** PKPab **PKPab** **12 57 52.2 -1.8**

*KRNET **03** 12:58:41.8±0.1,41.07N×74.46E,h16km,mb2.8*
*SOME **03** 12:58:41.3,41.00N×74.47E,h10km*
*NNC **03** 12:58:42.6±0.5,41.01N×74.48E,h0km,mb3.7,mpv3.4,*
Error ellipse: s-maj=3.7km s-min=2.5km az=1.0
*KNET **03** 12:58:43.5±0.7,41.15N×74.50E,h0km,ml2.3,Error*
ellipse: s-maj=5.3km s-min=3.9km az=23.0
ISC 03 12:58:41.1±1.2,41.04N±0.04×74.48E±0.02,h15km±10km,
n64,σ1§41/102,32C-25D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.83**	**352**	⇓*i*P			**Pb**	**12 58 57.4**	**0.0**
ARLS	baz=53			⇓*i*S			**Sb**	**12 59 08.9**	**+0.4**
UCH	**Uchtor**	**1.19**	**1**	⇑*i*P			**Pn**	**12 59 04.0**	**+0.3**
UCH	baz=2.0			⇑*i*S			**Sn**	**12 59 20.0**	**+0.2**
UCH	**Uchtor**	**1.19**	**1**	⇓P			**Pn**	**12 59 04.5**	**+0.8**
AML	13nm,0.2s,SNR=16 **Almayashu**	**1.24**	**332**	⇓*i*P			**Pg**	**12 59 04.7**	**-0.4**
AML	baz=32			⇓*i*S			**Sn**	**12 59 21.8**	**+0.8**
AML	**Almayashu**	**1.24**	**332**	⇓P			**Pg**	**12 59 04.9**	**-0.2**
AML	11nm,0.1s,SNR=30			⇓S			**Sn**	**12 59 22.2**	**+1.3**
OHH	**Osh**	**1.38**	**249**	⇑*i*P			**Pg**	**12 59 07.9**	**+0.2**
OHH	30nm,0.2s baz=47			⇑*i*S			**Sg**	**12 59 27.0**	**+1.3**
AAK	**Ala-Archa**	**1.60**	**1**	⇓*i*P			**Pg**	**12 59 11.4**	**-0.5**
AAK	baz=1.0			⇓*i*S			**Sg**	**12 59 32.6**	**-0.1**
AAK	**Ala-Archa**	**1.60**	**1**	⇓P			**Pg**	**12 59 11.9**	**-0.1**
AAK	9.7nm,0.1s,SNR=13			⇑S			**Sg**	**12 59 33.9**	**+1.2**
AAK	**Ala-Archa**	**1.60**	**1**	⇑P			**Pg**	**12 59 12.4**	**+0.5**
AAK	4.6nm,0.4s			⇑S			**Sg**	**12 59 34.4**	**+1.7**
KBK	**Karagaybulak**	**1.66**	**12**	⇑*i*P			**Pg**	**12 59 12.7**	**-0.3**
KBK	31nm,0.7s baz=13			⇑*i*S			**Sg**	**12 59 34.7**	**+0.1**
KBK	**Karagaybulak**	**1.66**	**12**	P			**Pg**	**12 59 13.4**	**+0.4**
KBK	13nm,0.1s,SNR=10			⇑S			**Sg**	**12 59 37.0**	**+2.5**
EKS2	**Erkin-Say**	**1.71**	**342**	⇓*e*P			**Pg**	**12 59 13.2**	**-0.7**
EKS2	51nm,0.2s baz=43			⇓*i*S			**Sg**	**12 59 36.1**	**0.0**
EKS2	**Erkin-Say**	**1.71**	**342**	⇑P			**Pg**	**12 59 13.8**	**-0.1**
ULHL	2.6nm,0.1s,SNR=15 **Ulahol**	**1.79**	**47**	⇑*e*P			**Pg**	**12 59 15.3**	**-0.2**
ULHL	baz=48			⇑*i*S			**Sg**	**12 59 39.5**	**+0.6**
ULHL	**Ulahol**	**1.79**	**47**	⇑P			**Pg**	**12 59 15.4**	**-0.2**
ULHL	6.1nm,0.1s,SNR=7.0			⇓S			**Sg**	**12 59 39.7**	**+0.8**
BOOM	37nm,0.3s **Boomskoye usch**	**1.82**	**37**	⇓*i*P			**Pg**	**12 59 15.6**	**-0.5**
BOOM	baz=37			⇓*i*S			**Sg**	**12 59 40.0**	**+0.3**
MRKS	**Merke**	**1.94**	**332**	*e*P			**Pg**	**12 59 19.0**	**+0.5**
MRKS	25nm,0.4s 67nm,0.6s			⇑*i*S			**Sg**	**12 59 46.3**	**+2.6**
MRKS	**Merke**	**1.94**	**332**	Pg			**Pg**	**12 59 19.0**	**+0.5**
MRKS	25nm,0.4s 67nm,0.6s			Lg			Lg	12 59 46.3	
CHMS	**Chumysh**	**1.97**	**6**	⇑*i*P			**Pb**	**12 59 17.7**	**+1.0**
CHMS	baz=6.0			⇑*i*S			**Sg**	**12 59 43.9**	**-0.7**
CHMS	baz=6.0 **Chumysh**	**1.97**	**6**	⇑P			**Pg**	**12 59 18.7**	**-0.3**
TKM2	4.3nm,0.1s,SNR=7.6 **Tokmak 2**	**2.06**	**24**	⇓*e*P			**Pg**	**12 59 19.6**	**-1.1**
TKM2	baz=24			⇓*i*S			**Sg**	**12 59 47.2**	**-0.3**
TKM2	baz=24 **Tokmak 2**	**2.06**	**24**	⇑P			**Pg**	**12 59 20.1**	**-0.6**
TKM2	5.4nm,0.1s,SNR=24 **Tokmak 2**	**2.06**	**24**	⇓Pn			**Pg**	**12 59 20.0**	**-0.6**
TKM2	2.0nm,0.3s 39nm,0.7s			⇑Lg			Lg	12 59 49.4	
MNAS	**Manas**	**2.07**	**315**	⇑*i*P			**Pg**	**12 59 19.6**	**-1.2**
MNAS	baz=15			⇑*i*S			**Sg**	**12 59 47.2**	**-0.5**
USP	baz=15 **Ospenovka**	**2.23**	**0**	⇑*i*P			**Pb**	**12 59 21.4**	**+0.3**
USP	baz=1.0			⇑*i*S			**Sg**	**12 59 50.5**	**-2.3**
USP	baz=1.0 **Ospenovka**	**2.23**	**0**	⇑P			**Pg**	**12 59 23.1**	**-0.8**
KST	25nm,0.2s,SNR=60 **Kastek**	**2.29**	**28**	⇓*i*P			**Pg**	**12 59 25.0**	**-0.1**
KST	7.7nm,0.2s 52nm,0.6s			*e*S			**Sg**	**12 59 56.3**	**+1.5**
KST	**Kastek**	**2.29**	**28**	Pg			**Pg**	**12 59 25.0**	**-0.1**
KST	7.7nm,0.2s 52nm,0.6s			Lg			Lg	12 59 56.3	
KDJ	**Kajisay**	**2.31**	**61**	⇑*i*P			**Pb**	**12 59 23.1**	**+0.6**
KDJ	baz=62			⇑*i*S			**Sg**	**12 59 53.3**	**-2.0**
SGDS	baz=62 **Sogindy**	**2.42**	**3**	Pg			**Pg**	**12 59 27.0**	**-0.5**
SGDS	24nm,0.5s			Lg			Lg	12 59 59.8	
MTBS	17nm,0.4s **Maitube**	**2.55**	**34**	⇑*i*P			**Pg**	**12 59 29.5**	**-0.5**
MTBS	7.0nm,0.2s 36nm,0.2s			*e*S			**Sg**	**13 00 04.4**	**+1.3**
MTBS	**Maitube**	**2.55**	**34**	Pg			**Pg**	**12 59 29.5**	**-0.5**
MTBS	7.0nm,0.2s 36nm,0.2s			Lg			Lg	13 00 04.4	
IZV	**Izvestkoviy**	**2.56**	**38**	*e*P			**Pg**	**12 59 30.0**	**-0.1**
IZV	6.9nm,0.3s 42nm,0.3s			*e*S			**Sg**	**13 00 05.2**	**+1.9**
IZV	**Izvestkoviy**	**2.56**	**38**	Pg			**Pg**	**12 59 30.0**	**-0.1**
IZV	6.9nm,0.3s 42nm,0.3s			Lg			Lg	13 00 05.2	
TNSS	**Tian-Shan**	**2.72**	**42**	*e*P			**Pg**	**12 59 32.6**	**-0.7**
TNSS	5.0nm,0.2s 15nm,0.4s			*e*S			**Sg**	**13 00 09.6**	**+1.1**
TNSS	**Tian-Shan**	**2.72**	**42**	Pg			**Pg**	**12 59 32.6**	**-0.7**
TNSS	5.0nm,0.2s 15nm,0.4s			Lg			Lg	13 00 09.6	
KRBS	**Karabastau**	**2.80**	**18**	*e*P			**Pg**	**12 59 34.1**	**-0.8**
KRBS	3.0nm,0.1s 35nm,0.4s			*e*S			**Sg**	**13 00 11.8**	**+0.7**
KRBS	**Karabastau**	**2.80**	**18**	Pg			**Pg**	**12 59 34.1**	**-0.8**
KRBS	3.0nm,0.1s 35nm,0.4s			Lg			Lg	13 00 11.8	
MDOK	**Medeo**	**2.86**	**41**	⇑*i*P			**Pg**	**12 59 34.8**	**-1.2**
MDOK	6.2nm,0.2s 22nm,0.3s			⇓*i*S			**Sg**	**13 00 13.4**	**+0.4**
MDOK	**Medeo**	**2.86**	**41**	Pg			**Pg**	**12 59 34.8**	**-1.2**
MDOK	6.2nm,0.2s 22nm,0.3s			Lg			Lg	13 00 13.4	
ANVS	**Anan'yevo**	**2.95**	**53**	⇑*i*P			**Pb**	**12 59 32.0**	**-1.6**
ANVS	baz=53			⇑*i*S			**Sb**	**13 00 08.9**	**-0.6**
KTBS	baz=53 **Karatobe**	**3.13**	**31**	*e*P			**Pg**	**12 59 40.1**	**-1.1**
KTBS	2.9nm,0.3s 31nm,0.4s			*e*S			**Sg**	**13 00 22.1**	**+0.3**
KTBS	**Karatobe**	**3.13**	**31**	Pg			**Pg**	**12 59 40.1**	**-1.1**
KTBS	2.9nm,0.3s 31nm,0.4s			Lg			Lg	13 00 22.1	
KUU	**Kurty**	**3.17**	**25**	⇑*i*P			**Pg**	**12 59 39.9**	**-1.9**
KUU	3.4nm,0.3s 35nm,0.6s			⇓*i*S			**Sg**	**13 00 22.0**	**-1.0**
KUU	**Kurty**	**3.17**	**25**	Pg			**Pg**	**12 59 39.9**	**-1.9**
KUU	3.4nm,0.3s 35nm,0.6s			Lg			Lg	13 00 22.0	
IUG	**Iuzhnay**	**3.51**	**290**	*e*P			**Pg**	**12 59 46.4**	**-2.0**
IUG	6.3nm,0.3s 18nm,0.5s			*e*S			**Sg**	**13 00 33.2**	**-0.7**
IUG	**Iuzhnay**	**3.51**	**290**	Pg			**Pg**	**12 59 46.4**	**-2.0**
IUG	6.3nm,0.3s 18nm,0.5s			Lg			Lg	13 00 33.2	
SATY	**Saty**	**3.56**	**54**	*e*P			**Pg**	**12 59 48.2**	**-1.1**
SATY	1.8nm,0.2s 7.0nm,0.3s			*e*S			**Sg**	**13 00 35.8**	**+0.4**
SATY	**Saty**	**3.56**	**54**	Pg			**Pg**	**12 59 48.2**	**-1.1**
SATY	1.8nm,0.2s 7.0nm,0.3s			Lg			Lg	13 00 35.8	
KK31	**Karatay Array**	**3.60**	**306**	⇓Pg			**Pg**	**12 59 47.5**	**-2.7**
KK31	2.4nm,0.7s,baz=130,slow=16,SNR=19 0.6nm,0.2s,baz=123,slow=29,SNR=6.8			⇓Lg			Lg	13 00 36.4	
KURS	**Kuram**	**3.68**	**47**	*e*P			**Pg**	**12 59 49.7**	**-1.9**
KURS	3.6nm,0.5s 5.7nm,0.6s			*e*S			**Sg**	**13 00 39.1**	**-0.1**
KURS	**Kuram**	**3.68**	**47**	Pg			**Pg**	**12 59 49.7**	**-1.9**
KURS	3.6nm,0.5s 5.7nm,0.6s			Lg			Lg	13 00 39.1	
KPKS	**Kokpek**	**3.96**	**51**	*e*P			**Pg**	**12 59 54.6**	**-2.3**
KPKS	4.6nm,0.2s 16nm,0.4s			*e*S			**Sg**	**13 00 47.4**	**-0.7**
UZB	**Uzynbulak**	**3.99**	**57**	*e*P			**Pg**	**12 59 56.0**	**-1.5**
UZB	2.3nm,0.4s 6.2nm,0.3s			*e*S			**Sg**	**13 00 49.7**	**+0.6**
UZB	**Uzynbulak**	**3.99**	**57**	Pg			**Pg**	**12 59 56.0**	**-1.5**
UZB	2.3nm,0.4s 6.2nm,0.3s			Lg			Lg	13 00 49.7	
ARXS	**Arharly**	**4.02**	**37**	*e*P			**Pg**	**12 59 55.4**	**-2.8**
ARXS	5.5nm,0.4s 18nm,0.5s			*e*S			**Sg**	**13 00 48.5**	**-1.8**
ARXS	**Arharly**	**4.02**	**37**	Pg			**Pg**	**12 59 55.4**	**-2.8**
ARXS	5.5nm,0.4s 18nm,0.5s			Lg			Lg	13 00 48.5	
MNBS	**Baschi**	**4.20**	**42**	*e*P			**Pg**	**12 59 59.3**	**-2.3**
MNBS	2.7nm,0.3s 16nm,0.4s			*e*S			**Sg**	**13 00 54.8**	**-1.2**
MNBS	**Baschi**	**4.20**	**42**	Pg			**Pg**	**12 59 59.3**	**-2.3**
MNBS	2.7nm,0.3s 16nm,0.4s			Lg			Lg	13 00 54.8	
SHLS	**Shalkode**	**4.27**	**59**	*e*P			**Pg**	**13 00 04.5**	**+1.5**
SHLS	3.3nm,0.2s 11nm,0.5s			*e*S			**Sg**	**13 01 04.7**	**+6.4**
SHLS	**Shalkode**	**4.27**	**59**	Pg			**Pg**	**13 00 04.4**	**+1.5**
SHLS	3.3nm,0.2s 11nm,0.5s			Lg			Lg	13 01 04.7	
PDGK	**Podgornoye**	**4.37**	**57**	⇓Pg			**Pg**	**13 00 03.2**	**-1.7**
PDGK	1.3nm,0.5s 7.4nm,0.7s			⇓Lg			Lg	13 01 02.0	
DJR	**Jarkent**	**5.12**	**48**	*e*P			**Pg**	**13 00 17.0**	**-2.1**
DJR	3.7nm,0.6s 5.0nm,0.7s			*e*S			**Sg**	**13 01 25.7**	**+0.3**
DJR	**Jarkent**	**5.12**	**48**	Pg			**Pg**	**13 00 17.0**	**-2.1**
	3.7nm,0.6s			Lg			Lg	13 01 04.7	

*IDC **03** 13:09:11.5±1.7,31.64S×178.51W,h67km±16km,mb4.2/5,*
mb1 4.4/8,mb1mx3.9/36,mbtmp4.4/8,Error ellipse:
s-maj=27.8km s-min=11.1km az=115.0
*NEIC **03** 13:09:12.2±1.0,31.7S±0.1×178.6W±0.2,h78km±10km,*
mb4.7/13,Error ellipse: s-maj=23.7km s-min=11.6km
az=121.0
ISC 03 13:09:10.8±0.7,31.74S±0.07×178.5W±0.1,h61km,n71,
σ1§93/75,mb4.5/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.52**	**12**	P			**Pn**	**13 09 50.8**	**+1.4**
GLKZ				S			**Sn**	**13 10 18.3**	**-0.6**
RAO	**Raoul Island**	**2.53**	**12**	P			**Pn**	**13 09 51.0**	**+1.4**
RAO	50nm,0.3s,baz=127,slow=20,SNR=2.8			S			**Sn**	**13 10 18.2**	**-1.1**
RIZ	311nm,0.3s,baz=246,slow=24,SNR=11 **Raoul Island**	**2.54**	**12**	P			**Pn**	**13 09 51.2**	**+1.5**
RIZ				S			**Sn**	**13 10 19.8**	**+0.5**
MXZ	**Matakaoa Point**	**6.37**	**203**	P			**Pn**	**13 10 45.2**	**+3.1**
MXZ				S			**Sn**	**13 11 55.4**	**+1.9**
MXZ	**Matakaoa Point**	**6.37**	**203**	Pn			**Pn**	**13 10 44.6**	**+2.5**
WMGZ	**Waiomatatini S**	**6.57**	**202**	P			**Pn**	**13 10 48.1**	**+3.3**
HAZ	**Te Kaha**	**6.73**	**206**	P			**Pn**	**13 10 50.9**	**+3.9**
HAZ				S			**Sn**	**13 12 00.8**	**-1.4**
PKGZ	**Pakihiroa**	**6.74**	**204**	P			Pn	13 10 56.2	+9.0
RUGZ	**Raukumara Rang**	**6.96**	**206**	P			**Pn**	**13 10 52.9**	**+2.7**
RUGZ				S			**Sn**	**13 12 03.2**	**-4.7**
TWGZ	**Tauwhareparae**	**7.04**	**203**	P			**Pn**	**13 10 54.4**	**+3.2**
TWGZ				S			**Sn**	**13 12 13.5**	**+3.6**

CNGZ	**Carnagh Statio**	**7.25 201**	P		**Pn**	13 10 56.8	+2.8	
OPRZ	**Ohinepanea**	**7.32 212**	P		Pn	13 11 00.5	+5.5	
TKGZ	**Te Karaka**	**7.32 203**	P		**Pn**	13 10 57.5	+2.5	
TKGZ			S		**Sn**	13 12 14.9	-1.7	
MWZ	**Matawai**	**7.34 205**	P		**Pn**	13 10 57.4	+2.1	
URZ	**Urewera**	**7.43 208**	P		**Pn**	13 10 58.4	+1.9	
	0.7nm,0.3s,baz=271,slow=4.9,SNR=13							
URZ			S		**Sn**	13 12 20.7	+1.4	
	6.9nm,0.3s,baz=142,slow=2.2,SNR=6.4							
URZ	**Urewera**	**7.43 208**	P		**Pn**	13 10 58.6	+2.1	
URZ			S		**Sn**	13 12 14.9	-4.4	
OUZ	**Omahuta**	**7.45 240**	P		Pn	13 11 09.8	+13	
RAGZ	**Rawiri**	**7.52 205**	P		**Pn**	13 11 00.2	+2.4	
RIGZ	**Rimuhau**	**7.59 203**	P		**Pn**	13 11 00.9	+2.1	
RIGZ			S		**Sn**	13 12 19.7	-3.6	
MUGZ	**Murupara**	**7.75 209**	P		**Pn**	13 11 02.8	+1.8	
MUGZ			S		**Sn**	13 12 24.4	-3.0	
SNGZ	**Shannon Statio**	**7.80 205**	P		**Pn**	13 11 03.9	+2.3	
RAHZ	**Arahi**	**8.01 205**	P		**Pn**	13 11 06.0	+1.5	
MTHZ	**Maungataniwha**	**8.05 207**	P		**Pn**	13 11 07.2	+2.1	
ARHZ	**Aropaoanui**	**8.35 205**	P		**Pn**	13 11 10.2	+1.0	
BKZ	**Black Stump Fm**	**8.45 207**	P		**Pn**	13 11 11.7	+1.1	
BKZ	**Black Stump Fm**	**8.45 207**	Pn		**Pn**	13 11 11.4	+0.7	
MCHZ	**McNeill Hill**	**8.62 206**	P		**Pn**	13 11 14.1	+1.3	
HIZ	**Hauiti**	**8.67 217**	P		Pn	13 11 19.9	+6.4	
KWHZ	**Kaweka Forest**	**8.71 207**	P		**Pn**	13 11 15.1	+1.1	
KAHZ	**Kahuranaki**	**8.87 204**	P		**Pn**	13 11 17.6	+1.3	
PRHZ	**Porangahau**	**9.37 203**	P		**Pn**	13 11 22.8	-0.3	
BFZ	**Birch Farm**	**9.88 204**	P		**Pn**	13 11 28.6	-1.4	
BFZ	**Birch Farm**	**9.88 204**	Pn		**Pn**	13 11 29.0	-1.0	
MRZ	**Mangatainoka R**	**10.10 207**	P		**Pn**	13 11 32.1	-0.9	
NNZ	**Nelson**	**11.48 212**	P		Pn	13 11 57.6	+5.6	
CMWZ	**Cape Campbell**	**11.56 208**	P		**Pn**	13 11 56.7	+3.6	
THZ	**Tophouse**	**12.13 212**	P		**Pn**	13 12 03.7	+2.8	
THZ	**Tophouse**	**12.13 212**	Pn		**Pn**	13 12 02.4	+1.5	
INZ	**Inchbonnie**	**13.56 213**	P		**P**	13 12 26.9	-0.4	
OXZ	**Oxford**	**13.77 210**	P		**Pn**	13 12 23.4	+0.4	
WVZ	**Waitaha Valley**	**14.16 214**	P		**P**	13 12 33.6	-0.4	
RPZ	**Rata Peaks**	**14.51 212**	P		**Pn**	13 12 35.7	+2.9	
	2.3nm,0.3s,baz=33,slow=3.3,SNR=7.1							
RPZ			S		Sn	13 15 01.0	-11	
	1.6nm,0.3s,baz=298,slow=23,SNR=6.3							
RPZ	**Rata Peaks**	**14.51 212**	P		**P**	13 12 38.0	+0.1	
RPZ	**Rata Peaks**	**14.51 212**	P		**P**	13 12 37.4	-0.4	
ARCZ	**Arundel**	**14.64 211**	P		**Pn**	13 12 36.3	+1.8	
NIUE	**Niue**	**14.79 34**	P		**P**	13 12 40.1	-1.1	
FOZ	**Fox Glacier**	**14.95 215**	P		**P**	13 12 42.9	+0.2	
ODZ	**Otahua Downs**	**15.75 209**	P		**P**	13 12 51.9	+0.3	
WHZ	**Wether Hill Ro**	**17.60 213**	P		**Pn**	13 13 12.0	+0.2	
WHZ			IAmb		IAmb	13 13 21.7		
	comp=Z,63nm,1.4s							
CTA	**Charters Tower**	**33.60 282**	P		**P**	13 15 46.2	+0.7	
	comp=Z,2.3nm,0.5s,baz=112,slow=12,SNR=4.6							
CTAO	**Charters Tower**	**33.60 282**	P		**P**	13 15 46.1	+0.5	
CTAO			IAmb		IAmb	13 15 50.1		
	comp=Z,14nm,1.4s							
STKA	**Stephens Creek**	**33.77 259**	P		**P**	13 15 48.2	+1.4	
	comp=Z,3.3nm,0.6s,baz=102,slow=11,SNR=9.6							
STKA	**Stephens Creek**	**33.77 259**	IAmb		IAmb	13 15 48.8		
	comp=Z,1.4nm,1.1s							
BBOO	**Buckleboo**	**38.20 256**	P		**P**	13 16 24.2	-0.5	
AS31	**Alice Springs**	**42.62 269**	P		**P**	13 17 00.6	-0.8	
AS31			IAmb		IAmb	13 17 01.7		
	comp=Z,2.2nm,0.8s							
ASAR	**Alice Springs**	**42.62 269**	P		**P**	13 17 00.8	-0.5	
	comp=Z,4.5nm,0.5s,baz=108,slow=7.9,SNR=129							
ASAR	**Alice Springs**	**42.62 269**	P		**P**	13 17 00.3	-1.0	
WR0	**Warramunga Arr**	**43.55 274**	P		**P**	13 17 08.0	-0.8	
WB2	**Warramunga Arr**	**43.72 274**	P		**P**	13 17 09.4	-0.8	
WRAB	**Tennant Creek**	**43.72 274**	P		**P**	13 17 09.3	-0.9	
WRAB			IAmb		IAmb	13 17 10.1		
	comp=Z,14nm,0.7s							
WRA	**Warramunga Arr**	**43.73 274**	P		**P**	13 17 09.6	-0.7	
	comp=Z,14nm,0.3s,baz=112,slow=8.0,SNR=382							
WRA	**Warramunga Arr**	**43.73 274**	P		**P**	13 17 08.6	-1.7	
WB0	**Warramunga Arr**	**43.76 274**	P		**P**	13 17 09.4	-1.1	
KNRA	**Kununurra**	**50.38 276**	P		**P**	13 18 01.3	-0.8	
KNRA			IAmb		IAmb	13 18 16.4		
	comp=Z,16nm,1.2s							
MAW	**Mawson**	**70.90 201**	P		**P**	13 20 21.5	+0.5	
KKM	**Kota Kinabalu**	**72.56 289**	P		**P**	13 20 31.2	-0.7	
SNAA	**Sanae**	**76.83 179**	P		P	13 21 01.3	+5.5	
VNA3	**Neumayer Olymp**	**77.00 176**	P		P	13 21 02.4	+5.7	
NVAR	**Mina Array Bea**	**89.52 43**	P		**P**	13 22 01.5	-0.1	
	comp=Z,0.8nm,1.0s,baz=231,slow=5.7,SNR=3.3							
FINES	**FINESS Array B**	**146.24 339**	PKPbc		**PKPdf**	13 28 41.4	-1.1	
	comp=Z,3.5nm,0.9s,baz=48,slow=2.8,SNR=5.7							
TORD	**Torodi Ar. Bea**	**161.50 181**	PKPab		**PKPab**	13 29 50.0	+0.2	
	comp=Z,0.4nm,0.5s,baz=196,slow=2.1,SNR=2.8							

*MOS **03** 13:09:57.8±0.9,45°55'N×26°35'E,h126km,mb4.1/6,Error ellipse: s-maj=7.1km s-min=4.6km az=105.1*
*SIGU **03** 13:09:58.4±0.1,45°6'N±0°9'×2°6E±°,h129km,mb3.9/6*
*IDC **03** 13:09:59.0±0.4,45°56'N×26°25'E,h120km±3km,mb3.5/13, mb1 3.6/19,mb1mx3.4/52,mbtmp3.9/19,MS3.4/2, Ms1 3.5/2,ms1mx2.6/40,Error ellipse: s-maj=14.9km s-min=9.3km az=152.0*
*SOF **03** 13:09:59.7,45°57'N×26°35'E,h100km,MD4.4*
*NEIC **03** 13:09:59.1±1.6,45°58'N±0°04'×26°39'E±0°04,h128km±3km, Error ellipse: s-maj=5.8km s-min=3.9km az=147.0*
*BUC **03** 13:09:59.4±0.2,45°57'N×26°41'E,h119km±2km,ml4.4/61, Error ellipse: s-maj=1.5km s-min=1.3km az=2.0*
*BEO **03** 13:10:03.5±1.3,45°47'N×26°13'E,h81km±5km,ML3.5/9*

ISC 03 13:09:59.1±0.5, 45°58N±0°02×26°41E±0°02, h124km±3km, h124km:pP-P,n377,○1915/531,mb4.1/30,150C-101D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.17**	**207**	⇑P	**Pn**	**13 10 16.7**	**+0.4**
NEHR	**Nehoiu**	**0.17**	**207**	⇑P	**Pn**	**13 10 16.7**	**+0.4**
BISRR	**Bisoca**	**0.22**	**98**	⇑P	**Pn**	**13 10 17.0**	**+0.6**
BISRR				⇑S	**Sn**	**13 10 29.3**	**-0.2**
BISRR	**Bisoca**	**0.22**	**98**	⇑P	**Pn**	**13 10 17.0**	**+0.6**
BISRR				⇑S	**Sn**	**13 10 29.3**	**-0.2**
PLOR	**Plostina**	**0.32**	**32**	⇑P	**Pn**	**13 10 16.7**	**0.0**
PLOR				⇑S	**Sn**	**13 10 30.0**	**-0.1**
PLOR	**Plostina**	**0.32**	**32**	⇑P	**Pn**	**13 10 16.7**	**0.0**
PLOR				⇑S	**Sn**	**13 10 30.0**	**-0.1**
PLOR	**Plostina**	**0.32**	**32**	P	**Pn**	**13 10 16.7**	**0.0**
PLOR				S	**Sn**	**13 10 30.5**	**+0.4**
PLR	**Plostina**	**0.32**	**32**		**Pn**	**13 10 16.7**	**0.0**
PLOR					**Sn**	**13 10 30.5**	**+0.4**
MLR	**Muntele Rosu**	**0.34**	**255**	P	**Pn**	**13 10 17.0**	**+0.2**
	433nm,0.3s,baz=25,slow=0.8,SNR=4232						
MLR				S	**Sn**	**13 10 29.4**	**-0.9**
	1μm,0.3s,baz=282,slow=20,SNR=48						
MLR	**Muntele Rosu**	**0.34**	**255**	*e*Pg	**Pn**	**13 10 16.4**	**-0.5**
MLR				*e*Sg	**Sn**	**13 10 28.0**	**-2.3**
MLR	**Muntele Rosu**	**0.34**	**255**	⇑P	**Pn**	**13 10 17.1**	**+0.2**
MLR				⇑S	**Sn**	**13 10 29.9**	**-0.4**
MLR	**Muntele Rosu**	**0.34**	**255**	⇑P	**Pn**	**13 10 17.1**	**+0.2**
MLR				⇑S	**Sn**	**13 10 29.9**	**-0.4**
VRI	**Vrincioaia**	**0.37**	**38**	⇑P	**Pn**	**13 10 17.1**	**+0.2**
VRI				⇑S	**Sn**	**13 10 29.9**	**-0.5**
VRI	**Vrincioaia**	**0.37**	**38**	⇑P	**Pn**	**13 10 17.1**	**+0.2**
VRI				⇓S	**Sn**	**13 10 29.9**	**-0.5**
VRI	**Vrincioaia**	**0.37**	**38**	P	**Pn**	**13 10 17.1**	**+0.2**
VRI					**Sn**	13 10 29.9	
VRI	**Vrincioaia**	**0.37**	**38**		**Pn**	**13 10 17.1**	**+0.2**
VRI					**Sn**	**13 10 29.9**	**-0.5**
GRER		**0.45**	**116**	⇑P	**Pn**	**13 10 18.6**	**+1.3**
GRER				⇑S	**Sn**	**13 10 30.9**	**0.0**
GRER		**0.45**	**116**	⇑P	**Pn**	**13 10 18.6**	**+1.3**
GRER				⇑S	**Sn**	**13 10 30.9**	**0.0**
ISR	**Istrita**	**0.47**	**168**	⇑P	**Pn**	**13 10 17.9**	**+0.4**
ISR				⇑S	**Sn**	**13 10 30.4**	**-0.9**
ISR	**Istrita**	**0.47**	**168**	⇑P	**Pn**	**13 10 17.9**	**+0.4**
ISR				⇑S	**Sn**	**13 10 30.4**	**-0.9**
ISR	**Istrita**	**0.47**	**168**	P	**Pn**	**13 10 17.9**	**+0.4**
ISR				S	**Sn**	**13 10 30.3**	**-0.9**
ISR	**Istrita**	**0.47**	**168**		**Pn**	**13 10 17.9**	**+0.4**
ISR					**Sn**	**13 10 30.4**	**-0.9**
ODBI	**Odobesti**	**0.49**	**68**	⇓P	**Pn**	**13 10 18.6**	**+1.1**
ODBI				⇑S	**Sn**	**13 10 31.0**	**-0.4**
ODBI	**Odobesti**	**0.49**	**68**	⇓P	**Pn**	**13 10 18.6**	**+1.1**
ODBI				⇑S	**Sn**	**13 10 31.0**	**-0.4**
SECR		**0.59**	**204**	⇓P	**Pn**	**13 10 18.9**	**+0.7**
SECR				⇓S	**Sn**	**13 10 32.4**	**-0.1**
SECR		**0.59**	**204**	⇓P	**Pn**	**13 10 18.9**	**+0.7**
SECR				⇓S	**Sn**	**13 10 32.4**	**-0.1**
PETR	**Petresti**	**0.60**	**76**	⇑P	**Pn**	**13 10 18.9**	**+0.8**
PETR				⇑S	**Sn**	**13 10 33.0**	**+0.5**
PETR	**Petresti**	**0.60**	**76**	⇑P	**Pn**	**13 10 18.9**	**+0.8**
PETR				⇑S	**Sn**	**13 10 33.0**	**+0.5**
OZUR		**0.68**	**320**	⇑P	**Pn**	**13 10 18.5**	**-0.3**
OZUR				⇑S	**Sn**	**13 10 32.4**	**-1.3**
OZUR		**0.68**	**320**	⇑P	**Pn**	**13 10 18.5**	**-0.3**
OZUR				⇑S	**Sn**	**13 10 32.4**	**-1.3**
PLAR	**PLOIESTI**	**0.71**	**202**	⇑P	**Pn**	**13 10 19.8**	**+0.8**
PLAR				⇑S	**Sn**	**13 10 34.6**	**+0.6**
PLAR	**PLOIESTI**	**0.71**	**202**	⇑P	**Pn**	**13 10 19.8**	**+0.8**
PLAR				⇑S	**Sn**	**13 10 34.6**	**+0.6**
PGOR	**Pogoanele**	**0.78**	**148**	⇓P	**Pn**	**13 10 20.3**	**+0.7**
PGOR				⇑S	**Sn**	**13 10 35.0**	**0.0**
PGOR	**Pogoanele**	**0.78**	**148**	⇓P	**Pn**	**13 10 20.3**	**+0.7**
PGOR				⇑S	**Sn**	**13 10 35.0**	**0.0**
DOPR	**Dopca**	**0.81**	**299**	⇑P	**Pn**	**13 10 19.7**	**-0.1**
DOPR				⇑S	**Sn**	**13 10 34.7**	**-0.9**
DOPR	**Dopca**	**0.81**	**299**	⇑P	**Pn**	**13 10 19.7**	**-0.1**
DOPR				⇑S	**Sn**	**13 10 34.7**	**-0.9**
GHRR		**0.85**	**55**	⇓P	**Pn**	**13 10 20.7**	**+0.6**
GHRR				⇑S	**Sn**	**13 10 36.6**	**+0.5**
GHRR		**0.85**	**55**	⇓P	**Pn**	**13 10 20.7**	**+0.6**
GHRR				⇑S	**Sn**	**13 10 36.6**	**+0.5**
TUDR		**0.89**	**88**	⇑P	**Pn**	**13 10 20.4**	**0.0**
TUDR				⇑S	**Sn**	**13 10 36.3**	**-0.3**
TUDR		**0.89**	**88**	⇑P	**Pn**	**13 10 20.4**	**0.0**
TUDR				⇑S	**Sn**	**13 10 36.3**	**-0.3**
SULR		**0.90**	**187**	⇑P	**Pn**	**13 10 21.2**	**+0.6**
SULR				⇑S	**Sn**	**13 10 37.3**	**+0.4**
SULR		**0.90**	**187**	⇑P	**Pn**	**13 10 21.2**	**+0.6**
SULR				⇑S	**Sn**	**13 10 37.3**	**+0.4**
SULR		**0.90**	**187**		**Pn**	**13 10 21.2**	**+0.6**
SULR					**Sn**	**13 10 37.5**	**+0.7**
TESR	**Tescani**	**0.95**	**10**	⇑S	**Sn**	**13 10 36.5**	**-1.2**
TESR	**Tescani**	**0.95**	**10**	⇑S	**Sn**	**13 10 36.5**	**-1.2**
TESR	**Tescani**	**0.95**	**10**		**Sn**	**13 10 36.5**	**-1.2**
VOIR		**0.96**	**262**	⇓P	**Pn**	**13 10 21.2**	**-0.1**
VOIR				⇑S	**Sn**	**13 10 36.7**	**-1.3**
VOIR		**0.96**	**262**	⇓P	**Pn**	**13 10 21.2**	**-0.1**
VOIR				⇑S	**Sn**	**13 10 36.7**	**-1.3**
VOIR		**0.96**	**262**	P	**Pn**	**13 10 21.1**	**-0.1**
SCHL	**Schela**	**1.00**	**94**	⇑P	**Pn**	**13 10 21.5**	**0.0**
SCHL				⇑S	**Sn**	**13 10 37.5**	**-1.0**
SCHL	**Schela**	**1.00**	**94**	⇑P	**Pn**	**13 10 21.5**	**0.0**
SCHL				⇑S	**Sn**	**13 10 37.5**	**-1.0**
MTUR	**Matau**	**1.01**	**250**	⇑P	**Pn**	**13 10 22.1**	**+0.4**
MTUR	**Matau**	**1.01**	**250**	⇑P	**Pn**	**13 10 22.1**	**+0.4**
VARL	**Varlezi**	**1.06**	**72**	⇑P	**Pn**	**13 10 22.5**	**+0.4**
VARL				⇓S	**Sn**	**13 10 39.5**	**0.0**
VARL	**Varlezi**	**1.06**	**72**	⇑P	**Pn**	**13 10 22.5**	**+0.4**
VARL				⇓S	**Sn**	**13 10 39.5**	**0.0**
BIR	**Birlad**	**1.10**	**51**	⇑P	**Pn**	**13 10 22.9**	**+0.4**
BIR				⇓S	**Sn**	**13 10 40.1**	**-0.1**
BIR	**Birlad**	**1.10**	**51**	⇑P	**Pn**	**13 10 22.9**	**+0.4**
BIR				⇓S	**Sn**	**13 10 40.1**	**-0.1**
LEHL	**Lehliu**	**1.14**	**165**	⇓P	**Pn**	**13 10 23.6**	**+0.7**
LEHL				⇑S	**Sn**	**13 10 41.5**	**+0.6**
LEHL	**Lehliu**	**1.14**	**165**	⇓P	**Pn**	**13 10 23.6**	**+0.7**
LEHL				⇑S	**Sn**	**13 10 41.5**	**+0.6**
INCR	**INCERC-Sediu C**	**1.15**	**189**	⇑S	**Sn**	**13 10 41.1**	**0.0**
INCR	**INCERC-Sediu C**	**1.15**	**189**	⇑S	**Sn**	**13 10 41.1**	**0.0**
INCR	**INCERC-Sediu C**	**1.15**	**189**		**Sn**	**13 10 41.1**	**0.0**
GISR	**Galati**	**1.17**	**96**	⇑P	**Pn**	**13 10 23.6**	**+0.4**
GISR				⇑S	**Sn**	**13 10 41.6**	**+0.3**
GISR	**Galati**	**1.17**	**96**	⇑P	**Pn**	**13 10 23.6**	**+0.4**
GISR				⇑S	**Sn**	**13 10 41.6**	**+0.3**
GISR	**Galati**	**1.17**	**96**		**Pn**	**13 10 23.6**	**+0.4**
GISR					**Sn**	**13 10 41.6**	**+0.3**
AMRR	**Amara**	**1.17**	**145**	⇓P	**Pn**	**13 10 23.8**	**+0.6**
AMRR	**Amara**	**1.17**	**145**	⇓P	**Pn**	**13 10 23.8**	**+0.6**
AMRR	**Amara**	**1.17**	**145**	P	**Pn**	**13 10 23.8**	**+0.6**
AMRR	**Amara**	**1.17**	**145**		**Pn**	**13 10 23.8**	**+0.6**
STFAR	**Stefanesti-Arg**	**1.25**	**236**	⇑P	**Pn**	**13 10 24.6**	**+0.5**
STFAR				⇑S	**Sn**	**13 10 43.5**	**+0.5**
STFAR	**Stefanesti-Arg**	**1.25**	**236**	⇑P	**Pn**	**13 10 24.6**	**+0.5**
STFAR				⇑S	**Sn**	**13 10 43.5**	**+0.5**
BUC1	**Bucharest**	**1.26**	**192**	⇑P	**Pn**	**13 10 24.6**	**+0.5**
BUC1				⇑S	**Sn**	**13 10 43.0**	**-0.1**
BUC1	**Bucharest**	**1.26**	**192**	⇑P	**Pn**	**13 10 24.6**	**+0.5**
BUC1				⇑S	**Sn**	**13 10 43.0**	**-0.1**
BUC1	**Bucharest**	**1.26**	**192**	P	**Pn**	**13 10 24.7**	**+0.5**
BUC1						13 10 43.0	
BUC1	**Bucharest**	**1.26**	**192**		**Pn**	**13 10 24.6**	**+0.5**
BUC1					**Sn**	**13 10 43.0**	**-0.1**
ARR	**Arges**	**1.26**	**261**	⇓P	**Pn**	**13 10 24.5**	**+0.2**
ARR	**Arges**	**1.26**	**261**	⇓P	**Pn**	**13 10 24.5**	**+0.2**
ARR	**Arges**	**1.26**	**261**		**Pn**	**13 10 24.5**	**+0.2**
GIUM	**Giurgiulesti**	**1.27**	**93**	P	**Pn**	**13 10 24.8**	**+0.6**
GIUM				S	**Sn**	**13 10 44.0**	**+0.7**
GIUM	**Giurgiulesti**	**1.27**	**93**	⇑P	**Pn**	**13 10 24.8**	**+0.6**
GIUM				⇑S	**Sn**	**13 10 43.6**	**+0.3**
GIUM	**Giurgiulesti**	**1.27**	**93**	⇑P	**Pn**	**13 10 24.8**	**+0.6**
GIUM				⇑S	**Sn**	**13 10 43.6**	**+0.3**
GIUM	**Giurgiulesti**	**1.27**	**93**		**Pn**	**13 10 24.8**	**+0.6**
GIUM					**Sn**	**13 10 44.0**	**+0.7**
CFR	**Carcaliu**	**1.28**	**107**	⇑P	**Pn**	**13 10 24.3**	**-0.1**
CFR				⇑S	**Sn**	**13 10 42.3**	**-1.3**
CFR	**Carcaliu**	**1.28**	**107**	⇑P	**Pn**	**13 10 24.3**	**-0.1**
CFR				⇑S	**Sn**	**13 10 42.3**	**-1.3**
CFR	**Carcaliu**	**1.28**	**107**	P	**Pn**	**13 10 24.4**	**-0.1**
CFR						13 10 42.2	
CFR	**Carcaliu**	**1.28**	**107**		**Pn**	**13 10 24.3**	**-0.1**
CFR					**Sn**	**13 10 42.2**	**-1.3**
BIZ	**Bicaz**	**1.38**	**351**	⇑P	**Pn**	**13 10 26.3**	**+0.9**
BIZ				⇑S	**Sn**	**13 10 45.9**	**+0.4**
BIZ	**Bicaz**	**1.38**	**351**	⇑P	**Pn**	**13 10 26.3**	**+0.9**
BIZ				⇑S	**Sn**	**13 10 45.9**	**+0.4**
BIZ	**Bicaz**	**1.38**	**351**		**Pn**	**13 10 26.5**	**+1.0**
BIZ					**Sn**	**13 10 45.9**	**+0.4**
GIRR	**Girov**	**1.38**	**3**	⇓P	**Pn**	**13 10 25.9**	**+0.4**
GIRR	**Girov**	**1.38**	**3**	⇓P	**Pn**	**13 10 25.9**	**+0.4**
SGRR	**Singureni**	**1.39**	**193**	⇓P	**Pn**	**13 10 25.8**	**+0.2**
SGRR				⇑S	**Sn**	**13 10 45.1**	**-0.6**
SGRR	**Singureni**	**1.39**	**193**	⇓P	**Pn**	**13 10 25.8**	**+0.2**
SGRR				⇑S	**Sn**	**13 10 45.1**	**-0.6**
HARR	**Harsova**	**1.40**	**129**	⇓P	**Pn**	**13 10 25.9**	**+0.3**
HARR	**Harsova**	**1.40**	**129**	⇓P	**Pn**	**13 10 25.9**	**+0.3**
HARR	**Harsova**	**1.40**	**129**	P	**Pn**	**13 10 25.9**	**+0.3**
HARR	**Harsova**	**1.40**	**129**		**Pn**	**13 10 25.9**	**+0.3**
VASR	**Vaslui**	**1.44**	**42**	⇑P	**Pn**	**13 10 26.3**	**+0.2**
VASR				⇑S	**Sn**	**13 10 46.0**	**-0.6**
VASR	**Vaslui**	**1.44**	**42**	⇑P	**Pn**	**13 10 26.3**	**+0.2**
VASR				⇑S	**Sn**	**13 10 46.0**	**-0.6**
HUMR	**Humele**	**1.46**	**224**	⇓P	**Pn**	**13 10 26.3**	**-0.1**
HUMR				⇑S	**Sn**	**13 10 46.4**	**-0.6**
HUMR	**Humele**	**1.46**	**224**	⇓P	**Pn**	**13 10 26.3**	**-0.1**
HUMR				⇑S	**Sn**	**13 10 46.4**	**-0.6**
HUMR	**Humele**	**1.46**	**224**		**Pn**	**13 10 26.3**	**-0.1**
HUMR					**Sn**	**13 10 46.4**	**-0.6**
RASA	**Rasa**	**1.46**	**159**	⇓P	**Pn**	**13 10 26.6**	**+0.3**
RASA				⇑S	**Sn**	**13 10 46.8**	**-0.2**
RASA	**Rasa**	**1.46**	**159**	⇓P	**Pn**	**13 10 26.6**	**+0.3**
RASA				⇑S	**Sn**	**13 10 46.8**	**-0.2**
MDB	**Medias**	**1.52**	**292**	⇓P	**Pn**	**13 10 27.8**	**+0.7**
MDB				⇑S	**Sn**	**13 10 48.9**	**+0.5**
MDB	**Medias**	**1.52**	**292**	⇓P	**Pn**	**13 10 27.8**	**+0.7**
MDB				⇑S	**Sn**	**13 10 48.9**	**+0.5**
TLBR	**Topalu**	**1.56**	**131**	⇓P	**Pn**	**13 10 27.8**	**+0.3**
TLBR				⇑S	**Sn**	**13 10 47.9**	**-1.1**
TLBR	**Topalu**	**1.56**	**131**	⇓P	**Pn**	**13 10 27.8**	**+0.3**
TLBR				⇑S	**Sn**	**13 10 47.9**	**-1.1**
RMVG	**GOVORA**	**1.59**	**251**	⇑S	**Sn**	**13 10 50.3**	**+0.5**
RMVG	**GOVORA**	**1.59**	**251**	⇑S	**Sn**	**13 10 50.3**	**+0.5**
TPGR	**Topolog**	**1.59**	**116**	⇓P	**Pn**	**13 10 28.0**	**0.0**
TPGR				⇑S	**Sn**	**13 10 48.6**	**-1.3**
TPGR	**Topolog**	**1.59**	**116**	⇓P	**Pn**	**13 10 28.0**	**0.0**
TPGR				⇑S	**Sn**	**13 10 48.6**	**-1.3**
COPA	**Copaceanca**	**1.67**	**211**	⇓P	**Pn**	**13 10 28.8**	**0.0**
COPA	**Copaceanca**	**1.67**	**211**	⇓P	**Pn**	**13 10 28.8**	**0.0**
COPA	**Copaceanca**	**1.67**	**211**		**Pn**	**13 10 28.8**	**0.0**
CVDA	**Cernavoda**	**1.70**	**136**	⇓P	**Pn**	**13 10 29.6**	**+0.5**
CVDA	**Cernavoda**	**1.70**	**136**	⇓P	**Pn**	**13 10 29.6**	**+0.5**
CVDA	**Cernavoda**	**1.70**	**136**		**Pn**	**13 10 29.6**	**+0.5**
TLCR		**1.74**	**102**	⇓P	**Pn**	**13 10 30.1**	**+0.4**
TLCR				⇓S	**Sn**	**13 10 52.3**	**-0.6**
TLCR		**1.74**	**102**	⇓P	**Pn**	**13 10 30.1**	**+0.4**
TLCR				⇓S	**Sn**	**13 10 52.3**	**-0.6**
TLCR		**1.74**	**102**	P	**Pn**	**13 10 30.0**	**+0.4**
TLCR				S	**Sn**	**13 10 52.2**	**-0.6**
TLCR		**1.74**	**102**		**Pn**	**13 10 30.1**	**+0.4**
TLCR					**Sn**	**13 10 52.3**	**-0.6**
ICOR	**Ion Corvin**	**1.77**	**145**	⇓P	**Pn**	**13 10 30.5**	**+0.6**
ICOR				⇑S	**Sn**	**13 10 52.7**	**-0.7**
ICOR	**Ion Corvin**	**1.77**	**145**	⇓P	**Pn**	**13 10 30.5**	**+0.6**
ICOR				⇑S	**Sn**	**13 10 52.7**	**-0.7**
ICOR	**Ion Corvin**	**1.77**	**145**		**Pn**	**13 10 30.5**	**+0.6**
ICOR					**Sn**	**13 10 52.7**	**-0.7**
PRAR	**RASCA**	**1.79**	**356**	⇑P	**Pn**	**13 10 30.8**	**+0.5**
PRAR	**RASCA**	**1.79**	**356**	⇑P	**Pn**	**13 10 30.8**	**+0.5**
IAS	**Iasi**	**1.80**	**26**	⇑P	**Pn**	**13 10 30.3**	**0.0**
IAS				⇑S	**Sn**	**13 10 52.8**	**-1.5**
IAS	**Iasi**	**1.80**	**26**	⇑P	**Pn**	**13 10 30.3**	**0.0**
IAS				⇑S	**Sn**	**13 10 52.8**	**-1.5**
IAS	**Iasi**	**1.80**	**26**	P	**Pn**	**13 10 30.3**	**0.0**
IAS						13 10 52.8	
IAS	**Iasi**	**1.80**	**26**		**Pn**	**13 10 30.3**	**0.0**
IAS					**Sn**	**13 10 52.8**	**-1.5**
TIRR	**Tirgusor**	**1.81**	**127**	⇓P	**Pn**	**13 10 30.8**	**+0.3**
TIRR				⇑S	**Sn**	**13 10 53.3**	**-1.1**
TIRR	**Tirgusor**	**1.81**	**127**	⇓P	**Pn**	**13 10 30.8**	**+0.3**
TIRR				⇑S	**Sn**	**13 10 53.3**	**-1.1**
TIRR	**Tirgusor**	**1.81**	**127**	P	**Pn**	**13 10 30.6**	**+0.1**
TIRR				S	**Sn**	**13 10 53.0**	**-1.4**
TIRR	**Tirgusor**	**1.81**	**127**	Pn	**Pn**	**13 10 30.4**	**-0.1**
TIRR	**Tirgusor**	**1.81**	**127**		**Pn**	**13 10 30.8**	**+0.3**
TIRR					**Sn**	**13 10 52.9**	**-1.4**
LOT	**Lotru**	**1.86**	**267**	⇑P	**Pn**	**13 10

HORU	**Horodok**	**3.64**	**0**	*e*Pn		**Pn**	**13 10 53.9**	**0.0**
HORU				Pm			13 10 54.3	
HORU				*e*Sn		**Sn**	**13 11 35.5**	**-0.8**
HORU				Sm			13 11 48.7	
PLD	**Plovdiv**	**3.68**	**200**	*e*Pn		**Pn**	**13 10 54.5**	**0.0**
BERU	**Beregovo**	**3.70**	**317**	*e*Pn		**Pn**	**13 10 54.3**	**-0.4**
VTS	**Vitosha**	**3.74**	**219**	*i* P		**Pn**	**13 10 56.2**	**+0.8**
MUKU	**Mukachevo**	**3.84**	**320**	*e*Pn		**Pn**	**13 10 56.9**	**+0.4**
BOVS	**Bovan**	**3.88**	**242**	*e*Pn		**Pn**	**13 10 55.9**	**-1.2**
MORS	**Morshin**	**3.95**	**335**	*e*Pn		**Pn**	**13 10 59.3**	**+1.3**
RZN	**Rozhen**	**4.08**	**198**	*i* P		**Pn**	**13 11 02.0**	**+2.0**
UZH	**Uzhgorod**	**4.15**	**319**	*d* iP		**Pn**	**13 11 00.4**	**-0.3**
UZH				*e*S		**Sn**	**13 11 47.4**	**-1.0**
UZH				smax		smax		
	comp=N,8.0nm,1.2s							
UZH				smax		smax		
	comp=E,4.0nm,1.2s							
UZH				MLR		MLR		
	comp=N,9.0nm,1.0s							
UZH				MLR		MLR		
	comp=E,9.0nm,1.0s							
UZH				MLR		MLR		
	comp=Z,4.0nm,1.0s							
BOSS	**Bosilegrad**	**4.18**	**224**	*e*Pn		**Pn**	**13 11 01.4**	**+0.2**
SHIU	**Shidnytsya**	**4.19**	**332**	*e*Pn		**Pn**	**13 11 02.5**	**+1.2**
KOLS	**Kolonicke sedl**	**4.38**	**322**	*e*P		**Pn**	**13 11 03.4**	**-0.4**
KOLS	**Kolonicke sedl**	**4.38**	**322**	*e*PN		**Pn**	**13 11 03.4**	**-0.4**
GRUS	**Gruza**	**4.39**	**249**	*e*Pn		**Pn**	**13 11 03.4**	**-0.6**
KKB	**Krupnik**	**4.42**	**214**	P		**Pn**	**13 11 04.9**	**+0.5**
SELS	**Selova**	**4.46**	**240**	*e*Pn		**Pn**	**13 11 04.1**	**-0.8**
TRUS	**Trudelj**	**4.47**	**255**	*e*Pn		**Pn**	**13 11 04.2**	**-0.8**
LVV	**L'vov**	**4.54**	**340**	*e*P		**Pn**	**13 11 05.2**	**-0.6**
LVV				*e*S		**Sn**	**13 11 57.3**	**-0.4**
LVV				pmax		pmax		
	comp=Z,70nm,1.2s							
LVV				smax		smax		
	comp=E,90nm,1.6s							
LVV				smax		smax		
	comp=N,50nm,1.7s							
ALN	**Alexandroupoli**	**4.69**	**183**	P		**Pn**	**13 11 07.6**	**-0.3**
ALN	**Alexandroupoli**	**4.69**	**183**			**Pn**	**13 11 07.6**	**-0.3**
CRVS	**Cervenica-Dubn**	**4.73**	**316**	*e*P		**Pn**	**13 11 08.4**	**-0.1**
CRVS	**Cervenica-Dubn**	**4.73**	**316**	*e*PN		**Pn**	**13 11 08.4**	**-0.1**
KWP	**Kalwaria Pacla**	**4.76**	**330**	*e*P		**Pn**	**13 11 10.2**	**+1.3**
KWP	**Kalwaria Pacla**	**4.76**	**330**	P		**Pn**	**13 11 08.9**	**0.0**
KWP	**Kalwaria Pacla**	**4.76**	**330**	Pn		**Pn**	**13 11 08.9**	**0.0**
DIVS	**Divibare**	**4.79**	**254**	*e*Pn		**Pn**	**13 11 08.5**	**-0.9**
DIVS	**Divibare**	**4.79**	**254**	Pn		**Pn**	**13 11 08.4**	**-1.0**
IVAS	**Ivanjica**	**4.89**	**248**	*e*Pn		**Pn**	**13 11 09.5**	**-1.2**
SRS	**Serrai**	**4.91**	**206**	*e*Pn		**Pn**	**13 11 11.0**	**+0.1**
STIP	**Stip**	**4.94**	**220**	*i* Pn		**Pn**	**13 11 09.0**	**-2.4**
KECS	**Kecovo**	**4.98**	**308**	*e*P		**Pn**	**13 11 11.3**	**-0.5**
KECS	**Kecovo**	**4.98**	**308**	*e*PN		**Pn**	**13 11 11.3**	**-0.5**
PSZ	**Piszkesteto**	**5.05**	**300**	P		**Pn**	**13 11 11.5**	**-1.3**
PSZ	**Piszkesteto**	**5.05**	**300**			**Pn**	**13 11 11.5**	**-1.3**
SEV	**Sevastopol'**	**5.25**	**99**	P		**Pn**	**13 11 14.0**	**-1.4**
SEV				Pm			13 11 15.4	
SEV				S		**Sn**	**13 12 13.3**	**-1.5**
SEV				Sm			13 12 16.0	
SEV	**Sevastopol'**	**5.25**	**99**	*e*P		**Pn**	**13 11 14.2**	**-1.2**
SEV				*e*S		**Sn**	**13 12 13.3**	**-1.5**
BBLS	**Lazići**	**5.27**	**254**	*e*Pn		**Pn**	**13 11 15.7**	**-0.1**
AKASG	**Malin Array Be**	**5.46**	**19**	P		**Pn**	**13 11 18.0**	**-0.2**
	comp=N,6.7nm,0.3s,baz=205,slow=12,SNR=16							
AKASG				S		**Sn**	**13 12 15.4**	**-4.5**
	comp=N,12nm,0.3s,baz=204,slow=20,SNR=8.3							
AKASG	**Malin Array Be**	**5.46**	**19**			**Pn**	**13 11 16.5**	**-1.7**
AKBB	**Malin Array Si**	**5.46**	**19**	P		**Pn**	**13 11 17.4**	**-0.8**
AKBB	**Malin Array Si**	**5.46**	**19**	Pn		**Pn**	**13 11 17.4**	**-0.8**
SIM	**Simferopol'**	**5.48**	**94**	P		**Pn**	**13 11 16.3**	**-2.2**
SIM				S		**Sn**	**13 12 17.2**	**-3.2**
SIM				Sm			13 12 19.5	
SIM	**Simferopol'**	**5.48**	**94**	*e*P		**Pn**	**13 11 16.3**	**-2.2**
SIM				*e*S		**Sn**	**13 12 17.2**	**-3.2**
YAL	**Yalta**	**5.60**	**98**	P		**Pn**	**13 11 19.7**	**-0.4**
YAL				S		**Sn**	**13 12 23.5**	**+0.3**
YAL	**Yalta**	**5.60**	**98**	*e*P		**Pn**	**13 11 19.7**	**-0.4**
YAL				*e*S		**Sn**	**13 12 23.5**	**+0.3**
NIE	**Niedzica**	**5.65**	**315**	*e*P		**Pn**	**13 11 21.3**	**+0.5**
ALU	**Alushta**	**5.73**	**96**	S		**Sn**	**13 12 25.0**	**-1.4**
ALU				Sm			13 12 25.9	
LANS	**Liptovska Anna**	**5.91**	**310**	*e*P		**Pn**	**13 11 25.3**	**+0.9**
LANS	**Liptovska Anna**	**5.91**	**310**	*e*PN		**Pn**	**13 11 25.3**	**+0.9**
VYHS	**Vyhne**	**5.94**	**302**	*e*P		**Pn**	**13 11 24.3**	**-0.4**
VYHS	**Vyhne**	**5.94**	**302**	*e*PN		**Pn**	**13 11 24.3**	**-0.4**
SUDU	**Sudak**	**6.11**	**93**	P		**Pn**	**13 11 26.1**	**-0.9**
SUDU				Pm			13 11 36.5	
SUDU				S		**Sn**	**13 12 33.8**	**-1.7**
SUDU				Sm			13 12 36.2	
SUDU	**Sudak**	**6.11**	**93**	*e*P		**Pn**	**13 11 26.1**	**-0.9**
SUDU				*e*S		**Sn**	**13 12 33.8**	**-1.7**
LIT	**Litokhoron**	**6.18**	**209**	P		**Pn**	**13 11 26.5**	**-1.5**
LIT	**Litokhoron**	**6.18**	**209**	Pn		**Pn**	**13 11 26.5**	**-1.5**
OJC	**Ojcow**	**6.43**	**319**	*e*P		**Pn**	**13 11 30.1**	**-1.1**
OJC	**Ojcow**	**6.43**	**319**	P		**Pn**	**13 11 31.5**	**+0.3**
OJC	**Ojcow**	**6.43**	**319**	Pn		**Pn**	**13 11 31.5**	**+0.3**
STON	**Ston**	**6.81**	**250**	Sg		**Sn**	**13 12 51.9**	**-0.6**
ILGA	**Ilgaz**	**6.99**	**128**			**Pn**	**13 11 37.8**	**-1.3**
MAKA	**Makarska**	**7.10**	**255**	Sg		**Sn**	**13 13 00.9**	**+1.4**
MANT	**Manisa**	**7.26**	**167**	Pn		**Pn**	**13 11 43.2**	**+0.4**
MORC	**Moravsky Berou**	**7.31**	**308**	P		**Pn**	**13 11 42.9**	**-0.3**
MORC	**Moravsky Berou**	**7.31**	**308**	Pn		**Pn**	**13 11 42.9**	**-0.3**
LSTV	**Lastovo**	**7.39**	**251**	Sg		**Sn**	**13 13 08.7**	**+2.1**
VRAC	**Vranov**	**7.63**	**303**	P		**Pn**	**13 11 47.7**	**+0.3**
	comp=N,0.6nm,0.3s,baz=112,slow=12,SNR=5.6							
BR131	**Keskin Array S**	**7.91**	**135**	*i* P		**Pn**	**13 11 50.8**	**-0.7**
BR131	**Keskin Array S**	**7.91**	**135**			**Pn**	**13 11 50.7**	**-0.7**
BRTR	**Keskin Array B**	**7.91**	**135**	P		**Pn**	**13 11 51.1**	**-0.4**
	comp=N,0.5nm,0.3s,baz=319,slow=11,SNR=16							
BRTR	**Keskin Array B**	**7.91**	**135**	*e*P		**Pn**	**13 11 51.1**	**-0.4**
BRTR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
BRTR	**Keskin Array B**	**7.91**	**135**			**Pn**	**13 11 50.8**	**-0.7**
SUW	**Suwalki**	**8.70**	**347**	*e*P		**Pn**	**13 12 00.1**	**-1.7**
SUW	**Suwalki**	**8.70**	**347**	P		**Pn**	**13 12 00.0**	**-1.8**
SUW	**Suwalki**	**8.70**	**347**	Pn		**Pn**	**13 11 60.0**	**-1.8**
TOKA	**Tokat**	**9.06**	**122**	Pn		**Pn**	**13 12 06.0**	**-0.9**
ELL	**Elmali**	**9.21**	**162**	P		**Pn**	**13 12 08.1**	**-0.9**
ELL	**Elmali**	**9.21**	**162**	Pn		**Pn**	**13 12 08.1**	**-0.9**
GERES	**GERESS Array B**	**9.24**	**295**	P		**Pn**	**13 12 09.6**	**+0.3**
	baz=112,slow=13,SNR=2.2							
TIP	**Timpagrande**	**9.58**	**232**	Pn		**Pn**	**13 12 13.6**	**-0.2**
NRCA	**Norcia**	**9.93**	**259**			**Pn**	**13 12 17.3**	**-1.3**
KARP	**Karpathos**	**10.04**	**176**	Pn		**Pn**	**13 12 19.1**	**-0.9**
VORD	**Divnogorie**	**10.14**	**53**	*e*P		**Pn**	**13 12 23.9**	**+2.7**
VORD				*e*S		**Sn**	**13 14 08.2**	**-4.8**
VORD				pmax		pmax		
	comp=Z,6.0nm,0.5s							
VORD				smax		smax		
	comp=E,90nm,1.0s							
VSR	**Storozhevoye**	**10.19**	**52**	*e*P		**Pn**	**13 12 24.0**	**+2.1**
VSR				*e*S		**Sn**	**13 14 11.1**	**-3.0**
VSR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
VSR				smax		smax		
	comp=E,60nm,0.9s							
LPSR	**Galich'ya Gora**	**10.80**	**45**	*e*P		**Pn**	**13 12 31.8**	**+1.7**
LPSR				*e*S		**Sn**	**13 14 20.5**	**-8.4**
LPSR				pmax		pmax		
	comp=Z,9.0nm,1.1s							
LPSR				smax		smax		
	comp=N,10.0nm,0.6s							
OBN	**Obninsk**	**11.53**	**30**	LR		LR	13 16 38.9	
	comp=N,31nm,18.3s,baz=63,slow=34							
OBN	**Obninsk**	**11.53**	**30**	*i* P		**Pn**	**13 12 41.3**	**+1.5**
VRH	**Novokhopyorsk**	**11.63**	**56**	*e*P		**Pn**	**13 12 37.9**	**-3.2**
VRH				*e*S		**Sn**	**13 14 42.1**	**-6.8**
VRH				pmax		pmax		
	comp=Z,10.0nm,1.0s							
VRH				smax		smax		
	comp=N,40nm,0.6s							
KIV	**Kislovodsk**	**11.69**	**92**	P		**Pn**	**13 12 40.9**	**-1.2**
KIV	**Kislovodsk**	**11.69**	**92**	Pn		**Pn**	**13 12 40.9**	**-1.2**
SENIN	**Lac Senin/Sane**	**13.32**	**280**	P		**P**	**13 13 08.3**	**-0.2**
FINES	**FINESS Array B**	**15.90**	**359**	P		**Pn**	**13 13 30.9**	**-4.7**
	comp=N,0.3nm,0.3s,baz=179,slow=12,SNR=6.8							
FINES	**FINESS Array B**	**15.90**	**359**	*e*P		**Pn**	**13 13 33.5**	**-2.1**
FINES				pmax		pmax		
	comp=Z,4.0nm,0.9s							
HFS	**Hagfors**	**16.43**	**337**	P		**Pn**	**13 13 40.7**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=138,slow=16,SNR=5.9							
NC405	**NORSAR Array S**	**17.79**	**336**	P		**P**	**13 13 57.1**	**-0.5**
NC405				lAmb		lAmb	13 14 20.9	
	comp=Z,28nm,1.1s							
NAO01	**NORSAR Array S**	**17.82**	**335**	P		**P**	**13 13 58.0**	**+0.1**
NB201	**NORSAR Array S**	**17.86**	**336**	P		**P**	**13 13 58.3**	**-0.1**
NB2	**NORSAR Subarra**	**17.88**	**335**	P		**P**	**13 13 58.1**	**-0.5**
	comp=Z,7.0nm,1.1s,baz=143,slow=11							
NOA	**NORSAR Array B**	**17.88**	**335**	*e*P		**P**	**13 13 57.8**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=138,slow=11,SNR=5.3							
NOA	**NORSAR Array B**	**17.88**	**335**	*e*P		**P**	**13 13 59.1**	**+0.5**
NOA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
NC303	**NORSAR Array S**	**17.98**	**336**	P		**P**	**13 13 59.6**	**-0.1**
NBO00	**NORSAR Array S**	**18.00**	**335**	P		**P**	**13 14 00.3**	**+0.4**
NBO00				lAmb		lAmb	13 14 15.8	
	comp=Z,20nm,1.1s							
NC204	**NORSAR Array S**	**18.20**	**335**	P		**P**	**13 14 02.5**	**+0.4**
NC204				lAmb		lAmb	13 14 10.8	
	comp=Z,24nm,1.4s							
AKTO	**Aktyubinsk**	**21.60**	**66**	pP		pP	13 15 01.4	-0.5
	comp=Z,2.4nm,0.6s,baz=285,slow=10,SNR=5.6							
ARU	**Arti**	**22.75**	**50**	P		**P**	**13 14 50.5**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=176,slow=10,SNR=3.6							
ARU				pP		**pP**	**13 15 13.1**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=273,slow=13,SNR=3.8							
ARU	**Arti**	**22.75**	**50**	P		**P**	**13 14 52.7**	**+2.2**
ARU							13 15 27.4	
ARU				S		**S**	**13 18 54.1**	**+4.6**
ARU				SS		**SnSn**	**13 19 44.7**	**+10**
ARU	**Arti**	**22.75**	**50**	P		**P**	**13 14 50.9**	**+0.4**
ARU				lAmb		lAmb	13 15 18.0	
	comp=Z,6.6nm,0.7s							
LVZ	**Lovozero**	**22.79**	**8**	P		**P**	**13 14 51.5**	**+0.7**
LVZ				pmax		pmax		
	comp=Z,19nm,0.8s							
LVZ	**Lovozero**	**22.79**	**8**	P		**P**	**13 14 51.5**	**+0.7**
ABKAR	**Akbulak array**	**22.88**	**69**	P		**P**	**13 14 52.1**	**+0.3**
ABKAR						**pP**	**13 15 13.6**	**-2.0**
ESDC	**Sonseca Array**	**23.03**	**266**	P		**P**	**13 14 52.1**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=64,slow=9.2,SNR=6.2							
ARCES	**ARCESS Array B**	**24.03**	**359**	P		**P**	**13 15 02.0**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=185,slow=9.7,SNR=5.0							
ARCES	**ARCESS Array B**	**24.03**	**359**	*e*P		**P**	**13 15 04.0**	**+1.9**
ARCES				pmax		pmax		
	comp=Z,3.0nm,0.9s							
BRVK	**Borovoye**	**29.18**	**59**	P		**P**	**13 15 48.3**	**-0.1**
BRVK				pmax		pmax		
	comp=Z,4.0nm,1.1s							
BRVK	**Borovoye**	**29.18**	**59**	P		**P**	**13 15 48.3**	**-0.1**
KURBB	**Kurchatov Arra**	**34.57**	**62**	P		**P**	**13 16 36.5**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=286,slow=9.2,SNR=3.8							
KURBB				pP		**pP**	**13 17 03.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=287,slow=8.6,SNR=3.2							
KURK	**Kurchatov**	**34.61**	**62**	P		**P**	**13 16 36.5**	**+0.6**
KURK				*PP		**pP**	**13 17 03.4**	**+0.2**
KURK	**Kurchatov**	**34.61**	**62**	P		**P**	**13 16 36.5**	**+0.6**
KURK	**Kurchatov**	**34.61**	**62**			pP	13 17 03.4	+0.2
KURK	**Kurchatov**	**34.61**	**62**	lAmb		lAmb	13 17 02.8	
	comp=Z,1.5nm,1.1s							
ZAA0	**Zalesovo Array**	**37.66**	**55**	P		**P**	**13 17 01.9**	**0.0**
ZAA0				lAmb		lAmb	13 17 30.8	
	comp=Z,3.0nm,0.8s							
ZALV	**Zalesovo Beam**	**37.66**	**55**	P		**P**	**13 17 03.4**	**+1.5**
	comp=Z,1.1nm,0.4s,baz=282,slow=9.0,SNR=5.4							
ZALV				pP		**pP**	**13 17 30.4**	**+0.9**
	comp=Z,4.5nm,0.8s,baz=277,slow=8.6,SNR=7.6							
ZALV	**Zalesovo Beam**	**37.66**	**55**	P		**P**	**13 17 02.6**	**+0.7**
ZALV						**pP**	**13 17 29.4**	**-0.1**
MK31	**Makanchi Array**	**38.01**	**67**	P		**P**	**13 17 05.3**	**+0.4**
MK31				pmax		pmax		
	comp=Z,3.0nm,1.4s							
MK31	**Makanchi Array**	**38.01**	**67**	P		**P**	**13 17 05.3**	**+0.4**
MKAR	**Makanchi Array**	**38.01**	**67**	P		**P**	**13 17 06.2**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=287,slow=8.5,SNR=3.8							
MKAR				pP		**pP**	**13 17 33.3**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=287,slow=5.7,SNR=3.1							
MKAR	**Makanchi Array**	**38.01**	**67**	P		**P**	**13 17 04.9**	**0.0**
TOA0	**Torodi Ar. Sit**	**38.52**	**221**	P		**P**	**13 17 09.8**	**+0.3**
TOA0				lAmb		lAmb	13 17 11.0	
	comp=Z,12nm,1.5s							
TORD	**Torodi Ar. Bea**	**38.52**	**221**	P		**P**	**13 17 09.8**	**+0.4**
	comp=Z,2.1nm,0.4s,baz=27,slow=8.4,SNR=33							
TORD				PcP		**PcP**	**13 19 19.7**	**0.0**
	comp=Z,0.6nm,0.6s,baz=2.4,slow=2.1,SNR=3.8							
TORD	**Torodi Ar. Bea**	**38.52**	**221**	P		**P**	**13 17 09.5**	**+0.1**
KOWA	**Kowa**	**40.21**	**229**	P		**P**	**13 17 23.6**	**+0.1**
KOWA				lAmb		lAmb	13 17 25.8	
	comp=Z,10nm,1.5s							
DGZ	**Jazzator, Alta**	**40.34**	**61**	*i* P		**P**	**13 17 25.9**	**+1.5**
DGZ				pmax		pmax		
	comp=Z,1.0nm,0.8s							
WMQ	**Urumqi**	**42.66**	**70**	*e*P		**P**	**13 17 45.6**	**+2.3**
DBIC	**Dimbokro**	**47.27**	**225**	P		**P**	**13 18 19.4**	**-0.5**
	comp=Z,3.9nm,0.3s,baz=16,slow=7.0,SNR=33							
DBIC	**Dimbokro**	**47.27**	**225**	P		**P**	**13 18 19.3**	**-0.6**
DBIC				pmax		pmax		
	comp=Z,15nm,1.3s							
DBIC	**Dimbokro**	**47.27**	**225**	P		**P**	**13 18 19.3**	**-0.6**
TIC	**Toumodi**	**47.38**	**225**	*e*P		**P**	**13 18 23.1**	**+2.3**
KIC	**Kosan Boka**	**47.48**	**224**	*e*P		**P**	**13 18 21.0**	**-0.6**
	comp=Z,3.2nm,0.2s							
LIC	**Lamto**	**47.74**	**224**	*e*P		**P**	**13 18 22.9**	**-0.7**
	comp=Z,2.8nm,0.2s							
SONM	**Songino Array**	**52.53**	**57**	P		**P**	**13 19 01.4**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=294,slow=8.1,SNR=2.9							
SONM				pP		**pP**	**13 19 30.5**	**+1.8**
	comp=Z,0.7nm,0.4s,baz=292,slow=9.4,SNR=3.0							
HHC	**Hu-ho-hao-te**	**59.42**	**61**	*e*P		**P**	**13 19 52.1**	**+3.5**
HHC				pmax		pmax		
	comp=Z,13nm,0.8s							
HHC				pmax		pmax		
	comp=Z,210nm,6.6s							
C36M	**Paulatuk**	**63.34**	**349**	P		**P**	**13 20 14.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**64.91**	**89**	P		**P**	**13 20 26.2**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=301,slow=7.6,SNR=9.3							
CMAR	**Chiang Mai Arr**	**64.91**	**89**	*e*P		**P**	**13 20 26.2**	**+0.9**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
LBNH	**Lisbon**	**65.05**	**308**	P		**P**	**13 20 26.0**	**0.0**
LBNH				pmax		pmax		
	comp=Z,31nm,1.3s							
LBNH	**Lisbon**	**65.05**	**308**	P		**P**	**13 20 25.9**	**0.0**
INK	**Inuvik**	**65.45**	**352**	P		**P**	**13 20 27.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=30,slow=4.8,SNR=6.8							
INK	**Inuvik**	**65.45**	**352**	P		**P**	**13 20 27.6**	**-0.4**
INK				pmax		pmax		
	comp=Z,3.0nm,1.3s							
INK	**Inuvik**	**65.45**	**352**	P		**P**	**13 20 27.6**	**-0.4**
TOLK	**Toolik Lake Re**	**66.07**	**358**	P		**P**	**13 20 33.4**	**+1.2**
TOLK				lAmb		lAmb	13 20 43.3	
	comp=Z,6.2nm,1.4s							
IMAR	**Indian Mountai**	**68.78**	**0**	P		**P**	**13 20 50.3**	**+1.2**
ILAR	**Eielson Array**	**69.87**	**357**	P		**P**	**13 20 57.1**	**+1.2**
	comp=Z,0.2nm,0.8s,baz=358,slow=5.5,SNR=4.3							
DHY	**Denali Highway**	**71.58**	**357**	P		**P**	**13 21 07.1**	**+0.6**
DHY				lAmb		lAmb	13 21 34.5	
	comp=Z,8.2nm,1.5s							
SKT	**Skwentna**	**72.78**	**359**	P		**P**	**13 21 13.6**	**+0.1**
SKT				lAmb		lAmb	13 21 21.0	
	comp=Z,4.9nm,1.2s							
N25K	**Chitina, Valde**	**72.92**	**356**	P		**P**	**13 21 15.3**	**+0.9**
N25K				lAmb		lAmb	13 21 19.9	
	comp=Z,10nm,1.5s							
PDAR	**Pinedale Array**	**83.70**	**329**	P		**P**	**13 22 13.9**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=51,slow=4.7,SNR=2.8							
BMO	**Blue Mountains**	**84.39**	**335**	P		**P**	**13 22 16.4**	**-1.1**
BMO				pmax		pmax		
	comp=Z,4.0nm,1.4s							
BMO	**Blue Mountains**	**84.39**	**335**	P		**P**	**13 22 16.4**	**-1.1**
BMO				lAmb		lAmb	13 22 25.3	
	comp=Z,4.1nm,1.4s							
TXAR	**Lajitas Array**	**92.74**	**318**	LR		LR	14 06 51.3	
	comp=Z,97nm,19.4s,baz=0.0,slow=37							
WRA	**Warramunga Arr**	**116.41**	**92**	PKP		**PKPdf**	**13 28 27.6**	**-0.6**
	comp=Z,0.6nm,1.1s,baz=317,slow=1.4,SNR=5.5							
ASAR	**Alice Springs**	**118.54**	**95**	PKP		**PKPdf**	**13 28 31.4**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=311,slow=1.6,SNR=7.4							

*IDC **03** 13:11:08.1±3.1,23.99S×179.72W,h500km±31km, mb3.2/7, mb1 3.3/8,mb1mx3.1/39,mbtmp4.1/8, Error ellipse: s-maj=29.3km s-min=23.9km az=141.0*
*NEIC **03** 13:11:09.6±1.3,24.0S±0.1×179.7W±0.1,h522km±8km, mb4.2/19, Error ellipse: s-maj=18.2km s-min=17.4km az=122.0*

ISC 03 13:11:08.2±0.6,23.97S±0.10×179.7W±0.1,h500km,n33, σ1805/34,mb3.9/15,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.50**	**164**	P	**P**	**13 12 41.3**	**+1.7**
MSVF	**Nonsavu**	**6.55**	**341**	P	**P**	**13 12 52.5**	**+2.4**
DZM	**Mont Dzumac**	**12.90**	**276**	P	**P**	**13 13 57.6**	**+1.2**
	0.3nm,0.3s,baz=106,slow=15,SNR=3.8						
URZ	**Urewera**	**14.50**	**190**	P	**P**	**13 14 13.9**	**+0.9**
BKZ	**Black Stump Fm**	**15.49**	**191**	P	**P**	**13 14 23.8**	**+0.4**
ARMA	**Armidale**	**26.25**	**250**	P	**P**	**13 16 02.9**	**-0.1**
ARMA				lAmb	lAmb	13 16 20.2	
	comp=Z,21nm,1.5s						
CAN	**Canberra**	**29.34**	**240**	P	**P**	**13 16 29.1**	**-0.8**
CAN				lAmb	lAmb	13 16 36.1	
	comp=Z,30nm,1.5s						
CTA	**Charters Tower**	**31.75**	**270**	P	**P**	**13 16 50.3**	**-0.5**
	comp=Z,5.6nm,0.3s,baz=92,slow=10,SNR=10						
CTAO	**Charters Tower**	**31.75**	**270**	P	**P**	**13 16 50.1**	**-0.7**
CTAO				lAmb	lAmb	13 16 51.5	
	comp=Z,27nm,1.5s						
STKA	**Stephens Creek**	**34.95**	**248**	P	**P**	**13 17 17.8**	**0.0**
	comp=Z,0.7nm,0.5s,baz=95,slow=12,SNR=3.1						
BBOO	**Buckleboo**	**39.67**	**247**	P	**P**	**13 17 56.5**	**0.0**
TAOE	**Nuku Hiva Isla**	**40.64**	**75**	P	**P**	**13 18 03.2**	**-1.4**
AS31	**Alice Springs**	**42.29**	**261**	P	**P**	**13 18 18.8**	**+1.2**
ASAR	**Alice Springs**	**42.29**	**261**	P	**P**	**13 18 18.2**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=96,slow=9.9,SNR=5.2						
WB2	**Warramunga Arr**	**42.66**	**266**	P	**P**	**13 18 19.9**	**-0.6**
WB2				lAmb	lAmb	13 18 29.4	
	comp=Z,4.6nm,1.2s						
WRAB	**Tennant Creek**	**42.67**	**266**	P	**P**	**13 18 20.2**	**-0.3**
WRAB				lAmb	lAmb	13 18 32.7	
	comp=Z,7.3nm,1.4s						
WB0	**Warramunga Arr**	**42.67**	**266**	P	**P**	**13 18 20.5**	**0.0**
WB0				lAmb	lAmb	13 18 27.9	
	comp=Z,5.9nm,1.2s						
WRA	**Warramunga Arr**	**42.67**	**266**	P	**P**	**13 18 19.4**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=96,slow=8.4,SNR=4.6						
WRA				ScP	**ScP**	**13 23 05.5**	**+1.1**
	comp=Z,0.4nm,0.9s,baz=100,slow=4.1,SNR=3.1						
WRA	**Warramunga Arr**	**42.67**	**266**	P	**P**	**13 18 20.4**	**-0.1**
KNRA	**Kununurra**	**48.96**	**270**	P	**P**	**13 19 07.2**	**-1.5**
KNRA				lAmb	lAmb	13 19 23.3	
	comp=Z,17nm,1.4s						
PSA00	**Pilbara Seismi**	**55.42**	**260**	P	**P**	**13 19 53.9**	**-1.2**
PSA00				lAmb	lAmb	13 20 14.7	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**55.42**	**260**	P	**P**	**13 19 54.3**	**-0.8**
PSA00				lAmb	lAmb	13 20 11.7	
	comp=Z,4.4nm,0.8s						
QSPA	**South Pole Qui**	**66.11**	**180**	P	**P**	**13 21 05.0**	**-0.1**
QS

KLR				LR	LR	13 43 60.0	
	comp=Z,100nm,18.1s,baz=304,slow=36						
YOJ	**Yonaguni jima**	**18.43 243**		P	**Pn**	**13 38 12.7**	**+0.3**
NJ2	**Nanjing**	**18.70 270**		*e*P	**Pn**	**13 38 15.9**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
YULB	**Yu-li**	**20.32 243**		P	**P**	**13 38 32.5**	**-0.3**
YULB				IAmb	IAmb	13 38 53.5	
	comp=Z,29nm,1.1s						
HHC	**Hu-ho-hao-te**	**24.24 295**		*e*P	**P**	**13 39 13.5**	**+0.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,6.6s						
H11N2	**WAKE ISLAND Hy**	**27.07 115**		T	T	14 08 38.4	
	baz=306,slow=75,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**27.08 115**		T	T	14 08 39.8	
	baz=306,slow=75,SNR=8.7						
H11N3	**WAKE ISLAND Hy**	**27.09 115**		T	T	14 08 41.1	
	baz=306,slow=75,SNR=10						
H11S3	**WAKE ISLAND Hy**	**27.68 118**		T	T	14 09 42.0	
	baz=309,slow=74,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**27.68 118**		T	T	14 09 40.2	
	baz=309,slow=74,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**27.70 118**		T	T	14 09 36.7	
	baz=309						
ULN	**Ulaanbaatar**	**28.81 309**		P	**P**	**13 39 55.2**	**+0.8**
SONM	**Songino Array**	**29.23 308**		P	**P**	**13 39 58.1**	**+0.1**
	comp=Z,5.0nm,0.9s,baz=105,slow=8.2,SNR=19						
SONM				LR	LR	13 51 53.2	
	comp=Z,74nm,19.1s,baz=84,slow=37						
SONM	**Songino Array**	**29.23 308**		P	**P**	**13 39 57.8**	**-0.2**
DAV	**Davao City (W)**	**30.50 211**		LR	LR	13 51 05.5	
	comp=Z,41nm,19.6s,baz=270,slow=34						
CD2	**Chengdu**	**31.48 275**		*e*P	**P**	**13 40 18.0**	**0.0**
TLY	**Talaya**	**32.05 315**		LR	LR	13 53 25.0	
	comp=Z,43nm,18.9s,baz=128,slow=36						
KIWB	**Kanaga Island**	**34.74 47**		P	**P**	**13 40 44.0**	**-2.1**
GSTR	**Great Sitkin T**	**35.45 46**		P	**P**	**13 40 51.6**	**-0.8**
TIXI	**Tiksi**	**38.10 354**		P	**P**	**13 41 14.4**	**-0.1**
TIXI				IAmb	IAmb	13 41 35.4	
	comp=Z,9.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.54 258**		P	**P**	**13 41 34.6**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=46,slow=7.6,SNR=6.6						
CMAR				LR	LR	13 58 03.6	
	comp=Z,8.8nm,20.4s,baz=356,slow=36						
WMQ	**Urumqi**	**41.92 300**		*e*P	**P**	**13 41 48.9**	**+2.2**
WMQ				pP	pwP	13 42 00.4	-2.0
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.9s						
ZAA0	**Zalesovo Array**	**43.66 315**		P	**P**	**13 41 60.0**	**-0.5**
ZALV	**Zalesovo Beam**	**43.66 315**		P	**P**	**13 42 00.7**	**+0.1**
	comp=Z,2.6nm,0.4s,baz=96,slow=7.6,SNR=12						
ZALV				PcP	**PcP**	**13 43 47.1**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=105,slow=3.1,SNR=3.8						
ZALV	**Zalesovo Beam**	**43.66 315**		P	**P**	**13 41 60.0**	**-0.5**
KAPI	**Kappang**	**43.84 211**		P	**P**	**13 42 00.6**	**-1.8**
MK31	**Makanchi Array**	**45.43 304**		P	**P**	**13 42 14.6**	**-0.2**
MKAR	**Makanchi Array**	**45.43 304**		P	**P**	**13 42 15.2**	**+0.3**
	comp=Z,4.9nm,0.8s,baz=89,slow=9.8,SNR=38						
MKAR	**Makanchi Array**	**45.43 304**		P	**P**	**13 42 14.6**	**-0.2**
MAKZ	**Makanchi**	**45.65 305**		P	**P**	**13 42 16.3**	**-0.2**
MAKZ				IAmb	IAmb	13 42 17.0	
	comp=Z,4.4nm,0.6s						
KURK	**Kurchatov**	**47.50 310**		P	**P**	**13 42 30.8**	**-0.2**
MTN	**Manton Dam**	**47.68 193**		P	**P**	**13 42 32.5**	**-0.1**
KDJ	**Kajisay**	**49.80 299**		P	**P**	**13 42 49.2**	**+0.2**
KNRA	**Kununurra**	**50.92 195**		P	**P**	**13 42 57.8**	**+0.5**
ILAR	**Eielson Array**	**52.10 31**		P	**P**	**13 43 07.5**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=268,slow=7.0,SNR=2.7						
BRVK	**Borovoye**	**52.36 314**		P	**P**	**13 43 08.7**	**+0.9**
BRVK				IAmb	IAmb	13 43 09.5	
	comp=Z,3.4nm,0.7s						
RIDG	**Independent Ri**	**53.02 32**		P	**P**	**13 43 11.6**	**-1.0**
RIDG				IAmb	IAmb	13 43 40.4	
	comp=Z,9.3nm,0.9s						
FITZ	**Fitzroy Crossi**	**54.00 198**		P	**P**	**13 43 21.4**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=0.0,slow=12,SNR=1.2						
FITZ	**Fitzroy Crossi**	**54.00 198**		P	**P**	**13 43 19.9**	**-0.2**
FITZ				IAmb	IAmb	13 43 35.2	
	comp=Z,6.4nm,1.4s						
WRAB	**Tennant Creek**	**54.17 188**		P	**P**	**13 43 21.5**	**+0.2**
WRAB				IAmb	IAmb	13 43 26.6	
	comp=Z,9.6nm,1.3s						
WR0	**Warramunga Arr**	**54.17 188**		P	**P**	**13 43 21.5**	**+0.2**
WR0				IAmb	IAmb	13 43 26.7	
	comp=Z,8.3nm,1.3s						
CTA	**Charters Tower**	**54.18 174**		P	**P**	**13 43 22.4**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=11,slow=10,SNR=1.7						
CTAO	**Charters Tower**	**54.18 174**		P	**P**	**13 43 22.3**	**+0.9**
WB2	**Warramunga Arr**	**54.18 188**		P	**P**	**13 43 21.6**	**+0.2**
WB2				IAmb	IAmb	13 43 42.1	
	comp=Z,3.4nm,0.8s						
WRA	**Warramunga Arr**	**54.18 188**		P	**P**	**13 43 21.6**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=5.0,slow=7.4,SNR=78						
WRA	**Warramunga Arr**	**54.18 188**		P	**P**	**13 43 21.7**	**+0.3**
KK31	**Karatay Array**	**54.33 302**		P	**P**	**13 43 22.8**	**+0.3**
KKAR	**Karatay Array**	**54.33 302**		P	**P**	**13 43 22.6**	**+0.2**
KKAR				IAmb	IAmb	13 43 24.5	
	comp=Z,3.8nm,0.8s						
KKAR	**Karatay Array**	**54.33 302**		P	**P**	**13 43 22.6**	**+0.2**
CHGR	**Chuyangaron**	**56.65 297**		P	**P**	**13 43 38.8**	**-0.5**
AS31	**Alice Springs**	**57.90 188**		P	**P**	**13 43 48.2**	**+0.1**
ASAR	**Alice Springs**	**57.91 188**		P	**P**	**13 43 48.8**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=21,slow=9.8,SNR=22						
ASAR	**Alice Springs**	**57.91 188**		P	**P**	**13 43 48.4**	**+0.4**
ARU	**Arti**	**58.32 320**		P	**P**	**13 43 50.0**	**-0.6**
ABKAR	**Akbulak array**	**59.57 311**		P	**P**	**13 43 59.2**	**-0.2**
ABKAR				IAmb	IAmb	13 44 00.3	
	comp=Z,3.1nm,0.6s						
KIRV	**Kirov**	**62.36 324**		P	**P**	**13 44 18.8**	**+0.6**
	comp=Z,6.2nm,0.5s,baz=106,slow=2.4,SNR=3.2						
HRA	**Herat**	**63.41 295**		P	**P**	**13 44 26.6**	**+0.7**
HRA				IAmb	IAmb	13 44 27.0	
	comp=Z,4.8nm,0.7s						
GEYT	**Alibeck**	**64.97 300**		P	**P**	**13 44 36.3**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=195,slow=4.6,SNR=4.8						
GEYT	**Alibeck**	**64.97 300**		IAmb	IAmb	13 44 41.0	
	comp=Z,26nm,1.5s						
RES	**Resolute Bay**	**65.46 14**		P	**P**	**13 44 39.3**	**+1.1**
RES				IAmb	IAmb	13 44 42.5	
	comp=Z,9.1nm,1.3s						
ARCES	**ARCESS Array B**	**66.57 340**		P	**P**	**13 44 46.1**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=48,slow=6.5,SNR=6.5						
FINES	**FINESS Array B**	**71.21 333**		P	**P**	**13 45 14.7**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=104,slow=5.5,SNR=5.6						
FINES	**FINESS Array B**	**71.21 333**		P	**P**	**13 45 14.5**	**+0.1**
KBZ	**Khabaz**	**72.55 311**		P	**P**	**13 45 23.8**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=159,slow=17,SNR=3.5						
WALA	**Waterton Lakes**	**73.78 41**		P	**P**	**13 45 29.2**	**-1.0**
WALA				IAmb	IAmb	13 45 49.9	
	comp=Z,8.0nm,1.1s						
AKASG	**Malin Array Be**	**76.38 323**		P	**P**	**13 45 44.9**	**0.0**
	comp=Z,2.4nm,0.5s,baz=47,slow=6.1,SNR=8.8						
AKASG				LR	LR	14 21 07.3	
	comp=Z,25nm,18.9s,baz=15,slow=37						
AKASG	**Malin Array Be**	**76.38 323**		P	**P**	**13 45 44.6**	**-0.3**
AKBB	**Malin Array Si**	**76.38 323**		P	**P**	**13 45 44.6**	**-0.3**
AKBB				IAmb	IAmb	13 45 45.3	
	comp=Z,5.6nm,0.8s						
HFS	**Hagfors**	**76.57 336**		P	**P**	**13 45 45.9**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=46,slow=4.5,SNR=7.7						
NC204	**NORSAR Array S**	**76.67 338**		P	**P**	**13 45 46.9**	**+0.5**
NB201	**NORSAR Array S**	**76.68 337**		P	**P**	**13 45 46.6**	**+0.1**
NB2	**NORSAR Subarra**	**76.71 337**		P	**P**	**13 45 46.9**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**76.71 337**		P	**P**	**13 45 47.3**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=40,slow=5.7,SNR=9.2						

*NEIC **03** 13:47:39.8±0.9, 17°.82S±0°.07×167°.9E±0°.2, h24km±7km, mb4.3/12, Error ellipse: s-maj=23.1km s-min=8.7km az=78.0*
*IDC **03** 13:47:42.9±8.1, 17°.98S×167°.96E, h48km±76km, mb3.6/3, mb1 3.8/4, mb1mx3.4/18, mbtmp3.8/4, ML3.7/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/15, Error ellipse: s-maj=65.8km s-min=51.4km az=160.0*

ISC 03 13:47:41.3±1.4, 17°.84S±0°.07×168°.0E±0°.2, h35km, n18, σ0s68/19, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.49**	**343**		**Pn**	**13 48 18.7**	**-0.7**
DZM	**Mont Dzumac**	**4.44**	**199**	P	**Pn**	**13 48 46.1**	**-0.2**
	4.3nm,0.3s,baz=84,slow=13,SNR=141						
DZM				S	**Sn**	**13 49 35.5**	**-1.3**
	9.1nm,0.3s,baz=152,slow=22,SNR=18						
DZM				LR	LR	13 50 21.0	
	comp=Z,73nm,19.9s,baz=27,slow=37						
CAN	**Canberra**	**24.23**	**220**	P	**P**	**13 52 56.1**	**+1.2**
STKA	**Stephens Creek**	**27.61**	**235**	P	**P**	**13 53 25.0**	**-0.6**
	2.0nm,0.8s,baz=52,slow=12,SNR=3.4						
WR0	**Warramunga Arr**	**31.66**	**261**	P	**P**	**13 54 01.8**	**+0.2**
WR0				IAmb	IAmb	13 54 13.2	
	comp=Z,7.7nm,1.4s						
WB0	**Warramunga Arr**	**31.81**	**261**	P	**P**	**13 54 02.8**	**0.0**
WB2	**Warramunga Arr**	**31.84**	**261**	P	**P**	**13 54 02.9**	**-0.3**
WB2				IAmb	IAmb	13 54 15.5	
	comp=Z,2.8nm,1.1s						
WRAB	**Tennant Creek**	**31.84**	**261**	P	**P**	**13 54 02.8**	**-0.4**
WRAB				IAmb	IAmb	13 54 03.0	
	comp=Z,4.6nm,1.1s						
WRA	**Warramunga Arr**	**31.85**	**261**	P	**P**	**13 54 03.0**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=77,slow=6.1,SNR=5.1						
BBOO	**Buckleboo**	**32.31**	**236**	P	**P**	**13 54 08.1**	**+0.9**
AS31	**Alice Springs**	**32.32**	**254**	P	**P**	**13 54 07.0**	**-0.4**
ASAR	**Alice Springs**	**32.32**	**254**	P	**P**	**13 54 07.7**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=81,slow=8.5,SNR=26						
ASAR	**Alice Springs**	**32.32**	**254**	P	**P**	**13 54 07.1**	**-0.3**
MCQ	**Macquarie Isla**	**37.24**	**189**	P	**P**	**13 54 48.4**	**-0.9**
KNRA	**Kununurra**	**37.55**	**267**	P	**P**	**13 54 53.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**40.20**	**263**	P	**P**	**13 55 15.0**	**+0.4**
QSPA	**South Pole Qui**	**72.20**	**180**	P	**P**	**13 59 03.3**	**+0.7**
QSPA				IAmb	IAmb	13 59 13.7	
	comp=Z,4.5nm,1.4s						
ARCES	**ARCESS Array B**	**123.42**	**345**	PKP	**PKPdf**	**14 06 34.2**	**+0.1**
	comp=Z,3.6nm,0.8s,baz=72,slow=2.9,SNR=4.9						

*NEIC **03** 14:18:05.9±0.8, 18°.05S±0°.1×178°.4W±0°.1, h625km±8km, mb4.1/15, Error ellipse: s-maj=25.5km s-min=14.0km az=137.0*
*IDC **03** 14:18:07.5±8.5, 17°.87S×178°.47W, h639km±90km, mb2.8/3, mb1 3.2/3, mb1mx2.7/30, mbtmp3.9/3, Error ellipse: s-maj=243.3km s-min=37.2km az=156.0*

ISC 03 14:18:03.8±1.1, 18°.05S±0°.2×178°.3W±0°.2, h600km, n21, σ0s86/22, mb4.0/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.46**	**273**	P	P	14 19 30.7	+4.9
OUZ	**Omahuta**	**18.62**	**201**	P	**P**	**14 21 47.8**	**+2.9**
OUZ				IAmb	IAmb	14 21 56.7	
	comp=Z,20nm,1.2s						
NNZ	**Nelson**	**24.24**	**195**	P	**P**	**14 22 34.6**	**-0.5**
THZ	**Tophouse**	**24.87**	**196**	P	**P**	**14 22 39.8**	**-1.0**
KHZ	**Kahutara**	**25.33**	**194**	P	**P**	**14 22 43.2**	**-1.5**
BBOO	**Buckleboo**	**43.44**	**241**	P	**P**	**14 25 15.6**	**+0.3**
WR0	**Warramunga Arr**	**44.50**	**260**	P	**P**	**14 25 24.2**	**+0.6**
WR0				IAmb	IAmb	14 25 45.0	
	comp=Z,7.4nm,1.4s						
WB0	**Warramunga Arr**	**44.66**	**260**	P	**P**	**14 25 25.1**	**+0.3**
WB0				IAmb	IAmb	14 25 28.0	
	comp=Z,7.0nm,1.4s						
WB2	**Warramunga Arr**	**44.68**	**260**	P	**P**	**14 25 25.1**	**0.0**
WRAB	**Tennant Creek**	**44.69**	**260**	P	**P**	**14 25 25.0**	**-0.1**
WRAB				IAmb	IAmb	14 25 31.6	
	comp=Z,5.3nm,1.3s						
WRA	**Warramunga Arr**	**44.69**	**260**	P	**P**	**14 25 25.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=94,slow=7.0,SNR=34						
WRA				PcP	**PcP**	**14 26 53.9**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=91,slow=3.7,SNR=6.8						
WRA	**Warramunga Arr**	**44.69**	**260**	P	**P**	**14 25 25.2**	**0.0**
AS31	**Alice Springs**	**44.84**	**254**	P	**P**	**14 25 26.7**	**+0.4**
ASAR	**Alice Springs**	**44.85**	**254**	P	**P**	**14 25 26.8**	**+0.5**
	comp=Z,1.2nm,0.4s,baz=90,slow=8.0,SNR=53						
ASAR				PcP	**PcP**	**14 26 54.4**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=105,slow=3.9,SNR=9.5						
ASAR	**Alice Springs**	**44.85**	**254**	P	**P**	**14 25 26.1**	**-0.1**
MTN	**Manton Dam**	**48.87**	**268**	P	**P**	**14 25 56.5**	**-0.1**
MTN				IAmb	IAmb	14 26 24.8	
	comp=Z,17nm,1.2s						
FORT	**Forrest**	**50.05**	**245**	P	**P**	**14 26 04.6**	**-0.3**
KNRA	**Kununurra**	**50.56**	**264**	P	**P**	**14 26 08.7**	**-0.1**
KNRA				IAmb	IAmb	14 26 13.8	
	comp=Z,9.3nm,1.1s						
JHJ2	**Mitsune**	**64.64**	**322**	P	**P**	**14 27 43.5**	**-0.2**
QSPA	**South Pole Qui**	**72.08**	**180**	P	**P**	**14 28 28.0**	**-0.3**
TXAR	**Lajitas Array**	**85.97**	**58**	P	**P**	**14 29 42.6**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=210,slow=4.6,SNR=5.0						

IDC 03 14:25:05.1±4.0, 27°.29N×97°.26E, h70km±43km, mb3.0/5, mb1 3.2/6, mb1mx3.1/51, mbtmp3.3/6, ML3.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/14, Error ellipse: s-maj=62.9km s-min=17.6km az=68.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.92**	**170**	P	Pn	14 27 11.7	+0.4
	0.1nm,0.3s,baz=340,slow=13,SNR=6.1						
SONM	**Songino Array**	**21.72**	**17**	P	P	14 29 50.4	-0.1
	0.4nm,0.6s,baz=206,slow=13,SNR=1.8						
MKAR	**Makanchi Array**	**22.77**	**333**	P	P	14 30 00.6	-1.1
	0.3nm,0.5s,baz=143,slow=8.5,SNR=5.1						
KURBB	**Kurchatov Arra**	**27.33**	**334**	P	P	14 30 44.3	+1.1
	0.6nm,0.7s,baz=149,slow=11,SNR=4.4						
ASAJ	**Asahikawa**	**39.92**	**53**	LR	LR	14 48 25.2	
	comp=Z,27nm,20.4s,baz=106,slow=35						
WRA	**Warramunga Arr**	**59.11**	**139**	P	P	14 34 58.5	-0.1
	0.5nm,0.7s,baz=327,slow=7.4,SNR=7.6						
ASAR	**Alice Springs**	**61.79**	**142**	P	P	14 35 16.7	-0.1
	0.3nm,0.5s,baz=323,slow=6.4,SNR=9.8						

*IDC **03** 14:38:52.5±2.9, 15°.62N×144°.67E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/46, mbtmp3.8/8, ML3.6/1, MS3.3/7, Ms1 3.4/7, ms1mx3.0/34, Error ellipse: s-maj=114.3km s-min=16.7km az=79.0*
*NEIC **03** 14:38:54.9±1.1, 15°.68N±0°.07×144°.84E±0°.09, h20km±7km, mb4.5/15, Error ellipse: s-maj=12.7km s-min=9.9km az=121.0*

ISC 03 14:38:53.4±0.7, 15°.72N±0°.07×144°.9E±0°.1, h10km, n38, σ0s95/27, mb4.2/13, MS3.2/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.12**	**179**	Pn	**Pn**	**14 39 28.6**	**-0.3**
	22nm,0.3s,baz=305,slow=5.5,SNR=24						
GUMO				Sn	**Sn**	**14 39 53.6**	**-1.7**
	23nm,0.3s,baz=150,slow=22,SNR=8.3						
GUMO	**Guam**	**2.12**	**179**		**Pn**	**14 39 28.1**	**-0.8**
PATS	**Pohnpei**	**15.87**	**122**	Pn	**Pn**	**14 42 37.5**	**+0.4**
JOW	**Kunigami**	**18.97**	**308**	P	**P**	**14 43 14.0**	**-1.1**
H11S3	**WAKE ISLAND Hy**	**21.05**	**79**	T	T	15 05 40.9	
	baz=261,slow=78,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**21.07**	**79**	T	T	15 05 38.2	
	baz=261,slow=78,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**21.07**	**79**	T	T	15 05 42.0	
	baz=261,slow=78,SNR=11						
H11N1	**WAKE ISLAND Hy**	**21.37**	**76**	T	T	15 05 54.3	
	baz=263,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**21.38**	**76**	T	T	15 05 54.9	
	baz=263,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**21.39**	**76**	T	T	15 05 55.7	
	baz=263,slow=75,SNR=16						
MJAR	**Matsushiro Arr**	**21.57**	**345**	LR	LR	14 50 49.5	
	comp=Z,86nm,19.7s,baz=195,slow=33						
MJB9	**Matsu-Tunnel**	**21.57**	**345**	P	**P**	**14 43 41.6**	**-1.6**
JHS	**Saijyo**	**21.90**	**333**	P	**P**	**14 43 46.4**	**-0.3**
JHS				IAmb	IAmb	14 43 59.1	
	comp=Z,47nm,1.3s						
FAKI	**Fak Fak**	**22.32**	**215**	P	**P**	**14 43 53.3**	**+1.9**
JTU	**Tsushima**	**23.32**	**326**	P	**P**	**14 44 03.4**	**+1.7**
KSRS	**Korea Array**	**26.33**	**329**	P	**P**	**14 44 30.0**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=144,slow=9.1,SNR=6.2						
KSRS				LR	LR	14 53 20.3	
	comp=Z,48nm,19.4s,baz=144,slow=33						
HNR	**Honiara**	**29.12**	**148**	LR	LR	14 55 54.8	
	comp=Z,63nm,19.6s,baz=316,slow=35						
USRK	**Ussuriysk Ar.**	**30.42**	**342**	LR	LR	14 56 13.2	
	comp=Z,58nm,18.4s,baz=100,slow=34						
MTN	**Manton Dam**	**31.45**	**206**	P	**P**	**14 45 15.2**	**-0.1**
KNRA	**Kununurra**	**35.01**	**208**	P	**P**	**14 45 45.7**	**-0.6**
KNRA				IAmb	IAmb	14 45 46.9	
	comp=Z,7.7nm,0.9s						
CTAO	**Charters Tower**	**35.61**	**178**	P	**P**	**14 45 53.2**	**+1.8**
CTAO				IAmb	IAmb	14 46 17.3	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**36.73**	**197**	P	**P**	**14 46 00.9**	**-0.2**
WR0	**Warramunga Arr**	**36.87**	**196**	P	**P**	**14 46 02.1**	**-0.2**
WR0				IAmb	IAmb	14 46 03.3	
	comp=Z,7.9nm,1.4s						
WRAB	**Tennant Creek**	**36.90**	**197**	P	**P**	**14 46 02.6**	**0.0**
WRAB				IAmb	IAmb	14 46 10.7	
	comp=Z,7.8nm,1.2s						
WB2	**Warramunga Arr**	**36.91**	**197**	P	**P**	**14 46 02.6**	**0.0**
WB2				IAmb	IAmb	14 46 11.4	
	comp=Z,5.4nm,1.0s						
WRA	**Warramunga Arr**	**36.91**	**197**	P	**P**	**14 46 02.1**	**-0.5**
	comp=Z,3.0nm,0.9s,baz=16,slow=9.6,SNR=18						
FITZ	**Fitzroy Crossi**	**38.56**	**210**	P	**P**	**14 46 15.7**	**-0.9**
	comp=Z,3.2nm,0.7s,baz=34,slow=11,SNR=8.5						
FITZ	**Fitzroy Crossi**	**38.56**	**210**	P	**P**	**14 46 16.0**	**-0.6**
FITZ				IAmb	IAmb	14 46 17.2	
	comp=Z,5.5nm,0.9s						
PETK	**Petropavlovsk-**	**38.66**	**12**	P	**P**	**14 46 16.7**	**-0.4**
ASAR	**Alice Springs**	**40.58**	**196**	P	**P**	**14 46 32.6**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=22,slow=11,SNR=5.6						
CMAR	**Chiang Mai Arr**	**43.88**	**280**	LR	LR	15 02 35.6	
	comp=Z,23nm,21.1s,baz=144,slow=32						
SONM	**Songino Array**	**45.00**	**324**	LR	LR	15 04 56.6	
	comp=Z,36nm,21.2s,baz=60,slow=35						
STKA	**Stephens Creek**	**47.42**	**184**	P	**P**	**14 47 27.9**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=15,slow=16,SNR=3.0						
STKA	**Stephens Creek**	**47.42**	**184**	P	**P**	**14 47 27.8**	**-0.5**
GSTR	**Great Sitkin T**	**47.70**	**32**	P	**P**	**14 47 30.4**	**+0.2**
ZALV	**Zalesovo Beam**	**59.90**	**324**	P	**P**	**14 48 59.4**	**0.0**
	comp=Z,0.5nm,0.4s,baz=98,slow=3.2,SNR=1.6						
MKAR	**Makanchi Array**	**59.96**	**315**	P	**P**	**14 49 01.1**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=87,slow=9.1,SNR=2.2						
PPT	**Papeete**	**72.60**	**114**	LR	LR	15 17 26.7	
	comp=Z,58nm,18.4s,baz=320,slow=32						

IDC 03 14:44:34.9±6.4, 29°.12S×73°.52E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/39, mbtmp3.6/4, MS3.5/4, Ms1 3.5/4, ms1mx2.9/44, Error ellipse: s-maj=174.4km s-min=40.1km az=52.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**21.39**	**357**	T	T	15 10 59.3	
	baz=175,slow=76,SNR=16						
H08S2	**Diego Garcia H**	**21.39**	**357**	T	T	15 11 06.0	
	baz=175,slow=76,SNR=19						
H08S3	**Diego Garcia H**	**21.41**	**357**	T	T	15 10 57.4	
	baz=175,slow=76,SNR=31						
H01W2	**Cape Leeuwin H**	**34.74**	**110**	T	T	15 27 41.9	
	baz=269,slow=75,SNR=4.1						
H01W3	**Cape Leeuwin H**	**34.75**	**110**	T	T	15 27 43.1	
	baz=269,slow=75,SNR=6.0						
H01W1	**Cape Leeuwin H**	**34.76**	**110**	T	T	15 27 34.7	
	baz=269,slow=75,SNR=4.5						
MATP	**Matopo**	**41.58**	**272**	LR	LR	15 06 53.9	
	comp=Z,57nm,18.2s,baz=50,slow=32						
TSUM	**Tsumeb**	**51.58**	**268**	LR	LR	15 12 29.9	
	comp=Z,58nm,18.1s,baz=66,slow=32						
CMAR	**Chiang Mai Arr**	**53.29**	**31**	P	P	14 53 55.9	+0.1
	0.2nm,0.3s,baz=207,slow=5.7,SNR=1.6						
ASAR	**Alice Springs**	**53.86**	**99**	P	P	14 54 00.3	+0.2
	0.6nm,0.6s,baz=249,slow=6.2,SNR=12						
WRA	**Warramunga Arr**	**55.56**	**95**	P	P	14 54 12.1	-0.4
	0.9nm,0.8s,baz=250,slow=7.5,SNR=6.7						
MKAR	**Makanchi Array**	**75.98**	**6**	P	P	14 56 23.5	0.0
	0.6nm,0.9s,baz=201,slow=7.7,SNR=2.4						
JNU	**Nakatsue**	**82.37**	**45**	LR	LR	15 31 06.7	
	comp=Z,93nm,20.6s,baz=276,slow=34						
KSRS	**Korea Array**	**83.56**	**41**	LR	LR	15 30 25.0	
	comp=Z,7.8nm,21.9s,baz=45,slow=33						

*SOME **03** 14:55:35.0, 40°.33N×76°.83E, h15km*
*KRNET **03** 14:55:36.2±0.1, 40°.46N×77°.13E, mb3.2*
*NNC **03** 14:55:38.1±0.7, 40°.45N×76°.90E,

KNDC				⇓Lg		Lg	14 57 05.3		
	43nm,0.4s								
KOTS	**Kotyrbulak**	**2.91**	**3**	*eP*		**Pg**	**14 56 28.6**	**-0.2**	
	63nm,0.4s								
KOTS				*eS*		**Sg**	**14 57 06.6**	**0.0**	
	101nm,0.5s								
KOTS	**Kotyrbulak**	**2.91**	**3**	Pg		**Pg**	**14 56 28.6**	**-0.2**	
	63nm,0.4s								
KOTS				Lg		Lg	14 57 06.6		
	101nm,0.5s								
AAK	**Ala-Archa**	**2.92**	**323**	⇑*eP*		**Pb**	**14 56 26.8**	**+0.9**	
	baz=19								
AAK				⇑*iS*		**Sb**	**14 57 04.1**	**+2.0**	
	baz=19								
AAK	**Ala-Archa**	**2.92**	**323**	⇓Pn		**Pb**	**14 56 25.4**	**-0.5**	
	8.0nm,0.4s								
AAK				⇑Lg		Lg	14 57 09.4		
	25nm,0.9s								
SATY	**Saty**	**2.96**	**22**	⇓*iP*		**Pg**	**14 56 30.4**	**+0.6**	
	9.9nm,0.4s								
SATY				⇑*iS*		**Sg**	**14 57 10.0**	**+1.7**	
	18nm,0.4s								
SATY	**Saty**	**2.96**	**22**	Pg		**Pg**	**14 56 30.4**	**+0.6**	
	9.9nm,0.4s								
SATY				Lg		Lg	14 57 10.0		
	18nm,0.4s								
AML	**Almayashu**	**3.00**	**308**	⇑*iP*		**Pb**	**14 56 28.4**	**+1.0**	
	baz=4.0								
AML				⇑*iS*		**Sb**	**14 57 06.6**	**+2.0**	
	baz=4.0								
CHMS	**Chumysh**	**3.11**	**330**	⇑*iP*		**Pb**	**14 56 28.6**	**-0.4**	
	baz=26								
CHMS				⇑*iS*		**Sb**	**14 57 07.1**	**-0.2**	
	baz=26								
OHH	**Osh**	**3.13**	**275**	⇑*iP*		**Pg**	**14 56 31.9**	**-1.1**	
	baz=73								
OHH				⇑*iS*		**Sg**	**14 57 12.2**	**-1.3**	
	baz=73								
UZB	**Uzynbulak**	**3.24**	**29**	*eP*		**Pg**	**14 56 34.5**	**-0.7**	
	8.1nm,0.5s								
UZB				*eS*		**Sg**	**14 57 16.9**	**-0.4**	
	12nm,0.8s								
UZB	**Uzynbulak**	**3.24**	**29**	Pg		**Pg**	**14 56 34.5**	**-0.7**	
	8.1nm,0.5s								
UZB				Lg		Lg	14 57 16.9		
	12nm,0.8s								
EKS2	**Erkin-Say**	**3.29**	**316**	⇑*eP*		**Pb**	**14 56 32.6**	**+0.3**	
	baz=12								
EKS2				⇑*iS*		**Sb**	**14 57 13.6**	**+0.8**	
	baz=12								
KURS	**Kuram**	**3.30**	**17**	*eP*		**Pg**	**14 56 35.2**	**-1.2**	
	10nm,0.3s								
KURS				*eS*		**Sg**	**14 57 18.1**	**-1.1**	
	8.4nm,0.9s								
KURS	**Kuram**	**3.30**	**17**	Pg		**Pg**	**14 56 35.2**	**-1.2**	
	10nm,0.3s								
KURS				Lg		Lg	14 57 18.1		
	8.4nm,0.9s								
KTBS	**Karatobe**	**3.38**	**358**	*eP*		**Pg**	**14 56 36.7**	**-1.2**	
	7.7nm,0.6s								
KTBS				*eS*		**Sg**	**14 57 20.6**	**-1.2**	
	24nm,0.5s								
KTBS	**Karatobe**	**3.38**	**358**	Pg		**Pg**	**14 56 36.7**	**-1.2**	
	7.7nm,0.6s								
KTBS				Lg		Lg	14 57 20.6		
	24nm,0.5s								
KPKS	**Kokpek**	**3.42**	**23**	*eP*		**Pg**	**14 56 37.4**	**-1.2**	
	23nm,0.5s								
KPKS				*eS*		**Sg**	**14 57 21.8**	**-1.0**	
	21nm,0.5s								
SHLS	**Shalkode**	**3.43**	**34**	⇑*iP*		**Pg**	**14 56 41.8**	**+3.0**	
	18nm,0.7s								
SHLS				⇑*iS*		**Sg**	**14 57 29.3**	**+6.1**	
	32nm,0.6s								
SHLS	**Shalkode**	**3.43**	**34**	Pg		**Pg**	**14 56 41.8**	**+3.0**	
	18nm,0.7s								
SHLS				Lg		Lg	14 57 29.3		
	32nm,0.6s								
KRBS	**Karabastau**	**3.48**	**346**	*eP*		**Pg**	**14 56 39.2**	**-0.6**	
	10.0nm,0.5s								
KRBS				*eS*		**Sg**	**14 57 24.7**	**-0.2**	
	31nm,0.6s								
KRBS	**Karabastau**	**3.48**	**346**	Pg		**Pg**	**14 56 39.2**	**-0.6**	
	10.0nm,0.5s								
KRBS				Lg		Lg	14 57 24.7		
	31nm,0.6s								
SGDS	**Sogindy**	**3.54**	**333**	Pg		**Pg**	**14 56 40.1**	**-0.9**	
	6.8nm,0.6s								
SGDS				Lg		Lg	14 57 26.6		
	9.9nm,0.4s								
PDGK	**Podgornoye**	**3.58**	**32**	Pg		**Pg**	**14 56 40.8**	**-0.9**	
	3.6nm,0.4s								
PDGK				Lg		Lg	14 57 27.6		
	6.7nm,0.7s								
PDGK	**Podgornoye**	**3.58**	**32**	⇑Pg		**Pg**	**14 56 40.5**	**-1.2**	
	5.5nm,0.5s								
PDGK				⇑Lg		Lg	14 57 26.5		
	15nm,0.7s								
KUU	**Kurty**	**3.58**	**354**	*eP*		**Pg**	**14 56 40.9**	**-0.8**	
	6.6nm,0.7s								
KUU				⇑*iS*		**Sg**	**14 57 27.9**	**-0.3**	
	16nm,0.7s								
KUU	**Kurty**	**3.58**	**354**	Pg		**Pg**	**14 56 40.9**	**-0.8**	
	6.6nm,0.7s								
KUU				Lg		Lg	14 57 27.9		
	16nm,0.7s								
MRKS	**Merke**	**3.65**	**313**	*eP*		**Pg**	**14 56 42.2**	**-0.8**	
	5.9nm,0.2s								
MRKS				*eS*		**Sg**	**14 57 30.4**	**+0.1**	
	6.6nm,0.4s								
MRKS	**Merke**	**3.65**	**313**	Pg		**Pg**	**14 56 42.2**	**-0.8**	
	5.9nm,0.2s								
MRKS				Lg		Lg	14 57 30.4		
	6.6nm,0.4s								
MNBS	**Baschi**	**3.92**	**16**	*eP*		**Pg**	**14 56 47.6**	**-0.5**	
	8.3nm,0.5s								
MNBS				*eS*		**Sg**	**14 57 39.2**	**+0.3**	
	11nm,0.4s								
MNBS	**Baschi**	**3.92**	**16**	Pg		**Pg**	**14 56 47.6**	**-0.5**	
	8.3nm,0.5s								
MNBS				Lg		Lg	14 57 39.2		
	11nm,0.4s								
ARXS	**Arharly**	**3.95**	**10**	*eP*		**Pg**	**14 56 47.6**	**-1.1**	
	17nm,0.6s								
ARXS				*eS*		**Sg**	**14 57 39.4**	**-0.5**	
	12nm,0.4s								
ARXS	**Arharly**	**3.95**	**10**	Pg		**Pg**	**14 56 47.6**	**-1.1**	
	17nm,0.6s								
ARXS				Lg		Lg	14 57 39.4		
	12nm,0.4s								
KTMS	**Ketmen**	**4.06**	**39**	*eP*		**Pg**	**14 56 50.4**	**-0.4**	
	14nm,0.3s								
KTMS				*eS*		**Sg**	**14 57 44.4**	**+1.0**	
	12nm,0.6s								
KTMS	**Ketmen**	**4.06**	**39**	Pg		**Pg**	**14 56 50.4**	**-0.4**	
	14nm,0.3s								
KTMS				Lg		Lg	14 57 44.4		
	12nm,0.6s								
DJR	**Jarkent**	**4.55**	**27**	*eP*		**Pg**	**14 56 59.0**	**-1.2**	
	4.7nm,0.4s								
DJR				*eS*		**Sg**	**14 57 59.2**	**+0.1**	
	4.0nm,0.5s								
DJR	**Jarkent**	**4.55**	**27**	Pg		**Pg**	**14 56 59.1**	**-1.2**	
	4.7nm,0.4s								
DJR				Lg		Lg	14 57 59.2		
	4.0nm,0.5s								
BTLS	**Baital**	**5.15**	**337**	*eP*		**Pg**	**14 57 09.6**	**-2.2**	
	2.7nm,0.5s								
BTLS				*eS*		**Sg**	**14 58 17.1**	**-1.4**	
	4.8nm,0.3s								
BTLS	**Baital**	**5.15**	**337**	Pg		**Pg**	**14 57 09.6**	**-2.2**	
	2.7nm,0.5s								
BTLS				Lg		Lg	14 58 17.1		
	4.8nm,0.3s								
IUG	**Iuzhnay**	**5.47**	**292**	*eP*		**Pg**	**14 57 16.8**	**-1.1**	
	3.8nm,0.4s								
IUG				*eS*		**Sg**	**14 58 29.9**	**+1.2**	
	8.4nm,0.8s								
IUG	**Iuzhnay**	**5.47**	**292**	Pg		**Pg**	**14 57 16.8**	**-1.1**	
	3.8nm,0.4s								
IUG				Lg		Lg	14 58 29.9		
	8.4nm,0.8s								
KK31	**Karatay Array**	**5.51**	**302**	⇑Pg		**Pg**	**14 57 18.3**	**-0.3**	
	0.7nm,0.5s,baz=129,slow=16,SNR=5.5								
KK31				⇑Lg		Lg	14 58 32.3		
	2.3nm,0.7s,baz=111,slow=28,SNR=4.4								

*IDC **03** 15:12:20.5±2.0, 0°.43N×126°.73E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/41, mbtmp3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/34, Error ellipse: s-maj=212.5km s-min=21.8km az=66.0*
*DJA **03** 15:12:25.9±0.4, 0°.N±4°.×12°.6E±°, h10km, M3.5/7, mb3.8/1, MLv3.4/7*
*NEIC **03** 15:12:27.5±1.7, 0°.16N±0°.09×126°.20E±0°.05, h61km±10km, mb4.0/14, Error ellipse: s-maj=13.9km s-min=6.5km az=158.0*
ISC 03 15:12:25.0±0.7, **0°.25N**±0°.07×**126°.23E**±0°.08, **h35**km, **n35,** σ1¶**42**/33, **mb4.0**/9, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**66**	P		Pn		15 12 54.9	+9.0
TNTI	**Ternate**	**1.24**	**66**	Pn		**Pn**		**15 12 48.9**	**+3.0**
KMSI	**Cibinong**	**2.28**	**278**	P		**Pn**		**15 12 57.4**	**-2.8**
SANI	**Sanana**	**2.30**	**186**	P		**Pn**		**15 13 03.9**	**+3.4**
GTOI	**Gorontalo**	**3.25**	**277**	P		**Pn**		**15 13 13.8**	**+0.3**
LUWI	**Luwuk**	**3.69**	**250**	P		**Pn**		**15 13 20.3**	**+0.6**
LUWI	**Luwuk**	**3.69**	**250**			**Pn**		**15 13 20.3**	**+0.6**
APSI	**Ampana**	**4.73**	**256**	P		**Pn**		**15 13 31.5**	**-2.4**
MPSI	**Mapaga**	**6.34**	**271**	P		**Pn**		**15 13 55.5**	**-0.5**
MYLDM	**Lahad Datu**	**9.14**	**302**	Pn		**Pn**		**15 14 37.7**	**+3.1**
SBUM	**Sibu**	**14.18**	**279**	P		**P**		**15 15 50.2**	**-0.2**
KSM	**Kuching**	**15.97**	**274**			**P**		**15 16 09.6**	**-0.8**
KSM					IAmb	IAmb		15 16 10.0	
	comp=Z,9.4nm,0.8s								
KNRA	**Kununurra**	**16.02**	**171**	Pn		**Pn**		**15 16 08.0**	**+0.1**
KNRA					IAmb	IAmb		15 16 34.0	
	comp=Z,13nm,1.2s								
LEM	**Lembang**	**19.86**	**249**	LR		LR		15 25 17.4	
	comp=Z,41nm,18.1s,baz=15,slow=38								
WB0	**Warramunga Arr**	**21.44**	**159**	P		**P**		**15 17 10.3**	**-0.1**
WB0					IAmb	IAmb		15 17 14.7	
	comp=Z,6.8nm,1.1s								
WRAB	**Tennant Creek**	**21.58**	**159**	P		**P**		**15 17 11.6**	**-0.3**
WRAB					IAmb	IAmb		15 17 29.0	
	comp=Z,5.4nm,1.2s								
WRA	**Warramunga Arr**	**21.59**	**159**	P		**P**		**15 17 11.7**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=342,slow=12,SNR=12								
WRA	**Warramunga Arr**	**21.59**	**159**	P		**P**		**15 17 10.8**	**-1.2**
WB2	**Warramunga Arr**	**21.59**	**159**	P		**P**		**15 17 11.4**	**-0.6**
WB2					IAmb	IAmb		15 17 36.8	
	comp=Z,5.4nm,1.1s								
WR0	**Warramunga Arr**	**21.68**	**158**	P		**P**		**15 17 12.7**	**-0.1**
PSA00	**Pilbara Seismi**	**22.57**	**196**	P		**P**		**15 17 21.7**	**-0.8**
AS31	**Alice Springs**	**24.92**	**163**	P		**P**		**15 17 45.5**	**+0.4**
ASAR	**Alice Springs**	**24.92**	**163**	P		**P**		**15 17 46.0**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=346,slow=8.4,SNR=18								
ASAR	**Alice Springs**	**24.92**	**163**	P		**P**		**15 17 44.6**	**-0.5**
JNU	**Nakatsue**	**32.98**	**7**	P		**P**		**15 18 55.8**	**-1.0**
KSAR	**Wonju Array Be**	**37.04**	**2**	P		**P**		**15 19 32.4**	**+0.8**
MK31	**Makanchi Array**	**60.14**	**327**	P		**P**		**15 22 30.2**	**+1.0**
MK31					IAmb	IAmb		15 22 51.9	
	comp=Z,3.3nm,1.4s								
MKAR	**Makanchi Array**	**60.14**	**327**	P		**P**		**15 22 31.5**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=122,slow=8.1,SNR=6.1								
MKAR	**Makanchi Array**	**60.14**	**327**	P		**P**		**15 22 30.0**	**+0.8**
MAKZ	**Makanchi**	**60.32**	**327**	P		**P**		**15 22 31.5**	**+1.1**
MCQ	**Macquarie Isla**	**60.85**	**159**	P		**P**		**15 22 32.9**	**-0.9**
KURBB	**Kurchatov Arra**	**64.40**	**329**	P		**P**		**15 22 58.5**	**+0.9**
	comp=Z,1.2nm,0.9s,baz=124,slow=5.8,SNR=4.2								
KURK	**Kurchatov**	**64.41**	**329**	P		**P**		**15 22 58.1**	**+0.5**
KURK					IAmb	IAmb		15 23 01.9	
	comp=Z,2.3nm,0.9s								
KKAR	**Karatay Array**	**65.45**	**318**	P		**P**		**15 23 05.2**	**+0.5**
ABKAR	**Akbulak array**	**74.53**	**322**	P		**P**		**15 23 60.0**	**-0.2**

*NEIC **03** 15:27:54.2±1.1, 2°.85N±0°.10×124°.44E±0°.10, h331km±10km, mb4.1/20, Error ellipse: s-maj=16.0km s-min=11.9km az=223.0*
*IDC **03** 15:27:55.6±3.4, 2°.84N×124°.49E, h345km±38km, mb3.4/6, mb1 3.5/8, mb1mx3.1/45, mbtmp4.2/8, Error ellipse: s-maj=50.7km s-min=15.6km az=72.0*
ISC 03 15:27:55.5±0.7, **2°.80N**±0°.09×**124°.37E**±0°.10, **h350**km, **n33,** σ1¶**14**/34, **mb3.9**/12, **Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**3.61**	**124**	Pn		**Pn**		**15 28 56.5**	**-4.2**
LUWI	**Luwuk**	**4.13**	**203**	Pn		**Pn**		**15 29 04.4**	**-1.5**
MYLDM	**Lahad Datu**	**6.31**	**292**	Pn		**Pn**		**15 29 28.6**	**-1.4**
SIJI	**Sorong**	**7.80**	**118**	P		**Pn**		**15 29 46.5**	**-0.9**
	0.6nm,0.3s,baz=278,slow=18,SNR=4.1								
KKM	**Kota Kinabalu**	**8.74**	**292**	Pn		**Pn**		**15 29 58.7**	**+0.1**
FAKI	**Fak Fak**	**9.71**	**126**	Pn		**Pn**		**15 30 08.9**	**-1.3**
SOEI	**Soe**	**12.47**	**180**			**Pn**		**15 30 44.0**	**+0.9**
BATI	**Baumata**	**12.94**	**183**	P		**Pn**		**15 30 49.2**	**+0.8**
	baz=30,slow=14								
JAGI	**Jajag, Banyuwa**	**15.13**	**222**	P		**P**		**15 31 12.2**	**+0.5**
MTN	**Manton Dam**	**16.93**	**157**	P		**P**		**15 31 31.9**	**+0.8**
MTN					IAmb	IAmb		15 31 36.9	
	comp=Z,16nm,1.4s								
TPUB	**Ta-pu**	**20.70**	**350**	P		**P**		**15 32 10.1**	**0.0**
FITZ	**Fitzroy Crossi**	**20.80**	**177**	P		**P**		**15 32 11.7**	**+0.8**
	comp=Z,2.6nm,0.3s,baz=353,slow=7.7,SNR=68								
BKNI	**Bangkinang**	**23.44**	**264**	P		**P**		**15 32 34.7**	**-0.4**
WB0	**Warramunga Arr**	**24.49**	**157**	P		**P**		**15 32 44.1**	**-0.3**
WB0					IAmb	IAmb		15 32 46.1	
	comp=Z,9.6nm,1.4s								
WRAB	**Tennant Creek**	**24.62**	**157**	P		**P**		**15 32 45.5**	**-0.1**
WRAB					IAmb	IAmb		15 32 46.3	
	comp=Z,5.2nm,0.4s								
WRA	**Warramunga Arr**	**24.63**	**157**	P		**P**		**15 32 45.6**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=335,slow=10,SNR=79								
WRA				PcP		**PcP**		**15 36 13.5**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=329,slow=2.1,SNR=2.1								
WRA	**Warramunga Arr**	**24.63**	**157**	P		**P**		**15 32 44.6**	**-1.1**
WB2	**Warramunga Arr**	**24.63**	**157**	P		**P**		**15 32 45.5**	**-0.2**
WB2					IAmb	IAmb		15 32 46.6	
	comp=Z,2.9nm,0.5s								
WR0	**Warramunga Arr**	**24.72**	**157**	P		**P**		**15 32 46.6**	**+0.1**
WR0					IAmb	IAmb		15 33 10.2	
	comp=Z,9.9nm,1.5s								
AS31	**Alice Springs**	**27.89**	**161**	P		**P**		**15 33 15.0**	**+0.3**
ASAR	**Alice Springs**	**27.89**	**161**	P		**P**		**15 33 15.1**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=343,slow=7.1,SNR=23								
COCO	**West Island**	**31.15**	**241**	P		**P**		**15 33 41.3**	**-1.9**
FORT	**Forrest**	**33.57**	**174**	P		**P**		**15 34 04.6**	**+0.6**
NWAO	**Narrogin (SRO)**	**36.16**	**190**	P		**P**		**15 34 26.0**	**+0.1**
BBOO	**Buckleboo**	**37.10**	**164**	P		**P**		**15 34 34.5**	**+0.8**
EIDS	**Eidsvold**	**38.14**	**139**	P		**P**		**15 34 41.8**	**-0.7**
EIDS					IAmb	IAmb		15 34 55.6	
	comp=Z,21nm,1.4s								
STKA	**Stephens Creek**	**38.17**	**156**	P		**P**		**15 34 43.2**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=342,slow=9.3,SNR=4.8								
PALK	**Pallekele**	**43.70**	**278**	P		**P**		**15 35 28.2**	**+0.5**
PALK					IAmb	IAmb		15 35 31.9	
	comp=Z,26nm,1.4s								
CAN	**Canberra**	**44.39**	**151**	P		**P**		**15 35 34.9**	**+2.1**
CAN					IAmb	IAmb		15 36 03.5	
	comp=Z,15nm,1.3s								
MK31	**Makanchi Array**	**57.00**	**327**	P		**P**		**15 37 06.3**	**+0.5**
MKAR	**Makanchi Array**	**57.00**	**327**	P		**P**		**15 37 06.5**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=118,slow=7.5,SNR=10.0								
KURK	**Kurchatov**	**61.28**	**329**	P		**P**		**15 37 35.2**	**+0.5**
KIRV	**Kirov**	**79.80**	**329**	P		**P**		**15 39 26.0**	**+0.6**
	comp=Z,10nm,0.6s,baz=101,slow=4.9,SNR=3.9								

*IDC **03** 15:57:21.2±1.5, 33°.77N×139°.04E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.3/42, mbtmp3.4/3, ML2.7/1, Error ellipse: s-maj=40.4km s-min=18.2km az=58.0*
*JMA **03** 15:57:22.3±0.1, 34°.18N×140°.31E, h30km±3km, M3.5*
ISC 03 15:57:21.6±1.4, **34°.11N**±0°.05×**140°.34E**±0°.05, **h28**km±12km, **n25,** σ0¶**72**/29, **5C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JMKN	**Mikurajimanish**	**0.66**	**251**	⇑P		**Pb**		**15 57 35.0**	**+0.4**
JMKN						S		**Sn**	**15 57 43.8**	**-0.8**
BSO3	**Boso 3**	**0.70**	**12**	⇑P		**Pn**		**15 57 35.3**	**-0.1**
BSO3				*eX*				15 57 44.5	
BSO1	**Boso 1**	**0.75**	**44**	⇑P		**Pn**		**15 57 35.5**	**-0.4**
BSO1				*eX*				15 57 45.4	
BSO4	**Boso 4**	**0.87**	**360**	⇑P		**Pn**		**15 57 38.1**	**+0.1**
JNIO	**Niijimaoohara**	**0.92**	**286**	P		**Pn**		**15 57 38.4**	**-0.2**
JSKK	**Shikinejimakit**	**0.96**	**284**	P		**Pn**		**15 57 39.1**	**-0.1**
JSKK				*eS*		**Sb**		**15 57 51.5**	**-0.5**
JTHY	**Toshimahigashi**	**0.96**	**295**	P		**Pn**		**15 57 39.3**	**0.0**
JTHY				*eS*		**Sn**		**15 57 51.5**	**-0.5**
JIM2	**Oshima 3**	**0.96**	**309**	⇓P		**Pn**		**15 57 38.8**	**-0.5**
JKO	**Kozu shima**	**1.00**	**274**	P		**Pn**		**15 57 39.8**	**0.0**
JKO				*eS*		**Sb**		**15 57 53.1**	**0.0**
JKUC	**kamogawauchiur**	**1.05**	**354**	P		**Pn**		**15 57 40.4**	**-0.1**
JKUC				*eS*		**Sn**		**15 57 53.3**	**-0.9**
JHJ2	**Mitsune**	**1.09**	**204**	⇑P		**Pb**		**15 57 41.5**	**-0.4**
JHJ2				S		**Sb**		**15 57 56.2**	**+0.5**
JHJ	**Hachijo jima 2**	**1.09**	**205**	Pn		**Pb**		**15 57 41.5**	**-0.4**
	182nm,0.3s,baz=338,slow=18,SNR=80								
JHJ				Sn		**Sb**		**15 57 56.0**	**+0.2**
	544nm,0.3s,baz=288,slow=23,SNR=15								
KTJ3	**Kamata3**	**1.33**	**308**	⇓P		**Pn**		**15 57 43.8**	**-0.5**
KTJ3				*eS*		**Sn**		**15 57 59.3**	**-1.8**
JIZS	**Izushimoda**	**1.35**	**297**	⇓P		**Pn**		**15 57 44.8**	**+0.2**
JOD2	**Odawara 2**	**1.54**	**318**	⇓P		**Pn**		**15 57 47.0**	**-0.3**
MJAR	**Matsushiro Arr**	**2.98**	**325**	Pn		**Pn**		**15 58 08.3**	**+1.2**
	1.2nm,0.3s,baz=158,slow=13,SNR=83								
MJAR				Sn		**Sn**		**15 58 41.6**	**-0.3**
	1.3nm,0.3s,baz=23,slow=31,SNR=12								
MAT	**Matsushiro**	**2.98**	**325**	P		**Pn**		**15 58 08.9**	**+1.8**
MAT				S		**Sn**		**15 58 42.7**	**+0.7**
H11N2	**WAKE ISLAND Hy**	**27.57**	**115**	T		T		16 31 56.9	
	baz=306,slow=75,SNR=24								
H11N1	**WAKE ISLAND Hy**	**27.58**	**115**	T		T		16 32 05.6	
	baz=306,slow=75,SNR=23								
H11N3	**WAKE ISLAND Hy**	**27.59**	**115**	T		T		16 31 58.1	
	baz=306,slow=75,SNR=15								
H11S3	**WAKE ISLAND Hy**	**28.17**	**117**	T		T		16 32 45.6	
	baz=308,slow=74,SNR=6.5								
H11S1	**WAKE ISLAND Hy**	**28.17**	**117**	T		T		16 32 41.5	
	baz=308,SNR=5.6								
H11S2	**WAKE ISLAND Hy**	**28.18**	**117**	T		T		16 32 49.0	
	baz=308,slow=74,SNR=5.4								
WRA	**Warramunga Arr**	**54.06**	**187**	P		**P**		**16 06 43.6**	**-0.1**
	0.2nm,0.4s,baz=5.4,slow=7.8,SNR=8.2								
ASAR	**Alice Springs**	**57.79**	**187**	P		**P**		**16 07 11.4**	**+1.0**
	0.2nm,0.7s,baz=19,slow=10,SNR=5.3								

*TEH **03** 16:00:15.9, 30°.97N×57°.42E, h10km, ML3.6*
*THR **03** 16:00:16.9±0.7, 30°.90N×57°.57E, h14km±5km, ML3.3*
ISC 03 16:00:16.4±0.9, **30°.98N**±0°.04×**57°.46E**±0°.04, **h10**km, **n20,** σ1¶**37**/21, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KHGB	**Koh Gabri**	**1.04**	**235**	*ePg*		**Pg**		**16 00 35.3**	**-1.1**
KHGB				*e*				16 00 41.0	
CHMN	**Cheshme madani**	**1.12**	**176**	*ePg*		**Pg**		**16 00 37.2**	**-0.7**
CHMN				*e*				16 00 58.1	
TVBK	**TV Kerman**	**1.16**	**212**	*ePg*		**Pb**		**16 00 38.3**	**-0.5**
TVBK				*e*				16 00 43.0	
KRBR	**Kerman**	**1.16**	**211**	*ePg*		**Pg**		**16 00 38.4**	**-0.4**
NGRK	**Negar Kerman**	**1.47**	**206**	*ePg*		**Pg**		**16 00 44.0**	**-0.7**
NGRK				*e*				16 00 49.1	
BSRN	**Basiran**	**1.73**	**55**	*ePn*		**Pb**		**16 00 48.0**	**-0.4**
BSRN				*eSg*		**Sg**		**16 01 11.0**	**-1.1**
BSRN				IAML				16 01 14.1	
	comp=E,265nm,0.2s								
IBAF	**Bafgh**	**1.73**	**291**	*ePg*		**Pb**		**16 00 47.9**	**-0.5**
IBAF				*e*				16 01 18.6	
IKOO	**Kooshah**	**1.95**	**42**	*ePn*		**Pb**		**16 00 51.0**	**-1.2**
IKOO				*e*				16 01 23.3	
TPRV	**Parvadeh(Tabas**	**2.15**	**342**	*ePn*		**Pb**		**16 00 54.2**	**-1.2**
ITEG	**Tejag**	**2.20**	**29**	*ePn*		**Pn**		**16 00 54.2**	**+1.0**
ITEG				*e*				16 01 29.3	
NHDN	**Nehbandan**	**2.26**	**79**	*ePn*		**Pb**		**16 00 56.4**	**-0.9**
NHDN				*e*				16 01 29.8	
TKDS	**Koohdasht(Taba**	**2.64**	**354**	*ePn*		**Pn**		**16 01 01.1**	**+1.9**
TKDS				*e*				16 01 55.5	
TABS	**Tabas**	**2.68**	**354**	*ePn*		**Pb**		**16 01 02.8**	**-1.7**
TABS				*eSg*		**Sg**		**16 01 43.2**	**+0.8**
IDAH	**Dahanechah**	**2.70**	**49**	*e*		Pg		16 01 12.6	+4.5
AFRZ	**Afriz**	**2.77**	**28**	*ePn*		**Pn**		**16 01 02.0**	**+1.0**
YZKH	**Yazd**	**2.82**	**301**	*ePn*		**Pb**		**16 01 05.8**	**-1.1**
IMQN	**Monand**	**2.89**	**40**	*e*				16 01 17.2	
IMQN				*ePn*		**Pn**		**16 01 04.8**	**+2.0**

MTVZ	Mangateitei	2.58	23	P	Pb	16 16 01.8	+0.8
DREZ	Durham Road	2.59	0	P	Pb	16 15 59.7	-1.4
PKE	Pukeiti	2.59	356	P	Pn	16 15 58.2	+2.0
MHCZ	Mount Hutt	2.61	227	P	Pn	16 15 56.4	-0.1
PKVZ	Pokaka	2.64	20	P	Pn	16 15 59.1	+2.1
MOVZ	Moawhango	2.65	27	P	Pn	16 15 57.6	+0.5
WNVZ	Wahianoa	2.67	24	P	Pn	16 15 59.8	+2.3
PXZ	Pawanui	2.67	50	P	Pn	16 15 55.8	-1.5
VRZ	Vera Road	2.69	9	P	Pn	16 15 59.3	+1.8
BHHZ	Black Hill Sta	2.69	33	P	Pn	16 15 58.3	+0.6
KRHZ	Kereru	2.70	39	P	Pn	16 15 57.1	-0.6
MHEZ	Mangahewa	2.70	2	P	Pn	16 16 01.3	-1.7
DRZ	Dome Shelter	2.71	23	P	Pb	16 16 03.9	+0.6
WHVZ	Whangaehu Hut	2.71	24	P	Pn	16 16 00.0	+1.9
FWVZ	Far West T-bar	2.73	23	P	Pb	16 16 01.7	-1.9
TUVZ	Tukino	2.75	24	P	Pn	16 15 59.9	+1.4
WACZ	Wakanui South	2.77	218	P	Pn	16 15 58.9	+0.3
NGZ	Ngauruhoe	2.81	23	P	Pn	16 16 02.4	+3.0
KAHZ	Kahuranaki	2.84	47	P	Pn	16 15 58.4	-1.3
OTVZ	Oturere	2.84	24	P	Pb	16 16 05.1	-0.4
WTVZ	West Tongariro	2.87	22	P	Pn	16 16 02.3	+2.2
WVZ	Waitaha Valley	2.87	242	P	Pn	16 16 02.9	+2.9
TWVZ	Taurewa	2.87	20	P	Pn	16 16 02.7	+2.6
ETVZ	East Tongariro	2.88	24	P	Pn	16 16 02.0	+1.6
TMVZ	Te Maari	2.90	24	P	Pn	16 16 02.5	+1.9
KRVZ	Karewarewa	2.90	23	P	Pn	16 16 03.4	+2.8
KWHZ	Kaweka Forest	2.90	37	P	Pn	16 16 00.1	-0.5
MCHZ	McNeill Hill	3.01	40	P	Pn	16 16 01.2	-0.8
MCHZ				P	Pn	16 16 01.4	-0.6
RPZ	Rata Peaks	3.01	229	Pn	Pn	16 16 01.6	-0.4
	1.1nm,0.3s,baz=166,slow=2.0,SNR=17						
RPZ				Pg	Pb	16 16 10.7	+2.3
	21nm,0.3s,baz=11,slow=3.6,SNR=27						
RPZ				Sn	Sn	16 16 37.9	+0.2
	16nm,0.3s,baz=321,slow=21,SNR=20						
RPZ	Rata Peaks	3.01	229	P	Pn	16 16 02.4	+0.4
KATZ	Kakaramea	3.03	23	P	Pb	16 16 09.2	+0.5
CKHZ	Cape Kidnapper	3.05	47	P	Pg	16 16 15.6	+1.9
RITZ	Rihia Road	3.07	25	P	Pb	16 16 09.3	-0.1
ARCZ	Arundel	3.10	225	P	Pn	16 16 03.3	+0.1
BKZ	Black Stump Fm	3.15	35	P	Pn	16 16 02.9	-1.0
RATZ	Rangitukua	3.15	23	P	Pb	16 16 10.8	+0.1
GCSZ	Gaunt Creek Bo	3.24	240	P	Pb	16 16 09.5	-2.7
WATZ	Wairara	3.29	22	P	Pb	16 16 11.6	-1.4
HIZ	Hauiti	3.30	9	P	Pn	16 16 07.8	+1.8
WHTZ	Whakaora	3.39	24	P	Pb	16 16 17.6	+2.8
MRHZ	Matea Rd	3.40	31	P	Pn	16 16 06.4	-1.0
KUTZ	Kaahu Road	3.52	21	P	Pb	16 16 17.9	+1.0
MTHZ	Maungataniwha	3.56	36	P	Pb	16 16 18.0	+0.4
WHHZ	Waihua	3.56	42	P	Pg	16 16 27.3	+3.9
TLZ	Tolley Road	3.60	17	P	Pn	16 16 12.2	+2.1
ALRZ	Allen Road	3.61	28	P	Pb	16 16 17.9	-0.6
RAHZ	Arahi	3.62	39	P	Pg	16 16 22.5	-2.0
FOZ	Fox Glacier	3.67	240	P	Pb	16 16 15.5	-4.1
PRRZ	Plateau Road	3.69	28	P	Pb	16 16 17.0	-2.8
HSRZ	Hossack Road	3.81	25	P	Pg	16 16 25.4	-2.7
RTZ	Ruatahuna	3.81	35	P	Pb	16 16 23.7	+1.7
SNGZ	Shannon Statio	3.84	40	P	Pg	16 16 27.2	-1.6
MUGZ	Murupara	3.84	32	P	Pn	16 16 13.3	-0.2
RRRZ	Republican Roa	3.87	28	P	Pb	16 16 25.1	+2.2
LBZ	Lake Benmore	3.92	227	P	Pn	16 16 16.2	+1.6
NGRZ	Ngongotaha	3.98	29	P	Pb	16 16 26.8	+2.0
KARZ	Kaharoa	4.07	23	P	Pb	16 16 28.8	+2.4
KMRZ	Kaimai	4.15	20	P	Pg	16 16 31.8	-3.0
ODZ	Otahua Downs	4.16	217	P	Pn	16 16 17.4	-0.4
TOZ	Tahuroa Road	4.17	14	P	Pn	16 16 20.3	+2.5
URZ	Urewera	4.17	33	Pn	Pn	16 16 16.3	-1.5
	0.5nm,0.3s,baz=252,slow=6.4,SNR=8.5						
URZ				Pg	Pb	16 16 26.5	-1.5
	2.7nm,0.3s,baz=242,slow=9.0,SNR=12						
URZ				Lg	Lg	16 17 18.7	
	baz=216,slow=21,SNR=1.1						
URZ	Urewera	4.17	33	P	Pn	16 16 16.4	-1.5
TGRZ	Tauranga	4.35	22	P	Pb	16 16 33.2	+2.2
CNGZ	Carnagh Statio	4.51	44	P	Pg	16 16 38.1	-3.4
JCZ	Jackson Bay	4.58	238	P	Pn	16 16 27.1	+3.4
RUGZ	Raukumara Rang	4.66	36	P	Pn	16 16 24.3	-0.4
AWAZ	Awhitu Peninsu	4.72	4	P	Pn	16 16 28.9	+3.4
PUZ	Puketiti	4.84	42	P	Pb	16 16 42.1	+2.6
ETAZ	East Tamaki Re	4.85	7	P	Pn	16 16 29.3	+2.0
HAZ	Te Kaha	4.88	36	P	Pn	16 16 26.3	-1.3
PKGZ	Pakihiroa	4.90	39	P	Pn	16 16 33.0	+4.9
MBAZ	Motutapu North	5.03	6	P	Pb	16 16 36.6	-6.1
WIAZ	Waiheke Island	5.03	9	P	Pn	16 16 32.0	+2.2
KUZ	Kuaotunu	5.16	14	P	Pn	16 16 33.2	+1.6
MXZ	Matakaoa Point	5.27	38	P	Pb	16 16 47.2	+0.4
CTZ	Chatham Island	7.04	109	P	Pn	16 16 57.3	-0.1
DZM	Mont Dzumac	20.70	339	LR	LR	16 27 53.6	
	comp=Z,69nm,18.1s,baz=1.0,slow=37						
ASAR	Alice Springs	37.99	286	P	P	16 22 32.5	+0.3
	0.3nm,0.7s,baz=123,slow=6.7,SNR=5.3						
WRA	Warramunga Arr	40.07	291	P	P	16 22 48.7	-0.9
	0.2nm,0.6s,baz=127,slow=8.3,SNR=5.2						
TORD	Torodi Ar. Bea	150.74	195	PKPbc	PKPbc	16 35 06.8	+0.1
	0.2nm,0.5s,baz=190,slow=2.2,SNR=1.8						

IDC ***03*** *16:36:13.8±5.5,21°.68N×143°.30E, h313km±57km, mb3.0/10, mb1 3.2/11, mb1mx3.0/41, mbtmp3.7/11, Error ellipse: s-maj=32.6km s-min=13.1km az=87.0*

ISC 03 16:36:12.4±1.2, 21°.7N±0°.1×143°.3E±0°.2, h300km, n11, σ0$59/11, mb3.0/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	15.49	344	P	P	16 39 35.0	+0.3
	0.0nm,0.3s,baz=158,slow=12,SNR=1.8						
KSRS	Korea Array	20.62	323	P	P	16 40 29.4	-0.2
	1.0nm,0.5s,baz=151,slow=9.5,SNR=6.4						
KLR	Kul'dur	29.02	344	P	P	16 41 45.0	0.0
	2.0nm,0.5s,baz=175,slow=6.9,SNR=6.4						
SONM	Songino Array	39.45	320	P	P	16 43 15.4	+1.1
	0.2nm,0.3s,baz=112,slow=6.5,SNR=1.6						
CMAR	Chiang Mai Arr	41.70	274	P	P	16 43 32.5	-0.4
	0.2nm,0.3s,baz=74,slow=6.7,SNR=1.8						
WRA	Warramunga Arr	42.26	193	P	P	16 43 37.5	+0.3
	0.6nm,0.5s,baz=16,slow=9.1,SNR=38						
ASAR	Alice Springs	45.97	192	P	P	16 44 06.7	+0.3
	0.1nm,0.3s,baz=12,slow=7.7,SNR=6.9						
MKAR	Makanchi Array	54.82	313	P	P	16 45 11.6	-0.5
	0.3nm,0.5s,baz=94,slow=9.8,SNR=4.8						
ILAR	Eielson Array	62.02	27	P	P	16 46 00.8	-0.3
	0.2nm,0.4s,baz=262,slow=4.6,SNR=4.8						
ARCES	ARCESS Array B	79.00	342	P	P	16 47 43.4	+0.3
	3.1nm,0.9s,baz=79,slow=7.5,SNR=7.7						
FINES	FINESS Array B	83.27	335	P	P	16 48 04.6	-0.9
	3.9nm,0.9s,baz=65,slow=5.3,SNR=8.5						

IDC ***03*** *17:04:10.1±2.3,22°.82N×12°.00W, h0km, mb4.0/4, mb1 4.1/7, mb1mx3.7/52, mbtmp4.0/7, ML3.9/3, MS4.7/1, Ms1 4.7/1, ms1mx2.7/38, Error ellipse: s-maj=70.3km s-min=22.2km az=72.0*

ISC 03 17:04:13.9±1.6, 22°.9N±0°.1×11°.5W±0°.3, h10km, n12, σ1$37/11, mb4.0/4, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOWA	Kowa	10.94	139	Pn	Pn	17 06 51.6	+1.0
	1.0nm,0.3s,baz=321,slow=11,SNR=13						
KOWA				Sn	Sn	17 08 53.8	+0.7
	0.5nm,0.3s,baz=157,slow=14,SNR=7.4						
KOWA				Lg	Lg	17 10 07.5	
	0.2nm,0.3s,baz=269,slow=21,SNR=1.6						
MDT	Midelt	11.59	30	Lg	Lg	17 10 25.8	
	0.3nm,0.3s,baz=322,slow=16,SNR=4.2						
TORD	Torodi Ar. Bea	15.82	126	Pn	Pn	17 07 58.0	+1.0
	0.3nm,0.3s,baz=313,slow=11,SNR=9.3						
TORD				Sn	Sn	17 10 50.2	-2.3
	0.1nm,0.3s,baz=306,slow=23,SNR=3.8						
DBIC	Dimbokro	17.35	157	P	Pn	17 08 15.1	-1.2
	0.5nm,0.3s,baz=325,slow=12,SNR=4.7						
I48TN	KESRA INFRASON	22.16	50	*i*		19 22 10.0	
	baz=241,slow=304,SNR=2.1						
VAE	Valguarnera	26.56	51	LR	LR	17 20 46.6	
	comp=Z,2μm,21.3s,baz=104,slow=37						
GERES	GERESS Array B	32.67	31	P	P	17 10 46.8	+0.5
	0.7nm,0.6s,baz=214,slow=9.2,SNR=4.9						
FINES	FINESS Array B	46.32	24	P	P	17 12 39.2	-0.5
	1.6nm,0.6s,baz=230,slow=8.9,SNR=6.9						
ARCES	ARCESS Array B	51.59	16	P	P	17 13 19.0	-1.0
	5.6nm,0.9s,baz=236,slow=7.5,SNR=2.9						
MKAR	Makanchi Array	76.14	45	P	P	17 16 02.6	+0.4
	0.4nm,0.5s,baz=289,slow=5.6,SNR=9.5						
WRA	Warramunga Arr	148.07	91	PKPbc	PKPdf	17 23 59.0	+1.6
	0.6nm,0.7s,baz=295,slow=2.6,SNR=7.3						
ASAR	Alice Springs	148.23	98	PKPbc	PKPbc	17 23 59.7	-1.3
	0.6nm,0.7s,baz=299,slow=1.8,SNR=11						

IDC ***03*** *17:08:57.9±1.5,2°.80S×141°.57E, h0km, mb3.7/6, mb1 4.1/8, mb1mx3.8/26, mbtmp3.9/8, ML4.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/30, Error ellipse: s-maj=46.4km s-min=21.3km az=106.0*

NEIC ***03*** *17:09:03.0±1.0, 2°.8S±0°.2×141°.4E±0°.2, h32km±6km, mb4.0/7, Error ellipse: s-maj=35.9km s-min=20.2km az=125.0*

ISC 03 17:09:03.8±1.3, 2°.8S±0°.1×141°.3E±0°.2, h35km, n27, σ1$24/19, mb3.8/6, MS2.9/3, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	Manton Dam	14.12	225	Pn	Pn	17 12 19.7	-1.7
WB0	Warramunga Arr	18.12	201	P	P	17 13 13.9	+1.0
WB0				IAmb	IAmb	17 13 36.6	
	comp=Z,20nm,1.6s						
SOEI	Soe	18.23	247	P	Pn	17 13 11.4	-3.0
SOEI				IAmb	IAmb	17 13 42.0	
	comp=Z,12nm,0.7s						
WR0	Warramunga Arr	18.24	201	P	Pn	17 13 14.2	-0.1
WR0				IAmb	IAmb	17 13 32.5	
	comp=Z,10nm,1.1s						
WRAB	Tennant Creek	18.29	201	P	Pn	17 13 15.0	+0.2
WRAB				IAmb	IAmb	17 13 24.0	
	comp=Z,5.9nm,0.6s						
WB2	Warramunga Arr	18.29	201	P	Pn	17 13 14.9	-0.1
WRA	Warramunga Arr	18.30	201	P	Pn	17 13 15.2	+0.2
	comp=Z,0.5nm,0.3s,baz=20,slow=13,SNR=35						
WRA	Warramunga Arr	18.30	201	P	Pn	17 13 15.1	+0.1
BATI	Baumata	18.95	246	P	Pn	17 13 25.1	+2.1
	comp=Z,1.1nm,0.3s,baz=95,slow=11,SNR=1.9						
FITZ	Fitzroy Crossi	21.56	224	P	P	17 13 51.4	+1.0
	comp=Z,3.2nm,0.7s,baz=47,slow=18,SNR=9.8						
FITZ				LR	LR	17 23 27.9	
	comp=Z,45nm,19.0s,baz=42,slow=40						
FITZ	Fitzroy Crossi	21.56	224	P	P	17 13 49.0	-1.4
AS31	Alice Springs	21.90	198	P	P	17 13 55.1	+1.1
ASAR	Alice Springs	21.90	198	P	P	17 13 53.9	-0.1
	comp=Z,1.1nm,0.6s,baz=29,slow=10,SNR=22						
ASAR	Alice Springs	21.90	198	P	P	17 13 54.8	+0.8
H11S3	WAKE ISLAND Hy	32.80	49	T	T	17 49 59.7	
	baz=232,slow=75,SNR=1302						
H11S2	WAKE ISLAND Hy	32.81	49	T	T	17 50 01.5	
	baz=232,slow=75,SNR=742						
H11S1	WAKE ISLAND Hy	32.82	49	T	T	17 50 01.0	
	baz=232,slow=75,SNR=885						
H11N1	WAKE ISLAND Hy	33.70	47	T	T	17 51 08.3	
	baz=229,slow=76,SNR=71						
H11N2	WAKE ISLAND Hy	33.72	47	T	T	17 51 09.2	
	baz=229,slow=76,SNR=76						
H11N3	WAKE ISLAND Hy	33.72	47	T	T	17 51 09.2	
	baz=229,slow=76,SNR=87						
KSRS	Korea Array	41.96	344	LR	LR	17 32 27.5	
	comp=Z,15nm,20.8s,baz=45,slow=34						
CMAR	Chiang Mai Arr	46.73	299	P	P	17 17 30.8	+0.9
	comp=Z,0.4nm,0.8s,baz=124,slow=7.7,SNR=2.9						
MKAR	Makanchi Array	71.46	322	P	P	17 20 21.6	+0.8
	comp=Z,0.6nm,0.7s,baz=93,slow=7.3,SNR=5.1						
MKAR	Makanchi Array	71.46	322	P	P	17 20 21.4	+0.6
ZALV	Zalesovo Beam	73.34	329	P	P	17 20 31.6	-0.2
	comp=Z,1.5nm,0.8s,baz=104,slow=6.7,SNR=4.3						
ILAR	Eielson Array	84.90	24	P	P	17 21 33.9	-0.9
	comp=Z,0.9nm,0.7s,baz=258,slow=4.8,SNR=7.7						
GEYT	Alibeck	86.32	308	LR	LR	18 04 47.0	
	comp=Z,13nm,18.2s,baz=15,slow=39						

IDC 03 17:11:34.5±4.6, 13°.83N×145°.67E, h46km±35km, mb3.2/3, mb1 3.4/3, mb1mx3.2/46, mbtmp3.5/3, MS3.3/1, Ms1 3.3/1, ms1mx2.6/12, Error ellipse: s-maj=51.3km s-min=34.1km az=81.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.81	253	P	Pn	17 11 50.0	+0.3
	438nm,0.3s,baz=94,slow=3.6,SNR=284						
GUMO				S	Sn	17 12 01.8	+1.1
	432nm,0.3s,baz=0.4,slow=22,SNR=9.5						
H11S3	WAKE ISLAND Hy	20.71	74	T	T	17 38 01.4	
	baz=262,SNR=5.0						
H11S1	WAKE ISLAND Hy	20.72	74	T	T	17 38 09.9	
	baz=262						
H11S2	WAKE ISLAND Hy	20.72	74	T	T	17 37 53.6	
	baz=262						
WRA	Warramunga Arr	35.36	199	P	P	17 18 25.0	-0.9
	0.8nm,1.1s,baz=21,slow=9.7,SNR=2.0						
ASAR	Alice Springs	39.00	197	P	P	17 18 57.4	+0.6
	0.5nm,0.7s,baz=17,slow=9.9,SNR=2.6						
SONM	Songino Array	46.99	324	LR	LR	17 38 31.2	
	comp=Z,30nm,19.1s,baz=153,slow=34						
MKAR	Makanchi Array	61.86	316	P	P	17 21 49.1	-0.1
	0.2nm,0.3s,baz=97,slow=9.2,SNR=2.0						

IPEC ***03*** *17:39:21.5±0.2,51°.50N×16°.28E, h0km, ML1.7/3, Error ellipse: s-maj=1.8km s-min=0.9km az=29.0*

PRU ***03*** *17:39:22.8±0.0,51°.44N×16°.16E, h0km*

VIE ***03*** *17:39:25.3±0.9,51°.28N×16°.60E, h0km, mb1.9/2, ml2.5/3, Error ellipse: s-maj=9.4km s-min=5.1km az=127.0 35 km NW of Wroclaw Suspected Mining induced.*

ISC 03 17:39:22.9±1.3, 51°.41N±0°.06×16°.18E±0°.03, h0km, n24, σ0$67/43, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.58	173	*e*Pg	Pg	17 39 34.3	+0.3
KSP				*e*Sg	Sg	17 39 42.4	+1.0
CHVC	Chvalec	0.83	186	*e*PG	Pg	17 39 39.3	+0.5
CHVC				*e*SG	Sb	17 39 51.0	-1.0
OSTC	Ostas	0.86	179	*e*PG	Pg	17 39 39.9	+0.5
OSTC				*e*SG	Sb	17 39 52.0	-0.8
UPC	Upice	0.91	187	*e*PG	Pg	17 39 40.5	+0.1
UPC				*e*SG	Sb	17 39 53.3	-1.0
	comp=Z,22nm,0.2s						
DPC	Dobruska-Polom	1.07	175	*e*PG	Pg	17 39 43.3	-0.1
DPC				*e*SG	Sb	17 39 58.4	-0.4
	comp=Z,19nm,0.4s						
PVCC	Panska Ves	1.35	230	*e*PG	Pn	17 39 49.1	+0.1
PVCC				*e*SG	Sb	17 40 07.1	+0.2
	comp=Z,44nm,0.2s						
KRLC	Kraliky	1.39	164	*e*PG	Pg	17 39 49.1	-0.5
KRLC				*e*SG	Sg	17 40 07.4	-0.3
	comp=Z,17nm,0.2s						
BRG	Berggiesshubel	1.51	250	PG	Pn	17 39 51.0	-0.2
BRG				SG	Sg	17 40 11.2	-0.2
	22nm,0.4s						
PRU	Pruhonice	1.77	217	*e*SG	Sb	17 40 19.2	+0.3
MORC	Moravsky Berou	1.85	152	*e*PN	Pn	17 39 55.0	-1.0
MORC				*e*SG	Sn	17 40 20.6	+0.4
MORC	Moravsky Berou	1.85	152	*e*Pn	Pn	17 39 55.0	-1.0
	baz=336						
MORC				*e*Sg	Sn	17 40 20.5	+0.4
	6.3nm,0.2s,baz=336						
CLL	Collm	2.00	268	*e*Pg	Pb	17 40 00.0	-0.1
CLL				*e*Sg	Sb	17 40 26.0	+0.5
VRAC	Vranov	2.12	173	*e*PN	Pn	17 40 00.1	+0.4
VRAC				*e*SG	Sg	17 40 30.9	-0.2
VRAC	Vranov	2.12	173	*e*Pn	Pn	17 40 00.1	+0.4
	baz=355						
VRAC				*e*Sg	Sg	17 40 30.9	-0.2
	5.5nm,0.3s,baz=355						
TREC	Trest	2.17	192	*e*SG	Sg	17 40 32.5	0.0
KRUC	Moravsky	2.36	177	*e*PN	Pn	17 40 03.1	+0.2
KRUC				*e*SG	Sg	17 40 37.7	-1.0
KRUC	Moravsky	2.36	177	*e*Pn	Pn	17 40 03.1	+0.2
	baz=358						
KRUC				*e*Sg	Sg	17 40 37.6	-1.1
	2.8nm,0.3s,baz=358						
OJC	Ojcow	2.59	116	*e*Pg	Pb	17 40 10.6	+0.4
OJC				*e*Sg	Sg	17 40 45.5	-0.5
NKC	Novy Kostel	2.65	245	*e*SG	Sg	17 40 47.1	-0.8
	comp=Z,11nm,0.3s						
KHC	Kasperske Hory	2.83	217	*e*PN	Pn	17 40 08.0	-1.4
KHC				*e*PG	Pb	17 40 15.0	+0.6
KHC				*e*SG	Sg	17 40 52.4	-1.4
	comp=Z,3.7nm,0.4s						
VYHS	Vyhne	3.39	149	*e*PG	Pg	17 40 28.5	+0.7
CONA	Conrad Observa	3.50	184	*i* Pn	Pn	17 40 19.7	+1.1
	0.2nm,0.1s						
CONA				*e*Sg	Sg	17 41 15.0	-0.1
	2.8nm,0.2s						
MOA	Molln	3.78	200	Sg	Sg	17 41 25.0	+0.7
	1.6nm,0.2s						
ARSA	Arzberg	4.19	186	*e*Sg	Sg	17 41 37.2	-0.3
	0.4nm,0.2s						

NEIC ***03*** *17:40:38.8±1.1,3°.76N±0°.08×95°.8E±0°.1, h51km±3km, mb4.2/8, Error ellipse: s-maj=18.2km s-min=10.9km az=76.0*

DJA ***03*** *17:40:40.6±1.3,4°.N±5°×9°.6E±°, h18km±8km, M3.9/4, mb4.0/1, MLv3.8/4*

IDC ***03*** *17:40:41.5±6.8,3°.83N×95°.84E, h68km±51km, mb3.5/6, mb1 3.6/8, mb1mx3.4/39, mbtmp3.8/8, ML3.5/2, MS2.6/3, Ms1 2.7/3, ms1mx2.5/30, Error ellipse: s-maj=76.4km s-min=16.8km az=58.0*

ISC 03 17:40:39.1±0.8, 3°.83N±0°.06×95°.79E±0°.09, h50km, n34, σ1$21/35, mb4.0/10, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.75	55	P	Pn	17 40 53.0	-0.5
MLSI				S	Sn	17 41 01.4	-2.6
TPTI		1.50	112	P	Pn	17 41 03.1	-0.5
TPTI				S	Sn	17 41 19.7	-2.4
LHMI	Lhok Sumawe	1.80	40	P	Pn	17 41 09.0	+1.2
LHMI	Lhok Sumawe	1.80	40	Pn	Pn	17 41 08.8	+1.0
GSI	Gunungsitoli	3.08	145	P	Pn	17 41 25.2	-0.1
GSI	Gunungsitoli	3.08	145	Pn	Pn	17 41 23.8	-1.5
PSI	Prapat	3.29	108	P	Pn	17 41 30.4	+2.1
	2.0nm,0.3s,baz=360,slow=5.8,SNR=14						
PSI				S	Sn	17 42 09.2	+2.8
	3.6nm,0.3s,baz=180,slow=21,SNR=5.8						
PSI				LR	LR	17 42 25.2	
	comp=Z,126nm,20.9s,baz=300,slow=32						
RPSI	Rantau Prapat	3.33	110	Pn	Pn	17 41 29.1	+0.4
RPSI	Rantau Prapat	3.33	110		Pn	17 41 30.4	+1.7
RPSI					Sn	17 42 09.2	+2.1
KULM	Kulim	5.06	73		Pn	17 41 52.1	-0.4
IPM	Ipoh	5.26	83		Pn	17 41 54.3	-1.0
CMAR	Chiang Mai Arr	14.86	12	P	P	17 44 09.7	-1.3
	0.1nm,0.3s,baz=198,slow=12,SNR=8.2						
CMAR				LR	LR	17 51 03.2	
	comp=Z,29nm,18.5s,baz=128,slow=42						
CMAR	Chiang Mai Arr	14.86	12		Pn	17 44 06.4	+0.2
PALK	Pallekele	15.40	283	LR	LR	17 49 07.6	
	comp=Z,18nm,20.4s,baz=251,slow=33						
H08S2	Diego Garcia H	25.89	244	T	T	18 12 48.3	
	baz=64						
H08S3	Diego Garcia H	25.89	244	T	T	18 13 09.5	
	baz=64,SNR=12						
H08S1	Diego Carcia H	25.91	244	T	T	18 13 16.6	
	baz=64						
MK31	Makanchi Array	44.37	347	P	P	17 48 44.9	+0.3
MKAR	Makanchi Array	44.37	347	P	P	17 48 44.7	+0.1
	0.5nm,0.4s,baz=156,slow=9.0,SNR=10						
MKAR	Makanchi Array	44.37	347	P	P	17 48 44.3	-0.3
MAKZ	Makanchi	44.45	346	P	P	17 48 45.3	+0.1
MAKZ				IAmb	IAmb	17 48 54.3	
	comp=Z,4.0nm,1.1s						
WB0	Warramunga Arr	44.60	123	P	P	17 48 46.5	-0.3
WRA	Warramunga Arr	44.64	123	P	P	17 48 46.8	-0.3
	comp=Z,0.3nm,0.5s,baz=302,slow=9.4,SNR=9.5						
WRA	Warramunga Arr	44.64	123	P	P	17 48 46.4	-0.7
WB2	Warramunga Arr	44.65	123	P	P	17 48 46.8	-0.3
WB2				IAmb	IAmb	17 49 10.8	
	comp=Z,5.6nm,1.2s						
SONM	Songino Array	44.78	10	P	P	17 48 47.9	0.0
	comp=Z,1.1nm,0.5s,baz=187,slow=9.2,SNR=10.0						
SONM				PcP	PcP	17 50 30.2	+0.9
	comp=Z,0.3nm,0.4s,baz=202,slow=4.3,SNR=3.0						
SONM	Songino Array	44.78	10	P	P	17 48 47.8	-0.2
WR0	Warramunga Arr	44.81	123	P	P	17 48 47.3	-1.2
WR0				IAmb	IAmb	17 49 10.4	
	comp=Z,6.6nm,1.3s						
ASAR	Alice Springs	46.11	128	P	P	17 48 58.8	0.0
	comp=Z,0.2nm,0.3s,baz=300,slow=7.6,SNR=12						
ASAR	Alice Springs	46.11	128	P	P	17 48 57.3	-1.4
ZALV	Zalesovo Beam	50.76	352	P	P	17 49 33.9	-0.1
	comp=Z,1.6nm,0.5s,baz=174,slow=6.8,SNR=9.3						
ABKAR	Akbulak array	54.54	332	P	P	17 50 02.4	+0.4
ABKAR	Akbulak array	54.54	332	P	P	17 50 02.5	+0.4
ABKAR				IAmb	IAmb	17 50 26.7	
	comp=Z,1.8nm,1.1s						
ARCES

*IDC **03** 17:55:46.5±4.0, 18°.52S×174°.66W, h52km±38km, mb3.5/6, mb1 3.9/7, mb1mx3.6/27, mbtmp3.9/7, ML4.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/25, Error ellipse: s-maj=49.7km s-min=20.0km az=137.0*

ISC 03 17:55:44.1±0.8, **18°.8S**±0°.1×**174°.5W**±0°.1, **h35**km, **n29**, σ0**82**/21, **mb4.3/9, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.38**	**95**		**Pn**	**17 56 48.4**	**+0.2**
AFI	**Afiamalu**	**5.49**	**29**	P	**Pn**	**17 57 04.0**	**+0.5**
	6.2nm,0.3s,baz=186,slow=4.5,SNR=4.3						
AFI				S	Sn	17 57 56.9	-8.6
	6.2nm,0.3s,baz=200,slow=20,SNR=1.7						
AFI	**Afiamalu**	**5.49**	**29**	Pn	**Pn**	**17 57 05.0**	**+1.4**
DZM	**Mont Dzumac**	**18.13**	**256**	LR	LR	18 06 05.0	
	comp=Z,44nm,18.5s,baz=16,slow=34						
URZ	**Urewera**	**20.76**	**199**	P	Pn	18 00 24.8	+0.3
	2.8nm,0.3s,baz=296,slow=2.6,SNR=5.6						
URZ	**Urewera**	**20.76**	**199**	P	**P**	**18 00 23.5**	**+1.6**
CTAO	**Charters Tower**	**36.95**	**261**	P	**P**	**18 02 49.5**	**-0.7**
WR0	**Warramunga Arr**	**47.91**	**260**	P	**P**	**18 04 19.1**	**-0.3**
WB0	**Warramunga Arr**	**48.07**	**260**	P	**P**	**18 04 20.4**	**-0.2**
WB0				IAmb	IAmb	18 04 26.1	
	comp=Z,6.4nm,1.4s						
WB2	**Warramunga Arr**	**48.09**	**260**	P	**P**	**18 04 20.8**	**+0.1**
WB2				IAmb	IAmb	18 04 29.7	
	comp=Z,8.4nm,1.4s						
WRAB	**Tennant Creek**	**48.09**	**260**	P	**P**	**18 04 20.6**	**-0.1**
WRAB				IAmb	IAmb	18 04 47.3	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**48.10**	**260**	P	**P**	**18 04 20.8**	**0.0**
	comp=Z,0.9nm,0.3s,baz=97,slow=7.0,SNR=113						
WRA	**Warramunga Arr**	**48.10**	**260**	P	**P**	**18 04 20.6**	**-0.3**
ASAR	**Alice Springs**	**48.11**	**255**	P	**P**	**18 04 21.1**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=90,slow=7.8,SNR=23						
ASAR	**Alice Springs**	**48.11**	**255**	P	**P**	**18 04 21.3**	**+0.4**
KNRA	**Kununurra**	**54.06**	**264**	P	**P**	**18 05 06.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**56.52**	**260**	P	**P**	**18 05 24.4**	**+1.0**
FITZ				IAmb	IAmb	18 05 53.0	
	comp=Z,6.0nm,1.4s						
NVAR	**Mina Array Bea**	**77.53**	**42**	P	**P**	**18 07 37.0**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=233,slow=8.9,SNR=2.5						
NVAR	**Mina Array Bea**	**77.53**	**42**	P	**P**	**18 07 34.9**	**-1.8**
H03S2	**Juan Fernandez**	**84.27**	**124**	T	T	19 40 56.6	
	baz=250,slow=75,SNR=51						
H03S1	**Juan Fernandez**	**84.28**	**124**	T	T	19 40 57.6	
	baz=250,slow=75,SNR=47						
H03S3	**Juan Fernandez**	**84.28**	**124**	T	T	19 40 55.3	
	baz=250,slow=75,SNR=44						
H03N2	**Juan Fernandez**	**84.39**	**123**	T	T	19 41 03.0	
	baz=256,slow=72,SNR=15						
H03N3	**Juan Fernandez**	**84.39**	**123**	T	T	19 41 00.7	
	baz=256,slow=72,SNR=13						
H03N1	**Juan Fernandez**	**84.40**	**123**	T	T	19 41 06.9	
	baz=256,slow=72,SNR=11						
PDAR	**Pinedale Array**	**85.47**	**42**	P	**P**	**18 08 18.5**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=256,slow=2.7,SNR=1.7						
PDAR	**Pinedale Array**	**85.47**	**42**	P	**P**	**18 08 18.0**	**-0.6**
ILAR	**Eielson Array**	**85.92**	**12**	P	**P**	**18 08 19.4**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=209,slow=6.5,SNR=4.2						
ILAR	**Eielson Array**	**85.92**	**12**	P	**P**	**18 08 19.5**	**-0.5**

*NNC **03** 17:59:15.3±0.3, 42°.85N×77°.86E, h0km±1km, mb3.7, mpv3.9, Error ellipse: s-maj=3.1km s-min=0.9km az=175.0*
*KRNET **03** 17:59:15.9±0.1, 42°.85N×77°.86E, h20km, mb3.8*
*SOME **03** 17:59:16.0, 42°.88N×77°.83E, h5km*
*KNET **03** 17:59:17.4±0.6, 42°.86N×77°.64E, h0km, ml3.0, Error ellipse: s-maj=6.4km s-min=4.9km az=171.0*

ISC 03 17:59:16.3±0.9, **42°.87N**±0°.02×**77°.81E**±0°.01, **h7**km±7km, **n87**, σ1**949**/161, **35C-47D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANVS	**Anan'yevo**	**0.13**	**231**	⇓*i*P	**Pg**	**17 59 20.0**	**+0.8**
	baz=47						
ANVS				⇓*i*S	**Sg**	**17 59 22.3**	**+1.0**
	baz=47						
SATY	**Saty**	**0.48**	**66**	⇑*i*P	**Pg**	**17 59 24.9**	**-0.8**
	baz=62						
SATY				⇓*i*S	**Sg**	**17 59 31.8**	**-0.2**
	baz=62						
SATY	**Saty**	**0.48**	**66**	⇑*i*P	**Pg**	**17 59 24.9**	**-0.8**
	257nm,0.1s						
SATY				⇓*i*S	**Sg**	**17 59 31.8**	**-0.2**
	642nm,0.1s						
SATY	**Saty**	**0.48**	**66**	P	**Pg**	**17 59 24.9**	**-0.8**
	257nm,0.1s						
SATY				S	**Sg**	**17 59 31.8**	**-0.2**
	642nm,0.1s						
ZHN	**Zhinishke**	**0.55**	**57**	*e*P	**Pg**	**17 59 26.0**	**-1.0**
	239nm,0.1s						
ZHN				*e*S	**Sg**	**17 59 33.2**	**-1.0**
	222nm,0.1s						
ZHN	**Zhinishke**	**0.55**	**57**	P	**Pg**	**17 59 26.0**	**-1.0**
	239nm,0.1s						
ZHN				S	**Sg**	**17 59 33.2**	**-1.0**
	222nm,0.1s						
PRZ	**Przheval'sk**	**0.58**	**131**	⇑*e*P	**Pg**	**17 59 26.8**	**-0.8**
	baz=31						
PRZ				⇑*i*S	**Sg**	**17 59 34.3**	**-0.9**
	baz=31						
KOTS	**Kotyrbulak**	**0.63**	**306**	*e*P	**Pg**	**17 59 28.8**	**+0.3**
	baz=6.0						
KOTS				*e*S	**Sb**	**17 59 38.0**	**-0.8**
	baz=6.0						
KOTS	**Kotyrbulak**	**0.63**	**306**	*e*P	**Pg**	**17 59 28.8**	**+0.3**
	66nm,0.2s						
KOTS				*e*S	**Sb**	**17 59 38.0**	**-0.8**
	463nm,0.3s						
KOTS	**Kotyrbulak**	**0.63**	**306**	P	**Pg**	**17 59 28.8**	**+0.3**
	66nm,0.2s						
KOTS				S	**Sb**	**17 59 38.0**	**-0.8**
	463nm,0.3s						
MDOK	**Medeo**	**0.63**	**298**	⇑*i*P	**Pg**	**17 59 28.7**	**+0.2**
	baz=98						
MDOK				⇓*i*S	**Sb**	**17 59 37.9**	**-1.0**
	baz=98						
MDOK	**Medeo**	**0.63**	**298**	⇑*i*P	**Pg**	**17 59 28.7**	**+0.2**
	45nm,0.4s						
MDOK				⇓*i*S	**Sb**	**17 59 37.8**	**-1.0**
	280nm,0.4s						
MDOK	**Medeo**	**0.63**	**298**	Pg	**Pg**	**17 59 28.7**	**+0.2**
	45nm,0.4s						
MDOK				Lg	Lg	17 59 37.8	
	280nm,0.4s						
TNSS	**Tian-Shan**	**0.65**	**285**	⇓*i*P	**Pg**	**17 59 29.0**	**0.0**
	baz=87						
TNSS				⇓*i*S	**Sg**	**17 59 38.6**	**+1.0**
	baz=87						
TNSS	**Tian-Shan**	**0.65**	**285**	⇓*i*P	**Pg**	**17 59 29.0**	**0.0**
	70nm,0.3s						
TNSS				⇓*i*S	**Sg**	**17 59 38.6**	**+1.0**
	95nm,0.2s						
TNSS	**Tian-Shan**	**0.65**	**285**	P	**Pg**	**17 59 29.0**	**0.0**
	70nm,0.3s						
TNSS				S	**Sg**	**17 59 38.6**	**+1.0**
	95nm,0.2s						
KURS	**Kuram**	**0.68**	**23**	⇓*i*P	**Pg**	**17 59 29.0**	**-0.4**
	baz=19						
KURS				⇓*i*S	**Sg**	**17 59 38.4**	**+0.2**
	baz=19						
KURS	**Kuram**	**0.68**	**23**	⇓*i*P	**Pg**	**17 59 29.0**	**-0.4**
	24nm,0.1s						
KURS				⇓*i*S	**Sg**	**17 59 38.4**	**+0.2**
	74nm,0.3s						
KURS	**Kuram**	**0.68**	**23**	P	**Pg**	**17 59 29.0**	**-0.4**
	24nm,0.1s						
KURS				S	**Sg**	**17 59 38.4**	**+0.2**
	74nm,0.3s						
KNDC	**Almaty**	**0.71**	**300**	⇑P	**Pg**	**17 59 30.0**	**0.0**
	7.2nm,0.3s						
KNDC				⇓S	**Sb**	**17 59 40.3**	**-0.8**
	132nm,0.5s						
AAA	**Alma-Ata**	**0.74**	**298**	*e*P	**Pg**	**17 59 30.7**	**+0.1**
	40nm,0.1s						
AAA				*e*S	**Sb**	**17 59 41.4**	**-0.5**
	24nm,0.1s						
AAA	**Alma-Ata**	**0.74**	**298**	P	**Pg**	**17 59 30.7**	**+0.1**
	40nm,0.1s						
AAA				S	**Sb**	**17 59 41.4**	**-0.5**
	24nm,0.1s						
KDJ	**Kajisay**	**0.87**	**212**	⇓*i*P	**Pg**	**17 59 32.1**	**-0.9**
	baz=15						
KDJ				⇓*i*S	**Sg**	**17 59 44.1**	**-0.2**
	baz=15						
KPKS	**Kokpek**	**0.88**	**47**	*e*P	**Pg**	**17 59 32.1**	**-1.1**
	437nm,0.1s						
KPKS				*e*S	**Sg**	**17 59 43.8**	**-0.9**
	545nm,0.2s						
IZV	**Izvestkoviy**	**0.89**	**281**	*e*P	**Pg**	**17 59 33.3**	**-0.2**
	baz=82						
IZV				*e*S	**Sb**	**17 59 45.8**	**-0.6**
	baz=82						
IZV	**Izvestkoviy**	**0.89**	**281**	*e*P	**Pg**	**17 59 33.3**	**-0.2**
	81nm,0.1s						
IZV				*e*S	**Sb**	**17 59 45.9**	**-0.6**
	334nm,0.3s						
IZV	**Izvestkoviy**	**0.89**	**281**	P	**Pg**	**17 59 33.3**	**-0.2**
	81nm,0.1s						
IZV				S	**Sb**	**17 59 45.9**	**-0.6**
	334nm,0.3s						
UZB	**Uzynbulak**	**0.94**	**72**	*e*P	**Pg**	**17 59 32.6**	**-1.7**
	baz=70						
UZB				*e*S	**Sg**	**17 59 44.7**	**-1.7**
	baz=70						
UZB	**Uzynbulak**	**0.94**	**72**	*e*P	**Pg**	**17 59 32.6**	**-1.7**
	95nm,0.2s						
UZB				*e*S	**Sg**	**17 59 44.8**	**-1.7**
	92nm,0.1s						
UZB	**Uzynbulak**	**0.94**	**72**	P	**Pg**	**17 59 32.6**	**-1.7**
	95nm,0.2s						
UZB				S	**Sg**	**17 59 44.8**	**-1.7**
	92nm,0.1s						
MTBS	**Maitube**	**1.04**	**285**	⇓*i*P	**Pg**	**17 59 36.1**	**-0.3**
	baz=86						
MTBS				⇑*i*S	**Sb**	**17 59 50.4**	**-0.3**
	baz=86						
MTBS	**Maitube**	**1.04**	**285**	⇓*i*P	**Pg**	**17 59 36.1**	**-0.3**
	87nm,0.3s						
MTBS				⇑*i*S	**Sb**	**17 59 50.4**	**-0.3**
	94nm,0.4s						
MTBS	**Maitube**	**1.04**	**285**	P	**Pg**	**17 59 36.1**	**-0.3**
	87nm,0.3s						
MTBS				S	**Sb**	**17 59 50.4**	**-0.3**
	94nm,0.4s						
KTBS	**Karatobe**	**1.18**	**316**	*e*P	**Pb**	**17 59 38.8**	**-0.3**
	15nm,0.2s						
KTBS				*e*S	**Sn**	**17 59 54.9**	**-0.8**
	129nm,0.3s						
KTBS	**Karatobe**	**1.18**	**316**	P	**Pb**	**17 59 38.8**	**-0.3**
	15nm,0.2s						
KTBS				S	**Sn**	**17 59 54.9**	**-0.8**
	129nm,0.3s						
SHLS	**Shalkode**	**1.25**	**76**	*e*P	**Pg**	**17 59 43.9**	**+3.6**
	baz=77						
SHLS				*e*S	**Sn**	**18 00 04.2**	**+6.7**
	baz=77						
SHLS	**Shalkode**	**1.25**	**76**	*e*P	**Pg**	**17 59 43.9**	**+3.6**
	120nm,0.2s						
SHLS				*e*S	**Sn**	**18 00 04.1**	**+6.7**
	112nm,0.3s						
SHLS	**Shalkode**	**1.25**	**76**	P	**Pg**	**17 59 43.9**	**+3.6**
	120nm,0.2s						
SHLS				S	**Sn**	**18 00 04.1**	**+6.7**
	112nm,0.3s						
MNBS	**Baschi**	**1.29**	**19**	*e*P	**Pb**	**17 59 40.5**	**-0.4**
	26nm,0.1s						
MNBS				*e*S	**Sn**	**17 59 58.1**	**-0.3**
	1μm,0.2s						
MNBS	**Baschi**	**1.29**	**19**	P	**Pb**	**17 59 40.5**	**-0.4**
	26nm,0.1s						
MNBS				S	**Sn**	**17 59 58.1**	**-0.3**
	1μm,0.2s						
ULHL	**Ulahol**	**1.31**	**242**	⇓*i*P	**Pn**	**17 59 40.5**	**-0.8**
	baz=44						
ULHL				⇓*i*S	**Sb**	**17 59 57.0**	**-1.5**
	baz=44						
ULHL	**Ulahol**	**1.31**	**242**	⇓P	**Pn**	**17 59 40.5**	**-0.8**
	120nm,0.2s,SNR=63						
ULHL				⇑S	**Sb**	**17 59 58.2**	**-0.3**
	101nm,0.2s						
PDGK	**Podgornoye**	**1.32**	**69**	P	**Pn**	**17 59 39.3**	**-2.0**
	26nm,0.2s						
PDGK				S	**Sb**	**17 59 56.1**	**-2.5**
	21nm,0.2s						
PDGK	**Podgornoye**	**1.32**	**69**	⇓P	**Pn**	**17 59 39.3**	**-2.0**
	23nm,0.4s						
PDGK				⇑S	**Sb**	**17 59 57.0**	**-1.6**
	37nm,0.4s						
ARXS	**Arharly**	**1.35**	**1**	*e*P	**Pb**	**17 59 41.4**	**-0.5**
	112nm,0.1s						
ARXS				*e*S	**Sg**	**17 59 59.6**	**0.0**
	272nm,0.2s						
ARXS	**Arharly**	**1.35**	**1**	P	**Pb**	**17 59 41.4**	**-0.5**
	112nm,0.1s						
ARXS				S	**Sg**	**17 59 59.6**	**0.0**
	272nm,0.2s						
KST	**Kastek**	**1.36**	**278**	⇓*i*P	**Pn**	**17 59 41.7**	**-0.2**
	baz=79						
KST				⇓*i*S	**Sg**	**18 00 00.6**	**+0.3**
	baz=79						
KST	**Kastek**	**1.36**	**278**	⇓*i*P	**Pn**	**17 59 41.7**	**-0.2**
	79nm,0.2s						
KST				⇓*i*S	**Sg**	**18 00 00.5**	**+0.3**
	80nm,0.3s						
KST	**Kastek**	**1.36**	**278**	P	**Pn**	**17 59 41.7**	**-0.2**
	79nm,0.2s						
KST				S	**Sg**	**18 00 00.5**	**+0.3**
	80nm,0.3s						
BOOM	**Boomskoye usch**	**1.43**	**255**	⇓*i*P	**Pb**	**17 59 42.7**	**-0.7**
	baz=57						
BOOM				⇓*i*S	**Sn**	**18 00 01.4**	**-0.5**
	baz=57						
KUU	**Kurty**	**1.48**	**314**	⇓*i*P	**Pb**	**17 59 43.9**	**-0.3**
	baz=14						
KUU				⇓*e*S	**Sg**	**18 00 04.2**	**+0.2**
	baz=14						
KUU	**Kurty**	**1.48**	**314**	⇓*i*P	**Pb**	**17 59 43.9**	**-0.3**
	21nm,0.3s						
KUU				*e*S	**Sg**	**18 00 04.2**	**+0.2**
	179nm,0.3s						
KUU	**Kurty**	**1.48**	**314**	P	**Pb**	**17 59 43.9**	**-0.3**
	21nm,0.3s						
KUU				S	**Sg**	**18 00 04.2**	**+0.2**
	179nm,0.3s						
TKM2	**Tokmak 2**	**1.62**	**273**	⇑*i*P	**Pb**	**17 59 46.8**	**0.0**
	baz=73						
TKM2				⇑*i*S	**Sg**	**18 00 08.9**	**+0.4**
	baz=73						
TKM2	**Tokmak 2**	**1.62**	**273**	⇓P	**Pb**	**17 59 46.3**	**-0.5**
	14nm,0.1s,SNR=25						
TKM2				⇑S	**Sg**	**18 00 09.0**	**+0.4**
	183nm,0.2s						
TKM2	**Tokmak 2**	**1.62**	**273**	⇑P	**Pb**	**17 59 46.2**	**-0.5**
	7.0nm,0.5s						
TKM2				⇑S	**Sg**	**18 00 08.7**	**+0.1**
	45nm,0.3s						
KTMS	**Ketmen**	**1.95**	**72**	*e*P	**Pn**	**17 59 50.2**	**+0.2**
	baz=71						
KTMS				*e*S	**Sn**	**18 00 14.7**	**-0.1**
	baz=71						
KTMS	**Ketmen**	**1.95**	**72**	*e*P	**Pn**	**17 59 50.2**	**+0.2**
	65nm,0.2s						
KTMS				*e*S	**Sn**	**18 00 14.7**	**-0.1**
	70nm,0.2s						
KTMS	**Ketmen**	**1.95**	**72**	P	**Pn**	**17 59 50.2**	**+0.2**
	65nm,0.2s						
KTMS				S	**Sn**	**18 00 14.7**	**-0.1**
	70nm,0.2s						
DJR	**Jarkent**	**2.06**	**44**	*e*P	**Pb**	**17 59 52.8**	**-1.2**
	25nm,0.2s						
DJR				*e*S	**Sb**	**18 00 19.5**	**-0.3**
	115nm,0.4s						
DJR	**Jarkent**	**2.06**	**44**	Pg	**Pb**	**17 59 52.8**	**-1.2**
	25nm,0.2s						
DJR				Lg	Lg	18 00 19.5	
	115nm,0.4s						
KBK	**Karagaybulak**	**2.12**	**265**	⇓*i*P	**Pb**	**17 59 54.5**	**-0.6**
	baz=66						
KBK				⇓*i*S	**Sb**	**18 00 20.9**	**-0.7**
	baz=66						
KBK	**Karagaybulak**	**2.12**	**265**	⇑P	**Pb**	**17 59 55.2**	**+0.1**
	35nm,0.2s,SNR=39						
TDK	**Taldyqorghan**	**2.18**	**11**	*e*P	**Pb**	**17 59 55.7**	**-0.4**
	40nm,0.1s						
TDK				*e*S	**Sb**	**18 00 24.3**	**+1.0**
	577nm,0.2s						
TDK	**Taldyqorghan**	**2.18**	**11**	Pg	**Pb**	**17 59 55.7**	**-0.4**
	40nm,0.1s						
TDK				Lg	Lg	18 00 24.3	
	577nm,0.2s						
CHMS	**Chumysh**	**2.25**	**274**	⇑*i*P	**Pb**	**17 59 56.5**	**-0.8**
	baz=75						
CHMS				⇑*i*S	**Sb**	**18 00 24.7**	**-0.6**
	baz=75						
CHMS	**Chumysh**	**2.25**	**274**	⇓P	**Pb**	**17 59 56.4**	**-0.8**
	14nm,0.2s,SNR=23						
FRU1	**Bishkek**	**2.34**	**270**	⇑*i*P	**Pb**	**17 59 57.5**	**-1.3**
	baz=70						
FRU1				⇑*i*S	**Sb**	**18 00 26.9**	**-1.0**
	baz=70						
SGDS	**Sogindy**	**2.40**	**285**	Pg	**Pb**	**17 59 59.5**	**-0.4**
	14nm,0.2s						
SGDS				Lg	Lg	18 00 31.2	
	55nm,0.2s						
AAK	**Ala-Archa**	**2.45**	**266**	⇑*i*P	**Pb**	**17 59 59.2**	**-1.6**
	baz=66						
AAK				⇑*i*S	**Sb**	**18 00 29.8**	**-1.4**
	baz=66						
AAK	**Ala-Archa**	**2.45**	**266**	⇓P	**Pb**	**18 00 00.5**	**-0.3**
	32nm,0.2s,SNR=59						
AAK	**Ala-Archa**	**2.45**	**266**	⇓Pn	**Pn**	**17 59 58.1**	**+1.3**
	30nm,0.5s						
AAK				⇓Lg	Lg	18 00 33.9	
	48nm,0.6s						
UCH	**Uchtor**	**2.52**	**256**	⇑*i*P	**Pb**	**18 00 00.0**	**-2.1**
	baz=57						
UCH				⇑*e*S	**Sn**	**18 00 30.5**	**+1.3**
	baz=57						
UCH	**Uchtor**	**2.52**	**256**	⇑P	**Pb**	**18 00 01.5**	**-0.6**
	7.4nm,0.2s,SNR=6.5						
ARLS	**Aral**	**2.77**	**250**	⇓*e*P	**Pn**	**18 00 02.7**	**+1.4**
	baz=51						
ARLS				⇓*i*S	**Sn**	**18 00 36.1**	**+1.1**
	baz=51						
EKS2	**Erkin-Say**	**2.97**	**267**	⇓*i*P	**Pn**	**18 00 06.4**	**+2.4**
	baz=68						
EKS2				⇓*i*S	**Sn**	**18 00 41.8**	**+1.8**
	baz=68						
AML	**Almayashu**	**3.13**	**258**	⇑*i*P	**Pn**	**18 00 08.5**	**+2.1**
	baz=58						
AML				⇑*i*S	**Sn**	**18 00 45.5**	**+1.3**
	baz=58						
MRKS	**Merke**	**3.37**	**269**	*e*P	**Pb**	**18 00 17.0**	**+0.5**
	12nm,0.4s						
MRKS				*e*S	**Sg**	**18 01 01.3**	**-3.3**
	27nm,0.2s						
MRKS	**Merke**	**3.37**	**269**	Pg	**Pb**	**18 00 17.0**	**+0.5**
	12nm,0.4s						
MRKS				Lg	Lg	18 01 01.3	
	27nm,0.2s						
BTLS	**Baital**	**3.48**	**310**	*e*P	**Pb**	**18 00 19.7**	**+1.5**
	1.9nm,0.5s						
BTLS				*e*S	**Sg**	**18 01 05.1**	**-2.9**
	2.8nm,0.3s						
BTLS	**Baital**	**3.48**	**310**	Pg	**Pb**	**18 00 19.7**	**+1.5**
	1.9nm,0.5s						
BTLS				Lg	Lg	18 01 05.1	
	2.8nm,0.3s						
MNAS	**Manas**	**3.93**	**266**	⇑*e*P	**Pn**	**18 00 18.8**	**+1.6**
	baz=67						
MNAS				⇑*i*S	**Sn**	**18 01 04.1**	**+0.5**
	baz=67						
MAKZ	**Makanchi**	**4.93**	**36**	⇑Pn	**Pn**	**18 00 29.7**	**-1.1**
	1.0nm,0.7s						
MAKZ				⇑Pg	**Pb**	**18 00 45.5**	**+2.5**
	3.4nm,1.1s						
MAKZ				⇑Sn	**Sn**	**18 01 28.2**	**0.0**
	2.0nm,0.8s						
MAKZ				⇑Lg	Lg	18 01 49.5	
	4.6nm,0.8s						
MK31	**Makanchi Array**	**5.06**	**38**	Pn	**Pn**	**18 00 33.1**	**+0.5**
	1.0nm,0.5s,baz=213,slow=15,SNR=24						
MK31				⇓Pg	**Pb**	**18 00 47.6**	**+2.5**
	1.4nm,0.6s,baz=218,slow=16,SNR=5.1						
MK31				⇓Sn	**Sn**	**18 01 31.6**	**+0.3**
	1.5nm,0.4s,baz=215,slow=25,SNR=4.7						
MK31				⇓Lg	Lg	18 01 52.9	
	2.1nm,0.5s,baz=217,slow=25,SNR=10						
KK31	**Karatay Array**	**5.36**	**275**	⇑Pg	**Pb**	**18 00 53.8**	**+3.6**
	1.5nm,0.5s,baz=93,slow=15,SNR=27						
KK31				Lg	Lg	18 02 05.0	
	9.7nm,0.8s,baz=90,slow=30,SNR=11						
IUG	**Iuzhnay**	**5.79**	**266**	Pg	**Pg**	**18 01 03.2**	**-4.1**
	5.0nm,0.3s						
IUG				Lg	Lg	18 02 20.0	
	15nm,0.3s						
KURBB	**Kurchatov Arra**	**7.78**	**3**	⇓Lg	Lg	18 03 21.7	
	9.8nm,0.6s						

*IDC **03** 18:06:46.7±0.7, 64°.70N×17°.53W, h0km, mb3.7/12, mb1 3.9/14, mb1mx3.7/55, mbtmp3.7/14, ML3.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/46, Error ellipse: s-maj=21.9km s-min=10.6km az=9.0*
*NEIC **03** 18:06:48.0±2.0, 64°.71N±0°.10×17°.7W±0°.2, h10km±1km, mb4.4/8, Error ellipse: s-maj=16.9km s-min=12.3km az=190.0*
*REY **03** 18:06:47.1, 64°.68N×17°.47W, h7km*

ISC 03 18:06:47.8±0.5, **64°.69N**±0°.02×**17°.49W**±0°.02, **h10**km, **n88**, σ1**968**/100, **mb3.8**/15, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.11**	**28**	P	**Pg**	**18 06 49.9**	**-0.8**
	baz=22						
IVON	**Vonarskard**	**0.12**	**261**	P	**Pg**	**18 06 49.8**	**-0.9**
	baz=266						
IURH	**Urdarhals**	**0.20**	**48**	P	**Pg**	**18 06 51.2**	**-0.8**
	baz=45						
IGRF	**Grimsfjall**	**0.30**	**161**	P	**Pg**	**18 06 52.6**	**-1.3**
	baz=163						
IKVE	**Kverkfjoll**	**0.35**	**92**	P	**Pg**	**18 06 53.8**	**-1.0**
	baz=90						
IKVE				S	**Sg**	**18 06 58.8**	**-0.7**
	baz=90						
IHUS	**Husbondi**	**0.40**	**190**	P	**Pg**	**18 06 54.8**	**-1.0**
	baz=192						
IHUS				S	**Sg**	**18 07 00.9**	**-0.3**
	baz=192						
ISKR	**Skrokkalda**	**0.41**	**252**	P	**Pb**	**18 06 55.1**	**-2.1**
	baz=253						
THOR	**Thorvaldshraun**	**0.42**	**55**	P	**Pg**	**18 06 54.9**	**-1.2**
	baz=53						
IVOT	**Vottur**	**0.44**	**162**	P	**Pg**	**18 06 55.2**	**-1.3**
	baz=163						
IVOT				S	**Sg**	**18 07 01.0**	**-1.3**
	baz=163						
IKRE	**Kreppuhraun**	**0.48**	**78**	P	**Pg**	**18 06 55.5**	**-1.7**
	baz=77						
IKRE				S	**Sg**	**18 07 02.8**	**-0.8**
	baz=77						
IJOK	**Jokulheimar**	**0.49**	**221**	P	**Pg**	**18 06 56.2**	**-1.2**
	baz=222						
IJOK				S	**Sg**	**18 07 03.4**	**-0.6**
	baz=222						
IASK	**Askja**	**0.51**	**44**	P	**Pg**	**18 06 56.4**	**-1.4**
	baz=43						
IASK				S	**Sg**	**18 07 03.7**	**-0.8**
	baz=43						
IMKO	**Mokollar**	**0.57**	**59**	P	**Pg**	**18 06 57.3**	**-1.5**
	baz=58						
ISVA	**Svartarkot**	**0.66**	**9**	P	**Pg**	**18 06 59.0**	**-1.5**
	baz=7.7						

IREN	**Reynihlio** baz=14	**0.99**	**14**	P		**Pg**	**18 07 04.7**	**-2.1**
IKVO	**Krokottuvotn** baz=13	**1.06**	**14**	P		**Pg**	**18 07 05.7**	**-2.4**
ISNB	**Snabyli** baz=209	**1.08**	**208**	P		**Pg**	**18 07 06.2**	**-2.4**
IGRS	**Grimsstaoir** baz=30	**1.11**	**31**	P		**Pb**	**18 07 06.6**	**-2.5**
ISLY	**Slysaalda** baz=221	**1.12**	**220**	P		**Pb**	**18 07 07.1**	**-2.2**
IFED	**Fedgar** baz=237	**1.17**	**236**	P		**Pb**	**18 07 08.2**	**-1.9**
IRJU	**Rjupnafell** baz=207	**1.20**	**206**	P		**Pb**	**18 07 08.2**	**-2.3**
ISKI	**Skildingahlsh** baz=8.6	**1.20**	**9**	P		**Pb**	**18 07 08.0**	**-2.6**
ISKI				S		**Sb**	**18 07 24.2**	**-1.9**
IGHA	**Grjothals** baz=16	**1.21**	**16**	P		**Pb**	**18 07 08.3**	**-2.5**
IMJO	**Mjoaskard** baz=233	**1.22**	**232**	P		**Pb**	**18 07 09.0**	**-1.9**
IGRA	**Granastaoir** baz=358	**1.23**	**358**	P		**Pn**	**18 07 08.7**	**-2.3**
IGYG	**Gygjarholskot** baz=252	**1.25**	**252**	P		**Pn**	**18 07 09.1**	**-2.1**
IDIM	**Dimmadalss** baz=9.7	**1.30**	**10**	P		**Pn**	**18 07 09.8**	**-2.1**
IHAU	**Haukadalur** baz=238	**1.30**	**237**	P		**Pn**	**18 07 10.3**	**-1.6**
IHVO	**Lagu-Hvolar** baz=208	**1.31**	**208**	P		**Pn**	**18 07 10.3**	**-1.9**
IHED	**Heoinshofoi** baz=2.6	**1.40**	**3**	P		**Pn**	**18 07 11.3**	**-2.0**
IHED				S		**Sb**	**18 07 30.3**	**-1.5**
IALF	**Alftagrof** baz=213	**1.42**	**212**	P		**Pn**	**18 07 11.9**	**-1.7**
IBRE	**Brettingsstaoi** baz=353	**1.45**	**353**	P		**Pn**	**18 07 12.3**	**-1.7**
IESK	**Eystri-Skogar** baz=218	**1.45**	**217**	P		**Pn**	**18 07 12.5**	**-1.6**
ISAU	**Saurbar** baz=243	**1.46**	**242**	P		**Pn**	**18 07 12.1**	**-2.0**
IGIL	**Gilhagi** baz=18	**1.47**	**18**	P		**Pn**	**18 07 12.2**	**-2.1**
IMID	**Miomork** baz=227	**1.48**	**226**	P		**Pn**	**18 07 13.1**	**-1.3**
ISIG	**Siglufjorour** baz=338	**1.56**	**338**	P		**Pn**	**18 07 14.2**	**-1.4**
IASM	**Asmuli** baz=240	**1.61**	**239**	P		**Pn**	**18 07 15.2**	**-1.0**
BORG	**Borgarnes** 18nm,0.3s,baz=100,slow=9.9,SNR=46	**1.65**	**274**	Pg		**Pn**	**18 07 15.3**	**-1.4**
BORG				Lg		Lg	18 07 38.9	
	7.3nm,0.3s,baz=192,slow=22,SNR=7.1							
BORG	**Borgarnes**	**1.65**	**274**	Pn		**Pn**	**18 07 15.1**	**-1.7**
IKRO	**Krokur** baz=251	**1.69**	**251**	P		**Pn**	**18 07 15.5**	**-1.8**
ISOL	**Solvholt** baz=245	**1.69**	**245**	P		**Pn**	**18 07 15.7**	**-1.6**
IHEI	**Heioarbar** baz=255	**1.70**	**255**	P		**Pn**	**18 07 16.2**	**-1.3**
IVME	**Vestmannaeyjar** baz=226	**1.77**	**225**	P		**Pn**	**18 07 17.6**	**-0.8**
ILEI	**Leirhofn** baz=13	**1.77**	**13**	P		**Pn**	**18 07 17.2**	**-1.2**
IHRN	**Hraun** baz=323	**1.80**	**323**	P		**Pn**	**18 07 17.6**	**-1.2**
SCO	**Scoresbysund**	**6.06**	**346**			**Pn**	**18 08 16.5**	**-0.8**
SCO	**Scoresbysund** baz=174,slow=9.3	**6.06**	**346**	*e*		**Pn**	**18 08 16.4**	**-0.8**
SCO				*i* P		**Pn**	**18 08 17.5**	**+0.2**
SCO				*i* S		**Sn**	**18 09 31.3**	**+4.7**
SCO				IAML			18 09 40.6	
	comp=Z,1.6nm,0.5s							
EKA	**Eskdalemuir Ar** baz=321,slow=13,SNR=8.0	**11.77**	**136**	Pn		**Pn**	**18 09 36.0**	**+0.4**
FINES	**FINESS Array B** comp=Z,0.1nm,0.3s,baz=297,slow=9.2,SNR=1.7	**19.70**	**79**	P		**Pn**	**18 11 18.1**	**-0.1**
CLL	**Collm**	**20.71**	**116**	*i* P		Pn	18 11 29.4	-0.8
BRG	**Berggiesshubel** comp=Z,7.7nm,1.1s	**21.42**	**115**	*e*P		**P**	**18 11 36.7**	**+1.2**
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P		**P**	**18 11 51.3**	**+2.2**
DPC	**Dobruska-Polom**	**22.77**	**113**	*e*P		**P**	**18 11 52.7**	**+2.7**
GERES	**GERESS Array B** comp=Z,0.7nm,0.8s,baz=310,slow=6.6,SNR=4.9	**22.96**	**119**	P		**P**	**18 11 54.0**	**+1.8**
GERES	**GERESS Array B**	**22.96**	**119**	P		**P**	**18 11 54.4**	**+2.3**
TREC	**Trest**	**23.28**	**116**	*e*P		**P**	**18 11 58.8**	**+3.5**
VRAC	**Vranov** comp=Z,32nm,19.4s,baz=334,slow=39	**23.70**	**114**	LR		LR	18 22 03.8	
ESDC	**Sonseca Array** comp=Z,1.3nm,0.7s,baz=352,slow=9.4,SNR=5.8	**26.27**	**156**	P		**P**	**18 12 24.6**	**+1.6**
AKASG	**Malin Array Be** comp=Z,0.1nm,0.3s,baz=320,slow=9.3,SNR=1.2	**27.84**	**98**	P		**P**	**18 12 37.0**	**0.0**
AKASG	**Malin Array Be** comp=Z,0.5nm,0.7s	**27.84**	**98**	IAmb		IAmb	18 12 38.3	
MLR	**Muntele Rosu**	**30.53**	**108**	P		**P**	**18 13 01.8**	**+0.7**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.9s,baz=354,slow=7.7,SNR=2.4	**38.48**	**105**	P		**P**	**18 14 10.2**	**+0.4**
ILAR	**Eielson Array** comp=Z,1.4nm,1.1s,baz=20,slow=11,SNR=6.1	**45.66**	**332**	P		**P**	**18 15 09.5**	**+1.5**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.5s,baz=320,slow=6.2,SNR=2.2	**47.61**	**51**	P		**P**	**18 15 22.2**	**-1.1**
KURK	**Kurchatov** comp=Z,3.0nm,0.8s	**48.09**	**58**	P		**P**	**18 15 28.6**	**+1.5**
KURK				IAmb		IAmb	18 15 29.5	
MKAR	**Makanchi Array** comp=Z,1.1nm,0.9s,baz=0.0,slow=6.3,SNR=5.6	**52.71**	**58**	P		**P**	**18 16 02.6**	**+0.5**
MKAR	**Makanchi Array**	**52.71**	**58**	P		**P**	**18 16 02.9**	**+0.8**
TORD	**Torodi Ar. Bea** comp=Z,1.1nm,0.8s,baz=335,slow=8.4,SNR=5.1	**53.16**	**156**	P		**P**	**18 16 04.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P		**P**	**18 16 05.6**	**-0.1**
PDAR	**Pinedale Array** comp=Z,0.9nm,0.8s,baz=46,slow=3.9,SNR=2.0	**53.17**	**293**	P		**P**	**18 16 05.0**	**-0.8**
BTK	**Batken** comp=Z,6.3nm,1.1s	**53.95**	**72**	P		**P**	**18 16 12.1**	**+0.7**
BTK				IAmb		IAmb	18 16 16.9	
GAR	**Garm**	**54.64**	**73**	P		**P**	**18 16 19.0**	**+2.6**
PV13	**Radium Mtn., P**	**56.79**	**290**	P		**P**	**18 16 31.4**	**-0.7**
SONM	**Songino Array** comp=Z,0.6nm,0.8s,baz=337,slow=6.7,SNR=3.2	**59.62**	**40**	P		**P**	**18 16 51.8**	**+0.3**
SONM	**Songino Array**	**59.62**	**40**	P		**P**	**18 16 52.8**	**+1.3**
TXAR	**Lajitas Array** comp=Z,0.7nm,0.9s,baz=57,slow=4.6,SNR=3.9	**62.28**	**280**	P		**P**	**18 17 11.1**	**+1.2**
TXAR	**Lajitas Array**	**62.28**	**280**	P		**P**	**18 17 10.9**	**+1.0**
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.8s,baz=322,slow=7.3,SNR=6.1	**84.11**	**59**	P		**P**	**18 19 19.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P		**P**	**18 19 19.9**	**+1.2**

IDC 03 18:11:54.3±2.8, 7.16N×94.12E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/44, mbtmp3.4/4, ML3.6/1, MS2.8/2, Ms1 2.9/2, ms1mx2.5/30, Error ellipse: s-maj=92.3km s-min=32.5km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.18**	**22**	Pn		Pn		18 14 49.1	0.0
	0.1nm,0.3s,baz=213,slow=14,SNR=5.5								
CMAR				LR		LR		18 19 29.8	
	comp=Z,45nm,18.0s,baz=354,slow=37								
PALK	**Pallekele**	**13.32**	**271**	LR		LR		18 20 07.5	
	comp=Z,32nm,18.4s,baz=222,slow=37								
H08S3	**Diego Garcia H** baz=56,slow=74	**26.10**	**236**	T		T		18 44 22.2	
H08S2	**Diego Garcia H** baz=56,slow=74	**26.11**	**236**	T		T		18 44 19.4	
H08S1	**Diego Carcia H** baz=56	**26.12**	**236**	T		T		18 44 20.5	
MKAR	**Makanchi Array** 0.5nm,0.6s,baz=161,slow=6.5,SNR=2.9	**40.78**	**348**	P		P		18 19 36.6	-0.6
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=169,slow=9.7,SNR=2.4	**47.26**	**353**	P		P		18 20 29.6	+0.5
WRA	**Warramunga Arr** 0.3nm,0.8s,baz=307,slow=8.1,SNR=1.9	**47.86**	**125**	P		P		18 20 34.2	-0.2

*IDC **03** 18:13:28.7±1.2, 6.77N×72.88W, h164km±11km, mb3.5/9, mb1 3.8/12, mb1mx3.5/35, mbtmp4.1/12, MS2.8/1, Ms1 2.8/1, ms1mx2.3/27, Error ellipse: s-maj=21.4km s-min=13.2km az=132.0*
*NEIC **03** 18:13:29.0±1.7, 6.7N±0.1×72.9W±0.1, h169km±10km, mb4.5/16, Error ellipse: s-maj=20.2km s-min=12.3km az=131.0*

*RSNC **03** 18:13:29.7±1.1, 6.83N×73.13W, h150km±4km, ML3.8, Mw4.2, Fault plane solution: NP1:φs122.00000°, δ72.00000°, λ54.00000°.*

ISC 03 18:13:28.5±0.6, 6.84N±0.03×73.11W±0.04, h157km±5km, n79, σ1s84/114, mb4.3/16, 8C-7D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**195**	⇓*i*P		**Pn**		**18 13 49.9**	**-0.1**
BARC				*e*S		**Sn**		**18 14 05.4**	**-1.1**
BARC				*i*				18 14 06.5	
	comp=Z,1μm,0.2s								
PAMC	**Pamplona, Colo**	**0.64**	**40**	⇓*i*P		**Pn**		**18 13 52.6**	**+0.7**
PAMC				*e*S		**Sn**		**18 14 09.6**	**-0.2**
PAMC				*i*				18 14 12.3	
	comp=Z,2μm,0.5s								
BRRC	**Barranca, Sant**	**0.65**	**294**	⇑*i*P		**Pn**		**18 13 51.7**	**+0.3**
BRRC				*e*S		**Sn**		**18 14 08.9**	**0.0**
BRRC				*i*				18 14 11.3	
	comp=Z,952nm,0.3s								
RUSC	**La Rusia**	**0.94**	**178**	⇑*i*P		**Pn**		**18 13 53.9**	**-0.2**
RUSC				*e*S		**Sn**		**18 14 12.8**	**-0.8**
RUSC				*i*				18 14 14.6	
	comp=Z,664nm,0.3s								
PTBC	**PUERTO BERRIO,**	**1.37**	**257**	⇑*i*P		**Pn**		**18 13 56.4**	**-0.9**
PTBC				*e*S		**Sn**		**18 14 17.9**	**-1.4**
PTBC				*i*				18 14 25.2	
	comp=Z,1μm,0.4s								
TAMC	**Tame, Arauca**	**1.38**	**107**	⇑*i*P		Pn		18 13 58.2	+0.9
TAMC				*i*				18 14 19.1	
	comp=Z,633nm,0.4s								
TAMC				*e*S		**Sn**		**18 14 20.1**	**+0.7**
OCAC	**Ocana**	**1.40**	**352**	*e*P		**Pn**		**18 13 58.0**	**+0.2**
OCAC				*e*S		**Sn**		**18 14 19.8**	**-0.5**
OCAC				*i*				18 14 25.3	
	comp=Z,1μm,0.5s								
SPBC	**San Pablo de B**	**1.52**	**219**	⇑*i*P		**Pn**		**18 13 59.0**	**+0.1**
SPBC				*e*S		**Sn**		**18 14 21.4**	**-0.8**
SPBC				*i*				18 14 28.2	
	comp=Z,1μm,0.5s								
CHIC	**Chingaza**	**2.28**	**196**	⇑*i*P		**Pn**		**18 14 07.9**	**+0.1**
CHIC				*e*S		**Sn**		**18 14 37.4**	**-0.6**
CHIC				*i*				18 14 44.7	
	comp=Z,486nm,0.5s								
ROSC	**El Rosal**	**2.32**	**211**	P		**Pn**		**18 14 09.8**	**+1.5**
	comp=Z,168nm,0.3s,baz=130,slow=17,SNR=302								
ROSC				S		**Sn**		**18 14 36.5**	**-2.3**
	comp=Z,148nm,0.3s,baz=72,slow=20,SNR=8.6								
HELC	**Santa Helena**	**2.48**	**255**	*e*P		**Pn**		**18 14 10.0**	**-0.2**
HELC				*e*S		**Sn**		**18 14 42.7**	**+0.5**
HELC				*i*				18 14 49.7	
	comp=Z,550nm,0.5s								
UREC	**San Jos de Ur**	**2.56**	**291**	*e*P		**Pn**		**18 14 09.8**	**-0.9**
UREC				*e*S		**Sn**		**18 14 41.2**	**-2.2**
UREC				*i*				18 14 50.5	
	comp=Z,534nm,0.3s								
GUY2C	**Guyana, Caldas**	**2.76**	**234**	*e*P		**Pn**		**18 14 14.4**	**+0.9**
GUY2C				*e*S		**Sn**		**18 14 48.6**	**+0.3**
GUY2C				*i*				18 14 58.4	
	comp=Z,620nm,0.5s								
PTGC	**Puerto Gaitan,**	**2.80**	**160**	⇑*i*P		**Pn**		**18 14 13.1**	**-0.6**
PTGC				*i*				18 14 46.4	
	comp=Z,219nm,0.4s								
PTGC				*e*S		**Sn**		**18 14 46.5**	**-2.2**
CBOC	**Ciudad Bolivar**	**3.04**	**252**	⇓*e*P		**Pn**		**18 14 17.4**	**+0.6**
CBOC				*e*S		**Sn**		**18 14 54.5**	**+0.3**
CBOC				*i*				18 15 11.5	
	comp=Z,216nm,0.5s								
DBBC	**Dabeiba**	**3.08**	**273**	⇓*e*P		**Pn**		**18 14 17.4**	**+0.2**
DBBC				*e*S		**Sn**		**18 14 55.0**	**+0.1**
TOLC	**Tolima**	**3.14**	**225**	*e*P		**Pn**		**18 14 18.9**	**+0.6**
TOLC				*e*S		**Sn**		**18 14 56.7**	**0.0**
MOTC	**Monteria, Cord**	**3.18**	**307**	⇓*i*P		**Pn**		**18 14 17.0**	**-1.3**
MOTC				*e*S		**Sn**		**18 14 55.3**	**-1.7**
SDV	**Santo Domingo**	**3.19**	**50**	P		**Pn**		**18 14 19.2**	**+0.5**
	comp=Z,114nm,0.3s,baz=208,slow=4.3,SNR=338								
SDV				S		**Sn**		**18 14 55.4**	**-2.2**
	comp=Z,39nm,0.3s,baz=236,slow=22,SNR=15								
SDV	**Santo Domingo**	**3.19**	**50**	⇓*i*P		**Pn**		**18 14 19.1**	**+0.4**
SDV				*e*S		**Sn**		**18 14 56.3**	**-1.4**
SDV				*i*				18 15 01.2	
	comp=Z,123nm,0.5s								
SDV	**Santo Domingo**	**3.19**	**50**			**Pn**		**18 14 18.9**	**+0.2**
ARGC	**Ariguani, Magd**	**3.20**	**340**	*e*P		**Pn**		**18 14 20.0**	**+1.3**
ARGC				*e*S		**Sn**		**18 14 58.2**	**+0.5**
ARGC				*i*				18 15 06.1	
	comp=Z,209nm,0.4s								
ANIL	**Santa Ana**	**3.26**	**224**	*e*P		**Pn**		**18 14 21.1**	**+1.3**
ANIL				*e*S		**Sn**		**18 15 00.1**	**+0.6**
ANIL				*i*				18 15 06.5	
	comp=Z,85nm,0.5s								
PRAC	**Prado**	**3.57**	**210**	⇑*i*P		**Pn**		**18 14 23.1**	**-0.4**
PRAC				*e*S		**Sn**		**18 15 06.0**	**-0.2**
PRAC				*i*				18 15 12.8	
	comp=Z,473nm,0.6s								
ORTC	**Ortega, Tolima**	**3.60**	**216**	⇓*e*P		**Pn**		**18 14 24.3**	**+0.4**
ORTC				*e*S		**Sn**		**18 15 07.2**	**+0.3**
ORTC				*i*				18 15 14.2	
	comp=Z,303nm,0.6s								
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P		**Pn**		**18 14 23.6**	**-1.0**
SJCC				*e*S		**Sn**		**18 15 05.2**	**-3.0**
SJCC				*i*				18 15 20.7	
	comp=Z,142nm,0.4s								
LCBC	**Los crdobas,**	**3.79**	**302**	*e*P		**Pn**		**18 14 25.5**	**-0.8**
LCBC				*e*S		**Sn**		**18 15 12.6**	**+1.4**
YOTC	**Yotoco, Valle**	**4.29**	**229**	*e*P		**Pn**		**18 14 32.7**	**-0.2**
YOTC				*e*S		**Sn**		**18 15 16.4**	**-6.6**
YOTC				*i*				18 15 35.2	
	comp=Z,39nm,0.5s								
SMRC	**Santa Marta, M**	**4.43**	**346**	*e*P		**Pn**		**18 14 34.8**	**+0.2**
SMRC				*e*S		**Sn**		**18 15 22.7**	**-3.5**
SMRC				*i*				18 15 29.2	
	comp=Z,107nm,0.5s								
CAPC	**Capurgana**	**4.56**	**293**	*e*P		**Pn**		**18 14 34.6**	**-1.7**
CAPC				*e*S		**Sn**		**18 15 24.1**	**-5.0**
CAPC				*i*				18 15 34.9	
	comp=Z,75nm,0.4s								
PTAC	**Punta Ardita,**	**4.67**	**274**	*e*P		**Pn**		**18 14 37.4**	**-0.3**
PTAC				*e*S		Sn		18 15 25.1	-6.5
MACC	**Macarena, Meta**	**4.72**	**189**	*e*P		**Pn**		**18 14 36.8**	**-1.6**
MACC				*e*S		**Sn**		**18 15 28.7**	**-4.4**
MACC				*i*				18 15 33.9	
	comp=Z,68nm,0.5s								
MARP	**Paez Belalcaza**	**4.88**	**216**	*e*P		**Pn**		**18 14 40.6**	**-0.1**
MARP				*e*S		**Sn**		**18 15 29.8**	**-7.3**
URIC	**Uribia, Colomb**	**4.95**	**13**	*e*P		**Pn**		**18 14 40.3**	**-1.1**
URIC				*e*S		**Sn**		**18 15 31.5**	**-7.0**
URIC				*i*				18 15 42.5	
	comp=Z,44nm,0.5s								
GARC	**Garzon, Huila**	**5.20**	**207**	*e*P		**Pn**		**18 14 44.2**	**-0.7**
GARC				*e*S		**Sn**		**18 15 38.2**	**-6.4**
GARC				*i*				18 15 49.6	
	comp=Z,76nm,0.3s								
PCON	**Cinco Dias**	**5.55**	**216**	*e*P		**Pn**		**18 14 51.3**	**+1.4**
PCON				*e*S		**Sn**		**18 15 53.3**	**-0.1**
PCON				*i*				18 16 27.1	
	comp=Z,30nm,0.5s								
POPC	**Popayan, Colom**	**5.55**	**220**	*e*P		**Pn**		**18 14 49.8**	**+0.2**
BBAC	**Balboa, Cauca**	**6.32**	**221**	*e*P		**Pn**		**18 15 00.3**	**+0.6**
BBAC				*e*S		**Sn**		**18 16 09.7**	**-1.5**
PCRV	**Puerto La Cruz**	**9.02**	**68**	P		**Pn**		**18 15 33.3**	**-2.1**
	comp=Z,1.4nm,0.3s,baz=242,slow=5.2,SNR=3.5								
PLCV	**Puerto La Cruz**	**9.05**	**68**	P		**Pn**		**18 15 33.3**	**-2.6**
MTDJ	**Mount Denham**	**12.11**	**340**	Pn		**Pn**		**18 16 18.3**	**+2.1**
ATAH	**Atahualpa**	**14.85**	**201**	LR		LR		18 23 18.3	
	comp=Z,33nm,19.3s,baz=346,slow=40								
U40A	**Yellville**	**34.48**	**331**	P		**P**		**18 20 02.5**	**+1.0**
U40A						IAmb	IAmb	18 20 03.5	
	comp=Z,10nm,0.7s								
P46A	**Rosedale**	**35.01**	**341**	P		**P**		**18 20 07.6**	**+1.7**
CCM	**Cathedral Cave**	**35.16**	**335**	P		**P**		**18 20 08.3**	**+1.1**
CCM						IAmb	IAmb	18 20 09.0	
	comp=Z,11nm,0.7s								
SFIN	**Lafayette**	**35.66**	**342**	P		**P**		**18 20 13.1**	**+1.5**
SFIN						IAmb	IAmb	18 20 13.5	
	comp=Z,10nm,0.5s								
R40A	**Maddies Statio**	**35.79**	**334**	P		**P**		**18 20 13.4**	**+0.8**
R40A						IAmb	IAmb	18 20 14.4	
	comp=Z,3.1nm,0.7s								
TXAR	**Lajitas Array**	**36.45**	**312**	P		**P**		**18 20 19.5**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=98,slow=5.2,SNR=4.6								
TXAR	**Lajitas Array**	**36.45**	**312**	P		**P**		**18 20 17.5**	**-1.1**
WMOK	**Wichita Mounta**	**36.47**	**323**	P		**P**		**18 20 18.8**	**+0.3**
MNTX	**Cornudas Mount**	**38.96**	**314**	P		**P**		**18 20 39.6**	**+0.1**
LMN	**Caledonia Moun**	**39.52**	**9**	P		**P**		**18 20 45.0**	**+1.0**
BATG	**Bathurst New B**	**40.74**	**7**	P		**P**		**18 20 55.3**	**+1.3**
EYMN	**Ely**	**43.85**	**342**	P		**P**		**18 21 19.6**	**+0.5**
EYMN				IAmb		IAmb		18 21 20.2	
	comp=Z,8.6nm,0.7s								
ULM	**Lac du Bonnet**	**47.27**	**340**	P		**P**		**18 21 45.8**	**-0.1**
	comp=Z,4.5nm,0.5s,baz=146,slow=8.0,SNR=6.1								
ULM	**Lac du Bonnet**	**47.27**	**340**	P		**P**		**18 21 45.9**	**0.0**
ULM				IAmb		IAmb		18 21 46.8	
	comp=Z,4.9nm,0.7s								
PDAR	**Pinedale Array**	**48.06**	**324**	P		**P**		**18 21 53.3**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=127,slow=9.1,SNR=5.4								
PDAR				PcP		**PcP**		**18 23 16.9**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=124,slow=4.5,SNR=1.8								
PDAR	**Pinedale Array**	**48.06**	**324**	P		**P**		**18 21 52.7**	**+0.2**
SCHQ	**Schefferville**	**48.12**	**5**	P		**P**		**18 21 53.2**	**+0.9**
	comp=Z,3.9nm,0.6s,baz=200,slow=5.6,SNR=5.1								
SCHQ	**Schefferville**	**48.12**	**5**	P		**P**		**18 21 52.3**	**-0.1**
SCHQ				IAmb		IAmb		18 21 54.3	
	comp=Z,7.3nm,0.9s								
BGU	**Big Grassy Mou**	**49.13**	**320**	P		**P**		**18 22 01.6**	**+1.0**
DGMT	**Dagmar**	**49.13**	**333**	P		**P**		**18 22 01.9**	**+1.6**
DGMT				IAmb		IAmb		18 22 02.4	
	comp=Z,14nm,0.7s								
MCMT	**McKenzie Canyo**	**51.21**	**324**	P		**P**		**18 22 18.0**	**+1.8**
NVAR	**Mina Array Bea**	**51.47**	**315**	P		**P**		**18 22 19.1**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=243,slow=37,SNR=2.5								
NVAR				PcP		**PcP**		**18 23 30.7**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=147,slow=5.2,SNR=1.9								
NVAR	**Mina Array Bea**	**51.47**	**315**	P		**P**		**18 22 19.6**	**+1.4**
MFID	**Camas Ranch**	**52.22**	**321**	P		**P**		**18 22 23.7**	**+0.1**
FRB	**Frobisher Bay**	**56.89**	**2**	P		**P**		**18 22 56.0**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=97,slow=6.2,SNR=4.6								
YKA	**Yellowknife Ar**	**63.25**	**340**	P		**P**		**18 23 40.1**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=168,slow=32,SNR=8.2								
SUMG	**Summit**	**68.97**	**11**	P		**P**		**18 24 17.2**	**+0.4**
SUMG				IAmb		IAmb		18 24 18.1	
	comp=Z,6.8nm,0.6s								
SUMG	**Summit**	**68.97**	**11**	*i* P		**P**		**18 24 17.0**	**+0.2**
	comp=Z,18nm,0.7s								
SUMG	**Summit**	**68.97**	**11**	*i* P		**P**		**18 24 17.0**	**+0.2**
SUMG				IAmb		IAmb		18 24 18.0	
	comp=Z,18nm,0.7s								
TORD	**Torodi Ar. Bea**	**73.73**	**78**	P		**P**		**18 24 43.3**	**-2.7**
	comp=Z,0.6nm,1.0s,baz=289,slow=4.4,SNR=2.0								
ILAR	**Eielson Array**	**76.95**	**335**	P		**P**		**18 25 03.9**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=99,slow=4.7,SNR=5.3								
MKAR	**Makanchi Array**	**122.30**	**20**	PKP		**PKPdf**		**18 32 04.7**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=323,slow=1.9,SNR=1.9								
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc		**PKPbc**		**18 32 57.9**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=112,slow=3.9,SNR=14								
ASAR	**Alice Springs**	**149.13**	**234**			**PKPdf**		**18 32 57.6**	**+2.7**
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc		**PKPbc**		**18 33 01.6**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=108,slow=2.7,SNR=22								
CMAR	**Chiang Mai Arr**	**153.67**	**17**	PKPbc		**PKPbc**		**18 33 10.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=321,slow=3.6,SNR=8.9								
CMAR	**Chiang Mai Arr**	**153.67**	**17**			**PKPbc**		**18 33 09.8**	**0.0**

*VAO **03** 18:17:08.9±1.7, 22.07S×68.84W, h133km, mb4.8*
*NEIC **03** 18:17:09.4±1.5, 22.19S±0.02×68.61W±0.10, h121km±5km, Error ellipse: s-maj=12.8km s-min=2.8km az=89.0*
*IDC **03** 18:17:09.6±0.5, 22.34S×68.55W, h116km±6km, mb4.0/5, mb1 3.9/7, mb1mx3.6/26, mbtmp4.2/7, MS2.7/3, Ms1 2.8/3, ms1mx2.6/24, Error ellipse: s-maj=22.8km s-min=17.9km az=148.0*
*GUC **03** 18:17:11.6±0.6, 22.17S×68.65W, h108km±3km, ML4.1*

ISC 03 18:17:09.4±0.5, 22.15S±0.03×68.60W±0.05, h120km±5km, n89, σ1s41/110, mb4.3/4, 11C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.54**	**212**	P		**Pn**		**18 17 28.4**	**+0.4**
	575nm,0.3s,baz=40,slow=7.0,SNR=4795								
LVC				S		**Sn**		**18 17 41.6**	**-0.6**
	2μm,0.3s,baz=196,slow=20,SNR=44								
LVC	**Limon Verde**	**0.54**	**212**	*e*P		**Pn**		**18 17 28.6**	**+0.6**
LVC				*e*S		**Sn**		**18 17 41.8**	**-0.3**
PB09	**IPOC Station P**	**0.69**	**300**	*i* P		**Pn**		**18 17 29.8**	**+0.8**
PB09				*i* S		**Sn**		**18 17 43.3**	**-0.3**
PB09		

AC05	**El Transito**	**6.83**	**192**			**Pn**	**18 18 44.8**	**-2.3**
LCO	**Las Campanas**	**7.09**	**195**	Pn		**Pn**	**18 18 46.8**	**-4.0**
SIV	**San Ignacio**	**9.39**	**51**	P		**Sn**	**18 19 19.3**	**-2.4**
	comp=E,5.2nm,0.3s,baz=255,slow=8.5,SNR=72							
SIV				S		Sn	**18 20 57.3**	**-8.2**
	comp=E,0.9nm,0.3s,baz=208,slow=15,SNR=2.8							
VA03	**San Esteban**	**10.72**	**189**	Pn		**Pn**	**18 19 41.5**	**+1.9**
ROC1	**El Roble**	**11.00**	**191**	Pn		**Pn**	**18 19 45.4**	**+1.9**
CPUP	**Villa Florida**	**11.09**	**191**	P		**Pn**	**18 19 43.5**	**-1.1**
	comp=E,0.1nm,0.3s,baz=282,slow=1,SNR=4.6							
CPUP				LR		LR	18 23 32.7	
	comp=E,59nm,18.0s,baz=220,slow=35							
CPUP	**Villa Florida**	**11.09**	**114**	Pn		**Pn**	**18 19 44.0**	**-0.6**
MT02	**Curacav**	**11.29**	**191**	Pn		**Pn**	**18 19 46.2**	**-1.0**
SAML	**Samuel**	**14.12**	**22**	P		**P**	**18 20 28.5**	**+0.5**
TRCB	**Terra Rica**	**14.77**	**96**	*eP*		**P**	**18 20 35.1**	**-0.1**
PTGB	**Pitanga**	**15.39**	**103**	*eP*		**P**	**18 20 42.8**	**+0.6**
ITAB	**Concordia**	**15.80**	**112**	*eP*		**P**	**18 20 47.2**	**+0.7**
CPSB	**Cacapava Do Su**	**15.88**	**124**	*eP*		**P**	**18 20 47.5**	**+0.1**
PCMB	**Pacaembu**	**16.10**	**91**	*eP*		**P**	**18 20 50.9**	**+0.9**
CLDB	**Colider**	**16.61**	**50**	*eP*		**Pn**	**18 20 55.1**	**-0.1**
ARAG	**Araguaiana, MT**	**17.12**	**71**	*eP*		**Pn**	**18 21 02.2**	**+0.8**
ITRB	**Iturama**	**17.21**	**85**	*eP*		**Pn**	**18 21 03.6**	**+1.0**
FRTB	**Fartura**	**17.60**	**98**	*eP*		**Pn**	**18 21 07.4**	**+0.1**
PLCA	**Paso Flores**	**18.60**	**185**	P		**Pn**	**18 21 20.0**	**+0.9**
	comp=E,0.2nm,0.3s,baz=330,slow=8.0,SNR=6.3							
PLCA				LR		LR	18 28 36.4	
	comp=E,45nm,18.3s,baz=337,slow=37							
PLCA	**Paso Flores**	**18.60**	**185**			**Pn**	**18 21 18.7**	**-0.3**
BB19B	**Bebedouro**	**18.70**	**90**	*eP*		**P**	**18 21 19.4**	**+0.9**
SNDB	**Serra Nova Dou**	**19.37**	**61**	*eP*		**P**	**18 21 25.5**	**-0.3**
SPB	**Sao Paulo**	**19.56**	**98**	P		**P**	**18 21 28.3**	**+0.5**
SPB				IAmb		IAmb	18 21 29.4	
	comp=Z,20nm,0.9s							
SPB	**Sao Paulo**	**19.56**	**98**	*eP*		**P**	**18 21 28.6**	**+0.8**
IPMB	**Ipameri, GO**	**19.59**	**81**	*eP*		**P**	**18 21 28.2**	**-0.1**
NPGB	**Novo Progresso**	**19.71**	**99**	*eP*		**P**	**18 21 28.9**	**-0.7**
PET01	**Itanhaem-SP**	**19.71**	**100**	*eP*		**P**	**18 21 30.2**	**+0.7**
BDFB	**Brasilia**	**20.51**	**75**	P		**P**	**18 21 38.3**	**+0.1**
	comp=Z,12nm,0.5s,baz=241,slow=11,SNR=14							
BDFB	**Brasilia**	**20.51**	**75**	P		**P**	**18 21 38.1**	**-0.2**
BDFB				IAmb		IAmb	18 21 40.0	
	comp=Z,13nm,0.5s							
ITTB	**Itaituba**	**21.63**	**37**	*eP*		**P**	**18 21 49.8**	**-0.3**
PEXB	**Peixe**	**21.79**	**66**	*eP*		**P**	**18 21 51.1**	**-0.8**
JANB	**Januaria**	**24.05**	**77**	*eP*		**P**	**18 22 13.2**	**-0.5**
PRPB	**Parauapebas**	**24.11**	**52**	*eP*		**P**	**18 22 13.6**	**-0.6**
SMTB	**Santa Maria do**	**24.13**	**60**	*eP*		**P**	**18 22 14.5**	**+0.2**
MALB	**Monte Alegre**	**24.52**	**37**	*eP*		**P**	**18 22 17.6**	**-0.2**
MCPB	**Macapa, AP**	**26.99**	**39**	*eP*		**P**	**18 22 39.4**	**-0.8**
GDU01	**Guandu, BA**	**28.82**	**78**	*eP*		**P**	**18 22 55.7**	**-0.7**
MDP	**Montagnes des**	**31.26**	**32**	P		**P**	**18 23 18.3**	**+0.3**
	comp=Z,9.8nm,0.9s,baz=213,slow=8.3,SNR=2.7							
TXAR	**Lajitas Array**	**61.32**	**325**	P		**P**	**18 27 13.8**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=158,slow=7.8,SNR=3.9							
TXAR				pP		**pP**	**18 27 43.3**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=145,slow=13,SNR=2.5							
TXAR	**Lajitas Array**	**61.32**	**325**	P		**P**	**18 27 13.5**	**+1.0**
DBIC	**Dimbokro**	**68.64**	**73**	P		**P**	**18 28 00.1**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=216,slow=8.9,SNR=5.0							
DBIC	**Dimbokro**	**68.64**	**73**	P		**P**	**18 27 59.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**77.30**	**70**	P		**P**	**18 28 51.9**	**+0.8**
	comp=Z,2.0nm,0.4s,baz=257,slow=5.6,SNR=22							
TORD				pP		**pP**	**18 29 22.9**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=252,slow=5.0,SNR=3.1							
TORD	**Torodi Ar. Bea**	**77.30**	**70**	P		**P**	**18 28 51.1**	**0.0**
ASAR	**Alice Springs**	**129.47**	**207**	PKP		**PKiKP**	**18 36 06.0**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=150,slow=2.0,SNR=4.2							
WRA	**Warramunga Arr**	**132.54**	**210**	PKP		**PKiKP**	**18 36 12.2**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=160,slow=1.5,SNR=5.5							
WRA				pPKP		**pPKPdf**	**18 36 41.1**	**-2.8**
	comp=Z,0.8nm,1.2s,baz=158,slow=1.8,SNR=1.7							
MKAR	**Makanchi Array**	**145.98**	**37**	PKPbc		**PKPab**	**18 36 35.8**	**0.0**
	comp=Z,0.6nm,0.8s,baz=328,slow=4.3,SNR=3.9							
MKAR	**Makanchi Array**	**145.98**	**37**			**PKPbc**	**18 36 35.6**	**+0.5**
SONM	**Songino Array**	**154.06**	**8**	pPKP		pPKPdf	18 37 18.5	-2.1
	comp=Z,0.7nm,0.6s,baz=253,slow=1.3,SNR=4.0							

IDC 03 18:26:13.2±2.6, 6°99N×93°27E, h0km, mb3.3/4, mb1 3.5/5, mb1mx3.3/32, mbtmp3.3/5, ML3.3/1, Error ellipse: s-maj=92.6km s-min=26.6km az=63.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.67**	**25**	Pn	Pn	18 29 15.1	+0.3
	0.1nm,0.3s,baz=218,slow=15,SNR=3.3						
H08S3	**Diego Garcia H**	**25.31**	**235**	T	T	18 58 37.1	
	baz=55,slow=75,SNR=35						
H08S2	**Diego Garcia H**	**25.31**	**235**	T	T	18 58 38.2	
	baz=55,slow=75,SNR=7.5						
H08S1	**Diego Garcia H**	**25.33**	**235**	T	T	18 58 36.2	
	baz=55,slow=75,SNR=5.3						
MKAR	**Makanchi Array**	**40.77**	**348**	P	P	18 33 56.2	+0.1
	0.2nm,0.5s,baz=157,slow=7.7,SNR=1.4						
ZALV	**Zalesovo Beam**	**47.32**	**353**	P	P	18 34 48.1	-0.5
	0.3nm,0.3s,baz=178,slow=4.3,SNR=1.8						
WRA	**Warramunga Arr**	**48.46**	**124**	P	P	18 34 59.7	+1.8
	0.3nm,0.8s,baz=305,slow=9.0,SNR=1.7						
ASAR	**Alice Springs**	**50.02**	**129**	P	P	18 35 08.0	-1.9
	0.4nm,0.9s,baz=302,slow=8.4,SNR=2.2						

*IDC **03** 18:30:37.6±2.2, 7°30N×94°10E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.5/32, mbtmp3.5/6, ML3.8/2, Error ellipse: s-maj=82.4km s-min=20.8km az=62.0*
*NEIC **03** 18:30:44.0±1.9, 7°39N±0°06×94°4E±0°2, h42km±14km, mb4.4/5, Error ellipse: s-maj=27.0km s-min=3.1km az=72.0*
ISC 03 18:30:44.2±1.5, 7°4N±0°1×94°5E±0°2, h35km, n21, σ1s09/18, mb3.7/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.30**	**132**	Pn	Pn	**18 31 33.6**	**+0.3**
PSI	**Prapat**	**6.39**	**136**	Pn	Pn	**18 32 17.5**	**+1.5**
	0.9nm,0.3s,baz=360,slow=14,SNR=1.8						
RPSI	**Rantau Prapat**	**6.47**	**137**		Pn	**18 32 17.5**	**+0.6**
KULM	**Kulim**	**6.50**	**109**		Pn	**18 32 17.3**	**-0.1**
IPM	**Ipoh**	**7.15**	**114**	Pn	Pn	**18 32 25.5**	**-0.8**
CM31	**Chiang Mai Arr**	**11.78**	**21**	Pn	Pn	**18 33 31.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**11.78**	**21**	Pn	Pn	**18 33 31.3**	**+1.5**
	0.3nm,0.3s,baz=212,slow=14,SNR=10						
H08S3	**Diego Garcia H**	**26.56**	**236**	T	T	19 02 53.4	
	baz=55,slow=75,SNR=21						
H08S2	**Diego Garcia H**	**26.56**	**236**	T	T	19 02 54.9	
	baz=55,slow=75,SNR=8.5						
H08S1	**Diego Garcia H**	**26.57**	**236**	T	T	19 02 55.6	
	baz=55,slow=75,SNR=7.6						
MKAR	**Makanchi Array**	**40.58**	**347**	P	P	**18 38 18.9**	**-1.5**
	0.5nm,0.5s,baz=172,slow=7.9,SNR=8.0						
MKAR	**Makanchi Array**	**40.58**	**347**	P	P	**18 38 20.6**	**+0.2**
MAKZ	**Makanchi**	**40.66**	**347**	P	P	**18 38 20.7**	**-0.3**
KURK	**Kurchatov**	**45.11**	**346**	P	P	**18 38 56.4**	**-0.6**
KURK				IAmb	IAmb	18 39 05.2	
	comp=Z,7.4nm,1.2s						
ZALV	**Zalesovo Beam**	**47.02**	**352**	P	P	**18 39 11.8**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=168,slow=7.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**47.02**	**352**	P	P	**18 39 10.3**	**-1.7**
WB0	**Warramunga Arr**	**47.69**	**125**	P	P	**18 39 16.4**	**-1.4**
WRA	**Warramunga Arr**	**47.74**	**125**	P	P	**18 39 17.9**	**-0.2**
	comp=Z,0.5nm,1.1s,baz=306,slow=8.5,SNR=7.3						
WRA	**Warramunga Arr**	**47.74**	**125**	P	P	**18 39 16.3**	**-1.8**
WB2	**Warramunga Arr**	**47.75**	**125**	P	P	**18 39 18.0**	**-0.2**
WB2				IAmb	IAmb	18 39 45.9	
	comp=Z,3.0nm,1.1s						
ASAR	**Alice Springs**	**49.38**	**130**	P	P	**18 39 31.1**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=301,slow=8.0,SNR=7.5						

IDC 03 18:35:20.5±2.3, 7°24N×94°09E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/31, mbtmp3.5/5, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/29, Error ellipse: s-maj=86.3km s-min=23.7km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.11**	**23**	Pn	Pn	18 38 15.3	+0.8
	0.1nm,0.3s,baz=211,slow=14,SNR=5.2						
PALK	**Pallekele**	**13.28**	**271**	LR	LR	18 42 09.9	
	comp=Z,37nm,20.6s,baz=196,slow=31						
H08S3	**Diego Garcia H**	**26.12**	**236**	T	T	19 07 37.3	
	baz=55,slow=75,SNR=22						
H08S2	**Diego Garcia H**	**26.13**	**236**	T	T	19 07 46.0	
	baz=55,slow=75,SNR=5.6						
H08S1	**Diego Garcia H**	**26.14**	**236**	T	T	19 07 45.1	
	baz=55,slow=75,SNR=3.5						
MKAR	**Makanchi Array**	**40.69**	**348**	P	P	18 43 02.4	-0.4
	1.5nm,0.7s,baz=161,slow=7.6,SNR=7.7						
MKAR				LR	LR	19 02 14.7	
	comp=Z,30nm,18.1s,baz=125,slow=40						
ZALV	**Zalesovo Beam**	**47.17**	**353**	P	P	18 43 54.6	-0.1
	0.7nm,0.6s,baz=186,slow=13,SNR=5.3						
WRA	**Warramunga Arr**	**47.94**	**125**	P	P	18 44 01.0	-0.2
	0.1nm,0.5s,baz=306,slow=8.5,SNR=6.0						
ASAR	**Alice Springs**	**49.55**	**130**	P	P	18 44 13.7	0.0
	0.4nm,1.0s,baz=301,slow=7.4,SNR=1.8						

*TEH **03** 18:47:32.7, 32°72N×47°67E, h10km, ML2.8*
*ISN **03** 18:47:33.0±1.0, 32°74N×47°68E, h14km±5km, ML2.5*
ISC 03 18:47:33.4±1.3, 32°72N±0°07×47°72E±0°07, h10km, n6, σ0s36/10, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.81**	**8**	*e*Pg	**Pb**	**18 47 49.6**	**0.0**
IKFM				*e*		18 48 08.8	
IKMR	**Kamar-syah**	**0.97**	**35**	*e*Pg	**Pg**	**18 47 52.0**	**-0.1**
IKMR				*e*		18 47 54.3	
IKMR				*e*Sg	**Sn**	**18 48 06.8**	**-0.2**
IKOM	**Komasi**	**1.46**	**353**	*e*Pg	**Pn**	**18 48 00.3**	**+0.3**
IBDR	**Badra**	**1.55**	**285**	*e*Pg	**Pn**	**18 48 01.0**	**-0.1**
IBDR				*e*Sg	**Sn**	**18 48 21.0**	**-0.3**
IBDR				AML	AML	18 48 28.6	
	comp=E,80nm,0.5s						
IBDR				AML	AML	18 48 30.1	
	comp=N,75nm,0.5s						
NSR	**Nassriya**	**2.17**	**219**	*e*Pn	**Pn**	**18 48 10.0**	**+0.4**
NSR				*e*Sn	**Sn**	**18 48 36.0**	**-0.5**
BHD	**Baghdad**	**2.86**	**282**	*e*Pn	**Pn**	**18 48 19.0**	**0.0**
BHD				*e*Sn	**Sn**	**18 48 54.0**	**+0.5**

*SJA **03** 18:58:01.9±0.5, 35°33S×72°26W, h56km±10km, ML4.1, MW3.8*
*IDC **03** 18:58:10.8±4.3, 34°85S×72°15W, h62km±43km, mb3.6/3, mb1 3.6/5, mb1mx3.4/30, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=71.9km s-min=32.0km az=94.0*
*GUC **03** 18:58:10.0±0.8, 34°96S×71°85W, h38km±2km, ML3.8*
ISC 03 18:58:09.5±1.2, 34°96S±0°04×71°98W±0°08, h45km±11km, n29, σ1s77/40, mb3.8/3, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BO03	**Pichilemu**	**0.46**	**1**	*e*P	**Pn**	**18 58 19.9**	**-0.1**
BO03				*i* S	**Sn**	**18 58 26.9**	**-0.5**
BO03				IAML		18 58 28.7	
	comp=N,5μm,0.3s						
BO02	**Sierra Bellavi**	**1.00**	**81**	⇓ *i* P	**Pn**	**18 58 26.2**	**-1.0**
BO02				*i* S	**Sn**	**18 58 38.1**	**-2.1**
MT09	**Talagante**	**1.44**	**35**	⇓ *i* P	**Pn**	**18 58 33.3**	**+0.1**
MT09				*i* S	**Sn**	**18 58 51.1**	**+0.1**
MT09				IAML		18 58 54.6	
	comp=N,4μm,0.3s						
BI02	**San Fabin de**	**1.79**	**162**	*e*P	**Pn**	**18 58 39.3**	**+1.2**
BI02				*i* S	**Sn**	**18 59 00.9**	**+1.2**
BI02				IAML		18 59 05.4	
	comp=N,440nm,0.1s						
MT02	**Curacav**	**1.83**	**23**	⇑ *i* P	**Pn**	**18 58 38.4**	**-0.1**
MT02				*i* S	**Sn**	**18 59 00.9**	**+0.3**
MT02				IAML		18 59 06.6	
	comp=N,545nm,0.2s						
LMEL	**Las Melosas**	**1.84**	**53**	⇑ *i* P	**Pn**	**18 58 38.6**	**-0.1**
LMEL				*i* S	**Sn**	**18 59 01.0**	**+0.1**
LMEL				IAML		18 59 07.6	
	comp=N,3μm,0.1s						
MT05	**Renca**	**1.87**	**34**	*e*P	**Pn**	**18 58 39.5**	**+0.4**
MT05				*i* S	**Sn**	**18 59 02.5**	**+0.9**
MT05				IAML		18 59 08.8	
	comp=E,2μm,0.2s						
MT03	**Universidad Ad**	**1.90**	**40**	*e*P	**Pn**	**18 58 39.6**	**0.0**
MT03				*i* S	**Sn**	**18 59 03.2**	**+0.8**
MT03				IAML		18 59 08.2	
	comp=N,3μm,0.2s						
PEL	**Peldehue**	**2.10**	**31**	⇑ *i* P	**Pn**	**18 58 42.4**	**+0.1**
PEL				*i* S	**Sn**	**18 59 07.9**	**+0.6**
PEL	**Peldehue**	**2.10**	**31**	*e*P	**Pn**	**18 58 43.0**	**+0.7**
PEL				*e*S	**Sn**	**18 59 13.2**	**+5.9**
ROC1	**El Roble**	**2.13**	**22**	*e*P	**Pn**	**18 58 42.3**	**-0.6**
PUMA	**Malargue**	**2.14**	**105**	*e*P	**Pn**	**18 58 44.4**	**+3.6**
PUMA				*e*S	Pn	18 58 47.2	+4.5
ROCH	**El Roble**	**2.14**	**22**	⇓ *i* P	**Pn**	**18 58 43.2**	**+0.2**
ROCH				*i* S	**Sn**	**18 59 09.9**	**+1.5**
ROCH				IAML		18 59 17.4	
	comp=E,976nm,0.5s						
EDS3	**Malargue**	**2.26**	**112**	*e*P	**Pn**	**18 58 40.4**	**-4.1**
VA03	**San Esteban**	**2.49**	**29**	IAML		18 59 26.4	
	comp=E,1μm,0.5s						
AAGR	**Agrelo**	**3.21**	**55**	*e*P	**Pn**	**18 58 59.7**	**+2.1**
ARCO	**CERRO ARCO**	**3.30**	**51**	*e*P	**Pn**	**18 59 00.6**	**+1.8**
AUSP	**Uspallata**	**3.48**	**39**	*e*P	**Pn**	**18 59 02.8**	**+1.4**
ASAL	**Salagasta**	**3.52**	**49**	*e*P	**Pn**	**18 59 04.3**	**+2.5**
ASAL				*e*S	Sn	18 59 57.0	+15
RTLS	**Leoncito**	**3.87**	**36**	*e*P	**Pn**	**18 59 08.1**	**+1.4**
RTLS				*e*S	Sn	19 00 05.1	+14
RTLS				IAML		19 00 12.6	
	comp=Z,109nm,0.6s						
RTCV	**Cerro Valdivia**	**4.22**	**44**	*e*P	**Pn**	**18 59 12.6**	**+1.2**
RTCV				*e*S	Sn	19 00 10.7	+11
AROD	**Rodeo**	**5.22**	**25**	*e*P	**Pn**	**18 59 25.6**	**+0.2**
PLCA	**Paso Flores**	**5.87**	**169**	P	**Pn**	**18 59 37.2**	**+3.2**
	comp=Z,0.5nm,0.3s,baz=335,slow=12,SNR=12						
ACLC	**CERRO LA CRUZ**	**6.97**	**39**	*e*P	**Pn**	**18 59 49.3**	**+0.1**
ACLC				IAML		19 01 19.8	
	comp=Z,24nm,0.6s						
VCA	**Vinchina**	**6.98**	**28**	*e*P	**Pn**	**18 59 50.2**	**+0.8**
VCA				*e*S	**Sn**	**19 01 08.7**	**+1.1**
VCA				IAML		19 01 26.1	
	comp=Z,35nm,0.6s						
LPAZ	**La Paz**	**18.91**	**11**	P	**Pn**	**19 02 27.8**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=204,slow=3.9,SNR=5.5						
SIV	**San Ignacio**	**21.27**	**30**	P	**P**	**19 02 50.9**	**-1.3**
	comp=Z,1.7nm,0.7s,baz=219,slow=11,SNR=8.9						
TORD	**Torodi Ar. Bea**	**84.49**	**70**	P	**P**	**19 10 37.9**	**0.0**
	comp=Z,0.4nm,0.5s,baz=244,slow=1.4,SNR=5.1						
ULM	**Lac du Bonnet**	**87.44**	**345**	P	**P**	**19 10 50.1**	**-1.5**
	comp=Z,1.3nm,0.4s,baz=180,slow=11,SNR=2.0						

*IDC **03** 19:06:20.7±0.8, 16°10N×86°07E, h0km, mb4.0/12, mb1 4.1/14, mb1mx3.9/40, mbtmp4.0/14, ML4.3/2, MS3.0/6, Ms1 3.1/6, ms1mx2.8/35, Error ellipse: s-maj=24.5km s-min=17.4km az=49.0*
*NEIC **03** 19:06:23.5±1.2, 16°1N±0°1×86°1E±0°1, h16km±4km, mb4.4/16, Error ellipse: s-maj=16.0km s-min=13.8km az=183.0*
*NDI **03** 19:06:27.5±2.4, 16°35N×86°21E, h40km±999km, ML4.4, mb4.4(NEIC)*
ISC 03 19:06:22.8±0.6, 16°28N±0°05×86°07E±0°05, h10km, n77, σ2s74/91, mb4.1/16, MS2.8/3, Bay of Bengal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHLP	**Challavanipeta**	**2.93**	**319**	*e*P	**Pn**	**19 07 12.5**	**+3.0**
CHLP				*e*S	**Sn**	**19 07 44.1**	**-0.6**
VIS	**Vishakhapatnam**	**2.99**	**299**	*e*P	**Pn**	**19 07 14.2**	**+3.9**
VIS				*e*S	**Sn**	**19 07 46.7**	**+0.5**
PVM	**Polavaram**	**4.37**	**283**	*e*P	**Pn**	**19 07 33.6**	**+4.3**
PVM				*e*S	**Sn**	**19 08 19.2**	**-1.0**
MYLAV	**Mylavaram**	**5.24**	**276**	*e*P	**Pn**	**19 07 44.8**	**+3.5**
MYLAV				*e*S	**Sn**	**19 08 39.8**	**-1.9**
GGR	**Gangavaram**	**5.82**	**286**	*e*P	**Pn**	**19 07 53.5**	**+4.3**
GGR				*e*S	**Sn**	**19 08 54.9**	**-1.3**
ADKI	**Addanki**	**5.88**	**267**	*e*P	**Pn**	**19 07 51.8**	**+1.7**
ADKI				*e*S	**Sn**	**19 08 54.1**	**-3.6**
MDRS	**Chennai**	**6.48**	**241**	*e*P	**Pn**	**19 07 59.2**	**+1.0**
MDRS				IAmb	IAmb	19 08 01.5	
	comp=Z,36nm,0.3s						
MDRS				*e*S	**Sn**	**19 09 09.6**	**-2.7**
MDRS				IAML		19 09 10.9	
	comp=N,416nm,0.1s						
MDRS				IAML		19 09 14.0	
	comp=E,427nm,0.2s						
NJS	**Nagarjunasagar**	**6.50**	**273**	*e*P	**Pn**	**19 08 01.4**	**+2.9**
NJS				*e*S	**Sn**	**19 09 08.8**	**-4.0**
SKHT	**Srikalahasti**	**6.65**	**249**	*e*P	**Pn**	**19 08 01.2**	**+0.7**
SKHT				*e*S	**Sn**	**19 09 11.1**	**-5.4**
CUPL	**Choutuppal**	**6.92**	**279**	*e*P	**Pn**	**19 08 07.4**	**+3.0**
CUPL				*e*S	**Sn**	**19 09 20.5**	**-2.9**
RPR	**Rampur**	**6.95**	**293**	*e*P	**Pn**	**19 08 08.7**	**+3.9**
RPR				*e*S	**Sn**	**19 09 21.0**	**-3.1**
HYB	**Hyderabad**	**7.29**	**280**	*i* P	**Pn**	**19 08 12.0**	**+2.6**
HYB				*e*S	**Sn**	**19 09 34.0**	**+1.7**
HYBB	**Hyderabad (bro**	**7.29**	**280**	*e*P	**Pn**	**19 08 12.4**	**+3.0**
HYBB				*e*S	**Sn**	**19 09 27.4**	**-5.0**
DGPR	**DIGLIPUR**	**7.32**	**114**	*e*P	**Pn**	**19 08 10.6**	**+0.8**
PBA	**Port Blair**	**7.94**	**125**	*e*P	Pn	19 08 19.3	+0.9
PBA				*e*S	Sn	19 09 39.9	-8.4
PBA	**Port Blair**	**7.94**	**125**	Pn	Pn	19 08 18.3	-0.1
NGP	**Nagpur**	**8.23**	**307**	*e*P	**Pn**	**19 08 24.0**	**+1.7**
NGP				*i* x	x	19 08 36.1	
NGP				*e*S	**Sn**	**19 09 49.3**	**-6.1**
SAIH	**SAIHA**	**8.98**	**45**	*e*P	**Pn**	**19 08 32.7**	**0.0**
KLRI	**Killari**	**9.23**	**282**	*e*P	**Pn**	**19 08 38.3**	**+2.2**
KLRI				*e*S	Sn	19 10 11.8	-8.3
PALK	**Pallekele**	**10.38**	**211**	Pn	**Pn**	**19 08 48.5**	**-3.4**
	comp=E,9.1nm,0.3s,baz=132,slow=12,SNR=71						
PALK				Sn	Sn	19 10 36.7	-12
	comp=E,23nm,0.3s,baz=27,slow=20,SNR=18						
PALK				LR	LR	19 12 32.5	
	comp=E,100nm,21.5s,baz=135,slow=36						
PALK	**Pallekele**	**10.38**	**211**		**Pn**	**19 08 49.0**	**-2.9**
ODAN	**Odare**	**10.60**	**6**	*e*P	**Pn**	**19 08 55.6**	**+0.6**
	comp=E,64nm,0.4s						
ODAN				*e*S	**Sn**	**19 10 47.9**	**-6.0**
RAMN	**Ramite**	**10.63**	**3**	*e*P	**Pn**	**19 08 56.5**	**+1.1**
	comp=E,154nm,0.4s						
BHPL	**Bhopal**	**10.68**	**312**	*e*P	**Pn**	**19 08 59.2**	**+3.2**
BHPL				*e*S	Sn	19 10 47.6	-8.2
SHL	**Shillong**	**10.71**	**29**	*e*S	Sn	19 10 42.5	-14
SHL				*e*S		19 10 43.5	
TAPN	**Taplejung**	**11.12**	**8**	*e*P	**Pn**	**19 09 03.3**	**+1.1**
	comp=E,21nm,0.3s						
TAPN				*e*S	**Sn**	**19 11 02.1**	**-4.7**
GTK	**Tadong**	**11.23**	**12**	*ex*	**Sn**	**19 11 04.0**	**-5.3**
PKI	**Pulchoki**	**11.25**	**357**	*e*P	**Pn**	**19 09 05.1**	**+1.1**
	comp=E,124nm,0.5s						
PKIN	**Phulchoki**	**11.26**	**357**	*e*P	**Pn**	**19 09 04.5**	**+0.4**
	comp=E,60nm,0.3s						
PKIN				*e*S	**Sn**	**19 11 04.2**	**-6.0**
DMN	**Daman**	**11.31**	**356**	*e*P	**Pn**	**19 09 05.5**	**+0.8**
	comp=E,344nm,0.8s						
KKN	**Kakani**	**11.48**	**356**	*e*P	**Pn**	**19 09 07.5**	**+0.5**
	comp=E,28nm,0.2s						
KKN				*e*S	**Sn**	**19 11 08.4**	**-7.0**
GUN	**Gumba**	**11.57**	**359**	*e*P	**Pn**	**19 09 08.9**	**+0.4**
KOLN	**Koldanda**	**11.66**	**349**	*e*P	**Pn**	**19 09 10.2**	**+0.7**
	comp=E,37nm,0.2s						
KOLN				*e*S	**Sn**	**19 11 13.2**	**-6.7**
GKN	**Gorkha**	**11.74**	**354**	*e*P	**Pn**	**19 09 11.0**	**+0.4**
	comp=E,144nm,0.2s						
GKN				*e*S	**Sn**	**19 11 15.3**	**-6.5**
TRD	**Trivandrum**	**11.78**	**230**	*e*P	**Pn**	**19 09 09.6**	**-1.5**
TRD				*e*S	Sn	19 11 11.4	-11
GOA	**Goa**	**11.81**	**268**	*e*P	**Pn**	**19 09 14.8**	**+3.4**
GOA				*e*S	Sn	19 11 15.3	-8.0
KOHI	**KOHIMA**	**12.02**	**37**	*e*P	**Pn**	**19 09 16.2**	**+1.9**
KOHI				IAmb	IAmb	19 09 21.8	
	comp=Z,6.9nm,0.2s						
TEZP	**TEZPUR**	**12.04**	**30**	*e*P	**Pn**	**19 09 12.6**	**-1.9**
TEZP				*e*S	Sn	19 11 14.3	-15
PYUN	**Piuthan**	**12.10**	**347**	*e

BAYB				IAML		19 29 49.0		
	comp=N,3μm,0.6s							
BAYT	**Aydıntepe-Bayb**	**0.55**	**43**	PG	**Pg**	**19 29 38.1**	**-0.3**
BAYT				SG	**Sg**	**19 29 45.9**	**+0.3**
KOPT	**Kop Dagi**	**0.65**	**87**	*i* P	**Pg**	**19 29 40.7**	**+0.4**
KOPT				*i* S	**Sb**	**19 29 51.1**	**-0.6**
KOPT				IAML		19 29 54.0		
	comp=N,2μm,0.6s							
KOPT				IAML		19 29 57.0		
	comp=E,2μm,0.5s							
TNCL	**Tunceli-Merkez**	**0.88**	**185**	*i* P	**Pg**	**19 29 44.7**	**+0.1**
YEDI	**Yedisu-Bingol**	**0.88**	**128**	PG	**Pg**	**19 29 44.6**	**-0.1**
YEDI				SG	**Sb**	**19 29 58.7**	**+0.5**
MACK	**Trabzon**	**0.96**	**5**	*i* P	**Pg**	**19 29 45.9**	**-0.3**
MACK				*i* S	**Sg**	**19 29 58.6**	**0.0**
MACK				IAML		19 30 02.0		
	comp=N,1μm,0.2s							
MACK				IAML		19 30 07.0		
	comp=E,2μm,0.8s							
ILIC	**ilic-Erzincan**	**0.99**	**238**	PG	**Pg**	**19 29 46.9**	**+0.1**
KTUT	**Trabzon**	**1.00**	**5**	PG	**Pb**	**19 29 47.1**	**-0.8**
KTUT				SG	**Sb**	**19 30 01.2**	**-0.3**
KRIK	**Erzurum-spir**	**1.04**	**70**	*i* P	**Pg**	**19 29 47.7**	**0.0**
KRIK				*i* S	**Sg**	**19 30 00.3**	**-0.9**
PTK	**Pertek**	**1.11**	**190**	PN	**Pn**	**19 29 49.9**	**-0.7**
PTK				SN	**Sn**	**19 30 06.3**	**-0.3**
KEMA	**Kemaliye**	**1.15**	**232**	*i* P	**Pg**	**19 29 48.8**	**-1.0**
KEMA				*i* S	**Sb**	**19 30 05.7**	**0.0**
ESPY	**Espiye-Giresun**	**1.16**	**323**	PN	**Pg**	**19 29 49.8**	**-0.3**
ESPY				SN	**Sb**	**19 30 05.0**	**-1.2**
BNGB	**Bingl**	**1.28**	**141**	PN	**Pn**	**19 29 52.2**	**-0.5**
KARO	**Karliova-Bingo**	**1.28**	**122**	PN	**Pn**	**19 29 52.2**	**-0.6**
ARPR	**Arapgir-MALATY**	**1.35**	**229**	PN	**Pn**	**19 29 52.8**	**-1.1**
CHAY	**Cayeli-Rize**	**1.37**	**36**	PN	**Pn**	**19 29 52.8**	**-1.1**
CHOM	**Cayeli-Rize**	**1.39**	**37**	PN	**Pn**	**19 29 53.5**	**-0.8**
CHOM				SN	**Sb**	**19 30 12.0**	**-0.8**
CUZAR	**Zara_SIVAS**	**1.45**	**267**	*i* P	**Pn**	**19 29 54.5**	**-0.7**
CUZAR				*i* S	**Sg**	**19 30 15.0**	**+0.7**
ELZG	**Elazig**	**1.58**	**199**	*i* P	**Pb**	**19 29 57.1**	**-0.6**
ELZG				*i* S	**Sg**	**19 30 19.1**	**+0.6**
ELZG				IAML		19 30 26.0		
	comp=E,463nm,0.6s							
VRTB	**Varto-Mus**	**1.62**	**120**	PN	**Pn**	**19 29 57.1**	**-0.5**
VRTB	**Varto-Mus**	**1.62**	**120**	*i* P	**Pg**	**19 30 00.6**	**+1.7**
SVRC	**Sivrice-ELAZID**	**1.63**	**190**	PN	**Pn**	**19 29 57.3**	**-0.4**
KOPR	**Koprukoy-ERZUR**	**1.69**	**89**	PN	**Pn**	**19 29 57.9**	**-0.7**
ORDU	**Ordu-Boztepe**	**1.69**	**307**	*i* P	**Pb**	**19 29 58.5**	**-1.1**
ORDU				*i* S	**Sb**	**19 30 20.6**	**-0.9**
ORDU				IAML		19 30 25.0		
	comp=N,464nm,1.1s							
HEKM	**Malatya_Hekimh**	**1.71**	**230**	*i* P	**Pg**	**19 30 00.2**	**-0.4**
HOMI	**Horasan**	**1.73**	**87**	*i* P	**Pb**	**19 30 00.3**	**-0.2**
CUKAN	**kangal_SIVAS**	**1.81**	**249**	*i* P	**Pb**	**19 30 01.8**	**0.0**
CUKAN				*i* S	**Sg**	**19 30 28.1**	**+2.0**
RSDY	**Resadiye-TOKAT**	**1.82**	**284**	PN	**Pn**	**19 29 59.6**	**-0.6**
DDEM	**Demirkent**	**1.84**	**60**	*i* P	**Pb**	**19 30 01.2**	**-1.0**
DDEM				*i* S	**Sb**	**19 30 25.5**	**-0.2**
DDEM				IAML		19 30 33.0		
	comp=N,771nm,0.7s							
MUSM	**Mu-Merkez**	**1.92**	**131**	*i* P	**Pb**	**19 30 02.6**	**-1.0**
MALT	**Malatya**	**1.92**	**210**	PN	**Pn**	**19 30 01.3**	**-0.3**
SCER	**sogukcermik**	**1.94**	**267**	*i* P	**Pb**	**19 30 02.9**	**-1.1**
SVSK	**Karacayir**	**2.04**	**269**	PN	**Pn**	**19 30 02.9**	**-0.2**
SENK	**Senkaya-Erzuru**	**2.15**	**74**	PN	**Pn**	**19 30 04.4**	**-0.4**
EATA	**Eleskirt**	**2.19**	**92**	*i* P	**Pg**	**19 30 09.5**	**-0.2**
SVAN	**Silvan-Diyarba**	**2.20**	**146**	PN	**Pn**	**19 30 05.0**	**-0.3**
SVAN	**Silvan-Diyarba**	**2.20**	**146**	*i* P	**Pb**	**19 30 06.7**	**-1.6**
DARE	**Darende-Malaty**	**2.20**	**231**	PN	**Pn**	**19 30 05.4**	**0.0**
ERBA	**Erbaa**	**2.32**	**288**	*i* P	**Pb**	**19 30 10.5**	**+0.2**
GURO	**Guroymak-BITLI**	**2.34**	**127**	PN	**Pn**	**19 30 06.6**	**+0.2**
MLAZ	**Malazgirt-MUS**	**2.40**	**110**	PN	**Pn**	**19 30 08.1**	**-0.1**
TOKT	**Tokat**	**2.40**	**279**	PN	**Pn**	**19 30 07.7**	**-0.5**
URFA	**Urfa**	**2.62**	**195**	PN	**Pn**	**19 30 11.8**	**+0.5**
CUSAR	**Sarkisla-SIVAS**	**2.69**	**259**	*i* P	**Pn**	**19 30 13.4**	**+1.2**
CUSAR				*i* S	**Sb**	**19 30 51.1**	**+0.9**
BNN	**Bunyan**	**3.16**	**250**	PN	**Pn**	**19 30 18.9**	**+0.3**
BGD	**Bogdanovka**	**3.27**	**66**	P	**Pg**	**19 30 30.3**	**-0.1**
CHVG	**Ch'k'valeri**	**3.29**	**33**	P	**Pn**	**19 30 22.1**	**+1.8**
CHVG				S	**Sn**	**19 31 01.2**	**+1.3**
TKB	**Tkibuli**	**3.46**	**46**	P	**Pb**	**19 30 29.7**	**-0.1**
TKB				S	**Sb**	**19 31 14.2**	**+2.0**
ONI	**Oni**	**3.87**	**47**	P	**Pn**	**19 30 30.6**	**+2.3**

*IDC **03** 19:34:54.9±6.4, 28.°05S×178.°48W, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.4/36, mbtmp3.3/2, Error ellipse: s-maj=224.2km s-min=105.5km az=161.0*

ISC 03 19:35:29.8±2.7, 30.°2S±0.°2×179.°2W±0.°4, h300km, n19, σ1°52/18, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**7.87**	**194**	P	**Pn**	**19 37 24.7**	**+3.1**
PKGZ	**Pakihiroa**	**8.01**	**196**	P	Pn	19 37 31.7	+8.3
RUGZ	**Raukumara Rang**	**8.18**	**198**	P	**Pn**	**19 37 27.6**	**+1.9**
CNGZ	**Carnagh Statio**	**8.55**	**194**	P	**Pn**	**19 37 32.5**	**+2.5**
URZ	**Urewera**	**8.62**	**200**	P	**Pn**	**19 37 32.1**	**+1.3**
RAGZ	**Rawiri**	**8.75**	**198**	P	**P**	**19 37 35.8**	**-1.8**
RTZ	**Ruatahuna**	**8.98**	**200**	P	**Pn**	**19 37 35.8**	**+0.4**
SNGZ	**Shannon Statio**	**9.04**	**198**	P	**Pn**	**19 37 36.6**	**+0.6**
ARHZ	**Arapoaanui**	**9.58**	**198**	P	**Pn**	**19 37 43.6**	**+0.9**
BKZ	**Black Stump Fm**	**9.64**	**200**	P	**Pn**	**19 37 43.6**	**+0.2**
BHHZ	**Black Hill Sta**	**10.07**	**202**	P	**Pn**	**19 37 48.2**	**-0.4**
KAHZ	**Kahuranaki**	**10.11**	**198**	P	**Pn**	**19 37 48.8**	**-0.5**
KRHZ	**Kereru**	**10.11**	**200**	P	**Pn**	**19 37 48.4**	**-0.8**
PNHZ	**Pukenui**	**10.41**	**200**	P	**Pn**	**19 37 52.2**	**-0.7**
TSZ	**Takapari Road**	**10.62**	**201**	P	**Pn**	**19 37 54.3**	**-1.1**
PRHZ	**Porangahau**	**10.62**	**198**	P	**Pn**	**19 37 54.8**	**-0.6**
ASAR	**Alice Springs**	**42.10**	**267**	P	**P**	**19 42 55.3**	**+2.0**
	0.2nm,0.4s,baz=100,slow=8.1,SNR=1.4						
WRA	**Warramunga Arr**	**43.06**	**273**	P	**P**	**19 43 01.2**	**+0.2**
	0.2nm,0.3s,baz=111,slow=8.0,SNR=12						
FINES	**FINESS Array B**	**144.59**	**339**	PKP	**PKPdf**	**19 54 28.6**	**-1.3**
	2.1nm,0.8s,baz=48,slow=4.1,SNR=4.2						

*NEIC **03** 19:44:20.2±1.5, 23.°1S±0.°3×180.°0E±0.°1, h614km±16km, mb4.2/11, Error ellipse: s-maj=38.7km s-min=19.8km az=182.0*

*IDC **03** 19:44:28.2±11.0, 23.°09S×179.°32E, h686km±100km, mb2.7/4, mb1 2.8/5, mb1mx2.6/35, mbtmp3.9/5, Error ellipse: s-maj=125.4km s-min=79.3km az=119.0*

ISC 03 19:44:19.4±1.1, 23.°3S±0.°2×180.°0E±0.°1, h600km, n18, σ0°97/19, mb4.0/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.56**	**273**	P	**P**	**19 47 05.5**	**+1.6**
	0.4nm,0.3s,baz=116,slow=22,SNR=1.7						
RAR	**Rarotonga**	**18.85**	**88**	P	**P**	**19 48 03.1**	**+0.3**
LTZ	**Lake Taylor**	**20.47**	**196**	P	**P**	**19 48 15.4**	**-1.8**
CTA	**Charters Tower**	**31.46**	**269**	P	**P**	**19 49 53.9**	**+0.1**
	2.6nm,0.3s,baz=95,slow=9.2,SNR=9.6						
CTAO	**Charters Tower**	**31.46**	**269**	P	**P**	**19 49 54.2**	**+0.4**
CTAO				IAmb	IAmb	19 50 11.9	
	comp=Z,16nm,1.3s						
STKA	**Stephens Creek**	**34.94**	**247**	P	**P**	**19 50 22.9**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=99,slow=13,SNR=3.2						
BBOO	**Buckleboo**	**39.67**	**246**	P	**P**	**19 51 01.0**	**-0.3**
BBOO				IAmb	IAmb	19 51 01.1	
	comp=Z,23nm,1.2s						
ASAR	**Alice Springs**	**42.12**	**260**	P	**P**	**19 51 20.1**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=100,slow=7.0,SNR=8.0						
ASAR				PcP	**PcP**	**19 52 59.3**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=94,slow=3.7,SNR=2.7						
WR0	**Warramunga Arr**	**42.24**	**266**	P	**P**	**19 51 21.2**	**-0.6**
WR0				IAmb	IAmb	19 51 24.4	
	comp=Z,7.2nm,1.4s						
WB2	**Warramunga Arr**	**42.42**	**265**	P	**P**	**19 51 22.6**	**-0.5**
WB2				IAmb	IAmb	19 51 27.1	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**42.42**	**266**	P	**P**	**19 51 22.4**	**-0.8**
WB0				IAmb	IAmb	19 51 47.8	
	comp=Z,9.3nm,1.4s						
WRAB	**Tennant Creek**	**42.43**	**265**	P	**P**	**19 51 22.7**	**-0.5**
WRA	**Warramunga Arr**	**42.43**	**265**	P	**P**	**19 51 22.4**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=94,slow=8.3,SNR=19						
WRA	**Warramunga Arr**	**42.43**	**265**	P	**P**	**19 51 22.6**	**-0.7**
VNDA	**Vanda**	**54.99**	**185**	P	**P**	**19 52 56.1**	**+1.2**
QSPA	**South Pole Qui**	**66.80**	**180**	P	**P**	**19 54 13.2**	**+0.8**
QSPA				IAmb	IAmb	19 54 16.2	
	comp=Z,7.9nm,1.5s						

AKASG	**Malin Array Be**	**144.44**	**328**	PKP	**PKPdf**	**20 02 47.6**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=42,slow=3.7,SNR=5.0							
AKASG	**Malin Array Be**	**144.44**	**328**		**PKPdf**	**20 02 47.7**	**-0.4**

*NEIC **03** 19:47:29.1±1.0, 11.°92S±0.°03×166.°5E±0.°2, h147km±11km, mb4.4/12, Error ellipse: s-maj=31.2km s-min=4.3km az=90.0*

*IDC **03** 19:47:32.3±5.5, 12.°02S×166.°40E, h176km±53km, mb3.4/8, mb1 3.5/9, mb1mx3.4/36, mbtmp3.9/9, Error ellipse: s-maj=41.7km s-min=32.6km az=109.0*

ISC 03 19:47:29.6±1.0, 11.°92S±0.°09×166.°5E±0.°2, h150km, n24, σ1°07/27, mb4.1/13, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.58**	**168**	Pn	**Pn**	**19 48 24.1**	**-0.3**
DZM	**Mont Dzumac**	**10.09**	**180**	P	**Pn**	**19 49 53.0**	**+2.0**
	0.3nm,0.3s,baz=206,slow=19,SNR=1.2						
DZM				S	**Sn**	**19 51 42.4**	**-0.3**
	0.3nm,0.3s,baz=20,slow=21,SNR=1.1						
PATS	**Pohnpei**	**20.32**	**336**	P	**P**	**19 51 55.2**	**+1.2**
PATS				IAmb	IAmb	19 51 57.6	
	comp=Z,55nm,1.2s						
STKA	**Stephens Creek**	**30.30**	**225**	P	**P**	**19 53 26.1**	**-0.7**
	comp=Z,2.8nm,0.9s,baz=356,slow=24,SNR=3.4						
STKA	**Stephens Creek**	**30.30**	**225**	P	**P**	**19 53 26.0**	**-0.9**
MSWZ	**Moikau Station**	**30.38**	**167**	P	**P**	**19 53 27.0**	**-0.3**
WR0	**Warramunga Arr**	**31.66**	**251**	P	**P**	**19 53 38.8**	**-0.2**
WR0				IAmb	IAmb	19 54 01.8	
	comp=Z,5.0nm,1.2s						
WB0	**Warramunga Arr**	**31.77**	**252**	P	**P**	**19 53 39.8**	**-0.1**
WB0				IAmb	IAmb	19 53 50.4	
	comp=Z,10nm,1.5s						
WB2	**Warramunga Arr**	**31.84**	**251**	P	**P**	**19 53 40.3**	**-0.2**
WB2				IAmb	IAmb	19 54 02.4	
	comp=Z,8.8nm,1.4s						
WRA	**Warramunga Arr**	**31.85**	**251**	P	**P**	**19 53 40.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=84,slow=9.2,SNR=4.5						
WRA				PcP	**PcP**	**19 56 26.5**	**-1.5**
	comp=Z,0.4nm,0.9s,baz=90,slow=5.2,SNR=1.9						
WRA	**Warramunga Arr**	**31.85**	**251**	P	**P**	**19 53 40.8**	**+0.2**
RPZ	**Rata Peaks**	**31.93**	**174**	P	**P**	**19 53 40.5**	**-0.5**
ASAR	**Alice Springs**	**33.03**	**245**	P	**P**	**19 53 49.7**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=71,slow=11,SNR=5.5						
ASAR				PcP	**PcP**	**19 56 30.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=52,slow=2.9,SNR=5.3						
BBOO	**Buckleboo**	**34.75**	**228**	P	**P**	**19 54 06.7**	**+1.1**
KNRA	**Kununurra**	**36.76**	**260**	P	**P**	**19 54 23.5**	**+0.6**
KNRA				IAmb	IAmb	19 54 26.0	
	comp=Z,17nm,1.1s						
FITZ	**Fitzroy Crossi**	**39.83**	**256**	P	**P**	**19 54 48.5**	**-0.1**
	comp=Z,3.3nm,1.0s,baz=56,slow=7.3,SNR=3.0						
FITZ	**Fitzroy Crossi**	**39.83**	**256**	P	**P**	**19 54 45.1**	**-3.5**
FITZ				IAmb	IAmb	19 54 50.9	
	comp=Z,7.3nm,1.3s						
KSRS	**Korea Array**	**60.99**	**325**	P	**P**	**19 57 26.5**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=140,slow=8.0,SNR=2.4						
VNDA	**Vanda**	**65.64**	**181**	P	**P**	**19 57 57.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**73.09**	**294**	P	**P**	**19 58 44.9**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=120,slow=3.7,SNR=6.1						
QSPA	**South Pole Qui**	**78.09**	**180**	P	**P**	**19 59 11.9**	**+0.2**
QSPA				IAmb	IAmb	19 59 13.9	
	comp=Z,6.9nm,1.4s						
SONM	**Songino Array**	**79.78**	**324**	P	**P**	**19 59 21.4**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=141,slow=7.1,SNR=2.7						
MKAR	**Makanchi Array**	**94.63**	**317**	P	**P**	**20 00 33.1**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=88,slow=6.0,SNR=10						
MKAR	**Makanchi Array**	**94.63**	**317**	P	**P**	**20 00 33.2**	**-0.3**

*KRSC **03** 20:05:60.0±1.3, 48.°61N×156.°15E, h35km±18km, ML4.3*
*IDC **03** 20:06:01.5±3.2, 48.°62N×154.°95E, h74km±29km, mb3.3/7, mb1 3.6/9, mb1mx3.3/51, mbtmp3.7/9, MS2.9/2, Ms1 3.0/2, ms1mx2.5/24, Error ellipse: s-maj=33.2km s-min=20.2km az=133.0*

ISC 03 20:05:57.4±1.0, 48.°4N±0.°1×155.°3E±0.°1, h35km, n29, σ2°10/26, mb3.5/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.31**	**13**	*eP*	**Pn**	**20 06 34.8**	**+1.9**
SKR				*eS*	**Sn**	**20 06 59.7**	**-0.4**
PAU	**Pauzhetka**	**3.19**	**18**	*eP*	**Pn**	**20 06 48.0**	**+3.0**
PAU				*eS*	**Sn**	**20 07 22.2**	**+0.5**
KDTR	**Khodutka, Kamc**	**3.82**	**27**	*eP*	**Pn**	**20 06 55.4**	**+1.7**
KDTR				*eS*	**Sn**	**20 07 35.2**	**-2.2**
ASAK	**Asacha**	**4.29**	**22**	*eP*	**Pn**	**20 07 02.8**	**+2.6**
GRL	**Gorelyy**	**4.49**	**22**	*eP*	**Pn**	**20 07 05.8**	**+2.9**
GRL				*eS*	**Sn**	**20 07 53.4**	**-0.5**
RUS	**Russkaya**	**4.50**	**26**	*eP*	**Pn**	**20 07 04.2**	**+1.2**
RUS				*eS*	**Sn**	**20 07 51.4**	**-2.7**
APC	**Apacha**	**4.65**	**14**	*eP*	**Pn**	**20 07 08.0**	**+3.0**
PETK	**Petropavlovsk-**	**4.92**	**17**	P	**Pn**	**20 07 11.9**	**+3.1**
	1.3nm,0.3s,baz=171,slow=12,SNR=20						
PET	**Petropavlovsk**	**5.07**	**24**	*eP*	**Pn**	**20 07 12.3**	**+1.6**
PET				*eS*	**Sn**	**20 08 07.2**	**-0.8**
DALK	**Dalny**	**5.10**	**24**	*eP*	**Pn**	**20 07 14.2**	**+3.0**
DALK				*eS*	**Sn**	**20 08 08.3**	**-0.5**
KRX	**Arik**	**5.37**	**22**	*eP*	**Pn**	**20 07 17.7**	**+2.7**
ASAJ	**Asahikawa**	**9.78**	**248**	P	**Pn**	**20 08 17.9**	**+2.4**
	1.2nm,0.3s,baz=113,slow=20,SNR=5.2						
KLR	**Kul'dur**	**15.50**	**282**	LR	LR	20 16 49.2	
	comp=Z,44nm,18.1s,baz=326,slow=42						
KSRS	**Korea Array**	**22.71**	**251**	P	**P**	**20 10 54.3**	**-1.6**
	0.7nm,0.6s,baz=51,slow=11,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**30.14**	**158**	T	T	20 43 59.4	
	baz=345,slow=76,SNR=30						
H11N1	**WAKE ISLAND Hy**	**30.16**	**158**	T	T	20 43 57.3	
	baz=345,slow=76,SNR=67						
H11N3	**WAKE ISLAND Hy**	**30.16**	**158**	T	T	20 43 53.1	
	baz=345,slow=76,SNR=27						
H11S1	**WAKE ISLAND Hy**	**31.27**	**159**	T	T	20 45 20.7	
	baz=345,slow=76,SNR=295						
H11S3	**WAKE ISLAND Hy**	**31.27**	**159**	T	T	20 45 26.8	
	baz=345,slow=76,SNR=560						
H11S2	**WAKE ISLAND Hy**	**31.28**	**159**	T	T	20 45 27.4	
	baz=345,slow=76,SNR=272						
MKAR	**Makanchi Array**	**47.47**	**297**	P	**P**	**20 14 26.1**	**-2.5**
	0.3nm,0.7s,baz=60,slow=8.5,SNR=2.2						
CMAR	**Chiang Mai Arr**	**54.19**	**257**	P	**P**	**20 15 19.0**	**-0.4**
	1.5nm,0.9s,baz=33,slow=8.1,SNR=8.6						
CMAR				LR	LR	20 41 08.1	
	comp=Z,11nm,21.1s,baz=84,slow=39						
PDAR	**Pinedale Array**	**62.58**	**56**	P	**P**	**20 16 17.9**	**0.0**
	0.2nm,0.6s,baz=282,slow=5.2,SNR=2.2						
FINES	**FINESS Array B**	**63.13**	**335**	P	**P**	**20 16 19.2**	**-1.8**
	2.7nm,1.0s,baz=59,slow=8.3,SNR=1.3						
WRA	**Warramunga Arr**	**70.60**	**201**	P	**P**	**20 17 08.7**	**-0.2**
	0.6nm,0.9s,baz=16,slow=6.6,SNR=6.1						
ASAR	**Alice Springs**	**74.29**	**200**	P	**P**	**20 17 32.0**	**+1.1**
	0.2nm,0.4s,baz=16,slow=5.0,SNR=5.4						
H03N2	**Juan Fernandez**	**137.29**	**90**	T	T	22 58 26.5	
	baz=310,slow=77,SNR=29						
H03N1	**Juan Fernandez**	**137.31**	**90**	T	T	22 58 24.5	
	baz=310,slow=77,SNR=26						
H03N3	**Juan Fernandez**	**137.31**	**90**	T	T	22 58 26.3	
	baz=310,slow=77,SNR=28						

*NEIC **03** 20:19:10.7±1.6, 6.°74S±0.°07×125.°2E±0.°2, h533km±15km, mb4.0/7, Error ellipse: s-maj=25.6km s-min=9.8km az=91.0*

*IDC **03** 20:19:10.7±1.0, 6.°76S×125.°37E, h532km±12km, mb3.1/3, mb1 3.3/9, mb1mx2.9/41, mbtmp4.1/9, Error ellipse: s-maj=28.1km s-min=11.3km az=61.0*

*DJA **03** 20:19:13.3±0.7, 7.°5S±10.°×12.°5E±1.°2, h513km±10km, M3.9/8, mb4.0/5, MLv3.8/8*

ISC 03 20:19:12.3±0.8, 7.°05S±0.°08×125.°0E±0.°10, h550km, n33, σ1°00/39, mb3.5/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.79**	**195**	P	**P**	**20 20 25.7**	**-0.6**
SOEI				S	**S**	**20 21 24.5**	**-1.9**
SOEI	**Soe**	**2.79**	**195**	P	**P**	**20 20 25.6**	**-0.6**
BATI	**Baumata**	**3.41**	**203**	P	**P**	**20 20 30.4**	**+0.4**
	17nm,0.3s,baz=40,slow=9.0,SNR=25						
BATI				S	**S**	**20 21 33.5**	**+0.2**
	7.5nm,0.3s,baz=28,slow=23,SNR=9.5						
BATI	**Baumata**	**3.41**	**203**	P	**P**	**20 20 29.6**	**-0.4**
BATI				S	**S**	**20 21 33.1**	**-0.2**
EDFI	**Ende, Flores**	**3.69**	**242**	P	**P**	**20 20 31.1**	**-1.0**

BSSI	**Bau Bau, Buton**	**4.57**	**281**	P	**P**	**20 20 39.2**	**+0.6**
BKSI	**Bulukumba**	**5.14**	**289**	P	**P**	**20 20 43.1**	**-0.3**
	0.1nm33nm,0.7s							
WSI	**Waingapu**	**5.33**	**240**	P	**S**	**20 22 02.5**	**+1.8**
BASI	**Baing, Sumba**	**5.39**	**234**	P	S	20 22 11.2	+10
BNSI	**Bone**	**5.53**	**298**	P	**P**	**20 20 47.7**	**+0.9**
	0.2nm44nm,0.8s							
KAPI	**Kappang**	**5.60**	**291**	P	**P**	**20 20 48.2**	**+0.9**
	1.3nm,0.3s,baz=126,slow=6.8,SNR=9.1							
KAPI				S	**S**	**20 22 03.9**	**-1.0**
	1.0nm,0.3s,baz=166,slow=19,SNR=8.9							
KAPI	**Kappang**	**5.60**	**291**	P	**P**	**20 20 46.4**	**-0.9**
SPSI	**Sidrap Palu**	**6.04**	**300**	P	**P**	**20 20 51.1**	**-0.2**
	0.1nm35nm,0.7s							
WBSI	**Waikabubak, Su**	**6.12**	**245**	P	**S**	**20 22 12.7**	**-1.0**
TTSI	**Tana Toraja**	**6.51**	**307**	P	**P**	**20 20 56.9**	**+1.2**
	0.1nm14nm,0.8s							
KMSI	**Cibinong**	**7.64**	**352**	P	**S**	**20 22 41.4**	**+1.3**
MTN	**Manton Dam**	**8.35**	**134**	P	**S**	**20 21 12.8**	**-0.7**
SIJI	**Sorong**	**8.76**	**46**	P	P	20 21 11.7	-6.1
	0.8nm,0.3s,baz=264,slow=23,SNR=3.7							
KNRA	**Kununurra**	**9.34**	**157**	P	**P**	**20 21 23.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**11.00**	**177**	P	**P**	**20 21 41.2**	**+0.7**
	0.8nm,0.3s,baz=8.9,slow=9.7,SNR=77							
FITZ				S	**S**	**20 23 41.2**	**-1.2**
	0.1nm,0.3s,baz=141,slow=16,SNR=2.6							
WB0	**Warramunga Arr**	**15.59**	**145**	P	**P**	**20 22 26.9**	**-1.0**
WB0				IAmb	IAmb	20 22 28.8		
	comp=Z,3.1nm,0.7s							
WRAB	**Tennant Creek**	**15.70**	**146**	P	**P**	**20 22 28.5**	**-0.5**
WRAB				IAmb	IAmb	20 22 38.1		
	comp=Z,7.8nm,1.4s							
WRA	**Warramunga Arr**	**15.70**	**146**	P	**P**	**20 22 27.9**	**-1.0**
	comp=Z,1.0nm,0.3s,baz=338,slow=9.9,SNR=87							
WRA				S	**S**	**20 25 09.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=331,slow=16,SNR=4.2							
WRA	**Warramunga Arr**	**15.70**	**146**	P	**P**	**20 22 28.1**	**-0.9**
WB2	**Warramunga Arr**	**15.71**	**146**	P	**P**	**20 22 28.4**	**-0.6**
WB2				IAmb	IAmb	20 22 38.3		
	comp=Z,6.2nm,1.1s							
WR0	**Warramunga Arr**	**15.83**	**145**	P	**P**	**20 22 29.2**	**-1.0**
AS31	**Alice Springs**	**18.61**	**154**	P	**P**	**20 22 56.7**	**+0.9**
AS31				IAmb	IAmb	20 22 57.8		
	comp=Z,1.9nm,1.1s							
ASAR	**Alice Springs**	**18.61**	**154**	P	**P**	**20 22 56.9**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=335,slow=8.7,SNR=65							
ASAR				S	**S**	**20 25 59.2**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=347,slow=21,SNR=2.1							
ASAR				ScP	**ScP**	**20 29 40.2**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=348,slow=2.5,SNR=1.6							
STKA	**Stephens Creek**	**29.16**	**150**	P	**P**	**20 24 30.6**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=322,slow=8.3,SNR=9.3							
STKA	**Stephens Creek**	**29.16**	**150**	P	**P**	**20 24 30.6**	**+1.1**
MKAR	**Makanchi Array**	**65.63**	**329**	P	**P**	**20 29 01.9**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=123,slow=7.6,SNR=11							
ZALV	**Zalesovo Beam**	**69.52**	**336**	P	**P**	**20 29 24.4**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=120,slow=6.1,SNR=2.8					

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**5.61**	**354**	Lg	Lg	21 44 51.6	
	22nm,0.2s						
AML	**Almayashu**	**5.97**	**21**	P	**Pn**	**21 43 53.9**	**+0.2**
	SNR=46						
MRKS	**Merke**	**6.43**	**16**	Lg	Lg	21 45 10.9	
	6.1nm,0.4s						
EKS2	**Erkin-Say**	**6.48**	**19**	P	**Pn**	**21 44 01.0**	**+0.6**
	SNR=44						
KK31	**Karatay Array**	**6.53**	**358**	⇓P	**Pn**	**21 44 01.7**	**+0.8**
	1.6nm,0.3s,baz=175,slow=12,SNR=35						
KK31				S	**Sn**	**21 45 12.6**	**-1.4**
	4.1nm,0.6s,baz=190,slow=23,SNR=6.2						
AAK	**Ala-Archa**	**6.67**	**24**	P	**Pn**	**21 44 03.3**	**+0.2**
	SNR=15						
AAK	**Ala-Archa**	**6.67**	**24**	⇓P	**Pn**	**21 44 03.3**	**+0.2**
	5.2nm,0.3s						
AAK				⇑S	**Sn**	**21 45 19.1**	**+1.5**
	7.2nm,1.1s						
KBK	**Karagaybulak**	**6.84**	**26**	P	**Pn**	**21 44 06.1**	**+0.7**
	SNR=5.3						
CHMS	**Chumysh**	**7.08**	**24**	P	**Pn**	**21 44 08.6**	**+0.1**
	SNR=8.9						
USP	**Ospenovka**	**7.24**	**22**	P	**Pn**	**21 44 10.2**	**-0.6**
	SNR=10.0						
TKM2	**Tokmak 2**	**7.31**	**28**	P	**Pn**	**21 44 11.5**	**-0.3**
	SNR=7.0						
TKM2	**Tokmak 2**	**7.31**	**28**	⇑P	**Pn**	**21 44 11.3**	**-0.5**
	2.5nm,0.5s						
TKM2				⇓S	**Sn**	**21 45 32.9**	**-0.4**
	2.4nm,0.9s						
KST	**Kastek**	**7.56**	**30**	P	**Pn**	**21 44 14.8**	**-0.2**
	3.7nm,0.3s						
IZV	**Izvestkoviy**	**7.82**	**33**	P	**Pn**	**21 44 18.4**	**-0.3**
	2.6nm,0.2s						
AB31	**Akbulak array**	**14.97**	**331**	P	**Pn**	**21 45 53.6**	**-0.1**
	0.1nm,0.3s,baz=163,slow=12,SNR=11						

IGQ ***03*** *21:42:33.4±0.9, 1˚Sₓ3˚ₓ8˚1Wₓ˚, h6km, M4.2*
ISC 03 21:42:33.2±1.5, **0°69S**±0°04×**80°9W**±0°1, **h10**km, **n61**,
σ1§**66**/60, **Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	**Jama**	**0.85**	**60**	P	**Pb**	**21 42 50.3**	**+0.2**
JAMA				S	**Sn**	**21 43 03.2**	**-0.6**
PPLP	**Puerto Lpez**	**0.87**	**169**	P	**Pg**	**21 42 50.3**	**+0.4**
PPLP				S	**Sb**	**21 43 02.7**	**+0.7**
MAG1	**Magdalena**	**1.32**	**62**	P	**Pg**	**21 42 58.8**	**+0.3**
SALI	**Salinas**	**1.49**	**182**	P	**Pn**	**21 42 59.7**	**-0.2**
SALI				S	**Sg**	**21 43 21.7**	**+0.7**
AGUAY	**Guayaquil**	**1.68**	**144**	P	**Pn**	**21 43 02.1**	**-0.5**
ASDO	**Santo Domingo**	**1.87**	**77**	P	**Pn**	**21 43 05.3**	**0.0**
AMIL	**Milagro (Trans**	**1.97**	**137**	P	**Pb**	**21 43 08.3**	**-0.8**
MILO	**Milagro-Astudi**	**2.10**	**139**	P	**Pn**	**21 43 08.2**	**-0.2**
ILLI	**Illinizas Sur**	**2.21**	**91**	P	**Pn**	**21 43 11.4**	**+1.0**
PAC1	**Pacto, Paraso**	**2.35**	**66**	*eP*	**Pn**	**21 43 12.0**	**0.0**
PAC1	**Pacto, Paraso**	**2.35**	**66**	P	**Pn**	**21 43 11.8**	**-0.2**
TERV	**Terraza Guagua**	**2.39**	**78**	P	**Pn**	**21 43 13.6**	**+0.7**
GGPC	**Guagua Pichinc**	**2.40**	**79**	P	**Pn**	**21 43 13.6**	**+0.6**
IGUA	**Igualata**	**2.44**	**109**	P	**Pb**	**21 43 15.9**	**-1.6**
COHC	**Cochancay**	**2.44**	**136**	P	**Pn**	**21 43 13.8**	**+0.7**
BNAS	**Cotopaxi Volca**	**2.46**	**90**	P	**Pb**	**21 43 16.2**	**-1.6**
BMOR	**Cotopaxi Volca**	**2.48**	**91**	P	**Pb**	**21 43 16.5**	**-1.8**
BREF	**Cotopaxi Volca**	**2.50**	**90**	P	**Pb**	**21 43 17.4**	**-1.2**
VC1	**Cotopaxi 1**	**2.54**	**89**	P	**Pb**	**21 43 17.5**	**-1.7**
PULU	**Pululahua**	**2.54**	**74**	P	**Pn**	**21 43 16.0**	**+1.2**
BTAM	**Cotopaxi Volca**	**2.55**	**90**	P	**Pb**	**21 43 17.6**	**-1.6**
VCES	**Cotopaxi**	**2.55**	**92**	P	**Pb**	**21 43 18.0**	**-1.3**
BBIL	**Ulba Tungurahu**	**2.57**	**107**	P	**Pb**	**21 43 17.8**	**-1.7**
TAMB	**Tambo**	**2.58**	**90**	P	**Pb**	**21 43 18.2**	**-1.5**
JUI6	**Juive**	**2.58**	**106**	P	**Pb**	**21 43 18.3**	**-1.4**
PIS1	**Pisayambo**	**2.58**	**98**	P	**Pb**	**21 43 18.6**	**-1.3**
BMAS	**Trigal station**	**2.59**	**108**	P	**Pb**	**21 43 18.3**	**-1.7**
RETU	**Refugio**	**2.61**	**107**	P	**Pb**	**21 43 18.7**	**-1.7**
ARRY	**Arrayan**	**2.62**	**108**	P	**Pb**	**21 43 18.4**	**-1.9**
BULB	**Ulba Tungurahu**	**2.64**	**106**	P	**Pb**	**21 43 19.0**	**-1.8**
ANTG	**Antisana-Guama**	**2.69**	**86**	P	**Pb**	**21 43 19.4**	**-2.5**
PIAT	**Ana Tenorio**	**2.70**	**97**	P	**Pb**	**21 43 19.7**	**-2.1**
ANTM	**Antisana-La Mi**	**2.72**	**87**	P	**Pb**	**21 43 19.8**	**-2.5**
CUSE	**Cuicocha Este**	**2.73**	**69**	*eP*	**Pn**	**21 43 18.3**	**+0.9**
CUSE	**Cuicocha Este**	**2.73**	**69**	P	**Pn**	**21 43 18.0**	**+0.5**
CUIC	**Cuicocha-Domo**	**2.76**	**69**	P	**Pn**	**21 43 18.3**	**+0.4**
ANTS	**Antisana-Sarah**	**2.78**	**86**	P	**Pb**	**21 43 20.9**	**-2.4**
ANTI	**Antisana**	**2.79**	**85**	P	**Pb**	**21 43 21.2**	**-2.3**
SANGA	**Volcan Sangay**	**2.91**	**118**	P	**Pn**	**21 43 22.1**	**+2.2**
IMBA	**Imbabura, San**	**2.91**	**71**	P	**Pn**	**21 43 21.9**	**+2.0**
URCU	**Urcuqui**	**2.91**	**67**	P	**Pn**	**21 43 21.8**	**+1.8**
ARNL	**Arenillas**	**2.97**	**163**	P	**Pn**	**21 43 20.0**	**-0.4**
ARDO	**Archidona, Ten**	**3.16**	**96**	P	**Pb**	**21 43 28.0**	**-1.4**
BOSC	**San Juan Bosco**	**3.46**	**135**	P	**Pb**	**21 43 32.0**	**-2.6**
PKYU	**Pakayacu**	**3.48**	**106**	P	**Pb**	**21 43 31.4**	**-3.5**
MCRA	**Macar, Loja**	**3.79**	**165**	P	**Pn**	**21 43 32.0**	**+0.3**
GCUF	**Volcan Galeras**	**4.07**	**62**	*eP*	**Pn**	**21 43 37.9**	**+1.9**
BBAC	**Balboa, Cauca**	**4.57**	**54**	*eP*	**Pn**	**21 43 42.1**	**-0.5**
CRUC	**La Cruz**	**4.58**	**61**	*eP*	**Pn**	**21 43 44.4**	**+1.5**
GR1C	**Gorgona, Isla**	**4.60**	**37**	*eP*	**Pb**	**21 43 51.8**	**-2.2**
POPC	**Popayan, Colom**	**5.34**	**53**	*eP*	**Pn**	**21 43 53.2**	**0.0**
PCON	**Cinco Dias**	**5.44**	**57**	*eP*	**Pn**	**21 43 56.1**	**+1.1**
MARP	**Paez Belalcaza**	**6.10**	**55**	*eP*	**Pn**	**21 44 06.1**	**+2.4**
PTLC	**Puerto Leguiza**	**6.21**	**82**	*eP*	**Pn**	**21 44 09.0**	**+4.1**
YOTC	**Yotoco, Valle**	**6.53**	**45**	*eP*	**Pn**	**21 44 10.2**	**+0.7**
ORTC	**Ortega, Tolima**	**7.30**	**51**	*eP*	Pn	21 44 25.2	+5.2
PRAC	**Prado**	**7.47**	**54**	*eP*	**Pn**	**21 44 25.4**	**+3.1**
TOLC	**Tolima**	**7.68**	**47**	*eP*	Pn	21 44 33.6	+8.1
GUY2C	**Guyana, Caldas**	**8.10**	**43**	*eP*	Pn	21 44 37.2	+5.9
CBOC	**Ciudad Bolivar**	**8.16**	**37**	*eP*	Pn	21 44 41.1	+9.2
CHIC	**Chingaza**	**8.93**	**54**	*eP*	**Pn**	**21 44 44.8**	**+2.1**

REY ***03*** *21:49:26.7, 64˚68Nₓ17˚52W, h7km*
BGS ***03*** *21:49:27.7±2.6, 64˚55Nₓ17˚66W, h5km, mb4.7(NEIC)*
BJI ***03*** *21:49:27.0±0.0, 64˚61Nₓ17˚92W, h10km, mB5.2/9, mb4.7/17*
IDC ***03*** *21:49:27.5±0.6, 64˚57Nₓ17˚79W, h0km, mb3.9/15, mb1 4.1/16, mb1mx3.9/39, mbtmp3.9/16, ML4.5/1, MS3.3/15, Ms1 3.3/15, ms1mx3.1/43, Error ellipse: s-maj=19.8km s-min=10.2km az=16.0*
NEIC ***03*** *21:49:29.6±2.1, 64˚55N±0˚09×17˚7W±0˚2, h10km±4km, mb4.7/50, Error ellipse: s-maj=12.9km s-min=9.3km az=192.0*
ISC 03 21:49:29.2±0.4, **64°59N**±0°03×**17°67W**±0°03, **h10**km, **n174**,
σ1§**92**/153, **mb4.6**/50, **MS3.2**/9, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.09**	**336**	P	**Pg**	**21 49 29.1**	**-2.6**
	baz=267						
IDYN	**Dyngjuhals**	**0.24**	**33**	P	Pg	21 49 29.6	-4.6
	baz=30						
IHUS	**Husbondi**	**0.30**	**179**	P	**Pg**	**21 49 33.9**	**-1.3**
	baz=189						
ISKR	**Skrokkalda**	**0.31**	**264**	P	**Pg**	**21 49 34.0**	**-1.4**
	baz=253						
IJOK	**Jokulheimar**	**0.37**	**221**	P	**Pg**	**21 49 35.3**	**-1.1**
	baz=220						
IVOT	**Vottur**	**0.39**	**146**	P	**Pg**	**21 49 34.7**	**-2.1**
	baz=160						
IVOT				S	**Sg**	**21 49 40.8**	**-1.2**
	baz=160						
IKVE	**Kverkfjoll**	**0.44**	**78**	P	Pg	21 49 33.6	-4.2
	baz=90						
THOR	**Thorvaldshraun**	**0.55**	**51**	P	Pg	21 49 34.5	-5.3
	baz=54						
IKRE	**Kreppuhraun**	**0.59**	**70**	P	Pg	21 49 35.2	-5.3
	baz=77						
IKRE				S	**Sg**	**21 49 42.8**	**-5.5**
	baz=77						
IASK	**Askja**	**0.64**	**43**	P	Pg	21 49 36.0	-5.5
	baz=44						
IASK				S	Sg	21 49 43.2	-6.7
	baz=44						
IKAL	**Kalfafell**	**0.65**	**181**	P	**Pg**	**21 49 39.5**	**-2.1**
	baz=186						
IVAT	**Vatnsfell**	**0.68**	**234**	P	**Pb**	**21 49 41.1**	**-2.0**
	baz=232						
IKSK	**Karasker**	**0.68**	**129**	P	**Pg**	**21 49 38.1**	**-4.2**
	baz=138						
ISVA	**Svartarkot**	**0.77**	**13**	P	Pg	21 49 38.7	-5.3
	baz=9.4						
IVSH	**V-Sauoahnukur**	**0.86**	**75**	P	Pg	21 49 39.7	-6.1
	baz=80						
IVSH				S	Sg	21 49 50.5	-6.5
	baz=80						
ISNB	**Snabyli**	**0.96**	**206**	P	**Pb**	**21 49 45.3**	**-2.5**
	baz=208						
ISNB				S	**Sn**	**21 49 58.8**	**-3.5**
	baz=208						
IADA	**Aoalbol**	**0.99**	**64**	P	Pb	21 49 42.3	-6.2
	baz=67						
ISLY	**Slysaalda**	**1.00**	**220**	P	**Pb**	**21 49 46.7**	**-1.9**
	baz=220						
IFED	**Fedgar**	**1.05**	**238**	P	**Pb**	**21 49 47.5**	**-1.9**
	baz=236						
IMEL	**Melhnausar**	**1.07**	**23**	P	Pn	21 49 43.4	-6.8
	baz=22						
IRJU	**Rjupnafell**	**1.07**	**205**	P	**Pb**	**21 49 47.7**	**-2.1**
	baz=206						
IMJO	**Mjoaskard**	**1.10**	**234**	P	**Pb**	**21 49 48.1**	**-2.1**
	baz=232						
IREN	**Reynihlio**	**1.11**	**17**	P	Pn	21 49 44.1	-6.6
	baz=15						
IREN				S	Sb	21 49 56.8	-8.0
	baz=15						
IGYG	**Gygjarholskot**	**1.15**	**255**	P	**Pg**	**21 49 48.3**	**-2.8**
	baz=252						
IHAU	**Haukadalur**	**1.18**	**239**	P	**Pg**	**21 49 49.4**	**-2.4**
	baz=237						
IHVO	**Lagu-Hvolar**	**1.19**	**206**	P	**Pb**	**21 49 49.5**	**-2.3**
	baz=207						
IGRS	**Grimsstaoir**	**1.24**	**31**	P	Pn	21 49 46.2	-6.3
	baz=31						
IALF	**Alftagrof**	**1.29**	**212**	P	**Pb**	**21 49 50.9**	**-2.6**
	baz=212						
ISKI	**Skildingahlsh**	**1.31**	**12**	P	Pn	21 49 47.6	-6.0
	baz=9.5						
ISKI				S	**Sn**	**21 50 05.7**	**-5.4**
	baz=9.5						
IESK	**Eystri-Skogar**	**1.33**	**217**	P	**Pg**	**21 49 52.0**	**-2.7**
	baz=217						
ISAU	**Saurbar**	**1.34**	**244**	P	**Pn**	**21 49 51.3**	**-2.6**
	baz=243						
IMID	**Miomork**	**1.35**	**227**	P	**Pg**	**21 49 52.7**	**-2.3**
	baz=226						
IDIM	**Dimmadalss**	**1.41**	**12**	P	Pn	21 49 49.1	-5.8
	baz=10						
IASM	**Asmuli**	**1.50**	**241**	P	**Pn**	**21 49 54.2**	**-1.8**
	baz=239						
IHED	**Heoinshofoi**	**1.50**	**6**	P	Pn	21 49 50.6	-5.5
	baz=3.4						
IBRE	**Brettingsstaoi**	**1.54**	**356**	P	Pn	21 49 51.6	-5.1
	baz=354						
ISOL	**Solvholt**	**1.58**	**246**	P	**Pn**	**21 49 55.1**	**-2.0**
	baz=245						
BORG	**Borgarnes**	**1.58**	**277**	Pg	**Pn**	**21 49 54.8**	**-2.4**
	82nm,0.3s,baz=95,slow=8.1,SNR=144						
BORG				Lg	Lg	21 50 15.7	
	24nm,0.3s,baz=103,slow=23,SNR=4.4						
BORG	**Borgarnes**	**1.58**	**277**	Pn	**Pn**	**21 49 55.0**	**-2.2**
IKRO	**Krokur**	**1.58**	**253**	P	**Pn**	**21 49 55.4**	**-1.8**
	baz=251						
IGIL	**Gilhagi**	**1.59**	**20**	P	Pn	21 49 51.7	-5.7
	baz=19						
IHEI	**Heioarbar**	**1.60**	**257**	P	**Pn**	**21 49 55.5**	**-1.9**
	baz=255						
ISIG	**Siglufjorour**	**1.63**	**342**	P	Pn	21 49 53.4	-4.5
	baz=339						
ISIG				S	**Sn**	**21 50 15.3**	**-3.6**
	baz=339						
IVME	**Vestmannaeyjar**	**1.64**	**226**	P	**Pb**	**21 49 57.0**	**-2.5**
	baz=225						
ILEI	**Leirhofn**	**1.89**	**15**	P	Pn	21 49 56.5	-5.0
	baz=13						
SCO	**Scoresbysund**	**6.14**	**346**		**Pn**	**21 50 57.5**	**-2.3**
SCO	**Scoresbysund**	**6.14**	**346**	*e*	**Pn**	**21 50 56.9**	**-2.9**
	baz=165,slow=7.9						
SCO				*i* P	**Pn**	**21 50 57.0**	**-2.7**
SCO				*i* P	**Pn**	**21 50 58.2**	**-1.5**
SCO				*e*S	**Sn**	**21 52 08.4**	**-1.4**
SCO				IAML		21 52 26.9	
	comp=Z,3.6nm,0.4s						
JMIC	**Jan Mayen**	**7.29**	**24**	LR	LR	21 53 08.1	
	comp=Z,52nn,20.4s,baz=48,slow=30						
LEWI	**Lewis, Hebride**	**8.28**	**136**	*eP*	**Pn**	**21 51 27.7**	**-1.4**
KAC	**Achnashellach**	**9.29**	**134**	*eP*	**Pn**	**21 51 41.5**	**-1.5**
KPL	**Plockton**	**9.32**	**136**	*eP*	**Pn**	**21 51 41.6**	**-1.7**
INVG	**Invergeldie, C**	**10.57**	**134**	*eP*	**Pn**	**21 51 58.3**	**-2.1**
EAB	**Aberfoyle**	**10.68**	**136**	*eP*	**Pn**	**21 52 01.3**	**-0.6**
PGBU	**Glenifferbraes**	**10.96**	**137**	*eP*	**Pn**	**21 52 05.5**	**-0.3**
CLGH	**Cloghs, Cushen**	**11.15**	**143**	*eP*	**Pn**	**21 52 08.9**	**+0.5**
NEWG	**New Galloway**	**11.63**	**139**	*eP*	**Pn**	**21 52 12.9**	**-2.0**
EKA	**Eskdalemuir Ar**	**11.76**	**135**	Pn	**Pn**	**21 52 16.2**	**-0.5**
	baz=321,slow=13,SNR=24						
ESK	**Eskdalemuir**	**11.76**	**136**	*eP*	**Pn**	**21 52 15.9**	**-0.8**
ESK	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**21 52 16.1**	**-0.6**
NC204	**NORSAR Array S**	**13.30**	**91**	Pn	**Pn**	**21 52 41.5**	**+3.6**
NOA	**NORSAR Array B**	**13.61**	**92**	LR	LR	21 57 22.5	
	comp=Z,78nm,18.6s,baz=300,slow=35						
SFJD	**Kangerlussuaq**	**13.63**	**295**	LR	LR	21 57 16.0	
	comp=Z,140nm,21.2s,baz=92,slow=34						
HFS	**Hagfors**	**15.12**	**93**	LR	LR	21 58 19.3	
	comp=Z,68nm,19.5s,baz=294,slow=35						
ARCES	**ARCESS Array B**	**17.22**	**54**	LR	LR	21 58 36.0	
	comp=Z,65nm,18.1s,baz=310,slow=32						
FINES	**FINESS Array B**	**19.79**	**79**	LR	LR	22 01 13.6	
	comp=Z,52nm,20.5s,baz=78,slow=36						
CLL	**Collm**	**20.74**	**115**	*i* (P)	Pn	21 54 12.3	+0.3
	comp=Z,40nm,1.9s						
CLL				*e*		21 54 18.0	
ECH	**Echery**	**21.16**	**129**	P	**P**	**21 54 15.1**	**+0.9**
BRG	**Berggiesshubel**	**21.45**	**115**	*eP*	**P**	**21 54 16.9**	**-0.4**
	comp=Z,48nm,1.9s						
KSP	**Ksiaz**	**22.41**	**112**	*eP*	**P**	**21 54 30.4**	**+2.9**
KHC	**Kasperske Hory**	**22.71**	**118**	*eP*	**P**	**21 54 29.0**	**-1.8**
GEC2	**GERESS Array S**	**22.99**	**118**	P	**P**	**21 54 34.8**	**+1.0**
GERES	**GERESS Array B**	**22.99**	**118**	P	**P**	**21 54 34.5**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=302,slow=7.7,SNR=6.1						
GERES	**GERESS Array B**	**22.99**	**118**		**P**	**21 54 33.6**	**-0.2**
MOTA	**Moosalm**	**23.28**	**124**	*eP*	**P**	**21 54 40.2**	**+3.3**
	comp=Z,3nm,1.3s						
DAVOX	**Davos/Dischmat**	**23.33**	**127**	LR	LR	22 03 22.9	
	comp=Z,43nm,20.0s,baz=81,slow=36						
FETA	**Feichten**	**23.42**	**125**	*eP*	**P**	**21 54 40.1**	**+1.8**
	comp=Z,7.8nm,1.4s						
SQTA	**Sankt Quirin**	**23.42**	**124**	P	**P**	**21 54 42.1**	**+3.9**
	comp=Z,13nm,2.0s						
WATA	**Walderalm**	**23.46**	**123**	*eP*	**P**	**21 54 42.0**	**+3.4**
	comp=Z,6.7nm,1.1s						
WTTA	**Wattenberg**	**23.54**	**123**	*eP*	**P**	**21 54 43.0**	**+3.5**
	comp=Z,13nm,1.4s						
VRAC	**Vranov**	**23.73**	**114**	LR	LR	22 05 26.1	
	comp=Z,81nm,18.9s,baz=325,slow=40						
ABTA	**Abfaltersbach**	**24.30**	**123**	*eP*	**P**	**21 54 50.6**	**+4.1**
	comp=Z,8.9nm,1.8s						
OJC	**Ojcow**	**24.31**	**108**	*eP*	**P**	**21 54 48.8**	**+2.3**
CONA	**Conrad Observa**	**24.56**	**117**	P	**P**	**21 54 49.8**	**+0.8**
	comp=Z,3.6nm,0.8s						
CIMO	**Cimolais**	**24.64**	**123**	P	**P**	**21 54 51.5**	**+1.8**
MYKA	**Terra Mystica**	**24.81**	**121**	*eP*	**P**	**21 54 56.4**	**+5.3**
	comp=Z,8.3nm,1.3s						
LANS	**Liptovska Anna**	**25.01**	**110**	*eP*	**P**	**21 54 52.8**	**-0.1**
VYHS	**Vyhne**	**25.27**	**112**	*eP*	**P**	**21 54 55.5**	**+0.2**
SCHQ	**Schefferville**	**25.97**	**271**	P	**P**	**21 55 01.0**	**-0.5**
	comp=Z,8.3nm,0.8s,baz=68,slow=4.1,SNR=5.5						
SCHQ	**Schefferville**	**25.97**	**271**	P	**P**	**21 55 00.9**	**-0.6**
SCHQ				IAmb	IAmb	21 55 14.1	
	comp=Z,22nm,1.2s						
PSZ	**Piszkesteto**	**26.16**	**112**	P	**P**	**21 55 07.0**	**+3.6**
PSZ				IAmb	IAmb	21 55 07.8	
	comp=Z,20nm,1.5s						
ESDC	**Sonseca Array**	**26.22**	**156**	P	**P**	**21 55 04.0**	**0.0**
	comp=Z,2.0nm,1.1s,baz=349,slow=9.8,SNR=5.5						
ESDC				LR	LR	22 04 56.5	
	comp=Z,67nm,18.5s,baz=325,slow=35						
KOLS	**Kolonicke sedl**	**26.32**	**107**	*eP*	**P**	**21 55 05.0**	**+0.2**
AKASG	**Malin Array Be**	**27.91**	**97**	P	**P**	**21 55 19.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=318,slow=9.1,SNR=1.9						
OBN	**Obninsk**	**27.96**	**84**	LR	LR	22 06 49.0	
	comp=Z,14nm,21.8s,baz=224,slow=37						
BURAR	**Bucovina Array**	**28.58**	**106**	P	**P**	**21 55 28.6**	**+3.5**
KEST	**Kesra**	**33.15**	**137**	LR	LR	22 10 19.4	
	comp=Z,47nm,21.6s,baz=282,slow=38						
BRTR	**Keskin Array B**	**38.53**	**105**	P	**P**	**21 56 52.8**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=270,slow=36,SNR=1.5						
INK	**Inuvik**	**39.87**	**329**	P	**P**	**21 57 01.3**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=3.3,slow=11,SNR=2.3						
INK	**Inuvik**	**39.87**	**329**	P	**P**	**21 57 01.7**	**-0.5**
ABKAR	**Akbulak array**	**42.08**	**73**	P	**P**	**21 57 22.1**	**+1.3**
TIXI	**Tiksi**	**42.12**	**15**	P	**P**	**21 57 21.6**	**+0.8**
TOLK	**Toolik Lake Re**	**42.79**	**336**	P	**P**	**21 57 27.5**	**+1.2**
TOLK				IAmb	IAmb	21 57 31.4	
	comp=Z,22nm,1.5s						
BMAR	**Burnt Mountain**	**42.93**	**333**	P	**P**	**21 57 28.8**	**+1.3**
N49A	**Columbus Grove**	**44.03**	**271**	P	**P**	**21 57 37.6**	**+1.0**
IL31		**45.72**	**332**	P	**P**	**21 57 51.2**	**+1.6**
IL31				IAmb	IAmb	21 57 54.2	
	comp=Z,16nm,1.5s						
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**21 57 50.0**	**+0.3**
	comp=Z,2.9nm,1.1s,baz=16,slow=6.2,SNR=14						
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**21 57 50.0**	**+0.3**
MDM	**Murphy Dome**	**45.81**	**333**	P	**P**	**21 57 50.8**	**+0.2**
MDM				IAmb	IAmb	21 57 53.4	
	comp=Z,16nm,1.3s						
IMAR	**Indian Mountai**	**45.90**	**337**	P	**P**	**21 57 51.7**	**+0.6**
BCAR	**Beaver Creek A**	**46.13**	**328**	P	**P**	**21 57 54.8**	**+1.7**
ZALV	**Zalesovo Beam**	**47.74**	**51**	P	**P**	**21 58 05.5**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=350,slow=3.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**47.74**	**51**	P	**P**	**21 58 04.8**	**-0.9**
KURK	**Kurchatov**	**48.22**	**58**	P	**P**	**21 58 08.5**	**-0.9**
KURK				IAmb	IAmb	21 58 11.3	
	comp=Z,5.3nm,0.8s						
EGMT	**Eagleton**	**48.84**	**297**	P	**P**	**21 58 15.3**	**+0.9**
T42A	**Van Buren**	**50.24**	**274**	P	**P**	**21 58 25.4**	**+0.4**
T42A				IAmb	IAmb	21 58 41.8	
	comp=Z,5.9nm,0.6s						
HALT	**Halls**	**50.43**	**272**	P	**P**	**21 58 27.9**	**+1.3**
RLMT	**Red Lodge**	**51.05**	**294**	P	**P**	**21 58 31.9**	**+0.5**
RLMT				IAmb	IAmb	21 58 38.5	
	comp=Z,17nm,1.5s						
KK31	**Karatay Array**	**51.37**	**70**	P	**P**	**21 58 34.9**	**+1.3**
KKAR	**Karatay Array**	**51.37**	**70**	P	**P**	**21 58 33.8**	**+0.2**
YNE	**Yellowstone No**	**51.44**	**295**	P	**P**	**21 58 35.4**	**+1.1**
BOZ	**Bozeman (W)**	**51.57**	**297**	P	**P**	**21 58 35.8**	**+0.6**
BOZ				IAmb	IAmb	21 58 38.9	
	comp=Z,16nm,1.4s						
YMP	**Mirror Lake Pl**	**51.72**	**295**	P	**P**	**21 58 37.8**	**+1.3**
YHL	**Hebgen Lake**	**52.02**	**296**	P	**P**	**21 58 40.2**	**+1.4**
MKAR	**Makanchi Array**	**52.83**	**58**	P	**P**	**21 58 43.7**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=308,slow=6.0,SNR=7.7						
MKAR	**Makanchi Array**	**52.83**	**58**	P	**P**	**21 58 43.3**	**-1.0**
TOA0	**Torodi Ar. Sit**	**53.10**	**156**	P	**P**	**21 58 46.6**	**0.0**
TORD	**Torodi Ar. Bea**	**53.10**	**156**	P	**P**	**21 58 46.0**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=338,slow=7.4,SNR=6.3						
TORD	**Torodi Ar. Bea**	**53.10**	**156**	P	**P**	**21 58 45.9**	**-0.7**
BW06	**Boulder Array**	**53.14**	**293**	P	**P**	**21 58 46.7**	**-0.2**
BW06				IAmb	IAmb	21 58 49.7	
	comp=Z,5.8nm,0.8s						
PD31	**Pinedale Array**	**53.14**	**293**	P	**P**	**21 58 47.6**	**+0.7**
PD31				IAmb	IAmb	21 58 49.7	
	comp=Z,7.0nm,1.1s						
PDAR	**Pinedale Array**	**53.14**	**293**	P	**P**	**21 58 47.0**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=59,slow=6.9,SNR=21						
PDAR				LR	LR	22 22 05.2	
	comp=Z,103nm,18.9s,baz=38,slow=37						
PDAR	**Pinedale Array**	**53.14**	**293**	P	**P**	**21 58 45.9**	**-1.1**
REDW	**Red Top Meadow**	**53.15**	**294**	P	**P**	**21 58 47.9**	**+0.9**
REDW				IAmb	IAmb	21 58 50.8	
	comp=Z,9.9nm,1.3s						
BCYI	**Bear Canyon**	**53.34**	**297**	P	**P**	**21 58 52.0**	**+3.6**
BTK	**Batken**	**54.05**	**71**	P	**P**	**21 58 53.7**	**+0.2**
BTK				IAmb	IAmb	21 58 56.4	
	comp=Z,6.1nm,0.9s						
GAR	**Garm**	**54.74**	**72**	P	**P**	**21 58 58.8**	**+0.2**
HWUT	**Hardware

DAV	**Davao City (W)**	**11.16**	**334**	LR	LR	22 07 39.6	
	comp=Z,94nm,19.4s,baz=72,slow=41						
FITZ	**Fitzroy Crossi**	**15.73**	**197**	Pn	**Pn**	**22 03 53.8**	**+0.1**
	0.1nm,0.3s,baz=25,slow=12,SNR=2.4						
FITZ				Sn	**Sn**	**22 06 43.9**	**-3.1**
	0.0nm,0.3s,baz=193,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**17.23**	**168**	P	**P**	**22 04 16.2**	**+2.2**
	0.2nm,0.3s,baz=346,slow=11,SNR=12						
WRA				S	**Sn**	**22 07 19.5**	**-4.1**
	0.1nm,0.3s,baz=346,slow=24,SNR=1.8						
ASAR	**Alice Springs**	**20.79**	**171**	P	**P**	**22 04 54.8**	**+1.8**
	3.8nm,0.7s,baz=348,slow=10.0,SNR=40						
STKA	**Stephens Creek**	**30.55**	**161**	P	**P**	**22 06 26.6**	**+1.7**
	1.0nm,0.4s,baz=337,slow=12,SNR=3.4						
STKA				LR	LR	22 21 16.4	
	comp=Z,56nm,18.8s,baz=27,slow=41						
MKAR	**Makanchi Array**	**65.22**	**326**	P	**P**	**22 10 52.8**	**+0.1**
	0.2nm,0.5s,baz=120,slow=7.2,SNR=2.5						

*DDA **03** 22:07:39.9,38˚.43N×45˚.23E,h7km,2km,ML2.6*
*TEH **03** 22:07:40.4,38˚.35N×45˚.23E,h10km,ML2.9*
ISC 03 22:07:40.5±1.2,38˚.41N±0˚.04×45˚.23E±0˚.03,h7km±11km, n25,σ1§14/33,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMRD	**Marand**	**0.48**	**50**	*e*Pg	**Pb**	**22 07 50.8**	**-0.5**
IMRD				*e*		22 08 04.5	
ITBZ	**Tabriz**	**0.74**	**103**	*e*Pg	**Pg**	**22 07 54.7**	**0.0**
ITBZ				*e*Sg	**Sb**	**22 08 05.8**	**-0.3**
ITBZ				*e*		22 08 08.9	
YOVA	**Hakkari_Yksek**	**1.11**	**223**	*i* P	**Pb**	**22 08 01.5**	**-0.6**
YOVA				IAML		22 08 17.0	
	comp=E,76nm,0.7s						
YOVA				*i* S	**Sn**	**22 08 20.0**	**+1.9**
YOVA				IAML		22 08 23.0	
	comp=N,146nm,0.6s						
CLDR	**Caldiran**	**1.27**	**306**	P	**Pn**	**22 08 03.8**	**-1.0**
CLDR				S	**Sn**	**22 08 22.8**	**+0.7**
CLDR	**Caldiran**	**1.27**	**306**	*i* P	**Pn**	**22 08 03.2**	**-1.5**
IHRS	**Heris**	**1.42**	**93**	*e*		22 08 16.0	
IHRS				*e*Pg	**Pg**	**22 08 08.5**	**+0.7**
VMUR	**Van-Muradiye**	**1.43**	**295**	*i* P	**Pb**	**22 08 07.1**	**-0.3**
VMUR				*i* S	**Sg**	**22 08 26.8**	**+0.5**
VMUR				IAML		22 08 30.0	
	comp=N,110nm,0.8s						
TVAN	**Van**	**1.44**	**275**	*i* P	**Pb**	**22 08 07.2**	**-0.6**
TVAN				*i* S	**Sg**	**22 08 27.5**	**+0.7**
TVAN				IAML		22 08 33.0	
	comp=N,66nm,1.0s						
TVAN				IAML		22 08 33.0	
	comp=E,86nm,0.6s						
VANB	**Van**	**1.46**	**278**	*e*P	**Pg**	**22 08 08.5**	**0.0**
VANB				S	**Sg**	**22 08 29.9**	**+2.5**
HAKT	**HAKKARI**	**1.47**	**235**	*i* P	**Pn**	**22 08 07.1**	**-0.6**
IHSH	**Hashtrud**	**1.60**	**93**	*e*Pg	Pg	22 08 17.1	+6.0
IHSH				*e*		22 08 44.9	
DYDN	**Diyadin**	**1.66**	**314**	*i* P	**Pb**	**22 08 10.6**	**-0.9**
DYDN				*i* S	**Sg**	**22 08 35.4**	**+1.6**
DYDN				IAML		22 08 38.0	
	comp=N,65nm,0.9s						
GEVA	**Gevas**	**1.71**	**268**	*i* P	**Pn**	**22 08 10.0**	**-0.9**
GEVA				*i* S	**Sg**	**22 08 37.0**	**+1.5**
IGDI	**IGDIR**	**1.71**	**329**	*i* P	**Pb**	**22 08 12.3**	**0.0**
CUKT	**Cukurca**	**1.73**	**229**	*e*P	**Pg**	**22 08 13.5**	**-0.2**
CUKT	**Cukurca**	**1.73**	**229**	*i* P	**Pg**	**22 08 13.1**	**-0.5**
CUKT				*i* S	**Sg**	**22 08 35.0**	**-1.1**
CUKT				IAML		22 08 46.0	
	comp=N,74nm,0.7s						
CUKT				IAML		22 08 48.0	
	comp=E,120nm,0.7s						
TASB	**TASBURUN-IGDIR**	**1.76**	**334**	*e*P	**Pn**	**22 08 10.2**	**-1.2**
AKDM	**Akdamar-Van**	**1.77**	**268**	*e*P	**Pg**	**22 08 13.6**	**-0.9**
ISRB	**Sarab**	**2.00**	**106**	*e*Pg	**Pg**	**22 08 18.2**	**-0.7**
ISRB				*e*		22 08 57.3	
AGRB	**Hanur-Agry**	**2.10**	**304**	*e*P	**Pn**	**22 08 17.0**	**+0.8**
MLAZ	**Malazgirt-MUS**	**2.22**	**290**	*e*P	**Pb**	**22 08 19.3**	**-1.8**
SIRN	**Sırnak**	**2.41**	**249**	*i* P	**Pn**	**22 08 21.6**	**+1.3**
BLIS	**Bitlis-Merkez**	**2.45**	**271**	*i* P	**Pb**	**22 08 23.5**	**-1.4**
GURO	**Guroymak-BITLI**	**2.52**	**274**	*e*P	**Pb**	**22 08 24.3**	**-1.7**
SRTM	**Siirt_Merkez**	**2.64**	**262**	*i* P	**Pb**	**22 08 29.0**	**+0.8**

*NNC **03** 22:47:59.9±3.0,36˚.90N×71˚.08E,h202km±46km,mb2.8, mpv4.3,Error ellipse: s-maj=29.5km s-min=17.8km az=19.0*
ISC 03 22:47:58.8±3.1,36˚.8N±0˚.2×71˚.2E±0˚.1,h200km,n15, σ1§10/18,4C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**5.43**	**351**	Pg	**Pn**	**22 49 19.9**	**+1.1**
	17nm,0.3s						
IUG				Lg	Lg	22 50 21.1	
	16nm,0.4s						
AML	**Almayashu**	**5.69**	**19**	P	**Pn**	**22 49 23.1**	**+0.7**
	SNR=27						
UCH	**Uchtor**	**6.02**	**24**	P	**Pn**	**22 49 27.8**	**+1.1**
	SNR=5.2						
DZA	**Taraz**	**6.10**	**1**	Pg	**Pn**	**22 49 28.9**	**+1.5**
	316nm,0.1s						
DZA				Lg	Lg	22 50 36.9	
	43nm,0.2s						
MRKS	**Merke**	**6.16**	**14**	Pg	**Pn**	**22 49 28.7**	**+0.5**
	8.5nm,0.4s						
MRKS				Lg	Lg	22 50 36.7	
	9.5nm,0.6s						
EKS2	**Erkin-Say**	**6.21**	**18**	P	**Pn**	**22 49 30.6**	**+1.8**
	SNR=14						
KK31	**Karatay Array**	**6.33**	**356**	P	**Pn**	**22 49 30.3**	**0.0**
	1.7nm,0.4s,baz=176,slow=13,SNR=23						
KK31				⇓S	**Sn**	**22 50 41.1**	**-1.8**
	1.9nm,0.5s,baz=196,slow=20,SNR=6.8						
AAK	**Ala-Archa**	**6.38**	**23**	P	**Pn**	**22 49 33.1**	**+2.0**
	SNR=8.2						
AAK	**Ala-Archa**	**6.38**	**23**	⇑P	**Pn**	**22 49 31.6**	**+0.5**
	2.6nm,0.3s						
AAK				⇓S	**Sn**	**22 50 44.5**	**+0.3**
	4.1nm,0.6s						
ULHL	**Ulahol**	**6.72**	**34**	P	**Pn**	**22 49 35.8**	**+0.3**
	SNR=8.9						
TKM2	**Tokmak 2**	**7.01**	**28**	P	**Pn**	**22 49 39.5**	**+0.2**
	SNR=7.7						
TKM2	**Tokmak 2**	**7.01**	**28**	⇑P	**Pn**	**22 49 39.7**	**+0.4**
	2.6nm,0.5s						
TKM2				⇑S	**Sn**	**22 50 59.1**	**+0.1**
	4.9nm,0.8s						
TNSS	**Tian-Shan**	**7.66**	**34**	P	**Pn**	**22 49 46.7**	**-1.2**
	3.2nm,0.3s						
AB31	**Akbulak array**	**14.91**	**330**	P	**Pn**	**22 51 19.4**	**-0.3**
	0.3nm,0.5s,baz=128,slow=11,SNR=8.9						
AKTO	**Aktyubinsk**	**16.61**	**329**	⇑P	**P**	**22 51 38.8**	**-0.4**
	1.4nm,0.6s						

*IDC **03** 23:04:30.0±4.1,7˚.53S×127˚.71E,h153km±36km,mb3.5/5, mb1 3.8/8,mb1mx3.5/30,mbtmp4.1/8,MS3.0/1,Ms1 3.0/1, ms1mx2.2/27,Error ellipse: s-maj=51.2km s-min=18.4km az=70.0*
ISC 03 23:04:29.6±0.9,7˚.76S±0˚.08×127˚.8E±0˚.1,h150km,n11, σ2§37/14,mb3.9/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.74**	**239**	P	**Pn**	**23 05 41.1**	**+1.5**
	11nm,0.3s,baz=140,slow=3.2,SNR=6.3						
BATI				S	**Sn**	**23 06 33.2**	**-0.9**
	21nm,0.3s,baz=104,slow=23,SNR=9.6						
FITZ	**Fitzroy Crossi**	**10.48**	**191**	P	**Pn**	**23 06 56.4**	**+0.3**
	3.0nm,0.3s,baz=7.6,slow=13,SNR=64						
FITZ				S	**Sn**	**23 08 47.6**	**-4.5**
	1.8nm,0.3s,baz=53,slow=15,SNR=4.2						
WRA	**Warramunga Arr**	**13.68**	**153**	P	**Pn**	**23 07 39.3**	**+1.8**
	3.6nm,0.3s,baz=326,slow=13,SNR=114						
WRA				S	**Sn**	**23 10 06.0**	**-3.1**
	2.8nm,0.3s,baz=322,slow=23,SNR=8.8						
ASAR	**Alice Springs**	**16.87**	**160**	P	**Pn**	**23 08 20.6**	**+3.6**
	1.3nm,0.3s,baz=336,slow=11,SNR=60						
ASAR				S	**S**	**23 11 24.6**	**-0.2**
	0.7nm,0.3s,baz=320,slow=20,SNR=6.3						
NWAO	**Narrogin (SRO)**	**26.88**	**200**	P	**P**	**23 09 58.1**	**+1.6**
	3.3nm,0.4s,baz=68,slow=5.4,SNR=1.8						
PSI	**Prapat**	**30.64**	**289**	LR	LR	23 24 24.4	
	comp=Z,27nm,19.1s,baz=30,slow=39						

SONM	**Songino Array**	**58.50**	**343**	P	**P**	**23 14 09.3**	**-0.9**
	0.2nm,0.5s,baz=181,slow=7.2,SNR=2.1						
MKAR	**Makanchi Array**	**67.68**	**328**	P	**P**	**23 15 09.2**	**-1.4**
	0.8nm,0.4s,baz=125,slow=8.0,SNR=12						
ZALV	**Zalesovo Beam**	**71.31**	**335**	P	**P**	**23 15 30.7**	**-2.0**
	0.9nm,0.5s,baz=127,slow=5.8,SNR=5.7						
VNDA	**Vanda**	**71.97**	**173**	P	**P**	**23 15 38.1**	**+1.8**
	0.6nm,0.7s,baz=332,slow=7.3,SNR=6.4						
TORD	**Torodi Ar. Bea**	**126.79**	**281**	PKP	**PKPdf**	**23 23 15.5**	**-1.0**
	0.6nm,0.9s,baz=110,slow=3.4,SNR=3.3						

*JMA **03** 23:11:43.4±0.1,23˚.94N×121˚.68E,h15km±2km,M3.1*
*TAP **03** 23:11:44.5,23˚.99N×121˚.63E,h23km,ML3.6,C*
ISC 03 23:11:43.5±0.9,23˚.95N±0˚.02×121˚.72E±0˚.02,h24km±4km, n116,σ1§39/204,4C-8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.10**	**285**	⇑*i*P	**Pb**	**23 11 48.7**	**+0.7**
	baz=215						
HWA				S	**Sn**	**23 11 52.6**	**+1.4**
	baz=215						
TWD	**Chiawan**	**0.17**	**320**	⇑*i*P	**Pb**	**23 11 48.7**	**0.0**
	baz=345						
TWD				S	**Sb**	**23 11 51.9**	**-0.4**
	baz=345						
NACB	**Ninganchiao**	**0.25**	**334**	⇑*i*P	**Pb**	**23 11 49.5**	**-0.2**
	baz=349						
NACB				*i* S	**Sb**	**23 11 53.1**	**-0.8**
	baz=349						
ESL	**Shilin**	**0.29**	**243**	*e*P	**Pb**	**23 11 50.5**	**+0.1**
	baz=233						
ESL				S	**Sb**	**23 11 55.1**	**+0.1**
	baz=233						
ETLH	**Xiulin Townshi**	**0.33**	**320**	⇓*i*P	**Pb**	**23 11 50.5**	**-0.6**
	baz=326						
ETLH				S	**Sb**	**23 11 55.2**	**-1.0**
	baz=326						
EGFH	**Guangfu**	**0.38**	**223**	*e*P	**Pn**	**23 11 52.3**	**-1.2**
	baz=220						
EGFH				*e*S	**Sb**	**23 11 58.0**	**+0.6**
	baz=220						
WHF	**Hehuan Shan**	**0.46**	**295**	⇓*i*P	**Pb**	**23 11 52.3**	**-0.9**
	baz=287						
WHF				*e*S	**Sb**	**23 11 57.8**	**-2.0**
	baz=287						
OWD	**Renai**	**0.49**	**271**	*e*P	**Pb**	**23 11 53.1**	**-0.6**
	baz=271						
OWD				*e*S	**Sb**	**23 11 58.5**	**-2.1**
	baz=271						
ENAH	**Nanao**	**0.51**	**10**	*e*P	**Pb**	**23 11 54.6**	**+0.8**
	baz=13						
ENAH				*e*S	**Sb**	**23 12 01.7**	**+1.0**
	baz=13						
CHGB	**Renai**	**0.51**	**283**	⇓*i*P	**Pb**	**23 11 53.5**	**-0.5**
	baz=273						
CHGB				S	**Sb**	**23 11 59.6**	**-1.4**
	baz=273						
FUSS	**Fushou**	**0.52**	**305**	⇓*i*P	**Pn**	**23 11 53.7**	**-1.9**
	baz=304						
FUSS				S	**Sb**	**23 11 59.9**	**-1.6**
	baz=304						
HGSD	**Ruisui**	**0.53**	**210**	*e*P	**Pn**	**23 11 55.8**	**+0.3**
	baz=213						
HGSD				*e*S	**Sn**	**23 12 04.7**	**+1.0**
	baz=213						
VWDT	**VWDT**	**0.56**	**250**	⇑*i*P	**Pn**	**23 11 54.8**	**-1.2**
	baz=237						
VWDT				S	**Sb**	**23 12 01.9**	**-0.4**
	baz=237						
NNSB	**Datong**	**0.57**	**328**	⇓*i*P	**Pn**	**23 11 54.4**	**-1.7**
	baz=330						
NNSB				*i* S	**Sb**	**23 12 01.5**	**-1.1**
	baz=330						
NNSH	**Datong**	**0.57**	**328**	⇓*i*P	**Pn**	**23 11 54.4**	**-1.7**
	baz=330						
NNSH				S	**Sb**	**23 12 01.1**	**-1.6**
	baz=330						
EHY	**Hungye**	**0.57**	**219**	*e*P	**Pb**	**23 11 54.7**	**-0.2**
	baz=215						
EHY				*e*S	**Sn**	**23 12 03.2**	**-1.5**
	baz=215						
TWT	**Tachien**	**0.58**	**302**	P	**Pn**	**23 11 54.8**	**-1.5**
	baz=300						
TWT				*e*S	**Sb**	**23 12 02.1**	**-1.0**
	baz=300						
NNS	**Nan Shan**	**0.58**	**327**	⇓*i*P	**Pn**	**23 11 54.7**	**-1.7**
	baz=331						
NNS				S	**Sb**	**23 12 01.9**	**-1.1**
	baz=331						
TDCB	**Techi**	**0.59**	**301**	⇓*i*P	**Pn**	**23 11 54.9**	**-1.6**
	baz=300						
TDCB				S	**Sb**	**23 12 02.0**	**-1.4**
	baz=300						
TWC	**Suao**	**0.67**	**10**	*e*P	**Pb**	**23 11 57.3**	**+0.8**
	baz=12						
TWC				*e*S	**Sn**	**23 12 06.8**	**-0.4**
	baz=12						
YULB	**Yu-li**	**0.67**	**215**	*e*P	**Pn**	**23 11 56.0**	**-1.5**
	baz=206						
YULB				*e*S	**Sn**	**23 12 05.8**	**-1.5**
	baz=206						
NDT	**Datong Townshi**	**0.68**	**344**	*e*P	**Pn**	**23 11 56.6**	**-1.0**
	baz=349						
NDT				S	**Sn**	**23 12 06.3**	**-1.1**
	baz=349						
ENTT	**Nioudou**	**0.70**	**349**	*e*P	**Pn**	**23 11 57.0**	**-0.9**
	baz=347						
ENTT				*e*S	**Sn**	**23 12 06.3**	**-1.7**
	baz=347						
EYUL	**Yuli**	**0.70**	**211**	*e*P	**Pb**	**23 11 58.8**	**+1.8**
	baz=216						
EYUL				*e*S	**Sn**	**23 12 09.5**	**+1.6**
	baz=216						
TWF1	**Yuli**	**0.71**	**213**	*e*P	**Pb**	**23 11 56.7**	**-0.5**
	baz=217						
TWF1				*e*S	**Sn**	**23 12 06.9**	**-1.2**
	baz=217						
SSLB	**Suanglung**	**0.71**	**257**	P	**Pn**	**23 11 56.9**	**-1.3**
	baz=259						
SSLB				S	**Sn**	**23 12 05.1**	**-3.3**
	baz=259						
DPDB	**Guoxing**	**0.73**	**277**	P	**Pn**	**23 11 57.2**	**-1.1**
	baz=274						
DPDB				*e*S	**Sn**	**23 12 06.5**	**-2.2**
	baz=274						
SMLT	**Sun Moon Lake**	**0.75**	**265**	*e*P	**Pn**	**23 11 57.5**	**-1.1**
	baz=261						
SMLT				*e*S	**Sn**	**23 12 06.5**	**-2.8**
	baz=261						
TWE	**Neicheng**	**0.77**	**357**	*e*P	**Pn**	**23 11 58.3**	**-0.5**
	baz=356						
TWE				*e*S	**Sn**	**23 12 08.3**	**-1.3**
	baz=356						
WHP	**Taichung City**	**0.78**	**295**	*e*P	**Pn**	**23 11 58.1**	**-0.8**
	baz=290						
WHP				S	**Sn**	**23 12 07.3**	**-2.6**
	baz=290						
YHNB	**Yeheng**	**0.78**	**337**	*e*P	**Pn**	**23 11 58.1**	**-1.0**
	baz=339						
YHNB				S	**Sn**	**23 12 07.2**	**-2.9**
	baz=339						
TYC	**Yuchr**	**0.79**	**267**	*e*P	**Pn**	**23 11 58.0**	**-1.1**
	baz=263						
TYC				*e*S	**Sn**	**23 12 07.0**	**-3.0**
	baz=263						
NSK	**Sanguang**	**0.79**	**336**	P	**Pn**	**23 11 58.2**	**-1.0**
	baz=338						
NSK				S	**Sn**	**23 12 07.6**	**-2.8**
	baz=338						
WHYT	**Xinyi Township**	**0.83**	**252**	*e*P	**Pn**	**23 11 59.4**	**-0.3**
	baz=252						
WHYT				*e*S	**Sn**	**23 12 09.9**	**-1.2**
	baz=252						
FULB	**Fuli**	**0.84**	**207**	*e*P	**Pb**	**23 11 59.9**	**+0.4**
	baz=215						
NWLT	**Wulai**	**0.85**	**347**	*e*P	**Pn**	**23 11 59.7**	**-0.2**
	baz=340						
NWLT				*e*S	**Sn**	**23 12 09.7**	**-2.0**
	baz=340						
CHKT	**Chengkung**	**0.91**	**201**	*e*P	**Pb**	**23 12 01.1**	**+0.5**
	baz=206						
CHKT				*e*S	**Sb**	**23 12 16.1**	**+3.9**
	baz=206						
NTC	**Toucheng**	**0.91**	**7**	*e*P	**Pb**	**23 12 02.9**	**+2.3**
	baz=2.0						
NTC				*e*S	**Sb**	**23 12 15.2**	**+3.0**
	baz=2.0						
WJS	**Zhushan**	**0.91**	**262**	*e*P	**Pb**	**23 12 01.3**	**+0.6**
	baz=261						
WJS				*e*S	**Sn**	**23 12 13.5**	**+0.4**
	baz=261						
EGS		**0.91**	**12**	*e*P	**Pb**	**23 12 02.8**	**+2.1**
	baz=10.0						
EGS				*e*S	**Sb**	**23 12 15.8**	**+3.4**
	baz=10.0						
NSTT	**Nanjuang**	**0.94**	**316**	*e*P	**Pn**	**23 12 01.1**	**-0.1**
	baz=317						
NSTT				*e*S	**Sn**	**23 12 12.2**	**-1.7**
	baz=317						
ALS	**Alishan**	**0.94**	**243**	P	**Pb**	**23 12 01.6**	**+0.2**
	baz=232						
ALS				*e*S	**Sn**	**23 12 13.6**	**-0.7**
	baz=232						
LIOB	**Emei**	**0.94**	**318**	*e*P	**Pn**	**23 12 01.6**	**+0.4**
	baz=318						
LIOB				*e*S	**Sn**	**23 12 11.8**	**-2.2**
	baz=318						
WNT	**Mingjian**	**0.95**	**266**	P	**Pb**	**23 12 01.9**	**+0.7**
	baz=263						
WNT				*e*S	**Sn**	**23 12 14.3**	**+0.3**
	baz=263						
TWQ1	**Liyutan**	**0.95**	**295**	P	**Pn**	**23 12 02.1**	**+0.8**
	baz=301						
TWQ1				S	**Sn**	**23 12 13.7**	**-0.4**
	baz=301						
TCU	**Taichung**	**0.97**	**282**	*e*P	**Pb**	**23 12 02.5**	**+0.9**
	baz=280						
TCU				*e*S	**Sn**	**23 12 15.3**	**+0.7**
	baz=280						
NSY	**Sanyi**	**0.99**	**298**	*e*P	**Pn**	**23 12 02.7**	**+0.9**
	baz=297						
NSY				*e*S	**Sn**	**23 12 15.2**	**+0.1**
	baz=297						
ELDTW	**Lidau**	**0.99**	**220**	*e*P	**Pb**	**23 12 02.3**	**+0.2**
	baz=204						
ELDTW				*e*S	**Sb**	**23 12 16.6**	**+1.8**
	baz=204						
CHN5	**Tsauling**	**1.01**	**250**	*e*P	**Pb**	**23 12 03.1**	**+0.7**
	baz=248						
CHN5				*e*S	**Sn**	**23 12 16.4**	**+0.6**
	baz=248						
TIPB	**Shuangxi**	**1.02**	**6**	*e*P	**Pb**	**23 12 03.8**	**+1.2**
	baz=355						
TIPB				*e*S	**Sb**	**23 12 16.8**	**+1.2**
	baz=355						
NMLH	**Miaoli**	**1.03**	**305**	*e*P	**Pb**	**23 12 03.9**	**+1.3**
	baz=304						
NMLH				*e*S	**Sn**	**23 12 16.9**	**+0.8**
	baz=304						
TWA	**Mucha**	**1.03**	**353**	*e*P	**Pb**	**23 12 03.3**	**+0.6**
	baz=342						
TWA				*e*S	**Sn**	**23 12 16.4**	**+0.2**
	baz=342						
EDH	**Donghe**	**1.04**	**201**	*e*P	**Pb**	**23 12 03.4**	**+0.6**
	baz=193						
EDH				*e*S	**Sb**	**23 12 19.8**	**+3.7**
	baz=193						
TATO	**Taipei**	**1.04**	**349**	*e*P	**Pn**	**23 12 03.3**	**+0.7**
	baz=349						
TATO				*e*S	**Sn**	**23 12 14.5**	**-1.9**
	baz=349						
WDJ	**Dajia District**	**1.06**	**292**	*e*P	**Pn**	**23 12 03.4**	**+0.6**
	baz=291						
WDJ				*e*S	**Sn**	**23 12 15.4**	**-1.4**
	baz=291						
WCHH	**Zhanghua**	**1.07**	**277**	*e*P	**Pn**	**23 12 03.6**	**+0.7**
	baz=285						
WCHH				*e*S	**Sn**	**23 12 18.4**	**+1.5**
	baz=285						
SBCB	**Hsinchu**	**1.07**	**322**	*e*P	**Pb**	**23 12 05.8**	**+2.4**
	baz=321						
SBCB				*e*S	**Sn**	**23 12 19.1**	**+2.0**
	baz=321						
TWB1	**Santiao Chiao**	**1.08**	**13**	*e*P	**Pb**	**23 12 05.1**	**+1.6**
	baz=10.0						
TWB1				*e*S	**Sb**	**23 12 20.2**	**+2.9**
	baz=10.0						
HSN	**Hsinchu**	**1.09**	**321**	*e*P	**Pb**	**23 12 04.9**	**+1.3**
	baz=330						
HSN				*e*S	**Sn**	**23 12 19.3**	**+1.8**
	baz=330						
WGK	**Gukeng**	**1.09**	**256**	*e*P	**Pb**	**23 12 04.5**	**+0.8**
	baz=255						
WDLH	**Douliu**	**1.11**	**257**	*e*P	**Pb**	**23 12 04.3**	**+0.3**
	baz=256						
NWF	**Wu-fen Shan**	**1.12**	**3**	*e*P	**Pb**	**23 12 05.2**	**+0.9**
	baz=348						
NWF				*e*S	**Sb**	**23 12 20.4**	**+2.0**
	baz=348						
WFSB	**Wu-fen Shan**	**1.12**	**3**	*e*P	**Pb**	**23 12 05.1**	**+0.9**
	baz=348						
WFSB				*e*S	**Sb**	**23 12 20.4**	**+2.1**
	baz=348						
NCUH	**Zhongli**	**1.12**	**335**	*e*P	**Pb**	**23 12 06.2**	**+1.9**
	baz=334						
NCUH				*e*S	**Sn**	**23 12 19.9**	**+1.5**
	baz=334						
NCU	**National Centr**	**1.12**	**335**	*e*P	**Pb**	**23 12 04.9**	**+0.6**
	baz=334						
NCU				*e*S	**Sn**	**23 12 20.3**	**+1.9**
	baz=334						
LONT	**Longtian**	**1.17**	**208**	*e*P	**Pb**	**23 12 04.6**	**-0.4**
	baz=200						
STYT	**Tauyuan**	**1.18**	**229**	*e*P	**Pb**	**23 12 05.3**	**+0.1**
	baz=217						
STYT				*e*S	**Sb**	**23 12 20.8**	**+0.8**
	baz=217						
TWS1	**Kuangyinshan**	**1.18**	**347**	*e*P	**Pn**	**23 12 05.3**	**+0.9**
	baz=360						
TWS1				*e*S	**Sn**	**23 12 20.7**	**+0.9**
	baz=360						
TPUB	**Ta-pu**	**1.19**	**237**	*e*P	**Pb**	**23 12 05.9**	**+0.5**
	baz=226						
TPUB				*e*S	**Sb**	**23 12 21.7**	**+1.4**
	baz=226						
CHN4	**Tsaushan**	**1.19**	**240**	*e*P	**Pb**	**23 12 06.3**	**+1.0**
	baz=229						
CHN4				*e*S	**Sb**	**23 12 21.9**	**+1.6**
	baz=229						
YM01	**YM01**	**1.20**	**354**	*e*P	**Pb**	**23 12 05.7**	**+0.1**
	baz=352						
YM01				*e*S	**Sn**	**23 12 20.9**	**+0.6**
	baz=352						
YM10	**YM10**	**1.21**	**353**	*e*P	**Pb**	**23 12 06.2**	**+0.4**
	baz=352						
YM10				*e*S	**Sn**	**23 12 20.5**	**-0.2**
	baz=352						
CHN2	**Minshiung**	**1.21**	**250**	*e*P	**Pb**	**23 12 06.6**	**+0.9**
	baz=249						
CHN2				*e*S	**Sb**	**23 12 21.7**	**+0.8**
	baz=249						
YM04	**YM04**	**1.21**	**352**	*e*P	**Pn**	**23 12 04.8**	**-0.1**
	baz=355						
YM05	**YM05**	**1.22**	**354**	*e*P	**Pb**	**23 12 06.2**	**+0.3**
	baz=352						
YM05				*e*S	**Sn**	**23 12 21.6**	**+0.8**
	baz=352						
YM11	**YM11**	**1.22**	**354**	*e*P	**Pb**	**23 12 06.3**	**+0.4**
	baz=352						
WTP	**Ta-pu**	**1.23**	**236**	*e*P	**Pb**	**23 12 06.5**	**+0.5**
	baz=233						
WTP				*e*S	**Sb**	**23 12 22.2**	**+0.7**
	baz=233						
NTST

TWGBT	**Beinan**	**1.27**	**208**	*e*P	**Pn**	**23**	**12**	**04.3 -1.4**
	baz=188							
TWGBT				*e*S	**Sb**	**23**	**12**	**24.1 +1.5**
	baz=188							
YOJ	**Yonaguni jima**	**1.29**	**66**	*e*P	**Pb**	**23**	**12**	**09.5 +2.5**
	baz=72							
YOJ	**Yonaguni jima**	**1.29**	**66**	P	**Pb**	**23**	**12**	**07.8 +0.8**
YOJ				*e*S	**Sb**	**23**	**12**	**25.6 +2.4**
LDUT	**Ludao**	**1.29**	**190**	*e*P	**Pb**	**23**	**12**	**08.6 +1.6**
	baz=173							
TWK	**Hsinying**	**1.31**	**239**	*e*P	**Pb**	**23**	**12**	**08.0 +0.5**
	baz=238							
TWK				*e*S	**Sb**	**23**	**12**	**25.9 +1.9**
	baz=238							
CHN1	**Nanshi**	**1.33**	**235**	*e*P	**Pb**	**23**	**12**	**07.8 +0.1**
	baz=236							
SNST	**Tainan City**	**1.33**	**237**	*e*P	**Pb**	**23**	**12**	**08.4 +0.6**
	baz=238							
SGST	**Jiashian**	**1.35**	**231**	*e*P	**Pb**	**23**	**12**	**07.9 -0.3**
	baz=231							
SLGT	**Liugui**	**1.37**	**226**	*e*P	**Pb**	**23**	**12**	**08.4 0.0**
	baz=226							
SLGT				*e*S	**Sb**	**23**	**12**	**26.9 +1.5**
	baz=226							
ICHU	**Yijhu**	**1.44**	**246**	*e*P	**Pb**	**23**	**12**	**09.4 -0.2**
	baz=247							
ECL	**Taimali**	**1.52**	**208**	*e*P	**Pb**	**23**	**12**	**08.6 -2.3**
	baz=188							
SCST	**Cishan**	**1.54**	**227**	*e*P	**Pb**	**23**	**12**	**12.7 +1.3**
	baz=229							
SSD	**Sandimen**	**1.56**	**220**	*e*P	**Pb**	**23**	**12**	**11.2 -0.5**
	baz=221							
TSMG	**Majia**	**1.58**	**219**	*e*P	**Pb**	**23**	**12**	**12.5 +0.5**
	baz=221							
TSMG				*e*S	**Sb**	**23**	**12**	**33.4 +1.8**
	baz=221							
EAST	**Anshuo**	**1.75**	**207**	*e*P	**Pb**	**23**	**12**	**14.2 -0.8**
	baz=190							
SCZT	**Fangliau**	**1.86**	**213**	*e*P	**Pb**	**23**	**12**	**16.5 -0.4**
	baz=215							
SCZT				*e*S	**Sb**	**23**	**12**	**40.5 +0.7**
	baz=215							
IRIF	**Iriomote-Funau**	**1.88**	**78**	P	**Pb**	**23**	**12**	**16.5 -0.6**
IRIF				*e*S	**Sb**	**23**	**12**	**40.4 +0.2**
LAY	**Lan-yu**	**1.91**	**185**	*e*P	**Pn**	**23**	**12**	**13.5 -1.0**
	baz=178							
SLIU	**Shizi**	**1.92**	**206**	*e*P	**Pb**	**23**	**12**	**17.8 0.0**
	baz=187							
WDGT	**Dungji**	**2.01**	**250**	*e*P	**Pn**	**23**	**12**	**16.7 +0.9**
	baz=252							
PHUB	**P'eng-hu**	**2.01**	**258**	*e*P	**Pn**	**23**	**12**	**15.2 -0.7**
	baz=260							
PHUB				*e*S	**Sn**	**23**	**12**	**40.1 -0.2**
	baz=260							
PNG	**Penghu**	**2.02**	**260**	*e*P	**Pn**	**23**	**12**	**16.8 +0.8**
	baz=261							
PNG				*e*S	**Sn**	**23**	**12**	**41.3 +0.9**
	baz=261							
JKRS	**Kuro-shima**	**2.12**	**82**	P	**Pb**	**23**	**12**	**19.9 -1.2**
JKRS				*e*S	**Sb**	**23**	**12**	**47.0 0.0**
VCHM	**Qimei**	**2.22**	**251**	*e*P	**Pn**	**23**	**12**	**19.8 +1.0**
	baz=240							
VCHM				*e*S	**Sn**	**23**	**12**	**45.6 +0.1**
	baz=240							
JIJ	**Ishigaki jima**	**2.25**	**79**	P	**Pb**	**23**	**12**	**21.1 -2.4**
JIJ				*e*S	**Sb**	**23**	**12**	**48.6 -2.4**
PTTC	**Pingtan**	**2.35**	**312**	*e*P	**Pn**	**23**	**12**	**20.6 0.0**
	baz=309							
JISG	**Ishigakijimahi**	**2.45**	**74**	P	**Pb**	**23**	**12**	**23.8 -3.1**
JISG				*e*S	**Sb**	**23**	**12**	**52.9 -3.8**
PTMZ	**Houxiangcun**	**2.60**	**295**	*e*P	**Pn**	**23**	**12**	**23.4 -0.6**
	baz=294							
LYJJ	**Jianjiangzhen**	**3.14**	**326**	*e*P	**Pn**	**23**	**12**	**31.0 -0.4**
	baz=321							
AXDP	**Jialang**	**3.54**	**286**	*e*P	**Pn**	**23**	**12**	**37.1 +0.1**
	baz=286							
ZPLA	**Ao Xicun**	**3.63**	**271**	*e*P	**Pn**	**23**	**12**	**38.4 +0.2**
	baz=272							
ZZJH	**Jiuhuzhen**	**3.77**	**279**	*e*P	**Pn**	**23**	**12**	**39.7 -0.3**
	baz=279							

*IDC **03** 23:14:17.2±2.6, 6.°68S×129.°76E, h136km±29km, mb3.6/3, mb1 3.6/7, mb1mx3.3/33, mbtmp4.0/7, Error ellipse: s-maj=51.4km s-min=17.0km az=80.0*
ISC 03 23:14:17.2±0.9, **6.°69S**±0.°06×**130.°3E**±0.°2, **h150**km, **n7, σ3s12**/10, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.86**	**9**	P			**Pn**	**23 15 43.2**	**+1.1**
	2.5nm,0.3s,baz=217,slow=20,SNR=8.3								
SIJI				S			**Sn**	**23 16 44.5**	**-4.0**
	11nm,0.3s,baz=237,slow=23,SNR=12								
FITZ	**Fitzroy Crossi**	**12.23**	**202**	P			**Pn**	**23 17 05.2**	**-1.3**
	0.6nm,0.3s,baz=23,slow=9.2,SNR=18								
FITZ				S			Sn	23 19 11.0	-11
	1.4nm,0.3s,baz=97,slow=16,SNR=8.2								
WRA	**Warramunga Arr**	**13.73**	**164**	P			**Pn**	**23 17 26.8**	**+1.0**
	0.9nm,0.3s,baz=342,slow=13,SNR=12								
WRA				S			**Sn**	**23 19 53.4**	**-4.6**
	2.3nm,0.3s,baz=334,slow=22,SNR=15								
ASAR	**Alice Springs**	**17.22**	**169**	P			**Pn**	**23 18 11.8**	**+2.9**
	0.7nm,0.3s,baz=350,slow=9.9,SNR=18								
ASAR				S			**S**	**23 21 17.8**	**-2.2**
	0.6nm,0.3s,baz=337,slow=14,SNR=4.7								
STKA	**Stephens Creek**	**27.17**	**159**	P			**P**	**23 19 49.9**	**+3.2**
	1.6nm,0.7s,baz=312,slow=15,SNR=3.0								
MKAR	**Makanchi Array**	**68.16**	**327**	P			**P**	**23 25 00.7**	**-0.5**
	2.2nm,0.4s,baz=121,slow=8.1,SNR=46								
VNDA	**Vanda**	**72.71**	**173**	P			**P**	**23 25 30.1**	**+1.8**
	0.3nm,0.9s,baz=315,slow=7.1,SNR=1.8								

*JMA **03** 23:15:41.3±0.1, 24.°29N×121.°85E, h62km±2km, M2.4*
*TAP **03** 23:15:42.2, 24.°33N×121.°82E, h55km, ML2.8, D*
ISC 03 23:15:42.7±1.2, **24.°31N**±0.°03×**121.°88E**±0.°03, **h52**km±6km, **n62, σ0s64**/117, **2C-3D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.15**	**336**	*i* P			**Pn**	**23 15 51.0**	**+0.1**
	baz=355								
ENAH				S			**Sn**	**23 15 58.2**	**+1.4**
	baz=355								
NACB	**Ninganchiao**	**0.29**	**242**	⇓P			**Pn**	**23 15 51.5**	**-0.4**
	baz=232								
NACB				S			**Sn**	**23 15 58.8**	**+0.3**
	baz=232								
TWC	**Suao**	**0.30**	**355**	*i* P			**Pn**	**23 15 51.9**	**0.0**
	baz=7.0								
TWC				*i* S			**Sn**	**23 15 59.7**	**+1.1**
	baz=7.0								
TWD	**Chiawan**	**0.34**	**228**	*i* P			**Pn**	**23 15 52.1**	**-0.2**
	baz=218								
TWD				*i* S			**Sn**	**23 15 59.6**	**+0.3**
	baz=218								
ETLH	**Xiulin Townshi**	**0.38**	**254**	P			**Pn**	**23 15 52.3**	**-0.5**
	baz=248								
ETLH				S			**Sn**	**23 15 60.0**	**0.0**
	baz=248								
ENTT	**Nioudou**	**0.43**	**319**	⇑*i* P			**Pn**	**23 15 52.6**	**-0.7**
	baz=323								
ENTT				*i* S			**Sn**	**23 16 01.0**	**0.0**
	baz=323								
NDT	**Datong Townshi**	**0.44**	**311**	*i* P			**Pn**	**23 15 53.0**	**-0.4**
	baz=313								
NDT				*i* S			**Sn**	**23 16 01.1**	**0.0**
	baz=313								
TWE	**Neicheng**	**0.45**	**335**	⇓*i* P			**Pn**	**23 15 53.4**	**0.0**
	baz=341								
TWE				*i* S			**Sn**	**23 16 00.9**	**-0.4**
	baz=341								
NNSB	**Datong**	**0.46**	**285**	P			**Pn**	**23 15 53.1**	**-0.7**
	baz=283								
NNSB				S			**Sn**	**23 16 01.3**	**-0.5**
	baz=283								
NNSH	**Datong**	**0.46**	**285**	*e*P			**Pn**	**23 15 53.2**	**-0.6**
	baz=283								
NNSH				*e*S			**Sn**	**23 16 00.9**	**-0.8**
	baz=283								
NNS	**Nan Shan**	**0.48**	**286**	*i* P			**Pn**	**23 15 53.3**	**-0.6**
	baz=284								
NNS				*i* S			**Sn**	**23 16 01.4**	**-0.6**
	baz=284								
EGS		**0.53**	**6**	P			**Pn**	**23 15 54.9**	**+0.5**
	baz=12								
EGS				S			**Sn**	**23 16 05.0**	**+2.1**
	baz=12								
NTC	**Toucheng**	**0.54**	**356**	*e*P			**Pn**	**23 15 54.0**	**-0.6**
NTC				*e*S			**Sn**	**23 16 04.0**	**+0.9**
NWLT	**Wulai**	**0.57**	**324**	*e*P			**Pn**	**23 15 54.6**	**-0.4**
	baz=326								
NWLT				*e*S			**Sn**	**23 16 03.6**	**-0.3**
	baz=326								
YHNB	**Yeheng**	**0.58**	**308**	⇑P			**Pn**	**23 15 54.5**	**-0.6**
	baz=309								
YHNB				S			**Sn**	**23 16 03.0**	**-1.0**
	baz=309								
FUSS	**Fushou**	**0.58**	**264**	P			**Pn**	**23 15 54.9**	**-0.3**
	baz=261								
FUSS				S			**Sn**	**23 16 04.1**	**-0.2**
	baz=261								
WHF	**Hehuan Shan**	**0.58**	**253**	⇓*i* P			**Pn**	**23 15 54.8**	**-0.7**
	baz=249								
WHF				*i* S			**Sn**	**23 16 04.2**	**-0.4**
	baz=249								
NSK	**Sanguang**	**0.59**	**308**	*i* P			**Pn**	**23 15 54.7**	**-0.6**
	baz=309								
NSK				*i* S			**Sn**	**23 16 03.3**	**-1.0**
	baz=309								
TWT	**Tachien**	**0.64**	**265**	*i* P			**Pn**	**23 15 55.8**	**-0.1**
	baz=262								
TWT				*i* S			**Sn**	**23 16 05.7**	**+0.2**
	baz=262								
TDCB	**Techi**	**0.66**	**265**	P			**Pn**	**23 15 55.8**	**-0.4**
	baz=262								
TDCB				S			**Sn**	**23 16 05.4**	**-0.5**
	baz=262								
TIPB	**Shuangxi**	**0.66**	**356**	*i* P			**Pn**	**23 15 56.0**	**-0.1**
TIPB				*i* S			**Sn**	**23 16 06.1**	**+0.4**
CHGB	**Renai**	**0.69**	**249**	P			**Pn**	**23 15 56.2**	**-0.4**
	baz=245								
CHGB				S			**Sn**	**23 16 06.3**	**-0.4**
	baz=245								
TWB1	**Santiao Chiao**	**0.70**	**8**	P			**Pn**	**23 15 56.4**	**-0.1**
	baz=13								
TWB1				S			**Sn**	**23 16 08.0**	**+1.4**
	baz=13								
NWF	**Wu-fen Shan**	**0.76**	**354**	*i* P			**Pn**	**23 15 57.0**	**-0.4**
	baz=357								
NWF				S			**Sn**	**23 16 08.6**	**+0.5**
	baz=357								
WFSB	**Wu-fen Shan**	**0.76**	**354**	P			**Pn**	**23 15 57.2**	**-0.1**
	baz=357								
WFSB				*e*S			**Sn**	**23 16 08.9**	**+1.0**
	baz=357								
WHP	**Taichung City**	**0.85**	**268**	P			**Pn**	**23 15 58.7**	**+0.2**
	baz=266								
WHP				S			**Sn**	**23 16 10.5**	**+0.3**
	baz=266								
LIOB	**Emei**	**0.85**	**293**	*i* P			**Pn**	**23 15 58.3**	**-0.2**
	baz=293								
LIOB				S			**Sn**	**23 16 09.9**	**-0.2**
	baz=293								
NSTT	**Nanjuang**	**0.86**	**292**	P			**Pn**	**23 15 58.1**	**-0.4**
	baz=291								
NSTT				S			**Sn**	**23 16 10.1**	**-0.1**
	baz=291								
VWDT	**VWDT**	**0.87**	**231**	P			**Pn**	**23 15 58.1**	**-0.6**
	baz=227								
VWDT				S			**Sn**	**23 16 10.5**	**0.0**
	baz=227								
YM01	**YM01**	**0.88**	**342**	P			**Pn**	**23 16 00.0**	**+1.2**
	baz=344								
YM01				*e*S			**Sn**	**23 16 10.8**	**+0.1**
	baz=344								
TWS1	**Kuangyinshan**	**0.89**	**332**	P			**Pn**	**23 15 58.7**	**-0.3**
	baz=334								
TWS1				S			**Sn**	**23 16 10.5**	**-0.5**
	baz=334								
YM04	**YM04**	**0.89**	**340**	*e*P			**Pn**	**23 15 58.9**	**-0.2**
	baz=342								
YM04				*e*S			**Sn**	**23 16 10.6**	**-0.4**
	baz=342								
YM05	**YM05**	**0.89**	**342**	*e*S			**Sn**	**23 16 11.6**	**+0.4**
	baz=344								
DPDB	**Guoxing**	**0.91**	**252**	P			**Pn**	**23 15 59.3**	**0.0**
	baz=250								
DPDB				*e*S			**Sn**	**23 16 11.2**	**-0.3**
	baz=250								
YM08	**YM08**	**0.91**	**343**	*e*P			**Pn**	**23 16 00.0**	**+0.7**
	baz=346								
HGSD	**Ruisui**	**0.92**	**207**	*e*P			**Pn**	**23 16 00.0**	**+0.7**
	baz=203								
HGSD				*e*S			**Sn**	**23 16 12.3**	**+0.8**
	baz=203								
EHY	**Hungye**	**0.95**	**212**	P			**Pn**	**23 15 58.7**	**-1.1**
	baz=208								
EHY				S			**Sn**	**23 16 13.5**	**+1.1**
	baz=208								
SMLT	**Sun Moon Lake**	**0.99**	**245**	P			**Pn**	**23 16 00.0**	**-0.4**
	baz=241								
SMLT				*e*S			**Sn**	**23 16 14.2**	**+0.8**
	baz=241								
SSLB	**Suanglung**	**0.99**	**238**	P			**Pn**	**23 15 59.8**	**-0.5**
	baz=235								
SSLB				*e*S			**Sn**	**23 16 13.9**	**+0.5**
	baz=235								
NMLH	**Miaoli**	**1.01**	**283**	*e*P			**Pn**	**23 16 00.4**	**-0.2**
	baz=282								
TYC	**Yuchr**	**1.02**	**247**	P			**Pn**	**23 16 00.7**	**0.0**
	baz=244								
TYC				S			**Sn**	**23 16 13.7**	**-0.2**
	baz=244								
YULB	**Yu-li**	**1.06**	**210**	P			**Pn**	**23 15 59.8**	**-1.4**
	baz=207								
YULB				*e*S			**Sn**	**23 16 14.6**	**-0.3**
	baz=207								
EYUL	**Yuli**	**1.09**	**208**	*e*P			**Pn**	**23 16 01.7**	**+0.1**
	baz=205								
EYUL				*e*S			**Sn**	**23 16 16.7**	**+1.1**
	baz=205								
TWF1	**Yuli**	**1.09**	**209**	P			**Pn**	**23 16 01.9**	**+0.2**
	baz=205								
WHYT	**Xinyi Township**	**1.12**	**237**	P			**Pn**	**23 16 02.9**	**+0.8**
	baz=234								
WHYT				*e*S			**Sn**	**23 16 16.9**	**+0.4**
	baz=234								
WNT	**Mingjian**	**1.17**	**249**	P			**Pn**	**23 16 03.1**	**+0.3**
	baz=246								
WNT				S			**Sn**	**23 16 17.9**	**+0.2**
	baz=246								
FULB	**Fuli**	**1.23**	**206**	P			**Pn**	**23 16 02.9**	**-0.7**
	baz=203								
FULB				S			**Sn**	**23 16 20.1**	**+1.0**
	baz=203								
ALS	**Alishan**	**1.26**	**231**	P			**Pn**	**23 16 04.4**	**+0.1**
	baz=228								
ALS				S			**Sn**	**23 16 20.1**	**-0.2**
	baz=228								
CHN5	**Tsauling**	**1.31**	**237**	P			**Pn**	**23 16 04.2**	**-0.5**
	baz=235								
CHN5				*e*S			**Sn**	**23 16 22.0**	**+0.9**
	baz=235								
ELDTW	**Lidau**	**1.37**	**215**	P			**Pn**	**23 16 06.3**	**+0.8**
	baz=212								
ELDTW				S			**Sn**	**23 16 21.6**	**-0.9**
	baz=212								
WDLH	**Douliu**	**1.37**	**243**	*e*P			**Pn**	**23 16 05.7**	**+0.3**
	baz=241								
CHN4	**Tsaushan**	**1.52**	**231**	*i* P			**Pn**	**23 16 08.2**	**+0.8**
	baz=229								
CHN4				*e*S			**Sn**	**23 16 26.6**	**+0.5**
	baz=229								
TPUB	**Ta-pu**	**1.52**	**229**	P			**Pn**	**23 16 08.2**	**+0.6**
	baz=226								
TPUB				*e*S			**Sn**	**23 16 26.8**	**+0.5**
	baz=226								
LONT	**Longtian**	**1.56**	**206**	*e*S			**Sn**	**23 16 27.0**	**-0.1**
	baz=204								
WTP	**Ta-pu**	**1.57**	**228**	*e*P			**Pn**	**23 16 08.2**	**0.0**
	baz=225								
WTP				*e*S			**Sn**	**23 16 28.5**	**+1.0**
	baz=225								
TWK	**Hsinying**	**1.64**	**231**	P			**Pn**	**23 16 09.7**	**+0.5**
	baz=228								
TWK				*e*S			**Sn**	**23 16 28.7**	**-0.6**
	baz=228								
SNST	**Tainan City**	**1.67**	**230**	*e*S			**Sn**	**23 16 29.6**	**-0.1**
	baz=227								
CHN1	**Nanshi**	**1.67**	**228**	*e*P			**Pn**	**23 16 10.3**	**+0.7**
	baz=226								
CHN1				*e*S			**Sn**	**23 16 30.0**	**+0.2**
	baz=226								
IRIF	**Iriomote-Funau**	**1.69**	**89**	P			**Pn**	**23 16 09.2**	**-0.6**
IRIF				*e*S			**Sn**	**23 16 29.8**	**-0.5**
SLGT	**Liugui**	**1.73**	**221**	*e*P			**Pn**	**23 16 11.2**	**+0.8**
	baz=218								
SLGT				S			**Sn**	**23 16 31.9**	**+0.6**
	baz=218								
JIJ	**Ishigaki jima**	**2.07**	**88**	P			**Pn**	**23 16 14.5**	**-0.5**
JIJ				*e*S			**Sn**	**23 16 38.3**	**-1.3**
JISG	**Ishigakijimahi**	**2.24**	**82**	P			**Pn**	**23 16 16.4**	**-0.8**
JISG				*e*S			**Sn**	**23 16 43.5**	**-0.2**

*TIR **03** 23:29:13.3, 41.°43N×20.°40E, h13km±1km, Md2.6*
*SKO **03** 23:29:13.1, 41.°47N×20.°38E, h15km*
ISC 03 23:29:14.0±1.3, **41.°42N**±0.°05×**20.°38E**±0.°04, **h9**km±11km, **n10, σ1s36**/17, **Albania**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.27**	**10**	P			**Pg**	**23 29 19.1**	**-0.5**
	baz=7.0								
PHP				S			**Sg**	**23 29 23.4**	**+0.1**
	baz=7.0								
TIR	**Tirane**	**0.39**	**260**	P			**Pb**	**23 29 21.7**	**-1.4**
	baz=259								
TIR				S			**Sb**	**23 29 28.4**	**-0.7**
	baz=259								
OHR	**Ohrid**	**0.44**	**133**	*i* Pg			**Pb**	**23 29 22.8**	**-1.1**
OHR				*i* Sg			**Sb**	**23 29 29.9**	**-0.7**
OHR				*e*Lg			Lg	23 29 30.4	
	comp=N,72nm,0.3s								
OHR				*e*Lg			Lg	23 29 31.4	
	comp=E,34nm,0.3s								
PUK	**Puka**	**0.72**	**330**	P			**Pg**	**23 29 27.1**	**-0.9**
	baz=329								
PUK				S			**Sb**	**23 29 38.4**	**-0.5**
	baz=329								
SKO	**Skopje**	**0.97**	**55**	*i* Pg			**Pg**	**23 29 31.5**	**-1.2**
SKO				*i* Sg			**Sb**	**23 29 45.3**	**-0.6**
BCI	**Bajram Curri**	**0.98**	**347**	P			**Pb**	**23 29 32.5**	**-0.6**
	baz=346								
BCI				S			**Sn**	**23 29 46.8**	**-1.1**
	baz=346								
STIP	**Stip**	**1.39**	**78**	*i* Pg			**Pg**	**23 29 42.2**	**+1.6**
STON	**Ston**	**2.46**	**307**	*e*Pn			**Pn**	**23 29 55.3**	**+1.0**
STON				Sn			**Sg**	**23 30 35.7**	**+2.5**
RICI	**Ricice**	**3.17**	**312**	*e*Pn			**Pn**	**23 30 06.2**	**+2.1**
KIJV	**Kijevo**	**3.91**	**313**	*e*Pn			**Pn**	**23 30 15.3**	**+1.1**

IDC 03 23:34:47.1±3.2, **5.°74S**×**147.°11E**, **h200**km±44km, **mb3.2**/2, **mb1 3.3**/4, **mb1mx2.9**/40, **mbtmp3.6**/4, **Error ellipse: s-maj=82.3km s-min=24.5km az=116.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.64**	**179**	P			**Pn**	**23 35 44.9**	**+0.4**
	3.0nm,0.3s,baz=349,slow=10,SNR=6.8								
PMG				S			Sn	23 36 29.6	0.0
	6.3nm,0.3s,baz=36,slow=22,SNR=7.7								
WRA	**Warramunga Arr**	**18.80**	**220**	P			P	23 38 52.5	+0.8
	0.2nm,0.3s,baz=41,slow=11,SNR=11								
WRA				S			S	23 42 15.1	+0.1
	0.0nm,0.3s,baz=42,slow=21,SNR=3.4								
ASAR	**Alice Springs**	**21.89**	**214**	P			P	23 39 25.2	+0.8
	0.6nm,0.5s,baz=47,slow=8.8,SNR=4.8								
FITZ	**Fitzroy Crossi**	**24.29**	**238**	P			P	23 39 46.5	+0.1
	1.9nm,0.6s,baz=61,slow=12,SNR=21								
TORD	**Torodi Ar. Bea**	**145.13**	**285**	PKPbc			PKPbc	23 53 60.0	-1.7
	0.5nm,0.9s,baz=71,slow=3.4,SNR=4.2								

*SJA **04** 00:11:49.0±0.5, 19.°62S×64.°31W, h672km±5km, ML4.6, MW4.3*
*IDC **04** 00:11:56.3±0.7, 19.°30S×64.°05W, h598km±8km, mb3.1/6, mb1 3.4/11, mb1mx3.1/40, mbtmp4.2/11, Error ellipse: s-maj=15.8km s-min=12.1km az=137.0*
*VAO **04** 00:11:56.2±0.3, 19.°37S×63.°96W, h595km±5km, mb4.0*
*NEIC **04** 00:11:56.3±1.6, 19.°3S±0.°1×64.°1W±0.°1, h605km±11km, mb4.3/11, Error ellipse: s-maj=16.0km s-min=13.9km az=136.0*
ISC 04 00:11:56.1±0.5, **19.°29S**±0.°06×**64.°03W**±0.°07, **h600**km, **n90, σ0s90**/113, **mb4.2**/9, **Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YJA	**Yavi**	**3.19**	**205**	*e*P			**P**	**00 13 18.0**	**+1.2**
YJA				*e*S			**S**	**00 14 24.0**	**+1.3**
YJA				IAML				00 14 27.1	
	comp=Z,8.3nm,0.8s								
HJA	**Humahuaca**	**4.11**	**198**	*e*P			**P**	**00 13 23.7**	**+1.0**
HJA				IAML				00 15 51.8	
	comp=Z,12nm,0.9s								
SIV	**San Ignacio**	**4.33**	**41**	P			**P**	**00 13 25.4**	**+1.4**
	comp=Z,52nm,0.3s,baz=240,slow=7.3,SNR=815								
SIV				S			**S**	**00 14 36.2**	**+0.6**
	baz=111,slow=23,SNR=6.7								
GO01	**Chusmiza**	**4.88**	**265**	P			**P**	**00 13 29.0**	**+0.4**
PB08	**IPOC Station P**	**4.90**	**259**	P			**P**	**00 13 29.3**	**+0.6**
PB08				*e*S			**S**	**00 14 44.4**	**+0.3**
PB08	**IPOC Station P**	**4.90**	**259**	*e*P			**P**	**00 13 29.5**	**+0.9**
PB08				*e*S			**S**	**00 14 44.1**	**0.0**
PB08				IAML				00 14 50.5	
	comp=Z,47nm,0.6s								
LPAZ	**La Paz**	**4.91**	**307**	P			**P**	**00 13 30.0**	**+0.9**
	comp=Z,2.8nm,0.3s,baz=92,slow=5.7,SNR=80								
LPAZ				S			**S**	**00 14 44.0**	**-0.7**
	comp=Z,1.7nm,0.3s,baz=291,slow=9.6,SNR=13								
LPAZ	**La Paz**	**4.91**	**307**	P			**P**	**00 13 30.0**	**+0.9**
LPAZ	**La Paz**	**4.91**	**307**	*e*P			**P**	**00 13 29.9**	**+0.9**
LPAZ				*e*S			**S**	**00 14 44.0**	**-0.7**
MNMC	**Minye Minye**	**5.26**	**271**	P			**P**	**00 13 31.6**	**+0.2**
PB16	**IPOC Station P**	**5.27**	**279**	P			**P**	**00 13 32.5**	**+0.7**
PB11	**IPOC Station P**	**5.32**	**264**				**P**	**00 13 31.4**	**-0.4**
PB01	**IPOC Station P**	**5.41**	**250**	P			**P**	**00 13 32.6**	**+0.2**
PB01	**IPOC Station P**	**5.41**	**250**	*e*P			**P**	**00 13 32.8**	**+0.4**
PB01				*e*S			**S**	**00 14 50.0**	**-1.1**
PB01				IAML				00 14 52.0	
	comp=Z,115nm,0.2s								
PB09	**IPOC Station P**	**5.48**	**242**	P			**P**	**00 13 34.2**	**+1.1**
PB09							**S**	**00 14 52.0**	**-0.2**
PB09	**IPOC Station P**	**5.48**	**242**	*e*P			**P**	**00 13 34.1**	**+1.1**
PB09				*e*S			**S**	**00 14 50.7**	**-1.6**
PB09				IAML				00 14 57.7	
	comp=Z

PB15				*e*S	**S**	**00 15 06.4**	**-0.2**	
PB15				IAML		00 15 11.9		
	comp=Z,379nm,0.2s							
PB04	**IPOC Station P**	**6.47**	**241**	*e*P	**P**	**00 13 41.8**	**+0.2**	
PB04	**IPOC Station P**	**6.47**	**241**	*e*P	**P**	**00 13 42.9**	**+1.4**	
PB04				*e*S	**S**	**00 15 09.6**	**+1.7**	
PB04				IAML		00 15 18.4		
	comp=Z,51nm,0.2s							
PB05	**IPOC Station P**	**6.76**	**237**	*e*P	**P**	**00 13 44.4**	**+0.3**	
PB05				*e*S	**S**	**00 15 13.0**	**+0.5**	
PB05				IAML		00 15 24.2		
	comp=Z,28nm,0.3s							
VILB	**Vilhena**	**7.29**	**31**	*e*P	**P**	**00 13 49.8**	**+0.8**	
GO02	**Mina Guanaco**	**7.79**	**220**	P	**P**	**00 13 54.8**	**+1.0**	
PB14	**IPOC Station P**	**7.95**	**227**	P	**P**	**00 13 55.9**	**+0.7**	
PB14	**IPOC Station P**	**7.95**	**227**	*e*P	**P**	**00 13 55.9**	**+0.7**	
PB14				*e*P	P	00 13 56.1	+0.9	
PB14				*e*S	**S**	**00 15 34.1**	**+1.3**	
PB14				IAML		00 15 50.6		
	comp=Z,28nm,0.3s							
AC02	**Maricunga**	**8.86**	**211**	P	**P**	**00 14 01.8**	**-2.3**	
AC01	**Pan de Azucar**	**9.13**	**220**	P	**P**	**00 14 06.1**	**-0.1**	
CPUP	**Villa Florida**	**9.35**	**140**	P	**P**	**00 14 08.0**	**-0.4**	
	comp=Z,0.4nm,0.3s,baz=330,slow=9.3,SNR=9.1							
ETMB	**Extrema**	**9.65**	**347**	*e*P	**P**	**00 14 12.5**	**+0.9**	
GO03	**Copiap**	**10.04**	**213**	P	**P**	**00 14 15.0**	**-0.2**	
SAML	**Samuel**	**10.31**	**5**	P	**P**	**00 14 18.2**	**+0.2**	
AC04	**Llanos de Chal**	**10.97**	**215**	P	**P**	**00 14 24.7**	**+0.3**	
AC05	**El Transito**	**11.08**	**210**	P	**P**	**00 14 25.0**	**-0.7**	
CLDB	**Colider**	**11.54**	**45**	*e*P	**P**	**00 14 29.4**	**-1.0**	
ARAG	**Araguaiana, MT**	**12.19**	**75**	*e*P	**P**	**00 14 36.4**	**-0.4**	
PTGB	**Pitanga**	**12.34**	**118**	*e*P	**P**	**00 14 37.9**	**-0.5**	
GO04	**Tololo Observa**	**12.46**	**208**	P	**P**	**00 14 39.5**	**-0.1**	
ITRB	**Iturama**	**12.90**	**94**	*e*P	**P**	**00 14 43.7**	**-0.3**	
CO03	**El Pedregal**	**12.98**	**206**	P	**P**	**00 14 44.7**	**0.0**	
CO02	**Combarbal**	**13.43**	**207**	P	**P**	**00 14 48.5**	**-0.8**	
ITAB	**Concordia**	**13.49**	**128**	*e*P	**P**	**00 14 48.4**	**-1.4**	
FRTB	**Fartura**	**14.07**	**109**	*e*P	**P**	**00 14 52.6**	**-3.2**	
SNDB	**Serra Nova Dou**	**14.26**	**61**	*e*P	**P**	**00 14 56.9**	**-0.6**	
VA03	**San Esteban**	**14.64**	**202**	P	**P**	**00 15 01.5**	**+0.6**	
CPSB	**Cacapava Do Su**	**14.65**	**141**	*e*P	**P**	**00 14 59.9**	**-1.1**	
BB19B	**Bebedouro**	**14.67**	**100**	*e*P	**P**	**00 15 00.7**	**-0.6**	
NPGB	**Novo Progresso**	**14.80**	**36**	*e*P	**P**	**00 15 02.2**	**-0.5**	
ROC1	**El Roble**	**15.00**	**203**	P	**P**	**00 15 05.0**	**+0.6**	
IPMB	**Ipameri, GO**	**15.05**	**88**	*e*P	**P**	**00 15 04.3**	**-0.6**	
MT02	**Curacav**	**15.30**	**203**	P	**P**	**00 15 07.7**	**+0.9**	
MT02				IAmb	IAmb	00 15 10.1		
	comp=Z,13nm,1.1s							
BDFB	**Brasilia**	**15.71**	**79**	P	**P**	**00 15 11.2**	**+0.2**	
	comp=Z,1.7nm,0.3s,baz=265,slow=11,SNR=12							
BDFB	**Brasilia**	**15.71**	**79**	P	**P**	**00 15 11.5**	**+0.5**	
BDFB				IAmb	IAmb	00 15 12.3		
	comp=Z,8.0nm,0.7s							
SPB	**Sao Paulo**	**16.04**	**108**	*e*P	**P**	**00 15 13.6**	**-0.2**	
MACA	**Manacapuru-AM**	**16.36**	**12**	*e*P	**P**	**00 15 17.9**	**+1.0**	
BO02	**Sierra Bellavi**	**16.57**	**200**	P	**P**	**00 15 20.1**	**+1.5**	
PEXB	**Peixe**	**16.74**	**67**	*e*P	**P**	**00 15 21.2**	**+0.9**	
ITTB	**Itaituba**	**16.90**	**30**	*e*P	**P**	**00 15 22.3**	**+0.5**	
PARB	**Paraibuna**	**17.62**	**106**	*e*P	**P**	**00 15 28.2**	**-0.2**	
SMTB	**Santa Maria do**	**19.00**	**59**	*e*P	**P**	**00 15 41.2**	**+0.2**	
PRPB	**Parauapebas**	**19.01**	**49**	*e*P	**P**	**00 15 41.4**	**+0.3**	
JANB	**Januaria**	**19.30**	**80**	*e*P	**P**	**00 15 44.2**	**+0.4**	
PLCA	**Paso Flores**	**22.09**	**193**	P	**P**	**00 16 08.8**	**+0.3**	
	comp=Z,1.6nm,0.5s,baz=4.1,slow=9.6,SNR=12							
NAN01	**Guarapari, ES**	**22.71**	**90**	*e*P	**P**	**00 16 14.2**	**0.0**	
LL01	**San Ignacio de**	**24.09**	**195**	P	**P**	**00 16 25.8**	**-0.3**	
LL01				IAmb	IAmb	00 16 28.0		
	comp=Z,8.2nm,1.1s							
MDP	**Montagnes des**	**26.70**	**26**	P	**P**	**00 16 49.8**	**+0.4**	
	comp=Z,4.9nm,0.8s,baz=201,slow=11,SNR=5.6							
RCBR	**Riachuelo**	**30.48**	**68**	P	**P**	**00 17 23.3**	**+1.1**	
	comp=Z,5.4nm,0.5s,baz=240,slow=7.7,SNR=6.5							
RCBR	**Riachuelo**	**30.48**	**68**	IAmb	IAmb	00 17 39.8		
	comp=Z,9.7nm,0.9s							
TOSP	**Speyside**	**30.59**	**7**	P	**P**	**00 17 20.3**	**-2.6**	
TOSP				IAmb	IAmb	00 17 34.1		
	comp=Z,23nm,1.0s							
EFI	**East Falkland**	**32.66**	**173**	P	**P**	**00 17 40.2**	**+0.1**	
T45A	**Paducah**	**60.63**	**338**	P	**P**	**00 21 09.6**	**-0.5**	
PAL	**Palisades**	**60.68**	**351**	P	**P**	**00 21 11.4**	**+1.0**	
PAL				IAmb	IAmb	00 21 21.7		
	comp=Z,14nm,0.9s							
TXAR	**Lajitas Array**	**61.63**	**321**	P	**P**	**00 21 17.4**	**+0.4**	
	comp=Z,0.3nm,0.5s,baz=138,slow=5.8,SNR=2.4							
TORD	**Torodi Ar. Bea**	**72.30**	**69**	P	**P**	**00 22 22.0**	**-0.5**	
	comp=Z,2.0nm,0.4s,baz=254,slow=5.4,SNR=47							
TORD	**Torodi Ar. Bea**	**72.30**	**69**	P	**P**	**00 22 22.0**	**-0.5**	
PDAR	**Pinedale Array**	**74.62**	**327**	P	**P**	**00 22 36.0**	**+0.5**	
	comp=Z,0.5nm,0.5s,baz=130,slow=10,SNR=6.2							
ASAR	**Alice Springs**	**133.86**	**203**	PKP	**PKPdf**	**00 30 07.1**	**+0.4**	
	comp=Z,0.4nm,0.4s,baz=149,slow=2.2,SNR=3.0							
WRA	**Warramunga Arr**	**137.05**	**206**	PKP	**PKPdf**	**00 30 13.1**	**+0.4**	
	comp=Z,0.3nm,0.3s,baz=156,slow=1.8,SNR=12							
SONM	**Songino Array**	**150.48**	**13**	PKPbc	**PKiKP**	**00 30 41.9**	**+0.4**	
	comp=Z,1.0nm,0.6s,baz=318,slow=0.7,SNR=4.8							

*REY **04** 00:15:26.5,64.68N×17.50W,h6km*
*IDC **04** 00:15:27.5±0.8,64.61N×17.57W,h0km,mb3.7/8, mb1 3.9/12,mb1mx3.7/51,mbtmp3.7/12,ML2.5/3,Error ellipse: s-maj=24.3km s-min=10.7km az=12.0*

ISC 04 00:15:27.4±0.6,64.66N±0.03×17.50W±0.03,h10km,n51, σ2s10/58,mb3.8/9,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.11**	**277**	P	**Pg**	**00 15 29.0**	**-1.3**
baz=269							
IDYN	**Dyngjuhals**	**0.14**	**23**	P	**Pg**	**00 15 29.4**	**-1.3**
baz=26							
IGRF	**Grimsfjall**	**0.27**	**158**	P	**Pb**	**00 15 31.9**	**-2.6**
baz=159							
IKVE	**Kverkfjoll**	**0.35**	**87**	S	**Sg**	**00 15 38.4**	**-0.8**
baz=89							
IKVE				P	**Pg**	**00 15 33.8**	**-0.7**
baz=89							
IHUS	**Husbondi**	**0.37**	**191**	P	**Pb**	**00 15 33.9**	**-2.2**
baz=190							
ISKR	**Skrokkalda**	**0.40**	**256**	P	**Pb**	**00 15 34.1**	**-2.5**
baz=254							
ISKR				S	**Sb**	**00 15 40.4**	**-2.2**
baz=254							
THOR	**Thorvaldshraun**	**0.45**	**52**	P	**Pg**	**00 15 34.6**	**-1.5**
baz=53							
IJOK	**Jokulheimar**	**0.47**	**223**	P	**Pb**	**00 15 35.3**	**-2.4**
baz=221							
IKRE	**Kreppuhraun**	**0.49**	**75**	P	**Pg**	**00 15 35.3**	**-1.8**
baz=77							
IMKO	**Mokolfar**	**0.59**	**57**	P	**Pg**	**00 15 37.1**	**-1.8**
baz=58							
IIEY	**Innrieyrar**	**0.63**	**206**	P	**Pb**	**00 15 38.1**	**-2.3**
baz=205							
IKSK	**Karasker**	**0.67**	**138**	P	**Pg**	**00 15 38.1**	**-2.2**
baz=139							
ISVA	**Svartarkot**	**0.69**	**9**	P	**Pg**	**00 15 38.7**	**-2.0**
baz=8.8							
IKAL	**Kalfafell**	**0.72**	**187**	P	**Pb**	**00 15 39.6**	**-2.4**
baz=186							
IVSH	**V-Sauoahnukur**	**0.77**	**78**	P	**Pg**	**00 15 39.9**	**-2.4**
baz=79							
IVSH				S	**Sg**	**00 15 50.9**	**-1.5**
baz=79							
IVAT	**Vatnsfell**	**0.78**	**233**	P	**Pb**	**00 15 40.7**	**-2.3**
baz=232							
IVAT				S	**Sb**	**00 15 51.6**	**-2.0**
baz=232							
IADA	**Aoalbol**	**0.90**	**65**	P	**Pg**	**00 15 41.9**	**-2.8**
baz=66							
IREN	**Reynihlio**	**1.02**	**14**	P	**Pg**	**00 15 44.2**	**-2.9**
baz=14							
ISNB	**Snabyli**	**1.05**	**209**	P	**Pg**	**00 15 45.3**	**-2.3**
baz=208							
ISLY	**Slysaalda**	**1.10**	**221**	P	**Pb**	**00 15 46.3**	**-2.2**
baz=220							
IGRS	**Grimsstaoir**	**1.14**	**30**	P	**Pb**	**00 15 46.2**	**-3.0**
baz=30							
IFED	**Fedgar**	**1.15**	**237**	P	**Pg**	**00 15 47.1**	**-2.4**
baz=237							
IRJU	**Rjupnafell**	**1.17**	**207**	P	**Pn**	**00 15 47.7**	**-2.1**
baz=206							
ISKI	**Skildingahlsh**	**1.23**	**9**	P	**Pn**	**00 15 47.6**	**-3.0**
baz=9.2							
IGYG	**Gygjarholskot**	**1.24**	**253**	P	**Pg**	**00 15 49.0**	**-2.1**
baz=253							
IGHA	**Grjothals**	**1.24**	**16**	P	**Pn**	**00 15 47.8**	**-3.0**
baz=16							
IGRA	**Granastaoir**	**1.26**	**359**	P	**Pn**	**00 15 48.0**	**-3.1**
baz=358							
IHAU	**Haukadalur**	**1.28**	**238**	P	**Pg**	**00 15 49.8**	**-2.1**
baz=238							
IDIM	**Dimmadalss**	**1.33**	**10**	P	**Pn**	**00 15 49.1**	**-2.9**
baz=10							
IESK	**Eystri-Skogar**	**1.43**	**218**	P	**Pb**	**00 15 52.1**	**-2.0**
baz=217							
ISAU	**Saurbar**	**1.44**	**243**	P	**Pb**	**00 15 52.1**	**-2.1**
baz=243							
IGIL	**Gilhagi**	**1.50**	**18**	P	**Pn**	**00 15 52.1**	**-2.3**
baz=18							
ISIG	**Siglufjorour**	**1.59**	**339**	P	**Pn**	**00 15 53.3**	**-2.3**
baz=339							
BORG	**Borgarnes**	**1.65**	**275**	Pg	**Pb**	**00 15 55.2**	**-2.6**
	18nm,0.3s,baz=98,slow=7.7,SNR=57						
BORG				Lg	Lg	00 16 19.0	
	14nm,0.3s,baz=267,slow=21,SNR=7.7						
SCO	**Scoresbysund**	**6.09**	**346**	*i* P	**Pn**	**00 16 57.0**	**-0.3**
SCO				*i* S	**Pn**	**00 16 59.0**	**+1.7**
SCO	**Scoresbysund**	**6.09**	**346**	*i* P	**Pn**	**00 16 57.0**	**-0.3**
SCO				*i* P	**Pn**	**00 16 57.0**	**-0.3**
SCO				*i* S	**Pn**	**00 16 59.0**	**+1.7**
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn	**Pn**	**00 18 15.9**	**+1.0**
	baz=322,slow=13,SNR=7.8						
NOA	**NORSAR Array B**	**13.53**	**92**	Pn	**Pn**	**00 18 37.7**	**-1.5**
	0.0nm,0.3s,baz=300,slow=13,SNR=3.5						
HFS	**Hagfors**	**15.05**	**93**	Pn	**Pn**	**00 19 00.1**	**+0.3**
	0.1nm,0.3s,baz=264,slow=13,SNR=1.4						
FINES	**FINESS Array B**	**19.71**	**79**	P	**Pn**	**00 19 57.9**	**0.0**
	0.1nm,0.3s,baz=308,slow=16,SNR=1.9						
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P	**P**	**00 20 16.9**	**+1.9**
	18nm,1.4s						
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**00 20 30.5**	**+1.9**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**00 20 30.8**	**+1.3**
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**00 20 33.6**	**+2.0**
	0.3nm,0.5s,baz=346,slow=14,SNR=3.8						
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**00 21 04.7**	**+2.2**
	1.1nm,0.9s,baz=347,slow=24,SNR=4.1						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**00 23 50.6**	**+2.9**
	1.2nm,1.0s,baz=17,slow=6.6,SNR=8.0						
ZALV	**Zalesovo Beam**	**47.64**	**51**	P	**P**	**00 24 04.1**	**+1.0**
	0.5nm,0.4s,baz=324,slow=9.0,SNR=2.2						
MKAR	**Makanchi Array**	**52.73**	**58**	P	**P**	**00 24 43.4**	**+1.6**
	0.9nm,0.9s,baz=312,slow=9.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P	**P**	**00 24 45.8**	**+0.7**
	1.8nm,1.1s,baz=341,slow=8.7,SNR=5.5						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**00 24 47.4**	**+1.9**
	1.5nm,0.9s,baz=54,slow=7.5,SNR=8.1						
TXAR	**Lajitas Array**	**62.28**	**280**	P	**P**	**00 25 51.2**	**+1.7**
	0.6nm,1.0s,baz=42,slow=5.8,SNR=4.2						

AUST 04 00:33:46.3±0.3,32.95S×151.42E,h10km±1km,Error ellipse: s-maj=4.2km s-min=1.9km az=134.0,Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGCD	**Mangrove Creek**	**0.37**	**225**	P	Pg	00 33 53.2	-0.4
baz=0.4							
MGCD				S	Sg	00 33 59.4	+0.9
baz=0.4							
RIV	**Riverview**	**0.90**	**194**	P	Pg	00 34 03.2	-0.6
baz=0.9,SNR=6.3							
RIV				S	Sb	00 34 16.3	0.0
baz=0.9							
ARMA	**Armidale**	**2.53**	**4**	P	Pn	00 34 27.0	-0.6
baz=2.5,SNR=30							
YNG	**Young**	**2.86**	**241**	P	Pn	00 34 31.7	-0.3
baz=2.9							
YNG				S	Sb	00 35 12.5	0.0
baz=2.9							
CNB	**Canberra Magne**	**2.91**	**215**	P	Pn	00 34 33.1	+0.3
baz=2.9							
CNB				S	Sn	00 35 09.2	+1.3
baz=2.9							
CAN	**Canberra**	**3.10**	**220**	P	Pn	00 34 35.8	+0.4
baz=3.1							
CAN				S	Sn	00 35 13.5	+1.0
baz=3.1							

*IDC **04** 01:03:38.7±6.1,17.48S×168.99E,h206km±46km,mb3.9/4, mb1 4.0/4,mb1mx3.4/34,mbtmp4.4/4,Error ellipse: s-maj=55.1km s-min=24.0km az=25.0*
*NEIC **04** 01:03:43.5±1.5,17.82S±0.10×168.9E±0.1,h244km±8km, mb4.3/18,Error ellipse: s-maj=18.2km s-min=14.2km az=100.0*

ISC 04 01:03:43.5±1.2,17.83S±0.09×168.9E±0.2,h250km,n26, σ0s88/27,mb4.2/10,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.87**	**325**	Pn	**Pn**	**01 04 33.9**	**-0.8**
DZM	**Mont Dzumac**	**4.82**	**208**	P	**Pn**	**01 04 56.3**	**-0.9**
	0.7nm,0.3s,baz=148,slow=21,SNR=8.1						
DZM				S	**S**	**01 05 55.8**	**0.0**
	1.0nm,0.3s,baz=105,slow=20,SNR=6.3						
LHI	**Lord Howe Isla**	**16.29**	**211**		**Pn**	**01 07 18.6**	**-0.4**
OUZ	**Omahuta**	**17.82**	**167**	P	**Pn**	**01 07 35.9**	**-1.0**
OUZ				IAmb	IAmb	01 07 42.3	
	comp=Z,11nm,1.1s						
EIDS	**Eidsvold**	**18.18**	**243**	P	**P**	**01 07 37.7**	**-0.5**
EIDS				IAmb	IAmb	01 07 50.1	
	comp=Z,8.0nm,1.0s						
ARMA	**Armidale**	**20.11**	**228**	P	**P**	**01 07 59.5**	**+0.6**
CTAO	**Charters Tower**	**21.54**	**260**	P	**P**	**01 08 14.2**	**+0.8**
CTAO				IAmb	IAmb	01 08 16.8	
	comp=Z,6.8nm,0.9s						
URZ	**Urewera**	**21.59**	**162**	P	**P**	**01 08 14.9**	**+1.3**
	comp=Z,4.3nm,0.5s,baz=308,slow=18,SNR=5.8						
URZ	**Urewera**	**21.59**	**162**	P	**P**	**01 08 14.5**	**+0.9**
URZ				IAmb	IAmb	01 08 19.1	
	comp=Z,6.0nm,0.6s						
BKZ	**Black Stump Fm**	**22.27**	**164**	P	**P**	**01 08 20.8**	**+0.9**
BKZ				IAmb	IAmb	01 08 22.1	
	comp=Z,10nm,0.5s						
BFZ	**Birch Farm**	**23.64**	**166**	P	**P**	**01 08 32.5**	**+0.2**
KHZ	**Kahutara**	**24.83**	**172**	P	**P**	**01 08 41.9**	**-1.1**
STKA	**Stephens Creek**	**28.36**	**235**	P	**P**	**01 09 16.0**	**+1.3**
	comp=Z,3.0nm,0.6s,baz=66,slow=6.3,SNR=6.5						
STKA	**Stephens Creek**	**28.36**	**235**	P	**P**	**01 09 15.3**	**+0.6**
WR0	**Warramunga Arr**	**32.55**	**261**	P	**P**	**01 09 49.6**	**-2.0**
WB0	**Warramunga Arr**	**32.70**	**261**	P	**P**	**01 09 52.3**	**-0.5**
WB0				IAmb	IAmb	01 09 53.5	
	comp=Z,3.0nm,0.4s						
WB2	**Warramunga Arr**	**32.73**	**261**	P	**P**	**01 09 53.1**	**0.0**
WB2				IAmb	IAmb	01 10 07.2	
	comp=Z,3.1nm,0.9s						
WRA	**Warramunga Arr**	**32.74**	**261**	P	**P**	**01 09 53.4**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=84,slow=8.3,SNR=43						
WRA	**Warramunga Arr**	**32.74**	**261**	P	**P**	**01 09 52.9**	**-0.4**
BBOO	**Buckleboo**	**33.07**	**237**	P	**P**	**01 09 57.3**	**+1.4**
BBOO				IAmb	IAmb	01 09 59.6	
	comp=Z,9.9nm,1.1s						
AS31	**Alice Springs**	**33.18**	**254**	P	**P**	**01 09 57.5**	**+0.4**
ASAR	**Alice Springs**	**33.19**	**254**	P	**P**	**01 09 57.7**	**+0.6**
	comp=Z,9.8nm,0.5s,baz=85,slow=8.7,SNR=153						
ASAR	**Alice Springs**	**33.19**	**254**	P	**P**	**01 09 57.0**	**-0.1**
KNRA	**Kununurra**	**38.45**	**267**	P	**P**	**01 10 41.5**	**-0.2**
KNRA				IAmb	IAmb	01 10 42.9	
	comp=Z,9.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**41.09**	**263**	P	**P**	**01 11 04.5**	**+1.1**
ARCES	**ARCESS Array B**	**123.63**	**345**	PKP	**PKPdf**	**01 22 10.8**	**+0.2**
	comp=Z,9.7nm,1.2s,baz=3.8,slow=2.7,SNR=1.4						

*IDC **04** 01:08:33.5±1.8,19.77S×177.88W,h422km±17km, mb3.9/17,mb1 4.1/18,mb1mx3.9/36,mbtmp4.7/18,Error ellipse: s-maj=14.6km s-min=11.2km az=112.0*
*BJI **04** 01:08:33.0±0.0,19.90S×177.80W,h437km,mB5.2/9, mb4.8/11*
*NEIC **04** 01:08:33.0±1.2,19.76S±0.10×177.68W±0.10, h436km±1km,mb4.7/78,Error ellipse: s-maj=14.5km s-min=13.0km az=145.0*

ISC 04 01:08:34.5±0.3,19.76S±0.05×177.67W±0.06,h450km, n260,σ1s34/279,mb4.7/57,13C-10D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.53**	**296**	P	**P**	**01 09 51.4**	**-3.2**
NIUE	**Niue**	**7.34**	**86**	P	**P**	**01 10 21.1**	**-1.8**
NIUE					**S**	**01 11 49.5**	**-2.1**

AFI	**Afiamalu**	**8.11**	**45**	P	**P**	**01 10 27.4**	**-3.8**
	14nm,0.3s,baz=51,slow=1.2,SNR=12							
AFI				S	S	01 11 56.5	-10	
	11nm,0.3s,baz=308,slow=21,SNR=6.4							
RIZ	**Raoul Island**	**9.44**	**181**	P	**P**	01 10 38.3	-7.1	
RIZ				S	**S**	**01 12 31.5**	**-1.7**	
RAO	**Raoul Island**	**9.45**	**181**	S	**S**	**01 12 30.4**	**-2.9**	
	150nm,0.3s,baz=80,slow=21,SNR=3.6							
GLKZ	**Green Lake**	**9.46**	**181**	P	**P**	**01 10 43.8**	**-1.8**	
GLKZ				S	**S**	**01 12 32.2**	**-1.3**	
FUNA	**Funafuti**	**11.58**	**344**		**P**	**01 11 07.1**	**-1.8**	
DZM	**Mont Dzumac**	**15.02**	**258**	P	**P**	**01 11 47.6**	**+1.6**	
	0.8nm,0.3s,baz=74,slow=18,SNR=8.8							
SANVU	**Saraoutou**	**15.04**	**284**	P	**P**	**01 11 45.4**	**-0.8**	
OUZ	**Omahuta**	**17.22**	**205**	P	**P**	**01 12 09.4**	**+0.4**	
OUZ	**Omahuta**	**17.22**	**205**	P	**P**	**01 12 07.5**	**-1.5**	
OUZ				IAmb	IAmb	01 12 13.5		
	comp=Z,21nm,0.6s							
GRZ	**Great Barrier**	**17.50**	**199**	P	**P**	**01 12 14.3**	**+2.4**	
WCZ	**Waipu Caves**	**17.58**	**202**	P	**P**	**01 12 16.5**	**+3.8**	
KNTN	**Kanton**	**17.86**	**20**	P	**P**	**01 12 14.7**	**-1.2**	
KUZ	**Kuaotunu**	**17.88**	**198**	P	**P**	**01 12 16.0**	**+0.1**	
MXZ	**Matakaoa Point**	**18.08**	**190**	P	**P**	**01 12 16.5**	**-1.3**	
MXZ	**Matakaoa Point**	**18.08**	**190**	P	**P**	**01 12 17.2**	**-0.6**	
MXZ				IAmb	IAmb	01 12 31.5		
	comp=Z,29nm,1.1s							
WIAZ	**Waiheke Island**	**18.10**	**199**	P	**P**	**01 12 19.1**	**+1.0**	
HAZ	**Te Kaha**	**18.36**	**192**	P	**P**	**01 12 20.5**	**-0.1**	
HAZ				S	**S**	**01 15 24.7**	**-1.0**	
MKAZ	**Moumakai**	**18.38**	**198**	P	**P**	**01 12 20.8**	**0.0**	
WTAZ	**Waiatarua**	**18.40**	**200**	P	**P**	**01 12 22.0**	**+0.9**	
RUGZ	**Raukumara Rang**	**18.58**	**192**	P	**P**	**01 12 22.7**	**-0.2**	
RUGZ				S	**S**	**01 15 28.0**	**-1.6**	
PUZ	**Puketiti**	**18.58**	**190**	P	**P**	**01 12 24.2**	**+1.5**	
PUZ				S	**S**	**01 15 36.8**	**+7.4**	
TWGZ	**Tauwhareparae**	**18.73**	**191**	P	**P**	**01 12 24.8**	**+0.7**	
TWGZ				S	**S**	**01 15 35.7**	**+3.8**	
TOZ	**Tahuroa Road**	**18.87**	**197**	P	**P**	**01 12 26.1**	**+1.5**	
MWZ	**Matawai**	**18.97**	**192**	P	**P**	**01 12 25.5**	**-0.5**	
MWZ				S	**S**	**01 15 35.2**	**-0.5**	
URZ	**Urewera**	**18.98**	**193**	P	**P**	**01 12 24.7**	**-1.7**	
	comp=Z,4.9nm,0.3s,baz=237,slow=3.3,SNR=23							
URZ	**Urewera**	**18.98**	**193**	P	**P**	**01 12 24.3**	**-2.1**	
URZ				S	**S**	**01 15 31.9**	**-3.9**	
URZ	**Urewera**	**18.98**	**193**	P	**P**	**01 12 25.9**	**-0.4**	
URZ				IAmb	IAmb	01 12 26.8		
	comp=Z,14nm,0.8s							
CNGZ	**Carnagh Statio**	**18.99**	**190**	P	**P**	**01 12 27.3**	**+0.8**	
TKGZ	**Te Karaka**	**19.01**	**191**	P	**P**	01 12 18.5	-8.1	
RAGZ	**Rawiri**	**19.15**	**192**	P	**P**	**01 12 27.1**	**-0.9**	
RAGZ				S	**S**	01 15 48.9	+10	
RIGZ	**Rimuhau**	**19.29**	**191**	P	**P**	**01 12 29.7**	**+0.4**	
RTZ	**Ruatahuna**	**19.35**	**193**	P	**P**	**01 12 29.2**	**-0.6**	
TLZ	**Tolley Road**	**19.42**	**196**	P	**P**	**01 12 31.8**	**+1.3**	
MTHZ	**Maungataniwha**	**19.61**	**193**	P	**P**	**01 12 32.5**	**+0.3**	
MTHZ				S	**S**	01 15 56.0	+10	
MHGZ	**Mahia Peninsul**	**19.70**	**190**	P	**P**	**01 12 32.9**	**-0.1**	
HIZ	**Hauiti**	**19.78**	**198**	P	**P**	**01 12 35.9**	**+2.2**	
HIZ	**Hauiti**	**19.78**	**198**	P	**P**	**01 12 33.1**	**-0.6**	
NMHZ	**Naumai**	**19.85**	**193**	P	**P**	**01 12 33.9**	**-0.5**	
BKZ	**Black Stump Fm**	**19.98**	**193**	P	**P**	**01 12 34.1**	**-1.6**	
BKZ	**Black Stump Fm**	**19.98**	**193**	P	**P**	**01 12 33.2**	**-2.4**	
BKZ				IAmb	IAmb	01 12 37.7		
	comp=Z,12nm,0.5s							
TMVZ	**Te Maari**	**20.12**	**195**	P	**P**	**01 12 36.1**	**-0.9**	
ETVZ	**East Tongariro**	**20.14**	**195**	P	**P**	**01 12 36.4**	**-0.7**	
OTVZ	**Oturere**	**20.17**	**195**	P	**P**	**01 12 35.0**	**-2.4**	
MCHZ	**McNeill Hill**	**20.21**	**193**	P	**P**	**01 12 35.8**	**-1.8**	
KWHZ	**Kaweka Forest**	**20.25**	**193**	P	**P**	**01 12 36.8**	**-1.3**	
WNVZ	**Wahianoa**	**20.34**	**195**	P	**P**	**01 12 37.5**	**-

WB2	**Warramunga Arr**	**45.00**	**261**	P	**P**	**01 16 07.9**	**-0.8**
WB2				IAmb	IAmb	01 16 08.1		
	comp=Z,19nm,0.7s							
WRAB	**Tennant Creek**	**45.01**	**261**	P	**P**	**01 16 07.7**	**-0.9**
WRAB				IAmb	IAmb	01 16 08.4		
	comp=Z,30nm,1.1s							
WRA	**Warramunga AY**	**45.01**	**261**	P	**P**	**01 16 07.7**	**-1.1**
	comp=Z,9.3nm,0.3s,baz=98,slow=5.9,SNR=286							
WRA				S	**S**	**01 22 10.6**	**-3.1**
	comp=Z,1.0nm,0.7s,baz=109,slow=14,SNR=2.8							
WRA	**Warramunga Arr**	**45.01**	**261**	P	**P**	**01 16 07.4**	**-1.3**
MTN	**Manton Dam**	**49.47**	**270**	P	**P**	**01 16 41.7**	**-0.8**
MTN				IAmb	IAmb	01 16 42.3		
	comp=Z,20nm,0.8s							
FORT	**Forrest**	**49.87**	**246**	P	**P**	**01 16 44.6**	**-0.7**
KNRA	**Kununurra**	**51.02**	**266**	P	**P**	**01 16 53.1**	**-0.8**
FAKI	**Fak Fak**	**51.64**	**282**	P	**P**	**01 16 57.6**	**-0.9**
FITZ	**Fitzroy Crossi**	**53.44**	**262**	P	**P**	**01 17 10.6**	**-0.8**
SOEI	**Soe**	**56.79**	**271**	P	**P**	**01 17 36.6**	**+1.4**
	comp=Z,79nm,0.8s							
SOEI	**Soe**	**56.79**	**271**	P	**P**	**01 17 34.4**	**-0.8**
BATI	**Baumata**	**57.23**	**270**	P	**P**	**01 17 39.6**	**+1.5**
	comp=Z,40nm,0.6s							
PSAD2	**Pilbara Seismi**	**58.02**	**256**	P	**P**	**01 17 42.6**	**-0.8**
PSAC2	**Pilbara Seismi**	**58.09**	**256**	P	**P**	**01 17 43.2**	**-0.7**
PSAB3	**Pilbara Seismi**	**58.13**	**256**	P	**P**	**01 17 43.4**	**-0.7**
PSAB2	**Pilbara Seismi**	**58.13**	**256**	P	**P**	**01 17 43.4**	**-0.8**
PSAA3	**Pilbara Seismi**	**58.13**	**256**	P	**P**	**01 17 43.4**	**-0.8**
PSA00	**Pilbara Seismi**	**58.14**	**256**	P	**P**	**01 17 43.5**	**-0.6**
PSA00	**Pilbara Seismi**	**58.14**	**256**	P	**P**	**01 17 43.1**	**-1.1**
PSA00				IAmb	IAmb	01 17 43.6		
	comp=Z,18nm,0.7s							
PSAA2	**Pilbara Seismi**	**58.14**	**256**	P	**P**	**01 17 43.8**	**-0.4**
PSAC3	**Pilbara Seismi**	**58.15**	**256**	P	**P**	**01 17 43.5**	**-0.7**
PSAA1	**Pilbara Seismi**	**58.15**	**256**	P	**P**	**01 17 43.5**	**-0.8**
PSAB1	**Pilbara Seismi**	**58.16**	**256**	P	**P**	**01 17 43.6**	**-0.8**
PSAD1	**Pilbara Seismi**	**58.17**	**257**	P	**P**	**01 17 44.2**	**-0.2**
PSAC1	**Pilbara Seismi**	**58.18**	**256**	P	**P**	**01 17 44.1**	**-0.3**
PSAD3	**Pilbara Seismi**	**58.19**	**256**	P	**P**	**01 17 44.0**	**-0.5**
VNDA	**Vanda**	**58.67**	**185**	P	**P**	**01 17 49.2**	**+2.4**
	comp=Z,3.4nm,0.7s,baz=350,slow=7.0,SNR=20							
VNDA	**Vanda**	**58.67**	**185**	P	**P**	**01 17 47.4**	**+0.6**
NWAO	**Narrogin (SRO)**	**58.98**	**243**	P	**P**	**01 17 49.2**	**-0.5**
NWAO				IAmb	IAmb	01 17 50.0		
	comp=Z,22nm,0.9s							
EDFI	**Ende, Flores**	**59.52**	**271**	P	**P**	**01 17 53.2**	**-0.5**
	comp=Z,17nm,0.9s							
TWSI	**Taliwang, Sumb**	**64.05**	**270**	P	**P**	**01 18 22.3**	**-1.1**
	comp=Z,24nm,1.0s							
MPSI	**Mapaga**	**64.28**	**280**	P	**P**	**01 18 24.8**	**-0.1**
MJAR	**Matsushiro Arr**	**69.81**	**323**	P	**P**	**01 18 58.6**	**0.0**
	comp=Z,5.2nm,0.6s,baz=159,slow=6.1,SNR=8.3							
MJAR	**Matsushiro Arr**	**69.81**	**323**	P	**P**	**01 18 58.2**	**-0.4**
MAT	**Matsushiro**	**69.81**	**323**	P	**P**	**01 18 58.9**	**+0.3**
QSPA	**South Pole Qui**	**70.30**	**180**	P	**P**	**01 19 01.5**	**+0.3**
QSPA				IAmb	IAmb	01 19 04.4		
	comp=Z,22nm,0.9s							
PETK	**Petropavlovsk-**	**75.64**	**345**	P	**P**	**01 19 33.7**	**+1.7**
	comp=Z,5.7nm,0.6s,baz=106,slow=7.9,SNR=18							
PETK	**Petropavlovsk-**	**75.64**	**345**	P	**P**	**01 19 32.5**	**+0.5**
USRK	**Ussuriysk Ar.**	**78.53**	**326**	P	**P**	**01 19 49.4**	**+1.4**
	comp=Z,4.1nm,1.0s,baz=167,slow=7.2,SNR=4.7							
USRK	**Ussuriysk Ar.**	**78.53**	**326**	P	**P**	**01 19 48.5**	**+0.4**
MDPB	**Devils Postpil**	**79.32**	**44**	P	**P**	**01 19 54.2**	**+1.4**
OHAK	**Old Harbor**	**79.36**	**13**	P	**P**	**01 19 53.2**	**+1.0**
OHAK				IAmb	IAmb	01 20 10.2		
	comp=Z,24nm,1.2s							
YBH	**Yreka Blue Hor**	**79.52**	**39**	P	**P**	**01 19 55.9**	**+2.4**
	comp=Z,3.3nm,0.9s,baz=338,slow=3.3,SNR=9.0							
YBH	**Yreka Blue Hor**	**79.52**	**39**	P	**P**	**01 19 54.0**	**+0.5**
NJ2	**Nanjing**	**79.65**	**309**	*e*P	**P**	**01 19 56.5**	**+2.2**
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.5s							
BEKR	**Beckworth**	**79.81**	**41**	P	**P**	**01 19 55.5**	**+0.3**
PNTR	**Pine Nut**	**79.83**	**42**	P	**P**	**01 19 54.6**	**-0.8**
BELA	**Belgrano 2**	**80.24**	**173**	P	**P**	**01 19 58.0**	**+1.3**
NVAR	**Mina Array Bea**	**80.28**	**43**	P	**P**	**01 20 00.3**	**+2.6**
	comp=Z,1.0nm,0.7s,baz=221,slow=8.1,SNR=10							
NVAR	**Mina Array Bea**	**80.28**	**43**	P	**P**	**01 19 58.0**	**+0.3**
PINE	**Pine Mountain**	**81.82**	**38**	P	**P**	**01 20 05.9**	**+0.4**
MAW	**Mawson**	**82.36**	**200**	P	**P**	**01 20 08.7**	**+1.0**
	comp=Z,2.7nm,0.5s,baz=137,slow=6.4,SNR=22							
MAW	**Mawson**	**82.36**	**200**	P	**P**	**01 20 08.9**	**+1.2**
X16A	**Lo Mia Camp, P**	**82.83**	**50**	P	**P**	**01 20 10.2**	**-0.8**
TTA	**Tatalina**	**84.17**	**10**	P	**P**	**01 20 16.9**	**0.0**
TTA				IAmb	IAmb	01 20 19.7		
	comp=Z,15nm,1.2s							
GHO	**Glory Hole Cre**	**84.44**	**13**	P	**P**	**01 20 18.7**	**+0.5**
N25K	**Chitina, Valde**	**85.30**	**15**	P	**P**	**01 20 23.0**	**+0.6**
N25K				IAmb	IAmb	01 20 24.5		
	comp=Z,11nm,0.8s							
TRF	**Thorofare Moun**	**85.67**	**12**	P	**P**	**01 20 24.7**	**+0.5**
SEY	**Seymchan**	**85.73**	**347**	P	**P**	**01 20 25.9**	**+1.6**
	comp=Z,6.6nm,0.6s,baz=160,slow=5.9,SNR=11							
RND	**Reindeer**	**85.92**	**13**	P	**P**	**01 20 25.8**	**+0.5**
MNTX	**Cornudas Mount**	**86.07**	**54**	P	**P**	**01 20 27.5**	**+0.7**
TX31	**Lajitas Ar. Si**	**86.40**	**57**	P	**P**	**01 20 28.4**	**-0.1**
TX31				IAmb	IAmb	01 20 33.6		
	comp=Z,6.8nm,0.8s							
TX32	**Lajitas Array**	**86.40**	**57**	P	**P**	**01 20 28.2**	**-0.2**
TXAR	**Lajitas Array**	**86.40**	**57**	P	**P**	**01 20 32.7**	**+4.2**
	comp=Z,2.3nm,0.7s,baz=217,slow=6.7,SNR=35							
TXAR	**Lajitas Array**	**86.40**	**57**	P	**P**	**01 20 28.8**	**+0.3**
WRH	**Wood River Hil**	**87.02**	**12**	P	**P**	**01 20 31.2**	**+0.7**
WRH				IAmb	IAmb	01 20 32.0		
	comp=Z,17nm,1.0s							
HDA	**Harding Lake**	**87.20**	**13**	P	**P**	**01 20 31.8**	**+0.5**
HDA				IAmb	IAmb	01 20 33.0		
	comp=Z,9.2nm,0.7s							
CCB	**Clear Creek Bu**	**87.23**	**12**	P	**P**	**01 20 32.2**	**+0.8**
CCB				IAmb	IAmb	01 20 32.8		
	comp=Z,8.7nm,0.6s							
BCAR	**Beaver Creek A**	**87.24**	**16**	P	**P**	**01 20 32.2**	**+0.6**
WHY	**Whitehorse**	**87.26**	**20**	P	**P**	**01 20 32.3**	**+0.5**
IMAR	**Indian Mountai**	**87.38**	**10**	P	**P**	**01 20 32.7**	**+0.6**
TCOL	**CIGO, UAF Yank**	**87.42**	**12**	P	**P**	**01 20 32.9**	**+0.6**
MDM	**Murphy Dome**	**87.43**	**12**	P	**P**	**01 20 33.0**	**+0.6**
MDM				IAmb	IAmb	01 20 34.2		
	comp=Z,13nm,1.0s							
SYO	**Syowa Base**	**87.51**	**193**	⇓*e*P	**P**	**01 20 31.8**	**-1.1**
SYO	**Syowa Base**	**87.51**	**193**	⇑*e*PcP	**PcP**	**01 20 33.8**	**-0.5**
SYO	**Syowa Base**	**87.51**	**193**	⇑*e*pP	pP	01 22 09.6	-4.1
IL31		**87.53**	**13**	P	**P**	**01 20 33.6**	**+0.8**
ILAR	**Eielson Array**	**87.53**	**13**	P	**P**	**01 20 33.4**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=228,slow=5.1,SNR=26							
ILAR	**Eielson Array**	**87.53**	**13**	P	**P**	**01 20 34.0**	**+1.2**
POKR	**Poker Plat Res**	**87.72**	**12**	P	**P**	**01 20 34.0**	**+0.2**
POKR				IAmb	IAmb	01 20 35.0		
	comp=Z,9.3nm,0.7s							
PDAR	**Pinedale Array**	**88.22**	**43**	P	**P**	**01 20 39.1**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=222,slow=4.3,SNR=3.9							
PDAR	**Pinedale Array**	**88.22**	**43**	P	**P**	**01 20 36.5**	**-0.4**
DAWY	**Dawson**	**88.67**	**16**	P	**P**	**01 20 38.9**	**+0.7**
SNAA	**Sanae**	**88.73**	**178**	P	**P**	**01 20 39.4**	**+0.7**
SNAA	**Sanae**	**88.73**	**178**	P	**P**	**01 20 39.2**	**+0.5**
EGAK	**Eagle**	**88.82**	**15**	P	**P**	**01 20 39.7**	**+0.9**
EGAK				IAmb	IAmb	01 20 41.2		
	comp=Z,6.6nm,0.8s							
VNA3	**Neumayer Olymp**	**88.85**	**176**	P	**P**	**01 20 40.1**	**+0.9**
HHC	**Hu-ho-hao-te**	**89.06**	**314**	*e*P	**P**	**01 20 38.5**	**-2.2**
HHC				pmax	pmax			
	comp=Z,17nm,0.7s							
HHC				pmax	pmax			
	comp=Z,560nm,5.7s							
COLD	**Coldfoot**	**89.10**	**10**	P	**P**	**01 20 40.2**	**+0.1**
COLD				IAmb	IAmb	01 20 42.7		
	comp=Z,10nm,0.8s							
VNA2	**Neumayer--Watz**	**89.30**	**177**	P	**P**	**01 20 42.3**	**+1.0**
	baz=176,slow=3.8							
VNA1	**Neumayer--Stat**	**89.52**	**176**	P	**P**	**01 20 43.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**90.16**	**289**	P	**P**	**01 20 48.2**	**+1.9**
	comp=Z,1.0nm,0.4s,baz=120,slow=3.2,SNR=11							
CMAR	**Chiang Mai Arr**	**90.16**	**289**	P	**P**	**01 20 46.0**	**-0.2**
BMAR	**Burnt Mountain**	**90.31**	**12**	P	**P**	**01 20 46.5**	**+0.6**
LZH	**Lanzhou**	**92.57**	**307**	⇑P	**P**	**01 20 59.4**	**+2.2**
LZH				pP	pP	01 22 39.1	-0.2
LZH				sP	sP	01 23 22.7	-2.5
LZH				PP	**PP**	**01 24 51.8**	**+5.4**
LZH				pmax	pmax			
	comp=Z,20nm,1.4s							
LZH				pmax	pmax			
	comp=Z,120nm,5.3s							
MKAR	**Makanchi Array**	**110.92**	**314**	PKiKP	**PKiKP**	**01 26 15.3**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=0.0,slow=1.2,SNR=4.2							
MKAR				PKKPbc	**PKKPbc**	**01 37 15.4**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=342,slow=2.3,SNR=4.4							
BOSA	**Boshof**	**127.05**	**205**	PKP	**PKiKP**	**01 26 48.1**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=287,slow=2.2,SNR=3.7							
BOSA	**Boshof**	**127.05**	**205**		**PKiKP**	**01 26 47.4**	**-0.5**
ARCES	**ARCESS Array B**	**128.26**	**350**	PKP	**PKiKP**	**01 26 49.1**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=59,slow=3.3,SNR=9.4							
MATP	**Matopo**	**132.54**	**214**	PKP	**PKiKP**	**01 26 59.8**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=269,slow=1.4,SNR=4.8							
MATP				SKPbc	**SKPab**	**01 29 45.3**	**+1.1**
	comp=Z,2.3nm,0.9s,baz=286,slow=3.1,SNR=3.8							
FINES	**FINESS Array B**	**135.16**	**344**	PKP	**PKiKP**	**01 27 02.5**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=64,slow=3.2,SNR=6.4							
FINES				SKPbc	**SKPab**	**01 29 52.8**	**-1.4**
	comp=Z,6.6nm,1.1s,baz=270,slow=5.7,SNR=4.1							
NOA	**NORSAR Array B**	**138.29**	**354**	PKP	**PKiKP**	**01 27 09.5**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=16,slow=3.7,SNR=3.7							
AKASG	**Malin Array Be**	**142.52**	**332**	PKhKP	**PKPdf**	**01 27 12.8**	**-2.3**
	comp=Z,1.8nm,0.5s,baz=29,slow=3.6,SNR=6.4							
SHEL	**Horse Pasture**	**143.62**	**167**		**PKPdf**	**01 27 18.1**	**0.0**
SORM	**Soroca**	**144.74**	**329**	⇑P	**PKPab**	**01 27 19.7**	**+0.1**
BUR08	**Bucovina Ar. S**	**146.56**	**332**	PKPdf	**PKPdf**	**01 27 22.3**	**0.0**
BRTR	**Keskin Array B**	**146.57**	**313**	PKPbc	**PKPbc**	**01 27 25.4**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=137,slow=2.4,SNR=5.9							
BURAR	**Bucovina Array**	**146.57**	**331**	⇓P	**PKiKP**	**01 27 25.7**	**-1.2**
BURAR	**Bucovina Array**	**146.57**	**331**		**PKPdf**	**01 27 22.9**	**+0.6**
BIZ	**Bicaz**	**146.66**	**330**	⇓P	**PKiKP**	**01 27 26.0**	**-1.0**
CFR	**Carcaliu**	**146.86**	**326**	⇓P	**PKPbc**	**01 27 26.2**	**+0.9**
TPGR	**Topolog**	**146.92**	**325**	⇓P	**PKPbc**	**01 27 26.1**	**+0.6**
KSP	**Ksiaz**	**147.08**	**344**	*e*PKP	**PKiKP**	**01 27 27.2**	**-0.5**
VRI	**Vrincioaia**	**147.12**	**328**	⇑P	**PKiKP**	**01 27 28.4**	**-0.6**
BMR	**Baia Mare**	**147.28**	**333**	⇓P	**PKiKP**	**01 27 28.4**	**+0.2**
HARR	**Harsova**	**147.29**	**325**	⇑P	**PKiKP**	**01 27 28.8**	**+0.5**
ARCR	**ARCALIA**	**147.36**	**332**	⇑P	**PKiKP**	**01 27 28.5**	**+0.1**
OSTC	**Ostas**	**147.36**	**344**	*e*PKP	**PKiKP**	**01 27 28.2**	**-0.1**
OSTC				*ex*	x	01 27 31.9		
CHVC	**Chvalec**	**147.37**	**344**	*e*PKP	**PKiKP**	**01 27 28.5**	**+0.1**
CHVC				*ex*	x	01 27 32.1		
CLL	**Collm**	**147.42**	**348**	*i* PKPbc	**PKiKP**	**01 27 28.0**	**-0.4**
	comp=Z,8.0nm,0.7s							
CLL				*i* PKPab	**PKPab**	**01 27 31.4**	**+1.4**
	comp=Z,11nm,1.0s							
CLL				*ep*PKPab	**pPKPab**	**01 29 15.0**	**+1.5**
CLL				*e*SKPdf	**SKPdf**	**01 30 14.0**	**-0.2**
CLL	**Collm**	**147.42**	**348**		**PKPbc**	**01 27 27.0**	**+0.4**
UPC	**Upice**	**147.46**	**344**	*e*PKP	**PKiKP**	**01 27 27.8**	**-0.7**
UPC				*ex*	x	01 27 32.4		
DPC	**Dobruska-Polom**	**147.52**	**343**	*e*PKP	**PKiKP**	**01 27 28.1**	**-0.6**
DPC				*ex*	x	01 27 32.8		
NEHR	**Nehoiu**	**147.64**	**328**	⇓P	**PKPbc**	**01 27 26.9**	**-0.6**
MORC	**Moravsky Berou**	**147.68**	**341**	⇑P	**PKPab**	**01 27 33.1**	**+1.9**
DOPR	**Dopca**	**147.70**	**329**	⇑P	**PKiKP**	**01 27 28.4**	**-0.8**
VOIR		**148.25**	**329**	⇑P	**PKiKP**	**01 27 31.1**	**+0.7**
PRU	**Pruhonice**	**148.31**	**345**	*e*PKP	**PKiKP**	**01 27 30.3**	**0.0**
PRU				*ex*	x	01 27 34.6		
VRAC	**Vranov**	**148.38**	**342**	⇓P	**PKiKP**	**01 27 30.9**	**+0.5**
VYHS	**Vyhne**	**148.39**	**339**	*e*PKP	**PKiKP**	**01 27 30.8**	**+0.3**
ARR	**Arges**	**148.50**	**329**	⇑P	**PKiKP**	**01 27 31.3**	**+0.4**
SMOL	**Smolenice**	**148.84**	**340**	*e*PKP	**PKiKP**	**01 27 31.8**	**+0.4**
MODS	**Modra-Piesok**	**149.01**	**340**	*e*PKP	**PKiKP**	**01 27 31.6**	**-0.2**
MEM	**Membach**	**149.08**	**355**	PKPdf	**PKPdf**	**01 27 26.6**	**+0.4**
KHC	**Kasperske Hory**	**149.34**	**345**	*e*PKP	**PKiKP**	**01 27 33.3**	**+0.8**
KHC				*ex*	x	01 27 39.9		
GZR	**Gura Zlata**	**149.35**	**331**	⇓P	**PKiKP**	**01 27 32.3**	**-0.4**
GEC2	**GERESS Array S**	**149.58**	**345**		**PKPbc**	**01 27 32.4**	**+0.2**
GERES	**GERESS Array B**	**149.58**	**345**	PKPbc	**PKiKP**	**01 27 33.5**	**+0.4**
	comp=Z,2.8nm,0.6s,baz=27,slow=3.1,SNR=22							
GERES	**GERESS Array B**	**149.58**	**345**	PKPdf	**PKPdf**	**01 27 27.1**	**0.0**
BZS	**Buzias**	**149.69**	**333**	⇑P	**PKiKP**	**01 27 33.3**	**0.0**
SRE	**Strehaia**	**149.71**	**330**	⇑P	**PKPdf**	**01 27 22.5**	**-4.9**
CONA	**Conrad Observa**	**149.84**	**342**	*e*P	**PKiKP**	**01 27 34.5**	**+0.9**
	comp=Z,4.1nm,0.6s							
HERR	**Herculane**	**149.91**	**331**	⇓P	**PKiKP**	**01 27 34.0**	**+0.2**
MOA	**Molln**	**150.35**	**344**	*e*P	**PKiKP**	**01 27 35.1**	**+0.5**
	comp=Z,4.6nm,1.0s							
SOKA	**Soboth**	**151.21**	**342**	*e*P	**PKiKP**	**01 27 36.3**	**-0.2**
	comp=Z,5.0nm,0.8s							
KBA	**Koelnbreinsper**	**151.31**	**344**	*e*P	**PKiKP**	**01 27 36.7**	**0.0**
	comp=Z,3.9nm,0.6s							
WATA	**Walderalm**	**151.48**	**347**	*e*P	**PKiKP**	**01 27 37.7**	**+0.6**
	comp=Z,1.9nm,0.4s							
RETA	**Reutte**	**151.51**	**348**	*e*P	**PKiKP**	**01 27 37.7**	**+0.7**
	comp=Z,5.2nm,1.2s							
WTTA	**Wattenberg**	**151.54**	**347**	*e*P	**PKiKP**	**01 27 37.7**	**+0.5**
	comp=Z,5.8nm,0.6s							
MOTA	**Mooslm**	**151.57**	**347**	*e*P	**PKiKP**	**01 27 37.7**	**+0.4**
	comp=Z,5.0nm,1.0s							
MYKA	**Terra Mystica**	**151.64**	**343**	*e*P	**PKiKP**	**01 27 37.6**	**+0.3**
	comp=Z,7.6nm,0.8s							
SQTA	**Sankt Quirin**	**151.67**	**347**	*e*P	**PKiKP**	**01 27 38.5**	**+1.0**
	comp=Z,5.7nm,0.8s							
ABTA	**Abfaltersbach**	**151.82**	**345**	*e*P	**PKiKP**	**01 27 38.0**	**+0.3**
	comp=Z,5.6nm,0.5s							
PRED	**Cave del Predi**	**151.84**	**343**	PKPab	**PKPab**	**01 27 48.8**	**+0.2**
FETA	**Feichten**	**151.96**	**348**	*e*P	**PKiKP**	**01 27 39.1**	**+1.0**
	comp=Z,4.5nm,1.0s							
CIMO	**Cimolais**	**152.25**	**345**		**PKPbc**	**01 27 38.4**	**0.0**
LIC	**Lamto**	**164.76**	**151**	*e*PKP2	**PKPab**	**01 28 47.8**	**+2.5**
	comp=Z,1.5nm,0.2s							
KIC	**Kosan Boka**	**165.01**	**152**	*e*PKP2	**PKPab**	**01 28 48.9**	**+2.5**
	comp=Z,26nm,0.9s							
TIC	**Toumodi**	**165.13**	**150**	*e*PKP2	**PKPab**	**01 28 49.4**	**+2.4**
DBIC	**Dimbokro**	**165.23**	**151**	PKPab	**PKPab**	**01 28 49.5**	**+2.1**
	comp=Z,4.9nm,0.6s,baz=175,slow=3.8,SNR=7.1							
DBIC	**Dimbokro**	**165.23**	**151**		**PKPab**	**01 28 46.6**	**-0.8**
TORD	**Torodi Ar. Bea**	**173.39**	**175**	PKP	**PKPdf**	**01 27 52.5**	**+0.4**
	comp=Z,2.5nm,1.0s,baz=137,slow=2.8,SNR=9.2							
TORD				PKPab	**PKPab**	**01 29 24.6**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=179,slow=2.2,SNR=8.7							
TORD				PP	**PP**	**01 33 15.2**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=211,slow=3.1,SNR=4.3							
TORD	**Torodi Ar. Bea**	**173.39**	**175**		**PKPdf**	**01 27 51.3**	**-0.8**

*JMA **04** 01:10:37.6±0.2, 36°.25N×141°.58E, h55km±4km, M3.3*
*IDC **04** 01:10:44.9±8.1, 36°.14N×140°.95E, h41km±56km, mb3.3/2, mb1 3.6/4, mb1mx3.3/49, mbtmp3.6/4, ML3.1/2, MS2.2/2, Ms1 2.2/2, ms1mx2.1/23, Error ellipse: s-maj=92.4km s-min=18.4km az=75.0*

ISC 04 01:10:38.9±1.7, 36°.24N±0°.05×141°.6E±0°.1, h35km, n19, σ0s80/17, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.81**	**228**	P	**Pn**	**01 10 53.1**	**-0.7**
CHOJ				*e*S	**Sn**	**01 11 04.5**	**-0.1**
JHYU	**Hitachinakayam**	**0.83**	**277**	P	**Pn**	**01 10 53.2**	**-0.8**
JHYU				S	**Sn**	**01 11 04.9**	**-0.1**
JHO	**Hitachi**	**0.91**	**294**	P	**Pn**	**01 10 53.9**	**-1.3**
ONAJ	**Iwakimizuishiy**	**1.07**	**323**	P	**Pn**	**01 10 56.4**	**-1.1**
JFK	**Kawauchi**	**1.26**	**333**	P	**Pn**	**01 10 59.2**	**-0.9**
JFT	**Otama**	**1.63**	**322**	P	**Pn**	**01 11 05.5**	**+0.4**
JAG	**Ashikaga**	**1.74**	**227**	P	**Pn**	**01 11 05.8**	**-0.8**
JMM	**Marumori**	**1.74**	**338**	P	**Pn**	**01 11 06.4**	**-0.3**
JRY	**Ryogami san**	**2.20**	**265**	P	**Pn**	**01 11 12.4**	**-0.5**
MJAR	**Matsushiro Arr**	**2.75**	**277**	P	**Pn**	**01 11 20.9**	**+0.3**
	1.5nm,0.3s,baz=112,slow=8.6,SNR=24							
MJAR				LR	LR	01 12 08.6		
	comp=Z,21nm,21.5s,baz=190,slow=38							
MAT	**Matsushiro**	**2.75**	**277**	P	**Pn**	**01 11 21.3**	**+0.7**
MAT				*e*S	**Sn**	**01 11 53.3**	**+0.6**
JHJ	**Hachijo jima 2**	**3.46**	**206**	P	**Pn**	**01 11 30.6**	**+0.3**
	22nm,0.3s,baz=345,slow=21,SNR=16							
JHJ				S	**Sn**	**01 12 08.9**	**-1.1**
	22nm,0.3s,baz=129,slow=24,SNR=6.2							
KSRS	**Korea Array**	**11.03**	**280**	LR	LR	01 16 15.7		
	comp=Z,31nm,19.1s,baz=98,slow=31							
H11N2	**WAKE ISLAND Hy**	**27.62**	**120**	T	T	01 45 40.7		
	baz=320							
H11N1	**WAKE ISLAND Hy**	**27.63**	**120**	T	T	01 45 36.5		
	baz=320							
H11N3	**WAKE ISLAND Hy**	**27.64**	**120**	T	T	01 45 38.6		
	baz=320							
ZALV	**Zalesovo Beam**	**42.56**	**313**	P	P	01 18 42.3	+11	
	0.9nm,0.6s,baz=100,slow=4.8,SNR=4.5							
MKAR	**Makanchi Array**	**44.67**	**303**	P	**P**	**01 18 48.9**	**+0.7**
	0.8nm,0.8s,baz=94,slow=7.5,SNR=4.8							
WRA	**Warramunga Arr**	**56.30**	**188**	P	P	01 20 21.7	+5.6
	0.2nm,0.3s,baz=5.2,slow=7.5,SNR=1.8							

NNC 04 01:38:49.3±4.0, 38°.18N×70°.97E, h0km, mb3.7, mpv3.3, 4C-4D, Error ellipse: s-maj=30.4km s-min=26.1km

az=29.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.93**	**356**	⇓Pn	Pn	01 40 05.4	+0.7
	1.0nm,0.3s,baz=171,slow=12,SNR=18						
KK31				Pg	Pb	01 40 17.0	+0.5
	1.3nm,0.4s,baz=176,slow=13,SNR=10						
KK31				⇑Sn	Sn	01 41 03.3	+0.9
	3.8nm,0.5s						
KK31				⇑Lg	Lg	01 41 26.0		
	7.8nm,0.6s,baz=163,slow=27,SNR=5.2						
AAK	**Ala-Archa**	**5.20**	**30**	⇓Pn	Pn	01 40 07.6	-0.9
	2.7nm,0.7s						
AAK				⇑Pg	Pb	01 40 23.7	+2.5
	8.7nm,0.8s						
AAK				⇓Sn	Sn	01 41 11.9	+2.6
	5.1nm,0.8s						
AAK				⇑Lg	Lg	01 41 32.4		
	8.9nm,0.9s						
TKM2	**Tokmak 2**	**5.90**	**35**	⇓Pn	Pn	01 40 18.5	+0.3
	1.7nm,0.6s						

*NEIC **04** 02:44:30.8±1.7, 40°.42N±0°.04×124°.95W±0°.09, h16km±8km, Error ellipse: s-maj=10.4km s-min=5.9km az=71.0*
*NCEDC **04** 02:44:31.6±1.4, 40°.41N±0°.04×124°.89W±0°.02, h11km±6km, ML3.4/30, Error ellipse: s-maj=6.3km s-min=2.5km az=179.0*
*ANF **04** 02:44:35.2±1.5, 40°.55N×124°.58W, h20km±15km, ML3.3/11, Error ellipse: s-maj=11.6km s-min=8.0km az=36.0*
*IDC **04** 02:44:37.0±3.2, 40°.26N×124°.27W, h0km, mb3.3/2, mb1 3.8/3, mb1mx3.5/33, mbtmp3.4/3, ML3.1/1, MS3.0/3, Ms1 3.0/3, ms1mx2.8/14, Error ellipse: s-maj=103.0km s-min=19.1km az=34.0*

ISC 04 02:44:31.6±1.6, 40°.44N±0°.04×124°.87W±0°.07, h19km±4km, n81, σ1s91/83, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSMM	**Slide Mountain**	**0.59**	**115**		**Pg**	**02 44 43.4**	**+0.1**
JCC	**Jacoby Creek,**	**0.74**

H11N1 WAKE ISLAND Hy 61.10 272 T T 04 01 24.0
baz=53,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 61.96 271 T T 04 02 19.7
baz=54,slow=74,SNR=14
H11S2 WAKE ISLAND Hy 61.97 271 T T 04 02 20.2
baz=54,slow=74,SNR=12
H11S3 WAKE ISLAND Hy 61.98 271 T T 04 02 22.2
baz=54,slow=74,SNR=6.9

DDA 04 02:44:43.9, 39°13N × 29°03E, h7km, 2km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.35**	**97**	*i* P	Pg	02 44 51.2	+0.3
GDZ				*i* S	Sg	02 44 56.3	+0.8
USAK	**Uak-Merkez**	**0.42**	**181**	*i* P	Pb	02 44 52.9	-0.7
USAK				IAML		02 44 57.0	
	comp=E,177nm,1.5s						
USAK				*i* S	Sg	02 44 58.6	+1.1
USAK				IAML		02 45 04.0	
	comp=N,34nm,0.4s						
MANT	**Manisa**	**0.74**	**210**	*i* P	Pb	02 44 58.7	-0.5
ULDT	**Uludag**	**1.01**	**5**	*i* P	Pb	02 45 04.2	+0.3
ULDT				*i* S	Sb	02 45 17.2	-0.3
BORA	**Eskisehir**	**1.33**	**55**	*i* P	Pn	02 45 08.9	-0.1
BORA				IAML		02 45 23.0	
	comp=N,17nm,1.3s						
BORA				IAML		02 45 24.0	
	comp=E,13nm,1.3s						
BORA				*i* S	Sb	02 45 26.1	-0.4

WEL 04 03:04:05.3, 43°S ± 1° × 171°6E ± 1°, 0, h10km ± 1km, M2.4/8, ML2.5/8, MLv2.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=172.1, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MHCZ	**Mount Hutt**	**0.04**	**204**	P	Pg	03 04 08.3	+1.0
MHCZ				S	Sg	03 04 09.5	+0.9
OXZ	**Oxford**	**0.37**	**62**	P	Pb	03 04 13.7	-0.2
OXZ				S	Sb	03 04 19.1	-0.7
RPZ	**Rata Peaks**	**0.45**	**241**	P	Pb	03 04 15.5	+0.3
RPZ				S	Sb	03 04 22.0	0.0
RACZ	**Rakaia**	**0.46**	**120**	P	Pb	03 04 16.0	+0.6
RACZ				S	Sb	03 04 22.0	-0.4
WACZ	**Wakanui South**	**0.48**	**158**	P	Pb	03 04 16.6	+0.8
ARCZ	**Arundel**	**0.54**	**214**	P	Pb	03 04 17.4	+0.6
WVZ	**Waitaha Valley**	**0.75**	**304**	P	Pb	03 04 20.9	+0.5
INZ	**Inchbonnie**	**0.78**	**352**	P	Pb	03 04 21.3	+0.4
MQZ	**McQueen's Vall**	**0.80**	**105**	P	Pb	03 04 21.9	+0.6
MQZ				S	Sb	03 04 32.7	+0.6
AMCZ	**Amberley**	**0.84**	**68**	P	Pn	03 04 23.0	-0.1
AMCZ				S	Sn	03 04 35.0	-0.5
LTZ	**Lake Taylor**	**0.87**	**35**	P	Pn	03 04 23.4	-0.2
LTZ				S	Sb	03 04 34.9	+0.6
OKCZ	**Okains Bay**	**1.09**	**102**	P	Pn	03 04 27.1	+0.5
OKCZ				S	Sn	03 04 41.5	-0.3
GVZ	**Greta Valley S**	**1.18**	**64**	P	Pg	03 04 28.8	+0.8
FOZ	**Fox Glacier**	**1.29**	**268**	P	Pg	03 04 31.2	+1.2
LBZ	**Lake Benmore**	**1.35**	**228**	P	Pg	03 04 32.0	+0.8
ODZ	**Otahua Downs**	**1.69**	**203**	P	Pn	03 04 35.5	+0.7
THZ	**Tophouse**	**1.99**	**30**	P	Pb	03 04 42.1	+0.6

*IDC **04** 03:20:10.3 ± 1.1, 22°71N × 121°27E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.5/36, mbtmp3.7/5, ML3.6/1, MS2.6/1, Ms1 2.8/1, ms1mx2.3/37, Error ellipse: s-maj=46.4km s-min=22.2km az=72.0*
*JMA **04** 03:20:11.6 ± 0.1, 23°00N × 121°46E, h16km ± 4km, M3.6*
*TAP **04** 03:20:13.1, 23°04N × 121°34E, h20km, ML3.9, C*
ISC 04 03:20:13.1 ± 0.8, 23°03N ± 0°01 × 121°36E ± 0°02, h18km ± 2km, n134, σ1°02/198, mb3.6/4, 3C-20D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.07**	**5**	*i* P	**Pg**	**03 20 17.2**	**+0.6**
	baz=24						
EDH	**Donghe**	**0.07**	**223**	⇑*i* P	**Pg**	**03 20 17.0**	**+0.3**
	baz=205						
EDH				*i* S	**Sg**	**03 20 19.7**	**+0.7**
	baz=205						
FULB	**Fuli**	**0.18**	**341**	⇑*i* P	**Pg**	**03 20 18.2**	**+0.3**
	baz=352						
FULB				*i* S	**Sg**	**03 20 22.6**	**+1.4**
	baz=352						
LONT	**Longtian**	**0.24**	**241**	⇓*i* P	**Pg**	**03 20 19.1**	**+0.3**
	baz=247						
LONT				*i* S	**Sg**	**03 20 23.5**	**+0.9**
	baz=247						
EYUL	**Yuli**	**0.32**	**354**	*e*P	**Pb**	**03 20 20.6**	**+0.2**
	baz=341						
EYUL				*i* S	**Sn**	**03 20 26.7**	**-2.5**
	baz=341						
TWF1	**Yuli**	**0.33**	**350**	⇓*i* P	**Pb**	**03 20 20.3**	**-0.3**
	baz=339						
TWF1				*e*S	**Sb**	**03 20 25.2**	**-0.3**
	baz=339						
TWGBT	**Beinan**	**0.33**	**231**	⇓*i* P	**Pg**	**03 20 20.0**	**-0.2**
	baz=239						
TWGBT				*i* S	**Sg**	**03 20 24.1**	**-0.9**
	baz=239						
TTN	**Taitung**	**0.33**	**216**	P	**Pb**	**03 20 20.9**	**+0.3**
	baz=203						
TTN				S	**Sb**	**03 20 26.8**	**+1.2**
	baz=203						
ELDTW	**Lidau**	**0.35**	**297**	⇓*i* P	**Pg**	**03 20 20.0**	**-0.7**
	baz=297						
ELDTW				S	**Sg**	**03 20 24.6**	**-1.2**
	baz=297						
LDUT	**Ludao**	**0.37**	**164**	⇓*i* P	**Pg**	**03 20 21.1**	**+0.2**
	baz=162						
LDUT				*e*S	**Sb**	**03 20 27.1**	**+0.5**
	baz=162						
YULB	**Yu-li**	**0.37**	**351**	⇓*i* P	**Pg**	**03 20 20.8**	**-0.2**
	baz=339						
YULB				S	**Sg**	**03 20 25.9**	**-0.3**
	baz=339						
HGSD	**Ruisui**	**0.47**	**7**	*e*P	**Pb**	**03 20 22.9**	**0.0**
	baz=16						
HGSD				*e*S	**Sb**	**03 20 29.8**	**+0.3**
	baz=16						
EHY	**Hungye**	**0.48**	**356**	⇓*i* P	**Pb**	**03 20 22.5**	**-0.6**
	baz=344						
EHY				*e*S	**Sb**	**03 20 30.6**	**+0.8**
	baz=344						
ECL	**Taimali**	**0.57**	**221**	P	**Pb**	**03 20 23.3**	**-1.2**
	baz=229						
ECL				*e*S	**Sb**	**03 20 30.6**	**-1.6**
	baz=229						
STYT	**Tauyuan**	**0.57**	**284**	⇓*i* P	**Pb**	**03 20 23.9**	**-0.7**
	baz=289						
STYT				*e*S	**Sb**	**03 20 31.3**	**-1.0**
	baz=289						
EGFH	**Guangfu**	**0.64**	**6**	*e*P	**Pn**	**03 20 27.0**	**-0.3**
	baz=351						
EGFH				*e*S	**Sg**	**03 20 35.3**	**+0.8**
	baz=351						
SLGT	**Liugui**	**0.66**	**267**	⇓*i* P	**Pb**	**03 20 25.6**	**-0.4**
	baz=267						
SLGT				S	**Sb**	**03 20 33.6**	**-1.2**
	baz=267						
ALS	**Alishan**	**0.70**	**314**	⇓*i* P	**Pg**	**03 20 26.8**	**-0.3**
	baz=314						
ALS				*e*S	**Sg**	**03 20 36.0**	**-0.5**
	baz=314						
SGST	**Jiashian**	**0.72**	**275**	⇓*i* P	**Pb**	**03 20 26.1**	**-1.0**
	baz=276						
SGST				S	**Sb**	**03 20 36.0**	**-0.6**
	baz=276						
WTP	**Ta-pu**	**0.72**	**288**	⇓*i* P	**Pg**	**03 20 27.0**	**-0.3**
	baz=290						
WTP				*e*S	**Sn**	**03 20 37.7**	**-1.3**
	baz=290						
TPUB	**Ta-pu**	**0.72**	**292**	⇓*i* P	**Pg**	**03 20 27.0**	**-0.4**
	baz=294						
TPUB				*e*S	**Sg**	**03 20 37.1**	**+0.1**
	baz=294						
TSMG	**Majia**	**0.73**	**244**	*e*P	**Pb**	**03 20 26.2**	**-1.1**
	baz=246						
TSMG				*e*S	**Sb**	**03 20 34.4**	**-2.6**
	baz=246						
VWDT	**VWDT**	**0.75**	**345**	⇓*i* P	**Pb**	**03 20 27.3**	**-0.4**
	baz=356						
VWDT				*e*S	**Sb**	**03 20 36.5**	**-1.1**
	baz=356						
CHN4	**Tsaushan**	**0.78**	**295**	⇓*i* P	**Pg**	**03 20 28.2**	**-0.2**
	baz=299						
CHN4				S	**Sn**	**03 20 40.3**	**0.0**
	baz=299						
CHN1	**Nanshi**	**0.78**	**282**	⇓*i* P	**Pg**	**03 20 28.4**	**0.0**
	baz=282						
CHN1				*e*S	**Sg**	**03 20 38.3**	**-0.6**
	baz=282						
MASBT	**Mashibuluo**	**0.79**	**239**	⇓*i* P	**Pb**	**03 20 27.2**	**-1.0**
	baz=238						
MASBT				*e*S	**Sb**	**03 20 36.3**	**-2.3**
	baz=238						
ESL	**Shilin**	**0.79**	**5**	*e*P	**Pb**	**03 20 27.9**	**-0.4**
	baz=355						
ESL				*e*S	**Sb**	**03 20 37.4**	**-1.2**
	baz=355						
TAW	**Tawu**	**0.79**	**213**	*e*P	**Pb**	**03 20 27.0**	**-1.3**
	baz=221						
TAW				*e*S	**Sb**	**03 20 36.8**	**-1.8**
	baz=221						
EAST	**Anshuo**	**0.80**	**216**	*e*P	**Pb**	**03 20 27.0**	**-1.4**
	baz=215						
EAST				*e*S	**Sb**	**03 20 37.0**	**-1.9**
	baz=215						
SCST	**Cishan**	**0.81**	**260**	⇓*e*P	**Pn**	**03 20 29.5**	**-0.1**
	baz=260						
SCST				*e*S	**Sn**	**03 20 41.4**	**+0.2**
	baz=260						
WHYT	**Xinyi Township**	**0.81**	**325**	*i* P	**Pg**	**03 20 28.9**	**-0.2**
	baz=325						
WHYT				*e*S	**Sg**	**03 20 39.2**	**-0.7**
	baz=325						
SNST	**Tainan City**	**0.82**	**284**	*e*P	**Pg**	**03 20 29.0**	**-0.1**
	baz=284						
SNST				*e*S	**Sn**	**03 20 40.8**	**-0.6**
	baz=284						
TWK	**Hsinying**	**0.84**	**287**	⇓*i* P	**Pg**	**03 20 29.2**	**-0.3**
	baz=287						
TWK				*e*S	**Sn**	**03 20 41.1**	**-0.8**
	baz=287						
SSLB	**Suanglung**	**0.84**	**334**	⇓*i* P	**Pb**	**03 20 28.7**	**-0.5**
	baz=333						
SSLB				*e*S	**Sb**	**03 20 39.0**	**-1.3**
	baz=333						
CHN5	**Tsauling**	**0.84**	**312**	P	**Pn**	**03 20 29.7**	**-0.5**
	baz=312						
CHN5				*e*S	**Sb**	**03 20 39.6**	**-0.7**
	baz=312						
TWM1	**Shoushan**	**0.89**	**257**	*e*P	**Pn**	**03 20 30.9**	**+0.2**
	baz=255						
TWM1				*e*S	**Sn**	**03 20 43.2**	**+0.1**
	baz=255						
SSPT	**Xinbi**	**0.91**	**234**	*e*P	**Pb**	**03 20 30.2**	**-0.2**
	baz=229						
SSPT				*e*S	**Sb**	**03 20 40.9**	**-1.2**
	baz=229						
CHN3	**Shinhua**	**0.92**	**273**	*e*P	**Pg**	**03 20 32.3**	**+1.3**
	baz=273						
CHN3				*e*S	**Sn**	**03 20 46.2**	**+2.4**
	baz=273						
SCZT	**Fangliau**	**0.94**	**226**	*e*P	**Pb**	**03 20 30.1**	**-0.9**
	baz=220						
SCZT				*e*S	**Sb**	**03 20 43.0**	**-0.1**
	baz=220						
SMLT	**Sun Moon Lake**	**0.95**	**334**	*e*P	**Pb**	**03 20 30.8**	**-0.4**
	baz=338						
SMLT				*e*S	**Sn**	**03 20 45.1**	**+0.2**
	baz=338						
CHN2	**Minshiung**	**0.96**	**302**	*e*P	**Pg**	**03 20 31.3**	**-0.4**
	baz=302						
CHN2				*e*S	**Sn**	**03 20 46.0**	**+1.3**
	baz=302						
SLIU	**Shizi**	**0.96**	**213**	*e*P	**Pb**	**03 20 29.4**	**-1.8**
	baz=201						
SLIU				*e*S	**Sb**	**03 20 42.1**	**-1.4**
	baz=201						
CHY	**Chiayi**	**0.98**	**299**	*e*P	**Pg**	**03 20 32.2**	**0.0**
	baz=299						
CHY				*e*S	**Sn**	**03 20 46.5**	**+1.2**
	baz=299						
WJS	**Zhushan**	**0.98**	**324**	*e*P	**Pg**	**03 20 32.7**	**+0.5**
	baz=323						
WJS				*e*S	**Sn**	**03 20 46.2**	**+0.8**
	baz=323						
SNJT	**Kaohsiung City**	**0.98**	**254**	*e*P	**Pg**	**03 20 33.6**	**+1.4**
	baz=254						
SNJT				*e*S	**Sg**	**03 20 48.9**	**+3.7**
	baz=254						
WGK	**Gukeng**	**0.98**	**312**	*e*P	**Pg**	**03 20 32.6**	**+0.3**
	baz=312						
WGK				*e*S	**Sn**	**03 20 47.2**	**+1.7**
	baz=312						
TYC	**Yuchr**	**0.99**	**332**	*e*P	**Pg**	**03 20 32.1**	**-0.3**
	baz=332						
TYC				*e*S	**Sg**	**03 20 45.8**	**+0.4**
	baz=332						
LAY	**Lan-yu**	**1.00**	**170**	*e*P	**Pb**	**03 20 29.9**	**-2.0**
	baz=161						
LAY				*e*S	**Sb**	**03 20 44.1**	**-0.7**
	baz=161						
WDLH	**Douliu**	**1.00**	**311**	*e*P	**Pg**	**03 20 32.8**	**+0.2**
	baz=311						
WDLH				*e*S	**Sg**	**03 20 47.2**	**+1.4**
	baz=311						
TAI1	**Yung-k'ang**	**1.04**	**271**	*e*P	**Pg**	**03 20 33.2**	**-0.2**
	baz=271						
CHGB	**Renai**	**1.04**	**351**	*e*P	**Pb**	**03 20 32.1**	**-0.7**
	baz=358						
ICHU	**Yijhu**	**1.05**	**289**	⇑*i* P	**Pg**	**03 20 33.3**	**-0.2**
	baz=289						
ICHU				*e*S	**Sg**	**03 20 48.5**	**+1.3**
	baz=289						
WNT	**Mingjian**	**1.05**	**324**	*e*P	**Pg**	**03 20 33.6**	**+0.1**
	baz=323						
WNT				*e*S	**Sg**	**03 20 48.0**	**+0.6**
	baz=323						
KAU	**Kaohsiung**	**1.07**	**245**	*e*P	**Pg**	**03 20 35.4**	**+1.5**
	baz=245						
TWD	**Chiawan**	**1.07**	**12**	*e*P	**Pb**	**03 20 32.0**	**-1.2**
	baz=359						
TWD				*e*S	**Sb**	**03 20 45.8**	**-1.0**
	baz=359						
WLGB	**Puzi**	**1.07**	**295**	*e*P	**Pg**	**03 20 33.3**	**-0.7**
	baz=295						
WLGB				*e*S	**Sg**	**03 20 48.9**	**+0.8**
	baz=295						
DPDB	**Guoxing**	**1.08**	**339**	*e*P	**Pg**	**03 20 33.8**	**-0.3**
	baz=345						
DPDB				*e*S	**Sg**	**03 20 47.8**	**-0.5**
	baz=345						
SCLT	**Jiali**	**1.08**	**278**	*e*S	**Sg**	**03 20 50.1**	**+1.8**
	baz=278						
CHN8	**Yiju**	**1.10**	**287**	*e*P	**Pg**	**03 20 33.8**	**-0.8**
	baz=287						
CHN8				*e*S	**Sg**	**03 20 50.4**	**+1.4**
	baz=287						
WTK	**Tuku**	**1.11**	**307**	*e*P	**Pg**	**03 20 34.3**	**-0.4**
	baz=306						
WTK				*e*S	**Sg**	**03 20 49.7**	**+0.5**
	baz=306						
WHF	**Hehuan Shan**	**1.12**	**356**	*e*P	**Pb**	**03 20 33.4**	**-0.8**
	baz=355						
WHF				*e*S	**Sb**	**03 20 47.9**	**-0.6**
	baz=355						
WLCH	**Liuqiu**	**1.13**	**234**	*e*P	**Pg**	**03 20 36.0**	**+1.0**
	baz=231						
WLCH				*e*S	**Sg**	**03 20 52.7**	**+2.9**
	baz=231						
NACB	**Ninganchiao**	**1.16**	**11**	*e*P	**Pn**	**03 20 32.3**	**-2.2**
	baz=8.0						
HEN	**Hengchun**	**1.17**	**210**	*e*P	**Pn**	**03 20 33.7**	**-0.8**
	baz=200						
ETLH	**Xiulin Townshi**	**1.18**	**5**	*e*P	**Pn**	**03 20 34.2**	**-0.7**
	baz=3.0						
TWK1	**Hengchun**	**1.19**	**206**	*e*P	**Pn**	**03 20 34.6**	**-0.3**
	baz=195						
TWK1				*e*S	**Sb**	**03 20 50.0**	**-0.3**
	baz=195						
TWKBT	**Hengchun**	**1.19**	**205**	*e*P	**Pn**	**03 20 34.5**	**-0.4**
	baz=195						
TWKBT				*e*S	**Sb**	**03 20 49.6**	**-0.7**
	baz=195						
TSEB	**Hengchuen, Pin**	**1.20**	**201**	*e*P	**Pn**	**03 20 34.0**	**-1.0**
	baz=192						
TSEB				*e*S	**Sb**	**03 20 49.6**	**-0.8**
	baz=192						
WSF	**Szhu**	**1.21**	**300**	*e*P	**Pb**	**03 20 34.9**	**-0.6**
	baz=300						
WSF				*e*S	**Sg**	**03 20 51.9**	**-0.5**
	baz=300						
FUSS	**Fushou**	**1.22**	**355**	*e*P	**Pb**	**03 20 35.4**	**-0.4**
	baz=3.0						
TWT	**Tachien**	**1.23**	**352**	*e*P	**Pg**	**03 20 36.2**	**-0.8**
	baz=349						
TDCB	**Techi**	**1.23**	**351**	*e*P	**Pn**	**03 20 35.1**	**-0.6**
	baz=349						
TCU	**Taichung**	**1.28**	**331**	*e*P	**Pb**	**03 20 36.8**	**+0.1**
	baz=329						
WCHH	**Zhanghua**	**1.28**	**325**	*e*P	**Pg**	**03 20 37.0**	**-0.9**
	baz=323						
WCHH				*e*S	**Sb**	**03 20 52.9**	**0.0**
	baz=323						
WHP	**Taichung City**	**1.30**	**343**	*e*P	**Pg**	**03 20 38.2**	**-0.2**
	baz=352						
WHP				*e*S	**Sg**	**03 20 54.8**	**-0.6**
	baz=352						
NNSB	**Datong**	**1.40**	**1**	*e*P	**Pn**	**03 20 36.9**	**-0.9**
	baz=12						
NNSH	**Datong**	**1.40**	**1**	*e*P	**Pn**	**03 20 37.4**	**-0.4**
	baz=12						
NNS	**Nan Shan**	**1.41**	**1**	*e*P	**Pb**	**03 20 38.9**	**-0.1**
	baz=12						
TWQ1	**Liyutan**	**1.42**	**338**	*e*P	**Pg**	**03 20 39.6**	**-1.0**
	baz=336						
WDJ	**Daija District**	**1.47**	**334**	*e*P	**Pg**	**03 20 41.2**	**-0.3**
	baz=316						
NSY	**Sanyi**	**1.49**	**339**	*e*P	**Pg**	**03 20 40.8**	**-1.0**
	baz=338						
NDT	**Datong Townshi**	**1.58**	**5**	*e*P	**Pn**	**03 20 40.6**	**+0.4**
	baz=15						
WDGT	**Dungji**	**1.58**	**279**	*e*P	**Pn**	**03 20 39.9**	**-0.4**
	baz=279						
NMLH	**Miaoli**	**1.59**	**341**	*e*P	**Pg**	**03 20 42.6**	**-1.2**
	baz=338						
ENTT	**Nioudou**	**1.62**	**7**	*e*P	**Pn**	**03 20 40.0**	**-0.8**
	baz=17						
NSTT	**Nanjuang**	**1.63**	**348**	*e*P	**Pb**	**03 20 43.0**	**+0.4**
	baz=346						
YHNB	**Yeheng**	**1.64**	**1**	*e*P	**Pn**	**03 20 41.6**	**+0.5**
	baz=11						
TWC	**Suao**	**1.64**	**16**	*e*P	**Pb**	**03 20 42.5**	**-0.3**
	baz=360						
LIOB	**Emei**	**1.64**	**349**	*e*P	**Pb**	**03 20 43.2**	**+0.3**
	baz=346						
NSK	**Sanguang**	**1.64**	**360**	*e*P	**Pn**	**03 20 41.4**	**+0.3**
	baz=11						
PHUB	**P'eng-hu**	**1.71**	**287**	*e*P	**Pn**	**03 20 41.4**	**-0.6**
	baz=287						
PNG	**Penghu**	**1.74**	**288**	*e*P	**Pn**	**03 20 42.4**	**-0.1**
	baz=288						
NWLT	**Wulai**	**1.75**	**4**	*e*P	**Pb**	**03 20 43.5**	**-1.2**
	baz=15						
VCHM	**Qimei**	**1.79**	**276**	*e*P	**Pn**	**03 20 41.6**	**-1.4**
	baz=276						
NTC	**Toucheng**	**1.87**	**13**	*e*P	**Pn**	**03 20 44.4**	**+0.2**
	baz=9.0						
TWA	**Mucha**	**1.96**	**6**	*e*P	**Pn**	**03 20 45.9**	**+0.5**
	baz=14						
TIPB	**Shuangxi**	**1.98**	**12**	*e*P	**Pn**	**03 20 46.6**	**+0.8**
	baz=7.0						
JYNG	**Yonagunijimaku**	**2.03**	**45**	P	**Pn**	**03 20 46.6**	**+0.2**
JYNG				*e*S	**Sn**	**03 21 11.4**	**+0.1**
TWB1	**Santiao Chiao**	**2.06**	**16**	*e*P	**Pb**	**03 20 49.1**	**-0.8**
	baz=2.0						
NWF	**Wu-fen Shan**	**2.07**	**11**	*e*P	**Pn**	**03 20 47.5**	**+0.4**
	baz=5.0						
WFSB	**Wu-fen Shan**	**2.07**	**11**	*e*P	**Pn**	**03 20 47.2**	**+0.2**
	baz=5.0						
YOJ	**Yonaguni jima**	**2.08**	**46**	*e*P	**Pn**	**03 20 47.0**	**-0.2**
	baz=42						
YOJ	**Yonaguni jima**	**2.08**	**46**	P	**Pn**	**03 20 46.6**	**-0.5**
YOJ				*e*S	**Sn**	**03 21 12.0**	**-0.6**
YM05	**YM05**	**2.14**	**5**	*e*P	**Pn**	**03 20 48.1**	**+0.1**
	baz=14						
HATJ	**Hateruma jima**	**2.47**	**65**	*e*S	**Sn**	**03 21 21.4**	**-0.7**
IRIF	**Iriomote-Funau**	**2.54**	**59**	P	**Pn**	**03 20 54.2**	**+0.9**
VWUC	**VWUC**	**2.62**	**319**	*e*P	**Pn**	**03 20 54.6**	**+0.1**
	baz=319						
JKRS	**Kuro-shima**	**2.71**	**63**	P	**Pn**	**03 20 57.1**	**+1.3**
JKRS				S	**Sn**	**03 21 28.9**	**+0.7**
PTTC	**Pingtan**	**2.86**	**330**	*e*P	**Pn**	**03 20 57.8**	**0.0**
	baz=329						
PTMZ	**Houxiangcun**	**2.87**	**315**	*e*P	**Pn**	**03 20 59.0**	**+1.1**
	baz=315						
JIJ	**Ishigaki jima**	**2.88**	**62**	P	**Pn**	**03 20 58.1**	**0.0**
JIJ				*e*S	**Sn**	**03 21 33.7**	**+1.4**
KNM	**Kinmen**	**3.02**	**298**	*e*P	**Pn**	**03 21 01.3**	**+1.3**
	baz=297						
KNMB	**Chin-men Tao**	**3.08**	**298**	*e*P	**Pn**	**03 21 00.2**	**-0.5**
	baz=299						
JISG	**Ishigakijimahi**	**3.12**	**60**	P	**Pn**	**03 21 01.0**	**-0.4**
JISG				*e*S	**Sn**	**03 21 36.8**	**-1.4**
MATB	**Ma-tsu**	**3.37**	**338**	*e*P	**Pn**	**03 21 04.2**	**-0.6**
	baz=338						
JTJ	**Tarama**	**3.46**	**62**	P	**Pn**	**03 21 06.4**	**+0.4**
JTJ				*e*S	**Sn**	**03 21 47.6**	**+1.1**
AXDP	**Jialang**	**3.62**	**302**	*e*P	**Pn**	**03 21 07.7**	**-0.6**
	baz=302						
MHZQ	**Yeshan**	**3.72**	**326**	*e*P	**Pn**	**03 21 10.1**	**+0.4**
	baz=327						
LYJJ	**Jianjiangzhen**	**3.80**	**338**	*e*P	**Pn**	**03 21 11.1**	**+0.4**
	baz=338						
JMJ2	**Miyako jima3**	**4.01**	**64**	P	**Pn**	**03 21 13.9**	**+0.2**
JMJ	**Miyako jima 2**	**4.02**	**63**	*e*P	**Pn**	**03 21 13.4**	**-0.3**
	baz=61						
XPSS	**Dashiqiu**	**4.03**	**345**	*e*P	**Pn**	**03 21 13.3**	**-0.6**
	baz=345						
JNU	**Nakatsue**	**13.10**	**38**	Pn	**Pn**	**03 23 22.0**	**+3.7**
	0.2nm,0.3s,baz=241,slow=5.2,SNR=3.8						
JNU				Sn	Sn	03 25 54.7	+11
	0.2nm,0.3s,baz=195,slow=16,SNR=1.8						
CMAR	**Chiang Mai Arr**	**21.44**	**262**	LR	LR	03 33 59.5	
	comp=Z,14nm,19.5s,baz=130,slow=39						
MKAR	**Makanchi Array**	**39.28**	**317**	P	**P**	**03 27 43.7**	**+2.9**
	0.2nm,0.5s,baz=101,slow=9.9,SNR=2.0						
ZALV	**Zalesovo Beam**	**41.30**	**328**	P	**P**	**03 27 57.6**	**+0.2**
	0.8nm,0.4s,baz=111,slow=7.9,SNR=2.7						
H11N1	**WAKE ISLAND Hy 42.41**	**86**		T	T	04 13 21.3	
	baz=283,slow=75,SNR=35						
H11N2	**WAKE ISLAND Hy 42.41**	**86**		T	T	04 13 22.8	
	baz=283,slow=75,SNR=66						
H11N3	**WAKE ISLAND Hy 42.42**	**86**		T	T	04 13 23.9	
	baz=283,slow=75,SNR=40						
H11S3	**WAKE ISLAND Hy 42.50**	**87**		T	T	04 13 28.2	
	baz=284,slow=75,SNR=81						
H11S1	**WAKE ISLAND Hy 42.51**	**87**		T	T	04 13 28.3	
	baz=284,slow=75,SNR=40						
H11S2	**WAKE ISLAND Hy 42.52**	**87**		T	T	04 13 29.1	
	baz=284,slow=75,SNR=48						
WRA	**Warramunga Arr**	**44.55**	**162**	P	**P**	**03 28 21.5**	**-2.5**
	0.3nm,0.4s,baz=344,slow=8.8,SNR=9.5						
WRA				PcP	**PcP**	**03 30 05.4**	**-1.7**
	0.5nm,1.1s,baz=350,slow=4.0,SNR=2.0						
ASAR	**Alice Springs**	**47.99**	**164**	P	**P**	**03 28 49.9**	**-1.2**
	0.2nm,0.3s,baz=343,slow=7.0,SNR=5.0						
ASAR				PcP	**PcP**	**03 30 17.3**	**-1.8**
	0.2nm,0.4s,baz=328,slow=3.3,SNR=1.7						

*ATH **04** 03:21:01.6, 36°60N × 27°56E, h111km ± 3km, ML2.9/2, Error ellipse: s-maj=3.1km s-min=2.0km az=101.0*
*ISK **04** 03:21:02.6, 36°64N × 27

BDRM	**Kayabasi**	**0.45**	**345**	*i* P		**Pn**	**03 21 18.4**	**-0.1**
BODT	**Bodrum**	**0.48**	**332**	PG		**Pn**	**03 21 18.9**	**+0.3**
BODT				SG		**Sn**	**03 21 30.7**	**-0.4**
BODT	**Bodrum**	**0.48**	**332**	P		**Pn**	**03 21 19.1**	**+0.5**
BODT				S		**Sn**	**03 21 30.7**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.49**	**80**	PG		**Pn**	**03 21 19.1**	**+0.4**
TURN	**Turunc**	**0.55**	**75**	PG		**Pn**	**03 21 19.6**	**+0.6**
TURN	**Turunc**	**0.55**	**75**	*i* P		**Pn**	**03 21 19.0**	**+0.1**
TURN				*i* S		**Sn**	**03 21 31.3**	**-0.4**
TURN				IAML			03 21 32.0	
	comp=E,162nm,0.3s							
TURN				IAML			03 21 32.0	
	comp=N,115nm,0.4s							
ARG	**Arkhangelos**	**0.60**	**134**	P		**Pn**	**03 21 20.1**	**+0.6**
ARG				S		**Sn**	**03 21 32.8**	**+0.2**
ARG				AML	AML		03 21 33.9	
	comp=E,835μm,0.2s							
ARG				AML	AML		03 21 34.5	
	comp=N,782μm,0.2s							
ARG	**Arkhangelos**	**0.60**	**134**	PG		**Pn**	**03 21 20.3**	**+0.9**
ARG	**Arkhangelos**	**0.60**	**134**	P		**Pn**	**03 21 20.3**	**+0.9**
ARG				S		**Sn**	**03 21 32.6**	**+0.1**
	comp=N,410nm,0.2s							
MLSB	**Milas**	**0.68**	**13**	PG		**Pn**	**03 21 21.4**	**+1.3**
YER	**Yerkesik**	**0.75**	**48**	PG		**Pn**	**03 21 21.7**	**+1.0**
YER	**Yerkesik**	**0.75**	**48**	P		**Pn**	**03 21 21.7**	**+1.0**
DALY	**Dalyan (Mula)**	**0.87**	**78**	PG		**Pn**	**03 21 23.2**	**+1.4**
DALY	**Dalyan (Mula)**	**0.87**	**78**	*i* P		**Pn**	**03 21 22.8**	**+1.0**
DALY				*i* S		**Sn**	**03 21 37.1**	**+0.4**
DALY				IAML			03 21 38.0	
	comp=N,194nm,0.3s							
DALY				IAML			03 21 38.0	
	comp=E,109nm,0.2s							
AYDN	**Tasoluk**	**1.05**	**13**	*i* P		**Pn**	**03 21 23.9**	**+0.3**
AYDN				*i* S		**Sn**	**03 21 40.0**	**-0.1**
AYDN				IAML			03 21 40.0	
	comp=E,67nm,0.3s							
KARP	**Karpathos**	**1.14**	**198**	P		**Pn**	**03 21 24.9**	**+0.3**
KARP				S		**Sn**	**03 21 41.2**	**-0.5**
KARP				AML	AML		03 21 41.8	
	comp=N,832μm,0.2s							
KARP				AML	AML		03 21 42.0	
	comp=E,718μm,0.2s							
KARP	**Karpathos**	**1.14**	**198**	PN		**Pn**	**03 21 25.1**	**+0.5**
KARP	**Karpathos**	**1.14**	**198**	P		**Pn**	**03 21 25.0**	**+0.3**
KARP				S		**Sn**	**03 21 40.8**	**-0.9**
	comp=E,378nm,0.1s							
FETY	**Fethiye**	**1.20**	**89**	PN		**Pn**	**03 21 26.1**	**+0.8**
FETY	**Fethiye**	**1.20**	**89**	*i* P		**Pn**	**03 21 25.8**	**+0.5**
FETY				*i* S		**Sn**	**03 21 40.2**	**-2.7**
FETY				IAML			03 21 43.0	
	comp=E,53nm,0.4s							
FETY				IAML			03 21 44.0	
	comp=N,65nm,0.2s							
SMG	**Samos**	**1.23**	**331**	P		**Pn**	**03 21 26.3**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.33**	**10**	PN		**Pn**	**03 21 27.6**	**+0.7**
TAVA	**DENIZLI_Tavas**	**1.35**	**51**	*i* P		**Pn**	**03 21 28.1**	**+1.1**
TAVA				*i* S		**Sn**	**03 21 44.7**	**-1.3**
TAVA				IAML			03 21 46.0	
	comp=N,38nm,0.2s							
CAME	**Cameli-Denizli**	**1.41**	**77**	PN		**Pn**	**03 21 28.9**	**+1.1**
AKAS	**Kas**	**1.67**	**103**	*i* P		**Pn**	**03 21 30.5**	**-0.4**
KSL	**Kastellorizon**	**1.68**	**106**	P		**Pn**	**03 21 31.5**	**+0.6**
GOLH	**Golhisar**	**1.69**	**69**	*i* P		**Pn**	**03 21 32.2**	**+1.0**
GOLH				*i* S		**Sn**	**03 21 54.0**	**+0.6**
GOLH				IAML			03 21 57.0	
	comp=N,48nm,0.5s							
ZKR	**Zakros**	**1.88**	**217**	P		**Pn**	**03 21 34.0**	**+0.6**
AKUM	**Antalya-Kumluc**	**2.24**	**97**	*i* P		**Pn**	**03 21 38.8**	**+0.8**
AKUM				*i* S		**Sn**	**03 22 02.7**	**-2.8**
AKUM				IAML			03 22 09.0	
	comp=E,29nm,0.2s							
BRDR	**BURDUR-Merkez**	**2.24**	**61**	*i* P		**Pn**	**03 21 38.2**	**+0.1**
BRDR				*i* S		**Sn**	**03 22 02.4**	**-3.3**
KORT	**Korkueli**	**2.25**	**80**	*i* P		**Pn**	**03 21 39.8**	**+1.6**
LAST	**Lasithi**	**2.26**	**230**	P		**Pn**	**03 21 38.1**	**-0.2**
USAK	**Uak-Merkez**	**2.37**	**28**	*i* P		**Pn**	**03 21 40.0**	**+0.4**
USAK				IAML			03 22 02.0	
	comp=E,72nm,0.8s							
USAK				*i* S		**Sn**	**03 22 07.2**	**-1.4**
IDI	**Anoyia**	**2.57**	**239**	P		**Pn**	**03 21 42.2**	**-0.1**
SIVA	**Sivas**	**2.77**	**235**	P		**Pn**	**03 21 45.8**	**+0.9**
IMMV	**Iera Moni Meta**	**3.15**	**249**	P		**Pn**	**03 21 50.9**	**+0.9**
KEPZ	**Antalya-Kepez**	**3.23**	**84**	*i* P		**Pn**	**03 21 52.5**	**+1.4**
KEPZ				*i* S		**Sn**	**03 22 29.8**	**+0.8**
KEPZ				IAML			03 22 33.0	
	comp=N,19nm,0.5s							
KEPZ				IAML			03 22 33.0	
	comp=E,16nm,1.0s							
GVD	**Gavdhos**	**3.37**	**239**	P		**Pn**	**03 21 53.7**	**+0.9**

DJA 04 03:32:52.0±0.3,**2°S**±2°×**12°1E**±°,**h10**km,**M4.0**/9,**MLv4.0**/9, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	**Ampana**	**1.54**	**11**	P	Pn	03 33 19.0	-0.5
APSI				S	Sg	03 33 41.5	0.0
TTSI	**Tana Toraja**	**1.65**	**248**	P	Pn	03 33 18.4	-2.6
LUWI	**Luwuk**	**1.98**	**46**	P	Pn	03 33 24.3	-1.3
SPSI	**Sidrap Palu**	**2.19**	**226**	P	Pn	03 33 28.4	-0.1
SPSI				S	Sn	03 33 56.5	+0.7
BNSI	**Bone**	**2.32**	**212**	P	Pn	03 33 30.5	+0.3
MPSI	**Mapaga**	**3.11**	**332**	P	Pn	03 33 40.7	-0.4
MPSI				S	Sn	03 34 19.1	+0.7
BKSI	**Bulukumba**	**3.12**	**203**	P	Pn	03 33 34.8	-6.5
GTOI	**Gorontalo**	**3.47**	**29**	P	Pn	03 33 46.3	+0.2

*IDC **04** 03:52:14.8±0.8, 7°.71N×94°.77E, h0km, mb4.0/16, mb1 4.1/18, mb1mx3.9/48, mbtmp4.0/18, ML4.1/2, MS3.4/12, Ms1 3.5/12, ms1mx3.2/41, Error ellipse: s-maj=35.5km s-min=16.5km az=54.0*

*DJA **04** 03:52:16.2±0.8, 7°N±8°×9°4E±1°3, h10km, M4.2/6, mb4.4/6, MLv4.2/4*

*NEIC **04** 03:52:21.4±1.7, 7°.65N±0°.06×94°.8E±0°.1, h49km±7km, mb4.4/15, Error ellipse: s-maj=19.8km s-min=3.9km az=66.0*

ISC 04 03:52:20.1±0.6,**7°57N**±0°.08×**94°58E**±0°.08,**h35**km,**n78**, σ1**§37/73**,**mb4.2**/29,**MS3.4**/9,**1C**,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.31**	**134**	P	**Pn**	**03 53 11.9**	**+2.6**
LHMI	**Lhok Sumawe**	**3.31**	**134**	Pn	**Pn**	**03 53 09.9**	**+0.5**
PBA	**Port Blair**	**4.45**	**336**	Pn	Pn	03 53 26.4	+1.4
TPTI		**5.00**	**149**	P	**Pn**	**03 53 30.4**	**-2.3**
	0.1nm41nm,1.0s						
PSI	**Prapat**	**6.41**	**137**	Pn	**Pn**	**03 53 51.9**	**-0.3**
	1.5nm,0.3s,baz=2.9,slow=7.9,SNR=8.6						
PSI				LR	LR	03 56 44.6	
	comp=Z,323nm,18.6s,baz=212,slow=42						
KULM	**Kulim**	**6.44**	**110**		**Pn**	**03 53 52.4**	**-0.1**
RPSI	**Rantau Prapat**	**6.49**	**138**	Pn	**Pn**	**03 53 53.7**	**+0.5**
IPM	**Ipoh**	**7.11**	**115**	Pn	**Pn**	**03 54 01.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**11.63**	**21**	Pn	**Pn**	**03 55 01.0**	**-2.7**
	0.8nm,0.3s,baz=216,slow=15,SNR=2.9						
CMAR				LR	LR	03 59 41.3	
	comp=Z,211nm,18.9s,baz=251,slow=39						
CMAR	**Chiang Mai Arr**	**11.63**	**21**		**Pn**	**03 55 03.5**	**-0.2**
PALK	**Pallekele**	**13.76**	**270**	LR	LR	04 00 37.4	
	comp=Z,196nm,19.7s,baz=197,slow=36						
QIZ	**Qiongzhong**	**18.70**	**51**	P	**Pn**	**03 56 37.3**	**+1.1**
QIZ				S	**S**	**04 00 05.2**	**-1.7**
QIZ				LR	LR		
	comp=N,480nm,14.2s						
QIZ				LR	LR		
	comp=E,210nm,4.2s						
QIZ				LR	LR		
	comp=Z,180nm,7.5s						
KMI	**Kunming**	**19.12**	**23**	⇑P	**Pn**	**03 56 45.1**	**+3.7**
KMI				pP	sP	03 56 53.2	0.0
KMI				sP	pwP	03 56 59.5	+7.7
KMI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KMI				LR	LR		
	comp=N,170nm,18.5s						
KMI				LR	LR		
	comp=E,220nm,20.4s						
KMI				LR	LR		
	comp=Z,170nm,18.0s						
LEM	**Lembang**	**19.33**	**137**	LR	LR	04 05 21.9	
	comp=Z,203nm,19.4s,baz=123,slow=41						
GYA	**Guiyang**	**22.03**	**30**	*e*P	P	03 57 23.9	+12
GYA				pmax	pmax		
	comp=Z,7.0nm,1.9s						
KAPI	**Kappang**	**28.05**	**116**	LR	LR	04 09 31.9	
	comp=Z,59nm,18.9s,baz=285,slow=37						
XAN	**Xi'an**	**29.49**	**25**	P	P	03 58 25.5	+4.5
XAN				pP	pP	03 58 30.4	+0.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	**Lanzhou**	**29.63**	**15**	*e*P	P	03 58 28.3	+5.9
LZH				pP	sP	03 58 39.2	+3.7
LZH				sP	pwP	03 58 42.1	+6.9
LZH				*e*PP	**PP**	**03 59 26.0**	**-3.7**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,5.0s						
LZH				LR	LR		
	comp=N,230nm,13.0s						
LZH				LR	LR		
	comp=E,240nm,13.2s						
LZH				LR	LR		
	comp=Z,350nm,16.3s						
NJ2	**Nanjing**	**33.23**	**40**	*e*P	**P**	**03 58 55.5**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
HHC	**Hu-ho-hao-te**	**36.44**	**22**	*e*P	**P**	**03 59 25.2**	**+3.5**
HHC				pmax	pmax		
	comp=Z,25nm,0.7s						
HHC				pmax	pmax		
	comp=Z,280nm,5.7s						
WMQ	**Urumqi**	**36.61**	**352**	*e*P	**P**	**03 59 26.7**	**+3.6**
MK31	**Makanchi Array**	**40.48**	**347**	P	**P**	**03 59 54.8**	**-0.6**
MK31				IAmb	IAmb	04 00 04.8	
	comp=Z,4.9nm,0.9s						
MKAR	**Makanchi Array**	**40.48**	**347**	P	**P**	**03 59 53.1**	**-2.4**
	comp=Z,1.9nm,0.5s,baz=162,slow=7.8,SNR=18						
MKAR				LR	LR	04 20 12.9	
	comp=Z,36nm,18.1s,baz=150,slow=42						
MKAR	**Makanchi Array**	**40.48**	**347**	P	**P**	**03 59 54.7**	**-0.8**
MAKZ	**Makanchi**	**40.57**	**347**	P	**P**	**03 59 56.6**	**+0.5**
MAKZ				IAmb	IAmb	04 00 05.3	
	comp=Z,4.2nm,0.8s						
KK31	**Karatay Array**	**41.23**	**333**	P	**P**	**04 00 02.6**	**+0.9**
KKAR	**Karatay Array**	**41.23**	**333**	P	**P**	**04 00 01.2**	**-0.4**
SONM	**Songino Array**	**41.37**	**12**	P	**P**	**04 00 01.4**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=188,slow=8.7,SNR=1.9						
SONM				LR	LR	04 18 16.8	
	comp=Z,85nm,18.6s,baz=152,slow=38						
SONM	**Songino Array**	**41.37**	**12**	P	**P**	**04 00 01.3**	**-1.6**
KSRS	**Korea Array**	**42.41**	**40**	LR	LR	04 18 03.5	
	comp=Z,33nm,18.6s,baz=180,slow=37						
GYB1	**ALIBECK ARRAY**	**44.71**	**318**	P	**P**	**04 00 31.1**	**+1.2**
GYA1	**ALIBECK ARRAY**	**44.72**	**318**	P	**P**	**04 00 29.8**	**-0.2**
GEYT	**Alibeck**	**44.72**	**318**	P	**P**	**04 00 30.8**	**+0.7**
	comp=Z,4.2nm,0.6s,baz=151,slow=6.8,SNR=4.9						
GEYT				LR	LR	04 20 28.2	
	comp=Z,38nm,18.2s,baz=295,slow=38						
GEYT	**Alibeck**	**44.72**	**318**	P	**P**	**04 00 29.9**	**-0.2**
GYA0B	**ALIBECK ARRAY**	**44.72**	**318**	P	**P**	**04 00 30.1**	**+0.1**
GYA0B				IAmb	IAmb	04 00 35.2	
	comp=Z,6.0nm,0.7s						
KURBB	**Kurchatov Arra**	**44.95**	**346**	P	**P**	**04 00 30.5**	**-1.1**
	comp=Z,5.2nm,0.6s,baz=170,slow=7.1,SNR=11						
KURK	**Kurchatov**	**45.01**	**346**	P	**P**	**04 00 31.6**	**-0.5**
ZAA0	**Zalesovo Array**	**46.92**	**352**	P	**P**	**04 00 47.4**	**+0.3**
ZAA0				IAmb	IAmb	04 00 59.1	
	comp=Z,7.3nm,1.1s						
ZALV	**Zalesovo Beam**	**46.92**	**352**	P	**P**	**04 00 45.8**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=175,slow=7.4,SNR=4.0						
ZALV				LR	LR	04 21 34.8	
	comp=Z,38nm,21.7s,baz=221,slow=38						
ZALV	**Zalesovo Beam**	**46.92**	**352**	P	**P**	**04 00 47.1**	**0.0**
WB0	**Warramunga Arr**	**47.68**	**125**	P	**P**	**04 00 53.3**	**-0.3**
WRA	**Warramunga Arr**	**47.73**	**126**	P	**P**	**04 00 52.8**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=305,slow=9.2,SNR=2.6						
WB2	**Warramunga Arr**	**47.74**	**126**	P	**P**	**04 00 54.1**	**+0.1**
WB2				IAmb	IAmb	04 01 12.1	
	comp=Z,5.2nm,1.1s						
ASAR	**Alice Springs**	**49.38**	**130**	P	**P**	**04 01 05.4**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=305,slow=7.5,SNR=6.5						
ASAR				PcP	**PcP**	**04 02 29.7**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=309,slow=4.0,SNR=6.5						
ASAR	**Alice Springs**	**49.38**	**130**	P	**P**	**04 01 06.1**	**-0.6**
ASAR					**PcP**	**04 02 28.4**	**-0.5**
BRVK	**Borovoye**	**49.48**	**341**	P	**P**	**04 01 07.8**	**+0.9**
BRVK				IAmb	IAmb	04 01 16.0	
	comp=Z,4.3nm,0.8s						
AB07	**Akbulak array**	**50.69**	**331**	P	**P**	**04 01 15.2**	**-0.9**
AB06	**Akbulak array**	**50.70**	**331**	P	**P**	**04 01 15.2**	**-0.9**
AB03	**Akbulak array**	**50.71**	**331**	P	**P**	**04 01 15.2**	**-1.0**
AB01	**Akbulak array**	**50.71**	**331**	P	**P**	**04 01 15.4**	**-0.8**
AB02	**Akbulak array**	**50.71**	**331**	P	**P**	**04 01 15.4**	**-0.9**
AB31	**Akbulak array**	**50.71**	**331**	P	**P**	**04 01 15.5**	**-0.7**
ABKAR	**Akbulak array**	**50.71**	**331**	P	**P**	**04 01 15.6**	**-0.6**
ABKAR				IAmb	IAmb	04 01 25.2	
	comp=Z,5.0nm,1.1s						
ABKAR	**Akbulak array**	**50.71**	**331**	P	**P**	**04 01 15.2**	**-1.1**
AB04	**Akbulak array**	**50.71**	**331**	P	**P**	**04 01 15.3**	**-0.9**
AB05	**Akbulak array**	**50.72**	**331**	P	**P**	**04 01 15.4**	**-0.9**
AB09	**Akbulak array**	**50.73**	**331**	P	**P**	**04 01 16.6**	**+0.3**
BRTR	**Keskin Array B**	**62.96**	**311**	P	**P**	**04 02 43.1**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=306,slow=37,SNR=3.3						
TIXI	**Tiksi**	**67.45**	**11**	P	**P**	**04 03 11.2**	**-0.6**
MLR	**Muntele Rosu**	**69.69**	**316**	P	**P**	**04 03 27.1**	**+0.5**
BURAR	**Bucovina Array**	**70.56**	**318**	P	**P**	**04 03 32.8**	**+1.0**
FINES	**FINESS Array B**	**73.19**	**332**	P	**P**	**04 03 44.6**	**-2.5**
	comp=Z,1.7nm,0.6s,baz=79,slow=7.2,SNR=3.4						
ARCES	**ARCESS Array B**	**75.70**	**340**	LR	LR	04 39 39.0	
	comp=Z,40nm,21.0s,baz=345,slow=38						
GERES	**GERESS Array B**	**78.34**	**318**	P	**P**	**04 04 18.4**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=79,slow=5.1,SNR=7.2						
GERES	**GERESS Array B**	**78.34**	**318**	P	**P**	**04 04 17.9**	**+0.8**
HFS	**Hagfors**	**78.94**	**330**	P	**P**	**04 04 21.4**	**+1.5**
	comp=Z,1.8nm,0.4s,baz=98,slow=6.4,SNR=9.1						
NB2	**NORSAR Subarra**	**80.21**	**331**	P	**P**	**04 04 28.5**	**+1.6**
	comp=Z,3.7nm,1.0s,baz=94,slow=5.6						
NOA	**NORSAR Array B**	**80.21**	**331**	P	**P**	**04 04 25.6**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=94,slow=5.1,SNR=2.1						
SPITS	**Spitsbergen Ar**	**80.23**	**348**	P	**P**	**04 04 27.0**	**+0.4**
	comp=Z,4.5nm,0.7s,baz=72,slow=4.7,SNR=1.3						
EKA	**Eskdalemuir Ar**	**88.22**	**325**	P	**P**	**04 05 06.2**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=84,slow=7.2,SNR=1.5						
TORD	**Torodi Ar. Bea**	**91.09**	**283**	P	**P**	**04 05 22.6**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=106,slow=4.7,SNR=2.1						
TORD				LR	LR	04 45 20.1	
	comp=Z,12nm,18.2s,baz=130,slow=35						
TORD	**Torodi Ar. Bea**	**91.09**	**283**	P	**P**	**04 05 22.1**	**+0.2**
ESDC	**Sonseca Array**	**91.75**	**310**	P	**P**	**04 05 25.5**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=59,slow=4.4,SNR=2.7						
ESDC	**Sonseca Array**	**91.75**	**310**	P	**P**	**04 05 25.1**	**+0.6**
ILAR	**Eielson Array**	**94.86**	**22**	P	**P**	**04 05 38.2**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=283,slow=5.2,SNR=1.9						
ILAR	**Eielson Array**	**94.86**	**22**	P	**P**	**04 05 38.3**	**+0.1**
PDAR	**Pinedale Array**	**125.29**	**22**	PKP	**PKPdf**	**04 11 17.0**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=357,slow=3.6,SNR=2.3						
PDAR	**Pinedale Array**	**125.29**	**22**		**PKPdf**	**04 11 16.9**	**-1.0**

*IDC **04** 03:57:29.2±1.0, 8°.02N×95°.29E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/44, mbtmp3.8/10, ML3.4/1, Error ellipse: s-maj=67.0km s-min=19.6km az=53.0*

ISC 04 03:57:31.0±0.9,**8°1N**±0°.3×**95°3E**±0°.3,**h10**km,**n10**, σ1**§00/10**,**mb3.7**/9,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.38**	**145**	Pn	**Pn**	**03 59 06.2**	**+0.9**
	0.8nm,0.3s,baz=356,slow=17,SNR=2.3						
MKAR	**Makanchi Array**	**40.15**	**346**	P	**P**	**04 05 06.8**	**-0.4**
	0.7nm,0.7s,baz=174,slow=6.7,SNR=5.2						
ZALV	**Zalesovo Beam**	**46.52**	**352**	P	**P**	**04 05 58.5**	**0.0**
	0.8nm,0.4s,baz=180,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	**47.48**	**126**	P	**P**	**04 06 05.6**	**-0.9**
	0.2nm,0.5s,baz=307,slow=8.3,SNR=5.1						
ASAR	**Alice Springs**	**49.20**	**131**	P	**P**	**04 06 18.9**	**-0.9**
	0.3nm,0.7s,baz=298,slow=7.7,SNR=2.2						
FINES	**FINESS Array B**	**73.06**	**332**	P	**P**	**04 09 02.0**	**+0.9**
	4.6nm,0.9s,baz=101,slow=7.2,SNR=6.7						
GERES	**GERESS Array B**	**78.42**	**318**	P	**P**	**04 09 33.5**	**+1.3**
	0.4nm,0.5s,baz=74,slow=7.2,SNR=3.8						
HFS	**Hagfors**	**78.84**	**330**	P	**P**	**04 09 34.4**	**+0.3**
	3.1nm,0.7s,baz=110,slow=6.3,SNR=2.3						
NOA	**NORSAR Array B**	**80.10**	**331**	P	**P**	**04 09 40.8**	**-0.2**
	0.8nm,0.9s,baz=98,slow=5.3,SNR=1.4						
TORD	**Torodi Ar. Bea**	**91.63**	**283**	P	**P**	**04 10 37.9**	**-1.2**
	0.4nm,0.8s,baz=93,slow=3.5,SNR=2.5						

*IDC **04** 04:19:11.0±1.1, 0°.12N×123°.58E, h127km±9km, mb4.7/33, mb1 4.7/39, mb1mx4.7/45, mbtmp5.1/39, MS3.5/11, Ms1 3.5/11, ms1mx3.1/41, Error ellipse: s-maj=9.7km s-min=6.8km az=75.0*

*BJI **04** 04:19:10.0±0.0, 0°.10N×123°.80E, h120km, mB5.4/37, mb5.1/67*

*NEIC **04** 04:19:10.4±1.2, 0°.08N±0°.06×123°.65E±0°.05, h129km±3km, mb5.1/126, Error ellipse: s-maj=8.6km s-min=7.3km az=140.0*

*GCMT **04** 04:19:11.4±0.3, 0°.15N±0°.02×123°.84E±0°.02, h121km±3km, MW4.9/94, Moment Tensor Solution. s32,c35; s94,c125; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.43±.08; Mθθ0.55±.10; Mφφ-2.98±.10; Mrθ0.98±.07; Mrφ-0.26±.10; Mθφ0.17±.09; Best double couple: M0 2.92700×10^16 NP1:φs163.00000°, δ47.00000°, λ58.00000°. NP2: φs25.00000°, δ52.00000°, λ120.00000°. Principal axes: T 2.8460, Plg67.0000°, Azm359.0000°; N 0.1630, Plg23.0000°, Azm186.0000°; P -3.0090, Plg3.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **04** 04:19:11.9±0.1, 0°N±2°×12°4E±°, h126km±2km, M5.1/56, mb5.2/56, mB5.5/28, MLv5.6/22, Mw(mB)5.0/28, Mwp5.0/1*

*MOS **04** 04:19:12.4±0.9, 0°.12N×123°.54E, h158km, mb5.0/56, Error ellipse: s-maj=8.5km s-min=4.5km az=112.3*

*KLM **04** 04:19:16.0, 0°.17S×123°.67E, h137km, mb5.1*

ISC 04 04:19:11.5±0.5,**0°.03N**±0°.03×**123°68E**±0°.04,**h137**km±4km, **n589**,σ1**§28/637**,**mb5.0**/142,**34C-24D**,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.62**	**29**	P	**Pn**	**04 19 32.7**	**+0.5**
LUWI	**Luwuk**	**1.40**	**220**	P	**Pn**	**04 19 38.0**	**-1.1**
LUWI				S	**Sn**	**04 19 57.4**	**-2.7**
LUWI	**Luwuk**	**1.40**	**220**		**Pn**	**04 19 37.7**	**-1.4**
LUWI				Sn	**Sn**	**04 19 56.6**	**-3.6**
APSI	**Ampana**	**2.24**	**245**	P	**Pn**	**04 19 48.9**	**+0.1**
SANI	**Sanana**	**3.10**	**132**	P	**Pn**	**04 19 56.7**	**-3.0**
SANI				S	**Sn**	**04 20 29.9**	**-7.0**
TNTI	**Ternate**	**3.76**	**79**	P	**Pn**	**04 20 07.4**	**-0.9**
TNTI				S	**Sn**	**04 20 49.1**	**-3.2**
TNTI	**Ternate**	**3.76**	**79**	Pn	**Pn**	**04 20 07.3**	**-1.1**
TNTI				Sn	**Sn**	**04 20 48.6**	**-3.7**
MPSI	**Mapaga**	**3.79**	**275**	P	**Pn**	**04 20 10.0**	**+1.2**
SGSI	**Sangihe**	**4.07**	**27**	P	**Pn**	**04 20 14.4**	**+1.9**
KDI	**Kendari**	**4.10**	**195**	P	**Pn**	**04 20 13.8**	**+0.9**
TTSI	**Tana Toraja**	**4.92**	**232**	P	**Pn**	**04 20 24.7**	**+0.9**
TTSI				S	**Sn**	**04 21 18.0**	**-2.0**
SPSI	**Sidrap Palu**	**5.57**	**225**	P	**Pn**	**04 20 32.6**	**+0.2**
	4.3nm12μm1μm,0.6s						
BNSI	**Bone**	**5.67**	**219**	P	**Pn**	**04 20 33.8**	**+0.1**
	2.9nm6μm460nm,0.6s						
SGKI	**Sangatta, Kali**	**6.10**	**265**	P	**Pn**	**04 20 40.1**	**+0.5**
	3.2nm3μm7μm414nm,1.0s						
DDMP	**Don Marcelino,**	**6.36**	**19**	*e*P	**Pn**	**04 20 47.2**	**+4.1**
DDMP				*e*S	**Sn**	**04 21 57.9**	**+3.2**
KAPI	**Kappang**	**6.37**	**218**	P	**Pn**	**04 20 43.3**	**+0.3**
	112nm,0.3s,baz=16,slow=6.8,SNR=114						
KAPI				S	**Sn**	**04 21 53.0**	**-1.6**
	46nm,0.3s,baz=88,slow=20,SNR=12						
KAPI				LR	LR	04 23 39.5	
	comp=Z,906nm,19.0s,baz=58,slow=42						
KAPI	**Kappang**	**6.37**	**218**	Pn	**Pn**	**04 20 40.3**	**-2.8**
KAPI					**Sn**	**04 21 53.4**	**-1.3**
BKSI	**Bulukumba**	**6.40**	**214**	P	**Pn**	**04 20 43.6**	**+0.1**
	2.2nm3μm256nm,0.6s						
SKMP	**Bagumbayan, Su**	**6.50**	**8**	*e*P	**Pn**	**04 20 44.4**	**-0.5**
SKMP				*e*S	Sn	04 21 49.4	-8.6
BKB	**Balikpapan**	**6.90**	**259**	P	**Pn**	**04 20 52.0**	**+1.7**
	6.7nm15μm2μm,0.9s						
BKB	**Balikpapan**	**6.90**	**259**	Pn	**Pn**	**04 20 49.6**	**-0.7**
BSSI	**Bau Bau, Buton**	**6.91**	**207**	P	**Pn**	**04 20 52.6**	**+2.2**
	2.4nm6μm626nm,0.8s						
KCP	**Kidapawan**	**7.07**	**11**	⇑*i*P	Pn	04 20 57.6	+5.0
DAV

WRAB Tennant Creek 22.43 153 *ce* P **P 04 23 58.6 -0.5**
WRAB pmax pmax
comp=Z,49nm,1.0s
WRAB Tennant Creek 22.43 153 P **P 04 23 59.1 -0.1**
WRAB IAmb IAmb 04 24 01.8
comp=Z,37nm,0.8s
WRA Warramunga Arr 22.43 153 P **P 04 23 59.1 -0.1**
comp=Z,32nm,0.6s,baz=333,slow=10,SNR=460
WRA PcP **PcP 04 27 49.9 +1.0**
comp=Z,5.9nm,0.5s,baz=328,slow=2.0,SNR=8.2
WRA S **S 04 27 52.9 -2.7**
comp=Z,11nm,0.9s,baz=334,slow=16,SNR=10.0
WRA ScP **ScP 04 31 14.3 +0.4**
comp=Z,2.6nm,0.8s,baz=325,slow=2.5,SNR=6.0
WRA Warramunga Arr 22.43 153 P **P 04 23 58.1 -1.1**
WB2 Warramunga Arr 22.43 153 IAmb IAmb 04 24 01.8
comp=Z,40nm,0.7s
TWG Pinlang 22.79 354 P **P 04 24 01.6 -0.9**
IPM Ipoh 23.06 281 P **P 04 24 04.8 -0.4**
IPM IAmb IAmb 04 24 07.9
comp=Z,54nm,0.8s
IPM Ipoh 23.06 281 P **P 04 24 07.0 +1.8**
QIZ Qiongzhong 23.26 325 P **P 04 24 07.1 +0.1**
QIZ S **S 04 28 11.2 +2.3**
QIZ LR LR
comp=Z,310nm,4.1s
QIZ LR LR
comp=Z,500nm,4.4s
QIZ LR LR
comp=Z,230nm,10.7s
TPUB Ta-pu 23.32 353 P **P 04 24 06.6 -0.9**
TPUB IAmb IAmb 04 24 14.4
comp=Z,125nm,0.9s
YULB Yu-li 23.34 354 P **P 04 24 06.8 -0.8**
YULB IAmb IAmb 04 24 14.2
comp=Z,35nm,0.7s
KULM Kulim 23.58 283 P **P 04 24 12.0 +2.0**
SSLB Suanglung 23.76 354 P **P 04 24 10.6 -1.0**
SSLB IAmb IAmb 04 24 15.6
comp=Z,44nm,0.8s
MNSI Mandailing Nat 24.11 272 P **P 04 24 18.1 +3.3**
GIRL Giralia 24.34 202 P **P 04 24 18.2 +1.4**
baz=24,SNR=6.6
RPSI Rantau Prapat 24.89 276 P **P 04 24 21.2 -0.7**
RPSI **PcP 04 27 53.4 -0.9**
RPSI Rantau Prapat 24.89 276 **PcP 04 27 55.0 +0.6**
PSI Prapat 24.90 277 P **P 04 24 22.1 0.0**
comp=Z,16nm,0.8s,baz=219,slow=0.3,SNR=17
PSI PcP **PcP 04 27 55.0 +0.4**
comp=Z,1.9nm,0.3s,baz=179,slow=5.4,SNR=5.1
PSI Prapat 24.90 277 P **P 04 24 21.2 -0.9**
PSI 04 27 53.4
PSI pmax pmax
comp=Z,23nm,0.9s
PMG Port Moresby 25.18 113 P **P 04 24 25.7 +1.2**
comp=Z,35nm,0.8s,baz=322,slow=4.6,SNR=9.0
PMG Port Moresby 25.18 113 *ce* P **P 04 24 26.0 +1.5**
PMG pmax pmax
comp=Z,29nm,1.0s
WRKA Warakurna 25.32 170 P **P 04 24 26.3 +0.7**
baz=26,SNR=143
AS31 Alice Springs 25.56 158 P **P 04 24 28.4 +0.6**
ASAR Alice Springs 25.56 158 P **P 04 24 28.6 +0.7**
comp=Z,7.3nm,0.5s,baz=342,slow=13,SNR=75
ASAR PcP **PcP 04 27 56.9 +1.2**
comp=Z,15nm,0.5s,baz=345,slow=2.2,SNR=20
ASAR S **S 04 28 44.6 -1.0**
comp=Z,7.5nm,1.0s,baz=351,slow=23,SNR=6.3
ASAR ScP **ScP 04 31 23.1 +0.7**
comp=Z,1.7nm,0.7s,baz=329,slow=2.5,SNR=4.8
ASAR Alice Springs 25.56 158 P **P 04 24 28.0 +0.1**
ASAR **PcP 04 27 55.7 0.0**
ASAR **ScP 04 31 23.3 +0.8**
QIS Mount Isa 25.72 144 P **P 04 24 30.5 +1.2**
baz=26,SNR=36
MEEK Meekatharra 26.96 190 P **P 04 24 40.3 -0.1**
baz=27,SNR=8.1
KRVT Keravat (AS076 28.64 99 P **P 04 24 56.4 +0.9**
comp=Z,51nm,0.6s,baz=10,slow=4.0,SNR=5.9
SLVN Son La 28.66 319 P **P 04 24 54.7 -0.9**
CTA Charters Tower 29.81 133 P **P 04 25 07.8 +2.1**
comp=Z,4.1nm,0.8s,baz=305,slow=12,SNR=2.7
CTA PcP **PcP 04 28 07.8 +1.7**
comp=Z,6.4nm,0.6s,baz=312,slow=3.1,SNR=6.7
CTA ScP **ScP 04 31 37.2 +1.6**
comp=Z,5.1nm,0.8s,baz=278,slow=14,SNR=4.0
MORW Morawa 29.84 194 P **P 04 25 06.1 +0.2**
baz=30,SNR=9.5
MORW Morawa 29.84 194 P **P 04 25 06.1 +0.2**
MORW IAmb IAmb 04 25 07.1
comp=Z,32nm,1.1s
CMAR Chiang Mai Arr 30.43 308 P **P 04 25 12.2 +0.9**
comp=Z,17nm,0.9s,baz=138,slow=7.5,SNR=50
CMAR PcP **PcP 04 28 08.8 +1.1**
comp=Z,11nm,0.7s,baz=161,slow=1.8,SNR=19
CMAR ScP **ScP 04 31 38.7 +1.1**
comp=Z,0.8nm,0.3s,baz=202,slow=3.6,SNR=4.6
CMAR LR LR 04 38 09.6
comp=Z,65nm,20.9s,baz=174,slow=38
CMAR Chiang Mai Arr 30.43 308 P **P 04 25 10.2 -1.0**
CMAR **PcP 04 28 08.8 +1.1**
CHTO Chiang Mai 30.63 309 P **P 04 25 12.1 -0.9**
CHTO pmax pmax
comp=Z,52nm,1.0s
CHTO Chiang Mai 30.63 309 P **P 04 25 12.1 -0.9**
CHTO IAmb IAmb 04 25 16.8
comp=Z,52nm,0.9s
FORT Forrest 30.92 173 P **P 04 25 15.9 +0.5**
baz=31,SNR=95
FORT Forrest 30.92 173 P **P 04 25 15.4 0.0**
GYA Guiyang 30.97 329 ⇓P **P 04 25 18.7 +2.7**
GYA pP pP 04 25 47.1 +1.5
GYA pmax pmax
comp=Z,23nm,1.0s
BLDU Ballidu 31.19 192 P **P 04 25 17.8 +0.1**
baz=31,SNR=25
KMBL Kambalda 31.27 183 P **P 04 25 18.9 +0.4**
baz=31,SNR=8.8
WHN Wuhan 31.61 345 ⇑P **P 04 25 24.5 +3.0**
WHN pmax pmax
comp=Z,52nm,1.0s
KLBR Kellerberrin 31.95 190 P **P 04 25 24.7 +0.3**
baz=32,SNR=14
KMI Kunming 32.13 322 ⇑P **P 04 25 29.5 +3.1**
KMI sP sP 04 26 08.0 -4.1
KMI pmax pmax
comp=Z,20nm,1.2s
NJ2 Nanjing 32.17 352 *e* P **P 04 25 28.3 +2.0**
NJ2 pmax pmax
comp=Z,29nm,1.0s
ENH Enshi 32.97 337 P **P 04 25 32.4 -0.9**
ENH IAmb IAmb 04 25 36.2
comp=Z,37nm,0.9s
NWAO Narrogin (SRO) 33.34 190 P **P 04 25 36.9 +0.3**
comp=Z,16nm,0.8s,baz=38,slow=8.1,SNR=8.6
NWAO Narrogin (SRO) 33.34 190 P **P 04 25 37.1 +0.6**
baz=34,SNR=4.5
NWAO Narrogin (SRO) 33.34 190 P **P 04 25 37.1 +0.6**
NWAO pmax pmax
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 33.34 190 P **P 04 25 37.1 +0.6**
NWAO IAmb IAmb 04 25 39.2
comp=Z,19nm,0.9s
JNU Nakatsue 33.61 11 P **P 04 25 38.5 -0.4**
comp=Z,16nm,0.8s,baz=322,slow=2.3,SNR=7.5
BBOO Buckleboo 34.69 162 P **P 04 25 49.1 +0.9**
baz=35,SNR=7.2
BBOO Buckleboo 34.69 162 P **P 04 25 48.8 +0.6**
BBOO IAmb IAmb 04 25 52.8
comp=Z,20nm,1.0s
JMN Monobe 34.86 15 P **P 04 25 48.8 -0.9**
JHS Saijyo 35.89 13 P **P 04 25 59.4 +1.0**
STKA Stephens Creek 35.98 154 P **P 04 26 00.4 +1.2**
comp=Z,28nm,0.5s,baz=330,slow=8.6,SNR=80
STKA PcP **PcP 04 28 23.9 +0.9**
comp=Z,13nm,0.5s,baz=340,slow=4.5,SNR=6.1
STKA ScP **ScP 04 31 57.4 +0.8**
comp=Z,5.5nm,0.9s,baz=292,slow=6.3,SNR=3.7
STKA LR LR 04 41 38.4
comp=Z,67nm,18.1s,baz=334,slow=37
STKA Stephens Creek 35.98 154 P **P 04 26 00.6 +1.4**
baz=36,SNR=46
STKA Stephens Creek 35.98 154 P **P 04 25 59.8 +0.5**
CD2 Chengdu 36.07 330 P **P 04 26 01.8 +1.7**
CD2 pmax pmax
comp=Z,80nm,0.6s

HTT Hallett 36.24 158 P **P 04 26 02.8 +1.2**
baz=36,SNR=35
XAN Xi'an 36.55 339 P **P 04 26 04.9 +0.7**
XAN pP pP 04 26 31.7 -2.6
XAN pmax pmax
comp=Z,27nm,0.9s
XAN pmax pmax
comp=Z,290nm,5.3s
XAN Xi'an 36.55 339 P **P 04 26 03.1 -1.1**
XAN pmax pmax
comp=Z,17nm,0.9s
XAN Xi'an 36.55 339 P **P 04 26 03.1 -1.1**
XAN IAmb IAmb 04 26 09.3
comp=Z,17nm,0.9s
JWT Wachi 36.74 16 P **P 04 26 04.9 -0.7**
INU Inuyama 37.27 18 P **P 04 26 09.6 -0.5**
INU IAmb IAmb 04 26 14.2
comp=Z,43nm,1.0s
KSAR Wonju Array Be 37.43 6 P **P 04 26 10.6 -0.8**
KSAR Wonju Array Be 37.43 6 P **P 04 26 10.6 -0.8**
KSAR **PcP 04 28 27.4 +0.2**
KSRS Korea Array 37.44 6 P **P 04 26 12.2 +0.7**
comp=Z,7.5nm,0.8s,baz=181,slow=9.8,SNR=28
KSRS PcP **PcP 04 28 27.9 +0.7**
comp=Z,4.1nm,0.8s,baz=184,slow=4.0,SNR=9.9
KSRS LR LR 04 43 40.0
comp=Z,32nm,18.1s,baz=197,slow=39
JGF Kuroka 37.61 18 P **P 04 26 12.3 -0.8**
JGF IAmb IAmb 04 26 14.7
comp=Z,31nm,0.7s
CMSA Cobar Meteorol 37.69 148 P **P 04 26 15.6 +1.9**
baz=38,SNR=27
MJAR Matsushiro Arr 38.75 19 P **P 04 26 22.2 -0.3**
comp=Z,45nm,0.7s,baz=192,slow=9.0,SNR=92
MJAR PcP **PcP 04 28 32.6 +1.2**
comp=Z,3.4nm,0.6s,baz=174,slow=3.4,SNR=6.1
MJAR LR LR 04 42 22.8
comp=Z,29nm,20.0s,baz=155,slow=36
MJAR Matsushiro Arr 38.75 19 P **P 04 26 21.7 -0.9**
MAJO Matsushiro 38.75 19 *c* iP **P 04 26 22.2 -0.3**
MAJO pmax pmax
comp=Z,40nm,0.8s
MAJO Matsushiro 38.75 19 P **P 04 26 21.6 -1.0**
MAT Matsushiro 38.75 19 P **P 04 26 21.9 -0.6**
TIY Taiyuan 38.91 346 *e* P **P 04 26 26.0 +2.1**
TIY pmax pmax
comp=Z,36nm,0.8s
TIY pmax pmax
comp=Z,360nm,5.8s
TIY LR LR
comp=Z,420nm,6.0s
TIY LR LR
comp=Z,590nm,5.0s
TIY LR LR
comp=Z,700nm,5.8s
SHL Shillong 39.84 312 P **P 04 26 31.0 -1.0**
SHL pmax pmax
comp=Z,31nm,1.0s
SHL Shillong 39.84 312 P **P 04 26 30.9 -1.0**
SHL IAmb IAmb 04 26 33.9
comp=Z,31nm,1.0s
ARMA Armidale 40.29 141 P **P 04 26 37.9 +2.4**
baz=40,SNR=15
ARMA Armidale 40.29 141 P **P 04 26 36.1 +0.6**
ARMA IAmb IAmb 04 26 38.6
comp=Z,18nm,0.8s
ARPS Mount Arapiles 40.30 157 P **P 04 26 37.2 +1.8**
baz=40,SNR=25
LZH Lanzhou 40.34 335 ⇑P **P 04 26 38.4 +2.5**
LZH pP pP 04 27 04.3 -2.1
LZH sP sP 04 27 18.5 -3.5
LZH PP **PnPn 04 28 17.0 +0.3**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,100nm,5.4s
BJT Baijiatuan 40.38 351 P **P 04 26 35.3 -0.7**
BJT pmax pmax
comp=Z,19nm,1.1s
BJT Baijiatuan 40.38 351 P **P 04 26 35.3 -0.7**
BJI Beijing 40.41 351 P **P 04 26 37.4 +1.3**
BJI PcP **PcP 04 28 37.4 +0.8**
BJI pmax pmax
comp=Z,15nm,0.9s
JMM Marumori 40.82 21 P **P 04 26 39.1 -0.6**
YNG Young 41.26 148 P **P 04 26 45.5 +2.2**
baz=41,SNR=5.9
MGCD Mangrove Creek 41.94 145 P **P 04 26 52.1 +3.2**
baz=42,SNR=5.5
HHC Hu-ho-hao-te 42.09 346 *e* P **P 04 26 51.0 +0.9**
HHC pmax pmax
comp=Z,25nm,0.8s
HHC pmax pmax
comp=Z,320nm,6.6s
CAN Canberra 42.36 149 P **P 04 26 52.7 +0.4**
CAN pmax pmax
comp=Z,33nm,0.7s
CAN Canberra 42.36 149 P **P 04 26 52.6 +0.4**
CAN IAmb IAmb 04 26 55.7
comp=Z,33nm,0.7s
TOO Toolangi 42.49 154 P **P 04 26 55.8 +2.5**
baz=43,SNR=14
TOO Toolangi 42.49 154 P **P 04 26 54.1 +0.8**
TOO pmax pmax
comp=Z,24nm,0.9s
TOO Toolangi 42.49 154 P **P 04 26 54.1 +0.8**
TOO IAmb IAmb 04 26 56.8
comp=Z,24nm,0.8s
CNB Canberra Magne 42.55 148 P **P 04 26 56.1 +2.2**
baz=43,SNR=5.6
LSA Lhasa 42.79 316 P **P 04 26 55.1 -1.3**
LSA pmax pmax
comp=Z,15nm,0.6s
LSA Lhasa 42.79 316 P **P 04 26 55.1 -1.3**
LSA IAmb IAmb 04 26 59.1
comp=Z,15nm,0.6s
VLA Vladivostok 43.52 9 *i* P **P 04 27 00.9 -0.5**
VLA pmax pmax
comp=Z,30nm,1.0s
CN2 Changchun 43.61 2 *e* P **P 04 27 01.3 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
TAPN Taplejung 43.94 311 *e* P **P 04 27 06.3 +0.9**
comp=Z,63nm,0.8s
RAMN Ramite 44.57 310 *e* P **P 04 27 12.0 +1.6**
comp=Z,82nm,0.5s
USA0B Ussuriysk Arra 44.60 9 P **P 04 27 09.6 -0.4**
USA0B pmax pmax
comp=Z,34nm,0.7s
USA0B Ussuriysk Arra 44.60 9 P **P 04 27 09.6 -0.4**
USA0B IAmb IAmb 04 27 11.5
comp=Z,34nm,0.7s
USRK Ussuriysk Ar. 44.60 9 P **P 04 27 10.5 +0.5**
comp=Z,42nm,0.7s,baz=191,slow=5.7,SNR=78
USRK Ussuriysk Ar. 44.60 9 P **P 04 27 09.5 -0.5**
MDJ Mudanjiang 44.70 6 P **P 04 27 11.9 +1.1**
MDJ pmax pmax
comp=Z,1µm,5.8s
MDJ Mudanjiang 44.70 6 P **P 04 27 10.3 -0.5**
GTA Gaotai 44.86 334 *e* P **P 04 27 13.9 +1.5**
GTA pP pP 04 27 42.6 -1.0
GTA sP sP 04 27 55.8 -3.3
GTA PcP **PcP 04 28 52.6 +0.8**
GTA pmax pmax
comp=Z,22nm,1.2s
GUN Gumba 45.61 311 *e* P **P 04 27 19.8 +1.1**
comp=Z,54nm,0.4s
PKI Pulchoki 45.80 310 *e* P **P 04 27 20.7 +0.5**
comp=Z,12nm,0.3s
PKIN Phulchoki 45.81 310 *e* P **P 04 27 20.8 +0.6**
comp=Z,24nm,0.4s
KKN Kakani 46.01 310 *e* P **P 04 27 22.3 +0.6**
comp=Z,55nm,0.8s
DMN Daman 46.05 310 *e* P **P 04 27 22.9 +0.8**
comp=Z,88nm,1.0s
TEY Ternei 46.25 13 ⇑ *i* P **P 04 27 23.9 +0.9**
TEY pmax pmax
comp=Z,150nm,0.8s
TEY pmax pmax
comp=N,50nm,0.9s
GKN Gorkha 46.61 310 *e* P **P 04 27 26.8 +0.5**
comp=N,63nm,0.7s
KOLN Koldanda 47.29 309 *e* P **P 04 27 32.7 +1.0**
comp=N,133nm,0.7s
DANN Dangsing 47.45 310 *e* P **P 04 27 33.7 +0.7**
comp=N,136nm,0.7s

HYB Hyderabad 47.64 294 *i* P **P 04 27 33.0 -1.3**
PYUN Piuthan 47.92 309 *e* P **P 04 27 37.0 +0.4**
comp=N,218nm,1.0s
KLR Kul'dur 49.50 7 *ce* P **P 04 27 47.2 -0.7**
KLR pmax pmax
comp=Z,16nm,0.9s
YSS Yuzh-Sakhalins 49.62 17 *ce* P **P 04 27 48.8 -0.1**
YSS pmax pmax
comp=Z,115nm,1.7s
ULN Ulaanbaatar 49.79 345 *ce* P **P 04 27 50.2 -0.2**
ULN pmax pmax
comp=Z,11nm,0.8s
ULN Ulaanbaatar 49.79 345 P **P 04 27 50.0 -0.4**
SONM Songino Array 49.93 345 P **P 04 27 51.5 +0.1**
comp=Z,9.7nm,0.7s,baz=158,slow=8.8,SNR=45
SONM PcP **PcP 04 29 09.3 -0.4**
comp=Z,5.0nm,0.7s,baz=158,slow=3.7,SNR=6.1
SONM LR LR 04 50 40.4
comp=Z,54nm,19.8s,baz=96,slow=38
SONM Songino Array 49.93 345 P **P 04 27 50.6 -0.8**
SONM **PcP 04 29 09.1 -0.6**
ZAK Zakamensk 53.10 344 *e* P **P 04 28 13.6 -1.3**
ZAK pmax pmax
comp=Z,27nm,0.9s
ZEA Zeya 53.60 3 *e* P **P 04 28 21.2 +2.8**
ZEA pmax pmax
comp=Z,20nm,0.9s
WMQ Urumqi 54.12 328 *e* P **P 04 28 23.8 +1.4**
WMQ pP pP 04 28 55.7 +0.9
WMQ PcP **PcP 04 29 25.9 +0.5**
WMQ pmax pmax
comp=Z,54nm,0.7s
WMQ pmax pmax
comp=Z,330nm,5.1s
TLY Talaya 54.17 345 P **P 04 28 22.5 -0.1**
comp=Z,4.3nm,0.7s,baz=208,slow=4.4,SNR=3.7
TLY LR LR 04 53 05.9
comp=Z,36nm,20.3s,baz=140,slow=38
TLY Talaya 54.17 345 *e* P **P 04 28 22.8 +0.2**
TLY pmax pmax
comp=Z,13nm,0.8s
TLY Talaya 54.17 345 P **P 04 28 22.3 -0.3**
NIL Nilore 57.88 311 P **P 04 28 48.6 -0.7**
NIL pmax pmax
comp=Z,25nm,0.7s
NIL Nilore 57.88 311 P **P 04 28 48.6 -0.7**
ZSN Zaisan 58.05 330 *e* P **P 04 28 50.9 +0.7**
comp=Z,5.7nm,0.6s,baz=330
ZSN Zaisan 58.05 330 *e* P **P 04 28 50.9 +0.7**
ZSN pmax pmax
comp=Z,6.0nm,0.6s
BOD Bodaibo 58.13 354 *e* P **P 04 28 50.7 +0.2**
BOD pmax pmax
comp=Z,18nm,1.4s
SHLS Shalkode 58.34 323 *i* P **P 04 28 51.3 -1.2**
comp=Z,15nm,0.7s,baz=324
SHLS Shalkode 58.34 323 *i* P **P 04 28 51.2 -1.2**
SHLS pmax pmax
comp=Z,15nm,0.7s
DGZ Jazzator, Alta 58.40 333 *i* P **P 04 28 52.4 -0.3**
DGZ pmax pmax
comp=Z,26nm,0.8s
KSH Kashi 58.61 318 *e* P **P 04 28 54.4 0.0**
KSH *es* P sP 04 29 44.4 +2.2
KSH pmax pmax
comp=Z,26nm,0.6s
SATY Saty 58.93 323 ⇑ *i* P **P 04 28 57.1 +0.6**
comp=Z,14nm,0.6s,baz=323
SATY Saty 58.93 323 *c i* P **P 04 28 57.1 +0.6**
SATY pmax pmax
comp=Z,14nm,0.6s
MK31 Makanchi Array 58.95 328 P **P 04 28 56.2 -0.2**
MK31 pmax pmax
comp=Z,22nm,0.6s
MK31 Makanchi Array 58.95 328 P **P 04 28 56.2 -0.2**
MKAR Makanchi Array 58.95 328 P **P 04 28 56.5 +0.1**
comp=Z,35nm,0.6s,baz=123,slow=8.0,SNR=157
MKAR PcP **PcP 04 29 43.9 -0.2**
comp=Z,22nm,0.6s,baz=175,slow=2.8,SNR=20
MKAR ScP **ScP 04 33 31.2 -0.8**
comp=Z,0.7nm,0.6s,baz=142,slow=5.7,SNR=3.3
MKAR Makanchi Array 58.95 328 *i* P **P 04 28 56.4 -0.1**
MKAR pmax pmax
comp=Z,35nm,0.6s
MKAR Makanchi Array 58.95 328 P **P 04 28 56.1 -0.4**
MKAR **PcP 04 29 44.1 -0.1**
KPKS Kokpek 58.99 323 ⇑ *i* P **P 04 28 57.1 +0.2**
comp=Z,23nm,0.7s,baz=323
KPKS Kokpek 58.99 323 *c i* P **P 04 28 57.1 +0.2**
KPKS pmax pmax
comp=Z,23nm,0.7s
MAKZ Makanchi 59.12 328 P **P 04 28 57.3 -0.4**
MAKZ pmax pmax
comp=Z,20nm,0.6s
MAKZ Makanchi 59.12 328 P **P 04 28 57.2 -0.4**
KDJ Kajisay 59.18 321 P **P 04 28 57.8 -0.5**
KDJ pmax pmax
comp=Z,16nm,0.6s
KDJ Kajisay 59.18 321 P **P 04 28 57.8 -0.5**
KDJ IAmb IAmb 04 29 00.7
comp=Z,16nm,0.6s
MDOK Medeo 59.81 322 *e* P **P 04 29 03.1 +0.4**
baz=322
MDOK Medeo 59.81 322 *e* P **P 04 29 03.0 +0.4**
PEA0B Petropavlovsk- 59.99 23 *ce* P **P 04 29 03.5 0.0**
PETK Petropavlovsk- 59.99 23 P **P 04 29 04.4 +0.9**
comp=Z,23nm,0.7s,baz=211,slow=3.4,SNR=58
PETK Petropavlovsk- 59.99 23 P **P 04 29 03.2 -0.3**
TDK Taldyqorghan 60.02 324 *e* P **P 04 29 03.9 0.0**
comp=Z,18nm,0.5s,baz=325
TDK Taldyqorghan 60.02 324 *e* P **P 04 29 03.8 -0.1**
TDK pmax pmax
comp=Z,18nm,0.5s
TKM2 Tokmak 2 60.59 321 P **P 04 29 08.4 +0.4**
SNR=22
TKM2 Tokmak 2 60.59 321 P **P 04 29 08.1 +0.1**
RPZ Rata Peaks 60.61 142 P **P 04 29 08.5 +0.6**
KUU Kurty 60.64 322 ⇑ *i* P **P 04 29 08.2 +0.1**
comp=Z,23nm,0.5s,baz=322
KUU Kurty 60.64 322 *c i* P **P 04 29 08.2 +0.1**
KUU pmax pmax
comp=Z,23nm,0.5s
THZ Tophouse 60.77 140 P **P 04 29 09.5 +0.4**
THZ IAmb IAmb 04 29 12.7
comp=Z,17nm,0.8s
UCH Uchtor 60.92 320 P **P 04 29 11.3 +0.7**
SNR=6.3
AAK Ala-Archa 61.14 320 P **P 04 29 12.3 +0.6**
SNR=9.9
AAK Ala-Archa 61.14 320 P **P 04 29 12.0 +0.3**
TUWZ Tuamarina 61.29 139 P **P 04 29 13.0 +0.5**
AML Almayashu 61.40 320 P **P 04 29 14.3 +0.5**
SNR=12
KBL Kabul 61.44 310 P **P 04 29 13.6 -0.4**
KBL pmax pmax
comp=Z,32nm,0.6s
KBL Kabul 61.44 310 P **P 04 29 13.6 -0.4**
USP Ospenovka 61.45 321 P **P 04 29 13.8 +0.1**
SNR=13
SGDS Sogindy 61.47 321 *e* P **P 04 29 13.5 -0.2**
baz=321
SGDS Sogindy 61.47 321 *e* P **P 04 29 13.5 -0.2**
BKZ Black Stump Fm 61.99 135 P **P 04 29 17.9 +0.6**
BKZ IAmb IAmb 04 29 19.9
comp=Z,20nm,0.7s
YAK Yakutsk 62.01 3 *e* P **P 04 29 16.9 0.0**
YAK *e* 04 30 01.3
YAK *eS* **S 04 37 26.2 -4.1**
YAK *e**SS **pS 04 38 04.3 -0.9**
YAK pmax pmax
comp=Z,142nm,0.9s
YAK pmax pmax
comp=E,6.0nm,0.8s
YAK pmax pmax
comp=N,25nm,0.9s
YAK smax smax
comp=N,874nm,3.5s
YAK smax smax
comp=E,606nm,3.4s
YAK Yakutsk 62.01 3 **P 04 29 16.5 -0.3**
URZ Urewera 62.05 134 P **P 04 29 18.4 +0.8**
URZ IAmb IAmb 04 29 21.8
comp=Z,15nm,0.8s
GAR Garm 62.27 315 P **P 04 29 18.7 -0.5**
BTK Batken 62.37 316 IAmb IAmb 04 29 23.4

comp=Z,10nm,0.9s
ZAA0 Zalesovo Array 62.57 335 P **P** **04 29 19.4 -1.4**
ZAA0 lAmb lAmb 04 29 22.0
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 62.57 335 P **P** **04 29 19.6 -1.2**
comp=Z,10nm,0.6s,baz=122,slow=6.4,SNR=37
ZALV PcP **PcP** **04 29 57.0 -1.5**
comp=Z,3.7nm,0.4s,baz=103,slow=5.1,SNR=5.6
ZALV LR LR 04 57 16.7
comp=Z,36nm,18.9s,baz=132,slow=37
ZALV Zalesovo Beam 62.57 335 P **P** **04 29 19.4 -1.4**
BTLS Baital 62.64 323 *e*P **P** **04 29 21.0 -0.5**
baz=323
BTLS Baital 62.64 323 *e*P **P** **04 29 21.0 -0.5**
CHGR **Chuyangaron 62.95 314** P **P** **04 29 23.1 -0.6**
CHGR lAmb lAmb 04 29 25.8
comp=Z,21nm,0.8s
MA2 Magadan 63.03 15 *ce*P **P** **04 29 25.1 +1.4**
MA2 pmax pmax
comp=Z,160nm,2.5s
MA2 Magadan 63.03 15 P **P** **04 29 23.6 -0.1**
KURBB Kurchatov Arra 63.28 330 P **P** **04 29 24.9 -0.6**
comp=Z,33nm,0.7s,baz=130,slow=6.1,SNR=113
KURBB PcP **PcP** **04 30 00.9 -0.6**
comp=Z,14nm,0.6s,baz=122,slow=3.7,SNR=11
KURK Kurchatov 63.29 330 P **P** **04 29 25.0 -0.6**
KURK 04 30 01.0
KURK Kurchatov 63.29 330 P **P** **04 29 25.2 -0.4**
KURK **PcP** **04 30 01.3 -0.3**
DZA Taraz 63.30 319 *i* P **P** **04 29 25.2 -0.8**
baz=320
DZA Taraz 63.30 319 *i* P **P** **04 29 25.1 -0.8**
IUG luzhnay 63.82 318 *e*P **P** **04 29 29.4 -0.1**
comp=Z,6.5nm,0.5s,baz=318
IUG luzhnay 63.82 318 *e*P **P** **04 29 29.3 -0.1**
IUG pmax pmax
comp=Z,7.0nm,0.5s
KK31 Karatay Array 63.93 319 P **P** **04 29 29.2 -0.8**
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KK31 Karatay Array 63.93 319 P **P** **04 29 29.2 -0.8**
KKAR Karatay Array 63.93 319 P **P** **04 29 29.6 -0.4**
KKAR Karatay Array 63.93 319 P **P** **04 29 29.7 -0.4**
KKAR Karatay Array 63.93 319 P **P** **04 29 29.6 -0.4**
BRZS Berezniki 66.00 327 *e*P **P** **04 29 42.9 -0.5**
baz=327
BRZS Berezniki 66.00 327 *e*P **P** **04 29 42.8 -0.5**
SEY Seymchan 66.31 14 *i* P **P** **04 29 45.2 +0.3**
WSAR Wadi Sarin 67.16 295 P **P** **04 29 50.5 -0.6**
comp=Z,7.6nm,0.5s,baz=154,slow=5.6,SNR=12
BRVK Borovoye 68.88 329 *ce*P **P** **04 29 59.8 -1.5**
BRVK pmax pmax
comp=Z,17nm,1.0s
BRVK Borovoye 68.88 329 P **P** **04 30 00.2 -1.1**
BRVK lAmb lAmb 04 30 02.5
comp=Z,13nm,0.8s
SOCY Socotra 70.16 283 P **P** **04 30 07.5 -2.5**
GEYT Alibeck 70.89 310 P **P** **04 30 12.7 -1.2**
comp=Z,6.8nm,0.7s,baz=133,slow=8.3,SNR=7.2
GEYT PcP **PcP** **04 30 33.9 +0.2**
comp=Z,3.8nm,0.6s,baz=151,slow=3.3,SNR=3.7
TIXI Tiksi 71.58 2 P **P** **04 30 17.0 -0.3**
TIXI pmax pmax
comp=Z,44nm,0.8s
TIXI Tiksi 71.58 2 P **P** **04 30 17.0 -0.3**
ABKAR Akbulak array 73.12 322 P **P** **04 30 26.3 -0.6**
ABKAR Akbulak array 73.12 322 P **P** **04 30 26.1 -0.9**
NRIK Noril'sk 73.31 347 P **P** **04 30 27.3 -0.4**
comp=Z,15nm,0.7s,baz=136,slow=6.1,SNR=22
NRIK Noril'sk 73.31 347 *ce*P **P** **04 30 27.0 -0.7**
NRIK pmax pmax
comp=Z,15nm,0.9s
BILL Bilibino 73.89 15 *e*P **P** **04 30 29.8 -1.3**
BILL *e* 04 30 47.0
BILL *e* 04 33 17.9
BILL pmax pmax
comp=Z,36nm,2.5s
BILL Bilibino 73.89 15 P **P** **04 30 31.5 +0.4**
SVE Sverdlovsk 75.54 330 ⇓ *e*P **P** **04 30 39.8 -1.0**
SVE pmax pmax
comp=Z,54nm,0.9s
ARU Arti 76.46 329 *c* iP **P** **04 30 44.7 -1.3**
ARU 04 33 33.0
ARU S **S** **04 40 21.2 +1.0**
ARU SS **SS** **04 45 19.1 +1.3**
ARU pmax pmax
comp=Z,30nm,0.8s
ARU Arti 76.46 329 P **P** **04 30 44.7 -1.3**
ARU lAmb lAmb 04 30 45.6
comp=Z,28nm,0.8s
ABPO Ambohimpanom 77.21 251 P **P** **04 30 51.3 +0.1**
ABPO pmax pmax
comp=Z,7.0nm,0.8s
ABPO Ambohimpanom 77.21 251 P **P** **04 30 51.3 +0.1**
OPO Ambohidratompo 77.21 251 P **P** **04 30 51.5 +0.3**
comp=Z,11nm,0.8s,baz=79,slow=5.0,SNR=11
MAW Mawson 79.26 200 P **P** **04 31 02.6 +1.4**
comp=Z,18nm,0.6s,baz=67,slow=5.5,SNR=72
MAW PKKPbc **PKKPbc** **04 49 51.4 -2.9**
comp=Z,1.3nm,0.7s,baz=228,slow=3.0,SNR=7.7
MAW Mawson 79.26 200 P **P** **04 31 02.6 +1.4**
baz=79,SNR=87
MAW Mawson 79.26 200 P **P** **04 31 02.6 +1.4**
VNDA Vanda 80.18 172 P **P** **04 31 07.4 +1.3**
comp=Z,20nm,0.8s,baz=318,slow=6.2,SNR=125
VNDA PKKPbc **PKKPbc** **04 49 49.9 -2.7**
comp=Z,0.2nm,0.3s,baz=287,slow=2.1,SNR=4.2
VNDA LR LR 05 06 21.0
comp=Z,38nm,19.2s,baz=334,slow=35
VNDA Vanda 80.18 172 P **P** **04 31 07.5 +1.4**
VNDA pmax pmax
comp=Z,20nm,0.8s
VNDA Vanda 80.18 172 P **P** **04 31 07.5 +1.4**
VNDA lAmb lAmb 04 31 08.2
comp=Z,20nm,0.8s
MLH Mauna Loa 81.44 70 P **P** **04 31 13.4 -0.8**
SDPT Sand Point 81.94 34 P **P** **04 31 16.4 +0.6**
ZEI Tsey 82.47 313 *e*P **P** **04 31 17.9 -1.3**
ZEI pmax pmax
comp=Z,25nm,1.3s
KBZ Khabaz 83.31 314 P **P** **04 31 22.5 -0.6**
comp=Z,7.5nm,0.8s,baz=114,slow=3.2,SNR=9.7
KBZ Khabaz 83.31 314 *ce*P **P** **04 31 22.6 -0.6**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KIV Kislovodsk 83.49 314 *e*P **P** **04 31 21.5 -2.7**
KIV pmax pmax
comp=Z,23nm,1.0s
RDOG Red Dog Mine 83.81 21 P **P** **04 31 26.1 +0.9**
MARD Mardin 84.33 307 P **P** **04 31 28.3 -0.4**
MARD lAmb lAmb 04 31 29.1
comp=Z,12nm,0.6s
VRH Novokhopyorsk 84.93 321 *e*P **P** **04 31 29.6 -1.5**
VRH pmax pmax
comp=Z,40nm,1.2s
TTA Tatalina 85.56 27 P **P** **04 31 34.5 +0.3**
TTA pmax pmax
comp=Z,9.0nm,0.8s
TTA Tatalina 85.56 27 P **P** **04 31 34.5 +0.3**
KMBO Kilima Mbogo 86.43 269 P **P** **04 31 40.5 +0.8**
comp=Z,4.1nm,0.6s,baz=67,slow=7.3,SNR=18
VSR Storozhevoye 86.53 321 *e*P **P** **04 31 37.7 -1.4**
VSR pmax pmax
comp=Z,40nm,0.6s
LPSR Galich'ya Gora 86.78 323 *e*P **P** **04 31 39.1 -1.1**
LPSR pmax pmax
comp=Z,30nm,0.7s
IMAR Indian Mountai 86.94 24 P **P** **04 31 41.1 +0.3**
KLMR Klimovskoe 87.12 331 *e*P **P** **04 31 39.3 -2.4**
KLMR pmax pmax
comp=Z,36nm,0.5s
KLMR Klimovskoe 87.12 331 *e*P **P** **04 31 39.4 -2.3**
KLMR AMP 04 31 41.8
comp=Z,36nm,0.5s
GAZ Gaziantep 87.16 307 P **P** **04 31 41.9 -0.7**
GAZ lAmb lAmb 04 31 43.4
comp=Z,25nm,0.8s
ANN Anapa 87.31 315 *e*P **P** **04 31 40.0 -3.0**
ANN *e* 04 35 05.5
ANN *e*S **SKSac** **04 41 55.2 -2.6**
ANN *e*SS **SS** **04 47 57.1 -2.2**
ANN *e*SSS SSS 04 51 24.2
ANN pmax pmax
comp=Z,46nm,0.6s
BRLK Bradley Lake 87.66 30 P **P** **04 31 44.1 -0.3**
BRLK lAmb lAmb 04 31 45.4
comp=Z,30nm,0.9s
MOS Moscow 87.75 326 *e*P **P** **04 31 41.9 -2.9**
MOS pmax pmax
comp=Z,35nm,0.6s
SYO Syowa Base 87.90 201 ⇓ *i*P **P** **04 31 45.0 -0.3**
SYO Syowa Base 87.90 201 ⇓ *i*PcP **PcP** **04 31 46.4 -0.6**
KTH Kantishna Hill 87.91 27 P **P** **04 31 45.7 +0.1**
KTH lAmb lAmb 04 31 46.8
comp=Z,16nm,1.2s
MLY Manley 88.10 25 P **P** **04 31 47.3 +0.9**
baz=266
RC01 Rabbit Creek A 88.31 29 P **P** **04 31 47.7 +0.3**
baz=267
OBN Obninsk 88.32 325 *e*P **P** **04 31 46.5 -1.0**
OBN *e* 04 35 15.5
OBN *e*PPP PPP 04 37 12.0
OBN pmax pmax
comp=Z,15nm,0.7s
COLD Coldfoot 88.46 23 P **P** **04 31 49.4 +1.4**
baz=266
COLD Coldfoot 88.46 23 lAmb lAmb 04 31 50.3
comp=Z,24nm,1.0s
BWN Browne 88.59 26 lAmb lAmb 04 31 51.2
comp=Z,24nm,0.9s
I23K Minto, Yukon-K 88.69 25 P **P** **04 31 50.4 +1.4**
baz=267
TOLK Toolik Lake Re 88.78 21 P **P** **04 31 50.8 +1.2**
baz=267
TOLK Toolik Lake Re 88.78 21 P **P** **04 31 49.5 0.0**
TOLK lAmb lAmb 04 31 53.9
comp=Z,7.8nm,0.8s
NEA2 Nenana 88.79 26 P **P** **04 31 50.2 +0.6**
baz=268
MCK McKinley 88.81 26 P **P** **04 31 49.8 0.0**
baz=268
RND Reindeer 88.83 27 P **P** **04 31 50.0 +0.1**
RND pmax pmax
comp=Z,19nm,0.9s
RND Reindeer 88.83 27 P **P** **04 31 50.0 +0.1**
RND lAmb lAmb 04 31 50.5
comp=Z,19nm,0.9s
KNK Knik Glacier 88.94 29 P **P** **04 31 50.9 +0.5**
KNK lAmb lAmb 04 31 53.0
comp=Z,19nm,1.0s
SML Sawmill 89.02 28 lAmb lAmb 04 32 04.9
comp=Z,20nm,1.1s
WRH Wood River Hil 89.20 26 lAmb lAmb 04 31 52.2
comp=Z,13nm,0.9s
COLA College 89.32 25 *i* P **P** **04 31 51.7 -0.3**
COLA pmax pmax
comp=Z,3.0nm,0.9s
CCB Clear Creek Bu 89.33 25 P **P** **04 31 51.9 -0.2**
CCB lAmb lAmb 04 31 52.6
comp=Z,9.6nm,0.8s
DHY Denali Highway 89.49 27 P **P** **04 31 52.4 -0.7**
DHY lAmb lAmb 04 31 54.4
comp=Z,12nm,0.8s
POKR Poker Plat Res 89.50 25 P **P** **04 31 52.8 -0.1**
baz=269
POKR Poker Plat Res 89.50 25 P **P** **04 31 52.5 -0.4**
POKR lAmb lAmb 04 32 14.1
comp=Z,7.6nm,0.8s
HDA Harding Lake 89.70 26 P **P** **04 31 53.2 -0.7**
baz=270
HDA Harding Lake 89.70 26 P **P** **04 31 53.3 -0.6**
HDA lAmb lAmb 04 31 55.2
comp=Z,9.5nm,0.7s
IL31 89.73 25 P **P** **04 31 53.8 -0.1**
ILAR Eielson Array 89.73 25 P **P** **04 31 52.8 -1.2**
comp=Z,2.9nm,0.6s,baz=248,slow=4.8,SNR=33
ILAR PKKPbc **PKKPbc** **04 49 27.3 -2.2**
comp=Z,0.9nm,0.7s,baz=106,slow=1.9,SNR=7.3
ILAR Eielson Array 89.73 25 P **P** **04 31 53.0 -1.0**
ILAR Eielson Array 89.73 25 P **P** **04 31 53.0 -1.0**
QSPA South Pole Qui 89.96 180 P **P** **04 31 55.3 +0.1**
QSPA lAmb lAmb 04 31 58.2
comp=Z,22nm,1.1s
BR131 Keskin Array S 90.01 310 *i* P **P** **04 31 54.5 -1.5**
BRTR Keskin Array B 90.01 310 P **P** **04 31 54.6 -1.5**
comp=Z,4.2nm,0.8s,baz=129,slow=5.7,SNR=13
BRTR Keskin Array B 90.01 310 *i* P **P** **04 31 54.7 -1.4**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
M24K Tolsona, Glenn 90.04 28 P **P** **04 31 56.6 +1.1**
baz=270
M24K Tolsona, Glenn 90.04 28 P **P** **04 31 55.7 +0.1**
APA Apatity 90.08 337 ⇓ iP **P** **04 31 52.4 -3.1**
APA *i* *PP **pP** **04 32 34.8 +3.9**
APA pmax pmax
comp=Z,12nm,0.8s
KLU Klutina 90.16 29 P **P** **04 31 56.1 -0.1**
KLU lAmb lAmb 04 31 57.9
comp=Z,19nm,1.1s
PAX Paxson 90.36 27 P **P** **04 31 56.9 -0.2**
PAX pmax pmax
comp=Z,13nm,1.0s
PAX Paxson 90.36 27 P **P** **04 31 56.9 -0.2**
PAX lAmb lAmb 04 31 58.2
comp=Z,13nm,1.0s
RIDG Independent Ri 90.63 26 lAmb lAmb 04 31 59.4
comp=Z,20nm,0.9s
BMAR Burnt Mountain 90.64 23 P **P** **04 31 58.5 +0.2**
N25K Chitina, Valde 90.80 29 P **P** **04 32 00.1 +1.0**
baz=272
N25K Chitina, Valde 90.80 29 lAmb lAmb 04 32 01.2
comp=Z,13nm,1.0s
DOT Dot Lake 90.98 26 P **P** **04 32 00.1 +0.3**
DOT lAmb lAmb 04 32 00.7
comp=Z,6.1nm,0.7s
SCRK Sand Creek 91.00 26 P **P** **04 32 00.7 +0.7**
baz=272
MENT Mentasta 91.16 27 P **P** **04 32 01.0 +0.2**
MENT lAmb lAmb 04 32 02.5
comp=Z,9.3nm,0.7s
L26K Log Cabin Wild 91.33 27 P **P** **04 32 02.8 +1.3**
baz=273
K27K Chicken 91.84 26 P **P** **04 32 05.8 +2.0**
baz=274
K27K Chicken 91.84 26 lAmb lAmb 04 32 07.5
comp=Z,19nm,1.1s
BALM Baldy 91.91 29 lAmb lAmb 04 32 06.3
comp=Z,13nm,0.8s
BCAR Bever Creek A 92.03 27 P **P** **04 32 05.0 +0.2**
AKASG Malin Array Be 92.81 321 P **P** **04 32 06.8 -1.8**
comp=Z,5.4nm,0.4s,baz=68,slow=4.9,SNR=24
AKASG PKiKP **PKiKP** **04 36 55.2 -0.6**
comp=Z,0.3nm,0.3s,baz=75,slow=2.1,SNR=2.1
AKASG Malin Array Be 92.81 321 P **P** **04 32 07.1 -1.4**
AKBB Malin Array Si 92.81 321 *ce*P **P** **04 32 05.9 -2.6**
AKBB Malin Array Si 92.81 321 lAmb lAmb 04 32 07.2
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 92.84 340 P **P** **04 32 06.6 -1.7**
comp=Z,9.1nm,0.5s,baz=91,slow=7.3,SNR=28
ARCES PKKPbc **PKKPdf** **04 49 19.9 +0.9**
comp=Z,6.4nm,0.9s,baz=285,slow=3.5,SNR=4.0
DAWY Dawson 93.01 26 lAmb lAmb 04 32 11.9
comp=Z,15nm,1.0s
HAMF Hammerfest 93.29 341 *e*P **P** **04 32 08.2 -2.1**
TLCR 93.42 315 ⇑ P **P** **04 32 10.2 -1.3**
TLCR 93.42 315 ⇑ P **P** **04 32 10.2 -1.3**
SPA0 Spitsbergen Ar 93.49 349 *e*P **P** **04 32 10.7 -0.5**
SORM Soroca 93.54 318 ⇓ P **P** **04 32 10.3 -1.7**
SORM Soroca 93.54 318 ⇓ P **P** **04 32 10.3 -1.7**
FINES FINESS Array B 93.62 331 P **P** **04 32 10.2 -1.8**
comp=Z,4.6nm,0.5s,baz=68,slow=4.7,SNR=34
FINES PKiKP **PKiKP** **04 36 57.1 +0.3**
comp=Z,2.3nm,0.6s,baz=84,slow=3.3,SNR=6.2
FINES FINESS Array B 93.62 331 P **P** **04 32 10.5 -1.5**
FINES FINESS Array B 93.62 331 P **P** **04 32 10.5 -1.5**
VSU Vasula 93.62 328 *e*P **P** **04 32 10.7 -1.3**
KTK1 Kautokeino 93.72 339 *e*P **P** **04 32 11.0 -1.3**
CFR Carcaliu 93.90 315 ⇓ P **P** **04 32 11.6 -2.1**
CFR Carcaliu 93.90 315 ⇓ P **P** **04 32 11.6 -2.1**
IDID Didziasalis 93.94 325 *e*P **P** **04 32 13.1 -0.5**
HSPB Hornsund (broa 94.01 348 *e*P **P** **04 32 13.1 -0.5**
IZAR Zarasai 94.17 326 *e*P **P** **04 32 14.2 -0.5**
IIGN Ignalina 94.23 325 *e*P **P** **04 32 14.3 -0.6**
ISAL Salakas 94.26 326 *e*P **P** **04 32 14.4 -0.7**
INK Inuvik 94.69 21 lAmb lAmb 04 32 17.5
comp=Z,7.4nm,0.6s
VRI Vrincioaia 94.83 316 ⇑ P **P** **04 32 17.6 -0.4**
VRI Vrincioaia 94.83 316 ⇑ P **P** **04 32 17.6 -0.4**
BISRR Bisoca 94.87 316 ⇓ P P 04 32 12.4 -5.8
PLOR Plostina 94.89 316 ⇓ P **P** **04 32 17.5 -0.8**
PLOR Plostina 94.89 316 ⇓ P **P** **04 32 17.5 -0.8**
TRO Tromso 95.09 340 *e*P **P** **04 32 17.7 -0.8**
BIZ Bicaz 95.16 317 ⇓ P **P** **04 32 18.6 -0.9**
NEHR Nehoiu 95.17 315 ⇑ P **P** **04 32 18.9 -0.7**
LSZ Lusaka 95.31 255 P **P** **04 32 20.3 -0.6**
LSZ pmax pmax
comp=Z,31nm,0.8s
LSZ Lusaka 95.31 255 P **P** **04 32 20.3 -0.6**
MLR Muntele Rosu 95.41 316 ⇑ P **P** **04 32 20.3 -0.5**
MLR Muntele Rosu 95.41 316 ⇑ P **P** **04 32 20.3 -0.5**
OZUR 95.46 316 ⇓ P **P** **04 32 19.4 -1.5**
PABE Paberze 95.48 326 *e*P **P** **04 32 20.2 -0.4**
BURAR Bucovina Array 95.69 318 ⇓ P **P** **04 32 21.5 -0.5**
BURAR Bucovina Array 95.69 318 ⇓ P **P** **04 32 21.5 -0.5**
BURAR Bucovina Array 95.69 318 P **P** **04 32 21.5 -0.5**
BUR08 Bucovina Ar. S 95.70 318 P **P** **04 32 21.3 -0.8**
DOPR Dopca 95.75 316 ⇓ P **P** **04 32 21.3 -0.9**
COPA Copaceanca 96.06 314 ⇓ P **P** **04 32 22.2 -1.4**
ARR Arges 96.34 316 ⇓ P **P** **04 32 23.6 -1.3**
PBUR Paburge 96.54 326 *e*P **P** **04 32 25.0 -0.5**
STEI Steigen 96.84 339 *e*P **P** **04 32 24.9 -1.6**
BMR Baia Mare 96.84 318 ⇓ P **P** **04 32 26.8 -0.3**
BMR Baia Mare 96.84 318 ⇓ P **P** **04 32 26.8 -0.3**
LOT Lotru 96.94 316 ⇑ P **P** **04 32 27.0 -0.7**
FAUS Fauske 96.98 338 *e*P **P** **04 32 24.6 -2.6**
LOF Lofoten 97.38 339 *e*P **P** **04 32 28.1 -0.9**
BOSA Boshof 97.42 241 P **P** **04 32 30.0 -0.3**
comp=Z,1.5nm,0.5s,baz=97,slow=4.4,SNR=7.4
BOSA LR LR 05 13 51.0
comp=Z,16nm,21.2s,baz=80,slow=34
KOLS Kolonicke sedl 97.47 319 *e*P **P** **04 32 28.3 -1.6**
KOLS Kolonicke sedl 97.47 319 *e*PDIFF **P** **04 32 28.3 -1.6**
UZH Uzhgorod 97.50 319 *e*P **P** **04 32 29.3 -0.7**
GZR Gura Zlata 97.64 316 ⇑ P **P** **04 32 29.7 -1.1**
GZR Gura Zlata 97.64 316 ⇑ P **P** **04 32 29.7 -1.1**
MOR8 Moi Rana 97.67 337 *e*P **P** **04 32 26.9 -3.5**
C36M Paulatuk 97.69 19 P Pdif 04 32 30.8 +0.4
baz=291
HERR Herculane 97.96 315 ⇓ P **P** **04 32 30.9 -1.2**
CRVS Cervenica-Dubn 98.00 319 *e*P **P** **04 32 32.0 -0.3**
CRVS Cervenica-Dubn 98.00 319 *e*PDIFF **P** **04 32 32.0 -0.3**
BZS Buzias 98.41 316 ⇓ P **P** **04 32 32.3 -1.9**
BZS Buzias 98.41 316 ⇓ P **P** **04 32 32.3 -1.9**
NSS Namsos 99.18 336 *e*P **Pdif** **04 32 35.2 -1.9**
VYHS Vyhne 99.79 319 *e*P **Pdif** **04 32 39.1 -1.2**
VYHS Vyhne 99.79 319 *e*PDIFF **Pdif** **04 32 39.1 -1.2**
NC602 NORSAR Array S 100.64 332 *e*Pdif **Pdif** **04 32 41.7 -2.0**
NB2 NORSAR Subarra 100.69 333 P **Pdif** **04 32 41.6 -2.4**
comp=Z,2.3nm,0.6s,baz=73,slow=4.4
NB2 NORSAR Subarra 100.69 333 P **Pdif** **04 32 41.6 -2.4**
baz=73,slow=4.4
NOA NORSAR Array B 100.69 333 P **Pdif** **04 32 41.9 -2.1**
comp=Z,2.1nm,0.7s,baz=73,slow=4.5,SNR=9.8
NOA PKiKP **PKiKP** **04 37 09.6 +0.2**
comp=Z,1.8nm,1.0s,baz=74,slow=2.0,SNR=3.7
SNAA Sanae 100.88 195 Pdiff **Pdif** **04 32 46.0 +1.3**
SNAA Sanae 100.88 195 P **Pdif** **04 32 45.6 +0.9**
SNAA Sanae 100.88 195 Pdif **Pdif** **04 32 45.6 +0.9**
DOMB Dombas 101.29 334 *e*Pdif **Pdif** **04 32 46.0 -0.7**
CLL Collm 102.78 323 *e*P **Pdif** **04 32 51.0 -2.5**
GERES GERESS Array B 103.02 320 P **Pdif** **04 32 53.6 -1.1**
comp=Z,0.7nm,0.7s,baz=78,slow=3.3,SNR=3.4
GERES PKiKP **PKiKP** **04 37 14.2 +0.1**
comp=Z,0.4nm,0.5s,baz=83,slow=3.3,SNR=4.1
BLS5 Blasjo 103.50 332 *e*Pdif **Pdif** **04 32 55.9 -0.7**
YKA Yellowknife Ar 104.10 24 PKiKP **PKiKP** **04 37 15.8 +0.4**
comp=Z,0.8nm,0.6s,baz=314,slow=0.7,SNR=6.2
YKA PKKPbc **PKKPbc** **04 48 47.0 -3.1**
comp=Z,1.4nm,0.7s,baz=123,slow=3.4,SNR=4.1
M02C Callahan 107.41 46 P **PKiKP** **04 37 24.4 +2.0**
baz=286
L04D Klamath Falls 107.58 45 P **PKiKP** **04 37 24.0 +1.2**
baz=287
N02D Trinity Center 107.64 47 P **PKiKP** **04 37 25.0 +2.2**
baz=286
J05D Fort Rock, OR 108.01 44 P **PKiKP** **04 37 25.4 +1.9**
baz=288
NVAR Mina Array Bea 111.63 48 PKiKP **PKiKP** **04 37 32.1 +1.5**
comp=Z,1.1nm,0.6s,baz=264,slow=1.8,SNR=11
CWC Cottonwood Cre 112.41 50 P **PKiKP** **04 37 34.0 +1.9**
baz=288
HLID Hailey 112.57 42 P **PKiKP** **04 37 34.3 +2.2**
baz=293
GMRC Granite Mounta 114.80 51 P PKPdf 04 37 38.8 +2.1
baz=289
DUG Dugway, Tooele 114.99 45 P **PKPdf** **04 37 38.6 +1.8**
baz=293
SZCU Shurtz Canyon 115.78 48 **PKPdf** **04 37 38.1 -0.4**
PDAR Pinedale Array 116.13 41 PKP **PKiKP** **04 37 39.1 +0.1**
comp=Z,0.6nm,0.5s,baz=118,slow=0.9,SNR=8.6
PDAR Pinedale Array 116.13 41 **PKPdf** **04 37 38.5 -0.5**
LAO LASA Array 116.29 36 P **PKiKP** **04 37 41.1 +2.1**
baz=302
PKCU Pink Cliffs 116.41 47 **PKPdf** **04 37 39.2 -0.7**
WUAZ Wupatki 117.84 49 P **PKiKP** **04 37 44.4 +1.9**
baz=292
ESDC Sonseca Array 118.10 316 PKP **PKiKP** **04 37 42.9 +0.1**
comp=Z,1.0nm,0.6s,baz=31,slow=1.6,SNR=9.5
ESDC Sonseca Array 118.10 316 **PKPdf** **04 37 42.5 -0.3**
RWWY Rawlins 118.17 41 **PKPdf** **04 37 42.5 -0.6**
O20A White River Ci 118.19 43 P **PKiKP** **04 37 44.6 +1.5**
baz=297
PV17 East Wray Mesa 118.50 45 **PKPdf** **04 37 43.2 -0.5**
PV02 Paradox Valley 118.69 45 **PKPdf** **04 37 43.6 -0.6**
RSSD Black Hills 118.96 38 PKiKP **PKPdf** **04 37 44.1 -0.4**
RSSD Black Hills 118.96 38 P **PKiKP** **04 37 44.8 +0.2**
baz=302
RSSD Black Hills 118.96 38 PKPdf **PKPdf** **04 37 44.1 -0.4**
MVCO Mesa Verde 119.29 46 P **PKiKP** **04 37 46.8 +1.4**
baz=295
MDND Maddock 119.34 32 P **PKiKP** **04 37 45.4 +0.5**
baz=308
TUC Tucson 119.46 52 PKiKP **PKPdf** **04 37 45.0 -0.6**
TUC Tucson 119.46 52 P **PKiKP** **04 37 47.0 +1.4**
baz=291
TUC Tucson 119.46 52 **PKPdf** **04 37 45.0 -0.6**
ULM Lac du Bonnet 119.64 28 PKP **PKPdf** **04 37 45.1 -0.2**
comp=Z,5.4nm,0.7s,baz=263,slow=1.7,SNR=8.2
ISCO Idaho Springs 120.14 42 PKiKP **PKPdf** **04 37 46.2 -0.8**
ISCO Idaho Springs 120.14 42 P **PKiKP** **04 37 48.5 +1.4**
baz=299
ISCO Idaho Springs 120.14 42 PKPdf **PKPdf** **04 37 46.2 -0.8**
S22A 4UR Ranch, Cre 120.25 45 P **PKiKP** **04 37 49.4 +2.1**
baz=297
TOA0 Torodi Ar. Sit 121.06 285 PKPdf **PKPdf** **04 37 48.4 -0.6**
TORD Torodi Ar. Bea 121.06 285 PKP **PKPdf** **04 37 49.0 0.0**
comp=Z,10nm,0.6s,baz=64,slow=2.0,SNR=71
TORD PKiKPbc **PKKPab** **04 47 54.4 +1.0**
comp=Z,2.7nm,0.7s,baz=271,slow=3.2,SNR=12
TORD Torodi Ar. Bea 121.06 285 PKPdf **PKPdf** **04 37 48.3 -0.7**
SDCO Great Sand Dun 121.19 45 P **PKiKP** **04 37 50.7 +1.5**
baz=298
121A Cookes Peak, D 121.73 51 P **PKiKP** **04 37 52.1 +1.8**
baz=293
ANMO Albuquerque 121.75 48 PKiKP **PKPdf** **04 37 49.6 -0.5**
ANMO Albuquerque 121.75 48 P **PKiKP** **04 37 52.0 +1.8**
baz=296
ANMO Albuquerque 121.75 48 PKPdf **PKPdf** **04 37 49.6 -0.5**
T25A Trinidad 122.24 45 P **PKiKP** **04 37 52.8 +1.7**
baz=298
T25A Trinidad 122.24 45 PKPdf **PKPdf** **04 37 50.4 -0.5**
EYMN Ely 123.31 28 P **PKiKP** **04 37 53.1 +0.5**
baz=317
ECSD EROS Data Cent 123.54 34 P **PKiKP** **04 37 53.7 +0.4**
baz=309
ECSD EROS Data Cent 123.54 34 PKPdf **PKPdf** **04 37 52.9 -0.1**
MNTX Cornudas Mount 123.93 51 P **PKiKP** **04 37 56.1 +1.7**
baz=295
BGNE Belgrade 124.06 37 P **PKiKP** **04 37 54.4 0.0**
baz=307
SCHQ Schefferville 124.64 7 PKP **PKiKP** **04 37 55.4 +0.3**
comp=Z,11nm,0.4s,baz=337,slow=2.2,SNR=33
MSTX Muleshoe 124.91 47 P **PKiKP** **04 37 57.2 +0.8**
baz=298
MSTX Muleshoe 124.91 47 PKPdf **PKPdf** **04 37 55.4 -0.7**
TXAR Lajitas Array 126.25 53 PKP **PKiKP** **04 37 59.2 0.0**
comp=Z,1.4nm,0.7s,baz=236,slow=0.3,SNR=14
TXAR Lajitas Array 126.25 53 **PKPdf** **04 37 58.4 -0.3**
KOWA Kowa 126.31 288 **PKPdf** **04 37 58.5 -0.6**
KSU1 Kansas State U 126.38 39 P **PKiKP** **04 37 59.3 +0.3**
baz=307
WMOK Wichita Mounta 127.39 44 P **PKiKP** **04 38 02.2 +1.0**
baz=302
JFWS Jewell Farm 127.53 31 P **PKPdf** **04 38 00.8 +0.2**
baz=315

CHGQ	**Chibougamau** baz=337	**127.90**	**15**	P		**PKiKP**	04 38 01.8	**+0.1**
LSQQ	**Lebel-sur-Quev** baz=334	**127.96**	**17**	P		**PKiKP**	04 38 02.1	**+0.2**
FNO	**Franklin**	**128.07**	**43**			**PKPdf**	04 38 01.7	**-0.2**
KIC	**Kosan Boka** comp=Z,11nm,0.8s	**128.14**	**278**	*e*PKiKP		**PKiKP**	04 38 03.1	**-0.1**
DBIC	**Dimbokro** comp=Z,6.2nm,0.8s,baz=31,slow=3.2,SNR=8.5	**128.23**	**278**	PKP		**PKiKP**	04 38 03.3	**-0.1**
DBIC	**Dimbokro**	**128.23**	**278**			**PKPdf**	04 38 01.8	**-0.9**
TIC	**Toumodi**	**128.39**	**278**	*e*PKiKP		**PKiKP**	04 38 03.6	**-0.2**
LIC	**Lamto** comp=Z,20nm,0.6s	**128.44**	**278**	*e*PKiKP		**PKPdf**	04 38 03.1	**-0.1**
JCT	**Junction City** baz=298	**128.76**	**50**	P		**PKiKP**	04 38 05.0	**+0.9**
U38A	**Gravette**	**129.39**	**40**			**PKPdf**	04 38 03.9	**-0.5**
CCM	**Cathedral Cave** baz=312	**130.31**	**36**	P		**PKPdf**	04 38 06.5	**+0.4**
U40A	**Yellville** baz=309	**130.41**	**39**	P		**PKiKP**	04 38 06.9	**-0.3**
D56A	**ZEC Mazanza, M** baz=336	**130.42**	**17**	P		**PKiKP**	04 38 07.0	**+0.1**
W39A	**Magazine** baz=307	**130.52**	**41**	P		**PKiKP**	04 38 07.8	**+0.3**
LATQ	**La Tuque** baz=338	**130.64**	**15**	P		**PKiKP**	04 38 07.9	**+0.6**
E56A	**St. Veronique** baz=335	**130.79**	**17**	P		**PKiKP**	04 38 07.9	**+0.2**
MIAR	**Mount Ida** baz=307	**131.05**	**42**	P		**PKiKP**	04 38 09.5	**+0.9**
FCAR	**Ozark Folk Cen**	**131.16**	**39**			**PKPdf**	04 38 07.5	**-0.3**
E57A	**Chemin Saint G** baz=336	**131.17**	**16**	P		**PKiKP**	04 38 09.1	**+0.7**
E61A	**Lac Etchemin** baz=341	**132.08**	**13**	P		**PKiKP**	04 38 10.8	**+0.5**
F60A	**Warwick** baz=339	**132.16**	**15**	P		**PKiKP**	04 38 10.9	**+0.5**
G58A	**Ormstown** baz=336	**132.35**	**17**	P		**PKiKP**	04 38 10.8	**0.0**
O51A	**Pataskala** baz=323	**133.39**	**28**	P		**PKiKP**	04 38 13.3	**+0.2**
H61A	**Lyndonville** baz=338	**133.51**	**15**	P		**PKiKP**	04 38 14.0	**+0.8**
M54A	**Oil Creek Stat** baz=327	**133.57**	**24**	P		**PKPdf**	04 38 12.6	**+0.5**
J58A	**Remsen** baz=334	**133.58**	**19**	P		**PKiKP**	04 38 13.1	**-0.3**
G64A	**Maxfield** baz=343	**133.58**	**12**	P		**PKiKP**	04 38 13.7	**+0.4**
WVT	**Waverly**	**133.62**	**36**	PKiKP		**PKPdf**	04 38 12.0	**-0.4**
WVT	**Waverly** baz=314	**133.62**	**36**	P		**PKiKP**	04 38 13.4	**-0.3**
WVT	**Waverly**	**133.62**	**36**			**PKPdf**	04 38 12.0	**-0.4**
J59A	**Piesco** baz=334	**133.74**	**18**	P		**PKiKP**	04 38 13.5	**-0.3**
J59A	**Piesco**	**133.74**	**18**	PKPdf		**PKPdf**	04 38 12.2	**-0.3**
L56A	**Greenwood** baz=330	**133.86**	**22**	P		**PKiKP**	04 38 13.8	**-0.3**
P52A	**Corning** baz=323	**134.01**	**28**	P		**PKiKP**	04 38 14.3	**-0.1**
H65A	**Eastbrook** baz=343	**134.22**	**12**	P		**PKiKP**	04 38 14.6	**0.0**
H66A	**Whiting** baz=345	**134.32**	**11**	P		**PKiKP**	04 38 15.3	**+0.5**
N57A	**Milroy** baz=329	**135.05**	**23**	P		**PKiKP**	04 38 16.8	**+0.4**
Q54A	**Coxs Mills** baz=324	**135.14**	**27**	P		**PKiKP**	04 38 16.7	**+0.1**
PLCA	**Paso Flores** comp=Z,6.0nm,0.9s,baz=205,slow=1.9,SNR=9.6	**137.47**	**164**	PKP		**PKPdf**	04 38 19.8	**+0.2**
MTO3	**Montecristo**	**144.31**	**65**			PKPbc	04 38 31.8	+0.5
TGUH	**Tegucigalpa,Un**	**146.31**	**64**			**PKPdf**	04 38 36.4	**+0.4**
GO04	**Tololo Observa**	**147.01**	**157**			**PKPbc**	04 38 38.8	**-0.3**
LCO	**Las Campanas**	**148.07**	**156**	PKP2		**PKPbc**	04 38 41.5	**-0.6**
LCO	**Las Campanas**	**148.07**	**156**			**PKPbc**	04 38 41.5	**-0.6**
AC05	**El Transito**	**148.40**	**156**			**PKPbc**	04 38 42.3	**-0.5**
AC04	**Llanos de Chal**	**148.62**	**154**			**PKPbc**	04 38 43.3	**+0.1**
GO03	**Copiap**	**149.51**	**155**			**PKPbc**	04 38 45.0	**-0.5**
JTS	**Las Juntas de** comp=Z,15nm,0.4s,baz=355,slow=5.7,SNR=14	**149.73**	**69**	PKPbc		**PKPbc**	04 38 46.7	**+0.3**
CPUP	**Villa Florida** comp=Z,3.1nm,0.7s,baz=228,slow=3.2,SNR=7.9	**153.84**	**178**	PKP		**PKPdf**	04 38 48.4	**+1.1**
CPUP				PKPbc		**PKiKP**	04 38 56.8	**+1.3**
CPUP	comp=Z,6.3nm,0.7s,baz=114,slow=1.9,SNR=15			PKPab		**PKPab**	04 39 09.9	**+1.3**
CPUP	comp=Z,11nm,0.9s,baz=177,slow=5.8,SNR=7.4 **Villa Florida**	**153.84**	**178**	PKPdf		**PKPdf**	04 38 47.2	**-0.1**
CPUP						**PKPab**	04 39 08.7	**+0.1**
CPUP	**Villa Florida**	**153.84**	**178**	*e*P		**PKPdf**	04 38 49.0	**+1.7**
LVC	**Limon Verde** comp=Z,9.5nm,0.6s,baz=255,slow=2.9,SNR=15	**154.43**	**152**	PKPbc		**PKiKP**	04 38 58.5	**+1.3**
LVC				PKPab		**PKPab**	04 39 13.5	**+1.8**
LVC	comp=Z,6.8nm,0.6s,baz=227,slow=5.4,SNR=5.1 **Limon Verde**	**154.43**	**152**			**PKPbc**	04 38 56.5	**-0.7**
PB11	**IPOC Station P**	**156.44**	**147**	PKPab		**PKPab**	04 39 19.5	**-0.7**
TRCB	**Terra Rica**	**157.09**	**189**	*e*P		**PKPab**	04 39 23.5	**+0.8**
PCMB	**Pacaembu**	**158.00**	**193**	*e*P		**PKPab**	04 39 27.1	**+0.5**
SJG	**San Juan** comp=Z,23nm,1.1s,baz=23,slow=8.2,SNR=3.9	**159.54**	**28**	PKPab		**PKPab**	04 39 33.8	**+0.4**
SJG	**San Juan**	**159.54**	**28**			**PKPab**	04 39 33.0	**-0.4**
ITRB	**Iturama**	**159.59**	**196**	*e*P		**PKPab**	04 39 34.4	**+0.8**
AQDB	**Aquidauana**	**159.67**	**182**	*e*P		**PKPdf**	04 38 56.0	**+1.0**
MTP	**Monte Pirata**	**159.83**	**26**			**PKPab**	04 39 35.8	**+1.2**
LPAZ	**La Paz** comp=Z,5.7nm,0.9s,baz=294,slow=2.2,SNR=6.6	**160.08**	**145**	PKP		**PKPdf**	04 38 57.1	**+0.8**
LPAZ				PKPab		**PKPab**	04 39 38.0	**+1.4**
ROSC	comp=Z,14nm,0.9s,baz=189,slow=7.0,SNR=8.3 **El Rosal**	**161.38**	**75**	PKP		**PKPdf**	04 38 58.1	**+0.6**
ROSC	comp=Z,12nm,0.9s,baz=7.1,slow=2.8,SNR=6.6			PKPab		**PKPab**	04 39 43.4	**+1.0**
ROSC	comp=Z,11nm,0.5s,baz=155,slow=3.9,SNR=6.8 **El Rosal**	**161.38**	**75**	PKPdf		**PKPdf**	04 38 56.1	**-1.4**
ROSC				PKPab		**PKPab**	04 39 40.5	**-1.8**
BDFB	**Brasilia** comp=Z,3.1nm,1.0s,baz=86,slow=7.8,SNR=3.3	**162.46**	**207**	PKP		**PKPdf**	04 38 58.8	**+0.6**
BDFB				PKPab		**sPKPdf**	04 39 47.5	**0.0**
BDFB	comp=Z,10nm,0.8s,baz=113,slow=3.0,SNR=12 **Brasilia**	**162.46**	**207**	PKPab		**PKPab**	04 39 47.9	**+1.6**
SDV	**Santo Domingo** comp=Z,12nm,0.8s,baz=320,slow=1.3,SNR=10	**163.22**	**58**	PKP		**PKPdf**	04 38 59.5	**+0.5**
SDV				PKPab		**PKPab**	04 39 50.9	**+0.8**
SDV	comp=Z,3.5nm,0.3s,baz=5.8,slow=17,SNR=4.6 **Santo Domingo**	**163.22**	**58**			**PKPdf**	04 38 58.1	**-1.0**
SDV	**Santo Domingo**	**163.22**	**58**	*e*P		**PKPdf**	04 38 59.6	**+0.5**
SIV	**San Ignacio** comp=Z,7.2nm,0.8s,baz=182,slow=2.3,SNR=20	**163.46**	**164**	PKP		**PKPdf**	04 38 59.7	**+0.7**
SIV				PKPab		**PKPab**	04 39 51.8	**+1.2**
PCRV	comp=Z,4.9nm,0.5s,baz=191,slow=6.3,SNR=8.8 **Puerto La Cruz**	**166.91**	**39**	PKPab		**PKPab**	04 40 06.1	**+0.1**
PLCV	comp=Z,2.6nm,0.4s,baz=325,slow=12,SNR=1.2 **Puerto La Cruz**	**166.95**	**39**			**PKPab**	04 40 06.1	**0.0**
CLDB	**Colider**	**169.22**	**183**	*e*P		**PKPdf**	04 38 56.9	**-6.6**
NPGB	**Novo Progresso**	**172.97**	**188**	*e*P		**PKPdf**	04 39 05.3	**-0.2**
MDP	**Montagnes des** comp=Z,4.1nm,0.8s,baz=22,slow=2.6,SNR=4.2	**173.72**	**324**	PKPab		**PKPab**	04 40 35.5	**-0.6**

*IDC **04** 04:19:22.6±3.0, 11°.84N×92°.64E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/48, mbtmp4.0/5, Error ellipse: s-maj=68.8km s-min=51.2km az=150.0*

ISC 04 04:19:24.6±1.4, 11°.6N±0°.2×92°.0E±0°.3, h10km, n8, σ1§28/8, mb3.9/4, 1C, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**1.78**	**31**	*i* Pg	**Pg**	**Pg**	**04 19 60.0**	**+1.1**
DGPR				*e*S	**Sn**	**Sn**	**04 20 17.2**	**-1.0**
DGPR	comp=E,909nm,0.5s			IAML			04 20 24.9	
DGPR	comp=N,1µm,0.7s			IAML			04 20 25.0	
CMAR	**Chiang Mai Arr** baz=229,slow=14,SNR=4.2	**9.54**	**44**	Pn	Pn		04 21 33.2	-8.9
MKAR	**Makanchi Array** comp=N,0.2nm,0.3s,baz=167,slow=10,SNR=4.1	**35.99**	**349**	P	**P**		**04 26 24.7**	**-1.0**
ZALV	**Zalesovo Beam** comp=N,1.3nm,0.3s,baz=176,slow=8.1,SNR=5.7	**42.59**	**354**	P	**P**		**04 27 19.3**	**-1.4**
FINES	**FINESS Array B** comp=N,3.8nm,1.1s,baz=108,slow=4.5,SNR=4.9	**68.41**	**332**	P	**P**		**04 30 26.8**	**+0.4**
GERES	**GERESS Array B** comp=N,0.4nm,0.6s,baz=83,slow=8.0,SNR=2.1	**73.63**	**318**	P	**P**		**04 30 59.7**	**+1.2**
SYO	**Syowa Base**	**88.37**	**197**	*e*X	**P**		**04 32 16.4**	**+0.1**
PDAR	**Pinedale Array** comp=N,0.5nm,0.6s,baz=122,slow=1.2,SNR=4.0	**122.37**	**19**	PKP	**PKPdf**		**04 38 19.6**	**-1.2**

*IDC **04** 04:35:25.9±1.6, 10°.49S×74°.55W, h124km±19km, mb3.2/4, mb1 3.5/9, mb1mx3.4/32, mbtmp3.7/9, MS3.0/1, Ms1 3.0/1, ms1mx2.4/8, Error ellipse: s-maj=19.7km s-min=14.3km az=52.0*

ISC 04 04:35:24.3±0.7, 10°.42S±0°.07×74°.42W±0°.07, h100km, n14, σ1§96/15, mb3.5/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.84**	**237**	P	**Pn**	**Pn**	**04 36 09.3**	**+1.3**
NNA	25nm,0.3s,baz=70,slow=8.1,SNR=37			S	**Sn**	**Sn**	**04 36 41.3**	**-0.3**
CZSB	64nm,0.3s,baz=189,slow=22,SNR=16 **Cruzeiro do Su**	**3.17**	**32**	*e*P	**Pn**	**Pn**	**04 36 16.5**	**+4.2**
ATAH	**Atahualpa** 1.5nm,0.3s,baz=136,slow=1.0,SNR=13	**5.11**	**309**	P	**Pn**	**Pn**	**04 36 39.9**	**+1.0**
ATAH	4.0nm,0.3s,baz=152,slow=23,SNR=4.3			S	**Sn**	**Sn**	**04 37 38.5**	**+1.6**
ETMB	**Extrema**	**8.10**	**86**	*e*P	**Pn**	**Pn**	**04 37 21.0**	**+1.8**
LPAZ	**La Paz** 0.2nm,0.3s,baz=320,slow=6.3,SNR=12	**8.45**	**134**	P	**Pn**	**Pn**	**04 37 27.8**	**+3.2**
SAML	**Samuel**	**11.17**	**83**	*e*P	**Pn**	**Pn**	**04 38 01.4**	**+0.4**
SIV	**San Ignacio** 0.2nm,0.3s,baz=311,slow=7.6,SNR=6.4	**14.12**	**114**	P	**P**	**P**	**04 38 42.6**	**-1.8**
SDV	**Santo Domingo** 1.3nm,0.3s,baz=5.9,slow=17,SNR=4.8	**19.55**	**11**	P	**P**	**P**	**04 39 44.3**	**-0.2**
SJG	**San Juan** comp=Z,26nm,19.4s,baz=302,slow=36	**29.50**	**16**	LR	LR		04 53 19.3	
TXAR	**Lajitas Array** 0.6nm,0.4s,baz=152,slow=8.7,SNR=28	**49.56**	**325**	P	**P**	**P**	**04 43 57.1**	**-0.6**
PDAR	**Pinedale Array** 0.3nm,0.7s,baz=120,slow=11,SNR=2.4	**61.91**	**331**	P	**P**	**P**	**04 45 32.1**	**-1.6**
NVAR	**Mina Array Bea** 0.2nm,0.6s,baz=117,slow=7.2,SNR=2.6	**63.54**	**323**	P	**P**	**P**	**04 45 44.3**	**-0.2**
TORD	**Torodi Ar. Bea** 0.7nm,0.7s,baz=240,slow=3.7,SNR=8.7	**79.08**	**74**	P	**P**	**P**	**04 47 17.2**	**-1.2**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=136,slow=2.1,SNR=2.6	**138.62**	**223**	PKP	**PKPdf**	**PKPdf**	**04 54 38.2**	**-1.3**

IDC 04 04:56:26.0±2.2, 5°.15N×125°.13E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/53, mbtmp3.5/3, Error ellipse: s-maj=198.8km s-min=26.7km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=338,slow=11,SNR=8.3	**26.53**	**160**	P	P	P	05 02 04.9	-0.7
ASAR	**Alice Springs** 0.3nm,0.5s,baz=355,slow=8.5,SNR=2.3	**29.89**	**164**	P	P	P	05 02 36.8	+1.1
MKAR	**Makanchi Array** 0.8nm,0.7s,baz=124,slow=5.4,SNR=6.5	**55.49**	**325**	P	P	P	05 06 02.6	-0.1

*IDC **04** 05:03:05.3±9.5, 7°.17S×113°.46E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/49, mbtmp3.5/3, Error ellipse: s-maj=164.0km s-min=137.2km az=178.0*
*DJA **04** 05:03:08.5±0.3, 8°.5±3°×11°.3E±°, h11km±5km, M3.4/7, MLv3.4/7*

ISC 04 05:03:07.8±1.0, 7°.88S±0°.07×112°.97E±0°.06, h10km, n11, σ0§76/13, mb3.5/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**0.62**	**130**	P	**Pg**	**Pg**	**05 03 19.6**	**-0.1**
BLJI	**Banyuglugur**	**0.64**	**78**	P	**Pb**	**Pb**	**05 03 21.0**	**0.0**
BLJI				S	**Sb**	**Sb**	**05 03 30.8**	**+0.8**
GRJI	**Gresik**	**1.07**	**333**	P	**Pn**	**Pn**	**05 03 28.3**	**-0.5**
GRJI				S	**Sn**	**Sn**	**05 03 45.0**	**+1.2**
PWJI	**Pagerwojo**	**1.16**	**263**	P	**Pn**	**Pn**	**05 03 30.0**	**0.0**
ABJI	**Asem Bagus**	**1.26**	**86**	P	**Pb**	**Pb**	**05 03 31.7**	**+0.1**
KMMI	**Kalianget**	**1.29**	**50**	P	**Pn**	**Pn**	**05 03 31.3**	**-0.6**
JAGI	**Jajag, Banyuwa**	**1.31**	**117**	P	**Pn**	**Pn**	**05 03 32.1**	**-0.1**
TBJI	**Tambak Boyo**	**1.53**	**313**	P	**Pn**	**Pn**	**05 03 34.5**	**-0.6**
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=300,slow=11,SNR=4.5	**23.93**	**122**	P	**P**	**P**	**05 08 20.6**	**-1.6**
ASAR	**Alice Springs** 0.8nm,0.7s,baz=304,slow=8.6,SNR=7.1	**25.48**	**130**	P		**P**	**05 08 36.6**	**+0.2**
STKA	**Stephens Creek** 0.6nm,0.4s,baz=325,slow=14,SNR=2.9	**35.77**	**136**	P		**P**	**05 10 07.5**	**+0.3**

*IDC **04** 05:06:21.8±3.2, 23°.93S×179°.98W, h500km±33km, mb3.3/5, mb1 3.5/6, mb1mx3.1/40, mbtmp4.2/6, Error ellipse: s-maj=42.5km s-min=27.2km az=177.0*

ISC 04 05:06:21.8±1.4, 24°.0S±0°.1×180°.0W±0°.2, h500km, n6, σ0§55/8, mb3.8/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera** 0.6nm,0.3s,baz=29,slow=2.4,SNR=2.2	**14.46**	**189**	P	**P**	**P**	**05 09 26.0**	**-0.1**
URZ	0.1nm,0.3s,baz=338,slow=4.8,SNR=1.5			S	**S**	**S**	**05 11 58.3**	**+0.1**
CTA	**Charters Tower** 4.9nm,0.4s,baz=84,slow=10,SNR=12	**31.52**	**270**	P	**P**	**P**	**05 12 02.8**	**+0.4**
ASAR	**Alice Springs** 2.1nm,0.7s,baz=95,slow=7.8,SNR=20	**42.07**	**261**	P	**P**	**P**	**05 13 29.1**	**-0.2**
ASAR	0.2nm,0.5s,baz=100,slow=4.9,SNR=4.5			ScP	**ScP**	**ScP**	**05 18 14.8**	**-0.7**
WRA	**Warramunga Arr** 2.5nm,0.5s,baz=96,slow=8.4,SNR=80	**42.45**	**266**	P	**P**	**P**	**05 13 31.5**	**-0.8**
FITZ	**Fitzroy Crossi** 1.6nm,0.6s,baz=99,slow=7.7,SNR=3.6	**50.87**	**266**	P	**P**	**P**	**05 14 36.3**	**+0.1**
TXAR	**Lajitas Array** 0.4nm,0.7s,baz=217,slow=5.7,SNR=5.3	**90.43**	**58**	P	**P**	**P**	**05 18 29.9**	**+0.1**

IDC 04 05:15:00.7±2.5, 30°.15S×138°.57E, h0km, mb1 3.3/4, mb1mx3.2/24, mbtmp3.1/4, ML3.2/4, Error ellipse: s-maj=71.1km s-min=14.1km az=44.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 0.7nm,0.3s,baz=302,slow=15,SNR=7.5	**3.12**	**124**	Pn	Pn	Pn	05 15 50.4	-0.7
STKA	3.1nm,0.3s,baz=301,slow=15,SNR=24			Pg	Pg	Pg	05 15 59.0	-1.5
STKA	3.3nm,0.3s,baz=298,slow=9.5,SNR=5.8			Sn	Sn	Sn	05 16 28.6	-0.6
STKA	5.5nm,0.3s,baz=349,slow=19,SNR=7.2			Lg	Lg	Lg	05 16 39.1	
ASAR	**Alice Springs** 0.3nm,0.3s,baz=151,slow=12,SNR=9.0	**7.68**	**326**	Pn	Pn	Pn	05 16 54.2	+0.3
ASAR	0.1nm,0.3s,baz=149,slow=23,SNR=2.6			Sn	Sn	Sn	05 18 20.5	-1.2
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=161,slow=12,SNR=15	**10.86**	**338**	Pn	Pn	Pn	05 17 38.8	+1.3
WRA	0.0nm,0.3s,baz=159,slow=24,SNR=1.3			Sn	Sn	Sn	05 19 38.2	-1.5
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=148,slow=9.0,SNR=1.5	**16.81**	**313**	Pn	Pn	Pn	05 18 57.4	-0.1

IDC 04 05:20:56.0±18.0, 0°.03S×130°.24E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/28, mbtmp3.4/3, Error ellipse: s-maj=337.6km s-min=220.8km az=117.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,1.0s,baz=349,slow=11,SNR=2.7	**20.20**	**169**	P	P	P	05 25 33.1	+0.5
ASAR	**Alice Springs** 0.2nm,0.5s,baz=351,slow=10,SNR=2.5	**23.77**	**172**	P	P	P	05 26 10.3	-0.1
STKA	**Stephens Creek** 1.9nm,0.7s,baz=331,slow=13,SNR=2.3	**33.45**	**162**	P	P	P	05 27 36.6	-0.3

*NEIC **04** 05:36:16.6±1.6, 7°.30N±0°.05×94°.2E±0°.1, h10km±1km, mb4.5/9, Error ellipse: s-maj=24.1km s-min=7.4km az=258.0*
*IDC **04** 05:36:16.0±0.7, 7°.42N×94°.25E, h0km, mb3.8/12, mb1 4.0/14, mb1mx3.8/44, mbtmp3.9/14, ML4.2/2, MS3.3/11, Ms1 3.4/11, ms1mx3.1/37, Error ellipse: s-maj=25.2km s-min=15.8km az=61.0*

ISC 04 05:36:17.3±0.6, 7°.37N±0°.09×94°.3E±0°.1, h10km, n40, σ0§98/33, mb3.9/16, MS3.3/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.40**	**129**	Pn	**Pn**	**Pn**	**05 37 10.1**	**-0.3**
PSI	**Prapat** 0.7nm,0.3s,baz=2.1,slow=5.5,SNR=2.1	**6.48**	**134**	Pn	**Pn**	**Pn**	**05 37 52.6**	**-0.4**
PSI				LR	LR	LR	05 40 37.1	
RPSI	comp=Z,282nm,20.5s,baz=125,slow=40 **Rantau Prapat**	**6.55**	**135**			**Pn**	**05 37 52.6**	**-1.3**
RPSI	**Rantau Prapat**	**6.55**	**135**	Pn		**Pn**	**05 37 52.4**	**-1.5**
KULM	**Kulim**	**6.66**	**108**	Pn		**Pn**	**05 37 55.0**	**-0.3**
IPM	**Ipoh**	**7.30**	**113**	Pn		**Pn**	**05 38 03.3**	**-0.8**
CMAR	**Chiang Mai Arr** 1.8nm,0.3s,baz=210,slow=12,SNR=2.7	**11.92**	**22**	Pn		**Pn**	**05 39 08.5**	**+1.0**
CMAR				LR		LR	05 43 42.9	
PALK	comp=Z,182nm,18.1s,baz=228,slow=38 **Pallekele**	**13.47**	**270**	Sn		Sn	05 41 47.5	-11
PALK	0.4nm,0.3s,baz=17,slow=20,SNR=1.2			LR		LR	05 43 55.6	
SLVN	comp=Z,167nm,21.1s,baz=197,slow=34 **Son La**	**16.71**	**33**	Pn		**Pn**	**05 40 11.5**	**-0.2**
H08S3	**Diego Garcia H** baz=55,slow=75,SNR=149	**26.35**	**236**	T		T	06 08 37.0	
H08S2	**Diego Garcia H** baz=55,slow=75,SNR=16	**26.35**	**236**	T		T	06 08 34.6	
H08S1	**Diego Garcia H** baz=55,slow=75,SNR=7.6	**26.37**	**236**	T		T	06 08 35.7	
KAPI	**Kappang** comp=Z,54nm,21.5s,baz=279,slow=36	**28.24**	**115**	LR		LR	05 53 12.6	
MKAR	**Makanchi Array** 1.2nm,0.5s,baz=172,slow=7.8,SNR=10	**40.61**	**347**	P		**P**	**05 43 56.9**	**-0.4**
MKAR				LR		LR	06 03 51.9	
SONM	comp=Z,43nm,18.3s,baz=169,slow=41 **Songino Array** 1.0nm,0.5s,baz=188,slow=4.5,SNR=4.5	**41.62**	**12**	P		**P**	**05 44 06.1**	**+0.3**
SONM				LR		LR	06 01 41.1	
KSRS	comp=Z,52nm,18.0s,baz=178,slow=37 **Korea Array** 0.4nm,0.3s,baz=226,slow=10,SNR=4.4	**42.75**	**40**	P		**P**	**05 44 15.2**	**+0.2**
KURK	**Kurchatov**	**45.13**	**346**	P		**P**	**05 44 33.5**	**-0.4**
H01W3	**Cape Leeuwin H** baz=331	**46.02**	**157**	T		T	06 34 24.2	
H01W2	**Cape Leeuwin H** baz=331	**46.03**	**157**	T		T	06 34 23.2	
H01W1	**Cape Leeuwin H** baz=331	**46.04**	**157**	T		T	06 34 20.9	
ZALV	**Zalesovo Beam** 0.8nm,0.3s,baz=179,slow=7.4,SNR=5.1	**47.07**	**352**	P		**P**	**05 44 48.3**	**-0.9**
WB0	**Warramunga Arr**	**47.81**	**125**	P		**P**	**05 44 54.9**	**-0.6**
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=307,slow=8.3,SNR=16	**47.86**	**125**	P		**P**	**05 44 55.9**	**0.0**
WRA	0.6nm,0.8s,baz=313,slow=2.5,SNR=5.7			PcP		**PcP**	**05 46 25.9**	**+1.4**
WRA	comp=Z,35nm,20.2s,baz=325,slow=38			LR		LR	06 06 39.8	
WRAB	**Tennant Creek**	**47.86**	**125**	P		**P**	**05 44 56.6**	**+0.7**
WRAB	comp=Z,5.3nm,1.4s			IAmb		IAmb	05 45 15.6	
WB2	**Warramunga Arr**	**47.87**	**125**	P		**P**	**05 44 55.2**	**-0.7**
WB2	comp=Z,3.8nm,1.2s			IAmb		IAmb	05 45 03.7	
WR0	**Warramunga Arr**	**48.03**	**125**	P		**P**	**05 44 57.7**	**+0.5**
WR0	comp=Z,6.0nm,1.2s			IAmb		IAmb	05 45 08.1	
ASAR	**Alice Springs** comp=Z,1.0nm,0.9s,baz=292,slow=7.3,SNR=7.4	**49.49**	**130**	P		**P**	**05 45 08.9**	**+0.5**
ASAR				PcP		**PcP**	**05 46 31.8**	**+1.4**
ABKAR	comp=Z,0.8nm,0.7s,baz=313,slow=3.4,SNR=5.8 **Akbulak array**	**50.74**	**331**	P		**P**	**05 45 17.2**	**-0.2**
ABKAR	**Akbulak array**	**50.74**	**331**	P		**P**	**05 45 17.3**	**-0.2**
KMBO	**Kilima Mbogo** comp=Z,0.3nm,0.5s,baz=75,slow=23,SNR=1.1	**57.51**	**264**	P		**P**	**05 46 06.8**	**-1.0**
KMBO	comp=Z,26nm,18.1s,baz=94,slow=33			LR		LR	06 08 15.5	
BRTR	**Keskin Array B** comp=Z,1.1nm,0.7s,baz=120,slow=6.2,SNR=2.1	**62.86**	**311**	P		**P**	**05 46 44.8**	**+0.9**
BRTR	comp=Z,15nm,18.0s,baz=85,slow=38			LR		LR	06 16 35.2	
TIXI	**Tiksi**	**67.70**	**11**	P		**P**	**05 47 13.9**	**-0.6**
TIXI	comp=Z,4.5nm,1.1s			IAmb		IAmb	05 47 20.7	
AKASG	**Malin Array Be** comp=Z,18nm,18.9s,baz=285,slow=38	**68.63**	**322**	LR		LR	06 19 58.3	
FINES	**FINESS Array B** comp=Z,2.4nm,0.8s,baz=116,slow=4.4,SNR=7.1	**73.22**	**332**	P		**P**	**05 47 47.2**	**-1.2**
MAW	**Mawson** comp=Z,1.2nm,0.9s,baz=300,slow=21,SNR=4.0	**78.07**	**192**	P		**P**	**05 48 18.3**	**+2.4**
GERES	**GERESS Array B** comp=Z,0.6nm,0.6s,baz=59,slow=5.9,SNR=2.4	**78.29**	**318**	P		**P**	**05 48 18.9**	**+1.1**
GERES	**GERESS Array B**	**78.29**	**318**	P		**P**	**05 48 17.9**	**0.0**
NOA	**NORSAR Array B** comp=Z,0.3nm,0.5s,baz=91,slow=5.7,SNR=1.2	**80.24**	**331**	P		**P**	**05 48 28.3**	**+0.2**
NOA	comp=Z,19nm,18.2s,baz=340,slow=37			LR		LR	06 25 55.9	
NVAR	**Mina Array Bea** comp=Z,0.3nm,0.6s,baz=341,slow=1.9,SNR=1.9	**125.27**	**31**	PKP	**PKPdf**	**PKPdf**	**05 55 17.1**	**-2.1**
CPUP	**Villa Florida** comp=Z,1.3nm,0.8s,baz=56,slow=6.8,SNR=3.2	**147.06**	**232**	PKPbc	**PKPbc**	**PKPbc**	**05 56 00.0**	**-1.3**

*IDC **04** 05:41:47.6±1.9, 6°.08S×152°.62E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/27, mbtmp3.6/4, Error ellipse: s-maj=49.8km s-min=21.

ITCA	**Escuela Especi**	**1.42**	**315**	*eP*		Pn	05 44 36.7	0.0
UEES	**Universidad Ev**	**1.42**	**317**	*eP*		Pn	05 44 36.9	+0.2
UEES				*eS*		Sb	05 44 55.9	-0.9
UEES				IAML			05 44 58.5	
	comp=Z,290nm,0.2s							
BOQS	**Boqueron**	**1.46**	**316**	*eP*		Pn	05 44 37.6	+0.2
BOQS				*eS*		Sb	05 44 57.5	-0.6
CNGN	**Cerro Negro**	**1.52**	**96**	*eP*		Pn	05 44 35.7	-2.3
CNGN				*eS*		Sn	05 44 55.7	-1.0
CEDA	**San Andres**	**1.59**	**315**	*eP*		Pn	05 44 39.4	+0.4
CEDA				*eS*		Sn	05 44 59.2	+0.8
TACO	**Tacachico**	**1.68**	**320**	*eP*		Pn	05 44 40.4	+0.1
TACO				*eS*		Sb	05 45 02.7	-1.5
UNIC	**Universidad Ca**	**1.82**	**316**	*eP*		Pn	05 44 42.5	+0.3

IDC 04 06:12:24.3±7.1, 30°66S×179°02W, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.7/25, mbtmpg3.8/2, MS4.2/1, Ms1 4.2/1, ms1mx2.7/30, Error ellipse: s-maj=294.8km s-min=55.1km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.22**	**268**	P	P	06 20 18.9	-0.4
	0.6nm,0.5s,baz=101,slow=7.3,SNR=9.6						
WRA	**Warramunga Arr**	**43.23**	**273**	P	P	06 20 27.6	+0.1
	1.2nm,0.5s,baz=112,slow=8.0,SNR=20						
GUMO	**Guam**	**56.05**	**316**	LR	LR	06 41 16.2	
	comp=Z,238nm,21.3s,baz=36,slow=31						
FINES	**FINESS Array B**	**145.09**	**339**	PKPbc	PKPbc	06 32 01.6	-0.8
	1.2nm,0.5s,baz=64,slow=3.2,SNR=8.9						

*REN **04** 06:20:24.7±1.4, 38°.89N±0°.03×116°.16W±0°.03, h0km±1km, ML3.8/6, Error ellipse: s-maj=4.8km s-min=2.9km az=162.0*
*ANF **04** 06:20:25.1±0.8, 38°.92N×116°.06W, h0km, ML3.7/8, Error ellipse: s-maj=6.7km s-min=5.6km az=171.0*
*NEIC **04** 06:20:25.2±1.5, 38°.90N±0°.03×116°.16W±0°.01, h4km±6km, Error ellipse: s-maj=4.2km s-min=1.1km az=166.0*

ISC 04 06:20:24.6±1.5, 38°.90N±0°.04×116°.16W±0°.02, h1km±15km, n80, σ0s94/91, Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
R11A	**Troy Canyon, C**	**0.71**	**141**	P	**Pg**	**06 20 38.2**	**-0.1**
	baz=320						
R11A				S	**Sg**	**06 20 48.2**	**+0.8**
	baz=320						
R11A	**Troy Canyon, C**	**0.71**	**141**		**Pg**	**06 20 38.2**	**-0.1**
R11A				Sg	**Sg**	**06 20 47.1**	**-0.3**
TPH	**Tonopah**	**1.17**	**226**		**Pb**	**06 20 47.0**	**-0.9**
TPH	**Tonopah**	**1.17**	**226**	Sg	**Sg**	**06 21 02.5**	**+0.2**
SPR3	**Spring Creek 3**	**1.43**	**85**	Pn	**Pb**	**06 20 51.9**	**-0.4**
SPR3				Sg	**Sb**	**06 21 10.1**	**-1.0**
KVN	**Kaiserville**	**1.52**	**276**		**Pn**	**06 20 52.5**	**-0.7**
KVN				Sn	**Sb**	**06 21 13.6**	**-0.1**
NV11	**Mina Array Sit**	**1.63**	**254**		**Pn**	**06 20 54.2**	**-0.5**
NV11				Sn	**Sb**	**06 21 15.9**	**-0.9**
PRN	**Pahroc Range**	**1.73**	**149**		**Pn**	**06 20 55.7**	**-0.2**
PRN				Sn	**Sg**	**06 21 19.9**	**-0.2**
NVAR	**Mina Array Bea**	**1.74**	**255**	Pn	**Pn**	**06 20 55.2**	**-1.0**
PSUT	**Pine Spring**	**1.84**	**101**		**Pn**	**06 20 57.7**	**+0.1**
PSUT				Sn	**Sb**	**06 21 21.4**	**-1.3**
RYN	**Ryan**	**1.87**	**262**		**Pn**	**06 20 57.6**	**-0.3**
TPNV	**Topopah Spring**	**1.95**	**182**	P	**Pn**	**06 20 58.7**	**-0.3**
	baz=2.0						
TPNV				S	**Sg**	**06 21 27.7**	**+0.4**
	baz=2.0						
TPNV	**Topopah Spring**	**1.95**	**182**		**Pn**	**06 20 58.6**	**-0.4**
LHV	**Little Huntoon**	**1.95**	**251**		**Pn**	**06 20 59.2**	**+0.4**
ELK	**Elko**	**1.97**	**21**		**Pn**	**06 20 58.2**	**-1.3**
MLNR	**Milner Canyon**	**2.16**	**234**		**Pn**	**06 21 02.0**	**+0.1**
BENR	**Benton**	**2.24**	**239**		**Pn**	**06 21 02.9**	**-0.2**
POCCA	**Poleta Canyon**	**2.27**	**228**		**Pn**	**06 21 03.5**	**+0.1**
ORC	**Owens River**	**2.34**	**238**		**Pn**	**06 21 05.2**	**+0.7**
MLAC	**Mammoth, Mammo**	**2.46**	**240**	Pb	**Pb**	**06 21 10.0**	**+0.2**
	baz=58						
MLAC				S	**Sg**	**06 21 43.3**	**-0.3**
	baz=58						
RCCR	**Rock Creek Can**	**2.46**	**236**		**Pn**	**06 21 06.9**	**+0.7**
TIN	**Tinemaha, Big**	**2.46**	**222**	Sb	**Sg**	**06 21 44.4**	**+0.6**
	baz=41						
FURC	**Furnace Creek,**	**2.49**	**193**	Pb	**Pb**	**06 21 10.5**	**+0.3**
	baz=13						
FURC				Sb	**Sg**	**06 21 45.3**	**+0.6**
	baz=13						
SHPR	**Sheep Range**	**2.52**	**161**		**Pn**	**06 21 06.5**	**-0.3**
OMMB	**Old Mammoth Mi**	**2.58**	**241**		**Pn**	**06 21 08.8**	**+1.0**
CCUT	**Cedar City**	**2.58**	**121**		**Pn**	**06 21 07.5**	**-0.3**
WAKR	**Walker**	**2.60**	**262**		**Pn**	**06 21 07.5**	**-0.4**
MDPB	**Devils Postpil**	**2.62**	**242**	Pn	**Pn**	**06 21 09.3**	**+0.9**
PAHR	**Pah Rah Range**	**2.63**	**289**		**Pn**	**06 21 09.7**	**+1.3**
PNTR	**Pine Nut**	**2.69**	**275**		**Pn**	**06 21 08.6**	**-0.6**
SZCU	**Shurtz Canyon**	**2.75**	**117**		**Pn**	**06 21 09.5**	**-0.5**
VCNR	**Virginia City**	**2.75**	**279**		**Pn**	**06 21 10.1**	**+0.1**
DUG	**Dugway, Tooele**	**2.89**	**62**	P	**Pn**	**06 21 12.0**	**+0.1**
	baz=244						
DUG	**Dugway, Tooele**	**2.89**	**62**		**Pn**	**06 21 12.1**	**+0.1**
LCMT	**Little Creek M**	**2.98**	**128**		**Pn**	**06 21 13.7**	**+0.5**
WVA	**Winnemucca Val**	**3.03**	**291**		**Pn**	**06 21 14.0**	**+0.2**
MPMC	**Manual Prospec**	**3.03**	**201**	Pb	**Pb**	**06 21 21.1**	**+1.6**
	baz=20						
MPMC				Sb	**Sg**	**06 22 00.8**	**-1.2**
	baz=20						
PEAR	**Peavine Mounta**	**3.04**	**285**		**Pn**	**06 21 14.0**	**0.0**
EMB	**Emerald Bay**	**3.08**	**273**		**Pn**	**06 21 14.9**	**+0.3**
MVU	**Marysvale**	**3.11**	**96**		**Pn**	**06 21 16.7**	**+1.6**
RUBR	**Rubicon Trail**	**3.12**	**274**	Pn	**Pn**	**06 21 15.8**	**+0.7**
MSU	**Marysvale**	**3.14**	**96**		**Pn**	**06 21 15.9**	**+0.5**
BGU	**Big Grassy Mou**	**3.14**	**49**		**Pn**	**06 21 14.9**	**-0.5**
KBF	**Kyburz Flat**	**3.21**	**282**		**Pn**	**06 21 16.4**	**0.0**
MTPU	**Mount Pierson**	**3.23**	**104**	Pn	**Pn**	**06 21 17.5**	**+0.6**
KNB	**Kanab**	**3.24**	**124**		**Pn**	**06 21 17.1**	**+0.3**
LOY	**Loyalton**	**3.25**	**285**		**Pn**	**06 21 17.0**	**+0.1**
NLU	**North Lily Min**	**3.33**	**70**	Pn	**Pn**	**06 21 18.9**	**+0.9**
PKCU	**Pink Cliffs**	**3.36**	**114**		**Pn**	**06 21 18.2**	**-0.3**
BEKR	**Beckworth**	**3.40**	**288**		**Pn**	**06 21 19.0**	**+0.1**
TUQ	**Turquoise Moun**	**3.46**	**177**	Sb	**Sg**	**06 22 14.3**	**-1.6**
	baz=357						
GSC	**Goldstone, Bar**	**3.63**	**188**	Pn	**Pn**	**06 21 22.4**	**+0.3**
MPU	**Maple Canyon**	**3.67**	**71**	Pn	**Pn**	**06 21 24.1**	**+1.3**
ISA	**Isabella, Lake**	**3.72**	**210**	Pn	**Pn**	**06 21 24.2**	**+0.9**
SPUT	**South Promonto**	**3.73**	**49**		**Pn**	**06 21 23.7**	**+0.3**
AFDM	**Forest Hills D**	**3.75**	**272**		**Pn**	**06 21 23.7**	**-0.1**
CTU	**Camp Tracy**	**3.84**	**61**	Pn	**Pn**	**06 21 25.4**	**+0.4**
JLU	**Jordanelle**	**4.01**	**63**	Pn	**Pn**	**06 21 28.0**	**+0.6**
ORV	**Oroville**	**4.20**	**281**		**Pn**	**06 21 30.1**	**+0.3**
P17A	**Butcher Ranch,**	**4.25**	**81**	Pn	**Pn**	**06 21 32.8**	**+2.1**
MOD	**Modoc Plateau**	**4.36**	**315**		**Pn**	**06 21 34.0**	**+1.8**
SRU	**San Rafael Swe**	**4.39**	**85**	Pn	**Pn**	**06 21 34.2**	**+1.6**
MFID	**Camas Ranch**	**4.52**	**3**		**Pn**	**06 21 35.0**	**+0.7**
J08A	**Circle Bar Ran**	**4.79**	**339**		**Pn**	**06 21 40.9**	**+2.9**
HLID	**Hailey**	**4.84**	**15**		**Pn**	**06 21 38.8**	**0.0**
WDC	**Whiskeytown Da**	**5.20**	**291**	Pn	**Pn**	**06 21 45.0**	**+1.5**
PFO	**Pinyon Flats O**	**5.28**	**183**	Pn	**Pn**	**06 21 44.8**	**0.0**
RDMU	**Red Mountain**	**5.35**	**70**	Pn	**Pn**	**06 21 45.0**	**-0.7**
HOPS	**Hopland Field**	**5.39**	**273**	Pn	**Pn**	**06 21 46.4**	**+0.2**
PV14	**Lion Creek, Pa**	**5.61**	**93**	Pn	**Pn**	**06 21 50.3**	**+0.9**
PV17	**East Wray Mesa**	**5.67**	**94**	Pn	**Pn**	**06 21 52.0**	**+1.8**
PV16	**Nyswonger Mesa**	**5.70**	**94**		**Pn**	**06 21 52.4**	**+1.8**
PV11	**David Mesa, Pa**	**5.74**	**94**		**Pn**	**06 21 53.5**	**+2.3**
PV03	**Paradox Valley**	**5.76**	**94**		**Pn**	**06 21 52.5**	**+1.0**
PV12	**Saucer Basin,**	**5.79**	**93**		**Pn**	**06 21 53.7**	**+1.8**
PV13	**Radium Mtn., P**	**5.80**	**95**		**Pn**	**06 21 53.2**	**+1.2**
PV02	**Paradox Valley**	**5.86**	**94**	Pn	**Pn**	**06 21 54.1**	**+1.3**
PV01	**Paradox Valley**	**6.00**	**95**		**Pn**	**06 21 56.6**	**+1.8**
TPAW	**Teton Pass**	**6.04**	**39**	Pn	**Pn**	**06 21 55.9**	**+0.6**
PDAR	**Pinedale Array**	**6.32**	**50**		**Pn**	**06 21 58.4**	**-0.8**

*IDC **04** 06:26:37.5±3.8, 15°.34N×120°.07E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/52, mbtmpg3.4/3, Error ellipse: s-maj=427.5km s-min=28.6km az=61.0*
*MAN **04** 06:26:54.8, 13°.16N×120°.12E, h1km, mb4.1, ML2.8, MS2.5*

ISC 04 06:26:54.9±1.0, 13°22N±0°.04×120°14E±0°.06, h10km, n10, σ1s09/16, mb3.4/3, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.52**	**12**	*eP*	**Pb**	**06 27 06.2**	**+0.1**
LUBP				*eS*	**Sn**	**06 27 16.2**	**-1.0**
PGP	**Puerto Galera**	**0.84**	**71**	⇑*eP*	**Pb**	**06 27 11.3**	**-0.2**
PGP				*i S*	**Sg**	**06 27 21.7**	**-0.3**
BUSP	**Coron**	**1.22**	**177**	*eP*	**Pb**	**06 27 17.3**	**-0.6**
BUSP				*eS*	**Sn**	**06 27 37.0**	**+2.6**
LQP	**Lukban**	**1.62**	**57**	⇑*eP*	**Pg**	**06 27 25.8**	**-0.2**
LQP				*eS*	**Sg**	**06 27 47.8**	**+0.7**
BOAC	**Boac**	**1.68**	**82**	*eP*	**Pb**	**06 27 25.8**	**-0.1**
BOAC				*eS*	**Sg**	**06 27 49.6**	**+0.8**
OTRP	**Odiongan**	**2.03**	**115**	*eP*	**Pb**	**06 27 30.9**	**-0.9**
OTRP				*eS*	**Sg**	**06 27 59.3**	**-0.7**
ENPP	**El Nido**	**2.12**	**199**	*eP*	**Pn**	**06 27 30.5**	**0.0**
ENPP				*eS*	**Sb**	**06 27 58.2**	**-1.7**
WRA	**Warramunga Arr**	**35.80**	**157**	P	**P**	**06 33 54.6**	**0.0**
	0.3nm,0.5s,baz=335,slow=9.6,SNR=8.3						
ASAR	**Alice Springs**	**39.06**	**160**	P	**P**	**06 34 23.6**	**+1.3**
	0.5nm,0.5s,baz=340,slow=6.7,SNR=12						
MKAR	**Makanchi Array**	**46.09**	**324**	P	P	06 34 49.4	-30
	0.2nm,0.7s,baz=104,slow=6.4,SNR=1.8						

*TEH **04** 06:37:10.8, 32°.51N×47°.94E, h10km, ML3.4*
*THR **04** 06:37:10.7±0.5, 32°.52N×47°.72E, h14km±999km, ML3.2*
*ISN **04** 06:37:11.1±0.8, 32°.55N×47°.93E, h14km±6km, ML3.1*
*IDC **04** 06:37:12.6±16.0, 33°.05N×47°.92E, h0km, mb3.8/6, mb1 3.8/6, mb1mx3.5/37, mbtmpg3.8/6, Error ellipse: s-maj=336.7km s-min=30.9km az=12.0*

ISC 04 06:37:11.5±1.3, 32°51N±0°.04×47°92E±0°.03, h14km±10km, n42, σ1s42/49, mb3.7/6, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**1.02**	**356**	*ePg*	**Pg**	**06 37 30.8**	**-0.4**
IKFM				*e*		06 37 52.5	
IKMR	**Kamar-syah**	**1.08**	**21**	*ePg*	**Pg**	**06 37 31.9**	**-0.5**
IKMR				*e*		06 37 52.0	
IDOB	**Doab**	**1.30**	**9**	*ePg*	**Pg**	**06 37 36.0**	**-0.5**
AHWZ	**Ahwaz**	**1.32**	**152**	*ePg*	**Pn**	**06 37 36.2**	**+0.6**
AHWZ				*eSg*	**Sg**	**06 37 55.5**	**+1.4**
BMDN	**Meydan**	**1.39**	**33**	*ePg*	**Pb**	**06 37 37.4**	**0.0**
BMDN				*e*		06 38 04.7	
IKOM	**Komasi**	**1.70**	**348**	*ePg*	**Pb**	**06 37 42.8**	**+0.1**
IKOM				*e*		06 38 10.7	
IBDR	**Badra**	**1.78**	**290**	*ePg*	**Pn**	**06 37 43.0**	**+1.1**
IBDR				*eSg*	**Sb**	**06 38 07.0**	**+0.8**
IBDR				AML	AML	06 38 13.2	
	comp=N,247nm,0.4s						
IBDR				AML	AML	06 38 31.0	
	comp=E,147nm,0.4s						
HSAM	**Samen**	**1.79**	**18**	*ePn*	**Pb**	**06 37 43.9**	**-0.5**
HSAM				*e*		06 38 19.5	
KCHF	**Cheshme Sefid,**	**1.91**	**338**	*ePg*	**Pb**	**06 37 47.1**	**+0.8**
KCHF				*e*		06 38 23.2	
KER	**Kermanshah**	**1.99**	**341**	*ePg*	**Pg**	**06 37 48.9**	**-0.8**
KHMZ	**Khomeyn**	**2.11**	**54**	*ePn*	**Pb**	**06 37 49.4**	**-0.2**
KHMZ				*eSg*	**Sg**	**06 38 21.1**	**+1.8**
KHMZ	**Khomeyn**	**2.11**	**54**	*ePn*	**Pb**	**06 37 49.4**	**-0.2**
NSR	**Nassriya**	**2.13**	**226**	*ePn*	**Pn**	**06 37 48.0**	**+1.3**
NSR				*eSn*	**Sn**	**06 38 14.0**	**+1.1**
NSR				AML	AML	06 38 21.7	
	comp=E,301nm,0.4s						
IGHG	**Ghaleghazi**	**2.14**	**328**	*ePn*	**Pb**	**06 37 49.4**	**-0.9**
IGHG				*e*		06 38 29.1	
IVIS	**Veis**	**2.21**	**336**	*ePn*	**Pn**	**06 37 49.7**	**+1.8**
IVIS				*e*		06 38 38.5	
IPIR	**Pirpir**	**2.51**	**85**	*ePn*	**Pn**	**06 37 53.8**	**+1.5**
IPIR				*e*		06 38 41.6	
HAGD	**Aghdareh**	**2.52**	**23**	*ePn*	**Pn**	**06 37 53.9**	**+1.5**
HAGD				*e*		06 38 38.3	
IDHR	**Dehrash**	**2.54**	**330**	*ePn*	**Pn**	**06 37 54.0**	**+1.5**
IDHR				*e*		06 38 00.6	
ASAO	**Ashtian**	**2.69**	**40**	*ePn*	**Pn**	**06 37 57.1**	**+2.4**
ASAO				*eSg*	**Sg**	**06 38 38.1**	**+0.2**
ASAO				IAML		06 38 43.5	
	comp=E,75nm,0.8s						
ASAO	**Ashtian**	**2.69**	**40**	*ePn*	**Pn**	**06 37 57.1**	**+2.4**
HSRG	**Sareghieh**	**2.75**	**6**	*ePn*	**Pb**	**06 37 58.8**	**-1.8**
HSRG				*e*		06 38 48.2	
BHD	**Baghdad**	**3.08**	**285**	*ePn*	**Pn**	**06 38 01.0**	**+1.3**
BHD				*eSn*	**Sn**	**06 38 38.0**	**+1.7**
IKLH	**Kolahrood**	**3.18**	**74**	*ePn*	**Pn**	**06 38 03.1**	**+1.7**
IKLH				*e*		06 39 04.2	
QAM	**Ghamsar**	**3.21**	**66**	*ePn*	**Pn**	**06 38 03.8**	**+2.1**
IRAZ	**Razeghan**	**3.34**	**29**	*ePn*	**Pn**	**06 38 06.0**	**+2.5**
GHVR	**GHOM**	**3.44**	**54**	*ePn*	**Pn**	**06 38 07.5**	**+2.7**
GHVR				*eSg*	**Sg**	**06 39 00.8**	**-1.1**
GHVR	**GHOM**	**3.44**	**54**	*ePn*	**Pn**	**06 38 07.5**	**+2.7**
KLNJ	**Kolanjah**	**3.46**	**115**	*ePn*	**Pn**	**06 38 06.6**	**+1.2**
IGAR	**Gharneh**	**3.48**	**91**	*e*		06 38 58.3	
IGAR				*ePn*	**Pn**	**06 38 06.4**	**+0.9**
IQOM	**Qom**	**3.51**	**48**	*ePn*	**Pn**	**06 38 07.4**	**+1.5**
IZEF	**Zefreh**	**3.73**	**83**	*ePn*	**Pn**	**06 38 12.0**	**+1.2**
IRAM	**Ramesheh**	**3.84**	**99**	*ePn*	**Pn**	**06 38 10.8**	**+0.3**
IMHD	**Mahdasht**	**3.91**	**35**	*ePn*	**Pn**	**06 38 12.5**	**+1.3**
IVRN	**Varamin**	**4.03**	**51**	*ePn*	**Pn**	**06 38 14.0**	**+1.1**
IHSB	**Hasanabad**	**4.04**	**43**	*ePn*	**Pn**	**06 38 13.9**	**+0.8**
IDMV	**Damavand**	**4.58**	**47**	*ePn*	**Pn**	**06 38 21.8**	**+1.0**
AKASG	**Malin Array Be**	**22.82**	**328**	P	**P**	**06 42 11.7**	**-2.3**
	comp=E,0.3nm,0.3s,baz=141,slow=11,SNR=1.4						
KURBB	**Kurchatov Arra**	**28.89**	**42**	P	**P**	**06 43 09.8**	**0.0**
	comp=E,0.3nm,0.6s,baz=248,slow=9.4,SNR=4.1						
MKAR	**Makanchi Array**	**29.80**	**51**	P	**P**	**06 43 17.9**	**0.0**
	comp=E,0.8nm,0.8s,baz=247,slow=8.6,SNR=6.4						
FINES	**FINESS Array B**	**32.23**	**340**	P	**P**	**06 43 37.9**	**-1.2**
	comp=E,4.0nm,1.0s,baz=150,slow=8.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**33.82**	**40**	P	**P**	**06 43 52.2**	**-0.9**
	comp=E,0.6nm,0.5s,baz=248,slow=9.8,SNR=2.0						
HFS	**Hagfors**	**35.64**	**331**	P	**P**	**06 44 08.0**	**-0.8**
	comp=E,2.2nm,0.6s,baz=119,slow=8.9,SNR=2.0						

*IDC **04** 06:54:15.8±4.8, 36°.80N×71°.87E, h140km±45km, mb3.2/5, mb1 3.3/10, mb1mx3.1/61, mbtmpg3.8/10, Error ellipse: s-maj=33.0km s-min=22.4km az=4.0*
*NEIC **04** 06:54:18.6±1.7, 37°.11N±0°.07×71°.85E±0°.06, h161km±9km, mb4.1/3, Error ellipse: s-maj=10.3km s-min=7.3km az=168.0*
*NNC **04** 06:54:20.9±3.6, 37°.57N×71°.87E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=38.4km s-min=24.1km az=136.0*

ISC 04 06:54:17.0±0.6, 37°03N±0°.05×71°87E±0°.06, h150km, n42, σ1s78/51, mb3.3/6, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.32**	**328**	Pn	**Pn**	**06 54 57.3**	**+1.3**
GAR				Sn	**Sn**	**06 55 24.3**	**-1.9**
CHGR	**Chuyangaron**	**2.69**	**308**	Pn	**Pn**	**06 55 01.5**	**+0.9**
CHGR				Sn	**Sn**	**06 55 33.2**	**-1.1**
BTK	**Batken**	**3.14**	**345**	Pn	**Pn**	**06 55 08.0**	**+1.8**
BTK				Sn	**Sn**	**06 55 44.9**	**+0.7**
KBL	**Kabul**	**3.38**	**224**	Pn	**Pn**	**06 55 13.3**	**+3.9**
NIL	**Nilore**	**3.55**	**161**	Pn	**Pn**	**06 55 15.2**	**+3.7**
AAK	**Ala-Archa**	**5.95**	**19**	P	**Pn**	**06 55 44.3**	**+1.1**
	3.0nm,0.3s						
AAK				S	**Sn**	**06 56 48.5**	**-2.1**
	11nm,0.7s						
AAK	**Ala-Archa**	**5.95**	**19**	Pn	**Pn**	**06 55 44.7**	**+1.5**
DHRM	**DHARAMSHALA**	**6.00**	**141**	*eP*	**Pn**	**06 55 45.8**	**+1.8**
DHRM				*eS*	**Sn**	**06 56 50.3**	**-1.6**
DHRM				IAML		06 56 52.9	
	comp=N,95nm,0.6s						
DHRM				IAML		06 56 53.1	
	comp=E,168nm,0.2s						
KK31	**Karatay Array**	**6.16**	**351**	⇑P	**Pn**	**06 55 46.2**	**+0.5**
	comp=E,3.7nm,0.3s,baz=171,slow=12,SNR=87						
KK31				⇓S	**Sn**	**06 56 50.8**	**-4.4**
	comp=E,13nm,0.3s,baz=165,slow=24,SNR=4.2						
KK31	**Karatay Array**	**6.16**	**351**	Pn	**Pn**	**06 55 46.5**	**+0.8**
KKAR	**Karatay Array**	**6.16**	**351**	Pn	**Pn**	**06 55 46.5**	**+0.8**
KKAR	**Karatay Array**	**6.16**	**351**	Pn	**Pn**	**06 55 46.4**	**+0.6**
BOOM	**Boomskoye usch**	**6.29**	**29**	Pn	**Pn**	**06 55 48.7**	**+1.0**
TKM2	**Tokmak 2**	**6.54**	**25**	⇑P	**Pn**	**06 55 50.5**	**-0.5**
TKM2	comp=E,0.9nm,0.4s			⇓S	**Sn**	**06 57 03.2**	**-1.5**
	comp=E,1.8nm,0.5s						
SMLA	**Simla**	**7.34**	**142**	*eP*	**Pn**	**06 56 02.6**	**+1.0**
SMLA				*eS*	**Sn**	**06 57 20.2**	**-3.5**
SMLA				IAML		06 57 25.2	
	comp=N,41nm,0.3s						
SMLA				IAML		06 57 25.7	

	comp=E,62nm,0.4s							
GEYT	**Alibeck**	**10.97**	**279**	P		**Pn**	**06 56 49.5**	**-0.3**
	comp=E,0.7nm,0.3s,baz=119,slow=12,SNR=2.7							
GEYT				S		**Sn**	**06 58 46.2**	**-4.9**
	comp=E,1.5nm,0.3s,baz=92,slow=13,SNR=3.2							
MKAR	**Makanchi Array**	**12.45**	**35**	P		**Pn**	**06 57 09.0**	**0.0**
	comp=E,0.1nm,0.3s,baz=227,slow=14,SNR=3.6							
PYUN	**Piuthan**	**12.92**	**130**	*eP*		**Pn**	**06 57 14.1**	**-1.3**
	comp=E,39nm,0.6s							
DANN	**Dangsing**	**13.22**	**127**	*eP*		**Pn**	**06 57 18.2**	**-1.1**
	comp=E,7.9nm,0.3s							
KOLN	**Koldanda**	**13.53**	**130**	*eP*		**Pn**	**06 57 22.1**	**-1.1**
	comp=E,16nm,0.6s							
GKN	**Gorkha**	**14.02**	**126**	*eP*		**Pn**	**06 57 28.6**	**-0.7**
	comp=E,21nm,0.6s							
KURBB	**Kurchatov Arra**	**14.40**	**17**	P		**P**	**06 57 37.3**	**+0.9**
	comp=E,0.1nm,0.3s,baz=203,slow=11,SNR=14							
KURK	**Kurchatov**	**14.51**	**17**	P		**P**	**06 57 37.5**	**0.0**
DMN	**Daman**	**14.59**	**126**	*eP*		**Pn**	**06 57 36.6**	**0.0**
	comp=E,7.3nm,0.3s							
PKIN	**Phulchoki**	**14.80**	**126**	*eP*		**Pn**	**06 57 39.3**	**+0.1**
	comp=E,18nm,0.5s							
PKI	**Pulchoki**	**14.81**	**126**	*eP*		**Pn**	**06 57 38.5**	**-0.9**
GUN	**Gumba**	**14.90**	**124**	*eP*		**Pn**	**06 57 40.1**	**-0.4**
	comp=E,13nm,0.5s							
ABKAR	**Akbulak array**	**14.98**	**328**	P		**Pn**	**06 57 42.2**	**+1.2**
ABKAR	**Akbulak array**	**14.98**	**328**			**Pn**	**06 57 41.8**	**+0.8**
RAMN	**Ramite**	**16.01**	**125**	*eP*		**P**	**06 57 54.1**	**-0.6**
	comp=E,19nm,0.6s							
TAPN	**Taplejung**	**16.50**	**121**	*eP*		**P**	**06 58 01.1**	**+1.0**
	comp=E,16nm,0.5s							
ODAN	**Odare**	**16.60**	**123**	*eP*		**Pn**	**06 58 02.0**	**+0.8**
	comp=E,12nm,0.5s							
AKTO	**Aktyubinsk**	**16.69**	**328**	P		**Pn**	**06 58 04.9**	**+3.0**
	comp=E,0.7nm,0.3s,baz=129,slow=12,SNR=5.4							
ZAA0	**Zalesovo Array**	**19.15**	**24**	P		**P**	**06 58 28.7**	**+0.3**
ZAA0				IAmb	IAmb	06 58 30.4		
	comp=Z,6.9nm,0.7s							
ZALV	**Zalesovo Beam**	**19.15**	**24**	P		**P**	**06 58 29.4**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=222,slow=9.6,SNR=31							
ZALV	**Zalesovo Beam**	**19.15**	**24**	P		**P**	**06 58 28.8**	**+0.3**
SONM	**Songino Array**	**27.46**	**56**	P		**P**	**06 59 51.0**	**+2.1**
	comp=Z,0.6nm,0.5s,baz=254,slow=10.0,SNR=2.5							
HFS	**Hagfors**	**43.09**	**321**	P		**P**	**07 02 03.5**	**+1.7**
	comp=Z,1.4nm,0.4s,baz=95,slow=7.4,SNR=4.3							
NOA	**NORSAR Array B**	**44.38**	**323**	P		**P**	**07 02 12.0**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=81,slow=7.2,SNR=1.2							
WRA	**Warramunga Arr**	**81.68**	**123**	P		**P**	**07 06 16.5**	**-2.2**
	comp=Z,0.3nm,0.9s,baz=323,slow=5.8,SNR=2.1							
WR0	**Warramunga Arr**	**81.83**	**122**	P		**P**	**07 06 17.7**	**-1.8**
WR0				IAmb	IAmb	07 06 29.6		
	comp=Z,4.6nm,1.4s							
ASAR	**Alice Springs**	**83.98**	**125**	P		**P**	**07 06 31.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=318,slow=2.6,SNR=1.9							

**IDC 04 07:03:11.0±13.0, 8°43S×123°61E, h139km±88km, mb3.5/1, mb1 3.1/4, mb1mx2.9/45, mbtmpg3.5/4, Error ellipse: s-maj=139.0km s-min=91.3km az=101.0,

ZALV				LR	LR	07 42 55.4	
	comp=Z,42nm,18.6s,baz=122,slow=36						
SONM	**Songino Array**	**56.94**	**32**	P	P	07 21 15.0	+0.8
	1.0nm,0.7s,baz=235,slow=5.2,SNR=4.0						
H01W3	**Cape Leeuwin H**	**60.21**	**134**	T	T	08 26 45.6	
	baz=298						
H01W2	**Cape Leeuwin H**	**60.22**	**134**	T	T	08 26 47.3	
	baz=298						
H01W1	**Cape Leeuwin H**	**60.23**	**134**	T	T	08 26 48.0	
	baz=298						
FITZ	**Fitzroy Crossi**	**63.93**	**112**	LR	LR	07 46 20.7	
	comp=Z,6.7nm,21.7s,baz=311,slow=33						
WRA	**Warramunga Arr**	**72.36**	**112**	P	P	07 22 55.5	+0.1
	1.7nm,0.9s,baz=287,slow=5.7,SNR=9.5						
ASAR	**Alice Springs**	**72.68**	**116**	P	P	07 22 57.0	-0.2
	0.7nm,0.8s,baz=275,slow=6.2,SNR=8.0						
TXAR	**Lajitas Array**	**145.43**	**342**	PKPbc	PKPbc	07 31 07.1	-0.6
	0.8nm,0.7s,baz=70,slow=3.0,SNR=9.4						

NNC ***04*** *07:15:08.6±0.6,50.15N×79.14E,h0km,mb2.9,mpv2.6, Error ellipse: s-maj=16.8km s-min=3.2km az=53.0, Suspected Mining explosion.*
IDC ***04*** *07:15:09.2±1.1,50.07N×78.74E,h0km,mb1 2.8/2, mb1mx2.7/46,mbtmp2.8/2,ML2.4/2,Error ellipse: s-maj=15.6km s-min=6.8km az=66.0*
ASRS ***04*** *07:15:14.1±0.6,50.N±2.×7.9E±.,h5km,MLh3.2/4, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

ISC 04 07:15:08.9±1.2,50.09N±0.03×78.69E±0.06,h0km,n28, σ1§71/53,15C-9D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.50**	**347**	⇓P		**Pb**	**07 15 19.8**	**-0.9**
KUR07				⇑S		**Sb**	**07 15 28.4**	**-0.1**
KUR06	**Kurchatov Arra**	**0.52**	**348**	⇑P		**Pb**	**07 15 20.0**	**-1.0**
KUR06				⇓S		**Sb**	**07 15 28.9**	**-0.1**
KUR14	**Kurchatov Arra**	**0.53**	**353**	⇑P		**Pb**	**07 15 19.7**	**-1.3**
KUR14				⇑S		**Sb**	**07 15 28.5**	**-0.7**
KUR15	**Kurchatov Arra**	**0.53**	**351**	⇑P		**Pb**	**07 15 20.0**	**-1.1**
KUR15				⇑S		**Sb**	**07 15 29.0**	**-0.4**
KURBB	**Kurchatov Arra**	**0.54**	**349**	Pg		**Pb**	**07 15 20.4**	**-0.9**
	2.2nm,0.3s,baz=166,slow=17,SNR=48							
KURBB				Lg		Lg	07 15 28.5	
	2.7nm,0.3s,baz=166,slow=31,SNR=7.9							
KURBB	**Kurchatov Arra**	**0.54**	**349**	⇑P		**Pb**	**07 15 20.2**	**-1.0**
	16nm,0.3s							
KURBB				⇑S		**Sb**	**07 15 29.2**	**-0.3**
	28nm,0.5s							
KUR16	**Kurchatov Arra**	**0.55**	**347**	⇓P		**Pb**	**07 15 20.5**	**-0.9**
KUR16				⇓S		**Sb**	**07 15 29.3**	**-0.5**
KUR17	**Kurchatov Arra**	**0.56**	**345**	⇓P		**Pb**	**07 15 20.8**	**-0.8**
KUR17				⇓S		**Sb**	**07 15 30.1**	**0.0**
KUR05	**Kurchatov Arra**	**0.56**	**350**	⇑P		**Pb**	**07 15 20.4**	**-1.1**
KUR05				⇑S		**Sb**	**07 15 29.7**	**-0.4**
KUR04	**Kurchatov Arra**	**0.58**	**351**	⇑P		**Pb**	**07 15 21.0**	**-0.9**
KUR04				⇑S		**Sb**	**07 15 30.3**	**-0.4**
KURK	**Kurchatov**	**0.62**	**356**	⇑P		**Pb**	**07 15 21.6**	**-1.1**
	5.4nm,0.3s							
KURK				⇑S		**Sb**	**07 15 31.7**	**-0.3**
	6.8nm,0.4s							
MAKZ	**Makanchi**	**3.95**	**145**	P		**Pn**	**07 16 10.6**	**-0.2**
MAKZ				Pg		**Pb**	**07 16 19.7**	**+0.3**
MAKZ				Sg		**Sb**	**07 17 08.3**	**+0.7**
MAKZ	**Makanchi**	**3.95**	**145**	⇓Pg		**Pb**	**07 16 19.2**	**-0.2**
	0.9nm,0.5s							
MAKZ				⇑Lg		Lg	07 17 07.6	
	9.1nm,0.7s							
UKR	**Ust'-Kan**	**3.97**	**75**	P		**Pn**	**07 16 10.2**	**-0.9**
UKR				Pg		**Pb**	**07 16 20.4**	**+0.6**
UKR				Sg		**Sg**	**07 17 13.6**	**-2.9**
MK31	**Makanchi Array**	**4.08**	**143**	⇑Pn		**Pn**	**07 16 12.6**	**+0.1**
	0.1nm,0.1s,baz=322,slow=9.9,SNR=24							
MK31				⇓Pg		**Pb**	**07 16 23.2**	**+1.6**
	0.2nm,0.2s,baz=329,slow=15,SNR=12							
MK31				Lg		Lg	07 17 12.6	
	3.6nm,0.5s,baz=332,slow=28,SNR=18							
MKAR	**Makanchi Array**	**4.08**	**143**	Pn		**Pn**	**07 16 12.5**	**0.0**
	0.2nm,0.3s,baz=322,slow=9.9,SNR=19							
MKAR				Pg		**Pb**	**07 16 19.9**	**-1.7**
	0.6nm,0.3s,baz=324,slow=15,SNR=10.0							
MKAR				Lg		Lg	07 17 11.9	
	1.3nm,0.3s,baz=336,slow=24,SNR=17							
MKAR	**Makanchi Array**	**4.08**	**143**	P		**Pn**	**07 16 12.3**	**-0.2**
MKAR				Pg		**Pb**	**07 16 22.1**	**+0.5**
MKAR				Sg		**Sb**	**07 17 13.8**	**+2.3**
ZALV	**Zalesovo Beam**	**5.41**	**42**	Pn		**Pn**	**07 16 30.4**	**-0.3**
	0.6nm,0.3s,baz=229,slow=14,SNR=5.1							
ZALV				Lg		Lg	07 17 57.2	
	0.2nm,0.3s,baz=227,slow=29,SNR=1.9							
I46RU	**ZALESOVO INFRA**	**5.41**	**42**	*i*			07 47 00.0	
	baz=224,slow=316,SNR=1.5							
NVS	**Novosibirsk**	**5.51**	**29**	Sg		**Sg**	**07 18 13.4**	**+7.7**
DGZ	**Jazzator, Alta**	**5.66**	**91**	P		**Pn**	**07 16 36.2**	**+1.7**
DGZ				S		**Sn**	**07 17 41.1**	**+0.9**
DGZ				Sg		**Sg**	**07 18 07.3**	**-3.4**
CHBI	**Chibit, Altay**	**5.67**	**84**	P		**Pn**	**07 16 35.2**	**+0.8**
CHBI				S		**Sn**	**07 17 40.6**	**+0.4**
CHBI				Sg		**Sg**	**07 18 07.9**	**-2.8**
ELT	**Eltsovka**	**5.67**	**53**	Sg		**Sg**	**07 18 14.1**	**+3.3**
ARTR	**Artybash**	**5.69**	**69**	Sg		**Sg**	**07 18 10.1**	**-1.5**
AKAR	**Aktash**	**5.74**	**84**	P		**Pn**	**07 16 36.4**	**+0.9**
AKAR				S		**Sn**	**07 17 42.0**	**-0.1**
AKAR				Sg		**Sg**	**07 18 12.2**	**-1.0**
ULGR	**Ulagan, Altay**	**5.96**	**81**	P		**Pn**	**07 16 39.8**	**+1.3**
ULGR				S		**Sn**	**07 17 47.3**	**-0.1**
ULGR				Sg		**Sg**	**07 18 17.3**	**-2.9**
CUR	**Chagan-Uzun**	**6.22**	**86**	Sg		**Sg**	**07 18 26.6**	**-1.9**
TEL	**Teeli**	**7.39**	**78**	Sg		**Sg**	**07 19 05.6**	**-0.6**

IDC 04 07:55:08.0±4.9,38.99N×110.16E,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.4/41,mbtmp3.7/4,Error ellipse: s-maj=102.3km s-min=22.3km az=86.0,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.26**	**344**	Pn	Pn		07 57 23.0	+0.1
	baz=159,slow=12,SNR=7.1							
SONM				Sn	Sn		07 59 08.1	+0.3
	0.3nm,0.3s,baz=166,slow=24,SNR=5.3							
SONM				Lg	Lg		07 59 59.7	
	0.2nm,0.3s,baz=163,slow=29,SNR=5.9							
MKAR	**Makanchi Array**	**21.77**	**300**	P	P		08 00 01.8	+0.5
	2.9nm,0.9s,baz=100,slow=12,SNR=14							
CMAR	**Chiang Mai Arr**	**22.66**	**209**	P	P		08 00 10.4	-0.5
	2.6nm,0.7s,baz=13,slow=9.3,SNR=12							
ZALV	**Zalesovo Beam**	**22.82**	**319**	P	P		08 00 12.6	+0.4
	0.4nm,0.3s,baz=135,slow=10.0,SNR=2.7							

IDC ***04*** *07:56:51.1±3.0,25.08S×179.79E,h478km±30km,mb2.9/5, mb1 3.3/7,mb1mx3.1/28,mbtmp4.0/7,Error ellipse: s-maj=25.3km s-min=23.8km az=1.0*
NEIC ***04*** *07:56:51.4±2.2,25.0S±0.1×179.9E±0.2,h501km±10km, mb4.8/14,Error ellipse: s-maj=23.5km s-min=16.6km az=110.0*

ISC 04 07:56:52.3±0.6,24.93S±0.06×179.8E±0.1,h500km,n59, σ1§85/73,mb3.4/7,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.77**	**155**	P	P	**P**	**07 58 16.1**	**-1.0**
GLKZ	**Green Lake**	**4.78**	**155**	P	P	**P**	**07 58 17.5**	**+0.3**
GLKZ				S	S	**S**	**07 59 28.3**	**+1.7**
MSVF	**Nonsavu**	**7.34**	**347**	P	P	**P**	**07 58 44.4**	**+2.1**
NIUE	**Niue**	**11.19**	**61**	P	P	**P**	**07 59 20.7**	**-1.7**
OUZ	**Omahuta**	**11.56**	**206**	P	P	**P**	**07 59 24.0**	**-2.0**
KUZ	**Kuaotunu**	**12.28**	**195**	P	P	**P**	**07 59 34.9**	**+1.3**
MXZ	**Matakaoa Point**	**12.65**	**185**	P	P	**P**	**07 59 36.6**	**-1.0**
MXZ				S	S	**S**	**08 01 57.7**	**+3.8**
MXZ	**Matakaoa Point**	**12.65**	**185**	P	P	**P**	**07 59 35.8**	**-1.8**
HAZ	**Te Kaha**	**12.89**	**187**	P	P	**P**	**07 59 41.1**	**+1.0**
HAZ				S	S	**S**	**08 02 00.4**	**+1.8**
WMGZ	**Waiomatatini S**	**12.90**	**185**	P	P	**P**	**07 59 39.6**	**-0.6**
RUGZ	**Raukumara Rang**	**13.11**	**187**	P	P	**P**	**07 59 45.7**	**+3.1**
RUGZ				S	S	**S**	**08 02 04.9**	**+1.8**
PUZ	**Puketiti**	**13.16**	**185**	P	P	**P**	**07 59 44.5**	**+1.4**
PUZ				S	S	**S**	**08 02 04.6**	**+0.8**
TWGZ	**Tauwhareparae**	**13.29**	**186**	P	P	**P**	**07 59 43.7**	**-0.7**
TWGZ				S	S	**S**	**08 02 09.3**	**+3.0**
URZ	**Urewera**	**13.48**	**189**	P	P	**P**	**07 59 42.8**	**-3.5**
	3.9nm,0.3s,baz=55,slow=3.9,SNR=29							
URZ				S	S	**S**	**08 02 07.8**	**-2.0**
	0.7nm,0.3s,baz=94,slow=18,SNR=3.0							
URZ	**Urewera**	**13.48**	**189**	P	P	**P**	**07 59 44.2**	**-2.1**
URZ				S	S	**S**	**08 02 07.2**	**-2.6**
URZ	**Urewera**	**13.48**	**189**	P	P	**P**	**07 59 43.1**	**-3.2**
MWZ	**Matawai**	**13.50**	**188**	P	P	**P**	**07 59 45.7**	**-0.9**
MWZ				S	S	**S**	**08 02 08.8**	**-1.5**
AFI	**Afiamalu**	**13.55**	**38**	P	P	**P**	**07 59 46.6**	**-0.9**
TKGZ	**Te Karaka**	**13.56**	**186**	P	P	**P**	**07 59 47.0**	**-0.2**
CNGZ	**Carnagh Statio**	**13.57**	**185**	P	P	**P**	**07 59 48.8**	**+1.5**
RAGZ	**Rawiri**	**13.67**	**188**	P	P	**P**	**07 59 47.6**	**-0.8**
RAGZ				S	S	**S**	**08 02 15.0**	**+1.3**
MUGZ	**Murupara**	**13.74**	**190**	P	P	**P**	**07 59 47.8**	**-1.3**
MUGZ				S	S	**S**	**08 02 13.3**	**-1.7**
TLZ	**Tolley Road**	**13.83**	**194**	P	P	**P**	**07 59 52.7**	**+2.6**
RIGZ	**Rimuhau**	**13.84**	**187**	P	P	**P**	**07 59 50.1**	**0.0**
RIGZ				S	S	**S**	**08 02 17.0**	**+0.1**
SNGZ	**Shannon Statio**	**13.96**	**188**	P	P	**P**	**07 59 47.8**	**-3.7**
HIZ	**Hauiti**	**14.17**	**196**	P	P	**P**	**07 59 52.1**	**-1.5**
RATZ	**Rangitukua**	**14.30**	**193**	P	P	**P**	**07 59 55.7**	**+0.6**
BKZ	**Black Stump Fm**	**14.46**	**190**	P	P	**P**	**07 59 54.0**	**-2.7**
BFZ	**Birch Farm**	**15.98**	**190**	P	P	**P**	**08 00 09.0**	**-3.6**
BFZ					IAmb	IAmb	08 00 35.5	
	comp=Z,28nm,1.1s							
MSWZ	**Moikau Station**	**16.86**	**192**	P	P	**P**	**08 00 20.1**	**-1.6**
BHW	**Baring Head**	**16.93**	**193**	P	P	**P**	**08 00 20.9**	**-1.4**
QRZ	**Quartz Range**	**16.96**	**199**	P	P	**P**	**08 00 21.6**	**-1.2**
PLWZ	**Palliser**	**17.01**	**192**	P	P	**P**	**08 00 20.8**	**-2.5**
NNZ	**Nelson**	**17.09**	**197**	P	P	**P**	**08 00 20.6**	**-3.4**
TUWZ	**Tuamarina**	**17.15**	**195**	P	P	**P**	**08 00 21.1**	**-3.5**
BSWZ	**Blackbirch Sta**	**17.44**	**195**	P	P	**P**	**08 00 25.9**	**-1.5**
THZ	**Tophouse**	**17.73**	**197**	P	P	**P**	**08 00 27.5**	**-2.6**
THZ					IAmb	IAmb	08 00 39.9	
	comp=Z,42nm,1.3s							
KHZ	**Kahutara**	**18.18**	**195**	P	P	**P**	**08 00 32.5**	**-1.6**
KHZ					IAmb	IAmb	08 00 51.9	
	comp=Z,46nm,1.5s							
LTZ	**Lake Taylor**	**18.85**	**197**	P	P	**P**	**08 00 38.7**	**-1.6**
LTZ					IAmb	IAmb	08 00 46.9	
	comp=Z,28nm,1.3s							
MQZ	**McQueen's Wall**	**19.61**	**196**	P	P	**P**	**08 00 43.9**	**-3.3**
RPZ	**Rata Peaks**	**20.05**	**199**	P	P	**P**	**08 00 49.6**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=56,slow=6.5,SNR=1.7							
RPZ	**Rata Peaks**	**20.05**	**199**	P	P	**P**	**08 00 50.9**	**-0.4**
RPZ					IAmb	IAmb	08 01 12.6	
	comp=Z,54nm,1.5s							
ASAR	**Alice Springs**	**41.67**	**262**	P	P	**P**	**08 03 57.4**	**+0.6**
	comp=Z,0.7nm,1.0s,baz=93,slow=6.9,SNR=6.6							
ASAR					PcP	**PcP**	**08 05 42.9**	**+0.9**
	comp=Z,0.4nm,0.9s,baz=95,slow=4.9,SNR=2.3							
WB2	**Warramunga Arr**	**42.13**	**267**	P	P	**P**	**08 04 00.9**	**+0.5**
WB2					IAmb	IAmb	08 04 25.9	
	comp=Z,8.2nm,1.4s							
WB0	**Warramunga Arr**	**42.14**	**268**	P	P	**P**	**08 04 01.1**	**+0.6**
WRA	**Warramunga Arr**	**42.14**	**267**	P	P	**P**	**08 04 00.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=100,slow=6.8,SNR=16							
WRA					ScP	**ScP**	**08 08 48.6**	**+2.3**
	comp=Z,0.6nm,1.0s,baz=106,slow=3.8,SNR=4.6							
WRA	**Warramunga Arr**	**42.14**	**267**	P	P	**P**	**08 03 59.6**	**-0.9**
QSPA	**South Pole Qui**	**65.15**	**180**	P	P	**P**	**08 06 43.9**	**+0.7**
MAW	**Mawson**	**76.71**	**201**	P	P	**P**	**08 07 51.6**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=141,slow=11,SNR=6.3							
MAW	**Mawson**	**76.71**	**201**	P	P	**P**	**08 07 50.0**	**-1.1**
USRK	**Ussuriysk Ar.**	**81.52**	**327**	P	P	**P**	**08 08 15.5**	**-1.4**
NVAR	**Mina Array Bea**	**85.64**	**44**	P	P	**P**	**08 08 39.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=224,slow=7.6,SNR=3.2							
NVAR	**Mina Array Bea**	**85.64**	**44**	P	P	**P**	**08 08 37.1**	**-0.7**
TXAR	**Lajitas Array**	**91.15**	**58**	P	P	**P**	**08 09 05.5**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=209,slow=7.2,SNR=6.0							
TXAR	**Lajitas Array**	**91.15**	**58**	P	P	**P**	**08 09 03.1**	**-0.6**
COLD	**Coldfoot**	**94.60**	**11**	P	P	**P**	**08 09 18.4**	**-0.1**
COLD					IAmb	IAmb	08 09 22.4	
	comp=Z,4.4nm,0.5s							
AKASG	**Malin Array Be**	**145.72**	**326**	PKPbc	PKPbc	**PKPbc**	**08 15 34.0**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=51,slow=3.6,SNR=2.1							
BRTR	**Keskin Array B**	**148.02**	**306**	PKPbc	PKPbc	**PKPbc**	**08 15 41.6**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=132,slow=2.1,SNR=2.6							
TORD	**Torodi Ar. Bea**	**168.14**	**189**	PKPab	PKPab	**PKPab**	**08 17 13.0**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=184,slow=4.1,SNR=2.1							

JMA 04 08:09:43.0±0.2,39.57N×144.60E,h46km,M3.6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**2.14**	**281**	P	Pn		08 10 17.2	+1.0
MIYJ	**Miyakonagasawa**	**2.15**	**271**	P	Pn		08 10 17.5	+1.2
MIYJ				eS	Sn		08 10 42.9	+1.1
JKEN	**Kujiedanarisaw**	**2.31**	**287**	P	Pn		08 10 19.5	+0.9
JKEN				eS	Sn		08 10 46.6	+0.8
OFUJ	**Ofunato**	**2.33**	**259**	P	Pn		08 10 19.6	+0.8
OFUJ				eS	Sn		08 10 46.4	+0.3
JANG	**Nango**	**2.50**	**290**	P	Pn		08 10 22.3	+1.1
JANG				eS	Sn		08 10 51.0	+0.5
JOM	**Ohasama**	**2.56**	**269**	P	Pn		08 10 23.6	+1.6
JOM				eS	Sn		08 10 54.1	+2.2
JMK	**Ichinoseki**	**2.70**	**258**	P	Pn		08 10 25.0	+1.2
JMK				eS	Sn		08 10 55.9	+0.7
JNBK	**Urakawa-nobuka**	**3.05**	**333**	P	Pn		08 10 30.8	+2.1
JNBK				eS	Sn		08 11 07.0	+3.1
JCH	**Churui**	**3.18**	**343**	P	Pn		08 10 31.7	+1.2
JCH				eS	Sn		08 11 08.1	+0.9
JYK	**Kaneyama**	**3.36**	**260**	P	Pn		08 10 35.0	+2.1
JAK	**Akkeshi**	**3.42**	**1**	S	Sn		08 11 13.2	+0.1
JAR	**Ashorobuto**	**3.78**	**351**	eS	Sn		08 11 21.8	0.0
NEM2	**Nemuro 2**	**3.89**	**12**	P	Pn		08 10 39.3	-0.9
NEM2				eS	Sn		08 11 22.0	-2.5
JTKR	**Abashiri--Toko**	**4.43**	**354**	P	Pn		08 10 49.1	+1.5
JTKR				eS	Sn		08 11 38.4	+0.6
JRY	**Ryogami san**	**5.74**	**234**	P	Pn		08 11 05.3	-0.4

NEIC ***04*** *08:49:04.5±1.4,64.5N±0.1×17.6W±0.2,h8km±5km, mb4.4/11,Error ellipse: s-maj=15.5km s-min=8.2km az=201.0*
IDC ***04*** *08:49:05.2±1.1,64.43N×17.63W,h0km,mb3.6/6, mb1 4.0/7,mb1mx3.6/50,mbtmp3.6/7,ML3.9/1,MS3.1/6, Ms1 3.1/6,ms1mx2.8/45,Error ellipse: s-maj=34.9km s-min=13.4km az=15.0*

ISC 04 08:49:05.5±0.6,64.48N±0.07×17.48W±0.06,h10km,n34, σ1§45/32,mb4.0/12,Iceland

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.68**	**281**	Pg		**Pn**	**08 49 33.2**	**-1.7**
	15nm,0.3s,baz=98,slow=8.2,SNR=62							
BORG				Lg		Lg	08 49 56.5	
	5.6nm,0.3s,baz=180,slow=20,SNR=9.8							
BORG	**Borgarnes**	**1.68**	**281**			**Pn**	**08 49 33.3**	**-1.6**
BORG					Sn	**Sn**	**08 49 55.0**	**-1.4**
SCO	**Scoresbysund**	**6.27**	**346**			**Pn**	**08 50 34.6**	**-3.3**
SCO	**Scoresbysund**	**6.27**	**346**	*i* P		**Pn**	**08 50 35.9**	**-1.9**
SCO				*e*S		**Sn**	**08 51 50.1**	**+0.7**
SCO	**Scoresbysund**	**6.27**	**346**	*i* P		**Pn**	**08 50 36.0**	**-1.9**
SCO				*i* P		**Pn**	**08 50 36.0**	**-1.9**
SCO				*e*			08 50 36.0	
	baz=186,slow=6.5							
SCO				*e*S		**Sn**	**08 51 50.2**	**+0.7**
SCO				IAML			08 51 59.9	
	comp=Z,4.4nm,0.5s							
EKA	**Eskdalemuir Ar**	**11.62**	**135**	Pn		**Pn**	**08 51 51.6**	**+0.4**
	baz=328,slow=13,SNR=5.9							
NC204	**NORSAR Array S**	**13.22**	**91**	Pn		**Pn**	**08 52 11.6**	**-1.4**
NOA	**NORSAR Array B**	**13.52**	**92**	LR		LR	08 57 04.2	
	comp=Z,63nm,18.9s,baz=290,slow=35							
SFJD	**Kangerlussuaq**	**13.75**	**295**	LR		LR	08 57 09.9	
	comp=Z,92nm,18.4s,baz=128,slow=35							
HFS	**Hagfors**	**15.03**	**92**	LR		LR	08 58 00.8	
	comp=Z,88nm,18.7s,baz=338,slow=36							
SPITS	**Spitsbergen Ar**	**17.04**	**23**	LR		LR	08 57 58.0	
	comp=Z,19nm,18.4s,baz=230,slow=31							
FINES	**FINESS Array B**	**19.73**	**79**	P		**P**	**08 53 35.0**	**+0.1**
BRG	**Berggiesshubel**	**21.33**	**115**	*e*P		**P**	**08 53 54.4**	**+2.1**
	comp=Z,12nm,1.2s							
DAVOX	**Davos/Dischmat**	**23.20**	**127**	LR		LR	09 03 01.5	
	comp=Z,88nm,19.9s,baz=85,slow=36							
OJC	**Ojcow**	**24.19**	**108**	P		**P**	**08 54 21.1**	**-0.7**
CIMO	**Cimolais**	**24.51**	**124**	P		**P**	**08 54 24.3**	**-0.5**
CIMO					IAmb	IAmb	08 54 39.6	
	comp=Z,8.9nm,1.4s							
COI	**Coimbra**	**24.88**	**163**	P		**P**	**08 54 27.4**	**-0.7**
ESDC	**Sonseca Array**	**26.08**	**156**	P		**P**	**08 54 37.5**	**-1.5**
RES	**Resolute Bay**	**26.62**	**325**	LR		LR	09 06 08.8	
	comp=Z,47nm,20.8s,baz=56,slow=38							
RES	**Resolute Bay**	**26.62**	**325**	P		**P**	**08 54 44.1**	**+0.6**
BR231	**Keskin MP Arra**	**37.97**	**106**	P		**P**	**08 56 22.4**	**-0.7**
TIXI	**Tiksi**	**42.21**	**15**	P		**P**	**08 56 58.1**	**+0.3**
TIXI					IAmb	IAmb	08 57 03.0	
	comp=Z,9.2nm,1.4s							
BMAR	**Burnt Mountain**	**43.07**	**333**	P		**P**	**08 57 05.8**	**+0.9**
ILAR	**Eielson Array**	**45.86**	**333**	P		**P**	**08 57 29.2**	**+2.0**
	comp=Z,0.9nm,0.9s,baz=28,slow=5.5,SNR=7.0							
HDA	**Harding Lake**	**46.19**	**332**	P		**P**	**08 57 31.7**	**+1.9**
HDA					IAmb	IAmb	08 57 40.4	
	comp=Z,3.6nm,0.6s							
KTH	**Kantishna Hill**	**47.74**	**334**	P		**P**	**08 57 40.9**	**-1.1**
KTH					IAmb	IAmb	08 57 58.7	
	comp=Z,7.5nm,1.3s							
MKAR	**Makanchi Array**	**52.82**	**58**	P		**P**	**08 58 21.2**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=312,slow=5.8,SNR=4.9							
TORD	**Torodi Ar. Bea**	**52.97**	**156**	P		**P**	**08 58 23.0**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=345,slow=9.5,SNR=2.7							
PD31	**Pinedale Array**	**53.26**	**293**	P		**P**	**08 58 23.4**	**-0.8**
PD31					IAmb	IAmb	08 58 28.2	
	comp=Z,2.2nm,0.9s							
PDAR	**Pinedale Array**	**53.26**	**293**	P		**P**	**08 58 25.1**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=50,slow=6.6,SNR=8.2							
PDAR	**Pinedale Array**	**53.26**	**293**	P		**P**	**08 58 23.0**	**-1.2**
DBIC	**Dimbokro**	**58.41**	**165**	P		**P**	**08 59 00.6**	**-0.4**
DBIC					IAmb	IAmb	08 59 14.1	
	comp=Z,11nm,1.3s							
NVAR	**Mina Array Bea**	**60.40**	**297**	P		**P**	**08 59 16.0**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=37,slow=6.8,SNR=2.0							
TXAR	**Lajitas Array**	**62.33**	**280**	P		**P**	**08 59 29.9**	**+2.0**
	comp=Z,0.8nm,1.1s,baz=64,slow=2.9,SNR=4.1							

IDC ***04*** *08:53:32.3±0.9,0.68S×15.82W,h0km,mb4.0/9, mb1 4.2/11,mb1mx3.9/43,mbtmp4.1/11,ML3.5/2,MS3.5/14, Ms1 3.5/14,ms1mx3.3/35,Error ellipse: s-maj=26.4km s-min=22.6km az=118.0*
NEIC ***04*** *08:53:33.0±2.5,0.60S±0.07×15.8W±0.2,h10km±1km, mb4.6/10,Error ellipse: s-maj=28.9km s-min=11.7km az=277.0*

ISC 04 08:53:33.2±0.7,0.6S±0.1×15.8W±0.1,h10km,n40, σ1§17/23,mb4.4/11,MS3.4/12,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H10N2	**ASCENSION HYDR**	**7.30**	**170**		T	T	09 02 39.2	
	baz=348,slow=74,SNR=222							
H10N3	**ASCENSION HYDR**	**7.31**	**170**		T	T	09 02 35.9	
	baz=348,slow=74,SNR=264							
H10N1	**ASCENSION HYDR**	**7.32**	**170**		T	T	09 02 40.6	
	baz=348,slow=74,SNR=396							
H10S3	**ASCENSION HYDR**	**8.38**	**172**		T	T	09 03 55.1	
	baz=351,slow=74,SNR=122							
H10S2	**ASCENSION HYDR**	**8.39**	**172**		T	T	09 04 00.7	
	baz=229,slow=74,SNR=53							
DBIC	**Dimbokro**	**13.08**	**56**		Pn	**Pn**	**08 56 39.1**	**-0.2**
	0.2nm,0.3s,baz=163,slow=13,SNR=1.8							
DBIC					Sn	**Sn**	**08 59 03.1**	**-1.9**
	0.3nm,0.3s,baz=307,slow=17,SNR=1.7							
DBIC					LR	LR	09 00 52.1	
	comp=Z,215nm,20.4s,baz=230,slow=33							
KOWA	**Kowa**	**18.99**	**37**	P		**Pn**	**08 57 57.9**	**+2.0**
	0.3nm,0.3s,baz=221,slow=6.5,SNR=5.9							
KOWA					LR	LR	09 04 36

279nm,0.3s,baz=162,slow=23,SNR=14
LEM LR LR 09 20 19.0
comp=Z,564nm,18.4s,baz=176,slow=44
LEM Lembang 1.70 29 P **Pn 09 19 28.6 +1.6**
CMJI Cimerak 1.74 72 P **Pn 09 19 26.8 -0.5**
CMJI S **Sn 09 19 48.7 +0.5**
DBJI Dramaga 1.76 359 P **Pn 09 19 30.0 +2.4**
CGJI Cibinong 2.01 328 P **Pn 09 19 33.7 +2.6**
SBJI Serang 2.28 344 P **Pn 09 19 37.7 +2.9**
KPJI Karang Pucung 2.35 6 P **Pn 09 19 37.4 +1.7**
XMIS Christmas Isla 2.42 207 **Pn 09 19 37.7 +1.0**
UGM Wanagama 3.73 84 Pn **Pn 09 19 56.3 +1.5**
SMRI Semarang 3.84 71 Pn **Pn 09 19 57.1 +0.8**
KLSI 4.14 330 P **Pn 09 20 02.2 +1.8**
MNAI Manna 5.47 316 Pn **Pn 09 20 16.8 -1.8**
JAGI Jajag, Banyuwa 7.30 92 Pn **Pn 09 20 45.7 +1.9**
KAPI Kappang 13.30 77 LR LR 09 27 48.2
comp=Z,51nm,20.5s,baz=270,slow=39
FITZ Fitzroy Crossi 20.75 120 P **P 09 23 38.4 +0.8**
1.1nm,0.6s,baz=270,slow=7.1,SNR=2.7
FITZ Fitzroy Crossi 20.75 120 P **P 09 23 39.1 +1.5**
FAKI Fak Fak 25.90 80 P **P 09 24 29.5 +0.9**
FAKI IAmb IAmb 09 24 58.0
comp=Z,14nm,1.2s
NWAO Narrogin (SRO) 26.33 160 LR LR 09 32 50.1
comp=Z,55nm,20.9s,baz=44,slow=32
CMAR Chiang Mai Arr 27.71 344 P **P 09 24 42.6 -2.2**
comp=Z,1.0nm,0.3s,baz=181,slow=8.6,SNR=4.5
CMAR LR LR 09 38 07.2
comp=Z,16nm,18.8s,baz=190,slow=42
CMAR Chiang Mai Arr 27.71 344 P **P 09 24 43.9 -0.9**
WB0 Warramunga Arr 29.05 116 P **P 09 24 58.1 +1.3**
WB0 IAmb IAmb 09 25 01.6
comp=Z,6.5nm,1.2s
WRA Warramunga Arr 29.06 116 P **P 09 24 58.8 +1.9**
comp=Z,0.4nm,0.6s,baz=286,slow=12,SNR=9.0
WRA Warramunga Arr 29.06 116 P **P 09 24 57.4 +0.4**
WB2 Warramunga Arr 29.07 116 P **P 09 24 56.5 -0.5**
WB2 IAmb IAmb 09 24 57.9
comp=Z,3.7nm,1.1s
ASAR Alice Springs 30.12 124 P **P 09 25 07.6 +1.3**
comp=Z,0.2nm,0.4s,baz=298,slow=8.3,SNR=7.2
H08S2 Diego Garcia H 33.95 269 T T 10 01 22.4
baz=95
H08S3 Diego Garcia H 33.97 269 T T 10 01 16.2
baz=95
H08S1 Diego Garcia H 33.97 269 T T 10 01 22.6
baz=95
STKA Stephens Creek 39.93 131 P **P 09 26 31.3 +0.6**
comp=Z,1.0nm,0.5s,baz=304,slow=13,SNR=3.8
STKA Stephens Creek 39.93 131 P **P 09 26 32.6 +2.0**
STKA IAmb IAmb 09 26 46.1
comp=Z,2.2nm,1.5s
USA0B Ussuriysk Arra 57.04 21 P **P 09 28 40.4 -1.7**
USRK Ussuriysk Ar. 57.04 21 P **P 09 28 40.8 -1.3**
comp=Z,1.3nm,0.7s,baz=207,slow=8.3,SNR=4.2
USRK Ussuriysk Ar. 57.04 21 P **P 09 28 39.9 -2.1**
MK31 Makanchi Array 59.05 341 P **P 09 28 55.2 -0.9**
MK31 IAmb IAmb 09 28 57.1
comp=Z,0.9nm,0.7s
MKAR Makanchi Array 59.05 341 P **P 09 28 54.5 -1.7**
comp=Z,1.0nm,0.6s,baz=143,slow=7.3,SNR=10
MKAR Makanchi Array 59.05 341 P **P 09 28 55.2 -0.9**
ABKAR Akbulak array 70.43 330 P **P 09 30 08.3 -1.9**
TXAR Lajitas Array 144.59 50 PKP **PKPdf 09 38 33.0 -0.4**
comp=Z,0.4nm,0.8s,baz=202,slow=1.9,SNR=4.0
TKL Tuckaleechee C 151.13 18 PKPbc **PKPbc 09 38 49.3 -0.4**
baz=169,slow=5.2

PGC 04 09:20:18.4±2.0, 49°.11N×129°.97W, h10km, MLSn3.2/23, Mw3.8/23, 254km Wsw of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMF	**NEPTUNE Canada**	**1.29**	**153**	P	Pn	09 20 39.6	-2.6
KEMF				S	Sb	09 20 54.6	-4.5
BPBC	**Brooks Peninsu**	**1.77**	**53**	Pn	Pn	09 20 46.9	-2.3
HOLB	**Holberg**	**1.94**	**37**	Pn	Pn	09 20 49.3	-2.1
HOLB				Sn	Sn	09 21 12.2	-3.7
EDB	**Eliza Dome**	**2.01**	**66**	Pn	Pn	09 20 50.1	-2.2
FHRB	**Fair Harbour**	**2.08**	**62**	Pn	Pn	09 20 51.5	-1.8
MAYB	**Maynard**	**2.23**	**53**	Pn	Pn	09 20 53.7	-1.8
PHC	**Port Hardy**	**2.29**	**45**	Pn	Pn	09 20 54.6	-1.6
PHC				Sn	Sn	09 21 20.3	-4.2
WOSB	**Woss**	**2.45**	**63**	Pn	Pn	09 20 57.4	-1.1
TLCB	**Telegraph Cove**	**2.49**	**53**	Pn	Pn	09 20 57.8	-1.1
TLCB				Sn	Sn	09 21 25.6	-3.7
GDR	**Gold River**	**2.66**	**74**	Pn	Pn	09 20 59.0	-2.1
TOFB	**Tofino**	**2.67**	**87**	Pn	Pn	09 21 00.1	-1.3
NCRB	**Newcastle Ridg**	**2.85**	**61**	Pn	Pn	09 21 03.4	-0.6
SPLB	**Strathcona Par**	**2.92**	**73**	Pn	Pn	09 21 02.8	-2.0
BTB	**Buttle Lake**	**2.93**	**81**	Pn	Pn	09 21 03.6	-1.6
BTB				Sn	Sn	09 21 36.1	-4.4
OZB	**Mount Ozzard**	**2.95**	**91**	Pn	Pn	09 21 03.4	-1.8
MWAB	**Mount Washingt**	**3.11**	**76**	Pn	Pn	09 21 06.1	-1.4
MWAB				Sn	Sn	09 21 41.9	-3.0
CBB	**Campbell River**	**3.14**	**71**	Pn	Pn	09 21 05.6	-2.3
BFSB	**Bamfield**	**3.19**	**93**	Pn	Pn	09 21 07.0	-1.5
B928	**Bamfield**	**3.20**	**93**	Pn	Pn	09 21 06.7	-1.9
B928				Sn	Sn	09 21 42.4	-4.3
BBB	**Bella Bella**	**3.30**	**20**	Pn	Pn	09 21 09.3	-0.8
BBB				Sn	Sn	09 21 44.0	-5.3
B927	**Port Alberni**	**3.39**	**86**	Pn	Pn	09 21 10.3	-0.8
MGB	**Mount Grey**	**3.47**	**90**	Pn	Pn	09 21 11.2	-1.4
OCP	**Olym-Cheeka Pk**	**3.63**	**101**	Pn	Pn	09 21 14.0	-0.6
TXB	**Texada**	**3.66**	**79**	Pn	Pn	09 21 14.8	-0.2
B926	**Mesachie Lake**	**3.86**	**92**	Pn	Pn	09 21 17.4	-0.2
NLLB	**Nanaimo Lost L**	**3.92**	**86**	Pn	Pn	09 21 18.5	-0.2
SHB	**Sechelt**	**4.01**	**81**	Pn	Pn	09 21 19.8	-0.2
OBC	**Olympics--Boni**	**4.05**	**103**	Pn	Pn	09 21 20.2	-0.3
BUTB	**Butedale**	**4.08**	**13**	Pn	Pn	09 21 19.9	-0.9
BUTB				Sn	Sn	09 22 04.7	-3.8
STW	**Striped Peak**	**4.29**	**101**	Pn	Pn	09 21 23.6	-0.1
B010	**North Saanich**	**4.32**	**94**	Pn	Pn	09 21 23.6	-0.6
B009	**North Saanich**	**4.33**	**94**	Pn	Pn	09 21 23.3	-0.8
PGC	**Sidney**	**4.33**	**94**	Pn	Pn	09 21 24.1	-0.1
B011	**North Saanich**	**4.33**	**94**	Pn	Pn	09 21 23.6	-0.6
BIB	**Bowen Island**	**4.37**	**84**	Pn	Pn	09 21 25.1	+0.3
VGZ	**Gonzales**	**4.45**	**96**	Pn	Pn	09 21 25.5	-0.3
WPB	**Watts Point**	**4.45**	**80**	Pn	Pn	09 21 24.8	-1.1
GRNB	**Grenville Isla**	**4.75**	**0**	Pn	Pn	09 21 30.3	+0.3
BLN	**Blyn Mountain**	**4.77**	**101**	Pn	Pn	09 21 30.7	+0.4
UBRB	**Upper Baezaeko**	**5.31**	**42**	Pn	Pn	09 21 38.3	+0.6
MBW	**Mount Baker**	**5.33**	**90**	Pn	Pn	09 21 37.0	-1.1
LLLB	**Lillooet**	**5.44**	**71**	Pn	Pn	09 21 40.0	+0.5
HOPB	**Hope**	**5.61**	**84**	Pn	Pn	09 21 42.4	+0.6
RPW	**Rockport**	**5.63**	**94**	Pn	Pn	09 21 42.8	+0.6
FMW	**Mount Fremont**	**5.97**	**108**	Pn	Pn	09 21 47.9	+0.8
FSB	**Fort Saint Jam**	**6.42**	**31**	Pn	Pn	09 21 53.9	+1.0
LTY	**Liberty**	**6.49**	**103**	Pn	Pn	09 21 55.6	+1.7
PNT	**Penticton**	**6.79**	**84**	Pn	Pn	09 21 58.5	+0.5
MNB	**Mounoet Dainar**	**7.99**	**63**	Pn	Pn	09 22 14.2	-0.5
BMBC	**Bull Mountain**	**8.43**	**31**	Pn	Pn	09 22 21.1	+0.6
NBC5	**NorthernBC 5**	**9.49**	**25**	Pn	Pn	09 22 37.5	+2.4
EDM	**Edmonton**	**11.21**	**62**	Pn	Pn	09 22 59.1	+0.5

IDC 04 09:32:31.2±1.7, 28°.10N×101°.79E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/37, mbtmp3.3/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/26, Error ellipse: s-maj=50.8km s-min=27.2km az=74.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.95**	**196**	Pg	Pn	09 35 34.2	+39
	0.2nm,0.3s,baz=6.3,slow=17,SNR=4.3						
CMAR				Lg	Lg	09 37 44.6	
	0.4nm,0.3s,baz=19,slow=27,SNR=1.7						
TLY	**Talaya**	**23.59**	**3**	LR	LR	09 47 55.7	
	comp=Z,40nm,18.1s,baz=7.0,slow=39						
MKAR	**Makanchi Array**	**24.13**	**326**	P	P	09 37 48.2	-0.6
	0.5nm,0.8s,baz=127,slow=9.2,SNR=2.8						
KLR	**Kul'dur**	**31.18**	**39**	LR	LR	09 53 07.6	
	comp=Z,35nm,19.2s,baz=86,slow=40						
GEYT	**Alibeck**	**37.61**	**297**	LR	LR	09 57 26.1	
	comp=Z,25nm,20.5s,baz=310,slow=40						
WRA	**Warramunga Arr**	**57.20**	**143**	P	P	09 42 20.3	0.0
	0.3nm,0.5s,baz=330,slow=7.7,SNR=2.6						
ASAR	**Alice Springs**	**60.07**	**146**	P	P	09 42 40.7	+0.4
	0.3nm,0.8s,baz=328,slow=6.8,SNR=2.7						

IDC 04 09:37:57.8±7.7, 7°.57N×94°.37E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/40, mbtmp3.5/4, Error ellipse: s-maj=380.7km s-min=30.7km az=57.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.54**	**236**	T	T	10 10 22.0	
	baz=55,slow=74						
H08S2	**Diego Garcia H**	**26.54**	**236**	T	T	10 10 23.4	
	baz=55,slow=74						
H08S1	**Diego Garcia H**	**26.55**	**236**	T	T	10 10 23.9	
	baz=55						
MKAR	**Makanchi Array**	**40.44**	**347**	P	P	09 45 37.5	-0.4
	0.7nm,0.6s,baz=160,slow=8.9,SNR=6.1						
KURBB	**Kurchatov Arra**	**44.90**	**346**	P	P	09 46 14.3	+0.2
	0.9nm,0.6s,baz=173,slow=7.7,SNR=8.0						
ZALV	**Zalesovo Beam**	**46.89**	**352**	P	P	09 46 29.5	-0.2
	0.5nm,0.4s,baz=186,slow=7.2,SNR=2.1						
WRA	**Warramunga Arr**	**47.90**	**125**	P	P	09 46 38.1	-0.1
	0.2nm,0.7s,baz=304,slow=9.0,SNR=2.0						

*KRNET **04** 09:38:31.6±0.1, 42°.99N×69°.18E, mb3.0*
*SOME **04** 09:38:33.6, 43°.62N×69°.75E*
*NNC **04** 09:38:34.4±2.2, 43°.63N×69°.76E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=18.1km s-min=4.7km az=130.0, Suspected Mining explosion.*

ISC 04 09:38:38.2±2.1, 43°.46N±0°.08×69°.81E±0°.09, h0km, n18, σ1§98/27, 16C, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRLS	**Boroldoy**	**0.43**	**178**	P	Pn	09 38 49.2	-2.5
	22nm,0.4s						
BRLS				S	Sb	09 39 01.2	+5.6
	21nm,0.4s						
KK31	**Karatay Array**	**0.62**	**124**	⇑P	Pg	09 38 49.4	-0.8
	0.8nm,0.3s,baz=324,slow=17,SNR=8.7						
KK31				⇑S	Sb	09 39 00.5	-0.7
	5.3nm,0.3s,baz=318,slow=29,SNR=4.2						
IUG	**Iuzhnay**	**1.32**	**173**	P	Pb	09 39 02.2	-1.7
	17nm,0.4s						
IUG				S	Sn	09 39 23.7	+1.3
	60nm,0.5s						
MNAS	**Manas**	**2.20**	**115**	⇑*e*P	Pn	09 39 15.5	-0.7
	baz=0.0						
MNAS				⇑*i*S	Sb	09 39 47.7	+0.8
	baz=0.0						
MRKS	**Merke**	**2.60**	**105**	Pg	Pb	09 39 25.1	-0.7
	4.3nm,0.5s						
MRKS				Lg	Lg	09 40 02.0	
	9.9nm,0.5s						
EKS2	**Erkin-Say**	**3.01**	**104**	⇑*i*P	Pn	09 39 28.3	+1.0
	baz=94						
EKS2				⇑*i*S	Sb	09 40 09.3	-0.9
	baz=94						
AML	**Almayashu**	**3.15**	**114**	⇑*i*P	Pn	09 39 29.0	-0.5
	baz=3.0						
AML				⇑*i*S	Sn	09 40 10.7	+2.8
	baz=3.0						
USP	**Ospenovka**	**3.42**	**92**	⇑*i*P	Pn	09 39 35.4	+2.5
	baz=84						
USP				⇑*i*S	Sb	09 40 21.4	-0.6
	baz=84						
BTLS	**Baital**	**3.43**	**61**	Pg	Pb	09 39 38.4	-1.5
	6.9nm,0.5s						
BTLS				Lg	Lg	09 40 24.9	
	4.0nm,0.6s						
SGDS	**Sogindy**	**3.51**	**88**	Pg	Pb	09 39 38.6	-2.6
	2.4nm,0.6s						
SGDS				Lg	Lg	09 40 25.2	
	4.6nm,0.5s						
AAK	**Ala-Archa**	**3.53**	**102**	⇑*i*P	Pn	09 39 35.6	+1.1
	baz=93						
AAK				⇑*i*S	Sb	09 40 22.1	-3.0
	baz=93						
AAK	**Ala-Archa**	**3.53**	**102**	⇑Pg	Pb	09 39 39.9	-1.7
	1.9nm,0.5s						
AAK				⇑Lg	Lg	09 40 29.5	
	2.4nm,0.5s						
ARLS	**Aral**	**3.69**	**114**	⇑*i*P	Pn	09 39 35.9	-0.8
	baz=5.0						
ARLS				⇑*i*S	Sn	09 40 22.7	+1.8
	baz=5.0						
KRBS	**Karabastau**	**4.27**	**85**	Pg	Pb	09 39 52.2	-1.9
	3.0nm,0.5s						
KRBS				Lg	Lg	09 40 48.6	
	5.4nm,0.5s						
KST	**Kastek**	**4.51**	**93**	Pg	Pb	09 39 59.3	+0.9
	3.6nm,0.4s						
KST				Lg	Lg	09 41 00.7	
	5.9nm,0.5s						
KTBS	**Karatobe**	**5.00**	**85**	Pg	Pb	09 40 06.0	-0.6
	2.1nm,0.5s						
KTBS				Lg	Lg	09 41 12.3	
	11nm,0.5s						
ARXS	**Arharly**	**5.85**	**80**	Pg	Pb	09 40 22.3	+1.2
	2.0nm,0.6s						
ARXS				Lg	Lg	09 41 40.7	
	4.2nm,0.6s						
MNBS	**Baschi**	**6.25**	**81**	Pg	Pb	09 40 29.1	+1.1
	1.0nm,0.4s						
MNBS				Lg	Lg	09 41 51.7	
	4.3nm,0.4s						

*IDC **04** 09:39:57.1±2.9, 14°.41N×93°.62W, h0km, mb3.4/1, mb1 3.7/3, mb1mx3.4/41, mbtmp3.3/3, ML3.4/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/27, Error ellipse: s-maj=205.3km s-min=45.9km az=65.0*
*MEX **04** 09:39:59.4±1.0, 14°.20N×94°.16W, h18km±18km, MD3.8*

ISC 04 09:39:59.3±3.8, 14°.44N±0°.10×94°.01W±0°.07, h8km±21km, n11, σ1§49/16, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.47**	**31**	*e*P	Pn	09 40 25.6	-0.5
PCIG				*i* S	Sg	09 40 46.1	-0.6
THIG		**1.75**	**74**	*i* P	Pn	09 40 29.1	-0.9
THIG				*i* S	Sb	09 40 52.6	-1.2
TGIG		**2.48**	**20**	*e*P	Pn	09 40 41.1	+1.1
TGIG				*e*S	Sn	09 41 11.9	+1.4
CCIG	**Comitan**	**2.57**	**44**	*e*P	Pn	09 40 43.4	+2.0
CCIG				*i* S	Sb	09 41 16.9	-0.8
CMIG	**Matias Romero**	**2.77**	**342**	Pn	Pn	09 40 43.6	-0.3
	5.8nm,0.3s,baz=176,slow=14,SNR=119						
CMIG				Sn	Sn	09 41 14.9	-2.6
	51nm,0.3s,baz=151,slow=15,SNR=45						
CMIG				LR	LR	09 41 24.6	
	comp=Z,60nm,19.0s,baz=172,slow=30						
CMIG	**Matias Romero**	**2.77**	**342**	*e*P	Pn	09 40 43.6	-0.3
CMIG				*i* S	Sn	09 41 16.3	-1.2
TXAR	**Lajitas Array**	**17.30**	**330**	P	P	09 44 04.9	+2.0
	0.0nm,0.3s,baz=153,slow=11,SNR=4.3						
TKL	**Tuckaleechee C**	**23.04**	**22**	LR	LR	09 55 19.1	
	comp=Z,45nm,18.4s,baz=100,slow=40						
NVAR	**Mina Array Bea**	**32.12**	**323**	P	P	09 46 28.8	+1.3
	0.2nm,0.3s,baz=122,slow=7.6,SNR=3.5						
WRA	**Warramunga Arr**	**133.61**	**256**	PKP	PKPdf	09 59 16.4	-1.0
	0.3nm,0.8s,baz=88,slow=3.0,SNR=2.5						
CMAR	**Chiang Mai Arr**	**144.91**	**338**	PKPbc	PKPab	09 59 36.1	-0.9
	0.6nm,0.5s,baz=343,slow=2.8,SNR=5.5						

*IDC **04** 10:47:56.8±0.7, 41°.90N×119°.63W, h0km, mb3.5/1, mb1 3.5/6, mb1mx3.4/44, mbtmp3.1/6, ML3.1/5, MS3.2/2, Ms1 3.2/2, ms1mx2.6/36, Error ellipse: s-maj=10.7km s-min=5.0km az=10.0*
*ANF **04** 10:47:57.2±1.1, 41°.83N×119°.58W, h7km±10km, ML3.8/18, Error ellipse: s-maj=4.1km s-min=2.5km az=92.0*
*REN **04** 10:47:58.1±3.1, 41°.88N±0°.03×119°.61W±0°.04, h0km±6km, ML4.1/4, ML3.8/35(SEA), Mwr3.7/87(NEIC), Error ellipse: s-maj=4.9km s-min=4.7km az=148.0*
*NEIC **04** 10:47:59.9±1.8, 41°.98N±0°.03×119°.68W±0°.04, h5km±2km, Error ellipse: s-maj=5.6km s-min=4.7km az=177.0*
*SEA **04** 10:47:59±4.1, 41°.83N±0°.04×119°.66W±0°.05, h0km±7km, Error ellipse: s-maj=6.3km s-min=4.6km az=218.0*
*NEIC **04** 10:48:00.2, 41°.99N×119°.67W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.76; $M_{\theta\theta}$-1.73; $M_{\phi\phi}$3.49; $M_{r\theta}$-1.27; $M_{\theta\phi}$-0.96; $M_{\phi r}$-3.91; Fault plane solution: $M_0$5.19000×10^{14} NP1:ϕ_s18.42000°, δ77.44000°, λ-63.79000°. NP2:ϕ_s132.25000°, δ28.87000°, λ-153.23000°. Principal axes: T 5.5806, Plg28.0000°, Azm88.0000°; N -0.8986, Plg26.0000°, Azm192.0000°; P -4.6820, Plg51.0000°, Azm318.0000°;*

ISC 04 10:47:57.7±1.3, 41°.91N±0°.02×119°.64W±0°.03, h1km±12km, n106, σ1§86/122, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.50**	**270**		**Pg**	**10 48 08.0**	**+0.8**
MOD				Sg	**Sb**	**10 48 15.5**	**-1.7**
K05A	**Summer Lake**	**1.24**	**312**		**Pg**	**10 48 22.4**	**+0.9**
K05A				Sg	**Sn**	**10 48 39.4**	**-0.6**
M04C	**Macdoel**	**1.65**	**266**	P	Pn	10 48 27.3	-0.7
	baz=86,SNR=166						
M04C				Sb	**Sg**	**10 48 51.5**	**+0.8**
	baz=86						
J08A	**Circle Bar Ran**	**1.69**	**30**	Pn	**Pn**	**10 48 28.1**	**-0.4**
J08A				Sn	**Sb**	**10 48 51.0**	**-0.4**
K04D	**Chiloquin, OR**	**1.73**	**295**	P	Pn	10 48 28.9	-0.2
	baz=114,SNR=90						
K04D				Sb	**Sg**	**10 48 54.9**	**+1.8**
	baz=114						
J05D	**Fort Rock, OR**	**1.81**	**320**	P	**Pn**	**10 48 30.2**	**0.0**
	baz=139,SNR=229						
J05D				Sb	**Sg**	**10 48 57.5**	**+1.6**
	baz=139						
L04D	**Klamath Falls**	**2.01**	**280**	P	**Pn**	**10 48 32.2**	**-0.8**
	baz=99,SNR=368						
L04D				Sb	**Sg**	**10 49 02.7**	**+0.4**
	baz=99						
BEKR	**Beckworth**	**2.11**	**195**		**Pb**	**10 48 36.2**	**-0.7**
PINE	**Pine Mountain**	**2.12**	**334**		**Pb**	**10 48 37.0**	**0.0**
I07A	**Izee**	**2.18**	**3**		**Pb**	**10 48 36.7**	**-1.3**
PAHR	**Pah Rah Range**	**2.21**	**175**		**Pb**	**10 48 38.1**	**-0.3**
J04D	**Umpqua Nationa**	**2.26**	**307**	Sb	**Sg**	**10 49 11.1**	**+0.7**
	baz=126						
O03E	**Paynes Creek**	**2.29**	**226**	P	Pn	10 48 35.4	-1.4
	baz=45,SNR=123						
O03E				Sb	**Sb**	**10 49 09.6**	**+0.7**
	baz=45						
YBH	**Yreka Blue Hor**	**2.30**	**267**	Pn	Pn	10 48 36.0	-0.9
	8.7nm,0.3s,baz=88,slow=11,SNR=72						
YBH				Pg	**Pb**	**10 48 38.7**	**-1.4**
	8.7nm,0.3s,baz=66,slow=14,SNR=65						
YBH				Lg	Lg	10 49 10.2	
	24nm,0.3s,baz=159,slow=8.0,SNR=10						
YBH	**Yreka Blue Hor**	**2.30**	**267**		**Pn**	**10 48 36.2**	**-0.8**
M02C	**Callahan**	**2.46**	**259**	P	Pn	10 48 37.7	-1.4
	baz=78,SNR=14						
M02C				Sb	**Sg**	**10 49 15.4**	**-1.4**
	baz=78						
N02D	**Trinity Center**	**2.49**	**249**	P	Pn	10 48 37.6	-1.9
	baz=68,SNR=56						
N02D				Sb	**Sg**	**10 49 16.1**	**-1.5**
	baz=68						
WDC	**Whiskeytown Da**	**2.56**	**240**		**Pb**	**10 48 42.4**	**-2.0**
HUMO	**Hull Mountain**	**2.56**	**287**		**Pn**	**10 48 39.5**	**-0.9**
VCNR	**Virginia City**	**2.61**	**180**		**Pb**	**10 48 45.8**	**+0.4**
I05D	**Terrebonne, OR**	**2.73**	**333**	Pb	**Pb**	**10 48 48.1**	**+0.7**
	baz=152						
I05D				Sb	**Sg**	**10 49 25.3**	**-0.2**
	baz=152						
ORV	**Oroville**	**2.74**	**212**		**Pb**	**10 48 45.0**	**-2.5**
I04A	**Tendick Farm,**	**2.78**	**314**	Pb	**Pb**	**10 48 48.5**	**+0.3**
	baz=132						
I04A				Sb	**Sg**	**10 49 26.1**	**-0.9**
	baz=132						
PNTR	**Pine Nut**	**2.81**	**179**		**Pb**	**10 48 48.5**	**-0.4**
RUBR	**Rubicon Trail**	**2.88**	**188**		**Pb**	**10 48 49.6**	**-0.4**
L02E	**Cave Junction**	**2.96**	**276**	P	Pn	10 48 46.0	+0.1
	baz=94,SNR=75						
L02E				Sb	**Sb**	**10 49 29.7**	**+1.7**
	baz=94						
KVN	**Kaiserville**	**3.08**	**157**	Pn	**Pb**	**10 48 50.0**	**-3.5**
K02D	**Willamette Mer**	**3.09**	**286**	P	Pn	10 48 48.2	+0.5
	baz=104						
K02D				Sb	**Sg**	**10 49 34.7**	**-2.2**
	baz=104						
AFDM	**Forest Hills D**	**3.12**	**199**		**Pb**	**10 48 52.7**	**-1.4**
MFID	**Camas Ranch**	**3.19**	**60**	Pn	**Pb**	**10 48 49.5**	**+0.4**
KRMB	**Red Mountain**	**3.22**	**265**	Pn	**Pn**	**10 48 50.1**	**+0.5**
KHMM	**Horse Mountain**	**3.25**	**253**		**Pb**	**10 48 53.0**	**-3.2**
I03D	**Drain, OR**	**3.27**	**304**	Sb	**Sg**	**10 49 40.5**	**-2.0**
	baz=122						
H04A	**Detroit Lake**	**3.34**	**327**	Pn	Pn	10 48 51.1	-0.1
RYN	**Ryan**	**3.38**	**165**		**Pb**	**10 48 55.3**	**-3.2**
BMO	**Blue Mountains**	**3.40**	**29**	Pn	**Pb**	**10 48 56.5**	**-2.3**
WAKR	**Walker**	**3.40**	**177**		**Pn**	**10 48 53.2**	**+1.1**
J01E	**Myrtle Point**	**3.41**	**293**	Sg	**Sg**	**10 49 51.5**	**+4.2**
	baz=110						
G08A	**Pilot Rock**	**3.42**	**8**	Pn	**Pn**	**10 48 53.1**	**+0.8**
H04D	**Lebanon**	**3.46**	**320**	Sb	**Sg**	**10 49 46.8**	**-2.1**
	baz=138						
JCC	**Jacoby Creek,**	**3.48**	**253**		**Pn**	**10 48 55.3**	**+2.3**
KMRM	**Mail Ridge**	**3.51**	**243**	Pn	**Pn**	**10 48 55.8**	**+2.3**
ELK	**Elko**	**3.51**	**108**	Pn	**Pn**	**10 48 54.6**	**+0.9**
	0.7nm,0.3s,baz=293,slow=16,SNR=13						
ELK				Pg	**Pb**	**10 48 59.1**	**-1.7**
	5.6nm,0.3s,baz=286,slow=16,SNR=31						
ELK				Sn	**Sn**	**10 49 35.0**	**-0.9**
	1.8nm,0.3s,baz=58,slow=22,SNR=1.6						
ELK				Lg	Lg	10 49 46.9	
	6.0nm,0.3s,baz=189,slow=23,SNR=6.0						
ELK				LR	LR	10 50 37.3	
	comp=Z,274nm,18.4s,baz=300,slow=46						
ELK	**Elko**	**3.51**	**108**		**Pn**	**10 48 53.7**	**0.0**
G05D	**Wamic, OR**	**3.55**	**340**	Pb	**Pb**	**10 49 01.4**	**0.0**
	baz=159						
G05D				Sb	**Sg**	**10 49 49.5**	**-2.3**
	baz=159						
NVAR	**Mina Array Bea**	**3.62**	**163**	Pn	**Pn**	**10 48 55.5**	**+0.3**
	0.5nm,0.3s,baz=346,slow=13,SNR=8.2						
NVAR				Pg	**Pb**	**10 49 00.3**	**-2.4**
	1.2nm,0.3s,baz=345,slow=12,SNR=18						
NVAR				Lg	Lg	10 49 51.8	
	3.7nm,0.3s,baz=346,slow=30,SNR=4.2						
NVAR	**Mina Array Bea**	**3.62**	**163**		**Pn**	**10 48 56.2**	**+1.1

MTPU	**Mount Pierson**	**6.90**	**122**	Pn	**Pn**	**10 49 43.4**	**+3.0**
TMUT	**Trail Mountain**	**6.92**	**109**		**Pn**	**10 49 40.6**	**0.0**
LCMT	**Little Creek M**	**6.95**	**133**		**Pn**	**10 49 40.6**	**-0.2**
Q16A	**Castle Valley**	**7.12**	**112**		**Pn**	**10 49 46.5**	**+3.4**
KNB	**Kanab**	**7.18**	**131**	Pn	**Pn**	**10 49 46.7**	**+2.6**
P17A	**Butcher Ranch,**	**7.18**	**107**		**Pn**	**10 49 47.7**	**+3.6**
PKCU	**Pink Cliffs**	**7.20**	**126**		**Pn**	**10 49 48.0**	**+3.6**
SRU	**San Rafael Swe**	**7.48**	**109**		**Pn**	**10 49 50.5**	**+2.3**
BW06	**Boulder Array**	**7.52**	**80**	Pn	**Pn**	**10 49 49.3**	**+0.6**
PD31	**Pinedale Array**	**7.52**	**80**	Pn	**Pn**	**10 49 50.7**	**+1.9**
PDAR	**Pinedale Array**	**7.52**	**80**	Pn	**Pn**	**10 49 51.4**	**+2.7**
	0.1nm,0.3s,baz=264,slow=14,SNR=6.4						
PDAR				Lg	Lg	10 51 53.5	
	0.1nm,0.3s,baz=258,slow=17,SNR=2.2						
PDAR	**Pinedale Array**	**7.52**	**80**		**Pn**	**10 49 50.1**	**+1.4**
PV23	**Carpenter Ridg**	**8.83**	**109**	Pn	**Pn**	**10 50 08.7**	**+1.9**
PV01	**Paradox Valley**	**9.29**	**110**		Pn	10 50 17.6	+4.6
SMCO	**Snowmass**	**10.02**	**102**		Pn	10 50 27.4	+4.3
ANMO	**Albuquerque**	**12.45**	**120**	LR	LR	10 56 19.1	
	comp=Z,94nm,18.4s,baz=292,slow=40						
TXAR	**Lajitas Array**	**18.02**	**129**	P	**Pn**	**10 52 08.8**	**-0.7**
	0.0nm,0.3s,baz=331,slow=9.2,SNR=3.1						
ILAR	**Eielson Array**	**27.67**	**335**	P	**P**	**10 53 46.6**	**-0.3**
	0.5nm,0.8s,baz=157,slow=9.2,SNR=5.9						

IDC 04 10:52:12.5±2.6, 14°65N×143°66E, h190km±64km, mb2.8/3, mb1 3.0/3, mb1mx2.8/35, mbtmp3.4/3, Error ellipse: s-maj=158.5km s-min=25.8km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.58**	**132**	P	Pn	10 52 46.2	+0.1
	8.2nm,0.3s,baz=316,slow=18,SNR=8.5						
GUMO				S	Sn	10 53 12.2	+0.1
	38nm,0.3s,baz=3.8,slow=22,SNR=11						
WRA	**Warramunga Arr**	**35.58**	**195**	P	P	10 58 51.4	-0.5
	0.5nm,0.8s,baz=16,slow=10.0,SNR=6.4						
ASAR	**Alice Springs**	**39.26**	**194**	P	P	10 59 23.4	+0.5
	0.2nm,0.6s,baz=19,slow=9.0,SNR=1.5						
MKAR	**Makanchi Array**	**59.92**	**316**	P	P	11 01 58.4	-0.1
	0.3nm,0.4s,baz=96,slow=7.4,SNR=4.7						

IDC 04 10:53:03.1±2.4, 2°07N×127°30E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/32, mbtmp3.3/3, Error ellipse: s-maj=180.3km s-min=28.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.94**	**163**	P	P	10 58 09.3	+0.3
	0.4nm,0.3s,baz=342,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.37**	**166**	P		10 58 40.9	-0.4
	0.1nm,0.5s,baz=344,slow=9.6,SNR=1.6						
MKAR	**Makanchi Array**	**59.24**	**326**	P	P	11 03 06.4	0.0
	0.2nm,0.5s,baz=111,slow=7.9,SNR=2.4						

*IDC **04** 11:01:26.9±2.7, 33°.60N×135°.22E, h43km±25km, mb3.4/3, mb1 3.5/6, mb1mx3.3/33, mbtmp3.5/6, ML3.2/3, MS2.5/1, Ms1 2.5/1, ms1mx2.1/32, Error ellipse: s-maj=30.0km s-min=18.3km az=158.0*

*JMA **04** 11:01:26.7, 33°.73N×135°.30E, h44km±1km, M3.5 Broadband fault plane solution: P waves. NP1: ϕs=110.00000°, δ65.00000°, λ178.00000°. NP2: ϕs=201.00000°, δ88.00000°, λ25.00000°. Principal axes: T Plg19.0000°, Azm69.0000°; N Plg65.0000°, Azm206.0000°; P Plg16.0000°, Azm333.0000°;*

JMA Felt I J1.

*NIED **04** 11:01:26.7, 33°.73N×135°.30E, h44km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.90; $M_{\theta\theta}$-3.03; $M_{\phi\phi}$2.14; $M_{r\theta}$-0.99; $M_{\theta\phi}$-1.98; $M_{\phi r}$-2.29; Fault plane solution: $M_0$4.17000×10^{14} NP1: ϕs=210.00000°, δ81.00000°, λ39.00000°. NP2: ϕs=113.00000°, δ51.00000°, λ169.00000°.*

ISC 04 11:01:26.6±1.0, 33°.71N±0°.06×135°.28E±0°.03, h42km±7km, n24, σ0s87/31, mb3.5/3, 6C-4D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWM	**Minabe**	**0.15**	**24**	⇑P	**Pn**	**11 01 33.9**	**+0.1**
JWM				S	**Sn**	**11 01 38.8**	**-0.1**
JTNC	**Tanabenakahech**	**0.30**	**68**	⇑P	**Pn**	**11 01 35.1**	**0.0**
JTNC				S	**Sn**	**11 01 41.0**	**0.0**
JWY	**Kouya**	**0.57**	**27**	⇑P	**Pn**	**11 01 38.2**	**-0.3**
JWY				S	**Sn**	**11 01 46.0**	**-0.9**
JAI	**Aioi**	**0.69**	**277**	⇑P	**Pn**	**11 01 40.1**	**+0.1**
JAI				S	**Sn**	**11 01 49.5**	**-0.2**
JAWN	**Awajishima-nag**	**0.84**	**338**	⇓P	**Pn**	**11 01 42.0**	**0.0**
JAWN				S	**Sn**	**11 01 53.0**	**-0.1**
JKN2	**Miekihoku**	**0.98**	**57**	⇑P	**Pn**	**11 01 43.5**	**-0.4**
JKN2				S	**Sn**	**11 01 55.8**	**-0.8**
JHE	**Heguri**	**1.00**	**19**	⇓P	**Pn**	**11 01 43.9**	**-0.3**
JHE				S	**Sn**	**11 01 56.4**	**-0.8**
JMN	**Monobe**	**1.17**	**271**	⇑P	**Pn**	**11 01 46.4**	**-0.1**
JMN				S	**Sn**	**11 02 00.8**	**-0.5**
TTO1	**TONANKAI O.B.S**	**1.26**	**93**	P	**Pn**	**11 01 47.4**	**0.0**
JJS	**Sakaide**	**1.30**	**301**	⇓P	**Pn**	**11 01 48.2**	**-0.1**
JJS				S	**Sn**	**11 02 03.5**	**-1.0**
JKS	**Kasai**	**1.32**	**344**	⇓P	**Pn**	**11 01 48.6**	**0.0**
JKS				S	**Sn**	**11 02 04.2**	**-0.8**
MAT	**Matsushiro**	**3.71**	**39**	P	**Pn**	**11 02 22.2**	**+0.8**
MAT				*e*S	**Sn**	**11 03 03.8**	**0.0**
MJAR	**Matsushiro Arr**	**3.71**	**39**	P	**Pn**	**11 02 22.8**	**+1.4**
	0.2nm,0.3s,baz=210,slow=13,SNR=13						
JNU	**Nakatsue**	**3.73**	**262**	P	**Pn**	**11 02 22.0**	**+0.3**
	7.4nm,0.3s,baz=59,slow=12,SNR=139						
JNU				S	**Sn**	**11 03 03.1**	**-1.2**
	4.4nm,0.3s,baz=251,slow=20,SNR=7.7						
KSRS	**Korea Array**	**7.06**	**304**	P	**Pn**	**11 03 09.9**	**+2.6**
	0.3nm,0.3s,baz=116,slow=14,SNR=3.2						
KSRS				S	**Sn**	**11 04 24.3**	**-2.0**
	0.6nm,0.3s,baz=124,slow=24,SNR=5.1						
KSRS				LR	LR	11 06 06.3	
	comp=Z,36nm,20.6s,baz=125,slow=39						
SONM	**Songino Array**	**25.85**	**312**	P	**P**	**11 06 53.7**	**-0.4**
	0.5nm,0.3s,baz=125,slow=12,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**31.34**	**108**	T	T	11 40 18.3	
	baz=302,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**31.35**	**108**	T	T	11 40 18.7	
	baz=302,slow=74,SNR=11						
H11N3	**WAKE ISLAND Hy**	**31.36**	**108**	T	T	11 40 19.6	
	baz=302,slow=74,SNR=12						
H11S3	**WAKE ISLAND Hy**	**31.86**	**110**	T	T	11 40 57.6	
	baz=305,slow=75,SNR=10						
H11S1	**WAKE ISLAND Hy**	**31.86**	**110**	T	T	11 40 58.3	
	baz=305,slow=75,SNR=8.6						
H11S2	**WAKE ISLAND Hy**	**31.88**	**110**	T	T	11 40 60.0	
	baz=305,slow=75,SNR=6.9						
MKAR	**Makanchi Array**	**41.74**	**305**	P	**P**	**11 09 12.2**	**+0.7**
	1.1nm,0.6s,baz=92,slow=9.8,SNR=13						
WRA	**Warramunga Arr**	**53.36**	**181**	P	**P**	**11 10 41.5**	**-0.3**
	0.2nm,0.5s,baz=358,slow=8.0,SNR=1.7						

*SJA **04** 11:01:37.7±0.6, 20°.89S×71°.23W, h10km, ML4.0, MW3.9*

*GUC **04** 11:01:45.6±0.7, 20°.88S×70°.80W, h35km±2km, ML3.8*

ISC 04 11:01:41.4±2.4, 20°.89S±0°.03×70°.96W±0°.09, h12km±17km, n30, σ1s39/48, 10C-1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.80**	**67**	⇑*i*P	**Pb**	**11 01 57.2**	**0.0**
TA01				*e*S	**Sb**	**11 02 06.5**	**-1.6**
TA01				IAML		11 02 09.2	
	comp=Z,8μm,0.8s						
TA02	**Huaiquique**	**0.99**	**52**	⇑*i*P	**Pb**	**11 02 00.9**	**+0.3**
TA02				*e*S	**Sb**	**11 02 12.2**	**-1.4**
TA02				IAML		11 02 17.2	
	comp=N,14μm,0.5s						
PB07	**IPOC Station P**	**1.31**	**130**	⇑*i*P	**Pn**	**11 02 05.8**	**0.0**
PB07				*e*S	**Sb**	**11 02 21.5**	**-1.4**
PB07				IAML		11 02 34.3	
	comp=E,2μm,0.2s						
PB07	**IPOC Station P**	**1.31**	**130**	*e*P	**Pn**	**11 02 06.0**	**+0.3**
PB07				IAML		11 02 32.7	
	comp=Z,2μm,0.3s						
PB01	**IPOC Station P**	**1.39**	**97**	⇑*i*P	**Pn**	**11 02 06.6**	**-0.2**
PB01				*e*S	**Sn**	**11 02 22.1**	**-3.0**
PB01				IAML		11 02 25.9	
	comp=E,3μm,0.4s						
PB01	**IPOC Station P**	**1.39**	**97**	*e*P	**Pn**	**11 02 07.1**	**+0.4**
PB01				IAML		11 02 34.6	
	comp=Z,1μm,0.2s						
PSGC	**Pisagua**	**1.51**	**32**	⇑*i*P	**Pn**	**11 02 08.6**	**+0.2**
PSGC				*e*S	**Sn**	**11 02 26.8**	**-1.2**
PSGC				IAML		11 02 33.0	
	comp=N,2μm,0.3s						
PSGCX	**Pisagua**	**1.51**	**32**	*e*P	**Pn**	**11 02 08.6**	**+0.2**
PB03	**IPOC Station P**	**1.61**	**136**	⇑*i*P	**Pn**	**11 02 10.4**	**+0.5**
PB03				*e*S	**Sn**	**11 02 28.4**	**-2.4**
PB03				IAML		11 02 39.1	
	comp=E,1μm,0.4s						
PB03	**IPOC Station P**	**1.61**	**136**	*e*P	**Pn**	**11 02 10.5**	**+0.5**
PB03				IAML		11 02 37.6	
	comp=Z,1μm,0.5s						
PB04	**IPOC Station P**	**1.63**	**152**	*e*P	**Pn**	**11 02 10.6**	**+0.5**
PB04				*i* S	**Sb**	**11 02 31.7**	**-0.4**
PB04				IAML		11 02 41.1	
	comp=N,3μm,0.6s						
PB04	**IPOC Station P**	**1.63**	**152**	*e*P	**Pn**	**11 02 10.6**	**+0.5**
PB04				*e*S	**Sb**	**11 02 32.5**	**+0.3**
PB04				IAML		11 02 41.1	
	comp=Z,3μm,0.4s						
PB11	**IPOC Station P**	**1.66**	**48**	⇑*i*P	**Pn**	**11 02 10.8**	**+0.2**
PB11				*e*S	**Sn**	**11 02 30.9**	**-1.1**
PB11	**IPOC Station P**	**1.66**	**48**	*e*P	**Pn**	**11 02 11.4**	**+0.8**
PB11				IAML		11 02 38.4	
	comp=Z,3μm,0.5s						
PB09	**IPOC Station P**	**1.84**	**120**	⇑*i*P	**Pn**	**11 02 14.3**	**+1.2**
PB09				*e*S	**Sn**	**11 02 36.1**	**-0.4**
PB09				IAML		11 02 43.3	
	comp=E,1μm,0.6s						
PB09	**IPOC Station P**	**1.84**	**120**	*e*P	**Pb**	**11 02 14.8**	**-0.4**
PB09				IAML		11 02 53.5	
	comp=Z,814nm,0.4s						
PB08	**IPOC Station P**	**1.85**	**67**	⇑*i*P	**Pn**	**11 02 14.1**	**+0.7**
PB08				*e*S	**Sn**	**11 02 36.3**	**-0.7**
PB08				IAML		11 02 42.9	
	comp=E,2μm,0.7s						
PB08	**IPOC Station P**	**1.85**	**67**	*e*P	**Pn**	**11 02 14.2**	**+0.8**
PB08				IAML		11 02 45.4	
	comp=Z,1μm,0.7s						
GO01	**Chusmiza**	**2.06**	**54**	⇑*i*P	**Pn**	**11 02 17.1**	**+0.8**
GO01				*e*S	**Sn**	**11 02 41.7**	**-0.5**
GO01				IAML		11 02 47.7	
	comp=N,2μm,0.3s						
PB05	**IPOC Station P**	**2.08**	**160**	*e*P	**Pn**	**11 02 16.7**	**+0.3**
PB05				*i* S	**Sn**	**11 02 43.1**	**+0.8**
PB05				IAML		11 03 01.3	
	comp=E,709nm,0.5s						
PB05	**IPOC Station P**	**2.08**	**160**	*e*P	**Pn**	**11 02 16.7**	**+0.3**
PB05				*e*S	**Sg**	**11 02 47.2**	**-1.2**
PB05				IAML		11 02 54.0	
	comp=Z,540nm,0.8s						
MNMC	**Minye Minye**	**2.17**	**37**	⇓*e*P	**Pn**	**11 02 18.6**	**+0.9**
MNMC				*e*S	**Sn**	**11 02 44.2**	**-0.5**
MNMC				IAML		11 02 54.4	
	comp=E,3μm,0.4s						
MNMCX	**Minye Minye**	**2.17**	**37**	*e*P	**Pn**	**11 02 18.7**	**+1.0**
MNMCX				*e*S	**Sb**	**11 02 49.5**	**+1.7**
PB06	**IPOC Station P**	**2.22**	**145**	*e*P	**Pn**	**11 02 18.8**	**+0.5**
PB06				*i* S	**Sn**	**11 02 46.0**	**+0.1**
PB06				IAML		11 02 55.7	
	comp=E,903nm,0.3s						
PB06	**IPOC Station P**	**2.22**	**145**	*e*P	**Pn**	**11 02 18.9**	**+0.5**
PB06				*e*S	**Sb**	**11 02 50.1**	**+0.8**
PB06				IAML		11 03 04.6	
	comp=Z,807nm,0.5s						
LVC	**Limon Verde**	**2.57**	**132**	*e*P	**Pn**	**11 02 25.6**	**+2.3**
LVC				IAML		11 03 14.3	
	comp=Z,298nm,0.7s						
PB15	**IPOC Station P**	**2.69**	**149**	*e*P	**Pn**	**11 02 25.5**	**+0.7**
PB15				IAML		11 03 09.6	
	comp=Z,1μm,0.3s						
PB14	**IPOC Station P**	**3.76**	**172**	*e*P	**Pn**	**11 02 39.6**	**+0.1**
YJA	**Yavi**	**5.23**	**105**	*e*P	**Pn**	**11 03 04.7**	**+4.7**
HJA	**Humahuaca**	**5.65**	**115**	*e*P	**Pn**	**11 03 09.8**	**+4.2**

IDC 04 11:02:05.3±4.8, 1°30S×15°.86W, h0km, mb3.6/1, mb1 3.7/2, mb1mx3.4/42, mbtmp3.7/2, ML3.5/1, MS3.2/6, Ms1 3.3/6, ms1mx2.9/30, Error ellipse: s-maj=266.6km s-min=56.7km az=125.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H10N2	**ASCENSION HYDR**	**6.62**	**168**	T	T	11 11 11.9	
	baz=347,slow=74,SNR=102						
H10N3	**ASCENSION HYDR**	**6.63**	**168**	T	T	11 11 21.0	
	baz=347,slow=74,SNR=67						
H10N1	**ASCENSION HYDR**	**6.64**	**168**	T	T	11 11 13.3	
	baz=347,slow=74,SNR=125						
H10S3	**ASCENSION HYDR**	**7.69**	**171**	T	T	11 12 30.6	
	baz=350,slow=74,SNR=56						
H10S2	**ASCENSION HYDR**	**7.70**	**171**	T	T	11 12 40.7	
	baz=230,slow=74,SNR=15						
KOWA	**Kowa**	**19.59**	**36**	P	P	11 06 35.3	+0.1
	0.2nm,0.3s,baz=200,slow=12,SNR=3.7						
KOWA				LR	LR	11 12 38.7	
	comp=Z,76nm,20.6s,baz=254,slow=32						
RCBR	**Riachuelo**	**20.50**	**257**	LR	LR	11 12 22.5	
	comp=Z,64nm,20.5s,baz=81,slow=30						
TORD	**Torodi Ar. Bea**	**22.57**	**50**	P	P	11 07 07.4	0.0
	1.9nm,0.8s,baz=234,slow=10,SNR=9.6						
TORD				LR	LR	11 14 43.1	
	comp=Z,46nm,19.3s,baz=235,slow=34						
CPUP	**Villa Florida**	**46.98**	**234**	LR	LR	11 28 54.6	
	comp=Z,31nm,19.5s,baz=47,slow=34						
LPAZ	**La Paz**	**53.57**	**251**	LR	LR	11 33 35.1	
	comp=Z,40nm,19.1s,baz=70,slow=35						
VRAC	**Vranov**	**57.65**	**25**	LR	LR	11 35 19.3	
	comp=Z,17nm,21.9s,baz=270,slow=35						
ASAR	**Alice Springs**	**141.53**	**132**	PKP	PKPdf	11 21 38.6	-0.8
	0.2nm,0.5s,baz=220,slow=2.4,SNR=1.7						
WRA	**Warramunga Arr**	**143.95**	**127**	PKP	PKPdf	11 21 43.4	-0.4
	0.2nm,0.4s,baz=240,slow=2.4,SNR=5.9						

*SOME **04** 11:06:23.4, 40°.60N×72°.58E, h0km*

*NNC **04** 11:06:25.7±2.5, 40°.58N×72°.60E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=19.2km s-min=8.2km az=167.0*

*KRNET **04** 11:06:26.0±0.1, 40°.61N×72°.52E, h10km, mb2.6*

ISC 04 11:06:26.3±1.2, 40°.62N±0°.04×72°.54E±0°.03, h4km±14km, n14, σ0s71/23, 13C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.21**	**118**	⇑*i*P	**Pg**	**11 06 30.2**	**-0.3**
OHH				⇑*i*S	**Sg**	**11 06 33.8**	**+0.5**
	baz=14						
BTK	**Batken**	**1.43**	**247**	⇑*i*P	**Pn**	**11 06 52.8**	**-0.3**
BTK				⇑*i*S	**Sg**	**11 07 12.6**	**+0.4**
	baz=47						
AML	**Almayashu**	**1.74**	**30**	⇑*i*P	**Pb**	**11 06 58.7**	**-0.3**
AML				⇑*i*S	**Sg**	**11 07 23.7**	**+1.5**
	baz=30						
ARLS	**Aral**	**1.83**	**47**	⇑*i*P	**Pg**	**11 07 00.5**	**-0.8**
ARLS				⇑*i*S	**Sg**	**11 07 25.8**	**+0.8**
	baz=47						
MNAS	**Manas**	**1.86**	**359**	⇑*i*P	**Pb**	**11 07 00.6**	**-0.3**
MNAS				⇑*i*S	**Sg**	**11 07 26.5**	**+0.4**
	baz=60						
MRKS	**Merke**	**2.18**	**13**	*e*P	**Pb**	**11 07 05.7**	**-0.7**
	6.6nm,0.5s						
MRKS				*e*S	**Sg**	**11 07 36.1**	**-0.3**
	11nm,0.4s						
MRKS	**Merke**	**2.18**	**13**	Pg	**Pb**	**11 07 05.7**	**-0.7**
	6.6nm,0.5s						
MRKS				Lg	Lg	11 07 36.1	
	11nm,0.4s						
EKS2	**Erkin-Say**	**2.24**	**24**	⇑*i*P	**Pn**	**11 07 04.8**	**+0.6**
EKS2				⇑*i*S	**Sb**	**11 07 36.1**	**+0.7**
	baz=24						
IUG	**Iuzhnay**	**2.42**	**310**	*e*P	**Pb**	**11 07 10.8**	**+0.4**
	3.7nm,0.2s						
IUG				*e*S	**Sg**	**11 07 45.1**	**+1.0**
	11nm,0.4s						
IUG	**Iuzhnay**	**2.42**	**310**	Pg	**Pb**	**11 07 10.9**	**+0.4**
	4.7nm,0.3s						
IUG				Lg	Lg	11 07 45.3	
	12nm,0.5s						
AAK	**Ala-Archa**	**2.49**	**35**	⇓*e*P	**Pn**	**11 07 08.3**	**+0.6**
	baz=36						
AAK				⇓*i*S	**Sb**	**11 07 41.7**	**-1.0**
	baz=36						
AAK	**Ala-Archa**	**2.49**	**35**	⇓Pg	**Pb**	**11 07 11.7**	**+0.1**
	1.2nm,0.5s						
AAK				⇑Lg	Lg	11 07 46.2	
	3.3nm,0.6s						
KK31	**Karatay Array**	**2.90**	**329**	⇓Pg	**Pg**	**11 07 21.2**	**-0.7**
	0.3nm,0.4s,baz=152,slow=16						
KK31				⇓Lg	Lg	11 07 58.5	
	1.7nm,0.5s,baz=150,slow=29,SNR=7.2						
SGDS	**Sogindy**	**3.23**	**28**	Pg	**Pb**	**11 07 24.2**	**0.0**
	1.8nm,0.6s						
SGDS				Lg	Lg	11 08 07.6	
	1.8nm,0.3s						

*NEIC **04** 11:20:04.1±1.9, 64°.52N±0°.05×17°.8W±0°.2, h7km±4km, mb4.4/17, Error ellipse: s-maj=10.6km s-min=7.4km az=70.0*

*IDC **04** 11:20:05.2±0.8, 64°.50N×17°.67W, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.8/44, mbtmp3.8/12, ML3.6/2, Error ellipse: s-maj=27.9km s-min=10.8km az=13.0*

*REY **04** 11:20:05.3, 64°.67N×17°.46W, h6km*

ISC 04 11:20:04.9±0.8, 64°.67N±0°.02×17°.51W±0°.02, h8km±5km, n102, σ1s42/116, mb4.1/18, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.11**	**272**	P	**Pg**	**11 20 08.0**	**+0.5**
	baz=271						
IVON				S	**Sg**	**11 20 10.4**	**+1.2**
	baz=271						
IDYN	**Dyngjuhals**	**0.14**	**26**	P	**Pg**	**11 20 08.1**	**+0.1**
	baz=18						
IGRF	**Grimsfjall**	**0.28**	**158**	P	**Pg**	**11 20 10.6**	**0.0**
	baz=163						
IKVE	**Kverkfjoll**	**0.36**	**88**	P	**Pg**	**11 20 11.7**	**-0.3**
	baz=89						
IKVE				S	**Sg**	**11 20 16.3**	**-0.4**
	baz=89						
IHUS	**Husbondi**	**0.38**	**190**	P	**Pb**	**11 20 12.8**	**-1.2**
	baz=193						
IHUS				S	**Sb**	**11 20 18.4**	**-1.7**
	baz=193						
ISKR	**Skrokkalda**	**0.40**	**254**	P	**Pb**	**11 20 12.9**	**-1.3**
	baz=255						
IVOT	**Vottur**	**0.42**	**161**	P	**Pb**	**11 20 12.9**	**-1.8**
	baz=164						
THOR	**Thorvaldshraun**	**0.44**	**53**	P	**Pg**	**11 20 13.1**	**-0.4**
	baz=52						
THOR				S	**Sg**	**11 20 19.3**	**-0.1**
	baz=52						
IJOK	**Jokulheimar**	**0.47**	**221**	P	**Pb**	**11 20 14.1**	**-1.4**
	baz=223						
IJOK				S	**Sb**	**11 20 20.9**	**-1.7**
	baz=223						
IKRE	**Kreppuhraun**	**0.50**	**76**	P	**Pg**	**11 20 13.7**	**-0.8**
	baz=76						
IKRE				S	**Sg**	**11 20 20.5**	**-0.5**
	baz=76						
IASK	**Askja**	**0.53**	**43**	P	**Pg**	**11 20 14.5**	**-0.7**
	baz=42						
IMKO	**Mokollar**	**0.59**	**58**	P	**Pg**	**11 20 15.5**	**-0.7**
	baz=57						
IMKO				S	**Sg**	**11 20 23.5**	**-0.4**
	baz=57						
IIEY	**Innrieyrar**	**0.64**	**205**	P	**Pb**	**11 20 16.8**	**-1.4**
	baz=207						
IIEY				S	**Sb**	**11 20 25.5**	**-1.8**
	baz=207						
ISVA	**Svartarkot**	**0.68**	**9**	P	**Pg**	**11 20 17.3**	**-0.7**
	baz=7.2						
ISVA				S	**Sg**	**11 20 26.6**	**-0.2**
	baz=7.2						
IKSK	**Karaskser**	**0.68**	**138**	P	**Pb**	**11 20 16.5**	**-2.5**
	baz=140						
IKAL	**Kalfafell**	**0.73**	**186**	P	**Pb**	**11 20 18.4**	**-1.4**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.78**	**79**	P	**Pg**	**11 20 18.4**	**-1.5**
	baz=79						
IVSH				S	**Sg**	**11 20 28.8**	**-1.1**
	baz=79						
IVAT	**Vatnsfell**	**0.78**	**232**	P	**Pb**	**11 20 19.4**	**-1.3**
	baz=233						
IHVE	**Hveravellir**	**0.91**	**284**	P	**Pg**	**11 20 21.1**	**-1.1**
	baz=283						
IHVE				S	**Sg**	**11 20 33.9**	**-0.1**
	baz=283						
IMEL	**Melhnausar**	**0.97**	**21**	P	**Pg**	**11 20 22.0**	**-1.6**
	baz=20						
IMEL				S	**Sg**	**11 20 34.9**	**-1.3**
	baz=20						
IREN	**Reynihlio**	**1.01**	**14**	P	**Pg**	**11 20 22.7**	**-1.6**
	baz=13						
ISNB	**Snabyli**	**1.06**	**208**	P	**Pn**	**11 20 24.0**	**-1.9**
	baz=209						
IKVO	**Krokottuvotn**	**1.08**	**14**	P	**Pg**	**11 20 23.8**	**-1.9**
	baz=13						
ISLY	**Slysaalda**	**1.10**	**220**	P	**Pn**	**11 20 24.9**	**-1.7**
	baz=221						
IGRS	**Grimsstaoir**	**1.13**	**30**	P	**Pg**	**11 20 24.7**	**-1.9**
	baz=30						
IFED	**Fedgar**	**1.15**	**237**	P	**Pn**	**11 20 26.0**	**-1.3**
	baz=237						
IRJU	**Rjupnafell**	**1.17**	**206**	P	**Pn**	**11 20 26.0**	**-1.5**
	baz=207						
IMJO	**Mjoaskard**	**1.20**	**233**	P	**Pn**	**11 20 26.8**	**-1.2**
	baz=234						
ISKI	**Skildingahlsh**	**1.22**	**9**	P	**Pg**	**11 20 26.2**	**-2.1**
	baz=8.3						
ISKI				S	**Sg**	**11 20 43.1**	**-1.0**
	baz=8.3						
IGHA	**Grjothals**	**1.23**	**16**	P	**Pg**	**11 20 26.1**	**-2.3**
	baz=16						
IGYG	**Gygjarholskot**	**1.24**	**253**	P	**Pg**	**11 20 26.8**	**-1.8**
	baz=253						
IGRA	**Granastaoir**	**1.25**	**359**	P	**Pg**	**11 20 26.6**	**-2.3**
	baz=358						
IHAU	**Haukadalur**	**1.28**	**238**	P	**Pn**	**11 20 28.4**	**-0.6**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.29**	**208**	P	**Pn**	**11 20 28.0**	**-1.1**
	baz=209						

SCO Scoresbysund 6.08 346 eP Pn 11 21 36.0 +1.1
EKA Eskdalemuir Ar 11.76 136 Pn Pn 11 22 52.6 -0.2
baz=325,slow=13,SNR=6.0
ESK Eskdalemuir 11.76 136 Pn Pn 11 22 53.2 +0.5
HFS Hagfors 15.05 93 Pn P 11 23 44.5 +1.6
0.1nm,0.3s,baz=306,slow=12,SNR=4.0
FINES FINESS Array B 19.71 79 P Pn 11 24 38.1 +2.4
0.2nm,0.3s,baz=305,slow=4.9,SNR=2.9
FINES FINESS Array B 19.71 79 P P 11 24 33.4 -0.8
CLL Collm 20.71 116 P P 11 24 42.7 -2.5
BRG Berggiesshubel 21.42 115 ePKP P 11 24 55.0 +2.2
13nm,1.4s
KHC Kasperske Hory 22.68 118 eP P 11 25 06.6 +0.2
DPC Dobruska-Polom 22.77 113 eP P 11 25 10.1 +2.8
SENIN Lac Senin/Sane 22.83 132 P P 11 25 07.3 -0.9
GERES GERESS Array B 22.96 119 P P 11 25 12.3 +2.8
0.3nm,0.5s,baz=309,slow=6.2,SNR=5.4
GERES GERESS Array B 22.96 119 P P 11 25 08.0 -1.4
CTI Castel Tesino 24.57 125 P P 11 25 23.5 -1.5
CTI IAmb IAmb 11 25 33.3
comp=Z,13nm,1.4s
AKASG Malin Array Be 27.85 98 P P 11 25 56.2 +1.9
comp=Z,0.5nm,0.3s,baz=320,slow=9.5,SNR=2.0
PVAQ Vaqueiros 27.92 163 P P 11 25 54.0 -1.2
BURAR Bucovina Array 28.53 106 P P 11 26 00.1 -0.6
BRTR Keskin Array B 38.48 105 P P 11 27 28.7 +1.5
comp=Z,1.3nm,0.7s,baz=328,slow=5.2,SNR=3.1
BRTR Keskin Array B 38.48 105 P P 11 27 26.6 -0.7
ULM Lac du Bonnet 41.60 289 P P 11 27 51.9 -0.9
ULM IAmb IAmb 11 28 00.3
comp=Z,18nm,1.5s
ABKAR Akbulak array 41.99 73 P P 11 27 57.2 +1.3
TOLK Toolik Lake Re 42.74 336 P P 11 28 02.2 +0.2
TOLK IAmb IAmb 11 28 06.8
comp=Z,10nm,1.1s
ILAR Eielson Array 45.68 332 P P 11 28 28.4 +2.9
comp=Z,1.4nm,1.0s,baz=19,slow=7.0,SNR=9.4
ILAR PcP PcP 11 30 05.1 +1.9
comp=Z,0.3nm,0.8s,baz=28,slow=4.1,SNR=4.3
ILAR Eielson Array 45.68 332 P P 11 28 26.3 +0.8
IMAR Indian Mountai 45.85 337 P P 11 28 26.4 -0.4
BCAR Beaver Creek A 46.10 329 P P 11 28 29.3 +0.4
ZALV Zalesovo Beam 47.63 51 P P 11 28 42.7 +1.8
comp=Z,0.7nm,0.5s,baz=316,slow=6.0,SNR=3.7
KURK Kurchatov 48.11 58 P P 11 28 45.1 +0.5
KURK IAmb IAmb 11 28 47.8
comp=Z,3.5nm,0.9s
X48A Hartselle 50.76 269 P P 11 29 02.9 -2.1
KSU1 Kansas State U 50.93 280 P P 11 29 05.8 -0.4
KSU1 IAmb IAmb 11 29 31.5
comp=Z,14nm,1.4s
KK31 Karatay Array 51.28 70 P P 11 29 10.4 +1.6
KK31 IAmb IAmb 11 29 12.1
comp=Z,3.6nm,1.2s
KKAR Karatay Array 51.28 70 P P 11 29 09.7 +0.9
MCMT McKenzie Canyo 52.72 297 P P 11 29 19.1 -0.7
MKAR Makanchi Array 52.73 58 P P 11 29 21.5 +1.9
comp=Z,0.7nm,0.8s,baz=329,slow=5.4,SNR=4.5
MKAR Makanchi Array 52.73 58 P P 11 29 20.4 +0.8
TORD Torodi Ar. Bea 53.15 156 P P 11 29 22.9 -0.1
comp=Z,1.3nm,1.0s,baz=337,slow=5.7,SNR=4.8
TORD Torodi Ar. Bea 53.15 156 P P 11 29 21.6 -1.4
BW06 Boulder Array 53.17 293 P P 11 29 22.2 -1.0
BW06 IAmb IAmb 11 29 26.7
comp=Z,4.1nm,1.1s
PD31 Pinedale Array 53.17 293 P P 11 29 22.2 -1.0
PD31 IAmb IAmb 11 29 26.7
comp=Z,3.3nm,1.1s
PDAR Pinedale Array 53.17 293 P P 11 29 24.9 +1.7
comp=Z,1.7nm,0.9s,baz=47,slow=6.5,SNR=9.7
PDAR Pinedale Array 53.17 293 P P 11 29 21.7 -1.5
CHGR Chuyangaron 54.47 74 P P 11 29 33.6 +1.1
GAR Garm 54.65 73 P P 11 29 34.8 +0.9
TCUT Toone Canyon 55.30 294 P P 11 29 37.9 -0.8
TXAR Lajitas Array 62.28 280 P P 11 30 29.7 +2.5
comp=Z,0.8nm,1.0s,baz=46,slow=5.2,SNR=4.3
TXAR Lajitas Array 62.28 280 P P 11 30 26.0 -1.2
CMAR Chiang Mai Arr 84.13 59 P P 11 32 38.8 +2.6
comp=Z,0.4nm,0.3s,baz=334,slow=6.0,SNR=4.2
CMAR Chiang Mai Arr 84.13 59 P P 11 32 36.5 +0.3

*IDC **04** 11:26:24.6±0.5, 15°.44S×173°.17W, h0km, mb4.6/16, mb1 4.8/18, mb1mx4.5/41, mbtmp4.6/18, ML3.1/1, MS3.8/16, Ms1 3.8/16, ms1mx3.6/32, Error ellipse: s-maj=23.6km s-min=12.6km az=130.0*

*NEIC **04** 11:26:25.6±1.5, 15°.47S±0°.07×173°.2W±0°.1, h6km±2km, mb5.0/99, Ms_20 5.1/53, Error ellipse: s-maj=16.4km s-min=9.7km az=110.0*

*GCMT **04** 11:26:34.6±0.4, 15°.56S±0°.03×172°.78W±0°.03, h16km±1km, MW5.2/70, Moment Tensor Solution. s15,c16; s70,c88; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.03±.12; Mθθ=0.59±.11; Mϕϕ=-0.61±.09; Mrθ=-6.29±1.23; Mrϕ=0.15±.11; Mθϕ=2.41±.54; Best double couple: M0=6.75700×10^16 NP1:ϕs=210.00000°, δ=4.00000°, λ=-172.00000°. NP2: ϕs=111.00000°, δ=89.00000°, λ=-86.00000°. Principal axes: T 6.9360, Plg44.0000°, Azm197.0000°; N -0.3570, Plg4.0000°, Azm291.0000°; P -6.5790, Plg45.0000°, Azm26.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 11:26:26.3±0.4, 15°.48S±0°.05×173°.04W±0°.08, h10km, n317, σ1=34/278, mb4.9/59, MS4.8/46, 2C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.99**	**38**	Pn	**Pn**	**11 26 59.7**	**-0.3**
AFI	863nm,0.3s,baz=188,slow=1.3,SNR=1193			Sn	**Sn**	**11 27 19.9**	**-5.0**
	1μm,0.3s,baz=137,slow=2.3,SNR=25						
AFI	**Afiamalu**	**1.99**	**38**		**Pn**	**11 26 59.9**	**-0.1**
NIUE	**Niue**	**4.65**	**141**	Pn	**Pn**	**11 27 35.9**	**-0.7**
KNTN	**Kanton**	**12.70**	**6**	Pn	**Pn**	**11 29 25.8**	**-1.2**
RAR	**Rarotonga**	**13.82**	**116**	Pn	**Pn**	**11 29 43.4**	**+1.1**
RAR	0.9nm,0.3s,baz=263,slow=13,SNR=2.3			LR	LR	11 34 35.7	
	comp=Z,125nm,18.3s,baz=268,slow=35						
GLKZ	**Green Lake**	**14.43**	**197**	P	**Pn**	**11 29 49.7**	**-1.0**
GLKZ				S	Sn	11 32 19.8	-11
DZM	**Mont Dzumac**	**20.49**	**248**	P	**P**	**11 31 02.8**	**-1.8**
DZM	9.2nm,0.8s,baz=130,slow=20,SNR=3.0			LR	LR	11 38 21.7	
	comp=Z,140nm,18.4s,baz=57,slow=35						
PAE	**Paea**	**22.59**	**99**	*eT*	T	11 54 37.3	
	3.1nm,0.3s						
PPT	**Papeete**	**22.59**	**99**	LR	LR	11 37 50.5	
	comp=Z,79nm,19.6s,baz=296,slow=30						
PPT2	**Papeete2**	**22.59**	**99**	*eLR*	LR	11 36 37.5	
	comp=Z,500nm,27.5s						
PPT2	**Papeete2**	**22.59**	**99**	*eT*	T	11 54 39.7	
	3.4nm,0.3s						
TIAR	**Tiarei**	**22.81**	**99**	*eT*	T	11 54 53.8	
	3.2nm,0.4s						
TVO	**Taravao**	**22.91**	**99**	*eT*	T	11 55 01.1	
	1.9nm,0.3s						
OUZ	**Omahuta**	**23.02**	**209**	P	**P**	**11 31 32.8**	**+1.3**
OUZ				IAmb	IAmb	11 31 34.9	
	comp=Z,50nm,1.0s						
GRZ	**Great Barrier**	**23.09**	**204**	P	**P**	**11 31 32.1**	**-0.1**
XMAS	**Kiritimati**	**23.27**	**43**	P	**P**	**11 31 34.9**	**+0.7**
XMAS				IAmb	IAmb	11 31 35.7	
	comp=Z,56nm,1.0s						
WCZ	**Waipu Caves**	**23.28**	**207**	P	**P**	**11 31 34.6**	**+0.5**
MXZ	**Matakaoa Point**	**23.29**	**198**	P	**P**	**11 31 36.5**	**+2.3**
MXZ	**Matakaoa Point**	**23.29**	**198**	P	**P**	**11 31 36.5**	**+2.3**
MXZ				IAmb	IAmb	11 31 36.5	
	comp=Z,54nm,1.1s						
KUZ	**Kuaotunu**	**23.42**	**203**	P	**P**	**11 31 37.2**	**+1.7**
WMGZ	**Waiomatatini S**	**23.50**	**197**	P	**P**	**11 31 38.5**	**+2.2**
WMGZ				S	**S**	**11 35 45.8**	**-4.3**
TBI	**Tubuai**	**23.55**	**113**	*eLR*	LR	11 37 07.4	
	comp=Z,420nm,29.8s						
TBI	**Tubuai**	**23.55**	**113**	*eT*	T	11 55 51.7	
	comp=Z,10nm,0.3s						
HAZ	**Te Kaha**	**23.62**	**198**	P	**P**	**11 31 38.5**	**+0.9**
HAZ				S	**S**	**11 35 50.0**	**-2.0**
WIAZ	**Waiheke Island**	**23.69**	**204**	P	**P**	**11 31 38.9**	**+0.7**
PUZ	**Puketiti**	**23.78**	**197**	P	**P**	**11 31 41.1**	**+2.0**
PUZ				S	**S**	**11 35 51.8**	**-2.8**
RUGZ	**Raukumara Rang**	**23.85**	**198**	P	**P**	**11 31 42.2**	**+2.4**
RUGZ				S	**S**	**11 35 56.4**	**+0.4**
WHRZ	**Whale Island**	**23.97**	**200**	P	**P**	**11 31 44.3**	**+3.4**
OPRZ	**Ohinepanea**	**24.10**	**200**	P	**P**	**11 31 45.2**	**+3.1**
CNGZ	**Carnagh Statio**	**24.18**	**197**	P	**P**	**11 31 46.5**	**+3.7**
MWZ	**Matawai**	**24.23**	**198**	P	**P**	**11 31 45.5**	**+2.1**
PMOR	**Pomariorio Ree**	**24.26**	**92**	*eT*	T	11 56 44.6	
	comp=Z,2.6nm,0.2s						
URZ	**Urewera**	**24.30**	**199**	P	**P**	**11 31 43.4**	**-0.5**
	comp=Z,43nm,0.6s,baz=59,slow=4.4,SNR=41						
URZ				S	**S**	**11 36 01.6**	**-1.2**
	comp=Z,4.1nm,0.6s,baz=164,slow=20,SNR=2.6						
URZ	**Urewera**	**24.30**	**199**	P	**P**	**11 31 45.3**	**+1.4**
URZ				S	**S**	**11 35 59.4**	**-3.4**
URZ	**Urewera**	**24.30**	**199**	P	**P**	**11 31 43.9**	**0.0**
TOZ	**Tahuroa Road**	**24.37**	**202**	P	**P**	**11 31 45.7**	**+1.1**
RAGZ	**Rawiri**	**24.42**	**198**	P	**P**	**11 31 47.6**	**+2.5**
RIGZ	**Rimuhau**	**24.51**	**198**	P	**P**	**11 31 48.4**	**+2.5**
MUGZ	**Murupara**	**24.60**	**199**	P	**P**	**11 31 49.3**	**+2.5**
HSRZ	**Hossack Road**	**24.63**	**201**	P	**P**	**11 31 52.7**	**+5.8**
RTZ	**Ruatahuna**	**24.66**	**199**	P	**P**	**11 31 50.4**	**+3.1**
SNGZ	**Shannon Statio**	**24.70**	**198**	P	**P**	**11 31 50.2**	**+2.6**
PRRZ	**Plateau Road**	**24.75**	**200**	P	**P**	**11 31 52.0**	**+4.0**
ALRZ	**Allen Road**	**24.82**	**200**	P	**P**	**11 31 52.1**	**+3.4**
KNZ	**Kokohu**	**24.83**	**197**	P	**P**	**11 31 52.5**	**+3.8**
TLZ	**Tolley Road**	**24.89**	**202**	P	**P**	**11 31 51.7**	**+2.3**
MTHZ	**Maungataniwha**	**24.92**	**199**	P	**P**	**11 31 53.7**	**+4.0**
HIZ	**Hauiti**	**25.30**	**203**	P	**P**	**11 31 53.0**	**0.0**
BKZ	**Black Stump Fm**	**25.32**	**199**	P	**P**	**11 31 54.8**	**+1.6**
BKZ				S	**S**	**11 36 23.5**	**+4.1**
BKZ	**Black Stump Fm**	**25.32**	**199**	P	**P**	**11 31 52.7**	**-0.5**
BKZ				IAmb	IAmb	11 32 00.6	
	comp=Z,18nm,0.7s						
VRZ	**Vera Road**	**25.87**	**202**	P	**P**	**11 31 58.5**	**+0.3**
PXZ	**Pawanui**	**26.00**	**198**	P	**P**	**11 32 00.2**	**+0.9**
BFZ	**Birch Farm**	**26.78**	**198**	P	**P**	**11 32 07.4**	**+1.0**
BFZ				IAmb	IAmb	11 32 07.7	
	comp=Z,34nm,1.0s						
HNR	**Honiara**	**27.04**	**280**	LR	LR	11 41 26.3	
	comp=Z,188nm,21.8s,baz=152,slow=34						
RPZ	**Rata Peaks**	**31.23**	**203**	P	**P**	**11 32 45.4**	**-0.6**
	comp=Z,3.8nm,0.5s,baz=331,slow=16,SNR=1.9						
TAOE	**Nuku Hiva Isla**	**32.79**	**82**	*eLR*	LR	11 41 15.5	
	comp=Z,544nm,29.6s						
TAOE	**Nuku Hiva Isla**	**32.79**	**82**	*eT*	T	12 07 20.3	
	comp=Z,30nm,0.2s						
H11S2	**WAKE ISLAND Hy**	**39.21**	**329**	T	T	12 15 30.0	
	baz=149,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**39.23**	**329**	T	T	12 15 01.4	
	baz=149,slow=76,SNR=46						
H11S1	**WAKE ISLAND Hy**	**39.23**	**329**	T	T	12 15 31.3	
	baz=149,slow=76,SNR=13						
H11N3	**WAKE ISLAND Hy**	**40.16**	**330**	T	T	12 16 47.4	
	baz=150,slow=76,SNR=21						
H11N1	**WAKE ISLAND Hy**	**40.16**	**330**	T	T	12 16 47.1	
	baz=150,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**40.17**	**330**	T	T	12 16 48.6	
	baz=150,slow=76,SNR=23						
STKA	**Stephens Creek**	**44.30**	**240**	P	**P**	**11 34 35.2**	**-1.3**
	comp=Z,11nm,0.7s,baz=92,slow=9.7,SNR=22						
STKA				LR	LR	11 50 42.0	
	comp=Z,99nm,21.7s,baz=30,slow=33						
STKA	**Stephens Creek**	**44.30**	**240**	P	**P**	**11 34 34.5**	**-1.9**
BBOO	**Buckleboo**	**49.07**	**240**	P	**P**	**11 35 11.6**	**-2.4**
BBOO				IAmb	IAmb	11 35 13.6	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**49.97**	**257**	P	**P**	**11 35 20.1**	**-0.9**
WB2	**Warramunga Arr**	**50.15**	**257**	P	**P**	**11 35 20.9**	**-1.4**
WRA	**Warramunga Arr**	**50.16**	**257**	P	**P**	**11 35 20.8**	**-1.7**
	comp=Z,2.4nm,0.7s,baz=94,slow=6.7,SNR=34						
WRA				PcP	**PcP**	**11 36 41.9**	**0.0**
	comp=Z,2.6nm,1.0s,baz=92,slow=3.7,SNR=6.3						
WRA				LR	LR	11 55 33.6	
	comp=Z,91nm,19.6s,baz=85,slow=35						
WRA	**Warramunga Arr**	**50.16**	**257**	P	**P**	**11 35 20.4**	**-2.1**
AS31	**Alice Springs**	**50.41**	**252**	P	**P**	**11 35 22.2**	**-2.1**
ASAR	**Alice Springs**	**50.41**	**252**	P	**P**	**11 35 22.9**	**-1.5**
	comp=Z,20nm,0.6s,baz=86,slow=8.2,SNR=292						
ASAR				LR	LR	11 55 23.1	
	comp=Z,247nm,20.8s,baz=95,slow=35						
ASAR	**Alice Springs**	**50.41**	**252**	P	**P**	**11 35 22.1**	**-2.2**
FORT	**Forrest**	**55.69**	**243**	P	**P**	**11 36 00.3**	**-2.7**
VNDA	**Vanda**	**63.33**	**186**	P	**P**	**11 36 55.8**	**+0.8**
	comp=Z,3.8nm,0.9s,baz=9.2,slow=7.0,SNR=25						
VNDA	**Vanda**	**63.33**	**186**	P	**P**	**11 36 55.7**	**+0.6**
PSAC3	**Pilbara Seismi**	**63.52**	**253**	IAMs_20	IAMs_20	12 00 23.0	
	comp=Z,650nm,19.0s						
PSAD1	**Pilbara Seismi**	**63.54**	**253**	P	**P**	**11 36 57.2**	**-0.3**
PSAD1				IAmb	IAmb	11 37 12.7	
	comp=Z,9.2nm,0.9s						
PSAD3	**Pilbara Seismi**	**63.56**	**253**	P	**P**	**11 36 56.9**	**-0.7**
PSAD3				IAmb	IAmb	11 37 12.4	
	comp=Z,13nm,1.2s						
NWAO	**Narrogin (SRO)**	**64.88**	**241**	LR	LR	12 05 02.7	
	comp=Z,60nm,20.6s,baz=196,slow=36						
PKM	**Mcpherson Peak**	**71.13**	**44**	P	**P**	**11 37 46.2**	**+0.8**
	baz=234						
CIS	**Catalina Islan**	**71.24**	**46**	P	**P**	**11 37 45.7**	**-0.3**
	baz=236						
SMMC	**Simmler**	**71.25**	**44**	P	**P**	**11 37 46.4**	**+0.4**
	baz=234						
ARVC	**Arvin**	**71.93**	**44**	P	**P**	**11 37 49.9**	**-0.1**
	baz=235						
VES	**Vestal, Richgr**	**72.16**	**44**	P	**P**	**11 37 51.8**	**+0.5**
	baz=235						
MURC	**Murrieta**	**72.20**	**47**	P	**P**	**11 37 51.6**	**-0.1**
	baz=237						
BFSC	**Mount Baldy Ra**	**72.23**	**46**	P	**P**	**11 37 52.2**	**+0.2**
	baz=236						
ESJX	**Sierra Juarez**	**72.23**	**49**	IAMs_20	IAMs_20	12 02 47.5	
	comp=Z,328nm,19.0s						
EDW2	**Edwds Air Fo**	**72.36**	**45**	P	**P**	**11 37 52.8**	**+0.2**
	baz=236,SNR=8.7						
MONP2	**Monument Peak**	**72.36**	**47**	P	**P**	**11 37 53.2**	**+0.3**
	baz=238						
IKP	**In-Ko-Pah, Jac**	**72.46**	**48**	P	**P**	**11 37 53.5**	**+0.1**
	baz=238						
ISA	**Isabella, Lake**	**72.47**	**44**	P	**P**	**11 37 53.9**	**+0.6**
	baz=235,SNR=11						
ISA	**Isabella, Lake**	**72.47**	**44**	P	**P**	**11 37 51.9**	**-1.4**
ISA				IAmb	IAmb	11 37 54.9	
	comp=Z,15nm,1.1s						
CMB	**Columbia Colle**	**72.60**	**41**	P	**P**	**11 37 54.2**	**+0.2**
PFO	**Pinyon Flats O**	**72.72**	**47**	P	**P**	**11 37 55.1**	**+0.1**
	baz=237						
TPFO	**Pinon Flats**	**72.72**	**47**	P	**P**	**11 37 54.9**	**-0.1**
	baz=237						
PETK	**Petropavlovsk-**	**72.82**	**342**	P	**P**	**11 37 54.6**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=142,slow=7.3,SNR=2.5						
PETK				LR	LR	12 02 00.4	
	comp=Z,74nm,21.5s,baz=132,slow=29						
WDC	**Whiskeytown Da**	**72.83**	**38**	P	**P**	**11 37 55.5**	**+0.2**
WDC				IAmb	IAmb	11 37 57.2	
	comp=Z,16nm,1.4s						
LRMC	**Laurel Mtn Rad**	**72.90**	**45**	P	**P**	**11 37 56.3**	**+0.3**
	baz=236,SNR=5.8						
N02D	**Trinity Center**	**72.98**	**38**	P	**P**	**11 37 57.1**	**+0.8**
	baz=231						
O03E	**Paynes Creek**	**73.09**	**39**	P	**P**	**11 37 57.0**	**+0.1**
	baz=232						
CWC	**Cottonwood Cre**	**73.17**	**44**	P	**P**	**11 37 58.2**	**+0.6**
	baz=235						
MDPB	**Devils Postpil**	**73.20**	**42**	P	**P**	**11 37 58.2**	**+0.3**
MDPB				IAmb	IAmb	11 37 59.3	
	comp=Z,11nm,0.9s						
OMMB	**Old Mammoth Mi**	**73.24**	**42**	P	**P**	**11 37 58.2**	**0.0**
BELC	**Belle Mtn. Jos**	**73.26**	**47**	P	**P**	**11 37 58.5**	**+0.3**
	baz=238						
MPMC	**Manual Prospec**	**73.35**	**44**	P	**P**	**11 37 59.2**	**+0.4**
	baz=236,SNR=24						
GSC	**Goldstone, Bar**	**73.40**	**45**	P	**P**	**11 37 58.9**	**0.0**
	baz=237,SNR=9.1						
GSC	**Goldstone, Bar**	**73.40**	**45**	P	**P**	**11 37 58.6**	**-0.3**
GSC				IAmb	IAmb	11 38 00.1	
	comp=Z,11nm,1.0s						
TIN	**Tinemaha, Big**	**73.42**	**43**	P	**P**	**11 37 59.4**	**+0.4**
	baz=235						
YBH	**Yreka Blue Hor**	**73.46**	**37**	P	**P**	**11 38 00.6**	**+1.5**
YBH				IAmb	IAmb	11 38 01.2	
	comp=Z,23nm,1.4s						
BC3	**Big Chuckawall**	**73.46**	**47**	P	**P**	**11 37 59.6**	**+0.3**
	baz=238						
HEC	**Hector,Ludlow**	**73.47**	**46**	P	**P**	**11 37 59.9**	**+0.7**
	baz=237						
WAKR	**Walker**	**73.48**	**41**	P	**P**	**11 38 00.3**	**+0.9**
K02D	**Willamette Mer**	**73.53**	**36**	P	**P**	**11 38 00.7**	**+1.3**
	baz=230						
BEKR	**Beckworth**	**73.71**	**40**	P	**P**	**11 38 01.2**	**+0.5**
PNTR	**Pine Nut**	**73.72**	**41**	P	**P**	**11 38 00.4**	**-0.5**
PNTR				IAmb	IAmb	11 38 02.5	
	comp=Z,16nm,1.0s						
VCNR	**Virginia City**	**73.81**	**40**	P	**P**	**11 38 02.0**	**+0.7**
GMRC	**Granite Mounta**	**73.91**	**46**	P	**P**	**11 38 02.1**	**+0.1**
	baz=238,SNR=7.7						
LHV	**Little Huntoon**	**73.93**	**42**	P	**P**	**11 38 01.3**	**-0.4**
LHV				IAmb	IAmb	11 38 03.7	
	comp=Z,13nm,1.0s						
IRM	**Iron Mountain**	**73.94**	**47**	P	**P**	**11 38 02.0**	**0.0**
	baz=238,SNR=6.7						
M04C	**Macdoel**	**74.00**	**37**	P	**P**	**11 38 02.4**	**+0.2**
	baz=231						
L04D	**Klamath Falls**	**74.00**	**37**	P	**P**	**11 38 02.7**	**+0.4**
	baz=231						
FURC	**Furnace Creek,**	**74.00**	**44**	P	**P**	**11 38 02.7**	**+0.5**
	baz=236,SNR=6.9						
TUQ	**Turquoise Moun**	**74.08**	**45**	P	**P**	**11 38 02.7**	**-0.2**
	baz=237,SNR=5.1						
SHOC	**Shoshone, Teco**	**74.09**	**45**	P	**P**	**11 38 03.3**	**+0.5**
	baz=237						
NVAR	**Mina Array Bea**	**74.16**	**42**	P	**P**	**11 38 03.8**	**+0.3**
	comp=Z,9.9nm,0.8s,baz=227,slow=10.0,SNR=64						
NVAR				LR	LR	12 03 20.8	
	comp=Z,170nm,20.2s,baz=221,slow=30						
NVAR	**Mina Array Bea**	**74.16**	**42**	P	**P**	**11 38 03.6**	**+0.2**
NV11	**Mina Array Sit**	**74.25**	**42**	P	**P**	**11 38 04.9**	**+0.9**
NV11				IAmb	IAmb	11 38 05.5	
	comp=Z,17nm,1.0s						
214A	**Organ Pipe Nat**	**74.50**	**50**	P	**P**	**11 38 05.3**	**0.0**
	baz=240						
QSPA	**South Pole Qui**	**74.56**	**180**	P	**P**	**11 38 06.1**	**+0.9**
QSPA				IAmb	IAmb	11 38 06.8	
	comp=Z,16nm,1.0s						
NEE2	**Needles Airpor**	**74.63**	**47**	P	**P**	**11 38 06.6**	**+0.7**
	baz=238						
KVN	**Kaiserville**	**74.65**	**41**	P	**P**	**11 38 06.7**	**+0.4**
KVN				IAmb	IAmb	11 38 07.6	
	comp=Z,12nm,0.9s						
TPH	**Tonopah**	**74.66**	**43**	P	**P**	**11 38 07.2**	**+0.9**
TPNV	**Topopah Spring**	**74.68**	**44**	P	**P**	**11 38 06.4**	**-0.1**
	baz=237,SNR=12						
TPNV	**Topopah Spring**	**74.68**	**44**	P	**P**	**11 38 06.8**	**+0.4**
TPNV				IAmb	IAmb	11 38 07.9	
	comp=Z,13nm,0.9s						
PDMCI	**Parker Dam,Lak**	**74.72**	**47**	P	**P**	**11 38 06.7**	**+0.1**
	baz=239						
J04D	**Umpqua Nationa**	**74.75**	**36**	P	**P**	**11 38 07.6**	**+0.8**
	baz=231						
SHPR	**Sheep Range**	**75.17**	**45**	P	**P**	**11 38 10.3**	**+1.0**
SHPR				IAmb	IAmb	11 38 11.0	
	comp=Z,14nm,1.1s						
H04D	**Lebanon**	**75.22**	**35**	P	**P**	**11 38 10.3**	**+1.1**
	baz=230						
J05D	**Fort Rock, OR**	**75.28**	**36**	P	**P**	**11 38 10.8**	**+1.1**
	baz=231						
G03D	**McMinnville, O**	**75.38**	**34**	P	**P**	**11 38 10.8**	**+0.8**
	baz=229						
H04A	**Detroit Lake**	**75.62**	**35**	P	**P**	**11 38 12.7**	**+1.1**
PRN	**Pahroc Range**	**75.73**	**44**	P	**P**	**11 38 13.6**	**+1.2**
PRN				IAmb	IAmb	11 38 14.3	
	comp=Z,16nm,1.0s						
PINE	**Pine Mountain**	**75.76**	**36**	P	**P**	**11 38 13.9**	**+1.4**
I05D	**Terrebonne, OR**	**75.88**	**35**	P	**P**	**11 38 13.6**	**+0.6**
	baz=231						
R11A	**Troy Canyon, C**	**75.88**	**43**	P	**P**	**11 38 13.5**	**+0.1**
	baz=237,SNR=10						
R11A	**Troy Canyon, C**	**75.88**	**43**	P	**P**	**11 38 13.4**	**+0.1**
TUC	**Tucson**	**76.17**	**51**	P	**P**	**11 38 15.3**	**+0.3**
	baz=241						
G05D	**Wamic, OR**	**76.45**	**35**	P	**P**	**11 38 17.0**	**+0.8**
	baz=231						
KSRS	**Korea Array**	**76.46**	**315**	P	**P**	**11 38 16.5**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=148,slow=7.4,SNR=5.3						
KSRS				LR	LR	12 09 51.2	
	comp=Z,14nm,19.0s,baz=30,slow=34						
E04D	**Cinebar**	**76.62**	**33**	P	**P**	**11 38 18.2**	**+1.1**
	baz=230						
LCMT	**Little Creek M**	**76.75**	**45**	P	**P**	**11 38 19.2**	**+0.9**
I07A	**Izee**	**76.76**	**37**	P	**P**	**11 38 19.2**	**+1.1**
F05D	**White Salmon**	**76.78**	**34**	P	**P**	**11 38 18.6**	**+0.5**
	baz=231						
319A	**Douglas**	**76.87**	**52**	P	**P**	**11 38 19.9**	**+0.9**
319A				IAmb	IAmb	11 38 20.1	
	comp=Z,10nm,0.9s						
J08A	**Circle Bar Ran**	**76.92**	**38**	P	**P**	**11 38 19.6**	**+0.6**
CCUT	**Cedar City**	**76.95**	**45**	P	**P**	**11 38 20.5**	**+1.1**
D03D	**Eldon**	**76.98**	**32**	P	**P**	**11 38 20.6**	**+1.5**
	baz=229						
KNB	**Kanab**	**77.04**	**45**	P	**P**	**11 38 20.8**	**+0.9**
SPR3	**Spring Creek 3**	**77.06**	**43**	P	**P**	**11 38 20.7**	**+0.5**
SPR3				IAmb	IAmb	11 38 21.1	
	comp=Z,11nm,1.0s						
PSUT	**Pine Spring**	**77.13**	**44**	P	**P**	**11 38 20.8**	**+0.4**
WUAZ	**Wupatki**	**77.30**	**47**	P	**P**	**11 38 22.4**	**+1.0**
	baz=240,SNR=7.5						
ELK	**Elko**	**77.42**	**41**	P	**P**	**11 38 22.6**	**+0.6**
ELK				IAmb	IAmb	11 38 23.4	
	comp=Z,12nm,1.2s						
PKCU	**Pink Cliffs**	**77.61**	**45**	P	**P**	**11 38 24.9**	**+1.6**
Q23K	**Middleton Isla**	**77.74**	**14**	P	**P**	**11 38 24.7**	**+1.7**
	baz=206						
G08A	**Pilot Rock**	**77.80**	**36**	P	**P**	**11 38 24.2**	**+0.3**
B05A	**Bryant**	**77.96**	**32**	P	**P**	**11 38 25.2**	**+0.6**
	baz=230						
LEM	**Lembang**	**77.97**	**266

NEW	Newport	80.58	34	P		P		11 38 38.5	-0.5
ANMO	Albuquerque	80.59	50	P		P		11 38 40.0	+0.5
	baz=244								
MCMT	McKenzie Canyo	81.10	39	P		P		11 38 42.5	+0.4
MCK	McKinley	81.14	11	P		P		11 38 42.2	+0.6
	baz=203								
MSO	Missoula	81.54	37	P		P		11 38 44.0	-0.2
	baz=237,SNR=11								
REDW	Red Top Meadow	81.57	41	P		P		11 38 45.2	+0.6
REDW				IAmb		IAmb		11 38 46.0	
	comp=Z,20nm,1.3s								
S22A	4UR Ranch, Cre	81.57	47	P		P		11 38 45.6	+0.8
	baz=243								
S22A	4UR Ranch, Cre	81.57	47	P		P		11 38 45.7	+0.8
TPAW	Teton Pass	81.57	41	P		P		11 38 45.5	+0.8
TPAW				IAmb		IAmb		11 38 46.1	
	comp=Z,14nm,0.9s								
O20A	White River Ci	81.70	45	P		P		11 38 45.4	+0.1
	baz=242								
IMW	Indian Meadow	81.79	40	P		P		11 38 46.7	+0.8
NEA2	Nenana	81.91	10	P		P		11 38 46.5	+0.9
	baz=203								
WRH	Wood River Hil	81.97	11	P		P		11 38 46.1	+0.2
WRH				IAmb		IAmb		11 38 46.8	
	comp=Z,9.7nm,1.0s								
MLY	Manley	82.04	9	P		P		11 38 46.2	-0.1
	baz=202								
BW06	Boulder Array	82.10	42	P		P		11 38 47.1	-0.3
	baz=240								
BW06	Boulder Array	82.10	42	P		P		11 38 47.1	-0.3
BW06				IAmb		IAmb		11 38 48.2	
	comp=Z,12nm,1.2s								
PDAR	Pinedale Array	82.10	42	P		P		11 38 47.4	0.0
	comp=Z,4.5nm,0.9s,baz=213,slow=3.4,SNR=30								
PDAR				LR		LR		12 06 01.3	
	comp=Z,110nm,21.3s,baz=202,slow=29								
HDA	Harding Lake	82.12	11	P		P		11 38 46.9	+0.2
	baz=205								
SMCO	Snowmass	82.12	46	P		P		11 38 49.1	+1.3
SMCO				IAmb		IAmb		11 38 49.4	
	comp=Z,16nm,1.1s								
YHL	Hebgen Lake	82.12	39	P		P		11 38 48.4	+0.8
CCB	Clear Creek Bu	82.18	11	P		P		11 38 47.8	+0.8
BOZ	Bozeman (W)	82.24	38	P		P		11 38 48.4	+0.4
	baz=239,SNR=8.2								
H17A	Grant Village	82.27	40	P		P		11 38 48.5	+0.2
	baz=240								
YHH	Holmes Hill	82.30	39	P		P		11 38 49.5	+1.0
SCRK	Sand Creek	82.32	12	P		P		11 38 48.5	+0.6
	baz=208								
YNR	Norris Junctio	82.36	40	P		P		11 38 47.5	-1.2
I23K	Minto, Yukon-K	82.37	10	P		P		11 38 48.4	+0.4
	baz=203								
TCOL	CIGO, UAF Yank	82.38	11	P		P		11 38 48.0	-0.1
	baz=204								
IL31		82.46	11	P		P		11 38 48.9	+0.4
ILAR	Eielson Array	82.46	11	P		P		11 38 48.0	-0.5
	comp=Z,1.4nm,0.6s,baz=229,slow=6.4,SNR=28								
ILAR				LR		LR		12 06 42.0	
	comp=Z,91nm,21.6s,baz=184,slow=29								
ILAR	Eielson Array	82.46	11	P		P		11 38 48.4	-0.1
SDCO	Great Sand Dun	82.51	48	P		P		11 38 49.8	0.0
	baz=244								
SDCO	Great Sand Dun	82.51	48	P		P		11 38 49.1	-0.7
SDCO				IAmb		IAmb		11 38 51.1	
	comp=Z,11nm,1.2s								
POKR	Poker Plat Res	82.68	11	P		P		11 38 49.4	-0.2
	baz=205								
YMP	Mirror Lake Pl	82.70	40	P		P		11 38 50.0	-0.6
HRY	Holter Researc	82.70	37	P		P		11 38 50.7	+0.3
K27K	Chicken	82.77	13	P		P		11 38 51.3	+1.1
	baz=210								
YNE	Yellowstone No	82.92	40	P		P		11 38 51.6	-0.1
MSTX	Muleshoe	82.94	52	P		P		11 38 51.9	+0.1
	baz=246								
MSTX	Muleshoe	82.94	52	P		P		11 38 50.9	-0.9
MSTX				IAmb		IAmb		11 38 52.2	
	comp=Z,14nm,1.1s								
T25A	Trinidad	83.03	49	P		P		11 38 52.6	+0.2
	baz=245								
T25A	Trinidad	83.03	49	P		P		11 38 51.4	-1.1
RWWY	Rawlins	83.11	43	P		P		11 38 52.2	-0.6
Q24A	Divide	83.30	47	P		P		11 38 53.9	0.0
	baz=244								
ISCO	Idaho Springs	83.34	46	P		P		11 38 54.5	+0.4
	baz=244								
PRP	Porcupine Dome	83.39	11	P		P		11 38 53.4	0.0
PRP				IAmb		IAmb		11 38 54.7	
	comp=Z,6.9nm,0.9s								
PRP				IAMs_20		IAMs_20		12 17 00.4	
	comp=Z,270nm,20.0s								
RLMT	Red Lodge	83.44	40	P		P		11 38 54.8	+0.5
	baz=240,SNR=5.7								
RLMT	Red Lodge	83.44	40	P		P		11 38 54.7	+0.4
GCMT	Greycliff	83.52	39	P		P		11 38 55.2	+0.5
N23A	Red Feather La	83.60	45	P		P		11 38 55.6	+0.3
	baz=243								
N23A	Red Feather La	83.60	45	P		P		11 38 55.6	+0.3
JCT	Junction City	83.91	56	P		P		11 38 56.6	-0.2
	baz=248								
K22A	Casper	84.01	43	P		P		11 38 57.2	0.0
	baz=243								
K22A	Casper	84.01	43	P		P		11 38 56.8	-0.5
K22A				IAmb		IAmb		11 38 58.8	
	comp=Z,12nm,1.2s								
PHWY	Pilot Hill	84.11	44	P		P		11 38 57.8	-0.2
PHWY				IAmb		IAmb		11 38 58.7	
	comp=Z,6.4nm,0.9s								
AMTX	Amarillo	84.13	52	P		P		11 38 57.6	-0.4
	baz=247								
AMTX	Amarillo	84.13	52	P		P		11 38 56.8	-1.1
COLD	Coldfoot	84.17	9	P		P		11 38 58.4	+1.2
	baz=202								
EGMT	Eagleton	84.59	37	P		P		11 38 59.9	0.0
	baz=240								
EGMT	Eagleton	84.59	37	P		P		11 38 58.7	-1.2
BILL	Bilibino	84.64	352	IAMs_20		IAMs_20		12 23 23.7	
	comp=Z,635nm,21.0s								
ABTX	Abilene, Hawle	84.83	54	P		P		11 39 00.9	-0.5
	baz=248								
ABTX	Abilene, Hawle	84.83	54	P		P		11 39 01.0	-0.4
H03S2	Juan Fernandez	84.87	124	T		T		13 13 15.2	
	baz=252								
H03S1	Juan Fernandez	84.88	124	T		T		13 13 10.4	
	baz=252								
H03S3	Juan Fernandez	84.88	124	T		T		13 13 06.3	
	baz=252								
KSCO	Kaye Shedlock'	85.09	47	P		P		11 39 03.2	+0.5
KSCO				IAmb		IAmb		11 39 17.8	
	comp=Z,12nm,1.2s								
TOLK	Toolik Lake Re	85.58	8	P		P		11 39 05.3	+1.0
	baz=203								
435B	Jarrell	85.80	57	IAMs_20		IAMs_20		12 06 44.1	
	comp=Z,439nm,19.0s								
LAO	LASA Array	86.05	39	P		P		11 39 07.5	+0.2
	baz=243								
RSSD	Black Hills	86.29	42	P		P		11 39 08.5	-0.2
	baz=244								
WHTX	Lake Whitney,	86.33	56	P		P		11 39 08.5	-0.4
	baz=249								
OKCFA	Oklahoma City	87.54	52	IAMs_20		IAMs_20		12 11 16.9	
	comp=Z,680nm,22.0s								
MAW	Mawson	87.82	199	P		P		11 39 15.8	+0.3
	comp=Z,11nm,1.0s,baz=135,slow=6.4,SNR=22								
MAW	Mawson	87.82	199	P		P		11 39 15.7	+0.3
DGMT	Dagmar	88.08	38	P		P		11 39 17.2	+0.2
	baz=244								
OK031	S. Brethren Rd	88.19	52	IAMs_20		IAMs_20		12 20 03.3	
	comp=Z,680nm,22.0s								
INK	Inuvik	88.27	14	P		P		11 39 17.1	-0.3
	comp=Z,1.8nm,0.8s,baz=196,slow=4.6,SNR=5.3								
LC01	Cunco	88.84	130	IAMs_20		IAMs_20		12 06 04.1	
	comp=Z,568nm,21.0s								
HHC	Hu-ho-hao-te	89.34	313	*eP*		P		11 39 23.5	+0.3
HHC				pmax		pmax			
	comp=Z,11nm,0.7s								
HHC				pmax		pmax			
	comp=Z,300nm,6.6s								
KSU1	Kansas State U	89.46	49	P		P		11 39 23.7	0.0
	baz=250								
CRIN	San Cristobal	89.55	77	IAMs_20		IAMs_20		12 14 55.7	
	comp=Z,460nm,20.0s								
YKA	Yellowknife Ar	90.04	23	LR		LR		12 12 12.3	
	comp=Z,69nm,21.5s,baz=0.0,slow=30								
MIAR	Mount Ida	90.24	54	P		P		11 39 27.4	0.0
	baz=251								
MATN	Matagalpa	90.67	77	IAMs_20		IAMs_20		12 11 37.9	
	comp=Z,228nm,18.0s								
CD2	Chengdu	92.15	301	*eP*		P		11 39 37.0	+0.5
SYO	Syowa Base	92.58	191⇑	*eP*		P		11 39 35.8	-1.9
SYO	Syowa Base	92.58	191⇑	*es*P		P		11 39 40.2	+2.5
VNA3	Neumayer Olymp	92.74	175	P		P		11 39 38.4	0.0
CCM	Cathedral Cave	93.11	51	P		P		11 39 40.2	-0.5
	baz=253								
VNA2	Neumayer--Watz	93.24	175	P		P		11 39 41.1	+0.4
VNA1	Neumayer--Stat	93.44	175	P		P		11 39 42.3	+0.6
OXF	Oxford	93.52	55	P		P		11 39 42.2	-0.4
	baz=254								
LZH	Lanzhou	93.55	306	*eP*		P		11 39 45.6	+2.6
LZH				pP		pwP		11 39 48.9	+1.0
LZH				sP		sP		11 39 50.4	+3.6
LZH				*e*PP		PP		11 43 34.5	+6.6
LZH				pmax		pmax			
	comp=Z,20nm,1.4s								
LZH				pmax		pmax			
	comp=Z,93nm,5.2s								
LZH				LR		LR			
	comp=Z,170nm,17.5s								
LZH				LR		LR			
	comp=Z,180nm,17.2s								
LZH				LR		LR			
	comp=Z,250nm,19.6s								
ULM	Lac du Bonnet	93.78	39	LR		LR		12 14 48.5	
	comp=Z,138nm,20.0s,baz=283,slow=31								
JFWS	Jewell Farm	95.23	47	P		P		11 39 49.2	-1.1
	baz=254								
MKAR	Makanchi Array	111.13	315	PKiKP		PKiKP		11 44 59.7	-0.6
	comp=Z,0.3nm,0.7s,baz=118,slow=1.1,SNR=2.4								
SEUS	St. Eustatius	113.26	77	IAMs_20		IAMs_20		12 22 49.5	
	comp=Z,361nm,20.0s								
ARU	Arti	123.59	328	PKP		PKPdf		11 45 23.0	-0.8
	comp=Z,0.6nm,0.3s,baz=275,slow=7.7,SNR=3.8								
VYHS	Vyhne	145.66	346	*e*PKP		PKPab		11 46 06.2	+0.6
KMBO	Kilima Mbogo	145.81	244	PKPbc		PKPdf		11 46 05.6	-1.1
	comp=Z,1.7nm,0.4s,baz=90,slow=6.1,SNR=2.1								
KHC	Kasperske Hory	146.01	352	*e*PKP		PKPbc		11 46 06.7	+0.3
KHC				*ex*		x		11 46 25.2	
GERES	GERESS Array B	146.27	352	PKPbc		PKPdf		11 46 06.9	+0.8
	comp=Z,0.9nm,0.8s,baz=56,slow=9.9,SNR=6.2								
BRTR	Keskin Array B	146.44	321	PKPbc		PKPbc		11 46 08.8	+0.6
	comp=Z,4.0nm,0.7s,baz=149,slow=2.4,SNR=12								
ISP	Isparta	149.53	321	IAMs_20		IAMs_20		12 58 23.2	
	comp=Z,301nm,20.0s								
PDG	Podgorica	151.14	341	IAMs_20		IAMs_20		12 52 45.5	
	comp=Z,468nm,22.0s								
FNA	Florina	151.85	336	IAMs_20		IAMs_20		12 35 04.6	
	comp=Z,190nm,20.0s								
LIT	Litokhoron	151.98	334	IAMs_20		IAMs_20		12 55 39.2	
	comp=Z,396nm,18.0s								
AQU	L'Aquila	152.65	350	IAMs_20		IAMs_20		12 53 38.4	
	comp=Z,359nm,20.0s								
INTR	Introdacqua	152.89	349	IAMs_20		IAMs_20		12 52 28.8	
	comp=Z,368nm,21.0s								
AGG	Agios Georgios	152.94	333	IAMs_20		IAMs_20		12 56 43.7	
	comp=Z,441nm,18.0s								
PAOL	Paolisi	153.70	347	IAMs_20		IAMs_20		13 00 31.2	
	comp=Z,391nm,21.0s								
ES14	SONSECA Array	154.09	20	IAMs_20		IAMs_20		12 52 41.9	
	comp=Z,594nm,21.0s								
IDI	Anoyia	154.56	324	IAMs_20		IAMs_20		12 58 32.3	
	comp=Z,332nm,20.0s								
ITM	Ithomi	154.63	331	IAMs_20		IAMs_20		12 56 09.7	
	comp=Z,575nm,22.0s								
CEL	Celeste	155.98	343	IAMs_20		IAMs_20		12 56 46.6	
	comp=Z,282nm,21.0s								
CORL	Corleone	156.98	347	IAMs_20		IAMs_20		12 51 56.0	
	comp=Z,440nm,22.0s								

SJA ***04*** *11:44:39.5±0.5, 41.37S×74.86W, h10km, ML4.5, MW4.8*
VAO ***04*** *11:44:47.7±1.0, 41.29S×74.01W, h10km, mb4.8*
NEIC ***04*** *11:44:48.4, 41.18S×73.69W, h33km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.84; Mθθ=0.76; Mφφ=0.08; Mrθ=-0.32; Mrφ=-0.44; Mθφ=-0.38; Fault plane solution: M₀=1.05000×10¹⁶ NP1:φ=319.97000°, δ=47.01000°, λ=-52.29000°. NP2:φ=91.38000°, δ=54.64000°, λ=-123.27000°. Principal axes: T 0.9876, Plg4.0000°, Azm204.0000°; N 0.1075, Plg27.0000°, Azm112.0000°; P -1.0951, Plg63.0000°, Azm303.0000°;*
IDC ***04*** *11:44:51.9±0.7, 41.27S×73.58W, h35km±4km, mb4.3/14, mb1 4.5/15, mb1mx4.3/27, mbtmp4.5/15, ML4.2/1, MS4.1/13, Ms1 4.1/13, ms1mx4.0/20 Error ellipse: s-maj=14.6km s-min=12.7km az=122.0*
NEIC ***04*** *11:44:52.0±1.9, 41.14S±0.06×73.67W±0.06, h33km±1km, Error ellipse: s-maj=10.2km s-min=8.0km az=165.0*
GUC ***04*** *11:44:51.5±0.7, 41.23S×73.82W, h26km±12km, ML4.9*
GCMT ***04*** *11:44:54.0±0.3, 41.25S±0.02×74.11W±0.03, h40km, MW4.9/57, Moment Tensor Solution. s47,c54; s57,c72; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.63±.17; Mθθ=2.74±.11; Mφφ=0.11±.14; Mrθ=-0.91±.08; Mθφ=1.11±.08; Mrφ=-0.25±.14; Best double couple: M₀=3.04000×10¹⁶ NP1:φ=122.00000°, δ=39.00000°, λ=110.00000°. NP2: φ=277.00000°, δ=54.00000°, λ=75.00000°. Principal axes: T 2.8540, Plg75.0000°, Azm139.0000°; N 0.3760, Plg12.0000°, Azm286.0000°; P -3.2270, Plg8.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 11:44:51.5±0.4, 41.18S±0.05×73.96W±0.06, h35km, n223, σ1 55/228, mb4.8/43, MS4.1/14, 1C-2D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LL01	San Ignacio de	1.66	136	*i*P	Pn	11 45 17.7	-0.4
LL01				*i* S	Sn	11 45 36.6	-1.6
LL01				IAML		11 45 38.6	
	comp=N,17μm,0.3s						
LL01	San Ignacio de	1.66	136	Pn	Pn	11 45 17.7	-0.4
LL02	Futaleuf	2.55	143	*e*P	Pn	11 45 30.5	+0.2
PLCA	Paso Flores	2.62	81	Pg	Pn	11 45 33.8	+2.4
	comp=N,37nm,0.3s,baz=260,slow=12,SNR=267						
PLCA				Lg	Lg	11 46 07.5	
	comp=N,64nm,0.3s,baz=339,slow=23,SNR=2.1						
PLCA				LR	LR	11 46 39.5	
	comp=N,2μm,19.2s,baz=267,slow=46						
PLCA	Paso Flores	2.62	81	*i*P	Pn	11 45 32.7	+1.3
PLCA	Paso Flores	2.62	81	Pn	Pn	11 45 32.9	+1.5
PLCA	Paso Flores	2.62	81	*i* P	Pn	11 45 34.0	+2.7
PLCA				*e*S	Sn	11 46 15.4	+13
PLCA				IAML		11 46 22.1	
	comp=Z,1μm,1.9s						
PLCA	Paso Flores	2.62	81	*e*P	Pn	11 45 32.3	+1.0
BI04	Isla Mocha	2.77	1	*e*P	Pn	11 45 35.0	+1.7
BI04				*i* S	Sn	11 46 04.6	-0.9
BI04				IAML		11 46 08.5	
	comp=E,6μm,0.1s						
LC01	Cunco	2.79	36	*i*P	Pn	11 45 35.1	+1.4
LC01				*i* S	Sn	11 46 07.9	+1.9
CANA	Caviahue	3.98	35	*i* P	Pn	11 45 51.9	+1.7
CANA				*e*S	Sn	11 46 45.4	+10
CANA				IAML		11 47 19.8	
	comp=Z,401nm,1.0s						
LAJA	Laja	4.01	14	*e*P	Pn	11 45 52.2	+1.7
BI03	Tigo	4.39	10	*e*P	Pn	11 45 56.5	+0.8
BI03	Tigo	4.39	10	Pn	Pn	11 45 56.3	+0.7
BI02	San Fabin de	4.97	26	*e*P	Pn	11 46 05.3	+1.6
BI02	San Fabin de	4.97	26	Pn	Pn	11 46 05.5	+1.8
PUMA	Malargue	6.69	33	*i* P	Pn	11 46 29.9	+2.6
BO02	Sierra Bellavi	6.85	22	Pn	Pn	11 46 30.0	+0.4
COIS	El Sosneado	6.97	31	*i* P	Pn	11 46 32.3	+1.1
LAMA	Las Malvinas	7.27	32	*i* P	Pn	11 46 37.1	+1.9
MT05	Renca	8.19	19	Pn	Pn	11 46 46.9	-0.9
MT02	Curacav	8.22	17	Pn	Pn	11 46 47.3	-1.0
H03S1	Juan Fernandez	8.31	330	Pn	Pn	11 46 51.4	+2.2
	baz=129,slow=7.7,SNR=46						
H03S1				Sn	Sn	11 48 18.0	-3.7
	baz=243,slow=75,SNR=4.4						
H03S1				T	T	11 55 57.3	
	baz=153,slow=75,SNR=126						
H03S2	Juan Fernandez	8.32	330	Pn	Pn	11 46 51.5	+2.1
	baz=129,slow=7.7,SNR=55						
H03S2				Sn	Sn	11 48 18.1	-4.0
	baz=243,slow=75,SNR=3.7						
H03S2				T	T	11 55 49.0	
	baz=153,slow=75,SNR=131						
H03S3	Juan Fernandez	8.33	330	Pn	Pn	11 46 51.7	+2.2
	baz=129,slow=7.7,SNR=55						
H03S3				Sn	Sn	11 48 18.0	-4.2
	baz=243,slow=75,SNR=2.4						
H03S3				T	T	11 55 48.7	
	baz=153,slow=75,SNR=690						
VA01	Torpederas	8.35	13	Pn	Pn	11 46 48.9	-1.1
PEL	Peldehue	8.44	19	Pn	Pn	11 46 49.8	-1.5
PEL	Peldehue	8.44	19	*i* P	Pn	11 46 50.5	-0.8
VA04	Juan Fernndez	8.46	331	Pn	Pn	11 46 53.2	+1.7
ROC1	El Roble	8.52	17		Pn	11 46 51.3	-1.3
ROC1	El Roble	8.52	17	*i* P	Pn	11 46 51.5	-1.1
H03N3	Juan Fernandez	8.66	331	Pn	Pn	11 46 57.4	+3.2
	baz=277,slow=70,SNR=452						
H03N1	Juan Fernandez	8.67	331	Pn	Pn	11 46 56.7	+2.5
	baz=277,slow=70,SNR=494						
H03N1				Sn	Sn	11 48 27.3	-3.3
	baz=184,slow=74,SNR=4.2						
H03N2	Juan Fernandez	8.68	331	Pn	Pn	11 46 57.0	+2.7
	baz=277,slow=70,SNR=224						
H03N2				Sn	Sn	11 48 31.7	+0.9
	baz=78,slow=74,SNR=3.8						
VA03	San Esteban	8.83	19		Pn	11 46 55.6	-1.2
AAGR	Agrelo	9.06	28	*i* P	Pn	11 47 00.6	+0.8
ARCO	CERRO ARCO	9.24	27	*i* P	Pn	11 47 03.9	+1.4
ASAL	Salagasta	9.50	27	*i* P	Pn	11 47 06.5	+0.6
AUSP	Uspallata	9.66	24	*i* P	Pn	11 47 08.6	+0.3
RTLS	Leoncito	10.09	23	*i* P	Pn	11 47 14.2	+0.1
CO02	Combarbal	10.24	14		Pn	11 47 15.3	-0.8
ZON	Zonda	10.51	26		Pn	11 47 18.6	-1.1
CO03	El Pedregal	10.65	15		Pn	11 47 21.2	-0.4
RTLL	Cerro Villicun	10.78	26	*i* P	Pn	11 47 22.9	-0.5
MRA	San Martin	10.96	40	*i* P	Pn	11 47 26.4	+0.6
GO04	Tololo Observa	11.28	14	Pn	Pn	11 47 29.6	-0.8
CO01	Juntas del Tor	11.61	17		Pn	11 47 33.9	-1.0
LCO	Las Campanas	12.43	13	Pn	Pn	11 47 45.0	-1.1
AC05	El Transito	12.68	15	Pn	Pn	11 47 46.8	-2.6
AC04	Llanos de Chal	13.16	11	Pn	Pn	11 47 54.9	-1.0
GO03	Copiap	13.90	14	Pn	Pn	11 48 05.4	-0.6
AC02	Mariinga	14.86	17	Pn	Pn	11 48 16.8	-2.6
GO02	Mina Guanaco	16.39	14	Pn	Pn	11 48 37.9	-1.1
PB14	IPOC Station P	16.78	11	Pn	Pn	11 48 40.5	-3.5
PB14				IAmb	IAmb	11 48 45.3	
	comp=Z,101nm,1.3s						
PB10	IPOC Station P	17.85	10	P	Pn	11 48 57.0	0.0
PB15	IPOC Station P	18.32	13	P	P	11 49 01.4	-1.5
PB06	IPOC Station P	18.79	13	P	P	11 49 06.0	-1.9
PB06				IAmb	IAmb	11 49 10.9	
	comp=Z,64nm,1.2s						
LVC	Limon Verde	19.00	14	P	P	11 49 10.5	0.0
	comp=Z,0.7nm,0.3s,baz=194,slow=8.2,SNR=7.2						
LVC				LR	LR	11 56 36.9	
	comp=Z,991nm,21.0s,baz=188,slow=37						
LVC	Limon Verde	19.00	14		P	11 49 07.5	-3.0
LVC	Limon Verde	19.00	14	*e*P	P	11 49 10.9	+0.4
PB04	IPOC Station P	19.07	11	P	P	11 49 09.1	-1.9
PB04				IAmb	IAmb	11 49 14.4	
	comp=Z,84nm,1.1s						
CPUP	Villa Florida	20.21	48	P	P	11 49 21.7	-1.6
	comp=Z,6.1nm,0.7s,baz=248,slow=7.6,SNR=3.3						
CPUP				LR	LR	11 58 28.2	
	comp=Z,362nm,20.4s,baz=222,slow=41						
CPUP	Villa Florida	20.21	48	P	P	11 49 20.9	-2.4
PB01	IPOC Station P	20.43	12	P	P	11 49 26.2	+0.4
PB01				IAmb	IAmb	11 49 31.2	
	comp=Z,64nm,1.0s						
TA01	Diego Aracena	20.80	10	P	P	11 49 29.3	-0.4
TA01				IAmb	IAmb	11 49 48.2	
	comp=Z,65nm,1.2s						
PB08	IPOC Station P	21.37	12	P	P	11 49 35.9	-0.4
PB08				IAmb	IAmb	11 49 43.4	
	comp=Z,46nm,1.0s						
PB11	IPOC Station P	21.67	11	P	P	11 49 38.5	-0.7
PSGCX	Pisagua	21.76	10	P	P	11 49 40.1	-0.1
MNMC	Minye Minye	22.29	11	P	P	11 49 46.2	+0.1
MNMC				IAmb	IAmb	11 50 02.5	
	comp=Z,79nm,1.2s						
PB16	IPOC Station P	23.09	11	P	P	11 49 53.9	-0.9
PMSA	Palmer Station	24.31	170	P	P	11 50 04.2	-1.2
	comp=Z,15nm,1.1s,baz=312,slow=8.2,SNR=4.7						
PMSA				LR	LR	11 58 40.6	
	comp=Z,1μm,20.7s,baz=340,slow=34						
PMSA	Palmer Station	24.31	170	P	P	11 50 06.5	+1.1
PMSA				IAmb	IAmb	11 50 08.6	
	comp=Z,52nm,1.4s						
PTGB	Pitanga	24.54	55	*e*P	P	11 50 07.3	-0.6
LPAZ	La Paz	25.31	13	P	P	11 50 16.7	+1.1
	comp=Z,9.6nm,1.1s,baz=144,slow=7.6,SNR=17						
LPAZ	La Paz	25.31	13	P	P	11 50 15.3	-0.2
LPAZ	La Paz	25.31	13	*e*P	P	11 50 16.1	+0.5
TRCB	Terra Rica	25.64	51	*e*P	P	11 50 17.4	-0.5
PCMB	Pacaembu	27.36	51	*e*P	P	11 50 34.1	+0.8
SIV	San Ignacio	27.47	28	P	P	11 50 34.3	0.0
	comp=Z,10.0nm,1.1s,baz=231,slow=11,SNR=14						
SIV				LR	LR	12 03 20.8	
	comp=Z,444nm,18.4s,baz=240,slow=40						
PTLB	Pontes e Lacer	28.68	31	*e*P	P	11 50 45.9	+0.7
NNA	Nana	29.19	354	LR	LR	11 59 39.4	
	comp=Z,326nm,21.6s,baz=178,slow=30						
ETMB	Extrema	31.98	15	*e*P	P	11 51 15.5	+1.2
SAML	Samuel	33.49	20	P	P	11 51 25.5	-2.0
SAML	Samuel	33.49	20

SWET	**Sewanee**	**76.82**	**350**	P	**P**	**11 56 41.2**	**+1.8**
SWET				IAmb	IAmb	11 56 41.7	
	comp=Z,17nm,1.2s						
V48A	**Smith Brothers**	**77.46**	**349**	P	**P**	**11 56 42.2**	**-0.7**
V48A				IAmb	IAmb	11 56 44.9	
	comp=Z,10nm,0.9s						
W41B	**Gary Mavity, V**	**77.82**	**345**	P	**P**	**11 56 46.6**	**+1.6**
WVT	**Waverly**	**77.98**	**349**	P	**P**	**11 56 46.2**	**+0.4**
BOSA	**Boshof**	**78.10**	**118**	P	**P**	**11 56 46.4**	**-0.7**
	comp=Z,12nm,0.8s,baz=220,slow=6.2,SNR=12						
BOSA				pP	**pP**	**11 56 58.1**	**0.0**
	comp=Z,7.9nm,0.6s,baz=226,slow=4.4,SNR=5.5						
BOSA				LR	LR	12 24 35.5	
	comp=Z,64nm,20.8s,baz=196,slow=31						
BOSA	**Boshof**	**78.10**	**118**	P	**P**	**11 56 46.5**	**-0.6**
BOSA				IAmb	IAmb	11 56 47.7	
	comp=Z,12nm,0.8s						
LCAR	**Lake Charles**	**78.48**	**346**	P	**P**	**11 56 48.0**	**-0.6**
LCAR				IAmb	IAmb	11 56 52.4	
	comp=Z,8.8nm,0.9s						
LIC	**Lamto**	**78.52**	**71**	*e*P	**P**	**11 56 49.7**	**+0.4**
	comp=Z,15nm,1.0s						
TIC	**Toumodi**	**78.81**	**71**	*e*P	**P**	**11 56 51.4**	**+0.4**
KIC	**Kosan Boka**	**78.81**	**71**	*e*P	**P**	**11 56 51.4**	**+0.4**
	comp=Z,0.7nm,0.2s						
DBIC	**Dimbokro**	**78.94**	**71**	P	**P**	**11 56 51.0**	**-0.7**
	comp=Z,4.7nm,0.8s,baz=144,slow=5.5,SNR=4.0						
DBIC				pP	**pP**	**11 57 02.8**	**+0.1**
	comp=Z,51nm,1.4s,baz=189,slow=7.4,SNR=6.6						
DBIC				LR	LR	12 27 00.8	
	comp=Z,91nm,18.8s,baz=200,slow=32						
DBIC	**Dimbokro**	**78.94**	**71**	P	**P**	**11 56 50.9**	**-0.8**
DBIC				IAmb	IAmb	11 57 04.1	
	comp=Z,13nm,0.8s						
PBMO	**Poplar Bluff**	**79.04**	**347**	P	**P**	**11 56 53.0**	**+1.4**
PBMO				IAmb	IAmb	11 56 53.5	
	comp=Z,9.3nm,0.9s						
TUL1	**Leonard**	**79.29**	**342**	P	**P**	**11 56 53.9**	**+0.8**
TUL1				IAmb	IAmb	11 56 55.2	
	comp=Z,10nm,0.8s						
MGMO	**Mountain Grove**	**79.74**	**345**	P	**P**	**11 56 57.0**	**+1.6**
FVM	**French Village**	**80.22**	**347**	P	**P**	**11 56 58.3**	**+0.3**
FVM				IAmb	IAmb	11 56 60.0	
	comp=Z,9.7nm,0.9s						
CCM	**Cathedral Cave**	**80.43**	**346**	P	**P**	**11 56 59.6**	**+0.5**
S39A	**Bolivar**	**80.47**	**345**	P	**P**	**11 57 00.3**	**+0.9**
S39A				IAmb	IAmb	11 57 01.4	
	comp=Z,6.8nm,0.9s						
LBTB	**Lobatse**	**80.67**	**115**	P	**P**	**11 56 58.6**	**-2.5**
R40A	**Maddies Statio**	**80.84**	**345**	P	**P**	**11 57 02.1**	**+0.7**
R40A				IAmb	IAmb	11 57 19.9	
	comp=Z,9.4nm,1.2s						
ANMO	**Albuquerque**	**81.44**	**333**	P	**P**	**11 57 06.4**	**+1.5**
P40A	**Paris**	**82.01**	**346**	P	**P**	**11 57 08.4**	**+1.0**
P38A	**Dawn**	**82.38**	**345**	P	**P**	**11 57 10.1**	**+0.7**
P38A				IAmb	IAmb	11 57 11.4	
	comp=Z,17nm,1.1s						
T25A	**Trinidad**	**82.78**	**336**	P	**P**	**11 57 14.1**	**+2.2**
T25A				IAmb	IAmb	11 57 15.5	
	comp=Z,13nm,1.1s						
N38A	**Joes South For**	**83.45**	**345**	P	**P**	**11 57 16.1**	**+1.1**
S22A	**4UR Ranch, Cre**	**84.11**	**334**	P	**P**	**11 57 20.9**	**+2.1**
S22A				IAmb	IAmb	11 57 21.7	
	comp=Z,10nm,1.4s						
SMCO	**Snowmass**	**85.45**	**335**	P	**P**	**11 57 28.1**	**+2.4**
SMCO				IAmb	IAmb	11 57 31.7	
	comp=Z,7.0nm,1.1s						
KNB	**Kanab**	**85.57**	**330**	P	**P**	**11 57 28.5**	**+2.5**
ISCO	**Idaho Springs**	**85.60**	**336**	P	**P**	**11 57 27.5**	**+1.3**
GSC	**Goldstone, Bar**	**85.68**	**326**	P	**P**	**11 57 30.2**	**+3.7**
GSC				IAmb	IAmb	11 57 31.8	
	comp=Z,12nm,1.5s						
SHPR	**Sheep Range**	**86.04**	**328**	P	**P**	**11 57 30.9**	**+2.5**
SHPR				IAmb	IAmb	11 57 32.5	
	comp=Z,9.0nm,1.3s						
SZCU	**Shurtz Canyon**	**86.18**	**330**	P	**P**	**11 57 32.2**	**+3.1**
MTPU	**Mount Pierson**	**86.24**	**331**	P	**P**	**11 57 31.8**	**+2.3**
CCUT	**Cedar City**	**86.25**	**330**	P	**P**	**11 57 31.3**	**+1.9**
K31A	**O'Neill**	**86.38**	**342**	P	**P**	**11 57 31.0**	**+1.3**
SRU	**San Rafael Swe**	**86.59**	**332**	P	**P**	**11 57 32.5**	**+1.5**
I37A	**Lemond, Waseca**	**86.60**	**346**	P	**P**	**11 57 32.1**	**+1.5**
Q16A	**Castle Valley**	**86.64**	**332**	P	**P**	**11 57 32.2**	**+1.0**
MSU	**Marysvale**	**86.65**	**331**	P	**P**	**11 57 31.9**	**+0.5**
MVU	**Marysvale**	**86.65**	**331**	P	**P**	**11 57 33.8**	**+2.4**
ISA	**Isabella, Lake**	**86.70**	**325**	P	**P**	**11 57 33.5**	**+2.0**
PRN	**Pahroc Range**	**86.78**	**328**	P	**P**	**11 57 34.9**	**+3.0**
PRN				IAmb	IAmb	11 57 36.2	
	comp=Z,7.1nm,1.0s						
TPNV	**Topopah Spring**	**86.86**	**327**	P	**P**	**11 57 35.3**	**+3.0**
ECSD	**EROS Data Cent**	**86.96**	**344**	P	**P**	**11 57 33.8**	**+1.4**
TMUT	**Trail Mountain**	**86.99**	**332**	P	**P**	**11 57 35.5**	**+2.4**
PSUT	**Pine Spring**	**87.29**	**330**	P	**P**	**11 57 37.1**	**+2.6**
TORD	**Torodi Ar. Bea**	**88.06**	**71**	P	**P**	**11 57 38.2**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=245,slow=4.6,SNR=4.6						
TORD				pP	**pP**	**11 57 48.7**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=241,slow=3.9,SNR=10						
TORD	**Torodi Ar. Bea**	**88.06**	**71**	P	**P**	**11 57 37.9**	**-0.5**
DUG	**Dugway, Tooele**	**88.36**	**331**	P	**P**	**11 57 40.4**	**+0.9**
DUG				IAmb	IAmb	11 57 53.9	
	comp=Z,8.9nm,1.1s						
F36A	**Milaca**	**88.41**	**346**	P	**P**	**11 57 40.0**	**+0.7**
K22A	**Casper**	**88.48**	**337**	P	**P**	**11 57 41.6**	**+1.6**
OMMB	**Old Mammoth Mi**	**88.57**	**326**	P	**P**	**11 57 43.7**	**+3.0**
OMMB				IAmb	IAmb	11 57 44.6	
	comp=Z,8.9nm,1.2s						
MDPB	**Devils Postpil**	**88.62**	**326**	P	**P**	**11 57 43.8**	**+2.9**
MDPB				IAmb	IAmb	11 57 44.6	
	comp=Z,4.5nm,1.1s						
TCUT	**Toone Canyon**	**88.68**	**333**	P	**P**	**11 57 43.2**	**+2.2**
F33A	**5 Mile Ranch,**	**88.91**	**345**	P	**P**	**11 57 42.5**	**+0.9**
F33A				IAmb	IAmb	11 57 43.4	
	comp=Z,6.6nm,0.8s						
NVAR	**Mina Array Bea**	**88.97**	**327**	P	**P**	**11 57 44.1**	**+1.6**
	comp=Z,1.9nm,0.9s,baz=159,slow=6.6,SNR=13						
NVAR	**Mina Array Bea**	**88.97**	**327**	P	**P**	**11 57 44.0**	**+1.5**
HWUT	**Hardware Ranch**	**89.17**	**333**	P	**P**	**11 57 44.9**	**+1.6**
SPUT	**South Promonto**	**89.21**	**332**	P	**P**	**11 57 45.2**	**+1.7**
KVN	**Kaiserville**	**89.42**	**327**	P	**P**	**11 57 46.6**	**+2.1**
KVN				IAmb	IAmb	11 57 48.0	
	comp=Z,5.6nm,1.2s						
WAKR	**Walker**	**89.51**	**326**	P	**P**	**11 57 46.3**	**+1.3**
WAKR				IAmb	IAmb	11 57 49.4	
	comp=Z,9.1nm,1.1s						
CMB	**Columbia Colle**	**89.52**	**325**	P	**P**	**11 57 47.0**	**+2.2**
CMB				IAmb	IAmb	11 57 48.6	
	comp=Z,6.0nm,1.1s						
BW06	**Boulder Array**	**89.53**	**335**	P	**P**	**11 57 45.5**	**+0.5**
BW06				IAmb	IAmb	11 57 47.4	
	comp=Z,6.8nm,1.1s						
PD31	**Pinedale Array**	**89.53**	**335**	P	**P**	**11 57 45.9**	**+0.9**
PD31				IAmb	IAmb	11 57 47.4	
	comp=Z,6.1nm,1.1s						
PDAR	**Pinedale Array**	**89.53**	**335**	P	**P**	**11 57 46.8**	**+1.7**
	comp=Z,5.1nm,1.0s,baz=151,slow=5.0,SNR=19						
PDAR	**Pinedale Array**	**89.53**	**335**	P	**P**	**11 57 45.6**	**+0.6**
IMW	**Indian Meadow**	**90.99**	**334**	P	**P**	**11 57 53.9**	**+2.0**
IMW				IAmb	IAmb	11 57 54.6	
	comp=Z,8.4nm,1.1s						
FLWY	**Flagg Ranch**	**91.08**	**334**	P	**P**	**11 57 54.8**	**+2.6**
YMR	**Madison River**	**91.69**	**335**	P	**P**	**11 57 56.2**	**+1.3**
YHH	**Holmes Hill**	**91.76**	**335**	P	**P**	**11 57 57.4**	**+2.0**
HLID	**Hailey**	**91.89**	**332**	P	**P**	**11 57 58.1**	**+2.2**
HLID				IAmb	IAmb	11 58 03.1	
	comp=Z,3.8nm,1.1s						
BCYI	**Bear Canyon**	**92.19**	**333**	P	**P**	**11 57 58.6**	**+1.3**
MCMT	**McKenzie Canyo**	**92.45**	**333**	P	**P**	**11 58 01.5**	**+2.9**
DGMT	**Dagmar**	**93.19**	**340**	P	**P**	**11 58 02.9**	**+1.4**
ASAR	**Alice Springs**	**110.49**	**207**	PKiKP	**PKiKP**	**12 03 19.9**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=164,slow=2.9,SNR=4.9						
WRA	**Warramunga Arr**	**113.75**	**209**	PKiKP	**PKiKP**	**12 03 26.1**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=166,slow=1.5,SNR=12						
FITZ	**Fitzroy Crossi**	**118.28**	**201**	PKP	**PKPdf**	**12 03 35.3**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=158,slow=5.4,SNR=1.8						
FITZ	**Fitzroy Crossi**	**118.28**	**201**		**PKPdf**	**12 03 35.1**	**-0.2**
ILAR	**Eielson Array**	**119.85**	**332**	PKP	**PKPdf**	**12 03 37.7**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=56,slow=2.4,SNR=5.5						
NOA	**NORSAR Array B**	**122.83**	**35**	PKP	**PKPdf**	**12 03 42.9**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=248,slow=2.3,SNR=1.6						
H11S2	**WAKE ISLAND Hyd**	**123.90**	**265**	T	T	14 19 57.5	
	baz=132,slow=75,SNR=69						
H11S1	**WAKE ISLAND Hyd**	**123.91**	**265**	T	T	14 20 01.9	
	baz=132,slow=75,SNR=30						
H11S3	**WAKE ISLAND Hyd**	**123.92**	**265**	T	T	14 20 02.0	
	baz=132,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hyd**	**124.48**	**267**	T	T	14 20 38.9	
	baz=128,slow=76,SNR=7.0						
H11N1	**WAKE ISLAND Hyd**	**124.50**	**267**	T	T	14 20 38.2	
	baz=128,slow=76,SNR=25						
H11N2	**WAKE ISLAND Hyd**	**124.50**	**267**	T	T	14 20 37.8	
	baz=128,slow=76,SNR=6.4						
BRTR	**Keskin Array B**	**126.41**	**66**	PKP	**PKPdf**	**12 03 50.4**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=239,slow=7.0,SNR=4.5						
BRTR	**Keskin Array B**	**126.41**	**66**		**PKPdf**	**12 03 50.0**	**-0.5**
AKASG	**Malin Array Be**	**128.00**	**52**	PKP	**PKPdf**	**12 03 52.5**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=273,slow=1.6,SNR=1.8						
AKASG	**Malin Array Be**	**128.00**	**52**		**PKPdf**	**12 03 51.7**	**-1.2**
GEYT	**Alibeck**	**143.27**	**79**	PKP	**PKPdf**	**12 04 21.3**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=256,slow=5.8,SNR=2.1						
PETK	**Petropavlovsk-**	**143.67**	**307**	PKP	PKPab	12 04 20.1	+1.4
	comp=Z,11nm,1.1s,baz=52,slow=2.4,SNR=4.3						
NRIK	**Noril'sk**	**150.15**	**13**	PKPbc	**PKPbc**	**12 04 37.6**	**+0.3**
	comp=Z,7.1nm,0.9s,baz=90,slow=1.9,SNR=5.8						
MJAR	**Matsushiro Arr**	**154.61**	**270**	PKPab	**PKPab**	**12 05 04.6**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=122,slow=4.4,SNR=4.9						
CMAR	**Chiang Mai Arr**	**156.55**	**163**	PKP	**PKPdf**	**12 04 42.1**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=227,slow=4.7,SNR=1.2						
CMAR				PKPab	**PKPab**	**12 05 10.2**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=213,slow=6.3,SNR=1.8						
ZALV	**Zalesovo Beam**	**160.91**	**41**	PKP	**PKPdf**	**12 04 46.7**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=321,slow=1.9,SNR=7.4						
ZALV	**Zalesovo Beam**	**160.91**	**41**		**PKPdf**	**12 04 45.3**	**-1.7**
MKAR	**Makanchi Array**	**162.04**	**64**	PKP	**PKPdf**	**12 04 48.0**	**-0.6**
	comp=Z,1.0nm,1.0s,baz=251,slow=3.7,SNR=4.5						
MKAR				PKPab	**PKPab**	**12 05 33.7**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=256,slow=3.5,SNR=2.7						
MKAR				pPKPab	**pPKPab**	**12 05 46.0**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=276,slow=4.2,SNR=9.0						
MKAR	**Makanchi Array**	**162.04**	**64**		**PKPdf**	**12 04 47.4**	**-1.1**
MKAR					**PKPab**	**12 05 33.5**	**-1.7**
KSRS	**Korea Array**	**162.67**	**265**	PKPab	**PKPab**	**12 05 39.6**	**+1.4**
	comp=Z,1.3nm,0.9s,baz=114,slow=3.0,SNR=4.5						
KSRS				pPKPab	**pPKPab**	**12 05 51.2**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=108,slow=2.9,SNR=3.8						
SONM	**Songino Array**	**173.34**	**358**	PKP	**PKPdf**	**12 04 56.8**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=329,slow=5.2,SNR=4.0						
SONM				PKPab	**PKPab**	**12 06 24.8**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=343,slow=4.5,SNR=2.4						
SONM	**Songino Array**	**173.34**	**358**		**PKPdf**	**12 04 56.0**	**-0.6**
SONM					**PKPab**	**12 06 26.4**	**+1.4**
LZH	**Lanzhou**	**174.63**	**161**	*e*PKP	**PKPdf**	**12 04 59.5**	**+2.0**
LZH				pPKP	pPKPdf	12 05 02.8	-6.2
LZH				LR	LR		
	comp=N,98nm,18.1s						
LZH				LR	LR		
	comp=E,100nm,18.0s						
LZH				LR	LR		
	comp=Z,150nm,20.3s						

*SOME **04** 12:01:52.1,39.67N×73.72E,h10km*
*NNC **04** 12:01:54.7±3.4,39.75N×73.71E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=25.5km s-min=14.2km az=168.0
*KRNET **04** 12:01:57.1±0.1,39.71N×73.77E,mb3.2*
ISC 04 12:01:58.9±1.3**,39.81N**±0.06**×73.87E**±0.03**,h10**km**,n45,**
σ2$02/72,26C-7D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
OHH	**Osh**	**1.09**	**311**	⇑*i*P		**Pg**	**12 02 18.4**	**-1.5**
	baz=18							
OHH				⇑*i*S		**Sg**	**12 02 34.0**	**-0.1**
	baz=18							
ARLS	**Aral**	**2.08**	**9**	⇓*i*P		**Pb**	**12 02 36.4**	**-0.4**
	baz=11							
ARLS				⇓*i*S		**Sg**	**12 03 06.1**	**+0.4**
	baz=11							
AML	**Almayashu**	**2.32**	**357**	⇑*i*P		**Pb**	**12 02 40.4**	**-0.7**
	baz=59							
AML				⇑*i*S		**Sg**	**12 03 11.8**	**-1.7**
	baz=59							
AML	**Almayashu**	**2.32**	**357**	P		**Pb**	**12 02 40.6**	**-0.5**
	SNR=37							
BTK	**Batken**	**2.36**	**277**	⇑*i*P		**Pn**	**12 02 38.2**	**+0.5**
	baz=80							
BTK				⇑*i*S		**Sn**	**12 03 08.2**	**+1.4**
	baz=80							
UCH	**Uchtor**	**2.46**	**11**	⇑*i*P		**Pb**	**12 02 42.5**	**-1.0**
	baz=12							
UCH				⇑*i*S		**Sg**	**12 03 15.7**	**-2.4**
	baz=12							
EKS2	**Erkin-Say**	**2.85**	**359**	⇓*i*P		**Pn**	**12 02 47.3**	**+2.8**
	baz=0.0							
EKS2				⇓*i*S		**Sb**	**12 03 24.1**	**-0.8**
	baz=0.0							
EKS2	**Erkin-Say**	**2.85**	**359**	P		**Pb**	**12 02 49.1**	**-0.8**
	SNR=7.6							
AAK	**Ala-Archa**	**2.86**	**9**	⇑*e*P		**Pn**	**12 02 47.8**	**+3.0**
	baz=10.0							
AAK				⇑*i*S		**Sb**	**12 03 24.6**	**-0.7**
	baz=10.0							
AAK	**Ala-Archa**	**2.86**	**9**	P		**Pb**	**12 02 49.3**	**-0.9**
	SNR=18							
AAK	**Ala-Archa**	**2.86**	**9**	Pg		**Pb**	**12 02 50.5**	**+0.3**
	6.1nm,0.4s							
AAK				⇓Lg		Lg	12 03 28.9	
	22nm,0.8s							
MNAS	**Manas**	**2.87**	**339**	⇑*e*P		**Pn**	**12 02 47.3**	**+2.5**
	baz=42							
MNAS				⇑*i*S		**Sb**	**12 03 23.7**	**-1.7**
	baz=42							
GAR	**Garm**	**2.87**	**255**	⇑*i*P		**Pn**	**12 02 44.9**	**+0.1**
	baz=56							
GAR				⇑*i*S		**Sn**	**12 03 19.7**	**+0.3**
	baz=56							
KBK	**Karagaybulak**	**2.96**	**16**	⇑*i*P		**Pn**	**12 02 49.4**	**+3.3**
	baz=16							
KBK				⇑*i*S		**Sb**	**12 03 27.2**	**-0.8**
	baz=16							
KBK	**Karagaybulak**	**2.96**	**16**	P		**Pb**	**12 02 51.6**	**-0.1**
	SNR=5.9							
MRKS	**Merke**	**2.97**	**351**	*e*P		**Pb**	**12 02 50.0**	**-1.9**
	18nm,0.3s							
MRKS				*e*S		**Sg**	**12 03 32.3**	**-2.0**
	14nm,0.3s							
MRKS	**Merke**	**2.97**	**351**	Pg		**Pb**	**12 02 50.0**	**-1.9**
	18nm,0.3s							
MRKS				Lg		Lg	12 03 32.9	
	14nm,0.3s							
BOOM	**Boomskoye usch**	**3.10**	**30**	⇑*i*P		**Pn**	**12 02 51.1**	**+3.1**
	baz=30							
BOOM				⇑*i*S		**Sb**	**12 03 31.0**	**-1.2**
	baz=30							
TKM2	**Tokmak 2**	**3.37**	**22**	⇑*i*P		**Pn**	**12 02 55.2**	**+3.5**
	baz=23							
TKM2				⇑*i*S		**Sb**	**12 03 37.2**	**-2.7**
	baz=23							
TKM2	**Tokmak 2**	**3.37**	**22**	⇑Pg		**Pb**	**12 03 00.2**	**+1.4**
	1.2nm,0.3s							
TKM2				Lg		Lg	12 03 36.9	
	3.8nm,0.6s							
KDJ	**Kajisay**	**3.41**	**46**	⇑*i*P		**Pn**	**12 02 55.7**	**+3.4**
	baz=46							
KDJ				⇑*i*S		**Sb**	**12 03 38.5**	**-2.7**
	baz=46							
USP	**Ospenovka**	**3.49**	**8**	⇑*i*P		**Pn**	**12 02 56.3**	**+3.1**
	baz=9.0							
USP				⇑*i*S		**Sb**	**12 03 39.2**	**-3.9**
	baz=9.0							
USP	**Ospenovka**	**3.49**	**8**	P		**Pb**	**12 03 01.3**	**+0.6**
	SNR=7.2							
KST	**Kastek**	**3.59**	**25**	*e*P		**Pb**	**12 03 01.8**	**-0.7**
	3.0nm,0.3s							
KST				*e*S		**Sg**	**12 03 52.8**	**-1.5**
	12nm,0.6s							
KST	**Kastek**	**3.59**	**25**	Pg		**Pb**	**12 03 01.8**	**-0.7**
	2.4nm,0.2s							
KST				Lg		Lg	12 03 52.8	
	7.5nm,0.7s							
IUG	**luzhnay**	**3.73**	**310**	⇓*i*P		**Pn**	**12 02 58.7**	**+2.2**
	6.6nm,0.3s							
IUG				⇓*i*S		**Sb**	**12 03 46.6**	**-3.4**
	42nm,0.4s							
IUG	**luzhnay**	**3.73**	**310**	Pg		**Pn**	**12 02 58.3**	**+1.7**
	6.6nm,0.3s							
IUG				Lg		Lg	12 03 46.0	
	42nm,0.4s							
IZV	**Izvestkoviy**	**3.83**	**32**	*e*P		**Pb**	**12 03 07.0**	**+0.4**
	3.5nm,0.5s							
IZV				*e*S		**Sg**	**12 04 01.2**	**-0.6**
	12nm,0.8s							
IZV	**Izvestkoviy**	**3.83**	**32**	Pg		**Pb**	**12 03 07.0**	**+0.4**
	3.5nm,0.5s							
IZV				Lg		Lg	12 04 01.2	
	12nm,0.8s							
TNSS	**Tian-Shan**	**3.97**	**35**	*e*P		**Pb**	**12 03 08.1**	**-1.1**
	3.5nm,0.3s							
TNSS				*e*S		**Sg**	**12 04 03.5**	**-2.8**
	4.1nm,0.7s							
TNSS	**Tian-Shan**	**3.97**	**35**	Pg		**Pb**	**12 03 08.1**	**-1.1**
	3.5nm,0.3s							
TNSS				Lg		Lg	12 04 03.5	
	4.1nm,0.7s							
CHM	**Chimkent**	**4.08**	**309**	*e*P		**Pn**	**12 03 05.9**	**+4.6**
	351nm,0.3s							
CHM				*e*S		**Sb**	**12 03 59.1**	**-1.2**
	291nm,0.1s							
KRBS	**Karabastau**	**4.11**	**19**	*e*P		**Pb**	**12 03 11.3**	**0.0**
	2.9nm,0.5s							
KRBS				*e*S		**Sg**	**12 04 08.7**	**-2.2**
	6.1nm,0.6s							
KRBS	**Karabastau**	**4.11**	**19**	Pg		**Pb**	**12 03 11.3**	**0.0**
	2.9nm,0.5s							
KRBS				Lg		Lg	12 04 08.7	
	6.1nm,0.6s							
KK31	**Karatay Array**	**4.14**	**324**	Pg		**Pb**	**12 03 14.8**	**+2.9**
	0.8nm,0.4s,baz=147,slow=16,SNR=8.1							
KK31				⇑Sn		**Sn**	**12 03 55.5**	**+4.7**
	1.4nm,0.3s,baz=134,slow=25,SNR=5.3							
KOTS	**Kotyrbulak**	**4.20**	**34**	*e*P		**Pb**	**12 03 12.7**	**-0.2**
	12nm,0.4s							
KOTS				*e*S		**Sg**	**12 04 11.1**	**-2.6**
	22nm,0.3s							
KOTS	**Kotyrbulak**	**4.20**	**34**	Pg		**Pb**	**12 03 12.7**	**-0.2**
	12nm,0.4s							
KOTS				Lg		Lg	12 04 11.1	
	22nm,0.3s							
KTBS	**Karatobe**	**4.43**	**27**	*e*P		**Pb**	**12 03 16.9**	**+0.2**
	2.2nm,0.4s							
KTBS				*e*S		**Sg**	**12 04 18.7**	**-2.4**
	13nm,0.7s							
KTBS	**Karatobe**	**4.43**	**27**	Pg		**Pb**	**12 03 16.9**	**+0.2**
	2.2nm,0.4s							
KTBS				Lg		Lg	12 04 18.7	
	13nm,0.7s							
KUU	**Kurty**	**4.48**	**24**	*e*P		**Pb**	**12 03 17.8**	**+0.2**
	2.7nm,0.7s							
KUU				*e*S		**Sg**	**12 04 20.2**	**-2.4**
	2.1nm,0.1s							
KUU	**Kurty**	**4.48**	**24**	Pg		**Pb**	**12 03 17.8**	**+0.2**
	2.3nm,0.6s							
KUU				Lg		Lg	12 04 20.2	
	4.6nm,0.6s							
ARXS	**Arharly**	**5.29**	**33**	*e*P		**Pb**	**12 03 32.9**	**+1.3**
	3.4nm,0.5s							
ARXS				*e*S		**Sg**	**12 04 45.5**	**-3.4**
	4.2nm,0.6s							
ARXS	**Arharly**	**5.29**	**33**	Pg		**Pb**	**12 03 32.9**	**+1.3**
	3.4nm,0.5s							
ARXS				Lg		Lg	12 04 45.4	
	4.2nm,0.6s							
MNBS	**Baschi**	**5.44**	**37**	*e*P		**Pb**	**12 03 36.0**	**+1.9**
	1.5nm,0.4s							
MNBS				*e*S		**Sg**	**12 04 51.4**	**-2.2**
	2.5nm,0.6s							
MNBS	**Baschi**	**5.44**	**37**	Pg		**Pb**	**12 03 36.0**	**+1.9**
	1.5nm,0.4s							
MNBS				Lg		Lg	12 04 51.3	
	2.5nm,0.6s							

*IDC **04** 12:05:44.0±2.0,7.43S×128.48E,h162km±23km,mb3.5/2,*
mb1 3.8/6,mb1mx3.4/30,mbtmp4.3/6,Error ellipse:
s-maj=23.8km s-min=17.9km az=104.0
ISC 04 12:05:41.8±0.9**,7.65S**±0.06**×128.81E**±0.09**,h150**km**,n7,**
σ4$24/11,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**5.69**	**243**	P		**Pn**	**12 07 06.0**	**+1.6**
	40nm,0.3s,baz=55,slow=2.1,SNR=17							
BATI				S		**Sn**	**12 08 07.0**	**-2.0**
	39nm,0.3s,baz=41,slow=20,SNR=6.5							
SIJI	**Sorong**	**7.16**	**20**	P		**Pn**	**12 07 24.9**	**+0.9**
	3.4nm,0.3s,baz=229,slow=20,SNR=18							
SIJI				S		**Sn**	**12 08 40.2**	**-4.1**
	0.6nm,0.3s,baz=203,slow=22,SNR=1.3							
FITZ	**Fitzroy Crossi**	**10.84**	**196**	P		**Pn**	**12 08 14.7**	**+1.8**
	2.0nm,0.3s,baz=24,slow=12,SNR=13							
FITZ				S		**Sn**	**12 10 07.1**	**-5.8**
	0.7

SCO	**Scoresbysund**	**6.79**	**269**			**Pn**	**12 35 27.4**	**-1.6**
SCO	**Scoresbysund**	**6.79**	**269**	*i*	P	**Pn**	**12 35 27.0**	**-2.0**
SCO	**Scoresbysund**	**6.79**	**269**	*i*	P	**Pn**	**12 35 27.0**	**-2.0**
SCO	**Scoresbysund**	**6.79**	**269**	*i*	P	**Pn**	**12 35 27.0**	**-2.0**
SCO				*i*	P	**Pn**	**12 35 27.0**	**-2.0**
DAG	**Danmarks Havn**	**6.84**	**325**	*i*	P	**Pn**	**12 35 26.0**	**-3.7**
DAG	**Danmarks Havn**	**6.84**	**325**	*e*	P	**Pn**	**12 35 25.8**	**-3.9**
DAG				*e*	S	Sn	12 36 32.8	-15
DAG					IAML		12 36 38.1	
	comp=Z,16nm,0.3s							
DAG	**Danmarks Havn**	**6.84**	**325**	*i*	P	**Pn**	**12 35 26.0**	**-3.7**
DAG				*i*	S	Sn	12 36 32.0	-15
DAG	**Danmarks Havn**	**6.84**	**325**	*i*	P	**Pn**	**12 35 26.0**	**-3.7**
DAG				*i*	P	**Pn**	**12 35 26.0**	**-3.7**
DAG				*i*	S	Sn	12 36 32.1	-15
DAG					IAML		12 36 38.1	
	comp=Z,16nm,0.3s							
N2HS	**Hamsund**	**6.86**	**114**	*e*	P	**Pn**	**12 35 30.1**	**+0.3**
N2HS				*e*	S	**Sn**	**12 36 43.5**	**-4.3**
STEI	**Steigen**	**6.89**	**116**	*e*	P	**Pn**	**12 35 30.6**	**+0.2**
STEI					IAML		12 36 47.6	
	comp=Z,35nm,0.6s							
HSPB	**Hornsund (broa**	**6.92**	**33**	*e*	Pn	**Pn**	**12 35 30.4**	**-0.3**
HSPB	**Hornsund (broa**	**6.92**	**33**	*e*	P	**Pn**	**12 35 30.6**	**-0.1**
N2NF	**Nordfold**	**7.00**	**117**	*e*	P	**Pn**	**12 35 32.1**	**+0.3**
N2NF					IAML		12 36 50.2	
	comp=Z,52nm,0.4s							
TRO	**Tromso**	**7.04**	**98**		Pn	**Pn**	**12 35 31.6**	**-0.7**
TRO	**Tromso**	**7.04**	**98**	*e*	P	**Pn**	**12 35 32.0**	**-0.3**
N2IH	**Innhavet**	**7.07**	**114**	*e*	P	**Pn**	**12 35 33.6**	**+0.8**
N2IH				*e*	S	**Sn**	**12 36 48.4**	**-4.6**
NBB08	**Skaug oppvekst**	**7.10**	**120**	*e*	P	**Pn**	**12 35 33.5**	**+0.3**
N2TV	**TΥrnvik**	**7.11**	**118**	*e*	P	**Pn**	**12 35 33.2**	**-0.1**
N2TV				*e*	S	**Sn**	**12 36 47.4**	**-6.6**
NBB30	**Finnes**	**7.17**	**125**	*e*	P	**Pn**	**12 35 33.9**	**-0.2**
NBB30				*e*	S	**Sn**	**12 36 48.8**	**-6.6**
NBB30					IAML		12 36 55.1	
	comp=Z,51nm,0.4s							
NBB05	**Inndyr**	**7.20**	**124**	*e*	P	**Pn**	**12 35 34.7**	**+0.2**
NBB05				*e*	S	**Sn**	**12 36 49.2**	**-6.9**
NBB28	**Valnes**	**7.20**	**122**	*e*	P	**Pn**	**12 35 34.7**	**+0.2**
NBB28	**Valnes**	**7.20**	**122**	*e*	S	**Sn**	**12 36 49.9**	**-6.2**
NBB28					IAML		12 36 57.6	
	comp=Z,26nm,0.4s							
FAUS	**Fauske**	**7.28**	**119**	*e*	P	**Pn**	**12 35 35.7**	**0.0**
FAUS				*e*	S	**Sn**	**12 36 52.7**	**-5.5**
FAUS					IAML		12 36 58.9	
	comp=Z,33nm,0.4s							
NBB13	**Alf Garage**	**7.33**	**128**	*e*	P	**Pn**	**12 35 36.3**	**-0.1**
NBB40	**Tonnes**	**7.34**	**129**	*e*	P	**Pn**	**12 35 36.3**	**-0.2**
NBB40				*e*	S	**Sn**	**12 36 53.1**	**-6.6**
NBB17	**Glomfjord BΨr**	**7.34**	**125**	*e*	P	**Pn**	**12 35 37.3**	**+0.7**
NBB17				*e*	S	**Sn**	**12 36 53.3**	**-6.5**
KONS	**Konsvik**	**7.38**	**129**	⇑*i*	P	**Pn**	**12 35 36.7**	**-0.3**
KONS				*e*	S	**Sn**	**12 36 54.0**	**-6.7**
N2ST	**Straumen**	**7.39**	**119**	*e*	P	**Pn**	**12 35 36.6**	**-0.6**
N2ST				*e*	S	**Sn**	**12 36 56.4**	**-4.6**
BRBA	**Barentsburg A**	**7.47**	**25**		Pn	**Pn**	**12 35 38.6**	**+0.2**
BRBA	**Barentsburg A**	**7.47**	**25**	*e*	P	**Pn**	**12 35 38.5**	**+0.2**
STOK	**Stokkvaagen**	**7.49**	**130**	*e*	P	**Pn**	**12 35 38.8**	**+0.3**
STOK				*e*	S	**Sn**	**12 36 56.4**	**-6.9**
BRBB	**Barentsburg B**	**7.50**	**25**		Pn	**Pn**	**12 35 39.1**	**+0.4**
BRBB	**Barentsburg B**	**7.50**	**25**	*e*	P	**Pn**	**12 35 39.0**	**+0.3**
NBB29	**Rokland skole**	**7.57**	**121**	*e*	P	**Pn**	**12 35 41.6**	**+2.0**
NBB29	**Rokland skole**	**7.57**	**121**	*e*		**Sn**	**12 37 03.7**	**-1.7**
SPA0	**Spitsbergen Ar**	**7.86**	**27**		Pn	**Pn**	**12 35 44.3**	**+0.6**
	baz=205,slow=16							
SPA0	**Spitsbergen Ar**	**7.86**	**27**		Pn	**Pn**	**12 35 44.4**	**+0.8**
SPA0	**Spitsbergen Ar**	**7.86**	**27**		Pn	**Pn**	**12 35 44.3**	**+0.6**
	baz=205,slow=16							
SPITS	**Spitsbergen Ar**	**7.86**	**27**		Pn	**Pn**	**12 35 43.8**	**+0.1**
	baz=206,slow=15,SNR=319							
SPITS					LR	LR	12 38 06.2	
	comp=Z,646nm,19.6s,baz=210,slow=32							
KBS	**Kingsbay**	**7.91**	**19**		Pn	**Pn**	**12 35 41.9**	**-2.4**
KBS					Sn	**Sn**	**12 37 08.5**	**-5.1**
KBS	**Kingsbay**	**7.91**	**19**		P	**Pn**	**12 35 43.9**	**-0.3**
KBS	**Kingsbay**	**7.91**	**19**		Pn	**Pn**	**12 35 43.9**	**-0.3**
KBS	**Kingsbay**	**7.91**	**19**	*e*	P	**Pn**	**12 35 43.2**	**-1.1**
KBS				*e*	S	**Sn**	**12 37 06.2**	**-7.4**
KBS					IAMs_20	IAMs_20	12 37 40.1	
	comp=Z,2µm,15.1s							
KBS	**Kingsbay**	**7.91**	**19**	*i*	P	**Pn**	**12 35 43.2**	**-1.1**
HAMF	**Hammerfest**	**8.13**	**86**	*e*	P	**Pn**	**12 35 45.8**	**-1.6**
HOPEN	**Hopen**	**8.56**	**44**		Pn	**Pn**	**12 35 54.1**	**+0.9**
HOPEN	**Hopen**	**8.56**	**44**	*e*	P	**Pn**	**12 35 54.0**	**+0.9**
KTK1	**Kautokeino**	**8.68**	**97**	*e*	P	**Pn**	**12 35 54.8**	**-0.1**
NSS	**Namsos**	**8.78**	**139**	*e*	P	**Pn**	**12 35 56.7**	**+0.5**
ARA0	**ARCESS Array S**	**9.15**	**91**		Pn	**Pn**	**12 36 00.7**	**-0.6**
	baz=291,slow=10							
ARA0	**ARCESS Array S**	**9.15**	**91**		Pn	**Pn**	**12 36 00.7**	**-0.6**
	baz=291,slow=10							
ARCES	**ARCESS Array B**	**9.15**	**91**		Pn	**Pn**	**12 36 00.6**	**-0.7**
	baz=290,slow=11,SNR=56							
ARCES					Sn	**Sn**	**12 37 38.1**	**-5.9**
	baz=293,slow=23,SNR=1.1							
ARCES					LR	LR	12 39 14.2	
	comp=Z,922nm,20.0s,baz=285,slow=35							
TBLU	**Trondheim**	**9.62**	**147**	*e*	P	**Pn**	**12 36 06.6**	**-1.1**
MOL	**Molde**	**9.85**	**155**	*e*	P	**Pn**	**12 36 10.7**	**-0.2**
BORG	**Borgarnes**	**10.16**	**236**		LR	LR	12 39 14.9	
	comp=Z,582nm,19.2s,baz=21,slow=32							
BORG	**Borgarnes**	**10.16**	**236**		P	**Pn**	**12 36 15.2**	**0.0**
BORG	**Borgarnes**	**10.16**	**236**		Pn	**Pn**	**12 36 15.2**	**0.0**
NOR	**Nord**	**10.42**	**348**		Pn	**Pn**	**12 36 17.0**	**-1.7**
NOR	**Nord**	**10.42**	**348**	*i*	P	**Pn**	**12 36 16.0**	**-2.7**
NOR	**Nord**	**10.42**	**348**	*i*	P	**Pn**	**12 36 16.0**	**-2.7**
NOR				*e*	S	Sn	12 38 01.1	-14
NOR					IAML		12 38 08.2	
	comp=Z,2.9nm,0.3s							
NOR	**Nord**	**10.42**	**348**	*i*	P	**Pn**	**12 36 16.0**	**-2.7**
NOR				*e*	S	Sn	12 38 01.1	-14
NOR	**Nord**	**10.42**	**348**	*i*	P	**Pn**	**12 36 16.0**	**-2.7**
NOR				*e*	S	Sn	12 38 01.1	-14
NOR					IAML		12 38 08.2	
	comp=Z,2.9nm,0.3s							
FOO	**Floro**	**10.52**	**163**	*e*	P	**Pn**	**12 36 19.6**	**-0.4**
FOO				*e*			12 36 27.7	
FOO				*e*	S	**Sn**	**12 39.0**	**-8.7**
DOMB	**Dombas**	**10.57**	**152**	*e*	P	**Pn**	**12 36 20.2**	**-0.6**
HYA	**Hoyanger**	**11.05**	**161**	*e*	P	**Pn**	**12 36 27.5**	**+0.1**
SUMG	**Summit**	**11.27**	**292**		P	**Pn**	**12 36 29.8**	**-0.9**
SUMG	**Summit**	**11.27**	**292**		Pn	**Pn**	**12 36 29.8**	**-0.9**
SUMG	**Summit**	**11.27**	**292**	*i*	P	**Pn**	**12 36 30.0**	**-0.7**
SUMG	**Summit**	**11.27**	**292**	*i*	P	**Pn**	**12 36 30.0**	**-0.7**
NC204	**NORSAR Array S**	**11.56**	**150**		Pn	**Pn**	**12 36 34.3**	**0.0**
NC204	**NORSAR Array S**	**11.56**	**150**	*e*	P	**Pn**	**12 36 34.9**	**+0.6**
ASK	**Askoy**	**11.63**	**164**	*e*	P	**Pn**	**12 36 35.9**	**+0.7**
NC303	**NORSAR Array S**	**11.70**	**148**			**Pn**	**12 36 35.1**	**-1.2**
NC303	**NORSAR Array S**	**11.70**	**148**	*e*	P	**Pn**	**12 36 37.5**	**+1.3**
SKAR	**Skarslia**	**11.77**	**156**	*e*	P	**Pn**	**12 36 37.6**	**+0.4**
SKAR					IAmb	IAmb	12 36 38.6	
	comp=Z,10nm,0.5s							
NBO00	**NORSAR Array S**	**11.79**	**150**			**Pn**	**12 36 38.2**	**+0.7**
NB2	**NORSAR Subarra**	**11.85**	**149**		Pn	**Pn**	**12 36 38.5**	**+0.2**
	baz=340,slow=14							
NB2	**NORSAR Subarra**	**11.85**	**149**		Pn	**Pn**	**12 36 38.6**	**+0.2**
	comp=Z,8.8nm,0.6s,baz=340,slow=14							
NB2	**NORSAR Subarra**	**11.85**	**149**		Pn	**Pn**	**12 36 38.5**	**+0.2**
	baz=340,slow=14							
NOA	**NORSAR Array B**	**11.85**	**149**		Pn	**Pn**	**12 36 38.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=335,slow=11,SNR=32							
NOA					LR	LR	12 41 03.3	
	comp=Z,1µm,20.3s,baz=340,slow=37							
NB201	**NORSAR Array S**	**11.86**	**149**			**Pn**	**12 36 39.0**	**+0.6**
NC405	**NORSAR Array S**	**11.87**	**148**			**Pn**	**12 36 39.1**	**+0.6**
NAO01	**NORSAR Array S**	**11.98**	**150**		Pn	**Pn**	**12 36 40.6**	**+0.4**
NC602	**NORSAR Array S**	**12.19**	**149**			**Pn**	**12 36 43.2**	**+0.3**
NRA0	**NORESS Array S**	**12.19**	**149**		Pn	**Pn**	**12 36 43.1**	**+0.2**
	baz=339,slow=16							
NRA0	**NORESS Array S**	**12.19**	**149**		Pn	**Pn**	**12 36 43.1**	**+0.2**
	baz=339,slow=16							
ODD1	**Odda**	**12.33**	**161**	*e*	P	**Pn**	**12 36 45.6**	**+0.7**
APA	**Apatity**	**12.65**	**92**	⇑*i*	P	**Pn**	**12 36 50.5**	**+1.4**
APA				*i*			12 39 16.0	
APA					pmax	pmax		
	comp=Z,8.0nm,0.7s							
APA					MLR	MLR		
	comp=Z,2µm,11.0s							
BLS5	**Blasjo**	**12.79**	**162**	*e*	P	**Pn**	**12 36 49.9**	**-1.3**
LVZ	**Lovozero**	**12.86**	**90**	⇑*e*	P	**Pn**	**12 36 50.5**	**-1.5**
LVZ					pmax	pmax		
	comp=Z,160nm,2.0s							
LVZ	**Lovozero**	**12.86**	**90**			**Pn**	**12 36 52.9**	**+0.9**
KMY	**Karmoy**	**12.89**	**165**	*e*	P	**Pn**	**12 36 50.7**	**-1.7**
KONO	**Kongsberg**	**12.94**	**154**		P	**Pn**	**12 36 53.3**	**+0.2**
KONO	**Kongsberg**	**12.94**	**154**		Pn	**Pn**	**12 36 53.3**	**+0.2**
KONO	**Kongsberg**	**12.94**	**154**	*e*	P	**Pn**	**12 36 51.4**	**-1.8**
KONO					IAmb	IAmb	12 36 54.2	
	comp=Z,12nm,1.1s							
HFS	**Hagfors**	**13.13**	**145**		Pn	**Pn**	**12 36 55.7**	**-0.1**
	baz=346,slow=12							
HFS	**Hagfors**	**13.13**	**145**		Pn	**Pn**	**12 36 55.6**	**-0.1**
	comp=Z,7.4nm,0.3s,baz=356,slow=10,SNR=73							
HFS					LR	LR	12 41 52.4	
	comp=Z,1µm,19.5s,baz=338,slow=37							
HFS	**Hagfors**	**13.13**	**145**		Pn	**Pn**	**12 36 55.7**	**-0.1**
	baz=346,slow=12							
SNART	**Snartemo**	**13.94**	**161**	*e*	P	**Pn**	**12 37 07.7**	**+0.9**
ANGG	**Ammassalik, Gr**	**14.34**	**263**		Pn	**P**	**12 37 15.2**	**-4.1**
FIA0	**FINESS Array S**	**14.84**	**120**		Pn	**Pn**	**12 37 18.0**	**-1.0**
	baz=334,slow=14							
FIA0	**FINESS Array S**	**14.84**	**120**		Pn	**Pn**	**12 37 18.0**	**-1.0**
	baz=334,slow=14							
FIA1	**FINESS Array S**	**14.84**	**120**			**Pn**	**12 37 18.5**	**-0.5**
FINES	**FINESS Array B**	**14.84**	**120**		Pn	**Pn**	**12 37 17.6**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=334,slow=13,SNR=33							
FINES					LR	LR	12 42 31.7	
	comp=Z,2µm,19.6s,baz=314,slow=35							
FINES	**FINESS Array B**	**14.84**	**120**		P	**Pn**	**12 37 18.4**	**-0.6**
FINES	**FINESS Array B**	**14.84**	**120**			**Pn**	**12 37 18.4**	**-0.6**
TMCR	**Tamitsa**	**16.30**	**98**	*e*	P	**Pn**	**12 37 34.4**	**-3.7**
TMCR					pmax	pmax		
	comp=Z,99nm,1.3s							
EKA	**Eskdalemuir Ar**	**16.52**	**184**		P	**Pn**	**12 37 41.9**	**+1.0**
EKA	**Eskdalemuir Ar**	**16.52**	**184**		Pn	**Pn**	**12 37 40.5**	**-0.4**
	baz=7.5,slow=14,SNR=13							
EKA	**Eskdalemuir Ar**	**16.52**	**184**		P	**Pn**	**12 37 41.9**	**+1.0**
ESK	**Eskdalemuir**	**16.54**	**184**		P	**P**	**12 37 42.9**	**-0.9**
ESK					pmax	pmax		
	comp=Z,43nm,1.1s							
ESK	**Eskdalemuir**	**16.54**	**184**		P	**P**	**12 37 42.9**	**-0.9**
SLIT	**Slitere, Latvi**	**17.21**	**133**	*e*	P	**P**	**12 37 50.9**	**-0.3**
SFJD	**Kangerlussuaq**	**17.54**	**279**		LR	LR	12 43 47.7	
	comp=Z,1µm,19.6s,baz=50,slow=34							
VSU	**Vasula**	**17.56**	**125**	*e*	P	**Pn**	**12 37 52.9**	**-1.0**
VSU					IAmb	IAmb	12 37 55.2	
	comp=Z,647nm,1.7s							
VSU	**Vasula**	**17.56**	**125**	*d*	P	**Pn**	**12 37 53.1**	**-0.8**
VSU					pmax	pmax		
	comp=Z,450nm,1.7s							
TULEG	**Thule**	**18.01**	**316**			**P**	**12 38 00.1**	**+0.3**
TULEG					IAmb	IAmb	12 38 02.4	
	comp=Z,169nm,1.4s							
PBUR	**Paburge**	**18.60**	**136**	*e*	P	**Pn**	**12 38 07.6**	**+0.9**
BSEG	**Bad Segeberg**	**18.61**	**158**	*e*	P	**Pn**	**12 38 08.1**	**+1.3**
	comp=Z,36nm,1.2s,baz=351,slow=10							
KLMR	**Klimovskoe**	**19.24**	**104**	*e*	P	**Pn**	**12 38 15.3**	**+0.9**
KLMR					pmax	pmax		
	comp=Z,147nm,1.3s							
KLMR	**Klimovskoe**	**19.24**	**104**	*e*	Pn	**Pn**	**12 38 15.3**	**+0.9**
KLMR					AMP		12 38 16.5	
	comp=Z,147nm,1.3s							
PABE	**Paberze**	**19.53**	**133**	*e*	P	**Pn**	**12 38 17.7**	**-0.3**
PABE					IAmb	IAmb	12 38 31.4	
	comp=Z,84nm,0.8s							
IZAR	**Zarasai**	**19.85**	**130**	*e*	P	**Pn**	**12 38 22.1**	**+0.4**
ISAL	**Salakas**	**19.98**	**130**	*e*	P	**P**	**12 38 22.5**	**+0.9**
ISAL					IAmb	IAmb	12 38 26.0	
	comp=Z,18nm,0.8s							
NRDL	**Niedersach Rie**	**20.00**	**159**	*e*	P	Pn	12 38 23.7	+0.2
	comp=Z,57nm,1.4s,baz=351,slow=10							
IIGN	**Ignalina**	**20.20**	**130**	*e*	P	**P**	**12 38 24.5**	**+0.5**
IIGN					IAmb	IAmb	12 38 28.2	
	comp=Z,17nm,1.1s							
GKP	**Gorka Klasztor**	**20.27**	**146**	*e*	P	Pn	12 38 26.7	0.0
IDID	**Didziasalis**	**20.36**	**129**	*e*	P	**P**	**12 38 26.2**	**+0.5**
ASSE	**Asse, Remlinge**	**20.42**	**158**	*e*	P	Pn	12 38 28.0	-0.5
	comp=Z,85nm,1.6s,baz=351,slow=10							
CLZ	**Clausthal**	**20.67**	**159**	*e*	P	Pn	12 38 30.8	-0.7
	comp=Z,52nm,1.1s,baz=351,slow=10							
SUW	**Suwalki**	**20.74**	**136**	*e*	P	**P**	**12 38 30.4**	**+0.6**
SUW	**Suwalki**	**20.74**	**136**		P	**P**	**12 38 30.6**	**+0.8**
SUW					pmax	pmax		
	comp=Z,204nm,1.1s							
SUW	**Suwalki**	**20.74**	**136**		P	**P**	**12 38 30.6**	**+0.8**
NACGM	**Naroch**	**20.75**	**130**	*e*		Pn	12 38 38.0	+5.7
NACGM				*e*	LQ	LQ	12 44 04.0	
NACGM				*e*	LR	LR	12 45 34.0	
BUG	**Bochum--Univer**	**20.77**	**165**	*e*	P	Pn	12 38 31.4	-1.1
	comp=Z,78nm,1.6s,baz=351,slow=10							
UCC	**Uccle**	**21.20**	**170**		P	**P**	**12 38 35.5**	**+0.7**
UCC					pmax	pmax		
	comp=Z,55nm,1.3s							
UCC	**Uccle**	**21.20**	**170**		P	**P**	**12 38 35.5**	**+0.7**
UCC					IAmb	IAmb	12 38 37.4	
	comp=Z,56nm,1.3s							
MNK	**Minsk**	**21.38**	**129**	⇑*i*	P	**P**	**12 38 37.0**	**+0.3**
NEUB	**Neuenburg**	**21.46**	**157**	*e*	P	**P**	**12 38 38.9**	**+1.3**
	comp=Z,70nm,1.0s,baz=351,slow=10							
SNF	**Seneffe**	**21.49**	**170**		P	**P**	**12 38 39.8**	**+1.9**
CLL	**Collm**	**21.52**	**155**	⇑*i*	P	**P**	**12 38 39.5**	**+1.2**
	comp=Z,27nm,1.4s							
CLL				*e*	S	**S**	**12 42 39.0**	**+2.5**
CLL	**Collm**	**21.52**	**155**	⇑*i*	P	**P**	**12 38 39.5**	**+1.2**
CLL				*e*	S	**S**	**12 42 39.0**	**+2.5**
CLL					pmax	pmax		
	comp=Z,27nm,1.4s							
CLL	**Collm**	**21.52**	**155**	*e*	P	**P**	**12 38 39.2**	**+0.9**
	comp=Z,53nm,1.7s,baz=351,slow=10							
CLL	**Collm**	**21.52**	**155**		P	**P**	**12 38 38.9**	**+0.7**
BCLA	**Clavier**	**21.64**	**168**	⇑	P	**P**	**12 38 41.0**	**+1.5**
UBBA	**Unterbreizbach**	**21.64**	**160**	*e*	P	**P**	**12 38 41.0**	**+1.5**
	comp=Z,82nm,1.6s,baz=351,slow=10							
AHRW	**Bad Neuenahr-A**	**21.64**	**165**	*e*	P	**P**	**12 38 41.3**	**+1.7**
	comp=Z,134nm,1.4s,baz=351,slow=10							
BGES	**Gesves**	**21.66**	**169**		P	**P**	**12 38 40.8**	**+1.0**
BMRD	**Maredsous**	**21.72**	**169**		x	**P**	**12 38 44.4**	**+4.0**
BMRD					sP	**pwP**	**12 38 48.9**	**+3.5**
BMRD					PnPn	**PnPn**	**12 39 02.3**	**+1.2**
DOU	**Dourbes**	**21.92**	**170**		PnPn	**PnPn**	**12 39 05.5**	**+1.8**
FBE	**Freiberg**	**21.95**	**155**	*e*	P	**P**	**12 38 43.9**	**+1.1**
	comp=Z,46nm,1.2s,baz=351,slow=10							
MOX	**Moxa**	**22.00**	**158**	*e*	P	**P**	**12 38 44.5**	**+1.1**
	comp=Z,48nm,1.5s,baz=351,slow=10							
BRG	**Berggiesshubel**	**22.07**	**154**	*e*	P	**P**	**12 38 45.4**	**+1.2**
	comp=Z,44nm,1.5s							
	comp=N,702nm,23.9s							
	comp=E,426nm,17.7s							
	comp=Z,678nm,14.7s							
BRG	**Berggiesshubel**	**22.07**	**154**	*e*	P	**P**	**12 38 45.4**	**+1.2**
BRG					pmax	pmax		
	comp=Z,44nm,1.5s							
BRG					MLR	MLR		
	comp=N,702nm,23.9s							
BRG					MLR	MLR		
	comp=E,426nm,17.7s							
BRG					MLR	MLR		
	comp=Z,678nm,14.7s							
BRG	**Berggiesshubel**	**22.07**	**154**	*e*	P	**P**	**12 38 44.9**	**+0.7**
	comp=Z,44nm,1.5s,baz=351,slow=10							
TNS	**Taunus Mts**	**22.08**	**163**	*e*	P	**P**	**12 38 45.9**	**+1.6**
	comp=Z,27nm,1.0s,baz=351,slow=10							
PLN	**Plauen**	**22.22**	**157**	*e*	P	**P**	**12 38 46.9**	**+1.2**
	comp=Z,28nm,1.2s,baz=351,slow=10							
BEL	**Belsk**	**22.30**	**142**	*e*	P	**P**	**12 38 48.8**	**+2.2**
TANN	**Tannenbergstha**	**22.33**	**156**	*e*	P	**P**	**12 38 48.1**	**+1.1**
	comp=Z,52nm,1.2s,baz=351,slow=10							
GUNZ	**Gunzen**	**22.36**	**157**	*e*	P	**P**	**12 38 48.5**	**+1.2**
	comp=Z,26nm,1.4s,baz=351,slow=10							
WERN	**Wernitzgruen**	**22.44**	**156**	*e*	P	**P**	**12 38 49.6**	**+1.4**
	comp=Z,32nm,1.2s,baz=351,slow=10							
KSP	**Ksiaz**	**22.46**	**150**	*e*	P	**P**	**12 38 49.3**	**+1.1**
PVCC	**Panska Ves**	**22.50**	**153**		AMS	AMS	12 47 00.0	
	comp=Z,700nm,18.3s							
NKC	**Novy Kostel**	**22.50**	**156**	*e*	P	**P**	**12 38 51.1**	**+2.3**
NKC					MLR	MLR		
	comp=Z,700nm,11.9s							
NKC	**Novy Kostel**	**22.50**	**156**	*e*	P	**P**	**12 38 51.1**	**+2.3**
NKC					AMS	AMS	12 48 30.0	
	comp=Z,700nm,11.9s							
CHVC	**Chvalec**	**22.67**	**150**	*e*	P	**P**	**12 38 51.7**	**+1.1**
CHVC					AMS	AMS	12 47 30.0	
	comp=Z,800nm,19.0s							
OSTC	**Ostas**	**22.72**	**150**	*e*	P	**P**	**12 38 51.9**	**+0.8**
OSTC					AMS	AMS	12 47 30.0	
	comp=Z,800nm,18.5s							
UPC	**Upice**	**22.74**	**150**	*e*	P	**P**	**12 38 52.6**	**+1.3**
UPC					MLR	MLR		
	comp=Z,700nm,15.5s							
UPC	**Upice**	**22.74**	**150**	*e*	P	**P**	**12 38 52.6**	**+1.3**
UPC					AMS	AMS	12 47 40.0	
	comp=Z,700nm,15.5s							
GRF	**Grafenberg Arr**	**22.89**	**159**	*e*	P	**P**	**12 38 53.0**	**+0.1**
	comp=Z,18nm,0.7s,baz=351,slow=10							
MOS	**Moscow**	**22.90**	**114**	*e*	P	**P**	**12 38 52.5**	**-0.4**
MOS					pmax	pmax		
	comp=Z,76nm,1.2s							
MOS					MLR	MLR		
	comp=Z,2µm,15.0s							
PRA	**Prague**	**22.93**	**153**		AMS	AMS	12 47 40.0	
	comp=Z,300nm,15.6s							
ROTZ	**Rotzenmuhle**	**22.93**	**157**	*e*	P	**P**	**12 38 54.9**	**+1.6**
	comp=Z,12nm,1.2s,baz=351,slow=10							
DPC	**Dobruska-Polom**	**22.94**	**150**	*e*	P	**P**	**12 38 54.7**	**+1.3**
DPC					MLR	MLR		
	comp=Z,700nm,19.0s							
DPC	**Dobruska-Polom**	**22.94**	**150**	*e*	P	**P**	**12 38 54.7**	**+1.3**
DPC					AMS	AMS	12 47 40.0	
	comp=Z,700nm,19.0s							
PRU	**Pruhonice**	**23.02**	**153**	*e*	P	**P**	**12 38 56.5**	**+2.2**
PRU					MLR	MLR		
	comp=Z,900nm,26.4s							
PRU	**Pruhonice**	**23.02**	**153**	*e*	P	**P**	**12 38 56.5**	**+2.2**
PRU					AMS	AMS	12 46 40.0	
	comp=Z,900nm,26.4s							
OBN	**Obninsk**	**23.14**	**116**		P	**P**	**12 38 55.4**	**0.0**
	comp=Z,13nm,0.7s,baz=316,slow=16,SNR=8.2							
OBN					LR	LR	12 47 31.3	
	comp=Z,382nm,18.9s,baz=346,slow=36							
OBN	**Obninsk**	**23.14**	**116**	*e*	P	**P**	**12 38 55.5**	**0.0**
OBN				*e*			12 38 59.9	
OBN				*e*	PPP	PPP	12 39 30.0	
OBN				*e*			12 42 44.2	
OBN					pmax	pmax		
	comp=Z,85nm,1.3s							
OBN					MLR	MLR		
	comp=Z,1µm,17.0s							
OBN	**Obninsk**	**23.14**	**116**		P	**P**	**12 38 55.8**	**+0.4**
PBCC	**Pribram**	**23.24**	**154**	*e*	P	**P**	**12 38 59.0**	**+2.5**
KRLC	**Kraliky**	**23.28**	**149**	*e*	P	**P**	**12 39 00.8**	**+3.9**
KRLC					MLR	MLR		
	comp=Z,700nm,15.9s							
KRLC	**Kraliky**	**23.28**	**149**	*e*	P	**P**	**12 39 00.8**	**+3.9**
KRLC					AMS	AMS	12 48 40.0	
	comp=Z,700nm,15.9s							
WET	**Wettzell**	**23.63**	**156**	*e*	P	**P**	**12 39 01.2**	**+0.8**
	comp=Z,19nm,1.4s,baz=351,slow=10							
OJC	**Ojcow**	**23.66**	**145**	*e*	P	**P**	**12 39 01.5**	**+0.9**
OJC	**Ojcow**	**23.66**	**145**		P	**P**	**12 39 01.5**	**+0.9**
OJC					pmax	pmax		
	comp=Z,50nm,1.2s							
OJC	**Ojcow**	**23.66**	**145**		P	**P**	**12 39 01.5**	**+0.9**
OJC					IAmb	IAmb	12

DAVOX **Davos/Dischmat** 25.62 162 LR LR 12 49 31.7
comp=Z,429nm,21.5s,baz=64,slow=37
UZH **Uzhgorod** 25.65 142 *e*P **P** **12 39 20.3 +1.5**
UZH *e*S **S** **12 43 46.6 -0.1**
UZH MLR MLR
comp=N,90nm,17.0s
UZH MLR MLR
comp=E,90nm,17.0s
UZH MLR MLR
comp=Z,70nm,17.0s
PSZ **Piszkesteto** 25.89 146 P **P** **12 39 21.3 +0.1**
PSZ pmax pmax
comp=Z,20nm,1.3s
PSZ **Piszkesteto** 25.89 146 P **P** **12 39 21.3 +0.1**
PSZ IAmb IAmb 12 39 25.9
comp=Z,20nm,1.3s
LPSR **Galich'ya Gora** 26.02 116 *e*P **P** **12 39 22.8 +0.6**
LPSR pmax pmax
comp=Z,40nm,1.0s
MYKA **Terra Mystica** 26.20 156 *e*P **P** **12 39 28.6 +4.6**
comp=Z,13nm,1.6s
SOKA **Soboth** 26.33 154 *e*P **P** **12 39 27.1 +1.9**
comp=Z,5.9nm,1.3s
BUR08 **Bucovina Ar. S** 27.17 139 P **P** **12 39 33.7 +0.9**
BUR08 IAmb IAmb 12 39 38.3
comp=Z,16nm,1.1s
NRIK **Noril'sk** 27.19 51 LR LR 12 53 09.5
comp=Z,169nm,18.9s,baz=18,slow=42
NRIK **Noril'sk** 27.19 51⇑ *e*P **P** **12 39 32.2 -0.4**
BURAR **Bucovina Array** 27.20 139 ⇓P **P** **12 39 34.7 +1.7**
BURAR **Bucovina Array** 27.20 139 ⇓P **P** **12 39 34.7 +1.7**
BURAR **Bucovina Array** 27.20 139 P **P** **12 39 34.2 +1.2**
VSR **Storozhevoye** 27.33 117 *e*P **P** **12 39 34.1 +0.1**
VSR pmax pmax
comp=Z,30nm,0.9s
SORM **Soroca** 27.39 134 ⇑P **P** **12 39 35.6 +1.0**
SORM **Soroca** 27.39 134 ⇑P **P** **12 39 35.6 +1.0**
VORD **Divnogorie** 27.59 117 *e*P **P** **12 39 36.6 +0.3**
VORD pmax pmax
comp=Z,20nm,1.0s
BIZ **Bicaz** 28.03 138 ⇓P **P** **12 39 42.5 +2.1**
VRH **Novokhopyorsk** 28.06 114 *e*P **P** **12 39 39.7 -0.9**
VRH pmax pmax
comp=Z,20nm,1.0s
BZS **Buzias** 28.42 145 ⇓P P 12 39 39.1 -4.7
BZS **Buzias** 28.42 145 ⇓P P 12 39 39.1 -4.7
ARU **Arti** 28.73 90 P **P** **12 39 48.1 +1.6**
comp=Z,0.9nm,0.4s,baz=259,slow=21,SNR=2.0
ARU LR LR 12 51 02.5
comp=Z,459nm,19.2s,baz=314,slow=36
ARU **Arti** 28.73 90 P **P** **12 39 45.8 -0.7**
ARU S **S** **12 44 35.3 0.0**
ARU MLR MLR
comp=Z,412nm,17.0s
ARU **Arti** 28.73 90 P **P** **12 39 46.2 -0.3**
GZR **Gura Zlata** 28.85 143 ⇓P **P** **12 39 47.9 +0.2**
GZR **Gura Zlata** 28.85 143 ⇓P **P** **12 39 47.9 +0.2**
VRI **Vrincioaia** 29.19 138 ⇑P **P** **12 39 52.9 +2.3**
VRI **Vrincioaia** 29.19 138 ⇑P **P** **12 39 52.9 +2.3**
MDVR **Moldovita** 29.24 145 ⇓P **P** **12 39 48.3 -2.9**
MLR **Muntele Rosu** 29.38 139 P **P** **12 39 54.2 +1.7**
comp=Z,11nm,1.1s,baz=77,slow=3.0,SNR=5.5
MLR LR LR 12 52 00.3
comp=Z,1μm,19.3s,baz=352,slow=37
MLR **Muntele Rosu** 29.38 139 ⇑P **P** **12 39 54.5 +2.0**
MLR **Muntele Rosu** 29.38 139 P **P** **12 39 51.5 -1.0**
MLR pmax pmax
comp=Z,13nm,1.0s
MLR **Muntele Rosu** 29.38 139 P **P** **12 39 51.5 -1.0**
MLR IAmb IAmb 12 40 00.7
comp=Z,13nm,1.0s
PETR **Petresti** 29.43 137 ⇓P P 12 40 01.9 +9.1
TPGR **Topolog** 30.51 136 ⇑P **P** **12 40 03.7 +1.3**
HARR **Harsova** 30.57 137 ⇓P **P** **12 40 04.7 +1.9**
HARR **Harsova** 30.57 137 ⇓P **P** **12 40 04.7 +1.9**
SCHQ **Schefferville** 31.81 273 P **P** **12 40 14.1 +0.3**
comp=Z,3.8nm,0.8s,baz=14,slow=14,SNR=1.7
SCHQ LR LR 12 51 48.2
comp=Z,515nm,21.0s,baz=74,slow=34
ESDC **Sonseca Array** 32.20 184 P **P** **12 40 17.7 +0.4**
comp=Z,2.2nm,0.7s,baz=358,slow=9.1,SNR=5.6
ESDC LR LR 12 52 53.3
comp=Z,218nm,18.9s,baz=345,slow=36
ESDC **Sonseca Array** 32.20 184 P **P** **12 40 15.7 -1.6**
ANN **Anapa** 32.73 124 *e*P **P** **12 40 19.1 -2.7**
ANN *e**PP **pP** **12 40 22.2 -2.1**
ANN *e* 12 41 25.6
ANN *e*S **S** **12 45 34.3 -3.7**
ANN pmax pmax
comp=Z,26nm,0.9s
ANN MLR MLR
comp=Z,1μm,14.0s
ANN MLR MLR
comp=E,284nm,13.0s
ANN MLR MLR
comp=N,305nm,12.0s
FNA **Florina** 33.07 147 P **P** **12 40 25.1 +0.2**
FNA pmax pmax
comp=Z,39nm,0.9s
FNA **Florina** 33.07 147 P **P** **12 40 25.1 +0.2**
TIXI **Tiksi** 33.29 26⇓ *e*P **P** **12 40 28.3 +1.9**
TIXI pmax pmax
comp=Z,96nm,1.3s
TIXI **Tiksi** 33.29 26 P **P** **12 40 27.4 +1.0**
TIXI IAmb IAmb 12 40 29.8
comp=Z,27nm,1.3s
AKTO **Aktyubinsk** 33.67 97 P **P** **12 40 30.9 +0.9**
comp=Z,4.2nm,0.9s,baz=329,slow=9.7,SNR=8.8
LIT **Litokhoron** 33.92 146 P **P** **12 40 33.0 +0.7**
LIT pmax pmax
comp=Z,15nm,1.1s
LIT **Litokhoron** 33.92 146 P **P** **12 40 33.0 +0.7**
LIT IAmb IAmb 12 40 34.6
comp=Z,15nm,1.1s
GOF **Gofitskoye** 34.01 118⇑ *e*P **P** **12 40 35.2 +2.2**
GOF pmax pmax
comp=Z,77nm,0.8s
SOC **Sochi** 34.47 122 *e*P **P** **12 40 36.8 -0.1**
SOC *e* 12 41 50.2
SOC *e*S **S** **12 46 06.1 +1.2**
SOC *e*SS **SnSn** **12 48 12.9 -2.2**
SOC MLR MLR
comp=Z,479nm,14.0s
KIV **Kislovodsk** 34.92 119 *e*P **P** **12 40 43.6 +2.6**
KIV pmax pmax
comp=Z,57nm,1.1s
KIV MLR MLR
comp=Z,796nm,16.0s
AGG **Agios Georgios** 34.95 147 P **P** **12 40 41.4 +0.2**
AGG pmax pmax
comp=Z,23nm,1.2s
AGG **Agios Georgios** 34.95 147 P **P** **12 40 41.4 +0.2**
AGG IAmb IAmb 12 40 44.0
comp=Z,23nm,1.2s
KBZ **Khabaz** 35.19 119 P **P** **12 40 45.2 +2.0**
comp=Z,10nm,0.9s,baz=345,slow=7.4,SNR=12
KBZ LR LR 12 55 01.9
comp=Z,494nm,18.6s,baz=342,slow=36
KBZ **Khabaz** 35.19 119⇑ *e*P **P** **12 40 45.5 +2.3**
KBZ pmax pmax
comp=Z,18nm,1.1s
BRVK **Borovoye** 35.25 83⇑ *e*P **P** **12 40 44.7 +1.0**
BRVK pmax pmax
comp=Z,15nm,1.8s
ABKAR **Akbulak array** 35.30 96 P **P** **12 40 44.5 +0.4**
ABKAR IAmb IAmb 12 40 51.6
comp=Z,10nm,1.1s
ABKAR **Akbulak array** 35.30 96 P **P** **12 40 45.0 +0.8**
ZEI **Tsey** 36.34 118 *e*P **P** **12 40 54.4 +1.1**
ZEI pmax pmax
comp=Z,11nm,1.0s
KEST **Kesra** 36.54 165 LR LR 12 56 52.3
comp=Z,316nm,18.8s,baz=269,slow=38
BR131 **Keskin Array S** 36.58 132⇓ *e*P **P** **12 40 57.0 +1.7**
BRTR **Keskin Array B** 36.58 132 LR LR 12 56 45.9
comp=Z,108nm,21.0s,baz=358,slow=38
BRTR **Keskin Array B** 36.58 132 *ce*P **P** **12 40 54.0 -1.3**
BRTR pmax pmax
comp=Z,9.0nm,0.4s
INK **Inuvik** 36.62 332 P **P** **12 40 54.7 -0.5**
INK pmax pmax
comp=Z,20nm,1.5s
INK **Inuvik** 36.62 332 P **P** **12 40 54.6 -0.5**
INK IAmb IAmb 12 40 57.9
comp=Z,20nm,1.4s
MAK **Makhachkala** 37.20 114 *e*P **P** **12 40 57.1 -3.3**
MAK *e*S **S** **12 46 41.7 -5.0**
MAK pmax pmax
comp=Z,292nm,1.2s
MAK MLR MLR
comp=Z,766nm,17.0s
YKA **Yellowknife Ar** 38.46 317 P **P** **12 41 11.8 +0.9**
comp=Z,5.5nm,1.1s,baz=34,slow=10,SNR=4.2
YKA LR LR 12 56 24.7
comp=Z,386nm,21.0s,baz=0.0,slow=35
YKA **Yellowknife Ar** 38.46 317 *ce*P **P** **12 41 12.3 +1.5**
YKA pmax pmax
comp=Z,6.0nm,1.1s
ELL **Elmali** 38.60 138 P **P** **12 41 13.3 +0.9**
ELL pmax pmax
comp=Z,62nm,1.0s
ELL **Elmali** 38.60 138 P **P** **12 41 13.3 +0.9**
BMAR **Burnt Mountain** 38.90 338 P **P** **12 41 15.4 +0.9**
ZALV **Zalesovo Beam** 38.92 70 P **P** **12 41 17.8 +3.1**
comp=Z,0.8nm,0.6s,baz=306,slow=43,SNR=2.2
ZALV LR LR 13 00 25.8
comp=Z,135nm,20.4s,baz=326,slow=41
ZALV **Zalesovo Beam** 38.92 70 P **P** **12 41 16.1 +1.4**
COLD **Coldfoot** 39.69 342 P **P** **12 41 22.1 +1.0**
KURK **Kurchatov** 39.87 78⇑ *e*P **P** **12 41 24.4 +1.7**
KURK pmax pmax
comp=Z,14nm,1.7s
KURK **Kurchatov** 39.87 78 P **P** **12 41 23.4 +0.7**
KURBB **Kurchatov Arra** 39.92 78 P **P** **12 41 25.8 +2.6**
comp=Z,2.0nm,0.2s,baz=330,slow=7.3,SNR=15
BILL **Bilibino** 40.20 7 *e*P **P** **12 41 26.2 +1.0**
BILL *e* 12 42 57.5
BILL *e* 12 43 30.0
BILL pmax pmax
comp=Z,23nm,1.7s
PRP **Porcupine Dome** 40.84 338 P **P** **12 41 30.8 0.0**
IMAR **Indian Mountai** 41.24 343 P **P** **12 41 34.2 +0.3**
MDM **Murphy Dome** 41.69 340 P **P** **12 41 37.8 +0.2**
IL31 41.72 339 P **P** **12 41 38.3 +0.5**
ILAR **Eielson Array** 41.72 339 P **P** **12 41 39.1 +1.3**
comp=Z,1.5nm,0.8s,baz=8.1,slow=6.9,SNR=13
ILAR PcP **PcP** **12 43 34.0 +0.1**
comp=Z,1.2nm,0.8s,baz=332,slow=4.2,SNR=6.9
ILAR LR LR 12 59 45.8
comp=Z,116nm,21.0s,baz=30,slow=37
ILAR **Eielson Array** 41.72 339 P **P** **12 41 38.5 +0.7**
COLA **College** 41.73 339⇓ *e*P **P** **12 41 39.1 +1.2**
COLA pmax pmax
comp=Z,16nm,1.7s
K27K **Chicken** 41.84 335 P **P** **12 41 39.3 +0.4**
K27K IAmb IAmb 12 41 57.2
comp=Z,22nm,1.5s
YAK **Yakutsk** 42.30 32 *e*P **P** **12 41 43.0 +0.5**
YAK pmax pmax
comp=Z,17nm,1.1s
YAK pmax pmax
comp=N,12nm,1.4s
YAK pmax pmax
comp=E,10.0nm,1.5s
FFC **Flin Flon** 42.31 302 P **P** **12 41 43.0 +0.2**
FFC pmax pmax
comp=Z,18nm,1.1s
FFC **Flin Flon** 42.31 302 P **P** **12 41 43.0 +0.2**
FFC IAmb IAmb 12 41 46.7
comp=Z,18nm,1.1s
PAX **Paxson** 43.30 337 P **P** **12 41 51.3 +0.5**
PAX pmax pmax
comp=Z,13nm,0.7s
PAX **Paxson** 43.30 337 P **P** **12 41 51.3 +0.5**
PAX IAmb IAmb 12 41 56.7
comp=Z,13nm,0.7s
DHY **Denali Highway** 43.42 338 P **P** **12 41 52.5 +0.7**
DGZ **Jazzator, Alta** 43.43 71⇓ *e*P **P** **12 41 51.6 -0.5**
DGZ pmax pmax
comp=Z,9.0nm,1.6s
KK31 **Karatay Array** 44.11 90 P **P** **12 41 58.5 +1.0**
KK31 pmax pmax
comp=Z,6.0nm,0.9s
KK31 **Karatay Array** 44.11 90 P **P** **12 41 58.5 +1.0**
KKAR **Karatay Array** 44.11 90 P **P** **12 41 58.5 +1.0**
KKAR pmax pmax
comp=Z,6.0nm,0.9s
KKAR **Karatay Array** 44.11 90 P **P** **12 41 58.5 +1.0**
KKAR **Karatay Array** 44.11 90 P **P** **12 41 58.2 +0.8**
SEY **Seymchan** 44.36 17⇓ *e*P **P** **12 41 59.0 -0.2**
MAKZ **Makanchi** 44.36 77 P **P** **12 42 00.8 +1.3**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
MAKZ **Makanchi** 44.36 77 P **P** **12 42 00.8 +1.3**
MK31 **Makanchi Array** 44.47 77 P **P** **12 42 01.2 +0.9**
MK31 pmax pmax
comp=Z,4.0nm,1.1s
MK31 **Makanchi Array** 44.47 77 P **P** **12 42 01.2 +0.9**
MKAR **Makanchi Array** 44.47 77 P **P** **12 42 01.5 +1.1**
comp=Z,2.5nm,0.8s,baz=344,slow=6.6,SNR=8.2
MKAR PcP **PcP** **12 43 44.0 +0.4**
comp=Z,3.0nm,1.2s,baz=324,slow=3.7,SNR=3.5
MKAR LR LR 13 04 24.3
comp=Z,92nm,18.1s,baz=320,slow=41
MKAR **Makanchi Array** 44.47 77 *i* P **P** **12 42 05.0 +4.7**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR **Makanchi Array** 44.47 77 P **P** **12 42 01.2 +0.9**
ULM **Lac du Bonnet** 44.61 294 LR LR 13 00 10.3
comp=Z,356nm,20.1s,baz=44,slow=36
GEYT **Alibeck** 44.98 105 P **P** **12 42 06.5 +2.0**
comp=Z,5.2nm,0.7s,baz=296,slow=11,SNR=5.6
GEYT PP **PP** **12 43 54.5 +5.2**
comp=Z,4.1nm,0.9s,baz=311,slow=9.4,SNR=4.0
GEYT LR LR 13 02 39.7
comp=Z,388nm,19.2s,baz=335,slow=38
AAK **Ala-Archa** 45.78 87⇑ *e*P **P** **12 42 08.8 -2.2**
AAK pmax pmax
comp=Z,9.0nm,1.3s
BOOM **Boomskoye usch** 46.37 85 P **P** **12 42 17.4 +1.8**
BOOM pmax pmax
comp=Z,8.0nm,1.0s
BOOM **Boomskoye usch** 46.37 85 P **P** **12 42 17.4 +1.8**
BOOM IAmb IAmb 12 42 27.4
comp=Z,7.6nm,1.0s
BTK **Batken** 46.97 92 P **P** **12 42 20.4 +0.2**
BTK pmax pmax
comp=Z,19nm,1.5s
BTK **Batken** 46.97 92 P **P** **12 42 20.4 +0.2**
BTK IAmb IAmb 12 42 26.4
comp=Z,19nm,1.4s
CHGR **Chuyangaron** 47.73 94 P **P** **12 42 26.8 +0.6**
F33A **5 Mile Ranch,** 48.72 292 P **P** **12 42 33.8 +0.3**
F33A IAmb IAmb 12 42 40.3
comp=Z,16nm,1.2s
WMQ **Urumqi** 48.80 74 *e*P **P** **12 42 38.3 +4.0**
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,200nm,4.7s
KSH **Kashi** 49.09 87 P P 12 42 43.2 +6.6
KSH pmax pmax
comp=Z,11nm,0.6s
KSH pmax pmax
comp=Z,310nm,4.9s
TAM **Tamanrasset** 49.16 172 P **P** **12 42 38.0 +0.7**
TAM pmax pmax
comp=Z,10.0nm,1.0s
TAM **Tamanrasset** 49.16 172 P **P** **12 42 38.0 +0.7**
TAM IAmb IAmb 12 42 41.0
comp=Z,10nm,1.0s
I37A **Lemond, Waseca** 49.52 289 P **P** **12 42 40.0 +0.2**
EGMT **Eagleton** 50.44 304 P **P** **12 42 46.0 -0.8**
SONM **Songino Array** 50.45 56 P **P** **12 42 48.4 +1.5**
comp=Z,1.7nm,0.9s,baz=330,slow=8.3,SNR=5.5
SONM LR LR 13 07 26.8
comp=Z,64nm,19.5s,baz=349,slow=40
SONM **Songino Array** 50.45 56 P **P** **12 42 47.7 +0.8**
SONM pmax pmax
comp=Z,5.0nm,1.4s
SONM **Songino Array** 50.45 56 P **P** **12 42 47.7 +0.8**
ULN **Ulaanbaatar** 50.59 56⇑ *e*P **P** **12 42 48.6 +0.6**
ULN pmax pmax
comp=Z,8.0nm,1.7s
L40A **Anamosa** 50.65 286 P **P** **12 42 47.1 -1.2**
L40A IAmb IAmb 12 42 51.6
comp=Z,26nm,1.2s
Q51A **Peebles** 50.99 277 P **P** **12 42 50.4 -0.6**
R49A **Shelbyville** 52.23 278 P **P** **12 42 59.9 -0.3**
R49A IAmb IAmb 12 43 07.8
comp=Z,34nm,1.5s
S51A **Beattyville** 52.34 276 P **P** **12 43 00.7 -0.4**
S51A IAmb IAmb 12 43 04.4
comp=Z,23nm,1.2s
MSO **Missoula** 52.62 307 P **P** **12 43 03.0 -0.2**
MSO IAmb IAmb 12 43 09.6
comp=Z,11nm,1.2s
LRM **Limekiln Ridge** 53.18 305 P **P** **12 43 07.3 -0.1**
YHH **Holmes Hill** 53.73 304 P **P** **12 43 11.6 0.0**
YHL **Hebgen Lake** 53.76 304 P **P** **12 43 11.8 0.0**
MCMT **McKenzie Canyo** 54.21 305 P **P** **12 43 13.9 -1.0**
PETK **Petropavlovsk-** 54.54 15 LR LR 13 06 49.7
comp=Z,83nm,18.0s,baz=13,slow=36
TPAW **Teton Pass** 54.96 303 P **P** **12 43 19.8 -0.7**
TPAW IAmb IAmb 12 43 23.8
comp=Z,13nm,1.4s
REDW **Red Top Meadow** 55.05 303 P **P** **12 43 20.2 -0.9**
REDW IAmb IAmb 12 43 25.1
comp=Z,12nm,1.2s
W50A **Signal Mountai** 55.12 277 P **P** **12 43 20.3 -1.2**
T42A **Van Buren** 55.23 283 P **P** **12 43 21.1 -1.0**
T42A IAmb IAmb 12 43 28.5
comp=Z,24nm,1.4s
BW06 **Boulder Array** 55.26 302 P **P** **12 43 20.8 -1.9**
BW06 IAmb IAmb 12 43 24.1
comp=Z,8.6nm,1.2s
PDAR **Pinedale Array** 55.26 302 P **P** **12 43 23.0 +0.3**
comp=Z,2.7nm,1.0s,baz=46,slow=6.4,SNR=13
PDAR LR LR 13 06 45.4
comp=Z,218nm,18.4s,baz=24,slow=36
PDAR **Pinedale Array** 55.26 302 P **P** **12 43 22.4 -0.2**
SWET **Sewanee** 55.30 277 P **P** **12 43 22.7 0.0**
SWET IAmb IAmb 12 43 28.5
comp=Z,16nm,1.2s
MGMO **Mountain Grove** 55.47 284 P **P** **12 43 23.3 -0.6**
AHID **Auburn Hatcher** 55.68 303 P **P** **12 43 24.0 -1.5**
HLID **Hailey** 55.79 306 P **P** **12 43 26.0 -0.3**
N23A **Red Feather La** 56.02 298 P **P** **12 43 27.4 -0.8**
N23A IAmb IAmb 12 43 33.4
comp=Z,19nm,1.2s
GOGA **Godfrey** 56.20 274 P **P** **12 43 28.7 -0.4**
GOGA pmax pmax
comp=Z,16nm,1.2s
GOGA **Godfrey** 56.20 274 P **P** **12 43 28.7 -0.4**
GOGA IAmb IAmb 12 43 33.0
comp=Z,16nm,1.2s
U40A **Yellville** 56.39 284 P **P** **12 43 29.4 -1.1**
U40A IAmb IAmb 12 43 37.0
comp=Z,14nm,1.2s
GTA **Gaotai** 56.43 66 *e*P **P** **12 43 30.6 -0.3**
GTA pP sP 12 43 35.3 +0.9
GTA sP pwP 12 43 38.5 +2.2
GTA pmax pmax
comp=Z,3.0nm,1.0s
HWUT **Hardware Ranch** 56.88 303 P **P** **12 43 33.5 -0.6**
ISCO **Idaho Springs** 56.94 297 P **P** **12 43 34.2 -0.6**
ISCO pmax pmax
comp=Z,8.0nm,1.2s
ISCO **Idaho Springs** 56.94 297 P **P** **12 43 34.2 -0.6**
ISCO IAmb IAmb 12 43 37.0
comp=Z,7.9nm,1.2s
O20A **White River Ci** 57.36 299 P **P** **12 43 36.7 -0.9**
SMCO **Snowmass** 57.90 298 P **P** **12 43 41.0 -0.7**
SMCO IAmb IAmb 12 43 49.4
comp=Z,16nm,1.4s
BGU **Big Grassy Mou** 57.90 304 P **P** **12 43 40.1 -1.2**
OK031 **S. Brethren Rd** 57.96 288 P **P** **12 43 40.8 -0.8**
OK030 **Cody Creek RV** 57.97 288 P **P** **12 43 41.6 -0.1**
HHC **Hu-ho-hao-te** 58.30 55 *e*P **P** **12 43 46.6 +2.5**
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,210nm,6.6s
MPU **Maple Canyon** 58.39 302 P **P** **12 43 44.4 -0.4**
DUG **Dugway, Tooele** 58.53 303 P **P** **12 43 46.3 +0.6**
DUG pmax pmax
comp=Z,9.0nm,1.1s
DUG **Dugway, Tooele** 58.53 303 P **P** **12 43 46.3 +0.6**
DUG IAmb IAmb 12 43 53.2
comp=Z,9.5nm,1.1s
TORD **Torodi Ar. Bea** 58.62 177 P **P** **12 43 47.2 +0.8**
comp=Z,4.2nm,0.8s,baz=355,slow=7.1,SNR=14
TORD LR LR 13 09 08.6
comp=Z,146nm,20.0s,baz=260,slow=36
TORD **Torodi Ar. Bea** 58.62 177 P **P** **12 43 45.5 -0.9**
ELK **Elko** 58.65 306 P **P** **12 43 45.3 -1.3**
ELK pmax pmax
comp=Z,6.0nm,1.3s
ELK **Elko** 58.65 306 P **P** **12 43 45.3 -1.3**
CN2 **Changchun** 58.79 43 *e*P **P** **12 43 47.4 +0.1**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
SRU **San Rafael Swe** 58.94 301 P **P** **12 43 48.2 -0.4**
SRU pmax pmax
comp=Z,7.0nm,1.0s
SRU **San Rafael Swe** 58.94 301 P **P** **12 43 48.2 -0.4**
TMUT **Trail Mountain** 58.95 302 P **P** **12 43 48.7 -0.1**
USRK **Ussuriysk Ar.** 59.73 37 LR LR 13 12 01.6
comp=Z,55nm,18.1s,baz=342,slow=38
TEY **Ternei** 59.76 33 *e*P **P** **12 43 51.9 -2.0**
TCRU **Three Creeks R** 59.92 302 P **P** **12 43 55.7 +0.2**
MSU **Marysvale** 59.94 302 P **P** **12 43 54.2 -1.4**
MSU **Marysvale** 59.94 302 P **P** **12 43 54.2 -1.4**
MVCO **Mesa Verde** 60.16 298 P **P** **12 43 56.4 -0.8**
PSUT **Pine Spring** 60.37 304 P **P** **12 43 57.4 -1.1**
MTPU **Mount Pierson** 60.39 302 P **P** **12 43 57.8 -1.1**
PAHR **Pah Rah Range** 60.67 309 P **P** **12 43 59.0 -1.5**
LZH **Lanzhou** 60.67 64 *e*P **P** **12 44 01.6 +1.0**
LZH pP sP 12 44 04.8 +0.8
LZH sP pwP 12 44 06.5 +0.5
LZH *e*PP **PP** **12 46 16.7 +2.9**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,86nm,7.6s
LZH LR LR
comp=Z,320nm,15.0s
LZH LR LR
comp=Z,330nm,15.2s
LZH LR LR
comp=Z,460nm,18.1s
KVN **Kaiserville** 60.97 307 P **P** **12 44 03.2 +0.6**
KVN pmax pmax
comp=Z,13nm,1.4s
KVN **Kaiserville** 60.97 307 P **P** **12 44 03.1 +0.6**
KVN IAmb IAmb 12 44 05.3
comp=Z,13nm,1.4s
CCUT **Cedar City** 61.16 303 P **P** **12 44 02.6 -1.4**
NATX **Nacogdoches** 61.20 284 P **P** **12 44 02.9 -1.1**
KNB **Kanab** 61.52 302 P **P** **12 44 05.5 -0.9**
KNB **Kanab** 61.52 302 P **P** **12 44 05.5 -0.9**
NVAR **Mina Array Bea** 61.61 307 P **P** **12 44 07.8 +0.9**
comp=Z,1.1nm,0.9s,baz=31,slow=3.7,SNR=9.1
NVAR LR LR 13 11 09.2
comp=Z,155nm,21.2s,baz=26,slow=36
NVAR **Mina Array Bea** 61.61 307 P **P** **12 44 06.1 -0.9**
ANMO **Albuquerque** 61.71 296⇓ *e*P **P** **12 44 08.5 +0.8**
ANMO pmax pmax
comp=Z,11nm,1.7s
PRN **Pahroc Range** 61.74 304 P **P** **12 44 07.0 -0.8**
PRN IAmb IAmb 12 44 20.1
comp=Z,17nm,1.5s
ABTX **Abilene, Hawle** 61.90 289 P **P** **12 44 08.1 -0.6**
TPNV **Topopah Spring** 62.48 305 P **P** **12 44 12.4 -0.4**
TPNV pmax pmax
comp=Z,12nm,1.3s
TPNV **Topopah Spring** 62.48 305 P **P** **12 44 12.4 -0.4**
TPNV IAmb IAmb 12 44 29.6
comp=Z,12nm,1.2s
BNM **Barren Site** 62.51 296 P **P** **12 44 11.8 -1.3**
WUAZ **Wupatki** 62.54 300 P **P** **12 44 13.0 -0.2**
WUAZ IAmb IAmb 12 44 20.9
comp=Z,14nm,1.2s
JCT **Junction City** 63.95 288 P **P** **12 44 21.5 -0.9**
JCT pmax pmax
comp=Z,33nm,1.5s
JCT **Junction City** 63.95 288 P **P** **12 44 21.5 -0.9**
ISA **Isabella, Lake** 64.27 306 P **P** **12 44 24.5 0.0**
ISA pmax pmax
comp=Z,7.0nm,1.1s
ISA **Isabella, Lake** 64.27 306 P **P** **12 44 24.5 0.0**
ISA IAmb IAmb 12 44 28.4
comp=Z,7.0nm,1.1s
DBIC **Dimbokro** 65.07 184 LR LR 13 12 25.4

comp=Z,88nm,20.8s,baz=0.0,slow=36
KSRS Korea Array 65.40 43 P **P** **12 44 32.0 +0.3**
KSRS LR LR 13 16 08.1
comp=Z,68nm,18.4s,baz=352,slow=39
CD2 Chengdu 65.50 66 *eP* **P** **12 44 33.0 +0.4**
TXAR Lajitas Array 66.17 291 P **P** **12 44 37.5 +0.5**
comp=Z,1.4nm,0.7s,baz=49,slow=5.2,SNR=19
TXAR LR LR 13 12 09.9
comp=Z,203nm,21.7s,baz=0.0,slow=35
TXAR Lajitas Array 66.17 291 P **P** **12 44 36.0 -0.9**
TJN Taejon 66.32 43⇑ *eP* **P** **12 44 38.3 +0.7**
MAJO Matsushiro 68.30 34‖ *eP* **P** **12 44 51.1 +0.9**
MAJO pmax pmax
comp=Z,18nm,1.2s
MAT Matsushiro 68.30 34 P **P** **12 44 50.8 +0.6**
MJAR Matsushiro Arr 68.30 34 P **P** **12 44 51.2 +1.0**
comp=Z,8.6nm,1.0s,baz=345,slow=6.3,SNR=11
MJAR Matsushiro Arr 68.30 34 P **P** **12 44 51.0 +0.8**
MJAR pmax pmax
comp=Z,12nm,1.5s
MJAR Matsushiro Arr 68.30 34 P **P** **12 44 51.0 +0.8**
NJ2 Nanjing 68.48 52 *eP* **P** **12 44 51.2 -0.2**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
CMAR Chiang Mai Arr 75.80 74 P **P** **12 45 36.1 +0.8**
comp=Z,0.8nm,0.9s,baz=318,slow=7.1,SNR=4.5
CMAR LR LR 13 25 53.3
comp=Z,42nm,18.2s,baz=300,slow=41
CMAR Chiang Mai Arr 75.80 74 *eP* **P** **12 45 36.5 +1.1**
CMAR pmax pmax
comp=Z,1.0nm,0.9s
KMBO Kilima Mbogo 76.86 140 LR LR 13 21 29.2
comp=Z,44nm,21.0s,baz=92,slow=37
ROSC El Rosal 80.13 255 LR LR 13 17 32.8
comp=Z,64nm,20.7s,baz=30,slow=33
LPAZ La Paz 98.36 243 LR LR 13 29 01.4
comp=Z,9.4nm,19.8s,baz=8.0,slow=34
WRA Warramunga Arr 122.26 51 PKP **PKPdf** **12 52 43.3 -0.7**
comp=Z,0.9nm,1.1s,baz=347,slow=2.5,SNR=3.4
ASAR Alice Springs 125.72 53 PKhKP **PKPdf** **12 52 47.9 -2.7**
comp=Z,0.6nm,0.8s,baz=4.5,slow=2.1,SNR=6.0
MAW Mawson 145.52 142 PKPbc **PKPab** **12 53 27.3 +1.2**
comp=Z,3.3nm,0.9s,baz=300,slow=7.3,SNR=12

ISC 04 12:34:26.8±1.2,**50.12N**±0.07×**19.22E**±0.05,**h0km,n5,**
σ0§46/10,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OJC	**Ojcow**	**0.38**	**74**	*e*Pg		**Pg**	**12 34 34.2**	**+0.1**
OJC				*e*Sg		**Sg**	**12 34 39.1**	**+0.1**
LANS	**Liptovska Anna**	**0.98**	**171**	*e*PG		**Pb**	**12 34 46.5**	**-0.1**
LANS				*e*SG		**Sg**	**12 34 58.8**	**+0.6**
LANS				*e*LG		Lg	12 35 02.8	
NIE	**Niedzica**	**0.99**	**135**	*e*Pg		**Pb**	**12 34 46.8**	**0.0**
NIE				*e*Sg		**Sb**	**12 35 00.9**	**+0.5**
MORC	**Moravsky Berou**	**1.14**	**253**	*e*PG		**Pb**	**12 34 49.4**	**+0.1**
MORC				*e*SG		**Sb**	**12 35 05.1**	**+0.4**
VYHS	**Vyhne**	**1.64**	**189**	*e*PN		**Pn**	**12 34 56.6**	**-0.3**
VYHS				*e*SN		**Sn**	**12 35 18.0**	**-0.8**

*TEH **04** 13:04:11.7,31.90N×51.18E,h5km,ML3.5*
*NEIC **04** 13:04:13.9±2.4,31.69N±0.09×50.91E±0.07,h10km±1km, mb4.2/9,Error ellipse: s-maj=15.6km s-min=9.4km az=354.0*
*IDC **04** 13:04:14.2±2.4,31.92N×50.64E,h0km,mb3.8/5, mb1 3.9/6,mb1mx3.6/33,mbtmp3.8/6,ML3.7/1,Error ellipse: s-maj=50.3km s-min=32.3km az=154.0*
*THR **04** 13:04:16.7±0.5,31.91N×51.07E,h14km±17km,ML3.3*
ISC 04 13:04:13.4±0.6,**31.84N**±0.03×**51.08E**±0.04,**h10km,n51,**
σ1§77/49,mb4.1/8,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ROKH	**ROKH**	**0.50**	**356**	*e*Pg		**Pg**	**13 04 22.2**	**-1.0**
ROKH				*e*Sg		**Sb**	**13 04 30.1**	**-1.8**
ROKH				*e*			13 04 33.1	
IPIR	**Pirpir**	**0.85**	**350**	*e*Pg		**Pg**	**13 04 28.4**	**-1.5**
IPIR				*e*			13 04 48.0	
KLNJ	**Kolanjah**	**0.94**	**152**	*e*Pg		**Pg**	**13 04 30.6**	**-1.0**
KLNJ				*e*			13 04 49.6	
IGAR	**Gharneh**	**0.99**	**56**	*e*Pg		**Pg**	**13 04 31.2**	**-1.3**
IGAR				*e*			13 04 34.1	
IRAM	**Ramesheh**	**1.11**	**91**	*e*Pg		**Pg**	**13 04 32.7**	**-2.1**
IRAM				*e*			13 04 56.8	
IZEF	**Zefreh**	**1.49**	**45**	*e*Pg		**Pg**	**13 04 40.5**	**-1.6**
IZEF				*e*			13 05 12.3	
IKLH	**Kolahrood**	**1.53**	**16**	*e*Pg		**Pb**	**13 04 41.0**	**-1.0**
IKLH				*e*			13 05 12.0	
QAM	**Ghamsar**	**1.94**	**9**	*e*Pn		**Pg**	**13 04 48.9**	**-1.6**
QAM				*e*			13 05 24.3	
KHMZ	**Khomeyn**	**2.11**	**334**	*e*Pn		**Pg**	**13 04 52.7**	**-1.2**
KHMZ				IAML			13 05 30.3	
comp=E,252nm,0.6s								
AHWZ	**Ahwaz**	**2.14**	**257**	*e*Pn		**Pb**	**13 04 52.4**	**+0.2**
KAZ1	**Kazerun**	**2.27**	**167**	*e*Pn		**Pb**	**13 04 53.2**	**-1.2**
KAZ1				*e*			13 05 38.1	
SHI	**Shiraz**	**2.52**	**150**	*e*		Sg	13 06 00.5	+26
ANAR	**Anarak**	**2.61**	**58**	*e*		Sn	13 05 16.6	-11
GHVR	**GHOM**	**2.63**	**4**	*e*Pn		**Pb**	**13 05 00.1**	**-0.6**
GHVR				IAML			13 05 55.6	
comp=E,99nm,0.6s								
GHVR	**GHOM**	**2.63**	**4**	*e*Pn		**Pb**	**13 05 00.1**	**-0.6**
IKMR	**Kamar-syah**	**2.82**	**307**	*e*Pn		**Pn**	**13 05 00.3**	**+1.8**
ASAO	**Ashtian**	**2.84**	**342**	*e*Pn		**Pb**	**13 05 02.9**	**-1.4**
ASAO				*e*Sg		**Sg**	**13 05 43.4**	**-1.2**
ASAO	**Ashtian**	**2.84**	**342**	*e*Pn		**Pb**	**13 05 02.9**	**-1.4**
YZKH	**Yazd**	**3.03**	**79**	*e*Pn		**Pb**	**13 05 06.2**	**-1.3**
YZKH	**Yazd**	**3.03**	**79**	*e*Pn		**Pb**	**13 05 06.2**	**-1.3**
IDOB	**Doab**	**3.12**	**309**	*e*Pn		**Pn**	**13 05 04.2**	**+1.4**
HSAM	**Samen**	**3.14**	**319**	*e*Pn		**Pn**	**13 05 05.7**	**+2.5**
HSAM				*e*			13 06 05.7	
IKFM	**Kafar-mosalman**	**3.20**	**302**	*e*Pn		**Pn**	**13 05 05.5**	**+1.8**
IKFM				*e*			13 06 02.8	
HAGD	**Aghdareh**	**3.38**	**332**	*e*Pn		**Pn**	**13 05 09.1**	**+2.6**
HAGD				*e*			13 06 19.3	
IRAZ	**Razeghan**	**3.68**	**345**	*e*Pn		**Pn**	**13 05 13.9**	**+3.4**
IRAZ				*e*			13 06 28.3	
IKOM	**Komasi**	**3.79**	**309**	*e*Pn		**Pn**	**13 05 13.7**	**+1.7**
HSRG	**Sareghieh**	**4.12**	**326**	*e*Pn		**Pn**	**13 05 18.8**	**+2.2**
HSRG				*e*			13 05 33.4	
IANJ	**Anjilo**	**4.32**	**32**	*e*Pn		**Pn**	**13 05 20.1**	**+0.7**
UOSS	**Minazif**	**8.22**	**145**	Pn		**Pn**	**13 06 12.4**	**-0.4**
GEVA	**Gevas**	**9.21**	**317**	Pn		**Pn**	**13 06 22.1**	**-4.3**
RAYN	**Ar Rayn**	**9.65**	**212**	Pn		**Pn**	**13 06 30.0**	**-2.3**
MARD	**Mardin**	**10.09**	**306**	Pn		**Pn**	**13 06 38.7**	**+0.2**
BR131	**Keskin Array S**	**16.17**	**304**			**P**	**13 08 03.4**	**-0.7**
BR131				IAmb		IAmb	13 08 07.9	
comp=Z,6.8nm,0.8s								
BRTR	**Keskin Array B**	**16.17**	**304**	Pn		**Pn**	**13 08 02.3**	**+1.4**
comp=Z,0.3nm,0.3s,baz=124,slow=14,SNR=9.6								
BRTR	**Keskin Array B**	**16.17**	**304**	P		**P**	**13 08 03.2**	**-0.8**
ANTO	**Ankara**	**16.83**	**303**			**P**	**13 08 11.4**	**+0.2**
GAR	**Garm**	**17.21**	**60**	P		**P**	**13 08 21.2**	**+5.5**
ABKAR	**Akbulak array**	**18.63**	**18**	P		**Pn**	**13 08 33.7**	**+2.4**
TIRR	**Tirgusor**	**21.74**	**312**	P		**P**	**13 09 05.0**	**+0.1**
TIRR				IAmb		IAmb	13 09 16.9	
comp=Z,33nm,1.4s								
IDI	**Anoyia**	**22.07**	**286**	P		**P**	**13 09 09.3**	**+0.8**
ITM	**Ithomi**	**24.55**	**291**	P		**P**	**13 09 32.3**	**-1.0**
ITM				IAmb		IAmb	13 09 43.1	
comp=Z,13nm,1.4s								
AKASG	**Malin Array Be**	**24.83**	**326**	P		**P**	**13 09 36.5**	**+0.8**
comp=Z,0.4nm,0.3s,baz=123,slow=7.5,SNR=3.0								
BURAR	**Bucovina Array**	**25.20**	**316**	P		**P**	**13 09 39.1**	**-0.1**
MKAR	**Makanchi Array**	**28.16**	**49**	P		P	13 10 10.7	+4.8
comp=Z,0.3nm,0.7s,baz=251,slow=9.0,SNR=2.7								
MKAR	**Makanchi Array**	**28.16**	**49**	P		P	13 10 09.9	+4.0
FINES	**FINESS Array B**	**33.79**	**339**	P		**P**	**13 10 54.5**	**-0.7**
comp=Z,2.8nm,0.9s,baz=147,slow=8.3,SNR=1.6								
NOA	**NORSAR Array B**	**39.05**	**330**	P		**P**	**13 11 39.9**	**-0.2**
comp=Z,0.9nm,0.8s,baz=120,slow=8.3,SNR=3.5								
TOA0	**Torodi Ar. Sit**	**48.82**	**259**	P		**P**	**13 12 58.7**	**-0.5**
TOA0				IAmb		IAmb	13 13 11.9	
comp=Z,1.8nm,0.9s								
TORD	**Torodi Ar. Bea**	**48.82**	**259**	P		**P**	**13 12 58.6**	**-0.5**
comp=Z,1.2nm,0.7s,baz=60,slow=7.9,SNR=7.6								
TORD	**Torodi Ar. Bea**	**48.82**	**259**	P		**P**	**13 12 59.1**	**-0.1**
LBTB	**Lobatse**	**61.56**	**206**	P		**P**	**13 14 32.6**	**+1.7**

*IDC **04** 13:52:33.5±0.7,9.86N×124.17E,h0km,mb3.9/13, mb1 4.0/14,mb1mx3.8/50,mbtmp4.0/14,ML4.7/1,MS3.1/2, Ms1 3.2/2,ms1mx2.7/33,Error ellipse: s-maj=37.4km s-min=13.4km az=75.0*
*MAN **04** 13:52:36.4,9.87N×124.00E,h10km,mb5.4,ML4.4,MS4.6*
MAN Intensity V - Catigbian Bohol; Intensity IV - Tagbilaran City; Antequerra Corella, Baclayon, Cortes, Balilihan, Loboc, Jagna, Bohol.
*NEIC **04** 13:52:41.6±1.3,9.80N±0.08×124.1E±0.1,h67km±7km, mb4.4/19,Error ellipse: s-maj=15.7km s-min=10.8km az=74.0*
ISC 04 13:52:35.4±1.1,**9.78N**±0.03×**124.10E**±0.03,**h12km**±7km,
n64,σ1§33/77,mb4.4/25,3C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TBP	**Tagbilaran**	**0.25**	**251**	*i*	*P*	**Pb**	**13 52 43.2**	**+1.3**
TBP				*i*	S	**Sb**	**13 52 46.3**	**0.0**
LLP	**Lapu-Lapu**	**0.56**	**346**	*i*	*P*	**Pg**	**13 52 44.8**	**-1.5**
LLP				*i*	S	**Sg**	**13 52 51.5**	**-2.3**
MSLP	**Maasin**	**0.82**	**64**	*e*	*P*	**Pn**	**13 52 53.0**	**+0.1**
MSLP				*e*	S	**Sn**	**13 53 06.6**	**+1.7**
OCLP	**Ormoc**	**1.36**	**21**	*e*	*P*	**Pn**	**13 53 00.3**	**0.0**
OCLP				*e*	S	**Sb**	**13 53 19.6**	**+1.3**
CGP	**Cagayan de Oro**	**1.44**	**156**	*e*	*P*	**Pg**	**13 53 02.2**	**-0.9**
CGP				*e*	S	**Sg**	**13 53 22.8**	**+1.1**
CNOP	**Candoni, Negro**	**1.45**	**272**	*e*	*P*	**Pn**	**13 53 00.3**	**-1.1**
CNOP				*e*	S	**Sb**	**13 53 20.5**	**-0.2**
GUIM	**Jordan**	**1.71**	**300**	*e*	*P*	**Pn**	**13 53 03.9**	**-1.2**
GUIM				*e*	S	**Sn**	**13 53 25.4**	**-1.6**
GLSP	**General Luna,**	**1.99**	**90**	*e*	*P*	**Pb**	**13 53 10.4**	**-1.2**
GLSP				*e*	S	**Sg**	**13 53 41.0**	**+1.4**
PAGZ	**Pagadian**	**2.04**	**201**	*e*	*P*	**Pb**	**13 53 11.7**	**-0.8**
PAGZ				*e*	S	**Sg**	**13 53 41.4**	**+0.2**
BUKP	**Musuan**	**2.11**	**153**	*e*	*P*	**Pb**	**13 53 13.7**	**+0.1**
BUKP				*e*	S	**Sg**	**13 53 43.0**	**-0.3**
BESP	**Borongan**	**2.24**	**36**	*e*	*P*	**Pn**	**13 53 13.4**	**+1.1**
BESP				*e*	S	**Sb**	**13 53 45.9**	**+2.4**
JAP	**San Jose, Anti**	**2.33**	**295**	‖ *e*	*P*	**Pn**	**13 53 14.6**	**+1.0**
DAV	**Davao City (W)**	**3.06**	**151**	LR	LR		13 54 49.5	
comp=Z,393nm,18.6s,baz=235,slow=44								
DAV	**Davao City (W)**	**3.06**	**151**	Pn		**Pb**	**13 53 27.9**	**-2.0**
OTRP	**Odiongan**	**3.29**	**322**	*e*	*P*	**Pn**	**13 53 27.2**	**+0.5**
BUSP	**Coron**	**4.43**	**300**	*e*	*P*	**Pn**	**13 53 42.6**	**+0.1**
LQP	**Lukban**	**4.99**	**330**	‖ *e*	*P*	**Pn**	**13 53 50.7**	**+0.3**
MYLDM	**Lahad Datu**	**7.19**	**231**			**Pn**	**13 54 23.8**	**+3.3**
YULB	**Yu-li**	**13.80**	**349**	P		**P**	**13 55 59.7**	**+0.1**
TPUB	**Ta-pu**	**13.86**	**347**	P		**P**	**13 56 01.0**	**+0.9**
SSLB	**Suanglung**	**14.26**	**348**	Pn		**Pn**	**13 55 59.2**	**+2.0**
FAKI	**Fak Fak**	**14.99**	**147**			**P**	**13 56 13.1**	**+0.3**
FAKI				IAmb		IAmb	13 56 29.4	
comp=Z,21nm,1.1s								
SOEI	**Soe**	**19.40**	**180**	Pn		**Pn**	**13 57 04.7**	**+1.8**
SOEI				IAmb		IAmb	13 57 22.8	
comp=Z,14nm,0.9s								
BATI	**Baumata**	**19.86**	**181**	P		**Pn**	**13 57 08.1**	**0.0**
comp=Z,2.3nm,0.3s,baz=314,slow=2.4,SNR=3.4								
NJ2	**Nanjing**	**22.70**	**348**	*e*	*P*	**P**	**13 57 37.8**	**+0.8**
NJ2				pmax	pmax			
comp=Z,9.0nm,0.5s								
MTN	**Manton Dam**	**23.53**	**163**	P		**P**	**13 57 45.8**	**+0.2**
MTN				IAmb		IAmb	13 58 03.9	
comp=Z,26nm,1.4s								
KMI	**Kunming**	**25.40**	**310**	⇑P		**P**	**13 58 03.8**	**+0.6**
KMI				pP		sP	13 58 08.4	-0.1
KMI				pmax		pmax		
comp=Z,15nm,0.9s								
CMAR	**Chiang Mai Arr**	**25.86**	**292**	P		**P**	**13 58 08.6**	**+1.4**
comp=Z,2.3nm,0.9s,baz=98,slow=6.7,SNR=1.6								
CMAR				LR		LR	14 08 24.4	
comp=Z,30nm,18.3s,baz=175,slow=37								
GSI	**Gunungsitoli**	**27.69**	**254**	P		**P**	**13 58 24.6**	**+0.8**
GSI				IAmb		IAmb	13 58 43.5	
comp=Z,17nm,1.2s								
FITZ	**Fitzroy Crossi**	**27.74**	**177**	P		**P**	**13 58 26.6**	**+2.6**
comp=Z,1.9nm,0.9s,baz=11,slow=11,SNR=2.7								
KSRS	**Korea Array**	**27.77**	**7**	P		**P**	**13 58 24.2**	**+0.1**
comp=Z,1.0nm,0.6s,baz=187,slow=10.0,SNR=4.8								
JGF	**Kuroka**	**28.40**	**23**	P		**P**	**13 58 29.6**	**-0.3**
JGF				IAmb		IAmb	13 58 30.8	
comp=Z,13nm,1.3s								
WRAB	**Tennant Creek**	**31.20**	**161**	P		**P**	**13 58 52.0**	**-2.7**
WRA	**Warramunga Arr**	**31.20**	**161**	P		**P**	**13 58 54.2**	**-0.6**
comp=Z,0.2nm,0.5s,baz=340,slow=9.4,SNR=2.3								
WRA				PcP		**PcP**	**14 01 48.4**	**-1.3**
comp=Z,0.4nm,0.6s,baz=330,slow=2.8,SNR=5.4								
WB2	**Warramunga Arr**	**31.21**	**161**	P		**P**	**13 58 52.5**	**-2.3**
WB2				IAmb		IAmb	13 58 58.5	
comp=Z,9.0nm,1.5s								
RABL	**Rabaul**	**31.21**	**115**	P		**P**	**13 58 52.2**	**-2.8**
WR0	**Warramunga Arr**	**31.28**	**161**	P		**P**	**13 58 54.2**	**-1.3**
WR0				IAmb		IAmb	13 59 15.7	
comp=Z,6.9nm,1.4s								
LZH	**Lanzhou**	**32.01**	**328**	*e*	*P*	**P**	**13 59 04.5**	**+2.5**
LZH				pP		sP	13 59 09.1	+1.7
LZH				sP		pP	13 59 12.3	+6.5
LZH				*e*	PP	**PnPn**	**14 00 10.6**	**+3.3**
LZH				pmax		pmax		
comp=Z,21nm,1.3s								
LZH				pmax		pmax		
comp=Z,85nm,4.9s								
LZH				LR		LR		
comp=N,210nm,12.9s								
LZH				LR		LR		
comp=E,220nm,13.3s								
LZH				LR		LR		
comp=Z,310nm,16.4s								
HHC	**Hu-ho-hao-te**	**32.88**	**342**	*e*	*P*	**P**	**13 59 10.9**	**+1.4**
HHC				pmax		pmax		
comp=Z,17nm,0.9s								
HHC				pmax		pmax		
comp=Z,400nm,6.6s								
AS31	**Alice Springs**	**34.59**	**164**	P		**P**	**13 59 24.7**	**+0.3**
ASAR	**Alice Springs**	**34.59**	**164**	P		**P**	**13 59 25.1**	**+0.7**
comp=Z,0.7nm,0.7s,baz=342,slow=7.2,SNR=16								
ASAR				PcP		**PcP**	**14 01 58.1**	**-1.0**
comp=Z,0.3nm,0.5s,baz=340,slow=2.8,SNR=5.9								
ASAR	**Alice Springs**	**34.59**	**164**	P		**P**	**13 59 24.5**	**+0.1**
ASAR						**PcP**	**14 01 58.1**	**-1.0**
USRK	**Ussuriysk Ar.**	**34.97**	**10**	P		**P**	**13 59 27.6**	**+0.1**
comp=Z,2.2nm,0.8s,baz=185,slow=9.5,SNR=2.1								
JKA	**Kamikawa-asahi**	**37.79**	**22**	P		**P**	**13 59 50.5**	**-1.0**
KLR	**Kul'dur**	**39.84**	**8**	P		**P**	**14 00 08.3**	**-0.4**
comp=Z,1.4nm,0.6s,baz=234,slow=8.7,SNR=2.3								
BBOO	**Buckleboo**	**43.85**	**165**	P		**P**	**14 00 42.1**	**+0.4**
BBOO				IAmb		IAmb	14 01 03.2	
comp=Z,23nm,1.3s								
STKA	**Stephens Creek**	**44.67**	**159**	P		**P**	**14 00 49.2**	**+0.9**
comp=Z,0.5nm,0.4s,baz=323,slow=10,SNR=1.3								
STKA	**Stephens Creek**	**44.67**	**159**	P		**P**	**14 00 48.5**	**+0.3**
WMQ	**Urumqi**	**46.33**	**324**	*e*	*P*	**P**	**14 01 03.0**	**+1.6**
MK31	**Makanchi Array**	**51.15**	**324**	P		**P**	**14 01 38.6**	**+0.2**
MKAR	**Makanchi Array**	**51.15**	**324**	P		**P**	**14 01 38.4**	**+0.1**
comp=Z,1.5nm,0.7s,baz=133,slow=8.0,SNR=13								
MAKZ	**Makanchi**	**51.34**	**324**	P		**P**	**14 01 39.8**	**0.0**
MAKZ				IAmb		IAmb	14 01 40.9	
comp=Z,3.7nm,1.4s								
NIL	**Nilore**	**52.26**	**305**	P		**P**	**14 01 46.6**	**-0.3**
ZALV	**Zalesovo Beam**	**54.05**	**332**	P		**P**	**14 01 58.9**	**-0.8**
comp=Z,0.6nm,0.5s,baz=134,slow=8.3,SNR=2.2								
KURK	**Kurchatov**	**55.28**	**327**	P		**P**	**14 02 08.2**	**-0.5**
KURK				IAmb		IAmb	14 02 14.1	
comp=Z,7.6nm,1.1s								
KURBB	**Kurchatov Arra**	**55.28**	**326**	P		**P**	**14 02 08.4**	**-0.3**
comp=Z,1.7nm,0.7s,baz=125,slow=6.6,SNR=8.4								
KKAR	**Karatay Array**	**57.09**	**315**	P		**P**	**14 02 21.0**	**-0.8**
NRIK	**Noril'sk**	**63.98**	**346**	P		**P**	**14 03 07.5**	**-0.8**
comp=Z,2.6nm,0.5s,baz=133,slow=5.1,SNR=4.6								
AB02	**Akbulak array**	**65.86**	**320**	P		**P**	**14 03 19.4**	**-1.6**
ABKAR	**Akbulak array**	**65.86**	**320**	P		**P**	**14 03 19.8**	**-1.2**
ARU	**Arti**	**68.47**	**327**	P		**P**	**14 03 35.9**	**-1.5**
comp=Z,0.5nm,0.4s,baz=100,slow=18,SNR=3.3								
ARU	**Arti**	**68.47**	**327**	IAmb		IAmb	14 03 36.4	
comp=Z,8.2nm,1.3s								
CHIR	**Chirikof Islan**	**76.51**	**35**	P		**P**	**14 04 24.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**118.46**	**291**	PKP		**PKPdf**	**14 11 22.5**	**-1.6**
comp=Z,0.2nm,0.4s,baz=90,slow=1.4,SNR=2.3								

*IDC **04** 14:10:06.2±1.5,35.78N×141.26E,h0km,mb3.9/5, mb1 3.9/7,mb1mx3.7/34,mbtmp3.9/7,ML3.5/2,MS2.9/3, Ms1 3.0/3,ms1mx2.6/35,Error ellipse: s-maj=41.6km s-min=20.0km az=62.0*
*NIED **04** 14:10:08.6,35.76N×141.13E,h14km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.05; $M_{\theta\theta}$-1.75; $M_{\phi\phi}$2.80; $M_{r\theta}$-2.77; $M_{\theta\phi}$-2.27; $M_{\phi r}$-6.82; Fault plane solution: $M_0$8.08000×10^{14} NP1: ϕ_S19.00000°, δ86.00000°, λ-67.00000°. NP2:ϕ_S118.00000°, δ24.00000°, λ-170.00000°.*
*JMA **04** 14:10:08.6±0.2,35.76N×141.13E,h14km±2km,M4.2*
JMA Felt I J1.
*NEIC **04** 14:10:13.2±2.5,35.98N±0.06×141.02E±0.07,h38km±9km, mb4.3/9,Error ellipse: s-maj=8.5km s-min=8.1km az=142.0*
ISC 04 14:10:07.8±1.4,**35.77N**±0.04×**141.17E**±0.06,**h13km**±8km,
n52,σ1§30/51,mb4.1/10,2C-4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHOJ	**Chosi**	**0.27**	**255**	⇑P		**Pg**	**14 10 13.6**	**+0.2**
CHOJ				S		**Sg**	**14 10 17.2**	**+0.1**
JIHU	**Itakohorinouch**	**0.56**	**290**	‖P		**Pb**	**14 10 19.8**	**+0.3**
JIHU				S		**Sb**	**14 10 27.6**	**+0.1**
JSMT	**Sammumatsuo**	**0.60**	**258**	⇑P		**Pb**	**14 10 20.1**	**-0.2**
JSMT				S		**Sb**	**14 10 27.9**	**-0.8**
JHYU	**Hitachinakayam**	**0.74**	**320**	‖P		**Pb**	**14 10 22.7**	**+0.1**
JHYU				S		**Sb**	**14 10 32.7**	**+0.1**
JCN	**Nagara**	**0.87**	**246**	P		**Pb**	**14 10 25.1**	**+0.3**
JCN				S		**Sn**	**14 10 37.2**	**-1.1**
JYT	**Yasato**	**0.92**	**300**	‖P		**Pb**	**14 10 24.5**	**-1.1**
JYT				S		**Sg**	**14 10 36.6**	**-0.9**
JYT	**Yasato**	**0.92**	**300**	Pn		**Pb**	**14 10 24.6**	**-0.9**
JYT				Sn		**Sg**	**14 10 36.3**	**-1.1**
JHO	**Hitachi**	**0.97**	**330**	‖P		**Pb**	**14 10 25.8**	**-0.7**
BSO4	**Boso 4**	**1.04**	**221**	P		**Pn**	**14 10 28.4**	**+0.4**
BSO3	**Boso 3**	**1.11**	**209**	P		**Pb**	**14 10 28.6**	**-0.1**
JMM	**Marumori**	**2.11**	**352**			**Pn**	**14 10 42.3**	**-0.6**
MJAR	**Matsushiro Arr**	**2.52**	**289**	Pn		**Pn**	**14 10 48.1**	**-0.4**
2.0nm,0.3s,baz=96,slow=15,SNR=97								
MJAR				Sn		**Sb**	**14 11 23.1**	**-0.8**
2.1nm,0.3s,baz=124,slow=17,SNR=3.2								
MJAR				LR		LR	14 11 45.0	
comp=Z,95nm,20.7s,baz=180,slow=39								
MJAR	**Matsushiro Arr**	**2.52**	**289**			**Pn**	**14 10 47.4**	**-1.1**
MAJO	**Matsushiro**	**2.52**	**289**	Pn		**Pn**	**14 10 48.4**	**-0.1**
MAT	**Matsushiro**	**2.52**	**289**	P		**Pn**	**14 10 48.4**	**-0.1**
MAT				*e*S		**Sn**	**14 11 17.5**	**-1.7**
MJB9	**Matsu-Tunnel**	**2.52**	**289**	Pn		**Pn**	**14 10 48.5**	**-0.1**
JSG	**Sagara**	**2.68**	**247**	Pn		**Pb**	**14 10 53.5**	**-2.1**
JHJ2	**Mitsune**	**2.88**	**203**	Pn		**Pb**	**14 10 57.6**	**-1.5**
JGF	**Kuroka**	**3.11**	**268**	Pn		**Pn**	**14 10 59.9**	**+3.2**
JSD	**Sado**	**3.25**	**315**			**Pn**	**14 11 00.3**	**+1.8**
INU	**Inuyama**	**3.42**	**264**	Pn		**Pn**	**14 11 03.8**	**+2.9**
JWT	**Wachi**	**4.73**	**266**	Pn		**Pn**	**14 11 22.0**	**+3.0**
JTM	**Tenmabayashi**	**5.01**	**359**	Pn		**Pn**	**14 11 24.6**	**+1.9**
JHS	**Saijyo**	**6.63**	**266**	Pn		**Pn**	**14 11 47.9**	**+2.9**
ASAJ	**Asahikawa**	**8.41**	**7**	Pn		**Pn**	**14 12 09.0**	**-0.4**
1.1nm,0.3s,baz=215,slow=10.0,SNR=7.3								
ASAJ				Sn		**Sn**	**14 13 41.6**	**-2.5**
0.3nm,0.3s,baz=143,slow=20,SNR=1.1								
JKA	**Kamikawa-asahi**	**8.41**	**7**			**Pn**	**14 12 09.0**	**-0.4**
JKA						**Sn**	**14 13 41.6**	**-2.5**
KSRS	**Korea Array**	**10.78**	**283**	LR		LR	14 17 02.4	
comp=Z,71nm,19.3s,baz=111,slow=38								
H11N2	**WAKE ISLAND Hy**	**27.69**	**118**	T		T	14 44 51.8	
baz=311,slow=75,SNR=190								
H11N1	**WAKE ISLAND Hy**	**27.70**	**118**	T		T	14 44 52.3	
baz=311,slow=75,SNR=145								
H11N3	**WAKE ISLAND Hy**	**27.71**	**118**	T		T	14 44 53.1	
baz=311,slow=75

comp=Z,5.0nm,0.9s
VNDA Vanda 48.93 171 P **P** **14 31 08.7 +0.2**
comp=Z,1.3nm,0.8s,baz=196,slow=5.2,SNR=12
VNDA LR LR 14 50 47.6
comp=Z,100nm,20.0s,baz=193,slow=35
VNDA Vanda 48.93 171 P **P** **14 31 08.8 +0.2**
VNDA IAmb IAmb 14 31 16.8
comp=Z,1.7nm,0.8s
DBIC Dimbokro 60.86 339 LR LR 14 56 43.7
comp=Z,35nm,18.1s,baz=126,slow=34
TORD Torodi Ar. Bea 66.01 347 P **P** **14 33 09.0 -0.5**
comp=Z,0.5nm,0.6s,baz=178,slow=7.1,SNR=4.0
TORD LR LR 14 58 26.8
comp=Z,18nm,18.2s,baz=120,slow=33
TORD Torodi Ar. Bea 66.01 347 IAmb IAmb 14 33 10.6
comp=Z,1.4nm,1.2s
H01W2 Cape Leeuwin H 68.98 120 T T 15 49 20.0
baz=221,slow=75,SNR=15
H01W3 Cape Leeuwin H 69.00 120 T T 15 49 21.6
baz=221,slow=75,SNR=14
H01W1 Cape Leeuwin H 69.00 120 T T 15 49 27.4
baz=221,slow=75,SNR=17
ASAR Alice Springs 88.15 128 P **P** **14 35 14.2 +0.1**
comp=Z,1.6nm,0.8s,baz=206,slow=4.5,SNR=18
ASAR Alice Springs 88.15 128 P **P** **14 35 14.1 0.0**

*IDC **04** 14:27:32.5±3.9, 1°.58N×97°.79E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/28, mbtmp3.5/4, MS3.4/1, Ms1 3.4/1, ms1mx2.5/25, Error ellipse: s-maj=207.4km s-min=25.2km az=56.0*
*DJA **04** 14:27:54.9±0.6, 3°.N±4°×9°.9E±°, h151km±5km, M3.2/6, MLv3.2/6*
ISC 04 14:27:54.1±0.9, 2°.50N±0°.09×99°.0E±0°.1, h150km, n13, σ1°38/12, mb3.4/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**1.10**	**335**	P	**Pn**	**14 28 20.7**	**+1.0**
TSI				S	**Sn**	**14 28 41.2**	**+1.8**
MNSI	**Mandailing Nat**	**1.78**	**162**	P	**Pn**	**14 28 28.3**	**+1.6**
GSI	**Gunungsitoli**	**1.88**	**231**	P	**Pn**	**14 28 28.9**	**+1.1**
TPTI		**2.00**	**292**	P	**Pn**	**14 28 30.3**	**+1.1**
TPTI				S	**Sn**	**14 28 56.4**	**+0.3**
MLSI	**Meulaboh, Aceh**	**3.16**	**304**	S	**Sn**	**14 29 20.1**	**-1.6**
H08S2	**Diego Garcia H** baz=70	**28.33**	**249**	T	T	15 01 08.8	
H08S3	**Diego Garcia H** baz=70	**28.33**	**249**	T	T	15 01 23.7	
H08S1	**Diego Carcia H** baz=70	**28.35**	**249**	T	T	15 01 22.2	
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=301,slow=9.2,SNR=5.8	**41.21**	**124**	P	**P**	**14 35 23.2**	**-1.2**
WRA				PcP	**PcP**	**14 37 19.4**	**-1.3**
	0.4nm,1.0s,baz=300,slow=2.9,SNR=1.8						
ASAR	**Alice Springs** 0.4nm,0.6s,baz=300,slow=7.9,SNR=8.8	**42.76**	**129**	P	**P**	**14 35 36.0**	**-1.0**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=146,slow=8.9,SNR=1.9	**46.47**	**344**	P	**P**	**14 36 05.5**	**-0.5**
MJAR	**Matsushiro Arr** comp=Z,36nm,20.1s,baz=165,slow=37	**49.51**	**42**	LR	LR	14 59 22.6	
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=153,slow=7.4,SNR=2.0	**52.60**	**349**	P	**P**	**14 36 53.1**	**+0.9**

MAN 04 14:52:37.8, 9°.86N×124°.01E, h11km, mb4.4, ML3.3, MS3.1, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.23**	**222**	↓*i*P	Pb	14 52 44.6	+0.7
TBP				*i*S	Sg	14 52 47.7	+2.0
LLP	**Lapu-Lapu**	**0.46**	**354**	↓*i*P	Pg	14 52 46.3	-0.4
LLP				*i*S	Sg	14 52 53.1	+0.3
MSLP	**Maasin**	**0.88**	**72**	*e*P	Pg	14 52 54.3	-0.3
MSLP				*e*S	Sn	14 53 08.1	-0.6
OCLP	**Ormoc**	**1.32**	**26**	*e*P	Pn	14 53 01.7	-0.5
OCLP				*e*S	Sg	14 53 20.6	+0.3
CNOP	**Candoni, Negro**	**1.35**	**269**	*e*P	Pn	14 53 02.3	-0.3
CNOP				*e*S	Sg	14 53 21.5	+0.1
CGP	**Cagayan de Oro**	**1.55**	**154**	↑*e*P	Pn	14 53 03.0	-2.3
CGP				*e*S	Sn	14 53 23.1	-2.4
GUIM	**Jordan**	**1.59**	**299**	*e*P	Pn	14 53 05.3	-0.7
GUIM				*e*S	Sn	14 53 26.9	+0.4
PAGZ	**Pagadian**	**2.10**	**197**	*e*P	Pn	14 53 13.7	+0.9
PAGZ				*e*S	Sb	14 53 42.3	+0.5
BUKP	**Musuan**	**2.23**	**152**	*e*P	Pn	14 53 14.9	+0.3
BUKP				*e*S	Sb	14 53 45.5	-0.2

*IDC **04** 14:53:58.5±2.9, 35°.95N×141°.28E, h0km, mb3.2/3, mb1 3.3/4, mb1mx3.2/29, mbtmp3.1/4, ML2.4/1, Error ellipse: s-maj=70.5km s-min=26.6km az=46.0*
*JMA **04** 14:54:06.5±0.2, 35°.74N×140°.67E, h50km±2km, M2.6*
ISC 04 14:54:06.9±1.2, 35°.75N±0°.06×140°.80E±0°.09, h48km±7km, n20, σ1°43/19, mb3.2/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.07**	**137**	P	**Pn**	**14 54 14.5**	**+0.2**
JSMT	**Sammumatsuo**	**0.31**	**250**	P	**Pn**	**14 54 15.3**	**-0.5**
JSMT				S	**Sn**	**14 54 22.3**	**+0.1**
JIHU	**Itakohorinouch**	**0.31**	**314**	P	**Pn**	**14 54 15.8**	**-0.1**
JIHU				S	**Sn**	**14 54 22.8**	**+0.5**
JCN	**Nagara**	**0.59**	**236**	P	**Pn**	**14 54 18.6**	**-0.5**
JYT	**Yasato**	**0.69**	**314**	P	**Pn**	**14 54 19.2**	**-1.1**
JYT				S	**Sn**	**14 54 28.0**	**-2.0**
JHO	**Hitachi**	**0.88**	**348**	P	**Pn**	**14 54 22.9**	**0.0**
BSO3	**Boso 3**	**0.98**	**194**	P	**Pn**	**14 54 23.8**	**-0.2**
JAG	**Ashikaga**	**1.28**	**302**	P	**Pn**	**14 54 27.2**	**-1.2**
JOD2	**Odawara 2**	**1.48**	**251**	P	**Pn**	**14 54 29.9**	**-1.2**
MJAR	**Matsushiro Arr** 0.7nm,0.3s,baz=98,slow=14,SNR=27	**2.24**	**291**	Pn	**Pn**	**14 54 41.5**	**0.0**
MJAR				Sn	**Sn**	**14 55 12.1**	**+4.1**
	0.4nm,0.3s,baz=127,slow=15,SNR=6.0						
MAT	**Matsushiro**	**2.25**	**291**	P	**Pn**	**14 54 41.8**	**+0.2**
MAT				*e*S	**Sn**	**14 55 09.7**	**+1.6**
H11N2	**WAKE ISLAND Hy** baz=312	**27.95**	**118**	T	T	15 28 55.3	
H11N1	**WAKE ISLAND Hy** baz=312	**27.96**	**118**	T	T	15 28 54.7	
H11N3	**WAKE ISLAND Hy** baz=312	**27.97**	**118**	T	T	15 28 60.0	
H11S1	**WAKE ISLAND Hy** baz=312,slow=74	**28.61**	**120**	T	T	15 29 45.2	
H11S3	**WAKE ISLAND Hy** baz=312,slow=74	**28.61**	**120**	T	T	15 29 49.6	
H11S2	**WAKE ISLAND Hy** baz=312	**28.63**	**120**	T	T	15 29 50.9	
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=72,slow=9.3,SNR=2.6	**44.39**	**303**	P	**P**	**15 02 12.4**	**-0.2**
WRA	**Warramunga Arr** 0.1nm,0.4s,baz=0.7,slow=7.5,SNR=1.4	**55.73**	**187**	P	**P**	**15 03 37.5**	**-1.2**
ASAR	**Alice Springs** 0.2nm,0.6s,baz=7.7,slow=8.6,SNR=2.0	**59.45**	**187**	P	**P**	**15 04 05.8**	**+0.9**

IDC 04 15:04:19.7±18.0, 42°.10S×87°.75E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/27, mbtmp3.5/3, Error ellipse: s-maj=647.2km s-min=32.5km az=137.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H** baz=243,slow=74,SNR=28	**21.81**	**79**	T	T	15 30 56.3	
H01W3	**Cape Leeuwin H** baz=243,slow=74,SNR=24	**21.82**	**79**	T	T	15 31 01.9	
H01W1	**Cape Leeuwin H** baz=243,slow=74,SNR=25	**21.83**	**79**	T	T	15 30 59.5	
MAW	**Mawson** 0.6nm,0.7s,baz=31,slow=12,SNR=1.6	**28.88**	**200**	P	P	15 10 19.7	0.0
H08S2	**Diego Garcia H** baz=160,slow=76	**36.87**	**334**	T	T	15 50 21.0	
H08S1	**Diego Carcia H** baz=160	**36.88**	**334**	T	T	15 50 30.1	
H08S3	**Diego Garcia H** baz=160,slow=76	**36.89**	**334**	T	T	15 50 30.3	
ASAR	**Alice Springs** 0.4nm,0.7s,baz=225,slow=7.1,SNR=11	**42.33**	**79**	P	P	15 12 15.4	0.0
WRA	**Warramunga Arr** 0.6nm,0.8s,baz=229,slow=7.9,SNR=6.6	**44.96**	**75**	P	P	15 12 36.4	-0.3

*TEH **04** 15:22:35.6, 32°.65N×47°.86E, h10km, ML2.9*
*ISN **04** 15:22:36.6±1.4, 32°.67N×47°.83E, h15km±7km, ML2.8*
ISC 04 15:22:36.5±1.1, 32°.70N±0°.06×47°.83E±0°.05, h10km, n10, σ1°10/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.82**	**1**	*e*Pg	**Pg**	**15 22 51.8**	**-0.6**
IKFM				*e*Sg	**Sn**	**15 23 06.1**	**-0.3**
IKFM				*e*		15 23 10.0	
IDOB	**Doab**	**1.12**	**15**	*e*Pg	**Pb**	**15 22 57.4**	**-0.8**
IDOB				*e*		15 23 23.6	
IBDR	**Badra**	**1.65**	**285**	*e*Pg	**Pb**	**15 23 06.0**	**-1.1**
IBDR				*e*Sg	**Sg**	**15 23 29.0**	**-0.7**
IBDR				AML	AML	15 23 30.5	
	comp=N,140nm,0.8s						
IBDR				AML	AML	15 23 31.9	
	comp=E,119nm,0.5s						
IGHG	**Ghaleghazi**	**1.94**	**327**	*e*Pn	**Pb**	**15 23 11.6**	**-0.5**
IGHG				*e*		15 23 53.7	
IVIS	**Veis**	**2.00**	**336**	*e*Pn	**Pb**	**15 23 12.5**	**-0.5**
NSR	**Nassriya**	**2.22**	**221**	*e*Pn	**Pn**	**15 23 14.0**	**+0.7**
NSR				*e*Sn	**Sn**	**15 23 40.0**	**-0.8**
IPIR	**Pirpir**	**2.58**	**90**	*e*Pn	**Pn**	**15 23 19.5**	**+0.9**
IPIR				*e*		15 24 11.6	
BHD	**Baghdad**	**2.96**	**282**	*e*Pn	**Pn**	**15 23 25.0**	**+1.5**
BHD				*e*Sn	**Sn**	**15 24 01.0**	**+1.9**
QAM	**Ghamsar**	**3.20**	**70**	*e*Pn	**Pn**	**15 23 28.1**	**+1.0**
QAM				*e*		15 24 22.5	
IZEF	**Zefreh**	**3.79**	**86**	*e*Pn	**Pn**	**15 23 36.5**	**+1.2**
IZEF				*e*		15 24 44.9	

*NNC **04** 15:58:26.9±2.2, 42°.92N×78°.33E, h0km, mpv2.6, Error ellipse: s-maj=12.4km s-min=8.6km az=46.0*
*KRNET **04** 15:58:28.8±0.1, 43°.09N×77°.98E, h17km, mb1.9*
ISC 04 15:58:27.0±1.0, 43°.04N±0°.07×78°.23E±0°.04, h10km±8km, n11, σ0°73/22, 11C-5D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SATY	**Saty** 79nm,0.1s	**0.13**	**81**	P	**Pg**	**15 58 30.4**	**+0.1**
SATY				S	**Sg**	**15 58 33.0**	**+0.4**
	113nm,0.1s						
ANVS	**Anan'yevo** baz=18	**0.48**	**238**	↓*i*P	**Pg**	**15 58 36.2**	**-0.3**
ANVS				↓*i*S	**Sg**	**15 58 42.1**	**-0.8**
	baz=18						
PRZ	**Przheval'sk** baz=52	**0.57**	**167**	↑*i*P	**Pn**	**15 58 41.9**	**+0.6**
PRZ				↑*i*S	**Sn**	**15 58 51.6**	**+0.8**
	baz=52						
UZB	**Uzynbulak** 3.3nm,0.1s	**0.59**	**79**	P	**Pg**	**15 58 38.2**	**-0.4**
UZB				S	**Sg**	**15 58 46.4**	**0.0**
	3.5nm,0.1s						
PDGK	**Podgornoye** 0.9nm,0.2s	**0.97**	**72**	P	**Pg**	**15 58 44.9**	**-0.8**
PDGK				S	**Sg**	**15 58 57.8**	**-0.5**
	0.5nm,0.3s						
PDGK	**Podgornoye** 0.5nm,0.3s	**0.97**	**72**	↓P	**Pg**	**15 58 44.8**	**-0.8**
PDGK				↑S	**Sg**	**15 58 57.7**	**-0.6**
	0.2nm,0.3s						
KDJ	**Kajisay** baz=11	**1.19**	**221**	↑*i*P	**Pg**	**15 58 49.5**	**-0.4**
KDJ				↑*i*S	**Sb**	**15 59 04.6**	**-0.7**
	baz=11						
ULHL	**Ulahol** baz=37	**1.67**	**242**	↑*i*P	**Pn**	**15 58 56.5**	**+0.1**
ULHL				↑*i*S	**Sn**	**15 59 17.6**	**-0.3**
	baz=37						
BOOM	**Boomskoye usch** baz=49	**1.77**	**253**	↑*i*P	**Pn**	**15 58 58.4**	**+0.6**
BOOM				↑*i*S	**Sn**	**15 59 20.4**	**-0.1**
	baz=49						
TKM2	**Tokmak 2** baz=65	**1.93**	**267**	↓*i*P	**Pn**	**15 59 01.1**	**+1.0**
TKM2				↓*i*S	**Sn**	**15 59 24.6**	**+0.1**
	baz=65						
ARLS	**Aral** baz=47	**3.12**	**249**	↑*i*P	**Pn**	**15 59 18.2**	**+1.8**
ARLS				↑*i*S	**Sn**	**15 59 53.6**	**-0.1**
	baz=47						

*ISK **04** 16:01:05.8, 37°.40N×27°.04E, h7km, ML2.3/16*
*THE **04** 16:01:06.1, 37°.43N×27°.06E, h0km±1km, ML2.5/4, Error ellipse: s-maj=2.4km s-min=0.8km az=74.0*
*DDA **04** 16:01:06.1, 37°.38N×27°.03E, h7km±3km, ML2.0*
ISC 04 16:01:06.5±1.0, 37°.40N±0°.02×27°.03E±0°.03, h10km±9km, n32, σ0°64/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKAV	**Yalikavak-Bodr**	**0.34**	**144**	PG	**Pg**	**16 01 12.7**	**-0.5**
GCAM	**G?zelcaml?**	**0.34**	**28**	PG	**Pg**	**16 01 13.4**	**+0.1**
GCAM				SG	**Sb**	**16 01 18.7**	**-1.3**
GCAM	**G?zelcaml?**	**0.34**	**28**	*i* P	**Pg**	**16 01 13.3**	**+0.1**
GCAM				*i* S	**Sb**	**16 01 18.8**	**-1.3**
GCAM				IAML		16 01 20.0	
	comp=E,750nm,0.1s						
GCAM				IAML		16 01 20.0	
	comp=N,716nm,0.1s						
SMG	**Samos**	**0.34**	**334**	P	**Pg**	**16 01 13.3**	**-0.1**
SMG				S	**Sg**	**16 01 18.7**	**+0.7**
	comp=N,2μm,0.2s						
BODT	**Bodrum**	**0.40**	**146**	PG	**Pg**	**16 01 14.3**	**-0.2**
BODT				SG	**Sg**	**16 01 19.9**	**+0.1**
BODT	**Bodrum**	**0.40**	**146**	P	**Pg**	**16 01 14.2**	**-0.2**
BDRM	**Kayabasi**	**0.47**	**135**	*i* P	**Pg**	**16 01 14.8**	**-0.8**
BDRM				*i* S	**Sb**	**16 01 22.9**	**-0.9**
BDRM				IAML		16 01 24.0	
	comp=E,135nm,0.5s						
MLSB	**Milas**	**0.60**	**100**	PG	**Pg**	**16 01 18.2**	**0.0**
KOSK	**Kos Island**	**0.65**	**184**	PG	**Pg**	**16 01 19.1**	**+0.1**
KOSK	**Kos Island**	**0.65**	**184**	P	**Pb**	**16 01 19.2**	**-0.6**
DGB	**zmir**	**0.66**	**350**	*i* P	**Pg**	**16 01 18.9**	**-0.4**
DGB				*i* S	**Sb**	**16 01 29.9**	**+0.6**
DGB				IAML		16 01 31.0	
	comp=E,122nm,0.4s						
DGB				IAML		16 01 31.0	
	comp=N,272nm,0.3s						
DAT	**Datca**	**0.80**	**147**	PG	**Pg**	**16 01 21.8**	**-0.1**
DAT	**Datca**	**0.80**	**147**	*i* P	**Pg**	**16 01 21.4**	**-0.5**
DAT				IAML		16 01 39.0	
	comp=N,32nm,0.2s						
DAT				IAML		16 01 40.0	
	comp=E,22nm,0.2s						
NIS1	**Nisyros Isl.**	**0.81**	**171**	PG	**Pb**	**16 01 23.1**	**+0.6**
NIS1	**Nisyros Isl.**	**0.81**	**171**	P	**Pb**	**16 01 22.4**	**-0.1**
NIS1				S	**Sn**	**16 01 36.0**	**+0.2**
	comp=E,235nm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**0.87**	**51**	PG	**Pg**	**16 01 22.9**	**-0.4**
BLCB	**Balcova**	**0.98**	**1**	PG	**Pg**	**16 01 24.7**	**-0.7**
BLCB	**Balcova**	**0.98**	**1**	P	**Pg**	**16 01 24.6**	**-0.8**
URLA	**Izmir**	**1.02**	**340**	PG	**Pg**	**16 01 25.4**	**-0.7**
URLA	**Izmir**	**1.02**	**340**	*i* P	**Pg**	**16 01 25.7**	**-0.4**
URLA				*i* S	**Sn**	**16 01 41.2**	**0.0**
URLA				IAML		16 01 43.0	
	comp=E,44nm,0.7s						
URLA				IAML		16 01 44.0	
	comp=N,54nm,0.9s						
YER	**Yerkesik**	**1.03**	**104**	PG	**Pb**	**16 01 26.2**	**-0.3**
AMGA	**Amorgos Island**	**1.07**	**238**	P	**Pg**	**16 01 26.2**	**-0.9**
AMGA				S	**Sb**	**16 01 41.4**	**+0.3**
	comp=N,175nm,0.6s						
TURN	**Turunc**	**1.15**	**122**	PN	**Pg**	**16 01 28.0**	**-0.6**
TURN	**Turunc**	**1.15**	**122**	*i* P	**Pg**	**16 01 27.9**	**-0.7**
TURN				*i* S	**Sn**	**16 01 46.0**	**+1.6**
TURN				IAML		16 01 49.0	
	comp=E,32nm,0.6s						
TURN				IAML		16 01 49.0	
	comp=N,28nm,0.4s						
APE	**Apeiranthos**	**1.24**	**255**	PN	**Pn**	**16 01 30.1**	**+0.2**
APE	**Apeiranthos**	**1.24**	**255**	P	**Pn**	**16 01 30.0**	**+0.2**
DALY	**Dalyan (Mula)**	**1.42**	**114**	PN	**Pn**	**16 01 32.4**	**+0.1**
ANAF	**Anafi Island**	**1.45**	**224**	P	**Pn**	**16 01 32.9**	**+0.2**
ANAF				S	**Sg**	**16 01 53.6**	**+0.5**
	comp=N,222nm,0.4s						
ARG	**Arkhangelos**	**1.47**	**143**	PN	**Pn**	**16 01 32.9**	**-0.1**
KULA	**Kula-Manisa**	**1.70**	**49**	PN	**Pn**	**16 01 36.9**	**+0.6**
FETY	**Fethiye**	**1.81**	**114**	PN	**Pn**	**16 01 38.5**	**+0.8**
CAME	**Cameli-Denizli**	**1.87**	**103**	PN	**Pn**	**16 01 39.3**	**+0.7**

NCEDC 04 16:17:35.1±1.0, 37°.48N±0°.03×118°.79W±0°.01, h7km±5km, Md3.0/49, Error ellipse: s-maj=4.0km s-min=1.2km az=173.0, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMD		**0.12**	**108**		Pg	16 17 37.9	+0.1
MDRNC	**Doe Ridge**	**0.16**	**346**		Pg	16 17 39.0	+0.4
MTUM	**Tungsten Hills**	**0.22**	**125**		Pg	16 17 39.7	+0.2
OMMB	**Old Mammoth Mi**	**0.22**	**309**		Pg	16 17 39.6	0.0
OMMB				Sg	Sg	16 17 42.4	-0.2
MRDM	**Red Cones**	**0.25**	**299**		Pg	16 17 40.3	+0.2
MDPB	**Devils Postpil**	**0.28**	**304**		Pg	16 17 40.8	0.0
MDPB				Sg	Sg	16 17 44.3	-0.2
BENR	**Benton**	**0.29**	**36**		Pg	16 17 41.0	0.0
BHPR	**Bishop**	**0.30**	**127**		Pg	16 17 41.3	+0.2
MDCM	**Deadman Creek**	**0.31**	**319**		Pg	16 17 41.4	+0.1
MGNR	**McGee Canyon**	**0.34**	**12**		Pg	16 17 42.3	+0.3
ANTCA	**Antelope Range**	**0.47**	**22**		Pg	16 17 44.4	0.0
BONR	**Boundary Peak**	**0.61**	**39**		Pg	16 17 47.0	0.0
HCK	**Huntoon Valley**	**0.62**	**14**		Pg	16 17 47.3	+0.3
LUL	**Lundy Lake**	**0.65**	**332**		Pb	16 17 48.8	-0.3
LHV	**Little Huntoon**	**0.80**	**16**		Pg	16 17 50.5	-0.2
LHV				Sg	Sg	16 18 01.0	-0.1
HELL	**Mitchell Peak,**	**0.82**	**193**		Pg	16 17 50.5	-0.4
NVAR	**Mina Array Bea**	**1.02**	**22**		Pg	16 17 53.5	-1.3
NV11	**Mina Array Sit**	**1.08**	**27**		Pg	16 17 55.2	-0.6
NV11				Sg	Sg	16 18 09.4	-0.4
WAKR	**Walker**	**1.15**	**334**	Pg	Pg	16 17 57.0	-0.2
RYN	**Ryan**	**1.17**	**10**		Pg	16 17 57.0	-0.5
GVN	**Grapevine**	**1.25**	**112**		Pg	16 17 58.9	-0.1
TMO	**Tin Mountain**	**1.29**	**121**		Pn	16 17 59.3	-0.6
TPH	**Tonopah**	**1.38**	**64**		Pn	16 18 00.3	-0.7
CMB	**Columbia Colle**	**1.38**	**294**		Pn	16 18 00.4	-0.6
CMB	**Columbia Colle**	**1.38**	**294**	Pn	Pn	16 18 00.2	-0.8
KVN	**Kaiserville**	**1.66**	**19**	Pn	Pn	16 18 04.5	-0.5
PNTR	**Pine Nut**	**1.73**	**339**		Pn	16 18 05.2	-0.7
EMB	**Emerald Bay**	**1.82**	**326**		Pb	16 18 08.5	-0.4
ISA	**Isabella, Lake**	**1.83**	**172**		Pn	16 18 07.2	0.0
RUBR	**Rubicon Trail**	**1.91**	**326**	Pn	Pn	16 18 07.8	-0.5
PMPB	**Monarch Peak**	**2.05**	**233**	Pn	Pn	16 18 10.4	+0.3
TPNV	**Topopah Spring**	**2.09**	**104**		Pn	16 18 10.5	-0.3
PAGB	**Antelope Grade**	**2.10**	**214**	Pn	Pn	16 18 10.5	-0.4
SAO	**San Andreas Ge**	**2.24**	**252**	Pn	Pn	16 18 13.8	+1.1
AFDM	**Forest Hills D**	**2.26**	**311**	Pn	Pn	16 18 13.2	+0.2
SCZ	**Santa Cruz**	**2.27**	**248**		Pb	16 18 14.9	-1.6
R11A	**Troy Canyon, C**	**2.68**	**70**	Pn	Pn	16 18 18.2	-0.7
GSC	**Goldstone, Bar**	**2.70**	**143**	Pn	Pn	16 18 18.9	-0.2
ORV	**Oroville**	**2.97**	**315**	Pn	Pn	16 18 22.9	+0.1
PRN	**Pahroc Range**	**2.98**	**90**		Pn	16 18 22.6	-0.4
CVS	**Carmenet Viney**	**3.03**	**288**		Pb	16 18 27.4	-2.1
SHPR	**Sheep Range**	**3.06**	**107**	Pn	Pn	16 18 23.9	-0.3
PSUT	**Pine Spring**	**4.04**	**73**	Pn	Pn	16 18 36.9	-0.7
CCUT	**Cedar City**	**4.31**	**87**	Pn	Pn	16 18 41.0	-0.4
MTPU	**Mount Pierson**	**5.26**	**82**	Pn	Pn	16 18 54.6	0.0

WEL 04 16:27:04.9, 43°S±3°×17°1E±°, h5km±2km, M2.3/7, ML2.4/7, MLv2.3/7, Error ellipse: s-maj=0.0km s-min=0.0km az=129.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	**Waitaha Valley**	**0.12**	**314**	P	Pg	16 27 06.4	-0.9
GCSZ	**Gaunt Creek Bo**	**0.42**	**247**	P	Pb	16 27 14.8	0.0
RPZ	**Rata Peaks**	**0.58**	**165**	P	Pb	16 27 17.9	+0.4
INZ	**Inchbonnie**	**0.61**	**45**	P	Pb	16 27 17.9	-0.2
MHCZ	**Mount Hutt**	**0.64**	**126**	P	Pb	16 27 19.1	+0.5
ARCZ	**Arundel**	**0.82**	**164**	P	Pb	16 27 22.3	+0.7
FOZ	**Fox Glacier**	**0.84**	**243**	P	Pn	16 27 23.0	-0.4
OXZ	**Oxford**	**0.88**	**101**	P	Pn	16 27 23.7	-0.2
LTZ	**Lake Taylor**	**1.11**	**71**	P	Pn	16 27 27.7	+0.6
LBZ	**Lake Benmore**	**1.32**	**201**	P	Pg	16 27 32.8	+2.6
DSZ	**Denniston Nort**	**1.58**	**27**	P	Pg	16 27 36.0	+0.9
OKCZ	**Okains Bay**	**1.70**	**110**	P	Pg	16 27 37.3	-0.2
ODZ	**Otahua Downs**	**1.89**	**185**	P	Pb	16 27 39.5	-0.3
THZ	**Tophouse**	**2.06**	**48**	P	Pg	16 27 43.8	-0.5

TUL 04 16:46:11.3±0.7, 36°.26N±0°.01×97°.37W±0°.02, h3km±7km, ML2.6, Error ellipse: s-maj=1.9km s-min=1.6km az=50.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.46**	**189**	Pg	Pg	16 46 20.6	+0.4
OK031	**S. Brethren Rd**	**0.52**	**125**		Pg	16 46 21.9	+0.5
OK031				Sg	Sg	16 46 29.1	+1.0
CROK	**Carrier**	**0.56**	**297**	Pg	Pg	16 46 22.1	+0.1
CROK				Sg	Sg	16 46 29.5	+0.3
OK030	**Cody Creek RV**	**0.57**	**125**		Pg	16 46 22.9	+0.6
OK030				Sg	Sg	16 46 30.8	+1.0
BCOK	**Bluff Creek, N**	**0.63**	**198**	Pg	Pg	16 46 23.7	+0.3
BCOK				Sg	Sg	16 46 31.9	+0.4
OK025	**Westminster Rd**	**0.67**	**178**		Pg	16 46 24.6	+0.4
KAN13	**South Haven SW**	**0.76**	**353**	Pg	Pg	16 46 26.1	+0.2
KAN13				Sg	Sg	16 46 36.3	+0.5
OKCFA	**Oklahoma City**	**0.84**	**185**	Pg	Pg	16 46 27.6	+0.1
KAN14	**Manchester OK**	**0.85**	**326**	Pg	Pg	16 46 27.6	0.0
KAN14				Sg	Sg	16 46 38.8	+0.2
OKCSW	**OKLAHOMA CITY**	**0.85**	**184**	Pg	Pg	16 46 27.8	+0.2
KAN09	**Caldwell North**	**0.90**	**347**	Pg	Pg	16 46 28.6	0.0
KAN05	**Bluff City Nor**	**0.94**	**335**	Pg	Pg	16 46 29.3	-0.1
T35A	**Sooner Cattle**	**0.95**	**46**	Pg	Pg	16 46 29.5	0.0
FNO	**Franklin**	**1.00**	**182**		Pg	16 46 29.9	-0.5
KAN10	**Anthony SW Sta**	**1.05**	**326**	Pg	Pg	16 46 31.2	-0.2
KAN08	**Anthony NE Sta**	**1.08**	**334**	Pg	Pg	16 46 32.3	+0.2
KAN12	**Harper NE Stat**	**1.16**	**334**	Pg	Pg	16 46 33.2	-0.3
W35A	**Tecumseh**	**1.17**	**160**		Pg	16 46 33.0	-0.8
TUL1	**Leonard**	**1.32**	**105**	Pg

mb4.6/16,Ms4.8/1,Ms7 4.6/1
NEIC ***04*** *16:52:31.9±1.6,6°15S±0.0°8×150.7°E±0.°1,h47km±7km, mb4.5/33,Error ellipse: s-maj=18.1km s-min=2.3km az=127.0*
DJA ***04*** *16:52:31.7±0.6,6°S±5°×15°1E±°,h44km±8km,M4.8/6, mb4.7/6,mB5.0/2,MLv4.9/3,Mw(mB)4.3/2*
IDC ***04*** *16:52:32.6±1.4,6°20S×150°76E,h48km±13km,mb4.2/19, mb1 4.4/21,mb1mx4.1/43,mbtmp4.5/21,ML2.1/1,MS3.3/7, Ms1 3.3/7,ms1mx3.1/27,Error ellipse: s-maj=17.3km s-min=8.4km az=121.0*

ISC 04 16:52:31.3±0.5,6°18S±0.0°07×150°69E±0.°08,h35km,n76, σ1§54/78,mb4.5/32,MS3.6/5,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.29**	**35**	P			**Pn**	**16 53 07.3**	**+0.7**
	66nm,0.3s,baz=247,slow=0.6,SNR=122								
KRVT				S			**Sn**	**16 53 40.8**	**+7.2**
	187nm,0.3s,baz=23,slow=3.1,SNR=4.0								
KRVT				LR		LR	LR	16 53 57.5	
	comp=Z,310nm,21.2s,baz=218,slow=38								
RABL	**Rabaul**	**2.46**	**37**				**Pn**	**16 53 08.7**	**-0.4**
PMG	**Port Moresby**	**4.75**	**227**	P			**Pn**	**16 53 42.7**	**+2.3**
	5.6nm,0.3s,baz=36,slow=9.4,SNR=18								
PMG				S			**Sn**	**16 54 37.1**	**+2.8**
	28nm,0.3s,baz=168,slow=14,SNR=8.8								
PMG				LR		LR	LR	16 55 32.7	
	comp=Z,280nm,20.2s,baz=28,slow=38								
PMG	**Port Moresby**	**4.75**	**227**				**Pn**	**16 53 41.3**	**+0.9**
HNR	**Honiara**	**9.72**	**110**	LR		LR	LR	16 57 59.2	
	comp=Z,172nm,21.8s,baz=15,slow=34								
WB0	**Warramunga Arr**	**20.82**	**228**	P			**P**	**16 57 09.7**	**-0.2**
WB0						IAmb	IAmb	16 57 14.9	
	comp=Z,24nm,0.8s								
WR0	**Warramunga Arr**	**20.83**	**227**	P			**P**	**16 57 10.0**	**-0.1**
WR0						IAmb	IAmb	16 57 15.5	
	comp=Z,22nm,0.9s								
WRAB	**Tennant Creek**	**20.95**	**228**	P			**P**	**16 57 10.8**	**-0.6**
WB2	**Warramunga Arr**	**20.96**	**228**	P			**P**	**16 57 11.0**	**-0.5**
WB2						IAmb	IAmb	16 57 17.7	
	comp=Z,22nm,0.8s								
WRA	**Warramunga Arr**	**20.97**	**228**	P			**P**	**16 57 12.1**	**+0.5**
	comp=Z,18nm,0.7s,baz=50,slow=10,SNR=138								
WRA				S			**S**	**17 01 03.2**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=54,slow=19,SNR=4.9								
WRA				ScP			**ScP**	**17 04 55.1**	**+2.4**
	comp=Z,0.8nm,0.8s,baz=51,slow=2.9,SNR=5.9								
WRA	**Warramunga Arr**	**20.97**	**228**	P			**P**	**16 57 10.5**	**-1.1**
DZM	**Mont Dzumac**	**21.93**	**138**	P			**P**	**16 57 22.3**	**+0.2**
	comp=Z,5.2nm,0.6s,baz=322,slow=19,SNR=3.7								
KNRA	**Kununurra**	**23.48**	**245**	P			**P**	**16 57 38.5**	**+0.4**
KNRA						IAmb	IAmb	16 57 51.3	
	comp=Z,15nm,0.8s								
AS31	**Alice Springs**	**23.73**	**221**	P			**P**	**16 57 40.2**	**-0.2**
ASAR	**Alice Springs**	**23.73**	**221**	P			**P**	**16 57 40.8**	**+0.4**
	comp=Z,15nm,0.6s,baz=55,slow=9.0,SNR=233								
ASAR				S			**S**	**17 01 54.3**	**+0.8**
	comp=Z,1.8nm,1.0s,baz=40,slow=19,SNR=7.4								
ASAR				ScP			**ScP**	**17 04 59.1**	**-0.8**
	comp=Z,0.3nm,0.9s,baz=47,slow=2.8,SNR=2.2								
ASAR				LR		LR	LR	17 06 25.5	
	comp=Z,90nm,19.7s,baz=56,slow=35								
ASAR	**Alice Springs**	**23.73**	**221**	P			**P**	**16 57 39.8**	**-0.6**
TNTI	**Ternate**	**24.29**	**286**	P			**P**	**16 57 44.5**	**-1.2**
SOEI	**Soe**	**26.41**	**261**	P			**P**	**16 58 09.0**	**+4.0**
	comp=Z,18nm,1.2s								
STKA	**Stephens Creek**	**26.94**	**197**	P			**P**	**16 58 09.7**	**+0.1**
	comp=Z,11nm,0.8s,baz=341,slow=8.5,SNR=23								
STKA				LR		LR	LR	17 09 11.1	
	comp=Z,104nm,19.1s,baz=22,slow=37								
STKA	**Stephens Creek**	**26.94**	**197**	P			**P**	**16 58 09.2**	**-0.4**
BATI	**Baumata**	**27.04**	**260**	P			**P**	**16 58 15.8**	**+5.1**
	comp=Z,14nm,0.8s,baz=111,slow=8.6,SNR=3.3								
FITZ	**Fitzroy Crossi**	**27.16**	**242**	P			**P**	**16 58 12.1**	**+0.5**
	comp=Z,3.7nm,0.6s,baz=58,slow=9.2,SNR=17								
FITZ	**Fitzroy Crossi**	**27.16**	**242**	P			**P**	**16 58 11.5**	**-0.1**
FITZ						IAmb	IAmb	16 58 22.2	
	comp=Z,11nm,0.9s								
MMRI	**Maumere**	**28.32**	**263**	P			**P**	**16 58 20.4**	**-1.7**
EDFI	**Ende, Flores**	**28.87**	**263**	P			**P**	**16 58 28.1**	**+1.0**
	comp=Z,9.0nm,0.9s								
JAGI	**Jajag, Banyuwa**	**36.31**	**264**	P			**P**	**16 59 30.7**	**-1.3**
CISI	**Cisompet, Garu**	**42.58**	**266**	P			**P**	**17 00 24.0**	**-0.5**
JMN	**Monobe**	**42.77**	**339**	P			**P**	**17 00 25.1**	**-0.5**
LEM	**Lembang**	**42.79**	**267**	P			**P**	**17 00 27.4**	**+1.1**
	comp=Z,34nm,0.8s,baz=91,slow=4.5,SNR=10								
JNU	**Nakatsue**	**43.38**	**336**	P			**P**	**17 00 31.7**	**+1.1**
	comp=Z,18nm,0.9s,baz=131,slow=4.5,SNR=6.9								
JNU	**Nakatsue**	**43.38**	**336**	P			**P**	**17 00 30.6**	**0.0**
JWT	**Wachi**	**43.69**	**342**	P			**P**	**17 00 33.0**	**+0.1**
JWT						IAmb	IAmb	17 00 43.0	
	comp=Z,10nm,0.9s								
JHS	**Saijyo**	**44.19**	**339**	P			**P**	**17 00 36.9**	**-0.2**
JHS						IAmb	IAmb	17 00 48.9	
	comp=Z,11nm,1.0s								
KSRS	**Korea Array**	**48.34**	**336**	P			**P**	**17 01 10.6**	**+1.1**
	comp=Z,4.5nm,0.8s,baz=156,slow=8.8,SNR=14								
NJ2	**Nanjing**	**48.64**	**323**	*e*P			**P**	**17 01 11.9**	**-0.1**
NJ2				pmax			pmax		
	comp=Z,6.0nm,0.5s								
USRK	**Ussuriysk Ar.**	**52.91**	**343**	P			**P**	**17 01 44.0**	**0.0**
	comp=Z,1.2nm,0.7s,baz=159,slow=8.2,SNR=2.5								
HHC	**Hu-ho-hao-te**	**58.98**	**326**	*e*P			**P**	**17 02 28.5**	**+0.9**
HHC				pmax			pmax		
	comp=Z,8.0nm,0.8s								
PEA0B	**Petropavlovsk-**	**59.36**	**5**	P			**P**	**17 02 28.9**	**-1.0**
PETK	**Petropavlovsk-**	**59.36**	**5**	P			**P**	**17 02 28.7**	**-1.2**
	comp=Z,7.3nm,1.0s,baz=158,slow=7.2,SNR=8.0								
LZH	**Lanzhou**	**60.79**	**317**	*e*P			**P**	**17 02 38.9**	**-1.3**
LZH				pP			pP	17 02 51.6	+0.7
LZH				sP			sP	17 02 57.0	+2.0
LZH				*e*PP			**PP**	**17 04 55.8**	**+1.3**
LZH				pmax			pmax		
	comp=Z,21nm,1.3s								
LZH				pmax			pmax		
	comp=Z,85nm,4.8s								
LZH				LR			LR		
	comp=Z,220nm,15.3s								
LZH				LR			LR		
	comp=Z,240nm,15.2s								
LZH				LR			LR		
	comp=Z,400nm,18.4s								
SONM	**Songino Array**	**66.40**	**329**	P			**P**	**17 03 17.6**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=140,slow=4.8,SNR=7.1								
SONM	**Songino Array**	**66.40**	**329**	P			**P**	**17 03 17.2**	**+0.2**
VNDA	**Vanda**	**71.54**	**177**	P			**P**	**17 03 48.1**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=322,slow=6.9,SNR=9.7								
VNDA	**Vanda**	**71.54**	**177**	P			**P**	**17 03 47.7**	**-0.6**
WMQ	**Urumqi**	**75.35**	**318**	*e*P			**P**	**17 04 12.2**	**+0.8**
CNPM	**China Poot**	**79.87**	**26**	P			**P**	**17 04 35.6**	**-0.6**
MK31	**Makanchi Array**	**80.00**	**320**	P			**P**	**17 04 35.7**	**-1.5**
MKAR	**Makanchi Array**	**80.00**	**320**	P			**P**	**17 04 37.1**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=107,slow=6.3,SNR=9.3								
MKAR	**Makanchi Array**	**80.00**	**320**	P			**P**	**17 04 35.9**	**-1.3**
ZALV	**Zalesovo Beam**	**81.15**	**327**	P			**P**	**17 04 42.2**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=111,slow=5.9,SNR=8.2								
ZALV	**Zalesovo Beam**	**81.15**	**327**	P			**P**	**17 04 41.0**	**-2.1**
NIL	**Nilore**	**83.03**	**305**	P			**P**	**17 04 52.4**	**-1.1**
NIL						IAmb	IAmb	17 04 55.7	
	comp=Z,3.7nm,0.7s								
DHY	**Denali Highway**	**83.24**	**24**	P			**P**	**17 04 53.6**	**-0.5**
DHY						IAmb	IAmb	17 04 58.4	
	comp=Z,5.2nm,0.9s								
KURK	**Kurchatov**	**83.57**	**323**	P			**P**	**17 04 54.3**	**-1.6**
QSPA	**South Pole Qui**	**83.78**	**180**	P			**P**	**17 04 56.9**	**0.0**
	comp=Z,2.7nm,0.8s,baz=352,slow=2.4,SNR=18								
QSPA	**South Pole Qui**	**83.78**	**180**	P			**P**	**17 04 55.9**	**-1.0**
QSPA						IAmb	IAmb	17 05 20.6	
	comp=Z,3.7nm,0.8s								
CCB	**Clear Creek Bu**	**83.82**	**22**	P			**P**	**17 04 54.9**	**-1.9**
CCB						IAmb	IAmb	17 04 56.6	
	comp=Z,3.2nm,0.7s								
IL31		**84.23**	**22**	P			**P**	**17 04 56.4**	**-2.5**
ILAR	**Eielson Array**	**84.23**	**22**	P			**P**	**17 04 56.9**	**-2.1**
	comp=Z,2.7nm,0.7s,baz=246,slow=5.2,SNR=14								
ILAR	**Eielson Array**	**84.23**	**22**	P			**P**	**17 04 56.6**	**-2.4**
DOT	**Dot Lake**	**84.83**	**24**	P			**P**	**17 05 00.7**	**-1.4**
DOT						IAmb	IAmb	17 05 02.9	
	comp=Z,4.1nm,0.8s								
K27K	**Chicken**	**85.79**	**24**	P			**P**	**17 05 06.5**	**-0.3**
K27K						IAmb	IAmb	17 05 10.2	
	comp=Z,4.5nm,0.8s								
EGAK	**Eagle**	**86.45**	**23**	P			**P**	**17 05 09.4**	**-0.6**
NRIK	**Noril'sk**	**86.59**	**342**	P			**P**	**17 05 10.7**	**0.0**
	comp=Z,2.4nm,0.7s,baz=135,slow=4.3,SNR=6.7								
HYT	**Haines Junctio**	**86.63**	**28**	P			**P**	**17 05 11.2**	**0.0**
KKAR	**Karatay Array**	**87.06**	**314**	P			**P**	**17 05 12.7**	**-0.9**
INK	**Inuvik**	**90.49**	**21**	P			**P**	**17 05 28.3**	**-0.8**
	comp=Z,1.2nm,0.5s,baz=320,slow=3.8,SNR=5.8								
INK	**Inuvik**	**90.49**	**21**	IAmb		IAmb	IAmb	17 05 30.0	
	comp=Z,2.6nm,1.1s								
NVAR	**Mina Array Bea**	**94.58**	**52**	P			**P**	**17 05 49.3**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=253,slow=6.2,SNR=4.6								
ARU	**Arti**	**96.29**	**326**	LR		LR		17 49 07.4	
	comp=Z,23nm,18.8s,baz=82,slow=35								
AKTO	**Aktyubinsk**	**96.43**	**320**	LR		LR		17 47 57.4	
	comp=Z,21nm,20.6s,baz=55,slow=34								
PDAR	**Pinedale Array**	**101.32**	**48**	P			**Pdif**	**17 06 19.4**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=222,slow=2.0,SNR=4.3								
GERES	**GERESS Array B**	**124.10**	**327**	PKP			**PKPdf**	**17 11 25.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=120,slow=1.9,SNR=6.3								
TORD	**Torodi Ar. Bea**	**148.69**	**285**	PKPbc			**PKPbc**	**17 12 15.8**	**-0.2**
	comp=Z,7.1nm,0.7s,baz=57,slow=2.9,SNR=33								
TORD	**Torodi Ar. Bea**	**148.69**	**285**				**PKPbc**	**17 12 14.7**	**-1.2**
DBIC	**Dimbokro**	**155.70**	**273**	PKPbc			PKPbc	17 12 32.0	
	comp=Z,2.0nm,0.6s,baz=236,slow=3.6,SNR=2.1								

IDC ***04*** *16:58:21.9±0.6,49°04S×9°04W,h0km,mb4.3/13, mb1 4.4/13,mb1mx4.2/24,mbtmp4.3/13,MS4.1/16, Ms1 4.1/16,ms1mx4.1/19,Error ellipse: s-maj=17.3km s-min=16.6km az=136.0*
NEIC ***04*** *16:58:24.3±1.7,49°04S±0°06×9°1W±0°2,h15km±4km, mb4.9/40,Error ellipse: s-maj=16.6km s-min=4.5km az=115.0*
GCMT ***04*** *16:58:26.3±0.3,49°11S±0°01×8°70W±0°02,h12km, MW4.9/99,Moment Tensor Solution. s29,c34; s99,c134; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.18±.10; Mθθ1.92±.09; Mϕϕ-1.74±.09; Mrθ0.43±.27; Mrϕ-2.43±.07; Mθϕ-0.15±.29; Best double couple: M=3.07300×10¹⁶ NP1:ϕs162.00000°,δ84.00000°,λ5.00000°. NP2: ϕs71.00000°,δ86.00000°,λ174.00000°. Principal axes: T 3.1930, Plg8.0000°, Azm26.0000°; N -0.2440, Plg82.0000°, Azm216.0000°; P -2.9530, Plg1.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 16:58:23.3±0.4,49°08S±0.°08×8°99W±0.°08,h10km,n108, σ0§68/94,mb4.8/27,MS4.2/17,2D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**21.64**	**179**	P			**P**	**17 03 14.4**	**+1.0**
VNA2	**Neumayer--Watz**	**21.93**	**179**	P			**P**	**17 03 16.7**	**+0.3**
VNA3	**Neumayer Olymp**	**22.24**	**181**	P			**P**	**17 03 20.3**	**+0.5**
SNAA	**Sanae**	**22.84**	**175**	P			**P**	**17 03 26.2**	**-0.1**
SNAA	**Sanae**	**22.84**	**175**	P			**P**	**17 03 26.7**	**+0.4**
	13nm,1.1s,baz=360,slow=10,SNR=19								
SNAA				LR			LR	17 10 15.1	
	comp=Z,523nm,18.9s,baz=9.0,slow=31								
SNAA	**Sanae**	**22.84**	**175**	P			**P**	**17 03 25.8**	**-0.5**
SNAA						IAmb	IAmb	17 03 47.9	
	comp=Z,31nm,1.3s								
SUR	**Sutherland**	**27.83**	**64**	P			**P**	**17 04 13.4**	**+0.4**
	comp=Z,7.5nm,0.9s,baz=198,slow=9.6,SNR=2.7								
SUR				LR			LR	17 12 18.6	
	comp=Z,356nm,19.4s,baz=220,slow=30								
SUR	**Sutherland**	**27.83**	**64**	P			**P**	**17 04 12.4**	**-0.6**
SUR						IAmb	IAmb	17 04 21.0	
	comp=Z,33nm,1.3s								
BELA	**Belgrano 2**	**30.49**	**190**	P			**P**	**17 04 35.8**	**-0.1**
SYO	**Syowa Base**	**30.73**	**148**	*e*P			**P**	**17 04 37.0**	**-1.1**
SYO	**Syowa Base**	**30.73**	**148**	*e*pP			pP	17 04 42.7	+2.6
EFI	**East Falkland**	**30.93**	**246**	P			**P**	**17 04 39.1**	**-1.0**
PMSA	**Palmer Station**	**32.63**	**221**	*e*P			P	17 05 01.7	+6.9
BOSA	**Boshof**	**33.20**	**65**	P			**P**	**17 04 59.8**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=219,slow=9.8,SNR=4.5								
BOSA				LR		LR	LR	17 15 46.4	
	comp=Z,314nm,18.6s,baz=226,slow=32								
BOSA	**Boshof**	**33.20**	**65**	P			**P**	**17 04 58.8**	**-1.5**
TSUM	**Tsumeb**	**36.67**	**45**	P			**P**	**17 05 30.4**	**0.0**
	comp=Z,3.9nm,0.6s,baz=218,slow=6.1,SNR=5.8								
TSUM	**Tsumeb**	**36.67**	**45**	P			**P**	**17 05 30.1**	**-0.3**
TSUM						IAmb	IAmb	17 05 38.6	
	comp=Z,26nm,1.5s								
CPSB	**Cacapava Do Su**	**38.28**	**282**	*e*P			**P**	**17 05 45.2**	**+1.4**
PET01	**Itanhaem-SP**	**38.82**	**296**	*e*P			**P**	**17 05 47.2**	**-1.1**
MAW	**Mawson**	**39.25**	**145**	P			**P**	**17 05 52.0**	**+0.6**
	comp=Z,7.5nm,0.9s,baz=264,slow=9.0,SNR=13								
MAW				LR			LR	17 19 01.9	
	comp=Z,185nm,21.6s,baz=250,slow=32								
MAW	**Mawson**	**39.25**	**145**	P			**P**	**17 05 51.9**	**+0.4**
SPB	**Sao Paulo**	**39.44**	**296**	P			**P**	**17 05 52.1**	**-1.4**
H10S2	**ASCENSION HYDR**	**40.27**	**351**	T			T	17 49 09.7	
	baz=174,slow=74,SNR=11								
H10S3	**ASCENSION HYDR**	**40.28**	**351**	T			T	17 49 37.3	
	baz=46,slow=74,SNR=30								
ITQB	**Itaqui**	**40.83**	**280**	*e*P			**P**	**17 06 05.6**	**+0.7**
QSPA	**South Pole Qui**	**41.17**	**180**	P			**P**	**17 06 08.0**	**+0.3**
	comp=Z,5.5nm,0.9s,baz=242,slow=2.1,SNR=5.7								
QSPA	**South Pole Qui**	**41.17**	**180**	P			**P**	**17 06 07.1**	**-0.5**
ASCN	**Ascension**	**41.26**	**352**	P			**P**	**17 06 08.3**	**-0.4**
MATP	**Matopo**	**41.35**	**60**	P			**P**	**17 06 09.0**	**-0.5**
	comp=Z,4.0nm,1.0s,baz=185,slow=9.2,SNR=4.5								
BB19B	**Bebedouro**	**42.03**	**297**	*e*P			**P**	**17 06 15.5**	**+0.5**
PLCA	**Paso Flores**	**43.30**	**257**	P			**P**	**17 06 24.5**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=177,slow=6.7,SNR=4.5								
PLCA				LR		LR	LR	17 20 40.7	
	comp=Z,102nm,20.2s,baz=128,slow=31								
PLCA	**Paso Flores**	**43.30**	**257**	P			**P**	**17 06 24.2**	**-1.0**
GDU01	**Guandu, BA**	**43.31**	**314**	*e*P			**P**	**17 06 25.5**	**+0.1**
CPUP	**Villa Florida**	**43.56**	**283**	P			**P**	**17 06 27.0**	**-0.4**
	comp=Z,7.1nm,1.1s,baz=124,slow=4.8,SNR=4.0								
CPUP				LR		LR	LR	17 21 56.1	
	comp=Z,104nm,18.9s,baz=158,slow=32								
CPUP	**Villa Florida**	**43.56**	**283**	P			**P**	**17 06 26.2**	**-1.1**
CPUP	**Villa Florida**	**43.56**	**283**	*e*P			**P**	**17 06 27.9**	**+0.6**
IPMB	**Ipameri, GO**	**44.27**	**300**	*e*P			**P**	**17 06 33.1**	**0.0**
JANB	**Januaria**	**44.54**	**307**	*e*P			**P**	**17 06 35.0**	**-0.3**
BDFB	**Brasilia**	**46.05**	**303**	P			**P**	**17 06 47.5**	**+0.1**
	comp=Z,12nm,1.1s,baz=138,slow=6.6,SNR=7.3								
BDFB				LR		LR	LR	17 22 02.4	
	comp=Z,432nm,20.0s,baz=138,slow=31								
BDFB	**Brasilia**	**46.05**	**303**	P			**P**	**17 06 47.2**	**-0.1**
BDFB						IAmb	IAmb	17 06 48.5	
	comp=Z,16nm,1.1s								
BO02	**Sierra Bellavi**	**46.86**	**264**	P			**P**	**17 06 53.1**	**-0.5**
BO02						IAmb	IAmb	17 06 56.0	
	comp=Z,7.4nm,0.9s								
SDBA	**SAO DESIDERIO**	**47.07**	**309**	*e*P			**P**	**17 06 55.3**	**-0.1**
BI03	**Tigo**	**47.09**	**260**	P			**P**	**17 06 55.0**	**-0.2**
ZON	**Zonda**	**47.50**	**269**	P			**P**	**17 06 58.2**	**-0.4**
ZON						IAmb	IAmb	17 07 15.2	
	comp=Z,11nm,0.9s								
PEL	**Peldehue**	**47.81**	**266**	P			**P**	**17 07 01.1**	**+0.2**
VA03	**San Esteban**	**47.96**	**266**	P			**P**	**17 07 02.2**	**0.0**
VA03						IAmb	IAmb	17 07 06.6	
	comp=Z,10nm,0.8s								
MT02	**Curacav**	**48.03**	**265**	P			**P**	**17 07 02.6**	**0.0**
ROC1	**El Roble**	**48.13**	**265**	P			**P**	**17 07 03.8**	**+0.1**
ARAG	**Aragusiana, MT**	**48.15**	**298**	*e*P			**P**	**17 07 04.7**	**+1.1**
PEXB	**Peixe**	**49.11**	**305**	*e*P			**P**	**17 07 11.6**	**+0.5**
CO01	**Juntas del Tor**	**49.44**	**269**	P			**P**	**17 07 15.1**	**+1.3**
CO01						IAmb	IAmb	17 07 23.1	
	comp=Z,13nm,1.0s								
GO04	**Tololo Observa**	**49.77**	**268**	P			**P**	**17 07 16.5**	**+0.2**
AC05	**El Transito**	**50.30**	**270**	P			**P**	**17 07 19.9**	**-0.3**
SNDB	**Serra Nova Dou**	**50.87**	**302**	*e*P			**P**	**17 07 25.2**	**+0.8**
SMTB	**Santa Maria do**	**51.46**	**308**	*e*P			**P**	**17 07 29.2**	**+0.3**
AC01	**Pan de Azucar**	**52.32**	**272**	P			**P**	**17 07 35.4**	**+0.2**
AC01						IAmb	IAmb	17 07 44.3	
	comp=Z,24nm,0.9s								
GO02	**Mina Guanaco**	**52.33**	**274**	P			**P**	**17 07 35.2**	**-0.4**
GO02						IAmb	IAmb	17 07 44.3	
	comp=Z,17nm,0.8s								
PTLB	**Pontes e Lacer**	**52.72**	**291**	*e*P			**P**	**17 07 38.2**	**0.0**
VA04	**Juan Fernndez**	**52.80**	**259**	P			**P**	**17 07 38.9**	**+0.2**
VNDA	**Vanda**	**53.54**	**178**	P			**P**	**17 07 44.0**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=231,slow=6.3,SNR=6.5								
VNDA	**Vanda**	**53.54**	**178**	P			**P**	**17 07 44.0**	**+0.5**
PB15	**IPOC Station P**	**53.61**	**276**	P			**P**	**17 07 44.8**	**-0.2**
PB15						IAmb	IAmb	17 07 54.5	
	comp=Z,16nm,0.8s								
LVC	**Limon Verde**	**53.66**	**277**	P			**P**	**17 07 46.0**	**+0.4**
LVC	**Limon Verde**	**53.66**	**277**	*e*P			**P**	**17 07 46.9**	**+1.3**
PB06	**IPOC Station P**	**54.03**	**276**	P			**P**	**17 07 47.9**	**-0.1**
CLDB	**Colider**	**54.32**	**298**	*e*P			**P**	**17 07 49.6**	**-0.4**
PB07	**IPOC Station P**	**54.92**	**277**	P			**P**	**17 07 54.5**	**0.0**
PB07						IAmb	IAmb	17 08 03.0	
	comp=Z,15nm,0.8s								
PB01	**IPOC Station P**	**55.15**	**278**	P			**P**	**17 07 56.2**	**+0.2**
VILB	**Vilhena**	**55.29**	**292**	*e*P			**P**	**17 07 57.8**	**+0.7**
PB08	**IPOC Station P**	**55.58**	**279**	P			**P**	**17 07 59.6**	**+0.1**
PB08						IAmb	IAmb	17 08 08.3	
	comp=Z,21nm,1.0s								
DBIC	**Dimbokro**	**55.64**	**5**	LR		LR	LR	17 26 34.0	
	comp=Z,287nm,18.7s,baz=138,slow=30								
TA01	**Diego Aracena**	**55.94**	**278**	P			**P**	**17 08 00.8**	**-0.9**
TA01						IAmb	IAmb	17 08 15.9	
	comp=Z,14nm,0.9s								
GO01	**Chusmiza**	**55.95**	**279**	P			**P**	**17 08 01.2**	**-1.0**
GO01						IAmb	IAmb	17 08 10.6	
	comp=Z,15nm,0.9s								
PB11	**IPOC Station P**	**56.18**	**279**	P			**P**	**17 08 02.4**	**-1.1**
PSGCX	**Pisagua**	**56.60**	**279**	P			**P**	**17 08 06.6**	**+0.1**
PB16	**IPOC Station P**	**57.11**	**280**	P			**P**	**17 08 09.7**	**-1.0**
PB16						IAmb	IAmb	17 08 19.2	
	comp=Z,12nm,0.8s								
NPGB	**Novo Progresso**	**57.17**	**301**	*e*P			**P**	**17 08 11.7**	**+1.2**
TMAB	**Tom-Au,PA,Br**	**57.27**	**311**	*e*P			**P**	**17 08 11.9**	**+0.9**
LPAZ	**La Paz**	**57.73**	**283**	P			**P**	**17 08 14.7**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=195,slow=7.4,SNR=5.7								
LPAZ				LR		LR	LR	17 31 40.4	
	comp=Z,118nm,19.8s,baz=128,slow=35								
LPAZ	**La Paz**	**57.73**	**283**	P			**P**	**17 08 14.0**	**-1.1**
LPAZ	**La Paz**	**57.73**	**283**	*e*P			**P**	**17 08 14.8**	**-0.3**
MBAR	**Mbarara**	**59.10**	**48**	P			**P**	**17 08 24.4**	**+0.3**
MBAR						IAmb	IAmb	17 08 28.9	
	comp=Z,8.0nm,1.1s								
ITTB	**Itaituba**	**59.59**	**303**	*e*P			**P**	**17 08 27.9**	**+0.6**
SAML	**Samuel**	**60.23**	**293**	P			**P**	**17 08 30.0**	**-1.7**
SAML						IAmb	IAmb	17 08 39.6	
	comp=Z,7.5nm,0.9s								
SAML	**Samuel**	**60.23**	**293**	*e*P			**P**	**17 08 31.9**	**+0.1**
MALB	**Monte Alegre**	**60.88**	**306**	*e*P			**P**	**17 08 36.7**	**+0.6**
MCPB	**Macapa, AP**	**60.98**	**309**	*e*P			**P**	**17 08 37.6**	**+0.8**
KMBO	**Kilima Mbogo**	**62.01**	**55**	LR		LR	LR	17 34 33.1	
	comp=Z,388nm,18.0s,baz=120,slow=35								
TORD	**Torodi Ar. Bea**	**62.67**	**12**	P			**P**	**17 08 48.0**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=201,slow=2.8,SNR=5.7								
TORD				LR			LR	17 31 19.5	
	comp=Z,154nm,19.1s,baz=195,slow=32								
ROSC	**El Rosal**	**77.86**	**292**	LR		LR	LR	17 42 49.4	
	comp=Z,252nm,19.2s,baz=112,

comp=Z,19nm,0.8s
TIA Tai'an 23.29 303 P P 17 32 26.5 +0.9
TIA pmax pmax
comp=Z,15nm,1.4s
H11N2 WAKE ISLAND Hy 24.25 99 T T 17 57 45.3
baz=289,slow=75,SNR=60
H11N1 WAKE ISLAND Hy 24.25 99 T T 17 57 50.1
baz=289,slow=75,SNR=44
H11N3 WAKE ISLAND Hy 24.27 99 T T 17 57 50.5
baz=289,slow=75,SNR=52
H11S3 WAKE ISLAND Hy 24.48 102 T T 17 58 07.2
baz=291,slow=75,SNR=409
H11S1 WAKE ISLAND Hy 24.49 102 T T 17 58 07.8
baz=291,slow=75,SNR=292
H11S2 WAKE ISLAND Hy 24.50 102 T T 17 58 08.6
baz=291,slow=75,SNR=572
SIJI Sorong 28.04 202 P P 17 33 10.0 +1.1
comp=Z,3.4nm,0.8s,baz=353,slow=7.2,SNR=3.5
HHC Hu-ho-hao-te 29.05 309 *e*P **P 17 33 19.8 +1.9**
HHC pmax pmax
comp=Z,17nm,0.8s
HHC pmax pmax
comp=Z,150nm,5.7s
XAN Xi'an 29.29 294 P P 17 33 20.3 +0.2
XAN sP pwP 17 33 31.2 +1.5
XAN pmax pmax
comp=Z,14nm,2.0s
XAN pmax pmax
comp=Z,340nm,5.4s
GYA Guiyang 31.14 279 ⇑P **P 17 33 38.7 +2.1**
GYA sP sP 17 33 50.9 +0.7
GYA pmax pmax
comp=Z,15nm,1.4s
BNDI Bandanaira 31.91 202 P P 17 33 46.0 +2.8
comp=Z,54nm,0.9s
CD2 Chengdu 33.45 288 *e*P **P 17 33 57.0 +0.3**
LZH Lanzhou 33.70 297 *e*P **P 17 34 00.7 +1.7**
LZH pP pP 17 34 08.2 -0.5
LZH sP sP 17 34 11.6 -1.2
LZH *e*PP **PP 17 35 14.2 -1.3**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,120nm,5.2s
LZH LR LR
comp=Z,330nm,13.1s
LZH LR LR
comp=Z,340nm,13.3s
LZH LR LR
comp=Z,500nm,16.5s
KMI Kunming 34.83 278 ⇑P **P 17 34 10.3 +1.4**
KMI pmax pmax
comp=Z,18nm,1.0s
ULN Ulaanbaatar 34.95 319 *de*P **P 17 34 10.0 +0.4**
ULN pmax pmax
comp=Z,19nm,1.7s
ULN Ulaanbaatar 34.95 319 P **P 17 34 09.5 -0.1**
ULN IAmb IAmb 17 34 12.2
comp=Z,7.4nm,0.9s
SONM Songino Array 35.33 318 P **P 17 34 13.4 +0.5**
comp=Z,2.2nm,0.6s,baz=134,slow=8.2,SNR=12
SONM LR LR 17 48 15.7
comp=Z,56nm,19.1s,baz=121,slow=35
SONM Songino Array 35.33 318 P **P 17 34 12.3 -0.6**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 35.33 318 P **P 17 34 12.3 -0.6**
GTA Gaotai 37.34 302 *e*P **P 17 34 29.9 -0.2**
GTA pP pP 17 34 37.1 -2.9
GTA sP pwP 17 34 40.4 +0.4
GTA pmax pmax
comp=Z,9.0nm,1.4s
ZAK Zakamensk 38.29 320 *e*P **P 17 34 35.0 -3.0**
ZAK pmax pmax
comp=Z,8.0nm,1.4s
TLY Talaya 38.67 322⇑ *e*P **P 17 34 42.2 +1.1**
TLY pmax pmax
comp=Z,12nm,1.9s
MMRI Maumere 38.76 211 P **P 17 34 44.1 +2.0**
comp=Z,36nm,1.0s
EDFI Ende, Flores 39.12 212 P **P 17 34 46.5 +1.3**
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 39.83 269 P **P 17 34 51.8 +0.7**
comp=Z,1.0nm,0.9s,baz=227,slow=29,SNR=4.8
CMAR Chiang Mai Arr 39.83 269 P **P 17 34 51.1 -0.1**
BASI Baing, Sumba 40.93 212 P **P 17 35 02.4 +2.3**
comp=Z,38nm,0.9s
LSA Lhasa 44.40 287 P **P 17 35 28.7 -0.2**
LSA pmax pmax
comp=Z,16nm,1.5s
LSA Lhasa 44.40 287 P **P 17 35 28.7 -0.2**
LSA IAmb IAmb 17 35 32.4
comp=Z,16nm,1.5s
SHL Shillong 44.42 281 P **P 17 35 28.0 -0.7**
SHL pmax pmax
comp=Z,46nm,1.6s
SHL Shillong 44.42 281 P **P 17 35 28.0 -0.7**
SHL IAmb IAmb 17 35 31.4
comp=Z,46nm,1.6s
BILL Bilibino 45.10 13 *e*P **P 17 35 34.9 +1.6**
BILL *e* 17 37 15.1
BILL pmax pmax
comp=Z,3.0nm,1.1s
WB0 Warramunga Arr 45.57 189 P **P 17 35 35.7 -1.9**
WB0 IAmb IAmb 17 35 38.3
comp=Z,13nm,0.9s
WR0 Warramunga Arr 45.74 189 P **P 17 35 37.9 -1.0**
WR0 IAmb IAmb 17 35 39.7
comp=Z,12nm,0.8s
WRAB Tennant Creek 45.74 189 *d i*P **P 17 35 38.2 -0.7**
WRAB pmax pmax
comp=Z,23nm,1.0s
WRAB Tennant Creek 45.74 189 P **P 17 35 38.1 -0.7**
WB2 Warramunga Arr 45.75 189 P **P 17 35 38.2 -0.8**
WRA Warramunga Arr 45.75 189 P **P 17 35 38.7 -0.3**
comp=Z,14nm,0.8s,baz=9.0,slow=8.7,SNR=91
WRA Warramunga Arr 45.75 189 *ce*P **P 17 35 38.4 -0.6**
WRA pmax pmax
comp=Z,14nm,0.8s
WRA Warramunga Arr 45.75 189 P **P 17 35 37.4 -1.6**
FITZ Fitzroy Crossi 46.02 201 P **P 17 35 41.1 0.0**
PSI Prapat 46.64 248 P **P 17 35 45.2 -1.1**
PSI pmax pmax
comp=Z,9.0nm,1.2s
RPSI Rantau Prapat 46.69 248 P **P 17 35 45.2 -1.4**
RPSI IAmb IAmb 17 35 50.4
comp=Z,9.2nm,1.2s
WMQ Urumqi 46.88 307 *e*P **P 17 35 49.0 +1.2**
WMQ pP pP 17 35 55.7 -2.3
WMQ pmax pmax
comp=Z,34nm,0.9s
WMQ pmax pmax
comp=Z,210nm,4.3s
WMQ Urumqi 46.88 307 P **P 17 35 49.1 +1.2**
WMQ pmax pmax
comp=Z,12nm,0.6s
WMQ Urumqi 46.88 307 P **P 17 35 49.1 +1.2**
WMQ IAmb IAmb 17 35 49.9
comp=Z,12nm,0.6s
DGZ Jazzator, Alta 47.80 315⇓ *e*P **P 17 35 55.5 +0.5**
DGZ pmax pmax
comp=Z,8.0nm,1.4s
GSI Gunungsitoli 48.58 247 P **P 17 36 02.2 +0.9**
ZSN Zaisan 49.19 312 *e*P **P 17 36 04.9 -0.6**
baz=312
ZSN Zaisan 49.19 312 *e*P **P 17 36 04.9 -0.6**
AS31 Alice Springs 49.47 189 P **P 17 36 06.4 -1.5**
ASAR Alice Springs 49.47 189 P **P 17 36 07.4 -0.5**
comp=Z,1.3nm,0.8s,baz=11,slow=11,SNR=18
ASAR Alice Springs 49.47 189 P **P 17 36 06.9 -1.0**
ZAA0 Zalesovo Array 50.17 320 P **P 17 36 12.1 -0.8**
MK31 Makanchi Array 50.89 311 P **P 17 36 18.6 +0.2**
MK31 pmax pmax
comp=Z,13nm,1.7s
MK31 Makanchi Array 50.89 311 P **P 17 36 18.6 +0.2**
MK31 IAmb IAmb 17 36 20.1
comp=Z,12nm,1.7s
MKAR Makanchi Array 50.89 311 P **P 17 36 19.0 +0.5**
comp=Z,1.9nm,0.7s,baz=93,slow=8.5,SNR=15
MKAR Makanchi Array 50.89 311 P **P 17 36 18.1 -0.4**
MAKZ Makanchi 51.11 311 P **P 17 36 20.0 -0.1**
MAKZ pmax pmax
comp=Z,12nm,1.6s
MAKZ Makanchi 51.11 311 P **P 17 36 20.0 -0.1**
MAKZ IAmb IAmb 17 36 21.9
comp=Z,12nm,1.6s
SHLS Shalkode 52.85 306 *e*P **P 17 36 29.3 -4.1**
comp=Z,2.2nm,1.0s,baz=306
SHLS Shalkode 52.85 306 *e*P **P 17 36 29.2 -4.1**
SHLS pmax pmax
comp=Z,2.0nm,1.0s
KPKS Kokpek 53.41 306 *e*P **P 17 36 36.1 -1.2**
comp=Z,3.0nm,1.6s,baz=306
KPKS Kokpek 53.41 306 *e*P **P 17 36 36.1 -1.2**
KPKS pmax pmax
comp=Z,3.0nm,1.6s
KURK Kurchatov 53.54 315 *de*P **P 17 36 37.5 -0.5**
KURK pmax pmax
comp=Z,16nm,1.7s
KURK Kurchatov 53.54 315 P **P 17 36 37.5 -0.5**
KURK IAmb IAmb 17 36 39.2
comp=Z,17nm,1.4s
TDK Taldyqorghan 53.57 308 *e*P **P 17 36 37.2 -1.2**
baz=308
TDK Taldyqorghan 53.57 308 *e*P **P 17 36 37.2 -1.2**
SATY Saty 53.63 306 *e*P **P 17 36 37.3 -1.8**
comp=Z,1.5nm,0.9s,baz=306
SATY Saty 53.63 306 *e*P **P 17 36 37.2 -1.8**
SATY pmax pmax
comp=Z,1.0nm,0.9s
PRZ Przheval'sk 53.66 305 P **P 17 36 39.5 +0.2**
PRZ pmax pmax
comp=Z,34nm,1.6s
PRZ Przheval'sk 53.66 305 P **P 17 36 39.5 +0.2**
NRIK Noril'sk 53.80 339⇓ *e*P **P 17 36 38.4 -1.3**
MDOK Medeo 54.62 306 *e*P **P 17 36 45.0 -1.3**
baz=306
MDOK Medeo 54.62 306 *e*P **P 17 36 44.9 -1.3**
AAA Alma-Ata 54.71 306 *e*P **P 17 36 46.0 -0.8**
baz=306
AAA Alma-Ata 54.71 306 *e*P **P 17 36 46.0 -0.8**
KUU Kurty 55.09 307 *e*P **P 17 36 47.9 -1.6**
comp=Z,9.1nm,1.6s,baz=307
KUU Kurty 55.09 307 *e*P **P 17 36 47.9 -1.6**
KUU pmax pmax
comp=Z,9.0nm,1.6s
BOOM Boomskoye usch 55.48 305 P **P 17 36 51.3 -1.2**
BOOM pmax pmax
comp=Z,5.0nm,1.1s
BOOM Boomskoye usch 55.48 305 P **P 17 36 51.3 -1.2**
KSH Kashi 55.74 302 *e*P **P 17 36 56.8 +2.5**
SGDS Sogindy 56.36 307 *e*P **P 17 36 57.3 -1.4**
baz=307
SGDS Sogindy 56.36 307 *e*P **P 17 36 57.2 -1.4**
AAK Ala-Archa 56.53 306⇓ *e*P **P 17 37 00.2 +0.2**
AAK pmax pmax
comp=Z,15nm,1.7s
BTLS Baital 56.66 308 *e*P **P 17 36 59.2 -1.4**
comp=Z,2.1nm,1.8s,baz=308
BTLS Baital 56.66 308 *e*P **P 17 36 59.2 -1.4**
BTLS pmax pmax
comp=Z,2.0nm,1.8s
IMAR Indian Mountai 56.74 26 P **P 17 37 01.4 +0.5**
STKA Stephens Creek 57.12 180 P **P 17 37 03.5 -0.4**
comp=Z,4.1nm,0.8s,baz=346,slow=6.9,SNR=6.1
BRZS Berezniki 57.33 314 *e*P **P 17 37 04.5 -0.9**
comp=Z,1.6nm,1.3s,baz=314
BRZS Berezniki 57.33 314 *e*P **P 17 37 04.4 -0.9**
BRZS pmax pmax
comp=Z,2.0nm,1.3s
BRVK Borovoye 58.74 318⇓ *i*P **P 17 37 16.4 +1.3**
BRVK pmax pmax
comp=Z,13nm,1.7s
BRVK Borovoye 58.74 318 P **P 17 37 15.2 0.0**
BRVK IAmb IAmb 17 37 17.2
comp=Z,20nm,1.6s
DZA Taraz 58.82 306 *e*P **P 17 37 15.1 -0.9**
baz=306
DZA Taraz 58.82 306 *e*P **P 17 37 15.0 -0.9**
NIL Nilore 58.83 295 P **P 17 37 15.8 -0.3**
NIL pmax pmax
comp=Z,50nm,1.8s
NIL Nilore 58.83 295 P **P 17 37 15.8 -0.3**
MDM Murphy Dome 58.85 28 P **P 17 37 17.4 +1.6**
MDM IAmb IAmb 17 37 19.9
comp=Z,14nm,1.4s
SCM Sheep Creek Mo 58.99 32 P **P 17 37 17.9 +1.0**
SCM pmax pmax
comp=Z,45nm,1.7s
SCM Sheep Creek Mo 58.99 32 P **P 17 37 17.9 +1.0**
COLA College 59.00 28⇑ *e*P **P 17 37 17.3 +0.6**
COLA pmax pmax
comp=Z,9.0nm,1.3s
COLA College 59.00 28 P **P 17 37 16.2 -0.5**
COLA IAmb IAmb 17 37 20.4
comp=Z,16nm,1.4s
HDA Harding Lake 59.35 29 P **P 17 37 19.3 +0.2**
HDA IAmb IAmb 17 37 21.5
comp=Z,5.6nm,1.0s
KK31 Karatay Array 59.39 306 P **P 17 37 18.8 -1.0**
KK31 pmax pmax
comp=Z,17nm,1.6s
KK31 Karatay Array 59.39 306 P **P 17 37 18.8 -1.0**
KK31 IAmb IAmb 17 37 24.0
comp=Z,17nm,1.6s
KKAR Karatay Array 59.39 306 P **P 17 37 18.0 -1.8**
KKAR pmax pmax
comp=Z,17nm,1.6s
KKAR Karatay Array 59.39 306 P **P 17 37 18.0 -1.8**
KKAR IAmb IAmb 17 37 24.0
comp=Z,17nm,1.6s
KKAR Karatay Array 59.39 306 P **P 17 37 18.3 -1.5**
IL31 59.40 28 P **P 17 37 20.1 +0.7**
IL31 IAmb IAmb 17 37 21.8
comp=Z,16nm,1.6s
ILAR Eielson Array 59.40 28 P **P 17 37 20.4 +0.8**
comp=Z,3.7nm,1.0s,baz=264,slow=5.2,SNR=17
ILAR Eielson Array 59.40 28 P **P 17 37 19.4 -0.2**
IUG luznay 59.87 305 *e*P **P 17 37 22.3 -1.1**
baz=306
IUG luznay 59.87 305 *e*P **P 17 37 22.2 -1.1**
PAX Paxson 59.91 30 P **P 17 37 23.7 +0.5**
PAX pmax pmax
comp=Z,17nm,1.1s
PAX Paxson 59.91 30 P **P 17 37 23.7 +0.5**
GAR Garm 60.16 302 P **P 17 37 24.9 -0.5**
DOT Dot Lake 60.57 30 P **P 17 37 28.4 +0.8**
DOT IAmb IAmb 17 37 31.3
comp=Z,13nm,1.2s
CRQM Cirque 60.99 33 P **P 17 37 32.6 +1.9**
CHGR Chuyangaron 61.11 302 P **P 17 37 30.8 -1.0**
BCAR Beaver Creek A 61.60 30 P **P 17 37 35.0 +0.4**
KBL Kabul 62.05 297 P **P 17 37 37.8 -0.6**
KBL pmax pmax
comp=Z,15nm,1.3s
KBL Kabul 62.05 297 P **P 17 37 37.8 -0.6**
KBL IAmb IAmb 17 37 42.3
comp=Z,15nm,1.3s
HYT Haines Junctio 63.74 33 P **P 17 37 50.0 +1.0**
HYT IAmb IAmb 17 38 13.5
comp=Z,24nm,1.8s
INK Inuvik 64.72 24 P **P 17 37 55.9 +0.8**
comp=Z,1.6nm,0.8s,baz=304,slow=10,SNR=4.1
INK Inuvik 64.72 24 P **P 17 37 55.6 +0.5**
INK pmax pmax
comp=Z,14nm,1.7s
INK Inuvik 64.72 24 P **P 17 37 55.6 +0.5**
INK IAmb IAmb 17 37 56.8
comp=Z,14nm,1.7s
WHY Whitehorse 65.04 33 P **P 17 37 58.6 +1.1**
WHY IAmb IAmb 17 38 03.1
comp=Z,21nm,1.7s
ABKAR Akbulak array 65.64 315 P **P 17 37 59.2 -2.2**
ABKAR Akbulak array 65.64 315 P **P 17 37 58.9 -2.5**
ABKAR IAmb IAmb 17 38 18.8
comp=Z,8.3nm,1.6s
WRAK Wrangell Islan 67.09 37 P **P 17 38 11.2 +0.7**
HRA Herat 67.52 298 P **P 17 38 12.7 -1.3**
MAK Makhachkala 75.71 311 *e*P **P 17 39 01.4 -1.4**
MAK *e* 17 41 53.4
MAK *e*S **S 17 48 42.2 +0.2**
MAK *e*SS **SS 17 53 33.3 -0.1**
MAK pmax pmax
comp=Z,215nm,1.2s
MAK MLR MLR
comp=Z,218nm,16.0s
FINES FINESS Array B 78.99 334 P **P 17 39 19.2 -1.7**
comp=Z,2.6nm,0.8s,baz=56,slow=7.1,SNR=8.5
FINES FINESS Array B 78.99 334 *i*P **P 17 39 19.0 -1.8**
FINES pmax pmax
comp=Z,3.0nm,0.8s
BMO Blue Mountains 79.89 45 P **P 17 39 27.7 +1.4**
BMO pmax pmax
comp=Z,8.0nm,1.3s
BMO Blue Mountains 79.89 45 P **P 17 39 27.7 +1.4**
BEKR Beckworth 79.98 51 P **P 17 39 28.4 +1.5**
BEKR IAmb IAmb 17 39 30.3
comp=Z,13nm,1.6s
MFID Camas Ranch 81.49 46 P **P 17 39 36.2 +1.3**
NVAR Mina Array Bea 82.04 51 P **P 17 39 38.8 +0.8**
comp=Z,1.2nm,0.8s,baz=292,slow=5.6,SNR=6.3
NVAR Mina Array Bea 82.04 51 P **P 17 39 38.9 +0.9**
ELK Elko 83.11 48 P **P 17 39 44.5 +1.0**
ELK pmax pmax
comp=Z,4.0nm,1.3s
ELK Elko 83.11 48 P **P 17 39 44.5 +1.0**
AKASG Malin Array Be 83.41 324 P **P 17 39 42.6 -1.9**
comp=Z,0.2nm,0.3s,baz=50,slow=4.7,SNR=2.5
R11A Troy Canyon, C 83.98 50 P **P 17 39 49.1 +1.1**
GCMT Greycliff 84.19 42 P **P 17 39 49.3 +0.4**
FLWY Flagg Ranch 84.43 44 P **P 17 39 52.6 +2.4**
REDW Red Top Meadow 84.70 44 P **P 17 39 53.8 +2.2**
REDW IAmb IAmb 17 39 56.4
comp=Z,20nm,1.6s
NOA NORSAR Array B 84.75 338 P **P 17 39 49.1 -2.1**
comp=Z,1.5nm,0.9s,baz=47,slow=4.8,SNR=4.0
PSUT Pine Spring 85.09 50 P **P 17 39 54.4 +0.8**
PDAR Pinedale Array 85.82 44 P **P 17 39 58.6 +1.4**
comp=Z,1.2nm,0.9s,baz=292,slow=4.7,SNR=5.8
CLL Collm 91.02 331 *e*P **P 17 40 22.0 +0.6**
CLL Collm 91.02 331 *e*P **P 17 40 22.0 +0.6**
ANMO Albuquerque 92.03 50⇓ *e*P **P 17 40 28.2 +1.4**
ANMO pmax pmax
comp=Z,10.0nm,2.5s
TORD Torodi Ar. Bea 125.01 310 PKP **PKPdf 17 46 16.7 -1.5**
comp=Z,0.4nm,0.7s,baz=48,slow=2.1,SNR=2.1
PLCA Paso Flores 149.50 128 PKPbc **PKPbc 17 47 05.5 -1.1**
comp=Z,2.3nm,0.9s,baz=284,slow=2.4,SNR=3.5
LPAZ La Paz 151.00 77 PKPbc **PKPbc 17 47 11.2 -0.4**
comp=Z,3.3nm,0.8s,baz=270,slow=5.1,SNR=11
LPAZ La Paz 151.00 77 PKiKP 17 47 13.0 +0.8

TIR ***04*** *17:53:53.8, 39°.27N × 128°.80E, h60 km ± 4 km, Ml3.3*
THE ***04*** *17:53:55.0, 39°.21N × 18°.91E, h0 km ± 3 km, ML2.9/6, Error ellipse: s-maj=3.6km s-min=1.9km az=264.0*
ISC 04 17:53:55.3 ± 1.2, 39°.27N ± 0°.04 × 18°.84E ± 0°.03, h17 km ± 9 km, n31, σ1 s 06/48, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCTE	**Santa Cesarea**	**0.85**	**340**	P	**Pg**	**17 54 11.2**	**-0.8**
SCTE	baz=343			S	**Sn**	**17 54 24.1**	**-0.5**
	baz=343						
KEK	**Kerkira**	**0.86**	**59**	P	**Pg**	**17 54 11.3**	**-0.8**
KEK				S	**Sn**	**17 54 23.9**	**-1.0**
	765nm,0.4s						
IGT	**Igoumenitsa**	**1.19**	**77**	P	**Pb**	**17 54 16.3**	**-1.1**
IGT	baz=76			S	**Sn**	**17 54 33.4**	**+0.5**
	baz=76						
IGT	**Igoumenitsa**	**1.19**	**77**	P	**Pb**	**17 54 17.2**	**-0.2**
IGT				S	**Sb**	**17 54 32.2**	**-0.2**
	248nm,0.4s						
VLO	**Vlora**	**1.30**	**23**	P	**Pn**	**17 54 18.4**	**-0.3**
VLO	baz=23			S	**Sg**	**17 54 36.4**	**-0.9**
	baz=23						
VLO	comp=N,3.4nm,0.3s,baz=23			AMP			
VLO	**Vlora**	**1.30**	**23**	P	**Pn**	**17 54 18.8**	**+0.1**
VLO				S	**Sg**	**17 54 40.4**	**+3.1**
TSLK	**Tsoukalades, L**	**1.48**	**107**	P	**Pn**	**17 54 21.1**	**-0.1**
TSLK				S	**Sb**	**17 54 41.3**	**+0.3**
	comp=N,332nm,0.4s						
LKD2	**Lefkada island**	**1.50**	**108**	P	**Pn**	**17 54 21.4**	**-0.1**
LKD2	baz=107			S	**Sn**	**17 54 41.0**	**+0.5**
	baz=107						
LKD2	**Lefkada island**	**1.50**	**108**	P	**Pn**	**17 54 21.1**	**-0.3**
LKD2				S	**Sg**	**17 54 43.1**	**-0.5**
	comp=N,360nm,0.4s						
NYDR	**Nydri-Lefkada**	**1.55**	**110**	P	**Pn**	**17 54 21.6**	**-0.6**
NYDR				S	**Sg**	**17 54 44.9**	**-0.5**
	comp=N,365nm,0.6s						
EVGI	**Lefkada island**	**1.56**	**114**	P	**Pn**	**17 54 21.9**	**-0.4**
FSK	**Fiskardo**	**1.57**	**121**	P	**Pn**	**17 54 21.8**	**-0.6**
FSK				S	**Sb**	**17 54 45.4**	**+1.9**
	comp=N,355nm,0.5s						
DMLN	**Damoulianata-K**	**1.58**	**130**	P	**Pb**	**17 54 24.6**	**+0.5**
JAN	**Janina**	**1.60**	**75**	P	**Pn**	**17 54 23.1**	**+0.2**
LSK	**Leskovik**	**1.62**	**57**	P	**Pn**	**17 54 22.6**	**-0.5**
LSK	baz=56			S	**Sb**	**17 54 44.4**	**-0.6**
	baz=56						
LSK	comp=N,1.0nm,0.5s,baz=56			AMP			
TAR1	**Taranto**	**1.73**	**317**	*e*Pn	**Pg**	**17 54 28.4**	**-0.2**
TAR1				Sn	**Sg**	**17 54 53.3**	**+2.1**
CGL1	**Ceglie Messapi**	**1.73**	**323**	*e*Pn	**Pb**	**17 54 28.0**	**+1.3**
CGL1				Sn	**Sg**	**17 54 52.3**	**+1.1**
PSDA	**Pessada-Kefalo**	**1.79**	**130**	P	**Pb**	**17 54 28.2**	**+0.6**
PDO	**Prodromos**	**1.95**	**109**	P	**Pn**	**17 54 27.7**	**+0.1**
TIR	**Tirane**	**2.22**	**20**	P	**Pn**	**17 54 31.8**	**+0.5**
	baz=21						
BAI	**Bari**	**2.37**	**321**	*e*Pn	**Pg**	**17 54 39.8**	**-1.0**
BAI				Sn	**Sg**	**17 55 10.8**	**-0.7**
FNA	**Florina**	**2.46**	**51**	P	**Pn**	**17 54 35.3**	**+0.5**
	baz=51						
EFP	**Efpalio**	**2.54**	**108**	P	**Pn**	**17 54 36.5**	**+0.8**
PHP	**Peshkopia**	**2.70**	**26**	P	**Pn**	**17 54 37.8**	**-0.2**
	baz=26						
PHP				S	**Sn**	**17 55 11.8**	**+1.4**
	baz=26						
PHP	comp=N,0.3nm,1.0s,baz=26			AMP			
PUK	**Puka**	**2.88**	**16**	P	**Pn**	**17 54 40.7**	**+0.1**
	baz=16						
BCI	**Bajram Curri**	**3.23**	**16**	P	**Pn**	**17 54 45.9**	**+0.6**
	baz=16						
STIP	**Stip**	**3.52**	**45**	*i* Pn	**Pn**	**17 54 51.9**	**+2.7**
RICI	**Ricice**	**4.41**	**344**	*e*Pn	**Pn**	**17 55 00.3**	**-1.2**
KIJV	**Kijevo**	**5.07**	**340**	*e*Pn	**Pn**	**17 55 10.0**	**-0.5**
KIJV				Sn	**Sn**	**17 56 06.5**	**-2.1**
MORI	**Morici**	**5.16**	**334**	*e*Pn	**Pn**	**17 55 11.5**	**-0.2**
NVLJ	**Novalja**	**6.06**	**332**	*e*Pn	**Pn**	**17 55 22.7**	**-1.4**

IDC ***04*** *18:02:40.3 ± 0.9, 2°.25N × 128°.39E, h130 km ± 8 km, mb3.6/10, mb1 3.8/12, mb1mx3.5/37, mbtmp4.1/12, Error ellipse: s-maj=26.1km s-min=10.4km az=63.0*
NEIC ***04*** *18:02:40.3 ± 1.1, 2°.23N ± 0°.05 × 128°.27E ± 0°.06, h129 km ± 7 km, mb4.2/23, Error ellipse: s-maj=10.3km s-min=2.4km az=128.0*
DJA ***04*** *18:02:40.8 ± 0.5, 2°.1N ± 3° × 12°.8E ± °, h86 km ± 6 km, M4.2/11, mB4.8/3, mb4.5/6, MLv4.2/11, Mw(mB)4.0/3*
ISC 04 18:02:38.1 ± 0.5, 2°.33N ± 0°.05 × 128°.33E ± 0°.06, h100 km, n66, σ1 s 43/73, mb4.1/20, 1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.82**	**212**	P	**Pn**	**18 03 09.4**	**+0.9**
TNTI	**Ternate**	**1.82**	**212**	Pn	**Pn**	**18 03 09.1**	**+0.6**
TNTI				Sn	**Sn**	**18 03 32.2**	**+0.6**
SGSI	**Sangihe**	**3.10**	**296**	P	**Pn**	**18 03 27.3**	**+2.1**
SGSI				S	**Sn**	**18 04 02.0**	**+0.4**
SIJI	**Sorong**	**4.33**	**137**	P	**Pn**	**18 03 44.3**	**+2.5**
	4.5nm,0.3s,baz=232,slow=22,SNR=37						
SIJI				S	**Sn**	**18 04 32.0**	**+0.7**
	4.5nm,0.3s,baz=203,slow=22,SNR=18						
KMSI	**Cibinong**	**4.68**	**248**	P	**Pn**	**18 03 46.5**	**0.0**
KMSI				S	**Sn**	**18 04 38.5**	**-1.3**
MATI	**Mati**	**5.03**	**336**	*e*P	**Pn**	**18 03 53.6**	**+2.4**
MATI				*e*S	**Sn**	**18 04 48.0**	**-0.2**
GTOI	**Gorontalo**	**5.58**	**252**	P	**Pn**	**18 04 00.1**	**+1.4**
	0.2nm731nm43nm,0.6s						
SKMP	**Bagumbayan, Su**	**5.62**	**318**	*e*P	**Pn**	**18 04 00.2**	**+1.0**
SKMP				*e*S	**Sn**	**18 05 02.4**	**0.0**
KCP	**Kidapawan**	**5.66**	**325**⇑	*e*P	Pn	18 04 07.9	+8.1
NLAI	**Namlea**	**5.67**	**192**	P	**Pn**	**18 04 00.2**	**+0.2**
	0.2nm1μm6.2nm,0.6s						
LUWI	**Luwuk**	**6.49**	**239**	P	**Pn**	**18 04 11.4**	**+0.3**
	0.5nm666nm37nm,0.5s						

LUWI	Luwuk	6.49 239			Pn		18 04 10.8	-0.3
FAKI	Fak Fak	6.53 143		Pn	Pn		18 04 14.3	+2.6
FAKI				Sn	Sn		18 05 24.7	+0.1
MPSI	Mapaga	8.66 257	P	P	Pn		18 04 40.5	-0.1
	11nm,0.8s							
TTSI	Tana Toraja	10.04 238	P		Pn		18 04 57.7	-1.8
	33nm,1.1s							
MYLDM	Lahad Datu	10.21 286			Pn		18 05 04.4	+2.7
BNSI	Bone	10.59 231	P	P	Pn		18 05 08.1	+1.1
	20nm,0.7s							
SPSI	Sidrap Palu	10.60 234	P		Pn		18 05 06.9	-0.1
KAPI	Kappang	11.25 230	P	P	Pn		18 05 17.9	+2.0
	4.1nm,0.3s,baz=218,slow=5.5,SNR=6.9							
KAPI	Kappang	11.25 230	Pn		Pn		18 05 16.0	+0.1
MTN	Manton Dam	15.33 170			P		18 06 12.0	+0.4
MTN				IAmb	IAmb		18 06 30.9	
	comp=Z,45nm,1.5s							
SBUM	Sibu	16.09 271	P	P	P		18 06 21.0	+0.9
JAGI	Jajag, Banyuwa	17.75 233	P	P	Pn		18 06 39.9	+0.9
JAGI				IAmb	IAmb		18 07 08.2	
	comp=Z,41nm,1.6s							
KNRA	Kununurra	17.90 179			P		18 06 39.7	-0.3
KNRA				IAmb	IAmb		18 06 42.4	
	comp=Z,23nm,1.3s							
FITZ	Fitzroy Crossi	20.47 187	P	P	P		18 07 06.5	-1.5
	comp=Z,1.3nm,0.9s,baz=7.7,slow=8.7,SNR=1.8							
FITZ	Fitzroy Crossi	20.47 187	P	P	P		18 07 09.5	+1.5
TPUB	Ta-pu	22.14 341	P	P	P		18 07 25.5	-0.2
WB0	Warramunga Arr	22.76 165	P	P	P		18 07 30.9	-1.2
WRA	Warramunga Arr	22.91 165	P	P	P		18 07 32.2	-1.5
	comp=Z,2.1nm,0.6s,baz=345,slow=11,SNR=17							
WRA				pP	pP		18 07 57.1	+3.4
	comp=Z,0.7nm,0.6s,baz=345,slow=11,SNR=2.5							
WRA				PcP	PcP		18 11 19.5	-1.6
	comp=Z,0.1nm,0.3s,baz=336,slow=2.4,SNR=2.1							
WRA	Warramunga Arr	22.91 165	P	P	P		18 07 32.2	-1.5
WB2	Warramunga Arr	22.91 165	P	P	P		18 07 32.6	-1.1
WB2				IAmb	IAmb		18 07 45.4	
	comp=Z,14nm,1.6s							
WC3	Warramunga Arr	22.93 165	P	P	P		18 07 32.9	-1.1
WC3				IAmb	IAmb		18 07 33.3	
	comp=Z,4.2nm,0.7s							
WR0	Warramunga Arr	22.98 165	P	P	P		18 07 33.3	-1.0
WR0				IAmb	IAmb		18 07 42.2	
	comp=Z,8.5nm,1.4s							
YHNB	Yeheng	23.20 344	P	P	P		18 07 36.4	-0.1
ASAR	Alice Springs	26.41 168	P	P	P		18 08 04.0	-1.5
	comp=Z,0.3nm,0.5s,baz=355,slow=8.0,SNR=10							
ASAR				pP	pP		18 08 32.0	+4.4
	comp=Z,1.2nm,0.8s,baz=349,slow=11,SNR=6.9							
ASAR				PcP	PcP		18 11 27.0	-1.8
	comp=Z,0.3nm,0.4s,baz=358,slow=2.1,SNR=8.1							
KSRS	Korea Array	34.95 359	P	P	P		18 09 20.6	+0.1
	comp=Z,0.9nm,0.5s,baz=175,slow=9.2,SNR=4.8							
BBOO	Buckleboo	35.71 169	P	P	P		18 09 25.7	-1.4
STKA	Stephens Creek	36.28 161	P	P	P		18 09 30.2	-1.8
LZH	Lanzhou	40.51 329	||P	P		18 10 09.0	+1.4
LZH			pP	pwP			18 10 37.2	+2.8
LZH			sP	sP			18 10 52.3	+12
LZH			PP	PnPn			18 11 48.5	+0.9
LZH			pmax	pmax				
	comp=Z,19nm,1.3s							
LZH			pmax	pmax				
	comp=Z,56nm,5.0s							
H11S3	WAKE ISLAND Hy	40.87 64	T	T			18 53 52.7	
	baz=251							
H11S2	WAKE ISLAND Hy	40.88 64	T	T			18 53 52.9	
	baz=251							
H11S1	WAKE ISLAND Hy	40.88 64	T	T			18 53 53.5	
	baz=251							
HHC	Hu-ho-hao-te	41.23 341	eP	P			18 10 13.5	+0.2
HHC			pmax	pmax				
	comp=Z,13nm,0.8s							
HHC			pmax	pmax				
	comp=Z,360nm,6.6s							
H11N1	WAKE ISLAND Hy	41.45 63	T	T			18 54 34.3	
	baz=250							
H11N2	WAKE ISLAND Hy	41.46 63	T	T			18 54 36.6	
	baz=250							
H11N3	WAKE ISLAND Hy	41.46 63	T	T			18 54 33.7	
	baz=250							
SONM	Songino Array	49.13 341	P	P			18 11 16.1	+0.4
	comp=Z,0.7nm,0.5s,baz=158,slow=8.3,SNR=4.6							
WMQ	Urumqi	54.78 325	eP	P			18 11 59.2	+1.5
MK31	Makanchi Array	59.61 325	P	P			18 12 31.6	0.0
MK31			IAmb	IAmb			18 12 32.2	
	comp=Z,2.2nm,0.8s							
MKAR	Makanchi Array	59.61 325	P	P			18 12 31.5	-0.1
	comp=Z,2.5nm,0.4s,baz=116,slow=8.1,SNR=42							
MKAR			pP	pwP			18 13 02.0	+3.2
	comp=Z,0.4nm,0.7s,baz=122,slow=8.3,SNR=1.8							
MKAR			PcP	PcP			18 13 16.4	-1.5
	comp=Z,0.3nm,0.7s,baz=119,slow=4.2,SNR=3.7							
MAKZ	Makanchi	59.79 325	P	P			18 12 32.8	0.0
MAKZ			IAmb	IAmb			18 12 33.5	
	comp=Z,3.2nm,0.7s							
ZALV	Zalesovo Beam	62.55 333	P	P			18 12 50.2	-1.1
	comp=Z,0.9nm,0.3s,baz=147,slow=6.8,SNR=3.3							
KURK	Kurchatov	63.77 327	P	P			18 12 59.3	-0.1
KK31	Karatay Array	65.33 317	P	P			18 13 08.6	-1.3
KK31			IAmb	IAmb			18 13 30.3	
	comp=Z,2.4nm,1.2s							
KKAR	Karatay Array	65.33 317	P	P			18 13 09.0	-0.8
KKAR	Karatay Array	65.33 317	P	P			18 13 08.6	-1.2
KKAR			IAmb	IAmb			18 13 30.3	
	comp=Z,2.4nm,1.2s							
TIXI	Tiksi	69.22 0	P	P			18 13 32.9	-0.8
BRVK	Borovoye	69.42 327	P	P			18 13 34.6	-0.8
BRVK			IAmb	IAmb			18 13 35.1	
	comp=Z,3.1nm,0.6s							
AB07	Akbulak array	74.22 321	P	P			18 14 03.3	-0.8
AB01	Akbulak array	74.23 321	P	P			18 14 03.4	-0.9
ABKAR	Akbulak array	74.23 321	P	P			18 14 03.3	-0.9
VNDA	Vanda	81.85 173	P	P			18 14 44.1	-1.7
	comp=Z,0.3nm,0.3s,baz=304,slow=4.8,SNR=3.1							
VNDA	Vanda	81.85 173	P	P			18 14 43.9	-1.8
BRLK	Bradley Lake	83.35 30	P	P			18 14 53.5	-0.4
BRLK			IAmb	IAmb			18 15 04.0	
	comp=Z,7.5nm,1.2s							
ARCES	ARCESS Array B	92.30 340	P	P			18 15 35.3	-1.5
	comp=Z,1.5nm,0.5s,baz=64,slow=5.5,SNR=8.1							
FINES	FINESS Array B	93.81 332	P	P			18 15 42.5	-1.3
	comp=Z,3.0nm,0.9s,baz=253,slow=9.6,SNR=1.5							

*BJI **04** 18:21:01.5±0.0,28°.29S×178°.58W,h348km,mB5.3/37, mb5.0/60*
*IDC **04** 18:21:02.8±0.4,28°.55S×179°.14W,h340km±3km,mb4.6/17, mb1 4.8/20,mb1mx4.7/25,mbtmp5.3/20,Error ellipse: s-maj=9.1km s-min=8.1km az=106.0*
*NEIC **04** 18:21:03.6±1.9,28°.60S±0°.08×179°.1W±0°.1,h354km±4km, mb5.2/142,Error ellipse: s-maj=13.1km s-min=11.3km az=111.0*
*MOS **04** 18:21:03.2±1.0,28°.56S×179°.13W,h353km,mb5.3/13, Error ellipse: s-maj=9.8km s-min=7.1km az=123.8*
*GCMT **04** 18:21:07.6±0.2,28°.51S±0°.03×179°.16W±0°.03, h364km±1km,MW5.4/106,Moment Tensor Solution. s106,c168; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=0.66±.03; Mθθ0.21±.04; Mφφ0.45±.04; Mrθ-0.23±.04; Mθφ0.25±.04; Mφr-1.19±.03; Best double couple: M0.1.36600×10^17 NP1:φ223.00000°,δ15.00000°, λ-61.00000°. NP2:φ14.00000°,δ77.00000°,λ-97.00000°. Principal axes: T 1.3120, Plg31.0000°, Azm110.0000°; N 0.1080, Plg7.0000°, Azm16.0000°; P -1.4200, Plg58.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 04 18:21:02.5±0.4,28°.64S±0°.04×179°.01W±0°.04, h345km±3km,h346km;pP-P,n831,σ1.950/914,mb5.2/116, 60C-44D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RIZ	Raoul Island	1.12	123	P		Pn	18 21 50.7	+2.5
RIZ				S		S	18 22 20.8	-4.1
RAO	Raoul Island	1.14	123	P		Pn	18 21 50.3	+2.0
	3μm,0.3s,baz=8.1,slow=3.5,SNR=138							
RAO				S		S	18 22 25.3	+0.3
	2μm,0.3s,baz=277,slow=21,SNR=9.5							
RAO	Raoul Island	1.14	123	P		Pn	18 21 50.6	+2.3
RAO				S		S	18 22 24.2	-0.7
RAO	Raoul Island	1.14	123	P		Pn	18 21 51.1	+2.8
RAO				S		S	18 22 22.2	-2.8
RAO	Raoul Island	1.14	123	Pn		Pn	18 21 50.6	+2.3
RAO				S		S	18 22 24.2	-0.7
GLKZ	Green Lake	1.14	123	P		Pn	18 21 50.4	+2.1
GLKZ				S		S	18 22 26.7	+1.7
GRZ	Great Barrier	8.91	210	P		P	18 23 10.7	+0.9
OUZ	Omahuta	9.08	222	P		P	18 23 13.9	+2.1
OUZ	Omahuta	9.08	222			P	18 23 13.9	+2.1
MXZ	Matakaoa Point	9.18	193	P		Pn	18 23 07.1	-3.3
MXZ				S		S	18 24 47.6	-7.5
MXZ	Matakaoa Point	9.18	193			Pn	18 23 06.6	-3.8
WCZ	Waipu Caves	9.19	216	P		P	18 23 15.2	+2.2
KUZ	Kuaotunu	9.22	207	P		P	18 23 13.6	+0.3
WMGZ	Waiomatatini S	9.40	193	P		Pn	18 23 10.6	-2.6
WMGZ				S		S	18 24 48.6	-12
WIZ	White Island	9.42	199	P		P	18 23 16.4	+0.9
HAZ	Te Kaha	9.48	196	P		Pn	18 23 11.2	-2.9
HAZ				S		S	18 24 53.1	-8.7
ABAZ	Army Bay	9.48	212	P		P	18 23 19.5	+3.2
WIAZ	Waiheke Island	9.51	210	P		P	18 23 18.5	+2.0
PKGZ	Pakihiroa	9.54	194	P		Pn	18 23 11.7	-3.1
PKGZ				S		S	18 24 50.2	-13
PUZ	Puketiti	9.68	193	P		Pn	18 23 14.9	-1.6
PUZ				S		S	18 24 56.0	-10
RUGZ	Raukumara Rang	9.70	196	P		Pn	18 23 13.8	-3.1
RUGZ				S		S	18 24 57.0	-10
ETAZ	East Tamaki Re	9.73	210	P		P	18 23 21.4	+2.4
HBAZ	Herne Bay Bore	9.73	211	P		P	18 23 21.7	+2.7
EPAZ	Eden Park BICE	9.75	211	P		P	18 23 22.3	+3.1
MKAZ	Moumakai	9.76	209	P		P	18 23 21.3	+2.1
WHRZ	Whale Island	9.78	199	P		P	18 23 19.8	+0.2
TWGZ	Tauwhareparae	9.84	194	P		Pn	18 23 15.6	-2.8
TWGZ				S		S	18 25 04.1	-5.7
WTAZ	Waiatarua	9.87	211	P		P	18 23 23.5	+3.0
AWAZ	Awhitu Peninsu	9.95	211	P		P	18 23 23.5	+2.1
MARZ	Manawahe	9.99	200	P		P	18 23 21.3	-0.6
EDRZ	Edgecumbe	10.09	199	P		P	18 23 23.7	+0.7
CNGZ	Carnagh Statio	10.09	193	P		Pn	18 23 18.6	-2.7
MWZ	Matawai	10.09	196	P		Pn	18 23 18.5	-3.0
TKGZ	Te Karaka	10.12	194	P		Pn	18 23 18.0	-3.7
TKGZ				S		S	18 25 06.7	-9.2
URZ	Urewera	10.12	198	P		Pn	18 23 21.6	-0.2
	15nm,0.3s,baz=299,slow=3.2,SNR=97							
URZ				S		S	18 25 11.4	-4.6
	46nm,0.3s,baz=256,slow=6.4,SNR=8.7							
URZ	Urewera	10.12	198	P		Pn	18 23 18.2	-3.6
URZ	Urewera	10.12	198			Pn	18 23 18.4	-3.3
KARZ	Kararoa	10.16	202	P		P	18 23 24.6	+0.8
TOZ	Tahuroa Road	10.16	205	P		P	18 23 23.5	-0.2
MKRZ	Makatiti	10.20	201	P		P	18 23 25.9	+1.6
OMRZ	Omania	10.20	201	P		P	18 23 26.3	+2.1
NGRZ	Ngongotaha	10.25	202	P		P	18 23 27.1	+2.3
RAGZ	Rawiri	10.27	196	P		Pn	18 23 21.9	-1.7
TARZ	Mount Tarawera	10.27	200	P		Pn	18 23 23.4	-0.3
UTU	Utuhina	10.32	202	P		P	18 23 27.9	+2.4
HLRZ	Highlands Stat	10.34	201	P		P	18 23 26.8	+1.1
RRRZ	Republican Roa	10.37	200	P		P	18 23 26.9	+0.8
RIGZ	Rimuhau	10.39	194	P		Pn	18 23 22.0	-3.1
MUGZ	Murupara	10.42	199	P		Pn	18 23 24.6	-0.7
HSRZ	Hossack Road	10.43	201	P		P	18 23 29.0	+2.3
HRRZ	Handcock Road	10.48	201	P		P	18 23 27.8	+0.4
RTZ	Ruatahuna	10.49	197	P		Pn	18 23 22.3	-4.0
GRRZ	Galatos Road	10.50	202	P		P	18 23 29.3	+1.7
PRRZ	Plateau Road	10.55	200	P		Pn	18 23 27.2	+0.3
SNGZ	Shannon Statio	10.56	196	P		Pn	18 23 23.5	-3.5
PRGZ	Paritu Road	10.57	193	P		Pn	18 23 24.3	-2.9
ALRZ	Allen Road	10.62	200	P		Pn	18 23 26.9	-0.9
WPRZ	Whakapapatarin	10.64	201	P		P	18 23 29.6	+0.4
TLZ	Tolley Road	10.68	204	P		Pn	18 23 28.1	-0.4
KNZ	Kokohu	10.71	194	P		Pn	18 23 24.3	-4.5
KUTZ	Kaahu Road	10.72	202	P		P	18 23 31.7	+1.7
RAHZ	Arahi	10.75	197	P		Pn	18 23 29.3	0.0
MTHZ	Maungataniwha	10.75	198	P		Pn	18 23 25.4	-3.9
MHGZ	Mahia Peninsul	10.79	193	P		Pn	18 23 27.3	-2.5
MHGZ				S		S	18 25 19.2	-12
WHTZ	Whakaora	10.84	201	P		P	18 23 33.0	+1.6
MRHZ	Matea Rd	10.85	199	P		Pn	18 23 29.6	-0.9
WHHZ	Waihua	10.87	196	P		Pn	18 23 24.7	-6.0
WATZ	Wairara	10.95	202	P		P	18 23 32.4	-0.2
NMHZ	Naumai	10.99	197	P		Pn	18 23 29.4	-2.9
HATZ	Hinemaiaia	11.00	200	P		P	18 23 33.1	-0.1
RATZ	Rangitukua	11.08	202	P		P	18 23 33.9	+0.2
HIZ	Hauiti	11.09	206	P		P	18 23 36.0	+1.9
HIZ	Hauiti	11.09	206	P		P	18 23 34.0	-0.1
ARHZ	Aropaoanui	11.10	196	P		Pn	18 23 29.3	-4.2
BKZ	Black Stump Fm	11.14	198	P		Pn	18 23 30.4	-3.6
BKZ	Black Stump Fm	11.14	198			Pn	18 23 29.2	-4.8
RITZ	Rihia Road	11.15	201	P		P	18 23 34.9	0.0
MSVF	Nonsavu	11.19	345	P		P	18 23 35.4	-0.1
MSVF	Nonsavu	11.19	345	P		P	18 23 35.4	-0.1
KATZ	Kakaramea	11.21	202	P		P	18 23 35.4	-0.1
MCHZ	McNeill Hill	11.35	197	P		Pn	18 23 32.8	-3.6
KWHZ	Kaweka Forest	11.40	198	P		Pn	18 23 33.4	-3.7
CKHZ	Cape Kidnapper	11.46	195	P		Pn	18 23 34.9	-2.8
TUVZ	Tukino	11.48	201	P		Pn	18 23 34.5	-3.6
DRZ	Dome Shelter	11.52	202	P		Pn	18 23 38.8	0.0
KAHZ	Kahuranaki	11.63	196	P		Pn	18 23 35.6	-4.2
VRZ	Vera Road	11.66	205	P		P	18 23 41.1	+0.6
PXZ	Pawanui	11.86	196	P		Pn	18 23 38.5	-3.9
WPHZ	Waipukurau	12.00	197	P		Pn	18 23 42.1	-2.1
TSZ	Takapari Road	12.12	199	P		P	18 23 38.9	-6.0
ANWZ	Angora Road	12.36	196	P		P	18 23 47.4	-0.8
OHWZ	Ohakea	12.45	201	P		P	18 23 48.7	-0.4
PRWZ	Pori Road	12.58	198	P		P	18 23 48.7	-1.9
BFZ	Birch Farm	12.63	197			P	18 23 46.0	-5.1
NIUE	Niue	12.63	43	P		P	18 23 50.1	-1.3
NIUE						S	18 26 08.8	-2.4
CPWZ	Castlepoint	12.85	197	P		P	18 23 52.1	-1.5
MSWZ	Moikau Station	13.58	199	P		P	18 23 57.0	-4.6
PLWZ	Palliser	13.72	198			P	18 23 60.0	-3.2
NNZ	Nelson	14.01	204	P		P	18 24 02.2	-4.0
BSWZ	Blackbirch Sta	14.27	202	P		P	18 24 06.7	-2.5
THZ	Tophouse	14.65	205			P	18 24 10.4	-3.1
DZM	Mont Dzumac	14.68	293	P		Pn	18 24 19.7	+3.8
	30nm,0.3s,baz=114,slow=12,SNR=202							
DZM				S		S	18 26 52.2	-0.6
	0.2nm,0.3s,baz=18,slow=20,SNR=1.4							
KHZ	Kahutara	15.01	202			P	18 24 13.8	-3.5
CTZ	Chatham Island	15.19	173	S		S	18 27 15.2	+13
LTZ	Lake Taylor	15.77	204			P	18 24 23.1	-2.5
AFI	Afiamalu	16.12	26	P		P	18 24 29.8	0.0
	26nm,0.3s,baz=236,slow=8.0,SNR=22							
AFI				S		S	18 27 14.2	-7.4
	5.9nm,0.3s,baz=46,slow=19,SNR=3.9							
AFI	Afiamalu	16.12	26	P		P	18 24 28.7	-1.1
AFI				S		S	18 27 13.1	-8.6
AFI				pmax	pmax			
	comp=Z,516nm,1.5s							
AFI	Afiamalu	16.12	26	P		P	18 24 28.7	-1.1
AFI				S		S	18 27 13.1	-8.6
OXZ	Oxford	16.33	204	P		P	18 24 28.3	-3.3
OXZ				IAmb	IAmb		18 24 35.2	
	comp=Z,51nm,0.4s							
MQZ	McQueen's Vall	16.46	202			P	18 24 30.1	-2.8
RPZ	Rata Peaks	17.03	205	P		P	18 24 38.6	-0.6
	comp=Z,6.1nm,0.3s,baz=329,slow=0.7,SNR=11							
RPZ				S		S	18 27 34.4	-4.4
	comp=Z,8.2nm,0.3s,baz=177,slow=21,SNR=10							
RPZ	Rata Peaks	17.03	205			P	18 24 36.9	-2.2
RPZ				IAmb	IAmb		18 24 46.9	
	comp=Z,149nm,1.8s							
SANVU	Saraoutou	18.30	313	P		P	18 24 52.2	-0.8
SANVU				IAmb	IAmb		18 24 56.3	
	comp=Z,93nm,1.1s							
RAR	Rarotonga	18.94	71	P		P	18 25 01.7	+2.1
	comp=Z,0.9nm,0.3s,baz=212,slow=12,SNR=3.2							
RAR	Rarotonga	18.94	71	IAmb	IAmb		18 25 03.9	
	comp=Z,175nm,1.6s							
LHI	Lord Howe Isla	19.19	256	P		P	18 24 59.7	-2.5
	baz=19,SNR=6.8							
LHI	Lord Howe Isla	19.19	256	P		P	18 25 05.4	+3.2
LHI				IAmb	IAmb		18 25 29.9	
	comp=Z,116nm,0.9s							
ARMA	Armidale	25.58	259	P		P	18 26 03.8	+2.3
ARMA				IAmb	IAmb		18 26 05.5	
	comp=Z,72nm,0.8s							
KNTN	Kanton	26.64	16	P		P	18 26 10.5	-0.4
KNTN				IAmb	IAmb		18 26 12.8	
	comp=Z,76nm,1.2s							
EIDS	Eidsvold	26.81	270	P		P	18 26 13.2	+0.8
EIDS				IAmb	IAmb		18 26 15.2	
	comp=Z,156nm,1.1s							
HNR	Honiara	27.49	310	P		P	18 26 17.4	-1.1
	comp=Z,76nm,0.8s,baz=180,slow=10,SNR=8.7							
HNR	Honiara	27.49	310	P		P	18 26 16.8	-1.6
HNR				pmax	pmax			
	comp=Z,80nm,0.7s							
HNR	Honiara	27.49	310	P		P	18 26 16.8	-1.6
HNR				IAmb	IAmb		18 26 17.9	
	comp=Z,80nm,0.7s							
CNB	Canberra	27.56	248	P		P	18 26 18.7	-0.3
	baz=28,SNR=26							
CAN	Canberra	27.86	248	P		P	18 26 24.3	+2.7
CAN				pmax	pmax			
	comp=Z,88nm,0.9s							
CAN	Canberra	27.86	248	P		P	18 26 24.3	+2.7
CAN				IAmb	IAmb		18 26 25.2	
	comp=Z,88nm,0.9s							
YNG	Young	28.29	250	P		P	18 26 24.8	-0.6
	baz=28,SNR=12							
PAE	Paea	29.11	74	eP		P	18 26 32.4	-0.2
	comp=Z,4.5nm,0.8s							
PPT	Papeete	29.15	74	P		P	18 26 34.0	+0.9
	comp=Z,48nm,0.8s,baz=116,slow=4.0,SNR=4.4							
TVO	Taravao	29.33	75	eP		P	18 26 34.3	-0.4
	comp=Z,16nm,0.8s							
TIAR	Tiarei	29.35	74	eP		P	18 26 34.9	0.0
	comp=Z,35nm,0.9s							
TAU	Tasmania Unive	30.58	233	P		P	18 26 47.0	+1.8
TAU				pmax	pmax			
	comp=Z,243nm,1.5s							
TAU	Tasmania Unive	30.58	233	P		P	18 26 47.0	+1.8
TAU				IAmb	IAmb		18 26 48.2	
	comp=Z,243nm,1.5s							
CMSA	Cobar Meteorol	30.60	256	P		P	18 26 47.0	+1.4
	baz=31,SNR=58							
TARA	Tarawa	30.81	344	P		P	18 26 46.5	-1.1
TARA				IAmb	IAmb		18 26 47.7	
	comp=Z,147nm,0.7s							
TOO	Toolangi	30.89	244	P		P	18 26 50.0	+1.8
TOO				pmax	pmax			
	comp=Z,139nm,1.1s							
TOO	Toolangi	30.89	244	P		P	18 26 50.0	+1.8
TOO				IAmb	IAmb		18 26 51.1	
	comp=Z,138nm,1.1s							
VAH	Vaihoa	31.91	72	eP		P	18 26 57.0	-0.1
	comp=Z,94nm,0.9s							
CTA	Charters Tower	32.67	277	PcP		PcP	18 29 40.9	+0.5
	comp=Z,14nm,0.8s,baz=230,slow=4.9,SNR=3.0							
CTAO	Charters Tower	32.67	277	P		P	18 27 05.2	+1.5
CTAO				pmax	pmax			
	comp=Z,276nm,0.8s							
CTAO	Charters Tower	32.67	277	P		P	18 27 05.2	+1.5
STKA	Stephens Creek	34.05	255	P		P	18 27 16.5	+1.1
	comp=Z,102nm,1.0s,baz=90,slow=9.3,SNR=85							
STKA				PcP		PcP	18 29 44.1	-0.1
	comp=Z,15nm,1.1s,baz=90,slow=2.0,SNR=3.0							
STKA				ScP		ScP	18 32 57.0	+1.4
	comp=Z,25nm,0.8s,baz=64,slow=3.2,SNR=18							
STKA	Stephens Creek	34.05	255	P		P	18 27 16.7	+1.3
STKA	Stephens Creek	34.05	255	ScP		ScP	18 32 57.0	+1.4
HTT	Hallett	36.18	252	P		P	18 27 34.0	+0.5
	baz=36,SNR=64							
RABL	Rabaul	36.61	306	P		P	18 27 36.4	-0.9
RABL				IAmb	IAmb		18 27 38.0	
	comp=Z,98nm,0.5s							
PMG	Port Moresby	37.07	294	P		P	18 27 40.9	-0.1
PMG							18 29 54.4	
PMG				pmax	pmax			
	comp=Z,78nm,1.1s							
PMG	Port Moresby	37.07	294	P		P	18 27 40.9	-0.1
PMG				IAmb	IAmb		18 27 42.3	
	comp=Z,78nm,1.1s							
PMG						PcP	18 29 54.4	+1.0
BBOO	Buckleboo	38.63	252	P		P	18 27 53.6	-0.2
	baz=39,SNR=40							
BBOO	Buckleboo	38.63	252	P		P	18 27 53.4	-0.4
BBOO				IAmb	IAmb		18 27 54.8	
	comp=Z,202nm,1.0s							
PATS	Pohnpei	41.50	325	P		P	18 28 16.6	-0.6
PATS				IAmb	IAmb		18 28 45.2	
	comp=Z,244nm,1.3s							
MANU	Manus Island	41.55	303	P		P	18 28 17.5	-0.2
MANU				IAmb	IAmb		18 28 18.4	
	comp=Z,111nm,1.2s							
AS31	Alice Springs	42.34	265	P		P	18 28 24.3	+0.2
ASAR	Alice Springs	42.34	265	P		P	18 28 24.1	0.0
	comp=Z,86nm,0.7s,baz=97,slow=7.4,SNR=746							
ASAR				PcP		PP	18 30 10.8	+0.3
	comp=Z,4.2nm,0.4s,baz=110,slow=3.4,SNR=4.5							
ASAR				ScP		ScP	18 33 28.1	+0.6
	comp=Z,7.2nm,0.8s,baz=111,slow=4.2,SNR=9.5							
ASAR				S		S	18 34 17.5	-1.4
	comp=Z,3.2nm,0.8s,baz=105,slow=16,SNR=6.9							
ASAR				PKiKP		PKiKP	18 37

comp=Z,5,8nm,1.1s,baz=206,slow=22,SNR=9.6
FITZ Fitzroy Crossi 51.49 269 P P 18 29 34.1 0.0
baz=52,SNR=107
FITZ Fitzroy Crossi 51.49 269 P P 18 29 34.3 +0.2
FITZ IAmb IAmb 18 29 35.6
comp=Z,219nm,1.2s
FAKI Fak Fak 52.91 290 P P 18 29 43.8 -0.7
RKGY Rocky Gully 54.03 246 P P 18 29 51.9 -0.5
baz=54,SNR=4.8
KLBR Kellerberrin 54.10 250 P P 18 29 51.9 -0.9
baz=54,SNR=12
NWAO Narrogin (SRO) 54.20 248 P P 18 29 52.8 -0.8
baz=54,SNR=4.7
NWAO Narrogin (SRO) 54.20 248 P P 18 29 52.6 -1.1
NWAO 18 30 53.1
NWAO pmax pmax
comp=Z,52nm,1.2s
NWAO Narrogin (SRO) 54.20 248 P P 18 29 52.5 -1.1
NWAO PcP PcP 18 30 53.3 +0.2
NWAO Narrogin (SRO) 54.20 248 P P 18 29 52.6 -1.1
NWAO IAmb IAmb 18 29 53.9
comp=Z,52nm,1.2s
NWAO PcP PcP 18 30 53.1 -0.1
GUMO Guam 54.61 315 P P 18 29 55.9 -0.7
GUMO pmax pmax
comp=Z,243nm,0.9s
GUMO Guam 54.61 315 P P 18 29 55.9 -0.7
MEEK Meekatharra 54.73 256 P P 18 29 56.3 -1.2
baz=55,SNR=15
MUN Mundaring 55.28 249 P P 18 30 00.5 -0.7
baz=55,SNR=7.7
PSA00 Pilbara Seismi 55.31 263 P P 18 30 00.6 -1.0
PSA00 IAmb IAmb 18 30 02.1
comp=Z,212nm,1.4s
PSA00 PcP PcP 18 30 57.7 +0.1
PSA00 Pilbara Seismi 55.31 263 P P 18 29 59.2 -2.4
PSA00 IAmb IAmb 18 30 00.1
comp=Z,67nm,1.2s
PSA00 PcP PcP 18 30 56.6 -1.0
MORW Morawa 56.20 253 IAmb IAmb 18 30 08.1
comp=Z,91nm,1.5s
SOEI Soe 56.24 278 P P 18 30 09.9 +1.5
SOEI IAmb IAmb 18 30 21.8
comp=Z,145nm,1.0s
CASY Casey 56.29 207 P P 18 30 07.8 +0.1
CASY IAmb IAmb 18 30 08.8
comp=Z,88nm,0.9s
MMRI Maumere 58.53 278 P P 18 30 23.8 -0.3
MMRI IAmb IAmb 18 30 24.9
comp=Z,180nm,1.1s
TNTI Ternate 59.01 290 P P 18 30 26.6 -0.7
QSPA South Pole Qui 61.46 180 P P 18 30 45.3 +2.1
comp=Z,36nm,0.8s,baz=31,slow=1.1,SNR=184
QSPA S S 18 38 39.4 +3.2
comp=Z,2.3nm,0.9s,baz=260,slow=23,SNR=10
QSPA South Pole Qui 61.46 180 P P 18 30 45.5 +2.3
QSPA IAmb IAmb 18 30 46.5
comp=Z,40nm,0.8s
LUWI Luwuk 61.87 285 P P 18 30 46.5 0.0
LUWI IAmb IAmb 18 30 47.5
comp=Z,145nm,1.1s
JAGI Jajag, Banyuwa 65.68 274 P P 18 31 10.4 -0.8
MYLDM Lahad Datu 68.80 289 P P 18 31 31.8 +1.2
MYLDM IAmb IAmb 18 31 56.6
comp=Z,42nm,1.2s
SMRI Semarang 69.59 273 P P 18 31 35.2 -0.3
SMRI IAmb IAmb 18 31 37.4
comp=Z,65nm,0.6s
BELA Belgrano 2 71.64 173 P P 18 31 47.8 +1.1
CISI Cisompet, Garu 71.67 271 P P 18 31 47.3 -0.7
SBUM Sibu 72.67 283 P P 18 31 54.0 +0.2
SBUM IAmb IAmb 18 31 55.5
comp=Z,124nm,1.4s
SBUM Sibu 72.67 283 P P 18 31 54.0 +0.2
MAW Mawson 73.64 201 P P 18 31 59.5 +1.1
comp=Z,39nm,0.8s,baz=125,slow=6.8,SNR=142
MAW S S 18 40 59.7 +0.2
comp=Z,1.1nm,1.0s,baz=233,slow=20,SNR=2.0
MAW Mawson 73.64 201 P P 18 31 59.4 +0.9
baz=74,SNR=82
MAW Mawson 73.64 201 P P 18 31 59.6 +1.2
MAW S S 18 40 59.7 +0.2
MAW pmax pmax
comp=Z,11nm,0.9s
MAW Mawson 73.64 201 P P 18 31 59.6 +1.2
KSM Kuching 73.83 281 P P 18 32 00.4 -0.1
KSM Kuching 73.83 281 P P 18 32 01.0 +0.5
JSG Sagara 74.84 325 P P 18 32 06.7 +0.9
INU Inuyama 75.97 324 IAmb IAmb 18 32 13.4
comp=Z,106nm,1.0s
JMM Marumori 76.12 328 P P 18 32 13.0 +0.2
JMM IAmb IAmb 18 32 14.4
comp=Z,61nm,1.2s
MJAR Matsushiro Arr 76.30 326 P P 18 32 13.8 -0.2
comp=Z,58nm,0.9s,baz=162,slow=5.7,SNR=79
MJAR Matsushiro Arr 76.30 326 P P 18 32 13.2 -0.7
MJAR pmax pmax
comp=Z,54nm,1.1s
MJAR Matsushiro Arr 76.30 326 P P 18 32 13.2 -0.7
MAJO Matsushiro 76.30 326*d* iP P 18 32 13.3 -0.6
MAJO pmax pmax
comp=Z,120nm,1.1s
MAJO Matsushiro 76.30 326 P P 18 32 14.3 +0.4
MAJO IAmb IAmb 18 32 15.1
comp=Z,93nm,1.0s
MAT Matsushiro 76.30 326 P P 18 32 13.5 -0.4
TWG Pinlang 77.14 305 IAmb IAmb 18 32 17.7
comp=Z,47nm,0.6s
YULB Yu-li 77.33 306 P P 18 32 18.5 -1.5
YULB IAmb IAmb 18 32 21.4
comp=Z,60nm,1.4s
JSD Sado 77.45 327 IAmb IAmb 18 32 22.0
comp=Z,84nm,1.0s
NACB Ninganchiao 77.61 306 IAmb IAmb 18 32 22.3
comp=Z,59nm,1.0s
SSLB Suanglung 77.82 306 P P 18 32 21.3 -1.4
SSLB IAmb IAmb 18 32 22.3
comp=Z,95nm,1.2s
YHNB Yeheng 78.08 307 IAmb IAmb 18 32 30.5
comp=Z,46nm,1.1s
SYO Syowa Base 78.62 193⇑ iP P 18 32 25.0 -1.2
SYO Syowa Base 78.62 193⇓ iX P 18 32 30.3 +4.1
MYKOM Kota Tinggi 79.58 278 P P 18 32 32.0 -0.4
MYKOM Kota Tinggi 79.58 278 P P 18 32 33.0 +0.6
SNAA Sanae 79.93 179 P P 18 32 34.2 +0.8
SNAA Sanae 79.93 179 S S 18 42 08.4 +1.2
comp=Z,1.2nm,0.9s,baz=41,slow=18,SNR=3.7
SNAA Sanae 79.93 179*d* iP P 18 32 33.9 +0.5
SNAA pmax pmax
comp=Z,24nm,0.9s
SNAA Sanae 79.93 179 P P 18 32 34.2 +0.8
SNAA IAmb IAmb 18 32 35.2
comp=Z,26nm,1.0s
VNA3 Neumayer Olymp 80.11 177 P P 18 32 35.0 +0.7
JKA Kamikawa-asahi 80.47 333 P P 18 32 37.6 +1.2
JKA IAmb IAmb 18 32 45.9
comp=Z,86nm,1.2s
ASAJ Asahikawa 80.48 333 P P 18 32 37.6 +1.2
ASAJ pmax pmax
comp=Z,86nm,1.2s
VNA2 Neumayer--Watz 80.54 177 P P 18 32 37.6 +1.1
baz=165,slow=5.4
NVL N'lazarevskaya 80.57 184 eP P 18 32 36.4 -0.2
NVL pmax pmax
comp=Z,10.0nm,0.7s
DLV T Lat 80.76 289 P P 18 32 39.8 +1.0
VNA1 Neumayer--Stat 80.77 177 P P 18 32 38.8 +1.1
BKNI Bangkinang 81.33 275 P P 18 32 41.2 -0.4
TJN Taejon 82.00 319*d* iP P 18 32 44.6 +0.1
KSRS Korea Array 82.44 320 P P 18 32 47.8 +1.1
comp=Z,26nm,1.0s,baz=140,slow=5.6,SNR=64
KSAR Wonju Array Be 82.45 320 P P 18 32 47.2 +0.4
KSAR Wonju Array Be 82.45 320 P P 18 32 47.2 +0.4
KS19 Wonju Array Si 82.50 320 P P 18 32 47.4 +0.3
KS19 IAmb IAmb 18 32 49.2
comp=Z,61nm,1.1s
YSS Yuzh-Sakhalins 82.78 335*d* iP P 18 32 49.8 +1.5
YSS pmax pmax
comp=Z,169nm,2.5s
YSS Yuzh-Sakhalins 82.78 335 P P 18 32 48.7 +0.5
IPM Ipoh 83.35 279 P P 18 32 51.7 -0.4
IPM Ipoh 83.35 279 P P 18 32 52.0 0.0
QIZ Qiongzhong 83.44 296 IAmb IAmb 18 32 54.2
comp=Z,78nm,1.1s
PET Petropavlovsk 83.62 347*d* iP P 18 32 51.7 -0.6
PET pmax pmax
comp=Z,401nm,1.6s
PEA0B Petropavlovsk- 83.90 346*c e*P P 18 32 54.7 +0.9
PETK Petropavlovsk- 83.90 346 P P 18 32 54.5 +0.7
comp=Z,49nm,0.7s,baz=114,slow=8.2,SNR=74
PETK Petropavlovsk- 83.90 346 P P 18 32 53.9 +0.1
KULM Kulim 84.07 279 P P 18 32 56.0 +0.4
PLCA Paso Flores 84.35 134 P P 18 32 58.5 +1.8
comp=Z,12nm,0.9s,baz=232,slow=4.2,SNR=21
PLCA Paso Flores 84.35 134 IAmb IAmb 18 32 59.7
comp=Z,21nm,1.1s
NJ2 Nanjing 84.43 311⇓ *i*P P 18 32 57.9 +1.0
NJ2 pmax pmax
comp=Z,68nm,0.8s
LC01 Cunco 84.49 131 P P 18 32 58.4 +1.1
LC01 IAmb IAmb 18 32 59.8
comp=Z,28nm,0.9s
EFI East Falkland 84.74 148⇓ *e*P P 18 32 58.0 -0.3
EFI pmax pmax
comp=Z,180nm,2.8s
ESJX Sierra Juarez 85.02 49 IAmb IAmb 18 33 02.1
comp=Z,22nm,0.7s
USA0B Ussuriysk Arra 85.21 327*c i*P P 18 33 00.3 -0.2
USRK Ussuriysk Ar. 85.21 327 P P 18 33 01.6 +1.1
comp=Z,18nm,0.8s,baz=132,slow=3.4,SNR=36
USRK Ussuriysk Ar. 85.21 327 P P 18 33 01.2 +0.7
MONP2 Monument Peak 85.25 49 P P 18 33 03.5 +2.2
baz=232
BFSC Mount Baldy Ra 85.29 47 P P 18 33 03.1 +1.8
baz=231
IKP In-Ko-Pah, Jac 85.31 49 P P 18 33 03.6 +2.2
baz=232
EDW2 Edwards Air Fo 85.49 46 P P 18 33 04.0 +1.8
baz=230
PFO Pinyon Flats O 85.68 48⇓ *e*P P 18 33 04.7 +1.5
PFO pmax pmax
comp=Z,7.0nm,0.7s
TPFO Pinon Flats 85.68 48 P P 18 33 05.1 +1.9
baz=232
ISA Isabella, Lake 85.68 45 P P 18 33 03.6 +0.5
ISA pmax pmax
comp=Z,6.0nm,0.7s
ISA Isabella, Lake 85.68 45 P P 18 33 05.0 +1.8
baz=230
ISA Isabella, Lake 85.68 45 P P 18 33 03.6 +0.5
LRMC Laurel Mtn Rad 86.06 46 P P 18 33 07.0 +1.9
baz=231
BI02 San Fabin de 86.09 130 P P 18 33 06.3 +0.9
BI02 IAmb IAmb 18 33 07.8
comp=Z,19nm,0.8s
BELC Belle Mtn. Jos 86.22 48 P P 18 33 07.9 +2.0
baz=232
BC3 Big Chuckawall 86.36 48 P P 18 33 08.6 +2.0
baz=232
CWC Cottonwood Cre 86.42 45 P P 18 33 08.5 +1.7
baz=230
GSC Goldstone, Bar 86.51 46 P P 18 33 08.9 +1.8
baz=231
WDC Whiskeytown Da 86.51 40 P P 18 33 08.3 +1.4
WDC pmax pmax
comp=Z,26nm,1.9s
WDC Whiskeytown Da 86.51 40 P P 18 33 08.3 +1.4
HEC Hector,Ludlow 86.51 47 P P 18 33 09.0 +1.8
baz=232
MPMC Manual Prospec 86.55 46 P P 18 33 09.0 +1.5
baz=231
WHN Wuhan 86.58 307 ⇓P P 18 33 08.4 +0.9
WHN pmax pmax
comp=Z,160nm,1.1s
MDJ Mudanjiang 86.68 326 P P 18 33 09.3 +1.7
MDJ pmax pmax
comp=Z,35nm,0.9s
MDJ pmax pmax
comp=Z,340nm,3.6s
MDJ Mudanjiang 86.68 326 IAmb IAmb 18 33 09.4
comp=Z,35nm,1.0s
N02D Trinity Center 86.69 39 P P 18 33 10.2 +2.3
baz=227
IRM Iron Mountain 86.87 48 P P 18 33 11.3 +2.5
baz=232
M02C Callahan 86.89 39 P P 18 33 11.2 +2.3
baz=227
GMRC Granite Mounta 86.92 47 P P 18 33 11.2 +2.0
baz=232
WAKR Walker 86.93 43 P P 18 33 10.3 +1.1
DL2 Dalian 87.06 318 P P 18 33 10.4 +0.8
DL2 pmax pmax
comp=Z,91nm,1.4s
DL2 pmax pmax
comp=Z,760nm,5.6s
TUQ Turquoise Moun 87.15 47 P P 18 33 12.2 +1.9
baz=232
PNTR Pine Nut 87.21 42 P P 18 33 11.9 +1.3
PNTR IAmb IAmb 18 33 13.3
comp=Z,12nm,0.7s
BO02 Sierra Bellavi 87.45 129 P P 18 33 13.2 +1.4
BO02 IAmb IAmb 18 33 14.3
comp=Z,18nm,1.0s
NVAR Mina Array Bea 87.56 43 P P 18 33 13.6 +1.3
comp=Z,6.6nm,0.7s,baz=222,slow=8.3,SNR=66
NVAR PKKPbc PKKPbc 18 51 00.7 +0.6
comp=Z,0.7nm,0.7s,baz=102,slow=2.4,SNR=5.6
NVAR PKPPKP P'P'df 18 59 06.7 +1.8
comp=Z,0.5nm,0.8s,baz=66,slow=3.6,SNR=3.7
NVAR Mina Array Bea 87.56 43 P P 18 33 13.2 +1.0
PDMCI Parker Dam,Lak 87.62 49 P P 18 33 14.4 +2.1
baz=233
L04D Klamath Falls 87.75 38 P P 18 33 14.5 +1.6
baz=227
TPNV Topopah Spring 87.89 45 P P 18 33 15.6 +1.9
baz=231
TIA Tai'an 88.13 313 P P 18 33 15.9 +1.2
TIA pmax pmax
comp=Z,47nm,0.9s
CN2 Changchun 88.21 323 *e*P P 18 33 15.5 +0.6
CN2 pmax pmax
comp=Z,70nm,1.3s
GRNR Gornyy 88.32 334⇓ *i*P P 18 33 17.0 +1.8
GRNR pmax pmax
comp=Z,30nm,1.1s
TUC Tucson 88.71 52 P P 18 33 19.9 +2.3
TUC pmax pmax
comp=Z,9.0nm,0.7s
TUC Tucson 88.71 52 P P 18 33 20.4 +2.8
baz=235
TUC Tucson 88.71 52 P P 18 33 19.9 +2.3
J05D Fort Rock, OR 89.05 38 P P 18 33 21.1 +2.0
baz=228
KLR Kul'dur 89.08 330⇓ *e*P P 18 33 19.9 +1.1
KLR pmax pmax
comp=Z,66nm,1.6s
CO02 Combarbal 89.26 125 P P 18 33 21.0 +0.6
CO02 IAmb IAmb 18 33 22.7
comp=Z,25nm,0.8s
SLVN Son La 89.39 295 P P 18 33 22.4 +1.4
SLVN IAmb IAmb 18 33 23.9
comp=Z,81nm,1.4s
PINE Pine Mountain 89.55 38 P P 18 33 22.9 +1.5
PINE IAmb IAmb 18 33 24.0
comp=Z,14nm,0.8s
I05D Terrebonne, OR 89.70 37 P P 18 33 23.7 +1.8
baz=228
GYA Guiyang 89.91 300 ⇓P P 18 33 23.7 +0.3
GYA pmax pmax
comp=Z,34nm,1.4s
KNB Kanab 90.10 47 P P 18 33 26.2 +2.0
KNB pmax pmax
comp=Z,29nm,1.9s
KNB Kanab 90.10 47 P P 18 33 26.2 +2.0
WUAZ Wupatki 90.17 49 P P 18 33 26.5 +2.1
baz=234
121A Cookes Peak, D 90.93 53 P P 18 33 30.6 +2.5
baz=236
BJT Baijiatuau 91.04 316 P P 18 33 29.0 +0.8
BJT pmax pmax
comp=Z,120nm,1.9s
BJT Baijiatuau 91.04 316 P P 18 33 29.0 +0.8
BJT IAmb IAmb 18 33 30.3
comp=Z,120nm,1.9s
BJI Beijing 91.05 316 P P 18 33 29.1 +0.9
BJI pmax pmax
comp=Z,24nm,0.9s
PAYA Payao 91.66 291 P P 18 33 33.4 +1.9
CM36 Chiang Mai Arr 91.89 290 P P 18 33 34.0 +1.4
CM35 Chiang Mai Arr 91.92 290 P P 18 33 34.0 +1.3
CM04 Chiang Mai Arr 91.92 290 P P 18 33 35.1 +2.4
comp=Z,164nmcomp=Z,20nm,1.4s
CM09 Chiang Mai Arr 91.94 290 P P 18 33 35.4 +2.6
comp=Z,149nmcomp=Z,15nm,1.0s
CM01 Chiang Mai Arr 91.95 290 P P 18 33 35.3 +2.4
comp=Z,148nmcomp=Z,17nm,1.2s
CM05 Chiang Mai Arr 91.95 290 P P 18 33 35.2 +2.3
comp=Z,105nmcomp=Z,13nm,1.2s
CM02 Chiang Mai Arr 91.97 290 P P 18 33 35.0 +2.1
comp=Z,144nmcomp=Z,18nm,1.1s
CM31 Chiang Mai Arr 91.98 290 P P 18 33 35.1 +2.1
comp=Z,4µmcomp=Z,263nm,0.9s
CM31 Chiang Mai Arr 91.98 290 IAmb IAmb 18 33 35.8
comp=Z,27nm,1.1s
CMAR Chiang Mai Arr 91.98 290 P P 18 33 34.5 +1.5
comp=Z,6.1nm,0.7s,baz=141,slow=3.6,SNR=38
CMAR PP PP 18 37 11.3 -6.9
comp=Z,1.1nm,0.9s,baz=138,slow=5.9,SNR=2.8
CMAR PKKPbc PKKPbc 18 50 48.2 +0.6
comp=Z,0.4nm,0.6s,baz=280,slow=4.4,SNR=4.7
CMAR Chiang Mai Arr 91.98 290 P P 18 33 34.0 +1.0
CM13 Chiang Mai Arr 91.99 290 P P 18 33 35.3 +2.2
comp=Z,112nmcomp=Z,12nm,1.2s
CM15 Chiang Mai Arr 91.99 290 P P 18 33 35.0 +1.9
comp=Z,129nmcomp=Z,13nm,1.0s
CM34 Chiang Mai Arr 92.00 290 P P 18 33 34.0 +0.9
TIY Taiyuan 92.04 312 *e*P P 18 33 34.2 +1.3
TIY LR LR
comp=Z,260nm,4.9s
TIY LR LR
comp=Z,180nm,5.2s
TIY LR LR
comp=Z,270nm,5.7s
CMMT Chiang Mai 92.15 290 P P 18 33 35.4 +1.6
comp=Z,12nm,1.1s
CHTO Chiang Mai 92.16 290 P P 18 33 34.6 +0.8
CHTO pmax pmax
comp=Z,22nm,1.1s
CHTO Chiang Mai 92.16 290 P P 18 33 34.6 +0.8
CHTO IAmb IAmb 18 33 36.3
comp=Z,22nm,1.1s
CM33 Chiang Mai Arr 92.16 290 P P 18 33 35.0 +1.2
MNTX Cornudas Mount 92.19 55 P P 18 33 35.2 +1.5
baz=238
TXAR Lajitas Array 92.19 58 P P 18 33 34.1 +0.2
comp=Z,0.7nm,0.7s,baz=214,slow=7.9,SNR=9.9
TXAR PKKPbc PKKPbc 18 50 48.2 +0.5
comp=Z,0.5nm,0.6s,baz=65,slow=7.1,SNR=5.5
TXAR Lajitas Array 92.19 58 P P 18 33 33.3 -0.5
TXAR *PP pwP 18 34 56.5 -0.4
TXAR Lajitas Array 92.19 58 P P 18 33 33.3 -0.5
TXAR pwP 18 34 56.5 -0.4
KMI Kunming 92.24 297 ⇓P P 18 33 35.9 +1.6
KMI pmax pmax
comp=Z,29nm,1.0s
XAN Xi'an 92.35 308 P P 18 33 35.5 +1.1
XAN pP pP 18 34 55.3 +0.5
XAN pmax pmax
comp=Z,40nm,1.4s
XAN pmax pmax
comp=Z,210nm,4.3s
SUA Susitna One 92.67 13 P P 18 33 35.4 +0.1
SUA IAmb IAmb 18 33 36.5
comp=Z,15nm,0.7s
SRU San Rafael Swe 92.80 46 P P 18 33 37.7 +1.1
SRU pmax pmax
comp=Z,4.0nm,0.6s
SRU San Rafael Swe 92.80 46 P P 18 33 37.7 +1.1
PLID Pearl Lake 93.09 39 P P 18 33 37.9 +0.1
PLID pwP 18 35 03.5 +2.2
GHO Glory Hole Cre 93.32 14 IAmb IAmb 18 33 39.4
comp=Z,13nm,0.6s
CUT Chulitna 93.62 13 P P 18 33 39.7 +0.2
baz=205
SCM Sheep Creek Mo 93.72 14 IAmb IAmb 18 33 41.4
comp=Z,11nm,0.8s
SEY Seymchan 94.07 347⇑ *e*P P 18 33 42.0 +0.5
HHC Hu-ho-hao-te 94.38 315 *e*P P 18 33 45.1 +1.5
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,280nm,6.6s
CD2 Chengdu 94.40 303 *e*P P 18 33 44.0 +0.1
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HIA Hailar 94.78 325⇓ *e*P P 18 33 44.3 -0.8
HIA pmax pmax
comp=Z,25nm,2.6s
PDAR Pinedale Array 95.48 44 P P 18 33 48.6 -0.1
comp=Z,0.7nm,0.6s,baz=213,slow=3.9,SNR=6.8
PDAR PKKPbc PKKPbc 18 50 39.5 -0.6
comp=Z,0.8nm,0.6s,baz=86,slow=3.4,SNR=7.1
WRH Wood River Hil 95.91 13 P P 18 33 49.4 -0.5
WRH IAmb IAmb 18 33 51.4
comp=Z,22nm,1.5s
MLY Manley 95.92 12 P P 18 33 49.6 -0.4
baz=205
BCAR Beaver Creek A 96.07 16 P P 18 33 50.7 0.0
HDA Harding Lake 96.08 13 P P 18 33 50.8 +0.1
baz=208
IMAR Indian Mountai 96.30 10 P P 18 33 51.7 +0.1
COLA College 96.32 13 *i*P P 18 33 52.1 +0.5
COLA pmax pmax
comp=Z,6.0nm,0.8s
MDM Murphy Dome 96.32 13 IAmb IAmb 18 33 53.0
comp=Z,12nm,1.2s
SCRK Sand Creek 96.34 15 P P 18 33 52.7 +0.7
baz=211
ILAR Eielson Array 96.42 13 P P 18 33 51.5 -0.6
comp=Z,1.8nm,0.8s,baz=234,slow=5.9,SNR=11
ILAR PKIKP PKiKP 18 38 27.2 -0.3
comp=Z,0.7nm,0.8s,baz=290,slow=4.2,SNR=4.8
ILAR PKKPbc PKKPbc 18 50 35.9 -2.4
comp=Z,1.4nm,1.1s,baz=8.0,slow=2.6,SNR=6.3
ILAR Eielson Array 96.42 13 P P 18 33 51.7 -0.5
LZH Lanzhou 96.96 307 ⇑P P 18 33 57.6 +2.1
LZH pP pwP 18 35 22.5 +3.0
LZH PP PP 18 38 01.2 +4.5
LZH pmax pmax
comp=Z,23nm,1.4s
LZH pmax pmax
comp=Z,130nm,6.5s
BILL Bilibino 97.01 354⇓ *e*P P 18 33 54.3 -0.4
BILL *e**PP pP 18 35 16.5 +0.9
BILL *e**SP sP 18 35 53.7 +2.6
BILL *e* 18 37 52.8
BILL pmax pmax
comp=Z,39nm,2.1s
YAK Yakutsk 99.29 338⇓ *e*P Pdif 18 34 05.5 +0.5
YAK pmax pmax
comp=Z,64nm,3.2s
SONM Songino Array 101.25 319 P Pdif 18 34 16.0 +1.7
comp=Z,0.8nm,0.6s,baz=141,slow=4.0,SNR=5.1
SONM PKIKP PKiKP 18 38 37.1 +0.2
comp=Z,0.6nm,0.4s,baz=28,slow=2.2,SNR=5.6
GTA Gaotai 101.36 309 *e*P Pdif 18 34 16.2 +1.2
GTA pmax pmax
comp=Z,6.0nm,1.7s
YKA Yellowknife Ar 104.24 26 PKKPbc PKKPbc 18 50 13.2 -2.4
comp=Z,0.8nm,0.6s,baz=69,slow=3.7,SNR=4.3
TAPN Taplejung 105.22 293 *e*P PKiKP 18 38 45.4 +0.4
comp=Z,5.0nm,0.3s
ODAN Odare 105.28 292 *e*P PKiKP 18 38 45.4 +0.3
comp=Z,4.0nm,0.4s
RAMN Ramite 105.96 292 *e*P PKiKP 18 38 46.1 -0.2
GUN Gumba 106.94 293 *e*P PKiKP 18 38 47.5 -0.7
PKI Pulchoki 107.18 292 *e*P PKiKP 18 38 47.7 -1.0
comp=Z,5.6nm,0.5s
PKIN Phulchoki 107.19 292 *e*P PKiKP 18 38 47.6 -1.0
comp=Z,8.9nm,0.6s
KKN Kakani 107.37 293 *e*P PKiKP 18 38 48.9 0.0
comp=Z,3.7nm,0.4s
DMN Daman 107.44 292 *e*P PKiKP 18 38 49.3 +0.2
GKN Gorkha 107.98 292 *e*P PKiKP 18 38 49.4 -0.5
comp=Z,2.7nm,0.4s
KOLN Koldanda 108.73 292 *e*P PKiKP 18 38 50.4 -1.0
comp=Z,2.9nm,0.3s
DANN Dangsing 108.83 293 *e*P PKiKP 18 38 51.3 -0.4
comp=Z,7.1nm,0.3s
PYUN Piuthan 109.36 292 *e*P PKiKP 18 38 51.6 -1.0
comp=Z,4.5nm,0.3s
WMQ Urumqi 111.44 309 *e*PKP PKiKP 18 38 55.8 -0.1
DGZ Jazzator, Alta 113.46 315*c i*PKIKP PKiKP 18 38 59.2 -0.4
ZSN Zaisan 114.44 312 *e*PKP PKPdf 18 39 00.5 -1.0
comp=Z,3.2nm,0.7s,baz=312
ZSN Zaisan 114.44 312 *e*PKIKP PKPdf 18 39 00.4 -1.0
ZSN pmax pmax

comp=Z,3.0nm,0.7s
SMLA Simla 115.17 293 *e*P **PKPdf 18 39 02.5 -0.7**
SMLA IAmb IAmb 18 39 04.3
comp=Z,6.8nm,0.6s
OPO Ambohidratompo 115.22 229 PKP **PKPdf 18 39 04.6 +0.6**
comp=Z,2.9nm,0.7s,baz=55,slow=6.1,SNR=6.6
MK31 Makanchi Array 115.96 311 *i* PKIKP **PKPdf 18 39 03.5 -0.9**
MK31 Makanchi Array 115.96 311 PKPdf **PKPdf 18 39 03.1 -1.3**
MKAR Makanchi Array 115.96 311 Pdiff **Pdif 18 35 22.4 +2.8**
comp=Z,0.4nm,0.6s,baz=94,slow=7.2,SNR=5.5
MKAR PKP **PKPdf 18 39 03.8 -0.6**
comp=Z,5.5nm,0.4s,baz=231,slow=0.7,SNR=89
MKAR SKP **SKPdf 18 42 06.3 0.0**
comp=Z,1.9nm,0.9s,baz=113,slow=1.8,SNR=4.4
MKAR PKKPbc **PKKPbc 18 49 37.2 +0.1**
comp=Z,0.5nm,0.6s,baz=272,slow=3.6,SNR=6.0
MKAR Makanchi Array 115.96 311*c* *i* PKIKP **PKPdf 18 39 03.7 -0.7**
MKAR pmax pmax
comp=Z,8.0nm,0.6s
MKAR Makanchi Array 115.96 311 PKPdf **PKPdf 18 39 00.7 -3.7**
ZALV Zalesovo Beam 116.13 319 PKP **PKPdf 18 39 03.7 -0.7**
comp=Z,4.6nm,0.6s,baz=144,slow=1.3,SNR=27
ZALV Zalesovo Beam 116.13 319 **PKPdf 18 39 02.9 -1.5**
MAKZ Makanchi 116.17 311 PKIKP **PKPdf 18 39 03.7 -1.1**
MAKZ Makanchi 116.17 311 PKPdf **PKPdf 18 39 03.7 -1.1**
DHRM DHARAMSHALA 116.24 294 *e*P **PKPdf 18 39 05.3 -0.3**
DHRM IAmb IAmb 18 39 06.2
comp=Z,12nm,0.4s
SUR Sutherland 116.46 199 PKP **PKiKP 18 39 06.8 +0.6**
comp=Z,11nm,0.7s,baz=89,slow=0.5,SNR=19
SHLS Shalkode 116.97 306 *e*PKP **PKPdf 18 39 05.0 -1.6**
baz=306
SHLS Shalkode 116.97 306 *e*PKIKP **PKPdf 18 39 05.0 -1.6**
PDGK Podgornoye 116.99 307 PKIKP **PKPdf 18 39 05.5 -1.1**
PRZ Przheval'sk 117.55 305 PKIKP **PKPdf 18 39 07.5 -0.3**
PRZ Przheval'sk 117.55 305 **PKPdf 18 39 07.5 -0.3**
KPKS Kokpek 117.60 307 *e*PKP **PKPdf 18 39 06.8 -0.9**
comp=Z,3.5nm,0.6s,baz=307
KPKS Kokpek 117.60 307 *e*PKIKP **PKPdf 18 39 06.8 -0.9**
KPKS pmax pmax
comp=Z,3.0nm,0.6s
NRIK Noril'sk 117.67 336 PKP **PKPdf 18 39 06.8 -0.2**
comp=Z,5.6nm,0.3s,baz=94,slow=3.0,SNR=15
NRIK Noril'sk 117.67 336*c* *i* PKIKP **PKPdf 18 39 06.5 -0.4**
SATY Saty 117.69 306 *e*PKP **PKPdf 18 39 07.3 -0.7**
comp=Z,3.8nm,0.8s,baz=306
SATY Saty 117.69 306 *e*PKIKP **PKPdf 18 39 07.2 -0.7**
SATY pmax pmax
comp=Z,4.0nm,0.8s
TDK Taldyqorghan 118.16 308 *e*PKP **PKPdf 18 39 07.6 -1.1**
comp=Z,6.8nm,0.5s,baz=308
TDK Taldyqorghan 118.16 308 *e*PKIKP **PKPdf 18 39 07.6 -1.1**
TDK pmax pmax
comp=Z,7.0nm,0.5s
BOSA Boshof 118.51 204 PKP **PKiKP 18 39 10.8 +0.7**
comp=Z,4.9nm,0.6s,baz=155,slow=1.8,SNR=14
BOSA PKKPbc **PKKPbc 18 49 27.8 -0.4**
comp=Z,1.5nm,0.7s,baz=322,slow=2.1,SNR=3.9
KSH Kashi 118.58 302 *e*PKP **PKiKP 18 39 10.9 +1.1**
KSH *e*PP **pPKPdf 18 40 35.9 +1.1**
KSH AMB AMB
comp=Z,270nm,4.0s
MDOK Medeo 118.68 306 *e*PKP **PKPdf 18 39 08.9 -1.1**
comp=Z,64nm,0.9s,baz=306
MDOK Medeo 118.68 306 *e*PKIKP **PKPdf 18 39 08.8 -1.1**
MDOK pmax pmax
comp=Z,64nm,0.9s
TNSS Tian-Shan 118.72 306 *e*PKP **PKPdf 18 39 09.7 -0.6**
baz=306
TNSS Tian-Shan 118.72 306 *e*PKIKP **PKPdf 18 39 09.7 -0.6**
AAA Alma-Ata 118.79 306 *e*PKP **PKPdf 18 39 09.2 -0.9**
baz=306
AAA Alma-Ata 118.79 306 *e*PKIKP **PKPdf 18 39 09.1 -0.9**
ULHL Ulahol 119.05 305 P **PKiKP 18 39 10.8 +0.1**
SNR=5.4
NIL Nilore 119.10 295 PKIKP **PKPdf 18 39 10.0 -0.9**
NIL Nilore 119.10 295 PKPdf **PKPdf 18 39 10.0 -0.9**
KURK Kurchatov 119.19 315*d* *i* PKIKP **PKPdf 18 39 09.5 -0.9**
KURK pmax pmax
comp=Z,47nm,1.3s
KURK Kurchatov 119.19 315 PKPdf **PKPdf 18 39 09.3 -1.1**
KURBB Kurchatov Arra 119.23 315 PKIKP **PKPdf 18 39 09.6 -0.9**
BOOM Boomskoye usch 119.32 305 PKIKP **PKPdf 18 39 11.2 0.0**
BOOM Boomskoye usch 119.32 305 PKPdf **PKPdf 18 39 11.2 0.0**
KUU Kurty 119.35 307 *e*PKP **PKPdf 18 39 09.6 -1.4**
comp=Z,8.5nm,0.7s,baz=307
KUU Kurty 119.35 307 *e*PKIKP **PKPdf 18 39 09.5 -1.4**
KUU pmax pmax
comp=Z,8.0nm,0.7s
TKM2 Tokmak 2 119.66 305 P **PKPdf 18 39 11.6 -0.3**
SNR=7.0
TKM2 Tokmak 2 119.66 305 PKIKP **PKPdf 18 39 11.0 -0.9**
KBK Karagaybulak 120.07 305 P **PKiKP 18 39 12.7 0.0**
SNR=6.4
CHMS Chumysh 120.29 305 P **PKPdf 18 39 12.7 -0.1**
SNR=5.4
UCH Uchtor 120.29 304 P **PKiKP 18 39 13.9 +0.4**
SNR=7.1
AAK Ala-Archa 120.39 305 P **PKPdf 18 39 13.3 0.0**
SNR=6.1
AAK Ala-Archa 120.39 305*d* *i* PKIKP **PKPdf 18 39 13.0 -0.2**
AAK pmax pmax
comp=Z,31nm,1.3s
SGDS Sogindy 120.47 306 *e*PKP **PKPdf 18 39 12.3 -0.9**
comp=Z,4.7nm,1.0s,baz=306
SGDS Sogindy 120.47 306 *e*PKIKP **PKPdf 18 39 12.3 -0.9**
SGDS pmax pmax
comp=Z,5.0nm,1.0s
USP Ospenovka 120.52 306 P **PKPdf 18 39 13.0 -0.3**
SNR=15
AML Almayashu 120.87 304 P **PKiKP 18 39 14.6 +0.1**
SNR=29
EKS2 Erkin-Say 120.92 305 P **PKiKP 18 39 14.3 0.0**
SNR=14
BTLS Baital 121.19 308 *e*PKP **PKPdf 18 39 13.7 -0.8**
comp=Z,7.7nm,0.7s,baz=308
BTLS Baital 121.19 308 *e*PKIKP **PKPdf 18 39 13.6 -0.8**
BTLS pmax pmax
comp=Z,8.0nm,0.7s
LBTB Lobatse 121.64 206 PKP **PKiKP 18 39 16.7 +0.4**
comp=Z,5.6nm,0.7s,baz=188,slow=2.3,SNR=7.9
KBL Kabul 122.70 295 PKIKP **PKPdf 18 39 17.9 -0.1**
KBL Kabul 122.70 295 PKPdf **PKPdf 18 39 17.9 -0.1**
GAR Garm 122.73 300 **PKiKP 18 39 18.1 +0.1**
DZA Taraz 122.73 305 *e*PKP **PKPdf 18 39 17.1 -0.5**
comp=Z,11nm,0.8s,baz=305
DZA Taraz 122.73 305 *e*PKIKP **PKPdf 18 39 17.0 -0.5**
DZA pmax pmax
comp=Z,11nm,0.8s
BRZS Berezniki 122.85 313 *e*PKP **PKPdf 18 39 16.2 -1.3**
comp=Z,5.0nm,0.6s,baz=313
BRZS Berezniki 122.85 313 *e*PKIKP **PKPdf 18 39 16.2 -1.3**
BRZS pmax pmax
comp=Z,5.0nm,0.6s
KK31 Karatay Array 123.36 305 *i* PKIKP **PKPdf 18 39 18.2 -0.5**
KKAR Karatay Array 123.36 305 PKIKP **PKPdf 18 39 17.5 -1.2**
KKAR Karatay Array 123.36 305 PKPdf **PKPdf 18 39 17.5 -1.2**
IUG luzhnay 123.54 304 *e*PKP **PKPdf 18 39 18.2 -1.1**
comp=Z,12nm,1.2s,baz=304
IUG luzhnay 123.54 304 *e*PKIKP **PKPdf 18 39 18.1 -1.1**
IUG pmax pmax
comp=Z,13nm,1.2s
MATP Matopo 124.45 212 PKP **PKiKP 18 39 21.9 -0.2**
comp=Z,20nm,1.0s,baz=175,slow=1.6,SNR=24
BRVK Borovoye 124.59 317*d* *i* PKIKP **PKPdf 18 39 19.8 -0.9**
BRVK pmax pmax
comp=Z,44nm,1.0s
BRVK Borovoye 124.59 317 PKPdf **PKPdf 18 39 20.0 -0.7**
SCHQ Schefferville 125.51 41 PKP **PKPdf 18 39 22.6 +0.2**
comp=Z,8.4nm,0.9s,baz=254,slow=4.4,SNR=4.3
NOR Nord 126.50 3 *i* PKIKP **PKPdf 18 39 23.2 -0.4**
NOR Nord 126.50 3 *i* P **PKPdf 18 39 23.2 -0.4**
NOR Nord 126.50 3 *i* P **PKPdf 18 39 23.2 -0.4**
LSZ Lusaka 129.03 215 PKP **PKPdf 18 39 30.8 +0.3**
comp=Z,9.3nm,0.8s,baz=225,slow=1.4,SNR=8.2
LSZ SKPbc SKPbc 18 42 18.6 +0.2
comp=Z,14nm,0.9s,baz=154,slow=3.8,SNR=9.3
LSZ Lusaka 129.03 215 **PKPdf 18 39 27.5 -3.0**
KBS Kingsbay 129.40 357 *e*PKPdf **PKiKP 18 39 29.6 -0.3**
TSUM Tsumeb 129.81 201 PKP **PKPdf 18 39 32.3 +0.4**
comp=Z,4.7nm,0.7s,baz=119,slow=1.1,SNR=4.4
TSUM SKPbc SKPbc 18 42 22.1 +0.8
comp=Z,7.6nm,0.9s,baz=99,slow=4.8,SNR=7.5
SPA0 Spitsbergen Ar 129.89 356 PKP **PKiKP 18 39 30.6 -0.4**
SPA0 Spitsbergen Ar 129.89 356 *e*PKPdf **PKPdf 18 39 29.9 -0.3**

SVE Sverdlovsk 129.98 322 *e*PKIKP **PKPdf 18 39 31.0 +0.1**
SVE pmax pmax
comp=Z,24nm,1.1s
DAG Danmarks Havn 130.89 6⇓*i* PKIKP **PKPdf 18 39 30.8 -1.2**
DAG pmax pmax
comp=Z,5.0nm,0.5s
DAG Danmarks Havn 130.89 6⇓*i* P **PKPdf 18 39 30.8 -1.2**
comp=Z,4.6nm,0.5s
DAG Danmarks Havn 130.89 6⇓*i* P **PKPdf 18 39 30.9 -1.2**
DAG IAmb IAmb 18 39 32.5
comp=Z,4.6nm,0.5s
UOSS Minazif 130.94 279 PKPdf **PKPdf 18 39 32.8 -0.9**
AB31 Akbulak array 131.09 312 *i* PKIKP **PKPdf 18 39 32.9 -0.3**
ABKAR Akbulak array 131.09 312 PKPpre 18 39 24.6
ABKAR PKPdf **PKPdf 18 39 32.2 -1.0**
ABKAR Akbulak array 131.09 312 PKPpre 18 39 24.0
ABKAR PKPdf **PKPdf 18 39 32.3 -0.9**
ARU Arti 131.17 321 *i* PKIKP **PKPdf 18 39 32.9 -0.2**
ARU 18 41 54.3
ARU Arti 131.17 321 PKPpre 18 39 26.5
ARU PKPdf **PKPdf 18 39 32.8 -0.4**
SUMG Summit 131.24 15 *i* PKIKP **PKiKP 18 39 34.2 -0.1**
SUMG pmax pmax
comp=Z,14nm,0.7s
SUMG Summit 131.24 15 PKPdf **PKPdf 18 39 33.2 -0.1**
SUMG Summit 131.24 15 *i* P **PKiKP 18 39 34.2 -0.1**
comp=Z,14nm,0.7s
SUMG Summit 131.24 15 *i* P **PKiKP 18 39 34.3 -0.1**
SUMG IAmb IAmb 18 39 35.7
comp=Z,14nm,0.7s
GEYT Alibeck 132.00 297 PKP **PKPdf 18 39 35.6 +0.3**
comp=Z,11nm,0.7s,baz=232,slow=1.7,SNR=17
GEYT SKPbc **SKPbc 18 42 28.7 +0.2**
comp=Z,45nm,1.1s,baz=207,slow=3.0,SNR=30
GEYT Alibeck 132.00 297 **SKPab 18 42 29.7 -0.2**
GYA0B ALIBECK ARRAY 132.00 297 PKPdf **PKPdf 18 39 35.3 -0.1**
AKTO Aktyubinsk 132.26 314 PKIKP **PKPdf 18 39 35.1 -0.3**
DBG Daneborg 132.99 8 *i* P **PKPdf 18 39 35.5 -0.6**
DBG IAmb IAmb 18 39 37.7
comp=Z,2.1nm,0.4s
ICESG Greenland Ices 133.20 19 *i* P **PKPdf 18 39 37.4 +0.4**
KMBO Kilima Mbogo 134.37 236 PKP **PKiKP 18 39 41.6 -0.7**
comp=Z,9.0nm,1.1s,baz=355,slow=3.2,SNR=4.7
KMBO SKPbc **SKPbc 18 42 39.2 +1.7**
comp=Z,4.1nm,0.8s,baz=62,slow=4.9,SNR=8.6
KMBO Kilima Mbogo 134.37 236 PKIKP **PKPdf 18 39 40.3 -0.5**
KMBO Kilima Mbogo 134.37 236 PKPdf **PKPdf 18 39 40.3 -0.5**
KMBO SKPbc **SKPbc 18 42 38.6 +1.1**
KIRV Kirov 135.37 326 PKP **PKPdf 18 39 41.3 +0.4**
comp=Z,38nm,0.5s,baz=67,slow=0.6,SNR=5.7
KIRV SKPbc **SKPbc 18 42 38.6 -0.1**
comp=Z,17nm,0.7s,baz=72,slow=3.6,SNR=4.0
KIRV Kirov 135.37 326⇑ *e*PKIKP **PKPdf 18 39 39.7 -1.2**
HAMF Hammerfest 136.05 349 *e*PKPdf **PKPdf 18 39 42.7 +0.8**
SCO Scoresbysund 136.15 11 *i* PKIKP **PKiKP 18 39 43.9 +0.1**
SCO Scoresbysund 136.15 11 *i* P **PKiKP 18 39 43.9 +0.1**
SCO Scoresbysund 136.15 11 *i* P **PKiKP 18 39 43.9 +0.1**
ARCES ARCESS Array B 136.69 348 PKhKP **PKPdf 18 39 33.8**
comp=Z,5.1nm,0.7s,baz=46,slow=1.8,SNR=24
ARCES PKP **PKPdf 18 39 43.4 +0.3**
comp=Z,18nm,0.6s,baz=14,slow=1.9,SNR=9.7
ARCES SKPbc **SKPbc 18 42 42.7 +0.2**
comp=Z,13nm,0.9s,baz=29,slow=2.8,SNR=5.3
KTK1 Kautokeino 137.55 348 *e*PKPdf **PKPdf 18 39 45.1 +0.4**
TRO Tromso 137.68 351 *e*PKPdf **PKPdf 18 39 44.8 -0.1**
KLMR Klimovskoe 138.80 332 *e*PKIKP **PKPdf 18 39 42.3 -4.9**
KLMR pmax pmax
comp=Z,21nm,0.8s
KLMR Klimovskoe 138.80 332 *e*PKPdf **PKPdf 18 39 42.4 -4.8**
KLMR AMP 18 39 47.3
comp=Z,21nm,0.8s
KLMR *e*PP **PP 18 42 37.8 -5.4**
MAK Makhachkala 140.16 304 *i* P **Pdif 18 37 06.8 -0.4**
MAK *e* 18 42 51.2
MAK *e*SSS SSS 19 06 06.5
GROC Groznyy 141.38 304 *e*PKHKP PKPpre 18 39 46.9
GROC *e* 18 42 55.7
GROC pmax pmax
comp=Z,17nm,0.7s
VRH Novokhopyorsk 142.16 318 *e*PKHKP PKPpre 18 39 49.2
VRH pmax pmax
comp=Z,20nm,0.6s
MOS Moscow 142.39 326 *e*PKHKP PKPpre 18 39 48.7
GNI Garni 142.46 300 PKP **PKPdf 18 39 53.0 -1.7**
comp=Z,4.6nm,0.5s,baz=14,slow=4.2,SNR=2.6
GNI SKPbc **SKPbc 18 42 59.7 +0.4**
comp=Z,21nm,1.1s,baz=217,slow=5.1,SNR=4.1
ZEI Tsey 142.81 304 *i* PKHKP **PKPdf 18 39 51.6 -3.7**
ZEI pmax pmax
comp=Z,9.0nm,0.7s
GOF Gofitskoye 143.03 308⇑ *e*PKIKP PKPbc 18 39 52.9 -0.4
GOF pmax pmax
comp=Z,72nm,0.9s
FINES FINESS Array B 143.19 340 PKP PKPbc 18 39 52.7 -0.5
comp=Z,42nm,0.4s,baz=56,slow=3.6,SNR=354
FINES SKPbc **SKPbc 18 43 00.5 +0.5**
comp=Z,8.7nm,0.8s,baz=46,slow=4.0,SNR=5.8
FINES FINESS Array B 143.19 340 PKPab 18 39 51.8 0.0
LPSR Galich'ya Gora 143.19 321 *e*PKHKP PKPab 18 39 52.0 0.0
LPSR pmax pmax
comp=Z,30nm,0.8s
OBN Obninsk 143.22 326 PKP PKPbc 18 39 53.0 -0.4
comp=Z,11nm,0.4s,baz=265,slow=0.8,SNR=12
OBN Obninsk 143.22 326 ⇓P PKPbc 18 39 52.9 -0.6
OBN Obninsk 143.22 326*de* PKHKP PKPab 18 39 51.2 -0.9
OBN *e* 18 43 09.1
OBN *e*PPP PPP 18 46 23.2
OBN pmax pmax
comp=Z,40nm,1.2s
OBN Obninsk 143.22 326 PKPdf PKPab 18 39 51.9 -0.1
AKH Akhalkalaki 143.29 302 ⇑P PKPbc 18 39 55.0 +0.6
AKH Akhalkalaki 143.29 302 PKIKP PKPbc 18 39 54.2 -0.2
AKH Akhalkalaki 143.29 302 PKPdf PKPbc 18 39 54.2 -0.1
KBZ Khabaz 143.38 306 PKP PKPbc 18 39 54.4 +0.1
comp=Z,22nm,0.9s,baz=142,slow=2.1,SNR=33
KBZ Khabaz 143.38 306*d* *i* PKIKP PKPab 18 39 53.4 +0.3
NSS Namsos 143.42 352 *e*PKPdf PKPab 18 39 52.7 +0.1
KVAR Kislovodsk Arr 143.49 306 PKP **PKPdf 18 39 55.9 -0.4**
comp=Z,12nm,0.8s,baz=90,slow=20,SNR=5.0
KIV Kislovodsk 143.49 306 *i* PKHKP PKPab 18 39 53.1 -0.6
KIV pmax pmax
comp=Z,92nm,1.0s
KIV Kislovodsk 143.49 306 PKPdf PKPbc 18 39 54.3 -0.4
VSR Storozhevoye 143.64 319 *e*PKIKP PKPab 18 39 54.1 +0.2
VSR pmax pmax
comp=Z,50nm,0.8s
VORD Divnogorie 143.66 319 *e*PKIKP PKPab 18 39 53.6 -0.4
VORD pmax pmax
comp=Z,110nm,1.8s
VSU Vasula 145.26 336 *e*P **PKPbc 18 39 59.5 +0.2**
VSU Vasula 145.26 336*ce* PKIKP **PKPdf 18 39 58.6 -0.1**
SOC Sochi 145.68 306 *e*PKIKP **PKPdf 18 40 00.4 +0.5**
SOC *i* 18 40 04.0
SOC *e* 18 43 26.5
SOC *e*PPP PPP 18 46 39.9
SOC *e*SS SS 19 01 51.4 +1.3
SOC *e*SSS SSS 19 07 17.5
SOC pmax pmax
comp=Z,71nm,0.9s
SOC pmax pmax
comp=Z,32nm,0.9s
KOPT Kop Dagi 145.71 300 **PKPbc 18 40 01.7 0.0**
MARD Mardin 145.72 295 **PKPdf 18 40 00.8 +0.4**
MOL Molde 145.79 355 *e*PKPbc **PKPbc 18 40 00.8 +0.1**
KTUT Trabzon 146.13 302 ⇑P **PKPbc 18 40 02.7 +0.3**
DOMB Dombas 146.17 353 *e*PKPbc **PKPbc 18 40 01.8 -0.2**
NC303 NORSAR Array S 146.68 351 **PKPbc 18 40 02.4 -1.0**
NB201 NORSAR Array S 146.86 351 **PKPbc 18 40 03.5 -0.4**
NB2 NORSAR Subarra 146.88 351 PKP **PKPbc 18 40 03.4 -0.6**
comp=Z,38nm,0.6s,baz=14,slow=2.9
NB2 NORSAR Subarra 146.88 351 PKPab **PKPbc 18 40 03.4 -0.6**
baz=14,slow=2.9
NOA NORSAR Array B 146.88 351 PKPbc **PKPbc 18 40 04.0 0.0**
comp=Z,48nm,0.8s,baz=16,slow=4.5,SNR=81
NOA NORSAR Array B 146.88 351 PKIKP **PKPbc 18 40 04.0 0.0**
FOO Floro 146.93 356 *e*PKPbc **PKPbc 18 40 03.9 -0.1**
ANN Anapa 146.96 309 *i* PKP2 **PKPbc 18 40 04.4 -0.2**
ANN *e* 18 43 29.9
ANN *e*SS SS 19 02 04.3 0.0
ANN *e*SSS SSS 19 07 42.4
ANN pmax pmax
comp=Z,124nm,0.7s
NAO01 NORSAR Array S 147.12 351 **PKPbc 18 40 04.6 0.0**
NC602 NORSAR Array S 147.13 350 **PKPbc 18 40 03.8 -0.8**

NC602 NORSAR Array S 147.13 350 *e*PKPbc **PKPbc 18 40 04.3 -0.3**
HYA Hoyanger 147.29 355 *e*PKPbc **PKPbc 18 40 05.0 0.0**
HFS Hagfors 147.35 348 PKPbc **PKPbc 18 40 04.7 -0.5**
comp=Z,71nm,0.6s,baz=72,slow=4.8,SNR=94
IZAR Zarasai 147.43 333 *e*P **PKPbc 18 40 06.2 +0.7**
SUE Sulen 147.49 357 *e*PKPbc **PKPbc 18 40 05.8 +0.4**
IDID Didziasalis 147.54 332 *e*P **PKPbc 18 40 06.0 +0.2**
SKAR Skarslia 147.58 353 *e*PKPbc **PKPbc 18 40 06.0 +0.1**
ISAL Salakas 147.61 333 *e*P **PKPbc 18 40 06.5 +0.5**
MICGM Minsk 147.62 330⇓ *e*P **PKPbc 18 40 06.0 -0.1**
MICGM PM 18 40 07.0
comp=Z,1.4nm,0.6s
MNK Minsk 147.62 330⇓ *e*PKP2 **PKPbc 18 40 06.0 -0.1**
MNK pmax pmax
comp=Z,1μm,0.6s
IIGN Ignalina 147.73 333 *e*P **PKPbc 18 40 06.7 +0.3**
NACGM Naroch 147.81 332 *e*P **PKPbc 18 40 06.0 -0.6**
NACGM PM 18 40 07.0
comp=Z,0.7nm,1.0s
OSL Oslo 148.01 351 *e*PKPbc **PKPbc 18 40 07.0 +0.1**
ASK Askoy 148.03 356 *e*PKPbc **PKPbc 18 40 06.9 0.0**
BER Bergen 148.12 356 *e*PKPbc **PKPbc 18 40 07.0 -0.1**
KONO Kongsberg 148.44 352⇓ *i* PKHKP **PKPdf 18 40 05.2 +1.2**
KONO Kongsberg 148.44 352 **PKPbc 18 40 08.0 0.0**
KONO Kongsberg 148.44 352 *e*PKPbc **PKPbc 18 40 07.7 -0.3**
PABE Paberze 148.49 335 *e*P **PKPbc 18 40 08.3 +0.1**
ODD1 Odda 148.50 355 *e*PKPbc **PKPbc 18 40 08.3 0.0**
PBUR Paburge 148.81 337 *e*P **PKPbc 18 40 09.2 +0.2**
ASF Jabal al Asfar 148.92 286 PKPbc **PKPbc 18 40 10.8 +0.5**
comp=Z,34nm,0.8s,baz=60,slow=1.9,SNR=47
BLS5 Blasjo 149.00 355 *e*PKPbc **PKPbc 18 40 09.9 +0.4**
SIM Simferopol' 149.14 311*d* *i* PKHKP **PKPbc 18 40 09.8 -0.5**
SIM *e* 18 40 16.0
SIM pmax pmax
comp=Z,91nm,0.6s
KMY Karmoy 149.29 356 *e*PKPbc **PKPbc 18 40 10.3 +0.2**
DIKM Dikmen 149.33 304 ⇓P **PKPbc 18 40 11.2 +0.4**
AKASG Malin Array Be 149.37 324 PKPbc **PKPbc 18 40 10.6 0.0**
comp=Z,70nm,0.4s,baz=44,slow=3.4,SNR=182
AKASG Malin Array Be 149.37 324 **PKPdf 18 40 04.4 -1.3**
AKASG PKPbc **PKPbc 18 40 10.4 -0.1**
AKASG **pPKPbc 18 41 34.5 -0.6**
AKBB Malin Array Si 149.37 324⇑ *e*PKIKP **PKPdf 18 40 04.9 -0.8**
AKBB Malin Array Si 149.37 324 PKPdf **PKPdf 18 40 05.0 -0.8**
AKBB **PKPbc 18 40 10.3 -0.3**
SUW Suwalki 149.91 334 *e*PKPbc **PKPbc 18 40 11.9 +0.1**
SUW *e*PKPab **PKPab 18 40 18.7 0.0**
HOMB Homborsund 149.92 352 *e*PKPbc **PKPbc 18 40 11.7 +0.1**
HOMB Homborsund 149.92 352 *i* P **PKPbc 18 40 11.0 -0.6**
HOMB *i* P **PKiKP 18 40 12.4 0.0**
QRWL Qaraoun 149.98 288 *e*P **PKiKP 18 40 13.7 +0.2**
SNART Snartemo 150.00 353 *e*PKPbc **PKPbc 18 40 11.7 -0.1**
SNART Snartemo 150.00 353 *i* P **PKPbc 18 40 11.0 -0.8**
SNART *i* P **PKiKP 18 40 12.7 +0.2**
BHIL Bhannes 150.00 289 *e*P **PKiKP 18 40 13.5 0.0**
LEWI Lewis, Hebride 150.00 8 *e*P **PKPbc 18 40 11.7 -0.2**
DQRL Deir Qamar 150.07 288 *e*P **PKiKP 18 40 14.1 +0.4**
BZK Bozkurt 150.15 305 ⇓P **PKiKP 18 40 13.9 +0.5**
LINV Loch Inver, As 150.19 7 *e*P **PKPbc 18 40 12.3 +0.1**
MMAI Mount Meron Ar 150.21 287 PKPbc **PKiKP 18 40 14.2 +0.3**
comp=Z,372nm,1.2s,baz=76,slow=4.5,SNR=114
EIL Elat 150.38 280 PKPbc **PKiKP 18 40 14.5 +0.2**
comp=Z,68nm,0.7s,baz=256,slow=0.8,SNR=47
KAC Achnashellach 150.82 7 *e*P **PKPbc 18 40 14.0 +0.2**
MCD Coleburn Disti 150.92 5 *e*P **PKPbc 18 40 13.9 -0.2**
KPL Plockton 150.94 7 *e*P **PKPbc 18 40 14.0 -0.1**
BRTR Keskin Array B 150.96 301 PKP **PKPdf 18 40 08.6 -0.3**
comp=Z,2.2nm,0.9s,baz=180,slow=3.3,SNR=5.8
BRTR PKPbc **PKPbc 18 40 14.8 -0.2**
comp=Z,22nm,0.6s,baz=116,slow=2.9,SNR=58
BRTR Keskin Array B 150.96 301 **PKPdf 18 40 07.5 -1.4**
BRTR PKPbc **PKPbc 18 40 14.7 -0.2**
GOET G??ttrup 151.03 351 *i* P **PKiKP 18 40 15.2 +0.5**
comp=Z,139nm,0.8s
GOET G??ttrup 151.03 351 *i* P **PKiKP 18 40 15.2 +0.5**
GOET IAmb IAmb 18 40 15.5
comp=Z,140nm,0.8s
SORM Soroca 151.28 320 ⇑P **PKPbc 18 40 14.6 -0.5**
SORM Soroca 151.28 320 ⇑PKIKP **PKPbc 18 40 14.6 -0.5**
ANTO Ankara 151.57 302 ⇑P **PKPdf 18 40 08.0 -1.7**
ANTO Ankara 151.57 302 ⇑PKPdf **PKPdf 18 40 08.0 -1.7**
MUD Monsted U'grnd 151.60 350 *i* PKIKP **PKPbc 18 40 15.7 +0.2**
MUD Monsted U'grnd 151.60 350 *i* P **PKPbc 18 40 15.7 +0.2**
MUD Monsted U'grnd 151.60 350 *i* P **PKPbc 18 40 15.8 +0.2**
DRUM Mains of Drumt 151.63 4 *e*P **PKPbc 18 40 15.0 -0.6**
MILM Milestii Mici 151.65 318 ⇑P **PKPbc 18 40 15.5 -0.5**
BSD Bornholm Skovb 151.69 343⇓ *i* PKIKP **PKPbc 18 40 16.0 +0.2**
BSD pmax pmax
comp=Z,99nm,0.4s
BSD Bornholm Skovb 151.69 343⇓ *i* P **PKPbc 18 40 16.0 +0.2**
comp=Z,99nm,0.4s
BSD Bornholm Skovb 151.69 343 *i* P **PKPbc 18 40 15.0 -0.9**
BSD ⇓ *i* P **PKPbc 18 40 16.1 +0.2**
BSD IAmb IAmb 18 40 16.6
comp=Z,99nm,0.4s
COP Copenhagen 151.75 346⇓ *i* PKIKP **PKiKP 18 40 16.4 +0.2**
COP pmax pmax
comp=Z,62nm,0.6s
COP Copenhagen 151.75 346⇓ *i* P **PKiKP 18 40 16.4 +0.2**
comp=Z,62nm,0.6s
COP Copenhagen 151.75 346⇓ *i* P **PKiKP 18 40 16.4 +0.2**
COP IAmb IAmb 18 40 16.7
comp=Z,62nm,0.6s
CSS Mathiatis 151.88 291 **PKPbc 18 40 16.9 -0.1**
INVG Invergeldie, C 152.00 6 *e*P **PKPbc 18 40 16.2 -0.3**
LAWE Loch Awe, Argy 152.02 8 *e*P **PKPbc 18 40 16.5 -0.1**
EAB Aberfoyle 152.21 6 *e*P **PKPbc 18 40 16.6 -0.4**
LEF Lefka 152.23 292 ⇑P **PKPbc 18 40 16.2 -1.5**
TLCR 152.48 314 ⇑P **PKiKP 18 40 18.5 +0.4**
TLCR 152.48 314 ⇑PKIKP **PKiKP 18 40 18.5 +0.4**
BEL Belsk 152.51 333 *e*PKPbc **PKiKP 18 40 18.8 +0.8**
LVV L'vov 152.52 327 *e*PKIKP **PKPbc 18 40 17.9 0.0**
ESY Stoneypath 152.62 4 *e*P **PKPbc 18 40 17.6 -0.3**
GKP Gorka Klasztor 152.63 339 *e*PKPbc **PKiKP 18 40 18.5 +0.3**
GKP *e*PKPab **PKPab 18 40 30.3 +0.1**
EBL Broad Law 152.73 5 *e*P **PKPbc 18 40 18.0 -0.1**
TPGR Topolog 152.88 314 ⇑P **PKiKP 18 40 19.6 +0.6**
PRAR RASCA 152.90 320 ⇑P **PKiKP 18 40 19.4 +0.4**
CFR Carcaliu 152.91 315 ⇑P **PKiKP 18 40 19.0 0.0**
CFR Carcaliu 152.91 315 ⇑PKIKP **PKiKP 18 40 19.0 0.0**
GHRR 152.92 317 ⇑P **PKiKP 18 40 20.2 +1.2**
TIRR Tirgusor 153.07 313 ⇑P **PKiKP 18 40 19.7 +0.4**
TIRR Tirgusor 153.07 313 ⇑PKIKP **PKiKP 18 40 19.7 +0.4**
TIRR Tirgusor 153.07 313 PKPbc **PKiKP 18 40 19.5 +0.1**
TIRR **PKPab 18 40 32.7 +0.4**
EKA Eskdalemuir Ar 153.16 5 PKP **PKPdf 18 40 11.3 -0.1**
comp=Z,0.8nm,0.5s,baz=308,slow=1.9,SNR=3.7
EKA PKPbc **PKPbc 18 40 18.9 -0.2**
comp=Z,3.8nm,0.5s,baz=324,slow=2.0,SNR=25
EKA PKPab **PKPab 18 40 32.1 -0.2**
comp=Z,3.4nm,0.6s,baz=320,slow=3.5,SNR=7.4
BIZ Bicaz 153.21 320 ⇑P **PKPdf 18 40 13.7 +2.0**
TLBR Topalu 153.26 314 ⇑P **PKiKP 18 40 20.6 +0.8**
HARR Harsova 153.27 314 ⇑P **PKiKP 18 40 20.5 +0.7**
HARR Harsova 153.27 314 ⇑PKIKP **PKiKP 18 40 20.5 +0.7**
NEWG New Galloway 153.27 7 *e*P **PKPbc 18 40 19.1 -0.3**
KWP Kalwaria Pacla 153.28 328 *e*PKPbc **PKiKP 18 40 19.9 +0.2**
KWP *e*PKPab **PKPab 18 40 33.8 +0.7**
BUR08 Bucovina Ar. S 153.30 322 PKPdf **PKPdf 18 40 12.3 +0.3**
BUR08 PKPbc **PKiKP 18 40 20.6 +0.7**
BUR08 PKPab **PKPab 18 40 33.6 +0.2**
ORH Orhaniye 153.30 305 P PKPab 18 40 47.2 +14
BURAR Bucovina Array 153.31 322 ⇑P **PKPdf 18 40 13.4 +1.4**
BURAR Bucovina Array 153.31 322 ⇑PKIKP **PKPdf 18 40 13.4 +1.4**
VRI Vrincioaia 153.43 317 ⇑P **PKiKP 18 40 20.1 0.0**
VRI Vrincioaia 153.43 317 ⇑PKIKP **PKiKP 18 40 20.1 0.0**
GAL1 Galloway 153.47 7 *e*P **PKPbc 18 40 19.7 -0.1**
PLOR Plostina 153.48 317 ⇑P **PKiKP 18 40 20.3 +0.1**
PLOR Plostina 153.48 317 ⇑PKIKP **PKiKP 18 40 20.3 +0.1**
ICOR Ion Corvin 153.61 313 ⇑P **PKiKP 18 40

comp=Z,4.2nm,0.6s,baz=212,slow=0.8,SNR=3.6
MLR Muntele Rosu 154.09 317 ⇑P **PKPbc 18 40 21.4 -0.2**
OJC Ojcow 154.15 332 *e*PKPdf **PKPdf 18 40 11.7 -1.3**
OJC *e*PKP **PKiKP 18 40 21.8 +0.3**
OJC *e*PKPab **PKPab 18 40 37.0 +0.2**
DOPR Dopca 154.16 319 ⇑P **PKiKP 18 40 21.9 +0.3**
UZH Uzhgorod 154.17 326 *e*PKIKP **PKPbc 18 40 20.6 -0.9**
UZH *i* 18 40 37.0
GDLE Glaisdale, N Y 154.21 2 *e*P **PKiKP 18 40 21.5 +0.1**
NEF NEVSHA 154.33 312 *i*P **PKPab 18 40 38.9 +1.1**
CRVS Cervenica-Dubn 154.38 328 *e*PKIKP **PKPdf 18 40 14.4 +1.1**
CRVS *e* 18 40 38.6
CRVS Cervenica-Dubn 154.38 328 *e*PKP **PKPdf 18 40 14.4 +1.1**
CRVS *e* 18 40 38.6
NIE Niedzica 154.53 330 *e*PKPdf **PKPdf 18 40 14.3 +0.8**
NIE *e*PKP **PKiKP 18 40 23.8 +1.4**
NIE *e*PKPab **PKPab 18 40 38.3 -0.2**
VOIR 154.65 318 ⇓P **PKiKP 18 40 23.1 +0.4**
VOIR 154.65 318 ⇓PKIKP **PKiKP 18 40 23.1 +0.4**
RAZG Razgrad 154.70 313 ⇑P **PKPab 18 40 40.5 +1.2**
ARR Arges 154.93 318 ⇑P **PKPdf 18 40 15.5 +1.2**
KSP Ksiaz 154.99 337 *e*PKPdf **PKPdf 18 40 14.6 +0.5**
KSP *e*PKP **PKPbc 18 40 23.9 +0.8**
KSP *e*PKPab **PKPab 18 40 40.9 +0.6**
MANT Manisa 155.09 300 PKPdf **PKPdf 18 40 14.1 -0.8**
MANT PKPab **PKPab 18 40 41.4 -0.1**
LANS Liptovska Anna 155.10 330 *e*PKP2 **PKPab 18 40 42.3 +1.4**
KECS Kecovo 155.13 328 *e*PKP2 **PKPab 18 40 41.6 +0.6**
HUMR Humele 155.18 316 ⇓P PKPdf 18 40 23.4 +8.8
SZH Strazhica 155.21 313 *i*P **PKPab 18 40 42.6 +1.0**
NRDL Niedersach Rie 155.22 347 *e*PKPbc PKPbc 18 40 24.1
baz=20,slow=1.9
NRDL *e*PKPab **PKPab 18 40 41.3 +0.2**
baz=21,slow=4.4
OSTC Ostas 155.26 336 *e*PKPDF **PKPdf 18 40 14.5 0.0**
OSTC ⇑*e*PKP PKPbc 18 40 24.8
OSTC *e*PKPAB **PKPab 18 40 42.1 +0.6**
CHVC Chvalec 155.29 337⇑*e*PKP PKPbc 18 40 24.5
CHVC *e*PKPAB **PKPab 18 40 42.4 +0.8**
UPC Upice 155.37 337 *e*PKIKP **PKPdf 18 40 14.4 -0.2**
UPC *e* 18 40 43.0
UPC Upice 155.37 337 *e*PKPDF **PKPdf 18 40 14.4 -0.2**
UPC ⇑*e*PKP PKPbc 18 40 24.7
UPC *e*PKPAB **PKPab 18 40 43.0 +1.0**
DPC Dobruska-Polom 155.39 336 *e*PKIKP **PKPdf 18 40 14.5 -0.2**
DPC *e* 18 40 42.9
DPC Dobruska-Polom 155.39 336 *e*PKPDF **PKPdf 18 40 14.5 -0.2**
DPC ⇑*e*PKP PKPbc 18 40 24.5
DPC *e*PKPAB **PKPab 18 40 42.9 +0.8**
MORC Moravsky Berou 155.41 334 *e*PKP **PKPdf 18 40 14.7 -0.1**
MORC *e* 18 40 24.9
MORC *e* 18 40 42.5
MORC Moravsky Berou 155.41 334 PKIKP **PKPdf 18 40 14.4 -0.4**
MORC Moravsky Berou 155.41 334 **PKPdf 18 40 14.4 -0.4**
ASSE Asse, Remlinge 155.45 346 *e*PKPbc PKPbc 18 40 24.8
baz=20,slow=1.9
ASSE *e*PKPab **PKPab 18 40 42.3 +0.2**
baz=21,slow=4.4
KRLC Kraliky 155.45 335 *e*PKIKP **PKPdf 18 40 14.8 0.0**
KRLC *e* 18 40 42.6
KRLC Kraliky 155.45 335 *e*PKPDF **PKPdf 18 40 14.8 0.0**
KRLC ⇑*e*PKP PKPbc 18 40 25.0
KRLC *e*PKPAB **PKPab 18 40 42.6 +0.2**
CLL Collm 155.62 342 *e*PKPdf **PKPdf 18 40 14.0 -0.9**
comp=Z,17nm,1.5s
CLL *i* PKPbc PKPbc 18 40 24.7
comp=Z,21nm,0.9s
CLL ⇑*i*PKPab **PKPab 18 40 43.2 +0.2**
comp=Z,51nm,0.8s
CLL Collm 155.62 342⇑*e*PKIKP **PKPdf 18 40 14.0 -0.9**
CLL *i* 18 40 24.7
CLL *i* 18 40 43.2
CLL pmax pmax
comp=Z,17nm,1.5s
CLL pmax pmax
comp=Z,21nm,0.9s
CLL pmax pmax
comp=Z,51nm,0.8s
CLL Collm 155.62 342 PKPdf **PKPdf 18 40 14.4 -0.5**
CLL PKPbc 18 40 24.1
CLL PKPab **PKPab 18 40 42.7 -0.3**
YER Yerkesik 155.63 297 P **PKPab 18 40 42.8 -0.9**
BRG Berggiesshubel 155.74 340 *e*PKP **PKPdf 18 40 14.1 -1.0**
comp=Z,28nm,1.4s
BRG Berggiesshubel 155.74 340 *i* PKP PKPbc 18 40 24.1
comp=Z,11nm,0.8s
BRG Berggiesshubel 155.74 340 *e*PKIKP **PKPdf 18 40 14.1 -1.0**
BRG *i* 18 40 24.1
BRG pmax pmax
comp=Z,28nm,1.4s
BRG pmax pmax
comp=Z,11nm,0.8s
BRG Berggiesshubel 155.74 340 *e*PKPdf **PKPdf 18 40 15.3 +0.3**
baz=13,slow=1.3
BRG *e*PKPab **PKPab 18 40 43.9 +0.5**
baz=21,slow=4.4
CLZ Clausthal 155.78 346 *e*PKPdf **PKPdf 18 40 15.0 -0.2**
baz=13,slow=1.3
CLZ *e*PKPbc PKPbc 18 40 25.2
baz=20,slow=1.9
CLZ *e*PKPab **PKPab 18 40 43.9 +0.2**
baz=21,slow=4.4
PSZ Piszkesteto 155.81 328 ⇓P **PKPab 18 40 45.1 +1.0**
PSZ Piszkesteto 155.81 328 ⇓PKP2 **PKPab 18 40 45.1 +1.0**
IBBN Ibbenburen 155.82 350 *e*PKPab **PKPab 18 40 44.1 +0.3**
baz=21,slow=4.4
PVCC Panska Ves 155.84 339 *e*PKIKP **PKPdf 18 40 15.7 +0.5**
PVCC *e* 18 40 44.2
PVCC Panska Ves 155.84 339 *e*PKPDF **PKPdf 18 40 15.7 +0.5**
PVCC ⇑*e*PKP PKPbc 18 40 25.6
PVCC *e*PKPAB **PKPab 18 40 44.2 +0.2**
VYHS Vyhne 155.87 330 *e*PKIKP **PKPdf 18 40 15.9 +0.5**
VYHS *e* 18 40 44.9
VYHS Vyhne 155.87 330 *e*PKP **PKPdf 18 40 15.9 +0.5**
VYHS *e* 18 40 44.9
FBE Freiberg 155.87 341 *e*PKPbc PKPbc 18 40 25.7
baz=20,slow=1.9
FBE *e*PKPab **PKPab 18 40 44.8 +0.8**
baz=21,slow=4.4
NEUB Neuenburg 156.04 343 *e*PKPdf **PKPdf 18 40 15.8 +0.3**
baz=13,slow=1.3
NEUB *e*PKPab **PKPab 18 40 45.3 +0.5**
baz=21,slow=4.4
JAVC Velka Javorina 156.08 332 *e*PKP **PKPdf 18 40 16.7 +1.0**
JAVC *e* 18 40 27.5
JAVC *e* 18 40 46.6
ALN Alexandroupoli 156.15 307 PKP2 **PKPab 18 40 45.4 -0.3**
ALN Alexandroupoli 156.15 307 PKPab **PKPab 18 40 45.4 -0.3**
GTTG Gottingen 156.15 346 *e*PKPab **PKPab 18 40 45.5 +0.2**
baz=21,slow=4.4
VRAC Vranov 156.15 334 PKP **PKPdf 18 40 16.1 +0.4**
comp=Z,1.1nm,0.4s,baz=0.0,slow=3.0,SNR=3.9
VRAC PKPab **PKPab 18 40 46.0 +0.6**
comp=Z,10nm,0.8s,baz=37,slow=4.0,SNR=11
VRAC Vranov 156.15 334 ⇑P PKPbc 18 40 26.6
VRAC Vranov 156.15 334 *e*PKP **PKPdf 18 40 15.8 +0.1**
VRAC *e* 18 40 26.2
VRAC *e* 18 40 46.0
PRU Pruhonice 156.31 338 *e*PKIKP **PKPdf 18 40 15.5 -0.4**
PRU Pruhonice 156.31 338 *e*PKPDF **PKPdf 18 40 15.5 -0.4**
PRU ⇑*e*PKP PKPbc 18 40 25.9
PRU *e*PKPAB **PKPab 18 40 46.5 +0.5**
BODT Bodrum 156.40 298 P **PKPab 18 40 46.3 -0.7**
KRUC Moravsky 156.43 334 *e*PKP **PKPdf 18 40 15.9 -0.2**
KRUC *e* 18 40 26.6
KRUC *e* 18 40 46.9
SMOL Smolenice 156.45 332 *e*PKP2 **PKPab 18 40 47.6 +0.9**
BZS Buzias 156.50 322 ⇑P **PKPdf 18 40 12.9 -3.4**
BZS Buzias 156.50 322 ⇑PKIKP **PKPdf 18 40 12.9 -3.4**
MPEP Malo Peshtene 156.56 315 *i*P **PKPab 18 40 48.5 +1.1**
TANN Tannenbergstha 156.58 341 *e*PKPbc PKPbc 18 40 27.4
baz=20,slow=1.9
TANN *e*PKPab **PKPab 18 40 47.6 +0.4**
baz=21,slow=4.4
PRK Paraskevi 156.58 303 P **PKPab 18 40 47.1 -0.5**
WERD Werda 156.59 342 *e*PKPbc PKPbc 18 40 27.0
baz=20,slow=1.9
WERD *e*PKPab **PKPab 18 40 47.9 +0.7**
baz=21,slow=4.4
MOX Moxa 156.60 343 *e*PKPdf **PKPdf 18 40 15.8 -0.5**
baz=13,slow=1.3
MOX *e*PKPbc PKPbc 18 40 26.7
baz=20,slow=1.9
MOX *e*PKPab **PKPab 18 40 47.3 0.0**
baz=21,slow=4.4
PLN Plauen 156.60 342 *e*PKPab **PKPab 18 40 47.5 +0.2**
baz=21,slow=4.4
MODS Modra-Piesok 156.62 332 *e*PKIKP **PKPdf 18 40 17.0 +0.6**
MODS Modra-Piesok 156.62 332 *e*PKP **PKPdf 18 40 17.0 +0.6**
MODS *e* 18 40 47.2
GUNZ Gunzen 156.66 341 *e*PKPab **PKPab 18 40 48.0 +0.5**
baz=21,slow=4.4
PGB Panagyurishte 156.69 313 *i*P **PKPab 18 40 49.1 +1.1**
WERN Wernitzgruen 156.71 341 *e*PKPab **PKPab 18 40 48.7 +0.9**
baz=21,slow=4.4
RZN Rozhen 156.73 310 *i*P **PKPab 18 40 49.0 +0.6**
NKC Novy Kostel 156.74 341 *e*PKP2 **PKPab 18 40 48.5 +0.6**
NKC Novy Kostel 156.74 341 *e*PKP **PKPab 18 40 48.5 +0.6**
PBCC Pribram 156.75 338 *e*PKPDF **PKPdf 18 40 16.3 -0.2**
PBCC *e*PKPAB **PKPab 18 40 48.4 +0.4**
UBBA Unterbreizbach 156.82 345 *e*PKPab **PKPab 18 40 48.1 +0.1**
baz=21,slow=4.4
LIC Lamto 156.99 165 *e*PKIKP **PKPdf 18 40 18.2 +0.3**
comp=Z,22nm,0.6s
MANZ Manzenberg 157.06 341 *e*PKPab **PKPab 18 40 49.7 +0.4**
baz=21,slow=4.4
LIA Limnos Island 157.14 306 P **PKPab 18 40 47.5 -2.5**
KIC Kosan Boka 157.19 165 *e*PKIKP **PKPdf 18 40 18.3 +0.2**
comp=Z,32nm,0.9s
ROTZ Rotzenmuhle 157.23 341 *e*PKPab **PKPab 18 40 50.8 +0.8**
baz=21,slow=4.4
VTS Vitosha 157.25 314 *i*P **PKPab 18 40 51.8 +1.2**
KHC Kasperske Hory 157.37 338 *e*PKIKP **PKPdf 18 40 17.1 -0.2**
KHC Kasperske Hory 157.37 338 *e*PKPDF **PKPdf 18 40 17.1 -0.2**
KHC ⇑*e*PKP PKPbc 18 40 28.6
KHC *e*PKPAB **PKPab 18 40 51.1 +0.4**
TIC Toumodi 157.40 164 *e*PKIKP **PKPdf 18 40 18.7 +0.3**
MMB Musomiste 157.43 311 *i*P **PKPab 18 40 51.8 +0.5**
NVR Nevrokopi 157.45 310 P **PKPab 18 40 50.8 -0.6**
DBIC Dimbokro 157.46 165 PKP **PKPdf 18 40 18.7 +0.3**
comp=Z,11nm,0.9s,baz=170,slow=2.4,SNR=9.1
CONA Conrad Observa 157.55 333 *e*P **PKPab 18 40 52.4 +0.8**
comp=Z,14nm,0.8s,SNR=5.4
GRA1 Grafenberg Arr 157.57 342 **PKPdf 18 40 16.0 -1.5**
GRA1 **PKPab 18 40 52.1 +0.6**
GRF Grafenberg Arr 157.57 342 PKIKP **PKPdf 18 40 16.0 -1.5**
GRF Grafenberg Arr 157.57 342 *e*PKPab **PKPab 18 40 52.1 +0.6**
baz=21,slow=4.4
GEC2 GERESS Array S 157.58 338 *e*PKPbc PKPbc 18 40 28.9
baz=20,slow=1.9
GEC2 *e*PKPab **PKPab 18 40 51.8 +0.1**
baz=21,slow=4.4
GEC2 GERESS Array S 157.58 338 PKPbc 18 40 29.1
GEC2 PKPab **PKPab 18 40 51.5 -0.2**
GERES GERESS Array B 157.58 338 PKP **PKPdf 18 40 17.6 0.0**
comp=Z,2.0nm,0.9s,baz=4.1,slow=4.1,SNR=5.8
GERES PKPbc PKPbc 18 40 29.1
comp=Z,1.0nm,0.4s,baz=46,slow=3.9,SNR=5.9
GERES PKPab **PKPab 18 40 51.7 +0.1**
comp=Z,5.9nm,0.7s,baz=28,slow=6.0,SNR=16
GERES GERESS Array B 157.58 338 PKIKP **PKPdf 18 40 16.7 -1.0**
GERES GERESS Array B 157.58 338 **PKPdf 18 40 16.6 -1.0**
GERES PKPdif PKPbc 18 40 28.7
GERES PKPab **PKPab 18 40 51.3 -0.3**
WET Wettzell 157.58 339 *e*PKPab **PKPab 18 40 52.3 +0.8**
baz=21,slow=4.4
BEBN Eben Emael 157.59 352 PKPab **PKPab 18 40 51.3 -0.1**
KKB Krupnik 157.72 312 *i*P **PKPab 18 40 53.3 +0.8**
MEM Membach 157.73 352 PKPab **PKPab 18 40 52.0 -0.1**
BTNL Ternell 157.74 351 PKPab **PKPab 18 40 52.1 -0.1**
BSTI Sart Tilman 157.81 352 PKPab **PKPab 18 40 52.5 0.0**
BHOU Houvegnez 157.98 351 PKPab **PKPab 18 40 53.5 +0.3**
BCLA Clavier 158.00 353 PKPab **PKPab 18 40 53.1 -0.2**
SNF Seneffe 158.02 354 PKPab **PKPab 18 40 53.4 +0.1**
THR6 Thira Island, 158.06 297 P **PKPab 18 40 51.8 -2.3**
BGES Gesves 158.06 353 PKPab **PKPab 18 40 53.1 -0.4**
BMRD Maredsous 158.18 353 PKPab **PKPab 18 40 54.0 0.0**
KNT Kendrikon 158.18 311 P **PKPab 18 40 53.8 -0.7**
PAIG Paliouri 158.19 307 P **PKPab 18 40 54.2 -0.4**
MOA Molln 158.23 335 *e*P **PKPab 18 40 55.1 +0.7**
STIP Stip 158.39 313 *i*P **PKPab 18 40 55.0 -0.3**
DOU Dourbes 158.40 354 PKPab **PKPab 18 40 54.7 -0.3**
WLF Walferdange 158.64 351 PKPab **PKPab 18 40 56.5 +0.5**
WLF Walferdange 158.64 351 *e*PKPab **PKPab 18 40 56.3 +0.3**
baz=21,slow=4.4
IDI Anoyia 158.69 294 PKP **PKPdf 18 40 20.2 +0.8**
comp=Z,2.3nm,0.5s,baz=18,slow=3.2,SNR=3.6
IDI PKPab **PKPab 18 40 57.1 0.0**
comp=Z,19nm,0.8s,baz=102,slow=5.0,SNR=7.6
IDI Anoyia 158.69 294 ⇑P **PKPab 18 40 57.5 +0.5**
SKO Skopje 158.72 314 *i*P **PKPab 18 40 58.1 +1.3**
RJOB Jochberg 158.84 338 *e*PKPab **PKPab 18 40 57.2 +0.1**
baz=21,slow=4.4
PERS Pernice 158.89 332 *e*PKPab **PKPab 18 40 57.4 0.0**
SOKA Soboth 158.90 332 *e*P **PKPab 18 40 57.5 +0.1**
comp=Z,15nm,1.1s
STU Stuttgart 158.93 345 *e*PKPab **PKPab 18 40 57.6 +0.3**
baz=21,slow=4.4
FUR Furstenfeldbru 158.94 341 *e*PKPab **PKPab 18 40 58.5 +1.0**
baz=21,slow=4.4
LIT Litokhoron 158.94 309 P **PKPab 18 40 55.8 -2.1**
GOLS Golise 159.18 330 *i*PKPab **PKPab 18 40 58.5 -0.1**
KBA Koelnbreinsper 159.21 336 *e*P **PKPab 18 40 59.7 +0.7**
comp=Z,5.4nm,0.5s
VAM Vamos 159.22 295 P **PKPab 18 40 58.5 -0.7**
GCIS Gornji Cirnik 159.29 330 *e*PKPab **PKPab 18 40 58.9 -0.2**
FNA Florina 159.38 311 PKIKP **PKPdf 18 40 18.6 -1.4**
FNA PKP **PKPab 18 40 59.2 -0.6**
FNA Florina 159.38 311 PKPdf **PKPdf 18 40 18.6 -1.4**
FNA **PKPab 18 40 59.2 -0.6**
MYKA Terra Mystica 159.48 334 *i*P **PKPab 18 40 59.6 -0.4**
comp=Z,13nm,0.7s
BFO Black Forest 159.54 346 PKP2 **PKPab 18 40 59.8 -0.3**
BFO Black Forest 159.54 346 *e*PKPab **PKPab 18 41 00.2 +0.1**
baz=21,slow=4.4
BFO Black Forest 159.54 346 PKPab **PKPab 18 40 59.8 -0.3**
OHR Ohrid 159.59 313 *i*P **PKPab 18 41 00.8 +0.1**
WATA Walderalm 159.59 339 *e*P **PKPab 18 41 01.0 +0.5**
comp=Z,17nm,0.6s
LJU Ljubljana 159.61 332 *e*PKPdf **PKPdf 18 40 18.6 -1.5**
LJU *e*PKPab **PKPab 18 41 00.3 -0.1**
WTTA Wattenberg 159.63 339 *e*P **PKPab 18 41 01.4 +0.7**
comp=Z,31nm,0.9s,SNR=6.5
RETA Reutte 159.70 341 *e*P **PKPab 18 41 01.6 +0.7**
comp=Z,22nm,0.6s,SNR=7.8
UBR Ueberruh 159.71 342 *e*PKPab **PKPab 18 41 01.9 +1.0**
baz=21,slow=4.4
MOTA Moosalm 159.73 340 *e*P **PKPab 18 41 01.7 +0.6**
comp=Z,58nm,1.2s,SNR=12
ABTA Abfaltersbach 159.79 337 *i*P **PKPab 18 41 01.0 -0.3**
comp=Z,16nm,0.6s
SQTA Sankt Quirin 159.81 339 *e*P **PKPab 18 41 02.0 +0.6**
comp=Z,21nm,0.8s,SNR=8.5
KTHA Kythira Island 159.91 298 P **PKPab 18 41 00.5 -1.7**
ANX Ano Chora 159.98 305 P **PKPab 18 41 00.5 -2.0**
KLV Kalavryta, Ach 160.02 303 P **PKPab 18 41 00.8 -1.9**
FETA Feichten 160.13 340 *e*P **PKPab 18 41 03.5 +0.6**
comp=Z,28nm,1.1s,SNR=6.0
DAVA Damuels 160.13 342 *i*P **PKPab 18 41 03.5 +0.6**
comp=Z,24nm,0.6s,SNR=7.3
DRO Drossia 160.38 304 P **PKPab 18 41 03.6 -0.6**
ITM Ithomi 160.50 301 P **PKPab 18 41 02.0 -2.7**
DAVOX Davos/Dischmat 160.60 341 PKPab **PKPab 18 41 05.5 +0.5**
comp=Z,30nm,0.5s,baz=299,slow=2.6,SNR=32
CTI Castel Tesino 160.70 337 PKIKP **PKPdf 18 40 20.5 -0.9**
CTI 18 41 04.6
CTI Castel Tesino 160.70 337 PKPdf **PKPdf 18 40 20.5 -0.9**
CTI PKPab **PKPab 18 41 04.6 -0.7**
PYL PYLOS 160.73 301 P **PKPab 18 41 03.6 -2.2**
TORD Torodi Ar. Bea 164.57 183 PKP **PKPdf 18 40 25.9 0.0**
comp=Z,12nm,1.1s,baz=322,slow=1.2,SNR=29
TORD PKPab **PKPab 18 41 23.4 +0.6**
comp=Z,19nm,0.9s,baz=170,slow=3.6,SNR=34
TORD PP **PP 18 45 09.2 +0.7**
comp=Z,1.3nm,0.8s,baz=175,slow=3.0,SNR=2.6
TORD Torodi Ar. Bea 164.57 183 **PKPdf 18 40 25.2 -0.7**
TORD **PKPab 18 41 23.1 +0.3**
KOWA Kowa 165.18 161 PKP **PKPdf 18 40 26.6 +0.2**
comp=Z,6.3nm,0.8s,baz=299,slow=1.0,SNR=6.8
KOWA Kowa 165.18 161 **PKPdf 18 40 26.2 -0.2**
ESDC Sonseca Array 168.26 19 PKP **PKPdf 18 40 28.0 -0.1**
comp=Z,7.3nm,1.2s,baz=341,slow=3.0,SNR=9.8
ESDC PKPab **PKPab 18 41 39.0 +0.2**
comp=Z,3.3nm,1.1s,baz=333,slow=5.2,SNR=5.6
PAB San Pablo 168.26 21 PKIKP **PKPdf 18 40 29.2 +1.1**
PAB San Pablo 168.26 21 **PKPdf 18 40 29.2 +1.1**
KEST Kesra 170.00 317 PKP **PKPdf 18 40 29.2 -0.1**
comp=Z,2.0nm,0.9s,baz=243,slow=2.3,SNR=4.0
KEST PKPab **PKPab 18 41 47.4 +0.7**
comp=Z,10nm,1.0s,baz=342,slow=7.5,SNR=4.9
KEST Kesra 170.00 317 PKPab **PKPab 18 41 47.2 +0.5**
TAM Tamanrasset 172.88 216 PKIKP **PKPdf 18 40 31.5 +0.3**
TAM PKP **PKPab 18 42 00.6 +0.8**
TAM Tamanrasset 172.88 216 **PKPdf 18 40 31.4 +0.3**
TAM PKPab **PKPab 18 42 00.6 +0.8**
MDT Midelt 173.64 48 PKP **PKPdf 18 40 32.2 +1.1**
comp=Z,6.9nm,0.9s,baz=243,slow=2.3,SNR=2.3

*SKHL **04** 18:21:23.8±0.2, 44°.73N×149°.39E, h35km±4km, mb4.5/4*
*JMA **04** 18:21:25.5±0.7, 45°.03N×149°.04E, h30km, M3.9*
ISC 04 18:21:21.5±3.7, 44°.59N±0°.08×149°.6E±0°.2, h35km, n22,
σ2s76/34, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.36**	**299**	*i* P		**Pn**	**18 21 43.0**	**-1.0**
KUR					AMB	AMB	18 21 43.0	
	210nm,0.4s							
KUR				*i* S		**Sn**	**18 21 57.5**	**-3.3**
KUR					A	A	18 21 58.4	
	258nm,0.5s							
KUR					A	A	18 21 58.4	
	2μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**2.71**	**259**	*i* P		**Pn**	**18 22 04.0**	**+1.4**
YUK					AMB	AMB	18 22 07.0	
	130nm,0.4s							
YUK				*i* S		**Sn**	**18 22 34.0**	**-0.1**
YUK					A	A	18 22 38.0	
	405nm,0.5s							
YUK					A	A	18 22 38.0	
	273nm,0.5s							
GRPR	**Tuman**	**2.79**	**259**	*e*P		**Pn**	**18 22 06.0**	**+2.4**
GRPR					AMB	AMB	18 22 09.0	
	85nm,0.4s							
GRPR				*i* S		**Sn**	**18 22 36.0**	**0.0**
GRPR					A	A	18 22 45.0	
	338nm,0.3s							
GRPR					A	A	18 22 45.0	
	165nm,0.3s							
NEM2	**Nemuro 2**	**3.02**	**247**	P		**Pn**	**18 22 08.2**	**+1.5**
NEM2				*e*S		**Sn**	**18 22 40.2**	**-1.4**
NMR	**Nemuro--Hokkai**	**3.03**	**247**	*i* P		**Pn**	**18 22 08.0**	**+1.1**
NMR				*i* S		**Sn**	**18 22 40.0**	**-1.8**
GLVR	**Golovnino**	**3.03**	**255**	*e*P		**Pn**	**18 22 09.0**	**+2.1**
GLVR					AMB	AMB	18 22 12.0	
	87nm,0.5s							
GLVR				*e*S		**Sn**	**18 22 44.0**	**+2.0**
GLVR					A	A	18 22 50.0	
	532nm,0.5s							
GLVR					A	A	18 22 50.0	
	287nm,0.5s							
JRA	**Rausu**	**3.26**	**260**	P		**Pn**	**18 22 12.6**	**+2.6**
JNK	**Nakash**	**3.63**	**256**	P		**Pn**	**18 22 17.8**	**+2.6**
JNK				*e*S		**Sn**	**18 22 55.6**	**-1.2**
JAK	**Akkeshi**	**3.87**	**247**	P		**Pn**	**18 22 20.4**	**+2.0**
JAK				*e*S		**Sn**	**18 23 01.1**	**-1.5**
JTKR	**Abashiri--Toko**	**4.11**	**263**	P		**Pn**	**18 22 24.1**	**+2.4**
JAR	**Ashorobuto**	**4.38**	**255**	P		**Pn**	**18 22 28.8**	**+3.3**
JAR				*e*S		**Sn**	**18 23 15.5**	**+0.3**
JOB	**Onbets**	**4.48**	**250**	P		**Pn**	**18 22 29.8**	**+3.0**
JCH	**Churui**	**4.92**	**248**	P		**Pn**	**18 22 35.7**	**+2.8**
JCH				*e*S		**Sn**	**18 23 26.9**	**-1.6**
JKK2	**Kamakawa 2**	**4.95**	**264**	P		**Pn**	**18 22 36.7**	**+3.4**
JNBK	**Urakawa-nobuka**	**5.47**	**247**	P		**Pn**	**18 22 42.7**	**+2.2**
JNB	**Noboribetsu**	**6.55**	**254**	P		**Pn**	**18 22 57.8**	**+2.5**
JYM2	**Yakumo 2**	**7.14**	**253**	P		**Pn**	**18 23 05.6**	**+2.2**
JANG	**Nango**	**7.29**	**237**	P		**Pn**	**18 23 07.4**	**+1.9**
JANG				*e*S		**Sn**	**18 24 22.2**	**-4.7**
JTM	**Tenmabayashi**	**7.32**	**242**	P		**Pn**	**18 23 07.9**	**+2.0**
JTM				*e*S		**Sn**	**18 24 23.3**	**-4.4**
JTH	**Tanohata**	**7.36**	**233**	*e*S		**Sn**	**18 24 22.8**	**-5.9**
OFUJ	**Ofunato**	**8.06**	**230**	*e*S		**Sn**	**18 24 41.2**	**-4.8**
JIO	**Ouri**	**8.69**	**228**	P		**Pn**	**18 23 27.1**	**+2.5**
JIO				*e*S		Sn	18 24 56.0	-5.3

*IDC **04** 18:45:33.8±1.4, 36°.58S×176°.98E, h290km±11km, mb4.0/6, mb1 4.2/6, mb1mx3.6/23, mbtmp4.6/6, Error ellipse: s-maj=25.2km s-min=15.1km az=34.0*
*NEIC **04** 18:45:34.6±2.0, 37°.05S±0°.07×176°.70E±0°.08, h294km±5km, mb4.4/26, ML3.8(WEL), Error ellipse: s-maj=12.4km s-min=6.5km az=215.0*
*WEL **04** 18:45:35.6, 37°.5S×17°.7E, h290km±8km, M3.8/61, MLv3.8/61, Error ellipse: s-maj=0.0km s-min=0.0km az=0.5*
ISC 04 18:45:35.0±0.6, 37°.10S±0°.06×176°.71E±0°.06, h297km±5km, n218, σ1s29/229, mb4.4/16, North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MYRZ	**Mayor Island**	**0.41**	**245**	P		**Pn**	**18 46 13.1**	**+0.1**
TGRZ	**Tauranga**	**0.72**	**210**	P		**Pn**	**18 46 14.4**	**+0.6**
OPRZ	**Ohinepanea**	**0.75**	**189**	P		**Pn**	**18 46 14.3**	**+0.4**
WHRZ	**Whale Island**	**0.78**	**164**	P		**Pn**	**18 46 15.1**	**+1.1**
KUZ	**Kuaotunu**	**0.87**	**294**	P		**Pn**	**18 46 13.8**	**-0.6**
MARZ	**Manawahe**	**0.88**	**182**	P		**Pn**	**18 46 15.1**	**+0.6**
KARZ	**Kaharoa**	**0.99**	**202**	P		**Pn**	**18 46 16.0**	**+1.1**
OMRZ	**Omania**	**1.04**	**195**	P		**Pn**	**18 46 16.1**	**+0.9**
MKRZ	**Makatiti**	**1.05**	**190**	P		**Pn**	**18 46 16.8**	**+1.5**
HAZ	**Te Kaha**	**1.07**	**128**	P		**Pn**	**18 46 14.5**	**-0.8**
HAZ				S		**S**	**18 46 43.8**	**-3.5**
TARZ	**Mount Tarawera**	**1.14**	**188**	P		**Pn**	**18 46 16.9**	**+1.1**
TOZ	**Tahuroa Road**	**1.15**	**237**	P		**Pn**	**18 46 16.7**	**+1.1**
RUGZ	**Raukumara Rang**	**1.15**	**139**	P		**Pn**	**18 46 14.8**	**-1.1**
RUGZ				S		**S**	**18 46 43.4**	**-4.9**
HLRZ	**Highlands Stat**	**1.18**	**194**	P		**Pn**	**18 46 17.5**	**+1.6**
URZ	**Urewera**	**1.20**	**165**	P		**Pn**	**18 46 15.8**	**-0.1**
	69nm,0.3s,baz=258,slow=3.9,SNR=545							
URZ				S		**S**	**18 46 47.0**	**-1.4**
	138nm,0.3s,baz=252,slow=7.3,SNR=50							
URZ	**Urewera**	**1.20**	**165**	P		**Pn**	**18 46 15.6**	**-0.3**
URZ				S		**S**	**18 46 47.0**	**-1.4**
URZ	**Urewera**	**1.20**	**165**			**Pn**	**18 46 15.4**	**-0.5**
MKAZ	**Moumakai**	**1.24**	**269**	P		**Pn**	**18 46 16.6**	**+0.4**
RRRZ	**Republican Roa**	**1.24**	**187**	P		**Pn**	**18 46 17.1**	**+0.8**
HSRZ	**Hossack Road**	**1.26**	**197**	P		**Pn**	**18 46 18.0**	**+1.7**
WIAZ	**Waiheke Island**	**1.30**	**283**	P		**Pn**	**18 46 16.6**	**0.0**
GRZ	**Great Barrier**	**1.32**	**310**	P		**Pn**	**18 46 15.6**	**-1.2**
HRRZ	**Handcock Road**	**1.33**	**195**	P		**Pn**	**18 46 17.8**	**+1.0**
GRRZ	**Galatos Road**	**1.33**	**201**	P		**Pn**	**18 46 18.1**	**+1.4**
PKGZ	**Pakihiroa**	**1.34**	**126**	P		**Pn**	**18 46 16.8**	**-0.1**
PKGZ				S		**S**	**18 46 48.1**	**-2.1**
MXZ	**Matakaoa Point**	**1.35**	**110**	P		**Pn**	**18 46 16.1**	**-0.8**
MXZ				S		**S**	**18 46 47.4**	**-2.7**
MXZ	**Matakaoa Point**	**1.35**	**110**			**Pn**	**18 46 15.9**	**-0.9**
MUGZ	**Murupara**	**1.37**	**178**	P		**Pn**	**18 46 17.4**	**+0.4**
MWZ	**Matawai**	**1.39**	**152**	P		**Pn**	**18 46 17.1**	**-0.1**
MWZ				S		**S**	**18 46 49.3**	**-1.3**
PRRZ	**Plateau Road**	**1.42**	**190**	P		**Pn**	**18 46 18.4**	**+1.1**
ETAZ	**East Tamaki Re**	**1.43**	**275**	P		**Pn**	**18 46 17.9**	**+0.5**
TWGZ	**Tauwhareparae**	**1.47**	**137**	P		**Pn**	**18 46 18.3**	**+0.7**
WPRZ	**Whakapapataran**	**1.48**	**197**	P		**Pn**	**18 46 19.0**	**+1.3**
ALRZ	**Allen Road**	**1.48**	**191**	P		**Pn**	**18 46 18.7**	**+1.0**
MBAZ	**Motutapu North**	**1.49**

HIZ	Hauiti	2.03 226	P		Pn	18 46 23.9 +2.2
HIZ	Hauiti	2.03 226			Pn	18 46 23.4 +1.7
PRGZ	Paritu Road	2.04 153	P		Pn	18 46 22.5 +0.8
KNZ	Kokohu	2.06 159	P		Pn	18 46 22.7 +0.9
BKZ	Black Stump Fm	2.07 185	P		Pn	18 46 22.7 +0.7
BKZ	Black Stump Fm	2.07 185			Pn	18 46 22.6 +0.7
KRVZ	Karewarewa	2.16 203	P		Pn	18 46 24.0 +1.2
TMVZ	Te Maari	2.16 201	P		Pn	18 46 24.1 +1.3
ARHZ	Aropaoanui	2.17 174	P		Pn	18 46 24.2 +1.5
ETVZ	East Tongariro	2.18 201	P		Pn	18 46 24.4 +1.4
WTVZ	West Tongariro	2.19 203	P		Pn	18 46 24.5 +1.4
TWVZ	Taurewa	2.21 207	P		Pn	18 46 24.6 +1.4
OTVZ	Oturere	2.22 202	P		Pn	18 46 24.8 +1.5
WCZ	Waipu Caves	2.23 301	P		Pn	18 46 23.0 -0.4
NGZ	Ngauruhoe	2.25 203	P		Pn	18 46 25.2 +1.6
MHGZ	Mahia Peninsul	2.25 156	P		Pn	18 46 24.7 +1.2
TUVZ	Tukino	2.32 201	P		Pn	18 46 25.5 +1.3
KWHZ	Kaweka Forest	2.33 185	P		Pn	18 46 25.5 +1.3
FWVZ	Far West T-bar	2.33 203	P		Pn	18 46 25.9 +1.4
MCHZ	McNeill Hill	2.34 180	P		Pn	18 46 25.8 +1.6
DRZ	Dome Shelter	2.35 202	P		Pn	18 46 26.4 +1.7
WHVZ	Whangaehu Hut	2.35 202	P		Pn	18 46 26.0 +1.4
WNVZ	Wahianoa	2.39 201	P		Pn	18 46 26.1 +1.3
MOVZ	Moawhango	2.42 198	P		Pn	18 46 25.9 +0.9
PKVZ	Pokaka	2.43 206	P		Pn	18 46 26.7 +1.6
BHHZ	Black Hill Sta	2.44 192	P		Pn	18 46 26.1 +1.0
MTVZ	Mangateitei	2.48 203	P		Pn	18 46 27.1 +1.5
VRZ	Vera Road	2.54 217	P		Pn	18 46 28.5 +2.5
KRHZ	Kereru	2.55 186	P		Pn	18 46 27.2 +1.1
CKHZ	Cape Kidnapper	2.57 174	P		Pn	18 46 27.5 +1.3
KAHZ	Kahuranaki	2.69 177	P		Pn	18 46 28.9 +1.5
PNHZ	Pukenui	2.83 168	P		Pn	18 46 29.7 +0.8
PXZ	Pawanui	2.93 178	P		Pn	18 46 30.7 +1.0
WPHZ	Waipukurau	2.96 184	P		Pn	18 46 31.5 +1.5
LREZ	Lake Rotokare	2.97 217	P		Pn	18 46 32.7 +2.6
WAZ	Wanganui	2.97 207	P		Pn	18 46 31.8 +1.6
NEZ	North Egmont	2.99 223	P		Pn	18 46 34.0 +3.6
PKE	Pukeiti	2.99 225	P		Pn	18 46 33.5 +3.1
TSZ	Takapari Road	3.01 191	P		Pn	18 46 31.3 +0.8
KHEZ	Kahui Hut	3.05 223	P		Pn	18 46 34.1 +3.1
OUZ	Omahuta	3.14 306	P		Pn	18 46 31.2 -0.8
OUZ	Omahuta	3.14 306			Pn	18 46 31.2 -0.8
PRHZ	Porangahau	3.16 181	P		Pn	18 46 33.3 +1.3
DVHZ	Dannevirke	3.22 187	P		Pn	18 46 33.5 +0.8
OHWZ	Ohakea	3.29 199	P		Pn	18 46 35.0 +1.7
ANWZ	Angora Road	3.36 183	P		Pn	18 46 35.5 +1.5
POWZ	Post Office Ro	3.37 192	P		Pn	18 46 35.3 +1.2
PRWZ	Pori Road	3.50 189	P		Pn	18 46 37.0 +1.5
BFZ	Birch Farm	3.59 186	P		Pn	18 46 37.2 +0.7
BFZ	Birch Farm	3.59 186	Pn		Pn	18 46 37.1 +0.6
MRZ	Mangatainoka R	3.66 194	P		Pn	18 46 37.8 +0.5
TIWZ	Tintock	3.72 190	P		Pn	18 46 39.0 +1.0
CPWZ	Castlepoint	3.82 186	P		Pn	18 46 40.9 +2.0
OGWZ	Otaki Gorge	3.90 197	P		Pn	18 46 40.5 +0.7
HOWZ	Holdsworth Sta	3.90 193	P		Pn	18 46 40.1 +0.2
KIW	Kapiti Island	4.01 200	P		Pn	18 46 41.4 +0.4
TMWZ	Te Maipa	4.05 189	P		Pn	18 46 42.2 +0.7
MTW	Mount Morrison	4.16 193	P		Pn	18 46 42.7 +0.1
CAW	Cannon Point	4.20 197	P		Pn	18 46 43.6 +0.4
DUWZ	D'Urville Isla	4.29 210	P		Pn	18 46 44.4 +0.2
TRWZ	Traveller	4.36 190	P		Pn	18 46 45.6 +0.6
PAWZ	Paruwai Farm	4.39 193	P		Pn	18 46 45.7 +0.4
WEL	Wellington	4.44 199	P		Pn	18 46 46.2 +0.4
MSWZ	Moikau Station	4.45 194	P		Pn	18 46 46.2 +0.2
MSWZ	Moikau Station	4.45 194			Pn	18 46 46.2 +0.2
SNZO	South Karori	4.48 200	Pn		Pn	18 46 46.4 +0.1
TCW	Tory Channel	4.52 204	P		Pn	18 46 47.0 +0.3
BHW	Baring Head	4.53 198	P		Pn	18 46 47.1 +0.2
BHW	Baring Head	4.53 198			Pn	18 46 47.0 +0.2
PLWZ	Palliser	4.60 194	P		Pn	18 46 47.7 0.0
PLWZ	Palliser	4.60 194	Pn		Pn	18 46 48.0 +0.2
TUWZ	Tuamarina	4.82 206	P		Pn	18 46 50.4 +0.1
TUWZ	Tuamarina	4.82 206			Pn	18 46 50.2 0.0
NNZ	Nelson	4.86 211	P		Pn	18 46 50.5 -0.1
NNZ	Nelson	4.86 211	Pn		Pn	18 46 50.4 -0.1
QRZ	Quartz Range	4.94 220	P		Pn	18 46 51.1 -0.5
QRZ	Quartz Range	4.94 220	Pn		Pn	18 46 51.4 -0.2
CMWZ	Cape Campbell	5.03 202	Pn		Pn	18 46 51.9 -0.7
BSWZ	Blackbirch Sta	5.10 205	P		Pn	18 46 53.9 +0.5
BSWZ	Blackbirch Sta	5.10 205			Pn	18 46 53.7 +0.2
THZ	Tophouse	5.51 211	P		Pn	18 46 58.1 -0.2
THZ	Tophouse	5.51 211	Pn		Pn	18 46 58.6 +0.3
KHZ	Kahutara	5.84 204	P		Pn	18 47 02.7 +0.6
KHZ	Kahutara	5.84 204	Pn		Pn	18 47 02.9 +0.8
DSZ	Denniston Nort	5.99 218	P		Pn	18 47 04.2 +0.2
GVZ	Greta Valley S	6.50 205	P		Pn	18 47 10.4 +0.3
LTZ	Lake Taylor	6.62 210	P		Pn	18 47 11.4 -0.1
LTZ	Lake Taylor	6.62 210	Pn		Pn	18 47 11.4 -0.1
INZ	Inchbonnie	6.92 214	P		Pn	18 47 15.1 -0.1
OXZ	Oxford	7.17 208	P		Pn	18 47 17.8 -0.5
OXZ	Oxford	7.17 208			Pn	18 47 17.4 -0.9
OKCZ	Okains Bay	7.17 202	P		Pn	18 47 18.9 +0.6
MQZ	McQueen's Vall	7.29 204	P		Pn	18 47 19.0 -0.6
MQZ	McQueen's Vall	7.29 204	Pn		Pn	18 47 18.7 -0.9
RACZ	Rakaia	7.48 206	P		Pn	18 47 21.8 -0.2
MHCZ	Mount Hutt	7.53 210	P		Pn	18 47 22.1 -0.5
WACZ	Wakanui South	7.77 207	P		Pn	18 47 25.9 +0.3
RPZ	Rata Peaks	7.89 211	P		Pn	18 47 27.3 +0.3
	1.0nm,0.3s,baz=255,slow=1.9,SNR=9.1					
RPZ			S		S	18 48 52.8 -5.1
	4.9nm,0.3s,baz=312,slow=23,SNR=13					
RPZ	Rata Peaks	7.89 211	P		Pn	18 47 27.1 +0.1
RPZ	Rata Peaks	7.89 211	Pn		Pn	18 47 26.8 -0.3
GCSZ	Gaunt Creek Bo	7.89 216	P		Pn	18 47 27.1 0.0
ARCZ	Arundel	8.03 210	P		Pn	18 47 28.4 -0.4
FOZ	Fox Glacier	8.30 217	P		Pn	18 47 31.9 -0.2
FOZ	Fox Glacier	8.30 217	Pn		Pn	18 47 31.8 -0.3
LBZ	Lake Benmore	8.80 212	P		Pn	18 47 38.4 +0.2
LBZ	Lake Benmore	8.80 212	Pn		Pn	18 47 38.6 +0.3
ODZ	Otahua Downs	9.16 208	P		Pn	18 47 43.6 +1.0
ODZ	Otahua Downs	9.16 208	Pn		Pn	18 47 43.4 +0.8
WKZ	Wanaka	9.66 215	Pn		Pn	18 47 46.5 -2.4
MLZ	Mavora Lakes	10.48 215	P		Pn	18 48 00.2 +1.2
MLZ	Mavora Lakes	10.48 215	Pn		Pn	18 47 58.6 -0.4
DCZ	Deep Cove	11.01 218			Pn	18 48 06.7 +1.3
STKA	Stephens Creek	29.30 270	P		P	18 51 10.3 -0.3
CTAO	Charters Tower	31.48 294	P		P	18 51 30.4 +0.6
BBOO	Buckleboo	33.41 265	P		P	18 51 47.6 +1.2
BBOO			IAmb		IAmb	18 52 00.8
	comp=Z,22nm,1.4s					
PPTF	Pamatai, Papee	35.45 66	P		P	18 52 05.3 +1.4
AS31	Alice Springs	38.96 278	P		P	18 52 33.9 +0.6
ASAR	Alice Springs	38.96 278	P		P	18 52 34.0 +0.8
	comp=Z,7.7nm,0.6s,baz=121,slow=8.2,SNR=215					
ASAR			ScP		ScP	18 57 55.3 -1.3
	comp=Z,0.5nm,0.6s,baz=119,slow=3.4,SNR=8.5					
ASAR			S		S	18 58 11.3 +1.9
	comp=Z,0.2nm,0.7s,baz=116,slow=14,SNR=4.1					
ASAR	Alice Springs	38.96 278	P		P	18 52 33.5 +0.3
ASAR					ScP	18 57 54.9 -1.7
RABL	Rabaul	39.74 320	P		P	18 52 40.6 +0.9
RABL			IAmb		IAmb	18 52 43.2
	comp=Z,14nm,0.6s					
WR0	Warramunga Arr	40.43 283	P		P	18 52 45.4 +0.2
FORT	Forrest	40.50 264	P		P	18 52 46.8 +1.1
FORT			IAmb		IAmb	18 52 48.0
	comp=Z,22nm,0.8s					
WB2	Warramunga Arr	40.58 283	P		P	18 52 46.7 +0.1
WB2			IAmb		IAmb	18 52 47.6
	comp=Z,7.2nm,0.7s					
WRA	Warramunga Arr	40.59 283	P		P	18 52 46.9 +0.3
	comp=Z,4.8nm,0.5s,baz=121,slow=7.8,SNR=112					
WRA			ScP		ScP	18 58 01.4 -1.5
	comp=Z,0.5nm,0.6s,baz=116,slow=3.8,SNR=9.1					
WRA	Warramunga Arr	40.59 283	P		P	18 52 47.0 +0.4
WB0	Warramunga Arr	40.65 283	P		P	18 52 47.5 +0.4
VNDA	Vanda	41.03 185	P		P	18 52 47.2 -2.2
MTN	Manton Dam	47.28 289	P		P	18 53 39.3 -0.1
MTN			PcP		PcP	18 55 04.6 -0.7
KNRA	Kununurra	47.38 284	P		P	18 53 40.7 +0.5
KNRA			IAmb		IAmb	18 53 45.9
	comp=Z,38nm,1.6s					
NWAO	Narrogin (SRO)	48.20 256	P		P	18 53 46.5 +0.3
NWAO			IAmb		IAmb	18 54 17.2
	comp=Z,25nm,1.3s					
NWAO	Narrogin (SRO)	48.20 256	P		P	18 53 46.6 +0.3
NWAO			IAmb		IAmb	18 54 17.2
	comp=Z,22nm,1.4s					
FITZ	Fitzroy Crossi	48.45 279	P		P	18 53 49.2 +0.9
SAUI	Saumlaki	50.30 294	P		P	18 54 02.5 +0.3
MORW	Morawa	50.72 260	P		P	18 54 05.9 +0.7
QSPA	South Pole Qui	53.02 180	P		P	18 54 25.2 +3.5
	comp=Z,10nm,0.7s,baz=354,slow=0.9,SNR=52					
QSPA	South Pole Qui	53.02 180	P		P	18 54 24.3 +2.6
QSPA			IAmb		IAmb	18 54 25.9
	comp=Z,11nm,0.8s					
FAKI	Fak Fak	53.11 299	P		P	18 54 21.7 -1.2
MMRI	Maumere	56.70 286	P		P	18 54 49.1 +0.6
MMRI			IAmb		IAmb	18 55 22.5
	comp=Z,15nm,0.9s					
CISI	Cisompet, Garu	68.66 277	P		P	18 56 07.4 +0.3
SNAA	Sanae	71.53 180	P		P	18 56 23.9 +0.4
SNAA			IAmb		IAmb	18 56 39.0
	comp=Z,5.9nm,1.5s					
VNA3	Neumayer Olymp	71.86 178	P		P	18 56 26.3 +0.9
VNA2	Neumayer--Watz	72.24 179	P		P	18 56 28.6 +1.0
	baz=171,slow=6.0					
KSM	Kuching	72.27 286	P		P	18 56 28.6 -0.1
KSM			IAmb		IAmb	18 56 56.6
	comp=Z,10nm,1.3s					
PLCA	Paso Flores	81.05 135	P		P	18 57 19.4 +2.0
	comp=Z,1.0nm,0.6s,baz=258,slow=6.1,SNR=4.2					
PLCA	Paso Flores	81.05 135	P		P	18 57 20.2 +2.8
PLCA			IAmb		IAmb	18 57 24.1
	comp=Z,9.9nm,1.6s					
PETK	Petropavlovsk-	91.35 349	P		P	18 58 04.8 -1.9
	comp=Z,9.1nm,1.1s,baz=147,slow=6.7,SNR=1.4					
CMAR	Chiang Mai Arr	91.62 292	P		P	18 58 09.3 +0.5
	comp=Z,1.7nm,0.7s,baz=146,slow=3.4,SNR=12					
CMAR	Chiang Mai Arr	91.62 292	P		P	18 58 09.0 +0.2
HHC	Hu-ho-hao-te	97.84 316	*e*P		Pdif	18 58 38.9 +2.0
HHC			pmax		pmax	
	comp=Z,8.0nm,1.0s					
HHC			pmax		pmax	
	comp=Z,210nm,7.6s					
MKAR	Makanchi Array	118.61 309	PKP		PKPdf	19 03 45.3 -2.0
	comp=Z,0.6nm,0.5s,baz=162,slow=1.0,SNR=5.9					
ZALV	Zalesovo Beam	120.01 317	PKP		PKPdf	19 03 47.6 -2.1
	comp=Z,0.4nm,0.5s,baz=45,slow=2.2,SNR=2.1					
ARCES	ARCESS Array B	143.97 343	PKP		PKPab	19 04 31.5 -0.8
	comp=Z,2.9nm,0.5s,baz=30,slow=2.2,SNR=25					
KBZ	Khabaz	144.59 295	PKP		PKPbc	19 04 34.7 -0.7
	comp=Z,4.9nm,0.9s,baz=147,slow=3.9,SNR=5.5					
FINES	FINESS Array B	149.49 332	PKPbc		PKPbc	19 04 46.5 -1.8
	comp=Z,4.7nm,0.7s,baz=32,slow=4.0,SNR=23					
DBIC	Dimbokro	149.67 177	PKPbc		PKPbc	19 04 50.0 -0.2
	comp=Z,3.3nm,0.8s,baz=72,slow=3.2,SNR=2.4					
BRTR	Keskin Array B	151.07 287	PKPbc		PKPbc	19 04 52.1 -0.9
	comp=Z,3.2nm,0.8s,baz=156,slow=3.7,SNR=9.8					
AKASG	Malin Array Be	153.16 311	PKPbc		PKPbc	19 04 55.3 -1.8
	comp=Z,1.2nm,0.5s,baz=66,slow=2.7,SNR=7.2					
AKASG			PKPab		PKPab	19 05 08.9 -1.3
	comp=Z,0.7nm,0.4s,baz=57,slow=4.5,SNR=3.2					
TORD	Torodi Ar. Bea	155.73 192	PKPab		PKPab	19 05 22.8 +0.9
	comp=Z,1.0nm,0.5s,baz=158,slow=4.0,SNR=6.2					
CLL	Collm	161.67 326	*e*PKPab		PKPab	19 05 46.0 -0.9

*IDC **04** 18:46:53.0±3.0, 35°.95N×141°.56E, h0km, mb3.5/2, mb1 3.5/3, mb1mx3.3/34, mbtmp3.3/3, ML2.1/1, Error ellipse: s-maj=73.9km s-min=31.6km az=44.0*
*JMA **04** 18:46:59.5±0.2, 35°.82N×141°.05E, h36km±1km, M2.5*
ISC 04 18:46:57.7±2.3, 35°.84N±0°.10×141°.3E±0°.1, h26km±12km, n17, σ1s97/15, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.36 248		P	Pb	18 47 06.1	+0.4
CHOJ				S	Sb	18 47 10.9	-0.3
JIHU	Itakohorinouch	0.62 282		P	Pn	18 47 09.9	-0.9
JSMT	Sammumatsuo	0.70 254		P	Pn	18 47 10.7	-1.2
JHYU	Hitachinakayam	0.75 312		P	Pn	18 47 12.4	-0.2
JHYU				*e*S	Sn	18 47 21.1	-2.0
JYT	Yasato	0.96 294		P	Pn	18 47 14.1	-1.4
JHO	Hitachi	0.96 324		P	Pn	18 47 15.5	0.0
JAG	Ashikaga	1.58 292		P	Pn	18 47 22.9	-1.2
MJAR	Matsushiro Arr	2.58 287		Pn	Pn	18 47 38.1	+0.4
	0.3nm,0.3s,baz=100,slow=9.4,SNR=14						
MJAR				Sn	Sn	18 48 13.5	+5.3
	0.2nm,0.3s,baz=87,slow=13,SNR=4.8						
MAT	Matsushiro	2.58 287		P	Pn	18 47 38.1	+0.3
MAT				*e*S	Sn	18 48 06.1	-2.2
H11N2	WAKE ISLAND Hy	27.66 119		T	T	19 21 46.8	
	baz=311,slow=75,SNR=11						
H11N1	WAKE ISLAND Hy	27.66 119		T	T	19 21 47.0	
	baz=311,slow=75,SNR=8.0						
H11N3	WAKE ISLAND Hy	27.67 119		T	T	19 21 48.1	
	baz=312,slow=75,SNR=15						
H11S1	WAKE ISLAND Hy	28.33 121		T	T	19 22 40.3	
	baz=312,slow=75,SNR=7.8						
H11S3	WAKE ISLAND Hy	28.33 121		T	T	19 22 40.4	
	baz=312,slow=75,SNR=6.5						
H11S2	WAKE ISLAND Hy	28.34 121		T	T	19 22 43.7	
	baz=312,slow=75,SNR=6.1						
MKAR	Makanchi Array	44.67 303		P	P	18 55 08.3	+0.1
	0.6nm,0.6s,baz=87,slow=9.6,SNR=6.3						
WRA	Warramunga Arr	55.86 198		P	P	18 56 33.3	+0.3
	0.2nm,0.5s,baz=4.9,slow=7.5,SNR=2.4						

IDC 04 19:09:12.5±999.0, 55°.51N×093°.93W, h0km, Error ellipse: s-maj=573.4km s-min=179.4km az=33.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I37NO	I37NO	16.23	25	*i*		20 55 50.0	
	baz=222,slow=338,SNR=0.8						
I43RU	DUBNA INFRASON	21.12	71	*i*		21 15 50.0	
	baz=290,slow=302,SNR=2.0						
I31KZ	AKTYUBINSK INF	34.94	73	*i*		22 45 30.7	
	baz=302,slow=325,SNR=2.5						

*IDC **04** 19:15:25.3±2.1, 11°.29N×44°.17E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/52, mbtmp3.8/5, ML3.4/1, MS3.1/2, Ms1 3.0/2, ms1mx2.6/39, Error ellipse: s-maj=65.0km s-min=13.3km az=178.0*
*NEIC **04** 19:15:27.7±2.1, 11°.7N±0°.1×44°.08E±0°.09, h9km±7km, mb4.1/5, Error ellipse: s-maj=20.9km s-min=6.1km az=143.0*
ISC 04 19:15:28.0±1.1, 11°.7N±0°.1×44°.09E±0°.09, h10km, n18, σ1s09/16, mb3.8/6, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I19DJ	I19DJ	0.92 258		Pg	Pg	19 15 46.3	+0.5
	baz=64,slow=20,SNR=1.8						
I19DJ				Lg	Lg	19 15 59.8	
	baz=69,slow=24						
ATD	Arta Tunnel	1.23 264		Pg	Pn	19 15 50.4	-0.9
	284nm,0.3s,baz=54,slow=11,SNR=286						
ATD				Lg	Lg	19 16 08.1	
	133nm,0.3s,baz=71,slow=23,SNR=14						
ATD	Arta Tunnel	1.23 264			Pn	19 15 49.8	-1.5
ATD				Sn	Sb	19 16 08.3	+1.0
DAMY	Dhamar	2.91 6			Pn	19 16 14.3	-0.4
DAMY				Sn	Sn	19 16 48.4	-1.4
KMBO	Kilima Mbogo	14.41 209		Lg	Lg	19 22 57.4	
	0.1nm,0.3s,baz=60,slow=20,SNR=1.9						
WSAR	Wadi Sarin	18.01 48		P	P	19 19 41.2	+2.2
	0.1nm,0.3s,baz=242,slow=13,SNR=5.7						
GNI	Garni	28.38 1		LR	LR	19 33 10.9	
	comp=Z,33nm,21.2s,baz=236,slow=37						
KBZ	Khabaz	31.96 358		LR	LR	19 36 16.7	
	comp=Z,32nm,18.3s,baz=94,slow=39						
ABKAR	Akbulak array	39.72 16		P	P	19 22 59.7	-0.9
ABKAR	Akbulak array	39.72 16		P	P	19 22 59.8	-0.8
ABKAR				IAmb	IAmb	19 23 05.3	
	comp=Z,2.4nm,1.1s						
AKASG	Malin Array Be	40.79 346		P	P	19 23 10.3	+0.9
TORD	Torodi Ar. Bea	41.40 277		P	P	19 23 14.8	-0.2
	comp=Z,0.8nm,0.9s,baz=90,slow=8.9,SNR=3.6						
TORD	Torodi Ar. Bea	41.40 277		IAmb	IAmb	19 23 21.8	
	comp=Z,1.7nm,1.2s						
MK31	Makanchi Array	47.55 35			P	19 24 03.2	-0.6
MK31				IAmb	IAmb	19 24 16.4	
	comp=Z,5.1nm,1.6s						
MKAR	Makanchi Array	47.55 35		P	P	19 24 04.0	+0.1
	comp=Z,0.6nm,0.9s,baz=216,slow=6.0,SNR=4.1						
ZALV	Zalesovo Beam	53.07 29		P	P	19 24 45.9	+0.5
	comp=Z,0.7nm,0.8s,baz=235,slow=5.1,SNR=2.6						
CMAR	Chiang Mai Arr	53.24 76		P	P	19 24 46.4	-0.9
	comp=Z,1.1nm,0.9s,baz=263,slow=8.9,SNR=6.4						
ARB1	ARCESS Array S	59.03 352		P	P	19 25 28.5	+0.6

WEL 04 19:33:46.7, 39°S±2°×17°5E±°, h165km±3km, M2.7/42, MLv2.7/42, Error ellipse: s-maj=0.0km s-min=0.0km az=130.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRZ	Vera Road	0.10 322		P	Pn	19 34 08.2	-0.5
VRZ				S	Sn	19 34 24.5	-0.9
PKVZ	Pokaka	0.41 103		P	Pn	19 34 09.4	-0.1
PKVZ				S	Sn	19 34 26.0	-0.9
MHEZ	Mangahewa	0.42 287		S	Sn	19 34 26.4	-0.4
LREZ	Lake Rotokare	0.42 232		P	Pn	19 34 09.9	+0.4
LREZ				S	Sn	19 34 27.3	+0.4
TWVZ	Taurewa	0.49 75		P	Pn	19 34 09.6	-0.3
DREZ	Durham Road	0.49 271		P	Pn	19 34 09.8	+0.1
MTVZ	Mangateitei	0.53 111		P	Pn	19 34 09.9	-0.1
MTVZ				S	Sn	19 34 26.7	-1.1
FWVZ	Far West T-bar	0.56 96		P	Pn	19 34 10.3	-0.1
FWVZ				S	Sn	19 34 27.3	-1.1
WAZ	Wanganui	0.56 168		P	Pn	19 34 10.5	+0.4
WAZ				S	Sn	19 34 26.8	-1.3
NEZ	North Egmont	0.58 263		P	Pn	19 34 10.6	+0.3
NEZ				S	Sn	19 34 28.3	0.0
WHVZ	Whangaehu Hut	0.59 98		P	Pn	19 34 10.6	+0.1
WTVZ	West Tongariro	0.59 82		P	Pn	19 34 10.4	0.0
WTVZ				S	Sn	19 34 27.6	-0.8
NGZ	Ngauruhoe	0.59 88		P	Pn	19 34 10.4	0.0
WNVZ	Wahianoa	0.60 102		P	Pn	19 34 10.7	+0.2
KRVZ	Karewarewa	0.64 80		P	Pn	19 34 10.4	-0.2
TUVZ	Tukino	0.64 96		P	Pn	19 34 11.0	+0.3
KHEZ	Kahui Hut	0.64 262		P	Pn	19 34 10.8	+0.2
OTVZ	Oturere	0.65 87		P	Pn	19 34 10.9	+0.2
PKE	Pukeiti	0.66 270		P	Pn	19 34 10.8	+0.2
TMVZ	Te Maari	0.68 83		P	Pn	19 34 11.3	+0.4
ETVZ	East Tongariro	0.68 85		P	Pn	19 34 11.3	+0.4
KATZ	Kakaramea	0.71 72		P	Pn	19 34 11.0	0.0
MOVZ	Moawhango	0.74 106		P	Pn	19 34 10.9	-0.2
NBEZ	Newall Road No	0.76 265		P	Pn	19 34 10.9	-0.3
NMEZ	Namu Road	0.77 254		P	Pn	19 34 11.4	+0.3
RATZ	Rangitukua	0.80 66		P	Pn	19 34 11.6	0.0
RITZ	Rihia Road	0.83 75		P	Pn	19 34 12.0	+0.3
WATZ	Wairara	0.86 55		P	Pn	19 34 12.2	+0.3
BHHZ	Black Hill Sta	0.99 107		P	Pn	19 34 12.7	-0.2
TLZ	Tolley Road	1.03 32		P	Pn	19 34 13.1	-0.2
OHWZ	Ohakea	1.07 160		P	Pn	19 34 13.4	0.0
TSZ	Takapari Road	1.22 135		P	Pn	19 34 15.1	+0.4
KWHZ	Kaweka Forest	1.25 101		P	Pn	19 34 15.6	+0.5
KRHZ	Kereru	1.27 111		P	Pn	19 34 15.5	+0.3
PNHZ	Pukenui	1.27 124		P	Pn	19 34 15.4	+0.2
BKZ	Black Stump Fm	1.29 89		P	Pn	19 34 15.2	-0.3
MCHZ	McNeill Hill	1.46 100		P	Pn	19 34 18.0	+0.9
DVHZ	Dannevirke	1.50 137		P	Pn	19 34 17.4	0.0
WPHZ	Waipukurau	1.51 125		P	Pn	19 34 17.8	+0.3
TOZ	Tahuroa Road	1.56 20		P	Pn	19 34 17.9	-0.1
MRZ	Mangatainoka R	1.56 159		P	Pn	19 34 17.9	-0.2
MTHZ	Maungataniwha	1.60 78		P	Pn	19 34 18.0	-0.4
OGWZ	Otaki Gorge	1.63 171		P	Pn	19 34 18.9	+0.2
KIW	Kapiti Island	1.66 178		P	Pn	19 34 18.8	-0.2
MUGZ	Murupara	1.68 65		P	Pn	19 34 18.5	-0.7
ARHZ	Aropaoanui	1.68 93		P	Pn	19 34 19.8	+0.5
KAHZ	Kahuranaki	1.69 111		P	Pn	19 34 19.8	+0.5
DUWZ	D'Urville Isla	1.75 203		P	Pn	19 34 19.6	-0.3
PRHZ	Porangahau	1.75 128		P	Pn	19 34 20.3	+0.4
TIWZ	Tintock	1.77 153		P	Pn	19 34 20.2	0.0
PXZ	Pawanui	1.77 119		P	Pn	19 34 20.4	+0.2
RTZ	Ruatahuna	1.77 71		P	Pn	19 34 19.9	-0.5
CKHZ	Cape Kidnapper	1.79 105		P	Pn	19 34 21.0	+0.6
BFZ	Birch Farm	1.83 144		P	Pn	19 34 21.1	+0.3
WHHZ	Waihua	1.87 87		P	Pn	19 34 21.6	+0.3
CAW	Cannon Point	1.91 175		P	Pn	19 34 21.6	-0.1
URZ	Urewera	2.01 63		P	Pn	19 34 22.2	-0.7
MTW	Mount Morrison	2.02 166		P	Pn	19 34 22.4	-0.5
TCW	Tory Channel	2.05 192		P	Pn	19 34 23.0	-0.3
TMWZ	Te Maip

STKA	Stephens Creek	43.91	240	IAmb	IAmb	20 15 24.8	
	comp=Z,0.8nm,0.9s						
BBOO	Buckleboo	48.68	240	P	P	20 16 01.0	-1.7
BBOO				IAmb	IAmb	20 16 35.5	
	comp=Z,30nm,1.5s						
WR0	Warramunga Arr	49.69	257	P	P	20 16 10.1	-0.5
WR0				IAmb	IAmb	20 16 11.6	
	comp=Z,14nm,1.6s						
WB0	Warramunga Arr	49.84	257	P	P	20 16 10.7	-1.0
WB0				IAmb	IAmb	20 16 24.7	
	comp=Z,12nm,1.4s						
WB2	Warramunga Arr	49.87	257	P	P	20 16 11.0	-1.0
WB2				IAmb	IAmb	20 16 19.4	
	comp=Z,15nm,1.6s						
WB2				PcP	PcP	20 17 31.9	-0.7
WRAB	Tennant Creek	49.87	257	P	P	20 16 08.9	-3.1
WRAB				IAmb	IAmb	20 16 46.9	
	comp=Z,21nm,1.6s						
WRA	Warramunga Arr	49.88	257	P	P	20 16 10.4	-1.6
	comp=Z,0.8nm,0.5s,baz=92,slow=6.7,SNR=21						
WRA				PcP	PcP	20 17 33.1	+0.5
	comp=Z,0.5nm,0.6s,baz=94,slow=3.2,SNR=2.7						
WRA	Warramunga Arr	49.88	257	IAmb	IAmb	20 16 13.2	
	comp=Z,0.2nm,0.9s						
AS31	Alice Springs	50.10	252		P	20 16 11.8	-1.9
ASAR	Alice Springs	50.10	252	P	P	20 16 12.2	-1.5
	comp=Z,2.5nm,0.6s,baz=87,slow=8.3,SNR=32						
ASAR				PcP	PcP	20 17 33.6	+0.3
	comp=Z,0.4nm,0.5s,baz=99,slow=4.1,SNR=1.4						
ASAR	Alice Springs	50.10	252	P	P	20 16 11.6	-2.1
KNRA	Kununurra	55.65	262	P	P	20 16 54.5	-0.3
FITZ	Fitzroy Crossi	58.26	258	P	P	20 17 12.8	-0.4
FITZ				IAmb	IAmb	20 17 50.5	
	comp=Z,6.9nm,1.2s						
SOEI	Soe	61.07	268	P	P	20 17 32.9	+0.1
VNDA	Vanda	62.85	186	P	P	20 17 45.8	+2.1
	comp=Z,0.7nm,0.9s,baz=358,slow=6.4,SNR=6.2						
MDPB	Devils Postpil	73.67	42	P	P	20 18 53.3	+0.9
MDPB				IAmb	IAmb	20 18 56.2	
	comp=Z,6.3nm,1.1s						
NVAR	Mina Array Bea	74.63	42	P	P	20 18 59.1	+1.2
	comp=Z,0.4nm,0.6s,baz=228,slow=8.9,SNR=5.4						
NVAR	Mina Array Bea	74.63	42	P	P	20 18 58.7	+0.7
TXAR	Lajitas Array	80.78	56	P	P	20 19 33.3	+0.9
	comp=Z,0.2nm,0.8s,baz=222,slow=3.4,SNR=4.3						
PDAR	Pinedale Array	82.57	42	P	P	20 19 41.0	-0.6
	comp=Z,0.2nm,0.4s,baz=96,slow=3.0,SNR=4.0						
PDAR	Pinedale Array	82.57	42	P	P	20 19 41.0	-0.6
ILAR	Eielson Array	82.95	11	P	P	20 19 43.0	+0.2
	comp=Z,0.5nm,0.7s,baz=228,slow=6.1,SNR=9.8						
MAW	Mawson	87.32	199	P	P	20 20 05.1	+0.3
	comp=Z,0.3nm,0.3s,baz=112,slow=7.6,SNR=3.7						
CMAR	Chiang Mai Arr	92.94	288	P	P	20 20 32.5	+0.4
	comp=Z,1.0nm,0.8s,baz=92,slow=3.7,SNR=5.8						
BRTR	Keskin Array B	146.69	321	PKPbc	PKPab	20 27 01.1	-0.6
	comp=Z,1.9nm,0.7s,baz=99,slow=1.8,SNR=7.2						
BRTR	Keskin Array B	146.69	321		PKPab	20 27 00.9	-0.9
GERES	GERESS Array B	146.71	352	PKPbc	PKPab	20 27 01.5	+0.1
	comp=Z,0.2nm,0.3s,baz=15,slow=4.1,SNR=2.1						
ESDC	Sonseca Array	154.57	20		PKPdf	20 27 11.1	0.0

REY ***04*** *20:45:27.3, 64.67N ± 17.51W, h5km*
MOS ***04*** *20:45:27.9 ± 0.8, 64.63N ± 17.62W, h10km, mb4.5/17, Error ellipse: s-maj=13.6km s-min=7.8km az=109.9*
NEIC ***04*** *20:45:29.0 ± 1.7, 64.54N ± 0.08 × 17.6W ± 0.1, h8km ± 4km, mb4.7/73, Error ellipse: s-maj=11.4km s-min=7.9km az=184.0*
IDC ***04*** *20:45:28.1 ± 0.6, 64.55N × 17.62W, h0km, mb4.0/19, mb1 4.2/21, mb1mx4.0/39, mbtmp4.0/21, ML3.4/2, MS3.1/10, Ms1 3.1/10, ms1mx2.9/46, Error ellipse: s-maj=18.4km s-min=9.0km az=15.0*
ISC 04 20:45:29.3 ± 0.7, 64°57N ± 0°03 × 17°59W ± 0°03, h10km ± 4km, n200, σ 9 46/186, mb4.6/69, MS3.3/6, 8C-4D, Iceland

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IVON	Vonarskard	0.13	327	P		Pg	20 45 29.6	-2.8
	baz=273							
IGRF	Grimsfjall	0.21	138	P		Pg	20 45 32.7	-1.1
	baz=158							
IDYN	Dyngjuhals	0.24	23	P		Pg	20 45 30.3	-4.0
	baz=27							
IHUS	Husbondi	0.27	186	P		Pg	20 45 34.4	-0.5
	baz=189							
ISKR	Skrokkalda	0.34	269	P		Pg	20 45 34.7	-1.4
	baz=254							
IVOT	Vottur	0.35	149	P		Pg	20 45 35.1	-1.0
	baz=160							
IVOT				S		Sb	20 45 40.9	-2.2
	baz=160							
IKVE	Kverkfjoll	0.41	74	P		Pg	20 45 34.2	-3.2
	baz=88							
IIEY	Innrieyrar	0.53	206	P		Pg	20 45 38.7	-0.8
	baz=205							
IIEY				S		Sb	20 45 47.4	-0.8
	baz=205							
IKAL	Kalfafell	0.62	184	P		Pg	20 45 40.0	-1.3
	baz=186							
IASK	Askja	0.63	39	P		Pg	20 45 36.8	-4.7
	baz=43							
IKSK	Karasker	0.64	129	P		Pg	20 45 39.1	-2.5
	baz=138							
IMKO	Mokollar	0.68	52	P		Pg	20 45 37.8	-4.6
	baz=58							
IVAT	Vatnsfell	0.69	237	P		Pg	20 45 41.3	-1.3
	baz=232							
ISVA	Svartarkot	0.79	10	P		Pg	20 45 39.4	-5.0
	baz=9.2							
ISNB	Snabyli	0.95	209	P		Pb	20 45 45.6	-2.1
	baz=208							
ISLY	Slysaalda	1.00	222	P		Pb	20 45 46.6	-2.1
	baz=220							
ISLY				S		Sg	20 46 00.8	-0.6
	baz=220							
IFED	Fedgar	1.06	240	P		Pb	20 45 47.5	-2.3
	baz=237							
IRJU	Rjupnafell	1.06	207	P		Pb	20 45 48.0	-1.8
	baz=206							
IMEL	Melhnausar	1.08	21	P		Pb	20 45 44.2	-5.8
	baz=21							
IMJO	Mjoaskard	1.11	236	P		Pb	20 45 48.7	-1.8
	baz=233							
IREN	Reynihlio	1.12	15	P		Pn	20 45 44.9	-6.2
	baz=14							
IGYG	Gygjarholskot	1.17	257	P		Pb	20 45 48.6	-3.0
	baz=253							
IKVO	Krokottuvotn	1.19	14	P		Pn	20 45 46.0	-6.0
	baz=14							
ISKI	Skildingahlsh	1.33	10	P		Pn	20 45 48.3	-5.6
	baz=9.4							
BORG	Borgarnes	1.62	278	Pg		Pn	20 45 55.4	-2.4
	80nm,0.3s,baz=97,slow=9.9,SNR=199							
BORG				Lg		Lg	20 46 19.5	
	27nm,0.3s,baz=99,slow=23,SNR=14							
BORG	Borgarnes	1.62	278	P		Pn	20 45 54.8	-3.0
BORG							20 46 17.2	
BORG	Borgarnes	1.62	278	Pn		Pn	20 45 54.8	-3.0
BORG				Sn		Sn	20 46 17.2	-1.4
SCO	Scoresbysund	6.17	346	*e*		Pn	20 46 53.7	-6.6
	baz=174,slow=9.3							
SCO				*i*	P	Pn	20 46 59.0	-1.3
SCO				*i*	S	Sn	20 48 09.9	-0.9
SCO					IAML		20 48 28.4	
	comp=Z,1.8nm,0.4s							
JMIC	Jan Mayen	7.30	24	LR		LR	20 49 05.9	
	comp=Z,58nm,19.6s,baz=154,slow=30							
SUMG	Summit	11.00	326	P		Pn	20 48 08.3	+1.5
SUMG	Summit	11.00	326	Pn		Pn	20 48 08.3	+1.5
SUMG	Summit	11.00	326	*i* P		Pn	20 48 10.7	+3.9
SUMG	Summit	11.00	326	*i* P		Pn	20 48 10.7	+3.9
EKB10	Eskdalemuir Ar	11.69	135	Pn		Pn	20 48 12.5	-3.3
EKB8	Eskdalemuir Ar	11.70	135	Pn		Pn	20 48 12.7	-3.3
EKA	Eskdalemuir Ar	11.72	135	Pn		Pn	20 48 15.8	-0.4
	baz=322,slow=13,SNR=19							
ESK	Eskdalemuir	11.72	136	P		Pn	20 48 14.4	-1.8
ESK	Eskdalemuir	11.72	136	Pn		Pn	20 48 14.4	-1.8
NC204	NORSAR Array S	13.27	91	Pn		Pn	20 48 33.8	-3.6
NOA	NORSAR Array B	13.57	92	Pn		Pn	20 48 42.2	+0.6
	comp=Z,0.0nm,0.3s,baz=293,slow=15,SNR=3.2							
NOA				LR		LR	20 53 34.1	
	comp=Z,64nm,18.0s,baz=295,slow=36							
SFJD	Kangerlussuaq	13.67	295	LR		LR	20 53 17.4	
	comp=Z,98nm,21.7s,baz=91,slow=34							
SFJD	Kangerlussuaq	13.67	295	P		Pn	20 48 42.3	-0.5
SFJD	Kangerlussuaq	13.67	295	Pn		Pn	20 48 42.2	-0.5
HFS	Hagfors	15.08	93	LR		LR	20 54 08.8	
	comp=Z,59nm,18.1s,baz=275,slow=34							
ARCES	ARCESS Array B	17.21	54	LR		LR	20 54 52.5	
	comp=Z,49nm,18.2s,baz=300,slow=33							
FINES	FINESS Array B	19.76	79	LR		LR	20 56 31.3	
	comp=Z,30nm,21.1s,baz=254,slow=34							
TULEG	Thule	19.91	328	P		P	20 50 01.6	+1.1
MOX	Moxa	20.69	118	P		Pn	20 50 10.3	-1.2
MOX				pmax		pmax		
	comp=Z,8.0nm,1.6s							
CLL	Collm	20.70	115	*e*P		P	20 50 06.0	-3.2
	comp=Z,17nm,1.5s							
CLL				*i*			20 50 15.1	
	comp=Z,20nm,1.4s							
CLL				*e*S		Sn	20 54 02.0	-2.8
CLL	Collm	20.70	115	*e*P		P	20 50 06.0	-3.2
CLL				*e*S		Sn	20 54 02.0	-2.8
CLL				pmax		pmax		
	comp=Z,17nm,1.5s							
CLL	Collm	20.70	115	P		P	20 50 08.9	-0.3
CLL				IAmb		IAmb	20 50 21.8	
	comp=Z,45nm,1.9s							
ECH	Echery	21.12	129	P		P	20 50 14.5	+0.6
ECH				pmax		pmax		
	comp=Z,12nm,1.1s							
ECH	Echery	21.12	129	P		P	20 50 14.5	+0.6
NKC	Novy Kostel	21.34	118	*e*P		P	20 50 20.4	+4.2
NKC	Novy Kostel	21.34	118	*e*P		P	20 50 20.4	+4.2
BRG	Berggiesshubel	21.41	115	*e*P		P	20 50 16.7	-0.2
	comp=Z,6.4nm,0.9s							
BRG	Berggiesshubel	21.41	115	*e*P		P	20 50 16.7	-0.2
BRG				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BFO	Black Forest	21.42	127	P		P	20 50 18.2	+1.1
BFO				pmax		pmax		
	comp=Z,11nm,1.0s							
BFO	Black Forest	21.42	127	P		P	20 50 18.2	+1.1
FRB	Frobisher Bay	21.75	291	LR		LR	20 57 05.1	
	comp=Z,64nm,19.9s,baz=20,slow=32							
KSP	Ksiaz	22.36	112	*e*P		P	20 50 28.0	+0.9
KHC	Kasperske Hory	22.66	118	*e*P		P	20 50 30.4	0.0
KHC	Kasperske Hory	22.66	118	*e*P		P	20 50 30.4	0.0
DPC	Dobruska-Polom	22.76	112	*e*P		P	20 50 32.4	+1.0
DPC	Dobruska-Polom	22.76	112	*e*P		P	20 50 32.4	+1.0
SUW	Suwalki	22.91	98	P		P	20 50 32.7	-0.2
SUW				pmax		pmax		
	comp=Z,49nm,1.4s							
SUW	Suwalki	22.91	98	P		P	20 50 32.7	-0.2
SUW				IAmb		IAmb	20 51 08.4	
	comp=Z,49nm,1.4s							
GEC2	GERESS Array S	22.94	118	P		P	20 50 34.0	+0.7
GEC2				IAmb		IAmb	20 50 48.2	
	comp=Z,37nm,1.5s							
GEC2B	GERESS ARRAY S	22.94	118	P		P	20 50 32.7	-0.7
GERES	GERESS Array B	22.94	118	P		P	20 50 34.5	+1.2
	comp=Z,1.5nm,0.8s,baz=344,slow=8.4,SNR=4.6							
GERES	GERESS Array B	22.94	118	P		P	20 50 33.0	-0.4
FUORN	Ofenpass-Fuorn	23.56	126	P		P	20 50 40.5	+0.7
FUORN				IAmb		IAmb	20 51 28.4	
	comp=Z,43nm,1.9s							
VRAC	Vranov	23.69	114	P		P	20 50 40.8	0.0
	comp=Z,1.1nm,0.4s,baz=1.4,slow=22,SNR=6.3							
MORC	Moravsky Berou	23.70	112	P		P	20 50 41.2	+0.3
MORC				pmax		pmax		
	comp=Z,36nm,1.8s							
MORC	Moravsky Berou	23.70	112	P		P	20 50 41.2	+0.3
MORC				IAmb		IAmb	20 50 54.9	
	comp=Z,36nm,1.8s							
OJC	Ojcow	24.27	108	*e*P		P	20 50 47.4	+1.2
OJC				*ep*P		sP	20 50 55.6	+4.3
OJC	Ojcow	24.27	108	P		P	20 50 46.4	+0.2
OJC				pmax		pmax		
	comp=Z,35nm,1.7s							
OJC	Ojcow	24.27	108	P		P	20 50 46.4	+0.2
OJC				IAmb		IAmb	20 50 49.3	
	comp=Z,35nm,1.7s							
CTI	Castel Tesino	24.54	125	P		P	20 50 49.0	+0.1
CTI				pmax		pmax		
	comp=Z,27nm,1.5s							
CTI	Castel Tesino	24.54	125	P		P	20 50 49.0	+0.1
CTI				IAmb		IAmb	20 51 02.7	
	comp=Z,26nm,1.5s							
ZOU	Zoufplan	24.58	122	P		P	20 50 49.6	+0.3
ZOU				IAmb		IAmb	20 51 39.0	
	comp=Z,32nm,1.6s							
LANS	Liptovska Anna	24.97	110	*e*P		P	20 50 53.4	+0.8
LANS				pmax		pmax		
	comp=Z,3.0nm,0.8s							
LANS	Liptovska Anna	24.97	110	*e*P		P	20 50 53.4	+0.8
VYHS	Vyhne	25.23	112	*e*P		P	20 50 56.0	+1.0
VYHS	Vyhne	25.23	112	*e*P		P	20 50 56.0	+1.0
KLMR	Klimovskoe	25.67	72	*e*P		P	20 50 57.3	-1.5
KLMR				pmax		pmax		
	comp=Z,12nm,1.1s							
KLMR	Klimovskoe	25.67	72	*e*P		P	20 50 57.3	-1.5
KLMR				AMP			20 51 00.9	
	comp=Z,12nm,1.1s							
KWP	Kalwaria Pacla	25.92	106	*e*P		P	20 51 01.9	+0.7
KWP	Kalwaria Pacla	25.92	106	P		P	20 51 01.6	+0.4
KWP				pmax		pmax		
	comp=Z,20nm,1.1s							
KWP	Kalwaria Pacla	25.92	106	P		P	20 51 01.6	+0.4
KWP				IAmb		IAmb	20 51 22.0	
	comp=Z,20nm,1.1s							
SCHQ	Schefferville	26.00	272	P		P	20 51 01.5	-0.3
	comp=Z,9.4nm,0.9s,baz=64,slow=9.6,SNR=4.7							
SCHQ	Schefferville	26.00	272	P		P	20 51 01.4	-0.5
PSZ	Piszkesteto	26.12	112	P		P	20 51 04.2	+1.1
PSZ				pmax		pmax		
	comp=Z,47nm,1.9s							
PSZ	Piszkesteto	26.12	112	P		P	20 51 04.2	+1.1
PSZ				IAmb		IAmb	20 51 21.0	
	comp=Z,47nm,1.9s							
ESDC	Sonseca Array	26.18	156	P		P	20 51 04.6	+0.9
	comp=Z,1.0nm,0.7s,baz=356,slow=9.1,SNR=6.6							
ESDC				LR		LR	21 01 05.2	
	comp=Z,68nm,18.6s,baz=340,slow=36							
ESDC	Sonseca Array	26.18	156	P		P	20 51 05.4	+1.8
KOLS	Kolonicke sedl	26.28	107	*e*P		P	20 51 05.7	+1.2
KOLS				pmax		pmax		
	comp=Z,25nm,1.8s							
KOLS	Kolonicke sedl	26.28	107	*e*P		P	20 51 05.7	+1.2
RES	Resolute Bay	26.52	325	P		P	20 51 08.5	+2.1
	comp=Z,3.0nm,0.9s,baz=357,slow=0.8,SNR=3.5							
RES				LR		LR	21 01 36.0	
	comp=Z,60nm,18.2s,baz=90,slow=36							
RES	Resolute Bay	26.52	325	P		P	20 51 06.6	+0.2
RES				pmax		pmax		
	comp=Z,12nm,1.5s							
RES	Resolute Bay	26.52	325	P		P	20 51 06.6	+0.2
AKASG	Malin Array Be	27.87	97	P		P	20 51 18.9	+0.3
	comp=Z,0.4nm,0.4s,baz=318,slow=9.9,SNR=2.4							
AKASG	Malin Array Be	27.87	97	*i* P		P	20 51 23.2	+4.5
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.7s							
AKBB	Malin Array Si	27.87	97	↓*e*P		P	20 51 21.0	+2.3
AKBB				pmax		pmax		
	comp=Z,20nm,2.8s							
AKBB	Malin Array Si	27.87	97	P		P	20 51 17.4	-1.3
AKBB				IAmb		IAmb	20 51 21.4	
	comp=Z,36nm,2.0s							
OBN	Obninsk	27.93	84	*e*P		P	20 51 21.3	+2.1
OBN				*e*			20 52 06.5	
OBN				*e*PPP		PPP	20 52 16.8	
OBN				pmax		pmax		
	comp=Z,21nm,1.3s							
BURAR	Bucovina Array	28.54	106	P		P	20 51 25.4	+0.6
ALN	Alexandroupoli	34.40	112	P		P	20 52 17.5	+1.3
ALN				pmax		pmax		
	comp=Z,14nm,1.3s							
ALN	Alexandroupoli	34.40	112	P		P	20 52 17.5	+1.3
ALN				IAmb		IAmb	20 52 19.6	
	comp=Z,14nm,1.3s							
AGG	Agios Georgios	34.56	118	P		P	20 52 17.7	0.0
AGG				pmax		pmax		
	comp=Z,17nm,1.3s							
AGG	Agios Georgios	34.56	118	P		P	20 52 17.7	0.0
AGG				IAmb		IAmb	20 52 22.6	
	comp=Z,16nm,1.3s							
NRIK	Noril'sk	36.56	35	P		P	20 52 34.8	+0.2
	comp=Z,1.4nm,0.3s,baz=308,slow=8.8,SNR=3.7							
NRIK	Noril'sk	36.56	35	↓*e*P		P	20 52 34.5	0.0
C36M	Paulatuk	36.88	325	P		P	20 52 37.0	-0.2
C36M				IAmb		IAmb	20 52 47.0	
	comp=Z,17nm,1.4s							
BRTR	Keskin Array B	38.49	105	P		P	20 52 51.8	+0.4
	comp=Z,1.5nm,0.8s,baz=330,slow=7.1,SNR=6.2							
BRTR	Keskin Array B	38.49	105	*i* P		P	20 52 54.7	+3.3
BRTR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
BRTR	Keskin Array B	38.49	105	P		P	20 52 51.6	+0.3
KIV	Kislovodsk	38.88	92	*e*P		P	20 52 53.4	-1.1
KIV				pmax		pmax		
	comp=Z,20nm,1.0s							
KIV				MLR		MLR		
	comp=Z,76nm,16.0s							
KIV	Kislovodsk	38.88	92	P		P	20 52 53.7	-0.8
KBZ	Khabaz	39.15	92	↓*e*P		P	20 52 59.7	+3.1
KBZ				pmax		pmax		
	comp=Z,6.0nm,1.2s							
YKA	Yellowknife Ar	39.25	313	P		P	20 52 58.2	+1.0
	comp=Z,2.4nm,0.8s,baz=45,slow=9.7,SNR=2.7							
INK	Inuvik	39.91	329	P		P	20 53 02.3	-0.4
	comp=Z,2.7nm,0.9s,baz=24,slow=8.1							
INK				LR		LR	21 12 01.3	
	comp=Z,47nm,18.5s,baz=24,slow=40							
INK	Inuvik	39.91	329	IAmb		IAmb	20 53 08.8	
	comp=Z,18nm,1.8s							
AB09	Akbulak array	42.05	73	P		P	20 53 19.6	-0.8
AB04	Akbulak array	42.05	73	P		P	20 53 20.7	+0.1
ABKAR	Akbulak array	42.06	73	P		P	20 53 20.5	-0.1
TIXI	Tiksi	42.14	15	↑*i* P		P	20 53 21.7	+0.7
TIXI				pmax		pmax		
	comp=Z,113nm,2.5s							
TIXI	Tiksi	42.14	15	P		P	20 53 21.7	+0.7
GAZ	Gaziantep	42.15	103	P		P	20 53 21.5	-0.1
TOLK	Toolik Lake Re	42.82	336	P		P	20 53 27.6	+0.9
TOLK				IAmb		IAmb	20 53 29.0	
	comp=Z,19nm,1.1s							
BRVK	Borovoye	43.22	62	↑*e*P		P	20 53 30.3	+0.4
BRVK				pmax		pmax		
	comp=Z,5.0nm,1.3s							
FYU	Fort Yukon	43.84	333	P		P	20 53 35.6	+0.8
COLD	Coldfoot	44.19	336	P		P	20 53 38.6	+0.9
DAWY	Dawson	44.76	328	P		P	20 53 43.9	+1.6
DAWY				IAmb		IAmb	20 53 45.6	
	comp=Z,15nm,1.5s							
PRP	Porcupine Dome	44.82	332	P		P	20 53 44.4	+1.5
PRP				IAmb		IAmb	20 53 47.2	
	comp=Z,12nm,1.4s							
K27K	Chicken	45.40	329	P		P	20 53 48.5	+1.2
S54A	Dingess, Beckl	45.42	266	P		P	20 53 49.9	+2.1
IL31		45.76	332	P		P	20 53 50.0	0.0
IL31				IAmb		IAmb	20 53 59.3	
	comp=Z,13nm,1.4s							
ILAR	Eielson Array	45.76	332	P		P	20 53 50.8	+0.7
	comp=Z,4.9nm,1.2s,baz=24,slow=5.4,SNR=19							
ILAR				PcP		PcP	20 55 27.4	0.0
	comp=Z,1.2nm,0.9s,baz=0.6,slow=2.6,SNR=7.1							
ILAR	Eielson Array	45.76	332	P		P	20 53 49.8	-0.3
ILAR						PcP	20 55 27.2	-0.3
MDM	Murphy Dome	45.85	333	P		P	20 53 51.6	+0.7
MDM				IAmb		IAmb	20 53 55.5	
	comp=Z,13nm,1.2s							
COLA	College	45.85	333	↑*e*P		P	20 53 52.2	+1.4
COLA				pmax		pmax		
	comp=Z,12nm,1.3s							
HDA	Harding Lake	46.09	332	P		P	20 53 53.4	+0.6
HDA				IAmb		IAmb	20 53 54.7	
	comp=Z,16nm,1.6s							
BCAR	Beaver Creek A	46.17	329	P		P	20 53 54.0	+0.6
RIDG	Independent Ri	46.25	331	P		P	20 53 54.8	+0.7
BILL	Bilibino	47.65	358	*e*P		P	20 54 05.8	+0.9
BILL				*e*			20 55 56.1	
BILL				*e*PPP		PPP	20 56 40.3	
BILL				pmax		pmax		
	comp=Z,3.0nm,0.9s							
ZALV	Zalesovo Beam	47.73	51	P		P	20 54 06.8	+1.2
	comp=Z,1.3nm,0.7s,baz=332,slow=5.9,SNR=6.3							
ZALV				PcP		PcP	20 55 34.7	+0.1
	comp=Z,1.0nm,0.8s,baz=316,slow=4.0,SNR=2.3							
ZALV	Zalesovo Beam	47.73	51	*i* P		P	20 54 05.9	+0.3
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ZALV	Zalesovo Beam	47.73	51	P		P	20 54 04.7	-0.9
KURK	Kurchatov	48.20	58	↑*e*P		P	20 54 09.2	-0.1
KURK				pmax		pmax		
	comp=Z,6.0nm,1.0s							
KURK	Kurchatov	48.20	58	P		P	20 54 08.3	-1.0
KURK				IAmb		IAmb	20 54 11.5	
	comp=Z,4.7nm,0.8s							
T47A	Sharon Grove	48.60	270	P		P	20 54 12.7	+0.1
EGMT	Eagleton	48.88	297	P		P	20 54 15.7	+0.9
KKAR	Karatay Array	51.35	70	P		P	20 54 33.1	-0.3
KKAR	Karatay Array	51.35	70	P		P	20 54 33.1	-0.3
BOZ	Bozeman (W)	51.62	297	P		P	20 54 36.4	+0.8
BOZ				pmax		pmax		
	comp=Z,10.0nm,1.1s							
BOZ	Bozeman (W)	51.62	297	P		P	20 54 36.4	+0.8
BOZ				IAmb		IAmb	20 56 07.9	
	comp=Z,9.7nm,1.1s							
DGZ	Jazzator, Alta	52.17	53	↑*e*P		P	20 54 40.8	+1.1
DGZ				pmax		pmax		
	comp=Z,22nm,3.0s							
MAKZ	Makanchi	52.69	58	P		P	20 54 43.9	+0.5
MAKZ				pmax		pmax		
	comp=Z,9.0nm,1.6s							
MAKZ	Makanchi	52.69	58	P		P	20 54 43.9	+0.5
IMW	Indian Meadow	52.77	295	P		P	20 54 45.3	+0.9
MK31	Makanchi Array	52.81	58	P		P	20 54 43.7	-0.6
MK31				pmax		pmax		
	comp=Z,5.0nm,1.3s							
MK31	Makanchi Array	52.81	58	P		P	20 54 43.7	-0.6
MKAR	Makanchi Array	52.81	58	P		P

NIL	**Nilore**	**60.52**	**73**	P	**P**	**20 55 38.9**	**-0.3**
NIL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NIL	**Nilore**	**60.52**	**73**	P	**P**	**20 55 38.9**	**-0.3**
NIL				IAmb	IAmb	20 55 41.7	
	comp=Z,10nm,1.1s						
WAKR	**Walker**	**60.68**	**298**	P	**P**	**20 55 41.3**	**+0.8**
WAKR				IAmb	IAmb	20 56 11.0	
	comp=Z,16nm,1.7s						
TXAR	**Lajitas Array**	**62.26**	**280**	P	**P**	**20 55 52.1**	**+1.0**
	comp=Z,1.4nm,1.0s,baz=48,slow=4.1,SNR=7.8						
TXAR	**Lajitas Array**	**62.26**	**280**	P	**P**	**20 55 51.7**	**+0.5**
319A	**Douglas**	**62.84**	**286**	P	**P**	**20 55 56.4**	**+1.3**
MAJO	**Matsushiro**	**77.44**	**20**⇑	*eP*	**P**	**20 57 24.4**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,14nm,1.4s						
CMAR	**Chiang Mai Arr**	**84.22**	**59**	P	**P**	**20 57 60.0**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=327,slow=7.5,SNR=5.1						
CMAR	**Chiang Mai Arr**	**84.22**	**59**	P	**P**	**20 58 00.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**84.22**	**59**	P	**P**	**20 58 00.8**	**+0.1**
LPAZ	**La Paz**	**89.30**	**228**	LR	LR	21 31 46.6	
	comp=Z,272nm,20.2s,baz=310,slow=31						
ASAR	**Alice Springs**	**135.07**	**38**	PKP	**PKiKP**	**21 04 49.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=332,slow=4.3,SNR=4.3						

REY ***04*** *20:50:57.2, 64.68N×17.46W, h9km*
IDC ***04*** *20:50:57.8±0.7, 64.59N×17.68W, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/39, mbtmp3.8/12, ML4.0/1, Error ellipse: s-maj=22.3km s-min=10.8km az=13.0*
NEIC ***04*** *20:50:59.3±1.8, 64.58N±0.08×17.5W±0.1, h8km±4km, mb4.5/14, Error ellipse: s-maj=11.9km s-min=8.6km az=183.0*

ISC 04 20:50:58.8±0.4**, 64.67N**±0.02×**17.48W**±0.03**, h10**km**, n78, σ2s 32/88, mb3.9**/16**, Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.12**	**271**	P	**Pg**	**20 51 00.1**	**-1.6**
	baz=269						
IDYN	**Dyngjuhals**	**0.13**	**22**	P	**Pg**	**20 51 00.1**	**-1.8**
	baz=19						
IGRF	**Grimsfjall**	**0.28**	**161**	P	**Pg**	**20 51 02.6**	**-1.9**
	baz=163						
IKVE	**Kverkfjoll**	**0.35**	**89**	P	**Pg**	**20 51 03.6**	**-2.1**
	baz=89						
IHUS	**Husbondi**	**0.39**	**191**	P	**Pg**	**20 51 04.8**	**-1.6**
	baz=193						
ISKR	**Skrokkalda**	**0.41**	**254**	P	**Pb**	**20 51 05.0**	**-3.1**
	baz=254						
IJOK	**Jokulheimar**	**0.48**	**222**	P	**Pg**	**20 51 06.1**	**-2.1**
	baz=223						
IJOK				S	**Sb**	**20 51 13.0**	**-3.5**
	baz=223						
IASK	**Askja**	**0.52**	**43**	P	**Pg**	**20 51 06.5**	**-2.5**
	baz=42						
IASK				S	**Sg**	**20 51 13.5**	**-2.4**
	baz=42						
IMKO	**Mokollar**	**0.58**	**57**	P	**Pg**	**20 51 07.5**	**-2.5**
	baz=57						
IMKO				S	**Sg**	**20 51 15.4**	**-2.2**
	baz=57						
IIEY	**Innrieyrar**	**0.64**	**206**	P	**Pg**	**20 51 08.8**	**-2.4**
	baz=207						
IIEY				S	**Sb**	**20 51 17.9**	**-3.2**
	baz=207						
IKSK	**Karasker**	**0.67**	**139**	P	**Pg**	**20 51 08.4**	**-3.4**
	baz=140						
ISVA	**Svartarkot**	**0.68**	**8**	P	**Pg**	**20 51 09.3**	**-2.6**
	baz=7.4						
IKAL	**Kalfafell**	**0.73**	**187**	P	**Pg**	**20 51 10.4**	**-2.5**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**79**	P	**Pg**	**20 51 10.3**	**-3.2**
	baz=79						
IVSH				S	**Sg**	**20 51 20.9**	**-2.6**
	baz=79						
IVAT	**Vatnsfell**	**0.79**	**233**	P	**Pg**	**20 51 11.5**	**-2.5**
	baz=233						
IVAT				S	**Sb**	**20 51 22.6**	**-2.8**
	baz=233						
IMEL	**Melhnausar**	**0.97**	**21**	P	**Pg**	**20 51 14.0**	**-3.4**
	baz=20						
IREN	**Reynihlio**	**1.01**	**14**	P	**Pg**	**20 51 14.7**	**-3.4**
	baz=13						
ISNB	**Snabyli**	**1.07**	**209**	P	**Pg**	**20 51 16.0**	**-3.2**
	baz=209						
IGRS	**Grimsstaoir**	**1.13**	**30**	P	**Pb**	**20 51 16.7**	**-3.7**
	baz=30						
IRJU	**Rjupnafell**	**1.18**	**207**	P	**Pb**	**20 51 18.2**	**-3.1**
	baz=207						
ISKI	**Skildingahlsh**	**1.22**	**9**	P	**Pn**	**20 51 18.2**	**-3.6**
	baz=8.4						
IGHA	**Grjothals**	**1.23**	**16**	P	**Pn**	**20 51 18.1**	**-3.9**
	baz=16						
IHAU	**Haukadalur**	**1.29**	**238**	P	**Pn**	**20 51 19.9**	**-2.9**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.30**	**208**	P	**Pn**	**20 51 20.2**	**-2.8**
	baz=208						
IDIM	**Dimmadalss**	**1.32**	**10**	P	**Pn**	**20 51 19.7**	**-3.5**
	baz=9.5						
IALF	**Alftagrof**	**1.40**	**213**	P	**Pn**	**20 51 21.7**	**-2.7**
	baz=213						
IHED	**Heoinshofoi**	**1.42**	**3**	P	**Pn**	**20 51 21.1**	**-3.4**
	baz=2.5						
IHED				S	**Sn**	**20 51 40.1**	**-3.1**
	baz=2.5						
IESK	**Eystri-Skogar**	**1.44**	**218**	P	**Pn**	**20 51 22.3**	**-2.6**
	baz=218						
ISAU	**Saurbar**	**1.45**	**243**	P	**Pn**	**20 51 21.9**	**-3.1**
	baz=243						
IMID	**Miomork**	**1.47**	**227**	P	**Pn**	**20 51 23.0**	**-2.2**
	baz=227						
IBRE	**Brettingsstaoi**	**1.47**	**353**	P	**Pn**	**20 51 22.1**	**-3.1**
	baz=353						
IGIL	**Gilhagi**	**1.49**	**18**	P	**Pn**	**20 51 22.1**	**-3.5**
	baz=18						
ISIG	**Siglufjorour**	**1.58**	**338**	P	**Pn**	**20 51 24.1**	**-2.8**
	baz=338						
IASM	**Asmuli**	**1.61**	**240**	P	**Pn**	**20 51 24.9**	**-2.3**
	baz=240						
BORG	**Borgarnes**	**1.65**	**274**	Pg	**Pn**	**20 51 25.0**	**-2.8**
	25nm,0.3s,baz=89,slow=6.9,SNR=6.7						
BORG				Lg	Lg	20 51 48.1	
	13nm,0.3s,baz=202,slow=23,SNR=8.2						
BORG	**Borgarnes**	**1.65**	**274**		**Pn**	**20 51 25.1**	**-2.7**
BORG				Sn	**Sg**	**20 51 50.9**	**-1.0**
IKRO	**Krokur**	**1.68**	**252**	P	**Pn**	**20 51 25.4**	**-2.8**
	baz=252						
ISOL	**Solvholt**	**1.68**	**245**	P	**Pn**	**20 51 26.0**	**-2.2**
	baz=245						
IHEI	**Heioarbar**	**1.70**	**255**	P	**Pn**	**20 51 26.0**	**-2.4**
	baz=255						
SCO	**Scoresbysund**	**6.08**	**346**		**Pn**	**20 52 26.6**	**-1.9**
SCO				Sn	**Sn**	**20 53 42.4**	**+4.3**
SCO	**Scoresbysund**	**6.08**	**346**	*e*	**Pn**	**20 52 26.9**	**-1.6**
	baz=169,slow=8.6						
SCO				*i* P	**Pn**	**20 52 28.4**	**-0.2**
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**20 53 45.4**	**-0.9**
	baz=323,slow=13,SNR=7.3						
ESK	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**20 53 47.3**	**+0.9**
NOA	**NORSAR Array B**	**13.53**	**92**	Pn	**Pn**	**20 54 14.4**	**+3.9**
	0.0nm,0.3s,baz=298,slow=13,SNR=2.3						
ARC5	**ARCESS Array S**	**17.11**	**55**		**P**	**20 55 00.2**	**+0.9**
ARC5				IAmb	IAmb	20 55 17.9	
	comp=Z,94nm,1.8s						
ARC1	**ARCESS Array S**	**17.11**	**55**		**P**	**20 55 00.2**	**+0.9**
ARC1				IAmb	IAmb	20 55 18.6	
	comp=Z,126nm,1.9s						
CLL	**Collm**	**20.70**	**116**	P	**P**	**20 55 39.3**	**+0.5**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P	**P**	**20 55 47.0**	**+0.6**
	comp=Z,16nm,1.4s						
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**20 56 00.1**	**+0.1**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**20 56 02.1**	**+1.2**
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**20 56 05.0**	**+2.0**
	comp=Z,1.7nm,1.1s,baz=317,slow=7.0,SNR=4.3						
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**20 56 34.4**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=345,slow=9.2,SNR=5.6						
ESDC	**Sonseca Array**	**26.25**	**156**	IAmb	IAmb	20 56 36.2	
	comp=Z,7.1nm,1.1s						
BRTR	**Keskin Array B**	**38.47**	**105**	P	**P**	**20 58 22.2**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=325,slow=7.7,SNR=5.4						
KBZ	**Khabaz**	**39.11**	**92**	P	**P**	**20 58 27.0**	**+1.2**
	comp=Z,2.7nm,0.9s,baz=309,slow=13,SNR=3.1						
KBZ	**Khabaz**	**39.11**	**92**	P	**P**	**20 58 27.0**	**+1.2**
ABKAR	**Akbulak array**	**41.98**	**73**	P	**P**	**20 58 50.0**	**+0.5**
TIXI	**Tiksi**	**42.02**	**15**	P	**P**	**20 58 51.3**	**+1.7**
TIXI				IAmb	IAmb	20 58 52.9	
	comp=Z,5.8nm,1.1s						
TOLK	**Toolik Lake Re**	**42.75**	**336**	P	**P**	**20 58 57.6**	**+2.0**
TOLK				IAmb	IAmb	20 58 58.8	
	comp=Z,11nm,1.3s						
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**20 59 20.9**	**+1.8**
	comp=Z,1.4nm,1.0s,baz=22,slow=6.5,SNR=10						
ILAR				PcP	**PcP**	**21 00 57.4**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=22,slow=3.4,SNR=5.1						
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**20 59 20.6**	**+1.5**
MDM	**Murphy Dome**	**45.78**	**333**		**P**	**20 59 21.8**	**+1.9**
MDM				IAmb	IAmb	20 59 24.6	
	comp=Z,6.3nm,1.2s						
IMAR	**Indian Mountai**	**45.86**	**337**	P	**P**	**20 59 22.2**	**+1.8**
ZALV	**Zalesovo Beam**	**47.62**	**51**	P	**P**	**20 59 35.6**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=317,slow=8.3,SNR=2.3						
ZALV				PcP	**PcP**	**21 01 05.5**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=291,slow=4.0,SNR=1.7						
ZALV	**Zalesovo Beam**	**47.62**	**51**	P	**P**	**20 59 35.3**	**+0.9**
KURK	**Kurchatov**	**48.10**	**58**	P	**P**	**20 59 38.4**	**+0.3**
KURK				IAmb	IAmb	20 59 39.3	
	comp=Z,4.5nm,1.0s						
KK31	**Karatay Array**	**51.27**	**70**	P	**P**	**21 00 03.6**	**+1.2**
KKAR	**Karatay Array**	**51.27**	**70**		**P**	**21 00 03.7**	**+1.3**
MKAR	**Makanchi Array**	**52.72**	**58**	P	**P**	**21 00 13.7**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=327,slow=6.2,SNR=6.2						
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P	**P**	**21 00 16.0**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=343,slow=8.2,SNR=5.3						
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P	**P**	**21 00 16.0**	**-0.5**
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**21 00 17.5**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=46,slow=6.4,SNR=7.4						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**21 00 16.9**	**+0.1**
GAR	**Garm**	**54.64**	**73**	P	**P**	**21 00 28.7**	**+1.3**
SONM	**Songino Array**	**59.63**	**40**	P	**P**	**21 01 03.0**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=316,slow=6.0,SNR=3.3						
SONM	**Songino Array**	**59.63**	**40**	IAmb	IAmb	21 01 05.0	
	comp=Z,7.1nm,2.0s						
NIL	**Nilore**	**60.44**	**74**	P	**P**	**21 01 09.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**84.12**	**59**	P	**P**	**21 03 30.2**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=316,slow=6.3,SNR=3.0						

REY 04 21:00:22.0, 64.67N×17.42W, h10km, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**10**	P	Pg	21 00 25.1	0.0
	baz=10						
IDYN				S	Sg	21 00 27.3	+0.1
	baz=10						
IVON	**Vonarskard**	**0.14**	**273**	P	Pg	21 00 25.1	-0.3
	baz=273						
IURH	**Urdarhals**	**0.19**	**37**	P	Pg	21 00 26.1	0.0
	baz=37						
IGRF	**Grimsfjall**	**0.27**	**166**	P	Pg	21 00 27.3	-0.2
	baz=166						
IKVE	**Kverkfjoll**	**0.32**	**88**	S	Sg	21 00 32.6	-0.1
	baz=88						
IKVE				P	Pg	21 00 28.1	-0.4
	baz=88						
IHUS	**Husbondi**	**0.39**	**196**	P	Pg	21 00 29.6	-0.1
	baz=196						
IVOT	**Vottur**	**0.41**	**165**	P	Pg	21 00 29.6	-0.5
	baz=165						
ISKR	**Skrokkalda**	**0.43**	**256**	P	Pg	21 00 30.2	-0.3
	baz=256						
IJOK	**Jokulheimar**	**0.50**	**225**	P	Pg	21 00 31.0	-0.7
	baz=225						
IASK	**Askja**	**0.51**	**40**	P	Pg	21 00 31.2	-0.7
	baz=40						
IASK				S	Sg	21 00 38.5	-0.1
	baz=40						
IIEY	**Innrieyrar**	**0.65**	**208**	P	Pg	21 00 33.9	-0.7
	baz=208						
IKSK	**Karasker**	**0.65**	**141**	S	Sg	21 00 42.0	-1.2
	baz=141						
ISVA	**Svartarkot**	**0.68**	**6**	P	Pg	21 00 34.3	-0.9
	baz=5.9						
ISVA				S	Sg	21 00 43.9	0.0
	baz=5.9						
IKAL	**Kalfafell**	**0.73**	**189**	P	Pg	21 00 35.0	-1.1
	baz=189						
IVAT	**Vatnsfell**	**0.81**	**234**	S	Sg	21 00 47.4	-0.8
	baz=234						
IMEL	**Melhnausar**	**0.96**	**19**	P	Pg	21 00 38.9	-1.7
	baz=19						
IREN	**Reynihlio**	**1.01**	**12**	P	Pg	21 00 39.6	-1.8
	baz=12						
ISNB	**Snabyli**	**1.07**	**210**	P	Pg	21 00 40.8	-1.8
	baz=210						
IKVO	**Krokottuvotn**	**1.08**	**12**	P	Pg	21 00 40.7	-2.0
	baz=12						
ISLY	**Slysaalda**	**1.12**	**222**	P	Pb	21 00 42.3	-1.3
	baz=222						
IRJU	**Rjupnafell**	**1.19**	**208**	P	Pb	21 00 42.2	-2.4
	baz=208						
ISKI	**Skildingahlsh**	**1.22**	**8**	P	Pn	21 00 43.1	-2.1
	baz=7.6						
IGRA	**Granastaoir**	**1.26**	**357**	P	Pn	21 00 44.1	-1.6
	baz=357						

BJI ***04*** *21:00:30.0±0.0, 64.60N×17.50W, h5km, mB5.2/13, mb4.6/21, Ms5.1/2, Ms7 4.8/2*
MOS ***04*** *21:00:33.4±1.5, 64.60N×17.33W, h10km, mb4.4/13, Error ellipse: s-maj=11.4km s-min=7.3km az=106.0*
IDC ***04*** *21:00:33.8±0.5, 64.58N×17.47W, h0km, mb4.0/22, mb1 4.2/28, mb1mx4.1/43, mbtmp4.1/28, ML2.7/5, MS3.5/24, Ms1 3.5/24, ms1mx3.3/49, Error ellipse: s-maj=16.5km s-min=8.5km az=14.0*
NEIC ***04*** *21:00:34.0±1.2, 64.56N±0.08×17.5W±0.1, h8km±4km, mb4.6/41, Error ellipse: s-maj=12.1km s-min=8.0km az=182.0*

ISC 04 21:00:34.5±0.4**, 64.57N**±0.06×**17.43W**±0.05**, h9**km**, n181, σ1s 17/178, mb4.3/66, MS3.5**/20**, 8C-4D, Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.69**	**278**	Pg	**Pn**	**21 01 02.4**	**-1.7**
	31nm,0.3s,baz=100,slow=8.9,SNR=44						
BORG				Lg	Lg	21 01 25.5	
	12nm,0.3s,baz=32,slow=20,SNR=4.2						
BORG	**Borgarnes**	**1.69**	**278**	P	**Pn**	**21 01 01.3**	**-2.8**
BORG						21 01 24.3	
BORG	**Borgarnes**	**1.69**	**278**		**Pn**	**21 01 01.3**	**-2.8**
BORG				Sn	**Sn**	**21 01 24.3**	**-1.5**
SCO	**Scoresbysund**	**6.19**	**346**	P	**Pn**	**21 02 03.5**	**-2.4**
SCO						21 03 15.6	
SCO	**Scoresbysund**	**6.19**	**346**	Pn	**Pn**	**21 02 03.5**	**-2.4**
SCO				Sn	**Sn**	**21 03 15.6**	**-1.0**
SCO	**Scoresbysund**	**6.19**	**346**	*e*	**Pn**	**21 02 03.9**	**-2.0**
	baz=154,slow=7.9						
SCO				*e*P	**Pn**	**21 02 05.0**	**-0.9**
SCO				*e*S	**Sn**	**21 03 15.6**	**-1.0**
SCO				IAML		21 03 29.0	
	comp=Z,2.1nm,0.6s						
JMIC	**Jan Mayen**	**7.27**	**24**	LR	LR	21 04 39.0	
	comp=Z,199nm,20.7s,baz=272,slow=34						
EKA	**Eskdalemuir Ar**	**11.66**	**136**	Pn	**Pn**	**21 03 20.8**	**-0.1**
	baz=327,slow=13,SNR=13						
ESK	**Eskdalemuir**	**11.66**	**136**	P	**Pn**	**21 03 20.7**	**-0.2**
ESK	**Eskdalemuir**	**11.66**	**136**	Pn	**Pn**	**21 03 20.7**	**-0.2**
NC204	**NORSAR Array S**	**13.20**	**91**	Pn	**Pn**	**21 03 38.9**	**-2.9**
NOA	**NORSAR Array B**	**13.50**	**92**	Pn	**Pn**	**21 03 43.3**	**-2.7**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.4						
NOA				LR	LR	21 09 07.0	
	comp=Z,93nm,18.8s,baz=295,slow=38						
SFJD	**Kangerlussuaq**	**13.74**	**295**	LR	LR	21 08 48.0	
	comp=Z,458nm,18.3s,baz=93,slow=36						
HFS	**Hagfors**	**15.01**	**93**	Pn	**Pn**	**21 04 04.4**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=148,slow=8.6,SNR=1.9						
HFS				LR	LR	21 09 53.8	
	comp=Z,156nm,20.1s,baz=318,slow=37						
SPITS	**Spitsbergen Ar**	**16.95**	**23**	Pn	**P**	**21 04 33.2**	**-0.1**
	baz=226,slow=10,SNR=2.4						
SPITS				LR	LR	21 09 25.4	
	comp=Z,99nm,20.6s,baz=185,slow=31						
ARCES	**ARCESS Array B**	**17.15**	**54**	P	**Pn**	**21 04 33.9**	**-0.1**
	baz=328,slow=4.3,SNR=2.3						
ARCES				LR	LR	21 09 55.5	
	comp=Z,210nm,21.9s,baz=270,slow=33						
FINES	**FINESS Array B**	**19.69**	**79**	P	**P**	**21 05 03.8**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=190,slow=27,SNR=3.4						
FINES	**FINESS Array B**	**19.69**	**79**	P	**P**	**21 05 03.5**	**0.0**
CLL	**Collm**	**20.63**	**116**	*i* P	**P**	**21 05 14.0**	**+0.1**
	comp=Z,19nm,1.4s						
CLL				*i*		21 05 19.4	
CLL				*e*		21 06 39.0	
CLL	**Collm**	**20.63**	**116**	*i* P	**P**	**21 05 14.0**	**+0.1**
CLL				*i*		21 05 19.4	
CLL				pmax	pmax		
	comp=Z,19nm,1.4s						
CLL	**Collm**	**20.63**	**116**	P	**P**	**21 05 13.5**	**-0.4**
GRF	**Grafenberg Arr**	**21.25**	**121**	*e*P	**P**	**21 05 21.1**	**+0.5**
	comp=Z,75nm,2.5s,baz=325,slow=10						
NKC	**Novy Kostel**	**21.27**	**118**	*e*P	**P**	**21 05 22.9**	**+2.0**
NKC	**Novy Kostel**	**21.27**	**118**	*e*P	**P**	**21 05 22.9**	**+2.0**
STU	**Stuttgart**	**21.29**	**125**	P	**P**	**21 05 18.9**	**-2.1**
STU				pmax	pmax		
	comp=Z,13nm,0.6s						
STU	**Stuttgart**	**21.29**	**125**	P	**P**	**21 05 18.9**	**-2.1**
STU				IAmb	IAmb	21 05 28.3	
	comp=Z,13nm,0.6s						
BRG	**Berggiesshubel**	**21.34**	**115**	*e*P	**P**	**21 05 21.9**	**+0.3**
	comp=Z,15nm,1.2s						
BRG	**Berggiesshubel**	**21.34**	**115**	*e*P	**P**	**21 05 21.9**	**+0.3**
BRG				pmax	pmax		
	comp=Z,15nm,1.2s						
BFO	**Black Forest**	**21.36**	**127**	P	**P**	**21 05 21.9**	**+0.1**
BFO				pmax	pmax		
	comp=Z,13nm,1.2s						
BFO	**Black Forest**	**21.36**	**127**	P	**P**	**21 05 21.9**	**+0.1**
VSU	**Vasula**	**21.54**	**86**⇑	*i* P	**P**	**21 05 22.4**	**-1.2**
VSU				pmax	pmax		
	comp=Z,277nm,2.5s						
FRB	**Frobisher Bay**	**21.81**	**291**	LR	LR	21 13 31.5	
	comp=Z,187nm,20.0s,baz=12,slow=36						
KSP	**Ksiaz**	**22.30**	**112**	*e*P	**P**	**21 05 32.1**	**+0.3**
CHVC	**Chvalec**	**22.40**	**113**	*e*P	**P**	**21 05 34.6**	**+1.7**
UPC	**Upice**	**22.45**	**113**	*e*P	**P**	**21 05 34.9**	**+1.5**
UPC	**Upice**	**22.45**	**113**	*e*P	**P**	**21 05 34.9**	**+1.5**
OSTC	**Ostas**	**22.49**	**113**	*e*P	**P**	**21 05 33.6**	**-0.3**
KHC	**Kasperske Hory**	**22.60**	**118**	*e*P	**P**	**21 05 37.6**	**+2.5**
KHC	**Kasperske Hory**	**22.60**	**118**	*e*P	**P**	**21 05 37.6**	**+2.5**
DPC	**Dobruska-Polom**	**22.69**	**113**	*e*P	**P**	**21 05 36.4**	**+0.3**
DPC	**Dobruska-Polom**	**22.69**	**113**	*e*P	**P**	**21 05 36.4**	**+0.3**
DAVA	**Damuels**	**22.80**	**126**	P	**P**	**21 05 40.6**	**+3.3**
	comp=Z,11nm,1.2s						
SUW	**Suwalki**	**22.84**	**98**	P	**P**	**21 05 39.4**	**+1.9**
SUW				pmax	pmax		
	comp=Z,18nm,0.8s						
SUW	**Suwalki**	**22.84**	**98**	P	**P**	**21 05 39.4**	**+1.9**
SUW				IAmb	IAmb	21 05 53.2	
	comp=Z,18nm,0.8s						
GEC2	**GERESS Array S**	**22.88**	**119**	P	**P**	**21 05 38.5**	**+0.4**
GERES	**GERESS Array B**	**22.88**	**119**	P	**P**	**21 05 38.9**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=311,slow=6.9,SNR=4.5						
GERES				LR	LR	21 15 07.3	
	comp=Z,147nm,21.2s,baz=295,slow=38						
GERES	**GERESS Array B**	**22.88**	**119**	P	**P**	**21 05 38.2**	**+0.1**
MOTA	**Moosalm**	**23.18**	**124**	*e*P	**P**	**21 05 42.2**	**+1.0**
	comp=Z,6.8nm,1.2s						
DAVOX	**Davos/Dischmat**	**23.23**	**127**	P	**P**	**21 05 43.2**	**+1.4**
	comp=Z,6.5nm,1.0s,baz=324,slow=6.8,SNR=4.8						
DAVOX				LR	LR	21 14 54.4	
	comp=Z,141nm,18.3s,baz=83,slow=37						
FETA	**Feichten**	**23.32**	**125**	*e*P	**P**	**21 05 45.8**	**+3.1**
	comp=Z,10nm,1.7s						
SQTA	**Sankt Quirin**	**23.32**	**124**	*e*P	**P**	**21 05 45.0**	**+2.4**
	comp=Z,8.7nm,1.0s						
WTTA	**Wattenberg**	**23.44**	**124**	P	**P**	**21 05 45.0**	**+1.1**
	comp=Z,8.1nm,0.9s						
VRAC	**Vranov**	**23.62**	**114**	P	**P**	**21 05 47.1**	**+1.6**
	comp=Z,2.7nm,0.9s,baz=325,slow=10,SNR=4.3						
VRAC				LR	LR	21 15 03.5	
	comp=Z,158nm,19.1s,baz=310,slow=37						
VRAC	**Vranov**	**23.62**	**114**	*e*P	**P**	**21 05 46.1**	**+0.6**
MORC	**Moravsky Berou**	**23.63**	**112**	*e*P	**P**	**21 05 45.8**	**+0.2**
MORC	**Moravsky Berou**	**23.63**	**112**	P	**P**	**21 05 45.2**	**-0.5**
MORC				pmax	pmax		
	comp=Z,23nm,1.7s						
MORC	**Moravsky Berou**	**23.63**	**112**	P	**P**	**21 05 45.1**	**-0.5**
MORC				IAmb	IAmb	21 05 47.2	
	comp=Z,23nm,1.7s						
KRUC	**Moravsky**	**23.74**	**115**	*e*P	**P**	**21 05 46.9**	**+0.2**
NACGM	**Naroch**	**23.78**	**93**	*e*	**P**	**21 05 45.0**	**-2.0**
OJC	**Ojcow**	**24.20**	**109**	*e*P	**P**	**21 05 50.3**	**-0.7**
OJC	**Ojcow**	**24.20**	**109**	P	**P**	**21 05 50.4**	**-0.6**
OJC				pmax	pmax		
	comp=Z,26nm,1.8s						
OJC	**Ojcow**	**24.20**	**109**	P	**P**	**21 05 50.4**	**-0.6**
OJC				IAmb	IAmb	21 05 55.8	
	comp=Z,26nm,1.8s						
CONA	**Conrad Observa**	**24.46**	**117**	*e*P	**P**	**21 05 54.9**	**+1.5**
	comp=Z,7.1nm,1.1s						
SMOL	**Smolenice**	**24.59**	**114**	*e*P	**P**	**21 05 55.7**	**+1.1**
SMOL	**Smolenice**	**24.59**	**114**	*e*P	**P**	**21 05 55.7**	**+1.1**
LANS	**Liptovska Anna**	**24.90**	**111**	*e*P	**P**	**21 05 59.8**	**+2.4**
LANS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LANS	**Liptovska Anna**	**24.90**	**111**	*e*P	**P**	**21 05 59.8**	**+2.4**
VYHS	**Vyhne**	**25.17**	**112**	*e*P	**P**	**21 05 59.5**	**-0.2**
VYHS	**Vyhne**	**25.17**	**112**	*e*P	**

comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,131nm,16.0s
KBZ Khabaz 39.08 92 P **P 21 08 03.0 +1.6**
comp=Z,4.2nm,0.8s,baz=319,slow=10,SNR=7.1
KBZ Khabaz 39.08 92⇑ *eP* **P 21 08 02.7 +1.3**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
INK Inuvik 39.94 329 P **P 21 08 10.2 +1.8**
comp=Z,2.5nm,0.9s,baz=24,slow=11,SNR=6.1
ULM Lac du Bonnet 41.66 289 LR LR 21 24 23.6
comp=Z,72nm,22.0s,baz=74,slow=34
ABKAR Akbulak array 41.99 73 P **P 21 08 25.3 -0.2**
ABKAR Akbulak array 41.99 73 P **P 21 08 24.9 -0.5**
TIXI Tiksi 42.12 15⇑ *iP* **P 21 08 27.0 +0.8**
TIXI Tiksi 42.12 15 P **P 21 08 26.0 -0.3**
MARD Mardin 43.46 100 P **P 21 08 38.4 +0.7**
MARD IAmb IAmb 21 08 43.2
comp=Z,8.7nm,1.0s
L42A Oliver, Polo 45.61 277 P **P 21 08 55.3 +0.6**
IL31 45.79 333 P **P 21 08 56.3 +0.6**
IL31 IAmb IAmb 21 09 09.5
comp=Z,14nm,1.8s
ILAR Eielson Array 45.79 333 P **P 21 08 56.3 +0.5**
comp=Z,2.8nm,1.0s,baz=24,slow=5.9,SNR=17
ILAR PcP **PcP 21 10 33.5 +0.4**
comp=Z,1.8nm,1.0s,baz=349,slow=2.8,SNR=9.7
ILAR LR LR 21 30 12.3
comp=Z,48nm,18.6s,baz=82,slow=39
ILAR Eielson Array 45.79 333 P **P 21 08 55.5 -0.3**
COLA College 45.89 333 P **P 21 08 56.9 +0.4**
COLA pmax pmax
comp=Z,17nm,1.3s
COLA College 45.89 333 P **P 21 08 56.9 +0.4**
IMAR Indian Mountai 45.96 337 P **P 21 08 57.8 +0.7**
BCAR Beaver Creek A 46.21 329 P **P 21 08 60.0 +0.8**
BILL Bilibino 47.65 358 *eP* **P 21 09 10.1 -0.2**
BILL *e* 21 11 02.2
BILL *e*PPP PPP 21 11 44.8
BILL pmax pmax
comp=Z,6.0nm,2.0s
ZAA0 Zalesovo Array 47.67 51 P **P 21 09 10.6 0.0**
ZALV Zalesovo Beam 47.67 51 P **P 21 09 10.3 -0.3**
comp=Z,1.2nm,0.6s,baz=339,slow=7.9,SNR=5.6
ZALV Zalesovo Beam 47.67 51 *iP* **P 21 09 13.5 +2.9**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 47.67 51 P **P 21 09 10.0 -0.6**
KURK Kurchatov 48.14 58⇑ *eP* **P 21 09 13.7 -0.6**
KURK pmax pmax
comp=Z,7.0nm,0.8s
KURK Kurchatov 48.14 58 P **P 21 09 13.3 -1.0**
KURK IAmb IAmb 21 09 16.5
comp=Z,6.3nm,0.8s
GEYT Alibeck 50.41 84 P **P 21 09 32.2 +0.4**
comp=Z,1.2nm,0.5s,baz=296,slow=4.8,SNR=3.9
GEYT LR LR 21 33 35.0
comp=Z,49nm,18.1s,baz=45,slow=39
GYA0B ALIBECK ARRAY 50.41 84 P **P 21 09 32.6 +0.8**
GYA0B IAmb IAmb 21 09 34.9
comp=Z,6.2nm,1.2s
KKAR Karatay Array 51.28 70 P **P 21 09 38.3 0.0**
KKAR 21 09 38.5
KKAR Karatay Array 51.28 70 P **P 21 09 38.3 0.0**
KKAR Karatay Array 51.28 70 P **P 21 09 38.5 +0.2**
KKAR IAmb IAmb 21 09 41.4
comp=Z,6.6nm,1.4s
DGZ Jazzator, Alta 52.12 53⇑ *iP* **P 21 09 45.6 +0.9**
DGZ pmax pmax
comp=Z,20nm,2.9s
MK31 Makanchi Array 52.75 58 P **P 21 09 48.9 -0.3**
MK31 pmax pmax
comp=Z,2.0nm,1.0s
MK31 Makanchi Array 52.75 58 P **P 21 09 48.9 -0.3**
MKAR Makanchi Array 52.75 58 P **P 21 09 48.4 -0.8**
comp=Z,2.1nm,0.9s,baz=333,slow=4.2,SNR=14
MKAR Makanchi Array 52.75 58 *eP* **P 21 09 49.0 -0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 52.75 58 P **P 21 09 48.9 -0.3**
TOA0 Torodi Ar. Sit 53.04 156 P **P 21 09 51.0 -0.6**
TORD Torodi Ar. Bea 53.04 156 P **P 21 09 51.7 +0.1**
comp=Z,1.2nm,0.8s,baz=342,slow=8.8,SNR=6.8
TORD Torodi Ar. Bea 53.04 156 P **P 21 09 50.4 -1.2**
PD31 Pinedale Array 53.24 293 P **P 21 09 52.7 -0.5**
PD31 IAmb IAmb 21 09 55.6
comp=Z,3.8nm,0.8s
PDAR Pinedale Array 53.24 293 P **P 21 09 53.1 -0.1**
comp=Z,2.5nm,0.8s,baz=57,slow=6.3,SNR=17
PDAR LR LR 21 30 53.4
comp=Z,74nm,20.1s,baz=30,slow=34
PDAR Pinedale Array 53.24 293 P **P 21 09 52.8 -0.5**
AAK Ala-Archa 53.27 67⇑ *eP* **P 21 09 53.7 +0.4**
AAK pmax pmax
comp=Z,11nm,1.0s
BTK Batken 53.96 72 P **P 21 09 58.4 +0.1**
BTK pmax pmax
comp=Z,11nm,1.2s
BTK Batken 53.96 72 P **P 21 09 58.4 +0.1**
BOOM Boomskoye usch 53.97 66 P **P 21 09 58.6 +0.2**
BOOM pmax pmax
comp=Z,7.0nm,1.1s
BOOM Boomskoye usch 53.97 66 P **P 21 09 58.6 +0.2**
BOOM IAmb IAmb 21 10 06.9
comp=Z,6.5nm,1.1s
CHGR Chuyangaron 54.46 74 P **P 21 10 01.8 -0.2**
GAR Garm 54.65 73 P **P 21 10 03.8 +0.4**
HWUT Hardware Ranch 55.02 294 P **P 21 10 05.5 -0.6**
HWUT IAmb IAmb 21 10 11.9
comp=Z,5.1nm,1.1s
MPU Maple Canyon 56.40 293 P **P 21 10 15.1 -1.0**
KSH Kashi 56.51 68 *eP* **P 21 10 17.1 +0.4**
PV14 Lion Creek, Pa 56.76 290 P **P 21 10 18.1 -0.6**
PV14 IAmb IAmb 21 10 21.5
comp=Z,5.4nm,0.8s
WMQ Urumqi 57.26 56 *eP* **P 21 10 23.5 +1.6**
WMQ pP sP 21 10 29.8 +3.2
WMQ pmax pmax
comp=Z,21nm,0.7s
WMQ pmax pmax
comp=Z,220nm,4.3s
WMQ Urumqi 57.26 56 P **P 21 10 22.1 +0.1**
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ Urumqi 57.26 56 P **P 21 10 22.1 +0.1**
KBL Kabul 57.93 76 P **P 21 10 26.5 -0.4**
KBL pmax pmax
comp=Z,4.0nm,1.2s
KBL Kabul 57.93 76 P **P 21 10 26.5 -0.4**
ANMO Albuquerque 58.65 286⇓ *eP* **P 21 10 33.3 +1.4**
ANMO pmax pmax
comp=Z,8.0nm,2.5s
SZCU Shurtz Canyon 59.06 293 P **P 21 10 35.2 +0.4**
YBH Yreka Blue Hor 59.14 303 LR LR 21 36 56.9
comp=Z,56nm,19.1s,baz=25,slow=37
R11A Troy Canyon, C 59.40 295 P **P 21 10 37.1 +0.1**
R11A IAmb IAmb 21 10 44.1
comp=Z,5.3nm,1.7s
SONM Songino Array 59.70 40 P **P 21 10 38.9 0.0**
comp=Z,1.4nm,0.9s,baz=321,slow=5.1,SNR=5.8
SONM LR LR 21 38 55.2
comp=Z,51nm,18.2s,baz=309,slow=39
SONM Songino Array 59.70 40 P **P 21 10 38.4 -0.6**
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM Songino Array 59.70 40 P **P 21 10 38.4 -0.6**
ULN Ulaanbaatar 59.85 40⇓ *eP* **P 21 10 41.1 +1.1**
ULN pmax pmax
comp=Z,12nm,2.5s
NVAR Mina Array Bea 60.38 297 P **P 21 10 44.7 +0.9**
comp=Z,0.4nm,0.9s,baz=30,slow=5.5,SNR=4.0
NVAR Mina Array Bea 60.38 297 P **P 21 10 43.6 -0.3**
NIL Nilore 60.45 73 P **P 21 10 43.8 -0.4**
NIL pmax pmax
comp=Z,12nm,1.2s
NIL Nilore 60.45 73 P **P 21 10 43.8 -0.4**
TXAR Lajitas Array 62.33 280 P **P 21 10 57.8 +0.8**
comp=Z,0.9nm,0.9s,baz=50,slow=3.9,SNR=8.0
TXAR LR LR 21 36 50.1
comp=Z,110nm,20.3s,baz=0.0,slow=35
TXAR Lajitas Array 62.33 280 P **P 21 10 56.6 -0.4**
MDP Montagnes des 64.46 220 LR LR 21 31 15.7
comp=Z,30nm,19.2s,baz=92,slow=29
HHC Hu-ho-hao-te 67.57 40 *eP* **P 21 11 31.2 +0.2**
HHC pmax pmax
comp=Z,7.0nm,0.7s
HHC pmax pmax
comp=Z,120nm,6.6s
USRK Ussuriysk Ar. 68.95 23 P **P 21 11 41.7 +2.3**
comp=Z,0.8nm,0.6s,baz=144,slow=41,SNR=2.3
LZH Lanzhou 69.67 48 *eP* **P 21 11 44.2 0.0**
LZH pP pP 21 11 46.8 -0.9
LZH sP sP 21 11 48.1 -0.9
LZH *e*PP **PP 21 14 20.3 +2.6**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,79nm,7.7s
LZH LR LR
comp=Z,140nm,16.2s
LZH LR LR
comp=Z,140nm,16.0s
LZH LR LR
comp=Z,220nm,18.3s
ROSC El Rosal 71.90 241 LR LR 21 42 18.4
comp=Z,26nm,18.7s,baz=247,slow=35
KSRS Korea Array 74.72 28 LR LR 21 50 18.7
comp=Z,29nm,19.9s,baz=107,slow=40
NJ2 Nanjing 77.80 37 *eP* **P 21 12 31.6 -0.1**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
CMAR Chiang Mai Arr 84.16 59 P **P 21 13 06.0 +0.2**
comp=Z,1.3nm,0.9s,baz=315,slow=6.1,SNR=7.8
CMAR Chiang Mai Arr 84.16 59 P **P 21 13 06.1 +0.3**
WRA Warramunga Arr 131.59 37 PKP **PKiKP 21 19 48.6 +0.5**
comp=Z,0.6nm,1.0s,baz=329,slow=1.5,SNR=2.9
ASAR Alice Springs 135.03 38 PKP **PKiKP 21 19 55.2 +0.2**
comp=Z,0.8nm,0.9s,baz=336,slow=1.8,SNR=6.0
STKA Stephens Creek 144.79 32 PKP **PKPdf 21 20 10.6 -0.4**
comp=Z,2.3nm,0.8s,baz=359,slow=8.3,SNR=3.8

*IDC **04** 21:26:16.3±0.8, 12°.23S×75°.12W, h0km, mb4.1/8, mb1 4.2/11, mb1mx4.0/38, mbtmp4.0/11, ML3.2/3, MS3.3/6, Ms1 3.3/6, ms1mx3.0/33, Error ellipse: s-maj=20.8km s-min=11.8km az=16.0*
*ARE **04** 21:26:17±1.4, 12°.31S±0°.09×75°.14W±0°.04, h17km±4km, ML4.1, mb4.6/11(NEIC), Error ellipse: s-maj=12.6km s-min=4.8km az=192.0*
*NEIC **04** 21:26:18.7±1.0, 12°.24S±0°.07×75°.09W±0°.04, h20km±3km, Error ellipse: s-maj=11.4km s-min=3.4km az=200.0*
*VAO **04** 21:26:21.2±1.5, 12°.04S×74°.83W, h10km, mb4.4*
ISC 04 21:26:17.6±0.5, 12°.26S±0°.06×75°.12W±0°.06, h10km, n64, σ181/11/61, mb4.5/13, MS3.6/4, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
NNA	**Nana**	**1.71**	**279**	Pg	**Pn**		**21 26 46.4**	**-1.2**
	37nm,0.3s,baz=101,slow=9.9,SNR=61							
NNA				Lg	Lg		21 27 10.2	
	46nm,0.3s,baz=280,slow=8.6,SNR=7.6							
NNA				LR	LR		21 27 36.4	
	comp=Z,982nm,18.3s,baz=102,slow=47							
NNA	**Nana**	**1.71**	**279**			**Pn**	**21 26 48.2**	**+0.6**
NNA						**Sb**	**21 27 11.0**	**+0.2**
CZSB	**Cruzeiro do Su**	**5.09**	**28**	*eP*	**Pn**		**21 27 33.7**	**-0.4**
ATAH	**Atahualpa**	**6.03**	**327**	Pn	**Pn**		**21 27 47.8**	**+0.4**
	0.4nm,0.3s,baz=75,slow=18,SNR=2.5							
ATAH				Sn		**Sn**	**21 28 57.5**	**+0.8**
	0.7nm,0.3s,baz=300,slow=23,SNR=0.8							
ATAH				Lg	Lg		21 29 33.8	
	1.3nm,0.3s,baz=355,slow=22,SNR=1.8							
ATAH				LR	LR		21 30 14.9	
	comp=Z,135nm,19.2s,baz=172,slow=40							
LPAZ	**La Paz**	**7.86**	**121**	Pn	**Pn**		**21 28 14.6**	**+1.9**
	0.2nm,0.3s,baz=310,slow=11,SNR=8.4							
LPAZ				Sn		**Sn**	**21 29 43.4**	**+1.3**
	0.2nm,0.3s,baz=117,slow=17,SNR=1.2							
LPAZ				Lg	Lg		21 30 31.0	
	0.2nm,0.3s,baz=279,slow=4.1,SNR=1.4							
LPAZ	**La Paz**	**7.86**	**121**			**Pn**	**21 28 12.2**	**-0.5**
LPAZ	**La Paz**	**7.86**	**121**	*eP*	**Pn**		**21 28 14.7**	**+2.0**
PB16	**IPOC Station P**	**8.11**	**139**	Pn	**Pn**		**21 28 16.2**	**+0.2**
MNMC	**Minye Minye**	**8.65**	**143**	Pn	**Pn**		**21 28 22.6**	**-0.6**
PSGCX	**Pisagua**	**8.73**	**147**	Pn	**Pn**		**21 28 24.6**	**+0.5**
ETMB	**Extrema**	**9.07**	**75**	*eP*	**Pn**		**21 28 28.7**	**0.0**
PB11	**IPOC Station P**	**9.12**	**146**	Pn	**Pn**		**21 28 29.5**	**0.0**
LVC	**Lion Verde**	**11.87**	**151**	LR	LR		21 33 51.9	
	comp=Z,65nm,18.0s,baz=328,slow=38							
SAML	**Samuel**	**12.18**	**75**	Pn	**Pn**		**21 29 10.2**	**-1.2**
SAML	**Samuel**	**12.18**	**75**	*eP*	**Pn**		**21 29 10.5**	**-0.9**
SIV	**San Ignacio**	**14.12**	**107**	Pn	**Pn**		**21 29 39.7**	**+1.8**
	0.2nm,0.3s,baz=290,slow=10,SNR=1.7							
PCON	**Cinco Dias**	**14.55**	**355**	*eP*	**Pn**		**21 29 46.8**	**+2.5**
POPC	**Popayan, Colom**	**14.79**	**354**	*eP*	**Pn**		**21 29 49.0**	**+1.8**
PTLB	**Pontes e Lacer**	**15.84**	**103**	*eP*	**Pn**		**21 30 02.5**	**+1.7**
PRAC	**Prado**	**15.88**	**1**	*eP*	**P**		**21 30 05.2**	**+0.1**
ORTC	**Ortega, Tolima**	**16.07**	**360**	*eP*	**P**		**21 30 05.6**	**-1.6**
TOLC	**Tolima**	**16.74**	**359**	*eP*	**P**		**21 30 16.0**	**+1.0**
CHIC	**Chingaza**	**16.84**	**5**	*eP*	**P**		**21 30 15.1**	**-1.1**
MACA	**Manacapuru-AM**	**16.91**	**59**	*eP*	**Pn**		**21 30 13.0**	**-1.6**
GUY2C	**Guyana, Caldas**	**17.38**	**359**	*eP*	**P**		**21 30 25.1**	**+2.9**
RUSC	**La Rusia**	**18.15**	**7**	*eP*	**P**		**21 30 32.9**	**+2.1**
PTBC	**PUERTO BERRIO,**	**18.69**	**2**	*eP*	**Pn**		**21 30 36.6**	**0.0**
CLDB	**Colider**	**18.98**	**88**	*eP*	**P**		**21 30 38.6**	**-0.8**
DBBC	**Dabeiba**	**19.19**	**357**	*eP*	**P**		**21 30 39.8**	**-2.0**
PAMC	**Pamplona, Colo**	**19.62**	**7**	*eP*	**Pn**		**21 30 48.3**	**0.0**
NPGB	**Novo Progresso**	**20.15**	**77**	*eP*	**P**		**21 30 51.8**	**-0.5**
ITTB	**Itaituba**	**20.71**	**69**	*eP*	**P**		**21 30 57.9**	**-0.4**
SDV	**Santo Domingo**	**21.48**	**12**	P	**P**		**21 31 07.0**	**+0.2**
	14nm,0.8s,baz=206,slow=7.5,SNR=15							
SDV	**Santo Domingo**	**21.48**	**12**	*eP*	**P**		**21 31 06.7**	**-0.1**
SDV	**Santo Domingo**	**21.48**	**12**	P	**P**		**21 31 06.2**	**-0.5**
SDV	**Santo Domingo**	**21.48**	**12**	*eP*	**P**		**21 31 07.2**	**+0.4**
CPUP	**Villa Florida**	**21.82**	**132**	LR	LR		21 40 56.7	
	comp=Z,33nm,21.0s,baz=324,slow=40							
SJCC	**San Jacinto, C**	**22.02**	**360**	*eP*	**P**		**21 31 10.2**	**-2.3**
SNDB	**Serra Nova Dou**	**23.29**	**92**	*eP*	**P**		**21 31 26.0**	**+0.1**
BDFB	**Brasilia**	**26.51**	**100**	LR	LR		21 43 18.8	
	comp=Z,153nm,21.3s,baz=332,slow=39							
LC01	**Cunco**	**26.68**	**174**	P	**P**		**21 31 56.3**	**-0.6**
MATN	**Matagalpa**	**27.23**	**336**	P	**P**		**21 32 01.6**	**-0.6**
MATN				IAmb	IAmb		21 32 07.6	
	comp=Z,13nm,0.8s							
PLCA	**Paso Flores**	**28.64**	**173**	P	**P**		**21 32 14.6**	**+0.1**
	comp=Z,2.4nm,1.0s,baz=328,slow=11,SNR=4.3							
PLCA	**Paso Flores**	**28.64**	**173**	P	**P**		**21 32 13.3**	**-1.2**
PLCA				IAmb	IAmb		21 32 20.1	
	comp=Z,14nm,1.4s							
MLPR	**Magueyes Islan**	**31.08**	**15**	P	**P**		**21 32 35.4**	**-0.8**
TXAR	**Lajitas Array**	**49.70**	**327**	P	**P**		**21 35 11.2**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=149,slow=11,SNR=2.7							
OMMB	**Old Mammoth Mi**	**64.46**	**322**	P	**P**		**21 36 54.3**	**-0.5**
OMMB				IAmb	IAmb		21 36 57.2	
	comp=Z,3.2nm,0.9s							
NVAR	**Mina Array Bea**	**64.59**	**323**	P	**P**		**21 36 55.5**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=139,slow=7.6,SNR=3.8							
NVAR	**Mina Array Bea**	**64.59**	**323**	P	**P**		**21 36 54.6**	**-1.0**
ULM	**Lac du Bonnet**	**64.85**	**345**	P	**P**		**21 36 56.4**	**-0.3**
	comp=Z,8.4nm,0.9s,baz=229,slow=4.6,SNR=4.3							
ULM	**Lac du Bonnet**	**64.85**	**345**	P	**P**		**21 36 55.9**	**-0.8**
ORV	**Oroville**	**67.20**	**323**	P	**P**		**21 37 12.3**	**+0.2**
ORV				IAmb	IAmb		21 37 14.9	
	comp=Z,5.1nm,0.9s							
DBIC	**Dimbokro**	**72.33**	**79**	LR	LR		22 08 03.9	
	comp=Z,34nm,18.3s,baz=230,slow=35							
KOWA	**Kowa**	**75.28**	**71**	P	**P**		**21 38 01.2**	**-0.3**
KOWA				IAmb	IAmb		21 38 07.2	
	comp=Z,5.5nm,1.1s							
TOA0	**Torodi Ar. Sit**	**80.24**	**74**	P	**P**		**21 38 28.3**	**-0.9**
TOA0				IAmb	IAmb		21 38 29.4	
	comp=Z,7.8nm,1.0s							
TORD	**Torodi Ar. Bea**	**80.24**	**74**	P	**P**		**21 38 28.6**	**-0.7**
	comp=Z,4.9nm,0.8s,baz=269,slow=5.6,SNR=22							
TORD	**Torodi Ar. Bea**	**80.24**	**74**	P	**P**		**21 38 28.5**	**-0.7**
ESDC	**Sonseca Array**	**83.71**	**47**	P	**P**		**21 38 46.8**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=260,slow=5.3,SNR=6.3							
ESDC				LR	LR		22 14 49.0	
	comp=Z,24nm,18.3s,baz=255,slow=35							
VNDA	**Vanda**	**84.83**	**191**	P		**P**	**21 38 53.3**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=110,slow=4.3,SNR=4.5							
BCAR	**Beaver Creek A**	**90.67**	**335**	P		**P**	**21 39 20.2**	**-0.1**
ZALV	**Zalesovo Beam**	**135.47**	**17**	PKP		**PKiKP**	**21 45 39.3**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=305,slow=5.2,SNR=3.7							
MKAR	**Makanchi Array**	**140.66**	**25**	PKhKP	PKPpre		21 45 42.7	
	comp=Z,0.4nm,0.8s,baz=338,slow=1.3,SNR=3.8							
SONM	**Songino Array**	**144.52**	**358**	PKP		**PKPdf**	**21 45 54.1**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=331,slow=1.2,SNR=11							
SONM	**Songino Array**	**144.52**	**358**		PKPbc		21 45 53.2	0.0

*JMA **04** 21:33:34.3±0.1, 37°.18N×135°.15E, h379km±2km, M3.1*
*IDC **04** 21:33:35.0±1.2, 37°.18N×135°.11E, h375km±18km, mb2.6/2, mb1 2.9/6, mb1mx2.7/48, mbtmp3.5/6, Error ellipse: s-maj=29.8km s-min=21.0km az=50.0*
ISC 04 21:33:34.5±0.9, 37°.21N±0°.10×135°.16E±0°.07, h372km, n21, σ082/25, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
JJH	**Hakui**	**1.33**	**102**	P	**Pn**		**21 34 24.8**	**+0.8**
JKY	**Yasaka**	**1.57**	**182**	P	**Pn**		**21 34 25.9**	**+0.5**
JSZ	**Suzu**	**1.77**	**81**	P	**Pn**		**21 34 27.5**	**+1.1**
JOI	**OKI**	**1.79**	**240**	P	**Pn**		**21 34 26.9**	**+0.4**
JWT	**Wachi**	**1.93**	**174**	P	**Pn**		**21 34 28.0**	**+0.5**
JWT				*eS*	**S**		**21 35 09.8**	**-0.3**
JYTA	**Yamagatataniai**	**2.05**	**141**	P	**Pn**		**21 34 28.9**	**+0.6**
JYTA				S	**S**		**21 35 11.2**	**-0.3**
MAT	**Matsushiro**	**2.53**	**104**	P	**Pn**		**21 34 32.6**	**+0.9**
MAT				*eS*	**S**		**21 35 18.0**	**+0.1**
MAT	**Matsushiro**	**2.53**	**104**	P	**Pn**		**21 34 32.6**	**+0.9**
MJAR	**Matsushiro Arr**	**2.54**	**104**	P	**Pn**		**21 34 33.0**	**+1.2**
	0.4nm,0.3s,baz=282,slow=9.5,SNR=28							
JSD	**Sado**	**2.60**	**70**	P		**Pn**	**21 34 32.8**	**+0.6**
JHS	**Saijyo**	**2.75**	**218**	P		**Pn**	**21 34 33.9**	**+0.3**
JHK	**Hiroka**	**3.08**	**88**	P		**Pn**	**21 34 37.0**	**+0.8**
JFT	**Otama**	**4.14**	**84**	P		**Pn**	**21 34 46.7**	**+0.5**
JMM	**Marumori**	**4.53**	**80**	P		**Pn**	**21 34 50.9**	**+0.8**
JFK	**Kawauchi**	**4.56**	**86**	P		**Pn**	**21 34 50.7**	**+0.1**
JFK				S		**S**	**21 35 49.9**	**-2.2**
JMK	**Ichinoseki**	**5.09**	**68**	P		**Pn**	**21 34 57.0**	**+1.0**
KSRS	**Korea Array**	**5.77**	**275**	P		**Pn**	**21 35 04.2**	**+0.8**
	0.4nm,0.3s,baz=94,slow=12,SNR=11							
USRK	**Ussuriysk Ar.**	**7.39**	**342**	P		**P**	**21 35 22.5**	**-0.3**
	baz=150,slow=10,SNR=12							
ASAJ	**Asahikawa**	**8.92**	**37**	P		**P**	**21 35 40.7**	**-0.1**
	1.0nm,0.3s,baz=216,slow=8.7,SNR=6.3							
MKAR	**Makanchi Array**	**39.77**	**301**	P		**P**	**21 40 32.5**	**-0.2**
	0.3nm,0.7s,baz=91,slow=9.9,SNR=3.0							
WRA	**Warramunga Arr**	**56.84**	**181**	P		**P**	**21 42 41.7**	**0.0**
	0.2nm,0.4s,baz=357,slow=7.6,SNR=6.3							

*TAP **04** 21:51:50.8, 24°.83N×122°.33E, h115km, ML2.8, C*
*JMA **04** 21:51:51.0±0.1, 24°.79N×122°.32E, h115km±2km, M2.0*
ISC 04 21:51:51.3±1.8, 24°.86N±0°.06×122°.33E±0°.03, h112km±11km, n48, σ054/83, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
TWB1	**Santiao Chiao**	**0.34**	**295**	*eP*		**Pn**	**21 52 07.8**	**+0.4**
	baz=290							
TWB1				*eS*		**Sn**	**21 52 19.9**	**+0.4**
	baz=290							
TIPB	**Shuangxi**	**0.47**	**283**	P		**Pn**	**21 52 08.4**	**+0.2**
	baz=276							
TIPB				*eS*		**Sn**	**21 52 20.6**	**-0.3**
	baz=276							
TWC	**Suao**	**0.51**	**240**	*eP*		**Pn**	**21 52 08.0**	**-0.3**
	baz=242							
TWC				*eS*		**Sn**	**21 52 19.9**	**-1.2**
	baz=242							
WFSB	**Wu-fen Shan**	**0.54**	**293**	*eP*		**Pn**	**21 52 07.9**	**-0.7**
	baz=287							
WFSB				*eS*		**Sn**	**21 52 22.6**	**+1.0**
	baz=287							
TWE	**Neicheng**	**0.62**	**257**	*eP*		**Pn**	**21 52 09.3**	**+0.2**
	baz=264							
TWE				*eS*		**Sn**	**21 52 22.5**	**0.0**
	baz=264							
JYNG	**Yonaguni jima**	**0.69**	**126**	P		**Pn**	**21 52 09.8**	**+0.1**
JYNG				*eS*		**Sn**	**21 52 23.7**	**+0.1**
ENTT	**Nioudou**	**0.73**	**252**	*eP*		**Pn**	**21 52 10.4**	**+0.3**
	baz=256							
ENTT				*eS*		**Sn**	**21 52 24.9**	**+0.7**
	baz=256							
YOJ	**Yonaguni jima**	**0.74**	**123**	*eP*		**Pn**	**21 52 11.5**	**+1.4**
	baz=127							
YOJ				*eS*		**Sn**	**21 52 23.7**	**-0.5**
	baz=127							
YM01	**YM01**	**0.75**	**292**	P		**Pn**	**21 52 10.3**	**0.0**
	baz=289							
YM01				*eS*		**Sn**	**21 52 24.0**	**-0.5**
	baz=289							
YM08	**YM08**	**0.75**	**296**	*eP*		**Pn**	**21 52 10.3**	**0.0**
	baz=291							
YM11	**YM11**	**0.75**	**294**	*eP*		**Pn**	**21 52 10.7**	**+0.4**
	baz=289							
YM05	**YM05**	**0.76**	**294**	*eP*		**Pn**	**21 52 10.4**	**0.0**
	baz=290							
YM05				*eS*		**Sn**	**21 52 24.9**	**+0.2**
	baz=290							
NWLT	**Wulai**	**0.76**	**264**	*eP*		**Pn**	**21 52 10.5**	**+0.2**
	baz=270							
NWLT				*eS*		**Sn**	**21 52 24.1**	**-0.6**
	baz=270							
YM04	**YM04**	**0.78**	**292**	*eP*		**Pn**	**21 52 10.4**	**-0.1**
	baz=287							
YM04				*eS*		**Sn**	**21 52 24.7**	**-0.3**
	baz=287							
TWY	**Chenhua**	**0.78**	**302**	*eP*		**Pn**	**21 52 10.2**	**-0.3**
	baz=304							
NDT	**Datong Townshi**	**0.79**	**251**	P		**Pn**	**21 52 11.2**	**+0.6**
	baz=253							
NDT				*eS*		**Sn**	**21 52 26.2**	**+1.1**
	baz=253							
PCYT	**Pengchaiyu**	**0.80**	**343**	*eP*		**Pn**	**21 52 10.7**	**0.0**
	baz=338							
TWS1	**Kuangyinshan**	**0.86**	**286**	*eP*		**Pn**	**21 52 11.8**	**+0.6**
	baz=284							
YHNB	**Yeheng**	**0.89**	**258**	P		**Pn**	**21 52 11.7**	**+0.1**
	baz=265							
YHNB				*eS*		**Sn**	**21 52 26.7**	**-0.2**
	baz=265							
NSK	**Sanguang**	**0.90**	**258**	P		**Pn**	**21 52 11.8**	**+0.1**
	baz=260							
NSK				*eS*		**Sn**	**21 52 26.8**	**-0.3**
	baz=260							
NACB	**Ninganchiao**	**0.96**	**225**	*eP*		**Pn**	**21 52 11.8**	**-0.4**
	baz=220							
NACB				*eS*		**Sn**	**21 52 27.5**	**-0.5**
	baz=220							
NNSB	**Datong**	**0.96**	**244**	P		**Pn**	**21 52 12.7**	**+0.3**
	baz=239							
NNSB				*eS*		**Sn**	**21 52 28.4**	**+0.1**
	baz=239							
NNSH	**Datong**	**0.96**	**244**	P		**Pn**	**21 52 12.5**	**+0.1**
	baz=240							
NNSH				*eS*		**Sn**	**21 52 28.2**	**-0.1**
	baz=240							
NNS	**Nan Shan**	**0.97**	**244**	P		**Pn**	**21 52 12.5**	**+0.1**
	baz=239							
NNS				*eS*		**Sn**	**21 52 28.4**	**+0.1**
	baz=239							
ETLH	**Xiulin Townshi**	**1.01**	**230**	*eP*		**Pn**	**21 52 12.4**	**-0.4**
	baz=223							
ETLH				*eS*		**Sn**	**21 52 28.2**	**-0.9**
	baz=223							
FUSS	**Fushou**	**1.16**	**238**	P		**Pn**	**21 52 14.9**	**+0.3**
	baz=239							
FUSS				*eS*		**Sn**	**21 52 32.0**	**-

baz=225
IRIF Iriomote-Funau 1.38 112 P **Pn** **21 52 16.6 -0.1**
IRIF S **Sn** **21 52 35.7 -0.3**
WHP Taichung City 1.39 246 *i* P **Pn** **21 52 17.4 +0.4**
baz=254
WHP S **Sn** **21 52 35.9 -0.6**
baz=254
VWDT VWDT 1.55 225 *eP* **Pn** **21 52 20.4 +1.6**
baz=230
HGSD Ruisui 1.60 211 *eP* **Pn** **21 52 19.8 +0.5**
baz=220
SMLT Sun Moon Lake 1.63 234 *eP* **Pn** **21 52 20.1 +0.3**
baz=234
TYC Yuchr 1.65 235 *eP* **Pn** **21 52 19.6 -0.3**
baz=241
TYC *eS* **Sn** **21 52 42.2 +0.4**
baz=241
JKRS Kuro-shima 1.65 112 P **Pn** **21 52 20.3 +0.3**
JKRS S **Sn** **21 52 42.1 +0.3**
SSLB Suanglung 1.65 230 P **Pn** **21 52 20.8 +0.8**
baz=226
SSLB *eS* **Sn** **21 52 42.3 +0.4**
baz=226
JIJ Ishigaki jima 1.72 106 P **Pn** **21 52 20.9 0.0**
JIJ S **Sn** **21 52 42.4 -1.0**
YULB Yu-li 1.74 213 *eP* **Pn** **21 52 21.8 +0.7**
baz=219
TWF1 Yuli 1.78 212 *eP* **Pn** **21 52 20.3 -1.3**
baz=218
JISG Ishigakijimahi 1.82 98 P **Pn** **21 52 22.2 +0.1**
JISG *eS* **Sn** **21 52 45.1 -0.5**
ALS Alishan 1.94 226 *eP* **Pn** **21 52 24.5 +0.6**
baz=237
JTJ Tarama 2.17 95 P **Pn** **21 52 26.8 +0.4**
JTJ S **Sn** **21 52 53.3 -0.1**
CHN1 Nanshi 2.35 225 *eP* **Pn** **21 52 29.0 +0.2**
baz=235

IDC ***04*** *22:31:33.6±0.6, 19°.83S×70°.78W, h0km, mb4.1/14, mb1 4.3/15, mb1mx4.2/45, mbtmp4.2/15, ML4.0/1, MS3.9/25, Ms1 3.9/25, ms1mx3.8/39, Error ellipse: s-maj=24.4km s-min=14.2km az=55.0*

GUC ***04*** *22:31:35.9±0.5, 19°.88S×71°.10W, h37km±2km, ML4.4*

NEIC ***04*** *22:31:35.5±1.6, 19°.94S±0°.03×70°.98W±0°.04, h15km±2km, mb5.0/50, Mwr4.8/30, Mww4.9, ML4.4(GUC), Error ellipse: s-maj=5.5km s-min=4.5km az=106.0*

NEIC ***04*** *22:31:36.2, 19°.95S×70°.94W, h14km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}0.60; $M_{\theta\theta}$0.02; $M_{\phi\phi}$-0.63; $M_{r\theta}$0.52; $M_{\theta\phi}$0.52; $M_{\phi r}$-1.44; Fault plane solution: $M_0$1.73000×10^{16} NP1:ϕ_s313.58000°, δ14.45000°, λ64.07000°. NP2:ϕ_s160.25000°, δ77.03000°, λ96.43000°. Principal axes: T 1.5650, Plg58.0000°, Azm79.0000°; N 0.2882, Plg6.0000°, Azm339.0000°; P -1.8533, Plg32.0000°, Azm245.0000°;*

VAO ***04*** *22:31:36.7±0.5, 19°.84S×70°.68W, h10km, mb4.4*

GCMT ***04*** *22:31:39.5±0.5, 19°.75S±0°.03×71°.39W±0°.03, h28km±1km, MW5.0/65, Moment Tensor Solution. s27,c29; s65,c79; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.99±.19; $M_{\theta\theta}$-0.40±.11; $M_{\phi\phi}$-2.60±.12; $M_{r\theta}$0.19±.18; $M_{\theta\phi}$0.40±.07; $M_{\phi r}$-1.69±.18; Best double couple: M◎3.30200×10^{16} NP1:ϕ_s348.00000°, δ30.00000°, λ87.00000°. NP2: ϕ_s172.00000°, δ60.00000°, λ92.00000°. Principal axes: T 3.4630, Plg74.0000°, Azm86.0000°; N -0.3280, Plg1.0000°, Azm351.0000°; P -3.1410, Plg15.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***04*** *22:31:40, 19°.85S×71°.08W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}1.65; $M_{\theta\theta}$0.21; $M_{\phi\phi}$-1.86; $M_{r\theta}$0.88; $M_{\theta\phi}$0.66; $M_{\phi r}$-2.12; Fault plane solution: $M_0$2.97000×10^{16} NP1:ϕ_s352.00000°, δ20.00000°, λ102.00000°. NP2:ϕ_s158.00000°, δ71.00000°, λ85.00000°. Principal axes: T 2.7555, Plg64.0000°, Azm61.0000°; N 0.3830, Plg4.0000°, Azm160.0000°; P -3.1386, Plg26.0000°, Azm252.0000°;*

ISC 04 22:31:36.9±1.4, 19°.93S±0°.03×70°.92W±0°.05, h24km±10km, n280, σ1§07/270, mb4.8/33, MS4.0/22, 10C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.82**	**115**	*eP*		**Pn**	**22 31 52.8**	**0.0**
TA02				*eS*		**Sn**	**22 32 05.8**	**+1.6**
TA02				IAML			22 32 09.0	
	comp=E,13μm,0.4s							
PSGC	**Pisagua**	**0.82**	**67**	⇓*iP*		**Pb**	**22 31 51.8**	**-0.7**
PSGC				*eS*		**Sb**	**22 32 04.5**	**+1.2**
PSGCX	**Pisagua**	**0.82**	**67**			**Pb**	**22 31 51.9**	**-0.7**
PSGCX						**Sb**	**22 32 04.5**	**+1.2**
TA01	**Diego Aracena**	**0.94**	**132**	⇑*iP*		**Pb**	**22 31 54.4**	**-0.1**
TA01				*i* S		**Sn**	**22 32 08.2**	**+0.9**
TA01				IAML			22 32 14.4	
	comp=E,8μm,0.4s							
TA01	**Diego Aracena**	**0.94**	**132**			**Pb**	**22 31 54.4**	**-0.1**
TA01				Sg		**Sn**	**22 32 07.1**	**-0.2**
PB11	**IPOC Station P**	**1.20**	**82**	⇑*iP*		**Pn**	**22 31 58.5**	**+0.2**
PB11				*i* S		**Sn**	**22 32 16.2**	**+2.2**
PB11				IAML			22 32 18.8	
	comp=E,18μm,0.5s							
PB11	**IPOC Station P**	**1.20**	**82**			**Pn**	**22 31 58.5**	**+0.2**
PB11				Sn		**Sn**	**22 32 16.2**	**+2.2**
MNMC	**Minye Minye**	**1.48**	**58**	⇑*iP*		**Pn**	**22 32 02.3**	**0.0**
MNMC				*eS*		**Sb**	**22 32 23.1**	**+0.7**
MNMC	**Minye Minye**	**1.48**	**58**			**Pn**	**22 32 02.2**	**0.0**
AP01	**Chacalluta**	**1.64**	**20**	*eP*		**Pn**	**22 32 02.9**	**-1.3**
AP01				*i* S		**Sn**	**22 32 23.4**	**-1.1**
AP01				IAML			22 32 38.2	
	comp=E,13μm,0.7s							
AP01	**Chacalluta**	**1.64**	**20**			**Pn**	**22 32 03.1**	**-1.1**
GO01	**Chusmiza**	**1.65**	**81**	⇑*iP*		**Pn**	**22 32 05.3**	**+0.7**
GO01				*i* S		**Sb**	**22 32 28.5**	**+1.1**
GO01				IAML			22 32 31.9	
	comp=N,10μm,0.2s							
GO01	**Chusmiza**	**1.65**	**81**			**Pn**	**22 32 05.4**	**+0.7**
PB08	**IPOC Station P**	**1.68**	**98**	⇑*iP*		**Pn**	**22 32 05.7**	**+0.7**
PB08				*i* S		**Sb**	**22 32 29.5**	**+1.4**
PB08				IAML			22 32 32.7	
	comp=N,4μm,0.5s							
PB08	**IPOC Station P**	**1.68**	**98**	Pn		**Pn**	**22 32 05.5**	**+0.4**
PB02	**IPOC Station P**	**1.69**	**145**	⇑*iP*		**Pn**	**22 32 04.9**	**-0.1**
PB01	**IPOC Station P**	**1.74**	**130**	⇑*iP*		**Pn**	**22 32 06.2**	**+0.5**
PB01				*i* S		**Sb**	**22 32 29.6**	**-0.2**
PB01				IAML			22 32 38.9	
	comp=E,6μm,0.4s							
PB01	**IPOC Station P**	**1.74**	**130**	Pn		**Pn**	**22 32 06.2**	**+0.5**
PB07	**IPOC Station P**	**2.04**	**152**	*i* P		**Pn**	**22 32 09.5**	**-0.3**
PB07				*i* S		**Sn**	**22 32 34.2**	**-0.4**
PB07				IAML			22 32 53.3	
	comp=E,2μm,0.5s							
PB16	**IPOC Station P**	**2.07**	**40**	⇑*iP*		**Pn**	**22 32 10.6**	**-0.1**
PB16				IAML			22 32 49.1	
	comp=N,5μm,0.8s							
PB16	**IPOC Station P**	**2.07**	**40**	Pn		**Pn**	**22 32 10.5**	**-0.1**
PB03	**IPOC Station P**	**2.38**	**153**	*i* P		**Pn**	**22 32 14.1**	**-0.4**
PB03				IAML			22 33 06.4	
	comp=E,1μm,0.3s							
PB09	**IPOC Station P**	**2.44**	**140**	⇑*iP*		**Pn**	**22 32 16.5**	**+1.2**
PB09				IAML			22 32 60.0	
	comp=E,3μm,0.4s							
PB09	**IPOC Station P**	**2.44**	**140**			**Pn**	**22 32 16.5**	**+1.2**
PB04	**IPOC Station P**	**2.50**	**163**	*eP*		**Pn**	**22 32 15.2**	**-1.0**
PB04				IAML			22 33 09.5	
	comp=E,2μm,0.5s							
PB04	**IPOC Station P**	**2.50**	**163**			**Pn**	**22 32 15.4**	**-0.8**
PB05	**IPOC Station P**	**2.99**	**167**	*eP*		**Pn**	**22 32 21.6**	**-1.3**
PB06	**IPOC Station P**	**3.04**	**156**	*eP*		**Pn**	**22 32 22.8**	**-0.9**
PB06				IAML			22 33 20.1	
	comp=N,865nm,0.4s							
PB06	**IPOC Station P**	**3.04**	**156**	Pn		**Pn**	**22 32 22.7**	**-0.9**
LVC	**Limon Verde**	**3.26**	**145**	Pn		**Pn**	**22 32 28.2**	**+1.3**
	comp=N,16nm,0.3s,baz=305,slow=10,SNR=17							
LVC				Sn		**Sn**	**22 33 07.1**	**+2.0**
	comp=N,72nm,0.3s,baz=209,slow=20,SNR=8.8							
LVC				Lg		Lg	22 33 19.5	
	comp=N,197nm,0.3s,baz=224,slow=18,SNR=5.9							
LVC	**Limon Verde**	**3.26**	**145**	*eP*		**Pn**	**22 32 28.1**	**+1.3**
LVC	**Limon Verde**	**3.26**	**145**	Pn		**Pn**	**22 32 28.0**	**+1.1**
LVC	**Limon Verde**	**3.26**	**145**	*eP*		**Pn**	**22 32 28.1**	**+1.3**
PB15	**IPOC Station P**	**3.53**	**158**			**Pn**	**22 32 29.4**	**-1.0**
LPAZ	**La Paz**	**4.49**	**37**	Pn		**Pn**	**22 32 45.8**	**+1.8**
	comp=N,1.6nm,0.3s,baz=211,slow=9.5,SNR=28							
LPAZ				LR		LR	22 34 38.9	
	comp=N,3μm,18.1s,baz=233,slow=43							
LPAZ	**La Paz**	**4.49**	**37**	*eP*		**Pn**	**22 32 46.6**	**+2.6**
LPAZ	**La Paz**	**4.49**	**37**			**Pn**	**22 32 46.2**	**+2.3**
PB14	**IPOC Station P**	**4.70**	**174**	Pn		**Pn**	**22 32 44.4**	**-2.2**
GO02	**Mina Guanaco**	**5.35**	**167**	Pn		**Pn**	**22 32 54.4**	**-1.1**
AC01	**Pan de Azucar**	**6.20**	**177**			**Pn**	**22 33 05.9**	**-1.0**
AC02	**Maricunga**	**7.07**	**167**			**Pn**	**22 33 17.7**	**-1.6**
AC05	**El Transito**	**8.89**	**176**	Pn		**Pn**	**22 33 44.1**	**+0.2**
NNA	**Nana**	**9.73**	**323**	Pn		**Pn**	**22 33 59.7**	**+4.2**
	comp=N,1.8nm,0.3s,baz=203,slow=16,SNR=3.9							
NNA				Sn		Sn	22 35 32.4	-12
	comp=N,3.0nm,0.3s,baz=230,slow=12,SNR=1.9							
NNA				LR		LR	22 37 49.0	
	comp=N,522nm,19.6s,baz=155,slow=39							
CO01	**Juntas del Tor**	**10.04**	**176**	Pn		**Pn**	**22 33 59.1**	**-0.6**
SIV	**San Ignacio**	**10.16**	**69**	Pn		**Pn**	**22 34 01.8**	**+0.5**
	comp=N,5.0nm,0.3s,baz=284,slow=8.2,SNR=52							
CO03	**El Pedregal**	**10.87**	**179**	Pn		**Pn**	**22 34 12.2**	**+1.2**
ETMB	**Extrema**	**11.03**	**25**	*eP*		**Pn**	**22 34 11.7**	**-1.6**
CO02	**Combarbal**	**11.23**	**180**	Pn		**Pn**	**22 34 15.5**	**-0.5**
PTLB	**Pontes e Lacer**	**12.08**	**70**	*eP*		**Pn**	**22 34 26.2**	**-1.4**
CZSB	**Cruzeiro do Su**	**12.25**	**352**	*eP*		**Pn**	**22 34 30.6**	**+0.7**
VILB	**Vilhena**	**12.40**	**58**	*eP*		**Pn**	**22 34 30.3**	**-1.7**
SAML	**Samuel**	**13.23**	**36**			**Pn**	**22 34 41.5**	**-1.9**
SAML	**Samuel**	**13.23**	**36**	*eP*		**Pn**	**22 34 41.7**	**-1.6**
CPUP	**Villa Florida**	**14.03**	**120**	LR		LR	22 40 21.2	
	comp=N,255nm,19.2s,baz=300,slow=38							
CPUP	**Villa Florida**	**14.03**	**120**	*eP*		**Pn**	**22 34 53.0**	**-1.2**
AQDB	**Aquidauana**	**14.30**	**95**	*eP*		**Pn**	**22 34 56.3**	**-1.7**
ATAH	**Atahualpa**	**14.64**	**329**	LR		LR	22 39 51.8	
	comp=N,161nm,20.2s,baz=174,slow=34							
H03N1	**Juan Fernandez**	**15.23**	**206**	T		T	22 50 53.6	
	baz=33,slow=72,SNR=94							
H03N2	**Juan Fernandez**	**15.23**	**206**	T		T	22 50 54.4	
	baz=33,slow=72,SNR=96							
H03N3	**Juan Fernandez**	**15.24**	**206**	T		T	22 50 57.1	
	baz=33,slow=72,SNR=82							
BI02	**San Fabin de**	**16.68**	**181**	Pn		**Pn**	**22 35 28.4**	**-0.6**
CLDB	**Colider**	**17.12**	**61**	*eP*		**Pn**	**22 35 32.7**	**-2.1**
TRCB	**Terra Rica**	**17.27**	**103**	*eP*		**Pn**	**22 35 35.7**	**-0.9**
PTGB	**Pitanga**	**18.08**	**109**	*eP*		**Pn**	**22 35 46.3**	**-0.3**
PCMB	**Pacaembu**	**18.46**	**99**	*eP*		**P**	**22 35 50.2**	**-0.8**
ARAG	**Araguaiana, MT**	**18.67**	**80**	*eP*		**P**	**22 35 52.3**	**-1.0**
ITAB	**Concordia**	**18.68**	**116**	*eP*		**P**	**22 35 53.5**	**+0.1**
LC01	**Cunco**	**18.92**	**182**			**P**	**22 35 56.1**	**+0.1**
CPSB	**Cacapava Do Su**	**18.93**	**127**	*eP*		**P**	**22 35 56.5**	**+0.5**
ITRB	**Iturama**	**19.35**	**93**	*eP*		**P**	**22 36 00.1**	**-0.7**
MACA	**Manacapuru-AM**	**19.43**	**32**	*eP*		**P**	**22 36 00.2**	**-1.4**
PLTB	**Pedras Altas**	**19.51**	**131**	*eP*		**P**	**22 36 02.9**	**+0.4**
NPGB	**Novo Progresso**	**19.80**	**52**	*eP*		**P**	**22 36 04.7**	**-1.0**
PTLC	**Puerto Leguiza**	**20.33**	**349**	*eP*		**P**	**22 36 06.5**	**-4.9**
SNDB	**Serra Nova Dou**	**20.45**	**70**	*eP*		**P**	**22 36 10.7**	**-2.1**
PLCA	**Paso Flores**	**20.74**	**179**	P		**P**	**22 36 16.1**	**+0.3**
	comp=N,4.7nm,1.0s,baz=359,slow=14,SNR=6.0							
PLCA	**Paso Flores**	**20.74**	**179**	P		**P**	**22 36 16.2**	**+0.3**
PLCA	**Paso Flores**	**20.74**	**179**	*eP*		Pn	22 36 17.4	-0.8
TIJ01	**Guaruva-PR**	**20.92**	**109**	*eP*		**P**	**22 36 17.2**	**-0.8**
BB19B	**Bebedouro**	**21.01**	**97**	*eP*		**P**	**22 36 17.7**	**-1.2**
IPMB	**Ipameri, GO**	**21.57**	**89**	*eP*		**P**	**22 36 24.3**	**+0.6**
GCUF	**Volcan Galeras**	**21.95**	**343**	*eP*		**P**	**22 36 34.0**	**+4.6**
SPB	**Sao Paulo**	**22.11**	**104**	*eP*		**P**	**22 36 30.5**	**-0.1**
BDFB	**Brasilia**	**22.22**	**83**	P		**P**	**22 36 31.5**	**-0.5**
	comp=N,9.2nm,1.0s,baz=242,slow=11,SNR=3.9							
BDFB				LR		LR	22 46 42.4	
	comp=N,699nm,18.2s,baz=270,slow=41							
BDFB	**Brasilia**	**22.22**	**83**	P		**P**	**22 36 30.6**	**-1.4**
LL01	**San Ignacio de**	**22.42**	**183**	P		**P**	**22 36 34.3**	**+0.6**
LL01				IAml		IAmb	22 36 44.4	
	comp=Z,65nm,1.9s							
GARC	**Garzon, Huila**	**22.43**	**348**	*eP*		**P**	**22 36 34.4**	**+0.1**
PCON	**Cinco Dias**	**22.76**	**346**	*eP*		**P**	**22 36 40.1**	**+1.9**
BETC	**Betania**	**22.90**	**348**	*eP*		**P**	**22 36 39.6**	**+0.5**
POPC	**Popayan, Colom**	**23.03**	**345**	*eP*		**P**	**22 36 42.0**	**+1.4**
PEXB	**Peixe**	**23.07**	**74**	*eP*		**P**	**22 36 40.8**	**-0.1**
MARP	**Paez Belalcaza**	**23.16**	**347**	*eP*		**P**	**22 36 43.6**	**+1.6**
PRAC	**Prado**	**23.81**	**350**	*eP*		**P**	**22 36 46.8**	**-1.3**
ORTC	**Ortega, Tolima**	**24.07**	**349**	*eP*		**P**	**22 36 50.6**	**+0.1**
MALB	**Monte Alegre**	**24.25**	**44**	*eP*		**P**	**22 36 53.2**	**+1.0**
YOTC	**Yotoco, Valle**	**24.35**	**347**	*eP*		**P**	**22 36 54.6**	**+1.4**
BSCB	**Bom Sucesso**	**24.52**	**97**	*eP*		**P**	**22 36 54.4**	**-0.3**
CHIC	**Chingaza**	**24.56**	**353**	*eP*		**P**	**22 36 51.0**	**-4.4**
PRPB	**Paraupebas**	**24.65**	**59**	*eP*		**P**	**22 36 55.8**	**0.0**
TOLC	**Tolima**	**24.74**	**349**	*eP*		**P**	**22 36 58.0**	**+1.1**
ROSC	**El Rosal**	**24.84**	**352**	LR		LR	22 46 59.6	
	comp=Z,684nm,19.6s,baz=204,slow=37							
ROSC	**El Rosal**	**24.84**	**352**	P		**P**	**22 36 58.2**	**+0.3**
ROSC				LR		LR	22 37 19.4	
	comp=Z,28nm,1.1s							
SMTB	**Santa Maria do**	**25.10**	**67**	*eP*		**P**	**22 36 59.0**	**-0.9**
GUY2C	**Guyana, Caldas**	**25.37**	**350**	*eP*		**P**	**22 37 04.1**	**+1.3**
SPBC	**San Pablo de B**	**25.61**	**353**	*eP*		**P**	**22 37 03.7**	**-0.9**
NORC	**Norcasia**	**25.63**	**351**	*eP*		**P**	**22 37 04.5**	**-0.2**
RUSC	**La Rusia**	**25.75**	**355**	*eP*		**P**	**22 37 06.0**	**-0.3**
JANB	**Januaria**	**25.82**	**83**	*eP*		**P**	**22 37 05.0**	**-1.6**
SDBA	**SAO DESIDERIO**	**26.06**	**77**	*eP*		**P**	**22 37 08.6**	**-0.1**
HELC	**Santa Helena**	**26.35**	**350**	*eP*		**P**	**22 37 11.8**	**+0.2**
PTBC	**PUERTO BERRIO,**	**26.53**	**352**	*eP*		**P**	**22 37 10.7**	**-2.1**
MCPB	**Macapa, AP**	**26.82**	**46**	*eP*		**P**	**22 37 15.6**	**+0.1**
DBBC	**Dabeiba**	**27.28**	**348**	*eP*		**P**	**22 37 19.0**	**-0.6**
SDV	**Santo Domingo**	**28.63**	**1**	P		**P**	**22 37 33.2**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=234,slow=7.4,SNR=5.2							
SDV				LR		LR	22 48 16.0	
	comp=Z,430nm,19.5s,baz=212,slow=35							
SDV	**Santo Domingo**	**28.63**	**1**	P		**P**	**22 37 33.5**	**+1.6**
SDV	**Santo Domingo**	**28.63**	**1**	*eP*		**P**	**22 37 33.6**	**+1.7**
SJCC	**San Jacinto, C**	**29.93**	**352**	*eP*		**P**	**22 37 42.1**	**-1.2**
RCBR	**Riachuelo**	**36.80**	**72**	P		**P**	**22 38 42.3**	**-0.8**
	comp=Z,13nm,0.9s,baz=217,slow=14,SNR=4.0							
RCBR	**Riachuelo**	**36.80**	**72**	P		**P**	**22 38 42.7**	**-0.5**
RCBR				IAmb		IAmb	22 38 43.1	
	comp=Z,19nm,1.0s							
W58A	**Raeford**	**55.21**	**352**	P		**P**	**22 41 07.7**	**-0.1**
	baz=170							
W56A	**Indian Trail**	**55.52**	**350**	P		**P**	**22 41 09.6**	**-0.4**
	baz=169							
W54A	**Cherokee Point**	**55.75**	**349**	P		**P**	**22 41 11.4**	**-0.2**
	baz=167							
V59A	**Middlesex**	**55.82**	**353**	P		**P**	**22 41 12.4**	**+0.3**
	baz=172							
V57A	**Coltrane Farms**	**56.14**	**351**	P		**P**	**22 41 14.3**	**-0.1**
	baz=170							
V56A	**Mocksville**	**56.17**	**351**	P		**P**	**22 41 14.6**	**0.0**
	baz=169							
U59A	**Littleton**	**56.35**	**353**	P		**P**	**22 41 15.6**	**-0.2**
	baz=172							
U59A	**Littleton**	**56.35**	**353**	P		**P**	**22 41 15.8**	**-0.1**
U59A				IAmb		IAmb	22 41 16.7	
	comp=Z,32nm,1.6s							
V54A	**Nebo**	**56.38**	**349**	P		**P**	**22 41 15.7**	**-0.4**
	baz=168							
U58A	**Oxford**	**56.48**	**353**	P		**P**	**22 41 17.2**	**+0.4**
	baz=171							
U57A	**Blanch**	**56.62**	**352**	P		**P**	**22 41 17.3**	**-0.5**
	baz=170							
Z41A	**Richland Creek**	**56.87**	**338**	P		**P**	**22 41 20.0**	**+0.3**
T59A	**Double "B" Far**	**56.94**	**354**	P		**P**	**22 41 20.0**	**-0.1**
	baz=172							
T59A	**Double "B" Far**	**56.94**	**354**	P		**P**	**22 41 19.9**	**-0.2**
T59A				IAmb		IAmb	22 41 29.7	
	comp=Z,16nm,0.9s							
T58A	**Grand View Acr**	**57.02**	**353**	P		**P**	**22 41 20.8**	**+0.2**
	baz=171							
U54A	**Nelsons Funny**	**57.08**	**350**	P		**P**	**22 41 20.8**	**-0.4**
	baz=168							
T57A	**Hurt**	**57.16**	**352**	P		**P**	**22 41 21.3**	**-0.3**
	baz=171							
T57A	**Hurt**	**57.16**	**352**	P		**P**	**22 41 21.2**	**-0.5**
T57A				IAmb		IAmb	22 41 22.5	
	comp=Z,27nm,1.4s							
T56A	**Rocky Mt**	**57.30**	**351**	P		**P**	**22 41 23.0**	**+0.4**
	baz=170							
WLAR	**White Oak Lake**	**57.36**	**338**	P		**P**	**22 41 23.3**	**+0.2**
V48A	**Smith Brothers**	**57.38**	**345**	P		**P**	**22 41 21.9**	**-1.3**
V48A				IAmb		IAmb	22 41 32.5	
	comp=Z,26nm,1.5s							
TZTN	**Tazewell**	**57.42**	**348**	P		**P**	**22 41 22.3**	**-1.3**
	baz=166							
T55A	**Pulaski**	**57.49**	**351**	P		**P**	**22 41 23.8**	**-0.2**
	baz=169							
S57A	**Dark Hollow, R**	**57.88**	**352**	P		**P**	**22 41 26.9**	**+0.2**
	baz=171							
S57A	**Dark Hollow, R**	**57.88**	**352**	P		**P**	**22 41 27.0**	**+0.3**
S57A				IAmb		IAmb	22 41 27.6	
	comp=Z,32nm,1.5s							
R58B	**Mineral**	**57.95**	**354**	P		**P**	**22 41 26.1**	**-1.1**
	baz=172							
R58B	**Mineral**	**57.95**	**354**	P		**P**	**22 41 27.6**	**+0.4**
R58B				IAmb		IAmb	22 41 28.4	
	comp=Z,19nm,1.2s							
WVT	**Waverly**	**58.00**	**344**	P		**P**	**22 41 26.0**	**-1.6**
	baz=161							
S55A	**Lewisburg**	**58.09**	**351**	P		**P**	**22 41 28.3**	**0.0**
	baz=169							
S54A	**Dingess, Beckl**	**58.24**	**350**	P		**P**	**22 41 28.8**	**-0.6**
	baz=168							
TXAR	**Lajitas Array**	**58.27**	**326**	P		**P**	**22 41 29.8**	**0.0**
	comp=Z,0.5nm,0.8s,baz=143,slow=9.3,SNR=2.7							
TXAR				LR		LR	23 05 26.9	
	comp=Z,57nm,18.6s,baz=0.0,slow=35							
TXAR	**Lajitas Array**	**58.27**	**326**	P		**P**	**22 41 30.3**	**+0.5**
R58A	**Rapidan**	**58.30**	**353**	P		**P**	**22 41 29.6**	**0.0**
	baz=172							
MIAR	**Mount Ida**	**58.30**	**338**	P		**P**	**22 41 29.5**	**-0.2**
	baz=155							
MIAR	**Mount Ida**	**58.30**	**338**	P		**P**	**22 41 29.6**	**-0.2**
MIAR				IAmb		IAmb	22 41 39.3	
	comp=Z,21nm,1.4s							
R57A	**Stanardsville**	**58.35**	**353**	P		**P**	**22 41 29.9**	**-0.1**
	baz=172							
T47A	**Sharon Grove**	**58.63**	**345**	P		**P**	**22 41 31.0**	**-1.0**
Q58A	**Fox Den Farm,**	**58.90**	**354**	P		**P**	**22 41 33.8**	**0.0**
	baz=173							
Q57A	**Strasburg**	**59.07**	**353**	P		**P**	**22 41 35.6**	**+0.6**
	baz=172							
Q56A	**Snyder Ridge,**	**59.17**	**353**	P		**P**	**22 41 36.3**	**+0.6**
	baz=171							
Q56A	**Snyder Ridge,**	**59.17**	**353**	P		**P**	**22 41 35.8**	**+0.2**
Q56A				IAmb		IAmb	22 41 46.0	
	comp=Z,17nm,0.9s							
Q54A	**Coxs Mills**	**59.33**	**351**	P		**P**	**22 41 36.5**	**-0.3**
	baz=169							
S44A	**Carbondale**	**59.85**	**343**	P		**P**	**22 41 39.3**	**-1.1**
P54A	**Burton**	**59.89**	**351**	P		**P**	**22 41 40.1**	**-0.6**
	baz=170							
P53A	**Whipple**	**59.91**	**351**	P		**P**	**22 41 41.1**	**+0.4**
	baz=169							
O57A	**Amberson**	**60.15**	**354**	P		**P**	**22 41 42.7**	**+0.3**
	baz=173							
O56A	**Blue Knob Stat**	**60.31**	**353**	P		**P**	**22 41 44.0**	**+0.5**
	baz=172							
TUL1	**Leonard**	**60.32**	**337**	P		**P**	**22 41 43.7**	**0.0**
N55A	**Marion Center**	**60.86**	**353**	P		**P**	**22 41 47.6**	**+0.3**
	baz=171							
N56A	**West Decatur**	**60.92**	**354**	P		**P**	**22 41 47.9**	**+0.3**
	baz=172							
MNTX	**Cornudas Mount**	**61.05**	**327**	P		**P**	**22 41 49.8**	**+1.1**
M58A	**Price's Panora**	**61.20**	**355**	P		**P**	**22 41 48.9**	**-0.7**
	baz=172							
R40A	**Maddies Statio**	**61.28**	**341**	P		**P**	**22 41 50.4**	**+0.3**
R40A				IAmb		IAmb	22 41 56.1	
	comp=Z,27nm,1.5s							
M59A	**Waymart**	**61.30**	**356**	P		**P**	**22 41 50.1**	**-0.1**
	baz=175							
M56A	**Emporium**	**61.47**	**354**	P		**P**	**22 41 51.2**	**-0.1**
	baz=172							
M54A	**Oil Creek Stat**	**61.66**	**353**	P		**P**	**22 41 52.4**	**-0.2**
	baz=171							
L58A	**Harry Jones Me**	**61.83**	**356**	P		**P**	**22 41 54.8**	**+1.0**
	baz=175							
L59A	**Walton**	**61.92**	**357**	P		**P**	**22 41 54.9**	**+0.4**
	baz=176							
BINY	**Binghamton**	**61.99**	**356**	P		**P**	**22 41 55.1**	**+0.2**
	baz=175							
L56A	**Greenwood**	**62.05**	**354**	P		**P**	**22 41 55.6**	**+0.3**
	baz=173							
WVNY	**West Valley, N**	**62.42**	**354**	P		**P**	**22 41 57.9**	**+0.1**
K59A	**Cooperstown**	**62.49**	**357**	P		**P**	**22 41 58.7**	**+0.5**
	baz=176							
K58A	**Earlville**	**62.53**	**356**	P		**P**	**22 41 58.8**	**+0.3**

PDAR LR LR 23 16 27.7
comp=Z,50nm,18.4s,baz=125,slow=38
PDAR Pinedale Array 71.82 331 P **P** **22 42 57.8 +0.1**
OMMB Old Mammoth Mi 72.95 322 P **P** **22 43 05.7 +1.0**
ELK Elko 73.07 326 P **P** **22 43 05.3 0.0**
comp=Z,0.3nm,0.4s,baz=195,slow=13,SNR=1.5
ELK LR LR 23 14 41.4
comp=Z,63nm,18.2s,baz=142,slow=35
ELK Elko 73.07 326 P **P** **22 43 05.2 0.0**
NVAR Mina Array Bea 73.10 323 P **P** **22 43 06.8 +1.3**
comp=Z,1.1nm,0.8s,baz=36,slow=24,SNR=2.6
NVAR Mina Array Bea 73.10 323 P **P** **22 43 06.1 +0.6**
ULM Lac du Bonnet 73.27 344 LR LR 23 17 20.8
comp=Z,86nm,20.9s,baz=114,slow=38
PPT Papeete 73.85 257 LR LR 23 08 18.7
comp=Z,34nm,20.1s,baz=159,slow=30
YHH Holmes Hill 73.98 332 P **P** **22 43 11.2 +0.5**
PAHR Pah Rah Range 74.59 323 P **P** **22 43 15.6 +1.5**
HLID Hailey 74.72 329 P **P** **22 43 16.7 +1.9**
baz=138
HLID Hailey 74.72 329 P **P** **22 43 15.8 +1.0**
YBH Yreka Blue Hor 77.82 323 LR LR 23 14 12.2
comp=Z,55nm,20.9s,baz=120,slow=33
VNDA Vanda 78.06 190 LR LR 23 12 16.1
comp=Z,22nm,20.9s,baz=138,slow=31
SYO Syowa Base 78.62 160‖*e*X P 22 43 31.0 -5.3
SYO Syowa Base 78.62 160‖*e*X **P** **22 43 36.7 +0.4**
TOA0 Torodi Ar. Sit 78.62 71 P **P** **22 43 35.8 -1.5**
TOA0 IAmb IAmb 22 43 45.8
comp=Z,20nm,0.9s
TORD Torodi Ar. Bea 78.62 71 P **P** **22 43 36.0 -1.2**
comp=Z,8.2nm,0.8s,baz=253,slow=5.0,SNR=35
TORD LR LR 23 16 35.8
comp=Z,209nm,21.3s,baz=250,slow=34
NEW Newport 79.45 331 LR LR 23 22 45.8
comp=Z,64nm,18.4s,baz=113,slow=39
RAR Rarotonga 81.98 250 LR LR 23 11 12.7
comp=Z,208nm,18.8s,baz=110,slow=29
FRB Frobisher Bay 83.42 1 LR LR 23 20 40.2
comp=Z,99nm,21.3s,baz=192,slow=35
TAM Tamanrasset 85.81 64 P **P** **22 44 15.1 +0.1**
TAM IAmb IAmb 22 44 25.4
comp=Z,16nm,1.2s
BOSA Boshof 85.85 119 LR LR 23 19 25.2
comp=Z,114nm,18.9s,baz=238,slow=34
ESDC Sonseca Array 86.06 45 P **P** **22 44 15.4 -0.2**
comp=Z,2.7nm,1.2s,baz=290,slow=3.8,SNR=3.2
ESDC LR LR 23 22 36.0
comp=Z,95nm,18.0s,baz=225,slow=36
MAW Mawson 86.36 164 P **P** **22 44 17.4 +0.8**
comp=Z,1.4nm,0.8s,baz=172,slow=8.3,SNR=3.2
MAW LR LR 23 25 19.7
comp=Z,70nm,18.1s,baz=238,slow=37
MAW Mawson 86.36 164 P **P** **22 44 16.9 +0.3**
BBB Bella Bella 87.31 329 LR LR 23 27 08.8
comp=Z,42nm,19.4s,baz=124,slow=38
YKA Yellowknife Ar 89.09 341 P **P** **22 44 29.5 -0.1**
comp=Z,1.1nm,0.7s,baz=191,slow=36,SNR=2.2
YKA LR LR 23 27 10.4
comp=Z,64nm,21.7s,baz=0.0,slow=38
RES Resolute Bay 95.63 354 LR LR 23 30 20.6
comp=Z,54nm,19.6s,baz=132,slow=37
BMRD Maredsous 96.36 39 PcP **PcP** **22 45 04.7 +1.1**
H11S2 WAKE ISLAND Hyd 25.79 279 T T 01 09 59.2
baz=101,slow=75,SNR=49
H11S1 WAKE ISLAND Hyd 25.80 279 T T 01 09 59.1
baz=101,slow=75,SNR=29
H11S3 WAKE ISLAND Hyd 25.81 279 T T 01 10 00.5
baz=101,slow=75,SNR=27
H11N3 WAKE ISLAND Hyd 25.84 280 T T 01 10 02.3
baz=100,slow=74,SNR=13
H11N2 WAKE ISLAND Hyd 25.86 280 T T 01 10 02.0
baz=100,slow=74,SNR=15
H11N1 WAKE ISLAND Hyd 25.86 280 T T 01 10 05.2
baz=100,slow=74,SNR=2.7
ASAR Alice Springs 130.37 210 PKP **PKPdf** **22 50 46.5 +0.5**
comp=Z,0.2nm,0.5s,baz=174,slow=39,SNR=2.1
ABKAR Akbulak array 131.25 41 PKPdf **PKPdf** **22 50 47.3 +0.5**
GEYT Alibeck 132.53 56 PKP **PKPdf** **22 50 49.5 -0.2**
comp=Z,1.7nm,0.9s,baz=133,slow=19,SNR=1.9
WRA Warramunga Arr 133.28 213 PKP **PKPdf** **22 50 51.6 0.0**
comp=Z,0.5nm,0.9s,baz=153,slow=2.0,SNR=2.3
ZALV Zalesovo Beam 141.29 23 PKP **PKPdf** **22 51 05.1 -0.2**
comp=Z,1.9nm,0.8s,baz=280,slow=3.4,SNR=8.3
MAKZ Makanchi 145.24 33 **PKPbc** **22 51 11.8 -0.4**
NIL Nilore 145.41 59 **PKPbc** **22 51 12.7 -0.5**
MK31 Makanchi Array 145.41 33 PKPdf **PKPbc** **22 51 12.6 -0.2**
MKAR Makanchi Array 145.41 33 PKPbc **PKPbc** **22 51 12.7 -0.1**
comp=Z,4.9nm,1.1s,baz=321,slow=3.1,SNR=24
KSH Kashi 145.52 48 PKPbc **PKPab** **22 51 14.4 +0.7**
KSH PP **PP** **22 54 34.1 +0.3**
KSH AMB AMB
comp=Z,400nm,5.1s
KSH LR LR
comp=Z,130nm,4.3s
KSH LR LR
comp=Z,190nm,3.9s
KSH LR LR
comp=Z,350nm,6.2s
KLR Kul'dur 145.58 333 PKPbc **PKPdf** **22 51 13.2 +0.2**
comp=Z,2.0nm,0.8s,baz=182,slow=18,SNR=2.6
USRK Ussuriysk Ar. 149.17 327 PKPbc **PKPbc** **22 51 24.3 +1.0**
comp=Z,1.7nm,0.8s,baz=57,slow=7.0,SNR=5.0
MJAR Matsushiro Arr 149.62 309 PKPbc **PKiKP** **22 51 27.1 +1.3**
comp=Z,3.9nm,1.0s,baz=294,slow=0.6,SNR=5.9
WMQ Urumqi 150.22 32 *e*PKPbc **PKPdf** **22 51 21.5 +0.6**
WMQ LR LR
comp=Z,280nm,29.5s
WMQ LR LR
comp=Z,210nm,23.9s
SONM Songino Array 152.08 4 PKPbc **PKPbc** **22 51 29.5 -0.8**
comp=Z,1.8nm,0.7s,baz=307,slow=1.1,SNR=10
SONM Songino Array 152.08 4 **PKPbc** **22 51 30.4 +0.1**
HHC Hu-ho-hao-te 159.04 355 *e*PKP **PKPdf** **22 51 31.4 -1.8**
LZH Lanzhou 163.26 15 *e*PKP **PKPdf** **22 51 38.2 +0.3**
LZH pPKP pPKPdf 22 51 44.9 -0.2
LZH sPKP 22 51 47.1
LZH LR LR
comp=Z,150nm,18.0s
LZH LR LR
comp=Z,160nm,18.3s
LZH LR LR
comp=Z,200nm,20.1s
NJ2 Nanjing 165.08 326 *e*PKP **PKPdf** **22 51 41.3 +1.9**
CD2 Chengdu 168.06 23 PKP **PKPdf** **22 51 41.6 -0.3**

JMA ***04*** *22:50:20.9±0.1,23.˚97N×122.˚39E,h34km±3km,M3.5*
NIED ***04*** *22:50:21.0,23.˚97N×122.˚39E,h34km,MW3.8,Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}1.84; $M_{\theta\theta}$1.73; $M_{\theta\phi}$-3.57; $M_{r\theta}$3.44; $M_{r\phi}$2.35; $M_{\phi r}$-0.12; Fault plane solution: $M_0$5.15000×10^{14} NP1: ϕ_c121.00000°,δ72.00000°,λ43.00000°. NP2:ϕ_s15.00000°, δ50.00000°,λ157.00000°.*
NEIC ***04*** *22:50:21.5±1.4,23.˚99N±0.˚05×122.˚42E±0.˚04, h42km±10km,mb4.0/8 Error ellipse: s-maj=8.0km s-min=4.3km az=149.0*
TAP ***04*** *22:50:21.7,24.˚05N×122.˚41E,h37km,ML4.1,D*
IDC ***04*** *22:50:43.8±20.0,24.˚62N×122.˚99E,h263km±135km, mb3.4/7,mb1 3.4/8,mb1mx3.0/58,mbtmp4.0/8,MS3.1/1, Ms1 3.1/1,ms1mx2.4/34,Error ellipse: s-maj=178.2km s-min=41.2km az=172.0*

ISC 04 22:50:22.6±0.5,24˚03N±0˚02×122˚44E±0˚02,h50km±6km, n169,σ1§39/276,mb4.0/12,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.63**	**47**	P		**Pn**	**22 50 34.4**	**-1.1**
JYNG					*e*S	**Sn**	**22 50 43.5**	**-1.2**
YOJ	**Yonaguni jima**	**0.68**	**50**	*i* P		**Pn**	**22 50 35.2**	**-0.9**
	baz=61							
YOJ				*i* S		**Sn**	**22 50 45.0**	**-0.9**
	baz=61							
YOJ	**Yonaguni jima**	**0.68**	**50**	P		**Pn**	**22 50 35.1**	**-1.0**
YOJ					*e*S	**Sn**	**22 50 45.0**	**-0.9**
YOJ	**Yonaguni jima**	**0.68**	**50**			**Pn**	**22 50 35.2**	**-0.9**
YOJ					Sn	**Sn**	**22 50 45.1**	**-0.8**
ENAH	**Nanao**	**0.71**	**306**	P		**Pn**	**22 50 34.9**	**-1.7**
	baz=305							
ENAH					S	**Sn**	**22 50 44.5**	**-2.2**
	baz=305							
HWA	**Hwalien**	**0.77**	**267**	P		**Pn**	**22 50 35.7**	**-1.6**
	baz=253							
HWA					*e*S	**Sn**	**22 50 47.2**	**-0.7**
	baz=253							
NACB	**Ninganchiao**	**0.79**	**281**	P		**Pn**	**22 50 35.6**	**-1.9**
	baz=267							
NACB					S	**Sn**	**22 50 45.8**	**-2.6**
	baz=267							
NACB	**Ninganchiao**	**0.79**	**281**			**Pn**	**22 50 35.4**	**-2.1**
NACB					Sn	**Sn**	**22 50 45.7**	**-2.7**
TWC	**Suao**	**0.79**	**317**	P		**Pn**	**22 50 35.6**	**-2.0**
	baz=317							
TWC					*e*S	**Sn**	**22 50 46.1**	**-2.4**
	baz=317							
ETLH	**Xiulin Townshi**	**0.89**	**282**	P		**Pn**	**22 50 37.3**	**-1.7**
	baz=270							
ETLH					S	**Sn**	**22 50 48.6**	**-2.4**
	baz=270							
EGS		**0.94**	**331**	P		**Pn**	**22 50 38.8**	**-0.7**
	baz=320							
EGS					*e*S	**Sn**	**22 50 49.7**	**-2.2**
	baz=320							
ESL	**Shilin**	**0.94**	**257**	P		**Pn**	**22 50 37.3**	**-2.3**
	baz=248							
ESL					*e*S	**Sn**	**22 50 49.1**	**-3.0**
	baz=248							
ILA	**Ilan**	**0.97**	**320**	*e*P		**Pn**	**22 50 39.3**	**-0.6**
	baz=319							
TWE	**Neicheng**	**0.99**	**315**	*e*P		**Pn**	**22 50 39.3**	**-0.9**
	baz=314							
TWE					*e*S	**Sn**	**22 50 53.1**	**-0.1**
	baz=314							
EGFH	**Guangfu**	**0.99**	**249**	*e*P		**Pn**	**22 50 38.5**	**-1.8**
	baz=246							
EGFH					*e*S	**Sn**	**22 50 51.5**	**-1.7**
	baz=246							
NTC	**Toucheng**	**0.99**	**326**	*e*P		**Pn**	**22 50 39.6**	**-0.7**
	baz=326							
NTC					*e*S	**Sn**	**22 50 53.9**	**+0.6**
	baz=326							
ENTT	**Nioudou**	**1.00**	**308**	*i* P		**Pn**	**22 50 39.6**	**-0.9**
	baz=295							
ENTT					*e*S	**Sn**	**22 50 52.9**	**-0.7**
	baz=295							
NDT	**Datong Townshi**	**1.02**	**304**	*e*P		**Pn**	**22 50 39.9**	**-0.8**
	baz=292							
NDT					*e*S	**Sn**	**22 50 53.1**	**-0.9**
	baz=292							
NNSB	**Datong**	**1.04**	**293**	P		**Pn**	**22 50 40.0**	**-1.1**
	baz=281							
NNSB					S	**Sn**	**22 50 53.3**	**-1.4**
	baz=281							
NNSH	**Datong**	**1.04**	**293**	*e*P		**Pn**	**22 50 39.9**	**-1.2**
	baz=282							
NNSH					S	**Sn**	**22 50 53.1**	**-1.6**
	baz=282							
NNS	**Nan Shan**	**1.06**	**293**	*i* P		**Pn**	**22 50 40.2**	**-1.1**
	baz=282							
NNS					S	**Sn**	**22 50 53.6**	**-1.4**
	baz=282							
TWB1	**Santiao Chiao**	**1.06**	**337**	P		**Pn**	**22 50 39.9**	**-1.3**
	baz=352							
TWB1					*e*S	**Sn**	**22 50 54.8**	**-0.1**
	baz=352							
HGSD	**Ruisui**	**1.07**	**240**	*i* P		**Pn**	**22 50 39.5**	**-1.9**
	baz=238							
HGSD					*e*S	**Sn**	**22 50 52.3**	**-2.8**
	baz=238							
WHF	**Hehuan Shan**	**1.08**	**277**	P		**Pn**	**22 50 40.2**	**-1.6**
	baz=274							
WHF					*e*S	**Sn**	**22 50 54.4**	**-1.6**
	baz=274							
TIPB	**Shuangxi**	**1.09**	**329**	P		**Pn**	**22 50 40.6**	**-1.1**
	baz=329							
TIPB					S	**Sn**	**22 50 55.1**	**-0.7**
	baz=329							
FUSS	**Fushou**	**1.11**	**282**	*e*P		**Pn**	**22 50 40.8**	**-1.4**
	baz=280							
FUSS					*e*S	**Sn**	**22 50 54.6**	**-2.0**
	baz=280							
NWLT	**Wulai**	**1.14**	**311**	*e*P		**Pn**	**22 50 41.6**	**-0.6**
	baz=310							
NWLT					*e*S	**Sn**	**22 50 56.0**	**-0.8**
	baz=310							
EHY	**Hungye**	**1.15**	**243**	*e*P		**Pn**	**22 50 41.2**	**-1.2**
	baz=253							
EHY					*e*S	**Sn**	**22 50 54.3**	**-2.8**
	baz=253							
CHGB	**Renai**	**1.16**	**272**	P		**Pn**	**22 50 41.5**	**-1.2**
	baz=270							
CHGB					*e*S	**Sn**	**22 50 55.3**	**-2.3**
	baz=270							
YHNB	**Yeheng**	**1.16**	**304**	*i* P		**Pn**	**22 50 42.0**	**-0.7**
	baz=290							
YHNB					*e*S	**Sn**	**22 50 55.8**	**-1.7**
	baz=290							
YHNB	**Yeheng**	**1.16**	**304**			**Pn**	**22 50 41.9**	**-0.8**
YHNB					Sn	**Sn**	**22 50 56.0**	**-1.6**
TWT	**Tachien**	**1.18**	**281**	P		**Pn**	**22 50 42.4**	**-0.6**
	baz=269							
TWT					*e*S	**Sn**	**22 50 57.1**	**-0.9**
	baz=269							
NSK	**Sanguang**	**1.18**	**303**	P		**Pn**	**22 50 42.3**	**-0.6**
	baz=290							
NSK					*e*S	**Sn**	**22 50 55.9**	**-2.0**
	baz=290							
TDCB	**Techi**	**1.19**	**281**	P		**Pn**	**22 50 42.2**	**-1.0**
	baz=268							
TDCB					*e*S	**Sn**	**22 50 55.9**	**-2.5**
	baz=268							
NWF	**Wu-fen Shan**	**1.20**	**330**	P		**Pn**	**22 50 42.0**	**-1.2**
	baz=330							
WFSB	**Wu-fen Shan**	**1.20**	**330**	P		**Pn**	**22 50 42.1**	**-1.0**
	baz=330							
WFSB					*e*S	**Sn**	**22 50 58.6**	**+0.3**
	baz=330							
IRIF	**Iriomote-Funau**	**1.22**	**75**	P		**Pn**	**22 50 43.0**	**-0.3**
IRIF					*e*S	**Sn**	**22 51 00.8**	**+2.1**
VWDT	**VWDT**	**1.22**	**257**	P		**Pn**	**22 50 42.2**	**-1.1**
	baz=255							
VWDT					*e*S	**Sn**	**22 50 55.5**	**-3.2**
	baz=255							
YULB	**Yu-li**	**1.22**	**239**	*i* P		**Pn**	**22 50 41.9**	**-1.5**
	baz=251							
YULB					*e*S	**Sn**	**22 50 56.8**	**-2.1**
	baz=251							
YULB	**Yu-li**	**1.22**	**239**			**Pn**	**22 50 41.7**	**-1.7**
YULB					Sn	**Sn**	**22 50 56.3**	**-2.5**
TWA	**Mucha**	**1.23**	**321**	*e*P		**Pn**	**22 50 42.2**	**-1.3**
	baz=336							
TWA					*e*S	**Sn**	**22 50 59.0**	**0.0**
	baz=336							
EYUL	**Yuli**	**1.23**	**237**	P		**Pn**	**22 50 42.2**	**-1.2**
	baz=225							
EYUL					*e*S	**Sn**	**22 50 57.6**	**-1.4**
	baz=225							
TWF1	**Yuli**	**1.24**	**238**	P		**Pn**	**22 50 42.5**	**-1.2**
	baz=225							
TWF1					*e*S	**Sn**	**22 50 57.0**	**-2.3**
	baz=225							
HATJ	**Hateruma jima**	**1.25**	**88**	P		**Pn**	**22 50 43.7**	**0.0**
HATJ					*e*S	**Sn**	**22 50 59.5**	**+0.1**
TATO	**Taipei**	**1.28**	**318**	P		**Pn**	**22 50 43.5**	**-0.7**
	baz=316							
TATO					*e*S	**Sn**	**22 51 00.5**	**+0.2**
	baz=316							
TATO	**Taipei**	**1.28**	**318**			**Pn**	**22 50 43.9**	**-0.3**
TATO					Sn	**Sn**	**22 51 00.4**	**+0.1**
TAP1	**Taipei**	**1.31**	**321**	*e*P		**Pn**	**22 50 44.5**	**0.0**
	baz=336							
TAP1					*e*S	**Sn**	**22 51 01.7**	**+0.8**
	baz=336							
TAP	**Taipei**	**1.32**	**320**	*e*S		**Sn**	**22 51 02.1**	**+1.0**
	baz=336							
FULB	**Fuli**	**1.33**	**232**	P		**Pn**	**22 50 43.2**	**-1.8**
	baz=219							
FULB					*e*S	**Sn**	**22 50 59.0**	**-2.6**
	baz=219							
CHKT	**Chengkung**	**1.35**	**227**	P		**Pn**	**22 50 43.0**	**-2.1**
	baz=216							
CHKT					*e*S	**Sn**	**22 50 58.5**	**-3.5**
	baz=216							
YM01	**YM01**	**1.37**	**325**	*e*P		**Pn**	**22 50 44.1**	**-1.3**
	baz=338							
YM01					*e*S	**Sn**	**22 51 02.9**	**+0.5**
	baz=338							
SSLB	**Suanglung**	**1.38**	**260**	*i* P		**Pn**	**22 50 44.7**	**-0.9**
	baz=258							
SSLB					*e*S	**Sn**	**22 51 01.0**	**-1.7**
	baz=258							
SSLB	**Suanglung**	**1.38**	**260**			**Pn**	**22 50 44.2**	**-1.3**
	baz=253							
YM10	**YM10**	**1.38**	**325**	*e*P		**Pn**	**22 50 44.2**	**-1.4**
	baz=338							
YM10					*e*S	**Sn**	**22 51 03.0**	**+0.2**
	baz=338							
YM11	**YM11**	**1.38**	**325**	*e*P		**Pn**	**22 50 44.4**	**-1.3**
	baz=325							
DPDB	**Guoxing**	**1.38**	**271**	*i* P		**Pn**	**22 50 45.2**	**-0.5**
	baz=262							
DPDB					*e*S	**Sn**	**22 51 02.3**	**-0.6**
	baz=262							
YM05	**YM05**	**1.38**	**325**	*e*P		**Pn**	**22 50 44.2**	**-1.4**
	baz=338							
YM05					*e*S	**Sn**	**22 51 03.8**	**+0.9**
	baz=338							
WHP	**Taichung City**	**1.39**	**281**	*e*P		**Pn**	**22 50 45.4**	**-0.3**
	baz=270							
WHP					*e*S	**Sn**	**22 51 02.2**	**-0.8**
	baz=270							
YM04	**YM04**	**1.39**	**324**	*e*P		**Pn**	**22 50 44.4**	**-1.3**
	baz=338							
YM04					*e*S	**Sn**	**22 51 02.7**	**-0.3**
	baz=338							
YM08	**YM08**	**1.39**	**326**	*e*P		**Pn**	**22 50 44.3**	**-1.4**
	baz=325							
YM03	**YM03**	**1.41**	**325**	*e*P		**Pn**	**22 50 45.7**	**-0.3**
	baz=337							
YM03					*e*S	**Sn**	**22 51 02.8**	**-0.7**
	baz=337							
SMLT	**Sun Moon Lake**	**1.42**	**265**	P		**Pn**	**22 50 45.4**	**-0.7**
	baz=262							
SMLT					*e*S	**Sn**	**22 51 03.1**	**-0.6**
	baz=262							
TWS1	**Kuangyinshan**	**1.42**	**319**	P		**Pn**	**22 50 45.7**	**-0.3**
	baz=334							
TWS1					*e*S	**Sn**	**22 51 04.2**	**+0.6**
	baz=334							
ANP	**Anpu**	**1.43**	**324**	*e*P		**Pn**	**22 50 45.6**	**-0.7**
	baz=324							
LIOB	**Emei**	**1.44**	**296**	*e*P		**Pn**	**22 50 46.9**	**+0.6**
	baz=294							
LIOB					*e*S	**Sn**	**22 51 04.2**	**+0.1**
	baz=294							
NSTT	**Nanjuang**	**1.44**	**295**	P		**Pn**	**22 50 46.9**	**+0.5**
	baz=293							
NSTT					*e*S	**Sn**	**22 51 03.4**	**-0.9**
	baz=293							
NTST	**Danshui**	**1.45**	**322**	*e*P		**Pn**	**22 50 45.8**	**-0.7**
	baz=335							
JKRS	**Kuro-shima**	**1.45**	**81**	P		**Pn**	**22 50 46.7**	**+0.3**
JKRS					*e*S	**Sn**	**22 51 05.4**	**+1.1**
TYC	**Yuchr**	**1.45**	**266**	P		**Pn**	**22 50 45.9**	**-0.6**
	baz=263							
TYC					*e*S	**Sn**	**22 51 03.2**	**-1.2**
	baz=263							
TWY	**Chenhua**	**1.46**	**329**	*e*P		**Pn**	**22 50 46.2**	**-0.4**
	baz=328							
NCU	**National Centr**	**1.48**	**310**	*e*P		**Pn**	**22 50 46.6**	**-0.2**
	baz=308							
NCU					*e*S	**Sn**	**22 51 05.5**	**+0.4**
	baz=308							
EDH	**Donghe**	**1.48**	**225**	*e*P		**Pn**	**22 50 44.9**	**-1.9**
	baz=215							
EDH					*e*S	**Sn**	**22 51 01.3**	**-3.8**
	baz=215							
NCUH	**Zhongli**	**1.48**	**310**	*e*S		**Sn**	**22 51 06.0**	**+0.9**
	baz=308							
WHYT	**Xinyi Township**	**1.49**	**258**	*e*P		**Pn**	**22 50 46.9**	**-0.2**
	baz=255							
SBCB	**Hsinchu**	**1.53**	**300**	P		**Pn**	**22 50 47.6**	**0.0**
	baz=298							
SBCB					*e*S	**Sn**	**22 51 07.0**	**+0.7**
	baz=298							
HSN	**Hsinchu**	**1.55**	**300**	*e*S		**Sn**	**22 51 06.5**	**-0.2**
	baz=300							
ELDTW	**Lidau**	**1.55**	**238**	P		**Pn**	**22 50 46.5**	**-1.4**
	baz=235							
ELDTW					*e*S	**Sn**	**22 51 03.9**	**-3.0**
	baz=235							
TWQ1	**Liyutan**	**1.56**	**282**	*e*P		**Pn**	**22 50 48.6**	**+0.7**
	baz=280							
TWQ1					*e*S	**Sn**	**22 51 08.1**	**+1.1**
	baz=280							
WJS	**Zhushan**	**1.58**	**263**	*e*P		**Pn**	**22 50 48.6**	**+0.4**
	baz=261							
WJS					*e*S	**Sn**	**22 51 10.9**	**+3.3**
	baz=261							
ALS	**Alishan**	**1.58**	**251**	P		**Pn**	**22 50 48.4**	**-0.2**
	baz=249							
ALS					*e*S	**Sn**	**22 51 06.8**	**-1.2**
	baz=249							
NMLH	**Miaoli**	**1.59**	**289**	*e*P		**Pn**	**22 50 49.0**	**+0.6**
	baz=287							
NMLH					*e*S	**Sn**	**22 51 08.7**	**+0.9**
	baz=287							
JIJ	**Ishigaki jima**	**1.59**	**77**	P		**Pn**	**22 50 47.8**	**-0.6**
JIJ					*e*S	**Sn**	**22 51 07.8**	**0.0**
WNT	**Mingjian**	**1.61**	**265**	*e*P		**Pn**	**22 50 49.4**	**+0.7**
	baz=263							
WNT					*e*S	**Sn**	**22 51 09.6**	**+1.2**
	baz=263							
LDUT	**Ludao**	**1.61**	**214**	*e*P		**Pn**	**22 50 46.6**	**-2.1**
	baz=211							
LDUT					*e*S	**Sn**	**22 51 04.9**	**-3.5**
	baz=211							
PCYT	**Pengchaiyu**	**1.63**	**348**	*e*P		**Pn**	**22 50 48.0**	**-1.0**
	baz=334							
PCYT					*e*S	**Sn**	**22 51 08.9**	**+0.1**
	baz=334							
LONT	**Longtian**	**1.64**	**227**	P		**Pn**	**22 50 47.6**	**-1.5**
	baz=237							
LONT					*e*S	**Sn**	**22 51 07.6**	**-1.4**
	baz=237							
CHN5	**Tsauling**	**1.67**	**256**	P		**Pn**	**22 50 49.7**	**+0.2**
	baz=245							
CHN5					*e*S	**Sn**	**22 51 10.9**	**+1.0**
	baz=245							
WDJ	**Dajia District**	**1.67**	**281**	*e*P		**Pn**	**22 50 50.1**	**+0.6**
	baz=279							
WDJ					*e*S	**Sn**	**22 51 10.3**	**+0.5**
	baz=279							
WCHH	**Zhanghua**	**1.72**	**272**	*e*P		**Pn**	**22 50 50.8**	**+0.6**
	baz=270							
WCHH					*e*S	**Sn**	**22 51 12.7**	**+1.7**
	baz=270							
TWGBT	**Beinan**	**1.73**	**226**	P		**Pn**	**22 50 48.7**	**-1.7**
	baz=236							
TWGBT					*e*S	**Sn**	**22 51 08.9**	**-2.5**
	baz=236							
TTN	**Taitung**	**1.74**	**223**	*e*S		**Sn**	**22 51 09.2**	**-2.2**
	baz=212							
TWG	**Pinlang**	**1.74**	**227**	*e*P		**Pn**	**22 50 48.5**	**-1.9**
	baz=236							
TWG					*e*S	**Sn**	**22 51 09.0**	**-2.4**
	baz=236							
TWG	**Pinlang**	**1.74**	**227**			**Pn**	**22 50 48.5**	**-1.9**
WGK	**Gukeng**	**1.75**	**259**	*e*P		**Pn**	**22 50 51.2**	**+0.6**
	baz=257							
STYT	**Tauyuan**	**1.77**	**241**	*e*P		**Pn**	**22 50 50.6**	**-0.2**
	baz=231							
STYT					*e*S	**Sn**	**22 51 11.8**	**-0.4**
	baz=231							
WDLH	**Douliu**	**1.77**	**259**	*e*P		**Pn**	**22 50 51.2**	**+0.3**
	baz=257							
WDLH					*e*S	**Sn**	**22 51 13.3**	**+1.1**
	baz=257							
JISG	**Ishigakijimahi**	**1.80**	**72**	P		**Pn**	**22 50 50.7**	**-0.5**
JISG					S	**Sn**	**22 51 12.1**	**-0.7**
TPUB	**Ta-pu**	**1.81**	**247**	*e*P		**Pn**	**22 50 51.7**	**+0.3**
	baz=245							
TPUB					*e*S	**Sn**	**22 51 14.4**	**+1.2**
	baz=245							
TPUB	**Ta-pu**	**1.81**	**247**			**Pn**	**22 50 51.6**	**+0.2**
CHN4	**Tsaushan**	**1.82**	**249**	*e*P		**Pn**	**22 50 52.2**	**+0.6**
	baz=247							
CHN4					*e*S	**Sn**	**22 51 15.3**	**+1.8**
	baz=247							
WTP	**Ta-pu**	**1.85**	**245**	*e*P		**Pn**	**22 50 52.5**	**+0.6**
	baz=243							
WTP					*e*S	**Sn**	**22 51 15.8**	**+1.6**
	baz=243							
CHN2	**Minshiung**	**1.87**	**255**	*e*P		**Pn**	**22 50 53.0**	**+0.9**
	baz=253							
CHN2					*e*S	**Sn**	**22 51 15.7**	**+1.2**
	baz=253							
RLNB	**Erlin**	**1.91**	**266**	*e*P		**Pn**	**22 50 53.4**	**+0.7**
	baz=276							
RLNB					*e*S	**Sn**	**22 51 17.4**	**+1.9**
	baz=276							

WTK	**Tuku**	**1.91 260**	*e*P		**Pn**	**22 50 53.7**	**+1.0**
	baz=258						
WTK			*e*S		**Sn**	**22 51 17.9**	**+2.4**
	baz=258						
CHY	**Chiayi**	**1.92 255**	P		**Pn**	**22 50 53.7**	**+0.8**
	baz=252						
CHY			*e*S		**Sn**	**22 51 16.2**	**+0.3**
	baz=252						
SLGT	**Liugui**	**1.94 238**	P		**Pn**	**22 50 53.4**	**+0.2**
	baz=229						
SLGT			*e*S		**Sn**	**22 51 16.8**	**+0.4**
	baz=229						
CHN1	**Nanshi**	**1.94 245**	*e*P		**Pn**	**22 50 54.1**	**+0.8**
	baz=243						
CHN1			*e*S		**Sn**	**22 51 18.5**	**+2.0**
	baz=243						
TWK	**Hsinying**	**1.94 247**	P		**Pn**	**22 50 54.0**	**+0.8**
	baz=245						
TWK			*e*S		**Sn**	**22 51 18.8**	**+2.3**
	baz=245						
SGST	**Jiashian**	**1.95 241**	P		**Pn**	**22 50 53.0**	**-0.3**
	baz=229						
SGST			*e*S		**Sn**	**22 51 17.3**	**+0.8**
	baz=229						
SNST	**Tainan City**	**1.95 246**	P		**Pn**	**22 50 54.2**	**+0.9**
	baz=244						
SNST			*e*S		**Sn**	**22 51 18.0**	**+1.3**
	baz=244						
ECL	**Taimali**	**1.97 224**	P		**Pn**	**22 50 51.7**	**-2.0**
	baz=222						
ECL			*e*S		**Sn**	**22 51 14.2**	**-2.9**
	baz=222						
WTCT	**Ta-ch'eng**	**1.98 266**	*e*P		**Pn**	**22 50 53.9**	**+0.2**
	baz=264						
WSF	**Szhu**	**2.07 260**	*e*P		**Pn**	**22 50 55.8**	**+0.9**
	baz=258						
WSF			*e*S		**Sn**	**22 51 21.6**	**+2.1**
	baz=258						
ICHU	**Yijhu**	**2.09 252**	*e*P		**Pn**	**22 50 55.3**	**+0.1**
	baz=251						
ICHU			*e*S		**Sn**	**22 51 21.2**	**+1.2**
	baz=251						
SSD	**Sandimen**	**2.09 233**	*e*P		**Pn**	**22 50 54.6**	**-0.7**
	baz=226						
SSD			*e*S		**Sn**	**22 51 18.9**	**-1.3**
	baz=226						
TSMG	**Majia**	**2.11 232**	*e*P		**Pn**	**22 50 55.7**	**+0.2**
	baz=226						
TSMG			*e*S		**Sn**	**22 51 18.4**	**-2.1**
	baz=226						
SCST	**Cishan**	**2.12 238**	*e*P		Pn	22 50 57.5	+1.9
	baz=226						
CHN3	**Shinhua**	**2.13 244**	*e*P		**Pn**	**22 50 57.3**	**+1.6**
	baz=242						
LAY	**Lan-yu**	**2.14 203**	*e*P		**Pn**	**22 50 53.8**	**-2.1**
	baz=200						
LAY			*e*S		**Sn**	**22 51 18.0**	**-3.3**
	baz=200						
CHN8	**Yiju**	**2.15 252**	*e*P		**Pn**	**22 50 56.4**	**+0.3**
	baz=250						
JTJ	**Tarama**	**2.15 73**	P		**Pn**	**22 50 56.2**	**+0.1**
MASBT	**Mashibuluo**	**2.18 230**	*e*P		**Pn**	**22 50 56.2**	**-0.2**
	baz=225						
MASBT			*e*S		**Sn**	**22 51 20.9**	**-1.3**
	baz=225						
TAW	**Tawu**	**2.19 221**	*e*P		**Pn**	**22 50 55.0**	**-1.5**
	baz=228						
EAST	**Anshou**	**2.19 222**	*e*P		**Pn**	**22 50 55.9**	**-0.8**
	baz=220						
EAST			*e*S		**Sn**	**22 51 21.2**	**-1.5**
	baz=220						
TWM1	**Shoushan**	**2.21 238**	*e*P		Pn	22 50 59.4	+2.5
	baz=236						
TWM1			*e*S		**Sn**	**22 51 27.0**	**+4.1**
	baz=236						
SSPT	**Xinbi**	**2.31 229**	*e*P		Pn	22 51 00.1	+2.0
	baz=222						
SNJT	**Kaohsiung City**	**2.31 237**	*e*P		Pn	22 51 00.5	+2.3
	baz=236						
SCZT	**Fangliau**	**2.35 226**	*e*P		**Pn**	**22 50 59.0**	**+0.2**
	baz=219						
SCZT			*e*S		**Sn**	**22 51 27.2**	**+0.8**
	baz=219						
SLIU	**Shizi**	**2.35 220**	*e*P		**Pn**	**22 50 57.7**	**-1.2**
	baz=226						
SLIU			*e*S		**Sn**	**22 51 24.8**	**-1.7**
	baz=226						
WLCH	**Liuqiu**	**2.52 229**	*e*P		Pn	22 51 04.4	+3.2
	baz=242						
TSEB	**Hengchuen, Pin**	**2.55 214**	*e*S		**Sn**	**22 51 31.6**	**+0.3**
	baz=221						
HEN	**Hengchun**	**2.55 218**	*e*P		**Pn**	**22 51 01.2**	**-0.3**
	baz=216						
HEN			*e*S		**Sn**	**22 51 31.7**	**+0.3**
	baz=216						
TWKBT	**Hengchun**	**2.56 216**	*e*P		**Pn**	**22 51 00.9**	**-0.8**
	baz=214						
TWKBT			*e*S		**Sn**	**22 51 29.8**	**-1.9**
	baz=214						
TWK1	**Hengchun**	**2.56 216**	*e*P		**Pn**	**22 51 01.0**	**-0.7**
	baz=214						
TWK1			*e*S		**Sn**	**22 51 31.4**	**-0.2**
	baz=214						
JIRB	**Irabujima**	**2.62 72**	P		**Pn**	**22 51 02.9**	**+0.5**
JIRB			*e*S		**Sn**	**22 51 33.9**	**+0.9**
WDGT	**Dungji**	**2.66 254**	P		**Pn**	**22 51 03.0**	**-0.1**
	baz=252						
PHUB	**P'eng-hu**	**2.68 260**	P		**Pn**	**22 51 03.0**	**-0.2**
	baz=272						
PHUB			*e*S		**Sn**	**22 51 32.8**	**-1.7**
	baz=272						
PNG	**Penghu**	**2.68 261**	P		**Pn**	**22 51 03.2**	**-0.1**
	baz=259						
PNG			*e*S		**Sn**	**22 51 34.0**	**-0.6**
	baz=259						
JMJ	**Miyako jima 2**	**2.72 73**	*e*P		**Pn**	**22 51 04.0**	**+0.2**
	baz=75						
JMJ			*e*S		**Sn**	**22 51 37.0**	**+1.6**
	baz=75						
JMJ2	**Miyako jima3**	**2.73 74**	P		**Pn**	**22 51 05.2**	**+1.2**
JMJ2			*e*S		**Sn**	**22 51 37.5**	**+1.8**
PTTC	**Pingtan**	**2.84 302**	*e*P		**Pn**	**22 51 04.6**	**-0.9**
	baz=300						
VCHM	**Qimei**	**2.88 254**	*e*P		**Pn**	**22 51 05.7**	**-0.3**
	baz=253						
VCHM			*e*S		**Sn**	**22 51 38.8**	**-0.7**
	baz=253						
XPSS	**Dashiqiu**	**3.54 325**	*e*P		**Pn**	**22 51 14.1**	**-0.9**
	baz=333						
KNM	**Kinmen**	**3.68 277**	*e*P		**Pn**	**22 51 17.4**	**+0.4**
	baz=274						
KNMB	**Chin-men Tao**	**3.72 278**	*e*P		**Pn**	**22 51 16.3**	**-1.3**
	baz=275						
KNMB	**Chin-men Tao**	**3.72 278**	Pn		**Pn**	**22 51 16.5**	**-1.1**
AXDP	**Jialang**	**4.17 283**	*e*P		**Pn**	**22 51 22.9**	**-0.7**
	baz=271						
ZPLA	**Ao Xicun**	**4.29 270**	*e*P		**Pn**	**22 51 24.4**	**-1.0**
	baz=268						
KSRS	**Korea Array**	**14.19 18**	P		**P**	**22 53 45.1**	**-1.7**
	0.2nm,0.3s,baz=196,slow=12,SNR=12						
USRK	**Ussuriysk Ar.**	**21.59 19**	P		**P**	**22 55 05.8**	**-2.3**
	1.3nm,0.8s,baz=204,slow=14,SNR=3.3						
SONM	**Songino Array**	**26.97 336**	P		**P**	**22 55 58.7**	**-0.9**
	0.5nm,0.4s,baz=149,slow=6.9,SNR=6.0						
SONM	**Songino Array**	**26.97 336**	P		**P**	**22 55 58.6**	**-1.0**
MK31	**Makanchi Array**	**39.25 316**	P		**P**	**22 57 46.1**	**-0.2**
MK31			IAmb		IAmb	22 57 46.7	
	comp=Z,1.1nm,0.5s						
MKAR	**Makanchi Array**	**39.25 316**	P		**P**	**22 57 46.3**	**0.0**
	comp=Z,1.4nm,0.5s,baz=101,slow=9.3,SNR=27						
MKAR	**Makanchi Array**	**39.25 316**	P		**P**	**22 57 46.1**	**-0.2**
MAKZ	**Makanchi**	**39.46 315**	P		**P**	**22 57 48.2**	**+0.3**
MAKZ			IAmb		IAmb	22 57 49.1	
	comp=Z,4.0nm,1.1s						
ZAA0	**Zalesovo Array**	**41.00 327**	P		**P**	**22 57 59.7**	**-0.9**
ZAA0			IAmb		IAmb	22 58 00.1	
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**41.00 327**	P		**P**	**22 57 58.8**	**-1.9**
	comp=Z,1.8nm,0.5s,baz=112,slow=8.8,SNR=8.5						
ZALV	**Zalesovo Beam**	**41.00 327**	P		**P**	**22 57 59.7**	**-0.9**
KURK	**Kurchatov**	**42.95 320**	P		**P**	**22 58 16.0**	**-0.5**
KURBB	**Kurchatov Array**	**42.97 320**	P		**P**	**22 58 16.5**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=109,slow=8.7,SNR=6.3						
KK31	**Karatay Array**	**46.48 307**	P		**P**	**22 58 43.6**	**-1.3**
KK31			IAmb		IAmb	22 58 44.1	
	comp=Z,1.5nm,0.8s						
KKAR	**Karatay Array**	**46.48 307**	P		**P**	**22 58 43.6**	**-1.2**
CHGR	**Chuyangaron**	**47.16 301**	P		**P**	**22 58 50.3**	**0.0**

HNR	**Honiara**	**49.48 128**	LR		LR	23 16 43.0	
	comp=Z,20nm,21.0s,baz=271,slow=32						
ABKAR	**Akbulak array**	**54.37 314**	P		**P**	**22 59 44.8**	**+0.5**
ABKAR			IAmb		IAmb	22 59 45.0	
	comp=Z,1.2nm,0.5s						
ABKAR	**Akbulak array**	**54.37 314**	P		**P**	**22 59 44.4**	**+0.2**
FINES	**FINESS Array B**	**72.16 330**	P		**P**	**23 01 39.7**	**-2.1**
	comp=Z,3.4nm,0.9s,baz=14,slow=7.6,SNR=3.4						
EKA	**Eskdalemuir Ar**	**88.39 332**	P		P	23 03 03.4	-5.7
	comp=Z,0.4nm,0.4s,baz=34,slow=9.1,SNR=4.1						

IDC ***04*** *22:50:52.4±0.6, 16°.09S×176°.12W, h374km±5km, mb3.9/10, mb1 4.2/11, mb1mx3.8/34, mbtmp4.7/11, Error ellipse: s-maj=22.1km s-min=10.3km az=145.0*

NEIC ***04*** *22:50:52.6±1.9, 16°.1S±0°.1×176°.0W±0°.1, h376km±6km, mb4.4/68, Error ellipse: s-maj=16.9km s-min=12.1km az=145.0*

ISC 04 22:50:50.0±0.4, 16°.21S±0°.08×176°.12W±0°.08, h350km, n189, σ1°.24/183, mb4.4/44, 14C-8D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.78**	**62**	P	**Pn**	**22 52 09.1**	**+1.7**
	52nm,0.3s,baz=37,slow=0.6,SNR=65						
AFI				S	**S**	**22 53 11.0**	**+1.2**
	17nm,0.3s,baz=49,slow=22,SNR=2.1						
MSVF	**Nonsavu**	**5.78**	**254**	Pn	Pn	22 52 24.7	+6.3
NIUE	**Niue**	**6.56**	**117**		**Pn**	**22 52 29.9**	**+2.6**
FUNA	**Funafuti**	**8.90**	**329**	P	**P**	**22 52 57.5**	**+0.2**
OUZ	**Omahuta**	**21.05**	**204**	P	**P**	**22 55 09.6**	**+2.0**
OUZ				IAmb	IAmb	22 55 10.6	
	comp=Z,16nm,0.8s						
URZ	**Urewera**	**22.76**	**194**	P	**P**	**22 55 22.1**	**-0.9**
BKZ	**Black Stump Fm**	**23.77**	**194**	P	**P**	**22 55 30.4**	**-1.9**
EIDS	**Eidsvold**	**31.92**	**248**	P	**P**	**22 56 43.5**	**-0.9**
ARMA	**Armidale**	**32.69**	**239**	P	**P**	**22 56 51.0**	**-0.1**
TOO	**Toolangi**	**39.94**	**230**	P	**P**	**22 57 52.5**	**+0.8**
TOO				IAmb	IAmb	22 57 56.8	
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**41.37**	**240**	P	**P**	**22 58 03.6**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=98,slow=11,SNR=16						
STKA	**Stephens Creek**	**41.37**	**240**	P	**P**	**22 58 03.6**	**+0.3**
BBOO	**Buckleboo**	**46.14**	**240**	P	**P**	**22 58 40.9**	**-0.1**
BBOO				IAmb	IAmb	22 58 41.4	
	comp=Z,17nm,1.0s						
WB0	**Warramunga Arr**	**47.07**	**258**	P	**P**	**22 58 47.9**	**-0.4**
WB0				IAmb	IAmb	22 58 48.7	
	comp=Z,27nm,0.8s						
WB2	**Warramunga Arr**	**47.10**	**258**		**P**	**22 58 48.0**	**-0.5**
WRA	**Warramunga Arr**	**47.11**	**258**	P	**P**	**22 58 48.0**	**-0.6**
	comp=Z,14nm,0.5s,baz=94,slow=6.6,SNR=527						
WRA				PcP	**PcP**	**23 00 13.3**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=90,slow=5.1,SNR=5.1						
WRA	**Warramunga Arr**	**47.11**	**258**	P	**P**	**22 58 47.9**	**-0.7**
AS31	**Alice Springs**	**47.37**	**253**		**P**	**22 58 50.2**	**-0.4**
ASAR	**Alice Springs**	**47.37**	**253**	P	**P**	**22 58 50.5**	**0.0**
	comp=Z,38nm,0.4s,baz=88,slow=7.9,SNR=694						
ASAR				pP	**pP**	**23 00 06.3**	**+5.1**
	comp=Z,5.4nm,0.8s,baz=84,slow=8.8,SNR=3.8						
ASAR	**Alice Springs**	**47.37**	**253**	P	**P**	**22 58 50.1**	**-0.4**
MTN	**Manton Dam**	**51.06**	**266**	P	**P**	**22 59 17.8**	**-0.4**
MTN				IAmb	IAmb	22 59 19.1	
	comp=Z,18nm,1.1s						
FORT	**Forrest**	**52.72**	**243**	P	**P**	**22 59 29.5**	**-0.6**
KNRA	**Kununurra**	**52.86**	**262**	P	**P**	**22 59 31.2**	**-0.2**
KNRA				IAmb	IAmb	22 59 35.7	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**55.48**	**259**	P	**P**	**22 59 50.1**	**0.0**
SOEI	**Soe**	**58.28**	**268**	P	**P**	**23 00 10.6**	**+0.8**
PSA00	**Pilbara Seismi**	**60.47**	**254**	P	**P**	**23 00 24.1**	**-0.2**
NWAO	**Narrogin (SRO)**	**61.94**	**241**	P	**P**	**23 00 33.1**	**-0.9**
NWAO				IAmb	IAmb	23 00 48.1	
	comp=Z,10.0nm,1.1s						
VNDA	**Vanda**	**62.32**	**185**	P	**P**	**23 00 37.2**	**+1.5**
	comp=Z,2.6nm,1.0s,baz=11,slow=6.4,SNR=12						
VNDA	**Vanda**	**62.32**	**185**	P	**P**	**23 00 37.0**	**+1.3**
MORW	**Morawa**	**63.17**	**245**	P	**P**	**23 00 41.2**	**-0.9**
MORW				IAmb	IAmb	23 00 42.5	
	comp=Z,16nm,1.1s						
QSPA	**South Pole Qui**	**73.84**	**180**	P	**P**	**23 01 47.2**	**+0.2**
QSPA				IAmb	IAmb	23 01 48.8	
	comp=Z,14nm,1.1s						
KMRM	**Mail Ridge**	**74.32**	**39**	P	**P**	**23 01 49.9**	**-0.1**
KRMB	**Red Mountain**	**75.00**	**38**	P	**P**	**23 01 54.2**	**+0.3**
ISA	**Isabella, Lake**	**75.07**	**45**	P	**P**	**23 01 54.0**	**-0.4**
WDC	**Whiskeytown Da**	**75.24**	**39**	P	**P**	**23 01 54.8**	**-0.4**
WDC				IAmb	IAmb	23 01 56.6	
	comp=Z,9.7nm,1.0s						
AFDM	**Forest Hills D**	**75.26**	**41**	P	**P**	**23 01 55.1**	**-0.2**
AFDM				IAmb	IAmb	23 01 56.3	
	comp=Z,6.0nm,0.8s						
ORV	**Oroville**	**75.28**	**41**	P	**P**	**23 01 55.1**	**-0.4**
ORV				IAmb	IAmb	23 01 56.4	
	comp=Z,6.5nm,1.0s						
MDPB	**Devils Postpil**	**75.74**	**43**	P	**P**	**23 01 58.3**	**-0.1**
MDPB				IAmb	IAmb	23 01 59.6	
	comp=Z,7.5nm,1.0s						
OMMB	**Old Mammoth Mi**	**75.78**	**43**	P	**P**	**23 01 58.5**	**-0.2**
YBH	**Yreka Blue Hor**	**75.84**	**38**	P	**P**	**23 01 58.9**	**+0.2**
WAKR	**Walker**	**75.99**	**43**	P	**P**	**23 01 59.9**	**+0.2**
WAKR				IAmb	IAmb	23 02 01.1	
	comp=Z,9.3nm,1.0s						
PNTR	**Pine Nut**	**76.22**	**42**	P	**P**	**23 02 01.1**	**+0.1**
LHV	**Little Huntoon**	**76.46**	**43**	P	**P**	**23 02 02.0**	**-0.1**
LHV				IAmb	IAmb	23 02 03.7	
	comp=Z,10nm,1.1s						
RYN	**Ryan**	**76.66**	**43**	P	**P**	**23 02 02.9**	**-0.5**
RYN				IAmb	IAmb	23 02 04.0	
	comp=Z,7.6nm,1.1s						
NVAR	**Mina Array Bea**	**76.69**	**43**	P	**P**	**23 02 03.8**	**+0.1**
	comp=Z,4.6nm,0.8s,baz=228,slow=9.3,SNR=28						
NVAR	**Mina Array Bea**	**76.69**	**43**	P	**P**	**23 02 03.6**	**0.0**
PAHR	**Pah Rah Range**	**76.70**	**42**	P	**P**	**23 02 03.6**	**0.0**
PAHR				IAmb	IAmb	23 02 04.8	
	comp=Z,10nm,1.1s						
NV11	**Mina Array Sit**	**76.79**	**43**	P	**P**	**23 02 03.6**	**-0.5**
NV11				IAmb	IAmb	23 02 04.7	
	comp=Z,7.5nm,1.1s						
TPH	**Tonopah**	**77.21**	**44**	P	**P**	**23 02 06.5**	**0.0**
TPNV	**Topopah Spring**	**77.27**	**45**	P	**P**	**23 02 06.8**	**-0.1**
TPNV				IAmb	IAmb	23 02 08.0	
	comp=Z,7.1nm,0.9s						
SHPR	**Sheep Range**	**77.79**	**46**	P	**P**	**23 02 09.9**	**+0.3**
PINE	**Pine Mountain**	**78.11**	**37**	P	**P**	**23 02 11.3**	**0.0**
PRN	**Pahroc Range**	**78.33**	**45**	P	**P**	**23 02 12.4**	**-0.2**
PRN				IAmb	IAmb	23 02 14.1	
	comp=Z,6.5nm,1.1s						
R11A	**Troy Canyon, C**	**78.45**	**44**	P	**P**	**23 02 12.3**	**-1.0**
X16A	**Lo Mia Camp, P**	**79.42**	**49**	P	**P**	**23 02 19.1**	**+0.5**
X16A				IAmb	IAmb	23 02 20.4	
	comp=Z,7.6nm,0.9s						
PSUT	**Pine Spring**	**79.71**	**45**	P	**P**	**23 02 19.8**	**-0.3**
ELK	**Elko**	**79.93**	**42**	P	**P**	**23 02 20.8**	**-0.4**
ELK				IAmb	IAmb	23 02 22.2	
	comp=Z,6.4nm,1.0s						
G08A	**Pilot Rock**	**80.14**	**37**	P	**P**	**23 02 21.5**	**-0.6**
G08A				IAmb	IAmb	23 02 23.2	
	comp=Z,11nm,1.0s						
HAWA	**Hanford**	**80.45**	**36**	P	**P**	**23 02 23.4**	**-0.1**
BMO	**Blue Mountains**	**80.86**	**38**	P	**P**	**23 02 25.5**	**-0.4**
BMO				IAmb	IAmb	23 02 26.7	
	comp=Z,9.6nm,1.1s						
MFID	**Camas Ranch**	**80.97**	**40**	P	**P**	**23 02 26.6**	**+0.1**
MFID				IAmb	IAmb	23 02 27.5	
	comp=Z,11nm,1.1s						
GLB	**Gilahina Butte**	**81.55**	**15**	P	**P**	**23 02 28.1**	**-0.9**
HLID	**Hailey**	**81.92**	**40**	P	**P**	**23 02 31.3**	**-0.2**
HLID				IAmb	IAmb	23 02 33.0	
	comp=Z,9.6nm,1.0s						
MNTX	**Cornudas Mount**	**82.81**	**54**	P	**P**	**23 02 35.7**	**-0.5**
MNTX				IAmb	IAmb	23 02 37.3	
	comp=Z,6.5nm,0.9s						
PV23	**Carpenter Ridg**	**83.01**	**47**	P	**P**	**23 02 36.9**	**-0.4**
TX31	**Lajitas Ar. Si**	**83.24**	**57**	P	**P**	**23 02 38.4**	**0.0**
TXAR	**Lajitas Array**	**83.24**	**57**	P	**P**	**23 02 38.8**	**+0.3**
	comp=Z,4.6nm,0.9s,baz=240,slow=5.0,SNR=16						
TXAR	**Lajitas Array**	**83.24**	**57**	P	**P**	**23 02 38.6**	**+0.1**
ANMO	**Albuquerque**	**83.33**	**51**	P	**P**	**23 02 38.5**	**-0.5**
ANMO				IAmb	IAmb	23 02 40.3	
	comp=Z,8.4nm,1.1s						
DOT	**Dot Lake**	**83.39**	**14**	P	**P**	**23 02 37.4**	**-0.9**
DOT				IAmb	IAmb	23 02 39.1	
	comp=Z,5.3nm,1.0s						

HDA	**Harding Lake**	**83.43**	**12**	P	**P**	**23 02 37.6**	**-0.9**
HDA				IAmb	IAmb	23 02 38.4	
	comp=Z,5.9nm,0.8s						
MCMT	**McKenzie Canyo**	**83.53**	**40**	P	**P**	**23 02 39.4**	**-0.4**
BELA	**Belgrano 2**	**83.56**	**172**	P	**P**	**23 02 38.8**	**-0.3**
IMAR	**Indian Mountai**	**83.65**	**9**	P	**P**	**23 02 38.8**	**-0.8**
COLA	**College**	**83.66**	**12**	P	**P**	**23 02 38.6**	**-1.0**
MDM	**Murphy Dome**	**83.66**	**12**	P	**P**	**23 02 38.5**	**-1.2**
IL31		**83.76**	**12**	P	**P**	**23 02 39.0**	**-1.1**
IL31				IAmb	IAmb	23 02 40.1	
	comp=Z,5.4nm,0.9s						
ILAR	**Eielson Array**	**83.76**	**12**	P	**P**	**23 02 38.9**	**-1.2**
	comp=Z,5.8nm,1.0s,baz=215,slow=5.1,SNR=30						
ILAR	**Eielson Array**	**83.76**	**12**	P	**P**	**23 02 38.7**	**-1.4**
S22A	**4UR Ranch, Cre**	**84.25**	**48**	P	**P**	**23 02 43.6**	**0.0**
S22A				IAmb	IAmb	23 02 44.5	
	comp=Z,6.0nm,1.0s						
YHL	**Hebgen Lake**	**84.58**	**40**	P	**P**	**23 02 44.7**	**-0.4**
PD31	**Pinedale Array**	**84.62**	**43**	P	**P**	**23 02 44.3**	**-1.0**
PDAR	**Pinedale Array**	**84.62**	**43**	P	**P**	**23 02 44.6**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=204,slow=3.3,SNR=12						
PDAR	**Pinedale Array**	**84.62**	**43**	P	**P**	**23 02 44.3**	**-1.0**
HRY	**Holter Researc**	**85.09**	**38**	P	**P**	**23 02 47.2**	**-0.1**
MAW	**Mawson**	**86.19**	**199**	P	**P**	**23 02 52.7**	**+0.5**
	comp=Z,4.6nm,0.9s,baz=101,slow=6.2,SNR=14						
MAW	**Mawson**	**86.19**	**199**	P	**P**	**23 02 52.6**	**+0.5**
HHC	**Hu-ho-hao-te**	**87.67**	**314**	*e*P	**P**	**23 02 58.9**	**-1.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,210nm,6.6s						
CMAR	**Chiang Mai Arr**	**90.39**	**289**	P	**P**	**23 03 13.5**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=141,slow=2.4,SNR=4.8						
SYO	**Syowa Base**	**91.28**	**192**	*e*P	**P**	**23 03 13.7**	**-2.3**
LZH	**Lanzhou**	**91.60**	**307**	P	**P**	**23 03 19.1**	**+0.7**
LZH				pP	pwP	23 04 49.0	+6.4
LZH				sP	sP	23 05 27.5	+12
LZH				PP	**PP**	**23 07 06.3**	**+3.8**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				pmax	pmax		
	comp=Z,130nm,6.3s						
SNAA	**Sanae**	**92.22**	**178**	P	**P**	**23 03 19.5**	**-1.0**
SNAA	**Sanae**	**92.22**	**178**	P	**P**	**23 03 19.9**	**-0.6**
VNA3	**Neumayer Olymp**	**92.28**	**176**	P	**P**	**23 03 20.5**	**-0.2**
VNA2	**Neumayer--Watz**	**92.74**	**176**	P	**P**	**23 03 20.6**	**-2.2**
ARU	**Arti**	**122.63**	**327**	PKP	**PKPdf**	**23 09 03.1**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=99,slow=6.5,SNR=7.9						
ARCES	**ARCESS Array B**	**125.01**	**351**	PKP	**PKPdf**	**23 09 07.3**	**-1.1**
	comp=Z,7.0nm,1.0s,baz=7.4,slow=1.4,SNR=15						
FINES	**FINESS Array B**	**132.12**	**346**	PKP	**PKPdf**	**23 09 21.7**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=11,slow=4.2,SNR=8.9						
SORM	**Soroca**	**142.34**	**333**	⇓P	**PKiKP**	**23 09 42.7**	**-1.8**
KMBO	**Kilima Mbogo**	**142.82**	**246**	PKP	**PKPdf**	**23 09 42.4**	**-1.2**
	comp=Z,3.2nm,0.8s,baz=52,slow=5.1,SNR=14						
KMBO	**Kilima Mbogo**	**142.82**	**246**	PKPdf	**PKPdf**	**23 09 40.8**	**-2.8**
KWP	**Kalwaria Pacla**	**143.32**	**339**	*e*PKP	PKPbc	23 09 40.6	-0.7
OJC	**Ojcow**	**143.72**	**343**	*e*PKP	PKPbc	23 09 41.0	-0.5
KSP	**Ksiaz**	**144.03**	**347**	*e*PKP	PKPbc	23 09 42.7	-0.5
BURAR	**Bucovina Array**	**144.07**	**335**		**PKPab**	**23 09 42.6**	**-0.5**
CLZ	**Clausthal**	**144.07**	**353**	*e*PKPbc	**PKPab**	**23 09 42.4**	**-0.5**
	baz=10,slow=3.0						
CLL	**Collm**	**144.23**	**350**	*i* PKPbc	**PKPab**	**23 09 42.3**	**-1.1**
	comp=Z,12nm,1.2s						
CLL	**Collm**	**144.23**	**350**	*e*PKPbc	**PKPab**	**23 09 42.3**	**-1.1**
	baz=10,slow=3.0						
CLL	**Collm**	**144.23**	**350**		**PKPab**	**23 09 42.4**	**-1.0**
BIZ	**Bicaz**	**144.24**	**334**	⇓P	PKPbc	23 09 43.7	-0.2
NIE	**Niedzica**	**144.28**	**342**	*e*PKP	PKPbc	23 09 43.6	-0.4
TLCR		**144.31**	**329**	⇑P	**PKPab**	**23 09 43.6**	**-0.4**
OSTC	**Ostas**	**144.32**	**346**	*e*PKP	PKPbc	23 09 43.6	-0.5
CHVC	**Chvalec**	**144.33**	**347**	*e*PKP	**PKPab**	**23 09 42.6**	**-1.3**
GTTG	**Gottingen**	**144.41**	**353**	*e*PKPbc	**PKPab**	**23 09 43.6**	**-0.6**
	baz=10,slow=3.0						
UPC	**Upice**	**144.41**	**347**	*e*PKP	**PKPab**	**23 09 43.6**	**-0.6**
BRG	**Berggiesshubel**	**144.48**	**349**	*e*PKP	**PKPab**	**23 09 42.5**	**-1.9**
	comp=Z,16nm,1.6s						
DPC	**Dobruska-Polom**	**144.49**	**346**	*e*PKP	**PKPab**	**23 09 43.9**	**-0.7**
NEUB	**Neuenburg**	**144.51**	**351**	*e*PKPbc	PKPbc	23 09 43.6	-1.0
	baz=10,slow=3.0						
FBE	**Freiberg**	**144.54**	**350**	*e*PKPbc	PKPbc	23 09 44.0	-0.6
	baz=10,slow=3.0						

	comp=Z,11nm,1.5s							
RJOB	**Jochberg**	**147.71**	**349**	*e*PKPbc	**PKPbc**	**23 09 52.9**	**-1.0**
	baz=10,slow=3.0							
BFO	**Black Forest**	**147.76**	**354**	*e*PKPbc	**PKPbc**	**23 09 53.4**	**-0.6**
	baz=10,slow=3.0							
KBA	**Koelnbreinsper**	**148.23**	**348**	*e*P	**PKPbc**	**23 09 54.5**	**-0.9**
	comp=Z,3.7nm,0.5s							
WATA	**Walderalm**	**148.31**	**350**	*i* P	**PKPbc**	**23 09 54.7**	**-0.9**
	comp=Z,3.4nm,0.5s							
WTTA	**Wattenberg**	**148.37**	**350**	*e*P	**PKPbc**	**23 09 55.1**	**-0.7**
	comp=Z,4.2nm,0.5s							
SQTA	**Sankt Quirin**	**148.48**	**350**	*e*P	**PKPbc**	**23 09 55.5**	**-0.5**
	comp=Z,15nm,1.5s							
MYKA	**Terra Mystica**	**148.59**	**347**	*e*P	**PKPbc**	**23 09 54.2**	**-2.1**
	comp=Z,2.5nm,0.4s							
DAVA	**Damuels**	**148.61**	**352**	*i* P	**PKPbc**	**23 09 55.4**	**-1.0**
	comp=Z,17nm,1.1s							
ABTA	**Abfaltersbach**	**148.71**	**349**	*e*P	**PKPbc**	**23 09 55.4**	**-1.1**
	comp=Z,9.5nm,1.1s							
FETA	**Feichten**	**148.75**	**351**	*e*P	**PKPbc**	**23 09 55.4**	**-1.3**
	comp=Z,12nm,1.2s							
DAVOX	**Davos/Dischmat**	**149.11**	**352**	PKPbc	**PKPbc**	**23 09 56.6**	**-1.1**
	comp=Z,8.8nm,0.7s,baz=230,slow=1.7,SNR=7.4							
FUORN	**Ofenpass-Fuorn**	**149.21**	**351**		**PKPbc**	**23 09 56.9**	**-1.1**
TUE	**Stuetta**	**149.48**	**353**		**PKPbc**	**23 09 57.3**	**-1.3**
IDI	**Anoyia**	**153.28**	**319**	PKPbc	**PKPbc**	**23 10 05.8**	**-1.7**
	comp=Z,2.3nm,0.4s,baz=286,slow=16,SNR=9.4							
IDI	**Anoyia**	**153.28**	**319**		**PKPbc**	**23 10 06.6**	**-0.8**
TORD	**Torodi Ar. Bea**	**176.30**	**145**	PKP	**PKPdf**	**23 10 17.7**	**-1.9**
	comp=Z,1.0nm,0.9s,baz=285,slow=1.5,SNR=4.8							
TORD				PKPab	**PKPab**	**23 12 01.7**	**-0.5**
	comp=Z,1.5nm,1.0s,baz=260,slow=3.2,SNR=4.0							
TORD	**Torodi Ar. Bea**	**176.30**	**145**		**PKPdf**	**23 10 17.2**	**-2.3**
TORD					**PKPab**	**23 12 02.3**	**+0.1**

DJA 04 23:02:02.6±0.7, **8°S**±4′×**10°9E**±°, **h36**km±15km, **M3.5**/10, **MLv3.5**/10, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**1.05**	**311**	P	Pn	23 02 21.1	+0.3
CMJI				S	Sn	23 02 34.8	+0.6
KPJI	**Karang Pucung**	**1.18**	**344**	P	Pn	23 02 22.9	+0.3
KPJI				S	Sn	23 02 38.4	+0.9
YOGI	**Yogyakarta**	**1.23**	**58**	P	Pn	23 02 23.3	+0.1
YOGI				S	Sn	23 02 39.4	+0.8
UGM	**Wanagama**	**1.38**	**66**	P	Pn	23 02 25.8	+0.4
UGM				S	Sn	23 02 42.9	+0.5
CISI	**Cisompet, Garu**	**1.69**	**303**	P	Pn	23 02 29.9	+0.2
CISI				S	Sn	23 02 50.5	+0.4
WOJI	**Wonogiri, Jawa**	**1.78**	**69**	P	Pn	23 02 30.4	-0.4
CNJI	**Cibinong**	**2.40**	**299**	P	Pn	23 02 39.6	+0.2
PWJI	**Pagerwojo**	**2.57**	**80**	P	Pn	23 02 42.3	+0.6
PWJI				S	Sn	23 03 12.7	+1.0
SKJI	**Sukabumi**	**3.04**	**299**	P	Pn	23 02 48.6	+0.4
GRJI	**Gresik**	**3.56**	**64**	S	Sn	23 03 36.9	+0.8

*NORS **04** 23:08:13.6±0.0, 42°.50N×43°.60E, h14km, MPVA3.2*
*MOS **04** 23:08:13.3±0.0, 42°.40N×43°.52E, h18km, MPVA3.3*
*DDA **04** 23:08:15.0, 42°.43N×43°.33E, h10km±5km, ML2.0*
ISC 04 23:08:14.1±1.2, **42°.47N**±0°.04×**43°.49E**±0°.05, **h7**km±11km, **n13**, σ0**s32**/23, **1C**, **Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIGR	**Digorskoe uzhe**	**0.43**	**9**	*e*Pg	**Pg**	**23 08 22.3**	**-0.3**
ZEI	**Tsey**	**0.44**	**44**	*i* Pg	**Pg**	**23 08 22.8**	**+0.2**
ZEI				*e*Sg	**Sg**	**23 08 29.0**	**+0.5**
LACR	**Lac**	**0.69**	**59**	*i* Pg	**Pg**	**23 08 26.9**	**-0.6**
LACR				*e*Sg	**Sg**	**23 08 36.2**	**-0.3**
KORR	**Kora**	**0.75**	**34**	*i* Pg	**Pg**	**23 08 28.9**	**+0.4**
KORR				*e*Sg	**Sb**	**23 08 40.2**	**+0.2**
LSNR	**Lesken**	**0.84**	**17**	*e*Pg	**Pg**	**23 08 30.5**	**+0.2**
LSNR				*e*Sg	**Sb**	**23 08 42.7**	**0.0**
ARNR	**Ardon**	**0.92**	**39**	*e*Pg	**Pn**	**23 08 33.3**	**-0.2**
ARNR				*e*Sg	**Sn**	**23 08 46.6**	**-0.4**
STDR	**Stavd-Durt**	**0.99**	**25**	*e*Pg	**Pn**	**23 08 34.5**	**+0.1**
STDR				*e*Sg	**Sn**	**23 08 49.4**	**+0.7**
AKH	**Akhalkalaki**	**1.06**	**180**	∥P	**Pn**	**23 08 35.7**	**+0.1**
KBZ	**Khabaz**	**1.33**	**341**	*e*Pg	**Pn**	**23 08 38.8**	**-0.3**
KIV0	**Kislovodsk Arr**	**1.59**	**339**	*e*Pg	**Pb**	**23 08 43.9**	**-0.1**
KIV0				*e*Sg	**Sn**	**23 09 03.8**	**0.0**
BEYR	**Belyy Ugol+**	**1.62**	**343**	*e*Pg	**Pb**	**23 08 44.4**	**+0.1**
BEYR				*e*Sg	**Sb**	**23 09 04.7**	**-0.3**
DBOC	**Borcka**	**1.76**	**231**	*i* P	**Pb**	**23 08 46.5**	**-0.2**
DBOC				*i* S	**Sg**	**23 09 10.9**	**+0.1**
DBOC				IAML		23 09 12.0	
	comp=E,24nm,0.2s						
DBAD	**Bademkaya**	**1.98**	**223**	*i* P	**Pb**	**23 08 50.4**	**0.0**
DBAD				*i* S	**Sg**	**23 09 17.8**	**+0.2**
DBAD				IAML		23 09 18.0	
	comp=E,21nm,0.4s						
DBAD				IAML		23 09 19.0	
	comp=N,25nm,0.3s						

IDC 04 23:12:46.2±6.1, **18°.92S**×**176°.97W**, **h0**km, **mb3.9**/2, **mb1 4.2**/2, **mb1mx3.6**/35, **mbtmp3.9**/2, **MS3.2**/2, **Ms1 3.3**/2, **ms1mx2.8**/31, **Error ellipse: s-maj=310.6km s-min=54.9km az=148.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.80**	**260**	P	P	23 21 10.2	+0.1
	0.5nm,0.3s,baz=96,slow=8.3,SNR=26						
WRA				LR	LR	23 37 57.2	
	comp=Z,45nm,21.9s,baz=115,slow=33						
ASAR	**Alice Springs**	**45.85**	**255**	P	P	23 21 10.2	-0.3
	1.9nm,0.7s,baz=89,slow=8.4,SNR=19						
CMAR	**Chiang Mai Arr**	**90.51**	**289**	LR	LR	00 05 37.7	
	comp=Z,9.3nm,21.5s,baz=20,slow=35						
GERES	**GERESS Array B**	**148.93**	**346**	PKPbc	PKPbc	23 32 35.5	-0.6
	0.5nm,0.6s,baz=14,slow=4.4,SNR=2.4						

*ANF **04** 23:13:49.2±0.6, 35°.57N×97°.11W, h0km, ML3.5/8, Error ellipse: s-maj=9.4km s-min=2.9km az=155.0*
*TUL **04** 23:13:50.3±0.9, 35°.46N±0°.03×97°.03W±0°.03, h6km±7km, ML3.2, Error ellipse: s-maj=5.3km s-min=2.1km az=136.0*
*NEIC **04** 23:13:51.0±0.7, 35°.48N±0°.02×97°.04W±0°.01, h7km±7km, Error ellipse: s-maj=2.4km s-min=0.9km az=205.0*
ISC 04 23:13:50.6±1.0, **35°.47N**±0°.02×**97°.03W**±0°.02, **h8**km±9km, **n58**, σ0**s90**/72, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.22**	**324**	Pg	**Pg**	**23 13 55.4**	**+0.3**
OK025	**Westminster Rd**	**0.27**	**293**		**Pg**	**23 13 56.1**	**+0.1**
OK025				Sg	**Sg**	**23 14 00.2**	**+0.5**
OKCSW	**OKLAHOMA CITY**	**0.34**	**259**		**Pg**	**23 13 57.1**	**-0.1**
OKCSW				Sg	**Sg**	**23 14 02.0**	**+0.3**
W35A	**Tecumseh**	**0.34**	**158**		**Pg**	**23 13 57.2**	**-0.1**
W35A				Sg	**Sg**	**23 14 02.1**	**+0.2**
OKCFA	**Oklahoma City**	**0.35**	**260**		**Pg**	**23 13 57.3**	**-0.1**
OKCFA					**Sg**	**23 14 02.3**	**+0.3**
FNO	**Franklin**	**0.37**	**234**		**Pg**	**23 13 58.0**	**+0.1**
FNO				Sg	**Sg**	**23 14 03.2**	**+0.4**
OK029	**Liberty Lake**	**0.47**	**313**		**Pg**	**23 13 59.7**	**-0.1**
OK029				Sg	**Sg**	**23 14 06.6**	**+0.6**
OK030	**Cody Creek RV**	**0.50**	**24**		**Pg**	**23 14 00.5**	**+0.2**
OK030				Sg	**Sg**	**23 14 07.5**	**+0.7**
OK031	**S. Brethren Rd**	**0.50**	**18**		**Pg**	**23 14 00.5**	**+0.1**
OK031				Sg	**Sb**	**23 14 07.7**	**-1.4**
BCOK	**Bluff Creek, N**	**0.51**	**291**		**Pg**	**23 14 00.3**	**-0.1**
BCOK				Sg	**Sg**	**23 14 07.5**	**+0.5**
X34A	**Smith Ranch, M**	**1.09**	**217**	Pg	**Pg**	**23 14 11.2**	**-0.3**
TUL1	**Leonard**	**1.10**	**66**	P	**Pg**	**23 14 10.6**	**-1.1**
	baz=246						
TUL1				S	**Sg**	**23 14 26.0**	**0.0**
	baz=246						
TUL1	**Leonard**	**1.10**	**66**	Pg	**Pg**	**23 14 10.5**	**-1.1**
CROK	**Carrier**	**1.29**	**323**		**Pn**	**23 14 14.3**	**-0.6**
T35A	**Sooner Cattle**	**1.50**	**16**		**Pn**	**23 14 17.6**	**-0.2**
KAN13	**South Haven SW**	**1.58**	**347**		**Pn**	**23 14 19.1**	**+0.2**
WMOK	**Wichita Mounta**	**1.61**	**243**	P	**Pn**	**23 14 19.3**	**0.0**
	baz=63						
WMOK				S	**Sn**	**23 14 40.6**	**+0.3**
	baz=63						
WMOK	**Wichita Mounta**	**1.61**	**243**	Pn	**Pn**	**23 14 19.0**	**-0.3**
X37A	**Clayton**	**1.62**	**122**	Pn	**Pb**	**23 14 20.2**	**-0.5**
KAN14	**Manchester OK**	**1.66**	**333**	Pn	**Pn**	**23 14 20.2**	**+0.2**
KAN09	**Caldwell North**	**1.73**	**344**	Pn	**Pb**	**23 14 21.7**	**-0.9**
KAN05	**Bluff City Nor**	**1.77**	**338**	Pn	**Pn**	**23 14 21.9**	**+0.4**
U32A	**Winter Ranch,**	**1.84**	**300**	Pn	**Pn**	**23 14 23.1**	**+0.7**
KAN10	**Anthony SW Sta**	**1.86**	**333**	Pn	**Pn**	**23 14 22.9**	**+0.2**
KAN08	**Anthony NE Sta**	**1.91**	**337**	Pn	**Pn**	**23 14 23.8**	**+0.4**
KAN12	**Harper NE Stat**	**1.98**	**337**	Pn	**Pn**	**23 14 24.9**	**+0.5**
Z35A	**Perchaven, San**	**2.15**	**185**	Pn	**Pn**	**23 14 27.6**	**+0.9**
U38A	**Gravette**	**2.35**	**65**	Pn	**Pn**	**23 14 31.0**	**+1.5**
HHAR	**Hobbs**	**2.64**	**71**	Pn	**Pn**	**23 14 33.7**	**+0.3**
W39A	**Magazine**	**2.67**	**95**	P	**Pn**	**23 14 34.4**	**+0.5**
	baz=277						
W39A				S	**Sn**	**23 15 08.6**	**+2.2**
	baz=277						
W39A	**Magazine**	**2.67**	**95**	Pn	**Pn**	**23 14 34.2**	**+0.4**
Z38A	**Mt. Pleasant**	**2.78**	**142**	Pn	**Pn**	**23 14 36.3**	**+0.9**
MIAR	**Mount Ida**	**2.98**	**107**	P	**Pn**	**23 14 39.8**	**+1.6**
	baz=289						
MIAR	**Mount Ida**	**2.98**	**107**	Pn	**Pn**	**23 14 39.5**	**+1.3**
R32A	**Long Quarter,**	**3.24**	**336**	Pn	**Pn**	**23 14 42.4**	**+0.7**
WHTX	**Lake Whitney,**	**3.49**	**186**	Pb	**Pb**	**23 14 51.9**	**-0.7**
	baz=5.7						
WHTX				S	**Sb**	**23 15 32.1**	**-3.1**
	baz=5.7						
WHTX	**Lake Whitney,**	**3.49**	**186**	Pn	**Pn**	**23 14 45.8**	**+0.7**
U40A	**Yellville**	**3.50**	**74**	P	**Pn**	**23 14 45.8**	**+0.5**
	baz=256						
U40A	**Yellville**	**3.50**	**74**	Pn	**Pn**	**23 14 45.7**	**+0.4**
X40A	**Basin Creek Fa**	**3.58**	**105**	P	**Pn**	**23 14 47.7**	**+1.3**
	baz=287						
X40A	**Basin Creek Fa**	**3.58**	**105**	Pn	**Pn**	**23 14 47.5**	**+1.1**
237A	**Washetta, Mont**	**3.61**	**163**	Pn	**Pn**	**23 14 48.0**	**+1.2**
KSU1	**Kansas State U**	**3.64**	**5**	Pn	**Pn**	**23 14 47.3**	**+0.2**
WLAR	**White Oak Lake**	**3.69**	**118**	Pn	**Pn**	**23 14 48.6**	**+0.7**
S39A	**Bolivar**	**3.72**	**52**	Pn	**Pn**	**23 14 49.0**	**+0.8**
AMTX	**Amarillo**	**3.85**	**263**	Pn	**Pn**	**23 14 52.6**	**+2.4**
WHAR	**Wooly Hollow**	**3.88**	**91**	Pn	**Pn**	**23 14 51.0**	**+0.5**
W41B	**Gary Mavity, V**	**3.92**	**93**	P	**Pn**	**23 14 52.1**	**+1.0**
	baz=276						
W41B				S	**Sn**	**23 15 39.3**	**+2.1**
	baz=276						
W41B	**Gary Mavity, V**	**3.92**	**93**	Pn	**Pn**	**23 14 51.8**	**+0.7**
CBKS	**Cedar Bluff**	**3.97**	**328**	Pn	**Pn**	**23 14 52.2**	**+0.4**
FCAR	**Ozark Folk Cen**	**4.02**	**83**	Pn	**Pn**	**23 14 52.4**	**+0.1**
CCAR	**Cane Creek**	**4.60**	**108**	Pn	**Pn**	**23 15 00.9**	**+0.5**
R40A	**Maddies Statio**	**4.74**	**52**	Pn	**Pn**	**23 15 03.1**	**+0.8**
LCAR	**Lake Charles**	**4.82**	**81**	Pn	**Pn**	**23 15 02.7**	**-0.6**
X43A	**Marvell**	**5.14**	**99**	Pn	**Pn**	**23 15 08.9**	**+1.2**
JCT	**Junction City**	**5.50**	**206**	Pn	**Pn**	**23 15 12.7**	**0.0**
KSCO	**Kaye Shedlock'**	**5.69**	**310**	Pn	**Pn**	**23 15 15.9**	**+0.4**
T25A	**Trinidad**	**6.19**	**288**	Pn	**Pn**	**23 15 21.6**	**-0.7**

*REY **04** 23:21:21.3, 64°.67N×17°.44W, h8km*
*IDC **04** 23:21:22.0±0.6, 64°.69N×17°.68W, h0km, mb4.0/17, mb1 4.3/18, mb1mx4.0/56, mbtmp4.0/18, ML4.4/1, MS3.5/22, Ms1 3.5/22, ms1mx3.4/38, Error ellipse: s-maj=19.6km s-min=9.3km az=11.0*
*MOS **04** 23:21:22.5±1.1, 64°.59N×17°.67W, h10km, mb4.6/21, Error ellipse: s-maj=12.6km s-min=7.3km az=102.7*
*NEIC **04** 23:21:23.7±2.0, 64°.62N±0°.06×17°.8W±0°.1, h9km±4km, mb4.7/80, Error ellipse: s-maj=9.5km s-min=8.6km az=116.0*
*DNK **04** 23:21:32.9±5.0, 65°.18N×17°.37W, h15km±398km*
ISC 04 23:21:24.0±0.3, **64°.67N**±0°.03×**17°.44W**±0°.03, **h10**km, **n382**, σ1**s70**/354, **mb4.6**/73, **MS3.5**/20, **13C-6D**, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**15**	P	**Pg**	**23 21 24.1**	**-2.9**
	baz=14						
IDYN				S	**Sg**	**23 21 26.4**	**-2.8**
	baz=14						
IURH	**Urdarhals**	**0.20**	**40**	P	**Pg**	**23 21 25.4**	**-2.8**
	baz=40						
IGRF	**Grimsfjall**	**0.28**	**164**	P	**Pg**	**23 21 26.8**	**-2.9**
	baz=165						
IKVE	**Kverkfjoll**	**0.33**	**89**	S	**Sg**	**23 21 32.2**	**-2.7**
	baz=89						
IHUS	**Husbondi**	**0.39**	**194**	P	**Pg**	**23 21 28.8**	**-2.9**
	baz=194						
IHUS				S	**Sg**	**23 21 34.5**	**-2.3**
	baz=194						
IVOT	**Vottur**	**0.42**	**164**	P	**Pg**	**23 21 29.2**	**-3.0**
	baz=165						
IVOT				S	**Sg**	**23 21 35.2**	**-2.4**
	baz=165						
ISKR	**Skrokkalda**	**0.42**	**255**	P	**Pg**	**23 21 29.4**	**-2.9**
	baz=255						
IJOK	**Jokulheimar**	**0.49**	**224**	S	**Sg**	**23 21 37.9**	**-2.2**
	baz=224						
IJOK				P	Pg	23 21 30.3	-3.3
	baz=224						
IASK	**Askja**	**0.51**	**41**	P	**Pg**	**23 21 30.7**	**-3.2**
	baz=41						
IMKO	**Mokollar**	**0.56**	**56**	P	**Pg**	**23 21 31.6**	**-3.3**
	baz=56						
IKSK	**Karasker**	**0.66**	**140**	P	Pg	23 21 32.6	-4.2
	baz=140						
IKAL	**Kalfafell**	**0.73**	**189**	P	Pg	23 21 34.5	-3.7
	baz=189						
IVSH	**V-Sauoahnukur**	**0.75**	**79**	P	**Pg**	**23 21 34.5**	**-3.9**
	baz=79						
IVAT	**Vatnsfell**	**0.81**	**233**	P	Pg	23 21 35.6	-3.8
	baz=234						
IKVO	**Krokottuvotn**	**1.07**	**12**	P	Pg	23 21 40.0	-4.6
	baz=12						
ISNB	**Snabyli**	**1.07**	**210**	S	**Sg**	**23 21 56.2**	**-2.3**
	baz=210						
ISNB				P	Pb	23 21 40.1	-4.5
	baz=210						
ISLY	**Slysaalda**	**1.12**	**221**	P	Pb	23 21 41.5	-4.0
	baz=222						
IRJU	**Rjupnafell**	**1.19**	**208**	P	Pn	23 21 42.2	-4.4
	baz=208						
ISKI	**Skildingahlsh**	**1.22**	**8**	P	Pb	23 21 42.2	-4.8
	baz=7.9						
IGHA	**Grjothals**	**1.22**	**15**	P	Pb	23 21 42.2	-5.0
	baz=15						
IGHA				S	**Sb**	**23 21 58.9**	**-4.1**
	baz=15						
IMJO	**Mjoaskard**	**1.22**	**234**	P	Pn	23 21 43.4	-3.7
	baz=234						
IGRA	**Granastaoir**	**1.25**	**357**	P	Pn	23 21 42.8	-4.7
	baz=357						
IGYG	**Gygjarholskot**	**1.26**	**253**	P	Pn	23 21 43.7	-3.9
	baz=253						
IDIM	**Dimmadalss**	**1.31**	**9**	P	Pn	23 21 43.7	-4.6
	baz=9.0						
BORG	**Borgarnes**	**1.67**	**274**	Pg	Pn	23 21 49.5	-3.8
	52nm,0.3s,baz=98,slow=9.7,SNR=84						
BORG				Lg	Lg	23 22 13.7	
	62nm,0.3s,baz=244,slow=23,SNR=14						
BORG				LR	LR	23 22 38.4	
	comp=Z,1μm,21.4s,baz=79,slow=49						
SCO	**Scoresbysund**	**6.09**	**346**	*e*	**Pn**	**23 22 51.3**	**-2.5**
	baz=175,slow=6.9						
SCO				*i* P	**Pn**	**23 22 53.7**	**-0.1**
SCO				*i* S	**Sn**	**23 24 00.8**	**-2.6**
JMIC	**Jan Mayen**	**7.18**	**24**	LR	LR	23 24 48.1	
	comp=Z,83nm,19.3s,baz=214,slow=29						
SUMG	**Summit**		**10.95**	**325**	*i* P	**Pn**	**23 24 05.5**	**+4.7**
SUMG	**Summit**		**10.95**	**325**	*i* P	**Pn**	**23 24 05.5**	**+4.7**
SUMG	**Summit**		**10.95**	**325**	*i* P	**Pn**	**23 24 05.6**	**+4.7**
EKA	**Eskdalemuir Ar**		**11.74**	**136**	Pn	**Pn**	**23 24 11.2**	**-0.1**
	baz=320,slow=13,SNR=15							
ESK	**Eskdalemuir**		**11.74**	**136**	P	**Pn**	**23 24 11.3**	**-0.1**
ESK	**Eskdalemuir**		**11.74**	**136**	Pn	**Pn**	**23 24 11.3**	**-0.1**
DAG	**Danmarks Havn**		**12.17**	**359**	*i* P	**Pn**	**23 24 19.9**	**+2.9**
DAG	**Danmarks Havn**		**12.17**	**359**	*i* P	**Pn**	**23 24 19.9**	**+2.9**
DAG	**Danmarks Havn**		**12.17**	**359**	*i* P	**Pn**	**23 24 19.9**	**+2.9**
DSB	**Dublin**		**12.77**	**149**	Pn	**Pn**	**23 24 23.6**	**-1.7**
NOA	**NORSAR Array B**		**13.51**	**92**	LR	LR	23 29 52.9	
	comp=Z,135nm,19.1s,baz=280,slow=38							
SFJD	**Kangerlussuaq**		**13.69**	**295**	LR	LR	23 29 44.5	
	comp=Z,136nm,21.4s,baz=86,slow=37							
SFJD	**Kangerlussuaq**		**13.69**	**295**	P	**Pn**	**23 24 34.7**	**-3.0**
SFJD	**Kangerlussuaq**		**13.69**	**295**	Pn	**Pn**	**23 24 34.7**	**-3.0**
HFS	**Hagfors**		**15.02**	**93**	Pn	**P**	**23 25 02.6**	**+1.2**
	0.1nm,0.3s,baz=182,slow=25,SNR=3.0							
NOR	**Nord**		**17.02**	**0**	*i* P	**Pn**	**23 25 23.1**	**+1.5**
NOR	**Nord**		**17.02**	**0**	*i* P	**Pn**	**23 25 23.1**	**+1.5**
NOR	**Nord**		**17.02**	**0**	*i* P	**Pn**	**23 25 23.2**	**+1.5**
ARCES	**ARCESS Array B**		**17.09**	**55**	LR	LR	23 30 21.8	
	comp=Z,83nm,21.9s,baz=275,slow=31							

FINES	**FINESS Array B**	**19.68**	**79**	LR	LR	23 33 30.9		
	comp=Z,155nm,18.5s,baz=266,slow=37							
CLF	**Chambon-Foret**	**19.78**	**138**	P	**P**	**23 25 55.3**	**+1.3**
APA	**Apatity**	**20.30**	**59**⇑	*i* P	Pn	23 26 02.9	+1.4
APA				pmax	pmax		
	comp=Z,13nm,1.2s						
CLL	**Collm**	**20.68**	**116**	*i* P	**P**	**23 26 04.5**	**+0.7**
	comp=Z,90nm,2.3s						
CLL				*i*		23 26 12.6	
CLL				*e*		23 26 24.0	
CLL				Lm	MLR	23 34 00.0	
	comp=Z,100nm,19.6s						
CLL	**Collm**	**20.68**	**116**	*i* P	**P**	**23 26 04.5**	**+0.7**
CLL				*i*		23 26 12.6	
CLL				pmax	pmax		
	comp=Z,90nm,2.3s						
CLL	**Collm**	**20.68**	**116**	P	**P**	**23 26 03.9**	**+0.1**
ECH	**Echery**	**21.14**	**129**	P	**P**	**23 26 07.7**	**-1.0**
ECH				pmax	pmax		
	comp=Z,12nm,1.0s						
ECH	**Echery**	**21.14**	**129**	P	**P**	**23 26 07.7**	**-1.0**
GRF	**Grafenberg Arr**	**21.31**	**121**	*e*P	**P**	**23 26 12.2**	**+1.6**
	comp=Z,26nm,1.5s,baz=325,slow=10							
NKC	**Novy Kostel**	**21.33**	**118**	*e*P	**P**	**23 26 13.1**	**+2.3**
NKC	**Novy Kostel**	**21.33**	**118**	*e*P	**P**	**23 26 13.1**	**+2.3**
STU	**Stuttgart**	**21.36**	**125**	P	**P**	**23 26 13.4**	**+2.4**
STU				pmax	pmax		
	comp=Z,61nm,1.5s						
STU	**Stuttgart**	**21.36**	**125**	P	**P**	**23 26 13.4**	**+2.4**
STU				IAmb	IAmb	23 26 19.3	
	comp=Z,61nm,1.5s						
BRG	**Berggiesshubel**	**21.39**	**115**	*e*P	**P**	**23 26 11.9**	**+0.5**
	comp=Z,26nm,1.5s							
BRG	**Berggiesshubel**	**21.39**	**115**	*e*P	**P**	**23 26 11.9**	**+0.5**
BRG				pmax	pmax		
	comp=Z,27nm,1.5s						
BFO	**Black Forest**	**21.43**	**127**	P	**P**	**23 26 13.1**	**+1.2**
BFO				pmax	pmax		
	comp=Z,29nm,1.5s						
BFO	**Black Forest**	**21.43**	**127**	P	**P**	**23 26 13.1**	**+1.2**
BFO				IAmb	IAmb	23 26 29.5	
	comp=Z,29nm,1.5s						
VSU	**Vasula**	**21.54**	**86**⇓	*e*P	**P**	**23 26 15.0**	**+2.1**
VSU				pmax	pmax		
	comp=Z,92nm,1.2s						
PRU	**Pruhonice**	**22.33**	**116**	*e*P	**P**	**23 26 25.7**	**+4.2**
PRU	**Pruhonice**	**22.33**	**116**	*e*P	**P**	**23 26 25.7**	**+4.2**
KSP	**Ksiaz**	**22.34**	**112**	*e*P	**P**	**23 26 22.6**	**+0.9**
CHVC	**Chvalec**	**22.45**	**113**	*e*P	**P**	**23 26 24.8**	**+2.0**
OSTC	**Ostas**	**22.54**	**113**	*e*P	**P**	**23 26 26.1**	**+2.4**
KHC	**Kasperske Hory**	**22.66**	**119**	*e*P	**P**	**23 26 26.3**	**+1.3**
KHC	**Kasperske Hory**	**22.66**	**119**	*e*P	**P**	**23 26 26.3**	**+1.3**
DPC	**Dobruska-Polom**	**22.74**	**113**	*e*P	**P**	**23 26 27.6**	**+1.7**
DPC	**Dobruska-Polom**	**22.74**	**113**	*e*P	**P**	**23 26 27.6**	**+1.7**
GEC2	**GERESS Array S**	**22.94**	**119**	P	**P**	**23 26 29.8**	**+1.8**
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**23 26 28.6**	**+0.6**
	comp=Z,2.4nm,1.0s,baz=330,slow=7.8,SNR=7.6							
GERES				LR	LR	23 36 34.6		
	comp=Z,133nm,20.5s,baz=298,slow=40							
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**23 26 29.1**	**+1.1**
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**23 26 29.1**	**+1.1**
VRAC	**Vranov**	**23.67**	**114**	P	**P**	**23 26 36.7**	**+1.4**
	comp=Z,2.3nm,0.3s,baz=331,slow=10,SNR=4.6							
MORC	**Moravsky Berou**	**23.68**	**112**	P	**P**	**23 26 35.4**	**0.0**
MORC				pmax	pmax			
	comp=Z,9.0nm,1.5s							
MORC	**Moravsky Berou**	**23.68**	**112**	P	**P**	**23 26 35.4**	**0.0**
NACGM	**Naroch**	**23.79**	**93**	*e*	**P**	**23 26 37.0**	**+0.6**
OJC	**Ojcow**	**24.24**	**109**	*e*P	**P**	**23 26 42.9**	**+2.2**
SMOL	**Smolenice**	**24.54**	**114**	*e*P	**P**	**23 26 45.6**	**+1.3**
SMOL	**Smolenice**	**24.64**	**114**	*e*P	**P**	**23 26 45.6**	**+1.3**
LANS	**Liptovska Anna**	**24.94**	**111**	*e*P	**P**	**23 26 50.0**	**+2.9**
LANS				pmax	pmax			
	comp=Z,5.0nm,1.0s							
LANS	**Liptovska Anna**	**24.94**	**111**	*

ANN *e* 23 29 42.5
ANN *eS* **S** **23 33 59.8 -1.5**
ANN pmax pmax
comp=Z,15nm,0.8s
ARU Arti **36.06 66***c i*P **P** **23 28 25.8 +0.7**
ARU 23 29 44.9
ARU S **S** **23 34 07.3 +3.6**
ARU SS **SnSn** **23 36 32.0 +4.1**
ARU pmax pmax
comp=Z,30nm,3.0s
I62A Tamworth **36.22 261** P **P** **23 28 27.0 +0.4**
baz=36
H60A Morristown **36.24 263** P **P** **23 28 27.4 +0.6**
baz=37
G58A Ormstown **36.35 265** P **P** **23 28 28.9 +1.2**
baz=37
NRIK Noril'sk **36.44 35**⇑*i*P **P** **23 28 30.2 +2.0**
H59A Cadyville **36.60 265** P **P** **23 28 31.2 +1.4**
baz=37
G57A Newington **36.79 266** P **P** **23 28 32.8 +1.4**
baz=37
C36M Paulatuk **36.84 325** P **P** **23 28 33.8 +2.3**
baz=44
J62A Henniker **36.94 261** P **P** **23 28 34.6 +1.9**
baz=36
H58A Gabriels **36.99 265** P **P** **23 28 34.2 +1.0**
baz=37
LONY Lake Ozonia **37.00 265** P **P** **23 28 34.5 +1.2**
baz=37
L64A Middleborough **37.59 259** P **P** **23 28 41.0 +2.8**
baz=34
J60A Lant Hill Farm **37.62 263** P **P** **23 28 40.2 +1.7**
baz=36
J59A Piesco **37.90 264** P **P** **23 28 42.8 +1.9**
baz=36
I57A Carthage **38.01 266** P **P** **23 28 43.4 +1.5**
baz=36
GOF Gofitskoye **38.09 91**⇑*e*P **P** **23 28 43.5 +1.0**
GOF pmax pmax
comp=Z,56nm,1.6s
BRTR Keskin Array B **38.46 105** P **P** **23 28 47.2 +1.4**
comp=Z,0.9nm,0.8s,baz=339,slow=9.3,SNR=5.0
BRTR Keskin Array B **38.46 105***c i*P **P** **23 28 48.5 +2.7**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B **38.46 105** P **P** **23 28 45.1 -0.7**
K59A Cooperstown **38.61 264** P **P** **23 28 48.7 +1.8**
baz=36
H53A Bobcaygeon **38.76 269** P **P** **23 28 49.8 +1.7**
baz=37
KIV Kislovodsk **38.82 92** *e*P **P** **23 28 49.3 +0.6**
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,151nm,16.0s
K58A Earlville **38.96 265** P **P** **23 28 51.4 +1.6**
baz=36
KBZ Khabaz **39.09 93** LR LR 23 44 56.3
comp=Z,101nm,19.8s,baz=308,slow=36
L59A Walton **39.16 263** P **P** **23 28 53.2 +1.6**
baz=35
YKA Yellowknife Ar **39.23 313** P **P** **23 28 49.5 -2.3**
comp=Z,7.0nm,1.1s,baz=40,slow=9.7,SNR=2.3
YKA LR LR 23 44 53.5
comp=Z,63nm,18.8s,baz=0.0,slow=36
YKA Yellowknife Ar **39.23 313***ce*P **P** **23 28 54.2 +2.4**
YKA pmax pmax
comp=Z,2.0nm,0.8s
K57A Scipio Center **39.35 265** P **P** **23 28 55.1 +2.0**
baz=36
M60A Port Jervis **39.70 262** P **P** **23 28 57.8 +1.8**
baz=34
K56A Middlesex **39.73 266** P **P** **23 28 57.9 +1.7**
baz=36
INK Inuvik **39.85 329** P **P** **23 28 56.3 -0.6**
INK pmax pmax
comp=Z,10.0nm,1.4s
INK Inuvik **39.85 329** P **P** **23 28 56.3 -0.6**
L57A Andrews Acres **40.09 265** P **P** **23 29 00.8 +1.5**
baz=35
N60A Cedar Hill Far **40.27 262** P **P** **23 29 02.1 +1.3**
baz=34
L56A Greenwood **40.29 266** P **P** **23 29 02.2 +1.3**
baz=35
M57A Sunshine Farm, **40.76 265** P **P** **23 29 06.9 +2.2**
baz=35
N58A Sunbury **40.99 264** P **P** **23 29 08.3 +1.6**
baz=34
M56A Emporium **41.09 266** P **P** **23 29 08.9 +1.4**
baz=35
O59A Robesonia **41.20 263** P **P** **23 29 10.1 +1.7**
baz=34
N57A Milroy **41.42 265** P **P** **23 29 12.0 +1.8**
baz=34
A21K Barrow **41.43 341** P **P** **23 29 13.0 +3.1**
baz=25
N56A West Decatur **41.60 265** P **P** **23 29 13.4 +1.6**
baz=34
ULM Lac du Bonnet **41.62 289** LR LR 23 44 05.2
comp=Z,88nm,21.0s,baz=104,slow=33
MAK Makhachkala **41.69 89** *e*P **P** **23 29 09.8 -2.6**
MAK *eS* **S** **23 35 26.9 -1.9**
MAK *eSS* **SS** **23 38 29.0 -4.8**
MAK MLR MLR
comp=Z,109nm,12.0s
M54A Oil Creek Stat **41.70 267** P **P** **23 29 14.4 +1.8**
baz=35
P59A Jarrettsville **41.89 263** P **P** **23 29 16.0 +2.0**
baz=34
O57A Amberson **41.90 264** P **P** **23 29 15.9 +1.7**
baz=34
ABKAR Akbulak array **41.97 73** P **P** **23 29 14.6 0.0**
N55A Marion Center **42.01 266** P **P** **23 29 16.5 +1.5**
baz=34
TIXI Tiksi **42.02 15**⇓*e*P **P** **23 29 16.8 +2.1**
TIXI pmax pmax
comp=Z,116nm,2.5s
TIXI Tiksi **42.02 15** P **P** **23 29 15.6 +0.8**
O56A Blue Knob Stat **42.25 265** P **P** **23 29 18.7 +1.6**
baz=34
N54A Moraine State **42.29 267** P **P** **23 29 19.1 +1.7**
baz=34
P58A Pank, Wackersv **42.36 263** P **P** **23 29 19.8 +1.9**
baz=34
P57A Homestead Farm **42.67 264** P **P** **23 29 22.3 +2.0**
baz=34
TOLK Toolik Lake Re **42.75 336** P **P** **23 29 22.9 +2.1**
baz=28,SNR=7.4
TOLK Toolik Lake Re **42.75 336** P **P** **23 29 20.6 -0.2**
TOLK IAmb IAmb 23 29 24.3
comp=Z,22nm,1.2s
BMAR Burnt Mountain **42.90 333** P **P** **23 29 21.3 -0.7**
M51A Elyria **42.93 269** P **P** **23 29 24.6 +2.1**
baz=35
P56A Dayton Farm, R **43.01 265** P **P** **23 29 24.7 +1.6**
baz=34
O54A Avella **43.10 267** P **P** **23 29 25.3 +1.4**
baz=34
BRVK Borovoye **43.11 62***de*P **P** **23 29 24.9 +1.1**
BRVK pmax pmax
comp=Z,12nm,2.5s
BRVK Borovoye **43.11 62** P **P** **23 29 24.9 +1.1**
AGMN Agassiz Nation **43.14 287** P **P** **23 29 25.5 +1.4**
baz=38
S61A Accomac **43.18 260** P **P** **23 29 26.5 +2.0**
baz=32
Q57A Strasburg **43.21 264** P **P** **23 29 26.8 +1.9**
baz=33
MCWV Mont Chateau **43.31 266** P **P** **23 29 27.3 +1.7**
baz=34
O53A New Philadelph **43.41 268** P **P** **23 29 28.2 +1.8**
baz=34
MARD Mardin **43.49 100** P **P** **23 29 29.3 +2.1**
MARD IAmb IAmb 23 29 44.8
comp=Z,12nm,1.2s
P54A Burton **43.63 266** P **P** **23 29 29.7 +1.5**
baz=34
R58A Rapidan **43.65 263** P **P** **23 29 30.2 +1.8**
baz=33
O52A Adamsville **43.78 268** P **P** **23 29 30.9 +1.5**
baz=34
R57A Stanardsville **43.88 264** P **P** **23 29 31.7 +1.6**
baz=33
R58B Mineral **43.88 263** P **P** **23 29 31.8 +1.6**
baz=33
Q55A Buckhannon **43.96 266** P **P** **23 29 32.6 +1.7**
baz=33

O51A Pataskala **44.09 269** P **P** **23 29 33.5 +1.7**
baz=34
P53A Whipple **44.11 267** P **P** **23 29 33.7 +1.7**
baz=34
P53A Whipple **44.11 267** P **P** **23 29 32.9 +0.8**
P53A IAmb IAmb 23 29 35.2
comp=Z,15nm,1.1s
COLD Coldfoot **44.12 336** P **P** **23 29 33.5 +1.7**
baz=27
COLD Coldfoot **44.12 336** P **P** **23 29 31.9 +0.1**
N49A Columbus Grove **44.13 271** P **P** **23 29 32.9 +0.7**
R56A Bull Pasture M **44.16 264** P **P** **23 29 34.5 +1.9**
baz=33
ACSO Alum Creek Sta **44.18 269** P **P** **23 29 33.8 +1.2**
baz=34
Q54A Coxs Mills **44.29 266** P **P** **23 29 35.7 +2.2**
baz=33
P52A Corning **44.31 268** P **P** **23 29 35.9 +2.2**
baz=34
S57A Dark Hollow, R **44.51 264** P **P** **23 29 37.5 +2.2**
baz=33
Q53A Leroy **44.70 267** P **P** **23 29 38.5 +1.8**
baz=33
DAWY Dawson **44.71 328** P **P** **23 29 37.2 +0.6**
DAWY IAmb IAmb 23 29 39.2
comp=Z,12nm,1.3s
PRP Porcupine Dome **44.76 332** P **P** **23 29 38.9 +1.8**
PRP IAmb IAmb 23 29 43.1
comp=Z,14nm,1.5s
P51A Williamsport **44.84 269** P **P** **23 29 39.0 +1.2**
baz=34
Q52A Bidwell **44.93 268** P **P** **23 29 40.0 +1.4**
baz=33
R54A Victor **45.03 266** P **P** **23 29 41.1 +1.7**
baz=33
V62A Hyde County Ai **45.10 259** P **P** **23 29 41.6 +1.7**
baz=31
T57A Hurt **45.28 263** P **P** **23 29 42.9 +1.4**
baz=32
R53A Hurricane **45.32 267** P **P** **23 29 43.2 +1.5**
baz=33
S54A Dingess, Beckl **45.49 266** P **P** **23 29 44.3 +1.2**
baz=33
POKR Poker Plat Res **45.49 333** P **P** **23 29 44.5 +1.7**
baz=28
U58A Oxford **45.49 262** P **P** **23 29 45.1 +2.0**
baz=32
P49A Miami Univ. Ec **45.51 270** P **P** **23 29 44.5 +1.3**
baz=34
T56A Rocky Mt **45.59 264** P **P** **23 29 45.1 +1.3**
baz=32
IL31 **45.69 332** P **P** **23 29 43.9 -0.3**
IL31 IAmb IAmb 23 29 49.0
comp=Z,11nm,1.3s
ILAR Eielson Array **45.69 332** P **P** **23 29 43.9 -0.5**
comp=Z,5.9nm,1.2s,baz=25,slow=4.8,SNR=23
ILAR PcP **PcP** **23 31 21.2 -0.8**
comp=Z,2.4nm,1.0s,baz=354,slow=2.2,SNR=8.5
ILAR LR LR 23 52 23.7
comp=Z,39nm,18.0s,baz=101,slow=41
ILAR Eielson Array **45.69 332** P **P** **23 29 45.2 +0.9**
MDM Murphy Dome **45.79 333** P **P** **23 29 46.7 +1.6**
COLA College **45.79 333**⇓*e*P **P** **23 29 45.5 +0.4**
COLA pmax pmax
comp=Z,11nm,1.4s
U57A Blanch **45.80 263** P **P** **23 29 47.2 +1.7**
baz=32
I23K Minto, Yukon-K **45.84 334** P **P** **23 29 47.9 +2.5**
baz=27
I23K Minto, Yukon-K **45.84 334** P **P** **23 29 47.5 +2.1**
I23K IAmb IAmb 23 29 49.3
comp=Z,12nm,1.3s
T55A Pulaski **45.84 265** P **P** **23 29 47.6 +1.8**
baz=32
IMAR Indian Mountai **45.86 337** P **P** **23 29 47.6 +1.9**
CCB Clear Creek Bu **45.98 333** IAmb IAmb 23 29 49.5
comp=Z,13nm,1.5s
HDA Harding Lake **46.03 332** P **P** **23 29 48.5 +1.5**
baz=28,SNR=5.6
BCAR Beaver Creek A **46.12 329** P **P** **23 29 49.3 +1.6**
RIDG Independent Ri **46.19 331** P **P** **23 29 49.9 +1.6**
MLY Manley **46.20 335** P **P** **23 29 50.0 +1.7**
baz=26,SNR=6.6
T54A Tazewell **46.22 265** P **P** **23 29 50.3 +1.4**
baz=32
NEA2 Nenana **46.28 334** P **P** **23 29 50.5 +1.6**
baz=27,SNR=6.9
V57A Coltrane Farms **46.45 263** P **P** **23 29 51.6 +1.0**
baz=32
T53A Wise **46.70 266** P **P** **23 29 53.9 +1.2**
baz=32
U54A Nelsons Funny **46.78 265** P **P** **23 29 54.3 +1.0**
baz=32
V56A Mocksville **46.82 264** P **P** **23 29 55.1 +1.5**
baz=32
W58A Raeford **46.95 262** P **P** **23 29 55.9 +1.4**
baz=31
MCK McKinley **47.03 333** P **P** **23 29 56.1 +1.3**
baz=26
V55A Taylorsville **47.09 264** P **P** **23 29 57.0 +1.3**
baz=32
ECSD EROS Data Cent **47.12 284** P **P** **23 29 57.1 +1.3**
baz=35
W57A Gilead **47.16 263** P **P** **23 29 57.6 +1.4**
baz=31
WCI Wyandotte Cave **47.27 271** P **P** **23 29 57.6 +0.6**
WCI pmax pmax
comp=Z,11nm,0.9s
WCI Wyandotte Cave **47.27 271** P **P** **23 29 58.7 +1.6**
baz=33
WCI Wyandotte Cave **47.27 271** P **P** **23 29 57.6 +0.6**
W56A Indian Trail **47.43 263** P **P** **23 29 59.3 +1.0**
baz=31
V54A Nebo **47.47 265** P **P** **23 29 59.7 +1.1**
baz=32
TZTN Tazewell **47.51 267** P **P** **23 29 59.9 +1.0**
baz=32
ZAA0 Zalesovo Array **47.61 51** P **P** **23 30 00.5 +1.0**
ZALV Zalesovo Beam **47.61 51** P **P** **23 29 59.6 +0.2**
comp=Z,0.4nm,0.4s,baz=334,slow=9.9,SNR=4.8
ZALV LR LR 23 50 44.6
comp=Z,30nm,19.9s,baz=296,slow=37
ZALV Zalesovo Beam **47.61 51** *i*P **P** **23 30 01.5 +2.0**
ZALV Zalesovo Beam **47.61 51** P **P** **23 30 00.0 +0.6**
KMSC Kings Mountain **47.74 264** P **P** **23 30 01.8 +1.0**
baz=31
KMSC Kings Mountain **47.74 264** IAmb IAmb 23 30 02.9
comp=Z,9.1nm,1.1s
BIRD Birdtown, Kers **47.80 263** P **P** **23 30 00.1 -1.0**
M24K Tolsona, Glenn **47.92 330** P **P** **23 30 03.6 +1.7**
baz=27
N25K Chitina, Valde **48.03 329** P **P** **23 30 03.7 +1.0**
baz=28
KURK Kurchatov **48.09 58**⇑*e*P **P** **23 30 04.0 +0.8**
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov **48.09 58** P **P** **23 30 03.1 -0.1**
KURK IAmb IAmb 23 30 07.4
comp=Z,4.9nm,1.0s
KURBB Kurchatov Arra **48.13 58** P **P** **23 30 02.9 -0.7**
comp=Z,1.6nm,0.6s,baz=321,slow=7.3,SNR=7.8
W54A Cherokee Point **48.16 265** P **P** **23 30 05.0 +1.1**
baz=31,SNR=5.2
X56A White Oak **48.17 263** P **P** **23 30 05.6 +1.6**
baz=31
X55A Gracelyn & Ava **48.45 264** P **P** **23 30 07.5 +1.3**
baz=31
BG3 Lake Jocassee **48.56 265** IAmb IAmb 23 30 10.4
comp=Z,6.3nm,1.2s
LAO LASA Array **48.62 293** P **P** **23 30 06.5 -1.0**
EGMT Eagleton **48.89 297** P **P** **23 30 10.9 +1.3**
baz=35,SNR=6.8
HODGE Hodges **48.92 264** IAmb IAmb 23 30 12.4
comp=Z,11nm,1.2s
CCM Cathedral Cave **49.54 275** P **P** **23 30 15.2 +0.7**
baz=33
RC01 Rabbit Creek A **49.58 332** P **P** **23 30 16.1 +1.5**
baz=25
RSSD Black Hills **49.86 290** P **P** **23 30 17.8 +0.7**
baz=34
GOGA Godfrey **50.14 265** P **P** **23 30 20.2 +1.1**
baz=31
T42A Van Buren **50.34 274** IAmb IAmb 23 30 24.2
comp=Z,14nm,1.4s
GEYT Allbeck **50.40 84** LR LR 23 55 32.2
comp=Z,47nm,18.8s,baz=305,slow=41
PLAL Pickwick Lake **50.78 270** IAmb IAmb 23 30 24.9

comp=Z,7.5nm,1.2s
RLMT Red Lodge **51.11 295** P **P** **23 30 27.5 +0.9**
baz=34
KK31 Karatay Array **51.25 70** P **P** **23 30 28.6 +1.2**
KK31 pmax pmax
comp=Z,10.0nm,1.5s
KK31 Karatay Array **51.25 70** P **P** **23 30 28.6 +1.2**
KK31 IAmb IAmb 23 30 30.6
comp=Z,10nm,1.5s
KKAR Karatay Array **51.25 70** P **P** **23 30 28.6 +1.2**
KKAR Karatay Array **51.25 70** P **P** **23 30 28.6 +1.2**
MSO Missoula **51.47 299** P **P** **23 30 29.6 +0.4**
baz=33
BOZ Bozeman (W) **51.63 297** P **P** **23 30 31.6 +1.3**
baz=33,SNR=6.3
U40A Yellville **51.66 275** P **P** **23 30 31.1 +0.5**
baz=32
LRAL Lakeview Retre **51.97 268** P **P** **23 30 33.5 +0.6**
baz=31
DGZ Jazzator, Alta **52.06 53**⇓*e*P **P** **23 30 35.2 +1.7**
DGZ pmax pmax
comp=Z,8.0nm,1.8s
K22A Casper **52.09 291** P **P** **23 30 34.2 +0.4**
baz=33
MAKZ Makanchi **52.57 59** P **P** **23 30 37.8 +0.6**
MAKZ pmax pmax
comp=Z,5.0nm,1.3s
MAKZ Makanchi **52.57 59** P **P** **23 30 37.8 +0.6**
MK31 Makanchi Array **52.70 58** P **P** **23 30 38.5 +0.3**
MK31 pmax pmax
comp=Z,5.0nm,1.5s
MK31 Makanchi Array **52.70 58** P **P** **23 30 38.5 +0.3**
MKAR Makanchi Array **52.70 58** P **P** **23 30 38.4 +0.2**
comp=Z,1.8nm,1.1s,baz=339,slow=6.5,SNR=6.9
MKAR Makanchi Array **52.70 58***ce*P **P** **23 30 39.2 +1.0**
MKAR pmax pmax
comp=Z,2.0nm,1.1s
MKAR Makanchi Array **52.70 58** P **P** **23 30 39.1 +0.9**
IMW Indian Meadow **52.79 295** IAmb IAmb 23 30 41.9
comp=Z,8.1nm,1.2s
W39A Magazine **53.05 275** P **P** **23 30 41.1 +0.3**
baz=32
TOA0 Torodi Ar. Sit **53.14 156** P **P** **23 30 41.5 -0.2**
TORD Torodi Ar. Bea **53.14 156** P **P** **23 30 40.6 -1.0**
comp=Z,2.7nm,1.0s,baz=347,slow=8.7,SNR=6.2
TORD Torodi Ar. Bea **53.14 156** P **P** **23 30 41.2 -0.4**
BW06 Boulder Array **53.20 293** P **P** **23 30 42.5 +0.3**
baz=32,SNR=12
BW06 Boulder Array **53.20 293** IAmb IAmb 23 30 44.1
comp=Z,15nm,1.2s
PD31 Pinedale Array **53.20 293** IAmb IAmb 23 30 44.1
comp=Z,14nm,1.2s
PDAR Pinedale Array **53.20 293** P **P** **23 30 41.3 -0.9**
comp=Z,6.0nm,1.0s,baz=54,slow=5.8,SNR=18
PDAR LR LR 23 51 41.8
comp=Z,82nm,19.1s,baz=33,slow=34
PDAR Pinedale Array **53.20 293** P **P** **23 30 41.7 -0.5**
REDW Red Top Meadow **53.20 295** IAmb IAmb 23 30 44.8
comp=Z,6.4nm,1.1s
AAK Ala-Archa **53.23 67**⇑*i*P **P** **23 30 44.7 +2.3**
AAK pmax pmax
comp=Z,30nm,2.5s
N23A Red Feather La **53.33 289** P **P** **23 30 44.1 +0.9**
baz=32
MIAR Mount Ida **53.51 275** P **P** **23 30 44.9 +0.6**
baz=31
BTK Batken **53.93 72** P **P** **23 30 49.0 +1.6**
BTK pmax pmax
comp=Z,9.0nm,1.1s
BTK Batken **53.93 72** P **P** **23 30 49.0 +1.6**
BTK IAmb IAmb 23 30 52.4
comp=Z,9.1nm,1.1s
CHGR Chuyangaron **54.44 74** P **P** **23 30 52.4 +1.3**
GAR Garm **54.62 73** P **P** **23 30 53.3 +0.8**
TLY Talaya **55.38 40**⇑*e*P **P** **23 30 55.7 -2.0**
TLY pmax pmax
comp=Z,3.0nm,1.0s
WMOK Wichita Mounta **55.57 279** P **P** **23 31 00.2 +0.9**
baz=31,SNR=5.5
WMOK Wichita Mounta **55.57 279** IAmb IAmb 23 31 01.7
comp=Z,8.1nm,1.1s
S22A 4UR Ranch, Cre **56.36 288** P **P** **23 31 05.5 +0.3**
baz=31
KSH Kashi **56.47 68** *e*P **P** **23 31 08.7 +2.9**
KSH pmax pmax
comp=Z,18nm,1.0s
DUG Dugway, Tooele **56.67 294** P **P** **23 31 07.6 +0.4**
baz=31
DUG Dugway, Tooele **56.67 294** IAmb IAmb 23 31 13.6
comp=Z,9.9nm,1.4s
PV17 East Wray Mesa **56.77 290** IAmb IAmb 23 31 09.9
comp=Z,9.2nm,1.1s
WMQ Urumqi **57.21 56** *e*P **P** **23 31 12.7 +1.8**
WMQ pP sP 23 31 16.9 +1.0
WMQ sP pP 23 31 19.3 +4.8
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ pmax pmax
comp=Z,170nm,4.9s
MVCO Mesa Verde **57.50 289** P **P** **23 31 14.1 +0.8**
baz=31
ABTX Abilene, Hawle **57.75 279** P **P** **23 31 15.6 +0.8**
baz=30
MSU Marysvale **57.86 293** P **P** **23 31 16.7 +0.9**
MSU Marysvale **57.86 293** P **P** **23 31 16.7 +0.9**
KBL Kabul **57.91 77** P **P** **23 31 17.4 +1.3**
KBL pmax pmax
comp=Z,4.0nm,1.3s
KBL Kabul **57.91 77** P **P** **23 31 17.4 +1.3**
MSTX Muleshoe **57.91 282** P **P** **23 31 17.2 +1.2**
baz=30
ANMO Albuquerque **58.61 286**⇑*e*P **P** **23 31 22.9 +1.9**
ANMO pmax pmax
comp=Z,5.0nm,1.7s
ANMO Albuquerque **58.61 286** P **P** **23 31 22.5 +1.5**
baz=30
SZCU Shurtz Canyon **59.02 293** P **P** **23 31 21.6 -2.2**
R11A Troy Canyon, C **59.34 295** P **P** **23 31 26.4 +0.4**
baz=30,SNR=8.1
R11A Troy Canyon, C **59.34 295** IAmb IAmb 23 31 28.6
comp=Z,6.7nm,1.2s
SONM Songino Array **59.62 40** P **P** **23 31 28.0 +0.2**
comp=Z,0.6nm,0.9s,baz=339,slow=7.9,SNR=4.2
SONM Songino Array **59.62 40** P **P** **23 31 28.2 +0.4**
SONM pmax pmax
comp=Z,2.0nm,1.2s
SONM Songino Array **59.62 40** P **P** **23 31 28.2 +0.4**
JCT Junction City **59.67 278** P **P** **23 31 29.2 +1.1**
baz=30
ULN Ulaanbaatar **59.77 40**⇑*e*P **P** **23 31 30.5 +1.7**
ULN pmax pmax
comp=Z,4.0nm,1.3s
ULN Ulaanbaatar **59.77 40** P **P** **23 31 29.1 +0.3**
O03E Paynes Creek **60.00 301** P **P** **23 31 31.3 +0.9**
baz=29
WUAZ Wupatki **60.13 290** P **P** **23 31 32.4 +0.9**
baz=30
WUAZ Wupatki **60.13 290** P **P** **23 31 30.0 -1.4**
NVAR Mina Array Bea **60.32 297** P **P** **23 31 30.8 -2.0**
comp=Z,0.9nm,0.9s,baz=60,slow=3.4,SNR=5.8
NVAR LR LR 23 56 38.0
comp=Z,109nm,21.5s,baz=35,slow=35
NIL Nilore **60.42 74** P **P** **23 31 34.6 +1.3**
NIL pmax pmax
comp=Z,9.0nm,1.1s
NIL Nilore **60.42 74** P **P** **23 31 34.6 +1.3**
NIL IAmb IAmb 23 31 35.3
comp=Z,8.8nm,1.1s
TPNV Topopah Spring **60.82 295** P **P** **23 31 37.0 +0.9**
baz=29
MNTX Cornudas Mount **60.97 283** P **P** **23 31 37.7 +0.7**
baz=29
MNTX Cornudas Mount **60.97 283** P **P** **23 31 38.4 +1.4**
X16A Lo Mia Camp, P **61.11 290** IAmb IAmb 23 31 40.7
comp=Z,8.7nm,1.2s
121A Cookes Peak, D **61.25 286** P **P** **23 31 40.2 +1.1**
baz=29
833A Chaparral WMA, **61.37 276** P **P** **23 31 41.5 +1.7**
baz=29
MPMC Manual Prospec **62.08 295** P **P** **23 31 46.1 +1.4**
baz=29
PDMCI Parker Dam,Lak **62.30 292** P **P** **23 31 47.8 +1.8**
baz=29
TXAR Lajitas Array **62.31 280** P **P** **23 31 44.8 -1.4**
comp=Z,2.0nm,0.9s,baz=38,slow=6.3,SNR=6.0
TXAR Lajitas Array **62.31 280** P **P** **23 31 44.5 -1.6**

GMRC	**Granite Mounta** baz=29	**62.48**	**293**	P		**P**	**23 31 48.4**	**+1.1**
LRMC	**Laurel Mtn Rad** baz=28	**62.66**	**295**	P		**P**	**23 31 50.0**	**+1.4**
ISA	**Isabella, Lake** baz=28	**62.81**	**296**	P		**P**	**23 31 50.7**	**+1.3**
IRM	**Iron Mountain** baz=29	**62.83**	**293**	P		**P**	**23 31 50.7**	**+1.2**
EDW2	**Edwards Air Fo** baz=28	**63.31**	**295**	P		**P**	**23 31 53.1**	**+0.3**
PKM	**Mcpherson Peak** baz=28	**64.01**	**297**	P		**P**	**23 31 57.9**	**+0.3**
MONP2	**Monument Peak** baz=28	**64.44**	**293**	P		**P**	**23 32 01.5**	**+1.1**
SDV	**Santo Domingo**	**66.85**	**239**	P		**P**	**23 32 14.2**	**-1.9**
HHC	**Hu-ho-hao-te**	**67.49**	**40**	*eP*		**P**	**23 32 20.2**	**+0.4**
HHC	comp=Z,8.0nm,0.8s				pmax	pmax		
HHC	comp=Z,260nm,6.6s				pmax	pmax		
ROSC	**El Rosal**	**71.95**	**241**	LR		LR	00 04 14.3	
	comp=Z,28nm,18.1s,baz=38,slow=36							
KSRS	**Korea Array**	**74.63**	**28**	LR		LR	00 08 22.5	
	comp=Z,24nm,18.8s,baz=165,slow=38							
NJ2	**Nanjing**	**77.72**	**37**	*eP*		**P**	**23 33 20.5**	**-0.1**
NJ2	comp=Z,8.0nm,0.5s				pmax	pmax		
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P		**P**	**23 33 55.0**	**0.0**
	comp=Z,0.5nm,0.3s,baz=319,slow=6.3,SNR=5.6							
CMAR					LR	LR	00 15 28.4	
	comp=Z,16nm,18.1s,baz=265,slow=39							
CMAR	**Chiang Mai Arr**	**84.11**	**59**	*ceP*		**P**	**23 33 57.7**	**+2.8**
CMAR	comp=Z,1.0nm,0.3s				pmax	pmax		
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P		**P**	**23 33 55.3**	**+0.4**
CPUP	**Villa Florida**	**95.86**	**215**	LR		LR	00 12 12.3	
	comp=Z,22nm,18.6s,baz=53,slow=32							
BOSA	**Boshof**	**98.75**	**143**	LR		LR	00 24 50.3	
	comp=Z,34nm,18.1s,baz=3.0,slow=38							

IDC 04 23:24:56.2±3.2, **7°33'N**×**94°18'E**, **h0**km, **mb3.5**/5, **mb1 3.6**/6, **mb1mx3.4**/42, **mbtmp3.5**/6, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.3**/45, **Error ellipse: s-maj=138.8km s-min=22.1km az=60.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**13.37**	**271**	LR	LR	23 32 34.7	
	comp=Z,40nm,20.4s,baz=245,slow=34						
H08S3	**Diego Garcia H**	**26.24**	**236**	T	T	23 57 18.0	
	baz=54,slow=74,SNR=39						
H08S2	**Diego Garcia H**	**26.25**	**236**	T	T	23 57 15.8	
	baz=250,slow=74,SNR=3.6						
H08S1	**Diego Garcia H**	**26.26**	**236**	T	T	23 57 17.0	
MKAR	**Makanchi Array**	**40.63**	**347**	P	P	23 32 37.2	-0.8
	0.6nm,0.6s,baz=164,slow=7.3,SNR=10						
SONM	**Songino Array**	**41.69**	**12**	P	P	23 32 46.6	-0.1
	0.3nm,0.8s,baz=193,slow=5.9,SNR=1.5						
KURBB	**Kurchatov Arra**	**45.08**	**346**	P	P	23 33 13.6	-0.3
	1.3nm,0.5s,baz=170,slow=7.0,SNR=1.2						
ZALV	**Zalesovo Beam**	**47.10**	**352**	P	P	23 33 30.9	+1.1
	0.9nm,0.4s,baz=165,slow=6.0,SNR=2.4						
WRA	**Warramunga Arr**	**47.91**	**125**	P	P	23 33 36.5	-0.2
	0.2nm,0.5s,baz=306,slow=8.5,SNR=8.5						
ASAR	**Alice Springs**	**49.54**	**130**	P	P	23 33 49.1	-0.1
	0.1nm,0.4s,baz=300,slow=7.5,SNR=2.2						

*IDC **04** 23:37:08.1*±*0.9, 9°48'N*×*122°66'E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/37, mbtmp3.9/8, MS2.8/3, Ms1 2.8/3, ms1mx2.6/34, Error ellipse: s-maj=144.0km s-min=17.2km az=68.0*

*MAN **04** 23:37:13.8, 9°44'N×122°43'E, h28km, mb4.9, ML3.8, MS3.8*

*NEIC **04** 23:37:16.9*±*1.0, 9°4'N*±*0°1'×122°6'E*±*0°2', h67km*±*2km, mb4.2/10, Error ellipse: s-maj=23.9km s-min=14.9km az=74.0*

ISC 04 23:37:13.1±1.2, **9°44'N**±0°03'×**122°49'E**±0°04, **h31**km±10km, **n45**, σ1°**88**/57, **mb4.1**/12, **4C-2D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNOP	**Candoni, Negro**	**0.41**	**21**	*eP*	**Pn**	**23 37 23.9**	**+0.9**
CNOP				*eS*	**Sn**	23 37 31.4	+1.9
GUIM	**Jordan**	**1.18**	**5**	*eP*	**Pn**	**23 37 34.4**	**+0.9**
GUIM				*eS*	**Sb**	23 37 50.2	+0.3
TBP	**Tagbilaran**	**1.38**	**80**↓	*eP*	**Pb**	**23 37 40.9**	**+2.6**
TBP				*eS*	**Sb**	**23 37 57.6**	**+2.0**
JAP	**San Jose, Anti**	**1.40**	**338**↓	*eP*	**Pn**	**23 37 37.9**	**+1.4**
LLP	**Lapu-Lapu**	**1.70**	**59**↑	*eP*	**Pb**	**23 37 42.5**	**-1.2**
LLP				*i* S	**Sb**	**23 38 03.6**	**-1.1**
PAGZ	**Pagadian**	**1.81**	**151**	*eP*	**Pb**	**23 37 45.3**	**-0.4**
PAGZ				*eS*	**Sb**	**23 38 10.4**	**+2.3**
CUYO	**Cuyo Island**	**2.01**	**314**	*eP*	**Pn**	**23 37 45.0**	**+0.1**
CUYO				*eS*	**Sn**	**23 38 09.4**	**+0.3**
CGP	**Cagayan de Oro**	**2.39**	**114**↑	*eP*	**Pb**	**23 37 53.5**	**-2.0**
CGP				*eS*	**Sb**	**23 38 22.0**	**-2.6**
MSLP	**Maasin**	**2.44**	**73**	*eP*	**Pb**	**23 37 54.1**	**-2.2**
MSLP				*eS*	**Sn**	**23 38 20.9**	**+1.3**
ZCP	**Zamboanga City**	**2.53**	**189**↑	*iP*	**Pn**	**23 37 53.2**	**+1.2**
ZCP				*i* S	**Sn**	**23 38 21.2**	**-0.6**
OCLP	**Ormoc**	**2.63**	**52**	*eP*	**Pn**	**23 37 55.3**	**+1.8**
OCLP				*eS*	**Sb**	**23 38 27.2**	**-4.3**
OTRP	**Odiongan**	**2.94**	**351**	*eP*	**Pn**	**23 38 00.1**	**+2.4**
OTRP				*eS*	**Sn**	**23 38 35.1**	**+3.1**
BUKP	**Musuan**	**2.98**	**121**	*eP*	**Pb**	**23 38 02.2**	**-3.4**
BUKP				*eS*	**Sb**	**23 38 39.2**	**-2.5**
BUSP	**Coron**	**3.40**	**319**	*eP*	**Pn**	**23 38 04.1**	**+0.1**
BUSP				*eS*	**Sn**	**23 38 44.8**	**+1.5**
ENPP	**El Nido**	**3.48**	**300**	*eP*	**Pn**	**23 38 04.8**	**-0.4**
ENPP				*eS*	**Sn**	**23 38 42.4**	**-3.1**
KCP	**Kidapawan**	**3.53**	**133**↑	*eP*	**Pb**	**23 38 12.2**	**-2.9**
KCP				*i* S	**Sb**	**23 39 00.7**	**+3.1**
DAV	**Davao City (W)**	**3.86**	**127**	LR	LR	23 39 39.6	
	comp=Z,114nm,18.4s,baz=300,slow=40						
MYLDM	**Lahad Datu**	**5.79**	**223**		**Pn**	**23 38 39.9**	**+2.9**
LUWI	**Luwuk**	**10.42**	**178**	Pn	**Pn**	**23 39 45.2**	**+4.7**
SBUM	**Sibu**	**12.35**	**236**	Pn	**Pn**	**23 40 10.4**	**+3.6**
LEM	**Lembang**	**21.93**	**223**	LR	LR	23 50 34.0	
	comp=Z,19nm,18.6s,baz=134,slow=36						
KSRS	**Korea Array**	**28.32**	**9**	LR	LR	23 53 36.7	
	comp=Z,36nm,21.6s,baz=25,slow=35						
WRA	**Warramunga Arr**	**31.45**	**158**	P	**P**	**23 43 30.8**	**-1.2**
	0.2nm,0.5s,baz=332,slow=11,SNR=2.1						
WRA	**Warramunga Arr**	**31.45**	**158**	P	**P**	**23 43 31.6**	**-0.4**
WR0	**Warramunga Arr**	**31.54**	**158**	P	**P**	**23 43 32.9**	**+0.1**
WR0	comp=Z,9.2nm,1.3s				IAmb	IAmb	23 43 51.6	
AS31	**Alice Springs**	**34.75**	**161**	P	**P**	**23 44 00.8**	**+0.1**
ASAR	**Alice Springs**	**34.75**	**161**	P	**P**	**23 44 00.3**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=339,slow=6.9,SNR=11						
ASAR	**Alice Springs**	**34.75**	**161**	P	**P**	**23 44 00.6**	**-0.2**
SONM	**Songino Array**	**40.61**	**343**	P	**P**	**23 44 49.8**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=162,slow=8.9,SNR=6.1						
SONM	**Songino Array**	**40.61**	**343**	P	**P**	**23 44 50.7**	**+0.5**
NWAO	**Narrogin (SRO)**	**42.43**	**187**	P	**P**	**23 45 02.7**	**-2.4**
NWAO	comp=Z,6.4nm,1.1s				IAmb	IAmb	23 45 03.7	
STKA	**Stephens Creek**	**44.97**	**157**	P	**P**	**23 45 25.1**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=330,slow=8.1,SNR=2.0						
STKA	**Stephens Creek**	**44.97**	**157**	P	**P**	**23 45 25.5**	**-0.1**
MK31	**Makanchi Array**	**50.49**	**325**	P	**P**	**23 46 09.1**	**+0.8**
MK31	comp=Z,1.1nm,0.8s				IAmb	IAmb	23 46 09.7	
MKAR	**Makanchi Array**	**50.49**	**325**	P	**P**	**23 46 08.7**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=129,slow=9.2,SNR=10						
MKAR	**Makanchi Array**	**50.49**	**325**	P	**P**	**23 46 08.2**	**-0.1**
ZALV	**Zalesovo Beam**	**53.62**	**333**	P	**P**	**23 46 31.3**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=121,slow=8.5,SNR=6.7						
ZALV	**Zalesovo Beam**	**53.62**	**333**	P	**P**	**23 46 31.1**	**-0.3**
KURK	**Kurchatov**	**54.69**	**327**	P	**P**	**23 46 39.1**	**-0.2**
KK31	**Karatay Array**	**56.21**	**316**	P	**P**	**23 46 51.2**	**+0.8**
KK31	comp=Z,1.8nm,0.8s				IAmb	IAmb	23 46 52.0	
KKAR	**Karatay Array**	**56.21**	**316**	P	**P**	**23 46 51.2**	**+0.8**
NRIK	**Noril'sk**	**63.93**	**347**	P	**P**	**23 47 42.9**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=144,slow=7.8,SNR=5.1						
ABKAR	**Akbulak array**	**65.09**	**320**	P	**P**	**23 47 51.3**	**+0.5**
MENT	**Mentasta**	**83.39**	**27**	P	**P**	**23 49 35.6**	**-1.6**
FINES	**FINESS Array B**	**84.84**	**331**	P	**P**	**23 49 43.9**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=46,slow=8.2,SNR=3.4						

*ATA **04** 23:48:42.2*±*1.5, 40°01'N×39°65'E, h7km*±*27km, ML2.3, MW3.8*

*ISK **04** 23:48:42.4, 40°01'N×39°66'E, h6km, ML2.5/17*

*DDA **04** 23:48:43.1, 39°96'N×39°61'E, h7km*±*1km, ML2.2*

ISC 04 23:48:42.7±1.0, **39°97'N**±0°02×**39°66'E**±0°02, **h9**km±9km, **n33**, σ1°**15**/49, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUZM	**Uzumlu**	**0.26**	**174**	*eP*	**Pg**	**23 48 48.8**	**+0.8**
EUZM				*eS*	**Sb**	**23 48 53.3**	**-1.0**
EUZM				IAML		23 48 53.6	
	comp=Z,144nm,0.4s						
KELT	**Kelkit**	**0.36**	**300**	*eP*	**Pg**	**23 48 50.1**	**+0.2**
KELT				*eS*	**Sg**	**23 48 54.9**	**+0.2**
KELT				IAML		23 48 55.2	
	comp=Z,292nm,0.2s						
KELT	**Kelkit**	**0.36**	**300**	*i* P	**Pg**	**23 48 50.0**	**0.0**
KELT				IAML		23 48 55.0	
	comp=E,481nm,0.2s						
KELT				*i* S	**Sg**	**23 48 55.1**	**+0.5**
ERZN	**Erzincan**	**0.38**	**173**	PG	**Pg**	**23 48 51.1**	**+0.8**
ERZN				SG	**Sb**	**23 48 57.6**	**-0.3**
GUMT	**Gumushane**	**0.51**	**344**	PG	**Pg**	**23 48 52.5**	**-0.2**
GUMT				SG	**Sg**	**23 48 59.2**	**-0.2**
BAYB	**BAYBURT**	**0.54**	**57**	*eP*	**Pg**	**23 48 53.0**	**-0.2**
BAYB				*eS*	**Sg**	**23 49 00.6**	**+0.1**
BAYB				IAML		23 49 03.9	
	comp=Z,94nm,1.1s						
BAYB	**BAYBURT**	**0.54**	**57**	*i* P	**Pg**	**23 48 53.1**	**-0.2**
BAYB				*i* S	**Sg**	**23 49 00.7**	**+0.2**
BAYT	**Aydıntepe-Bayb**	**0.56**	**41**	PG	**Pg**	**23 48 53.6**	**-0.1**
BAYT				SG	**Sg**	**23 49 00.9**	**-0.2**
KOPT	**Kop Dagi**	**0.65**	**85**	*i* P	**Pb**	**23 48 56.1**	**-0.2**
KOPT				*i* S	**Sb**	**23 49 06.5**	**+0.9**
KOPT				IAML		23 49 09.0	
	comp=N,96nm,0.6s						
KOPT				IAML		23 49 10.0	
	comp=E,76nm,1.1s						
TNCL	**Tunceli-Merkez**	**0.86**	**186**	*eP*	**Pg**	**23 48 59.7**	**+0.5**
TNCL				*eS*	**Sn**	**23 49 13.8**	**0.0**
TNCL				IAML		23 49 15.2	
	comp=Z,27nm,0.3s						
TNCL	**Tunceli-Merkez**	**0.86**	**186**	*i* P	**Pg**	**23 48 59.7**	**+0.5**
YEDI	**Yedisu-Bingol**	**0.86**	**128**	PG	**Pb**	**23 48 59.7**	**-0.3**
REFA	**Refahiye_ERZN**	**0.90**	**231**	*eP*	**Pg**	**23 48 56.5**	**-3.5**
REFA				*eS*	**Sg**	**23 49 06.1**	**-5.5**
REFA				IAML		23 49 08.6	
	comp=Z,29nm,0.6s						
MACK	**Trabzon**	**0.98**	**5**	*i* P	**Pb**	**23 49 01.9**	**0.0**
ILIC	**ilic-Erzincan**	**0.99**	**239**	PG	**Pg**	**23 49 02.0**	**+0.3**
KTUT	**Trabzon**	**1.02**	**5**	PG	**Pg**	**23 49 01.9**	**-0.5**
KRIK	**Erzurum-spir**	**1.04**	**69**	*eP*	**Pn**	**23 49 03.2**	**-0.5**
KRIK				*eS*	**Sn**	**23 49 17.6**	**-0.9**
KRIK	**Erzurum-spir**	**1.04**	**69**	*i* P	**Pb**	**23 49 02.9**	**-0.2**
KRIK				*i* S	**Sn**	**23 49 18.6**	**+0.1**
PTK	**Pertek**	**1.09**	**191**	PN	**Pb**	**23 49 04.4**	**+0.5**
KEMA	**Kemaliye**	**1.14**	**233**	*eP*	**Pg**	**23 49 04.5**	**-0.1**
KEMA				*eS*	**Sb**	**23 49 20.9**	**+1.2**
KEMA				IAML		23 49 27.1	
	comp=Z,4.9nm,0.5s						
KEMA	**Kemaliye**	**1.14**	**233**	*i* P	**Pg**	**23 49 04.3**	**-0.3**
SUSE	**Susehri**	**1.14**	**283**	*i* P	**Pg**	**23 49 04.2**	**-0.5**
SUSE				*i* S	**Sg**	**23 49 19.4**	**-0.1**
SUSE				IAML		23 49 20.0	
	comp=N,86nm,0.3s						
SUSE				IAML		23 49 21.0	
	comp=E,84nm,0.4s						
ESPY	**Espiye-Giresun**	**1.19**	**323**	PN	**Pb**	**23 49 04.6**	**-0.8**
BNGB	**Bingl**	**1.25**	**141**	PN	**Pg**	**23 49 07.6**	**+0.8**
ARPR	**Arapgir-MALATY**	**1.35**	**230**	PN	**Pn**	**23 49 08.4**	**+0.5**
CHOM	**Cayeli-Rize**	**1.41**	**36**	PN	**Pn**	**23 49 08.7**	**+0.1**
CUZAR	**Zara_SIVAS**	**1.46**	**267**	*iP*	**Pb**	**23 49 10.9**	**+0.8**
CUZAR				*i* S	**Sg**	**23 49 30.2**	**+0.7**
CUZAR				IAML		23 49 37.0	
	comp=E,44nm,0.4s						
CUZAR				IAML		23 49 37.0	
	comp=N,26nm,0.3s						
VRTB	**Varto-Mus**	**1.60**	**120**	PN	**Pb**	**23 49 12.1**	**-0.5**
KOPR	**Koprukoy-ERZUR**	**1.69**	**88**	PN	**Pb**	**23 49 13.4**	**-0.6**
RSDY	**Resadiye-TOKAT**	**1.84**	**284**	PN	**Pn**	**23 49 16.0**	**+1.5**
MALT	**Malatya**	**1.91**	**211**	PN	**Pb**	**23 49 18.1**	**+0.3**
SVSK	**Karacayir**	**2.05**	**269**	PN	**Pn**	**23 49 18.4**	**+1.1**
DARE	**Darende-Malaty**	**2.19**	**231**	PN	**Pn**	**23 49 20.5**	**+1.1**

*ATH **04** 23:51:03.6, 40°79'N×19°72'E, h12km*±*5km, ML2.2/2, Error ellipse: s-maj=5.5km s-min=0.9km az=63.0*

*TIR **04** 23:51:03.8, 40°70'N×19°76'E, h2km*±*1km, Md2.8, Ml2.8*

ISC 04 23:51:04.1±1.0, **40°74'N**±0°02×**19°67'E**±0°03, **h14**km±8km, **n18**, σ1°**45**/29, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.30**	**206**	P	**Pg**	**23 51 09.9**	**-0.4**
	baz=222						
VLO				S	**Sg**	**23 51 15.5**	**+1.0**
	baz=222						
VLO				AMP			
	comp=E,11nm,0.2s,baz=222						
TIR	**Tirane**	**0.62**	**14**	P	**Pg**	**23 51 14.4**	**-1.9**
TIR				S	**Sg**	**23 51 22.8**	**-1.8**
TIR				AML	AML	23 51 46.2	
	comp=E,340μm,0.7s						
TIR				AML	AML	23 51 50.9	
	comp=N,488μm,0.6s						
LSK	**Leskovik**	**0.92**	**129**	P	**Pg**	**23 51 20.7**	**-1.3**
	baz=130						
LSK				S	**Sb**	**23 51 33.6**	**-0.5**
	baz=130						
KEK	**Kerkira**	**1.03**	**174**	P	**Pb**	**23 51 23.8**	**+0.1**
KEK				S	**Sn**	**23 51 39.7**	**+1.3**
PHP	**Peshkopia**	**1.11**	**31**	P	**Pn**	**23 51 26.1**	**+0.7**
	baz=27						
PHP				S	**Sn**	**23 51 42.6**	**+2.1**
	baz=27						
PHP				AMP			
	comp=N,0.4nm,0.9s,baz=27						
PENT	**Pentalofos**	**1.25**	**115**	P	**Pn**	**23 51 27.0**	**-0.3**
FNA	**Florina**	**1.30**	**88**	P	**Pn**	**23 51 27.4**	**-0.5**
FNA				S	**Sg**	**23 51 44.8**	**-1.2**
FNA				AML	AML	23 51 55.7	
	comp=E,226μm,0.5s						
FNA				AML	AML	23 51 56.9	
	comp=N,254μm,0.4s						
IGT	**Igoumenitsa**	**1.31**	**157**	P	**Pn**	**23 51 28.5**	**+0.4**
IGT				S	**Sg**	**23 51 47.5**	**+1.1**
IGT	**Igoumenitsa**	**1.31**	**157**	P	**Pb**	**23 51 28.7**	**+0.2**
	baz=159						
IGT				S	**Sg**	**23 51 47.3**	**+1.0**
	baz=159						
PUK	**Puka**	**1.31**	**7**	P	**Pg**	**23 51 30.8**	**+1.4**
	baz=4.0						
PUK				S	**Sg**	**23 51 51.0**	**+4.5**
	baz=4.0						
KZN	**Kozani**	**1.66**	**104**	P	**Pb**	**23 51 34.4**	**-0.2**
NOCI	**Noci**	**1.98**	**272**	P	**Pb**	**23 51 40.0**	**+0.1**
STIP	**Stip**	**2.12**	**63**	*i* Pn	**Pg**	**23 51 45.0**	**+0.2**
LSTV	**Lastovo**	**2.90**	**315**	Sn	**Sn**	**23 52 23.9**	**-0.7**
MAKA	**Makarska**	**3.22**	**323**	Sn	**Sn**	**23 52 31.4**	**-1.1**
RICI	**Ricice**	**3.34**	**326**	*ePn*	**Pn**	**23 51 55.6**	**-0.3**
RICI				Sn	**Sn**	**23 52 32.9**	**-2.5**
KIJV	**Kijevo**	**4.06**	**325**	*ePn*	**Pn**	**23 52 05.1**	**-0.8**
KIJV				Sn	**Sn**	**23 52 53.0**	**-0.2**
MORI	**Morici**	**4.29**	**318**	Sn	**Sn**	**23 52 59.3**	**+0.5**

*NEIC **05** 00:00:28.7*±*1.2, 20°8S*±*0°2×178°2W*±*0°1, h584km*±*11km, mb4.5/17, Error ellipse: s-maj=25.6km s-min=14.9km az=161.0*

*IDC **05** 00:00:30.8*±*2.9, 20°90S×178°18W, h612km*±*36km, mb3.1/5, mb1 3.4/7, mb1mx3.1/27, mbtmp4.2/7, Error ellipse: s-maj=40.6km s-min=18.3km az=158.0*

ISC 05 00:00:29.5±0.7, **20°8S**±0°1×**178°1W**±0°1, **h600**km, **n36**, σ0°**83**/38, **mb4.2**/11, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.72**	**310**	P	**P**	**00 01 57.6**	**-2.8**
DZM	**Mont Dzumac**	**14.41**	**262**	P	**P**	**00 03 33.4**	**+1.0**
	0.6nm,0.3s,baz=92,slow=18,SNR=2.3						
URZ	**Urewera**	**17.88**	**192**	P	**P**	**00 04 03.0**	**-0.8**
	1.5nm,0.3s,baz=290,slow=2.8,SNR=5.9						
URZ	**Urewera**	**17.88**	**192**	P	**P**	**00 04 03.5**	**-0.3**
URZ				IAmb	IAmb	00 04 18.7	
	comp=Z,8.1nm,0.8s						
BKZ	**Black Stump Fm**	**18.88**	**193**	P	**P**	**00 04 12.1**	**-0.9**
BKZ				IAmb	IAmb	00 04 19.2	
	comp=Z,18nm,1.5s						
CTAO	**Charters Tower**	**33.33**	**265**	P	**P**	**00 06 19.8**	**+0.1**
CTAO				IAmb	IAmb	00 06 20.9	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**37.55**	**244**	P	**P**	**00 06 54.7**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=77,slow=14,SNR=2.0						
STKA	**Stephens Creek**	**37.55**	**244**	P	**P**	**00 06 55.4**	**+1.2**
TAOE	**Nuku Hiva Isla**	**38.49**	**78**	P	**P**	**00 07 00.5**	**-1.7**
BBOO	**Buckleboo**	**42.30**	**244**	P	**P**	**00 07 32.2**	**0.0**
BBOO				IAmb	IAmb	00 07 32.9	
	comp=Z,6.9nm,0.8s						
WR0	**Warramunga Arr**	**44.24**	**262**	P	**P**	**00 07 46.8**	**-0.6**
AS31	**Alice Springs**	**44.33**	**257**	P	**P**	**00 07 48.3**	**+0.4**
ASAR	**Alice Springs**	**44.33**	**257**	P	**P**	**00 07 48.1**	**+0.2**
	comp=Z,4.3nm,0.6s,baz=96,slow=7.7,SNR=82						
ASAR				PcP	**PcP**	**00 09 19.4**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=101,slow=3.6,SNR=4.2						
ASAR				S	**S**	**00 13 39.0**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=93,slow=16,SNR=5.4						
ASAR	**Alice Springs**	**44.33**	**257**	P	**P**	**00 07 47.9**	**-0.1**
WB0	**Warramunga Arr**	**44.41**	**263**	P	**P**	**00 07 48.4**	**-0.3**
WB0				IAmb	IAmb	00 07 48.8	
	comp=Z,7.1nm,0.4s						
WB2	**Warramunga Arr**	**44.42**	**262**	P	**P**	**00 07 48.0**	**-0.7**
WRA	**Warramunga Arr**	**44.43**	**262**	P	**P**	**00 07 48.4**	**-0.4**
	comp=Z,2.0nm,0.3s,baz=97,slow=7.5,SNR=146						
WRA				PcP	**PcP**	**00 09 19.4**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=90,slow=3.2,SNR=1.6						
WRA	**Warramunga Arr**	**44.43**	**262**	P	**P**	**00 07 48.6**	**-0.2**
NPH	**North Pit**	**45.80**	**31**	P	**P**	**00 08 00.1**	**+0.9**
NPH				IAmb	IAmb	00 08 09.0	
	comp=Z,35nm,1.0s						
OBL	**Observatory Le**	**45.80**	**31**	P	**P**	**00 07 59.9**	**+0.7**
BYL	**Byron's Ledge**	**45.81**	**31**		**P**	**00 08 00.1**	**+0.8**
UWB	**Uwekahuna B**	**45.81**	**31**	P	**P**	**00 07 59.9**	**+0.5**
MTN	**Manton Dam**	**49.04**	**271**	P	**P**	**00 08 23.2**	**-0.2**
MTN				IAmb	IAmb	00 08 35.0	
	comp=Z,23nm,1.2s						
FORT	**Forrest**	**49.06**	**247**	P	**P**	**00 08 23.5**	**+0.2**
FORT				IAmb	IAmb	00 08 27.7	
	comp=Z,11nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.86**	**263**	P	**P**	**00 08 51.3**	**+0.3**
ILAR	**Eielson Array**	**88.63**	**13**	P	**P**	**00 12 19.4**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=218,slow=5.0,SNR=4.3						
ILAR	**Eielson Array**	**88.63**	**13**	P	**P**	**00 12 19.6**	**+0.4**
PDAR	**Pinedale Array**	**89.26**	**43**	P	**P**	**00 12 24.4**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=195,slow=4.6,SNR=3.9						
PDAR	**Pinedale Array**	**89.26**	**43**	P	**P**	**00 12 24.2**	**+1.2**
ARCES	**ARCESS Array B**	**129.19**	**350**	PKP	**PKiKP**	**00 18 30.3**	**-0.2**
	comp=Z,5.4nm,1.1s,baz=94,slow=1.3,SNR=3.9						
AKASG	**Malin Array Be**	**143.21**	**331**	PKP	PKPab	00 18 54.4	+0.1
	comp=Z,1.1nm,0.4s,baz=42,slow=4.0,SNR=7.3						
BRTR	**Keskin Array B**	**146.94**	**312**	PKPbc	**PKPbc**	**00 19 05.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=64,slow=3.4,SNR=2.9						
BRTR	**Keskin Array B**	**146.94**	**312**		**PKPbc**	**00 19 06.9**	**+0.8**
CLL	**Collm**	**148.32**	**347**	*e*PKPbc	**PKiKP**	**00 19 10.0**	**-0.1**
GERES	**GERESS Array B**	**150.45**	**344**	PKPbc	**PKPbc**	**00 19 14.0**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=56,slow=2.5,SNR=1.9						
GERES	**GERESS Array B**	**150.45**	**344**		**PKPbc**	**00 19 14.3**	**0.0**

*DNK **05** 00:01:18.7*±*2.6, 51°15N×15°34E, h36km*±*113km, ML1.9*

*IPEC **05** 00:01:19.4*±*0.2, 51°51N×16°29E, h0km, ML2.0/3, Error ellipse: s-maj=1.5km s-min=0.8km az=35.0*

*VIE **05** 00:01:19.5*±*0.8, 51°46N×16°31E, h0km, mb2.0/2, ml2.6/4, Error ellipse: s-maj=8.3km s-min=5.4km az=83.0 64 km NW of Wroclaw Suspected Mining induced.*

*PRU **05** 00:01:21.8*±*0.0, 51°42N×16°09E, h0km*

ISC 05 00:01:18.9±1.0, **51°54N**±0°04×**16°19E**±0°03, **h0**km, **n26**, σ0°**83**/54, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**175**	*ePg*	**Pg**	**00 01 32.3**	**-0.1**
KSP				*eSg*	**Sg**	**00 01 40.1**	**-1.3**
CHVC	**Chvalec**	**0.96**	**185**	*ePG*	**Pg**	**00 01 37.3**	**0.0**
CHVC				*eSG*	**Sg**	**00 01 49.2**	**-0.4**
	comp=Z,24nm,0.5s						
OSTC	**Ostas**	**0.99**	**179**	*ePG*	**Pg**	**00 01 37.8**	**0.0**
OSTC				*eSG*	**

GVZ	**Greta Valley S**	**0.10 259**	P	Pg	00 02 22.4	+0.7
AMCZ	**Amberley**	**0.44 239**	P	Pn	00 02 29.3	-0.3
KHZ	**Kahutara**	**0.60 28**	P	Pb	00 02 30.5	+0.4
LTZ	**Lake Taylor**	**0.68 284**	P	Pn	00 02 32.8	-0.2
OKCZ	**Okains Bay**	**0.78 186**	P	Pn	00 02 34.3	-0.1
MQZ	**McQueen's Vall**	**0.84 206**	P	Pg	00 02 34.7	+0.1
OXZ	**Oxford**	**0.91 245**	P	Pn	00 02 36.1	0.0
THZ	**Tophouse**	**1.20 351**	P	Pb	00 02 40.8	+0.4
BSWZ	**Blackbirch Sta**	**1.34 23**	P	Pg	00 02 46.6	+2.5
ARCZ	**Arundel**	**1.76 235**	P	Pn	00 02 48.2	+0.4
TMWZ	**Te Maipa**	**2.74 49**	P	Pn	00 03 01.2	-0.2
ODZ	**Otahua Downs**	**2.77 220**	P	Pn	00 03 02.0	+0.3

NEIC ***05*** *00:45:23.3±1.4, 19°.28N±0°.08×64°.19W±0°.09, h36km±55km, Error ellipse: s-maj=13.9km s-min=9.9km az=52.0*
RSPR ***05*** *00:45:24.9, 19°.24N×64°.21W, h27km±15km, MD3.4/9*

ISC 05 00:45:20.4±2.6, 19°.30N±0°.08×64°.22W±0°.03, h14km±15km, n46, σ1§50/62, 7C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.96**	**203**	*e*P	**Pb**	**00 45 39.5**	**+0.7**
TBVI	**Tortola**	**0.96**	**203**	*e*S	**Sb**	**00 45 51.0**	**-0.3**
TBVI	**Tortola**	**0.96**	**203**		**Pb**	**00 45 39.5**	**+0.7**
TBVI					**Sb**	**00 45 51.0**	**-0.3**
CUPR	**Culebra, Puert**	**1.41**	**226**	*e*P	**Pn**	**00 45 46.2**	**+0.5**
CUPR	**Culebra, Puert**	**1.41**	**226**	*e*S	**Sn**	**00 46 02.6**	**-1.4**
CUPR	**Culebra, Puert**	**1.41**	**226**	Pn	**Pn**	**00 45 46.5**	**+0.9**
CUPR					**Sn**	**00 46 03.2**	**-0.9**
CDVI	**St. Croix**	**1.62**	**199**	*e*P	**Pn**	**00 45 49.2**	**+0.6**
CDVI	**St. Croix**	**1.62**	**199**	*e*S	**Sn**	**00 46 08.0**	**-1.4**
CDVI	**St. Croix**	**1.62**	**199**	*e*P	**Pb**	**00 45 50.4**	**+0.2**
CDVI				*e*S	**Sg**	**00 46 12.7**	**-0.1**
CDVI	**St. Croix**	**1.62**	**199**	Pn	**Pb**	**00 45 50.5**	**+0.2**
CDVI					**Sn**	**00 46 09.8**	**+0.5**
MTP	**Monte Pirata**	**1.74**	**227**	*e*P	**Pn**	**00 45 51.0**	**+0.7**
MTP	**Monte Pirata**	**1.74**	**227**	*e*S	**Sn**	**00 46 11.5**	**-0.7**
MTP	**Monte Pirata**	**1.74**	**227**	Pn	**Pn**	**00 45 50.9**	**+0.7**
MTP					**Pb**	**00 45 51.2**	**-0.9**
MTP				Sn	**Sn**	**00 46 12.8**	**+0.6**
CBYP	**Canovanas**	**1.86**	**237**	Pn	**Pn**	**00 45 52.6**	**+0.6**
CBYP					**Pb**	**00 45 52.8**	**-1.4**
HUMP	**Col San Antoni**	**1.93**	**234**	*e*P	**Pn**	**00 45 53.5**	**+0.7**
HUMP	**Col San Antoni**	**1.93**	**234**	*e*S	**Sn**	**00 46 16.1**	**-0.8**
HUMP	**Col San Antoni**	**1.93**	**234**	Pn	**Pn**	**00 45 53.8**	**+0.9**
HUMP				Sn	**Sn**	**00 46 16.7**	**-0.2**
GCPR	**Guaynabo City**	**2.02**	**241**	Pn	**Pn**	**00 45 54.4**	**+0.2**
PDPR	**Patillas Dam,**	**2.13**	**234**	*e*P	**Pn**	**00 45 56.7**	**+1.1**
PDPR	**Patillas Dam,**	**2.13**	**234**	*e*S	**Sn**	**00 46 21.6**	**-0.3**
PDPR	**Patillas Dam,**	**2.13**	**234**	Pn	**Pn**	**00 45 56.5**	**+0.8**
PDPR				Sn	**Sn**	**00 46 22.3**	**+0.4**
SJG	**San Juan**	**2.18**	**238**	Pn	**Pn**	**00 45 57.0**	**+0.7**
IGPR	**InterUniversit**	**2.23**	**234**	*e*P	**Pn**	**00 45 58.3**	**+1.4**
IGPR	**InterUniversit**	**2.23**	**234**	*e*S	**Sn**	**00 46 23.9**	**-0.4**
IGPR	**InterUniversit**	**2.23**	**234**	Pn	**Pn**	**00 45 58.5**	**+1.6**
EMPR	**Esperanza - Ma**	**2.34**	**250**	Pn	**Pn**	**00 46 00.6**	**+2.1**
SKI	**Saint Kitts**	**2.41**	**144**	*e*P	**Pb**	**00 46 05.3**	**+1.8**
AOPR	**Arecibo Observ**	**2.58**	**249**	*e*P	**Pn**	**00 46 02.9**	**+1.0**
AOPR	**Arecibo Observ**	**2.58**	**249**	*e*S	**Sn**	**00 46 32.7**	**-0.4**
AOPR	**Arecibo Observ**	**2.58**	**249**	*e*P	**Pn**	**00 46 03.2**	**+1.3**
AOPR				*e*S	**Sb**	**00 46 37.3**	**-0.9**
AOPR	**Arecibo Observ**	**2.58**	**249**	Pn	**Pn**	**00 46 02.4**	**+0.5**
AOPR				Sn	**Sn**	**00 46 33.9**	**+0.9**
OBIP	**Obispado Ponce**	**2.59**	**242**	Pn	**Pn**	**00 46 02.8**	**+1.0**
ICMP	**Isla Caja de M**	**2.60**	**238**	Pn	**Pn**	**00 46 03.4**	**+1.3**
MPR	**Mayaguez**	**2.97**	**249**	Pn	**Pn**	**00 46 09.4**	**+2.3**
MLPR	**Magueyes Islan**	**2.99**	**244**	*e*P	**Pn**	**00 46 08.9**	**+1.5**
MLPR				*e*S	**Sn**	**00 46 43.1**	**0.0**
MLPR	**Magueyes Islan**	**2.99**	**244**	Pn	**Pn**	**00 46 08.1**	**+0.6**
BPA	**Boggy Peak**	**3.17**	**135**	*e*P	**Pn**	**00 46 11.7**	**+1.8**
BPA				*e*S	**Sn**	**00 46 46.2**	**-1.4**
MLYT	**Lee's Yard**	**3.21**	**143**	*e*P	**Pb**	**00 46 16.3**	**-0.9**
MLYT				*e*S	**Sn**	**00 46 53.1**	**+4.6**
ANBD	**Bethesda, Anti**	**3.23**	**133**	*e*P	**Pn**	**00 46 12.4**	**+1.6**
ANBD				*e*S	**Sn**	**00 46 49.4**	**+0.3**
ABD	**La Joyeuse, An**	**3.83**	**137**	*e*P	Pn	00 46 24.1	+5.2
ABD				*e*S	**Sn**	**00 47 00.6**	**-3.1**
CBE	**Ff, Capester**	**4.06**	**142**	*e*P	**Pn**	**00 46 26.4**	**+4.2**
CBE	**Ff, Capester**	**4.06**	**142**	*e*S	**Sb**	**00 47 17.4**	**-3.4**
MAGL	**Barre de l'Ile**	**4.35**	**140**	*e*P	**Pb**	**00 47 34.7**	**-2.0**
MAGL				*e*S	**Sn**	**00 47 16.3**	**-0.4**
DSLB	**Salisbury**	**4.68**	**145**	*e*P	**Pn**	**00 46 33.5**	**+2.8**
DR12	**Loma Pena Alta**	**4.91**	**265**	Pn	**Pn**	**00 46 34.6**	**+0.7**
SDDR	**Presa de Saban**	**6.69**	**268**	Pn	**Pn**	**00 47 00.3**	**+1.9**

NEIC ***05*** *01:01:24.4±2.6, 5°.08S±0°.06×129°.9E±0°.1, h185km±11km, mb4.3/8, Error ellipse: s-maj=18.9km s-min=7.8km az=107.0*
DJA ***05*** *01:01:25.1±0.4, 5°S±4'×13°0E±°, h183km±6km, M4.1/7, mb3.9/3, MLv4.2/7*
IDC ***05*** *01:01:25.1±1.7, 5°.00S×129°.91E, h193km±23km, mb3.2/2, mb1 3.8/7, mb1mx3.4/30, mbtmp4.3/7, MS3.4/1, Ms1 3.4/1, ms1mx2.3/17, Error ellipse: s-maj=28.8km s-min=17.1km az=87.0*

ISC 05 01:01:24.9±0.6, 5°.07S±0°.06×129°.98E±0°.07, h200km, n30, σ1§86/36, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**0.55**	**352**	P	**Pn**	**01 01 52.1**	**-0.1**
BNDI				S	**Sn**	**01 02 10.9**	**-2.6**
FAKI	**Fak Fak**	**3.11**	**47**	P	**Pn**	**01 02 16.5**	**+0.6**
FAKI				S	**Sn**	**01 02 55.6**	**-0.2**
FAKI	**Fak Fak**	**3.11**	**47**		**Pn**	**01 02 16.6**	**+0.6**
FAKI				Sn	**Sn**	**01 02 54.8**	**-1.0**
NLAI	**Namlea**	**3.40**	**302**	P	**Pn**	**01 02 19.4**	**+0.1**
NLAI				S	**Sn**	**01 02 59.4**	**-2.6**
SIJI	**Sorong**	**4.37**	**17**	P	**Pn**	**01 02 30.8**	**-0.5**
	20nm,0.3s,baz=53,slow=7.3,SNR=122						
SIJI				S	**Sn**	**01 03 18.6**	**-5.0**
	22nm,0.3s,baz=101,slow=22,SNR=26						
SANI	**Sanana**	**4.99**	**307**	P	**Pn**	**01 02 36.4**	**-2.8**
SOEI	**Soe**	**7.33**	**230**	Pn	**Pn**	**01 03 10.1**	**+0.5**
MTN	**Manton Dam**	**7.81**	**172**	Pn	**Pn**	**01 03 15.4**	**-0.3**
BATI	**Baumata**	**8.08**	**230**	P	**Pn**	**01 03 18.9**	**-0.3**
	6.8nm,0.3s,baz=197,slow=1.3,SNR=7.0						
BATI	**Baumata**	**8.08**	**230**	P	**Pn**	**01 03 19.9**	**+0.7**
EDFI	**Ende, Flores**	**9.01**	**246**	P	**Pn**	**01 03 34.2**	**+2.8**
KNRA	**Kununurra**	**10.61**	**186**	Pn	**Pn**	**01 03 51.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**13.62**	**198**	P	**P**	**01 04 31.9**	**-0.7**
	0.3nm,0.3s,baz=8.1,slow=12,SNR=14						
FITZ				S	S	01 06 51.2	-11
	0.1nm,0.3s,baz=284,slow=4.1,SNR=3.0						
FITZ	**Fitzroy Crossi**	**13.62**	**198**	Pn	**Pn**	**01 04 30.2**	**-0.1**
WB0	**Warramunga Arr**	**15.23**	**164**	P	**P**	**01 04 49.9**	**-0.5**
WB0				IAmb	IAmb	01 04 54.0	
	comp=Z,6.8nm,0.8s						
WRA	**Warramunga Arr**	**15.38**	**164**	P	**P**	**01 04 52.2**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=346,slow=13,SNR=36						
WRA				S	**S**	**01 07 36.4**	**-6.3**
	comp=Z,0.9nm,0.3s,baz=336,slow=23,SNR=9.8						
WRA	**Warramunga Arr**	**15.38**	**164**	P	**Pn**	**01 04 50.9**	**-0.9**
WB2	**Warramunga Arr**	**15.38**	**164**	P	**P**	**01 04 52.5**	**+0.4**
WB2				IAmb	IAmb	01 04 55.9	
	comp=Z,5.0nm,0.8s						
WR0	**Warramunga Arr**	**15.45**	**164**	P	**P**	**01 04 52.6**	**-0.2**
AS31	**Alice Springs**	**18.87**	**169**	P	**Pn**	**01 05 33.1**	**-0.1**
AS31				IAmb	IAmb	01 05 37.0	
	comp=Z,6.0nm,0.5s						
ASAR	**Alice Springs**	**18.87**	**169**	P	**Pn**	**01 05 32.7**	**-0.5**
	comp=Z,1.5nm,0.3s,baz=350,slow=11,SNR=108						
ASAR				S	**S**	**01 08 52.9**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=349,slow=20,SNR=9.1						
ASAR	**Alice Springs**	**18.87**	**169**	P	**Pn**	**01 05 33.0**	**-0.3**
PSA00	**Pilbara Seismi**	**19.12**	**210**	P	**P**	**01 05 32.7**	**-0.2**
PSA00				IAmb	IAmb	01 05 41.3	
	comp=Z,25nm,1.4s						
TGY	**Tagaytay City**	**21.06**	**335**	LR	LR	01 15 35.3	
	comp=Z,96nm,19.0s,baz=94,slow=41						
CTA	**Charters Tower**	**21.76**	**135**	P	**P**	**01 06 02.0**	**+1.1**
	comp=Z,3.8nm,0.7s,baz=304,slow=11,SNR=1.8						
BBOO	**Buckleboo**	**28.18**	**169**	P	**P**	**01 07 00.8**	**+2.0**
BBOO				IAmb	IAmb	01 07 03.5	
	comp=Z,19nm,1.5s						
JCJ	**Chichijima**	**34.09**	**20**	P	**P**	**01 07 52.2**	**+1.6**
MKAR	**Makanchi Array**	**66.62**	**326**	P	**P**	**01 11 54.1**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=118,slow=6.7,SNR=4.3						
MKAR	**Makanchi Array**	**66.62**	**326**	P	**P**	**01 11 54.3**	**+0.5**
ABKAR	**Akbulak array**	**81.00**	**321**	P	**P**	**01 13 19.3**	**+2.0**

BGR ***05*** *01:12:34.3±0.5, 53°.39N×6°.45E, h5km, ML2.9/11, Error ellipse: s-maj=8.9km s-min=4.4km az=108.0*
BGR Felt III EMS.
BGS ***05*** *01:12:34.0±0.7, 53°.38N×6°.67E, h4km, ML3.0, ML3.0*
LDG ***05*** *01:12:34.6±0.1, 53°.37N×6°.61E, h3km, Ml3.0/33, Error ellipse: s-maj=2.1km s-min=1.4km az=152.0*
DNK ***05*** *01:12:35.4±2.1, 53°.50N×6°.91E, h0km±64km, ML2.2*
UPP ***05*** *01:12:36.9±2.8, 53°.52N×7°.01E, h0km, ML2.1, Suspected explosion*
NAO ***05*** *01:12:40.6±5.6, 53°.92N×6°.22E, h8km±28km, ML1.7*

ISC 05 01:12:29.9±0.7, 53°.37N±0°.03×6°.57E±0°.03, h0km, n107, σ2§74/168, The Netherlands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HLG	**Helgoland**	**1.13**	**43**	*e*Pg	**Pn**	**01 12 56.3**	**+3.3**
HLG				*e*Sg	**Sn**	**01 13 11.6**	**+2.5**
IBBN	**Ibbenburen**	**1.29**	**145**	*e*Pg	**Pn**	**01 12 58.9**	**+3.8**
IBBN				*e*Sg	**Sn**	**01 13 16.0**	**+3.1**
WTSB	**Winterswijk**	**1.41**	**174**	*e*Sg	**Sn**	**01 13 19.0**	**+3.0**
BSEG	**Bad Segeberg**	**2.30**	**74**	*e*Pn	**Pn**	**01 13 11.6**	**+2.6**
NRDL	**Niedersach Rie**	**2.32**	**111**	*e*Pn	**Pb**	**01 13 12.8**	**+0.4**
HGN	**Heimansgroeve**	**2.64**	**189**	*e*Pn	**Pn**	**01 13 16.6**	**+3.0**
CLZ	**Clausthal**	**2.78**	**122**	*e*Pn	**Pn**	**01 13 18.5**	**+2.8**
MEM	**Membach**	**2.79**	**187**	*e*Pn	**Pn**	**01 13 19.0**	**+3.3**
AHRW	**Bad Neuenahr-A**	**2.85**	**173**	*e*Pn	**Pb**	**01 13 21.3**	**-0.3**
TNS	**Taunus Mts**	**3.36**	**159**	*e*Pn	**Pn**	**01 13 27.3**	**+3.6**
MUD	**Monsted U'grnd**	**3.44**	**25**	*e*P	**Pn**	**01 13 28.8**	**+4.2**
MUD	**Monsted U'grnd**	**3.44**	**25**	*i*P	**Pn**	**01 13 28.8**	**+4.2**
MUD	**Monsted U'grnd**	**3.44**	**25**	*e*P	**Pn**	**01 13 28.8**	**+4.2**
GIVF	**Givet**	**3.45**	**199**	*e*Pn	**Pn**	**01 13 27.9**	**+3.1**
GIVF	**Givet**	**3.45**	**199**	*e*Pg	**Pg**	**01 13 38.5**	**+2.6**
GIVF				*e*Sn	**Sn**	**01 14 06.4**	**+0.1**
	5.7nm,0.2s						
GIVF				*e*Sg	**Sg**	**01 14 23.6**	**+3.1**
	13nm,0.3s						
BAIF	**Baives**	**3.62**	**205**	*e*Pn	**Pn**	**01 13 30.1**	**+2.9**
BAIF	**Baives**	**3.62**	**205**	*e*Pg	**Pg**	**01 13 41.7**	**+2.4**
BAIF				*e*Sn	**Sn**	**01 14 10.5**	**-0.1**
	3.3nm,0.2s						
BAIF				*e*Sg	**Sg**	**01 14 28.9**	**+2.7**
	5.3nm,0.2s						
CLL	**Collm**	**4.46**	**115**	*e*Pg	Pg	01 14 05.0	+10
CLL				*e*Sn	**Sn**	**01 14 29.0**	**-2.1**
CLL				*e*Sg	**Sg**	**01 14 58.0**	**+5.1**
GDLE	**Glaisdale, N Y**	**4.49**	**287**	*e*P	**Pn**	**01 13 43.7**	**+4.6**
GDLE				*e*S	**Sn**	**01 14 33.4**	**+1.4**
GDLE				IAML		01 14 37.9	
	comp=N,25nm,0.4s						
GDLE				IAML		01 14 41.0	
	comp=E,11nm,0.4s						
GDLE	**Glaisdale, N Y**	**4.49**	**287**	*e*P	**Pn**	**01 13 43.7**	**+4.6**
GDLE				*e*S	**Sn**	**01 14 33.5**	**+1.5**
LUNU	**Lund**	**4.61**	**58**	P	**Pn**	**01 13 42.9**	**+2.2**
LUNU				S	**Sn**	**01 14 33.1**	**-1.7**
LUNU	**Lund**	**4.61**	**58**	*i*P	**Pn**	**01 13 43.0**	**+2.3**
LUNU				*i*S	**Sn**	**01 14 33.7**	**-1.1**
BJUU	**Bjuv**	**4.62**	**52**	P	**Pn**	**01 13 43.1**	**+2.3**
BJUU				S	**Sn**	**01 14 33.3**	**-1.8**
CWF	**Charnwood Fore**	**4.79**	**266**	*e*P	**Pn**	**01 13 47.4**	**+4.2**
CWF				*e*S	**Sn**	**01 14 40.5**	**+1.1**
CWF				IAML		01 14 44.3	
	comp=E,5.7nm,0.2s						
CWF				IAML		01 14 45.6	
	comp=N,5.3nm,0.3s						
PAGF	**Fort de Pagny**	**4.85**	**187**	*e*Pn	**Pn**	**01 13 46.4**	**+2.3**
	baz=9.7						
PAGF	**Fort de Pagny**	**4.85**	**187**	*e*P	Pn	01 13 50.2	+6.1
	baz=5.8						
PAGF	**Fort de Pagny**	**4.85**	**187**	*e*Pg	**Pg**	**01 14 04.6**	**+1.8**
PAGF				*e*Sn	**Sn**	**01 14 39.6**	**-1.3**
	comp=N,1.2nm,0.1s,baz=17						
MEZF	**Maizieres J'vi**	**4.97**	**192**	*e*Pn	**Pn**	**01 13 48.3**	**+2.7**
	baz=2.3						
MEZF	**Maizieres J'vi**	**4.97**	**192**	*e*Pg	**Pg**	**01 14 06.2**	**+1.2**
	baz=18						
MEZF				*e*Sn	**Sn**	**01 14 42.5**	**-1.2**
	comp=N,2.4nm,0.3s,baz=12						
MEZF				*e*Sg	**Sg**	**01 15 10.6**	**+1.3**
	comp=N,7.9nm,0.4s						
CDF	**Champ du Feu**	**4.98**	**175**	*e*Pn	**Pn**	**01 13 48.2**	**+2.2**
CDF	**Champ du Feu**	**4.98**	**175**	*e*Pg	**Pg**	**01 14 06.5**	**+1.2**
CDF				*e*Sn	**Sn**	**01 14 42.6**	**-1.7**
	comp=N,1.2nm,0.2s						
CDF				*e*Sg	**Sg**	**01 15 11.1**	**+1.2**
	comp=N,3.2nm,0.4s						
SNART	**Snartemo**	**5.00**	**4**	*e*P	**Pn**	**01 13 48.8**	**+2.8**
SNART				IAML		01 14 33.4	
	comp=Z,8.1nm,0.7s						
SNART				*e*S	**Sn**	**01 14 41.0**	**-3.4**
SNART	**Snartemo**	**5.00**	**4**	*i*P	Pn	01 13 51.2	+5.2
SNART				*e*P	Pb	01 13 52.6	-5.5
SNART				IAML		01 14 45.7	
	comp=Z,2.5nm,0.4s						
HOMB	**Homborsund**	**5.03**	**12**	*e*P	**Pn**	**01 13 49.1**	**+2.6**
HOMB				*e*S	**Sn**	**01 14 42.2**	**-3.1**
HOMB				IAML		01 15 06.9	
	comp=Z,7.1nm,0.6s						
HOMB	**Homborsund**	**5.03**	**12**	*i*P	**Pn**	**01 13 50.0**	**+3.5**
HOMB				*i*S	**Sn**	**01 14 44.4**	**-0.9**
HOMB				IAML		01 14 48.6	
	comp=Z,1.6nm,0.4s						
ONAU	**Onsala**	**5.06**	**35**	P	**Pn**	**01 13 49.1**	**+2.2**
ONAU	**Onsala**	**5.06**	**35**	*i*P	**Pn**	**01 13 49.1**	**+2.2**
ONAU				*i*S	**Sn**	**01 14 43.3**	**-2.6**
BSD	**Bornholm Skovb**	**5.20**	**67**	*e*P	**Pn**	**01 13 49.5**	**+0.7**
BSD				*e*S	**Sn**	**01 14 43.5**	**-5.9**
BSD				IAML		01 14 56.2	
	comp=Z,1.3nm,0.4s						
BSD	**Bornholm Skovb**	**5.20**	**67**	*i*P	**Pn**	**01 13 50.6**	**+1.8**
BSD				*e*S	**Sn**	**01 14 46.6**	**-2.8**
BSD	**Bornholm Skovb**	**5.20**	**67**	*i*P	**Pn**	**01 13 50.6**	**+1.8**
BSD				*e*S	**Sn**	**01 14 46.6**	**-2.8**
BSD				IAML		01 14 56.2	
	comp=Z,1.3nm,0.4s						
WOL	**Wolverton**	**5.20**	**250**	*e*P	**Pn**	**01 13 52.9**	**+4.1**
DEL	**Delary**	**5.23**	**51**	*i*P	**Pn**	**01 13 52.0**	**+2.7**
DEL				IAML		01 14 51.9	
	comp=Z,1.0nm,0.4s						
SFTF	**Sexfontaines**	**5.26**	**191**	*e*Pn	**Pn**	**01 13 51.9**	**+2.2**
	baz=17						
SFTF	**Sexfontaines**	**5.26**	**191**	*e*Pg	**Pg**	**01 14 12.0**	**+1.4**
SFTF				*e*Sn	**Sn**	**01 14 49.8**	**-1.2**
	comp=Z,2.2nm,0.2s						
HAU	**Haudompre**	**5.37**	**182**	*e*Pn	**Pn**	**01 13 53.1**	**+1.8**
HAU	**Haudompre**	**5.37**	**182**	*e*P	Pn	01 13 57.6	+6.3
HAU				*e*Sn	**Sn**	**01 14 52.0**	**-1.8**
	comp=Z,1.6nm,0.2s						
TJOU	**Tjoern**	**5.48**	**29**	*i*P	**Pn**	**01 13 55.0**	**+2.4**
TJOU				*i*S	**Sn**	**01 14 52.5**	**-3.8**
STRD	**Stroud**	**5.56**	**257**	*e*P	**Pn**	**01 13 57.7**	**+3.9**
HINF	**Hinteralfeld**	**5.56**	**178**	*e*Pn	**Pn**	**01 13 55.9**	**+2.0**
HINF				*e*Sn	**Sn**	**01 14 56.5**	**-2.0**
	comp=Z,1.0nm,0.2s						
HLM1	**Long Mynd**	**5.78**	**265**	*e*P	**Pn**	**01 14 01.3**	**+4.6**
HLM1				*e*S	**Sn**	**01 15 04.5**	**+0.8**
HLM1				IAML		01 15 08.2	
	comp=E,7.2nm,0.6s						
HLM1				IAML		01 15 09.5	
	comp=N,4.9nm,0.3s						
KESW	**Keswick, Cumbr**	**5.84**	**286**	*e*P	**Pn**	**01 14 01.3**	**+3.7**
KMY	**Karmoy**	**5.90**	**353**	*e*P	**Pn**	**01 14 00.0**	**+1.6**
KMY				*e*S	**Sn**	**01 15 04.3**	**-2.5**
KMY				IAML		01 15 28.2	
	comp=Z,5.6nm,0.8s						
MCH1	**Michaelchurch**	**5.98**	**261**	*e*P	**Pn**	**01 14 03.1**	**+3.6**
MCH1				*e*S	**Sn**	**01 15 09.0**	**+0.4**
MCH1				IAML		01 15 09.7	
	comp=E,6.1nm,0.4s						
MCH1				IAML		01 15 12.2	
	comp=N,7.5nm,0.5s						
EKA	**Eskdalemuir Ar**	**6.02**	**293**	Pn	**Pn**	**01 14 03.7**	**+3.7**
EKA				Sn	**Sn**	**01 15 10.9**	**+1.3**
EKA	**Eskdalemuir Ar**	**6.02**	**293**	Pn	**Pn**	**01 14 03.7**	**+3.7**
EKA				Sn	**Sn**	**01 15 10.9**	**+1.3**
ESK	**Eskdalemuir**	**6.04**	**293**	*e*P	**Pn**	**01 14 03.7**	**+3.4**
ESK	**Eskdalemuir**	**6.04**	**293**	*e*P	**Pn**	**01 14 04.0**	**+3.6**
ESK				*e*S	**Sn**	**01 15 08.5**	**-1.6**
BLS5	**Blasjo**	**6.07**	**359**	*e*P	**Pn**	**01 14 02.2**	**+1.4**
BLS5				*e*S	**Sn**	**01 15 05.8**	**-5.1**
BLS5				IAML		01 15 19.3	
	comp=Z,3.1nm,1.0s						
KHC	**Kasperske Hory**	**6.11**	**131**	*e*PN	**Pb**	**01 14 16.0**	**-1.2**
KHC				*e*SN	**Sn**	**01 15 07.5**	**-4.6**
EDI	**Edinburgh**	**6.21**	**298**	*e*P	**Pn**	**01 14 07.1**	**+4.4**
EDI				*e*S	**Sn**	**01 15 13.8**	**-0.5**
STRU	**Stroemstad**	**6.24**	**23**	P	**Pn**	**01 14 04.9**	**+1.9**
STRU				S	**Sn**	**01 15 11.2**	**-3.7**
STRU	**Stroemstad**	**6.24**	**23**	*i*P	**Pn**	**01 14 05.5**	**+2.5**
FKPU	**Falk**	**6.27**	**37**	P	**Pn**	**01 14 06.5**	**+2.9**
FKPU				S	**Sn**	**01 15 13.9**	**-1.9**
FKPU	**Falk**	**6.27**	**37**	P	**Pn**	**01 14 06.5**	**+2.9**
FKPU				S	**Sn**	**01 15 13.9**	**-1.9**
DRUM	**Mains of Drumt**	**6.29**	**308**	*e*P	**Pn**	**01 14 08.2**	**+4.5**
DRUM				*e*S	**Sn**	**01 15 13.0**	**-3.2**
LOR	**Lormes**	**6.35**	**197**	*e*Pn	**Pn**	**01 14 07.3**	**+2.6**
	baz=19						
LOR	**Lormes**	**6.35**	**197**	*e*Pg	**Pg**	**01 14 31.9**	**+0.5**
	baz=27						
LOR				*e*Sn	**Sn**	**01 15 15.1**	**-2.7**
	comp=Z,2.1nm,0.2s,baz=28						
LDF	**La Druitiere**	**6.38**	**224**	*e*Pn	**Pn**	**01 14 06.9**	**+1.9**
LDF				*e*Sn	**Sn**	**01 15 17.0**	**-1.5**
	comp=Z,0.5nm,0.2s						
FLN	**La Foliniere**	**6.40**	**227**	*e*Pn	**Pn**	**01 14 07.9**	**+2.6**
	baz=46						
FLN				*e*Sn	**Sn**	**01 15 17.4**	**-1.7**
	comp=Z,2.2nm,0.2s,baz=50						
NEWG	**New Galloway**	**6.57**	**290**	*e*P	**Pn**	**01 14 10.9**	**+3.4**
HYF	**Humbligny**	**6.60**	**204**	*e*P	Pn	01 14 15.2	+7.1
HYF				*e*Sn	**Sn**	**01 15 21.6**	**-2.5**
SSF	**Saint Saulge**	**6.61**	**198**	*e*Pn	**Pn**	**01 14 10.5**	**+2.2**
SSF	**Saint Saulge**	**6.61**	**198**	*e*Pg	**Pg**	**01 14 36.8**	**+0.3**
SSF				*e*Sn	**Sn**	**01 15 22.0**	**-2.3**
	comp=Z,0.7nm,0.2s						
CABF	**La Chapelle**	**6.77**	**183**	*e*Pn	**Pn**	**01 14 12.5**	**+2.0**
CABF	**La Chapelle**	**6.77**	**183**	*e*Pg	**Pg**	**01 14 39.6**	**0.0**
CABF				*e*Sn	**Sn**	**01 15 25.7**	**-2.7**
	comp=Z,0.9nm,0.2s						
GAL1	**Galloway**	**6.80**	**287**	*e*P	**Pn**	**01 14 14.2**	**+3.5**
GRR	**Gorron**	**6.85**	**226**	*e*Pn	**Pn**	**01 14 13.7**	**+2.2**
GRR				*e*Sn	**Sn**	**01 15 28.4**	**-1.7**
	comp=Z,2.7nm,0.2s						
AVF	**Avril sur Loir**	**6.90**	**199**	*e*Pn	**Pn**	**01 14 14.5**	**+2.3**
AVF				*e*Sn	**Sn**	**01 15 28.6**	**-2.8**
	comp=Z,0.3nm,0.2s						
SMF	**Signal de Mont**	**6.96**	**196**	*e*Pn	**Pn**	**01 14 15.0**	**+2.0**
SMF				*e*Sn	**Sn**	**01 15 30.2**	**-2.6**
	comp=Z,1.0nm,0.2s						
BGF	**Bois d'Agland**	**7.23**	**201**	*e*Pn	**Pn**	**01 14 19.0**	**+2.3**
BGF	**Bois d'Agland**	**7.23**	**201**	*e*Pg	**Pg**	**01 14 48.5**	**+0.3**
BGF				*e*Sn	**Sn**	**01 15 36.1**	**-3.3**
	comp=Z,2.7nm,0.2s						
BGF				*e*Sg	**Sg**	**01 16 20.8**	**-1.0**
	comp=Z,5.9nm,0.3s						
SKAR	**Skarslia**	**7.39**	**7**	*e*P	**Pn**	**01 14 20.4**	**+1.4**
SKAR				*e*S	Sn	01 15 36.4	-7.0
SKAR

*IDC **05** 01:50:21.2±2.5,37.38N×141.77E,h71km±23km,mb3.6/13, mb1 3.8/17,mb1mx3.7/46,mbtmp4.0/17,MS3.0/4, Ms1 3.0/4,ms1mx2.6/36,Error ellipse: s-maj=19.6km s-min=14.9km az=100.0*

ISC 05 01:50:17.8±1.5,37.42N±0.04×141.94E±0.07,h40km±14km, n95,σ1§13/102,mb4.2/26,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JFK	**Kawauchi**	**0.85**	**267**	P		**Pn**	**01 50 33.0**	**-0.4**
JFK				S		**Sn**	**01 50 43.6**	**-1.1**
JMST	**Minamisoumatoc**	**0.89**	**290**	P		**Pn**	**01 50 33.3**	**-0.6**
JMST				S		**Sn**	**01 50 44.4**	**-1.2**
ONAJ	**Iwakimizuishiy**	**0.96**	**251**	P		**Pn**	**01 50 34.6**	**-0.4**
ONAJ				S		**Sn**	**01 50 46.8**	**-0.7**
JIKH	**Ishinomakikobu**	**0.97**	**337**	P		**Pn**	**01 50 34.6**	**-0.3**
JIKH				S		**Sn**	**01 50 46.5**	**-1.0**
JMM	**Marumori**	**1.01**	**296**	P		**Pn**	**01 50 35.3**	**-0.3**
JMM				S		**Sn**	**01 50 47.7**	**-0.9**
JMM	**Marumori**	**1.01**	**296**	Pn		**Pn**	**01 50 35.3**	**-0.3**
JMM				Sn		**Sn**	**01 50 47.8**	**-0.9**
JIO	**Ouri**	**1.14**	**336**	P		**Pn**	**01 50 37.0**	**-0.2**
JIO				S		**Sn**	**01 50 50.4**	**-1.2**
JFT	**Otama**	**1.28**	**275**	P		**Pn**	**01 50 39.7**	**+0.4**
JFT				S		**Sn**	**01 50 55.3**	**+0.1**
JOU	**Okura**	**1.38**	**314**	P		**Pn**	**01 50 40.6**	**-0.1**
JMK	**Ichinoseki**	**1.63**	**340**	P		**Pn**	**01 50 44.4**	**+0.3**
JMK				S		**Sn**	**01 51 03.7**	**-0.2**
JYS	**Shirataka**	**1.69**	**299**	P		**Pn**	**01 50 45.4**	**+0.6**
JYS				S		**Sn**	**01 51 06.2**	**+1.0**
JFY	**Yanaizu**	**1.78**	**270**	P		**Pn**	**01 50 46.5**	**+0.4**
JFY				*e*S		**Sn**	**01 51 08.5**	**+1.0**
JYT	**Yasato**	**1.84**	**230**	Pn		**Pn**	**01 50 46.8**	**-0.1**
JYT				Sn		**Sn**	**01 51 08.7**	**-0.2**
JYK	**Kaneyama**	**1.95**	**321**	P		**Pn**	**01 50 48.8**	**+0.4**
JYK				*e*S		**Sn**	**01 51 11.9**	**+0.3**
JYA	**Atsumi**	**2.11**	**304**	P		**Pn**	**01 50 51.2**	**+0.5**
JYA				*e*S		**Sn**	**01 51 16.3**	**+0.6**
JSD	**Sado**	**2.98**	**283**	Pn		**Pn**	**01 51 02.7**	**+0.1**
MJAR	**Matsushiro Arr**	**3.11**	**255**	P		**Pn**	**01 51 05.7**	**+1.2**
	1.6nm,0.3s,baz=81,slow=16,SNR=27							
MJAR				S		**Sn**	**01 51 40.4**	**-0.1**
	1.7nm,0.3s,baz=77,slow=32,SNR=4.2							
MJAR				LR		LR	01 52 28.8	
	comp=Z,162nm,21.3s,baz=95,slow=43							
MAJO	**Matsushiro**	**3.12**	**255**	Pn		**Pn**	**01 51 05.4**	**+1.0**
MAT	**Matsushiro**	**3.12**	**255**	P		**Pn**	**01 51 05.8**	**+1.3**
MAT				S		**Sn**	**01 51 42.8**	**+2.4**
MJB9	**Matsu-Tunnel**	**3.12**	**255**	Pn		**Pn**	**01 51 05.9**	**+1.4**
JTM	**Tenmabayashi**	**3.43**	**349**	Pn		**Pn**	**01 51 09.9**	**+1.1**
JGF	**Kuroka**	**4.11**	**245**	Pn		**Pn**	**01 51 20.0**	**+1.8**
INU	**Inuyama**	**4.48**	**244**	Pn		**Pn**	**01 51 25.0**	**+1.8**
JHJ2	**Mitsune**	**4.63**	**203**	Pn		**Pn**	**01 51 25.0**	**-0.3**
JHJ	**Hachijo jima 2**	**4.64**	**203**	P		**Pn**	**01 51 27.4**	**+2.1**
	21nm,0.3s,baz=49,slow=20,SNR=6.5							
JHJ				S		**Sn**	**01 52 14.8**	**-3.2**
	39nm,0.3s,baz=266,slow=22,SNR=5.8							
ERM	**Erimo**	**4.69**	**11**	Pn		**Pn**	**01 51 25.7**	**-0.3**
JWT	**Wachi**	**5.69**	**250**	Pn		**Pn**	**01 51 40.9**	**+1.1**
JHS	**Saijyo**	**7.53**	**254**	Pn		**Pn**	**01 52 06.4**	**+1.3**
USA0B	**Ussuriysk Arra**	**10.13**	**315**	Pn		**Pn**	**01 52 40.8**	**+0.1**
USRK	**Ussuriysk Ar.**	**10.13**	**315**	P		**Pn**	**01 52 43.5**	**+2.8**
	baz=121,slow=14,SNR=4.8							
USRK	**Ussuriysk Ar.**	**10.13**	**315**	Pn		**Pn**	**01 52 41.9**	**+1.2**
KSRS	**Korea Array**	**11.15**	**274**	P		**Pn**	**01 52 57.4**	**+2.8**
	0.2nm,0.3s,baz=86,slow=14,SNR=5.1							
KSRS				LR		LR	01 57 17.5	
	comp=Z,54nm,18.2s,baz=80,slow=38							
KLR	**Kul'dur**	**13.93**	**331**	LR		LR	01 58 29.3	
	comp=Z,55nm,20.1s,slow=35							
SEY	**Seymchan**	**26.33**	**11**	P		**P**	**01 55 50.2**	**+0.6**
	2.6nm,0.5s,baz=186,slow=11,SNR=7.0							
SONM	**Songino Array**	**27.92**	**303**	P		**P**	**01 56 04.0**	**-0.3**
	1.6nm,0.8s,baz=104,slow=8.0,SNR=5.0							
SONM	**Songino Array**	**27.92**	**303**	P		**P**	**01 56 01.4**	**-2.9**
H11N2	**WAKE ISLAND Hy**	**27.99**	**122**	T		T	02 25 43.2	
	baz=314,slow=75,SNR=138							
H11N1	**WAKE ISLAND Hy**	**28.00**	**122**	T		T	02 25 39.8	
	baz=314,slow=75,SNR=183							
H11N3	**WAKE ISLAND Hy**	**28.01**	**122**	T		T	02 25 44.6	
	baz=314,slow=75,SNR=127							
H11S1	**WAKE ISLAND Hy**	**28.72**	**124**	T		T	02 26 34.6	
	baz=316,slow=76,SNR=208							
H11S3	**WAKE ISLAND Hy**	**28.72**	**124**	T		T	02 26 38.1	
	baz=316,slow=76,SNR=185							
H11S2	**WAKE ISLAND Hy**	**28.74**	**124**	T		T	02 26 39.5	
	baz=316,slow=76,SNR=122							
ZAA0	**Zalesovo Array**	**41.97**	**312**	P		**P**	**01 58 03.8**	**-0.8**
ZALV	**Zalesovo Beam**	**41.97**	**312**	P		**P**	**01 58 04.1**	**-0.5**
	1.2nm,0.5s,baz=97,slow=7.6,SNR=5.3							
ZALV	**Zalesovo Beam**	**41.97**	**312**	P		**P**	**01 58 04.5**	**-0.1**
MK31	**Makanchi Array**	**44.27**	**302**	P		**P**	**01 58 22.1**	**-1.3**
MKAR	**Makanchi Array**	**44.27**	**302**	P		**P**	**01 58 22.9**	**-0.5**
	1.6nm,0.8s,baz=91,slow=9.9,SNR=8.9							
MKAR	**Makanchi Array**	**44.27**	**302**	P		**P**	**01 58 22.8**	**-0.7**
KURK	**Kurchatov**	**46.03**	**308**	P		**P**	**01 58 36.4**	**-0.8**
KDAK	**Kodiak Island**	**46.53**	**42**	P		**P**	**01 58 41.5**	**+0.5**
TRF	**Thorofare Moun**	**47.48**	**34**	P		**P**	**01 58 50.4**	**+1.8**
MDM	**Murphy Dome**	**48.37**	**32**	P		**P**	**01 58 57.2**	**+1.9**
MDM				IAmb		IAmb	01 59 01.6	
	comp=Z,5.6nm,1.4s							
WRH	**Wood River Hil**	**48.44**	**33**	P		**P**	**01 58 57.5**	**+1.8**
WRH				IAmb		IAmb	01 59 12.8	
	comp=Z,3.3nm,1.2s							
WRH				PcP		**PcP**	**02 00 21.7**	**+0.3**
POKR	**Poker Flat Res**	**48.70**	**32**	P		**P**	**01 58 59.7**	**+1.9**
POKR				IAmb		IAmb	01 58 60.0	
	comp=Z,4.4nm,0.7s							
IL31		**48.94**	**33**	P		**P**	**01 59 00.2**	**+0.6**
IL31				IAmb		IAmb	01 59 00.8	
	comp=Z,2.7nm,0.7s							
ILAR	**Eielson Array**	**48.94**	**33**	P		**P**	**01 59 00.1**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=263,slow=5.9,SNR=19							
ILAR	**Eielson Array**	**48.94**	**33**	P		**P**	**01 59 00.3**	**+0.6**
PRP	**Porcupine Dome**	**49.49**	**32**	P		**P**	**01 59 05.5**	**+1.4**
PRP				IAmb		IAmb	01 59 13.1	
	comp=Z,6.1nm,1.5s							
RIDG	**Independent Ri**	**49.90**	**34**	P		**P**	**01 59 07.3**	**+0.3**
RIDG				IAmb		IAmb	01 59 22.7	
	comp=Z,9.0nm,1.5s							
DOT	**Dot Lake**	**50.25**	**34**	P		**P**	**01 59 10.5**	**+0.8**
DOT				IAmb		IAmb	01 59 14.0	
	comp=Z,2.8nm,1.2s							
K27K	**Chicken**	**51.09**	**33**	P		**P**	**01 59 17.4**	**+1.4**
K27K				IAmb		IAmb	01 59 18.1	
	comp=Z,3.5nm,1.1s							
BCAR	**Beaver Creek A**	**51.34**	**35**	P		**P**	**01 59 19.1**	**+1.2**
CTGM	**Chitina Glacie**	**51.88**	**37**	P		**P**	**01 59 23.1**	**+1.0**
KKAR	**Karatay Array**	**53.30**	**300**	P		**P**	**01 59 35.3**	**+2.6**
INK	**Inuvik**	**53.85**	**27**	P		**P**	**01 59 36.8**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=270,slow=5.1,SNR=2.8							
INK	**Inuvik**	**53.85**	**27**	P		**P**	**01 59 36.7**	**+0.5**
INK				IAmb		IAmb	01 59 49.8	
	comp=Z,4.8nm,1.4s							
GAR	**Garm**	**54.91**	**295**	P		**P**	**01 59 43.7**	**-0.9**
ARU	**Arti**	**56.35**	**318**	P		**P**	**01 59 54.1**	**-0.4**
ARU				IAmb		IAmb	02 00 05.2	
	comp=Z,4.6nm,1.1s							
WB0	**Warramunga Arr**	**57.32**	**188**	P		**P**	**02 00 01.2**	**-0.6**
WB0				IAmb		IAmb	02 00 12.7	
	comp=Z,3.4nm,1.1s							
WR0	**Warramunga Arr**	**57.49**	**188**	P		**P**	**02 00 02.4**	**-0.6**
WR0				IAmb		IAmb	02 00 12.8	
	comp=Z,6.0nm,1.3s							
WB2	**Warramunga Arr**	**57.50**	**188**	P		**P**	**02 00 02.6**	**-0.4**
WRA	**Warramunga Arr**	**57.50**	**188**	P		**P**	**02 00 02.4**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=6.0,slow=7.4,SNR=12							
WRA	**Warramunga Arr**	**57.50**	**188**	P		**P**	**02 00 01.7**	**-1.3**
ABKAR	**Akbulak array**	**58.01**	**310**	P		**P**	**02 00 05.5**	**-0.9**
ABKAR				IAmb		IAmb	02 00 19.5	
	comp=Z,1.3nm,0.6s							
ASAR	**Alice Springs**	**61.23**	**188**	P		**P**	**02 00 28.2**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=13,slow=5.9,SNR=5.9							
RES	**Resolute Bay**	**62.12**	**15**	P		**P**	**02 00 34.1**	**0.0**
	comp=Z,1.0nm,0.6s,baz=301,slow=5.9,SNR=5.4							
RES	**Resolute Bay**	**62.12**	**15**	P		**P**	**02 00 34.3**	**+0.2**
RES				IAmb		IAmb	02 00 46.7	
	comp=Z,5.5nm,1.4s							
FINES	**FINESS Array B**	**68.67**	**332**	P		**P**	**02 01 16.1**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=46,slow=8.0,SNR=5.4							
FINES	**FINESS Array B**	**68.67**	**332**	P		**P**	**02 01 15.3**	**-1.3**
PINE	**Pine Mountain**	**69.77**	**50**	P		**P**	**02 01 25.9**	**+1.8**
PINE				IAmb		IAmb	02 01 40.8	
	comp=Z,7.3nm,1.2s							
BMO	**Blue Mountains**	**71.36**	**48**	P		**P**	**02 01 34.9**	**+1.3**
BEKR	**Beckworth**	**72.29**	**53**	P		**P**	**02 01 39.9**	**+0.5**
NC405	**NORSAR Array S**	**73.78**	**337**	P		**P**	**02 01 47.5**	**-0.1**
NB2	**NORSAR Subarra**	**73.99**	**337**	P		**P**	**02 01 48.3**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=39,slow=6.2							
NOA	**NORSAR Array B**	**73.99**	**337**	P		**P**	**02 01 48.5**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=39,slow=5.9,SNR=4.4							
NVAR	**Mina Array Bea**	**74.42**	**53**	P		**P**	**02 01 53.5**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=285,slow=6.2,SNR=4.2							
NVAR	**Mina Array Bea**	**74.42**	**53**	P		**P**	**02 01 51.3**	**-0.7**
R11A	**Troy Canyon, C**	**76.19**	**52**	P		**P**	**02 02 03.1**	**+1.0**
PDAR	**Pinedale Array**	**77.10**	**46**	P		**P**	**02 02 07.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=274,slow=2.9,SNR=6.3							
PDAR	**Pinedale Array**	**77.10**	**46**	P		**P**	**02 02 07.4**	**+0.2**
PPT	**Papeete**	**84.43**	**117**	LR		LR	02 31 43.7	
	comp=Z,320nm,21.2s,baz=82,slow=29							
LPAZ	**La Paz**	**146.14**	**60**	PKPbc		**PKPab**	**02 09 54.9**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=269,slow=4.1,SNR=4.8							
H03N2	**Juan Fernandez**	**146.64**	**96**	T		T	04 54 11.1	
	baz=292,slow=76,SNR=5.3							
H03N3	**Juan Fernandez**	**146.66**	**96**	T		T	04 54 20.0	
	baz=292,slow=76,SNR=5.8							
H03N1	**Juan Fernandez**	**146.66**	**96**	T		T	04 54 18.5	
	baz=292,slow=76,SNR=8.2							

*SKO **05** 01:58:21.5,41.91N×23.13E,h22km*
*SOF **05** 01:58:21.3,41.97N×23.21E,h12km,MD2.6*
*ATH **05** 01:58:22.6,41.89N×23.21E,h24km±2km,ML2.8/5,Error ellipse: s-maj=3.7km s-min=1.7km az=164.0*
*THE **05** 01:58:23.7,41.85N×23.21E,h6km,ML2.7/11,Error ellipse: s-maj=0.8km s-min=0.5km az=160.0*
*BEO **05** 01:58:23.9±0.4,42.09N×23.11E,h16km±3km,ML2.7/12*

ISC 05 01:58:21.5±0.9,41.94N±0.01×23.10E±0.02,h10km±7km, n69,σ1§48/108,20C-16D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KKB	**Krupnik**	**0.07**	**191**	*i* P		**Pg**	**01 58 24.9**	**+1.1**
MMB	**Musomiste**	**0.58**	**127**	*i* P		**Pg**	**01 58 33.1**	**+0.2**
VTS	**Vitosha**	**0.69**	**8**	*i* P		**Pg**	**01 58 34.2**	**-0.6**
BOSS	**Bosilegrad**	**0.72**	**321**	*e*Pg		**Pg**	**01 58 35.6**	**+0.1**
BOSS				*e*Sg		**Sg**	**01 58 45.6**	**+0.6**
STIP	**Stip**	**0.73**	**251**	*i* Pg		**Pg**	**01 58 32.6**	**-3.0**
STIP				*i* Sg		**Sg**	**01 58 40.5**	**-4.5**
KNT	**Kendrikon**	**0.79**	**191**	P		**Pb**	**01 58 37.5**	**+0.1**
KNT	**Kendrikon**	**0.79**	**191**	P		**Pb**	**01 58 37.3**	**-0.1**
KNT				S		**Sb**	**01 58 47.9**	**-0.3**
	448nm,0.1s							
NVR	**Nevrokopi**	**0.82**	**136**	P		**Pg**	**01 58 36.9**	**-0.5**
NVR				S		**Sg**	**01 58 46.8**	**-1.2**
NVR				AML		AML	01 58 47.6	
	comp=E,1961μm,0.2s							
NVR				AML		AML	01 58 47.9	
	comp=N,1557μm,0.2s							
NVR	**Nevrokopi**	**0.82**	**136**	P		**Pg**	**01 58 36.8**	**-0.5**
NVR				S		**Sg**	**01 58 47.2**	**-0.8**
	comp=N,875nm,0.2s							
SRS	**Serrai**	**0.90**	**156**	P		**Pg**	**01 58 38.7**	**-0.2**
SRS				S		**Sb**	**01 58 51.0**	**-0.3**
SRS				AML		AML	01 58 53.8	
	comp=N,1200μm,0.3s							
SRS				AML		AML	01 58 55.9	
	comp=E,887μm,0.3s							
SRS	**Serrai**	**0.90**	**156**	P		**Pg**	**01 58 38.7**	**-0.2**
SRS				S		**Sg**	**01 58 50.5**	**-0.1**
	comp=E,515nm,0.3s							
PGB	**Panagyurishte**	**1.00**	**52**	*i* P		**Pg**	**01 58 39.1**	**-1.7**
SOH	**Sokhos**	**1.13**	**170**	P		**Pg**	**01 58 43.2**	**-0.1**
SOH				S		**Sb**	**01 58 58.0**	**0.0**
SOH				AML		AML	01 58 59.9	
	comp=E,1086μm,0.4s							
SOH				AML		AML	01 59 01.8	
	comp=N,2131μm,0.5s							
SOH	**Sokhos**	**1.13**	**170**	P		**Pg**	**01 58 43.2**	**-0.1**
SOH				S		**Sb**	**01 58 58.3**	**+0.3**
	comp=N,638nm,0.4s							
PLD	**Plovdiv**	**1.21**	**82**	*e*Pg		**Pg**	**01 58 44.6**	**-0.1**
PLD				*e*Sg		**Sn**	**01 59 01.0**	**+0.2**
PLD	**Plovdiv**	**1.21**	**82**	*i* P		**Pb**	**01 58 43.5**	**-0.9**
RZN	**Rozhen**	**1.23**	**101**	*i* P		**Pn**	**01 58 43.8**	**-1.2**
SKO	**Skopje**	**1.24**	**272**	*e*Pg		**Pg**	**01 58 46.1**	**+0.8**
SKO				*e*Sg		**Sn**	**01 59 05.1**	**+3.4**
BARS	**Barje**	**1.29**	**313**	*e*Pn		**Sb**	**01 58 58.8**	**-3.9**
THE	**Thessaloniki**	**1.31**	**185**	P		**Pg**	**01 58 46.9**	**+0.2**
THE				S		**Sg**	**01 59 04.6**	**+0.9**
	comp=N,432nm,0.5s							
HORT	**Hortiatis**	**1.34**	**180**	P		**Pg**	**01 58 47.2**	**0.0**
HORT				S		**Sg**	**01 59 05.1**	**+0.5**
HORT				AML		AML	01 59 08.2	
	comp=E,673μm,0.3s							
HORT				AML		AML	01 59 09.9	
	comp=N,424μm,0.5s							
HORT	**Hortiatis**	**1.34**	**180**	P		**Pb**	**01 58 46.8**	**0.0**
HORT				S		**Sg**	**01 59 05.2**	**+0.5**
	comp=N,275nm,0.4s							
ZAPS	**Zavoj**	**1.38**	**346**	*e*Pg		**Pb**	**01 58 47.9**	**+0.5**
KAVA	**Kavala**	**1.42**	**131**	P		**Pn**	**01 58 47.6**	**+0.2**
KAVA				S		**Sn**	**01 59 06.0**	**-0.1**
KAVA				AML		AML	01 59 08.8	
	comp=N,1263μm,0.3s							
KAVA				AML		AML	01 59 08.9	
	comp=E,779μm,0.3s							
KAVA	**Kavala**	**1.42**	**131**	P		**Pb**	**01 58 47.8**	**-0.3**
KAVA				S		**Sb**	**01 59 06.1**	**-0.1**
	comp=E,410nm,0.3s							
PLG	**Polygyros**	**1.59**	**170**	P		**Pn**	**01 58 50.2**	**+0.5**
PLG	**Polygyros**	**1.59**	**170**	P		**Pn**	**01 58 50.2**	**+0.5**
PLG				S		**Sb**	**01 59 10.9**	**-0.2**
	comp=E,205nm,0.5s							
BLKB	**Belogradchik**	**1.71**	**350**	*e*Pn		**Pn**	**01 58 52.3**	**+0.8**
BLKB				*e*Sg		**Sb**	**01 59 14.9**	**+0.2**
BLKB	**Belogradchik**	**1.71**	**350**	⇑S		**Sg**	**01 59 17.0**	**+0.5**
OUR	**Ouranopolis**	**1.74**	**157**	P		**Pn**	**01 58 51.9**	**+0.2**
OUR	**Ouranopolis**	**1.74**	**157**	P		**Pn**	**01 58 52.1**	**+0.4**
THAS	**Thassos island**	**1.81**	**137**	P		**Pn**	**01 58 52.4**	**-0.3**
THAS	**Thassos island**	**1.81**	**137**	P		**Pn**	**01 58 53.0**	**+0.3**
THAS				S		**Sn**	**01 59 16.1**	**+0.5**
	comp=E,225nm,0.4s							
DIM	**Dimitrovgrad**	**1.82**	**86**	*i* P		**Pb**	**01 58 54.8**	**-0.1**
SELS	**Selova**	**1.94**	**312**	*e*Pn		**Pn**	**01 58 55.0**	**+0.3**
SELS				*e*Sg		**Sb**	**01 59 21.5**	**+0.1**
ZAGS	**Zajecar**	**1.98**	**341**	*e*Pn		**Pn**	**01 58 55.2**	**+0.1**
BOVS	**Bovan**	**1.98**	**329**	*e*Pn		**Pn**	**01 58 55.1**	**0.0**
BOVS				*e*Sg		**Sn**	**01 59 21.4**	**+1.4**
RDO	**Rodhopi**	**1.99**	**113**	P		**Pn**	**01 58 56.4**	**+1.2**
PAIG	**Paliouri**	**2.06**	**168**	P		**Pn**	**01 58 56.2**	**+0.1**
PAIG	**Paliouri**	**2.06**	**168**	P		**Pn**	**01 58 56.3**	**+0.1**
PAIG				S		**Sn**	**01 59 21.9**	**0.0**
	comp=E,78nm,0.5s							
BAIL	**Bailesti**	**2.09**	**5**	⇑P		**Pb**	**01 58 58.5**	**-1.0**
BAIL				⇓S		**Sg**	**01 59 29.3**	**+0.7**
PUNG	**Punghina**	**2.34**	**357**	*e*Pn		**Pn**	**01 59 00.6**	**+0.5**
PUNG	**Punghina**	**2.34**	**357**	⇑P		**Pn**	**01 59 00.3**	**+0.3**
PUNG				⇑S		**Sg**	**01 59 38.5**	**+1.8**
SMTH	**Samothraki Isl**	**2.35**	**128**	P		**Pn**	**01 59 00.5**	**+0.3**
SMTH				S		**Sn**	**01 59 29.5**	**+0.4**
	comp=E,32nm,0.3s							
LIA	**Limnos Island**	**2.58**	**142**	P		**Pn**	**01 59 03.5**	**+0.2**
GRUS	**Gruza**	**2.62**	**319**	*e*Pn		**Pn**	**01 59 04.7**	**+0.8**
GRUS				*e*Sg		**Sb**	**01 59 43.3**	**+2.5**
SJES	**Sjenica**	**2.66**	**301**	*e*Pn		**Pn**	**01 59 04.6**	**0.0**
SJES				*e*Sg		**Sg**	**01 59 46.6**	**-0.4**
SVIS	**Svilajnac**	**2.70**	**330**	*e*Pn		**Pn**	**01 59 04.5**	**-0.5**
IVAS	**Ivanjica**	**2.72**	**308**	*e*Pn		**Pn**	**01 59 05.8**	**+0.5**
SRE	**Strehaia**	**2.72**	**2**	⇑P		**Pn**	**01 59 06.8**	**+1.5**
SRE				⇑S		**Sg**	**01 59 49.1**	**+0.1**
HUMR	**Humele**	**2.93**	**27**	⇓P		**Pb**	**01 59 11.3**	**-2.5**
HUMR				⇓S		**Sg**	**01 59 54.0**	**-1.6**
HERR	**Herculane**	**2.98**	**351**	⇑P		**Pn**	**01 59 08.2**	**-0.6**
HERR				⇑S		**Sb**	**01 59 53.2**	**+1.9**
RAZG	**Razgrad**	**2.99**	**56**	⇑P		**Pn**	**01 59 10.6**	**+1.6**
RAZG				⇑S		**Sg**	**01 59 56.9**	**-0.6**
TRUS	**Trudelj**	**3.02**	**320**	*e*Pn		**Pn**	**01 59 11.1**	**+1.7**
SGRR	**Singureni**	**3.10**	**42**	⇑P		**Pn**	**01 59 13.6**	**+3.0**
SGRR				⇑S		**Sg**	**01 59 58.7**	**-2.5**
DIVS	**Divibare**	**3.14**	**314**	*e*Pn		**Pn**	**01 59 11.5**	**+0.4**
GZR	**Gura Zlata**	**3.46**	**356**	⇑P		**Pn**	**01 59 16.5**	**+1.0**
GZR				⇓S		**Sg**	**02 00 11.7**	**-1.0**
LOT	**Lotru**	**3.54**	**8**	⇓P		**Pn**	**01 59 16.2**	**-0.5**
LOT				⇑S		**Sn**	**01 59 56.8**	**-1.8**
SULR		**3.58**	**39**	⇑S		**Sb**	**02 00 12.1**	**+3.8**
ARR	**Arges**	**3.60**	**17**	⇓P		**Pn**	**01 59 17.2**	**-0.3**
LEHL	**Lehliu**	**3.71**	**46**	⇓S		**Sb**	**02 00 15.7**	**+3.4**
RASA	**Rasa**	**3.74**	**51**	⇑S		**Sg**	**02 00 19.2**	**-2.3**
VOIR		**3.77**	**21**	⇓P		**Pn**	**01 59 20.4**	**+0.6**
VOIR				⇓S		**Sg**	**02 00 23.4**	**+0.8**
BZS	**Buzias**	**3.83**	**344**	⇓P		**Pn**	**01 59 19.6**	**-1.0**
BZS				⇓S		**Sg**	**02 00 23.8**	**-0.6**
MLR	**Muntele Rosu**	**4.11**	**29**	⇓P		**Pn**	**01 59 26.2**	**+1.8**
MLR				⇓S		**Sb**	**02 00 21.2**	**-2.4**
NEHR	**Nehoiu**	**4.18**	**33**	⇑P		**Pn**	**01 59 27.3**	**+1.8**
NEHR				⇑S		**Sg**	**02 00 37.0**	**+1.2**
TIRR	**Tirgusor**	**4.63**	**55**	⇓S		**Sb**	**02 00 42.9**	**+4.4**
VRI	**Vrincioaia**	**4.72**	**32**	⇓P		**Pn**	**01 59 30.9**	**-1.9**
VRI				⇓S		**Sn**	**02 00 28.2**	**+0.6**
CFR	**Carcaliu**	**4.88**	**47**	⇑P		Pg	02 00 03.3	+8.2
CFR				⇓S		**Sg**	**02 00 53.2**	**-5.1**

JMA 05 02:17:47.3,38.72N×142.26E,h35km±1km,M3.7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
OFUJ	**Ofunato**	**0.58**	**308**	P		Pn	02 17 59.1	0.0
OFUJ				S		Sn	02 18 07.4	-0.1
JKMT	**Kesennumamotoy**	**0.62**	**279**	P		Pn	02 17 59.5	-0.1
JKMT				S		Sn	02 18 08.1	-0.2
JIKH	**Ishinomakikobu**	**0.74**	**237**	P		Pn	02 18 01.2	-0.1
JIKH				S		Sn	02 18 11.3	-0.1
JIO	**Ouri**	**0.76**	**250**	P		Pn	02 18 01.3	-0.2
JIO				S		Sn	02 18 11.3	-0.5
JMK	**Ichinoseki**	**0.84**	**286**	P		Pn	02 18 02.9	+0.2
JMK				S		Sn	02 18 14.0	+0.1
JOM	**Ohasama**	**1.06**	**315**	P		Pn	02 18 06.3	+0.6
JOM				S		Sn	02 18 19.8	+0.5
JTH	**Tanohata**	**1.25**	**346**	P		Pn	02 18 08.9	+0.5
JTH				*e*S		Sn	02 18 24.3	+0.3
JOU	**Okura**	**1.30**	**255**	P		Pn	02 18 09.8	+0.8
JOU				S		Sn	02 18 26.0	+0.8
JMM	**Marumori**	**1.44**	**234**	P		Pn	02 18 11.3	+0.5
JRG	**Rokugo**	**1.44**	**299**	P		Pn	02 18 12.1	+1.3
JRG				S		Sn	02 18 30.0	+1.6
JYK	**Kaneyama**	**1.50**	**278**	P		Pn	02 18 12.9	+1.2
MAT	**Matsushiro**	**3.88**	**237**	P		Pn	02 18 47.0	+2.5
MAT				*e*S		Sn	02 19 32.4	+3.5

WEL 05 02:37:22.2,37.8S±0.9×175.7E±0.6,h7km±1km,M3.6/22, ML3.9/22,MLv3.6/22,Error ellipse: s-maj=0.0km s-min=0.0km az=162.7,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
TOZ	**Tahuroa Road**	**0.17**	**280**	P		Pg	02 37 26.8	+1.1
TOZ		

LTZ	**Lake Taylor**	**5.66**	**207**	P	Pn	02 38 49.8 +3.0
INZ	**Inchbonnie**	**5.94**	**212**	P	Pn	02 38 51.4 +0.9
JCZ	**Jackson Bay**	**8.20**	**218**	P	Pn	02 39 23.5 +1.8

NIED ***05*** *02:42:52.1,31°.11N×130°.31E,h157km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.35; $M_{\theta\theta}$-2.02; $M_{\phi\phi}$-1.33; $M_{r\theta}$1.18; $M_{\theta\phi}$-0.79; $M_{r\phi}$4.97; Fault plane solution: M_o5.80000×10^{14} NP1:ϕ_s20.00000°, δ76.00000°, λ81.00000°. NP2:ϕ_s234.00000°, δ17.00000°, λ123.00000°.*

JMA 05 02:42:52.1±0.1, 31°.10N×130°.30E, h157km±1km, M3.5, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSU	**Suzuyama**	**0.43**	**18**	P	Pn	02 43 14.1	+0.2
JTSR	**Tashiro 2**	**0.54**	**83**	P	Pn	02 43 14.3	-0.1
JTSR				S	Sn	02 43 31.3	-0.2
JKC	**Kuchinoerabu**	**0.64**	**188**	P	Pn	02 43 15.1	+0.1
JKC				*e*S	Sn	02 43 32.6	+0.1
JTN	**Tanegashima 3**	**0.73**	**127**	P	Pn	02 43 15.7	+0.1
JTN				S	Sn	02 43 33.7	+0.2
JSJ	**Shimokoshiki**	**0.76**	**319**	P	Pn	02 43 15.3	-0.4
JSJ				S	Sn	02 43 33.5	-0.4
JMTN	**Minamitane**	**0.87**	**143**	P	Pn	02 43 16.6	+0.1
JMTN				S	Sn	02 43 35.4	+0.2
JYAK	**Yakushimahirau**	**0.88**	**168**	P	Pn	02 43 16.6	0.0
JYAK				*e*S	Sn	02 43 34.8	-0.5
JTZ	**Takazaki**	**1.04**	**40**	P	Pn	02 43 18.0	+0.1
JTZ				S	Sn	02 43 37.0	-0.7
JNN	**Nakanoshima**	**1.31**	**196**	P	Pn	02 43 20.4	+0.1
JIU3	**Izumi3**	**1.51**	**17**	P	Pn	02 43 22.5	+0.2
JIU3				*e*S	Sn	02 43 45.2	-0.4

IDC ***05*** *03:23:59.7±0.8, 64°.61N×17°.58W, h0km, mb3.7/9, mb1 4.0/13, mb1mx3.7/48, mbtmp3.8/13, ML2.7/3, MS3.1/15, Ms1 3.2/15, ms1mx2.9/51, Error ellipse: s-maj=25.2km s-min=10.2km az=13.0*
REY ***05*** *03:23:59.6, 64°.68N×17°.45W, h6km*
NEIC ***05*** *03:24:00.2±0.6, 64°.7N±0°.1×17°.8W±0°.1, h8km±6km, mb4.5/8, Error ellipse: s-maj=14.5km s-min=6.2km az=175.0*

ISC 05 03:23:59.9±0.5, 64°.70N±0°.02×17°.50W±0°.03, h10km, n67, σ1§62/68, mb3.9/13, MS3.2/9, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.11**	**32**	P	**Pg**	**03 24 02.3**	**-0.4**
	baz=18						
IVON	**Vonarskard**	**0.11**	**257**	P	**Pg**	**03 24 02.4**	**-0.4**
	baz=268						
IGRF	**Grimsfjall**	**0.31**	**161**	P	**Pg**	**03 24 05.1**	**-1.1**
	baz=164						
ISKR	**Skrokkalda**	**0.41**	**250**	P	**Pg**	**03 24 07.4**	**-0.5**
	baz=254						
IHUS	**Husbondi**	**0.41**	**189**	P	**Pg**	**03 24 07.1**	**-0.9**
	baz=193						
IVOT	**Vottur**	**0.45**	**162**	P	**Pg**	**03 24 07.4**	**-1.3**
	baz=164						
IVOT				S	**Sg**	**03 24 13.5**	**-1.2**
	baz=164						
IJOK	**Jokulheimar**	**0.50**	**219**	P	**Pg**	**03 24 08.6**	**-1.0**
	baz=223						
IJOK				S	**Sg**	**03 24 15.3**	**-0.8**
	baz=223						
IASK	**Askja**	**0.51**	**45**	P	**Pg**	**03 24 08.7**	**-1.1**
	baz=42						
ISVA	**Svartarkot**	**0.65**	**9**	P	**Pg**	**03 24 11.5**	**-1.0**
	baz=7.2						
ISVA				S	**Sg**	**03 24 20.0**	**-1.0**
	baz=7.2						
IIEY	**Innrieyrar**	**0.66**	**204**	P	**Pg**	**03 24 11.4**	**-1.3**
	baz=207						
IIEY				S	**Sg**	**03 24 19.6**	**-1.8**
	baz=207						
IKSK	**Karasker**	**0.70**	**140**	P	**Pg**	**03 24 11.0**	**-2.5**
	baz=140						
IKAL	**Kalfafell**	**0.76**	**186**	P	**Pg**	**03 24 12.7**	**-1.9**
	baz=188						
IKAL				S	**Sg**	**03 24 22.5**	**-1.9**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**81**	P	**Pg**	**03 24 12.6**	**-2.2**
	baz=79						
IVSH				S	**Sg**	**03 24 22.8**	**-2.0**
	baz=79						
IVAT	**Vatnsfell**	**0.80**	**231**	P	**Pg**	**03 24 13.9**	**-1.4**
	baz=233						
IHVE	**Hveravellir**	**0.90**	**282**	P	**Pg**	**03 24 15.7**	**-1.6**
	baz=283						
IMEL	**Melhnausar**	**0.94**	**22**	P	**Pg**	**03 24 16.2**	**-1.9**
	baz=20						
IREN	**Reynihlio**	**0.98**	**15**	P	**Pg**	**03 24 17.0**	**-1.9**
	baz=13						
IREN				S	**Sg**	**03 24 30.0**	**-1.7**
	baz=13						
IKVO	**Krokottuvotn**	**1.05**	**14**	P	**Pg**	**03 24 18.0**	**-2.1**
	baz=13						
ISNB	**Snabyli**	**1.08**	**208**	P	**Pg**	**03 24 18.6**	**-2.2**
	baz=209						
IGRS	**Grimsstaoir**	**1.11**	**31**	P	**Pb**	**03 24 19.0**	**-2.2**
	baz=30						
IFED	**Fedgar**	**1.17**	**236**	P	**Pb**	**03 24 20.2**	**-2.0**
	baz=237						
ISKI	**Skildingahlsh**	**1.19**	**9**	P	**Pb**	**03 24 20.5**	**-2.1**
	baz=8.3						
IRJU	**Rjupnafell**	**1.20**	**206**	P	**Pb**	**03 24 20.7**	**-2.0**
	baz=207						
IGHA	**Grjothals**	**1.20**	**17**	P	**Pb**	**03 24 20.4**	**-2.4**
	baz=16						
IGRA	**Granastaoir**	**1.23**	**359**	P	**Pn**	**03 24 21.0**	**-2.1**
	baz=358						
IGYG	**Gygjarholskot**	**1.25**	**252**	P	**Pn**	**03 24 21.4**	**-2.0**
	baz=253						
IDIM	**Dimmadalss**	**1.29**	**10**	P	**Pn**	**03 24 21.9**	**-2.1**
	baz=9.4						
IHAU	**Haukadalur**	**1.30**	**237**	P	**Pn**	**03 24 23.0**	**-1.1**
	baz=236						
IHVO	**Lagu-Hvolar**	**1.32**	**207**	P	**Pn**	**03 24 22.7**	**-1.7**
	baz=208						
BORG	**Borgarnes**	**1.64**	**273**	Pg	**Pn**	**03 24 27.6**	**-1.1**
	38nm,0.3s,baz=87,slow=8.1,SNR=87						
BORG				Lg	Lg	03 24 51.9	
	32nm,0.3s,baz=254,slow=22,SNR=16						
BORG				LR	LR	03 24 58.8	
	comp=Z,64nm,20.0s,baz=148,slow=37						
BORG	**Borgarnes**	**1.64**	**273**	Pn	**Pn**	**03 24 27.7**	**-1.1**
BORG				Sn	**Sn**	**03 24 47.8**	**-2.2**
SCO	**Scoresbysund**	**6.05**	**346**		**Pn**	**03 25 29.5**	**+0.1**
SCO	**Scoresbysund**	**6.05**	**346**	*e*	**Pn**	**03 25 29.0**	**-0.3**
	baz=149,slow=6.2						
SCO				*i* P	**Pn**	**03 25 30.9**	**+1.6**
JMIC	**Jan Mayen**	**7.16**	**24**	LR	LR	03 27 53.3	
	comp=Z,127nm,21.1s,baz=244,slow=32						
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn	**Pn**	**03 26 48.5**	**+0.7**
	baz=322,slow=13,SNR=16						
ESK	**Eskdalemuir**	**11.78**	**136**	Pn	**Pn**	**03 26 49.5**	**+1.6**
NOA	**NORSAR Array B**	**13.54**	**92**	Pn	**Pn**	**03 27 11.1**	**-0.7**
	0.0nm,0.3s,baz=300,slow=13,SNR=2.3						
NOA				LR	LR	03 32 20.7	
	comp=Z,22nm,19.8s,baz=290,slow=37						
SFJD	**Kangerlussuaq**	**13.65**	**295**	LR	LR	03 31 48.1	
	comp=Z,116nm,18.2s,baz=12,slow=34						
HFS	**Hagfors**	**15.05**	**93**	LR	LR	03 32 32.8	
	comp=Z,54nm,18.9s,baz=267,slow=34						
ARCES	**ARCESS Array B**	**17.10**	**55**	P	**P**	**03 28 01.0**	**+0.6**
	baz=281,slow=12,SNR=1.9						
ARCES				LR	LR	03 32 57.4	
	comp=Z,31nm,18.5s,baz=305,slow=31						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**03 28 29.0**	**-1.4**
	0.1nm,0.3s,baz=303,slow=13,SNR=1.9						
FINES				LR	LR	03 36 23.5	
	comp=Z,34nm,18.0s,baz=278,slow=38						
TULEG	**Thule**	**19.82**	**327**	P	**Pn**	**03 28 30.3**	**-1.5**
TULEG				IAmb	IAmb	03 28 47.8	
	comp=Z,17nm,1.0s						
CLL	**Collm**	**20.72**	**116**	*e*P	Pn	03 28 41.0	-1.5
	comp=Z,45nm,2.1s						
CLL				*i*		03 28 48.5	
	comp=Z,21nm,1.6s						
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P	**P**	**03 28 51.4**	**+3.7**
	comp=Z,32nm,1.7s						
KHC	**Kasperske Hory**	**22.69**	**118**	*e*P	**P**	**03 29 04.0**	**+2.6**
GERES	**GERESS Array B**	**22.97**	**119**	P	**P**	**03 29 06.5**	**+2.2**
	comp=Z,0.9nm,0.9s,baz=349,slow=11,SNR=4.9						
GERES				LR	LR	03 38 20.2	
	comp=Z,67nm,19.2s,baz=294,slow=38						
DAVOX	**Davos/Dischmat**	**23.34**	**127**	LR	LR	03 39 07.1	
	comp=Z,54nm,18.6s,baz=277,slow=39						
VRAC	**Vranov**	**23.71**	**114**	P	**P**	**03 29 11.4**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=333,slow=11,SNR=1.7						
VRAC				LR	LR	03 39 28.1	
	comp=Z,59nm,18.3s,baz=271,slow=39						
SCHQ	**Schefferville**	**26.04**	**271**	P	**P**	**03 29 32.9**	**0.0**
	comp=Z,6.7nm,1.0s,baz=45,slow=7.1,SNR=3.0						
ESDC	**Sonseca Array**	**26.28**	**156**	P	**P**	**03 29 36.7**	**+1.4**
	comp=Z,1.4nm,1.0s,baz=345,slow=11,SNR=4.3						
ESDC				LR	LR	03 39 45.5	
	comp=Z,55nm,18.8s,baz=5.0,slow=36						
RES	**Resolute Bay**	**26.44**	**324**	LR	LR	03 40 08.5	
	comp=Z,74nm,18.3s,baz=52,slow=37						
KEST	**Kesra**	**33.18**	**138**	LR	LR	03 44 52.1	
	comp=Z,53nm,18.2s,baz=289,slow=38						
BRTR	**Keskin Array B**	**38.49**	**105**	P	**P**	**03 31 23.9**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=340,slow=8.1,SNR=4.0						
KIV	**Kislovodsk**	**38.84**	**92**	P	**P**	**03 31 26.5**	**+1.6**
KIV				IAmb	IAmb	03 31 35.5	
	comp=Z,10nm,1.2s						
ULM	**Lac du Bonnet**	**41.59**	**289**	LR	LR	03 46 42.4	
	comp=Z,39nm,21.1s,baz=62,slow=33						
ILAR	**Eielson Array**	**45.66**	**332**	P	**P**	**03 32 23.0**	**+3.0**
	comp=Z,1.1nm,1.1s,baz=25,slow=4.7,SNR=5.7						
ILAR				LR	LR	03 52 47.1	
	comp=Z,31nm,19.2s,baz=48,slow=38						
ILAR	**Eielson Array**	**45.66**	**332**	P	**P**	**03 32 20.8**	**+0.7**
KKAR	**Karatay Array**	**51.27**	**70**	P	**P**	**03 33 04.8**	**+1.3**
MKAR	**Makanchi Array**	**52.71**	**58**	P	**P**	**03 33 15.9**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=328,slow=4.9,SNR=2.2						
PD31	**Pinedale Array**	**53.16**	**293**	P	**P**	**03 33 17.1**	**-0.8**
PD31				IAmb	IAmb	03 33 25.4	
	comp=Z,12nm,1.8s						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**03 33 18.9**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=58,slow=5.5,SNR=4.7						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**03 33 18.0**	**+0.1**
BW06	**Boulder Array**	**53.16**	**293**	P	**P**	**03 33 17.1**	**-0.8**
BW06				IAmb	IAmb	03 33 25.4	
	comp=Z,15nm,1.9s						
REDW	**Red Top Meadow**	**53.17**	**295**	P	**P**	**03 33 17.1**	**-0.9**
REDW				IAmb	IAmb	03 33 21.3	
	comp=Z,8.1nm,1.4s						
TOA0	**Torodi Ar. Sit**	**53.17**	**156**	P	**P**	**03 33 18.1**	**+0.2**
TORD	**Torodi Ar. Bea**	**53.17**	**156**	P	**P**	**03 33 18.6**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=343,slow=8.3,SNR=5.1						
TORD				LR	LR	03 57 29.0	
	comp=Z,26nm,18.3s,baz=200,slow=38						
TORD	**Torodi Ar. Bea**	**53.17**	**156**	P	**P**	**03 33 18.6**	**+0.7**

SKO ***05*** *03:40:48.2,41°.90N×23°.12E,h22km*
ATH ***05*** *03:40:49.2,41°.91N×23°.20E,h8km±4km,ML2.5/5, Error ellipse: s-maj=4.6km s-min=1.5km az=178.0*
BEO ***05*** *03:40:49.7±0.5,42°.03N×23°.07E,h4km±3km,ML2.4/9*
THE ***05*** *03:40:50.5,41°.86N×23°.20E,h6km,ML2.4/8, Error ellipse: s-maj=1.1km s-min=0.7km az=152.0*

ISC 05 03:40:47.5±1.1, 41°.92N±0°.02×23°.09E±0°.02, h2km±10km, n44, σ1§34/71, 9C-4D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIP	**Stip**	**0.71**	**252**	*i* Pg	**Pg**	**03 40 59.2**	**-2.0**
STIP				*i* Sg	**Sg**	**03 41 07.2**	**-3.2**
BOSS	**Bosilegrad**	**0.73**	**322**	*e*Pg	**Pg**	**03 41 02.4**	**+0.9**
BOSS				*e*Sg	**Sg**	**03 41 09.5**	**-1.5**
KNT	**Kendrikon**	**0.77**	**191**	P	**Pb**	**03 41 04.0**	**+0.3**
KNT				S	**Sb**	**03 41 14.4**	**-0.1**
KNT	**Kendrikon**	**0.77**	**191**	P	**Pb**	**03 41 04.0**	**+0.3**
KNT				S	**Sb**	**03 41 14.5**	**-0.1**
	250nm,0.1s						
NVR	**Nevrokopi**	**0.81**	**134**	P	**Pb**	**03 41 03.6**	**-0.8**
NVR				S	**Sb**	**03 41 14.0**	**-1.8**
NVR				AML	AML	03 41 14.4	
	comp=E,1057μm,0.3s						
NVR				AML	AML	03 41 14.7	
	comp=N,931μm,0.2s						
NVR	**Nevrokopi**	**0.81**	**134**	P	**Pb**	**03 41 03.6**	**-0.8**
NVR				S	**Sb**	**03 41 14.2**	**-1.6**
	comp=N,500nm,0.2s						
SRS	**Serrai**	**0.89**	**155**	P	**Pb**	**03 41 05.5**	**-0.2**
SRS				S	**Sb**	**03 41 17.3**	**-0.6**
SRS				AML	AML	03 41 20.5	
	comp=E,374μm,0.3s						
SRS				AML	AML	03 41 20.6	
	comp=N,662μm,0.3s						
SRS	**Serrai**	**0.89**	**155**	P	**Pb**	**03 41 05.5**	**-0.2**
SRS				S	**Sb**	**03 41 17.6**	**-0.3**
	comp=N,210nm,0.2s						
SOH	**Sokhos**	**1.12**	**170**	P	**Pn**	**03 41 10.0**	**-0.2**
SOH				S	**Sn**	**03 41 25.1**	**-1.0**
SOH				AML	AML	03 41 26.6	
	comp=E,536μm,0.3s						
SOH				AML	AML	03 41 28.5	
	comp=N,884μm,0.5s						
SOH	**Sokhos**	**1.12**	**170**	P	**Pn**	**03 41 09.9**	**-0.2**
SOH				S	**Sn**	**03 41 25.2**	**-1.0**
	comp=N,282nm,0.4s						
PLD	**Plovdiv**	**1.22**	**81**	*e*Pg	**Pg**	**03 41 11.3**	**+0.5**
PLD				*e*Sg	**Sn**	**03 41 27.1**	**-1.4**
SKO	**Skopje**	**1.23**	**273**	*e*Pg	**Pg**	**03 41 12.2**	**+1.1**
SKO				*e*Sg	**Sg**	**03 41 29.0**	**+1.9**
THE	**Thessaloniki**	**1.29**	**184**	P	**Pg**	**03 41 13.8**	**+1.5**
THE	**Thessaloniki**	**1.29**	**184**	P	**Pg**	**03 41 13.6**	**+1.3**
THE				S	**Sg**	**03 41 31.1**	**+2.1**
	comp=N,148nm,0.4s						
BARS	**Barje**	**1.30**	**314**	*e*Pn	**Sg**	**03 41 27.7**	**-1.6**
HORT	**Hortiatis**	**1.32**	**180**	P	**Pg**	**03 41 14.0**	**+1.1**
HORT				S	**Sg**	**03 41 32.2**	**+2.1**
HORT				AML	AML	03 41 33.5	
	comp=N,213μm,0.2s						
HORT				AML	AML	03 41 34.6	
	comp=E,260μm,0.3s						
HORT	**Hortiatis**	**1.32**	**180**	P	**Pg**	**03 41 14.0**	**+1.1**
HORT				S	**Sg**	**03 41 32.2**	**+2.1**
	comp=E,118nm,0.3s						
ZAPS	**Zavoj**	**1.39**	**346**	*e*Pn	**Pb**	**03 41 13.7**	**-0.5**
KAVA	**Kavala**	**1.42**	**130**	P	**Pg**	**03 41 14.5**	**-0.1**
KAVA				S	**Sg**	**03 41 32.7**	**-0.3**
KAVA				AML	AML	03 41 35.6	
	comp=N,597μm,0.2s						
KAVA				AML	AML	03 41 35.7	
	comp=E,419μm,0.3s						
KAVA	**Kavala**	**1.42**	**130**	P	**Pg**	**03 41 14.6**	**-0.1**
KAVA				S	**Sg**	**03 41 33.0**	**0.0**
	comp=E,478μm,0.2s						
PLG	**Polygyros**	**1.57**	**170**	P	**Pb**	**03 41 17.0**	**-0.3**
PLG				S	**Sb**	**03 41 37.2**	**-0.4**
	comp=E,88nm,0.5s						
OUR	**Ouranopolis**	**1.73**	**157**	P	**Pb**	**03 41 18.6**	**-1.3**
BLKB	**Belogradchik**	**1.73**	**350**	*e*Pn	**Pb**	**03 41 19.5**	**-0.4**
BLKB				*e*Sg	**Sb**	**03 41 42.2**	**+0.1**
BLKB	**Belogradchik**	**1.73**	**350**	⇓S	**Sg**	**03 41 43.7**	**+0.7**
THAS	**Thassos island**	**1.80**	**136**	P	**Pg**	**03 41 21.9**	**-0.1**
THAS	**Thassos island**	**1.80**	**136**	P	**Pb**	**03 41 19.7**	**-1.4**
SELS	**Selova**	**1.95**	**312**	*e*Pn	**Pn**	**03 41 21.6**	**0.0**
SELS				*e*Sg	**Sb**	**03 41 47.7**	**-0.7**
ZAGS	**Zajecar**	**1.99**	**342**	*e*Pn	**Pn**	**03 41 21.6**	**-0.5**
BOVS	**Bovan**	**1.99**	**330**	*e*Pn	**Pn**	**03 41 22.9**	**+0.8**
BOVS				*e*Sg	**Sb**	**03 41 49.4**	**-0.2**
RDO	**Rodhopi**	**2.00**	**112**	P	**Pb**	**03 41 24.1**	**-0.4**
RDO	**Rodhopi**	**2.00**	**112**	P	**Pb**	**03 41 23.1**	**-1.4**
PAIG	**Paliouri**	**2.04**	**167**	P	**Pn**	**03 41 23.1**	**+0.3**
BAIL	**Bailesti**	**2.10**	**5**	⇓S	**Sg**	**03 41 56.9**	**+1.7**
PUNG	**Punghina**	**2.36**	**357**	*e*Pn	**Pn**	**03 41 27.4**	**+0.2**
GRUS	**Gruza**	**2.63**	**319**	*e*Pn	**Pn**	**03 41 31.7**	**+0.8**
GRUS				*e*Sg	**Sb**	**03 42 10.0**	**+2.1**
SJES	**Sjenica**	**2.66**	**301**	*e*Pn	**Pb**	**03 41 33.7**	**-2.2**
IVAS	**Ivanjica**	**2.72**	**308**	*e*Pn	**Pn**	**03 41 33.1**	**+0.9**
SRE	**Strehaia**	**2.74**	**2**	⇑P	**Pg**	**03 41 40.1**	**+0.1**
SRE				⇓S	**Sg**	**03 42 17.8**	**+2.3**
SGRR	**Singureni**	**3.12**	**42**	⇑S	**Sg**	**03 42 24.8**	**-3.0**
DIVS	**Divibare**	**3.14**	**315**	*e*Pn	**Pn**	**03 41 38.2**	**+0.1**
GZR	**Gura Zlata**	**3.48**	**356**	⇓P	**Pn**	**03 41 42.3**	**-0.3**
GZR				⇑S	**Sg**	**03 42 39.3**	**+0.1**
VOIR		**3.79**	**21**	⇑P	**Pn**	**03 41 46.9**	**-0.1**
VOIR				⇑S	**Sn**	**03 42 33.1**	**+1.0**
BZS	**Buzias**	**3.84**	**344**	⇑P	**Pn**	**03 41 47.5**	**-0.1**
BZS				⇑S	**Sg**	**03 42 48.9**	**-2.1**
MLR	**Muntele Rosu**	**4.12**	**29**	⇑P	**Pn**	**03 41 55.0**	**+3.4**
MLR				⇑S	**Sn**	**03 42 43.8**	**+3.4**

IDC ***05*** *03:46:16.1±1.6, 12°.84N×143°.71E, h161km±18km, mb3.2/6, mb1 3.4/6, mb1mx3.2/41, mbtmp3.7/6, Error ellipse: s-maj=41.6km s-min=24.5km az=97.0*

ISC 05 03:46:15.3±1.1, 12°.8N±0°.2×143°.6E±0°.1, h150km, n7, σ0§66/8, mb3.5/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.46**	**59**	P	**Pn**	**03 46 44.1**	**-0.3**
	65nm,0.3s,baz=200,slow=12,SNR=14						
GUMO				S	**Sn**	**03 47 07.6**	**+0.9**
	62nm,0.3s,baz=105,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**33.83**	**196**	P	**P**	**03 52 43.6**	**+0.2**
	0.3nm,0.6s,baz=18,slow=9.7,SNR=2.0						
KLR	**Kul'dur**	**37.57**	**347**	P	**P**	**03 53 15.6**	**+0.5**
	1.3nm,0.4s,baz=176,slow=10,SNR=4.9						
SONM	**Songino Array**	**46.62**	**326**	P	**P**	**03 54 28.6**	**0.0**
	0.5nm,0.5s,baz=149,slow=9.7,SNR=3.6						
MKAR	**Makanchi Array**	**61.16**	**317**	P	**P**	**03 56 14.2**	**+0.2**
	0.4nm,0.6s,baz=121,slow=5.6,SNR=5.0						
ZALV	**Zalesovo Beam**	**61.50**	**325**	P	**P**	**03 56 15.9**	**-0.2**
	0.7nm,0.3s,baz=109,slow=8.4,SNR=2.7						
ILAR	**Eielson Array**	**69.78**	**25**	P	**P**	**03 57 08.0**	**-1.0**
	0.4nm,0.6s,baz=253,slow=6.0,SNR=6.2						

IDC ***05*** *03:55:10.5±1.0, 14°.75N×146°.91E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/43, mbtmp4.1/10, ML4.5/1, MS3.1/3, Ms1 3.2/3, ms1mx2.8/28, Error ellipse: s-maj=29.0km s-min=15.4km az=100.0*
NEIC ***05*** *03:55:13.0±1.1, 14°.58N±0°.07×147°.29E±0°.04, h36km±7km, mb4.4/16, Error ellipse: s-maj=11.1km s-min=4.3km az=194.0*

ISC 05 03:55:13.5±0.6, 14°.59N±0°.08×147°.23E±0°.08, h35km, n48, σ1§11/41, mb4.3/17, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.50**	**247**	Pn	**Pn**	**03 55 50.8**	**-0.8**
	124nm,0.3s,baz=94,slow=5.2,SNR=18						
GUMO				Sn	**Sn**	**03 56 19.0**	**-1.8**
	38nm,0.3s,baz=181,slow=7.0,SNR=4.4						
GUMO	**Guam**	**2.50**	**247**		**Pn**	**03 55 51.5**	**-0.1**
GUMO					**Sn**	**03 56 20.5**	**-0.3**
PATS	**Pohnpei**	**13.34**	**124**	Pn	**Pn**	**03 58 18.6**	**-1.9**
H11S3	**WAKE ISLAND Hy**	**19.05**	**76**	T	T	04 19 27.3	
	baz=261						
H11S1	**WAKE ISLAND Hy**	**19.07**	**76**	T	T	04 19 18.4	
	baz=261						
H11S2	**WAKE ISLAND Hy**	**19.07**	**76**	T	T	04 19 22.7	
	baz=261						
KRVT	**Keravat (AS076**	**19.37**	**165**	LR	LR	04 06 50.6	
	comp=Z,110nm,19.2s,baz=12,slow=36						
H11N1	**WAKE ISLAND Hy**	**19.46**	**72**	T	T	04 19 52.5	
	baz=258						
H11N2	**WAKE ISLAND Hy**	**19.47**	**72**	T	T	04 19 50.3	
	baz=258						
H11N3	**WAKE ISLAND Hy**	**19.48**	**72**	T	T	04 19 55.1	
	baz=258,slow=75						
SIJI	**Sorong**	**22.04**	**227**	P	**P**	**04 00 06.2**	**+1.0**
	7.2nm,0.6s,baz=36,slow=12,SNR=6.7						
FAKI	**Fak Fak**	**22.87**	**222**	P	**P**	**04 00 16.9**	**+2.8**
MJAR	**Matsushiro Arr**	**23.30**	**341**	P	**P**	**04 00 15.4**	**-2.9**
	78nm,0.8s,baz=166,slow=10.0,SNR=5.2						
MJAR	**Matsushiro Arr**	**23.30**	**341**	P	**P**	**04 00 18.1**	**-0.2**
JNU	**Nakatsue**	**23.68**	**324**	P	**P**	**04 00 21.8**	**-0.3**
JNU				IAmb	IAmb	04 00 37.3	
	comp=Z,15nm,1.0s						
HNR	**Honiara**	**27.00**	**151**	LR	LR	04 10 35.7	
	comp=Z,36nm,20.0s,baz=358,slow=34						
KSRS	**Korea Array**	**28.51**	**327**	P	**P**	**04 01 05.6**	**0.0**
	comp=Z,1.5nm,0.6s,baz=141,slow=9.4,SNR=6.1						
MTN	**Manton Dam**	**31.58**	**211**	P	**P**	**04 01 33.1**	**+0.2**
WB0	**Warramunga Arr**	**36.40**	**201**	P	**P**	**04 02 15.5**	**+0.7**
WB2	**Warramunga Arr**	**36.58**	**201**	P	**P**	**04 02 16.4**	**0.0**
WB2				IAmb	IAmb	04 02 24.7	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**36.59**	**201**	P	**P**	**04 02 18.0**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=23,slow=9.8,SNR=11						
WRA	**Warramunga Arr**	**36.59**	**201**	P	**P**	**04 02 15.4**	**-1.0**
KLR	**Kul'dur**	**36.80**	**343**	P	**P**	**04 02 17.1**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=176,slow=5.1,SNR=9.9						
FITZ	**Fitzroy Crossi**	**38.84**	**214**	P	**P**	**04 02 36.2**	**+0.8**
FITZ				IAmb	IAmb	04 02 37.4	
	comp=Z,5.5nm,1.1s						
ASAR	**Alice Springs**	**40.20**	**199**	P	**P**	**04 02 48.2**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=24,slow=8.9,SNR=7.3						
ASAR	**Alice Springs**	**40.20**	**199**	P	**P**	**04 02 46.0**	**-0.7**
CMAR	**Chiang Mai Arr**	**46.34**	**282**	LR	LR	04 22 42.5	
	comp=Z,16nm,19.6s,baz=25,slow=36						
SONM	**Songino Array**	**47.27**	**323**	P	**P**	**04 03 43.9**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=136,slow=6.4,SNR=13						
SONM	**Songino Array**	**

UZB				Lg	Lg	04 17 45.9			
	9.1nm,0.5s								
DJR	**Jarkent**	**3.81**	**320**	⇓*iP*	**Pg**	**04 17 06.7**	**-0.4**		
	4.7nm,0.4s								
DJR				*eS*	**Sg**	**04 17 56.2**	**-0.3**		
	7.7nm,0.6s								
DJR	**Jarkent**	**3.81**	**320**	Pg	**Pg**	**04 17 06.6**	**-0.4**		
	4.5nm,0.5s								
DJR				Lg	Lg	04 17 56.2			
	6.1nm,0.5s								
KPKS	**Kokpek**	**3.90**	**302**	*eP*	**Pg**	**04 17 07.7**	**-1.1**		
	13nm,0.5s								
KPKS				*eS*	**Sg**	**04 17 58.5**	**-0.9**		
	28nm,0.5s								
SATY	**Saty**	**3.91**	**296**	*eP*	**Pg**	**04 17 07.8**	**-1.1**		
	11nm,0.8s								
SATY				*eS*	**Sg**	**04 17 57.9**	**-1.7**		
	12nm,0.5s								
SATY	**Saty**	**3.91**	**296**	Pg	**Pg**	**04 17 07.8**	**-1.1**		
	11nm,0.8s								
SATY				Lg	Lg	04 17 57.9			
	12nm,0.5s								
MNBS	**Baschi**	**4.40**	**308**	*eP*	**Pg**	**04 17 16.6**	**-1.7**		
	8.4nm,0.5s								
MNBS				*eS*	**Sg**	**04 18 13.3**	**-2.1**		
	13nm,0.5s								
MNBS	**Baschi**	**4.40**	**308**	Pg	**Pg**	**04 17 16.6**	**-1.7**		
	8.4nm,0.5s								
MNBS				Lg	Lg	04 18 13.3			
	13nm,0.5s								
TNSS	**Tian-Shan**	**4.91**	**291**	*eP*	**Pg**	**04 17 26.9**	**-1.1**		
	2.6nm,0.5s								
TNSS				*eS*	**Sg**	**04 18 31.2**	**-0.5**		
	7.1nm,0.6s								
MK31	**Makanchi Array**	**5.37**	**353**	⇓Pg	**Pb**	**04 17 30.8**	**+2.9**		
	0.9nm,0.5s,baz=164,slow=15,SNR=4.7								
MK31				⇓Lg	Lg	04 18 43.6			
	12nm,0.6s,baz=165,slow=29,SNR=7.5								
MAKZ	**Makanchi**	**5.42**	**351**	⇑Pg	**Pb**	**04 17 32.0**	**+3.3**		
	1.8nm,0.8s								
MAKZ				⇑Lg	Lg	04 18 44.7			
	11nm,0.8s								
KST	**Kastek**	**5.61**	**289**	*eP*	**Pg**	**04 17 41.6**	**+0.2**		
	3.9nm,0.5s								
KST				*eS*	**Sg**	**04 18 56.2**	**+2.2**		
	10nm,0.6s								
ZSN	**Zaisan**	**6.10**	**11**	*eP*	**Pg**	**04 17 48.6**	**-2.1**		
	5.4nm,0.2s								
ZSN				*eS*	**Sg**	**04 19 08.4**	**-1.3**		
	12nm,0.6s								
ZSN	**Zaisan**	**6.10**	**11**	Pg	**Pg**	**04 17 48.6**	**-2.1**		
	5.9nm,0.3s								
ZSN				Lg	Lg	04 19 08.4			
	13nm,0.6s								

IDC ***05*** *04:28:19.8±1.8,4°.44S×144°.52E,h154km±18km,mb4.0/13, mb1 4.2/16,mb1mx4.0/31,mbtmp4.5/16,MS2.9/2, Ms1 2.9/2,ms1mx2.5/24,Error ellipse: s-maj=20.1km s-min=9.5km az=93.0*

NEIC ***05*** *04:28:20.4±1.1,4°.46S±0°.08×144°.5E±0°.1,h159km±7km, mb4.6/39,Error ellipse: s-maj=14.7km s-min=10.8km az=106.0*

ISC 05 04:28:19.8±0.4,**4°.47S**±0°.05×**144°.48E**±0°.07,**h150**km,**n77**, σ0**92**/83,**mb4.6**/33,**1C**,**Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.75**	**50**	Pn	**Pn**	**04 29 17.8**	**+0.9**
PMG	**Port Moresby**	**5.58**	**152**	P	**Pn**	**04 29 41.8**	**+0.9**
	2.1nm,0.3s,baz=348,slow=8.7,SNR=5.2						
PMG				S	**Sn**	**04 30 43.4**	**-0.9**
	1.6nm,0.3s,baz=350,slow=12,SNR=3.6						
PMG				LR	LR	04 32 11.9	
	comp=Z,81nm,19.3s,baz=192,slow=42						
PMG	**Port Moresby**	**5.58**	**152**		**Pn**	**04 29 41.6**	**+0.7**
PMG					**Sn**	**04 30 45.2**	**+0.8**
SIJI	**Sorong**	**13.68**	**285**	P	**Pn**	**04 31 28.3**	**+0.6**
	3.0nm,0.3s,baz=81,slow=17,SNR=2.8						
MTN	**Manton Dam**	**15.60**	**237**	Pn	**Pn**	**04 31 50.0**	**-1.7**
MTN				IAmb	IAmb	04 31 53.4	
	comp=Z,31nm,0.8s						
CTA	**Charters Tower**	**15.62**	**174**	P	**P**	**04 31 54.6**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=12,SNR=2.2						
HNR	**Honiara**	**16.12**	**109**		**Pn**	**04 31 57.2**	**-0.9**
WB0	**Warramunga Arr**	**18.11**	**212**	P	**P**	**04 32 20.2**	**-0.2**
WB0				IAmb	IAmb	04 32 23.5	
	comp=Z,29nm,0.9s						
WR0	**Warramunga Arr**	**18.19**	**211**	P	**P**	**04 32 21.2**	**0.0**
WRAB	**Tennant Creek**	**18.27**	**212**	P	**P**	**04 32 22.1**	**0.0**
WRAB				IAmb	IAmb	04 32 25.3	
	comp=Z,35nm,0.8s						
WB2	**Warramunga Arr**	**18.28**	**212**	P	**P**	**04 32 22.3**	**+0.1**
WRA	**Warramunga Arr**	**18.29**	**212**	P	**P**	**04 32 22.6**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=32,slow=11,SNR=147						
WRA				S	**S**	**04 35 39.7**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=19,slow=19,SNR=3.0						
WRA				LR	LR	04 40 00.7	
	comp=Z,43nm,18.4s,baz=55,slow=38						
WRA	**Warramunga Arr**	**18.29**	**212**	P	**P**	**04 32 21.8**	**-0.5**
KNRA	**Kununurra**	**19.05**	**233**	P	**P**	**04 32 30.3**	**-0.4**
SOEI	**Soe**	**20.73**	**254**	P	**P**	**04 32 50.9**	**+2.0**
SOEI					**S**	**04 36 33.3**	**+0.9**
AS31	**Alice Springs**	**21.65**	**207**	P	**P**	**04 32 58.8**	**+0.3**
ASAR	**Alice Springs**	**21.65**	**207**	P	**P**	**04 32 59.3**	**+0.8**
	comp=Z,18nm,0.7s,baz=35,slow=9.6,SNR=188						
ASAR				S	**S**	**04 36 48.8**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=31,slow=18,SNR=17						
ASAR	**Alice Springs**	**21.65**	**207**	P	**P**	**04 32 58.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.88**	**232**	P	**P**	**04 33 09.4**	**-1.1**
	comp=Z,6.9nm,0.5s,baz=45,slow=10,SNR=40						
FITZ	**Fitzroy Crossi**	**22.88**	**232**	P	**P**	**04 33 09.4**	**-1.1**
BBOO	**Buckleboo**	**29.28**	**195**	P	**P**	**04 34 07.2**	**-0.8**
PSA00	**Pilbara Seismi**	**29.33**	**232**	P	**P**	**04 34 09.9**	**+1.3**
PSA00				IAmb	IAmb	04 34 13.9	
	comp=Z,5.6nm,0.7s						
FORT	**Forrest**	**30.41**	**209**	P	**P**	**04 34 17.5**	**-0.5**
FORT				IAmb	IAmb	04 34 19.6	
	comp=Z,11nm,0.8s						
JHS	**Saijyo**	**40.69**	**346**	P	**P**	**04 35 44.9**	**-0.7**
NJ2	**Nanjing**	**43.74**	**328**	*eP*	**P**	**04 36 11.1**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	**Korea Array**	**44.47**	**341**	P	**P**	**04 36 15.7**	**-0.3**
	comp=Z,4.3nm,0.9s,baz=161,slow=9.4,SNR=13						
USRK	**Ussuriysk Ar.**	**49.73**	**348**	P	**P**	**04 36 56.1**	**-0.5**
	comp=Z,3.6nm,0.7s,baz=172,slow=5.6,SNR=7.1						
CMAR	**Chiang Mai Arr**	**50.32**	**298**	P	**P**	**04 37 01.8**	**+0.2**
	comp=Z,3.2nm,0.5s,baz=124,slow=7.5,SNR=9.8						
CMAR	**Chiang Mai Arr**	**50.32**	**298**	P	**P**	**04 37 00.2**	**-1.4**
CN2	**Changchun**	**51.02**	**342**	*eP*	**P**	**04 37 07.0**	**+0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**54.23**	**329**	*eP*	**P**	**04 37 30.1**	**-0.1**
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,5.3s						
LZH	**Lanzhou**	**55.43**	**320**	⇑P	**P**	**04 37 39.5**	**+0.5**
LZH				pP	pP	04 38 12.4	-1.5
LZH				sP	sP	04 38 18.2	-12
LZH				PP	**PP**	**04 39 46.7**	**+2.1**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,6.8s						
PETK	**Petropavlovsk-**	**58.44**	**9**	P	**P**	**04 37 59.3**	**-0.3**
	comp=Z,8.7nm,0.9s,baz=200,slow=10,SNR=2.7						
PETK	**Petropavlovsk-**	**58.44**	**9**	P	**P**	**04 37 59.6**	**-0.1**
SONM	**Songino Array**	**61.87**	**332**	P	**P**	**04 38 22.6**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=153,slow=7.2,SNR=6.8						
SONM	**Songino Array**	**61.87**	**332**	P	**P**	**04 38 22.4**	**-0.9**
WMQ	**Urumqi**	**70.01**	**320**	*eP*	**P**	**04 39 16.7**	**+1.4**
VNDA	**Vanda**	**73.59**	**176**	P	**P**	**04 39 36.8**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=319,slow=6.3,SNR=13						
VNDA	**Vanda**	**73.59**	**176**	P	**P**	**04 39 36.7**	**+0.7**
MK31	**Makanchi Array**	**74.73**	**321**	P	**P**	**04 39 42.4**	**-0.8**
MKAR	**Makanchi Array**	**74.73**	**321**	P	**P**	**04 39 43.0**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=106,slow=7.4,SNR=24						
MKAR	**Makanchi Array**	**74.73**	**321**	P	**P**	**04 39 42.5**	**-0.7**
MAKZ	**Makanchi**	**74.93**	**321**	P	**P**	**04 39 43.9**	**-0.5**
ZALV	**Zalesovo Beam**	**76.39**	**328**	P	**P**	**04 39 51.3**	**-1.1**
	comp=Z,3.1nm,0.6s,baz=116,slow=5.0,SNR=11						
ZALV	**Zalesovo Beam**	**76.39**	**328**	P	**P**	**04 39 51.6**	**-0.9**
KKAR	**Karatay Array**	**81.43**	**315**	P	**P**	**04 40 19.4**	**-0.8**

MAW	**Mawson**	**82.69**	**202**	P	**P**	**04 40 26.7**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=68,slow=4.4,SNR=8.0						
MAW	**Mawson**	**82.69**	**202**	P	**P**	**04 40 26.4**	**+0.2**
IMAR	**Indian Mountai**	**82.97**	**21**	P	**P**	**04 40 27.9**	**+0.3**
NRIK	**Noril'sk**	**83.06**	**343**	P	**P**	**04 40 27.2**	**-0.8**
	comp=Z,5.0nm,0.7s,baz=123,slow=5.7,SNR=7.6						
RND	**Reindeer**	**83.76**	**25**	P	**P**	**04 40 31.5**	**-0.4**
BRVK	**Borovoye**	**84.14**	**324**	P	**P**	**04 40 33.4**	**-0.5**
BRVK				IAmb	IAmb	04 40 34.5	
	comp=Z,6.0nm,0.9s						
DHY	**Denali Highway**	**84.25**	**25**	P	**P**	**04 40 34.5**	**0.0**
DHY				IAmb	IAmb	04 40 35.3	
	comp=Z,11nm,0.8s						
WRH	**Wood River Hil**	**84.48**	**24**	P	**P**	**04 40 34.9**	**-0.5**
WRH				IAmb	IAmb	04 40 35.3	
	comp=Z,9.0nm,0.8s						
CCB	**Clear Creek Bu**	**84.66**	**24**	P	**P**	**04 40 35.6**	**-0.7**
CCB				IAmb	IAmb	04 40 36.0	
	comp=Z,9.6nm,0.7s						
TCOL	**CIGO, UAF Yank**	**84.73**	**23**	P	**P**	**04 40 35.9**	**-0.7**
TCOL				IAmb	IAmb	04 40 36.8	
	comp=Z,7.3nm,0.7s						
COLA	**College**	**84.73**	**23**	P	**P**	**04 40 35.9**	**-0.7**
COLA				IAmb	IAmb	04 40 36.8	
	comp=Z,7.7nm,0.7s						
COLD	**Coldfoot**	**84.79**	**21**	P	**P**	**04 40 37.1**	**+0.2**
COLD				IAmb	IAmb	04 40 49.0	
	comp=Z,5.2nm,0.5s						
HDA	**Harding Lake**	**84.92**	**24**	P	**P**	**04 40 36.9**	**-0.8**
IL31		**85.08**	**24**	P	**P**	**04 40 37.1**	**-1.2**
IL31				IAmb	IAmb	04 40 38.1	
	comp=Z,8.0nm,0.8s						
ILAR	**Eielson Array**	**85.08**	**24**	P	**P**	**04 40 36.9**	**-1.5**
	comp=Z,6.6nm,0.7s,baz=254,slow=5.0,SNR=89						
ILAR	**Eielson Array**	**85.08**	**24**	P	**P**	**04 40 37.2**	**-1.2**
QSPA	**South Pole Qui**	**85.49**	**180**	P	**P**	**04 40 40.7**	**+0.1**
QSPA				IAmb	IAmb	04 40 41.6	
	comp=Z,6.4nm,0.8s						
RIDG	**Independent Ri**	**85.55**	**25**	P	**P**	**04 40 41.1**	**+0.2**
RIDG				IAmb	IAmb	04 40 41.5	
	comp=Z,13nm,1.0s						
TOLK	**Toolik Lake Re**	**85.59**	**20**	P	**P**	**04 40 41.1**	**+0.2**
MENT	**Mentasta**	**85.77**	**26**	P	**P**	**04 40 42.0**	**+0.1**
MENT				IAmb	IAmb	04 40 43.0	
	comp=Z,6.4nm,0.6s						
DOT	**Dot Lake**	**85.85**	**25**	P	**P**	**04 40 42.4**	**+0.1**
DOT				IAmb	IAmb	04 40 43.5	
	comp=Z,11nm,0.8s						
BARN	**Barnard Glacie**	**86.14**	**28**	P	**P**	**04 40 43.9**	**-0.1**
BCAR	**Beaver Creek A**	**86.66**	**26**	P	**P**	**04 40 46.4**	**+0.1**
K27K	**Chicken**	**86.81**	**25**	P	**P**	**04 40 47.2**	**+0.2**
EGAK	**Eagle**	**87.40**	**24**	P	**P**	**04 40 49.9**	**+0.2**
EGAK				IAmb	IAmb	04 40 51.2	
	comp=Z,3.8nm,0.8s						
DAWY	**Dawson**	**87.96**	**25**	P	**P**	**04 40 52.6**	**+0.2**
DAWY				IAmb	IAmb	04 40 54.0	
	comp=Z,6.8nm,0.9s						
HYT	**Haines Junctio**	**88.05**	**29**	P	**P**	**04 40 53.1**	**0.0**
TORD	**Torodi Ar. Bea**	**142.28**	**286**	PKP	**PKPdf**	**04 47 35.4**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=37,slow=2.8,SNR=2.1						
TORD	**Torodi Ar. Bea**	**142.28**	**286**		**PKPdf**	**04 47 34.1**	**-1.4**
DBIC	**Dimbokro**	**149.41**	**276**	PKPbc	**PKPbc**	**04 47 51.7**	**-0.6**
	comp=Z,5.6nm,1.0s,baz=265,slow=1.0,SNR=5.0						
DBIC	**Dimbokro**	**149.41**	**276**		**PKPbc**	**04 47 50.7**	**-1.5**

GCG ***05*** *04:30:15.5±0.6,15°.26N×92°.27W,h90km±13km,MD3.7*
MEX ***05*** *04:30:16.8±0.5,14°.93N×92°.01W,h109km±4km,MD3.6*

ISC 05 04:30:17.6±2.5,**14°.8N**±0°.4×**92°.3W**±0°.2,**h100**km,**n5**, σ0**98**/9,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.17**	**23**	*eP*	**Pn**	**04 30 31.1**	**-0.7**
THIG				*eS*	**Sn**	**04 30 41.9**	**-0.3**
STG3	**Santiaguito 3,**	**0.74**	**93**	*eP*	**Pn**	**04 30 34.2**	**-1.4**
STG3				*eS*	**Sn**	**04 30 49.5**	**+0.4**
ERG	**Entre ros, C**	**0.80**	**113**	*eP*	**Pn**	**04 30 36.0**	**0.0**
PCIG		**1.27**	**318**	*eP*	**Pn**	**04 30 40.9**	**-0.3**
PCIG				*eS*	**Sn**	**04 31 00.1**	**+1.2**
FUG	**Fuego 3**	**1.47**	**102**	*eP*	**Pn**	**04 30 43.6**	**-0.1**
FUG				*eS*	**Sn**	**04 31 04.8**	**+1.3**

IDC 05 04:42:44.1±4.0,**1°.85N×97°.63E,h0**km,**mb3.5**/5,**mb1 3.6**/5, **mb1mx3.3**/32,**mbtmp3.5**/5,**Error ellipse: s-maj=165.0km s-min=24.9km az=59.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**26.79**	**249**	T	T	05 15 16.3	
	baz=70,slow=74						
H08S3	**Diego Garcia H**	**26.80**	**249**	T	T	05 15 20.5	
	baz=70,slow=74						
H08S1	**Diego Carcia H**	**26.81**	**249**	T	T	05 15 21.6	
	baz=70,slow=74						
WRA	**Warramunga Arr**	**42.01**	**123**	P	P	04 50 37.6	-0.1
	0.1nm,0.4s,baz=304,slow=9.4,SNR=1.5						
ASAR	**Alice Springs**	**43.44**	**128**	P	P	04 50 49.0	-0.3
	0.1nm,0.4s,baz=316,slow=7.8,SNR=2.2						
SONM	**Songino Array**	**46.43**	**8**	P	P	04 51 13.3	+0.5
	0.9nm,0.6s,baz=191,slow=9.6,SNR=5.2						
MKAR	**Makanchi Array**	**46.73**	**346**	P	P	04 51 14.6	-0.4
	0.5nm,0.5s,baz=170,slow=8.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**52.99**	**351**	P	P	04 52 02.1	-0.4
	0.8nm,0.4s,baz=165,slow=7.9,SNR=1.8						

ANF ***05*** *04:45:29.3±1.7,41°.87N×119°.61W,h1km±16km,ML3.3/13, Error ellipse: s-maj=5.0km s-min=3.2km az=68.0*
REN ***05*** *04:45:30.6±4.3,41°.89N±0°.04×119°.61W±0°.04,h1km±6km, ML3.5/4,ML3.2/41(SEA),Error ellipse: s-maj=5.6km s-min=4.3km az=167.0*
SEA ***05*** *04:45:32.4±3.9,41°.84N±0°.04×119°.73W±0°.05,h0km±6km, Error ellipse: s-maj=6.0km s-min=5.0km az=67.0*
NEIC ***05*** *04:45:33.3±1.3,42°.01N±0°.03×119°.74W±0°.03,h15km±6km, Error ellipse: s-maj=5.5km s-min=2.2km az=206.0*

ISC 05 04:45:32.1±1.4,**41°.95N**±0°.03×**119°.70W**±0°.03,**h5**km±11km, **n57**,σ1**42**/70,**Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.45**	**265**		**Pg**	**04 45 40.5**	**-0.2**
MOD				Sg	**Sg**	**04 45 47.7**	**+1.0**
K05A	**Summer Lake**	**1.18**	**312**	Pn	**Pg**	**04 45 54.7**	**0.0**
K05A				Sn	**Sn**	**04 46 12.4**	**+0.5**
M04C	**Macdoel**	**1.60**	**265**	P	**Pn**	**04 45 59.7**	**-1.5**
	baz=86,SNR=112						
M04C				Sb	**Sg**	**04 46 24.3**	**+0.7**
	baz=86						
K04D	**Chiloquin, OR**	**1.67**	**295**	P	**Pn**	**04 46 00.8**	**-1.2**
	baz=114,SNR=37						
K04D				Sb	**Sg**	**04 46 27.0**	**+1.4**
	baz=114						
J08A	**Circle Bar Ran**	**1.68**	**32**		**Pn**	**04 46 00.7**	**-1.5**
J08A				Sn	**Sn**	**04 46 22.5**	**-1.6**
J05D	**Fort Rock, OR**	**1.75**	**320**	P	**Pn**	**04 46 02.3**	**-0.9**
	baz=139,SNR=68						
J05D				Sb	**Sg**	**04 46 29.7**	**+1.4**
	baz=139						
L04D	**Klamath Falls**	**1.96**	**279**	P	**Pn**	**04 46 04.5**	**-1.5**
	baz=98,SNR=34						
L04D				Sb	**Sb**	**04 46 34.9**	**+2.0**
	baz=98						
WVA	**Winnemucca Val**	**2.00**	**183**		**Pn**	**04 46 06.4**	**-0.3**
PINE	**Pine Mountain**	**2.06**	**334**	Pn	**Pn**	**04 46 06.7**	**-0.8**
BEKR	**Beckworth**	**2.14**	**194**		**Pn**	**04 46 08.8**	**+0.2**
I07A	**Izee**	**2.14**	**4**	Pn	**Pn**	**04 46 07.3**	**-1.3**
J04D	**Umpqua Nationa**	**2.20**	**307**	Sb	**Sb**	**04 46 41.7**	**+1.7**
	baz=126						
PAHR	**Pah Rah Range**	**2.25**	**174**		**Pn**	**04 46 09.7**	**-0.3**
YBH	**Yreka Blue Hor**	**2.26**	**266**		**Pn**	**04 46 08.6**	**-1.5**
O03E	**Paynes Creek**	**2.29**	**225**	P	**Pn**	**04 46 08.7**	**-1.8**
	baz=45,SNR=75						
O03E				Sb	**Sb**	**04 46 42.2**	**-0.3**
	baz=45						
LOY	**Loyalton**	**2.32**	**190**		**Pb**	**04 46 12.2**	**-2.2**
PEAR	**Peavine Mounta**	**2.34**	**185**		**Pb**	**04 46 12.9**	**-2.0**
M02C	**Callahan**	**2.42**	**258**	P	**Pn**	**04 46 10.1**	**-2.3**
	baz=77						
M02C				Sb	**Sb**	**04 46 47.7**	**+1.3**
	baz=77						
N02D	**Trinity Center**	**2.46**	**248**	P	**Pn**	**04 46 10.6**	**-2.2**
	baz=68,SNR=23						
N02D				Sb	**Sb**	**04 46 48.2**	**+0.9**
	baz=68						
KBF	**Kyburz Flat**	**2.47**	**189**		**Pb**	**04 46 15.0**	**-2.0**
VPK	**Verdi Peak**	**2.48**	**186**		**Pb**	**04 46 16.4**	**-0.8**
HUMO	**Hull Mountain**	**2.50**	**286**		**Pn**	**04 46 12.0**	**-1.5**
WDC	**Whiskeytown Da**	**2.54**	**238**		**Pn**	**04 46 12.2**	**-1.7**
IND	**Independence**	**2.55**	**190**		**Pb**	**04 46 17.1**	**-1.3**
VCNR	**Virginia City**	**2.65**	**179**		**Pn**	**04 46 15.1**	**-0.5**
I05D	**Terrebonne, OR**	**2.67**	**334**	Pb	**Pb**	**04 46 19.9**	**-0.6**
	baz=152						
I04A	**Tendick Farm,**	**2.72**	**314**	Pb	**Pb**	**04 46 20.8**	**-0.4**
	baz=132						
I04A				Sb	**Sg**	**04 46 58.1**	**-1.2**
	baz=132						
ORV	**Oroville**	**2.75**	**210**		**Pn**	**04 46 17.6**	**+0.7**
PNTR	**Pine Nut**	**2.85**	**178**		**Pb**	**04 46 20.0**	**-3.6**
L02E	**Cave Junction**	**2.91**	**275**	P	**Pn**	**04 46 18.8**	**-0.3**
	baz=94,SNR=15						
L02E				Sb	**Sb**	**04 47 01.9**	**+1.5**
	baz=94						
K02D	**Willamette Mer**	**3.03**	**286**	P	**Pn**	**04 46 20.5**	**-0.3**
	baz=104,SNR=73						
K02D				Sb	**Sb**	**04 47 07.0**	**+3.2**
	baz=104						
AFDM	**Forest Hills D**	**3.15**	**198**		**Pn**	**04 46 23.3**	**+1.0**
I03D	**Drain, OR**	**3.20**	**304**	Sb	**Sb**	**04 47 12.6**	**+3.9**
	baz=122						
KHMM	**Horse Mountain**	**3.21**	**252**	Pn	**Pn**	**04 46 23.0**	**-0.3**
MFID	**Camas Ranch**	**3.21**	**62**		**Pn**	**04 46 21.8**	**-1.4**
G08A	**Pilot Rock**	**3.39**	**9**	Pn	**Pn**	**04 46 25.2**	**-0.4**
BMO	**Blue Mountains**	**3.39**	**30**	Pn	**Pn**	**04 46 25.9**	**+0.2**
RYN	**Ryan**	**3.44**	**164**		**Pn**	**04 46 27.9**	**+1.5**
WAKR	**Walker**	**3.44**	**177**	Pn	**Pn**	**04 46 27.7**	**+1.2**
KMRM	**Mail Ridge**	**3.48**	**242**	Pn	**Pn**	**04 46 26.9**	**-0.1**
ELK	**Elko**	**3.57**	**108**		**Pn**	**04 46 29.2**	**+0.9**
NVAR	**Mina Array Bea**	**3.67**	**163**		**Pn**	**04 46 31.2**	**+1.6**
NV11	**Mina Array Sit**	**3.70**	**161**	Pn	**Pn**	**04 46 31.3**	**+1.2**
LHV	**Little Huntoon**	**3.80**	**166**	Pn	**Pn**	**04 46 32.5**	**+1.2**
CMB	**Columbia Colle**	**3.94**	**188**	Pn	**Pn**	**04 46 34.8**	**+1.5**
PLID	**Pearl Lake**	**4.14**	**39**	Pn	**Pn**	**04 46 36.1**	**0.0**
HLID	**Hailey**	**4.22**	**66**	P	**Pn**	**04 46 35.1**	**-2.1**
	baz=248						
HLID	**Hailey**	**4.22**	**66**	Pn	**Pn**	**04 46 36.3**	**-0.9**
MDPB	**Devils Postpil**	**4.33**	**173**	Pn	**Pn**	**04 46 39.7**	**+0.9**
OMMB	**Old Mammoth Mi**	**4.36**	**173**	Pn	**Pn**	**04 46 40.0**	**+0.7**
R11A	**Troy Canyon, C**	**4.78**	**137**		**Pn**	**04 46 45.1**	**+0.2**
BGU	**Big Grassy Mou**	**5.12**	**99**		**Pn**	**04 46 49.9**	**+0.4**
BCYI	**Bear Canyon**	**5.18**	**61**	Pn	**Pn**	**04 46 50.4**	**0.0**
SPUT	**South Promonto**	**5.47**	**94**	Pn	**Pn**	**04 46 54.9**	**+0.5**
PSUT	**Pine Spring**	**5.62**	**125**		**Pn**	**04 46 57.4**	**+0.8**
TPNV	**Topopah Spring**	**5.66**	**151**	Pn	**Pn**	**04 46 58.0**	**+1.0**
PRN	**Pahroc Range**	**5.78**	**140**		**Pn**	**04 46 59.4**	**+0.8**

IDC ***05*** *05:05:58.3±0.7,3°.23S×152°.57E,h308km±4km,mb3.6/14, mb1 3.7/16,mb1mx3.5/36,mbtmp4.2/16,Error ellipse: s-maj=19.9km s-min=12.0km az=97.0*
NEIC ***05*** *05:05:59.0±1.4,3°.26S±0°.09×152°.4E±0°.1,h312km±6km, mb4.3/14,Error ellipse: s-maj=18.8km s-min=11.9km az=75.0*

ISC 05 05:05:58.1±0.6,**3°.25S**±0°.07×**152°.4E**±0°.1,**h300**km,**n39**, σ1**39**/43,**mb4.1**/18,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.96**	**193**	Pn	**Pn**	**05 06 40.3**	**+1.9**
KRVT	**Keravat (AS076**	**1.11**	**198**	P	**Pn**	**05 06 41.2**	**+2.2**
	49nm,0.3s,baz=120,slow=1.4,SNR=11						
KRVT				S	**S**	**05 07 14.2**	**+2.7**
	17nm,0.3s,baz=271,slow=23,SNR=8.2						
MANU	**Manus Island**	**5.15**	**283**	Pn	**Pn**	**05 07 18.4**	**+1.0**
PMG	**Port Moresby**	**8.02**	**220**	P	**Pn**	**05 07 53.5**	**+1.5**
	2.1nm,0.3s,baz=12,slow=7.3,SNR=3.6						
CTA	**Charters Tower**	**17.77**	**199**	P	**P**	**05 09 45.7**	**+0.3**
	0.4nm,0.3s,baz=8.0,slow=9.5,SNR=1.8						
CTAO	**Charters Tower**	**17.77**	**199**	P	**P**	**05 09 45.4**	**0.0**
CTAO				IAmb	IAmb	05 09 57.5	
	comp=Z,16nm,1.1s						
DZM	**Mont Dzumac**	**23.16**	**145**	P	**P**	**05 10 38.0**	**-0.9**
	comp=Z,4.3nm,0.8s,baz=330,slow=20,SNR=1.7						
WB0	**Warramunga Arr**

PIZC				*i*			05 26 37.5	
	comp=Z,250nm,0.5s							
DBBC	**Dabeiba**	**1.71**	**67**	⇑*e*P	**Pn**	**05 26 17.6**	**0.0**	
DBBC				*e*S	**Sn**	**05 26 38.4**	**-0.8**	
DBBC	**Dabeiba**	**1.71**	**67**	⇑*e*P	**Pn**	**05 26 17.6**	**0.0**	
DBBC				*e*S	**Sn**	**05 26 35.5**	**-3.7**	
CBOC	**Ciudad Bolivar**	**1.84**	**105**	⇑*e*P	**Pn**	**05 26 18.4**	**-1.1**	
HELC	**Santa Helena**	**2.26**	**94**	⇑*i*P	**Pn**	**05 26 25.8**	**+0.3**	
HELC				*e*S	**Sn**	**05 26 52.5**	**-0.6**	
HELC				*i*		05 27 05.6		
	comp=Z,80nm,0.5s							
CAPC	**Capurgana**	**2.32**	**11**	*e*P	**Pn**	**05 26 27.2**	**+1.3**	
CAPC				*i*		05 27 15.8		
	comp=Z,105nm,0.6s							
UREC	**San Jos de Ur**	**2.65**	**58**	*e*P	**Pn**	**05 26 31.6**	**+1.1**	
UREC				*i*		05 27 12.6		
	comp=N,117nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.66**	**115**	*e*P	**Pn**	**05 26 31.2**	**+0.2**	
GUY2C				*i*		05 27 19.1		
	comp=Z,66nm,0.7s							
YOTC	**Yotoco, Valle**	**2.76**	**148**	*e*P	**Pn**	**05 26 31.6**	**-0.5**	
AZU	**Azuero**	**2.85**	**300**	⇓*i*P	**Pn**	**05 26 34.2**	**+1.0**	
AZU				*e*S	**Sn**	**05 27 06.4**	**-0.8**	
ANIL	**Santa Ana**	**3.01**	**128**	*e*P	**Pn**	**05 26 37.4**	**+1.7**	
NORC	**Norcasia**	**3.01**	**105**	*e*P	**Pn**	**05 26 37.6**	**+2.1**	
NORC				*i*		05 27 24.1		
	comp=N,66nm,0.6s							
TOLC	**Tolima**	**3.02**	**125**	*e*P	**Pn**	**05 26 37.2**	**+1.3**	
CHPO	**Chepo, Panama**	**3.10**	**335**	⇑*i*P	**Pn**	**05 26 36.5**	**-0.2**	
CHPO				*e*S	**Sn**	**05 27 12.6**	**-0.7**	
UPA	**Univ. de Panam**	**3.13**	**327**	*e*P	**Pn**	**05 26 36.1**	**-1.1**	
CACAO	**El Cacao, Vera**	**3.20**	**288**	⇓*i*P	**Pn**	**05 26 38.7**	**+0.6**	
CACAO				*e*S	**Sn**	**05 27 13.6**	**-2.4**	
MOTC	**Monteria, Cord**	**3.21**	**41**	*e*P	**Pn**	**05 26 39.1**	**+0.9**	
MOTC				*e*S	**Sn**	**05 27 15.8**	**-0.4**	
MOTC				*i*		05 27 23.3		
	comp=Z,19nm,0.4s							
PTBC	**PUERTO BERRIO,**	**3.32**	**86**	*e*P	**Pn**	**05 26 41.3**	**+1.5**	
PTBC				*i*		05 27 11.2		
	comp=Z,59nm,0.8s							
ORTC	**Ortega, Tolima**	**3.51**	**134**	*e*P	**Pn**	**05 26 44.9**	**+2.6**	
SPBC	**San Pablo de B**	**3.77**	**100**	⇓*e*P	**Pn**	**05 26 47.9**	**+1.9**	
SPBC				*e*S	**Sb**	**05 27 39.0**	**-1.1**	
ROSC	**El Rosal**	**3.77**	**113**	*e*P	**Pn**	**05 26 49.5**	**+3.3**	
POPC	**Popayan, Colom**	**3.94**	**164**	*e*P	**Pn**	**05 26 50.1**	**+1.6**	
POPC				*e*S	**Sn**	**05 27 33.9**	**-0.7**	
BRRC	**Barranca, Sant**	**4.13**	**79**	*e*P	**Pn**	**05 26 53.1**	**+2.3**	
PCON	**Cinco Dias**	**4.23**	**161**	*e*P	Pn	05 26 58.1	+5.4	
CHIC	**Chingaza**	**4.39**	**113**	*e*P	**Pn**	**05 26 57.3**	**+2.5**	
RUSC	**La Rusia**	**4.71**	**95**	*e*P	**Pn**	**05 27 01.5**	**+2.2**	
GARC	**Garzon, Huila**	**4.73**	**151**	*e*P	**Pn**	**05 27 02.8**	**+3.5**	
OCAC	**Ocana**	**4.82**	**67**	*e*P	**Pn**	**05 27 02.3**	**+1.7**	
GCUF	**Volcan Galeras**	**5.11**	**175**	*e*P	Pn	05 27 10.7	+6.0	
PAMC	**Pamplona, Colo**	**5.16**	**79**	*e*P	**Pn**	**05 27 07.7**	**+2.3**	

BUC 05 05:37:52.2±0.3, 45°66N×26°58E, h142km±2km, ml3.6/27, 78C-62D, Error ellipse: s-maj=1.9km s-min=1.8km az=149.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BISRR	**Bisoca**	**0.14**	**140**	⇓P	Pn	05 38 12.1	+0.5
BISRR				⇑S	Sn	05 38 26.6	+0.5
BISRR	**Bisoca**	**0.14**	**140**	⇓P	Pn	05 38 12.1	+0.5
BISRR				⇑S	Sn	05 38 26.6	+0.5
PLOR	**Plostina**	**0.20**	**14**	⇑P	Pn	05 38 11.8	+0.2
PLOR				⇑S	Sn	05 38 26.4	0.0
PLOR	**Plostina**	**0.20**	**14**	⇑P	Pn	05 38 11.8	+0.2
PLOR				⇑S	Sn	05 38 26.4	0.0
VRI	**Vrincioaia**	**0.23**	**26**	⇓P	Pn	05 38 11.9	+0.3
VRI				⇓S	Sn	05 38 26.8	+0.3
VRI	**Vrincioaia**	**0.23**	**26**	⇓P	Pn	05 38 11.9	+0.3
VRI				⇓S	Sn	05 38 26.8	+0.3
NEHR	**Nehoiu**	**0.30**	**221**	⇓P	Pn	05 38 12.5	+0.6
NEHR				⇓S	Sn	05 38 27.2	+0.4
NEHR	**Nehoiu**	**0.30**	**221**	⇓P	Pn	05 38 12.5	+0.6
NEHR				⇓S	Sn	05 38 27.2	+0.4
ODBI	**Odobesti**	**0.35**	**72**	⇑P	Pn	05 38 13.1	+1.1
ODBI				⇓S	Sn	05 38 27.5	+0.6
ODBI	**Odobesti**	**0.35**	**72**	⇑P	Pn	05 38 13.1	+1.1
ODBI				⇓S	Sn	05 38 27.5	+0.6
PETR	**Petresti**	**0.46**	**82**	⇓P	Pn	05 38 13.2	+0.8
PETR				⇓S	Sn	05 38 29.1	+1.4
PETR	**Petresti**	**0.46**	**82**	⇓P	Pn	05 38 13.2	+0.8
PETR				⇓S	Sn	05 38 29.1	+1.4
MLR	**Muntele Rosu**	**0.48**	**250**	⇑P	Pn	05 38 13.1	+0.4
MLR				⇑S	Sn	05 38 29.1	+0.9
MLR	**Muntele Rosu**	**0.48**	**250**	⇑P	Pn	05 38 13.1	+0.4
MLR				⇑S	Sn	05 38 29.1	+0.9
ISR	**Istrita**	**0.54**	**183**	⇑P	Pn	05 38 13.7	+0.7
ISR				⇓S	Sn	05 38 30.0	+1.3
ISR	**Istrita**	**0.54**	**183**	⇑P	Pn	05 38 13.7	+0.7
ISR				⇓S	Sn	05 38 30.0	+1.3
GHRR		**0.71**	**55**	⇓S	Sn	05 38 31.2	+0.8
GHRR		**0.71**	**55**	⇓S	Sn	05 38 31.2	+0.8
OZUR		**0.71**	**309**	⇑P	Pn	05 38 13.8	-0.2
OZUR				⇑S	Sn	05 38 29.6	-0.9
OZUR		**0.71**	**309**	⇑P	Pn	05 38 13.8	-0.2
OZUR				⇑S	Sn	05 38 29.6	-0.9
SECR		**0.72**	**210**	⇑P	Pn	05 38 14.8	+0.8
SECR				⇑S	Sn	05 38 31.8	+1.3
SECR		**0.72**	**210**	⇑P	Pn	05 38 14.8	+0.8
SECR				⇑S	Sn	05 38 31.8	+1.3
TUDR		**0.77**	**94**	⇑P	Pn	05 38 14.6	+0.4
TUDR				⇓S	Sn	05 38 32.3	+1.3
TUDR		**0.77**	**94**	⇑P	Pn	05 38 14.6	+0.4
TUDR				⇓S	Sn	05 38 32.3	+1.3
TESR	**Tescani**	**0.86**	**3**	⇓S	Sn	05 38 31.5	-1.0
TESR	**Tescani**	**0.86**	**3**	⇓S	Sn	05 38 31.5	-1.0
DOPR	**Dopca**	**0.89**	**291**	⇓P	Pn	05 38 15.3	0.0
DOPR				⇓S	Sn	05 38 32.7	-0.2
DOPR	**Dopca**	**0.89**	**291**	⇓P	Pn	05 38 15.3	0.0
DOPR				⇓S	Sn	05 38 32.7	-0.2
SCHL	**Schela**	**0.89**	**100**	⇑P	Pn	05 38 15.7	+0.5
SCHL				⇓S	Sn	05 38 33.1	+0.3
SCHL	**Schela**	**0.89**	**100**	⇑P	Pn	05 38 15.7	+0.5
SCHL				⇓S	Sn	05 38 33.1	+0.3
VARL	**Varlezi**	**0.92**	**74**	⇑P	Pn	05 38 14.9	-0.5
VARL				⇑S	Sn	05 38 33.3	+0.1
VARL	**Varlezi**	**0.92**	**74**	⇑P	Pn	05 38 14.9	-0.5
VARL				⇑S	Sn	05 38 33.3	+0.1
BIR	**Birlad**	**0.95**	**50**	⇑P	Pn	05 38 16.1	+0.3
BIR				⇑S	Sn	05 38 33.6	-0.1
BIR	**Birlad**	**0.95**	**50**	⇑P	Pn	05 38 16.1	+0.3
BIR				⇑S	Sn	05 38 33.6	-0.1
SULR		**1.00**	**193**	⇑P	Pn	05 38 16.5	+0.2
SULR				⇑S	Sn	05 38 35.7	+1.2
SULR		**1.00**	**193**	⇑P	Pn	05 38 16.5	+0.2
SULR				⇑S	Sn	05 38 35.7	+1.2
VOIR		**1.10**	**259**	⇑P	Pn	05 38 17.0	-0.2
VOIR				⇑S	Sn	05 38 35.8	-0.4
VOIR		**1.10**	**259**	⇑P	Pn	05 38 17.0	-0.2
VOIR				⇑S	Sn	05 38 35.8	-0.4
MTUR	**Matau**	**1.15**	**249**	⇓P	Pn	05 38 17.7	-0.1
MTUR	**Matau**	**1.15**	**249**	⇓P	Pn	05 38 17.7	-0.1
AMRR	**Amara**	**1.18**	**153**	⇑P	Pn	05 38 18.5	+0.7
AMRR				⇓S	Sn	05 38 37.9	+0.6
AMRR	**Amara**	**1.18**	**153**	⇑P	Pn	05 38 18.5	+0.7
AMRR				⇓S	Sn	05 38 37.9	+0.6
LEHL	**Lehliu**	**1.20**	**172**	⇑P	Pn	05 38 18.4	+0.4
LEHL				⇑S	Sn	05 38 38.9	+1.2
LEHL	**Lehliu**	**1.20**	**172**	⇑P	Pn	05 38 18.4	+0.4
LEHL				⇑S	Sn	05 38 38.9	+1.2
CFR	**Carcaliu**	**1.20**	**113**	⇓P	Pn	05 38 18.3	+0.3
CFR				⇓S	Sn	05 38 38.1	+0.4
CFR	**Carcaliu**	**1.20**	**113**	⇓P	Pn	05 38 18.3	+0.3
CFR				⇓S	Sn	05 38 38.1	+0.4
VASR	**Vaslui**	**1.30**	**40**	⇓P	Pn	05 38 19.1	+0.2
VASR				⇓S	Sn	05 38 38.8	-0.7
VASR	**Vaslui**	**1.30**	**40**	⇓P	Pn	05 38 19.1	+0.2
VASR				⇓S	Sn	05 38 38.8	-0.7
HARR	**Harsova**	**1.36**	**135**	⇑P	Pn	05 38 20.0	+0.4
HARR	**Harsova**	**1.36**	**135**	⇑P	Pn	05 38 20.0	+0.4
BUC1	**Bucharest**	**1.37**	**197**	⇑P	Pn	05 38 20.2	+0.4
BUC1				⇑S	Sn	05 38 41.0	+0.3
BUC1	**Bucharest**	**1.37**	**197**	⇑P	Pn	05 38 20.2	+0.4
BUC1				⇑S	Sn	05 38 41.0	+0.3
SGRR	**Singureni**	**1.50**	**197**	⇑P	Pn	05 38 21.4	+0.2
SGRR				⇓S	Sn	05 38 43.0	-0.1
RASA	**Rasa**	**1.50**	**164**	⇑S	Sn	05 38 43.9	+0.7
RASA	**Rasa**	**1.50**	**164**	⇑S	Sn	05 38 43.9	+0.7
TLBR	**Topalu**	**1.52**	**136**	⇑S	Sn	05 38 43.3	-0.4
TLBR	**Topalu**	**1.52**	**136**	⇑S	Sn	05 38 43.3	-0.4
TPGR	**Topolog**	**1.53**	**121**	⇑P	Pn	05 38 21.5	+0.1
TPGR				⇓S	Sn	05 38 43.3	-0.5
TPGR	**Topolog**	**1.53**	**121**	⇑P	Pn	05 38 21.5	+0.1
TPGR				⇓S	Sn	05 38 43.3	-0.5
HUMR	**Humele**	**1.60**	**226**	⇑S	Sn	05 38 44.7	-0.5
HUMR	**Humele**	**1.60**	**226**	⇑S	Sn	05 38 44.7	-0.5
TLCR		**1.64**	**106**	⇑P	Pn	05 38 23.2	+0.5
TLCR				⇓S	Sn	05 38 46.0	0.0
TLCR		**1.64**	**106**	⇑P	Pn	05 38 23.2	+0.5
TLCR				⇓S	Sn	05 38 46.0	0.0
CVDA	**Cernavoda**	**1.68**	**141**	⇓S	Sn	05 38 46.5	-0.3
CVDA	**Cernavoda**	**1.68**	**141**	⇓S	Sn	05 38 46.5	-0.3
ICOR	**Ion Corvin**	**1.77**	**150**	⇓P	Pn	05 38 23.7	-0.4
ICOR				⇓S	Sn	05 38 48.3	-0.3
ICOR	**Ion Corvin**	**1.77**	**150**	⇓P	Pn	05 38 23.7	-0.4
ICOR				⇓S	Sn	05 38 48.3	-0.3
TIRR	**Tirgusor**	**1.77**	**132**	⇑P	Pn	05 38 24.4	+0.3
TIRR	**Tirgusor**	**1.77**	**132**	⇑P	Pn	05 38 24.4	+0.3
COPA	**Copaceanca**	**1.80**	**213**	⇑P	Pn	05 38 23.9	-0.6
COPA				⇑S	Sn	05 38 48.8	-0.5
COPA	**Copaceanca**	**1.80**	**213**	⇑P	Pn	05 38 23.9	-0.6
COPA				⇑S	Sn	05 38 48.8	-0.5
MFTR	**Murfatlar**	**1.98**	**138**	⇓S	Sn	05 38 52.5	-0.3
MFTR	**Murfatlar**	**1.98**	**138**	⇓S	Sn	05 38 52.5	-0.3
MILM	**Milestii Mici**	**2.00**	**50**	⇑P	Pn	05 38 26.7	0.0
MILM	**Milestii Mici**	**2.00**	**50**	⇑P	Pn	05 38 26.7	0.0
RAZG	**Razgrad**	**2.09**	**181**	⇓S	Sn	05 38 55.4	0.0
RAZG	**Razgrad**	**2.09**	**181**	⇓S	Sn	05 38 55.4	0.0
EFOR	**EFORIE**	**2.15**	**136**	⇑S	Sn	05 38 56.8	+0.3
EFOR	**EFORIE**	**2.15**	**136**	⇑S	Sn	05 38 56.8	+0.3
BURAR	**Bucovina Array**	**2.17**	**335**	⇓P	Pn	05 38 29.9	+0.9
BURAR	**Bucovina Array**	**2.17**	**335**	⇓P	Pn	05 38 29.9	+0.9
GZR	**Gura Zlata**	**2.69**	**266**	⇓S	Sn	05 39 09.3	+0.7
GZR	**Gura Zlata**	**2.69**	**266**	⇓S	Sn	05 39 09.3	+0.7
SORM	**Soroca**	**2.76**	**25**	⇓P	Pn	05 38 35.6	-0.5
SORM	**Soroca**	**2.76**	**25**	⇓P	Pn	05 38 35.6	-0.5

BJI 05 06:06:08.6±0.0, 36°80N×86°84E, h5km, ML3.9/4, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**7.04**	**5**	*e*Pn	Pn	06 07 52.6	+0.2
WMQ				smax	smax		
	comp=N,40nm,1.1s						
WMQ				smax	smax		
	comp=E,55nm,0.7s						

*MEX **05** 06:10:38.3±0.8, 14°77N×92°62W, h74km±10km, MD3.9*
*GCG **05** 06:10:38.6±0.6, 14°93N×92°57W, h39km±7km, MD3.8*
ISC 05 06:10:38.9±1.7, 14°85N±0°10×92°63W±0°08, h58km±14km, n10, σ0°86/18, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.36**	**81**	*i* P	**Pn**	**06 10 48.7**	**-0.5**
THIG				*i* S	**Sn**	**06 10 58.1**	**+1.3**
PCIG		**1.02**	**326**	*e*P	**Pn**	**06 10 57.3**	**+0.2**
PCIG				*i* S	**Sn**	**06 11 10.8**	**+0.2**
STG3	**Santiaguito 3,**	**1.04**	**98**	*e*P	**Pn**	**06 10 56.5**	**-1.0**
STG3				*e*S	**Sn**	**06 11 10.4**	**-0.8**
ERG	**Entre ros, C**	**1.11**	**112**	*e*P	**Pn**	**06 10 57.2**	**-1.0**
CCIG	**Comitan**	**1.50**	**19**	*e*P	**Pn**	**06 11 03.7**	**-0.1**
CCIG				*i* S	**Sn**	**06 11 22.4**	**0.0**
FUG	**Fuego 3**	**1.78**	**103**	*e*P	**Pn**	**06 11 07.2**	**-0.3**
FUG				*e*S	**Sn**	**06 11 28.8**	**-0.3**
TGIG		**1.97**	**346**	*i* P	**Pn**	**06 11 09.0**	**-1.0**
TGIG				*i* S	**Sn**	**06 11 33.6**	**-0.1**
PCG	**Pacaya**	**2.01**	**103**	*e*P	**Pn**	**06 11 10.8**	**+0.1**
PCG				*e*S	**Sn**	**06 11 35.5**	**+0.6**
NBG	**Las Nubes**	**2.23**	**96**	*e*P	**Pn**	**06 11 15.7**	**+2.0**
CMIG	**Matias Romero**	**3.11**	**316**	*e*P	**Pn**	**06 11 25.5**	**0.0**
CMIG				*i* S	**Sn**	**06 12 01.6**	**+0.2**

IDC 05 06:28:53.7±8.0, 33°86N×88°37E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/38, mbtmp3.6/3, Error ellipse: s-maj=434.1km s-min=35.3km az=70.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**20.25**	**354**	P	P	06 33 30.3	0.0
	0.5nm,0.4s,baz=170,slow=8.8,SNR=1.8						
WRA	**Warramunga Arr**	**69.14**	**134**	P	P	06 40 02.6	+0.6
	0.4nm,0.4s,baz=327,slow=6.6,SNR=11						
ASAR	**Alice Springs**	**71.75**	**136**	P	P	06 40 17.4	-0.6
	0.4nm,0.5s,baz=321,slow=5.6,SNR=7.4						

*IDC **05** 06:29:59.0±2.5, 54°15N×86°44E, h0km, mb1 3.2/2, mb1mx3.0/38, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=20.8km s-min=13.1km az=58.0*
*NNC **05** 06:30:53.6±8.2, 50°24N×81°42E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=102.7km s-min=25.4km az=43.0, Suspected Mining explosion.*
ISC 05 06:29:57.4±2.8, 53°1N±0°1×85°9E±0°2, h0km, n8, σ1s20/7, 5C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.01**	**323**	Pg	**Pg**	**06 30 16.9**	**0.0**
	1.4nm,0.3s,baz=78,slow=17,SNR=6.0						
ZALV				Lg	Lg	06 30 31.3	
	2.5nm,0.3s,baz=73,slow=29,SNR=7.3						
I46RU	**ZALESOVO INFRA**	**1.01**	**323**	*i*		06 35 38.5	
	baz=79,slow=339,SNR=0.6						
KURK	**Kurchatov**	**5.09**	**244**	⇑Pn	**Pb**	**06 31 26.0**	**-1.3**
	1.8nm,0.9s						
KURK				⇓Sn	Sn	06 31 49.3	-25
	4.0nm,1.0s						
KURBB	**Kurchatov Arra**	**5.19**	**244**	Pn	**Pb**	**06 31 29.9**	**+0.9**
	0.2nm,0.3s,baz=55,slow=13,SNR=16						
KURBB				Lg	Lg	06 33 09.2	
	0.0nm,0.3s,baz=62,slow=34,SNR=1.7						
KURBB	**Kurchatov Arra**	**5.19**	**244**	⇑Pn	**Pb**	**06 31 29.3**	**+0.3**
	2.5nm,0.6s						
KURBB				⇑Sn	Sn	06 31 54.2	-23
	13nm,0.9s						
MK31	**Makanchi Array**	**6.76**	**201**	⇑Pg	**Pb**	**06 31 55.3**	**-0.4**
	2.1nm,1.0s,baz=28,slow=13,SNR=6.8						
MK31				⇓Lg	Lg	06 32 45.2	
	6.5nm,1.2s,baz=33,slow=31,SNR=5.9						
MKAR	**Makanchi Array**	**6.76**	**201**	Pn	**Pb**	**06 31 54.6**	**-1.1**
	0.3nm,0.3s,baz=25,slow=13,SNR=7.4						
MAKZ	**Makanchi**	**6.82**	**203**	⇑Pg	**Pb**	**06 31 58.0**	**+1.3**
	1.2nm,1.0s						
MAKZ				⇓Lg	Lg	06 32 40.3	
	3.4nm,1.2s						

TRN 05 06:35:31.6, 10°99N×61°99W, h94km, MD3.5, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.67**	**121**	*e*	Pn	06 35 48.8	+0.6
TRN	**Trinidad (W)**	**0.67**	**121**	*e*P	Pn	06 35 48.8	+0.7
TRN				*e*S	Sn	06 36 00.5	-0.1
TPP	**Pointe-a-Pierr**	**0.85**	**142**	*e*S	Sn	06 36 03.6	-0.2
GRGR	**Grenville**	**1.18**	**16**	*e*P	Pn	06 35 53.1	-0.6
GRGR				*e*S	Sn	06 36 10.1	-0.2
TPR	**Prospect**	**1.21**	**81**	*e*P	Pn	06 35 54.5	+0.5
TPR				*e*S	Sn	06 36 10.7	-0.1
GRHS	**Sauteurs**	**1.27**	**16**	*e*S	Sn	06 36 12.4	+0.2
GRSS	**Sisters**	**1.35**	**16**	*e*P	Pn	06 35 56.5	+0.8
TOSP	**Speyside**	**1.46**	**78**	*e*P	Pn	06 35 56.7	-0.3
TOSP				*e*S	Sn	06 36 15.5	-0.8
GCMP	**Grenada, Carri**	**1.58**	**20**	*e*P	Pn	06 35 58.5	-0.1
GCMP				*e*S	Sn	06 36 18.0	-1.1
SVOC	**Richmond Hill,**	**2.28**	**19**	*e*P	Pn	06 36 08.3	+0.7
SVOC				*e*S	Sn	06 36 34.4	-0.7
SVB	**Belmont**	**2.38**	**18**	*e*P	Pn	06 36 08.5	-0.4
SVB				*e*S	Sn	06 36 36.3	-1.3
SVCV	**St. Vincent, C**	**2.41**	**20**	*e*P	Pn	06 36 09.3	-0.1
SVCV				*e*S	Sn	06 36 36.6	-1.8
SVV	**Soufriere Volc**	**2.43**	**18**	*e*P	Pn	06 36 10.7	+1.0
SVV				*e*S	Sn	06 36 38.7	-0.2
MCLT	**Moule a Chique**	**2.89**	**21**	*e*P	Pn	06 36 15.3	-0.4
MCLT				*e*S	Sn	06 36 48.2	-1.5
SLB	**Belfond**	**2.97**	**18**	*e*P	Pn	06 36 17.8	+0.9
SLAC	**Saint Lucia, A**	**3.08**	**20**	*e*P	Pn	06 36 17.9	-0.3
SLAC				*e*S	Sn	06 36 53.1	-1.2
BCHC	**Barbados, Cave**	**3.14**	**47**	*e*P	Pn	06 36 19.9	+0.9
SLBI	**Saint Lucia, B**	**3.17**	**18**	*e*P	Pn	06 36 19.4	-0.1
SLBI				*e*S	Sn	06 36 55.4	-1.1
BBGH	**Gun Hill**	**3.20**	**48**	*e*P	Pn	06 36 20.4	+0.5
BBGH				*e*S	Sn	06 36 55.8	-1.3
BBSP	**Saint Philip**	**3.25**	**49**	*e*P	Pn	06 36 20.8	+0.2
CBE	**Ff, Capester**	**5.06**	**4**	*e*P	Pn	06 36 44.6	-0.6
CBE	**Ff, Capester**	**5.06**	**4**	*e*S	Sn	06 37 39.8	-2.6

*IDC **05** 06:39:27.9±0.8, 32°70S×178°25W, h0km, mb4.5/4, mb1 4.7/7, mb1mx4.3/24, mbtmp4.5/7, ML4.3/3, MS3.6/9, Ms1 3.6/9, ms1mx3.4/32, Error ellipse: s-maj=26.7km s-min=21.9km az=120.0*
*WEL **05** 06:39:29.5±1.0, 33°S±6°×17°8W±1°7, h33km, M4.7/15, mB5.1/7, ML5.1/15, MLv4.9/15, Mw(mB)4.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=107.1*
*NEIC **05** 06:39:31.9±2.8, 32°70S±0°06×178°1W±0°1, h35km±1km, mb4.7/10, Error ellipse: s-maj=19.8km s-min=9.8km az=104.0*
ISC 05 06:39:32.4±0.6, 32°74S±0°06×178°0W±0°1, h35km, n85, σ1s83/82, mb4.7/10, MS3.6/10, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.47**	**2**	P	**Pn**	**06 40 20.2**	**-3.7**
GLKZ				S	**Sn**	**06 41 01.9**	**-1.7**
RAO	**Raoul Island**	**3.48**	**2**	Pn	**Pn**	**06 40 21.1**	**-2.9**
	115nm,0.3s,baz=112,slow=19,SNR=2.5						
RAO				Sn	**Sn**	**06 41 02.6**	**-1.3**
	168nm,0.3s,baz=50,slow=22,SNR=2.3						
RIZ	**Raoul Island**	**3.48**	**2**	P	**Pn**	**06 40 21.0**	**-3.1**
RIZ				S	**Sn**	**06 41 01.9**	**-2.2**
MXZ	**Matakaoa Point**	**5.67**	**211**	P	**Pn**	**06 40 52.3**	**-1.9**
MXZ				S	**Sn**	**06 41 58.4**	**+0.4**
MXZ	**Matakaoa Point**	**5.67**	**211**	Pn	**Pn**	**06 40 52.4**	**-1.7**
WMGZ	**Waiomatatini S**	**5.84**	**209**	P	**Pn**	**06 40 58.0**	**+1.5**
WMGZ				S	**Sn**	**06 42 03.3**	**+1.1**
PKGZ	**Pakihiroa**	**6.04**	**211**	P	**Pn**	**06 40 58.3**	**-1.0**
PKGZ				S	**Sn**	**06 42 07.4**	**+0.1**
HAZ	**Te Kaha**	**6.06**	**213**	P	**Pn**	**06 40 59.1**	**-0.4**
HAZ				S	**Sn**	**06 42 08.6**	**+1.0**
PUZ	**Puketiti**	**6.12**	**209**	P	**Pn**	**06 40 58.6**	**-1.8**
PUZ				S	**Sn**	**06 42 08.3**	**-0.9**
RUGZ	**Raukumara Rang**	**6.28**	**213**	P	**Pn**	**06 41 01.7**	**-1.0**
RUGZ				S	**Sn**	**06 42 11.6**	**-1.7**
TWGZ	**Tauwhareparae**	**6.33**	**210**	P	**Pn**	**06 41 03.1**	**-0.1**
TWGZ				S	**Sn**	**06 42 13.9**	**-0.3**
GRZ	**Great Barrier**	**6.41**	**235**	P	Pn	06 41 11.6	+7.3
CNGZ	**Carnagh Statio**	**6.50**	**207**	P	**Pn**	**06 41 04.4**	**-1.1**
KUZ	**Kuaotunu**	**6.51**	**230**	P	**Pn**	**06 41 05.2**	**-0.5**
TKGZ	**Te Karaka**	**6.60**	**209**	P	**Pn**	**06 41 08.0**	**+1.1**
TKGZ				S	**Sn**	**06 42 20.1**	**-0.9**
MWZ	**Matawai**	**6.65**	**212**	P	**Pn**	**06 41 06.3**	**-1.4**
MWZ				S	**Sn**	**06 42 19.3**	**-2.9**
URZ	**Urewera**	**6.78**	**214**	Pn	**Pn**	**06 41 08.3**	**-1.1**
	4.0nm,0.3s,baz=258,slow=1.8,SNR=24						
URZ				Sn	**Sn**	**06 42 23.2**	**-2.2**
	8.9nm,0.3s,baz=258,slow=0.1,SNR=7.7						
URZ	**Urewera**	**6.78**	**214**	P	**Pn**	**06 41 07.7**	**-1.7**
URZ				S	**Sn**	**06 42 22.5**	**-2.9**
URZ	**Urewera**	**6.78**	**214**		**Pn**	**06 41 09.1**	**-0.3**

comp=Z,1.4nm,0.9s,baz=223,slow=7.7,SNR=7.8
ELK Elko 93.28 43 LR LR 07 25 57.1
comp=Z,606nm,21.9s,baz=310,slow=30
GDL2 Guadalupe Moun 94.85 55 P **P** **06 52 52.1 +1.2**
PDAR Pinedale Array 97.84 44 LR LR 07 28 41.3
comp=Z,156nm,21.9s,baz=267,slow=30
MKAR Makanchi Array 119.23 309 PKP **PKiKP** **06 58 17.9 +0.3**
comp=Z,0.4nm,0.6s,baz=234,slow=3.3,SNR=4.6
KURBB Kurchatov Arra 122.66 313 PKP **PKiKP** **06 58 23.8 -0.3**
comp=Z,0.5nm,0.4s,baz=124,slow=1.9,SNR=5.7
BVAR Borovoye Array 128.03 315 PKP **PKiKP** **06 58 34.7 0.0**
comp=Z,0.5nm,0.6s,baz=68,slow=3.3,SNR=4.4
ARCES ARCESS Array B 140.86 347 PKP **PKPdf** **06 58 56.8 -0.8**
comp=Z,3.6nm,0.9s,baz=113,slow=2.1,SNR=5.9
FINES FINESS Array B 147.31 339 PKPbc **PKPbc** **06 59 12.0 +0.5**
comp=Z,9.7nm,0.5s,baz=48,slow=3.9,SNR=78
FINES FINESS Array B 147.31 339 **PKPbc** **06 59 11.8 +0.3**
NB2 NORSAR Subarra151.05 351 PKP **PKiKP** **06 59 21.7 +0.2**
comp=Z,1.2nm,0.6s,baz=18,slow=2.6
NOA NORSAR Array B 151.05 351 PKPbc **PKPbc** **06 59 21.0 0.0**
comp=Z,0.9nm,0.5s,baz=15,slow=4.1,SNR=6.5
AKASG Malin Array Be 153.10 320 PKPbc **PKiKP** **06 59 26.2 +0.2**
comp=Z,1.2nm,0.5s,baz=45,slow=2.6,SNR=6.4
AKASG PKPab **PKPab** **06 59 37.2 -0.3**
comp=Z,1.3nm,0.6s,baz=50,slow=3.0,SNR=4.8
AKASG Malin Array Be 153.10 320 **PKPbc** **06 59 24.9 -0.9**
BRTR Keskin Array B 153.61 294 PKPbc **PKiKP** **06 59 27.6 -0.1**
comp=Z,0.9nm,0.6s,baz=156,slow=3.3,SNR=2.9
CLL Collm 159.75 340 *e*PKPab **PKPab** **07 00 06.0 0.0**
TORD Torodi Ar. Bea 160.50 179 PKPab **PKPab** **07 00 12.0 +1.9**
comp=Z,0.4nm,0.6s,baz=168,slow=5.0,SNR=2.3

IDC 05 06:43:05.7±7.3, 31.67S×178.79W, h0km, mb3.5/2, mb1 3.7/2, mb1mx3.5/23, mbtmp3.5/2, Error ellipse: s-maj=309.8km s-min=63.6km az=158.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.38**	**269**	P	P	06 51 01.9	-0.2
	0.3nm,0.6s,baz=111,slow=7.2,SNR=1.9						
WRA	**Warramunga Arr**	**43.49**	**274**	P	P	06 51 10.9	-0.1
	0.3nm,0.3s,baz=114,slow=7.6,SNR=5.2						
FINES	**FINESS Array B**	**146.09**	**339**	PKPbc	PKPdf	07 02 46.1	+0.1
	6.2nm,1.1s,baz=48,slow=2.8,SNR=3.9						

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*NNC **05** 06:59:57.8±1.6, 54.33N×86.52E, h0km, mb3.1, mpv2.9, Error ellipse: s-maj=16.5km s-min=7.9km az=177.0, Suspected Mining explosion.*

*IDC **05** 07:00:02.4±2.2, 54.15N×86.30E, h0km, mb1 3.2/3, mb1mx3.1/44, mbtmp3.2/3, ML3.0/3, Error ellipse: s-maj=18.0km s-min=12.9km az=39.0*

ISC 05 07:00:01.7±1.9, 54.3N±0.1×86.16E±0.08, h0km, n9, σ1ŝ65/12, 8C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**0.85**	**249**	⇑P	**Pg**	**07 00 18.1**	**+0.1**
	0.4nm,0.3s						
ZAA0				⇓S	**Sn**	**07 00 33.1**	**-0.9**
	1.5nm,0.6s						
ZALV	**Zalesovo Beam**	**0.85**	**249**	Pg	**Pg**	**07 00 18.3**	**+0.4**
	2.9nm,0.3s,baz=74,slow=17,SNR=16						
ZALV				Lg	Lg	07 00 33.1	
	9.3nm,0.3s,baz=78,slow=31,SNR=36						
KURK	**Kurchatov**	**5.81**	**235**	⇑Pn	**Pn**	**07 01 26.7**	**-2.4**
	2.6nm,1.1s						
KURK				⇑Lg	Lg	07 03 08.8	
	7.6nm,1.4s						
KURBB	**Kurchatov Arra**	**5.92**	**235**	Pn	**Pn**	**07 01 32.1**	**+1.7**
	0.2nm,0.3s,baz=53,slow=14,SNR=6.0						
KURBB				Lg	Lg	07 03 10.8	
	baz=59,slow=29,SNR=1.4						
KURBB	**Kurchatov Arra**	**5.92**	**235**	⇑Pn	**Pn**	**07 01 31.8**	**+1.3**
	3.0nm,0.7s						
KURBB				⇑Lg	Lg	07 03 12.8	
	8.1nm,0.8s						
MK31	**Makanchi Array**	**7.87**	**200**	⇑Pn	**Pn**	**07 01 57.0**	**-0.4**
	0.3nm,0.6s,baz=28,slow=14,SNR=12						
MK31				⇑Sn	**Sn**	**07 03 28.8**	**+1.7**
	0.9nm,0.8s,baz=181,slow=15,SNR=5.7						
MK31				⇓Lg	Lg	07 04 09.4	
	2.4nm,0.8s,baz=29,slow=27,SNR=5.2						
MKAR	**Makanchi Array**	**7.87**	**200**	Pn	**Pn**	**07 01 58.0**	**+0.7**
	0.3nm,0.3s,baz=26,slow=14,SNR=10						
MKAR				Lg	Lg	07 04 09.8	
	0.1nm,0.3s,baz=33,slow=32,SNR=7.5						
MAKZ	**Makanchi**	**7.92**	**201**	⇑Pn	**Pn**	**07 01 54.9**	**-3.2**
	0.6nm,0.6s						
MAKZ				⇓Sn	**Sn**	**07 03 28.2**	**-0.1**
	1.4nm,1.1s						
MAKZ				⇓Lg	Lg	07 04 12.9	
	2.6nm,1.1s						
SONM	**Songino Array**	**14.23**	**109**	Pn	**Pn**	**07 03 24.7**	**+0.2**
	0.1nm,0.3s,baz=302,slow=13,SNR=2.3						

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*IDC **05** 07:10:22.5±2.2, 5.63S×147.44E, h170km±21km, mb3.7/3, mb1 3.9/5, mb1mx3.3/36, mbtmp4.2/5, Error ellipse: s-maj=47.3km s-min=15.3km az=116.0*

*NEIC **05** 07:10:25.8±1.8, 5.74S±0.08×146.6E±0.9, h124km±73km, mb4.2/6, Error ellipse: s-maj=134.9km s-min=11.1km az=89.0*

ISC 05 07:10:24.3±3.5, 5.7S±0.2×147.0E±0.3, h150km, n13, σ0ŝ91/15, mb4.2/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.72**	**178**	P	**Pn**	**07 11 21.6**	**+0.7**
	5.0nm,0.3s,baz=42,slow=8.4,SNR=6.2						
PMG				S	**Sn**	**07 12 05.2**	**+0.2**
	16nm,0.3s,baz=208,slow=17,SNR=17						
PMG	**Port Moresby**	**3.72**	**178**		**Sn**	**07 12 03.6**	**-1.4**
WB0	**Warramunga Arr**	**18.63**	**220**	P	**P**	**07 14 31.0**	**+0.5**
WR0	**Warramunga Arr**	**18.68**	**219**	P	**Pn**	**07 14 32.0**	**-1.2**
WR0				IAmb	IAmb	07 14 33.0	
	comp=Z,11nm,0.9s						
WB2	**Warramunga Arr**	**18.78**	**220**	P	**Pn**	**07 14 33.4**	**-1.0**
WB2				IAmb	IAmb	07 14 34.3	
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**18.79**	**220**	P	**Pn**	**07 14 33.2**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=51,slow=12,SNR=69						
WRA				S	**S**	**07 17 59.2**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=43,slow=17,SNR=5.5						
WRA	**Warramunga Arr**	**18.79**	**220**	P	**P**	**07 14 31.9**	**-0.4**
AS31	**Alice Springs**	**21.89**	**214**	P	**P**	**07 15 06.3**	**+0.7**
AS31				IAmb	IAmb	07 15 07.3	
	comp=Z,4.0nm,0.3s						
ASAR	**Alice Springs**	**21.90**	**214**	P	**P**	**07 15 06.2**	**+0.7**
	comp=Z,4.9nm,0.5s,baz=49,slow=8.3,SNR=117						
ASAR				S	**S**	**07 18 58.6**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=31,slow=23,SNR=9.6						
ASAR	**Alice Springs**	**21.90**	**214**	P	**P**	**07 15 05.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**24.24**	**238**	P	**P**	**07 15 27.4**	**-0.1**
	comp=Z,7.2nm,0.5s,baz=58,slow=9.3,SNR=32						
FITZ	**Fitzroy Crossi**	**24.24**	**238**	P	**P**	**07 15 27.4**	**-0.1**
ILAR	**Eielson Array**	**85.17**	**23**	P	P	07 22 37.4	-6.0
	comp=Z,0.3nm,0.6s,baz=262,slow=4.5,SNR=4.4						

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*BJI **05** 07:23:03.0±0.0, 41.90N×119.70W, h5km, mB5.3/4, mb5.1/10, Ms4.7/1, Ms7 4.5/1*

*IDC **05** 07:23:03.6±0.5, 41.93N×119.61W, h0km, mb4.3/12, mb1 4.3/22, mb1mx4.2/52, mbtmp4.1/22, ML3.6/8, MS3.7/26, Ms1 3.7/26, ms1mx3.6/53, Error ellipse: s-maj=6.7km s-min=5.4km az=25.0*

*ANF **05** 07:23:03.7±0.3, 41.89N×119.72W, h0km, ML4.7/16, Error ellipse: s-maj=3.0km s-min=2.4km az=137.0*

*NEIC **05** 07:23:04.4, 41.91N×119.62W, h9km, Moment Tension Solution. Moment tensor: Scale 10^16 Nm; Mrr=0.73; Mθθ=0.14; Mφφ=0.87; Mrθ=-0.38; Mθφ=0.15; Mφr=-0.46; Fault plane solution: M0 1.02000×10^16 NP1:ϕs167.66000°, δ32.39000°, λ-125.04000°. NP2:ϕs27.36000°, δ63.98000°, λ-69.99000°. Principal axes: T 1.0472, Plg17.0000°, Azm103.0000°; N -0.0672, Plg18.0000°, Azm198.0000°; P -0.9800, Plg65.0000°, Azm332.0000°;*

*SEA **05** 07:23:04.6±3.9, 41.80N±0.04×119.64W±0.05, h0km±4km Error ellipse: s-maj=5.9km s-min=5.0km az=199.0*

*REN **05** 07:23:04.4±3.1, 41.908N±0.010×119.62W±0.04, h0km±4km, ML4.6/3, mb4.6/79(NEIC), ML4.7/99(SEA), Mww4.5/9(NCEDC), Mwr4.6/108(NEIC), Mww4.7(NEIC), Error ellipse: s-maj=4.7km s-min=1.1km az=79.0*

*NEIC **05** 07:23:05.9±2.6, 41.91N±0.04×119.69W±0.04, h5km±1km, Error ellipse: s-maj=6.7km s-min=5.2km az=193.0*

*NEIC **05** 07:23:07.5, 41.80N×119.97W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=4.88; Mθθ=2.29; Mφφ 7.17; Mrθ=-3.39; Mθφ 1.12; Mφr=0.56; Fault plane solution: M0 7.30000×10^15 NP1:ϕs36.22000°, δ58.58000°, λ-48.77000°. NP2:ϕs156.97000°, δ50.08000°, λ-137.17000°. Principal axes: T 7.3800, Plg5.0000°, Azm98.0000°; N -0.1662, Plg34.0000°, Azm192.0000°; P -7.2138, Plg55.0000°, Azm1.0000°;*

*GCMT **05** 07:23:08.4±0.4, 41.95N±0.05×119.65W±0.03, h17km±1km, MW4.7/72, Moment Tensor Solution. s12,c12; s72,c94; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.29±.14; Mθθ-0.08±.07; Mφφ 1.37±.09; Mrθ-0.19±.29; Mθφ 0.14±.05; Mφr-0.59±.20; Best double couple: M0 1.47500×10^16 NP1:ϕs180.00000°, δ33.00000°, λ-99.00000°. NP2: ϕs11.00000°, δ57.00000°, λ-84.00000°. Principal axes: T 1.5160, Plg12.0000°, Azm97.0000°; N -0.0810, Plg5.0000°, Azm188.0000°; P -1.4340, Plg77.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **05** 07:23:11, 41.94N×119.66W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr-0.96; Mθθ-0.06; Mφφ 1.02; Mrθ-0.23; Mθφ 0.30; Mφr-0.45; Fault plane solution: M0 1.43000×10^16 NP1:ϕs195.00000°, δ23.00000°, λ-88.00000°. NP2:ϕs14.00000°, δ67.00000°, λ-90.00000°. Principal axes: T 1.4924, Plg22.0000°, Azm104.0000°; N -0.1382, Plg1.0000°, Azm14.0000°; P -1.3542, Plg68.0000°, Azm282.0000°;*

ISC 05 07:23:05.3±1.3, 41.86N±0.03×119.65W±0.03, h7km±9km, n356, σ1ŝ73/348, mb4.6/44, MS3.8/18, Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.49**	**276**		**Pg**	**07 23 14.3**	**-0.5**
MOD	**Modoc Plateau**	**0.49**	**276**		**Sg**	**07 23 21.5**	**+0.2**
K05A	**Summer Lake**	**1.27**	**314**		**Pn**	**07 23 28.1**	**-1.6**
M04C	**Macdoel**	**1.64**	**268**	P	**Pn**	**07 23 33.3**	**-1.4**
M04C	baz=85,SNR=1000						
	baz=85			Sb	**Sb**	**07 23 56.9**	**+0.1**
J08A	**Circle Bar Ran**	**1.73**	**30**		**Pn**	**07 23 34.1**	**-1.8**
K04D	**Chiloquin, OR**	**1.74**	**297**	P	**Pn**	**07 23 34.5**	**-1.6**
K04D	baz=114,SNR=181						
	baz=114			Sb	**Sb**	**07 23 59.6**	**-0.2**
J05D	**Fort Rock, OR**	**1.85**	**321**	P	**Pn**	**07 23 35.9**	**-1.6**
J05D	baz=139,SNR=1000						
	baz=139			Sb	**Sb**	**07 24 02.9**	**0.0**
L04D	**Klamath Falls**	**2.01**	**281**	P	**Pn**	**07 23 38.1**	**-1.7**
L04D	baz=98,SNR=960						
	baz=98			Sb	**Sb**	**07 24 07.9**	**+0.3**
BEKR	**Beckworth**	**2.06**	**195**		**Pn**	**07 23 41.9**	**+1.4**
PAHR	**Pah Rah Range**	**2.15**	**175**		**Pn**	**07 23 41.9**	**+0.1**
PINE	**Pine Mountain**	**2.16**	**334**	Pn	**Pn**	**07 23 40.8**	**-1.0**
I07A	**Izee**	**2.23**	**3**		**Pn**	**07 23 42.7**	**0.0**
O03E	**Paynes Creek**	**2.25**	**227**	P	**Pn**	**07 23 42.0**	**-1.0**
O03E	baz=45,SNR=737						
	baz=45			Sb	**Sb**	**07 24 15.0**	**+0.5**
J04D	**Umpqua Nationa**	**2.29**	**308**	P	**Pn**	**07 23 41.9**	**-1.8**
	baz=125,SNR=393						
YBH	**Yreka Blue Hor**	**2.29**	**268**	Pn	**Pn**	**07 23 42.6**	**-1.0**
	48nm,0.3s,baz=57,slow=12,SNR=253						
YBH				Lg	Lg	07 24 16.8	
	96nm,0.3s,baz=356,slow=12,SNR=10						
YBH				LR	LR	07 24 34.6	
	comp=Z,532nm,19.9s,baz=180,slow=39						
YBH	**Yreka Blue Hor**	**2.29**	**268**		**Pn**	**07 23 41.9**	**-1.8**
M02C	**Callahan**	**2.45**	**260**	P	**Pn**	**07 23 43.7**	**-2.0**
	baz=77,SNR=264						
N02D	**Trinity Center**	**2.46**	**250**	P	**Pn**	**07 23 44.0**	**-1.9**
N02D	baz=67,SNR=507						
	baz=67			Sb	**Sb**	**07 24 20.8**	**+0.4**
WDC	**Whiskeytown Da**	**2.53**	**241**		**Pn**	**07 23 45.3**	**-1.4**
VCNR	**Virginia City**	**2.56**	**180**		**Pn**	**07 23 49.0**	**+1.7**
HUMO	**Hull Mountain**	**2.57**	**288**		**Pn**	**07 23 45.8**	**-1.6**
ORV	**Oroville**	**2.70**	**212**		**Pn**	**07 23 48.8**	**-0.2**
PNTR	**Pine Nut**	**2.76**	**179**		**Pb**	**07 23 54.1**	**-0.9**
I05D	**Terrebonne, OR**	**2.77**	**334**	P	**Pn**	**07 23 49.1**	**-1.1**
	baz=152						
I04A	**Tendick Farm,**	**2.81**	**315**	P	**Pn**	**07 23 49.2**	**-1.4**
I04A	baz=132						
	baz=132			Sb	**Sb**	**07 24 31.4**	**+1.0**
RUBR	**Rubicon Trail**	**2.83**	**188**	Pn	**Pb**	**07 23 55.7**	**-0.5**
L02E	**Cave Junction**	**2.96**	**277**	P	**Pn**	**07 23 51.5**	**-1.2**
L02E	baz=94,SNR=408						
	baz=94			Sb	**Sb**	**07 24 35.3**	**+0.4**
AFDM	**Forest Hills D**	**3.08**	**200**	Pn	**Pn**	**07 23 56.1**	**+1.8**
K02D	**Willamette Mer**	**3.10**	**287**	P	**Pn**	**07 23 53.6**	**-1.0**
	baz=103,SNR=446						
KRMB	**Red Mountain**	**3.21**	**265**		**Pn**	**07 23 55.8**	**-0.4**
MFID	**Camas Ranch**	**3.22**	**60**		**Pn**	**07 23 55.3**	**-1.1**
KHMM	**Horse Mountain**	**3.23**	**254**		**Pn**	**07 23 58.0**	**+1.5**
I03D	**Drain, OR**	**3.29**	**305**	Sb	**Sb**	**07 24 45.9**	**+1.8**
	baz=122						
RYN	**Ryan**	**3.33**	**165**		**Pn**	**07 23 59.9**	**+1.9**
WAKR	**Walker**	**3.35**	**177**		**Pn**	**07 24 00.3**	**+2.1**
H04A	**Detroit Lake**	**3.38**	**328**	Pn	**Pn**	**07 24 01.8**	**+3.3**
KBO	**Bosley Butte**	**3.43**	**278**		**Pn**	**07 23 59.0**	**-0.2**
BMO	**Blue Mountains**	**3.45**	**29**	Pn	**Pn**	**07 23 58.9**	**-0.6**
JCC	**Jacoby Creek,**	**3.46**	**254**		**Pn**	**07 23 58.9**	**-0.6**
G08A	**Pilot Rock**	**3.47**	**8**		**Pn**	**07 23 58.4**	**-1.4**
KMRM	**Mail Ridge**	**3.48**	**243**	Pn	**Pn**	**07 24 00.8**	**+1.0**
ELK	**Elko**	**3.50**	**107**	Pn	**Pn**	**07 24 00.7**	**+0.4**
	7.3nm,0.3s,baz=297,slow=13,SNR=92						
ELK				Sn	**Sn**	**07 24 44.3**	**+2.2**
	46nm,0.3s,baz=150,slow=13,SNR=4.6						
ELK				Lg	Lg	07 24 53.3	
	155nm,0.3s,baz=37,slow=22,SNR=8.4						
ELK	**Elko**	**3.50**	**107**		**Pn**	**07 24 00.5**	**+0.2**
NVAR	**Mina Array Bea**	**3.57**	**163**	Pn	**Pn**	**07 24 01.7**	**+0.4**
	5.9nm,0.3s,baz=120,slow=33,SNR=58						
NVAR				Sn	**Sn**	**07 24 44.8**	**+0.9**
	38nm,0.3s,baz=328,slow=13,SNR=6.2						
NVAR				Lg	Lg	07 24 58.2	
	85nm,0.3s,baz=199,slow=19,SNR=4.8						
NVAR				LR	LR	07 25 50.1	
	comp=Z,3μm,18.3s,baz=344,slow=45						
NVAR	**Mina Array Bea**	**3.57**	**163**	Pn	**Pn**	**07 24 02.3**	**+1.0**
NV11	**Mina Array Sit**	**3.60**	**161**		**Pn**	**07 24 03.1**	**+1.4**
KEBM	**Edson Butte**	**3.62**	**288**		**Pn**	**07 24 01.7**	**-0.1**
KCPM	**Cahto Peak**	**3.69**	**235**		**Pn**	**07 24 03.3**	**+0.5**
LHV	**Little Huntoon**	**3.70**	**166**		**Pn**	**07 24 05.1**	**+2.2**
COR	**Corvallis**	**3.82**	**317**	Pn	**Pn**	**07 24 06.4**	**+2.0**
CMB	**Columbia Colle**	**3.86**	**189**		**Pn**	**07 24 08.2**	**+3.1**
HOPS	**Hopland Field**	**3.87**	**224**	Pn	**Pn**	**07 24 08.2**	**+2.9**
F07A	**Phinny Hill Vi**	**4.04**	**357**		**Pn**	**07 24 08.4**	**+0.8**
PLID	**Pearl Lake**	**4.18**	**38**	Pn	**Pn**	**07 24 09.3**	**-0.3**
TPH	**Tonopah**	**4.21**	**153**		**Pn**	**07 24 12.4**	**+2.3**
HLID	**Hailey**	**4.22**	**64**	P	**Pn**	**07 24 08.6**	**-1.5**
HLID	baz=248						
	baz=248			Sb	**Sb**	**07 25 11.5**	**+0.5**
HLID	**Hailey**	**4.22**	**64**		**Pn**	**07 24 09.7**	**-0.4**
MDPB	**Devils Postpil**	**4.24**	**174**		**Pn**	**07 24 12.7**	**+2.2**
OMMB	**Old Mammoth Mi**	**4.26**	**173**		**Pn**	**07 24 13.5**	**+2.6**
F10A	**Beach Ranch, E**	**4.47**	**22**		**Pn**	**07 24 11.8**	**-1.7**
HAWA	**Hanford**	**4.54**	**1**		**Pn**	**07 24 16.0**	**+1.6**
F04A	**Amboy**	**4.54**	**335**		**Pn**	**07 24 16.0**	**+1.6**
R11A	**Troy Canyon, C**	**4.69**	**137**	P	**Pn**	**07 24 18.1**	**+1.6**
	baz=320						
R11A	**Troy Canyon, C**	**4.69**	**137**	Pn	**Pn**	**07 24 18.2**	**+1.6**
E07A	**Sunnyside**	**4.71**	**358**		**Pn**	**07 24 18.6**	**+2.0**
E09A	**Wood Farm, Sta**	**4.78**	**13**		**Pn**	**07 24 20.7**	**+3.0**
TIN	**Tinemaha, Big**	**4.92**	**167**	Pg	**Pg**	**07 24 38.0**	**-1.4**
	baz=349						
BGU	**Big Grassy Mou**	**5.06**	**98**	Pn	**Pn**	**07 24 21.7**	**0.0**
HVU	**Hansel Valley**	**5.13**	**89**	Pn	**Pn**	**07 24 25.0**	**+2.3**
LON	**Longmire**	**5.13**	**343**	Pn	**Pn**	**07 24 25.1**	**+2.5**
BCYI	**Bear Canyon**	**5.19**	**60**		**Pn**	**07 24 23.7**	**+0.2**
D08A	**Wollman Farm,**	**5.23**	**5**	Pn	**Pn**	**07 24 23.8**	**0.0**
SAO	**San Andreas Ge**	**5.27**	**196**	Pn	**Pn**	**07 24 25.5**	**+1.1**
SPUT	**South Promonto**	**5.42**	**93**	Pn	**Pn**	**07 24 26.0**	**-0.7**
DUG	**Dugway, Tooele**	**5.43**	**106**	P	**Pn**	**07 24 27.1**	**+0.4**
	baz=291						
DUG	**Dugway, Tooele**	**5.43**	**106**	Pn	**Pn**	**07 24 27.5**	**+0.8**
LTY	**Liberty**	**5.45**	**353**	Pn	**Pn**	**07 24 28.9**	**+1.9**
E03A	**Lebam**	**5.47**	**330**	Pn	**Pn**	**07 24 27.3**	**+0.2**
PSUT	**Pine Spring**	**5.54**	**125**	Pn	**Pn**	**07 24 29.7**	**+1.4**
TPNV	**Topopah Spring**	**5.56**	**151**	P	**Pn**	**07 24 30.6**	**+2.1**
	baz=333						
TPNV	**Topopah Spring**	**5.56**	**151**	Pn	**Pn**	**07 24 30.7**	**+2.1**
D05A	**Enumclaw**	**5.59**	**343**	Pn	**Pn**	**07 24 31.9**	**+3.1**
PRN	**Pahroc Range**	**5.68**	**140**		**Pn**	**07 24 32.6**	**+2.4**
D04E	**Lakebay**	**5.77**	**338**	P	**Pn**	**07 24 33.4**	**+2.1**
	baz=156						
MCMT	**McKenzie Canyo**	**5.78**	**57**	Pn	**Pn**	**07 24 32.3**	**+0.7**
FURC	**Furnace Creek,**	**5.80**	**157**	P	**Pn**	**07 24 34.0**	**+2.3**
	baz=339						
MPMC	**Manual Prospec**	**6.03**	**163**	P	**Pn**	**07 24 36.1**	**+1.1**
	baz=345						
NLU	**North Lily Min**	**6.04**	**106**		**Pn**	**07 24 36.2**	**+1.0**
HWUT	**Hardware Ranch**	**6.05**	**90**		**Pn**	**07 24 36.8**	**+1.4**
CTU	**Camp Tracy**	**6.06**	**98**		**Pn**	**07 24 36.2**	**+0.8**
PAGB	**Antelope Grade**	**6.13**	**185**	Pn	**Pn**	**07 24 38.9**	**+2.6**
D03D	**Eldon**	**6.19**	**338**	P	**Pn**	**07 24 37.9**	**+0.9**
	baz=155						
DLMT	**Dillon**	**6.20**	**53**		**Pn**	**07 24 37.7**	**+0.3**
TCUT	**Toone Canyon**	**6.23**	**94**		**Pn**	**07 24 39.7**	**+1.8**
ISA	**Isabella, Lake**	**6.25**	**171**	P	**Pn**	**07 24 39.4**	**+1.4**
	baz=352						
ISA	**Isabella, Lake**	**6.25**	**171**	Pn	**Pn**	**07 24 40.5**	**+2.5**
NLWA	**Neilton Lookou**	**6.30**	**333**		**Pn**	**07 24 40.7**	**+2.1**
JLU	**Jordanelle**	**6.30**	**99**		**Pn**	**07 24 39.9**	**+1.0**
MPU	**Maple Canyon**	**6.34**	**104**		**Pn**	**07 24 40.3**	**+1.0**
SHPR	**Sheep Range**	**6.38**	**145**	Pn	**Pn**	**07 24 42.2**	**+2.5**
TCRU	**Three Creeks R**	**6.39**	**118**		**Pn**	**07 24 42.1**	**+2.0**
MSO	**Missoula**	**6.44**	**37**	P	**Pn**	**07 24 41.4**	**+0.8**
	baz=222						
MSO	**Missoula**	**6.44**	**37**	Pn	**Pn**	**07 24 41.6**	**+1.0**
ICU	**Indian Springs**	**6.45**	**135**		**Pn**	**07 24 43.0**	**+2.2**
CCUT	**Cedar City**	**6.47**	**130**	Pn	**Pn**	**07 24 43.2**	**+2.0**
SHOC	**Shoshone, Teco**	**6.50**	**155**	P	Pn	07 24 35.2	-6.1
	baz=338						
B08A	**Colville Reser**	**6.51**	**2**	Pn	**Pn**	**07 24 44.7**	**+3.2**
LRM	**Limekiln Ridge**	**6.54**	**50**	Pn	**Pn**	**07 24 42.5**	**+0.4**
MVU	**Marysvale**	**6.60**	**118**		**Pn**	**07 24 43.8**	**+0.8**
SZCU	**Shurtz Canyon**	**6.61**	**128**		**Pn**	**07 24 45.1**	**+2.1**
TPAW	**Teton Pass**	**6.61**	**73**		Pn	07 24 48.3	+5.2
MSU	**Marysvale**	**6.62**	**118**	Pn	**Pn**	**07 24 44.9**	**+1.7**
B05A	**Bryant**	**6.64**	**346**	P	Pn	07 24 38.1	-5.1
	baz=164						
NEW	**Newport**	**6.65**	**15**	Pn	**Pn**	**07 24 44.0**	**+0.5**
	0.2nm,0.3s,baz=190,slow=17,SNR=6.5						
NEW				Sn	**Sn**	**07 25 59.1**	**-0.4**
	0.9nm,0.3s,baz=180,slow=21,SNR=3.8						
NEW				Lg	Lg	07 26 30.4	
	0.9nm,0.3s,baz=168,slow=16,SNR=4.0						
NEW				LR	LR	07 27 41.6	
	comp=Z,957nm,19.9s,baz=188,slow=42						
NEW	**Newport**	**6.65**	**15**	P	Pn	07 24 38.5	-5.0
	baz=196						
NEW	**Newport**	**6.65**	**15**		**Pn**	**07 24 44.3**	**+0.8**
REDW	**Red Top Meadow**	**6.66**	**74**		Pn	07 24 49.0	+5.3
QLMT	**Earthquake Lak**	**6.69**	**61**	Pn	**Pn**	**07 24 46.3**	**+2.2**
IMW	**Indian Meadow**	**6.71**	**69**	Pn	**Pn**	**07 24 48.4**	**+3.9**
ARVC	**Arvin**	**6.75**	**174**	P	**Pn**	**07 24 43.3**	**-1.4**
	baz=355						
B06A	**Marblemount**	**6.79**	**350**	Pn	**Pn**	**07 24 47.1**	**+1.9**
YHB	**Horse Butte**	**6.81**	**62**	Pn	**Pn**	**07 24 48.2**	**+2.4**
YHL	**Hebgen Lake**	**6.86**	**61**		**Pn**	**07 24 49.2**	**+2.7**
MTPU	**Mount Pierson**	**6.88**	**121**	Pn	**Pn**	**07 24 49.1**	**+2.2**
BOZ	**Bozeman (W)**	**6.91**	**55**	P	**Pn**	**07 24 42.5**	**-4.5**
	baz=240						
BOZ	**Bozeman (W)**	**6.91**	**55**	Pn	**Pn**	**07 24 47.8**	**+0.7**
GSC	**Goldstone, Bar**	**6.91**	**160**	P	**Pn**	**07 24 45.2**	**-1.8**
	baz=342						
GSC	**Goldstone, Bar**	**6.91**	**160**		**Pn**	**07 24 49.9**	**+2.9**
TMUT	**Trail Mountain**	**6.91**	**109**		**Pn**	**07 24 49.6**	**+2.3**
LCMT	**Little Creek M**	**6.92**	**132**		**Pn**	**07 24 49.6**	**+2.3**
FLWY	**Flagg Ranch**	**6.93**	**68**		**Pn**	**07 24 50.6**	**+3.1**
JTMT	**Jette**	**7.02**	**31**	Pn	**Pn**	**07 24 49.0**	**+0.5**
TUQ	**Turquoise Moun**	**7.04**	**154**	P	**Pn**	**07 24 51.0**	**+2.2**
	baz=337						
EDW2	**Edwards Air Fo**	**7.08**	**169**	P	**Pn**	**07 24 52.2**	**+2.8**
	baz=350						
Q16A	**Castle Valley**	**7.10**

SDCO Great Sand Dun 11.63 106 Pn 07 25 54.6 +2.7
BBB Bella Bella 11.83 334 LR LR 07 30 26.0
comp=Z,340nm,21.9s,baz=150,slow=38
ANMO Albuquerque 12.43 119 Pn Pn 07 26 04.0 +1.3
0.1nm,0.3s,baz=315,slow=15,SNR=5.8
ANMO Lg Lg 07 29 37.1
0.1nm,0.3s,baz=218,slow=19,SNR=2.4
ANMO LR LR 07 31 35.4
comp=Z,794nm,20.5s,baz=302,slow=41
ANMO Albuquerque 12.43 119 P Pn 07 26 04.3 +1.6
baz=308
ANMO Albuquerque 12.43 119 Pn Pn 07 26 05.7 +3.0
T25A Trinidad 12.67 107 P Pn 07 26 09.1 +3.0
baz=297
T25A Trinidad 12.67 107 Pn Pn 07 26 09.7 +3.6
121A Cookes Peak, D 13.25 131 P Pn 07 26 16.1 +2.1
baz=318
121A Cookes Peak, D 13.25 131 Pn Pn 07 26 17.4 +3.4
319A Douglas 13.35 138 Pn Pn 07 26 16.9 +1.5
E28A Huff 14.38 64 Pn Pn 07 26 30.3 +1.1
MNTX Cornudas Mount 15.26 127 P Pn 07 26 40.4 -0.7
baz=316
MNTX Cornudas Mount 15.26 127 P 07 26 44.5 -1.5
SUSD Miller 15.32 73 P P 07 26 47.6 +0.9
SUSD IAmb IAmb 07 26 49.2
comp=Z,38nm,1.1s
MSTX Muleshoe 15.45 115 P Pn 07 26 45.6 +1.9
baz=306
MSTX Muleshoe 15.45 115 P P 07 26 49.6 +1.2
MSTX IAmb IAmb 07 26 59.9
comp=Z,29nm,1.5s
CBKS Cedar Bluff 15.48 95 Pn Pn 07 26 45.1 +1.0
CBKS IAmb IAmb 07 26 53.2
comp=Z,29nm,1.3s
K31A O'Neill 15.49 80 Pn 07 26 43.4 -0.8
K31A IAmb IAmb 07 26 53.0
comp=Z,23nm,1.1s
AMTX Amarillo 15.70 110 P Pn 07 26 48.1 +1.1
baz=302
AMTX Amarillo 15.70 110 Pn Pn 07 26 45.7 -1.3
BGNE Belgrade 16.08 84 Pn Pn 07 26 51.9 +0.1
R32A Long Quarter, 16.37 95 P P 07 26 58.5 +0.1
ECSD EROS Data Cent 17.00 76 P Pn 07 27 02.9 -0.6
baz=272
ECSD EROS Data Cent 17.00 76 Pn 07 27 04.1 +0.6
KAN14 Manchester OK 17.44 99 P Pn 07 27 09.2 +0.2
KAN13 South Haven SW 17.78 98 P P 07 27 16.1 +2.1
WMOK Wichita Mounta 17.83 107 P Pn 07 27 13.2 -0.7
baz=300
WMOK Wichita Mounta 17.83 107 P 07 27 15.8 +1.2
DLBC Dease Lake 17.85 342 Pn Pn 07 27 13.8 -0.1
comp=Z,0.0nm,0.3s,baz=155,slow=12,SNR=2.0
AGMN Agassiz Nation 17.95 61 P Pn 07 27 12.9 -2.4
baz=258
TXAR Lajitas Array 17.99 129 P Pn 07 27 16.1 +0.2
baz=331,slow=9.2,SNR=0.6
TXAR LR LR 07 35 20.5
comp=Z,192nm,20.0s,baz=0.0,slow=41
ABTX Abilene, Hawle 18.36 114 P Pn 07 27 19.0 -1.4
baz=306
ULM Lac du Bonnet 18.45 55 P P 07 27 19.7 -1.6
comp=Z,0.2nm,0.3s,baz=239,slow=12,SNR=2.9
ULM LR LR 07 34 34.4
comp=Z,265nm,18.4s,baz=254,slow=38
LPIG La Paz 19.34 153 LR LR 07 35 34.4
comp=Z,316nm,20.5s,baz=342,slow=39
TUL1 Leonard 19.47 100 P P 07 27 30.1 -2.5
baz=295
JCT Junction City 19.59 119 P P 07 27 34.7 +0.8
baz=311
SCIA State Center 19.66 81 P P 07 27 35.3 +0.7
baz=279
SPMN Marine on St. 19.71 71 P P 07 27 33.1 -2.0
baz=270
SPMN Marine on St. 19.71 71 P P 07 27 35.5 +0.3
SPMN IAmb IAmb 07 27 41.5
comp=Z,23nm,1.1s
S39A Bolivar 20.62 93 P Pn 07 27 46.6 -0.8
HHAR Hobbs 20.68 97 P P 07 27 45.9 +0.1
YKA Yellowknife Ar 20.89 7 P P 07 27 46.0 -1.8
comp=Z,15nm,1.1s,baz=189,slow=10.0,SNR=11
YKA LR LR 07 36 34.5
comp=Z,254nm,21.2s,baz=0.0,slow=39
WHY Whitehorse 21.01 339 07 27 51.7
P40A Paris 21.02 87 P P 07 27 49.9 +0.5
P40A IAmb IAmb 07 27 56.4
comp=Z,37nm,0.7s
L40A Anamosa 21.10 80 P P 07 27 50.7 +0.4
L40A IAmb IAmb 07 27 58.3
comp=Z,37nm,0.9s
R40A Maddies Statio 21.21 91 P P 07 27 51.3 -0.2
W39A Magazine 21.25 100 P P 07 27 50.6 -1.4
baz=296
833A Chaparral WMA, 21.31 123 P P 07 27 53.5 +0.9
baz=315
I40A Norwalk 21.33 75 P P 07 27 51.4 -1.3
237A Washetta, Mont 21.38 110 P P 07 27 53.9 +0.6
237A IAmb IAmb 07 27 59.4
comp=Z,31nm,1.1s
U40A Yellville 21.46 96 P P 07 27 53.4 -0.8
baz=293
U40A Yellville 21.46 96 P P 07 27 54.5 +0.3
MGMO Mountain Grove 21.60 93 P P 07 27 57.0 +1.3
N41A Harden Midland 21.63 83 P P 07 27 57.0 +1.0
N41A IAmb IAmb 07 28 00.2
comp=Z,63nm,1.4s
MIAR Mount Ida 21.70 101 P P 07 27 55.4 -1.3
baz=298
MIAR Mount Ida 21.70 101 P P 07 27 58.7 +2.0
JFWS Jewell Farm 21.70 77 P P 07 27 54.4 -2.3
baz=277
HYT Haines Junctio 21.89 336 P P 07 27 59.7 +1.0
HYT IAmb IAmb 07 28 03.9
comp=Z,19nm,1.1s
CCM Cathedral Cave 22.05 90 P P 07 27 59.7 -0.8
baz=289
CCM Cathedral Cave 22.05 90 P P 07 28 01.0 +0.4
CCM IAmb IAmb 07 28 07.7
comp=Z,13nm,0.7s
FCAR Ozark Folk Cen 22.19 96 P P 07 28 02.0 0.0
L42A Oliver, Polo 22.26 80 P P 07 28 04.3 +1.6
WHAR Wooly Hollow 22.32 98 P P 07 28 05.1 +1.8
WHAR IAmb IAmb 07 28 10.1
comp=Z,16nm,1.0s
W41B Gary Mavity, V 22.39 98 P P 07 28 04.1 0.0
baz=296
W41B Gary Mavity, V 22.39 98 P P 07 28 04.3 +0.1
W41B IAmb IAmb 07 28 08.7
comp=Z,32nm,1.3s
WLAR White Oak Lake 22.44 103 P P 07 28 06.1 +1.4
T42A Van Buren 22.52 93 P P 07 28 06.0 +0.4
T42A IAmb IAmb 07 28 10.8
comp=Z,17nm,1.1s
HKT Hockley 22.57 114 P P 07 28 07.4 +1.3
SLM Saint Louis 22.63 88 P P 07 28 07.8 +1.2
FVM French Village 22.69 90 P P 07 28 07.3 -0.1
FVM IAmb IAmb 07 28 20.2
comp=Z,23nm,1.4s
LCAR Lake Charles 22.84 95 P P 07 28 08.9 0.0
LCAR IAmb IAmb 07 28 14.6
comp=Z,17nm,1.1s
P43A Skaggs, Pawnee 22.88 85 P P 07 28 09.9 +0.6
P43A IAmb IAmb 07 28 14.1
comp=Z,34nm,1.1s
PBMO Poplar Bluff 23.11 93 P P 07 28 12.7 +1.0
PBMO IAmb IAmb 07 28 16.7
comp=Z,26nm,1.1s
Q44A Meyer Farm, Va 23.46 87 P P 07 28 15.6 +0.4
Q44A IAmb IAmb 07 28 22.3
comp=Z,24nm,0.8s
O44A Mansfield 23.53 84 P P 07 28 17.7 +1.8
S44A Carbondale 23.66 90 P P 07 28 16.4 -0.8
X43A Marvell 23.69 99 P P 07 28 18.9 +1.4
X43A IAmb IAmb 07 28 22.3
comp=Z,23nm,1.0s
PEBM Pemiscott Bayo 23.78 94 P P 07 28 19.0 +0.6
PENMO Penman 23.83 93 P P 07 28 20.8 +1.9
T45A Paducah 24.35 91 P P 07 28 23.6 -0.1
P46A Rosedale 24.61 84 P P 07 28 25.8 -0.2
W45A Hickory Valley 24.67 96 P P 07 28 26.3 -0.4
L46A Eue Claire 24.73 78 P P 07 28 29.1 +2.0
USIN University of 24.76 88 P P 07 28 26.6 -0.9
OXF Oxford 24.78 97 P P 07 28 25.7 -2.0
baz=296
OXF Oxford 24.78 97 P P 07 28 27.9 +0.2

BCAR Beaver Creek A 24.91 336 P P 07 28 29.4 +0.8
DAWY Dawson 25.01 339 P P 07 28 30.7 +1.2
DAWY IAmb IAmb 07 28 32.9
comp=Z,12nm,1.3s
BLO Bloomington 25.24 85 P P 07 28 34.1 +2.3
WVT Waverly 25.29 93 P P 07 28 31.1 -1.1
baz=293
WVT Waverly 25.29 93 P P 07 28 31.9 -0.3
WVT IAmb IAmb 07 28 39.6
comp=Z,9.3nm,0.8s
L26K Log Cabin Wild 25.37 335 P P 07 28 32.2 -0.5
baz=135
T47A Sharon Grove 25.51 90 P P 07 28 35.8 +1.5
T47A IAmb IAmb 07 28 40.7
comp=Z,23nm,1.1s
PLAL Pickwick Lake 25.57 95 P P 07 28 34.5 -0.4
PLAL IAmb IAmb 07 28 41.8
comp=Z,13nm,0.9s
WCI Wyandotte Cave 25.70 87 P P 07 28 34.0 -1.9
baz=289
WCI Wyandotte Cave 25.70 87 P P 07 28 36.9 +0.9
K27K Chicken 25.72 337 P P 07 28 36.1 +0.2
baz=139
SCRK Sand Creek 26.25 336 P P 07 28 40.0 -0.9
baz=136
LRAL Lakeview Retre 27.24 98 P P 07 28 49.1 -0.9
baz=299
INK Inuvik 27.53 349 P P 07 28 51.0 -1.1
comp=Z,5.5nm,1.0s,baz=150,slow=9.4,SNR=10
INK LR LR 07 41 16.0
comp=Z,302nm,19.7s,baz=163,slow=40
INK Inuvik 27.53 349 P P 07 28 51.4 -0.8
INK IAmb IAmb 07 28 55.0
comp=Z,7.4nm,1.0s
W50A Signal Mountai 27.54 93 P P 07 28 52.6 0.0
W50A IAmb IAmb 07 28 57.1
comp=Z,17nm,1.2s
IL31 27.71 335 P P 07 28 54.5 +0.7
IL31 IAmb IAmb 07 28 57.5
comp=Z,8.8nm,0.9s
ILAR Eielson Array 27.71 335 P P 07 28 53.9 0.0
comp=Z,5.1nm,0.9s,baz=152,slow=8.0,SNR=37
ILAR LR LR 07 39 31.2
comp=Z,182nm,19.2s,baz=141,slow=36
ILAR Eielson Array 27.71 335 P P 07 28 54.1 +0.3
MCK McKinley 27.72 332 P P 07 28 54.0 +0.1
baz=128
PRP Porcupine Dome 27.82 337 P P 07 28 57.2 +2.2
PRP IAmb IAmb 07 28 59.0
comp=Z,9.6nm,1.1s
V51A Loudon 28.02 91 P P 07 29 00.5 +3.7
CPCT Cooper Cave 28.03 92 P P 07 28 55.0 -1.9
POKR Poker Plat Res 28.12 335 P P 07 28 58.0 +0.5
baz=132
POKR Poker Plat Res 28.12 335 P P 07 28 57.5 -0.1
X51A Calhoun 28.15 93 P P 07 28 57.1 -0.9
250A Grady 28.30 99 P P 07 28 57.2 -2.2
Z51A Franklin 28.46 96 P P 07 29 04.0 +3.2
Z51A IAmb IAmb 07 29 05.5
comp=Z,19nm,1.1s
TKL Tuckaleechee C 28.50 91 P P 07 29 00.6 -0.6
comp=Z,5.7nm,0.9s,baz=286,slow=7.7,SNR=5.1
TKL LR LR 07 40 34.9
comp=Z,173nm,19.6s,baz=302,slow=37
W52A Murphy 28.62 92 P P 07 29 05.1 +2.9
BMAR Burnt Mountain 28.99 340 P P 07 29 05.5 +0.3
Y52A Lilburn 29.04 94 P P 07 29 06.3 +0.3
MLY Manley 29.14 333 P P 07 29 03.4 -3.2
baz=128
SADO Sadowa 29.40 70 LR LR 07 39 59.0
comp=Z,219nm,20.0s,baz=300,slow=35
GOGA Godfrey 29.69 95 P P 07 29 09.9 -1.8
baz=297
GOGA Godfrey 29.69 95 P P 07 29 10.6 -1.2
GOGA IAmb IAmb 07 29 16.4
comp=Z,13nm,0.9s
V54A Nebo 29.82 89 P P 07 29 11.6 -1.3
baz=294
W54A Cherokee Point 29.92 91 P P 07 29 13.9 +0.1
baz=295
X54A Belton 30.01 92 P P 07 29 11.5 -3.0
baz=295
R55A Manton 30.27 83 P P 07 29 15.5 -1.4
baz=290
KMSC Kings Mountain 30.54 90 P P 07 29 19.5 +0.3
baz=294
X55A Gracelyn & Ava 30.59 91 P P 07 29 20.1 +0.4
baz=296
IMAR Indian Mountai 30.72 333 P P 07 29 21.1 +0.6
JSC Jenkinsville 30.95 91 P P 07 29 21.1 -1.8
JSC IAmb IAmb 07 29 27.2
comp=Z,12nm,1.2s
X56A White Oak 31.03 91 P P 07 29 23.0 -0.6
baz=296
W56A Indian Trail 31.10 89 P P 07 29 22.4 -1.7
baz=294
SCHQ Schefferville 36.54 51 P P 07 30 10.3 -1.0
comp=Z,5.4nm,0.8s,baz=292,slow=7.2,SNR=5.1
SCHQ LR LR 07 43 37.1
comp=Z,123nm,19.9s,baz=68,slow=34
SCHQ Schefferville 36.54 51 IAmb IAmb 07 30 24.2
comp=Z,7.8nm,0.9s
PETK Petropavlovsk- 53.99 312 LR LR 07 52 19.4
comp=Z,101nm,21.2s,baz=110,slow=32
ROSC El Rosal 54.61 120 LR LR 08 00 58.1
comp=Z,73nm,18.0s,baz=354,slow=42
NRIK Noril'sk 67.31 350 P P 07 33 59.8 -0.4
comp=Z,1.6nm,0.3s,baz=38,slow=5.6,SNR=4.6
NOA NORSAR Array B 69.95 23 P P 07 34 15.8 -1.0
comp=Z,1.9nm,0.8s,baz=321,slow=6.2,SNR=4.5
USRK Ussuriysk Ar. 72.99 314 LR LR 08 03 08.9
comp=Z,46nm,21.6s,baz=357,slow=33
FINES FINESS Array B 73.36 16 P P 07 34 36.4 -0.9
comp=Z,1.5nm,0.6s,baz=3.7,slow=4.3,SNR=5.6
LPAZ La Paz 74.86 129 P P 07 34 48.3 +1.0
comp=Z,1.4nm,0.9s,baz=230,slow=0.6,SNR=4.6
LPAZ LR LR 08 10 38.8
comp=Z,18nm,19.6s,baz=321,slow=38
LPAZ La Paz 74.86 129 IAmb IAmb 07 34 52.0
comp=Z,1.6nm,0.8s
KLMR Klimovskoe 76.24 10 eP P 07 34 52.5 -1.5
KLMR AMP 07 34 57.3
comp=Z,25nm,1.5s
CN2 Changchun 76.66 318 eP P 07 34 56.7 0.0
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CLL Collm 78.48 28 i P P 07 35 08.2 +1.5
comp=Z,20nm,1.7s
CLL e 07 35 11.0
CLL LmV 08 14 00.0
comp=Z,100nm,20.1s
DAVOX Davos/Dischmat 81.02 32 LR LR 08 14 11.9
comp=Z,64nm,19.1s,baz=298,slow=38
VRAC Vranov 81.41 27 LR LR 08 12 36.7
comp=Z,46nm,18.0s,baz=312,slow=37
SONM Songino Array 81.85 331 P P 07 35 24.9 -0.3
comp=Z,1.1nm,0.7s,baz=57,slow=3.2,SNR=8.6
SONM LR LR 08 13 16.8
comp=Z,106nm,18.3s,baz=28,slow=37
SONM Songino Array 81.85 331 P P 07 35 24.7 -0.4
ZALV Zalesovo Beam 82.28 346 LR LR 08 16 15.3
comp=Z,33nm,20.2s,baz=10,slow=39
AKASG Malin Array Be 83.89 19 P P 07 35 34.2 -1.3
comp=Z,3.1nm,0.8s,baz=344,slow=5.2,SNR=9.5
AKASG Malin Array Be 83.89 19 IAmb IAmb 07 35 36.0
comp=Z,2.8nm,1.3s
BRVK Borovoye 85.08 354 P P 07 35 40.0 -1.4
BRVK IAmb IAmb 07 35 43.4
comp=Z,5.8nm,0.9s
HHC Hu-ho-hao-te 85.52 324 eP P 07 35 45.2 +1.1
HHC pmax pmax
comp=Z,30nm,1.2s
HHC pmax pmax
comp=Z,180nm,7.1s
BURAR Bucovina Array 85.63 23 P P 07 35 45.1 +0.6
NJ2 Nanjing 88.88 314 eP P 07 36 00.0 -0.3
NJ2 pmax pmax
comp=Z,11nm,0.5s
CPUP Villa Florida 88.96 127 LR LR 08 16 27.0
comp=Z,9.2nm,21.6s,baz=17,slow=36
ABKAR Akbulak array 89.27 0 P P 07 36 01.9 0.0
ABKAR Akbulak array 89.27 0 P P 07 36 01.8 0.0
MK31 Makanchi Array 89.61 345 P P 07 36 01.4 -2.1
MK31 IAmb IAmb 07 36 05.3
comp=Z,3.0nm,1.1s
MKAR Makanchi Array 89.61 345 P P 07 36 03.0 -0.5
comp=Z,1.6nm,1.0s,baz=352,slow=5.8,SNR=9.4
MKAR LR LR 08 19 33.5
comp=Z,36nm,21.8s,baz=22,slow=38
MAKZ Makanchi 89.65 345 P P 07 36 02.8 -0.9
MAKZ IAmb IAmb 07 36 05.3
comp=Z,5.1nm,0.9s
WMQ Urumqi 91.24 341 eP P 07 36 12.2 +0.9
LZH Lanzhou 92.82 326 eP P 07 36 18.3 -0.5
LZH ePP PP 07 40 02.1 +2.0
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,72nm,9.3s
LZH LR LR
comp=Z,97nm,17.0s
LZH LR LR
comp=Z,100nm,17.3s
LZH LR LR
comp=Z,160nm,19.7s
KOWA Kowa 98.49 62 LR LR 08 22 59.9
comp=Z,51nm,18.4s,baz=290,slow=36

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*BJI **05** 07:27:58.2±0.0, 13°.72N×145°.80E, h108km, mB5.2/28, mb4.8/40*
*DJA **05** 07:28:01.2±0.6, 14°N±8°×14°.5E±°, h99km±3km, M5.0/18, mb5.1/18, mB5.3/7, MLv5.0/1, Mw(mB)4.8/7*
*IDC **05** 07:28:02.0±0.6, 13°.95N×145°.37E, h100km±4km, mb4.3/27, mb1 4.5/28, mb1mx4.4/42, mbtmp4.7/28, MS3.4/18, Ms1 3.4/18, ms1mx3.2/50, Error ellipse: s-maj=16.2km s-min=8.1km az=86.0*
*NEIC **05** 07:28:03.5±1.6, 13°.92N±0°.08×145°.30E±0°.10, h112km±5km, mb4.9/99, Error ellipse: s-maj=13.7km s-min=12.3km az=84.0*
*GCMT **05** 07:28:06.5±0.3, 13°.69N±0°.02×145°.34E±0°.04, h120km±5km, MW4.8/75, Moment Tensor Solution. s17,c19; s75,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.70±.11; $M_{\theta\theta}$0.71±.14; $M_{\phi\phi}$-0.01±.14; $M_{r\theta}$1.51±.07; $M_{\theta\phi}$0.79±.21; $M_{r\phi}$0.12±.08; Best double couple: $M_0$1.83900×10^{16} NP1:ϕ_s24.00000°, δ26.00000°, λ-148.00000°. NP2:ϕ_s264.00000°, δ77.00000°, λ-68.00000°. Principal axes: T 1.9500, Plg28.0000°, Azm336.0000°; N -0.2210, Plg21.0000°, Azm78.0000°; P -1.7290, Plg53.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 07:28:03.1±0.7, 13°.90N±0°.05×145°.34E±0°.08, h110km±6km, n170,σ1§19/155, mb4.8/83, 1C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.55	236	P	Pn	07 28 20.5	+0.2
	2μm,0.3s,baz=289,slow=20,SNR=383						
GUMO				S	Sn	07 28 32.1	-1.1
	3μm,0.3s,baz=356,slow=14,SNR=8.9						
PATS	Pohnpei	14.56	118	Pn	Pn	07 31 22.4	-1.5
RABL	Rabaul	19.20	159	P	P	07 32 20.1	+1.6
KRVT	Keravat (AS076	19.27	159	P	P	07 32 20.7	+1.5
	3.4nm,0.3s,baz=112,slow=2.4,SNR=6.1						
SIJI	Sorong	20.24	225	P	Pn	07 32 31.8	-0.9
	63nm,0.8s,baz=32,slow=10,SNR=22						
DAV	Davao City (W)	20.57	253	LR	LR	07 41 09.1	
	comp=Z,27nm,18.4s,baz=82,slow=38						
H11S3	WAKE ISLAND Hy	21.00	75	T	T	07 54 33.6	
	baz=261,slow=75						
H11S1	WAKE ISLAND Hy	21.01	75	T	T	07 54 01.7	
	baz=261,slow=75						
H11S2	WAKE ISLAND Hy	21.01	75	T	T	07 54 30.8	
	baz=261,slow=75						
FAKI	Fak Fak	21.16	219	P	P	07 32 40.4	+0.8
	1μm106nm,1.1s						
FAKI	Fak Fak	21.16	219	P	P	07 32 40.8	+1.1
FAKI				IAmb	IAmb	07 32 44.0	
	comp=Z,73nm,0.8s						
H11N1	WAKE ISLAND Hy	21.42	71	T	T	07 55 47.6	
	baz=257,slow=75						
H11N2	WAKE ISLAND Hy	21.43	71	T	T	07 55 57.3	
	baz=257,slow=75						
H11N3	WAKE ISLAND Hy	21.43	71	T	T	07 55 59.9	
	baz=257,slow=75						
JMN	Monobe	22.32	334	P	P	07 32 53.0	+1.2
JMN				IAmb	IAmb	07 32 55.0	
	comp=Z,45nm,1.0s						
INU	Inuyama	22.64	342	P	P	07 32 53.9	-1.0
INU				IAmb	IAmb	07 32 57.0	
	comp=Z,90nm,1.2s						
JGF	Kuroka	22.77	343	P	P	07 32 54.9	-1.4
JGF				IAmb	IAmb	07 32 57.2	
	comp=Z,78nm,1.1s						
JWT	Wachi	23.10	339	P	P	07 32 59.4	0.0
PMG	Port Moresby	23.22	175	P	P	07 33 00.7	0.0
	comp=Z,31nm,0.5s,baz=354,slow=3.5,SNR=11						
PMG	Port Moresby	23.22	175	P	P	07 33 01.1	+0.4
PMG				IAmb	IAmb	07 33 01.7	
	comp=Z,45nm,0.7s						
JNU	Nakatsue	23.23	328	P	P	07 33 01.2	+0.5
	comp=Z,49nm,1.1s,baz=101,slow=4.0,SNR=9.6						
JNU				LR	LR	07 41 24.1	
	comp=Z,65nm,18.0s,baz=146,slow=35						
JNU	Nakatsue	23.23	328	P	P	07 33 01.5	+0.8
JNU				IAmb	IAmb	07 33 03.0	
	comp=Z,60nm,1.1s						
MJAR	Matsushiro Arr	23.44	345	P	P	07 33 01.5	-1.0
	comp=Z,20nm,1.0s,baz=175,slow=10,SNR=17						
MJAR				LR	LR	07 40 57.7	
	comp=Z,160nm,20.9s,baz=160,slow=33						
MJAR	Matsushiro Arr	23.44	345	P	P	07 33 02.3	-0.2
MAJO	Matsushiro	23.44	345	P	P	07 33 02.3	-0.2
MAJO				IAmb	IAmb	07 33 04.4	
	comp=Z,30nm,0.8s						
MAT	Matsushiro	23.44	345	P	P	07 33 01.7	-0.8
MSAI	Masohi	23.63	225	P	P	07 33 04.1	-0.4
	comp=Z,666nmcomp=Z,29nm,0.7s						
JHS	Saijyo	23.73	334	P	P	07 33 05.9	+0.7
JHS				IAmb	IAmb	07 33 07.4	
	comp=Z,43nm,0.7s						
JSD	Sado	24.85	347	P	P	07 33 15.5	+0.3
JSD				IAmb	IAmb	07 33 19.3	
	comp=Z,58nm,1.3s						
SANI	Sanana	24.88	232	P	P	07 33 13.5	-2.3
	comp=Z,15nm,0.9s						
LUWI	Luwuk	26.84	238	P	P	07 33 30.8	-2.7
LUWI	Luwuk	26.84	238	P	P	07 33 31.3	-2.1
HNR	Honiara	27.34	147	LR	LR	07 44 23.2	
	comp=Z,69nm,18.5s,baz=316,slow=36						
KSRS	Korea Array	28.13	330	P	P	07 33 45.0	+0.3
	comp=Z,5.9nm,0.8s,baz=144,slow=10,SNR=20						
KSRS				ScP	ScP	07 40 27.4	+0.1
	comp=Z,0.9nm,0.6s,baz=149,slow=2.6,SNR=5.3						
MTN	Manton Dam	30.07	209	P	P	07 34 01.2	-0.9
MTN				IAmb	IAmb	07 34 03.0	
	comp=Z,38nm,1.0s						
JKA	Kamikawa-asahi	30.21	356	P	P	07 34 03.1	+0.1
JKA	Kamikawa-asahi	30.21	356	IAmb	IAmb	07 34 10.9	
	comp=Z,27nm,1.1s						
ASAJ	Asahikawa	30.21	356	P	P	07 34 03.1	+0.1
	comp=Z,7.2nm,0.8s,baz=185,slow=12,SNR=1.8						
NJ2	Nanjing	30.22	311	eP	P	07 34 03.0	-0.3
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
USA0B	Ussuriysk Arra	32.28	342	P	P	07 34 23.3	+2.0
USA0B				IAmb	IAmb	07 34 24.8	
	comp=Z,15nm,0.9s						
USRK	Ussuriysk Ar.	32.28	342	P	P	07 34 21.9	+0.6
	comp=Z,11nm,0.8s,baz=161,slow=9.1,SNR=21						
USRK				ScP	ScP	07 40 41.5	+0.7
	comp=Z,1.2nm,0.6s,baz=174,slow=4.3,SNR=4.4						
USRK				LR	LR	07 46 34.2	
	comp=Z,53nm,19.5s,baz=160,slow=34						
USRK	Ussuriysk Ar.	32.28	342	P	P	07 34 21.4	+0.1
MDJ	Mudanjiang	33.43	339	P	P	07 34 32.3	+1.0
MDJ				pP	pwP	07 34 57.4	-0.6
MDJ				sP	sP	07 35 11.2	+3.6
MDJ				S	S	07 39 50.5	+6.0
MDJ				sS	sS	07 40 33.4	+7.4
MDJ				ScP	ScP	07 40 41.8	-2.9
MDJ				PcS	PcS	07 40 51.5	-4.4
MDJ				ScS	ScS	07 44 42.4	-3.4
MDJ				pmax	pmax		
	comp=Z,23nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,210nm,5.8s						
MDJ	Mudanjiang	33.43	339	IAmb	IAmb	07 34 33.1	

	comp=Z,20nm,1.0s								
KNRA	**Kununurra**	**33.65**	**210**		P		**P**	**07 34 33.9**	**+0.4**
CTA	**Charters Tower**	**33.78**	**178**		P		**P**	**07 34 34.2**	**-0.4**
	comp=Z,4.8nm,0.5s,baz=2.8,slow=8.5,SNR=15								
CTAO	**Charters Tower**	**33.78**	**178**		P		**P**	**07 34 35.4**	**+0.8**
CTAO					IAmb		IAmb	07 34 42.4	
	comp=Z,16nm,1.2s								
CN2	**Changchun**	**34.33**	**334**	*eP*			**P**	**07 34 40.3**	**+1.2**
CN2					pmax		pmax		
	comp=Z,10.0nm,0.8s								
WB0	**Warramunga Arr**	**35.15**	**198**		P		**P**	**07 34 46.1**	**-0.3**
WR0	**Warramunga Arr**	**35.28**	**198**		P		**P**	**07 34 46.6**	**-1.0**
WRA	**Warramunga Arr**	**35.33**	**198**		P		**P**	**07 34 47.8**	**-0.1**
	comp=Z,33nm,0.7s,baz=21,slow=9.4,SNR=315								
WRA					PcP		**PcP**	**07 37 17.1**	**+1.0**
	comp=Z,3.3nm,0.6s,baz=14,slow=3.3,SNR=8.1								
WRA					ScP		**ScP**	**07 40 51.8**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=19,slow=4.3,SNR=5.2								
WRA					LR		LR	07 49 08.2	
	comp=Z,68nm,20.8s,baz=330,slow=36								
BJI	**Beijing**	**36.49**	**321**		P		**P**	**07 34 58.1**	**+0.5**
BJI					pmax		pmax		
	comp=Z,4.0nm,1.0s								
KLR	**Kul'dur**	**36.97**	**345**		P		**P**	**07 35 00.9**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=143,slow=13,SNR=9.3								
FITZ	**Fitzroy Crossi**	**37.26**	**212**		LR		LR	07 52 04.3	
	comp=Z,32nm,18.0s,baz=44,slow=39								
FITZ	**Fitzroy Crossi**	**37.26**	**212**		P		**P**	**07 35 04.6**	**+0.2**
FITZ					IAmb		IAmb	07 35 05.9	
	comp=Z,28nm,1.1s								
GYA	**Guiyang**	**38.24**	**295**	*eP*			**P**	**07 35 14.7**	**+1.9**
GYA					pmax		pmax		
	comp=Z,8.0nm,1.1s								
XAN	**Xi'an**	**38.57**	**308**		P		**P**	**07 35 15.6**	**+0.3**
XAN					pP		pP	07 35 39.8	+0.1
XAN					pmax		pmax		
	comp=Z,10.0nm,0.8s								
AS31	**Alice Springs**	**38.97**	**197**		P		**P**	**07 35 18.7**	**0.0**
ASAR	**Alice Springs**	**38.97**	**197**		P		**P**	**07 35 19.0**	**+0.3**
	comp=Z,8.3nm,0.7s,baz=27,slow=9.5,SNR=129								
ASAR					PP		**PP**	**07 36 48.6**	**-1.8**
	comp=Z,3.0nm,1.0s,baz=19,slow=12,SNR=4.9								
ASAR					PcP		**PcP**	**07 37 28.4**	**+1.2**
	comp=Z,2.5nm,0.8s,baz=18,slow=3.5,SNR=4.3								
ASAR					ScP		**ScP**	**07 41 05.8**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=14,slow=3.7,SNR=4.7								
ASAR					LR		LR	07 51 35.3	
	comp=Z,65nm,21.7s,baz=351,slow=36								
ASAR	**Alice Springs**	**38.97**	**197**		P		**P**	**07 35 17.9**	**-0.8**
EIDS	**Eidsvold**	**39.43**	**172**		P		**P**	**07 35 23.6**	**+1.2**
HHC	**Hu-ho-hao-te**	**39.84**	**319**	*eP*			**P**	**07 35 26.4**	**+0.5**
HHC					pP		pP	07 35 52.0	+1.8
HHC					pmax		pmax		
	comp=Z,33nm,0.8s								
HHC					pmax		pmax		
	comp=Z,160nm,6.1s								
PEA0B	**Petropavlovsk-**	**40.33**	**12**		P		**P**	**07 35 30.3**	**+0.7**
PETK	**Petropavlovsk-**	**40.33**	**12**		P		**P**	**07 35 29.0**	**-0.6**
	comp=Z,2.9nm,0.6s,baz=170,slow=8.8,SNR=1.9								
PETK	**Petropavlovsk-**	**40.33**	**12**		P		**P**	**07 35 30.2**	**+0.6**
DZM	**Mont Dzumac**	**41.30**	**150**		P		**P**	**07 35 38.9**	**+0.8**
	comp=Z,16nm,0.8s,baz=332,slow=3.9,SNR=7.4								
CD2	**Chengdu**	**41.73**	**301**	*eP*			**P**	**07 35 41.0**	**-0.5**
LZH	**Lanzhou**	**43.19**	**308**	⇑	P		**P**	**07 35 54.3**	**+0.9**
LZH					pP		pwP	07 36 20.5	-0.5
LZH					sP		sP	07 36 33.2	+2.9
LZH					PP		**PcP**	**07 37 38.6**	**-2.4**
LZH					pmax		pmax		
	comp=Z,25nm,1.3s								
LZH					pmax		pmax		
	comp=Z,110nm,6.0s								
PSA00	**Pilbara Seismi**	**43.23**	**216**		P		**P**	**07 35 53.8**	**+0.2**
PSA00					IAmb		IAmb	07 35 55.0	
	comp=Z,32nm,1.5s								
CMAR	**Chiang Mai Arr**	**44.70**	**282**		P		**P**	**07 36 05.6**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=80,slow=7.0,SNR=1.9								
CMAR					PcP		**PcP**	**07 37 47.7**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=94,slow=2.0,SNR=4.4								
CMAR					ScP		**ScP**	**07 41 29.1**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=82,slow=1.4,SNR=5.1								
CMAR					LR		LR	07 54 15.0	
	comp=Z,18nm,21.1s,baz=200,slow=35								
MSVF	**Nonsavu**	**45.05**	**133**		P		**P**	**07 36 10.3**	**+2.0**
MSVF					IAmb		IAmb	07 36 11.5	
	comp=Z,37nm,1.2s								
STKA	**Stephens Creek**	**45.66**	**184**		P		**P**	**07 36 12.8**	**0.0**
	comp=Z,24nm,0.7s,baz=353,slow=8.2,SNR=64								
STKA					LR		LR	07 55 42.2	
	comp=Z,45nm,19.2s,baz=20,slow=36								
STKA	**Stephens Creek**	**45.66**	**184**		P		**P**	**07 36 12.4**	**-0.3**
SONM	**Songino Array**	**46.75**	**324**		P		**P**	**07 36 21.1**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=138,slow=9.1,SNR=2.6								
SONM					PcP		**PcP**	**07 37 53.8**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=118,slow=4.8,SNR=1.4								
SONM					ScP		**ScP**	**07 41 35.5**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=150,slow=3.9,SNR=5.4								
SONM	**Songino Array**	**46.75**	**324**		IAmb		IAmb	07 36 29.4	
	comp=Z,1.8nm,0.8s								
BBOO	**Buckleboo**	**47.28**	**191**		P		**P**	**07 36 26.0**	**+0.5**
GTA	**Gaotai**	**47.31**	**311**	*eP*			**P**	**07 36 27.1**	**+1.2**
GTA					pmax		pmax		
	comp=Z,4.0nm,1.0s								
FORT	**Forrest**	**47.43**	**200**		P		**P**	**07 36 27.1**	**+0.6**
ADK	**Adak**	**48.56**	**31**		P		**P**	**07 36 36.4**	**+1.3**
SEY	**Seymchan**	**49.22**	**4**		P		**P**	**07 36 39.4**	**-0.6**
	comp=Z,2.9nm,0.2s,baz=176,slow=22,SNR=4.6								
YAK	**Yakutsk**	**49.36**	**350**		P		**P**	**07 36 40.7**	**-0.2**
ATKA	**Atka Island**	**50.00**	**31**		P		**P**	**07 36 45.7**	**-0.3**
TOO	**Toolangi**	**51.19**	**180**		P		**P**	**07 36 56.2**	**+1.1**
MORW	**Morawa**	**51.24**	**213**		P		**P**	**07 36 54.7**	**-1.0**
MORW					IAmb		IAmb	07 36 56.4	
	comp=Z,31nm,1.4s								
UNV	**Unalaska Valle**	**54.82**	**33**		P		**P**	**07 37 22.0**	**+0.5**
AKUT	**Akutan**	**55.34**	**33**		P		**P**	**07 37 25.1**	**-0.2**
WMQ	**Urumqi**	**57.26**	**313**	*eP*			**P**	**07 37 41.7**	**+2.4**
WMQ					pmax		pmax		
	comp=Z,22nm,1.1s								
WMQ					pmax		pmax		
	comp=Z,240nm,4.7s								
URZ	**Urewera**	**59.82**	**151**		LR		LR	08 01 57.1	
	comp=Z,31nm,18.1s,baz=31,slow=34								
MKAR	**Makanchi Array**	**61.59**	**316**		P		**P**	**07 38 09.2**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=88,slow=9.2,SNR=15								
MKAR	**Makanchi Array**	**61.59**	**316**		P		**P**	**07 38 08.3**	**-0.6**
ZALV	**Zalesovo Beam**	**61.64**	**324**		P		**P**	**07 38 09.2**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=96,slow=5.9,SNR=4.6								
ZALV	**Zalesovo Beam**	**61.64**	**324**		pP		pP	07 38 36.0	+0.3
MAKZ	**Makanchi**	**61.80**	**316**		P		**P**	**07 38 10.8**	**+0.4**
RPZ	**Rata Peaks**	**61.96**	**159**		LR		LR	08 05 06.1	
	comp=Z,35nm,18.6s,baz=344,slow=36								
OHAK	**Old Harbor**	**63.04**	**32**		P		**P**	**07 38 19.0**	**+0.7**
SVW2	**Sparrevohn**	**63.19**	**28**		IAmb		IAmb	07 38 21.2	
	comp=Z,7.4nm,0.7s								
KDAK	**Kodiak Island**	**63.57**	**32**		P		**P**	**07 38 21.0**	**-0.8**
CNPM	**China Poot**	**64.74**	**30**		P		**P**	**07 38 29.2**	**-0.3**
BRLK	**Bradley Lake**	**64.97**	**30**		P		**P**	**07 38 30.3**	**-0.7**
PPLA	**Purkeypile**	**65.31**	**27**		IAmb		IAmb	07 38 34.8	
	comp=Z,9.2nm,0.8s								
SKT	**Skwentna**	**65.31**	**28**		P		**P**	**07 38 32.5**	**-0.6**
SKT					IAmb		IAmb	07 38 34.2	
	comp=Z,10.0nm,0.9s								
KSH	**Kashi**	**65.42**	**307**		P		**P**	**07 38 36.7**	**+2.3**
KSH					pmax		pmax		
	comp=Z,200nm,3.8s								
SUA	**Susitna One**	**65.52**	**28**		IAmb		IAmb	07 38 35.3	
	comp=Z,16nm,1.1s								
IMAR	**Indian Mountai**	**65.73**	**23**		P		**P**	**07 38 36.3**	**+0.5**
SEW	**Seward**	**65.76**	**30**		P		**P**	**07 38 35.9**	**-0.1**
NRIK	**Noril'sk**	**65.99**	**341**		P		**P**	**07 38 36.9**	**-0.5**
	comp=Z,9.4nm,0.6s,baz=113,slow=8.1,SNR=20								
NRIK					LR		LR	08 07 31.2	
	comp=Z,47nm,18.1s,baz=12,slow=36								
KTH	**Kantishna Hill**	**66.06**	**26**		P		**P**	**07 38 35.2**	**-2.8**
KTH					IAmb		IAmb	07 38 39.5	
	comp=Z,29nm,1.3s								
PMR	**Palmer**	**66.30**	**28**		IAmb		IAmb	07 38 40.0	
	comp=Z,13nm,0.7s								
GHO	**Glory Hole Cre**	**66.44**	**28**		P		**P**	**07 38 40.6**	**+0.2**
GHO					IAmb		IAmb	07 38 41.3	
	comp=Z,18nm,0.8s								
KNK	**Knik Glacier**	**66.56**	**29**		IAmb		IAmb	07 38 43.5	
	comp=Z,22nm,0.9s								
BWN	**Browne**	**66.86**	**26**		IAmb		IAmb	07 38 44.7	
	comp=Z,30nm,1.2s								
RND	**Reindeer**	**66.91**	**27**		P		**P**	**07 38 43.0**	**-0.3**
GLI	**Glacier Island**	**67.08**	**29**		P		**P**	**07 38 44.9**	**+0.4**
GLI					IAmb		IAmb	07 38 45.7	
	comp=Z,16nm,0.8s								
SCM	**Sheep Creek Mo**	**67.19**	**28**		P		**P**	**07 38 45.8**	**+0.6**
FID	**Port Fidalgo**	**67.34**	**30**		P		**P**	**07 38 46.3**	**+0.2**
DHY	**Denali Highway**	**67.47**	**27**		P		**P**	**07 38 47.2**	**+0.1**
WRH	**Wood River Hil**	**67.52**	**25**		P		**P**	**07 38 46.8**	**-0.3**
MDM	**Murphy Dome**	**67.59**	**25**		P		**P**	**07 38 46.4**	**-1.2**
NIL	**Nilore**	**67.62**	**301**		P		**P**	**07 38 47.3**	**-1.1**
NIL					IAmb		IAmb	07 38 50.5	
	comp=Z,17nm,1.1s								
EYAK	**Cordova Ski Ar**	**67.66**	**30**		P		**P**	**07 38 47.8**	**-0.2**
EYAK					IAmb		IAmb	07 38 49.8	
	comp=Z,26nm,1.1s								
CCB	**Clear Creek Bu**	**67.68**	**25**		IAmb		IAmb	07 38 48.9	
	comp=Z,14nm,1.4s								
KLU	**Klutina**	**67.77**	**29**		P		**P**	**07 38 49.1**	**+0.2**
KLU					IAmb		IAmb	07 38 50.5	
	comp=Z,14nm,0.8s								
M24K	**Tolsona, Glenn**	**67.78**	**28**		P		**P**	**07 38 50.1**	**+1.2**
M24K					IAmb		IAmb	07 39 05.8	
	comp=Z,35nm,1.4s								
ILAR	**Eielson Array**	**68.09**	**25**		P		**P**	**07 38 49.7**	**-1.1**
	comp=Z,4.9nm,0.7s,baz=251,slow=5.5,SNR=68								
ILAR	**Eielson Array**	**68.09**	**25**		P		**P**	**07 38 49.2**	**-1.6**
ILAR							**PcP**	**07 39 13.5**	**-2.5**
PAX	**Paxson**	**68.29**	**27**		IAmb		IAmb	07 38 54.5	
	comp=Z,11nm,1.1s								
N25K	**Chitina, Valde**	**68.41**	**29**		P		**P**	**07 38 53.6**	**+0.7**
RIDG	**Independent Ri**	**68.73**	**27**		IAmb		IAmb	07 38 55.8	
	comp=Z,16nm,1.2s								
GLB	**Gilahina Butte**	**68.75**	**29**		IAmb		IAmb	07 38 57.2	
	comp=Z,25nm,1.1s								
VRDI	**Verde Repeater**	**68.89**	**29**		P		**P**	**07 38 56.2**	**+0.2**
VRDI					IAmb		IAmb	07 38 57.4	
	comp=Z,14nm,0.8s								
CRQM	**Cirque**	**68.96**	**30**		P		**P**	**07 38 57.2**	**+0.8**
CRQM					IAmb		IAmb	07 39 00.8	
	comp=Z,14nm,0.7s								
DOT	**Dot Lake**	**69.05**	**27**		P		**P**	**07 38 56.6**	**-0.1**
DOT					IAmb		IAmb	07 38 57.7	
	comp=Z,9.2nm,0.7s								
MCARA	**McCarthy VSAT**	**69.11**	**29**		P		**P**	**07 38 57.6**	**+0.4**
MCARA					IAmb		IAmb	07 38 58.9	
	comp=Z,21nm,1.0s								
BALM	**Baldy**	**69.39**	**30**		P		**P**	**07 38 58.7**	**-0.3**
BALM					IAmb		IAmb	07 39 00.4	
	comp=Z,10.0nm,0.8s								
KKAR	**Karatay Array**	**69.60**	**311**		P		**P**	**07 39 00.3**	**-0.2**
BMAR	**Burnt Mountain**	**69.64**	**23**		P		**P**	**07 39 01.1**	**+0.7**
CTGM	**Chitina Glacie**	**69.86**	**30**		P		**P**	**07 39 02.7**	**+0.8**
CTGM					IAmb		IAmb	07 39 04.0	
	comp=Z,20nm,0.8s								
BCAR	**Beaver Creek A**	**69.96**	**28**		P		**P**	**07 39 02.6**	**+0.3**
K27K	**Chicken**	**69.98**	**27**		P		**P**	**07 39 03.4**	**+0.9**
EGAK	**Eagle**	**70.50**	**26**		P		**P**	**07 39 05.5**	**0.0**
DAWY	**Dawson**	**71.16**	**27**		P		**P**	**07 39 10.2**	**+0.6**
HYT	**Haines Junctio**	**71.71**	**30**		IAmb		IAmb	07 39 15.6	
	comp=Z,20nm,0.9s								
WHY	**Whitehorse**	**72.99**	**30**		P		**P**	**07 39 21.4**	**+0.7**
JIS	**Juneau Island**	**73.18**	**33**		P		**P**	**07 39 23.1**	**+1.4**
JIS					IAmb		IAmb	07 39 23.6	
	comp=Z,12nm,0.8s								
INK	**Inuvik**	**73.91**	**22**		P		**P**	**07 39 25.7**	**-0.1**
	comp=Z,5.2nm,0.8s,baz=269,slow=6.4,SNR=24								
INK	**Inuvik**	**73.91**	**22**		P		**P**	**07 39 25.8**	**+0.1**
DLBC	**Dease Lake**	**75.48**	**33**		P		**P**	**07 39 36.7**	**+1.6**
DLBC					IAmb		IAmb	07 39 37.7	
	comp=Z,16nm,1.0s								
ABKAR	**Akbulak array**	**76.62**	**318**		P		**P**	**07 39 40.6**	**-1.1**
ABKAR	**Akbulak array**	**76.62**	**318**		IAmb		IAmb	07 39 42.0	
	comp=Z,2.4nm,1.0s								
BBB	**Bella Bella**	**77.05**	**39**		LR		LR	08 08 33.1	
	comp=Z,17nm,20.5s,baz=322,slow=32								
YBH	**Yreka Blue Hor**	**82.33**	**49**		LR		LR	08 08 39.0	
	comp=Z,31nm,21.3s,baz=314,slow=30								
YKA	**Yellowknife Ar**	**82.38**	**27**		P		**P**	**07 40 12.3**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=286,slow=3.8,SNR=5.4								
YKA					LR		LR	08 13 57.3	
	comp=Z,18nm,21.3s,baz=0.0,slow=34								
B08A	**Colville Reser**	**83.24**	**42**		IAmb		IAmb	07 40 20.0	
	comp=Z,9.9nm,0.8s								
NEW	**Newport**	**84.69**	**42**		IAmb		IAmb	07 40 27.6	
	comp=Z,12nm,1.1s								
NVAR	**Mina Array Bea**	**86.37**	**51**		P		**P**	**07 40 34.0**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=269,slow=5.8,SNR=12								
WALA	**Waterton Lakes**	**86.52**	**40**		P		**P**	**07 40 35.5**	**+1.6**
WALA					IAmb		IAmb	07 40 36.6	
	comp=Z,8.4nm,0.8s								
ARCES	**ARCESS Array B**	**86.93**	**342**		P		**P**	**07 40 34.5**	**-0.9**
	comp=Z,3.3nm,0.6s,baz=71,slow=7.8,SNR=12								
TPNV	**Topopah Spring**	**88.33**	**52**		P		**P**	**07 40 44.0**	**+1.0**
KBZ	**Khabaz**	**89.27**	**315**		LR		LR	08 24 18.4	
	comp=Z,30nm,19.1s,baz=146,slow=38								
FINES	**FINESS Array B**	**91.08**	**335**		P		**P**	**07 40 53.4**	**-1.6**
	comp=Z,2.1nm,0.6s,baz=77,slow=6.1,SNR=11								
PDAR	**Pinedale Array**	**91.42**	**45**		P		**P**	**07 40 56.7**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=247,slow=2.0,SNR=5.8								
PDAR					LR		LR	08 15 23.3	
	comp=Z,17nm,20.9s,baz=317,slow=31								
VNDA	**Vanda**	**91.74**	**176**		P		**P**	**07 40 58.2**	**+0.6**
	comp=Z,3.4nm,0.9s,baz=321,slow=5.1,SNR=17								
VNDA	**Vanda**	**91.74**	**176**		P		**P**	**07 40 59.0**	**+1.4**
VNDA					IAmb		IAmb	07 40 59.9	
	comp=Z,6.0nm,1.1s								
TORD	**Torodi Ar. Bea**	**135.06**	**305**		PKP		**PKPdf**	**07 47 10.5**	**0.0**
	comp=Z,0.8nm,0.7s,baz=41,slow=1.4,SNR=3.6								
TORD					SKPbc		**SKPbc**	**07 50 30.4**	**-0.8**
	comp=Z,2.9nm,0.9s,baz=28,slow=3.5,SNR=9.1								
DBIC	**Dimbokro**	**144.05**	**303**		PKP		PKPbc	07 47 24.9	0.0
	comp=Z,8.8nm,0.7s,baz=28,slow=2.8,SNR=14								
KIC	**Kosan Boka**	**144.13**	**302**	*eP*			**PKPab**	**07 47 24.6**	**-0.2**
	comp=Z,9.9nm,0.4s								
TIC	**Toumodi**	**144.19**	**303**	*eP*			**PKPab**	**07 47 25.1**	**+0.1**
LIC	**Lamto**	**144.44**	**302**	*eP*			**PKPab**	**07 47 26.0**	**+0.1**
	comp=Z,38nm,0.4s								
LPAZ	**La Paz**	**147.62**	**99**		PKPbc		**PKPbc**	**07 47 35.6**	**-0.8**
	comp=Z,3.3nm,0.7s,baz=351,slow=3.4,SNR=12								
LPAZ	**La Paz**	**147.62**	**99**				**PKPbc**	**07 47 35.8**	**-0.6**
TDK					*eS*		**Sg**	**07 43 44.2**	**-0.1**
	39nm,0.1s								
TDK	**Taldyqorghan**	**1.20**	**309**		P		**Pb**	**07 43 28.4**	**+0.2**
	56nm,0.2s								
TDK					S		**Sn**	**07 43 43.9**	**-0.5**
	39nm,0.1s								
UZB	**Uzynbulak**	**1.21**	**205**	⇓	*eP*		**Pb**	**07 43 28.1**	**-0.2**
	146nm,0.2s								
UZB					*eS*		**Sn**	**07 43 44.2**	**-0.5**
	109nm,0.2s								
UZB	**Uzynbulak**	**1.21**	**205**		P		**Pb**	**07 43 28.2**	**-0.2**
	146nm,0.2s								
UZB					S		**Sg**	**07 43 44.4**	**-0.1**
	109nm,0.2s								
KURS	**Kuram**	**1.35**	**236**		*eP*		**Pb**	**07 43 30.6**	**-0.1**
	17nm,0.4s								
KURS					*eS*		**Sg**	**07 43 48.2**	**-0.8**
	59nm,0.3s								
KURS	**Kuram**	**1.35**	**236**		P		**Pg**	**07 43 31.5**	**0.0**
	17nm,0.4s								
KURS					S		**Sg**	**07 43 49.2**	**+0.3**
	59nm,0.3s								
ARXS	**Arharly**	**1.36**	**269**	⇑	*eP*		**Pb**	**07 43 30.5**	**-0.4**
	37nm,0.2s								
ARXS					*eS*		**Sb**	**07 43 48.0**	**-0.2**
	138nm,0.2s								
ARXS	**Arharly**	**1.36**	**269**		P		**Pb**	**07 43 30.5**	**-0.4**
	37nm,0.2s								
ARXS					S		**Sb**	**07 43 48.1**	**-0.2**
	138nm,0.2s								
ZHN	**Zhinishke**	**1.42**	**221**		*eP*		**Pb**	**07 43 31.7**	**-0.3**
	69nm,0.2s								
ZHN					*eS*		**Sb**	**07 43 50.0**	**-0.1**
	178nm,0.1s								
ZHN	**Zhinishke**	**1.42**	**221**		P		**Pb**	**07 43 31.8**	**-0.2**
	69nm,0.2s								
ZHN					S		**Sg**	**07 43 50.7**	**-0.6**
	178nm,0.1s								
SATY	**Saty**	**1.52**	**219**		*eP*		**Pb**	**07 43 33.5**	**-0.2**
	51nm,0.1s								
SATY					*eS*		**Sb**	**07 43 53.1**	**+0.2**
	390nm,0.2s								
SATY	**Saty**	**1.52**	**219**		P		**Pg**	**07 43 34.4**	**-0.2**
	51nm,0.1s								
SATY					S		**Sg**	**07 43 54.4**	**0.0**
	390nm,0.2s								
KOTS	**Kotyrbulak**	**2.14**	**243**		*eP*		**Pb**	**07 43 43.4**	**-0.9**
	32nm,0.2s								
KOTS					*eS*		**Sb**	**07 44 10.1**	**-0.7**
	425nm,0.3s								
KOTS	**Kotyrbulak**	**2.14**	**243**		Pg		**Pb**	**07 43 45.1**	**+0.8**
	33nm,0.2s								
KOTS					Lg		Lg	07 44 12.7	
	425nm,0.3s								
MDOK	**Medeo**	**2.22**	**242**		*eP*		**Pb**	**07 43 44.5**	**-1.1**
	8.6nm,0.3s								
MDOK					*eS*		**Sb**	**07 44 11.9**	**-1.1**
	70nm,0.4s								
MDOK	**Medeo**	**2.22**	**242**		Pg		**Pb**	**07 43 46.2**	**+0.6**
	8.6nm,0.3s								
MDOK					Lg		Lg	07 44 14.4	
	70nm,0.4s								
KTBS	**Karatobe**	**2.25**	**257**		*eP*		**Pb**	**07 43 45.2**	**-0.9**
	9.6nm,0.4s								
KTBS					*eS*		**Sb**	**07 44 13.1**	**-0.9**
	216nm,0.4s								
KTBS	**Karatobe**	**2.25**	**257**		Pg		**Pb**	**07 43 46.8**	**+0.7**
	9.6nm,0.4s								
KTBS					Lg		Lg	07 44 15.6	
	216nm,0.4s								
TNSS	**Tian-Shan**	**2.35**	**240**		*eP*		**Pb**	**07 43 47.5**	**-0.4**
	6.4nm,0.2s								
TNSS					*eS*		**Sb**	**07 44 17.0**	**0.0**
	11nm,0.2s								
TNSS	**Tian-Shan**	**2.35**	**240**		Pg		**Pb**	**07 43 48.1**	**+0.2**
	6.4nm,0.2s								
TNSS					Lg		Lg	07 44 17.6	
	11nm,0.2s								
KUU	**Kurty**	**2.46**	**263**		*eP*		**Pb**	**07 43 48.2**	**-1.4**
	5.1nm,0.2s								
KUU					*eS*		**Sb**	**07 44 18.3**	**-1.5**
	47nm,0.3s								
KUU	**Kurty**	**2.46**	**263**		Pg		**Pb**	**07 43 50.0**	**+0.4**
	5.1nm,0.2s								
KUU					Lg		Lg	07 44 21.0	
	47nm,0.3s								
MTBS	**Maitube**	**2.63**	**246**		*eP*		**Pb**	**07 43 51.4**	**-1.2**
	9.7nm,0.3s								
MTBS					*eS*		**Sb**	**07 44 23.8**	**-1.1**
	63nm,0.3s								
MTBS	**Maitube**	**2.63**	**246**		Pg		**Pb**	**07 43 53.5**	**+0.9**
	9.7nm,0.3s								
MTBS					Lg		Lg	07 44 26.9	
	63nm,0.3s								
KRBS	**Karabastau**	**2.97**	**261**		*eP*		**Pb**	**07 43 56.5**	**-1.9**
	2.7nm,0.2s								
KRBS					*eS*		**Sb**	**07 44 32.4**	**-2.1**
	19nm,0.3s								
KRBS	**Karabastau**	**2.97**	**261**		Pg		**Pb**	**07 43 58.7**	**+0.4**
	2.7nm,0.2s								
KRBS					Lg		Lg	07 44 35.9	
	19nm,0.3s								
KST	**Kastek**	**2.98**	**247**		*eP*		**Pb**	**07 43 57.4**	**-1.1**
	4.8nm,0.2s								
KST					*eS*		**Sb**	**07 44 34.0**	**-0.9**
	30nm,0.4s								
KST	**Kastek**	**2.98**	**247**		Pg		**Pb**	**07 43 58.9**	**+0.4**
	4.8nm,0.2s								
KST					Lg		Lg	07 44 36.3	
	30nm,0.4s								
MAKZ	**Makanchi**	**3.02**	**31**	⇑	Pn		**Pn**	**07 43 57.5**	**-1.5**
	0.4nm,0.3s								
MAKZ					⇓Sn		**Sb**	**07 44 33.0**	**-2.8**
	1.6nm,0.3s								
MK31	**Makanchi Array**	**3.12**	**34**		Pn		**Pn**	**07 43 57.8**	**+3.3**
	0.8nm,0.3s,baz=213,slow=15,SNR=46								

mb1mx3.1/42,mbtmp3.2/3,ML2.6/3,Error ellipse: s-maj=21.1km s-min=7.1km az=144.0

ISC 05 08:03:10.7±0.7, 59°52N±0°02×24°88E±0°02, h0km, n72, σ1§77/110, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARBE	**Arbavere**	**0.57**	**98**	*eP*	**Pb**	**08 03 23.5**	**0.0**
ARBE				*eS*	**Sb**	**08 03 31.5**	**-0.6**
MEF	**Metsahovi**	**0.74**	**341**	*eP*	**Pb**	**08 03 26.0**	**-0.5**
MEF				*eS*	**Sg**	**08 03 34.6**	**0.0**
MEF				AML	AML	08 03 42.0	
	comp=Z,35nm,0.7s						
MEF				AML	AML	08 03 43.4	
	comp=E,27nm,0.2s						
MEF				AML	AML	08 03 43.5	
	comp=N,31nm,0.8s						
MEF	**Metsahovi**	**0.74**	**341**	*eP*	**Pb**	**08 03 25.9**	**-0.5**
MEF				*eS*	**Sb**	**08 03 36.0**	**-1.2**
MTSE	**Matsula**	**0.98**	**215**	*eP*	**Pg**	**08 03 28.5**	**-0.9**
MTSE				*eS*	**Sg**	**08 03 40.1**	**-1.9**
MTSE	**Matsula**	**0.98**	**215**	*eP*	**Pg**	**08 03 28.5**	**-0.9**
MTSE				*eS*	**Sg**	**08 03 39.7**	**-2.4**
PVF	**Pernaja**	**1.14**	**25**	*eP*	**Pn**	**08 03 33.8**	**-0.1**
PVF				*eS*	**Sn**	**08 03 49.8**	**-0.4**
VSU	**Vasula**	**1.43**	**137**	Pg	**Pn**	**08 03 38.3**	**+0.4**
VSU				Lg	Lg	08 03 57.3	
VSU	**Vasula**	**1.43**	**137**	*eP*	**Pg**	**08 03 38.4**	**+0.4**
VSU				*eS*	**Sb**	**08 03 57.2**	**+0.4**
VSU				AML	AML	08 04 01.8	
	comp=E,98nm,0.2s						
VSU				AML	AML	08 04 02.8	
	comp=Z,75nm,0.2s						
VSU				AML	AML	08 04 03.1	
	comp=N,100nm,0.5s						
VSU	**Vasula**	**1.43**	**137**	*eP*	**Pn**	**08 03 38.2**	**+0.4**
VSU				*eS*	**Sg**	**08 03 56.8**	**+0.3**
VSU	**Vasula**	**1.43**	**137**	Pg	**Pn**	**08 03 38.3**	**+0.4**
VSU				Sg	**Sb**	**08 03 57.3**	**+0.4**
VJF	**Virojoki**	**1.69**	**51**	*eP*	**Pg**	**08 03 43.6**	**+0.6**
VJF				*eS*	**Sg**	**08 04 06.3**	**+1.4**
VJF				MSG		08 04 09.5	
	comp=Z,15nm,0.1s						
FIA0	**FINESS Array S**	**2.02**	**16**	Pn	**Pg**	**08 03 49.4**	**0.0**
	baz=205,slow=16						
FIA0				Lg	Lg	08 04 15.6	
	baz=198,slow=28						
FIA0	**FINESS Array S**	**2.02**	**16**	*eP*	**Pg**	**08 03 49.3**	**-0.1**
FIA0				*eS*	**Sg**	**08 04 15.1**	**-0.4**
FIA0	**FINESS Array S**	**2.02**	**16**	Pn	**Pg**	**08 03 49.4**	**0.0**
	baz=205,slow=16						
FIA0				Sg	**Sg**	**08 04 15.6**	**0.0**
	baz=198,slow=28						
FINES	**FINESS Array B**	**2.02**	**16**	Pg	**Pg**	**08 03 49.2**	**-0.2**
	comp=Z,5.6nm,0.3s,baz=206,slow=14,SNR=235						
FINES				Lg	Lg	08 04 15.3	
	comp=Z,5.7nm,0.3s,baz=200,slow=26,SNR=21						
FIA1	**FINESS Array S**	**2.02**	**17**	*eP*	**Pg**	**08 03 49.3**	**-0.1**
FIA1				*eS*	**Sg**	**08 04 15.3**	**-0.3**
RAF	**Rauma**	**2.17**	**316**	*eP*	**Pb**	**08 03 50.7**	**0.0**
RAF				*eS*	**Sg**	**08 04 19.6**	**-0.7**
RAF				AML	AML	08 04 20.7	
	comp=E,19nm,0.2s						
RAF				AML	AML	08 04 21.0	
	comp=Z,22nm,0.4s						
RAF				AML	AML	08 04 21.4	
	comp=N,21nm,0.4s						
RAF	**Rauma**	**2.17**	**316**	*eP*	**Pb**	**08 03 50.5**	**-0.2**
RAF				*eS*	**Sb**	**08 04 17.9**	**-0.2**
RAF				MSG		08 04 20.6	
	comp=Z,9.6nm,0.1s						
SLIT	**Slitere, Latvi**	**2.33**	**217**	*eP*	**Pn**	**08 03 51.8**	**+1.5**
SLIT				*eS*	**Sb**	**08 04 22.4**	**-0.4**
SLIT				AML	AML	08 04 24.6	
	comp=N,188nm,0.2s						
SLIT				AML	AML	08 04 25.6	
	comp=E,179nm,0.4s						
SLIT				AML	AML	08 04 27.1	
	comp=Z,116nm,0.5s						
AAL	**Aland**	**2.56**	**287**	P	**Pn**	**08 03 54.0**	**+0.6**
AAL				S	**Sn**	**08 04 25.9**	**+0.9**
AAL	**Aland**	**2.56**	**287**	*eP*	**Pn**	**08 03 54.2**	**+0.9**
AAL				*eS*	**Sn**	**08 04 25.7**	**+0.6**
KEF	**Keuruu**	**2.66**	**360**	*eP*	**Pb**	**08 03 58.0**	**-1.2**
KEF				*eS*	**Sb**	**08 04 31.0**	**-1.2**
KEF				MSG		08 04 34.9	
	comp=Z,7.5nm,0.2s						
KAF	**Kangasniemi**	**2.70**	**14**	*eP*	**Pb**	**08 03 58.0**	**-1.8**
KAF				*eS*	**Sb**	**08 04 31.9**	**-1.5**
NRTU	**Norrtaelje**	**3.18**	**276**	P	**Pn**	**08 04 02.2**	**+0.3**
NRTU				S	**Sn**	**08 04 41.6**	**+1.1**
NRTU	**Norrtaelje**	**3.18**	**276**	*eP*	**Pn**	**08 04 02.2**	**+0.3**
NRTU				*eS*	**Sn**	**08 04 41.6**	**+1.1**
NRTU	**Norrtaelje**	**3.18**	**276**	P	**Pn**	**08 04 02.2**	**+0.3**
NRTU				S	**Sn**	**08 04 41.6**	**+1.1**
SUF	**Sumiainen**	**3.27**	**10**	*eP*	**Pn**	**08 04 06.0**	**+2.8**
SUF				*eS*	**Sn**	**08 04 46.0**	**+3.2**
GRAU	**Graesoe**	**3.30**	**287**	P	**Pn**	**08 04 03.5**	**0.0**
GRAU	**Graesoe**	**3.30**	**287**	*eP*	**Pn**	**08 04 03.5**	**0.0**
GRAU	**Graesoe**	**3.30**	**287**	P	**Pn**	**08 04 03.5**	**0.0**
NYNU	**Nynaeshamn**	**3.57**	**265**	P	**Pn**	**08 04 07.8**	**+0.5**
NYNU	**Nynaeshamn**	**3.57**	**265**	*eP*	**Pn**	**08 04 07.8**	**+0.5**
NYNU	**Nynaeshamn**	**3.57**	**265**	P	**Pn**	**08 04 07.8**	**+0.5**
VAF	**Ylistaro**	**3.69**	**344**	*eP*	**Pn**	**08 04 12.2**	**+3.2**
VAF				*eS*	**Sn**	**08 04 54.7**	**+1.6**
GOTU	**Gotland**	**3.78**	**244**	P	**Pn**	**08 04 11.0**	**+0.9**
GOTU	**Gotland**	**3.78**	**244**	*eP*	**Pn**	**08 04 11.0**	**+0.9**
GOTU	**Gotland**	**3.78**	**244**	P	**Pn**	**08 04 11.0**	**+0.9**
FIBU	**Brunna**	**3.83**	**279**	P	**Pn**	**08 04 11.1**	**+0.2**
FIBU	**Brunna**	**3.83**	**279**	P	**Pn**	**08 04 11.1**	**+0.2**
BACU	**Backbrunna**	**3.96**	**278**	P	**Pn**	**08 04 12.5**	**0.0**
BACU	**Backbrunna**	**3.96**	**278**	*eP*	**Pn**	**08 04 12.5**	**0.0**
BACU	**Backbrunna**	**3.96**	**278**	P	**Pn**	**08 04 12.5**	**0.0**
OSTU	**Oestervaala**	**3.97**	**284**	P	**Pn**	**08 04 12.8**	**+0.1**
OSTU	**Oestervaala**	**3.97**	**284**	*eP*	**Pn**	**08 04 12.8**	**+0.1**
OSTU	**Oestervaala**	**3.97**	**284**	P	**Pn**	**08 04 12.8**	**+0.1**
IGGU	**Iggoen**	**4.01**	**293**	P	**Pn**	**08 04 13.5**	**+0.2**
IGGU	**Iggoen**	**4.01**	**293**	*eP*	**Pn**	**08 04 13.5**	**+0.2**
IGGU	**Iggoen**	**4.01**	**293**	P	**Pn**	**08 04 13.5**	**+0.2**
ARNU	**Arnoeviken**	**4.29**	**304**	P	**Pn**	**08 04 17.8**	**+0.6**
ARNU	**Arnoeviken**	**4.29**	**304**	*eP*	**Pn**	**08 04 17.8**	**+0.6**
ARNU	**Arnoeviken**	**4.29**	**304**	P	**Pn**	**08 04 17.8**	**+0.6**
ESKU	**Eskilstuna**	**4.35**	**270**	P	**Pn**	**08 04 18.9**	**+0.9**
ESKU	**Eskilstuna**	**4.35**	**270**	*eP*	**Pn**	**08 04 18.9**	**+0.9**
ESKU	**Eskilstuna**	**4.35**	**270**	P	**Pn**	**08 04 18.9**	**+0.9**
VIKU	**Vikbolandet**	**4.35**	**260**	P	**Pn**	**08 04 19.1**	**+1.1**
VIKU	**Vikbolandet**	**4.35**	**260**	*eP*	**Pn**	**08 04 19.1**	**+1.1**
VIKU	**Vikbolandet**	**4.35**	**260**	P	**Pn**	**08 04 19.1**	**+1.1**
HEMU	**Hemsoen**	**4.59**	**317**	*eP*	**Pn**	**08 04 23.2**	**+1.9**
HEMU				*eS*	**Sn**	**08 05 16.1**	**+0.9**
JOF	**Joensuu**	**4.61**	**40**	*eP*	**Pn**	**08 04 23.8**	**+2.2**
JOF				*eS*	**Sn**	**08 05 17.0**	**+1.2**
HFS	**Hagfors**	**5.68**	**281**	Pn	**Pn**	**08 04 35.7**	**-0.5**
	baz=129,slow=14						
HFS				Sn	**Sn**	**08 05 39.7**	**-2.4**
	baz=87,slow=37						
HFS				Lg	Lg	08 06 05.9	
	baz=92,slow=37						
HFS	**Hagfors**	**5.68**	**281**	Pn	**Pn**	**08 04 35.8**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=92,slow=23,SNR=13						
HFS				Sn	**Sn**	**08 05 39.8**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=91,slow=30,SNR=1.8						
HFS				Lg	Lg	08 06 07.6	
	comp=Z,0.9nm,0.3s,baz=97,slow=33,SNR=5.3						
HFS	**Hagfors**	**5.68**	**281**	Pn	**Pn**	**08 04 35.7**	**-0.5**
	baz=129,slow=14						
HFS				Sn	**Sn**	**08 05 39.7**	**-2.4**
	baz=87,slow=37						
HFS				Sg	**Sb**	**08 06 05.9**	**+6.8**
	baz=92,slow=37						
NRA0	**NORESS Array S**	**6.78**	**286**	Pn	**Pn**	**08 04 50.0**	**-1.3**
	baz=105,slow=16						
NRA0				Sn	**Sn**	**08 06 06.9**	**-2.1**
	baz=102,slow=28						
NRA0	**NORESS Array S**	**6.78**	**286**	Pn	**Pn**	**08 04 50.0**	**-1.3**
	baz=105,slow=16						
NRA0				Sn	**Sn**	**08 06 06.9**	**-2.1**
	baz=102,slow=28						
NB2	**NORSAR Subarra**	**6.97**	**289**	Pn	**Pn**	**08 04 53.0**	**-0.9**
	baz=98,slow=14						
NB2				Sn	**Sn**	**08 04 53.8**	**-0.9**
	baz=101,slow=28						
NB2				Sg	**Sb**	**08 06 09.6**	**-4.2**
	baz=99,slow=37						
NOA	**NORSAR Array B**	**6.97**	**289**	Pn	**Pn**	**08 04 52.2**	**-1.7**
	comp=Z,0.0nm,0.3s,baz=102,slow=13,SNR=4.9						
NOA				Sn	**Sn**	**08 06 10.2**	**-3.6**
	comp=Z,0.0nm,0.3s,baz=101,slow=14,SNR=1.8						
NOA				Lg	Lg	08 06 47.0	
	comp=Z,0.1nm,0.3s,baz=95,slow=19,SNR=1.7						
APA0	**Apatity Array**	**8.88**	**20**	Pn	**Pn**	**08 05 20.0**	**0.0**
	baz=192,slow=16						
APA0	**Apatity Array**	**8.88**	**20**	Pn	**Pn**	**08 05 20.0**	**0.0**
	baz=192,slow=16						
ARA0	**ARCESS Array S**	**10.06**	**1**	Pn	**Pn**	**08 05 36.2**	**-0.1**
	baz=179,slow=14						
ARA0	**ARCESS Array S**	**10.06**	**1**	Pn	**Pn**	**08 05 36.2**	**-0.1**
	baz=179,slow=14						
ARCES	**ARCESS Array B**	**10.06**	**1**	Pn	**Pn**	**08 05 36.1**	**-0.1**
	baz=180,slow=13,SNR=16						
ARCES				Sn	**Sn**	**08 07 23.4**	**-6.3**
	baz=182,slow=22,SNR=2.5						

IDC 05 08:25:39.2±1.2, 55°42S×27°87W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/31, mbtmp3.7/3, Error ellipse: s-maj=56.0km s-min=33.6km az=85.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.18**	**183**	P	P	08 34 12.8	+0.1
	0.9nm,0.7s,baz=181,slow=7.7,SNR=6.6						
LPAZ	**La Paz**	**49.70**	**306**	P	P	08 34 33.8	+0.2
	0.5nm,0.4s,baz=140,slow=2.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**72.70**	**30**	P	P	08 37 09.0	+0.2
	0.6nm,0.7s,baz=204,slow=6.6,SNR=3.5						
H07N1	**FLORES T-PHASE**	**94.78**	**357**	T	T	10 22 58.4	
	SNR=5.5						
INK	**Inuvik**	**145.07**	**321**	PKPbc	PKPbc	08 45 16.1	-0.2
	1.3nm,0.9s,baz=122,slow=7.9,SNR=4.6						
ILAR	**Eielson Array**	**149.41**	**313**	PKPbc	PKPbc	08 45 26.9	-1.6
	0.7nm,0.8s,baz=114,slow=1.7,SNR=7.6						

IDC 05 08:30:26.4±2.8, 54°30N×85°94E, h0km, mb1 3.0/2, mb1mx2.9/54, mbtmp3.0/2, ML2.3/1, Error ellipse: s-maj=19.7km s-min=10.8km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.74**	**243**	*i*		08 34 30.0	
	baz=64,slow=343,SNR=0.9						
ZALV	**Zalesovo Beam**	**0.74**	**243**	Pg	Pg	08 30 38.9	-1.7
	0.4nm,0.3s,baz=62,slow=17,SNR=3.2						
ZALV				Lg	Lg	08 30 51.6	
	2.3nm,0.3s,baz=63,slow=36,SNR=10						
KURBB	**Kurchatov Arra**	**5.83**	**234**	Pn	Pn	08 31 54.0	0.0
	0.1nm,0.3s,baz=52,slow=13,SNR=5.0						
MKAR	**Makanchi Array**	**7.86**	**199**	Pn	Pn	08 32 23.5	+1.5
	baz=19,slow=12,SNR=1.2						
MKAR				Sn	Sn	08 33 52.8	+1.2
	0.0nm,0.3s,baz=24,slow=25,SNR=2.7						
MKAR				Lg	Lg	08 34 35.4	
	0.1nm,0.3s,baz=13,slow=38,SNR=2.0						

IDC 05 08:33:33.4±2.0,64°49N×17°87W,h0km,mb3.5/2, mb1 3.7/2,mb1mx3.3/46,mbtmp3.5/2,Error ellipse: s-maj=104.2km s-min=32.7km az=56.0

ISC 05 08:33:34.2±1.4, 64°7N±0°1×17°3W±0°4, h10km, n4, σ1§08/6, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**6.08**	**345**	*e*	**Pn**	**08 35 02.7**	**-1.3**
	baz=160,slow=8.6						
SCO				*i* P	**Pn**	**08 35 03.6**	**-0.4**
SCO				*i* S	**Sn**	**08 36 14.0**	**+0.5**
ILAR	**Eielson Array**	**45.70**	**333**	P	**P**	**08 41 55.8**	**+1.1**
	0.8nm,1.1s,baz=26,slow=7.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**53.13**	**157**	P	**P**	**08 42 51.9**	**0.0**
	0.4nm,0.9s,baz=348,slow=6.2,SNR=1.9						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**08 42 52.4**	**-0.3**
	baz=54,slow=7.5,SNR=5.2						

SNET 05 08:38:08.1±0.9, 13°53N×90°47W, h30km±3km, ML3.3
GCG 05 08:38:08.2±0.6, 13°51N×90°69W, h17km±7km, MD3.6

ISC 05 08:38:08.0±2.3, 13°5N±0°1×90°50W±0°06, h32km±14km, n23, σ0§61/31, 3C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.93**	**354**	*eP*	**Pb**	**08 38 24.9**	**-0.9**
PCG				*eS*	**Sn**	**08 38 38.0**	**+0.5**
SBLS	**San Blas**	**0.93**	**66**	*eP*	**Pn**	**08 38 24.6**	**-0.5**
SBLS				*eS*	**Sb**	**08 38 37.8**	**-0.2**
RTR	**El Retiro**	**0.94**	**62**	*eP*	**Pn**	**08 38 24.8**	**-0.3**
SNJE	**San Jose**	**0.96**	**65**	*eP*	**Pn**	**08 38 25.0**	**-0.5**
FUG	**Fuego 3**	**1.03**	**341**	*eP*	**Pn**	**08 38 26.0**	**-0.5**
FUG				*eS*	**Sn**	**08 38 39.7**	**-0.3**
CEDA	**San Andres**	**1.13**	**72**	*eP*	**Pn**	**08 38 26.7**	**-0.9**
CEDA				*eS*	**Sn**	**08 38 42.1**	**0.0**
CEDA				IAML		08 38 50.6	
	comp=Z,2μm,0.5s						
NBG	**Las Nubes**	**1.13**	**8**	*eP*	**Pb**	**08 38 29.0**	**-0.2**
NBG				*eS*	**Sb**	**08 38 45.7**	**+2.1**
BOQS	**Boqueron**	**1.22**	**77**	*eP*	**Pn**	**08 38 29.8**	**+0.7**
TACO	**Tacachico**	**1.22**	**66**	*eP*	**Pn**	**08 38 28.5**	**-0.4**
UEES	**Universidad Ev**	**1.25**	**78**	*eP*	**Pn**	**08 38 29.4**	**0.0**
SNET	**Serv Nac Est T**	**1.25**	**80**	*eP*	**Pn**	**08 38 29.2**	**-0.2**
SNET				*eS*	**Sn**	**08 38 45.6**	**+0.3**
SNET				IAML		08 38 47.1	
	comp=Z,729nm,0.3s						
OPAM	**Oficina de Pla**	**1.29**	**79**	*eP*	**Pn**	**08 38 30.0**	**+0.1**
LFU	**La Fuente**	**1.38**	**78**	*eP*	**Pn**	**08 38 31.2**	**+0.1**
LFRS	**El Faro**	**1.41**	**83**	*eP*	**Pn**	**08 38 31.7**	**+0.1**
LFRS				*eS*	**Sn**	**08 38 50.0**	**+0.9**
ERG	**Entre ros, C**	**1.42**	**313**	*eP*	**Pn**	**08 38 31.6**	**0.0**
LBRS	**Las Brisas**	**1.44**	**79**	*eP*	**Pn**	**08 38 31.9**	**-0.1**
MTO3	**Montecristo**	**1.45**	**50**	*eP*	**Pn**	**08 38 31.4**	**-0.8**
PAVA	**Las Pavas**	**1.54**	**81**	*eP*	**Pn**	**08 38 33.3**	**-0.1**
ESQI	**Esquipulas**	**1.57**	**46**	*iP*	**Pn**	**08 38 33.2**	**-0.6**
STG3	**Santiaguito 3,**	**1.62**	**320**	*eP*	**Pn**	**08 38 34.4**	**-0.1**
STG3				*eS*	**Sn**	**08 38 54.6**	**+0.3**
COEB	**Comit de Eme**	**1.92**	**89**	*iP*	**Pn**	**08 38 38.5**	**-0.1**
COEB				IAML		08 38 39.1	
	comp=Z,192nm,0.4s						
TECA	**Tecapa**	**1.94**	**89**	*eP*	**Pn**	**08 38 39.0**	**-0.1**
LCND	**La Caada**	**2.54**	**93**	*eP*	**Pn**	**08 38 46.8**	**-0.4**
LCND				IAML		08 39 21.7	
	comp=Z,160nm,0.5s						

IDC 05 08:39:11.6±6.7, 56°38S×26°90W, h106km±61km, mb3.9/7, mb1 4.0/9, mb1mx3.8/24, mbtmp4.3/9, Error ellipse: s-maj=28.5km s-min=15.0km az=53.0
NEIC 05 08:39:14.4±1.9, 56°44S±0°10×27°1W±0°2, h131km±7km, mb4.4/25, Error ellipse: s-maj=21.2km s-min=6.0km az=52.0

ISC 05 08:39:10.8±0.6, 56°4S±0°1×26°9W±0°1, h100km, n41, σ0§94/40, mb4.3/13, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.89**	**287**	Pn	**Pn**	**08 40 37.4**	**+2.0**
SNAA	**Sanae**	**18.36**	**156**	P	**Pn**	**08 43 17.9**	**-0.5**
	0.7nm,0.3s,baz=301,slow=9.4,SNR=35						
SNAA	**Sanae**	**18.36**	**156**	P	**P**	**08 43 17.4**	**+0.2**
SNAA				IAmb	IAmb	08 43 18.5	
	comp=Z,7.8nm,0.7s						
EFI	**East Falkland**	**18.83**	**271**	P	**Pn**	**08 43 23.4**	**-0.6**
PMSA	**Palmer Station**	**19.82**	**230**	P	**Pn**	**08 43 34.2**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=73,slow=8.6,SNR=9.2						
PMSA	**Palmer Station**	**19.82**	**230**	P	**Pn**	**08 43 34.8**	**-0.7**
PMSA				IAmb	IAmb	08 43 44.4	
	comp=Z,10nm,1.0s						
H09N1	**TRISTAN DA CUN**	**21.66**	**33**	T	T	09 06 43.8	
	SNR=15						
PLCA	**Paso Flores**	**32.24**	**280**	P	**P**	**08 45 28.1**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=170,slow=5.2,SNR=6.2						
PLCA	**Paso Flores**	**32.24**	**280**	IAmb	IAmb	08 45 30.9	
	comp=Z,4.8nm,1.4s						
QSPA	**South Pole Qui**	**33.86**	**180**	P	**P**	**08 45 43.7**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=169,slow=0.3,SNR=28						
QSPA				PcP	**PcP**	**08 48 18.9**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=197,slow=4.2,SNR=1.6						
QSPA	**South Pole Qui**	**33.86**	**180**	P	**P**	**08 45 44.0**	**+0.5**
QSPA				IAmb	IAmb	08 45 44.8	
	comp=Z,7.9nm,1.5s						
CPUP	**Villa Florida**	**37.17**	**311**	P	**P**	**08 46 11.4**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=148,slow=7.3,SNR=4.5						
MT02	**Curacav**	**38.07**	**288**	P	**P**	**08 46 18.3**	**-1.1**
ROC1	**El Roble**	**38.22**	**289**	P	**P**	**08 46 19.2**	**-1.8**
CO02	**Combarbal**	**39.61**	**291**	P	**P**	**08 46 31.7**	**-0.7**
MAW	**Mawson**	**39.77**	**143**	P	**P**	**08 46 32.9**	**-0.2**
	comp=Z,0.9nm,0.3s,baz=227,slow=7.4,SNR=9.8						
MAW	**Mawson**	**39.77**	**143**	P	**P**	**08 46 33.8**	**+0.6**
CO01	**Juntas del Tor**	**40.12**	**293**	P	**P**	**08 46 35.8**	**-1.0**
CO01				IAmb	IAmb	08 46 39.4	
	comp=Z,13nm,1.5s						
AC05	**El Transito**	**41.13**	**294**	P	**P**	**08 46 44.3**	**-0.7**
AC05				IAmb	IAmb	08 46 51.8	
	comp=Z,18nm,1.4s						
AC02	**Maricunga**	**42.19**	**297**	P	**P**	**08 46 53.6**	**-0.4**
AC02				IAmb	IAmb	08 46 55.3	
	comp=Z,7.5nm,0.7s						
LVC	**Limon Verde**	**45.63**	**300**	P	**P**	**08 47 22.5**	**+1.1**
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**08 47 25.8**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=186,slow=7.0,SNR=16						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**08 47 26.3**	**+1.1**
PB09	**IPOC Station P**	**46.48**	**300**	P	**P**	**08 47 28.4**	**+0.5**
PB09				IAmb	IAmb	08 47 29.6	
	comp=Z,10.0nm,0.7s						
PB07	**IPOC Station P**	**46.85**	**300**	P	**P**	**08 47 30.9**	**+0.1**
PB01	**IPOC Station P**	**47.24**	**300**	P	**P**	**08 47 33.7**	**-0.1**
PB08	**IPOC Station P**	**47.85**	**301**	P	**P**	**08 47 38.7**	**-0.1**
GO01	**Chusmiza**	**48.28**	**302**	P	**P**	**08 47 43.0**	**+0.7**
PB11	**IPOC Station P**	**48.42**	**301**	P	**P**	**08 47 43.2**	**+0.2**
PSGCX	**Pisagua**	**48.78**	**301**	P	**P**	**08 47 44.7**	**-0.9**
PSGCX				IAmb	IAmb	08 47 46.5	
	comp=Z,10nm,0.9s						
MNMC	**Minye Minye**	**48.93**	**302**	P	**P**	**08 47 47.6**	**+0.7**
LPAZ	**La Paz**	**50.72**	**305**	P	**P**	**08 48 01.9**	**+0.9**
	comp=Z,14nm,0.5s,baz=141,slow=4.0,SNR=64						
LPAZ	**La Paz**	**50.72**	**305**	P	**P**	**08 48 01.8**	**+0.9**
SAML	**Samuel**	**55.17**	**315**	P	**P**	**08 48 33.2**	**+0.3**
SAML				IAmb	IAmb	08 48 33.7	
	comp=Z,3.3nm,1.0s						
TOA0	**Torodi Ar. Sit**	**73.26**	**29**	P	**P**	**08 50 31.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**73.26**	**29**	P	**P**	**08 50 31.5**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=196,slow=5.1,SNR=11						
TORD				pP	**sP**	**08 51 03.7**	**-2.3**
	comp=Z,1.4nm,0.6s,baz=203,slow=6.4,SNR=4.4						
TORD	**Torodi Ar. Bea**	**73.26**	**29**	P	**P**	**08 50 32.0**	**+1.1**
H07S1	**FLORES T-PHASE**	**95.47**	**357**	T	T	10 36 23.0	
	SNR=6.4						
ILAR	**Eielson Array**	**150.48**	**311**	PKPbc	**PKPbc**	**08 58 48.7**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=132,slow=3.8,SNR=13						
ILAR	**Eielson Array**	**150.48**	**311**		**PKiKP**	**08 58 51.2**	**+1.4**
SONM	**Songino Array**	**150.56**	**87**	PKPbc	**PKPbc**	**08 58 49.9**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=234,slow=3.1,SNR=4.4						

DNK 05 08:54:49.7±0.9, 59°16N×19°16E, h73km, ML2.3, Explosion
UPP 05 08:54:50.9±0.1, 58°99N×18°21E, h0km, ML2.2, Explosion
HEL 05 08:54:52.1±0.1, 59°01N×18°16E, h0km, ML1.9, ML2.2(UPP), Explosion
BER 05 08:54:53.4±3.6, 59°08N×18°24E, h0km, ML1.6, ML1.9(NAO), Suspected explosion
IDC 05 08:54:54.2±2.2, 59°21N×18°17E, h0km, mb1 3.1/3, mb1mx2.9/42, mbtmp3.0/3, ML1.8/3, Error ellipse: s-maj=26.5km s-min=7.7km az=179.0
NAO 05 08:54:55.2±1.9, 59°33N×18°11E, ML1.9

ISC 05 08:54:50.6±0.8, 59°00N±0°02×18°15E±0°02, h0km, n70, σ1§26/104, 2C, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRTU	**Norrtaelje**	**0.73**	**20**	P	**Pg**	**08 55 04.5**	**-0.1**
NRTU				S	**Sg**	**08 55 13.8**	**-0.2**
NRTU	**Norrtaelje**	**0.73**	**20**	*i* P	**Pg**	**08 55 04.5**	**-0.1**
NRTU				*i* S	**Sg**	**08 55 13.8**	**-0.2**
NRTU	**Norrtaelje**	**0.73**	**20**	P	**Pg**	**08 55 04.5**	**-0.1**
NRTU				S	**Sg**	**08 55 13.8**	**-0.2**
VIKU	**Vikbolandet**	**0.90**	**237**	P	**Pg**	**08 55 08.4**	**+0.5**
VIKU	**Vikbolandet**	**0.90**	**237**	*eP*	**Pg**	**08 55 08.4**	**+0.5**
VIKU	**Vikbolandet**	**0.90**	**237**	P	**Pg**	**08 55 08.4**	**+0.5**
UPP	**Uppsala**	**0.91**	**343**	P	**Pg**	**08 55 08.2**	**+0.2**
UPP	**Uppsala**	**0.91**	**343**	*eP*	**Pg**	**08

NOA					Sn	Sn	08 56 39.5	-2.2	
	comp=Z,0.0nm,0.3s,baz=262,slow=13,SNR=1.5								
NOA					Lg	Lg	08 56 55.9		
	comp=Z,0.1nm,0.3s,baz=98,slow=15,SNR=6.0								
NC303	**NORSAR Array S**	**4.06**	**306**	*eP*		**Pn**	**08 55 55.1**	**+1.1**	
NC303				*eS*		**Sn**	**08 56 41.7**	**-0.5**	
NC303				IAML			08 57 00.5		
	comp=Z,3.0nm,0.5s								
NAO01	**NORSAR Array S**	**4.10**	**300**	⇑*iP*		**Pn**	**08 55 54.9**	**+0.4**	
NBO00	**NORSAR Array S**	**4.23**	**302**	⇑*iP*		**Pn**	**08 55 56.8**	**+0.6**	
NBO00				*eS*		**Sn**	**08 56 45.4**	**-0.9**	
BSD	**Bornholm Skovb**	**4.27**	**206**	*e*		**Pn**	**08 55 53.5**	**-3.3**	
	baz=30,slow=14								
BSD				*i* P		Pb	08 55 57.2	-9.3	
BSD				IAML			08 57 06.9		
	comp=Z,3.1nm,0.3s								
BSD	**Bornholm Skovb**	**4.27**	**206**	*e*		**Pn**	**08 55 53.5**	**-3.3**	
	baz=30,slow=14								
BSD				*i* P		**Pn**	**08 55 57.2**	**+0.4**	
BSD				IAML			08 57 06.9		
	comp=Z,3.1nm,0.3s								
NC204	**NORSAR Array S**	**4.34**	**305**	*eP*		**Pn**	**08 55 58.8**	**+0.9**	
NC204				*eS*		**Sn**	**08 56 49.2**	**0.0**	
KONO	**Kongsberg**	**4.43**	**282**	*eP*		**Pn**	**08 55 59.5**	**+0.5**	
KONO				*eS*		**Sn**	**08 56 51.5**	**+0.3**	
KONO				IAML			08 57 21.4		
	comp=Z,2.9nm,0.4s								
KEF	**Keuruu**	**4.59**	**43**	*eP*		**Pn**	**08 56 03.0**	**+1.8**	
KEF				*eS*		**Sn**	**08 56 54.6**	**-0.6**	
KEF				MSG			08 56 57.9		
	comp=Z,1.0nm,0.1s								
VAF	**Ylistaro**	**4.62**	**27**	*eP*		**Pn**	**08 56 03.9**	**+2.4**	
VAF				*eS*		**Sn**	**08 56 56.4**	**+0.6**	
FIA0	**FINESS Array S**	**4.65**	**55**	Pn		**Pn**	**08 56 03.5**	**+1.4**	
	baz=243,slow=12								
FIA0				Pg		**Pb**	**08 56 13.7**	**+0.7**	
	baz=236,slow=16								
FIA0				Sn		**Sn**	**08 56 56.4**	**-0.3**	
	baz=242,slow=22								
FIA0				Lg		Lg	08 57 14.0		
	baz=237,slow=28								
FIA0	**FINESS Array S**	**4.65**	**55**	*eP*		**Pn**	**08 56 03.6**	**+1.6**	
FIA0				*eS*		**Sn**	**08 56 56.1**	**-0.6**	
FIA0	**FINESS Array S**	**4.65**	**55**	Pn		**Pn**	**08 56 03.5**	**+1.4**	
	baz=243,slow=12								
FIA0				Pg		**Pb**	**08 56 13.7**	**+0.7**	
	baz=236,slow=16								
FIA0				Sn		**Sn**	**08 56 56.4**	**-0.3**	
	baz=242,slow=22								
FIA0				Sg		**Sb**	**08 57 14.0**	**+4.5**	
	baz=237,slow=28								
FINES	**FINESS Array B**	**4.65**	**55**	Pn		**Pn**	**08 56 03.4**	**+1.3**	
	comp=Z,0.2nm,0.3s,baz=248,slow=12,SNR=12								
FINES				Pg		**Pb**	**08 56 12.7**	**-0.3**	
	comp=Z,0.2nm,0.3s,baz=243,slow=14,SNR=7.0								
FINES				Sn		**Sn**	**08 56 56.4**	**-0.3**	
	comp=Z,0.7nm,0.3s,baz=245,slow=21,SNR=11								
FINES				Lg		Lg	08 57 13.4		
	comp=Z,1.0nm,0.3s,baz=250,slow=22,SNR=8.3								
FIA1	**FINESS Array S**	**4.65**	**55**	*eP*		**Pn**	**08 56 03.6**	**+1.6**	
FIA1				*eS*		**Sn**	**08 56 56.1**	**-0.6**	
KAF	**Kangasniemi**	**5.10**	**49**	*eP*		**Pn**	**08 56 09.2**	**+1.1**	
KAF				*eS*		**Sn**	**08 57 06.0**	**-1.6**	
SKAR	**Skarslia**	**5.25**	**293**	*eP*		**Pn**	**08 56 10.7**	**+0.4**	
SKAR				*eS*		**Sn**	**08 57 09.8**	**-1.6**	
SKAR				IAML			08 57 11.9		
	comp=Z,1.3nm,0.4s								
SUF	**Sumiainen**	**5.41**	**43**	*eP*		**Pn**	**08 56 13.2**	**+0.8**	
SUF				*eS*		**Sn**	**08 57 13.8**	**-1.5**	
DOMB	**Dombas**	**5.43**	**308**	*eP*		**Pn**	**08 56 13.3**	**+0.5**	
DOMB				IAML			08 57 25.8		
	comp=Z,7.3nm,0.1s								
SNART	**Snartemo**	**5.75**	**268**	*i* P		**Pn**	**08 56 17.6**	**+0.5**	
SNART				IAML			08 57 53.2		
	comp=Z,1.9nm,0.4s								
SNART	**Snartemo**	**5.75**	**268**	*i* P		**Pn**	**08 56 17.6**	**+0.5**	
SNART				IAML			08 57 53.2		
	comp=Z,1.9nm,0.4s								
ARA0	**ARCESS Array S**	**11.04**	**14**	Pn		**Pn**	**08 57 27.4**	**-2.2**	
	baz=199,slow=16								
ARA0	**ARCESS Array S**	**11.04**	**14**	Pn		**Pn**	**08 57 27.4**	**-2.2**	
	baz=199,slow=16								
ARCES	**ARCESS Array B**	**11.04**	**14**	Pn		**Pn**	**08 57 26.9**	**-2.6**	
	baz=197,slow=14,SNR=6.0								
ARCES				Sn		Sn	08 59 24.2	-9.4	
	baz=194,slow=22,SNR=2.1								

*MDD **05** 08:59:18.8±1.4,36˚29N×10˚66W,h0km,mbLg3.0/19, Error ellipse: s-maj=12.0km s-min=10.2km az=67.0, PRXIMO*
*CNRM **05** 08:59:19.9±1.4,35˚95N×10˚11W,h0km,Error ellipse: s-maj=13.6km s-min=5.7km az=86.0*
*INMG **05** 08:59:19.7±0.9,36˚09N×10˚82W,h31km,ML2.7,Error ellipse: s-maj=4.5km s-min=3.4km az=93.0*
*IGIL **05** 08:59:20.1,36˚08N×10˚82W,h31km,ML2.9*
ISC 05 08:59:15.2±2.2,36˚08N±0˚04×10˚57W±0˚07,h9km±11km, n74,σ2ˢ43/111,4C,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.75**	**53**	⇑P		**Pb**	**08 59 48.5**	**+0.9**
	5.1nm,0.1s,SNR=18							
PFVI				S		**Sg**	**09 00 09.9**	**-1.7**
	32nm,0.1s,SNR=12							
PFVI	**Vila Bisbo**	**1.75**	**53**	P		**Pn**	**08 59 48.2**	**+2.4**
PFVI				S		**Sg**	**09 00 09.7**	**-1.8**
PFVI	**Vila Bisbo**	**1.75**	**53**	⇑*ePn*		**Pb**	**08 59 48.4**	**+0.9**
PFVI				*eSn*		**Sg**	**09 00 10.1**	**-1.4**
PFVI				A		A	09 00 11.4	
	27nm,0.1s							
MORF	**Marmelete**	**1.97**	**51**	*eP*		**Pn**	**08 59 51.5**	**+2.6**
MORF				*eS*		**Sb**	**09 00 14.7**	**-1.3**
MORF				AML		AML	09 00 15.9	
	comp=N,66nm,0.2s							
MORF	**Marmelete**	**1.97**	**51**	P		**Pn**	**08 59 51.5**	**+2.6**
MORF				S		**Sb**	**09 00 15.2**	**-0.8**
	comp=N,46nm,0.2s							
MORF	**Marmelete**	**1.97**	**51**	*ePn*		**Pn**	**08 59 51.5**	**+2.6**
MORF				*eSn*		**Sb**	**09 00 15.2**	**-0.8**
MORF				A		A	09 00 17.0	
	comp=N,46nm,0.2s							
PTEO	**Sao Teotonio**	**2.08**	**45**	P		**Pn**	**08 59 52.7**	**+2.3**
PTEO				S		**Sn**	**09 00 17.8**	**+1.4**
	comp=N,16nm,0.5s							
PTEO	**Sao Teotonio**	**2.08**	**45**	⇑*ePn*		**Pn**	**08 59 52.7**	**+2.3**
PTEO				*eSn*		**Sn**	**09 00 17.8**	**+1.4**
PTEO				A		A	09 00 19.6	
	comp=N,33nm,0.5s							
PBDV	**Barranco-do-Ve**	**2.42**	**61**	P		**Pb**	**08 59 58.1**	**-0.8**
PBDV				S		**Sb**	**09 00 26.5**	**-2.4**
	comp=N,15nm,0.2s							
PBDV	**Barranco-do-Ve**	**2.42**	**61**	*ePn*		**Pb**	**08 59 58.1**	**-0.8**
PBDV				*eSn*		**Sb**	**09 00 26.5**	**-2.4**
PBDV				A		A	09 00 34.5	
	comp=N,15nm,0.2s							
PCVE	**Castro Verde**	**2.55**	**52**	P		**Pn**	**08 59 59.6**	**+2.7**
PCVE				S		**Sn**	**09 00 29.3**	**+1.2**
	comp=N,21nm,0.1s							
PCVE	**Castro Verde**	**2.55**	**52**	*ePn*		**Pn**	**08 59 59.6**	**+2.7**
PCVE				*eSn*		**Sn**	**09 00 29.3**	**+1.2**
PCVE				A		A	09 00 31.8	
	comp=N,21nm,0.1s							
PNCL	**Nicolau / Gran**	**2.60**	**38**	P		**Pn**	**08 59 59.7**	**+2.2**
PNCL				S		**Sn**	**09 00 29.7**	**+0.4**
	comp=N,28nm,0.1s							
PNCL	**Nicolau / Gran**	**2.60**	**38**	*ePn*		**Pn**	**08 59 59.7**	**+2.2**
PNCL				*eSn*		**Sn**	**09 00 29.7**	**+0.4**
PNCL				A		A	09 00 32.3	
	comp=N,28nm,0.1s							
PVAQ	**Vaqueiros**	**2.64**	**59**	P		**Pn**	**09 00 01.0**	**+2.9**
PVAQ				S		**Sb**	**09 00 31.7**	**-3.7**
	comp=N,21nm,0.1s							
PVAQ	**Vaqueiros**	**2.64**	**59**	P		**Pn**	**09 00 00.5**	**+2.4**
PVAQ				S		**Sb**	**09 00 32.6**	**-2.8**
PVAQ	**Vaqueiros**	**2.64**	**59**	⇑*ePn*		**Pn**	**09 00 01.0**	**+2.9**
PVAQ				*eSn*		**Sb**	**09 00 31.7**	**-3.7**
PVAQ				A		A	09 00 33.2	
	comp=N,21nm,0.1s							
EGRO	**El Granado**	**2.87**	**59**	P		**Pn**	**09 00 04.1**	**+2.9**
	comp=N,3.0nm,0.3s,SNR=27							
EGRO				S		**Sb**	**09 00 37.9**	**-4.0**
	comp=N,15nm,0.1s,SNR=7.9							
PBEJ	**Beja**	**2.91**	**47**	P		**Pn**	**09 00 03.9**	**+2.2**
PBEJ				S		**Sn**	**09 00 37.3**	**+0.5**
	comp=N,4.7nm,0.2s							
PBEJ	**Beja**	**2.91**	**47**	*ePn*		**Pn**	**09 00 03.9**	**+2.2**
PBEJ				*eSn*		**Sn**	**09 00 37.3**	**+0.5**
PBEJ				A		A	09 00 39.5	
	comp=N,9.4nm,0.2s							
EVO	**Evora**	**3.18**	**39**	S		**Sn**	**09 00 43.8**	**+0.1**
	comp=N,31nm,0.2s							
EVO	**Evora**	**3.18**	**39**	*eP*		**Pn**	**09 00 09.3**	**+3.7**
EVO				*eS*		**Sn**	**09 00 43.2**	**-0.5**
EVO	**Evora**	**3.18**	**39**	*eSn*		**Sn**	**09 00 43.8**	**+0.1**
EVO				A		A	09 00 45.1	
	comp=N,31nm,0.2s							
PBAR	**Barrancos**	**3.51**	**52**	S		**Sn**	**09 00 52.8**	**+1.1**
PBAR	**Barrancos**	**3.51**	**52**	*eSn*		**Sn**	**09 00 52.8**	**+1.1**
PMTG	**Montargil**	**3.52**	**31**	P		**Pn**	**09 00 11.7**	**+1.6**
PMTG				S		**Sn**	**09 00 51.0**	**-0.9**
	comp=N,12nm,0.2s							
PMTG	**Montargil**	**3.52**	**31**	*ePn*		**Pn**	**09 00 11.7**	**+1.6**
PMTG				*eSn*		**Sn**	**09 00 51.0**	**-0.9**
PMTG				A		A	09 00 51.1	
	comp=N,12nm,0.2s							
EMIN	**Mina Concepcio**	**3.55**	**60**	P		**Pn**	**09 00 13.4**	**+2.9**
	comp=N,10nm,1.2s,SNR=20							
EMIN				S		**Sn**	**09 00 53.8**	**+1.2**
	comp=N,4.8nm,0.1s,SNR=7.9							
PSBE	**So Bento**	**3.71**	**22**	*eSn*		**Sn**	**09 00 55.9**	**-0.7**
PSBE				A		A	09 00 59.2	
	comp=N,18nm,0.7s							
ESPR	**Espera**	**3.88**	**77**	P		**Pn**	**09 00 18.4**	**+3.3**
	comp=N,19nm,0.2s,SNR=44							
ESPR				S		**Sb**	**09 01 01.9**	**-9.0**
	comp=N,25nm,0.2s,SNR=7.9							
ZHG	**ZHG**	**4.16**	**128**	P		**Pn**	**09 00 20.4**	**+1.3**
ZHG				S		**Sn**	**09 01 05.6**	**-2.3**
PMRV	**Marv??o**	**4.18**	**36**	P		**Pn**	**09 00 21.1**	**+1.8**
PMRV				S		**Sn**	**09 01 07.0**	**-1.4**
	comp=N,10nm,0.5s							
PMRV	**Marv??o**	**4.18**	**36**	*ePn*		**Pn**	**09 00 21.1**	**+1.8**
PMRV				*eSn*		**Sn**	**09 01 07.0**	**-1.4**
PMRV				A		A	09 01 08.8	
	comp=N,10nm,0.5s							
PCAS	**Casmilo, Conde**	**4.29**	**22**	S		**Sn**	**09 01 08.9**	**-2.0**
	comp=N,5.9nm,0.6s							
PCAS	**Casmilo, Conde**	**4.29**	**22**	*eSn*		**Sn**	**09 01 08.9**	**-2.0**
PCAS				A		A	09 01 17.2	
	comp=N,5.9nm,0.6s							
PCBR	**Castelo Branco**	**4.48**	**32**	S		**Sn**	**09 01 14.3**	**-1.3**
	comp=N,1.6nm,0.2s							
PCBR	**Castelo Branco**	**4.48**	**32**	*eSn*		**Sn**	**09 01 14.3**	**-1.3**
PCBR				A		A	09 01 16.9	
	comp=N,3.2nm,0.2s							
ECAB	**El Cabril**	**4.57**	**63**	P		**Pn**	**09 00 27.2**	**+2.6**
	comp=N,1.5nm,0.3s,SNR=9.1							
ECAB				S		**Sn**	**09 01 18.3**	**+0.3**
	comp=N,5.9nm,0.2s							
MTE	**Manteigas**	**4.93**	**28**	S		**Sn**	**09 01 24.2**	**-2.5**
MTE	**Manteigas**	**4.93**	**28**	A		A	09 01 18.5	
	comp=N,4.9nm,0.7s							
MTE				*eSn*		**Sn**	**09 01 24.2**	**-2.5**
PVIS	**Viseu**	**5.08**	**24**	S		**Sn**	**09 01 28.7**	**-1.9**
	comp=N,4.0nm,0.1s							
PVIS	**Viseu**	**5.08**	**24**	*eSn*		**Sn**	**09 01 28.7**	**-1.9**
PVIS				A		A	09 01 30.6	
	comp=N,7.9nm,0.1s							
IFR	**Ifrane**	**5.15**	**118**	*eS*		**Sn**	**09 01 28.3**	**-4.2**
EADA	**Adamuz**	**5.22**	**65**	P		**Pn**	**09 00 36.3**	**+2.7**
	comp=N,2.1nm,0.3s,SNR=19							
EADA				S		**Sn**	**09 01 32.9**	**-1.1**
	comp=N,3.3nm,0.1s,SNR=7.9							
LCRM	**LCR**	**5.26**	**115**	P		**Pn**	**09 00 35.8**	**+1.5**
LCRM				S		**Sn**	**09 01 34.5**	**-0.7**
EGOR	**Sierra Gorda,**	**5.30**	**77**	P		Pn	09 00 38.8	+4.0
	comp=N,0.9nm,0.1s,SNR=7.9							
EGOR				S		**Sn**	**09 01 37.6**	**+1.6**
	comp=N,5.5nm,0.5s,SNR=7.9							
EPLA	**Plasencia**	**5.33**	**40**	P		**Pn**	**09 00 36.9**	**+1.9**
	comp=N,4.0nm,0.3s,SNR=7.9							
EPLA				S		**Sn**	**09 01 33.3**	**-3.2**
	comp=N,2.3nm,0.1s,SNR=4.0							
PVRL	**Vila Real**	**5.65**	**22**	S		**Sn**	**09 01 40.9**	**-3.6**
PVRL	**Vila Real**	**5.65**	**22**	*eSn*		**Sn**	**09 01 40.9**	**-3.6**
ELGU	**Los Guajares,**	**5.65**	**80**	P		Pn	09 00 43.8	+4.3
	comp=N,1.6nm,0.1s,SNR=7.9							
POLO	**Lamas de Olo**	**5.71**	**21**	S		**Sn**	**09 01 42.8**	**-3.4**
	comp=N,1.6nm,0.2s							
POLO	**Lamas de Olo**	**5.71**	**21**	*eSn*		**Sn**	**09 01 42.8**	**-3.4**
POLO				A		A	09 01 45.4	
	comp=N,1.6nm,0.2s							
MD31	**MD31**	**5.77**	**122**	P		**Pn**	**09 00 42.6**	**+1.4**
MD31				S		**Sn**	**09 01 44.2**	**-3.3**
MVO	**Moncorvo**	**5.78**	**28**	P		**Pn**	**09 00 42.4**	**+1.1**
	comp=N,0.3nm,0.1s,SNR=7.9							
MVO				S		**Sn**	**09 01 43.9**	**-3.9**
	comp=N,8.9nm,0.4s,SNR=6.3							
MVO	**Moncorvo**	**5.78**	**28**	*eSn*		**Sn**	**09 01 44.5**	**-3.3**
MVO				A		A	09 01 47.2	
	comp=N,5.1nm,0.4s							
EQUE	**Quentar**	**5.84**	**77**	P		Pn	09 00 46.0	+3.9
	comp=N,1.9nm,0.3s,SNR=6.6							
MDT	**Midelt**	**5.90**	**122**	P		**Pn**	**09 00 45.0**	**+1.9**
MDT				S		**Sn**	**09 01 47.9**	**-3.0**
PAB	**San Pablo**	**6.02**	**53**	P		**Pn**	**09 00 46.8**	**+2.3**
	comp=N,0.6nm,0.1s,SNR=7.9							
PAB				S		**Sn**	**09 01 51.6**	**-2.1**
	comp=N,1.9nm,0.3s,SNR=7.9							
OUZM	**OUZ**	**6.06**	**147**	P		**Pn**	**09 00 45.6**	**+0.5**
ELOB	**Lobios**	**6.10**	**18**	P		**Pn**	**09 00 46.8**	**+1.2**
	comp=N,0.3nm,0.1s,SNR=4.0							
ELOB				S		Sn	09 01 50.4	-5.2
	comp=N,4.3nm,0.7s,SNR=7.9							
PGAV	**Gavieira, Arco**	**6.14**	**16**	P		**Pn**	**09 00 47.0**	**+0.7**
PGAV				S		Sn	09 01 51.6	-5.2
PGAV	**Gavieira, Arco**	**6.14**	**16**	*ePn*		**Pn**	**09 00 47.0**	**+0.7**
PGAV				*eSn*		Sn	09 01 51.6	-5.2
EZAM	**Zamans**	**6.23**	**13**	S		Sn	09 01 52.6	-6.2
	comp=N,7.9nm,0.4s,SNR=7.9							
EQES	**Quesada**	**6.25**	**72**	P		**Pn**	**09 00 50.4**	**+2.7**
	comp=N,0.6nm,0.1s,SNR=7.9							
EQES				S		**Sn**	**09 01 59.0**	**-0.3**
	comp=N,2.5nm,0.4s,SNR=7.9							
ESDC	**Sonseca Array**	**6.34**	**54**	P		**Pn**	**09 00 51.3**	**+2.4**
	comp=N,0.4nm,0.2s,baz=240,slow=13,SNR=14							
ESDC				S		**Sn**	**09 01 59.4**	**-2.1**
	comp=N,31nm,1.9s,baz=240,slow=23,SNR=9.1							
PBRG	**Braganca**	**6.45**	**26**	S		**Sn**	**09 02 00.5**	**-3.7**
	comp=N,1.9nm,0.4s							
PBRG	**Braganca**	**6.45**	**26**	*eSn*		**Sn**	**09 02 00.5**	**-3.7**
PBRG				A		A	09 02 03.9	
	comp=N,3.7nm,0.4s							
ECAL	**Calabor**	**6.57**	**26**	S		**Sn**	**09 02 03.0**	**-4.2**
	comp=N,7.6nm,0.3s,SNR=7.9							
SESP	**Santiago Espad**	**6.73**	**70**	P		**Pn**	**09 00 57.2**	**+2.8**
	comp=N,1.1nm,0.2s,SNR=7.9							
SESP				S		**Sn**	**09 02 09.7**	**-1.5**
	comp=N,5.0nm,0.4s,SNR=7.9							
GUD	**Guadarrama**	**6.79**	**46**	P		**Pn**	**09 00 56.7**	**+1.4**
	comp=N,0.1nm,0.1s,SNR=7.9							
GUD				S		**Sn**	**09 02 09.7**	**-3.1**
	comp=N,2.9nm,0.3s,SNR=7.2							
EMAZ	**Mazaricos**	**6.97**	**10**	P		Pn	09 00 57.2	-0.3
	comp=N,0.5nm,0.1s,SNR=4.0							
EMAZ				S		Sn	09 02 08.3	-8.7
	comp=N,3.9nm,0.2s,SNR=7.9							
EAGO	**Agolada(Pontev**	**6.98**	**15**	P		Pn	09 00 57.9	+0.1
	comp=N,1.8nm,0.1s,SNR=7.9							
EAGO				S		Sn	09 02 09.9	-7.3
	SNR=7.9							
ETOB	**Tobarra**	**7.62**	**68**	P		**Pn**	**09 01 08.7**	**+2.0**
	comp=N,0.9nm,0.2s,SNR=7.9							
ETOB				S		**Sn**	**09 02 31.7**	**-1.5**
	comp=N,2.1nm,0.4s,SNR=7.9							
ETOR	**Torete**	**8.18**	**52**	P		**Pn**	**09 01 16.4**	**+2.1**
	comp=N,0.2nm,0.0s,SNR=5.5							
ETOR				S		**Sn**	**09 02 43.1**	**-3.8**
	comp=N,6.2nm,0.3s,SNR=7.9							

*ANF **05** 09:05:36.6±1.4,41˚84N×119˚58W,h7km±15km,ML3.1/9, Error ellipse: s-maj=7.3km s-min=4.4km az=87.0*
*REN **05** 09:05:37.9±1.6,41˚89N±0˚02×119˚61W±0˚04,h0km±7km, ML3.5/1,ML3.0/16(SEA),Error ellipse: s-maj=4.5km s-min=2.8km az=111.0*
*NEIC **05** 09:05:38.8±1.2,41˚92N±0˚04×119˚64W±0˚05,h13km±7km, Error ellipse: s-maj=6.5km s-min=5.3km az=167.0*
*SEA **05** 09:05:39.7±2.4,41˚86N±0˚04×119˚69W±0˚05,h15km±7km, Error ellipse: s-maj=6.2km s-min=5.2km az=217.0*
ISC 05 09:05:38.4±1.5,41˚91N±0˚03×119˚64W±0˚04,h9km±13km, n28,σ0ˢ96/36,Nevada

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.50**	**269**			**Pg**	**09 05 47.8**	**-0.2**
MOD						**Sg**	**09 05 55.0**	**+0.5**
K05A	**Summer Lake**	**1.24**	**312**	Pg		**Pb**	**09 06 02.0**	**0.0**
M04C	**Macdoel**	**1.65**	**266**	P		**Pn**	**09 06 06.9**	**-0.8**
	baz=86,SNR=82							
M04C				S		**Sb**	**09 06 29.4**	**-0.6**
	baz=86							
J08A	**Circle Bar Ran**	**1.68**	**30**	Pn		**Pn**	**09 06 07.8**	**-0.3**
K04D	**Chiloquin, OR**	**1.73**	**295**	P		**Pn**	**09 06 08.3**	**-0.4**
	baz=114,SNR=11							
K04D				Sb		**Sg**	**09 06 34.3**	**+0.5**
	baz=114							
J05D	**Fort Rock, OR**	**1.81**	**320**	Pb		**Pb**	**09 06 11.6**	**-0.2**
	baz=139,SNR=87							
J05D				Sb		**Sg**	**09 06 37.4**	**+0.8**
	baz=139							
L04D	**Klamath Falls**	**2.01**	**280**	P		**Pn**	**09 06 11.4**	**-1.2**
	baz=98,SNR=44							
L04D				Sb		**Sg**	**09 06 41.8**	**-1.1**
	baz=98							
PINE	**Pine Mountain**	**2.11**	**333**			**Pn**	**09 06 14.6**	**+0.5**
BEKR	**Beckworth**	**2.11**	**195**	Pn		**Pn**	**09 06 14.4**	**+0.3**
PAHR	**Pah Rah Range**	**2.21**	**175**	Pn		**Pn**	**09 06 15.6**	**+0.2**
J04D	**Umpqua Nationa**	**2.26**	**307**	Pb		**Pb**	**09 06 19.1**	**-0.4**
	baz=126							
O03E	**Paynes Creek**	**2.30**	**226**	P		**Pn**	**09 06 15.4**	**-1.1**
	baz=45,SNR=50							
O03E				Sb		**Sb**	**09 06 48.3**	**-0.2**
	baz=45							
YBH	**Yreka Blue Hor**	**2.30**	**267**			**Pn**	**09 06 15.4**	**-1.2**
M02C	**Callahan**	**2.46**	**259**	P		**Pn**	**09 06 17.3**	**-1.5**
	baz=77,SNR=5.4							
M02C				Sb		**Sb**	**09 06 55.4**	**+2.0**
	baz=77							
N02D	**Trinity Center**	**2.49**	**249**	P		**Pn**	**09 06 17.4**	**-1.7**
	baz=68,SNR=10							
N02D				Sb		**Sb**	**09 06 55.4**	**+1.4**
	baz=68							
HUMO	**Hull Mountain**	**2.56**	**287**	Pn		**Pn**	**09 06 19.3**	**-0.8**
WDC	**Whiskeytown Da**	**2.56**	**240**	Pn		**Pn**	**09 06 19.0**	**-1.1**
VCNR	**Virginia City**	**2.61**	**180**			**Pn**	**09 06 21.1**	**+0.1**
I05D	**Terrebonne, OR**	**2.73**	**333**	Pb		**Pb**	**09 06 27.3**	**-0.1**
	baz=152							
ORV	**Oroville**	**2.75**	**212**			**Pb**	**09 06 28.0**	**+0.4**
I04A	**Tendick Farm,**	**2.78**	**314**	Pb		**Pb**	**09 06 28.4**	**+0.3**
	baz=132							
K02D	**Willamette Mer**	**3.09**	**286**	P		**Pn**	**09 06 27.6**	**+0.2**
	baz=104							
MFID	**Camas Ranch**	**3.19**	**61**	Pn		**Pn**	**09 06 29.1**	**+0.3**
KBO	**Bosley Butte**	**3.43**	**277**	Pn		**Pn**	**09 06 32.2**	**+0.1**
KEBM	**Edson Butte**	**3.61**	**287**	Pn		**Pn**	**09 06 35.3**	**+0.8**
NVAR	**Mina Array Bea**	**3.62**	**163**			**Pb**	**09 06 41.2**	**-1.5**
CMB	**Columbia Colle**	**3.91**	**189**			**Pb**	**09 06 49.4**	**+1.8**
HLID	**Hailey**	**4.19**	**65**	Pn		**Pn**	**09 06 41.2**	**-1.4**

*IDC **05** 09:06:11.2±1.8,33˚81S×72˚49W,h0km,mb3.8/3, mb1 3.8/7,mb1mx3.6/33,mbtmp3.7/7,ML3.6/4,Error ellipse: s-maj=72.6km s-min=22.0km az=102.0*
*GUC **05** 09:06:15.3±0.7,34˚00S×72˚36W,h31km±2km,ML3.9*
ISC 05 09:06:13.0±1.3,33˚94S±0˚04×72˚41W±0˚04,h13km±9km, n30,σ1ˢ25/43,7C-4D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BO03	**Pichilemu**	**0.67**	**147**	⇓*iP*		**Pg**	**09 06 26.3**	**+0.3**
BO03				*i* S		**Sg**	**09 06 34.8**	**-0.1**
BO03				IAML			09 06 37.5	
	comp=N,8μm,0.2s							
VA01	**Torpederas**	**1.11**	**35**	⇑*eP*		**Pg**	**09 06 34.8**	**+0.4**
VA01				*eS*		**Sn**	**09 06 49.8**	**+0.4**
MT09	**Talagante**	**1.19**	**83**	⇓*iP*		**Pn**	**09 06 35.0**	**-0.5**
MT09				*i* S		**Sb**	**09 06 50.2**	**-0.7**
MT09				IAML			09 06 50.7	
	comp=N,9μm,0.2s							
MT02	**Curacav**	**1.26**	**58**	⇓*iP*		**Pb**	**09 06 36.5**	**-0.1**
MT02				*i* S		**Sn**	**09 06 52.9**	**-0.1**
MT05	**Renca**	**1.49**	**69**	⇑*eP*		**Pn**	**09 06 40.0**	**

*UPP **05** 09:16:06.0±0.1,58.99N×18.21E,h0km,ML2.3, Explosion*
*HEL **05** 09:16:06.9±0.1,59.00N×18.18E,h0km,ML1.9, ML2.3(UPP), Explosion*
*BER **05** 09:16:06.7±1.9,59.05N×18.49E,h0km,ML1.6, ML2.3(UPP), Suspected explosion*
*IDC **05** 09:16:08.4±2.9,59.12N×18.22E,h0km,mb1 3.1/3, mb1mx2.8/52,mbtmp2.9/3,ML1.9/3, Error ellipse: s-maj=35.1km s-min=9.0km az=0.0*

ISC 05 09:16:05.6±0.8,**59.00N**±0.02×**18.20E**±0.02,**h0**km,**n63,** σ1ᵍ**09**/98,**3C**,**Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NYNU	**Nynaeshamn**	**0.10**	**273**	P	**Pg**	**09 16 08.4**	**+0.8**
NYNU				S	**Sg**	**09 16 09.8**	**+0.9**
NYNU	**Nynaeshamn**	**0.10**	**273**	*i* P	**Pg**	**09 16 08.4**	**+0.8**
NYNU				*i* S	**Sg**	**09 16 09.8**	**+0.9**
NYNU	**Nynaeshamn**	**0.10**	**273**	P	**Pg**	**09 16 08.4**	**+0.8**
NYNU				S	**Sg**	**09 16 09.8**	**+0.9**
NRTU	**Norrtaelje**	**0.71**	**18**	P	**Pg**	**09 16 19.6**	**+0.3**
NRTU				S	**Sg**	**09 16 28.8**	**+0.3**
NRTU	**Norrtaelje**	**0.71**	**18**	*i* P	**Pg**	**09 16 19.6**	**+0.3**
NRTU				*i* S	**Sg**	**09 16 28.8**	**+0.3**
NRTU	**Norrtaelje**	**0.71**	**18**	P	**Pg**	**09 16 19.6**	**+0.3**
NRTU				S	**Sg**	**09 16 28.8**	**+0.3**
UPP	**Uppsala**	**0.91**	**341**	P	**Pg**	**09 16 23.3**	**+0.3**
UPP	**Uppsala**	**0.91**	**341**	*eP*	**Pg**	**09 16 23.3**	**+0.3**
VIKU	**Vikbolandet**	**0.93**	**238**	P	**Pg**	**09 16 23.4**	**+0.1**
VIKU	**Vikbolandet**	**0.93**	**238**	*eP*	**Pg**	**09 16 23.4**	**+0.1**
VIKU	**Vikbolandet**	**0.93**	**238**	P	**Pg**	**09 16 23.4**	**+0.1**
ESKU	**Eskilstuna**	**0.96**	**285**	P	**Pg**	**09 16 23.9**	**0.0**
ESKU	**Eskilstuna**	**0.96**	**285**	*eP*	**Pg**	**09 16 23.9**	**0.0**
ESKU	**Eskilstuna**	**0.96**	**285**	P	**Pg**	**09 16 23.9**	**0.0**
FIBU	**Brunna**	**1.00**	**335**	P	**Pg**	**09 16 24.9**	**+0.1**
FIBU	**Brunna**	**1.00**	**335**	P	**Pg**	**09 16 24.9**	**+0.1**
BACU	**Backbrunna**	**1.02**	**327**	P	**Pg**	**09 16 25.3**	**+0.1**
BACU	**Backbrunna**	**1.02**	**327**	*eP*	**Pg**	**09 16 25.3**	**+0.1**
BACU	**Backbrunna**	**1.02**	**327**	P	**Pg**	**09 16 25.3**	**+0.1**
GOTU	**Gotland**	**1.33**	**171**	P	**Pg**	**09 16 30.4**	**-0.7**
GOTU	**Gotland**	**1.33**	**171**	*eP*	**Pg**	**09 16 30.4**	**-0.7**
GOTU	**Gotland**	**1.33**	**171**	P	**Pg**	**09 16 30.4**	**-0.7**
FORU	**Forsmark**	**1.39**	**360**	P	**Pn**	**09 16 32.0**	**-0.2**
FORU				S	**Sg**	**09 16 50.3**	**0.0**
FORU	**Forsmark**	**1.39**	**360**	*eP*	**Pn**	**09 16 32.0**	**-0.2**
FORU				*eS*	**Sg**	**09 16 50.3**	**0.0**
FORU	**Forsmark**	**1.39**	**360**	P	**Pn**	**09 16 32.0**	**-0.2**
FORU				S	**Sg**	**09 16 50.3**	**0.0**
AAL	**Aland**	**1.49**	**37**	P	**Pn**	**09 16 33.6**	**0.0**
AAL	**Aland**	**1.49**	**37**	*eP*	**Pn**	**09 16 33.7**	**0.0**
AAL				*eS*	**Sg**	**09 16 53.0**	**-0.5**
VSTU	**Vaestervik**	**1.60**	**214**	P	**Pb**	**09 16 35.6**	**-0.4**
VSTU	**Vaestervik**	**1.60**	**214**	*eP*	**Pb**	**09 16 35.6**	**-0.4**
VSTU	**Vaestervik**	**1.60**	**214**	P	**Pb**	**09 16 35.6**	**-0.4**
LNKU	**Linkoeping**	**1.61**	**242**	P	**Pn**	**09 16 35.6**	**+0.4**
LNKU	**Linkoeping**	**1.61**	**242**	*eP*	**Pn**	**09 16 35.6**	**+0.4**
LNKU	**Linkoeping**	**1.61**	**242**	P	**Pn**	**09 16 35.6**	**+0.4**
NRAU	**Nora**	**1.72**	**291**	P	**Pn**	**09 16 37.0**	**+0.3**
NRAU				S	**Sb**	**09 17 00.4**	**+0.2**
NRAU	**Nora**	**1.72**	**291**	*eP*	**Pn**	**09 16 37.0**	**+0.3**
NRAU				*eS*	**Sb**	**09 17 00.4**	**+0.2**
NRAU	**Nora**	**1.72**	**291**	P	**Pn**	**09 16 37.0**	**+0.3**
NRAU				S	**Sb**	**09 17 00.4**	**+0.2**
RAF	**Rauma**	**2.71**	**40**	*eP*	**Pn**	**09 16 52.4**	**+2.1**
RAF				*eS*	**Sn**	**09 17 25.1**	**+1.5**
RAF				MSG		09 17 32.7	
	comp=Z,4.9nm,0.1s						
BORU	**Boraas**	**3.17**	**247**	*i* P	**Pn**	**09 16 58.9**	**+2.1**
MEF	**Metsahovi**	**3.38**	**66**	*eP*	**Pn**	**09 17 00.7**	**+1.2**
MEF				*eS*	**Sn**	**09 17 40.5**	**+0.3**
MEF				MSG		09 17 55.1	
	comp=Z,2.1nm,0.1s						
DEL	**Delary**	**3.44**	**224**	*i* P	**Pn**	**09 17 02.0**	**+1.7**
DEL				IAML		09 18 03.2	
	comp=Z,1.0nm,0.4s						
STRU	**Stroemstad**	**3.63**	**274**	*eP*	**Pn**	**09 17 04.5**	**+1.6**
STRU				*eS*	**Sn**	**09 17 46.4**	**0.0**
ONAU	**Onsala**	**3.69**	**247**	*i* P	**Pn**	**09 17 06.0**	**+2.1**
ONAU				*eS*	**Sn**	**09 17 50.5**	**+2.5**
NC602	**NORSAR Array S**	**3.78**	**300**	⇑*i* P	**Pn**	**09 17 05.8**	**+0.7**
NC602				*eS*	**Sn**	**09 17 49.7**	**-0.6**
NC602				IAML		09 18 08.4	
	comp=Z,2.7nm,0.3s						
NB201	**NORSAR Array S**	**4.03**	**304**	*eP*	**Pn**	**09 17 09.8**	**+1.3**
NB201				IAML		09 18 13.5	
	comp=Z,3.6nm,0.4s						
NOA	**NORSAR Array B**	**4.06**	**303**	Pn	**Pn**	**09 17 08.0**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=131,slow=12,SNR=3.8						
NOA				Sn	**Sn**	**09 17 56.7**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=99,slow=18,SNR=1.1						
NOA				Lg	Lg	09 18 13.7	
	comp=Z,0.1nm,0.3s,baz=137,slow=24,SNR=5.8						
NC303	**NORSAR Array S**	**4.08**	**306**	⇑*i* P	**Pn**	**09 17 10.1**	**+0.9**
NC303				IAML		09 18 15.3	
	comp=Z,3.5nm,0.7s						
NAO01	**NORSAR Array S**	**4.12**	**300**	⇑*i* P	**Pn**	**09 17 10.0**	**+0.3**
PVF	**Pernaja**	**4.17**	**65**	*eP*	**Pn**	**09 17 11.7**	**+1.3**
PVF				*eS*	**Sn**	**09 18 00.4**	**+0.6**
NBO00	**NORSAR Array S**	**4.25**	**302**	*eP*	**Pn**	**09 17 11.9**	**+0.4**
NBO00				*eS*	**Sn**	**09 17 59.8**	**-1.9**
BSD	**Bornholm Skovb**	**4.29**	**206**	*eS*	**Sn**	**09 18 00.5**	**-2.2**
BSD				*e*	**Pn**	**09 17 09.5**	**-2.5**
	baz=35,slow=14						
BSD				*i* P	**Pn**	**09 17 12.3**	**+0.3**
BSD				IAML		09 18 20.6	
	comp=Z,2.0nm,0.3s						
BSD	**Bornholm Skovb**	**4.29**	**206**	*e*	**Pn**	**09 17 09.5**	**-2.5**
	baz=35,slow=14						
BSD				*i* P	**Pn**	**09 17 12.3**	**+0.3**
BSD				*eS*	**Sn**	**09 18 00.5**	**-2.2**
BSD				IAML		09 18 20.6	
	comp=Z,2.0nm,0.3s						
NC204	**NORSAR Array S**	**4.36**	**305**	*eP*	**Pn**	**09 17 13.9**	**+0.8**
KONO	**Kongsberg**	**4.46**	**282**	*eP*	**Pn**	**09 17 14.9**	**+0.6**
KONO				*eS*	**Sn**	**09 18 04.9**	**-1.9**
KONO				IAML		09 18 14.1	
	comp=Z,3.6nm,0.5s						
KEF	**Keuruu**	**4.57**	**43**	*eP*	**Pn**	**09 17 17.9**	**+1.9**
KEF				*eS*	**Sn**	**09 18 09.5**	**-0.2**
FIA0	**FINESS Array S**	**4.63**	**55**	*eP*	**Pn**	**09 17 18.4**	**+1.7**
FIA0				*eS*	**Sn**	**09 18 11.3**	**+0.3**
FINES	**FINESS Array B**	**4.63**	**55**	Pn	**Pn**	**09 17 18.4**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=248,slow=12,SNR=13						
FINES				Sn	**Sn**	**09 18 11.7**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=246,slow=22,SNR=11						
FINES				Lg	Lg	09 18 28.6	
	comp=Z,1.0nm,0.3s,baz=245,slow=23,SNR=7.6						
FIA1	**FINESS Array S**	**4.63**	**55**	*eP*	**Pn**	**09 17 18.4**	**+1.6**
FIA1				*eS*	**Sn**	**09 18 11.3**	**+0.2**
KAF	**Kangasniemi**	**5.07**	**49**	*eP*	**Pn**	**09 17 24.1**	**+1.3**
KAF				*eS*	**Sn**	**09 18 21.3**	**-0.7**
SKAR	**Skarslia**	**5.27**	**293**	*eP*	**Pn**	**09 17 25.8**	**+0.2**
SKAR				*eS*	**Sn**	**09 18 24.2**	**-2.7**
SKAR				IAML		09 18 29.1	
	comp=Z,2.1nm,0.6s						
SUF	**Sumiainen**	**5.39**	**43**	*eP*	**Pn**	**09 17 27.8**	**+0.7**
SUF				*eS*	**Sn**	**09 18 28.6**	**-1.1**
SNART	**Snartemo**	**5.77**	**268**	*i* P	**Pn**	**09 17 32.6**	**+0.2**
SNART				*eS*	**Sn**	**09 18 37.0**	**-2.3**
SNART				IAML		09 19 05.2	
	comp=Z,1.8nm,0.3s						
SNART	**Snartemo**	**5.77**	**268**	*i* P	**Pn**	**09 17 32.6**	**+0.2**
SNART				*eS*	**Sn**	**09 18 37.0**	**-2.3**
SNART				IAML		09 19 05.2	
	comp=Z,1.8nm,0.3s						
ARCES	**ARCESS Array B**	**11.03**	**14**	Pn	**Pn**	**09 18 42.6**	**-1.8**
	baz=194,slow=13,SNR=6.1						

*MAN **05** 09:16:01.1,3.06N×127.71E,h8km,mb4.6,ML3.5,MS3.3*
*IDC **05** 09:16:19.3±0.8,4.21N×126.80E,h0km,mb4.0/12, mb1 4.2/13,mb1mx3.9/50,mbtmp4.0/13,ML3.6/1,MS3.3/6, Ms1 3.3/6,ms1mx2.8/52,Error ellipse: s-maj=55.1km s-min=13.7km az=68.0*
*NEIC **05** 09:16:23.9±1.3,4.3N±0.1×126.9E±0.1,h34km±7km, mb4.2/12,Error ellipse: s-maj=18.8km s-min=14.1km az=66.0*

ISC 05 09:16:20.7±0.6,**4.25N**±0.06×**126.9E**±0.1,**h10**km,**n39,** σ1ᵍ**19**/38,**mb4.1**/18,**MS3.3**/4,**1D**,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.20**	**327**	*eP*	**Pn**	**09 16 58.2**	**+0.8**
DAV	**Davao City (W)**	**3.10**	**334**	LR	LR	09 18 39.3	
	comp=Z,333nm,20.4s,baz=91,slow=45						
SKMP	**Bagumbayan, Su**	**3.27**	**314**	*eP*	**Pn**	**09 17 13.6**	**+1.4**
SKMP				*eS*	**Sn**	**09 17 53.5**	**+2.4**
KCP	**Kidapawan**	**3.29**	**326**	⇓*i* P	**Pb**	**09 17 16.9**	**-2.4**
KCP				*i* S	**Sb**	**09 18 03.1**	**+3.6**
TNTI	**Ternate**	**3.49**	**173**	Pn	**Pn**	**09 17 16.5**	**+1.4**
BUKP	**Musuan**	**4.05**	**333**	*eP*	**Pn**	**09 17 24.8**	**+1.9**
BUKP				*eS*	**Sg**	**09 18 28.9**	**-2.1**
SIJI	**Sorong**	**6.69**	**139**	Pn	**Pn**	**09 18 00.3**	**+1.2**
	1.1nm,0.3s,baz=7.9,slow=19,SNR=1.7						
LUWI	**Luwuk**	**6.70**	**218**		**Pn**	**09 17 59.3**	**0.0**
KAPI	**Kappang**	**11.67**	**218**	LR	LR	09 24 13.3	
	comp=Z,86nm,19.0s,baz=33,slow=41						
KNRA	**Kununurra**	**19.89**	**175**	P	**Pn**	**09 20 53.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.25**	**183**	P	**P**	**09 21 17.3**	**-0.6**
	2.4nm,0.6s,baz=10,slow=11,SNR=9.1						
FITZ	**Fitzroy Crossi**	**22.25**	**183**	P	**P**	**09 21 17.2**	**-0.8**
FITZ				IAmb	IAmb	09 21 43.1	
	comp=Z,16nm,1.5s						
WB0	**Warramunga Arr**	**24.97**	**163**	P	**P**	**09 21 44.5**	**-0.2**
WB0				IAmb	IAmb	09 21 54.5	
	comp=Z,6.6nm,0.8s						
WRA	**Warramunga Arr**	**25.12**	**163**	P	**P**	**09 21 46.0**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=344,slow=10,SNR=30						
WRA	**Warramunga Arr**	**25.12**	**163**	P	**P**	**09 21 46.5**	**+0.4**
WB2	**Warramunga Arr**	**25.13**	**163**	P	**P**	**09 21 46.5**	**+0.4**
WB2				IAmb	IAmb	09 21 56.1	
	comp=Z,6.3nm,0.9s						
WR0	**Warramunga Arr**	**25.20**	**163**	P	**P**	**09 21 45.8**	**-1.0**
WR0				IAmb	IAmb	09 22 00.0	
	comp=Z,5.5nm,1.0s						
KRVT	**Keravat (AS076**	**26.48**	**108**	LR	LR	09 31 47.7	
	comp=Z,39nm,18.3s,baz=273,slow=35						
PSA00	**Pilbara Seismi**	**26.59**	**195**	P	**P**	**09 21 59.7**	**+0.3**
PSA00				IAmb	IAmb	09 22 03.7	
	comp=Z,6.1nm,1.1s						
ASAR	**Alice Springs**	**28.57**	**167**	P	**P**	**09 22 17.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=349,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**28.57**	**167**	P	**P**	**09 22 17.2**	**0.0**
CMAR	**Chiang Mai Arr**	**30.78**	**300**	P	**P**	**09 22 36.7**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=123,slow=8.1,SNR=4.4						
BBOO	**Buckleboo**	**37.87**	**167**	P	**P**	**09 23 38.5**	**+0.5**
STKA	**Stephens Creek**	**38.55**	**160**	P	**P**	**09 23 43.6**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=314,slow=7.1,SNR=9.4						
STKA				PcP	**PcP**	**09 25 56.1**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=345,slow=12,SNR=2.1						
PALK	**Pallekele**	**46.07**	**276**	LR	LR	09 46 14.6	
	comp=Z,217nm,18.4s,baz=219,slow=39						
SONM	**Songino Array**	**46.87**	**341**	P	**P**	**09 24 51.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=146,slow=8.6,SNR=2.3						
MK31	**Makanchi Array**	**57.24**	**325**	P	**P**	**09 26 07.9**	**-0.5**
MK31				IAmb	IAmb	09 26 11.9	
	comp=Z,1.1nm,1.1s						
MKAR	**Makanchi Array**	**57.24**	**325**	P	**P**	**09 26 07.5**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=125,slow=8.2,SNR=8.4						
MKAR				PcP	**PcP**	**09 27 02.8**	**0.0**
	comp=Z,0.7nm,0.7s,baz=134,slow=3.4,SNR=2.0						
ZALV	**Zalesovo Beam**	**60.21**	**333**	P	**P**	**09 26 28.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=131,slow=6.7,SNR=2.4						
KURK	**Kurchatov**	**61.41**	**327**		**P**	**09 26 36.9**	**-0.2**
KURK				IAmb	IAmb	09 26 41.8	
	comp=Z,3.5nm,0.6s						
NRIK	**Noril'sk**	**69.97**	**346**	P	**P**	**09 27 32.7**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=141,slow=6.5,SNR=1.7						
ABKAR	**Akbulak array**	**71.87**	**321**	P	**P**	**09 27 43.4**	**-0.6**
VNDA	**Vanda**	**83.92**	**173**	P	**P**	**09 28 51.0**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=294,slow=5.1,SNR=4.6						
VNDA	**Vanda**	**83.92**	**173**	P	**P**	**09 28 51.5**	**+1.1**
ILAR	**Eielson Array**	**84.55**	**25**	P	**P**	**09 28 51.8**	**-2.2**
OBN	**Obninsk**	**86.75**	**325**	LR	LR	10 08 04.2	
	comp=Z,9.1nm,21.0s,baz=188,slow=36						
ARCES	**ARCESS Array B**	**90.03**	**340**	P	**P**	**09 29 20.7**	**+0.3**
	comp=Z,3.3nm,0.9s,baz=92,slow=6.4,SNR=1.8						
FINES	**FINESS Array B**	**91.47**	**332**	P	**P**	**09 29 27.5**	**+0.4**
	comp=Z,2.5nm,0.9s,baz=72,slow=6.4,SNR=1.4						
NOA	**NORSAR Array B**	**98.41**	**334**	LR	LR	10 17 05.2	
	comp=Z,12nm,18.8s,baz=270,slow=37						

*IDC **05** 09:24:49.4±3.0,32.74S×178.40W,h0km,mb3.9/2, mb1 4.2/3,mb1mx3.7/32,mbtmp3.9/3,ML3.7/1,MS3.2/4, Ms1 3.2/4,ms1mx2.8/35,Error ellipse: s-maj=68.4km s-min=35.9km az=116.0*
*NEIC **05** 09:24:51.4±0.8,32.74S±0.09×178.4W±0.2,h10km±2km, mb4.4/6,Error ellipse: s-maj=33.4km s-min=6.3km az=115.0*

ISC 05 09:24:52.0±1.4,**32.7S**±0.1×**178.6W**±0.2,**h10**km,**n46,** σ1ᵍ**11**/37,**mb4.2**/5,**MS3.4**/3,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**5.70**	**205**	P	**Pn**	**09 26 17.0**	**+0.3**
PKGZ	**Pakihiroa**	**5.89**	**207**	P	**Pn**	**09 26 18.8**	**-0.6**
HAZ	**Te Kaha**	**5.89**	**210**	P	**Pn**	**09 26 20.4**	**+1.0**
PUZ	**Puketiti**	**5.98**	**205**	P	**Pn**	**09 26 20.1**	**-0.5**
RUGZ	**Raukumara Rang**	**6.11**	**209**	P	**Pn**	**09 26 22.9**	**+0.3**
TWGZ	**Tauwhareparae**	**6.18**	**206**	P	**Pn**	**09 26 23.7**	**+0.3**
CNGZ	**Carnagh Statio**	**6.37**	**204**	P	**Pn**	**09 26 29.4**	**+3.5**
TKGZ	**Te Karaka**	**6.46**	**206**	P	**Pn**	**09 26 29.5**	**+2.3**
MWZ	**Matawai**	**6.49**	**208**	P	**Pn**	**09 26 27.3**	**-0.4**
URZ	**Urewera**	**6.60**	**211**	Pn	**Pn**	**09 26 27.2**	**-1.9**
	1.5nm,0.3s,baz=272,slow=5.3,SNR=13						
URZ				Sn	**Sn**	**09 27 43.8**	**-0.6**
	1.3nm,0.3s,baz=192,slow=15,SNR=1.3						
URZ	**Urewera**	**6.60**	**211**	P	**Pn**	**09 26 30.2**	**+1.1**
URZ	**Urewera**	**6.60**	**211**		**Pn**	**09 26 28.1**	**-1.0**
URZ				Sn	**Sn**	**09 27 43.9**	**-0.5**
RAGZ	**Rawiri**	**6.67**	**208**	P	**Pn**	**09 26 29.5**	**-0.7**
PRGZ	**Paritu Road**	**6.87**	**204**	P	**Pn**	**09 26 32.3**	**-0.6**
MUGZ	**Murupara**	**6.93**	**212**	P	**Pn**	**09 26 34.2**	**+0.5**
SNGZ	**Shannon Statio**	**6.95**	**208**	P	**Pn**	**09 26 35.3**	**+1.3**
RTZ	**Ruatahuna**	**6.95**	**210**	P	**Pn**	**09 26 34.5**	**+0.4**
RAHZ	**Arahi**	**7.16**	**208**	P	**Pn**	**09 26 39.0**	**+2.1**
MTHZ	**Maungataniwha**	**7.21**	**210**	P	**Pn**	**09 26 38.7**	**+1.1**
NMHZ	**Naumai**	**7.43**	**209**	P	**Pn**	**09 26 41.2**	**+0.6**
BKZ	**Black Stump Fm**	**7.62**	**210**	P	**Pn**	**09 26 44.9**	**+1.7**
BKZ	**Black Stump Fm**	**7.62**	**210**	Pn	**Pn**	**09 26 42.9**	**-0.3**
MCHZ	**McNeill Hill**	**7.77**	**208**	P	**Pn**	**09 26 45.4**	**+0.2**
KWHZ	**Kaweka Forest**	**7.87**	**210**	P	**Pn**	**09 26 47.4**	**+0.8**
OTVZ	**Oturere**	**7.99**	**214**	P	**Pn**	**09 26 53.3**	**+4.9**
DZM	**Mont Dzumac**	**16.98**	**305**	LR	LR	09 34 02.0	
	comp=Z,174nm,19.7s,baz=158,slow=32						
ARMA	**Armidale**	**25.47**	**267**	P	**P**	**09 30 20.9**	**+0.3**
PPT	**Papeete**	**30.12**	**67**	LR	LR	09 42 13.9	
	comp=Z,9.6nm,19.1s,baz=248,slow=35						
STKA	**Stephens Creek**	**33.57**	**260**	LR	LR	09 44 04.4	
	comp=Z,63nm,18.4s,baz=28,slow=34						
ASAR	**Alice Springs**	**42.57**	**270**	P	**P**	**09 32 48.5**	**+0.2**
	1.5nm,0.7s,baz=107,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**42.57**	**270**	P	**P**	**09 32 49.2**	**+0.9**
WR0	**Warramunga Arr**	**43.59**	**275**	P	**P**	**09 32 57.0**	**+0.5**
WB2	**Warramunga Arr**	**43.75**	**275**	P	**P**	**09 32 58.0**	**0.0**
WB2				IAmb	IAmb	09 33 11.5	
	comp=Z,7.1nm,1.3s						
WRA	**Warramunga Arr**	**43.76**	**275**	P	**P**	**09 32 57.7**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=114,slow=7.9,SNR=31						
WRA	**Warramunga Arr**	**43.76**	**275**	P	**P**	**09 32 58.3**	**+0.3**
WB0	**Warramunga Arr**	**43.80**	**275**	P	**P**	**09 32 58.0**	**-0.2**
WB0				IAmb	IAmb	09 33 04.2	
	comp=Z,3.7nm,0.8s						
QSPA	**South Pole Qui**	**57.44**	**180**	P	**P**	**09 34 40.0**	**-0.9**
QSPA				IAmb	IAmb	09 35 02.4	
	comp=Z,8.5nm,1.2s						
H03S2	**Juan Fernandez**	**79.61**	**123**	T	T	11 05 24.3	
	baz=236						
H03S1	**Juan Fernandez**	**79.62**	**123**	T	T	11 05 21.5	
	baz=236						
H03S3	**Juan Fernandez**	**79.62**	**123**	T	T	11 05 27.0	
	baz=236						
H03N3	**Juan Fernandez**	**79.81**	**123**	T	T	11 05 42.4	
	baz=233,slow=74						
H03N2	**Juan Fernandez**	**79.81**	**123**	T	T	11 05 44.8	
	baz=233						
H03N1	**Juan Fernandez**	**79.83**	**123**	T	T	11 05 43.0	
	baz=233,slow=74						
ELK	**Elko**	**93.53**	**43**	LR	LR	10 10 43.0	
	comp=Z,16nm,20.7s,baz=246,slow=30						
FINES	**FINESS Array B**	**147.10**	**338**	PKPbc	**PKPdf**	**09 44 32.9**	**+0.6**
	comp=Z,19nm,1.3s,baz=38,slow=2.9,SNR=7.6						
FINES	**FINESS Array B**	**147.10**	**338**		**PKPbc**	**09 44 33.5**	**-0.9**

*ANF **05** 09:25:53.6±1.4,41.90N×119.63W,h0km,ML2.3/1,Error ellipse: s-maj=11.5km s-min=5.6km az=92.0*
*REN **05** 09:25:54.6±1.3,41.88N±0.05×119.63W±0.04,h0km±8km, ML2.5/1,Md2.2/6(SEA),Error ellipse: s-maj=8.3km s-min=2.7km az=155.0*
*NEIC **05** 09:25:54.8±0.1,41.88N±0.08×119.64W±0.05,h11km±7km, Error ellipse: s-maj=11.5km s-min=4.9km az=186.0*
*SEA **05** 09:25:55.4±3.6,41.81N±0.04×119.68W±0.05,h0km±8km, Error ellipse: s-maj=5.7km s-min=4.9km az=201.0*

ISC 05 09:25:55.1±2.4,**41.89N**±0.07×**119.68W**±0.09,
h13km±15km,**n10**,σ0ᵍ**63**/15,**Nevada**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.47**	**272**		**Pg**	**09 26 04.3**	**-0.1**
MOD					**Sg**	**09 26 11.2**	**+0.6**
K05A	**Summer Lake**	**1.23**	**313**		**Pn**	**09 26 18.5**	**+0.4**
M04C	**Macdoel**	**1.62**	**267**	P	**Pn**	**09 26 23.4**	**0.0**
	baz=86,SNR=15						
M04C				S	**Sg**	**09 26 47.4**	**+0.2**
	baz=86						
J08A	**Circle Bar Ran**	**1.71**	**31**		**Pn**	**09 26 24.6**	**-0.1**
J05D	**Fort Rock, OR**	**1.81**	**321**	Pb	**Pb**	**09 26 28.1**	**+0.1**
	baz=139,SNR=11						
J05D				Sb	**Sg**	**09 26 53.1**	**0.0**
	baz=139						
L04D	**Klamath Falls**	**1.98**	**280**	P	**Pn**	**09 26 28.4**	**0.0**
	baz=99,SNR=7.3						
L04D				Sb	**Sg**	**09 26 58.6**	**-0.2**
	baz=99						
I07A	**Izee**	**2.19**	**3**	Pn	**Pn**	**09 26 31.6**	**+0.3**
O03E	**Paynes Creek**	**2.26**	**226**	P	**Pn**	**09 26 33.2**	**+1.0**
	baz=45,SNR=5.7						
O03E				S	**Sb**	**09 27 03.1**	**-0.6**
	baz=45						
YBH	**Yreka Blue Hor**	**2.27**	**267**	Pn	**Pn**	**09 26 32.8**	**+0.5**
N02D	**Trinity Center**	**2.45**	**249**	Sb	**Sg**	**09 27 12.4**	**-1.5**
	baz=68						

*IDC **05** 09:27:28.1±0.9,25.57N×142.72E,h0km,mb3.9/8, mb1 4.0/10,mb1mx3.7/46,mbtmp3.8/10,ML2.9/2,MS3.3/1, Ms1 3.3/1,ms1mx2.5/49,Error ellipse: s-maj=42.7km s-min=17.3km az=91.0*
*NEIC **05** 09:27:32.2±0.7,25.81N±0.03×142.3E±0.2,h35km±2km, mb4.5/10,Error ellipse: s-maj=32.5km s-min=4.0km az=85.0*

ISC 05 09:27:33.1±0.8,**25.73N**±0.07×**142.3E**±0.2,**h35**km,**n28,** σ1ᵍ**55**/22,**mb4.1**/12,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.37**	**354**		**Pn**	**09 27 53.8**	**-1.8**
JCJ				Sn	**Sn**	**09 28 09.6**	**-3.0**
JHJ	**Hachijo jima 2**	**7.69**	**344**	LR	LR	09 31 54.3	
	comp=Z,217nm,19.0s,baz=306,slow=34						
MJAR	**Matsushiro Arr**	**11.34**	**343**	Pn	**Pn**	**09 30 14.2**	**+1.6**
	0.1nm,0.3s,baz=162,slow=12,SNR=1.1						
KSRS	**Korea Array**	**16.93**	**317**	P	**P**	**09 31 29.7**	**+0.8**
	0.1nm,0.3s,baz=127,slow=9.9,SNR=1.3						
YOJ	**Yonaguni jima**	**17.55**	**270**	P	**Pn**	**09 31 32.4**	**-2.6**
YOJ				IAmb	IAmb	09 31 34.7	
	comp=Z,46nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**23.41**	**100**	T	T	09 57 41.8	
	baz=290						
H11N1	**WAKE ISLAND Hy**	**23.41**	**100**	T	T	09 57 26.0	
	baz=290						
H11N3	**WAKE ISLAND Hy**	**23.42**	**100**	T	T	09 57 21.8	
	baz=290						
H11S3	**WAKE ISLAND Hy**	**23.66**	**103**	T	T	09

ZALV	**Zalesovo Beam**	**46.80**	**352**	P	**P**	**09 37 43.2**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=178,slow=8.5,SNR=6.0						
ZALV	**Zalesovo Beam**	**46.80**	**352**	P	**P**	**09 37 43.1**	**-0.3**
WRA	**Warramunga Arr**	**47.82**	**126**	P	**P**	**09 37 49.8**	**-2.2**
	comp=Z,0.2nm,0.4s,baz=306,slow=8.5,SNR=1.9						
WRA				LR	LR	10 00 10.7	
	comp=Z,34nm,19.6s,baz=315,slow=38						
ASAR	**Alice Springs**	**49.49**	**130**	P	**P**	**09 38 02.5**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=304,slow=7.8,SNR=2.9						
RAYN	**Ar Rayn**	**49.53**	**294**	P	**P**	**09 38 05.8**	**+0.6**
RAYN				IAmb	IAmb	09 38 33.6	
	comp=Z,3.2nm,1.1s						
ABKAR	**Akbulak array**	**50.59**	**331**	P	**P**	**09 38 12.8**	**+0.1**
STKA	**Stephens Creek**	**59.69**	**134**	LR	LR	10 08 30.0	
	comp=Z,22nm,18.6s,baz=19,slow=39						
ARCES	**ARCESS Array B**	**75.58**	**340**	LR	LR	10 16 56.2	
	comp=Z,30nm,19.9s,baz=180,slow=38						
BOSA	**Boshof**	**75.83**	**238**	P	**P**	**09 41 00.2**	**-0.6**

*SOME **05** 09:32:25.6, 41.°73N×85.°60E, h0km*
*NNC **05** 09:32:51.2±2.3, 42.°18N×84.°78E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=20.8km s-min=12.7km az=127.0*

ISC 05 09:32:41.1±3.5, 42.°1N±0.°1×85.°1E±0.°1, h10km, n10, σ1§97/19, 6C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**4.30**	**288**	⇑Pn	**Pb**	**09 33 53.9**	**-2.9**
	1.0nm,0.3s						
PDGK				⇓Pg	**Pg**	**09 34 06.4**	**+3.0**
	3.7nm,0.4s						
PDGK				⇑Lg	Lg	09 35 00.9	
	18nm,0.4s						
DJR	**Jarkent**	**4.46**	**302**	*e*P	**Pb**	**09 33 58.0**	**-1.6**
	2.8nm,0.4s						
DJR				*e*S	**Sg**	**09 35 04.5**	**+0.2**
	15nm,0.5s						
UZB	**Uzynbulak**	**4.59**	**285**	*e*P	**Pb**	**09 33 59.3**	**-2.5**
	14nm,0.3s						
UZB				*e*S	**Sg**	**09 35 06.8**	**-1.6**
	19nm,0.5s						
KPKS	**Kokpek**	**4.90**	**288**	*e*P	**Pb**	**09 34 05.9**	**-1.1**
	7.3nm,0.2s						
KPKS				*e*S	**Sg**	**09 35 18.1**	**-0.3**
	28nm,0.5s						
SATY	**Saty**	**5.02**	**283**	*e*P	**Pb**	**09 34 07.1**	**-2.0**
	11nm,0.4s						
SATY				*e*S	**Sg**	**09 35 20.1**	**-2.1**
	12nm,0.2s						
MK31	**Makanchi Array**	**5.10**	**338**	Pn	**Pb**	**09 34 07.5**	**-2.9**
	0.1nm,0.2s,baz=32,slow=18,SNR=14						
MK31				⇑Pg	**Pg**	**09 34 21.3**	**+2.5**
	5.1nm,0.7s,baz=160,slow=14,SNR=29						
MK31				⇑Lg	Lg	09 35 27.1	
	3.3nm,0.3s,baz=159,slow=28,SNR=13						
MAKZ	**Makanchi**	**5.20**	**336**	⇑Pg	**Pg**	**09 34 23.1**	**+2.4**
	8.5nm,0.9s						
MAKZ				⇑Lg	Lg	09 35 31.1	
	11nm,0.8s						
KURS	**Kuram**	**5.27**	**288**	*e*P	**Pb**	**09 34 13.1**	**-0.2**
	4.1nm,0.7s						
KURS				*e*S	**Sg**	**09 35 30.4**	**+0.2**
	11nm,0.5s						
MNBS	**Baschi**	**5.27**	**294**	*e*P	**Pb**	**09 34 13.0**	**-0.4**
	3.0nm,0.3s						
MNBS				*e*S	**Sg**	**09 35 30.3**	**-0.1**
	22nm,0.3s						
ZSN	**Zaisan**	**5.35**	**358**	*e*P	**Pb**	**09 34 13.8**	**-0.9**
	6.1nm,0.3s						
ZSN				*e*S	**Sg**	**09 35 31.5**	**-1.4**
	8.2nm,0.6s						

*IDC **05** 09:44:11.8±0.8, 13.°80N×121.°15E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.7/52, mbtmp3.9/10, Error ellipse: s-maj=36.5km s-min=15.2km az=69.0*
*NEIC **05** 09:44:20.5±1.0, 13.°81N±0.°08×121.°1E±0.°2, h77km±9km, mb4.3/14, Error ellipse: s-maj=21.6km s-min=11.4km az=96.0*
*MAN **05** 09:44:35.0, 13.°69N×120.°63E, h173km, mb4.9, ML3.8, MS3.8*

ISC 05 09:44:33.1±0.7, 13.°70N±0.°04×120.°73E±0.°07, h193km±6km, n44, σ1§75/42, mb3.8/17, 3C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.30**	**132**	⇑*e*P	**Pn**	**09 44 59.7**	**+0.8**
PGP				*e*S	**Sn**	**09 45 18.8**	**+0.1**
TGY	**Tagaytay City**	**0.45**	**27**	*e*P	Pn	09 45 01.7	+2.4
TGY				*i* S	**Sn**	**09 45 21.8**	**+2.1**
LUBP	**Lubang**	**0.47**	**274**	*e*P	**Pn**	**09 44 59.8**	**+0.6**
LUBP				*e*S	**Sn**	**09 45 18.3**	**-1.0**
LQP	**Lukban**	**0.89**	**63**	⇑*i*P	**Pn**	**09 45 03.7**	**+2.0**
LQP				*i* S	**Sn**	**09 45 16.9**	**-6.8**
BOAC	**Boac**	**1.11**	**103**	*e*P	**Pn**	**09 45 03.9**	**+0.9**
BOAC				*e*S	**Sn**	**09 45 27.2**	**+1.2**
SJMP	**San Jose**	**1.29**	**163**	*e*P	**Pn**	**09 45 05.1**	**+0.7**
SJMP				*e*S	**Sn**	**09 45 28.4**	**-0.4**
POLP	**Polilio Island**	**1.56**	**49**	*e*P	**Pn**	**09 45 08.7**	**+2.0**
BUSP	**Coron**	**1.77**	**197**	*e*P	**Pn**	**09 45 10.0**	**+1.2**
BUSP				*e*S	**Sn**	**09 45 36.2**	**-0.3**
OTRP	**Odiongan**	**1.84**	**136**	*e*P	**Pn**	**09 45 09.3**	**+0.4**
OTRP				*e*S	**Sn**	**09 45 37.3**	**-0.4**
BALP	**Baler**	**2.19**	**22**	*e*P	**Pn**	**09 45 14.8**	**+1.8**
BALP				*e*S	**Sn**	**09 45 45.3**	**+1.0**
BCP	**Baguio City**	**2.70**	**358**	⇑*i*P	**Pn**	**09 45 21.7**	**+2.6**
BCP				*i* S	**Sn**	**09 45 50.3**	**-4.7**
BOLP	**Bolinao**	**2.77**	**344**	*e*P	**Pn**	**09 45 20.7**	**+1.0**
BOLP				*e*S	**Sn**	**09 45 56.4**	**+0.2**
ENPP	**El Nido**	**2.79**	**207**	*e*P	**Pn**	**09 45 21.2**	**+1.2**
ENPP				*e*S	**Sn**	**09 45 55.7**	**-0.8**
ENH	**Enshi**	**19.48**	**330**	P	**P**	**09 48 42.3**	**-3.1**
CMAR	**Chiang Mai Arr**	**21.45**	**286**	P	**P**	**09 49 06.8**	**+0.2**
	1.6nm,0.7s,baz=110,slow=8.9,SNR=8.8						
CMAR	**Chiang Mai Arr**	**21.45**	**286**	P	**P**	**09 49 06.3**	**-0.2**
RPSI	**Rantau Prapat**	**24.16**	**245**	P	**P**	**09 49 32.8**	**+0.9**
RPSI				IAmb	IAmb	09 49 33.5	
	comp=Z,6.2nm,0.8s						
KSAR	**Wonju Array Be**	**24.49**	**14**	P	P	09 49 28.7	-5.8
KSRS	**Korea Array**	**24.51**	**14**	P	P	09 49 31.3	-3.4
	comp=Z,0.4nm,0.5s,baz=198,slow=11,SNR=1.9						
SHL	**Shillong**	**29.55**	**298**	P	**P**	**09 50 20.5**	**+0.4**
SHL				IAmb	IAmb	09 50 21.4	
	comp=Z,8.3nm,0.5s						
WB0	**Warramunga Arr**	**35.88**	**158**	P	P	09 51 13.2	-1.6
WB0				IAmb	IAmb	09 51 38.8	
	comp=Z,2.7nm,0.9s						
WRA	**Warramunga Arr**	**36.02**	**158**	P	P	09 51 14.1	-2.0
	comp=Z,1.4nm,0.6s,baz=334,slow=9.8,SNR=40						
WRA	**Warramunga Arr**	**36.02**	**158**	P	P	09 51 13.9	-2.1
WB2	**Warramunga Arr**	**36.02**	**158**	P	P	09 51 14.2	-1.9
WB2				IAmb	IAmb	09 51 17.3	
	comp=Z,3.7nm,0.8s						
SONM	**Songino Array**	**36.06**	**344**	P	**P**	**09 51 16.0**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=161,slow=10,SNR=7.5						
WR0	**Warramunga Arr**	**36.11**	**158**	P	P	09 51 15.1	-1.7
WR0				IAmb	IAmb	09 51 16.4	
	comp=Z,6.0nm,1.4s						
KLR	**Kul'dur**	**36.57**	**12**	P	P	09 51 18.2	-2.2
	comp=Z,1.6nm,0.7s,baz=270,slow=5.6,SNR=5.0						
GIRL	**Giralia**	**36.68**	**190**	P	**P**	**09 51 21.8**	**+0.2**
AS31	**Alice Springs**	**39.31**	**161**	P	P	09 51 41.5	-2.2
AS31				IAmb	IAmb	09 51 44.0	
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**39.31**	**161**	P	P	09 51 42.6	-1.0
	comp=Z,2.1nm,0.4s,baz=336,slow=6.7,SNR=54						
ASAR	**Alice Springs**	**39.31**	**161**	P	P	09 51 42.1	-1.5
FORT	**Forrest**	**44.78**	**171**	P	**P**	**09 52 26.8**	**-0.9**
MK31	**Makanchi Array**	**46.04**	**324**	P	**P**	**09 52 37.0**	**-0.5**
MKAR	**Makanchi Array**	**46.04**	**324**	P	**P**	**09 52 38.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=124,slow=6.6,SNR=4.5						
MKAR	**Makanchi Array**	**46.04**	**324**	P	**P**	**09 52 37.9**	**+0.4**
ZALV	**Zalesovo Beam**	**49.06**	**333**	P	**P**	**09 53 00.3**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=111,slow=7.9,SNR=2.8						
ZALV	**Zalesovo Beam**	**49.06**	**333**	P	P	**09 53 00.7**	**+0.1**
STKA	**Stephens Creek**	**49.54**	**157**	P	P	09 53 03.7	-0.7
	comp=Z,0.9nm,0.5s,baz=325,slow=9.1,SNR=3.6						
STKA	**Stephens Creek**	**49.54**	**157**	P	**P**	**09 53 04.1**	**-0.4**
KURBB	**Kurchatov Arra**	**50.20**	**326**	P	**P**	**09 53 10.0**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=118,slow=9.1,SNR=6.0						
KURK	**Kurchatov**	**50.20**	**326**	P	**P**	**09 53 10.2**	**+1.0**
KURK				IAmb	IAmb	09 53 11.1	
	comp=Z,2.6nm,0.8s						
TOO	**Toolangi**	**56.06**	**156**	P	P	09 53 50.9	-1.2
ABKAR	**Akbulak array**	**60.75**	**319**	P	**P**	**09 54 24.9**	**+0.5**
FINES	**FINESS Array B**	**80.29**	**331**	P	**P**	**09 56 22.6**	**+0.3**

IDC 05 09:56:56.5±9.2, 7.°91N×94.°23E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.2/54, mbtmp3.4/4, Error ellipse: s-maj=453.3km s-min=31.5km az=57.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.61**	**235**	T	T	10 29 15.6	
	baz=55,slow=74						
H08S2	**Diego Garcia H**	**26.61**	**235**	T	T	10 29 05.2	
	baz=55						
H08S1	**Diego Carcia H**	**26.63**	**235**	T	T	10 29 18.1	
	baz=55,slow=74						
MKAR	**Makanchi Array**	**40.07**	**347**	P	P	10 04 33.2	-0.5
	0.3nm,0.6s,baz=162,slow=7.0,SNR=2.9						
KURBB	**Kurchatov Arra**	**44.53**	**346**	P	P	10 05 09.6	-0.3
	0.6nm,0.7s,baz=170,slow=7.1,SNR=2.9						
ZALV	**Zalesovo Beam**	**46.53**	**352**	P	P	10 05 26.1	+0.4
	0.4nm,0.4s,baz=176,slow=5.6,SNR=1.4						
WRA	**Warramunga Arr**	**48.21**	**126**	P	P	10 05 39.1	-0.2
	0.2nm,0.8s,baz=306,slow=8.5,SNR=1.4						

*IDC **05** 10:03:09.7±1.6, 6.°12N×124.°15E, h546km±20km, mb3.0/9, mb1 3.1/9, mb1mx2.8/48, mbtmp4.0/9, Error ellipse: s-maj=33.9km s-min=9.8km az=75.0*

ISC 05 10:03:09.7±0.7, 6.°09N±0.°09×124.°3E±0.°3, h550km, n15, σ1§17/21, mb3.5/10, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.47**	**25**	*e*P	**P**	**10 04 13.4**	**-1.6**
KCP	**Kidapawan**	**1.18**	**39**	⇑*i*P	**P**	**10 04 17.9**	**+1.4**
DDMP	**Don Marcelino,**	**1.36**	**89**	*e*P	**P**	**10 04 15.4**	**-1.6**
BUKP	**Musuan**	**1.92**	**22**	*e*P	**P**	**10 04 19.6**	**+0.5**
MATI	**Mati**	**2.08**	**66**	*e*P	**P**	**10 04 18.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**24.07**	**177**	P	**P**	**10 07 42.0**	**-0.2**
	1.0nm,0.5s,baz=358,slow=6.8,SNR=8.2						
WRA	**Warramunga Arr**	**27.68**	**159**	P	**P**	**10 08 14.6**	**+0.5**
	2.1nm,0.4s,baz=342,slow=9.1,SNR=83						
WRA				PcP	**PcP**	**10 11 13.1**	**-0.1**
	3.0nm,1.5s,baz=325,slow=3.0,SNR=2.1						
WRA				S	**S**	**10 12 15.1**	**-2.9**
	0.2nm,0.6s,baz=319,slow=21,SNR=2.1						
WRA				ScP	**ScP**	**10 14 02.4**	**+0.2**
	0.5nm,0.6s,baz=339,slow=3.0,SNR=9.5						
ASAR	**Alice Springs**	**31.01**	**163**	P	**P**	**10 08 44.2**	**+1.2**
	2.4nm,0.5s,baz=342,slow=7.1,SNR=64						
ASAR				PcP	**PcP**	**10 11 22.2**	**+0.3**
	0.3nm,0.5s,baz=340,slow=2.1,SNR=5.4						
ASAR				S	**S**	**10 13 08.8**	**-0.7**
	1.3nm,0.8s,baz=353,slow=25,SNR=9.6						
ASAR				ScP	**ScP**	**10 14 13.2**	**+0.2**
	0.5nm,0.6s,baz=331,slow=3.2,SNR=5.8						
MJAR	**Matsushiro Arr**	**32.86**	**21**	P	**P**	**10 08 57.8**	**-0.7**
	0.6nm,0.5s,baz=193,slow=9.0,SNR=4.1						
USRK	**Ussuriysk Ar.**	**38.55**	**9**	P	**P**	**10 09 46.0**	**+0.6**
	0.8nm,0.6s,baz=198,slow=7.0,SNR=2.0						
STKA	**Stephens Creek**	**41.19**	**157**	P	**P**	**10 10 08.4**	**+1.7**
	1.5nm,0.4s,baz=332,slow=8.6,SNR=5.7						
KLR	**Kul'dur**	**43.45**	**7**	P	**P**	**10 10 24.8**	**+0.7**
	1.1nm,0.6s,baz=219,slow=10,SNR=4.1						
SONM	**Songino Array**	**44.34**	**343**	P	**P**	**10 10 30.8**	**-0.4**
	0.8nm,0.7s,baz=165,slow=7.7,SNR=3.8						
MKAR	**Makanchi Array**	**54.27**	**325**	P	**P**	**10 11 43.2**	**-1.2**
	1.0nm,0.5s,baz=116,slow=7.9,SNR=11						
KURBB	**Kurchatov Arra**	**58.48**	**328**	P	**P**	**10 12 13.2**	**-0.1**
	1.0nm,0.5s,baz=132,slow=6.3,SNR=16						

*IDC **05** 10:07:26.7±1.0, 37.°37N×98.°13W, h0km, mb3.3/1, mb1 3.8/5, mb1mx3.5/49, mbtmp3.4/5, ML4.1/3, Error ellipse: s-maj=12.9km s-min=12.3km az=148.0*
*NEIC **05** 10:07:27.4±1.0, 37.°20N±0.°03×98.°05W±0.°04, h8km±5km, mb_Lg3.2/102, Error ellipse: s-maj=4.6km s-min=4.3km az=126.0*
*ANF **05** 10:07:28.4±0.8, 37.°21N×98.°01W, h10km±5km, ML4.2/12, Error ellipse: s-maj=3.3km s-min=2.0km az=45.0*

ISC 05 10:07:27.3±0.8, 37.°21N±0.°03×98.°03W±0.°03, h11km±5km, n109, σ1§06/99, Kansas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN08	**Anthony NE Sta**	**0.05**	**68**		**Pg**	**10 07 29.1**	**-0.3**
KAN12	**Harper NE Stat**	**0.09**	**15**		**Pg**	**10 07 29.9**	**0.0**
KAN12				Sg	**Sg**	**10 07 31.5**	**-0.3**
KAN10	**Anthony SW Sta**	**0.10**	**212**		**Pg**	**10 07 29.7**	**-0.3**
KAN10				Sg	**Sg**	**10 07 31.1**	**-0.8**
KAN05	**Bluff City Nor**	**0.16**	**128**		**Pg**	**10 07 30.9**	**0.0**
KAN05				Sg	**Sg**	**10 07 33.2**	**-0.1**
KAN14	**Manchester OK**	**0.26**	**168**		**Pg**	**10 07 32.5**	**0.0**
KAN14				Sg	**Sg**	**10 07 36.2**	**+0.2**
KAN09	**Caldwell North**	**0.34**	**102**		**Pg**	**10 07 34.1**	**+0.1**
KAN09				Sg	**Sg**	**10 07 38.6**	**+0.1**
KAN13	**South Haven SW**	**0.48**	**114**		**Pg**	**10 07 36.6**	**-0.1**
KAN13				Sg	**Sg**	**10 07 43.1**	**+0.1**
CROK	**Carrier**	**0.70**	**177**		**Pg**	**10 07 40.6**	**-0.2**
CROK				Sg	**Sg**	**10 07 50.2**	**+0.1**
U32A	**Winter Ranch,**	**1.14**	**224**		**Pg**	**10 07 48.5**	**-0.6**
T35A	**Sooner Cattle**	**1.25**	**103**		**Pg**	**10 07 50.6**	**-0.7**
R32A	**Long Quarter,**	**1.33**	**336**	Pn	**Pn**	**10 07 52.2**	**+0.3**
OK029	**Liberty Lake**	**1.48**	**162**		**Pn**	**10 07 54.5**	**+0.5**
OK031	**S. Brethren Rd**	**1.58**	**142**		**Pn**	**10 07 56.0**	**+0.8**
OK030	**Cody Creek RV**	**1.62**	**142**		**Pn**	**10 07 56.6**	**+0.8**
OK025	**Westminster Rd**	**1.72**	**161**		**Pn**	**10 07 58.3**	**+1.1**
OKCFA	**Oklahoma City**	**1.85**	**165**		**Pn**	**10 07 58.9**	**-0.1**
OKCFA				IAmb_Lg		10 08 28.4	
	comp=Z,107nm,0.9s						
OKCSW	**OKLAHOMA CITY**	**1.86**	**165**		**Pn**	**10 07 59.1**	**0.0**
FNO	**Franklin**	**2.01**	**165**		**Pn**	**10 08 01.4**	**+0.2**
CBKS	**Cedar Bluff**	**2.10**	**320**	P	**Pn**	**10 08 03.8**	**+1.4**
	baz=140						
CBKS				S	**Sb**	**10 08 31.2**	**-0.2**
	baz=140						
CBKS	**Cedar Bluff**	**2.10**	**320**		**Pn**	**10 08 03.5**	**+1.1**
KSU1	**Kansas State U**	**2.20**	**30**	P	**Pn**	**10 08 05.3**	**+1.6**
	baz=211						
KSU1				S	**Sb**	**10 08 33.1**	**-1.2**
	baz=211						
KSU1	**Kansas State U**	**2.20**	**30**	Pn	**Pn**	**10 08 05.6**	**+1.8**
KSU1				IAmb_Lg		10 08 36.4	
	comp=Z,97nm,0.7s						
TUL1	**Leonard**	**2.22**	**125**	P	**Pn**	**10 08 05.0**	**+0.9**
	baz=306						
TUL1				S	**Sn**	**10 08 33.8**	**+2.4**
	baz=306						
TUL1	**Leonard**	**2.22**	**125**		**Pn**	**10 08 05.2**	**+1.1**
W35A	**Tecumseh**	**2.25**	**155**		**Pn**	**10 08 05.5**	**+1.0**
WMOK	**Wichita Mounta**	**2.54**	**194**	P	**Pn**	**10 08 09.4**	**+0.9**
	baz=13						
WMOK	**Wichita Mounta**	**2.54**	**194**		**Pn**	**10 08 08.8**	**+0.3**
U38A	**Gravette**	**3.02**	**104**		**Pn**	**10 08 16.5**	**+1.4**
U38A				IAmb_Lg		10 09 09.3	
	comp=Z,77nm,0.8s						
X37A	**Clayton**	**3.39**	**140**		**Pn**	**10 08 21.5**	**+1.3**
HHAR	**Hobbs**	**3.41**	**104**		**Pn**	**10 08 22.2**	**+1.7**
HHAR				IAmb_Lg		10 09 23.2	
	comp=Z,46nm,0.7s						
N33A	**J Bar K, Exete**	**3.55**	**7**	Pn	**Pn**	**10 08 20.6**	**-1.8**
N33A				IAmb_Lg		10 09 25.4	
	comp=Z,73nm,0.8s						
AMTX	**Amarillo**	**3.76**	**233**	P	**Pn**	**10 08 27.2**	**+1.8**
	baz=51						
AMTX	**Amarillo**	**3.76**	**233**	Pn	**Pn**	**10 08 26.0**	**+0.6**
S39A	**Bolivar**	**3.78**	**81**		**Pn**	**10 08 26.0**	**+0.6**
W39A	**Magazine**	**3.98**	**119**	P	**Pn**	**10 08 29.4**	**+1.2**
	baz=301						
W39A	**Magazine**	**3.98**	**119**	IAmb_Lg		10 09 34.4	
	comp=Z,80nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.05**	**298**	S	**Sn**	**10 09 19.0**	**+2.2**
	baz=115						
KSCO	**Kaye Shedlock'**	**4.05**	**298**		**Pn**	**10 08 27.0**	**-2.3**
N35A	**Tabor**	**4.09**	**26**		**Pn**	**10 08 30.1**	**+0.2**
BGNE	**Belgrade**	**4.20**	**359**	P	**Pn**	**10 08 32.6**	**+1.3**
	baz=179						
BGNE	**Belgrade**	**4.20**	**359**	Pn	**Pn**	**10 08 32.6**	**+1.3**
U40A	**Yellville**	**4.24**	**100**	P	**Pn**	**10 08 32.9**	**+1.0**
	baz=283						
U40A				S	**Sn**	**10 09 21.8**	**+0.4**
	baz=283						
U40A	**Yellville**	**4.24**	**100**	Pn	**Pn**	**10 08 33.0**	**+1.2**
U40A				IAmb_Lg		10 09 51.4	
	comp=Z,41nm,0.8s						
P38A	**Dawn**	**4.28**	**54**		**Pn**	**10 08 32.5**	**+0.2**
MIAR	**Mount Ida**	**4.49**	**125**	P	**Pn**	**10 08 36.6**	**+1.4**
	baz=308						
MIAR	**Mount Ida**	**4.49**	**125**	Pn	**Pn**	**10 08 36.2**	**+1.0**
MIAR				IAmb_Lg		10 09 59.8	
	comp=Z,42nm,0.7s						
MGMO	**Mountain Grove**	**4.60**	**89**		**Pn**	**10 08 38.0**	**+1.2**
MGMO				IAmb_Lg		10 09 51.0	
	comp=Z,44nm,1.0s						
Z38A	**Mt. Pleasant**	**4.66**	**147**		**Pn**	**10 08 38.3**	**+0.6**
Z38A				IAmb_Lg		10 10 03.5	
	comp=Z,77nm,0.7s						
R40A	**Maddies Statio**	**4.69**	**75**		**Pn**	**10 08 38.2**	**+0.2**
L34A	**Svendsen Farm,**	**4.92**	**15**	Pn	**Pn**	**10 08 41.5**	**+0.3**
FCAR	**Ozark Folk Cen**	**4.93**	**104**		**Pn**	**10 08 41.5**	**+0.2**
FCAR				IAmb_Lg		10 10 07.3	
	comp=Z,31nm,0.8s						
X40A	**Basin Creek Fa**	**5.02**	**121**	P	**Pn**	**10 08 43.4**	**+0.9**
	baz=304						
X40A	**Basin Creek Fa**	**5.02**	**121**		**Pn**	**10 08 43.3**	**+0.8**
X40A				IAmb_Lg		10 10 14.4	
	comp=Z,50nm,1.1s						
WHAR	**Wooly Hollow**	**5.02**	**111**		**Pn**	**10 08 43.7**	**+1.1**
WHAR				IAmb_Lg		10 10 10.4	
	comp=Z,66nm,0.8s						
MSTX	**Muleshoe**	**5.04**	**232**		**Pn**	**10 08 44.6**	**+1.7**
W41B	**Gary Mavity, V**	**5.10**	**112**	P	**Pn**	**10 08 44.7**	**+1.1**
	baz=295						
W41B	**Gary Mavity, V**	**5.10**	**112**		**Pn**	**10 08 44.5**	**+0.9**
W41B				IAmb_Lg		10 10 16.5	
	comp=Z,38nm,0.7s						
N38A	**Joes South For**	**5.17**	**45**	Pn	**Pn**	**10 08 45.6**	**+1.0**
UALR	**University of**	**5.21**	**116**	Pn	**Pn**	**10 08 46.0**	**+0.9**
UALR				IAmb_Lg		10 10 21.2	
	comp=Z,32nm,0.7s						
WHTX	**Lake Whitney,**	**5.22**	**175**	Pn	**Pn**	**10 08 45.3**	**-0.1**
P40A	**Paris**	**5.24**	**62**	Pn	**Pn**	**10 08 45.6**	**+0.1**
P40A				IAmb_Lg		10 10 17.7	
	comp=Z,45nm,0.8s						
WLAR	**White Oak Lake**	**5.33**	**130**	Pn	**Pn**	**10 08 47.4**	**+0.5**
WLAR				IAmb_Lg		10 10 20.5	
	comp=Z,46nm,0.8s						
K31A	**O'Neill**	**5.44**	**354**	Pn	**Pn**	**10 08 49.0**	**+0.7**
CCM	**Cathedral Cave**	**5.45**	**79**	P	**Pn**	**10 08 49.3**	**+0.8**
	baz=263						
CCM	**Cathedral Cave**	**5.45**	**79**	Pn	**Pn**	**10 08 49.1**	**+0.6**
CCM				IAmb_Lg		10 10 36.0	
	comp=Z,29nm,0.9s						
237A	**Washetta, Mont**	**5.51**	**160**	Pn	**Pn**	**10 08 49.8**	**+0.6**
T42A	**Van Buren**	**5.55**	**90**		**Pn**	**10 08 49.3**	**-0.5**
LCAR	**Lake Charles**	**5.64**	**100**	Pn	**Pn**	**10 08 52.0**	**+0.9**
Z41A	**Richland Creek**	**5.81**	**131**	P	**Pn**	**10 08 54.0**	**+0.6**
	baz=314						
Z41A	**Richland Creek**	**5.81**	**131**	Pn	**Pn**	**10 08 53.6**	**+0.1**
Z41A				IAmb_Lg		10 10 41.7	
	comp=Z,34nm,0.8s						
CCAR	**Cane Creek**	**6.07**	**121**	IAmb_Lg		10 10 48.8	
	comp=Z,26nm,0.7s						
NATX	**Nacogdoches**	**6.10**	**152**	IAmb_Lg		10 10 57.2	
	comp=Z,35nm,0.8s						
SLM	**Saint Louis**	**6.32**	**75**	IAmb_Lg		10 10 44.0	
	comp=Z,35nm,0.8s						
ISCO	**Idaho Springs**	**6.49**	**296**	Pn	**Pn**	**10 09 03.0**	**0.0**
N41A	**Harden Midland**	**6.59**	**56**	Pn	**Pn**	**10 09 05.2**	**+1.0**
N41A				IAmb_Lg		10 11 07.5	
	comp=Z,31nm,0.8s						
ECSD	**EROS Data Cent**	**6.61**	**9**	P	**Pn**	**10 09 04.5**	**+0.1**
	baz=190						
ECSD	**EROS Data Cent**	**6.61**	**9**	Pn	**Pn**	**10 09 04.7**	**+0.3**
K38A	**Parkersburg**	**6.77**	**35**	IAmb_Lg		10 11 19.1	
	comp=Z,47nm,0.9s						
JCT	**Junction City**	**6.87**	**193**	IAmb_Lg		10 11 11.2	
	comp=Z,38nm,0.8s						
S44A	**Carbondale**	**7.00**	**83**	Pn	**Pn**	**10 09 10.6**	**+0.9**
S44A				IAmb_Lg		10 11 17.1	
	comp=Z,37nm,0.7s						
143A	**Socs Landing,**	**7.05**	**128**	IAmb_Lg		10 11 27.5	
	comp=Z,30nm,0.7s						
PHWY	**Pilot Hill**	**7.07**	**308**	IAmb_Lg		10 11 28.3	
	comp=Z,20nm,0.7s						
P43A	**Skaggs, Pawnee**	**7.11**	**67**	IAmb_Lg		10 11 14.5	
	comp=Z,37nm,0.8s			

QSPA	**South Pole Qui**	**34.99**	**180**	P		**P**	**10 14 49.4**	**-0.1**
CPUP	**Villa Florida**	**35.68**	**312**	P		**P**	**10 14 55.6**	**+0.2**
	1.9nm,0.8s,baz=144,slow=7.3,SNR=2.7							
CPUP	**Villa Florida**	**35.68**	**312**	P		**P**	**10 14 55.6**	**+0.2**
CPUP				IAmb		IAmb	10 14 57.4	
	comp=Z,15nm,1.4s							
MNMC	**Minye Minye**	**47.49**	**303**	P		**P**	**10 16 33.5**	**+0.9**
LPAZ	**La Paz**	**49.26**	**306**	P		**P**	**10 16 49.5**	**+2.9**
	comp=Z,0.3nm,0.4s,baz=180,slow=7.1,SNR=1.6							
LPAZ	**La Paz**	**49.26**	**306**	P		**P**	**10 16 47.2**	**+0.6**
LPAZ				IAmb		IAmb	10 17 03.6	
	comp=Z,1.6nm,0.8s							
TOA0	**Torodi Ar. Sit**	**72.78**	**31**	P		**P**	**10 19 23.9**	**-1.6**
TOA0				IAmb		IAmb	10 19 33.2	
	comp=Z,11nm,1.5s							
TORD	**Torodi Ar. Bea**	**72.78**	**31**	P		**P**	**10 19 23.5**	**-2.1**
	comp=Z,1.1nm,0.6s,baz=200,slow=6.3,SNR=8.2							
TORD	**Torodi Ar. Bea**	**72.78**	**31**	P		**P**	**10 19 23.9**	**-1.6**
LAO	**LASA Array**	**120.67**	**309**			**PKPdf**	**10 26 47.9**	**-0.5**
ILAR	**Eielson Array**	**148.98**	**313**	PKPbc		**PKPdf**	**10 27 41.2**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=122,slow=1.4,SNR=10							
ILAR	**Eielson Array**	**148.98**	**313**			**PKPbc**	**10 27 44.1**	**+0.2**
ILAR				PKPab		**PKPab**	**10 27 48.7**	**+0.7**

*MEX **05** 10:11:24.3±0.6, 14°.42N×92°.19W, h78km±10km, MD3.8*
*GCG **05** 10:11:25.4±0.3, 14°.58N×92°.14W, h69km±6km, MD3.6*
ISC 05 10:11:23.5±2.3, 14°.3N±0°.2×92°.31W±0°.08, h62km, n9, σ0s96/14, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.62**	**4**	***eP***	**Pn**	**10 11 36.4**	**-0.5**
THIG				*i* S	**Sn**	**10 11 46.1**	**-0.6**
ERG	**Entre ros, C**	**0.74**	**78**	***eP***	**Pn**	**10 11 38.9**	**+0.6**
STG3	**Santiaguito 3,**	**0.83**	**60**	***eP***	**Pn**	**10 11 39.6**	**0.0**
STG3				*eS*	**Sn**	**10 11 50.5**	**-1.0**
FUG	**Fuego 3**	**1.43**	**84**	***eP***	**Pn**	**10 11 47.8**	**+0.3**
FUG				*eS*	**Sn**	**10 12 04.3**	**-1.3**
PCG	**Pacaya**	**1.66**	**86**	*eS*	**Sn**	**10 12 11.5**	**+0.5**
PCIG		**1.66**	**328**	*i P*	**Pn**	**10 11 49.4**	**-0.9**
PCIG				*i* S	**Sn**	**10 12 09.8**	**-0.8**
CCIG	**Comitan**	**1.99**	**5**	***eP***	**Pn**	**10 11 56.1**	**+1.1**
TGIG		**2.59**	**343**	***eP***	**Pn**	**10 12 04.9**	**+1.8**
CMIG	**Matias Romero**	**3.73**	**319**	***eP***	**Pn**	**10 12 19.1**	**+0.5**
CMIG				*i* S	**Sn**	**10 13 01.3**	**+0.1**

IDC 05 10:17:18.2±7.5, 7°.91N×95°.15E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.3/31, mbtmp3.3/3, MS2.8/1, Ms1 3.0/1, ms1mx2.5/24, Error ellipse: s-maj=408.6km s-min=29.0km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.11**	**19**	LR	LR	10 24 19.5	
	comp=Z,42nm,18.3s,baz=191,slow=38						
MKAR	**Makanchi Array**	**40.28**	**346**	P	P	10 24 57.0	-0.1
	0.7nm,0.5s,baz=169,slow=8.1,SNR=8.0						
WRA	**Warramunga Arr**	**47.47**	**126**	P	P	10 25 55.3	+0.1
	0.4nm,1.1s,baz=306,slow=8.4,SNR=1.8						
ASAR	**Alice Springs**	**49.18**	**131**	P	P	10 26 08.0	-0.4
	0.3nm,1.0s,baz=309,slow=5.9,SNR=1.9						

*IDC **05** 10:19:50.5±2.1, 14°.79S×177°.66W, h349km±21km, mb3.4/9, mb1 3.7/11, mb1mx3.4/31, mbtmp4.1/11, Error ellipse: s-maj=24.4km s-min=13.0km az=145.0*
*NEIC **05** 10:19:51.6±1.6, 14°.8S±0°.1×177°.61W±0°.08, h359km±7km, mb4.2/28, Error ellipse: s-maj=18.2km s-min=11.2km az=174.0*
ISC 05 10:19:50.7±0.5, 14°.8S±0°.1×177°.7W±0°.1, h350km, n53, σ0s98/53, mb4.2/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.07**	**234**	Pn	**Pn**	**10 21 14.2**	**+3.0**
AFI	**Afiamalu**	**5.76**	**82**	P	**Pn**	**10 21 18.4**	**-0.5**
	14nm,0.3s,baz=41,slow=1.3,SNR=23						
AFI	**Afiamalu**	**5.76**	**82**		**Pn**	**10 21 18.7**	**-0.3**
DZM	**Mont Dzumac**	**16.74**	**242**	P	**P**	**10 23 24.5**	**+0.1**
	0.2nm,0.3s,baz=86,slow=19,SNR=1.3						
CTAO	**Charters Tower**	**34.79**	**256**	P	**P**	**10 26 10.7**	**+1.0**
CTAO				IAmb	IAmb	10 26 27.3	
	comp=Z,14nm,1.3s						
BBOO	**Buckleboo**	**45.61**	**238**	P	**P**	**10 27 37.7**	**+0.2**
BBOO				IAmb	IAmb	10 28 02.8	
	comp=Z,11nm,1.2s						
WR0	**Warramunga Arr**	**45.80**	**256**	P	**P**	**10 27 39.0**	**-0.2**
WB0	**Warramunga Arr**	**45.95**	**257**	P	**P**	**10 27 39.9**	**-0.4**
WB2	**Warramunga Arr**	**45.98**	**256**	P	**P**	**10 27 40.1**	**-0.4**
WRA	**Warramunga Arr**	**45.99**	**256**	P	**P**	**10 27 39.7**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=83,slow=5.8,SNR=97						
WRA				PcP	**PcP**	**10 29 10.1**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=84,slow=4.1,SNR=5.6						
WRA	**Warramunga Arr**	**45.99**	**256**	IAmb	IAmb	10 27 44.9	
	comp=Z,0.2nm,1.2s						
AS31	**Alice Springs**	**46.41**	**251**	P	**P**	**10 27 44.1**	**+0.2**
AS31				IAmb	IAmb	10 27 45.2	
	comp=Z,13nm,0.5s						
ASAR	**Alice Springs**	**46.41**	**251**	P	**P**	**10 27 43.6**	**-0.2**
	comp=Z,26nm,0.4s,baz=84,slow=8.5,SNR=484						
ASAR				PcP	**PcP**	**10 29 12.0**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=105,slow=4.2,SNR=4.0						
ASAR				S	**S**	**10 34 00.9**	**-3.8**
	comp=Z,0.5nm,0.7s,baz=85,slow=16,SNR=6.1						
ASAR	**Alice Springs**	**46.41**	**251**	P	**P**	**10 27 43.1**	**-0.8**
KNRA	**Kununurra**	**51.59**	**262**	P	**P**	**10 28 23.7**	**+0.9**
KNRA				IAmb	IAmb	10 28 46.3	
	comp=Z,25nm,1.3s						
FORT	**Forrest**	**52.05**	**242**	P	**P**	**10 28 25.6**	**-0.4**
FORT				IAmb	IAmb	10 28 37.7	
	comp=Z,12nm,0.9s						
FITZ	**Fitzroy Crossi**	**54.32**	**258**	P	**P**	**10 28 42.6**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=107,slow=7.0						
FITZ	**Fitzroy Crossi**	**54.32**	**258**	P	**P**	**10 28 43.0**	**+0.5**
PSA00	**Pilbara Seismi**	**59.45**	**253**	P	**P**	**10 29 17.5**	**-0.7**
PSA00				IAmb	IAmb	10 29 17.5	
	comp=Z,11nm,1.1s						
VNDA	**Vanda**	**63.63**	**185**	P	**P**	**10 29 44.4**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=1.3,slow=9.6,SNR=8.8						
VNDA	**Vanda**	**63.63**	**185**	P	**P**	**10 29 45.0**	**+0.1**
PETK	**Petropavlovsk-**	**70.84**	**345**	P	**P**	**10 30 29.5**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=156,slow=7.4,SNR=1.7						
KMRM	**Mail Ridge**	**74.15**	**40**	P	**P**	**10 30 52.3**	**+2.5**
QSPA	**South Pole Qui**	**75.28**	**180**	P	**P**	**10 30 55.5**	**-0.4**
RYN	**Ryan**	**76.62**	**44**	P	**P**	**10 31 02.9**	**-1.1**
RYN				IAmb	IAmb	10 31 16.4	
	comp=Z,2.1nm,0.8s						
NVAR	**Mina Array Bea**	**76.67**	**44**	P	**P**	**10 31 04.3**	**+0.1**
	comp=Z,1.4nm,1.0s,baz=220,slow=8.2,SNR=3.8						
TMUT	**Trail Mountain**	**81.94**	**46**	P	**P**	**10 31 32.4**	**-0.2**
WRH	**Wood River Hil**	**82.16**	**12**	P	**P**	**10 31 33.3**	**+0.6**
WRH				IAmb	IAmb	10 31 35.5	
	comp=Z,4.5nm,0.9s						
DOT	**Dot Lake**	**82.35**	**14**	P	**P**	**10 31 34.7**	**+0.9**
DOT				IAmb	IAmb	10 31 35.3	
	comp=Z,7.0nm,1.2s						
CCB	**Clear Creek Bu**	**82.37**	**12**	P	**P**	**10 31 34.4**	**+0.6**
IMAR	**Indian Mountai**	**82.47**	**10**	P	**P**	**10 31 35.7**	**+1.4**
MDM	**Murphy Dome**	**82.56**	**12**	P	**P**	**10 31 34.6**	**-0.2**
TCOL	**CIGO, UAF Yank**	**82.56**	**12**	P	**P**	**10 31 34.6**	**-0.1**
COLA	**College**	**82.56**	**12**	P	**P**	**10 31 34.6**	**-0.1**
IL31		**82.67**	**13**	P	**P**	**10 31 35.7**	**+0.4**
IL31				IAmb	IAmb	10 31 36.6	
	comp=Z,4.4nm,0.9s						
ILAR	**Eielson Array**	**82.67**	**13**	P	**P**	**10 31 35.5**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=226,slow=6.2,SNR=23						
ILAR	**Eielson Array**	**82.67**	**13**	P	**P**	**10 31 35.3**	**0.0**
POKR	**Poker Plat Res**	**82.86**	**12**	P	**P**	**10 31 36.7**	**+0.4**
TXAR	**Lajitas Array**	**83.71**	**58**	P	**P**	**10 31 41.8**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=223,slow=6.9,SNR=5.3						
DLMT	**Dillon**	**83.80**	**40**	P	**P**	**10 31 42.3**	**+0.6**
DLMT				IAmb	IAmb	10 31 43.4	
	comp=Z,2.7nm,0.8s						
DAWY	**Dawson**	**83.88**	**16**	P	**P**	**10 31 42.7**	**+1.1**
DAWY				IAmb	IAmb	10 31 43.3	
	comp=Z,3.7nm,0.8s						
EGAK	**Eagle**	**84.00**	**15**	P	**P**	**10 31 43.2**	**+1.1**
EGAK				IAmb	IAmb	10 31 43.8	
	comp=Z,5.1nm,0.8s						
PDAR	**Pinedale Array**	**84.58**	**43**	P	**P**	**10 31 46.0**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=262,slow=4.5,SNR=4.6						
PDAR	**Pinedale Array**	**84.58**	**43**	P	**P**	**10 31 46.6**	**+0.8**

MAW	**Mawson**	**87.05**	**200**	P		**P**	**10 31 56.5**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=134,slow=5.1,SNR=14							
MAW	**Mawson**	**87.05**	**200**	P		**P**	**10 31 57.0**	**0.0**
INK	**Inuvik**	**88.67**	**15**	P		**P**	**10 32 05.1**	**+0.6**
INK				IAmb		IAmb	10 32 19.6	
	comp=Z,2.6nm,1.4s							
ARCES	**ARCESS Array B**	**123.35**	**350**	PKP		**PKPdf**	**10 38 05.5**	**-0.5**
	comp=Z,5.7nm,0.9s,baz=0.0,slow=1.2,SNR=10							
NOA	**NORSAR Array B**	**133.34**	**354**	PKP		**PKPdf**	**10 38 24.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=14,slow=1.8,SNR=1.6							
BR131	**Keskin Array S**	**143.01**	**318**			PKPbc	10 38 41.9	+0.3
BRTR	**Keskin Array B**	**143.01**	**318**	PKP		PKPbc	10 38 41.7	+0.1
	comp=Z,2.4nm,0.8s,baz=94,slow=1.6,SNR=8.0							
GERES	**GERESS Array B**	**144.75**	**347**	PKP		**PKPdf**	**10 38 45.1**	**-1.3**
	comp=Z,1.4nm,0.5s,baz=355,slow=4.2,SNR=6.6							
GERES	**GERESS Array B**	**144.75**	**347**			**PKPdf**	**10 38 46.3**	**0.0**

*SEA **05** 10:23:05.8±3.5, 41°.80N±0°.04×119°.57W±0°.04, h5km±1km, Error ellipse: s-maj=6.5km s-min=4.3km az=192.0*
*ANF **05** 10:23:05.5±0.8, 41°.89N×119°.62W, h0km, ML3.4/13, Error ellipse: s-maj=6.4km s-min=3.9km az=104.0*
*REN **05** 10:23:06.7±2.4, 41°.92N±0°.04×119°.61W±0°.04, h0km±8km, ML3.7/1, ML3.5/35(SEA), Mwr3.5/27(NEIC), Error ellipse: s-maj=6.4km s-min=4.5km az=183.0*
*NEIC **05** 10:23:06.7, 41°.92N×119°.61W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr0.05; Mθθ-0.99; Mφφ0.94; Mrθ-0.90; Mrφ-0.10; Mθφ-1.85; Fault plane solution: Mo2.27000×10^14^ NP1:φs32.59000°, δ89.09000°, λ-65.92000°. NP2:φs124.62000°, δ24.09000°, λ-177.78000°. Principal axes: T 2.4654, Plg39.0000°, Azm101.0000°; N -0.4506, Plg24.0000°, Azm212.0000°; P -2.0148, Plg41.0000°, Azm325.0000°;*
*NEIC **05** 10:23:07.2±3.0, 41°.890N±0°.006×119°.65W±0°.05, h5km±8km Error ellipse: s-maj=5.0km s-min=0.9km az=89.0*
ISC 05 10:23:07.1±1.5, 41°.94N±0°.03×119°.70W±0°.03, h6km±15km, n45, σ1s35/56, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.45**	**265**		**Pg**	**10 23 16.5**	**+0.6**
MOD					**Sb**	**10 23 23.9**	**-0.8**
K05A	**Summer Lake**	**1.18**	**312**		**Pb**	**10 23 29.1**	**-1.1**
M04C	**Macdoel**	**1.61**	**265**	P	**Pn**	**10 23 33.0**	**-3.1**
	baz=84,SNR=13						
M04C				S	**Sg**	**10 23 59.1**	**+0.3**
	baz=84						
K04D	**Chiloquin, OR**	**1.67**	**295**	P	**Pn**	**10 23 36.7**	**-0.3**
	baz=113,SNR=14						
K04D				S	**Sg**	**10 24 01.5**	**+0.7**
	baz=113						
J08A	**Circle Bar Ran**	**1.68**	**32**		**Pn**	**10 23 36.1**	**-1.0**
J05D	**Fort Rock, OR**	**1.76**	**320**	P	**Pn**	**10 23 38.0**	**-0.3**
	baz=138,SNR=46						
J05D				Sb	**Sg**	**10 24 05.3**	**+1.7**
	baz=138						
L04D	**Klamath Falls**	**1.96**	**279**	P	**Pn**	**10 23 40.4**	**-0.6**
	baz=98,SNR=12						
L04D				Sb	**Sg**	**10 24 10.2**	**+0.1**
	baz=98						
PINE	**Pine Mountain**	**2.06**	**334**		**Pb**	**10 23 45.8**	**+0.7**
BEKR	**Beckworth**	**2.13**	**194**		**Pn**	**10 23 43.2**	**-0.2**
I07A	**Izee**	**2.15**	**4**		**Pb**	**10 23 46.0**	**-0.5**
J04D	**Umpqua Nationa**	**2.21**	**307**	Pb	**Pb**	**10 23 47.7**	**+0.1**
	baz=125						
PAHR	**Pah Rah Range**	**2.24**	**174**	Pn	**Pn**	**10 23 43.7**	**-1.2**
YBH	**Yreka Blue Hor**	**2.26**	**266**		**Pn**	**10 23 44.5**	**-0.6**
O03E	**Paynes Creek**	**2.29**	**225**	P	**Pn**	**10 23 44.4**	**-1.0**
	baz=45,SNR=14						
O03E				S	**Sb**	**10 24 16.6**	**-0.8**
	baz=45						
M02C	**Callahan**	**2.43**	**258**	P	**Pn**	**10 23 46.2**	**-1.2**
	baz=77,SNR=7.9						
M02C				Sb	**Sg**	**10 24 23.7**	**-1.4**
	baz=77						
N02D	**Trinity Center**	**2.46**	**248**	P	**Pn**	**10 23 46.9**	**-0.9**
	baz=67,SNR=6.4						
N02D				Sb	**Sb**	**10 24 24.3**	**+2.0**
	baz=67						
HUMO	**Hull Mountain**	**2.51**	**287**	Pn	**Pn**	**10 23 48.5**	**+0.1**
WDC	**Whiskeytown Da**	**2.54**	**239**	Pn	**Pn**	**10 23 49.1**	**+0.2**
I05D	**Terrebonne, OR**	**2.68**	**334**	Pb	**Pb**	**10 23 56.3**	**+0.8**
	baz=152,SNR=24						
I05D				Sb	**Sg**	**10 24 32.9**	**-0.3**
	baz=152						
I04A	**Tendick Farm,**	**2.72**	**314**	Pb	**Pb**	**10 23 57.1**	**+0.8**
	baz=131,SNR=6.0						
I04A				Sb	**Sg**	**10 24 34.1**	**-0.4**
	baz=131						
PNTR	**Pine Nut**	**2.85**	**178**		**Pn**	**10 23 54.8**	**+1.5**
RUBR	**Rubicon Trail**	**2.91**	**187**		**Pn**	**10 23 53.7**	**-0.5**
L02E	**Cave Junction**	**2.92**	**276**	P	**Pn**	**10 23 54.3**	**+0.2**
	baz=93,SNR=8.1						
K02D	**Willamette Mer**	**3.04**	**286**	P	**Pn**	**10 23 55.1**	**-0.7**
	baz=103,SNR=6.7						
K02D				Sb	**Sg**	**10 24 42.7**	**-1.9**
	baz=103						
AFDM	**Forest Hills D**	**3.14**	**198**	Pn	**Pn**	**10 23 55.6**	**-1.6**
KRMB	**Red Mountain**	**3.18**	**264**	Pn	**Pn**	**10 23 58.4**	**+0.6**
I03D	**Drain, OR**	**3.21**	**304**	Sb	**Sg**	**10 24 47.8**	**-2.4**
	baz=122						
MFID	**Camas Ranch**	**3.21**	**61**	Pn	**Pn**	**10 23 57.3**	**-0.9**
KHMM	**Horse Mountain**	**3.21**	**252**		**Pn**	**10 24 01.1**	**+2.8**
H04A	**Detroit Lake**	**3.29**	**327**		**Pn**	**10 24 02.6**	**+3.4**
KBO	**Bosley Butte**	**3.38**	**276**	Pn	**Pn**	**10 24 00.1**	**-0.4**
RYN	**Ryan**	**3.43**	**164**		**Pn**	**10 24 03.4**	**+2.1**
WAKR	**Walker**	**3.44**	**177**		**Pn**	**10 24 00.2**	**-1.2**
KMRM	**Mail Ridge**	**3.48**	**242**		**Pn**	**10 24 04.2**	**+2.3**
G05D	**Wamic, OR**	**3.50**	**341**	Sb	**Sg**	**10 24 57.0**	**-2.6**
	baz=159						
KEBM	**Edson Butte**	**3.56**	**287**	Pn	**Pn**	**10 24 03.6**	**+0.7**
ELK	**Elko**	**3.56**	**108**	Pn	**Pn**	**10 24 03.7**	**+0.5**
LHV	**Little Huntoon**	**3.80**	**166**		**Pn**	**10 24 07.9**	**+1.8**
HLID	**Hailey**	**4.22**	**66**		**Pn**	**10 24 12.5**	**+0.4**
OMMB	**Old Mammoth Mi**	**4.36**	**173**	Pn	**Pn**	**10 24 13.6**	**-0.5**
R11A	**Troy Canyon, C**	**4.77**	**137**	Pn	**Pn**	**10 24 18.3**	**-1.5**
SPR3	**Spring Creek 3**	**5.04**	**124**	Pn	**Pn**	**10 24 23.4**	**-0.1**
BGU	**Big Grassy Mou**	**5.11**	**99**	Pn	**Pn**	**10 24 23.9**	**-0.5**
MCMT	**McKenzie Canyo**	**5.76**	**58**	Pn	**Pn**	**10 24 34.8**	**+1.4**
PRN	**Pahroc Range**	**5.77**	**140**		**Pn**	**10 24 32.5**	**-1.0**

*IDC **05** 10:31:40.7±2.7, 7°.36S×129°.25E, h122km±29km, mb3.5/4, mb1 3.8/8, mb1mx3.4/48, mbtmp4.1/8, MS3.8/1, Ms1 3.8/1, ms1mx2.6/23, Error ellipse: s-maj=45.9km s-min=18.2km az=86.0*
ISC 05 10:31:38.9±0.8, 7°.44S±0°.06×129°.5E±0°.1, h100km, n10, σ2s55/13, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.39**	**244**	S	**Sn**	**10 34 23.9**	**+1.7**
	6.5nm,0.3s,baz=132,slow=23,SNR=9.1						
SIJI	**Sorong**	**6.76**	**15**	P	**Pn**	**10 33 17.7**	**+2.1**
	1.2nm,0.3s,baz=180,slow=20,SNR=8.5						
SIJI				S	**Sn**	**10 34 28.8**	**-2.3**
	1.7nm,0.3s,baz=222,slow=22,SNR=2.8						
FITZ	**Fitzroy Crossi**	**11.24**	**199**	P	**Pn**	**10 34 17.8**	**+1.2**
	1.5nm,0.3s,baz=30,slow=15,SNR=52						
FITZ				S	**Sn**	**10 36 17.1**	**-3.3**
	0.7nm,0.3s,baz=130,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**13.29**	**160**	P	**Pn**	**10 34 45.7**	**+1.9**
	1.6nm,0.3s,baz=346,slow=13,SNR=103						
WRA				S	**Sn**	**10 37 08.5**	**-1.5**
	1.7nm,0.3s,baz=335,slow=23,SNR=12						
ASAR	**Alice Springs**	**16.68**	**166**	P	**P**	**10 35 29.5**	**+2.0**
	1.2nm,0.3s,baz=340,slow=9.2,SNR=92						
ASAR				S	**Sn**	**10 38 27.9**	**-4.1**
	0.4nm,0.3s,baz=339,slow=23,SNR=6.1						
STKA	**Stephens Creek**	**26.80**	**157**	P	**P**	**10 37 11.4**	**+1.6**
	0.8nm,0.5s,baz=323,slow=10,SNR=1.6						
JNU	**Nakatsue**	**40.35**	**2**	LR	LR	10 56 42.5	
	comp=Z,136nm,19.4s,baz=94,slow=37						
MKAR	**Makanchi Array**	**68.32**	**327**	P	**P**	**10 42 26.9**	**-2.5**
	0.4nm,0.6s,baz=113,slow=7.8,SNR=4.0						
SEY	**Seymchan**	**72.33**	**11**	P	**P**	**10 42 53.3**	**-0.1**
	1.3nm,0.5s,baz=196,slow=9.8,SNR=4.6						
KURBB	**Kurchatov Arra**	**72.62**	**329**	P	**P**	**10 42 53.4**	**-2.1**
	0.3nm,0.2s,baz=126,slow=5.5,SNR=2.2						

*IDC **05** 10:42:00.1±1.1, 42°.72N×138°.95E, h237km±14km, mb3.1/5, mb1 3.2/8, mb1mx3.0/53, mbtmp3.7/8, Error ellipse: s-maj=20.5km s-min=15.8km az=131.0*
*JMA **05** 10:42:00.3±0.2, 42°.71N×138°.91E, h237km±2km, M2.9*
ISC 05 10:42:00.1±0.9, 42°.67N±0°.06×139°.01E±0°.08, h242km±7km, n26, σ0s92/37, mb3.2/5, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHST	**Hiyamasetana**	**0.68**	**111**	P	**Pn**	**10 42 32.9**	**+0.2**
JHST				*eS*	**S**	**10 42 57.4**	**-0.9**
JSH	**Shimam**	**0.76**	**92**	P	**Pn**	**10 42 33.1**	**+0.1**
JYM2	**Yakumo 2**	**1.15**	**118**	P	**Pn**	**10 42 35.7**	**+0.5**
JYM2				*eS*	**S**	**10 43 03.3**	**+0.7**
JSK	**Shakotan**	**1.27**	**57**	*eS*	**S**	**10 43 03.4**	**-0.7**
JOMM	**Oshimamatsumae**	**1.36**	**147**	P	**Pn**	**10 42 37.1**	**+0.4**
JOMM				*eS*	**S**	**10 43 05.4**	**+0.1**
JNB	**Noboribetsu**	**1.51**	**97**	P	**Pn**	**10 42 38.0**	**+0.3**
JSR	**Shiriuchi**	**1.54**	**137**	P	**Pn**	**10 42 38.7**	**+0.7**
JSR				*eS*	**S**	**10 43 08.3**	**+0.5**
JKB	**Kayabe**	**1.69**	**117**	P	**Pn**	**10 42 39.6**	**+0.4**
JEW	**Eniwo**	**1.80**	**84**	P	**Pn**	**10 42 41.2**	**+1.1**
JOT	**Ohata**	**1.99**	**130**	P	**Pn**	**10 42 42.2**	**+0.4**
JFR	**Furan**	**2.67**	**78**	P	**Pn**	**10 42 49.3**	**+0.7**
JFR				*eS*	**S**	**10 43 26.3**	**-0.5**
JNBK	**Urakawa-nobuka**	**2.79**	**97**	P	**Pn**	**10 42 50.4**	**+0.6**
JNBK				*eS*	**S**	**10 43 30.6**	**+1.6**
JANG	**Nango**	**2.96**	**140**	*eS*	**S**	**10 43 30.5**	**-2.0**
JKK2	**Kamakawa 2**	**2.98**	**65**	P	**Pn**	**10 42 53.0**	**+1.1**
JKK2				*eS*	**S**	**10 43 32.8**	**+0.1**
ASAJ	**Asahikawa**	**2.99**	**60**	P	**Pn**	**10 42 52.8**	**+0.9**
	2.2nm,0.3s,baz=225,slow=13,SNR=18						
ASAJ				S	**S**	**10 43 32.8**	**+0.1**
	1.1nm,0.3s,baz=153,slow=31,SNR=10						
JCH	**Churui**	**3.21**	**89**	P	**Pn**	**10 42 54.3**	**-0.1**
JCH				*eS*	**S**	**10 43 35.0**	**-2.2**
JAR	**Ashorobuto**	**3.54**	**78**	P	**Pn**	**10 42 58.4**	**+0.2**
JAR				*eS*	**S**	**10 43 42.5**	**-1.6**
JOM	**Ohasama**	**3.63**	**151**	P	**Pn**	**10 42 59.9**	**+0.7**
JOM				*eS*	**S**	**10 43 44.5**	**-1.5**
USRK	**Ussuriysk Ar.**	**5.34**	**289**	P	**Pn**	**10 43 18.2**	**-1.5**
	baz=92,slow=12,SNR=15						
MJAR	**Matsushiro Arr**	**6.15**	**186**	P	**Pn**	**10 43 30.1**	**0.0**
	0.3nm,0.3s,baz=3.2,slow=13,SNR=10						
MA2	**Magadan**	**18.42**	**19**	P	**P**	**10 45 56.8**	**-0.6**
	0.7nm,0.3s,baz=187,slow=16,SNR=1.8						
SEY	**Seymchan**	**21.76**	**17**	P	**P**	**10 46 31.6**	**-0.6**
	2.3nm,0.9s,baz=172,slow=4.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**36.90**	**307**	P	**P**	**10 48 45.6**	**+0.2**
	0.7nm,0.5s,baz=94,slow=7.6,SNR=4.4						
MKAR	**Makanchi Array**	**39.76**	**296**	P	**P**	**10 49 09.5**	**+0.1**
	0.4nm,0.4s,baz=83,slow=9.8,SNR=5.2						
KURBB	**Kurchatov Arra**	**41.23**	**303**	P	**P**	**10 49 21.0**	**-0.3**
	0.3nm,0.3s,baz=77,slow=9.1,SNR=1.3						
WRA	**Warramunga Arr**	**62.45**	**185**	P	**P**	**10 51 58.4**	**+0.8**
	0.1nm,0.4s,baz=1.4,slow=7.0,SNR=1.9						

IDC 05 10:53:03.2±8.1, 12°.57S×166°.62E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/35, mbtmp3.7/3, MS3.6/2, Ms1 3.6/2, ms1mx2.8/32, Error ellipse: s-maj=245.1km s-min=54.7km az=126.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**19.36**	**277**	LR	LR	11 03 48.0	
	comp=Z,33nm,21.7s,baz=331,slow=33						
WRA	**Warramunga Arr**	**31.81**	**252**	P		10 59 30.6	+0.7
	0.5nm,1.1s,baz=83,slow=9.2,SNR=2.0						
ASAR	**Alice Springs**	**32.92**	**246**	P	P	10 59 39.0	-0.7
	0.2nm,0.6s,baz=72,slow=9.5,SNR=4.7						
KAPI	**Kappang**	**46.87**	**275**	LR	LR	11 23 06.6	
	comp=Z,413nm,18.9s,baz=344,slow=38						
MKAR	**Makanchi Array**	**95.21**	**317**	P	P	11 06 28.7	-0.1

comp=N,1960μm,0.3s
SRS Serrai 1.35 240 P **Pn 11 01 09.7 +0.3**
SRS S **Sg 11 01 29.8 +2.5**
comp=N,1μm,0.4s
SMTH Samothraki Isl 1.38 167 P **Pn 11 01 09.2 -0.5**
SMTH AML AML 11 01 30.4
comp=E,341μm,0.3s
SMTH AML AML 11 01 31.9
comp=N,628μm,0.2s
SMTH Samothraki Isl 1.38 167 P **Pn 11 01 09.2 -0.5**
SMTH S **Sg 11 01 30.0 +2.0**
comp=N,242nm,0.3s
PVL Pavlikeni 1.41 6 *i* P **Pn 11 01 09.0 -1.2**
KESN Edirne-Kesan 1.53 130 *i* P **Pb 11 01 13.0 +0.1**
KESN *i* S **Sn 11 01 32.3 -0.2**
KESN IAML 11 01 33.0
comp=N,540nm,0.4s
KESN IAML 11 01 35.0
comp=E,381nm,0.5s
KKB Krupnik 1.53 273 *i* P **Pn 11 01 12.3 +0.4**
ERIK Erikli-Kesan 1.54 137 PN **Pn 11 01 12.0 0.0**
ERIK SN **Sb 11 01 32.7 -0.1**
SZH Strazhica 1.57 22 *i* P **Pb 11 01 12.9 -0.5**
VTS Vitosha 1.62 300 *i* P **Pb 11 01 13.8 -0.6**
SOH Sokhos 1.67 234 P **Pn 11 01 14.3 +0.5**
SOH AML AML 11 01 41.2
comp=N,1395μm,0.5s
SOH AML AML 11 01 43.1
comp=E,1634μm,0.7s
SOH Sokhos 1.67 234 P **Pn 11 01 14.1 +0.3**
OUR Ouranopolis 1.72 211 P **Pn 11 01 13.6 -0.8**
OUR AML AML 11 01 41.4
comp=N,854μm,0.3s
OUR AML AML 11 01 43.1
comp=E,1129μm,0.3s
OUR Ouranopolis 1.72 211 PN **Pn 11 01 14.7 +0.3**
OUR SN **Sn 11 01 37.3 +0.6**
OUR Ouranopolis 1.72 211 P **Pn 11 01 14.6 +0.2**
GADA Gvkgeada 1.72 160 PN **Pn 11 01 14.4 -0.1**
GADA SN **Sn 11 01 37.2 +0.4**
GADA Gvkgeada 1.72 160 P **Pn 11 01 14.8 +0.3**
GOKA anakkale-Gk 1.72 160 *i* P **Pn 11 01 14.9 +0.4**
GOKA *i* S **Sb 11 01 37.6 -0.3**
GOKA IAML 11 01 42.0
comp=N,376nm,0.3s
GOKA IAML 11 01 42.0
comp=E,367nm,0.3s
GELI Tayfur-Gelibol 1.74 144 PN **Pn 11 01 15.0 +0.3**
PHSR Pinarhisar 1.80 95 PN **Pn 11 01 15.9 +0.4**
KNT Kendrikon 1.80 250 P **Pn 11 01 15.4 -0.2**
ZIMR 1.85 5 ⇓P **Pb 11 01 17.5 -0.6**
ZIMR ⇑S **Sg 11 01 48.1 +4.8**
LPK Lapseki 1.89 139 PN **Pn 11 01 17.1 +0.3**
RKY Sarkoy-Tekirda 1.91 125 PN **Pn 11 01 17.4 +0.3**
LIA Limnos Island 1.92 179 P **Pn 11 01 16.9 -0.2**
LIA Limnos Island 1.92 179 P **Pn 11 01 17.4 +0.3**
PLG Polygyros 1.92 222 P **Pn 11 01 16.8 -0.5**
PLG AML AML 11 01 48.9
comp=E,654μm,0.3s
PLG AML AML 11 01 49.2
comp=N,656μm,0.3s
PLG Polygyros 1.92 222 P **Pn 11 01 17.8 +0.5**
MAR4 Marsite Statio 1.93 121 PN **Pn 11 01 17.2 -0.2**
MAR3 Marsite Statio 1.95 123 PN **Pn 11 01 17.8 +0.2**
MAR6 Marsite Statio 1.95 124 PN **Pn 11 01 18.0 +0.3**
HORT Hortiatis 1.96 232 P **Pn 11 01 18.3 +0.4**
HORT AML AML 11 01 49.2
comp=E,534μm,0.3s
HORT AML AML 11 01 50.8
comp=N,473μm,0.4s
HORT Hortiatis 1.96 232 P **Pn 11 01 18.2 +0.4**
GZKV Gazikoy-Tekird 1.97 122 PN **Pn 11 01 18.3 +0.5**
MAR2 Marsite Statio 1.97 123 PN **Pn 11 01 18.3 +0.4**
THE Thessaloniki 2.02 235 P **Pn 11 01 20.0 +1.5**
THE AML AML 11 01 49.6
comp=E,612μm,0.4s
THE AML AML 11 01 50.6
comp=N,605μm,0.6s
RAZG Razgrad 2.02 30 ⇑P **Pb 11 01 19.5 -1.6**
RAZG ⇓S **Sg 11 01 51.8 +2.9**
BOSS Bosilegrad 2.09 290 *e*Pn **Pb 11 01 22.6 +0.4**
BOSS *e*Sg **Sb 11 01 48.8 +0.3**
BOZC Bozcaada 2.09 160 PN **Pn 11 01 19.9 +0.4**
BOZC Bozcaada 2.09 160 *i* P **Pn 11 01 19.1 -0.4**
BOZC *i* S **Sn 11 01 45.1 -0.8**
EZN Ezine 2.18 155 PN **Pn 11 01 21.2 +0.4**
PAIG Paliouri 2.18 211 P **Pn 11 01 19.9 -0.9**
PAIG AML AML 11 02 01.7
comp=N,155μm,0.4s
PAIG AML AML 11 02 02.0
comp=E,187μm,0.5s
COPA Copaceanca 2.32 1 ⇑P **Pn 11 01 23.8 +1.1**
BAYC CANAKKALE_Bayr 2.33 152 *i* P **Pn 11 01 22.6 -0.2**
BAYC *i* S **Sn 11 01 52.1 +0.2**
ZAPS Zavoj 2.35 309 *e*Pn **Pb 11 01 27.5 +0.7**
KNL Balıkesir 2.38 130 *i* P **Pg 11 01 29.1 -0.3**
KNL *i* S **Sb 11 01 58.1 +1.4**
SLVT Silivri 2.38 103 PN **Pn 11 01 19.9 +0.4**
CTYL Yalikoy Yolu 2.39 97 PN **Pn 11 01 24.8 +0.7**
EDC Edincik 2.53 125 PN **Pn 11 01 26.3 +0.7**
BLKB Belogradchik 2.56 316 *e*Pn **Pb 11 01 29.4 -0.9**
BLKB Belogradchik 2.56 316 ⇑S **Sb 11 02 01.0 -1.0**
CTKS Kestanelik-??a 2.60 102 PN **Pn 11 01 27.2 +0.7**
GONE Gonen-Balikesi 2.62 132 PN **Pn 11 01 27.6 +0.8**
SIGR SIGRI 2.66 168 P **Pn 11 01 26.8 -0.5**
SIGR AML AML 11 02 12.2
comp=N,172μm,0.4s
SIGR AML AML 11 02 12.7
comp=E,129μm,0.4s
SIGR SIGRI 2.66 168 PN **Pn 11 01 28.0 +0.7**
SIGR SIGRI 2.66 168 P **Pn 11 01 27.1 -0.2**
BARS Barje 2.66 293 *e*Pn Pg 11 01 39.9 +5.1
BALY Balya 2.80 137 *i* P **Pn 11 01 29.6 +0.2**
BALY *i* S **Sn 11 02 01.8 -1.8**
BGKT Bogazkoy 2.81 102 PN **Pn 11 01 30.2 +0.8**
ZAGS Zajecar 2.92 314 *e*Pn **Pb 11 01 35.0 -1.5**
ZAGS *e*Sg **Sg 11 02 16.6 -1.2**
SULR 2.98 16 ⇓S **Sg 11 02 16.6 -2.9**
KLYT Kilyos 2.99 100 PN **Pn 11 01 32.9 +1.1**
ISK Istanbul-Kandi 3.04 103 PN **Pn 11 01 33.7 +1.1**
ARMT Armutlu 3.08 113 PN **Pn 11 01 34.1 +1.0**
BOVS Bovan 3.11 307 *e*Pn **Pb 11 01 37.2 -2.5**
SELS Selova 3.28 297 *e*Pn **Pb 11 01 39.3 -3.3**
ISR Istrita 3.46 17 ⇑P **Pn 11 01 40.2 +1.8**
ISR ⇑S **Sb 11 02 29.5 +1.6**
TIRR Tirgusor 3.57 41 ⇑P **Pn 11 01 39.7 -0.2**
TIRR ⇑S **Sb 11 02 29.6 -1.5**
VOIR 3.62 359 ⇑P **Pn 11 01 41.3 +0.6**
VOIR ⇓S **Sb 11 02 33.1 +0.4**
HERR Herculane 3.65 328 ⇑P **Pn 11 01 41.3 +0.3**
HERR ⇓S **Sb 11 02 29.8 -3.6**
MLR Muntele Rosu 3.72 9 ⇑P **Pn 11 01 43.6 +1.4**
MLR ⇑S **Sb 11 02 36.1 +0.5**
TPGR Topolog 3.87 37 ⇑P **Pn 11 01 44.9 +0.9**
TPGR ⇑S **Sb 11 02 38.5 -1.3**
BISRR Bisoca 3.90 16 ⇓S **Sb 11 02 39.8 -0.9**
GZR Gura Zlata 3.97 335 ⇑P **Pn 11 01 44.4 -1.1**
CFR Carcaliu 4.01 32 ⇑P **Pn 11 01 47.6 +1.7**
CFR ⇑S **Sb 11 02 41.0 -2.6**
VRI Vrincioaia 4.21 15 ⇓P **Pn 11 01 49.7 +1.0**
BZS Buzias 4.58 327 ⇑P **Pn 11 01 53.2 -0.5**
BZS ⇑S **Sn 11 02 52.4 +5.1**

*IDC **05** 11:01:31.5±1.2, 12.°47N×125.°03E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/33, mbtmp3.7/4, Error ellipse: s-maj=84.7km s-min=21.8km az=77.0*
*MAN **05** 11:01:36.4, 12.°56N×125.°09E, h31km, mb4.5, ML3.4, MS3.2*
ISC 05 11:01:36.2±1.8, 12.°56N±0.°05×125.°13E±0.°06, h28km±15km, n24, σ1§18/28, mb3.7/4, 2C, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.46**	**264**	*eP*	**Pn**	**11 01 46.6**	**-0.2**
CNP				*eS*	**Sn**	**11 01 55.1**	**+1.0**
BESP	**Borongan**	**1.00**	**162**	*eP*	**Pn**	**11 01 54.4**	**0.0**
BESP				*eS*	**Sb**	**11 02 08.5**	**+0.8**
PVCP	**Virac**	**1.40**	**317**	*eP*	**Pn**	**11 01 58.8**	**-1.1**
OCLP	**Ormoc**	**1.58**	**199**	*eP*	**Pn**	**11 02 02.9**	**+0.5**
OCLP				*eS*	**Sn**	**11 02 21.5**	**-0.4**
SCSP	**San Jose Seism**	**1.91**	**305**	*eP*	**Pn**	**11 02 06.7**	**-0.2**
MSLP	**Maasin**	**2.43**	**186**	*eP*	**Pn**	**11 02 15.7**	**+1.7**
MSLP				*eS*	**Sn**	**11 02 44.7**	**+2.0**
JCNP	**Jose Panganiba**	**2.92**	**306**	*eP*	**Pn**	**11 02 21.9**	**+1.1**
JCNP				*eS*	**Sn**	**11 02 55.4**	**+0.4**
GLSP	**General Luna,**	**2.93**	**160**	*eP*	**Pn**	**11 02 21.2**	**+0.4**
GLSP				*eS*	**Sn**	**11 02 56.5**	**+1.4**
OTRP	**Odiongan**	**3.04**	**267**	*eP*	**Pn**	**11 02 22.5**	**0.0**
OTRP				*eS*	**Sn**	**11 02 58.3**	**+0.3**
TBP	**Tagbilaran**	**3.11**	**204**	⇑*eP*	**Pb**	**11 02 29.9**	**-0.9**
GUIM	**Jordan**	**3.15**	**233**	*eP*	**Pn**	**11 02 24.4**	**+0.6**
GUIM				*eS*	**Sn**	**11 03 00.7**	**+0.2**
BOAC	**Boac**	**3.32**	**286**	*eP*	**Pn**	**11 02 26.8**	**+0.5**
BOAC				*eS*	**Sn**	**11 03 05.7**	**+0.9**
LQP	**Lukban**	**3.82**	**294**	⇑*eP*	**Pn**	**11 02 36.4**	**+3.1**
BALP	**Baler**	**4.68**	**313**	*eP*	**Pn**	**11 02 46.8**	**+1.9**
BALP				*eS*	**Sn**	**11 03 39.2**	**+0.9**
KSRS	**Korea Array**	**24.91**	**5**	P	**P**	**11 06 57.3**	**+0.4**
	1.4nm,0.7s,baz=186,slow=9.3,SNR=6.5						
WRA	**Warramunga Arr**	**33.55**	**164**	P	**P**	**11 08 12.0**	**-1.8**
	0.5nm,0.6s,baz=344,slow=9.2,SNR=8.0						
ASAR	**Alice Springs**	**37.01**	**167**	P	**P**	**11 08 43.0**	**-0.6**
	0.8nm,0.4s,baz=348,slow=7.2,SNR=28						
H11S3	**WAKE ISLAND Hy**	**40.41**	**76**	T	T	11 52 13.4	
	baz=268,slow=75,SNR=74						
H11S1	**WAKE ISLAND Hy**	**40.42**	**76**	T	T	11 52 12.4	
	baz=268,slow=75,SNR=36						
H11S2	**WAKE ISLAND Hy**	**40.42**	**76**	T	T	11 52 10.3	
	baz=268,slow=75,SNR=74						
H11N1	**WAKE ISLAND Hy**	**40.66**	**74**	T	T	11 52 30.8	
	baz=266,slow=75,SNR=251						
H11N2	**WAKE ISLAND Hy**	**40.67**	**74**	T	T	11 52 26.8	
	baz=266,slow=75,SNR=201						
H11N3	**WAKE ISLAND Hy**	**40.68**	**74**	T	T	11 52 27.6	
	baz=266,slow=75,SNR=168						
MKAR	**Makanchi Array**	**49.54**	**322**	P	**P**	**11 10 23.9**	**-0.6**
	0.4nm,0.5s,baz=108,slow=9.3,SNR=2.4						

*SKHL **05** 11:02:43.5±0.6, 43.°39N×146.°22E, h38km±2km, mb4.3/3*
*JMA **05** 11:02:43.8±0.1, 43.°34N×146.°05E, h50km±1km, M2.7*
ISC 05 11:02:42.1±3.2, 43.°36N±0.°08×146.°2E±0.°2, h50km±13km, n13, σ0§61/25, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.34**	**271**	P	**Pn**	**11 02 52.3**	**+0.7**
NEM2				*eS*	**Sn**	**11 02 58.4**	**+0.1**
NMR	**Nemuro--Hokkai**	**0.35**	**271**	*i* P	**Pn**	**11 02 52.0**	**+0.3**
NMR				*i* S	**Sn**	**11 02 58.0**	**-0.5**
GLVR	**Golovnino**	**0.63**	**307**	*i* P	**Pn**	**11 02 55.0**	**+0.1**
GLVR				AMB	AMB	11 02 55.0	
	297nm,0.3s						
GLVR				*i* S	**Sn**	**11 03 04.0**	**-0.1**
GLVR				A	A	11 03 05.0	
	2μm,0.3s						
GLVR				A	A	11 03 05.0	
	929nm,0.3s						
GRPR	**Tuman**	**0.71**	**333**	*i* P	**Pn**	**11 02 56.0**	**+0.1**
GRPR				AMB	AMB	11 02 56.0	
	200nm,0.4s						
GRPR				*i* S	**Sn**	**11 03 05.0**	**-0.9**
GRPR				A	A	11 03 06.0	
	2μm,0.2s						
GRPR				A	A	11 03 06.0	
	1μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.72**	**339**	*i* P	**Pn**	**11 02 56.0**	**0.0**
YUK				AMB	AMB	11 02 58.0	
	250nm,0.4s						
YUK				*i* S	**Sn**	**11 03 06.0**	**-0.2**
YUK				A	A	11 03 06.0	
	482nm,0.5s						
YUK				A	A	11 03 06.0	
	504nm,0.5s						
JKHN	**Kushirohamanak**	**0.82**	**250**	P	**Pn**	**11 02 57.8**	**+0.5**
JKHN				*eS*	**Sn**	**11 03 07.8**	**-0.7**
JNSB	**Nemuroshibetsu**	**0.97**	**296**	P	**Pn**	**11 02 59.8**	**+0.4**
JNSB				*eS*	**Sn**	**11 03 11.8**	**-0.3**
JRA	**Rausu**	**0.98**	**306**	P	**Pn**	**11 03 00.1**	**+0.6**
JRA				*eS*	**Sn**	**11 03 12.1**	**-0.2**
JNK	**Nakash**	**1.11**	**282**	P	**Pn**	**11 03 01.2**	**-0.1**
JNK				*eS*	**Sn**	**11 03 14.7**	**-0.8**
JAK	**Akkeshi**	**1.17**	**252**	P	**Pn**	**11 03 02.0**	**0.0**
JAK				*eS*	**Sn**	**11 03 15.5**	**-1.4**
JTKR	**Abashiri--Toko**	**1.78**	**291**	P	**Pn**	**11 03 11.4**	**+1.0**
JAR	**Ashorobuto**	**1.79**	**269**	P	**Pn**	**11 03 11.1**	**+0.7**
JAR				*eS*	**Sn**	**11 03 32.0**	**0.0**
JOB	**Onbets**	**1.80**	**256**	P	**Pn**	**11 03 11.2**	**+0.6**
JOB				*eS*	**Sn**	**11 03 31.9**	**-0.4**

*IDC **05** 11:18:18.5±0.8, 22.°47N×144.°93E, h0km, mb3.7/12, mb1 4.0/12, mb1mx3.8/40, mbtmp3.8/12, MS3.0/1, Ms1 3.0/1, ms1mx2.3/42, Error ellipse: s-maj=30.8km s-min=18.3km az=83.0*
ISC 05 11:18:23.6±0.9, 22.°4N±0.°1×144.°9E±0.°2, h35km, n14, σ1§26/15, mb3.6/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.23**	**339**	Pn	**Pn**	**11 21 57.1**	**+1.0**
	0.0nm,0.3s,baz=259,slow=18,SNR=1.7						
KSRS	**Korea Array**	**20.96**	**319**	P	**P**	**11 23 04.8**	**+1.2**
	0.5nm,0.7s,baz=122,slow=12,SNR=1.7						
USRK	**Ussuriysk Ar.**	**24.20**	**337**	P	**P**	**11 23 38.1**	**+1.3**
	1.8nm,0.8s,baz=124,slow=14,SNR=3.1						
USRK				LR	LR	11 33 25.4	
	comp=Z,35nm,18.5s,baz=172,slow=38						
SONM	**Songino Array**	**39.84**	**319**	P	**P**	**11 25 53.8**	**0.0**
	0.4nm,0.4s,baz=90,slow=7.2,SNR=2.0						
WRA	**Warramunga Arr**	**43.36**	**195**	P	**P**	**11 26 24.0**	**+1.3**
	1.4nm,0.6s,baz=17,slow=8.9,SNR=16						
ASAR	**Alice Springs**	**47.05**	**194**	P	**P**	**11 26 51.2**	**-0.8**
	0.5nm,0.7s,baz=10,slow=8.5,SNR=13						
ZALV	**Zalesovo Beam**	**54.66**	**321**	P	**P**	**11 27 46.8**	**-2.1**
	0.4nm,0.3s,baz=91,slow=14,SNR=1.5						
MKAR	**Makanchi Array**	**55.41**	**312**	P	**P**	**11 27 52.9**	**-1.6**
	0.3nm,0.6s,baz=94,slow=9.5,SNR=3.0						
MKAR				PcP	**PcP**	**11 28 56.1**	**+1.5**
	0.5nm,0.4s,baz=95,slow=5.3,SNR=6.7						
ILAR	**Eielson Array**	**60.65**	**27**	P	**P**	**11 28 29.8**	**-1.1**
	0.5nm,0.9s,baz=243,slow=5.6,SNR=4.9						
ARCES	**ARCESS Array B**	**78.75**	**342**	P	**P**	**11 30 22.6**	**+0.4**
	4.0nm,1.0s,baz=72,slow=8.6,SNR=1.9						
NVAR	**Mina Array Bea**	**81.42**	**52**	P	**P**	**11 30 38.6**	**+1.1**
	1.1nm,0.7s,baz=280,slow=5.4,SNR=10						
FINES	**FINESS Array B**	**83.22**	**335**	P	**P**	**11 30 45.2**	**-0.9**
	0.9nm,0.7s,baz=51,slow=4.4,SNR=3.8						
NOA	**NORSAR Array B**	**88.85**	**339**	P	**P**	**11 31 13.9**	**-0.1**
	0.1nm,0.3s,baz=37,slow=15,SNR=2.5						
PLCA	**Paso Flores**	**144.99**	**130**	PKPbc	**PKPbc**	**11 37 56.5**	**-0.3**
	1.8nm,0.9s,baz=188,slow=3.6,SNR=4.0						

*IDC **05** 11:24:00.7±10.0, 1.°14N×99.°12E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/36, mbtmp3.3/3, MS3.6/1, Ms1 3.6/1, ms1mx2.5/23, Error ellipse: s-maj=353.1km s-min=33.9km az=66.0*
*DJA **05** 11:24:56.7±0.2, 4.°5±2.°×10.°3E±.°, h10km, M4.0/9, MLv4.0/9*
ISC 05 11:24:55.9±1.3, 3.°93S±0.°04×103.°30E±0.°03, h11km±12km, n12, σ0§67/17, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.55**	**218**	P	**Pb**	**11 25 07.5**	**+0.1**
MNAI				S	**Sb**	**11 25 15.8**	**+0.5**
KSI	**Kapahiang**	**0.75**	**292**	P	**Pg**	**11 25 10.7**	**+0.2**
KSI				S	**Sb**	**11 25 22.1**	**+0.8**
MDSI	**Maura Dua**	**1.04**	**122**	P	**Pg**	**11 25 15.6**	**-0.3**
MDSI				S	**Sg**	**11 25 29.2**	**-0.3**
LWLI	**Liwa**	**1.32**	**145**	P	**Pn**	**11 25 19.4**	**-1.0**
KLSI		**1.62**	**118**	P	**Pn**	**11 25 25.1**	**+0.8**
KLSI				S	**Sg**	**11 25 48.1**	**+0.1**
PMBI	**Palembang**	**1.78**	**56**	P	**Pb**	**11 25 29.0**	**+0.5**
PMBI				S	**Sb**	**11 25 51.1**	**+0.3**
KRJI	**Kerinci**	**2.59**	**315**	P	**Pb**	**11 25 41.5**	**-0.8**
PPBI	**Pangkal Pinang**	**3.34**	**58**	P	**Pn**	**11 25 48.1**	**+0.1**
PPBI				S	**Sb**	**11 26 35.8**	**+0.1**
CGJI	**Cibinong**	**3.58**	**138**	P	**Pn**	**11 25 52.5**	**+1.2**
WRA	**Warramunga Arr**	**34.18**	**120**	P	**P**	**11 31 40.7**	**-0.9**
	0.2nm,0.5s,baz=301,slow=9.1,SNR=4.8						
ASAR	**Alice Springs**	**35.47**	**126**	P	**P**	**11 31 52.5**	**-0.1**
	0.4nm,0.5s,baz=299,slow=7.9,SNR=9.9						
MJAR	**Matsushiro Arr**	**51.80**	**36**	LR	LR	11 55 17.8	
	comp=Z,60nm,18.3s,baz=220,slow=37						

*IDC **05** 11:36:36.0±4.4, 35.°87N×70.°20E, h102km±38km, mb3.6/6, mb1 3.6/11, mb1mx3.3/57, mbtmp3.9/11, Error ellipse: s-maj=33.3km s-min=24.1km az=163.0*
*NNC **05** 11:36:47.3±11.0, 37.°05N×72.°25E, h279km±93km, mb2.6, mpv3.7, Error ellipse: s-maj=111.4km s-min=88.0km az=31.0*
ISC 05 11:36:37.7±0.7, 36.°19N±0.°06×70.°09E±0.°08, h100km, n17, σ1§45/21, mb3.5/5, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.79**	**147**	P	**Pn**	**11 37 21.4**	**+0.5**
THW	**Thamme Wali**	**3.65**	**157**	P	**Pn**	**11 37 32.7**	**+0.4**
THW				S	**Sn**	**11 38 16.0**	**+1.6**
KK31	**Karatay Array**	**6.92**	**3**	⇑P	**Pn**	**11 38 16.6**	**+0.2**
	1.5nm,0.3s,baz=198,slow=17,SNR=37						
KK31				⇑S	**Sn**	**11 39 33.5**	**-0.1**
	2.7nm,0.3s,baz=189,slow=20,SNR=4.7						
TKM2	**Tokmak 2**	**7.96**	**31**	⇑P	Pn	11 38 23.1	-7.7
	4.6nm,0.5s						
TKM2				⇓S	Sn	11 39 35.0	-24
	8.7nm,0.8s						
GEYT	**Ailbeck**	**9.72**	**284**	P	**Pn**	**11 38 55.7**	**+1.0**
	2.0nm,0.3s,baz=132,slow=12,SNR=14						
GEYT				S	**Sn**	**11 40 41.6**	**-0.4**
	0.4nm,0.3s,baz=102,slow=34,SNR=1.8						
MKAR	**Makanchi Array**	**13.98**	**37**	P	**Pn**	**11 39 51.2**	**-0.1**
	0.1nm,0.3s,baz=225,slow=12,SNR=6.2						
AB31	**Akbulak array**	**15.02**	**334**	⇓P	**Pn**	**11 40 04.0**	**-0.5**
	2.4nm,0.5s,baz=154,slow=12,SNR=42						
AB31				⇑S	**Sn**	**11 42 51.4**	**+1.3**
	1.1nm,0.5s,baz=162,slow=21,SNR=4.5						
KURBB	**Kurchatov Arra**	**15.66**	**20**	P	**P**	**11 40 15.1**	**+0.5**
	0.1nm,0.3s,baz=210,slow=11,SNR=19						
AKTO	**Aktyubinsk**	**16.70**	**332**	P	**P**	**11 40 27.1**	**+1.0**
	0.3nm,0.3s,baz=141,slow=14,SNR=5.7						
AKTO	**Aktyubinsk**	**16.70**	**332**	⇓P	**P**	**11 40 27.5**	**+1.4**
	1.2nm,0.7s						
AKTO				⇑S	**Sn**	**11 43 27.6**	**-3.0**
	4.4nm,1.2s						
BVAR	**Borovoye Array**	**16.84**	**1**	P	**P**	**11 40 28.7**	**+1.1**
	0.4nm,0.3s,baz=173,slow=8.3,SNR=3.1						
ZALV	**Zalesovo Beam**	**20.51**	**25**	P	**P**	**11 41 08.1**	**+0.4**
	24nm,0.6s,baz=220,slow=11,SNR=68						
FINES	**FINESS Array B**	**37.33**	**327**	P	**P**	**11 43 41.5**	**+1.5**
	1.5nm,0.8s,baz=115,slow=9.4,SNR=4.4						
ARCES	**ARCESS Array B**	**41.16**	**338**	P	**P**	**11 44 13.5**	**+1.7**
	4.5nm,1.0s,baz=122,slow=8.6,SNR=3.5						
NOA	**NORSAR Array B**	**44.19**	**323**	P	**P**	**11 44 35.1**	**-1.3**
	0.3nm,0.5s,baz=84,slow=8.4,SNR=1.7						
TORD	**Torodi Ar. Bea**	**64.97**	**268**	P	**P**	**11 47 05.7**	**-1.6**
	0.4nm,0.7s,baz=28,slow=4.4,SNR=2.4						
WRA	**Warramunga Arr**	**82.46**	**121**	P	**P**	**11 48 46.3**	**-2.9**
	0.2nm,0.7s,baz=327,slow=4.9,SNR=2.4						

IDC 05 11:51:12.2±2.2, 9.°61N×124.°58E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/35, mbtmp3.4/4, Error ellipse: s-maj=106.5km s-min=24.1km az=57.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**26.35**	**292**	P	P	11 56 49.2	-1.1
	0.6nm,0.7s,baz=96,slow=8.4,SNR=2.2						
WRA	**Warramunga Arr**	**30.90**	**162**	P	P	11 57 29.9	-0.8
	0.4nm,0.8s,baz=346,slow=9.2,SNR=5.5						
ASAR	**Alice Springs**	**34.30**	**165**	P	P	11 58 01.2	+0.7
	0.1nm,0.3s,baz=351,slow=7.0,SNR=5.6						
MKAR	**Makanchi Array**	**51.56**	**324**	P	P	12 00 20.8	+0.7
	0.6nm,0.8s,baz=111,slow=9.2,SNR=4.6						

IDC 05 11:53:07.4±1.6, 40.°46N×105.°29E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.3/38, mbtmp3.4/4, ML3.2/2, MS2.4/1, Ms1 2.4/1, ms1mx2.2/25, Error ellipse: s-maj=59.9km s-min=23.1km az=82.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**7.41**	**6**	Pn	Pn	11 54 57.2	+0.3
	0.8nm,0.3s,baz=186,slow=14,SNR=14						
SONM				Lg	Lg	11 57 02.8	
	0.9nm,0.3s,baz=186,slow=31,SNR=4.5						
SONM				LR	LR	11 57 22.1	
	comp=Z,26nm,18.5s,baz=235,slow=34						
MKAR	**Makanchi Array**	**17.78**	**298**	Pn	Pn	11 57 14.0	-2.3
	0.0nm,0.3s,baz=97,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**65.90**	**150**	P	P	12 03 55.4	+0.3
	0.2nm,0.7s,baz=343,slow=6.4,SNR=4.6						
ASAR	**Alice Springs**	**69.14**	**152**	P	P	12 04 15.3	-0.2
	0.5nm,0.6s,baz=335,slow=6.3,SNR=12						

*NNC **05** 12:01:16.6±0.9, 43.°16N×71.°82E, h13km±12km, mb3.1, mpv2.7, Error ellipse: s-maj=18.6km s-min=3.5km az=5.0*
*KRNET **05** 12:01:16.5±0.1, 43.°29N×71.°96E, h16km, mb2.6*
*SOME **05** 12:01:16.4, 43.°30N×71.°92E, h10km*
ISC 05 12:01:17.4±1.1, 43.°23N±0.°04×71.°94E±0.°02, h14km±12km, n21, σ1§43/40, 17C-6D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAS	**Manas**	**0.85**	**150**	⇑*iP*	**Pg**	**12 01 33.3**	**-0.6**
	baz=53						
MNAS				⇑*iS*	**Sg**	**12 01 45.8**	**+0.8**
	baz=53						
KK31	**Karatay Array**	**1.05**	**264**	P	**Pb**	**12 01 35.2**	**-2.2**
	0.6nm,0.2s,baz=80,slow=16,SNR=35						
KK31				S	**Sb**	**12 01 48.5**	**-2.5**
	1.0nm,0.2s,baz=79,slow=29,SNR=14						
MRKS	**Merke**	**1.06**	**117**	⇓*iP*	**Pb**	**12 01 37.1**	**-0.4**
	baz=20						
MRKS				⇓*eS*	**Sg**	**12 01 52.2**	**+0.5**
	baz=20						
MRKS	**Merke**	**1.06**	**117**	⇓*iP*	**Pb**	**12 01 37.1**	**-0.4**
	2.4nm,0.1s						
MRKS				*eS*	**Sg**	**12 01 52.2**	**+0.5**
	18nm,0.2s						
MRKS	**Merke**	**1.06**	**117**	P	**Pb**	**12 01 37.1**	**-0.4**
	2.4nm,0.1s						
MRKS				S	**Sg**	**12 01 52.2**	**+0.5**
	24nm,0.2s						
EKS2	**Erkin-Say**	**1.46**	**112**	⇑*iP*	**Pn**	**12 01 43.6**	**+0.1**
	baz=15						
EKS2				⇑*iS*	**Sb**	**12 02 03.7**	**+0.7**
	baz=15			

TKM2	**Tokmak 2**	**2.70**	**95**	⇑Pg		**Pg**	**12 02 08.3**	**-0.8**
	3.0nm,0.8s							
TKM2				⇓Lg		Lg	12 02 45.4	
	1.5nm,0.6s							
KRBS	**Karabastau**	**2.76**	**79**	*e*P		**Pb**	**12 02 05.5**	**-1.0**
	0.6nm,0.2s							
KRBS				*e*S		**Sb**	**12 02 40.5**	**+0.3**
	3.2nm,0.3s							
KRBS	**Karabastau**	**2.76**	**79**	Pg		**Pb**	**12 02 04.5**	**-2.0**
	0.6nm,0.2s							
KRBS				Lg		Lg	12 02 39.3	
	4.4nm,0.4s							
OHH	**Osh**	**2.77**	**167**	⇑*i*P		**Pb**	**12 02 04.4**	**-2.4**
	baz=67							
OHH				⇑*i*S		**Sb**	**12 02 39.9**	**-0.7**
	baz=67							
BTK	**Batken**	**3.28**	**195**	⇑*i*P		**Pn**	**12 02 11.7**	**+3.3**
	baz=95							
BTK				⇑*i*S		**Sb**	**12 02 52.2**	**-2.9**
	baz=95							

ANF ***05*** *12:12:49.2±0.3,41.84N×119.65W,h0km,ML3.4/13,Error ellipse: s-maj=2.5km s-min=2.2km az=140.0*
SEA ***05*** *12:12:50.3±3.1,41.82N±0.02×119.60W±0.03,h0km±7km, Error ellipse: s-maj=4.3km s-min=0.6km az=136.0*
REN ***05*** *12:12:50.4±2.8,41.88N±0.02×119.62W±0.04,h2km±7km, ML3.6/2,ML3.2/31(SEA),Error ellipse: s-maj=4.9km s-min=1.3km az=123.0*
NEIC ***05*** *12:12:53.6±3.8,41.93N±0.04×119.76W±0.05,h22km±8km, Error ellipse: s-maj=6.7km s-min=5.3km az=156.0*

ISC 05 12:12:50.9±1.4,41°92N±0.03×119°67W±0.03,h5km±14km, n46,σ1s08/58,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.47**	**268**		**Pg**	**12 13 00.2**	**+0.1**
MOD					**Sg**	**12 13 07.3**	**+1.2**
K05A	**Summer Lake**	**1.21**	**312**		**Pb**	**12 13 14.2**	**-0.3**
M04C	**Macdoel**	**1.62**	**266**	P	**Pn**	**12 13 19.3**	**-1.0**
	baz=86,SNR=122						
M04C				Sb	**Sg**	**12 13 42.9**	**-0.3**
	baz=86						
J08A	**Circle Bar Ran**	**1.69**	**31**	Pn	**Pn**	**12 13 20.2**	**-1.1**
K04D	**Chiloquin, OR**	**1.70**	**295**	P	**Pn**	**12 13 20.7**	**-0.7**
	baz=114,SNR=56						
K04D				Sb	**Sg**	**12 13 46.6**	**+1.1**
	baz=114						
J05D	**Fort Rock, OR**	**1.79**	**320**	Pb	**Pb**	**12 13 24.1**	**-0.2**
	baz=139,SNR=166						
J05D				Sb	**Sg**	**12 13 49.6**	**+1.2**
	baz=139						
WVA	**Winnemucca Val**	**1.97**	**183**		**Pb**	**12 13 26.4**	**-1.1**
L04D	**Klamath Falls**	**1.98**	**280**	P	**Pn**	**12 13 24.2**	**-1.0**
	baz=99,SNR=158						
L04D				Sb	**Sg**	**12 13 54.3**	**-0.3**
	baz=99						
PINE	**Pine Mountain**	**2.09**	**334**		**Pb**	**12 13 29.2**	**-0.3**
BEKR	**Beckworth**	**2.11**	**194**		**Pn**	**12 13 27.8**	**+0.6**
I07A	**Izee**	**2.17**	**3**		**Pb**	**12 13 29.8**	**-1.0**
PAHR	**Pah Rah Range**	**2.22**	**174**		**Pb**	**12 13 30.0**	**-1.6**
J04D	**Umpqua Nationa**	**2.23**	**307**	Pb	**Pb**	**12 13 31.4**	**-0.5**
	baz=126						
YBH	**Yreka Blue Hor**	**2.28**	**266**		**Pn**	**12 13 27.9**	**-1.4**
O03E	**Paynes Creek**	**2.28**	**225**	P	**Pn**	**12 13 28.1**	**-1.3**
	baz=45,SNR=75						
O03E				Sb	**Sb**	**12 14 01.1**	**-0.2**
	baz=45						
LOY	**Loyalton**	**2.30**	**191**		**Pb**	**12 13 31.6**	**-1.4**
PEAR	**Peavine Mounta**	**2.32**	**186**		**Pb**	**12 13 32.9**	**-0.5**
M02C	**Callahan**	**2.44**	**259**	P	**Pn**	**12 13 29.7**	**-1.8**
	baz=78,SNR=21						
KBF	**Kyburz Flat**	**2.44**	**190**		**Pb**	**12 13 34.9**	**-0.6**
VPK	**Verdi Peak**	**2.46**	**187**		**Pb**	**12 13 36.1**	**+0.3**
N02D	**Trinity Center**	**2.47**	**249**	P	**Pn**	**12 13 29.9**	**-2.0**
	baz=68,SNR=43						
N02D				Sb	**Sb**	**12 14 07.6**	**+1.1**
	baz=68						
IND	**Independence**	**2.52**	**191**		**Pb**	**12 13 36.4**	**-0.5**
HUMO	**Hull Mountain**	**2.53**	**287**		**Pn**	**12 13 31.9**	**-0.9**
WDC	**Whiskeytown Da**	**2.54**	**239**		**Pn**	**12 13 31.4**	**-1.4**
VCNR	**Virginia City**	**2.62**	**180**		**Pb**	**12 13 37.6**	**-0.8**
I05D	**Terrebonne, OR**	**2.71**	**334**	Pb	**Pb**	**12 13 39.7**	**-0.3**
	baz=152,SNR=14						
I05D				Sb	**Sg**	**12 14 18.0**	**0.0**
	baz=152						
ORV	**Oroville**	**2.74**	**211**		**Pn**	**12 13 36.5**	**+0.9**
I04A	**Tendick Farm,**	**2.75**	**314**	Pb	**Pb**	**12 13 40.6**	**0.0**
	baz=132,SNR=7.6						
I04A				Sb	**Sg**	**12 14 18.3**	**-1.0**
	baz=132						
RUBR	**Rubicon Trail**	**2.88**	**187**		**Pn**	**12 13 37.3**	**-0.5**
L02E	**Cave Junction**	**2.94**	**276**	P	**Pn**	**12 13 37.6**	**-0.7**
	baz=94,SNR=45						
L02E				Sb	**Sb**	**12 14 21.7**	**+1.7**
	baz=94						
EMB	**Emerald Bay**	**2.96**	**186**		**Pb**	**12 13 44.5**	**+0.3**
K02D	**Willamette Mer**	**3.06**	**286**	P	**Pn**	**12 13 40.1**	**0.0**
	baz=104,SNR=110						
K02D				Sb	**Sb**	**12 14 26.0**	**+2.4**
	baz=104						
AFDM	**Forest Hills D**	**3.13**	**199**		**Pn**	**12 13 39.9**	**-1.0**
KRMB	**Red Mountain**	**3.19**	**264**		**Pn**	**12 13 41.8**	**-0.2**
MFID	**Camas Ranch**	**3.21**	**61**	Pn	**Pn**	**12 13 41.6**	**-0.5**
KBO	**Bosley Butte**	**3.40**	**276**	Pn	**Pn**	**12 13 44.6**	**-0.2**
JCC	**Jacoby Creek,**	**3.46**	**253**	Pn	**Pn**	**12 13 45.0**	**-0.4**
G05D	**Wamic, OR**	**3.53**	**341**	Sb	**Sg**	**12 14 42.8**	**-1.6**
	baz=159						
KEBM	**Edson Butte**	**3.58**	**287**	Pn	**Pn**	**12 13 46.0**	**-1.2**
NVAR	**Mina Array Bea**	**3.64**	**163**		**Pn**	**12 13 46.9**	**-1.3**
KCPM	**Cahto Peak**	**3.71**	**234**	Pn	**Pn**	**12 13 48.2**	**-0.8**
LHV	**Little Huntoon**	**3.77**	**166**		**Pn**	**12 13 51.0**	**+1.3**
PLID	**Pearl Lake**	**4.14**	**39**		**Pn**	**12 13 53.8**	**-1.3**
HLID	**Hailey**	**4.21**	**65**	P	**Pn**	**12 13 55.0**	**-0.9**
	baz=248						
HLID				Sb	**Sb**	**12 14 58.7**	**+1.9**
	baz=248						
HLID	**Hailey**	**4.21**	**65**		**Pn**	**12 13 56.2**	**+0.3**
MCMT	**McKenzie Canyo**	**5.76**	**57**	Pn	**Pn**	**12 14 19.1**	**+1.7**

IDC 05 12:14:02.7±6.8,19°79S×173°87W,h259km±77km, mb3.6/4,mb1 3.8/4,mb1mx3.2/27,mbtmp4.1/4,Error ellipse: s-maj=69.3km s-min=37.4km az=151.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**10.12**	**201**	P	Pn	12 16 22.7	+0.1
	235nm,0.3s,baz=37,slow=20,SNR=7.9						
CTA	**Charters Tower**	**37.43**	**263**	P	P	12 20 51.4	-0.2
	1.5nm,0.4s,baz=85,slow=7.4,SNR=2.0						
ASAR	**Alice Springs**	**48.46**	**256**	P	P	12 22 19.8	0.0
	1.3nm,0.5s,baz=94,slow=7.9,SNR=38						
WRA	**Warramunga Arr**	**48.54**	**261**	P	P	12 22 20.0	-0.4
	0.6nm,0.3s,baz=97,slow=7.5,SNR=62						
GUMO	**Guam**	**52.43**	**306**	P	P	12 22 49.7	+0.4
	95nm,0.6s,baz=128,slow=20,SNR=2.3						
YKA	**Yellowknife Ar**	**94.28**	**24**	P	P	12 26 51.7	-0.4
	0.8nm,0.6s,baz=254,slow=9.3,SNR=2.1						

IDC ***05*** *12:29:07.5±8.5,14.16S×167.41E,h55km±60km,mb3.6/6, mb1 3.8/7,mb1mx3.4/33,mbtmp3.9/7,ML4.3/1,MS3.9/2, Ms1 3.9/2,ms1mx2.9/26,Error ellipse: s-maj=72.4km s-min=33.6km az=35.0*

ISC 05 12:29:06.7±2.2,14°2S±0.1×167°3E±0.3,h35km,n9, σ1s78/8,mb3.8/5,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.83**	**186**	P	**Pn**	**12 31 00.6**	**+2.4**
	3.9nm,0.3s,baz=7.3,slow=12,SNR=30						
DZM				S	**Sn**	**12 32 23.2**	**-2.4**
	1.3nm,0.3s,baz=323,slow=20,SNR=2.1						
CTA	**Charters Tower**	**20.91**	**251**	P	**P**	**12 33 45.3**	**-1.0**
	3.2nm,0.9s,baz=97,slow=8.1,SNR=2.2						
STKA	**Stephens Creek**	**29.32**	**229**	P	**P**	**12 35 06.8**	**+0.7**
	1.5nm,0.4s,baz=44,slow=11,SNR=7.3						
WRA	**Warramunga Arr**	**31.96**	**255**	P	**P**	**12 35 30.1**	**+0.5**
	0.5nm,0.9s,baz=86,slow=9.3,SNR=5.7						
ASAR	**Alice Springs**	**32.87**	**248**	P	**P**	**12 35 38.0**	**+0.5**
	0.8nm,0.6s,baz=78,slow=9.0,SNR=18						
KAPI	**Kappang**	**47.67**	**276**	LR	LR	12 58 46.8	
	comp=Z,176nm,18.3s,baz=302,slow=37						
JNU	**Nakatsue**	**58.54**	**324**	LR	LR	13 00 51.8	
	comp=Z,78nm,19.3s,baz=86,slow=32						
CMAR	**Chiang Mai Arr**	**74.77**	**294**	P	**P**	**12 40 43.0**	**-0.7**
	0.2nm,0.4s,baz=184,slow=19,SNR=1.4						
QSPA	**South Pole Qui**	**75.78**	**180**	P	**P**	**12 40 47.7**	**-1.2**
	2.4nm,1.1s,baz=357,slow=5.2,SNR=6.6						

MAN 05 12:31:16.9,9°51N×125°68E,h34km,mb3.9,ML2.7,MS2.2, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.51**	**58**	*e*P	Pn	12 31 28.0	+0.2
GLSP				*e*S	Sn	12 31 37.8	+2.3
MSLP	**Maasin**	**1.02**	**307**	*e*P	Pn	12 31 34.3	-0.6
MSLP				*e*S	Sn	12 31 47.4	-0.6
CGP	**Cagayan de Oro**	**1.43**	**223**	⇑*e*P	Pn	12 31 40.8	+0.3
CGP				*e*S	Sn	12 31 58.5	+0.2
TBP	**Tagbilaran**	**1.81**	**276**	⇑*e*P	Pn	12 31 47.5	+1.8

BJI ***05*** *12:40:59.9±0.0,1.73N×89.72E,h5km,mB5.1/38, mb4.8/58,Ms4.5/33,Ms7 4.3/33*
IDC ***05*** *12:41:04.5±0.6,2.25N×89.72E,h0km,mb4.3/20, mb1 4.4/22,mb1mx4.2/41,mbtmp4.3/22,ML4.3/2,MS3.9/25, Ms1 3.9/25,ms1mx3.8/32,Error ellipse: s-maj=19.7km s-min=13.0km az=52.0*
NEIC ***05*** *12:41:05.9±1.6,2.20N±0.08×89.78E±0.07,h10km±1km, mb4.8/52,Error ellipse: s-maj=13.9km s-min=11.1km az=209.0*
GCMT ***05*** *12:41:06.9±0.4,2.25N±0.02×89.67E±0.02,h19km±1km, MW4.9/98,Moment Tensor Solution. s27,c32; s98,c144; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.38±.12; Mθθ-1.74±.09; Mϕϕ1.36±.09; Mrθ0.43±.20; Mθϕ-1.96±.09; Mϕr-1.40±.26; Best double couple: Mo2.89700×10¹⁶ NP1:ϕs105.00000°,δ67.00000°,λ163.00000°. NP2: ϕs202.00000°,δ74.00000°,λ24.00000°. Principal axes: T 3.0860, Plg28.0000°, Azm65.0000°; N -0.3780, Plg61.0000°, Azm234.0000°; P -2.7070, Plg5.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 05 12:41:05.8±0.4,2°19N±0.06×89°75E±0°05,h10km,n184, σ1s38/182,mb4.8/59,MS4.1/34,2C-2D,North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**7.50**	**82**	P	**Pn**	**12 42 55.1**	**-0.2**
	0.3nm1μm47nm,0.5s						
LHMI	**Lhok Sumawe**	**7.79**	**67**	P	**Pn**	**12 43 00.8**	**+1.5**
	1.2nm4μm256nm,0.9s						
LHMI	**Lhok Sumawe**	**7.79**	**67**		**Pn**	**12 42 59.2**	**-0.1**
GSI	**Gunungsitoli**	**7.87**	**96**	P	**Pn**	**12 43 00.3**	**-0.1**
	1.1nm129nm,0.5s						
GSI	**Gunungsitoli**	**7.87**	**96**	Pn	**Pn**	**12 43 00.3**	**-0.1**
GSI				Sn	**Sn**	**12 44 24.1**	**-5.6**
TSI	**Tuntungan**	**8.90**	**81**	P	**Pn**	**12 43 14.4**	**-0.1**
	17μm169nm,0.6s						
RPSI	**Rantau Prapat**	**9.18**	**87**	Pn	**Pn**	**12 43 18.0**	**-0.3**
PBA	**Port Blair**	**9.86**	**17**	Pn	Pn	12 43 27.5	-0.3
PBA				Sn	Sn	12 45 19.5	+0.9
PKDT	**Phuket**	**10.25**	**56**	P	**Pn**	**12 43 33.2**	**+0.1**
PALK	**Pallekele**	**10.33**	**300**	Pn	**Pn**	**12 43 32.7**	**-1.6**
	3.4nm,0.3s,baz=222,slow=12,SNR=25						
PALK				Sn	Sn	12 45 19.3	-11
	28nm,0.3s,baz=125,slow=4.2,SNR=16						
PALK				LR	LR	12 47 12.4	
	comp=Z,664nm,18.7s,baz=225,slow=36						
PALK	**Pallekele**	**10.33**	**300**	Pn	**Pn**	**12 43 34.3**	**0.0**
KULM	**Kulim**	**11.30**	**74**	Pn	**Pn**	**12 43 47.0**	**-0.5**
DGPR	**DIGLIPUR**	**11.36**	**16**	*e*P	**Pn**	**12 43 47.7**	**-0.6**
TRTT	**Trang**	**11.38**	**60**	P	**Pn**	**12 43 47.7**	**-0.8**
BKNI	**Bangkinang**	**11.44**	**99**	Pn	**Pn**	**12 43 49.0**	**-0.4**
IPM	**Ipoh**	**11.48**	**78**		**Pn**	**12 43 49.8**	**-0.2**
KRJI	**Kerinci**	**12.46**	**110**	P	Pn	12 44 08.7	+5.3
	356nm,0.7s						
MDRS	**Chennai**	**14.33**	**319**	*e*P	**Pn**	**12 44 28.1**	**-0.8**
MDRS				*ex*	x	12 46 45.6	
SKHT	**Srikalahasti**	**15.18**	**320**	*e*P	**Pn**	**12 44 40.0**	**-0.4**
MDSI	**Maura Dua**	**15.87**	**115**	P	**P**	**12 44 51.7**	**-1.5**
	21nm,1.1s						
LWLI	**Liwa**	**15.99**	**117**	P	**P**	**12 44 58.0**	**+3.4**
	16μm100nm,0.9s						
KLSI		**16.45**	**115**	P	**P**	**12 45 03.5**	**+3.8**
ADKI	**Addanki**	**16.64**	**325**	*e*P	**Pn**	**12 44 59.4**	**0.0**
PVM	**Polavaram**	**16.96**	**332**	*e*P	**Pn**	**12 45 03.6**	**+0.2**
MYLAV	**Mylavaram**	**17.02**	**329**	*e*P	**Pn**	**12 45 02.7**	**-1.5**
CHLP	**Challavanipeta**	**17.15**	**341**	*e*P	**Pn**	**12 45 05.0**	**-0.7**
NJS	**Nagarjunasagar**	**17.59**	**325**	*e*P	**Pn**	**12 45 11.7**	**+0.4**
URV	**Uravakonda**	**17.68**	**316**	*e*P	**Pn**	**12 45 12.2**	**-0.2**
MHMT	**Maesarieng**	**17.80**	**26**	P	**P**	**12 45 15.3**	**+0.7**
GGR	**Gangavaram**	**18.15**	**330**	*e*P	**P**	**12 45 18.6**	**+0.1**
CHAI	**Chaiyaphum**	**18.19**	**41**	P	**Pn**	**12 45 18.8**	**+0.1**
CUPL	**Choutuppal**	**18.40**	**325**	*e*P	**Pn**	**12 45 21.2**	**0.0**
CM13	**Chiang Mai Arr**	**18.46**	**28**	P	**Pn**	**12 45 22.2**	**+0.2**
CM05	**Chiang Mai Arr**	**18.46**	**29**	P	**Pn**	**12 45 23.1**	**+1.1**
CM01	**Chiang Mai Arr**	**18.48**	**29**	P	**Pn**	**12 45 22.8**	**+0.6**
CM02	**Chiang Mai Arr**	**18.49**	**29**	P	**Pn**	**12 45 23.1**	**+0.8**
CM31	**Chiang Mai Arr**	**18.51**	**29**	P	**P**	**12 45 22.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**18.51**	**29**	P	**Pn**	**12 45 23.2**	**+0.7**
	0.4nm,0.3s,baz=224,slow=12,SNR=39						
CMAR				LR	LR	12 52 26.0	
	comp=Z,284nm,20.1s,baz=248,slow=37						
CMAR	**Chiang Mai Arr**	**18.51**	**29**	P	**P**	**12 45 21.9**	**-0.5**
CM09	**Chiang Mai Arr**	**18.52**	**29**	P	**Pn**	**12 45 23.2**	**+0.5**
HYB	**Hyderabad**	**18.71**	**325**	*i* P	**Pn**	**12 45 26.0**	**+1.0**
HYB				*e*S	**Sn**	**12 48 54.0**	**-0.5**
HYBB	**Hyderabad (bro**	**18.71**	**325**	*e*P	**P**	**12 45 24.7**	**0.0**
UTTA	**Uttaradit**	**18.75**	**34**	P	**Pn**	**12 45 25.4**	**-0.1**
CHTO	**Chiang Mai**	**18.82**	**28**	P	**Pn**	**12 45 26.1**	**-0.2**
RPR	**Rampur**	**19.48**	**329**	*e*P	**P**	**12 45 32.8**	**-0.3**
PAYA	**Payao**	**19.73**	**29**	P	**Pn**	**12 45 37.1**	**-0.2**
H08S3	**Diego Garcia H**	**19.80**	**240**	T	T	13 05 51.2	
	baz=58,slow=73,SNR=1514						
H08S2	**Diego Garcia H**	**19.80**	**240**	T	T	13 05 49.2	
	baz=58,slow=73,SNR=112						
H08S1	**Diego Carcia H**	**19.81**	**240**	T	T	13 05 54.7	
	baz=58,slow=73,SNR=1122						
LEM	**Lembang**	**19.96**	**117**	P	**Pn**	**12 45 41.0**	**+0.8**
	8.3nm,0.4s,baz=319,slow=19,SNR=1.5						
LEM				LR	LR	12 52 43.4	
	comp=Z,376nm,18.5s,baz=352,slow=35						
KLRI	**Killari**	**20.39**	**322**	*e*P	Pn	12 45 44.4	-0.7
SAIH	**SAIHA**	**20.42**	**9**	*ex*	Pn	12 45 45.3	-0.3
SAIH				IAmb	IAmb	12 45 54.0	
	comp=Z,29nm,0.6s						
NONG	**Nongkai**	**20.53**	**39**	P	**P**	**12 45 45.3**	**+0.8**
KSM	**Kuching**	**20.56**	**92**	P	**P**	**12 45 45.6**	**+0.7**
KSM				IAmb	IAmb	12 46 14.0	
	comp=Z,63nm,1.5s						
CRAI	**Chiangrai**	**20.71**	**29**	P	Pn	12 45 48.6	-0.3
DLV	**T Lat**	**20.95**	**62**	P	**P**	**12 45 50.1**	**+0.9**
NGP	**Nagpur**	**21.54**	**332**	*e*P	**P**	**12 46 00.6**	**+5.2**
NGP				*e*S	**S**	**12 49 50.5**	**-3.9**
BOK	**Bokaro**	**21.80**	**350**	*ex*	**P**	**12 46 03.4**	**+5.2**
BOK				IAmb	IAmb	12 46 12.3	
	comp=Z,55nm,0.7s						
SBUM	**Sibu**	**22.45**	**89**	P	**P**	**12 46 03.9**	**-1.4**
UGM	**Wanagama**	**23.02**	**116**	P	**P**	**12 46 10.4**	**-1.0**
SHL	**Shillong**	**23.33**	**5**	*e*P	**P**	**12 46 13.7**	**-0.8**
SHL				*i* x	x	12 46 24.0	
SHL				IAmb	IAmb	12 46 30.5	
	comp=Z,43nm,1.5s						
SHL	**Shillong**	**23.33**	**5**	P	**P**	**12 46 13.8**	**-0.8**
SLVN	**Son La**	**23.50**	**35**	P	**P**	**12 46 16.9**	**+0.8**
KOHI	**KOHIMA**	**23.77**	**10**	*e*P	**P**	**12 46 18.6**	**-0.2**
KOHI				IAmb	IAmb	12 46 38.5	
	comp=Z,27nm,0.8s						
MOKO	**MOKOCHONG**	**24.43**	**10**	*e*P	**P**	**12 46 23.4**	**-1.5**
MOKO				IAmb	IAmb	12 46 26.0	
	comp=Z,48nm,1.3s						
ODAN	**Odare**	**24.63**	**355**	*e*P	**P**	**12 46 28.3**	**+1.4**
	comp=Z,58nm,0.7s						
RAMN	**Ramite**	**24.80**	**353**	*e*P	**P**	**12 46 30.4**	**+1.9**
	comp=Z,70nm,0.8s						
TAPN	**Taplejung**	**25.09**	**356**	*e*P	**P**	**12 46 32.2**	**+1.1**
	comp=Z,32nm,0.6s						
ZIRO	**ZIRO**	**25.50**	**8**	*e*P	**P**	**12 46 35.0**	**+0.3**
PKI	**Pulchoki**	**25.58**	**351**	*e*P	**P**	**12 46 37.3**	**+1.7**
PKIN	**Phulchoki**	**25.59**	**351**	*e*P	**P**	**12 46 37.5**	**+1.9**
DMN	**Daman**	**25.66**	**350**	*e*P	**P**	**12 46 38.0**	**+1.7**
	comp=Z,52nm,1.0s						
KKN	**Kakani**	**25.81**	**351**	*e*P	**P**	**12 46 39.1**	**+1.5**
	comp=Z,35nm,0.8s						
QIZ	**Qiongzhong**	**25.83**	**48**	P	**P**	**12 46 37.1**	**-0.5**
QIZ				S	**S**	**12 51 07.4**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,22nm,1.5s						
QIZ				LR	LR		
	comp=Z,520nm,13.5s						
QIZ				LR	LR		
	comp=Z,540nm,16.8s						
QIZ				LR	LR		
	comp=Z,530nm,13.9s						
GUN	**Gumba**	**25.84**	**352**	*e*P	**P**	**12 46 39.3**	**+1.3**
	comp=Z,163nm,1.2s						
KMI	**Kunming**	**26.01**	**28**	⇑P	**P**	**12 46 41.3**	**+1.8**
KMI				sP	pwP	12 46 49.2	+3.9
KMI				S	**S**	**12 51 14.6**	**+4.0**
KMI				sS	sS	12 51 25.4	+11
KMI				pmax	pmax		
	comp=Z,27nm,1.0s						
KMI				pmax	pmax		
	comp=Z,190nm,4.1s						
KMI				LR	LR		
	comp=Z,520nm,23.1s						
KMI				LR	LR		
	comp=Z,570nm,21.1s						
KMI				LR	LR		
	comp=Z,560nm,16.6s						
KMI	**Kunming**	**26.01**	**28**	P	**P**	**12 46 40.9**	**+1.4**
KOLN	**Koldanda**	**26.11**	**348**	*e*P	**P**	**12 46 41.9**	**+1.6**
	comp=Z,72nm,1.1s						
GKN	**Gorkha**	**26.13**	**350**	*e*P	**P**	**12 46 42.1**	**+1.7**
	comp=Z,79nm,0.9s						
PYUN	**Piuthan**	**26.56**	**347**	*e*P	**P**	**12 46 46.6**	**+2.2**
	comp=Z,78nm,1.0s						
DANN	**Dangsing**	**26.64**	**348**	*e*P	**P**	**12 46 46.5**	**+1.4**
LSA	**Lhasa**	**27.39**	**3**	P	**P**	**12 46 53.8**	**+1.7**
LSA				pmax	pmax		
	comp=Z,58nm,1.6s						
LSA	**Lhasa**	**27.39**	**3**	P	**P**	**12 46 53.7**	**+1.7**
LSA				IAmb	IAmb	12 47 07.8	
	comp=Z,30nm,1.1s						
GYA	**Guiyang**	**29.09**	**32**	⇓P	**P**	**12 47 07.8**	**+0.9**
GYA				sP	pwP	12 47 14.7	+2.0
GYA				S	**S**	**12 51 59.7**	**+0.9**
GYA				pmax	pmax		
	comp=Z,15nm,1.3s						
GYA				LR	LR		
	comp=Z,600nm,16.8s						
GYA				LR	LR		
	comp=Z,350nm,13.5s						
GYA				LR	LR		
	comp=Z,580nm,18.1s						
CD2	**Chengdu**	**31.49**	**23**	*e*P	**P**	**12 47 29.0**	**+1.0**
CD2				S	**S**	**12 52 38.5**	**+2.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				LR	LR		
	comp=Z,540nm,13.2s						
CD2				LR	LR		
	comp=Z,620nm,15.2s						
CD2				LR	LR		
	comp=Z,540nm,13.7s						
DHRM	**DHARAMSHALA**	**32.47**	**338**	*ex*	P	12 47 43.7	+6.8
DHRM				IAmb	IAmb	12 47 48.2	
	comp=Z,17nm,1.0s						
ENH	**Enshi**	**33.62**	**32**	P	**P**	**12 47 46.3**	**-0.3**
NIL	**Nilore**	**34.90**	**336**	P	**P**	**12 47 58.4**	**+0.7**
LZH	**Lanzhou**	**36.16**	**20**	⇑P	**P**	**12 48 08.7**	**0.0**
LZH				pP	sP	12 48 11.8	-0.1
LZH				sP	pwP	12 48 13.4	-1.2
LZH				PP	**PP**	**12 49 32.4**	**+1.4**
LZH				pmax	pmax		
	comp=Z,28nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.8s						
LZH				LR	LR		
	comp=Z,780nm,15.7s						
LZH				LR	LR		
	comp=Z,520nm,14.1s						
LZH				LR	LR		
	comp=Z,770nm,16.8s						
XAN	**Xi'an**	**36.40**	**27**	P	**P**	**12 48 09.6**	**-1.0**
XAN				pP	sP	12 48 13.9	+0.1
XAN				pmax	pmax		
	comp=Z,22nm,1.3s						
XAN				pmax	pmax		
	comp=Z,220nm,6.9s						
XAN				LR	LR		
	comp=Z,660nm,19.4s						
XAN				LR	LR		
	comp=Z,510nm,19.0s						
XAN				LR	LR		
	comp=Z,590nm,17.3s						
XAN	**Xi'an**	**36.40**	**27**	P	**P**	**12 48 09.6**	**-1.0**
XAN				IAmb	IAmb	12 48 10.8	
	comp=Z,34nm,1.3s						
WHN	**Wuhan**	**36.58**	**37**	⇓P	**P**	**12 48 13.1**	**+1.0**
WHN				pmax	pmax		
	comp=Z,54nm,0.9s						
SOCY	**Socotra**	**36.80**	**287**	P	**P**	**12 48 15.6**	**+1.3**
KBL	**Kabul**	**37.53**	**331**	P	**P**	**12 48 21.5**	**+1.1**
KBL				IAmb	IAmb	12 48 31.8	
	comp=Z,25nm,1.6s						
PSA00	**Pilbara Seismi**	**37.73**	**130**	P	**P**	**12 48 21.4**	**-0.7**
PSA00	**Pilbara Seismi**	**37.73**	**130**	P	**P**	**12 48 22.4**	**+0.3**
PSA00				IAmb	IAmb	12 48 24.5	
	comp=Z,19nm,1.2s						
GTA	**Gaotai**	**38.16**	**13**	P	**P**	**12 48 26.4**	**+0.8**
GTA				pP	pwP	12 48 30.4	-1.1
GTA				sP	sP	12 48 33.7	+4.9
GTA				pmax	pmax

HHC	**Hu-ho-hao-te**	**43.24**	**24**	*e*P	**P**	**12 49 08.2**	**+0.7**
HHC				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.1s						
HHC				LR	LR		
	comp=Z,240nm,15.9s						
HHC				LR	LR		
	comp=Z,470nm,14.9s						
HHC				LR	LR		
	comp=Z,310nm,15.2s						
H01W3	**Cape Leeuwin H**	**43.40**	**150**	T	T	13 35 23.3	
	baz=329,slow=74						
H01W2	**Cape Leeuwin H**	**43.41**	**150**	T	T	13 35 37.6	
	baz=329						
H01W1	**Cape Leeuwin H**	**43.41**	**150**	T	T	13 35 38.2	
	baz=329,slow=74						
NWAO	**Narrogin (SRO)**	**43.53**	**146**	P	**P**	**12 49 09.9**	**0.0**
	comp=Z,2.8nm,0.5s,baz=304,slow=11,SNR=1.5						
KK31	**Karatay Array**	**44.20**	**340**	P	**P**	**12 49 15.8**	**+0.7**
KK31				IAmb	IAmb	12 49 26.7	
	comp=Z,12nm,1.3s						
KKAR	**Karatay Array**	**44.20**	**340**	P	**P**	**12 49 16.3**	**+1.1**
KKAR				IAmb	IAmb	12 49 26.7	
	comp=Z,12nm,1.3s						
KKAR	**Karatay Array**	**44.20**	**340**	P	**P**	**12 49 15.7**	**+0.5**
BJT	**Baijiatuau**	**44.63**	**29**	P	**P**	**12 49 19.5**	**+0.9**
BJT				IAmb	IAmb	12 49 21.1	
	comp=Z,15nm,1.1s						
BJI	**Beijing**	**44.66**	**29**	P	**P**	**12 49 19.8**	**+1.1**
BJI				pmax	pmax		
	comp=Z,13nm,1.4s						
BJI				LR	LR		
	comp=Z,180nm,16.1s						
BJI				LR	LR		
	comp=Z,300nm,16.1s						
BJI				LR	LR		
	comp=Z,200nm,29.4s						
MK31	**Makanchi Array**	**44.90**	**353**	P	**P**	**12 49 20.1**	**-0.6**
MKAR	**Makanchi Array**	**44.90**	**353**	P	**P**	**12 49 20.8**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=163,slow=8.9,SNR=21						
MKAR	**Makanchi Array**	**44.90**	**353**	P	**P**	**12 49 20.1**	**-0.5**
MAKZ	**Makanchi**	**44.95**	**352**	P	**P**	**12 49 21.3**	**+0.2**
MAKZ				IAmb	IAmb	12 49 31.9	
	comp=Z,12nm,1.4s						
GEYT	**Alibeck**	**45.89**	**325**	P	**P**	**12 49 27.6**	**-1.1**
	comp=Z,50nm,1.1s,baz=183,slow=15,SNR=5.1						
GEYT				LR	LR	13 10 28.9	
	comp=Z,137nm,19.3s,baz=150,slow=38						
SONM	**Songino Array**	**47.69**	**15**	P	**P**	**12 49 43.5**	**+0.8**
	comp=Z,20nm,0.8s,baz=197,slow=8.6,SNR=70						
SONM	**Songino Array**	**47.69**	**15**	P	**P**	**12 49 43.3**	**+0.6**
ULN	**Ulaanbaatar**	**47.90**	**16**	P	**P**	**12 49 44.6**	**+0.3**
ULN				IAmb	IAmb	12 49 46.0	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**48.94**	**119**	P	**P**	**12 49 53.3**	**+0.6**
WB0				IAmb	IAmb	12 50 05.6	
	comp=Z,30nm,1.6s						
WRA	**Warramunga Arr**	**48.96**	**119**	P	**P**	**12 49 53.4**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=297,slow=8.6,SNR=40						
WRA				LR	LR	13 09 45.0	
	comp=Z,59nm,21.8s,baz=275,slow=35						
WRA	**Warramunga Arr**	**48.96**	**119**	P	**P**	**12 49 52.9**	**+0.1**
WRAB	**Tennant Creek**	**48.96**	**119**	P	**P**	**12 49 53.4**	**+0.6**
WRAB				IAmb	IAmb	12 50 07.1	
	comp=Z,21nm,1.2s						
WB2	**Warramunga Arr**	**48.97**	**119**	P	**P**	**12 49 52.7**	**-0.2**
WR0	**Warramunga Arr**	**49.14**	**119**	P	**P**	**12 49 53.8**	**-0.4**
WR0				IAmb	IAmb	12 50 07.3	
	comp=Z,28nm,1.4s						
KURK	**Kurchatov**	**49.26**	**351**	P	**P**	**12 49 54.0**	**-0.6**
KURK				IAmb	IAmb	12 50 05.0	
	comp=Z,16nm,1.1s						
KSAR	**Wonju Array Be**	**49.56**	**40**	P	**P**	**12 49 56.0**	**-1.1**
KSRS	**Korea Array**	**49.60**	**40**	P	**P**	**12 49 56.8**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=230,slow=8.0,SNR=12						
KSRS				LR	LR	13 11 57.7	
	comp=Z,129nm,19.4s,baz=226,slow=37						
AS31	**Alice Springs**	**50.04**	**124**	P	**P**	**12 50 02.1**	**+1.0**
ASAR	**Alice Springs**	**50.04**	**124**	P	**P**	**12 50 01.8**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=297,slow=7.2,SNR=20						
ASAR				PcP	**PcP**	**12 51 21.9**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=300,slow=7.8,SNR=2.9						
ASAR				LR	LR	13 10 42.1	
	comp=Z,108nm,20.6s,baz=295,slow=36						
ZAA0	**Zalesovo Array**	**51.75**	**356**	P	**P**	**12 50 12.7**	**-0.7**
ZAA0				IAmb	IAmb	12 50 23.4	
	comp=Z,11nm,1.1s						
ZALV	**Zalesovo Beam**	**51.75**	**356**	P	**P**	**12 50 13.0**	**-0.4**
	comp=Z,2.7nm,0.4s,baz=180,slow=7.1,SNR=16						
ZALV				LR	LR	13 13 21.0	
	comp=Z,183nm,21.8s,baz=168,slow=38						
ZALV	**Zalesovo Beam**	**51.75**	**356**	P	**P**	**12 50 12.8**	**-0.6**
CN2	**Changchun**	**52.14**	**32**	*e*P	**P**	**12 50 17.8**	**+1.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMBO	**Kilima Mbogo**	**52.59**	**267**	LR	LR	13 10 15.1	
	comp=Z,99nm,18.3s,baz=92,slow=33						
BRVK	**Borovoye**	**53.21**	**345**	P	**P**	**12 50 23.9**	**-0.3**
ABKAR	**Akbulak array**	**53.36**	**336**	P	**P**	**12 50 25.7**	**+0.3**
ABKAR				IAmb	IAmb	12 50 37.0	
	comp=Z,19nm,1.2s						
ABKAR	**Akbulak array**	**53.36**	**336**	P	**P**	**12 50 25.7**	**+0.3**
MDJ	**Mudanjiang**	**54.93**	**34**	P	**P**	**12 50 37.3**	**+0.3**
MDJ				PcS	**PcS**	**12 55 34.5**	**-4.0**
MDJ				S	**S**	**12 58 19.3**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,19nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,330nm,6.1s						
MDJ				LR	LR		
	comp=Z,330nm,4.6s						
MDJ				LR	LR		
	comp=Z,390nm,5.0s						
MDJ				LR	LR		
	comp=Z,300nm,5.1s						
USRK	**Ussuriysk Ar.**	**56.05**	**36**	P	**P**	**12 50 44.4**	**-0.6**
	comp=Z,2.4nm,0.7s,baz=254,slow=7.4,SNR=8.2						
USRK				LR	LR	13 16 52.2	
	comp=Z,103nm,19.1s,baz=215,slow=38						
USRK	**Ussuriysk Ar.**	**56.05**	**36**	P	**P**	**12 50 44.9**	**-0.1**
MAT	**Matsushiro**	**56.21**	**46**	P	**P**	**12 50 45.8**	**-0.5**
MAT				*e*S	**S**	**12 58 41.2**	**+5.1**
MJAR	**Matsushiro Arr**	**56.21**	**46**	P	**P**	**12 50 45.5**	**-0.8**
	comp=Z,48nm,0.5s,baz=241,slow=6.9,SNR=5.6						
MJAR				LR	LR	13 15 09.5	
	comp=Z,172nm,21.7s,baz=155,slow=36						
KBZ	**Khabaz**	**58.56**	**322**	LR	LR	13 18 09.3	
	comp=Z,45nm,21.3s,baz=131,slow=38						
ARU	**Arti**	**59.57**	**341**	P	**P**	**12 51 09.1**	**-0.4**
ARU				IAmb	IAmb	12 51 11.3	
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**59.65**	**129**	P	**P**	**12 51 11.2**	**+0.6**
	comp=Z,3.7nm,1.0s,baz=343,slow=5.9,SNR=5.7						
STKA				LR	LR	13 15 22.5	
	comp=Z,100nm,21.0s,baz=295,slow=34						
STKA	**Stephens Creek**	**59.65**	**129**	P	**P**	**12 51 11.1**	**+0.6**
BR131	**Keskin Array S**	**63.01**	**314**	P	**P**	**12 51 33.5**	**+0.2**
BRTR	**Keskin Array B**	**63.01**	**314**	P	**P**	**12 51 32.7**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=132,slow=6.5,SNR=8.6						
BRTR				LR	LR	13 20 41.4	
	comp=Z,73nm,18.7s,baz=128,slow=38						
BRTR	**Keskin Array B**	**63.01**	**314**	P	**P**	**12 51 32.9**	**-0.4**
YAK	**Yakutsk**	**66.75**	**19**	P	**P**	**12 51 56.3**	**-0.7**
NRIK	**Noril'sk**	**67.05**	**359**	P	**P**	**12 51 57.1**	**-1.8**
	comp=Z,3.8nm,0.7s,baz=166,slow=5.6,SNR=5.3						
NRIK				LR	LR	13 22 39.5	
	comp=Z,215nm,21.8s,baz=197,slow=37						
BOSA	**Boshof**	**68.89**	**238**	P	**P**	**12 52 11.5**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=86,slow=8.2,SNR=4.1						
BOSA	**Boshof**	**68.89**	**238**	P	**P**	**12 52 11.5**	**+0.1**
KLMR	**Klimovskoe**	**69.76**	**336**	*e*P	**P**	**12 52 14.9**	**-1.0**
KLMR				AMP		12 52 28.4	
	comp=Z,20nm,1.5s						
AKASG	**Malin Array Be**	**70.00**	**324**	LR	LR	13 24 39.6	
	comp=Z,93nm,21.3s,baz=85,slow=37						
MLR	**Muntele Rosu**	**70.29**	**318**	P	**P**	**12 52 20.5**	**+0.8**
MLR				IAmb	IAmb	12 52 39.7	
	comp=Z,7.4nm,0.7s						
BURAR	**Bucovina Array**	**71.42**	**320**	P	**P**	**12 52 27.1**	**+0.5**
MAW	**Mawson**	**72.15**	**190**	LR	LR	13 18 02.5	
	comp=Z,125nm,20.3s,baz=58,slow=31						
TIXI	**Tiksi**	**73.64**	**12**	P	**P**	**12 52 37.7**	**-1.5**
KOLS	**Kolonicke sedl**	**73.68**	**321**	*e*P	**P**	**12 52 40.2**	**+0.3**
PETK	**Petropavlovsk-**	**75.14**	**35**	LR	LR	13 29 21.4	
	comp=Z,63nm,18.7s,baz=147,slow=39						
FINES	**FINESS Array B**	**75.75**	**334**	P	**P**	**12 52 51.4**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=128,slow=6.7,SNR=9.7						
FINES				LR	LR	13 27 46.2	
	comp=Z,106nm,19.5s,baz=76,slow=37						
ARCES	**ARCESS Array B**	**79.15**	**341**	P	**P**	**12 53 11.2**	**+0.7**
	comp=Z,8.1nm,1.0s,baz=83,slow=3.8,SNR=6.5						
ARCES				LR	LR	13 29 52.2	
	comp=Z,166nm,19.7s,baz=110,slow=37						
GEC2	**GERESS Array S**	**79.19**	**319**	P	**P**	**12 53 11.8**	**+0.6**
GEC2				IAmb	IAmb	12 53 13.4	
	comp=Z,5.4nm,0.9s						
GERES	**GERESS Array B**	**79.19**	**319**	P	**P**	**12 53 12.2**	**+1.0**
	comp=Z,3.0nm,0.9s,baz=92,slow=6.0,SNR=12						
GERES				LR	LR	13 34 02.6	
	comp=Z,32nm,18.3s,baz=108,slow=40						
CLL	**Collm**	**80.02**	**322**	*e*P	**P**	**12 53 15.0**	**-0.5**
CLL				*e*S	**S**	**13 03 18.0**	**-1.7**
CLL				*e*		13 05 06.0	
CLL				*e*SS	**SS**	**13 08 30.0**	**+0.3**
CLL				*e*		13 10 36.0	
CLL				Lm	MLR	13 30 00.0	
	comp=Z,100nm,19.0s						
NOA	**NORSAR Array B**	**82.54**	**331**	P	**P**	**12 53 30.4**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=93,slow=6.0,SNR=1.8						
NOA				LR	LR	13 32 38.0	
	comp=Z,59nm,20.2s,baz=100,slow=38						
TORD	**Torodi Ar. Bea**	**87.62**	**283**	P	**P**	**12 53 55.9**	**+0.7**
	comp=Z,0.8nm,1.0s,baz=93,slow=7.2,SNR=2.9						
TORD				LR	LR	13 29 26.7	
	comp=Z,62nm,21.6s,baz=150,slow=33						
TORD	**Torodi Ar. Bea**	**87.62**	**283**	P	**P**	**12 53 54.6**	**-0.5**
VNDA	**Vanda**	**88.30**	**168**	P	**P**	**12 53 57.6**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=342,slow=6.3,SNR=3.6						
VNDA				LR	LR	13 29 04.1	
	comp=Z,151nm,18.4s,baz=284,slow=33						
VNDA	**Vanda**	**88.30**	**168**	P	**P**	**12 53 56.9**	**-0.2**
VNDA				IAmb	IAmb	12 53 57.3	
	comp=Z,6.0nm,1.6s						
DBIC	**Dimbokro**	**94.32**	**277**	LR	LR	13 36 44.2	
	comp=Z,34nm,18.3s,baz=72,slow=35						
PDAR	**Pinedale Array**	**131.97**	**19**	PKP	**PKPdf**	**13 00 19.5**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=76,slow=1.5,SNR=2.5						
PDAR	**Pinedale Array**	**131.97**	**19**		**PKPdf**	**13 00 19.1**	**-1.3**
NVAR	**Mina Array Bea**	**132.00**	**30**	PKP	**PKPdf**	**13 00 19.8**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=268,slow=2.6,SNR=2.9						
NVAR	**Mina Array Bea**	**132.00**	**30**		**PKPdf**	**13 00 19.1**	**-1.4**
TXAR	**Lajitas Array**	**146.12**	**21**	PKPbc	**PKPbc**	**13 00 47.3**	**+0.2**
	comp=Z,3.8nm,0.9s,baz=270,slow=1.3,SNR=16						
TXAR	**Lajitas Array**	**146.12**	**21**		**PKPab**	**13 00 47.8**	**+0.1**

*NEIC **05** 12:51:36.5±1.4, 0°.15N±0°.08×127°.21E±0°.05, h146km±6km, mb4.1/14, Error ellipse: s-maj=12.0km s-min=6.0km az=161.0*
*DJA **05** 12:51:36.7±0.3, 0°N±3°×12°.7E±°, h138km±4km, M4.4/13, mB4.8/3, mb4.2/6, MLv4.6/13, Mw(mB)4.0/3*
*IDC **05** 12:51:37.8±2.5, 0°.05S×127°.16E, h160km±23km, mb3.4/7, mb1 3.5/9, mb1mx3.3/35, mbtmp3.9/9, Error ellipse: s-maj=33.6km s-min=10.5km az=77.0*

ISC 05 12:51:36.3±0.5, **0°.15N**±0°.05×**127°.24E**±0°.06, **h150**km, **n50,** σ1ŝ**36**/58, **mb4.0**/12, **1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
TNTI	**Ternate**	**0.63**	**11**	P		**Pn**	**12 51 58.3**	**-0.1**
TNTI				S		**Sn**	**12 52 14.2**	**-1.0**
TNTI	**Ternate**	**0.63**	**11**			**Pn**	**12 51 58.5**	**+0.1**
TNTI				Sn		**Sn**	**12 52 14.3**	**-0.9**
SANI	**Sanana**	**2.52**	**210**	P		**Pn**	**12 52 17.6**	**-0.1**
KMSI	**Cibinong**	**3.29**	**277**	P		**Pn**	**12 52 28.2**	**+0.9**
NLAI	**Namlea**	**3.37**	**182**	P		**Pn**	**12 52 28.9**	**+0.5**
MSAI	**Masohi**	**3.86**	**154**	P		**Pn**	**12 52 36.2**	**+1.5**
SGSI	**Sangihe**	**3.91**	**334**	P		**Pn**	**12 52 35.6**	**+0.2**
SlJI	**Sorong**	**4.15**	**104**	P		**Pn**	**12 52 39.4**	**+0.9**
	1.1nm,0.3s,baz=295,slow=19,SNR=2.3							
LUWI	**Luwuk**	**4.62**	**255**	P		**Pn**	**12 52 45.2**	**+0.4**
LUWI	**Luwuk**	**4.62**	**255**			**Pn**	**12 52 45.2**	**+0.4**
LUWI				Sn		**Sn**	**12 53 36.2**	**-1.9**
APSI	**Ampana**	**5.69**	**259**	P		**Pn**	**12 53 00.2**	**+1.3**
	1.4nm5µm277nm,0.5s							
FAKI	**Fak Fak**	**5.86**	**121**	Pn		**Pn**	**12 53 01.6**	**+0.4**
DDMP	**Don Marcelino,**	**6.11**	**346**	*e*P		**Pn**	**12 53 02.0**	**-2.5**
MATI	**Mati**	**6.82**	**352**	*e*P		**Pn**	**12 53 12.8**	**-1.2**
SKMP	**Bagumbayan, Su**	**6.88**	**337**	*e*P		**Pn**	**12 53 12.9**	**-1.8**
KCP	**Kidapawan**	**7.14**	**343**	⇓*i*P		**Pn**	**12 53 18.4**	**+0.1**
KCP				*i* S		**Sn**	**12 54 36.1**	**-2.4**
MPSI	**Mapaga**	**7.35**	**271**	P		**Pn**	**12 53 21.6**	**+0.6**
	0.1nm332nm6.3nm,0.9s							
BUKP	**Musuan**	**7.98**	**344**	*e*P		**Pn**	**12 53 28.1**	**-1.4**
TTSI	**Tana Toraja**	**8.07**	**247**	P		**Pn**	**12 53 31.7**	**+1.0**
	420nm23nm,0.7s							
SPSI	**Sidrap Palu**	**8.51**	**241**	P		**Pn**	**12 53 38.0**	**+1.4**
PAGZ	**Pagadian**	**8.56**	**333**	*e*P		**Pn**	**12 53 35.2**	**-2.0**
KAPI	**Kappang**	**9.07**	**235**	S		**Sn**	**12 55 25.3**	**+0.5**
	1.2nm,0.3s,baz=121,slow=20,SNR=1.2							
MTN	**Manton Dam**	**13.47**	**164**			**Pn**	**12 54 40.8**	**-0.8**
KNRA	**Kununurra**	**15.80**	**175**			**Pn**	**12 55 10.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**18.20**	**185**	P		**P**	**12 55 37.6**	**-0.2**
	0.2nm,0.3s,baz=352,slow=6.0,SNR=6.7							
FITZ				S		**S**	**12 58 52.4**	**-6.0**
	0.0nm,0.3s,baz=169,slow=16,SNR=1.6							
FITZ	**Fitzroy Crossi**	**18.20**	**185**	P		**P**	**12 55 38.3**	**+0.4**
FITZ				IAmb	IAmb		12 55 41.6	
	comp=Z,3.8nm,0.9s							
WB0	**Warramunga Arr**	**21.00**	**161**	P		**P**	**12 56 09.1**	**+1.0**
WB0				IAmb	IAmb		12 56 10.5	
	comp=Z,5.8nm,0.5s							
WRAB	**Tennant Creek**	**21.14**	**161**	P		**P**	**12 56 10.8**	**+1.2**
WRAB				IAmb	IAmb		12 56 15.7	
	comp=Z,5.5nm,0.6s							
WRA	**Warramunga Arr**	**21.14**	**161**	P		**P**	**12 56 09.7**	**+0.1**
	comp=Z,2.9nm,0.4s,baz=339,slow=11,SNR=106							
WRA				S		**S**	**12 59 53.4**	**-2.9**
	comp=Z,0.7nm,0.7s,baz=330,slow=21,SNR=6.4							
WRA	**Warramunga Arr**	**21.14**	**161**	P		**P**	**12 56 08.9**	**-0.7**
WB2	**Warramunga Arr**	**21.15**	**161**	P		**P**	**12 56 10.0**	**+0.4**
WB2				IAmb	IAmb		12 56 14.4	
	comp=Z,5.2nm,0.8s							
WR0	**Warramunga Arr**	**21.23**	**161**	P		**P**	**12 56 10.8**	**+0.3**
WR0				IAmb	IAmb		12 56 12.0	
	comp=Z,4.2nm,0.4s							
AS31	**Alice Springs**	**24.54**	**165**			**P**	**12 56 42.8**	**+0.6**
ASAR	**Alice Springs**	**24.54**	**165**	P		**P**	**12 56 42.2**	**0.0**
	comp=Z,2.2nm,0.4s,baz=350,slow=14,SNR=23							
ASAR				PcP		**PcP**	**13 00 16.7**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=347,slow=3.8,SNR=2.5							
ASAR				S		**S**	**13 00 51.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=349,slow=19,SNR=2.4							
ASAR	**Alice Springs**	**24.54**	**165**			**P**	**12 56 43.3**	**+1.1**
BBOO	**Buckleboo**	**33.82**	**167**	P		**P**	**12 58 04.9**	**+0.7**
STKA	**Stephens Creek**	**34.63**	**158**	P		**P**	**12 58 10.5**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=334,slow=11,SNR=6.2							
STKA	**Stephens Creek**	**34.63**	**158**	P		**P**	**12 58 11.6**	**+0.4**
KSRS	**Korea Array**	**37.12**	**1**	P		**P**	**12 58 33.5**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=177,slow=8.7,SNR=4.3							
ARMA	**Armidale**	**38.24**	**145**	P		**P**	**12 58 43.9**	**+1.9**
MKAR	**Makanchi Array**	**60.78**	**326**	P		**P**	**13 01 33.5**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=109,slow=8.4,SNR=6.6							
MKAR	**Makanchi Array**	**60.78**	**326**	P		**P**	**13 01 33.3**	**+0.9**
KURK	**Kurchatov**	**65.03**	**328**	P		**P**	**13 01 59.1**	**-1.2**
KURK				IAmb	IAmb		13 02 17.7	
	comp=Z,2.9nm,1.4s							
SOCY	**Socotra**	**73.61**	**283**	P		**P**	**13 02 54.0**	**+0.1**
SOCY				IAmb	IAmb		13 02 57.7	
	comp=Z,6.6nm,1.0s							
ABKAR	**Akbulak array**	**75.24**	**321**	P		**P**	**13 03 03.1**	**+0.5**
VNDA	**Vanda**	**79.83**	**173**	P		**P**	**13 03 28.1**	**+0.6**
MAW	**Mawson**	**80.60**	**200**	P		**P**	**13 03 31.6**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=11,slow=5.8,SNR=4.0							
MAW	**Mawson**	**80.60**	**200**	P		**P**	**13 03 32.8**	**+1.1**
ILAR	**Eielson Array**	**88.10**	**25**	P		**P**	**13 04 10.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=267,slow=10,SNR=1.7							
TORD	**Torodi Ar. Bea**	**124.45**	**286**	PKP		**PKPdf**	**13 10 18.9**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=27,slow=0.3,SNR=2.6							

LJU 05 12:58:07.8, 45°.92N×15°.82E, h0km, ML0.7, 1C Artificial, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
PTJ	**Puntijarka**	**0.10**	**99**	*e*P	g	Pg	12 58 09.4	-0.4
PTJ				S	g	Sg	12 58 11.2	+0.1
GCIS	**Gornji Cirnik**	**0.15**	**248**	⇑*e*P	g	Pg	12 58 10.4	-0.2
GCIS				*e*Sg	g	Sg	12 58 13.3	+0.9
	comp=Z,44nm,0.4s							
CRES	**Cresnjev**	**0.27**	**249**	*e*Pg	g	Pg	12 58 12.8	-0.2
CRES				*i* Sg	g	Sg	12 58 17.2	+0.7
	comp=Z,11nm,0.3s							
LEGS	**Legarje**	**0.35**	**274**	*e*Pg	g	Pg	12 58 15.2	+0.6
OZLJ	**Ozalj**	**0.40**	**219**	Sg	g	Sg	12 58 20.7	+0.3
MOSL	**Moslavina**	**0.72**	**115**	*e*Pg	g	Pg	12 58 22.4	+0.7
MOSL				Sg	g	Sb	12 58 32.8	-1.0

*THE **05** 12:58:09.9, 40°.75N×19°.70E, h0km±2km, ML2.9/4, Error ellipse: s-maj=2.3km s-min=0.6km az=348.0*
*TIR **05** 12:58:09.5, 40°.69N×19°.79E, h4km±1km, Md3.3*
*ATH **05** 12:58:10.6, 40°.74N×19°.82E, h10km±4km, ML2.8/5, Error ellipse: s-maj=4.6km s-min=1.0km az=270.0*

ISC 05 12:58:09.8±1.1, **40°.73N**±0°.02×**19°.74E**±0°.03, **h4**km±10km, **n35,** σ1ŝ**10**/45, **Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
VLO	**Vlora**	**0.32**	**216**	P		**Pg**	**12 58 15.6**	**-0.5**
	baz=227							
VLO				S		**Sg**	**12 58 21.3**	**+1.1**
	baz=227							
VLO	**Vlora**	**0.32**	**216**	P		**Pg**	**12 58 16.1**	**+0.1**
VLO				S		**Sg**	**12 58 21.1**	**+0.9**
	16µm,0.4s							
TIR	**Tirane**	**0.62**	**8**	P		**Pb**	**12 58 22.6**	**-0.7**
TIR				S		**Sg**	**12 58 30.5**	**+0.6**
TIR	**Tirane**	**0.62**	**8**	P		**Pb**	**12 58 22.8**	**-0.4**
	baz=4.0							
TIR				S		**Sb**	**12 58 32.2**	**-0.1**
	baz=4.0							
TIR	**Tirane**	**0.62**	**8**	P		**Pg**	**12 58 21.9**	**+0.1**
TIR				S		**Sg**	**12 58 30.2**	**+0.3**
	490nm,0.6s							
LSK	**Leskovik**	**0.87**	**131**	P		**Pg**	**12 58 25.7**	**-0.9**
	baz=130							
LSK	**Leskovik**	**0.87**	**131**	P		**Pb**	**12 58 27.1**	**-0.5**
LSK				S		**Sn**	**12 58 40.4**	**-1.8**
	748nm,0.8s							
KASA	**Kassiopi**	**0.99**	**171**	P		**Pg**	**12 58 29.3**	**+0.5**
KEK	**Kerkira**	**1.02**	**178**	P		**Pg**	**12 58 29.8**	**+0.5**
KEK				S		**Sb**	**12 58 44.5**	**+0.8**
KEK	**Kerkira**	**1.02**	**178**	P		**Pg**	**12 58 29.2**	**-0.1**
NEST	**Nestorio**	**1.04**	**107**	P		**Pg**	**12 58 29.2**	**-0.6**
NEST				AML	AML		12 58 57.7	
	comp=N,606µm,0.6s							
NEST				AML	AML		12 59 00.1	
	comp=E,940µm,0.5s							
NEST	**Nestorio**	**1.04**	**107**	P		**Pb**	**12 58 30.1**	**-0.4**
PHP	**Peshkopia**	**1.09**	**29**	P		**Pn**	**12 58 31.5**	**-0.3**
	baz=25							
PHP				S		**Sn**	**12 58 47.9**	**+0.4**
	baz=25							
PHP	**Peshkopia**	**1.09**	**29**	P		**Pg**	**12 58 30.3**	**-0.4**
PENT	**Pentalofos**	**1.19**	**116**	P		**Pg**	**12 58 32.4**	**-0.3**
PENT				AML	AML		12 59 00.9	
	comp=E,500µm,0.5s							
PENT				AML	AML		12 59 02.1	
	comp=N,649µm,0.5s							
PENT	**Pentalofos**	**1.19**	**116**	P		**Pb**	**12 58 32.5**	**-0.5**
FNA	**Florina**	**1.24**	**87**	P		**Pn**	**12 58 33.6**	**-0.4**
	baz=85							
IGT	**Igoumenitsa**	**1.28**	**159**	P		**Pg**	**12 58 34.2**	**-0.1**
IGT				AML	AML		12 59 05.4	
	comp=N,806µm,0.7s							
IGT				AML	AML		12 59 09.4	
	comp=E,676µm,1.3s							
IGT	**Igoumenitsa**	**1.28**	**159**	P		**Pn**	**12 58 34.7**	**+0.2**
IGT				S		**Sn**	**12 58 53.3**	**+1.3**
	comp=E,352nm,0.9s							
PUK	**Puka**	**1.31**	**5**	P		**Pb**	**12 58 36.1**	**+0.9**
	baz=3.0							
PUK				S		**Sn**	**12 58 56.2**	**+3.1**
	baz=3.0							
JAN	**Janina**	**1.37**	**141**	P		**Pn**	**12 58 35.7**	**-0.1**
JAN				AML	AML		12 59 06.1	
	comp=N,828µm,0.6s							
JAN				AML	AML		12 59 09.5	
	comp=E,779µm,0.5s							
JAN	**Janina**	**1.37**	**141**	P		**Pn**

GO04	Tololo Observa	14.83	175	P		P	13 27 17.8	-0.4
AQDB	Aquidauana	16.49	110	*e*P		Pn	13 27 34.9	-0.5
NPGB	Novo Progresso	18.42	65	*e*P		P	13 27 55.7	-2.0
H03N1	Juan Fernandez	19.04	198	T		T	13 46 58.4	
	baz=17,slow=74,SNR=10.0							
H03N2	Juan Fernandez	19.05	198	T		T	13 46 50.2	
	baz=17,slow=74,SNR=8.2							
H03N3	Juan Fernandez	19.06	198	T		T	13 46 56.9	
	baz=17,slow=74,SNR=11							
ITTB	Itaituba	19.49	58	*e*P		P	13 28 07.8	-1.6
SNDB	Serra Nova Dou	20.55	83	*e*P		P	13 28 20.5	-0.4
FRTB	Fartura	22.75	114	*e*P		P	13 28 44.3	+0.2
CPSB	Cacapava Do Su	22.82	134	*e*P		P	13 28 44.7	+0.1
PLTB	Pedras Altas	23.55	137	*e*P		P	13 28 49.0	-2.5
PRPB	Parauapebas	23.75	70	*e*P		P	13 28 51.4	-2.0
PLCA	Paso Flores	25.35	177	P		P	13 29 08.4	+0.6
	2.0nm,0.9s,baz=357,slow=12,SNR=4.5							
PLCA	Paso Flores	25.35	177	IAmb		IAmb	13 29 10.2	
	comp=Z,12nm,1.4s							
JANB	Januaria	26.88	93	*e*P		P	13 29 20.7	-1.2
TXAR	Lajitas Array	53.82	326	P		P	13 33 02.0	-0.8
	comp=Z,0.3nm,0.5s,baz=142,slow=6.3,SNR=2.9							
RWWY	Rawlins	65.31	332	P		P	13 34 19.6	-2.2
PDAR	Pinedale Array	67.24	331	P		P	13 34 34.6	+0.6
	comp=Z,0.1nm,0.3s,baz=96,slow=3.6,SNR=1.7							
REDW	Red Top Meadow	68.31	331	P		P	13 34 41.3	+0.6
REDW				IAmb		IAmb	13 34 42.4	
	comp=Z,4.9nm,1.4s							
SNAA	Sanae	69.09	162	P		P	13 34 45.5	+0.5
SNAA				IAmb		IAmb	13 34 46.8	
	comp=Z,3.7nm,0.8s							
DBIC	Dimbokro	70.16	77	P		P	13 34 52.5	0.0
	comp=Z,2.9nm,0.7s,baz=256,slow=4.2,SNR=3.2							
DBIC	Dimbokro	70.16	77	IAmb		IAmb	13 34 53.8	
	comp=Z,9.0nm,1.1s							
HUMO	Hull Mountain	74.15	324	P		P	13 35 15.0	-0.7
QSPA	South Pole Qui	74.83	180	P		P	13 35 21.0	+1.6
QSPA				IAmb		IAmb	13 35 21.9	
	comp=Z,5.0nm,1.3s							
TOA0	Torodi Ar. Sit	78.36	73	P		P	13 35 41.5	+1.4
TOA0				IAmb		IAmb	13 35 48.2	
	comp=Z,8.2nm,1.3s							
TORD	Torodi Ar. Bea	78.36	73	P		P	13 35 40.5	+0.5
	comp=Z,1.6nm,0.5s,baz=268,slow=5.5,SNR=8.6							
TORD	Torodi Ar. Bea	78.36	73	P		P	13 35 41.3	+1.3
VNDA	Vanda	82.35	190	P		P	13 36 02.2	+1.8
	comp=Z,0.5nm,0.8s,baz=203,slow=2.7,SNR=4.9							
ASAR	Alice Springs	133.62	214	PKP		PKPdf	13 42 55.9	+0.1
	comp=Z,0.3nm,0.7s,baz=136,slow=2.2,SNR=5.3							
WRA	Warramunga Arr	136.32	217	PKP		PKPdf	13 43 01.5	+0.6
	comp=Z,0.5nm,0.6s,baz=143,slow=2.0,SNR=8.7							
ZALV	Zalesovo Beam	137.46	20	PKP		PKPdf	13 43 00.8	-1.1
	comp=Z,8.9nm,0.6s,baz=270,slow=2.9,SNR=2.0							
MKAR	Makanchi Array	142.09	29	PKP		PKPdf	13 43 11.1	+0.5
	comp=Z,0.1nm,0.5s,baz=318,slow=1.9,SNR=1.6							
SONM	Songino Array	147.56	2	PKPbc		PKPdf	13 43 21.2	+1.1
	comp=Z,0.5nm,0.5s,baz=41,slow=4.7,SNR=3.6							
KSRS	Korea Array	151.67	325	PKPbc		PKPbc	13 43 33.6	+0.5
	comp=Z,0.5nm,0.5s,baz=358,slow=2.3,SNR=3.0							

IDC 05 13:38:39.9±2.8, 8°14S×157°13E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/31, mbtmp3.7/4, ML4.2/1, Error ellipse: s-maj=73.0km s-min=31.3km az=180.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	3.07	115	Pn		13 39 29.3	-0.5
	31nm,0.3s,baz=291,slow=0.9,SNR=22						
HNR				Sn		13 40 12.7	-0.8
	47nm,0.3s,baz=207,slow=18,SNR=11						
WRA	Warramunga Arr	24.99	240	P		P	13 44 05.1	-0.5
	0.6nm,0.7s,baz=66,slow=9.5,SNR=7.4							
WRA				PcP		PcP	13 47 41.4	+0.3
	0.3nm,0.6s,baz=70,slow=2.8,SNR=6.5							
ASAR	Alice Springs	27.08	233	P		P	13 44 23.9	-0.7
	0.6nm,1.0s,baz=101,slow=4.8,SNR=2.4							
STKA	Stephens Creek	27.69	209	P		P	13 44 30.7	+0.8
	1.1nm,0.7s,baz=51,slow=7.9,SNR=2.9							

*BJI **05** 14:01:01.8±0.0, 42°.75N×145°.92E, h32km, mB5.0/40, mb4.8/64, Ms4.3/17, Ms7.3/9/19*
*MOS **05** 14:01:04.5±0.9, 42°.70N×145°.67E, h46km, mb4.9/63, Error ellipse: s-maj=6.1km s-min=4.3km az=94.5*
MOS Felt (III) at Golovnino; (II) at Goryachiy Plyazh, Mendeleevo, Lagunnoe, Malokuril'skoe, Yuzhno-Kuril'sk.
*JMA **05** 14:01:04.6±0.1, 42°.69N×145°.73E, h48km±2km, M4.6*
JMA Felt III J1.
*NIED **05** 14:01:04.7, 42°.69N×145°.73E, h48km, MW4.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-6.04; $M_{\theta\theta}$6.82; $M_{\phi\phi}$-0.79; $M_{r\theta}$0.99; $M_{\theta\phi}$-0.35; $M_{\phi r}$1.62; Fault plane solution: $M_0$6.74000×10^{15} NP1: ϕ_s257.00000°, δ51.00000°, λ-111.00000°. NP2: ϕ_s108.00000°, δ43.00000°, λ-66.00000°.*
*IDC **05** 14:01:04.8±3.6, 42°.69N×145°.74E, h33km±26km, mb4.4/37, mb1 4.5/44, mb1mx4.5/58, mbtmp4.6/44, ML3.5/6, MS3.8/20, Ms1 3.8/20, ms1mx3.5/55 Error ellipse: s-maj=12.6km s-min=10.9km az=131.0*
*SKHL **05** 14:01:05.5±0.5, 42°.73N×145°.85E, h48km±1km, mb5.3/12*
SKHL Felt (III) at Golovnino; (II-III) at Yushno-Kuril'sk, Lagunnoye, Goryachiy Plyazh, Mendeleevo, Malokuril'skoye.
*NEIC **05** 14:01:05.7±1.5, 42°.65N±0°.07×145°.80E±0°.10, h38km±5km, mb4.8/286, Error ellipse: s-maj=10.9km s-min=9.1km az=123.0*
ISC 05 14:01:05.5±0.6, 42°.68N±0°.03×145°.72E±0°.03, h41km±4km, n753, σ0s98/782, mb4.8/222, MS3.9/26, 27C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKHN	Kushirohamanak	0.58	315	⇑P	Pn	14 01 16.7	-0.6
JKHN				*e*S	Sn	14 01 25.4	-0.3
NEM2	Nemuro 2	0.69	1	⇑P	Pn	14 01 18.1	-0.7
NEM2				*e*S	Sn	14 01 27.8	-0.5
NMR	Nemuro--Hokkai	0.69	0	*i* P	Pn	14 01 18.0	-0.8
NMR				*i* S	Sn	14 01 27.0	-1.4
NMR	Nemuro--Hokkai	0.69	0	⇑*i* PN	Pn	14 01 18.1	-0.8
NMR				*i* S	Sn	14 01 27.9	-0.5
JAK	Akkeshi	0.82	293	⇑P	Pn	14 01 20.1	-0.5
JAK				*e*S	Sn	14 01 31.8	+0.3
GLVR	Golovnino	1.07	352	*i* P	Pn	14 01 23.0	-1.0
GLVR				AMB	AMB	14 01 23.0	
	13μm,0.4s						
GLVR				*i* S	Sn	14 01 37.0	-0.6
GLVR				A	A	14 01 38.0	
	88μm,0.4s						
GLVR				A	A	14 01 38.0	
	86μm,0.4s						
GLVR	Golovnino	1.07	352	⇑*i* PN	Pn	14 01 23.3	-0.7
GLVR				*i* S	Sn	14 01 37.4	-0.2
GLVR				pmax	pmax		
	comp=Z,13μm,0.4s						
GLVR				pmax	pmax		
	comp=E,218nm,0.2s						
GLVR				pmax	pmax		
	comp=N,3μm,0.3s						
GLVR				smax	smax		
	comp=N,88μm,0.4s						
GLVR				smax	smax		
	comp=E,86μm,0.4s						
JNK	Nakash	1.17	321	⇑P	Pn	14 01 24.7	-0.6
JNK				*e*S	Sn	14 01 39.0	-1.1
GRPR	Tuman	1.31	2	*i* P	Pn	14 01 26.0	-1.3
GRPR				AMB	AMB	14 01 27.0	
	comp=E,16μm,0.3s						
GRPR				*i* S	Sn	14 01 42.0	-1.7
GRPR				A	A	14 01 43.0	
	comp=E,51μm,0.4s						
GRPR				A	A	14 01 43.0	
	comp=E,21μm,0.4s						
GRPR	Tuman	1.31	2	⇑*i* PN	Pn	14 01 26.5	-0.8
GRPR				*i* S	Sn	14 01 42.2	-1.5
GRPR				pmax	pmax		
	comp=N,4μm,0.3s						
GRPR				pmax	pmax		
	comp=E,2μm,0.3s						
GRPR				pmax	pmax		
	comp=Z,16μm,0.3s						
GRPR				smax	smax		
	comp=E,21μm,0.4s						
GRPR				smax	smax		
	comp=N,51μm,0.3s						
JRA	Rausu	1.33	341	⇑P	Pn	14 01 27.2	-0.4
JRA				*e*S	Sn	14 01 43.8	-0.3
YUK	Yuzh-Kuril'sk	1.36	4	*i* P	Pn	14 01 27.0	-0.9
YUK				AMB	AMB	14 01 28.0	
	comp=N,10μm,0.2s						
YUK				*i* S	Sn	14 01 43.0	-1.7
YUK				A	A	14 01 44.0	
	comp=N,29μm,1.1s						
YUK				A	A	14 01 44.0	
	comp=N,16μm,1.1s						
YUK				A	A	14 01 46.0	
	comp=N,20μm,0.6s						
YUK				A	A	14 01 46.0	
	comp=N,38μm,0.6s						
YUK	Yuzh-Kuril'sk	1.36	4	*c i* PN	Pn	14 01 27.1	-0.9
YUK				*i* S	Sn	14 01 43.1	-1.7
YUK				pmax	pmax		
	comp=N,2μm,0.2s						
YUK				pmax	pmax		
	comp=E,2μm,0.2s						
YUK				pmax	pmax		
	comp=Z,10μm,0.2s						
YUK				smax	smax		
	comp=N,29μm,1.0s						
YUK				smax	smax		
	comp=E,16μm,1.1s						
YUK				smax	smax		
	comp=E,38μm,0.6s						
YUK				smax	smax		
	comp=N,20μm,0.3s						
JOB	Onbets	1.41	280	⇓P	Pn	14 01 28.4	-0.2
JAR	Ashorobuto	1.56	294	⇑P	Pn	14 01 30.3	-0.4
JAR				*e*S	Sn	14 01 50.1	+0.4
JCH	Churui	1.74	269	⇓P	Pn	14 01 33.1	-0.1
JCH				*e*S	Sn	14 01 54.8	+0.6
JTHR	Tokachihiroo	1.83	259	⇓P	Pn	14 01 35.2	+0.7
JTHR				*e*S	Sn	14 01 57.2	+0.7
JTKR	Abashiri--Toko	1.85	315	⇑P	Pn	14 01 35.0	+0.3
JTKR				*e*S	Sn	14 01 57.6	+0.8
ERM	Erimo	2.01	252	*ce*PN	Pn	14 01 38.8	+1.9
ERM				pmax	pmax		
	comp=Z,449nm,0.6s						
ERM	Erimo	2.01	252	Pn	Pn	14 01 38.5	+1.5
JKA	Kamikawa-asahi	2.69	303	*e*P	Pn	14 01 47.8	+1.5
JKA	Kamikawa-asahi	2.69	303	Pn	Pn	14 01 47.6	+1.4
JKA	Kamikawa-asahi	2.69	303		Sn	14 02 19.7	+2.1
ASAJ	Asahikawa	2.69	303	Pn	Pn	14 01 47.8	+1.5
	comp=Z,26nm,0.3s,baz=157,slow=14,SNR=177						
ASAJ				Sn	Sn	14 02 19.7	+2.0
	comp=Z,107nm,0.3s,baz=60,slow=20,SNR=8.9						
ASAJ				LR	LR	14 03 12.6	
	comp=Z,1μm,18.4s,baz=115,slow=47						
KUR	Kuril'sk	2.99	30	*i* P	Pn	14 01 50.2	-0.1
KUR				AMB	AMB	14 01 55.0	
	comp=Z,566nm,0.4s						
KUR				*i* S	Sn	14 02 22.8	-2.0
KUR				A	A	14 02 30.0	
	comp=Z,494nm,0.5s						
KUR				A	A	14 02 30.0	
	comp=Z,2μm,0.5s						
KUR	Kuril'sk	2.99	30	*c i* PN	Pn	14 01 51.2	+0.9
KUR				*i* S	Sn	14 02 25.8	+1.0
KUR				pmax	pmax		
	comp=E,129nm,0.4s						
KUR				pmax	pmax		
	comp=Z,566nm,0.4s						
KUR				pmax	pmax		
	comp=N,189nm,0.3s						
KUR				smax	smax		
	comp=E,2μm,0.5s						
KUR				smax	smax		
	comp=N,494nm,0.3s						
KUR				smax	smax		
	comp=N,1μm,1.0s						
KUR				smax	smax		
	comp=E,2μm,1.0s						
JEW	Eniwo	3.15	274	Pn	Pn	14 01 54.0	+1.4
JTM	Tenmabayashi	3.96	243	Pn	Pn	14 02 03.6	-0.1
YSS	Yuzh-Sakhalins	4.77	335	*e*P	Pn	14 02 15.0	+0.3
YSS				AMB	AMB	14 02 20.0	
	comp=E,50nm,1.0s						
YSS				*e*S	Sn	14 03 08.9	+0.2
YSS				A	A	14 03 12.0	
	comp=E,80nm,0.9s						
YSS				A	A	14 03 12.0	
	comp=E,50nm,0.9s						
YSS	Yuzh-Sakhalins	4.77	335	⇓*e*PN	Pn	14 02 15.7	+1.0
YSS				*e*S	Sn	14 03 11.3	+2.6
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				smax	smax		
	comp=N,80nm,0.9s						
YSS				smax	smax		
	comp=E,50nm,0.7s						
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
YSS				MLR	MLR		
	comp=N,1μm,17.0s						
YSS	Yuzh-Sakhalins	4.77	335	Pn	Pn	14 02 14.2	-0.5
JMM	Marumori	6.11	220		Pn	14 02 30.2	-3.0
TEY	Ternei	7.00	293	*e*P	Pn	14 02 49.7	+4.3
TEY				AMB	AMB	14 02 53.4	
	comp=N,20nm,0.5s						
JSD	Sado	7.34	233	Pn	Pn	14 02 49.0	-1.1
JYT	Yasato	7.73	215		Pn	14 02 51.5	-3.9
MJB9	Matsu-Tunnel	8.43	226	Pn	Pn	14 03 02.8	-2.4
MAJO	Matsushiro	8.44	226	*d* PN	Pn	14 03 04.5	-0.6
MAJO	Matsushiro	8.44	226	Pn	Pn	14 03 03.6	-1.5
MAT	Matsushiro	8.44	226	P	Pn	14 03 04.0	-1.1
MAT				S	Sn	14 04 35.8	-3.2
MJAR	Matsushiro Arr	8.44	226	Pn	Pn	14 03 04.5	-0.7
	comp=N,0.6nm,0.3s,baz=28,slow=13,SNR=34						
TYV	Tymovskoe	8.45	347	*e*P	Pn	14 03 06.8	+1.5
TYV				AMB	AMB	14 03 14.7	
	comp=N,31nm,1.0s						
TYV				*e*S	Sn	14 04 37.5	-1.8
TYV				A	A	14 04 41.4	
	comp=N,10.0nm,1.0s						
TYV				A	A	14 04 41.4	
	comp=N,20nm,1.0s						
TYV	Tymovskoe	8.45	347	*e*PN	Pn	14 03 10.8	+5.5
TYV				*e*S	Sn	14 04 44.0	+4.7
TYV				pmax	pmax		
	comp=Z,31nm,1.0s						
TYV				pmax	pmax		
	comp=Z,800nm,3.5s						
TYV				smax	smax		
	comp=N,13nm,1.3s						
TYV				smax	smax		
	comp=E,900nm,4.1s						
JGF	Kuroka	9.60	225	Pn	Pn	14 03 19.6	-1.4
INU	Inuyama	9.97	226		Pn	14 03 25.0	-1.1
USRK	Ussuriysk Ar.	10.11	283	Pn	Pn	14 03 29.7	+1.7
	baz=95,slow=14,SNR=14						
USRK	Ussuriysk Ar.	10.11	283		Pn	14 03 29.3	+1.4
USA0B	Ussuriysk Arra	10.11	283	*i* PN	Pn	14 03 30.0	+2.0
USA0B	Ussuriysk Arra	10.11	283	Pn	Pn	14 03 29.3	+1.3
VLA	Vladivostok	10.17	277	*e*P	Pn	14 03 30.3	+1.5
VLA	Vladivostok	10.17	277	*i* PN	Pn	14 03 30.3	+1.5
VLA				pmax	pmax		
	comp=Z,25nm,1.0s						
VLA				MLR	MLR		
	comp=Z,247nm,15.0s						
GRNR	Gornyy	10.30	325	*e*P	Pn	14 03 29.2	-1.4
GRNR				AMB	AMB	14 03 30.9	
	comp=Z,3.0nm,1.0s						
GRNR	Gornyy	10.30	325	⇑*i* PN	Pn	14 03 29.2	-1.4
GRNR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GRNR				MLR	MLR		
	comp=E,160nm,17.0s						
GRNR				MLR	MLR		
	comp=N,170nm,11.0s						
GRNR				MLR	MLR		
	comp=Z,540nm,15.0s						
JHJ	Hachijo jima 2	10.63	208	Sn	Sn	14 05 20.2	-13
	comp=Z,28nm,0.3s,baz=68,slow=10,SNR=2.2						
JWT	Wachi	10.91	231		Pn	14 03 38.3	-0.7
NKL	Nikolayevsk	11.01	344	*e*P	Pn	14 03 40.3	+0.1
NKL				AMB	AMB	14 03 54.3	
	comp=Z,96nm,0.7s						
OKH	Okha	11.04	351	*e*P	Pn	14 03 42.6	+2.0
	comp=Z,3nm,0.3s,baz=114,slow=14,SNR=13						
KLR				LR	LR	14 08 49.7	
	comp=Z,482nm,19.2s,baz=122,slow=40						
KLR	Kul'dur	11.72	309	*e*P	Pn	14 03 51.2	+1.3
KLR	Kul'dur	11.72	309	*ce*PN	Pn	14 03 51.2	+1.3
KLR				pmax	pmax		
	comp=Z,23nm,1.2s						
KLR				MLR	MLR		
	comp=Z,450nm,15.0s						
MDJ	Mudanjiang	11.85	285	P	Pn	14 03 52.9	+1.1
MDJ				S	Sn	14 06 01.6	-1.0
MDJ				PcS	PcS	14 13 07.7	-3.3
MDJ				pmax	pmax		
	comp=Z,12nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,280nm,5.3s						
MDJ				LR	LR		
	comp=Z,380nm,4.6s						
MDJ				LR	LR		
	comp=Z,360nm,7.5s						
MDJ				LR	LR		
	comp=Z,370nm,7.5s						
JHS	Saijyo	12.46	236	Pn	Pn	14 03 59.8	-0.4
JMN	Monobe	12.90	230	Pn	Pn	14 04 04.1	-2.1
PEA0B	Petropavlovsk-	13.15	33	PN	Pn	14 04 08.7	-0.8
PEA0B	Petropavlovsk-	13.15	33	Pn	Pn	14 04 08.7	-0.8
PETK	Petropavlovsk-	13.15	33	Pn	Pn	14 04 07.9	-1.6
	comp=Z,0.5nm,0.3s,baz=194,slow=9.7,SNR=7.3						
EKMR	Ekimchan	13.45	325	*e*P	Pn	14 04 13.0	-0.6
EKMR				AMB	AMB	14 04 25.0	
	comp=Z,10.0nm,0.8s						
PET	Petropavlovsk	13.48	35	*e*P	Pn	14 04 11.8	-2.2
PET				AMB	AMB	14 04 23.8	
	comp=Z,520nm,1.0s						
PET	Petropavlovsk	13.48	35	*i* P	Pn	14 04 15.6	+1.6
PET				pmax	pmax		
	comp=Z,524nm,1.5s						
PET				MLR	MLR		
	comp=Z,2μm,19.0s						
PET	Petropavlovsk	13.48	35	Pn	Pn	14 04 12.3	-1.8
KSRS	Korea Array	14.59	255	Pn	Pn	14 04 29.8	+0.7
	comp=Z,0.2nm,0.3s,baz=62,slow=13,SNR=2.4						
KSRS				LR	LR	14 10 16.9	
	comp=Z,334nm,19.1s,baz=56,slow=38						
KSAR	Wonju Array Be	14.62	255	P	P	14 04 34.6	-0.6
KSAR	Wonju Array Be	14.62	255	P	P	14 04 34.5	-0.6
CN2	Changchun	14.82	281	*e*P	Pn	14 04 31.3	-0.9
CN2				*e*S	Sn	14 07 12.2	-2.9
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,220nm,4.8s						
CN2				LR	LR		
	comp=Z,340nm,13.0s						
CN2				LR	LR		
	comp=Z,340nm,13.0s						
CN2				LR	LR		
	comp=Z,350nm,13.0s						
JNU	Nakatsue	15.09	236	Pn	Pn	14 04 37.0	+1.2
	comp=Z,0.1nm,0.3s,baz=353,slow=8.1,SNR=1.7						
JNU				LR	LR	14 11 01.5	
	comp=Z,440nm,18.0s,baz=39,slow=40						
JTU	Tsushima	15.12	243	Pn	Pn	14 04 34.6	-1.6
JCJ	Chichijima	15.81	192	P	Pn	14 04 46.0	+0.8
BMKR	Bomnak	16.35	323	*e*P	Pn	14 04 50.0	-1.8
JSU	Suzuyama	16.49	232	P	P	14 04 55.7	-0.2
ZEA	Zeya	16.50	318	*e*P	Pn	14 04 52.0	-1.7
ZEA				AMB	AMB	14 05 04.0	
	comp=Z,37nm,1.0s						
ZEA	Zeya	16.50	318	*e*P	Pn	14 04 55.4	+1.7
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KROS	Kirovskiy	17.03	320	*e*P	Pn	14 04 59.0	-1.4
MA2	Magadan	17.20	9	P	Pn	14 05 00.9	-1.6
	comp=Z,0.4nm,0.3s,baz=186,slow=15,SNR=2.1						
MA2				LR	LR	14 11 28.3	
	comp=Z,218nm,19.2s,baz=191,slow=36						
SEY	Seymchan	20.66	9	P	P	14 05 39.0	-2.5
	comp=Z,3.7nm,0.7s,baz=193,slow=11,SNR=6.0						
SEY				LR	LR	14 14 24.1	
	comp=Z,176nm,18.9s,baz=156,slow=39						
SEY	Seymchan	20.66	9	*e*P	P	14 05 41.7	+0.3
SEY	Seymchan	20.66	9	*i* P	P	14 05 41.7	+0.3
YAK	Yakutsk	21.60	339	P	P	14 05 50.8	-0.7
	comp=Z,4.9nm,0.3s,baz=225,slow=1.5,SNR=6.3						
YAK				S	S	14 09 38.4	-10
	comp=Z,2.4nm,0.4s,baz=196,slow=20,SNR=0.5						
YAK				LR	LR	14 14 31.2	
	comp=Z,124nm,20.6s,baz=136,slow=37						
YAK	Yakutsk	21.60	339	*e*P	P	14 05 48.7	-2.8
YAK				*e*		14 06 20.6	
YAK				*e*S	S	14 09 45.7	-2.6
YAK				*e**SS	sS	14 10 05.2	+1.5
YAK				*e*SS	SnSn	14 10 33.5	+20
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,214nm,3.3s						
YAK				pmax	pmax		
	comp=N,230nm,3.9s						
YAK				pmax	pmax		
	comp=E,421nm,4.3s						
YAK				smax	smax		
	comp=N,288nm,3.3s						
YAK				smax	smax		
	comp=E,298nm,3.5s						
YAK				MLR	MLR		
	comp=Z,97nm,20.0s						
YAK				MLR	MLR		
	comp=N,85nm,18.0s						
YAK				MLR	MLR		
	comp=E,94nm,16.0s						
BJI	Beijing	22.28	273	P	P	14 05 58.1	-1.0
BJI				pmax	pmax		
	comp=E,13nm,0.6s						
BJT	Baijiatuau	22.30	273	P	P	14 05 58.1	-1.1
BJT				pmax	pmax		
	comp=Z,31nm,1.3s						
BJT	Baijiatuau	22.30	273	P	P	14 05 58.1	-1.1
TIA	Tai'an	22.94	263	P	P	14 06 05.4	-0.7
TIA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NJ2	Nanjing	23.75	252	*e*P	P	14 06 15.1	+1.2
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
AMKA	Amchitka	24.31	57	P	P	14 06 19.2	+0.3
HHC	Hu-ho-hao-te	25.45	278	*e*P	P	14 06 30.6	+1.1
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,4.6s						
HHC				LR	LR		
	comp=Z,230nm,11.8s						
HHC				LR	LR		
	comp=Z,340nm,12.5s						
HHC				LR	LR		
	comp=Z,200nm,11.8s						
ULN	Ulaanbaatar	27.50	294	*e*P	P	14 06 48.3	+0.3
ULN	Ulaanbaatar	27.50	294	*ce*P	P	14 06 48.3	+0.3
ULN				pmax	pmax		
	comp=Z,23nm,1.7s						
ULN	Ulaanbaatar	27.50	294	P	P	14 06 47.9	0.0
BILL	Bilibino	27.68	17	*e*P	P	14 06 51.3	+2.1
BILL	Bilibino	27.68	17	*i* P	P	14 06 51.3	+2.1
BILL				pmax	pmax		
	comp=Z,15nm,1.4s						
BILL				MLR	MLR		
	comp=Z,194nm,17.0s						
WHN	Wuhan	27.78	254	⇑P	P	14 06 51.9	+1.4
WHN				S	S	14 11 27.7	-2.7
WHN				LR	LR		
	comp=Z,800nm,15.3s						
SONM	Songino Array	27.94	294	P	P	14 06 52.5	+0.6
	comp=Z,26nm,0.6s,ba

comp=Z,18nm,0.6s
SONM Songino Array 27.94 294 P P 14 06 51.8 -0.1
GUMO Guam 29.00 182 LR LR 14 17 11.7
comp=Z,62nm,20.8s,baz=357,slow=33
H11N2 WAKE ISLAND Hy 29.02 135 T T 14 38 01.1
baz=328,slow=75,SNR=4594
H11N1 WAKE ISLAND Hy 29.03 135 T T 14 38 02.0
baz=328,slow=75,SNR=3415
H11N3 WAKE ISLAND Hy 29.04 135 T T 14 38 02.4
baz=328,slow=75,SNR=4618
TLY Talaya 29.62 302 P **P 14 07 08.2 +1.6**
comp=Z,2.8nm,0.6s,baz=105,slow=19,SNR=2.4
TLY LR LR 14 19 35.7
comp=Z,127nm,21.3s,baz=90,slow=38
TLY Talaya 29.62 302 *eP* **P 14 07 08.1 +1.4**
TLY Talaya 29.62 302 *i P* **P 14 07 08.1 +1.4**
TLY pmax pmax
comp=Z,3.0nm,0.8s
TLY Talaya 29.62 302 P P 14 07 07.5 +0.8
ZAK Zakamensk 29.86 300 *eP* **P 14 07 08.3 -0.6**
ZAK Zakamensk 29.86 300 *eP* **P 14 07 08.3 -0.6**
ZAK pmax pmax
comp=Z,6.0nm,1.4s
XAN Xi'an 29.93 266 P **P 14 07 10.1 +0.5**
XAN pP pP 14 07 19.6 -0.5
XAN pmax pmax
comp=Z,16nm,1.0s
XAN pmax pmax
comp=Z,120nm,7.8s
XAN Xi'an 29.93 266 P P 14 07 10.1 +0.5
XAN pmax pmax
comp=Z,10.0nm,0.7s
XAN Xi'an 29.93 266 P **P 14 07 10.1 +0.5**
XAN IAmb IAmb 14 07 10.9
comp=Z,9.7nm,0.7s
H11S1 WAKE ISLAND Hy 29.95 137 T T 14 39 08.4
baz=329,slow=76
H11S3 WAKE ISLAND Hy 29.95 137 T T 14 39 13.4
baz=329,slow=76
H11S2 WAKE ISLAND Hy 29.96 137 T T 14 39 09.6
baz=329,slow=76,SNR=9710
ENH Enshi 31.42 259 P P 14 07 23.2 +0.4
ENH IAmb IAmb 14 07 24.0
comp=Z,14nm,0.8s
LZH Lanzhou 32.77 273 *eP* **P 14 07 39.0 +4.3**
LZH pP pwP 14 07 49.8 +2.0
LZH sP sP 14 07 53.5 +3.3
LZH *e*PP **PP 14 08 49.2 0.0**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,92nm,5.4s
LZH LR LR
comp=Z,380nm,13.5s
LZH LR LR
comp=Z,400nm,13.2s
LZH LR LR
comp=Z,530nm,16.6s
GTA Gaotai 34.45 280 *eP* **P 14 07 49.9 +0.6**
GTA pP pP 14 07 54.4 -5.6
GTA pmax pmax
comp=Z,6.0nm,0.8s
ANM Nome 35.06 35 P P 14 07 54.8 +0.7
ANM pmax pmax
comp=Z,61nm,1.5s
ANM Nome 35.06 35 P P 14 07 54.8 +0.7
CD2 Chengdu 35.26 265 *eP* **P 14 07 57.0 +0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 35.65 256 ⇑P **P 14 08 00.4 +0.7**
GYA pP pwP 14 08 12.9 -0.2
GYA pmax pmax
comp=Z,14nm,0.9s
GYA LR LR
comp=Z,200nm,16.6s
CHGN Chignik 37.68 49 P P 14 08 16.2 -0.2
CHGN IAmb IAmb 14 08 29.6
comp=Z,23nm,1.2s
KWAJ Kwajalein Atol 38.83 144 P P 14 08 25.3 -1.2
KWAJ Kwajalein Atol 38.83 144 P P 14 08 25.3 -1.2
TTA Tatalina 38.92 38 P P 14 08 27.9 +1.0
TTA pmax pmax
comp=Z,14nm,1.1s
TTA Tatalina 38.92 38 P P 14 08 27.9 +1.0
TTA IAmb IAmb 14 08 41.0
comp=Z,14nm,1.1s
SVW2 Sparrevohn 39.06 41 P P 14 08 28.8 +0.7
KMI Kunming 39.27 258 ⇑P **P 14 08 31.7 +1.3**
KMI sP pwP 14 08 44.0 0.0
KMI pmax pmax
comp=Z,13nm,1.3s
KMI LR LR
comp=Z,160nm,16.6s
KMI LR LR
comp=Z,160nm,21.4s
KMI LR LR
comp=Z,210nm,22.9s
CHIR Chirikof Islan 39.28 50 P P 14 08 30.3 +0.4
NRIK Noril'sk 39.69 332 P P 14 08 31.4 -1.8
comp=Z,2.6nm,0.5s,baz=80,slow=5.6,SNR=4.3
NRIK Noril'sk 39.69 332 *i* P **P 14 08 33.3 +0.1**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
NRIK MLR MLR
comp=Z,80nm,15.0s
A21K Barrow 39.96 25 P P 14 08 35.0 -0.3
baz=256
A21K Barrow 39.96 25 P P 14 08 36.4 +1.0
A21K IAmb IAmb 14 08 44.1
comp=Z,20nm,0.9s
SII Sitkinak Islan 40.00 48 P P 14 08 36.6 +0.6
DGZ Jazzator, Alta 40.06 301 *i* P **P 14 08 36.6 -0.1**
DGZ pmax pmax
comp=Z,5.0nm,1.1s
OHAK Old Harbor 40.42 47 P P 14 08 39.2 -0.2
OHAK IAmb IAmb 14 09 05.3
comp=Z,28nm,1.3s
RSO Redoubt South 40.46 42 P P 14 08 38.6 -1.3
PPLA Purkeypile 40.67 38 P P 14 08 42.5 +1.0
PPLA IAmb IAmb 14 09 01.0
comp=Z,22nm,1.2s
KDAK Kodiak Island 40.74 46 P P 14 08 42.1 +0.1
KDAK pmax pmax
comp=Z,50nm,1.4s
KDAK Kodiak Island 40.74 46 P P 14 08 42.1 +0.1
ZAA0 Zalesovo Array 40.82 308 P P 14 08 42.4 -0.4
ZAA0 **PcP 14 10 43.4 +0.4**
ZALV Zalesovo Beam 40.82 308 P P 14 08 42.5 -0.2
comp=Z,4.4nm,0.4s,baz=90,slow=8.8,SNR=15
ZALV PcP **PcP 14 10 43.5 +0.6**
comp=Z,8.1nm,0.6s,baz=88,slow=3.1,SNR=14
ZALV LR LR 14 27 09.9
comp=Z,149nm,18.1s,baz=72,slow=38
ZALV Zalesovo Beam 40.82 308 P P 14 08 42.4 -0.4
ZALV **PcP 14 10 43.4 +0.4**
SKT Skwentna 40.99 40 P P 14 08 45.2 +1.1
SKT IAmb IAmb 14 08 46.6
comp=Z,22nm,0.9s
CAPN Captain Cook N 41.23 42 P P 14 08 45.7 -0.3
baz=274
KTH Kantishna Hill 41.23 37 P P 14 08 46.5 +0.3
KTH IAmb IAmb 14 09 00.0
comp=Z,29nm,1.1s
CNPM China Poot 41.28 44 P P 14 08 46.4 0.0
MLY Manley 41.32 35 P P 14 08 47.7 +0.9
baz=269
SUA Susitna One 41.38 41 P P 14 08 47.5 +0.1
SUA IAmb IAmb 14 09 00.2
comp=Z,43nm,1.3s
BRLK Bradley Lake 41.44 43 P P 14 08 47.1 -0.6
BRLK IAmb IAmb 14 08 54.3
comp=Z,27nm,1.4s
TRF Thorofare Moun 41.52 38 P P 14 08 48.6 0.0
WMQ Urumqi 41.52 292 *eP* **P 14 08 51.8 +3.1**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ pmax pmax
comp=Z,140nm,4.9s
CUT Chulitna 41.56 39 P P 14 08 49.5 +0.8
baz=272
COLD Coldfoot 41.61 32 P P 14 08 49.9 +0.8
baz=267
COLD Coldfoot 41.61 32 P P 14 08 49.5 +0.5
BWN Browne 41.87 36 P P 14 08 52.0 +0.7
I23K Minto, Yukon-K 41.90 35 P P 14 08 52.3 +0.9
baz=270,SNR=6.3
I23K Minto, Yukon-K 41.90 35 P P 14 08 51.9 +0.5
I23K IAmb IAmb 14 09 05.1
comp=Z,22nm,1.4s
TOLK Toolik Lake Re 41.94 30 P P 14 08 52.8 +1.0
baz=266
TOLK Toolik Lake Re 41.94 30 P P 14 08 51.9 +0.2
O22K Cooper Landing 41.95 42 P P 14 08 52.2 +0.3
NEA2 Nenana 42.03 36 P P 14 08 53.2 +0.7
baz=271,SNR=6.3
SEW Seward 42.12 43 P P 14 08 52.9 -0.3
PMR Palmer 42.15 40 P P 14 08 53.1 -0.4
PMR pmax pmax
comp=Z,16nm,1.3s
PMR Palmer 42.15 40 P P 14 08 53.1 -0.4
GHO Glory Hole Cre 42.23 40 P P 14 08 54.6 +0.3
GHO IAmb IAmb 14 09 20.7
comp=Z,33nm,1.4s
MDM Murphy Dome 42.39 35 P P 14 08 55.9 +0.4
WRH Wood River Hil 42.46 36 P P 14 08 56.5 +0.5
KNK Knik Glacier 42.48 41 P P 14 08 56.3 0.0
KNK IAmb IAmb 14 09 07.9
comp=Z,20nm,1.2s
SML Sawmill 42.51 40 P P 14 08 57.4 +0.9
SML IAmb IAmb 14 09 15.4
comp=Z,22nm,1.0s
TCOL CIGO, UAF Yank 42.55 35 P P 14 08 56.8 +0.1
TCOL IAmb IAmb 14 09 10.1
comp=Z,23nm,0.9s
COLA College 42.55 35 P P 14 08 56.8 +0.1
COLA pmax pmax
comp=Z,22nm,1.0s
COLA College 42.55 35 P P 14 08 56.8 +0.1
COLA IAmb IAmb 14 09 10.1
comp=Z,22nm,0.9s
CCB Clear Creek Bu 42.58 36 P P 14 08 56.9 0.0
POKR Poker Plat Res 42.72 35 P P 14 08 59.0 +0.9
baz=272,SNR=5.6
POKR Poker Plat Res 42.72 35 P P 14 08 58.4 +0.3
POKR IAmb IAmb 14 09 11.8
comp=Z,41nm,1.3s
DHY Denali Highway 42.85 38 P P 14 08 59.4 0.0
DHY IAmb IAmb 14 09 13.2
comp=Z,22nm,1.3s
HDA Harding Lake 42.96 36 P P 14 08 59.7 -0.4
baz=273,SNR=7.9
HDA Harding Lake 42.96 36 P P 14 08 59.5 -0.5
HDA IAmb IAmb 14 09 12.2
comp=Z,11nm,0.6s
IL31 42.97 35 P P 14 08 59.8 -0.3
IL31 IAmb IAmb 14 09 13.4
comp=Z,18nm,1.1s
ILAR Eielson Array 42.97 35 P P 14 09 00.2 +0.1
comp=Z,3.2nm,0.5s,baz=253,slow=4.6,SNR=45
ILAR PcP **PcP 14 10 49.4 -0.5**
comp=Z,0.7nm,0.5s,baz=278,slow=2.9,SNR=1.6
SCM Sheep Creek Mo 42.98 40 P P 14 09 00.0 -0.4
SCM pmax pmax
comp=Z,44nm,1.3s
SCM Sheep Creek Mo 42.98 40 P P 14 09 00.0 -0.4
SCM IAmb IAmb 14 09 14.3
comp=Z,44nm,1.3s
GLI Glacier Island 43.20 41 P P 14 09 02.1 +0.1
GLI IAmb IAmb 14 09 21.8
comp=Z,35nm,1.0s
M24K Tolsona, Glenn 43.50 39 P P 14 09 05.2 +0.7
baz=276
M24K Tolsona, Glenn 43.50 39 P P 14 09 05.5 +1.0
M24K IAmb IAmb 14 09 19.6
comp=Z,29nm,1.2s
PRP Porcupine Dome 43.50 34 P P 14 09 05.0 +0.4
PRP IAmb IAmb 14 09 07.4
comp=Z,11nm,0.6s
FID Port Fidalgo 43.51 41 P P 14 09 04.4 -0.2
FYU Fort Yukon 43.57 33 P P 14 09 06.2 +1.3
FYU IAmb IAmb 14 09 11.8
comp=Z,24nm,0.8s
KLU Klutina 43.69 40 P P 14 09 06.5 +0.5
KLU IAmb IAmb 14 09 35.4
comp=Z,22nm,1.2s
PAX Paxson 43.73 38 P P 14 09 06.5 +0.1
PAX pmax pmax
comp=Z,4.0nm,1.0s
PAX Paxson 43.73 38 P P 14 09 06.5 +0.1
EYAK Cordova Ski Ar 43.90 42 P P 14 09 08.3 +0.7
EYAK IAmb IAmb 14 09 27.9
comp=Z,20nm,1.1s
RIDG Independent Ri 43.93 37 P P 14 09 07.7 -0.3
RIDG IAmb IAmb 14 09 21.3
comp=Z,16nm,1.2s
MK31 Makanchi Array 44.16 298 P P 14 09 09.9 -0.1
MK31 pmax pmax
comp=Z,11nm,0.7s
MK31 Makanchi Array 44.16 298 P P 14 09 09.9 -0.1
MK31 IAmb IAmb 14 09 11.0
comp=Z,10nm,0.7s
MKAR Makanchi Array 44.16 298 P P 14 09 10.2 +0.2
comp=Z,13nm,0.7s,baz=83,slow=10.0,SNR=101
MKAR PcP **PcP 14 10 55.0 +0.7**
comp=Z,3.0nm,0.9s,baz=71,slow=3.3,SNR=2.6
MKAR LR LR 14 29 05.4
comp=Z,67nm,20.3s,baz=66,slow=38
MKAR Makanchi Array 44.16 298 *eP* **P 14 09 10.1 +0.1**
MKAR Makanchi Array 44.16 298*ceP* **P 14 09 10.1 +0.1**
MKAR pmax pmax
comp=Z,12nm,0.7s
MKAR Makanchi Array 44.16 298 P P 14 09 09.8 -0.2
SCRK Sand Creek 44.29 36 P P 14 09 10.5 -0.3
baz=276,SNR=6.7
DOT Dot Lake 44.29 37 P P 14 09 09.8 -1.0
N25K Chitina, Valde 44.30 40 P P 14 09 11.3 +0.4
MAKZ Makanchi 44.36 298 P P 14 09 11.8 +0.2
MAKZ pmax pmax
comp=Z,17nm,1.1s
MAKZ Makanchi 44.36 298 P P 14 09 11.8 +0.2
MAKZ IAmb IAmb 14 09 12.6
comp=Z,17nm,1.1s
MENT Mentasta 44.53 38 P P 14 09 13.5 +0.8
MENT IAmb IAmb 14 09 32.1
comp=Z,16nm,1.3s
KAIM Kayak Island 44.65 42 P P 14 09 14.1 +0.4
L26K Log Cabin Wild 44.69 38 P P 14 09 15.4 +1.4
baz=278
GLB Gilahina Butte 44.70 40 P P 14 09 14.7 +0.5
GLB IAmb IAmb 14 09 16.2
comp=Z,22nm,1.5s
VRDI Verde Repeater 44.90 40 P P 14 09 16.8 +0.9
VRDI IAmb IAmb 14 09 20.0
comp=Z,28nm,1.5s
MCARA McCarthy VSAT 45.08 40 P P 14 09 17.6 +0.5
MCARA IAmb IAmb 14 09 35.3
comp=Z,13nm,1.0s
CRQM Cirque 45.13 41 P P 14 09 18.5 +0.8
KURK Kurchatov 45.27 304 *eP* **P 14 09 18.6 -0.1**
KURK Kurchatov 45.27 304 P **P 14 09 18.6 -0.1**
KURK 14 10 59.1
KURK pmax pmax
comp=Z,16nm,0.8s
KURK Kurchatov 45.27 304 P P 14 09 18.6 -0.1
KURK IAmb IAmb 14 09 19.5
comp=Z,16nm,0.8s
TGL Tana Glacier 45.28 41 P P 14 09 19.8 +1.0
KURBB Kurchatov Arra 45.35 304 PcP **PcP 14 10 59.1 +0.9**
comp=Z,3.3nm,0.6s,baz=78,slow=3.5,SNR=7.4
KURBB Kurchatov Arra 45.35 304 P P 14 09 18.8 -0.6
EGAK Eagle 45.41 35 P P 14 09 19.5 -0.1
EGAK IAmb IAmb 14 09 32.5
comp=Z,14nm,1.0s
BALM Baldy 45.47 40 P P 14 09 21.1 +0.8
BALM IAmb IAmb 14 09 36.3
comp=Z,10nm,0.8s
BARN Barnard Glacie 45.79 40 P P 14 09 24.0 +1.0
BARN IAmb IAmb 14 09 25.5
comp=Z,8.4nm,0.7s
MESA MESA 45.82 42 P P 14 09 24.4 +1.1
CTGM Chitina Glacie 45.96 40 P P 14 09 24.7 +0.4
CTGM IAmb IAmb 14 09 43.0
comp=Z,21nm,1.2s
CHTO Chiang Mai 45.98 254 P P 14 09 25.6 +0.9
CHTO pmax pmax
comp=Z,7.0nm,0.7s
CHTO Chiang Mai 45.98 254 P P 14 09 25.6 +0.9
CHTO IAmb IAmb 14 09 26.6
comp=Z,7.2nm,0.7s
CM31 Chiang Mai Arr 46.22 253 P P 14 09 27.5 +0.9
CMAR Chiang Mai Arr 46.22 253 P P 14 09 28.0 +1.4
comp=Z,3.0nm,0.6s,baz=46,slow=7.4,SNR=22
CMAR PcP **PcP 14 11 03.5 +1.7**
comp=Z,0.7nm,0.6s,baz=356,slow=1.9,SNR=5.8
CMAR LR LR 14 29 42.7
comp=Z,127nm,18.6s,baz=99,slow=37
CMAR Chiang Mai Arr 46.22 253*ceP* **P 14 09 27.7 +1.1**
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CMAR Chiang Mai Arr 46.22 253 P P 14 09 27.6 +1.0
DAWY Dawson 46.28 36 P P 14 09 27.1 +0.5
SHL Shillong 46.93 267 P P 14 09 32.1 -0.2
SHL pmax pmax
comp=Z,6.0nm,0.8s
SHL Shillong 46.93 267 P P 14 09 32.1 -0.2
SHL IAmb IAmb 14 09 32.9
comp=Z,6.2nm,0.8s
FAKI Fak Fak 47.00 199 P P 14 09 32.3 -0.3
FAKI IAmb IAmb 14 09 45.3
comp=Z,14nm,1.1s
YKU2 Yakutat 47.09 42 P P 14 09 32.6 -0.3
HYT Haines Junctio 47.82 40 P P 14 09 40.3 +1.5
INK Inuvik 47.85 30 P P 14 09 39.5 +0.9
comp=Z,9.7nm,0.7s,baz=302,slow=6.8,SNR=52
INK Inuvik 47.85 30 P P 14 09 39.3 +0.6
INK pmax pmax
comp=Z,9.0nm,0.7s
INK Inuvik 47.85 30 P P 14 09 39.2 +0.6
INK IAmb IAmb 14 09 40.1
comp=Z,8.8nm,0.7s
SANI Sanana 47.96 207 P P 14 09 40.4 +0.3
comp=Z,26nm,1.0s
TAPN Taplejung 48.99 271 *eP* **P 14 09 48.8 +0.4**
comp=Z,17nm,0.6s
WHY Whitehorse 49.11 40 P P 14 09 50.0 +1.4
KDJ Kajisay 49.30 294 P P 14 09 50.5 0.0
KDJ pmax pmax
comp=Z,7.0nm,1.0s
KDJ Kajisay 49.30 294 P P 14 09 50.5 0.0
KDJ IAmb IAmb 14 10 03.8
comp=Z,7.0nm,1.0s
BRVK Borovoye 49.43 310 *eP* **P 14 09 51.5 +0.5**
BRVK Borovoye 49.43 310*ceP* **P 14 09 51.5 +0.5**
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 49.43 310 P P 14 09 51.2 +0.2
BRVK IAmb IAmb 14 09 52.2
comp=Z,11nm,0.9s
ODAN Odare 49.51 271 *eP* **P 14 09 51.9 -0.4**
BOOM Boomskoye usch 49.98 295 P P 14 09 56.1 +0.5
BOOM pmax pmax
comp=Z,16nm,0.9s
BOOM Boomskoye usch 49.98 295 P P 14 09 56.1 +0.5
GUN Gumba 50.03 273 *eP* **P 14 09 56.6 +0.2**
comp=Z,32nm,0.4s
RAMN Ramite 50.04 272 *eP* **P 14 09 56.1 -0.2**
comp=Z,22nm,0.6s
KKN Kakani 50.54 273 *eP* **P 14 10 00.4 +0.3**
comp=Z,17nm,0.6s
PKI Pulchoki 50.57 273 *eP* **P 14 10 00.2 -0.2**
comp=Z,6.8nm,0.4s
PKIN Phulchoki 50.57 273 *eP* **P 14 10 00.5 +0.1**
comp=Z,5.5nm,0.4s
DMN Daman 50.77 273 *eP* **P 14 10 02.2 +0.3**
comp=Z,21nm,0.7s
AAK Ala-Archa 50.88 296 *eP* **P 14 10 01.3 -1.1**
AAK Ala-Archa 50.88 296*ceP* **P 14 10 01.3 -1.1**
AAK pmax pmax
comp=Z,26nm,1.7s
GKN Gorkha 50.90 274 *eP* **P 14 10 02.9 +0.2**
comp=Z,13nm,0.5s
C36M Paulatuk 50.91 27 P **P 14 10 02.7 +0.7**
baz=288
C36M Paulatuk 50.91 27 P P 14 10 02.3 +0.4
KSH Kashi 51.28 292 *eP* **P 14 10 09.6 +4.2**
KSH *ep*P sP 14 10 21.5 +0.4
KSH pmax pmax
comp=Z,130nm,3.8s
DANN Dangsing 51.35 275 *eP* **P 14 10 07.0 +0.8**
comp=Z,82nm,0.6s
KOLN Koldanda 51.79 275 *eP* **P 14 10 10.0 +0.6**
comp=Z,28nm,0.4s
PYUN Piuthan 52.05 275 *eP* **P 14 10 12.0 +0.6**
comp=Z,22nm,0.4s
SVE Sverdlovsk 53.21 317 *eP* **P 14 10 19.8 +0.6**
SVE Sverdlovsk 53.21 317 *eP* **P 14 10 19.8 +0.6**
KK31 Karatay Array 53.29 298 P P 14 10 19.8 -0.3
KK31 pmax pmax
comp=Z,9.0nm,0.7s
KK31 Karatay Array 53.29 298 P P 14 10 19.8 -0.3
KK31 IAmb IAmb 14 10 20.9
comp=Z,8.8nm,0.7s
KKAR Karatay Array 53.29 298 P P 14 10 19.6 -0.5
KKAR Karatay Array 53.29 298 P P 14 10 19.8 -0.4
KKAR IAmb IAmb 14 10 20.9
comp=Z,8.8nm,0.7s
KKAR Karatay Array 53.29 298 P P 14 10 19.6 -0.5
ARU Arti 54.42 317 P P 14 10 27.8 -0.3
comp=Z,3.8nm,0.5s,baz=74,slow=3.0,SNR=17
ARU Arti 54.42 317 *eP* **P 14 10 27.0 -1.1**
ARU Arti 54.42 317*c i*P **P 14 10 27.0 -1.1**
ARU *PP **pP** 14 10 38.6 -0.8
ARU 14 11 30.4
ARU 14 12 25.5
ARU S **S 14 18 01.3 -2.1**
ARU SS **SKiKP 14 21 39.7 +5.5**
ARU pmax pmax
comp=Z,8.0nm,0.6s
ARU Arti 54.42 317 P P 14 10 27.6 -0.5
GAR Garm 55.38 294 P P 14 10 35.1 -0.4
SPA0 Spitsbergen Ar 55.63 349 *eP* **P 14 10 36.2 -0.5**
SPITS Spitsbergen Ar 55.63 349 P P 14 10 35.5 -1.1
comp=Z,2.8nm,0.6s,baz=68,slow=6.6,SNR=6.9
SPITS PcP **PcP 14 11 35.9 +0.2**
comp=Z,11nm,1.0s,baz=84,slow=2.6,SNR=4.1
SOEI Soe 55.75 206 P P 14 10 37.5 -0.7
comp=Z,32nm,1.0s
SOEI Soe 55.75 206 P P 14 10 37.5 -0.7
NIL Nilore 56.10 287 P P 14 10 40.8 +0.2
NIL pmax pmax
comp=Z,18nm,0.6s
NIL Nilore 56.10 287 P P 14 10 40.8 +0.2
RES Resolute Bay 56.29 16 P P 14 10 41.3 0.0
comp=Z,24nm,0.5s,baz=318,slow=6.4,SNR=90
RES Resolute Bay 56.29 16 P P 14 10 41.1 -0.2
RES pmax pmax
comp=Z,24nm,0.6s
RES Resolute Bay 56.29 16 P P 14 10 41.1 -0.2
CHGR Chuyangaron 56.34 294 P P 14 10 41.9 -0.5
HSPB Hornsund (broa 56.62 348 *eP* **P 14 10 44.1 +0.5**
MTN Manton Dam 56.85 197 P P 14 10 46.0 +0.1
AB31 Akbulak array 56.92 309 *i* P **P 14 10 46.2 0.0**
ABKAR Akbulak array 56.92 309 P P 14 10 46.0 -0.2
ABKAR IAmb IAmb 14 10 47.4
comp=Z,12nm,0.9s
YKA Yellowknife Ar 57.27 33 P P 14 10 49.0 +0.6
comp=Z,1.7nm,0.8s,baz=296,slow=7.5,SNR=2.3
AKTO Aktyubinsk 57.44 311 P P 14 10 49.5 -0.4
comp=Z,5.2nm,0.7s,baz=61,slow=14,SNR=12
AKTO LR LR 14 37 35.8
comp=Z,118nm,18.4s,baz=21,slow=38
KIRV Kirov 57.80 322 LR LR 14 38 31.9
comp=Z,104nm,18.1s,baz=44,slow=39
LVZ Lovozero 58.34 335 P P 14 10 55.5 -0.4
LVZ Lovozero 58.34 335 P P 14 10 55.5 -0.4
KBL Kabul 58.57 290 P P 14 10 57.2 -1.1
KBL pmax pmax
comp=Z,10.0nm,0.7s
KBL Kabul 58.57 290 P P 14 10 57.1 -1.1
TULEG Thule 59.05 9 P P 14 10 59.6 -1.0
KEV Kevo 59.34 339 P P 14 11 02.1 -0.7
KEV pmax pmax
comp=Z,60nm,1.5s
KEV Kevo 59.34 339 P P 14 11 02.1 -0.7
HAMF Hammerfest 59.58 341 *eP* **P 14 11 04.1 -0.3**
ARCES ARCESS Array B 59.88 339 P P 14 11 05.6 -0.9
comp=Z,1.7nm,0.4s,baz=42,slow=7.6,SNR=25
ARCES LR LR 14 43 05.6
comp=Z,70nm,20.4s,baz=265,slow=42
PGC Sidney 60.10 50 P P 14 11 08.7 +0.4
KNRA Kununurra 60.13 199 P P 14 11 08.4 -0.4
DAG Danmarks Havn 60.41 356 *i* P **P 14 11 09.0 -1.0**
DAG pmax pmax
comp=Z,3.0nm,0.7s
DAG Danmarks Havn 60.41 356 *i* P **P 14 11 09.0 -1.0**

comp=Z,3.2nm,0.7s
DAG Danmarks Havn 60.41 356 *i* P **P** **14 11 09.0 -1.0**
DAG IAmb IAmb 14 11 10.2

comp=Z,3.2nm,0.7s
NLWA Neilton Lookou 60.53 51 P **P** **14 11 11.6 +0.3**
KLMR Klimovskoe 60.78 327 *eP* **P** **14 11 10.9 -1.8**
KLMR pmax pmax

comp=Z,20nm,1.5s
KLMR Klimovskoe 60.78 327 *eP* **P** **14 11 10.9 -1.8**
KLMR AMP 14 11 21.9

comp=Z,20nm,1.5s
KTK1 Kautokeino 60.83 340 *eP* **P** **14 11 13.2 +0.2**
D03D Eldon 60.90 51 P **P** **14 11 14.9 +1.1**
baz=302
TRO Tromso 61.44 341 *eP* **P** **14 11 17.1 0.0**
E04D Cinebar 61.73 52 P **P** **14 11 20.6 +1.2**
baz=303
LON Longmire 62.06 51 P **P** **14 11 22.1 +0.4**
LON pmax pmax

comp=Z,7.0nm,1.2s
LON Longmire 62.06 51 P **P** **14 11 22.1 +0.4**
LON IAmb IAmb 14 11 42.0

comp=Z,6.6nm,1.2s
F04A Amboy 62.16 52 P **P** **14 11 23.1 +0.8**
I02D Swisshome 62.32 54 P **P** **14 11 25.1 +1.6**
baz=304
COR Corvallis 62.38 54 P **P** **14 11 24.1 +0.3**
COR pmax pmax

comp=Z,100nm,1.5s
COR Corvallis 62.38 54 P **P** **14 11 24.1 +0.3**
LTY Liberty 62.42 50 P **P** **14 11 24.0 -0.2**
LTY IAmb IAmb 14 11 25.6

comp=Z,17nm,1.5s
B08A Colville Reser 62.56 48 P **P** **14 11 25.3 +0.3**
B08A IAmb IAmb 14 11 26.2

comp=Z,5.2nm,0.7s
H04D Lebanon 62.75 54 P **P** **14 11 27.5 +1.1**
baz=304
H04A Detroit Lake 62.99 53 P **P** **14 11 28.7 +0.8**
H04A IAmb IAmb 14 11 30.0

comp=Z,8.2nm,0.9s
WB0 Warramunga Ar 63.01 192 P **P** **14 11 27.4 -0.8**
WB0 IAmb IAmb 14 11 42.9

comp=Z,11nm,1.4s
WR0 Warramunga Arr 63.17 192 P **P** **14 11 28.5 -0.7**
G05D Wamic, OR 63.19 52 P **P** **14 11 30.5 +1.3**
baz=304
WB2 Warramunga Arr 63.19 192 P **P** **14 11 27.9 -1.4**
WRA Warramunga Arr 63.19 192 P **P** **14 11 28.1 -1.2**
comp=Z,2.2nm,0.8s,baz=11,slow=7.3,SNR=32
WRA Warramunga Arr 63.19 192 P **P** **14 11 27.8 -1.5**
FITZ Fitzroy Crossi 63.24 201 P **P** **14 11 29.9 +0.2**
FITZ IAmb IAmb 14 11 45.3

comp=Z,7.1nm,0.9s
E07A Sunnyside 63.28 50 P **P** **14 11 30.7 +0.9**
E07A IAmb IAmb 14 11 31.9

comp=Z,6.4nm,0.8s
HRA Herat 63.32 293 P **P** **14 11 30.9 +0.4**
HRA IAmb IAmb 14 11 31.9

comp=Z,7.7nm,0.8s
I04A Tendick Farm, 63.36 54 P **P** **14 11 31.8 +1.4**
baz=304
C09A Chrisman Ranch 63.46 49 P **P** **14 11 31.4 +0.4**
C09A IAmb IAmb 14 11 32.5

comp=Z,9.0nm,0.8s
D08A Wollman Farm, 63.52 50 P **P** **14 11 31.9 +0.5**
D08A IAmb IAmb 14 11 32.9

comp=Z,8.4nm,0.7s
HAWA Hanford 63.56 50 P **P** **14 11 32.5 +0.9**
L02E Cave Junction 63.56 56 P **P** **14 11 33.2 +1.5**
baz=305
STEI Steigen 63.61 341 *eP* **P** **14 11 31.3 -0.2**
F07A Phinny Hill Vi 63.62 51 P **P** **14 11 33.2 +1.2**
F07A IAmb IAmb 14 11 34.2

comp=Z,10.0nm,0.7s
I05D Terrebonne, OR 63.69 53 P **P** **14 11 32.9 +0.4**
baz=305
HUMO Hull Mountain 63.70 55 P **P** **14 11 33.5 +0.8**
NEW Newport 63.82 48 P **P** **14 11 34.0 +0.7**
comp=Z,4.9nm,0.8s,baz=291,slow=8.5,SNR=9.4
NEW Newport 63.82 48 P **P** **14 11 34.1 +0.7**
NEW pmax pmax

comp=Z,7.0nm,1.0s
NEW Newport 63.82 48 P **P** **14 11 33.8 +0.4**
baz=305
NEW Newport 63.82 48 P **P** **14 11 34.1 +0.7**
NEW IAmb IAmb 14 11 35.5

comp=Z,6.5nm,1.0s
LOF Lofoten 63.85 342 *eP* **P** **14 11 32.6 -0.5**
J04D Umpqua Nationa 63.85 54 P **P** **14 11 35.1 +1.2**
baz=305
FAUS Fauske 64.03 341 *eP* **P** **14 11 34.3 0.0**
GEYT Alibeck 64.04 299 P **P** **14 11 35.3 +0.3**
comp=Z,8.5nm,0.6s,baz=63,slow=3.6,SNR=12
GEYT LR LR 14 41 55.2

comp=Z,122nm,18.2s,baz=55,slow=38
GEYT Alibeck 64.04 299 P **P** **14 11 35.4 +0.4**
GEYT PcP **PcP** **14 12 10.4 +0.4**
GYA0B ALIBECK ARRAY 64.04 299 P **P** **14 11 35.1 +0.1**
PINE Pine Mountain 64.23 53 P **P** **14 11 37.4 +1.1**
PINE IAmb IAmb 14 11 38.9

comp=Z,9.6nm,0.8s
E09A Wood Farm, Sta 64.27 50 P **P** **14 11 37.1 +0.8**
E09A IAmb IAmb 14 11 38.2

comp=Z,12nm,0.8s
L04D Klamath Falls 64.32 55 P **P** **14 11 38.0 +1.1**
baz=305
J05D Fort Rock, OR 64.35 54 P **P** **14 11 38.4 +1.3**
baz=305
YBH Yreka Blue Hor 64.35 56 P **P** **14 11 38.5 +1.5**
YBH pmax pmax

comp=Z,4.0nm,0.9s
YBH Yreka Blue Hor 64.35 56 P **P** **14 11 38.5 +1.5**
M02C Callahan 64.46 56 P **P** **14 11 39.1 +1.4**
baz=305
KMRM Mail Ridge 64.61 58 P **P** **14 11 40.7 +2.0**
KMRM IAmb IAmb 14 11 55.5

comp=Z,9.6nm,1.0s
N02D Trinity Center 64.79 57 P **P** **14 11 41.2 +1.3**
baz=306
M04C Macdoel 64.86 56 P **P** **14 11 41.1 +0.8**
baz=306
K05A Summer Lake 64.88 54 P **P** **14 11 41.4 +0.8**
K05A IAmb IAmb 14 11 43.3

comp=Z,10.0nm,0.9s
I07A Izee 64.91 52 P **P** **14 11 41.2 +0.5**
SUMG Summit 65.01 1 *i* P **P** **14 11 40.7 -0.5**
SUMG pmax pmax

comp=Z,35nm,0.8s
SUMG Summit 65.01 1 P **P** **14 11 41.4 +0.2**
SUMG Summit 65.01 1 *i* P **P** **14 11 40.7 -0.5**
comp=Z,34nm,0.8s
SUMG Summit 65.01 1 *i* P **P** **14 11 40.8 -0.5**
SUMG IAmb IAmb 14 11 42.3

comp=Z,34nm,0.8s
WALA Waterton Lakes 65.07 46 P **P** **14 11 42.4 +0.7**
MOR8 Moi Rana 65.20 340 *eP* **P** **14 11 40.4 -1.6**
FIA1 FINESS Array S 65.35 333 P **P** **14 11 42.6 -0.4**
FINES FINESS Array B 65.35 333 P **P** **14 11 43.0 -0.1**
comp=Z,15nm,0.6s,baz=46,slow=7.6,SNR=93
FINES LR LR 14 42 24.6

comp=Z,61nm,21.0s,baz=19,slow=38
FINES FINESS Array B 65.35 333 P **P** **14 11 42.8 -0.2**
FINES FINESS Array B 65.35 333 P **P** **14 11 42.8 -0.2**
OBN Obninsk 65.56 323 *eP* **P** **14 11 44.6 +0.2**
OBN Obninsk 65.56 323 *ceP* **P** **14 11 44.3 -0.1**
OBN *i* 14 12 15.1
OBN *i* 14 14 09.2
OBN *i* S **S** **14 20 22.3 -4.1**
OBN pmax pmax

comp=Z,9.0nm,0.5s
OBN MLR MLR

comp=Z,61nm,18.0s
VRH Novokhopyorsk 65.62 318 *eP* **P** **14 11 44.3 -0.7**
VRH pmax pmax

comp=Z,20nm,0.6s
JTMT Jette 65.67 47 P **P** **14 11 46.5 +0.9**
JTMT IAmb IAmb 14 11 47.5

comp=Z,6.1nm,0.7s
MOD Modoc Plateau 65.72 55 P **P** **14 11 46.9 +0.9**
MOD IAmb IAmb 14 12 01.7

comp=Z,5.7nm,0.5s
BMO Blue Mountains 65.73 51 P **P** **14 11 46.5 +0.6**
BMO pmax pmax

comp=Z,2.0nm,0.8s
BMO Blue Mountains 65.73 51 P **P** **14 11 46.5 +0.6**
O03E Paynes Creek 65.75 57 P **P** **14 11 46.6 +0.5**
baz=306
J08A Circle Bar Ran 65.94 53 P **P** **14 11 48.5 +1.1**
LPSR Galich'ya Gora 66.09 320 *eP* **P** **14 11 47.6 -0.4**
LPSR pmax pmax

comp=Z,30nm,0.7s
PLID Pearl Lake 66.33 50 P **P** **14 11 50.2 +0.3**
PLID IAmb IAmb 14 11 52.3

comp=Z,5.7nm,0.7s
ORV Oroville 66.37 57 P **P** **14 11 50.6 +0.6**
ORV pmax pmax

comp=Z,4.0nm,0.9s
ORV Oroville 66.37 57 P **P** **14 11 50.6 +0.6**
MSO Missoula 66.41 47 P **P** **14 11 50.8 +0.5**
baz=308
MSO Missoula 66.41 47 P **P** **14 11 50.8 +0.5**
MSO IAmb IAmb 14 12 07.9

comp=Z,9.0nm,1.2s
VSR Storozhevoye 66.86 319 *eP* **P** **14 11 52.3 -0.6**
VSR pmax pmax

comp=Z,10.0nm,0.8s
BEKR Beckworth 66.89 57 P **P** **14 11 54.4 +0.8**
BEKR IAmb IAmb 14 11 55.4

comp=Z,7.8nm,1.0s
ASAR Alice Springs 66.91 192 P **P** **14 11 54.0 +0.5**
comp=Z,1.0nm,0.8s,baz=9.1,slow=6.0,SNR=13
ASAR Alice Springs 66.91 192 P **P** **14 11 54.0 +0.5**
ASAR Alice Springs 66.91 192 P **P** **14 11 53.8 +0.3**
VORD Divnogorie 66.96 319 *eP* **P** **14 11 53.4 -0.1**
VORD pmax pmax

comp=Z,7.0nm,0.8s
AFDM Forest Hills D 67.06 58 P **P** **14 11 55.1 +0.6**
VSU Vasula 67.25 330 *eP* **P** **14 11 52.1 -3.1**
MFID Camas Ranch 67.44 51 P **P** **14 11 57.4 +0.5**
RUBR Rubicon Trail 67.51 57 P **P** **14 11 58.7 +1.1**
MAK Makhachkala 67.59 308 *eP* **P** **14 11 56.5 -1.1**
MAK *e* 14 14 28.6
MAK *e*PPP PPP 14 16 01.9
MAK *e*S **S** **14 20 50.3 -1.1**
MAK *e*SS **SS** **14 25 11.3 -0.5**
MAK MLR MLR

comp=Z,131nm,16.0s
PAHR Pah Rah Range 67.59 56 P **P** **14 11 58.7 +0.7**
PAHR IAmb IAmb 14 11 60.0

comp=Z,6.6nm,1.0s
HRY Holter Researc 67.62 47 P **P** **14 11 58.9 +0.9**
VCNR Virginia City 67.67 57 P **P** **14 11 59.5 +1.0**
VCNR IAmb IAmb 14 12 00.7

comp=Z,6.1nm,1.0s
PNTR Pine Nut 67.83 57 P **P** **14 12 00.4 +0.8**
PNTR IAmb IAmb 14 12 01.9

comp=Z,6.6nm,0.9s
LRM Limekiln Ridge 67.84 48 P **P** **14 12 00.4 +0.8**
EGMT Eagleton 67.88 45 P **P** **14 11 59.9 +0.3**
baz=310,SNR=5.9
EGMT Eagleton 67.88 45 P **P** **14 12 00.3 +0.7**
EGMT IAmb IAmb 14 12 01.2

comp=Z,10nm,0.8s
CMB Columbia Colle 67.98 58 P **P** **14 12 01.3 +1.0**
CMB pmax pmax

comp=Z,4.0nm,1.0s
CMB Columbia Colle 67.98 58 P **P** **14 12 01.3 +1.0**
DLMT Dillon 68.05 48 P **P** **14 12 01.9 +1.2**
DLMT IAmb IAmb 14 12 03.1

comp=Z,6.8nm,0.8s
HLID Hailey 68.16 50 P **P** **14 12 02.5 +1.0**
baz=308,SNR=6.2
HLID Hailey 68.16 50 P **P** **14 12 02.1 +0.6**
MCMT McKenzie Canyo 68.25 49 P **P** **14 12 02.4 +0.3**
BCYI Bear Canyon 68.26 49 P **P** **14 12 02.6 +0.4**
BOZ Bozeman (W) 68.43 47 P **P** **14 12 03.8 +0.7**
BOZ pmax pmax

comp=Z,13nm,0.7s
BOZ Bozeman (W) 68.43 47 P **P** **14 12 04.0 +0.8**
baz=309,SNR=12
BOZ Bozeman (W) 68.43 47 P **P** **14 12 03.8 +0.7**
ICESG Greenland Ices 68.48 2 *i* P **P** **14 12 02.0 -1.2**
ICESG IAmb IAmb 14 12 03.8

comp=Z,8.2nm,0.9s
RYN Ryan 68.78 57 P **P** **14 12 05.6 +0.1**
RYN IAmb IAmb 14 12 07.7

comp=Z,6.7nm,1.0s
LHV Little Huntoon 69.02 57 P **P** **14 12 07.8 +1.1**
LHV IAmb IAmb 14 12 09.6

comp=Z,14nm,1.1s
QLMT Earthquake Lak 69.03 48 P **P** **14 12 07.9 +0.9**
NVAR Mina Array Bea 69.03 57 P **P** **14 12 08.6 +1.5**
comp=Z,4.1nm,0.8s,baz=290,slow=6.4,SNR=20
NVAR Mina Array Bea 69.03 57 P **P** **14 12 07.6 +0.5**
MDPB Devils Postpil 69.05 58 P **P** **14 12 07.4 +0.2**
NV11 Mina Array Sit 69.12 57 P **P** **14 12 08.3 +0.7**
YHL Hebgen Lake 69.15 48 P **P** **14 12 08.7 +0.9**
YHB Horse Butte 69.21 48 P **P** **14 12 09.0 +0.9**
GCMT Greycliff 69.36 46 P **P** **14 12 09.9 +1.0**
YHH Holmes Hill 69.37 48 P **P** **14 12 10.0 +0.8**
YMR Madison River 69.39 48 P **P** **14 12 10.3 +1.2**
IZAR Zarasai 69.39 328 *eP* **P** **14 12 08.7 0.0**
ELK Elko 69.44 53 P **P** **14 12 10.5 +0.9**
ELK pmax pmax

comp=Z,4.0nm,1.2s
ELK Elko 69.44 53 P **P** **14 12 10.5 +0.9**
PAGB Antelope Grade 69.48 60 P **P** **14 12 10.4 +0.7**
PAGB IAmb IAmb 14 12 16.0

comp=Z,13nm,1.2s
IDID Didziasalis 69.52 328 *eP* **P** **14 12 09.6 +0.1**
ISAL Salakas 69.57 328 *eP* **P** **14 12 09.2 -0.6**
KVAR Kislovodsk Arr 69.69 311 P **P** **14 12 12.3 +1.4**
comp=Z,8.0nm,0.8s,baz=72,slow=20,SNR=2.8
YNE Yellowstone No 69.69 47 P **P** **14 12 12.1 +1.1**
KIV Kislovodsk 69.69 311 *eP* **P** **14 12 12.2 +1.3**
KIV Kislovodsk 69.69 311 *eP* **P** **14 12 12.2 +1.3**
KIV pmax pmax

comp=Z,59nm,1.1s
KIV MLR MLR

comp=Z,96nm,17.0s
KIV Kislovodsk 69.69 311 P **P** **14 12 12.2 +1.3**
IIGN Ignalina 69.69 328 *eP* **P** **14 12 09.4 -1.2**
KBZ Khabaz 69.72 311 P **P** **14 12 12.0 +1.1**
comp=Z,8.1nm,0.8s,baz=72,slow=2.3,SNR=13
KBZ Khabaz 69.72 311 *eP* **P** **14 12 10.7 -0.2**
KBZ Khabaz 69.72 311 *ceP* **P** **14 12 10.7 -0.2**
KBZ pmax pmax

comp=Z,8.0nm,0.9s
ZEI Tsey 69.76 310 *eP* **P** **14 12 10.8 -0.7**
ZEI Tsey 69.76 310 *eP* **P** **14 12 10.8 -0.7**
ZEI pmax pmax

comp=Z,5.0nm,0.9s
H17A Grant Village 69.78 48 P **P** **14 12 13.7 +2.1**
baz=310,SNR=5.8
H17A Grant Village 69.78 48 P **P** **14 12 14.0 +2.3**
H17A IAmb IAmb 14 12 15.3

comp=Z,11nm,1.0s
NACGM Naroch 69.80 327 *e* **P** **14 12 11.0 -0.2**
IMW Indian Meadow 69.90 49 P **P** **14 12 13.4 +0.9**
IMW IAmb IAmb 14 12 15.1

comp=Z,6.4nm,0.8s
FLWY Flagg Ranch 69.91 48 P **P** **14 12 14.1 +1.7**
TPH Tonopah 69.92 57 P **P** **14 12 13.6 +1.0**
TPH pmax pmax

comp=Z,33nm,0.9s
TPH Tonopah 69.92 57 P **P** **14 12 13.6 +1.0**
DOMB Dombas 69.94 340 *eP* **P** **14 12 12.3 +0.3**
SFJD Kangerlussuaq 69.94 7 P **P** **14 12 11.4 -0.4**
comp=Z,5.7nm,0.7s,baz=273,slow=3.6,SNR=2.1
RLMT Red Lodge 70.01 47 P **P** **14 12 14.1 +1.1**
baz=311
RLMT Red Lodge 70.01 47 P **P** **14 12 14.0 +1.0**
NC405 NORSAR Array S 70.02 338 P **P** **14 12 12.4 -0.1**
NC303 NORSAR Array S 70.02 338 P **P** **14 12 12.0 -0.5**
NC204 NORSAR Array S 70.14 339 P **P** **14 12 12.5 -0.8**
VES Vestal, Richgr 70.15 59 P **P** **14 12 14.3 +0.5**
baz=309
TPAW Teton Pass 70.15 49 P **P** **14 12 15.5 +1.5**
TPAW IAmb IAmb 14 12 16.7

comp=Z,9.9nm,1.0s
NB201 NORSAR Array S 70.19 338 P **P** **14 12 13.3 -0.3**
NB2 NORSAR Subarra 70.22 338 P **P** **14 12 13.3 -0.5**
comp=Z,3.2nm,0.5s,baz=33,slow=6.5
NB2 NORSAR Subarra 70.22 338 P **P** **14 12 13.3 -0.5**
baz=33,slow=6.5
NOA NORSAR Array B 70.22 338 P **P** **14 12 13.6 -0.2**
comp=Z,5.3nm,0.6s,baz=34,slow=6.3,SNR=8.7
NOA LR LR 14 48 11.6

comp=Z,70nm,18.5s,baz=45,slow=40
HFS Hagfors 70.27 337 P **P** **14 12 13.8 -0.2**
comp=Z,10nm,0.6s,baz=54,slow=7.5,SNR=22
SNOW Snow King Moun 70.28 49 P **P** **14 12 16.0 +1.2**
SNOW IAmb IAmb 14 12 17.4

comp=Z,7.1nm,0.8s
REDW Red Top Meadow 70.29 49 P **P** **14 12 16.1 +1.4**
REDW IAmb IAmb 14 12 17.3

comp=Z,8.7nm,1.1s
NC602 NORSAR Array S 70.38 338 P **P** **14 12 16.0 +1.3**
CWC Cottonwood Cre 70.41 58 P **P** **14 12 16.2 +0.6**
baz=309
PABE Paberze 70.45 329 *eP* **P** **14 12 15.1 0.0**
FRB Frobisher Bay 70.49 15 P **P** **14 12 14.6 -0.7**
comp=Z,4.5nm,0.3s,baz=327,slow=7.0,SNR=5.0
AHID Auburn Hatcher 70.54 50 P **P** **14 12 16.9 +0.6**
AHID IAmb IAmb 14 12 18.0

comp=Z,9.1nm,1.2s
LAO LASA Array 70.57 44 P **P** **14 12 15.8 -0.4**
LAO IAmb IAmb 14 12 18.2

comp=Z,14nm,1.2s
BGU Big Grassy Mou 70.62 52 P **P** **14 12 17.4 +0.6**
SPUT South Promonto 70.71 51 P **P** **14 12 17.8 +0.5**
R11A Troy Canyon, C 70.75 55 P **P** **14 12 18.6 +1.0**
baz=310,SNR=6.8
R11A Troy Canyon, C 70.75 55 P **P** **14 12 17.8 +0.2**
MPMC Manual Prospec 71.02 58 P **P** **14 12 20.4 +1.1**
baz=309
HWUT Hardware Ranch 71.03 51 P **P** **14 12 19.8 +0.5**
HWUT IAmb IAmb 14 12 21.4

comp=Z,14nm,1.3s
FURC Furnace Creek, 71.16 58 P **P** **14 12 21.3 +1.5**
baz=310
DUG Dugway, Tooele 71.22 52 P **P** **14 12 21.2 +0.9**
DUG pmax pmax

comp=Z,7.0nm,0.8s
DUG Dugway, Tooele 71.22 52 P **P** **14 12 21.5 +1.2**
baz=310,SNR=6.3
DUG Dugway, Tooele 71.22 52 P **P** **14 12 21.2 +0.9**
DUG IAmb IAmb 14 12 22.5

comp=Z,7.0nm,0.8s
TPNV Topopah Spring 71.23 57 P **P** **14 12 21.3 +0.8**
TPNV pmax pmax

comp=Z,9.0nm,1.1s
TPNV Topopah Spring 71.23 57 P **P** **14 12 21.6 +1.1**
baz=310,SNR=6.0
TPNV Topopah Spring 71.23 57 P **P** **14 12 21.3 +0.8**
TPNV IAmb IAmb 14 12 22.6

comp=Z,9.3nm,1.1s
LRMC Laurel Mtn Rad 71.27 59 P **P** **14 12 21.2 +0.5**
baz=309
BW06 Boulder Array 71.40 49 P **P** **14 12 22.1 +0.6**
baz=311,SNR=9.9
BW06 Boulder Array 71.40 49 P **P** **14 12 21.7 +0.2**
BW06 IAmb IAmb 14 12 22.9

comp=Z,10nm,1.2s
PD31 Pinedale Array 71.40 49 P **P** **14 12 21.8 +0.3**
PD31 IAmb IAmb 14 12 22.9

comp=Z,9.6nm,1.2s
PDAR Pinedale Array 71.40 49 P **P** **14 12 22.2 +0.7**
comp=Z,5.2nm,0.6s,baz=242,slow=0.7,SNR=43
PDAR Pinedale Array 71.40 49 P **P** **14 12 21.6 +0.1**
HYA Hoyanger 71.41 341 *eP* **P** **14 12 21.5 +0.6**
TCUT Toone Canyon 71.44 51 P **P** **14 12 22.7 +0.9**
EDW2 Edwards Air Fo 71.45 60 P **P** **14 12 22.4 +0.7**
baz=309
CTU Camp Tracy 71.52 52 P **P** **14 12 23.2 +1.0**
PSUT Pine Spring 71.67 54 P **P** **14 12 23.9 +0.6**
PRN Pahroc Range 71.67 56 P **P** **14 12 24.3 +1.2**
JLU Jordanelle 71.75 51 P **P** **14 12 24.5 +0.8**
AKASG Malin Array Be 71.82 323 P **P** **14 12 23.4 -0.2**
comp=Z,5.8nm,0.4s,baz=42,slow=6.4,SNR=32
AKASG Malin Array Be 71.82 323 P **P** **14 12 23.3 -0.3**
AKASG pmax pmax

comp=Z,2.0nm,0.7s
AKASG Malin Array Be 71.82 323 P **P** **14 12 23.3 -0.3**
AKBB Malin Array Si 71.82 323 P **P** **14 12 23.0 -0.6**
AKBB pmax pmax

comp=Z,8.0nm,0.8s
AKBB Malin Array Si 71.82 323 P **P** **14 12 23.0 -0.6**
AKBB IAmb IAmb 14 12 24.2

comp=Z,7.8nm,0.8s
GSC Goldstone, Bar 71.93 59 P **P** **14 12 25.4 +0.8**
baz=310
MPU Maple Canyon 72.02 52 P **P** **14 12 25.9 +0.6**
BFSC Mount Baldy Ra 72.07 60 P **P** **14 12 26.3 +0.7**
baz=310
ASK Askoy 72.25 341 *eP* **P** **14 12 26.5 +0.5**
TUQ Turquoise Moun 72.40 58 P **P** **14 12 28.2 +0.7**
baz=310
CCUT Cedar City 72.61 55 P **P** **14 12 29.6 +0.8**
MVU Marysvale 72.67 53 P **P** **14 12 29.9 +0.7**
MSU Marysvale 72.69 53 P **P** **14 12 29.8 +0.5**
MSU Marysvale 72.69 53 P **P** **14 12 29.8 +0.5**
TMUT Trail Mountain 72.74 52 P **P** **14 12 30.2 +0.5**
MURC Murrieta 72.77 60 P **P** **14 12 30.3 +0.6**
baz=310
P17A Butcher Ranch, 72.90 52 P **P** **14 12 31.3 +0.8**
P17A **sP** **14 12 45.9 -0.5**
GMRC Granite Mounta 72.98 58 P **P** **14 12 31.8 +0.8**
baz=310
MTPU Mount Pierson 72.99 54 P **P** **14 12 32.5 +1.2**
LCMT Little Creek M 73.03 55 P **P** **14 12 32.3 +1.0**
MDND Maddock 73.03 40 P **P** **14 12 31.4 +0.6**
baz=316
MDND Maddock 73.03 40 P **P** **14 12 31.2 +0.4**
K22A Casper 73.14 47 P **P** **14 12 32.3 +0.5**
baz=313
K22A Casper 73.14 47 P **P** **14 12 31.9 +0.1**
K22A IAmb IAmb 14 12 33.8

comp=Z,7.6nm,0.7s
UOSS Minazif 73.21 289 P **P** **14 12 32.1 -0.2**
UOSS IAmb IAmb 14 12 33.2

comp=Z,16nm,1.1s
SRU San Rafael Swe 73.26 52 P **P** **14 12 33.0 +0.3**
SRU pmax pmax

comp=Z,12nm,1.0s
SRU San Rafael Swe 73.26 52 P **P** **14 12 33.0 +0.3**
KNB Kanab 73.28 55 P **P** **14 12 34.0 +1.2**
KNB pmax pmax

comp=Z,6.0nm,0.9s
KNB Kanab 73.28 55 P **P** **14 12 34.0 +1.2**
RSSD Black Hills 73.45 45 P **P** **14 12 33.9 +0.2**
RSSD pmax pmax

comp=Z,5.0nm,0.7s
RSSD Black Hills 73.45 45 P **P** **14 12 34.0 +0.2**
baz=314
RSSD Black Hills 73.45 45 P **P** **14 12 33.9 +0.2**
IRM Iron Mountain 73.71 59 P **P** **14 12 35.9 +0.7**
baz=311
O20A White River Ci 73.89 50 P **P** **14 12 36.8 +0.5**
baz=312
O20A White River Ci 73.89 50 P **P** **14 12 36.8 +0.5**
IKP In-Ko-Pah, Jac 74.08 60 P **P** **14 12 37.6 +0.2**
baz=311
PDMCI Parker Dam,Lak 74.25 58 P **P** **14 12 39.0 +0.8**
baz=311
STKA Stephens Creek 74.29 184 P **P** **14 12 37.0 -1.2**
comp=Z,1.9nm,0.8s,baz=11,slow=7.2,SNR=4.5
STKA Stephens Creek 74.29 184 P **P** **14 12 38.5 +0.3**
STKA pmax pmax

comp=Z,1.0nm,1.1s
STKA Stephens Creek 74.29 184 P **P** **14 12 38.5 +0.3**
PV23 Carpenter Ridg 74.58 52 P **P** **14 12 40.4 -0.1**
PV23 IAmb IAmb 14 12 42.4

comp=Z,13nm,1.1s
ESJX Sierra Juarez 74.60 61 P **P** **14 12 40.5 -0.1**
ESJX IAmb IAmb 14 12 48.5

comp=Z,10nm,0.7s
PV10 Paradox Valley 74.62 52 P **P** **14 12 42.0 +1.4**
PV14 Lion Creek, Pa 74.63 52 P **P** **14 12 41.4 +0.6**
PV14 IAmb IAmb 14 12 42.1

comp=Z,7.6nm,0.6s
PHWY Pilot Hill 74.64 48 P **P** **14 12 40.4 -0.4**
N23A Red Feather La 74.65 48 P **P** **14 12 41.8 +0.9**
baz=314
N23A Red Feather La 74.65 48 P **P** **14 12 41.5 +0.7**
PV22 Blue Mesa, Par 74.66 52 P **P** **14 12 41.0 +0.2**
PV20 West Nyswonger 74.68 52 P **P** **14 12 41.3 +0.3**
PV20 IAmb IAmb 14 12 42.9

comp=Z,11nm,1.0s
PV04 Paradox Valley 74.68 52 P **P** **14 12 41.0 +0.1**
PV04 IAmb IAmb 14 13 03.3

comp=Z,11nm,1.1s
PV19 Morning Glory 74.69 52 P **P** **14 12 41.5 +0.4**

PV19 IAmb IAmb 14 12 43.0
comp=Z,13nm,0.9s
PV17 East Wray Mesa 74.73 52 P **P** **14 12 41.5 +0.2**
PV16 Nyswonger Mesa 74.73 52 P **P** **14 12 42.0 +0.7**
PV16 IAmb IAmb 14 12 43.2
comp=Z,11nm,1.0s
PV11 David Mesa, Pa 74.77 52 P **P** **14 12 42.3 +0.8**
PV11 IAmb IAmb 14 12 43.4
comp=Z,17nm,1.3s
PV18 Skein Mesa, Pa 74.78 52 P **P** **14 12 42.3 +0.7**
PV18 IAmb IAmb 14 12 43.5
comp=Z,8.4nm,0.8s
PV05 Paradox Valley 74.78 52 P **P** **14 12 42.4 +0.8**
PV12 Saucer Basin, 74.80 52 P **P** **14 12 42.2 +0.6**
PV12 IAmb IAmb 14 12 45.5
comp=Z,6.6nm,0.7s
PV03 Paradox Valley 74.81 52 P **P** **14 12 42.4 +0.6**
PV03 IAmb IAmb 14 12 43.6
comp=Z,7.0nm,0.8s
FORT Forrest 74.88 196 P **P** **14 12 42.2 +0.6**
FORT IAmb IAmb 14 13 02.6
comp=Z,12nm,0.9s
PV02 Paradox Valley 74.91 52 P **P** **14 12 42.6 +0.3**
PV01 Paradox Valley 75.05 52 P **P** **14 12 43.0 -0.1**
WUAZ Wupatki 75.15 55 P **P** **14 12 44.8 +1.1**
baz=312
MARD Mardin 75.16 307 P **P** **14 12 44.4 +0.7**
SMCO Snowmass 75.26 50 P **P** **14 12 44.9 +0.4**
KWP Kalwaria Pacla 75.41 326 P **P** **14 12 45.3 +0.6**
KWP pmax pmax
comp=Z,48nm,1.5s
KWP Kalwaria Pacla 75.41 326 P **P** **14 12 45.3 +0.6**
ISCO Idaho Springs 75.59 49 P **P** **14 12 46.8 +0.5**
ISCO pmax pmax
comp=Z,4.0nm,1.1s
ISCO Idaho Springs 75.59 49 P **P** **14 12 46.9 +0.5**
baz=314
ISCO Idaho Springs 75.59 49 P **P** **14 12 46.8 +0.5**
BBOO Buckleboo 75.64 188 P **P** **14 12 46.4 +0.4**
BBOO IAmb IAmb 14 12 48.2
comp=Z,8.6nm,1.0s
MVCO Mesa Verde 75.72 52 P **P** **14 12 47.7 +0.6**
baz=313
MVCO Mesa Verde 75.72 52 P **P** **14 12 47.6 +0.6**
BUR08 Bucovina Ar. S 75.86 323 P **P** **14 12 47.5 +0.1**
BURAR Bucovina Array 75.87 323 P **P** **14 12 47.8 +0.3**
F33A 5 Mile Ranch, 76.05 40 P **P** **14 12 48.5 0.0**
KOLS Kolonicke sedl 76.13 325 *eP* **P** **14 12 47.4 -1.4**
KOLS Kolonicke sedl 76.13 325 *eP* **P** **14 12 47.4 -1.4**
OJC Ojcow 76.13 328 P **P** **14 12 49.1 +0.3**
OJC pmax pmax
comp=Z,21nm,1.1s
OJC Ojcow 76.13 328 P **P** **14 12 49.1 +0.3**
OJC IAmb IAmb 14 12 50.3
comp=Z,21nm,1.1s
S22A 4UR Ranch, Cre 76.32 51 P **P** **14 12 51.6 +1.1**
baz=314
S22A 4UR Ranch, Cre 76.32 51 P **P** **14 12 51.5 +1.0**
Q24A Divide 76.43 49 P **P** **14 12 51.8 +0.7**
baz=314
Q24A Divide 76.43 49 P **P** **14 12 51.5 +0.4**
MORW Morawa 76.44 206 P **P** **14 12 51.4 +0.8**
ILGA Ilgaz 76.53 314 P **P** **14 12 52.8 +1.2**
ILGA IAmb IAmb 14 12 54.0
comp=Z,9.9nm,0.8s
SDCO Great Sand Dun 77.08 50 P **P** **14 12 55.1 +0.4**
baz=314
SDCO Great Sand Dun 77.08 50 P **P** **14 12 55.1 +0.4**
CHVC Chvalec 77.27 330 *eP* P 14 13 03.9 +8.6
DPC Dobruska-Polom 77.36 330 *eP* **P** **14 12 56.8 +1.0**
DPC Dobruska-Polom 77.36 330 *eP* **P** **14 12 56.8 +1.0**
MORC Moravsky Berou 77.36 329 *eP* **P** **14 12 56.3 +0.5**
MORC Moravsky Berou 77.36 329 P **P** **14 12 55.4 -0.4**
MORC pmax pmax
comp=Z,8.0nm,0.9s
MORC Moravsky Berou 77.36 329 P **P** **14 12 55.4 -0.4**
MORC IAmb IAmb 14 12 57.5
comp=Z,7.6nm,0.9s
ECSD EROS Data Cent 77.46 41 P **P** **14 12 56.7 +0.2**
baz=319
ECSD EROS Data Cent 77.46 41 P **P** **14 12 56.2 -0.2**
BR131 Keskin Array S 77.52 313 P **P** **14 12 57.0 0.0**
BR131 pmax pmax
comp=Z,3.0nm,0.7s
BR131 Keskin Array S 77.52 313 P **P** **14 12 57.0 0.0**
BRTR Keskin Array B 77.52 313 P **P** **14 12 57.3 +0.3**
comp=Z,2.9nm,0.6s,baz=83,slow=4.3,SNR=9.9
BRTR Keskin Array B 77.52 313 P **P** **14 12 57.7 +0.7**
CLL Collm 77.77 332 *j/P* **P** **14 12 58.1 +0.1**
comp=Z,10.0nm,0.7s
CLL *i* PcP **PcP** **14 13 07.9 0.0**
CLL LmV 14 50 00.0
comp=Z,100nm,20.2s
CLL Collm 77.77 332 *j/P* **P** **14 12 58.1 +0.1**
CLL *i* 14 13 07.9
CLL pmax pmax
comp=Z,10.0nm,0.7s
CLL Collm 77.77 332 P **P** **14 12 57.4 -0.6**
CLL IAmb IAmb 14 12 58.7
comp=Z,8.6nm,0.8s
VYHS Vyhne 77.88 327 *eP* **P** **14 12 59.5 +0.8**
VYHS Vyhne 77.88 327 *eP* **P** **14 12 59.5 +0.8**
PSZ Piszkesteto 77.91 326 P **P** **14 12 59.6 +0.7**
PSZ pmax pmax
comp=Z,7.0nm,0.8s
PSZ Piszkesteto 77.91 326 P **P** **14 12 59.6 +0.7**
PSZ IAmb IAmb 14 13 00.8
comp=Z,6.7nm,0.8s
JAVC Velka Javorina 78.05 328 *eP* **P** **14 13 01.2 +1.5**
VRAC Vranov 78.11 329 P **P** **14 13 00.7 +0.8**
comp=Z,2.4nm,0.5s,baz=281,slow=5.3,SNR=3.5
VRAC Vranov 78.11 329 *eP* **P** **14 13 00.8 +0.8**
T25A Trinidad 78.12 50 P **P** **14 13 01.0 +0.5**
baz=315
T25A Trinidad 78.12 50 P **P** **14 13 00.3 -0.2**
MDUB Mudurnu 78.28 315 P **P** **14 13 01.9 +0.8**
PRU Pruhonice 78.32 330 *eP* **P** **14 13 01.6 +0.5**
PRU Pruhonice 78.32 330 *eP* **P** **14 13 01.6 +0.5**
KRUC Moravsky 78.38 329 *eP* **P** **14 13 01.8 +0.4**
ANMO Albuquerque 78.48 53 *ceP* **P** **14 13 02.7 +0.2**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ANMO Albuquerque 78.48 53 P **P** **14 13 03.5 +1.1**
baz=314
ANMO Albuquerque 78.48 53 P **P** **14 13 03.3 +0.8**
LENM Lemitar 78.71 54 P **P** **14 13 05.5 +1.7**
EKA Eskdalemuir Ar 78.84 342 P **P** **14 13 04.3 +0.5**
comp=Z,5.4nm,0.5s,baz=29,slow=4.9,SNR=34
ESK Eskdalemuir 78.86 343 P **P** **14 13 04.2 +0.3**
ESK pmax pmax
comp=Z,34nm,1.4s
ESK Eskdalemuir 78.86 343 P **P** **14 13 04.2 +0.3**
BNM Barren Site 78.93 54 P **P** **14 13 06.3 +1.3**
319A Douglas 79.24 57 P **P** **14 13 07.6 +1.0**
319A IAmb IAmb 14 13 08.9
comp=Z,15nm,0.9s
121A Cookes Peak, D 79.36 56 P **P** **14 13 08.6 +1.2**
baz=314
121A Cookes Peak, D 79.36 56 P **P** **14 13 08.9 +1.6**
121A IAmb IAmb 14 13 09.9
comp=Z,8.7nm,0.8s
KHC Kasperske Hory 79.38 330 *eP* **P** **14 13 07.4 +0.4**
KHC Kasperske Hory 79.38 330 *eP* **P** **14 13 07.4 +0.4**
CONA Conrad Observa 79.51 328 *eP* **P** **14 13 07.8 0.0**
comp=Z,2.0nm,0.6s
GERES GERESS Array B 79.57 330 P **P** **14 13 08.1 0.0**
comp=Z,0.8nm,0.5s,baz=44,slow=7.8,SNR=5.4
GERES GERESS Array B 79.57 330 P **P** **14 13 08.0 -0.1**
NWAO Narrogin (SRO) 79.65 204 P **P** **14 13 09.0 +0.7**
NWAO pmax pmax
comp=Z,16nm,1.3s
NWAO Narrogin (SRO) 79.65 204 P **P** **14 13 09.0 +0.7**
NWAO IAmb IAmb 14 13 27.8
comp=Z,20nm,1.2s
NWAO Narrogin (SRO) 79.65 204 P **P** **14 13 09.0 +0.7**
NWAO IAmb IAmb 14 13 27.8
comp=Z,16nm,1.2s
TOO Toolangi 79.87 180 P **P** **14 13 10.7 +1.2**
TOO pmax pmax
comp=Z,8.0nm,0.9s
TOO Toolangi 79.87 180 P **P** **14 13 10.7 +1.2**
TOO IAmb IAmb 14 13 11.9
comp=Z,8.1nm,0.9s
MOA Molln 80.19 329 *eP* **P** **14 13 11.2 -0.1**
comp=Z,4.6nm,0.8s
ARSA Arzberg 80.20 328 *eP* **P** **14 13 10.7 -0.8**
comp=Z,1.5nm,0.5s
SOKA Soboth 80.86 328 *eP* **P** **14 13 15.5 +0.5**
comp=Z,6.8nm,0.7s
KBA Koelnbreinsper 81.18 329 *eP* **P** **14 13 15.7 -1.2**
comp=Z,5.9nm,0.6s
OBKA Obir 81.19 328 *eP* **P** **14 13 17.2 +0.4**
comp=Z,4.6nm,0.7s
AMTX Amarillo 81.28 50 P **P** **14 13 18.2 +0.7**
baz=317
MSTX Muleshoe 81.31 51 P **P** **14 13 18.7 +0.9**
baz=316
MNTX Cornudas Mount 81.39 55 P **P** **14 13 19.2 +1.1**
baz=315
MNTX Cornudas Mount 81.39 55 P **P** **14 13 19.0 +1.0**
MNTX IAmb IAmb 14 13 20.1
comp=Z,6.8nm,0.8s
MYKA Terra Mystica 81.44 329 *eP* **P** **14 13 18.8 +0.7**
comp=Z,8.3nm,0.9s
WATA Walderalm 81.62 330 *eP* **P** **14 13 19.3 +0.2**
comp=Z,6.6nm,0.5s
WTTA Wattenberg 81.66 330 *eP* **P** **14 13 19.8 +0.4**
comp=Z,10nm,0.9s
ABTA Abfaltersbach 81.77 330 *eP* **P** **14 13 19.7 -0.2**
comp=Z,2.1nm,0.6s
MOTA Moosalm 81.78 331 *eP* **P** **14 13 18.5 -1.4**
comp=Z,5.3nm,0.7s
SQTA Sankt Quirin 81.85 331 *eP* **P** **14 13 19.4 -0.9**
comp=Z,4.4nm,0.6s
FETA Feichten 82.19 331 *eP* **P** **14 13 20.2 -1.9**
comp=Z,6.6nm,0.9s
FUORN Ofenpass-Fuorn 82.70 331 P **P** **14 13 25.4 +0.5**
FUORN IAmb IAmb 14 13 27.8
comp=Z,8.2nm,0.7s
DAVOX Davos/Dischmat 82.70 331 P **P** **14 13 25.4 +0.6**
comp=Z,2.5nm,0.5s,baz=344,slow=19,SNR=2.4
P40A Paris 82.88 41 P **P** **14 13 26.0 +0.3**
WMOK Wichita Mounta 83.01 48 P **P** **14 13 26.9 +0.4**
WMOK Wichita Mounta 83.01 48 P **P** **14 13 26.4 -0.1**
baz=318
WMOK Wichita Mounta 83.01 48 P **P** **14 13 26.9 +0.4**
WMOK IAmb IAmb 14 13 45.9
comp=Z,8.9nm,1.4s
PMOR Pomariorio Ree 83.58 117 *eT* T 15 45 53.5
comp=Z,108nm,0.2s
S39A Bolivar 83.67 43 P **P** **14 13 29.3 -0.5**
S39A IAmb IAmb 14 13 30.3
comp=Z,9.3nm,0.9s
TUL1 Leonard 83.75 46 P **P** **14 13 30.6 +0.4**
baz=319
KARP Karpathos 84.06 314 P **P** **14 13 31.6 -0.3**
U38A Gravette 84.08 45 P **P** **14 13 31.9 -0.1**
U38A IAmb IAmb 14 13 33.0
comp=Z,9.9nm,0.9s
ABTX Abilene, Hawle 84.09 50 P **P** **14 13 33.0 +0.9**
baz=318
TX31 Lajitas Ar. Si 84.11 55 P **P** **14 13 33.0 +0.6**
TX32 Lajitas Array 84.11 55 P **P** **14 13 33.1 +0.8**
TX32 IAmb IAmb 14 13 33.8
comp=Z,5.3nm,0.9s
TXAR Lajitas Array 84.11 55 P **P** **14 13 33.4 +1.1**
comp=Z,4.3nm,0.8s,baz=297,slow=3.5,SNR=29
TXAR Lajitas Array 84.11 55 P **P** **14 13 33.0 +0.7**
PPT2 Papeete2 84.39 120 *e*LR LR 14 39 57.0
comp=Z,106nm,24.2s
PPT2 Papeete2 84.39 120 *eT* T 15 46 54.7
comp=Z,7.0nm,0.3s
CCM Cathedral Cave 84.42 42 P **P** **14 13 33.7 +0.1**
CCM pmax pmax
comp=Z,11nm,0.9s
CCM Cathedral Cave 84.42 42 P **P** **14 13 33.8 +0.2**
baz=322
CCM Cathedral Cave 84.42 42 P **P** **14 13 33.7 +0.1**
CCM IAmb IAmb 14 13 34.7
comp=Z,11nm,0.9s
HHAR Hobbs 84.43 44 P **P** **14 13 33.5 -0.2**
HHAR IAmb IAmb 14 13 34.6
comp=Z,7.4nm,0.8s
SFIN Lafayette 84.52 38 P **P** **14 13 34.4 +0.3**
baz=324
Z35A Perchaven, San 84.90 48 P **P** **14 13 36.0 -0.1**
U40A Yellville 84.93 44 P **P** **14 13 36.5 +0.2**
baz=321
U40A Yellville 84.93 44 P **P** **14 13 36.0 -0.2**
W39A Magazine 85.35 45 P **P** **14 13 38.5 +0.2**
baz=320
G57A Newington 85.36 28 P **P** **14 13 38.1 0.0**
baz=331
FCAR Ozark Folk Cen 85.67 44 P **P** **14 13 39.8 -0.1**
FCAR IAmb IAmb 14 13 40.7
comp=Z,9.7nm,0.9s
S44A Carbondale 85.67 41 P **P** **14 13 40.2 +0.3**
WHTX Lake Whitney, 85.79 49 P **P** **14 13 41.0 +0.4**
baz=319
PBMO Poplar Bluff 85.82 42 P **P** **14 13 41.0 +0.4**
F61A St Evariste 85.88 25 P **P** **14 13 40.9 +0.2**
baz=334
MIAR Mount Ida 85.96 45 P **P** **14 13 42.1 +0.7**
MIAR pmax pmax
comp=Z,13nm,0.8s
MIAR Mount Ida 85.96 45 P **P** **14 13 41.8 +0.5**
baz=321
MIAR Mount Ida 85.96 45 P **P** **14 13 42.1 +0.7**
LCAR Lake Charles 86.02 43 P **P** **14 13 41.5 -0.1**
LCAR IAmb IAmb 14 13 42.1
comp=Z,4.6nm,0.9s
W41B Gary Mavity, V 86.16 44 P **P** **14 13 42.6 +0.3**
baz=321
PARMO Parma 86.24 42 P **P** **14 13 43.2 +0.5**
G61A St-Isidore-de- 86.33 25 P **P** **14 13 43.4 +0.4**
baz=334
X40A Basin Creek Fa 86.39 45 P **P** **14 13 44.0 +0.5**
baz=321
J57A Williamstown 86.48 29 P **P** **14 13 44.4 +0.7**
baz=331
WCI Wyandotte Cave 86.63 38 P **P** **14 13 44.6 0.0**
baz=324
H62A Milan 87.09 25 P **P** **14 13 47.0 +0.3**
baz=334
T47A Sharon Grove 87.26 40 P **P** **14 13 48.2 +0.6**
WVT Waverly 87.60 41 P **P** **14 13 49.3 -0.1**
WVT pmax pmax
comp=Z,6.0nm,0.8s
WVT Waverly 87.60 41 P **P** **14 13 49.2 -0.1**
baz=324
WVT Waverly 87.60 41 P **P** **14 13 49.3 -0.1**
WVT IAmb IAmb 14 13 50.6
comp=Z,5.6nm,0.8s
N55A Marion Center 87.62 32 P **P** **14 13 49.2 -0.2**
baz=329
L59A Walton 87.89 29 P **P** **14 13 50.9 +0.2**
baz=331
O55A Ligonier 87.98 33 P **P** **14 13 51.4 +0.3**
baz=329
P54A Burton 88.02 34 P **P** **14 13 51.6 +0.3**
baz=328
N57A Milroy 88.20 31 P **P** **14 13 52.6 +0.5**
baz=330
Q53A Leroy 88.21 35 P **P** **14 13 52.6 +0.4**
baz=327
O56A Blue Knob Stat 88.23 32 P **P** **14 13 52.7 +0.4**
baz=329
U49A Red Boiling Sp 88.26 39 P **P** **14 13 52.9 +0.4**
T50A Nancy 88.28 38 P **P** **14 13 52.9 +0.4**
P55A Reedsville 88.37 34 P **P** **14 13 52.4 -0.5**
baz=328
Q54A Coxs Mills 88.40 34 P **P** **14 13 52.7 -0.4**
baz=328
L61B Northampton 88.48 27 P **P** **14 13 53.4 0.0**
baz=333
TBI Tubuai 88.73 124 *eT* T 15 52 18.6
comp=Z,14nm,0.3s
N59A State Game Lan 88.73 30 P **P** **14 13 54.7 0.0**
baz=331
P56A Dayton Farm, R 88.77 33 P **P** **14 13 54.9 +0.1**
baz=329
M60A Port Jervis 88.79 29 P **P** **14 13 54.4 -0.5**
baz=332
O58A Lewisberry 88.99 31 P **P** **14 13 56.1 +0.3**
baz=330
R54A Victor 89.01 35 P **P** **14 13 56.6 +0.6**
baz=328
O59A Robesonia 89.11 31 P **P** **14 13 57.4 +1.0**
baz=330
S54A Dingess, Beckl 89.19 35 P **P** **14 13 57.4 +0.5**
baz=327
SWET Sewanee 89.25 40 P **P** **14 13 57.2 0.0**
TZTN Tazewell 89.26 38 P **P** **14 13 57.9 +0.8**
baz=326
R55A Marlinton 89.29 34 P **P** **14 13 58.0 +0.7**
baz=328
T53A Wise 89.34 37 P **P** **14 13 58.1 +0.5**
baz=327
P58A Pank, Wackersv 89.39 32 P **P** **14 13 58.0 +0.3**
baz=330
T54A Tazewell 89.70 36 P **P** **14 13 59.9 +0.6**
baz=327
T55A Pulaski 89.99 35 P **P** **14 14 01.2 +0.6**
baz=328
U54A Nelsons Funny 90.04 36 P **P** **14 14 00.6 -0.4**
baz=327
M66A Nantucket 90.39 26 P **P** **14 14 01.6 -0.7**
baz=334
V55A Taylorsville 90.87 36 P **P** **14 14 04.5 -0.2**
baz=328
W54A Cherokee Point 91.08 37 P **P** **14 14 05.4 -0.3**
baz=327
KEST Kesra 92.39 326 LR LR 14 59 32.5
comp=Z,49nm,19.4s,baz=306,slow=38
ESDC Sonseca Array 93.55 337 P **P** **14 14 16.9 -0.2**
comp=Z,0.3nm,0.4s,baz=21,slow=3.9,SNR=4.4
TORD Torodi Ar. Bea 115.39 321 PKP **PKiKP** **14 19 42.3 -0.8**
comp=Z,0.5nm,0.5s,baz=18,slow=2.5,SNR=6.4
VNDA Vanda 120.34 176 PKP **PKPdf** **14 19 50.9 +0.2**
comp=Z,0.6nm,0.5s,baz=336,slow=5.0,SNR=7.5
DBIC Dimbokro 124.06 324 PKP **PKPdf** **14 19 59.5 -0.3**
comp=Z,1.3nm,0.6s,baz=343,slow=4.5,SNR=4.4
MAW Mawson 126.06 208 PKP **PKPdf** **14 20 01.7 -0.1**
comp=Z,0.9nm,0.7s,baz=138,slow=3.1,SNR=4.8
H03N2 Juan Fernandez 144.01 90 T T 17 01 35.7
baz=301,slow=77,SNR=36
H03N3 Juan Fernandez 144.02 90 T T 17 01 33.6
baz=301,slow=77,SNR=33
H03N1 Juan Fernandez 144.02 90 T T 17 01 37.0
baz=301,slow=77,SNR=43
SNAA Sanae 147.12 198 PKPdf **PKPbc** **14 20 43.0 +0.2**
VNA2 Neumayer--Watz 148.66 197 PKPbc **PKPbc** **14 20 47.5 +0.7**
VNA3 Neumayer Olymp 148.87 195 PKPdf **PKPbc** **14 20 45.9 -1.4**
VNA1 Neumayer--Stat 149.06 197 PKPbc **PKPbc** **14 20 48.4 +0.6**
BDFB Brasilia 150.59 28 PKPbc **PKPbc** **14 20 53.6 +0.3**
comp=Z,1.6nm,0.3s,baz=311,slow=1.9,SNR=5.9
PLCA Paso Flores 152.98 98 PKPbc **PKPbc** **14 20 58.2 +0.2**
comp=Z,1.1nm,0.6s,baz=318,slow=1.1,SNR=5.6

REY ***05*** *14:01:26.7, 64˚.62N×17˚.40W, h4km*
IDC ***05*** *14:01:28.5±0.7, 64˚.46N×17˚.75W, h0km, mb3.9/11, mb1 4.1/12, mb1mx3.8/53, mbtmp3.9/12, ML4.2/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/43, Error ellipse: s-maj=27.9km s-min=10.5km az=20.0*
NEIC ***05*** *14:01:29.3±1.7, 64˚.45N±0˚.09×17˚.7W±0˚.2, h8km±4km, mb4.6/26, Error ellipse: s-maj=13.2km s-min=9.4km az=194.0*

ISC 05 14:01:29.3±0.4, 64˚.55N±0˚.03×17˚.63W±0˚.03, h10km, n92, σ1§61/82, mb4.1/28, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.14**	**337**	P		**Pg**	**14 01 30.1**	**-2.4**
	baz=289							
IVON				S		**Sg**	**14 01 32.9**	**-1.9**
	baz=289							
IGRF	**Grimsfjall**	**0.21**	**132**	P		**Pg**	**14 01 31.2**	**-2.6**
	baz=165							
IHUS	**Husbondi**	**0.25**	**183**	P		**Pg**	**14 01 33.3**	**-1.2**
	baz=199							
IDYN	**Dyngjuhals**	**0.27**	**25**	P		Pg	14 01 30.4	-4.4
	baz=4.9							
ISKR	**Skrokkalda**	**0.33**	**273**	P		**Pg**	**14 01 34.7**	**-1.1**
	baz=262							
IVOT	**Vottur**	**0.34**	**145**	P		**Pg**	**14 01 33.6**	**-2.5**
	baz=165							
IVOT				S		**Sg**	**14 01 38.9**	**-1.7**
	baz=165							
IJOK	**Jokulheimar**	**0.35**	**228**	P		**Pg**	**14 01 35.3**	**-0.9**
	baz=230							
IKAL	**Kalfafell**	**0.60**	**182**	P		**Pg**	**14 01 39.1**	**-1.9**
	baz=191							
IKAL				S		**Sb**	**14 01 48.5**	**-1.9**
	baz=191							
IVAT	**Vatnsfell**	**0.67**	**238**	P		**Pb**	**14 01 40.9**	**-2.1**
	baz=237							
IMKO	**Mokollar**	**0.70**	**51**	P		Pg	14 01 37.1	-5.7
	baz=51							
ISVA	**Svartarkot**	**0.81**	**11**	P		Pg	14 01 39.6	-5.3
	baz=4.9							
ISVA				S		**Sg**	**14 01 49.6**	**-5.7**
	baz=4.9							
IVSH	**V-Sauoahnukur**	**0.86**	**71**	P		Pg	14 01 39.8	-6.0
	baz=74							
ISNB	**Snabyli**	**0.93**	**209**	P		**Pg**	**14 01 44.9**	**-2.1**
	baz=212							
ISLY	**Slysaalda**	**0.98**	**223**	P		**Pg**	**14 01 46.0**	**-2.0**
	baz=224							
IRJU	**Rjupnafell**	**1.04**	**207**	P		**Pg**	**14 01 47.2**	**-2.0**
	baz=210							
IFED	**Fedgar**	**1.04**	**241**	P		**Pg**	**14 01 47.3**	**-1.9**
	baz=240							
IMJO	**Mjoaskard**	**1.08**	**236**	P		**Pg**	**14 01 48.2**	**-1.9**
	baz=236							
IMEL	**Melhnausar**	**1.11**	**21**	P		Pn	14 01 44.2	-6.6
	baz=18							
IMEL				S		Sb	14 01 57.6	-7.3
	baz=18							
IREN	**Reynihlio**	**1.15**	**15**	P		Pn	14 01 45.1	-6.2
	baz=11							
IKVO	**Krokottuvotn**	**1.21**	**15**	P		Pn	14 01 46.1	-6.2
	baz=11							
IGRS	**Grimsstaoir**	**1.27**	**30**	P		Pn	14 01 46.7	-6.3
	baz=27							
ISKI	**Skildingahlsh**	**1.35**	**11**	P		Pn	14 01 48.5	-5.7
	baz=7.0							
BORG	**Borgarnes**	**1.60**	**279**	Pg		**Pn**	**14 01 55.5**	**-2.1**
	29nm,0.3s,baz=99,slow=7.1,SNR=50							
BORG				Lg		Lg	14 02 17.8	
	18nm,0.3s,baz=72,slow=15,SNR=3.8							
SCO	**Scoresbysund**	**6.19**	**346**			**Pn**	**14 02 59.5**	**-1.0**
SCO	**Scoresbysund**	**6.19**	**346**	*e*		**Pn**	**14 02 58.9**	**-1.6**
	baz=157,slow=7.9							
SCO				*i* P		**Pn**	**14 03 00.5**	**0.0**
SCO				*e*S		Sn	14 03 45.8	-25
SCO				IAML			14 03 54.8	
	comp=Z,5.9nm,0.5s							
EKA	**Eskdalemuir Ar**	**11.71**	**135**	Pn		**Pn**	**14 04 15.6**	**-0.6**
	baz=324,slow=12,SNR=8.7							
ESK	**Eskdalemuir**	**11.71**	**135**	Pn		**Pn**	**14 04 15.9**	**-0.3**
NBO00	**NORSAR Array S**	**13.40**	**92**	Pn		**Pn**	**14 04 39.9**	**+0.6**
SPITS	**Spitsbergen Ar**	**17.00**	**23**	LR		LR	14 10 20.1	
	comp=Z,78nm,20.6s,baz=290,slow=31							
ARC1	**ARCESS Array S**	**17.23**	**54**			**Pn**	**14 05 31.5**	**+1.8**
ARCES	**ARCESS Array B**	**17.23**	**54**	LR		LR	14 11 00.7	
	comp=Z,55nm,19.6s,baz=340,slow=33							
ARC2	**ARCESS Array S**	**17.24**	**54**	Pn		**Pn**	**14 05 28.8**	**-1.0**
ARC2				IAmb		IAmb	14 05 34.5	
	comp=Z,57nm,1.4s							
FINES	**FINESS Array B**	**19.78**	**79**	P		**P**	**14 06 01.1**	**+1.9**
CLL	**Collm**	**20.70**	**115**	*eP*		**P**	**14 06 09.0**	**-0.3**
	comp=Z,23nm,1.6s							
CLL				*i*			14 06 12.6	
BRG	**Berggiesshubel**	**21.41**	**115**	*eP*		**P**	**14 06 17.3**	**+0.4**
	comp=Z,33nm,1.6s							
BFO	**Black Forest**	**21.42**	**127**	P		**P**	**14 06 17.9**	**+0.8**
KHC	**Kasperske Hory**	**22.67**	**118**	*eP*		**P**	**14 06 31.0**	**+0.5**
DAVA	**Damuels**	**22.86**	**126**	*eP*		**P**	**14 06 37.5**	**+4.9**
	comp=Z,2.5nm,0.5s							
GEC2	**GERESS Array S**	**22.95**	**118**	P		**P**	**14 06 34.4**	**+1.0**
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**	**14 06 32.8**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=297,slow=5.8,SNR=5.2							
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**	**14 06 32.6**	**-0.9**
RETA	**Reutte**	**23.00**	**124**	*eP*		**P**	**14 06 36.5**	**+2.6**
	comp=Z,2.3nm,0.8s							
MOTA	**Moosalm**	**23.24**	**124**	*eP*		**P**	**14 06 39.4**	**+2.9**
	comp=Z,5.1nm,1.3s							
FETA	**Feichten**	**23.38**	**125**	*eP*		**P**	**14 06 40.2**	**+2.3**
	comp=Z,10nm,1.8s							
SQTA	**Sankt Quirin**	**23.38**	**124**	*eP*		**P**	**14 06 39.2**	**+1.3**
	comp=Z,4.6nm,0.8s							
WATA	**Walderalm**	**23.42**	**123**	*eP*		**P**	**14 06 39.6**	**+1.3**
	comp=Z,5.0nm,0.9s							
WTTA	**Wattenberg**	**23.50**	**123**	*eP*		**P**	**14 06 40.4**	**+1.3**
	comp=Z,10.0nm,1.2s							
MORC	**Moravsky Berou**	**23.70**	**112**	*eP*		**P**	**14 06 41.3**	**+0.3**

KRUC	**Moravsky**	**23.82**	**114**	*eP*	**P**	**14 06 42.4**	**+0.4**
CONA	**Conrad Observa**	**24.53**	**117**	*eP*	**P**	**14 06 49.4**	**+0.7**
	comp=Z,4.8nm,1.0s						
KLMR	**Klimovskoe**	**25.69**	**72**	*e*	**P**	**14 06 58.0**	**-1.0**
KLMR				AMP		14 07 02.9	
	comp=Z,25nm,1.4s						
ESDC	**Sonseca Array**	**26.17**	**156**	P	**P**	**14 07 04.9**	**+1.4**
	comp=Z,1.6nm,0.6s,baz=340,slow=7.0,SNR=3.7						
ESDC	**Sonseca Array**	**26.17**	**156**	P	**P**	**14 07 00.7**	**-2.9**
AKASG	**Malin Array Be**	**27.88**	**97**	P	**P**	**14 07 19.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=324,slow=9.4,SNR=1.8						
AKASG	**Malin Array Be**	**27.88**	**97**	IAmb	IAmb	14 07 21.6	
	comp=Z,1.8nm,1.2s						
AQU	**L'Aquila**	**28.38**	**126**	P	**P**	**14 07 22.3**	**-1.2**
BRTR	**Keskin Array B**	**38.50**	**105**	P	**P**	**14 08 51.7**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=292,slow=6.5,SNR=4.3						
INK	**Inuvik**	**39.91**	**329**	P	**P**	**14 09 03.7**	**+1.0**
	comp=Z,2.6nm,1.0s,baz=12,slow=12,SNR=3.7						
INK	**Inuvik**	**39.91**	**329**	IAmb	IAmb	14 09 09.2	
	comp=Z,4.3nm,1.1s						
AKTO	**Aktyubinsk**	**40.38**	**73**	P	**P**	**14 09 08.0**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=350,slow=9.5,SNR=4.9						
ULM	**Lac du Bonnet**	**41.59**	**289**	P	**P**	**14 09 17.4**	**+0.6**
	comp=Z,4.9nm,1.0s,baz=174,slow=18,SNR=2.9						
ULM	**Lac du Bonnet**	**41.59**	**289**	IAmb	IAmb	14 09 18.3	
	comp=Z,13nm,1.4s						
ABKAR	**Akbulak array**	**42.08**	**73**	P	**P**	**14 09 20.5**	**-0.3**
TIXI	**Tiksi**	**42.16**	**15**	P	**P**	**14 09 22.8**	**+1.6**
TIXI				IAmb	IAmb	14 09 27.2	
	comp=Z,9.8nm,1.1s						
ILAR	**Eielson Array**	**45.77**	**332**	P	**P**	**14 09 52.7**	**+2.4**
	comp=Z,1.2nm,0.9s,baz=21,slow=6.9,SNR=4.5						
EGMT	**Eagleton**	**48.88**	**297**	P	**P**	**14 10 16.1**	**+1.3**
KOWA	**Kowa**	**50.87**	**163**	LR	LR	14 32 33.8	
	comp=Z,35nm,19.1s,baz=300,slow=37						
YNE	**Yellowstone No**	**51.47**	**295**	P	**P**	**14 10 35.0**	**+0.3**
LRM	**Limekiln Ridge**	**51.74**	**297**	P	**P**	**14 10 36.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**53.05**	**156**	P	**P**	**14 10 47.1**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=350,slow=10.0,SNR=5.1						
TORD	**Torodi Ar. Bea**	**53.05**	**156**	P	**P**	**14 10 45.9**	**-0.5**
BW06	**Boulder Array**	**53.17**	**293**	P	**P**	**14 10 47.7**	**+0.4**
BW06				IAmb	IAmb	14 10 50.8	
	comp=Z,5.1nm,1.1s						
PD31	**Pinedale Array**	**53.17**	**293**	P	**P**	**14 10 46.9**	**-0.4**
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**14 10 47.2**	**0.0**
	comp=Z,2.3nm,0.8s,baz=48,slow=5.2,SNR=14						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**14 10 46.6**	**-0.7**
KDJ	**Kajisay**	**54.85**	**65**	P	**P**	**14 11 00.3**	**+0.8**
KDJ				IAmb	IAmb	14 11 05.0	
	comp=Z,8.4nm,1.4s						
HWUT	**Hardware Ranch**	**54.95**	**294**	P	**P**	**14 11 01.0**	**+0.8**
HWUT				IAmb	IAmb	14 11 04.4	
	comp=Z,5.3nm,1.0s						
NLU	**North Lily Min**	**56.56**	**293**	P	**P**	**14 11 11.9**	**+0.1**
PV01	**Paradox Valley**	**56.70**	**289**	P	**P**	**14 11 14.1**	**+1.2**
PV01				IAmb	IAmb	14 11 17.7	
	comp=Z,5.6nm,1.1s						
PV02	**Paradox Valley**	**56.71**	**290**	P	**P**	**14 11 13.9**	**+1.0**
PV03	**Paradox Valley**	**56.71**	**290**	P	**P**	**14 11 14.2**	**+1.3**
PV03				IAmb	IAmb	14 11 17.0	
	comp=Z,8.1nm,1.2s						
PV13	**Radium Mtn., P**	**56.78**	**290**	P	**P**	**14 11 13.5**	**+0.1**
PV13				IAmb	IAmb	14 11 17.7	
	comp=Z,9.0nm,1.0s						
MSU	**Marysvale**	**57.84**	**293**	P	**P**	**14 11 22.5**	**+1.6**
MVU	**Marysvale**	**57.86**	**293**	P	**P**	**14 11 22.3**	**+1.3**
TCRU	**Three Creeks R**	**57.86**	**293**	P	**P**	**14 11 22.2**	**+1.1**
BANI	**BANI**	**57.91**	**243**	P	**P**	**14 11 21.8**	**+0.4**
WUAZ	**Wupatki**	**60.09**	**290**	P	**P**	**14 11 36.3**	**-0.2**
WUAZ				IAmb	IAmb	14 11 40.9	
	comp=Z,9.4nm,1.2s						
TXAR	**Lajitas Array**	**62.25**	**280**	P	**P**	**14 11 52.5**	**+1.3**
	comp=Z,1.8nm,1.0s,baz=49,slow=3.8,SNR=7.2						
TXAR	**Lajitas Array**	**62.25**	**280**	P	**P**	**14 11 51.9**	**+0.8**
PFO	**Pinyon Flats O**	**63.80**	**293**	P	**P**	**14 12 02.2**	**+0.8**
ASAR	**Alice Springs**	**135.09**	**38**	PKP	**PKiKP**	**14 20 50.1**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=355,slow=2.0,SNR=4.2						
STKA	**Stephens Creek**	**144.85**	**32**	PKP	**PKPdf**	**14 21 06.0**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=19,slow=3.0,SNR=3.1						

*IDC **05** 14:02:12.6±1.4, 64.60N×17.71W, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.6/56, mbtmp3.8/6, ML3.4/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/45, Error ellipse: s-maj=43.6km s-min=13.9km az=18.0*
*NEIC **05** 14:02:14.1±1.1, 64.6°N±0.4×17.6°W±0.2, h11km±5km, mb4.4/2, Error ellipse: s-maj=54.5km s-min=6.4km az=190.0*
ISC 05 14:02:14.0±0.8, **64.5N**±0.2×**17.8W**±0.1, **h10**km, **n14**, σ1.501/11, **mb3.8/5**, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.53**	**280**	Pg	**Pn**	**14 02 40.4**	**-0.9**
	16nm,0.3s,baz=22,slow=18,SNR=3.2						
BORG				Lg	Lg	14 03 02.7	
	baz=49,slow=21,SNR=1.0						
EKA	**Eskdalemuir Ar**	**11.75**	**135**	Pn	**Pn**	**14 05 00.2**	**-1.3**
	baz=327,slow=13,SNR=2.3						
ESK	**Eskdalemuir**	**11.75**	**135**	Pn	**Pn**	**14 05 01.0**	**-0.4**
SFJD	**Kangerlussuaq**	**13.60**	**295**	LR	LR	14 10 01.0	
	comp=Z,130nm,21.7s,baz=98,slow=34						
FIA1	**FINESS Array S**	**19.87**	**79**	P	**P**	**14 06 44.5**	**-0.3**
FIA1				IAmb	IAmb	14 07 13.2	
	comp=Z,18nm,1.2s						
FINES	**FINESS Array B**	**19.87**	**79**	P	**P**	**14 06 44.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=307,slow=14,SNR=2.2						
FRB	**Frobisher Bay**	**21.67**	**291**	LR	LR	14 14 15.4	
	comp=Z,54nm,21.3s,baz=156,slow=33						
DAVOX	**Davos/Dischmat**	**23.34**	**126**	LR	LR	14 16 57.7	
	comp=Z,38nm,20.0s,baz=266,slow=38						
ESDC	**Sonseca Array**	**26.18**	**155**	P	**P**	**14 07 49.8**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=345,slow=9.3,SNR=2.2						
INK	**Inuvik**	**39.89**	**329**	P	**P**	**14 09 47.7**	**+0.4**
INK				IAmb	IAmb	14 09 52.6	
	comp=Z,13nm,1.2s						
TORD	**Torodi Ar. Bea**	**53.06**	**156**	P	**P**	**14 11 31.7**	**+0.6**
	comp=Z,1.3nm,1.0s,baz=341,slow=7.6,SNR=2.6						
PDAR	**Pinedale Array**	**53.11**	**293**	P	**P**	**14 11 32.9**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=40,slow=7.2,SNR=4.1						
PDAR	**Pinedale Array**	**53.11**	**293**	P	**P**	**14 11 31.9**	**+0.4**
TXAR	**Lajitas Array**	**62.17**	**280**	P	**P**	**14 12 34.5**	**-0.8**
	comp=Z,0.1nm,0.5s,baz=35,slow=5.6,SNR=4.2						

*IDC **05** 14:10:16.4±1.1, 34.52N×141.59E, h0km, mb3.3/5, mb1 3.7/8, mb1mx3.5/61, mbtmp3.5/8, ML2.9/3, Error ellipse: s-maj=24.8km s-min=20.8km az=132.0*
*JMA **05** 14:10:18.5±0.7, 34.57N×141.77E, h38km, M3.2*
ISC 05 14:10:21.4±1.0, **34.52N**±0.06×**141.57E**±0.09, **h35**km, **n17**, σ0.994/19, **mb3.4/5**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.51**	**285**	P	**Pn**	**14 10 31.3**	**-0.3**
BSO3	**Boso 3**	**0.92**	**288**	P	**Pn**	**14 10 38.0**	**+0.5**
BSO4	**Boso 4**	**1.12**	**295**	P	**Pn**	**14 10 40.9**	**+0.5**
JKUC	**kamogawauchiur**	**1.29**	**300**	P	**Pn**	**14 10 42.7**	**-0.2**
CHOJ	**Choshi**	**1.31**	**334**	P	**Pn**	**14 10 42.1**	**-1.1**
JMKN	**Mikurajimanish**	**1.76**	**250**	P	**Pn**	**14 10 49.4**	**+0.1**
JYT	**Yasato**	**2.04**	**327**	P	**Pn**	**14 10 52.5**	**-0.7**
JHJ	**Hachijo jima 2**	**2.04**	**227**	Pn	**Pn**	**14 10 53.5**	**+0.3**
	19nm,0.3s,baz=90,slow=20,SNR=1.2						
JHJ				Sn	**Sn**	**14 11 17.8**	**+0.3**
	26nm,0.3s,baz=109,slow=22,SNR=5.8						
MJAR	**Matsushiro Arr**	**3.40**	**307**	Pn	**Pn**	**14 11 12.1**	**+0.2**
	0.5nm,0.3s,baz=153,slow=12,SNR=21						
MJAR				Sn	**Sn**	**14 11 50.7**	**-0.4**
	0.2nm,0.3s,baz=118,slow=23,SNR=2.1						
MAT	**Matsushiro**	**3.40**	**307**	P	**Pn**	**14 11 13.1**	**+1.1**
MAT				*eS*	**Sn**	**14 11 52.2**	**+1.1**
JNU	**Nakatsue**	**9.01**	**264**	Pn	**Pn**	**14 12 26.0**	**-2.9**
	0.1nm,0.3s,baz=45,slow=4.3,SNR=1.0						
ASAJ	**Asahikawa**	**9.61**	**4**	Pn	Pn	14 12 31.2	-6.0
	0.1nm,0.3s,baz=108,slow=4.1,SNR=1.4						
MKAR	**Makanchi Array**	**45.60**	**304**	P	**P**	**14 18 37.6**	**-0.4**
	0.2nm,0.5s,baz=86,slow=8.9,SNR=2.4						
KURBB	**Kurchatov Arra**	**47.67**	**310**	P	**P**	**14 18 54.7**	**+0.5**
	0.3nm,0.5s,baz=84,slow=7.5,SNR=3.2						
ILAR	**Eielson Array**	**51.56**	**31**	P	**P**	**14 19 23.4**	**-0.1**
	0.4nm,0.7s,baz=260,slow=5.7,SNR=4.9						
WRA	**Warramunga Arr**	**54.60**	**188**	P	**P**	**14 19 46.4**	**0.0**
	0.3nm,0.7s,baz=6.0,slow=7.7,SNR=6.7						
NVAR	**Mina Array Bea**	**76.40**	**53**	P	**P**	**14 22 08.0**	**+0.5**
	0.2nm,0.5s,baz=285,slow=7.1,SNR=2.3						

*JMA **05** 14:15:30.6±0.1, 23.06N×121.61E, h24km±2km, M2.6*
*TAP **05** 14:15:31.8, 23.07N×121.54E, h18km, ML2.8, C*
ISC 05 14:15:30.8±1.0, **23.05N**±0.02×**121.59E**±0.02, **h18**km±3km, **n86**, σ0.973/163, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.21**	**282**	P	**Pg**	**14 15 36.4**	**+0.5**
	baz=281						
CHKT				S	**Sg**	**14 15 39.4**	**0.0**
	baz=281						
EDH	**Donghe**	**0.28**	**253**	P	**Pb**	**14 15 37.4**	**+0.2**
	baz=241						
EDH				S	**Sb**	**14 15 41.4**	**0.0**
	baz=241						
EYUL	**Yuli**	**0.38**	**320**	P	**Pg**	**14 15 39.1**	**+0.3**
	baz=334						
EYUL				*eS*	**Sb**	**14 15 45.6**	**+0.8**
	baz=334						
LDUT	**Ludao**	**0.39**	**196**	P	**Pg**	**14 15 39.8**	**+0.9**
	baz=189						
LDUT				*eS*	**Sb**	**14 15 46.0**	**+1.0**
	baz=189						
TWF1	**Yuli**	**0.40**	**318**	P	**Pg**	**14 15 39.3**	**+0.2**
	baz=333						
TWF1				S	**Sb**	**14 15 45.1**	**-0.1**
	baz=333						
YULB	**Yu-li**	**0.43**	**321**	P	**Pg**	**14 15 39.9**	**+0.2**
	baz=325						
YULB				S	**Sb**	**14 15 46.2**	**+0.1**
	baz=325						
LONT	**Longtian**	**0.45**	**251**	P	**Pg**	**14 15 40.2**	**+0.3**
	baz=238						
LONT				S	**Sb**	**14 15 46.7**	**+0.2**
	baz=238						
HGSD	**Ruisui**	**0.46**	**341**	*i* P	**Pg**	**14 15 40.2**	**0.0**
	baz=346						
HGSD				*eS*	**Sb**	**14 15 47.8**	**+0.9**
	baz=346						
TTN	**Taitung**	**0.51**	**234**	*eS*	**Sg**	**14 15 47.6**	**-0.2**
	baz=229						
EHY	**Hungye**	**0.51**	**331**	P	**Pg**	**14 15 41.2**	**0.0**
	baz=336						
EHY				*eS*	**Sb**	**14 15 48.7**	**+0.3**
	baz=336						
TWGBT	**Beinan**	**0.53**	**244**	*i* P	**Pg**	**14 15 41.5**	**+0.2**
	baz=232						
TWGBT				S	**Sg**	**14 15 48.6**	**+0.2**
	baz=232						
TWG	**Pinlang**	**0.53**	**244**	P	**Pg**	**14 15 41.5**	**+0.1**
	baz=232						
TWG				S	**Sg**	**14 15 48.7**	**+0.1**
	baz=232						
ELDTW	**Lidau**	**0.55**	**284**	P	**Pg**	**14 15 41.0**	**-0.7**
	baz=284						
ELDTW				S	**Sg**	**14 15 48.0**	**-1.1**
	baz=284						
EGFH	**Guangfu**	**0.63**	**346**	P	**Pb**	**14 15 43.6**	**+0.4**
	baz=2.0						
EGFH				*eS*	**Sb**	**14 15 52.5**	**+0.8**
	baz=2.0						
ECL	**Taimali**	**0.74**	**232**	P	**Pb**	**14 15 44.7**	**-0.4**
	baz=228						
ECL				*eS*	**Sb**	**14 15 53.9**	**-1.1**
	baz=228						
ESL	**Shilin**	**0.77**	**349**	*eP*	**Pb**	**14 15 45.3**	**-0.4**
	baz=353						
ESL				S	**Sg**	**14 15 56.8**	**+0.6**
	baz=353						
STYT	**Tauyuan**	**0.78**	**278**	P	**Pb**	**14 15 45.1**	**-0.6**
	baz=278						
STYT				S	**Sb**	**14 15 54.6**	**-1.4**
	baz=278						
VWDT	**VWDT**	**0.81**	**329**	P	**Pb**	**14 15 46.2**	**-0.1**
	baz=341						
VWDT				*eS*	**Sg**	**14 15 57.6**	**+0.2**
	baz=341						
ALS	**Alishan**	**0.85**	**302**	P	**Pb**	**14 15 47.2**	**0.0**
	baz=296						
ALS				*eS*	**Sg**	**14 15 58.4**	**-0.5**
	baz=296						
SLGT	**Liugui**	**0.87**	**266**	*eP*	**Pb**	**14 15 46.7**	**-0.7**
	baz=261						
SLGT				S	**Sg**	**14 15 58.7**	**-0.6**
	baz=261						
TPUB	**Ta-pu**	**0.92**	**286**	*eP*	**Pb**	**14 15 48.1**	**0.0**
	baz=291						
TPUB				*eS*	**Sn**	**14 16 01.2**	**-0.3**
	baz=291						
WTP	**Ta-pu**	**0.92**	**282**	*eP*	**Pb**	**14 15 48.2**	**0.0**
	baz=276						
WTP				*eS*	**Sg**	**14 16 00.3**	**-0.5**
	baz=276						
SGST	**Jiashian**	**0.93**	**272**	*eP*	**Pb**	**14 15 47.6**	**-0.7**
	baz=271						
SGST				*eS*	**Sb**	**14 16 00.1**	**-0.2**
	baz=271						
WHYT	**Xinyi Township**	**0.93**	**314**	*eP*	**Pb**	**14 15 48.6**	**+0.2**
	baz=325						
WHYT				S	**Sb**	**14 16 00.5**	**0.0**
	baz=325						
SSD	**Sandimen**	**0.94**	**251**	*eP*	**Pb**	**14 15 48.2**	**-0.2**
	baz=249						
SSD				*eS*	**Sb**	**14 15 59.0**	**-1.4**
	baz=249						
SSLB	**Suanglung**	**0.94**	**321**	*eP*	**Pb**	**14 15 48.6**	**+0.1**
	baz=333						
SSLB				S	**Sg**	**14 16 01.4**	**+0.1**
	baz=333						
TSMG	**Majia**	**0.94**	**249**	*eP*	**Pb**	**14 15 48.5**	**0.0**
	baz=252						
TSMG				*eS*	**Sb**	**14 15 59.5**	**-1.1**
	baz=252						
TAW	**Tawu**	**0.94**	**223**	*eP*	**Pb**	**14 15 48.0**	**-0.5**
	baz=231						
TAW				*eS*	**Sb**	**14 15 59.0**	**-1.7**
	baz=231						
EAST	**Anshuo**	**0.96**	**226**	*eP*	**Pb**	**14 15 48.8**	**0.0**
	baz=232						
EAST				*eS*	**Sb**	**14 16 00.1**	**-1.1**
	baz=232						
CHN4	**Tsaushan**	**0.96**	**288**	*eP*	**Pb**	**14 15 49.4**	**+0.4**
	baz=293						
CHN4				*eS*	**Sn**	**14 16 03.6**	**+0.9**
	baz=293						
CHN1	**Nanshi**	**0.99**	**278**	*eP*	**Pg**	**14 15 50.0**	**0.0**
	baz=277						
CHN1				*eS*	**Sn**	**14 16 04.0**	**+0.7**
	baz=277						
MASBT	**Mashibuluo**	**0.99**	**244**	*eP*	**Pb**	**14 15 48.8**	**-0.5**
	baz=235						
MASBT				*eS*	**Sb**	**14 16 01.3**	**-0.7**
	baz=235						
CHN5	**Tsauling**	**1.00**	**303**	P	**Pn**	**14 15 50.1**	**+0.2**
	baz=304						
CHN5				*eS*	**Sg**	**14 16 02.9**	**-0.5**
	baz=304						
LAY	**Lan-yu**	**1.01**	**182**	P	**Pb**	**14 15 48.7**	**-1.1**
	baz=167						
LAY				*eS*	**Sb**	**14 16 02.0**	**-0.7**
	baz=167						
SNST	**Tainan City**	**1.02**	**280**	P	**Pg**	**14 15 50.7**	**+0.1**
	baz=279						
SNST				S	**Sn**	**14 16 04.0**	**-0.1**
	baz=279						
TWD	**Chiawan**	**1.02**	**0**	*eP*	**Pb**	**14 15 49.4**	**-0.6**
	baz=17						
TWD				*eS*	**Sb**	**14 16 02.2**	**-0.8**
	baz=17						
SCST	**Cishan**	**1.02**	**261**	*eP*	**Pb**	**14 15 49.3**	**-0.6**
	baz=256						
SCST				*eS*	**Sn**	**14 16 05.5**	**+1.4**
	baz=256						
TWK	**Hsinying**	**1.04**	**282**	*eP*	**Pb**	**14 15 50.4**	**+0.2**
	baz=282						
TWK				*eS*	**Sn**	**14 16 04.6**	**+0.1**
	baz=282						
SMLT	**Sun Moon Lake**	**1.04**	**323**	P	**Pb**	**14 15 50.3**	**0.0**
	baz=334						
SMLT				*eS*	**Sg**	**14 16 04.5**	**-0.2**
	baz=334						
SGLT	**Jiouru**	**1.06**	**252**	*eP*	**Pb**	**14 15 51.1**	**+0.4**
	baz=250						
SGLT				*eS*	**Sn**	**14 16 05.0**	**-0.1**
	baz=250						
CHGB	**Renai**	**1.07**	**339**	P	**Pb**	**14 15 50.6**	**-0.3**
	baz=354						
CHGB				*eS*	**Sb**	**14 16 04.2**	**-0.5**
	baz=354						
TYC	**Yuchr**	**1.08**	**322**	*eP*	**Pn**	**14 15 51.6**	**+0.6**
	baz=334						
TYC				*eS*	**Sb**	**14 16 05.0**	**+0.2**
	baz=334						
SSPT	**Xinbi**	**1.10**	**239**	*eP*	**Pb**	**14 15 51.7**	**+0.4**
	baz=237						
SSPT				*eS*	**Sn**	**14 16 06.0**	**0.0**
	baz=237						
TWM1	**Shoushan**	**1.10**	**258**	*eP*	**Pg**	**14 15 52.9**	**+0.8**
	baz=256						
TWM1				*eS*	**Sg**	**14 16 08.4**	**+1.9**
	baz=256						
WJS	**Zhushan**	**1.10**	**314**	*eP*	**Pn**	**14 15 51.9**	**+0.6**
	baz=316						
WJS				*eS*	**Sg**	**14 16 06.6**	**0.0**
	baz=316						
SLIU	**Shizi**	**1.11**	**221**	*eP*	**Pb**	**14 15 49.6**	**-1.7**
	baz=218						
SLIU				*eS*	**Sg**	**14 16 07.2**	**+0.4**
	baz=218						
NACB	**Ninganchiao**	**1.11**	**0**	*eP*	**Pn**	**14 15 50.5**	**-1.0**
	baz=15						
NACB				*eS*	**Sb**	**14 16 04.7**	**-1.0**
	baz=15						
SCZT	**Fangliau**	**1.12**	**233**	*eP*	**Pb**	**14 15 50.5**	**-1.2**
	baz=223						
SCZT				S	**Sb**	**14 16 06.2**	**+0.3**
	baz=223						
WHF	**Hehuan Shan**	**1.13**	**345**	*eP*	**Pb**	**14 15 51.2**	**-0.8**
	baz=348						
WHF				S	**Sb**	**14 16 06.6**	**+0.1**
	baz=348						
CHN3	**Shinhua**	**1.13**	**271**	*eP*	**Pg**	**14 15 53.1**	**+0.5**
	baz=270						
CHN3				*eS*	**Sg**	**14 16 09.3**	**+1.8**
	baz=270						
WGK	**Gukeng**	**1.14**	**304**	*eP*	**Pg**	**14 15 52.7**	**0.0**
	baz=305						
WGK				*eS*	**Sg**	**14 16 08.4**	**+0.8**
	baz=305						
DPDB	**Guoxing**	**1.15**	**328**	*eP*	**Pn**	**14 15 51.9**	**-0.1**
	baz=338						
DPDB				*eS*	**Sb**	**14 16 06.0**	**-0.8**
	baz=338						
ETLH	**Xiulin Townshi**	**1.15**	**355**	*eP*	**Pn**	**14 15 50.8**	**-1.2**
	baz=358						
ETLH				S	**Sb**	**14 16 05.4**	**-1.5**
	baz=358						
WDLH	**Douliu**	**1.16**	**303**	*eP*	**Pg**	**14 15 53.5**	**+0.4**
	baz=304						
WDLH				*eS*	**Sg**	**14 16 09.5**	**+1.2**
	baz=304						
CHY	**Chiayi**	**1.16**	**293**	*eP*	**Pb**	**14 15 52.7**	**+0.5**
	baz=293						
CHY				*eS*	**Sg**	**14 16 08.4**	**0.0**
	baz=293						
WNT	**Mingjian**	**1.17**	**315**	P	**Pg**	**14 15 53.7**	**+0.3**
	baz=317						
WNT				*eS*	**Sg**	**14 16 08.7**	**-0.1**
	baz=317						
FUSS	**Fushou**	**1.23**	**345**	*eP*	**Pn**	**14 15 52.7**	**-0.6**
	baz=347						
FUSS				*eS*	**Sb**	**14 16 07.8**	**-1.5**
	baz=347						
ICHU	**Yijhu**	**1.24**	**284**	*eP*	**Pn**	**14 15 53.2**	**0.0**
	baz=285						
ICHU				*eS*	**Sn**	**14 16 09.5**	**0.0**
	baz=285						
WLGB	**Puzi**	**1.26**	**290**	*eS*	**Sg**	**14 16 11.3**	**-0.3**
	baz=290						
WTK	**Tuku**	**1.27**	**300**	*eS*	**Sg**	**14 16 11.3**	**-0.7**
	baz=301						
CHN8	**Yiju**	**1.30**	**283**	*eS*	**Sg**	**14 16 12.5**	**-0.4**
	baz=283						
HEN	**Hengchun**	**1.31**	**217**	*eP*	**Pn**	**14 15 54.1**	**+0.1**
	baz=214						
HEN				*eS*	**Sn**	**14 16 11.1**	**0.0**
	baz=214						
TSEB	**Hengchuen, Pin**	**1.31**	**209**	*eP*	**Pn**	**14 15 54.4**	**+0.2**
	baz=207						
TSEB				*eS*	**Sn**	**14 16 11.7**	**+0.5**
	baz=207						
WLCH	**Liuqiu**	**1.32**	**238**	*eS*	**Sg**	**14 16 14.4**	**+0.9**
	baz=223						
TWK1	**Hengchun**	**1.32**	**213**	*eP*	**Pn**	**14 15 53.9**	**-0.4**
	baz=210						
TWK1				S	**Sn**	**14 16 10.1**	**-1.4**
	baz=210						
WHP	**Taichung City**	**1.35**	**334**	*eP*	**Pn**	**14 15 55.8**	**+0.9**
	baz=342						
WHP				*eS*	**Sn**	**14 16 12.5**	**+0.1**
	baz=342						
NNSB	**Datong**	**1.38**	**352**	P	**Pn**	**14 15 54.8**	**-0.5**
	baz=355						
NNSB				*eS*	**Sn**	**14 16 10.9**	**-2.3**
	baz=355						
WSF	**Szhu**	**1.39**	**295**	*eS*	**Sb**	**14 16 13.8**	**+0.3**
	baz=296						
NNS	**Nan Shan**	**1.40**	**352**	*eP*	**Pn**	**14 15 54.6**	**-0.9**
	baz=10.0						
NNS				S	**Sn**	**14 16 11.7**	**-1.8**
	baz=10.0						
TWQ1	**Liyutan**	**1.49**	**330**	*eP*	**Pb**	**14 15 58.8**	**+0.9**
	baz=347						
TWQ1				S	**Sg**	**14 16 18.4**	**-0.5**
	baz=347						
NDT	**Datong Townshi**	**1.54**	**357**	*eP*	**Pn**	**14 15 57.2**	**-0.2**
	baz=360						
NDT				*eS*	**Sn**	**14 16 16.4**	**-0.6**
	baz=360						
WDJ	**Dajia District**	**1.56**	**326**	*eS*	**Sg**	**14 16 19.7**	**-1.3**
	baz=329						
TWC	**Suao**	**1.57**	**9**	*eS*	**Sn**	**14 16 16.4**	**-1.1**
	baz=22						
ENTT	**Nioudou**	**1.58**	**359**	*eP*	**Pn**	**14 15 58.5**	**+0.6**
	baz=2.0						
ENTT				S	**Sn**	**14 16 18.1**	**+0.2**
	baz=2.0						
YHNB	**Yeheng**	**1.62**	**353**	P	**Pn**	**14 15 59.4**	**+0.9**
	baz=9.0						
YHNB				*eS*	**Sn**	**14 16 18.7**	**-0.3**
	baz=9.0						
NSK	**Sanguang**	**1.63**	**353**	P	**Pn**	**14 15 59.7**	**+1.0**
	baz=8.0						
NSK				S	**Sn**	**14 16 18.7**	**-0.5**
	baz=8.0						
TWE	**Neicheng**	**1.66**	**2**	*eS*	**Sn**	**14

NP1:ϕ_s98.00000°,δ63.00000°,λ30.00000°. NP2: ϕ_s354.00000°,δ64.00000°,λ150.00000°.
*PDG **05** 14:22:24.7±0.5,38˙14N×20˙38E,h13km±1km,ML4.2/13 Error ellipse: s-maj=1.0km s-min=1.2km az=0.0*
*MED_RC **05** 14:22:24.0±0.4,38˙10N×20˙35E,h25km±2km,MW4.5/16, Moment Tensor Solution.Mantle waves: s16,c21; Duration: 1^{s}0 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.24±.99; $M_{\theta\theta}$-0.04±.72; $M_{\phi\phi}$0.28±.54; $M_{r\theta}$-2.45±.77; $M_{\theta\phi}$5.29±.35; $M_{\phi r}$1.30±.58; Best double couple: M_o5.94000×10^{15} NP1:ϕ_s182.00000°,δ67.00000°, λ-169.00000°. NP2:ϕ_s87.00000°,δ80.00000°, λ-23.00000°. Principal axes: T 5.5300, Plg9.0000°, Azm136.0000°; N 0.8200, Plg65.0000°, Azm245.0000°; P -6.3500, Plg24.0000°, Azm42.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*THE **05** 14:22:25.1,38˙10N×20˙44E,h13km,ML4.1/7 Error ellipse: s-maj=1.1km s-min=0.4km az=73.0*
*NEIC **05** 14:22:26.3±2.5,37˙96N±0˙08×20˙29E±0˙07,h39km±5km, mb4.4/20,Mwr4.3(CSEM),Error ellipse: s-maj=11.2km s-min=7.3km az=189.0*
*TIR **05** 14:22:28.2,38˙30N×20˙08E,h31km±9km,Md4.8*
*HLW **05** 14:22:56.8,36˙14N×22˙77E,h22km±25km,Md4.9*
ISC 05 14:22:24.2±0.9,**38˙08N**±0˙02×**20˙38E**±0˙03,**h14**km±6km, **n365**,σ1^s**50**/413,**mb4.2**/36,**MS3.3**/10,**20C-10D**,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.13**	**40**	P		**Pb**	**14 22 28.2**	**-0.2**
ARG2				S		**Sb**	**14 22 30.5**	**-0.7**
DMLN	**Damoulianata-K**	**0.16**	**358**	P		**Pb**	**14 22 29.0**	**0.0**
DMLN				S		**Sb**	**14 22 31.7**	**-0.4**
	482μm,0.3s							
PSDA	**Pessada-Kefalo**	**0.16**	**78**	P		**Pb**	**14 22 28.4**	**-0.6**
PSDA				S		**Sb**	**14 22 31.0**	**-1.2**
PSDA	**Pessada-Kefalo**	**0.16**	**78**	P		**Pb**	**14 22 28.4**	**-0.6**
PSDA				S		**Sb**	**14 22 30.9**	**-1.3**
	82μm,0.3s							
KEF4	**Livadi, Kephal**	**0.18**	**11**	P		**Pb**	**14 22 29.2**	**-0.1**
KEF4				S		**Sb**	**14 22 32.4**	**-0.3**
VLS	**Valsamata**	**0.19**	**59**	P		**Pb**	**14 22 28.7**	**-0.8**
VLS				S		**Sb**	**14 22 31.2**	**-1.8**
VLS				AML	AML		14 22 31.8	
VLS				AML	AML		14 22 32.0	
VLS	**Valsamata**	**0.19**	**59**	P		**Pb**	**14 22 28.7**	**-0.8**
VLS				S		**Sb**	**14 22 31.2**	**-1.8**
VLS	**Valsamata**	**0.19**	**59**	P		**Pb**	**14 22 28.7**	**-0.8**
VLS				S		**Sb**	**14 22 31.6**	**-1.4**
	336μm,0.2s							
KEF5	**Kardakata, Kep**	**0.21**	**19**	P		**Pb**	**14 22 29.4**	**-0.4**
KEF5				S		**Sb**	**14 22 32.7**	**-0.9**
VLMS	**Volimes, Zakyn**	**0.30**	**132**	P		**Pg**	**14 22 30.9**	**+0.4**
VLMS				S		**Sg**	**14 22 34.6**	**-0.1**
VLMS				AML	AML		14 22 38.5	
VLMS				AML	AML		14 22 41.6	
FSK	**Fiskardo**	**0.41**	**20**	P		**Pg**	**14 22 32.2**	**-0.2**
FSK				S		**Sg**	**14 22 38.0**	**+0.1**
FSK				AML	AML		14 22 39.2	
	comp=N,66134μm,0.4s							
FSK				AML	AML		14 22 40.1	
	comp=E,41668μm,0.2s							
FSK	**Fiskardo**	**0.41**	**20**	P		**Pg**	**14 22 32.4**	**0.0**
FSK				S		**Sg**	**14 22 38.0**	**+0.1**
	comp=E,36μm,0.6s							
ZAK2	**Zakynthos**	**0.50**	**125**	P		**Pg**	**14 22 33.8**	**-0.3**
KRI1	**kERI**	**0.54**	**140**	P		**Pg**	**14 22 34.8**	**0.0**
KRI1				S		**Sg**	**14 22 42.8**	**+0.8**
EVGI	**Lefkada island**	**0.58**	**22**	P		**Pg**	**14 22 35.3**	**-0.3**
EVGI				S		**Sg**	**14 22 43.3**	**-0.1**
EVGI	**Lefkada island**	**0.58**	**22**	P		**Pg**	**14 22 35.3**	**-0.3**
EVGI				S		**Sg**	**14 22 43.6**	**+0.2**
	comp=E,10μm,0.5s							
NYDR	**Nydri-Lefkada**	**0.68**	**21**	P		**Pb**	**14 22 36.8**	**-1.0**
NYDR				S		**Sb**	**14 22 47.1**	**0.0**
AST1	**Astakos**	**0.72**	**50**	P		**Pb**	**14 22 37.7**	**-0.9**
LKD2	**Lefkada island**	**0.74**	**17**	P		**Pb**	**14 22 38.0**	**-0.9**
LKD2				AML	AML		14 22 55.7	
	comp=N,25413μm,0.5s							
LKD2				AML	AML		14 22 57.0	
	comp=E,33484μm,0.5s							
LKD2	**Lefkada island**	**0.74**	**17**	P		**Pb**	**14 22 37.9**	**-1.0**
	baz=42							
LKD2				S		**Sn**	**14 22 52.0**	**+0.6**
	baz=42							
LKD2	**Lefkada island**	**0.74**	**17**	P		**Pb**	**14 22 38.2**	**-0.7**
LKD2				S		**Sg**	**14 22 49.2**	**+0.8**
	comp=E,12μm,0.7s							
TSLK	**Tsoukalades, L**	**0.78**	**16**	P		**Pb**	**14 22 38.7**	**-0.7**
TSLK				AML	AML		14 22 56.0	
	comp=E,71976μm,0.5s							
TSLK				AML	AML		14 22 58.5	
	comp=N,33255μm,0.5s							
TSLK	**Tsoukalades, L**	**0.78**	**16**	P		**Pb**	**14 22 38.8**	**-0.7**
TSLK				S		**Sg**	**14 22 50.3**	**+0.8**
PDO	**Prodromos**	**0.82**	**50**	P		**Pb**	**14 22 39.1**	**-1.0**
PDO				AML	AML		14 22 59.0	
	comp=N,71045μm,0.4s							
PDO				AML	AML		14 23 00.0	
	comp=E,53468μm,0.4s							
PDO	**Prodromos**	**0.82**	**50**	P		**Pb**	**14 22 39.2**	**-1.0**
RLS	**Riolos of Patr**	**0.86**	**91**	P		**Pb**	**14 22 40.0**	**-0.8**
RLS				AML	AML		14 22 56.5	
	comp=N,28409μm,0.4s							
RLS				AML	AML		14 22 57.3	
	comp=E,25157μm,0.4s							
RLS	**Riolos of Patr**	**0.86**	**91**	P		**Pb**	**14 22 40.2**	**-0.6**
DRO	**Drossia**	**1.06**	**96**	P		**Pb**	**14 22 43.7**	**-0.6**
DRO				AML	AML		14 23 06.2	
	comp=N,45584μm,0.4s							
DRO				AML	AML		14 23 06.9	
	comp=E,25890μm,0.7s							
DRO	**Drossia**	**1.06**	**96**	P		**Pb**	**14 22 43.8**	**-0.5**
AMT	**Artemida-Makis**	**1.19**	**117**	P		**Pn**	**14 22 46.0**	**-0.3**
AMT				AML	AML		14 23 08.7	
	comp=E,34941μm,0.5s							
AMT				AML	AML		14 23 16.1	
	comp=N,59334μm,0.6s							
AMT	**Artemida-Makis**	**1.19**	**117**	P		**Pn**	**14 22 45.9**	**-0.5**
EFP	**Efpalio**	**1.25**	**73**	P		**Pn**	**14 22 46.7**	**-0.5**
EFP	**Efpalio**	**1.25**	**73**	P		**Pn**	**14 22 46.4**	**-0.8**
EFP				S		**Sn**	**14 23 03.7**	**-0.1**
	comp=N,9μm,0.7s							
ANX	**Ano Chora**	**1.31**	**67**	P		**Pn**	**14 22 47.8**	**-0.4**
ANX				AML	AML		14 23 12.7	
	comp=N,29951μm,0.5s							
ANX				AML	AML		14 23 13.9	
	comp=E,30373μm,0.5s							
ANX	**Ano Chora**	**1.31**	**67**	P		**Pn**	**14 22 47.8**	**-0.4**
TRIZ	**Trizonia**	**1.36**	**77**	P		**Pn**	**14 22 48.5**	**-0.2**
TRIZ	**Trizonia**	**1.36**	**77**	P		**ePn**	**14 22 48.5**	**-0.2**
ALIK	**Aliki, Aigiali**	**1.38**	**82**	P		**Pn**	**14 22 48.8**	**-0.1**
EVR	**Evrytania**	**1.40**	**53**	P		**Pn**	**14 22 49.1**	**-0.3**
EVR				AML	AML		14 23 14.9	
	comp=N,8776μm,0.8s							
EVR				AML	AML		14 23 18.2	
	comp=E,6649μm,0.5s							
EVR	**Evrytania**	**1.40**	**53**	P		**Pn**	**14 22 49.1**	**-0.3**
KLV	**Kalavryta, Ach**	**1.40**	**91**	P		**Pn**	**14 22 49.6**	**+0.3**
KLV				AML	AML		14 23 16.8	
	comp=E,10521μm,1.1s							
KLV				AML	AML		14 23 18.5	
	comp=N,11282μm,0.6s							
KLV	**Kalavryta, Ach**	**1.40**	**91**	P		**Pn**	**14 22 49.2**	**-0.1**
KALE	**Kalithea**	**1.42**	**77**	P		**Pn**	**14 22 49.4**	**-0.3**
KALE				AML	AML		14 23 19.1	
	comp=N,13788μm,0.6s							
KALE				AML	AML		14 23 24.6	
	comp=E,12196μm,0.6s							
KALE	**Kalithea**	**1.42**	**77**	P		**Pn**	**14 22 49.3**	**-0.3**
IGT	**Igoumenitsa**	**1.45**	**358**	P		**Pb**	**14 22 51.0**	**0.0**
IGT				AML	AML		14 23 15.7	
	comp=E,16487μm,0.7s							
IGT				AML	AML		14 23 17.7	
	comp=N,9291μm,0.5s							
IGT	**Igoumenitsa**	**1.45**	**358**	P		**Pb**	**14 22 50.9**	**-0.1**
IGT				S		**Sn**	**14 23 09.1**	**+0.2**
ITM	**Ithomi**	**1.52**	**126**	P		**Pb**	**14 22 52.0**	**-0.2**
ITM				AML	AML		14 23 21.0	
	comp=N,8700μm,0.7s							
ITM				AML	AML		14 23 23.6	
	comp=E,9048μm,0.4s							
ITM	**Ithomi**	**1.52**	**126**	P		**Pn**	**14 22 51.5**	**+0.5**
ITM	**Ithomi**	**1.52**	**126**			**Pb**	**14 22 51.9**	**-0.2**
ITM	**Ithomi**	**1.52**	**126**	P		**Pn**	**14 22 51.4**	**+0.5**
GUR	**Goura**	**1.56**	**95**	P		**Pn**	**14 22 52.0**	**+0.5**
GUR	**Goura**	**1.56**	**95**	P		**Pn**	**14 22 51.8**	**+0.3**
TRIP	**Tripoli**	**1.59**	**110**	P		**Pb**	**14 22 54.2**	**+0.7**
PYL	**PYLOS**	**1.60**	**137**	P		**Pn**	**14 22 53.1**	**+1.1**
PYL				AML	AML		14 23 24.8	
	comp=N,5435μm,0.5s							
PYL				AML	AML		14 23 25.0	
	comp=E,5628μm,0.6s							
PYL	**PYLOS**	**1.60**	**137**	P		**Pn**	**14 22 52.4**	**+0.3**
JAN	**Janina**	**1.62**	**13**	P		**Pn**	**14 22 54.0**	**+0.2**
JAN				AML	AML		14 23 24.9	
	comp=E,12436μm,0.7s							
JAN				AML	AML		14 23 28.5	
	comp=N,9063μm,0.7s							
MAKR	**Makrakomi, Fth**	**1.66**	**55**	P		**Pb**	**14 22 54.8**	**+0.3**
KEK	**Kerkira**	**1.69**	**345**	P		**Pb**	**14 22 54.6**	**-0.5**
KEK				AML	AML		14 23 28.7	
	comp=E,11680μm,1.0s							
KEK				AML	AML		14 23 31.4	
	comp=N,9702μm,0.6s							
VLX	**Vlachokerasia**	**1.73**	**113**	P		**Pb**	**14 22 56.4**	**+0.5**
VLX				AML	AML		14 23 30.0	
	comp=E,11956μm,0.5s							
VLX				AML	AML		14 23 33.1	
	comp=N,12591μm,0.8s							
AGG	**Agios Georgios**	**1.79**	**58**	P		**Pb**	**14 22 56.9**	**0.0**
AGG	**Agios Georgios**	**1.79**	**58**	P		**Pn**	**14 22 55.2**	**+0.4**
AGG	**Agios Georgios**	**1.79**	**58**	P		**Pb**	**14 22 57.0**	**+0.2**
AGG	**Agios Georgios**	**1.79**	**58**	Pn		**Pb**	**14 22 57.0**	**+0.2**
THAL	**Thalero**	**1.80**	**91**	P		**Pb**	**14 22 57.0**	**+0.1**
AXAR	**Agios Charalam**	**1.92**	**68**	P		**Pb**	**14 22 58.7**	**-0.2**
THL	**Klokotos Trika**	**1.96**	**40**	P		**Pb**	**14 22 59.3**	**-0.2**
LOUT	**Loutraki**	**2.05**	**92**	P		**Pn**	**14 22 59.9**	**+1.6**
LSK	**Leskovik**	**2.08**	**5**	P		**Pb**	**14 23 01.6**	**-0.1**
LSK	baz=12			S		**Sb**	**14 23 26.2**	**-1.2**
	baz=12							
LKR	**Lokris**	**2.13**	**74**	P		**Pn**	**14 23 00.9**	**+1.5**
ATAL	**Atalanti**	**2.16**	**73**	P		**Pn**	**14 23 01.2**	**+1.4**
PENT	**Pentalofos**	**2.19**	**15**	P		**Pb**	**14 23 03.0**	**-0.7**
EPID	**Epidavros**	**2.22**	**101**	P		**Pn**	**14 23 01.7**	**+1.2**
VIL2	**Platees**	**2.28**	**86**	P		**Pn**	**14 23 03.3**	**+1.9**
NEST	**Nestorio**	**2.39**	**12**	P		**Pb**	**14 23 06.4**	**-0.7**
VLI	**Veliai**	**2.45**	**123**	P		**Pb**	**14 23 06.5**	**-1.4**
KZN	**Kozani**	**2.47**	**25**	P		**Pn**	**14 23 06.5**	**+2.3**
KZN	**Kozani**	**2.47**	**25**	P		**Pn**	**14 23 06.4**	**+2.3**
VLO	**Vlora**	**2.48**	**344**	P		**Pn**	**14 23 06.6**	**+2.4**
	baz=349							
SCTE	**Santa Cesarea**	**2.49**	**324**			**Pn**	**14 23 05.1**	**+0.8**
NEO	**Neokhori**	**2.54**	**60**	P		**Pn**	**14 23 07.0**	**+2.0**
XOR	**Xorichti**	**2.55**	**59**	P		**Pn**	**14 23 06.8**	**+1.7**
LIT	**Litokhoron**	**2.60**	**38**	P		**Pb**	**14 23 10.4**	**-0.2**
LIT	**Litokhoron**	**2.60**	**38**	Pn		**Pb**	**14 23 10.4**	**-0.2**
ATH	**Athens Observa**	**2.64**	**91**	P		**Pn**	**14 23 08.1**	**+1.9**
ATH				AML	AML		14 23 54.1	
	comp=E,1856μm,0.7s							
ATH				AML	AML		14 23 55.4	
	comp=N,2534μm,0.7s							
ATH	**Athens Observa**	**2.64**	**91**	P		**Pn**	**14 23 08.2**	**+1.9**
VLY	**Voula,Athens**	**2.71**	**94**	P		**Pn**	**14 23 08.4**	**+1.1**
PTL	**Penteli**	**2.75**	**90**	P		**Pn**	**14 23 09.3**	**+1.4**
DION	**Dionisos Attik**	**2.80**	**89**	P		**Pn**	**14 23 10.1**	**+1.5**
KTHA	**Kythira Island**	**2.81**	**130**	P		**Pn**	**14 23 11.4**	**+2.7**
KTHA	**Kythira Island**	**2.81**	**130**	P		**Pn**	**14 23 10.2**	**+1.5**
AOS	**Alonnisos**	**2.95**	**67**	P		**Pn**	**14 23 11.9**	**+1.3**
AOS	**Alonnisos**	**2.95**	**67**	P		**Pn**	**14 23 11.0**	**+0.4**
KYMI	**Kymi, Euboea I**	**2.98**	**78**	P		**Pn**	**14 23 12.1**	**+1.1**
TIP	**Timpagrande**	**3.04**	**292**	⇓P		**Pn**	**14 23 13.3**	**+1.4**
TIP				⇓S		**Sn**	**14 23 49.1**	**+0.9**
TIP	**Timpagrande**	**3.04**	**292**	Pn		**Pn**	**14 23 12.9**	**+1.0**
PAIG	**Paliouri**	**3.16**	**53**	P		**Pn**	**14 23 14.5**	**+1.0**
ANKY	**Antikythira Is**	**3.22**	**132**	P		**Pn**	**14 23 16.4**	**+2.2**
HORT	**Hortiatis**	**3.28**	**39**	P		**Pn**	**14 23 16.2**	**+1.0**
HORT	**Hortiatis**	**3.28**	**39**	P		**Pn**	**14 23 16.7**	**+1.5**
TIR	**Tirane**	**3.29**	**353**	⇑P		**Pn**	**14 23 16.9**	**+1.6**
TIR				⇑S		**Sn**	**14 23 56.2**	**+2.1**
TIR	**Tirane**	**3.29**	**353**	P		**Pn**	**14 23 16.9**	**+1.6**
TIR				S		**Sn**	**14 23 56.2**	**+2.1**
TIR	**Tirane**	**3.29**	**353**			**Pn**	**14 23 17.1**	**+1.8**
TIR	**Tirane**	**3.29**	**353**	P		**Pn**	**14 23 17.2**	**+2.0**
	baz=357							
PLG	**Polygyros**	**3.30**	**45**	P		**Pn**	**14 23 16.4**	**+0.9**
SKY	**Skiros Island**	**3.37**	**75**	P		**Pn**	**14 23 17.9**	**+1.6**
CGL1	**Ceglie Messapi**	**3.42**	**320**	*e*Pn		**Pn**	**14 23 17.6**	**+0.5**
TAR1	**Taranto**	**3.43**	**316**	*e*Pn		**Pn**	**14 23 18.6**	**+1.5**
MHLO	**Agia Marina, M**	**3.49**	**112**	P		**Pn**	**14 23 19.7**	**+1.7**
CEL	**Celeste**	**3.54**	**274**			**Pn**	**14 23 19.2**	**+0.4**
SOH	**Sokhos**	**3.58**	**39**	P		**Pn**	**14 23 21.1**	**+1.8**
OUR	**Ouranopolis**	**3.59**	**50**	P		**Pn**	**14 23 20.7**	**+1.3**
OUR	**Ouranopolis**	**3.59**	**50**	P		**Pn**	**14 23 20.9**	**+1.5**
PHP	**Peshkopia**	**3.60**	**1**	P		**Pn**	**14 23 21.5**	**+1.9**
PHP	baz=4.0			S		**Sn**	**14 24 04.1**	**+2.1**
	baz=4.0							
KNT	**Kendrikon**	**3.64**	**31**	P		**Pn**	**14 23 21.4**	**+1.2**
RODP	**Rodopos**	**3.69**	**132**	P		**Pn**	**14 23 22.9**	**+2.0**
MATE	**Matera**	**3.83**	**313**	⇑P		**Pn**	**14 23 24.0**	**+1.3**
MATE				⇓S		**Sn**	**14 24 10.4**	**+2.8**
KNDR	**Palaiochora Ch**	**3.89**	**136**	P		**Pn**	**14 23 25.1**	**+1.6**
IMMV	**Iera Moni Meta**	**3.90**	**131**	P		**Pn**	**14 23 25.2**	**+1.6**
IMMV	**Iera Moni Meta**	**3.90**	**131**	P		**Pn**	**14 23 24.8**	**+1.2**
SRS	**Serrai**	**3.92**	**38**	P		**Pn**	**14 23 25.4**	**+1.5**
PUK	**Puka**	**3.98**	**355**	P		**Pn**	**14 23 26.1**	**+1.3**
PUK	baz=358			S		**Sn**	**14 24 11.8**	**+0.6**
	baz=358							
ULC	**Ulcinj**	**3.98**	**348**	⇑*i*Pn		**Pn**	**14 23 25.1**	**+0.3**
ULC				*i* Sn		**Sn**	**14 24 12.1**	**+0.9**
BAI	**Bari**	**4.06**	**319**	*e*Pn		**Pn**	**14 23 27.1**	**+1.3**
DRME	**Dracevica, Mon**	**4.20**	**348**	⇓*i*Pn		**Pn**	**14 23 28.6**	**+0.8**
DRME				*i* Sn		**Sn**	**14 24 17.3**	**+0.6**
DRME	**Dracevica, Mon**	**4.20**	**348**	*e*Pn		**Pn**	**14 23 28.1**	**+0.3**
APE	**Apeiranthos**	**4.21**	**102**	⇑P		**Pn**	**14 23 28.5**	**+0.5**
APE				⇑S		**Sn**	**14 24 18.3**	**+1.2**
APE	**Apeiranthos**	**4.21**	**102**	P		**Pn**	**14 23 29.6**	**+1.6**
APE	**Apeiranthos**	**4.21**	**102**	P		**Pn**	**14 23 28.5**	**+0.5**
APE				S		**Sn**	**14 24 18.2**	**+1.2**
BCI	**Bajram Curri**	**4.29**	**357**	P		**Pn**	**14 23 31.2**	**+2.1**
	baz=0.0							
THT2	**Imeroviglí**	**4.34**	**111**	P		**Pn**	**14 23 31.8**	**+2.0**
BUM	**Brajici-Budva**	**4.37**	**345**	⇓*i*Pn		**Pn**	**14 23 30.6**	**+0.4**
BUM				*i* Sn		**Sn**	**14 24 21.5**	**+0.6**
SANT	**Santorini**	**4.40**	**111**	⇓S		**Sn**	**14 24 22.6**	**+1.1**
SANT	**Santorini**	**4.40**	**111**	P		**Pn**	**14 23 32.4**	**+1.8**
SANT	**Santorini**	**4.40**	**111**	Pn		**Pn**	**14 23 32.3**	**+1.8**
GVD	**Gavdhos**	**4.40**	**136**	P		**Pn**	**14 23 31.5**	**+0.9**
PDG	**Podgorica**	**4.43**	**349**	⇑P		**Pn**	**14 23 31.2**	**+0.2**
PDG	**Podgorica**	**4.43**	**349**	*e*Pn		**Pn**	**14 23 31.4**	**+0.5**
PDG	**Podgorica**	**4.43**	**349**	Pn		**Pn**	**14 23 31.3**	**+0.4**
TTG	**Podgorica**	**4.43**	**349**	⇑*i*Pn		**Pn**	**14 23 32.0**	**+1.1**
TTG				*i* Sn		**Sn**	**14 24 22.6**	**+0.3**
SIGR	**SIGRI**	**4.43**	**74**	P		**Pn**	**14 23 32.5**	**+1.5**
PVY	**Plav**	**4.52**	**356**	⇑*i*Pn		**Pn**	**14 23 33.5**	**+1.2**
PVY				*i* Sn		**Sn**	**14 24 25.3**	**+0.5**
IDI	**Anoyia**	**4.57**	**126**	Pn		**Pn**	**14 23 34.2**	**+1.2**
	comp=N,2.6nm,0.3s,baz=298,slow=15,SNR=15							
IDI				Sn		**Sn**	**14 24 22.4**	**-3.5**
	comp=N,9.2nm,0.3s,baz=288,slow=19,SNR=2.7							
IDI	**Anoyia**	**4.57**	**126**	⇑P		**Pn**	**14 23 33.7**	**+0.7**
IDI				⇑S		**Sn**	**14 24 27.3**	**+1.5**
IDI	**Anoyia**	**4.57**	**126**	P		**Pn**	**14 23 35.1**	**+2.1**
IDI	**Anoyia**	**4.57**	**126**	Pn		**Pn**	**14 23 32.8**	**-0.1**
HCY	**Herceg Novi**	**4.60**	**342**	*e*Pn		**Pn**	**14 23 33.0**	**-0.3**
HCY				*i* Sn		**Sn**	**14 24 26.9**	**+0.5**
HCY	**Herceg Novi**	**4.60**	**342**	*e*Pn		**Pn**	**14 23 32.9**	**-0.3**
CEME	**Cevo**	**4.60**	**346**	⇓*i*Pn		**Pn**	**14 23 33.8**	**+0.4**
CEME				*i* Sn		**Sn**	**14 24 25.2**	**-1.4**
BOZC	**Bozcaada**	**4.76**	**67**	P		**Pn**	**14 23 37.2**	**+1.7**
VAE	**Valguarnera**	**4.77**	**265**	Sn		**Sn**	**14 24 31.2**	**+0.5**
	comp=N,12nm,0.3s,baz=44,slow=18,SNR=2.4							
GADA	**Gvkgeada**	**4.78**	**62**	P		**Pn**	**14 23 36.8**	**+1.1**
IVA	**Berane**	**4.80**	**356**	⇓*i*Pn		**Pn**	**14 23 37.7**	**+1.6**
IVA				*i* Sn		**Sn**	**14 24 32.4**	**+0.8**
NKME	**Niksic**	**4.81**	**347**	*e*Pn		**Pn**	**14 23 36.4**	**+0.2**
NKME				*i* Sn		**Sn**	**14 24 31.8**	**+0.1**
KOME	**Kolasin**	**4.81**	**352**	*e*Pn		**Pn**	**14 23 37.4**	**+1.1**
KOME				*i* Sn		**Sn**	**14 24 32.1**	**+0.3**
NKY	**Niksic**	**4.85**	**348**	*e*Pn		**Pn**	**14 23 37.8**	**+1.0**
NKY				*i* Sn		**Sn**	**14 24 31.7**	**-1.0**
TREB	**Trebinje**	**4.88**	**342**	*e*Pn		**Pn**	**14 23 36.7**	**-0.5**
URLA	**Izmir**	**4.90**	**85**	P		**Pn**	**14 23 39.7**	**+2.2**
EZN	**Ezine**	**4.95**	**68**	P		**Pn**	**14 23 40.1**	**+2.0**
BRY	**Bratogost**	**5.02**	**344**	*e*Pn		**Pn**	**14 23 39.3**	**+0.1**
BRY				*i* Sn		**Sn**	**14 24 36.0**	**-1.0**
BRY	**Bratogost**	**5.02**	**344**	*e*Pn		**Pn**	**14 23 38.7**	**-0.5**
SGRT	**San Giovanni R**	**5.12**	**317**	Pn		**Pn**	**14 23 40.8**	**+0.3**
SJES	**Sjenica**	**5.19**	**357**	*e*Pn		**Pn**	**14 23 41.9**	**+0.5**
STON	**Ston**	**5.21**	**338**	*i* Pn		**Pn**	**14 23 41.5**	**-0.1**
ALN	**Alexandroupoli**	**5.21**	**56**	P		**Pn**	**14 23 42.9**	**+1.3**
ALN	**Alexandroupoli**	**5.21**	**56**	Pn		**Pn**	**14 23 42.9**	**+1.3**
DKL	**Dikili**	**5.21**	**77**	P		**Pn**	**14 23 43.8**	**+2.2**
UPM	**Unac-Piva**	**5.24**	**348**	⇑*i*Pn		**Pn**	**14 23 43.8**	**+1.5**
UPM				*i* Sn		**Sn**	**14 24 42.1**	**-0.4**
UPM	**Unac-Piva**	**5.24**	**348**	*e*Pn		**Pn**	**14 23 43.5**	**+1.2**
GELI	**Tayfur-Gelibol**	**5.27**	**62**	P		**Pn**	**14 23 44.1**	**+1.7**
PLE	**Pljevlja**	**5.30**	**352**	⇑*i*Pn		**Pn**	**14 23 44.6**	**+1.6**
PLE				*i* Sn		**Sn**	**14 24 43.9**	**0.0**
PAOL	**Paolisi**	**5.37**	**305**			**Pn**	**14 23 46.1**	**+2.2**
LSTV	**Lastovo**	**5.39**	**331**	*i* Pn		**Pn**	**14 23 44.3**	**+0.2**
GCAM	**G?zelcaml?**	**5.43**	**92**	P		**Pn**	**14 23 46.9**	**+2.2**
LPK	**Lapseki**	**5.46**	**63**	P		**Pn**	**14 23 46.8**	**+1.8**
ZKR	**Zakros**	**5.55**	**120**	P		**Pn**	**14 23 48.8**	**+2.5**
RUDO	**Rudo**	**5.59**	**352**	*e*Pn		**Pn**	**14 23 46.7**	**-0.1**
BODT	**Bodrum**	**5.60**	**98**	P		**Pn**	**14 23 49.7**	**+2.7**
NIS1	**Nisyros Isl.**	**5.61**	**103**	P		**Pn**	**14 23 49.4**	**+2.2**
CLTB	**Caltabellotta**	**5.70**	**267**	Pn		**Pn**	**14 23 47.8**	**-0.6**
MAKA	**Makarska**	**5.80**	**335**	*e*Pn		**Pn**	**14 23 50.0**	**+0.3**
BBLS	**Lazići**	**5.83**	**353**	*e*Pn		**Pn**	**14 23 50.2**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**5.93**	**89**	P		**Pn**	**14 23 54.0**	**+2.3**
RICI	**Ricice**	**5.94**	**337**	*e*Pn		**Pn**	**14 23 51.4**	**-0.4**
KARP	**Karpathos**	**6.00**	**113**	P		**Pn**	**14 23 55.3**	**+2.8**
KARP	**Karpathos**	**6.00**	**113**			**Pn**	**14 23 53.7**	**+1.1**
DIVS	**Divibare**	**6.02**	**357**	*e*Pn		**Pn**	**14 23 51.8**	**-1.1**
DIVS	**Divibare**	**6.02**	**357**	Pn		**Pn**	**14 23 52.8**	**-0.1**
BALB	**Balikesir**	**6.06**	**73**	P		**Pn**	**14 23 55.6**	**+2.3**
HAPS	**Han Pijesak,Bl**	**6.10**	**350**	*e*Pn		**Pn**	**14 23 53.2**	**-0.8**
INTR	**Introdacqua**	**6.33**	**310**	Pn		**Pn**	**14 23 58.9**	**+1.7**
YER	**Yerkesik**	**6.34**	**96**	P		**Pn**	**14 23 59.9**	**+2.6**
TURN	**Turunc**	**6.39**	**99**	P		**Pn**	**14 24 01.3**	**+3.4**
ARG	**Arkhangelos**	**6.46**	**104**	P		**Pn**	**14 24 01.6**	**+2.8**
TEKS	**Tekeris**	**6.50**	**355**	*e*Pn		**Pn**	**14 23 58.8**	**-0.5**
KIJV	**Kijevo**	**6.64**	**334**	*e*Pn		**Pn**	**14 24 01.6**	**+0.3**
DALY	**Dalyan (Mula)**	**6.70**	**98**	P		**Pn**	**14 24 05.2**	**+3.1**
MORI	**Morici**	**6.78**	**330**	*e*Pn		**Pn**	**14 24 04.1**	**+1.0**
HERR	**Herculane**	**6.96**	**12**	⇑P		**Pn**	**14 24 06.7**	**+1.0**
FETY	**Fethiye**	**7.08**	**

MMAI	**Mount Meron Ar**	**13.23**	**108**	Pn	**Pn**	**14 25 28.8**	**-2.9**
	comp=Z,0.9nm,0.3s,baz=297,slow=14,SNR=2.3						
MMAI				Sn	Sn	14 27 48.1	-10
	comp=Z,5.2nm,0.3s,baz=305,slow=24,SNR=5.8						
BFO	**Black Forest**	**13.48**	**323**	P	**Pn**	**14 25 35.7**	**+0.7**
BFO	**Black Forest**	**13.48**	**323**	Pn	**Pn**	**14 25 35.7**	**+0.7**
ECH	**Echery**	**13.97**	**321**	P	**P**	**14 25 49.9**	**+0.2**
ECH	**Echery**	**13.97**	**321**	Pn	**Pn**	**14 25 42.6**	**+0.9**
ECH				P	P	**14 25 49.9**	**+0.2**
MOX	**Moxa**	**14.03**	**336**	P	**P**	**14 25 42.8**	**+0.4**
AKASG	**Malin Array Be**	**14.10**	**24**	Pn	**Pn**	**14 25 40.1**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=213,slow=9.2,SNR=1.8						
AKASG	**Malin Array Be**	**14.10**	**24**	*i* P	**Pn**	**14 25 44.5**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CLL	**Collm**	**14.22**	**341**	*i* PP	**P**	**14 25 55.5**	**+3.2**
	comp=Z,6.0nm,0.9s						
CLL				*i* sP	Pn	14 25 58.4	+13
CLL	**Collm**	**14.22**	**341**	*i* P	**P**	**14 25 55.5**	**+3.2**
HDK1	**Dakhla**	**14.65**	**146**	P	**Pn**	**14 25 47.7**	**-3.4**
	baz=150						
EIL	**Elat**	**14.71**	**120**	Pn	**Pn**	**14 25 49.6**	**-2.3**
	comp=Z,0.7nm,0.3s,baz=266,slow=3.7,SNR=7.1						
EIL				Sn	Sn	14 28 20.4	-14
	comp=Z,1.6nm,0.3s,baz=270,slow=13,SNR=4.4						
EIL				LR	LR	14 33 16.3	
	comp=Z,57nm,18.3s,baz=279,slow=44						
ASF	**Jabal al Asfar**	**14.74**	**109**	Pn	**Pn**	**14 25 51.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=9.0,slow=14,SNR=1.8						
ASF				Sn	Sn	14 28 26.2	-9.2
	comp=Z,0.1nm,0.3s,baz=314,slow=18,SNR=1.2						
SUW	**Suwalki**	**16.05**	**6**	P	**P**	**14 26 14.1**	**+1.4**
SUW				pmax	pmax		
	comp=Z,47nm,0.8s						
SUW	**Suwalki**	**16.05**	**6**	P	**P**	**14 26 14.1**	**+1.4**
SUW				IAmb	IAmb	14 26 21.8	
	comp=Z,48nm,0.8s						
NACGM	**Naroch**	**17.38**	**12**	*e*	**P**	**14 26 30.0**	**+2.6**
KIV	**Kislovodsk**	**17.80**	**64**	*eP*	**P**	**14 26 32.6**	**+0.3**
KIV				pmax	pmax		
	comp=Z,27nm,1.0s						
KIV				MLR	MLR		
	comp=Z,99nm,14.0s						
KIV	**Kislovodsk**	**17.80**	**64**		**P**	**14 26 33.8**	**+1.5**
KBZ	**Khabaz**	**17.91**	**65**	P	**Pn**	**14 26 33.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=262,slow=15,SNR=4.1						
KBZ	**Khabaz**	**17.91**	**65**	*i* P	**P**	**14 26 33.6**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZEI	**Tsey**	**18.49**	**68**	*eP*	**Pn**	**14 26 45.1**	**+5.0**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VSR	**Storozhevoye**	**18.67**	**39**	*eP*	**Pn**	**14 26 43.5**	**+1.6**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GNI	**Garni**	**19.00**	**76**	LR	LR	14 34 13.0	
	comp=Z,183nm,19.4s,baz=286,slow=38						
ESDC	**Sonseca Array**	**19.01**	**282**	P	**P**	**14 26 44.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=77,slow=12,SNR=5.6						
ESDC				LR	LR	14 34 25.4	
	comp=Z,56nm,18.4s,baz=220,slow=38						
ESDC	**Sonseca Array**	**19.01**	**282**	IAmb	IAmb	14 26 45.2	
	comp=Z,12nm,1.4s						
LPSR	**Galich'ya Gora**	**19.43**	**36**	*eP*	**P**	**14 26 49.9**	**0.0**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VRH	**Novokhopyorsk**	**19.97**	**42**	*eP*	**Pn**	**14 26 57.2**	**-0.4**
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
OBN	**Obninsk**	**20.26**	**28**	*de*	**P**	**14 26 59.5**	**+0.6**
OBN				*e*		14 27 16.8	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,98nm,15.0s						
VSU	**Vasula**	**20.81**	**9**	*i* P	**P**	**14 27 04.8**	**-0.1**
VSU				pmax	pmax		
	comp=Z,79nm,0.9s						
MOS	**Moscow**	**21.13**	**28**	*eP*	**P**	**14 27 11.2**	**+2.9**
MOS				*e*		14 27 31.4	
HFS	**Hagfors**	**22.48**	**351**	P	**P**	**14 27 22.6**	**-0.2**
	comp=Z,14nm,0.7s,baz=163,slow=11,SNR=11						
HFS				LR	LR	14 36 31.2	
	comp=Z,92nm,21.7s,baz=160,slow=38						
NC602	**NORSAR Array S**	**23.35**	**349**	P	**P**	**14 27 31.2**	**-0.6**
EKA	**Eskdalemuir Ar**	**23.45**	**325**	P	**P**	**14 27 33.0**	**+0.2**
	comp=Z,6.3nm,0.8s,baz=126,slow=8.4,SNR=7.6						
FINES	**FINESS Array B**	**23.66**	**7**	P	**P**	**14 27 34.0**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=184,slow=9.2,SNR=16						
FINES	**FINESS Array B**	**23.66**	**7**	*eP*	**P**	**14 27 35.0**	**+0.2**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FIA1	**FINESS Array S**	**23.66**	**7**	P	**P**	**14 27 34.2**	**-0.7**
FIA1				IAmb	IAmb	14 27 44.3	
	comp=Z,15nm,1.0s						
NC405	**NORSAR Array S**	**23.69**	**350**	P	**P**	**14 27 34.3**	**-0.9**
NB201	**NORSAR Array S**	**23.69**	**349**	P	**P**	**14 27 33.5**	**-1.7**
NB2	**NORSAR Subarra**	**23.69**	**349**	P	**P**	**14 27 34.6**	**-0.7**
	comp=Z,12nm,1.0s,baz=160,slow=9.3						
NOA	**NORSAR Array B**	**23.69**	**349**	P	**P**	**14 27 35.2**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=152,slow=11,SNR=13						
NOA				LR	LR	14 37 48.9	
	comp=Z,71nm,19.1s,baz=175,slow=39						
NOA	**NORSAR Array B**	**23.69**	**349**	*eP*	**P**	**14 27 36.3**	**+1.0**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NBO00	**NORSAR Array S**	**23.75**	**348**	P	**P**	**14 27 35.1**	**-0.7**
NC303	**NORSAR Array S**	**23.85**	**349**	P	**P**	**14 27 37.2**	**+0.5**
NC204	**NORSAR Array S**	**23.99**	**349**	P	**P**	**14 27 39.0**	**+0.9**
KLMR	**Klimovskoe**	**25.77**	**22**	*eP*	**P**	**14 27 53.9**	**-0.3**
KLMR				pmax	pmax		
	comp=Z,22nm,1.4s						
KLMR	**Klimovskoe**	**25.77**	**22**	*eP*	**P**	**14 27 53.9**	**-0.3**
KLMR				AMP		14 27 58.7	
	comp=Z,22nm,1.4s						
AKTO	**Aktyubinsk**	**29.33**	**53**	P	**P**	**14 28 25.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=304,slow=11,SNR=2.5						
TORD	**Torodi Ar. Bea**	**29.88**	**219**	P	**P**	**14 28 31.7**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=26,slow=8.3,SNR=4.5						
TORD				LR	LR	14 41 38.8	
	comp=Z,60nm,19.4s,baz=10.0,slow=39						
ABKAR	**Akbulak array**	**30.39**	**56**	P	**P**	**14 28 35.3**	**-0.3**
ARU	**Arti**	**31.21**	**42**	P	**P**	**14 28 43.8**	**+1.0**
ARU						14 29 42.0	
ARU				S	**S**	**14 33 50.7**	**+2.4**
ARU				SS	**SnSn**	**14 35 30.4**	**-0.1**
ARCES	**ARCESS Array B**	**31.64**	**3**	P	**P**	**14 28 46.4**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=188,slow=11,SNR=6.6						
KOWA	**Kowa**	**31.91**	**229**	P	**P**	**14 28 50.7**	**+1.4**
	comp=Z,1.6nm,0.5s,baz=37,slow=2.4,SNR=4.3						
KOWA	**Kowa**	**31.91**	**229**	IAmb	IAmb	14 28 55.5	
	comp=Z,2.2nm,0.7s						
BORG	**Borgarnes**	**36.15**	**331**	LR	LR	14 46 25.3	
	comp=Z,43nm,19.3s,baz=82,slow=40						
BRVK	**Borovoye**	**37.20**	**50**	*ce*	**P**	**14 29 32.9**	**-1.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**37.20**	**50**	P	**P**	**14 29 35.2**	**+0.4**
BRVK				IAmb	IAmb	14 29 43.5	
	comp=Z,4.1nm,0.8s						
CHGR	**Chuyangaron**	**37.88**	**74**	P	**P**	**14 29 41.7**	**+0.8**
KK31	**Karatay Array**	**37.94**	**66**	P	**P**	**14 29 40.6**	**-0.5**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	**Karatay Array**	**37.94**	**66**	P	**P**	**14 29 40.6**	**-0.5**
KK31				IAmb	IAmb	14 29 49.3	
	comp=Z,3.5nm,0.8s						
KKAR	**Karatay Array**	**37.94**	**66**	P	**P**	**14 29 40.6**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	**Karatay Array**	**37.94**	**66**	P	**P**	**14 29 40.6**	**-0.5**
KKAR				IAmb	IAmb	14 29 49.3	
	comp=Z,3.5nm,0.8s						
DBIC	**Dimbokro**	**38.74**	**223**	P	**P**	**14 29 47.5**	**-0.6**
	comp=Z,2.4nm,0.6s,baz=30,slow=12,SNR=1.7						
DBIC				LR	LR	14 46 16.7	
	comp=Z,60nm,20.6s,baz=12,slow=37						
TIC	**Toumodi**	**38.85**	**223**	*e*	PKP1	**P**	**14 29 52.7**	**+3.6**
KIC	**Kosan Boka**	**38.94**	**222**	*e*	PKP1	**P**	**14 29 53.7**	**+3.9**
	comp=Z,5.8nm,0.7s						
LIC	**Lamto**	**39.21**	**222**	*e*	PKP1	**P**	**14 29 53.4**	**+1.4**
	comp=Z,5.5nm,0.5s						
KURK	**Kurchatov**	**42.42**	**53**	*ce*	P	**P**	**14 30 18.1**	**-0.1**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAKZ	**Makanchi**	**45.23**	**58**	P	**P**	**14 30 41.7**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAKZ	**Makanchi**	**45.23**	**58**	P	**P**	**14 30 41.7**	**+0.8**
MK31	**Makanchi Array**	**45.45**	**58**	P	**P**	**14 30 41.3**	**-1.3**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK31	**Makanchi Array**	**45.45**	**58**	P	**P**	**14 30 41.3**	**-1.3**
MK31				IAmb	IAmb	14 30 51.4	
	comp=Z,2.5nm,0.6s						
MKAR	**Makanchi Array**	**45.45**	**58**	P	**P**	**14 30 41.8**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=285,slow=7.9,SNR=21						
ZAA0	**Zalesovo Array**	**45.84**	**48**	P	**P**	**14 30 44.3**	**-1.2**
ZAA0				IAmb	IAmb	14 30 56.5	
	comp=Z,6.7nm,0.6s						
ZALV	**Zalesovo Beam**	**45.84**	**48**	P	**P**	**14 30 44.1**	**-1.5**
	comp=Z,6.9nm,0.6s,baz=279,slow=8.0,SNR=9.1						
ZALV				LR	LR	14 53 04.7	
	comp=Z,39nm,18.6s,baz=35,slow=40						
ZALV	**Zalesovo Beam**	**45.84**	**48**	*eP*	**P**	**14 30 47.8**	**+2.3**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NRIK	**Noril'sk**	**46.93**	**27**	*i* P	**P**	**14 30 53.5**	**-0.4**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
DGZ	**Jazzator, Alta**	**48.17**	**53**	*i* P	**P**	**14 31 04.6**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
WMQ	**Urumqi**	**49.90**	**61**	*eP*	**P**	**14 31 19.6**	**+2.3**
SONM	**Songino Array**	**60.60**	**50**	P	**P**	**14 32 34.2**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=292,slow=7.8,SNR=5.4						
SONM	**Songino Array**	**60.60**	**50**	P	**P**	**14 32 33.8**	**-0.7**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**60.60**	**50**	P	**P**	**14 32 33.8**	**-0.7**
LZH	**Lanzhou**	**64.34**	**63**	*eP*	**P**	**14 32 58.8**	**-0.9**
LZH				pP	sP	14 33 08.0	+2.0
LZH				sP	pP	14 33 11.3	+7.0
LZH				*e*PP	PcP	14 34 21.9	+48
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,56nm,7.5s						
LZH				LR	LR		
	comp=N,79nm,15.1s						
LZH				LR	LR		
	comp=E,87nm,15.3s						
LZH				LR	LR		
	comp=Z,100nm,18.0s						
YAK	**Yakutsk**	**65.25**	**29**	*i* P	**P**	**14 33 04.4**	**-0.5**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**67.18**	**55**	*eP*	**P**	**14 33 20.1**	**+2.3**
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,6.9s						
CMAR	**Chiang Mai Arr**	**70.01**	**82**	P	**P**	**14 33 35.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=312,slow=5.6,SNR=2.7						
CMAR				LR	LR	15 10 30.1	
	comp=Z,7.4nm,19.3s,baz=355,slow=41						
BILL	**Bilibino**	**71.14**	**13**	*i* P	**P**	**14 33 41.9**	**+0.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s						
INK	**Inuvik**	**72.14**	**350**	P	**P**	**14 33 47.5**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=51,slow=9.2,SNR=1.8						
INK	**Inuvik**	**72.14**	**350**	P	**P**	**14 33 48.6**	**+0.8**
INK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
INK	**Inuvik**	**72.14**	**350**	P	**P**	**14 33 48.6**	**+0.8**
INK				IAmb	IAmb	14 34 09.1	
	comp=Z,4.2nm,1.4s						
KLR	**Kul'dur**	**74.02**	**39**	*i* P	**P**	**14 34 00.0**	**+0.8**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
COLA	**College**	**76.97**	**355**	*i* P	**P**	**14 34 16.3**	**+0.5**
COLA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILAR	**Eielson Array**	**77.00**	**354**	P	**P**	**14 34 13.7**	**-2.4**
	comp=Z,0.2nm,0.7s,baz=353,slow=3.6,SNR=1.8						
KSRS	**Korea Array**	**79.48**	**51**	P	**P**	**14 34 28.9**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=310,slow=4.9,SNR=5.0						
KSRS				LR	LR	15 16 08.5	
	comp=Z,32nm,18.7s,baz=174,slow=41						
PDAR	**Pinedale Array**	**87.57**	**326**	P	**P**	**14 35 09.8**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=47,slow=5.3,SNR=1.9						
WRA	**Warramunga Arr**	**120.64**	**92**	PKP	**PKiKP**	**14 41 16.1**	**+0.1**
	comp=Z,0.2nm,0.8s,baz=321,slow=2.2,SNR=1.3						
ASAR	**Alice Springs**	**122.27**	**96**	PKP	**PKPdf**	**14 41 18.3**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=312,slow=1.4,SNR=2.0						

IDC 05 14:47:20.5±7.5, 8.71N×93.81E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/40, mbtmp3.2/3, MS2.4/1, Ms1 2.6/1, ms1mx2.3/18, Error ellipse: s-maj=393.5km s-min=31.5km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.90**	**27**	LR	LR	14 54 46.5	
	comp=Z,17nm,18.7s,baz=160,slow=41						
MKAR	**Makanchi Array**	**39.21**	**347**	P	P	14 54 50.4	-0.1
	0.1nm,0.4s,baz=157,slow=7.8,SNR=1.7						
WRA	**Warramunga Arr**	**49.01**	**126**	P	P	14 56 10.2	+0.7
	0.6nm,1.0s,baz=307,slow=8.5,SNR=4.7						
ASAR	**Alice Springs**	**50.70**	**130**	P	P	14 56 21.5	-0.8
	0.1nm,0.3s,baz=303,slow=7.9,SNR=6.4						

*IDC **05** 14:57:58.9±2.5, 23.98S×67.18W, h174km±22km, mb3.9/2, mb1 3.6/6, mb1mx3.3/24, mbtmp4.1/6, Error ellipse: s-maj=38.5km s-min=17.6km az=155.0*
*GUC **05** 14:57:59.3±0.5, 24.01S×67.52W, h208km±7km, ML3.9*
ISC 05 14:57:57.4±0.8, 24.13S±0.05×67.28W±0.05, h178km±8km, n27, σ1s45/44, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.72**	**110**	*i* P	**Pn**	**14 58 32.0**	**+0.4**
SLA				*i* S	**Sn**	**14 58 57.6**	**-0.5**
LVC	**Limon Verde**	**2.13**	**315**	P	**Pn**	**14 58 37.5**	**+1.3**
	12nm,0.3s,baz=113,slow=9.2,SNR=177						
LVC				S	**Sn**	**14 59 06.7**	**+0.6**
	23nm,0.3s,baz=299,slow=19,SNR=33						
LVC	**Limon Verde**	**2.13**	**315**	*eP*	**Pn**	**14 58 37.2**	**+1.1**
LVC				*eS*	**Sn**	**14 59 06.3**	**+0.2**
PB15	**IPOC Station P**	**2.21**	**294**	*eP*	**Pn**	**14 58 37.9**	**+1.1**
PB15				*i* S	**Sn**	**14 59 07.8**	**+0.4**
GO02	**Mina Guanaco**	**2.34**	**243**	↑*i* P	**Pn**	**14 58 39.1**	**+0.6**
GO02				*i* S	**Sn**	**14 59 10.4**	**0.0**
GO02				IAML		14 59 11.2	
	comp=N,563nm,0.2s						
PB06	**IPOC Station P**	**2.54**	**303**	*eP*	**Pn**	**14 58 41.8**	**+1.2**
PB06				*i* S	**Sn**	**14 59 13.8**	**-0.4**
PB06				IAML		14 59 16.4	
	comp=N,364nm,0.4s						
PB09	**IPOC Station P**	**2.94**	**322**	*eP*	**Pn**	**14 58 46.9**	**+1.4**
PB09				*eS*	**Sn**	**14 59 22.4**	**-0.5**
PB09				IAML		14 59 25.2	
	comp=E,104nm,0.3s						
PB05	**IPOC Station P**	**2.97**	**295**	*eP*	**Pn**	**14 58 46.2**	**+0.5**
PB05				*i* S	**Sn**	**14 59 21.1**	**-2.2**
PB05				IAML		14 59 23.5	
	comp=E,128nm,0.2s						
PB10	**IPOC Station P**	**3.06**	**281**	*eP*	**Pn**	**14 58 47.5**	**+0.9**
PB10				*i* S	**Sn**	**14 59 22.9**	**-2.2**
PB10				IAML		14 59 34.5	
	comp=N,143nm,0.5s						
PB03	**IPOC Station P**	**3.08**	**312**	*eP*	**Pn**	**14 58 47.8**	**+0.7**
PB03				*i* S	**Sn**	**14 59 24.8**	**-0.9**
PB03				IAML		14 59 27.4	
	comp=E,267nm,0.3s						
AC02	**Maricunga**	**3.17**	**211**	↑*i* P	**Pn**	**14 58 49.2**	**+0.7**
AC02				*eS*	**Sn**	**14 59 29.1**	**+0.7**
AHML	**Horco Molle**	**3.18**	**147**	*eP*	**Pn**	**14 58 48.1**	**0.0**
PB04	**IPOC Station P**	**3.19**	**304**	*eP*	**Pn**	**14 58 49.3**	**+0.8**
PB04				*i* S	**Sn**	**14 59 26.4**	**-1.7**
PB04				IAML		14 59 28.5	
	comp=N,392nm,0.5s						
PB07	**IPOC Station P**	**3.39**	**314**	*eP*	**Pn**	**14 58 51.6**	**+0.7**
PB07				*i* S	**Sn**	**14 59 30.9**	**-1.8**
PB01	**IPOC Station P**	**3.69**	**326**	↑*eP*	**Pn**	**14 58 54.9**	**+0.3**
PB01				*eS*	**Sn**	**14 59 37.9**	**-1.3**
PB02	**IPOC Station P**	**3.69**	**319**	↑*eP*	**Pn**	**14 58 54.9**	**+0.2**
PB02				*eS*	**Sn**	**14 59 37.6**	**-1.8**
PB08	**IPOC Station P**	**4.33**	**336**	*eP*	**Pn**	**14 59 04.3**	**+1.2**
GO03	**Copiap**	**4.36**	**217**	*eP*	**Pn**	**14 59 02.1**	**-0.9**
GO03				*eS*	**Sn**	**14 59 49.8**	**-4.8**
LPAZ	**La Paz**	**7.84**	**354**	P	**Pn**	**14 59 49.2**	**-0.1**
	comp=N,0.4nm,0.3s,baz=171,slow=7.3,SNR=9.2						
LPAZ				S	**Sn**	**15 01 15.5**	**-2.1**
	comp=N,0.1nm,0.3s,baz=90,slow=20,SNR=1.8						
SIV	**San Ignacio**	**9.97**	**37**	P	**Pn**	**15 00 14.8**	**-2.0**
	comp=N,1.5nm,0.3s,baz=243,slow=9.7,SNR=16						
BDFB	**Brasilia**	**19.97**	**69**	P	**P**	**15 02 16.7**	**+0.5**
	comp=N,0.4nm,0.3s,baz=239,slow=12,SNR=5.9						
RPN	**Rapa Nui**	**37.91**	**256**	P	**P**	**15 04 59.0**	**+1.5**
	comp=N,25nm,0.7s,baz=48,slow=14,SNR=1.2						
TORD	**Torodi Ar. Bea**	**76.85**	**69**	P	**P**	**15 09 30.5**	**+0.4**
	comp=N,0.2nm,0.4s,baz=241,slow=5.6,SNR=1.7						
ASAR	**Alice Springs**	**128.23**	**205**	PKP	**PKiKP**	**15 16 45.0**	**+1.2**
	comp=N,0.3nm,0.7s,baz=159,slow=2.4,SNR=5.5						
WRA	**Warramunga Arr**	**131.40**	**208**	PKP	**PKiKP**	**15 16 51.8**	**+1.6**
	comp=N,0.2nm,0.3s,baz=162,slow=1.8,SNR=9.4						
ZALV	**Zalesovo Beam**	**143.62**	**28**	PKP	**PKiKP**	**15 17 11.0**	**-3.1**
	comp=N,0.8nm,0.6s,baz=321,slow=3.7,SNR=2.8						
MKAR	**Makanchi Array**	**146.79**	**39**	PKPbc	**PKiKP**	**15 17 20.5**	**-0.3**
	comp=N,0.9nm,0.7s,baz=294,slow=3.5,SNR=8.3						

*IDC **05** 15:18:24.5±0.8, 42.07N×119.57W, h0km, mb3.5/1, mb1 3.6/6, mb1mx3.4/44, mbtmp3.2/6, ML3.5/5, MS2.8/6, Ms1 2.8/6, ms1mx2.6/32, Error ellipse: s-maj=10.0km s-min=5.5km az=8.0*
*ANF **05** 15:18:25.7±0.5, 41.83N×119.64W, h0km, ML3.9/16, Error ellipse: s-maj=3.6km s-min=2.8km az=98.0*
*REN **05** 15:18:26.5±1.6, 41.83N±0.04×119.61W±0.05, h4km±7km, ML4.2/3, ML3.7/54(SEA), Mwr3.9/65(NEIC), Error ellipse: s-maj=6.1km s-min=5.3km az=200.0*
*NEIC **05** 15:18:26.6, 41.83N×119.62W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.69; $M_{\theta\theta}$=3.15; $M_{\phi\phi}$=5.84; $M_{r\theta}$=2.96; $M_{r\phi}$=1.03; $M_{\theta r}$=6.10; Fault plane solution: M_o=8.52000×10^{14} NP1:ϕ_s=25.04000°, δ=78.60000°, λ=-61.41000°. NP2:ϕ_s=134.98000°, δ=30.59000°, λ=-157.15000°. Principal axes: T 9.0359, Plg=28.0000°, Azm=93.0000°; N -1.1402, Plg=28.0000°, Azm=199.0000°; P -7.8957, Plg=48.0000°, Azm=326.0000°;*
*SEA **05** 15:18:28.1±1.9, 41.82N±0.04×119.67W±0.05, h0km±7km Error ellipse: s-maj=6.6km s-min=5.2km az=201.0*
ISC 05 15:18:25.1±1.3, 41.99N±0.03×119.56W±0.03, h4km±13km, n72, σ1s95/79, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.56**	**261**	Pg	**Pb**	**15 18 36.6**	**-1.0**
MOD				Sg	**Sg**	**15 18 43.7**	**+0.6**
K05A	**Summer Lake**	**1.23**	**307**	Pn	**Pn**	**15 18 50.5**	**+1.2**
J08A	**Circle Bar Ran**	**1.59**	**30**		**Pg**	**15 18 56.5**	**+0.9**
M04C	**Macdoel**	**1.71**	**264**	P	**Pb**	**15 18 55.9**	**-1.4**
	baz=88,SNR=322						
M04C				S	**Sb**	**15 19 18.6**	**-0.6**
	baz=88						
K04D	**Chiloquin, OR**	**1.74**	**292**	P	**Pg**	**15 18 57.4**	**-1.1**
	baz=116,SNR=13						
K04D				S	**Sg**	**15 19 21.7**	**+0.6**
	baz=116						
J05D	**Fort Rock, OR**	**1.79**	**317**	Sb	**Sg**	**15 19 26.1**	**+3.6**
	baz=140						
L04D	**Klamath Falls**	**2.05**	**277**	P	**Pb**	**15 19 00.8**	**-2.2**
	baz=100,SNR=116						
L04D				Sb	**Sg**	**15 19 31.1**	**0.0**
	baz=100						
PINE	**Pine Mountain**	**2.06**	**331**		**Pg**	**15 19 03.5**	**-1.3**
I07A	**Izee**	**2.09**	**1**		**Pg**	**15 19 04.5**	**-0.7**
BEKR	**Beckworth**	**2.21**	**196**		**Pn**	**15 18 59.4**	**-3.3**
J04D	**Umpqua Nationa**	**2.26**	**304**	P	**Pb**	**15 19 05.2**	**-1.4**
	baz=127,SNR=12						
J04D				Sb	**Sg**	**15 19 39.9**	**+2.3**
	baz=127						
PAHR	**Pah Rah Range**	**2.29**	**177**		**Pn**	**15 19 03.7**	**-0.1**
YBH	**Yreka Blue Hor**	**2.36**	**265**	Pn	**Pn**	**15 19 04.6**	**-0.2**
	5.7nm,0.3s,baz=81,slow=9.5,SNR=78						
YBH				Lg	Lg	15 19 38.8	
	21nm,0.3s,baz=5.3,slow=12,SNR=15						
YBH	**Yreka Blue Hor**	**2.36**	**265**		**Pn**	**15 19 04.2**	**-0.7**
O03E	**Paynes Creek**	**2.39**	**226**	P	**Pn**	**15 19 04.5**	**-0.7**
	baz=46,SNR=216						
O03E				Sb	**Sb**	**15 19 37.0**	**-1.7**
	baz=46						
M02C	**Callahan**	**2.54**	**257**	P	**Pn**	**15 19 06.4**	**-0.8**
	baz=79,SNR=9.8						
M02C				Sb	**Sb**	**15 19 43.0**	**+0.2**
	baz=79						
N02D	**Trinity Center**	**2.57**	**248**	P	**Pn**	**15 19 06.9**	**-0.7**
	baz=69,SNR=16						
N02D				Sb	**Sb**	**15 19 43.9**	**+0.1**
	baz=69						
HUMO	**Hull Mountain**	**2.59**	**285**		**

PDAR	**Pinedale Array**	**7.45**	**81**	Pn	**Pn**	**15 20 16.7**	**+1.9**
	0.4nm,0.3s,baz=266,slow=12,SNR=6.4						
PDAR				Pg	**Pb**	**15 20 35.2**	**+0.2**
	0.2nm,0.3s,baz=260,slow=9.1,SNR=4.8						
PDAR				Lg	Lg	15 22 21.6	
	baz=260,slow=16,SNR=1.9						
PDAR	**Pinedale Array**	**7.45**	**81**	Pn	**Pn**	**15 20 16.5**	**+1.6**
YNE	**Yellowstone No**	**7.57**	**63**	Pn	**Pn**	**15 20 17.5**	**+1.0**
RDMU	**Red Mountain**	**7.66**	**97**	Pn	**Pn**	**15 20 18.1**	**+0.4**
BBB	**Bella Bella**	**17.73 333**		LR	LR	15 26 13.7	
	comp=Z,60nm,18.8s,baz=146,slow=40						
ANMO	**Albuquerque**	**12.44 120**		LR	LR	15 26 56.8	
	comp=Z,90nm,20.1s,baz=312,slow=41						
DLBC	**Dease Lake**	**17.74 342**		LR	LR	15 30 04.3	
	comp=Z,51nm,21.4s,baz=337,slow=40						
TXAR	**Lajitas Array**	**18.03 129**		P	**P**	**15 22 38.7**	**+1.5**
	0.0nm,0.3s,baz=322,slow=10,SNR=2.0						
ULM	**Lac du Bonnet**	**18.32**	**55**	LR	LR	15 30 04.3	
	comp=Z,39nm,18.2s,baz=224,slow=38						
ILAR	**Eielson Array**	**27.62 335**		P	**P**	**15 24 14.6**	**+1.2**
	0.6nm,0.9s,baz=156,slow=8.0,SNR=6.2						

*IDC **05** 15:26:23.7±0.7,17°.15S×173°.83W,h0km,mb4.2/10, mb1 4.4/11,mb1mx4.2/27,mbtmp4.2/11,ML3.9/1,MS3.2/4, Ms1 3.2/4,ms1mx2.9/32,Error ellipse: s-maj=30.9km s-min=16.6km az=130.0*

*NEIC **05** 15:26:25.1±2.9,17°.39S±0°.08×173°.5W±0°.1,h10km±1km, mb4.6/18,Error ellipse: s-maj=19.0km s-min=12.5km az=69.0*

ISC 05 15:26:25.1±0.6,17°.1S±0°.1×173°.8W±0°.1,h10km,n58, σ1s25/46,mb4.5/18,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.69**	**33**	Pn	**Pn**	**15 27 23.4**	**+1.1**
	9.0nm,0.3s,baz=242,slow=7.2,SNR=13						
AFI				Sn	**Sn**	**15 28 01.8**	**-4.1**
	41nm,0.3s,baz=198,slow=20,SNR=10						
AFI	**Afiamalu**	**3.69**	**33**	Pn	**Pn**	**15 27 24.1**	**+1.8**
NIUE	**Niue**	**4.21**	**119**	Pn	Pn	15 27 22.4	-7.1
MSVF	**Nonsavu**	**7.79**	**264**		Pb	15 28 32.4	-8.1
RAR	**Rarotonga**	**13.90**	**110**	LR	LR	15 33 50.1	
	comp=Z,73nm,18.8s,baz=282,slow=32						
OUZ	**Omahuta**	**21.30**	**209**	P	**P**	**15 31 12.4**	**+0.5**
URZ	**Urewera**	**22.58**	**199**	P	**P**	**15 31 23.5**	**-2.3**
	4.5nm,0.3s,baz=337,slow=4.0,SNR=9.3						
URZ				S	S	15 35 20.8	-12
	8.6nm,1.0s,baz=45,slow=19,SNR=1.5						
URZ	**Urewera**	**22.58**	**199**	P	**P**	**15 31 24.0**	**-1.7**
URZ				IAmb	IAmb	15 31 31.7	
	comp=Z,25nm,1.1s						
PPT2	**Papeete2**	**23.15**	**95**	eLR	LR	15 37 03.7	
	comp=Z,98nm,24.8s						
PPT	**Papeete**	**23.15**	**95**	LR	LR	15 37 55.3	
	comp=Z,30nm,19.8s,baz=295,slow=30						
BKZ	**Black Stump Fm**	**23.61**	**199**	P	**P**	**15 31 35.8**	**-0.5**
BKZ				IAmb	IAmb	15 31 48.9	
	comp=Z,25nm,1.3s						
TBI	**Tubuai**	**23.68**	**109**	eLR	LR	15 37 09.4	
	comp=Z,138nm,28.2s						
QRZ	**Quartz Range**	**26.47**	**204**	P	**P**	**15 32 03.7**	**+1.3**
HNR	**Honiara**	**26.61**	**283**	LR	LR	15 41 04.0	
	comp=Z,106nm,20.9s,baz=94,slow=33						
LTZ	**Lake Taylor**	**28.26**	**202**	P	**P**	**15 32 21.6**	**+3.0**
LTZ				IAmb	IAmb	15 32 26.5	
	comp=Z,16nm,1.2s						
RPZ	**Rata Peaks**	**29.51**	**203**	P	**P**	**15 32 29.6**	**0.0**
	comp=Z,2.0nm,0.6s,baz=45,slow=16,SNR=1.1						
RPZ	**Rata Peaks**	**29.51**	**203**	P	**P**	**15 32 30.1**	**+0.4**
TAOE	**Nuku Hiva Isla**	**33.76**	**80**	eLR	LR	15 41 48.4	
	comp=Z,191nm,25.9s						
KRVT	**Keravat (AS076**	**35.79**	**287**	LR	LR	15 46 34.0	
	comp=Z,61nm,19.6s,baz=129,slow=34						
CTAO	**Charters Tower**	**37.91**	**259**	P	**P**	**15 33 42.8**	**-0.1**
H11N3	**WAKE ISLAND Hy**	**41.15**	**332**	T	T	16 18 09.8	
	baz=151,slow=76,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**41.16**	**332**	T	T	16 18 12.7	
	baz=151,slow=76,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**41.17**	**332**	T	T	16 18 24.6	
	baz=151,slow=76,SNR=4.9						
STKA	**Stephens Creek**	**42.88**	**241**	P	**P**	**15 34 24.8**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=89,slow=8.3,SNR=5.9						
STKA	**Stephens Creek**	**42.88**	**241**	P	**P**	**15 34 24.9**	**+0.9**
BBOO	**Buckleboo**	**47.65**	**241**	P	**P**	**15 35 00.3**	**-1.5**
WR0	**Warramunga Arr**	**48.91**	**258**	P	**P**	**15 35 10.2**	**-1.5**
WR0				IAmb	IAmb	15 35 12.0	
	comp=Z,9.1nm,1.5s						
WB0	**Warramunga Arr**	**49.06**	**258**	P	**P**	**15 35 12.2**	**-0.7**
WB0				IAmb	IAmb	15 35 24.7	
	comp=Z,6.2nm,1.3s						
WB2	**Warramunga Arr**	**49.09**	**258**	P	**P**	**15 35 12.3**	**-0.8**
WRAB	**Tennant Creek**	**49.09**	**258**	P	**P**	**15 35 11.9**	**-1.2**
WRAB				IAmb	IAmb	15 35 28.1	
	comp=Z,3.1nm,0.7s						
WRA	**Warramunga Arr**	**49.10**	**258**	P	**P**	**15 35 12.2**	**-1.0**
	comp=Z,1.9nm,0.4s,baz=98,slow=6.6,SNR=37						
WRA				PcP	**PcP**	**15 36 37.1**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=96,slow=3.3,SNR=3.1						
WRA	**Warramunga Arr**	**49.10**	**258**	P	**P**	**15 35 12.2**	**-1.0**
AS31	**Alice Springs**	**49.24**	**253**	P	**P**	**15 35 13.7**	**-0.5**
AS31				IAmb	IAmb	15 35 14.5	
	comp=Z,5.1nm,0.7s						
ASAR	**Alice Springs**	**49.24**	**253**	P	**P**	**15 35 13.5**	**-0.7**
	comp=Z,18nm,0.6s,baz=89,slow=8.4,SNR=404						
ASAR				PcP	**PcP**	**15 36 37.5**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=110,slow=4.0,SNR=4.8						
ASAR	**Alice Springs**	**49.24**	**253**	P	**P**	**15 35 13.2**	**-1.0**
SIJI	**Sorong**	**56.35**	**281**	P	**P**	**15 36 07.7**	**+0.8**
	comp=Z,5.5nm,0.7s,baz=108,slow=20						
FITZ	**Fitzroy Crossi**	**57.49**	**259**	P	**P**	**15 36 16.1**	**+1.1**
VNDA	**Vanda**	**61.71**	**186**	P	**P**	**15 36 42.7**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=11,slow=7.0,SNR=5.9						
VNDA	**Vanda**	**61.71**	**186**	P	**P**	**15 36 43.0**	**0.0**
QSPA	**South Pole Qui**	**73.01**	**180**	P	**P**	**15 37 53.8**	**-1.2**
QSPA				IAmb	IAmb	15 38 08.9	
	comp=Z,4.4nm,1.0s						
NVAR	**Mina Array Bea**	**75.81**	**42**	P	**P**	**15 38 12.9**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=227,slow=10,SNR=10						
NVAR	**Mina Array Bea**	**75.81**	**42**	P	**P**	**15 38 13.4**	**+1.6**
NV11	**Mina Array Sit**	**75.91**	**42**	P	**P**	**15 38 13.9**	**+1.6**
NV11				IAmb	IAmb	15 38 14.6	
	comp=Z,5.3nm,1.3s						
MNTX	**Cornudas Mount**	**81.53**	**53**	P	**P**	**15 38 44.3**	**+1.1**
DLBC	**Dease Lake**	**83.37**	**21**	LR	LR	16 06 21.0	
	comp=Z,1μm,21.7s,baz=205,slow=29						
PDAR	**Pinedale Array**	**83.75**	**42**	P	**P**	**15 38 55.5**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=248,slow=4.0,SNR=4.6						
PDAR	**Pinedale Array**	**83.75**	**42**	P	**P**	**15 38 54.7**	**-0.1**
ILAR	**Eielson Array**	**84.13**	**11**	P	**P**	**15 38 56.1**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=236,slow=5.3,SNR=3.2						
ILAR	**Eielson Array**	**84.13**	**11**	P	**P**	**15 38 56.3**	**+0.3**
H03S1	**Juan Fernandez**	**84.64**	**124**	T	T	17 12 04.1	
	baz=288,slow=74,SNR=3.3						
H03S3	**Juan Fernandez**	**84.65**	**124**	T	T	17 12 04.2	
	baz=252,slow=74,SNR=3.9						
MKAR	**Makanchi Array**	**111.69**	**314**	PKiKP	**PKiKP**	**15 44 59.8**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=115,slow=2.1,SNR=3.5						
MKAR	**Makanchi Array**	**111.69**	**314**		**PKiKP**	**15 45 00.1**	**-0.1**
KMBO	**Kilima Mbogo**	**144.44**	**243**	PKP	**PKPdf**	**15 46 03.8**	**+0.7**
	comp=Z,3.7nm,0.9s,baz=54,slow=6.9,SNR=6.4						
KMBO	**Kilima Mbogo**	**144.44**	**243**		**PKPdf**	**15 46 02.6**	**-0.5**
BRTR	**Keskin Array B**	**147.15**	**319**	PKPbc	**PKPbc**	**15 46 08.5**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=64,slow=2.9,SNR=5.5						
BRTR	**Keskin Array B**	**147.15**	**319**		**PKPab**	**15 46 09.9**	**-0.7**
GERES	**GERESS Array B**	**147.70**	**351**	PKPbc	**PKPbc**	**15 46 09.9**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=0.0,slow=1.3,SNR=4.7						

*IDC **05** 15:44:26.7±2.5,25°.54S×179°.85W,h459km±24km,mb3.4/9, mb1 3.5/12,mb1mx3.3/34,mbtmp4.3/12,Error ellipse: s-maj=25.4km s-min=15.5km az=44.0*

*NEIC **05** 15:44:26±2.4,25°.5S±0°.1×179°.7W±0°.1,h469km±10km, mb4.3/26,Error ellipse: s-maj=18.8km s-min=14.9km az=86.0*

ISC 05 15:44:31.1±0.8,25°.87S±0°.08×180°.0W±0°.1,h500km,n65, σ1s48/75,mb4.2/19,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.83**	**152**	P	**P**	**15 45 48.7**	**+0.6**
GLKZ				S	**S**	**15 46 47.8**	**-3.1**
MSVF	**Nonsavu**	**8.31**	**347**	P	**P**	**15 46 27.8**	**-3.2**
WCZ	**Waipu Caves**	**11.16**	**205**	P	P	15 47 07.3	+6.7
WIAZ	**Waiheke Island**	**11.66**	**200**	P	**P**	**15 47 07.9**	**+1.9**
MXZ	**Matakaoa Point**	**11.75**	**187**	P	**P**	**15 47 08.3**	**+1.5**
MXZ				S	**S**	**15 49 14.9**	**-0.3**
MXZ	**Matakaoa Point**	**11.75**	**187**	P	**P**	**15 47 07.6**	**+0.8**
ETAZ	**East Tamaki Re**	**11.88**	**200**	P	**P**	**15 47 09.5**	**+1.2**
WMGZ	**Waiomatatini S**	**11.99**	**186**	P	**P**	**15 47 10.5**	**+1.1**
WMGZ				S	**S**	**15 49 19.1**	**-0.8**
HAZ	**Te Kaha**	**12.00**	**189**	P	**P**	**15 47 09.8**	**+0.3**
HAZ				S	**S**	**15 49 18.0**	**-2.1**
PKGZ	**Pakihiroa**	**12.10**	**187**	P	**P**	**15 47 11.3**	**+0.7**
PKGZ				S	**S**	**15 49 19.9**	**-2.2**
PUZ	**Puketiti**	**12.26**	**187**	P	**P**	**15 47 12.9**	**+0.6**
PUZ				S	**S**	**15 49 21.9**	**-3.2**
TWGZ	**Tauwhareparae**	**12.39**	**188**	P	**P**	**15 47 14.5**	**+0.7**
TWGZ				S	**S**	**15 49 25.6**	**-2.2**
URZ	**Urewera**	**12.60**	**191**	P	**P**	**15 47 15.0**	**-0.9**
	2.2nm,0.3s,baz=358,slow=10,SNR=34						
URZ				S	**S**	**15 49 28.3**	**-3.3**
	0.5nm,0.3s,baz=291,slow=14,SNR=1.9						
URZ	**Urewera**	**12.60**	**191**	P	**P**	**15 47 15.2**	**-0.6**
URZ				S	**S**	**15 49 31.4**	**-0.2**
URZ	**Urewera**	**12.60**	**191**	P	**P**	**15 47 14.7**	**-1.2**
MWZ	**Matawai**	**12.61**	**189**	P	**P**	**15 47 15.8**	**-0.2**
MWZ				S	**S**	**15 49 29.0**	**-2.9**
RAGZ	**Rawiri**	**12.78**	**189**	P	**P**	**15 47 18.3**	**+0.4**
MUGZ	**Murupara**	**12.87**	**192**	P	**P**	**15 47 19.8**	**+1.1**
RIGZ	**Rimuhau**	**12.94**	**188**	P	**P**	**15 47 19.4**	**-0.1**
RIGZ				S	**S**	**15 49 35.1**	**-3.2**
RTZ	**Ruatahuna**	**12.97**	**191**	P	**P**	**15 47 19.6**	**-0.2**
BKZ	**Black Stump Fm**	**13.59**	**192**	P	**P**	**15 47 24.7**	**-1.7**
AFI	**Afiamalu**	**14.16**	**34**	P	P	15 47 25.9	-6.9
	0.8nm,0.3s,baz=252,slow=20,SNR=1.8						
AFI	**Afiamalu**	**14.16**	**34**	P	P	15 47 26.3	-6.5
BFZ	**Birch Farm**	**15.10**	**191**	P	**P**	**15 47 41.2**	**-1.1**
QRZ	**Quartz Range**	**16.17**	**201**	P	**P**	**15 47 52.6**	**-0.7**
NNZ	**Nelson**	**16.27**	**198**	P	**P**	**15 47 53.4**	**-1.0**
KHZ	**Kahutara**	**17.35**	**196**	P	**P**	**15 48 04.5**	**-0.8**
KHZ				IAmb	IAmb	15 48 10.0	
	comp=Z,44nm,1.3s						
LHI	**Lord Howe Isla**	**19.23**	**248**	P	**P**	**15 48 24.9**	**+2.1**
RPZ	**Rata Peaks**	**19.25**	**200**	P	**P**	**15 48 21.9**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=50,slow=17,SNR=1.1						
FOZ	**Fox Glacier**	**19.49**	**203**	P	**P**	**15 48 25.1**	**+0.2**
ARMA	**Armidale**	**25.43**	**253**	P	**P**	**15 49 19.2**	**+0.6**
ARMA				IAmb	IAmb	15 49 27.5	
	comp=Z,13nm,1.2s						
EIDS	**Eidsvold**	**26.10**	**265**	P	**P**	**15 49 24.4**	**0.0**
EIDS				IAmb	IAmb	15 49 25.0	
	comp=Z,10nm,0.7s						
CAN	**Canberra**	**28.23**	**243**	P	**P**	**15 49 44.4**	**+1.2**
CAN				IAmb	IAmb	15 49 44.9	
	comp=Z,11nm,1.0s						
CTA	**Charters Tower**	**31.58**	**273**	P	**P**	**15 50 12.0**	**-0.3**
	comp=Z,6.5nm,0.4s,baz=114,slow=13,SNR=7.7						
CTAO	**Charters Tower**	**31.58**	**273**	P	**P**	**15 50 12.2**	**0.0**
CTAO				IAmb	IAmb	15 50 12.7	
	comp=Z,12nm,0.9s						
STKA	**Stephens Creek**	**34.07**	**251**	P	**P**	**15 50 33.4**	**+0.2**
	comp=Z,2.0nm,0.4s,baz=93,slow=11,SNR=14						
STKA	**Stephens Creek**	**34.07**	**251**	P	**P**	**15 50 33.3**	**0.0**
BBOO	**Buckleboo**	**38.74**	**249**	P	**P**	**15 51 11.2**	**-0.7**
AS31	**Alice Springs**	**41.79**	**263**	P	**P**	**15 51 35.7**	**-0.8**
ASAR	**Alice Springs**	**41.79**	**263**	P	**P**	**15 51 35.7**	**-0.8**
	comp=Z,2.8nm,0.4s,baz=90,slow=7.6,SNR=159						
ASAR				PcP	**PcP**	**15 53 20.3**	**-0.9**
	comp=Z,0.6nm,1.0s,baz=113,slow=4.3,SNR=1.8						
ASAR				ScP	**ScP**	**15 56 27.3**	**+3.6**
	comp=Z,0.3nm,0.9s,baz=92,slow=4.6,SNR=2.0						
ASAR	**Alice Springs**	**41.79**	**263**	P	**P**	**15 51 35.9**	**-0.6**
WR0	**Warramunga Arr**	**42.16**	**268**	P	**P**	**15 51 38.1**	**-1.3**
WR0				IAmb	IAmb	15 51 39.6	
	comp=Z,7.6nm,1.1s						
WB2	**Warramunga Arr**	**42.34**	**268**	P	**P**	**15 51 39.3**	**-1.6**
WB2				IAmb	IAmb	15 51 40.5	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**42.34**	**268**	P	**P**	**15 51 39.7**	**-1.2**
WRAB				IAmb	IAmb	15 51 40.9	
	comp=Z,4.2nm,0.8s						
WRA	**Warramunga Arr**	**42.35**	**268**	P	**P**	**15 51 39.5**	**-1.5**
	comp=Z,4.2nm,0.6s,baz=104,slow=7.9,SNR=54						
WRA				PcP	**PcP**	**15 53 23.2**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=106,slow=4.5,SNR=1.8						
WRA	**Warramunga Arr**	**42.35**	**268**	P	**P**	**15 51 39.5**	**-1.5**
WB0	**Warramunga Arr**	**42.35**	**269**	P	**P**	**15 51 39.6**	**-1.4**
WB0				IAmb	IAmb	15 51 41.0	
	comp=Z,5.4nm,0.7s						
FORT	**Forrest**	**45.69**	**251**	P	**P**	**15 52 05.5**	**-1.3**
FORT				IAmb	IAmb	15 52 11.1	
	comp=Z,13nm,0.8s						
KNRA	**Kununurra**	**48.75**	**271**	P	**P**	**15 52 29.2**	**-0.7**
KNRA				IAmb	IAmb	15 52 37.9	
	comp=Z,46nm,1.5s						
FITZ	**Fitzroy Crossi**	**50.74**	**267**	P	**P**	**15 52 44.3**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=127,slow=8.0,SNR=12						
FITZ	**Fitzroy Crossi**	**50.74**	**267**	P	**P**	**15 52 44.1**	**-0.6**
MLOA	**Mauna Loa Obse**	**50.98**	**30**	P	P	15 52 40.6	-6.1
VNDA	**Vanda**	**52.43**	**185**	P	**P**	**15 52 56.9**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=359,slow=6.0,SNR=2.0						
VNDA	**Vanda**	**52.43**	**185**	P	**P**	**15 52 57.9**	**+1.9**
MORW	**Morawa**	**56.26**	**251**	P	**P**	**15 53 22.9**	**-0.9**
MORW				IAmb	IAmb	15 53 33.1	
	comp=Z,35nm,1.5s						
QSPA	**South Pole Qui**	**64.22**	**180**	P	**P**	**15 54 18.1**	**+2.0**
	comp=Z,3.2nm,0.7s,baz=167,slow=1.6,SNR=22						
QSPA	**South Pole Qui**	**64.22**	**180**	P	**P**	**15 54 18.2**	**+2.0**
QSPA				IAmb	IAmb	15 54 19.0	
	comp=Z,4.1nm,0.8s						
MAW	**Mawson**	**75.92**	**201**	P	**P**	**15 55 26.9**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=132,slow=6.2,SNR=7.7						
MAW	**Mawson**	**75.92**	**201**	P	**P**	**15 55 27.0**	**+1.4**
SNAA	**Sanae**	**82.70**	**179**	P	**P**	**15 56 02.3**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=167,slow=19,SNR=5.9						
SNAA	**Sanae**	**82.70**	**179**	P	**P**	**15 56 01.6**	**+0.1**
AKASG	**Malin Array Be**	**146.63**	**326**	PKPbc	**PKPdf**	**16 03 14.0**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=50,slow=4.4,SNR=1.9						
AKASG	**Malin Array Be**	**146.63**	**326**		**PKPdf**	**16 03 13.5**	**0.0**
BRTR	**Keskin Array B**	**146.76**	**305**	PKPbc	**PKPdf**	**16 03 20.1**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=52,slow=2.4,SNR=1.9						
TORD	**Torodi Ar. Bea**	**167.25**	**187**	PKPab	**PKPab**	**16 04 47.5**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=182,slow=4.8,SNR=2.7						

*BJI **05** 16:03:48.0±0.0,59°.20N×136°.30W,h5km,mB5.2/22, mb4.7/33,Ms4.9/14,Ms7 4.6/15*

*IDC **05** 16:03:51.0±0.5,59°.24N×136°.32W,h0km,mb4.4/26, mb1 4.6/33,mb1mx4.5/46,mbtmp4.4/33,ML4.2/7,MS3.9/34, Ms1 4.0/34,ms1mx3.8/52,Error ellipse: s-maj=12.8km s-min=7.2km az=42.0*

*MOS **05** 16:03:51.1±1.0,59°.30N×136°.25W,h11km,mb5.0/57, Error ellipse: s-maj=14.0km s-min=5.0km az=100.6*

*PGC **05** 16:03:51.9±0.3,59°.17N×136°.35W,h2km,ML4.8,Mw4.7 PGC 64km west of Haines, Ak Southeastern Alaska Lightly felt in Whitehorse, Mmi Ii.*

*AEIC **05** 16:03:51±1.5,59°.16N±0°.03×136°.31W±0°.06,h5km±3km, Error ellipse: s-maj=4.9km s-min=3.9km az=214.0*

*NEIC **05** 16:03:52.2,59°.17N×136°.35W,h17km,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr0.55; Mθθ-1.11; Mφφ0.42; Mrθ-0.51; Mθφ1.06; Mφr-0.34; Fault plane solution: Mo1.50000×10^16^ NP1:φs258.00000°, δ72.00000°, λ32.00000°. NP2:φs157.00000°, δ60.00000°, λ159.00000°. Principal axes: T 1.3888, Plg35.0000°, Azm121.0000°; N 0.2613, Plg54.0000°, Azm284.0000°; P -1.6501, Plg8.0000°, Azm25.0000°;*

*NEIC **05** 16:03:52.0±1.4,59°.19N±0°.02×136°.29W±0°.06,h8km±3km, mb4.8/270,Mwr4.6/31,ML4.6(AEIC),Mwr4.7(OTT) Error ellipse: s-maj=4.8km s-min=2.5km az=54.0*

*NEIC **05** 16:03:52.2,59°.18N×136°.22W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr3.85; Mθθ-1.84; Mφφ-2.01; Mrθ2.84; Mθφ4.94; Mφr-7.02; Fault plane solution: Mo9.64000×10^15^ NP1:φs282.51000°, δ25.60000°, λ37.09000°. NP2:φs158.22000°, δ74.90000°, λ110.92000°. Principal axes: T 8.5501, Plg55.0000°, Azm95.0000°; N 1.9022, Plg20.0000°, Azm333.0000°; P -10.4523, Plg27.0000°, Azm232.0000°;*

*GCMT **05** 16:03:56.0±0.3,59°.33N±0°.02×136°.15W±0°.04,h18km, MW4.9/99,Moment Tensor Solution. s40,c50; s99,c133; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr2.56±.12; Mθθ-1.15±.08; Mφφ-1.41±.08; Mrθ0.00±.19; Mθφ1.11±.05; Mφr-0.47±.17; Best double couple: Mo2.52000×10^16^ NP1:φs312.00000°, δ41.00000°, λ81.00000°. NP2: φs145.00000°, δ49.00000°, λ98.00000°. Principal axes: T 2.6180, Plg83.0000°, Azm106.0000°; N -0.1960, Plg6.0000°, Azm319.0000°; P -2.4220, Plg4.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **05** 16:04:00.8±0.0,60°.26N×136°.95W,h15km±1km,mb5.2*

ISC 05 16:03:52.3±0.6,59°.21N±0°.03×136°.27W±0°.02,h11km±3km, h11km:pP-P,n935,σ0s93/965,mb4.9/210,MS4.0/37, 19C-2D,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLBC	**Pleasant Camp**	**0.26**	**349**	P	**Pg**	**16 03 57.1**	**-0.5**
PLBC				S	**Sg**	**16 04 00.8**	**-0.4**
PLBC	**Pleasant Camp**	**0.26**	**349**		**Pg**	**16 03 57.2**	**-0.5**
PLBC					**Sg**	**16 04 00.7**	**-0.4**
SKAG	**Skagway**	**0.55**	**62**	Pg	**Pg**	**16 04 02.6**	**-0.4**
SKAG				Sg	**Sg**	**16 04 09.9**	**-0.2**
BESE	**Bessie Mountai**	**0.97**	**130**	P	**Pg**	**16 04 09.5**	**-1.4**
BESE				S	**Sg**	**16 04 22.5**	**-1.0**
BESE	**Bessie Mountai**	**0.97**	**130**		**Pg**	**16 04 09.3**	**-1.6**
BESE	**Bessie Mountai**	**0.97**	**130**		**Sg**	**16 04 22.7**	**-0.8**
JIS	**Juneau Island**	**1.35**	**133**		**Pn**	**16 04 15.7**	**-1.5**
JIS				Sg	**Sb**	**16 04 34.2**	**-0.8**
WHY	**Whitehorse**	**1.62**	**25**	P	**Pb**	**16 04 21.4**	**-0.9**
WHY				Sn	**Sg**	**16 04 43.5**	**-0.9**
WHY	**Whitehorse**	**1.62**	**25**		**Pb**	**16 04 21.2**	**-1.1**
WHY					**Sg**	**16 04 42.8**	**-1.5**
YUK7	**Dusty Glacier**	**1.63**	**325**	P	**Pn**	**16 04 20.8**	**-0.4**
YUK7				Sn	**Sg**	**16 04 43.0**	**-1.8**
YUK7	**Dusty Glacier**	**1.63**	**325**		**Pn**	**16 04 20.9**	**-0.4**
YUK7					**Sg**	**16 04 43.9**	**-0.9**
PNL	**Peninsula**	**1.67**	**288**	P	**Pn**	**16 04 20.7**	**-0.8**
PNL				Sn	**Sb**	**16 04 43.0**	**-1.0**
PNL	**Peninsula**	**1.67**	**288**		**Pn**	**16 04 20.7**	**-0.8**
PNL					**Sb**	**16 04 43.6**	**-0.4**
HYT	**Haines Junctio**	**1.74**	**340**	P	**Pn**	**16 04 22.2**	**-0.4**
HYT				Sn	**Sg**	**16 04 46.1**	**-2.1**
HYT	**Haines Junctio**	**1.74**	**340**	Pn	**Pn**	**16 04 22.1**	**-0.6**
HYT					**Sg**	**16 04 46.1**	**-2.1**
YKU2	**Yakutat**	**1.77**	**281**		**Pb**	**16 04 23.3**	**-1.5**
YKU2	**Yakutat**	**1.77**	**281**		**Sb**	**16 04 46.9**	**-0.1**
BCPM	**Bancas Point**	**1.87**	**295**		**Pn**	**16 04 24.2**	**-0.1**
YUK6	**Outpost Mounta**	**2.04**	**330**	P	**Pn**	**16 04 26.3**	**-0.6**
YUK6				Sn	**Sb**	**16 04 53.5**	**-1.4**
YUK6	**Outpost Mounta**	**2.04**	**330**		**Pn**	**16 04 26.2**	**-0.6**
YUK5	**Granite Creek**	**2.09**	**338**	Pn	**Pn**	**16 04 27.9**	**+0.4**
YUK5				Sn	**Sb**	**16 04 54.5**	**-1.9**
YUK5	**Granite Creek**	**2.09**	**338**		**Pn**	**16 04 27.8**	**+0.4**
SIT	**Sitka**	**2.21**	**167**	Pn	**Pn**	**16 04 28.1**	**-0.8**
PCA	**Pinnacle**	**2.21**	**296**	Pn	**Pn**	**16 04 28.8**	**-0.2**
PCA				Sn	**Sn**	**16 04 57.2**	**+0.7**
PCA	**Pinnacle**	**2.21**	**296**		**Pn**	**16 04 28.9**	**-0.2**
PCA	**Pinnacle**	**2.21**	**296**		**Sb**	**16 04 58.1**	**-1.7**
YUK4	**Talbot Arm**	**2.45**	**332**	Pn	**Pn**	**16 04 33.4**	**+0.9**
YUK4	**Talbot Arm**	**2.45**	**332**		**Pn**	**16 04 33.4**	**+0.9**
SAMH	**Samovar Hills**	**2.47**	**294**	Pn	**Pn**	**16 04 33.0**	**+0.4**
SAMH				Sn	**Sn**	**16 05 02.4**	**-0.4**
SAMH	**Samovar Hills**	**2.47**	**294**		**Pn**	**16 04 33.1**	**+0.4**
SAMH					**Sb**	**16 05 05.5**	**-1.7**
CHX	**Chaix Hills**	**2.61**	**291**		**Pn**	**16 04 34.2**	**-0.3**
TABL	**Table Mountain**	**2.76**	**299**		**Pn**	**16 04 36.2**	**-0.5**
RKAV	**Rock

H02S1 **DAWSON INLET T** 6.38 159 Pn **Pn** 16 05 24.8 -1.3
SNR=584
H02S1 Sn **Sn** 16 06 35.5 -3.4
SNR=2.9
GRNB Grenville Isla 6.40 144 Pn **Pn** 16 05 26.2 -0.4
KNK Knik Glacier 6.45 295 Pn **Pn** 16 05 27.9 +0.7
SML Sawmill 6.50 299 P **Pn** 16 05 28.6 +0.6
SML Sawmill 6.50 299 **Pn** 16 05 28.6 +0.6
BNAB Bonilla 6.52 149 Pn **Pn** 16 05 27.8 -0.4
BNAB Bonilla 6.52 149 **Pn** 16 05 28.3 0.0
MOBC Moresby Island 6.53 157 Pn **Pn** 16 05 27.8 -0.5
WAT6 Susitna Watana 6.54 306 **Pn** 16 05 29.3 +0.7
DHY Denali Highway 6.63 311 **Pn** 16 05 30.5 +0.8
KITB Kitimat 6.64 137 Pn **Pn** 16 05 29.8 0.0
SEW Seward 6.74 283 **Pn** 16 05 29.8 -1.3
GHO Glory Hole Cre 6.76 298 **Pn** 16 05 32.2 +0.7
PMR Palmer 6.81 296 P **Pn** 16 05 31.0 -1.0
PMR Palmer 6.81 296 **Pn** 16 05 32.0 -0.1
FNBB Fort Nelson 6.85 87 Pn **Pn** 16 05 33.0 +0.4
FNBB Fort Nelson 6.85 87 **Pn** 16 05 33.1 +0.4
HWKB Hawksbury Isla 6.87 142 Pn **Pn** 16 05 33.0 0.0
O22K Cooper Landing 6.90 286 P **Pn** 16 05 32.6 -0.7
baz=95
O22K Cooper Landing 6.90 286 **Pn** 16 05 32.4 -0.9
RC01 Rabbit Creek A 6.98 291 P **Pn** 16 05 34.9 +0.4
baz=100
RC01 Rabbit Creek A 6.98 291 **Pn** 16 05 34.5 0.0
WAT1 Susitna Watana 6.98 307 **Pn** 16 05 35.8 +1.2
NBC2 NorthernBC 2 7.04 79 Pn **Pn** 16 05 35.8 +0.5
WAT2 Susitna Watana 7.06 307 **Pn** 16 05 35.9 +0.2
WAT7 Susitna Watana 7.11 306 **Pn** 16 05 37.4 +1.1
SLKM Skilak Lake 7.15 286 **Pn** 16 05 36.8 0.0
EPYK Eagle Plains 7.20 359 **Pn** 16 05 38.0 +0.6
HDA Harding Lake 7.26 320 P **Pn** 16 05 37.6 -0.7
baz=131,SNR=14
HDA Harding Lake 7.26 320 **Pn** 16 05 37.3 -1.0
NBC5 NorthernBC 5 7.34 97 Pn **Pn** 16 05 39.3 -0.3
RND Reindeer 7.37 310 P **Pn** 16 05 40.7 +0.8
RND Reindeer 7.37 310 Pn **Pn** 16 05 40.7 +0.8
BRSE Bradley Lake S 7.39 280 **Pn** 16 05 40.7 +0.6
BRLK Bradley Lake 7.46 281 Pn **Pn** 16 05 41.4 +0.3
IL31 7.49 323 **Pn** 16 05 40.0 -1.4
ILAR Eielson Array 7.49 323 Pn **Pn** 16 05 40.0 -1.3
0.6nm,0.3s,baz=145,slow=12,SNR=54
ILAR Lg Lg 16 07 46.4
6.0nm,0.3s,baz=127,slow=26,SNR=5.5
ILAR LR LR 16 08 51.6
comp=Z,2µm,18.4s,baz=134,slow=40
ILAR Eielson Array 7.49 323 P **Pn** 16 05 39.7 -1.7
ILAR Eielson Array 7.49 323 **Pn** 16 05 39.6 -1.7
HUR Hurricane 7.50 306 **Pn** 16 05 42.8 +1.3
SUA Susitna One 7.53 294 Pn **Pn** 16 05 41.8 -0.3
BUTB Butedale 7.54 141 Pn **Pn** 16 05 42.2 -0.1
CUT Chulitna 7.56 301 P **Pn** 16 05 42.6 +0.3
baz=109
MCK McKinley 7.57 312 P **Pn** 16 05 42.3 -0.2
baz=121,SNR=12
MCK McKinley 7.57 312 **Pn** 16 05 43.6 +1.1
PRP Porcupine Dome 7.65 330 Pn **Pn** 16 05 44.5 +0.8
CNPM China Poot 7.66 279 Pn **Pn** 16 05 44.2 +0.5
WRH Wood River Hil 7.69 318 **Pn** 16 05 44.5 +0.5
CCB Clear Creek Bu 7.70 320 **Pn** 16 05 43.4 -0.9
NBC6 NorthernBC 6 7.76 88 Pn **Pn** 16 05 45.4 +0.2
HOM Homer 7.85 280 P **Pn** 16 05 47.0 +0.6
baz=87
COLA College 7.86 321 *i* P **Pn** 16 05 49.3 +2.8
COLA pmax pmax
comp=Z,6.0nm,0.8s
POKR Poker Plat Res 7.89 323 P **Pn** 16 05 47.0 0.0
baz=134
POKR Poker Plat Res 7.89 323 **Pn** 16 05 46.1 -0.9
TRF Thorofare Moun 7.97 308 Pn **Pn** 16 05 49.5 +1.4
NBC3 NorthernBC 3 7.97 80 Pn **Pn** 16 05 48.9 +0.9
BWN Browne 8.00 314 **Pn** 16 05 47.5 -0.9
SKT Skwentna 8.01 297 **Pn** 16 05 48.8 +0.2
MDM Murphy Dome 8.04 321 Pn **Pn** 16 05 47.5 -1.5
STLK Strandline Lak 8.05 293 **Pn** 16 05 48.0 -1.1
FSB Fort Saint Jam 8.08 121 Pn **Pn** 16 05 50.2 +0.7
NEA2 Nenana 8.10 317 P **Pn** 16 05 50.3 +0.5
baz=126,SNR=14
NEA2 Nenana 8.10 317 **Pn** 16 05 50.1 +0.4
SPCG Spurr Capps Gl 8.11 292 **Pn** 16 05 49.0 -1.0
SPCP Crater Peak Br 8.17 291 **Pn** 16 05 50.8 -0.1
BMBC Bull Mountain 8.22 107 Pn **Pn** 16 05 51.4 -0.1
KTH Kantishna Hill 8.27 308 Pn **Pn** 16 05 53.6 +1.4
SPBG Spurr Blockage 8.27 291 **Pn** 16 05 52.8 +0.6
DFR Drift River 8.37 287 **Pn** 16 05 52.7 -0.9
RSO Redoubt South 8.40 286 **Pn** 16 05 53.3 -0.8
BBB Bella Bella 8.40 143 Pn **Pn** 16 05 54.0 +0.1
comp=Z,6.8nm,0.3s,baz=327,slow=14,SNR=27
BBB Sn **Sn** 16 07 26.8 -1.9
comp=Z,2.4nm,0.3s,baz=198,slow=20,SNR=7.4
BBB Lg Lg 16 08 13.1
comp=Z,3.6nm,0.3s,baz=234,slow=21,SNR=5.2
BBB Bella Bella 8.40 143 Pn **Pn** 16 05 54.4 +0.4
BBB Bella Bella 8.40 143 Pn **Pn** 16 05 53.7 -0.2
FYU Fort Yukon 8.44 335 **Pn** 16 05 54.4 0.0
RDWB Redoubt West 8.44 286 **Pn** 16 05 54.9 +0.3
SPNN North Nagishla 8.44 292 **Pn** 16 05 54.5 -0.1
NCT North Crescent 8.49 286 **Pn** 16 05 55.0 -0.2
I23K Minto, Yukon-K 8.53 320 P **Pn** 16 05 55.4 -0.2
baz=128
BPAW Bear Paw Mtn. 8.54 311 Pn **Pn** 16 05 55.6 -0.2
PPLA Purkeypile 8.56 302 Pn **Pn** 16 05 56.7 +0.5
OPT Oil Point 8.66 289 **Pn** 16 05 57.3 -0.2
KDAK Kodiak Island 8.66 268 Pn **Pn** 16 05 56.6 -0.9
MLY Manley 8.93 317 P **Pn** 16 06 01.9 +0.6
baz=124,SNR=6.4
NBC4 NorthernBC 4 9.12 106 Pn **Pn** 16 06 04.0 +0.2
OHAK Old Harbor 9.20 265 Pn **Pn** 16 06 03.4 -1.4
INK Inuvik 9.22 6 Pn **Pn** 16 06 04.6 -0.4
comp=Z,0.3nm,0.3s,baz=185,slow=12,SNR=23
INK Sn **Sn** 16 07 48.3 -0.3
baz=274,slow=19,SNR=2.1
INK Lg Lg 16 08 37.9
comp=Z,1.6nm,0.3s,baz=90,slow=20,SNR=3.4
INK LR LR 16 10 11.5
comp=Z,814nm,18.2s,baz=180,slow=41
INK Inuvik 9.22 6 Pn **Pn** 16 06 05.3 +0.3
INK Inuvik 9.22 6 P **Pn** 16 06 04.0 -1.0
INK Inuvik 9.22 6 Pn **Pn** 16 06 05.0 0.0
UBRB Upper Baezaeko 9.29 128 Pn **Pn** 16 06 07.6 +1.4
KAKN Katmai Knife C 9.81 273 **Pn** 16 06 13.4 +0.2
SVW2 Sparrevohn 9.81 289 **Pn** 16 06 12.0 -1.2
SII Sitkinak Islan 9.90 262 Pn **Pn** 16 06 13.3 -1.1
PHC Port Hardy 9.91 145 Pn **Pn** 16 06 15.4 +0.9
KABU Katmai Buttres 9.93 273 **Pn** 16 06 14.8 -0.1
HILA High Level 9.98 85 Pn **Pn** 16 06 15.2 -0.3
CAHL Cahill 9.99 272 **Pn** 16 06 15.0 -0.7
MANA Manning 10.15 95 Pn **Pn** 16 06 19.6 +1.7
COLD Coldfoot 10.18 328 P **Pn** 16 06 19.2 +0.9
baz=136,SNR=9.9
COLD Coldfoot 10.18 328 **Pn** 16 06 18.4 +0.1
TLCB Telegraph Cove 10.23 144 Pn **Pn** 16 06 20.0 +1.1
TTA Tatalina 10.25 300 **Pn** 16 06 18.7 -0.6
MAYB Maynard 10.25 145 Pn **Pn** 16 06 20.1 +0.7
FHRB Fair Harbour 10.58 146 Pn **Pn** 16 06 25.1 +1.4
NCRB Newcastle Ridg 10.59 142 Pn **Pn** 16 06 24.0 -0.1
WOSB Woss 10.65 144 Pn **Pn** 16 06 24.4 -0.4
DHRN Dharma Camp 10.88 37 Pn **Pn** 16 06 28.1 +0.4
CHIR Chirikof Islan 10.94 260 Pn **Pn** 16 06 27.8 -0.9
YKA Yellowknife Ar 11.05 63 Pn **Pn** 16 06 29.0 -1.1
comp=Z,2.6nm,0.3s,baz=260,slow=12,SNR=24
YKA Sn **Sn** 16 08 27.8 -5.7
comp=Z,3.1nm,0.3s,baz=253,slow=21,SNR=6.6
YKA Lg Lg 16 09 33.5
baz=260,slow=26,SNR=3.8
TOLK Toolik Lake Re 11.10 334 P **Pn** 16 06 32.5 +1.7
baz=142,SNR=27
TOLK Toolik Lake Re 11.10 334 Pn **Pn** 16 06 33.1 +2.2
C36M Paulatuk 11.44 22 P **Pn** 16 06 35.6 +0.2
baz=213
C36M Paulatuk 11.44 22 Pn **Pn** 16 06 34.7 -0.7
WSLR Whistler 11.91 134 Pn **Pn** 16 06 44.2 +2.1
LLLB Lillooet 11.92 130 Pn **Pn** 16 06 44.3 +2.2
BLBC Blue River 11.98 119 Pn **Pn** 16 06 45.4 +2.3
CHGN Chignik 12.16 266 **Pn** 16 06 44.5 -0.9
MNB Mounoet Dainar 12.26 117 Pn **Pn** 16 06 47.8 +0.9
KUKN Kugluktuk,NWT 12.73 39 Pn **Pn** 16 06 52.4 -0.7
SDPT Sand Point 13.62 264 **Pn** 16 07 05.1 -0.1
EDM Edmonton 14.05 105 Pn **Pn** 16 07 10.3 -0.8
A21K Barrow 14.72 334 P **P** 16 07 26.1 -0.1

E04D Cinebar 15.09 141 P **Pn** 16 07 22.6 -2.6
baz=332
LTY Liberty 15.13 135 Pn **Pn** 16 07 25.6 -0.3
LTY lAmb lAmb 16 07 38.7
comp=Z,79nm,1.2s
C09A Chrisman Ranch 15.59 129 P **P** 16 07 35.6 -0.6
C09A lAmb lAmb 16 07 44.8
comp=Z,54nm,1.3s
F04A Amboy 15.69 142 P **P** 16 07 36.2 -1.0
F04A lAmb lAmb 16 07 55.2
comp=Z,52nm,1.2s
NEW Newport 15.69 126 Pn **Pn** 16 07 33.2 0.0
comp=Z,0.2nm,0.3s,baz=341,slow=5.5,SNR=6.3
NEW Lg Lg 16 12 06.6
comp=Z,0.2nm,0.3s,baz=66,slow=18,SNR=4.4
NEW Newport 15.69 126 P **Pn** 16 07 33.4 +0.2
baz=321,SNR=16
NEW Newport 15.69 126 Pn **Pn** 16 07 33.1 -0.2
TNA Tin City 15.85 307 Pn **Pn** 16 07 34.9 -0.3
E07A Sunnyside 16.02 135 Pn **Pn** 16 07 36.7 -0.7
E07A lAmb lAmb 16 07 49.8
comp=Z,90nm,1.5s
HAWA Hanford 16.27 135 Pn **Pn** 16 07 39.6 -1.1
E08A Dider Farm, El 16.37 133 Pn **Pn** 16 07 41.1 -0.7
WALA Waterton Lakes 16.49 118 Pn **Pn** 16 07 44.6 +1.0
WALA Waterton Lakes 16.49 118 Pn **Pn** 16 07 43.2 -0.4
WALA lAmb lAmb 16 07 55.0
comp=Z,121nm,1.3s
G05D Wamic, OR 16.66 141 P **Pn** 16 07 45.5 -0.1
baz=332
H04A Detroit Lake 16.88 143 Pn **Pn** 16 07 46.8 -1.7
I02D Swisshome 16.92 148 P **Pn** 16 07 48.6 -0.4
baz=338
GAMB Gambell 17.36 300 Pn **Pn** 16 07 53.5 -0.7
GAMB lAmb lAmb 16 08 06.8
comp=Z,78nm,1.2s
UNV Unalaska Valle 17.42 265 P **P** 16 07 56.1 -0.3
UNV lAmb lAmb 16 08 07.4
comp=Z,176nm,1.4s
G08A Pilot Rock 17.43 135 Pn **Pn** 16 07 55.0 -0.4
F10A Beach Ranch, E 17.50 131 Pn **Pn** 16 07 56.1 -0.2
I04A Tendick Farm, 17.62 145 P **Pn** 16 07 58.5 +0.8
baz=336
MSO Missula 18.16 123 P **P** 16 08 05.4 +0.7
baz=321,SNR=22
MSO Missoula 18.16 123 **Pn** 16 08 04.3 -0.1
MSO lAmb lAmb 16 08 11.2
comp=Z,78nm,1.4s
J04D Umpqua Nationa 18.21 145 P **P** 16 08 06.6 +1.2
baz=336
K02D Willamette Mer 18.28 149 P **Pn** 16 08 06.3 +0.4
baz=339
J05D Fort Rock, OR 18.44 143 P **Pn** 16 08 08.3 +0.5
baz=335
PLID Pearl Lake 18.71 130 **P** 16 08 11.4 +0.5
L02E Cave Junction 18.80 150 P **P** 16 08 11.8 +0.1
baz=340
FFC Flin Flon 19.08 89 P **P** 16 08 14.6 0.0
FFC lAmb lAmb 16 08 24.6
comp=Z,131nm,1.4s
L04D Klamath Falls 19.10 147 P **P** 16 08 15.0 0.0
baz=338
EGMT Eagleton 19.16 114 P **P** 16 08 15.7 +0.1
baz=316,SNR=10
EGMT Eagleton 19.16 114 P **P** 16 08 15.4 -0.2
EGMT lAmb lAmb 16 08 22.9
comp=Z,76nm,1.1s
HRY Holter Researc 19.18 120 P **P** 16 08 16.6 +0.7
YBH Yreka Blue Hor 19.44 148 P **Pn** 16 08 21.0 +1.2
comp=Z,0.1nm,0.3s,baz=348,slow=9.7,SNR=10
YBH LR LR 16 15 00.6
comp=Z,389nm,19.1s,baz=330,slow=34
LRM Limekiln Ridge 19.59 123 Pn **Pn** 16 08 21.8 -0.1
M04C Macdoel 19.63 146 P **P** 16 08 21.6 +0.8
baz=338
M02C Callahan 19.71 149 P **P** 16 08 22.0 +0.3
baz=339
BOZ Bozeman (W) 20.12 122 P **P** 16 08 26.5 +0.2
baz=321,SNR=43
BOZ Bozeman (W) 20.12 122 Pn Pn 16 08 27.6 -0.5
BOZ lAmb lAmb 16 08 36.3
comp=Z,53nm,1.1s
N02D Trinity Center 20.14 149 P **P** 16 08 25.9 -0.5
baz=340,SNR=13
MFID Camas Ranch 20.19 132 P **P** 16 08 28.1 +1.2
MFID lAmb lAmb 16 08 40.3
comp=Z,55nm,1.5s
MCMT McKenzie Canyo 20.21 125 P **P** 16 08 27.1 -0.2
BCYI Bear Canyon 20.40 127 P **P** 16 08 30.3 +0.9
KMRM Mail Ridge 20.60 152 P **P** 16 08 32.5 +1.1
HLID Hailey 20.61 130 P **P** 16 08 31.8 +0.2
baz=327,SNR=26
HLID Hailey 20.61 130 P **P** 16 08 31.8 +0.2
QLMT Earthquake Lak 20.82 123 P **P** 16 08 33.1 -0.7
GCMT Greycliff 20.85 118 P **P** 16 08 32.7 -1.4
YHL Hebgen Lake 20.91 122 P **P** 16 08 34.1 -0.8
YHB Horse Butte 20.98 123 P **P** 16 08 35.0 -0.6
O03E Paynes Creek 21.02 148 P **P** 16 08 35.5 -0.4
baz=339,SNR=18
YHH Holmes Hill 21.10 122 P **P** 16 08 36.6 -0.4
YMR Madison River 21.15 122 P **P** 16 08 37.0 -0.4
YNR Norris Junctio 21.23 122 P **P** 16 08 37.9 -0.4
YNE Yellowstone No 21.30 120 P **P** 16 08 39.2 +0.1
YMP Mirror Lake Pl 21.44 121 P **P** 16 08 41.0 +0.3
H17A Grant Village 21.53 122 P **P** 16 08 42.2 +0.6
baz=323
H17A Grant Village 21.53 122 P **P** 16 08 41.2 -0.4
DGMT Dagmar 21.54 106 P **P** 16 08 40.7 -0.7
baz=312
DGMT Dagmar 21.54 106 P **P** 16 08 40.6 -0.8
DGMT lAmb lAmb 16 08 52.3
comp=Z,87nm,1.4s
RLMT Red Lodge 21.54 119 P **P** 16 08 41.6 -0.1
baz=320,SNR=17
RLMT Red Lodge 21.54 119 P **P** 16 08 41.7 0.0
RLMT lAmb lAmb 16 08 56.2
comp=Z,62nm,1.2s
RES Resolute Bay 21.68 28 P **P** 16 08 42.7 +0.1
comp=Z,7.5nm,0.4s,baz=248,slow=7.5,SNR=30
RES S **S** 16 12 39.6 -2.5
comp=Z,3.0nm,0.7s,baz=151,slow=18,SNR=1.9
RES Lg Lg 16 15 02.7
comp=Z,4.5nm,0.8s,baz=326,slow=18,SNR=1.2
RES LR LR 16 17 09.9
comp=Z,308nm,18.1s,baz=240,slow=37
RES Resolute Bay 21.68 28 Pn **P** 16 08 43.1 +0.6
RES Resolute Bay 21.68 28 P **P** 16 08 42.8 +0.2
RES pmax pmax
comp=Z,26nm,1.0s
RES Resolute Bay 21.68 28 P **P** 16 08 42.8 +0.2
IMW Indian Meadow 21.77 124 P **P** 16 08 45.5 +1.3
LAO LASA Array 21.79 112 P **P** 16 08 42.8 -1.3
baz=316,SNR=14
LAO LASA Array 21.79 112 P **P** 16 08 44.6 +0.5
ORV Oroville 21.80 148 P **P** 16 08 44.5 +0.4
ORV pmax pmax
comp=Z,27nm,1.5s
ORV Oroville 21.80 148 P **P** 16 08 44.5 +0.4
TPAW Teton Pass 22.10 124 P **P** 16 08 48.7 +1.0
GDXM Geysers 22.16 151 P **P** 16 08 49.0 +0.9
SNOW Snow King Moun 22.20 124 P **P** 16 08 50.3 +1.5
SNOW lAmb lAmb 16 08 57.5
comp=Z,88nm,1.5s
REDW Red Top Meadow 22.24 124 P **P** 16 08 50.6 +1.4
REDW lAmb lAmb 16 09 07.2
comp=Z,72nm,1.2s
PAHR Pah Rah Range 22.27 144 P **P** 16 08 50.9 +1.5
ECR Eagle Creek 22.27 126 P **P** 16 08 51.1 +1.6
AFDM Forest Hills D 22.51 147 P **P** 16 08 51.6 -0.3
AHID Auburn Hatcher 22.63 126 P **P** 16 08 53.8 +0.5
AHID lAmb lAmb 16 09 02.7
comp=Z,49nm,1.4s
ELK Elko 22.72 135 P **P** 16 08 55.5 +1.2
comp=Z,10nm,1.0s,baz=345,slow=7.6,SNR=16
ELK Lg Lg 16 15 52.8
comp=Z,0.4nm,0.4s,baz=258,slow=19,SNR=1.6
ELK Elko 22.72 135 P **P** 16 08 55.3 +1.0
ELK pmax pmax
comp=Z,30nm,1.4s
HVU Hansel Valley 22.77 130 P **P** 16 08 55.1 +0.5
BW06 Boulder Array 23.28 123 P **P** 16 08 59.7 -0.3
baz=324,SNR=13
BW06 Boulder Array 23.28 123 P **P** 16 08 59.8 -0.3
BW06 lAmb lAmb 16 09 09.5
comp=Z,46nm,1.4s

PD31 Pinedale Array 23.28 123 P **P** 16 08 59.7 -0.4
PD31 lAmb lAmb 16 09 09.5
comp=Z,42nm,1.4s
PDAR Pinedale Array 23.28 123 P **P** 16 09 01.4 +1.3
comp=Z,6.9nm,1.1s,baz=317,slow=6.3,SNR=27
PDAR LR LR 16 19 52.1
comp=Z,177nm,18.9s,baz=347,slow=41
PDAR Pinedale Array 23.28 123 P **P** 16 08 59.9 -0.2
SPUT South Promonto 23.30 130 P **P** 16 09 00.8 +0.7
WAKR Walker 23.36 145 P **P** 16 09 01.2 +0.4
BGU Big Grassy Mou 23.39 131 P **P** 16 09 01.4 +0.2
HWUT Hardware Ranch 23.40 128 P **P** 16 09 01.5 +0.3
RYN Ryan 23.52 143 P **P** 16 09 03.4 +1.0
CMB Columbia Colle 23.52 147 P **P** 16 09 02.7 +0.4
CMB pmax pmax
comp=Z,11nm,1.5s
CMB Columbia Colle 23.52 147 P **P** 16 09 02.7 +0.4
NVAR Mina Array Bea 23.77 143 P **P** 16 09 06.6 +1.7
comp=Z,6.9nm,1.0s,baz=318,slow=7.2,SNR=24
NVAR LR LR 16 18 15.7
comp=Z,490nm,18.3s,baz=350,slow=36
NVAR Mina Array Bea 23.77 143 P **P** 16 09 05.5 +0.6
NV11 Mina Array Sit 23.82 143 P **P** 16 09 06.5 +1.3
TCUT Toone Canyon 23.87 128 P **P** 16 09 06.8 +0.9
LHV Little Huntoon 23.87 144 P **P** 16 09 06.8 +1.2
CTU Camp Tracy 24.10 129 P **P** 16 09 08.2 +0.3
DUG Dugway, Tooele 24.11 132 P **P** 16 09 08.4 +0.4
baz=330,SNR=14
DUG Dugway, Tooele 24.11 132 P **P** 16 09 08.5 +0.4
DUG lAmb lAmb 16 09 11.8
comp=Z,46nm,1.1s
MDND Maddock 24.25 102 P **P** 16 09 09.0 -0.1
baz=312
MDND Maddock 24.25 102 P **P** 16 09 09.6 +0.5
JLU Jordanelle 24.29 129 P **P** 16 09 09.6 -0.3
TPH Tonopah 24.44 141 P **P** 16 09 11.9 +0.8
NLU North Lily Min 24.60 131 P **P** 16 09 13.4 +0.8
ULM Lac du Bonnet 24.63 93 P **P** 16 09 13.3 +0.8
comp=Z,7.5nm,0.9s,baz=305,slow=11,SNR=4.2
ULM LR LR 16 19 20.6
comp=Z,1µm,18.6s,baz=312,slow=38
ULM Lac du Bonnet 24.63 93 *i* P **P** 16 09 13.8 +1.3
ULM Lac du Bonnet 24.63 93 P **P** 16 09 12.8 +0.3
ULM lAmb lAmb 16 09 15.9
comp=Z,41nm,1.5s
K22A Casper 24.71 119 P **P** 16 09 13.2 -0.3
baz=322
MPU Maple Canyon 24.72 130 P **P** 16 09 14.1 +0.5
RSSD Black Hills 24.72 113 P **P** 16 09 13.8 +0.1
baz=319
RSSD Black Hills 24.72 113 P **P** 16 09 14.7 +1.0
RSSD lAmb lAmb 16 09 22.8
comp=Z,58nm,1.5s
R11A Troy Canyon, C 24.73 138 P **P** 16 09 14.7 +1.0
baz=334,SNR=25
R11A Troy Canyon, C 24.73 138 P **P** 16 09 14.9 +1.1
RDMU Red Mountain 25.09 126 P **P** 16 09 17.9 +1.0
PSUT Pine Spring 25.17 135 P **P** 16 09 18.4 +0.6
TMUT Trail Mountain 25.51 130 P **P** 16 09 21.6 +0.7
P17A Butcher Ranch, 25.54 129 P **P** 16 09 21.7 +0.6
CWC Cottonwood Cre 25.67 144 P **P** 16 09 23.2 +1.0
baz=338
PRN Pahroc Range 25.76 138 P **P** 16 09 24.1 +1.0
PRN lAmb lAmb 16 09 30.8
comp=Z,28nm,1.4s
TPNV Topopah Spring 25.78 141 P **P** 16 09 24.1 +0.9
baz=336,SNR=14
TPNV Topopah Spring 25.78 141 P **P** 16 09 24.3 +1.1
TPNV lAmb lAmb 16 09 30.0
comp=Z,42nm,1.4s
MVU Marysvale 25.81 133 P **P** 16 09 24.8 +1.2
MSU Marysvale 25.81 133 P **P** 16 09 24.7 +1.1
Q16A Castle Valley 25.85 131 P **P** 16 09 24.4 +0.5
SRU San Rafael Swe 25.94 129 P **P** 16 09 25.3 +0.6
O20A White River Ci 26.01 125 P **P** 16 09 26.0 +0.7
baz=326
O20A White River Ci 26.01 125 P **P** 16 09 26.0 +0.7
BILL Bilibino 26.02 314 *ie* P **P** 16 09 25.7 +0.7
BILL *e* 16 10 07.6
BILL pmax pmax
comp=Z,13nm,1.3s
BILL MLR MLR
comp=Z,644nm,15.0s
MPMC Manual Prospec 26.21 144 P **P** 16 09 27.8 +0.7
baz=338
MTPU Mount Pierson 26.22 133 P **P** 16 09 28.6 +1.1
CCUT Cedar City 26.22 136 P **P** 16 09 26.7 -0.6
PHWY Pilot Hill 26.27 119 P **P** 16 09 28.5 +0.7
PHWY lAmb lAmb 16 09 32.7
comp=Z,48nm,1.4s
ISA Isabella, Lake 26.28 146 P **P** 16 09 28.9 +1.2
ISA pmax pmax
comp=Z,10.0nm,1.3s
ISA Isabella, Lake 26.28 146 P **P** 16 09 28.2 +0.5
baz=339
ISA Isabella, Lake 26.28 146 P **P** 16 09 28.9 +1.2
SZCU Shurtz Canyon 26.28 135 P **P** 16 09 28.9 +1.0
N23A Red Feather La 26.38 121 P **P** 16 09 29.7 +1.0
baz=324
N23A Red Feather La 26.38 121 P **P** 16 09 29.3 +0.5
N23A lAmb lAmb 16 09 41.1
comp=Z,23nm,1.4s
SHPR Sheep Range 26.54 140 P **P** 16 09 31.2 +1.1
LRMC Laurel Mtn Rad 26.68 145 P **P** 16 09 32.6 +1.2
baz=339
PKCU Pink Cliffs 26.70 134 P **P** 16 09 32.8 +1.1
SHOC Shoshone, Teco 26.73 142 P **P** 16 09 33.1 +1.5
baz=337
LCMT Little Creek M 26.75 136 P **P** 16 09 33.1 +1.1
KNB Kanab 26.89 135 P **P** 16 09 33.8 +0.5
PV23 Carpenter Ridg 27.11 128 P **P** 16 09 35.9 +0.5
PV23 lAmb lAmb 16 09 44.5
comp=Z,28nm,1.5s
GSC Goldstone, Bar 27.11 143 P **P** 16 09 36.5 +1.3
baz=338
PV22 Blue Mesa, Par 27.13 127 P **P** 16 09 35.9 +0.4
PV22 lAmb lAmb 16 09 42.2
comp=Z,28nm,1.5s
EDW2 Edwards Air Fo 27.15 146 P **P** 16 09 37.0 +1.6
baz=339
PV10 Paradox Valley 27.16 128 P **P** 16 09 36.0 +0.2
PV10 lAmb lAmb 16 09 43.6
comp=Z,29nm,1.3s
PV14 Lion Creek, Pa 27.17 128 P **P** 16 09 36.2 +0.3
PV14 lAmb lAmb 16 09 43.0
comp=Z,28nm,1.5s
PV04 Paradox Valley 27.20 128 P **P** 16 09 36.8 +0.7
PV04 lAmb lAmb 16 09 47.9
comp=Z,21nm,1.5s
PV20 West Nyswonger 27.22 128 P **P** 16 09 36.3 0.0
PV20 lAmb lAmb 16 09 37.8
comp=Z,20nm,1.5s
PV19 Morning Glory 27.24 128 P **P** 16 09 36.9 +0.4
PV16 Nyswonger Mesa 27.27 128 P **P** 16 09 36.6 -0.1
PV16 lAmb lAmb 16 09 43.9
comp=Z,20nm,1.4s
TUQ Turquoise Moun 27.27 142 P **P** 16 09 38.5 +1.9
baz=337
PV07 Paradox Valley 27.27 127 P **P** 16 09 36.2 -0.5
PV17 East Wray Mesa 27.28 128 P **P** 16 09 37.0 +0.3
PV17 lAmb lAmb 16 09 43.9
comp=Z,41nm,1.5s
F33A 5 Mile Ranch, 27.28 102 P **P** 16 09 37.2 +0.7
F33A lAmb lAmb 16 09 41.1
comp=Z,47nm,1.4s
PV11 David Mesa, Pa 27.30 128 P **P** 16 09 37.3 +0.4
PV12 Saucer Basin, 27.31 128 P **P** 16 09 36.4 -0.7
PV12 lAmb lAmb 16 09 44.4
comp=Z,26nm,1.3s
PV18 Skein Mesa, Pa 27.33 128 P **P** 16 09 37.2 -0.1
PV18 lAmb lAmb 16 09 44.3
comp=Z,22nm,1.3s
PV03 Paradox Valley 27.34 128 P **P** 16 09 37.3 -0.1
ISCO Idaho Springs 27.42 121 P **P** 16 09 39.4 +1.3
baz=325,SNR=7.7
PV15 Paradox Valley 27.42 127 P **P** 16 09 38.7 +0.6
PV15 lAmb lAmb 16 09 43.2
comp=Z,13nm,1.0s
PV02 Paradox Valley 27.43 128 P **P** 16 09 38.6 +0.5
PV13 Radium Mtn., P 27.44 128 P **P** 16 09 38.3 0.0
PV13 lAmb lAmb 16 09 40.5
comp=Z,15nm,1.1s
PV01 Paradox Valley 27.56 128 P **P** 16 09 39.6 +0.2
PV01 lAmb lAmb 16 09 41.7
comp=Z,21nm,1.2s

GMRC Granite Mounta 27.95 142 P P 16 09 44.1 +1.3
baz=337
EYMN Ely 28.32 93 P P 16 09 45.8 0.0
baz=310
EYMN Ely 28.32 93 P P 16 09 46.3 +0.6
EYMN IAmb IAmb 16 09 50.8
comp=Z,13nm,1.1s
MVCO Mesa Verde 28.38 129 P P 16 09 47.1 +0.4
baz=330
MVCO Mesa Verde 28.38 129 P P 16 09 46.5 -0.2
MVCO IAmb IAmb 16 09 54.8
comp=Z,18nm,1.4s
S22A 4UR Ranch, Cre 28.61 126 P P 16 09 49.8 +1.0
baz=328
S22A 4UR Ranch, Cre 28.61 126 P P 16 09 49.0 +0.2
ECSD EROS Data Cent 28.62 105 P P 16 09 49.2 +0.7
baz=317
ECSD EROS Data Cent 28.62 105 P P 16 09 48.3 -0.1
ECSD IAmb IAmb 16 09 50.4
comp=Z,21nm,1.4s
F36A Milaca 28.67 99 P P 16 09 49.1 +0.3
F36A IAmb IAmb 16 09 55.9
comp=Z,29nm,1.5s
IRM Iron Mountain 28.69 142 P P 16 09 50.6 +1.4
baz=337
WUAZ Wupatki 28.76 134 P P 16 09 50.7 +0.7
baz=333,SNR=8.1
WUAZ Wupatki 28.76 134 P P 16 09 49.6 -0.4
WUAZ IAmb IAmb 16 09 52.9
comp=Z,23nm,1.3s
PFO Pinyon Flats O 28.79 144 LR LR 16 21 54.5
comp=Z,366nm,18.3s,baz=353,slow=38
PDMCI Parker Dam,Lak 28.89 140 P P 16 09 52.4 +1.5
baz=336
SDCO Great Sand Dun 29.17 124 P P 16 09 54.6 +0.9
baz=327
SDCO Great Sand Dun 29.17 124 P P 16 09 53.5 -0.2
W18A Petrified Fore 29.72 132 P P 16 09 59.3 +0.7
baz=332
W18A Petrified Fore 29.72 132 P P 16 09 57.9 -0.7
W18A IAmb IAmb 16 10 04.8
comp=Z,17nm,1.1s
T25A Trinidad 30.15 123 P P 16 10 02.4 0.0
baz=327
T25A Trinidad 30.15 123 P P 16 10 02.3 -0.1
CBKS Cedar Bluff 30.88 115 P P 16 10 09.1 +0.5
baz=323
ANMO Albuquerque 31.16 128 *ce* P P 16 10 11.2 -0.1
ANMO pmax pmax
comp=Z,12nm,1.3s
ANMO Albuquerque 31.16 128 P P 16 10 12.1 +0.8
baz=330
ANMO Albuquerque 31.16 128 P P 16 10 11.5 +0.2
214A Organ Pipe Nat 31.48 140 P P 16 10 14.9 +1.0
baz=337
R32A Long Quarter, 31.67 114 P P 16 10 16.4 +0.9
BNM Barren Site 31.79 129 P P 16 10 18.0 +1.2
JFWS Jewell Farm 32.41 99 P P 16 10 22.2 +0.2
baz=316
JFWS Jewell Farm 32.41 99 P P 16 10 22.2 +0.2
JFWS IAmb IAmb 16 10 29.2
comp=Z,24nm,1.1s
121A Cookes Peak, D 32.76 132 P P 16 10 27.2 +1.9
baz=333,SNR=6.5
121A Cookes Peak, D 32.76 132 P P 16 10 27.0 +1.7
KAN08 Anthony NE Sta 32.98 115 P P 16 10 28.4 +1.4
KAN10 Anthony SW Sta 33.01 115 P P 16 10 28.7 +1.4
E46A Sault Ste Mari 33.05 89 P P 16 10 28.9 +1.4
SEY Seymchan 33.09 307 *i* P P 16 10 31.4 +3.7
KAN14 Manchester OK 33.20 115 P P 16 10 29.9 +0.9
P38A Dawn 33.22 107 P P 16 10 30.0 +0.9
P38A IAmb IAmb 16 10 30.9
comp=Z,27nm,1.4s
319A Douglas 33.24 135 P P 16 10 31.2 +1.8
AMTX Amarillo 33.24 122 P P 16 10 30.1 +0.7
baz=328
AMTX Amarillo 33.24 122 P P 16 10 29.4 0.0
AMTX IAmb IAmb 16 10 36.3
comp=Z,14nm,1.1s
L42A Oliver, Polo 33.37 100 P P 16 10 30.7 +0.3
KAN13 South Haven SW 33.39 114 P P 16 10 31.3 +0.8
K43A Burlington 33.54 98 P P 16 10 32.0 +0.2
MSTX Muleshoe 33.54 124 P P 16 10 33.2 +1.2
baz=329,SNR=9.2
MSTX Muleshoe 33.54 124 P P 16 10 33.8 +1.8
N41A Harden Midland 33.73 103 P P 16 10 33.5 0.0
N41A IAmb IAmb 16 10 35.0
comp=Z,25nm,1.1s
T35A Sooner Cattle 33.92 113 P P 16 10 35.6 +0.4
T35A IAmb IAmb 16 10 37.4
comp=Z,17nm,1.0s
P40A Paris 34.03 105 P P 16 10 36.1 +0.1
P40A IAmb IAmb 16 10 37.8
comp=Z,25nm,1.2s
L44A Lake County Fo 34.13 98 P P 16 10 37.3 +0.4
baz=317
OK029 Liberty Lake 34.39 116 P P 16 10 39.6 +0.4
GDL2 Guadalupe Moun 34.41 128 P P 16 10 41.0 +1.4
BCOK Bluff Creek, N 34.43 116 P P 16 10 40.3 +0.7
MNTX Cornudas Mount 34.44 129 P P 16 10 41.1 +1.4
baz=332,SNR=12
MNTX Cornudas Mount 34.44 129 P P 16 10 41.0 +1.2
MNTX IAmb IAmb 16 10 45.6
comp=Z,10nm,1.1s
OK031 S. Brethren Rd 34.55 115 P P 16 10 41.2 +0.6
OK030 Cody Creek RV 34.59 115 P P 16 10 41.6 +0.6
HDIL Hopedale 34.63 101 P P 16 10 42.1 +0.8
M44A Midewin, Midew 34.64 99 P P 16 10 40.1 -1.3
WMOK Wichita Mounta 34.65 118 P P 16 10 42.7 +1.1
WMOK pmax pmax
comp=Z,48nm,1.4s
WMOK Wichita Mounta 34.65 118 P P 16 10 42.4 +0.8
baz=327,SNR=21
WMOK Wichita Mounta 34.65 118 P P 16 10 42.7 +1.1
FNO Franklin 34.85 116 P P 16 10 44.9 +1.6
R40A Maddies Statio 34.88 107 P P 16 10 43.4 -0.1
R40A IAmb IAmb 16 10 44.8
comp=Z,21nm,1.4s
U38A Gravette 35.31 111 P P 16 10 47.0 -0.3
VLDQ Val d'Or 35.41 82 P P 16 10 47.6 -0.4
VLDQ IAmb IAmb 16 10 49.3
comp=Z,14nm,1.1s
MGMO Mountain Grove 35.77 108 P P 16 10 50.6 -0.6
NOR Nord 35.82 13 *i* P P 16 10 52.5 +1.4
NOR pmax pmax
comp=Z,8.0nm,1.1s
NOR Nord 35.82 13 *i* P P 16 10 52.5 +1.4
comp=Z,7.9nm,1.1s
NOR Nord 35.82 13 *i* P P 16 10 52.6 +1.4
NOR IAmb IAmb 16 10 56.0
comp=Z,7.9nm,1.1s
SFIN Lafayette 35.87 99 P P 16 10 51.8 -0.2
baz=318
SFIN Lafayette 35.87 99 P P 16 10 52.7 +0.7
PETK Petropavlovsk- 35.89 290 P P 16 10 52.5 +0.5
comp=Z,2.4nm,0.6s,baz=54,slow=13,SNR=5.8
Q44A Meyer Farm, Va 36.02 103 P P 16 10 53.9 +0.6
Q44A IAmb IAmb 16 10 54.9
comp=Z,21nm,1.1s
FVM French Village 36.03 105 P P 16 10 53.1 -0.2
FVM IAmb IAmb 16 10 57.4
comp=Z,12nm,1.1s
ABTX Abilene, Hawle 36.05 121 P P 16 10 53.4 -0.2
baz=329
ABTX Abilene, Hawle 36.05 121 P P 16 10 53.5 -0.1
ABTX IAmb IAmb 16 11 01.2
comp=Z,22nm,1.3s
L48A N Adams 36.08 95 P P 16 10 54.4 +0.6
U40A Yellville 36.12 110 P P 16 10 53.2 -0.9
baz=323
U40A Yellville 36.12 110 P P 16 10 54.3 +0.1
N47A Urbana 36.22 98 P P 16 10 55.3 +0.4
X37A Clayton 36.35 114 P P 16 10 56.9 +0.7
X37A IAmb IAmb 16 11 03.5
comp=Z,36nm,1.3s
SCHQ Schefferville 36.49 66 P P 16 10 58.7 +1.5
comp=Z,3.1nm,0.5s,baz=299,slow=8.5,SNR=6.5
SCHQ LR LR 16 26 24.3
comp=Z,283nm,21.1s,baz=307,slow=37
SCHQ Schefferville 36.49 66 P P 16 10 57.9 +0.7
Z35A Perchaven, San 36.52 118 P P 16 10 58.3 +0.7
W39A Magazine 36.60 112 P P 16 10 58.8 +0.5
baz=324
W39A Magazine 36.60 112 P P 16 10 58.3 0.0
W39A IAmb IAmb 16 11 00.0
comp=Z,32nm,1.4s
N49A Columbus Grove 36.96 96 P P 16 11 01.6 +0.4
N49A IAmb IAmb 16 11 03.3
comp=Z,24nm,1.1s
PBMO Poplar Bluff 36.97 107 P P 16 11 01.5 +0.1
PBMO IAmb IAmb 16 11 03.3
comp=Z,19nm,1.4s
D55A Sainte-Anne-du 37.14 82 P P 16 11 02.6 -0.1
baz=312
SUMG Summit 37.20 30 *i* P P 16 11 04.0 +0.6
SUMG pmax pmax
comp=Z,18nm,0.6s
SUMG Summit 37.20 30 P P 16 11 04.4 +1.0
SUMG Summit 37.20 30 *i* P P 16 11 04.0 +0.6
comp=Z,18nm,0.6s
SUMG Summit 37.20 30 *i* P P 16 11 04.0 +0.6
SUMG IAmb IAmb 16 11 06.9
comp=Z,18nm,0.6s
TX31 Lajitas Ar. Si 37.21 129 P P 16 11 04.9 +1.3
TX32 Lajitas Array 37.21 129 P P 16 11 04.9 +1.2
TX32 IAmb IAmb 16 11 06.1
comp=Z,20nm,1.4s
TXAR Lajitas Array 37.21 129 P P 16 11 05.1 +1.5
comp=Z,6.2nm,1.0s,baz=335,slow=5.7,SNR=21
TXAR LR LR 16 27 50.5
comp=Z,494nm,19.6s,baz=0.0,slow=39
TXAR Lajitas Array 37.21 129 P P 16 11 04.8 +1.2
TXAR Lajitas Array 37.21 129 P P 16 11 04.8 +1.2
E55A Montcerf-Lytto 37.23 83 P P 16 11 03.0 -0.5
baz=312
MIAR Mount Ida 37.23 112 P P 16 11 02.6 -1.0
baz=325,SNR=6.4
MIAR Mount Ida 37.23 112 P P 16 11 03.8 +0.1
MIAR IAmb IAmb 16 11 05.5
comp=Z,32nm,1.5s
P48A Milroy 37.41 99 P P 16 11 05.2 +0.1
P48A IAmb IAmb 16 11 11.8
comp=Z,37nm,1.4s
O49A Covington 37.42 97 P P 16 11 05.2 0.0
D56A ZEC Mazanza, M 37.49 81 P P 16 11 04.9 -0.8
baz=312,SNR=5.7
WHTX Lake Whitney, 37.56 119 P P 16 11 06.2 -0.2
baz=328
WHTX Lake Whitney, 37.56 119 P P 16 11 06.8 +0.4
JCT Junction City 37.82 123 P P 16 11 09.3 +0.6
baz=330
WCI Wyandotte Cave 37.91 101 P P 16 11 10.0 +0.7
baz=320
WCI Wyandotte Cave 37.91 101 P P 16 11 09.9 +0.6
WCI IAmb IAmb 16 11 10.8
comp=Z,22nm,1.1s
ACSO Alum Creek Sta 38.08 96 P P 16 11 11.3 +0.5
baz=318
ACSO Alum Creek Sta 38.08 96 P P 16 11 11.2 +0.5
E57A Chemin Saint G 38.23 81 P P 16 11 12.0 0.0
baz=313
LATQ La Tuque 38.27 79 P P 16 11 12.8 +0.5
baz=312
O51A Pataskala 38.34 95 P P 16 11 14.1 +1.2
baz=318
M53A WI Miller and 38.38 92 P P 16 11 13.1 -0.2
baz=317,SNR=5.4
M53A WI Miller and 38.38 92 P P 16 11 14.1 +0.8
D58A Chemin du LacG 38.41 79 P P 16 11 13.1 -0.4
baz=312
435B Jarrell 38.53 120 P P 16 11 15.4 +0.8
435B IAmb IAmb 16 11 20.1
comp=Z,17nm,0.9s
P51A Williamsport 38.60 97 P P 16 11 14.2 -0.9
baz=319
P51A Williamsport 38.60 97 P P 16 11 13.8 -1.3
P51A IAmb IAmb 16 11 21.6
comp=Z,33nm,1.2s
E58A La Victoria 38.70 81 P P 16 11 14.8 -1.1
baz=313
O52A Adamsville 38.75 95 P P 16 11 16.3 -0.2
baz=318
O52A Adamsville 38.75 95 P P 16 11 16.1 -0.3
O52A IAmb IAmb 16 11 17.8
comp=Z,20nm,0.9s
N53A Lisbon 38.76 93 P P 16 11 17.1 +0.6
WVT Waverly 38.77 105 P P 16 11 16.6 +0.1
baz=322
WVT Waverly 38.77 105 P P 16 11 16.7 +0.1
DAG Danmarks Havn 38.78 19 *i* P P 16 11 16.8 +0.5
DAG pmax pmax
comp=Z,20nm,0.9s
DAG Danmarks Havn 38.78 19 *i* P P 16 11 16.8 +0.5
comp=Z,20nm,0.9s
DAG Danmarks Havn 38.78 19 *i* P P 16 11 16.8 +0.5
DAG IAmb IAmb 16 11 17.9
comp=Z,20nm,0.9s
Q51A Peebles 38.80 97 P P 16 11 17.2 +0.4
ICESG Greenland Ices 38.83 35 *i* P P 16 11 18.4 +1.3
ICESG IAmb IAmb 16 11 20.6
comp=Z,21nm,0.6s
M54A Oil Creek Stat 38.85 91 P P 16 11 17.0 -0.2
baz=317
M54A Oil Creek Stat 38.85 91 P P 16 11 17.0 -0.2
M54A IAmb IAmb 16 11 24.6
comp=Z,53nm,1.4s
R50A Paris 38.86 99 P P 16 11 17.4 0.0
MMNY Mt. Morris Dam 38.87 88 P P 16 11 17.0 -0.4
MMNY IAmb IAmb 16 11 23.9
comp=Z,56nm,1.5s
P52A Corning 38.96 96 P P 16 11 17.9 -0.3
baz=318
N54A Moraine State 39.08 92 P P 16 11 19.7 +0.6
baz=317
N54A Moraine State 39.08 92 P P 16 11 19.7 +0.6
M55A Ridgway 39.34 91 P P 16 11 22.2 +0.8
M55A IAmb IAmb 16 11 23.3
comp=Z,14nm,0.8s
J57A Williamstown 39.37 86 P P 16 11 20.8 -0.7
baz=315
Q52A Bidwell 39.40 96 P P 16 11 21.2 -0.6
baz=319
P53A Whipple 39.45 95 P P 16 11 22.2 -0.1
baz=319
P53A Whipple 39.45 95 P P 16 11 22.3 0.0
O54A Avella 39.45 93 P P 16 11 22.2 -0.1
baz=318
O54A Avella 39.45 93 P P 16 11 22.7 +0.4
L56A Greenwood 39.47 89 P P 16 11 22.1 -0.4
baz=316
D60A Saint Jean D'O 39.52 78 P P 16 11 22.5 -0.3
baz=313
CLTN Cedars of Leba 39.55 103 P P 16 11 24.0 +0.9
CLTN IAmb IAmb 16 11 30.9
comp=Z,41nm,1.4s
PLAL Pickwick Lake 39.55 106 P P 16 11 22.8 -0.4
T50A Nancy 39.57 101 P P 16 11 23.5 +0.2
T50A IAmb IAmb 16 11 30.0
comp=Z,39nm,1.4s
V48A Smith Brothers 39.58 104 P P 16 11 23.6 +0.2
V48A IAmb IAmb 16 11 25.2
comp=Z,24nm,1.3s
H58A Gabriels 39.59 84 P P 16 11 22.8 -0.5
baz=314
FRNY Flat Rock 39.60 83 P P 16 11 23.1 -0.3
FRNY IAmb IAmb 16 11 29.9
comp=Z,26nm,1.4s
E60A Ste Agathe de 39.63 79 P P 16 11 23.4 -0.3
baz=313
M56A Emporium 39.63 90 P P 16 11 23.1 -0.6
baz=317
M56A Emporium 39.63 90 P P 16 11 24.7 +0.9
M56A IAmb IAmb 16 11 26.2
comp=Z,42nm,1.4s
F60A Warwick 39.65 80 P P 16 11 23.4 -0.4
baz=313
H59A Cadyville 39.68 83 P P 16 11 24.2 +0.1
baz=314
I58A Old Forge 39.69 85 P P 16 11 24.2 -0.1
baz=315
S51A Beattyville 39.73 99 P P 16 11 25.5 +0.9
J58A Remsen 39.77 86 P P 16 11 25.2 +0.3
baz=315
P54A Burton 39.83 94 P P 16 11 25.6 +0.1
baz=318
Q53A Leroy 39.85 96 P P 16 11 25.7 0.0
baz=319
L57A Andrews Acres 39.94 88 P P 16 11 26.0 -0.3
baz=316
N56A West Decatur 39.98 91 P P 16 11 27.0 +0.3
baz=317
O55A Ligonier 39.99 92 P P 16 11 26.6 -0.1
baz=318
HKT Hockley 40.02 119 *i* P P 16 11 27.7 +0.7
HKT pmax pmax
comp=Z,22nm,1.5s
HKT Hockley 40.02 119 P P 16 11 27.8 +0.7
HKT IAmb IAmb 16 11 29.9
comp=Z,25nm,1.4s
R53A Hurricane 40.04 97 P P 16 11 27.1 -0.1
baz=320
R53A Hurricane 40.04 97 P P 16 11 27.0 -0.2
R53A IAmb IAmb 16 11 34.5
comp=Z,31nm,1.1s
G60A Masonville 40.05 81 P P 16 11 26.8 -0.4
baz=314
E61A Lac Etchemin 40.07 79 P P 16 11 28.0 +0.7
baz=313
J59A Piesco 40.09 85 P P 16 11 28.0 +0.4
baz=315
F61A St Evariste 40.13 79 P P 16 11 28.7 +0.8
baz=314
I59A Olmsteadville 40.18 84 P P 16 11 26.5 -1.8
baz=315
DBG Daneborg 40.22 22 *i* P P 16 11 29.4 +1.2
DBG IAmb IAmb 16 11 30.3
comp=Z,17nm,0.8s
BINY Binghamton 40.24 87 P P 16 11 28.2 -0.6
baz=316
BINY Binghamton 40.24 87 P P 16 11 29.3 +0.5
P55A Reedsville 40.24 94 P P 16 11 28.3 -0.6
baz=318
H60A Morristown 40.24 82 P P 16 11 26.8 -2.0
baz=315
M57A Sunshine Farm, 40.28 89 P P 16 11 28.9 -0.2
baz=317
M57A Sunshine Farm, 40.28 89 P P 16 11 29.9 +0.8
O56A Blue Knob Stat 40.32 92 P P 16 11 29.8 +0.3
baz=318
O56A Blue Knob Stat 40.32 92 P P 16 11 29.6 +0.1
O56A IAmb IAmb 16 11 36.4
comp=Z,36nm,1.4s
K59A Cooperstown 40.41 86 P P 16 11 30.6 +0.4
baz=316
L58A Harry Jones Me 40.42 88 P P 16 11 30.9 +0.6
baz=316
E62A Clayton Lake 40.42 78 P P 16 11 30.9 +0.6
baz=313
SWET Sewanee 40.43 104 P P 16 11 30.5 0.0
S53A Williamson 40.44 98 P P 16 11 30.9 +0.4
baz=320
I60A Shoreham 40.44 84 P P 16 11 30.4 0.0
baz=315
N57A Milroy 40.48 90 P P 16 11 30.7 -0.1
baz=317
X48A Hartselle 40.49 105 P P 16 11 31.1 +0.2
Q55A Buckhannon 40.49 94 P P 16 11 30.7 -0.2
baz=319
M58A Price's Panora 40.59 89 P P 16 11 31.8 +0.1
baz=317
TZTN Tazewell 40.59 100 P P 16 11 31.8 -0.1
baz=321
TZTN Tazewell 40.59 100 P P 16 11 31.7 -0.1
TZTN IAmb IAmb 16 11 38.6
comp=Z,53nm,1.5s
R54A Victor 40.64 96 P P 16 11 31.2 -1.0
baz=320
L59A Walton 40.73 87 P P 16 11 31.8 -1.1
baz=316
P56A Dayton Farm, R 40.75 93 P P 16 11 32.0 -1.0
baz=318
W50A Signal Mountai 40.76 103 P P 16 11 33.0 -0.2
W50A IAmb IAmb 16 11 35.9
comp=Z,23nm,1.4s
S54A Dingess, Beckl 40.77 97 P P 16 11 32.6 -0.7
baz=320
S54A Dingess, Beckl 40.77 97 P P 16 11 33.4 +0.1
S54A IAmb IAmb 16 11 37.2
comp=Z,29nm,1.4s
J60A Lant Hill Farm 40.80 84 P P 16 11 33.9 +0.4
baz=316
KSPA Keystone Colle 40.81 88 P P 16 11 34.4 +0.9
KSPA IAmb IAmb 16 11 36.1
comp=Z,33nm,1.4s
O57A Amberson 40.84 91 P P 16 11 32.3 -1.5
baz=318,SNR=6.9
N58A Sunbury 40.85 90 P P 16 11 33.4 -0.5
baz=317
Q56A Snyder Ridge, 40.92 94 P P 16 11 34.7 +0.2
baz=319
Q56A Snyder Ridge, 40.92 94 P P 16 11 34.8 +0.4
Q56A IAmb IAmb 16 11 42.0
comp=Z,21nm,1.2s
I61A Oroboro, Fairl 40.94 83 P P 16 11 34.7 +0.2
baz=315
M59A Waymart 41.00 88 P P 16 11 35.5 +0.4
baz=317
R55A Marlinton 41.01 95 P P 16 11 35.7 +0.4
baz=319
H62A Milan 41.02 81 P P 16 11 35.1 -0.1
baz=315
E63A Oxbow 41.11 77 P P 16 11 36.0 0.0
baz=314
E63A Oxbow 41.11 77 P P 16 11 36.7 +0.8
E63A IAmb IAmb 16 11 42.7
comp=Z,49nm,1.4s
V52A Sevierville 41.12 101 P P 16 11 37.2 +1.1
V52A IAmb IAmb 16 11 38.3
comp=Z,26nm,1.2s
FPAL Fort Paine 41.13 104 P P 16 11 36.4 +0.1
FPAL IAmb IAmb 16 11 38.0
comp=Z,39nm,1.4s
TKL Tuckaleechee C 41.17 101 P P 16 11 36.2 -0.4
TKL pmax pmax
comp=Z,18nm,1.1s
TKL Tuckaleechee C 41.17 101 P P 16 11 36.2 -0.4
TKL IAmb IAmb 16 11 44.0
comp=Z,18nm,1.1s
P57A Homestead Farm 41.19 92 P P 16 11 36.3 -0.3
baz=318,SNR=6.0
P57A Homestead Farm 41.19 92 P P 16 11 37.5 +0.9
T54A Tazewell 41.20 98 P P 16 11 35.8 -1.0
baz=320
S55A Lewisburg 41.20 96 P P 16 11 36.5 -0.3
baz=320
F63A Nahmakanta, Br 41.27 78 P P 16 11 36.9 -0.3
baz=314
O58A Lewisberry 41.27 90 P P 16 11 37.5 +0.1
baz=318
Y49A Blount Mountai 41.27 105 P P 16 11 37.3 -0.2
N59A State Game Lan 41.28 89 P P 16 11 37.8 +0.4
baz=317
N59A State Game Lan 41.28 89 P P 16 11 38.0 +0.5
N59A IAmb IAmb 16 11 43.2
comp=Z,16nm,1.1s
R56A Bull Pasture M 41.28 94 P P 16 11 38.0 +0.5
baz=319
Q57A Strasburg 41.32 93 P P 16 11 37.9 +0.1
baz=319
U54A Nelsons Funny 41.49 98 P P 16 11 39.5 +0.2
baz=321
U54A Nelsons Funny 41.49 98 P P 16 11 39.4 +0.2
O59A Robesonia 41.51 90 P P 16 11 38.9 -0.5
baz=318
F64A Sherman 41.53 78 P P 16 11 38.5 -0.9
baz=314
F64A Sherman 41.53 78 P P 16 11 39.5 +0.1
F64A IAmb IAmb 16 11 40.6
comp=Z,31nm,1.2s
P58A Pank, Wackersv 41.55 91 P P 16 11 38.8 -0.8
baz=318
T55A Pulaski 41.56 97 P P 16 11 39.3 -0.4
baz=320
M60A Port Jervis 41.57 87 P P 16 11 39.4 -0.4
baz=317
V53A Saluda 41.65 100 P P 16 11 41.5 +1.0
MVL Millersville 41.66 90 P P 16 11 41.6 +1.1
MVL IAmb IAmb 16 11 47.8
comp=Z,28nm,1.5s
BLA Blacksburg 41.67 96 P P 16 11 40.9 +0.2
baz=320
L61B Northampton 41.75 85 P P 16 11 40.9 -0.4
baz=316
Q58A Fox Den Farm, 41.77 92 P P 16 11 41.3 -0.1
baz=319
R57A Stanardsville 41.82 94 P P 16 11 41.1 -0.8
baz=319
K62A Royalston 41.83 84 P P 16 11 41.4 -0.4

baz=316
P59A Jarrettsville 41.91 91 P **P** **16 11 41.5 -1.0**
baz=318
O60A Telford 41.91 89 P **P** **16 11 42.7 +0.1**
baz=318
V54A Nebo 42.00 99 P **P** **16 11 43.6 +0.2**
baz=321,SNR=6.2
S57A Dark Hollow, R 42.00 95 P **P** **16 11 44.0 +0.6**
baz=320
T56A Rocky Mt 42.01 96 P **P** **16 11 42.1 -1.3**
baz=320
M61A Granite Spring 42.02 87 P **P** **16 11 43.3 -0.1**
baz=317
R58A Rapidan 42.08 93 P **P** **16 11 43.9 -0.1**
baz=319
WUPA West Chester U 42.09 89 P **P** **16 11 44.9 +0.8**
V55A Taylorsville 42.32 98 P **P** **16 11 46.1 +0.2**
baz=321
YAK Yakutsk 42.35 316*ce*P **P** **16 11 48.0 +2.2**
YAK pmax pmax
comp=Z,42nm,2.5s
YAK Yakutsk 42.35 316 P **P** **16 11 45.8 -0.1**
YAK IAmb IAmb 16 11 50.2
comp=Z,18nm,0.9s
R58B Mineral 42.40 93 P **P** **16 11 46.4 -0.2**
baz=320
R58B Mineral 42.40 93 P **P** **16 11 47.0 +0.4**
R58B IAmb IAmb 16 11 49.0
comp=Z,40nm,1.4s
W54A Cherokee Point 42.42 100 P **P** **16 11 46.1 -0.7**
baz=322
T57A Hurt 42.43 96 P **P** **16 11 46.6 -0.3**
baz=320
S58A Poland Farm, P 42.58 94 P **P** **16 11 47.4 -0.6**
baz=320
V56A Mocksville 42.72 98 P **P** **16 11 48.7 -0.5**
baz=321
X54A Belton 42.75 101 P **P** **16 11 49.5 0.0**
baz=322
KMSC Kings Mountain 42.81 99 P **P** **16 11 48.0 -1.9**
baz=322
U57A Blanch 42.83 96 P **P** **16 11 49.3 -0.7**
baz=321
T58A Grand View Acr 42.84 95 P **P** **16 11 50.1 0.0**
baz=320
V57A Coltrane Farms 43.02 97 P **P** **16 11 50.8 -0.8**
baz=321
GOGA Godfrey 43.10 103 P **P** **16 11 51.6 -0.7**
baz=323
X55A Gracelyn & Ava 43.19 100 P **P** **16 11 52.5 -0.4**
baz=322
W56A Indian Trail 43.20 99 P **P** **16 11 52.5 -0.6**
baz=322
U58A Oxford 43.26 95 P **P** **16 11 52.2 -1.3**
baz=321
LMN Caledonia Moun 43.31 75 P **P** **16 11 54.5 +0.6**
LMN IAmb IAmb 16 12 12.1
comp=Z,32nm,1.1s
T59A Double "B" Far 43.33 94 P **P** **16 11 53.8 -0.3**
baz=320
T59A Double "B" Far 43.33 94 P **P** **16 11 54.7 +0.6**
V58A Windy Hill, Pi 43.43 97 P **P** **16 11 54.6 -0.4**
baz=321
V58A Windy Hill, Pi 43.43 97 P **P** **16 11 55.6 +0.6**
V58A IAmb IAmb 16 12 02.6
comp=Z,16nm,1.1s
X56A White Oak 43.47 100 P **P** **16 11 55.1 -0.2**
baz=322
W57A Gilead 43.48 98 P **P** **16 11 55.3 -0.1**
baz=322
W57A Gilead 43.48 98 P **P** **16 11 55.5 +0.1**
W57A IAmb IAmb 16 12 01.3
comp=Z,37nm,1.5s
U59A Littleton 43.68 95 P **P** **16 11 56.7 -0.3**
baz=321
W58A Raeford 43.98 97 P **P** **16 11 59.8 +0.5**
baz=322
DRLN Deer Lake 44.48 67 P **P** **16 12 04.6 +1.3**
Z58A St. Stephen 45.01 99 P **P** **16 12 07.4 -0.2**
baz=323
JMIC Jan Mayen 45.02 21 LR LR 16 32 44.1
comp=Z,96nm,19.5s,baz=339,slow=38
GBN Guysborough 45.26 73 P **P** **16 12 09.4 0.0**
BORG Borgarnes 47.04 32 LR LR 16 32 48.2
comp=Z,264nm,18.9s,baz=323,slow=37
YSS Yuzh-Sakhalins 47.16 293 *i* P **P** **16 12 27.0 +2.6**
NRIK Noril'sk 47.94 341 P **P** **16 12 30.4 +0.2**
comp=Z,17nm,0.8s,baz=45,slow=6.1,SNR=18
NRIK LR LR 16 33 57.7
comp=Z,102nm,20.1s,baz=18,slow=38
NRIK Noril'sk 47.94 341*ce*P **P** **16 12 28.2 -1.9**
NRIK pmax pmax
comp=Z,16nm,0.9s
ZEA Zeya 49.06 309 *e*P **P** **16 12 38.9 -0.1**
ZEA pmax pmax
comp=Z,10.0nm,0.6s
JKA Kamikawa-asahi 49.31 290 P **P** **16 12 40.6 -0.4**
ASAJ Asahikawa 49.31 290 P **P** **16 12 41.9 +0.8**
comp=Z,5.7nm,0.8s,baz=24,slow=20,SNR=0.8
ASAJ Asahikawa 49.31 290 P **P** **16 12 40.6 -0.4**
ASAJ pmax pmax
comp=Z,52nm,1.5s
KLR Kul'dur 50.52 302*ce*P **P** **16 12 50.3 +0.2**
KLR pmax pmax
comp=Z,6.0nm,1.1s
KEV Kevo 50.78 7 P **P** **16 12 51.8 0.0**
BOD Bodaibo 50.84 319 *e*P **P** **16 12 51.3 -1.2**
BOD pmax pmax
comp=Z,22nm,1.4s
ARCES ARCESS Array B 50.89 8 P **P** **16 12 52.3 -0.4**
comp=Z,4.7nm,0.5s,baz=356,slow=4.9,SNR=23
ARCES PcP **PcP** **16 14 08.1 -0.9**
comp=Z,3.1nm,0.7s,baz=355,slow=4.5,SNR=3.8
ARCES LR LR 16 36 29.6
comp=Z,31nm,18.3s,baz=20,slow=38
USRK Ussuriysk Ar. 54.23 298 P **P** **16 13 18.8 +1.0**
comp=Z,1.0nm,0.5s,baz=35,slow=8.3,SNR=5.3
USRK Ussuriysk Ar. 54.23 298 P **P** **16 13 18.4 +0.7**
USRK Ussuriysk Ar. 54.23 298 P **P** **16 13 18.4 +0.7**
JSD Sado 56.07 288 P **P** **16 13 30.9 -0.2**
JSD IAmb IAmb 16 13 36.1
comp=Z,20nm,1.2s
TMCR Tamitsa 56.88 3 *e*P **P** **16 13 35.1 -1.3**
TMCR pmax pmax
comp=Z,21nm,0.6s
NC204 NORSAR Array S 57.16 18 P **P** **16 13 38.8 +0.2**
MJAR Matsushiro Arr 57.27 287 P **P** **16 13 39.9 +0.2**
comp=Z,63nm,0.7s,baz=80,slow=6.9,SNR=4.6
MAT Matsushiro 57.27 287 P **P** **16 13 39.7 0.0**
NC303 NORSAR Array S 57.31 18 P **P** **16 13 39.7 +0.1**
NBO00 NORSAR Array S 57.40 18 P **P** **16 13 40.1 -0.1**
NB2 NORSAR Subarra 57.46 18 P **P** **16 13 40.8 +0.1**
comp=Z,3.9nm,0.6s,baz=341,slow=7.4
NOA NORSAR Array B 57.46 18 P **P** **16 13 40.7 +0.1**
comp=Z,2.2nm,0.5s,baz=343,slow=7.3,SNR=17
NOA LR LR 16 39 24.6
comp=Z,110nm,18.2s,baz=325,slow=37
NB201 NORSAR Array S 57.46 18 P **P** **16 13 41.1 +0.4**
NC405 NORSAR Array S 57.47 18 P **P** **16 13 40.8 0.0**
NAO01 NORSAR Array S 57.59 18 P **P** **16 13 41.6 0.0**
NC602 NORSAR Array S 57.80 18 P **P** **16 13 43.7 +0.7**
JGF Kuroka 58.44 287 P **P** **16 13 47.7 -0.2**
KONO Kongsberg 58.51 20 P **P** **16 13 49.2 +1.3**
HFS Hagfors 58.71 17 LR LR 16 41 38.2
comp=Z,134nm,18.4s,baz=331,slow=39
FIA1 FINESS Array S 58.91 10 P **P** **16 13 50.6 -0.1**
FINES FINESS Array B 58.91 10 P **P** **16 13 50.0 -0.7**
comp=Z,3.2nm,0.7s,baz=15,slow=7.9,SNR=13
FINES LR LR 16 41 26.5
comp=Z,62nm,19.6s,baz=15,slow=38
FINES FINESS Array B 58.91 10*ce*P **P** **16 13 49.5 -1.2**
FINES pmax pmax
comp=Z,3.0nm,0.7s
MATN Matagalpa 59.28 119 P **P** **16 13 54.0 0.0**
TLY Talaya 59.31 321 *e*P **P** **16 13 57.2 +3.5**
TLY pmax pmax
comp=Z,29nm,1.1s
TLY MLR MLR
comp=Z,761nm,19.0s
JWT Wachi 59.65 289 P **P** **16 13 56.4 +0.1**
ESK Eskdalemuir 59.82 29 P **P** **16 13 57.6 +0.5**
ESK pmax pmax
comp=Z,65nm,1.5s
ESK Eskdalemuir 59.82 29 P **P** **16 13 57.6 +0.5**
MOY Mondy 60.16 323 *e*P P 16 14 04.2 +4.5
KLMR Klimovskoe 60.23 2 *e*P **P** **16 13 58.7 -1.1**
KLMR pmax pmax
comp=Z,42nm,1.4s
KLMR Klimovskoe 60.23 2 *e*P **P** **16 13 58.8 -1.1**
KLMR AMP 16 14 04.7
comp=Z,42nm,1.4s
DSB Dublin 60.85 32 P **P** **16 14 04.7 +0.5**
JHS Saijyo 60.98 290 P **P** **16 14 05.2 -0.2**
ULN Ulaanbaatar 61.42 317*ce*P **P** **16 14 08.8 +0.4**
ULN pmax pmax
comp=Z,13nm,2.5s
KS19 Wonju Array Si 61.44 296 P **P** **16 14 08.4 -0.1**
KSRS Korea Array 61.46 296 P **P** **16 14 09.3 +0.8**
comp=Z,4.7nm,0.9s,baz=31,slow=7.1,SNR=14
KSRS LR LR 16 41 44.3
comp=Z,126nm,19.9s,baz=44,slow=37
KSAR Wonju Array Be 61.48 296 P **P** **16 14 08.7 0.0**
KSAR Wonju Array Be 61.48 296 P **P** **16 14 08.7 0.0**
SONM Songino Array 61.67 317 P **P** **16 14 10.4 +0.3**
comp=Z,3.3nm,1.1s,baz=50,slow=7.9,SNR=7.7
SONM LR LR 16 42 59.6
comp=Z,174nm,19.4s,baz=21,slow=38
SONM Songino Array 61.67 317 P **P** **16 14 09.9 -0.2**
SONM pmax pmax
comp=Z,5.0nm,1.2s
SONM Songino Array 61.67 317 P **P** **16 14 09.9 -0.2**
VSU Vasula 61.91 10 *e*P **P** **16 14 11.1 -0.2**
ZAA0 Zalesovo Array 62.46 334 P **P** **16 14 14.2 -0.8**
ZAA0 IAmb IAmb 16 14 24.5
comp=Z,5.6nm,0.9s
ZALV Zalesovo Beam 62.46 334 P **P** **16 14 14.2 -0.9**
comp=Z,3.6nm,0.7s,baz=21,slow=6.9,SNR=12
ZALV LR LR 16 43 51.2
comp=Z,98nm,18.5s,baz=10,slow=38
ZALV Zalesovo Beam 62.46 334 *i* P **P** **16 14 16.8 +1.8**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 62.46 334 P **P** **16 14 13.5 -1.5**
KIRV Kirov 62.47 357*ce*P **P** **16 14 15.7 +0.7**
TJN Taejon 62.59 295*ce*P **P** **16 14 18.4 +2.2**
SVE Sverdlovsk 63.53 350 *e*P **P** **16 14 22.6 +0.4**
SVE pmax pmax
comp=Z,33nm,1.5s
BSEG Bad Segeberg 64.05 21 *e*P **P** **16 14 26.8 +1.2**
comp=Z,30nm,1.4s,baz=344,slow=6.4
ARU Arti 64.11 351 LR LR 16 45 49.6
comp=Z,59nm,18.4s,baz=21,slow=39
ARU Arti 64.11 351*d i*P **P** **16 14 26.3 +0.4**
ARU 16 14 58.5
ARU S **S** **16 23 00.4 -1.7**
ARU pmax pmax
comp=Z,42nm,1.8s
ARU Arti 64.11 351 P **P** **16 14 25.8 -0.1**
IZAR Zarasai 64.54 11 *e*P **P** **16 14 29.0 +0.2**
PABE Paberze 64.55 12 *e*P **P** **16 14 29.4 +0.6**
ISAL Salakas 64.71 11 *e*P **P** **16 14 30.0 +0.2**
IIGN Ignalina 64.94 11 *e*P **P** **16 14 31.7 +0.3**
IBBN Ibbenburen 65.09 23 *e*P **P** **16 14 33.6 +1.2**
comp=Z,18nm,1.0s,baz=344,slow=6.4
MOS Moscow 65.30 4 *e*P **P** **16 14 33.4 -0.3**
MOS pmax pmax
comp=Z,35nm,0.6s
NRDL Niedersach Rie 65.38 22 *e*P **P** **16 14 35.2 +1.0**
comp=Z,37nm,1.6s,baz=344,slow=6.4
NRDL *ep*P **sP** **16 14 39.3 -0.1**
HHC Hu-ho-hao-te 65.70 310 *e*P **P** **16 14 39.0 +2.3**
HHC pmax pmax
comp=Z,31nm,1.0s
HHC pmax pmax
comp=Z,150nm,6.2s
HHC LR LR
comp=Z,340nm,16.7s
HHC LR LR
comp=Z,580nm,17.8s
DGZ Jazzator, Alta 65.76 331 *i* P **P** **16 14 36.8 -0.2**
DGZ pmax pmax
comp=Z,10.0nm,1.7s
BUG Bochum-Univer 65.81 24 *e*P **P** **16 14 37.8 +0.7**
comp=Z,20nm,1.0s,baz=344,slow=6.4
ASSE Asse, Remlinge 65.83 22 *e*P **P** **16 14 38.0 +0.9**
comp=Z,18nm,0.5s,baz=344,slow=6.4
OBN Obninsk 65.89 5*ce*P **P** **16 14 37.5 0.0**
OBN *e* 16 15 08.1
OBN *e* 16 17 08.1
OBN pmax pmax
comp=Z,34nm,0.8s
OBN MLR MLR
comp=Z,80nm,15.0s
OBN Obninsk 65.89 5 P **P** **16 14 37.4 -0.1**
CLZ Clausthal 66.05 22 *e*P **P** **16 14 40.0 +1.3**
comp=Z,23nm,1.1s,baz=344,slow=6.4
CLZ *ep*P **sP** **16 14 44.2 +0.3**
BRVK Borovoye 66.05 343*ce*P **P** **16 14 38.7 +0.1**
BRVK pmax pmax
comp=Z,25nm,2.5s
BRVK Borovoye 66.05 343 P **P** **16 14 38.0 -0.6**
BRVK IAmb IAmb 16 14 39.8
comp=Z,9.8nm,1.2s
GTTG Gottingen 66.25 22 *e*P **P** **16 14 41.2 +1.3**
comp=Z,36nm,1.4s,baz=344,slow=6.4
MEM Membach 66.32 25 P **P** **16 14 41.5 +1.1**
BMRD Maredsous 66.33 26 P **P** **16 14 41.2 +0.8**
AHRW Bad Neuenahr-A 66.62 25 *e*P **P** **16 14 43.4 +1.1**
comp=Z,31nm,1.7s,baz=344,slow=6.4
KURK Kurchatov 66.82 337*ce*P **P** **16 14 43.6 0.0**
KURK pmax pmax
comp=Z,25nm,2.5s
KURK Kurchatov 66.82 337 P **P** **16 14 42.9 -0.6**
KURK IAmb IAmb 16 14 44.3
comp=Z,13nm,1.4s
NEUB Neuenburg 66.92 21 *e*P **P** **16 14 45.0 +0.8**
comp=Z,32nm,1.2s,baz=344,slow=6.4
UBBA Unterbreizbach 66.95 23 *e*P **P** **16 14 45.0 +0.7**
comp=Z,12nm,1.2s,baz=344,slow=6.4
CLL Collm 67.05 20 *e*P **P** **16 14 44.0 -1.0**
comp=Z,15nm,1.3s
CLL *i* 16 14 49.7
CLL *e*S **S** **16 23 36.0 -2.2**
CLL *e*SKSac **ScS** **16 24 42.0 -0.1**
CLL *e*SS **SS** **16 27 54.0 -1.8**
CLL *e*SSSS 16 32 00.0
CLL Lm MLR 16 44 00.0
comp=N,100nm,19.9s
CLL Lm MLR 16 44 00.0
comp=E,100nm,20.7s
CLL Lm MLR 16 44 00.0
comp=Z,100nm,19.5s
CLL Collm 67.05 20 *e*P **P** **16 14 44.0 -1.0**
CLL *i* 16 14 49.7
CLL pmax pmax
comp=Z,15nm,1.3s
CLL Collm 67.05 20 P **P** **16 14 45.4 +0.4**
comp=Z,15nm,1.3s,baz=344,slow=6.4
CLL Collm 67.05 20 P **P** **16 14 45.1 +0.1**
CLL IAmb IAmb 16 14 51.0
comp=Z,11nm,1.2s
TNS Taunus Mts 67.21 24 *e*P **P** **16 14 46.9 +0.8**
comp=Z,23nm,1.5s,baz=344,slow=6.4
WLF Walferdange 67.24 25 *e*P **P** **16 14 47.4 +1.2**
comp=Z,13nm,1.0s,baz=344,slow=6.4
MOX Moxa 67.43 22 *e*P **P** **16 14 48.2 +0.8**
comp=Z,24nm,1.3s,baz=344,slow=6.4
FBE Freiberg 67.48 20 *e*P **P** **16 14 48.7 +0.9**
comp=Z,11nm,1.1s,baz=344,slow=6.4
FBE *ep*P **sP** **16 14 52.9 -0.1**
BRG Berggiesshubel 67.64 20 *e*P **P** **16 14 49.4 +0.7**
comp=Z,27nm,1.5s
BRG *e* 16 14 53.4
comp=Z,24nm,1.4s
BRG Berggiesshubel 67.64 20 *e*P **P** **16 14 49.4 +0.7**
BRG *e* 16 14 53.4
BRG pmax pmax
comp=Z,27nm,1.5s
BRG Berggiesshubel 67.64 20 *e*P **P** **16 14 49.4 +0.7**
comp=Z,24nm,1.4s,baz=344,slow=6.4
PLN Plauen 67.69 21 *e*P **P** **16 14 49.7 +0.7**
comp=Z,14nm,1.1s,baz=344,slow=6.4
WERD Werda 67.75 21 *e*P **P** **16 14 50.0 +0.5**
comp=Z,9.5nm,1.4s,baz=344,slow=6.4
TANN Tannenbergstha 67.81 21 *e*P **P** **16 14 50.7 +0.8**
comp=Z,26nm,1.2s,baz=344,slow=6.4
GUNZ Gunzen 67.83 21 *e*P **P** **16 14 50.8 +0.8**
comp=Z,8.9nm,1.1s,baz=344,slow=6.4
GUNZ *ep*P **sP** **16 14 55.2 -0.1**
WERN Wernitzgruen 67.92 21 *e*P **P** **16 14 51.5 +0.9**
comp=Z,18nm,1.4s,baz=344,slow=6.4
KSP Ksiaz 68.06 18 *e*P **P** **16 14 52.0 +0.6**
MANZ Manzenberg 68.15 21 *e*P **P** **16 14 52.8 +0.7**
comp=Z,16nm,1.7s,baz=344,slow=6.4
GRA1 Grafenberg Arr 68.27 22 P **P** **16 14 52.7 -0.1**
GRF Grafenberg Arr 68.27 22 *e*P **P** **16 14 53.8 +1.1**
comp=Z,23nm,1.2s,baz=344,slow=6.4
GRF *ep*P **sP** **16 14 58.1 0.0**
ROTZ Rotzenmuhle 68.38 21 *e*P **P** **16 14 54.3 +0.9**
comp=Z,24nm,1.7s,baz=344,slow=6.4
LPSR Galich'ya Gora 68.48 3 *e*P **P** **16 14 53.7 -0.3**
LPSR pmax pmax
comp=Z,20nm,0.8s
DPC Dobruska-Polom 68.54 18 *e*P **P** **16 14 55.6 +1.1**
DPC *e* 16 14 59.9
DPC Dobruska-Polom 68.54 18 *e*P **P** **16 14 55.6 +1.1**
DPC *ep*P **sP** **16 14 59.9 +0.2**
MFF Saint Martin d 68.57 31 *e*P **P** **16 14 55.2 +0.5**
MFF pmax pmax
comp=Z,42nm,1.4s
PRU Pruhonice 68.59 20 *e*P **P** **16 14 56.4 +1.6**
PRU Pruhonice 68.59 20 *e*P **P** **16 14 56.4 +1.6**
ECH Echery 68.83 25 P **P** **16 14 56.8 +0.5**
BFO Black Forest 68.98 24 *e*P **P** **16 14 58.0 +0.8**
comp=Z,20nm,1.4s,baz=344,slow=6.4
BFO Black Forest 68.98 24 P **P** **16 14 57.6 +0.4**
WET Wettzell 69.11 21 *e*P **P** **16 14 59.1 +1.1**
comp=Z,23nm,1.5s,baz=344,slow=6.4
OJC Ojcow 69.20 16 *e*P **P** **16 14 58.5 0.0**
OJC Ojcow 69.20 16 P **P** **16 14 58.6 0.0**
OJC pmax pmax
comp=Z,18nm,1.4s
OJC Ojcow 69.20 16 P **P** **16 14 58.6 0.0**
KHC Kasperske Hory 69.25 21 *e*P **P** **16 15 00.1 +1.2**
KHC *e* 16 15 04.3
KHC Kasperske Hory 69.25 21 *e*P **P** **16 15 00.1 +1.2**
KHC *ep*P **sP** **16 15 04.3 +0.2**
MORC Moravsky Berou 69.29 18 *e*P **P** **16 14 59.4 +0.2**
MORC Moravsky Berou 69.29 18 P **P** **16 14 59.4 +0.2**
MORC IAmb IAmb 16 15 04.8
comp=Z,6.2nm,1.1s
GEC2 GERESS Array S 69.54 21 *e*P **P** **16 15 01.7 +0.9**
comp=Z,15nm,1.5s,baz=344,slow=6.4
GEC2 GERESS Array S 69.54 21 P **P** **16 15 00.9 +0.1**
GEC2 IAmb IAmb 16 15 03.0
comp=Z,6.9nm,1.1s
GERES GERESS Array B 69.54 21 P **P** **16 15 01.2 +0.4**
comp=Z,1.2nm,0.7s,baz=339,slow=6.0,SNR=10
GERES LR LR 16 46 40.9
comp=Z,79nm,20.1s,baz=310,slow=37
GERES GERESS Array B 69.54 21 P **P** **16 15 00.9 +0.1**
VRAC Vranov 69.60 19 LR LR 16 46 15.5
comp=Z,72nm,19.2s,baz=351,slow=37
VRAC Vranov 69.60 19 *e*P **P** **16 15 01.4 +0.4**
MK31 Makanchi Array 69.72 333*ce*P **P** **16 15 02.5 +0.6**
MK31 Makanchi Array 69.72 333 P **P** **16 15 00.8 -1.0**
MKAR Makanchi Array 69.72 333 P **P** **16 15 01.7 -0.2**
comp=Z,1.4nm,0.6s,baz=38,slow=6.3,SNR=12
MKAR LR LR 16 48 35.0
comp=Z,72nm,18.6s,baz=12,slow=38
MKAR Makanchi Array 69.72 333 *i* P **P** **16 15 02.2 +0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR Makanchi Array 69.72 333 P **P** **16 15 01.1 -0.7**
FUR Furstenfeldbru 69.74 23 *e*P **P** **16 15 02.8 +0.9**
comp=Z,27nm,1.1s,baz=344,slow=6.4
MAKZ Makanchi 69.78 333 P **P** **16 15 01.2 -1.0**
MAKZ IAmb IAmb 16 15 11.6
comp=Z,8.0nm,1.1s
KRUC Moravsky 69.80 19 *e*P **P** **16 15 02.5 +0.2**
AKASG Malin Array Be 69.82 10 P **P** **16 15 02.1 -0.2**
comp=Z,8.7nm,0.5s,baz=352,slow=5.8,SNR=37
AKASG LR LR 16 48 11.7
comp=Z,71nm,19.0s,baz=355,slow=38
AKASG Malin Array Be 69.82 10*ce*P **P** **16 15 02.0 -0.3**
AKASG pmax pmax
comp=Z,8.0nm,0.5s
AKASG Malin Array Be 69.82 10 P **P** **16 15 01.1 -1.2**
AKBB Malin Array Si 69.82 10*ce*P **P** **16 15 02.3 0.0**
AKBB Malin Array Si 69.82 10 P **P** **16 15 01.8 -0.6**
VSR Storozhevoye 69.87 3 *e*P **P** **16 15 02.0 -0.7**
VSR pmax pmax
comp=Z,30nm,1.4s
VRH Novokhopyorsk 69.94 1 *e*P **P** **16 15 02.3 -0.7**
VRH pmax pmax
comp=Z,10.0nm,0.7s
NIE Niedzica 70.06 16 *e*P **P** **16 15 05.0 +1.1**
NJ2 Nanjing 70.08 299 *e*P **P** **16 15 03.4 -0.8**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
AKTO Aktyubinsk 70.10 350 LR LR 16 48 07.1
comp=Z,39nm,21.7s,baz=8.7,slow=38
KWP Kalwaria Pacla 70.17 14 *e*P **P** **16 15 03.9 -0.7**
LANS Liptovska Anna 70.20 17 *e*P **P** **16 15 06.4 +1.6**
LANS pmax pmax
comp=Z,8.0nm,1.2s
LANS Liptovska Anna 70.20 17 *e*P **P** **16 15 06.4 +1.6**
JAVC Velka Javorina 70.21 18 *e*P **P** **16 15 05.7 +0.9**
RETA Reutte 70.28 23 *e*P **P** **16 15 01.9 -3.5**
comp=Z,6.4nm,0.9s
DAVA Damuels 70.29 24 *e*P **P** **16 15 02.3 -3.3**
comp=Z,9.5nm,1.1s
MOTA Moosalm 70.49 23 *e*P **P** **16 15 04.9 -1.8**
comp=Z,14nm,1.4s
SMOL Smolenice 70.50 18 *e*P **P** **16 15 08.3 +1.7**
SMOL pmax pmax
comp=Z,12nm,1.5s
SMOL Smolenice 70.50 18 *e*P **P** **16 15 08.3 +1.7**
WATA Walderalm 70.59 23 *e*P **P** **16 15 07.4 +0.1**
comp=Z,17nm,1.3s
MODS Modra-Piesok 70.61 18 *e*P **P** **16 15 07.9 +0.6**
MODS pmax pmax
comp=Z,22nm,1.3s
MODS Modra-Piesok 70.61 18 *e*P **P** **16 15 07.9 +0.6**
SENIN Lac Senin/Sane 70.61 26 P **P** **16 15 08.6 +1.0**
SENIN IAmb IAmb 16 15 18.7
comp=Z,7.9nm,0.9s
SQTA Sankt Quirin 70.63 23 *e*P **P** **16 15 06.5 -1.0**
comp=Z,13nm,1.1s
WTTA Wattenberg 70.67 23 *e*P **P** **16 15 07.6 -0.3**
comp=Z,18nm,1.0s
FETA Feichten 70.72 23 *e*P **P** **16 15 08.6 +0.5**
comp=Z,12nm,1.4s
CRVS Cervenica-Dubn 70.72 15 *e*P **P** **16 15 08.4 +0.5**
CRVS pmax pmax
comp=Z,34nm,1.7s
CRVS Cervenica-Dubn 70.72 15 *e*P **P** **16 15 08.4 +0.5**
VYHS Vyhne 70.74 17 *e*P **P** **16 15 08.9 +0.8**
VYHS pmax pmax
comp=Z,12nm,1.2s
VYHS Vyhne 70.74 17 *e*P **P** **16 15 08.9 +0.8**
KOLS Kolonicke sedl 70.80 15 *e*P **P** **16 15 08.2 -0.2**
KOLS pmax pmax
comp=Z,17nm,1.5s
KOLS Kolonicke sedl 70.80 15 *e*P **P** **16 15 08.2 -0.2**
CONA Conrad Observa 70.81 19 *e*P **P** **16 15 09.0 +0.4**
comp=Z,13nm,1.0s
ABKAR Akbulak array 71.09 349 P **P** **16 15 09.4 -0.7**
UZH Uzhgorod 71.10 15 *e*P **P** **16 15 10.2 0.0**
UZH *e* 16 15 14.4
WMQ Urumqi 71.12 328 *e*P **P** **16 15 12.7 +2.2**
KBA Koelnbreinsper 71.18 21 *e*P **P** **16 15 10.0 -1.0**
comp=Z,28nm,1.2s
ABTA Abfaltersbach 71.34 22 *e*P **P** **16 15 09.5 -2.3**
comp=Z,9.9nm,1.3s
ARSA Arzberg 71.41 20 *e*P **P** **16 15 10.8 -1.3**
comp=Z,6.3nm,0.9s
PSZ Piszkesteto 71.46 17 P **P** **16 15 12.6 +0.1**
PSZ IAmb IAmb 16 15 19.3
comp=Z,14nm,1.1s
MYKA Terra Mystica 71.67 21 *e*P **P** **16 15 10.5 -3.3**
comp=Z,12nm,1.5s
ROSC El Rosal 71.76 112 LR LR 16 49 11.2
comp=Z,137nm,20.2s,baz=34,slow=38
SOKA Soboth 71.87 20 *e*P **P** **16 15 14.7 -0.3**
comp=Z,16nm,1.1s
OBKA Obir 71.95 21 *e*P **P** **16 15 14.9 -0.6**
comp=Z,34nm,1.6s
BUR08 Bucovina Ar. S 72.43 13 P **P** **16 15 18.3 0.0**
BUR08 IAmb IAmb 16 15 24.1
comp=Z,14nm,1.4s
BURAR Bucovina Array 72.46 13 P **P** **16 15 18.7 +0.1**
XAN Xi'an 72.63 308 P **P** **16 15 21.4 +1.7**
XAN PcP **PcP** **16 15 40.5 +3.3**
XAN pmax pmax
comp=Z,7.0nm,1.3s

LZH	**Lanzhou**	**72.83**	**313**	*e*P	**P**	**16 15 18.2**	**-2.8**
LZH				*e*PP	**PP**	**16 18 01.6**	**-0.9**
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,8.0s						
LZH				LR	LR		
	comp=Z,140nm,16.5s						
LZH				LR	LR		
	comp=Z,150nm,16.3s						
LZH				LR	LR		
	comp=Z,230nm,18.6s						
BTLS	**Baital**	**73.15**	**338**	*e*P	**P**	**16 15 22.0**	**-0.6**
	comp=Z,6.2nm,1.4s,baz=338						
BTLS	**Baital**	**73.15**	**338**	*e*P	**P**	**16 15 21.9**	**-0.6**
BTLS				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KPKS	**Kokpek**	**73.69**	**334**	*e*P	**P**	**16 15 25.6**	**-0.4**
	baz=335						
KPKS	**Kokpek**	**73.69**	**334**	*e*P	**P**	**16 15 25.5**	**-0.4**
KUU	**Kurty**	**73.79**	**336**	*e*P	**P**	**16 15 25.4**	**-1.1**
	baz=336						
KUU	**Kurty**	**73.79**	**336**	*e*P	**P**	**16 15 25.3**	**-1.1**
SHLS	**Shalkode**	**73.81**	**334**	*e*P	**P**	**16 15 25.4**	**-1.3**
	comp=Z,14nm,1.6s,baz=334						
SHLS	**Shalkode**	**73.81**	**334**	*e*P	**P**	**16 15 25.3**	**-1.3**
SHLS				pmax	pmax		
	comp=Z,14nm,1.6s						
ESDC	**Sonseca Array**	**73.86**	**36**	P	**P**	**16 15 27.3**	**+0.4**
	comp=Z,8.7nm,1.1s,baz=336,slow=6.6,SNR=11						
ESDC	**Sonseca Array**	**73.86**	**36**	P	**P**	**16 15 27.2**	**+0.4**
SATY	**Saty**	**74.14**	**334**	*e*P	**P**	**16 15 27.8**	**-0.8**
	comp=Z,11nm,1.8s,baz=335						
SATY	**Saty**	**74.14**	**334**	*e*P	**P**	**16 15 27.8**	**-0.8**
SATY				pmax	pmax		
	comp=Z,11nm,1.8s						
AAA	**Alma-Ata**	**74.33**	**335**	*e*P	**P**	**16 15 28.7**	**-0.9**
	baz=336						
AAA	**Alma-Ata**	**74.33**	**335**	*e*P	**P**	**16 15 28.7**	**-0.9**
MDOK	**Medeo**	**74.34**	**335**	*e*P	**P**	**16 15 28.6**	**-1.2**
	baz=336						
MDOK	**Medeo**	**74.34**	**335**	*e*P	**P**	**16 15 28.5**	**-1.2**
SGDS	**Sogindy**	**74.57**	**337**	*e*P	**P**	**16 15 30.2**	**-0.8**
	comp=Z,8.6nm,1.7s,baz=338						
SGDS	**Sogindy**	**74.57**	**337**	*e*P	**P**	**16 15 30.1**	**-0.8**
SGDS				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BOOM	**Boomskoye usch**	**75.22**	**336**	P	**P**	**16 15 34.6**	**-0.3**
KDJ	**Kajisay**	**75.30**	**335**	P	**P**	**16 15 35.6**	**+0.2**
AAK	**Ala-Archa**	**75.38**	**337**	*ce*P	**P**	**16 15 36.4**	**+0.6**
AAK				pmax	pmax		
	comp=Z,51nm,2.5s						
IUG	**luzhnay**	**76.69**	**340**	*e*P	**P**	**16 15 42.3**	**-0.9**
	comp=Z,11nm,1.6s,baz=341						
IUG	**luzhnay**	**76.69**	**340**	*e*P	**P**	**16 15 42.2**	**-0.9**
IUG				pmax	pmax		
	comp=Z,11nm,1.6s						
KIV	**Kislovodsk**	**77.20**	**1**	*e*P	**P**	**16 15 46.0**	**0.0**
KIV				pmax	pmax		
	comp=Z,30nm,1.0s						
KIV	**Kislovodsk**	**77.20**	**1**	P	**P**	**16 15 45.8**	**-0.2**
KIV				IAmb	IAmb	16 15 56.1	
	comp=Z,13nm,1.1s						
PPT	**Papeete**	**77.27**	**193**	LR	LR	16 43 21.0	
	comp=Z,39nm,20.2s,baz=10,slow=31						
KBZ	**Khabaz**	**77.43**	**1**	P	**P**	**16 15 47.5**	**+0.3**
	comp=Z,5.8nm,1.0s,baz=310,slow=7.0,SNR=6.0						
KBZ	**Khabaz**	**77.43**	**1**	*ce*P	**P**	**16 15 47.1**	**0.0**
KBZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KSH	**Kashi**	**78.06**	**335**	*e*P	**P**	**16 15 53.9**	**+2.9**
KSH				*e*pP	PcP	16 16 03.7	+3.1
KSH				PP	**PP**	**16 18 53.8**	**+7.4**
KSH				S	**S**	**16 25 44.7**	**0.0**
KSH				sS	SKSac	16 26 03.5	-1.5
KSH				pmax	pmax		
	comp=Z,13nm,0.7s						
KSH				pmax	pmax		
	comp=Z,360nm,5.4s						
KSH				LR	LR		
	comp=Z,100nm,4.5s						
KSH				LR	LR		
	comp=Z,170nm,4.8s						
KSH				LR	LR		
	comp=Z,380nm,5.4s						
ZEI	**Tsey**	**78.37**	**360**	*e*P	**P**	**16 15 52.0**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BTK	**Batken**	**78.57**	**339**	P	**P**	**16 15 53.3**	**-0.4**
BTK				IAmb	IAmb	16 15 58.6	
	comp=Z,20nm,1.5s						
ALN	**Alexandroupoli**	**79.18**	**14**	P	**P**	**16 15 57.4**	**+0.4**
ALN				IAmb	IAmb	16 16 03.0	
	comp=Z,18nm,1.2s						
GAR	**Garm**	**79.69**	**339**	P	**P**	**16 15 59.7**	**-0.2**
CHGR	**Chuyangaron**	**80.23**	**340**	P	**P**	**16 16 02.4**	**-0.4**
GNI	**Garni**	**81.00**	**359**	*ce*P	**P**	**16 16 06.1**	**-0.9**
GNI				pmax	pmax		
	comp=Z,22nm,1.3s						
BR131	**Keskin Array S**	**81.07**	**8**	P	**P**	**16 16 06.8**	**-0.6**
BRTR	**Keskin Array B**	**81.07**	**8**	P	**P**	**16 16 07.5**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=0.0,slow=3.7,SNR=11						
BRTR				LR	LR	16 55 19.7	
	comp=Z,19nm,19.6s,baz=17,slow=38						
BRTR	**Keskin Array B**	**81.07**	**8**	P	**P**	**16 16 07.1**	**-0.2**
KEST	**Kesra**	**81.19**	**28**	LR	LR	16 52 42.3	
	comp=Z,140nm,18.8s,baz=218,slow=36						
GEYT	**Alibeck**	**82.48**	**349**	P	**P**	**16 16 15.4**	**+0.7**
	comp=Z,8.2nm,1.2s,baz=312,slow=5.4,SNR=3.5						
GEYT				LR	LR	16 58 02.6	
	comp=Z,40nm,18.4s,baz=170,slow=39						
KMI	**Kunming**	**83.00**	**308**	⇑P	P	16 16 22.4	+4.6
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MARD	**Mardin**	**83.80**	**2**	P	**P**	**16 16 21.6**	**-0.1**
HNR	**Honiara**	**85.14**	**243**	LR	LR	16 47 33.3	
	comp=Z,71nm,20.7s,baz=61,slow=31						
NNA	**Nana**	**85.46**	**122**	*ce*P	**P**	**16 16 30.1**	**+0.1**
NNA				pmax	pmax		
	comp=Z,30nm,1.3s						
SAML	**Samuel**	**89.12**	**109**	P	**P**	**16 16 47.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**90.50**	**309**	P	**P**	**16 16 54.3**	**+0.1**
	comp=Z,3.5nm,1.0s,baz=4.2,slow=4.3,SNR=11						
CMAR				LR	LR	17 02 23.1	
	comp=Z,65nm,18.5s,baz=80,slow=39						
CMAR	**Chiang Mai Arr**	**90.50**	**309**	P	**P**	**16 16 54.0**	**-0.3**
LPAZ	**La Paz**	**93.15**	**117**	P	**P**	**16 17 06.3**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=327,slow=6.9,SNR=2.3						
LPAZ				LR	LR	17 02 29.7	
	comp=Z,72nm,21.9s,baz=326,slow=38						
LPAZ	**La Paz**	**93.15**	**117**	P	**P**	**16 17 05.6**	**-1.5**
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LPAZ	**La Paz**	**93.15**	**117**	P	**P**	**16 17 05.6**	**-1.5**
LPAZ				IAmb	IAmb	16 17 21.8	
	comp=Z,6.1nm,1.4s						
VNDA	**Vanda**	**141.65**	**198**	PKhKP	PKPpre	16 23 17.3	
	comp=Z,0.7nm,1.0s,baz=26,slow=3.5,SNR=3.4						
BOSA	**Boshof**	**146.88**	**31**	PKPbc	**PKPbc**	**16 23 33.8**	**-0.6**
	comp=Z,6.0nm,0.7s,baz=356,slow=3.3,SNR=17						
BOSA	**Boshof**	**146.88**	**31**	PKP2	**PKPbc**	**16 23 33.6**	**-0.8**
BOSA	**Boshof**	**146.88**	**31**		**PKPbc**	**16 23 33.6**	**-0.8**
MAW	**Mawson**	**168.04**	**217**	PKPab	**PKPab**	**16 25 04.3**	**-0.7**
	comp=Z,2.0nm,0.9s,baz=117,slow=4.5,SNR=5.2						
MAW	**Mawson**	**168.04**	**217**	PKP2	**PKPab**	**16 25 03.9**	**-1.1**
MAW	**Mawson**	**168.04**	**217**		**PKPab**	**16 25 03.9**	**-1.1**

*IDC **05** 16:23:04.0±5.4,2°.23N×97°.92E,h69km±41km, mb3.3/5, mb1 3.4/6, mb1mx3.0/58, mbtmp3.6/6, ML3.5/1, Error ellipse: s-maj=64.8km s-min=18.0km az=56.0*

ISC 05 16:22:59.9±1.5,2°.1N±0°.2×97°.7E±0°.1,h35km,n10,σ0°75/8, mb3.7/5,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.38**	**61**	P		**Pn**	**16 23 24.0**	**+1.2**
	25nm,0.3s,baz=182,slow=2.6,SNR=28							
PSI				S		**Sn**	**16 23 38.9**	**-1.0**
	24nm,0.3s,baz=360,slow=18,SNR=6.4							
CMAR	**Chiang Mai Arr**	**16.27**	**4**	P		**P**	**16 26 48.4**	**-0.3**
	0.1nm,0.3s,baz=198,slow=11,SNR=3.4							
H08S2	**Diego Garcia H**	**26.97**	**249**	T		T	16 56 18.5	
	baz=68							
H08S3	**Diego Garcia H**	**26.98**	**249**	T		T	16 56 24.0	
	baz=68							
H08S1	**Diego Carcia H**	**26.99**	**249**	T		T	16 56 16.6	
	baz=68							
WRA	**Warramunga Arr**	**42.09**	**123**	P		**P**	**16 30 48.7**	**-0.2**
	0.4nm,0.6s,baz=302,slow=9.1,SNR=8.5							
ASAR	**Alice Springs**	**43.55**	**128**	P		**P**	**16 31 00.5**	**-0.3**
	0.1nm,0.4s,baz=295,slow=7.4,SNR=9.0							
MKAR	**Makanchi Array**	**46.48**	**345**	P		**P**	**16 31 23.8**	**+0.1**
	0.3nm,0.3s,baz=158,slow=9.3,SNR=6.7							
KURBB	**Kurchatov Arra**	**50.98**	**344**	P		**P**	**16 31 58.2**	**+0.1**
	1.1nm,0.8s,baz=166,slow=7.0,SNR=9.5							
ZALV	**Zalesovo Beam**	**52.73**	**350**	P		**P**	**16 32 10.7**	**-0.5**
	1.5nm,0.6s,baz=157,slow=7.8,SNR=8.5							

*IDC **05** 16:29:32.2±0.6,64°.58N×17°.64W,h0km,mb3.8/18, mb1 4.0/22,mb1mx3.8/50,mbtmp3.8/22,ML3.1/4, Error ellipse: s-maj=19.1km s-min=11.3km az=15.0*
*NEIC **05** 16:29:33.3±1.8,64°.55N±0°.10×17°.8W±0°.2,h7km±4km, mb4.5/21,Error ellipse: s-maj=14.0km s-min=9.9km az=194.0*

ISC 05 16:29:33.7±0.5,64°.58N±0°.07×17°.61W±0°.05,h10km,n61, σ1°04/64,mb4.0/27,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.61**	**278**	Pn		**Pn**	**16 29 59.7**	**-2.4**
	21nm,0.3s,baz=98,slow=10,SNR=46							
BORG				Sn		**Sb**	**16 30 23.2**	**-0.6**
	15nm,0.3s,baz=92,slow=23,SNR=7.9							
SCO	**Scoresbysund**	**6.16**	**346**			**Pn**	**16 31 02.4**	**-2.2**
SCO	**Scoresbysund**	**6.16**	**346**	*e*		Pn	16 30 59.0	-5.5
	baz=173,slow=7.4							
SCO				*i*	P	**Pn**	**16 31 02.0**	**-2.6**
SCO				*i*	S	**Sn**	**16 32 17.0**	**+2.0**
SCO				IAML			16 32 27.9	
	comp=Z,1.8nm,0.4s							
EKA	**Eskdalemuir Ar**	**11.73**	**135**	Pn		**Pn**	**16 32 20.4**	**-0.5**
	baz=323,slow=13,SNR=7.5							
ESK	**Eskdalemuir**	**11.73**	**136**	Pn		**Pn**	**16 32 23.0**	**+2.2**
NOA	**NORSAR Array B**	**13.58**	**92**	Pn		**Pn**	**16 32 42.7**	**-3.4**
	comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=3.5							
ARCES	**ARCESS Array B**	**17.21**	**54**	P		**Pn**	**16 33 33.9**	**+0.1**
	baz=277,slow=11,SNR=1.9							
FINES	**FINESS Array B**	**19.77**	**79**	P		**P**	**16 34 03.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=282,slow=11,SNR=2.8							
CLL	**Collm**	**20.71**	**115**	*i* P		**P**	**16 34 14.1**	**+0.3**
	comp=Z,20nm,1.5s							
CLL	**Collm**	**20.71**	**115**	P		**P**	**16 34 13.9**	**+0.1**
ECH	**Echery**	**21.13**	**129**	P		**P**	**16 34 18.3**	**-0.1**
BRG	**Berggiesshubel**	**21.42**	**115**	*e*P		**P**	**16 34 21.7**	**+0.2**
	comp=Z,8.6nm,1.1s							
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P		**P**	**16 34 35.6**	**+0.6**
DPC	**Dobruska-Polom**	**22.77**	**112**	*e*P		**P**	**16 34 36.6**	**+0.6**
GEC2	**GERESS Array S**	**22.95**	**118**	P		**P**	**16 34 39.2**	**+1.3**
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**	**16 34 37.1**	**-0.8**
	comp=Z,1.8nm,1.0s,baz=353,slow=9.4,SNR=7.7							
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**	**16 34 38.3**	**+0.3**
ESDC	**Sonseca Array**	**26.19**	**156**	P		**P**	**16 35 09.1**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=343,slow=9.5,SNR=7.2							
AKASG	**Malin Array Be**	**27.88**	**97**	P		**P**	**16 35 23.3**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=330,slow=11,SNR=1.7							
NRIK	**Noril'sk**	**36.56**	**35**	P		**P**	**16 36 38.4**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=307,slow=5.5,SNR=3.6							
BR131	**Keskin Array S**	**38.50**	**105**	P		**P**	**16 36 56.8**	**+0.9**
BRTR	**Keskin Array B**	**38.50**	**105**	P		**P**	**16 36 56.6**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=331,slow=4.4,SNR=4.4							
BRTR	**Keskin Array B**	**38.50**	**105**	P		**P**	**16 36 56.3**	**+0.4**
KBZ	**Khabaz**	**39.16**	**92**	P		**P**	**16 37 02.7**	**+1.5**
	comp=Z,2.5nm,0.8s,baz=311,slow=11,SNR=5.1							
INK	**Inuvik**	**39.89**	**329**	P		**P**	**16 37 06.8**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=27,slow=5.2,SNR=3.2							
INK	**Inuvik**	**39.89**	**329**	P		**P**	**16 37 07.7**	**+0.6**
AKTO	**Aktyubinsk**	**40.36**	**73**	P		**P**	**16 37 10.9**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=303,slow=9.2,SNR=4.4							
TIXI	**Tiksi**	**42.13**	**15**	P		**P**	**16 37 26.3**	**+0.9**
TIXI				IAmb		IAmb	16 37 27.5	
	comp=Z,5.9nm,1.1s							
BMAR	**Burnt Mountain**	**42.95**	**333**	P		**P**	**16 37 32.9**	**+0.7**
ILAR	**Eielson Array**	**45.74**	**332**	P		**P**	**16 37 55.3**	**+0.8**
	comp=Z,1.8nm,1.0s,baz=30,slow=6.1,SNR=12							
ILAR				PcP		**PcP**	**16 39 32.4**	**+0.4**
	comp=Z,0.6nm,1.0s,baz=347,slow=2.6,SNR=4.5							
ILAR	**Eielson Array**	**45.74**	**332**	P		**P**	**16 37 55.5**	**+1.1**
MDM	**Murphy Dome**	**45.84**	**333**	P		**P**	**16 37 56.6**	**+1.3**
MDM				IAmb		IAmb	16 37 58.7	
	comp=Z,6.9nm,1.2s							
IMAR	**Indian Mountai**	**45.92**	**337**	P		**P**	**16 37 56.0**	**+0.1**
BCAR	**Beaver Creek A**	**46.16**	**329**	P		**P**	**16 37 59.7**	**+1.8**
ZALV	**Zalesovo Beam**	**47.73**	**51**	P		**P**	**16 38 09.6**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=326,slow=9.2,SNR=2.1							
ZALV	**Zalesovo Beam**	**47.73**	**51**	P		**P**	**16 38 10.1**	**0.0**
KURK	**Kurchatov**	**48.20**	**58**	P		**P**	**16 38 13.5**	**-0.3**
KURK				IAmb		IAmb	16 38 14.7	
	comp=Z,3.8nm,0.9s							
KURBB	**Kurchatov Arra**	**48.24**	**58**	P		**P**	**16 38 13.5**	**-0.7**
	comp=Z,3.2nm,0.9s,baz=324,slow=7.4,SNR=15							
JSC	**Jenkinsville**	**48.37**	**263**	P		**P**	**16 38 14.5**	**-0.8**
T47A	**Sharon Grove**	**48.59**	**270**	P		**P**	**16 38 18.4**	**+1.4**
KK31	**Karatay Array**	**51.35**	**70**	P		**P**	**16 38 38.8**	**+0.8**
KK31				IAmb		IAmb	16 38 39.5	
	comp=Z,3.7nm,1.1s							
KKAR	**Karatay Array**	**51.35**	**70**	P		**P**	**16 38 38.6**	**+0.7**
BOZ	**Bozeman (W)**	**51.60**	**297**	P		**P**	**16 38 40.8**	**+0.8**
BOZ				IAmb		IAmb	16 38 47.1	
	comp=Z,12nm,1.5s							
MKAR	**Makanchi Array**	**52.81**	**58**	P		**P**	**16 38 48.2**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=319,slow=6.6,SNR=5.8							
TORD	**Torodi Ar. Bea**	**53.08**	**156**	P		**P**	**16 38 50.9**	**-0.1**
	comp=Z,2.0nm,1.0s,baz=340,slow=9.6,SNR=6.0							
TORD	**Torodi Ar. Bea**	**53.08**	**156**	P		**P**	**16 38 50.7**	**-0.3**
BW06	**Boulder Array**	**53.17**	**293**	P		**P**	**16 38 51.3**	**-0.4**
BW06				IAmb		IAmb	16 38 53.4	
	comp=Z,5.4nm,1.2s							
PD31	**Pinedale Array**	**53.17**	**293**	P		**P**	**16 38 51.5**	**-0.2**
PD31				IAmb		IAmb	16 38 53.4	
	comp=Z,3.4nm,1.1s							
PDAR	**Pinedale Array**	**53.17**	**293**	P		**P**	**16 38 51.5**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=54,slow=7.5,SNR=9.4							
PDAR	**Pinedale Array**	**53.17**	**293**	P		**P**	**16 38 51.9**	**+0.2**
BTK	**Batken**	**54.03**	**71**	P		**P**	**16 38 58.3**	**+0.4**
BTK				IAmb		IAmb	16 39 01.6	
	comp=Z,8.2nm,1.1s							
CHGR	**Chuyangaron**	**54.53**	**74**	P		**P**	**16 39 01.7**	**+0.2**
GAR	**Garm**	**54.72**	**73**	P		**P**	**16 39 03.5**	**+0.5**
PV13	**Radium Mtn., P**	**56.78**	**290**	P		**P**	**16 39 18.9**	**+1.0**
PV13				IAmb		IAmb	16 39 20.3	
	comp=Z,8.2nm,1.0s							
SONM	**Songino Array**	**59.74**	**40**	P		**P**	**16 39 38.9**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=332,slow=4.9,SNR=2.3							
NVAR	**Mina Array Bea**	**60.30**	**297**	P		**P**	**16 39 43.8**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=34,slow=8.2,SNR=2.9							
NIL	**Nilore**	**60.52**	**73**	P		**P**	**16 39 43.3**	**-0.5**
TXAR	**Lajitas Array**	**62.25**	**280**	P		**P**	**16 39 54.8**	**-0.8**
	comp=Z,0.7nm,0.9s,baz=39,slow=6.4,SNR=5.2							
TXAR	**Lajitas Array**	**62.25**	**280**	P		**P**	**16 39 55.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**84.22**	**59**	P		**P**	**16 42 04.6**	**-0.7**
	comp=Z,1.4nm,1.0s,baz=324,slow=4.5,SNR=4.5							
CMAR	**Chiang Mai Arr**	**84.22**	**59**	P		**P**	**16 42 05.1**	**-0.2**

*NNC **05** 16:32:08.7±1.6,54°.18N×86°.19E,h0km,mb3.5,mpv2.8, Error ellipse: s-maj=17.0km s-min=7.4km az=1.0, Suspected Mining explosion.*
*ASRS **05** 16:32:08.2±0.4,54°.N±2°.6E±°,h4km±1km,MLh3.2/18, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

ISC 05 16:32:07.9±0.7,54°.21N±0°.02×86°.23E±0°.02,h10km,n32, σ1°60/63,8C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
POMOR	**Pomortsevo, Ku**	**0.27**	**42**	Pg		**Pb**	**16 32 14.8**	**0.0**
POMOR				Sg		**Sb**	**16 32 20.0**	**+0.6**
SALR	**Pechorkino, Sa**	**0.37**	**304**	Pg		**Pg**	**16 32 14.7**	**-0.5**
SALR				P		**Pg**	**16 32 14.7**	**-0.5**
SALR				Sg		**Sg**	**16 32 19.1**	**-1.0**
SALR				S		**Sb**	**16 32 19.7**	**-2.7**
ZAA0	**Zalesovo Array**	**0.87**	**253**	⇑P		**Pb**	**16 32 24.5**	**-0.6**
	0.7nm,0.5s							
ZAA0				⇑S		**Sb**	**16 32 36.7**	**0.0**
	3.0nm,0.3s							
ELT	**Eltsovka**	**0.95**	**179**	Pg		**Pn**	**16 32 27.1**	**-0.2**
ELT				Sg		**Sn**	**16 32 41.2**	**+0.3**
KEM	**Kemerovo**	**1.14**	**356**	Sg		**Sn**	**16 32 44.3**	**-1.2**
KHAR	**Kharino, NSO,**	**1.59**	**286**	Pg		**Pg**	**16 32 37.7**	**-0.7**
KHAR				Sg		**Sg**	**16 32 59.0**	**0.0**
TASR	**Tashtagol**	**1.76**	**145**	Pg		**Pg**	**16 32 41.4**	**-0.2**
TASR				Sg		**Sg**	**16 33 05.9**	**+1.5**
NVSII	**Novosibirsk**	**1.85**	**291**	P		**Pb**	**16 32 41.5**	**-0.3**
NVSII				Pg		**Pg**	**16 32 41.7**	**-1.7**
NVSII				S		**Sb**	**16 33 05.4**	**+0.3**
NVSII				Sg		**Sg**	**16 33 05.6**	**-1.8**
NVS	**Novosibirsk**	**1.85**	**291**	Pg		**Pb**	**16 32 41.7**	**-0.2**
NVS				P		**Pb**	**16 32 41.7**	**-0.2**
NVS				S		**Sb**	**16 33 05.1**	**0.0**
NVS				Sg		**Sg**	**16 33 05.6**	**-1.9**
NHES	**Novosibirsk, N**	**1.99**	**290**	Pg		**Pb**	**16 32 43.7**	**-0.5**
NHES				Sg		**Sb**	**16 33 09.9**	**+0.8**
BSTK	**Bystrovka, Nov**	**2.12**	**281**	Pg		**Pb**	**16 32 46.7**	**+0.4**
BSTK				Sg		**Sg**	**16 33 15.0**	**-1.0**
ALXA	**Alekseevka, NS**	**2.24**	**290**	Pg		**Pb**	**16 32 48.8**	**+0.3**
ALXA				Sg		**Sg**	**16 33 18.2**	**-1.6**
SHRR	**Shira**	**2.32**	**81**	Pg		**Pb**	**16 32 50.3**	**+0.4**
SHRR				Sg		**Sg**	**16 33 22.0**	**-0.4**
ARTR	**Artybash**	**2.50**	**165**	Pg		**Pg**	**16 32 53.9**	**-1.9**
ARTR				Sg		**Sg**	**16 33 27.6**	**-0.5**
TBTR	**Tabat**	**2.97**	**114**	Pg		**Pg**	**16 33 04.6**	**-0.2**
TBTR				Sg		**Sg**	**16 33 42.0**	**-1.3**
ABNR	**Abakan**	**3.12**	**97**	Pg		**Pg**	**16 33 07.2**	**-0.4**
ABNR				Sg		**Sg**	**16 33 47.8**	**-0.2**
DJO	**Djoy, Khakassi**	**3.31**	**114**	Pg		**Pg**	**16 33 10.1**	**-1.1**
DJO				Sg		**Sg**	**16 33 51.0**	**-3.1**
CERR	**Cheremushki**	**3.38**	**112**	Sg		**Sg**	**16 33 53.9**	**-2.5**
UKR	**Ust'-Kan**	**3.40**	**196**	Sg		**Sg**	**16 33 55.0**	**-1.9**
DJOS	**Djoyskaya Sosn**	**3.40**	**113**	Sg		**Sg**	**16 33 56.4**	**-0.7**
ULGR	**Ulagan, Altay**	**3.75**	**163**	Pg		**Pg**	**16 33 18.5**	**-1.1**
ULGR				Sg		**Sg**	**16 34 06.1**	**-2.0**
CHBI	**Chibit, Altay**	**3.98**	**168**	Pg		**Pg**	**16 33 21.6**	**-2.5**
CHBI				Sg		**Sg**	**16 34 15.3**	**-0.4**
AKAR	**Aktash**	**3.99**	**167**	Pg		**Pg**	**16 33 23.3**	**-1.0**
AKAR				Sg		**Sg**	**16 34 15.0**	**-0.9**
TEL	**Teeli**	**4.01**	**141**	Pg		**Pg**	**16 33 22.9**	**-1.8**
TEL				Sg		**Sg**	**16 34 14.7**	**-1.8**
TUNR	**Tungur**	**4.06**	**179**	Pg		**Pg**	**16 33 23.0**	**-2.6**
TUNR				Sg		**Sg**	**16 34 15.0**	**-3.1**
CUR	**Chagan-Uzun**	**4.32**	**162**	Pg		**Pg**	**16 33 29.3**	**-1.3**
CUR				Sg		**Sg**	**16 34 26.9**	**+0.3**
DGZ	**Jazzator, Alta**	**4.58**	**170**	Pg		**Pg**	**16 33 33.9**	**-1.7**
DGZ				Sg		**Sg**	**16 34 34.9**	**+0.1**
ARDR	**Aradan**	**4.61**	**108**	Sg		**Sg**	**16 34 32.6**	**-3.2**
KURK	**Kurchatov**	**5.82**	**236**	⇑Pn		**Pn**	**16 33 37.5**	**+3.4**
	1.6nm,0.6s							
KURK				⇓Lg		Lg	16 35 12.5	
	4.4nm,1.0s							
KURBB	**Kurchatov Arra**	**5.92**	**236**	⇓Pn		**Pn**	**16 33 38.7**	**+3.1**
	1.6nm,0.5s							
KURBB				⇓Lg		Lg	16 35 14.8	
	3.0nm,0.6s							
MK31	**Makanchi Array**	**7.84**	**200**	⇑Pn		**Pn**	**16 34 05.5**	**+3.6**
	0.2nm,0.3s,baz=26,slow=13,SNR=26							
MK31				⇑Sn		**Sn**	**16 35 32.6**	**+2.0**
	0.4nm,0.5s,baz=24,slow=24,SNR=5.7							
MK31				⇑Lg		Lg	16 36 14.9	
	2.2nm,0.7s,baz=29,slow=29,SNR=4.1							
MAKZ	**Makanchi**	**7.89**	**202**	⇑Pn		**Pn**	**16 34 05.3**	**+2.6**
	0.6nm,0.7s							
MAKZ				⇑Sn		**Sn**	**16 35 33.2**	**+1.3**
	0.9nm,0.6s							
MAKZ				⇓Lg		Lg	16 36 14.9	
	3.7nm,0.8s							

*PGC **05** 16:41:30.9±0.6,59°.18N×136°.33W,h5km,ML2.6/4,62km west of Haines, Ak Southeastern Alaska*
*AEIC **05** 16:41:30.1±1.0,59°.18N±0°.02×

CEP	**Cherat**	**2.89**	**167**		P		**Pn**	**16 45 28.4**	**+2.9**
CEP					S		**Sn**	**16 46 06.0**	**+2.7**
BTK	**Batken**	**3.42**	**356**		PN		**Pn**	**16 45 34.1**	**+2.5**
BTK	**Batken**	**3.42**	**356**		Pn		**Pn**	**16 45 34.1**	**+2.5**
NIL	**Nilore**	**3.46**	**149**		PN		**Pn**	**16 45 35.2**	**+3.0**
NIL	**Nilore**	**3.46**	**149**		Pn		**Pn**	**16 45 35.2**	**+3.0**
THW	**Thamme Wali**	**3.87**	**172**		P		**Pn**	**16 45 39.8**	**+2.5**
KSH	**Kashi**	**4.79**	**52**		P		**Pn**	**16 45 45.0**	**-3.7**
KSH					S		Sn	16 46 35.0	-10
KSH	comp=N,130nm,0.6s				smax		smax		
KSH	comp=E,87nm,0.4s				smax		smax		
SARP	**Sargodha**	**4.88**	**164**		P		**Pn**	**16 45 51.8**	**+1.9**
IUG	**luzhnay**	**5.56**	**352**	⇓	*i* P		**Pn**	**16 45 59.8**	**+1.2**
	15nm,0.7s,baz=351								
IUG	**luzhnay**	**5.56**	**352**	*d*	*i* PN		**Pn**	**16 45 59.8**	**+1.2**
IUG	comp=Z,15nm,0.7s				pmax		pmax		
AML	**Almayashu**	**5.83**	**19**		P		**Pn**	**16 46 02.8**	**+0.5**
	SNR=182								
UCH	**Uchtor**	**6.17**	**24**		P		**Pn**	**16 46 07.6**	**+0.9**
	SNR=6.8								
DZA	**Taraz**	**6.25**	**1**		*e*P		**Pn**	**16 46 07.8**	**+0.4**
	comp=Z,18nm,0.5s,baz=1.1								
DZA	**Taraz**	**6.25**	**1**		*e*PN		**Pn**	**16 46 07.7**	**+0.4**
DZA	comp=Z,18nm,0.5s				pmax		pmax		
EKS2	**Erkin-Say**	**6.35**	**18**		P		**Pn**	**16 46 09.4**	**+0.6**
	SNR=40								
KK31	**Karatay Array**	**6.47**	**356**	⇑	P		**Pn**	**16 46 10.2**	**-0.1**
	comp=Z,8.7nm,0.6s,baz=185,slow=16,SNR=79								
KK31				⇑	S		**Sn**	**16 47 20.6**	**-3.7**
	comp=Z,7.1nm,0.3s,baz=186,slow=24,SNR=6.7								
KK31	**Karatay Array**	**6.47**	**356**		*e*PN		**Pn**	**16 46 10.5**	**+0.3**
KK31	**Karatay Array**	**6.47**	**356**		Pn		**Pn**	**16 46 10.3**	**+0.1**
KKAR	**Karatay Array**	**6.47**	**356**		PN		**Pn**	**16 46 10.4**	**+0.1**
KKAR	**Karatay Array**	**6.47**	**356**				**Pn**	**16 46 10.3**	**+0.1**
AAK	**Ala-Archa**	**6.53**	**22**	*d*	*i* PN		**Pn**	**16 46 11.7**	**+0.5**
KBK	**Karagaybulak**	**6.69**	**25**		P		**Pn**	**16 46 14.3**	**+1.0**
	SNR=27								
ULHL	**Ulahol**	**6.86**	**34**		P		**Pn**	**16 46 16.2**	**+0.8**
	SNR=13								
BOOM	**Boomskoye usch**	**6.93**	**31**		PN		**Pn**	**16 46 16.5**	**+0.2**
BOOM	**Boomskoye usch**	**6.93**	**31**		Pn		**Pn**	**16 46 16.5**	**+0.2**
CHMS	**Chumysh**	**6.94**	**23**		P		**Pn**	**16 46 16.7**	**+0.4**
	SNR=11								
USP	**Ospenovka**	**7.11**	**20**		P		**Pn**	**16 46 18.2**	**-0.4**
	SNR=17								
TKM2	**Tokmak 2**	**7.16**	**27**		P		**Pn**	**16 46 19.9**	**+0.5**
	SNR=12								
TKM2	**Tokmak 2**	**7.16**	**27**	⇑	P		**Pn**	**16 46 19.7**	**+0.3**
	comp=Z,40nm,0.6s								
TKM2				⇑	S		**Sn**	**16 47 45.9**	**+5.3**
	comp=Z,9.9nm,0.7s								
TKM2	**Tokmak 2**	**7.16**	**27**		PN		**Pn**	**16 46 19.6**	**+0.3**
TKM2					S		**Sn**	**16 47 45.9**	**+5.3**
KDJ	**Kajisay**	**7.21**	**39**		PN		**Pn**	**16 46 20.4**	**+0.3**
KDJ	**Kajisay**	**7.21**	**39**		Pn		**Pn**	**16 46 20.4**	**+0.3**
HRA	**Herat**	**7.58**	**255**		Pn		**Pn**	**16 46 28.1**	**+3.2**
AAA	**Alma-Ata**	**7.93**	**32**		*e*P		**Pn**	**16 46 30.1**	**+0.8**
	comp=Z,14nm,0.5s,baz=32								
AAA	**Alma-Ata**	**7.93**	**32**		*e*PN		**Pn**	**16 46 30.0**	**+0.8**
AAA	comp=Z,14nm,0.5s				pmax		pmax		
MDOK	**Medeo**	**7.95**	**33**		*e*P		**Pn**	**16 46 29.7**	**+0.1**
	baz=33								
MDOK	**Medeo**	**7.95**	**33**		*e*PN		**Pn**	**16 46 29.7**	**+0.1**
PRZ	**Przheval'sk**	**8.10**	**42**		PN		**Pn**	**16 46 32.0**	**+0.4**
PRZ	**Przheval'sk**	**8.10**	**42**				**Pn**	**16 46 32.0**	**+0.4**
KUU	**Kurty**	**8.27**	**27**		*e*P		**Pn**	**16 46 33.3**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=27								
KUU	**Kurty**	**8.27**	**27**		*e*PN		**Pn**	**16 46 33.2**	**-0.4**
KUU	comp=Z,3.0nm,0.8s				pmax		pmax		
SATY	**Saty**	**8.51**	**39**		*e*P		**Pn**	**16 46 36.1**	**-0.8**
	comp=Z,2.6nm,1.3s,baz=38								
SATY	**Saty**	**8.51**	**39**		*e*PN		**Pn**	**16 46 36.1**	**-0.8**
SATY	comp=Z,3.0nm,1.3s				pmax		pmax		
BTLS	**Baital**	**8.68**	**14**	⇓	*e*P		**Pn**	**16 46 38.7**	**-0.3**
	baz=14								
BTLS					*e*sP			16 47 24.6	
	baz=14								
BTLS	**Baital**	**8.68**	**14**	*d*	*e*PN		**Pn**	**16 46 38.6**	**-0.3**
KPKS	**Kokpek**	**8.95**	**38**		*e*P		**Pn**	**16 46 41.9**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=38								
KPKS	**Kokpek**	**8.95**	**38**		*e*PN		**Pn**	**16 46 41.9**	**-0.6**
KPKS	comp=Z,2.0nm,0.6s				pmax		pmax		
SHLS	**Shalkode**	**9.13**	**42**		*e*P		**Pn**	**16 46 47.7**	**+2.7**
	comp=Z,3.7nm,1.0s,baz=43								
SHLS	**Shalkode**	**9.13**	**42**		*e*P		**Pn**	**16 46 47.7**	**+2.7**
SHLS	comp=Z,4.0nm,1.0s				pmax		pmax		
KUDL	**Kundal**	**9.61**	**150**		*e*P		**Pn**	**16 46 50.8**	**-0.4**
KUDL					*e*S		Sn	16 48 22.9	-16
KUDL	comp=N,62nm,0.4s				AMP			16 48 34.7	
TDK	**Taldyqorghan**	**10.01**	**31**		*e*P		**Pn**	**16 46 56.0**	**-0.3**
	baz=31								
TDK	**Taldyqorghan**	**10.01**	**31**		*e*P		**Pn**	**16 46 55.9**	**-0.3**
GEYT	**Alibeck**	**10.44**	**281**		P		**Pn**	**16 47 02.1**	**+0.2**
	comp=N,0.3nm,0.3s,baz=90,slow=16,SNR=1.9								
GEYT	comp=N,0.3nm,0.3s,baz=117,slow=20,SNR=1.7				S		**Sn**	**16 48 56.6**	**-1.8**
MAKZ	**Makanchi**	**12.98**	**35**		P		**Pn**	**16 47 33.0**	**-1.2**
MAKZ	**Makanchi**	**12.98**	**35**		Pn		**Pn**	**16 47 33.0**	**-1.2**
MK31	**Makanchi Array**	**13.12**	**36**	*ce*	P		**Pn**	**16 47 36.5**	**+0.7**
MK31	**Makanchi Array**	**13.12**	**36**				**Pn**	**16 47 35.4**	**-0.5**
MKAR	**Makanchi Array**	**13.12**	**36**		P		**Pn**	**16 47 35.3**	**-0.6**
	comp=N,0.2nm,0.3s,baz=219,slow=16,SNR=9.7								
MKAR	**Makanchi Array**	**13.12**	**36**	*i*	P		**Pn**	**16 47 35.9**	**+0.1**
MKAR	comp=Z,1.0nm,0.6s				pmax		pmax		
MKAR	**Makanchi Array**	**13.12**	**36**		Pn		**Pn**	**16 47 35.0**	**-0.8**
PYUN	**Piuthan**	**13.15**	**127**		*e*P		**Pn**	**16 47 36.3**	**-0.3**
	comp=Z,15nm,0.3s								
DANN	**Dangsing**	**13.49**	**124**		*e*P		**Pn**	**16 47 40.6**	**-0.3**
	comp=Z,9.1nm,0.3s								
KOLN	**Koldanda**	**13.77**	**126**		*e*P		**Pn**	**16 47 43.8**	**-0.5**
	comp=Z,6.3nm,0.3s								
GKN	**Gorkha**	**14.30**	**123**		*e*P		**Pn**	**16 47 50.5**	**-0.3**
	comp=Z,18nm,0.4s								
WMQ	**Urumqi**	**14.54**	**55**		*e*P		**P**	**16 47 55.5**	**+0.8**
WMQ	comp=Z,15nm,0.7s				pmax		pmax		
WMQ	comp=Z,110nm,5.5s				pmax		pmax		
WMQ	comp=Z,160nm,6.5s				LR		LR		
WMQ	comp=Z,290nm,10.9s				LR		LR		
DMN	**Daman**	**14.87**	**123**		*e*P		**P**	**16 47 57.4**	**-1.3**
	comp=Z,7.0nm,0.4s								
KKN	**Kakani**	**14.87**	**122**		*e*P		**Pn**	**16 47 57.2**	**-0.7**
	comp=Z,16nm,0.5s								
KURBB	**Kurchatov Arra**	**14.96**	**19**		P		**Pn**	**16 47 56.8**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=2.3								
AB31	**Akbulak array**	**15.01**	**331**	⇓	P		**P**	**16 48 00.2**	**+0.5**
	comp=Z,3.4nm,0.7s,baz=141,slow=11,SNR=37								
AB31				⇑	S		**S**	**16 50 43.8**	**-1.8**
	comp=Z,1.9nm,0.7s,baz=147,slow=23,SNR=8.6								
AB31	**Akbulak array**	**15.01**	**331**	*i*	P		**P**	**16 48 01.0**	**+1.3**
ABKAR	**Akbulak array**	**15.01**	**331**				**Pn**	**16 47 59.0**	**-0.1**
KURK	**Kurchatov**	**15.07**	**19**	*i*	P		**Pn**	**16 47 59.5**	**-0.3**
KURK	comp=Z,1.0nm,1.0s				pmax		pmax		
PKIN	**Phulchoki**	**15.09**	**123**		*e*P		**P**	**16 48 00.0**	**-1.2**
	comp=Z,13nm,0.4s								
PKI	**Pulchoki**	**15.10**	**123**		*e*P		**Pn**	**16 48 00.1**	**-0.7**
	comp=Z,13nm,0.4s								
GUN	**Gumba**	**15.21**	**121**		*e*P		**P**	**16 48 01.4**	**-1.1**
	comp=Z,9.1nm,0.4s								
RAMN	**Ramite**	**16.31**	**122**		*e*P		**Pn**	**16 48 15.1**	**-0.2**
BRVK	**Borovoye**	**16.43**	**358**		P		**P**	**16 48 15.9**	**+0.6**
BRVK	comp=Z,2.0nm,0.8s				pmax		pmax		
BRVK	**Borovoye**	**16.43**	**358**		P		**P**	**16 48 15.9**	**+0.6**
AKTO	**Aktyubinsk**	**16.70**	**330**		P		**Pn**	**16 48 19.6**	**0.0**
	comp=Z,1.1nm,0.3s,baz=145,slow=8.4,SNR=19								
AKTO	**Aktyubinsk**	**16.70**	**330**	⇑	P		**P**	**16 48 18.9**	**+0.5**
	comp=Z,6.4nm,0.8s								
AKTO	comp=Z,5.7nm,1.1s			⇑	S		**S**	**16 51 22.3**	**-0.3**
TAPN	**Taplejung**	**16.83**	**119**		*e*P		**Pn**	**16 48 22.1**	**+0.5**
ODAN	**Odare**	**16.91**	**121**		*e*P		**Pn**	**16 48 22.2**	**-0.3**
DGZ	**Jazzator, Alta**	**17.61**	**37**		*i* P		**P**	**16 48 26.9**	**-1.6**
DGZ	comp=Z,6.0nm,1.9s				pmax		pmax		
ZAA0	**Zalesovo Array**	**19.75**	**24**		P		**P**	**16 48 51.8**	**+0.4**
ZALV	**Zalesovo Beam**	**19.75**	**24**		P		**P**	**16 48 51.1**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=220,slow=10.0,SNR=12								
ZALV	**Zalesovo Beam**	**19.75**	**24**		P		**P**	**16 48 49.2**	**-2.1**
SHL	**Shillong**	**20.89**	**116**		P		**P**	**16 49 04.0**	**0.0**
SHL	comp=Z,12nm,0.4s				pmax		pmax		
SHL	**Shillong**	**20.89**	**116**		P		**P**	**16 49 04.0**	**0.0**
SHL	comp=Z,12nm,0.4s				IAmb		IAmb	16 49 33.4	
GNI	**Garni**	**20.94**	**288**		P		**P**	**16 49 05.9**	**+1.5**
GNI	comp=Z,8.0nm,1.4s				pmax		pmax		
GNI	**Garni**	**20.94**	**288**		P		**P**	**16 49 05.9**	**+1.5**
ARU	**Arti**	**21.53**	**341**	*c*	*i* P		**P**	**16 49 11.2**	**+1.0**
ARU					*PP		**pP**	**16 49 43.0**	**-1.6**
ARU								16 49 53.8	
ARU					S		**S**	**16 52 58.8**	**+3.5**
ARU	comp=Z,4.0nm,1.0s				pmax		pmax		
KBZ	**Khabaz**	**22.62**	**297**		P		**P**	**16 49 21.6**	**+0.9**
	comp=Z,2.3nm,0.9s,baz=174,slow=5.8,SNR=4.2								
KBZ	**Khabaz**	**22.62**	**297**	*i*	P		**P**	**16 49 22.1**	**+1.4**
KBZ	comp=Z,9.0nm,2.5s				pmax		pmax		
KIV	**Kislovodsk**	**22.81**	**297**	*e*	P		**P**	**16 49 21.3**	**-1.2**
KIV	comp=Z,22nm,1.1s				pmax		pmax		
LZH	**Lanzhou**	**26.29**	**81**	⇑	P		**P**	**16 49 54.6**	**+0.4**
LZH					pP		pP	16 50 35.4	-0.4
LZH					PP		**PnPn**	**16 50 49.7**	**+3.2**
LZH					sP		sP	16 51 03.5	+4.0
LZH	comp=Z,21nm,1.4s				pmax		pmax		
LZH	comp=Z,65nm,5.0s				pmax		pmax		
OBN	**Obninsk**	**29.89**	**319**	⇑	*e*P		**P**	**16 50 25.6**	**0.0**
OBN					*e*			16 51 30.3	
OBN					*e*S		S	16 54 59.0	-8.7
OBN	comp=Z,10.0nm,0.5s				pmax		pmax		
HHC	**Hu-ho-hao-te**	**31.62**	**70**		*e*P		**P**	**16 50 39.8**	**-1.4**
HHC	comp=Z,22nm,0.8s				pmax		pmax		
HHC	comp=Z,120nm,3.9s				pmax		pmax		
AKASG	**Malin Array Be**	**32.93**	**309**		P		**P**	**16 50 52.7**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=80,slow=7.0,SNR=8.0								
AKASG	**Malin Array Be**	**32.93**	**309**	*i*	P		**P**	**16 50 53.0**	**+0.7**
AKASG	comp=Z,2.0nm,0.3s				pmax		pmax		
AKBB	**Malin Array Si**	**32.93**	**309**		P		**P**	**16 50 52.9**	**+0.6**
AKBB	comp=Z,4.0nm,0.6s				pmax		pmax		
AKBB	**Malin Array Si**	**32.93**	**309**		P		**P**	**16 50 52.9**	**+0.6**
NRIK	**Noril'sk**	**33.97**	**10**		P		**P**	**16 51 01.6**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=183,slow=11,SNR=3.6								
NRIK	**Noril'sk**	**33.97**	**10**	*i*	P		**P**	**16 51 01.5**	**+0.5**
NRIK	comp=Z,9.0nm,3.3s				pmax		pmax		
VSU	**Vasula**	**36.13**	**321**	*i*	P		**P**	**16 51 18.0**	**-1.6**
VSU	comp=Z,35nm,1.1s				pmax		pmax		
FIA1	**FINESS Array S**	**37.42**	**326**		P		**P**	**16 51 30.9**	**+0.5**
FIA1	comp=Z,18nm,1.4s				IAmb		IAmb	16 51 43.8	
FINES	**FINESS Array B**	**37.42**	**326**		P		**P**	**16 51 30.7**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=124,slow=9.4,SNR=10								
FINES	**FINESS Array B**	**37.42**	**326**	*i*	P		**P**	**16 51 31.0**	**+0.6**
FINES	comp=Z,1.0nm,0.3s				pmax		pmax		
FINES	**FINESS Array B**	**37.42**	**326**		P		**P**	**16 51 30.9**	**+0.4**
NJ2	**Nanjing**	**39.36**	**82**	*e*	P		**P**	**16 51 45.3**	**-1.7**
NJ2	comp=Z,6.0nm,0.5s				pmax		pmax		
KEV	**Kevo**	**40.70**	**338**		P		**P**	**16 51 58.2**	**+0.7**
KEV	comp=Z,53nm,1.4s				pmax		pmax		
KEV	**Kevo**	**40.70**	**338**		P		**P**	**16 51 58.2**	**+0.7**
ARCES	**ARCESS Array B**	**41.05**	**337**		P		**P**	**16 52 00.8**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=117,slow=8.8,SNR=18								
YAK	**Yakutsk**	**43.80**	**36**	*i*	P		**P**	**16 52 22.4**	**-0.1**
YAK	comp=Z,30nm,2.2s				pmax		pmax		
NC405	**NORSAR Array S**	**44.09**	**323**		P		**P**	**16 52 25.2**	**+0.2**
NC405					IAmb		IAmb	16 52 29.1	
	comp=Z,44nm,1.5s								
NC602	**NORSAR Array S**	**44.14**	**323**		P		**P**	**16 52 25.3**	**0.0**
NC303	**NORSAR Array S**	**44.27**	**323**		P		**P**	**16 52 26.9**	**+0.5**
NC303					IAmb		IAmb	16 52 49.9	
	comp=Z,39nm,1.3s								
NB201	**NORSAR Array S**	**44.29**	**323**		P		**P**	**16 52 26.6**	**+0.1**
NB2	**NORSAR Subarra**	**44.32**	**323**		P		**P**	**16 52 26.9**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=97,slow=7.9								
NOA	**NORSAR Array B**	**44.32**	**323**		P		**P**	**16 52 27.0**	**+0.1**
	comp=Z,2.9nm,0.6s,baz=96,slow=7.7,SNR=15								
NOA	**NORSAR Array B**	**44.32**	**323**		P		**P**	**16 52 27.0**	**+0.1**
NAO01	**NORSAR Array S**	**44.47**	**323**		P		**P**	**16 52 27.7**	**-0.2**
NBO00	**NORSAR Array S**	**44.53**	**323**		P		**P**	**16 52 28.5**	**0.0**
NBO00					IAmb		IAmb	16 52 53.6	
	comp=Z,15nm,1.2s								
NC204	**NORSAR Array S**	**44.56**	**323**		P		**P**	**16 52 29.0**	**+0.2**
NC204					IAmb		IAmb	16 52 49.3	
	comp=Z,14nm,1.1s								
KLR	**Kul'dur**	**44.98**	**54**	*i*	P		**P**	**16 52 31.1**	**-1.1**
KLR	comp=Z,5.0nm,1.4s				pmax		pmax		
KONO	**Kongsberg**	**45.03**	**321**		P		**P**	**16 52 32.3**	**-0.1**
KONO	comp=Z,43nm,1.5s				pmax		pmax		
KONO	**Kongsberg**	**45.03**	**321**		P		**P**	**16 52 32.3**	**-0.1**
KONO	comp=Z,42nm,1.5s				IAmb		IAmb	16 52 54.5	
JNU	**Nakatsue**	**48.47**	**76**		P		**P**	**16 52 57.6**	**-1.8**
ESDC	**Sonseca Array**	**57.47**	**298**		P		**P**	**16 54 05.1**	**0.0**
	comp=Z,0.8nm,0.7s,baz=54,slow=7.0,SNR=4.3								
SUMG	**Summit**	**60.96**	**341**		P		**P**	**16 54 29.8**	**+0.9**
SUMG	comp=Z,10.0nm,1.5s				pmax		pmax		
SUMG	**Summit**	**60.96**	**341**		P		**P**	**16 54 29.8**	**+0.9**
SUMG	comp=Z,10nm,1.5s				IAmb		IAmb	16 54 45.6	
TOA0	**Torodi Ar. Sit**	**65.81**	**269**		P		**P**	**16 54 59.4**	**-1.8**
TORD	**Torodi Ar. Bea**	**65.81**	**269**		P		**P**	**16 54 59.5**	**-1.6**
	comp=Z,2.0nm,0.7s,baz=50,slow=5.9,SNR=16								
TORD	**Torodi Ar. Bea**	**65.81**	**269**		P		**P**	**16 54 59.2**	**-1.9**
C36M	**Paulatuk**	**73.73**	**6**		P		**P**	**16 55 48.0**	**-0.5**
INK	**Inuvik**	**73.75**	**9**		P		**P**	**16 55 48.8**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=329,slow=8.1,SNR=8.5								
INK	**Inuvik**	**73.75**	**9**		P		**P**	**16 55 48.8**	**+0.2**
INK	comp=Z,8.8nm,1.4s				IAmb		IAmb	16 55 50.0	
TTA	**Tatalina**	**73.86**	**20**		P		**P**	**16 55 50.5**	**+1.0**
TTA	comp=Z,7.0nm,1.4s				pmax		pmax		
TTA	**Tatalina**	**73.86**	**20**		P		**P**	**16 55 50.5**	**+1.0**
ILAR	**Eielson Array**	**74.62**	**16**		P		**P**	**16 55 52.4**	**-1.4**
	comp=Z,0.5nm,0.8s,baz=315,slow=5.6,SNR=5.5								
ILAR	**Eielson Array**	**74.62**	**16**		P		**P**	**16 55 52.7**	**-1.0**
ILAR	**Eielson Array**	**74.62**	**16**		P		**P**	**16 55 52.6**	**-1.0**
KTH	**Kantishna Hill**	**74.70**	**18**		P		**P**	**16 55 53.5**	**-0.8**
KTH	comp=Z,11nm,1.4s				IAmb		IAmb	16 56 20.8	
DBIC	**Dimbokro**	**74.80**	**267**		P		**P**	**16 55 54.6**	**-1.0**
DBIC	comp=Z,6.0nm,1.0s				pmax		pmax		
DBIC	**Dimbokro**	**74.80**	**267**		P		**P**	**16 55 54.6**	**-1.0**
DBIC	comp=Z,5.5nm,1.0s				IAmb		IAmb	16 56 20.6	
PPLA	**Purkeypile**	**74.92**	**19**		P		**P**	**16 55 55.1**	**-0.6**
PPLA	comp=Z,24nm,1.4s				IAmb		IAmb	16 56 20.5	
TRF	**Thorofare Moun**	**74.94**	**18**		P		**P**	**16 55 56.9**	**+1.1**
KNRA	**Kununurra**	**75.22**	**123**		P		**P**	**16 55 57.4**	**-0.4**
RND	**Reindeer**	**75.33**	**17**		P		**P**	**16 55 57.1**	**-0.8**
RND	comp=Z,10.0nm,1.4s				pmax		pmax		
RND	**Reindeer**	**75.33**	**17**		P		**P**	**16 55 57.1**	**-0.8**
RND	comp=Z,10.0nm,1.4s				IAmb		IAmb	16 56 12.3	
EGAK	**Eagle**	**75.79**	**14**		P		**P**	**16 56 01.2**	**+0.9**
DHY	**Denali Highway**	**75.97**	**17**		P		**P**	**16 56 00.9**	**-0.7**
DHY	comp=Z,8.2nm,1.4s				IAmb		IAmb	16 56 16.7	
SCM	**Sheep Creek Mo**	**77.05**	**18**		P		**P**	**16 56 06.7**	**-0.9**
SCM	comp=Z,13nm,1.2s				pmax		pmax		
SCM	**Sheep Creek Mo**	**77.05**	**18**		P		**P**	**16 56 06.7**	**-0.9**
SCM	comp=Z,13nm,1.2s				IAmb		IAmb	16 56 20.2	
M24K	**Tolsona, Glenn**	**77.08**	**17**		P		**P**	**16 56 08.2**	**+0.4**
M24K	comp=Z,21nm,1.4s				IAmb		IAmb	16 56 36.8	
BALM	**Baldy**	**78.90**	**16**		P		**P**	**16 56 17.8**	**-0.1**
BALM	comp=Z,16nm,1.3s				IAmb		IAmb	16 56 33.7	
CTGM	**Chitina Glacie**	**79.19**	**15**		P		**P**	**16 56 19.5**	**+0.1**
CTGM	comp=Z,16nm,1.3s				IAmb		IAmb	16 56 41.5	
OHAK	**Old Harbor**	**79.28**	**23**		P		**P**	**16 56 19.6**	**-0.2**
YKA	**Yellowknife Ar**	**81.10**	**3**		P		**P**	**16 56 29.3**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=1.5,slow=4.9,SNR=6.4								
YKA	**Yellowknife Ar**	**81.10**	**3**	*i*	P		**P**	**16 56 29.2**	**-0.2**
YKA	comp=Z,2.0nm,0.5s				pmax		pmax		
WRA	**Warramunga Arr**	**81.99**	**122**		P		**P**	**16 56 32.6**	**-2.1**
	comp=Z,0.3nm,0.6s,baz=324,slow=4.8,SNR=8.0								
WB2	**Warramunga Arr**	**81.99**	**122**		P		**P**	**16 56 32.8**	**-2.0**
WB2	comp=Z,7.1nm,1.4s				IAmb		IAmb	16 57 01.9	
AS31	**Alice Springs**	**84.26**	**125**		P		**P**	**16 56 46.6**	**+0.3**
ASAR	**Alice Springs**	**84.26**	**125**		P		**P**	**16 56 44.2**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=306,slow=4.7,SNR=5.8								
ASAR	**Alice Springs**	**84.26**	**125**		P		**P**	**16 56 45.1**	**-1.2**
ASAR	**Alice Springs**	**84.26**	**125**		P		**P**	**16 56 45.1**	**-1.2**

NEIC ***05*** *16:45:10.2±0.6, 18°.4N±0°.1×147°.2E±0°.08, h10km±2km, mb4.3/7, Error ellipse: s-maj=21.6km s-min=10.6km az=155.0*

IDC ***05*** *16:45:19.5±5.9, 18°.27N×147°.09E, h94km±42km, mb3.4/8, mb1 3.5/9, mb1mx3.3/46, mbtmp3.8/9, MS3.2/1, Ms1 3.2/1, ms1mx2.5/24, Error ellipse: s-maj=89.5km s-min=15.8km az=88.0*

ISC 05 16:45:10.0±0.9, 18°.45N±0°.07×147°.4E±0°.2, h10km, n24, σ1°.26/22, mb4.0/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**5.41**	**207**	P		**Pn**	**16 46 32.7**	**+1.9**
	5.1nm,0.3s,baz=45,slow=9.8,SNR=1.8							
GUMO				S		**Sn**	**16 47 33.0**	**-0.1**
	5.3nm,0.3s,baz=15,slow=12,SNR=1.4							
PATS	**Pohnpei**	**15.70**	**136**	P		**P**	**16 48 56.1**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**18.30**	**87**	T		T	17 08 51.8	
	baz=273,slow=74,SNR=5.4							
H11S1	**WAKE ISLAND Hy**	**18.32**	**87**	T		T	17 08 55.3	
	baz=273,slow=74,SNR=3.9							
H11S2	**WAKE ISLAND Hy**	**18.32**	**87**	T		T	17 08 52.8	
	baz=273,slow=74,SNR=5.0							
MJAR	**Matsushiro Arr**	**19.76**	**338**	P		**Pn**	**16 49 41.3**	**-0.3**
	0.0nm,0.3s,baz=176,slow=9.7,SNR=1.8							
USRK	**Usuriysk Ar.**	**28.75**	**337**	P		**P**	**16 51 09.3**	**+1.7**
	1.0nm,0.7s,baz=146,slow=16,SNR=2.3							
KLR	**Kul'dur**	**33.20**	**341**	P		**P**	**16 51 49.2**	**+2.3**
	1.7nm,0.8s,baz=150,slow=12,SNR=4.6							
WRAB	**Tennant Creek**	**40.24**	**199**	P		**P**	**16 52 46.6**	**-0.5**
WRAB	comp=Z,2.9nm,0.8s				IAmb	IAmb	16 52 47.9	
WRA	**Warramunga Arr**	**40.25**	**199**	P		**P**	**16 52 44.7**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=26,slow=8.6,SNR=6.8							
WRA				LR		LR	17 09 16.0	
	comp=Z,35nm,21.9s,baz=15,slow=36							
AS31	**Alice Springs**	**43.88**	**198**	P		**P**	**16 53 16.5**	**-0.4**
ASAR	**Alice Springs**	**43.88**	**198**	P		**P**	**16 53 14.8**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=20,slow=7.6,SNR=9.8							
ASAR	**Alice Springs**	**43.88**	**198**	P		**P**	**16 53 16.5**	**-0.4**
SONM	**Songino Array**	**44.34**	**321**	P		**P**	**16 53 20.1**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=117,slow=8.4,SNR=2.5							
SONM	**Songino Array**	**44.34**	**321**	P		**P**	**16 53 20.7**	**+0.2**
BBOO	**Buckleboo**	**52.11**	**192**	P		**P**	**16 54 19.9

CUPR	**Culebra, Puert**	**1.99**	**104**		**Pb**	**17 02 03.2 +0.6**
BANI	**BANI**	**2.92**	**262**	Pn	**Pn**	**17 02 12.8 -0.1**
SDDR	**Presa de Saban**	**3.77**	**273**		**Pn**	**17 02 25.2 +0.7**

*IDC **05** 17:07:09.2±1.9, 1°.34N×125°.74E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/32, mbtmp3.3/3, Error ellipse: s-maj=179.7km s-min=27.4km az=65.0*
*DJA **05** 17:07:14.6±0.7, 1°N±5°×12°5E±°, h10km, M3.6/6, mb3.4/1, MLv3.7/6*
ISC 05 17:07:11.1±1.1, 1°2N±0°2×125°.55E±0°.06, h10km, n9, σ1ᵗ78/12, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.69**	**248**	P	**Pn**	**17 07 40.1**	**-0.6**
KMSI				S	**Sn**	**17 08 00.0**	**-2.4**
TNTI	**Ternate**	**1.87**	**103**	P	**Pg**	**17 07 46.5**	**-0.5**
GTOI	**Gorontalo**	**2.60**	**257**	P	**Pn**	**17 07 54.5**	**+1.3**
GTOI				S	**Sb**	**17 08 29.1**	**-0.8**
LUWI	**Luwuk**	**3.56**	**231**	P	**Pn**	**17 08 08.6**	**+2.1**
APSI	**Ampana**	**4.43**	**242**	P	**Pn**	**17 08 21.2**	**+2.8**
MPSI	**Mapaga**	**5.71**	**261**	P	**Pn**	**17 08 38.7**	**+2.6**
WRA	**Warramunga Arr**	**22.72**	**158**	P	**P**	**17 12 12.6**	**-0.8**
	0.3nm,0.4s,baz=337,slow=10,SNR=10						
ASAR	**Alice Springs**	**26.02**	**162**	P	**P**	**17 12 45.3**	**+0.7**
	0.5nm,0.6s,baz=350,slow=10,SNR=15						
ASAR				PcP	**PcP**	**17 16 12.9**	**0.0**
	0.5nm,1.1s,baz=345,slow=1.3,SNR=2.2						
MKAR	**Makanchi Array**	**58.97**	**327**	P	**P**	**17 17 10.5**	**-0.4**
	0.4nm,0.8s,baz=135,slow=7.2,SNR=2.4						

*DDA **05** 17:30:04.8, 36°.01N×27°.31E, h24km±2km, MW3.6*
*IDC **05** 17:30:05.4±1.7, 36°.12N×27°.33E, h46km±25km, mb3.7/9, mb1 3.7/12, mb1mx3.4/48, mbtmp3.9/12, ML3.9/3, Error ellipse: s-maj=25.7km s-min=12.9km az=174.0*
*ISK **05** 17:30:06.4, 36°.03N×27°.29E, h87km, ML3.5/36*
*ATH **05** 17:30:07.3, 36°.02N×27°.28E, h69km±3km, ML3.6/8, Error ellipse: s-maj=3.9km s-min=1.3km az=86.0*
*THE **05** 17:30:09.5, 36°.04N×27°.25E, h54km±3km, ML3.4/10, Error ellipse: s-maj=3.0km s-min=0.6km az=125.0*
*NIC **05** 17:30:09.2±0.0, 35°.73N×27°.59E, h62km±3km, MlI4.4/3*
*GII **05** 17:30:13.9±0.4, 35°.50N×27°.84E, h54km, MD3.1/2*
*HLW **05** 17:30:22.5, 34°.67N×27°.88E, h18km±6km, MlI4.2*
ISC 05 17:30:06.6±0.7, 35°.92N±0°.03×27°.41E±0°.03, h73km±6km, n182, σ1ᵗ93/243, mb3.9/9, 2C-2D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.43**	**208**	P	**Pn**	**17 30 20.5**	**+1.3**
KARP				S	**Sn**	**17 30 29.2**	**+0.8**
KARP				AML	AML	17 30 29.6	
	comp=N,23372μm,0.2s						
KARP				AML	AML	17 30 30.2	
	comp=E,30815μm,0.2s						
KARP	**Karpathos**	**0.43**	**208**	PG	**Pn**	**17 30 20.4**	**+1.2**
KARP	**Karpathos**	**0.43**	**208**	P	**Pn**	**17 30 20.5**	**+1.3**
KARP				S	**Sn**	**17 30 29.1**	**+0.7**
KARP				AML	AML	17 30 29.1	
	comp=E,28nm,0.3s						
KARP				AML	AML	17 30 29.1	
	comp=E,28nm,0.3s						
KARP				AML	AML	17 30 29.8	
	comp=E,31nm,0.2s						
KARP				AML	AML	17 30 29.8	
	comp=E,31nm,0.2s						
KARP	**Karpathos**	**0.43**	**208**	P	**Pn**	**17 30 20.5**	**+1.3**
KARP				S	**Sn**	**17 30 29.1**	**+0.7**
	comp=E,14μm,0.2s						
ARG	**Arkhangelos**	**0.65**	**63**	P	**Pn**	**17 30 23.2**	**+1.9**
ARG				S	**Sn**	**17 30 33.7**	**+1.6**
ARG				AML	AML	17 30 34.1	
	comp=E,8594μm,0.3s						
ARG				AML	AML	17 30 34.4	
	comp=N,5580μm,0.2s						
ARG	**Arkhangelos**	**0.65**	**63**	PG	**Pn**	**17 30 23.2**	**+1.9**
ARG	**Arkhangelos**	**0.65**	**63**	P	**Pn**	**17 30 23.1**	**+1.9**
ARG				S	**Sn**	**17 30 33.7**	**+1.6**
ARG	**Arkhangelos**	**0.65**	**63**	P	**Pn**	**17 30 23.1**	**+1.9**
ARG				S	**Sn**	**17 30 33.5**	**+1.4**
	comp=N,4μm,0.2s						
NIS1	**Nisyros Isl.**	**0.70**	**345**	P	**Pn**	**17 30 21.8**	**0.0**
NIS1				S	**Sn**	**17 30 31.2**	**-1.9**
NIS1				AML	AML	17 30 35.5	
	comp=N,5375μm,0.4s						
NIS1				AML	AML	17 30 40.1	
	comp=E,5894μm,0.3s						
NIS1	**Nisyros Isl.**	**0.70**	**345**	P	**Pn**	**17 30 21.8**	**0.0**
NISR	**Nisiros**	**0.72**	**342**	P	**Pn**	**17 30 21.8**	**-0.3**
NISR				S	**Sn**	**17 30 32.0**	**-1.5**
NISR				AML	AML	17 30 35.7	
	comp=N,2312μm,0.6s						
NISR				AML	AML	17 30 37.7	
	comp=E,3105μm,0.6s						
NISR	**Nisiros**	**0.72**	**342**	P	**Pn**	**17 30 21.7**	**-0.3**
KOSK	**Kos Island**	**0.90**	**337**	PG	**Pn**	**17 30 23.9**	**-0.1**
KOSK				SG	**Sn**	**17 30 36.2**	**-0.8**
MRSB	**Marmaris-Mugla**	**1.01**	**39**	PG	**Pn**	**17 30 26.5**	**+1.0**
TURN	**Turunc**	**1.08**	**38**	PG	**Pn**	**17 30 27.3**	**+0.9**
TURN	**Turunc**	**1.08**	**38**	*i* P	**Pn**	**17 30 27.2**	**+0.9**
TURN				*i* S	**Sn**	**17 30 39.7**	**-1.4**
TURN				IAML		17 30 42.0	
	comp=E,649nm,0.3s						
TURN				IAML		17 30 44.0	
	comp=N,484nm,0.2s						
BODT	**Bodrum**	**1.14**	**356**	PG	**Pn**	**17 30 27.1**	**0.0**
BDRM	**Kayabasi**	**1.14**	**1**	*i* P	**Pn**	**17 30 27.3**	**+0.2**
BDRM				*i* S	**Sn**	**17 30 40.2**	**-2.1**
BDRM				IAML		17 30 42.0	
	comp=E,659nm,0.5s						
YKAV	**Yalikavak-Bodr**	**1.20**	**355**	PN	**Pn**	**17 30 27.5**	**-0.4**
YKAV				SN	**Sn**	**17 30 42.3**	**-1.4**
ZKR	**Zakros**	**1.26**	**231**	P	**Pn**	**17 30 30.4**	**+1.8**
ZKR				S	**Sn**	**17 30 46.5**	**+1.4**
ZKR	**Zakros**	**1.26**	**231**	PN	**Pn**	**17 30 30.8**	**+2.2**
ZKR				SN	**Sn**	**17 30 46.9**	**+1.8**
ZKR	**Zakros**	**1.26**	**231**	P	**Pn**	**17 30 30.4**	**+1.8**
ZKR				S	**Sn**	**17 30 46.6**	**+1.4**
	comp=E,1μm,0.3s						
DALY	**Dalyan (Mula)**	**1.34**	**48**	PN	**Pn**	**17 30 31.5**	**+1.9**
DALY				SN	**Sn**	**17 30 48.9**	**+2.0**
ANAF	**Anafi Island**	**1.39**	**289**	P	**Pn**	**17 30 30.1**	**-0.2**
ANAF				AML	AML	17 30 46.6	
	comp=N,11964μm,0.3s						
ANAF				S	**Sn**	**17 30 46.7**	**-1.4**
ANAF				AML	AML	17 30 47.8	
	comp=E,16628μm,0.3s						
ANAF	**Anafi Island**	**1.39**	**289**	P	**Pn**	**17 30 30.1**	**-0.2**
ANAF				S	**Sn**	**17 30 45.5**	**-2.6**
	comp=E,7μm,0.3s						
YER	**Yerkesik**	**1.40**	**30**	PN	**Pn**	**17 30 31.7**	**+1.2**
MLSB	**Milas**	**1.40**	**12**	PN	**Pn**	**17 30 32.0**	**+1.5**
AMGA	**Amorgos Island**	**1.52**	**307**	P	**Pn**	**17 30 31.5**	**-0.5**
AMGA				S	**Sn**	**17 30 48.6**	**-2.6**
AMGA	**Amorgos Island**	**1.52**	**307**	P	**Pn**	**17 30 31.7**	**-0.3**
AMGA				S	**Sn**	**17 30 48.5**	**-2.7**
	comp=E,762nm,0.4s						
FETY	**Fethiye**	**1.53**	**62**	PN	**Pn**	**17 30 34.0**	**+1.9**
NPS	**Neapolis**	**1.61**	**246**	P	**Pn**	**17 30 33.9**	**+0.8**
NPS				S	**Sn**	**17 30 52.7**	**-0.5**
NPS				AML	AML	17 30 53.6	
	comp=E,2765μm,0.3s						
NPS				AML	AML	17 30 54.6	
	comp=N,3010μm,0.3s						
NPS	**Neapolis**	**1.61**	**246**	P	**Pn**	**17 30 33.8**	**+0.7**
NPS				S	**Sn**	**17 30 53.1**	**0.0**
	comp=N,1μm,0.2s						
THR8	**Santorini-Mono**	**1.64**	**288**	P	**Pn**	**17 30 33.3**	**-0.1**
THR8	**Santorini-Mono**	**1.64**	**288**	P	**Pn**	**17 30 33.3**	**-0.1**
SANT	**Santorini**	**1.64**	**286**	P	**Pn**	**17 30 33.4**	**-0.2**
SANT	**Santorini**	**1.64**	**286**	PN	**Pn**	**17 30 33.3**	**-0.2**
SANT	**Santorini**	**1.64**	**286**	*i* P	**Pn**	**17 30 33.4**	**-0.2**
SANT				*i* S	**Sn**	**17 30 49.5**	**-4.5**
SANT	**Santorini**	**1.64**	**286**	P	**Pn**	**17 30 33.5**	**-0.1**
SANT				S	**Sn**	**17 30 51.3**	**-2.7**
	comp=N,715nm,0.2s						
SNT1	**Gialos, Santor**	**1.68**	**288**	P	**Pn**	**17 30 34.0**	**-0.1**
SNT1	**Gialos, Santor**	**1.68**	**288**	P	**Pn**	**17 30 33.9**	**-0.1**
THR7	**Fira-Santorini**	**1.68**	**288**	P	**Pn**	**17 30 34.2**	**+0.1**
THR7	**Fira-Santorini**	**1.68**	**288**	P	**Pn**	**17 30 34.2**	**+0.1**
THR6	**Thira Island,**	**1.68**	**285**	P	**Pn**	**17 30 34.3**	**+0.1**
THR6	**Thira Island,**	**1.68**	**285**	P	**Pn**	**17 30 34.2**	**+0.1**
THT2	**Imerovigli**	**1.69**	**288**	PN	**Pn**	**17 30 34.4**	**+0.2**
THR3	**Thira Island,**	**1.70**	**287**	P	**Pn**	**17 30 34.3**	**0.0**
THR3	**Thira Island,**	**1.70**	**287**	P	**Pn**	**17 30 34.3**	**0.0**
CMBO	**Columbo, Santo**	**1.71**	**289**	P	**Pn**	**17 30 34.6**	**+0.1**
CMBO				S	**Sn**	**17 30 53.3**	**-2.2**
CMBO				AML	AML	17 30 54.5	
	comp=N,3985μm,0.5s						
CMBO				AML	AML	17 30 55.2	
	comp=E,3416μm,0.4s						
CMBO	**Columbo, Santo**	**1.71**	**289**	P	**Pn**	**17 30 34.5**	**+0.1**
CMBO				S	**Sn**	**17 30 53.3**	**-2.2**
THR9	**Santorini-Faro**	**1.72**	**285**	P	**Pn**	**17 30 34.5**	**-0.1**
THR9	**Santorini-Faro**	**1.72**	**285**	P	**Pn**	**17 30 34.6**	**+0.1**
SAP4	**Santorini-Oia**	**1.74**	**289**	P	**Pn**	**17 30 35.0**	**+0.2**
THR5	**Thira Island,**	**1.74**	**287**	P	**Pn**	**17 30 34.9**	**+0.1**
THR5	**Thira Island,**	**1.74**	**287**	P	**Pn**	**17 30 35.0**	**+0.1**
SAP3	**Santorini-Thir**	**1.75**	**288**	P	**Pn**	**17 30 35.2**	**+0.2**
SAP3	**Santorini-Thir**	**1.75**	**288**	P	**Pn**	**17 30 35.1**	**+0.2**
LAST	**Lasithi**	**1.75**	**245**	P	**Pn**	**17 30 36.0**	**+0.9**
LAST	**Lasithi**	**1.75**	**245**	P	**Pn**	**17 30 36.0**	**+0.9**
LAST				S	**Sn**	**17 30 56.7**	**+0.1**
	comp=E,320nm,0.3s						
KSL	**Kastellorizon**	**1.78**	**82**	P	**Pn**	**17 30 38.0**	**+2.6**
KSL				AML	AML	17 31 02.4	
	comp=E,866μm,0.3s						
KSL				AML	AML	17 31 04.4	
	comp=N,460μm,0.4s						
KSL	**Kastellorizon**	**1.78**	**82**	P	**Pn**	**17 30 37.8**	**+2.5**
KSL				S	**Sn**	**17 30 58.5**	**+1.3**
KSL	**Kastellorizon**	**1.78**	**82**	P	**Pn**	**17 30 37.9**	**+2.6**
GCAM	**G?zelcaml?**	**1.78**	**356**	PN	**Pn**	**17 30 35.9**	**+0.5**
GCAM	**G?zelcaml?**	**1.78**	**356**	*i* P	**Pn**	**17 30 35.9**	**+0.5**
GCAM				*i* S	**Sn**	**17 30 54.6**	**-2.6**
GCAM				IAML		17 30 56.0	
	comp=E,223nm,0.4s						
GCAM				IAML		17 30 57.0	
	comp=N,286nm,0.6s						
AKAS	**Kas**	**1.81**	**80**	PN	**Pn**	**17 30 38.3**	**+2.4**
AKAS	**Kas**	**1.81**	**80**	*i* P	**Pn**	**17 30 38.2**	**+2.4**
CAME	**Cameli-Denizli**	**1.83**	**56**	PN	**Pn**	**17 30 38.6**	**+2.3**
SMG	**Samos**	**1.84**	**346**	P	**Pn**	**17 30 36.3**	**+0.1**
SMG	**Samos**	**1.84**	**346**	P	**Pn**	**17 30 36.3**	**+0.1**
APE	**Apeiranthos**	**1.90**	**308**	P	**Pn**	**17 30 36.8**	**-0.3**
APE	**Apeiranthos**	**1.90**	**308**	PN	**Pn**	**17 30 36.7**	**-0.3**
APE	**Apeiranthos**	**1.90**	**308**	*i* P	**Pn**	**17 30 37.0**	**0.0**
APE				*i* S	**Sn**	**17 30 57.0**	**-3.2**
APE	**Apeiranthos**	**1.90**	**308**	P	**Pn**	**17 30 36.9**	**-0.1**
APE				S	**Sn**	**17 30 57.6**	**-2.5**
	comp=N,800nm,0.4s						
TAVA	**DENIZLI_Tavas**	**1.96**	**38**	*i* P	**Pn**	**17 30 39.3**	**+1.5**
TAVA				*i* S	**Sn**	**17 31 01.7**	**+0.1**
TAVA				IAML		17 31 07.0	
	comp=E,174nm,0.3s						
TAVA				IAML		17 31 09.0	
	comp=N,174nm,0.3s						
HRKL	**Herakleio**	**1.98**	**253**	PN	**Pn**	**17 30 38.9**	**+0.9**
DEMR	**Demre-Antalya**	**2.05**	**80**	PN	**Pn**	**17 30 41.3**	**+2.3**
AYDB	**Zeytinkoy-Aydi**	**2.06**	**11**	PN	**Pn**	**17 30 39.9**	**+0.7**
IDI	**Anoyia**	**2.15**	**254**	P	**Pn**	**17 30 40.7**	**+0.3**
	comp=N,40nm,0.3s,baz=59,slow=14,SNR=295						
IDI				S	**Sn**	**17 31 04.8**	**-1.4**
	comp=N,49nm,0.3s,baz=300,slow=20,SNR=10.0						
IDI	**Anoyia**	**2.15**	**254**	P	**Pn**	**17 30 40.7**	**+0.3**
IDI	**Anoyia**	**2.15**	**254**	PN	**Pn**	**17 30 40.6**	**+0.2**
IDI	**Anoyia**	**2.15**	**254**	P	**Pn**	**17 30 40.6**	**+0.2**
IDI				S	**Sn**	**17 31 05.2**	**-1.0**
	comp=N,298nm,0.4s						
DGB	**zmir**	**2.17**	**349**	*i* P	**Pn**	**17 30 40.8**	**+0.2**
DGB				*i* S	**Sn**	**17 31 02.3**	**-4.1**
GOLH	**Golhisar**	**2.17**	**52**	*i* P	**Pn**	**17 30 43.5**	**+2.7**
GOLH				*i* S	**Sn**	**17 31 07.5**	**+0.7**
GOLH				IAML		17 31 17.0	
	comp=N,327nm,0.8s						
ELL	**Elmali**	**2.18**	**67**	PN	**Pn**	**17 30 43.9**	**+3.0**
ELL	**Elmali**	**2.18**	**67**	P	**Pn**	**17 30 43.6**	**+2.7**
SIVA	**Sivas**	**2.31**	**248**	P	**Pn**	**17 30 44.5**	**+2.1**
SIVA	**Sivas**	**2.31**	**248**	P	**Pn**	**17 30 44.2**	**+1.8**
AKUM	**Antalya-Kumluc**	**2.41**	**80**	*i* P	**Pn**	**17 30 46.5**	**+2.7**
AKUM				*i* S	**Sn**	**17 31 12.8**	**+0.5**
AKUM				IAML		17 31 18.0	
	comp=E,147nm,0.3s						
AKUM				IAML		17 31 19.0	
	comp=N,104nm,0.3s						
BLCB	**Balcova**	**2.48**	**353**	PN	**Pn**	**17 30 44.8**	**+0.1**
URLA	**Izmir**	**2.52**	**345**	PN	**Pn**	**17 30 45.6**	**+0.2**
URLA	**Izmir**	**2.52**	**345**	*i* P	**Pn**	**17 30 45.4**	**0.0**
URLA				*i* S	**Sn**	**17 31 08.5**	**-6.5**
MHLA	**Plaka, Milos I**	**2.55**	**290**	P	**Pn**	**17 30 46.5**	**+0.8**
MHLO	**Agia Marina, M**	**2.55**	**288**	P	**Pn**	**17 30 46.4**	**+0.7**
MHLO	**Agia Marina, M**	**2.55**	**288**	P	**Pn**	**17 30 46.3**	**+0.7**
KORT	**Korkuteli**	**2.60**	**65**	PN	**Pn**	**17 30 49.7**	**+3.1**
KORT	**Korkueli**	**2.60**	**65**	*i* P	**Pn**	**17 30 49.4**	**+2.8**
KORT				*i* S	**Sn**	**17 31 19.5**	**+2.2**
KORT				IAML		17 31 26.0	
	comp=E,123nm,0.7s						
KEMT	**Kemer-ANTALYA**	**2.63**	**74**	PN	**Pn**	**17 30 48.9**	**+2.1**
VAM	**Vamos**	**2.66**	**260**	P	**Pn**	**17 30 47.4**	**+0.1**
VAM	**Vamos**	**2.66**	**260**	P	**Pn**	**17 30 47.4**	**+0.1**
BRDR	**BURDUR-Merkez**	**2.77**	**49**	*i* P	**Pn**	**17 30 50.6**	**+1.8**
BRDR				*i* S	**Sn**	**17 31 19.1**	**-2.1**
KULA	**Kula-Manisa**	**2.77**	**21**	PN	**Pn**	**17 30 49.3**	**+0.4**
IMMV	**Iera Moni Meta**	**2.83**	**262**	P	**Pn**	**17 30 50.2**	**+0.7**
IMMV	**Iera Moni Meta**	**2.83**	**262**	PN	**Pn**	**17 30 49.6**	**+0.1**
IMMV	**Iera Moni Meta**	**2.83**	**262**	P	**Pn**	**17 30 50.2**	**+0.7**
GVD	**Gavdhos**	**2.92**	**249**	P	**Pn**	**17 30 52.4**	**+1.6**
GVD	**Gavdhos**	**2.92**	**249**	PN	**Pn**	**17 30 52.0**	**+1.2**
GVD	**Gavdhos**	**2.92**	**249**	P	**Pn**	**17 30 52.7**	**+1.9**
BCK	**Bucak**	**2.98**	**58**	PN	**Pn**	**17 30 53.0**	**+1.3**
RODP	**Rodopos**	**2.99**	**264**	PN	**Pn**	**17 30 52.0**	**+0.2**
ZEDA	**zmir-Bergama**	**3.05**	**355**	*i* P	**Pn**	**17 30 52.6**	**0.0**
ZEDA				*i* S	**Sn**	**17 31 25.3**	**-2.6**
USAK	**Uak-Merkez**	**3.07**	**24**	*i* P	**Pn**	**17 30 54.0**	**+1.1**
USAK				*i* S	**Sn**	**17 31 23.1**	**-5.3**
USAK				IAML		17 31 27.0	
	comp=E,118nm,0.7s						
KNDR	**Palaiochora Ch**	**3.11**	**258**	PN	**Pn**	**17 30 54.2**	**+0.8**
ISP	**Isparta**	**3.13**	**52**	PN	**Pn**	**17 30 54.8**	**+1.0**
DKL	**Dikili**	**3.17**	**353**	PN	**Pn**	**17 30 54.2**	**+0.1**
ANKY	**Antikythira Is**	**3.33**	**270**	P	**Pn**	**17 30 56.7**	**+0.2**
SIMA	**Simav-Kutahya**	**3.39**	**21**	PN	**Pn**	**17 30 57.8**	**+0.5**
SIGR	**SIGRI**	**3.51**	**340**	PN	**Pn**	**17 30 58.0**	**-0.7**
KTHA	**Kythira Island**	**3.54**	**277**	P	**Pn**	**17 30 59.6**	**+0.4**
KTHA	**Kythira Island**	**3.54**	**277**	PN	**Pn**	**17 30 59.4**	**+0.2**
KTHA	**Kythira Island**	**3.54**	**277**	P	**Pn**	**17 30 59.7**	**+0.5**
SHUT	**Suhut-Afyon**	**3.63**	**43**	PN	**Pn**	**17 31 01.7**	**+1.2**
VLI	**Veliai**	**3.70**	**284**	P	**Pn**	**17 31 02.2**	**+0.9**
VLI	**Veliai**	**3.70**	**284**	P	**Pn**	**17 31 01.9**	**+0.6**
BALB	**Balikesir**	**3.73**	**6**	PN	**Pn**	**17 31 01.7**	**-0.1**
BALY	**Balya**	**3.81**	**2**	*i* P	**Pn**	**17 31 02.9**	**-0.1**
BALY				*i* S	**Sn**	**17 31 41.4**	**-5.3**
BALY				IAML		17 31 47.0	
	comp=N,46nm,0.9s						
SEYD	**Seydisehir-KON**	**3.86**	**66**	PN	**Pn**	**17 31 05.4**	**+1.8**
BAYC	**CANAKKALE_Bayr**	**3.87**	**350**	*i* P	**Pn**	**17 31 04.2**	**+0.5**
BAYC				*i* S	**Sn**	**17 31 44.5**	**-3.5**
TVSB	**Tavsanli**	**3.88**	**24**	PN	**Pn**	**17 31 04.5**	**+0.6**
GAZI	**Gazipasa**	**3.99**	**84**	PN	**Pn**	**17 31 06.6**	**+1.3**
EZN	**Ezine**	**3.99**	**348**	PN	**Pn**	**17 31 05.1**	**-0.2**
OSC1	**CSNet OBS 1**	**4.00**	**126**	P	**Pn**	**17 31 05.9**	**+0.5**
OSC1				S	**Sn**	**17 31 50.3**	**-0.8**
BOZC	**Bozcaada**	**4.06**	**345**	PN	**Pn**	**17 31 06.1**	**-0.1**
AKMS	**Akamas**	**4.12**	**101**	⇓P	**Pn**	**17 31 08.2**	**+1.0**
AKMS				AML	AML	17 31 55.1	
	comp=N,1.4nm,0.2s						
AKMS				AML	AML	17 31 55.9	
	comp=N,2.5nm,0.4s						
ALFC	**Alefka**	**4.30**	**99**	P	**Pn**	**17 31 10.5**	**+0.8**
ALFC				AML	AML	17 32 00.4	
	comp=N,1.4nm,0.2s						
ALFC				AML	AML	17 32 00.5	
	comp=N,1.8nm,0.2s						
NATA	**Nata**	**4.37**	**104**	⇑P	**Pn**	**17 31 11.4**	**+0.9**
GADA	**Gvkgeada**	**4.42**	**345**	PN	**Pn**	**17 31 11.2**	**0.0**
LEF	**Lefka**	**4.54**	**99**	PN	**Pn**	**17 31 13.2**	**+0.3**
MATC	**Matruh** baz=190	**4.57**	**182**	P	**Pn**	**17 31 14.8**	**+1.6**
ITM	**Ithomi**	**4.59**	**287**	PN	**Pn**	**17 31 13.0**	**-0.5**
SZAC	**Souni**	**4.62**	**103**	⇑P	**Pn**	**17 31 15.0**	**+1.0**
SLUM	**Salum** baz=217	**4.78**	**203**	P	**Pn**	**17 31 17.1**	**+0.9**
SLUM				AMP		17 32 00.0	
	baz=217						
SLUM				S	**Sn**	**17 32 03.6**	**-6.7**
	baz=217						
ASGA	**Asgata**	**4.91**	**102**	⇓P	**Pn**	**17 31 18.8**	**+1.0**
OSC2	**CSNet OBS 4**	**4.92**	**124**	S	**Sn**	**17 32 12.1**	**-1.4**
CSS	**Mathiatis**	**4.93**	**99**	Pn	**Pn**	**17 31 19.3**	**+1.1**
CSS	**Mathiatis**	**4.93**	**99**	P	**Pn**	**17 31 19.2**	**+1.1**
BRTR	**Keskin Array B**	**6.22**	**51**	P	**Pn**	**17 31 37.5**	**+1.5**
	comp=N,0.9nm,0.3s,baz=217,slow=14,SNR=31						
BRTR				S	**Sn**	**17 32 45.0**	**-0.7**
	comp=N,0.2nm,0.3s,baz=215,slow=26,SNR=2.2						
HNAT	**Natroun** baz=154	**6.83**	**156**	P	**Pn**	**17 31 44.1**	**-0.1**
HNAT				S	**Sn**	**17 32 54.8**	**-5.7**
	baz=154						
HNAT				AMP		17 33 00.0	
	baz=154						
SWA2		**6.86**	**194**	P	**Pn**	**17 31 45.6**	**+1.0**
	baz=202						
SWA2				S	Sn	17 32 49.5	-12
	baz=202						
KOT	**Kottamia** baz=143	**7.04**	**147**	P	**Pn**	**17 31 47.5**	**+0.4**
KOT				S	**Sn**	**17 32 59.9**	**-5.7**
	baz=143						
OFRI	**`Ofer**	**7.08**	**116**	Pn	**Pn**	**17 31 49.7**	**+2.0**
HHAG	**Hagoal** baz=141	**7.14**	**145**	P	**Pn**	**17 31 48.9**	**+0.5**
HSAF	**As Saff** baz=147	**7.19**	**150**	P	**Pn**	**17 31 49.6**	**+0.5**
MMA0B	**Mount Meron ar**	**7.21**	**111**	Pn	**Pn**	**17 31 50.0**	**+0.6**
MMA0B				Sn	**Sn**	**17 33 06.4**	**-3.5**
MMAI	**Mount Meron Ar**	**7.21**	**111**	P	**Pn**	**17 31 49.1**	**-0.3**
	comp=N,4.3nm,0.3s,baz=318,slow=12,SNR=30						
MMAI				S	**Sn**	**17 33 06.8**	**-3.1**
	comp=N,19nm,0.3s,baz=297,slow=24,SNR=19						
GLL	**Jalalah** baz=146	**7.29**	**149**	P	**Pn**	**17 31 51.2**	**+0.7**
GEM	**Giv'at Ha'Em**	**7.33**	**109**	Pn	**Pn**	**17 31 51.6**	**+0.7**
NATI	**Neve Ativ**	**7.36**	**109**	Pn	**Pn**	**17 31 52.5**	**+1.1**
MMLI	**Mount Malkishu**	**7.49**	**115**	Pn	**Pn**	**17 31 54.8**	**+1.5**
SUZ	**Suez** baz=137	**7.59**	**142**	P	**Pn**	**17 31 55.6**	**+1.1**
SHMJ	**Saham**	**7.61**	**112**	Pn	**Pn**	**17 31 55.8**	**+1.0**
AMAZ	**Amatzia**	**7.63**	**123**	Pn	**Pn**	**17 31 56.4**	**+1.3**
AMAZ				Sn	**Sn**	**17 33 16.4**	**-3.7**
HMDT	**Nahal Hemdat**	**7.66**	**116**	Pn	**Pn**	**17 31 56.7**	**+1.2**
HMDT				Sn	**Sn**	**17 33 16.8**	**-4.0**
KZIT	**Kziot**	**7.69**	**129**	Pn	**Pn**	**17 31 56.5**	**+0.6**
KZIT				Sn	**Sn**	**17 33 17.5**	**-4.0**
YTIR	**Yattir**	**7.87**	**123**	Pn	**Pn**	**17 31 59.3**	**+0.8**
YTIR				Sn	**Sn**	**17 33 22.4**	**-3.7**
DSI	**Dead Sea**	**7.93**	**121**	Pn	**Pn**	**17 31 59.9**	**+0.7**
GHAJ	**Ghor Haditha**	**8.21**	**122**	Pn	**Pn**	**17 32 04.0**	**+0.9**
KRMI	**Paran Flat**	**8.44**	**131**	Pn	**Pn**	**17 32 06.5**	**+0.3**
KRMI				Sn	**Sn**	**17 33 33.0**	**-6.9**
PRNI	**Paran**	**8.45**	**129**	Pn	**Pn**	**17 32 06.6**	**+0.3**
PRNI				Sn	**Sn**	**17 33 34.9**	**-5.2**
HRFI	**Mount Harif**	**8.69**	**130**	Pn	**Pn**	**17 32 10.0**	**+0.4**
HRFI				Sn	**Sn**	**17 33 40.6**	**-5.4**
ASF	**Jabal al Asfar**	**8.72**	**113**	S	**Sn**	**17 33 41.5**	**-5.2**
	comp=N,0.3nm,0.3s,baz=18,slow=20,SNR=1.6						
HFRF	**Wahat Farafira** baz=177	**8.78**	**175**	P	**Pn**	**17 32 11.3**	**+0.5**
MBRI	**Mt Berech**	**8.78**	**132**	Pn	**Pn**	**17 32 11.3**	**+0.4**
MBRI				Sn	**Sn**	**17 33 43.0**	**-5.4**
EIL	**Elat**	**8.90**	**132**	P	**Pn**	**17 32 12.8**	**+0.4**
	comp=N,0.5nm,0.3s,baz=300,slow=4.7,SNR=20						
EIL				S	**Sn**	**17 33 45.1**	**-5.9**
	comp=N,5.0nm,0.3s,baz=333,slow=15,SNR=13						
EIL	**Elat**	**8.90**	**132**	Pn	**Pn**	**17 32 12.8**	**+0.

baz=78
N02D Trinity Center 2.42 250 Pb Pb 17 54 06.2 -1.2
baz=68,SNR=6.8
N02D Sg Sg 17 54 40.2 -0.6
baz=68
WDC Whiskeytown Da 2.49 240 Pn 17 54 04.6 +0.1
WDC Pg Pb 17 54 08.1 -0.3
HUMO Hull Mountain 2.53 289 Pn 17 54 04.9 -0.2
VCNR Virginia City 2.55 179 Pn 17 54 05.7 +0.2
ORV Oroville 2.67 211 Pn 17 54 08.1 +1.2
PNTR Pine Nut 2.76 178 Pb 17 54 13.6 +0.4
I05D Terrebonne, OR 2.76 335 Pb Pb **17 54 15.0 +1.9**
baz=153
I05D Sb Sg **17 54 51.4 -0.4**
baz=153
I04A Tendick Farm, 2.78 315 Pb Pb **17 54 13.9 +0.5**
baz=132
I04A Sb Sg **17 54 51.2 -1.3**
baz=132
RUBR Rubicon Trail 2.81 187 Pg 17 54 16.8 -0.3
L02E Cave Junction 2.92 277 Sb Sb **17 54 53.0 +1.1**
baz=94
AFDM Forest Hills D 3.06 199 Pb 17 54 19.7 +1.6
KHMM Horse Mountain 3.18 254 Pg Pg **17 54 23.0 -1.1**
MFID Camas Ranch 3.26 60 Pn Pn **17 54 14.9 -0.3**
RYN Ryan 3.34 164 Pb 17 54 24.5 +1.5
WAKR Walker 3.35 176 Pg 17 54 25.5 -1.7
H04A Detroit Lake 3.36 328 Pg Pb **17 54 24.8 +1.4**
BMO Blue Mountains 3.48 29 Pb 17 54 26.3 +1.0
ELK Elko 3.54 107 Pn Pn **17 54 20.1 +0.9**
NVAR Mina Array Bea 3.58 162 Pn 17 54 20.1 +0.4
LHV Little Huntoon 3.71 165 Pn 17 54 23.6 +2.3
CMB Columbia Colle 3.84 188 Pn 17 54 25.1 +1.9
TPH Tonopah 4.22 152 Pn Pn **17 54 29.2 +0.7**
MDPB Devils Postpil 4.24 173 Pn Pn **17 54 30.7 +1.9**
HLID Hailey 4.26 65 Pn 17 54 28.2 -0.7
R11A Troy Canyon, C 4.71 137 Pb 17 54 46.1 -0.3
BGU Big Grassy Mou 5.11 98 Pn 17 54 42.1 +1.5
HVU Hansel Valley 5.18 88 Pn Pn **17 54 41.5 -0.1**
BCYI Bear Canyon 5.23 60 Pn 17 54 40.9 -1.5
DUG Dugway, Tooele 5.47 105 Pn Pn **17 54 45.8 +0.3**
PSUT Pine Spring 5.57 125 Pn 17 54 47.1 +0.1
PRN Pahroc Range 5.71 139 Pn 17 54 47.1 -1.7

WEL 05 17:54:19.8, 43.3°S ± 85.5° × 177.1°E ± 2.5°, h30 km ± 26 km, M2.2/6, ML2.3/6, MLv2.2/6, Error ellipse: s-maj=0.1 km s-min=0.0 km az=164.7, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
WVZ	**Waitaha Valley**	**0.05**	**294**	P		Pb	17 54 25.6	+0.7
GCSZ	**Gaunt Creek Bo**	**0.41**	**237**	P		Pn	17 54 30.8	+1.2
INZ	**Inchbonnie**	**0.60**	**52**	P		Pn	17 54 32.3	0.0
RPZ	**Rata Peaks**	**0.65**	**164**	P		Pn	17 54 33.7	+0.8
MHCZ	**Mount Hutt**	**0.71**	**128**	P		Pb	17 54 29.7	-4.0
FOZ	**Fox Glacier**	**0.84**	**238**	P		Pb	17 54 36.4	+0.5
ARCZ	**Arundel**	**0.89**	**162**	P		Pn	17 54 32.8	-3.6
LTZ	**Lake Taylor**	**1.12**	**74**	P		Pb	17 54 41.0	+0.4
LBZ	**Lake Benmore**	**1.36**	**199**	P		Pn	17 54 43.7	+0.9
OKCZ	**Okains Bay**	**1.76**	**112**	P		Pn	17 54 48.2	0.0
ODZ	**Otahua Downs**	**1.95**	**183**	P		Pn	17 54 50.9	0.0

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*DJA **05** 17:56:51.4±1.6, 0.7°N±4.4° × 122.7°E±2.5°, h21 km ± 18 km, M4.2/10, mB4.8/2, mb4.6/6, MLv4.1/10, Mw(mB)4.0/2*
*NEIC **05** 17:56:53.3±1.9, 0.4°N±0.1° × 126.65°E±0.04, h52 km ± 10 km, mb4.2/9, Error ellipse: s-maj=15.3 km s-min=6.2 km az=176.0*
*IDC **05** 17:56:53.2±2.0, 0.35°N × 126.61°E, h48 km ± 20 km, mb3.8/10, mb1 3.9/13, mb1mx3.6/42, mbtmp4.0/13, ML3.7/3, Error ellipse: s-maj=20.0 km s-min=14.1 km az=72.0*
ISC 05 17:56:51.9±0.6, 0.37°N±0.07° × 126.63°E±0.06, h35 km, n40, σ1°59/43, mb4.2/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
TNTI	**Ternate**	**0.84**	**62**	P		**Pn**	**17 57 07.1**	**-0.1**
TNTI	**Ternate**	**0.84**	**62**			**Pn**	**17 57 07.2**	**-0.1**
SANI	**Sanana**	**2.49**	**195**	P		**Pn**	**17 57 29.3**	**-0.6**
KMSI	**Cibinong**	**2.65**	**274**	P		**Pn**	**17 57 34.5**	**+2.3**
NLAI	**Namlea**	**3.62**	**172**	P		**Pn**	**17 57 46.4**	**+0.9**
GTOI	**Gorontalo**	**3.62**	**274**	P		**Pn**	**17 57 49.9**	**+4.3**
LUWI	**Luwuk**	**4.10**	**250**	P		Pn	17 57 58.9	+6.8
LUWI	**Luwuk**	**4.10**	**250**			**Pn**	**17 57 55.3**	**+3.2**
SIJI	**Sorong**	**4.80**	**105**	P		**Pn**	**17 58 05.0**	**+3.2**
	1.7nm,0.3s,baz=299,slow=13,SNR=12							
SIJI				S		**Sn**	**17 58 58.4**	**+2.2**
	0.4nm,0.3s,baz=218,slow=21,SNR=1.0							
APSI	**Ampana**	**5.14**	**256**	P		**Pn**	**17 58 06.6**	**+0.2**
	0.3nm505nm36nm,0.7s							
FAKI	**Fak Fak**	**6.50**	**120**	Pn		**Pn**	**17 58 26.5**	**+1.3**
TTSI	**Tana Toraja**	**7.61**	**243**	P		**Pn**	**17 58 41.4**	**+1.1**
	0.1nm30nm,0.5s							
BNSI	**Bone**	**8.06**	**234**	P		**Pn**	**17 58 47.3**	**+0.8**
	25nm,0.7s							
SPSI	**Sidrap Palu**	**8.10**	**238**	P		**Pn**	**17 58 49.1**	**+2.1**
	0.3nm882nm69nm,0.5s							
BKSI	**Bulukumba**	**8.61**	**229**	P		**Pn**	**17 58 56.8**	**+2.7**
	17nm,0.7s							
KAPI	**Kappang**	**8.71**	**232**	P		**Pn**	**17 58 57.8**	**+2.4**
	2.3nm,0.3s,baz=72,slow=9.6,SNR=1.8							
KAPI				S		**Sn**	**18 00 29.2**	**-3.2**
	1.9nm,0.3s,baz=128,slow=19,SNR=1.9							
EDFI	**Ende, Flores**	**10.31**	**208**	P		**Pn**	**17 59 19.8**	**+2.3**
FITZ	**Fitzroy Crossi**	**18.38**	**183**	P		**P**	**18 01 03.1**	**-0.7**
	0.1nm,0.3s,baz=0.8,slow=7.1,SNR=5.8							
WB0	**Warramunga Arr**	**21.42**	**160**	P		**P**	**18 01 36.3**	**-0.7**
WB0				IAmb		IAmb	18 01 39.5	
	comp=Z,6.8nm,0.4s							
WRA	**Warramunga Arr**	**21.56**	**160**	P		**P**	**18 01 37.5**	**-1.0**
	comp=Z,3.5nm,0.4s,baz=337,slow=10,SNR=78							
WRA	**Warramunga Arr**	**21.56**	**160**	P		**P**	**18 01 37.2**	**-1.3**
WB2	**Warramunga Arr**	**21.56**	**160**	P		**P**	**18 01 37.2**	**-1.3**
WB2				IAmb		IAmb	18 01 53.9	
	comp=Z,14nm,1.3s							
WR0	**Warramunga Arr**	**21.64**	**159**	P		**P**	**18 01 38.0**	**-1.4**
WR0				IAmb		IAmb	18 01 46.2	
	comp=Z,16nm,1.4s							
AS31	**Alice Springs**	**24.92**	**164**	P		**P**	**18 02 11.5**	**-0.4**
ASAR	**Alice Springs**	**24.92**	**164**	P		**P**	**18 02 11.4**	**-0.5**
	comp=Z,4.4nm,0.6s,baz=344,slow=12,SNR=90							
ASAR				PcP		**PcP**	**18 05 46.3**	**-0.8**
	comp=Z,0.3nm,1.0s,baz=350,slow=2.6,SNR=1.7							
ASAR				ScP		**ScP**	**18 09 23.4**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=338,slow=2.9,SNR=4.8							
ASAR	**Alice Springs**	**24.92**	**164**	P		**P**	**18 02 11.2**	**-0.7**
BBOO	**Buckleboo**	**34.19**	**166**	P		**P**	**18 03 33.9**	**-0.2**
STKA	**Stephens Creek**	**35.07**	**158**	P		**P**	**18 03 41.6**	**0.0**
	comp=Z,3.9nm,0.7s,baz=318,slow=7.3,SNR=10							
STKA	**Stephens Creek**	**35.07**	**158**	P		**P**	**18 03 41.5**	**-0.2**
MJAR	**Matsushiro Arr**	**37.56**	**15**	P		**P**	**18 04 01.7**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=189,slow=8.7,SNR=1.7							
JSD	**Sado**	**38.98**	**15**	P		**P**	**18 04 14.4**	**-0.4**
USRK	**Ussuriysk Ar.**	**43.90**	**6**	P		**P**	**18 04 55.6**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=178,slow=8.1,SNR=2.1							
SONM	**Songino Array**	**50.44**	**342**	P		**P**	**18 05 46.8**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=152,slow=9.8,SNR=2.8							
PETK	**Petropavlovsk-**	**58.56**	**21**	P		**P**	**18 06 45.2**	**+0.2**
	comp=Z,4.8nm,0.9s,baz=214,slow=7.8,SNR=4.6							
MKAR	**Makanchi Array**	**60.26**	**326**	P		**P**	**18 06 57.0**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=121,slow=8.2,SNR=18							
MKAR	**Makanchi Array**	**60.26**	**326**	P		**P**	**18 06 56.8**	**0.0**
ZALV	**Zalesovo Beam**	**63.52**	**334**	P		**P**	**18 07 17.4**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=127,slow=8.1,SNR=2.1							
ABKAR	**Akbulak array**	**74.68**	**321**	P		**P**	**18 08 27.9**	**+0.1**
ABKAR	**Akbulak array**	**74.68**	**321**	P		**P**	**18 08 28.0**	**+0.1**
ABKAR					IAmb	IAmb	18 08 28.7	
	comp=Z,1.4nm,0.8s							
ILAR	**Eielson Array**	**88.16**	**25**	P		**P**	**18 09 38.2**	**-0.7**
	comp=Z,0.6nm,1.0s,baz=257,slow=3.8,SNR=2.4							

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*IDC **05** 18:06:29.1±1.3, 6.66°N × 72.79°W, h172 km ± 32 km, mb1 3.5/2, mb1mx2.9/47, mbtmp4.0/2, Error ellipse: s-maj=681.7 km s-min=14.7 km az=132.0*
*RSNC **05** 18:06:30.2±1.2, 6.81°N × 73.13°W, h147 km ± 5 km, ML3.3, Mw3.6, Fault plane solution: NP1: φs 13.00000°, δ 28.00000°, λ 98.00000°.*
ISC 05 18:06:29.0±1.0, 6.86°N±0.03° × 73.12°W±0.04, h153 km ± 6 km, n29, σ1°31/55, 6C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
BARC	**Barichara**	**0.27**	**193**	⇓*iP*		**Pn**	**18 06 50.1**	**0.0**
BARC				*eS*		**Sn**	**18 07 05.3**	**-0.9**
BARC				*i*			18 07 06.8	
	comp=Z,316nm,0.4s							
BRRC	**Barranca, Sant**	**0.64**	**293**	⇑*iP*		**Pn**	**18 06 51.9**	**+0.5**
BRRC				*eS*		**Sn**	**18 07 09.3**	**+0.8**
BRRC				*i*			18 07 12.7	
	comp=Z,412nm,0.1s							
PAMC	**Pamplona, Colo**	**0.64**	**41**	⇑*iP*		**Pn**	**18 06 52.8**	**+0.8**
PAMC				*eS*		**Sn**	**18 07 10.0**	**+0.4**
PAMC				*i*			18 07 10.7	
	comp=Z,170nm,0.2s							
RUSC	**La Rusia**	**0.96**	**178**	⇑*iP*		**Pn**	**18 06 54.0**	**-0.3**
RUSC				*eS*		**Sn**	**18 07 12.1**	**-1.5**
RUSC				*i*			18 07 13.8	
	comp=Z,279nm,0.2s							
PTBC	**PUERTO BERRIO,**	**1.36**	**257**	⇑*iP*		**Pn**	**18 06 56.6**	**-0.8**
PTBC				*eS*		**Sn**	**18 07 18.4**	**-0.7**
PTBC				*i*			18 07 25.2	
	comp=Z,314nm,0.3s							
TAMC	**Tame, Arauca**	**1.39**	**107**	⇓*iP*		**Pn**	**18 06 58.4**	**+0.7**
TAMC				*eS*		**Sn**	**18 07 19.8**	**+0.1**
TAMC				*i*			18 07 20.7	
	comp=Z,137nm,0.5s							
OCAC	**Ocana**	**1.39**	**352**	*eP*		**Pn**	**18 06 58.3**	**+0.5**
OCAC				*eS*		**Sn**	**18 07 19.9**	**-0.1**
OCAC				*i*			18 07 25.6	
	comp=Z,246nm,0.3s							
SPBC	**San Pablo de B**	**1.52**	**218**	⇑*iP*		**Pn**	**18 06 59.0**	**-0.2**
SPBC				*eS*		**Sn**	**18 07 21.4**	**-0.8**
SPBC				*i*			18 07 22.5	
	comp=Z,350nm,0.2s							
NORC	**Norcasia**	**2.16**	**234**	*eP*		**Pn**	**18 07 05.9**	**-0.3**
NORC				*eS*		**Sn**	**18 07 34.1**	**-0.8**
CHIC	**Chingaza**	**2.29**	**195**	⇑*iP*		**Pn**	**18 07 08.3**	**+0.1**
CHIC				*eS*		**Sn**	**18 07 37.8**	**-0.6**
CHIC				*i*			18 07 39.7	
	comp=Z,62nm,0.2s							
ROSC	**El Rosal**	**2.33**	**211**	P		**Pn**	**18 07 10.1**	**+1.5**
	comp=Z,34nm,0.3s,baz=277,slow=17,SNR=67							
ROSC				S		**Sn**	**18 07 37.3**	**-1.8**
	comp=Z,75nm,0.3s,baz=194,slow=22,SNR=10							
ROSC	**El Rosal**	**2.33**	**211**	*eP*		**Pn**	**18 07 10.0**	**+1.5**
ROSC				*eS*		**Sn**	**18 07 40.0**	**+0.9**
ROSC				*i*			18 07 46.6	
	comp=Z,246nm,0.5s							
HELC	**Santa Helena**	**2.48**	**255**	*eP*		**Pn**	**18 07 11.7**	**+1.3**
HELC				*eS*		**Sn**	**18 07 42.0**	**-0.2**
HELC				*i*			18 07 50.0	
	comp=Z,102nm,0.3s							
UREC	**San Jos de Ur**	**2.55**	**291**	*eP*		**Pn**	**18 07 10.0**	**-0.9**
UREC				*eS*		**Sn**	**18 07 41.4**	**-1.9**
UREC				*i*			18 07 53.5	
	comp=Z,180nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*eP*		**Pn**	**18 07 14.3**	**+0.5**
GUY2C				*eS*		**Sn**	**18 07 49.1**	**+0.6**
GUY2C				*i*			18 07 58.8	
	comp=Z,340nm,0.9s							
PTGC	**Puerto Gaitan,**	**2.82**	**159**	*eP*		**Pn**	**18 07 13.2**	**-1.1**
PTGC				*eS*		**Sn**	**18 07 46.2**	**-3.0**
PTGC				*i*			18 07 48.4	
	comp=Z,77nm,0.3s							
CBOC	**Ciudad Bolivar**	**3.04**	**251**	*eP*		**Pn**	**18 07 18.1**	**+1.0**
CBOC				*eS*		**Sn**	**18 07 54.2**	**-0.1**
CBOC				*i*			18 08 05.9	
	comp=Z,40nm,0.5s							
DBBC	**Dabeiba**	**3.07**	**273**	*eP*		**Pn**	**18 07 18.3**	**+0.9**
DBBC				*eS*		**Sn**	**18 07 54.5**	**-0.4**
DBBC				*i*			18 07 56.0	
	comp=Z,244nm,0.3s							
MOTC	**Monteria, Cord**	**3.16**	**307**	*eP*		**Pn**	**18 07 17.2**	**-1.3**
MOTC				*eS*		**Sn**	**18 07 55.4**	**-1.5**
ARGC	**Ariguani, Magd**	**3.18**	**340**	*eP*		**Pn**	**18 07 20.6**	**+1.8**
ARGC				*eS*		**Sn**	**18 07 58.3**	**+0.8**
ARGC				*i*			18 08 01.5	
	comp=Z,44nm,0.3s							
SDV	**Santo Domingo**	**3.19**	**51**	P		**Pn**	**18 07 19.2**	**+0.1**
	comp=Z,8.7nm,0.3s,baz=222,slow=2.2,SNR=21							
SDV				S		**Sn**	**18 07 57.0**	**-0.8**
	comp=Z,4.5nm,0.3s,baz=250,slow=20,SNR=11							
PRAC	**Prado**	**3.58**	**209**	*eP*		**Pn**	**18 07 23.6**	**-0.3**
PRAC				*eS*		**Sn**	**18 08 06.0**	**-0.6**
PRAC				*i*			18 08 14.1	
	comp=Z,101nm,0.3s							
ORTC	**Ortega, Tolima**	**3.61**	**216**	*eP*		**Pn**	**18 07 24.3**	**0.0**
ORTC				*eS*		**Sn**	**18 08 07.8**	**+0.5**
ORTC				*i*			18 08 12.4	
	comp=Z,73nm,0.3s							
SJCC	**San Jacinto, C**	**3.64**	**326**	*eP*		**Pn**	**18 07 23.8**	**-1.0**
SJCC				*eS*		**Sn**	**18 08 05.2**	**-2.9**
SMRC	**Santa Marta, M**	**4.42**	**346**	*eP*		**Pn**	**18 07 35.1**	**+0.3**
SMRC				*eS*		**Sn**	**18 08 22.7**	**-3.4**
GARC	**Garzon, Huila**	**5.20**	**207**	*eP*		**Pn**	**18 07 44.8**	**-0.6**
GARC				*eS*		**Sn**	**18 08 43.8**	**-1.3**
GARC				*i*			18 08 47.1	
	comp=Z,29nm,0.2s							
MKAR	**Makanchi Array**	**122.29**	**20**	PKP		**PKPdf**	**18 25 03.8**	**-2.2**
	comp=Z,0.2nm,0.5s,baz=337,slow=3.0,SNR=1.5							
ASAR	**Alice Springs**	**149.13**	**234**	PKPbc		**PKPdf**	**18 25 57.9**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=123,slow=3.4,SNR=4.2							
WRA	**Warramunga Arr**	**150.35**	**241**	PKPbc		**PKPdf**	**18 26 01.2**	**+3.4**
	comp=Z,0.3nm,0.4s,baz=112,slow=2.4,SNR=6.3							

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*IDC **05** 18:10:30.8±1.8, 5.89°N × 72.53°W, h139 km ± 16 km, mb1 3.7/3, mb1mx3.1/49, mbtmp4.2/3, Error ellipse: s-maj=79.8 km s-min=7.7 km az=136.0*
*RSNC **05** 18:10:32.0±1.2, 6.60°N × 73.44°W, h123 km ± 5 km, ML3.2, Mw3.4*
ISC 05 18:10:30.6±1.1, 6.62°N±0.03° × 73.43°W±0.03, h131 km ± 7 km, n27, σ1°30/50, 2C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
BARC	**Barichara**	**0.24**	**96**	⇑*iP*		**Pn**	**18 10 49.1**	**+0.2**
BARC				*eS*		**Sn**	**18 11 02.4**	**-0.3**
BARC				*i*			18 11 03.4	
	comp=Z,630nm,0.6s							
BRRC	**Barranca, Sant**	**0.56**	**330**	⇓*iP*		**Pn**	**18 10 50.5**	**+0.4**
BRRC				*eS*		**Sn**	**18 11 05.1**	**+0.2**
BRRC				*i*			18 11 05.7	
	comp=Z,319nm,0.1s							
RUSC	**La Rusia**	**0.80**	**155**	⇓*iP*		**Pn**	**18 10 52.4**	**0.0**
RUSC				*eS*		**Sn**	**18 11 08.4**	**-0.4**
RUSC				*i*			18 11 11.0	
	comp=Z,119nm,0.2s							
PAMC	**Pamplona, Colo**	**1.02**	**45**	*eP*		**Pn**	**18 10 54.9**	**+0.6**
PAMC				*eS*		**Sn**	**18 11 13.0**	**+0.8**
PAMC				*i*			18 11 14.6	
	comp=Z,197nm,0.2s							
PTBC	**PUERTO BERRIO,**	**1.02**	**266**	⇑*iP*		**Pn**	**18 10 53.0**	**-0.8**
PTBC				*eS*		**Sn**	**18 11 11.2**	**-0.2**
PTBC				*i*			18 11 13.0	
	comp=Z,287nm,0.1s							
SPBC	**San Pablo de B**	**1.15**	**214**	⇓*iP*		**Pn**	**18 10 55.2**	**0.0**
SPBC				*eS*		**Sn**	**18 11 12.8**	**-0.9**
SPBC				*i*			18 11 14.8	
	comp=Z,409nm,0.2s							
OCAC	**Ocana**	**1.61**	**4**	*eP*		**Pn**	**18 11 00.5**	**+0.3**
OCAC				*eS*		**Sn**	**18 11 24.1**	**+1.3**
OCAC				*i*			18 11 28.8	
	comp=Z,250nm,0.3s							
TAMC	**Tame, Arauca**	**1.64**	**96**	*eP*		**Pn**	**18 11 01.1**	**+0.8**
TAMC				*i*			18 11 22.5	
	comp=Z,248nm,0.2s							
TAMC				*eS*		**Sn**	**18 11 23.2**	**+0.2**
NORC	**Norcasia**	**1.77**	**234**	*eP*		**Pn**	**18 11 01.7**	**-0.3**
NORC				*eS*		**Sn**	**18 11 25.4**	**-0.5**
NORC				*i*			18 11 30.3	
	comp=Z,180nm,0.2s							
ROSC	**El Rosal**	**1.98**	**207**	P		**Pn**	**18 11 07.1**	**+2.4**
	comp=Z,22nm,0.3s,baz=136,slow=22,SNR=16							
ROSC				S		**Sn**	**18 11 34.1**	**+3.3**
	comp=Z,49nm,0.3s,baz=116,slow=23,SNR=18							
ROSC	**El Rosal**	**1.98**	**207**	*eP*		**Pn**	**18 11 06.6**	**+1.9**
ROSC				*eS*		**Sn**	**18 11 32.2**	**+1.4**
ROSC				*i*			18 11 40.0	
	comp=Z,150nm,0.5s							
CHIC	**Chingaza**	**2.00**	**189**	*eP*		**Pn**	**18 11 05.7**	**+0.7**
CHIC				*eS*		**Sn**	**18 11 32.1**	**+0.8**
CHIC				*i*			18 11 36.5	
	comp=Z,78nm,0.7s							
HELC	**Santa Helena**	**2.13**	**259**	*eP*		**Pn**	**18 11 07.3**	**+0.8**
HELC				*eS*		**Sn**	**18 11 34.1**	**0.0**
HELC				*i*			18 11 39.1	
	comp=Z,96nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.37**	**234**	*eP*		**Pn**	**18 11 11.3**	**+1.6**
GUY2C				*eS*		**Sn**	**18 11 41.3**	**+1.7**
GUY2C				*i*			18 11 50.8	
	comp=Z,119nm,0.4s							
UREC	**San Jos de Ur**	**2.37**	**298**	*eP*		**Pn**	**18 11 09.0**	**-0.2**
UREC				*eS*		**Sn**	**18 11 37.7**	**-1.2**
UREC				*i*			18 11 40.7	
	comp=Z,110nm,0.4s							
PTGC	**Puerto Gaitan,**	**2.73**	**152**	*eP*		**Pn**	**18 11 13.2**	**-0.5**
PTGC				*eS*		**Sn**	**18 11 45.5**	**-1.5**
PTGC				*i*			18 11 48.2	
	comp=Z,62nm,0.3s							
DBBC	**Dabeiba**	**2.79**	**278**	*eP*		**Pn**	**18 11 15.5**	**+0.9**
DBBC				*eS*		**Sn**	**18 11 47.7**	**-0.8**
DBBC				*i*			18 11 52.0	
	comp=Z,275nm,0.4s							
MOTC	**Monteria, Cord**	**3.09**	**314**	*eP*		**Pn**	**18 11 18.2**	**-0.1**
MOTC				*eS*		**Sn**	**18 11 55.1**	**-0.1**
MOTC				*i*			18 11 58.1	
	comp=Z,41nm,0.3s							
PRAC	**Prado**	**3.23**	**207**	*eP*		**Pn**	**18 11 20.9**	**+0.7**
PRAC				*eS*		**Sn**	**18 11 58.0**	**-0.7**
PRAC				*i*			18 12 06.1	
	comp=Z,66nm,0.3s							
ORTC	**Ortega, Tolima**	**3.24**	**214**	*eP*		**Pn**	**18 11 21.2**	**+0.8**
ORTC				*eS*		**Sn**	**18 11 59.7**	**+0.7**
ORTC				*i*			18 12 03.3	
	comp=Z,50nm,0.3s							
ARGC	**Ariguani, Magd**	**3.32**	**346**	*eP*		**Pn**	**18 11 23.3**	**+1.9**
ARGC				*eS*		**Sn**	**18 12 05.3**	**+4.6**
SDV	**Santo Domingo**	**3.57**	**51**	P		**Pn**	**18 11 25.9**	**+1.1**
	comp=Z,20nm,0.3s,baz=151,slow=7.2,SNR=28							
SDV				S		**Sn**	**18 12 06.6**	**-0.3**
	comp=Z,12nm,0.3s,baz=21,slow=15,SNR=18							
SDV	**Santo Domingo**	**3.57**	**51**	*eP*		**Pn**	**18 11 25.8**	**+1.0**
SDV				*eS*		**Sn**	**18 12 06.0**	**-0.8**
SDV				*i*			18 12 09.7	
	comp=Z,33nm,0.5s							
SJCC	**San Jacinto, C**	**3.69**	**332**	*eP*		**Pn**	**18 11 25.7**	**-0.6**
SJCC				*eS*		**Sn**	**18 12 08.0**	**-1.6**
PCRV	**Puerto La Cruz**	**9.39**	**67**	P		Pn	18 12 35.8	-7.0
	comp=Z,0.7nm,0.3s,baz=293,slow=7.7,SNR=3.2							
ASAR	**Alice Springs**	**148.75**	**234**	PKPbc		**PKiKP**	**18 30 03.4**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=119,slow=4.1,SNR=7.0							
WRA	**Warramunga Arr**	**149.97**	**241**	PKPbc		**PKiKP**	**18 30 05.9**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=109,slow=2.6,SNR=1.7							

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*BJI **05** 18:13:16.5±0.0, 16.80°S × 178.80°W, h5 km, mB5.3/12, mb4.7/17, Ms5.0/5, Ms7 4.7/5*
*IDC **05** 18:13:17.6±0.6, 16.74°S × 178.88°W, h0 km, mb4.3/21, mb1 4.5/22, mb1mx4.3/48, mbtmp4.3/22, ML3.2/1, MS4.3/32, Ms1 4.3/32, ms1mx4.2/44, Error ellipse: s-maj=21.2 km s-min=13.9 km az=142.0*
*NEIC **05** 18:13:18.7±1.9, 16.8°S±0.1° × 178.96°W±0.02, h10 km ± 1 km, mb4.9/48, Error ellipse: s-maj=20.0 km s-min=4.2 km az=183.0*
*GCMT **05** 18:13:22.7±0.1, 16.96°S±0.01° × 178.63°W±0.01, h15 km, MW5.1/128, Moment Tensor Solution. s71,c96; s128,c222; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr -0.79±.10; Mθθ -4.36±.10; Mϕϕ 5.15±.10; Mrθ -1.39±.20; Mθϕ 3.50±.08; Mϕr 1.15±.18; Best double couple: M06.20600×10^16 NP1:φs 62.00000°, δ 74.00000°, λ -9.00000°. NP2:φs 155.00000°, δ 81.00000°, λ -163.00000°. Principal axes: T 6.3620, Plg 5.0000°, Azm 287.0000°; N -0.3160, Plg 71.0000°, Azm 181.0000°; P -6.0490, Plg 18.0000°, Azm 19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 05 18:13:18.7±0.4, 16.79°S±0.08° × 178.90°W±0.07, h10 km, n141, σ1°05/123, mb4.8/38, MS4.4/35, 3C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
MSVF	**Nonsavu**	**3.06**	**252**			**Pn**	**18 14 05.0**	**-2.3**
NIUE	**Niue**	**8.83**	**106**	Pn		**Pn**	**18 15 26.5**	**-0.1**
RAO	**Raoul Island**	**12.44**	**176**	LR		LR	18 20 22.3	
	comp=Z,3μm,18.1s,baz=345,slow=34							
SANVU	**Saraoutou**	**13.43**	**274**	Pn		**Pn**	**18 16 29.1**	**-0.4**
DZM	**Mont Dzumac**	**14.79**	**247**	Pn		**Pn**	**18 16 48.8**	**+0.6**
	0.1nm,0.3s,baz=116,slow=10,SNR=4.3							
DZM				LR		LR	18 21 21.5	
	comp=Z,2μm,21.9s,baz=78,slow=33							
KNTN	**Kanton**	**15.61**	**28**	Pn		**Pn**	**18 16 57.2**	**-1.8**
KNTN				IAmb		IAmb	18 17 05.2	
	comp=Z,87nm,1.1s							
RAR	**Rarotonga**	**18.61**	**107**	LR		LR	18 22 20.6	
	comp=Z,1μm,21.2s,baz=286,slow=29							
RAR	**Rarotonga**	**18.61**

PMG	**Port Moresby**	**33.83**	**278**	P	**P**	**18 20 02.6**	**+1.1**
PMG				IAmb	IAmb	18 20 04.7	
	comp=Z,23nm,1.1s						
TOO	**Toolangi**	**37.52**	**229**	P	**P**	**18 20 33.8**	**+0.7**
TOO				IAmb	IAmb	18 20 39.7	
	comp=Z,32nm,1.1s						
TAOE	**Nuku Hiva Isla**	**38.54**	**83**	*e*LR	LR	18 30 58.3	
	comp=Z,1μm,26.9s						
STKA	**Stephens Creek**	**38.77**	**240**	P	**P**	**18 20 44.3**	**+0.7**
	comp=Z,4.7nm,0.9s,baz=84,slow=5.0,SNR=5.2						
STKA				LR	LR	18 35 50.8	
	comp=Z,418nm,18.6s,baz=66,slow=35						
STKA	**Stephens Creek**	**38.77**	**240**	P	**P**	**18 20 44.0**	**+0.3**
WB0	**Warramunga Arr**	**44.35**	**259**	P	**P**	**18 21 27.5**	**-2.1**
WB0				IAmb	IAmb	18 21 45.0	
	comp=Z,22nm,1.4s						
WRA	**Warramunga Arr**	**44.39**	**258**	P	**P**	**18 21 29.1**	**-0.7**
	comp=Z,2.9nm,1.1s,baz=92,slow=7.4,SNR=11						
WRA				LR	LR	18 38 56.7	
	comp=Z,760nm,20.2s,baz=100,slow=35						
WRA	**Warramunga Arr**	**44.39**	**258**	P	**P**	**18 21 29.1**	**-0.7**
AS31	**Alice Springs**	**44.66**	**253**	P	**P**	**18 21 29.1**	**-2.9**
ASAR	**Alice Springs**	**44.66**	**253**	P	**P**	**18 21 31.1**	**-0.8**
	comp=Z,9.7nm,0.9s,baz=85,slow=8.6,SNR=41						
ASAR				LR	LR	18 39 29.4	
	comp=Z,1μm,18.9s,baz=92,slow=35						
ASAR	**Alice Springs**	**44.66**	**253**	P	**P**	**18 21 30.2**	**-1.8**
SIJI	**Sorong**	**51.53**	**283**	P	**P**	**18 22 25.9**	**+0.7**
	comp=Z,10.0nm,1.1s,baz=75,slow=4.6,SNR=7.5						
SIJI				LR	LR	18 43 37.2	
	comp=Z,465nm,20.6s,baz=112,slow=35						
FITZ	**Fitzroy Crossi**	**52.76**	**260**	P	**P**	**18 22 35.0**	**+0.6**
	comp=Z,2.4nm,1.0s,baz=104,slow=16,SNR=1.9						
FITZ				LR	LR	18 43 47.6	
	comp=Z,845nm,20.2s,baz=95,slow=35						
SOEI	**Soe**	**55.61**	**270**	P	**P**	**18 22 54.7**	**-0.7**
BATI	**Baumata**	**56.08**	**269**	P	**P**	**18 22 58.9**	**+0.3**
	comp=Z,23nm,1.0s,baz=37,slow=1.9,SNR=7.6						
BATI				LR	LR	18 45 35.9	
	comp=Z,346nm,21.7s,baz=140,slow=35						
VNDA	**Vanda**	**61.51**	**185**	P	**P**	**18 23 36.8**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=360,slow=7.5,SNR=13						
VNDA				LR	LR	18 45 13.4	
	comp=Z,175nm,20.7s,baz=28,slow=31						
VNDA	**Vanda**	**61.51**	**185**	P	**P**	**18 23 36.6**	**+1.3**
VNDA				IAmb	IAmb	18 24 01.5	
	comp=Z,9.9nm,1.2s						
MJAR	**Matsushiro Arr**	**66.74**	**323**	P	**P**	**18 24 11.0**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=123,slow=8.9,SNR=1.6						
MJAR				LR	LR	18 49 46.1	
	comp=Z,63nm,19.9s,baz=155,slow=33						
LEM	**Lembang**	**72.29**	**268**	LR	LR	18 56 39.3	
	comp=Z,200nm,20.2s,baz=142,slow=36						
PETK	**Petropavlovsk-**	**72.49**	**345**	LR	LR	18 53 50.8	
	comp=Z,85nm,18.6s,baz=161,slow=34						
QSPA	**South Pole Qui**	**73.26**	**180**	P	**P**	**18 24 49.4**	**-0.7**
KSRS	**Korea Array**	**73.56**	**318**	LR	LR	18 55 01.6	
	comp=Z,84nm,18.1s,baz=128,slow=34						
USRK	**Usuriysk Ar.**	**75.43**	**326**	LR	LR	18 55 59.5	
	comp=Z,88nm,18.2s,baz=136,slow=34						
NJ2	**Nanjing**	**76.87**	**309**	*e*P	**P**	**18 25 11.2**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YBH	**Yreka Blue Hor**	**77.96**	**39**	P	**P**	**18 25 17.1**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=340,slow=4.8,SNR=5.7						
LPIG	**La Paz**	**78.29**	**60**	LR	LR	18 51 15.0	
	comp=Z,60nm,20.6s,baz=228,slow=29						
CN2	**Changchun**	**78.86**	**322**	*e*P	P	18 25 31.4	+9.3
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
NVAR	**Mina Array Bea**	**78.95**	**44**	P	**P**	**18 25 23.1**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=227,slow=9.2,SNR=9.8						
NVAR				LR	LR	18 51 29.2	
	comp=Z,126nm,20.8s,baz=246,slow=29						
TTA	**Tatalina**	**81.46**	**10**	P	**P**	**18 25 35.6**	**-0.2**
TTA				IAmb	IAmb	18 25 53.4	
	comp=Z,18nm,1.4s						
ELK	**Elko**	**82.17**	**43**	P	**P**	**18 25 40.7**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=201,slow=5.1,SNR=2.1						
G08A	**Pilot Rock**	**82.22**	**38**	P	**P**	**18 25 40.0**	**-0.3**
MFID	**Camas Ranch**	**83.14**	**41**	P	**P**	**18 25 44.5**	**-0.5**
RND	**Reindeer**	**83.29**	**13**	P	**P**	**18 25 45.5**	**+0.2**
HLID	**Hailey**	**84.10**	**41**	P	**P**	**18 25 50.3**	**+0.2**
TMUT	**Trail Mountain**	**84.20**	**46**	P	**P**	**18 25 51.4**	**+0.5**
SPUT	**South Promonto**	**84.29**	**44**	P	**P**	**18 25 51.3**	**+0.2**
WRH	**Wood River Hil**	**84.39**	**13**	P	**P**	**18 25 50.9**	**0.0**
HDA	**Harding Lake**	**84.58**	**13**	P	**P**	**18 25 52.0**	**+0.1**
HDA				IAmb	IAmb	18 26 00.9	
	comp=Z,7.0nm,1.0s						
SRU	**San Rafael Swe**	**84.59**	**47**	P	**P**	**18 25 52.8**	**+0.1**
CCB	**Clear Creek Bu**	**84.60**	**13**	P	**P**	**18 25 51.6**	**-0.3**
DOT	**Dot Lake**	**84.61**	**15**	P	**P**	**18 25 52.0**	**0.0**
IMAR	**Indian Mountai**	**84.67**	**10**	P	**P**	**18 25 52.1**	**-0.1**
MAW	**Mawson**	**84.75**	**200**	P	**P**	**18 25 52.4**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=143,slow=3.4,SNR=3.9						
MAW				LR	LR	19 02 16.8	
	comp=Z,132nm,18.3s,baz=76,slow=35						
MDM	**Murphy Dome**	**84.79**	**13**	P	**P**	**18 25 52.5**	**-0.4**
TCUT	**Toone Canyon**	**84.89**	**44**	P	**P**	**18 25 54.8**	**+0.5**
IL31		**84.91**	**13**	P	**P**	**18 25 52.5**	**-1.0**
ILAR	**Eielson Array**	**84.91**	**13**	P	**P**	**18 25 52.9**	**-0.6**
	comp=Z,3.2nm,1.0s,baz=228,slow=5.8,SNR=14						
ILAR				LR	LR	18 57 17.6	
	comp=Z,107nm,20.7s,baz=214,slow=31						
ILAR	**Eielson Array**	**84.91**	**13**	P	**P**	**18 25 52.0**	**-1.4**
K27K	**Chicken**	**85.42**	**15**	P	**P**	**18 25 55.7**	**-0.4**
K27K				IAmb	IAmb	18 26 04.9	
	comp=Z,12nm,1.2s						
MCMT	**McKenzie Canyo**	**85.70**	**41**	P	**P**	**18 25 58.0**	**-0.2**
TX31	**Lajitas Ar. Si**	**85.80**	**58**	P	**P**	**18 25 59.4**	**+0.5**
TX32	**Lajitas Array**	**85.80**	**58**	P	**P**	**18 25 59.7**	**+0.8**
TX32				IAmb	IAmb	18 26 22.2	
	comp=Z,11nm,1.2s						
TXAR	**Lajitas Array**	**85.80**	**58**	P	**P**	**18 25 59.6**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=197,slow=3.9,SNR=5.0						
HHC	**Hu-ho-hao-te**	**86.16**	**315**	*e*P	**P**	**18 25 59.1**	**-1.3**
HHC				pmax	pmax		
	comp=Z,17nm,1.4s						
HHC				pmax	pmax		
	comp=Z,210nm,7.4s						
HHC				LR	LR		
	comp=Z,240nm,18.4s						
HHC				LR	LR		
	comp=Z,190nm,17.6s						
HHC				LR	LR		
	comp=Z,190nm,17.4s						
IMW	**Indian Meadow**	**86.47**	**42**	P	**P**	**18 26 02.6**	**+0.4**
IMW				IAmb	IAmb	18 26 12.6	
	comp=Z,7.4nm,1.2s						
QLMT	**Earthquake Lak**	**86.59**	**41**	P	**P**	**18 26 02.9**	**+0.3**
YHL	**Hebgen Lake**	**86.75**	**41**	P	**P**	**18 26 04.8**	**+1.3**
BW06	**Boulder Array**	**86.87**	**44**	P	**P**	**18 26 03.3**	**-0.7**
PDAR	**Pinedale Array**	**86.87**	**44**	P	**P**	**18 26 03.0**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=256,slow=3.6,SNR=2.1						
PDAR				LR	LR	18 57 56.8	
	comp=Z,122nm,20.6s,baz=260,slow=31						
KMI	**Kunming**	**86.91**	**297**	⇑P	**P**	**18 26 05.0**	**+0.4**
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KMI				LR	LR		
	comp=Z,190nm,18.8s						
KMI				LR	LR		
	comp=Z,290nm,21.5s						
KMI				LR	LR		
	comp=Z,440nm,23.2s						
YHH	**Holmes Hill**	**86.94**	**41**	P	**P**	**18 26 03.9**	**-0.5**
YNE	**Yellowstone No**	**87.57**	**41**	P	**P**	**18 26 06.7**	**-0.7**
CMAR	**Chiang Mai Arr**	**88.07**	**290**	P	**P**	**18 26 12.0**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=114,slow=3.7,SNR=2.5						
CMAR				LR	LR	19 02 17.9	
	comp=Z,73nm,21.6s,baz=168,slow=33						
CD2	**Chengdu**	**88.08**	**303**	*e*P	**P**	**18 26 09.0**	**-0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**89.84**	**308**	*e*P	**P**	**18 26 17.6**	**-0.6**
LZH				pP	**pP**	**18 26 20.9**	**-0.5**
LZH				sP	**sP**	**18 26 22.5**	**0.0**
LZH				*e*PP	**PP**	**18 29 52.8**	**+1.8**
LZH				pmax	pmax		
	comp=Z,23nm,1.4s						
LZH				pmax	pmax		
	comp=Z,92nm,5.2s						
LZH				LR	LR		
	comp=Z,180nm,17.4s						
LZH				LR	LR		
	comp=Z,180nm,17.2s						
LZH				LR	LR		
	comp=Z,260nm,19.5s						
SYO	**Syowa Base**	**90.13**	**193**	⇑*e*pP	**P**	**18 26 20.0**	**+1.2**
SYO	**Syowa Base**	**90.13**	**193**	⇑*e*sP	sP	18 26 22.0	-1.0
VNA3	**Neumayer Olymp**	**91.88**	**177**	P	**P**	**18 26 25.7**	**-1.2**
VNA2	**Neumayer--Watz**	**92.31**	**177**	P	**P**	**18 26 28.0**	**-0.9**
SONM	**Songino Array**	**92.41**	**319**	P	**P**	**18 26 30.8**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=122,slow=5.2,SNR=1.7						
SONM				LR	LR	19 04 40.5	
	comp=Z,80nm,19.8s,baz=108,slow=33						
PLCA	**Paso Flores**	**92.44**	**134**	LR	LR	18 57 28.2	
	comp=Z,53nm,20.5s,baz=294,slow=29						
YKA	**Yellowknife Ar**	**93.52**	**25**	LR	LR	19 04 33.3	
	comp=Z,288nm,18.8s,baz=0.0,slow=33						
ULM	**Lac du Bonnet**	**98.36**	**40**	LR	LR	19 04 03.9	
	comp=Z,240nm,20.4s,baz=281,slow=31						
AKASG	**Malin Array Be**	**139.36**	**333**	PKP	**PKiKP**	**18 32 48.4**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=22,slow=1.8,SNR=1.2						
BRTR	**Keskin Array B**	**143.67**	**316**	PKP	**PKiKP**	**18 32 56.4**	**-1.5**
	comp=Z,2.2nm,0.8s,baz=132,slow=2.1,SNR=5.6						
OSTC	**Ostas**	**144.19**	**343**	*e*PKP	**PKiKP**	**18 32 59.1**	**+0.7**
CLL	**Collm**	**144.28**	**347**	*i* PKPdf	**PKPdf**	**18 32 54.7**	**-0.2**
CLL				*i* PKiKP	**sPKPdf**	**18 33 00.5**	**+1.2**
	comp=Z,12nm,1.4s						
CLL				*e*		18 33 12.0	
CLL				LmV		19 39 00.0	
	comp=Z,100nm,20.7s						
DPC	**Dobruska-Polom**	**144.35**	**343**	*e*PKP	**PKPdf**	**18 32 54.7**	**-0.5**
DPC				*ex*	x	18 32 59.7	
BRG	**Berggiesshubel**	**144.47**	**346**	*e*PKP	**PKiKP**	**18 33 01.5**	**+2.5**
	comp=Z,14nm,1.4s						
BRG				*e*		18 33 07.9	
	comp=Z,16nm,1.5s						
MORC	**Moravsky Berou**	**144.51**	**342**	*e*PKP	**PKPdf**	**18 32 55.0**	**-0.5**
PRU	**Pruhonice**	**145.15**	**345**	*e*PKP	**PKPdf**	**18 32 56.8**	**+0.3**
PRU				*ep*PKP	**sPKPdf**	**18 33 01.7**	**+0.8**
VRAC	**Vranov**	**145.21**	**342**	PKPbc	**PKPdf**	**18 32 56.8**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=5.7,slow=4.2,SNR=3.9						
VRAC	**Vranov**	**145.21**	**342**	*e*PKP	**PKPdf**	**18 32 57.2**	**+0.5**
VYHS	**Vyhne**	**145.21**	**339**	*e*PKP	**PKPdf**	**18 32 57.1**	**+0.4**
KRUC	**Moravsky**	**145.49**	**342**	*e*PKP	**PKPab**	**18 32 57.8**	**+0.5**
GRF	**Grafenberg Arr**	**146.17**	**348**	*e*PKPbc	**PKiKP**	**18 33 04.9**	**+2.4**
	baz=18,slow=2.4						
KHC	**Kasperske Hory**	**146.18**	**345**	*e*PKP	**PKPdf**	**18 32 56.8**	**-1.6**
KHC				*ep*PKP	sPKPab	18 33 04.9	+0.6
GERES	**GERESS Array B**	**146.42**	**345**	PKPbc	**PKPbc**	**18 33 00.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=357,slow=2.0,SNR=4.1						
CONA	**Conrad Observa**	**146.66**	**342**	*e*P	**PKPab**	**18 33 02.8**	**+0.9**
	comp=Z,7.8nm,1.0s						
MOA	**Molln**	**147.19**	**344**	*e*P	**PKPab**	**18 33 04.2**	**+0.3**
	comp=Z,7.4nm,1.2s						
ARSA	**Arzberg**	**147.37**	**342**	*e*P	**PKPbc**	**18 33 02.3**	**-0.6**
	comp=Z,6.7nm,1.2s						
SOKA	**Soboth**	**148.03**	**342**	*e*P	**PKPbc**	**18 33 05.4**	**+0.7**
	comp=Z,8.2nm,1.3s						
KBA	**Koelnbreinsper**	**148.14**	**344**	*e*P	**PKPbc**	**18 33 05.9**	**+0.8**
	comp=Z,7.7nm,1.5s						
OBKA	**Obir**	**148.33**	**342**	*e*P	**PKiKP**	**18 33 06.7**	**-0.4**
	comp=Z,14nm,1.5s						
WATA	**Walderalm**	**148.34**	**346**	*e*P	**PKPbc**	**18 33 06.3**	**+0.7**
	comp=Z,3.6nm,0.7s						
RETA	**Reutte**	**148.37**	**347**	*e*P	**PKPbc**	**18 33 05.8**	**+0.3**
	comp=Z,3.7nm,0.7s						
WTTA	**Wattenberg**	**148.39**	**346**	*e*P	**PKPdf**	**18 33 03.5**	**+1.2**
	comp=Z,6.2nm,1.1s						
MOTA	**Moosalm**	**148.43**	**347**	*e*P	**PKPbc**	**18 33 05.0**	**-0.9**
	comp=Z,5.0nm,0.9s						
MYKA	**Terra Mystica**	**148.48**	**343**	*e*P	**PKPdf**	**18 32 59.6**	**-2.7**
	comp=Z,5.2nm,0.8s						
SQTA	**Sankt Quirin**	**148.53**	**347**	*e*P	**PKPdf**	**18 33 03.7**	**+1.2**
	comp=Z,1.2nm,0.4s						
ABTA	**Abtersbach**	**148.66**	**345**	*e*P	**PKPbc**	**18 33 05.5**	**-0.8**
	comp=Z,10nm,1.1s						
DAVA	**Damuels**	**148.74**	**348**	*e*P	**PKPdf**	**18 33 01.8**	**-1.1**
	comp=Z,6.1nm,0.8s						
FETA	**Feichten**	**148.82**	**347**	*e*P	**PKPbc**	**18 33 06.3**	**-0.6**
	comp=Z,8.1nm,1.2s						
DAVOX	**Davos/Dischmat**	**149.22**	**348**	PKPbc	**PKPbc**	**18 33 07.9**	**0.0**
	comp=Z,1.1nm,0.4s,baz=278,slow=11,SNR=3.6						
TORD	**Torodi Ar. Bea**	**176.33**	**189**	PKP	**PKPdf**	**18 33 31.7**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=120,slow=34,SNR=3.1						

REY ***05*** *18:19:43.8,64°.67N×17°.37W,h3km*
IDC ***05*** *18:19:44.9±0.6,64°.54N×17°.50W,h0km,mb3.9/17, mb1 4.1/20,mb1mx3.9/54,mbtmp3.9/20,ML2.6/2,MS3.4/11, Ms1 3.4/11,ms1mx3.1/47,Error ellipse: s-maj=19.3km s-min=9.3km az=13.0*
NEIC ***05*** *18:19:46.2±2.0,64°.5N±0°.1×17°.6W±0°.2,h8km±5km, mb4.5/31,Error ellipse: s-maj=22.1km s-min=10.2km az=198.0*

ISC 05 18:19:46.1±0.4,**64°.60N**±0°.03×**17°.56W**±0°.04,**h10**km,**n126,**
σ1**967**/115,**mb4.2**/40,**MS3.3**/6,**Iceland**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.12**	**313**	P		**Pg**		**18 19 47.3**	**-1.6**
	baz=270								
IDYN	**Dyngjuhals**	**0.21**	**23**	P		Pg		18 19 46.6	-4.0
	baz=1								
IHUS	**Husbondi**	**0.30**	**188**	P		**Pg**		**18 19 51.6**	**-0.6**
	baz=198								
IJOK	**Jokulheimar**	**0.40**	**226**	P		**Pg**		**18 19 53.4**	**-0.6**
	baz=226								
IMKO	**Mokollar**	**0.65**	**53**	P		Pg		18 19 53.8	-4.8
	baz=55								
IKAL	**Kalfafell**	**0.65**	**185**	S		**Sb**		**18 20 07.6**	**-1.0**
	baz=191								
IKAL				P		**Pg**		**18 19 56.9**	**-1.7**
	baz=191								
IVAT	**Vatnsfell**	**0.72**	**236**	P		**Pg**		**18 19 58.8**	**-1.1**
	baz=235								
IVAT				S		**Sn**		**18 20 10.6**	**-2.8**
	baz=235								
ISVA	**Svartarkot**	**0.76**	**10**	P		Pg		18 19 55.8	-4.8
	baz=4.2								
IVSH	**V-Sauoahnukur**	**0.82**	**74**	P		Pg		18 19 56.6	-5.1
	baz=78								
IVSH				S		**Sg**		**18 20 07.0**	**-5.4**
	baz=78								
IHVE	**Hveravellir**	**0.90**	**289**	P		**Pg**		**18 20 00.9**	**-2.6**
	baz=283								
ISNB	**Snabyli**	**0.98**	**209**	P		**Pg**		**18 20 03.2**	**-1.7**
	baz=211								
IRJU	**Rjupnafell**	**1.10**	**207**	P		**Pg**		**18 20 05.3**	**-1.8**
	baz=209								
IMJO	**Mjoaskard**	**1.14**	**235**	P		**Pg**		**18 20 05.9**	**-1.9**
	baz=234								
IKVO	**Krokottuvotn**	**1.16**	**14**	P		Pn		18 20 02.3	-6.1
	baz=11								
IGYG	**Gygjarholskot**	**1.19**	**256**	P		**Pb**		**18 20 06.8**	**-1.9**
	baz=254								
IGRS	**Grimsstaoir**	**1.21**	**29**	P		Pn		18 20 03.2	-5.9
	baz=28								
IHVO	**Lagu-Hvolar**	**1.21**	**208**	P		**Pg**		**18 20 07.9**	**-1.4**
	baz=210								
IHAU	**Haukadalur**	**1.22**	**240**	P		**Pb**		**18 20 07.4**	**-1.8**
	baz=239								
IGHA	**Grjothals**	**1.31**	**16**	P		Pn		18 20 05.1	-5.3
	baz=14								
IALF	**Alftagrof**	**1.32**	**214**	P		**Pn**		**18 20 08.9**	**-1.6**
	baz=215								
IGRA	**Granastaoir**	**1.33**	**360**	P		Pn		18 20 05.4	-5.2
	baz=356								
IGRA				S		**Sn**		**18 20 21.7**	**-6.6**
	baz=356								
IESK	**Eystri-Skogar**	**1.36**	**219**	P		**Pn**		**18 20 09.5**	**-1.5**
	baz=219								
ISAU	**Saurbar**	**1.39**	**245**	P		**Pn**		**18 20 09.2**	**-2.2**
	baz=244								
IMID	**Miomork**	**1.39**	**228**	P		**Pn**		**18 20 10.1**	**-1.4**
	baz=228								
IDIM	**Dimmadalss**	**1.40**	**11**	P		Pn		18 20 06.9	-4.7
	baz=7.9								
IHLA	**Hella**	**1.40**	**346**	P		Pn		18 20 07.5	-4.1
	baz=342								
IHED	**Heoinshofoi**	**1.50**	**4**	P		Pn		18 20 08.0	-4.9
	baz=1.0								
IASM	**Asmuli**	**1.54**	**242**	P		**Pn**		**18 20 12.2**	**-1.3**
	baz=241								
IBRE	**Brettingsstaoi**	**1.54**	**355**	P		Pn		18 20 09.3	-4.2
	baz=352								
IGIL	**Gilhagi**	**1.57**	**18**	P		Pn		18 20 09.6	-4.4
	baz=16								
ISOL	**Solvholt**	**1.62**	**247**	P		**Pn**		**18 20 13.1**	**-1.6**
	baz=246								
BORG	**Borgarnes**	**1.63**	**277**	Pg		**Pn**		**18 20 13.4**	**-1.3**
	21nm,0.3s,baz=103,slow=8.9,SNR=42								
BORG				Lg		Lg		18 20 36.6	
	13nm,0.3s,baz=239,slow=21,SNR=9.7								
IKRO	**Krokur**	**1.63**	**254**	P		**Pn**		**18 20 13.6**	**-1.1**
	baz=252								
ISIG	**Siglufjorour**	**1.64**	**340**	P		Pn		18 20 10.8	-4.1
	baz=337								
SCO	**Scoresbysund**	**6.15**	**346**				**Pn**	**18 21 13.9**	**-2.9**
SCO	**Scoresbysund**	**6.15**	**346**	*e*			**Pn**	**18 21 15.1**	**-1.7**
	baz=137,slow=6.9								
SCO					*i* P		**Pn**	**18 21 16.0**	**-0.7**
SCO					*i* P		**Pn**	**18 21 16.8**	**+0.1**
SCO					*i* S		**Sn**	**18 22 28.6**	**+1.7**
SCO					IAML			18 22 42.0	
	comp=Z,2.2nm,0.5s								
JMIC	**Jan Mayen**	**7.27**	**24**	LR		LR		18 23 50.6	
	comp=Z,134nm,19.4s,baz=263,slow=34								
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn		**Pn**		**18 22 32.5**	**-0.7**
	baz=324,slow=13,SNR=19								
NOA	**NORSAR Array B**	**13.56**	**92**	Pn		**Pn**		**18 22 54.9**	**-3.3**
	comp=Z,0.0nm,0.3s,baz=152,slow=22,SNR=2.4								
NOA				LR		LR		18 28 50.9	
	comp=Z,41nm,18.7s,baz=300,slow=40								
SFJD	**Kangerlussuaq**	**13.67**	**295**	LR		LR		18 27 49.9	
	comp=Z,318nm,18.8s,baz=100,slow=35								
HFS	**Hagfors**	**15.07**	**93**	Pn		**P**		**18 23 23.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=319,slow=4.3,SNR=7.0								
HFS				LR		LR		18 29 28.0	
	comp=Z,43nm,18.1s,baz=308,slow=39								
ARCES	**ARCESS Array B**	**17.18**	**54**	LR		LR		18 29 07.1	
	comp=Z,123nm,21.9s,baz=270,slow=33								
FINES	**FINESS Array B**	**19.74**	**79**	P		**P**		**18 24 16.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=240,slow=11,SNR=4.5								
FINES	**FINESS Array B**	**19.74**	**79**	P		**P**		**18 24 16.4**	**+0.8**
CLL	**Collm**	**20.70**	**115**	*i* P		**P**		**18 24 26.1**	**+0.1**
	comp=Z,29nm,1.7s								
CLL				*e*PP		**PnPn**		**18 24 46.0**	**+2.3**
CLL	**Collm**	**20.70**	**115**	P		**P**		**18 24 26.5**	**+0.5**
ECH	**Echery**	**21.13**	**129**	P		**P**		**18 24 30.5**	**-0.2**
GRF	**Grafenberg Arr**	**21.32**	**121**	*e*P		**P**		**18 24 33.6**	**+0.9**
	comp=Z,35nm,1.7s,baz=325,slow=10								
NKC	**Novy Kostel**	**21.34**	**118**	*e*P		**P**		**18 24 37.0**	**+4.0**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P		**P**		**18 24 34.0**	**+0.4**
	comp=Z,20nm,1.6s								
BFO	**Black Forest**	**21.43**	**127**	P		**P**		**18 24 34.3**	**+0.4**
BFO				IAmb		IAmb		18 24 50.5	
	comp=Z,17nm,1.2s								
FRB	**Frobisher Bay**	**21.75**	**291**	LR		LR		18 32 32.2	
	comp=Z,138nm,21.0s,baz=64,slow=35								
KSP	**Ksiaz**	**22.36**	**112**	*e*P		**P**		**18 24 43.7**	**-0.2**
CHVC	**Chvalec**	**22.46**	**113**	*e*P		**P**		**18 24 47.2**	**+2.2**
KHC	**Kasperske Hory**	**22.66**	**118**	*e*P		**P**		**18 24 48.2**	**+1.0**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P		**P**		**18 24 51.5**	**+3.3**
DAVA	**Damuels**	**22.86**	**126**	*e*P		**P**		**18 24 52.8**	**+3.4**
	comp=Z,9.2nm,1.1s								
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**		**18 24 50.2**	**0.0**
	comp=Z,1.7nm,1.0s,baz=330,slow=5.1,SNR=6.4								
GERES				LR		LR		18 33 57.2	
	comp=Z,128nm,21.2s,baz=297,slow=37								
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**		**18 24 50.8**	**+0.6**
RETA	**Reutte**	**23.00**	**125**	*e*P		**P**		**18 24 51.1**	**+0.4**
	comp=Z,5.5nm,1.0s								
MOTA	**Moosalm**	**23.24**	**124**	*e*P		**P**		**18 24 53.6**	**+0.3**
	comp=Z,10nm,1.6s								
DAVOX	**Davos/Dischmat**	**23.30**	**127**	LR		LR		18 33 53.9	
	comp=Z,89nm,18.0s,baz=83,slow=36								
SQTA	**Sankt Quirin**	**23.39**	**124**	*e*P		**P**		**18 24 56.3**	**+1.6**
	comp=Z,15nm,2.1s								
FETA	**Feichten**	**23.39**	**125**	*e*P		**P**		**18 24 57.3**	**+2.5**
	comp=Z,14nm,1.3s								
WATA	**Walderalm**	**23.42**	**124**	*e*P		**P**		**18 24 56.6**	**+1.5**
	comp=Z,1.8nm,0.5s								
VRAC	**Vranov**	**23.69**	**114**	P		**P**		**18 24 57.3**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=315,slow=11,SNR=3.

CHGR	**Chuyangaron**	**54.51**	**74**	P		**P**		**18 29 13.9**	**+0.2**
GAR	**Garm**	**54.70**	**73**	P		**P**		**18 29 16.1**	**+1.0**
PV02	**Paradox Valley**	**56.72**	**290**	P		**P**		**18 29 30.6**	**+0.8**
PV13	**Radium Mtn., P**	**56.80**	**290**	P		**P**		**18 29 31.8**	**+1.4**
PV13				IAmb		IAmb		18 29 34.5	
	comp=Z,5.9nm,1.0s								
R11A	**Troy Canyon, C**	**59.33**	**295**	P		**P**		**18 29 49.7**	**+1.7**
SONM	**Songino Array**	**59.71**	**40**	P		**P**		**18 29 50.0**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=331,slow=5.4,SNR=5.4								
SONM	**Songino Array**	**59.71**	**40**	P		**P**		**18 29 50.5**	**+0.1**
MDPB	**Devils Postpil**	**61.30**	**298**	P		**P**		**18 30 00.3**	**-1.3**
TXAR	**Lajitas Array**	**62.27**	**280**	P		**P**		**18 30 09.3**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=127,slow=25,SNR=3.4								
GTA	**Gaotai**	**65.37**	**49**	*eP*		**P**		**18 30 28.7**	**+0.4**
GTA				pP		pP		18 30 32.7	+0.6
GTA				sP		sP		18 30 36.1	+2.6
GTA				pmax		pmax			
	comp=Z,2.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**84.19**	**59**	P		**P**		**18 32 17.9**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=316,slow=7.2,SNR=6.0								
CPUP	**Villa Florida**	**95.77**	**215**	LR		LR		19 09 29.0	
	comp=Z,56nm,18.9s,baz=218,slow=31								
WRA	**Warramunga Arr**	**131.59**	**36**	PKP		**PKPdf**		**18 38 58.6**	**0.0**
	comp=Z,0.6nm,0.9s,baz=300,slow=3.2,SNR=3.0								
ASAR	**Alice Springs**	**135.04**	**38**	PKP		**PKPdf**		**18 39 06.0**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=248,slow=1.3,SNR=4.8								

*JMA **05** 18:20:37.0±0.3,26°.45N×124°.92E,h168km,M3.4*
*IDC **05** 18:20:45.0±16.0,26°.34N×124°.76E,h269km±217km, mb2.8/4,mb1 2.9/5,mb1mx2.7/58,mbtmp3.4/5,Error ellipse: s-maj=205.9km s-min=18.8km az=60.0*
ISC 05 18:20:36.2±0.9,26°.37N±0°.09×125°.03E±0°.07, h188km±10km,n27,σ1♀65/44,mb3.1/4,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**1.45**	**172**	P	**Pn**	**18 21 09.2**	**+0.8**
JIKM				*eS*	**Sn**	**18 21 32.6**	**-0.8**
JIRB	**Irabujima**	**1.54**	**175**	P	**Pn**	**18 21 09.6**	**+0.4**
JIRB				S	**Sn**	**18 21 33.4**	**-1.4**
JKE	**Kume jima 2**	**1.57**	**91**	P	**Pn**	**18 21 10.6**	**+1.1**
JKE				*eS*	**Sn**	**18 21 35.2**	**-0.1**
JOGS	**Gusukube**	**1.64**	**168**	P	**Pn**	**18 21 11.3**	**+1.1**
JOGS				S	**Sn**	**18 21 36.1**	**-0.4**
JMJ2	**Miyako jima3**	**1.64**	**171**	P	**Pn**	**18 21 11.2**	**+1.0**
JMJ2				S	**Sn**	**18 21 35.9**	**-0.7**
JTJ	**Tarama**	**1.74**	**190**	P	**Pn**	**18 21 11.7**	**+0.5**
JTJ				S	**Sn**	**18 21 36.8**	**-1.6**
JISG	**Ishigakijimahi**	**1.89**	**200**	P	**Pn**	**18 21 12.9**	**+0.2**
JISG				S	**Sn**	**18 21 39.3**	**-1.7**
JAGN	**Aguni-jima**	**1.99**	**83**	P	**Pn**	**18 21 14.5**	**+0.8**
JAGN				S	**Sn**	**18 21 42.5**	**-0.4**
JIJ	**Ishigaki jima**	**2.15**	**202**	P	**Pn**	**18 21 15.1**	**-0.4**
JIJ				S	**Sn**	**18 21 43.0**	**-3.1**
JKRS	**Kuro-shima**	**2.31**	**204**	P	**Pn**	**18 21 17.0**	**-0.3**
JKRS				S	**Sn**	**18 21 47.3**	**-2.0**
IRIF	**Iriomote-Funau**	**2.34**	**211**	P	**Pn**	**18 21 17.2**	**-0.4**
IRIF				S	**Sn**	**18 21 48.0**	**-1.8**
JJT3	**Tamagusuku3**	**2.48**	**95**	P	**Pn**	**18 21 20.5**	**+1.4**
JJT3				*eS*	**Sn**	**18 21 52.5**	**0.0**
HATJ	**Hateruma jima**	**2.56**	**206**	*eS*	**Sn**	**18 21 51.7**	**-2.5**
JNTH	**Nagotoyohara**	**2.68**	**86**	P	**Pn**	**18 21 22.2**	**+0.7**
JNTH				S	**Sn**	**18 21 54.9**	**-1.8**
JIH	**Iheya**	**2.71**	**75**	P	**Pn**	**18 21 22.6**	**+0.9**
JIH				*eS*	**Sn**	**18 21 56.0**	**-1.2**
JOW	**Kunigami**	**2.94**	**80**	P	**Pn**	**18 21 25.1**	**+0.6**
JOW				S	**Sn**	**18 22 00.2**	**-2.0**
JYRO	**Yoronjima**	**3.13**	**77**	P	**Pn**	**18 21 27.1**	**+0.4**
JYRO				*eS*	**Sn**	**18 22 03.7**	**-2.5**
JOKE	**Okinoerabujima**	**3.31**	**72**	P	**Pn**	**18 21 29.3**	**+0.3**
JTK	**Tokunoshima**	**3.77**	**67**	P	**Pn**	**18 21 34.6**	**0.0**
JAMN	**Amaminishikomi**	**4.13**	**62**	P	**Pn**	**18 21 38.8**	**-0.4**
JAMN				*eS*	**Sn**	**18 22 26.2**	**-2.4**
JAM	**Amami Oshima**	**4.55**	**62**	*eS*	**Sn**	**18 22 34.2**	**-3.9**
JMZ	**Minamidaito 2**	**5.59**	**94**	S	**Sn**	**18 22 57.2**	**-5.2**
KSRS	**Korea Array**	**11.32**	**12**	P	**P**	**18 23 20.5**	**+1.6**
	0.1nm,0.3s,baz=197,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	**39.32**	**313**	P	**P**	**18 27 47.2**	**+0.2**
	0.3nm,0.5s,baz=103,slow=9.7,SNR=6.0						
ZALV	**Zalesovo Beam**	**40.43**	**324**	P	**P**	**18 27 55.7**	**-0.2**
	0.5nm,0.4s,baz=106,slow=9.4,SNR=2.5						
WRA	**Warramunga Arr**	**46.91**	**168**	P	**P**	**18 28 48.2**	**+0.3**
	0.2nm,0.4s,baz=350,slow=8.9,SNR=1.7						
ASAR	**Alice Springs**	**50.47**	**169**	P	**P**	**18 29 16.4**	**+1.4**
	0.2nm,0.5s,baz=352,slow=8.4,SNR=8.6						

*IDC **05** 18:25:43.8±1.5,33°.39N×140°.78E,h0km,mb3.6/4, mb1 3.7/5,mb1mx3.4/57,mbtmp3.6/5,ML2.7/1,Error ellipse: s-maj=24.8km s-min=22.0km az=57.0*
*JMA **05** 18:25:46.6±0.2,33°.53N×140°.85E,h38km,M3.6*
*NIED **05** 18:25:46.6,33°.53N×140°.85E,h38km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=0.72; $M_{\theta\theta}$=3.21; $M_{\phi\phi}$=-2.49; $M_{r\theta}$=0.36; $M_{\theta\phi}$=-0.78; $M_{\phi r}$=1.58; Fault plane solution: $M_0$3.43000×10^{14} NP1: ϕ_s=319.00000°,δ76.00000°,λ=-28.00000°. NP2:ϕ_s=56.00000°, δ63.00000°,λ=-164.00000°.*
ISC 05 18:25:46.1±1.5,33°.51N±0°.05×140°.79E±0°.06,h19km±4km, n25,σ0♀89/32,mb3.7/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.90**	**244**	P	**Pn**	**18 26 04.0**	**+0.3**
JHJ2				S	**Sn**	**18 26 16.2**	**0.0**
JHJ	**Hachijo jima 2**	**0.92**	**246**	Pn	**Pg**	**18 26 04.1**	**0.0**
	330nm,0.3s,baz=331,slow=22,SNR=30						
JHJ				Sn	**Sg**	**18 26 15.3**	**-1.0**
	1µm,0.3s,baz=49,slow=23,SNR=44						
JHCJ	**Hachijojimakas**	**0.93**	**243**	P	**Pg**	**18 26 04.4**	**+0.1**
JHCJ				S	**Sn**	**18 26 16.2**	**-0.8**
JMKN	**Mikurajimanish**	**1.07**	**291**	P	**Pg**	**18 26 06.5**	**-0.3**
JMKN				S	**Sn**	**18 26 20.6**	**+0.3**
BSO1	**Boso 1**	**1.16**	**8**	P	**Pn**	**18 26 06.2**	**-0.5**
BSO1				*eS*	**Sb**	**18 26 21.6**	**+0.1**
BSO2	**Boso 2**	**1.24**	**359**	S	**Sn**	**18 26 24.5**	**+0.3**
BSO3	**Boso 3**	**1.31**	**350**	P	**Pn**	**18 26 08.9**	**-0.2**
BSO3				*eS*	**Sn**	**18 26 25.5**	**-0.5**
BSO4	**Boso 4**	**1.53**	**346**	P	**Pn**	**18 26 12.6**	**+0.4**
BSO4				*eS*	**Sn**	**18 26 32.2**	**+0.7**
JKO	**Kozu shima**	**1.53**	**297**	*eS*	**Sb**	**18 26 32.6**	**-0.2**
JTHY	**Toshimahigashi**	**1.61**	**310**	P	**Pb**	**18 26 14.4**	**-0.7**
JTHY				*eS*	**Sn**	**18 26 34.4**	**+0.8**
JIM2	**Oshima 3**	**1.65**	**317**	P	**Pn**	**18 26 14.2**	**+0.2**
JIM2				S	**Sn**	**18 26 33.5**	**-1.2**
JIZS	**Izushimoda**	**1.99**	**308**	P	**Pn**	**18 26 19.6**	**+0.9**
JIZS				S	**Sn**	**18 26 43.9**	**+0.8**
JOD2	**Odawara 2**	**2.25**	**322**	P	**Pn**	**18 26 22.7**	**+0.5**
JOD2				*eS*	**Sn**	**18 26 47.5**	**-1.9**
MJAR	**Matsushiro Arr**	**3.69**	**326**	Pn	**Pn**	**18 26 43.6**	**+1.5**
	0.6nm,0.3s,baz=247,slow=6.6,SNR=25						
MJAR				Sn	**Sn**	**18 27 23.6**	**-1.5**
	1.0nm,0.3s,baz=310,slow=5.7,SNR=10						
MAT	**Matsushiro**	**3.70**	**326**	P	**Pn**	**18 26 44.3**	**+2.1**
MAT				S	**Sn**	**18 27 24.9**	**-0.3**
H11N2	**WAKE ISLAND Hy**	**26.98**	**114**	T	T	18 59 30.5	
	baz=306,slow=74,SNR=41						
H11N1	**WAKE ISLAND Hy**	**26.99**	**114**	T	T	18 59 32.4	
	baz=306,slow=74,SNR=38						
H11N3	**WAKE ISLAND Hy**	**27.00**	**114**	T	T	18 59 33.3	
	baz=306,slow=74,SNR=34						
H11S3	**WAKE ISLAND Hy**	**27.56**	**116**	T	T	19 00 17.6	
H11S1	**WAKE ISLAND Hy**	**27.56**	**116**	T	T	19 00 18.0	
H11S2	**WAKE ISLAND Hy**	**27.58**	**116**	T	T	19 00 19.4	
ZALV	**Zalesovo Beam**	**43.98**	**315**	P	**P**	**18 33 52.6**	**+0.7**
	0.3nm,0.4s,baz=111,slow=8.0,SNR=1.7						
MKAR	**Makanchi Array**	**45.64**	**305**	P	**P**	**18 34 06.2**	**+0.9**
	0.9nm,0.6s,baz=92,slow=9.7,SNR=8.8						
WRA	**Warramunga Arr**	**53.50**	**188**	P	**P**	**18 35 05.0**	**-0.3**
	0.6nm,0.5s,baz=5.1,slow=7.7,SNR=12						
ASAR	**Alice Springs**	**57.23**	**188**	P	**P**	**18 35 31.9**	**-0.2**
	0.2nm,0.5s,baz=2.3,slow=6.8,SNR=7.4						

*IDC **05** 18:40:48.4±1.1,13°.09N×122°.43E,h0km,mb3.6/8, mb1 3.8/8,mb1mx3.6/38,mbtmp3.7/8,Error ellipse: s-maj=46.8km s-min=14.5km az=57.0*
*MAN **05** 18:40:49.6,13°.22N×122°.41E,h3km,mb5.2,ML4.1,MS4.2*
*NEIC **05** 18:40:54.1±0.7,13°.0N±0°.2×122°.3E±0°.2,h37km±13km, mb4.4/6,Error ellipse: s-maj=35.3km s-min=4.5km az=217.0*
ISC 05 18:40:49.2±1.2,13°.17N±0°.02×122°.44E±0°.03,h8km±8km, n39,σ1♀21/57,mb3.7/11,2C-2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.65**	**297**	*eP*	**Pg**	**18 41 01.7**	**-0.1**
GQP	**Guinayangan**	**0.73**	**0**	*iP*	**Pg**	**18 41 02.9**	**-0.5**
GQP				*iS*	**Sg**	**18 41 13.6**	**+0.6**
OTRP	**Odiongan**	**0.90**	**207**	*eP*	**Pn**	**18 41 08.4**	**+0.3**
OTRP				*eS*	**Sn**	**18 41 21.4**	**+0.1**
JCNP	**Jose Panganiba**	**1.14**	**13**	*eP*	**Pb**	**18 41 10.6**	**-0.6**
JCNP				*eS*	**Sb**	**18 41 25.3**	**-0.9**
SCSP	**San Jose Seism**	**1.16**	**65**	*eP*	**Pn**	**18 41 12.3**	**+0.6**
SCSP				*eS*	**Sn**	**18 41 29.9**	**+2.2**
LQP	**Lukban**	**1.29**	**317**	*eP*	**Pn**	**18 41 11.7**	**-2.0**
LQP				*iS*	**Sb**	**18 41 28.9**	**-1.6**
SJMP	**San Jose**	**1.47**	**242**	*eP*	**Pn**	**18 41 16.6**	**+0.7**
SJMP				*eS*	**Sg**	**18 41 37.9**	**+1.5**
PGP	**Puerto Galera**	**1.49**	**283**	*eP*	**Pn**	**18 41 15.4**	**-0.8**
PGP				*iS*	**Sn**	**18 41 37.2**	**+1.3**
POLP	**Polilio Island**	**1.63**	**343**	*eP*	**Pn**	**18 41 17.9**	**-0.2**
POLP				*eS*	**Sn**	**18 41 40.6**	**+1.3**
PVCP	**Virac**	**1.72**	**75**	*eP*	**Pb**	**18 41 20.7**	**-0.3**
PVCP				*eS*	**Sg**	**18 41 44.7**	**+0.1**
TGY	**Tagaytay City**	**1.73**	**303**	Pn	**Pn**	**18 41 21.0**	**+1.3**
	411nm,0.3s,baz=132,slow=1.9,SNR=34						
TGY				Sn	**Sn**	**18 41 43.2**	**+1.1**
	403nm,0.3s,baz=50,slow=7.9,SNR=16						
TGY	**Tagaytay City**	**1.73**	**303**	*eP*	**Pn**	**18 41 21.1**	**+1.4**
TGY				*iS*	**Sb**	**18 41 44.7**	**+1.4**
LUBP	**Lubang**	**2.21**	**285**	*eP*	**Pn**	**18 41 26.0**	**-0.1**
LUBP				*eS*	**Sn**	**18 41 54.2**	**+0.5**
CNP	**Catarman**	**2.26**	**106**	*eP*	**Pb**	**18 41 29.4**	**-0.9**
JAP	**San Jose, Anti**	**2.45**	**191**	*eP*	**Pg**	**18 41 35.9**	**-0.3**
BUSP	**Coron**	**2.48**	**242**	*eP*	**Pn**	**18 41 30.8**	**+0.8**
BUSP				*eS*	**Sn**	**18 41 60.0**	**-0.3**
GUIM	**Jordan**	**2.53**	**177**	*eP*	**Pn**	**18 41 31.6**	**+1.1**
GUIM				*eS*	**Sb**	**18 42 05.2**	**-0.9**
BALP	**Baler**	**2.69**	**342**	*eP*	**Pn**	**18 41 33.9**	**+1.1**
BALP				*eS*	**Sn**	**18 42 06.9**	**+1.3**
CNOP	**Candoni, Negro**	**3.32**	**177**	*eP*	**Pn**	**18 41 43.0**	**+1.5**
CNOP				*eS*	**Sn**	**18 42 20.6**	**-0.6**
SMPP	**San Manuel, Pa**	**3.42**	**330**	*eP*	**Pn**	**18 41 42.8**	**-0.1**
CAUP	**Cauayan**	**3.80**	**351**	*eP*	**Pn**	**18 41 49.4**	**+1.3**
CAUP				*eS*	**Sn**	**18 42 33.4**	**+0.4**
APYP	**Conner**	**4.81**	**346**	*eP*	**Pn**	**18 42 03.0**	**+1.1**
APYP				*eS*	**Sn**	**18 42 56.7**	**-1.2**
CM31	**Chiang Mai Arr**	**23.20**	**286**	P	**P**	**18 45 57.6**	**+0.8**
CM31				IAmb	IAmb	18 46 04.1	
	comp=Z,11nm,1.1s						
CMAR	**Chiang Mai Arr**	**23.20**	**286**	P	**P**	**18 45 57.2**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=93,slow=7.2,SNR=6.3						
CMAR	**Chiang Mai Arr**	**23.20**	**286**	P	**P**	**18 45 57.1**	**+0.3**
BATI	**Baumata**	**23.25**	**177**	P	**P**	**18 45 57.2**	**0.0**
	comp=Z,16nm,0.7s,baz=263,slow=7.7,SNR=4.6						
WRA	**Warramunga Arr**	**34.92**	**160**	P	**P**	**18 47 40.9**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=329,slow=11,SNR=5.4						
SONM	**Songino Array**	**37.07**	**342**	P	**P**	**18 48 01.2**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=161,slow=9.7,SNR=2.2						
SONM	**Songino Array**	**37.07**	**342**	P	**P**	**18 48 01.5**	**+1.6**
ASAR	**Alice Springs**	**38.28**	**163**	P	**P**	**18 48 10.8**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=345,slow=7.3,SNR=11						
MKAR	**Makanchi Array**	**47.47**	**323**	P	**P**	**18 49 24.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=118,slow=10.0,SNR=3.0						
STKA	**Stephens Creek**	**48.40**	**158**	P	**P**	**18 49 31.1**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=341,slow=17,SNR=3.3						
ZALV	**Zalesovo Beam**	**50.31**	**332**	P	**P**	**18 49 47.7**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=116,slow=12,SNR=3.5						
KURK	**Kurchatov**	**51.58**	**326**	P	**P**	**18 49 56.8**	**+1.0**
KURK				IAmb	IAmb	18 50 02.6	
	comp=Z,5.8nm,0.8s						
GAR	**Garm**	**52.57**	**309**	P	**P**	**18 50 01.6**	**-2.0**
KK31	**Karatay Array**	**53.56**	**314**	P	**P**	**18 50 07.8**	**-2.9**
KKAR	**Karatay Array**	**53.56**	**314**	P	**P**	**18 50 07.6**	**-3.1**
KKAR	**Karatay Array**	**53.56**	**314**	P	**P**	**18 50 08.7**	**-2.0**
KKAR				IAmb	IAmb	18 50 33.7	
	comp=Z,3.5nm,1.4s						
BURAR	**Bucovina Array**	**85.19**	**318**	P	**P**	**18 53 27.0**	**+0.5**

WEL 05 19:04:03.5±0.3,38°.5N±1°×17°.5E±°,h5km,M3.0/38, ML3.3/36,MLv3.0/38,Error ellipse: s-maj=0.0km s-min=0.0km az=86.7,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HIZ	**Hauiti**	**0.52**	**155**	P	Pg	19 04 14.1	+0.5
HIZ				S	Sg	19 04 21.4	+0.9
TOZ	**Tahuroa Road**	**0.79**	**68**	P	Pg	19 04 19.3	+0.5
TOZ				S	Sb	19 04 30.0	-0.9
TLZ	**Tolley Road**	**0.81**	**111**	P	Pg	19 04 19.3	+0.2
TLZ				S	Sb	19 04 30.7	-0.7
AWAZ	**Awhitu Peninsu**	**0.97**	**3**	P	Pg	19 04 22.1	-0.1
MKAZ	**Moumakai**	**1.04**	**27**	P	Pg	19 04 23.6	+0.1
MKAZ				S	Sg	19 04 35.5	+0.5
MHEZ	**Mangahewa**	**1.06**	**191**	P	Pg	19 04 23.7	-0.1
KUTZ	**Kaahu Road**	**1.08**	**115**	P	Pg	19 04 24.3	0.0
VRZ	**Vera Road**	**1.09**	**173**	P	Pg	19 04 23.7	-0.8
VRZ				S	Sg	19 04 38.3	-0.4
WTAZ	**Waiatarua**	**1.10**	**360**	P	Pg	19 04 24.6	-0.2
WTAZ				S	Sb	19 04 39.8	0.0
ETAZ	**East Tamaki Re**	**1.12**	**15**	P	Pg	19 04 24.8	-0.2
ETAZ				S	Sg	19 04 39.1	-0.3
WATZ	**Wairara**	**1.13**	**127**	P	Pg	19 04 25.0	-0.2
WATZ				S	Sg	19 04 38.7	-1.1
DREZ	**Durham Road**	**1.19**	**194**	P	Pg	19 04 25.7	-0.6
HBAZ	**Herne Bay Bore**	**1.19**	**6**	P	Pg	19 04 25.1	-1.3
HBAZ				S	Sb	19 04 42.2	-0.1
TWVZ	**Taurewa**	**1.23**	**147**	P	Pg	19 04 25.8	-1.4
TWVZ				S	Sg	19 04 41.8	-1.4
PKE	**Pukeiti**	**1.24**	**202**	P	Pg	19 04 26.4	-1.0
GRRZ	**Galatos Road**	**1.25**	**105**	P	Pg	19 04 27.5	0.0
RATZ	**Rangitukua**	**1.25**	**132**	P	Pg	19 04 26.6	-0.7
RVAZ	**Riverhead Bore**	**1.27**	**0**	P	Pn	19 04 28.0	-1.0
NGRZ	**Ngongotaha**	**1.27**	**93**	P	Pn	19 04 28.0	0.0
KATZ	**Kakaramea**	**1.28**	**137**	P	Pg	19 04 27.0	-1.1
KATZ				S	Sg	19 04 44.1	-0.7
UTU	**Utuhina**	**1.28**	**97**	P	Pb	19 04 28.7	+0.5
NEZ	**North Egmont**	**1.29**	**197**	P	Pg	19 04 27.4	-0.8
NEZ				S	Sg	19 04 44.9	0.0
KARZ	**Kaharoa**	**1.32**	**90**	P	Pn	19 04 28.7	+0.1
WIAZ	**Waiheke Island**	**1.32**	**20**	P	Pn	19 04 28.0	-0.6
WIAZ				S	Sg	19 04 44.9	-1.0
WPRZ	**Whakapapatarin**	**1.34**	**112**	P	Pg	19 04 29.6	+0.4
WTVZ	**West Tongariro**	**1.34**	**144**	P	Pn	19 04 27.6	-1.3
PREZ	**Palmer Road**	**1.34**	**194**	P	Pn	19 04 28.8	-0.2
KRVZ	**Karewarewa**	**1.34**	**142**	P	Pn	19 04 28.2	-0.9
KRVZ				S	Sg	19 04 45.3	-1.5
RITZ	**Rihia Road**	**1.37**	**133**	P	Pn	19 04 29.4	0.0
PKVZ	**Pokaka**	**1.39**	**155**	P	Pn	19 04 28.6	-1.0
PKVZ				S	Sb	19 04 46.2	-1.9
HRRZ	**Handcock Road**	**1.39**	**105**	P	Pn	19 04 29.8	+0.2
NGZ	**Ngauruhoe**	**1.39**	**145**	P	Pn	19 04 28.5	-1.2
ETVZ	**East Tongariro**	**1.41**	**141**	P	Pn	19 04 29.4	-0.6
OTVZ	**Oturere**	**1.41**	**143**	P	Pn	19 04 29.2	-0.9
HLRZ	**Highlands Stat**	**1.42**	**99**	P	Pn	19 04 27.5	-2.5
LREZ	**Lake Rotokare**	**1.43**	**185**	P	Pn	19 04 29.5	-0.6
FWVZ	**Far West T-bar**	**1.44**	**148**	P	Pn	19 04 29.6	-0.8
ABAZ	**Army Bay**	**1.45**	**8**	P	Pn	19 04 29.8	-0.6
DRZ	**Dome Shelter**	**1.46**	**148**	P	Pn	19 04 30.5	-0.4
WHVZ	**Whangaehu Hut**	**1.47**	**148**	P	Pn	19 04 30.1	-0.8
TUVZ	**Tukino**	**1.49**	**146**	P	Pn	19 04 30.5	-0.6
WNVZ	**Wahianoa**	**1.51**	**149**	P	Pn	19 04 30.7	-0.7
MTVZ	**Mangateitei**	**1.52**	**153**	P	Pn	19 04 31.0	-0.4
KUZ	**Kuaotunu**	**1.58**	**36**	P	Pn	19 04 31.0	-1.1
MOVZ	**Moawhango**	**1.65**	**146**	P	Pn	19 04 33.2	0.0
WAZ	**Wanganui**	**1.74**	**170**	P	Pn	19 04 34.4	-0.1
GRZ	**Great Barrier**	**1.92**	**22**	P	Pn	19 04 36.2	-0.6
KWKZ	**Kaweka Forest**	**2.00**	**134**	P	Pg	19 04 42.2	+0.3
WCZ	**Waipu Caves**	**2.10**	**355**	P	Pn	19 04 38.2	-1.2
PNHZ	**Pukenui**	**2.26**	**146**	P	Pb	19 04 45.6	+0.8
TSZ	**Takapari Road**	**2.29**	**152**	P	Pb	19 04 45.5	+0.2
RUGZ	**Raukumara Rang**	**2.45**	**89**	P	Pn	19 04 43.6	-0.7
POWZ	**Post Office Ro**	**2.52**	**159**	P	Pb	19 04 49.0	-0.4
MRZ	**Mangatainoka R**	**2.73**	**164**	P	Pn	19 04 50.3	+2.2
DUWZ	**D'Urville Isla**	**2.81**	**190**	P	Pn	19 04 48.6	-0.5
OGWZ	**Otaki Gorge**	**2.81**	**171**	P	Pb	19 04 52.2	-2.1
OUZ	**Omahuta**	**2.92**	**344**	P	Pn	19 04 49.7	-1.0
HOWZ	**Holdsworth Sta**	**2.95**	**166**	P	Pb	19 04 56.4	-0.2
NNZ	**Nelson**	**3.31**	**196**	P	Pn	19 04 55.5	-0.5
TUWZ	**Tuamarina**	**3.42**	**188**	P	Pn	19 04 58.1	+0.5
THZ	**Tophouse**	**3.94**	**199**	P	Pn	19 05 04.6	0.0
KHZ	**Kahutara**	**4.45**	**190**	P	Pn	19 05 12.5	+0.9

IDC 05 19:54:24.2±2.6,3°.19N×126°.34E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.2/45,mbtmp3.3/3,Error ellipse: s-maj=237.9km s-min=29.3km az=66.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.29**	**161**	P	P	19 59 43.4	-0.2
	0.2nm,0.3s,baz=340,slow=12,SNR=6.0						
ASAR	**Alice Springs**	**27.69**	**165**	P	P	20 00 15.1	+0.7
	0.1nm,0.3s,baz=359,slow=8.5,SNR=4.5						
MKAR	**Makanchi Array**	**57.78**	**326**	P	P	20 04 16.7	-0.6
	0.3nm,0.6s,baz=116,slow=6.7,SNR=2.8						

*IDC **05** 19:55:10.8±4.5,35°.91N×140°.91E,h0km,mb3.3/2, mb1 3.6/4,mb1mx3.2/53,mbtmp3.4/4,ML2.5/2,Error ellipse: s-maj=103.2km s-min=29.3km az=43.0*
*JMA **05** 19:55:19.6±0.1,35°.81N×140°.19E,h64km±2km,M2.6*
ISC 05 19:55:20.6±1.1,35°.76N±0°.05×140°.21E±0°.06,h60km±10km, n14,σ1♀15/22,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSMT	**Sammumatsuo**	**0.23**	**120**	P	**Pn**	**19 55 30.6**	**+0.4**
JIHU	**Itakohorinouch**	**0.33**	**51**	P	**Pn**	**19 55 30.6**	**-0.3**
JIHU				*eS*	**Sn**	**19 55 39.2**	**+0.8**
JYT	**Yasato**	**0.47**	**359**	P	**Pn**	**19 55 31.1**	**-1.1**
JYT				S	**Sn**	**19 55 39.7**	**-1.0**
JAG	**Ashikaga**	**0.91**	**318**	P	**Pn**	**19 55 36.7**	**-0.7**
JAG				S	**Sn**	**19 55 49.1**	**-0.7**
BSO3	**Boso 3**	**0.98**	**165**	P	**Pn**	**19 55 38.0**	**-0.1**
JOD2	**Odawara 2**	**1.04**	**242**	P	**Pn**	**19 55 38.6**	**-0.5**
JOD2				S	**Sn**	**19 55 52.2**	**-0.7**
JRY	**Ryogami san**	**1.09**	**284**	P	**Pn**	**19 55 39.9**	**+0.1**
JIM2	**Oshima 3**	**1.22**	**212**	P	**Pn**	**19 55 40.5**	**-1.0**
JIM2				S	**Sn**	**19 55 55.9**	**-1.2**
JKT	**Katashina**	**1.27**	**323**	P	**Pn**	**19 55 41.6**	**-0.7**
JKT				*eS*	**Sn**	**19 55 57.2**	**-1.3**
MJAR	**Matsushiro Arr**	**1.80**	**296**	Pn	**Pn**	**19 55 49.2**	**-0.1**
	1.7nm,0.3s,baz=101,slow=14,SNR=72						
MJAR				Sn	**Sn**	**19 56 13.5**	**+2.4**
	1.1nm,0.3s,baz=298,slow=28,SNR=2.6						
MAT	**Matsushiro**	**1.80**	**296**	P	**Pn**	**19 55 49.5**	**+0.2**
MAT				*eS*	**Sn**	**19 56 11.9**	**+0.8**
KSRS	**Korea Array**	**10.02**	**283**	Pn	**Pn**	**19 57 44.0**	**+2.2**
	0.0nm,0.3s,baz=97,slow=14,SNR=5.6						
WRA	**Warramunga Arr**	**55.67**	**187**	P	**P**	**20 04 49.2

KRMB	Red Mountain	3.20	265		Pn	20 07 05.2	+1.3
MFID	Camas Ranch	3.22	60	Pn	Pn	20 07 04.0	-0.2
KHMM	Horse Mountain	3.22	253		Pn	20 07 05.6	+1.3
H04A	Detroit Lake	3.36	328		Pn	20 07 04.4	-1.6
RYN	Ryan	3.36	165		Pn	20 07 06.8	+0.6
WAKR	Walker	3.37	177		Pn	20 07 06.7	+0.3
BMO	Blue Mountains	3.43	29		Pb	20 07 13.8	-0.3
G08A	Pilot Rock	3.45	8	Pg	Pb	20 07 17.1	+2.7
JCC	Jacoby Creek,	3.46	254		Pn	20 07 08.0	+0.6
KMRM	Mail Ridge	3.48	243	Pg	Pb	20 07 17.0	+2.2
ELK	Elko	3.52	107		Pn	20 07 09.0	+0.6
NVAR	Mina Array Bea	3.60	163	Pn	Pn	20 07 09.8	+0.3
NV11	Mina Array Sit	3.63	161		Pn	20 07 11.1	+1.2
LHV	Little Huntoon	3.73	166		Pn	20 07 12.5	+1.4
CMB	Columbia Colle	3.88	189		Pn	20 07 13.9	+0.7
HLID	Hailey	4.22	65	Pn	Pn	20 07 18.3	+0.3
TPH	Tonopah	4.23	153		Pn	20 07 18.2	0.0
R11A	Troy Canyon, C baz=320	4.71	137	P	Pn	20 07 27.2	+2.5
R11A	Troy Canyon, C	4.71	137	Pn	Pn	20 07 24.6	-0.2
SPR3	Spring Creek 3	4.98	124	Pn	Pn	20 07 29.9	+1.3
BGU	Big Grassy Mou	5.08	99	Pn	Pn	20 07 29.5	-0.3
HVU	Hansel Valley	5.15	89	Pn	Pn	20 07 30.7	-0.1
BCYI	Bear Canyon	5.19	60		Pn	20 07 31.9	+0.6
SPUT	South Promonto	5.44	94		Pn	20 07 33.6	-1.2
DUG	Dugway, Tooele	5.44	106	Pn	Pn	20 07 36.7	+1.9
PSUT	Pine Spring	5.56	125	Pn	Pn	20 07 38.2	+1.7
PRN	Pahroc Range	5.71	140		Pn	20 07 41.1	+2.7
BW06	Boulder Array	7.54	80		Pn	20 08 02.3	-1.3
PD31	Pinedale Array	7.54	80	Pn	Pn	20 08 02.6	-1.1
PDAR	Pinedale Array	7.54	80	Pn	Pn	20 08 02.2	-1.5
YNE	Yellowstone No	7.69	63	Pn	Pn	20 08 03.2	-2.6

IDC 05 20:27:10.1±2.0,2°27'N×126°06'E,h0^{km},mb3.6/4, mb1 3.7/4,mb1mx3.4/31,mbtmp3.6/4,MS3.3/3,Ms1 3.3/3, ms1mx2.6/32,Error ellipse: s-maj=174.1km s-min=26.8km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**20.51**	**244**	LR	LR	20 41 53.5	
	comp=Z,56nm,18.2s,baz=200,slow=43						
WRA	**Warramunga Arr**	**23.52**	**160**	P	P	20 32 22.2	+0.1
	1.2nm,0.5s,baz=338,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.89**	**164**	P	P	20 32 53.9	+0.9
	0.3nm,0.5s,baz=352,slow=7.1,SNR=5.5						
STKA	**Stephens Creek**	**37.03**	**158**	P	P	20 34 20.7	-1.1
	1.2nm,0.6s,baz=333,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	**58.37**	**326**	P	P	20 37 07.0	-0.3
	0.2nm,0.5s,baz=106,slow=6.2,SNR=1.6						
RAO	**Raoul Island**	**62.04**	**125**	LR	LR	21 06 33.7	
	comp=Z,32nm,18.8s,baz=352,slow=38						
AFI	**Afiamalu**	**63.66**	**107**	LR	LR	21 01 19.7	
	comp=Z,27nm,20.7s,baz=104,slow=32						

*DDA **05** 20:51:38.9,39°20'N×24°18'E,h26^{km}±1^{km},MW3.8*
*IDC **05** 20:51:38.8±1.0,39°15'N×24°16'E,h0^{km},mb3.6/7, mb1 3.8/12,mb1mx3.6/51,mbtmp3.7/12,ML3.6/5,MS2.8/7, Ms1 2.8/7,ms1mx2.5/44,Error ellipse: s-maj=18.1km s-min=14.5km az=98.0*
*ATH **05** 20:51:39.3,39°14'N×24°19'E,h25^{km}±1^{km},ML3.7/24,Error ellipse: s-maj=1.0km s-min=0.7km az=226.0*
*ISK **05** 20:51:39.2,39°17'N×24°25'E,h14^{km},ML3.7/37*
*NEIC **05** 20:51:40.0±1.7,39°17'N±0°04'×24°14'E±0°06,h7^{km}±7^{km}, Error ellipse: s-maj=7.0km s-min=6.4km az=118.0*
*THE **05** 20:51:40.4,39°14'N×24°20'E,h12^{km},ML3.8/15,Error ellipse: s-maj=0.6km s-min=0.3km az=317.0*
ISC 05 20:51:40.4±0.9,39°14'N±0°02'×24°18'E±0°01,h13^{km}±6^{km}, n290,σ^{s}11/339,mb3.8/9,MS2.7/3,12C-8D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALNA	**Alonissos**	**0.25**	**273**	P	**Pg**	**20 51 45.3**	**-0.4**
ALNA				S	**Sg**	**20 51 49.3**	**+0.1**
ALNA				AML	AML	20 51 50.8	
ALNA				AML	AML	20 51 51.6	
SKY	**Skiros Island**	**0.39**	**132**	P	**Pg**	**20 51 48.1**	**-0.1**
SKY				S	**Sg**	**20 51 53.3**	**0.0**
SKY				AML	AML	20 51 54.7	
SKY				AML	AML	20 51 54.8	
SKY	**Skiros Island**	**0.39**	**132**	P	**Pg**	**20 51 48.2**	**0.0**
SKY				S	**Sg**	**20 51 53.4**	**0.0**
	115µm,0.2s						
KYMI	**Kymi, Euboea I**	**0.51**	**187**	P	**Pg**	**20 51 50.0**	**-0.3**
KYMI				S	**Sg**	**20 51 57.5**	**+0.4**
KYMI				AML	AML	20 51 59.3	
	comp=N,12046µm,0.5s						
KYMI				AML	AML	20 51 59.9	
	comp=E,17589µm,0.7s						
KYMI	**Kymi, Euboea I**	**0.51**	**187**	P	**Pg**	**20 51 50.1**	**-0.3**
KYMI				S	**Sg**	**20 51 57.4**	**+0.3**
	comp=E,7µm,0.5s						
EFSA	**Agios Efstrati**	**0.74**	**57**	P	**Pg**	**20 51 54.6**	**-0.3**
NEO	**Neokhori**	**0.77**	**283**	P	**Pg**	**20 51 54.3**	**-1.0**
NEO				S	**Sg**	**20 52 05.5**	**+0.2**
NEO				AML	AML	20 52 07.6	
	comp=N,26236µm,0.6s						
NEO				AML	AML	20 52 07.7	
	comp=E,22507µm,0.3s						
NEO	**Neokhori**	**0.77**	**283**	P	**Pg**	**20 51 54.4**	**-0.9**
NEO				S	**Sg**	**20 52 06.7**	**+1.4**
	comp=E,12µm,0.8s						
XOR	**Xorichti**	**0.80**	**287**	P	**Pb**	**20 51 55.8**	**-0.5**
XOR				S	**Sb**	**20 52 07.5**	**+0.4**
	comp=E,10µm,0.6s						
PAIG	**Paliouri**	**0.88**	**334**	P	**Pb**	**20 51 57.1**	**-0.6**
PAIG				AML	AML	20 52 13.0	
	comp=E,4323µm,0.5s						
PAIG				AML	AML	20 52 13.4	
	comp=N,4073µm,0.5s						
PAIG	**Paliouri**	**0.88**	**334**	P	**Pb**	**20 51 57.0**	**-0.6**
PAIG				S	**Sb**	**20 52 10.4**	**+1.1**
	comp=N,2µm,0.5s						
ATAL	**Atalanti**	**1.01**	**244**	P	**Pb**	**20 51 58.5**	**-1.3**
ATAL				S	**Sb**	**20 52 12.9**	**0.0**
ATAL				AML	AML	20 52 15.6	
	comp=N,3841µm,0.7s						
ATAL				AML	AML	20 52 17.5	
	comp=E,2592µm,0.5s						
ATAL	**Atalanti**	**1.01**	**244**	P	**Pb**	**20 51 58.9**	**-0.9**
ATAL				S	**Sb**	**20 52 13.7**	**+0.7**
LKR	**Lokris**	**1.04**	**243**	P	**Pb**	**20 51 59.4**	**-1.0**
LKR				AML	AML	20 52 17.3	
	comp=N,3077µm,0.5s						
LKR				AML	AML	20 52 20.2	
	comp=E,3040µm,0.5s						
LKR	**Lokris**	**1.04**	**243**	P	**Pb**	**20 51 59.5**	**-0.9**
DION	**Dionisos Attik**	**1.07**	**191**	P	**Pb**	**20 52 00.2**	**-0.7**
DION				AML	AML	20 52 18.1	
	comp=N,56372µm,0.4s						
DION				AML	AML	20 52 18.1	
	comp=E,49184µm,0.4s						
DION	**Dionisos Attik**	**1.07**	**191**	P	**Pb**	**20 52 00.2**	**-0.7**
DION				S	**Sb**	**20 52 15.6**	**+0.7**
	comp=E,27µm,0.4s						
LIA	**Limnos Island**	**1.08**	**45**	P	**Pb**	**20 52 00.5**	**-0.6**
LIA				AML	AML	20 52 17.5	
	comp=N,11745µm,0.3s						
LIA				AML	AML	20 52 18.9	
	comp=E,8110µm,0.7s						
LIA	**Limnos Island**	**1.08**	**45**	P	**Pb**	**20 52 00.6**	**-0.5**
LIA				S	**Sb**	**20 52 15.6**	**+0.4**
	comp=E,5µm,0.4s						
PTL	**Penteli**	**1.11**	**193**	P	**Pb**	**20 52 00.9**	**-0.8**
PTL				AML	AML	20 52 20.1	
	comp=E,11683µm,1.2s						
PTL				AML	AML	20 52 20.5	
	comp=N,12645µm,0.6s						
PTL	**Penteli**	**1.11**	**193**	P	**Pb**	**20 52 00.8**	**-0.8**
PTL				S	**Sb**	**20 52 16.6**	**+0.6**
	comp=N,6µm,0.9s						
KARY	**Karystos**	**1.12**	**170**	P	**Pb**	**20 52 00.9**	**-0.8**
KARY				S	**Sb**	**20 52 15.4**	**-0.8**
KARY				AML	AML	20 52 20.6	
	comp=N,3256µm,0.4s						
KARY				AML	AML	20 52 22.6	
	comp=E,3065µm,0.4s						
KARY	**Karystos**	**1.12**	**170**	P	**Pb**	**20 52 00.9**	**-0.8**
VIL2	**Platees**	**1.17**	**218**	P	**Pn**	**20 52 01.6**	**-1.0**
VIL2				S	**Sb**	**20 52 18.3**	**+0.7**
VIL2				AML	AML	20 52 20.2	
	comp=N,12306µm,0.5s						
VIL2				AML	AML	20 52 22.4	
	comp=E,12741µm,0.5s						
VILL	**Villia**	**1.19**	**215**	P	**Pn**	**20 52 01.8**	**-1.0**
VILL				S	**Sb**	**20 52 19.1**	**+1.0**
	comp=E,7µm,0.5s						
OUR	**Ouranopolis**	**1.21**	**353**	P	**Pn**	**20 52 02.2**	**-0.9**
OUR	**Ouranopolis**	**1.21**	**353**	PN	**Pn**	**20 52 02.1**	**-0.9**
OUR				SN	**Sb**	**20 52 18.3**	**-0.4**
OUR	**Ouranopolis**	**1.21**	**353**	P	**Pn**	**20 52 02.2**	**-0.9**
OUR				S	**Sb**	**20 52 18.6**	**-0.1**
	comp=E,1µm,0.7s						
ATHU	**Athens Univers**	**1.21**	**195**	P	**Pn**	**20 52 02.1**	**-1.0**
ATHU				AML	AML	20 52 23.2	
	comp=N,8389µm,0.7s						
ATHU				AML	AML	20 52 23.7	
	comp=E,3742µm,0.9s						
ATHU	**Athens Univers**	**1.21**	**195**	P	**Pn**	**20 52 02.1**	**-1.0**
ATHU				S	**Sb**	**20 52 19.1**	**+0.4**
	comp=E,2µm,0.9s						
ATH	**Athens Observa**	**1.22**	**198**	P	**Pn**	**20 52 02.3**	**-0.9**
ATH				S	**Sb**	**20 52 19.9**	**+0.9**
ATH				AML	AML	20 52 21.2	
	comp=N,9257µm,44.1s						
ATH				AML	AML	20 52 23.3	
	comp=E,17155µm,0.7s						
ATH	**Athens Observa**	**1.22**	**198**	P	**Pn**	**20 52 02.4**	**-0.8**
ATH				S	**Sb**	**20 52 19.1**	**+0.1**
	comp=E,8µm,0.6s						
PSRA	**Psara**	**1.23**	**118**	P	**Pn**	**20 52 03.2**	**-0.1**
AXAR	**Agios Charalam**	**1.24**	**253**	P	**Pn**	**20 52 02.9**	**-0.6**
AXAR				S	**Sb**	**20 52 20.8**	**+1.0**
AXAR				AML	AML	20 52 25.3	
	comp=N,8300µm,0.6s						
AXAR				AML	AML	20 52 25.9	
	comp=E,5438µm,0.8s						
AXAR	**Agios Charalam**	**1.24**	**253**	P	**Pn**	**20 52 03.0**	**-0.6**
SIGR	**SIGRI**	**1.30**	**86**	P	**Pn**	**20 52 03.7**	**-0.6**
SIGR				AML	AML	20 52 25.6	
	comp=N,5295µm,0.5s						
SIGR				AML	AML	20 52 27.5	
	comp=E,5473µm,0.5s						
SIGR	**SIGRI**	**1.30**	**86**	PN	**Pn**	**20 52 03.4**	**-0.9**
SIGR				SN	**Sb**	**20 52 19.9**	**-1.5**
SIGR	**SIGRI**	**1.30**	**86**	P	**Pn**	**20 52 03.6**	**-0.7**
SIGR				S	**Sb**	**20 52 20.6**	**-0.8**
	comp=E,3µm,0.5s						
VLY	**Voula,Athens**	**1.32**	**194**	P	**Pn**	**20 52 03.8**	**-0.8**
VLY				AML	AML	20 52 25.4	
	comp=E,13500µm,0.7s						
VLY				AML	AML	20 52 26.0	
	comp=N,18305µm,0.7s						
VLY	**Voula,Athens**	**1.32**	**194**	P	**Pn**	**20 52 03.7**	**-0.8**
VLY				S	**Sn**	**20 52 22.1**	**+0.1**
	comp=N,8µm,0.7s						
PLG	**Polygyros**	**1.36**	**336**	P	**Pn**	**20 52 03.9**	**-1.3**
PLG				AML	AML	20 52 26.0	
	comp=N,1231µm,0.5s						
PLG				AML	AML	20 52 26.0	
	comp=E,1375µm,0.6s						
PLG	**Polygyros**	**1.36**	**336**	P	**Pn**	**20 52 03.9**	**-1.3**
AGG	**Agios Georgios**	**1.45**	**266**	P	**Pn**	**20 52 05.4**	**-1.0**
AGG				AML	AML	20 52 31.5	
	comp=N,3099µm,0.6s						
AGG				AML	AML	20 52 37.8	
	comp=E,3008µm,0.9s						
AGG	**Agios Georgios**	**1.45**	**266**	PN	**Pn**	**20 52 06.1**	**-0.3**
AGG				SN	**Sn**	**20 52 26.1**	**+0.8**
AGG	**Agios Georgios**	**1.45**	**266**	*i* P	**Pn**	**20 52 07.6**	**+1.2**
AGG				*i* S	**Sn**	**20 52 26.0**	**+0.7**
AGG	**Agios Georgios**	**1.45**	**266**	Pn	**Pn**	**20 52 06.0**	**-0.3**
AGG	**Agios Georgios**	**1.45**	**266**	P	**Pn**	**20 52 05.8**	**-0.6**
LTK	**Loutraki**	**1.46**	**221**	P	**Pn**	**20 52 06.9**	**+0.3**
LTK	**Loutraki**	**1.46**	**221**	P	**Pn**	**20 52 06.0**	**-0.6**
LTK				S	**Sn**	**20 52 25.6**	**-0.1**
	comp=E,2µm,0.5s						
DLFA	**Delphi**	**1.47**	**244**	P	**Pn**	**20 52 06.1**	**-0.6**
DSF	**Desfina**	**1.48**	**241**	P	**Pn**	**20 52 08.2**	**+1.3**
LOUT	**Loutraki**	**1.49**	**220**	P	**Pn**	**20 52 06.2**	**-0.7**
LOUT				AML	AML	20 52 33.4	
	comp=N,1070µm,0.4s						
LOUT				AML	AML	20 52 34.6	
	comp=E,1409µm,0.5s						
LOUT	**Loutraki**	**1.49**	**220**	P	**Pn**	**20 52 06.2**	**-0.7**
THAS	**Thassos island**	**1.52**	**16**	P	**Pn**	**20 52 06.7**	**-0.7**
THAS	**Thassos island**	**1.52**	**16**	P	**Pn**	**20 52 06.2**	**-1.2**
MAKR	**Makrakomi, Fth**	**1.60**	**266**	P	**Pn**	**20 52 08.4**	**-0.1**
MAKR				AML	AML	20 52 38.4	
	comp=N,2102µm,1.0s						
MAKR				AML	AML	20 52 46.8	
	comp=E,1254µm,0.8s						
BOZC	**Bozcaada**	**1.61**	**63**	PN	**Pn**	**20 52 07.4**	**-1.1**
BOZC	**Bozcaada**	**1.61**	**63**	*i* P	**Pn**	**20 52 07.5**	**-1.1**
BOZC				*i* S	**Sn**	**20 52 27.7**	**-1.5**
BOZC				IAML		20 52 35.0	
	comp=N,291nm,0.7s						
THAL	**Thalero**	**1.62**	**228**	P	**Pn**	**20 52 09.0**	**+0.3**
THAL	**Thalero**	**1.62**	**228**	P	**Pn**	**20 52 08.7**	**0.0**
LIT	**Litokhoron**	**1.62**	**307**	P	**Pn**	**20 52 07.9**	**-0.9**
LIT	**Litokhoron**	**1.62**	**307**	*i* P	**Pn**	**20 52 07.5**	**-1.3**
LIT				*i* S	**Sn**	**20 52 26.0**	**-3.7**
LIT	**Litokhoron**	**1.62**	**307**	Pn	**Pn**	**20 52 07.8**	**-0.9**
LIT	**Litokhoron**	**1.62**	**307**	P	**Pn**	**20 52 07.9**	**-0.9**
PRK	**Paraskevi**	**1.63**	**85**	P	**Pn**	**20 52 09.1**	**+0.3**
PRK				AML	AML	20 52 36.2	
	comp=N,7702µm,0.7s						
PRK				AML	AML	20 52 36.5	
	comp=E,6391µm,0.9s						
HORT	**Hortiatis**	**1.68**	**331**	P	**Pn**	**20 52 09.0**	**-0.6**
HORT	**Hortiatis**	**1.68**	**331**	PN	**Pn**	**20 52 09.1**	**-0.6**
HORT	**Hortiatis**	**1.68**	**331**	P	**Pn**	**20 52 09.2**	**-0.5**
SMTH	**Samothraki Isl**	**1.69**	**37**	P	**Pn**	**20 52 08.2**	**-1.5**
SMTH				AML	AML	20 52 39.4	
	comp=E,1213µm,0.9s						
SMTH				AML	AML	20 52 43.6	
	comp=N,1166µm,0.7s						
SMTH	**Samothraki Isl**	**1.69**	**37**	P	**Pn**	**20 52 08.2**	**-1.5**
GADA	**Gvkgeada**	**1.69**	**51**	PN	**Pn**	**20 52 08.5**	**-1.2**
GADA	**Gvkgeada**	**1.69**	**51**	P	**Pn**	**20 52 09.0**	**-0.7**
GOKA	**anakkale-Gk**	**1.70**	**51**	*i* P	**Pn**	**20 52 09.3**	**-0.5**
GOKA				*i* S	**Sn**	**20 52 32.1**	**+0.7**
GOKA				IAML		20 52 43.0	
	comp=E,1µm,0.5s						
GOKA				IAML		20 52 45.0	
	comp=N,1µm,0.6s						
EPID	**Epidavros**	**1.73**	**209**	P	**Pn**	**20 52 09.5**	**-0.8**
EPID	**Epidavros**	**1.73**	**209**	P	**Pn**	**20 52 09.4**	**-0.9**
THL	**Klokotos Trika**	**1.73**	**285**	P	**Pn**	**20 52 09.7**	**-0.5**
THL				AML	AML	20 52 41.7	
	comp=N,856µm,0.6s						
THL				AML	AML	20 52 44.5	
	comp=E,746µm,0.7s						
THL	**Klokotos Trika**	**1.73**	**285**	P	**Pn**	**20 52 09.8**	**-0.5**
KALE	**Kalithea**	**1.76**	**246**	P	**Pn**	**20 52 10.3**	**-0.5**
KALE	**Kalithea**	**1.76**	**246**	P	**Pn**	**20 52 10.0**	**-0.7**
THE	**Thessaloniki**	**1.76**	**328**	P	**Pn**	**20 52 10.5**	**-0.2**
THE	**Thessaloniki**	**1.76**	**328**	P	**Pn**	**20 52 10.5**	**-0.2**
TNSA	**Tinos**	**1.77**	**154**	P	**Pn**	**20 52 10.1**	**-0.6**
EZN	**Ezine**	**1.79**	**67**	PN	**Pn**	**20 52 09.8**	**-1.3**
EZN	**Ezine**	**1.79**	**67**	P	**Pn**	**20 52 10.3**	**-0.8**
SOH	**Sokhos**	**1.80**	**340**	P	**Pn**	**20 52 10.9**	**-0.4**
SOH	**Sokhos**	**1.80**	**340**	P	**Pn**	**20 52 10.9**	**-0.4**
KVLA	**Kavala**	**1.81**	**5**	P	**Pn**	**20 52 10.2**	**-1.0**
TRIZ	**Trizonia**	**1.82**	**246**	P	**Pn**	**20 52 11.0**	**-0.5**
TRIZ	**Trizonia**	**1.82**	**246**	P	**Pn**	**20 52 11.1**	**-0.4**
ANX	**Ano Chora**	**1.85**	**254**	P	**Pn**	**20 52 11.9**	**0.0**
ANX	**Ano Chora**	**1.85**	**254**	P	**Pn**	**20 52 12.0**	**0.0**
EVR	**Evrytania**	**1.86**	**264**	P	**Pn**	**20 52 12.6**	**+0.5**
EVR	**Evrytania**	**1.86**	**264**	P	**Pn**	**20 52 12.4**	**+0.2**
YDRA	**Hydra**	**1.87**	**198**	P	**Pn**	**20 52 11.4**	**-0.7**
KAVA	**Kavala**	**1.88**	**8**	P	**Pn**	**20 52 11.2**	**-1.0**
KAVA	**Kavala**	**1.88**	**8**	P	**Pn**	**20 52 11.1**	**-1.1**
GUR	**Goura**	**1.88**	**231**	P	**Pn**	**20 52 11.7**	**-0.6**
GUR	**Goura**	**1.88**	**231**	P	**Pn**	**20 52 11.7**	**-0.6**
EFP	**Efpalio**	**1.92**	**249**	P	**Pn**	**20 52 12.6**	**-0.2**
EFP	**Efpalio**	**1.92**	**249**	P	**Pn**	**20 52 12.6**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.93**	**71**	*i* P	**Pn**	**20 52 12.3**	**-0.7**
BAYC				*i* S	**Sn**	**20 52 37.9**	**+0.8**
KLV	**Kalavryta, Ach**	**1.93**	**236**	P	**Pn**	**20 52 12.5**	**-0.6**
KLV	**Kalavryta, Ach**	**1.93**	**236**	P	**Pn**	**20 52 12.4**	**-0.6**
AYVA	**Ayvalik**	**1.96**	**84**	*i* P	**Pn**	**20 52 13.1**	**-0.3**
AYVA				*i* S	**Sn**	**20 52 35.6**	**-2.2**
AYVA				IAML		20 52 45.0	
	comp=E,756nm,0.9s						
AYVA				IAML		20 52 45.0	
	comp=N,766nm,0.7s						
KTI	**Kastanea**	**2.03**	**309**	P	**Pn**	**20 52 14.0**	**-0.5**
SRS	**Serrai**	**2.03**	**347**	P	**Pn**	**20 52 13.6**	**-0.8**
SRS	**Serrai**	**2.03**	**347**	P	**Pn**	**20 52 13.6**	**-0.8**
URLA	**Izmir**	**2.04**	**112**	PN	**Pn**	**20 52 13.6**	**-0.9**
URLA	**Izmir**	**2.04**	**112**	*i* P	**Pn**	**20 52 14.4**	**-0.1**
URLA				*i* S	**Sn**	**20 52 39.6**	**-0.3**
URLA				IAML		20 52 51.0	
	comp=E,434nm,0.8s						
DKL	**Dikili**	**2.12**	**91**	PN	**Pn**	**20 52 14.5**	**-1.1**
GELI	**Tayfur-Gelibol**	**2.17**	**54**	PN	**Pn**	**20 52 15.5**	**-0.8**
KZN	**Kozani**	**2.20**	**303**	P	**Pn**	**20 52 16.6**	**-0.2**
KZN	**Kozani**	**2.20**	**303**	P	**Pn**	**20 52 16.5**	**-0.2**
TRIP	**Tripoli**	**2.20**	**224**	P	**Pn**	**20 52 16.8**	**+0.1**
TRIP	**Tripoli**	**2.20**	**224**	P	**Pn**	**20 52 16.7**	**-0.1**
ENEZ	**Enez**	**2.20**	**43**	PN	**Pn**	**20 52 15.5**	**-1.2**
NVR	**Nevrokopi**	**2.23**	**354**	P	**Pn**	**20 52 16.6**	**-0.5**
NVR	**Nevrokopi**	**2.23**	**354**	P	**Pn**	**20 52 15.9**	**-1.2**
KNT	**Kendrikon**	**2.25**	**334**	P	**Pn**	**20 52 17.5**	**0.0**
KNT	**Kendrikon**	**2.25**	**334**	PN	**Pn**	**20 52 16.8**	**-0.6**
KNT	**Kendrikon**	**2.25**	**334**	P	**Pn**	**20 52 17.4**	**0.0**
RDO	**Rodhopi**	**2.26**	**27**	P	**Pn**	**20 52 17.0**	**-0.6**
RDO	**Rodhopi**	**2.26**	**27**	PN	**Pn**	**20 52 16.2**	**-1.3**
RDO	**Rodhopi**	**2.26**	**27**	P	**Pn**	**20 52 16.9**	**-0.6**
ZEDA	**zmir-Bergama**	**2.26**	**93**	*i* P	**Pn**	**20 52 17.2**	**-0.3**
ZEDA				*i* S	**Sn**	**20 52 42.3**	**-3.0**
ZEDA				IAML		20 52 57.0	
	comp=N,251nm,1.0s						
ZEDA				IAML		20 52 57.0	
	comp=E,426nm,0.7s						
VLX	**Vlachokerasia**	**2.26**	**219**	P	**Pn**	**20 52 17.8**	**+0.1**
ALN	**Alexandroupoli**	**2.27**	**39**	P	**Pn**	**20 52 16.5**	**-1.1**
ALN	**Alexandroupoli**	**2.27**	**39**	PN	**Pn**	**20 52 15.9**	**-1.7**
ALN	**Alexandroupoli**	**2.27**	**39**	*i* P	**Pn**	**20 52 16.4**	**-1.1**
ALN				*i* S	**Sn**	**20 52 41.4**	**-4.0**
ALN	**Alexandroupoli**	**2.27**	**39**	Pn	**Pn**	**20 52 16.5**	**-1.1**
ALN	**Alexandroupoli**	**2.27**	**39**	P	**Pn**	**20 52 16.4**	**-1.1**
DRO	**Drossia**	**2.27**	**239**	P	**Pn**	**20 52 17.8**	**+0.1**
APE	**Apeiranthos**	**2.32**	**152**	P	**Pn**	**20 52 18.0**	**-0.5**
APE	**Apeiranthos**	**2.32**	**152**	‖P	**Pn**	**20 52 17.6**	**-0.8**
APE	**Apeiranthos**	**2.32**	**152**	PN	**Pn**	**20 52 18.0**	**-0.5**
APE	**Apeiranthos**	**2.32**	**152**	*i* P	**Pn**	**20 52 17.8**	**-0.7**
APE				*i* S	**Sn**	**20 52 41.7**	**-5.2**
APE	**Apeiranthos**	**2.32**	**152**	P	**Pn**	**20 52 17.9**	**-0.5**
LPK	**Lapseki**	**2.34**	**57**	PN	**Pn**	**20 52 17.6**	**-1.0**
BLCB	**Balcova**	**2.36**	**108**	PN	**Pn**	**20 52 18.3**	**-0.6**
ERIK	**Erikli-Kesan**	**2.36**	**49**	PN	**Pn**	**20 52 17.4**	**-1.5**
DGB	**zmir**	**2.38**	**116**	*i* P	**Pn**	**20 52 19.4**	**+0.3**
DGB				*i* S	**Sn**	**20 52 46.0**	**-2.1**
RLS	**Riolos of Patr**	**2.38**	**244**	P	**Pn**	**20 52 20.1**	**+0.8**
MHLA	**Plaka, Milos I**	**2.40**	**175**	P	**Pn**	**20 52 18.8**	**-0.6**
PDO	**Prodromos**	**2.40**	**258**	P	**Pn**	**20 52 20.2**	**+0.7**
MHLO	**Agia Marina, M**	**2.45**	**176**	P	**Pn**	**20 52 20.8**	**+0.7**
MMB	**Musomiste**	**2.48**	**352**	*i* P	**Pn**	**20 52 19.5**	**-1.0**
AMT	**Artemida-Makis**	**2.52**	**231**	P	**Pn**	**20 52 21.7**	**+0.6**
SMG	**Samos**	**2.52**	**124**	P	**Pn**	**20 52 21.3**	**+0.1**
SMG	**Samos**	**2.52**	**124**	P	**Pn**	**20 52 21.2**	**0.0**
KESN	**Edirne-Kesan**	**2.56**	**48**	*i* P	**Pn**	**20 52 20.9**	**-1.0**
KESN				*i* S	**Sn**	**20 52 52.4**	**-0.7**
KESN				IAML		20 53 05.0	
	comp=E,313nm,0.6s						
KESN				IAML		20 53 07.0	
	comp=N,273nm,0.8s						
PENT	**Pentalofos**	**2.58**	**295**	P	**Pn**	**20 52 22.5**	**+0.5**
RZN	**Rozhen**	**2.58**	**9**	*i* P	**Pn**	**20 52 21.7**	**-0.4**
VLI	**Veliai**	**2.61**	**203**	P	**Pn**	**20 52 21.8**	**-0.5**
VLI	**Veliai**	**2.61**	**203**	P	**Pn**	**20 52 21.6**	**-0.7**
ITM	**Ithomi**	**2.64**	**223**	P	**Pn**	**20 52 23.6**	**+0.8**
ITM	**Ithomi**	**2.64**	**223**	PN	**Pn**	**20 52 23.5**	**+0.8**
ITM	**Ithomi**	**2.64**	**223**		**Pn**	**20 52 23.9**	**+1.1**
AMGA	**Amorgos Island**	**2.67**	**149**	P	**Pn**	**20 52 22.8**	**-0.4**
AMGA	**Amorgos Island**	**2.67**	**149**	P	**Pn**	**20 52 22.8**	**-0.4**
KDZ	**Kurdzhali**	**2.68**	**20**	PN	**Pn**	**20 52 22.1**	**-1.3**
FNA	**Florina**	**2.71**

comp=N,3.3nm,0.3s,baz=104,slow=23,SNR=3.8

IDI	**Anoyia**	**3.88**	**171**	⇑P		**Pn**	**20 52 39.2**	**-0.7**
CTYL	**Yalikoy Yolu**	**3.91**	**52**	PN		**Pn**	**20 52 39.3**	**-0.9**
CTKS	**Kestanelik-??a**	**3.92**	**56**	PN		**Pn**	**20 52 39.6**	**-0.7**
ULDT	**Uludag**	**3.95**	**74**	*i* P		**Pn**	**20 52 41.4**	**+0.4**
ULDT				*i* S		**Sb**	**20 53 34.3**	**-3.6**
TURN	**Turunc**	**3.98**	**125**	*i* P		**Pn**	**20 52 40.1**	**-1.1**
TURN				*i* S		Sn	20 53 18.3	-9.4
IGD	**Bursa**	**4.03**	**72**	*i* P		**Pn**	**20 52 42.1**	**+0.2**
IGD				*i* S		**Sn**	**20 53 30.6**	**+1.6**
BGKT	**Bogazkoy**	**4.07**	**58**	PN		**Pn**	**20 52 40.9**	**-1.4**
TAVA	**DENIZLI_Tavas**	**4.08**	**113**	*i* P		**Pn**	**20 52 43.7**	**+1.1**
TAVA				*i* S		**Sb**	**20 53 39.7**	**-1.7**
TRML	**Termal-Yalova**	**4.11**	**67**	PN		**Pn**	**20 52 42.1**	**-0.9**
ISK	**Istanbul-Kandi**	**4.21**	**61**	PN		**Pn**	**20 52 43.9**	**-0.4**
KAVV	**Kandilli-Istan**	**4.21**	**61**	PN		**Pn**	**20 52 43.9**	**-0.4**
KLYT	**Kilyos**	**4.28**	**59**	PN		**Pn**	**20 52 45.2**	**-0.1**
KARP	**Karpathos**	**4.30**	**146**			**Pn**	**20 52 45.9**	**+0.3**
GOLH	**Golhisar**	**4.64**	**112**	*i* P		**Pn**	**20 52 52.4**	**+2.0**
GOLH				*i* S		**Sg**	**20 54 12.7**	**+3.2**
NEF	**NEVSHA**	**4.74**	**28**	*i* P		**Pn**	**20 52 51.6**	**0.0**
PDG	**Podgorica**	**4.98**	**313**	⇓P		**Pn**	**20 52 56.1**	**+1.2**
PDG	**Podgorica**	**4.98**	**313**	Pn		**Pn**	**20 52 54.1**	**-0.8**
COPA	**Copaceanca**	**5.05**	**8**	⇑P		**Pn**	**20 52 56.1**	**+0.2**
AKAS	**Kas**	**5.19**	**122**	Pn		**Pn**	**20 52 58.7**	**+0.8**
MDUB	**Mudurnu**	**5.56**	**74**	Pn		**Pn**	**20 53 01.1**	**-1.9**
TIP	**Timpagrande**	**5.77**	**273**	Pn		**Pn**	**20 53 05.1**	**-0.8**
DIVS	**Divibare**	**5.87**	**329**			**Pn**	**20 53 05.8**	**-1.4**
HERR	**Herculane**	**5.89**	**348**	⇓P		**Pn**	**20 53 06.3**	**-1.1**
ARR	**Arges**	**6.24**	**3**	⇑P		**Pn**	**20 53 12.4**	**+0.2**
LOT	**Lotru**	**6.32**	**357**	⇑P		**Pn**	**20 53 13.1**	**-0.2**
VOIR		**6.33**	**6**	⇑P		**Pn**	**20 53 13.8**	**+0.3**
GZR	**Gura Zlata**	**6.34**	**351**	⇓P		**Pn**	**20 53 13.2**	**-0.4**
MLR	**Muntele Rosu**	**6.48**	**11**	Pn		**Pn**	**20 53 16.5**	**+0.8**

comp=N,0.9nm,0.3s,baz=192,slow=5.3,SNR=32

MLR					Sn	**Sn**	**20 54 29.0**	**-0.5**

baz=120,slow=20,SNR=1.2

MLR					Lg	Lg	20 55 09.7	

comp=N,0.1nm,0.3s,baz=263,slow=22,SNR=1.2

MLR	**Muntele Rosu**	**6.48**	**11**	⇓P		**Pn**	**20 53 16.6**	**+1.0**
MLR	**Muntele Rosu**	**6.48**	**11**			**Pn**	**20 53 16.1**	**+0.5**
CFR	**Carcaliu**	**6.71**	**25**	⇑P		**Pn**	**20 53 18.5**	**-0.2**
BZS	**Buzias**	**6.75**	**344**	⇑P		**Pn**	**20 53 18.5**	**-0.7**
RICI	**Ricice**	**6.86**	**312**	*e*Pn		**Pn**	**20 53 21.7**	**+0.9**
DOPR	**Dopca**	**6.88**	**7**	⇓P		**Pn**	**20 53 21.6**	**+0.5**
DOPR				⇓S		**Sn**	**20 54 39.9**	**+0.7**
PLOR	**Plostina**	**6.95**	**14**	⇑P		**Pn**	**20 53 22.5**	**+0.5**
VRI	**Vrincioaia**	**6.98**	**15**	⇑P		**Pn**	**20 53 23.0**	**+0.5**
OZUR		**7.05**	**9**	⇑P		**Pn**	**20 53 24.2**	**+0.7**
BR131	**Keskin Array S**	**7.34**	**82**			**Pn**	**20 53 28.8**	**+1.4**
BRTR	**Keskin Array B**	**7.34**	**82**	Pn		**Pn**	**20 53 28.9**	**+1.4**

comp=N,0.8nm,0.3s,baz=254,slow=11,SNR=13

BRTR	**Keskin Array B**	**7.34**	**82**	Pn		**Pn**	**20 53 28.4**	**+0.9**
TESR	**Tescani**	**7.59**	**13**	⇑P		**Pn**	**20 53 31.7**	**+1.0**
KIJV	**Kijevo**	**7.59**	**312**	*e*Pn		**Pn**	**20 53 30.9**	**+0.1**
MORI	**Morici**	**7.92**	**309**	*e*Pn		**Pn**	**20 53 33.3**	**-2.0**
BIZ	**Bicaz**	**7.92**	**10**	⇑P		**Pn**	**20 53 36.5**	**+1.2**
BURAR	**Bucovina Array**	**8.51**	**5**	⇓P		**Pn**	**20 53 44.2**	**+0.7**
BURAR	**Bucovina Array**	**8.51**	**5**	Pn		**Pn**	**20 53 44.1**	**+0.6**
BUR08	**Bucovina Ar. S**	**8.54**	**5**			**Pn**	**20 53 43.2**	**-0.7**
KOLS	**Kolonicke sedl**	**9.89**	**353**	*e*PN		**Pn**	**20 54 03.8**	**+1.5**
MMAI	**Mount Meron Ar**	**10.94**	**121**	Pn		**Pn**	**20 54 17.8**	**+1.0**

comp=N,0.7nm,0.3s,baz=306,slow=11,SNR=7.5

VRAC	**Vranov**	**11.53**	**334**	LR		LR	20 58 33.4	

comp=N,27nm,19.9s,baz=252,slow=36

GERES	**GERESS Array B**	**12.28**	**326**	Pn		**Pn**	**20 54 36.1**	**+1.0**

comp=N,0.1nm,0.3s,baz=164,slow=12,SNR=2.8

DAVOX	**Davos/Dischmat**	**12.95**	**311**	LR		LR	21 00 02.8	

comp=N,51nm,21.4s,baz=116,slow=39

EIL	**Elat**	**12.96**	**134**	LR		LR	21 00 59.3	

comp=N,19nm,18.2s,baz=282,slow=43

GNI	**Garni**	**15.87**	**80**	LR		LR	21 02 34.8	

comp=N,43nm,18.8s,baz=262,slow=41

ESDC	**Sonseca Array**	**21.72**	**280**	P		**P**	**20 56 31.6**	**+0.2**

comp=N,1.0nm,0.9s,baz=256,slow=39,SNR=2.2

HFS	**Hagfors**	**22.04**	**346**	LR		LR	21 05 54.9	

comp=N,28nm,18.1s,baz=238,slow=39

FINES	**FINESS Array B**	**22.36**	**2**	P		**P**	**20 56 38.3**	**+0.3**

comp=N,2.2nm,0.9s,baz=200,slow=16,SNR=1.7

NOA	**NORSAR Array B**	**23.36**	**344**	P		**P**	**20 56 47.4**	**-1.1**

comp=N,1.1nm,0.8s,baz=154,slow=11,SNR=3.4

NOA				LR		LR	21 07 22.6	

comp=N,16nm,19.6s,baz=310,slow=40

EKA	**Eskdalemuir Ar**	**24.41**	**321**	P		**P**	**20 56 57.6**	**-0.8**

comp=N,3.4nm,1.0s,baz=119,slow=8.7,SNR=4.3

ARCES	**ARCESS Array B**	**30.47**	**1**	LR		LR	21 09 56.2	

comp=N,24nm,18.4s,baz=330,slow=36

TOA0	**Torodi Ar. Sit**	**32.64**	**224**	P		**P**	**20 58 12.8**	**+0.6**
TOA0				IAmb		IAmb	20 58 14.9	

comp=Z,6.6nm,1.4s

TORD	**Torodi Ar. Bea**	**32.64**	**224**	P		**P**	**20 58 12.4**	**+0.2**

comp=Z,2.0nm,0.6s,baz=36,slow=9.0,SNR=13

TORD	**Torodi Ar. Bea**	**32.64**	**224**	P		**P**	**20 58 12.7**	**+0.5**
GAR	**Garm**	**35.52**	**75**	P		**P**	**20 58 38.0**	**+0.8**
GAR				IAmb		IAmb	20 58 44.5	

comp=Z,5.7nm,1.0s

MKAR	**Makanchi Array**	**42.35**	**60**	P		**P**	**20 59 34.7**	**+0.6**

comp=Z,0.5nm,0.5s,baz=271,slow=7.5,SNR=6.7

ZALV	**Zalesovo Beam**	**42.91**	**49**	P		**P**	**20 59 38.8**	**+0.3**

comp=Z,0.9nm,0.5s,baz=270,slow=8.9,SNR=4.9

ZALV	**Zalesovo Beam**	**42.91**	**49**	P		**P**	**20 59 39.0**	**+0.5**

*NEIC **05** 21:04:14.8±1.6, 43.°85N±0.°05×105.°41W±0.°07, h0km±2km, ML3.4/53, Error ellipse: s-maj=8.9km s-min=8.5km az=320.0*

*IDC **05** 21:04:15.9±0.9, 44.°03N×105.°74W, h0km, mb3.9/3, mb1 3.8/8, mb1mx3.6/40, mbtmp3.7/8, ML3.5/5, MS3.0/1, Ms1 3.2/1, ms1mx2.3/45, Error ellipse: s-maj=23.9km s-min=8.0km az=145.0*

ISC 05 21:04:14.5±0.7, 43.°87N±0.°06×105.°42W±0.°06, h0km, n52, σ1°08/52, mb4.0/3, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.03**	**76**	Pg	**Pg**	**21 04 34.1**	**-0.1**
K22A	**Casper**	**1.46**	**214**	Pn	**Pn**	**21 04 41.2**	**-1.1**
K22A				IAML		21 05 06.0	

comp=N,407nm,0.6s

RWWY	**Rawlins**	**2.55**	**212**	Pn	**Pn**	**21 04 58.7**	**+1.4**
RWWY				IAML		21 05 37.9	

comp=N,276nm,0.8s

PHWY	**Pilot Hill**	**2.57**	**181**	Pn	**Pn**	**21 04 57.1**	**-0.6**
LAO	**LASA Array**	**2.87**	**349**		**Pn**	**21 05 02.0**	**+0.5**
N23A	**Red Feather La**	**3.00**	**188**	Pn	**Pn**	**21 05 03.5**	**0.0**
N23A				IAML		21 05 46.0	

comp=N,114nm,0.5s

N23A				IAML		21 05 52.6		

comp=E,120nm,0.7s

RLMT	**Red Lodge**	**3.02**	**296**	Pn	**Pn**	**21 05 03.5**	**-0.2**
RLMT				IAML		21 05 56.5		

comp=E,79nm,0.7s

RLMT				IAML		21 06 12.3		

comp=E,78nm,0.7s

BW06	**Boulder Array**	**3.21**	**251**		**Pn**	**21 05 06.3**	**-0.1**
PD31	**Pinedale Array**	**3.21**	**251**	Pn	**Pn**	**21 05 07.2**	**+0.8**
PDAR	**Pinedale Array**	**3.21**	**251**	Pn	**Pn**	**21 05 09.1**	**+2.7**

comp=E,5.7nm,0.3s,baz=66,slow=17,SNR=22

PDAR				Pg		**Pb**	**21 05 11.5**	**-1.0**

comp=E,11nm,0.3s,baz=74,slow=19,SNR=17

PDAR				Lg	Lg	21 05 51.3		

comp=E,9.1nm,0.3s,baz=73,slow=36,SNR=2.4

PDAR	**Pinedale Array**	**3.21**	**251**		**Pn**	**21 05 07.2**	**+0.8**
YMP	**Mirror Lake PI**	**3.51**	**286**	Pn	**Pn**	**21 05 11.2**	**+0.8**
GCMT	**Greycliff**	**3.58**	**304**	Pn	**Pn**	**21 05 11.6**	**+0.3**
YPP	**Pitchstone Pla**	**3.90**	**278**		**Pn**	**21 05 15.3**	**-0.5**
IMW	**Indian Meadow**	**3.99**	**272**		**Pn**	**21 05 15.9**	**-1.2**
IMW				IAML		21 05 45.6		

comp=E,86nm,0.5s

IMW				IAML		21 06 31.3		

comp=E,33nm,1.6s

YHH	**Holmes Hill**	**4.00**	**285**		**Pn**	**21 05 17.0**	**-0.2**
TPAW	**Teton Pass**	**4.03**	**266**		**Pn**	**21 05 16.0**	**-1.6**
TPAW				IAML		21 06 47.4		

comp=E,48nm,1.1s

YMR	**Madison River**	**4.06**	**283**		**Pn**	**21 05 18.5**	**+0.5**
ISCO	**Idaho Springs**	**4.07**	**182**	Pn	**Pn**	**21 05 18.6**	**+0.3**
YHL	**Hebgen Lake**	**4.24**	**285**		**Pn**	**21 05 21.6**	**+1.0**
O20A	**White River Ci**	**4.29**	**210**	Pn	**Pn**	**21 05 20.7**	**-0.4**
O20A				IAML		21 06 38.7		

comp=N,60nm,1.0s

O20A				IAML		21 06 39.6		

comp=E,50nm,0.7s

AHID	**Auburn Hatcher**	**4.29**	**257**		**Pn**	**21 05 20.3**	**-0.8**
AHID				IAML		21 05 47.4		

comp=N,52nm,0.5s

AHID				IAML		21 05 48.0		

comp=E,46nm,0.6s

RDMU	**Red Mountain**	**4.51**	**224**	Pn	**Pn**	**21 05 25.9**	**+1.6**
BOZ	**Bozeman (W)**	**4.75**	**293**	Pn	**Pn**	**21 05 29.2**	**+1.8**
BOZ				IAML		21 06 51.4		

comp=E,17nm,1.0s

BOZ				IAML		21 06 52.0		

comp=E,24nm,0.8s

SMCO	**Snowmass**	**4.83**	**194**	Pn	**Pn**	**21 05 30.0**	**+1.2**
SMCO				IAML		21 06 53.8		

comp=E,24nm,1.1s

SMCO				IAML		21 06 55.6		

comp=E,29nm,1.1s

Q24A	**Divide**	**4.91**	**178**	Pn	**Pn**	**21 05 29.5**	**-0.3**
Q24A				IAML		21 06 47.8		

comp=E,31nm,0.7s

Q24A				IAML		21 06 57.2		

comp=N,18nm,0.6s

K31A	**O'Neill**	**5.03**	**102**	Pn	**Pn**	**21 05 31.6**	**+0.5**
HWUT	**Hardware Ranch**	**5.06**	**246**	Pn	**Pn**	**21 05 32.4**	**+0.7**
HWUT				IAML		21 07 07.9		

comp=N,29nm,1.1s

HWUT				IAML		21 07 08.8		

comp=N,34nm,0.9s

EGMT	**Eagleton**	**5.13**	**325**		**Pn**	**21 05 34.7**	**+2.0**
TCUT	**Toone Canyon**	**5.21**	**240**	Pn	**Pn**	**21 05 35.4**	**+1.6**
KSCO	**Kaye Shedlock'**	**5.29**	**156**		**Pn**	**21 05 34.0**	**-0.9**
JLU	**Jordanelle**	**5.54**	**236**		**Pn**	**21 05 39.3**	**+1.9**
MDND	**Maddock**	**5.68**	**44**	Pn	**Pn**	**21 05 41.4**	**+1.3**
SPUT	**South Promonto**	**5.79**	**246**	Pn	**Pn**	**21 05 43.4**	**+1.8**
SDCO	**Great Sand Dun**	**6.12**	**181**	Pn	**Pn**	**21 05 46.8**	**+0.3**
S22A	**4UR Ranch, Cre**	**6.21**	**190**	Pn	**Pn**	**21 05 47.6**	**-0.1**
T25A	**Trinidad**	**6.77**	**173**	Pn	**Pn**	**21 05 54.7**	**-0.6**
R32A	**Long Quarter,**	**7.43**	**135**	Pn	**Pn**	**21 06 03.9**	**-0.3**
ELK	**Elko**	**7.92**	**250**	Pn	**Pn**	**21 06 12.8**	**+1.7**

comp=N,0.3nm,0.3s,baz=26,slow=7.6,SNR=3.3

ELK				Lg	Lg	21 08 18.1		

comp=N,0.1nm,0.3s,baz=176,slow=19,SNR=1.5

ELK	**Elko**	**7.92**	**250**	Pn	**Pn**	**21 06 11.2**	**+0.2**
KAN14	**Manchester OK**	**8.95**	**138**	Pn	**Pn**	**21 06 25.2**	**+0.3**
ULM	**Lac du Bonnet**	**9.11**	**42**	Pn	**Pn**	**21 06 27.1**	**-0.1**

comp=N,1.8nm,0.3s,baz=233,slow=12,SNR=12

ULM				Pg		21 07 01.7		

comp=N,2.0nm,0.3s,baz=225,slow=15,SNR=6.5

ULM				Lg	Lg	21 08 58.1		

comp=N,0.2nm,0.3s,baz=142,slow=18,SNR=2.4

ULM	**Lac du Bonnet**	**9.11**	**42**		**Pn**	**21 06 27.0**	**-0.1**
WMOK	**Wichita Mounta**	**10.47**	**148**	Pn	**Pn**	**21 06 45.2**	**-0.6**
S39A	**Bolivar**	**11.05**	**120**	Pn	**Pn**	**21 06 52.4**	**-1.4**
NVAR	**Mina Array Bea**	**11.13**	**245**	Pn	**Pn**	**21 06 57.0**	**+2.1**

comp=N,0.1nm,0.3s,baz=49,slow=13,SNR=8.3

MGMO	**Mountain Grove**	**12.04**	**119**	Pn	**Pn**	**21 07 08.2**	**+0.9**
TXAR	**Lajitas Array**	**14.58**	**174**	Pn	**P**	**21 07 47.0**	**-1.8**

comp=N,0.0nm,0.3s,baz=354,slow=17,SNR=3.3

TXAR				Pg	Pn	21 08 40.9	+59	

comp=N,0.1nm,0.3s,baz=32,slow=9.6,SNR=2.5

TXAR				Lg	Lg	21 11 55.5		

comp=N,0.1nm,0.3s,baz=4.6,slow=34,SNR=3.7

ILAR	**Eielson Array**	**31.10**	**327**	LR	LR	21 23 42.2		

comp=N,28nm,18.7s,baz=151,slow=38

ZALV	**Zalesovo Beam**	**82.16**	**354**	P	**P**	**21 16 37.0**	**+0.3**

comp=N,0.7nm,0.5s,baz=0.1,slow=4.2,SNR=4.6

SONM	**Songino Array**	**84.47**	**339**	P	**P**	**21 16 49.6**	**+0.5**

comp=N,0.3nm,0.6s,baz=20,slow=4.6,SNR=2.3

MKAR	**Makanchi Array**	**89.46**	**355**	P	**P**	**21 17 14.0**	**+0.9**

comp=N,0.6nm,0.6s,baz=32,slow=5.7,SNR=4.9

KRSC 05 21:08:08.2±1.4, 49.°34N×156.°60E, h16km±20km, ML4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**2.13**	**4**	*e*P	Pn	21 08 44.4	+1.3
PAU				*e*S	Sn	21 09 10.8	+1.6
KDTR	**Khodutka, Kamc**	**2.65**	**20**	*e*P	Pn	21 08 52.6	+2.5
KDTR				*e*S	Sb	21 09 25.7	-1.6
ASAK	**Asacha**	**3.16**	**15**	*e*P	Pb	21 09 01.0	-2.9
RUS	**Russkaya**	**3.33**	**21**	*e*P	Pn	21 09 02.3	+2.8
RUS				*e*S	Sb	21 09 43.2	-3.7
GRL	**Gorelyy**	**3.35**	**16**	*e*P	Pb	21 09 03.6	-3.6
GRL				*e*S	Sb	21 09 43.8	-3.9
APC	**Apacha**	**3.61**	**5**	*e*P	Pb	21 09 06.8	+3.3
KRMR	**Karymshinskiy**	**3.62**	**15**	*e*P	Pb	21 09 08.2	+3.6
PET	**Petropavlovsk**	**3.91**	**19**	*e*S	Sn	21 09 57.5	+4.5
DALK	**Dalny**	**3.94**	**19**	*e*P	Pn	21 09 11.4	+3.6
DALK				*e*S	Sn	21 09 58.6	+4.9
AVH	**Avacha**	**4.15**	**18**	*e*P	Pn	21 09 15.4	+4.5
KOK	**Koryaka**	**4.16**	**17**	*e*P	Pn	21 09 14.4	+3.4
SMAR	**Somma**	**4.16**	**19**	*e*P	Pn	21 09 15.8	+4.6
KRER	**Koryakskii**	**4.19**	**18**	*e*P	Pn	21 09 15.4	+3.8
SDLR	**Sedlovina**	**4.20**	**19**	*e*P	Pn	21 09 15.1	+3.6
KRX	**Arik**	**4.22**	**17**	*e*P	Pn	21 09 16.3	+4.3
KRX				*e*S	Sn	21 10 05.8	+4.8
SPN	**Mys Shipunski**	**4.33**	**28**	*e*P	Pn	21 09 17.0	+3.7
SPN				*e*S	Sn	21 10 09.4	+5.9
GNL	**Ganaly**	**4.44**	**10**	*e*P	Pn	21 09 19.0	+4.1
KZV	**Kizimen**	**6.21**	**20**	*e*P	Pn	21 09 43.1	+3.9
TUMR	**Tumrok**	**6.34**	**19**	*e*P	Pn	21 09 45.4	+4.5
KBTR	**Krutoberegovo**	**7.84**	**26**	*e*P	Pn	21 10 04.5	+3.0

IDC 05 21:35:52.3±6.2, 49.°61S×111.°03E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/27, mbtmp3.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.7/7, Error ellipse: s-maj=216.4km s-min=33.1km az=103.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.88**	**10**	T	T	21 54 33.9	

baz=193,slow=74,SNR=58

H01W1	**Cape Leeuwin H**	**14.89**	**10**	T	T	21 54 35.0		

baz=193,slow=74,SNR=55

H01W3	**Cape Leeuwin H**	**14.89**	**10**	T	T	21 54 35.1		

baz=193,slow=74,SNR=47

NWAO	**Narrogin (SRO)**	**17.30**	**18**	LR	LR	21 44 23.1		

comp=Z,80nm,20.2s,baz=102,slow=30

ASAR	**Alice Springs**	**31.49**	**43**	P	P	21 42 15.7	-0.2

0.9nm,0.7s,baz=216,slow=7.5,SNR=4.4

VNDA	**Vanda**	**33.83**	**162**	P	P	21 42 35.3	-0.4

0.5nm,0.8s,baz=284,slow=9.6,SNR=2.5

WRA	**Warramunga Arr**	**34.96**	**41**	P	P	21 42 45.9	-0.1

0.1nm,0.5s,baz=208,slow=8.5,SNR=1.5

H11S3	**WAKE ISLAND Hy**	**83.75**	**52**	T	T	23 20 22.3		

baz=205,slow=75,SNR=3.9

H11S2	**WAKE ISLAND Hy**	**83.76**	**52**	T	T	23 20 23.0		

baz=205,slow=75,SNR=5.8

H11S1	**WAKE ISLAND Hy**	**83.77**	**52**	T	T	23 20 23.6		

baz=205,slow=75,SNR=3.9

NVAR	**Mina Array Bea**	**143.42**	**89**	PKP	PKPdf	21 55 29.7	+1.2

0.6nm,0.9s,baz=265,slow=5.3,SNR=2.6

DJA 05 21:41:19.3±0.6, 8.°3S×107.°7E±°, h26km±5km, M4.2/12, mb4.5/1, MLv4.0/12, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.58**	**345**	P	Pn	21 41 31.9	+0.1
CNJI				S	Sn	21 41 40.3	-0.2
CISI	**Cisompet, Garu**	**0.62**	**60**	P	Pn	21 41 32.2	-0.2
LEM	**Lembang**	**1.09**	**18**	P	Pn	21 41 38.4	-0.7
SKJI	**Sukabumi**	**1.12**	**320**	P	Pn	21 41 39.3	0.0
SKJI				S	Sn	21 41 53.3	-0.6
CMJI	**Cimerak**	**1.16**	**86**	P	Pn	21 41 39.9	0.0
CMJI				S	Sn	21 41 53.6	-1.3
DBJI	**Dramaga**	**1.41**	**338**	P	Pn	21 41 43.6	+0.3
KPJI	**Karang Pucung**	**1.72**	**72**	P	Pn	21 41 47.9	+0.3
CGJI	**Cibinong**	**2.01**	**308**	P	Pn	21 41 51.1	-0.5
SBJI	**Serang**	**2.08**	**327**	P	Pn	21 41 53.0	+0.5
UGM	**Wanagama**	**3.21**	**91**	P	Pn	21 42 08.6	+0.4
KLSI		**4.05**	**321**	P	Pb	21 42 33.3	+3.3
PWJI	**Pagerwojo**	**4.48**	**92**	P	Pn	21 42 30.0	+4.4

*IDC **05** 22:09:25.7±2.1, 49.°34S×109.°69E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/24, mbtmp3.9/6, MS3.3/9, Ms1 3.2/9, ms1mx3.1/26, Error ellipse: s-maj=75.0km s-min=19.8km az=115.0*

*NEIC **05** 22:09:27.3±1.5, 49.°3S±0.°1×109.°5E±0.°2, h10km±2km, mb4.3/8, Error ellipse: s-maj=24.2km s-min=19.9km az=339.0*

ISC 05 22:09:26.8±1.4, 49.°3S±0.°2×109.°5E±0.°3, h10km, n23, σ0°74/15, mb4.0/7, MS3.2/8, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.77**	**15**	T	T	22 28 14.4	

baz=193,slow=74,SNR=71

H01W1	**Cape Leeuwin H**	**14.77**	**15**	T	T	22 28 13.3		

baz=193,slow=74,SNR=62

H01W3	**Cape Leeuwin H**	**14.78**	**15**	T	T	22 28 10.1		

baz=193,slow=74,SNR=72

NWAO	**Narrogin (SRO)**	**17.32**	**22**	LR	LR	22 18 33.4		

comp=Z,94nm,20.4s,baz=279,slow=32

MORW	**Morawa**	**20.79**	**16**	P	**P**	**22 14 08.4**	**+0.4**
MORW				IAmb	IAmb	22 14 18.8		

comp=Z,27nm,1.8s

BBOO	**Buckleboo**	**25.74**	**60**	P	**P**	**22 14 57.1**	**-0.3**
MAW	**Mawson**	**29.50**	**214**	LR	LR	22 24 17.5	

comp=Z,50nm,20.4s,baz=66,slow=30

STKA	**Stephens Creek**	**29.65**	**66**	P	**P**	**22 15 30.9**	**-1.5**

comp=Z,0.9nm,0.4s,baz=248,slow=11,

ILAR	**Eielson Array**	**66.72**	**28**	P		**P**	**22 36 17.1**	**+3.4**
	0.3nm,0.5s,baz=300,slow=9.5,SNR=5.7							
BRTR	**Keskin Array B**	**75.57**	**307**	P		**P**	**22 37 07.7**	**-0.3**
	1.3nm,0.8s,baz=72,slow=12,SNR=4.7							

TIR ***05*** *22:27:49.6, 41.06N×20.26E, h6km±2km, Md2.6*
THE ***05*** *22:27:49.8, 41.03N×20.17E, h14km±12km, ML1.8/2, Error ellipse: s-maj=12.9km s-min=0.6km az=317.0*
ATH ***05*** *22:27:50.2, 41.05N×20.16E, h16km±6km, ML2.0/1, Error ellipse: s-maj=8.4km s-min=1.3km az=32.0*
SKO ***05*** *22:27:51.6, 41.15N×20.20E, h10km*

ISC 05 22:27:50.0±1.1, **41.04N**±0.03×**20.16E**±0.04, **h15**km±9km, **n17**, σ0**867**/27, **Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.38**	**325**	P		**Pg**	**Pg**	**22 27 57.5**	**-0.3**
TIR				S		**Sg**	**Sg**	**22 28 03.8**	**+0.8**
TIR				AML	AML			22 28 06.2	
	comp=E,713μm,0.3s								
TIR				AML	AML			22 28 09.7	
	comp=N,484μm,0.2s								
TIR	**Tirane**	**0.38**	**325**	P		**Pg**	**Pg**	**22 27 58.1**	**+0.3**
	baz=315								
TIR				S		**Sb**	**Sb**	**22 28 04.6**	**+0.4**
	baz=315								
TIR	**Tirane**	**0.38**	**325**	P		**Pg**	**Pg**	**22 27 57.3**	**-0.5**
TIR				S		**Sg**	**Sg**	**22 28 03.6**	**+0.6**
	comp=N,115nm,0.2s								
OHR	**Ohrid**	**0.49**	**81**	*i* Pg		**Pg**	**Pg**	**22 27 59.6**	**-0.2**
OHR				*i* Sg		**Sb**	**Sb**	**22 28 07.6**	**+0.1**
OHR				*e*Lg		Lg	Lg	22 28 07.9	
	comp=N,56nm,0.5s								
OHR				*e*Lg		Lg	Lg	22 28 09.4	
	comp=E,45nm,0.4s								
PHP	**Peshkopia**	**0.68**	**18**	P		**Pg**	**Pg**	**22 28 02.4**	**-1.0**
	baz=12								
PHP				S		**Sb**	**Sb**	**22 28 12.2**	**-0.8**
	baz=12								
PHP	**Peshkopia**	**0.68**	**18**	P		**Pg**	**Pg**	**22 28 02.2**	**-1.2**
PHP				S		**Sb**	**Sb**	**22 28 13.3**	**+0.3**
NEST	**Nestorio**	**0.92**	**132**	P		**Pg**	**Pg**	**22 28 07.6**	**-0.3**
NEST	**Nestorio**	**0.92**	**132**	P		**Pg**	**Pg**	**22 28 07.1**	**-0.8**
LSK	**Leskovik**	**0.95**	**159**	P		**Pb**	**Pb**	**22 28 08.4**	**+0.2**
	baz=163								
LSK				S		**Sn**	**Sn**	**22 28 22.3**	**+0.1**
	baz=163								
LSK	**Leskovik**	**0.95**	**159**	P		**Pb**	**Pb**	**22 28 07.2**	**-1.0**
FNA	**Florina**	**0.96**	**105**	P		**Pg**	**Pg**	**22 28 08.6**	**0.0**
FNA				S		**Sn**	**Sn**	**22 28 22.0**	**-0.5**
FNA	**Florina**	**0.96**	**105**	P		**Pb**	**Pb**	**22 28 08.0**	**-0.4**
	baz=107								
FNA	**Florina**	**0.96**	**105**	P		**Pb**	**Pb**	**22 28 08.0**	**-0.4**
FNA				S		**Sb**	**Sb**	**22 28 21.3**	**+0.3**
	comp=E,82nm,0.3s								
PUK	**Puka**	**1.02**	**349**	P		**Pg**	**Pg**	**22 28 09.6**	**-0.2**
	baz=345								
PUK				S		**Sn**	**Sn**	**22 28 24.9**	**+0.7**
	baz=345								
PENT	**Pentalofos**	**1.12**	**138**	P		**Pg**	**Pg**	**22 28 12.1**	**+0.4**
IGT	**Igoumenitsa**	**1.51**	**175**	P		**Pg**	**Pg**	**22 28 18.9**	**-0.1**
STIP	**Stip**	**1.66**	**66**	*i* Pg		**Pg**	**Pg**	**22 28 23.6**	**+1.6**

DJA ***05*** *22:47:45.9±1.1, 8.5S×12.0E±*, h171km±18km, M3.5/11, MLv3.5/11*
IDC ***05*** *22:47:46.5±1.9, 8.16S×119.84E, h209km±17km, mb3.0/5, mb1 3.1/9, mb1mx3.0/39, mbtmp3.5/9, Error ellipse: s-maj=43.3km s-min=10.8km az=55.0*

ISC 05 22:47:44.8±0.8, **8.36S**±0.06×**119.60E**±0.06, **h200**km, **n21**, σ1**832**/24, **mb3.3/4**, **Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.29**	**189**	P		**Pn**	**Pn**	**22 48 15.5**	**-1.3**
WSI	**Waingapu**	**1.47**	**152**	P		**Pn**	**Pn**	**22 48 17.2**	**-1.1**
PLAI	**Plampang**	**1.86**	**256**	P		**Pn**	**Pn**	**22 48 21.1**	**-0.9**
BASI	**Baing, Sumba**	**2.08**	**153**	P		**Pn**	**Pn**	**22 48 24.1**	**-0.1**
EDFI	**Ende, Flores**	**2.10**	**101**	P		**Pn**	**Pn**	**22 48 23.5**	**-1.0**
BSSI	**Bau Bau, Buton**	**2.38**	**22**	P		**Pn**	**Pn**	**22 48 25.4**	**-2.0**
MMRI	**Maumere**	**2.62**	**96**	P		**Pn**	**Pn**	**22 48 30.3**	**+0.2**
TWSI	**Taliwang, Sumb**	**2.72**	**262**	P		**Pn**	**Pn**	**22 48 30.8**	**-0.4**
BKSI	**Bulukumba**	**3.06**	**10**	P		**Pn**	**Pn**	**22 48 34.7**	**-0.6**
KAPI	**Kappang**	**3.33**	**3**	P		**Pn**	**Pn**	**22 48 37.9**	**-0.5**
	7.8nm,0.3s,baz=176,slow=7.9,SNR=18								
BNSI	**Bone**	**3.97**	**7**	P		**Pn**	**Pn**	**22 48 46.4**	**+0.1**
BATI	**Baumata**	**4.41**	**115**	P		**Pn**	**Pn**	**22 48 53.0**	**+1.3**
	5.3nm,0.3s,baz=286,slow=7.7,SNR=7.7								
BATI				S			**Sn**	**22 49 42.7**	**-1.7**
	11nm,0.3s,baz=145,slow=20,SNR=4.1								
SOEI	**Soe**	**4.81**	**107**	P		**Pn**	**Pn**	**22 48 56.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**11.32**	**149**	P		**Pn**	**Pn**	**22 50 23.2**	**+2.2**
	0.1nm,0.3s,baz=338,slow=11,SNR=6.1								
FITZ				S			**Sn**	**22 52 24.5**	**-2.9**
	0.5nm,0.3s,baz=199,slow=19,SNR=10								
WRA	**Warramunga Arr**	**18.33**	**130**	P		**Pn**	**Pn**	**22 51 45.8**	**-1.1**
	0.2nm,0.3s,baz=302,slow=13,SNR=8.1								
WRA				S			**S**	**22 55 03.7**	**+0.2**
	0.1nm,0.3s,baz=77,slow=38,SNR=1.3								
ASAR	**Alice Springs**	**20.48**	**140**	P		**P**	**P**	**22 52 09.8**	**+2.3**
	0.6nm,0.3s,baz=317,slow=9.5,SNR=9.5								
SONM	**Songino Array**	**57.16**	**349**	P		**P**	**P**	**22 57 11.1**	**+0.3**
	0.2nm,0.5s,baz=165,slow=5.4,SNR=2.2								
MKAR	**Makanchi Array**	**64.17**	**332**	P		**P**	**P**	**22 57 58.7**	**+0.7**
	0.5nm,0.7s,baz=133,slow=7.1,SNR=3.1								
ZALV	**Zalesovo Beam**	**68.66**	**339**	P		**P**	**P**	**22 58 26.1**	**-0.2**
	0.4nm,0.4s,baz=140,slow=7.5,SNR=2.1								
VNDA	**Vanda**	**72.52**	**171**	P		**P**	**P**	**22 58 50.5**	**+1.2**
	0.2nm,0.4s,baz=276,slow=6.7,SNR=5.6								
LPAZ	**La Paz**	**154.34**	**163**	PKPbc		**PKPbc**	**PKPbc**	**23 07 22.0**	**-1.2**
	0.9nm,0.4s,baz=85,slow=13,SNR=4.2								

REN ***05*** *23:01:11.3±2.0, 41.87N±0.04×119.61W±0.05, h1km±7km, ML3.5/3, Md3.3/8(SEA), Mwr3.5/28(SLM), Error ellipse: s-maj=6.4km s-min=5.2km az=182.0*
ANF ***05*** *23:01:11.5±0.9, 41.78N×119.73W, h0km, ML3.1/12, Error ellipse: s-maj=7.5km s-min=3.5km az=110.0*
NEIC ***05*** *23:01:11.3, 41.87N×119.61W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.51; Mθθ=0.94; Mφφ 1.45; Mrθ=0.89; Mrφ=0.40; Mθφ=1.11; Fault plane solution: M0 1.95000×10^14 NP1:κ0=132.00000°, δ=41.00000°, λ=-165.00000°. NP2:κ0=30.00000°, δ=80.00000°, λ=-50.00000°. Principal axes: T 1.9512, Plg24.0000°, Azm90.0000°; N -0.0009, Plg39.0000°, Azm202.0000°; P -1.9504, Plg41.0000°, Azm337.0000°;*
SEA ***05*** *23:01:12.8±2.9, 41.83N±0.04×119.70W±0.04, h0km±8km Error ellipse: s-maj=6.5km s-min=4.1km az=196.0*
NEIC ***05*** *23:01:13.3±1.8, 41.92N±0.04×119.68W±0.05, h13km±7km, Error ellipse: s-maj=6.4km s-min=5.5km az=175.0*

ISC 05 23:01:12.3±1.4, **41.93N**±0.03×**119.67W**±0.04, **h4**km±12km, **n45**, σ1**905**/54, **Nevada**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.47**	**267**	Pg		**Pg**	**Pg**	**23 01 21.2**	**-0.1**
MOD	**Modoc Plateau**	**0.47**	**267**				**Sg**	**23 01 28.6**	**+1.1**
K05A	**Summer Lake**	**1.21**	**312**	Pn		**Pg**	**Pg**	**23 01 35.3**	**-0.2**
M04C	**Macdoel**	**1.62**	**266**	P		**Pn**	**Pn**	**23 01 40.2**	**-1.6**
	baz=86,SNR=33								
M04C				S			**Sn**	**23 02 03.2**	**-0.1**
	baz=86								
J08A	**Circle Bar Ran**	**1.68**	**31**	Pn		**Pn**	**Pn**	**23 01 41.4**	**-1.3**
K04D	**Chiloquin, OR**	**1.69**	**295**	P		**Pn**	**Pn**	**23 01 41.8**	**-1.1**
	baz=115,SNR=16								
K04D				S			**Sb**	**23 02 06.3**	**+0.4**
	baz=115								
J05D	**Fort Rock, OR**	**1.78**	**320**	P		**Pn**	**Pn**	**23 01 43.3**	**-0.7**
	baz=139								
J05D				S			**Sg**	**23 02 10.1**	**+0.6**
	baz=139								
L04D	**Klamath Falls**	**1.98**	**279**	P		**Pn**	**Pn**	**23 01 45.3**	**-1.5**
	baz=99,SNR=37								
L04D				Sb			**Sb**	**23 02 15.0**	**+0.9**
	baz=99								
PINE	**Pine Mountain**	**2.08**	**334**				**Pn**	**23 01 49.4**	**+1.1**
BEKR	**Beckworth**	**2.12**	**194**				**Pn**	**23 01 47.5**	**-1.2**
I07A	**Izee**	**2.16**	**3**				**Pb**	**23 01 51.6**	**-0.4**
J04D	**Umpqua Nationa**	**2.23**	**307**	Sb			**Sg**	**23 02 24.8**	**+0.9**
	baz=126								
PAHR	**Pah Rah Range**	**2.23**	**174**				**Pn**	**23 01 49.0**	**-1.2**
YBH	**Yreka Blue Hor**	**2.28**	**266**	Pn			**Pn**	**23 01 49.2**	**-1.6**
O03E	**Paynes Creek**	**2.29**	**225**	P			**Pn**	**23 01 48.5**	**-2.5**
	baz=46,SNR=34								
O03E				Sg			**Sb**	**23 02 22.7**	**-0.2**
	baz=46								
M02C	**Callahan**	**2.44**	**258**	P			**Pn**	**23 01 51.4**	**-1.7**
	baz=78								
N02D	**Trinity Center**	**2.47**	**248**	Pb			**Pn**	**23 01 55.1**	**+1.7**
	baz=68,SNR=18								
N02D				Sg			**Sg**	**23 02 30.0**	**-1.6**
	baz=68								
HUMO	**Hull Mountain**	**2.53**	**287**	Pn			**Pn**	**23 01 52.9**	**-1.3**
WDC	**Whiskeytown Da**	**2.55**	**239**				**Pn**	**23 01 53.2**	**-1.2**
VCNR	**Virginia City**	**2.63**	**180**				**Pn**	**23 01 55.7**	**0.0**
I05D	**Terrebonne, OR**	**2.70**	**334**	Pb			**Pb**	**23 02 01.6**	**+0.3**
	baz=152,SNR=9.3								
I05D				Sb			**Sg**	**23 02 39.6**	**+0.5**
	baz=152								
ORV	**Oroville**	**2.75**	**211**				**Pn**	**23 01 56.8**	**-0.4**
I04A	**Tendick Farm,**	**2.75**	**314**	Sb			**Sg**	**23 02 39.7**	**-0.8**
	baz=132								
PNTR	**Pine Nut**	**2.83**	**179**				**Pn**	**23 01 59.3**	**+0.7**
L02E	**Cave Junction**	**2.94**	**276**	P			**Pn**	**23 01 59.5**	**-0.3**
	baz=94,SNR=9.4								
L02E				Sb			**Sb**	**23 02 42.8**	**+1.3**
	baz=94								
K02D	**Willamette Mer**	**3.06**	**286**	P			**Pn**	**23 02 01.5**	**0.0**
	baz=104,SNR=47								
K02D				Sb			**Sb**	**23 02 47.1**	**+2.0**
	baz=104								
KVN	**Kaiserville**	**3.11**	**157**				**Pn**	**23 02 01.4**	**-0.9**
AFDM	**Forest Hills D**	**3.13**	**199**	Pn			**Pn**	**23 02 04.4**	**+1.8**
KRMB	**Red Mountain**	**3.19**	**264**				**Pn**	**23 02 03.6**	**+0.1**
MFID	**Camas Ranch**	**3.20**	**61**	Pn			**Pn**	**23 02 02.8**	**-0.8**
KHMM	**Horse Mountain**	**3.23**	**252**				**Pn**	**23 02 04.7**	**+0.8**
BMO	**Blue Mountains**	**3.40**	**30**				**Pn**	**23 02 05.6**	**-0.6**
KBO	**Bosley Butte**	**3.40**	**276**	Pn			**Pn**	**23 02 06.2**	**-0.1**
G08A	**Pilot Rock**	**3.40**	**9**				**Pn**	**23 02 04.9**	**-1.4**
WAKR	**Walker**	**3.42**	**177**				**Pn**	**23 02 06.5**	**-0.2**
KMRM	**Mail Ridge**	**3.49**	**242**				**Pn**	**23 02 08.1**	**+0.6**
KEBM	**Edson Butte**	**3.58**	**287**	Pn			**Pn**	**23 02 08.5**	**-0.1**
NVAR	**Mina Array Bea**	**3.65**	**163**				**Pn**	**23 02 09.5**	**-0.3**
LHV	**Little Huntoon**	**3.78**	**166**				**Pn**	**23 02 11.4**	**+0.1**
HLID	**Hailey**	**4.21**	**65**				**Pn**	**23 02 17.4**	**+0.1**
R11A	**Troy Canyon, C**	**4.75**	**137**				**Pn**	**23 02 24.7**	**-0.2**
BGU	**Big Grassy Mou**	**5.09**	**99**	Pn			**Pn**	**23 02 29.4**	**-0.2**
PRN	**Pahroc Range**	**5.75**	**140**				**Pn**	**23 02 38.6**	**0.0**
DLMT	**Dillon**	**6.18**	**54**	Pn			**Pn**	**23 02 44.1**	**-0.3**
ECR	**Eagle Creek**	**6.24**	**77**	Pn			**Pn**	**23 02 43.6**	**-1.8**

ATH ***05*** *23:03:28.9, 36.56N×26.57E, h149km±7km, ML2.7/4, Error ellipse: s-maj=7.0km s-min=2.2km az=355.0*
ISK ***05*** *23:03:28.7, 36.61N×26.59E, h148km±1km, ML2.3/12*
NIC ***05*** *23:03:30.0±0.0, 36.28N×26.98E, h175km±1km, Ml3.0/1*
THE ***05*** *23:03:30.9, 36.57N×26.57E, h176km±4km, ML2.7/8, Error ellipse: s-maj=4.3km s-min=0.8km az=150.0*
DDA ***05*** *23:03:34.6, 35.75N×27.45E, h8km±3km, ML2.0*

ISC 05 23:03:26.7±1.5, **36.61N**±0.05×**26.64E**±0.03, **h166**km±9km, **n74**, σ1**967**/97, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KOSK	**Kos Island**	**0.31**	**63**	PG		**Pn**	**Pn**	**23 03 49.6**	**+0.4**
AMGA	**Amorgos Island**	**0.64**	**290**	P		**Pn**	**Pn**	**23 03 51.5**	**+1.0**
AMGA	**Amorgos Island**	**0.64**	**290**	P		**Pn**	**Pn**	**23 03 51.6**	**+1.0**
BODT	**Bodrum**	**0.70**	**50**	PG		**Pn**	**Pn**	**23 03 51.8**	**+0.8**
ANAF	**Anafi Island**	**0.74**	**250**	P		**Pn**	**Pn**	**23 03 52.5**	**+1.2**
ANAF	**Anafi Island**	**0.74**	**250**	P		**Pn**	**Pn**	**23 03 52.5**	**+1.2**
THR8	**Santorini-Mono**	**0.95**	**258**	P		**Pn**	**Pn**	**23 03 53.7**	**+1.0**
SANT	**Santorini**	**0.98**	**256**	P		**Pn**	**Pn**	**23 03 53.9**	**+0.9**
SANT	**Santorini**	**0.98**	**256**	PG		**Pn**	**Pn**	**23 03 53.5**	**+0.6**
THT2	**Imerovigli**	**0.99**	**260**	PG		**Pn**	**Pn**	**23 03 53.1**	**+0.1**
APE	**Apeiranthos**	**1.00**	**297**	P		**Pn**	**Pn**	**23 03 54.1**	**+1.1**
APE	**Apeiranthos**	**1.00**	**297**	PG		**Pn**	**Pn**	**23 03 53.7**	**+0.6**
APE	**Apeiranthos**	**1.00**	**297**	P		**Pn**	**Pn**	**23 03 54.2**	**+1.1**
THR3	**Thira Island,**	**1.02**	**259**	P		**Pn**	**Pn**	**23 03 54.6**	**+1.4**
THR6	**Thira Island,**	**1.03**	**256**	P		**Pn**	**Pn**	**23 03 54.6**	**+1.3**
SMG	**Samos**	**1.10**	**8**	P		**Pn**	**Pn**	**23 03 57.2**	**+3.3**
KARP	**Karpathos**	**1.15**	**158**	P		**Pn**	**Pn**	**23 03 55.5**	**+1.1**
KARP				AML	AML			23 04 17.8	
	comp=N,593μm,0.3s								
KARP				AML	AML			23 04 18.3	
	comp=E,459μm,0.1s								
KARP	**Karpathos**	**1.15**	**158**	PN		**Pn**	**Pn**	**23 03 55.2**	**+0.9**
KARP				SN		**Sn**	**Sn**	**23 04 14.4**	**-1.1**
KARP	**Karpathos**	**1.15**	**158**	P		**Pn**	**Pn**	**23 03 55.4**	**+1.1**
KARP				S		**Sn**	**Sn**	**23 04 16.2**	**+0.7**
KARP				AML	AML			23 04 17.5	
	comp=E,0.6nm,0.3s								
KARP				AML	AML			23 04 17.5	
	comp=E,0.6nm,0.3s								
KARP				AML	AML			23 04 17.8	
	comp=E,0.5nm,0.2s								
KARP				AML	AML			23 04 17.8	
	comp=E,0.5nm,0.2s								
KARP	**Karpathos**	**1.15**	**158**	P		**Pn**	**Pn**	**23 03 55.5**	**+1.1**
KARP				S		**Sn**	**Sn**	**23 04 14.9**	**-0.6**
	comp=E,270nm,0.2s								
ARG	**Arkhangelos**	**1.27**	**108**	P		**Pn**	**Pn**	**23 03 57.1**	**+1.8**
ARG				AML	AML			23 04 19.5	
	comp=N,165μm,0.1s								
ARG				AML	AML			23 04 20.6	
	comp=E,307μm,0.3s								
ARG	**Arkhangelos**	**1.27**	**108**	PN		**Pn**	**Pn**	**23 03 56.8**	**+1.5**
ARG				SN		**Sn**	**Sn**	**23 04 16.9**	**-0.3**
ARG	**Arkhangelos**	**1.27**	**108**	P		**Pn**	**Pn**	**23 03 57.3**	**+2.0**
ARG				S		**Sn**	**Sn**	**23 04 18.2**	**+0.9**
ARG	**Arkhangelos**	**1.27**	**108**	P		**Pn**	**Pn**	**23 03 57.5**	**+2.2**
ARG				S		**Sn**	**Sn**	**23 04 17.3**	**+0.1**
	comp=E,118nm,0.3s								
TURN	**Turunc**	**1.30**	**82**	PN		**Pn**	**Pn**	**23 03 57.1**	**+1.5**
TURN				SN		**Sn**	**Sn**	**23 04 16.9**	**-0.9**
TURN	**Turunc**	**1.30**	**82**	*i* P		**Pn**	**Pn**	**23 03 57.3**	**+1.7**
TURN				*i* S		**Sn**	**Sn**	**23 04 15.2**	**-2.7**
TURN				IAML				23 04 18.0	
	comp=N,33nm,0.5s								
TURN				IAML				23 04 18.0	
	comp=E,46nm,0.2s								
YER	**Yerkesik**	**1.42**	**68**	PN		**Pn**	**Pn**	**23 03 58.3**	**+1.5**
YER	**Yerkesik**	**1.42**	**68**	P		**Pn**	**Pn**	**23 03 59.1**	**+2.3**
ZKR	**Zakros**	**1.53**	**193**	P		**Pn**	**Pn**	**23 03 59.4**	**+1.5**
ZKR	**Zakros**	**1.53**	**193**	PN		**Pn**	**Pn**	**23 03 59.1**	**+1.2**
ZKR	**Zakros**	**1.53**	**193**	P		**Pn**	**Pn**	**23 03 59.5**	**+1.5**
ZKR				S		**Sn**	**Sn**	**23 04 20.8**	**-1.1**
NPS	**Neapolis**	**1.58**	**212**	P		**Pn**	**Pn**	**23 03 59.4**	**+1.0**
NPS				AML	AML			23 04 23.8	
	comp=N,196μm,0.2s								
NPS				AML	AML			23 04 24.2	
	comp=E,304μm,0.2s								
NPS	**Neapolis**	**1.58**	**212**	P		**Pn**	**Pn**	**23 03 59.4**	**+1.0**
NPS				S		**Sn**	**Sn**	**23 04 21.5**	**-1.3**
	comp=E,120nm,0.2s								
DALY	**Dalyan (Mula)**	**1.63**	**82**	PN		**Pn**	**Pn**	**23 04 00.5**	**+1.7**
DALY	**Dalyan (Mula)**	**1.63**	**82**	*i* P		**Pn**	**Pn**	**23 04 01.1**	**+2.2**
DALY				*i* S		**Sn**	**Sn**	**23 04 22.3**	**-1.3**
DALY				IAML				23 04 26.0	
	comp=N,34nm,0.2s								
DALY				IAML				23 04 53.0	
	comp=E,23nm,0.1s								
LAST	**Lasithi**	**1.73**	**213**	P		**Pn**	**Pn**	**23 04 01.0**	**+1.0**
LAST	**Lasithi**	**1.73**	**213**	P		**Pn**	**Pn**	**23 04 01.0**	**+1.0**
LAST				S		**Sn**	**Sn**	**23 04 24.7**	**-0.9**
	comp=E,48nm,0.5s								
HRKL	**Herakleio**	**1.80**	**224**	PN		**Pn**	**Pn**	**23 04 01.3**	**+0.6**
IDI	**Anoyia**	**1.94**	**227**	P		**Pn**	**Pn**	**23 04 03.2**	**+0.9**
IDI				S		**Sn**	**Sn**	**23 04 27.8**	**-1.8**
IDI				AML	AML			23 04 28.4	
	comp=E,124μm,0.2s								
IDI				AML	AML			23 04 28.8	
	comp=N,126μm,0.1s								
IDI	**Anoyia**	**1.94**	**227**	PN		**Pn**	**Pn**	**23 04 03.1**	**+0.8**
IDI	**Anoyia**	**1.94**	**227**	P		**Pn**	**Pn**	**23 04 03.1**	**+0.8**
IDI				S		**Sn**	**Sn**	**23 04 28.1**	**-1.6**
	comp=N,62nm,0.2s								
FETY	**Fethiye**	**1.97**	**89**	PN		**Pn**	**Pn**	**23 04 04.2**	**+1.7**
FETY	**Fethiye**	**1.97**	**89**	*i* P		**Pn**	**Pn**	**23 04 04.4**	**+1.8**
FETY				*i* S		**Sn**	**Sn**	**23 04 26.8**	**-3.3**
FETY	**Fethiye**	**1.97**	**89**	P		**Pn**	**Pn**	**23 04 04.3**	**+1.7**
TAVA	**DENIZLI_Tavas**	**2.01**	**64**	*i* P		**Pn**	**Pn**	**23 04 05.2**	**+2.2**
TAVA				*i* S		**Sn**	**Sn**	**23 04 27.1**	**-4.1**
CAME	**Cameli-Denizli**	**2.17**	**80**	PN		**Pn**	**Pn**	**23 04 06.7**	**+1.8**
SIVA	**Sivas**	**2.18**	**224**	P		**Pn**	**Pn**	**23 04 06.6**	**+1.8**
SIVA	**Sivas**	**2.18**	**224**	P		**Pn**	**Pn**	**23 04 06.7**	**+1.8**
SIVA				S		**Sn**	**Sn**	**23 04 34.3**	**0.0**
	comp=N,50nm,0.5s								
VAM	**Vamos**	**2.31**	**239**	P		**Pn**	**Pn**	**23 04 07.5**	**+1.1**
VAM	**Vamos**	**2.31**	**239**	P		**Pn**	**Pn**	**23 04 07.8**	**+1.3**
VAM				S		**Sn**	**Sn**	**23 04 35.7**	**-1.5**
	comp=N,75nm,0.2s								
KSL	**Kastellorizon**	**2.42**	**100**	P		**Pn**	**Pn**	**23 04 10.1**	**+2.4**
KSL	**Kastellorizon**	**2.42**	**100**	P		**Pn**	**Pn**	**23 04 09.9**	**+2.1**
KSL				S		**Sn**	**Sn**	**23 04 38.9**	**-0.5**
AKAS	**Kas**	**2.42**	**98**	PN		**Pn**	**Pn**	**23 04 09.7**	**+1.8**
AKAS	**Kas**	**2.42**	**98**	*i* P		**Pn**	**Pn**	**23 04 09.9**	**+2.1**
AKAS				*i* S		**Sn**	**Sn**	**23 04 34.5**	**-5.2**
AKAS				IAML				23 04 42.0	
	comp=E,16nm,0.5s								
GOLH	**Golhisar**	**2.42**	**74**	*i* P		**Pn**	**Pn**	**23 04 10.3**	**+2.5**
GOLH				*i* S		Sn	Sn	23 04 31.5	-8.2
IMMV	**Iera Moni Meta**	**2.44**	**243**	P		**Pn**	**Pn**	**23 04 09.8**	**+1.9**
IMMV				S		**Sn**	**Sn**	**23 04 38.1**	**-1.8**
IMMV	**Iera Moni Meta**	**2.44**	**243**	PN		**Pn**	**Pn**	**23 04 09.1**	**+1.1**
IMMV	**Iera Moni Meta**	**2.44**	**243**	P		**Pn**	**Pn**	**23 04 09.0**	**+1.1**
IMMV				S		**Sn**	**Sn**	**23 04 38.9**	**-0.9**
	comp=E,72nm,0.4s								
RODP	**Rodopos**	**2.56**	**247**	PN		**Pn**	**Pn**	**23 04 10.7**	**+1.3**
ELL	**Elmali**	**2.63**	**86**	PN		**Pn**	**Pn**	**23 04 12.8**	**+2.4**
GVD	**Gavdhos**	**2.73**	**230**	P		**Pn**	**Pn**	**23 04 11.3**	**-0.1**
GVD	**Gavdhos**	**2.73**	**230**	PN		**Pn**	**Pn**	**23 04 12.8**	**+1.4**
ANKY	**Antikythira Is**	**2.80**	**256**	P		**Pn**	**Pn**	**23 04 13.4**	**+1.2**
KTHA	**Kythira Island**	**2.90**	**264**	P		**Pn**	**Pn**	**23 04 15.1**	**+1.5**
KTHA	**Kythira Island**	**2.90**	**264**	PN		**Pn**	**Pn**	**23 04 14.8**	**+1.2**
KTHA	**Kythira Island**	**2.90**	**264**	P		**Pn**	**Pn**	**23 04 14.8**	**+1.2**
VLI	**Veliai**	**2.98**	**273**	P		**Pn**	**Pn**	**23 04 15.6**	**+1.1**
VLI	**Veliai**	**2.98**	**273**	P		**Pn**	**Pn**	**23 04 15.6**	**+1.1**
AKUM	**Antalya-Kumluc**	**3.00**	**94**	*i* P		**Pn**	**Pn**	**23 04 17.0**	**+2.2**
AKUM				*i* S		**Sn**	**Sn**	**23 04 48.3**	**-3.7**
AKMS	**Akamas**	**4.90**	**107**	P		**Pn**	**Pn**	**23 04 39.9**	**+0.8**
ALFC	**Alefka**	**5.05**	**105**	P		**Pn**	**Pn**	**23 04 41.6**	**+0.5**
NATA	**Nata**	**5.16**	**109**	P		**Pn**	**Pn**	**23 04 43.3**	**+0.7**
SZAC	**Souni**	**5.41**	**108**	P		**Pn**	**Pn**	**23 04 46.7**	**+0.8**
MVOU	**Mavrovouni**	**5.90**	**104**	P		**Pn**	**Pn**	**23 04 54.0**	**+1.7**

IDC ***05*** *23:10:58.9±1.4, 43.96N×83.53E, h0km, mb3.7/6, mb1 3.7/12, mb1mx3.5/58, mbtmp3.5/12, ML3.3/6, MS2.6/1, Ms1 2.6/1, ms1mx2.1/47, Error ellipse: s-maj=27.7km s-min=13.6km az=83.0*
BJI ***05*** *23:11:03.3±0.0, 44.01N×83.43E, h5km, ML3.5/8*
SOME ***05*** *23:11:06.1, 44.12N×83.03E, h10km*
NNC ***05*** *23:11:08.2±1.3, 44.21N×82.87E, h16km±7km, mb4.1, mpv3.7, Error ellipse

10.0nm,0.2s
ARXS Lg Lg 23 13 04.8
70nm,0.4s
KOTS Kotyrbulak 4.47 264 *e*P **Pg 23 12 26.7 +0.1**
9.3nm,0.3s
KOTS *e*S **Sg 23 13 24.8 +0.3**
49nm,0.4s
KOTS Kotyrbulak 4.47 264 Pg **Pg 23 12 26.7 +0.1**
9.3nm,0.3s
KOTS Lg Lg 23 13 24.8
49nm,0.4s
MDOK Medeo 4.53 263 *e*P **Pg 23 12 29.5 +1.8**
5.1nm,0.5s
MDOK *e*S **Sg 23 13 29.5 +3.1**
36nm,0.4s
MDOK Medeo 4.53 263 Pg **Pg 23 12 29.5 +1.8**
5.1nm,0.5s
MDOK Lg Lg 23 13 29.5
36nm,0.4s
KNDC Almaty 4.58 264 ⇑Pg **Pg 23 12 29.5 +0.8**
32nm,0.8s
KNDC ⇑Lg Lg 23 13 30.8
115nm,0.9s
TNSS Tian-Shan 4.63 261 *e*P **Pg 23 12 30.0 +0.3**
5.8nm,0.3s
TNSS *e*S **Sg 23 13 30.4 +0.8**
16nm,0.3s
TNSS Tian-Shan 4.63 261 Pg **Pg 23 12 30.0 +0.3**
5.8nm,0.3s
TNSS Lg Lg 23 13 30.4
16nm,0.3s
KTBS Karatobe 4.72 270 *e*P **Pg 23 12 30.8 -0.5**
6.2nm,0.6s
KTBS *e*S **Sg 23 13 31.8 -0.6**
86nm,0.5s
KTBS Karatobe 4.72 270 Pg **Pg 23 12 30.8 -0.5**
6.2nm,0.6s
KTBS Lg Lg 23 13 31.8
86nm,0.5s
IZV Izvestkoviy 4.87 262 *e*P **Pg 23 12 35.2 +1.0**
4.0nm,0.2s
IZV *e*S **Sg 23 13 39.4 +2.1**
43nm,0.7s
IZV Izvestkoviy 4.87 262 Pg **Pg 23 12 35.2 +1.0**
4.0nm,0.2s
IZV Lg Lg 23 13 39.4
43nm,0.7s
KUU Kurty 4.96 272 *e*P **Pg 23 12 33.6 -2.3**
2.4nm,0.3s
KUU *e*S **Sg 23 13 36.9 -3.2**
69nm,0.5s
KUU Kurty 4.96 272 Pg **Pg 23 12 33.6 -2.3**
2.4nm,0.3s
KUU Lg Lg 23 13 36.9
69nm,0.5s
MTBS Maitube 4.98 263 *e*P **Pg 23 12 35.8 -0.6**
4.4nm,0.2s
MTBS *e*S **Sg 23 13 40.6 -0.3**
19nm,0.4s
MTBS Maitube 4.98 263 Pg **Pg 23 12 35.8 -0.6**
4.4nm,0.2s
MTBS Lg Lg 23 13 40.6
19nm,0.4s
KST Kastek 5.33 263 *e*P **Pg 23 12 42.9 -0.2**
6.4nm,0.6s
KST *e*S **Sg 23 13 52.5 +0.3**
34nm,0.7s
KST Kastek 5.33 263 Pg **Pg 23 12 42.9 -0.2**
6.4nm,0.6s
KST Lg Lg 23 13 52.5
34nm,0.7s
DGS Degeres 5.43 266 *e*P **Pg 23 12 44.1 -0.9**
3.3nm,0.6s
DGS *e*S **Sg 23 13 54.8 -0.6**
30nm,0.5s
DGS Degeres 5.43 266 Pg **Pg 23 12 44.1 -0.9**
3.3nm,0.6s
DGS Lg Lg 23 13 54.8
30nm,0.5s
TKM2 Tokmak 2 5.62 263 ⇑Pn Pn 23 12 32.0 +7.2
2.4nm,0.6s
TKM2 ⇑Pg **Pg 23 12 52.0 +3.4**
4.3nm,0.6s
TKM2 ⇑Lg Lg 23 13 59.3
17nm,0.7s
KURBB Kurchatov Arra 7.44 336 Pn **Pn 23 12 49.5 0.0**
0.1nm,0.3s,baz=145,slow=13,SNR=2.9
KURBB Lg Lg 23 14 54.0
0.6nm,0.3s,baz=150,slow=29,SNR=7.3
KURBB Kurchatov Arra 7.44 336 ⇑Pn **Pn 23 12 51.4 +1.9**
3.0nm,0.5s
KURBB ⇑Sn **Sn 23 14 12.7 -1.2**
12nm,0.5s
KURBB ⇓Lg Lg 23 14 56.2
56nm,0.7s
KURK Kurchatov 7.50 337 ⇑Pn **Pn 23 12 51.1 +0.8**
2.1nm,0.9s
KURK ⇑Sn **Sn 23 14 09.8 -5.5**
12nm,1.0s
KURK ⇑Lg Lg 23 14 57.4
28nm,0.7s
KK31 Karatay Array 9.26 269 ⇑Lg Lg 23 15 57.8
4.0nm,0.6s,baz=72,slow=26,SNR=6.5
ZALV Zalesovo Beam 10.12 5 Pn Pn 23 13 22.3 -3.9
0.3nm,0.3s,baz=194,slow=15,SNR=4.9
ZALV Sn Sn 23 15 11.6 -8.0
1.7nm,0.3s,baz=176,slow=26,SNR=14
ZALV Lg Lg 23 16 16.0
0.1nm,0.3s,baz=198,slow=27,SNR=2.0
BVAR Borovoye Array 12.46 322 Pn **Pn 23 13 58.9 +0.6**
0.5nm,0.3s,baz=144,slow=11,SNR=2.5
BVAR Lg Lg 23 17 40.9
0.2nm,0.3s,baz=179,slow=20,SNR=2.8
SONM Songino Array 16.61 68 Pn **Pn 23 14 51.7 -2.3**
0.1nm,0.3s,baz=270,slow=12,SNR=2.3
AKTO Aktyubinsk 18.28 300 P **P 23 15 16.1 +1.5**
0.2nm,0.3s,baz=82,slow=12,SNR=4.0
AKTO LR LR 23 22 28.0
comp=Z,20nm,19.2s,baz=175,slow=37
FINES FINESS Array B 37.39 318 P **P 23 18 14.3 +0.8**
1.6nm,1.0s,baz=106,slow=14,SNR=5.0
ARCES ARCESS Array B 38.49 331 P **P 23 18 23.3 +0.5**
5.8nm,1.1s,baz=79,slow=7.5,SNR=5.4
NOA NORSAR Array B 44.57 319 P **P 23 19 13.2 +0.5**
0.6nm,0.6s,baz=79,slow=6.8,SNR=2.2
ESDC Sonseca Array 62.16 299 P **P 23 21 23.1 +0.7**
0.5nm,0.6s,baz=47,slow=6.3,SNR=5.4
ILAR Eielson Array 64.82 21 P **P 23 21 37.9 -1.6**
0.2nm,0.6s,baz=330,slow=7.0,SNR=2.3
TORD Torodi Ar. Bea 74.92 274 P **P 23 22 42.5 +0.2**
0.6nm,0.6s,baz=43,slow=5.8,SNR=9.7

*GII **05** 23:13:54.5±0.0,26.°66N×33.°97E,h1km,mb4.2/6,MD4.0/7, Mm3.6/7*
*HLW **05** 23:14:08.1,27.°45N×34.°02E,h23km±1km,Md3.7,Ml4.1*
*SGS **05** 23:14:11.7,27.°69N×34.°16E,h18km,Ml2.9*
ISC 05 23:14:05.8±1.4,**27.°44N**±0.°04×**34.°06E**±0.°03,**h7**km±11km, **n62**,σ1**s44/73**,**Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TR1	**Tor 1**	**0.57**	**350**	P	**Pg**	**23 14 19.1**	**+2.1**
	baz=354						
RSHS		**1.08**	**37**	P	**Pg**	**23 14 26.1**	**-0.4**
RSHS		**1.08**	**37**	S	**Sg**	**23 14 38.2**	**-2.3**
KRABS	**KRABS**	**1.25**	**58**	S	**Sg**	**23 14 43.5**	**-2.5**
KRABS				P	**Pg**	**23 14 28.9**	**-0.9**
MWLHS	**Almuwaylih**	**1.33**	**76**	P	**Pg**	**23 14 31.9**	**+0.6**
BDAS	**Al Bad`**	**1.35**	**43**	S	**Sg**	**23 14 46.6**	**-2.7**
BDAS	**Al Bad`**	**1.35**	**43**	P	**Pg**	**23 14 30.1**	**-1.7**
GRB	**Gharib**	**1.40**	**307**	P	**Pg**	**23 14 31.2**	**-1.6**
	baz=308						
HRDS	**Abu Rudays**	**1.44**	**332**	P	**Pg**	**23 14 31.8**	**-1.6**
	baz=334						
WTBKS	**WTBKS**	**1.76**	**68**	S	**Sn**	**23 14 57.5**	**-2.1**
WTBKS				P	**Pn**	**23 14 37.2**	**+0.4**
HAQS	**Haql**	**1.78**	**25**	P	**Pn**	**23 14 36.6**	**-0.4**
JLOS		**1.81**	**44**	S	**Sn**	**23 14 57.9**	**-2.9**
JLOS		**1.81**	**44**	P	**Pn**	**23 14 37.2**	**-0.4**
HBST	**Basata**	**1.87**	**18**	P	**Pn**	**23 14 38.4**	**+0.1**
	baz=19						
HQLS		**2.05**	**25**	P	**Pn**	**23 14 40.6**	**-0.2**
NADB	**Abo Dabab**	**2.13**	**169**	P	**Pn**	**23 14 42.4**	**+0.6**
	baz=168						
NADB				S	**Sn**	**23 15 06.4**	**-2.1**
	baz=168						
WJHS		**2.20**	**108**	P	**Pn**	**23 14 43.6**	**+0.8**
ASUT		**2.22**	**270**	P	**Pn**	**23 14 43.9**	**+0.7**
	baz=270						
TBKS	**Tabuk**	**2.33**	**70**	P	**Pn**	**23 14 46.0**	**+1.4**
EIL	**Elat**	**2.36**	**19**	P	**Pn**	**23 14 44.2**	**-0.8**
EIL	**Elat**	**2.36**	**19**	Pn	**Pn**	**23 14 44.6**	**-0.4**
EIL				Sn	**Sg**	**23 15 22.9**	**+1.3**
AQBJ	**Aqaba**	**2.44**	**21**	P	**Pn**	**23 14 46.2**	**+0.1**
AQBJ	**Aqaba**	**2.44**	**21**	Pn	**Pn**	**23 14 45.8**	**-0.3**
AQBJ				Sn	**Sg**	**23 15 25.3**	**+1.0**
MBRI	**Mt Berech**	**2.46**	**18**	Pn	**Pn**	**23 14 46.7**	**+0.2**
MBRI				Sn	**Sg**	**23 15 26.6**	**+1.5**
SUZ	**Suez**	**2.63**	**336**	P	**Pn**	**23 14 48.9**	**+0.2**
	baz=337						
BIDS	**Bi'r al Bayda'**	**2.64**	**102**	P	**Pn**	**23 14 50.4**	**+1.5**
EWJHS	**Al Wajh**	**2.65**	**118**	P	**Pn**	**23 14 49.5**	**+0.6**
HRFI	**Mount Harif**	**2.73**	**18**	Pn	**Pn**	**23 14 49.9**	**-0.2**
HRFI				Sn	**Sb**	**23 15 32.7**	**+4.1**
KRMI	**Paran Flat**	**2.73**	**12**	P	**Pn**	**23 14 50.6**	**+0.4**
KRMI	**Paran Flat**	**2.73**	**12**	Pn	**Pn**	**23 14 50.3**	**+0.1**
KRMI				Sn	**Sb**	**23 15 32.4**	**+3.6**
TAMRE	**El Minia**	**2.80**	**276**	P	**Pn**	**23 14 51.7**	**+0.7**
	baz=276						
PRNI	**Paran**	**3.02**	**16**	Pn	**Pn**	**23 14 54.7**	**+0.6**
PRNI				Sn	**Sb**	**23 15 40.2**	**+3.2**
HHAG	**Hagoal**	**3.04**	**326**	P	**Pn**	**23 14 55.1**	**+0.7**
	baz=327						
HHAG				AMP		23 15 00.0	
	baz=327						
HHAG				S	**Sn**	**23 15 27.9**	**-3.2**
	baz=327						
HAGS	**Hagol**	**3.16**	**164**	P	**Pn**	**23 14 57.2**	**+1.2**
	baz=163						
KOT	**Kottamia**	**3.16**	**322**	AMP		23 16 00.0	
	baz=323						
ZFRI	**Zfri**	**3.25**	**17**	P	**Pn**	**23 14 57.3**	**0.0**
ZFRI	**Zfri**	**3.25**	**17**	Pn	**Pn**	**23 14 57.7**	**+0.4**
ZFRI				Sn	**Sb**	**23 15 46.3**	**+2.5**
KZIT	**Kziot**	**3.47**	**5**	Pn	**Pn**	**23 15 00.5**	**+0.2**
KZIT				Sn	**Sb**	**23 15 52.1**	**+2.1**
JDRJ	**Daraweish**	**3.57**	**23**	P	**Pn**	**23 15 03.3**	**+1.6**
BRNS	**Bernies**	**3.57**	**179**	P	**Pn**	**23 15 02.9**	**+1.3**
	baz=178						
MDBI	**Mazsada**	**4.02**	**16**	P	**Pn**	**23 15 08.0**	**+0.2**
GHAJ	**Ghor Haditha**	**4.07**	**18**	P	**Pn**	**23 15 09.6**	**+1.1**
GHAJ	**Ghor Haditha**	**4.07**	**18**	Pn	**Pn**	**23 15 09.6**	**+1.1**
AMAZ	**Amatzia**	**4.15**	**10**	P	**Pn**	**23 15 10.2**	**+0.6**
AMAZ	**Amatzia**	**4.15**	**10**	Pn	**Pn**	**23 15 10.3**	**+0.6**
DSI	**Dead Sea**	**4.28**	**15**	P	**Pn**	**23 15 11.3**	**0.0**
DSI	**Dead Sea**	**4.28**	**15**	Pn	**Pn**	**23 15 12.1**	**+0.8**
WALJ	**Wala**	**4.38**	**20**	P	**Pn**	**23 15 13.2**	**+0.4**
UJAP	**Al Uja**	**4.66**	**15**	P	**Pn**	**23 15 16.7**	**+0.1**
SLTI	**Sal'it**	**4.86**	**10**	P	**Pn**	**23 15 18.2**	**-1.2**
SLTI	**Sal'it**	**4.86**	**10**	Pn	**Pn**	**23 15 18.3**	**-1.2**
HMDT	**Nahal Hemdat**	**4.96**	**14**	P	**Pn**	**23 15 21.0**	**+0.2**
HMDT	**Nahal Hemdat**	**4.96**	**14**	Pn	**Pn**	**23 15 21.8**	**+1.0**
MMLI	**Mount Malkishu**	**5.12**	**13**	Pn	**Pn**	**23 15 24.1**	**+1.1**
HFRF	**Wahat Farafira**	**5.13**	**268**	P	**Pn**	**23 15 23.3**	**+0.2**
	baz=268						
OFRI	**`Ofer**	**5.23**	**9**	P	**Pn**	**23 15 25.2**	**+0.7**
OFRI	**`Ofer**	**5.23**	**9**	Pn	**Pn**	**23 15 25.2**	**+0.7**
SHMJ	**Saham**	**5.47**	**15**	P	**Pn**	**23 15 27.5**	**-0.3**
MMA0B	**Mount Meron ar**	**5.68**	**11**	Pn	**Pn**	**23 15 32.0**	**+1.3**
HNTI	**Hanita**	**5.71**	**9**	P	**Pn**	**23 15 31.5**	**+0.5**
CSS	**Mathiatis**	**7.53**	**355**	P	**Pn**	**23 15 55.7**	**-0.3**
CSS	**Mathiatis**	**7.53**	**355**	Pn	**Pn**	**23 15 56.1**	**+0.1**

*SOME **05** 23:26:35.7,43.°73N×83.°68E,h20km,MS3.8*
*IDC **05** 23:26:38.0±0.9,43.°96N×83.°46E,h0km,mb4.2/13, mb1 4.3/18,mb1mx4.1/43,mbtmp4.2/18,ML3.7/5,MS3.2/8, Ms1 3.2/8,ms1mx2.9/47,Error ellipse: s-maj=19.6km s-min=11.6km az=76.0*
*BJI **05** 23:26:41.5±0.0,44.°03N×83.°43E,h10km,mB4.6/5, mb4.2/9,ML4.2/9,Ms3.5/2,Ms7 3.2/1*
*NNC **05** 23:26:42.2±1.7,44.°10N×83.°18E,h6km±8km,mb4.4, mpv4.2,Error ellipse: s-maj=15.0km s-min=6.3km az=128.0*
*MOS **05** 23:26:43.1±1.4,44.°18N×83.°41E,h33km,mb4.7/8,Error ellipse: s-maj=6.6km s-min=5.5km az=123.8*
*NEIC **05** 23:26:45.2±1.2,44.°17N±0.°05×83.°31E±0.°08,h39km±6km, mb4.6/28,Error ellipse: s-maj=9.7km s-min=4.4km az=52.0*
ISC 05 23:26:40.5±0.4,**44.°09N**±0.°03×**83.°40E**±0.°02,**h10**km,**n200, s178**/236,**mb4.6**/38,**MS3.2**/3,**17C-34D**,**Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.30**	**255**	*e*P	**Pb**	**23 27 21.8**	**-0.3**
	16nm,0.3s						
KTMS				*e*S	**Sg**	**23 27 54.6**	**+0.3**
	1μm,0.5s						
KTMS	**Ketmen**	**2.30**	**255**	Pg	**Pn**	**23 27 19.7**	**+1.1**
	7.7nm,0.2s						
KTMS				Lg	Lg	23 27 51.1	
	665nm,0.3s						
KTMS	**Ketmen**	**2.30**	**255**	*e*P	**Pb**	**23 27 21.8**	**-0.3**
KTMS				*e*S	**Sg**	**23 27 54.6**	**+0.3**
DJR	**Jarkent**	**2.61**	**277**	*e*P	**Pb**	**23 27 26.8**	**-0.5**
	112nm,0.2s						
DJR				*e*S	**Sg**	**23 28 02.9**	**-1.3**
	617nm,0.6s						
DJR	**Jarkent**	**2.61**	**277**	Pg	**Pn**	**23 27 25.4**	**+2.7**
	37nm,0.2s						
DJR				Lg	Lg	23 28 00.9	
	580nm,0.5s						
DJR	**Jarkent**	**2.61**	**277**	*e*P	**Pb**	**23 27 26.8**	**-0.5**
DJR				*e*S	**Sg**	**23 28 02.9**	**-1.3**
MK31	**Makanchi Array**	**2.81**	**344**	⇓Pn	**Pn**	**23 27 28.5**	**+2.9**
	5.0nm,0.3s,baz=158,slow=14,SNR=2497						
MK31				⇑Pg	**Pg**	**23 27 35.0**	**+0.6**
	31nm,0.3s,baz=161,slow=17,SNR=68						
MK31				⇑Lg	Lg	23 28 12.0	
	41nm,0.2s,baz=159,slow=28,SNR=6.5						
MK31	**Makanchi Array**	**2.81**	**344**	*c* i P	**Pn**	**23 27 28.4**	**+2.9**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MK31	**Makanchi Array**	**2.81**	**344**		**Pn**	**23 27 27.2**	**+1.7**
MKAR	**Makanchi Array**	**2.81**	**344**	Pn	**Pn**	**23 27 28.1**	**+2.5**
	comp=Z,11nm,0.3s,baz=156,slow=14,SNR=149						
MKAR				Pg	**Pg**	**23 27 34.0**	**-0.4**
	comp=Z,61nm,0.3s,baz=157,slow=17,SNR=84						
MKAR				Lg	Lg	23 28 10.7	
	comp=Z,113nm,0.3s,baz=161,slow=27,SNR=3.5						
MKAR				LR	LR	23 28 49.9	
	comp=Z,340nm,18.3s,baz=50,slow=45						
MKAR	**Makanchi Array**	**2.81**	**344**	*i* P	**Pn**	**23 27 28.3**	**+2.7**
MKAR				pmax	pmax		
	comp=Z,15nm,0.5s						
MKAR	**Makanchi Array**	**2.81**	**344**		**Pn**	**23 27 27.3**	**+1.7**
MAKZ	**Makanchi**	**2.90**	**340**	⇑Pn	**Pn**	**23 27 29.7**	**+3.0**
	comp=Z,26nm,0.7s						
MAKZ				⇑Pg	**Pg**	**23 27 36.2**	**+0.3**
	comp=Z,73nm,0.5s						
MAKZ				⇑Lg	Lg	23 28 13.4	
	comp=Z,583nm,0.9s						
MAKZ	**Makanchi**	**2.90**	**340**	P	**Pn**	**23 27 28.3**	**+1.6**
MAKZ	**Makanchi**	**2.90**	**340**	Pn	**Pn**	**23 27 28.3**	**+1.6**
PDGK	**Podgornoye**	**2.94**	**256**	Pg	**Pn**	**23 27 30.5**	**+3.2**
	comp=Z,18nm,0.4s						
PDGK				Lg	Lg	23 28 09.6	
	comp=Z,186nm,0.8s						
PDGK	**Podgornoye**	**2.94**	**256**	⇓Pn	**Pn**	**23 27 28.7**	**+1.4**
	comp=Z,8.7nm,0.5s						
PDGK				⇑Pg	**Pg**	**23 27 36.9**	**+0.2**
	comp=Z,36nm,0.5s						
PDGK				⇑Lg	Lg	23 28 13.1	
	comp=Z,104nm,0.4s						
SHLS	**Shalkode**	**3.01**	**253**	*e*P	**Pn**	**23 27 28.5**	**+0.2**
	comp=Z,130nm,0.2s						
SHLS				*e*S	**Sn**	**23 28 05.7**	**+1.2**
	comp=Z,2μm,0.5s						
SHLS	**Shalkode**	**3.01**	**253**	Pg	**Pn**	**23 27 27.9**	**-0.4**
	comp=Z,130nm,0.2s						
SHLS				Lg	Lg	23 28 05.0	
	comp=Z,2μm,0.5s						
SHLS	**Shalkode**	**3.01**	**253**	*e*P	**Pn**	**23 27 28.5**	**+0.2**
SHLS				*e*S	**Sn**	**23 28 05.7**	**+1.2**
WMQ	**Urumqi**	**3.11**	**93**	*e*Pn	**Pb**	**23 27 34.6**	**-1.4**
WMQ				Sn	**Sb**	**23 28 13.3**	**-0.7**
WMQ				smax	smax		
	comp=Z,700nm,0.7s						
WMQ				smax	smax		
	comp=Z,650nm,0.7s						
WMQ	**Urumqi**	**3.11**	**93**	P	**Pn**	**23 27 32.9**	**+3.2**
WMQ	**Urumqi**	**3.11**	**93**		**Pn**	**23 27 32.9**	**+3.2**
KPKS	**Kokpek**	**3.47**	**261**	*e*P	**Pb**	**23 27 39.4**	**-2.7**
	comp=Z,34nm,0.1s						
KPKS				*e*S	**Sb**	**23 28 24.7**	**+0.4**
	comp=Z,619nm,0.4s						
KPKS	**Kokpek**	**3.47**	**261**	*e*P	**Pb**	**23 27 39.4**	**-2.7**
KPKS				*e*S	**Sb**	**23 28 24.7**	**+0.4**
ZSN	**Zaisan**	**3.51**	**16**	*e*P	**Pb**	**23 27 43.4**	**+0.6**
	comp=Z,348nm,0.3s						
ZSN				*e*S	**Sg**	**23 28 31.4**	**-1.9**
	comp=Z,956nm,0.7s						
ZSN	**Zaisan**	**3.51**	**16**	Pg	**Pb**	**23 27 43.4**	**+0.6**
	comp=Z,348nm,0.3s						
ZSN				Lg	Lg	23 28 31.4	
	comp=Z,956nm,0.7s						
ZSN	**Zaisan**	**3.51**	**16**	*e*P	**Pb**	**23 27 43.4**	**+0.6**
MNBS	**Baschi**	**3.60**	**272**	*e*P	**Pb**	**23 27 42.4**	**-1.9**
	comp=Z,19nm,0.1s						
MNBS				*e*S	**Sb**	**23 28 29.9**	**+1.8**
	comp=Z,425nm,0.6s						
MNBS	**Baschi**	**3.60**	**272**	Pg	**Pb**	**23 27 42.4**	**-1.9**
	comp=Z,19nm,0.1s						
MNBS				Lg	Lg	23 28 29.9	
	comp=Z,425nm,0.6s						
MNBS	**Baschi**	**3.60**	**272**	*e*P	**Pb**	**23 27 42.4**	**-1.9**
MNBS				*e*S	**Sb**	**23 28 29.9**	**+1.8**
TDK	**Taldyqorghan**	**3.68**	**286**	*e*P	**Pb**	**23 27 47.7**	**+2.1**
	comp=Z,338nm,0.6s						
TDK				*e*S	**Sg**	**23 28 39.1**	**+0.3**
	comp=Z,1μm,0.5s						
TDK	**Taldyqorghan**	**3.68**	**286**	Pg	**Pb**	**23 27 47.7**	**+2.1**
	comp=Z,338nm,0.6s						
TDK				Lg	Lg	23 28 39.1	
	comp=Z,1μm,0.5s						
TDK	**Taldyqorghan**	**3.68**	**286**	*e*P	**Pb**	**23 27 47.7**	**+2.1**
ZHN	**Zhinishke**	**3.72**	**257**	*e*P	**Pb**	**23 27 48.0**	**+1.7**
	comp=Z,32nm,0.2s						
ZHN				*e*S	**Sg**	**23 28 39.6**	**-0.3**
	comp=Z,98nm,0.2s						
ZHN	**Zhinishke**	**3.72**	**257**	Pg	**Pb**	**23 27 48.0**	**+1.7**
	comp=Z,32nm,0.2s						
ZHN				Lg	Lg	23 28 39.6	
	comp=Z,98nm,0.2s						
ZHN	**Zhinishke**	**3.72**	**257**	*e*P	**Pb**	**23 27 48.1**	**+1.7**
SATY	**Saty**	**3.77**	**256**	*e*P	**Pb**	**23 27 46.7**	**-0.5**
	comp=Z,29nm,0.1s						
SATY				*e*S	**Sb**	**23 28 37.5**	**+4.5**
	comp=Z,195nm,0.1s						
SATY	**Saty**	**3.77**	**256**	Pg	**Pb**	**23 27 46.7**	**-0.5**
	comp=Z,29nm,0.1s						
SATY				Lg	Lg	23 28 37.5	
	comp=Z,195nm,0.1s						
SATY	**Saty**	**3.77**	**256**	*e*P	**Pb**	**23 27 46.7**	**-0.5**
KURS	**Kuram**	**3.83**	**263**	*e*P	**Pb**	**23 27 48.5**	**+0.2**
	comp=Z,53nm,1.4s						
KURS				*e*S	**Sg**	**23 28 40.2**	**-3.3**
	comp=Z,337nm,1.0s						
KURS	**Kuram**	**3.83**	**263**	Pg	**Pb**	**23 27 48.5**	**+0.2**
	comp=Z,53nm,1.4s						
KURS				Lg	Lg	23 28 40.2	
	comp=Z,337nm,1.0s						
KURS	**Kuram**	**3.83**	**263**	*e*P	**Pb**	**23 27 48.5**	**+0.2**
PRZ	**Przheval'sk**	**3.99**	**248**	P	**Pn**	**23 27 45.1**	**+3.3**
PRZ	**Przheval'sk**	**3.99**	**248**	Pn	**Pn**	**23 27 45.1**	**+3.3**
ARXS	**Arharly**	**4.01**	**274**	*e*P	**Pb**	**23 27 50.2**	**-1.1**
	comp=Z,19nm,0.1s						
ARXS				*e*S	**Sb**	**23 28 43.8**	**+4.0**
	comp=Z,384nm,0.5s						
ARXS	**Arharly**	**4.01**	**274**	Pg	**Pb**	**23 27 50.2**	**-1.1**
	comp=Z,19nm,0.1s						
ARXS				Lg	Lg	23 28 43.8	
	comp=Z,384nm,0.5s						
ARXS	**Arharly**	**4.01**	**274**	*e*P	**Pb**	**23 27 50.2**	**-1.1**
KOTS	**Kotyrbulak**	**4.64**	**262**	*e*P	**Pb**	**23 28 03.3**	**+1.2**
	comp=Z,58nm,0.3s						
KOTS				*e*S	**Sg**	**23 29 06.0**	**-3.5**
	comp=Z,872nm,0.6s						
KOTS	**Kotyrbulak**	**4.64**	**262**	Pg	**Pb**	**23 28 03.3**	**+1.2**
	comp=Z,58nm,0.3s						
KOTS				Lg	Lg	23 29 06.0	
	comp=Z,872nm,0.6s						
MDOK	**Medeo**	**4.70**	**261**	*e*P	**Pb**	**23 28 03.9**	**+0.8**
	comp=Z,12nm,0.3s						
MDOK				*e*S	**Sg**	**23 29 07.4**	**-4.1**
	comp=Z,182nm,1.0s						
MDOK	**Medeo**	**4.70**	**261**	Pg	**Pb**	**23 28 03.9**	**+0.8**
	comp=Z,12nm,0.3s						
MDOK				Lg	Lg	23 29 07.4	
	comp=Z,182nm,1.0s						
KNDC	**Almaty**	**4.75**	**262**	⇓Pn	**Pn**	**23 27 54.7**	**+2.6**
	comp=Z,7.0nm,0.3s						
KNDC				⇓Pg	**Pg**	**23 28 08.8**	**-2.6**
	comp=Z,35nm,0.5s						
KNDC				⇓Lg	Lg	23 29 10.2	
	comp=Z,421nm,0.9s						
TNSS	**Tian-Shan**	**4.80**	**260**	*e*P	**Pb**	**23 28 07.2**	**+2.2**
	comp=Z,29nm,0.6s						
TNSS				*e*S	**Sg**	**23 29 12.5**	**-2.3**
	comp=Z,60nm,0.6s						
TNSS	**Tian-Shan**	**4.80**	**260**	Pg	**Pb**	**23 28 07.2**	**+2.2**
	comp=Z,29nm,0.6s						
TNSS				Lg	Lg	23 29 12.5	
	comp=Z,60nm,0.6s						
KTBS	**Karatobe**	**4.87**	**268**	*e*P	**Pb**	**23 28 07.6**	**+1.7**
	comp=Z,18nm,0.8s						
KTBS				*e*S	**Sg**	**23 29 13.3**	**-3.5**
	comp=Z,468nm,0.8s						
KTBS	**Karatobe**	**4.87**	**268**	Pg	**Pb**	**23 28 07.6**	**+1.7**
	comp=Z,18nm,0.8s						
KTBS				Lg	Lg	23 29 13.3	
	comp=Z,468nm,0.8s						
KDJ	**Kajisay**	**4.96**	**249**	P	**Pn**	**23 27 56.8**	**+1.7**
KDJ	**Kajisay**	**4.96**	**249**	Pn	**Pn**	**23 27 56.8**	**+1.7**
IZV	**Izvestkoviy**	**5.04**	**260**	*e*P	**Pb**	**23 28 10.5**	**+1.6**
	comp=Z,34nm,0.8s						
IZV				*e*S	**Sg**	**23 29 18.4**	**-3.9**
	comp=Z,181nm,0.9s						
IZV	**Izvestkoviy**	**5.04**	**260**	Pg	**Pb**	**23 28 10.5**	**+1.6**
	comp=Z,34nm,0.8s						
IZV				Lg	Lg	23 29 18.4	
	comp=Z,181nm,0.9s						
KUU	**Kurty**	**5.10**	**270**	*e*P	**Pb**	**23 28 09.0**	**-0.7**
	comp=Z,15nm,0.6s						
KUU				*e*S	**Sb**	**23 29 15.6**	**+4.6**
	comp=Z,174nm,0.7s						
KUU	**Kurty**	**5.10**	**270**	Pg	**Pb**	**23 28 08.0**	**-1.7**
	comp=Z,15nm,0.6s						
KUU				Lg	Lg	23 29 15.6	
	comp=Z,174nm,0.7s						
MTBS	**Maitube**	**5.15**	**262**	*e*P	**Pb**	**23 28 10.8**	**+0.1**
	comp=Z,13nm,0.5s						
MTBS				*e*S	**Sb**	**23 29 18.7**	**+6.0**
	comp=Z,62nm,0.7s						
MTBS	**Maitube**	**5.15**	**262**	Pg	**Pb**	**23 28 10.8**	**+0.1**
	comp=Z,13nm,0.5s						
MTBS				Lg	Lg	23 29 18.7	
	comp=Z,62nm,0.7s						
BOOM	**Boomskoye usch**	**5.67**	**256**	P	**Pn**	**23 28 06.9**	**+1.9**
BOOM	**Boomskoye usch**	**5.67**	**256**	Pn	**Pn**	**23 28 06.9**	**+1.9**
TKM2	**Tokmak 2**	**5.79**	**261**	⇓Pn	**Pn**	**23 28 09.0**	**+2.4**
	comp=Z,8.0nm,0.5s						
TKM2				⇓Pg	**Pg**	**23 28 28.1**	**-3.3**
	comp=Z,32nm,0.6s						
TKM2				⇓Lg	Lg	23 29 43.7	
	comp=Z,158

KURK ⇑Lg Lg 23 30 35.4
comp=Z,163nm,1.0s
KURK Kurchatov 7.38 336 *i* P **Pn** **23 28 29.2 +1.1**
KURK Kurchatov 7.38 336 Pn **Pn** **23 28 29.1 +0.9**
KK31 Karatay Array 9.40 268 ⇓Pn **Pn** **23 28 58.1 +2.2**
comp=Z,1.0nm,0.4s,baz=76,slow=13,SNR=12
KK31 ⇑Pg 23 29 34.4
comp=Z,5.0nm,0.7s,baz=76,slow=14,SNR=3.8
KK31 ⇓Lg Lg 23 31 39.8
comp=Z,24nm,0.8s,baz=73,slow=27,SNR=6.6
KK31 Karatay Array 9.40 268 P **Pn** **23 28 58.2 +2.2**
KK31 Karatay Array 9.40 268 Pn **Pn** **23 28 58.2 +2.2**
KKAR Karatay Array 9.40 268 P **Pn** **23 28 57.9 +1.9**
KKAR Karatay Array 9.40 268 **Pn** **23 28 57.9 +1.9**
KKAR Karatay Array 9.40 268 Pn **Pn** **23 28 57.5 +1.5**
ZAA0 Zalesovo Array 9.91 5 ⇓Pn **Pn** **23 29 02.5 -0.4**
comp=Z,1.2nm,0.7s
ZAA0 ⇑Sn **Sn** **23 30 51.9 -2.2**
comp=Z,1.9nm,0.4s
ZAA0 ⇓Lg Lg 23 31 57.2
comp=Z,13nm,1.1s
ZAA0 Zalesovo Array 9.91 5 Pn **Pn** **23 29 03.5 +0.7**
ZALV Zalesovo Beam 9.91 5 Pn **Pn** **23 29 03.1 +0.3**
comp=Z,1.0nm,0.3s,baz=186,slow=14,SNR=23
ZALV Sn **Sn** **23 30 50.9 -3.1**
comp=Z,7.6nm,0.3s,baz=175,slow=24,SNR=24
ZALV Lg Lg 23 31 55.0
baz=199,slow=27,SNR=2.4
ZALV LR LR 23 33 09.6
comp=Z,123nm,19.4s,baz=193,slow=39
ZALV Zalesovo Beam 9.91 5 P **Pn** **23 29 03.4 +0.5**
ZALV Zalesovo Beam 9.91 5 **Pn** **23 29 03.4 +0.5**
GAR Garm 11.04 247 **Pn** **23 29 20.4 +1.8**
CHGR Chuyangaron 11.99 248 Pn **Pn** **23 29 31.8 +0.3**
BVAR Borovoye Array 12.40 321 Pn **Pn** **23 29 36.0 -1.0**
comp=Z,1.5nm,0.3s,baz=95,slow=16,SNR=18
BVAR Sn **Sn** **23 31 50.2 -4.9**
comp=Z,0.7nm,0.3s,baz=187,slow=24,SNR=5.1
BVAR Lg Lg 23 33 09.7
comp=Z,0.6nm,0.3s,baz=164,slow=32,SNR=3.1
BRVK Borovoye 12.47 321 ⇑Pn **Pn** **23 29 38.5 +0.7**
comp=Z,6.5nm,0.9s
BRVK ⇓Sn **Sn** **23 31 53.2 -3.5**
comp=Z,8.1nm,0.7s
BRVK Borovoye 12.47 321 *i* P **Pn** **23 29 38.6 +0.7**
BRVK pmax pmax
comp=Z,24nm,3.6s
BRVK Borovoye 12.47 321 Pn **Pn** **23 29 38.2 +0.3**
NIL Nilore 13.07 221 P **Pn** **23 29 47.8 +1.6**
NIL Nilore 13.07 221 Pn **Pn** **23 29 47.8 +1.6**
KBL Kabul 14.62 234 P **Pn** **23 30 08.1 +0.5**
KBL Kabul 14.62 234 **Pn** **23 30 08.1 +0.5**
TLY Talaya 15.53 54 LR LR 23 36 30.2
comp=Z,54nm,19.1s,baz=244,slow=38
LSA Lhasa 15.63 154 P **P** **23 30 27.0 +1.5**
LSA pmax pmax
comp=Z,6.0nm,0.6s
LSA Lhasa 15.63 154 P **P** **23 30 24.3 -1.2**
LSA pmax pmax
comp=Z,5.0nm,0.6s
LSA Lhasa 15.63 154 Pn **P** **23 30 24.3 -1.2**
SONM Songino Array 16.41 69 Pn **P** **23 30 32.9 -0.8**
comp=Z,0.3nm,0.3s,baz=261,slow=12,SNR=12
SONM Lg Lg 23 35 25.9
comp=Z,0.3nm,0.3s,baz=284,slow=29,SNR=2.4
SONM LR LR 23 37 51.4
comp=Z,58nm,22.0s,baz=253,slow=41
SONM Songino Array 16.41 69 P **P** **23 30 33.7 0.0**
SONM pmax pmax
comp=Z,4.0nm,1.1s
SONM Songino Array 16.41 69 **P** **23 30 33.7 0.0**
ULN Ulaanbaatar 16.85 69 *i* P **P** **23 30 42.9 +4.3**
ULN pmax pmax
comp=Z,1.0nm,0.5s
AB31 Akbulak array 16.88 296 ⇓P **Pn** **23 30 34.3 -2.4**
comp=Z,4.0nm,0.7s
ABKAR Akbulak array 16.88 296 **Pn** **23 30 34.9 -1.7**
ABKAR Akbulak array 16.88 296 Pn **Pn** **23 30 34.8 -1.9**
AKTO Aktyubinsk 18.31 299 P **Pn** **23 30 54.5 +0.2**
comp=Z,0.5nm,0.3s,baz=92,slow=12,SNR=15
AKTO LR LR 23 38 24.5
comp=Z,96nm,18.3s,baz=106,slow=38
AKTO Aktyubinsk 18.31 299 ⇓P **Pn** **23 30 54.6 +0.3**
comp=Z,9.4nm,1.0s
SVE Sverdlovsk 19.18 320 *e*P **Pn** **23 31 05.7 +0.8**
SVE pmax pmax
comp=Z,21nm,0.9s
SHL Shillong 19.73 157 P **Pn** **23 31 12.9 +1.0**
SHL pmax pmax
comp=Z,5.0nm,0.8s
SHL Shillong 19.73 157 P **Pn** **23 31 12.8 +1.0**
ARU Arti 19.98 317 P **Pn** **23 31 14.2 -0.2**
comp=Z,2.2nm,0.6s,baz=134,slow=5.4,SNR=10
ARU LR LR 23 39 25.7
comp=Z,68nm,18.0s,baz=140,slow=38
ARU Arti 19.98 317 *d i*P **P** **23 31 14.0 +1.3**
ARU S **S** **23 34 49.8 -7.4**
ARU pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 19.98 317 **P** **23 31 13.1 +0.4**
XAN Xi'an 22.13 108 P **P** **23 31 38.7 +2.5**
XAN pmax pmax
comp=Z,11nm,1.3s
XAN Xi'an 22.13 108 P **P** **23 31 38.7 +2.5**
KIRV Kirov 25.36 317 P **P** **23 32 07.8 +0.4**
comp=Z,16nm,0.6s,baz=126,slow=1.6,SNR=9.7
KIRV LR LR 23 42 44.7
comp=Z,63nm,20.3s,baz=102,slow=38
NRIK Noril'sk 25.41 3 P **P** **23 32 07.7 0.0**
comp=Z,8.4nm,0.6s,baz=167,slow=7.5,SNR=16
NRIK Noril'sk 25.41 3 *i* P **P** **23 32 05.6 -2.1**
NRIK pmax pmax
comp=Z,11nm,0.8s
GNI Garni 28.76 276 *i* P **P** **23 32 40.5 +2.1**
GNI pmax pmax
comp=Z,6.0nm,1.1s
KIV Kislovodsk 29.07 284 *e*P **P** **23 32 41.4 +0.4**
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,121nm,15.0s
KLMR Klimovskoe 30.81 319 *e*P **P** **23 32 55.5 -0.5**
KLMR pmax pmax
comp=Z,26nm,1.4s
KLMR Klimovskoe 30.81 319 *e*P **P** **23 32 55.6 -0.5**
KLMR AMP 23 33 08.0
comp=Z,26nm,1.4s
OBN Obninsk 31.71 307 ⇑*e*P **P** **23 33 03.1 -0.9**
OBN *e* 23 34 09.6
OBN *e*SS SS 23 40 25.0 -3.8
OBN pmax pmax
comp=Z,9.0nm,1.1s
MARD Mardin 32.73 273 P **P** **23 33 14.0 +0.6**
MARD IAmb IAmb 23 33 15.7
comp=Z,11nm,0.8s
AKASG Malin Array Be 36.55 300 P **P** **23 33 46.1 0.0**
comp=Z,1.3nm,0.6s,baz=66,slow=8.3,SNR=8.3
AKASG Malin Array Be 36.55 300 *i* P **P** **23 33 46.4 +0.3**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
BR131 Keskin Array S 36.84 281 P **P** **23 33 49.2 +0.4**
BR131 pmax pmax
comp=Z,2.0nm,0.9s
BR131 Keskin Array S 36.84 281 P **P** **23 33 49.2 +0.4**
BRTR Keskin Array B 36.84 281 P **P** **23 33 48.7 -0.1**
comp=Z,1.8nm,0.7s,baz=91,slow=5.4,SNR=8.0
BRTR Keskin Array B 36.84 281 *i* P **P** **23 33 49.5 +0.7**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
RAYN Ar Rayn 37.15 249 P **P** **23 33 51.2 -0.3**
RAYN pmax pmax
comp=Z,3.0nm,0.7s
RAYN Ar Rayn 37.15 249 P **P** **23 33 51.1 -0.3**
RAYN IAmb IAmb 23 33 51.9
comp=Z,3.4nm,0.7s
FIA1 FINESS Array S 37.34 318 P **P** **23 33 52.4 -0.3**
FINES FINESS Array B 37.34 318 P **P** **23 33 52.8 +0.2**
comp=Z,1.3nm,0.6s,baz=83,slow=19,SNR=9.6
FINES PcP **PcP** **23 36 10.4 -1.1**
comp=Z,0.8nm,0.5s,baz=103,slow=6.3,SNR=3.7
FINES FINESS Array B 37.34 318 P **P** **23 33 52.5 -0.2**
MILM Milestii Mici 37.72 294 ⇓P **P** **23 33 56.0 0.0**
ARCES ARCESS Array B 38.39 331 P **P** **23 34 01.6 +0.1**
comp=Z,1.8nm,0.5s,baz=94,slow=8.3,SNR=17
PRAR RASCA 39.28 296 ⇓P **P** **23 34 10.1 +0.9**

PLOR Plostina 39.46 293 ⇓P **P** **23 34 12.8 +2.0**
PLOR Plostina 39.46 293 ⇓P **P** **23 34 12.8 +2.0**
BIZ Bicaz 39.48 295 ⇓P **P** **23 34 12.0 +1.1**
NEHR Nehoiu 39.84 293 ⇓P **P** **23 34 16.7 +2.8**
BURAR Bucovina Array 39.86 296 ⇑P **P** **23 34 15.2 +1.0**
BURAR Bucovina Array 39.86 296 ⇑P **P** **23 34 15.2 +1.0**
BURAR Bucovina Array 39.86 296 P **P** **23 34 14.2 +0.1**
BUR08 Bucovina Ar. S 39.86 296 P **P** **23 34 14.3 +0.2**
BUR08 IAmb IAmb 23 34 15.8
comp=Z,4.2nm,1.1s
MLR Muntele Rosu 40.05 293 ⇓P **P** **23 34 17.6 +1.8**
MLR Muntele Rosu 40.05 293 P **P** **23 34 16.5 +0.7**
MLR pmax pmax
comp=Z,5.0nm,0.9s
MLR Muntele Rosu 40.05 293 P **P** **23 34 16.5 +0.7**
MLR IAmb IAmb 23 34 19.5
comp=Z,4.8nm,0.9s
DOPR Dopca 40.26 294 ⇓P **P** **23 34 18.9 +1.5**
VOIR 40.66 293 ⇓P **P** **23 34 23.0 +2.2**
VOIR 40.66 293 ⇓P **P** **23 34 23.0 +2.2**
KWP Kalwaria Pacla 40.88 300 P **P** **23 34 23.5 +1.1**
KWP pmax pmax
comp=Z,23nm,1.1s
KWP Kalwaria Pacla 40.88 300 P **P** **23 34 23.4 +1.1**
OJC Ojcow 42.51 302 P **P** **23 34 35.8 0.0**
OJC pmax pmax
comp=Z,12nm,1.1s
OJC Ojcow 42.51 302 P **P** **23 34 35.8 0.0**
OJC IAmb IAmb 23 34 37.2
comp=Z,12nm,1.1s
BZS Buzias 42.86 295 ⇓P **P** **23 34 39.7 +1.0**
BZS Buzias 42.86 295 ⇓P **P** **23 34 39.7 +1.0**
PSZ Piszkesteto 43.17 298 ⇓P **P** **23 34 43.3 +2.1**
PSZ Piszkesteto 43.17 298 ⇓P **P** **23 34 43.3 +2.1**
VYHS Vyhne 43.65 300 *e*P **P** **23 34 46.3 +1.3**
VYHS Vyhne 43.65 300 *e*P **P** **23 34 46.3 +1.3**
NC405 NORSAR Array S 44.27 319 P **P** **23 34 50.3 +0.5**
NC405 IAmb IAmb 23 34 51.0
comp=Z,11nm,0.9s
DIVS Divibare 44.50 293 P **P** **23 34 52.0 0.0**
DIVS IAmb IAmb 23 34 56.6
comp=Z,16nm,1.4s
NB2 NORSAR Subarra 44.52 319 P **P** **23 34 51.9 0.0**
comp=Z,2.4nm,0.8s,baz=77,slow=7.9
NOA NORSAR Array B 44.52 319 P **P** **23 34 51.9 0.0**
comp=Z,3.0nm,0.7s,baz=78,slow=7.9,SNR=9.8
NOA LR LR 23 54 08.7
comp=Z,28nm,18.4s,baz=325,slow=37
IDI Anoyia 45.03 280 P **P** **23 34 55.8 -0.5**
IDI IAmb IAmb 23 35 07.4
comp=Z,16nm,1.1s
CLL Collm 46.25 305 *i* P **P** **23 35 06.2 +0.5**
comp=Z,8.0nm,0.7s
CLL *e* 23 35 09.0
CLL Collm 46.25 305 *i* P **P** **23 35 06.2 +0.5**
CLL pmax pmax
comp=Z,8.0nm,0.7s
CLL Collm 46.25 305 P **P** **23 35 05.5 -0.2**
CLL IAmb IAmb 23 35 07.1
comp=Z,7.9nm,0.7s
GERES GERESS Array B 46.71 302 P **P** **23 35 09.8 +0.3**
comp=Z,0.7nm,0.5s,baz=61,slow=8.2,SNR=7.7
WTTA Wattenberg 48.60 300 *e*P **P** **23 35 25.1 +0.9**
comp=Z,8.8nm,0.5s
WATA Walderalm 48.61 301 *e*P **P** **23 35 25.2 +0.9**
comp=Z,7.1nm,1.0s
SQTA Sankt Quirin 48.89 301 *e*P **P** **23 35 27.1 +0.8**
comp=Z,10nm,0.5s
MOTA Moosalm 48.90 301 *e*P **P** **23 35 26.7 +0.2**
comp=Z,8.8nm,0.9s
FETA Feichten 49.27 300 *e*P **P** **23 35 25.8 -3.6**
comp=Z,4.0nm,0.8s
DAVA Damuels 49.68 301 *e*P P 23 35 28.1 -4.4
comp=Z,8.4nm,1.2s
IMAR Indian Mountai 61.79 23 P **P** **23 36 58.9 0.0**
COLD Coldfoot 61.82 21 P **P** **23 36 59.7 +0.6**
COLD IAmb IAmb 23 37 00.5
comp=Z,4.8nm,0.8s
PPLA Purkeypile 64.54 25 P **P** **23 37 17.8 +0.4**
ILAR Eielson Array 64.59 21 P **P** **23 37 17.2 -0.3**
comp=Z,1.6nm,0.7s,baz=315,slow=4.9,SNR=16
ILAR Eielson Array 64.59 21 P **P** **23 37 17.1 -0.4**
DHY Denali Highway 65.80 23 P **P** **23 37 25.1 -0.4**
DHY IAmb IAmb 23 37 25.8
comp=Z,4.2nm,0.7s
SCM Sheep Creek Mo 66.80 24 P **P** **23 37 31.8 -0.1**
SCM pmax pmax
comp=Z,14nm,0.6s
SCM Sheep Creek Mo 66.80 24 P **P** **23 37 31.8 -0.1**
KNK Knik Glacier 66.81 24 P **P** **23 37 32.1 +0.2**
KNK IAmb IAmb 23 37 32.8
comp=Z,7.6nm,0.8s
M24K Tolsona, Glenn 66.91 23 P **P** **23 37 33.2 +0.6**
BCAR Beaver Creek A 67.29 20 P **P** **23 37 35.5 +0.5**
YKA Yellowknife Ar 72.79 9 P **P** **23 38 08.3 -0.3**
comp=Z,1.5nm,0.6s,baz=182,slow=27,SNR=3.0
TOA0 Torodi Ar. Sit 75.05 274 P **P** **23 38 21.7 -0.8**
TOA0 IAmb IAmb 23 38 29.9
comp=Z,7.6nm,1.4s
TORD Torodi Ar. Bea 75.05 274 P **P** **23 38 21.9 -0.7**
comp=Z,2.8nm,0.6s,baz=44,slow=5.1,SNR=45
TORD Torodi Ar. Bea 75.05 274 P **P** **23 38 21.7 -0.9**
KOWA Kowa 78.23 279 P **P** **23 38 40.0 -0.6**
KOWA IAmb IAmb 23 38 41.0
comp=Z,5.8nm,0.7s
WRA Warramunga Arr 78.93 132 P **P** **23 38 42.7 -1.5**
comp=Z,0.8nm,0.5s,baz=337,slow=5.8,SNR=2.9
DBIC Dimbokro 84.16 274 P **P** **23 39 11.2 -0.9**
DBIC pmax pmax
comp=Z,11nm,1.3s
DBIC Dimbokro 84.16 274 P **P** **23 39 11.2 -0.9**

*IDC **05** 23:28:22.2±0.5, 5˚.15S×153˚.79E, h0km, mb4.9/25, mb1 5.0/25, mb1mx4.8/37, mbtmp4.9/25, MS3.8/17, Ms1 3.8/17, ms1mx3.7/25, Error ellipse: s-maj=19.6km s-min=11.4km az=83.0*
*MOS **05** 23:28:28.8±0.9, 5˚.14S×153˚.65E, h56km, mb5.2/18, Error ellipse: s-maj=8.8km s-min=6.1km az=112.9*
*GCMT **05** 23:28:30.5±0.4, 5˚.46S±0˚.03×153˚.56E±0˚.03, h67km±3km, MW5.1/51, Moment Tensor Solution. s50,c58; s51,c64; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.75±.24; Mθθ-2.90±.21; Mϕϕ-1.85±. 19; Mrθ-0.91±.28; Mθϕ2.31±.16; Mϕr0.37±.23; Best double couple: Mo4.84800×10¹⁶ NP1:ϕs132.00000°, δ39.00000°, λ95.00000°. NP2: ϕs305.00000°, δ51.00000°, λ86.00000°. Principal axes: T 4.8590, Plg84.0000°, Azm188.0000°; N -0.0220, Plg3.0000°, Azm308.0000°; P -4.8370, Plg6.0000°, Azm38.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **05** 23:28:31.1±0.0, 4˚.87S×153˚.87E, h74km, mB5.2/40, mb5.1/66, Ms4.9/8, Ms7 4.7/6*
*NEIC **05** 23:28:32.5±1.3, 5˚.19S±0˚.07×153˚.63E±0˚.07, h78km±5km, mb5.1/102, Error ellipse: s-maj=11.5km s-min=9.3km az=220.0*
*DJA **05** 23:28:32.8±0.5, 5˚S±3˚×15˚4E±˚, h72km±5km, M5.1/40, mb5.1/40, mB5.6/12, MLv5.2/3, Mw(mB)5.1/12*

ISC 05 23:28:31.5±0.8, 5˚.20S±0˚.04×153˚.70E±0˚.05, h68km±7km, n337, σ1§15/336, mb5.1/125, 19C-4D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.83**	**303**	Pn		**Pn**	**23 29 00.4**		**-0.4**
RABL				Sn		**Sn**	**23 29 26.1**		**+2.9**
KRVT	**Keravat (AS076**	**1.89**	**298**	Pn		**Pn**	**23 29 00.3**		**-1.4**
	101nm,0.3s,baz=329,slow=1.2,SNR=23								
KRVT				Sn		**Sn**	**23 29 26.6**		**+2.0**
	483nm,0.3s,baz=24,slow=16,SNR=4.9								
KRVT				LR		LR	23 29 54.9		
	comp=Z,4µm,20.5s,baz=101,slow=48								
HNR	**Honiara**	**7.49**	**125**	P		**Pn**	**23 30 20.6**		**+2.5**
HNR	**Honiara**	**7.49**	**125**	Pn		**Pn**	**23 30 20.6**		**+2.5**
PMG	**Port Moresby**	**7.72**	**237**	Pn		**Pn**	**23 30 20.0**		**-1.2**
	8.6nm,0.3s,baz=47,slow=5.4,SNR=18								
PMG				Sn		**Sn**	**23 31 47.8**		**+0.7**
	8.3nm,0.3s,baz=355,slow=23,SNR=1.6								
PMG				LR		LR	23 33 27.5		
	comp=Z,809nm,21.5s,baz=16,slow=39								
PATS	**Pohnpei**	**12.81**	**21**	Pn		**Pn**	**23 31 28.7**		**-2.2**
CTA	**Charters Tower**	**16.48**	**205**	Pn		**P**	**23 32 18.9**		**-1.1**
	0.3nm,0.3s,baz=32,slow=13,SNR=11								
CTAO	**Charters Tower**	**16.48**	**205**	P		**Pn**	**23 32 18.4**		**0.0**
CTAO				pmax		pmax			
	comp=Z,51nm,1.2s								
CTAO	**Charters Tower**	**16.48**	**205**	Pn		**Pn**	**23 32 18.4**		**0.0**
KWAJ	**Kwajalein Atol**	**19.64**	**45**	P		**Pn**	**23 32 56.7**		**-0.2**
KWAJ				pmax		pmax			
	comp=Z,423nm,0.7s								
KWAJ	**Kwajalein Atol**	**19.64**	**45**	P		**Pn**	**23 32 56.6**		**-0.2**
EIDS	**Eidsvold**	**20.21**	**187**	P		**P**	**23 33 01.4**		**+0.5**
TARA	**Tarawa**	**20.28**	**72**	P		Pn	23 33 03.2		-1.1
TARA				IAmb		IAmb	23 33 07.7		
	comp=Z,180nm,1.1s								
DZM	**Mont Dzumac**	**20.82**	**145**	P		**P**	**23 33 07.9**		**+0.2**
	comp=Z,64nm,0.7s,baz=302,slow=6.9,SNR=75								
FAKI	**Fak Fak**	**21.52**	**275**	P		**P**	**23 33 13.8**		**-1.3**
SIJI	**Sorong**	**22.81**	**280**	P		**P**	**23 33 29.3**		**+0.4**
	comp=Z,25nm,0.7s,baz=66,slow=9.2,SNR=13								
MTN	**Manton Dam**	**23.53**	**250**	P		**P**	**23 33 36.4**		**+0.6**
WR0	**Warramunga Arr**	**23.72**	**230**	P		**P**	**23 33 37.4**		**-0.2**
WB0	**Warramunga Arr**	**23.72**	**231**	P		**P**	**23 33 37.4**		**-0.2**
WB2	**Warramunga Arr**	**23.86**	**230**	P		**P**	**23 33 38.3**		**-0.4**
WRA	**Warramunga Arr**	**23.87**	**230**	P		**P**	**23 33 38.8**		**0.0**
	comp=Z,6.2nm,0.6s,baz=53,slow=9.8,SNR=87								
WRA				PcP		**PcP**	**23 37 20.6**		**+0.2**
	comp=Z,9.5nm,0.7s,baz=51,slow=2.2,SNR=12								
WRA				ScP		**ScP**	**23 41 00.7**		**+7.7**
	comp=Z,2.2nm,1.0s,baz=56,slow=3.1,SNR=4.8								
WRA				LR		LR	23 42 50.8		
	comp=Z,375nm,21.5s,baz=50,slow=36								
ARMA	**Armidale**	**25.16**	**184**	P		**P**	**23 33 51.7**		**+1.1**
ARMA				IAmb		IAmb	23 33 53.1		
	comp=Z,48nm,0.8s								
AS31	**Alice Springs**	**26.47**	**224**	P		**P**	**23 34 02.1**		**-0.4**
ASAR	**Alice Springs**	**26.47**	**224**	P		**P**	**23 34 02.5**		**0.0**
	comp=Z,4.0nm,0.7s,baz=61,slow=8.6,SNR=41								
ASAR				PcP		**PcP**	**23 37 26.8**		**+0.6**
	comp=Z,8.9nm,0.7s,baz=59,slow=2.6,SNR=17								
ASAR				ScP		**ScP**	**23 41 08.2**		**+7.9**
	comp=Z,1.2nm,0.8s,baz=63,slow=3.1,SNR=6.7								
ASAR				LR		LR	23 44 09.7		
	comp=Z,452nm,22.0s,baz=83,slow=36								
ASAR	**Alice Springs**	**26.47**	**224**	P		**P**	**23 34 01.7**		**-0.8**
ASAR						**PcP**	**23 37 26.4**		**+0.2**
KNRA	**Kununurra**	**26.61**	**245**	P		**P**	**23 34 04.6**		**+0.9**
KNRA				IAmb		IAmb	23 34 22.3		
	comp=Z,47nm,0.8s								
H11S3	**WAKE ISLAND Hy**	**26.80**	**28**	T		T	00 02 24.0		
	baz=208,slow=76,SNR=8.7								
H11S2	**WAKE ISLAND Hy**	**26.81**	**28**	T		T	00 02 25.5		
	baz=208,slow=76,SNR=13								
H11S1	**WAKE ISLAND Hy**	**26.82**	**28**	T		T	00 02 31.4		
	baz=208,slow=76,SNR=12								
H11N1	**WAKE ISLAND Hy**	**27.95**	**27**	T		T	00 03 53.4		
H11N3	**WAKE ISLAND Hy**	**27.97**	**27**	T		T	00 03 58.4		
	baz=250,slow=74,SNR=6.6								
H11N2	**WAKE ISLAND Hy**	**27.97**	**27**	T		T	00 03 57.4		
	baz=24,slow=74,SNR=2.8								
STKA	**Stephens Creek**	**28.86**	**202**	P		**P**	**23 34 22.8**		**-0.9**
	comp=Z,4.9nm,0.7s,baz=28,slow=13,SNR=12								
STKA				PcP		**PcP**	**23 37 32.1**		**+0.3**
	comp=Z,1.9nm,0.7s,baz=233,slow=3.7,SNR=3.4								
STKA				LR		LR	23 45 51.9		
	comp=Z,302nm,20.4s,baz=28,slow=36								
STKA	**Stephens Creek**	**28.86**	**202**	P		**P**	**23 34 23.0**		**-0.7**
STKA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
STKA	**Stephens Creek**	**28.86**	**202**	P		**P**	**23 34 23.0**		**-0.7**
SOEI	**Soe**	**29.52**	**259**	P		P	23 34 40.7		+11
SOEI	**Soe**	**29.52**	**259**	P		**P**	**23 34 29.3**		**-0.6**
SOEI				IAmb		IAmb	23 35 24.3		
	comp=Z,36nm,1.0s								
FITZ	**Fitzroy Crossi**	**30.26**	**243**	P		**P**	**23 34 35.5**		**-0.7**
FITZ				IAmb		IAmb	23 35 01.8		
	comp=Z,40nm,0.8s								
LUWI	**Luwuk**	**31.15**	**277**			**P**	**23 34 42.3**		**-1.8**
LUWI				IAmb		IAmb	23 35 38.2		
	comp=Z,21nm,0.8s								
MMRI	**Maumere**	**31.41**	**262**	P		**P**	**23 34 48.5**		**+2.0**
	comp=Z,58nm,1.2s								
MMRI	**Maumere**	**31.41**	**262**	P		**P**	**23 34 45.3**		**-1.2**
MMRI				IAmb		IAmb	23 34 47.2		
	comp=Z,79nm,1.3s								
EDFI	**Ende, Flores**	**31.96**	**262**	P		**P**	**23 34 50.1**		**-1.3**
	comp=Z,24nm,0.8s								
BBOO	**Buckleboo**	**32.02**	**209**	P		**P**	**23 34 50.9**		**-0.7**
BBOO				IAmb		IAmb	23 35 26.8		
	comp=Z,26nm,1.3s								
BSSI	**Bau Bau, Buton**	**33.06**	**267**	P		**P**	**23 35 02.2**		**+1.3**
	comp=Z,595nmcomp=Z,19nm,1.4s								
TOO	**Toolangi**	**33.08**	**192**	P		**P**	**23 35 01.1**		**+0.3**
TOO				pmax		pmax			
	comp=Z,107nm,2.0s								
TOO	**Toolangi**	**33.08**	**192**	P		**P**	**23 35 01.1**		**+0.3**
TOO				IAmb		IAmb	23 35 03.7		
	comp=Z,107nm,1.9s								
BASI	**Baing, Sumba**	**33.18**	**259**	P		**P**	**23 35 02.4**		**+0.4**
	comp=Z,64nm,1.4s								
KAPI	**Kappang**	**33.81**	**269**	P		**P**	**23 35 06.8**		**-0.7**
KAPI				pmax		pmax			
	comp=Z,11nm,0.8s								
KAPI	**Kappang**	**33.81**	**269**	P		**P**	**23 35 06.8**		**-0.7**
SPSI	**Sidrap Palu**	**33.84**	**271**	P		**P**	**23 35 07.4**		**-0.3**
	comp=Z,21nm,0.8s								
MPSI	**Mapaga**	**34.20**	**278**	P		**P**	**23 35 09.4**		**-1.5**
	comp=Z,13nm,0.5s								
WBSI	**Waikabubak, Su**	**34.29**	**261**	P		**P**	**23 35 11.0**		**-0.7**
	comp=Z,62nm,0.7s								
FORT	**Forrest**	**35.05**	**220**	P		**P**	**23 35 17.4**		**-0.6**
OUZ	**Omahuta**	**35.07**	**151**	P		**P**	**23 35 18.6**		**+0.6**
PLAI	**Plampang**	**35.83**	**262**	P		**P**	**23 35 22.8**		**-2.0**
	comp=Z,30nm,0.7s								
WCZ	**Waipu Caves**	**36.01**	**151**	P		**P**	**23 35 25.5**		**-0.6**
PSA00	**Pilbara Seismi**	**36.60**	**240**	P		**P**	**23 35 30.6**		**-0.8**
PSA00				IAmb		IAmb	23 35 51.7		
	comp=Z,60nm,1.8s								
MYLDM	**Lahad Datu**	**36.63**	**286**	P		**P**	**23 35 31.9**		**+0.2**
MYLDM				IAmb		IAmb	23 35 34.1		
	comp=Z,38nm,1.3s								
TWSI	**Taliwang, Sumb**	**36.70**	**262**	P		**P**	**23 35 32.5**		**+0.2**
	comp=Z,20nm,1.0s								
TAU	**Tasmania Unive**	**37.98**	**188**	P		**P**	**23 35 43.1**		**+0.5**
TAU				pmax		pmax			
	comp=Z,157nm,1.8s								
TAU	**Tasmania Unive**	**37.98**	**188**	P		**P**	**23 35 43.1**		**+0.5**
TOZ	**Tahuroa Road**	**38.00**	**151**	P		**P**	**23 35 44.1**		**+1.2**
HIZ	**Hauiti**	**38.33**	**153**	P		**P**	**23 35 47.4**		**+1.8**
HIZ	**Hauiti**	**38.33**	**153**	P		**P**	**23 35 46.9**		**+1.2**
BBKI	**Banjar Baru**	**38.78**	**271**	P		**P**	**23 35 49.1**		**-0.8**
URZ	**Urewera**	**39.19**	**150**	P		**P**	**23 35 53.1**		**+0.2**
	comp=Z,17nm,0.7s,baz=329,slow=4.3,SNR=6.7								
URZ	**Urewera**	**39.19**	**150**	P		**P**	**23 35 53.7**		**+0.8**
URZ	**Urewera**	**39.19**	**150**	P		**P**	**23 35 53.7**		**+0.8**
URZ				IAmb		IAmb	23 35 53.9		
	comp=Z,28nm,0.9s								
OTVZ	**Oturere**	**39.22**	**153**	P		**P**	**23 35 55.1**		**+1.7**
FWVZ	**Far West T-bar**	**39.24**	**153**	P		**P**	**23 35 55.1**		**+1.5**
PKGZ	**Pakihiroa**	**39.39**	**149**	P		**P**	**23 35 55.6**		**+0.9**
MWZ	**Matawai**	**39.46**	**150**	P		**P**	**23 35 56.3**		**+1.1**
MTHZ	**Maungataniwha**	**39.52**	**151**	P		**P**	**23 35 56.5**		**+0.7**
BKZ	**Black Stump Fm**	**39.61**	**152**	P		**P**	**23 35 56.8**		**+0.3**
BKZ				IAmb		IAmb	23 35 57.9		
	comp=Z,30nm,1.0s								
BHHZ	**Black Hill Sta**	**39.67**	**153**	P		**P**	**23 35 57.2**		**+0.3**
CNGZ	**Carnagh Statio**	**39.91**	**150**	P		**P**	**23 35 59.2**		**+0.3**
KRHZ	**Kereru**	**39.93**	**152**	P		**P**	**23 35 59.4**		**+0.3**
THZ	**Tophouse**	**40.24**	**158**	P		**P**	**23 36 01.5**		**-0.1**
TUWZ	**Tuamarina**	**40.36**	**156**	P		**P**	**23 36 02.7**		**+0.1**
MSWZ	**Moikau Station**	**40.88**	**155**	P		**P**	**23 36 06.5

MLZ IAmb IAmb 23 36 18.0
comp=Z,25nm,0.9s
WHZ Wether Hill Ro 42.38 165 P P 23 36 18.7 -0.4
YULB Yu-li 42.52 313 P P 23 36 19.9 -0.6
YULB IAmb IAmb 23 36 38.3
comp=Z,19nm,0.8s
NACB Ninganchiao 42.79 314 P P 23 36 23.1 +0.3
NACB IAmb IAmb 23 36 27.4
comp=Z,45nm,1.3s
MORW Morawa 42.80 232 P P 23 36 22.0 -0.8
SSLB Suanglung 43.01 313 P P 23 36 24.5 -0.1
SSLB IAmb IAmb 23 36 32.5
comp=Z,29nm,1.2s
JMN Monobe 43.02 336 P P 23 36 25.3 +0.8
JMN IAmb IAmb 23 37 28.6
comp=Z,81nm,1.3s
YHNB Yeheng 43.26 315 P P 23 36 26.5 0.0
YHNB IAmb IAmb 23 36 48.3
comp=Z,46nm,1.1s
JGF Kuroka 43.40 341 P P 23 36 27.8 +0.4
JNU Nakatsue 43.83 332 P P 23 36 30.6 -0.5
comp=Z,22nm,0.9s,baz=117,slow=3.7,SNR=9.1
JNU Nakatsue 43.83 332 P P 23 36 30.5 -0.5
JNU IAmb IAmb 23 38 05.4
comp=Z,101nm,1.7s
MJAR Matsushiro Arr 43.98 342 P P 23 36 31.4 -0.8
comp=Z,80nm,0.8s,baz=173,slow=8.7,SNR=6.2
MAJO Matsushiro 43.99 342 *i* P **P 23 36 32.6 +0.4**
MAJO pmax pmax
comp=Z,5.0nm,0.8s
MAT Matsushiro 43.99 342 P P 23 36 32.4 +0.2
KPJI Karang Pucung 44.54 265 P P 23 36 38.4 +1.5
comp=Z,48nm,1.0s
CMJI Cimerak 45.02 264 P P 23 36 39.5 -1.3
comp=Z,75nm,1.1s
JSD Sado 45.35 343 P P 23 36 42.8 -0.2
JSD IAmb IAmb 23 36 47.5
comp=Z,14nm,0.5s
CISI Cisompet, Garu 45.65 265 P P 23 36 45.2 -0.6
comp=Z,4µmcomp=Z,129nm,0.9s
CISI Cisompet, Garu 45.65 265 P P 23 36 44.1 -1.7
JTU Tsushima 45.68 332 P P 23 36 45.8 +0.2
JTU IAmb IAmb 23 37 10.8
comp=Z,67nm,1.5s
CNJI Cibinong 46.33 265 P P 23 36 51.1 0.0
comp=Z,154nm,0.9s
JTM Tenmabayashi 47.21 347 P P 23 36 58.3 +0.8
JTM IAmb IAmb 23 38 12.2
comp=Z,37nm,1.3s
DLV T Lat 48.08 291 P P 23 37 05.1 +0.2
TJN Taejon 48.15 331 *ce* **P P 23 37 04.7 -0.2**
KSRS Korea Array 48.76 333 P P 23 37 09.6 +0.1
comp=Z,8.1nm,0.9s,baz=149,slow=9.4,SNR=21
KSRS LR LR 23 55 59.2
comp=Z,26nm,20.6s,baz=141,slow=34
KSAR Wonju Array Be 48.77 333 P P 23 37 09.1 -0.5
KSAR Wonju Array Be 48.77 333 P P 23 37 09.1 -0.5
KS19 Wonju Array Si 48.83 333 P P 23 37 09.5 -0.6
KS19 IAmb IAmb 23 37 10.3
comp=Z,25nm,1.2s
MDSI Maura Dua 49.34 269 P P 23 37 13.5 -0.9
comp=Z,24nm,1.1s
INCN Inchon 49.39 332 P P 23 37 14.5 +0.1
INCN pmax pmax
comp=Z,46nm,1.0s
INCN Inchon 49.39 332 P P 23 37 14.5 +0.1
NJ2 Nanjing 49.72 321 *e* **P P 23 37 18.0 +1.0**
NJ2 pmax pmax
comp=Z,12nm,0.5s
ASAJ Asahikawa 50.10 350 LR LR 23 56 15.8
comp=Z,57nm,19.2s,baz=155,slow=33
WHN Wuhan 51.77 316 ⇓ **P P 23 37 33.7 +1.3**
WHN pmax pmax
comp=Z,78nm,1.2s
SDSI Sungai Dareh 52.35 273 P P 23 37 38.7 +1.6
comp=Z,30nm,0.8s
USA0B Ussuriysk Arra 52.92 341 P P 23 37 40.8 +0.1
USA0B pmax pmax
comp=Z,8.0nm,0.9s
USA0B Ussuriysk Arra 52.92 341 P P 23 37 40.8 +0.1
USRK Ussuriysk Ar. 52.92 341 P P 23 37 40.2 -0.4
comp=Z,3.8nm,0.8s,baz=184,slow=9.3,SNR=9.8
USRK Ussuriysk Ar. 52.92 341 P P 23 37 40.7 0.0
USRK Ussuriysk Ar. 52.92 341 P P 23 37 40.7 0.0
KULM Kulim 53.99 280 P P 23 37 48.5 -0.6
KULM IAmb IAmb 23 37 50.0
comp=Z,14nm,0.8s
CN2 Changchun 55.03 335 *e* **P P 23 37 55.8 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
ENH Enshi 55.08 313 P P 23 37 56.7 0.0
GYA Guiyang 55.35 307 ⇓ **P P 23 38 00.2 +1.3**
GYA pP sP 23 38 20.6 -1.9
GYA pmax pmax
comp=Z,12nm,0.7s
BJT Baijiatuau 56.71 326 P P 23 38 07.8 -0.4
BJT pmax pmax
comp=Z,9.0nm,0.7s
BJT Baijiatuau 56.71 326 P P 23 38 07.8 -0.4
BJT IAmb IAmb 23 38 09.5
comp=Z,8.6nm,0.7s
BJI Beijing 56.72 326 P P 23 38 07.8 -0.4
BJI pmax pmax
comp=Z,12nm,0.7s
PPT Papeete 56.75 108 LR LR 00 00 11.2
comp=Z,30nm,18.2s,baz=285,slow=34
PPT2 Papeete2 56.75 108 *e* **S S 23 45 56.3 -0.9**
PPT2 *e* LR LR 23 54 52.3
comp=Z,72nm,25.5s
comp=Z,139nm,30.8s
KLR Kul'dur 57.48 343 LR LR 00 01 12.0
comp=Z,50nm,19.6s,baz=276,slow=34
KLR Kul'dur 57.48 343 *ce* **P P 23 38 12.9 -0.6**
KLR pmax pmax
comp=Z,6.0nm,0.9s
XAN Xi'an 57.53 316 P P 23 38 14.3 +0.1
XAN pP pP 23 38 30.5 0.0
XAN S S **23 46 06.2 -0.7**
XAN pmax pmax
comp=Z,55nm,0.8s
XAN pmax pmax
comp=Z,180nm,6.0s
XAN Xi'an 57.53 316 P P 23 38 13.9 -0.3
XAN pmax pmax
comp=Z,34nm,0.7s
XAN Xi'an 57.53 316 P P 23 38 13.9 -0.3
TBI Tubuai 57.58 114 *e* **LR LR** 23 55 20.3
comp=Z,267nm,32.2s
KMI Kunming 57.95 304 P P 23 38 18.0 +0.5
KMI pmax pmax
comp=Z,25nm,1.3s
KMI Kunming 57.95 304 P P 23 38 17.9 +0.5
KMI IAmb IAmb 23 38 36.6
comp=Z,25nm,1.3s
PEA0B Petropavlovsk- 58.19 3 P P 23 38 18.5 +0.2
PEA0B pmax pmax
comp=Z,177nm,1.5s
PEA0B Petropavlovsk- 58.19 3 P P 23 38 18.5 +0.2
PETK Petropavlovsk- 58.19 3 P P 23 38 18.5 +0.2
comp=Z,11nm,0.7s,baz=179,slow=8.5,SNR=7.4
PETK LR LR 23 59 16.4
comp=Z,81nm,21.5s,baz=174,slow=32
CM31 Chiang Mai Arr 58.86 295 P P 23 38 24.6 +0.9
CMAR Chiang Mai Arr 58.86 295 P P 23 38 24.7 +1.0
comp=Z,19nm,0.8s,baz=118,slow=5.2,SNR=87
CMAR LR LR 00 03 45.6
comp=Z,47nm,18.7s,baz=170,slow=36
CMAR Chiang Mai Arr 58.86 295 P P 23 38 24.4 +0.7
CHTO Chiang Mai 58.97 295 P P 23 38 24.9 +0.5
CHTO pmax pmax
comp=Z,36nm,1.3s
CHTO Chiang Mai 58.97 295 P P 23 38 24.9 +0.5
CHTO IAmb IAmb 23 38 26.6
comp=Z,36nm,1.3s
CD2 Chengdu 59.68 310 *e* **P P 23 38 29.0 -0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
HHC Hu-ho-hao-te 59.90 324 *e* **P P 23 38 31.5 +1.0**
HHC pmax pmax
comp=Z,19nm,1.1s
HHC pmax pmax
comp=Z,150nm,5.5s
HHC LR LR
comp=Z,190nm,17.0s
HHC LR LR
comp=Z,240nm,17.5s
HHC LR LR
comp=Z,200nm,17.3s
LZH Lanzhou 62.14 316 ⇑ **P P 23 38 47.1 +1.2**
LZH pP sP 23 39 08.3 -1.2
LZH sP PcP 23 39 16.5 -9.1
LZH PP **PP 23 41 07.6 +4.1**
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,95nm,5.8s
LZH LR LR
comp=Z,270nm,15.4s
LZH LR LR
comp=Z,280nm,15.2s
LZH LR LR
comp=Z,510nm,18.1s
ADK Adak 62.23 20 P P 23 38 45.7 -0.2
ADK pmax pmax
comp=Z,108nm,1.5s
ADK Adak 62.23 20 P P 23 38 45.7 -0.2
MA2 Magadan 64.62 358 P P 23 39 03.0 +1.4
comp=Z,36nm,0.7s,baz=175,slow=4.3,SNR=9.9
MA2 Magadan 64.62 358 *i* P **P 23 39 02.8 +1.2**
MA2 pmax pmax
comp=Z,18nm,0.8s
MA2 Magadan 64.62 358 P P 23 39 03.4 +1.8
GTA Gaotai 66.56 317 P P 23 39 15.9 +1.2
GTA pP pP 23 39 30.2 -1.2
GTA sP sP 23 39 38.2 -0.3
GTA pmax pmax
comp=Z,33nm,1.0s
ULN Ulaanbaatar 66.81 328 *ce* **P P 23 39 16.2 +0.1**
ULN pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 66.81 328 P P 23 39 16.5 +0.4
SONM Songino Array 67.14 327 P P 23 39 18.7 +0.5
comp=Z,5.2nm,0.5s,baz=143,slow=5.7,SNR=21
SONM LR LR 00 07 14.1
comp=Z,44nm,20.9s,baz=127,slow=35
SONM Songino Array 67.14 327 P P 23 39 18.5 +0.3
SONM pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 67.14 327 P P 23 39 18.5 +0.3
SHL Shillong 67.28 300 P P 23 39 19.4 -0.2
SHL pmax pmax
comp=Z,20nm,0.7s
SHL Shillong 67.28 300 P P 23 39 19.4 -0.2
SHL IAmb IAmb 23 39 20.8
comp=Z,20nm,0.7s
CASY Casey 67.90 197 P P 23 39 22.3 -0.2
CASY IAmb IAmb 23 40 46.6
comp=Z,46nm,1.6s
SEY Seymchan 67.95 359 *i* **P P 23 39 24.8 +2.0**
LSA Lhasa 69.20 304 P P 23 39 31.9 0.0
LSA pmax pmax
comp=Z,8.0nm,0.7s
LSA Lhasa 69.20 304 P P 23 39 31.9 0.0
YAK Yakutsk 69.55 348 *ce* **P P 23 39 33.0 +0.3**
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK Yakutsk 69.55 348 P P 23 39 33.2 +0.5
YAK IAmb IAmb 23 39 37.0
comp=Z,20nm,0.9s
ZAK Zakamensk 70.30 328 *e* **P P 23 39 37.0 -0.8**
ZAK pmax pmax
comp=Z,18nm,1.0s
TLY Talaya 70.88 330 P P 23 39 41.8 +0.6
comp=Z,4.1nm,0.8s,baz=112,slow=7.6,SNR=3.7
TLY Talaya 70.88 330 *e* **P P 23 39 40.7 -0.4**
TLY pmax pmax
comp=Z,25nm,1.2s
TLY Talaya 70.88 330 P P 23 39 41.3 +0.2
TAPN Taplejung 71.38 301 *e* **P P 23 39 45.6 +0.5**
comp=Z,39nm,0.9s
ODAN Odare 71.52 300 *e* **P P 23 39 46.5 +0.7**
comp=Z,93nm,0.8s
RAMN Ramite 72.22 300 *e* **P P 23 39 50.7 +0.6**
VNDA Vanda 72.40 178 P P 23 39 50.5 +0.6
comp=Z,16nm,0.8s,baz=335,slow=6.6,SNR=109
VNDA Vanda 72.40 178 P P 23 39 50.4 +0.6
VNDA pmax pmax
comp=Z,20nm,0.9s
VNDA Vanda 72.40 178 P P 23 39 50.4 +0.5
VNDA IAmb IAmb 23 39 51.5
comp=Z,20nm,0.8s
CHGN Chignik 72.69 26 P P 23 39 52.7 +0.9
CHGN IAmb IAmb 23 42 19.1
comp=Z,53nm,1.6s
GUN Gumba 73.09 301 *e* **P P 23 39 55.8 +0.4**
comp=Z,80nm,0.7s
PKI Pulchoki 73.41 301 *e* **P P 23 39 57.1 -0.1**
comp=Z,33nm,0.8s
PKIN Phulchoki 73.42 301 *e* **P P 23 39 57.3 +0.1**
KKN Kakani 73.58 301 *e* **P P 23 39 58.5 +0.5**
comp=Z,38nm,0.6s
BILL Bilibino 73.61 5 *ce* **P P 23 39 56.3 -0.8**
BILL pmax pmax
comp=Z,13nm,0.7s
BILL Bilibino 73.61 5 P P 23 39 57.8 +0.7
BILL IAmb IAmb 23 40 00.7
comp=Z,13nm,0.7s
PALK Pallekele 73.88 279 P P 23 40 00.0 +0.1
PALK pmax pmax
comp=Z,165nm,2.0s
PALK Pallekele 73.88 279 P P 23 39 60.0 +0.1
GKN Gorkha 74.18 301 *e* **P P 23 40 01.7 +0.2**
comp=Z,54nm,0.8s
KOLN Koldanda 75.01 300 *e* **P P 23 40 06.5 +0.1**
comp=Z,42nm,0.7s
DANN Dangsing 75.02 301 *e* **P P 23 40 06.5 0.0**
comp=Z,28nm,0.6s
OHAK Old Harbor 75.50 27 P P 23 40 08.2 0.0
PYUN Piuthan 75.61 301 *e* **P P 23 40 09.8 0.0**
comp=Z,82nm,0.9s
KDAK Kodiak Island 76.13 26 P P 23 40 12.4 +0.6
KDAK pmax pmax
comp=Z,129nm,2.0s
KDAK Kodiak Island 76.13 26 P P 23 40 12.4 +0.6
WMQ Urumqi 76.64 317 *e* **P P 23 40 16.0 +0.8**
WMQ PcP **PcP 23 40 27.8 +1.4**
WMQ sP sP 23 40 47.0 +7.5
WMQ pmax pmax
comp=Z,23nm,1.5s
WMQ pmax pmax
comp=Z,200nm,5.1s
HYB Hyderabad 77.47 289 *i* **P P 23 40 20.0 -0.3**
CNPM China Poot 77.69 25 P P 23 40 20.7 +0.1
CNPM IAmb IAmb 23 40 43.3
comp=Z,41nm,0.9s
DGZ Jazzator, Alta 78.94 323 *c i* **P P 23 40 27.8 -0.1**
DGZ pmax pmax
comp=Z,25nm,0.9s
ZSN Zaisan 79.75 320 *i* **P P 23 40 32.7 +0.5**
comp=Z,7.8nm,0.8s,baz=320
ZSN Zaisan 79.75 320 *i* **P P 23 40 32.7 +0.5**
ZSN pmax pmax
comp=Z,8.0nm,0.8s
IMAR Indian Mountai 80.46 19 P P 23 40 35.1 -0.5
RND Reindeer 80.75 23 P P 23 40 36.4 -0.9
RND pmax pmax
comp=Z,16nm,1.0s
RND Reindeer 80.75 23 P P 23 40 36.4 -0.9
RND IAmb IAmb 23 41 14.3
comp=Z,16nm,1.0s
MK31 Makanchi Array 81.22 319 P P 23 40 40.4 +0.3
MK31 pmax pmax
comp=Z,15nm,1.0s
MK31 Makanchi Array 81.22 319 P P 23 40 40.4 +0.3
MKAR Makanchi Array 81.22 319 P P 23 40 40.5 +0.4
comp=Z,10nm,0.6s,baz=104,slow=5.9,SNR=74
MKAR LR LR 00 16 22.0
comp=Z,30nm,20.6s,baz=64,slow=35
MKAR Makanchi Array 81.22 319 P P 23 40 40.1 0.0
MAKZ Makanchi 81.43 319 P P 23 40 41.3 +0.1
MAKZ pmax pmax
comp=Z,23nm,0.8s
MAKZ Makanchi 81.43 319 P P 23 40 41.3 +0.1
MAKZ IAmb IAmb 23 40 42.5
comp=Z,23nm,0.8s
COLA College 81.89 22 *i* **P P 23 40 41.7 -1.4**
COLA pmax pmax
comp=Z,7.0nm,0.8s
ZAA0 Zalesovo Array 81.98 326 P P 23 40 43.4 -0.5
ZAA0 IAmb IAmb 23 40 45.0
comp=Z,9.5nm,0.6s
ZALV Zalesovo Beam 81.98 326 P P 23 40 43.0 -0.8
comp=Z,10nm,0.5s,baz=113,slow=5.7,SNR=40
ZALV Zalesovo Beam 81.98 326 P P 23 40 43.3 -0.6
SHLS Shalkode 82.15 315 *e* **P P 23 40 44.3 -0.9**
comp=Z,3.5nm,0.5s,baz=315
SHLS Shalkode 82.15 315 *e* **P P 23 40 44.3 -0.9**
SHLS pmax pmax
comp=Z,4.0nm,0.5s
IL31 82.19 22 P P 23 40 43.0 -1.7
ILAR Eielson Array 82.19 22 P P 23 40 42.8 -2.0
comp=Z,3.2nm,0.8s,baz=253,slow=5.3,SNR=25
ILAR LR LR 00 14 59.2
comp=Z,84nm,19.3s,baz=222,slow=34
ILAR Eielson Array 82.19 22 P P 23 40 42.9 -1.9
ILAR Eielson Array 82.19 22 P P 23 40 42.9 -1.9
DOT Dot Lake 82.74 23 P P 23 40 47.2 -0.4
KPKS Kokpek 82.78 315 *e* **P P 23 40 48.8 +0.3**
baz=315
KPKS Kokpek 82.78 315 *e* **P P 23 40 48.7 +0.3**
SATY Saty 82.88 314 *e* **P P 23 40 49.7 +0.6**
comp=Z,5.7nm,1.5s,baz=314
SATY Saty 82.88 314 *e* **P P 23 40 49.6 +0.6**
SATY pmax pmax
comp=Z,6.0nm,1.5s
TOLK Toolik Lake Re 83.32 18 P P 23 40 50.3 -0.3
TDK Taldyqorghan 83.34 316 *e* **P P 23 40 51.9 +0.6**
comp=Z,22nm,1.2s,baz=316
TDK Taldyqorghan 83.34 316 *e* **P P 23 40 51.8 +0.6**
TDK pmax pmax
comp=Z,22nm,1.2s
KDJ Kajisay 83.54 313 P P 23 40 53.6 +1.1
KDJ pmax pmax
comp=Z,44nm,0.8s
KDJ Kajisay 83.54 313 P P 23 40 53.6 +1.1
MDOK Medeo 83.87 314 *i* **P P 23 40 55.0 +0.9**
baz=314
MDOK Medeo 83.87 314 *i* **P P 23 40 55.0 +0.9**
KSH Kashi 83.88 311 ⇑ *i* **P P 23 40 56.9 +2.7**
KSH pP sP 23 41 15.1 -3.6
KSH PP **PP 23 44 13.7 +5.2**
KSH S **S 23 51 12.4 -0.3**
KSH sS sS 23 51 49.1 +6.7
KSH pmax pmax
comp=Z,72nm,0.8s
KSH pmax pmax
comp=Z,330nm,4.6s
KSH LR LR
comp=Z,110nm,4.4s
KSH LR LR
comp=Z,130nm,4.7s
KSH LR LR
comp=Z,210nm,6.8s
TNSS Tian-Shan 83.91 314 *e* **P P 23 40 55.5 +0.8**
baz=314
TNSS Tian-Shan 83.91 314 *e* **P P 23 40 55.5 +0.8**
AAA Alma-Ata 83.97 314 *e* **P P 23 40 55.5 +1.0**
comp=Z,12nm,0.8s,baz=314
AAA Alma-Ata 83.97 314 *e* **P P 23 40 55.5 +1.0**
AAA pmax pmax
comp=Z,12nm,0.8s
ULHL Ulahol 84.25 313 P P 23 40 57.2 +1.1
SNR=15
BMAR Burnt Mountain 84.31 20 P P 23 40 55.4 -0.3
EGAK Eagle 84.38 23 P P 23 40 55.8 -0.2
HYT Haines Junctio 84.38 27 P P 23 40 57.2 +0.9
HYT IAmb IAmb 23 41 20.0
comp=Z,27nm,1.2s
BOOM Boomskoye usch 84.52 313 P P 23 40 58.4 +1.0
BOOM pmax pmax
comp=Z,36nm,0.7s
BOOM Boomskoye usch 84.52 313 P P 23 40 58.4 +1.0
KUU Kurty 84.53 315 ⇑ *i* **P P 23 40 57.7 +0.3**
comp=Z,53nm,0.8s,baz=315
KUU Kurty 84.53 315 *c i* **P P 23 40 57.6 +0.3**
KUU pmax pmax
comp=Z,53nm,0.8s
KURK Kurchatov 84.64 322 P P 23 40 57.3 -0.3
KURK pmax pmax
comp=Z,32nm,1.0s
KURK Kurchatov 84.64 322 P P 23 40 57.3 -0.3
KURK IAmb IAmb 23 40 58.5
comp=Z,32nm,1.0s
QSPA South Pole Qui 84.76 180 P P 23 40 58.1 -0.1
TKM2 Tokmak 2 84.85 314 P P 23 40 60.0 +0.8
SNR=38
NIL Nilore 84.94 304 P P 23 40 59.5 -0.1
NIL pmax pmax
comp=Z,51nm,0.7s
NIL Nilore 84.94 304 P P 23 40 59.5 -0.1
KBK Karagaybulak 85.27 313 P P 23 41 02.0 +0.8
SNR=21
CHMS Chumysh 85.48 314 P P 23 41 02.7 +0.6
SNR=19
UCH Uchtor 85.50 313 P P 23 41 04.0 +1.3
SNR=10
FRU1 Bishkek 85.53 314 P P 23 41 02.3 -0.1
FRU1 pmax pmax
comp=Z,35nm,1.1s
FRU1 Bishkek 85.53 314 P P 23 41 02.3 -0.1
FRU1 IAmb IAmb 23 41 04.2
comp=Z,35nm,1.1s
MAW Mawson 85.55 203 P P 23 41 02.1 +0.3
comp=Z,23nm,0.7s,baz=94,slow=6.0,SNR=92
MAW Mawson 85.55 203 P P 23 41 01.7 -0.1
MAW pmax pmax
comp=Z,6.0nm,0.8s
MAW Mawson 85.55 203 P P 23 41 01.7 -0.1
AAK Ala-Archa 85.59 313 *ce* **P P 23 41 03.3 +0.5**
AAK pmax pmax
comp=Z,52nm,0.9s
AAK Ala-Archa 85.59 313 P P 23 41 02.9 0.0
AAK IAmb IAmb 23 41 04.6
comp=Z,19nm,0.8s
SGDS Sogindy 85.65 314 ⇑ *i* **P P 23 41 03.0 0.0**
comp=Z,6.9nm,0.7s,baz=314
SGDS Sogindy 85.65 314 *c i* **P P 23 41 03.0 0.0**
SGDS pmax pmax
comp=Z,7.0nm,0.7s
USP Ospenovka 85.71 314 P P 23 41 03.8 +0.5
SNR=23
AML Almayashu 86.08 313 P P 23 41 06.6 +1.1
SNR=32
EKS2 Erkin-Say 86.12 313 P P 23 41 06.3 +0.9
SNR=7.5
BTLS Baital 86.37 316 ⇑ *i* **P P 23 41 06.6 +0.1**
comp=Z,7.6nm,0.8s,baz=316
BTLS Baital 86.37 316 *c i* **P P 23 41 06.5 +0.1**
BTLS pmax pmax
comp=Z,8.0nm,0.8s
NRIK Noril'sk 86.63 341 P P 23 41 06.3 -0.8
comp=Z,4.6nm,0.8s,baz=102,slow=5.0,SNR=9.4
NRIK Noril'sk 86.63 341 *ce* **P P 23 41 05.9 -1.2**
DZA Taraz 87.93 313 *e* **P P 23 41 14.0 0.0**
baz=313
DZA Taraz 87.93 313 *e* **P P 23 41 14.0 0.0**
GAR Garm 88.11 309 P P 23 41 15.2 +0.1
INK Inuvik 88.51 21 LR LR 00 16 32.2
comp=Z,115nm,21.0s,baz=208,slow=33
KBL Kabul 88.53 305 P P 23 41 16.1 -1.2
KBL pmax pmax
comp=Z,7.0nm,0.7s
KBL Kabul 88.53 305 P P 23 41 16.1 -1.2
KBL IAmb IAmb 23 41 17.2
comp=Z,6.6nm,0.7s
KK31 Karatay Array 88.56 313 P P 23 41 16.6 -0.4
KK31 pmax pmax
comp=Z,8.0nm,0.9s
KK31 Karatay Array 88.56 313 P P 23 41 16.6 -0.4
KK31 IAmb IAmb 23 41 17.8
comp=Z,7.9nm,0.8s
KKAR Karatay Array 88.56 313 P P 23 41 16.4 -0.6
KKAR Karatay Array 88.56 313 P P 23 41 16.4 -0.6
IUG Iuzhnay 88.77 312 *e* **P P 23 41 18.3 +0.2**
comp=Z,2.8nm,0.7s,baz=312
IUG Iuzhnay 88.77 312 *e* **P P 23 41 18.3 +0.2**
IUG pmax pmax
comp=Z,3.0nm,0.7s
CHGR Chuyangaron 88.96 309 P P 23 41 19.0 -0.1
BRVK Borovoye 90.17 323 *ce* **P P 23 41 23.6 -0.6**
BRVK pmax pmax
comp=Z,22nm,1.0s
BRVK Borovoye 90.17 323 P P 23 41 23.3 -1.0
BRVK IAmb IAmb 23 41 24.7
comp=Z,16nm,0.8s

NVAR	**Mina Array Bea**	**91.63**	**52**	P		**P**	**23 41 31.8**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=252,slow=5.7,SNR=8.3							
NVAR				LR		LR	00 14 55.4	
	comp=Z,136nm,21.8s,baz=264,slow=30							
NVAR	**Mina Array Bea**	**91.63**	**52**	P		**P**	**23 41 30.9**	**-0.8**
KVN	**Kaiserville**	**91.84**	**51**	P		**P**	**23 41 32.4**	**-0.2**
KVN				pmax		pmax		
	comp=Z,9.0nm,1.5s							
KVN	**Kaiserville**	**91.84**	**51**	P		**P**	**23 41 32.4**	**-0.2**
KVN				IAmb		IAmb	23 41 56.0	
	comp=Z,9.0nm,1.5s							
SYO	**Syowa Base**	**93.59 199**	⇑	*i*P		**P**	**23 41 38.0**	**-1.8**
SYO	**Syowa Base**	**93.59 199**	⇑	*e*PcP		**PcP**	**23 41 41.3**	**+1.1**
SYO	**Syowa Base**	**93.59 199**	‖	*e*pP		pP	23 42 01.8	+4.2
HRA	**Herat**	**94.10 304**		P		**P**	**23 41 41.7**	**-1.5**
HRA				IAmb		IAmb	23 41 43.5	
	comp=Z,9.1nm,1.0s							
YKA	**Yellowknife Ar**	**95.36**	**28**	LR		LR	00 20 21.6	
	comp=Z,66nm,21.0s,baz=0.0,slow=33							
ABKAR	**Akbulak array**	**96.36 319**		P		**P**	**23 41 50.6**	**-2.3**
ABKAR	**Akbulak array**	**96.36 319**		P		**P**	**23 41 50.8**	**-2.1**
WSAR	**Wadi Sarin**	**96.68 293**		P		**P**	**23 41 53.3**	**-1.6**
	comp=Z,4.6nm,0.7s,baz=240,slow=4.0,SNR=4.1							
BELA	**Belgrano 2**	**96.91 178**		P		**P**	**23 41 53.7**	**-1.1**
ARU	**Arti**	**97.15 326**		P		**P**	**23 41 54.3**	**-1.9**
ARU							23 45 53.0	
ARU				S		**SKSac**	**23 52 24.2**	**-3.1**
GEYT	**Alibeck**	**97.57 307**		P		**P**	**23 41 57.9**	**-0.8**
	comp=Z,12nm,1.2s,baz=232,slow=7.3,SNR=4.5							
AKTO	**Aktyubinsk**	**97.60 320**		P		**P**	**23 41 56.7**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=142,slow=23,SNR=4.9							
PDAR	**Pinedale Array**	**98.45**	**48**	LR		LR	00 20 39.7	
	comp=Z,122nm,20.7s,baz=304,slow=32							
ANMO	**Albuquerque**	**101.02**	**56**	*i* P		**Pdif**	**23 42 12.6**	**-1.7**
ANMO				pmax		pmax		
	comp=Z,1.0nm,1.1s							
SNAA	**Sanae**	**101.75 187**		P		**Pdif**	**23 42 13.5**	**-3.2**
SNAA	**Sanae**	**101.75 187**		*i* P		**Pdif**	**23 42 16.4**	**-0.2**
SNAA				pmax		pmax		
	comp=Z,2.0nm,1.1s							
APA	**Apatity**	**106.02 340**	⇓	*i*P		**Pdif**	**23 42 40.0**	**+4.5**
APA				pmax		pmax		
	comp=Z,8.0nm,1.2s							
AKASG	**Malin Array Be**	**115.34 325**		PKP		**PKiKP**	**23 47 04.4**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=62,slow=2.3,SNR=6.1							
AKASG	**Malin Array Be**	**115.34 325**		PKIKP		**PKiKP**	**23 47 05.1**	**-0.3**
AKASG	**Malin Array Be**	**115.34 325**				**PKiKP**	**23 47 05.1**	**-0.3**
BOSA	**Boshof**	**120.10 233**		PKP		**PKPdf**	**23 47 15.5**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=159,slow=3.3,SNR=8.7							
BOSA	**Boshof**	**120.10 233**				**PKPdf**	**23 47 15.3**	**-0.2**
KOLS	**Kolonicke sedl**	**120.15 325**		*e*PKIKP		**PKPdf**	**23 47 15.0**	**+0.3**
KOLS	**Kolonicke sedl**	**120.15 325**		*e*PKP		**PKPdf**	**23 47 15.0**	**+0.3**
LSZ	**Lusaka**	**122.33 248**		PKIKP		**PKPdf**	**23 47 20.2**	**+0.2**
LSZ	**Lusaka**	**122.33 248**				**PKPdf**	**23 47 20.2**	**+0.2**
CLL	**Collm**	**123.63 331**		*e*PKPdf		**PKPdf**	**23 47 20.0**	**-1.3**
CLL	**Collm**	**123.63 331**		*e*PKIKP		**PKPdf**	**23 47 20.0**	**-1.3**
CONA	**Conrad Observa**	**124.27 327**		*e*P		**PKPdf**	**23 47 21.8**	**-1.0**
	comp=Z,4.5nm,1.1s							
GERES	**GERESS Array B**	**124.86 329**		PKP		**PKPdf**	**23 47 23.5**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=78,slow=1.9,SNR=15							
MOTA	**Moosalm**	**127.16 329**		*e*P		**PKPdf**	**23 47 28.7**	**+0.3**
	comp=Z,7.1nm,1.0s							
SQTA	**Sankt Quirin**	**127.19 329**		*e*P		**PKPdf**	**23 47 27.7**	**-0.8**
	comp=Z,2.4nm,0.7s							
SDV	**Santo Domingo**	**135.87**	**83**	PKP		**PKPdf**	**23 47 44.3**	**-1.5**
	comp=Z,2.8nm,0.6s,baz=287,slow=1.2,SNR=5.1							
TAM	**Tamanrasset**	**144.65 303**		PKIKP		**PKPdf**	**23 48 01.2**	**-0.3**
TAM	**Tamanrasset**	**144.65 303**		PKPdf		PKPbc	23 48 01.2	+0.8
BDFB	**Brasilia**	**150.15 134**		PKPbc		**PKiKP**	**23 48 16.8**	**+0.2**
	comp=Z,5.6nm,0.6s,baz=319,slow=0.3,SNR=11							
TOA0	**Torodi Ar. Sit**	**151.28 288**				**PKPbc**	**23 48 18.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**151.28 288**		PKP		**PKPdf**	**23 48 12.2**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=40,slow=2.1,SNR=4.7							
TORD				PKPbc		**PKPbc**	**23 48 17.1**	**-1.3**
	comp=Z,17nm,0.6s,baz=56,slow=2.1,SNR=84							
TORD	**Torodi Ar. Bea**	**151.28 288**				**PKPbc**	**23 48 18.1**	**-0.3**
KIC	**Kosan Boka**	**158.52 274**		*e*PKP2		**PKPab**	**23 48 57.3**	**-0.2**
	comp=Z,40nm,1.0s							
DBIC	**Dimbokro**	**158.62 275**		PKPab		**PKPab**	**23 48 57.4**	**-0.5**
	comp=Z,6.6nm,0.7s,baz=62,slow=3.7,SNR=8.7							
TIC	**Toumodi**	**158.79 275**		*e*PKP2		**PKPab**	**23 48 58.3**	**-0.4**
LIC	**Lamto**	**158.81 274**		*e*PKP2		**PKPab**	**23 48 58.4**	**-0.3**
	comp=Z,26nm,0.9s							

VIE ***05*** *23:32:10.0±0.2, 46.4°N×15.0°E, h0km, ml1.5/5, Error ellipse: s-maj=1.7km s-min=1.6km az=167.0 23 km NW of Celje Suspected Mining induced.*

LJU 05 23:32:09.9, 46.39°N×15.07°E, h0km, ML1.0 Rockburst, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PERS	**Pernice**	**0.25**	**7**	*i* Pg	Pg	23 32 15.0	+0.4
	comp=Z,16nm,0.2s						
BISS	**Bistriski jare**	**0.26**	**9**	*e*Pg	Pg	23 32 15.5	+0.6
	comp=Z,12nm,0.1s						
SOKA	**Soboth**	**0.29**	**355**	*e*Pg	Pg	23 32 15.5	0.0
	comp=Z,1.8nm,0.2s						
SOKA				*e*Sg	Sg	23 32 19.8	+0.5
	comp=Z,5.2nm,0.3s						
GROS	**Grobnik**	**0.31**	**76**	*e*Pg	Pg	23 32 16.5	+0.7
	comp=Z,9.0nm,0.1s						
PDKS	**Podkum**	**0.33**	**189**	*e*Pg	Pg	23 32 16.7	+0.4
	comp=Z,19nm,0.4s						
DOBS	**Dobrina**	**0.37**	**131**	*e*Pg	Pg	23 32 17.4	+0.5
OBKA	**Obir**	**0.38**	**288**	*e*Pg	Pg	23 32 17.2	+0.1
	comp=Z,1.2nm,0.2s						
OBKA				*e*Sg	Sg	23 32 23.5	+1.4
	comp=Z,15nm,0.4s						
VNDS	**Vrh nad Dolski**	**0.39**	**222**	*e*Pg	Pg	23 32 17.4	+0.2
	comp=Z,13nm,0.2s						
MOZS	**Mozjanca**	**0.45**	**258**	*e*Pg	Pg	23 32 18.4	0.0
MOZS				*e*Sg	Sg	23 32 25.2	+1.0
	comp=Z,36nm,0.7s						
LEGS	**Legarje**	**0.47**	**159**	*e*Pg	Pg	23 32 19.1	+0.1
GOLS	**Golise**	**0.54**	**134**	*e*Pg	Pg	23 32 20.6	+0.4
	comp=Z,9.0nm,0.3s						
VISS	**Visnje**	**0.61**	**195**	*e*Pg	Pg	23 32 21.8	+0.2
GBAS	**Gorenja Brezov**	**0.63**	**224**	*e*Pg	Pg	23 32 22.0	+0.1
ARSA	**Arzberg**	**0.92**	**20**	*e*Pg	Pg	23 32 26.5	-1.0
	comp=Z,2.3nm,0.3s						
ARSA				*e*Sg	Sg	23 32 39.0	-0.4
	comp=Z,0.9nm,0.3s						
MYKA	**Terra Mystica**	**1.01**	**284**	*e*Pg	Pg	23 32 29.5	+0.1
	comp=Z,1.0nm,0.2s						
MYKA				*e*Sg	Sg	23 32 43.2	+0.7
	comp=Z,1.8nm,0.3s						
KBA	**Koelnbreinsper**	**1.37**	**301**	*e*Pg	Pg	23 32 36.0	-0.2
	comp=Z,1.5nm,0.5s						
KBA				*e*Sg	Sn	23 32 56.8	+1.3
	comp=Z,4.3nm,0.5s						

IDC ***05*** *23:45:27.1±2.4, 58.6°N×136.9°W, h0km, mb3.5/2, mb1 3.8/6, mb1mx3.5/51, mbtmp3.6/6, ML3.7/4, Error ellipse: s-maj=39.6km s-min=11.2km az=-26.0*

AEIC ***05*** *23:45:31±1.4, 59.18°N±0.03°×136.29°W±0.08, h6km±6km, Error ellipse: s-maj=6.5km s-min=4.2km az=-66.0*

NEIC ***05*** *23:45:32.1, 59.14°N×136.25°W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.19; Mθθ=0.52; Mφφ=-0.33; Mrθ=0.79; Mrφ=3.70; Mθφ=0.91; Fault plane solution: M0=3.92000×10^14 NP1:ϕ=2.36000°, δ=81.09000°, λ=167.12000°. NP2:ϕ=94.39000°, δ=77.27000°, λ=9.14000°. Principal axes: T 4.1503, Plg15.0000°, Azm318.0000°; N -0.5161, Plg74.0000°, Azm148.0000°; P -3.6342, Plg3.0000°, Azm49.0000°:*

NEIC ***05*** *23:45:32.1±1.4, 59.16°N±0.02°×136.23°W±0.05, h8km±6km Error ellipse: s-maj=4.1km s-min=1.9km az=128.0*

PGC ***05*** *23:45:32.0±0.2, 59.17°N×136.35°W, h3km, ML3.5/12, ML4.1, 64km west of Haines, Ak Southeastern Alaska*

ISC 05 23:45:31.7±1.2, 59.15N±0.03°×136.23W±0.03, h1km±9km, n142, σ1°33/156, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.32**	**347**	P	**Pg**	**23 45 37.4**	**-0.5**
PLBC				S	**Sg**	**23 45 41.0**	**-1.0**
PLBC	**Pleasant Camp**	**0.32**	**347**		**Pg**	**23 45 37.3**	**-0.5**
PLBC					**Sg**	**23 45 41.0**	**-1.0**
SKAG	**Skagway**	**0.56**	**55**		**Pg**	**23 45 42.9**	**+0.5**
SKAG				Sg	**Sg**	**23 45 50.7**	**+1.0**
BESE	**Bessie Mountai**	**0.91**	**128**	P	**Pg**	**23 45 49.7**	**+0.5**
BESE				S	**Sg**	**23 46 02.2**	**+1.3**
BESE	**Bessie Mountai**	**0.91**	**128**		**Pg**	**23 45 49.7**	**+0.5**
BESE	**Bessie Mountai**	**0.91**	**128**		**Sn**	**23 46 04.0**	**-1.5**
JIS	**Juneau Island**	**1.30**	**131**		**Pn**	**23 45 56.0**	**-0.8**
JIS				Sn	**Sg**	**23 46 15.4**	**+2.0**
WHY	**Whitehorse**	**1.66**	**23**	Pn	**Pn**	**23 46 01.6**	**-0.5**
WHY	**Whitehorse**	**1.66**	**23**		**Pn**	**23 46 01.6**	**-0.5**
WHY	**Whitehorse**	**1.66**	**23**		**Sn**	**23 46 23.6**	**-0.5**
YUK7	**Dusty Glacier**	**1.69**	**326**	Pn	**Pn**	**23 46 00.9**	**-1.7**
YUK7					**Sn**	**23 46 22.2**	**-2.7**
YUK7	**Dusty Glacier**	**1.69**	**326**		**Pn**	**23 46 01.3**	**-1.3**
PNL	**Peninsula**	**1.71**	**289**	Pn	**Pn**	**23 46 00.9**	**-1.7**
PNL				Sn	**Sn**	**23 46 22.3**	**-2.7**
PNI	**Peninsula**	**1.71**	**289**		**Pn**	**23 46 00.8**	**-1.7**
HYT	**Haines Junctio**	**1.80**	**340**	Pn	**Pn**	**23 46 02.4**	**-1.6**
HYT				Sn	**Sn**	**23 46 26.0**	**-1.6**
HYT	**Haines Junctio**	**1.80**	**340**	Pn	**Pn**	**23 46 02.7**	**-1.3**
YKU2	**Yakutat**	**1.80**	**283**	Pn	**Pn**	**23 46 03.3**	**-0.5**
YKU2	**Yakutat**	**1.80**	**283**		**Sn**	**23 46 26.7**	**-0.6**
BCPM	**Bancas Point**	**1.92**	**296**		**Pn**	**23 46 04.5**	**-0.9**
BCPM	**Bancas Point**	**1.92**	**296**		**Sn**	**23 46 29.5**	**-0.6**
YUK6	**Outpost Mounta**	**2.10**	**330**	Pn	**Pn**	**23 46 06.6**	**-1.6**
YUK6				Sn	**Sn**	**23 46 33.5**	**-1.4**
YUK6	**Outpost Mounta**	**2.10**	**330**		**Pn**	**23 46 06.8**	**-1.4**
SIT	**Sitka**	**2.15**	**167**	Pn	**Pn**	**23 46 08.2**	**-0.3**
YUK5	**Granite Creek**	**2.15**	**338**	Pn	**Pn**	**23 46 08.1**	**-0.8**
YUK5				Sn	**Sn**	**23 46 34.9**	**-1.3**
YUK5	**Granite Creek**	**2.15**	**338**		**Pn**	**23 46 08.2**	**-0.6**
PCA	**Pinnacle**	**2.26**	**297**	Pn	**Pn**	**23 46 08.9**	**-1.4**
PCA	**Pinnacle**	**2.26**	**297**		**Pn**	**23 46 09.5**	**-0.7**
SAMH	**Samovar Hills**	**2.52**	**295**	Pn	**Pn**	**23 46 13.4**	**-0.4**
SAMH	**Samovar Hills**	**2.52**	**295**		**Pn**	**23 46 13.2**	**-0.5**
YUK4	**Talbot Arm**	**2.52**	**332**	Pn	**Pn**	**23 46 13.6**	**-0.3**
YUK4				Sg	**Sg**	**23 46 51.3**	**-1.2**
YUK4	**Talbot Arm**	**2.52**	**332**		**Pn**	**23 46 13.6**	**-0.3**
CHX	**Chaix Hills**	**2.65**	**292**		**Pn**	**23 46 15.1**	**-0.5**
TABL	**Table Mountain**	**2.80**	**300**		**Pn**	**23 46 16.8**	**-1.1**
RKAV	**Rock Avalanche**	**2.84**	**296**	Pn	**Pn**	**23 46 17.5**	**-0.7**
RKAV	**Rock Avalanche**	**2.84**	**296**		**Pn**	**23 46 17.7**	**-0.5**
LOGN	**Logan Glacier**	**2.93**	**307**	Pn	**Pn**	**23 46 18.1**	**-1.4**
LOGN	**Logan Glacier**	**2.93**	**307**		**Pn**	**23 46 18.5**	**-1.1**
YAH	**Yahtse**	**3.05**	**296**		**Pn**	**23 46 20.9**	**-0.2**
MESA	**MESA**	**3.08**	**292**	Pn	**Pn**	**23 46 20.4**	**-1.3**
MESA	**MESA**	**3.08**	**292**		**Pn**	**23 46 21.2**	**-0.5**
CTGM	**Chitina Glacie**	**3.14**	**308**	Pn	**Pn**	**23 46 21.1**	**-1.3**
CTGM	**Chitina Glacie**	**3.14**	**308**		**Pn**	**23 46 21.5**	**-1.0**
GRNC	**Granite Creek**	**3.20**	**302**	Pn	**Pn**	**23 46 22.3**	**-1.1**
GRNC				Sn	**Sn**	**23 47 00.4**	**-1.8**
GRNC	**Granite Creek**	**3.20**	**302**		**Pn**	**23 46 22.5**	**-0.8**
DLBC	**Dease Lake**	**3.30**	**100**	Pn	**Pn**	**23 46 24.6**	**0.0**
	16nm,0.3s,baz=290,slow=7.0,SNR=298						
DLBC				Pg	**Pb**	**23 46 31.8**	**+0.7**
	44nm,0.3s,baz=295,slow=11,SNR=29						
DLBC				Lg	Lg	23 47 15.4	
	203nm,0.3s,baz=158,slow=13,SNR=17						
DLBC	**Dease Lake**	**3.30**	**100**	Pn	**Pn**	**23 46 24.5**	**0.0**
DLBC				Pg	**Pb**	**23 46 31.9**	**+0.8**
DLBC				Sg	**Sg**	**23 47 15.9**	**-1.9**
BARN	**Barnard Glacie**	**3.33**	**308**		**Pn**	**23 46 23.7**	**-1.3**
YUK3	**Moose Creek**	**3.37**	**323**	Pn	**Pn**	**23 46 24.5**	**-1.1**
YUK3				Sg	**Sb**	**23 47 15.3**	**+1.5**
YUK3	**Moose Creek**	**3.37**	**323**		**Pn**	**23 46 24.7**	**-0.9**
ISLE	**Juniper Island**	**3.41**	**298**		**Pn**	**23 46 25.7**	**-0.4**
WRAK	**Wrangell Islan**	**3.43**	**141**		**Pn**	**23 46 25.8**	**-0.5**
YUK2	**White River**	**3.50**	**321**	Pn	**Pn**	**23 46 26.8**	**-0.4**
YUK2	**White River**	**3.50**	**321**		**Pn**	**23 46 26.9**	**-0.4**
KIAG	**Kiagna River**	**3.56**	**303**	Pn	**Pn**	**23 46 26.7**	**-1.4**
KIAG	**Kiagna River**	**3.56**	**303**		**Pn**	**23 46 27.5**	**-0.6**
BALM	**Baldy**	**3.60**	**304**	Pn	**Pn**	**23 46 27.4**	**-1.3**
BALM	**Baldy**	**3.60**	**304**		**Pn**	**23 46 27.4**	**-1.3**
YUK1	**Sand Pete Hill**	**3.69**	**327**	Pn	**Pn**	**23 46 28.6**	**-1.3**
YUK1					**Sn**	**23 47 10.7**	**-3.3**
YUK1	**Sand Pete Hill**	**3.69**	**327**		**Pn**	**23 46 28.7**	**-1.2**
TGL	**Tana Glacier**	**3.69**	**299**		**Pn**	**23 46 29.5**	**-0.4**
PTPK	**Patty Peak**	**3.73**	**306**	Pn	**Pn**	**23 46 30.2**	**-0.3**
PTPK	**Patty Peak**	**3.73**	**306**		**Pn**	**23 46 30.6**	**0.0**
GRIN	**Grindle Hills**	**3.77**	**291**		**Pn**	**23 46 30.8**	**-0.1**
KHIT	**Khitrov Hills**	**3.78**	**293**		**Pn**	**23 46 31.1**	**0.0**
CRQM	**Cirque**	**3.83**	**298**		**Pn**	**23 46 31.5**	**-0.5**
BERG	**Berg Lake**	**3.98**	**291**		**Pn**	**23 46 33.8**	**0.0**
BVCY	**Beaver Creek**	**3.99**	**327**	Pn	**Pn**	**23 46 33.0**	**-0.9**
BVCY				Sg	**Sg**	**23 47 36.0**	**-3.7**
BVCY	**Beaver Creek**	**3.99**	**327**		**Pn**	**23 46 34.2**	**+0.3**
CRAG	**Craig**	**4.05**	**154**	Pn	**Pn**	**23 46 33.9**	**-0.8**
MCARA	**McCarthy VSAT**	**4.06**	**306**	Pn	**Pn**	**23 46 34.3**	**-0.6**
VRDI	**Verde Repeater**	**4.17**	**303**	Pn	**Pn**	**23 46 35.6**	**-0.9**
HMT	**Hamilton**	**4.24**	**290**		**Pn**	**23 46 37.1**	**-0.2**
GLB	**Gilahina Butte**	**4.42**	**305**		**Pn**	**23 46 38.9**	**-1.0**
RAGM	**Ragged Mountai**	**4.45**	**290**		**Pn**	**23 46 40.4**	**+0.2**
BC03		**4.77**	**328**		**Pn**	**23 46 43.7**	**-0.8**
BCAR	**Beaver Creek A**	**4.77**	**328**		**Pn**	**23 46 43.5**	**-1.1**
N25K	**Chitina, Valde**	**4.83**	**304**		**Pn**	**23 46 44.6**	**-1.0**
DAWY	**Dawson**	**5.16**	**344**	Pn	**Pn**	**23 46 49.4**	**-0.6**
DAWY				Pg	**Pb**	**23 47 05.7**	**+3.0**
DAWY				Sg	**Sb**	**23 48 10.0**	**+4.9**
DAWY	**Dawson**	**5.16**	**344**	Pn	**Pn**	**23 46 49.4**	**-0.6**
DIV	**Divide**	**5.17**	**297**	Pn	**Pn**	**23 46 49.2**	**-0.9**
L26K	**Log Cabin Wild**	**5.20**	**321**		**Pn**	**23 46 49.7**	**-0.9**
MENT	**Mentasta**	**5.26**	**319**		**Pn**	**23 46 50.3**	**-1.1**
KLU	**Klutina**	**5.36**	**300**		**Pn**	**23 46 52.0**	**-0.8**
K27K	**Chicken**	**5.64**	**333**		**Pn**	**23 46 55.7**	**-0.9**
GLI	**Glacier Island**	**5.72**	**292**	Pn	**Pn**	**23 46 57.1**	**-0.6**
M24K	**Tolsona, Glenn**	**5.73**	**305**	Pn	**Pn**	**23 46 58.4**	**+0.6**
RUBB	**Prince Rupert**	**5.84**	**143**	Pn	**Pn**	**23 46 59.3**	**0.0**
RUBB	**Prince Rupert**	**5.84**	**143**		**Pn**	**23 46 58.9**	**-0.4**
DOT	**Dot Lake**	**5.88**	**324**	Pn	**Pn**	**23 46 58.3**	**-1.5**
DOT	**Dot Lake**	**5.88**	**324**	Pn	**Pn**	**23 46 58.6**	**-1.3**
PAX	**Paxson**	**5.90**	**314**		**Pn**	**23 47 00.9**	**+0.7**
SCRK	**Sand Creek**	**6.10**	**326**		**Pn**	**23 47 01.9**	**-1.1**
EGAK	**Eagle**	**6.11**	**340**		**Pn**	**23 47 02.5**	**-0.5**
SCM	**Sheep Creek Mo**	**6.11**	**301**		**Pn**	**23 47 02.9**	**-0.2**
RIDG	**Independent Ri**	**6.19**	**322**	Pn	**Pn**	**23 47 02.4**	**-1.7**
DIB	**Dawson Inlet,**	**6.31**	**159**	Pn	**Pn**	**23 47 05.3**	**-0.5**
DIB	**Dawson Inlet,**	**6.31**	**159**	Pn	**Pn**	**23 47 05.0**	**-0.8**
GRNB	**Grenville Isla**	**6.34**	**144**	Pn	**Pn**	**23 47 05.5**	**-0.7**
KNK	**Knik Glacier**	**6.49**	**296**		**Pn**	**23 47 08.7**	**+0.4**
SML	**Sawmill**	**6.55**	**299**	Pn	**Pn**	**23 47 09.0**	**-0.1**
KITB	**Kitimat**	**6.58**	**137**	Pn	**Pn**	**23 47 10.0**	**+0.5**
KITB				Sg	**Sg**	**23 48 59.3**	**-3.6**
WAT6	**Susitna Watana**	**6.59**	**306**		**Pn**	**23 47 09.2**	**-0.6**
DHY	**Denali Highway**	**6.68**	**311**		**Pn**	**23 47 11.2**	**+0.2**
SEW	**Seward**	**6.78**	**284**	Pn	**Pn**	**23 47 11.0**	**-1.1**
GHO	**Glory Hole Cre**	**6.81**	**298**		**Pn**	**23 47 12.3**	**-0.3**
FNBB	**Fort Nelson**	**6.83**	**86**	Pn	**Pn**	**23 47 13.3**	**+0.4**
FNBB	**Fort Nelson**	**6.83**	**86**		**Pn**	**23 47 13.0**	**+0.1**
WAT7	**Susitna Watana**	**7.16**	**306**		**Pn**	**23 47 17.6**	**+0.1**
SLKM	**Skilak Lake**	**7.19**	**287**		**Pn**	**23 47 16.4**	**-1.4**
NBC5	**NorthernBC 5**	**7.32**	**97**	Pn	**Pn**	**23 47 19.6**	**0.0**
HDA	**Harding Lake**	**7.32**	**321**		**Pn**	**23 47 17.4**	**-2.3**
BRSE	**Bradley Lake S**	**7.43**	**281**		**Pn**	**23 47 20.9**	**-0.1**
RND	**Reindeer**	**7.43**	**310**		**Pn**	**23 47 21.5**	**+0.4**
BRLK	**Bradley Lake**	**7.50**	**281**	Pn	**Pn**	**23 47 21.5**	**-0.2**
IL31		**7.55**	**323**	Pn	**Pn**	**23 47 20.5**	**-2.2**
ILAR	**Eielson Array**	**7.55**	**323**	Pn	**Pn**	**23 47 20.4**	**-2.3**
	0.2nm,0.3s,baz=144,slow=13,SNR=7.0						
ILAR				Lg	Lg	23 49 24.1	
	0.7nm,0.3s,baz=106,slow=17,SNR=2.0						
SUA	**Susitna One**	**7.58**	**294**	Pn	**Pn**	**23 47 22.3**	**-0.9**
CNPM	**China Poot**	**7.69**	**279**		**Pn**	**23 47 24.5**	**-0.1**
NBC6	**NorthernBC 6**	**7.74**	**88**	Pn	**Pn**	**23 47 25.1**	**-0.3**
TRF	**Thorofare Moun**	**8.02**	**309**		**Pn**	**23 47 29.9**	**+0.5**
BMBC	**Bull Mountain**	**8.18**	**106**	Sg	**Sg**	**23 49 47.2**	**-7.0**
KTH	**Kantishna Hill**	**8.32**	**308**		**Pn**	**23 47 33.6**	**+0.2**
PPLA	**Purkeypile**	**8.61**	**303**	Pn	**Pn**	**23 47 37.2**	**-0.2**
KDAK	**Kodiak Island**	**8.68**	**268**	Pn	**Pn**	**23 47 37.0**	**-1.3**
NBC4	**NorthernBC 4**	**9.08**	**106**	Sg	Sn	23 50 14.6	+48
OHAK	**Old Harbor**	**9.21**	**265**	Pn	**Pn**	**23 47 43.8**	**-1.7**
INK	**Inuvik**	**9.27**	**6**	Pn	**Pn**	**23 47 48.1**	**+1.9**
	0.3nm,0.3s,baz=173,slow=11,SNR=6.4						
INK				Lg	Lg	23 50 17.1	
	0.5nm,0.3s,baz=258,slow=16,SNR=6.4						
INK	**Inuvik**	**9.27**	**6**	Pn	**Pn**	**23 47 47.0**	**+0.8**
COLD	**Coldfoot**	**10.25**	**328**	Pn	**Pn**	**23 47 59.8**	**+0.1**
DHRN	**Dharma Camp**	**10.91**	**37**	Pn	**Pn**	**23 48 08.4**	**-0.4**
YKA	**Yellowknife Ar**	**11.05**	**63**	Pn	**Pn**	**23 48 10.8**	**+0.2**
	0.4nm,0.3s,baz=260,slow=12,SNR=8.1						
YKA				Lg	Lg	23 51 31.3	
	0.2nm,0.3s,baz=253,slow=28,SNR=4.1						
TOLK	**Toolik Lake Re**	**11.16**	**334**		**Pn**	**23 48 13.4**	**+1.3**
CHGN	**Chignik**	**12.18**	**266**	Pn	**Pn**	**23 48 25.4**	**-0.7**
RES	**Resolute Bay**	**21.72**	**28**	P	**P**	**23 50 23.6**	**-0.2**
	0.6nm,0.4s,baz=240,slow=9.3,SNR=4.7						
RES	**Resolute Bay**	**21.72**	**28**	P	**P**	**23 50 23.3**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**56.44**	**251**	T	T	00 54 55.1	
	baz=31,slow=76,SNR=41						
H11N3	**WAKE ISLAND Hy**	**56.44**	**251**	T	T	00 54 55.4	
	baz=31,slow=76,SNR=46						
H11N1	**WAKE ISLAND Hy**	**56.45**	**251**	T	T	00 54 53.0	
	baz=31,slow=76,SNR=33						
H11S1	**WAKE ISLAND Hy**	**57.57**	**251**	T	T	00 56 27.1	
	baz=30,slow=75,SNR=34						
H11S2	**WAKE ISLAND Hy**	**57.59**	**251**	T	T	00 56 19.3	
	baz=30,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**57.59**	**251**	T	T	00 56 28.5	
	baz=30,slow=75,SNR=15						
AKASG	**Malin Array Be**	**69.87**	**10**	P	**P**	**23 56 44.1**	**+0.5**
	0.2nm,0.3s,baz=347,slow=5.8,SNR=1.7						

ATH ***05*** *23:47:19.9, 38.10°N×20.48°E, h16km±1km, ML2.5/5, Error ellipse: s-maj=2.5km s-min=1.0km az=246.0*

THE ***05*** *23:47:19.6, 38.09°N×20.43°E, h15km, ML2.6/3, Error ellipse: s-maj=1.9km s-min=0.6km az=77.0*

ISC 05 23:47:19.8±1.2, 38.10N±0.03°×20.47E±0.06, h17km±5km, n35, σ0°37/45, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.08**	**13**	P	**Pg**	**23 47 22.9**	**-0.2**
ARG2				S	**Sg**	**23 47 25.2**	**-0.1**
VLS	**Valsamata**	**0.12**	**53**	P	**Pg**	**23 47 23.4**	**-0.2**
VLS				S	**Sg**	**23 47 26.3**	**+0.2**
VLS				AML	AML	23 47 26.5	
	comp=N,14386μm,0.2s						
VLS				AML	AML	23 47 26.5	
	comp=E,17856μm,0.1s						
**

38nm,0.3s,baz=277,slow=0.6,SNR=21

KRVT				S		Sn	00 00 06.9	+4.6
	17nm,0.3s,baz=14,slow=16,SNR=1.9							
RABL	**Rabaul**	**2.63**	**47**			**Pn**	**23 59 36.2**	**+0.2**
RABL					Sn	**Sn**	**00 00 08.2**	**+1.4**
PMG	**Port Moresby**	**4.55**	**222**	P		**Pn**	**00 00 03.7**	**+1.4**
	5.8nm,0.3s,baz=41,slow=7.3,SNR=15							
PMG				S		**Sn**	**00 00 54.6**	**+0.7**
	4.2nm,0.3s,baz=147,slow=18,SNR=9.2							
PMG				LR		LR	00 01 50.4	
	comp=Z,124nm,19.3s,baz=346,slow=38							
PMG	**Port Moresby**	**4.55**	**222**			**Pn**	**00 00 04.1**	**+1.8**
PMG				Sn		**Sn**	**00 00 55.5**	**+1.5**
GUMO	**Guam**	**20.20**	**345**	LR		LR	00 11 02.3	
	comp=Z,35nm,20.5s,baz=154,slow=36							
WB0	**Warramunga Arr**	**20.60**	**227**	P		**P**	**00 03 31.1**	**+0.1**
WB0				IAmb		IAmb	00 03 35.2	
	comp=Z,10nm,1.1s							
WR0	**Warramunga Arr**	**20.62**	**226**	P		**P**	**00 03 31.1**	**0.0**
WR0				IAmb		IAmb	00 03 32.1	
	comp=Z,9.6nm,0.9s							
WB2	**Warramunga Arr**	**20.74**	**227**	P		**P**	**00 03 31.6**	**-0.8**
WB2				IAmb		IAmb	00 03 38.9	
	comp=Z,11nm,1.2s							
WRA	**Warramunga Arr**	**20.75**	**227**	P		**P**	**00 03 30.9**	**-1.7**
	comp=Z,4.8nm,0.7s,baz=49,slow=10,SNR=49							
WRA	**Warramunga Arr**	**20.75**	**227**	P		**P**	**00 03 31.3**	**-1.3**
KNRA	**Kununurra**	**23.16**	**244**	P		**P**	**00 03 58.7**	**+0.6**
AS31	**Alice Springs**	**23.56**	**220**	P		**P**	**00 04 02.3**	**+0.3**
ASAR	**Alice Springs**	**23.56**	**220**	P		**P**	**00 04 01.9**	**0.0**
	comp=Z,19nm,0.5s,baz=55,slow=9.0,SNR=37							
ASAR	**Alice Springs**	**23.56**	**220**	P		**P**	**00 04 01.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**26.85**	**241**	P		**P**	**00 04 31.2**	**-0.6**
	comp=Z,5.4nm,0.9s,baz=41,slow=7.4,SNR=20							
STKA	**Stephens Creek**	**26.97**	**196**	P		**P**	**00 04 32.9**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=352,slow=10,SNR=3.5							
STKA	**Stephens Creek**	**26.97**	**196**	P		**P**	**00 04 32.6**	**-0.2**
SONM	**Songino Array**	**66.03**	**329**	P		**P**	**00 09 38.4**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=134,slow=4.2,SNR=2.6							
SONM	**Songino Array**	**66.03**	**329**	P		**P**	**00 09 37.7**	**+0.4**
VNDA	**Vanda**	**71.73**	**177**	P		**P**	**00 10 11.5**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=357,slow=5.2,SNR=3.6							
VNDA	**Vanda**	**71.73**	**177**	P		**P**	**00 10 11.3**	**-0.8**
VNDA				IAmb		IAmb	00 10 25.4	
	comp=Z,1.2nm,1.1s							
MKAR	**Makanchi Array**	**79.58**	**320**	P		**P**	**00 10 56.2**	**-1.4**
	comp=Z,0.7nm,1.0s,baz=117,slow=8.0,SNR=2.0							
MKAR	**Makanchi Array**	**79.58**	**320**	P		**P**	**00 10 57.1**	**-0.5**
QSPA	**South Pole Qui**	**83.95**	**180**	P		**P**	**00 11 20.2**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=334,slow=1.6,SNR=11							
QSPA	**South Pole Qui**	**83.95**	**180**	P		**P**	**00 11 20.4**	**0.0**
ILAR	**Eielson Array**	**84.24**	**23**	P		**P**	**00 11 19.7**	**-1.9**
	comp=Z,0.4nm,0.9s,baz=320,slow=33,SNR=4.1							
TORD	**Torodi Ar. Bea**	**148.22**	**285**	PKPbc		**PKPdf**	**00 18 35.2**	**+1.3**
	comp=Z,1.0nm,0.5s,baz=69,slow=2.3,SNR=17							
BDFB	**Brasilia**	**151.89**	**140**	PKPbc		**PKPbc**	**00 18 45.1**	**-1.2**
	comp=Z,3.7nm,0.8s,baz=9.3,slow=22,SNR=3.9							

*REY **06** 00:18:54.8, 64.°68N×17.°46W, h5km*
*IDC **06** 00:18:55.4±0.8, 64.°55N×17.°69W, h0km, mb3.7/10, mb1 3.9/13, mb1mx3.7/50, mbtmp3.7/13, ML3.0/3, Error ellipse: s-maj=26.4km s-min=10.4km az=12.0*
*NEIC **06** 00:18:55.8±1.6, 64.°57N±0.°08×17.°8W±0.°1, h7km±4km, mb4.3/11, Error ellipse: s-maj=12.2km s-min=6.3km az=169.0*

ISC 06 00:18:56.2±0.5, 64.°65N±0.°03×17.°55W±0.°03, h10km, n79, σ1s92/76, mb3.9/15, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.09**	**288**	P	**Pg**	**00 18 57.5**	**-1.3**
	baz=268						
IVON				S	**Sg**	**00 18 59.8**	**-0.8**
	baz=268						
IDYN	**Dyngjuhals**	**0.17**	**29**	P	**Pg**	**00 18 57.5**	**-2.3**
	baz=20						
IGRF	**Grimsfjall**	**0.27**	**153**	P	**Pg**	**00 19 00.2**	**-1.5**
	baz=163						
IHUS	**Husbondi**	**0.35**	**187**	P	**Pg**	**00 19 02.4**	**-0.9**
	baz=192						
IVOT	**Vottur**	**0.41**	**157**	P	**Pg**	**00 19 02.7**	**-1.5**
	baz=163						
IJOK	**Jokulheimar**	**0.44**	**222**	P	**Pb**	**00 19 03.7**	**-2.3**
	baz=223						
IJOK				S	**Sb**	**00 19 10.8**	**-2.0**
	baz=223						
IMKO	**Mokollar**	**0.62**	**57**	P	Pg	00 19 05.0	-3.1
	baz=57						
IMKO				S	**Sg**	**00 19 13.0**	**-3.2**
	baz=57						
IKSK	**Karasker**	**0.68**	**136**	P	**Pg**	**00 19 05.9**	**-3.3**
	baz=140						
IKAL	**Kalfafell**	**0.70**	**185**	P	**Pg**	**00 19 08.0**	**-1.7**
	baz=188						
ISVA	**Svartarkot**	**0.71**	**10**	P	Pg	00 19 06.8	-3.0
	baz=7.5						
IVAT	**Vatnsfell**	**0.75**	**233**	P	**Pb**	**00 19 09.5**	**-1.8**
	baz=233						
IVSH	**V-Sauoahnukur**	**0.80**	**77**	P	Pg	00 19 07.8	-3.7
	baz=79						
IVSH				S	**Sg**	**00 19 18.3**	**-3.7**
	baz=79						
IHVE	**Hveravellir**	**0.89**	**286**	P	**Pg**	**00 19 10.7**	**-2.6**
	baz=283						
IMEL	**Melhnausar**	**1.00**	**22**	P	Pb	00 19 11.5	-4.1
	baz=20						
ISNB	**Snabyli**	**1.03**	**208**	P	**Pg**	**00 19 13.7**	**-2.2**
	baz=209						
ISLY	**Slysaalda**	**1.07**	**220**	P	**Pg**	**00 19 14.4**	**-2.3**
	baz=221						
IKVO	**Krokottuvotn**	**1.11**	**15**	P	Pn	00 19 13.3	-4.5
	baz=13						
IFED	**Fedgar**	**1.12**	**237**	P	**Pb**	**00 19 15.7**	**-1.9**
	baz=237						
IRJU	**Rjupnafell**	**1.14**	**206**	P	**Pb**	**00 19 16.0**	**-1.9**
	baz=207						
IGRS	**Grimsstaoir**	**1.17**	**31**	P	Pn	00 19 14.2	-4.3
	baz=30						
IGRS				S	**Sb**	**00 19 29.4**	**-4.1**
	baz=30						
IMJO	**Mjoaskard**	**1.17**	**233**	P	**Pb**	**00 19 16.3**	**-2.2**
	baz=233						
IGYG	**Gygjarholskot**	**1.21**	**254**	P	**Pb**	**00 19 16.3**	**-2.8**
	baz=253						
ISKI	**Skildingahlsh**	**1.25**	**10**	P	Pn	00 19 15.7	-4.0
	baz=8.5						
IHAU	**Haukadalur**	**1.25**	**238**	P	**Pb**	**00 19 17.5**	**-2.3**
	baz=238						
IGHA	**Grjothals**	**1.26**	**17**	P	Pn	00 19 15.6	-4.2
	baz=16						
IHVO	**Lagu-Hvolar**	**1.26**	**207**	P	**Pb**	**00 19 17.6**	**-2.3**
	baz=208						
IGRA	**Granastaoir**	**1.28**	**360**	P	Pn	00 19 16.0	-4.0
	baz=358						
IDIM	**Dimmadalss**	**1.35**	**11**	P	Pn	00 19 17.2	-3.8
	baz=9.6						
IESK	**Eystri-Skogar**	**1.40**	**217**	P	**Pn**	**00 19 19.8**	**-1.9**
	baz=218						
ISAU	**Saurbar**	**1.41**	**243**	P	**Pn**	**00 19 19.6**	**-2.3**
	baz=243						
IMID	**Miomork**	**1.42**	**227**	P	**Pb**	**00 19 20.5**	**-2.3**
	baz=227						
IHED	**Heoinshofoi**	**1.45**	**4**	P	Pn	00 19 18.6	-3.7
	baz=2.5						
IBRE	**Brettingsstaoi**	**1.49**	**354**	P	**Pn**	**00 19 19.6**	**-3.4**
	baz=353						
IASM	**Asmuli**	**1.57**	**240**	P	**Pn**	**00 19 22.5**	**-1.5**
	baz=240						
ISIG	**Siglufjorour**	**1.60**	**340**	P	**Pn**	**00 19 21.6**	**-2.8**
	baz=338						
BORG	**Borgarnes**	**1.62**	**275**	Pg	**Pn**	**00 19 22.8**	**-1.9**
	20nm,0.3s,baz=100,slow=10,SNR=43						
BORG				Lg	Lg	00 19 47.0	
	10nm,0.3s,baz=211,slow=23,SNR=8.6						
BORG	**Borgarnes**	**1.62**	**275**		**Pn**	**00 19 22.2**	**-2.5**
BORG					**Sg**	**00 19 45.9**	**-2.4**
IKRO	**Krokur**	**1.65**	**252**	P	**Pn**	**00 19 23.1**	**-1.9**
	baz=252						
ISOL	**Solvholt**	**1.65**	**246**	P	**Pn**	**00 19 23.4**	**-1.6**
	baz=245						
IHEI	**Heioarbar**	**1.66**	**256**	P	**Pn**	**00 19 23.6**	**-1.7**
	baz=255						
SCO	**Scoresbysund**	**6.10**	**346**		**Pn**	**00 20 25.1**	**-1.1**
SCO	**Scoresbysund**	**6.10**	**346**	*e*	Pn	00 20 21.9	-4.3
	baz=165,slow=8.6						
SCO				*i* P	**Pn**	**00 20 26.7**	**+0.5**
SCO				*i* S	**Sn**	**00 21 39.8**	**+3.9**
SCO				IAML		00 21 47.7	
	comp=Z,1.4nm,0.5s						
SUMG	**Summit**	**10.95**	**326**	Pn	**Pn**	**00 21 33.8**	**+0.9**
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**00 21 43.9**	**+0.2**
	baz=326,slow=13,SNR=6.7						
ESK	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**00 21 43.8**	**0.0**
NOA	**NORSAR Array B**	**13.56**	**92**	Pn	**Pn**	**00 22 10.2**	**+1.9**
	comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=2.2						
FINES	**FINESS Array B**	**19.73**	**79**	P	**Pn**	**00 23 28.3**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=324,slow=14,SNR=3.2						
FINES	**FINESS Array B**	**19.73**	**79**	P	**Pn**	**00 23 27.9**	**+0.9**
CLL	**Collm**	**20.72**	**116**	P	**P**	**00 23 36.9**	**+0.6**
CLL				IAmb	IAmb	00 23 46.0	
	comp=Z,13nm,1.5s						
GRA1	**Grafenberg Arr**	**21.34**	**121**	P	**P**	**00 23 43.7**	**+0.6**
GRA1				IAmb	IAmb	00 23 56.6	
	comp=Z,24nm,1.2s						
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P	**P**	**00 23 44.2**	**+0.2**
	comp=Z,12nm,1.4s						
BFO	**Black Forest**	**21.45**	**127**	P	**P**	**00 23 45.5**	**+1.2**
OSTC	**Ostas**	**22.57**	**113**	*e*P	**P**	**00 23 58.6**	**+2.4**
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P	**P**	**00 23 52.5**	**-5.0**
KHC				*ex*	x	00 23 57.9	
DPC	**Dobruska-Polom**	**22.77**	**113**	*e*P	**P**	**00 24 00.1**	**+1.7**
GERES	**GERESS Array B**	**22.97**	**119**	P	**P**	**00 24 01.4**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=325,slow=6.5,SNR=6.4						
GERES	**GERESS Array B**	**22.97**	**119**	P	**P**	**00 24 00.8**	**+0.2**
AKASG	**Malin Array Be**	**27.86**	**97**	P	**P**	**00 24 46.3**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=326,slow=9.2,SNR=2.3						
BRTR	**Keskin Array B**	**38.50**	**105**	P	**P**	**00 26 19.7**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=332,slow=8.1,SNR=4.4						
BRTR	**Keskin Array B**	**38.50**	**105**	P	**P**	**00 26 19.1**	**+0.8**
KBZ	**Khabaz**	**39.14**	**92**	P	**P**	**00 26 25.4**	**+2.0**
	comp=Z,2.2nm,0.9s,baz=308,slow=15,SNR=4.0						
ABKAR	**Akbulak array**	**42.02**	**73**	P	**P**	**00 26 47.7**	**+0.5**
TIXI	**Tiksi**	**42.06**	**15**	P	**P**	**00 26 49.1**	**+1.9**
TIXI				IAmb	IAmb	00 26 50.2	
	comp=Z,3.3nm,0.8s						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**00 27 17.9**	**+1.4**
	comp=Z,1.4nm,1.0s,baz=29,slow=6.6,SNR=8.6						
ILAR				PcP	**PcP**	**00 28 55.3**	**+1.1**
	comp=Z,0.9nm,0.9s,baz=343,slow=3.6,SNR=4.6						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**00 27 17.2**	**+0.7**
ZALV	**Zalesovo Beam**	**47.66**	**51**	P	**P**	**00 27 33.4**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=326,slow=7.5,SNR=1.9						
KURK	**Kurchatov**	**48.14**	**58**	P	**P**	**00 27 36.4**	**+0.6**
KURK				IAmb	IAmb	00 27 37.0	
	comp=Z,3.6nm,1.0s						
KKAR	**Karatay Array**	**51.30**	**70**	P	**P**	**00 28 00.3**	**+0.3**
KKAR	**Karatay Array**	**51.30**	**70**	P	**P**	**00 28 00.5**	**+0.5**
KKAR				IAmb	IAmb	00 28 02.2	
	comp=Z,2.4nm,1.1s						
MKAR	**Makanchi Array**	**52.76**	**58**	P	**P**	**00 28 11.3**	**+0.5**
	comp=Z,0.9nm,0.9s,baz=336,slow=5.3,SNR=4.4						
MKAR	**Makanchi Array**	**52.76**	**58**	P	**P**	**00 28 10.8**	**0.0**
TOA0	**Torodi Ar. Sit**	**53.13**	**156**	P	**P**	**00 28 13.8**	**0.0**
TOA0				IAmb	IAmb	00 28 28.0	
	comp=Z,7.9nm,1.4s						
TORD	**Torodi Ar. Bea**	**53.13**	**156**	P	**P**	**00 28 13.6**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=340,slow=8.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**53.13**	**156**	P	**P**	**00 28 13.6**	**-0.2**
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**00 28 14.7**	**+0.5**
	comp=Z,1.5nm,1.0s,baz=52,slow=9.6,SNR=5.5						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**00 28 14.2**	**+0.1**
GAR	**Garm**	**54.68**	**73**	P	**P**	**00 28 26.3**	**+1.2**
PV13	**Radium Mtn., P**	**56.78**	**290**	P	**P**	**00 28 40.6**	**+0.3**
SONM	**Songino Array**	**59.67**	**40**	P	**P**	**00 29 01.4**	**+1.1**
	comp=Z,0.5nm,0.9s,baz=2.1,slow=7.9,SNR=2.0						

IDC 06 00:42:33.0±2.4, 49.°22S×108.°72E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.7/23, mbtmp3.7/5, Error ellipse: s-maj=92.8km s-min=22.1km az=115.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.86**	**18**	T	T	01 01 26.6	
	baz=193,slow=74,SNR=30						
H01W1	**Cape Leeuwin H**	**14.87**	**18**	T	T	01 01 22.9	
	baz=193,slow=74,SNR=25						
H01W3	**Cape Leeuwin H**	**14.87**	**18**	T	T	01 01 23.5	
	baz=193,slow=74,SNR=25						
ASAR	**Alice Springs**	**32.28**	**47**	P	P	00 49 03.6	+0.1
	0.6nm,0.8s,baz=208,slow=7.8,SNR=5.3						
VNDA	**Vanda**	**34.66**	**162**	P	P	00 49 23.5	-0.1
	0.6nm,0.5s,baz=297,slow=8.9,SNR=6.4						
WRA	**Warramunga Arr**	**35.69**	**44**	P	P	00 49 32.8	-0.2
	1.0nm,0.9s,baz=210,slow=8.8,SNR=4.7						
QSPA	**South Pole Qui**	**40.92**	**180**	P	P	00 50 16.7	0.0
	0.7nm,0.5s,baz=312,slow=2.1,SNR=8.2						
SNAA	**Sanae**	**50.21**	**203**	P	P	00 51 29.9	-0.1
	1.4nm,0.9s,baz=131,slow=11,SNR=4.1						

*HEL **06** 00:42:40.4, 67.°80N×20.°17E, h0km, ML1.6, Explosion*
UPP 06 00:42:40.5±0.0, 67.°83N×20.°19E, h0km, ML2.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**25**	P	Pg	00 42 43.3	+0.2
KUA				S	Sg	00 42 45.1	+0.3
KUA	**Kurravaara**	**0.13**	**25**	*i* P	Pg	00 42 43.3	+0.2
KUA				*i* S	Sg	00 42 45.1	+0.3
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	00 42 45.1	+0.3
RATU	**Laukkuluspa**	**0.23**	**268**	*i* P	Pg	00 42 45.1	+0.3
KOVU	**Salmi**	**0.39**	**359**	P	Pg	00 42 48.1	+0.1
KOVU	**Salmi**	**0.39**	**359**	*i* P	Pg	00 42 48.1	+0.1
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 42 54.0	-0.1
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	00 42 53.9	-0.2
LANU				*e*S	Sg	00 43 03.5	+0.1
DUNU	**Dundret**	**0.73**	**168**	P	Pg	00 42 54.1	-0.3
DUNU	**Dundret**	**0.73**	**168**	*i* P	Pg	00 42 54.1	-0.3
MASU	**Masugnsbyn**	**0.79**	**118**	P	Pg	00 42 55.5	-0.1
MASU	**Masugnsbyn**	**0.79**	**118**	*i* P	Pg	00 42 55.5	-0.1
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 42 55.4	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	00 42 55.4	-0.2
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*PB	Pg	00 43 03.5	+0.1
	baz=187						
KIF				MSG		00 43 18.8	
	comp=Z,6.5nm,0.2s						
KIF				*e*SB	Sb	00 43 19.5	-0.5
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*P	Pg	00 43 03.5	0.0
PAJU	**Pajala**	**1.39**	**124**	P	Pg	00 43 05.8	-1.3
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	00 43 05.8	-1.3
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*PG	Pn	00 43 08.1	-0.5
ERTU				*e*SN	Sn	00 43 31.3	+2.4
KTK1	**Kautokeino**	**1.64**	**42**	*e*P	Pn	00 43 10.3	-0.2
KALU	**Kalix**	**2.34**	**146**	*e*P	Pn	00 43 20.4	+0.3
TOF	**Tornio**	**2.40**	**135**	*e*PB	Pn	00 43 22.5	+1.6
	baz=316						
TOF				MSG		00 43 50.9	
	comp=Z,2.0nm,0.2s						
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pn	00 43 25.4	+2.0
RNF				*e*SG	Sb	00 43 59.9	+0.2
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*PB	Pb	00 43 26.3	-1.4

UPP 06 00:42:44.8±0.3, 67.°84N×20.°22E, h0km, ML2.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.12**	**21**	P	Pg	00 42 47.4	+0.2
KUA				S	Sg	00 42 49.1	+0.4
KOVU	**Salmi**	**0.38**	**357**	P	Pg	00 42 52.2	+0.1
LANU	**Lannavaara**	**0.70**	**72**	P	Pg	00 42 58.0	-0.2
PAJU	**Pajala**	**1.39**	**125**	P	Pg	00 43 10.2	-1.1

*IDC **06** 00:45:33.8±1.9, 49.°13S×108.°81E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.9/26, mbtmp4.0/6, MS3.7/17, Ms1 3.7/17, ms1mx3.5/29, Error ellipse: s-maj=73.6km s-min=19.5km az=117.0*
*NEIC **06** 00:45:34.2±1.5, 49.°1S±0.°1×108.°6E±0.°2, h10km±1km, mb4.5/11, Error ellipse: s-maj=28.0km s-min=19.1km az=139.0*

ISC 06 00:45:34.8±0.8, 49.°1S±0.°1×108.°7E±0.°2, h10km, n42, σ0s74/27, mb4.1/8, MS3.7/16, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.75**	**18**	T	T	01 04 09.5	
	baz=193,slow=74,SNR=161						
H01W1	**Cape Leeuwin H**	**14.76**	**18**	T	T	01 04 08.8	
	baz=193,slow=74,SNR=161						
H01W3	**Cape Leeuwin H**	**14.77**	**18**	T	T	01 04 16.5	
	baz=193,slow=74,SNR=175						
NWAO	**Narrogin (SRO)**	**17.38**	**25**	LR	LR	00 54 25.6	
	comp=Z,342nm,21.0s,baz=252,slow=31						
MORW	**Morawa**	**20.78**	**18**		**P**	**00 50 16.8**	**+0.9**
MORW				IAmb	IAmb	00 50 24.2	
	comp=Z,56nm,1.6s						
MAW	**Mawson**	**29.34**	**214**	LR	LR	01 00 37.2	
	comp=Z,135nm,21.4s,baz=58,slow=31						
STKA	**Stephens Creek**	**30.07**	**67**	P	**P**	**00 51 43.9**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=294,slow=15,SNR=3.3						
STKA				LR	LR	01 01 36.8	
	comp=Z,208nm,21.4s,baz=206,slow=32						
STKA	**Stephens Creek**	**30.07**	**67**	P	**P**	**00 51 42.9**	**-1.2**
ASAR	**Alice Springs**	**32.23**	**47**	P	**P**	**00 52 03.1**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=210,slow=7.9,SNR=10						
ASAR				LR	LR	01 03 24.1	
	comp=Z,160nm,21.6s,baz=208,slow=33						
ASAR	**Alice Springs**	**32.23**	**47**	P	**P**	**00 52 02.5**	**-0.7**
AS31	**Alice Springs**	**32.23**	**47**	P	**P**	**00 52 02.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**33.83**	**30**	LR	LR	01 04 43.3	
	comp=Z,204nm,20.1s,baz=211,slow=34						
VNDA	**Vanda**	**34.79**	**162**	P	**P**	**00 52 24.9**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=293,slow=8.9,SNR=9.9						
VNDA				LR	LR	01 05 31.0	
	comp=Z,49nm,18.8s,baz=298,slow=34						
VNDA	**Vanda**	**34.79**	**162**	P	**P**	**00 52 24.7**	**-0.2**
VNDA				IAmb	IAmb	00 52 26.1	
	comp=Z,4.5nm,1.2s						
WRA	**Warramunga Arr**	**35.62**	**44**	P	**P**	**00 52 32.8**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=207,slow=8.8,SNR=8.1						
WRA				LR	LR	01 05 30.3	
	comp=Z,179nm,20.0s,baz=195,slow=34						
WRA	**Warramunga Arr**	**35.62**	**44**	P	**P**	**00 52 31.6**	**-1.1**
WB2	**Warramunga Arr**	**35.63**	**44**	P	**P**	**00 52 32.2**	**-0.5**
WB2				IAmb	IAmb	00 52 41.8	
	comp=Z,5.1nm,1.1s						
WB0	**Warramunga Arr**	**35.80**	**44**	P	**P**	**00 52 33.7**	**-0.5**
WB0				IAmb	IAmb	00 52 35.7	
	comp=Z,11nm,1.6s						
BATI	**Baumata**	**40.74**	**23**	LR	LR	01 10 52.9	
	comp=Z,94nm,18.0s,baz=236,slow=37						
QSPA	**South Pole Qui**	**41.04**	**180**	P	**P**	**00 53 18.0**	**0.0**
	comp=Z,2.7nm,0.9s,baz=349,slow=5.2,SNR=5.8						
QSPA	**South Pole Qui**	**41.04**	**180**	P	**P**	**00 53 17.9**	**-0.1**
QSPA				IAmb	IAmb	00 53 25.6	
	comp=Z,13nm,1.4s						
KAPI	**Kappang**	**44.92**	**16**	LR	LR	01 11 18.3	
	comp=Z,42nm,19.1s,baz=243,slow=34						
TUWZ	**Tuamarina**	**45.29**	**106**	P	**P**	**00 53 52.5**	**0.0**
SNAA	**Sanae**	**50.31**	**202**	P	**P**	**00 54 30.9**	**-0.1**
SNAA	**Sanae**	**50.31**	**202**	P	**P**	**00 54 31.4**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=94,slow=8.4,SNR=6.2						
SNAA				LR	LR	01 13 47.0	
	comp=Z,72nm,20.8s,baz=9.0,slow=34						
SNAA	**Sanae**	**50.31**	**202**	P	**P**	**00 54 31.0**	**-0.1**
SNAA				IAmb	IAmb	00 54 39.0	
	comp=Z,8.9nm,1.0s						
PMG	**Port Moresby**	**50.95**	**52**	LR	LR	01 15 03.3	
	comp=Z,98nm,19.3s,baz=203,slow=35						
VNA2	**Neumayer--Watz**	**51.92**	**202**	P	**P**	**00 54 43.3**	**+0.2**
VNA1	**Neumayer--Stat**	**52.32**	**202**	P	**P**	**00 54 47.0**	**+1.1**
KRVT	**Keravat (AS076**	**57.81**	**54**	LR	LR	01 18 54.1	
	comp=Z,51nm,18.1s,baz=185,slow=35						
HNR	**Honiara**	**58.11**	**65**	LR	LR	01 19 17.7	
	comp=Z,61nm,18.1s,baz=113,slow=35						
BOSA	**Boshof**	**64.82**	**255**	LR	LR	01 18 32.8	
	comp=Z,106nm,19.1s,baz=156,slow=30						
BOSA	**Boshof**	**64.82**	**255**	P	**P**	**00 56 12.8**	**-1.1**
SUR	**Sutherland**	**65.01**	**249**	LR	LR	01 18 38.1	
	comp=Z,126nm,19.0s,baz=122,slow=30						
LBTB	**Lobatse**	**67.11**	**258**	LR	LR	01 20 04.8	
	comp=Z,51nm,18.2s,baz=134,slow=31						
GO09	**Cerro Castillo**	**80.01**	**179**	P	**P**	**00 57 43.6**	**-0.4**
PPT	**Papeete**	**84.36**	**110**	LR	LR	01 25 35.4	
	comp=Z,21nm,21.1s,baz=246,slow=28						
NVAR	**Mina Array Bea**	**144.96**	**90**	PKP	**PKPab**	**01 05 11.9**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=236,slow=4.2,SNR=5.1						
NVAR	**Mina Array Bea**	**144.96**	**90**	

comp=N,215nm,0.6s
KRBR Kerman 3.31 46 *e*Pn **Pn** **01 15 19.1 -0.4**
TVBK TV Kerman 3.31 46 *e*Pn **Pn** **01 15 19.0 -0.6**
TVBK *e* 01 16 20.3
UOSS Minazif 3.35 144 Pn **Pn** **01 15 20.8 +1.0**
UOSS Sn **Sn** **01 15 59.4 -0.2**
HATD Hatta, Dubai 3.41 146 P **Pn** **01 15 22.1 +1.5**
HATD Hatta, Dubai 3.41 146 P **Pn** **01 15 22.4 +1.8**
HATD Hatta, Dubai 3.41 146 *e*Pn **Pn** **01 15 22.5 +1.9**
KHGB Koh Gabri 3.43 38 *e*Pn **Pn** **01 15 21.1 0.0**
KHGB *e* 01 16 07.0
KHGB Koh Gabri 3.43 38 P **Pn** **01 15 21.0 0.0**
IMEH Mehriz 3.73 8 *e*Pn **Pn** **01 15 25.5 +0.3**
IMEH Mehriz 3.73 8 Pn **Pn** **01 15 25.4 +0.3**
MZWR Madinat Zayed 3.91 182 *e*Pn **Pn** **01 15 31.3 +3.9**
ALNE Al Ain 3.93 156 *e*Pn **Pn** **01 15 29.9 +2.2**
SOHO SOHO 4.19 147 P **Pn** **01 15 32.0 +0.7**
SOHO SOHO 4.19 147 P **Pn** **01 15 34.5 +3.3**
SOHO SOHO 4.19 147 *e*Pn **Pn** **01 15 32.4 +1.1**
ISAD Sadrabad 4.23 356 *e*Pn **Pn** **01 15 32.5 +0.4**
IRAM Ramesheh 4.36 341 *e*Pn **Pn** **01 15 33.6 -0.2**
ICHK Chekchek 4.56 4 *e*Pn **Pn** **01 15 36.8 +0.2**
YZKH Yazd 4.71 6 *e*Pn **Pn** **01 15 38.5 -0.1**
YZKH Yazd 4.71 6 *e*Pn **Pn** **01 15 38.5 -0.1**
ARQ Araqi 4.88 152 P **Pn** **01 15 42.0 +1.2**
SNR=13
ARQ S **Sn** **01 16 37.4 +0.1**
IGAR Gharneh 5.01 340 *e*Pn **Pn** **01 15 43.3 +0.5**
HOQ Hoqain 5.04 143 P **Pn** **01 15 44.1 +1.1**
SNR=9.4
HOQ S **Sn** **01 16 41.3 0.0**
UMZA Um Al Zommool 5.05 168 *e*Pn **Pn** **01 15 45.5 +2.4**
NASN Na'in 5.21 349 *e*Pn **Pn** **01 15 45.6 0.0**
NASN Na'in 5.21 349 *e*Pn **Pn** **01 15 45.6 0.0**
IZEF Zefreh 5.40 345 *e*Pn **Pn** **01 15 47.2 -1.0**
ANAR Anarak 5.50 357 *e*Pn **Pn** **01 15 48.8 -0.6**
BIDO Bidbid 5.55 137 *e*Pn **Pn** **01 15 50.8 +0.8**
IPIR Pirpir 5.68 332 *e*Pn **Pn** **01 15 51.0 -1.0**
BSY Bisya 5.69 149 P **Pn** **01 15 53.5 +1.5**
BSY S **Sn** **01 16 55.9 -1.5**
TPRV Parvadeh(Tabas 5.80 23 *e*Pn **Pn** **01 15 52.8 -0.7**
SMDO Samad 5.86 141 P **Pn** **01 15 55.8 +1.4**
SNR=14
SMDO S **Sn** **01 17 02.8 +1.0**
IKLH Kolahrood 6.00 340 *e*Pn **Pn** **01 15 56.3 -0.2**
WSAR Wadi Sarin 6.07 136 Pn **Pn** **01 15 57.8 +0.6**
comp=N,0.9nm,0.3s,baz=331,slow=7.6,SNR=13
WSAR Sn **Sn** **01 17 05.5 -1.2**
baz=164,slow=18,SNR=1.6
WSAR LR LR 01 18 58.1
comp=N,147nm,19.4s,baz=337,slow=46
WSAR Wadi Sarin 6.07 136 P **Pn** **01 15 58.6 +1.5**
BSRN Basiran 6.14 45 *e*Pn **Pn** **01 15 58.1 -0.2**
BSRN Basiran 6.14 45 *e*Pn **Pn** **01 15 58.1 -0.2**
JMDO Jabal Madar 6.45 144 P **Pn** **01 16 03.1 +0.7**
JMDO S **Sn** **01 17 15.9 -0.2**
QAM Ghamsar 6.46 340 *e*Pn **Pn** **01 16 02.6 0.0**
KRSH Karshahi 6.47 346 *e*Pn **Pn** **01 16 01.9 -1.0**
TKDS Koohdasht(Taba 6.48 23 *e*Pn **Pn** **01 16 02.3 -0.6**
TABS Tabas 6.51 23 *e*Pn **Pn** **01 16 03.0 -0.3**
TABS Tabas 6.51 23 *e*Pn **Pn** **01 16 03.0 -0.3**
TNSJ Nastanj 6.64 19 *e*Pn **Pn** **01 16 04.4 -0.6**
WBK Wadi Bani Khal 6.74 137 P **Pn** **01 16 06.4 -0.1**
SNR=14
KHMZ Khomeyn 6.98 331 *e*Pn **Pn** **01 16 10.3 +0.4**
KHMZ Khomeyn 6.98 331 *e*Pn **Pn** **01 16 10.3 +0.4**
AFRZ Afriz 7.15 36 *e*Pn **Pn** **01 16 11.7 -0.4**
JLN Jalan Bani Buh 7.36 137 P **Pn** **01 16 15.1 +0.3**
JLN P **Pn** **01 16 15.1 +0.3**
MHTO MHTO 7.57 151 P **Pn** **01 16 18.1 +0.4**
MHTO S **Sn** **01 17 41.5 -2.2**
IANJ Anjilo 7.76 359 *e*Pn **Pn** **01 16 19.6 -1.0**
SHRT Shahrakht 8.02 41 *e*Pn **Pn** **01 16 23.7 -0.3**
SHRT Shahrakht 8.02 41 *e*Pn **Pn** **01 16 23.7 -0.3**
DQM DQM 8.36 157 P **Pn** **01 16 28.4 -0.2**
DQM S **Sn** **01 17 58.4 -4.6**
RAYN Ar Rayn 8.74 244 P **Pn** **01 16 32.7 -1.2**
RAYN 01 18 09.4
RAYN Ar Rayn 8.74 244 Pn **Pn** **01 16 32.7 -1.2**
RAYN Sn **Sn** **01 18 09.4 -3.3**
HRA Herat 9.70 44 Pn **Pn** **01 16 47.0 -0.2**
WHFO Wadi Hawf 9.72 182 P **Pn** **01 16 48.0 +0.6**
SNR=45
WHFO S **Sn** **01 18 32.8 -3.8**
SHAO Shalim 9.73 171 P **Pn** **01 16 46.8 -0.5**
SNR=5.9
SHAO S **Sn** **01 18 33.5 -3.3**
DMTO DMTO 9.96 175 P **Pn** **01 16 49.4 -1.1**
DMTO S **Sn** **01 18 39.1 -3.2**
RBK Rabkut 10.13 179 P **Pn** **01 16 53.5 +0.6**
RBK S **Sn** **01 18 45.6 -1.2**
ABTO Aybut 10.30 184 P **Pn** **01 16 53.8 -1.5**
ABTO S **Sn** **01 18 47.7 -3.2**
GEYT Alibeck 10.78 18 Pn Pn 01 17 06.4 +4.7
comp=N,0.3nm,0.3s,baz=212,slow=9.8,SNR=5.5
KBL Kabul 14.55 58 P **Pn** **01 17 52.7 -0.8**
KBL Kabul 14.55 58 Pn **Pn** **01 17 52.7 -0.8**
GNI Garni 14.62 331 Pn **P** **01 18 01.0 +0.2**
comp=N,0.3nm,0.3s,baz=256,slow=6.8,SNR=3.5
GNI LR LR 01 24 37.1
comp=N,68nm,21.4s,baz=138,slow=41
GNI Garni 14.62 331 P **Pn** **01 17 52.8 -1.6**
GNI Garni 14.62 331 Pn **Pn** **01 17 52.8 -1.6**
ASF Jabal al Asfar 15.52 291 Pn **Pn** **01 18 07.9 +1.6**
comp=N,0.2nm,0.3s,baz=57,slow=17,SNR=3.4
ASF Sn **Sn** **01 20 51.8 -6.5**
comp=N,0.1nm,0.3s,baz=257,slow=18,SNR=2.7
KOPT Kop Dagi 16.64 321 **Pn** **01 18 21.0 0.0**
CHGR Chuyangaron 16.71 45 **Pn** **01 18 21.9 +0.2**
MALT Malatya 16.82 313 P **P** **01 18 27.5 +2.3**
EIL Elat 16.87 281 Pn **Pn** **01 18 25.1 +1.6**
comp=N,0.5nm,0.3s,baz=163,slow=5.3,SNR=3.8
MMAI Mount Meron Ar 16.93 293 P **P** **01 18 26.8 +0.3**
comp=N,0.3nm,0.3s,baz=104,slow=16,SNR=3.5
ZEI Tsey 17.17 334 *e*P **P** **01 18 28.7 -0.5**
ZEI pmax pmax
comp=Z,22nm,1.3s
ONI Oni 17.18 333 P **P** **01 18 33.9 +4.7**
NIL Nilore 17.56 66 P **Pn** **01 18 32.3 +0.1**
NIL pmax pmax
comp=Z,9.0nm,0.8s
NIL Nilore 17.56 66 **Pn** **01 18 32.3 +0.1**
GAR Garm 17.64 46 Pn **Pn** **01 18 33.2 -0.1**
GAR **P** **01 18 33.4 -0.9**
GAR IAmb IAmb 01 18 38.4
comp=Z,14nm,0.9s
KBZ Khabaz 18.36 334 P **P** **01 18 43.5 +1.6**
comp=Z,0.1nm,0.3s,baz=174,slow=7.5,SNR=5.9
KBZ S **Sn** **01 22 03.9 -3.1**
comp=Z,0.3nm,0.3s,baz=270,slow=21,SNR=4.7
KVAR Kislovodsk Arr 18.63 334 P **Pn** **01 18 48.3 +2.9**
baz=75,slow=19,SNR=2.1
KVAR S **Sn** **01 22 10.8 -3.0**
baz=324,slow=14,SNR=2.7
KIV Kislovodsk 18.63 334 *e*P **Pn** **01 18 46.3 +0.9**
KIV pmax pmax
comp=Z,35nm,1.0s
KIV MLR MLR
comp=Z,44nm,13.0s
KIV Kislovodsk 18.63 334 P **P** **01 18 45.6 +0.4**
KIV IAmb IAmb 01 19 03.1
comp=Z,14nm,1.0s
KK31 Karatay Array 20.36 37 P **P** **01 19 04.3 +0.3**
KK31 pmax pmax
comp=Z,8.0nm,1.1s
KK31 Karatay Array 20.36 37 P **P** **01 19 04.2 +0.3**
KKAR Karatay Array 20.36 37 P **P** **01 19 04.3 +0.2**
KKAR pmax pmax
comp=Z,8.0nm,1.1s
KKAR Karatay Array 20.36 37 P **P** **01 19 04.2 +0.2**
KKAR Karatay Array 20.36 37 P **P** **01 19 04.2 +0.2**
BR131 Keskin Array S 20.74 311 P **P** **01 19 08.5 +0.3**
BR131 pmax pmax
comp=Z,8.0nm,1.0s
BR131 Keskin Array S 20.74 311 P **P** **01 19 08.5 +0.3**
BR131 IAmb IAmb 01 19 15.6
comp=Z,7.6nm,0.9s
BRTR Keskin Array B 20.74 311 P **P** **01 19 09.1 +0.9**
comp=Z,5.6nm,0.8s,baz=130,slow=12,SNR=13
BRTR Keskin Array B 20.74 311 P **P** **01 19 08.6 +0.3**
ABKAR Akbulak array 22.02 10 P **P** **01 19 20.8 -0.9**
ABKAR IAmb IAmb 01 19 28.5
comp=Z,6.7nm,0.8s
ABKAR Akbulak array 22.02 10 P **P** **01 19 22.1 +0.4**
ELL Elmali 22.28 300 P **P** **01 19 25.0 +0.2**
ELL pmax pmax
comp=Z,20nm,0.8s
ELL Elmali 22.28 300 P **P** **01 19 24.9 +0.2**
FRU1 Bishkek 22.51 43 P **P** **01 19 27.3 +0.1**
FRU1 pmax pmax
comp=Z,33nm,0.5s
FRU1 Bishkek 22.51 43 P **P** **01 19 27.3 +0.1**
MDUB Mudurnu 22.74 310 P **P** **01 19 30.0 +0.3**
AKTO Aktyubinsk 22.92 7 P **P** **01 19 31.9 +0.6**
comp=Z,3.0nm,0.6s,baz=168,slow=12,SNR=12
AKTO LR LR 01 30 19.1
comp=Z,39nm,18.5s,baz=200,slow=41
AKTO Aktyubinsk 22.92 7 P **P** **01 19 32.0 +0.6**
BOOM Boomskoye usch 23.13 45 P **P** **01 19 33.9 +0.1**
BOOM pmax pmax
comp=Z,11nm,1.1s
BOOM Boomskoye usch 23.13 45 P **P** **01 19 33.9 +0.1**
BOOM IAmb IAmb 01 19 39.8
comp=Z,11nm,1.1s
KDJ Kajisay 23.73 47 P **P** **01 19 39.9 +0.1**
KDJ pmax pmax
comp=Z,16nm,1.2s
KDJ Kajisay 23.73 47 P **P** **01 19 39.9 +0.1**
KDJ IAmb IAmb 01 19 47.0
comp=Z,16nm,1.1s
KARP Karpathos 24.14 296 P **P** **01 19 43.8 +0.2**
VRH Novokhopyorsk 25.27 342 *e*P **P** **01 19 53.8 +0.2**
VRH pmax pmax
comp=Z,30nm,0.7s
VSR Storozhevoye 26.06 338 *e*P **P** **01 20 01.3 +0.6**
VSR pmax pmax
comp=Z,9.0nm,0.6s
TPGR Topolog 26.67 317 ⇓P **P** **01 20 06.1 -0.3**
BRVK Borovoye 28.07 21 P **P** **01 20 19.3 +0.4**
BRVK pmax pmax
comp=Z,6.0nm,0.9s
BRVK Borovoye 28.07 21 P **P** **01 20 19.3 +0.4**
BRVK IAmb IAmb 01 20 23.1
comp=Z,5.5nm,0.9s
BVAR Borovoye Array 28.08 21 P **P** **01 20 20.1 +1.2**
comp=Z,4.3nm,0.8s,baz=18,slow=5.2,SNR=20
MLR Muntele Rosu 28.50 316 ⇓P **P** **01 20 25.3 +2.3**
comp=Z,2.5nm,0.8s,baz=172,slow=7.1,SNR=5.7
MLR Muntele Rosu 28.50 316 ⇓P **P** **01 20 24.5 +1.6**
MLR Muntele Rosu 28.50 316 ⇓P **P** **01 20 24.5 +1.6**
MLR Muntele Rosu 28.50 316 P **P** **01 20 23.2 +0.2**
ARU Arti 28.91 5 P **P** **01 20 27.4 +1.2**
comp=Z,0.3nm,0.3s,baz=169,slow=16,SNR=1.6
ARU LR LR 01 33 54.9
comp=Z,25nm,18.1s,baz=220,slow=40
ARU Arti 28.91 5 P **P** **01 20 26.7 +0.4**
ARU IAmb IAmb 01 20 30.0
comp=Z,5.1nm,1.1s
VOIR 29.03 315 ⇓P **P** **01 20 24.1 -3.5**
VOIR 29.03 315 ⇓P **P** **01 20 24.1 -3.5**
DOPR Dopca 29.08 317 ⇓P P 01 20 21.7 -6.2
MKAR Makanchi Array 29.25 42 P **P** **01 20 29.6 +0.2**
comp=Z,1.0nm,0.7s,baz=220,slow=8.2,SNR=6.0
ARR Arges 29.26 315 ⇑P **P** **01 20 30.7 +1.1**
KURBB Kurchatov Arra 29.51 32 P **P** **01 20 32.2 +0.6**
comp=Z,1.7nm,0.6s,baz=234,slow=8.4,SNR=9.1
KURK Kurchatov 29.61 32 P **P** **01 20 32.9 +0.3**
KURK pmax pmax
comp=Z,4.0nm,1.2s
KURK Kurchatov 29.61 32 P **P** **01 20 32.9 +0.3**
KURK IAmb IAmb 01 20 38.3
comp=Z,4.0nm,1.1s
AKASG Malin Array Be 29.71 327 P **P** **01 20 34.0 +0.6**
comp=Z,0.4nm,0.2s,baz=135,slow=7.8,SNR=1.7
AKASG Malin Array Be 29.71 327 P **P** **01 20 34.0 +0.6**
BZS Buzias 31.29 314 ⇑P P 01 20 55.2 +7.7
BZS Buzias 31.29 314 ⇑P P 01 20 55.2 +7.8
KOLS Kolonicke sedl 32.37 320 *e*P **P** **01 20 58.1 +1.2**
KOLS pmax pmax
comp=Z,5.0nm,1.1s
KOLS Kolonicke sedl 32.37 320 *e*P **P** **01 20 58.1 +1.2**
VYHS Vyhne 34.20 317 *e*P **P** **01 21 14.2 +1.3**
VYHS Vyhne 34.20 317 *e*P **P** **01 21 14.2 +1.3**
ZAA0 Zalesovo Array 34.60 32 P **P** **01 21 15.1 -1.2**
ZAA0 IAmb IAmb 01 21 19.9
comp=Z,6.0nm,0.8s
ZALV Zalesovo Beam 34.60 32 P **P** **01 21 15.3 -1.0**
comp=Z,5.8nm,0.6s,baz=236,slow=10,SNR=14
ZALV PcP **PcP** **01 23 50.9 +0.3**
comp=Z,0.4nm,0.5s,baz=205,slow=3.0,SNR=2.1
ZALV LR LR 01 37 41.3
comp=Z,33nm,18.2s,baz=279,slow=40
ZALV Zalesovo Beam 34.60 32 P **P** **01 21 14.8 -1.5**
ZALV **PcP** **01 23 51.0 +0.3**
ARSA Arzberg 35.80 314 *e*P **P** **01 21 29.0 +2.2**
comp=Z,5.0nm,1.1s
OSTC Ostas 36.61 319 *e*P **P** **01 21 34.8 +1.2**
CHVC Chvalec 36.71 319 *e*P **P** **01 21 33.2 -1.3**
MOA Molln 36.80 314 *e*P **P** **01 21 38.9 +3.6**
comp=Z,5.9nm,1.6s
GERES GERESS Array B 37.49 315 P **P** **01 21 42.7 +1.5**
comp=Z,0.2nm,0.5s,baz=154,slow=9.9,SNR=4.2
GERES GERESS Array B 37.49 315 P **P** **01 21 41.5 +0.4**
KHC Kasperske Hory 37.66 316 *e*P **P** **01 21 42.8 +0.2**
KHC Kasperske Hory 37.66 316 *e*P **P** **01 21 42.8 +0.2**
WTTA Wattenberg 38.34 312 *e*P **P** **01 21 49.7 +1.2**
comp=Z,8.5nm,1.0s
WATA Walderalm 38.39 312 *e*P **P** **01 21 50.4 +1.4**
comp=Z,2.9nm,0.8s
FINES FINESS Array B 38.59 339 P **P** **01 21 49.8 -0.3**
comp=Z,2.2nm,0.8s,baz=146,slow=9.4,SNR=9.0
FINES FINESS Array B 38.59 339 P **P** **01 21 50.7 +0.5**
FINES FINESS Array B 38.59 339 P **P** **01 21 50.6 +0.5**
SQTA Sankt Quirin 38.60 312 *e*P **P** **01 21 51.6 +0.9**
comp=Z,2.5nm,0.5s
MOTA Moosalm 38.71 312 *e*P **P** **01 21 56.0 +4.4**
CLL Collm 38.77 319 *e*(P) **P** **01 21 53.0 +1.1**
CLL *i* 01 21 59.3
CLL *e*PPPP 01 23 53.0
CLL Collm 38.77 319 *e*P **P** **01 21 53.0 +1.1**
CLL *i* 01 21 59.3
FETA Feichten 38.87 312 *e*P **P** **01 21 53.0 +0.1**
comp=Z,5.5nm,1.2s
DAVA Damuels 39.50 312 *e*P **P** **01 21 58.9 +0.7**
comp=Z,4.0nm,0.5s
GTA Gaotai 39.52 61 *e*P **P** **01 22 02.1 +3.6**
GTA pP sP 01 22 07.5 +4.2
GTA sP pP 01 22 10.9 +9.0
GTA pmax pmax
comp=Z,9.0nm,1.2s
NOA NORSAR Array B 43.92 332 P **P** **01 22 34.3 +0.2**
comp=Z,1.0nm,0.8s,baz=120,slow=7.9,SNR=3.6
NOA LR LR 01 44 54.9
comp=Z,13nm,18.5s,baz=300,slow=42
TAM Tamanrasset 43.93 275 P **P** **01 22 34.7 -0.2**
TAM pmax pmax
comp=Z,3.0nm,1.0s
TAM Tamanrasset 43.93 275 P **P** **01 22 34.6 -0.2**
TAM IAmb IAmb 01 22 38.7
comp=Z,3.3nm,1.0s
ARCES ARCESS Array B 45.04 346 P **P** **01 22 41.1 -1.8**
comp=Z,2.7nm,0.9s,baz=132,slow=5.1,SNR=4.8
SONM Songino Array 45.06 49 P **P** **01 22 43.1 -0.4**
comp=Z,1.2nm,0.8s,baz=256,slow=11,SNR=4.8
NRIK Noril'sk 46.02 16 P **P** **01 22 52.0 +1.5**
comp=Z,1.6nm,0.6s,baz=195,slow=5.4,SNR=4.8
ESDC Sonseca Array 48.96 300 P **P** **01 23 15.0 +1.0**
comp=Z,0.3nm,0.5s,baz=78,slow=7.0,SNR=4.1
TOA0 Torodi Ar. Sit 50.79 264 P **P** **01 23 26.9 -1.2**
TOA0 IAmb IAmb 01 23 30.5
comp=Z,6.3nm,1.0s
TORD Torodi Ar. Bea 50.79 264 P **P** **01 23 26.8 -1.4**
comp=Z,3.8nm,0.8s,baz=56,slow=7.1,SNR=15
TORD LR LR 01 48 18.8
comp=Z,40nm,19.6s,baz=310,slow=40
TORD Torodi Ar. Bea 50.79 264 P **P** **01 23 27.0 -1.2**
DBIC Dimbokro 59.44 261 P **P** **01 24 29.2 -1.4**
comp=Z,5.9nm,0.9s,baz=25,slow=8.1,SNR=3.3
DBIC Dimbokro 59.44 261 P **P** **01 24 29.3 -1.4**
KSRS Korea Array 61.59 60 P **P** **01 24 45.3 +0.3**
comp=Z,1.5nm,0.6s,baz=283,slow=7.3,SNR=6.2
KLR Kul'dur 61.79 47 P **P** **01 24 46.6 +0.4**
comp=Z,1.5nm,0.6s,baz=300,slow=7.8,SNR=5.2
BOSA Boshof 62.41 209 P **P** **01 24 50.0 -0.7**
comp=Z,1.6nm,0.5s,baz=17,slow=5.8,SNR=7.5
BOSA Boshof 62.41 209 P **P** **01 24 50.2 -0.4**
BOSA pmax pmax
comp=Z,4.0nm,1.1s
BOSA Boshof 62.41 209 P **P** **01 24 50.2 -0.4**
USRK Ussuriysk Ar. 62.99 52 P **P** **01 24 54.7 +0.4**
comp=Z,1.9nm,0.7s,baz=274,slow=4.1,SNR=5.6
USRK Ussuriysk Ar. 62.99 52 P **P** **01 24 54.4 +0.1**
SEY Seymchan 69.39 29 P **P** **01 25 36.3 +1.3**
comp=Z,3.7nm,0.7s,baz=286,slow=8.6,SNR=5.9
INK Inuvik 84.14 3 P **P** **01 26 59.7 +1.5**
comp=Z,1.3nm,0.8s,baz=346,slow=4.9,SNR=4.9
INK Inuvik 84.14 3 P **P** **01 26 58.4 +0.2**
INK pmax pmax
comp=Z,2.0nm,1.0s
INK Inuvik 84.14 3 P **P** **01 26 58.4 +0.2**
INK IAmb IAmb 01 27 04.1
comp=Z,1.5nm,0.9s
ILAR Eielson Array 86.41 9 P **P** **01 27 10.6 +0.9**
comp=Z,0.9nm,0.6s,baz=317,slow=3.6,SNR=13
ILAR Eielson Array 86.41 9 P **P** **01 27 10.2 +0.6**
YKA Yellowknife Ar 89.68 355 P **P** **01 27 27.1 +1.8**
comp=Z,2.4nm,0.7s,baz=21,slow=4.2,SNR=2.3
WRA Warramunga Arr 90.93 112 P **P** **01 27 30.3 -1.5**
comp=Z,0.5nm,0.7s,baz=318,slow=4.0,SNR=5.2
WRA Warramunga Arr 90.93 112 P **P** **01 27 30.7 -1.1**
WRA Warramunga Arr 90.93 112 P **P** **01 27 30.7 -1.1**
ASAR Alice Springs 92.37 115 P **P** **01 27 38.1 -0.4**
comp=Z,0.4nm,0.8s,baz=275,slow=5.2,SNR=2.4

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*ANF **06** 01:17:09.9±0.7,41°.78N×119°.64W,h2km±5km, ML3.9/18, Error ellipse: s-maj=3.8km s-min=2.3km az=121.0*
*IDC **06** 01:17:09.8±0.6,41°.56N×119°.72W,h0km, mb3.7/3, mb1 3.9/7, mb1mx3.6/49, mbtmp3.6/7, ML3.3/4, MS2.8/6, Ms1 2.8/6, ms1mx2.6/42, Error ellipse: s-maj=9.5km s-min=4.9km az=15.0*
*REN **06** 01:17:11.0±0.3,41°.87N±0°.04×119°.64W±0°.05, h1km±1km, ML3.5/3, mb4.1/1(NEIC), ML3.8/62(SEA), Mwr3.9/95(NEIC), Error ellipse: s-maj=6.6km s-min=4.7km az=213.0*
*NEIC **06** 01:17:11,41°.87N×119°.64W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=4.86; $M_{\theta\theta}$=1.35; $M_{\phi\phi}$=6.21; $M_{r\theta}$=-3.32; $M_{r\phi}$=0.75; $M_{\theta\phi}$=-5.31; Fault plane solution: M_0=8.48000×10^{14} NP1:ϕ_s=26.18000°, δ=70.51000°, λ=-72.08000°. NP2:ϕ_s=162.06000°, δ=26.24000°, λ=-131.01000°. Principal axes: T 8.7392, Plg23.0000°, Azm102.0000°; N -0.5537, Plg17.0000°, Azm200.0000°; P -8.1855, Plg60.0000°, Azm322.0000°;*
*NEIC **06** 01:17:11.1±0.4,41°.87N±0°.04×119°.64W±0°.06, h6km±5km Error ellipse: s-maj=6.6km s-min=5.3km az=225.0*
*SEA **06** 01:17:12.1±1.6,41°.81N±0°.04×119°.69W±0°.02, h0km±7km, Error ellipse: s-maj=6.0km s-min=2.5km az=183.0*

ISC 06 01:17:09.3±1.0,41°.65N±0°.03×119°.67W±0°.03,h3km±9km, n118,σ1$9^{7}/_{97}$/128,mb3.8/4,Nevada

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.53**	**299**			**Pg**	**01 17 20.6**	**+1.0**
MOD						**Sg**	**01 17 27.9**	**+1.3**
K05A	**Summer Lake**	**1.41**	**320**			**Pn**	**01 17 34.8**	**-1.3**
K05A					Sg	**Sn**	**01 17 51.6**	**-3.5**
M04C	**Macdoel**	**1.63**	**275**	P		**Pb**	**01 17 39.9**	**-0.1**
	baz=86,SNR=346							
M04C				S		**Sg**	**01 18 02.6**	**+1.0**
	baz=86							
K04D	**Chiloquin, OR**	**1.83**	**303**	P		**Pn**	**01 17 41.3**	**-0.5**
	baz=115,SNR=45							
K04D				S		**Sn**	**01 18 06.1**	**+0.7**
	baz=115							
BEKR	**Beckworth**	**1.85**	**197**			**Pg**	**01 17 46.8**	**+1.9**
J08A	**Circle Bar Ran**	**1.93**	**27**			**Pn**	**01 17 41.2**	**-1.9**
PAHR	**Pah Rah Range**	**1.95**	**173**			**Pg**	**01 17 47.9**	**+1.1**
J05D	**Fort Rock, OR**	**2.00**	**325**	P		**Pn**	**01 17 43.0**	**-1.1**
	baz=140							
J05D				S		**Sn**	**01 18 09.9**	**+0.2**
	baz=140							
L04D	**Klamath Falls**	**2.04**	**287**	P		**Pn**	**01 17 44.8**	**+0.1**
	baz=99,SNR=118							
L04D					Sb	**Sg**	**01 18 15.2**	**+0.2**
	baz=99							
O03E	**Paynes Creek**	**2.10**	**231**	Pb		**Pg**	**01 17 50.9**	**+1.3**
	baz=45,SNR=55							
O03E				Sg		**Sg**	**01 18 22.4**	**+5.5**
	baz=45							
YBH	**Yreka Blue Hor**	**2.27**	**273**	Pn		**Pn**	**01 17 48.7**	**+0.8**
	6.9nm,0.3s,baz=67,slow=13,SNR=48							
YBH					Pg	**Pb**	**01 17 51.4**	**+0.3**
	10.0nm,0.3s,baz=76,slow=14,SNR=52							
YBH					LR	LR	01 18 09.7	
	comp=Z,62nm,19.4s,baz=176,slow=27							
YBH					Lg	Lg	01 18 20.8	
	26nm,0.3s,baz=294,slow=4.8,SNR=12							
YBH	**Yreka Blue Hor**	**2.27**	**273**	Pn		**Pn**	**01 17 48.4**	**+0.6**
PINE	**Pine Mountain**	**2.34**	**337**			**Pn**	**01 17 47.8**	**-1.0**
VCNR	**Virginia City**	**2.35**	**180**			**Pg**	**01 17 53.6**	**-0.7**
N02D	**Trinity Center**	**2.38**	**255**	P		**Pb**	**01 17 50.6**	**-2.3**
	baz=68,SNR=36							
N02D					Sb	**Sg**	**01 18 28.3**	**+2.5**
	baz=68							
M02C	**Callahan**	**2.40**	**265**	P		**Pn**	**01 17 50.2**	**+0.6**
	baz=78,SNR=32							
M02C					Sb	**Sg**	**01 18 27.1**	**+0.7**
	baz=78							
J04D	**Umpqua Nationa**	**2.40**	**312**	Pb		**Pb**	**01 17 52.9**	**-0.4**
	baz=126							
J04D					Sb	**Sb**	**01 18 24.1**	**+0.6**
	baz=126							
WDC	**Whiskeytown Da**	**2.42**	**245**			**Pb**	**01 17 51.6**	**-1.8**
I07A	**Izee**	**2.44**	**3**			**Pn**	**01 17 48.5**	**-1.6**
ORV	**Oroville**	**2.51**	**214**	Pn		**Pg**	**01 17 55.5**	**-2.0**
PNTR	**Pine Nut**	**2.56**	**179**	Pn		**Pg**	**01 17 56.3**	**-2.1**
RUBR	**Rubicon Trail**	**2.62**	**188**	Pn		**Pg**	**01 17 57.1**	**-2.4**
HUMO	**Hull Mountain**	**2.62**	**293**			**Pn**	**01 17 52.3**	**-0.3**
KVN	**Kaiserville**	**2.86**	**155**			**Pb**	**01 18 00.2**	**-0.9**
AFDM	**Forest Hills D**	**2.87**	**201**	Pn		**Pb**	**01 18 00.7**	**-0.5**
I04A	**Tendick Farm,**	**2.94**	**318**	Pb		**Pb**	**01 18 02.0**	**-0.4**
	baz=132							
I04A					Sb	**Sb**	**01 18 39.4**	**+0.6**
	baz=132							
I05D	**Terrebonne, OR**	**2.95**	**336**	Pb		**Pb**	**01 18 01.3**	**-1.3**
	baz=153							
I05D					Sb	**Sb**	**01 18 38.4**	**-0.7**
	baz=153							
L02E	**Cave Junction**	**2.98**	**281**	P		**Pn**	**01 17 58.7**	**+1.3**
	baz=94,SNR=41							
L02E					Sb	**Sg**	**01 18 42.2**	**-2.7**
	baz=94							
RYN	**Ryan**	**3.14**	**163**			**Pb**	**01 18 04.2**	**-1.7**
K02D	**Willamette Mer**	**3.15**	**291**	P		**Pn**	**01 18 00.8**	**+1.0**
	baz=104,SNR=155							
K02D					Sb	**Sb**	**01 18 47.5**	**+2.8**
	baz=104							
WAKR	**Walker**	**3.15**	**177**			**Pb**	**01 18 04.5**	**-1.4**
KHMM	**Horse Mountain**	**3.15**	**257**	Pn		**Pb**	**01 18 02.8**	**-3.3**
KRMB	**Red Mountain**	**3.18**	**269**	Pn		**Pb**	**01 18 02.5**	**+2.2**
MFID	**Camas Ranch**	**3.35**	**57**			**Pn**	**01 18 02.3**	**-0.3**
KMRM	**Mail Ridge**	**3.37**	**246**	Pn		**Pb**	**01 18 06.3**	**-3.4**
NVAR	**Mina Array Bea**	**3.38**	**161**	Pg		**Pb**	**01 18 09.0**	**-1.0**
	1.5nm,0.3s,baz=339,slow=12,SNR=27							
NVAR					Lg	Lg	01 18 55.6	
	3.1nm,0.3s,baz=338,slow=30,SNR=1.9							
NVAR	**Mina Array Bea**	**3.38**	**161**			**Pb**	**01 18 07.5**	**-2.5**
JCC	**Jacoby Creek,**	**3.39**	**257**	Pn		**Pb**	**01 18 05.9**	**-4.0**
I03D	**Drain, OR**	**3.40**	**308**	Sb		**Sb**	**01 18 53.2**	**+1.5**
	baz=123							
NV11	**Mina Array Sit**	**3.42**	**160**			**Pb**	**01 18 07.8**	**-2.8**
KBO	**Bosley Butte**	**3.44**	**281**	Pn		**Pn**	**01 18 05.4**	**+1.5**
ELK	**Elko**	**3.47**	**104**	Pn		**Pn**	**01 18 07.8**	**+3.4**
	7.6nm,0.3s,baz=289,slow=13,SNR=65							
ELK					Pg	**Pb**	**01 18 11.8**	**+0.3**
	7.6nm,0.3s,baz=291,slow=18,SNR=45							
ELK					Lg	Lg	01 18 58.6	
	9.0nm,0.3s,baz=45,slow=20,SNR=6.5							
ELK					LR	LR	01 18 59.2	
	comp=Z,55nm,19.5s,baz=321,slow=31							
ELK	**Elko**	**3.47**	**104**			**Pn**	**01 18 06.2**	**+1.8**
LHV	**Little Huntoon**	**3.51**	**165**	Pn		**Pb**	**01 18 09.2**	**-2.8**
H04A	**Detroit Lake**	**3.55**	**330**	Pn		**Pn**	**01 18 04.7**	**-0.6**
KCPM

G08A	Pilot Rock	3.68	8	Pn		Pn	01 18 05.8	-1.4
G05D	Wamic, OR	3.79	342	Pb		Pb	01 18 15.8	-1.0
	baz=160							
G05D				Sb		Sb	01 19 03.8	+0.7
	baz=160							
COR	Corvallis	3.96	319	Pn		Pn	01 18 10.7	-0.2
MDPB	Devils Postpil	4.04	173	Pn		Pb	01 18 16.7	-4.5
TPH	Tonopah	4.04	151			Pb	01 18 16.3	-4.9
OMMB	Old Mammoth Mi	4.06	172	Pn		Pb	01 18 17.0	-4.7
F07A	Phinny Hill Vi	4.25	358	Pn		Pn	01 18 13.6	-1.3
HLID	Hailey	4.33	62	P		Pn	01 18 16.3	+0.2
	baz=248							
HLID				Sb		Sb	01 19 20.2	+1.4
	baz=248							
HLID	Hailey	4.33	62			Pn	01 18 16.0	-0.2
PLID	Pearl Lake	4.36	37	Pn		Pn	01 18 15.6	-1.1
F05D	White Salmon	4.43	344	Sb		Sb	01 19 22.5	+1.0
	baz=161							
R11A	Troy Canyon, C	4.55	135			Pn	01 18 22.6	+3.4
F04A	Amboy	4.72	336	Pn		Pn	01 18 20.6	-0.8
HAWA	Hanford	4.74	1	Pn		Pn	01 18 20.4	-1.2
E07A	Sunnyside	4.91	359	Pn		Pn	01 18 22.8	-1.2
BGU	Big Grassy Mou	5.06	96			Pn	01 18 27.9	+1.7
BCYI	Bear Canyon	5.31	58	Pn		Pn	01 18 29.4	-0.4
LON	Longmire	5.33	344	Pn		Pn	01 18 28.7	-1.0
TPNV	Topopah Spring	5.39	149	P		Pb	01 18 36.5	-7.8
	baz=333							
TPNV	Topopah Spring	5.39	149	Pn		Pn	01 18 34.7	+4.0
DUG	Dugway, Tooele	5.40	103	P		Pn	01 18 34.4	+3.6
	baz=290							
DUG	Dugway, Tooele	5.40	103	Pn		Pn	01 18 32.8	+2.0
SPUT	South Promonto	5.44	91	Pn		Pn	01 18 32.7	+1.3
PSUT	Pine Spring	5.44	123	Pn		Pn	01 18 34.3	+2.9
PRN	Pahroc Range	5.54	138	Pn		Pn	01 18 36.3	+3.5
D05A	Enumclaw	5.78	344	Pn		Pn	01 18 34.8	-1.1
MCMT	McKenzie Canyo	5.91	55	Pn		Pn	01 18 37.2	-0.8
HWUT	Hardware Ranch	6.08	85	Pn		Pn	01 18 41.3	+1.1
TCUT	Toone Canyon	6.24	92	Pn		Pn	01 18 43.8	+1.3
JLU	Jordanelle	6.30	97			Pn	01 18 44.8	+1.5
ICU	Indian Springs	6.33	133			Pn	01 18 50.1	+6.5
DLMT	Dillon	6.34	52	Pn		Pn	01 18 43.3	-0.5
CCUT	Cedar City	6.36	128			Pn	01 18 47.2	+3.1
SZCU	Shurtz Canyon	6.50	126			Pn	01 18 49.0	+3.0
MVU	Marysvale	6.53	116			Pn	01 18 48.9	+2.5
MSU	Marysvale	6.55	116	Pn		Pn	01 18 49.1	+2.4
MTPU	Mount Pierson	6.79	120			Pn	01 18 52.6	+2.3
LCMT	Little Creek M	6.80	131			Pn	01 18 53.4	+3.3
IMW	Indian Meadow	6.81	68	Pn		Pn	01 18 50.4	+0.1
NEW	Newport	6.86	14	Pn		Pn	01 18 55.8	+5.1
	0.1nm,0.3s,baz=210,slow=20,SNR=1.8							
NEW				Lg		Lg	01 20 43.6	
	0.2nm,0.3s,baz=288,slow=20,SNR=3.7							
NEW				LR		LR	01 21 48.9	
	comp=Z,77nm,19.9s,baz=193,slow=40							
NEW	Newport	6.86	14	Pn		Pn	01 18 49.5	-1.2
TMUT	Trail Mountain	6.87	107			Pn	01 18 53.0	+1.8
KNB	Kanab	7.04	129			Pn	01 18 56.6	+3.1
Q16A	Castle Valley	7.05	110			Pn	01 18 55.8	+2.2
PKCU	Pink Cliffs	7.07	124			Pn	01 18 56.9	+2.9
P17A	Butcher Ranch,	7.14	105			Pn	01 18 56.4	+1.6
SRU	San Rafael Swe	7.43	107			Pn	01 19 00.8	+2.0
PDAR	Pinedale Array	7.59	78	Pn		Pn	01 19 05.8	+4.7
	0.1nm,0.3s,baz=252,slow=13,SNR=9.8							
PDAR				Pg		Pb	01 19 23.4	+1.6
	0.6nm,0.3s,baz=249,slow=12,SNR=7.3							
PDAR	Pinedale Array	7.59	78			Pn	01 19 01.4	+0.4
RDMU	Red Mountain	7.71	95			Pn	01 19 04.0	+1.4
U15A	North Rim	7.76	130			Pn	01 19 06.5	+3.1
PV23	Carpenter Ridg	8.78	108			Pn	01 19 19.5	+2.1
PV14	Lion Creek, Pa	8.80	108			Pn	01 19 19.9	+2.3
PV20	West Nyswonger	8.86	108			Pn	01 19 20.6	+2.3
PV17	East Wray Mesa	8.89	109			Pn	01 19 20.9	+2.2
PV16	Nyswonger Mesa	8.90	108			Pn	01 19 21.1	+2.1
PV18	Skein Mesa, Pa	8.94	109	Pn		Pn	01 19 21.5	+2.0
PV11	David Mesa, Pa	8.94	108			Pn	01 19 21.7	+2.2
PV03	Paradox Valley	8.98	109			Pn	01 19 22.1	+2.1
RWWY	Rawlins	9.33	86			Pn	01 19 25.8	+0.9
N23A	Red Feather La	10.37	90			Pn	01 19 40.0	+0.9
BBB	Bella Bella	12.01	334	LR		LR	01 25 03.0	
	comp=Z,144nm,18.7s,baz=332,slow=39							
ANMO	Albuquerque	12.35	119	LR		LR	01 25 41.3	
	comp=Z,89nm,21.8s,baz=299,slow=42							
LPIG	La Paz	19.16	153	LR		LR	01 29 42.3	
	comp=Z,51nm,19.2s,baz=52,slow=39							
P40A	Paris	21.05	87	P		P	01 21 55.6	+1.3
P40A				IAmb		IAmb	01 22 00.1	
	comp=Z,8.1nm,0.8s							
YKA	Yellowknife Ar	21.10	7	P		P	01 21 56.9	+2.4
	comp=Z,1.7nm,0.7s,baz=194,slow=11,SNR=2.8							
ILAR	Eielson Array	27.89	335	P		P	01 23 02.0	+1.9
	comp=Z,0.9nm,0.8s,baz=155,slow=8.9,SNR=8.7							
KURBB	Kurchatov Arra	86.74	349	P		P	01 29 55.4	+0.9
	comp=Z,0.5nm,0.6s,baz=16,slow=4.8,SNR=4.1							

*OMAN **06** 01:20:38.6, 28°.25N×53°.74E, h10km, mb5.2/5, ml3.7/2*
*IDC **06** 01:20:44.7±1.0, 27°.68N×53°.86E, h0km, mb3.7/11, mb1 3.8/13, mb1mx3.6/49, mbtmp3.7/13, ML3.2/2, Error ellipse: s-maj=25.3km s-min=19.6km az=138.0*
*TEH **06** 01:20:45.8, 27°.77N×54°.12E, h14km, ML3.5*
*THR **06** 01:20:48.7±0.3, 27°.82N×54°.27E, h29km±9km, ML3.4*

ISC 06 01:20:46.5±0.5, 27.76N±0.05×54.03E±0.04, h10km, n54, σ1§41/59, mb3.7/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	LAR	0.32	106	ePg	Pg	01 20 51.0	-1.9
LAR1				eSg	Sg	01 20 55.8	-1.4
JHRM	Jahrom	0.85	332	ePg	Pg	01 21 02.6	-0.3
JHRM				e		01 21 28.4	
LMD1	Lamerd	0.87	242	e		01 21 33.1	
LMD1				ePg	Pb	01 21 04.1	+0.3
BNDS	Bandar-Abbas	1.94	100	ePn	Pn	01 21 19.1	-0.5
BNDS	Bandar-Abbas	1.94	100	ePn	Pn	01 21 19.1	-0.5
GENO	Geno	1.94	100	ePn	Pn	01 21 18.9	-0.8
SHI	Shiraz	2.30	325	ePn	Pn	01 21 25.4	+0.7
SHI				e		01 22 08.8	
AHBU	AHRAM	2.65	295	ePn	Pb	01 21 33.9	-0.2
BANOM	Banah	2.73	131	P	Pn	01 21 30.3	-0.2
	SNR=7.0						
BANOM				S	Sb	01 22 09.6	+0.5
NGRK	Negar Kerman	3.03	51	ePn	Pn	01 21 34.2	-0.7
NGRK				e		01 22 30.8	
KHNJ	Kahnooj	3.26	86	ePn	Pn	01 21 37.5	-0.3
KRBR	Kerman	3.27	47	IAML		01 22 39.2	
	comp=N,80nm,0.5s						
TVBK	TV Kerman	3.27	47	ePn	Pn	01 21 38.6	+0.5
ASUD	Al Ashush, Dub	3.33	159	P	Pn	01 21 38.4	-0.2
	SNR=17						
ASUD				S	Sb	01 22 25.9	-0.3
KHGB	Koh Gabri	3.38	39	ePn	Pn	01 21 38.4	-1.1
KHGB				e		01 22 25.1	
IMEH	Mehriz	3.66	8	ePn	Pn	01 21 44.6	+1.2
KLNJ	Kolanjah	3.88	327	ePn	Pn	01 21 46.5	0.0
IRAM	Rameshieh	4.29	341	ePn	Pn	01 21 53.4	+1.4
ICHK	Chekchek	4.49	4	ePn	Pn	01 21 55.6	+0.8
YZKH	Yazd	4.64	6	ePn	Pn	01 21 58.1	+1.3
YZKH	Yazd	4.64	6	ePn	Pn	01 21 58.1	+1.3
IGAR	Gharneh	4.94	340	ePn	Pn	01 22 02.0	+1.0
ARQ	Araqi	4.94	152	P	Pn	01 22 01.7	+0.8
	SNR=10						
ARQ				S	Sn	01 23 04.0	+5.8
NASN	Na'in	5.14	348	eS	Sn	01 23 02.5	-0.8
IZEF	Zefreh	5.33	344	ePn	Pn	01 22 06.6	+0.2
ANAR	Anarak	5.42	357	ePn	Pn	01 22 08.2	+0.6
IPIR	Pirpir	5.61	332	ePn	Pn	01 22 10.4	+0.1
SMDO	Samad	5.92	141	P	Pn	01 22 15.0	+0.6
	SNR=15						
IKLH	Kolahrood	5.93	340	ePn	Pn	01 22 15.5	+0.8
BSRN	Basiran	6.10	45	eP	Pn	01 22 16.7	-0.2
BSRN	Basiran	6.10	45	ePn	Pn	01 22 16.7	-0.2
WSAR	Wadi Sarin	6.12	136	Pn	Pn	01 22 17.3	+0.2
	comp=N,0.6nm,0.3s,baz=339,slow=6.1,SNR=12						
WSAR				Sn	Sn	01 23 26.0	-1.3
	comp=N,0.2nm,0.3s,baz=331,slow=6.9,SNR=3.5						
WSAR	Wadi Sarin	6.12	136	P	Pn	01 22 16.9	-0.2
	SNR=14						
WSAR				S	Sn	01 23 32.6	+5.2
ZHSF	Zahedan	6.21	71	ePn	Pn	01 22 18.0	-0.4
ZHSF	Zahedan	6.21	71	ePn	Pn	01 22 18.0	-0.4
TABS	Tabas	6.45	24	ePn	Pn	01 22 22.4	+0.7
TABS	Tabas	6.45	24	ePn	Pn	01 22 22.4	+0.7
WBK	Wadi Bani Khal	6.80	138	P	Pn	01 22 26.0	-0.5
	SNR=19						
MHTO	MHTO	7.64	151	P	Pn	01 22 37.4	-0.5
	SNR=7.9						
IANJ	Anjilo	7.69	359	ePn	Pn	01 22 39.0	+0.2
DQM	DQM	8.43	157	P	Pn	01 22 47.7	-1.0
	SNR=5.4						
WHFO	Wadi Hawf	9.79	181	P	Pn	01 23 07.0	-0.6
	SNR=32						
ASF	Jabal al Asfar	15.48	291	Pn	Pn	01 24 22.5	-2.6
	comp=N,0.1nm,0.3s,baz=63,slow=2.3,SNR=2.4						
BRTR	Keskin Array B	20.68	310	P	P	01 25 26.7	-0.2
	comp=N,0.8nm,0.7s,baz=136,slow=12,SNR=2.7						
AKTO	Aktyubinsk	22.85	7	P	P	01 25 50.9	+1.0
	comp=N,0.9nm,0.7s,baz=166,slow=12,SNR=2.3						
BVAR	Borovoye Array	28.01	21	P	P	01 26 39.1	+1.5
	comp=N,0.8nm,0.8s,baz=221,slow=8.6,SNR=5.5						
MKAR	Makanchi Array	29.20	42	P	P	01 26 50.6	+2.3
	comp=N,0.2nm,0.5s,baz=227,slow=8.3,SNR=1.5						
KURBB	Kurchatov Arra	29.45	32	P	P	01 26 51.6	+1.2
	comp=N,0.4nm,0.5s,baz=233,slow=9.0,SNR=3.8						
ZALV	Zalesovo Beam	34.55	32	P	P	01 27 34.1	-0.9
	comp=N,1.8nm,0.5s,baz=238,slow=10,SNR=9.0						
FINES	FINESS Array B	38.52	339	P	P	01 28 08.2	-0.5
	comp=N,4.2nm,1.1s,baz=119,slow=11,SNR=4.2						
SONM	Songino Array	45.02	49	P	P	01 29 03.7	+1.3
	comp=N,0.3nm,0.5s,baz=283,slow=13,SNR=2.2						
TORD	Torodi Ar. Bea	50.78	264	P	P	01 29 45.7	-1.6
	comp=N,1.1nm,0.8s,baz=59,slow=8.6,SNR=7.5						
BOSA	Boshof	62.47	209	P	P	01 31 09.2	-1.1
	comp=N,1.8nm,0.9s,baz=11,slow=6.5,SNR=1.4						
ILAR	Eielson Array	86.34	9	P	P	01 33 28.8	+0.2
	comp=N,0.4nm,0.7s,baz=326,slow=5.2,SNR=5.7						

*IDC **06** 01:21:10.2±0.7, 41°.49N×119°.72W, h0km, mb3.6/2, mb1 3.7/6, mb1mx3.5/46, mbtmp3.4/6, ML3.5/4, Error ellipse: s-maj=16.2km s-min=5.6km az=11.0*
*REN **06** 01:21:11.5±0.3, 41°.88N±0°.01×119°.63W±0°.05, h0km±7km, ML3.7/3, ML3.7/53(SEA), Mwr3.7/81(NEIC), Error ellipse: s-maj=5.5km s-min=1.5km az=80.0*
*ANF **06** 01:21:11.6±0.9, 41°.82N×119°.71W, h2km±7km, ML3.7/19, Error ellipse: s-maj=3.5km s-min=3.0km az=50.0*
*NEIC **06** 01:21:11.5, 41°.88N×119°.63W, h9km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.43; Mθθ=0.44; Mϕϕ 1.87; Mrθ=-1.58; Mθϕ 0.79; Mϕr=-3.26; Fault plane solution: M₀4.07000×10¹⁴ NP1:ϕ₁25.86000°, δ77.17000°, λ-84.23000°. NP2:ϕ₂181.37000°, δ14.05000°, λ-113.84000°. Principal axes: T 4.3532, Plg32.0000°, Azm111.0000°; N -0.6336, Plg6.0000°, Azm205.0000°; P -3.7196, Plg57.0000°, Azm303.0000°;*
*NEIC **06** 01:21:11.8±0.3, 41°.88N±0°.05×119°.64W±0°.05, h6km±6km Error ellipse: s-maj=7.3km s-min=5.7km az=186.0*
*SEA **06** 01:21:12.6±2.4, 41°.80N±0°.05×119°.71W±0°.05, h0km±7km, Error ellipse: s-maj=7.5km s-min=5.2km az=197.0*

ISC 06 01:21:12.0±0.7, 41°.83N±0°.03×119°.64W±0°.03, h10km, n78, σ1§53/98, Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.50	279		Pg	01 21 21.1	-0.7
MOD					Sg	01 21 28.2	-0.2
M04C	Macdoel	1.64	269	P	Pn	01 21 40.5	-0.7
	baz=86,SNR=77						
M04C				S	Sb	01 22 02.8	-0.5
	baz=86						
K04D	Chiloquin, OR	1.76	298	P	Pn	01 21 41.9	-0.8
	baz=115,SNR=19						
K04D				Sb	Sg	01 22 07.9	-0.7
	baz=115						
J05D	Fort Rock, OR	1.87	322	P	Pn	01 21 43.6	-0.7
	baz=139,SNR=55						
J05D				Sb	Sg	01 22 12.1	-0.2
	baz=139						
L04D	Klamath Falls	2.02	282	P	Pn	01 21 45.4	-1.0
	baz=99,SNR=42						
L04D				Sb	Sb	01 22 15.3	+1.1
	baz=99						
BEKR	Beckworth	2.03	196		Pn	01 21 47.5	+1.0
PAHR	Pah Rah Range	2.13	175	Pn	Pn	01 21 48.5	+0.7
PINE	Pine Mountain	2.18	334	Pn	Pn	01 21 48.5	-0.1
O03E	Paynes Creek	2.24	228	P	Pn	01 21 48.8	-0.4
	baz=45,SNR=54						
O03E				Sb	Sb	01 22 21.6	+1.1
	baz=45						
YBH	Yreka Blue Hor	2.30	269	Pn	Pn	01 21 48.9	-1.1
	7.1nm,0.3s,baz=78,slow=13,SNR=10						
YBH				Lg	Lg	01 22 21.5	
	41nm,0.3s,baz=89,slow=8.0,SNR=11						
YBH	Yreka Blue Hor	2.30	269	Pn	Pn	01 21 48.8	-1.3
J04D	Umpqua Nationa	2.31	309	Pb	Pb	01 21 53.2	-0.7
	baz=126						
J04D				Sb	Sg	01 22 24.3	-1.9
	baz=126						
M02C	Callahan	2.45	261	P	Pn	01 21 50.9	-1.3
	baz=78,SNR=31						
M02C				Sb	Sb	01 22 27.6	+1.2
	baz=78						
N02D	Trinity Center	2.46	251	P	Pn	01 21 51.1	-1.2
	baz=68,SNR=8.0						
N02D				Sb	Sb	01 22 28.7	+2.0
	baz=68						
WDC	Whiskeytown Da	2.52	241	Pn	Pn	01 21 52.3	-0.7
VCNR	Virginia City	2.53	180	Pn	Pn	01 21 54.4	+1.0
HUMO	Hull Mountain	2.58	289	Pn	Pn	01 21 52.6	-1.3
ORV	Oroville	2.67	213	Pn	Pn	01 21 56.2	+1.0
PNTR	Pine Nut	2.73	179	Pn	Pn	01 21 57.1	+0.9
RUBR	Rubicon Trail	2.80	188	Pn	Pn	01 21 58.0	+0.9
I05D	Terrebonne, OR	2.80	334	Pb	Pb	01 22 01.9	-0.3
	baz=152						
I05D				Sb	Sg	01 22 39.6	-2.4
	baz=152						
I04A	Tendick Farm,	2.83	315	Pb	Pb	01 22 02.5	-0.2
	baz=132						
I04A				Sb	Sg	01 22 39.8	-3.2
	baz=132						
L02E	Cave Junction	2.97	278	P	Pn	01 21 59.1	-0.1
	baz=94,SNR=53						
L02E				Sb	Sb	01 22 42.5	+1.1
	baz=94						
KVN	Kaiserville	3.01	157		Pn	01 22 00.6	+0.6
AFDM	Forest Hills D	3.05	200	Pn	Pn	01 22 01.4	+1.0
K02D	Willamette Mer	3.11	288	P	Pn	01 22 01.2	0.0
	baz=104,SNR=213						
K02D				Sb	Sb	01 22 47.8	+2.3
	baz=104						
KRMB	Red Mountain	3.21	266	Pn	Pn	01 22 02.9	+0.2
KHMM	Horse Mountain	3.22	254	Pn	Pn	01 22 03.3	+0.5
I03D	Drain, OR	3.31	306	Pg	Pg	01 22 14.6	-0.9
	baz=122						
I03D				Sb	Sb	01 22 54.2	+3.1
	baz=122						
RYN	Ryan	3.31	165		Pn	01 22 05.0	+1.0
WAKR	Walker	3.32	177	Pn	Pn	01 22 05.2	+0.9
H04A	Detroit Lake	3.41	328	Pn	Pn	01 22 05.2	-0.1
KBO	Bosley Butte	3.44	278	Pn	Pn	01 22 05.9	+0.1
J01E	Myrtle Point	3.44	294	P	Pn	01 22 06.3	+0.6
JCC	Jacoby Creek,	3.46	254		Pn	01 22 06.6	+0.7
KMRM	Mail Ridge	3.47	244		Pn	01 22 07.1	+1.0
BMO	Blue Mountains	3.47	29	Pn	Pn	01 22 05.9	-0.3
ELK	Elko	3.49	107	Pn	Pn	01 22 08.1	+1.5
	7.9nm,0.3s,baz=292,slow=13,SNR=20						
ELK				Pg	Pb	01 22 12.0	-2.0
	7.9nm,0.3s,baz=292,slow=18,SNR=20						
ELK				Lg	Lg	01 22 58.4	
	35nm,0.3s,baz=257,slow=20,SNR=15						
ELK	Elko	3.49	107	Pn	Pn	01 22 06.9	+0.4
G08A	Pilot Rock	3.50	8	Pn	Pn	01 22 06.1	-0.4
H04D	Lebanon	3.52	321	Pg	Pg	01 22 18.7	-0.8
	baz=138						
H04D				Sb	Sg	01 23 01.2	-3.9
	baz=138						
NVAR	Mina Array Bea	3.54	163	Pg	Pn	01 22 08.9	+1.5
	1.8nm,0.3s,baz=341,slow=12,SNR=5.5						
NVAR	Mina Array Bea	3.54	163	Pn	Pn	01 22 08.2	+0.9
G05D	Wamic, OR	3.62	341	Pb	Pb	01 22 16.4	+0.2
	baz=159						
G05D				Sb	Sb	01 23 03.3	+3.1
	baz=159						
KEBM	Edson Butte	3.63	288		Pn	01 22 08.8	+0.4
LHV	Little Huntoon	3.68	166	Pn	Pn	01 22 10.2	+1.3
TPH	Tonopah	4.18	153	Pn	Pn	01 22 17.0	+0.9
HLID	Hailey	4.22	64	P	Pn	01 22 16.9	+0.2
	baz=248						
HLID				Sb	Sb	01 23 21.4	+3.8
	baz=248						
HLID	Hailey	4.22	64		Pn	01 22 16.6	-0.1
OMMB	Old Mammoth Mi	4.24	173	Pn	Pn	01 22 17.9	+1.0
F05D	White Salmon	4.26	343	Sb	Sg	01 23 23.3	-5.7
	baz=161						
F04A	Amboy	4.57	335		Pn	01 22 21.1	0.0
R11A	Troy Canyon, C	4.66	137	P	Pn	01 22 25.2	+2.6
	baz=320						
R11A				Sb	Sg	01 23 37.1	-4.7
	baz=320						
BGU	Big Grassy Mou	5.05	98	Pn	Pn	01 22 28.3	+0.3
DUG	Dugway, Tooele	5.42	105	P	Pn	01 22 35.1	+2.1
	baz=290						
DUG	Dugway, Tooele	5.42	105		Pn	01 22 33.4	+0.4
SPUT	South Promonto	5.42	93		Pn	01 22 33.3	+0.3
PSUT	Pine Spring	5.52	125	Pn	Pn	01 22 35.0	+0.6
TPNV	Topopah Spring	5.53	151	P	Pn	01 22 36.8	+2.1
	baz=333						
TPNV	Topopah Spring	5.53	151		Pn	01 22 35.5	+0.8
PRN	Pahroc Range	5.66	140		Pn	01 22 37.2	+0.9
MCMT	McKenzie Canyo	5.79	57		Pn	01 22 38.0	-0.2
ECR	Eagle Creek	6.24	76	Pn	Pn	01 22 44.2	-0.1
JLU	Jordanelle	6.30	98		Pn	01 22 45.5	+0.3
AHID	Auburn Hatcher	6.40	79	Pn	Pn	01 22 46.6	0.0
CCUT	Cedar City	6.46	129	Pn	Pn	01 22 47.9	+0.6
IMW	Indian Meadow	6.72	69	Pn	Pn	01 22 50.7	-0.3
MTPU	Mount Pierson	6.86	121		Pn	01 22 53.3	+0.3
TMUT	Trail Mountain	6.90	109		Pn	01 22 53.9	+0.3
PDAR	Pinedale Array	7.54	79	Pn	Pn	01 23 06.3	+4.2
	0.1nm,0.3s,baz=265,slow=14,SNR=4.0						
PDAR				Pg	Pb	01 23 24.4	+1.5
	0.4nm,0.3s,baz=252,slow=14,SNR=7.2						
PDAR	Pinedale Array	7.54	79		Pn	01 23 02.1	0.0
RDMU	Red Mountain	7.70	96		Pn	01 23 04.6	+0.2
U15A	North Rim	7.85	131		Pn	01 23 07.0	+0.4
T25A	Trinidad	12.66	107		Pn	01 24 12.5	+0.2
TXAR	Lajitas Array	17.97	129	P	Pn	01 25 21.2	-0.9
	0.1nm,0.3s,baz=328,slow=13,SNR=5.1						
ILAR	Eielson Array	27.74	335	P	P	01 27 02.9	+2.5
	0.7nm,0.8s,baz=148,slow=12,SNR=7.2						
ILAR	Eielson Array	27.74	335	P	P	01 27 01.1	+0.7
KURBB	Kurchatov Arra	86.57	349	P	P	01 33 55.9	+0.7
	0.3nm,0.6s,baz=16,slow=5.6,SNR=3.1						

*NEIC **06** 01:35:02.8±0.8, 37°.21N±0°.04×98°.04W±0°.05, h11km±5km, mb_Lg3.2/112, Error ellipse: s-maj=7.4km s-min=4.5km az=218.0*
*ANF **06** 01:35:04.2±0.8, 37°.16N×98°.04W, h12km±6km, ML4.2/10, Error ellipse: s-maj=3.4km s-min=2.1km az=51.0*

ISC 06 01:35:02.7±0.8, 37°.21N±0°.02×98°.07W±0°.03, h10km±5km, n96, σ0§94/79, Kansas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAN08	Anthony NE Sta	0.08	81		Pg	01 35 04.8	-0.2
KAN08				Sg	Sg	01 35 05.9	-0.8
KAN10	Anthony SW Sta	0.09	191		Pg	01 35 05.5	+0.3
KAN10				Sg	Sg	01 35 07.0	+0.1
KAN12	Harper NE Stat	0.10	35		Pg	01 35 05.6	+0.3
KAN12				Sg	Sg	01 35 07.2	+0.1
KAN05	Bluff City Nor	0.19	123		Pg	01 35 06.5	-0.1
KAN05				Sg	Sg	01 35 09.0	-0.4
KAN14	Manchester OK	0.27	161		Pg	01 35 08.3	+0.1
KAN14				Sg	Sg	01 35 11.9	+0.2
KAN09	Caldwell North	0.37	102		Pg	01 35 09.8	-0.2
KAN09				Sg	Sg	01 35 14.4	-0.5
KAN13	South Haven SW	0.52	113		Pg	01 35 12.4	-0.3
KAN13				Sg	Sg	01 35 18.8	-0.7
CROK	Carrier	0.71	174		Pg	01 35 16.2	-0.2
U32A	Winter Ranch,	1.12	222		Pg	01 35 24.2	+0.1
T35A	Sooner Cattle	1.28	103	Pn	Pb	01 35 26.2	-0.7
T35A				Sn	Sb	01 35 42.4	-1.2
R32A	Long Quarter,	1.31	337		Pn	01 35 27.3	+0.2
OK029	Liberty Lake	1.50	160		Pb	01 35 29.9	-0.8
BCOK	Bluff Creek, N	1.60	166		Pn	01 35 30.7	-0.4
OK031	S. Brethren Rd	1.60	141		Pb	01 35 31.5	-0.9
OK030	Cody Creek RV	1.65	141		Pb	01 35 32.3	-0.9
OK025	Westminster Rd	1.73	160		Pb	01 35 33.7	-0.9
OKCFA	Oklahoma City	1.86	164	Pn	Pn	01 35 34.5	-0.2
OKCFA				IAmb_Lg		01 36 03.4	
	comp=Z,105nm,0.8s						
OKCSW	OKLAHOMA CITY	1.88	164		Pn	01 35 34.7	-0.1
FNO	Franklin	2.03	164		Pn	01 35 36.8	-0.2
CBKS	Cedar Bluff	2.07	321	P	Pb	01 35 39.6	-0.8
	baz=140						

X40A	**Basin Creek Fa**	**5.05**	**121**	P		**Pn**	**01 36 19.4**	**+1.0**
	baz=304							
X40A	**Basin Creek Fa**	**5.05**	**121**			**Pn**	**01 36 17.8**	**-0.7**
X40A				IAmb_Lg			01 37 49.8	
	comp=Z,42nm,0.8s							
WHAR	**Wooly Hollow**	**5.05**	**111**			**Pn**	**01 36 17.8**	**-0.7**
T25A	**Trinidad**	**5.06**	**271**	Pn		**Pn**	**01 36 18.6**	**-0.3**
T25A				IAmb_Lg			01 37 58.9	
	comp=Z,36nm,0.8s							
W41B	**Gary Mavity, V**	**5.13**	**112**	P		**Pn**	**01 36 20.5**	**+0.9**
W41B	baz=295							
	baz=295			Sb		**Sb**	**01 37 39.4**	**+5.2**
W41B	**Gary Mavity, V**	**5.13**	**112**	IAmb_Lg			01 37 55.1	
	comp=Z,44nm,0.7s							
N38A	**Joes South For**	**5.19**	**45**	Pn		**Pn**	**01 36 19.9**	**-0.5**
WHTX	**Lake Whitney,**	**5.23**	**174**	Pn		**Pn**	**01 36 20.8**	**-0.2**
UALR	**University of**	**5.24**	**116**	Pn		**Pn**	**01 36 21.5**	**+0.3**
UALR				IAmb_Lg			01 37 51.5	
	comp=Z,40nm,0.8s							
P40A	**Paris**	**5.27**	**62**	Pn		**Pn**	**01 36 20.6**	**-0.8**
P40A				IAmb_Lg			01 37 54.3	
	comp=Z,50nm,0.8s							
WLAR	**White Oak Lake**	**5.36**	**130**	IAmb_Lg			01 37 55.9	
	comp=Z,53nm,0.7s							
CCM	**Cathedral Cave**	**5.48**	**79**	Pn		**Pn**	**01 36 23.8**	**-0.7**
237A	**Washetta, Mont**	**5.52**	**160**	IAmb_Lg			01 38 03.4	
	comp=Z,28nm,0.9s							
T42A	**Van Buren**	**5.58**	**90**			**Pn**	**01 36 25.1**	**-0.7**
LCAR	**Lake Charles**	**5.68**	**100**	Pn		**Pn**	**01 36 26.3**	**-0.8**
LCAR				IAmb_Lg			01 38 04.8	
	comp=Z,43nm,1.0s							
Z41A	**Richland Creek**	**5.84**	**131**	IAmb_Lg			01 38 19.5	
	comp=Z,38nm,0.8s							
Q24A	**Divide**	**5.85**	**290**	IAmb_Lg			01 38 18.0	
	comp=Z,31nm,0.8s							
CCAR	**Cane Creek**	**6.10**	**121**	IAmb_Lg			01 38 33.1	
	comp=Z,34nm,0.7s							
NATX	**Nacogdoches**	**6.13**	**152**	IAmb_Lg			01 38 30.8	
	comp=Z,30nm,0.8s							
435B	**Jarrell**	**6.43**	**176**	IAmb_Lg			01 38 45.7	
	comp=Z,45nm,1.2s							
X43A	**Marvell**	**6.43**	**113**	IAmb_Lg			01 38 31.5	
	comp=Z,47nm,0.8s							
ECSD	**EROS Data Cent**	**6.61**	**9**	IAmb_Lg			01 38 35.5	
	comp=Z,22nm,0.7s							
N41A	**Harden Midland**	**6.62**	**56**	IAmb_Lg			01 38 47.1	
	comp=Z,36nm,0.8s							
JCT	**Junction City**	**6.87**	**193**	IAmb_Lg			01 38 47.0	
	comp=Z,42nm,0.8s							
S44A	**Carbondale**	**7.03**	**83**			**Pn**	**01 36 45.1**	**-0.6**
S44A				IAmb_Lg			01 38 52.1	
	comp=Z,46nm,0.9s							
PHWY	**Pilot Hill**	**7.03**	**308**	IAmb_Lg			01 38 50.5	
	comp=Z,24nm,0.7s							
143A	**Socs Landing,**	**7.09**	**127**	IAmb_Lg			01 38 58.7	
	comp=Z,34nm,0.7s							
HALT	**Halls**	**7.15**	**98**	IAmb_Lg			01 38 58.7	
	comp=Z,44nm,0.7s							
Q44A	**Meyer Farm, Va**	**7.34**	**74**	IAmb_Lg			01 39 03.9	
	comp=Z,37nm,1.1s							
HDIL	**Hopedale**	**7.62**	**61**	IAmb_Lg			01 39 10.9	
	comp=Z,33nm,0.8s							
I37A	**Lemond, Waseca**	**7.67**	**26**	IAmb_Lg			01 39 17.5	
	comp=Z,29nm,0.8s							
Y45A	**Yeager Farm, C**	**7.71**	**113**	IAmb_Lg			01 39 15.5	
	comp=Z,37nm,0.9s							
OLIL	**Olney**	**8.02**	**76**	IAmb_Lg			01 39 31.3	
	comp=Z,28nm,0.9s							
O44A	**Mansfield**	**8.06**	**66**	IAmb_Lg			01 39 18.9	
	comp=Z,28nm,0.9s							
RSSD	**Black Hills**	**8.25**	**329**	IAmb_Lg			01 39 36.9	
	comp=Z,17nm,0.8s							
JFWS	**Jewell Farm**	**8.27**	**44**	IAmb_Lg			01 39 36.8	
	comp=Z,34nm,0.8s							
USIN	**University of**	**8.30**	**82**	IAmb_Lg			01 39 28.1	
	comp=Z,30nm,1.0s							
RWWY	**Rawlins**	**8.36**	**305**	IAmb_Lg			01 39 34.9	
	comp=Z,24nm,1.0s							
PLAL	**Pickwick Lake**	**8.39**	**102**	IAmb_Lg			01 39 26.4	
	comp=Z,16nm,0.7s							
K22A	**Casper**	**8.46**	**313**	IAmb_Lg			01 39 55.9	
	comp=Z,23nm,1.0s							
I40A	**Norwalk**	**8.75**	**38**	IAmb_Lg			01 39 50.3	
	comp=Z,22nm,0.8s							
T47A	**Sharon Grove**	**8.77**	**88**	IAmb_Lg			01 39 44.9	
	comp=Z,18nm,0.8s							
P46A	**Rosedale**	**8.86**	**71**	IAmb_Lg			01 39 41.7	
	comp=Z,29nm,0.9s							
SFIN	**Lafayette**	**9.13**	**66**	IAmb_Lg			01 39 52.7	
	comp=Z,20nm,0.8s							
X48A	**Hartselle**	**9.37**	**104**	IAmb_Lg			01 39 55.3	
	comp=Z,14nm,0.9s							
U49A	**Red Boiling Sp**	**9.88**	**90**	IAmb_Lg			01 40 35.9	
	comp=Z,15nm,1.3s							

*DDA **06** 01:59:19.5, 40.69N×41.08E, h7km±4km, ML1.9*
*ISK **06** 01:59:19.7, 40.65N×41.01E, h8km, ML1.8/6*
*ATA **06** 01:59:21.1±0.6, 40.35N×41.03E, h27km, ML2.2, MW3.4*
ISC 06 01:59:19.3±1.0, 40.66N±0.02×41.05E±0.02, h11km±12km, n21, σ0°45/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
KRIK	**Erzurum-spir**	**0.34**	**197**	*e*P	**Pb**	**01 59 27.1**		**-0.4**
KRIK				*e*S	**Sg**	**01 59 30.6**		**-0.2**
KRIK				IAML		01 59 32.6		
	comp=Z,8μm,0.1s							
KRIK	**Erzurum-spir**	**0.34**	**197**	*i* P	**Pb**	**01 59 27.1**		**-0.4**
KRIK				*i* S	**Sg**	**01 59 30.9**		**+0.2**
CHOM	**Cayeli-Rize**	**0.49**	**333**	PG	**Pg**	**01 59 29.9**		**+1.0**
CHOM				SG	**Sb**	**01 59 37.1**		**0.0**
DDEM	**Demirkent**	**0.58**	**66**	*i* P	**Pg**	**01 59 30.7**		**+0.2**
DDEM				*i* S	**Sg**	**01 59 37.2**		**-1.0**
DDEM				IAML		01 59 40.0		
	comp=N,73nm,0.4s							
DBAD	**Bademkaya**	**0.60**	**54**	*i* P	**Pg**	**01 59 31.2**		**+0.1**
DBAD				*i* S	**Sg**	**01 59 38.3**		**-0.7**
EMRE	**Erzurum,Aziziy**	**0.64**	**185**	*i* P	**Pb**	**01 59 32.9**		**+0.3**
EMRE				*i* S	**Sg**	**01 59 39.9**		**-0.1**
EMRE				IAML		01 59 43.0		
	comp=N,63nm,0.9s							
BAYB	**BAYBURT**	**0.73**	**237**	*e*P	**Pb**	**01 59 33.9**		**-0.2**
BAYB				*e*S	**Sb**	**01 59 43.9**		**-0.4**
BAYB				IAML		01 59 44.3		
	comp=Z,7.2nm,0.1s							
BAYB	**BAYBURT**	**0.73**	**237**	*i* P	**Pb**	**01 59 34.0**		**-0.2**
BAYB				*i* S	**Sg**	**01 59 42.9**		**-0.2**
BAYT	**Aydıntepe-Bayb**	**0.75**	**249**	PG	**Pg**	**01 59 33.9**		**+0.1**
BAYT				SG	**Sb**	**01 59 44.3**		**-0.4**
KOPT	**Kop Dagi**	**0.77**	**214**	*i* P	**Pb**	**01 59 35.0**		**0.0**
KOPT				*i* S	**Sb**	**01 59 45.7**		**+0.2**
DAGI	**Agillar**	**0.77**	**57**	*i* P	**Pg**	**01 59 34.4**		**+0.1**
DAGI				*i* S	**Sg**	**01 59 43.5**		**-0.9**
DBOC	**Borcka**	**0.82**	**34**	*i* P	**Pg**	**01 59 35.2**		**-0.1**
DBOC				*i* S	**Sg**	**01 59 45.4**		**-0.6**
DBOC				IAML		01 59 48.0		
	comp=E,38nm,0.1s							
HOMI	**Horasan**	**0.90**	**133**	*i* P	**Pb**	**01 59 37.4**		**+0.4**
HOMI				*i* S	**Sb**	**01 59 49.6**		**+0.5**
KOPR	**Koprukoy-ERZUR**	**0.91**	**137**	PG	**Pg**	**01 59 37.4**		**+0.6**
SENK	**Senkaya-Erzuru**	**0.99**	**95**	PG	**Pb**	**01 59 39.3**		**+0.7**
MACK	**Trabzon**	**1.01**	**286**	*i* P	**Pb**	**01 59 39.2**		**+0.3**
MACK				*i* S	**Sg**	**01 59 51.7**		**-0.4**
MACK				IAML		01 59 54.0		
	comp=N,56nm,0.2s							
MACK				IAML		01 59 55.0		
	comp=E,41nm,0.3s							
KTUT	**Trabzon**	**1.03**	**289**	PG	**Pb**	**01 59 39.4**		**+0.3**
KTUT				SG	**Sb**	**01 59 52.8**		**+0.2**
YEDI	**Yedisu-Bingol**	**1.28**	**198**	PN	**Pg**	**01 59 44.0**		**0.0**
KARO	**Karliova-Bingo**	**1.35**	**180**	PN	**Pg**	**01 59 45.4**		**+0.1**
KELT	**Kelkit**	**1.47**	**250**	*e*P	**Pb**	**01 59 46.8**		**0.0**
KELT				IAML		02 00 07.0		
	comp=Z,9.7nm,0.2s							
KELT	**Kelkit**	**1.47**	**250**	*i* P	**Pb**	**01 59 46.7**		**0.0**

*ANF **06** 02:12:46.3±0.8, 41.82N×119.62W, h0km±7km, ML3.5/13, Error ellipse: s-maj=4.9km s-min=2.8km az=82.0*
*REN **06** 02:12:47.8±1.1, 41.88N±0.04×119.64W±0.05, h0km±7km, ML3.4/4, Md3.3/7(SEA), Mwr3.5/19(SLM), Error ellipse: s-maj=6.5km s-min=4.7km az=215.0*

*SEA **06** 02:12:47.9±2.2, 41.81N±0.04×119.61W±0.04, h0km±7km, Error ellipse: s-maj=6.4km s-min=3.7km az=209.0*
*NEIC **06** 02:12:47.8, 41.88N×119.64W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.21; $M_{\theta\theta}$=0.14; $M_{\theta\phi}$=1.07; $M_{r\theta}$=-0.49; $M_{\phi\phi}$=0.39; $M_{r\phi}$=-1.36; Fault plane solution: M_0=1.88000×10^{14} NP1:ϕ_0=200.00000°, δ=20.00000°, λ=-90.00000°. NP2:ϕ_0=20.00000°, δ=70.00000°, λ=-90.00000°. Principal axes: T 1.8868, Plg25.0000°, Azm110.0000°; N -0.0002, Plg0.0000°, Azm20.0000°; P -1.8866, Plg65.0000°, Azm290.0000°;*
ISC 06 02:12:48.0±1.6, 41.88N±0.03×119.65W±0.03, h2km±15km, n65, σ1°07/78, Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
MOD	**Modoc Plateau**	**0.49**	**273**		**Pg**	**02 12 57.4**		**+0.1**
MOD					**Sg**	**02 13 04.4**		**+0.7**
K05A	**Summer Lake**	**1.25**	**313**	Pg	**Pn**	**02 13 11.8**		**-1.0**
K05A				Sg	**Sb**	**02 13 29.1**		**-0.1**
M04C	**Macdoel**	**1.64**	**267**	P	**Pn**	**02 13 16.7**		**-1.3**
	baz=86,SNR=157							
M04C				S	**Sb**	**02 13 40.2**		**0.0**
	baz=86							
J08A	**Circle Bar Ran**	**1.72**	**30**	Pn	**Pn**	**02 13 18.1**		**-0.9**
J08A				Sn	**Sb**	**02 13 40.7**		**-1.7**
K04D	**Chiloquin, OR**	**1.73**	**296**	P	**Pn**	**02 13 18.1**		**-1.2**
	baz=115,SNR=69							
K04D				S	**Sb**	**02 13 42.5**		**-0.3**
	baz=115							
J05D	**Fort Rock, OR**	**1.83**	**321**	Pb	**Pb**	**02 13 21.7**		**-0.6**
	baz=140,SNR=198							
J05D				Sb	**Sg**	**02 13 47.1**		**+0.3**
	baz=140							
L04D	**Klamath Falls**	**2.01**	**281**	P	**Pn**	**02 13 21.6**		**-1.4**
	baz=99,SNR=51							
L04D				Sb	**Sb**	**02 13 51.8**		**+1.0**
	baz=99							
BEKR	**Beckworth**	**2.08**	**195**		**Pn**	**02 13 24.4**		**+0.3**
PINE	**Pine Mountain**	**2.14**	**334**		**Pn**	**02 13 25.1**		**+0.2**
PAHR	**Pah Rah Range**	**2.18**	**175**	Pn	**Pn**	**02 13 24.5**		**-0.9**
I07A	**Izee**	**2.21**	**3**		**Pn**	**02 13 26.0**		**+0.2**
O03E	**Paynes Creek**	**2.27**	**227**	P	**Pn**	**02 13 25.3**		**-1.3**
	baz=45,SNR=48							
O03E				S	**Sb**	**02 13 57.9**		**-0.4**
	baz=45							
YBH	**Yreka Blue Hor**	**2.29**	**267**	Pn	**Pn**	**02 13 25.2**		**-1.8**
M02C	**Callahan**	**2.45**	**260**	P	**Pn**	**02 13 27.2**		**-1.9**
	baz=78,SNR=8.9							
M02C				Sb	**Sb**	**02 14 03.8**		**+0.4**
	baz=78							
N02D	**Trinity Center**	**2.47**	**250**	P	**Pn**	**02 13 27.5**		**-1.9**
	baz=68,SNR=24							
N02D				Sb	**Sb**	**02 14 05.3**		**+1.3**
	baz=68							
WDC	**Whiskeytown Da**	**2.54**	**240**	Pn	**Pn**	**02 13 28.5**		**-1.6**
HUMO	**Hull Mountain**	**2.56**	**288**	Pn	**Pn**	**02 13 28.9**		**-1.7**
VCNR	**Virginia City**	**2.58**	**180**		**Pn**	**02 13 30.6**		**-0.4**
ORV	**Oroville**	**2.71**	**212**		**Pn**	**02 13 32.5**		**-0.2**
I05D	**Terrebonne, OR**	**2.75**	**334**	Pb	**Pb**	**02 13 37.5**		**-0.5**
	baz=153							
PNTR	**Pine Nut**	**2.79**	**179**	Pn	**Pn**	**02 13 33.0**		**-0.8**
I04A	**Tendick Farm,**	**2.79**	**314**	Sb	**Sb**	**02 14 15.8**		**+2.5**
	baz=132							
L02E	**Cave Junction**	**2.96**	**277**	P	**Pn**	**02 13 35.7**		**-0.3**
	baz=94,SNR=14							
L02E				Sb	**Sb**	**02 14 19.7**		**+1.7**
	baz=94							
KVN	**Kaiserville**	**3.06**	**157**		**Pn**	**02 13 37.1**		**-0.5**
K02D	**Willamette Mer**	**3.09**	**287**	P	**Pn**	**02 13 37.5**		**-0.4**
	baz=104,SNR=111							
K02D				Sb	**Sb**	**02 14 24.0**		**+2.1**
	baz=104							
AFDM	**Forest Hills D**	**3.09**	**199**	Pn	**Pn**	**02 13 37.7**		**-0.2**
KRMB	**Red Mountain**	**3.21**	**265**	Pn	**Pn**	**02 13 39.2**		**-0.4**
MFID	**Camas Ranch**	**3.21**	**60**	Pn	**Pn**	**02 13 39.2**		**-0.4**
I03D	**Drain, OR**	**3.27**	**305**	Pg	**Pg**	**02 13 50.4**		**-0.3**
	baz=122							
I03D				Sb	**Sb**	**02 14 30.0**		**+2.9**
	baz=122							
RYN	**Ryan**	**3.36**	**165**		**Pn**	**02 13 41.5**		**-0.1**
WAKR	**Walker**	**3.37**	**177**		**Pn**	**02 13 43.2**		**+1.3**
KBO	**Bosley Butte**	**3.42**	**277**	Pn	**Pn**	**02 13 42.4**		**-0.1**
BMO	**Blue Mountains**	**3.43**	**29**		**Pn**	**02 13 44.3**		**+1.7**
KMRM	**Mail Ridge**	**3.49**	**243**	Pn	**Pn**	**02 13 44.7**		**+1.4**
ELK	**Elko**	**3.51**	**107**	Pn	**Pn**	**02 13 44.4**		**+0.6**
NVAR	**Mina Array Bea**	**3.59**	**163**	Pn	**Pn**	**02 13 46.7**		**+1.8**
KEBM	**Edson Butte**	**3.61**	**288**	Pn	**Pn**	**02 13 44.9**		**-0.1**
NV11	**Mina Array Sit**	**3.63**	**161**	Pn	**Pn**	**02 13 46.0**		**+0.7**
LHV	**Little Huntoon**	**3.73**	**166**		**Pn**	**02 13 47.7**		**+1.2**
CMB	**Columbia Colle**	**3.88**	**189**		**Pn**	**02 13 49.3**		**+0.6**
PLID	**Pearl Lake**	**4.17**	**38**	Pn	**Pn**	**02 13 55.4**		**+2.6**
HLID	**Hailey**	**4.21**	**65**	P	**Pn**	**02 13 52.2**		**-1.2**
	baz=248							
HLID	**Hailey**	**4.21**	**65**	Pn	**Pn**	**02 13 53.7**		**+0.3**
TPH	**Tonopah**	**4.23**	**153**		**Pn**	**02 13 53.7**		**0.0**
MDPB	**Devils Postpil**	**4.26**	**174**		**Pn**	**02 13 54.0**		**-0.1**
OMMB	**Old Mammoth Mi**	**4.29**	**173**	Pn	**Pn**	**02 13 53.8**		**-0.8**
R11A	**Troy Canyon, C**	**4.70**	**137**	Pn	**Pn**	**02 13 59.8**		**-0.4**
BGU	**Big Grassy Mou**	**5.07**	**99**	Pn	**Pn**	**02 14 04.6**		**-0.6**
HVU	**Hansel Valley**	**5.14**	**89**	Pn	**Pn**	**02 14 05.5**		**-0.6**
BCYI	**Bear Canyon**	**5.18**	**59**	Pn	**Pn**	**02 14 05.8**		**0.0**
SPUT	**South Promonto**	**5.43**	**94**		**Pn**	**02 14 09.5**		**-0.6**
DUG	**Dugway, Tooele**	**5.44**	**106**	Pn	**Pn**	**02 14 09.9**		**-0.3**
PSUT	**Pine Spring**	**5.55**	**125**	Pn	**Pn**	**02 14 11.1**		**-0.8**
PRN	**Pahroc Range**	**5.70**	**140**		**Pn**	**02 14 13.2**		**-0.6**
MCMT	**McKenzie Canyo**	**5.77**	**57**	Pn	**Pn**	**02 14 14.2**		**-0.7**
ECR	**Eagle Creek**	**6.24**	**76**	Pn	**Pn**	**02 14 20.7**		**-0.5**
SHPR	**Sheep Range**	**6.40**	**146**	Pn	**Pn**	**02 14 22.8**		**-0.6**
AHID	**Auburn Hatcher**	**6.40**	**79**	Pn	**Pn**	**02 14 22.7**		**-0.8**
CCUT	**Cedar City**	**6.49**	**130**		**Pn**	**02 14 24.1**		**-0.6**
TPAW	**Teton Pass**	**6.61**	**73**	Pn	**Pn**	**02 14 25.6**		**-0.8**
REDW	**Red Top Meadow**	**6.66**	**74**	Pn	**Pn**	**02 14 26.2**		**-0.8**
IMW	**Indian Meadow**	**6.71**	**70**	Pn	**Pn**	**02 14 27.2**		**-0.6**
FLWY	**Flagg Ranch**	**6.92**	**68**	Pn	**Pn**	**02 14 29.8**		**-0.9**
LCMT	**Little Creek M**	**6.94**	**132**	Pn	**Pn**	**02 14 30.2**		**-0.6**
KNB	**Kanab**	**7.17**	**130**	Pn	**Pn**	**02 14 33.1**		**-0.9**

*NEIC **06** 02:12:50.4±1.1, 8.39S±0.05×108.15E±0.05, h58km±5km, mb4.6/40, Error ellipse: s-maj=7.4km s-min=6.6km az=51.0*
*DJA **06** 02:12:51.6±0.2, 8°S±2'×10°8E±°, h44km±3km, M4.8/41, mb4.9/41, mB5.3/12, MLv5.0/29, Mw(mB)4.7/12*
*IDC **06** 02:12:54.6±1.6, 8.01S×108.24E, h80km±14km, mb4.2/21, mb1 4.3/24, mb1mx4.2/37, mbtmp4.5/24, MS3.5/24, Ms1 3.5/24, ms1mx3.4/38, Error ellipse: s-maj=17.4km s-min=9.6km az=59.0*
ISC 06 02:12:49.9±0.9, 8.42S±0.04×108.12E±0.04, h48km±8km, n294, σ1°26/298, mb4.6/41, MS3.6/25, 1D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
CMJI	**Cimerak**	**0.71**	**27**	P	**Pn**	**02 13 03.7**		**-0.1**
CMJI				S	**Sn**	**02 13 12.1**		**-1.7**
CISI	**Cisompet, Garu**	**0.91**	**341**	P	**Pn**	**02 13 06.7**		**+0.2**
CISI				S	**Sn**	**02 13 17.5**		**-1.2**
CISI	**Cisompet, Garu**	**0.91**	**341**	Pn	**Pn**	**02 13 06.5**		**-0.1**
CISI				Sn	**Sn**	**02 13 18.4**		**-0.3**
KPJI	**Karang Pucung**	**1.35**	**37**	P	**Pn**	**02 13 13.6**		**+1.3**
KPJI				S	**Sn**	**02 13 29.9**		**+0.8**
CNJI	**Cibinong**	**1.48**	**318**	P	**Pn**	**02 13 14.5**		**+0.4**
LEM	**Lembang**	**1.66**	**342**	P	**Pn**	**02 13 18.9**		**+2.0**
	883nm,0.3s,baz=124,slow=8.7,SNR=338							
LEM				S	**Sn**	**02 13 40.1**		**+3.0**
	599nm,0.3s,baz=26,slow=22,SNR=8.9							
LEM				LR	LR	02 14 08.1		
	comp=Z,3μm,19.5s,baz=166,slow=55							
SKJI	**Sukabumi**	**2.10**	**312**	P	**Pn**	**02 13 23.8**		**+1.2**
SKJI				S	**Sn**	**02 13 47.6**		**+0.1**
YOGI	**Yogyakarta**	**2.23**	**74**	P	**Pn**	**02 13 25.1**		**+0.6**
YOGI				S	**Sn**	**02 13 50.0**		**-0.9**
DBJI	**Dramaga**	**2.30**	**324**	P	**Pn**	**02 13 27.5**		**+2.1**
UGM	**Wanagama**	**2.43**	**78**	P	**Pn**	**02 13 28.1**		**+0.9**
UGM	**Wanagama**	**2.43**	**78**	Pn	**Pn**	**02 13 27.2**		**0.0**
UGM				Sn	**Sn**	**02 13 54.4**		**-1.4**
SMRI	**Semarang**	**2.67**	**59**	P	**Pn**	**02 13 33.0**		**+2.5**
SMRI	**Semarang**	**2.67**	**59**		**Pn**	**02 13 30.9**		**+0.4**
SMRI				Sn	**Sn**	**02 14 03.1**		**+1.4**
TNG	**Tangerang**	**2.67**	**327**	P	**Pn**	**02 13 31.5**		**+1.0**
WOJI	**Wonogiri, Jawa**	**2.83**	**78**	P	**Pn**	**02 13 33.2**		**+0.5**
CGJI	**Cibinong**	**3.01**	**307**	P	**Pn**	**02 13 35.9**		**+0.9**

SBJI	**Serang**	**3.02**	**319**	P	**Pn**	**02 13 37.9**		**+2.6**
XMIS	**Christmas Isla**	**3.18**	**230**	Pn	**Pn**	**02 13 38.2**		**+0.7**
XMIS				Sn	**Sn**	**02 14 11.6**		**-2.6**
PWJI	**Pagerwojo**	**3.67**	**84**	P	**Pn**	**02 13 45.8**		**+1.7**
TBJI	**Tambak Boyo**	**4.02**	**67**	P	**Pn**	**02 13 50.8**		**+1.8**
BLSI	**Bandar Lampung**	**4.17**	**317**	P	**Pn**	**02 13 52.8**		**+1.8**
GRJI	**Gresik**	**4.57**	**71**	P	**Pn**	**02 13 57.6**		**+1.0**
KLSI		**5.01**	**318**	P	**Pn**	**02 14 05.7**		**+3.1**
LWLI	**Liwa**	**5.27**	**310**	P	**Pn**	**02 14 08.2**		**+2.0**
	2.4nm10μm235nm,0.6s							
GMJI	**Gumukmas**	**5.27**	**89**	P	**Pn**	**02 14 08.5**		**+2.4**
	2.3nm3μm129nm,0.6s							
BLJI	**Banyuglugur**	**5.46**	**83**	P	**Pn**	**02 14 11.7**		**+2.9**
	2.0nm4μm182nm,0.6s							
MDSI	**Maura Dua**	**5.54**	**315**	P	**Pn**	**02 14 11.6**		**+1.8**
	0.3nm901nm83nm,0.7s							
TPI	**Tanjungpandan**	**5.65**	**355**	P	**Pn**	**02 14 12.1**		**+0.7**
	0.4nm694nm82nm,0.8s							
JAGI	**Jajag, Banyuwa**	**5.97**	**91**	P	**Pn**	**02 14 18.0**		**+2.3**
	3.0nm4μm228nm,0.7s							
JAGI	**Jajag, Banyuwa**	**5.97**	**91**	Pn	**Pn**	**02 14 15.7**		**0.0**
ABJI	**Asem Bagus**	**6.08**	**85**	P	**Pn**	**02 14 20.0**		**+2.7**
	2.2nm2μm176nm,0.7s							
PPBI	**Pangkal Pinang**	**6.53**	**342**	P	**Pn**	**02 14 25.3**		**+1.9**
	1.0nm23μm55nm,0.8s							
PBKI	**Pangkalan Bun**	**6.69**	**32**	P	**Pn**	**02 14 27.3**		**+1.7**
	1.1nm168nm,1.0s							
SRBI	**Singaraja**	**7.03**	**88**	P	**Pn**	**02 14 33.5**		**+3.2**
	1.0nm3μm165nm,0.5s							
KSI	**Kapahiang**	**7.26**	**310**	P	**Pn**	**02 14 34.5**		**+1.0**
	2.5nm84nm,0.6s							
TWSI	**Taliwang, Sumb**	**8.67**	**93**	P	**Pn**	**02 14 54.9**		**+2.1**
	1μm66nm,0.8s							
KBKI	**Kotabaru**	**9.48**	**58**	P	Pn	02 15 14.7		+11
PLAI	**Plampang**	**9.55**	**93**	P	**Pn**	**02 15 06.2**		**+1.3**
	2μm143nm,1.1s							
WBSI	**Waikabubak, Su**	**11.20**	**97**	P	**Pn**	**02 15 25.2**		**-2.2**
	53nm,0.8s							
KAPI	**Kappang**	**12.04**	**74**	P	**Pn**	**02 15 41.2**		**+2.3**
	1.1nm,0.3s,baz=236,slow=15,SNR=5.8							
KAPI				LR	LR	02 21 00.5		
	comp=Z,249nm,18.4s,baz=263,slow=41							
KAPI	**Kappang**	**12.04**	**74**	Pn	**Pn**	**02 15 38.5**		**-0.4**
BKSI	**Bulukumba**	**12.31**	**76**	P	**P**	**02 15 51.4**		**-2.1**
SPSI	**Sidrap Palu**	**12.39**	**70**	P	P	02 16 01.7		+7.2
BSSI	**Bau Bau, Buton**	**12.48**	**80**	P	**Pn**	**02 15 47.9**		**+3.0**
	27nm,0.9s							
TTSI	**Tana Toraja**	**12.80**	**66**	P	**P**	**02 15 57.0**		**-2.0**
EDFI	**Ende, Flores**	**13.42**	**92**	P	**Pn**	**02 15 56.3**		**-1.6**
	27nm,0.6s							
MPSI	**Mapaga**	**14.61**	**54**	P	**Pn**	**02 16 15.6**		**+1.8**
	20nm,0.9s							
APSI	**Ampana**	**15.40**	**62**	P	**Pn**	**02 16 25.8**		**+1.6**
	420nm25nm,1.0s							
BATI	**Baumata**	**15.44**	**98**	P	**Pn**	**02 16 25.6**		**+0.9**
	6.1nm,0.3s,baz=17,slow=7.1,SNR=4.8							
BATI				S	**Sn**	**02 19 08.6**		**-6.2**
	7.1nm,0.3s,baz=164,slow=7.4,SNR=2.1							
BATI	**Baumata**	**15.44**	**98**	P	**Pn**	**02 16 25.4**		**+0.7**
	38nm,0.6s							
SOEI	**Soe**	**16.00**	**96**	P	**Pn**	**02 16 30.7**		**-1.2**
	1μm100nm,0.8s							
SOEI	**Soe**	**16.00**	**96**	Pn	**Pn**	**02 16 30.1**		**-1.8**
MYLDM	**Lahad Datu**	**17.02**	**38**	Pn	**Pn**	**02 16 43.6**		**-1.1**
MYLDM				IAmb	IAmb	02 16 58.7		
	comp=Z,46nm,1.0s							
PSA00	**Pilbara Seismi**	**17.28**	**140**		**P**	**02 16 48

comp=N,140nm,19.6s
GTA LR LR
comp=E,140nm,18.5s
GTA LR LR
comp=Z,170nm,18.9s
HHC Hu-ho-hao-te 49.13 3 *e*P **P 02 21 33.0 +0.1**
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,170nm,4.9s
HHC LR LR
comp=N,170nm,15.0s
HHC LR LR
comp=E,310nm,15.7s
HHC LR LR
comp=Z,150nm,15.9s
KSRS Korea Array 49.26 21 P **P 02 21 32.5 -1.2**
comp=Z,1.5nm,0.6s,baz=210,slow=9.8,SNR=6.1
KSRS PcP **PcP 02 22 57.0 +0.8**
comp=Z,3.2nm,0.9s,baz=206,slow=2.4,SNR=6.5
KSRS LR LR 02 41 53.1
comp=Z,18nm,21.7s,baz=150,slow=36
MJAR Matsushiro Arr 52.91 30 P **P 02 21 58.8 -2.5**
comp=Z,3.4nm,0.7s,baz=206,slow=7.7,SNR=6.1
MJAR PcP **PcP 02 23 10.5 +0.7**
comp=Z,1.1nm,0.3s,baz=204,slow=5.1,SNR=4.6
MJAR LR LR 02 44 17.7
comp=Z,39nm,20.5s,baz=250,slow=36
NIL Nilore 53.36 324 P **P 02 22 02.9 -1.7**
CN2 Changchun 54.30 15 *e*P P 02 22 20.6 +9.3
CN2 pmax pmax
comp=Z,10.0nm,0.7s
WMQ Urumqi 55.20 342 *e*P **P 02 22 20.1 +2.2**
SONM Songino Array 56.03 359 P **P 02 22 22.3 -1.6**
comp=Z,1.8nm,0.6s,baz=167,slow=7.7,SNR=11
SONM PcP **PcP 02 23 22.2 +0.5**
comp=Z,2.3nm,0.7s,baz=164,slow=4.5,SNR=7.1
SONM LR LR 02 48 34.4
comp=Z,65nm,19.8s,baz=175,slow=38
SONM Songino Array 56.03 359 P **P 02 22 22.6 -1.3**
SONM **PcP 02 23 21.3 -0.3**
KSH Kashi 56.24 330 *e*P **P 02 22 22.7 -2.8**
KSH pmax pmax
comp=Z,12nm,0.6s
KSH pmax pmax
comp=Z,360nm,4.8s
KBL Kabul 56.51 321 P **P 02 22 26.2 -1.4**
KBL IAmb IAmb 02 22 28.7
comp=Z,6.2nm,0.9s
USRK Ussuriysk Ar. 56.66 20 P **P 02 22 26.6 -1.6**
comp=Z,2.4nm,0.9s,baz=205,slow=16,SNR=2.8
USRK Ussuriysk Ar. 56.66 20 P **P 02 22 26.1 -2.1**
DZM Mont Dzumac 57.57 111 LR LR 02 49 37.2
comp=Z,53nm,18.3s,baz=260,slow=38
KDJ Kajisay 57.73 333 P **P 02 22 34.5 -1.6**
GAR Garm 58.81 326 P **P 02 22 41.8 -1.8**
CHGR Chuyangaron 59.22 325 P **P 02 22 44.0 -2.5**
MK31 Makanchi Array 59.60 340 P **P 02 22 48.3 -0.5**
MK31 IAmb IAmb 02 22 49.7
comp=Z,4.2nm,0.8s
MKAR Makanchi Array 59.60 340 P **P 02 22 46.9 -1.9**
comp=Z,6.2nm,0.8s,baz=155,slow=6.3,SNR=25
MKAR LR LR 02 51 28.2
comp=Z,62nm,19.4s,baz=149,slow=39
KURK Kurchatov 64.21 340 P **P 02 23 19.1 -0.5**
KURK IAmb IAmb 02 23 21.7
comp=Z,6.5nm,1.0s
RPZ Rata Peaks 64.74 134 LR LR 02 49 56.2
comp=Z,114nm,20.1s,baz=229,slow=34
ZAA0 Zalesovo Array 65.18 345 P **P 02 23 24.6 -1.3**
ZALV Zalesovo Beam 65.18 345 P **P 02 23 23.9 -2.0**
comp=Z,3.0nm,0.8s,baz=138,slow=3.8,SNR=9.2
ZALV PcP **PcP 02 23 57.5 -0.6**
comp=Z,1.1nm,0.4s,baz=180,slow=6.8,SNR=3.7
ZALV LR LR 02 52 56.2
comp=Z,32nm,19.9s,baz=208,slow=37
ZALV Zalesovo Beam 65.18 345 P **P 02 23 23.5 -2.4**
ZALV **PcP 02 23 57.6 -0.5**
GEYT Alibeck 65.56 318 P **P 02 23 28.4 -0.4**
comp=Z,15nm,0.8s,baz=141,slow=9.6,SNR=21
GEYT LR LR 02 53 47.6
comp=Z,22nm,19.7s,baz=0.0,slow=38
GYA0B ALIBECK ARRAY 65.56 318 P **P 02 23 28.3 -0.5**
MAW Mawson 66.34 197 P **P 02 23 36.9 +3.7**
comp=Z,2.6nm,0.6s,baz=88,slow=6.2,SNR=10
MAW LR LR 02 48 37.4
comp=Z,33nm,20.3s,baz=304,slow=32
MAW Mawson 66.34 197 P **P 02 23 33.9 +0.7**
ABKAR Akbulak array 71.20 329 P **P 02 24 03.0 -0.7**
ABKAR Akbulak array 71.20 329 P **P 02 24 03.1 -0.7**
PETK Petropavlovsk- 74.30 28 P **P 02 24 21.6 -0.5**
VNDA Vanda 74.37 170 P **P 02 24 26.0 +3.9**
comp=Z,4.4nm,0.9s,baz=318,slow=4.5,SNR=22
VNDA LR LR 02 56 27.6
comp=Z,24nm,18.0s,baz=344,slow=35
VNDA Vanda 74.37 170 P **P 02 24 23.4 +1.2**
VNDA IAmb IAmb 02 24 28.1
comp=Z,7.0nm,1.1s
ARU Arti 76.38 334 P **P 02 24 33.4 -0.4**
ARU IAmb IAmb 02 24 34.2
comp=Z,11nm,1.1s
MBAR Mbarara 77.43 271 P **P 02 24 39.9 -1.1**
MBAR IAmb IAmb 02 24 44.9
comp=Z,7.6nm,1.1s
MARD Mardin 77.53 311 P **P 02 24 39.6 -1.3**
LSZ Lusaka 78.17 256 P **P 02 24 44.1 -0.8**
LSZ IAmb IAmb 02 24 50.7
comp=Z,5.3nm,1.0s
KBZ Khabaz 78.44 318 P **P 02 24 46.0 +0.2**
comp=Z,6.6nm,1.0s,baz=157,slow=6.2,SNR=11
KBZ LR LR 03 04 23.0
comp=Z,9.1nm,19.6s,baz=170,slow=40
NRIK Noril'sk 78.89 353 P **P 02 24 45.4 -2.2**
comp=Z,1.1nm,0.4s,baz=163,slow=7.6,SNR=1.9
NRIK LR LR 03 02 44.6
comp=Z,47nm,18.9s,baz=202,slow=38
BOSA Boshof 79.78 242 P **P 02 24 55.8 +2.2**
comp=Z,2.8nm,0.8s,baz=150,slow=8.1,SNR=2.4
BOSA LR LR 02 55 34.1
comp=Z,42nm,21.1s,baz=159,slow=32
BOSA Boshof 79.78 242 P **P 02 24 53.1 -0.5**
BOSA IAmb IAmb 02 24 57.5
comp=Z,6.6nm,1.1s
GAZ Gaziantep 80.16 310 P **P 02 24 54.8 -0.5**
GAZ IAmb IAmb 02 24 58.7
comp=Z,8.2nm,0.9s
QSPA South Pole Qui 81.57 180 P **P 02 25 02.8 +0.3**
QSPA IAmb IAmb 02 25 08.2
comp=Z,6.0nm,1.0s
CSS Mathiatis 82.52 307 P **P 02 25 07.5 -0.4**
BR131 Keskin Array S 83.60 312 P **P 02 25 13.1 -0.4**
BR131 IAmb IAmb 02 25 16.1
comp=Z,6.2nm,0.9s
BRTR Keskin Array B 83.60 312 P **P 02 25 13.2 -0.2**
comp=Z,4.8nm,0.8s,baz=134,slow=7.0,SNR=17
BRTR LR LR 03 05 52.5
comp=Z,10nm,18.8s,baz=115,slow=38
BRTR Keskin Array B 83.60 312 P **P 02 25 13.0 -0.4**
KLMR Klimovskoe 87.15 333 *e*P **P 02 25 28.3 -2.2**
KLMR AMP 02 25 31.2
comp=Z,23nm,1.1s
KARP Karpathos 87.56 306 P **P 02 25 32.6 -0.6**
SNAA Sanae 88.50 197 P **P 02 25 37.1 +0.1**
AKASG Malin Array Be 89.49 321 P **P 02 25 41.5 -0.4**
comp=Z,1.0nm,0.6s,baz=96,slow=4.0,SNR=5.2
AKASG Malin Array Be 89.49 321 P **P 02 25 41.6 -0.2**
BURAR Bucovina Array 91.40 318 P **P 02 25 50.7 -0.3**
BUR08 Bucovina Ar. S 91.42 318 P **P 02 25 50.5 -0.5**
BUR08 IAmb IAmb 02 26 03.1
comp=Z,2.9nm,1.1s
FINES FINESS Array B 93.55 332 P **P 02 25 59.9 -0.4**
comp=Z,3.6nm,0.8s,baz=186,slow=1.9,SNR=5.7
ARCES ARCESS Array B 95.25 339 P **P 02 26 07.4 -0.7**
comp=Z,7.5nm,1.1s,baz=90,slow=1.2,SNR=4.2
ARCES LR LR 03 14 23.9
comp=Z,25nm,18.6s,baz=335,slow=39
TORD Torodi Ar. Bea 107.78 281 PKiKP **PKiKP 02 31 13.6 +0.7**
comp=Z,0.3nm,0.5s,baz=44,slow=0.9,SNR=7.0
TXAR Lajitas Array 143.63 51 PKP PKPbc 02 32 19.0 +1.2
comp=Z,0.8nm,0.8s,baz=308,slow=4.1,SNR=6.2
TXAR Lajitas Array 143.63 51 PKPbc 02 32 18.8 +1.1
H60A Morristown 143.99 1 P PKPbc 02 32 18.5 +0.3
baz=359
WMOK Wichita Mounta 144.01 39 P PKPbc 02 32 19.1 +0.4
baz=310,SNR=20
H58A Gabriels 144.09 3 P PKPbc 02 32 19.1 +0.5
baz=356
LBNH Lisbon 144.32 0 P PKPbc 02 32 20.0 +0.7
baz=360
HDIL Hopedale 144.44 23 P PKPbc 02 32 20.4 +0.7
baz=330
I61A Oroboro, Fairl 144.63 0 P **PKPdf 02 32 21.7 +0.3**
baz=359
I60A Shoreham 144.69 2 P **PKPdf 02 32 21.9 +0.3**
baz=358
I59A Olmsteadville 144.72 3 P **PKPab 02 32 20.5 0.0**
baz=356
I58A Old Forge 144.77 4 P PKPbc 02 32 21.1 +0.4
baz=355
ABTX Abilene, Hawle 144.77 43 P **PKPdf 02 32 22.1 0.0**
baz=307
J57A Williamstown 144.96 5 P **PKPab 02 32 21.3 0.0**
baz=353
TUL1 Leonard 145.00 35 P **PKPdf 02 32 22.1 -0.2**
baz=316
J59A Piesco 145.02 3 P **PKPbc 02 32 21.6 0.0**
baz=355
J58A Remsen 145.07 4 P **PKPbc 02 32 21.6 -0.1**
baz=354
J61A Chester 145.21 1 P **PKPdf 02 32 22.6 +0.1**
baz=359
J60A Lan Hill Farm 145.29 2 P **PKPbc 02 32 22.4 +0.1**
baz=357
J62A Henniker 145.33 360 P **PKPdf 02 32 22.8 +0.1**
baz=0.1
SFIN Lafayette 145.41 21 P **PKPab 02 32 23.3 +0.3**
baz=333,SNR=8.8
K56A Middlesex 145.53 7 P **PKPdf 02 32 23.1 0.0**
baz=350
K57A Scipio Center 145.59 6 P **PKPdf 02 32 23.3 +0.1**
baz=352
K58A Earlville 145.64 5 P **PKPbc 02 32 23.7 +0.2**
baz=353
ERPA Erie 145.69 11 P **PKPbc 02 32 23.8 +0.1**
baz=346
CCM Cathedral Cave 145.71 28 P **PKPab 02 32 24.2 0.0**
baz=324
K62A Royalston 145.89 0 P **PKPab 02 32 24.7 -0.1**
baz=359
K60A Five Rivers En 145.90 3 P **PKPab 02 32 25.0 +0.3**
baz=356
JCT Junction City 145.91 46 P **PKPab 02 32 25.9 +0.6**
baz=304
L56A Greenwood 146.05 8 P **PKPbc 02 32 24.9 0.0**
baz=350
L61B Northampton 146.10 1 P **PKPbc 02 32 24.9 0.0**
baz=358
BINY Binghamton 146.16 5 P **PKPbc 02 32 25.3 +0.1**
baz=353
M53A Wi Miller and 146.21 12 P **PKPbc 02 32 25.2 -0.1**
baz=344
L59A Walton 146.25 4 P **PKPbc 02 32 25.5 0.0**
baz=354
U40A Yellville 146.26 31 P **PKPbc 02 32 25.6 0.0**
baz=320
L57A Andrews Acres 146.27 7 P **PKPbc 02 32 25.5 -0.1**
baz=351
L58A Harry Jones Me 146.33 5 P **PKPbc 02 32 25.9 +0.3**
baz=353
M54A Oil Creek Stat 146.34 11 P **PKPbc 02 32 25.8 +0.1**
baz=346
BDFB Brasilia 146.38 225 PKPbc **PKiKP 02 32 29.0 -0.7**
comp=Z,1.9nm,0.7s,baz=79,slow=6.6,SNR=3.5
M56A Emporium 146.60 9 P **PKPbc 02 32 26.5 0.0**
baz=349
WHTX Lake Whitney, 146.62 42 P **PKPab 02 32 27.8 -0.1**
baz=309
W39A Magazine 146.65 34 P **PKPbc 02 32 27.3 +0.6**
baz=318
N54A Moraine State 146.80 11 P **PKPbc 02 32 27.3 +0.2**
baz=345
ACSO Alum Creek Sta 146.81 16 P **PKPbc 02 32 27.3 +0.2**
baz=340,SNR=7.2
M59A Waymart 146.87 5 P **PKPbc 02 32 27.6 +0.3**
baz=354
M57A Sunshine Farm, 146.89 7 P **PKPbc 02 32 27.7 +0.5**
baz=350,SNR=5.8
M58A Price's Panora 146.94 6 P **PKPbc 02 32 27.7 +0.3**
baz=352,SNR=5.4
P49A Miami Univ. Ec 146.96 18 P **PKPbc 02 32 27.5 0.0**
baz=336,SNR=7.1
O51A Pataskala 146.99 15 P **PKPbc 02 32 27.8 +0.1**
baz=340,SNR=12
M60A Port Jervis 147.14 4 P **PKPbc 02 32 28.1 +0.1**
baz=355
N56A West Decatur 147.14 9 P **PKPbc 02 32 28.2 +0.1**
baz=348,SNR=6.2
O52A Adamsville 147.21 14 P **PKPbc 02 32 28.3 0.0**
baz=342
O53A New Philadelph 147.23 13 P **PKPbc 02 32 28.4 +0.1**
baz=343
MIAR Mount Ida 147.24 34 P **PKPbc 02 32 28.9 +0.5**
baz=318,SNR=28
833A Chaparral WMA, 147.38 49 P **PKPab 02 32 30.1 -0.9**
baz=302
N57A Milroy 147.41 8 P **PKPbc 02 32 29.0 +0.2**
baz=350,SNR=7.6
N58A Sunbury 147.43 7 P **PKPbc 02 32 29.1 +0.3**
baz=351,SNR=9.2
N59A State Game Lan 147.46 5 P **PKPbc 02 32 29.4 +0.4**
baz=353,SNR=8.3
O54A Avella 147.48 12 P **PKPbc 02 32 29.4 +0.4**
baz=344,SNR=7.7
W41B Gary Mavity, V 147.49 32 P **PKPab 02 32 30.7 -0.5**
baz=320
P51A Williamsport 147.49 16 P **PKPbc 02 32 28.8 -0.2**
baz=339,SNR=7.8
PAL Palisades 147.50 3 P **PKPbc 02 32 29.1 +0.1**
baz=356
N60A Cedar Hill Far 147.56 5 P **PKPbc 02 32 29.3 +0.2**
baz=354
P52A Corning 147.59 15 P **PKPbc 02 32 29.2 -0.1**
baz=341,SNR=6.5
WCI Wyndotte Cave 147.60 21 P **PKPbc 02 32 29.6 +0.2**
baz=333
O55A Ligonier 147.66 11 P **PKPbc 02 32 29.6 +0.1**
baz=346
X40A Basin Creek Fa 147.69 34 P **PKPbc 02 32 30.5 +0.7**
baz=319
O56A Blue Knob Stat 147.73 10 P **PKPbc 02 32 30.1 +0.3**
baz=348,SNR=6.2
N61A South Mountain 147.73 3 P **PKPbc 02 32 30.0 +0.4**
baz=356
P53A Whipple 147.92 14 P **PKPbc 02 32 30.5 +0.3**
baz=342,SNR=6.1
O57A Amberson 147.93 8 P **PKPbc 02 32 30.4 +0.1**
baz=349
P54A Burton 148.01 13 P **PKPbc 02 32 30.9 +0.4**
baz=344,SNR=5.4
O59A Robesonia 148.01 6 P **PKPbc 02 32 30.7 +0.3**
baz=352
O60A Telford 148.08 5 P **PKPbc 02 32 31.0 +0.4**
baz=353
MCWV Mont Chateau 148.09 12 P **PKPbc 02 32 31.1 +0.5**
baz=345
O58A Lewisberry 148.11 7 P **PKPbc 02 32 30.8 +0.1**
baz=350,SNR=6.5
Q52A Bidwell 148.19 15 P **PKPbc 02 32 31.0 +0.1**
baz=340,SNR=7.3
P55A Reedsville 148.24 12 P **PKPbc 02 32 31.4 +0.3**
baz=345,SNR=5.5
O61A Allentown 148.37 4 P **PKPbc 02 32 31.4 +0.1**
baz=355
P56A Dayton Farm, R 148.43 10 P **PKPbc 02 32 31.9 +0.4**
baz=347,SNR=8.7
Q53A Leroy 148.48 14 P **PKPbc 02 32 31.9 +0.2**
baz=342,SNR=5.5
Q54A Coxs Mills 148.53 13 P **PKPbc 02 32 32.1 +0.3**
baz=343,SNR=6.5
P60A Greenville 148.56 6 P **PKPbc 02 32 32.1 +0.3**
baz=353
P57A Homestead Farm 148.59 9 P **PKPbc 02 32 32.3 +0.4**
baz=348,SNR=7.5
Z41A Richland Creek 148.62 35 P **PKPbc 02 32 32.8 +0.6**
baz=317
P59A Jarrettsville 148.68 7 P **PKPbc 02 32 32.5 +0.3**
baz=351
Q55A Buckhannon 148.68 12 P **PKPbc 02 32 32.5 +0.3**
baz=344,SNR=9.7
P58A Pank, Wackersv 148.69 8 P **PKPbc 02 32 32.5 +0.3**
baz=350
X43A Marvell 148.70 31 P **PKPbc 02 32 33.0 +0.7**
baz=322
P61A Hammonton 148.77 4 P **PKPbc 02 32 32.7 +0.3**
baz=354
Q56A Snyder Ridge, 148.81 11 P **PKPbc 02 32 32.9 +0.4**
baz=346,SNR=5.7
WVT Waverly 148.82 25 P **PKPbc 02 32 33.1 +0.5**
baz=328
R53A Hurricane 148.87 15 P **PKPbc 02 32 32.9 +0.2**
baz=340
Q57A Strasburg 148.96 10 P **PKPbc 02 32 33.2 +0.3**
baz=347,SNR=5.3
Q58A Fox Den Farm, 149.17 9 P **PKPbc 02 32 33.8 +0.4**
baz=349,SNR=7.5
R54A Victor 149.25 14 P **PKPbc 02 32 33.8 0.0**
baz=342
Q60A Greensboro 149.35 6 P **PKPbc 02 32 34.2 +0.3**
baz=352
R55A Marlinton 149.36 13 P **PKPbc 02 32 34.3 +0.3**
baz=344
R56A Bull Pasture M 149.39 12 P **PKPbc 02 32 34.6 +0.5**
baz=345
Q59A Harwood 149.39 7 P **PKiKP 02 32 34.6 -0.5**
baz=351
OXF Oxford 149.44 29 P **PKPbc 02 32 34.5 +0.3**
baz=324
S54A Dingess, Beckl 149.53 15 P **PKPbc 02 32 34.7 +0.2**
baz=341
R57A Stanardsville 149.66 10 P **PKiKP 02 32 35.3 -0.4**
baz=347,SNR=5.8
R58A Rapidan 149.75 10 P **PKPbc 02 32 35.4 +0.6**
baz=348,SNR=8.5
S55A Lewisburg 149.76 14 P **PKPbc 02 32 34.9 -0.1**
baz=343
R60A Leonardtown, M 149.99 7 P **PKiKP 02 32 36.0 -0.3**
baz=351
S56A Natural Bridge 150.06 12 P **PKPbc 02 32 35.5 -0.2**
baz=345
TZTN Tazewell 150.06 19 P **PKPbc 02 32 36.1 +0.4**
baz=336,SNR=5.5
R58B Mineral 150.09 10 P **PKPbc 02 32 36.1 +0.4**
baz=348
S57A Dark Hollow, R 150.10 11 P **PKPbc 02 32 36.2 +0.4**
baz=346
T54A Tazewell 150.16 16 P **PKPbc 02 32 36.2 +0.2**
baz=340,SNR=9.5
BLA Blacksburg 150.31 14 P **PKPbc 02 32 36.4 +0.1**
baz=343
T55A Pulaski 150.31 14 P **PKPbc 02 32 36.6 +0.3**
baz=342,SNR=5.3
S59A Mechanicsville 150.38 9 P **PKiKP 02 32 37.1 -0.1**
baz=349
S58A Poland Farm, P 150.41 10 P **PKPbc 02 32 36.8 +0.3**
baz=348,SNR=7.4
S60A Water View 150.53 8 P **PKiKP 02 32 37.6 +0.1**
baz=350
T56A Rocky Mt 150.58 13 P **PKPbc 02 32 37.1 +0.2**
baz=343,SNR=7.0
T57A Hurt 150.78 12 P **PKiKP 02 32 37.9 -0.1**
baz=345
TKL Tuckaleechee C 150.79 20 PKPbc **PKiKP 02 32 37.9 -0.2**
comp=Z,9.8nm,0.7s,baz=154,slow=4.8,SNR=14
TKL Tuckaleechee C 150.79 20 **PKPbc 02 32 36.5 -1.0**
T58A Grand View Acr 150.97 11 P **PKPbc 02 32 38.2 +0.3**
baz=346,SNR=6.2
T60A Surry 151.07 8 P **PKiKP 02 32 38.8 +0.1**
baz=350
T59A Double "B" Far 151.12 9 P **PKiKP 02 32 38.8 +0.1**
baz=348,SNR=11
U56A King 151.14 14 P **PKiKP 02 32 38.7 -0.1**
baz=342
V54A Nebo 151.26 17 P **PKiKP 02 32 39.0 -0.1**
baz=339
U57A Blanch 151.30 13 P **PKiKP 02 32 39.0 -0.1**
baz=344
V55A Taylorsville 151.40 16 P **PKiKP 02 32 39.3 -0.1**
baz=340
U58A Oxford 151.50 11 P **PKiKP 02 32 39.7 +0.1**
baz=346
V56A Mocksville 151.63 15 P **PKiKP 02 32 39.8 -0.1**
baz=342
U59A Littleton 151.68 10 P **PKiKP 02 32 39.9 0.0**
baz=348
V57A Coltrane Farms 151.73 14 P **PKPbc 02 32 39.8 +0.2**
baz=343,SNR=5.1
LRAL Lakeview Retre 151.79 28 P **PKiKP 02 32 40.2 0.0**
baz=327
W54A Cherokee Point 151.83 18 P **PKiKP 02 32 40.3 0.0**
baz=338
U61A Possum Corner 151.91 8 P **PKiKP 02 32 40.9 +0.6**
baz=350
V58A Windy Hill, Pi 151.97 13 P **PKPbc 02 32 40.4 +0.2**
baz=345
KMSC Kings Mountain 152.03 17 P **PKiKP 02 32 40.6 0.0**
baz=340
V59A Middlesex 152.17 11 P **PKiKP 02 32 40.9 0.0**
baz=346
W56A Indian Trail 152.24 15 P **PKiKP 02 32 41.3 +0.2**
baz=341
X54A Belton 152.27 19 P **PKiKP 02 32 41.4 +0.2**
baz=337
V60A Jim Taylor Roa 152.34 9 P **PKiKP 02 32 41.5 +0.3**
baz=348
W57A Gilead 152.38 14 P **PKiKP 02 32 41.4 0.0**
baz=342
V61A Roper 152.42 8 P **PKiKP 02 32 42.1 +0.6**
baz=350
X55A Gracelyn & Ava 152.57 18 P **PKiKP 02 32 42.0 +0.2**
baz=339
W58A Raeford 152.68 13 P **PKiKP 02 32 42.4 +0.4**
baz=344
X56A White Oak 152.72 17 P **PKiKP 02 32 42.5 +0.3**
baz=340
GOGA Godfrey 152.93 22 P **PKiKP 02 32 43.1 +0.5**
baz=334
W60A Pink Hill 152.96 11 P **PKiKP 02 32 43.0 +0.5**
baz=347
W61A Ground Anchor 152.96 9 P **PKiKP 02 32 43.0 +0.4**
baz=349
X59A McDuffie Farm, 153.25 12 P **PKiKP 02 32 43.3 +0.1**
baz=345
X60A Albert Glenn T 153.37 11 P **PKiKP 02 32 44.0 +0.5**
baz=346
Y58A Scranton 153.64 15 P **PKiKP 02 32 45.2 +1.2**
baz=342
Z57A Bowman 153.94 17 P **PKiKP 02 32 45.0 +0.4**
baz=340
LPAZ La Paz 155.17 189 PKPab **PKPab 02 33 07.4 +3.3**
comp=Z,1.6nm,0.7s,baz=157,slow=5.5,SNR=5.8
CMIG Matias Romero 155.99 67 PKPab **PKPab 02 33 06.4 -0.7**
comp=Z,0.5nm,0.3s,baz=243,slow=4.5,SNR=3.9

IDC 06 02:31:17.6±6.7, 6.00S×154.59E, h49km±51km, mb2.8/2, mb1 3.5/4, mb1mx3.2/33, mbtmpg3.5/4, ML3.0/2, MS2.5/1, Ms1 2.5/1, ms1mx2.3/9, Error ellipse: s-maj=57.4km s-min=23.6km az=92.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.06**	**303**	P	Pn	02 32 03.8	+0.4
	10nm,0.3s,baz=180,slow=8.1,SNR=2.0						
KRVT				S	Sn	02 32 39.5	+0.7
	16nm,0.3s,baz=309,slow=23,SNR=6.4						
KRVT				LR	LR	02 33 31.0	
	comp=Z,78nm,21.3s,baz=104,slow=44						
PMG	**Port Moresby**	**8.11**	**245**	P	Pn	02 33 12.4	-0.3
	3.2nm,0.3s,baz=43,slow=8.0,SNR=7.9						
PMG				S	Sn	02 34 42.9	-0.2
	0.8nm,0.3s,baz=16,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**24.07**	**233**	P	P	02 36 27.2	-1.4
	0.2nm,0.6s,baz=58,slow=9.7,SNR=1.8						
WRA				PcP	PcP	02 40 09.6	+0.3
	0.4nm,0.5s,baz=56,slow=2.6,SNR=8.5						
ASAR	**Alice Springs**	**26.55**	**226**	P	P	02 36 53.0	+2.0
	0.2nm,0.5s,baz=58,slow=8.9,SNR=2.0						
ASAR				PcP	PcP	02 40 15.2	+0.3
	0.2nm,0.4s,baz=62,slow=2.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**152.37**	**287**	PKPbc	PKPbc	02 51 07.9	-1.4
	0.4nm,0.6s,baz=63,slow=3.1,SNR=4.8						

WEL 06 03:40:48.7, 41.6S±0.9×174.4E±1.0, h14km±2km, M2.5/18, ML2.8/18, MLv2.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=134.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.20**	**218**	P	Pb	03 40 58.5	+4.4
TUWZ	**Tuamarina**	**0.36**	**297**	P	Pb	03 40 56.6	-0.3
TCW	**Tory Channel**	**0.39**	**349**	P	Pb	03 40 57.2	-0.2

BSWZ	**Blackbirch Sta**	**0.39**	**252**	P		Pg	03 40 57.0	+0.3
BHW	**Baring Head**	**0.42**	**64**	P		Pb	03 40 57.7	-0.1
WEL	**Wellington**	**0.43**	**44**	P		Pb	03 40 58.0	0.0
PLWZ	**Palliser**	**0.66**	**88**	P		Pb	03 41 02.2	+0.2
MSWZ	**Moikau Station**	**0.68**	**75**	P		Pb	03 41 02.5	+0.2
CAW	**Cannon Point**	**0.71**	**47**	P		Pb	03 41 02.8	0.0
PAWZ	**Paruwai Farm**	**0.82**	**75**	P		Pb	03 41 04.9	+0.2
KIW	**Kapiti Island**	**0.84**	**29**	P		Pb	03 41 05.0	0.0
NNZ	**Nelson**	**0.84**	**296**	P		Pg	03 41 04.9	0.0
DUWZ	**D'Urville Isla**	**0.86**	**336**	P		Pb	03 41 05.6	+0.1
MTW	**Mount Morrison**	**0.95**	**63**	P		Pn	03 41 07.4	-0.3
OGWZ	**Otaki Gorge**	**0.98**	**38**	P		Pb	03 41 07.4	0.0
TRWZ	**Traveller**	**1.00**	**79**	P		Pb	03 41 07.7	-0.2
KHZ	**Kahutara**	**1.03**	**217**	P		Pb	03 41 08.1	-0.1
HOWZ	**Holdsworth Sta**	**1.11**	**51**	P		Pg	03 41 10.2	+0.2
THZ	**Tophouse**	**1.11**	**261**	P		Pb	03 41 09.7	0.0
MRZ	**Mangatainoka R**	**1.30**	**45**	P		Pn	03 41 12.6	+0.2
QRZ	**Quartz Range**	**1.59**	**298**	P		Pb	03 41 17.7	-0.1
GVZ	**Greta Valley S**	**1.69**	**216**	P		Pn	03 41 16.9	-0.9
WAZ	**Wanganui**	**1.90**	**14**	P		Pg	03 41 26.0	+1.0
DSZ	**Denniston Nort**	**1.93**	**265**	P		Pb	03 41 23.2	-0.5
LTZ	**Lake Taylor**	**1.96**	**232**	P		Pn	03 41 21.1	-0.5
AMCZ	**Amberley**	**2.03**	**218**	P		Pn	03 41 21.3	-1.2
OKCZ	**Okains Bay**	**2.34**	**204**	P		Pn	03 41 24.8	-1.9
MOVZ	**Moawhango**	**2.42**	**26**	P		Pb	03 41 32.4	+0.3
WNVZ	**Wahianoa**	**2.45**	**23**	P		Pb	03 41 33.3	+0.7
MQZ	**McQueen's Vall**	**2.46**	**210**	P		Pn	03 41 25.9	-2.5
BHHZ	**Black Hill Sta**	**2.46**	**32**	P		Pb	03 41 34.1	+1.3
VRZ	**Vera Road**	**2.48**	**7**	P		Pg	03 41 34.8	-1.5
FWVZ	**Far West T-bar**	**2.50**	**21**	P		Pb	03 41 34.4	+0.9
NGZ	**Ngauruhoe**	**2.59**	**22**	P		Pb	03 41 36.1	+1.1
OTVZ	**Oturere**	**2.62**	**22**	P		Pb	03 41 36.4	+0.9
ETVZ	**East Tongariro**	**2.66**	**23**	P		Pb	03 41 37.0	+0.9
TMVZ	**Te Maari**	**2.68**	**23**	P		Pb	03 41 36.9	+0.5
KRVZ	**Karewarewa**	**2.68**	**22**	P		Pb	03 41 36.4	0.0
CNGZ	**Carnagh Statio**	**4.28**	**45**	P		Pn	03 41 58.1	+4.8
ODZ	**Otahua Downs**	**4.39**	**217**	P		Pn	03 41 52.9	-2.0

*IDC **06** 03:44:34.5±1.2,64°.49N×17°.91W,h0km,mb3.5/4,*
mb1 3.9/5,mb1mx3.5/43,mbtmp3.6/5,ML3.8/1,MS2.4/3,
Ms1 2.4/3,ms1mx2.2/41,Error ellipse: s-maj=44.5km
s-min=17.4km az=30.0

ISC 06 03:44:35.9±0.9,64°.53N±0°.09×17°.85W±0°.08,h10km,n9,
σ0s81/9,mb3.7/4,Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.51**	**280**	Pn	**Pn**	**03 45 01.9**	**-1.1**
	15nm,0.3s,baz=97,slow=7.7,SNR=17						
BORG				Sn	**Sb**	**03 45 23.6**	**+0.4**
	8.6nm,0.3s,baz=64,slow=19,SNR=10.0						
SCO	**Scoresbysund**	**6.18**	**347**	*e*	Pn	03 46 01.4	-5.6
	baz=185,slow=6.9						
SCO				*i* P	**Pn**	**03 46 06.0**	**-1.0**
SCO				*i* S	**Sn**	**03 47 18.3**	**+0.7**
SCO				IAML		03 47 27.8	
	comp=Z,1.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.77**	**135**	Pn	**Pn**	**03 47 24.1**	**+0.5**
	baz=325,slow=13,SNR=4.5						
NOA	**NORSAR Array B**	**13.68**	**91**	LR	LR	03 52 08.4	
	comp=Z,6.1nm,21.7s,baz=275,slow=33						
GERES	**GERESS Array B**	**23.02**	**118**	P	**P**	**03 49 40.4**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=339,slow=7.1,SNR=3.7						
GERES				LR	LR	03 58 01.3	
	comp=Z,20nm,21.4s,baz=239,slow=35						
VRAC	**Vranov**	**23.78**	**113**	LR	LR	04 00 27.6	
	comp=Z,12nm,20.4s,baz=77,slow=40						
ILAR	**Eielson Array**	**45.73**	**332**	P	**P**	**03 52 56.6**	**+0.1**
	comp=Z,1.0nm,1.0s,baz=23,slow=5.5,SNR=6.5						
TORD	**Torodi Ar. Bea**	**53.08**	**156**	P	**P**	**03 53 52.9**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=337,slow=9.9,SNR=3.3						
PDAR	**Pinedale Array**	**53.09**	**293**	P	**P**	**03 53 54.1**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=47,slow=6.6,SNR=5.6						

*IGIL **06** 03:57:49.1,37°.23N×13°.19W,h0km,ML2.7*
*MDD **06** 03:57:50.0±1.8,37°.16N×13°.14W,h0km,mb3.7/15,Error*
ellipse: s-maj=14.9km s-min=13.0km az=71.0,PRXIMO
*INMG **06** 03:57:51.8±1.2,36°.99N×13°.50W,h10km,ML2.6,Error*
ellipse: s-maj=6.6km s-min=5.4km az=94.0
*CNRM **06** 03:57:57.0±1.3,36°.65N×12°.71W,h63km±99km,Error*
ellipse: s-maj=13.9km s-min=7.2km az=130.0

ISC 06 03:57:46.3±3.2,37°.18N±0°.08×13°.3W±0°.1,h10km,n72,
σ2s12/104,2D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.53**	**89**	⇓P	**Pn**	**03 58 43.0**	**+1.8**
	5.4nm,0.1s,SNR=18						
PFVI				S	**Sn**	**03 59 22.3**	**-0.8**
	23nm,0.2s,SNR=10.0						
PFVI	**Vila Bisbo**	**3.53**	**89**	⇓*e*Pn	**Pn**	**03 58 43.0**	**+1.8**
PFVI				*e*Sn	**Sn**	**03 59 22.4**	**-0.7**
PFVI				A	A	03 59 25.3	
	11nm,0.4s						
PTEO	**Sao Teotonio**	**3.62**	**83**	P	**Pn**	**03 58 44.9**	**+2.5**
PTEO				S	**Sn**	**03 59 24.7**	**-0.6**
	4.8nm,0.3s						
PTEO	**Sao Teotonio**	**3.62**	**83**	*e*Pn	**Pn**	**03 58 44.9**	**+2.5**
PTEO				*e*Sn	**Sn**	**03 59 24.7**	**-0.6**
PTEO				A	A	03 59 29.9	
	9.6nm,0.3s						
MORF	**Marmelete**	**3.67**	**87**	*e*P	**Pn**	**03 58 44.5**	**+1.4**
MORF				*e*S	**Sn**	**03 59 25.2**	**-1.4**
MORF				AML	AML	03 59 28.0	
	comp=N,20nm,0.2s						
MORF	**Marmelete**	**3.67**	**87**	P	**Pn**	**03 58 45.3**	**+2.1**
MORF				S	**Sn**	**03 59 25.8**	**-0.7**
	comp=N,15nm,0.2s						
MORF	**Marmelete**	**3.67**	**87**	*e*Pn	**Pn**	**03 58 45.3**	**+2.1**
MORF				*e*Sn	**Sn**	**03 59 25.8**	**-0.7**
MORF				A	A	03 59 30.4	
	comp=N,15nm,0.2s						
PNCL	**Nicolau / Gran**	**3.86**	**75**	P	**Pn**	**03 58 47.8**	**+2.1**
PNCL				S	**Sn**	**03 59 31.1**	**0.0**
	comp=N,4.9nm,0.4s						
PNCL	**Nicolau / Gran**	**3.86**	**75**	*e*Pn	**Pn**	**03 58 47.8**	**+2.1**
PNCL				*e*Sn	**Sn**	**03 59 31.1**	**0.0**
PNCL				A	A	03 59 35.3	
	comp=N,4.9nm,0.4s						
PCVE	**Castro Verde**	**4.17**	**82**	P	**Pn**	**03 58 53.2**	**+3.2**
PCVE				S	**Sn**	**03 59 37.7**	**-1.1**
	comp=N,6.8nm,0.3s						
PCVE	**Castro Verde**	**4.17**	**82**	*e*Pn	**Pn**	**03 58 53.2**	**+3.2**
PCVE				*e*Sn	**Sn**	**03 59 37.7**	**-1.1**
PCVE				A	A	03 59 43.4	
	comp=N,6.8nm,0.3s						
PSBE	**So Bento**	**4.20**	**55**	*e*Pn	**Pn**	**03 58 53.9**	**+3.4**
PSBE				*e*Sn	**Sn**	**03 59 41.6**	**+2.0**
PSBE				A	A	03 59 46.2	
	comp=N,6.2nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.25**	**88**	P	**Pn**	**03 58 53.3**	**+2.3**
PBDV				S	**Sn**	**03 59 40.2**	**-0.5**
	comp=N,7.9nm,0.5s						
PBDV	**Barranco-do-Ve**	**4.25**	**88**	*e*Pn	**Pn**	**03 58 53.3**	**+2.3**
PBDV				*e*Sn	**Sn**	**03 59 40.2**	**-0.5**
PBDV				A	A	03 59 45.4	
	comp=N,7.9nm,0.5s						
PBEJ	**Beja**	**4.36**	**77**	S	**Sn**	**03 59 42.6**	**-0.8**
	comp=N,2.1nm,0.4s						
PBEJ	**Beja**	**4.36**	**77**	*e*Sn	**Sn**	**03 59 42.6**	**-0.8**
PBEJ				A	A	03 59 48.5	
	comp=N,4.2nm,0.4s						
EVO	**Evora**	**4.36**	**70**	P	**Pn**	**03 58 56.2**	**+3.7**
EVO				S	**Sn**	**03 59 42.9**	**-0.5**
	comp=N,10nm,0.1s						
EVO	**Evora**	**4.36**	**70**	*e*P	Pn	03 58 58.0	+5.5
EVO				*e*S	**Sn**	**03 59 42.6**	**-0.7**
EVO	**Evora**	**4.36**	**70**	*e*Pn	**Pn**	**03 58 56.2**	**+3.7**
EVO				*e*Sn	**Sn**	**03 59 42.9**	**-0.5**
EVO				A	A	03 59 45.9	
	comp=N,10nm,0.1s						
PMTG	**Montargil**	**4.39**	**63**	P	**Pn**	**03 58 56.3**	**+3.4**
PMTG				S	**Sn**	**03 59 44.3**	**+0.2**
	comp=N,3.4nm,0.1s						
PMTG	**Montargil**	**4.39**	**63**	*e*Pn	**Pn**	**03 58 56.3**	**+3.4**
PMTG				*e*Sn	**Sn**	**03 59 44.3**	**+0.2**
PMTG				A	A	03 59 47.6	
	comp=N,3.4nm,0.1s						
PVAQ	**Vaqueiros**	**4.42**	**85**	P	**Pn**	**03 58 55.8**	**+2.4**
PVAQ				S	**Sn**	**03 59 43.9**	**-0.9**
	comp=N,14nm,0.5s						
PVAQ	**Vaqueiros**	**4.42**	**85**	*e*Pn	**Pn**	**03 58 55.8**	**+2.4**
PVAQ				*e*Sn	**Sn**	**03 59 43.9**	**-0.9**
PVAQ				A	A	03 59 48.7	
	comp=N,14nm,0.5s						
EGRO	**El Granado**	**4.61**	**84**	P	**Pn**	**03 58 58.9**	**+2.9**
	comp=N,1.2nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**03 59 49.4**	**-0.1**
	comp=N,11nm,0.2s,SNR=8.5						
PCAS	**Casmilo, Conde**	**4.70**	**51**	S	**Sn**	**03 59 53.2**	**+1.5**
	comp=N,3.6nm,0.2s						
PCAS	**Casmilo, Conde**	**4.70**	**51**	*e*Sn	**Sn**	**03 59 53.2**	**+1.5**
PCAS				A	A	03 59 56.6	
	comp=N,3.6nm,0.2s						
PMPS	**Porto Santo**	**4.83**	**212**	*e*Sn	Sn	03 59 38.3	-17
COI	**Coimbra**	**4.84**	**50**	S	**Sn**	**03 59 57.0**	**+1.7**
	comp=N,3.8nm,0.3s						
COI	**Coimbra**	**4.84**	**50**	*e*Sn	**Sn**	**03 59 57.0**	**+1.7**
COI				A	A	03 59 58.8	
	comp=N,7.7nm,0.3s						
PMRV	**Marv??o**	**5.12**	**62**	P	**Pn**	**03 59 06.7**	**+3.6**
PMRV				S	**Sn**	**04 00 02.0**	**-0.3**
	comp=N,4.4nm,0.3s						
PMRV	**Marv??o**	**5.12**	**62**	*e*Pn	**Pn**	**03 59 06.7**	**+3.6**
PMRV				*e*Sn	**Sn**	**04 00 02.0**	**-0.3**
PMRV				A	A	04 00 06.1	
	comp=N,4.4nm,0.3s						
PCBR	**Castelo Branco**	**5.25**	**58**	S	**Sn**	**04 00 05.7**	**+0.4**
	comp=N,2.3nm,0.3s						
PCBR	**Castelo Branco**	**5.25**	**58**	*e*Sn	**Sn**	**04 00 05.7**	**+0.4**
PCBR				A	A	04 00 07.3	
	comp=N,4.6nm,0.3s						
EMIN	**Mina Concepcio**	**5.26**	**82**	P	**Pn**	**03 59 07.7**	**+2.7**
	comp=N,0.7nm,0.3s,SNR=7.9						
EMIN				S	**Sn**	**04 00 04.6**	**-1.2**
	comp=N,4.1nm,0.2s,SNR=11						
PMAR	**Madeira**	**5.37**	**215**	*e*Sn	Sn	03 59 49.3	-19
PMAR				A	A	03 59 56.5	
	comp=N,13nm,0.2s						
PVIS	**Viseu**	**5.46**	**48**	S	**Sn**	**04 00 10.3**	**-0.4**
	comp=N,1.7nm,0.3s						
PVIS	**Viseu**	**5.46**	**48**	*e*Sn	**Sn**	**04 00 10.3**	**-0.4**
PVIS				A	A	04 00 14.8	
	comp=N,3.4nm,0.3s						
MTE	**Manteigas**	**5.49**	**52**	S	**Sn**	**04 00 11.2**	**-0.3**
	comp=N,2.2nm,0.1s						
MTE	**Manteigas**	**5.49**	**52**	*e*Sn	**Sn**	**04 00 11.2**	**-0.3**
MTE				A	A	04 00 14.7	
	comp=N,4.3nm,0.1s						
ESPR	**Espera**	**5.92**	**91**	P	**Pn**	**03 59 16.4**	**+2.4**
	comp=N,2.2nm,0.2s,SNR=8.2						
ESPR				S	**Sn**	**04 00 20.2**	**-1.7**
	comp=N,10nm,0.3s,SNR=7.9						
PVRL	**Vila Real**	**5.93**	**45**	S	**Sn**	**04 00 20.8**	**-1.3**
	comp=N,1.7nm,1.0s						
PVRL	**Vila Real**	**5.93**	**45**	*e*Sn	**Sn**	**04 00 20.8**	**-1.3**
PVRL				A	A	04 00 28.4	
	comp=N,3.3nm,1.0s						
POLO	**Lamas de Olo**	**5.95**	**44**	S	**Sn**	**04 00 21.8**	**-1.0**
	comp=N,1.0nm,0.5s						
POLO	**Lamas de Olo**	**5.95**	**44**	*e*Sn	**Sn**	**04 00 21.8**	**-1.0**
POLO				A	A	04 00 28.7	
	comp=N,1.0nm,0.5s						
PCAB	**Cabril**	**6.06**	**40**	S	**Sn**	**04 00 24.4**	**-1.1**
	comp=N,1.6nm,0.4s						
PCAB	**Cabril**	**6.06**	**40**	*e*Sn	**Sn**	**04 00 24.4**	**-1.1**
PCAB				A	A	04 00 34.1	
	comp=N,3.1nm,0.4s						
EZAM	**Zamans**	**6.08**	**34**	S	**Sn**	**04 00 22.4**	**-3.4**
	comp=N,1.4nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.13**	**37**	S	**Sn**	**04 00 25.4**	**-1.8**
	comp=N,2.6nm,0.2s						
PGAV	**Gavieira, Arco**	**6.13**	**37**	*e*Sn	**Sn**	**04 00 25.4**	**-1.8**
PGAV				A	A	04 00 26.7	
	comp=N,2.6nm,0.2s						
ELOB	**Lobios**	**6.16**	**39**	P	**Pn**	**03 59 20.5**	**+3.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**04 00 25.4**	**-2.6**
	comp=N,1.2nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.26**	**49**	P	**Pn**	**03 59 19.3**	**+0.6**
	comp=N,0.5nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**04 00 28.1**	**-2.2**
	comp=N,2.0nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.26**	**49**	*e*Sn	**Sn**	**04 00 29.0**	**-1.3**
MVO				A	A	04 00 31.0	
	comp=N,2.9nm,0.5s						
ECAB	**El Cabril**	**6.28**	**79**	P	**Pn**	**03 59 21.1**	**+2.1**
	comp=N,0.5nm,0.2s,SNR=6.3						
ECAB				S	**Sn**	**04 00 28.0**	**-2.7**
	comp=N,1.2nm,0.2s,SNR=5.7						
EPLA	**Plasencia**	**6.31**	**61**	P	Pn	03 59 24.5	+5.1
	comp=N,0.9nm,0.2s,SNR=7.9						
EPLA				S	**Sn**	**04 00 30.5**	**-1.0**
	comp=N,2.3nm,0.1s,SNR=7.9						
HORN	**Hornachuelos**	**6.39**	**82**	P	**Pn**	**03 59 23.3**	**+2.9**
HORN				S	**Sn**	**04 00 31.5**	**-1.9**
ZHG	**ZHG**	**6.56**	**123**	P	**Pn**	**03 59 22.4**	**-0.6**
ZHG				S	Sn	04 00 28.2	-10
EMAZ	**Mazaricos**	**6.62**	**28**	P	**Pn**	**03 59 26.1**	**+2.5**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**04 00 33.8**	**-5.5**
	comp=N,4.7nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.83**	**45**	S	**Sn**	**04 00 42.9**	**-1.4**
	comp=N,0.9nm,0.5s						
PBRG	**Braganca**	**6.83**	**45**	*e*Sn	**Sn**	**04 00 42.9**	**-1.4**
PBRG				A	A	04 00 46.9	
	comp=N,1.7nm,0.5s						
EAGO	**Agolada(Pontev**	**6.87**	**34**	P	**Pn**	**03 59 29.9**	**+2.9**
	comp=N,0.2nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**04 00 39.6**	**-5.7**
	SNR=7.9						
ECAL	**Calabor**	**6.92**	**45**	P	**Pn**	**03 59 30.4**	**+2.6**
	comp=N,1.2nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**04 00 45.0**	**-1.6**
	comp=N,3.6nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**6.95**	**79**	P	**Pn**	**03 59 31.4**	**+3.2**
	comp=N,0.8nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**04 00 45.0**	**-2.3**
	comp=N,1.4nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**7.30**	**88**	P	**Pn**	**03 59 35.9**	**+2.8**
	comp=N,0.2nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**04 00 54.8**	**-1.3**
	comp=N,3.0nm,0.5s,SNR=7.9						
PAB	**San Pablo**	**7.38**	**69**	P	**Pn**	**03 59 38.2**	**+4.0**
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**04 00 55.3**	**-2.6**
	comp=N,0.6nm,0.2s,SNR=7.9						
OUK	**Oukaimeden**	**7.44**	**142**	P	Pn	03 59 34.3	-0.9
OUK				S	Sn	04 00 49.7	-10
ESDC	**Sonseca Array**	**7.70**	**68**	P	**Pn**	**03 59 40.8**	**+2.3**
	comp=N,0.4nm,0.2s,baz=254,slow=13,SNR=7.9						
ESDC				S	**Sn**	**04 01 03.5**	**-2.3**
	comp=N,0.5nm,0.2s,baz=256,slow=23,SNR=7.9						
EQES	**Quesada**	**8.12**	**83**	P	**Pn**	**03 59 46.0**	**+1.8**
	comp=N,0.1nm,0.1s,SNR=4.0						
EQES				S	**Sn**	**04 01 13.9**	**-2.2**
	comp=N,1.2nm,0.4s,SNR=7.9						
MD31	**MD31**	**8.19**	**119**	P	Pn	03 59 44.3	-1.0
MD31				S	Sn	04 01 09.7	-8.1
OUZM	**OUZ**	**8.25**	**137**	P	Pn	03 59 45.0	-1.2
OUZM				S	Sn	04 01 08.4	-11
MDT	**Midelt**	**8.32**	**119**	P	**Pn**	**03 59 46.7**	**-0.4**
MDT				S	Sn	04 01 13.5	-7.7
TZRR	**Tazzarine**	**9.02**	**133**	P	Pn	03 59 56.2	-0.5
TZRR				S	Sn	04 01 29.0	-9.3

*IDC **06** 04:15:35.9±1.4,36°.03N×71°.28E,h0km,mb3.8/7,*
mb1 3.9/11,mb1mx3.6/50,mbtmp3.8/11,ML3.4/4,MS3.4/1,
Ms1 3.4/1,ms1mx2.2/45,Error ellipse: s-maj=29.2km
s-min=23.9km az=118.0
*NNC **06** 04:15:50.9±3.4,36°.71N×71°.13E,h85km±52km,mb3.7,*
mpv4.0,Error ellipse: s-maj=27.2km s-min=25.2km
az=51.0

ISC 06 04:15:48.7±0.7,36°.54N±0°.06×71°.6E±0°.1,h100km,n25,
σ1s95/26,mb3.8/6,5C-4D,Afghanistan-Tajikistan border
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.72**	**174**	P	**Pn**	**04 16 30.3**	**-0.6**
CEP				S	**Sn**	**04 17 08.0**	**+4.7**
THW	**Thamme Wali**	**3.74**	**178**	P	**Pn**	**04 16 43.0**	**-1.4**
THN	**Thein Dam**	**5.33**	**139**	*e*S	**Sn**	**04 18 03.5**	**-2.6**

AAK	**Ala-Archa**	**6.49**	**19**	⇓P	**Pn**	**04 17 23.3**	**+1.5**
	2.6nm,0.4s						
AAK				⇑S	**Sn**	**04 18 35.4**	**+1.0**
	21nm,0.8s						
KK31	**Karatay Array**	**6.61**	**353**	⇑P	**Pn**	**04 17 23.0**	**-0.2**
	9.6nm,0.4s,baz=212,slow=38,SNR=56						
KK31				⇑S	**Sn**	**04 18 35.8**	**-1.1**
	11nm,0.8s,baz=175,slow=12,SNR=6.0						
TKM2	**Tokmak 2**	**7.08**	**25**	⇑P	**Pn**	**04 17 31.7**	**+1.8**
	3.5nm,0.5s						
GEYT	**Alibeck**	**10.82**	**281**	Sn	Sn	04 20 05.9	-14
	0.5nm,0.3s,baz=185,slow=2.4,SNR=2.2						
MK31	**Makanchi Array**	**12.99**	**35**	⇓P	**P**	**04 18 55.3**	**-0.7**
	0.7nm,0.5s,baz=207,slow=10,SNR=6.4						
MKAR	**Makanchi Array**	**12.99**	**35**	Pn	**Pn**	**04 18 50.2**	**+0.9**
	0.1nm,0.3s,baz=216,slow=14,SNR=2.9						
KURBB	**Kurchatov Arra**	**14.94**	**17**	Pn	**Pn**	**04 19 12.4**	**-2.1**
	0.0nm,0.3s,baz=210,slow=12,SNR=4.0						
KURBB	**Kurchatov Arra**	**14.94**	**17**	⇓P	**P**	**04 19 18.2**	**+0.6**
	3.1nm,0.7s						
AB31	**Akbulak array**	**15.28**	**330**	P	**Pn**	**04 19 15.4**	**-3.4**
	0.9nm,0.5s,baz=140,slow=13,SNR=20						
BVAR	**Borovoye Array**	**16.50**	**357**	Pn	**Pn**	**04 19 32.4**	**-1.5**
	0.7nm,0.3s,baz=209,slow=30,SNR=6.7						
BRVK	**Borovoye**	**16.54**	**357**	⇓P	**Pn**	**04 19 34.2**	**-0.2**
	6.7nm,1.2s						
AKTO	**Aktyubinsk**	**16.98**	**329**	P	**Pn**	**04 19 36.9**	**-2.9**
	0.5nm,0.3s,baz=160,slow=11,SNR=8.7						
AKTO	**Aktyubinsk**	**16.98**	**329**	⇑P	**Pn**	**04 19 38.5**	**-1.3**
	6.7nm,1.2s						
ZALV	**Zalesovo Beam**	**19.69**	**24**	P	**P**	**04 20 11.0**	**+1.3**
	2.9nm,0.5s,baz=229,slow=11,SNR=11						
ARU	**Arti**	**21.75**	**340**	P	**P**	**04 20 32.4**	**+0.6**
	0.8nm,0.3s,baz=162,slow=23,SNR=1.8						
FINES	**FINESS Array B**	**37.71**	**326**	P	**P**	**04 22 55.9**	**+1.7**
	0.9nm,0.3s,baz=114,slow=10.0,SNR=13						
ARCES	**ARCESS Array B**	**41.29**	**337**	P	**P**	**04 23 25.9**	**+2.1**
	1.5nm,0.5s,baz=104,slow=5.1,SNR=9.6						
NB2	**NORSAR Subarra**	**44.63**	**323**	P	**P**	**04 23 51.9**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.63**	**323**	P	**P**	**04 23 52.1**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=96,slow=7.7,SNR=8.3						
MJAR	**Matsushiro Arr**	**52.51**	**69**	LR	LR	04 47 23.0	
	comp=Z,32nm,18.6s,baz=180,slow=36						
TORD	**Torodi Ar. Bea**	**66.18**	**269**	P	**P**	**04 26 23.4**	**-2.5**
	comp=Z,0.6nm,0.8s,baz=52,slow=5.9,SNR=8.7						
WRA	**Warramunga Arr**	**81.62**	**122**	P	**P**	**04 27 56.2**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=325,slow=4.8,SNR=2.8						

*AEIC **06** 04:25:21±1.0,56°.54N±0°.03×156°.28W±0°.06,h70km±7km,*
ML2.9,Error ellipse: s-maj=5.4km s-min=3.7km az=64.0
*IDC **06** 04:25:26.5±10.0,57°.08N×155°.85W,h93km±74km,mb3.6/4,*
mb1 3.7/6,mb1mx3.2/65,mbtmp3.7/6,ML3.0/2,Error
ellipse: s-maj=83.4km s-min=24.9km az=56.0

ISC 06 04:25:21.3±0.9,56°.56N±0°.05×156°.30W±0°.04,
h72km±10km,n39,σ0s88/45,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**0.83**	**153**		**Pn**	**04 25 37.6**	**-0.2**
CHIR					**Sn**	**04 25 50.5**	**+0.5**
PLK3	**Peulik 3**	**1.13**	**1**		**Pn**	**04 25 42.1**	**+0.6**
PLK3					**Sn**	**04 25 57.1**	**+0.4**
SII	**Sitkinak Islan**	**1.17**	**89**		**Pn**	**04 25 42.0**	**0.0**
SII					**Sn**	**04 25 57.5**	**0.0**
PLBL	**Peulik Blue Cr**	**1.18**	**346**		**Sn**	**04 25 58.0**	**+0.3**
CHGN	**Chignik**	**1.21**	**258**		**Sn**	**04 25 56.9**	**-1.3**
PLK1	**Peulik 1**	**1.26**	**352**		**Pn**	**04 25 43.4**	**+0.3**
KJL	**Kejulik**	**1.55**	**14**		**Pn**	**04 25 47.3**	**+0.3**
CAHL	**Cahill**	**1.59**	**19**		**Pn**	**04 25 47.6**	**+0.1**
VNHG	**Veniaminof 1**	**1.63**	**259**		**Pn**	**04 25 48.2**	**+0.1**
ANCK	**Angle Creek**	**1.70**	**14**		**Pn**	**04 25 49.2**	**+0.2**
OHAK	**Old Harbor**	**1.78**	**67**		**Pn**	**04 25 49.6**	**-0.4**
OHAK					**Sn**	**04 26 10.6**	**-1.1**
KABU	**Katmai Buttres**	**1.80**	**17**		**Pn**	**04 25 50.9**	**+0.5**
KABU					**Sn**	**04 26 13.2**	**+0.8**
VNFG	**Fog Glacier, M**	**1.83**	**263**		**Pn**	**04 25 51.0**	**+0.3**
VNWF	**Veniaminof 8**	**1.86**	**259**		**

	25nm,0.3s							
UZB				eS		Sg	04 27 31.2	+0.2
	50nm,0.4s							
UZB	**Uzynbulak**	**3.86**	**280**	Pg		**Pg**	**04 26 39.2**	**-1.7**
	25nm,0.3s							
UZB				Lg		Lg	04 27 31.2	
	50nm,0.4s							
KPKS	**Kokpek**	**4.15**	**284**	eP		**Pg**	**04 26 44.7**	**-1.8**
	32nm,0.2s							
KPKS				eS		**Sg**	**04 27 40.8**	**+0.6**
	141nm,0.4s							
MK31	**Makanchi Array**	**4.42**	**342**	Pn		**Pn**	**04 26 36.8**	**+2.8**
	1.1nm,0.3s,baz=153,slow=14,SNR=54							
MK31				Pg		**Pb**	**04 26 46.0**	**+1.5**
	4.0nm,0.3s,baz=153,slow=17,SNR=26							
MK31				⇑Sn		**Sn**	**04 27 22.2**	**-3.3**
	18nm,0.7s,baz=153,slow=16,SNR=4.0							
MK31				Lg		Lg	04 27 40.0	
	41nm,0.6s,baz=155,slow=29,SNR=7.0							
MKAR	**Makanchi Array**	**4.42**	**342**	Pn		**Pn**	**04 26 36.9**	**+2.9**
	2.8nm,0.3s,baz=151,slow=14,SNR=59							
MKAR				Pg		**Pb**	**04 26 46.0**	**+1.4**
	4.1nm,0.3s,baz=155,slow=17,SNR=31							
MKAR				Sn		**Sn**	**04 27 24.6**	**-0.9**
	4.7nm,0.3s,baz=152,slow=17,SNR=4.1							
MKAR				Lg		Lg	04 27 41.5	
	7.6nm,0.3s,baz=157,slow=31,SNR=3.7							
MAKZ	**Makanchi**	**4.51**	**340**	⇑Pn		**Pn**	**04 26 37.0**	**+1.8**
	4.9nm,0.5s							
MAKZ				⇑Pg		**Pb**	**04 26 48.0**	**+2.0**
	9.9nm,0.5s							
MAKZ				⇑Sn		**Sn**	**04 27 24.4**	**-3.2**
	12nm,0.7s							
MAKZ				⇓Lg		Lg	04 27 42.5	
	41nm,0.7s							
KURS	**Kuram**	**4.53**	**283**	eP		**Pg**	**04 26 50.6**	**-3.0**
	14nm,0.7s							
KURS				eS		**Sg**	**04 27 51.0**	**-1.2**
	36nm,0.5s							
KURS	**Kuram**	**4.53**	**283**	Pg		**Pg**	**04 26 53.1**	**-0.5**
	14nm,0.8s							
KURS				Lg		Lg	04 27 54.7	
	36nm,0.5s							
ARXS	**Arharly**	**4.93**	**291**	eP		**Pb**	**04 26 57.1**	**+3.7**
	24nm,0.3s							
ARXS				eS		**Sg**	**04 28 02.9**	**-2.3**
	68nm,0.5s							
ARXS	**Arharly**	**4.93**	**291**	Pg		**Pg**	**04 26 59.6**	**-1.7**
	24nm,0.3s							
ARXS				Lg		Lg	04 28 06.0	
	68nm,0.5s							
KOTS	**Kotyrbulak**	**5.26**	**279**	eP		**Pg**	**04 27 06.1**	**-1.6**
	17nm,0.3s							
KOTS				eS		**Sg**	**04 28 17.7**	**+1.9**
	72nm,0.6s							
KOTS	**Kotyrbulak**	**5.26**	**279**	Pg		**Pg**	**04 27 06.1**	**-1.6**
	17nm,0.3s							
KOTS				Lg		Lg	04 28 15.4	
	72nm,0.6s							
MDOK	**Medeo**	**5.30**	**279**	eP		**Pg**	**04 27 07.2**	**-1.2**
	6.8nm,0.3s							
MDOK				eS		**Sg**	**04 28 19.7**	**+2.6**
	32nm,0.6s							
MDOK	**Medeo**	**5.30**	**279**	Pg		**Pg**	**04 27 07.2**	**-1.2**
	6.8nm,0.3s							
MDOK				Lg		Lg	04 28 18.9	
	32nm,0.6s							
TNSS	**Tian-Shan**	**5.37**	**277**	eP		**Pg**	**04 27 09.7**	**-0.1**
	6.2nm,0.4s							
TNSS				eS		**Sg**	**04 28 23.4**	**+4.1**
	19nm,0.6s							
TNSS	**Tian-Shan**	**5.37**	**277**	Pg		**Pg**	**04 27 09.7**	**-0.1**
	6.2nm,0.4s							
TNSS				Lg		Lg	04 28 22.4	
	17nm,0.4s							
KTBS	**Karatobe**	**5.63**	**284**	eP		**Pg**	**04 27 12.5**	**-2.2**
	8.3nm,0.5s							
KTBS				eS		**Sg**	**04 28 29.1**	**+1.5**
	47nm,0.5s							
KTBS	**Karatobe**	**5.63**	**284**	Pg		**Pg**	**04 27 13.7**	**-1.0**
	8.3nm,0.5s							
KTBS				Lg		Lg	04 28 26.8	
	47nm,0.5s							
KUU	**Kurty**	**5.90**	**285**	eP		**Pg**	**04 27 17.2**	**-2.7**
	4.1nm,0.7s							
KUU				eS		**Sg**	**04 28 37.4**	**+1.0**
	30nm,0.3s							
KUU	**Kurty**	**5.90**	**285**	Pg		**Pg**	**04 27 18.3**	**-1.6**
	4.1nm,0.7s							
KUU				Lg		Lg	04 28 36.4	
	30nm,0.3s							
DGS	**Degeres**	**6.24**	**279**	eP		**Pg**	**04 27 24.0**	**-2.3**
	5.6nm,0.3s							
DGS				eS		**Sg**	**04 28 48.7**	**+1.5**
	23nm,0.7s							
DGS	**Degeres**	**6.24**	**279**	Pg		**Pg**	**04 27 26.2**	**-0.1**
	5.6nm,0.3s							
DGS				Lg		Lg	04 28 47.9	
	23nm,0.7s							
TKM2	**Tokmak 2**	**6.36**	**276**	⇓Pn		Pn	04 27 06.5	+5.6
	1.7nm,0.6s							
TKM2				⇑Pg		**Pg**	**04 27 27.0**	**-1.6**
	3.5nm,0.7s							
TKM2				⇑Lg		Lg	04 28 49.4	
	17nm,0.7s							
AAK	**Ala-Archa**	**7.18**	**274**	⇓Lg		Lg	04 29 16.7	
	11nm,0.7s							
KURBB	**Kurchatov Arra**	**8.93**	**336**	Pn		**Pn**	**04 27 37.5**	**+1.6**
	0.1nm,0.3s,baz=148,slow=13,SNR=12							
KURBB				Sn		**Sn**	**04 29 17.5**	**+1.0**
	0.2nm,0.3s,baz=255,slow=29,SNR=5.5							
KURBB				Lg		Lg	04 30 07.0	
	0.2nm,0.3s,baz=140,slow=25,SNR=5.3							
KURBB	**Kurchatov Arra**	**8.93**	**336**	⇑Pn		**Pn**	**04 27 37.6**	**+1.8**
	1.1nm,0.3s							
KURBB				⇑Sn		**Sn**	**04 29 14.0**	**-2.5**
	7.4nm,0.6s							
KURBB				⇓Lg		Lg	04 30 00.1	
	44nm,0.8s							
KK31	**Karatay Array**	**10.09**	**278**	⇑Lg		Lg	04 30 46.8	
	2.0nm,0.6s,baz=72,slow=33,SNR=4.0							
ZALV	**Zalesovo Beam**	**11.37**	**2**	Pn		**Pn**	**04 28 07.8**	**-1.4**
	1.0nm,0.3s,baz=177,slow=13,SNR=10							
ZALV				Sn		**Sn**	**04 30 12.1**	**-4.1**
	0.6nm,0.3s,baz=165,slow=23,SNR=4.0							
ZALV				Lg		Lg	04 31 22.5	
	0.1nm,0.3s,baz=176,slow=26,SNR=1.9							
GTA	**Gaotai**	**12.20**	**100**	eP		**Pn**	**04 28 21.9**	**+1.1**
GTA				pP			04 28 25.5	
GTA				sP			04 28 28.4	
GTA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
FINES	**FINESS Array B**	**38.86**	**319**	P		**P**	**04 32 53.4**	**+1.5**
	1.0nm,0.5s,baz=111,slow=10,SNR=4.4							
ARCES	**ARCESS Array B**	**39.99**	**332**	P		**P**	**04 33 02.0**	**+0.7**
	4.6nm,1.0s,baz=94,slow=7.6,SNR=1.7							
NB2	**NORSAR Subarra**	**46.04**	**320**	P		**P**	**04 33 51.3**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=79,slow=7.9							
NOA	**NORSAR Array B**	**46.04**	**320**	P		**P**	**04 33 51.6**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=71,slow=8.0,SNR=3.5							
TORD	**Torodi Ar. Bea**	**75.76**	**275**	P		**P**	**04 37 14.6**	**+1.4**
	comp=Z,0.6nm,0.5s,baz=38,slow=4.9,SNR=12							
WRA	**Warramunga Arr**	**77.48**	**132**	P		**P**	**04 37 23.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=332,slow=5.3,SNR=5.7							
ASAR	**Alice Springs**	**80.28**	**135**	P		**P**	**04 37 38.1**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=352,slow=5.6,SNR=2.3							

*IDC **06** 04:34:07.8±1.7, 22°.63S×65°.93W, h240km±20km, mb3.6/3, mb1 3.6/6, mb1mx3.2/39, mbtmp4.2/6, Error ellipse: s-maj=31.4km s-min=16.9km az=115.0*
*SJA **06** 04:34:07.3±0.5, 22°.57S×66°.03W, h277km±4km, ML4.2, MW3.8*
*VAO **06** 04:34:08.4±0.4, 22°.65S×66°.33W, h289km±13km, mb3.6*
ISC 06 04:34:08.5±0.6, 22°.62S±0°.05×66°.16W±0°.05, h250km, n49, σ1°41/71, mb4.0/3, 4C-7D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**0.74**	**54**	eP	**Pn**	**04 34 44.9**	**+2.0**
YJA				eS	**S**	**04 35 12.2**	**+2.4**
HJA	**Humahuaca**	**0.90**	**131**	eP	**Pn**	**04 34 45.5**	**+1.9**
HJA				eS	**S**	**04 35 13.7**	**+2.7**
SLA	**San Lorenzo**	**2.18**	**164**	eP	**Pn**	**04 34 54.1**	**+1.3**
LVC	**Limon Verde**	**2.54**	**270**	P	**Pn**	**04 34 58.6**	**+1.9**
	20nm,0.3s,baz=97,slow=5.6,SNR=142						
LVC				S	**S**	**04 35 36.2**	**+1.6**
	12nm,0.3s,baz=230,slow=21,SNR=28						
LVC	**Limon Verde**	**2.54**	**270**	eP	**Pn**	**04 34 58.4**	**+1.8**
LVC				eS	**S**	**04 35 33.5**	**-1.1**
LVC	**Limon Verde**	**2.54**	**270**	eS	**S**	**04 35 36.9**	**+2.3**
LVC	**Limon Verde**	**2.54**	**270**	eP	**Pn**	**04 34 58.6**	**+1.9**
LVC				eS	**S**	**04 35 36.2**	**+1.6**
PB09	**IPOC Station P**	**2.97**	**285**	⇓iP	**Pn**	**04 35 03.4**	**+2.4**
PB09				eS	**S**	**04 35 42.9**	**+0.6**
PB09	**IPOC Station P**	**2.97**	**285**	eS	**S**	**04 35 44.5**	**+2.1**
PB09				IAML		04 35 46.8	
	comp=Z,173nm,0.3s						
PB15	**IPOC Station P**	**3.11**	**259**	eP	**Pn**	**04 35 03.9**	**+1.4**
PB15				*i* S	**S**	**04 35 45.3**	**+0.2**
PB15	**IPOC Station P**	**3.11**	**259**	eP	**Pn**	**04 35 04.5**	**+2.0**
PB15				eS	**S**	**04 35 45.1**	**0.0**
PB06	**IPOC Station P**	**3.16**	**268**	⇓eP	**Pn**	**04 35 04.3**	**+1.4**
PB06				eS	**S**	**04 35 45.8**	**-0.1**
PB06	**IPOC Station P**	**3.16**	**268**	eS	**S**	**04 35 46.4**	**+0.5**
PB06				IAML		04 35 52.8	
	comp=Z,239nm,0.2s						
PB03	**IPOC Station P**	**3.38**	**279**	⇑iP	**Pn**	**04 35 07.0**	**+1.6**
PB03				*i* S	**S**	**04 35 50.1**	**-0.2**
PB03	**IPOC Station P**	**3.38**	**279**	eS	**S**	**04 35 50.2**	**-0.2**
PB03				IAML		04 35 51.5	
	comp=Z,473nm,0.1s						
PB01	**IPOC Station P**	**3.47**	**296**	⇓iP	**Pn**	**04 35 07.9**	**+1.5**
PB01				eS	**S**	**04 35 51.9**	**-0.3**
PB01	**IPOC Station P**	**3.47**	**296**	eS	**S**	**04 35 52.5**	**+0.3**
PB01				IAML		04 35 55.0	
	comp=Z,274nm,0.2s						
FSA	**Cafayete**	**3.48**	**177**	eP	**Pn**	**04 35 07.8**	**+1.3**
PB07	**IPOC Station P**	**3.57**	**284**	⇓iP	**Pn**	**04 35 09.2**	**+1.6**
PB07				*i* S	**S**	**04 35 53.6**	**-0.7**
PB04	**IPOC Station P**	**3.70**	**274**	⇑iP	**Pn**	**04 35 10.6**	**+1.5**
PB04				eS	**S**	**04 35 55.9**	**-1.2**
PB08	**IPOC Station P**	**3.73**	**311**	⇓iP	**Pn**	**04 35 12.0**	**+2.4**
PB08				eS	**S**	**04 35 58.6**	**+0.6**
PB05	**IPOC Station P**	**3.74**	**266**	⇓iP	**Pn**	**04 35 10.8**	**+1.3**
PB05				eS	**S**	**04 35 56.6**	**-1.2**
PB05	**IPOC Station P**	**3.74**	**266**	eP	**Pn**	**04 35 10.8**	**+1.3**
PB05				eS	**S**	**04 35 57.2**	**-0.6**
PB05				IAML		04 35 58.3	
	comp=Z,142nm,0.2s						
GO02	**Mina Guanaco**	**4.04**	**230**	⇑iP	**Pn**	**04 35 14.1**	**+1.1**
GO02				*i* S	**S**	**04 36 04.4**	**+0.1**
GO01	**Chusmiza**	**4.08**	**315**	⇑iP	**Pn**	**04 35 15.8**	**+2.0**
GO01				eS	**S**	**04 36 06.8**	**+1.2**
AHML	**Horco Molle**	**4.21**	**170**	eP	**Pn**	**04 35 15.6**	**+0.7**
PB11	**IPOC Station P**	**4.33**	**310**	⇓iP	**Pn**	**04 35 17.2**	**+0.8**
PB11				*i* S	**S**	**04 36 09.0**	**-1.4**
CYA	**Choya**	**5.81**	**177**	eP	**Pn**	**04 35 34.9**	**+0.6**
LPAZ	**La Paz**	**6.57**	**343**	P	**Pn**	**04 35 46.0**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=132,slow=7.1,SNR=39						
LPAZ				S	**S**	**04 37 00.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=322,slow=16,SNR=7.9						
LPAZ	**La Paz**	**6.57**	**343**	eP	**Pn**	**04 35 44.9**	**+0.4**
LPAZ				eS	**S**	**04 37 01.3**	**+0.1**
ACLC	**CERRO LA CRUZ**	**6.81**	**186**	eP	**Pn**	**04 35 46.3**	**-0.7**
ACLC				eS	**S**	**04 37 04.6**	**-1.4**
SIV	**San Ignacio**	**8.15**	**37**	P	**Pn**	**04 36 02.9**	**-1.1**
	comp=Z,1.8nm,0.3s,baz=227,slow=14,SNR=62						
VILB	**Vilhena**	**11.16**	**32**	eP	**Pn**	**04 36 42.6**	**+0.8**
ETMB	**Extrema**	**12.73**	**360**	eP	**Pn**	**04 37 01.4**	**+0.1**
CPSB	**Cacapava Do Su**	**13.77**	**127**	eP	**Pn**	**04 37 14.6**	**+0.8**
SAML	**Samuel**	**13.89**	**12**	eP	**Pn**	**04 37 15.2**	**-0.3**
FRTB	**Fartura**	**15.30**	**96**	eP	**P**	**04 37 31.2**	**-0.6**
CLDB	**Colider**	**15.31**	**42**	eP	**P**	**04 37 32.3**	**+0.4**
BB19B	**Bebedouro**	**16.44**	**88**	eP	**P**	**04 37 42.8**	**-1.5**
SPB	**Sao Paulo**	**17.25**	**97**	eP	**P**	**04 37 50.7**	**-2.4**
SNDB	**Serra Nova Dou**	**17.69**	**56**	eP	**P**	**04 37 58.0**	**0.0**
NPGB	**Novo Progresso**	**18.66**	**36**	eP	**P**	**04 38 06.7**	**-1.7**
MACA	**Manacapuru-AM**	**20.06**	**16**	eP	**P**	**04 38 20.5**	**-2.8**
ITTB	**Itaituba**	**20.76**	**31**	eP	**P**	**04 38 28.6**	**-2.2**
SDV	**Santo Domingo**	**31.62**	**352**	P	**P**	**04 40 09.8**	**+1.1**
	comp=Z,1.5nm,0.4s,baz=200,slow=12,SNR=2.9						
TORD	**Torodi Ar. Bea**	**75.35**	**69**	P	**P**	**04 45 23.5**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=258,slow=5.7,SNR=34						
MAW	**Mawson**	**82.52**	**163**	P	**P**	**04 46 03.3**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=220,slow=7.9,SNR=2.6						
WRA	**Warramunga Arr**	**133.20**	**207**	PKP	**PKPdf**	**04 52 56.0**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=156,slow=1.8,SNR=8.8						
MKAR	**Makanchi Array**	**144.97**	**39**	PKP	**PKPab**	**04 53 16.5**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=321,slow=2.4,SNR=7.3						

IDC 06 04:46:02.7±2.9, 49°.43S×109°.59E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/23, mbtmp3.9/4, MS3.4/4, Ms1 3.4/4, ms1mx3.0/16, Error ellipse: s-maj=111.3km s-min=22.3km az=108.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.90**	**15**	T	T	05 04 44.4	
	baz=194,slow=74,SNR=56						
H01W1	**Cape Leeuwin H**	**14.91**	**15**	T	T	05 04 45.2	
	baz=194,slow=74,SNR=90						
H01W3	**Cape Leeuwin H**	**14.91**	**15**	T	T	05 04 45.7	
	baz=194,slow=74,SNR=66						
NWAO	**Narrogin (SRO)**	**17.44**	**22**	LR	LR	04 54 55.2	
	comp=Z,165nm,21.1s,baz=170,slow=30						
MAW	**Mawson**	**29.41**	**215**	LR	LR	05 01 13.5	
	comp=Z,62nm,19.1s,baz=56,slow=31						
ASAR	**Alice Springs**	**32.02**	**45**	P	P	04 52 31.2	+0.4
	0.7nm,0.6s,baz=209,slow=8.2,SNR=9.0						
ASAR				LR	LR	05 04 03.1	
	comp=Z,49nm,19.1s,baz=162,slow=34						
VNDA	**Vanda**	**34.29**	**162**	P	P	04 52 50.8	+0.7
	1.8nm,0.7s,baz=294,slow=10,SNR=10						
WRA	**Warramunga Arr**	**35.40**	**43**	P	P	04 53 00.8	+0.1
	0.9nm,0.7s,baz=207,slow=8.6,SNR=6.8						
QSPA	**South Pole Qui**	**40.70**	**180**	P	P	04 53 44.7	-0.1
	2.9nm,0.8s,baz=276,slow=1.4,SNR=12						
BOSA	**Boshof**	**65.32**	**254**	LR	LR	05 18 58.5	
	comp=Z,34nm,18.5s,baz=177,slow=30						
NVAR	**Mina Array Bea**	**144.36**	**89**	PKP	PKPab	05 05 37.9	-0.8
	0.5nm,0.8s,baz=228,slow=3.3,SNR=3.6						
TXAR	**Lajitas Array**	**147.77**	**116**	PKPbc	PKPdf	05 05 47.9	+1.4
	0.4nm,0.8s,baz=186,slow=3.4,SNR=4.3						

*IDC **06** 04:47:33.9±7.3, 25°.61S×175°.83W, h96km±60km, mb3.7/8, mb1 3.9/10, mb1mx3.8/27, mbtmp4.1/10, ML4.0/2, MS3.4/10, Ms1 3.4/10, ms1mx3.2/26, Error ellipse: s-maj=35.4km s-min=21.4km az=52.0*
ISC 06 04:47:22.7±0.8, 25°.65S±0°.1×175°.6W±0°.1, h10km, n19, σ1°30/17, mb4.1/8, MS3.7/5, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.17**	**209**	S	**Sn**	**04 49 16.0**	**+0.8**
	320nm,0.3s,baz=64,slow=23,SNR=7.8						
RAO				LR	LR	04 50 13.8	
	comp=Z,330nm,19.4s,baz=34,slow=39						
AFI	**Afiamalu**	**12.18**	**18**	LR	LR	04 55 02.3	
	comp=Z,93nm,18.3s,baz=184,slow=37						
URZ	**Urewera**	**14.04**	**204**	P	**P**	**04 50 47.9**	**-1.7**
	0.7nm,0.3s,baz=49,slow=9.3,SNR=2.3						
URZ				S	Sn	04 53 07.1	-10
	1.4nm,0.3s,baz=193,slow=22,SNR=14						
URZ				LR	LR	04 55 39.5	
	comp=Z,50nm,21.4s,baz=31,slow=35						
RAR	**Rarotonga**	**15.18**	**77**	LR	LR	04 55 57.1	
	comp=Z,145nm,21.8s,baz=294,slow=33						
DZM	**Mont Dzumac**	**16.79**	**278**	P	**P**	**04 51 21.6**	**+1.2**
	0.6nm,0.3s,baz=98,slow=18,SNR=2.5						
DZM				LR	LR	04 55 49.8	
	comp=Z,35nm,21.8s,baz=204,slow=30						
PPT	**Papeete**	**25.46**	**77**	LR	LR	05 00 04.7	
	comp=Z,100nm,20.0s,baz=228,slow=29						
CTA	**Charters Tower**	**35.48**	**271**	P	**P**	**04 54 20.4**	**+0.7**
	1.8nm,0.4s,baz=94,slow=14,SNR=2.0						
STKA	**Stephens Creek**	**37.85**	**250**	P	**P**	**04 54 40.0**	**+0.1**
	1.1nm,0.3s,baz=115,slow=14,SNR=2.9						
STKA				LR	LR	05 08 38.5	
	comp=Z,100nm,18.3s,baz=69,slow=34						
ASAR	**Alice Springs**	**45.71**	**261**	P	**P**	**04 55 43.8**	**-0.5**
	1.6nm,0.4s,baz=106,slow=8.1,SNR=26						
ASAR				PcP	**PcP**	**04 57 22.1**	**-0.1**
	0.7nm,0.7s,baz=110,slow=3.6,SNR=3.3						
ASAR				LR	LR	05 13 18.4	
	comp=Z,60nm,18.4s,baz=160,slow=34						
WRA	**Warramunga Arr**	**46.28**	**266**	P	**P**	**04 55 47.3**	**-1.5**
	0.8nm,0.4s,baz=104,slow=7.9,SNR=21						
WRA				PcP	**PcP**	**04 57 24.5**	**+0.2**
	0.5nm,0.5s,baz=97,slow=2.8,SNR=2.6						
VNDA	**Vanda**	**53.06**	**186**	P	**P**	**04 56 41.3**	**+1.7**
	1.4nm,0.9s,baz=359,slow=5.3,SNR=7.0						
QSPA	**South Pole Qui**	**64.49**	**180**	P	**P**	**04 57 59.6**	**+0.2**
	4.6nm,0.9s,baz=36,slow=1.5,SNR=16						
MAW	**Mawson**	**77.52**	**200**	P	**P**	**04 59 19.2**	**+1.0**
	1.0nm,0.5s,baz=181,slow=8.6,SNR=3.6						
NVAR	**Mina Array Bea**	**83.28**	**42**	P	**P**	**04 59 51.4**	**+1.5**
	0.1nm,0.4s,baz=225,slow=8.9,SNR=2.2						
NVAR				LR	LR	05 28 55.2	
	comp=Z,51nm,19.7s,baz=209,slow=30						
LPAZ	**La Paz**	**98.09**	**112**	LR	LR	05 38 05.6	
	comp=Z,22nm,18.5s,baz=72,slow=31						
ARCES	**ARCESS Array B**	**134.31**	**350**	PKP	**PKPdf**	**05 06 39.8**	**-0.3**
	6.5nm,1.1s,baz=1.4,slow=4.9,SNR=3.7						
AKASG	**Malin Array Be**	**148.51**	**329**	PKPbc	**PKPbc**	**05 07 08.0**	**-1.5**
	1.2nm,0.5s,baz=30,slow=2.1,SNR=4.7						
BRTR	**Keskin Array B**	**151.78**	**307**	PKPbc	**PKPbc**	**05 07 16.9**	**-1.1**
	1.2nm,0.8s,baz=108,slow=4.0,SNR=5.1						
TORD	**Torodi Ar. Bea**	**167.35**	**168**	PKPab	**PKPab**	**05 08 32.1**	**-2.4**
	0.8nm,0.9s,baz=172,slow=4.8,SNR=2.3						

ANF 06 04:48:29.8±2.6, 41°.84N×119°.66W, h0km, ML2.8/6, ML2.7/5, Error ellipse: s-maj=29.7km s-min=12.6km az=80.0, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
M04C	**Macdoel**	**1.63**	**269**	P	Pn	04 48 59.4	-0.4
	baz=87,SNR=18						
M04C				S	Sg	04 49 23.6	+1.6
	baz=87						
K04D	**Chiloquin, OR**	**1.74**	**297**	P	Pn	04 49 01.5	+0.2
	baz=116,SNR=9.4						
J05D	**Fort Rock, OR**	**1.85**	**322**	P	Pn	04 49 03.5	+0.6
	baz=141,SNR=27						
L04D	**Klamath Falls**	**2.00**	**282**	P	Pn	04 49 04.1	-0.9
	baz=100,SNR=13						
O03E	**Paynes Creek**	**2.24**	**227**	P	Pn	04 49 08.4	+0.2
	baz=46,SNR=16						
K02D	**Willamette Mer**	**3.09**	**287**	P	Pn	04 49 20.8	+1.0
	baz=105,SNR=10						

ANF 06 04:48:41.0±1.0, 41°.80N×119°.66W, h0km, Error ellipse: s-maj=9.9km s-min=6.1km az=137.0, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
M04C	**Macdoel**	**1.63**	**270**	P	Pn	04 49 10.8	-0.2
	baz=89						
M04C				S	Sg	04 49 34.4	+1.1
	baz=89						
K04D	**Chiloquin, OR**	**1.76**	**299**	P	Pn	04 49 12.8	0.0
	baz=117						
J05D	**Fort Rock, OR**	**1.89**	**323**	P	Pn	04 49 14.9	+0.3
	baz=142						
J05D				S	Sb	04 49 40.2	-0.4
	baz=142						
L04D	**Klamath Falls**	**2.01**	**283**	P	Pn	04 49 15.6	-0.7
	baz=101						
L04D				Sb	Sg	04 49 45.4	-0.3
	baz=101						
O03E	**Paynes Creek**	**2.21**	**228**	P	Pn	04 49 19.8	+0.8
	baz=46						
M02C	**Callahan**	**2.43**	**261**	Sb	Sg	04 49 59.0	0.0
	baz=79						
N02D	**Trinity Center**	**2.43**	**251**	Sg	Sg	04 50 00.9	+1.7
	baz=69						
K02D	**Willamette Mer**	**3.10**	**288**	P	Pn	04 49 32.5	+1.2
	baz=106						

*SJA **06** 05:06:28.4±0.5, 34°.76S×72°.67W, h46km±11km, ML3.3, MW4.0*
*GUC **06** 05:06:30.7±0.8, 34°.77S×72°.08W, h8km±3km, ML3.4*
ISC 06 05:06:29.6±1.5, 34°.75S±0°.03×72°.13W±0°.05, h4km±10km, n28, σ1°55/50, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BO03	**Pichilemu**	**0.29**	**29**	⇑iP	**Pg**	**05 06 35.9**	**+0.8**
BO03				*i* S	**Sg**	**05 06 40.2**	**+1.3**
BO02	**Sierra Bellavi**	**1.11**	**93**	⇑iP	**Pg**	**05 06 49.5**	**-1.4**
BO02				*i* S	**Sg**	**05 07 03.8**	**-1.4**
VA05	**Santo Domingo**	**1.17**	**22**	eP	**Pb**	**05 06 50.7**	**-1.6**
VA05				*i* S	**Sg**	**05 07 06.2**	**-0.9**
MT09	**Talagante**	**1.35**	**45**	eP	**Pn**	**05 06 53.7**	**-1.7**
MT09				*i* S	**Sb**	**05 07 10.6**	**-2.7**
MT09				IAML		05 07 17.2	
	comp=N,815nm,0.6s						
MT02	**Curacav**	**1.70**	**29**	eP	**Pn**	**05 06 58.3**	**-1.7**
MT02				*i* S	**Sn**	**05 07 19.3**	**-2.8**
VA01	**Torpederas**	**1.77**	**13**	eP	**Pn**	**05 07 00.2**	**-0.6**
VA01				eS	**Sn**	**05 07 23.8**	**0.0**
MT05	**Renca**	**1.78**	**41**	eP	**Pn**	**05 07 01.4**	**+0.3**
MT05				eS	**Sn**	**05 07

Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
I46RU	**ZALESOVO INFRA** baz=76,slow=331,SNR=2.1	**1.57**	**257**	*i*			05 34 15.8	
ZAA0	**Zalesovo Array** 0.4nm,0.5s,baz=67,slow=17	**1.57**	**257**	⇓P		Pn	05 26 57.2	-3.2
ZAA0	3.2nm,0.9s,baz=72,slow=22			⇑S		Sn	05 27 21.3	0.0
ZAA0				⇑Rg		Rg	05 27 29.4	
ZALV	**Zalesovo Beam** 2.1nm,0.3s,baz=73,slow=15,SNR=12	**1.57**	**257**	Pg		Pn	05 26 59.0	-1.4
ZALV	0.9nm,0.3s,baz=74,slow=35,SNR=6.4			Lg		Lg	05 27 22.3	
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=56,slow=14,SNR=13	**6.56**	**239**	Pn		Pn	05 28 09.8	+0.8
KURBB	baz=44,slow=23,SNR=1.4			Sn		Sn	05 29 21.6	-2.9
KURBB	0.0nm,0.3s,baz=45,slow=26,SNR=5.1			Lg		Lg	05 30 03.0	
KURBB	**Kurchatov Arra** 1.6nm,0.6s	**6.56**	**239**	⇓Pn		Pn	05 28 07.2	-1.8
KURBB	3.1nm,0.6s			⇑Sn		Sn	05 29 25.8	+1.3
KURBB	6.2nm,0.8s			⇓Lg		Lg	05 30 00.2	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=28,slow=12,SNR=1.0	**8.21**	**205**	Pn		Pn	05 28 32.7	+1.1

IDC ***06*** *05:32:45.3±10.0, 7.°75S×127.°64E, h152km±119km, mb3.3/4, mb1 3.6/7, mb1mx3.3/38, mbtmp4.0/7, ML4.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/18, Error ellipse: s-maj=79.6km s-min=53.1km az=37.0*

ISC 06 05:32:44.0±1.0, **7.°81S**±0.°09×**128.°2E**±0.°2, **h150**km, **n8,** σ**2**s**69/10, mb3.5/4, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
FITZ	**Fitzroy Crossi** 1.1nm,0.3s,baz=13,slow=10.0,SNR=25	**10.53**	**194**	P		**Pn**	**05 35 13.3**	**+2.2**
FITZ	2.5nm,0.3s,baz=278,slow=19,SNR=8.2			S		**Sn**	**05 37 05.1**	**-2.6**
WRA	**Warramunga Arr** 2.6nm,0.3s,baz=328,slow=14,SNR=80	**13.45**	**154**	P		**P**	**05 35 52.1**	**-1.0**
WRA	1.6nm,0.3s,baz=324,slow=23,SNR=7.7			S		**Sn**	**05 38 16.4**	**-1.5**
ASAR	**Alice Springs** 0.8nm,0.3s,baz=341,slow=11,SNR=42	**16.69**	**162**	P		**Pn**	**05 36 34.2**	**+4.9**
ASAR	0.1nm,0.3s,baz=327,slow=19,SNR=2.7			S		**S**	**05 39 32.0**	**-2.8**
NWAO	**Narrogin (SRO)** comp=Z,31nm,21.2s,baz=322,slow=39	**26.99**	**201**	LR		LR	05 50 10.1	
SONM	**Songino Array** 0.3nm,0.6s,baz=162,slow=7.6,SNR=2.6	**58.66**	**343**	P		**P**	**05 42 25.7**	**0.0**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=112,slow=5.8,SNR=2.1	**67.94**	**328**	P		**P**	**05 43 25.9**	**-0.8**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=116,slow=6.6,SNR=3.7	**71.53**	**335**	P		**P**	**05 43 47.3**	**-1.2**
KURBB	**Kurchatov Arra** 0.7nm,0.5s,baz=127,slow=5.0,SNR=7.2	**72.28**	**329**	P		**P**	**05 43 51.7**	**-1.3**

GUC ***06*** *06:00:22.7±0.6, 21.°16S×68.°58W, h139km±3km, ML3.1*
IDC ***06*** *06:00:26.4±8.9, 20.°94S×68.°17W, h153km±64km, mb3.3/1, mb1 3.0/3, mb1mx2.9/19, mbtmp3.5/3, Error ellipse: s-maj=97.0km s-min=55.2km az=49.0*

ISC 06 06:00:22.1±1.0, **21.°17S**±0.°03×**68.°62W**±0.°09, **h142**km±10km, **n20,** σ**0**s**51/37, 12C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
PB01	**IPOC Station P**	**0.82**	**279**	⇑*i*P		**Pn**	**06 00 44.6**	**-0.1**
PB01				*i* S		**Sn**	**06 01 01.4**	**-0.5**
PB01	comp=E,704nm,0.2s			IAML			06 01 03.1	
PB09	**IPOC Station P**	**0.85**	**223**	⇑*i*P		**Pn**	**06 00 45.6**	**+0.5**
PB09				*i* S		**Sn**	**06 01 02.6**	**0.0**
PB09	comp=E,141nm,0.3s			IAML			06 01 05.5	
PB08	**IPOC Station P**	**1.14**	**334**	⇓*i*P		**Pn**	**06 00 48.1**	**+0.3**
PB08				*i* S		**Sn**	**06 01 07.2**	**-0.1**
PB08	comp=E,349nm,0.2s			IAML			06 01 08.5	
PB07	**IPOC Station P**	**1.31**	**245**	⇑*i*P		**Pn**	**06 00 49.7**	**+0.4**
PB07				*i* S		**Sn**	**06 01 10.1**	**+0.2**
PB07	comp=E,349nm,0.4s			IAML			06 01 11.5	
PB03	**IPOC Station P**	**1.37**	**230**	⇑*i*P		**Pn**	**06 00 50.3**	**+0.4**
PB03				*i* S		**Sn**	**06 01 11.3**	**+0.2**
PB03	comp=E,211nm,0.2s			IAML			06 01 11.9	
LVC	**Limon Verde**	**1.46**	**191**	⇓*i*P		**Pn**	**06 00 51.3**	**+0.3**
LVC				*e*S		**Sn**	**06 01 12.9**	**-0.3**
TA01	**Diego Aracena**	**1.58**	**292**	⇑*i*P		**Pn**	**06 00 52.1**	**+0.2**
TA01				*i* S		**Sn**	**06 01 14.6**	**-0.1**
TA01	comp=E,332nm,0.5s			IAML			06 01 16.3	
GO01	**Chusmiza**	**1.59**	**340**	⇓*i*P		**Pn**	**06 00 52.8**	**+0.2**
GO01				*i* S		**Sn**	**06 01 15.9**	**+0.2**
TA02	**Huaiquique**	**1.67**	**302**	*e*P		**Pn**	**06 00 53.2**	**+0.2**
TA02				*i* S		**Sn**	**06 01 16.5**	**-0.1**
PB11	**IPOC Station P**	**1.71**	**325**	⇑*i*P		**Pn**	**06 00 53.4**	**-0.1**
PB11				*i* S		**Sn**	**06 01 17.3**	**-0.2**
PB06	**IPOC Station P**	**1.77**	**210**	⇑*i*P		**Pn**	**06 00 54.7**	**+0.4**
PB06				*i* S		**Sn**	**06 01 19.0**	**+0.2**
PB06	comp=E,228nm,0.3s			IAML			06 01 21.4	
PB04	**IPOC Station P**	**1.84**	**231**	⇑*i*P		**Pn**	**06 00 55.5**	**+0.5**
PB04				*i* S		**Sn**	**06 01 20.1**	**-0.2**
PB04	comp=E,129nm,0.1s			IAML			06 01 23.8	
PSGC	**Pisagua**	**2.11**	**318**	⇑*i*P		**Pn**	**06 00 58.0**	**-0.2**
PSGC				*i* S		**Sn**	**06 01 25.4**	**-0.3**
PB15	**IPOC Station P**	**2.18**	**201**	*e*P		**Pn**	**06 00 59.8**	**+0.7**
PB15				*e*S		**Sn**	**06 01 28.2**	**+0.6**
MNMC	**Minye Minye**	**2.23**	**335**	⇑*i*P		**Pn**	**06 01 00.5**	**+0.7**
MNMC				*i* S		**Sn**	**06 01 29.1**	**+0.4**
PB05	**IPOC Station P**	**2.23**	**221**	⇑*i*P		**Pn**	**06 01 00.1**	**+0.4**
PB05	comp=E,69nm,0.2s			IAML			06 01 30.2	
GO02	**Mina Guanaco**	**4.08**	**192**	⇑*i*P		**Pn**	**06 01 23.4**	**0.0**
GO02				*e*S		**Sn**	**06 02 10.2**	**-0.8**
LPAZ	**La Paz** comp=E,0.3nm,0.3s,baz=171,slow=7.2,SNR=9.0	**4.88**	**6**	P		**Pn**	**06 01 35.6**	**+1.2**
LPAZ				S		**Sn**	**06 02 30.0**	**-0.5**
BDFB	**Brasilia** comp=E,0.3nm,0.3s,baz=254,slow=7.4,SNR=3.9	**20.30**	**78**	P		**P**	**06 04 45.7**	**-1.4**
TORD	**Torodi Ar. Bea** comp=E,0.7nm,0.8s,baz=253,slow=5.5,SNR=4.2	**76.99**	**70**	P		**P**	**06 12 00.1**	**+0.4**

JMA ***06*** *06:05:32.8±0.1, 23.°67N×121.°58E, h0km, M3.0*
TAP ***06*** *06:05:34.6, 23.°73N×121.°42E, h17km, ML3.4, C*

ISC 06 06:05:34.6±0.8, **23.°72N**±0.°01×**121.°47E**±0.°02, **h18**km±4km, **n103,** σ**0**s**91**/188, **6C-8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
EGFH	**Guangfu** baz=176	**0.06**	**219**	*i* P		**Pg**	**06 05 38.0**	**0.0**
EGFH				*i* S		**Sg**	**06 05 39.9**	**-0.2**
ESL	**Shilin** baz=12	**0.10**	**342**	⇑*i*P		**Pg**	**06 05 38.0**	**-0.3**
ESL				*i* S		**Sg**	**06 05 40.3**	**-0.5**
HGSD	**Ruisui** baz=184	**0.23**	**190**	P		**Pg**	**06 05 40.5**	**+0.6**
HGSD				S		**Sg**	**06 05 44.9**	**+1.4**
EHY	**Hungye** baz=201	**0.25**	**213**	*i* P		**Pb**	**06 05 39.9**	**-0.7**
EHY				*i* S		**Sg**	**06 05 43.4**	**-0.7**
HWA	**Hwalien** baz=27	**0.29**	**26**	*e*P		**Pb**	**06 05 42.3**	**+1.0**
HWA				*e*S		**Sb**	**06 05 46.6**	**+0.7**
VWDT	**VWDT** baz=275	**0.30**	**277**	⇑*i*P		**Pg**	**06 05 40.8**	**-0.4**
VWDT				S		**Sg**	**06 05 44.8**	**-0.9**
YULB	**Yu-li** baz=194	**0.36**	**206**	⇑*i*P		**Pb**	**06 05 41.9**	**-0.6**
YULB				S		**Sb**	**06 05 46.9**	**-0.9**
OWD	**Renai** baz=315	**0.36**	**312**	*e*P		**Pg**	**06 05 41.4**	**-0.8**
OWD				S		**Sg**	**06 05 45.6**	**-1.8**
TWD	**Chiawan** baz=19	**0.38**	**18**	*e*P		**Pb**	**06 05 42.7**	**-0.2**
TWD				*e*S		**Sb**	**06 05 48.0**	**-0.5**
EYUL	**Yuli** baz=197	**0.39**	**200**	P		**Pb**	**06 05 42.8**	**-0.3**
EYUL				S		**Sb**	**06 05 48.2**	**-0.6**
TWF1	**Yuli** baz=199	**0.39**	**203**	P		**Pb**	**06 05 42.5**	**-0.6**
TWF1				*e*S		**Sb**	**06 05 48.1**	**-0.7**
CHGB	**Renai** baz=332	**0.44**	**322**	⇓*i*P		**Pg**	**06 05 43.1**	**-0.6**
CHGB				S		**Sg**	**06 05 48.2**	**-1.5**
WHF	**Hehuan Shan** baz=342	**0.47**	**337**	⇓*i*P		**Pg**	**06 05 43.4**	**-0.9**
WHF				*e*S		**Sg**	**06 05 49.1**	**-1.6**
NACB	**Ninganchiao** baz=20	**0.47**	**14**	⇑*i*P		**Pg**	**06 05 43.4**	**-0.8**
NACB				S		**Sg**	**06 05 49.8**	**-0.8**
SSLB	**Suanglung** baz=284	**0.48**	**279**	⇓*i*P		**Pg**	**06 05 43.3**	**-1.0**
SSLB				S		**Sg**	**06 05 48.7**	**-2.1**
ETLH	**Xiulin Townshi** baz=6.0	**0.49**	**2**	P		**Pg**	**06 05 43.9**	**-0.7**
ETLH				*e*S		**Sg**	**06 05 50.2**	**-1.1**
SMLT	**Sun Moon Lake** baz=294	**0.55**	**288**	⇓*i*P		**Pg**	**06 05 44.7**	**-0.9**
SMLT				S		**Sg**	**06 05 51.5**	**-1.5**
WHYT	**Xinyi Township** baz=267	**0.56**	**268**	*e*P		**Pg**	**06 05 45.5**	**-0.4**
WHYT				*e*S		**Sg**	**06 05 52.1**	**-1.4**
FUSS	**Fushou** baz=342	**0.57**	**339**	⇓*i*P		**Pg**	**06 05 45.4**	**-0.7**
FUSS				*e*S		**Sg**	**06 05 52.5**	**-1.2**
DPDB	**Guoxing** baz=309	**0.59**	**303**	*e*P		**Pg**	**06 05 45.6**	**-0.8**
DPDB				*e*S		**Sg**	**06 05 53.2**	**-1.0**
TYC	**Yuchr** baz=295	**0.59**	**289**	⇓*i*P		**Pg**	**06 05 45.3**	**-1.1**
TYC				S		**Sg**	**06 05 51.5**	**-2.8**
TWT	**Tachien** baz=335	**0.60**	**334**	⇓*i*P		**Pg**	**06 05 46.2**	**-0.4**
TWT				S		**Sg**	**06 05 53.1**	**-1.6**
TDCB	**Techi** baz=335	**0.61**	**332**	⇓*i*P		**Pg**	**06 05 46.2**	**-0.5**
TDCB				S		**Sg**	**06 05 53.1**	**-1.8**
CHKT	**Chengkung** baz=171	**0.62**	**189**	*e*P		**Pb**	**06 05 47.3**	**+0.3**
CHKT				*e*S		**Sb**	**06 05 56.4**	**+1.1**
ALS	**Alishan** baz=249	**0.64**	**252**	*e*P		**Pg**	**06 05 47.1**	**-0.3**
ALS				*e*S		**Sg**	**06 05 55.2**	**-0.9**
ELDTW	**Lidau** baz=207	**0.67**	**218**	*e*P		**Pg**	**06 05 47.0**	**-0.8**
ELDTW				*e*S		**Sg**	**06 05 55.4**	**-1.3**
WJS	**Zhushan** baz=279	**0.69**	**279**	*e*P		**Pb**	**06 05 48.1**	**0.0**
WJS				*e*S		**Sb**	**06 05 58.9**	**+1.6**
NNSB	**Datong** baz=3.0	**0.71**	**354**	⇑*i*P		**Pg**	**06 05 48.1**	**-0.7**
NNSB				S		**Sg**	**06 05 57.2**	**-1.1**
NNSH	**Datong** baz=1.0	**0.71**	**354**	⇑P		**Pg**	**06 05 48.0**	**-0.7**
NNSH				S		**Sg**	**06 05 56.9**	**-1.4**
NNS	**Nan Shan** baz=3.0	**0.73**	**353**	*e*P		**Pg**	**06 05 48.2**	**-0.8**
NNS				S		**Sg**	**06 05 57.6**	**-1.1**
CHN5	**Tsauling** baz=253	**0.73**	**261**	*e*P		**Pb**	**06 05 49.2**	**+0.2**
CHN5				*e*S		**Sg**	**06 05 58.4**	**-0.4**
WHP	**Taichung City** baz=321	**0.74**	**320**	*e*P		**Pg**	**06 05 48.6**	**-0.5**
WHP				*e*S		**Sg**	**06 05 58.0**	**-1.0**
WNT	**Mingjian** baz=285	**0.74**	**283**	P		**Pb**	**06 05 49.2**	**+0.2**
WNT				*e*S		**Sb**	**06 05 59.7**	**+1.0**
EDH	**Donghe** baz=188	**0.75**	**192**	*e*P		**Pg**	**06 05 48.3**	**-1.1**
EDH				*e*S		**Sb**	**06 06 00.5**	**+1.2**
WGK	**Gukeng** baz=267	**0.83**	**268**	*e*P		**Pb**	**06 05 50.8**	**+0.2**
WGK				*e*S		**Sb**	**06 06 02.7**	**+1.2**
TCU	**Taichung** baz=304	**0.84**	**301**	*e*P		**Pg**	**06 05 50.2**	**-0.8**
TCU				*e*S		**Sb**	**06 06 02.7**	**+0.9**
WDLH	**Douliu** baz=268	**0.85**	**268**	*e*P		**Pb**	**06 05 51.1**	**+0.2**
WDLH				*e*S		**Sb**	**06 06 03.0**	**+0.9**
STYT	**Tauyuan** baz=227	**0.85**	**230**	*e*P		**Pb**	**06 05 51.1**	**+0.1**
STYT				*e*S		**Sg**	**06 06 02.1**	**-0.5**
LONT	**Longtian** baz=198	**0.86**	**201**	*e*P		**Pb**	**06 05 50.9**	**-0.2**
LONT				*e*S		**Sn**	**06 06 03.7**	**-0.4**
TPUB	**Ta-pu** baz=245	**0.87**	**242**	*e*P		**Pb**	**06 05 51.6**	**+0.3**
TPUB				*e*S		**Sg**	**06 06 02.5**	**-0.7**
CHN4	**Tsaushan** baz=244	**0.88**	**246**	*e*P		**Pb**	**06 05 51.8**	**+0.4**
CHN4				*e*S		**Sb**	**06 06 04.0**	**+1.1**
NDT	**Datong Townshi** baz=5.0	**0.88**	**3**	*e*P		**Pg**	**06 05 51.2**	**-0.7**
NDT				*e*S		**Sg**	**06 06 02.7**	**-0.9**
TWQ1	**Liyutan** baz=322	**0.90**	**315**	*e*P		**Pb**	**06 05 52.0**	**+0.3**
TWQ1				*e*S		**Sg**	**06 06 03.5**	**-0.4**
WCHH	**Zhanghua** baz=294	**0.91**	**294**	*e*P		**Pb**	**06 05 52.0**	**+0.1**
WCHH				*e*S		**Sb**	**06 06 04.4**	**+0.8**
WTP	**Ta-pu** baz=240	**0.91**	**239**	*e*P		**Pb**	**06 05 52.5**	**+0.5**
WTP				*e*S		**Sb**	**06 06 04.4**	**+0.6**
ENTT	**Nioudou** baz=8.0	**0.93**	**6**	*e*P		**Pb**	**06 05 52.1**	**-0.1**
ENTT				*e*S		**Sg**	**06 06 04.1**	**-0.8**
CHN2	**Minshiung** baz=258	**0.93**	**259**	*e*S		**Sb**	**06 06 05.8**	**+1.5**
NSY	**Sanyi** baz=319	**0.95**	**317**	P		**Pb**	**06 05 53.2**	**+0.6**
NSY				*e*S		**Sn**	**06 06 07.2**	**+0.9**
YHNB	**Yeheng** baz=357	**0.95**	**355**	*e*P		**Pg**	**06 05 52.5**	**-0.7**
YHNB				*e*S		**Sg**	**06 06 04.3**	**-1.5**
TWC	**Suao** baz=18	**0.96**	**21**	*e*P		**Pn**	**06 05 53.2**	**0.0**
TWC				*e*S		**Sb**	**06 06 05.8**	**+0.7**
NSK	**Sanguang** baz=357	**0.96**	**354**	*e*P		**Pg**	**06 05 52.6**	**-0.7**
NSK				*e*S		**Sg**	**06 06 04.6**	**-1.4**
TWG	**Pinlang** baz=199	**0.96**	**202**	*e*P		**Pb**	**06 05 53.0**	**+0.1**
TWG				*e*S		**Sb**	**06 06 05.7**	**+0.5**
TWGBT	**Beinan** baz=199	**0.96**	**202**	*e*P		**Pn**	**06 05 53.1**	**-0.2**
TWGBT				*e*S		**Sb**	**06 06 05.8**	**+0.6**
CHY	**Chiayi** baz=256	**0.98**	**257**	*e*P		**Pg**	**06 05 53.2**	**-0.5**
CHY				*e*S		**Sg**	**06 06 06.3**	**-0.4**
WDJ	**Dajia District** baz=323	**0.98**	**310**	*e*P		**Pn**	**06 05 53.9**	**+0.3**
WDJ				*e*S		**Sn**	**06 06 08.4**	**+1.3**
WTK	**Tuku** baz=269	**0.99**	**269**	*e*P		**Pn**	**06 05 53.9**	**+0.2**
WTK				*e*S		**Sg**	**06 06 06.5**	**-0.3**
TWK	**Hsinying** baz=242	**1.00**	**244**	P		**Pb**	**06 05 53.9**	**+0.3**
TWK				*e*S		**Sb**	**06 06 07.3**	**+0.8**
NSTT	**Nanjuang** baz=346	**1.01**	**335**	P		**Pb**	**06 05 53.8**	**+0.2**
NSTT				*e*S		**Sg**	**06 06 06.5**	**-0.9**
CHN1	**Nanshi** baz=237	**1.01**	**239**	P		**Pn**	**06 05 54.1**	**+0.1**
CHN1				*e*S		**Sb**	**06 06 07.9**	**+1.2**
LIOB	**Emei** baz=338	**1.01**	**336**	P		**Pb**	**06 05 53.9**	**+0.1**
LIOB				*e*S		**Sg**	**06 06 07.2**	**-0.5**
SNST	**Tainan City** baz=239	**1.02**	**241**	*e*P		**Pn**	**06 05 54.5**	**+0.4**
SNST				*e*S		**Sb**	**06 06 07.5**	**+0.7**
TWE	**Neicheng** baz=22	**1.02**	**10**	*e*P		**Pn**	**06 05 54.0**	**0.0**
TWE				*e*S		**Sb**	**06 06 07.8**	**+1.0**
NMLH	**Miaoli** baz=324	**1.03**	**323**	*e*P		**Pn**	**06 05 54.8**	**+0.6**
NMLH				*e*S		**Sn**	**06 06 09.6**	**+1.5**
SGST	**Jiashian** baz=230	**1.03**	**232**	*e*P		**Pb**	**06 05 54.2**	**+0.3**
SGST				*e*S		**Sb**	**06 06 08.5**	**+1.4**
RLNB	**Erlin** baz=281	**1.03**	**280**	*e*P		**Pg**	**06 05 53.9**	**-0.8**
RLNB				*e*S		**Sb**	**06 06 08.6**	**+1.4**
LDUT	**Ludao** baz=178	**1.04**	**180**	*e*P		**Pn**	**06 05 55.0**	**+0.7**
LDUT				*e*S		**Sg**	**06 06 06.2**	**-2.2**
SLGT	**Liugui** baz=224	**1.04**	**227**	*e*P		**Pn**	**06 05 54.6**	**+0.2**
SLGT				*e*S		**Sb**	**06 06 08.1**	**+0.5**
NWLT	**Wulai** baz=14	**1.06**	**2**	*e*P		**Pb**	**06 05 54.7**	**+0.2**
NWLT				*e*S		**Sg**	**06 06 07.6**	**-1.5**
WSF	**Szhu** baz=266	**1.15**	**266**	*e*S		**Sn**	**06 06 12.2**	**+1.2**
ICHU	**Yijhu** baz=252	**1.15**	**252**	*e*P		**Pn**	**06 05 56.2**	**+0.4**
ICHU				*e*S		**Sb**	**06 06 11.5**	**+0.9**
NTC	**Toucheng** baz=18	**1.18**	**16**	*e*P		**Pn**	**06 05 57.8**	**+1.5**
NTC				*e*S		**Sg**	**06 06 12.2**	**-0.8**
ECL	**Taimali** baz=186	**1.21**	**203**	*e*P		**Pn**	**06 05 56.8**	**+0.1**
ECL				*e*S		**Sg**	**06 06 12.7**	**-1.1**
SCST	**Cishan** baz=226	**1.22**	**228**	*e*P		**Pn**	**06 05 56.6**	**-0.2**
SCST				*e*S		**Sn**	**06 06 14.9**	**+2.0**
SSD	**Sandimen** baz=208	**1.23**	**219**	*e*P		**Pn**	**06 05 57.2**	**+0.2**
SSD				*e*S		**Sn**	**06 06 16.1**	**+2.9**
TATO	**Taipei** baz=10.0	**1.25**	**1**	*e*P		**Pg**	**06 05 59.0**	**+0.1**
TATO				*e*S		**Sb**	**06 06 13.9**	**+0.2**
TSMG	**Majia** baz=210	**1.26**	**217**	*e*P		**Pg**	**06 05 58.3**	**-0.7**
TSMG				*e*S		**Sn**	**06 06 15.1**	**+1.3**
TWA	**Mucha** baz=7.0	**1.26**	**5**	*e*P		**Pg**	**06 05 59.5**	**+0.4**
TWA				*e*S		**Sn**	**06 06 15.4**	**+1.3**
TIPB	**Shuangxi** baz=16	**1.29**	**15**	*e*P		**Pn**	**06 05 57.5**	**-0.3**
TIPB				*e*S		**Sb**	**06 06 15.2**	**+0.3**
MASBT	**Mashibuluo** baz=209	**1.34**	**215**	*e*P		**Pn**	**06 05 58.7**	**+0.2**
MASBT				*e*S		**Sb**	**06 06 16.5**	**+0.4**
TWB1	**Santiao Chiao** baz=25	**1.37**	**20**	*e*P		**Pg**	**06 06 01.2**	**+0.1**
NWF	**Wu-fen Shan** baz=21	**1.38**	**12**	*e*P		**Pg**	**06 06 00.3**	**-1.0**
NWF				*e*S		**Sb**	**06 06 16.9**	**-0.5**
WFSB	**Wu-fen Shan** baz=21	**1.38**	**12**	*e*P		**Pg**	**06 06 01.1**	**-0.2**
WFSB				*e*S		**Sg**	**06 06 18.9**	**-0.4**
YM01	**YM01** baz=5.0	**1.43**	**4**	*e*P		**Pg**	**06 06 01.3**	**-0.9**
YM01				*e*S		**Sg**	**06 06 20.8**	**0.0**
YM04	**YM04** baz=27	**1.43**	**2**	*e*P		**Pg**	**06 06 01.6**	**-0.7**
YM10	**YM10** baz=28	**1.44**	**3**	*e*P		**Pg**	**06 06 01.7**	**-0.6**
EAST	**Anshuo** baz=185	**1.44**	**203**	*e*P		**Pg**	**06 06 01.3**	**-1.2**
YM05	**YM05** baz=5.0	**1.45**	**4**	*e*P		**Pb**	**06 06 00.7**	**-0.4**
YM05				*e*S		**Sn**	**06 06 18.7**	**+0.1**
YM03	**YM03** baz=26	**1.46**	**3**	*e*P		**Pb**	**06 06 01.4**	**0.0**
ANP	**Anpu** baz=26	**1.47**	**2**	*e*P		**Pn**	**06 06 00.9**	**+0.6**
YM08	**YM08** baz=10.0	**1.47**	**4**	*e*P		**Pg**	**06 06 02.4**	**-0.7**
SCZT	**Fangliau** baz=202	**1.55**	**210**	*e*P		**Pb**	**06 06 02.2**	**-0.6**
SCZT				*e*S		**Sb**	**06 06 22.6**	**+0.5**
YOJ	**Yonaguni jima** baz=65	**1.59**	**62**	*e*P		**Pn**	**06 06 02.0**	**+0.1**
YOJ	**Yonaguni jima**	**1.59**	**62**	P		**Pn**	**06 06 02.3**	**+0.3**
SLIU	**Shizi** baz=195	**1.61**	**203**	*e*P		**Pb**	**06 06 03.5**	**-0.5**
SLIU				*e*S		**Sg**	**06 06 25.0**	**-1.8**
PHUB	**P'eng-hu** baz=243	**1.75**	**264**	*e*P		**Pn**	**06 06 03.4**	**-0.8**
PNG	**Penghu** baz=263	**1.76**	**266**	*e*P		**Pn**	**06 06 03.8**	**-0.4**
VCHM	**Qimei** baz=252	**1.94**	**255**	*e*P		**Pn**	**06 06 06.3**	**-0.4**
IRIF	**Iriomote-Funau**	**2.16**	**73**	*e*S		**Sn**	**06 06 37.4**	**+1.3**

VWUC	**VWUC** baz=305	**2.24**	**305**	*e*P		**Pn**	**06 06 09.7**	**-1.1**
JIJ	**Ishigaki jima**	**2.53**	**75**	P		**Pn**	**06 06 14.9**	**0.0**
JIJ				*e*S		**Sn**	**06 06 45.3**	**0.0**
JISG	**Ishigakijimahi**	**2.74**	**71**	P		**Pn**	**06 06 17.7**	**0.0**
JISG				*e*S		**Sn**	**06 06 51.0**	**+0.6**
KNMB	**Chin-men Tao** baz=272	**2.91**	**285**	*e*P		**Pn**	**06 06 19.3**	**-0.8**
JTJ	**Tarama**	**3.09**	**72**	*e*S		**Sn**	**06 07 00.8**	**+1.6**

*ANF **06** 06:24:18.2±1.9,41.71N×119.56W,h2km±53km,ML2.6/2, ML2.6/2, Error ellipse: s-maj=63.7km s-min=12.3km az=117.0*

REN 06 06:24:19.2,42.12N×119.61W,h0km,Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M04C	**Macdoel** baz=78,SNR=8.9	**1.71**	**273**	P	Pn	06 24 49.2	0.0
M04C				S	Sb	06 25 12.7	+0.3
K04D	**Chiloquin, OR** baz=107,SNR=6.6	**1.87**	**300**	P	Pn	06 24 51.8	+0.4
K04D				S	Sn	06 25 15.1	-0.5
J05D	**Fort Rock, OR** baz=134,SNR=20	**2.00**	**322**	P	Pn	06 24 53.4	+0.2
J05D				S	Sn	06 25 19.5	+0.5
L04D	**Klamath Falls** baz=92,SNR=5.1	**2.11**	**285**	P	Pn	06 24 53.9	-0.8
L04D				S	Sb	06 25 23.6	-0.4

ANF 06 06:24:30.5±3.3,41.78N×119.59W,h0km,Error ellipse: s-maj=25.9km s-min=17.6km az=122.0,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
M04C	**Macdoel** baz=89	**1.68**	**271**	P	Pn	06 25 01.3	0.0
M04C				S	Sg	06 25 24.7	+0.1
K04D	**Chiloquin, OR** baz=117	**1.82**	**298**	P	Pn	06 25 03.1	-0.1
K04D				S	Sb	06 25 28.0	-0.1
J05D	**Fort Rock, OR** baz=141	**1.94**	**322**	P	Pn	06 25 04.9	+0.1
J05D				S	Sb	06 25 31.1	-0.5

*IDC **06** 06:37:57.1±2.0,20.19S×177.30W,h502km±39km, mb3.6/3, mb1 3.7/6,mb1mx3.1/30,mbtmp4.5/6, Error ellipse: s-maj=39.0km s-min=26.9km az=130.0*

*NEIC **06** 06:37:59.0±1.1,20.05S±0.3×177.40W±0.07,h526km±14km, mb4.3/18, Error ellipse: s-maj=39.0km s-min=4.5km az=166.0*

ISC 06 06:37:59.4±0.8,19.85S±0.1×177.4W±0.1,h550km,n27, σ1s27/29,mb4.3/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.82**	**294**	P	**P**	**06 39 26.2**	**-1.7**
NIUE	**Niue**	**7.04**	**85**	P	**P**	**06 39 48.5**	**+0.8**
AFI	**Afiamalu** 4.5nm,0.3s,baz=240,slow=6.2,SNR=8.5	**7.92**	**43**	P	**P**	**06 39 56.9**	**+0.4**
AFI				S	**S**	**06 41 31.2**	**-1.2**
DZM	**Mont Dzumac** 2.8nm,0.3s,baz=15,slow=19,SNR=4.7	**15.31**	**259**	P	**P**	**06 41 11.9**	**-0.4**
OUZ	**Omahuta**	**17.32**	**206**	P	**P**	**06 41 31.9**	**+1.0**
URZ	**Urewera** 1.0nm,0.3s,baz=332,slow=16,SNR=7.4	**19.02**	**193**	P	**P**	**06 41 42.4**	**-3.9**
EIDS	**Eidsvold**	**29.63**	**253**	P	**P**	**06 43 20.7**	**-0.1**
EIDS	comp=Z,17nm,1.4s			IAmb	IAmb	06 43 43.6	
ARMA	**Armidale**	**29.93**	**243**	P	**P**	**06 43 23.4**	**0.0**
CTAO	**Charters Tower**	**34.18**	**263**	P	**P**	**06 43 59.9**	**+0.4**
CTAO	comp=Z,9.7nm,1.2s			IAmb	IAmb	06 44 04.8	
TOO	**Toolangi**	**36.81**	**233**	P	**P**	**06 44 20.3**	**-0.8**
TOO	comp=Z,5.6nm,0.9s			IAmb	IAmb	06 44 42.8	
STKA	**Stephens Creek** comp=Z,4.1nm,0.6s,baz=92,slow=11,SNR=13	**38.65**	**243**	P	**P**	**06 44 36.2**	**0.0**
STKA	**Stephens Creek**	**38.65**	**243**	P	**P**	**06 44 36.1**	**-0.1**
BBOO	**Buckleboo**	**43.41**	**243**	P	**P**	**06 45 13.4**	**-0.6**
BBOO	comp=Z,8.0nm,0.6s			IAmb	IAmb	06 45 13.7	
AS31	**Alice Springs**	**45.28**	**256**	P	**P**	**06 45 29.2**	**+0.6**
ASAR	**Alice Springs** comp=Z,9.4nm,0.8s,baz=89,slow=8.4,SNR=79	**45.28**	**256**	P	**P**	**06 45 28.9**	**+0.3**
ASAR	**Alice Springs**	**45.28**	**256**	P	**P**	**06 45 28.6**	**+0.1**
WB0	**Warramunga Arr**	**45.29**	**261**	P	**P**	**06 45 29.0**	**+0.4**
WB0	comp=Z,3.7nm,0.5s			IAmb	IAmb	06 45 29.3	
WB2	**Warramunga Arr**	**45.30**	**261**	P	**P**	**06 45 28.9**	**+0.2**
WRA	**Warramunga Arr** comp=Z,1.6nm,0.3s,baz=98,slow=7.7,SNR=74	**45.31**	**261**	P	**P**	**06 45 28.9**	**+0.1**
WRA				PcP	**PcP**	**06 47 00.1**	**+3.2**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.7s,baz=93,slow=4.1,SNR=0.9	**45.31**	**261**	P	**P**	**06 45 28.4**	**-0.4**
FORT	**Forrest**	**50.14**	**246**	P	**P**	**06 46 04.5**	**-0.3**
FORT	comp=Z,20nm,1.1s			IAmb	IAmb	06 46 27.8	
KNRA	**Kununurra**	**51.32**	**265**	P	**P**	**06 46 14.7**	**+1.2**
FITZ	**Fitzroy Crossi**	**53.73**	**262**	P	**P**	**06 46 32.2**	**+1.4**
PSA00	**Pilbara Seismi**	**58.43**	**256**	P	**P**	**06 47 01.5**	**-1.6**
PSA00	**Pilbara Seismi**	**58.43**	**256**	P	**P**	**06 47 04.2**	**+1.1**
PSA00	comp=Z,24nm,1.5s			IAmb	IAmb	06 47 11.1	
MORW	**Morawa**	**60.66**	**247**	P	**P**	**06 47 18.7**	**+0.8**
MORW	comp=Z,18nm,1.5s			IAmb	IAmb	06 47 37.9	
CASY	**Casey**	**64.86**	**205**	P	**P**	**06 47 44.5**	**+0.3**

*JMA **06** 06:42:17.9±0.1,22.98N×121.46E,h21km±2km,M3.3*
*TAP **06** 06:42:19.2,23.00N×121.36E,h19km,ML3.3,C*

ISC 06 06:42:18.5±0.9,22.99N±0.02×121.42E±0.02,h18km±2km, n100,σ0s77/155,3C-13D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDH	**Donghe** baz=235	**0.10**	**263**	⇑*i*P	**Pg**	**06 42 22.9**	**+0.7**
EDH				*i* S	**Sg**	**06 42 25.2**	**+0.5**
CHKT	**Chengkung** baz=11	**0.12**	**338**	⇑*i*P	**Pg**	**06 42 23.2**	**+0.8**
CHKT				*i* S	**Sg**	**06 42 26.3**	**+1.1**
LONT	**Longtian** baz=250	**0.28**	**253**	P	**Pg**	**06 42 25.5**	**+0.8**
LONT				S	**Sg**	**06 42 30.1**	**+1.2**
LDUT	**Ludao** baz=161	**0.31**	**171**	⇑P	**Pg**	**06 42 26.4**	**+1.1**
LDUT				S	**Sb**	**06 42 31.9**	**+1.5**
TTN	**Taitung** baz=207	**0.34**	**227**	*e*P	**Pb**	**06 42 26.4**	**+0.4**
TTN				*e*S	**Sb**	**06 42 31.1**	**+0.1**
TWGBT	**Beinan** baz=247	**0.35**	**242**	P	**Pb**	**06 42 26.4**	**+0.1**
TWGBT				*i* S	**Sb**	**06 42 31.5**	**0.0**
TWG	**Pinlang** baz=247	**0.36**	**243**	⇓*i*P	**Pb**	**06 42 26.4**	**0.0**
TWG				S	**Sb**	**06 42 31.8**	**+0.2**
EYUL	**Yuli** baz=342	**0.37**	**346**	P	**Pb**	**06 42 27.1**	**+0.5**
EYUL				S	**Sb**	**06 42 33.0**	**+0.8**
TWF1	**Yuli** baz=340	**0.38**	**343**	⇓*i*P	**Pb**	**06 42 27.0**	**+0.2**
TWF1				*e*S	**Sb**	**06 42 32.5**	**+0.1**
ELDTW	**Lidau** baz=301	**0.42**	**299**	⇓*i*P	**Pg**	**06 42 26.8**	**-0.4**
ELDTW				*e*S	**Sg**	**06 42 31.8**	**-1.3**
YULB	**Yu-li** baz=341	**0.42**	**345**	⇓*i*P	**Pg**	**06 42 27.4**	**+0.2**
YULB				*e*S	**Sg**	**06 42 33.1**	**+0.1**
HGSD	**Ruisui** baz=15	**0.51**	**1**	*e*P	**Pg**	**06 42 29.1**	**+0.4**
HGSD				*e*S	**Sb**	**06 42 36.1**	**+0.3**
EHY	**Hungye** baz=343	**0.53**	**351**	P	**Pg**	**06 42 29.1**	**0.0**
EHY				*e*S	**Sg**	**06 42 35.8**	**-0.4**
ECL	**Taimali** baz=229	**0.57**	**228**	⇓*i*P	**Pb**	**06 42 29.4**	**-0.6**
ECL				*e*S	**Sg**	**06 42 36.9**	**-0.8**
STYT	**Tauyuan** baz=291	**0.63**	**286**	⇓*i*P	**Pb**	**06 42 30.6**	**-0.3**
STYT				*e*S	**Sb**	**06 42 38.2**	**-1.3**
EGFH	**Guangfu** baz=350	**0.68**	**1**	*e*P	**Pg**	**06 42 32.6**	**+0.7**
EGFH				*e*S	**Sg**	**06 42 41.6**	**+0.5**
SLGT	**Liugui** baz=266	**0.71**	**271**	⇓*i*P	**Pg**	**06 42 32.2**	**-0.2**
SLGT				*e*S	**Sg**	**06 42 41.0**	**-1.0**
TSMG	**Majia** baz=249	**0.76**	**249**	⇓P	**Pb**	**06 42 32.6**	**-0.6**
TSMG				*e*S	**Sb**	**06 42 42.1**	**-1.2**
ALS	**Alishan** baz=316	**0.77**	**313**	⇓*i*P	**Pg**	**06 42 33.6**	**-0.1**
ALS				*e*S	**Sb**	**06 42 42.5**	**-1.1**
SGST	**Jiashian** baz=280	**0.77**	**277**	*e*P	**Pb**	**06 42 32.8**	**-0.6**
SGST				*e*S	**Sg**	**06 42 43.2**	**-0.8**
WTP	**Ta-pu** baz=294	**0.78**	**290**	P	**Pg**	**06 42 33.9**	**0.0**
WTP				*e*S	**Sn**	**06 42 45.5**	**-0.4**
TAW	**Tawu** baz=211	**0.79**	**218**	*e*P	**Pb**	**06 42 33.3**	**-0.4**
TAW				*e*S	**Sb**	**06 42 43.1**	**-0.8**
TPUB	**Ta-pu** baz=298	**0.79**	**294**	⇓*i*P	**Pg**	**06 42 33.8**	**-0.2**
TPUB				*e*S	**Sn**	**06 42 44.6**	**-1.4**
EAST	**Anshuo** baz=215	**0.80**	**221**	P	**Pb**	**06 42 33.2**	**-0.6**
EAST				*e*S	**Sb**	**06 42 43.2**	**-1.0**
VWDT	**VWDT** baz=358	**0.81**	**342**	⇓*i*P	**Pb**	**06 42 34.0**	**0.0**
VWDT				*e*S	**Sb**	**06 42 43.2**	**-1.3**
MASBT	**Mashibuluo** baz=232	**0.81**	**243**	P	**Pb**	**06 42 33.5**	**-0.6**
MASBT				*e*S	**Sb**	**06 42 42.8**	**-1.9**
ESL	**Shilin** baz=5.0	**0.82**	**1**	*e*P	**Pn**	**06 42 35.7**	**+0.4**
ESL				*e*S	**Sn**	**06 42 46.7**	**-0.3**
CHN4	**Tsaushan** baz=301	**0.84**	**296**	⇓*i*P	**Pg**	**06 42 34.9**	**-0.1**
CHN4				*e*S	**Sn**	**06 42 47.0**	**-0.3**
CHN1	**Nanshi** baz=287	**0.84**	**284**	⇓*i*P	**Pn**	**06 42 35.1**	**-0.3**
CHN1				*e*S	**Sn**	**06 42 47.2**	**-0.2**
SCST	**Cishan** baz=259	**0.85**	**264**	*e*P	**Pb**	**06 42 34.7**	**-0.1**
SCST				*e*S	**Sn**	**06 42 47.7**	**0.0**
WHYT	**Xinyi Township** baz=334	**0.88**	**324**	*e*P	**Pg**	**06 42 35.5**	**-0.1**
SNST	**Tainan City** baz=291	**0.88**	**286**	*e*P	**Pg**	**06 42 35.4**	**-0.2**
SNST				*e*S	**Sn**	**06 42 48.4**	**+0.2**
TWK	**Hsinying** baz=288	**0.90**	**288**	*e*P	**Pn**	**06 42 36.0**	**-0.3**
TWK				*e*S	**Sn**	**06 42 48.5**	**-0.3**
SSLB	**Suanglung** baz=335	**0.90**	**332**	*e*P	**Pb**	**06 42 35.4**	**-0.3**
SSLB				*e*S	**Sb**	**06 42 46.8**	**-0.6**
CHN5	**Tsauling** baz=314	**0.91**	**312**	*e*P	**Pn**	**06 42 36.6**	**+0.1**
CHN5				*e*S	**Sg**	**06 42 47.9**	**-0.5**
SSPT	**Xinbi** baz=233	**0.93**	**238**	*e*P	**Pb**	**06 42 36.1**	**+0.1**
SSPT				*e*S	**Sn**	**06 42 49.2**	**-0.2**
TWM1	**Shoushan** baz=257	**0.93**	**260**	*e*P	**Pg**	**06 42 36.5**	**-0.1**
LAY	**Lan-yu** baz=159	**0.95**	**172**	*e*P	**Pb**	**06 42 35.2**	**-1.2**
LAY				*e*S	**Sb**	**06 42 47.6**	**-1.1**
SLIU	**Shizi** baz=199	**0.95**	**217**	*e*P	**Pb**	**06 42 35.4**	**-1.1**
SLIU				*e*S	**Sg**	**06 42 49.9**	**+0.3**
SCZT	**Fangliau** baz=220	**0.95**	**230**	*e*P	**Pb**	**06 42 36.4**	**-0.1**
SCZT				*e*S	**Sg**	**06 42 49.7**	**0.0**
CHN3	**Shinhua** baz=274	**0.97**	**276**	*e*P	**Pn**	**06 42 39.2**	**+2.0**
SMLT	**Sun Moon Lake** baz=336	**1.01**	**332**	P	**Pn**	**06 42 37.9**	**0.0**
SMLT				*e*S	**Sn**	**06 42 52.0**	**+0.3**
CHN2	**Minshiung** baz=303	**1.02**	**302**	*e*P	**Pg**	**06 42 38.9**	**+0.5**
SNJT	**Kaohsiung City** baz=255	**1.02**	**257**	*e*P	**Pg**	**06 42 40.2**	**+1.8**
CHY	**Chiayi** baz=300	**1.04**	**299**	*e*P	**Pg**	**06 42 39.2**	**+0.4**
CHY				*e*S	**Sn**	**06 42 53.7**	**+1.4**
WJS	**Zhushan** baz=325	**1.04**	**323**	*e*P	**Pg**	**06 42 39.3**	**+0.5**
WJS				*e*S	**Sn**	**06 42 54.5**	**+2.2**
TYC	**Yuchr** baz=334	**1.05**	**331**	*e*P	**Pg**	**06 42 38.6**	**-0.2**
TYC				*e*S	**Sg**	**06 42 52.9**	**+0.2**
WGK	**Gukeng** baz=313	**1.05**	**312**	*e*P	**Pg**	**06 42 38.9**	**0.0**
WDLH	**Douliu** baz=312	**1.07**	**311**	*e*P	**Pg**	**06 42 39.6**	**+0.3**
WDLH				*e*S	**Sg**	**06 42 54.6**	**+1.3**
CHGB	**Renai** baz=351	**1.09**	**348**	*e*P	**Pb**	**06 42 38.5**	**-0.5**
TWD	**Chiawan** baz=356	**1.10**	**9**	*e*P	**Pb**	**06 42 38.9**	**-0.1**
ICHU	**Yijhu** baz=290	**1.11**	**290**	*e*P	**Pg**	**06 42 39.5**	**-0.6**
ICHU				*e*S	**Sg**	**06 42 55.9**	**+1.3**
WNT	**Mingjian** baz=325	**1.11**	**323**	*e*P	**Pg**	**06 42 40.6**	**+0.5**
WNT				*e*S	**Sg**	**06 42 55.8**	**+1.0**
DPDB	**Guoxing** baz=349	**1.14**	**337**	P	**Pg**	**06 42 40.4**	**-0.1**
DPDB				*e*S	**Sg**	**06 42 55.7**	**+0.3**
WLCH	**Liuqiu** baz=228	**1.15**	**237**	*e*P	**Pg**	**06 42 42.4**	**+1.7**
WLCH				*e*S	**Sg**	**06 42 57.1**	**+1.3**
WHF	**Hehuan Shan** baz=7.0	**1.16**	**353**	*e*P	**Pn**	**06 42 39.9**	**-0.4**
CHN8	**Yiju** baz=288	**1.17**	**288**	*e*P	**Pg**	**06 42 40.7**	**-0.4**
CHN8				*e*S	**Sg**	**06 42 57.6**	**+1.3**
WTK	**Tuku** baz=307	**1.18**	**307**	*e*P	**Pg**	**06 42 41.1**	**-0.1**
WTK				*e*S	**Sg**	**06 42 56.1**	**-0.6**
TWKBT	**Hengchun** baz=193	**1.18**	**208**	*e*P	**Pn**	**06 42 39.4**	**-0.7**
NACB	**Ninganchiao** baz=8.0	**1.20**	**8**	*e*P	**Pn**	**06 42 38.8**	**-1.5**
ETLH	**Xiulin Townshi** baz=4.0	**1.22**	**3**	*e*P	**Pn**	**06 42 39.4**	**-1.3**
FUSS	**Fushou** baz=355	**1.27**	**353**	*e*P	**Pn**	**06 42 41.4**	**-0.2**
FUSS				*e*S	**Sb**	**06 42 57.8**	**-0.2**
TDCB	**Techi** baz=351	**1.28**	**349**	*e*P	**Pn**	**06 42 41.8**	**+0.1**
TDCB				*e*S	**Sb**	**06 42 57.5**	**-1.0**
WCHH	**Zhanghua** baz=325	**1.34**	**324**	*e*P	**Pb**	**06 42 43.6**	**+0.4**
WCHH				*e*S	**Sg**	**06 43 02.8**	**+0.8**
WHP	**Taichung City** baz=355	**1.36**	**342**	*e*P	**Pg**	**06 42 45.3**	**+0.5**
WHP				*e*S	**Sg**	**06 43 02.7**	**+0.2**
NNSB	**Datong** baz=13	**1.44**	**359**	*e*P	**Pn**	**06 42 43.2**	**-0.5**
NNSH	**Datong** baz=12	**1.44**	**359**	*e*P	**Pn**	**06 42 42.8**	**-0.9**
NNS	**Nan Shan** baz=13	**1.45**	**358**	*e*P	**Pn**	**06 42 44.4**	**+0.5**
TWQ1	**Liyutan** baz=336	**1.48**	**337**	*e*P	**Pg**	**06 42 46.3**	**-0.8**
NSY	**Sanyi** baz=339	**1.55**	**337**	*e*P	**Pg**	**06 42 47.5**	**-0.8**
NDT	**Datong Townshi** baz=16	**1.61**	**3**	*e*P	**Pb**	**06 42 47.6**	**-0.1**
WDGT	**Dungji** baz=279	**1.64**	**280**	*e*P	**Pn**	**06 42 46.2**	**-0.2**
NMLH	**Miaoli** baz=337	**1.65**	**340**	*e*P	**Pg**	**06 42 49.4**	**-0.9**
YHNB	**Yeheng** baz=11	**1.68**	**359**	*e*P	**Pn**	**06 42 47.6**	**+0.6**
NSTT	**Nanjuang** baz=358	**1.68**	**347**	*e*P	**Pb**	**06 42 49.2**	**+0.3**
NSTT				*e*S	**Sb**	**06 43 10.6**	**+0.8**
NSK	**Sanguang** baz=11	**1.68**	**358**	*e*P	**Pn**	**06 42 48.0**	**+0.9**
LIOB	**Emei** baz=344	**1.69**	**348**	*e*P	**Pb**	**06 42 49.1**	**0.0**
PHUB	**P'eng-hu** baz=287	**1.77**	**288**	*e*P	**Pb**	**06 42 48.5**	**+0.3**
NWLT	**Wulai** baz=15	**1.79**	**3**	*e*P	**Pb**	**06 42 50.0**	**-0.7**
PNG	**Penghu** baz=288	**1.81**	**289**	*e*P	**Pn**	**06 42 48.9**	**+0.2**
VCHM	**Qimei** baz=276	**1.84**	**277**	*e*P	**Pn**	**06 42 49.3**	**+0.1**
TIPB	**Shuangxi** baz=6.0	**2.01**	**11**	*e*P	**Pn**	**06 42 53.0**	**+1.4**
YOJ	**Yonaguni jima** baz=45	**2.07**	**45**	*e*P	**Pn**	**06 42 52.8**	**+0.5**
WFSB	**Wu-fen Shan** baz=4.0	**2.10**	**9**	*e*P	**Pn**	**06 42 52.6**	**-0.2**
HATJ	**Hateruma jima**	**2.44**	**64**	*e*S	**Sn**	**06 43 25.3**	**-1.4**
IRIF	**Iriomote-Funau**	**2.51**	**57**	*e*S	**Sn**	**06 43 28.6**	**+0.1**
JKRS	**Kuro-shima**	**2.69**	**62**	*e*S	**Sn**	**06 43 32.5**	**-0.3**
VWUC	**VWUC** baz=317	**2.69**	**318**	*e*P	**Pn**	**06 43 00.5**	**-0.3**
JIJ	**Ishigaki jima**	**2.85**	**61**	*e*S	**Sn**	**06 43 36.0**	**-1.0**
PTMZ	**Houxiangcun** baz=314	**2.93**	**315**	*e*P	**Pn**	**06 43 04.8**	**+0.6**
KNM	**Kinmen** baz=296	**3.08**	**298**	*e*P	**Pn**	**06 43 07.7**	**+1.4**
JISG	**Ishigakijimahi**	**3.10**	**58**	P	**Pn**	**06 43 06.5**	**+0.1**
JISG				*e*S	**Sn**	**06 43 43.0**	**+0.1**
KNMB	**Chin-men Tao** baz=298	**3.14**	**299**	*e*P	**Pn**	**06 43 06.4**	**-0.7**
MATB	**Ma-tsu** baz=333	**3.42**	**337**	*e*P	**Pn**	**06 43 11.5**	**+0.5**
JTJ	**Tarama**	**3.43**	**61**	*e*S	**Sn**	**06 43 50.4**	**-0.9**
ZPLA	**Ao Xicun** baz=285	**3.50**	**286**	*e*P	**Pn**	**06 43 12.8**	**+0.8**
AXDP	**Jialang** baz=301	**3.68**	**302**	*e*P	**Pn**	**06 43 14.9**	**+0.4**
MHZQ	**Yeshan** baz=325	**3.79**	**325**	*e*P	**Pn**	**06 43 16.6**	**+0.7**
LYJJ	**Jianjiangzhen** baz=334	**3.85**	**337**	*e*P	**Pn**	**06 43 17.8**	**+0.9**
XPSS	**Dashiqiu** baz=338	**4.08**	**344**	*e*P	**Pn**	**06 43 21.9**	**+2.0**

*REN **06** 06:53:02.6±1.0,41.87N±0.04×119.61W±0.04,h4km±2km, ML2.7/2, Error ellipse: s-maj=6.5km s-min=4.1km az=180.0*

*ANF **06** 06:53:03.3±2.2,41.76N×119.74W,h5km±15km,ML2.5/5, Error ellipse: s-maj=12.2km s-min=9.8km az=179.0*

*NEIC **06** 06:53:03.5±1.1,41.88N±0.05×119.68W±0.03,h1km±7km, Error ellipse: s-maj=8.2km s-min=1.9km az=158.0*

ISC 06 06:53:01.0±1.7,41.90N±0.04×119.58W±0.06,h0km±16km, n14,σ0s74/21,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.54**	**270**		**Pb**	**06 53 12.6**	**-0.7**
MOD					**Sg**	**06 53 19.7**	**+1.4**
K05A	**Summer Lake**	**1.27**	**311**		**Pn**	**06 53 26.3**	**+0.1**
J08A	**Circle Bar Ran**	**1.67**	**29**		**Pg**	**06 53 33.3**	**+0.3**
M04C	**Macdoel** baz=86,SNR=10	**1.69**	**267**	P	**Pb**	**06 53 31.9**	**-1.1**
M04C				Sb	**Sg**	**06 53 55.7**	**+0.4**
K04D	**Chiloquin, OR** baz=115	**1.77**	**295**	P	**Pg**	**06 53 34.5**	**-0.4**
K04D				S	**Sg**	**06 53 57.6**	**-0.1**
J05D	**Fort Rock, OR** baz=139,SNR=64	**1.84**	**319**	P	**Pg**	**06 53 36.2**	**-0.1**
J05D				S	**Sg**	**06 54 01.2**	**+1.0**
L04D	**Klamath Falls** baz=99,SNR=20	**2.05**	**280**	P	**Pn**	**06 53 36.7**	**-0.1**
L04D				Sb	**Sg**	**06 54 06.8**	**-0.1**
BEKR	**Beckworth**	**2.12**	**196**		**Pg**	**06 53 41.6**	**+0.1**
PINE	**Pine Mountain**	**2.14**	**333**		**Pb**	**06 53 40.3**	**-0.4**
I07A	**Izee**	**2.18**	**2**		**Pb**	**06 53 40.2**	**-1.1**
O03E	**Paynes Creek** baz=46,SNR=8.2	**2.32**	**227**	P	**Pn**	**06 53 40.3**	**-0.2**
O03E				Sg	**Sb**	**06 54 14.1**	**+1.2**
YBH	**Yreka Blue Hor**	**2.34**	**267**		**Pn**	**06 53 41.5**	**+0.7**
N02D	**Trinity Center** baz=68	**2.52**	**249**	Pb	**Pb**	**06 53 46.4**	**-0.7**
N02D				Sg	**Sg**	**06 54 21.5**	**-0.5**
HUMO	**Hull Mountain**	**2.60**	**287**		**Pn**	**06 53 44.6**	**+0.3**

*IDC **06** 06:54:18.9±1.1,30.94N×103.09E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/50,mbtmp3.6/6,MS2.5/1,Ms1 2.7/1, ms1mx2.2/42,Error ellipse: s-maj=49.2km s-min=21.2km az=54.0*

*BJI **06** 06:54:21.0±0.0,31.26N×103.23E,h20km,mb4.0/1, ML3.8/18*

ISC 06 06:54:21.8±0.8,31.27N±0.04×103.21E±0.07,h10km,n15, σ2s13/21,mb3.6/6,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.59**	**127**	Pn	**Pg**	**06 54 31.6**	**-1.6**
CD2				Sg	**Sg**	**06 54 40.1**	**-0.9**
CD2	comp=N,17μm,0.7s			smax	smax		
CD2	comp=E,10μm,1.0s			smax	smax		
CD2	**Chengdu**	**0.59**	**127**	Pg	**Pg**	**06 54 31.7**	**-1.5**
CD2				Sg	**Sg**	**06 54 39.8**	**-1.2**

CD2				smax	smax		
	comp=E,10μm,0.7s						
CD2				smax	smax		
	comp=E,4μm,0.4s						
LZH	**Lanzhou**	**4.83**	**6**	*e*Pg	**Pg**	**06 55 52.7**	**-1.6**
LZH				Sg	**Sg**	**06 56 54.4**	**-2.5**
LZH				smax	smax		
	comp=N,57nm,1.0s						
LZH				smax	smax		
	comp=E,59nm,1.1s						
LZH				LR	LR		
	comp=N,340nm,5.4s						
LZH				LR	LR		
	comp=E,600nm,5.4s						
LZH				LR	LR		
	comp=Z,430nm,8.4s						
XAN	**Xi'an**	**5.55**	**59**	Pn	**Pn**	**06 55 46.6**	**+2.1**
XAN				Pg	**Pb**	**06 56 02.2**	**+3.4**
XAN				Sg	**Sg**	**06 57 19.6**	**-0.3**
XAN				smax	smax		
	comp=Z,140nm,0.8s						
XAN				smax	smax		
	comp=Z,91nm,0.7s						
GYA	**Guiyang**	**5.67**	**147**	*e*Pn	**Pn**	**06 55 49.0**	**+2.8**
GYA				Sn	**Sn**	**06 56 54.1**	**+2.6**
GYA				Sg	**Sg**	**06 57 22.4**	**-1.5**
GYA				smax	smax		
	comp=Z,110nm,0.8s						
GYA				smax	smax		
	comp=Z,64nm,1.0s						
GTA	**Gaotai**	**8.58**	**342**	*e*P	**Pn**	**06 56 27.4**	**+1.2**
GTA				pP	Pg	06 56 32.3	-34
GTA				sP		06 56 34.5	
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WHN	**Wuhan**	**9.60**	**91**	P	**Pn**	**06 56 36.6**	**-3.4**
CMAR	**Chiang Mai Arr**	**13.33**	**198**	LR	LR	07 02 21.1	
	comp=Z,20nm,18.2s,baz=210,slow=37						
WMQ	**Urumqi**	**17.52**	**320**	*e*P	**Pn**	**06 58 25.3**	**-0.9**
KSRS	**Korea Array**	**21.28**	**66**	P	**P**	**06 59 09.2**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=264,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**22.36**	**320**	P	**P**	**06 59 21.4**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=134,slow=12,SNR=3.8						
ZALV	**Zalesovo Beam**	**26.24**	**335**	P	**P**	**06 59 57.1**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=147,slow=8.6,SNR=2.6						
FINES	**FINESS Array B**	**57.00**	**326**	P	**P**	**07 04 07.3**	**0.0**
	comp=Z,0.5nm,0.5s,baz=111,slow=7.6,SNR=3.9						
WRA	**Warramunga Arr**	**59.04**	**145**	P	**P**	**07 04 20.4**	**-1.7**
	comp=Z,0.7nm,1.0s,baz=340,slow=7.5,SNR=3.4						
ASAR	**Alice Springs**	**62.03**	**148**	P	**P**	**07 04 39.0**	**-3.5**
	comp=Z,0.2nm,0.7s,baz=345,slow=7.1,SNR=2.8						

*REN **06** 07:12:01.9±2.7, 41.89N±0.03×119.65W±0.04, h0km±6km, mb4.7/4, Mwr3.6/55(NEIC), Error ellipse: s-maj=4.4km s-min=3.1km az=138.0*

*NEIC **06** 07:12:01.9, 41.89N×119.65W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.01; $M_{\theta\theta}$=0.52; $M_{\phi\phi}$ 1.52; $M_{r\theta}$=0.86; $M_{r\phi}$=0.96; $M_{\theta\phi}$=-3.02; Fault plane solution: M_o3.55000×10^{14} NP1:ϕ_s15.13000°, δ77.76000°, λ-94.88000°. NP2:ϕ_s217.06000°, δ13.16000°, λ-68.60000°. Principal axes: T 3.9007, Plg33.0000°, Azm109.0000°; N -0.8677, Plg5.0000°, Azm16.0000°; P -3.0330, Plg57.0000°, Azm279.0000°;*

*NEIC **06** 07:12:02.7±3.2, 41.87N±0.01×119.66W±0.04, h4km±6km Error ellipse: s-maj=4.7km s-min=1.1km az=108.0*

*ANF **06** 07:12:02.5±1.0, 41.77N×119.85W, h2km±6km, ML3.6/15, Error ellipse: s-maj=7.2km s-min=4.3km az=95.0*

ISC 06 07:12:01.9±1.4, 41.89N±0.03×119.66W±0.03, h2km±12km, n88, σ1s40/104, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.48**	**272**		**Pg**	**07 12 11.3**	**+0.1**
MOD					**Sg**	**07 12 18.5**	**+1.0**
K05A	**Summer Lake**	**1.24**	**313**	Pg	**Pg**	**07 12 25.3**	**-0.5**
K05A				Sg	**Sg**	**07 12 42.6**	**+0.7**
M04C	**Macdoel**	**1.64**	**267**	P	**Pn**	**07 12 30.5**	**-1.4**
	baz=86,SNR=184						
M04C				Sb	**Sn**	**07 12 53.1**	**-0.4**
	baz=86						
J08A	**Circle Bar Ran**	**1.71**	**30**	Pn	**Pn**	**07 12 32.2**	**-0.6**
J08A				Sn	**Sb**	**07 12 57.4**	**+1.3**
K04D	**Chiloquin, OR**	**1.72**	**296**	P	**Pn**	**07 12 32.2**	**-0.9**
	baz=114,SNR=26						
K04D				Sb	**Sn**	**07 12 56.3**	**+0.6**
	baz=114						
J05D	**Fort Rock, OR**	**1.82**	**321**	P	**Pn**	**07 12 35.6**	**+1.1**
	baz=140,SNR=278						
J05D				Sb	**Sg**	**07 13 01.3**	**+0.9**
	baz=140						
L04D	**Klamath Falls**	**2.00**	**280**	P	**Pn**	**07 12 35.6**	**-1.3**
	baz=98,SNR=83						
L04D				Sb	**Sb**	**07 13 04.7**	**+0.1**
	baz=98						
BEKR	**Beckworth**	**2.09**	**195**	Pn	**Pn**	**07 12 36.5**	**-1.6**
BEKR					**Sb**	**07 13 07.2**	**+0.1**
PINE	**Pine Mountain**	**2.13**	**334**	Pn	**Pn**	**07 12 38.4**	**-0.3**
PINE					LR	07 13 10.2	
PAHR	**Pah Rah Range**	**2.19**	**175**	Pn	**Pn**	**07 12 39.7**	**+0.2**
PAHR				Sn	**Sb**	**07 13 09.7**	**-0.2**
I07A	**Izee**	**2.20**	**3**	Pn	**Pn**	**07 12 40.0**	**+0.4**
I07A					**Sb**	**07 13 10.2**	**+0.1**
J04D	**Umpqua Nationa**	**2.26**	**308**	Sg	**Sg**	**07 13 15.2**	**+0.6**
	baz=126						
O03E	**Paynes Creek**	**2.27**	**226**	P	**Pn**	**07 12 39.1**	**-1.5**
	baz=45,SNR=234						
O03E				Sg	**Sb**	**07 13 11.7**	**-0.6**
	baz=45						
YBH	**Yreka Blue Hor**	**2.29**	**267**	Pn	**Pn**	**07 12 39.4**	**-1.5**
YBH					**Sb**	**07 13 13.5**	**+0.7**
M02C	**Callahan**	**2.45**	**259**	P	**Pn**	**07 12 41.0**	**-2.0**
	baz=77,SNR=30						
M02C				Sg	**Sb**	**07 13 17.5**	**+0.1**
	baz=77						
N02D	**Trinity Center**	**2.47**	**249**	P	**Pn**	**07 12 41.2**	**-2.0**
	baz=67,SNR=32						
N02D				Sg	**Sb**	**07 13 19.0**	**+1.1**
	baz=67						
WDC	**Whiskeytown Da**	**2.54**	**240**		**Pn**	**07 12 42.7**	**-1.4**
HUMO	**Hull Mountain**	**2.56**	**287**	Pn	**Pn**	**07 12 43.4**	**-1.0**
VCNR	**Virginia City**	**2.59**	**180**	Pn	**Pn**	**07 12 45.9**	**+0.9**
ORV	**Oroville**	**2.72**	**212**	Pn	**Pn**	**07 12 46.1**	**-0.5**
I04A	**Tendick Farm,**	**2.78**	**314**	Pb	**Pb**	**07 12 52.4**	**0.0**
	baz=132,SNR=38						
I04A				Sb	**Sb**	**07 13 29.8**	**+2.8**
	baz=132						
PNTR	**Pine Nut**	**2.79**	**179**	Pn	**Pn**	**07 12 49.9**	**+2.0**
RUBR	**Rubicon Trail**	**2.86**	**188**	Pn	**Pn**	**07 12 50.9**	**+2.1**
L02E	**Cave Junction**	**2.95**	**277**	P	**Pn**	**07 12 49.7**	**-0.2**
	baz=94						
KVN	**Kaiserville**	**3.07**	**157**	Pn	**Pn**	**07 12 52.1**	**+0.5**
K02D	**Willamette Mer**	**3.08**	**287**	P	**Pn**	**07 12 51.3**	**-0.4**
	baz=104,SNR=99						
AFDM	**Forest Hills D**	**3.10**	**199**	Pn	**Pn**	**07 12 51.7**	**-0.3**
KRMB	**Red Mountain**	**3.21**	**265**	Pn	**Pn**	**07 12 53.4**	**0.0**
MFID	**Camas Ranch**	**3.21**	**60**	Pn	**Pn**	**07 12 53.1**	**-0.4**
KHMM	**Horse Mountain**	**3.23**	**253**	Pn	**Pn**	**07 12 55.6**	**+1.8**
I03D	**Drain, OR**	**3.27**	**305**	Pg	**Pg**	**07 13 04.4**	**-0.1**
	baz=122						
H04A	**Detroit Lake**	**3.35**	**327**	Pn	**Pn**	**07 12 56.5**	**+1.1**
RYN	**Ryan**	**3.37**	**165**		**Pn**	**07 12 55.2**	**-0.5**
WAKR	**Walker**	**3.38**	**177**	Pn	**Pn**	**07 12 57.8**	**+1.9**
KBO	**Bosley Butte**	**3.42**	**277**	Pn	**Pn**	**07 12 56.4**	**0.0**
BMO	**Blue Mountains**	**3.42**	**29**	Pn	**Pn**	**07 12 58.9**	**+2.5**
BMO					**Pb**	**07 12 59.6**	**-3.7**
JCC	**Jacoby Creek,**	**3.46**	**253**	Pn	**Pn**	**07 12 56.5**	**-0.4**
H04D	**Lebanon**	**3.47**	**320**	Pg	**Pg**	**07 13 08.9**	**+0.5**
	baz=138						
KMRM	**Mail Ridge**	**3.49**	**243**	Pn	**Pn**	**07 12 57.3**	**0.0**
ELK	**Elko**	**3.52**	**107**	Pn	**Pn**	**07 12 58.2**	**+0.4**
NVAR	**Mina Array Bea**	**3.60**	**163**	Pn	**Pn**	**07 12 59.1**	**0.0**
NV11	**Mina Array Sit**	**3.64**	**161**		**Pn**	**07 13 00.3**	**+0.9**
LHV	**Little Huntoon**	**3.74**	**166**		**Pn**	**07 13 02.7**	**+2.1**
CMB	**Columbia Colle**	**3.89**	**189**	Pn	**Pn**	**07 13 04.1**	**+1.3**
F07A	**Phinny Hill Vi**	**4.01**	**357**	Pn	**Pn**	**07 13 04.2**	**-0.2**
PLID	**Pearl Lake**	**4.16**	**38**	Pn	**Pn**	**07 13 05.6**	**-1.0**
HLID	**Hailey**	**4.21**	**65**	P	**Pn**	**07 13 07.7**	**+0.5**
	baz=248						
HLID	**Hailey**	**4.21**	**65**	Pn	**Pn**	**07 13 07.0**	**-0.3**
TPH	**Tonopah**	**4.24**	**153**		**Pn**	**07 13 08.8**	**+1.0**
MDPB	**Devils Postpil**	**4.27**	**174**	Pn	**Pn**	**07 13 09.6**	**+1.4**
OMMB	**Old Mammoth Mi**	**4.30**	**173**	Pn	**Pn**	**07 13 07.9**	**-0.7**
F10A	**Beach Ranch, E**	**4.45**	**22**	Pn	**Pn**	**07 13 13.2**	**+2.8**
HAWA	**Hanford**	**4.50**	**1**	Pn	**Pn**	**07 13 10.8**	**-0.4**
F04A	**Amboy**	**4.51**	**335**	Pn	**Pn**	**07 13 12.3**	**+1.0**
E08A	**Dider Farm, El**	**4.62**	**5**	Pn	**Pn**	**07 13 12.0**	**-0.8**
R11A	**Troy Canyon, C**	**4.71**	**137**	P	**Pn**	**07 13 15.4**	**+1.1**
	baz=320						
R11A	**Troy Canyon, C**	**4.71**	**137**	Pn	**Pn**	**07 13 15.1**	**+0.9**
SPR3	**Spring Creek 3**	**4.98**	**124**	Pn	**Pn**	**07 13 20.5**	**+2.5**
BGU	**Big Grassy Mou**	**5.07**	**99**	Pn	**Pn**	**07 13 20.1**	**+1.0**
SPUT	**South Promonto**	**5.43**	**94**		**Pn**	**07 13 25.4**	**+1.3**
DUG	**Dugway, Tooele**	**5.44**	**106**	Pn	**Pn**	**07 13 23.8**	**-0.4**
PSUT	**Pine Spring**	**5.56**	**125**	Pn	**Pn**	**07 13 27.3**	**+1.4**
TPNV	**Topopah Spring**	**5.59**	**151**		**Pn**	**07 13 27.3**	**+1.0**
PRN	**Pahroc Range**	**5.71**	**140**		**Pn**	**07 13 29.4**	**+1.5**
MCMT	**McKenzie Canyo**	**5.77**	**57**		**Pn**	**07 13 29.6**	**+0.9**
HWUT	**Hardware Ranch**	**6.06**	**90**	Pn	**Pn**	**07 13 36.1**	**+3.4**
TCUT	**Toone Canyon**	**6.24**	**94**	Pn	**Pn**	**07 13 35.5**	**+0.2**
ISA	**Isabella, Lake**	**6.28**	**171**	Pn	**Pn**	**07 13 33.0**	**-2.7**
JLU	**Jordanelle**	**6.32**	**99**		**Pn**	**07 13 37.9**	**+1.6**
MPU	**Maple Canyon**	**6.35**	**104**	Pn	**Pn**	**07 13 36.5**	**-0.3**
AHID	**Auburn Hatcher**	**6.40**	**79**	Pn	**Pn**	**07 13 37.7**	**+0.2**
TCRU	**Three Creeks R**	**6.41**	**118**	Pn	**Pn**	**07 13 39.8**	**+2.1**
MSO	**Missoula**	**6.42**	**38**	Pn	**Pn**	**07 13 41.1**	**+3.6**
CCUT	**Cedar City**	**6.50**	**130**	Pn	**Pn**	**07 13 40.5**	**+1.6**
MVU	**Marysvale**	**6.62**	**118**		**Pn**	**07 13 42.3**	**+1.8**
SZCU	**Shurtz Canyon**	**6.63**	**128**		**Pn**	**07 13 42.0**	**+1.4**
MSU	**Marysvale**	**6.64**	**118**	Pn	**Pn**	**07 13 41.1**	**+0.4**
IMW	**Indian Meadow**	**6.71**	**70**	Pn	**Pn**	**07 13 40.4**	**-1.3**
BOZ	**Bozeman (W)**	**6.89**	**55**	Pn	**Pn**	**07 13 41.3**	**-2.8**
MTPU	**Mount Pierson**	**6.90**	**121**	Pn	**Pn**	**07 13 43.5**	**-1.0**
TMUT	**Trail Mountain**	**6.93**	**109**		**Pn**	**07 13 42.8**	**-2.0**
LCMT	**Little Creek M**	**6.95**	**132**	Pn	**Pn**	**07 13 46.6**	**+1.7**
H17A	**Grant Village**	**7.10**	**66**	Pn	**Pn**	**07 13 47.1**	**+0.1**
KNB	**Kanab**	**7.18**	**130**	Pn	**Pn**	**07 13 49.7**	**+1.5**
PKCU	**Pink Cliffs**	**7.19**	**126**	Pn	**Pn**	**07 13 47.8**	**-0.6**
PD31	**Pinedale Array**	**7.53**	**80**	Pn	**Pn**	**07 13 51.6**	**-1.4**
PDAR	**Pinedale Array**	**7.53**	**80**	Pn	**Pn**	**07 13 51.0**	**-2.0**
U15A	**North Rim**	**7.90**	**131**		**Pn**	**07 14 00.3**	**+2.3**

*IDC **06** 07:18:35.1±2.6, 12.70N×91.40W, h0km, mb3.4/5, mb1 3.8/7, mb1mx3.6/45, mbtmp3.5/7, ML3.1/2, Error ellipse: s-maj=71.8km s-min=21.3km az=33.0*

*GCG **06** 07:18:51.9±0.6, 14.69N×91.21W, h29km±8km, MD4.4*

ISC 06 07:18:37.9±1.5, 13.0N±0.1×91.2W±0.1, h10km, n13, σ1s92/13, mb3.6/3, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**1.43**	**346**	*e*P	**Pn**	**07 19 00.9**	**-3.0**
FUG	**Fuego 3**	**1.44**	**14**	*e*P	**Pn**	**07 19 01.3**	**-2.9**
PCG	**Pacaya**	**1.46**	**23**	*e*P	**Pg**	**07 19 05.8**	**-0.2**
STG3	**Santiaguito 3,**	**1.69**	**348**	*e*P	Pn	07 19 00.5	-7.2
NBG	**Las Nubes**	**1.75**	**28**	*e*P	**Pn**	**07 19 07.2**	**-1.3**
MRL	**Marmol**	**2.51**	**36**	*e*P	**Pn**	**07 19 17.9**	**-1.0**
CMIG	**Matias Romero**	**5.37**	**319**	Pn	**Pn**	**07 19 56.7**	**-1.4**
	0.4nm,0.3s,baz=144,slow=13,SNR=6.9						
CMIG				Sn	**Sn**	**07 21 01.1**	**+1.1**
	1.5nm,0.3s,baz=84,slow=8.5,SNR=3.8						
JTS	**Las Juntas de**	**5.71**	**113**	Pn	**Pn**	**07 20 15.1**	**-1.4**
	0.5nm,0.5s,baz=14,slow=19,SNR=2.2						
TXAR	**Lajitas Array**	**19.91**	**326**	P	**P**	**07 23 09.6**	**-0.3**
	0.4nm,0.8s,baz=148,slow=10,SNR=2.7						
SDV	**Santo Domingo**	**20.61**	**99**	P	**P**	**07 23 16.9**	**-0.9**
	2.1nm,0.6s,baz=345,slow=7.7,SNR=3.5						
TKL	**Tuckaleechee C**	**23.49**	**15**	P	**P**	**07 23 51.0**	**+3.1**
	2.3nm,0.8s,baz=186,slow=9.2,SNR=3.7						
NVAR	**Mina Array Bea**	**34.90**	**321**	P	**P**	**07 25 30.6**	**+0.6**
	0.7nm,0.8s,baz=126,slow=9.1,SNR=4.1						
ILAR	**Eielson Array**	**64.02**	**337**	P	**P**	**07 29 12.4**	**+1.0**
	0.2nm,0.8s,baz=108,slow=8.8,SNR=3.6						

*IDC **06** 07:27:37.0±1.0, 51.15N×176.90W, h0km, mb3.6/9, mb1 3.9/9, mb1mx3.6/57, mbtmp3.7/9, Error ellipse: s-maj=30.6km s-min=22.2km az=141.0*

*AEIC **06** 07:27:44±1.0, 51.58N±0.08×177.09W±0.04, h52km±5km, ML3.7, mb3.9/4(NEIC), Error ellipse: s-maj=12.2km s-min=2.9km az=168.0*

*NEIC **06** 07:27:44.2±0.9, 51.47N±0.09×177.07W±0.04, h47km±7km, Error ellipse: s-maj=13.2km s-min=3.8km az=174.0*

ISC 06 07:27:43.6±1.5, 51.4N±0.1×177.07W±0.04, h46km±13km, n45, σ0s84/44, mb3.7/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**0.36**	**343**		**Pn**	**07 27 53.2**	**+0.2**
KIMD					**Sn**	**07 28 00.4**	**+0.9**
KIKV	**Kanaga Island**	**0.46**	**352**		**Pn**	**07 27 54.3**	**+0.1**
KIRH	**Kanaga Island**	**0.48**	**358**		**Pn**	**07 27 54.5**	**+0.1**
KICM	**Kanaga Island**	**0.51**	**351**		**Pn**	**07 27 54.8**	**+0.2**
KICM					**Sn**	**07 28 02.7**	**+0.1**
KINC	**Kanaga Island**	**0.51**	**356**		**Pn**	**07 27 54.7**	**-0.1**
ADK	**Adak**	**0.52**	**27**		**Pn**	**07 27 54.2**	**-0.6**
ETKA	**Kagalaska Isla**	**0.60**	**43**		**Pn**	**07 27 55.9**	**-0.1**
ADAG	**Mount Adagdak**	**0.63**	**27**		**Pn**	**07 27 56.4**	**+0.1**
TASE	**Tanaga Southea**	**0.73**	**305**		**Pn**	**07 27 58.0**	**+0.3**
TAFP	**Tanaga Falls P**	**0.75**	**310**		**Pn**	**07 27 57.7**	**-0.1**
TAFP					**Sn**	**07 28 07.8**	**-0.4**
GSTD	**Great Sitkin T**	**0.85**	**42**		**Pn**	**07 27 59.3**	**-0.1**
GSTD					**Sn**	**07 28 10.7**	**-0.1**
GSMY	**Great Sitkin M**	**0.88**	**45**		**Pn**	**07 27 59.7**	**0.0**
GSTR	**Great Sitkin T**	**0.92**	**42**		**Pn**	**07 28 00.4**	**+0.2**
GALAA	**Gareloi Lava P**	**1.12**	**288**		**Pn**	**07 28 03.5**	**+0.6**
ATKA	**Atka Island**	**1.94**	**65**		**Pn**	**07 28 14.8**	**+0.7**
ATKA					**Sn**	**07 28 38.0**	**+0.6**
KOWE	**Korovin West**	**1.98**	**60**		**Pn**	**07 28 15.6**	**+0.9**
KOFP	**Korovin Flat P**	**2.03**	**64**		**Pn**	**07 28 16.7**	**+1.3**
KOSE	**Korovin Southe**	**2.08**	**62**		**Pn**	**07 28 17.3**	**+1.2**
CESW	**Semis' Southwe**	**2.15**	**284**		**Pn**	**07 28 17.7**	**+0.7**
AMKA	**Amchitka**	**2.28**	**270**		**Pn**	**07 28 19.4**	**+0.7**
LSPA	**Little Sitkin**	**2.77**	**283**		**Pn**	**07 28 26.2**	**+0.8**
LSNW	**Little Sitkin**	**2.80**	**283**		**Pn**	**07 28 26.3**	**+0.4**
SEY	**Seymchan**	**19.95**	**317**	P	**Pn**	**07 32 12.6**	**-0.8**
	1.2nm,0.3s,baz=179,slow=23,SNR=7.7						
ILAR	**Eielson Array**	**20.54**	**38**	P	**P**	**07 32 17.7**	**-0.1**
	0.3nm,0.7s,baz=236,slow=11,SNR=5.3						
TOLK	**Toolik Lake Re**	**21.72**	**27**	P	**P**	**07 32 31.0**	**+0.4**
TOLK				lAmb	lAmb	07 32 31.6	
	comp=Z,9.5nm,1.5s						
BCAR	**Beaver Creek A**	**22.04**	**45**	P	**P**	**07 32 34.4**	**+0.4**
K27K	**Chicken**	**22.19**	**42**	P	**P**	**07 32 35.1**	**-0.5**
BMAR	**Burnt Mountain**	**22.61**	**33**	P	**P**	**07 32 40.0**	**0.0**
DAWY	**Dawson**	**23.34**	**43**	P	**P**	**07 32 48.6**	**+1.1**
DAWY				lAmb	lAmb	07 33 07.0	
	comp=Z,4.3nm,1.2s						
INK	**Inuvik**	**26.80**	**35**	P	**P**	**07 33 18.7**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=275,slow=11,SNR=4.7						
INK	**Inuvik**	**26.80**	**35**	P	**P**	**07 33 18.6**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**34.05**	**208**	T	T	08 10 53.3	
	baz=18,slow=76,SNR=328						
H11N3	**WAKE ISLAND Hy**	**34.06**	**208**	T	T	08 10 54.0	
	baz=18,slow=76,SNR=345						
H11N1	**WAKE ISLAND Hy**	**34.07**	**208**	T	T	08 10 54.4	
	baz=18,slow=76,SNR=264						
H11S1	**WAKE ISLAND Hy**	**35.27**	**207**	T	T	08 12 17.5	
	baz=18,slow=76,SNR=191						
H11S2	**WAKE ISLAND Hy**	**35.28**	**207**	T	T	08 12 20.1	
	baz=18,slow=76,SNR=107						
H11S3	**WAKE ISLAND Hy**	**35.28**	**207**	T	T	08 12 23.8	
	baz=18,slow=76,SNR=79						
PDAR	**Pinedale Array**	**45.26**	**73**	P	**P**	**07 35 56.3**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=340,slow=2.2,SNR=7.7						
PDAR	**Pinedale Array**	**45.26**	**73**	P	**P**	**07 35 54.7**	**-1.9**
TXAR	**Lajitas Array**	**57.57**	**82**	P	**P**	**07 37 28.4**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=304,slow=6.7,SNR=4.5						
TXAR	**Lajitas Array**	**57.57**	**82**	P	**P**	**07 37 28.5**	**-0.2**
ARCES	**ARCESS Array B**	**58.23**	**351**	P	**P**	**07 37 35.6**	**+3.0**
	comp=Z,2.3nm,0.8s,baz=357,slow=8.1,SNR=6.3						
WRA	**Warramunga Arr**	**82.81**	**225**	P	**P**	**07 40 02.2**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=34,slow=6.5,SNR=2.6						
ASAR	**Alice Springs**	**86.26**	**224**	P	**P**	**07 40 20.4**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=16,slow=3.3,SNR=4.5						
STKA	**Stephens Creek**	**90.56**	**214**	P	**P**	**07 40 38.6**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=39,slow=6.5,SNR=3.0						

IDC 06 07:28:59.8±43.0, 25.93S×179.98W, h502km±161km, mb3.4/4, mb1 3.5/5, mb1mx3.0/31, mbtmp4.3/5, Error ellipse: s-maj=566.0km s-min=95.0km az=84.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.99**	**284**	P	**P**	**07 31 48.7**	**-0.2**
	0.6nm,0.3s,baz=82,slow=15,SNR=6.1						
CTA	**Charters Tower**	**31.56**	**274**	P	**P**	**07 34 41.4**	**+0.8**
	3.9nm,0.3s,baz=99,slow=9.6,SNR=10						
STKA	**Stephens Creek**	**34.03**	**251**	P	**P**	**07 35 00.3**	**-1.1**
	1.4nm,0.4s,baz=88,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**41.76**	**263**	P	**P**	**07 36 04.7**	**-0.1**
	1.5nm,0.4s,baz=95,slow=8.7,SNR=26						
WRA	**Warramunga Arr**	**42.33**	**268**	P	**P**	**07 36 09.0**	**-0.3**
	1.6nm,0.5s,baz=103,slow=8.0,SNR=20						

*MAN **06** 07:50:37.8, 13.54N×120.50E, h51km, mb4.7, ML3.6, MS3.5*

MAN Intensity II - Puerto Galera, Oriental Mindoro; Abra de Ilog, Occidental Mindoro.

*IDC **06** 07:50:38.5±0.5, 13.64N×120.77E, h72km±5km, mb3.9/14, mb1 4.0/14, mb1mx3.7/41, mbtmp4.2/14, MS3.0/3, Ms1 3.1/3, ms1mx2.6/44, Error ellipse: s-maj=20.4km s-min=8.5km az=82.0*

*NEIC **06** 07:50:39.2±1.1, 13.59N±0.06×120.7E±0.1, h73km±9km, mb4.7/13, Error ellipse: s-maj=20.4km s-min=7.7km az=76.0*

ISC 06 07:50:38.7±0.5, 13.54N±0.03×120.53E±0.04, h69km±4km, h68km:pP-P, n61, σ1s23/83, mb4.5/23, 2C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.33**	**305**	*e*P	**Pn**	**07 50 49.3**	**-0.7**
LUBP				*e*S	**Sn**	**07 50 57.1**	**-1.1**
PGP	**Puerto Galera**	**0.42**	**95**	*e*P	**Pn**	**07 50 49.1**	**-1.7**
PGP				*i* S	**Sn**	**07 50 59.7**	**+0.2**
TGY	**Tagaytay City**	**0.69**	**36**	P	**Pn**	**07 50 53.4**	**-0.1**
	1μm,0.3s,baz=236,slow=2.6,SNR=52						
TGY				S	**Sn**	**07 51 03.1**	**-1.2**
	4μm,0.3s,baz=144,slow=19,SNR=16						
TGY	**Tagaytay City**	**0.69**	**36**	*i*P	**Pn**	**07 50 53.2**	**-0.2**
TGY				*i* S	**Sn**	**07 51 04.3**	**0.0**
LQP	**Lukban**	**1.14**	**60**	*i*P	**Pn**	**07 50 58.6**	**-0.5**
LQP				*i* S	**Sn**	**07 51 13.4**	**-0.9**
QVP	**Quezon City--P**	**1.17**	**23**	*e*P	**Pn**	**07 50 59.5**	**+0.2**
SJMP	**San Jose**	**1.22**	**152**	*e*P	**Pn**	**07 51 00.3**	**+0.3**
SJMP				*e*S	**Sn**	**07 51 15.7**	**-0.2**
BOAC	**Boac**	**1.28**	**94**	*e*P	**Pn**	**07 51 00.1**	**-0.7**
BOAC				*e*S	**Sn**	**07 51 17.9**	**+0.5**
BUSP	**Coron**	**1.56**	**192**	*e*P	**Pn**	**07 51 04.0**	**-0.5**
BUSP				*e*S	**Sn**	**07 51 23.1**	**-0.9**
POLP	**Polilio Island**	**1.81**	**49**	*e*P	**Pn**	**07 51 08.7**	**+0.9**
POLP				*e*S	**Sn**	**07 51 31.7**	**+1.9**
OTRP	**Odiongan**	**1.87**	**129**	*e*P	**Pn**	**07 51 08.6**	**-0.1**
OTRP				*e*S	**Sn**	**07 51 33.2**	**+1.8**
GQP	**Guinayangan**	**1.90**	**79**	*e*P	**Pn**	**07 51 09.4**	**+0.4**
GQP				*e*S	**Sn**	**07 51 31.8**	**-0.2**
JCNP	**Jose Panganiba**	**2.23**	**70**	*e*P	**Pn**	**07 51 14.0**	**+0.4**
JCNP				*e*S	**Sn**	**07 51 34.4**	**-5.7**
BALP	**Baler**	**2.41**	**25**	*e*P	**Pn**	**07 51 16.9**	**+1.0**
BALP				*e*S	**Sn**	**07 51 46.7**	**+2.3**
ENPP	**El Nido**	**2.56**	**205**	*e*P	**Pn**	**07 51 17.4**	**-0.6**
ENPP				*e*S	**Sn**	**07 51 45.4**	**-2.6**
SMPP	**San Manuel, Pa**	**2.60**	**3**	*e*P	**Pn**	**07 51 17.9**	**-0.6**
SMPP				*e*S	**Sn**	**07 51 47.8**	**-1.2**
CUYO	**Cuyo Island**	**2.72**	**170**	*e*P	**Pn**	**07 51 19.4**	**-0.8**
CUYO				*e*S	**Sn**	**07 51 49.7**	**-2.3**
BOLP	**Bolinao

ANF ***06*** *07:59:59.3±1.0,41.86N×119.62W,h0km±9km,ML3.8/15, Error ellipse: s-maj=4.3km s-min=2.6km az=89.0*

SEA ***06*** *08:00:01.2±4.3,41.80N±0.02×119.66W±0.05,h0km±6km, Error ellipse: s-maj=5.3km s-min=2.9km az=81.0*

REN ***06*** *08:00:01±3.0,41.89N±0.04×119.63W±0.04,h4km±6km, ML3.7/4,ML3.8/60(SEA),Mwr3.8/44(SLM),Error ellipse: s-maj=6.4km s-min=4.0km az=210.0*

NEIC ***06*** *08:00:01,41.89N×119.63W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr=1.93; Mθθ=2.12; Mϕϕ=4.05; Mrθ=-2.76; Mrϕ=-1.33; Mθϕ=4.58; Fault plane solution: M0=6.53000×10^14^ NP1:ϕ=132.00000°, δ=31.00000°,λ=-161.00000°. NP2:ϕ=225.00000°,δ=80.00000°, λ=-60.00000°. Principal axes: T 6.5323, Plg29.0000°, Azm91.0000°; N 0.0005, Plg30.0000°, Azm199.0000°; P -6.5328, Plg47.0000°, Azm326.0000°;*

NEIC ***06*** *08:00:01.5±2.6,41.95N±0.02×119.68W±0.04,h5km±2km Error ellipse: s-maj=5.4km s-min=3.0km az=126.0*

IDC ***06*** *08:00:02.7±0.3,41.83N×119.79W,h0km,mb3.8/1, mb1 3.8/4,mb1mx3.5/45,mbtmp3.3/4,ML3.2/3,MS2.8/2, Ms1 2.8/2,ms1mx2.5/41,Error ellipse: s-maj=8.4km s-min=2.7km az=76.0*

ISC 06 08:00:01.5±1.7, 41°91'N±0°03'×119°73'W±0°04, h2km±14km, n119, σ1$50/131, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MOD	**Modoc Plateau**	**0.42**	**270**		**Pg**	**Pn**	**08 00 09.8**	**+0.1**
MOD				Sg	**Sb**		**08 00 17.7**	**-1.2**
K05A	**Summer Lake**	**1.19**	**314**	Pg	**Pb**		**08 00 24.2**	**-0.7**
K05A				Sg	**Sb**		**08 00 41.5**	**+0.7**
M04C	**Macdoel**	**1.58**	**266**	P	**Pn**		**08 00 29.3**	**-1.4**
	baz=86,SNR=179							
M04C				S	**Sg**		**08 00 52.5**	**+0.3**
	baz=86							
K04D	**Chiloquin, OR**	**1.66**	**296**	P	**Pn**		**08 00 30.8**	**-1.0**
	baz=114,SNR=73							
K04D				Sb	**Sg**		**08 00 56.9**	**+2.0**
	baz=114							
J08A	**Circle Bar Ran**	**1.72**	**32**	Pn	**Pn**		**08 00 30.2**	**-2.5**
J08A				Sn	**Sn**		**08 00 52.7**	**-2.7**
J05D	**Fort Rock, OR**	**1.77**	**322**	P	**Pn**		**08 00 32.3**	**-1.1**
	baz=139							
J05D				Sb	**Sb**		**08 00 59.3**	**+1.8**
	baz=139							
L04D	**Klamath Falls**	**1.94**	**280**	P	**Pn**		**08 00 34.7**	**-1.0**
	baz=98,SNR=145							
L04D				Sb	**Sg**		**08 01 04.9**	**+1.0**
	baz=98							
PINE	**Pine Mountain**	**2.08**	**335**	Pn	**Pn**		**08 00 37.2**	**-0.6**
BEKR	**Beckworth**	**2.09**	**193**		**Pn**		**08 00 37.9**	**0.0**
I07A	**Izee**	**2.18**	**4**		**Pn**		**08 00 38.8**	**-0.2**
J04D	**Umpqua Nationa**	**2.20**	**308**	Sb	**Sg**		**08 01 12.9**	**+0.6**
	baz=126							
PAHR	**Pah Rah Range**	**2.21**	**173**		**Pn**		**08 00 39.8**	**+0.3**
YBH	**Yreka Blue Hor**	**2.23**	**267**		**Pn**		**08 00 38.5**	**-1.2**
O03E	**Paynes Creek**	**2.24**	**225**	P	**Pn**		**08 00 38.3**	**-1.5**
	baz=45							
O03E				Sb	**Sg**		**08 01 11.8**	**-1.8**
	baz=45							
M02C	**Callahan**	**2.39**	**259**	P	**Pn**		**08 00 40.0**	**-1.9**
	baz=77,SNR=23							
M02C				Sb	**Sg**		**08 01 17.5**	**-0.9**
	baz=77							
N02D	**Trinity Center**	**2.42**	**248**	P	**Pn**		**08 00 40.5**	**-1.7**
	baz=67,SNR=39							
N02D				Sb	**Sg**		**08 01 18.4**	**-0.9**
	baz=67							
HUMO	**Hull Mountain**	**2.49**	**287**		**Pn**		**08 00 41.6**	**-1.6**
WDC	**Whiskeytown Da**	**2.50**	**239**		**Pn**		**08 00 41.9**	**-1.3**
VCNR	**Virginia City**	**2.61**	**179**		**Pn**		**08 00 45.4**	**+0.5**
I05D	**Terrebonne, OR**	**2.70**	**335**	Pb	**Pb**		**08 00 49.9**	**-0.8**
	baz=152							
I05D				Sb	**Sb**		**08 01 27.0**	**+2.8**
	baz=152							
ORV	**Oroville**	**2.71**	**210**		**Pn**		**08 00 46.8**	**+0.7**
I04A	**Tendick Farm,**	**2.73**	**315**	P	**Pn**		**08 00 45.9**	**-0.6**
	baz=132							
I04A				Sb	**Sb**		**08 01 28.1**	**+3.1**
	baz=132							
PNTR	**Pine Nut**	**2.82**	**178**		**Pn**		**08 00 47.4**	**-0.4**
RUBR	**Rubicon Trail**	**2.87**	**187**		**Pb**		**08 00 50.6**	**-3.0**
L02E	**Cave Junction**	**2.89**	**276**	P	**Pn**		**08 00 48.7**	**0.0**
	baz=94,SNR=18							
L02E				Sb	**Sb**		**08 01 31.7**	**+1.9**
	baz=94							
K02D	**Willamette Mer**	**3.02**	**286**	P	**Pn**		**08 00 50.4**	**-0.1**
	baz=104,SNR=85							
AFDM	**Forest Hills D**	**3.10**	**198**		**Pn**		**08 00 51.5**	**-0.1**
KVN	**Kaiserville**	**3.11**	**156**		**Pn**		**08 00 51.5**	**-0.4**
KRMB	**Red Mountain**	**3.15**	**264**	Pn	**Pn**		**08 00 52.3**	**0.0**
KHMM	**Horse Mountain**	**3.18**	**252**	Pn	**Pn**		**08 00 52.5**	**-0.2**
I03D	**Drain, OR**	**3.21**	**305**	P	**Pn**		**08 00 52.4**	**-0.5**
	baz=122							
I03D				Sb	**Sb**		**08 01 42.4**	**+3.7**
	baz=122							
MFID	**Camas Ranch**	**3.25**	**61**	Pn	**Pn**		**08 00 51.2**	**-2.6**
H04A	**Detroit Lake**	**3.30**	**328**	Pn	**Pn**		**08 00 52.6**	**-1.8**
KBO	**Bosley Butte**	**3.36**	**277**	Pn	**Pn**		**08 00 55.1**	**0.0**
RYN	**Ryan**	**3.40**	**164**		**Pn**		**08 00 55.6**	**-0.2**
WAKR	**Walker**	**3.41**	**176**		**Pn**		**08 00 56.2**	**+0.3**
JCC	**Jacoby Creek,**	**3.41**	**253**	Pn	**Pn**		**08 00 54.8**	**-0.9**
G08A	**Pilot Rock**	**3.43**	**9**	Pn	**Pn**		**08 00 56.1**	**0.0**
BMO	**Blue Mountains**	**3.44**	**30**	Pn	**Pn**		**08 00 58.5**	**+2.2**
KMRM	**Mail Ridge**	**3.44**	**242**	Pn	**Pn**		**08 00 58.2**	**+1.9**
G05D	**Wamic, OR**	**3.53**	**342**	Pb	**Pb**		**08 01 03.7**	**-1.0**
	baz=159							
G05D				Sb	**Sb**		**08 01 50.4**	**+2.3**
	baz=159							
KEBM	**Edson Butte**	**3.54**	**287**	Pn	**Pn**		**08 00 58.4**	**+0.8**
ELK	**Elko**	**3.58**	**107**	Pn	**Pn**		**08 00 57.5**	**-0.8**
NVAR	**Mina Array Bea**	**3.64**	**162**	Pn	**Pn**		**08 00 59.8**	**+0.6**
	0.6nm,0.3s,baz=340,slow=12,SNR=15							
NVAR				Pg	**Pb**		**08 01 08.4**	**+1.6**
	3.0nm,0.3s,baz=337,slow=16,SNR=16							
NVAR				Lg	Lg		08 01 55.6	
	8.4nm,0.3s,baz=342,slow=26,SNR=10							
NVAR				LR	LR		08 02 46.5	
	comp=Z,180nm,20.8s,baz=318,slow=45							
NVAR	**Mina Array Bea**	**3.64**	**162**		**Pn**		**08 00 59.5**	**+0.4**
KCPM	**Cahto Peak**	**3.67**	**234**	Pn	**Pn**		**08 01 00.6**	**+1.2**
NV11	**Mina Array Sit**	**3.67**	**160**	Pn	**Pn**		**08 01 00.1**	**+0.6**
COR	**Corvallis**	**3.74**	**317**	Pn	**Pn**		**08 01 00.3**	**0.0**
LHV	**Little Huntoon**	**3.77**	**165**	Pn	**Pn**		**08 01 02.0**	**+1.3**
HOPS	**Hopland Field**	**3.87**	**222**	Pn	**Pn**		**08 01 01.8**	**-0.2**
CMB	**Columbia Colle**	**3.90**	**188**		**Pn**		**08 01 04.1**	**+1.5**
F07A	**Phinny Hill Vi**	**3.99**	**358**	Pn	**Pn**		**08 01 02.6**	**-1.1**
PLID	**Pearl Lake**	**4.18**	**39**	Pn	**Pn**		**08 01 05.7**	**-0.9**
HLID	**Hailey**	**4.25**	**65**	P	**Pn**		**08 01 04.5**	**-3.1**
	baz=248							
HLID	**Hailey**	**4.25**	**65**		**Pn**		**08 01 05.5**	**-2.0**
TPH	**Tonopah**	**4.29**	**152**		**Pn**		**08 01 08.4**	**+0.4**
MDPB	**Devils Postpil**	**4.30**	**173**		**Pn**		**08 01 08.8**	**+0.5**
OMMB	**Old Mammoth Mi**	**4.33**	**172**	Pn	**Pn**		**08 01 06.1**	**-2.5**
F10A	**Beach Ranch, E**	**4.45**	**23**		**Pn**		**08 01 08.2**	**-2.0**
F04A	**Amboy**	**4.47**	**335**		**Pn**		**08 01 10.4**	**+0.1**
HAWA	**Hanford**	**4.49**	**2**		**Pn**		**08 01 12.7**	**+2.1**
E08A	**Dider Farm, El**	**4.61**	**6**	Pn	**Pn**		**08 01 11.4**	**-0.9**
E07A	**Sunnyside**	**4.65**	**359**		**Pn**		**08 01 12.8**	**-0.1**
E09A	**Wood Farm, Sta**	**4.75**	**13**	Pn	**Pn**		**08 01 15.7**	**+1.6**
R11A	**Troy Canyon, C**	**4.77**	**137**		**Pn**		**08 01 12.5**	**-2.1**
SPR3	**Spring Creek 3**	**5.04**	**123**	Pn	**Pn**		**08 01 19.0**	**+0.5**
LON	**Longmire**	**5.07**	**344**	Pn	**Pn**		**08 01 18.5**	**-0.1**
BGU	**Big Grassy Mou**	**5.13**	**99**		**Pn**		**08 01 17.9**	**-1.7**
D08A	**Wollman Farm,**	**5.18**	**6**	Pn	**Pn**		**08 01 21.6**	**+1.5**
BCYI	**Bear Canyon**	**5.22**	**60**		**Pn**		**08 01 19.7**	**-1.1**
LTY	**Liberty**	**5.39**	**353**	Pn	**Pn**		**08 01 20.1**	**-2.9**
SPUT	**South Promonto**	**5.49**	**94**		Pn		08 01 20.4	-4.1
DUG	**Dugway, Tooele**	**5.50**	**106**		**Pn**		**08 01 23.4**	**-1.3**
D05A	**Enumclaw**	**5.52**	**344**	Pn	**Pn**		**08 01 26.5**	**+1.7**
PSUT	**Pine Spring**	**5.62**	**125**		**Pn**		**08 01 26.5**	**+0.1**
TPNV	**Topopah Spring**	**5.64**	**150**		**Pn**		**08 01 24.4**	**-2.2**
PMPB	**Monarch Peak**	**5.74**	**189**	Pn	**Pn**		**08 01 26.9**	**-1.0**
PRN	**Pahroc Range**	**5.76**	**140**		**Pn**		**08 01 27.4**	**-0.9**
MCMT	**McKenzie Canyo**	**5.80**	**57**		**Pn**		**08 01 27.6**	**-1.3**
HWUT	**Hardware Ranch**	**6.12**	**90**		**Pn**		**08 01 32.7**	**-0.5**
NLU	**North Lily Min**	**6.12**	**106**	Pn	Pn		08 01 27.6	-5.6
DLMT	**Dillon**	**6.22**	**54**	Pn	**Pn**		**08 01 34.2**	**-0.3**
TCUT	**Toone Canyon**	**6.30**	**94**	Pn	**Pn**		**08 01 32.5**	**-3.3**
ISA	**Isabella, Lake**	**6.31**	**171**	Pn	**Pn**		**08 01 34.2**	**-1.5**
JLU	**Jordanelle**	**6.38**	**99**	Pn	**Pn**		**08 01 35.4**	**-1.4**
MPU	**Maple Canyon**	**6.42**	**104**	Pn	**Pn**		**08 01 36.5**	**-0.8**
MSO	**Missoula**	**6.44**	**38**		Pn		08 01 31.9	-5.5
AHID	**Auburn Hatcher**	**6.46**	**79**	Pn	**Pn**		**08 01 34.2**	**-3.6**
SHPR	**Sheep Range**	**6.46**	**145**	Pn	**Pn**		**08 01 35.7**	**-2.1**
TCRU	**Three Creeks R**	**6.47**	**118**		**Pn**		**08 01 36.4**	**-1.7**
ICU	**Indian Springs**	**6.54**	**135**		**Pn**		**08 01 39.9**	**+1.0**
CCUT	**Cedar City**	**6.56**	**129**	Pn	**Pn**		**08 01 38.4**	**-0.9**
LRM	**Limekiln Ridge**	**6.56**	**51**	Pn	Pn		08 01 35.3	-3.9
TPAW	**Teton Pass**	**6.66**	**73**	Pn	**Pn**		**08 01 40.0**	**-0.7**
MVU	**Marysvale**	**6.68**	**118**	Pn	**Pn**		**08 01 41.0**	**0.0**
SZCU	**Shurtz Canyon**	**6.69**	**128**		**Pn**		**08 01 41.2**	**+0.1**
MSU	**Marysvale**	**6.70**	**118**	Pn	**Pn**		**08 01 40.7**	**-0.5**
QLMT	**Earthquake Lak**	**6.72**	**61**	Pn	**Pn**		**08 01 39.7**	**-1.7**
YHL	**Hebgen Lake**	**6.89**	**62**	Pn	**Pn**		**08 01 43.6**	**-0.3**
BOZ	**Bozeman (W)**	**6.93**	**55**	Pn	**Pn**		**08 01 42.4**	**-1.9**
MTPU	**Mount Pierson**	**6.96**	**121**	Pn	**Pn**		**08 01 43.5**	**-1.4**
FLWY	**Flagg Ranch**	**6.97**	**69**	Pn	**Pn**		**08 01 42.7**	**-2.2**
TMUT	**Trail Mountain**	**6.99**	**109**	Pn	**Pn**		**08 01 44.7**	**-0.6**
LCMT	**Little Creek M**	**7.00**	**132**	Pn	**Pn**		**08 01 44.7**	**-0.6**
KNB	**Kanab**	**7.24**	**130**	Pn	**Pn**		**08 01 47.1**	**-1.5**
PKCU	**Pink Cliffs**	**7.25**	**125**	Pn	**Pn**		**08 01 46.6**	**-2.3**
PD31	**Pinedale Array**	**7.59**	**80**	Pn	**Pn**		**08 01 51.2**	**-2.2**
PDAR	**Pinedale Array**	**7.59**	**80**	Pn	**Pn**		**08 01 55.5**	**+2.1**
	0.1nm,0.3s,baz=264,slow=13,SNR=9.2							
PDAR				LR	LR		08 04 36.0	
	comp=Z,41nm,18.8s,baz=260,slow=36							
RDMU	**Red Mountain**	**7.78**	**97**		**Pn**		**08 01 54.9**	**-1.1**
U15A	**North Rim**	**7.96**	**131**		**Pn**		**08 01 59.8**	**+1.3**
O20A	**White River Ci**	**8.87**	**98**	Pn	**Pn**		**08 02 12.2**	**+1.3**
PV23	**Carpenter Ridg**	**8.90**	**109**	Pn	**Pn**		**08 02 09.2**	**-2.2**
PV14	**Lion Creek, Pa**	**8.93**	**110**	Pn	**Pn**		**08 02 12.3**	**+0.6**
PV22	**Blue Mesa, Par**	**9.02**	**108**		**Pn**		**08 02 10.7**	**-2.4**
SMCO	**Snowmass**	**10.09**	**101**		**Pn**		**08 02 28.2**	**+0.4**
N23A	**Red Feather La**	**10.41**	**91**		**Pn**		**08 02 33.1**	**+1.0**
T25A	**Trinidad**	**12.75**	**107**	Pn	**Pn**		**08 03 04.2**	**+0.2**
TXAR	**Lajitas Array**	**18.07**	**129**	P	**P**		**08 04 15.2**	**+0.8**
	0.0nm,0.3s,baz=319,slow=11,SNR=4.5							
ILAR	**Eielson Array**	**27.64**	**335**	P	**P**		**08 05 51.8**	**+1.5**
	1.0nm,0.8s,baz=150,slow=9.3,SNR=12							

NEIC ***06*** *08:01:30.7±0.9, 17.5N±0.1×145.44E±0.06,h330km±11km, mb3.8/7,Error ellipse: s-maj=19.5km s-min=8.2km az=175.0*

IDC ***06*** *08:01:31.7±1.5, 17.40N×145.66E,h339km±17km,mb3.0/6, mb1 3.3/7,mb1mx3.0/46,mbtmp3.7/7,Error ellipse: s-maj=29.6km s-min=16.6km az=95.0*

ISC 06 08:01:32.4±0.8, 17°36'N±0°08'×145°5'E±0°2, h350km, n19, σ1$00/21, mb3.4/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GUMO	**Guam**	**3.80**	**189**	P	**Pn**		**08 02 40.3**	**+0.8**
	12nm,0.3s,baz=18,slow=20,SNR=2.1							
GUMO				S	**S**		**08 03 32.4**	**-1.1**
	11nm,0.3s,baz=343,slow=19,SNR=1.7							
GUMO	**Guam**	**3.80**	**189**		**Pn**		**08 02 37.3**	**-2.1**
GUMO				S	**S**		**08 03 33.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**29.07**	**340**	P	**P**		**08 07 00.4**	**-1.2**
WB0	**Warramunga Arr**	**38.47**	**197**	P	**P**		**08 08 22.6**	**+0.5**
WB0				IAmb	IAmb		08 08 38.0	
	comp=Z,5.0nm,1.3s							
WR0	**Warramunga Arr**	**38.61**	**197**	P	**P**		**08 08 24.1**	**+0.9**
WB2	**Warramunga Arr**	**38.65**	**197**	P	**P**		**08 08 24.2**	**+0.6**
WB2				IAmb	IAmb		08 08 41.5	
	comp=Z,9.2nm,1.4s							
WRA	**Warramunga Arr**	**38.65**	**197**	P	**P**		**08 08 24.2**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=16,slow=8.3,SNR=17							
WRA	**Warramunga Arr**	**38.65**	**197**	P	**P**		**08 08 23.6**	**0.0**
ASAR	**Alice Springs**	**42.31**	**196**	P	**P**		**08 08 54.4**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=11,slow=7.0,SNR=4.1							
SONM	**Songino Array**	**44.05**	**322**	P	**P**		**08 09 07.8**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=137,slow=7.1,SNR=8.8							
SONM	**Songino Array**	**44.05**	**322**	P	**P**		**08 09 05.9**	**-1.0**
MKAR	**Makanchi Array**	**59.23**	**314**	P	**P**		**08 10 59.0**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=90,slow=8.2,SNR=4.6							
MKAR	**Makanchi Array**	**59.23**	**314**	P	**P**		**08 10 58.9**	**+1.0**
KURK	**Kurchatov**	**62.12**	**319**	P	**P**		**08 11 17.6**	**+0.5**
ILAR	**Eielson Array**	**64.93**	**26**	P	**P**		**08 11 34.4**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=247,slow=6.1,SNR=9.9							
ILAR	**Eielson Array**	**64.93**	**26**	P	**P**		**08 11 34.3**	**-0.9**
BMAR	**Burnt Mountain**	**66.42**	**23**	P	**P**		**08 11 45.9**	**+1.3**
ABKAR	**Akbulak array**	**74.17**	**317**	P	**P**		**08 12 31.0**	**-0.3**
ABKAR				IAmb	IAmb		08 12 58.8	
	comp=Z,3.1nm,1.4s							
NVAR	**Mina Array Bea**	**84.13**	**52**	P	**P**		**08 13 25.7**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=266,slow=7.1,SNR=3.6							

SEA ***06*** *08:34:45.3±3.5,41.81N±0.04×119.54W±0.04,h0km±4km, Error ellipse: s-maj=6.1km s-min=4.5km az=202.0*

IDC ***06*** *08:34:45.1±0.5,41.54N×119.66W,h0km,mb4.1/12, mb1 4.1/18,mb1mx4.0/62,mbtmp4.0/18,ML3.1/6,MS3.5/23, Ms1 3.5/23,ms1mx3.3/65,Error ellipse: s-maj=9.1km s-min=5.3km az=13.0*

NEIC ***06*** *08:34:46.5,41.90N×119.66W,h8km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=3.07; Mθθ=0.17; Mϕϕ=2.90; Mrθ=1.12; Mrϕ=2.73; Mθϕ=-0.99; Fault plane solution: M0=4.31000×10^15^ NP1:ϕ=239.20000°, δ=50.89000°,λ=-48.48000°. NP2:ϕ=4.66000°,δ=54.49000°, λ=-129.19000°. Principal axes: T 4.5909, Plg2.0000°, Azm121.0000°; N -0.6303, Plg31.0000°, Azm30.0000°; P -3.9606, Plg59.0000°, Azm215.0000°;*

REN ***06*** *08:34:46.5±3.0,41.91N±0.03×119.657W±0.010, h5km±4km,ML4.7/6,mb4.4/51(NEIC),ML4.4/99(SEA), Mwr4.4/139(NEIC),Mww4.5(NEIC) Error ellipse: s-maj=5.0km s-min=1.0km az=179.0*

ANF ***06*** *08:34:46.8±0.6,41.86N×119.80W,h0km,ML4.5/19,Error ellipse: s-maj=6.7km s-min=6.6km az=74.0*

NEIC ***06*** *08:34:47.3±2.9,41.92N±0.03×119.69W±0.04,h5km±1km, Error ellipse: s-maj=5.7km s-min=5.2km az=140.0*

NEIC ***06*** *08:34:52,41.90N×119.79W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^15^Nm; Mrr=4.09; Mθθ=0.35; Mϕϕ=4.45; Mrθ=1.43; Mθϕ=3.54; Mrϕ=1.83; Fault plane solution: M0=6.02000×10^15^ NP1:ϕ=237.00000°, δ=49.00000°,λ=-44.00000°. NP2:ϕ=0.00000°,δ=58.00000°, λ=-129.00000°. Principal axes: T 6.4110, Plg5.0000°, Azm117.0000°; N -0.8803, Plg32.0000°, Azm23.0000°; P -5.5307, Plg57.0000°, Azm215.0000°;*

ISC 06 08:34:47.8±0.4, 41°84'N±0°04'×119°72'W±0°04, h10km, n262, σ1$48/259, mb4.4/35, MS3.5/17, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MOD	**Modoc Plateau**	**0.44**	**279**		**Pb**		**08 34 55.7**	**-2.1**
MOD				Sg	**Sb**		**08 35 03.0**	**-1.6**
K05A	**Summer Lake**	**1.25**	**316**	Pg	**Pb**		**08 35 09.4**	**-2.2**
M04C	**Macdoel**	**1.59**	**269**	P	**Pn**		**08 35 15.0**	**-1.1**
	baz=85,SNR=1000							
M04C				Sb	**Sg**		**08 35 39.4**	**+0.5**
	baz=85							
K04D	**Chiloquin, OR**	**1.71**	**298**	P	**Pn**		**08 35 16.1**	**-1.6**
	baz=114,SNR=920							
K04D				Sb	**Sg**		**08 35 43.3**	**+0.6**
	baz=114							
J08A	**Circle Bar Ran**	**1.77**	**31**		**Pn**		**08 35 15.9**	**-2.8**
J08A				Sn	**Sn**		**08 35 40.9**	**-0.5**
J05D	**Fort Rock, OR**	**1.83**	**323**	P	**Pn**		**08 35 17.7**	**-1.8**
	baz=139,SNR=1000							
J05D				Sb	**Sg**		**08 35 45.2**	**-1.5**
	baz=139							
L04D	**Klamath Falls**	**1.96**	**282**	P	**Pn**		**08 35 19.8**	**-1.5**
	baz=98,SNR=955							
L04D				Sb	**Sg**		**08 35 50.0**	**-1.0**
	baz=98							
BEKR	**Beckworth**	**2.03**	**194**		**Pn**		**08 35 21.9**	**-0.3**
BEKR				Sn	**Sb**		**08 35 50.3**	**0.0**
PAHR	**Pah Rah Range**	**2.14**	**173**	Pn	**Pn**		**08 35 23.3**	**-0.5**
PINE	**Pine Mountain**	**2.15**	**336**		**Pn**		**08 35 22.5**	**-1.4**
O03E	**Paynes Creek**	**2.21**	**226**	P	**Pn**		**08 35 24.1**	**-0.5**
	baz=44,SNR=723							
O03E				Sb	**Sg**		**08 35 57.6**	**-1.1**
	baz=44							
YBH	**Yreka Blue Hor**	**2.24**	**268**	Pn	**Pn**		**08 35 23.7**	**-1.4**
	18nm,0.3s,baz=52,slow=12,SNR=56							
YBH				Pg	**Pb**		**08 35 26.2**	**-2.2**
	34nm,0.3s,baz=77,slow=14,SNR=141							
YBH				Lg	Lg		08 35 58.1	
	311nm,0.3s,baz=334,slow=8.3,SNR=25							
YBH				LR	LR		08 36 14.9	
	comp=Z,206nm,20.4s,baz=72,slow=39							
YBH	**Yreka Blue Hor**	**2.24**	**268**	Pn	**Pn**		**08 35 23.8**	**-1.2**
I07A	**Izee**	**2.25**	**4**		**Pn**		**08 35 25.5**	**+0.3**
J04D	**Umpqua Nationa**	**2.26**	**309**	Pb	**Pb**		**08 35 27.0**	**-1.8**
	baz=126							
M02C	**Callahan**	**2.39**	**260**	P	**Pn**		**08 35 25.7**	**-1.5**
	baz=77,SNR=84							
M02C				Sb	**Sg**		**08 36 03.7**	**-1.0**
	baz=77							
N02D	**Trinity Center**	**2.41**	**250**	P	**Pn**		**08 35 25.8**	**-1.6**
	baz=67,SNR=150							
N02D				Sb	**Sg**		**08 36 04.7**	**-0.5**
	baz=67							
WDC	**Whiskeytown Da**	**2.47**	**240**		**Pn**		**08 35 27.0**	**-1.2**
HUMO	**Hull Mountain**	**2.53**	**289**		**Pn**		**08 35 27.3**	**-1.6**
VCNR	**Virginia City**	**2.54**	**179**		**Pn**		**08 35 27.9**	**-1.3**
ORV	**Oroville**	**2.65**	**211**		**Pn**		**08 35 30.9**	**+0.3**
PNTR	**Pine Nut**	**2.75**	**178**		**Pn**		**08 35 33.9**	**+1.7**
I05D	**Terrebonne, OR**	**2.77**	**335**	P	**Pn**		**08 35 30.0**	**-2.3**
	baz=153							
I04A	**Tendick Farm,**	**2.79**	**316**	P	**Pn**		**08 35 30.7**	**-1.8**
	baz=132							
I04A				Sb	**Sg**		**08 36 14.1**	**-3.2**
	baz=132							
RUBR	**Rubicon Trail**	**2.80**	**187**		**Pn**		**08 35 34.0**	**+1.1**
L02E	**Cave Junction**	**2.91**	**278**	P	**Pn**		**08 35 32.9**	**-1.4**
	baz=94,SNR=35							
AFDM	**Forest Hills D**	**3.04**	**199**		**Pn**		**08 35 37.2**	**+1.2**
KVN	**Kaiserville**	**3.04**	**156**		**Pn**		**08 35 37.0**	**+0.8**
K02D	**Willamette Mer**	**3.05**	**288**	P	**Pn**		**08 35 34.6**	**-1.7**
	baz=104,SNR=261							
KRMB	**Red Mountain**	**3.15**	**266**		**Pn**		**08 35 38.8**	**+1.1**
KHMM	**Horse Mountain**	**3.17**	**254**		**Pn**		**08 35 39.1**	**+1.2**
I03D	**Drain, OR**	**3.26**	**306**	P	**Pn**		**08 35 37.4**	**-1.5**
	baz=122							
MFID	**Camas Ranch**	**3.27**	**60**	Pn	**Pn**		**08 35 37.1**	**-2.2**
RYN	**Ryan**	**3.33**	**164**	Pn	**Pn**		**08 35 42.1**	**+1.9**
WAKR	**Walker**	**3.34**	**176**		**Pn**		**08 35 42.2**	**+1.9**
KBO	**Bosley Butte**	**3.38**	**278**		**Pn**		**08 35 42.0**	**+1.3**
J01E	**Myrtle Point**	**3.39**	**294**	P	**Pn**		**08 35 39.7**	**-1.0**
	baz=110							
JCC	**Jacoby Creek,**	**3.40**	**254**	Pn	**Pn**		**08 35 43.1**	**+2.2**
KMRM	**Mail Ridge**	**3.42**	**243**		**Pn**		**08 35 42.6**	**+1.2**
H04D	**Lebanon**	**3.48**	**322**	Pb	**Pb**		**08 35 47.5**	**-1.9**
	baz=138							
BMO	**Blue Mountains**	**3.49**	**29**		**Pn**		**08 35 42.1**	**-0.1**
G08A	**Pilot Rock**	**3.50**	**9**		**Pn**		**08 35 39.9**	**-2.5**
ELK	**Elko**	**3.55**	**106**	Pn	**Pn**		**08 35 41.4**	**-1.8**
	2.1nm,0.3s,baz=297,slow=13,SNR=47							
ELK				Pg	Pb		08 35 46.5	-4.3
	38nm,0.3s,baz=289,slow=18,SNR=237							
ELK				Sn	**Sn**		**08 36 22.5**	**-2.8**
	26nm,0.3s,baz=256,slow=23,SNR=4.8							
ELK				Lg	Lg		08 36 37.8	
	70nm,0.3s,baz=146,slow=10.0,SNR=7.3							
ELK	**Elko**	**3.55**	**106**	Pn	**Pn**		**08 35 42.1**	**-1.1**
NVAR	**Mina Array Bea**	**3.57**	**162**	Pg	**Pn**		**08 35 43.6**	**+0.1**
	3.5nm,0.3s,baz=342,slow=12,SNR=46							
NVAR				Lg	Lg		08 36 40.8

YHH	Holmes Hill	7.11	63	Pn	Pn	08 36 29.7	-2.4		
KNB	Kanab	7.18	130	Pn	Pn	08 36 35.0	+1.9		
PKCU	Pink Cliffs	7.20	125		Pn	08 36 35.5	+2.0		
HRY	Holter Researc	7.47	47	Pn	Pn	08 36 34.7	-2.2		
SRU	San Rafael Swe	7.52	108		Pn	08 36 39.1	+1.4		
BW06	Boulder Array	7.59	80		Pn	08 36 37.6	-1.0		
PD31	Pinedale Array	7.59	80		Pn	08 36 37.1	-1.6		
PDAR	Pinedale Array	7.59	80	Pn	Pn	08 36 40.2	+1.5		
	0.1nm,0.3s,baz=245,slow=15,SNR=15								
PDAR				Lg	Lg	08 38 41.0			
	0.3nm,0.3s,baz=232,slow=20,SNR=3.4								
PDAR				LR	LR	08 39 04.6			
	comp=Z,49nm,19.2s,baz=266,slow=34								
PDAR	Pinedale Array	7.59	80		Pn	08 36 37.4	-1.3		
MWC	Mount Wilson	7.71	170		Pn	08 36 40.4	+0.1		
YNE	Yellowstone No	7.75	63	Pn	Pn	08 36 37.7	-3.1		
U15A	North Rim	7.90	131		Pn	08 36 45.3	+2.3		
W13A	Hualapai Mount	8.13	144		Pn	08 36 47.5	+1.4		
RLMT	Red Lodge	8.28	63	Pn	Pn	08 36 47.5	-0.6		
WALA	Waterton Lakes	8.29	27	Pn	Pn	08 36 44.5	-3.7		
PFO	Pinyon Flats O	8.61	162	Pn	Pn	08 36 49.7	-2.8		
	0.0nm,0.3s,baz=299,slow=19,SNR=1.8								
PFO				Lg	Lg	08 39 17.7			
	0.1nm,0.3s,baz=188,slow=15,SNR=1.8								
PFO				LR	LR	08 40 33.0			
	comp=Z,415nm,18.8s,baz=342,slow=42								
O20A	White River Ci	8.85	97		Pn	08 36 57.5	+1.6		
PV23	Carpenter Ridg	8.87	109		Pn	08 36 58.6	+2.4		
PV14	Lion Creek, Pa	8.89	109		Pn	08 36 58.5	+1.9		
PV20	West Nyswonger	8.95	109		Pn	08 36 58.6	+1.3		
PV04	Paradox Valley	8.97	109		Pn	08 36 58.7	+1.2		
PV18	Skein Mesa, Pa	9.03	110	Pn	Pn	08 37 00.1	+1.7		
PV03	Paradox Valley	9.07	110		Pn	08 37 01.2	+2.2		
WUAZ	Wupatki	9.07	131	Pn	Pn	08 37 01.0	+2.0		
PV07	Paradox Valley	9.13	108		Pn	08 37 01.0	+1.2		
PV13	Radium Mtn., P	9.13	110	Pn	Pn	08 37 00.0	+0.2		
PV01	Paradox Valley	9.32	110		Pn	08 37 04.0	+1.6		
RWWY	Rawlins	9.35	87		Pn	08 37 02.5	-0.4		
EGMT	Eagleton	9.39	45	Pn	Pn	08 37 01.8	-1.3		
Y14A	Wickenburg	9.50	144	Pn	Pn	08 37 06.0	+1.3		
GLA	Glamis	9.59	155	Pn	Pn	08 37 05.8	-0.2		
MVCO	Mesa Verde	9.82	114	Pn	Pn	08 37 09.1	-0.2		
K22A	Casper	9.82	81		Pn	08 37 09.7	+0.5		
X16A	Lo Mia Camp, P	9.86	136	Pn	Pn	08 37 10.0	+0.2		
SMCO	Snowmass	10.06	101	Pn	Pn	08 37 11.6	-1.1		
113A	Mohawk Valley,	10.21	150	Pn	Pn	08 37 16.4	+2.0		
N23A	Red Feather La	10.40	91	Pn	Pn	08 37 15.9	-1.3		
PHWY	Pilot Hill	10.70	88		Pn	08 37 19.5	-1.9		
S22A	4UR Ranch, Cre	10.72	108	Pn	Pn	08 37 21.6	-0.1		
LAO	LASA Array	10.82	59	Pn	Pn	08 37 21.9	-0.9		
ISCO	Idaho Springs	10.88	96	Pn	Pn	08 37 24.0	+0.1		
Q24A	Divide	11.47	100		Pn	08 37 32.2	+0.2		
SDCO	Great Sand Dun	11.67	106	Pn	Pn	08 37 35.8	+1.1		
BBB	Bella Bella	11.82	334	Lg	Lg	08 41 23.4			
	0.3nm,0.3s,baz=252,slow=20,SNR=1.1								
BBB				LR	LR	08 42 19.9			
	comp=Z,380nm,19.6s,baz=164,slow=38								
TUC	Tucson	11.88	140	Pn	Pn	08 37 39.0	+1.7		
ANMO	Albuquerque	12.46	119		Pn	08 37 45.5	+0.1		
	0.1nm,0.3s,baz=303,slow=12,SNR=9.5								
ANMO				Lg	Lg	08 41 20.4			
	0.1nm,0.3s,baz=193,slow=19,SNR=1.9								
ANMO	Albuquerque	12.46	119		Pn	08 37 46.9	+1.5		
T25A	Trinidad	12.72	107		Pn	08 37 49.4	+0.5		
121A	Cookes Peak, D	13.28	131		Pn	08 37 59.0	+2.4		
MNTX	Cornudas Mount	15.29	127	P	P	08 38 26.7	-1.8		
SUSD	Miller	15.38	73	P	Pn	08 38 25.4	+0.7		
R32A	Long Quarter,	16.42	95	P	P	08 38 41.3	+0.2		
R32A				IAmb	IAmb	08 38 45.2			
	comp=Z,26nm,1.2s								
ECSD	EROS Data Cent	17.06	76	P	P	08 38 47.3	-0.8		
DLBC	Dease Lake	17.85	342	LR	LR	08 46 28.4			
	comp=Z,286nm,19.3s,baz=133,slow=39								
WMOK	Wichita Mounta	17.88	107	P	P	08 38 57.4	+0.2		
TX31	Lajitas Ar. Si	18.02	129	P	Pn	08 38 57.3	-1.1		
TX31				IAmb	IAmb	08 39 16.1			
	comp=Z,34nm,1.4s								
TX32	Lajitas Array	18.02	129	P	Pn	08 38 57.0	-1.4		
TXAR	Lajitas Array	18.02	129	P	Pn	08 38 58.9	+0.5		
	comp=Z,0.0nm,0.3s,baz=312,slow=9.4,SNR=1.9								
TXAR	Lajitas Array	18.02	129	P	Pn	08 38 58.4	-0.1		
N35A	Tabor	18.09	85	P	Pn	08 38 56.6	-2.6		
N35A				IAmb	IAmb	08 39 07.4			
	comp=Z,25nm,0.9s								
ULM	Lac du Bonnet	18.50	55	P	P	08 39 03.8	-0.3		
	comp=Z,0.1nm,0.3s,baz=292,slow=16,SNR=1.8								
ULM	Lac du Bonnet	18.50	55	P	Pn	08 39 04.3	+0.2		
LPIG	La Paz	19.34	153	LR	LR	08 46 13.1			
	comp=Z,131nm,19.6s,baz=352,slow=36								
TUL1	Leonard	19.52	100	P	P	08 39 13.6	-1.6		
K38A	Parkersburg	19.94	79	P	P	08 39 17.8	-2.0		
K38A				IAmb	IAmb	08 39 24.0			
	comp=Z,21nm,0.8s								
U38A	Gravette	20.34	97	P	P	08 39 22.5	-1.7		
HHAR	Hobbs	20.73	97	P	P	08 39 28.7	+0.2		
YKA	Yellowknife Ar	20.91	7	P	Pn	08 39 31.8	-0.9		
	comp=Z,5.9nm,1.1s,baz=192,slow=10.0,SNR=5.4								
YKA				LR	LR	08 48 15.4			
	comp=Z,124nm,18.6s,baz=0.0,slow=38								
P40A	Paris	21.08	87	P	P	08 39 31.4	-0.7		
P40A				IAmb	IAmb	08 39 35.4			
	comp=Z,24nm,0.8s								
R40A	Maddies Statio	21.27	90	P	P	08 39 32.9	-1.3		
I40A	Norwalk	21.38	75	P	P	08 39 34.3	-1.1		
U40A	Yellville	21.51	96	P	P	08 39 37.8	+0.9		
MGMO	Mountain Grove	21.65	93	P	P	08 39 39.9	+1.5		
MGMO				IAmb	IAmb	08 39 49.7			
	comp=Z,12nm,0.9s								
N41A	Harden Midland	21.68	83	P	P	08 39 39.6	+0.9		
N41A				IAmb	IAmb	08 39 43.0			
	comp=Z,10nm,0.8s								
JFWS	Jewell Farm	21.75	77	P	P	08 39 37.5	-1.9		
JFWS				IAmb	IAmb	08 39 44.8			
	comp=Z,23nm,0.9s								
CCM	Cathedral Cave	22.11	90	P	P	08 39 42.2	-1.1		
CCM				IAmb	IAmb	08 39 48.5			
	comp=Z,12nm,0.8s								
FCAR	Ozark Folk Cen	22.24	96	P	P	08 39 44.0	-0.6		
L42A	Oliver, Polo	22.31	79	P	P	08 39 43.7	-1.7		
WHAR	Wooly Hollow	22.36	98	P	P	08 39 46.8	+0.8		
WHAR				IAmb	IAmb	08 39 57.6			
	comp=Z,12nm,1.1s								
W41B	Gary Mavity, V	22.44	98	P	P	08 39 45.9	-0.9		
W41B				IAmb	IAmb	08 39 51.3			
	comp=Z,13nm,1.2s								
T42A	Van Buren	22.57	93	P	P	08 39 46.9	-1.3		
T42A				IAmb	IAmb	08 40 04.0			
	comp=Z,12nm,1.2s								
LCAR	Lake Charles	22.89	95	P	P	08 39 51.4	-0.1		
P43A	Skaggs, Pawnee	22.93	85	P	P	08 39 50.9	-1.1		
P43A				IAmb	IAmb	08 40 02.2			
	comp=Z,19nm,0.9s								
Q44A	Meyer Farm, Va	23.51	87	P	P	08 39 55.4	-2.5		
S44A	Carbondale	23.71	90	P	P	08 39 58.7	-1.1		
S44A				IAmb	IAmb	08 40 03.7			
	comp=Z,19nm,1.0s								
P46A	Rosedale	24.66	84	P	P	08 40 09.0	+0.3		
W45A	Hickory Valley	24.72	96	P	P	08 40 07.5	-1.8		
L46A	Eue Claire	24.78	78	P	P	08 40 07.7	-2.0		
BLO	Bloomington	25.29	85	P	P	08 40 14.1	-0.3		
WVT	Waverly	25.34	92	P	P	08 40 15.5	+0.7		
WVT				IAmb	IAmb	08 40 19.4			
	comp=Z,6.9nm,0.9s								
N47A	Urbana	25.46	81	P	P	08 40 13.9	-2.0		
T47A	Sharon Grove	25.56	90	P	P	08 40 16.2	-0.7		
T47A				IAmb	IAmb	08 40 21.5			
	comp=Z,11nm,0.9s								
PLAL	Pickwick Lake	25.62	95	P	P	08 40 17.9	+0.5		
PLAL				IAmb	IAmb	08 40 22.6			
	comp=Z,12nm,0.8s								
WCI	Wyandotte Cave	25.75	87	P	P	08 40 17.9	-0.6		
Z47A	Carrollton	26.42	99	P	P	08 40 24.0	-0.6		
X48A	Hartselle	26.62	95	P	P	08 40 25.2	-1.2		
X48A				IAmb	IAmb	08 40 28.3			
	comp=Z,6.4nm,0.8s								
U49A	Red Boiling Sp	26.73	90	P	P	08 40 26.0	-1.4		
U49A				IAmb	IAmb	08 40 30.4			
	comp=Z,7.9nm,1.0s								
LRAL	Lakeview Retre	27.29	98	P	P	08 40 31.9	-0.6		
LRAL				IAmb	IAmb	08 40 35.3			
	comp=Z,8.8nm,0.9s								
INK	Inuvik	27.54	349	P	P	08 40 37.6	+3.3		
	comp=Z,2.2nm,0.7s,baz=146,slow=10,SNR=9.9								
W50A	Signal Mountai	27.59	92	P	P	08 40 35.2	0.0		
W50A				IAmb	IAmb	08 40 39.2			
	comp=Z,12nm,1.1s								
FPAL	Fort Paine	27.65	94	P	P	08 40 36.6	+0.9		
FPAL				IAmb	IAmb	08 40 38.0			
	comp=Z,8.7nm,1.0s								
ILAR	Eielson Array	27.71	335	P	P	08 40 36.8	+0.9		
	comp=Z,1.0nm,0.9s,baz=144,slow=7.8,SNR=8.5								
ILAR				LR	LR	08 52 13.6			
	comp=Z,113nm,19.4s,baz=136,slow=37								
CPCT	Cooper Cave	28.08	91	P	P	08 40 38.9	-0.7		
CPCT				IAmb	IAmb	08 40 41.9			
	comp=Z,8.7nm,0.9s								
TKL	Tuckaleechee C	28.56	91	LR	LR	08 52 30.8			
	comp=Z,98nm,20.3s,baz=302,slow=37								
152A	Waverly Hall	29.16	97	P	P	08 40 50.4	+1.3		
152A				IAmb	IAmb	08 40 51.8			
	comp=Z,6.7nm,0.7s								
V53A	Saluda	29.27	90	P	P	08 40 50.8	+0.6		
SADO	Sadowa	29.46	70	LR	LR	08 52 58.3			
	comp=Z,131nm,20.3s,baz=302,slow=37								
GOGA	Godfrey	29.74	94	P	P	08 40 53.8	-0.5		
GOGA				IAmb	IAmb	08 40 56.7			
	comp=Z,9.3nm,0.8s								
IMAR	Indian Mountai	30.71	333	P	P	08 41 04.5	+2.0		
RES	Resolute Bay	34.83	11	P	P	08 41 38.5	+0.1		
	comp=Z,3.9nm,1.0s,baz=222,slow=12,SNR=2.7								
RES	Resolute Bay	34.83	11	IAmb	IAmb	08 41 41.9			
	comp=Z,9.3nm,1.1s								
FRB	Frobisher Bay	36.53	36	LR	LR	08 55 54.3			
	comp=Z,73nm,19.4s,baz=257,slow=34								
SCHQ	Schefferville	36.59	51	P	P	08 41 53.8	0.0		
	comp=Z,8.7nm,1.0s,baz=220,slow=7.9,SNR=2.8								
PETK	Petropavlovsk-	53.96	312	LR	LR	09 05 02.8			
	comp=Z,26nm,20.3s,baz=41,slow=34								
MA2	Magadan	54.88	322	LR	LR	09 05 17.4			
	comp=Z,40nm,22.0s,baz=62,slow=33								
SPITS	Spitsbergen Ar	57.37	10	LR	LR	09 07 46.0			
	comp=Z,75nm,18.5s,baz=50,slow=34								
PPT	Papeete	65.24	212	LR	LR	09 09 36.6			
	comp=Z,26nm,18.4s,baz=14,slow=32								
NOA	NORSAR Array B	69.99	23	P	P	08 46 00.2	+1.0		
	comp=Z,0.6nm,0.9s,baz=329,slow=11,SNR=3.6								
HFS	Hagfors	71.44	23	P	P	08 46 09.5	+1.5		
	comp=Z,2.5nm,0.6s,baz=320,slow=6.6,SNR=2.2								
FINES	FINESS Array B	73.39	16	LR	LR	09 18 39.5			
	comp=Z,37nm,18.4s,baz=334,slow=36								
LPAZ	La Paz	74.89	129	P	P	08 46 29.1	-0.5		
	comp=Z,0.8nm,0.7s,baz=342,slow=6.4,SNR=3.6								
LPAZ				LR	LR	09 19 33.2			
	comp=Z,19nm,21.8s,baz=26,slow=36								
ESDC	Sonseca Array	80.10	45	P	P	08 46 59.6	+1.7		
	comp=Z,1.1nm,0.8s,baz=310,slow=5.5,SNR=4.7								
SONM	Songino Array	81.83	331	P	P	08 47 07.5	+0.4		
	comp=Z,0.6nm,0.6s,baz=42,slow=2.4,SNR=3.8								
SONM				LR	LR	09 24 33.6			
	comp=Z,55nm,20.8s,baz=35,slow=36								
SONM	Songino Array	81.83	331	P	P	08 47 05.3	-1.8		
ARU	Arti	82.09	1	LR	LR	09 25 56.5			
	comp=Z,20nm,20.6s,baz=187,slow=37								
ZALV	Zalesovo Beam	82.29	346	P	P	08 47 10.4	+1.2		
	comp=Z,0.7nm,0.4s,baz=325,slow=2.3,SNR=5.1								
ZALV				LR	LR	09 29 33.4			
	comp=Z,24nm,18.5s,baz=42,slow=40								
ZALV	Zalesovo Beam	82.29	346	P	P	08 47 07.9	-1.3		
AKASG	Malin Array Be	83.93	19	P	P	08 47 19.1	+1.4		
	comp=Z,0.9nm,0.5s,baz=336,slow=4.1,SNR=4.7								
HHC	Hu-ho-hao-te	85.50	324	*e*P	P	08 47 27.7	+1.6		
HHC				pmax	pmax				
	comp=Z,22nm,1.3s								
HHC				pmax	pmax				
	comp=Z,96nm,7.0s								
NJ2	Nanjing	88.85	314	*e*P	P	08 47 43.5	+1.2		
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
MKAR	Makanchi Array	89.61	345	LR	LR	09 30 48.2			
	comp=Z,24nm,21.9s,baz=356,slow=37								
WMQ	Urumqi	91.24	341	*e*P	P	08 47 53.4	+0.1		
LZH	Lanzhou	92.80	326	*e*P	P	08 48 00.1	-0.7		
LZH				pP	PcP	08 48 01.8	+0.3		
LZH				sP	pP	08 48 02.5	-2.3		
LZH				*e*PP	PP	08 51 44.3	+2.2		
LZH				pmax	pmax				
	comp=Z,17nm,1.4s								
LZH				pmax	pmax				
	comp=Z,65nm,7.2s								
LZH				LR	LR				
	comp=N,79nm,17.5s								
LZH				LR	LR				
	comp=E,86nm,17.3s								
LZH				LR	LR				
	comp=Z,110nm,19.6s								
URZ	Urewera	98.30	225	LR	LR	09 25 10.7			
	comp=Z,27nm,20.0s,baz=31,slow=31								
WRA	Warramunga Arr	114.74	265	PKP	PKPdf	08 53 27.0	-1.8		
	comp=Z,0.4nm,0.9s,baz=48,slow=1.6,SNR=2.6								
ASAR	Alice Springs	117.29	262	PKP	PKPdf	08 53 32.2	-1.4		
	comp=Z,0.3nm,0.7s,baz=50,slow=2.9,SNR=2.7								

IDC ***06*** *08:42:41.9±14.0, 0°.45N×125°.32E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.5/53, mbtmp3.8/4, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/52, Error ellipse: s-maj=225.8km s-min=108.1km az=143.0*

DJA ***06*** *08:42:44.3±0.2, 0°.N±2°×12°.5E±°, h10km, M4.0/9, mb4.4/1, MLv3.8/9*

ISC 06 08:42:41.5±1.1, 0°.6N±0°.1×125°.03E±0°.04, h10km, n12, σ0s84/15, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.05	269	P	Pg	08 43 01.3	-0.5
KMSI				S	Sg	08 43 13.9	-1.6
GTOI	Gorontalo	2.02	271	P	Pb	08 43 19.1	+0.7
GTOI				S	Sb	08 43 44.0	+0.3
TNTI	Ternate	2.34	86	P	Pb	08 43 24.2	+0.4
TNTI				S	Sg	08 43 56.3	-0.5
LUWI	Luwuk	2.78	234	P	Pn	08 43 27.1	+0.9
LUWI				S	Sn	08 43 59.8	-0.1
SANI	Sanana	2.79	160	P	Pn	08 43 27.1	+0.8
APSI	Ampana	3.70	246	P	Pn	08 43 40.0	+1.2
TTSI	Tana Toraja	6.34	235	P	Pn	08 44 16.0	+0.8
DAV	Davao City (W)	6.46	5	LR	LR	08 46 53.6	
	comp=Z,116nm,18.2s,baz=179,slow=38						
FITZ	Fitzroy Crossi	18.58	178	P	Pn	08 46 59.0	-0.1
	0.1nm,0.3s,baz=355,slow=12,SNR=3.1						
WRA	Warramunga Arr	22.35	156	P	P	08 47 39.0	-0.9
	3.2nm,0.6s,baz=335,slow=11,SNR=38						
ASAR	Alice Springs	25.61	161	P	P	08 48 10.8	-0.5
	0.8nm,0.5s,baz=340,slow=8.0,SNR=16						
STKA	Stephens Creek	35.90	156	P	P	08 49 42.0	-0.1
	0.5nm,0.3s,baz=322,slow=12,SNR=3.4						

REY ***06*** *08:44:58.4, 64°.68N×17°.48W, h5km*

NEIC ***06*** *08:44:59.0±2.0, 64°.53N±0°.09×17°.7W±0°.1, h6km±5km, mb4.3/5, Error ellipse: s-maj=12.4km s-min=6.9km az=176.0*

IDC ***06*** *08:44:59.4±0.8, 64°.43N×18°.00W, h0km, mb3.7/7, mb1 4.0/9, mb1mx3.7/49, mbtmp3.7/9, ML3.1/2, Error ellipse: s-maj=34.6km s-min=14.9km az=30.0*

ISC 06 08:44:59.1±1.1, 64°.58N±0°.04×17°.68W±0°.03, h3km±8km, n55, σ1s40/51, mb3.9/10, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	Vonarskard	0.10	341	P	Pg	08 45 01.0	-0.2
	baz=268						
IGRF	Grimsfjall	0.25	134	P	Pg	08 45 03.9	+0.1
	baz=161						
IGRF				S	Sg	08 45 08.3	+1.3
	baz=161						
IDYN	Dyngjuhals	0.25	32	P	Pg	08 45 01.1	-2.9
	baz=23						
IHUS	Husbondi	0.28	178	P	Pg	08 45 05.7	+1.2
	baz=191						
ISKR	Skrokkalda	0.31	267	P	Pg	08 45 05.8	+0.9
	baz=254						
IJOK	Jokulheimar	0.35	222	P	Pg	08 45 07.4	+1.5
	baz=222						
IVOT	Vottur	0.38	145	P	Pg	08 45 06.3	0.0
	baz=162						
IVOT				S	Sg	08 45 12.3	+1.2
	baz=162						
IIEY	Innrieyrar	0.52	202	P	Pn	08 45 10.0	-3.5
	baz=206						
IIEY				S	Sb	08 45 18.7	-0.1
	baz=206						
THOR	Thorvaldshraun	0.56	50	P	Pg	08 45 06.4	-3.4
	baz=53						
THOR				S	Sg	08 45 12.6	-4.5
	baz=53						
IKAL	Kalfafell	0.63	180	P	Pn	08 45 11.5	-3.3
	baz=187						
IASK	Askja	0.65	42	P	Pg	08 45 07.8	-3.7
	baz=43						
IASK				S	Sg	08 45 15.1	-4.9
	baz=43						
IVAT	Vatnsfell	0.67	235	P	Pn	08 45 12.8	-2.6
	baz=232						
IKSK	Karasker	0.67	128	P	Pg	08 45 09.9	-1.9
	baz=139						
IMKO	Mokollar	0.70	54	P	Pg	08 45 08.6	-3.9
	baz=58						
IMKO				S	Sg	08 45 16.7	-4.9
	baz=58						
IHVE	Hveravellir	0.86	291	P	Pg	08 45 14.5	-1.1
	baz=283						
IVSH	V-Sauoahnukur	0.87	74	S	Sg	08 45 22.1	-4.9
	baz=79						
IVSH				P	Pg	08 45 11.7	-4.0
	baz=79						
ISNB	Snabyli	0.94	207	P	Pn	08 45 17.1	-2.1
	baz=209						
ISLY	Slysaalda	0.98	220	P	Pn	08 45 18.1	-1.6
	baz=221						
IRJU	Rjupnafell	1.06	205	P	Pn	08 45 19.2	-1.5
	baz=207						
IMJO	Mjoaskard	1.08	234	P	Pn	08 45 20.3	-0.9
	baz=233						
IMEL	Melhnausar	1.09	23	P	Pn	08 45 15.0	-6.2
	baz=21						
IREN	Reynihlio	1.12	17	P	Pn	08 45 15.8	-5.9
	baz=14						
IKVO	Krokottuvotn	1.19	16	P	Pn	08 45 17.1	-5.5
	baz=13						
IGRS	Grimsstaoir	1.25	31	P	Pn	08 45 17.9	-5.5
	baz=30						
ISKI	Skildingahlsh	1.33	12	P	Pn	08 45 19.4	-5.1
	baz=8.8						
IGHA	Grjothals	1.34	18	P	Pn	08 45 19.5	-5.2
	baz=16						
IGRA	Granastaoir	1.35	2	P	Pn	08 45 20.0	-4.7
	baz=358						
BORG	Borgarnes	1.58	278	Pn	Pb	08 45 26.8	-2.0
	35nm,0.3s,baz=88,slow=6.1,SNR=48						
BORG				Sn	Sg	08 45 50.7	+1.0
	20nm,0.3s,baz=50,slow=22,SNR=9.1						
BORG	Borgarnes	1.58	278		Pb	08 45 27.0	-1.8
BORG				Sn	Sg	08 45 49.3	-0.4
SCO	Scoresbysund	6.15	346		Pn	08 46 29.8	-0.9
SCO				Sn	Sn	08 47 41.5	+0.1
SCO	Scoresbysund	6.15	346	*e*	Pn	08 46 26.2	-4.5
	baz=180,slow=7.4						
SCO				*i* P	Pn	08 46 30.0	-0.7
SCO				*i* S	Sn	08 47 43.8	+2.3
SCO				IAML		08 47 51.6	
	comp=Z,1.7nm,0.5s						
SUMG	Summit	10.97	326	Pn	Pn	08 47 37.9	+0.9
EKA	Eskdalemuir Ar	11.75	135	Pn	Pn	08 47 47.5	+0.1
	baz=326,slow=13,SNR=4.8						
ESK	Eskdalemuir	11.75	135	Pn	Pn	08 47 47.9	+0.6
NOA	NORSAR Array B	13.61	92	Pn	Pn	08 48 14.0	+1.3
	comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=2.0						
CLL	Collm	20.74	115	*e*P	P	08 49 41.0	+0.6
CLL				*e*		08 49 49.0	
BRG	Berggiesshubel	21.45	115	*e*P	P	08 49 48.4	+0.3
	comp=Z,8.6nm,1.3s						
GEC2	GERESS Array S	22.98	118	P	P	08 50 03.4	-1.2
GERES	GERESS Array B	22.98	118	P	P	08 50 05.8	+1.2
	comp=Z,0.4nm,0.3s,baz=262,slow=9.3,SNR=5.8						
GERES	GERESS Array B	22.98	118	P	P	08 50 02.7	-1.9
SCHQ	Schefferville	25.96	271	P	P	08 50 32.2	-0.3
ESDC	Sonseca Array	26.20	156	P	P	08 50 35.4	+0.6
	comp=Z,1.0nm,0.8s,baz=343,slow=7.7,SNR=4.4						
ARU	Arti	36.19	66	P	P	08 52 02.6	+0.2
ARU				IAmb	IAmb	08 52 05.4	
	comp=Z,5.0nm,1.0s						
KBZ	Khabaz	39.19	92	P	P	08 52 30.2	+2.3
	comp=Z,1.8nm,0.7s,baz=323,slow=8.0,SNR=4.3						
ABKAR	Akbulak array	42.09	73	P	P	08 52 51.3	-0.5
ILAR	Eielson Array	45.73	332	P	P	08 53 22.1	+1.3
	comp=Z,1.3nm,1.1s,baz=30,slow=5.3,SNR=7.3						
ILAR				PcP	PcP	08 54 58.7	+0.3
	comp=Z,0.3nm,0.7s,baz=48,slow=2.1,SNR=4.1						
ILAR	Eielson Array	45.73	332	P	P	08 53 20.7	-0.1
IMAR	Indian Mountai	45.91	337	P	P	08 53 22.2	-0.1
TOA0	Torodi Ar. Sit	53.09	156	P	P	08 54 15.8	-1.7
TOA0

WNVZ	**Wahianoa**	**1.57**	**37**	P	Pn	08 55 38.9	+0.1
MOVZ	**Moawhango**	**1.58**	**42**	P	Pn	08 55 38.8	-0.2
DRZ	**Dome Shelter**	**1.59**	**35**	P	Pn	08 55 40.1	+0.7
ANWZ	**Angora Road**	**1.59**	**86**	P	Pn	08 55 39.3	+0.2
WHVZ	**Whangaehu Hut**	**1.60**	**36**	P	Pn	08 55 39.7	+0.3
FWVZ	**Far West T-bar**	**1.61**	**34**	P	Pn	08 55 39.6	+0.1
THZ	**Tophouse**	**1.62**	**223**	P	Pn	08 55 40.0	+0.5
TUVZ	**Tukino**	**1.64**	**37**	P	Pn	08 55 40.2	+0.3
WPHZ	**Waipukurau**	**1.65**	**72**	P	Pn	08 55 39.7	-0.1
BHHZ	**Black Hill Sta**	**1.69**	**50**	P	Pn	08 55 38.1	-2.2
NGZ	**Ngauruhoe**	**1.69**	**34**	P	Pn	08 55 40.6	+0.1
TWVZ	**Taurewa**	**1.72**	**28**	P	Pn	08 55 40.5	-0.2
OTVZ	**Oturere**	**1.73**	**35**	P	Pn	08 55 40.7	-0.3
WTVZ	**West Tongariro**	**1.74**	**32**	P	Pn	08 55 40.6	-0.4
ETVZ	**East Tongariro**	**1.77**	**35**	P	Pn	08 55 41.6	+0.1
TMVZ	**Te Maari**	**1.79**	**35**	P	Pn	08 55 41.9	+0.2
KRHZ	**Kereru**	**1.79**	**59**	P	Pn	08 55 41.0	-0.5
KHZ	**Kahutara**	**1.93**	**199**	P	Pn	08 55 44.1	+0.8
KWHZ	**Kaweka Forest**	**1.95**	**54**	P	Pn	08 55 43.3	-0.4
KAHZ	**Kahuranaki**	**2.06**	**68**	P	Pn	08 55 44.8	-0.4
HIZ	**Hauiti**	**2.10**	**10**	P	Pn	08 55 45.9	+0.2
MCHZ	**McNeill Hill**	**2.11**	**58**	P	Pn	08 55 45.4	-0.4
BKZ	**Black Stump Fm**	**2.15**	**49**	P	Pn	08 55 45.7	-0.7
DSZ	**Denniston Nort**	**2.27**	**239**	P	Pn	08 55 47.4	-0.4
MRHZ	**Matea Rd**	**2.35**	**42**	P	Pn	08 55 47.9	-1.1
NMHZ	**Naumai**	**2.38**	**52**	P	Pn	08 55 48.7	-0.7
TLZ	**Tolley Road**	**2.43**	**22**	P	Pn	08 55 50.2	+0.2
MTHZ	**Maungataniwha**	**2.57**	**48**	P	Pn	08 55 49.9	-1.9
GVZ	**Greta Valley S**	**2.58**	**203**	P	Pn	08 55 52.0	0.0
RAHZ	**Arahi**	**2.67**	**52**	P	Pn	08 55 51.2	-1.9
LTZ	**Lake Taylor**	**2.70**	**215**	P	Pn	08 55 53.4	-0.2
MUGZ	**Murupara**	**2.80**	**42**	P	Pn	08 55 53.1	-1.8
TOZ	**Tahuroa Road**	**2.98**	**17**	P	Pn	08 55 57.9	+0.6
INZ	**Inchbonnie**	**3.07**	**225**	P	Pn	08 55 58.2	-0.3
OXZ	**Oxford**	**3.25**	**212**	P	Pn	08 55 59.9	-1.0
MWZ	**Matawai**	**3.31**	**48**	P	Pn	08 55 59.6	-2.2
MQZ	**McQueen's Vall**	**3.37**	**202**	P	Pn	08 56 01.0	-1.5
TKGZ	**Te Karaka**	**3.43**	**52**	P	Pn	08 56 01.4	-1.9
MKAZ	**Moumakai**	**3.53**	**10**	P	Pn	08 56 05.2	+0.5
MHCZ	**Mount Hutt**	**3.61**	**215**	P	Pn	08 56 05.5	-0.4
RUGZ	**Raukumara Rang**	**3.66**	**45**	P	Pn	08 56 03.7	-2.8
TWGZ	**Tauwhareparae**	**3.68**	**50**	P	Pn	08 56 05.2	-1.6
WVZ	**Waitaha Valley**	**3.69**	**227**	P	Pn	08 56 08.6	+1.9
HAZ	**Te Kaha**	**3.87**	**44**	P	Pn	08 56 06.0	-3.2
PKGZ	**Pakihiroa**	**3.93**	**48**	P	Pn	08 56 08.0	-2.3
FOZ	**Fox Glacier**	**4.50**	**228**	P	Pn	08 56 17.3	-0.5
ODZ	**Otahua Downs**	**5.23**	**211**	P	Pn	08 56 26.8	-0.9
JCZ	**Jackson Bay**	**5.42**	**228**	P	Pn	08 56 29.3	-1.0
CTZ	**Chatham Island**	**7.38**	**118**	P	Pn	08 56 57.1	+0.1

*DNK **06** 09:00:31.3±0.9, 59°58N×25°10E, h0km, ML2.4(UPP), Suspected explosion*
*LVSN **06** 09:00:33.9±2.1, 59°54N×24°74E, h0km±18km, ML2.5*
*IDC **06** 09:00:33.2±3.0, 59°47N×24°97E, h0km, mb1 3.4/4, mb1mx3.1/52, mbtmp3.3/4, ML2.5/4, Error ellipse: s-maj=36.9km s-min=10.6km az=149.0*
*UPP **06** 09:00:34.0±2.3, 59°61N×24°78E, h0km, ML2.4, Suspected explosion*
*NAO **06** 09:00:34.2±1.0, 59°56N×24°81E, ML2.3*
*HEL **06** 09:00:34.3±0.1, 59°54N×24°68E, h0km, ML2.2, ML2.4(UPP), Explosion*
*BER **06** 09:00:35.8±4.8, 59°46N×24°73E, h0km, ML2.0, ML2.3(NAO), Suspected explosion*

ISC 06 09:00:32.5±0.7, **59°53N**±0°02×**24°64E**±0°02, **h0km**, **n82,** σ1§**82**/120, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARBE	**Arbavere**	**0.69**	**97**	*e*P	**Pg**	**09 00 46.1**	**+0.3**
ARBE				*e*S	**Sg**	**09 00 54.8**	**+0.1**
MEF	**Metsahovi**	**0.70**	**350**	*e*P	**Pb**	**09 00 46.8**	**-0.8**
MEF				*e*S	**Sg**	**09 00 55.8**	**+0.7**
MEF	comp=N,33nm,0.5s			AML	AML	09 01 01.9	
MEF	comp=Z,68nm,0.7s			AML	AML	09 01 02.0	
MEF	comp=E,38nm,0.1s			AML	AML	09 01 06.2	
MEF	**Metsahovi**	**0.70**	**350**	*e*P	**Pb**	**09 00 46.9**	**-0.8**
MEF				*e*S	**Sg**	**09 00 55.7**	**+0.6**
MTSE	**Matsula**	**0.92**	**208**	*e*P	**Pb**	**09 00 51.8**	**+0.5**
MTSE				*e*S	**Sg**	**09 01 03.1**	**+1.2**
MTSE	**Matsula**	**0.92**	**208**	*e*P	**Pb**	**09 00 51.9**	**+0.5**
MTSE				*e*S	**Sg**	**09 01 02.8**	**+0.8**
PVF	**Pernaja**	**1.19**	**30**	*e*P	**Pg**	**09 00 55.0**	**-0.3**
PVF				*e*S	**Sg**	**09 01 09.9**	**-0.9**
VSU	**Vasula**	**1.52**	**134**	Pg	**Pg**	**09 01 01.5**	**-0.1**
VSU				Lg	Lg	09 01 20.9	
VSU	**Vasula**	**1.52**	**134**	*e*P	**Pg**	**09 01 01.7**	**0.0**
VSU				*e*S	**Sg**	**09 01 20.8**	**-0.6**
VSU	comp=Z,107nm,0.2s			AML	AML	09 01 26.1	
VSU	comp=E,159nm,0.4s			AML	AML	09 01 29.3	
VSU	comp=N,195nm,0.3s			AML	AML	09 01 29.8	
VSU	**Vasula**	**1.52**	**134**	*e*P	**Pg**	**09 01 01.6**	**0.0**
VSU				*e*S	**Sg**	**09 01 21.1**	**-0.2**
VSU	**Vasula**	**1.52**	**134**	Pg	**Pg**	**09 01 01.5**	**0.0**
VSU				Sg	**Sg**	**09 01 20.9**	**-0.4**
VJF	**Virojoki**	**1.78**	**54**	*e*P	**Pb**	**09 01 05.1**	**-0.9**
VJF				*e*S	**Sb**	**09 01 27.7**	**-1.1**
FIA0	**FINESS Array S** baz=182,slow=16	**2.05**	**20**	Pn	**Pb**	**09 01 10.3**	**-0.2**
FIA0	baz=200,slow=28			Lg	Lg	09 01 36.6	
FIA0	baz=185,slow=37			Rg	Rg	09 01 46.3	
FIA0	**FINESS Array S**	**2.05**	**20**	*e*P	**Pb**	**09 01 10.0**	**-0.5**
FIA0				*e*S	**Sb**	**09 01 35.5**	**-1.1**
FIA0	**FINESS Array S** baz=182,slow=16	**2.05**	**20**	Pn	**Pb**	**09 01 10.3**	**-0.2**
FIA0	baz=185,slow=37			Sg	**Sg**	**09 01 46.3**	**+7.9**
FINES	**FINESS Array B** comp=N,7.4nm,0.3s,baz=191,slow=14,SNR=202	**2.05**	**20**	Pn	**Pb**	**09 01 10.1**	**-0.5**
FINES	comp=N,7.2nm,0.3s,baz=199,slow=26,SNR=21			Sn	**Sb**	**09 01 36.3**	**-0.3**
FIA1	**FINESS Array S**	**2.05**	**20**	*e*P	**Pb**	**09 01 10.0**	**-0.6**
FIA1				*e*S	**Sb**	**09 01 35.8**	**-0.8**
RAF	**Rauma**	**2.08**	**318**	*e*P	**Pg**	**09 01 12.2**	**0.0**
RAF				*e*S	**Sg**	**09 01 39.6**	**+0.5**
RAF	comp=N,42nm,0.2s			AML	AML	09 01 42.9	
RAF	comp=Z,28nm,0.2s			AML	AML	09 01 43.1	
RAF	comp=E,29nm,0.2s			AML	AML	09 01 43.7	
RAF	**Rauma**	**2.08**	**318**	*e*S	**Sb**	**09 01 36.8**	**-0.4**
RAF	comp=Z,15nm,0.1s			MSG		09 01 42.4	
SLIT	**Slitere, Latvi**	**2.27**	**214**	*e*P	**Pb**	**09 01 14.8**	**+0.6**
SLIT	comp=Z,337nm,0.2s			AML	AML	09 01 15.3	
SLIT	comp=E,292nm,0.3s			AML	AML	09 01 47.2	
SLIT	comp=N,258nm,0.5s			AML	AML	09 01 50.6	
AAL	**Aland**	**2.43**	**288**	P	**Pb**	**09 01 15.4**	**-1.7**
AAL				S	**Sb**	**09 01 48.3**	**+0.7**
AAL	**Aland**	**2.43**	**288**	*e*P	**Pn**	**09 01 15.3**	**+1.9**
AAL				*e*S	**Sn**	**09 01 45.5**	**+1.6**
KEF	**Keuruu**	**2.65**	**2**	*e*P	**Pb**	**09 01 18.9**	**-1.9**
KEF				*e*S	**Sn**	**09 01 50.8**	**+1.5**
KEF	comp=Z,6.6nm,0.1s			MSG		09 01 56.2	
KAF	**Kangasniemi**	**2.72**	**17**	*e*P	**Pb**	**09 01 19.4**	**-2.5**
KAF				*e*S	**Sn**	**09 01 52.4**	**+1.4**
KAF	comp=Z,7.5nm,0.1s			MSG		09 01 57.1	
NRTU	**Norrtaelje**	**3.06**	**275**	P	**Pn**	**09 01 23.9**	**+1.9**
NRTU	**Norrtaelje**	**3.06**	**275**	*e*P	**Pn**	**09 01 23.9**	**+1.9**
NRTU	**Norrtaelje**	**3.06**	**275**	P	**Pn**	**09 01 23.9**	**+1.9**
GRAU	**Graesoe**	**3.18**	**287**	P	**Pn**	**09 01 25.1**	**+1.5**
GRAU				S	**Sn**	**09 02 04.5**	**+2.3**
GRAU	**Graesoe**	**3.18**	**287**	*e*P	**Pn**	**09 01 25.1**	**+1.5**
GRAU				*e*S	**Sn**	**09 02 04.5**	**+2.3**
GRAU	**Graesoe**	**3.18**	**287**	P	**Pn**	**09 01 25.1**	**+1.5**
GRAU				S	**Sn**	**09 02 04.5**	**+2.3**
FORU	**Forsmark**	**3.36**	**288**	P	**Pn**	**09 01 28.3**	**+2.1**
FORU	**Forsmark**	**3.36**	**288**	*e*P	**Pn**	**09 01 28.3**	**+2.1**
FORU	**Forsmark**	**3.36**	**288**	P	**Pn**	**09 01 28.3**	**+2.1**
NYNU	**Nynaeshamn**	**3.45**	**264**	P	**Pn**	**09 01 29.9**	**+2.5**
NYNU	**Nynaeshamn**	**3.45**	**264**	*e*P	**Pn**	**09 01 29.9**	**+2.5**
NYNU	**Nynaeshamn**	**3.45**	**264**	P	**Pn**	**09 01 29.9**	**+2.5**
GOTU	**Gotland**	**3.67**	**242**	P	**Pn**	**09 01 33.3**	**+2.8**
GOTU	**Gotland**	**3.67**	**242**	*e*P	**Pn**	**09 01 33.3**	**+2.8**
GOTU	**Gotland**	**3.67**	**242**	P	**Pn**	**09 01 33.3**	**+2.8**
FIBU	**Brunna**	**3.71**	**279**	P	**Pn**	**09 01 33.5**	**+2.5**
FIBU	**Brunna**	**3.71**	**279**	P	**Pn**	**09 01 33.5**	**+2.5**
BACU	**Backbrunna**	**3.83**	**278**	P	**Pn**	**09 01 34.9**	**+2.2**
BACU	**Backbrunna**	**3.83**	**278**	*e*P	**Pn**	**09 01 34.9**	**+2.2**
BACU	**Backbrunna**	**3.83**	**278**	P	**Pn**	**09 01 34.9**	**+2.2**
OSTU	**Oestervaala**	**3.85**	**284**	P	**Pn**	**09 01 34.6**	**+1.7**
OSTU	**Oestervaala**	**3.85**	**284**	*e*P	**Pn**	**09 01 34.6**	**+1.7**
OSTU	**Oestervaala**	**3.85**	**284**	P	**Pn**	**09 01 34.6**	**+1.7**
IGGU	**Iggoen**	**3.90**	**293**	P	**Pn**	**09 01 35.5**	**+2.0**
IGGU	**Iggoen**	**3.90**	**293**	*e*P	**Pn**	**09 01 35.5**	**+2.0**
IGGU	**Iggoen**	**3.90**	**293**	P	**Pn**	**09 01 35.5**	**+2.0**
ARNU	**Arnoeviken**	**4.19**	**304**	P	**Pn**	**09 01 39.2**	**+1.7**
ARNU	**Arnoeviken**	**4.19**	**304**	*e*P	**Pn**	**09 01 39.2**	**+1.7**
ARNU	**Arnoeviken**	**4.19**	**304**	P	**Pn**	**09 01 39.2**	**+1.7**
ESKU	**Eskilstuna**	**4.23**	**270**	P	**Pn**	**09 01 40.5**	**+2.4**
ESKU	**Eskilstuna**	**4.23**	**270**	*e*P	**Pn**	**09 01 40.5**	**+2.4**
ESKU	**Eskilstuna**	**4.23**	**270**	P	**Pn**	**09 01 40.5**	**+2.4**
VIKU	**Vikbolandet**	**4.23**	**259**	P	**Pn**	**09 01 40.1**	**+1.9**
VIKU	**Vikbolandet**	**4.23**	**259**	*e*P	**Pn**	**09 01 40.1**	**+1.9**
VIKU	**Vikbolandet**	**4.23**	**259**	P	**Pn**	**09 01 40.1**	**+1.9**
HFS	**Hagfors** baz=103,slow=8.6	**5.55**	**281**	Pn	**Pn**	**09 01 58.3**	**+2.0**
HFS	baz=91,slow=37			Sn	**Sn**	**09 03 01.8**	**+1.0**
HFS	baz=104,slow=37			Lg	Lg	09 03 31.6	
HFS	**Hagfors** comp=Z,0.3nm,0.3s,baz=99,slow=16,SNR=13	**5.55**	**281**	Pn	**Pn**	**09 01 57.7**	**+1.3**
HFS	comp=Z,0.8nm,0.3s,baz=105,slow=22,SNR=6.8			Sn	**Sn**	**09 03 02.2**	**+1.4**
HFS	comp=Z,1.3nm,0.3s,baz=86,slow=29,SNR=6.2			Lg	Lg	09 03 28.4	
HFS	**Hagfors** baz=103,slow=8.6	**5.55**	**281**	Pn	**Pn**	**09 01 58.3**	**+2.0**
HFS	baz=91,slow=37			Sn	**Sn**	**09 03 01.8**	**+1.0**
HFS	baz=104,slow=37			Sg	**Sg**	**09 03 31.6**	**+0.9**
BORU	**Boraas**	**6.49**	**258**	*i* P	**Pn**	**09 02 11.4**	**+2.2**
DEL	**Delary**	**6.49**	**247**	*i* P	**Pn**	**09 02 10.4**	**+1.2**
DEL	comp=Z,1.8nm,0.4s			IAML		09 04 02.5	
NRA0	**NORESS Array S** baz=85,slow=11	**6.66**	**286**	Pn	**Pn**	**09 02 12.0**	**+0.6**
NRA0	baz=94,slow=28			Sn	**Sn**	**09 03 25.6**	**-2.3**
NRA0	baz=92,slow=37			Lg	Lg	09 04 02.5	
NRA0	**NORESS Array S** baz=85,slow=11	**6.66**	**286**	Pn	**Pn**	**09 02 12.0**	**+0.6**
NRA0	baz=94,slow=28			Sn	**Sn**	**09 03 25.6**	**-2.3**
NRA0	baz=92,slow=37			Sg	**Sg**	**09 04 02.5**	**-3.5**
NB2	**NORSAR Subarra** baz=96,slow=14	**6.85**	**289**	Pn	**Pn**	**09 02 14.4**	**+0.3**
NB2	baz=102,slow=28			Sn	**Sn**	**09 03 29.8**	**-2.8**
NB2	**NORSAR Subarra** baz=96,slow=14	**6.85**	**289**	Pn	**Pn**	**09 02 14.4**	**+0.3**
NB2	baz=102,slow=28			Sn	**Sn**	**09 03 29.8**	**-2.8**
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=99,slow=17,SNR=8.8	**6.85**	**289**	Pn	**Pn**	**09 02 13.9**	**-0.2**
NOA	comp=Z,0.0nm,0.3s,baz=294,slow=18,SNR=2.1			Sn	**Sn**	**09 03 32.5**	**-0.2**
NOA	comp=Z,0.1nm,0.3s,baz=80,slow=14,SNR=3.5			Lg	Lg	09 04 03.9	
BSD	**Bornholm Skovb** baz=23,slow=11	**6.87**	**234**	*e*	**Pn**	**09 02 11.7**	**-2.7**
BSD				*i* P	**Pn**	**09 02 15.1**	**+0.7**
BSD				*e*S	**Sn**	**09 03 30.0**	**-3.3**
BSD	comp=Z,1.3nm,0.5s			IAML		09 03 44.2	
BSD	**Bornholm Skovb** baz=23,slow=11	**6.87**	**234**	*e*	**Pn**	**09 02 11.7**	**-2.7**
BSD				*i* P	**Pn**	**09 02 15.1**	**+0.7**
BSD				*e*S	**Sn**	**09 03 30.0**	**-3.3**
BSD	comp=Z,1.3nm,0.5s			IAML		09 03 44.2	
STRU	**Stroemstad**	**6.91**	**272**	*i* P	**Pn**	**09 02 16.3**	**+1.4**
STRU				*e*S	**Sn**	**09 03 32.5**	**-1.7**
TJOU	**Tjoern**	**6.93**	**263**	*i* P	**Pn**	**09 02 17.1**	**+1.9**
ONAU	**Onsala**	**7.01**	**258**	*i* P	**Pn**	**09 02 18.0**	**+1.7**
HOMB	**Homborsund**	**8.45**	**268**	*i* P	**Pn**	**09 02 35.8**	**-0.2**
HOMB	comp=Z,2.2nm,0.4s			IAML		09 04 10.2	
HOMB	**Homborsund**	**8.45**	**268**	*i* P	**Pn**	**09 02 35.8**	**-0.2**
HOMB	comp=Z,2.2nm,0.4s			IAML		09 04 10.2	
APA0	**Apatity Array** baz=197,slow=14	**8.91**	**21**	Pn	**Pn**	**09 02 41.7**	**-0.7**
APA0	**Apatity Array** baz=197,slow=14	**8.91**	**21**	Pn	**Pn**	**09 02 41.7**	**-0.7**
SNART	**Snartemo**	**9.09**	**270**	*i* P	**Pn**	**09 02 44.4**	**-0.4**
SNART	comp=Z,1.8nm,0.4s			IAML		09 04 56.2	
SNART	**Snartemo**	**9.09**	**270**	*i* P	**Pn**	**09 02 44.4**	**-0.4**
SNART	comp=Z,1.8nm,0.4s			IAML		09 04 56.2	
ARA0	**ARCESS Array S** baz=177,slow=14	**10.06**	**2**	Pn	**Pn**	**09 02 57.1**	**-0.9**
ARA0	**ARCESS Array S** baz=177,slow=14	**10.06**	**2**	Pn	**Pn**	**09 02 57.1**	**-0.9**
ARCES	**ARCESS Array B** baz=180,slow=13,SNR=13	**10.06**	**2**	Pn	**Pn**	**09 02 57.0**	**-1.0**

NNC 06 09:00:33.1±2.3, **54°57N**×**85°88E, h0km, mb3.8, mpv2.9, 3C-2D, Error ellipse: s-maj=87.4km s-min=13.1km az=137.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array** 0.2nm,0.2s	**0.88**	**226**	⇑P	Pg	09 00 49.8	-0.1
ZAA0	1.7nm,0.4s			⇑S	Sg	09 01 02.3	+1.0
KURBB	**Kurchatov Arra** 1.2nm,0.3s	**5.97**	**232**	⇓Pn	Pn	09 02 04.4	+1.8
KURBB	2.8nm,0.9s			⇑Sn	Sn	09 03 13.4	+1.7
KURBB	4.0nm,0.7s			⇓Lg	Lg	09 03 43.7	
MK31	**Makanchi Array** 2.3nm,0.7s,baz=24,slow=14,SNR=21	**8.11**	**198**	Pn	Pn	09 02 32.9	+0.9

WEL 06 09:06:23.3, 39°S±4°×**17°8E**±°, **h28km**±3km, **M1.4/6, ML1.6/6, MLv1.4/6, Error ellipse: s-maj=0.0km s-min=0.0km az=171.6, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIGZ	**Rimuhau**	**0.14**	**215**	P	Pb	09 06 29.0	+0.3
RIGZ				S	Sb	09 06 34.2	+1.8
RIGZ	**Rimuhau**	**0.14**	**215**	P	Pb	09 06 29.1	+0.4
TKGZ	**Te Karaka**	**0.15**	**356**	P	Pb	09 06 28.9	+0.1
TKGZ				S	Sb	09 06 33.7	+1.2
TKGZ	**Te Karaka**	**0.15**	**356**	P	Pb	09 06 28.8	+0.1
TKGZ				S	Sb	09 06 33.6	+1.2
RAGZ	**Rawiri**	**0.36**	**285**	P	Pb	09 06 31.8	+0.2
RAGZ				S	Sn	09 06 38.7	-0.4
RAGZ	**Rawiri**	**0.36**	**285**	P	Pn	09 06 38.5	+5.7
MWZ	**Matawai**	**0.37**	**314**	P	Pb	09 06 31.6	-0.1
MWZ				S	Sb	09 06 38.0	+0.7
MWZ	**Matawai**	**0.37**	**314**	P	Pb	09 06 31.6	-0.1
MWZ				S	Sb	09 06 38.0	+0.8
TWGZ	**Tauwhareparae**	**0.43**	**13**	P	Pn	09 06 33.1	-0.5
TWGZ				S	Sn	09 06 41.4	+0.8
RUGZ	**Raukumara Rang**	**0.64**	**347**	P	Pb	09 06 35.7	-0.4
RUGZ				S	Sn	09 06 45.6	-0.5
RUGZ	**Raukumara Rang**	**0.64**	**347**	P	Pb	09 06 35.7	-0.4
RTZ	**Ruatahuna**	**0.69**	**268**	P	Pb	09 06 37.0	+0.1
MRHZ	**Matea Rd**	**1.16**	**258**	P	Pn	09 06 35.8	-7.9

WEL 06 09:06:26.3, 40°6S±0°8×**17°6E**±°, **h28km**±1km, **M1.5/6, ML1.5/6, MLv1.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=97.9, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRWZ	**Pori Road**	**0.04**	**82**	P	Pb	09 06 31.5	+0.5
PRWZ				S	Sb	09 06 35.2	+1.0
POWZ	**Post Office Ro**	**0.20**	**326**	P	Pn	09 06 33.0	-0.5
POWZ				S	Sb	09 06 36.9	+0.6
TIWZ	**Tintock**	**0.22**	**187**	P	Pn	09 06 37.8	+4.0
BFZ	**Birch Farm**	**0.28**	**116**	P	Pb	09 06 33.5	+0.3
BFZ				S	Sb	09 06 38.8	+0.9
MRZ	**Mangatainoka R**	**0.28**	**249**	P	Pb	09 06 33.6	+0.3
MRZ				S	Sn	09 06 38.9	-0.9
DVHZ	**Dannevirke**	**0.32**	**36**	P	Pb	09 06 34.2	+0.3
DVHZ				S	Sb	09 06 39.8	+0.8
HOWZ	**Holdsworth Sta**	**0.46**	**222**	P	Pn	09 06 36.5	-0.5
TSZ	**Takapari Road**	**0.50**	**4**	P	Pn	09 06 37.2	-0.5
TSZ				S	Sn	09 06 45.0	-0.4
TMWZ	**Te Maipa**	**0.55**	**182**	P	Pn	09 06 37.9	-0.3
TMWZ				S	Sn	09 06 47.1	+0.6

IDC 06 09:15:15.2±11.0, **15°08S**×**165°44E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/33, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=202.2km s-min=9.5km az=46.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac** 0.3nm,0.3s,baz=31,slow=13,SNR=12	**7.02**	**172**	Pn	Pn	09 16 59.4	0.0
DZM	0.1nm,0.3s,baz=131,slow=20,SNR=2.0			Sn	Sn	09 18 17.1	-2.9
STKA	**Stephens Creek** 1.1nm,0.5s,baz=50,slow=9.0,SNR=5.6	**27.43**	**228**	P	P	09 21 02.8	0.0
WRA	**Warramunga Arr** 0.2nm,0.7s,baz=77,slow=6.4,SNR=2.3	**30.02**	**256**	P	P	09 21 26.1	0.0
ASAR	**Alice Springs** 0.3nm,0.6s,baz=76,slow=9.1,SNR=6.8	**30.90**	**249**	P	P	09 21 33.8	0.0

*NEIC **06** 09:17:08.8±1.4, 13°96N±0°08×144°7E±0°1, h194km±6km, mb4.3/16. Error ellipse: s-maj=16.2km s-min=11.1km az=63.0*
*IDC **06** 09:17:08.4±0.5, 13°97N×144°75E, h192km±3km, mb3.4/11, mb1 3.5/11, mb1mx3.3/55, mbtmp3.9/11, Error ellipse: s-maj=31.0km s-min=11.7km az=88.0*

ISC 06 09:17:09.4±0.6, **13°96N**±0°09×**144°6E**±0°2, **h200km**, **n30,** σ1§**13**/30, **mb4.1**/20, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam** 117nm,0.3s,baz=262,slow=2.2,SNR=54	**0.43**	**149**	P	**Pn**	**09 17 35.8**	**-0.5**
GUMO	364nm,0.3s,baz=345,slow=22,SNR=44			S	**Sn**	**09 17 55.2**	**-1.9**
PATS	**Pohnpei**	**15.19**	**116**		**Pn**	**09 20 33.5**	**-0.5**
JGF	**Kuroka**	**22.52**	**344**	P	**P**	**09 21 52.3**	**-0.1**
JGF	comp=Z,14nm,1.2s			IAmb	IAmb	09 22 08.1	
JWT	**Wachi**	**22.81**	**340**	P	**P**	**09 21 54.2**	**-0.7**
JNU	**Nakatsue** comp=Z,14nm,0.9s,baz=205,slow=0.8,SNR=4.2	**22.83**	**329**	P	**P**	**09 21 55.2**	**0.0**
JNU	**Nakatsue**	**22.83**	**329**	P	**P**	**09 21 54.8**	**-0.4**
MJAR	**Matsushiro Arr** comp=Z,4.4nm,0.8s,baz=173,slow=10.0,SNR=8.2	**23.21**	**347**	P	**P**	**09 21 58.0**	**-0.6**
MAJO	**Matsushiro** comp=Z,8.6nm,0.8s	**23.22**	**347**	P	**P**	**09 21 58.7**	**+0.1**
MAJO				IAmb	IAmb	09 22 00.5	
JHS	**Saijyo**	**23.39**	**336**	P	**P**	**09 22 00.6**	**+0.4**
JSD	**Sado**	**24.64**	**348**	P	**P**	**09 22 11.8**	**+0.2**
KSRS	**Korea Array** comp=Z,1.2nm,0.4s,baz=142,slow=9.3,SNR=4.9	**27.74**	**331**	P	**P**	**09 22 38.8**	**-0.5**
CTA	**Charters Tower** comp=Z,1.1nm,0.6s,baz=27,slow=6.8,SNR=1.1	**33.87**	**177**	P	**P**	**09 23 32.8**	**-0.4**
WB0	**Warramunga Arr** comp=Z,5.2nm,1.1s	**35.00**	**197**	P	**P**	**09 23 40.5**	**-2.5**
WB0				IAmb	IAmb	09 23 42.9	
WR0	**Warramunga Arr** comp=Z,7.0nm,1.4s	**35.14**	**197**	P	**P**	**09 23 43.2**	**-0.9**
WR0				IAmb	IAmb	09 24 10.1	
WB2	**Warramunga Arr** comp=Z,3.4nm,0.6s	**35.18**	**197**	P	**P**	**09 23 42.0**	**-2.5**
WB2				IAmb	IAmb	09 23 45.2	
WRA	**Warramunga Arr** comp=Z,1.7nm,0.7s,baz=16,slow=9.3,SNR=41	**35.18**	**197**	P	**P**	**09 23 44.5**	**0.0**
AS31	**Alice Springs**	**38.84**	**196**	P	**P**	**09 24 14.8**	**-0.5**
ASAR	**Alice Springs** comp=Z,0.4nm,0.4s,baz=16,slow=9.5,SNR=14	**38.84**	**196**	P	**P**	**09 24 14.8**	**-0.5**
DZM	**Mont Dzumac** comp=Z,3.1nm,0.5s,baz=293,slow=20,SNR=8.7	**41.70**	**149**	P	**P**	**09 24 41.6**	**+2.7**
STKA	**Stephens Creek** comp=Z,1.2nm,0.7s,baz=9.7,slow=7.8,SNR=4.0	**45.67**	**184**	P	**P**	**09 25 10.4**	**+0.2**
STKA	**Stephens Creek**	**45.67**	**184**	P	**P**	**09 25 10.3**	**0.0**
SONM	**Songino Array** comp=Z,0.6nm,0.6s,baz=127,slow=10,SNR=2.5	**46.30**	**325**	P	**P**	**09 25 16.4**	**+1.2**
BBOO	**Buckleboo**	**47.22**	**190**	P	**P**	**09 25 22.3**	**0.0**
BBOO	comp=Z,10nm,1.4s			IAmb	IAmb	09 25 49.8	
FORT	**Forrest**	**47.25**	**200**	P	**P**	**09 25 23.0**	**+0.5**
FORT	comp=Z,13nm,0.9s			IAmb	IAmb	09 25 45.5	
TOO	**Toolangi**	**51.26**	**179**	P	**P**	**09

IANJ e 09 29 12.8
ISHM Shahmirzad 2.44 236 *e*Pn **Pn 09 28 38.7 +0.4**
ISHM e 09 29 20.5
IAKL Akhelmad 2.46 103 *e*Pn **Pn 09 28 37.8 -0.8**
IALA Alasht 2.63 246 *e*Pn **Pn 09 28 41.7 +0.7**
IPAY Payeh 2.69 105 *e*Pn **Pn 09 28 41.1 -0.6**
IPAY e 09 29 29.9
IFIR Firoozkooh 2.89 238 *e*Pn **Pn 09 28 45.4 +0.9**
IFIR e 09 28 51.5
ILAS Lasjerd 2.91 232 *e*Pn **Pn 09 28 43.8 -1.0**
ILAS e 09 29 34.8
IPRN Peran 2.92 252 *e*Pn **Pn 09 28 45.1 +0.3**
TNSJ Nastanj 3.31 168 *e*Pn **Pn 09 28 48.1 -2.0**
IDMV Damavand 3.43 243 *e*Pn **Pn 09 28 51.9 0.0**
IDMV e 09 30 10.0
DAMV Damavand 3.45 244 *e*Pn **Pn 09 28 51.5 -0.6**
DAMV Damavand 3.45 244 *e*Pn **Pn 09 28 51.5 -0.6**
IMYA Miami 3.58 103 *e*Pn **Pn 09 28 54.5 +0.6**
TABS Tabas 3.72 162 *e*Pn **Pn 09 28 55.3 -0.4**
TABS *e*Sg **Sb 09 29 50.4 +1.3**
TABS Tabas 3.72 162 *e*Pn **Pn 09 28 55.3 -0.4**
TKDS Koohdasht(Taba 3.75 163 *e*Pn **Pn 09 28 54.4 -1.8**
TKDS e 09 30 08.3
JRKH Jarkhoshk 3.91 108 *e*Pn **Pn 09 28 57.9 -0.4**
IVRN Varamin 3.95 237 *e*Pn **Pn 09 28 59.1 +0.2**
QALM Alamut, Qazvin 4.19 261 *e*Pn **Pn 09 29 02.2 -0.1**
TPRV Parvadeh(Tabas 4.24 170 *e*Pn **Pn 09 29 00.7 -2.1**
TPRV e 09 30 29.0
ANAR Anarak 4.34 203 *e*Pn **Pn 09 29 02.6 -1.7**
KRSH Karshahi 4.38 224 *e*Pn **Pn 09 29 03.6 -1.3**
IQOM Qom 4.48 240 *e*Pn **Pn 09 29 06.4 0.0**
GHVR GHOM 4.54 235 *e*Pn **Pn 09 29 06.5 -0.5**
GHVR IAML 09 30 34.3
comp=E,92nm,0.5s
GHVR IAML 09 30 40.9
comp=N,84nm,0.5s
GHVR GHOM 4.54 235 *e*Pn **Pn 09 29 06.5 -0.5**
AFRZ Afriz 4.61 144 *e*Pn **Pn 09 29 06.1 -1.9**
YZKH Yazd 4.90 192 *e*Pn **Pn 09 29 11.0 -1.0**
YZKH Yazd 4.90 192 *e*Pn **Pn 09 29 11.0 -1.0**
QAM Ghamsar 4.93 227 *e*Pn **Pn 09 29 12.0 -0.5**
ITEG Tejag 4.94 150 *e*Pn **Pn 09 29 11.7 -0.9**
NASN Na'in 5.03 210 *e*Pn **Pn 09 29 12.6 -1.3**
NASN Na'in 5.03 210 *e*Pn **Pn 09 29 12.6 -1.3**
IRAZ Razeghan 5.05 251 *e*Pn **Pn 09 29 14.3 +0.2**
ICHK Chekchek 5.08 193 *e*Pn **Pn 09 29 12.6 -1.9**
IZEF Zefreh 5.15 214 *e*Pn **Pn 09 29 14.4 -1.1**
QABG Abgarm-Qazvin 5.21 255 *e*Pn **Pn 09 29 15.3 -1.0**
ASAO Ashtian 5.37 242 *e*Pn **Pn 09 29 18.1 -0.4**
ASAO Ashtian 5.37 242 *e*Pn **Pn 09 29 18.1 -0.4**
ISAD Sadrabad 5.55 199 *e*Pn **Pn 09 29 19.5 -1.6**
IDAH Dahanechah 5.58 142 *e*Pn **Pn 09 29 19.4 -2.1**
ASTR Astara 5.69 286 *e*Pn **Pn 09 29 21.9 -0.7**
IGAR Gharneh 5.69 214 *e*Pn **Pn 09 29 23.2 +0.3**
LKRN Lenkeran, Azer 5.73 287 *e*Pn **Pn 09 29 22.6 -0.6**
IMEH Mehriz 5.88 190 *e*Pn **Pn 09 29 24.6 -1.0**
BSRN Basiran 5.92 151 *e*Pn **Pn 09 29 24.8 -1.2**
BSRN Basiran 5.92 151 *e*Pn **Pn 09 29 24.8 -1.2**
HRA Herat 5.96 116 Pn **Pn 09 29 25.6 -1.1**
ALIB Äli-Bayra 5.97 299 *e*Pn **Pn 09 29 25.7 -0.8**
LRK Lerik 6.05 286 *e*Pn **Pn 09 29 26.9 -0.9**
IRAM Ramesheh 6.07 208 *e*Pn **Pn 09 29 27.8 -0.3**
GLBA Clilabad 6.16 292 *e*Pn **Pn 09 29 28.8 -0.3**
YRD Yardimli 6.18 288 *e*Pn **Pn 09 29 28.9 -0.8**
GBS Qobustan 6.28 304 *e*Pn **Pn 09 29 29.8 -1.1**
HSRG Sareghieh 6.37 254 *e*Pn **Pn 09 29 33.6 +1.3**
ISRB Sarab 6.47 278 *e*Pn **Pn 09 29 34.1 +0.4**
HSAM Samen 6.55 245 *e*Pn **Pn 09 29 35.3 +0.5**
KHGB Koh Gabri 6.84 175 *e*Pn **Pn 09 29 37.0 -1.7**
IHRS Heris 7.01 282 *e*Pn **Pn 09 29 41.3 +0.3**
KLNJ Kolanjah 7.09 210 *e*Pn **Pn 09 29 42.5 +0.3**
IMRD Marand 8.10 284 *e*Pn **Pn 09 29 56.0 +0.1**
GEVA Gevas 10.13 280 **Pn 09 30 23.4 -0.4**
AKH Akhalkalaki 10.40 298 Pn **Pn 09 30 28.4 +1.0**
KBZ Khabaz 11.77 308 Pn **Pn 09 30 45.9 -0.1**
comp=N,0.3nm,0.3s,baz=157,slow=7.9,SNR=6.1
KBZ Sn **Sn 09 32 56.8 -0.5**
comp=N,0.2nm,0.3s,baz=38,slow=17,SNR=1.9
KVAR Kislovodsk Arr 12.01 308 Sn **Sn 09 32 58.6 -4.7**
baz=122,slow=19,SNR=1.8
AB31 Akbulak array 12.42 13 Pn **Pn 09 30 53.2 -1.6**
comp=N,0.6nm,0.5s,baz=204,slow=14,SNR=9.0
AB31 ⇑Sn **Sn 09 33 12.2 -1.0**
comp=N,1.2nm,0.6s,baz=196,slow=22,SNR=4.3
ABKAR Akbulak array 12.42 13 **Pn 09 30 55.2 +0.4**
ABKAR Akbulak array 12.42 13 Pn **Pn 09 30 55.8 +0.9**
KKAR Karatay Array 12.71 58 Pn **Pn 09 30 59.6 +0.7**
AKTO Aktyubinsk 13.32 6 Pn **Pn 09 31 06.8 -0.3**
comp=N,0.3nm,0.3s,baz=186,slow=15,SNR=8.3
AKTO Sn **Sn 09 33 33.4 -1.8**
comp=N,0.2nm,0.3s,baz=38,slow=19,SNR=2.3
AKTO LR LR 09 37 29.9
comp=N,44nm,18.4s,baz=164,slow=43
AKTO Aktyubinsk 13.32 6 ⇑Pn **Pn 09 31 06.1 -1.1**
comp=N,3.6nm,0.8s
AKTO ⇓Sn **Sn 09 33 33.2 -2.1**
comp=N,3.3nm,0.7s
MMAI Mount Meron Ar 17.18 262 LR LR 09 39 14.3
comp=N,39nm,19.4s,baz=135,slow=40
BRTR Keskin Array B 17.51 285 P **P 09 32 05.9 +2.3**
comp=N,0.1nm,0.3s,baz=98,slow=13,SNR=2.2
BVAR Borovoye Array 18.82 28 P **Pn 09 32 18.4 +0.1**
comp=N,0.2nm,0.3s,baz=238,slow=31,SNR=6.7
EIL Elat 18.91 253 LR LR 09 41 01.2
comp=N,50nm,18.9s,baz=94,slow=42
KURBB Kurchatov Arra 21.07 43 P **P 09 32 44.6 +2.3**
comp=N,1.3nm,0.8s,baz=242,slow=12,SNR=7.1
MK31 Makanchi Array 21.82 56 P **P 09 32 51.9 +1.4**
MK31 IAmb IAmb 09 32 55.6
comp=Z,14nm,1.4s
MKAR Makanchi Array 21.82 56 P **P 09 32 53.1 +2.6**
comp=Z,1.2nm,0.6s,baz=242,slow=11,SNR=6.9
MKAR Makanchi Array 21.82 56 P **P 09 32 52.2 +1.8**
AKASG Malin Array Be 23.24 314 P **P 09 33 05.6 +0.3**
comp=Z,1.7nm,0.5s,baz=105,slow=8.4,SNR=3.9
MLR Muntele Rosu 23.77 300 LR LR 09 44 53.7
comp=Z,37nm,20.9s,baz=95,slow=43
IDI Anoyia 24.93 275 P **P 09 33 23.3 +1.8**
comp=Z,6.5nm,0.7s,baz=79,slow=4.8,SNR=4.1
ARCES ARCESS Array B 36.28 343 LR LR 09 51 53.9
comp=Z,23nm,21.8s,baz=45,slow=40
TLY Talaya 36.42 51 LR LR 09 50 03.6
comp=Z,35nm,18.8s,baz=298,slow=36
NRIK Noril'sk 36.51 18 LR LR 09 53 11.8
comp=Z,38nm,19.4s,baz=186,slow=41
SONM Songino Array 38.16 57 LR LR 09 51 05.4
comp=Z,36nm,18.2s,baz=28,slow=36
ESDC Sonseca Array 46.10 292 P **P 09 36 22.9 +0.5**
comp=Z,0.7nm,0.6s,baz=72,slow=7.1,SNR=5.3
TORD Torodi Ar. Bea 53.67 258 P **P 09 37 19.6 -0.6**
comp=Z,0.2nm,0.4s,baz=52,slow=8.4,SNR=3.5

*IDC **06** 09:28:56.0±4.7,24°.10S×66°.83W,h179km±42km,mb3.1/1, mb1 3.0/4,mb1mx2.9/25,mbtmp3.4/4,Error ellipse: s-maj=71.9km s-min=29.5km az=154.0*
*GUC **06** 09:28:57.4±0.6,24°.15S×67°.40W,h230km±8km,ML3.8*
ISC 06 09:28:56.5±1.4,**24°.12S**±0°.08×**67°.2W**±0°.1,**h207**km±15km, **n16**,σ0**s97/27,6C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.21**	**313**	P		P	**Pn**	**09 29 38.8**	**+0.7**
	5.8nm,0.3s,baz=112,slow=8.3,SNR=89								
LVC				S		**S**	**S**	**09 30 10.8**	**+0.7**
	33nm,0.3s,baz=218,slow=6.9,SNR=14								
LVC	**Limon Verde**	**2.21**	**313**	⇓*i*P			**Pn**	**09 29 38.8**	**+0.7**
LVC				*i* S			**S**	**09 30 10.5**	**+0.4**
PB15	**IPOC Station P**	**2.32**	**293**	⇑*i*P			**Pn**	**09 29 39.9**	**+0.8**
PB15				*i* S			**S**	**09 30 11.7**	**0.0**
GO02	**Mina Guanaco**	**2.45**	**245**	⇑*i*P			**Pn**	**09 29 40.8**	**+0.2**
GO02				*i* S			**S**	**09 30 14.6**	**+0.1**
GO02				IAML				09 30 15.8	
	comp=E,448nm,0.3s								
PB06	**IPOC Station P**	**2.64**	**302**	⇑*i*P			**Pn**	**09 29 43.3**	**+0.7**
PB06				*e*S			**S**	**09 30 17.8**	**-0.2**
PB06				IAML				09 30 22.1	
	comp=N,320nm,0.2s								
PB14	**IPOC Station P**	**3.01**	**260**	⇑*e*P			**Pn**	**09 29 47.0**	**+0.1**
PB14				*e*S			**S**	**09 30 24.2**	**-1.7**
PB14				IAML				09 30 26.9	
	comp=E,127nm,0.3s								
PB09	**IPOC Station P**	**3.02**	**320**	*e*P			**Pn**	**09 29 48.0**	**+1.0**
PB09				*e*S			**S**	**09 30 26.6**	**+0.9**
PB09				IAML				09 30 30.3	
	comp=N,81nm,0.4s								
PB05	**IPOC Station P**	**3.08**	**294**	⇑*i*P			**Pn**	**09 29 48.1**	**+0.6**
PB05				*i* S			**S**	**09 30 25.7**	**-1.3**
PB05				IAML				09 30 30.3	
	comp=E,104nm,0.3s								
PB03	**IPOC Station P**	**3.17**	**310**	*e*P			**Pn**	**09 29 49.2**	**+0.6**
PB03				*i* S			**S**	**09 30 28.2**	**-0.8**
PB04	**IPOC Station P**	**3.29**	**302**	*e*P			**Pn**	**09 29 50.6**	**+0.5**
PB04				*e*S			**S**	**09 30 30.5**	**-1.0**
PB07	**IPOC Station P**	**3.48**	**313**	⇑*e*P			**Pn**	**09 29 52.6**	**+0.3**
PB07				*i* S			**S**	**09 30 34.4**	**-1.2**
LPAZ	**La Paz**	**7.85**	**353**	P			**Pn**	**09 30 48.8**	**+0.4**
	comp=E,0.4nm,0.3s,baz=183,slow=8.5,SNR=10								
SIV	**San Ignacio**	**9.90**	**36**	P			**Pn**	**09 31 11.9**	**-2.5**
	comp=E,0.3nm,0.3s,baz=225,slow=14,SNR=5.8								
TORD	**Torodi Ar. Bea**	**76.74**	**69**	P			**P**	**09 40 25.7**	**+0.2**
	comp=E,0.3nm,0.5s,baz=253,slow=5.0,SNR=1.8								
WRA	**Warramunga Arr**	**131.46**	**207**	PKP			**PKiKP**	**09 47 47.4**	**+1.3**
	comp=E,0.2nm,0.5s,baz=157,slow=1.9,SNR=6.6								
MKAR	**Makanchi Array**	**146.70**	**40**	PKPbc			**PKiKP**	**09 48 16.4**	**+0.1**
	comp=E,0.6nm,0.5s,baz=307,slow=3.9,SNR=2.4								

*IDC **06** 09:41:20.0±1.4,13°.2N×144°.71E,h111km±49km,mb3.6/4, mb1 3.8/4,mb1mx3.3/46,mbtmp3.9/4,Error ellipse: s-maj=151.6km s-min=28.4km az=60.0*
*NEIC **06** 09:41:20.3±0.8,13°.21N±0°.10×144°.7E±0°.2,h116km±8km, mb4.3/7,Error ellipse: s-maj=25.6km s-min=13.8km az=96.0*
ISC 06 09:41:20.3±0.9,**13°.1N**±0°.1×**144°.5E**±0°.1,**h100**km,**n13**, σ0**s41/12,mb4.1/8,Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.64**	**33**	LR		LR	LR	09 41 35.9	
	comp=Z,55nm,18.5s,baz=293,slow=40								
GUMO				P			**Pn**	**09 41 37.2**	**0.0**
	148nm,0.3s,baz=334,slow=17,SNR=64								
GUMO				S			**Sn**	**09 41 50.3**	**+0.5**
	568nm,0.3s,baz=165,slow=20,SNR=62								
PATS	**Pohnpei**	**14.93**	**113**				**Pn**	**09 44 45.8**	**-0.4**
WB0	**Warramunga Arr**	**34.10**	**197**	P			**P**	**09 47 55.6**	**0.0**
WB0				IAmb		IAmb	IAmb	09 47 59.3	
	comp=Z,6.9nm,1.4s								
WR0	**Warramunga Arr**	**34.24**	**197**	P			**P**	**09 47 57.1**	**+0.3**
WR0				IAmb		IAmb	IAmb	09 47 58.2	
	comp=Z,10nm,1.5s								
WB2	**Warramunga Arr**	**34.28**	**197**	P			**P**	**09 47 57.0**	**-0.1**
WB2				IAmb		IAmb	IAmb	09 47 57.9	
	comp=Z,4.9nm,0.9s								
WRA	**Warramunga Arr**	**34.28**	**197**	P			**P**	**09 47 57.0**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=22,slow=9.7,SNR=19								
WRA	**Warramunga Arr**	**34.28**	**197**	IAmb		IAmb	IAmb	09 47 58.0	
	comp=Z,0.2nm,1.1s								
AS31	**Alice Springs**	**37.94**	**196**	P			**P**	**09 48 28.8**	**+0.5**
AS31				IAmb		IAmb	IAmb	09 48 30.4	
	comp=Z,1.2nm,0.6s								
ASAR	**Alice Springs**	**37.94**	**196**	P			**P**	**09 48 28.9**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=21,slow=12,SNR=45								
CMAR	**Chiang Mai Arr**	**44.09**	**283**	P			**P**	**09 49 18.5**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=83,slow=6.4,SNR=4.8								
STKA	**Stephens Creek**	**44.76**	**184**	P			**P**	**09 49 24.3**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=342,slow=16,SNR=3.1								
STKA	**Stephens Creek**	**44.76**	**184**	IAmb		IAmb	IAmb	09 49 33.4	
	comp=Z,0.8nm,1.3s								
BBOO	**Buckleboo**	**46.31**	**190**	P			**P**	**09 49 36.1**	**-0.1**

RSNC 06 09:59:08.7±1.1,**6°.81N×73°.15W,h143**km±5km,**ML2.6, 6C-2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.21**	**188**	⇓*e*P			Pn	09 59 28.1	-0.4
BARC				*e*S			Sn	09 59 43.6	+0.2
BARC				*i*				09 59 44.4	
	comp=Z,49nm,0.2s								
BARC	**Barichara**	**0.21**	**188**	*e*P			Pn	09 59 28.0	-0.5
BARC				*e*S			Sn	09 59 42.3	-1.1
BARC				*i*				09 59 44.5	
	comp=Z,48nm,0.1s								
BRRC	**Barranca, Sant**	**0.63**	**298**	⇑*i*P			Pn	09 59 29.8	-0.2
BRRC				*e*S			Sn	09 59 46.6	+0.5
BRRC				*i*				09 59 47.9	
	comp=Z,31nm,0.1s								
BRRC	**Barranca, Sant**	**0.63**	**298**	⇑*e*P			Pn	09 59 29.8	-0.1
BRRC				*e*S			Sn	09 59 46.5	+0.4
BRRC				*i*				09 59 50.3	
	comp=Z,90nm,0.1s								
PAMC	**Pamplona, Colo**	**0.70**	**40**	⇑*i*P			Pn	09 59 31.0	0.0
PAMC				*e*S			Sn	09 59 47.8	-0.1
PAMC				*i*				09 59 50.4	
	comp=Z,32nm,0.5s								
PAMC	**Pamplona, Colo**	**0.70**	**40**	⇑*e*P			Pn	09 59 31.0	0.0
PAMC				*e*S			Sn	09 59 47.5	-0.4
PAMC				*i*				09 59 50.5	
	comp=Z,34nm,0.5s								
RUSC	**La Rusia**	**0.91**	**176**	⇑*e*P			Pn	09 59 32.1	-0.5
RUSC				*e*S			Sn	09 59 51.4	+0.7
RUSC				*i*				09 59 52.5	
	comp=Z,22nm,0.3s								
RUSC	**La Rusia**	**0.91**	**176**	⇑*e*P			Pn	09 59 32.1	-0.5
RUSC				*e*S			Sn	09 59 50.8	0.0
RUSC				*i*				09 59 52.4	
	comp=Z,22nm,0.3s								
PTBC	**PUERTO BERRIO,**	**1.32**	**259**	*e*P			Pn	09 59 34.5	-1.3
PTBC				*e*S			Sn	09 59 55.6	-0.9
PTBC				*i*				09 59 57.5	
	comp=Z,32nm,0.3s								
PTBC	**PUERTO BERRIO,**	**1.32**	**259**	*e*P			Pn	09 59 34.5	-1.4
PTBC				*e*S			Sn	09 59 55.6	-1.0
PTBC				*i*				09 59 58.6	
	comp=Z,149nm,0.0s								
TAMC	**Tame, Arauca**	**1.40**	**105**	*e*P			Pn	09 59 36.5	-0.2
TAMC				*e*S			Sn	09 59 58.3	+0.2
TAMC				*i*				09 59 59.5	
	comp=E,68nm,0.6s								
TAMC	**Tame, Arauca**	**1.40**	**105**	*e*P			Pn	09 59 36.5	-0.2
TAMC								09 59 56.9	
	comp=Z,24nm,0.5s								
TAMC				*e*S			Sn	09 59 57.6	-0.5
OCAC	**Ocana**	**1.43**	**353**	*e*P			Pn	09 59 35.8	-1.4
OCAC				*e*S			Sn	09 59 57.8	-1.2
OCAC				*i*				10 00 02.6	
	comp=Z,37nm,0.3s								
OCAC	**Ocana**	**1.43**	**353**	*e*P			Pn	09 59 36.4	-0.8
OCAC				*e*S			Sn	09 59 58.8	-0.2
OCAC				*i*				10 00 02.5	
	comp=Z,37nm,0.3s								
SPBC	**San Pablo de B**	**1.47**	**219**	⇓*e*P			Pn	09 59 37.0	-0.5
SPBC				*e*S			Sn	09 59 59.6	+0.2
SPBC				*i*				10 00 06.1	
	comp=Z,36nm,0.3s								
SPBC	**San Pablo de B**	**1.47**	**219**	*e*P			Pn	09 59 37.0	-0.5
SPBC				*e*S			Sn	09 59 59.6	+0.2
SPBC				*i*				10 00 06.2	
	comp=Z,1μm,0.0s								
NORC	**Norcasia**	**2.10**	**234**	*e*P			Pn	09 59 43.8	-1.0
NORC				*e*S			Sn	10 00 12.5	+0.1
NORC				*i*				10 00 18.0	
	comp=Z,23nm,0.5s								
NORC	**Norcasia**	**2.10**	**234**	*e*P			Pn	09 59 44.1	-0.6
NORC				*e*S			Sn	10 00 11.9	-0.5
NORC				*i*				10 00 18.0	
	comp=Z,22nm,0.6s								
CHIC	**Chingaza**	**2.24**	**195**	*e*P			Pn	09 59 46.5	-0.2
CHIC				*e*S			Sn	10 00 15.5	-0.3
CHIC				*i*				10 00 23.6	
	comp=Z,9.7nm,0.4s								
CHIC	**Chingaza**	**2.24**	**195**	*e*P			Pn	09 59 46.2	-0.5
CHIC				*e*S			Sn	10 00 15.6	-0.2
CHIC				*i*				10 00 23.6	
	comp=Z,9.7nm,0.4s								
ROSC	**El Rosal**	**2.27**	**211**	*e*P			Pn	09 59 48.0	+0.9
HELC	**Santa Helena**	**2.44**	**256**	*e*P			Pn	09 59 48.7	-0.4
HELC				*e*S			Sn	10 00 18.6	-1.4
HELC				*i*				10 00 26.0	
	comp=Z,12nm,0.4s								
UREC	**San Jos de Ur**	**2.54**	**292**	*e*P			Pn	09 59 48.1	-1.9
UREC				*e*S			Sn	10 00 19.2	-2.6
UREC				*i*				10 00 28.8	
	comp=Z,14nm,0.2s								
GUY2C	**Guyana, Caldas**	**2.70**	**235**	*e*P			Pn	09 59 52.7	+0.2
GUY2C				*e*S			Sn	10 00 25.8	-0.4
GUY2C				*i*				10 00 34.5	
	comp=Z,14nm,0.6s								
GUY2C	**Guyana, Caldas**	**2.70**	**235**	*e*P			Pn	09 59 52.8	+0.3
GUY2C				*e*S			Sn	10 00 28.9	+2.7
GUY2C				*i*				10 00 36.1	
	comp=Z,15nm,0.3s								
PTGC	**Puerto Gaitan,**	**2.78**	**159**	*e*P			Pn	09 59 51.4	-1.6
PTGC				*i*				10 00 08.5	
	comp=Z,18nm,0.4s								
PTGC				*e*S			Sn	10 00 24.5	-2.7
DBBC	**Dabeiba**	**3.04**	**274**	*e*P			Pn	09 59 55.3	-1.1
DBBC				*e*S			Sn	10 00 26.0	-7.2
DBBC				*i*				10 00 37.7	
	comp=Z,29nm,0.4s								
MOTC	**Monteria, Cord**	**3.17**	**308**	*e*P			Pn	09 59 55.3	-2.6
MOTC				*e*S			Sn	10 00 33.9	-2.1
MOTC				*i*				10 00 40.1	
	comp=Z,4.9nm,0.2s								
SDV	**Santo Domingo**	**3.24**	**50**	*e*P			Pn	09 59 57.4	-1.7
PRAC	**Prado**	**3.52**	**209**	*e*P			Pn	10 00 02.7	+0.1
ORTC	**Ortega, Tolima**	**3.55**	**216**	*e*P			Pn	10 00 03.3	+0.3
SJCC	**San Jacinto, C**	**3.67**	**327**	*e*P			Pn	10 00 02.2	-2.3

*UPP **06** 10:00:13.1±2.1,59°.58N×25°.07E,h0km,ML2.3,Suspected explosion*
*IDC **06** 10:00:15.4±2.1,59°.49N×24°.91E,h0km,mb1 3.2/4, mb1mx3.0/48,mbtmp3.2/4,ML2.5/4,Error ellipse: s-maj=21.9km s-min=8.0km az=144.0*
*HEL **06** 10:00:15.1±0.1,59°.47N×24°.74E,h0km,ML2.2, ML2.3(UPP),Explosion*
*BER **06** 10:00:15.1±2.2,59°.25N×25°.26E,h0km,ML1.8, ML2.5(DNK),Suspected explosion*
*LVSN **06** 10:00:16.4±5.1,59°.51N×24°.86E,h0km±42km,ML2.3*
ISC 06 10:00:13.3±0.7,**59°.46N**±0°.02×**24°.82E**±0°.03,**h0**km,**n48**, σ1**s40/79,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.60**	**92**	*e*P			**Pb**	**10 00 26.1**	**-0.5**
ARBE				*e*S			**Sb**	**10 00 34.4**	**-1.1**
MEF	**Metsahovi**	**0.79**	**345**	*e*P			**Pg**	**10 00 28.9**	**+0.5**
MEF				*e*S			**Sg**	**10 00 39.1**	**+0.5**
MEF				AML			AML	10 00 44.9	
	comp=Z,33nm,0.7s								
MEF				AML			AML	10 00 48.3	
	comp=E,21nm,0.4s								
MEF				AML			AML	10 00 48.8	
	comp=N,25nm,0.2s								
MEF	**Metsahovi**	**0.79**	**345**	*e*P			**Pg**	**10 00 28.7**	**+0.2**
MEF				*e*S			**Sg**	**10 00 38.9**	**+0.3**
MTSE	**Matsula**	**0.91**	**215**	*e*P			**Pg**	**10 00 31.6**	**+0.9**
MTSE				*e*S			**Sg**	**10 00 44.0**	**+1.5**
MTSE	**Matsula**	**0.91**	**215**	*e*P			**Pg**	**10 00 31.4**	**+0.7**
MTSE				*e*S			**Sg**	**10 00 42.9**	**+0.4**
PVF	**Pernaja**	**1.21**	**25**	*e*P			**Pg**	**10 00 36.6**	**+0.1**
PVF				*e*S			**Sb**	**10 00 53.0**	**-0.2**
VSU	**Vasula**	**1.41**	**134**	*e*P			**Pb**	**10 00 41.2**	**+0.7**
VSU				*e*S			**Sn**	**10 00 59.7**	**+0.2**
VSU				AML			AML	10 01 04.7	
	comp=Z,68nm,0.3s								
VSU				AML			AML	10 01 05.4	
	comp=E,120nm,0.3s								
VSU				AML			AML	10 01 06.4	
	comp=N,83nm,0.4s								
VSU	**Vasula**	**1.41**	**134**	*e*P			**Pb**	**10 00 41.2**	**+0.7**
VSU				*e*S			**Sn**	**10 00 59.4**	**0.0**
VJF	**Virojoki**	**1.75**	**51**	*e*P			**Pb**	**10 00 46.2**	**-0.1**
VJF				*e*S			**Sb**	**10 01 08.7**	**-0.1**
VJF				MSG				10 01 12.4	
	comp=Z,14nm,0.1s								
FIA0	**FINESS Array S**	**2.08**	**17**	*e*P			**Pb**	**10 00 51.9**	**0.0**
FIA0				*e*S			**Sb**	**10 01 17.5**	**-0.9**
FINES	**FINESS Array B**	**2.08**	**17**	Pn			**Pb**	**10 00 52.2**	**+0.3**
	comp=Z,5.8nm,0.3s,baz=202,slow=16,SNR=221								
FINES				Lg			Lg	10 01 19.0	
	comp=Z,5.7nm,0.3s,baz=194,slow=28,SNR=19								
FINES				Rg			Rg	10 01 33.1	
	comp=Z,21nm,1.0s,baz=186,slow=33,SNR=5.8								
FIA1	**FINESS Array S**	**2.09**	**17**	*e*P			**Pb**	**10 00 51.8**	**-0.2**
FIA1				*e*S			**Sb**	**10 01 17.5**	**-0.9**
RAF	**Rauma**	**2.19**	**317**	*e*P			**Pb**	**10 00 52.9**	**-0.9**
RAF				*e*S			**Sb**	**10 01 21.4**	**+0.2**
RAF				AML			AML	10 01 23.3	
	comp=Z,28nm,0.2s								
RAF				AML			AML	10 01 23.5	
	comp=E,22nm,0.2s								
RAF				AML			AML	10 01 23.8	
	comp=N,33nm,0.4s								
RAF	**Rauma**	**2.19**	**317**	*e*P			**Pb**	**10 00 52.8**	**-0.9**
RAF				*e*S			**Sb**	**10 01 20.5**	**-0.7**
RAF				MSG				10 01 23.1	
	comp=Z,20nm,0.1s								
SLIT	**Slitere, Latvi**	**2.27**	**217**	*e*P			**Pb**	**10 00 55.0**	**0.0**
SLIT				AML			AML	10 00 56.6	
	comp=Z,140nm,0.4s								
SLIT				*e*S			**Sg**	**10 01 25.9**	**-0.1**
SLIT				AML			AML	10 01 27.4	
	comp=N,177nm,0.4s								
SLIT				AML			AML	10 01 29.0	
	comp=E,212nm,0.5s								
AAL	**Aland**	**2.54**	**289**	P			**Pn**	**10 00 56.8**	**+1.1**
AAL				S			**Sn**	**10 01 29.0**	**+1.7**
AAL	**Aland**	**2.54**	**289**	*e*P			**Pn**	**10 00 56.7**	**+0.9**
AAL				*e*S			**Sn**

BSD *i* S **Sn** **10 03 11.1 -3.9**
NOA **NORSAR Array B 6.95 289** Pn **Pn** **10 01 56.0 -0.4**
comp=Z,0.0nm,0.3s,baz=101,slow=14,SNR=6.4
NOA Sn **Sn** **10 03 15.3 -0.8**
comp=Z,0.0nm,0.3s,baz=105,slow=19,SNR=1.4
NOA Lg Lg 10 03 46.4
comp=Z,0.1nm,0.3s,baz=68,slow=11,SNR=3.3
ARCES **ARCESS Array B 10.12 1** Pn **Pn** **10 02 39.1 -0.6**
baz=176,slow=14,SNR=13

IDC 06 10:11:35.1±38.0, 30.04°S×175.21°W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/20, mbtmp3.6/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=720.8km s-min=111.4km az=99.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.91**	**256**	P	P	10 18 45.8	+0.1
	0.3nm,0.2s,baz=84,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**45.54**	**265**	P	P	10 19 56.2	-0.6
	0.5nm,0.9s,baz=105,slow=6.7,SNR=4.5						
WRA	**Warramunga Arr**	**46.51**	**270**	P	P	10 20 04.3	-0.1
	0.3nm,0.3s,baz=110,slow=8.1,SNR=12						
GUMO	**Guam**	**57.97**	**313**	LR	LR	10 44 12.7	
	comp=Z,16nm,20.7s,baz=66,slow=34						
LEM	**Lembang**	**75.53**	**270**	LR	LR	10 55 51.8	
	comp=Z,29nm,18.1s,baz=162,slow=35						

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*REY **06** 10:13:37.7, 64.61°N×17.44°W, h2km*
*MOS **06** 10:13:38.5±1.4, 64.47°N×17.73°W, h10km, mb4.7/19, Error ellipse: s-maj=13.6km s-min=9.1km az=110.1*
*IDC **06** 10:13:38.6±0.6, 64.45°N×17.73°W, h0km, mb3.9/16, mb1 4.1/18, mb1mx4.0/44, mbtmp3.9/18, ML3.4/2, MS3.2/27, Ms1 3.3/27, ms1mx3.1/51, Error ellipse: s-maj=20.7km s-min=11.2km az=22.0*
*NEIC **06** 10:13:40.0±2.3, 64.46°N±0.10°×17.7°W±0.1, h10km±1km, mb4.5/23, Error ellipse: s-maj=16.5km s-min=9.5km az=196.0*
ISC 06 10:13:39.9±0.4, 64.50°N±0.03°×17.67°W±0.03, h10km, n178, σ1°59/154, mb4.4/62, MS3.3/25, 8C-5D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.17**	**348**	P	**Pg**	**10 13 41.1**	**-2.7**
	baz=293						
IVON				S	**Sg**	**10 13 43.6**	**-2.8**
	baz=293						
IGRF	**Grimsfjall**	**0.20**	**119**	P	**Pg**	**10 13 42.2**	**-2.0**
	baz=161						
IGRF				S	**Sg**	**10 13 45.8**	**-1.4**
	baz=161						
IHUS	**Husbondi**	**0.21**	**178**	P	**Pg**	**10 13 44.3**	**0.0**
	baz=197						
IJOK	**Jokulheimar**	**0.31**	**232**	P	**Pg**	**10 13 46.3**	**+0.2**
	baz=229						
ISKR	**Skrokkalda**	**0.32**	**281**	P	**Pg**	**10 13 45.5**	**-0.7**
	baz=263						
IVOT	**Vottur**	**0.32**	**138**	P	**Pg**	**10 13 44.9**	**-1.4**
	baz=162						
IDYN	**Dyngjuhals**	**0.32**	**24**	P	Pg	10 13 41.5	-4.8
	baz=9.5						
IKAL	**Kalfafell**	**0.56**	**181**	P	**Pb**	**10 13 50.0**	**-1.7**
	baz=189						
IKAL				S	**Sb**	**10 13 59.6**	**-0.1**
	baz=189						
THOR	**Thorvaldshraun**	**0.61**	**44**	P	Pg	10 13 46.4	-5.3
	baz=45						
IKSK	**Karasker**	**0.62**	**123**	P	**Pg**	**10 13 48.5**	**-3.4**
	baz=137						
IVAT	**Vatnsfell**	**0.63**	**240**	P	**Pb**	**10 13 51.8**	**-1.2**
	baz=237						
IASK	**Askja**	**0.70**	**38**	P	Pg	10 13 47.9	-5.6
	baz=37						
IASK				S	Sg	10 13 55.9	-6.8
	baz=37						
IMKO	**Mokollar**	**0.74**	**50**	P	Pg	10 13 48.8	-5.5
	baz=52						
IMKO				S	Sg	10 13 56.9	-7.1
	baz=52						
ISNB	**Snabyli**	**0.88**	**209**	P	**Pn**	**10 13 55.9**	**-2.4**
	baz=211						
ISNB				S	**Sn**	**10 14 10.5**	**-0.6**
	baz=211						
IVSH	**V-Sauoahnukur**	**0.89**	**69**	P	Pg	10 13 51.4	-5.6
	baz=74						
IVSH				S	Sg	10 14 01.9	-6.7
	baz=74						
IRJU	**Rjupnafell**	**0.99**	**207**	P	**Pn**	**10 13 58.0**	**-1.9**
	baz=209						
IMJO	**Mjoaskard**	**1.05**	**238**	P	**Pn**	**10 13 58.7**	**-1.9**
	baz=236						
IHVO	**Lagu-Hvolar**	**1.11**	**208**	P	**Pn**	**10 13 59.9**	**-1.6**
	baz=210						
IGYG	**Gygjarholskot**	**1.13**	**260**	P	**Pg**	**10 13 59.5**	**-2.1**
	baz=256						
IHAU	**Haukadalur**	**1.14**	**243**	P	**Pn**	**10 14 00.1**	**-1.7**
	baz=241						
IMEL	**Melhnausar**	**1.15**	**21**	P	Pn	10 13 55.5	-6.7
	baz=19						
IREN	**Reynihlio**	**1.19**	**15**	P	Pn	10 13 56.1	-6.5
	baz=12						
IREN				S	Sb	10 14 12.3	-5.8
	baz=12						
IALF	**Alftagrof**	**1.22**	**214**	P	**Pn**	**10 14 01.7**	**-1.2**
	baz=215						
IESK	**Eystri-Skogar**	**1.26**	**219**	P	**Pn**	**10 14 02.2**	**-1.3**
	baz=220						
IKVO	**Krokottuvotn**	**1.26**	**15**	P	Pn	10 13 57.3	-6.3
	baz=12						
IMID	**Miomork**	**1.29**	**230**	P	**Pg**	**10 14 03.2**	**-1.5**
	baz=229						
ISAU	**Saurbar**	**1.30**	**248**	P	**Pn**	**10 14 02.5**	**-1.7**
	baz=246						
IGRS	**Grimsstaoir**	**1.31**	**29**	P	Pn	10 13 58.1	-6.2
	baz=28						
IGRS				S	Sn	10 14 14.5	-7.4
	baz=28						
ISKI	**Skildingahlsh**	**1.40**	**11**	P	Pn	10 13 59.7	-5.8
	baz=7.6						
IGRA	**Granastaoir**	**1.42**	**2**	P	Pn	10 14 00.2	-5.6
	baz=357						
IDIM	**Dimmadalss**	**1.50**	**12**	P	Pn	10 14 01.5	-5.3
	baz=8.7						
ISOL	**Solvholt**	**1.54**	**250**	P	**Pn**	**10 14 06.2**	**-1.2**
	baz=247						
IKRO	**Krokur**	**1.56**	**256**	P	**Pn**	**10 14 06.4**	**-1.2**
	baz=254						
IHEI	**Heioarbar**	**1.58**	**261**	P	**Pn**	**10 14 06.7**	**-1.3**
	baz=258						
IVME	**Vestmannaeyjar**	**1.58**	**228**	P	**Pg**	**10 14 07.8**	**-2.4**
	baz=228						
IHED	**Heoinshofoi**	**1.59**	**5**	P	Pn	10 14 02.9	-5.2
	baz=2.0						
BORG	**Borgarnes**	**1.59**	**280**	Pn	**Pn**	**10 14 06.3**	**-1.8**
	43nm,0.3s,baz=95,slow=9.6,SNR=40						
BORG				Sn	**Sg**	**10 14 30.0**	**-1.1**
	22nm,0.3s,baz=223,slow=23,SNR=16						
BORG	**Borgarnes**	**1.59**	**280**		**Pn**	**10 14 06.0**	**-2.2**
IBRE	**Brettingsstaoi**	**1.63**	**357**	P	Pn	10 14 03.9	-4.7
	baz=353						
IGIL	**Gilhagi**	**1.68**	**19**	P	Pn	10 14 03.7	-5.6
	baz=17						
IBJA	**Bjarnastaoir**	**1.68**	**252**	P	**Pn**	**10 14 08.6**	**-0.8**
	baz=250						
ISIG	**Siglufjorour**	**1.72**	**343**	P	Pn	10 14 05.8	-4.0
	baz=338						
SCO	**Scoresbysund**	**6.23**	**347**	*e*	Pn	10 15 05.3	-6.4
	baz=157,slow=7.9						
SCO				*i* P	**Pn**	**10 15 10.0**	**-1.7**
SCO				*i* S	**Sn**	**10 16 24.9**	**+2.1**
SCO				IAML		10 16 30.8	
	comp=Z,1.1nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.69**	**135**	Pn	**Pn**	**10 16 25.9**	**-0.7**
	baz=324,slow=13,SNR=9.3						
NOA	**NORSAR Array B**	**13.60**	**91**	Pn	**Pn**	**10 16 50.9**	**-1.8**
	comp=Z,0.0nm,0.3s,baz=298,slow=13,SNR=3.5						
NOA				LR	LR	10 21 52.6	
	comp=Z,47nm,21.7s,baz=300,slow=36						
SFJD	**Kangerlussuaq**	**13.67**	**295**	LR	LR	10 21 57.5	
	comp=Z,186nm,21.4s,baz=85,slow=36						
HFS	**Hagfors**	**15.11**	**92**	Pn	**P**	**10 17 16.8**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=109,slow=8.0,SNR=4.0						
HFS				LR	LR	10 22 37.3	
	comp=Z,77nm,19.1s,baz=288,slow=36						

SPITS **Spitsbergen Ar 17.05 23** LR LR 10 22 07.4
comp=Z,112nm,20.9s,baz=250,slow=30
ARCES **ARCESS Array B 17.27 54** LR LR 10 23 00.9
comp=Z,99nm,20.0s,baz=305,slow=32
FINES **FINESS Array B 19.81 79** LR LR 10 25 19.8
comp=Z,83nm,20.0s,baz=235,slow=35
MOX **Moxa 20.69 118** P **P** **10 18 20.5 +0.7**
MOX pmax pmax
comp=Z,12nm,2.6s
CLL **Collm 20.70 115** *i* P **P** **10 18 19.3 -0.6**
comp=Z,25nm,1.5s
CLL *i* 10 18 34.3
CLL *e*S Sn 10 22 15.0 -0.5
CLL **Collm 20.70 115** *i* P **P** **10 18 19.3 -0.6**
CLL *e*S Sn 10 22 15.0 -0.5
CLL pmax pmax
comp=Z,25nm,1.5s
CLL **Collm 20.70 115** P **P** **10 18 18.8 -1.1**
GRF **Grafenberg Arr 21.31 120** *e*P **P** **10 18 26.7 +0.2**
comp=Z,13nm,1.1s,baz=325,slow=11
BFO **Black Forest 21.41 127** *e*P **P** **10 18 27.2 -0.4**
BFO **Black Forest 21.41 127** P **P** **10 18 27.2 -0.4**
BFO IAmb IAmb 10 18 29.6
comp=Z,22nm,1.3s
BRG **Berggiesshubel 21.41 115** *e*P **P** **10 18 27.4 -0.1**
comp=Z,18nm,1.2s
BRG **Berggiesshubel 21.41 115** *e*P **P** **10 18 27.4 -0.1**
BRG pmax pmax
comp=Z,18nm,1.3s
KSP **Ksiaz 22.37 111** *e*P **P** **10 18 37.1 -0.7**
OSTC **Ostas 22.56 112** *e*P **P** **10 18 41.4 +1.5**
KHC **Kasperske Hory 22.66 118** *e*P **P** **10 18 40.7 -0.3**
KHC **Kasperske Hory 22.66 118** *e*P **P** **10 18 40.7 -0.3**
DPC **Dobruska-Polom 22.77 112** *e*P **P** **10 18 40.4 -1.7**
DPC **Dobruska-Polom 22.77 112** *e*P **P** **10 18 40.4 -1.7**
DAVA **Damuels 22.84 126** *e*P **P** **10 18 45.0 +1.9**
comp=Z,8.0nm,0.9s
GEC2 **GERESS Array S 22.94 118** P **P** **10 18 45.8 +1.7**
GERES **GERESS Array B 22.94 118** P **P** **10 18 43.4 -0.6**
comp=Z,1.5nm,0.8s,baz=330,slow=7.7,SNR=7.5
GERES LR LR 10 27 37.8
comp=Z,52nm,20.6s,baz=334,slow=37
GERES **GERESS Array B 22.94 118** P **P** **10 18 43.6 -0.4**
GERES **GERESS Array B 22.94 118** P **P** **10 18 43.6 -0.4**
RETA **Reutte 22.99 124** *e*P **P** **10 18 44.7 +0.3**
comp=Z,1.9nm,0.6s
KRLC **Kraliky 23.16 112** *e*P **P** **10 18 46.6 +0.3**
KRLC **Kraliky 23.16 112** *e*P **P** **10 18 46.6 +0.3**
MOTA **Moosalm 23.23 124** *e*P **P** **10 18 44.6 -2.4**
comp=Z,6.9nm,1.2s
DAVOX **Davos/Dischmat 23.28 126** LR LR 10 28 38.0
comp=Z,50nm,18.4s,baz=292,slow=39
FETA **Feichten 23.37 125** *e*P **P** **10 18 50.3 +1.8**
comp=Z,12nm,1.0s
SQTA **Sankt Quirin 23.37 124** *e*P **P** **10 18 47.4 -1.1**
comp=Z,3.8nm,0.6s
WATA **Walderalm 23.41 123** *e*P **P** **10 18 49.0 +0.2**
comp=Z,4.4nm,0.7s
TMCR **Tamitsa 23.48 65** *e*P **P** **10 18 49.1 -0.1**
TMCR pmax pmax
comp=Z,16nm,0.4s
WTTA **Wattenberg 23.49 123** *e*P **P** **10 18 49.7 0.0**
comp=Z,14nm,1.6s
VRAC **Vranov 23.70 114** P **P** **10 18 51.9 +0.4**
comp=Z,2.4nm,0.3s,baz=328,slow=10,SNR=3.2
VRAC LR LR 10 27 32.5
comp=Z,56nm,21.9s,baz=332,slow=35
MORC **Moravsky Berou 23.70 112** P **P** **10 18 52.1 +0.5**
MORC pmax pmax
comp=Z,12nm,1.3s
MORC **Moravsky Berou 23.70 112** P **P** **10 18 52.1 +0.5**
MOA **Molln 23.98 119** *e*P **P** **10 18 55.0 +0.8**
comp=Z,16nm,1.5s
ABTA **Abfaltersbach 24.25 123** *e*P **P** **10 18 57.8 +1.0**
comp=Z,1.0nm,0.3s
KBA **Koelnbreinsper 24.27 121** *e*P **P** **10 18 58.0 +0.8**
comp=Z,11nm,1.4s
OJC **Ojcow 24.28 108** *e*P **P** **10 18 55.4 -1.6**
CONA **Conrad Observa 24.52 116** *e*P **P** **10 18 58.0 -1.3**
comp=Z,7.1nm,1.2s
MYKA **Terra Mystica 24.76 121** *e*P **P** **10 19 04.1 +2.7**
comp=Z,16nm,1.5s
NIE **Niedzica 25.11 109** *e*P **P** **10 19 04.2 -0.3**
OBKA **Obir 25.20 120** *e*P **P** **10 19 05.5 +0.1**
comp=Z,4.9nm,0.6s
SOKA **Soboth 25.24 119** *e*P **P** **10 19 05.4 -0.4**
comp=Z,8.5nm,1.2s
VYHS **Vyhne 25.24 112** *e*P **P** **10 19 05.7 0.0**
VYHS **Vyhne 25.24 112** *e*P **P** **10 19 05.7 0.0**
KLMR **Klimovskoe 25.73 71** *e*P **P** **10 19 06.4 -3.5**
KLMR pmax pmax
comp=Z,17nm,1.3s
KLMR **Klimovskoe 25.73 71** *e*P **P** **10 19 06.4 -3.5**
KLMR AMP 10 19 14.5
comp=Z,17nm,1.3s
KWP **Kalwaria Pacla 25.94 106** *e*P **P** **10 19 12.9 +0.9**
KWP **Kalwaria Pacla 25.94 106** P **P** **10 19 12.2 +0.2**
KWP S **S** **10 23 44.6 +2.7**
KWP pmax pmax
comp=Z,23nm,1.1s
KWP **Kalwaria Pacla 25.94 106** P **P** **10 19 12.2 +0.2**
KWP **S** **10 23 44.6 +2.7**
SCHQ **Schefferville 25.97 272** P **P** **10 19 12.2 0.0**
comp=Z,7.0nm,0.8s,baz=36,slow=14,SNR=1.9
SCHQ **Schefferville 25.97 272** IAmb IAmb 10 19 17.8
comp=Z,23nm,1.2s
PSZ **Piszkesteto 26.13 111** P **P** **10 19 13.8 0.0**
PSZ pmax pmax
comp=Z,25nm,1.5s
PSZ **Piszkesteto 26.13 111** P **P** **10 19 13.8 0.0**
ESDC **Sonseca Array 26.13 155** P **P** **10 19 12.9 -1.0**
comp=Z,0.8nm,0.3s,baz=348,slow=8.8,SNR=4.6
ESDC LR LR 10 29 23.0
comp=Z,73nm,18.9s,baz=330,slow=36
UZH **Uzhgorod 26.54 108** *e*P **P** **10 19 16.0 -1.4**
UZH *e* 10 19 18.9
RES **Resolute Bay 26.56 325** LR LR 10 29 38.3
comp=Z,87nm,19.9s,baz=118,slow=36
AKASG **Malin Array Be 27.89 97** P **P** **10 19 28.1 -1.5**
comp=Z,0.5nm,0.4s,baz=314,slow=10,SNR=2.0
AKASG **Malin Array Be 27.89 97** *ce*P **P** **10 19 32.7 +3.1**
OBN **Obninsk 27.97 84** LR LR 10 31 16.4
comp=Z,7.4nm,19.0s,baz=57,slow=38
OBN **Obninsk 27.97 84** *i* P **P** **10 19 30.0 -0.2**
OBN *i* 10 20 15.4
OBN pmax pmax
comp=Z,14nm,1.1s
OBN MLR MLR
comp=Z,33nm,13.0s
MLR **Muntele Rosu 30.55 107** LR LR 10 33 34.1
comp=Z,29nm,18.6s,baz=326,slow=39
KIRV **Kirov 31.11 69** LR LR 10 32 04.5
comp=Z,50nm,21.1s,baz=332,slow=36
KIRV **Kirov 31.11 69** *e*P **P** **10 19 59.6 +1.7**
MDT **Midelt 32.73 159** P **P** **10 20 13.7 +1.1**
comp=Z,3.3nm,0.9s,baz=349,slow=12,SNR=3.9
MDT LR LR 10 32 32.4
comp=Z,44nm,18.2s,baz=346,slow=35
NRIK **Noril'sk 36.63 35** *de*P **P** **10 20 47.1 +1.3**
NRIK pmax pmax
comp=Z,9.0nm,1.3s
SOC **Sochi 37.92 95** *e*P **P** **10 20 58.7 +1.7**
SOC *e* 10 22 27.0
SOC *e*PPP PPP 10 22 46.0
SOC *e*S **S** **10 26 54.4 +6.1**
SOC pmax pmax
comp=Z,34nm,9.7s
SOC MLR MLR
comp=Z,85nm,14.0s
GOF **Gofitskoye 38.19 91** *e*P **P** **10 21 01.2 +2.0**
GOF pmax pmax
comp=Z,31nm,0.8s
BR131 **Keskin Array S 38.51 105** *e*P **P** **10 21 03.8 +1.6**
BRTR **Keskin Array B 38.51 105** P **P** **10 21 02.8 +0.6**
comp=Z,1.3nm,0.8s,baz=308,slow=6.1,SNR=4.7
BRTR **Keskin Array B 38.51 105** *ce*P **P** **10 21 03.0 +0.8**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
IDI **Anoyia 38.81 118** LR LR 10 38 04.1
comp=Z,17nm,19.9s,baz=354,slow=38
KIV **Kislovodsk 38.91 92** *e*P **P** **10 21 06.8 +1.4**
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,52nm,16.0s

KBZ **Khabaz 39.18 92** P **P** **10 21 09.3 +1.7**
comp=Z,4.5nm,1.1s,baz=331,slow=7.7,SNR=4.8
KBZ LR LR 10 36 35.6
comp=Z,53nm,21.6s,baz=326,slow=35
KBZ **Khabaz 39.18 92** *e*P **P** **10 21 10.2 +2.6**
KBZ pmax pmax
comp=Z,13nm,2.2s
AKTO **Aktyubinsk 40.41 73** LR LR 10 37 42.3
comp=Z,48nm,20.7s,baz=327,slow=36
ABKAR **Akbulak array 42.11 73** P **P** **10 21 31.3 -0.4**
TIXI **Tiksi 42.21 15** *e*P **P** **10 21 33.3 +1.1**
TIXI pmax pmax
comp=Z,96nm,1.7s
TOLK **Toolik Lake Re 42.87 336** P **P** **10 21 39.0 +1.3**
TOLK IAmb IAmb 10 21 43.8
comp=Z,15nm,1.2s
BMAR **Burnt Mountain 43.01 333** P **P** **10 21 39.1 +0.2**
BRVK **Borovoye 43.27 62** *e*P **P** **10 21 43.1 +2.0**
BRVK pmax pmax
comp=Z,12nm,2.5s
ILAR **Eielson Array 45.80 332** P **P** **10 22 00.9 -0.2**
comp=Z,2.7nm,1.2s,baz=19,slow=6.2,SNR=11
ILAR PcP **PcP** **10 23 37.1 -1.2**
comp=Z,0.9nm,0.9s,baz=353,slow=3.1,SNR=5.6
ILAR LR LR 10 43 15.4
comp=Z,33nm,21.1s,baz=36,slow=39
ILAR **Eielson Array 45.80 332** P **P** **10 22 01.9 +0.8**
MDM **Murphy Dome 45.90 333** P **P** **10 22 04.5 +2.6**
MDM IAmb IAmb 10 22 05.4
comp=Z,11nm,1.3s
COLA **College 45.90 333** *i* *e*P **P** **10 22 03.4 +1.6**
COLA pmax pmax
comp=Z,3.0nm,0.7s
IMAR **Indian Mountai 45.98 337** P **P** **10 22 02.5 0.0**
BCAR **Beaver Creek A 46.21 329** P **P** **10 22 05.9 +1.4**
BILL **Bilibino 47.71 358** *i* P **P** **10 22 14.6 -1.4**
BILL *i* 10 23 40.3
BILL *i* 10 24 05.4
BILL pmax pmax
comp=Z,7.0nm,1.5s
ZALV **Zalesovo Beam 47.79 51** P **P** **10 22 17.6 +0.7**
comp=Z,0.5nm,0.3s,baz=64,slow=5.1,SNR=4.4
ZALV **Zalesovo Beam 47.79 51** *i* P **P** **10 22 18.5 +1.7**
ZALV **Zalesovo Beam 47.79 51** P **P** **10 22 16.5 -0.3**
KURK **Kurchatov 48.26 58** *e*P **P** **10 22 20.9 +0.4**
KURK pmax pmax
comp=Z,8.0nm,1.7s
KURK **Kurchatov 48.26 58** P **P** **10 22 20.8 +0.3**
KURK IAmb IAmb 10 22 24.2
comp=Z,3.7nm,0.9s
KKAR **Karatay Array 51.40 69** P **P** **10 22 43.5 -1.0**
KKAR **Karatay Array 51.40 69** P **P** **10 22 43.5 -1.0**
YAK **Yakutsk 51.45 19** LR LR 10 43 09.4
comp=Z,24nm,20.2s,baz=274,slow=34
H17A **Grant Village 52.21 295** P **P** **10 22 50.1 -0.7**
H17A IAmb IAmb 10 22 58.0
comp=Z,5.8nm,1.2s
MKAR **Makanchi Array 52.87 58** P **P** **10 22 55.0 -0.4**
comp=Z,0.9nm,0.8s,baz=310,slow=6.8,SNR=3.0
TORD **Torodi Ar. Bea 53.02 156** P **P** **10 22 56.7 -0.1**
comp=Z,2.9nm,1.1s,baz=337,slow=7.7,SNR=7.6
TORD LR LR 10 45 07.6
comp=Z,28nm,19.3s,baz=325,slow=36
TORD **Torodi Ar. Bea 53.02 156** P **P** **10 22 56.0 -0.8**
BW06 **Boulder Array 53.17 293** P **P** **10 22 56.9 -1.1**
PD31 **Pinedale Array 53.17 293** P **P** **10 22 57.1 -0.8**
PDAR **Pinedale Array 53.17 293** P **P** **10 22 57.8 -0.1**
comp=Z,2.1nm,0.8s,baz=58,slow=7.0,SNR=19
PDAR LR LR 10 44 53.5
comp=Z,43nm,21.2s,baz=349,slow=35
AAK **Ala-Archa 53.39 67** *e*P **P** **10 23 00.0 +0.5**
AAK pmax pmax
comp=Z,12nm,0.9s
BTK **Batken 54.08 71** P **P** **10 23 03.6 -0.9**
BTK pmax pmax
comp=Z,13nm,1.2s
BTK **Batken 54.08 71** P **P** **10 23 03.6 -0.9**
KSH **Kashi 56.63 68** *e*P **P** **10 23 27.6 +4.7**
KSH pmax pmax
comp=Z,13nm,0.6s
KSH pmax pmax
comp=Z,300nm,5.1s
ZAK **Zakamensk 56.63 41** *e*P **P** **10 23 21.7 -1.0**
ZAK pmax pmax
comp=Z,5.0nm,1.7s
PV14 **Lion Creek, Pa 56.68 290** P **P** **10 23 24.1 +0.7**
PV14 **pP** **10 23 24.6 -2.5**
PV14 IAmb IAmb 10 23 28.1
comp=Z,4.5nm,0.9s
PV01 **Paradox Valley 56.70 289** P **P** **10 23 25.1 +1.5**
PV01 IAmb IAmb 10 23 27.6
comp=Z,6.2nm,1.2s
PV03 **Paradox Valley 56.71 290** IAmb IAmb 10 23 27.4
comp=Z,9.3nm,1.3s
PV13 **Radium Mtn., P 56.78 290** P **P** **10 23 24.0 -0.1**
WMQ **Urumqi 57.38 56** *e*P **P** **10 23 31.8 +3.7**
SONM **Songino Array 59.81 40** P **P** **10 23 46.7 +1.7**
comp=Z,0.6nm,0.6s,baz=337,slow=7.8,SNR=6.2
SONM LR LR 10 51 42.4
comp=Z,51nm,19.0s,baz=242,slow=38
SONM **Songino Array 59.81 40** IAmb IAmb 10 23 48.5
comp=Z,2.3nm,1.2s
ULN **Ulaanbaatar 59.97 40** *i* *e*P **P** **10 23 48.0 +1.9**
ULN pmax pmax
comp=Z,11nm,2.5s
WUAZ **Wupatki 60.09 290** P **P** **10 23 48.2 +1.1**
WUAZ IAmb IAmb 10 23 56.1
comp=Z,6.0nm,1.2s
NVAR **Mina Array Bea 60.31 297** P **P** **10 23 49.9 +1.2**
comp=Z,0.3nm,0.7s,baz=56,slow=3.6,SNR=2.6
TXAR **Lajitas Array 62.24 280** P **P** **10 24 03.0 +1.3**
comp=Z,0.9nm,0.9s,baz=46,slow=3.6,SNR=6.0
KLR **Kul'dur 64.12 22** LR LR 10 51 38.4
comp=Z,20nm,18.5s,baz=241,slow=36
GTA **Gaotai 65.46 49** *e*P **P** **10 24 19.7 -3.1**
GTA pP pP 10 24 24.2 -2.4
GTA sP sP 10 24 26.8 -1.2
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,91nm,6.7s
GTA LR LR
comp=N,89nm,16.0s
GTA LR LR
comp=E,94nm,18.2s
GTA LR LR
comp=Z,72nm,15.6s
HHC **Hu-ho-hao-te 67.69 39** *e*P **P** **10 24 39.9 +2.9**
HHC pmax pmax
comp=Z,20nm,1.2s
HHC pmax pmax
comp=Z,130nm,5.6s
LZH **Lanzhou 69.79 47** *e*P **P** **10 24 51.7 +1.4**
LZH pP pP 10 24 55.1 +1.1
LZH sP sP 10 24 56.6 +1.2
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,88nm,7.1s
LZH LR LR
comp=N,130nm,16.4s
LZH LR LR
comp=E,130nm,16.3s
LZH LR LR
comp=Z,190nm,18.5s
KSRS **Korea Array 74.83 28** LR LR 11 01 21.0
comp=Z,9.4nm,20.3s,baz=345,slow=38
CPUP **Villa Florida 95.66 215** LR LR 11 04 35.6
comp=Z,29nm,18.3s,baz=31,slow=32
BOSA **Boshof 98.68 143** LR LR 11 14 48.3
comp=Z,25nm,19.3s,baz=356,slow=37
WRA **Warramunga Arr 131.70 36** PKP **PKiKP** **10 32 53.6 0.0**
comp=Z,0.9nm,1.1s,baz=347,slow=2.6,SNR=3.7
ASAR **Alice Springs 135.14 38** PKP **PKiKP** **10 33 00.3 -0.2**
comp=Z,0.6nm,0.9s,baz=338,slow=1.8,SNR=4.5
STKA **Stephens Creek 144.90 32** PKP **PKPdf** **10 33 16.7 +0.3**
comp=Z,1.9nm,0.8s,baz=3.4,slow=6.2,SNR=3.7

IDC 06 10:14:13.6±1.0, 18.57°S×168.91°E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=17.9km s-min=3.8km az=91.0, Vanuatu Islands

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

DZM	**Mont Dzumac**	**4.18**	**213**	Pn	Pn	10 15 18.7	-0.1
	1.3nm,0.3s,baz=113,slow=15,SNR=36						
DZM				Sn	Sn	10 16 09.5	+1.0
	1.8nm,0.3s,baz=111,slow=23,SNR=9.6						
STKA	**Stephens Creek**	**27.95**	**236**	P	P	10 20 06.8	+1.0
	0.5nm,0.3s,baz=96,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**32.64**	**262**	P	P	10 20 47.2	-0.3
	0.1nm,0.5s,baz=100,slow=7.9,SNR=4.0						
ASAR	**Alice Springs**	**33.00**	**255**	P	P	10 20 50.5	0.0
	0.7nm,0.5s,baz=84,slow=8.6,SNR=25						

*SOME **06** 10:26:50.2, 39.60N×75.53E, h5km*
*NNC **06** 10:26:52.5±1.4, 39.68N×75.51E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.1km s-min=6.7km az=161.0*
*KRNET **06** 10:26:55.2±0.1, 39.76N×75.32E, mb3.1*

ISC 06 10:26:56.4±1.7, 39.63N±0.08×75.47E±0.04, h10km, n41, σ2s08/68, 15C-19D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**2.25**	**294**	⇑*i*	**P**	**10 27 34.0**	**+0.3**
	baz=92						
OHH				⇑*i*	**S**	**10 28 02.0**	**+0.5**
	baz=92						
ARLS	**Aral**	**2.39**	**339**	⇑*eP*	**P**	**10 27 36.1**	**+0.3**
	baz=41						
ARLS				⇑*i*	**S**	**10 28 05.3**	**0.0**
	baz=41						
ULHL	**Ulahol**	**2.68**	**12**	⇑*i*	**P**	**10 27 40.5**	**+0.7**
	baz=15						
ULHL				⇑*i*	**S**	**10 28 13.7**	**+1.3**
	baz=15						
KDJ	**Kajisay**	**2.81**	**27**	⇓*eP*	**P**	**10 27 43.1**	**+1.5**
	baz=30						
KDJ				⇓*i*	**S**	**10 28 17.9**	**+2.2**
	baz=30						
AML	**Almayashu**	**2.84**	**332**	⇓*i*	**P**	**10 27 41.7**	**-0.4**
	baz=33						
AML				⇓*i*	**S**	**10 28 16.0**	**-0.6**
	baz=33						
BOOM	**Boomskoye usch**	**2.88**	**7**	⇓*i*	**P**	**10 27 42.9**	**+0.4**
	baz=10.0						
BOOM				⇓*i*	**S**	**10 28 18.1**	**+0.8**
	baz=10.0						
KBK	**Karagaybulak**	**3.05**	**353**	⇑*i*	**P**	**10 27 45.1**	**+0.3**
	baz=55						
KBK				⇑*i*	**S**	**10 28 21.8**	**+0.3**
	baz=55						
FRU1	**Bishkek**	**3.24**	**349**	⇑*eP*	**P**	**10 27 47.4**	**0.0**
	baz=50						
FRU1				⇑*i*	**S**	**10 28 25.6**	**-0.4**
	baz=50						
EKS2	**Erkin-Say**	**3.29**	**338**	⇓*i*	**P**	**10 27 48.2**	**+0.1**
	baz=39						
EKS2				⇓*i*	**S**	**10 28 27.0**	**-0.3**
	baz=39						
TKM2	**Tokmak 2**	**3.29**	**2**	⇓*i*	**P**	**10 27 48.7**	**+0.5**
	baz=4.0						
TKM2				⇓*i*	**S**	**10 28 28.3**	**+0.8**
	baz=4.0						
TKM2	**Tokmak 2**	**3.29**	**2**	⇑Pn	**P**	**10 27 45.3**	**-2.9**
	1.4nm,0.5s						
TKM2				⇓Pg	**Pb**	**10 27 52.5**	**-2.5**
	3.3nm,0.5s						
TKM2				⇓Lg	Lg	10 28 36.1	
	31nm,0.6s						
KST	**Kastek**	**3.43**	**6**	*eP*	**Pb**	**10 27 54.6**	**-2.7**
	7.6nm,0.4s						
KST				*eS*	**Sb**	**10 28 41.3**	**+2.2**
	18nm,0.6s						
KST	**Kastek**	**3.43**	**6**	Pg	**Pb**	**10 27 54.6**	**-2.7**
	7.6nm,0.4s						
KST				Lg	Lg	10 28 41.3	
	18nm,0.6s						
MRKS	**Merke**	**3.54**	**332**	*eP*	**Pb**	**10 27 57.0**	**-2.2**
	6.9nm,0.4s						
MRKS				*eS*	**Sb**	**10 28 45.1**	**+2.8**
	3.9nm,0.4s						
MRKS	**Merke**	**3.54**	**332**	Pg	**Pn**	**10 27 53.4**	**+1.9**
	6.9nm,0.4s						
MRKS				Lg	Lg	10 28 39.1	
	4.9nm,0.6s						
ANVS	**Anan'yevo**	**3.56**	**27**	⇓*i*	**P**	**10 27 53.1**	**+1.2**
	baz=30						
ANVS				⇓*i*	**S**	**10 28 35.7**	**+1.6**
	baz=30						
TNSS	**Tian-Shan**	**3.58**	**18**	*eP*	**Pb**	**10 27 57.4**	**-2.7**
	4.1nm,0.6s						
TNSS				*eS*	**Sb**	**10 28 46.0**	**+2.3**
	10nm,0.5s						
TNSS	**Tian-Shan**	**3.58**	**18**	Pg	**Pb**	**10 27 57.4**	**-2.7**
	4.1nm,0.6s						
TNSS				Lg	Lg	10 28 46.0	
	10nm,0.5s						
BTK	**Batken**	**3.61**	**278**	⇓*i*	**P**	**10 27 53.4**	**+1.0**
	baz=76						
BTK				⇓*eS*	**Sn**	**10 28 35.1**	**0.0**
	baz=76						
DGS	**Degeres**	**3.62**	**4**	*eP*	**Pb**	**10 27 58.0**	**-2.5**
	7.4nm,0.5s						
DGS				*eS*	**Sb**	**10 28 47.1**	**+2.6**
	16nm,0.8s						
DGS	**Degeres**	**3.62**	**4**	Pg	**Pb**	**10 27 58.0**	**-2.5**
	7.4nm,0.5s						
DGS				Lg	Lg	10 28 47.1	
	16nm,0.8s						
MNAS	**Manas**	**3.63**	**323**	⇑*iP*	**Pn**	**10 27 52.6**	**-0.2**
	baz=23						
MNAS				⇑*iS*	**Sn**	**10 28 34.3**	**-1.5**
	baz=23						
MDOK	**Medeo**	**3.73**	**18**	*eP*	**Pb**	**10 27 59.2**	**-3.1**
	2.3nm,0.4s						
MDOK				*eS*	**Sb**	**10 28 49.3**	**+1.7**
	25nm,0.8s						
MDOK	**Medeo**	**3.73**	**18**	Pg	**Pb**	**10 27 59.2**	**-3.1**
	2.3nm,0.4s						
MDOK				Lg	Lg	10 28 49.3	
	25nm,0.8s						
KOTS	**Kotyrbulak**	**3.81**	**18**	*eP*	**Pb**	**10 28 01.1**	**-2.6**
	8.4nm,0.5s						
KOTS				*eS*	**Sb**	**10 28 52.5**	**+2.5**
	20nm,0.5s						
KOTS	**Kotyrbulak**	**3.81**	**18**	Pg	**Pb**	**10 28 01.1**	**-2.6**
	8.4nm,0.5s						
KOTS				Lg	Lg	10 28 52.5	
	20nm,0.5s						
SGDS	**Sogindy**	**3.87**	**351**	Pg	**Pb**	**10 28 03.2**	**-1.5**
	4.0nm,0.4s						
SGDS				Lg	Lg	10 28 56.0	
	15nm,0.7s						
SATY	**Saty**	**4.08**	**32**	*eP*	**Pb**	**10 28 05.6**	**-2.7**
	2.6nm,0.1s						
SATY				*eS*	**Sb**	**10 29 00.3**	**+2.6**
	18nm,0.5s						
SATY	**Saty**	**4.08**	**32**	Pg	**Pb**	**10 28 05.6**	**-2.7**
	2.6nm,0.1s						
SATY				Lg	Lg	10 29 00.3	
	18nm,0.5s						
KUU	**Kurty**	**4.31**	**8**	*eP*	**Pb**	**10 28 10.2**	**-2.1**
	1.7nm,0.1s						
KUU				*eS*	**Sb**	**10 29 07.7**	**+3.4**
	20nm,0.5s						
KUU	**Kurty**	**4.31**	**8**	Pg	**Pb**	**10 28 10.2**	**-2.1**
	1.7nm,0.1s						
KUU				Lg	Lg	10 29 07.7	
	20nm,0.5s						
KURS	**Kuram**	**4.36**	**27**	*eP*	**Pb**	**10 28 09.8**	**-3.2**
	4.7nm,0.6s						
KURS				*eS*	**Sb**	**10 29 07.5**	**+1.9**
	10nm,0.8s						
KURS	**Kuram**	**4.36**	**27**	Pg	**Pb**	**10 28 09.8**	**-3.2**
	4.7nm,0.6s						
KURS				Lg	Lg	10 29 07.5	
	10nm,0.8s						
UZB	**Uzynbulak**	**4.42**	**36**	*eP*	**Pb**	**10 28 11.5**	**-2.6**
	3.7nm,0.5s						
UZB				*eS*	**Sb**	**10 29 10.3**	**+2.9**
	8.6nm,0.8s						
UZB	**Uzynbulak**	**4.42**	**36**	Pg	**Pb**	**10 28 11.5**	**-2.6**
	3.7nm,0.5s						
UZB				Lg	Lg	10 29 10.3	
	8.6nm,0.8s						
KPKS	**Kokpek**	**4.53**	**31**	*eP*	**Pb**	**10 28 13.3**	**-2.7**
	8.3nm,0.3s						
KPKS				*eS*	**Sb**	**10 29 13.4**	**+2.7**
	18nm,0.6s						
PDGK	**Podgornoye**	**4.77**	**38**	Pg	**Pb**	**10 28 16.9**	**-3.3**
	1.8nm,0.5s						
PDGK				Lg	Lg	10 29 19.3	
	4.9nm,0.6s						
PDGK	**Podgornoye**	**4.77**	**38**	⇓Pg	**Pb**	**10 28 18.2**	**-2.0**
	4.1nm,0.8s						
PDGK				⇓Lg	Lg	10 29 21.3	
	11nm,0.8s						
IUG	**luzhnay**	**4.83**	**303**	*eP*	**Pb**	**10 28 22.2**	**+1.1**
	3.6nm,0.3s						
IUG				*eS*	**Sg**	**10 29 28.9**	**-2.5**
	9.3nm,0.6s						
IUG	**luzhnay**	**4.83**	**303**	Pg	**Pb**	**10 28 19.6**	**-1.5**
	2.5nm,0.3s						
IUG				Lg	Lg	10 29 23.9	
	8.1nm,0.5s						
KK31	**Karatay Array**	**5.09**	**315**	⇓Pn	**Pn**	**10 28 11.5**	**-1.3**
	0.8nm,0.7s,baz=121,slow=12,SNR=3.6						
KK31				⇑Pg	**Pb**	**10 28 25.7**	**+0.1**
	0.4nm,0.4s,baz=131,slow=16,SNR=5.5						
KK31				⇑Lg	Lg	10 29 35.4	
	1.2nm,0.5s,baz=125,slow=15,SNR=4.0						

*IDC **06** 10:41:49.6±5.2, 25.39N×126.16E, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.4/45, mbtmp3.5/3, Error ellipse: s-maj=311.7km s-min=29.6km az=97.0*
*JMA **06** 10:41:50.6±0.1, 25.30N×125.67E, h31km±3km, M3.8*

ISC 06 10:41:49.6±1.7, 25.4N±0.1×125.59E±0.08, h9km±11km, n15, σ0s52/25, mb3.5/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	**0.56**	**213**	P	**Pb**	**10 42 01.4**	**-0.2**
JIKM				S	**Sb**	**10 42 09.3**	**-0.4**
JOGS	**Gusukube**	**0.65**	**194**	P	**Pg**	**10 42 02.2**	**0.0**
JOGS				S	**Sg**	**10 42 10.4**	**-0.4**
JIRB	**Irabujima**	**0.68**	**214**	P	**Pg**	**10 42 02.9**	**+0.2**
JIRB				S	**Sg**	**10 42 12.0**	**+0.5**
JMJ2	**Miyako jima3**	**0.69**	**200**	P	**Pg**	**10 42 03.0**	**0.0**
JMJ2				S	**Sg**	**10 42 12.0**	**0.0**
JTJ	**Tarama**	**1.10**	**227**	P	**Pb**	**10 42 10.0**	**-0.8**
JTJ				S	**Sg**	**10 42 25.3**	**+0.3**
JISG	**Ishigakijimahi**	**1.41**	**235**	P	**Pn**	**10 42 15.1**	**-0.3**
JISG				*eS*	**Sb**	**10 42 34.2**	**+0.1**
JKE	**Kume jima 2**	**1.43**	**49**	P	**Pn**	**10 42 15.7**	**0.0**
JKE				S	**Sn**	**10 42 33.7**	**-0.8**
JIJ	**Ishigaki jima**	**1.67**	**232**	P	**Pn**	**10 42 18.4**	**-0.6**
JIJ				*eS*	**Sn**	**10 42 40.0**	**-0.4**
JKRS	**Kuro-shima**	**1.84**	**232**	P	**Pn**	**10 42 21.6**	**+0.3**
JKRS				*eS*	**Sn**	**10 42 44.7**	**0.0**
JAGN	**Aguni-jima**	**1.91**	**51**	P	**Pn**	**10 42 22.6**	**+0.3**
JAGN				*eS*	**Sn**	**10 42 46.6**	**+0.2**
IRIF	**Iriomote-Funau**	**1.99**	**238**	P	**Pn**	**10 42 23.7**	**+0.3**
HATJ	**Hateruma jima**	**2.10**	**231**	P	**Pn**	**10 42 26.0**	**+1.1**
WRA	**Warramunga Arr**	**45.86**	**168**	P	**P**	**10 50 12.2**	**-0.2**
	1.4nm,0.9s,baz=350,slow=8.6,SNR=12						
ASAR	**Alice Springs**	**49.43**	**170**	P	**P**	**10 50 41.3**	**+1.2**
	0.3nm,0.5s,baz=358,slow=15,SNR=8.8						
ILAR	**Eielson Array**	**66.29**	**2**	P	**P**	**10 52 37.9**	**-0.1**
	0.2nm,0.6s,baz=259,slow=4.5,SNR=4.8						

*IDC **06** 10:50:30.7±2.7, 17.19S×174.53W, h145km±28km, mb3.4/5, mb1 3.7/6, mb1mx3.4/28, mbtmp4.0/6, Error ellipse: s-maj=44.4km s-min=18.8km az=133.0*

ISC 06 10:50:31.0±1.1, 17.1S±0.3×174.5W±0.3, h150km, n6, σ1s69/7, mb3.4/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.09**	**40**	P	**Pn**	**10 51 33.6**	**+1.0**
	29nm,0.3s,baz=191,slow=2.0,SNR=60						
AFI				S	**Sn**	**10 52 17.7**	**-2.6**
	200nm,0.3s,baz=65,slow=22,SNR=23						
URZ	**Urewera**	**22.34**	**198**	P	**P**	**10 55 15.6**	**-0.9**
	3.3nm,0.4s,baz=34,slow=0.9,SNR=7.1						
WRA	**Warramunga Arr**	**48.48**	**258**	P	**P**	**10 58 58.4**	**-0.6**
	0.4nm,0.5s,baz=97,slow=7.0,SNR=17						
ASAR	**Alice Springs**	**48.63**	**253**	P	**P**	**10 58 59.4**	**-0.6**
	2.3nm,0.7s,baz=89,slow=8.6,SNR=35						
PDAR	**Pinedale Array**	**84.20**	**42**	P	**P**	**11 02 47.0**	**+1.1**
	0.2nm,0.6s,baz=256,slow=2.3,SNR=2.9						
ILAR	**Eielson Array**	**84.30**	**12**	P	**P**	**11 02 46.2**	**+0.7**
	0.3nm,0.5s,baz=226,slow=5.9,SNR=12						

MAN 06 10:55:23.8, 13.54N×120.59E, h30km, mb3.8, ML2.5, MS2.1,1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.35**	**97**	⇑*eP*	Pn	10 55 33.3	+0.4
PGP				*eS*	Sn	10 55 40.9	+1.9
LUBP	**Lubang**	**0.39**	**299**	*eP*	Pn	10 55 33.6	+0.2
LUBP				*eS*	Sn	10 55 41.5	+1.8
SJMP	**San Jose**	**1.19**	**154**	*eP*	Pn	10 55 44.3	-0.1
SJMP				*eS*	Sn	10 56 00.0	+0.4

*ISN **06** 11:50:51.5±1.0, 33.52N×45.53E, h4km±3km, ML3.9*
*TEH **06** 11:50:53.0, 33.66N×45.77E, h15km, ML3.7*

ISC 06 11:50:52.0±0.9, 33.62N±0.04×45.68E±0.05, h10km, n33, σ1s08/37, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.55**	**157**	*ePg*	**Pg**	**11 51 03.0**	**+0.3**
IBDR				*eSg*	**Sb**	**11 51 12.0**	**+0.3**
IBDR				AML	AML	11 51 15.8	
	comp=E,10μm,0.5s						
IBDR				AML	AML	11 51 17.1	
	comp=N,7μm,0.8s						
IGHG	**Ghaleghazi**	**1.02**	**46**	*ePg*	**Pg**	**11 51 10.6**	**-1.1**
IGHG				*e*		11 51 32.2	
BHD	**Baghdad**	**1.14**	**252**	*ePg*	**Pb**	**11 51 13.0**	**-0.7**
BHD				*eSg*	**Sn**	**11 51 29.0**	**-0.6**
BHD				AML	AML	11 51 37.1	
	comp=E,2μm,0.4s						
IDHR	**Dehrash**	**1.23**	**28**	*ePg*	**Pn**	**11 51 15.3**	**-0.1**
IDHR				*e*		11 51 36.2	
KCHF	**Cheshme Sefid,**	**1.31**	**60**	*ePg*	**Pn**	**11 51 16.4**	**-0.1**
KCHF				*e*		11 51 39.3	
IVIS	**Veis**	**1.33**	**47**	*ePg*	**Pn**	**11 51 16.6**	**-0.1**
IVIS				*e*		11 51 39.9	
KER	**Kermanshah**	**1.43**	**57**	*ePg*	**Pn**	**11 51 18.8**	**+0.7**
IKOM	**Komasi**	**1.62**	**70**	*ePg*	**Pn**	**11 51 21.9**	**+1.1**
IKOM				*e*		11 51 49.2	
ILIN	**Lien**	**1.68**	**39**	*ePg*	**Pn**	**11 51 22.9**	**+1.3**
ILIN				*e*		11 51 49.4	
IKFM	**Kafar-mosalman**	**1.81**	**92**	*ePg*	**Pn**	**11 51 25.0**	**+1.8**
IKFM				*e*		11 51 53.8	
IBZA	**Bozab**	**2.00**	**64**	*ePn*	**Pn**	**11 51 26.5**	**+0.4**
IBZA				*e*		11 52 03.9	
IDOB	**Doab**	**2.09**	**85**	*ePn*	**Pn**	**11 51 28.3**	**+1.0**
IKMR	**Kamar-syah**	**2.26**	**92**	*ePn*	**Pn**	**11 51 30.9**	**+1.5**
IKMR				*e*		11 52 05.4	
HSAM	**Samen**	**2.50**	**76**	*ePn*	**Pn**	**11 51 33.8**	**+0.8**
HSAM				*e*		11 52 21.1	
BMDN	**Meydan**	**2.63**	**88**	*ePn*	**Pn**	**11 51 35.5**	**+0.9**
BMDN				*e*		11 52 24.9	
NSR	**Nassriya**	**2.63**	**171**	*ePn*	**Pn**	**11 51 34.0**	**-0.5**
NSR				*eSn*	**Sn**	**11 52 05.0**	**-1.5**
HSRG	**Sareghieh**	**2.69**	**52**	*ePn*	**Pn**	**11 51 37.3**	**+1.7**
HSRG				*e*		11 52 19.4	
HAGD	**Aghdareh**	**3.11**	**66**	*ePn*	**Pn**	**11 51 42.5**	**+1.2**
HAGD				*e*		11 52 33.6	
MAHB	**Mahabad**	**3.14**	**0**	*ePn*	**Pn**	**11 51 43.1**	**+1.5**
MAHB				*e*		11 52 34.9	
MSL	**Mosul**	**3.48**	**324**	*ePn*	**Pn**	**11 51 48.0**	**+1.8**
MSL				*eSn*	**Sn**	**11 52 28.0**	**+0.5**
QABG	**Abgarm-Qazvin**	**3.83**	**56**	*ePn*	**Pn**	**11 51 51.4**	**+0.1**
IRAZ	**Razeghan**	**3.94**	**62**	*ePn*	**Pn**	**11 51 53.5**	**+0.8**
QSDN	**Sirdan**	**4.06**	**44**	*ePn*	**Pn**	**11 51 55.2**	**+0.8**
IPIR	**Pirpir**	**4.47**	**101**	*ePn*	**Pn**	**11 52 01.6**	**+1.5**
IPIR				*e*		11 52 54.7	
IQOM	**Qom**	**4.63**	**73**	*ePn*	**Pn**	**11 52 02.1**	**-0.2**
QAM	**Ghamsar**	**4.81**	**87**	*ePn*	**Pn**	**11 52 05.9**	**+1.3**
IKLH	**Kolahrood**	**4.94**	**92**	*ePn*	**Pn**	**11 52 08.3**	**+1.8**
QALM	**Alamut, Qazvin**	**4.95**	**54**	*ePn*	**Pn**	**11 52 07.2**	**+0.6**
IVRN	**Varamin**	**5.19**	**73**	*ePn*	**Pn**	**11 52 10.0**	**+0.2**
KRSH	**Karshahi**	**5.39**	**85**	*ePn*	**Pn**	**11 52 13.8**	**+1.2**
IZEF	**Zefreh**	**5.62**	**96**	*ePn*	**Pn**	**11 52 16.1**	**+0.3**
KLNJ	**Kolanjah**	**5.64**	**116**	*ePn*	**Pn**	**11 52 18.0**	**+1.7**
IFIR	**Firoozkooh**	**6.17**	**69**	*ePn*	**Pn**	**11 52 23.6**	**+0.2**

DDA 06 12:02:29.5, 37.04N×30.54E, h7km±6km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KORT	**Korkueli**	**0.16**	**256**	*i* P	Pg	12 02 32.5	-0.3
KORT				*i* S	Sg	12 02 36.5	+1.4
KORT				IAML		12 02 39.0	
	comp=N,150nm,0.5s						
KORT				IAML		12 02 39.0	
	comp=E,149nm,0.5s						
GOLH	**Golhisar**	**0.81**	**284**	*i* P	Pg	12 02 45.4	+0.4
GOLH				*i* S	Sb	12 02 57.2	+0.1
GOLH				IAML		12 03 02.0	
	comp=N,20nm,0.5s						
KEPZ	**Antalya-Kepez**	**0.86**	**99**	*i* P	Pg	12 02 45.2	-0.9
KEPZ				IAML		12 02 57.0	
	comp=N,8.4nm,1.3s						
KEPZ				*i* S	Sb	12 02 59.6	+1.0
KEPZ				IAML		12 03 16.0	
	comp=E,6.1nm,1.0s						
BAGO	**Egridir - ISPA**	**0.97**	**12**	*i* P	Pg	12 02 47.1	-1.0
BAGO				*i* S	Sb	12 03 02.6	+0.8

ISK 06 12:02:46.2, 37.24N×28.17E, h2km, ML1.8/8, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.14**	**139**	PG	Pg	12 02 49.7	+0.8
YER				SG	Sg	12 02 52.2	+1.5
MLSB	**Milas**	**0.32**	**280**	PG	Pb	12 02 53.9	-0.8
TURN	**Turunc**	**0.47**	**173**	PG	Pg	12 02 55.9	+0.8
TURN				SG	Sb	12 03 03.5	-1.0
DALY	**Dalyan (Mula)**	**0.57**	**137**	PG	Pb	12 02 58.2	-0.7
BODT	**Bodrum**	**0.71**	**256**	PG	Pb	12 03 00.9	-0.4
AYDB	**Zeytinkoy-Aydi**	**0.74**	**343**	PG	Pb	12 03 01.2	-0.7
GCAM	**G?zelcaml?**	**0.88**	**302**	PG	Pb	12 03 03.9	-0.2
FETY	**Fethiye**	**0.95**	**129**	PG	Pb	12 03 05.2	-0.2
CAME	**Cameli-Denizli**	**0.95**	**108**	PG	Pb	12 03 05.2	-0.3
ARG	**Arkhangelos**	**1.02**	**182**	PG	Pb	12 03 06.7	+0.1
AKAS	**Kas**	**1.53**	**131**	PN	Pb	12 03 15.4	0.0
AKAS				SN	Sg	12 03 37.1	+1.8

JMA 06 12:04:42.5±0.2, 31.36N×130.49E, h143km±2km, M2.3, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTSR	**Tashiro 2**	**0.42**	**117**	P	Pn	12 05 02.7	0.0
JTSR				*eS*	Sn	12 05 17.6	-0.4
JSJ	**Shimokoshiki**	**0.73**	**296**	P	Pn	12 05 04.1	-0.4
JSJ				*eS*	Sn	12 05 20.9	-0.3
JTZ	**Takazaki**	**0.74**	**43**	P	Pn	12 05 04.6	+0.1
JTN	**Tanegashima 3**	**0.82**	**149**	P	Pn	12 05 05.2	0.0
JTN				*eS*	Sn	12 05 22.0	-0.3
JIU3	**Izumi3**	**1.22**	**13**	P	Pn	12 05 08.8	+0.2

*IDC **06** 12:05:01.0±1.3, 25.46N×144.99E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/58, mbtmp3.7/6, ML3.1/1, Error ellipse: s-maj=45.7km s-min=20.9km az=83.0*
*NEIC **06** 12:05:04.3±2.8, 25.5N±0.1×144.7E±0.1, h20km±5km, mb4.5/13, Error ellipse: s-maj=22.0km s-min=17.3km az=213.0*

ISC 06 12:05:02.7±0.9, 25.5N±0.1×144.8E±0.1, h10km, n26, σ1s36/25, mb4.0/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.83**	**305**	Pn	**Pn**	**12 05 47.4**	**-0.6**
MJAR	**Matsushiro Arr**	**12.38**	**335**	Pn	**Pn**	**12 07 59.9**	**+1.0**
	0.1nm,0.3s,baz=158,slow=11,SNR=5.4						
JMM	**Marumori**	**12.80**	**346**	Pn	**Pn**	**12 08 03.3**	**-1.4**
TPUB	**Ta-pu**	**22.10**	**269**	P	**P**	**12 09 56.6**	**-1.7**
TPUB				IAmb	IAmb	12 10 13.7	
	comp=Z,53nm,1.3s						
SONM	**Songino Array**	**37.49**	**317**	P	**P**	**12 12 18.0**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=114,slow=8.9,SNR=3.7						
WB0	**Warramunga Arr**	**46.10**	**194**	P	**P**	**12 13 27.8**	**+0.7**
WB0				IAmb	IAmb	12 13 42.1	
	comp=Z,5.3nm,1.2s						
WR0	**Warramunga Arr**	**46.26**	**193**	P	**P**	**12 13 28.4**	**0.0**
WB2	**Warramunga Arr**	**46.28**	**194**	P	**P**	**12 13 28.7**	**+0.1**
WB2				IAmb	IAmb	12 13 38.5	
	comp=Z,4.5nm,1.1s						
WRA	**Warramunga Arr**	**46.28**	**194**	P	**P**	**12 13 28.7**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=12,slow=8.7,SNR=16						
WRA	**Warramunga Arr**	**46.28**	**194**	IAmb	IAmb	12 13 32.6	
	comp=Z,0.1nm,1.0s						
ASAR	**Alice Springs**	**49.99**	**193**	P	**P**	**12 13 57.0**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=13,slow=9.6,SNR=5.6						
ZALV	**Zalesovo Beam**	**52.23**	**320**	P	**P**	**12 14 14.2**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=109,slow=8.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**52.23**	**320**	P	**P**	**12 14 14.1**	**+0.4**
MKAR	**Makanchi Array**	**53.30**	**311**	P	**P**	**12 14 22.5**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=86,slow=8.8,SNR=3.1						
KURK	**Kurchatov**	**55.77**	**315**	P	**P**	**12 14 39.1**	**-0.6**
KURK				IAmb	IAmb	12 14 41.0	
	comp=Z,5.5nm,1.2s						
ILAR	**Eielson Array**	**58.02**	**28**	P	**P**	**12 14 54.8**	**-0.6**
	comp=Z,0.8nm,1.0s,baz=254,slow=6.4,SNR=4.6						
KKAR	**Karatay Array**	**61.92**	**307**	P	**P**	**12 15 23.1**	**+0.5**
F07A	**Phinny Hill Vi**	**75.63**	**46**	P	**P**	**12 16 49.3**	**+1.3**
F10A	**Beach Ranch, E**	**77.34**	**45**	P	**P**	**12 16 57.9**	**+0.1**
DLMT	**Dillon**	**80.54**	**44**	P	**P**	**12 17 17.1**	**+1.7**
DLMT				IAmb	IAmb	12 17 34.7	
	comp=Z,6.3nm,0.8s						
YHL	**Hebgen Lake**	**81.67**	**44**	P	**P**	**12 17 25.2**	**+3.6**
YHB	**Horse Butte**	**81.70**	**44**	P	**P**	**12 17 21.2**	**-0.5**
ECR	**Eagle Creek**	**82.38**	**46**	P	**P**	**12 17 22.8**	**-2.5**
TPAW	**Teton Pass**	**82.45**	**45**	P	**P**	**12 17 27.1**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.41**	**264**		**Pg**	**12 15 43.7**	**-0.3**
MOD					**Sg**	**12 15 50.9**	**+1.4**
K05A	**Summer Lake**	**1.15**	**313**	Pg	**Pg**	**12 15 57.7**	**-0.4**
M04C	**Macdoel**	**1.57**	**265**	P	**Pn**	**12 16 03.0**	**-1.1**
	baz=86						
M04C				S	**Sb**	**12 16 25.6**	**+0.4**
	baz=86						
K04D	**Chiloquin, OR**	**1.64**	**295**	P	**Pn**	**12 16 05.1**	**0.0**
	baz=116,SNR=23						
K04D				S	**Sg**	**12 16 29.2**	**+0.7**
	baz=116						
J08A	**Circle Bar Ran**	**1.70**	**33**	Pn	**Pn**	**12 16 05.5**	**-0.4**
J05D	**Fort Rock, OR**	**1.73**	**321**	P	**Pb**	**12 16 07.6**	**-0.4**
	baz=141						
J05D				Sb	**Sg**	**12 16 34.5**	**+2.9**
	baz=141						
L04D	**Klamath Falls**	**1.92**	**279**	P	**Pn**	**12 16 08.2**	**-0.8**
	baz=100,SNR=21						
L04D				Sb	**Sg**	**12 16 38.1**	**+0.5**
	baz=100						
PINE	**Pine Mountain**	**2.04**	**335**	Pn	**Pb**	**12 16 13.0**	**-0.4**
BEKR	**Beckworth**	**2.13**	**193**	Pn	**Pn**	**12 16 11.0**	**-0.8**
I07A	**Izee**	**2.14**	**5**	Pn	**Pb**	**12 16 14.4**	**-0.6**
J04D	**Umpqua Nationa**	**2.17**	**307**	Pb	**Pb**	**12 16 16.3**	**+0.8**
	baz=127,SNR=18						
J04D				Sb	**Sg**	**12 16 47.5**	**+1.8**
	baz=127						
YBH	**Yreka Blue Hor**	**2.22**	**266**		**Pn**	**12 16 12.0**	**-1.1**
PAHR	**Pah Rah Range**	**2.25**	**173**	Pn	**Pn**	**12 16 12.9**	**-0.7**
O03E	**Paynes Creek**	**2.26**	**224**	P	**Pn**	**12 16 11.6**	**-2.0**
	baz=45						
O03E				Sb	**Sb**	**12 16 44.0**	**-1.2**
	baz=45						
M02C	**Callahan**	**2.39**	**258**	P	**Pn**	**12 16 14.2**	**-1.2**
	baz=78,SNR=22						
M02C				Sb	**Sg**	**12 16 51.0**	**-1.7**
	baz=78						
N02D	**Trinity Center**	**2.42**	**247**	P	**Pn**	**12 16 14.9**	**-0.9**
	baz=68,SNR=8.5						
N02D				Sb	**Sb**	**12 16 51.5**	**+1.7**
	baz=68						
HUMO	**Hull Mountain**	**2.47**	**287**	Pn	**Pn**	**12 16 15.7**	**-0.7**
WDC	**Whiskeytown Da**	**2.51**	**238**		**Pn**	**12 16 15.8**	**-1.1**
VCNR	**Virginia City**	**2.65**	**178**	Pn	**Pn**	**12 16 18.2**	**-0.8**
I05D	**Terrebonne, OR**	**2.66**	**335**	Pb	**Pb**	**12 16 23.6**	**-0.2**
	baz=154,SNR=24						
I05D				Sb	**Sg**	**12 17 02.5**	**+1.1**
	baz=154						
I04A	**Tendick Farm,**	**2.69**	**314**	Pb	**Pb**	**12 16 24.4**	**+0.1**
	baz=133,SNR=14						
I04A				Sb	**Sg**	**12 17 02.7**	**+0.3**
	baz=133						
ORV	**Oroville**	**2.73**	**210**	Pn	**Pn**	**12 16 20.0**	**0.0**
PNTR	**Pine Nut**	**2.85**	**178**	Pn	**Pn**	**12 16 23.6**	**+1.7**
L02E	**Cave Junction**	**2.88**	**276**	P	**Pn**	**12 16 22.2**	**+0.2**
	baz=94,SNR=32						
L02E				Sb	**Sb**	**12 17 05.6**	**+2.8**
	baz=94						
RUBR	**Rubicon Trail**	**2.91**	**186**	Pn	**Pn**	**12 16 24.5**	**+1.9**
K02D	**Willamette Mer**	**3.00**	**286**	P	**Pn**	**12 16 24.1**	**+0.4**
	baz=104,SNR=51						
K02D				Sb	**Sg**	**12 17 10.9**	**-1.4**
	baz=104						
AFDM	**Forest Hills D**	**3.13**	**198**	Pn	**Pn**	**12 16 25.2**	**-0.4**
KRMB	**Red Mountain**	**3.14**	**264**	Pn	**Pn**	**12 16 25.3**	**-0.4**
KVN	**Kaiserville**	**3.15**	**156**	Pn	**Pn**	**12 16 25.5**	**-0.5**
I03D	**Drain, OR**	**3.17**	**305**	Sb	**Sg**	**12 17 16.9**	**-0.9**
	baz=123						
MFID	**Camas Ranch**	**3.24**	**62**	Pn	**Pn**	**12 16 26.1**	**-1.0**
KBO	**Bosley Butte**	**3.34**	**276**	Pn	**Pn**	**12 16 30.6**	**+2.1**
H04D	**Lebanon**	**3.38**	**321**	Pb	**Pb**	**12 16 36.6**	**+0.6**
	baz=139						
H04D				Sb	**Sg**	**12 17 23.3**	**-1.1**
	baz=139						
BMO	**Blue Mountains**	**3.41**	**31**	Pn	**Pn**	**12 16 27.2**	**-2.2**
JCC	**Jacoby Creek,**	**3.41**	**252**	Pn	**Pn**	**12 16 27.2**	**-2.1**
RYN	**Ryan**	**3.44**	**164**		**Pn**	**12 16 28.2**	**-1.7**
G05D	**Wamic, OR**	**3.49**	**341**	Pb	**Pb**	**12 16 38.7**	**+0.8**
	baz=160						
G05D				Sb	**Sg**	**12 17 26.9**	**-1.0**
	baz=160						
ELK	**Elko**	**3.60**	**108**	Pn	**Pn**	**12 16 31.9**	**-0.3**
NVAR	**Mina Array Bea**	**3.68**	**162**		**Pn**	**12 16 32.3**	**-0.9**
NV11	**Mina Array Sit**	**3.71**	**160**	Pn	**Pn**	**12 16 37.4**	**+3.7**
LHV	**Little Huntoon**	**3.81**	**165**	Pn	**Pn**	**12 16 36.2**	**+1.4**
HOPS	**Hopland Field**	**3.89**	**222**	Pn	**Pn**	**12 16 33.3**	**-2.6**
CMB	**Columbia Colle**	**3.94**	**187**	Pn	**Pn**	**12 16 33.3**	**-3.3**
F05D	**White Salmon**	**4.13**	**343**	Sb	**Sg**	**12 17 45.5**	**-3.0**
	baz=162						
PLID	**Pearl Lake**	**4.16**	**40**	Pn	**Pn**	**12 16 39.7**	**-0.1**
HLID	**Hailey**	**4.25**	**66**	Sb	**Sb**	**12 17 42.8**	**+0.4**
	baz=248						
MDPB	**Devils Postpil**	**4.34**	**173**	Pn	**Pn**	**12 16 41.0**	**-1.3**
OMMB	**Old Mammoth Mi**	**4.36**	**172**	Pn	**Pn**	**12 16 40.7**	**-2.1**
SPR3	**Spring Creek 3**	**5.07**	**124**	Pn	**Pn**	**12 16 52.6**	**+0.1**
BGU	**Big Grassy Mou**	**5.15**	**99**		**Pn**	**12 16 52.1**	**-0.3**
BCYI	**Bear Canyon**	**5.21**	**61**		**Pn**	**12 16 55.0**	**+0.7**
DUG	**Dugway, Tooele**	**5.53**	**106**		**Pn**	**12 16 57.6**	**-1.0**
TPNV	**Topopah Spring**	**5.68**	**150**		**Pn**	**12 16 59.8**	**-0.9**
MCMT	**McKenzie Canyo**	**5.79**	**58**		**Pn**	**12 17 02.6**	**+0.3**
PRN	**Pahroc Range**	**5.80**	**140**		**Pn**	**12 17 02.5**	**+0.2**
LRM	**Limekiln Ridge**	**6.54**	**51**	Pn	**Pn**	**12 17 14.1**	**+1.4**
CCUT	**Cedar City**	**6.59**	**130**		**Pn**	**12 17 13.4**	**+0.1**
REDW	**Red Top Meadow**	**6.71**	**75**		**Pn**	**12 17 17.4**	**+2.5**
MTPU	**Mount Pierson**	**6.99**	**121**	Pn	**Pn**	**12 17 19.6**	**+0.7**

*JMA **06** 12:24:00.3±0.2,33˚.40N×138˚.47E, h309km, M3.2*
*IDC **06** 12:24:04.5±4.5,33˚.77N×138˚.50E, h313km±198km, mb2.9/2, mb1 3.3/3, mb1mx2.7/41, mbtmp3.7/3, Error ellipse: s-maj=284.0km s-min=176.9km az=177.0*
ISC 06 12:24:02.9±1.1,33˚62N±0˚.09×138˚41E±0˚.09, h300km, n17, σ1§16/21, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.64**	**301**	P	**Pn**	**12 24 40.8**	**-0.8**
TTO4	**TONANKAI O.B.S**	**0.82**	**298**	P	**Pn**	**12 24 41.3**	**-0.9**
TTO5	**TONANKAI O.B.S**	**0.86**	**318**	P	**Pn**	**12 24 41.9**	**-0.5**
TK04	**Tokai 4**	**0.89**	**330**	P	**Pn**	**12 24 42.5**	**-0.1**
JMKN	**Mikurajimanish**	**1.02**	**74**	P	**Pn**	**12 24 42.9**	**-0.5**
JOD2	**Odawara 2**	**1.73**	**19**	P	**Pn**	**12 24 48.0**	**+0.3**
JYN	**Shimob**	**1.88**	**3**	P	**Pn**	**12 24 49.6**	**+0.8**
BSO1	**Boso 1**	**2.37**	**63**	P	**Pn**	**12 24 51.1**	**-1.0**
BSO1				*e*S	**S**	**12 25 30.3**	**-1.1**
JYTA	**Yamagatataniai**	**2.41**	**325**	P	**Pn**	**12 24 53.4**	**+0.4**
JWY	**Kouya**	**2.42**	**285**	P	**Pn**	**12 24 52.4**	**-0.9**
JRY	**Ryogami san**	**2.43**	**9**	P	**Pn**	**12 24 54.4**	**+1.1**
JRY				*e*S	**S**	**12 25 33.3**	**-0.1**
MJAR	**Matsushiro Arr**	**2.92**	**357**	P	**Pn**	**12 24 58.8**	**+0.9**
	0.3nm,0.3s,baz=170,slow=8.8,SNR=14						
MAT	**Matsushiro**	**2.92**	**357**	P	**Pn**	**12 24 58.8**	**+0.9**
MAT				*e*S	**S**	**12 25 39.5**	**-2.2**
JAG	**Ashikaga**	**2.93**	**17**	P	**Pn**	**12 24 57.9**	**0.0**
JAG				S	**S**	**12 25 39.3**	**-2.5**
JWT	**Wachi**	**2.99**	**305**	P	**Pn**	**12 24 58.2**	**-0.3**
WRA	**Warramunga Arr**	**53.40**	**185**	P	**P**	**12 32 53.6**	**+1.1**
	0.6nm,0.3s,baz=359,slow=7.5,SNR=26						
ASAR	**Alice Springs**	**57.13**	**185**	P	**P**	**12 33 20.6**	**+1.7**
	0.2nm,0.5s,baz=18,slow=11,SNR=7.4						

*IDC **06** 12:30:59.2±0.8, 8˚.10N×75˚.32W, h36km±6km, mb3.6/4, mb1 3.9/6, mb1mx3.5/47, mbtmp3.9/6, ML3.8/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/26, Error ellipse: s-maj=27.0km s-min=20.0km az=29.0*
*RSNC **06** 12:31:00.9±1.0, 8˚.28N×75˚.31W, h28km±4km, ML3.8, Mw3.8, Fault plane solution: NP1:φs154.00000°, δ44.00000°, λ-107.00000°.*
ISC 06 12:30:59.5±0.8, 8˚28N±0˚.03×75˚30W±0˚.03, h31km±5km, n46, σ1§47/59, mb3.8/4, 8C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UREC	**San Jos de Ur**	**0.58**	**204**	⇑*i*P	**Pb**	**12 31 10.9**	**-0.3**
UREC				*e*S	**Sb**	**12 31 19.7**	**+0.5**
UREC				*i*		12 31 21.4	
	comp=Z,5μm,0.2s						
MOTC	**Monteria, Cord**	**0.61**	**324**	⇑*i*P	**Pn**	**12 31 12.8**	**+0.7**
MOTC				*e*S	**Sn**	**12 31 21.8**	**+0.9**
MOTC				*i*		12 31 26.2	
	comp=Z,3μm,0.5s						
LCBC	**Los crdobas,**	**1.20**	**298**	*e*P	**Pb**	**12 31 22.9**	**+1.3**
LCBC				*i*		12 31 46.2	
	comp=Z,3μm,0.4s						
DBBC	**Dabeiba**	**1.55**	**216**	*e*P	**Pn**	**12 31 25.6**	**+0.6**
DBBC				*e*S	**Sn**	**12 31 44.8**	**+0.6**
SJCC	**San Jacinto, C**	**1.61**	**4**	*e*P	**Pn**	**12 31 26.3**	**+0.5**
SJCC				*i*		12 31 59.5	
	comp=Z,373nm,0.4s						
ARGC	**Ariguani, Magd**	**1.88**	**34**	*e*P	**Pn**	**12 31 30.7**	**+1.2**
ARGC				*i*		12 32 03.4	
	comp=Z,462nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.92**	**154**	⇓*i*P	**Pn**	**12 31 31.0**	**+0.8**
PTBC				*e*S	**Sn**	**12 31 53.5**	**+0.1**
PTBC				*i*		12 31 58.1	
	comp=Z,1μm,0.5s						
BRRC	**Barranca, Sant**	**1.96**	**126**	⇑*e*P	**Pn**	**12 31 32.0**	**+1.4**
BRRC				*e*S	**Sn**	**12 31 55.1**	**+0.9**
BRRC				*i*		12 32 04.0	
	comp=Z,1μm,0.3s						
OCAC	**Ocana**	**1.96**	**91**	⇑*i*P	**Pn**	**12 31 31.1**	**+0.3**
OCAC				*e*S	**Sn**	**12 31 55.2**	**+0.8**
CAPC	**Capurgana**	**2.06**	**280**	⇑*e*P	**Pn**	**12 31 32.2**	**+0.2**
CAPC				*e*S	**Sn**	**12 31 57.1**	**+0.4**
CAPC				*i*		12 32 01.9	
	comp=Z,417nm,0.2s						
HELC	**Santa Helena**	**2.09**	**186**	⇓*i*P	**Pn**	**12 31 33.9**	**+1.1**
HELC				*e*S	**Sn**	**12 32 00.0**	**+2.0**
HELC				*i*		12 32 07.9	
	comp=Z,502nm,0.6s						
BARC	**Barichara**	**2.69**	**129**	⇑*e*P	**Pn**	**12 31 42.5**	**+1.6**
BARC				*e*S	**Sn**	**12 32 13.7**	**+1.1**
PTAC	**Punta Ardita,**	**2.73**	**246**	*e*P	**Pn**	**12 31 42.4**	**+1.1**
NORC	**Norcasia**	**2.74**	**171**	⇓*i*P	**Pn**	**12 31 42.1**	**+0.7**
NORC				*e*S	**Sn**	**12 32 13.8**	**+0.3**
NORC				*i*		12 32 27.5	
	comp=Z,413nm,0.3s						
PAMC	**Pamplona, Colo**	**2.74**	**110**	⇑*i*P	**Pn**	**12 31 43.4**	**+1.6**
SPBC	**San Pablo de B**	**2.88**	**155**	*e*P	**Pn**	**12 31 43.7**	**+0.2**
SPBC				*e*S	**Sn**	**12 32 18.9**	**+1.7**
SPBC				*i*		12 32 31.7	
	comp=Z,301nm,0.7s						
CVALL	**Valledupar, Ce**	**2.99**	**42**	*e*P	**Pn**	**12 31 45.6**	**+0.7**
GUY2C	**Guyana, Caldas**	**3.04**	**181**	⇓*e*P	**Pn**	**12 31 47.3**	**+1.4**
SMRC	**Santa Marta, M**	**3.05**	**20**	*e*P	**Pn**	**12 31 48.7**	**+3.0**
RUSC	**La Rusia**	**3.24**	**137**	*e*P	**Pn**	**12 31 49.5**	**+0.8**
RUSC				*e*S	**Sn**	**12 32 29.6**	**+3.2**
RUSC				*i*		12 32 44.2	
	comp=Z,533nm,0.6s						
ROSC	**El Rosal**	**3.56**	**164**	Pn	**Pn**	**12 31 54.7**	**+1.7**
	comp=Z,17nm,0.3s,baz=143,slow=20,SNR=16						
ROSC				Lg	Lg	12 32 44.0	
	comp=Z,75nm,0.3s,baz=49,slow=20,SNR=11						
TOLC	**Tolima**	**3.67**	**180**	*e*P	**Pn**	**12 31 56.9**	**+2.3**
ANIL	**Santa Ana**	**3.77**	**182**	*e*P	**Pn**	**12 31 58.0**	**+2.1**
ANIL				*i*		12 33 11.4	
	comp=N,136nm,0.4s						
CHIC	**Chingaza**	**3.95**	**157**	*e*P	**Pn**	**12 31 59.3**	**+0.8**
ORTC	**Ortega, Tolima**	**4.35**	**179**	*e*P	**Pn**	**12 32 05.5**	**+2.0**
ORTC				*i*		12 33 25.7	
	comp=Z,229nm,0.4s						
YOTC	**Yotoco, Valle**	**4.40**	**194**	⇑*e*P	**Pn**	**12 32 06.0**	**+1.7**
PRAC	**Prado**	**4.56**	**175**	*e*P	**Pn**	**12 32 07.5**	**+1.0**
SDV	**Santo Domingo**	**4.65**	**82**	Pn	**Pn**	**12 32 09.7**	**+1.8**
	comp=Z,32nm,0.3s,baz=260,slow=12,SNR=10.0						
SDV				Sn	**Sn**	**12 33 02.1**	**+1.0**
	comp=Z,52nm,0.3s,baz=270,slow=19,SNR=4.8						
SDV				LR	LR	12 34 13.9	
	comp=Z,175nm,19.3s,baz=267,slow=41						
SDV	**Santo Domingo**	**4.65**	**82**	*e*P	**Pn**	**12 32 09.0**	**+1.1**
URIC	**Uribia, Colomb**	**4.71**	**44**	*e*P	**Pn**	**12 32 07.9**	**-0.6**
URIC				*i*		12 33 28.8	
	comp=Z,108nm,0.8s						
PTGC	**Puerto Gaitan,**	**5.13**	**142**	*e*P	**Pn**	**12 32 15.7**	**+1.3**
BETC	**Betania**	**5.57**	**181**	*e*P	**Pn**	**12 32 21.1**	**+0.8**
POPC	**Popayan, Colom**	**5.87**	**194**	*e*P	**Pn**	**12 32 25.5**	**+0.8**
PCON	**Cinco Dias**	**6.02**	**191**	*e*P	**Pn**	**12 32 29.5**	**+2.5**
GARC	**Garzon, Huila**	**6.06**	**182**	*e*P	**Pn**	**12 32 27.2**	**-0.1**
FLOC	**Florencia**	**6.67**	**183**	*e*P	Pn	12 32 31.6	-3.9
ATAH	**Atahualpa**	**15.62**	**191**	Pn	**Pn**	**12 34 35.4**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=0.0,slow=10,SNR=2.4						
PTGA	**Pitinga**	**17.71**	**120**	Pn	**Pn**	**12 35 02.0**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=270,slow=20,SNR=4.4						
PTGA				S	Sn	12 38 08.7	-12
	comp=Z,0.3nm,0.3s,baz=270,slow=20,SNR=3.2						
PTGA				LR	LR	12 42 22.6	
	comp=Z,81nm,18.3s,baz=342,slow=39						
NNA	**Nana**	**20.20**	**184**	LR	LR	12 44 41.3	
	comp=Z,62nm,20.7s,baz=340,slow=41						
MDP	**Montagnes des**	**22.72**	**97**	LR	LR	12 45 01.5	
	comp=Z,39nm,20.4s,baz=304,slow=37						
LPAZ	**La Paz**	**25.42**	**164**	P	**P**	**12 36 23.3**	**-2.1**
	comp=Z,2.0nm,0.6s,baz=329,slow=17,SNR=8.8						
SIV	**San Ignacio**	**27.93**	**150**	P	**P**	**12 36 44.5**	**-2.8**
	comp=Z,0.8nm,0.5s,baz=340,slow=9.9,SNR=5.2						
SIV				pP	**pP**	**12 36 56.4**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=337,slow=13,SNR=3.6						
TXAR	**Lajitas Array**	**33.88**	**312**	P	**P**	**12 37 41.2**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=117,slow=9.2,SNR=2.1						
TORD	**Torodi Ar. Bea**	**75.56**	**79**	P	**P**	**12 42 40.4**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=293,slow=5.1,SNR=4.2						
ASAR	**Alice Springs**	**148.13**	**238**	PKPbc	**PKPdf**	**12 50 40.9**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=120,slow=3.5,SNR=22						
ASAR				pPKPbc	**sPKPdf**	**12 50 52.6**	**-1.0**
	comp=Z,1.8nm,0.6s,baz=117,slow=3.6,SNR=9.7						
WRA	**Warramunga Arr**	**149.07**	**245**	PKPbc	**PKPdf**	**12 50 43.6**	**+2.0**
	comp=Z,0.8nm,0.7s,baz=106,slow=2.7,SNR=14						
WRA				pPKPbc	**sPKPdf**	**12 50 55.1**	**0.0**
	comp=Z,1.3nm,0.6s,baz=103,slow=2.8,SNR=9.4						

*PRE **06** 12:53:40.4±0.9,26˚.93S×26˚.74E, h2km, ML2.8*
*EAF **06** 12:53:41.1±0.9,26˚.63S×23˚.57E, h10km, MD4.0*
ISC 06 12:53:40.8±1.1,26˚91S±0˚.03×26˚75E±0˚.03, h14km±9km, n18, σ1§92/36, 2D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.77**	**51**	*e*P	**Pg**	**12 53 55.9**	**0.0**
WDLM				*e*S	**Sg**	**12 54 06.6**	**+0.5**
WDLM				AML	AML	12 54 08.6	
	comp=Z,343nm,0.4s						
KLOF	**Kloof**	**0.95**	**54**	*e*P	**Pg**	**12 53 59.0**	**-0.3**
KLOF				*e*S	**Sg**	**12 54 12.5**	**+0.7**
KLOF				AML	AML	12 54 18.4	
	comp=Z,2μm,0.2s						
KSR	**Koster**	**1.06**	**7**	*e*P	**Pg**	**12 54 01.3**	**0.0**
KSR				*e*S	**Sg**	**12 54 16.0**	**+0.7**
KSR				AML	AML	12 54 21.5	
	comp=Z,890nm,0.1s						
SWZ	**Schweizer**	**1.29**	**258**	*e*P	**Pn**	**12 54 05.6**	**+1.1**
SWZ				*e*S	**Sb**	**12 54 22.6**	**+1.1**
SWZ				AML	AML	12 54 28.1	
	comp=Z,309nm,0.3s						
ERPM	**east rand prop**	**1.45**	**67**	*e*P	**Pg**	**12 54 09.4**	**+0.7**
ERPM				*e*S	**Sn**	**12 54 30.2**	**+4.5**
ERPM				AML	AML	12 54 32.3	
	comp=Z,93nm,0.2s						
BOSA	**Boshof**	**2.15**	**218**	*i* P	**Pg**	**12 54 20.8**	**-1.3**
BOSA				*i* S	**Sg**	**12 54 51.0**	**+1.1**
BOSA	**Boshof**	**2.15**	**218**	*e*P	**Pn**	**12 54 18.1**	**+1.8**
BOSA				*e*S	**Sn**	**12 54 45.0**	**+2.1**
BOSA				AML	AML	12 54 54.4	
	comp=Z,52nm,0.4s						
BOSA	**Boshof**	**2.15**	**218**	*i* P	**Pg**	**12 54 20.8**	**-1.3**
BOSA				*i* S	**Sg**	**12 54 51.0**	**+1.1**
LBTB	**Lobatse**	**2.16**	**331**	*i* P	**Pg**	**12 54 20.9**	**+1.2**
LBTB				*i* S	**Sg**	**12 54 49.2**	**-0.9**
LBTB	**Lobatse**	**2.16**	**331**	*e*P	**Pn**	**12 54 17.9**	**+1.5**
LBTB				*e*S	**Sn**	**12 54 46.0**	**+3.0**
LBTB				AML	AML	12 54 50.0	
	comp=Z,174nm,0.5s						
LBTB	**Lobatse**	**2.16**	**331**	*i* P	**Pb**	**12 54 20.9**	**+1.2**
LBTB				*i* S	**Sg**	**12 54 49.2**	**-0.9**
POGA	**Pongola**	**4.44**	**97**	*e*P	**Pn**	**12 54 49.9**	**+2.2**
POGA				*e*S	**Sn**	**12 55 39.9**	**+0.7**
POGA				AML	AML	12 56 04.4	
	comp=Z,26nm,0.4s						
UPI	**Upington**	**5.08**	**252**	*e*P	**Pn**	**12 54 58.1**	**+1.5**
UPI				*e*S	**Sn**	**12 55 54.9**	**-0.3**
UPI				AML	AML	12 56 22.7	
	comp=Z,8.3nm,0.3s						
MOPA	**Mopani**	**5.40**	**52**	*e*P	**Pn**	**12 55 03.5**	**+2.5**
MOPA				*e*S	**Sn**	**12 56 02.8**	**-0.1**
MOPA				AML	AML	12 56 36.7	
	comp=Z,13nm,0.6s						
GRAN	**Grantham**	**6.69**	**215**	*e*P	**Pn**	**12 55 19.8**	**+1.1**
GRAN				*e*S	**Sn**	**12 56 32.9**	**-1.8**
GRAN				AML	AML	12 56 51.7	
	comp=Z,4.9nm,0.5s						
BLWY	**Bulawayo**	**6.95**	**15**	⇓*i*P	**Pb**	**12 55 38.1**	**-3.4**
BLWY				*i* S	**Sb**	**12 57 02.0**	**-2.5**
BLWY	**Bulawayo**	**6.95**	**15**	⇓*i*P	**Pb**	**12 55 38.1**	**-3.4**
BLWY				*i* S	**Sb**	**12 57 02.0**	**-2.5**
CVNA	**Calvinia**	**7.62**	**232**	*e*P	**Pn**	**12 55 32.9**	**+1.5**
CVNA				*e*S	**Sn**	**12 56 54.7**	**-2.9**
CVNA				AML	AML	12 57 41.5	
	comp=Z,13nm,0.4s						

*ISN **06** 13:00:45.7±1.1,33˚.62N×45˚.77E, h0km±17km, ML2.7*
*TEH **06** 13:00:46.0,33˚.66N×45˚.80E, h10km, ML2.8*
ISC 06 13:00:46.8±0.9,33˚63N±0˚.05×45˚81E±0˚.05, h10km, n7, σ1§103/11, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.53**	**169**	*e*Pg	**Pb**	**13 00 58.0**	**-0.2**
IBDR				*e*Sg	**Sb**	**13 01 05.0**	**-0.8**
IBDR				AML	AML	13 01 09.0	
	comp=N,164nm,0.3s						
IBDR				AML	AML	13 01 30.1	
	comp=E,118nm,0.3s						
IGHG	**Ghaleghazi**	**0.94**	**42**	*e*		13 01 23.4	
IGHG				*e*Pg	**Pg**	**13 01 04.2**	**-0.7**
IDHR	**Dehrash**	**1.17**	**24**	*e*		13 01 29.0	
IDHR				*e*Pg	**Pb**	**13 01 08.2**	**-1.0**
BHD	**Baghdad**	**1.25**	**254**	*e*Pn	**Pg**	**13 01 10.0**	**-0.9**
BHD				*e*Sn	**Sn**	**13 01 28.0**	**+0.8**
BHD				AML	AML	13 01 30.1	
	comp=E,1μm,0.4s						
IKOM	**Komasi**	**1.51**	**68**	*e*Pg	**Pg**	**13 01 15.1**	**-0.8**
IKOM				*e*Sg	**Sg**	**13 01 37.2**	**+1.7**
IKOM				*e*		13 01 43.7	
ILIN	**Lien**	**1.60**	**36**	*e*Pg	**Pb**	**13 01 16.2**	**-0.4**
ILIN				*e*		13 01 39.8	
MSL	**Mosul**	**3.54**	**322**	*e*Pn	**Pn**	**13 01 43.0**	**+1.1**
MSL				*e*Sn	**Sn**	**13 02 24.0**	**+0.1**
MSL				AML	AML	13 02 41.5	
	comp=E,38nm,0.3s						

*SOME **06** 13:11:13.7,39˚.77N×75˚.32E, h5km*
*KRNET **06** 13:11:16.8±0.1,39˚.82N×75˚.21E, mb3.6*
*NNC **06** 13:11:23.2±2.3,40˚.21N×75˚.18E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=22.5km s-min=11.0km az=165.0*
ISC 06 13:11:19.2±1.6,39˚80N±0˚.08×75˚21E±0˚.04, h10km, n42, σ1§59/74, 28C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**2.00**	**292**	⇑*i*P	**Pn**	**13 11 53.2**	**+0.1**
	baz=92						
OHH				⇑*i*S	**Sb**	**13 12 19.6**	**-1.0**
	baz=92						
ARLS	**Aral**	**2.17**	**342**	⇑*i*P	**Pn**	**13 11 55.2**	**-0.3**
	baz=42						
ARLS				⇑*i*S	**Sn**	**13 12 23.2**	**+0.7**
	baz=42						
UCH	**Uchtor**	**2.48**	**348**	⇓*i*P	**Pn**	**13 11 59.6**	**-0.5**
	baz=48						
UCH				⇓*i*S	**Sn**	**13 12 31.4**	**+0.7**
	baz=48						
UCH	**Uchtor**	**2.48**	**348**	P	**Pn**	**13 12 00.5**	**+0.4**
	SNR=26						
ULHL	**Ulahol**	**2.57**	**17**	⇓*e*P	**Pn**	**13 12 00.9**	**-0.1**
	baz=17						
ULHL				⇓*e*S	**Sn**	**13 12 33.1**	**+0.7**
	baz=17						
ULHL	**Ulahol**	**2.57**	**17**	P	**Pn**	**13 12 02.2**	**+1.2**
	SNR=7.4						
AML	**Almayashu**	**2.60**	**334**	⇑*i*P	**Pn**	**13 12 01.5**	**-0.1**
	baz=34						
AML				⇑*i*S	**Sn**	**13 12 34.0**	**+0.5**
	baz=34						
AML	**Almayashu**	**2.60**	**334**	P	**Pn**	**13 12 02.2**	**+0.6**
	SNR=15						
BOOM	**Boomskoye usch**	**2.75**	**11**	⇑*i*P	**Pn**	**13 12 03.2**	**-0.3**
	baz=11						
BOOM				⇑*i*S	**Sn**	**13 12 37.6**	**+0.8**
	baz=11						
KDJ	**Kajisay**	**

	11nm,0.4s									
KRBS					*e*S		**Sb**	**13 13 18.9**	**+3.3**
	23nm,0.6s									
SATY	**Saty**	**4.05**	**35**	*e*P			**Pb**	**13 12 29.1**	**-1.6**
	6.7nm,0.9s									
SATY					*e*S		**Sb**	**13 13 20.8**	**+1.2**
	20nm,1.3s									
KTBS	**Karatobe**	**4.06**	**15**	*e*P			**Pb**	**13 12 29.7**	**-1.1**
	5.4nm,0.5s									
KTBS					*e*S		**Sb**	**13 13 22.6**	**+2.6**
	42nm,1.0s									
KUU	**Kurty**	**4.18**	**11**	*e*P			**Pb**	**13 12 31.9**	**-0.9**
	1.7nm,0.4s									
KUU					*e*S		**Sb**	**13 13 27.1**	**+3.8**
	43nm,0.5s									
UZB	**Uzynbulak**	**4.40**	**39**	*e*P			**Pb**	**13 12 35.1**	**-1.6**
	1.9nm,0.8s									
UZB					*e*S		**Sb**	**13 13 31.6**	**+1.6**
	11nm,1.0s									
KPKS	**Kokpek**	**4.50**	**34**	*e*P			**Pb**	**13 12 35.7**	**-2.5**
	3.9nm,0.5s									
KPKS					*e*S		**Sb**	**13 13 33.4**	**+0.9**
	28nm,0.7s									
IUG	**Iuzhnay**	**4.57**	**303**	*e*P			**Pb**	**13 12 40.6**	**+1.1**
	6.2nm,0.3s									
IUG					*e*S		**Sg**	**13 13 40.5**	**-5.4**
	36nm,1.0s									
PDGK	**Podgornoye**	**4.77**	**41**	⇑Pg			**Pb**	**13 12 44.7**	**+1.8**
	6.1nm,0.8s									
PDGK					⇓Lg		Lg	13 13 45.7		
	22nm,0.8s									
KK31	**Karatay Array**	**4.83**	**315**	⇑Pn			**Pn**	**13 12 32.2**	**+0.1**
	0.4nm,0.3s,baz=142,slow=11,SNR=4.8									
KK31					⇑Pg		**Pb**	**13 12 46.6**	**+2.6**
	0.9nm,0.4s,baz=127,slow=17,SNR=7.2									
KK31					⇑Lg		Lg	13 13 49.1		
	2.7nm,0.4s,baz=127,slow=26,SNR=5.4									
MNBS	**Baschi**	**4.89**	**28**	*e*P			**Pb**	**13 12 45.7**	**+0.6**
	0.1nm,0.7s									
MNBS					*e*S		**Sb**	**13 13 47.8**	**+3.8**
	0.2nm,0.8s									
BRLS	**Boroldaу**	**5.17**	**310**	*e*P			**Pb**	**13 12 49.6**	**-0.1**
	19nm,0.2s									
BRLS					*e*S		**Sb**	**13 13 56.2**	**+4.3**
	18nm,0.7s									

*GUC **06** 14:08:23.9±0.5,22°.86S×69°.27W, h90km±2km, MLh3.8*
*IDC **06** 14:08:24.0±1.9,22°.92S×69°.10W, h81km±11km, mb3.4/1, mb1 3.4/3, mb1mx3.1/33, mbtmp3.7/3, MS2.4/2, Ms1 2.5/2, ms1mx2.3/14, Error ellipse: s-maj=72.9km s-min=41.1km az=128.0*
ISC 06 14:08:23.5±0.9,**22°.89S**±0°.04×**69°.29W**±0°.06,**h89**km±6km,
n33,σ0s**84**/35,**8C-3D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**0.32**	**304**	⇑*i*P	**Pn**	**14 08 37.1**	**0.0**
PB06				*e*S	**Sn**	**14 08 47.1**	**0.0**
PB15	**IPOC Station P**	**0.36**	**208**	⇓*i*P	**Pn**	**14 08 37.7**	**+0.3**
PB15				*e*S	**Sn**	**14 08 48.3**	**+0.5**
LVC	**Limon Verde**	**0.44**	**52**	P	**Pn**	**14 08 38.4**	**+0.2**
	408nm,0.3s,baz=181,slow=6.7,SNR=5812						
LVC				S	**Sn**	**14 08 48.9**	**-0.1**
	1µm,0.3s,baz=145,slow=20,SNR=48						
LVC	**Limon Verde**	**0.44**	**52**	*e*P	**Pn**	**14 08 38.3**	**+0.1**
LVC				*e*S	**Sn**	**14 08 48.8**	**-0.1**
PB05	**IPOC Station P**	**0.84**	**272**	⇑*i*P	**Pn**	**14 08 41.6**	**+0.1**
PB05				*i* S	**Sn**	**14 08 55.6**	**+0.6**
PB03	**IPOC Station P**	**0.94**	**333**	⇑*i*P	**Pn**	**14 08 42.7**	**+0.1**
PB03				*e*S	**Sn**	**14 08 56.9**	**0.0**
PB03				IAML		14 08 57.6	
	comp=E,5µm,0.2s						
PB04	**IPOC Station P**	**0.97**	**304**	⇑*i*P	**Pn**	**14 08 43.0**	**0.0**
PB04				⇑*i*		14 08 56.7	
PB04				*i* S	**Sn**	**14 08 58.2**	**+0.7**
PB04				IAML		14 08 59.0	
	comp=E,3µm,0.2s						
PB09	**IPOC Station P**	**1.08**	**2**	*e*P	**Pn**	**14 08 44.9**	**+0.6**
PB09				*e*S	**Sn**	**14 09 00.9**	**+1.0**
PB09				IAML		14 09 02.3	
	comp=E,2µm,0.2s						
PB07	**IPOC Station P**	**1.28**	**334**	⇑*i*P	**Pn**	**14 08 46.8**	**+0.1**
PB07				*e*S	**Sn**	**14 09 04.0**	**-0.1**
PB07				IAML		14 09 05.3	
	comp=E,3µm,0.3s						
PB02	**IPOC Station P**	**1.66**	**340**	⇓*i*P	**Pn**	**14 08 51.4**	**0.0**
PB02				*e*S	**Sn**	**14 09 12.5**	**+0.1**
PB02				IAML		14 09 15.4	
	comp=E,2µm,0.3s						
PB01	**IPOC Station P**	**1.84**	**354**	⇓*i*P	**Pn**	**14 08 53.8**	**0.0**
PB01				*e*S	**Sn**	**14 09 16.8**	**+0.1**
PB01				IAML		14 09 19.9	
	comp=E,1µm,0.3s						
PB14	**IPOC Station P**	**2.01**	**210**	*e*P	**Pn**	**14 08 55.9**	**-0.3**
GO02	**Mina Guanaco**	**2.28**	**187**	⇑*i*P	**Pn**	**14 09 00.1**	**+0.4**
TA01	**Diego Aracena**	**2.45**	**340**	*e*P	**Pn**	**14 09 00.4**	**-1.4**
TA01				IAML		14 09 39.9	
	comp=N,286nm,0.3s						
PB08	**IPOC Station P**	**2.73**	**3**	⇑*i*P	**Pn**	**14 09 05.7**	**-0.1**
PB11	**IPOC Station P**	**3.13**	**354**	*e*P	**Pn**	**14 09 09.7**	**-1.3**
PB11				IAML		14 09 56.0	
	comp=N,240nm,0.3s						
GO01	**Chusmiza**	**3.20**	**2**	*e*P	**Pn**	**14 09 11.8**	**-0.5**
AC01	**Pan de Azucar**	**3.46**	**200**	*e*P	**Pn**	**14 09 13.7**	**-1.6**
LPAZ	**La Paz**	**6.65**	**10**	P	**Pn**	**14 10 00.6**	**+1.3**
	comp=N,0.2nm,0.3s,baz=27,slow=15,SNR=2.4						
LPAZ				LR	LR	14 12 50.0	
	comp=N,18nm,21.7s,baz=144,slow=40						
SIV	**San Ignacio**	**10.35**	**50**	P	**Pn**	**14 10 46.3**	**-2.8**
	comp=N,0.3nm,0.3s,baz=253,slow=11,SNR=9.2						
CPUP	**Villa Florida**	**11.41**	**110**	LR	LR	14 15 21.2	
	comp=N,36nm,18.4s,baz=38,slow=37						
H03N1	**Juan Fernandez**	**13.51**	**217**	T	T	14 24 01.5	
	baz=42,slow=72,SNR=7.8						
H03N2	**Juan Fernandez**	**13.52**	**217**	T	T	14 24 13.0	
	baz=42,slow=72,SNR=7.6						
H03N3	**Juan Fernandez**	**13.52**	**217**	T	T	14 24 11.5	
	baz=42,slow=72,SNR=6.5						
TORD	**Torodi Ar. Bea**	**78.15**	**70**	P	**P**	**14 20 15.2**	**+1.6**
	comp=N,0.3nm,0.4s,baz=254,slow=4.8,SNR=2.6						
TORD				pP	**pP**	**14 20 36.8**	**-0.9**
	comp=N,0.4nm,0.5s,baz=259,slow=5.5,SNR=4.5						
H11S2	**WAKE ISLAND Hyl**	**27.69**	**276**	T	T	16 47 29.5	
	baz=102						
H11S1	**WAKE ISLAND Hyl**	**27.70**	**276**	T	T	16 47 30.9	
	baz=102						
H11S3	**WAKE ISLAND Hyl**	**27.71**	**276**	T	T	16 47 31.3	
	baz=102						
H11N3	**WAKE ISLAND Hyl**	**27.81**	**278**	T	T	16 47 36.2	
	baz=103,slow=75,SNR=7.0						
H11N2	**WAKE ISLAND Hyl**	**27.82**	**278**	T	T	16 47 37.5	
	baz=103,slow=75,SNR=6.2						
H11N1	**WAKE ISLAND Hyl**	**27.83**	**278**	T	T	16 47 38.2	
	baz=103,slow=75,SNR=6.6						
WRA	**Warramunga Arr**	**131.59**	**210**	PKP	**PKPdf**	**14 27 26.6**	**-0.2**
	comp=N,0.1nm,0.4s,baz=153,slow=1.6,SNR=1.7						
MKAR	**Makanchi Array**	**146.95**	**37**	PKPbc	**PKPbc**	**14 27 55.9**	**0.0**
	comp=N,0.2nm,0.4s,baz=299,slow=3.0,SNR=1.9						

*MEX **06** 14:21:53.0±0.3,27°.67N×111°.63W, h4km±4km, MD4.0*
*IDC **06** 14:21:53.0±6.2,27°.01N×111°.29W, h0km, mb1 3.5/3, mb1mx3.4/31, mbtmp3.0/3, ML3.6/3, Error ellipse: s-maj=79.4km s-min=23.3km az=13.0*
*ECX **06** 14:21:53.3±0.3,27°.67N×111.63W, h16km±4km, MD3.6*
ISC 06 14:21:50.7±1.1,**27°.64N**±0°.08×**111°.54W**±0°.07,**h10**km,**n13**,
σ0s**70**/14,**2C**,**Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUYB	**Guaymas**	**0.65**	**67**	*e*P	**Pn**	**14 22 05.6**	**-0.3**
GUYB				*i* S	**Sn**	**14 22 15.6**	**-0.6**
GUYB	**Guaymas**	**0.65**	**67**	⇑*e*P	**Pn**	**14 22 05.6**	**-0.3**
GUYB				*e*S	**Sn**	**14 22 15.7**	**-0.6**
SRIG	**Santa Rosalia**	**0.70**	**243**	*e*P	**Pb**	**14 22 04.8**	**-0.2**
SRIG				*i* S	**Sg**	**14 22 13.9**	**+0.5**
SRIG	**Santa Rosalia**	**0.70**	**243**	⇑*e*P	**Pb**	**14 22 04.8**	**-0.2**
SRIG				*e*S	**Sg**	**14 22 13.9**	**+0.5**
HSIG		**1.47**	**21**	*e*P	**Pn**	**14 22 16.9**	**-0.4**
HSIG				*i* S	**Sn**	**14 22 35.0**	**-1.6**
HSIG		**1.47**	**21**	*e*P	**Pb**	**14 22 18.3**	**+0.2**
HSIG				*e*S	**Sb**	**14 22 37.5**	**+0.7**
CGIG		**4.14**	**48**	*e*P	**Pn**	**14 22 54.5**	**+0.3**
CGIG				*i* S	**Sn**	**14 23 43.5**	**+0.9**

TXAR	**Lajitas Array**	**7.13**	**74**	Pn			Pn	14 23 39.5	+4.3	
	0.2nm,0.3s,baz=240,slow=13,SNR=10									
TXAR				Lg			Lg	14 25 37.7		
	0.6nm,0.3s,baz=246,slow=28,SNR=5.0									
NVAR	**Mina Array Bea**	**12.16**	**334**	Pn			Pn	14 24 59.6	+15	
	0.1nm,0.3s,baz=158,slow=12,SNR=4.0									
PDAR	**Pinedale Array**	**15.18**	**6**	Pn			P	14 25 39.2	+8.7	
	0.1nm,0.3s,baz=168,slow=9.2,SNR=2.4									
H03N2	**Juan Fernandez**	**68.18**	**151**	T			T	15 47 15.5		
	baz=331,slow=77,SNR=14									
H03N1	**Juan Fernandez**	**68.19**	**151**	T			T	15 47 17.2		
	baz=331,slow=77,SNR=12									
H03N3	**Juan Fernandez**	**68.19**	**151**	T			T	15 47 18.4		
	baz=331,slow=77,SNR=15									

WEL 06 14:25:03.6,46°.5±6°.×**16°.6E**±°,**h5**km±5km,**M3.4**/12,
ML3.5/12,**MLv3.4**/12,**Error ellipse: s-maj=0.0km**
s-min=0.0km az=20.5,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**0.36**	**25**	P	Pb	14 25 12.0	-0.5
PYZ				S	Sb	14 25 18.2	-0.3
APZ	**The Paps**	**1.10**	**108**	P	Pn	14 25 25.6	-0.2
APZ				S	Sn	14 25 41.3	0.0
DCZ	**Deep Cove**	**1.14**	**25**	P	Pg	14 25 21.8	-3.6
DCZ				S	Sg	14 25 35.6	-4.6
WHZ	**Wether Hill Ro**	**1.20**	**60**	P	Pg	14 25 26.0	-0.4
WHZ				S	Sn	14 25 43.2	-0.4
MLZ	**Mavora Lakes**	**1.62**	**46**	P	Pn	14 25 32.5	-0.2
MLZ				S	Sg	14 25 56.1	+0.7
SYZ	**Scrubby Hill**	**1.85**	**92**	P	Pn	14 25 36.5	+0.6
SYZ				S	Sb	14 26 00.7	-0.6
MSZ	**Milford Sound**	**2.09**	**30**	P	Pn	14 25 37.8	-1.5
TUZ	**Tuapeka**	**2.27**	**77**	P	Pn	14 25 41.8	+0.2
TUZ				S	Sn	14 26 09.8	-0.2
EAZ	**Earnscleugh**	**2.36**	**59**	P	Pn	14 25 43.1	+0.2
WKZ	**Wanaka**	**2.45**	**48**	P	Pn	14 25 45.0	+0.8
JCZ	**Jackson Bay**	**2.93**	**35**	P	Pn	14 25 51.1	+0.3
HHSZ	**Highcliff Hill**	**2.94**	**79**	P	Pn	14 25 51.7	+0.8
ODZ	**Otahua Downs**	**3.27**	**65**	P	Pn	14 25 53.5	-2.0
LBZ	**Lake Benmore**	**3.36**	**52**	P	Pn	14 25 55.4	-1.4
FOZ	**Fox Glacier**	**3.80**	**40**	P	Pn	14 26 03.2	+0.5
INZ	**Inchbonnie**	**5.18**	**45**	P	Pn	14 26 20.5	-1.2
LTZ	**Lake Taylor**	**5.56**	**50**	P	Pn	14 26 25.3	-1.7
DSZ	**Denniston Nort**	**6.11**	**41**	P	Pn	14 26 33.9	-0.7
THZ	**Tophouse**	**6.62**	**47**	P	Pn	14 26 41.4	-0.2

*REY **06** 14:37:11.3,64°.68N×17°.48W, h8km*
*IDC **06** 14:37:13.5±1.2,64°.47N×18°.33W, h0km, mb3.4/6, mb1 3.8/6, mb1mx3.5/40, mbtmp3.5/6, Error ellipse: s-maj=64.1km s-min=20.6km az=45.0*
ISC 06 14:37:11.2±0.7,**64°.65N**±0°.03×**17°.39W**±0°.04,**h10**km,**n52**,
σ1s**72**/61,**mb3.5**/6,**Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.14**	**4**	P	**Pg**	**14 37 14.2**	**-0.3**
	baz=22						
IDYN				S	**Sg**	**14 37 16.9**	**+0.1**
	baz=22						
IVON	**Vonarskard**	**0.16**	**278**	P	**Pg**	**14 37 14.0**	**-0.7**
	baz=269						
IGRF	**Grimsfjall**	**0.25**	**168**	P	**Pb**	**14 37 16.7**	**-1.3**
	baz=162						
IHUS	**Husbondi**	**0.38**	**198**	P	**Pb**	**14 37 18.8**	**-1.2**
	baz=192						
IHUS				S	**Sb**	**14 37 24.2**	**-1.7**
	baz=192						
IVOT	**Vottur**	**0.39**	**167**	P	**Pb**	**14 37 19.2**	**-1.0**
	baz=163						
THOR	**Thorvaldshraun**	**0.42**	**47**	P	**Pb**	**14 37 19.3**	**-1.4**
	baz=52						
ISKR	**Skrokkalda**	**0.44**	**258**	P	**Pg**	**14 37 18.9**	**-0.9**
	baz=254						
IJOK	**Jokulheimar**	**0.49**	**227**	S	**Sg**	**14 37 26.8**	**-0.6**
	baz=222						
IJOK				P	**Pb**	**14 37 20.2**	**-1.8**
	baz=222						
IASK	**Askja**	**0.51**	**38**	P	**Pb**	**14 37 20.6**	**-1.7**
	baz=43						
IMKO	**Mokollar**	**0.56**	**53**	P	**Pb**	**14 37 21.6**	**-1.4**
	baz=57						
IMKO				S	**Sb**	**14 37 29.8**	**-1.2**
	baz=57						
ISVA	**Svartarkot**	**0.69**	**5**	P	**Pb**	**14 37 23.4**	**-1.9**
	baz=7.9						
ISVA				S	**Sg**	**14 37 32.6**	**-1.0**
	baz=7.9						
IKAL	**Kalfafell**	**0.72**	**191**	S	**Sb**	**14 37 34.6**	**-1.0**
	baz=187						
IKAL				P	**Pb**	**14 37 24.4**	**-1.4**
	baz=187						
IVSH	**V-Sauoahnukur**	**0.73**	**77**	P	**Pb**	**14 37 24.5**	**-1.5**
	baz=79						
IVSH				S	**Sb**	**14 37 35.1**	**-1.0**
	baz=79						
IVAT	**Vatnsfell**	**0.81**	**236**	P	**Pg**	**14 37 25.4**	**-1.4**
	baz=233						
IVAT				S	**Sg**	**14 37 36.1**	**-1.3**
	baz=233						
IHVE	**Hveravellir**	**0.96**	**284**	P	**Pg**	**14 37 27.2**	**-2.5**
	baz=283						
IMEL	**Melhnausar**	**0.97**	**18**	P	**Pg**	**14 37 28.1**	**-1.8**
	baz=21						
IREN	**Reynihlio**	**1.02**	**11**	P	**Pg**	**14 37 28.9**	**-1.9**
	baz=14						
ISNB	**Snabyli**	**1.07**	**211**	P	**Pg**	**14 37 30.1**	**-1.6**
	baz=209						
IKVO	**Krokottuvotn**	**1.09**	**11**	P	**Pg**	**14 37 29.9**	**-2.2**
	baz=13						
ISLY	**Slysaalda**	**1.12**	**223**	P	**Pb**	**14 37 31.0**	**-1.7**
	baz=221						
IGRS	**Grimsstaoir**	**1.13**	**28**	P	**Pb**	**14 37 30.9**	**-1.9**
	baz=30						
IGRS				S	**Sb**	**14 37 45.9**	**-1.5**
	baz=30						
IRJU	**Rjupnafell**	**1.18**	**209**	P	**Pn**	**14 37 32.3**	**-1.4**
	baz=207						
IFED	**Fedgar**	**1.18**	**239**	P	**Pb**	**14 37 32.0**	**-1.7**
	baz=237						
IMJO	**Mjoaskard**	**1.23**	**235**	P	**Pn**	**14 37 32.9**	**-1.6**
	baz=233						
ISKI	**Skildingahlsh**	**1.23**	**7**	P	**Pn**	**14 37 32.4**	**-2.1**
	baz=8.7						
IGHA	**Grjothals**	**1.24**	**14**	P	**Pn**	**14 37 32.3**	**-2.2**
	baz=16						
IGRA	**Granastaoir**	**1.27**	**356**	P	**Pn**	**14 37 32.7**	**-2.3**
	baz=358						
IGYG	**Gygjarholskot**	**1.28**	**254**	P	**Pn**	**14 37 33.0**	**-2.1**
	baz=253						
IHVO	**Lagu-Hvolar**	**1.30**	**210**	P	**Pn**	**14 37 34.1**	**-1.2**
	baz=208						
IHAU	**Haukadalur**	**1.31**	**240**	P	**Pn**	**14 37 34.0**	**-1.5**
	baz=238						
IDIM	**Dimmadalss**	**1.33**	**8**	P	**Pn**	**14 37 33.8**	**-2.0**
	baz=9.8						
IALF	**Alftagrof**	**1.41**	**215**	P	**Pn**	**14 37 35.8**	**-1.1**
	baz=213						
IHED	**Heoinshofoi**	**1.44**	**1**	P	**Pn**	**14 37 35.2**	**-2.0**
	baz=2.7						
IESK	**Eystri-Skogar**	**1.45**	**220**	P	**Pn**	**14 37 36.2**	**-1.2**
	baz=218						
ISAU	**Saurbar**	**1.48**	**245**	P	**Pn**	**14 37 36.0**	**-1.8**
	baz=243						
IMID	**Miomork**	**1.48**	**229**	P	**Pb**	**14 37 37.0**	**-1.8**
	baz=227						
IBRE	**Brettingsstaoi**	**1.49**	**352**	P	**Pn**	**14 37 36.2**	**-1.8**
	baz=353						
IGIL	**Gilhagi**	**1.50**	**16**	P	**Pn**	**14 37 36.5**	**-1.6**
	baz=18						
ISIG	**Siglufjorour**	**1.62**	**337**	P	**Pn**	**14 37 38.1**	**-1.6**
	baz=338						
IASM	**Asmuli**	**1.63**	**241**	P	**Pn**	**14 37 39.1**	**-0.8**
	baz=240						
ISOL	**Solvholt**	**1.71**	**247**	P	**Pn**	**14 37 40.0**	**-1.0**
	baz=245						
IKRO	**Krokur**	**1.71**	**253**	P	**Pn**	**14 37 39.9**	**-1.2**
	baz=252						
IHEI	**Heioarbar**	**1.73**	**257**	P	**Pn**	**14 37 40.1**	**-1.2**
	baz=255						
ILEI	**Leirhofn**	**1.80**	**12**	P	**Pn**	**14 37 41.1**	**-1.2**
	baz=13						
IHRN	**Hraun**	**1.86**	**323**	P	**Pn**	**14 37 41.6**	**-1.4**

	baz=324									
SCO	**Scoresbysund**	**6.11**	**345**	*e*			**Pn**	**14 38 41.0**	**-0.4**	
	baz=180,slow=7.4									
SCO				*i* P			**Pn**	**14 38 42.7**	**+1.3**	
SCO				*e*S			**Sn**	**14 39 55.5**	**+4.3**	
GERES	**GERESS Array B**	**22.91**	**119**	P			P	14 42 21.9	+6.9	
	0.8nm,0.8s,baz=333,slow=5.7,SNR=2.2									
ESDC	**Sonseca Array**	**26.22**	**156**	P			**P**	**14 42 48.4**	**+2.4**	
	0.9nm,0.8s,baz=340,slow=10.0,SNR=2.6									
ILAR	**Eielson Array**	**45.72**	**332**	P			**P**	**14 45 35.0**	**+3.2**	
	0.6nm,1.0s,baz=30,slow=5.6,SNR=5.1									
TORD	**Torodi Ar. Bea**	**53.11**	**157**	P			P	14 46 33.4	+4.7	
	0.7nm,0.7s,baz=345,slow=7.3,SNR=3.9									
PDAR	**Pinedale Array**	**53.23**	**293**	P			**P**	**14 46 31.4**	**+1.7**	
	1.1nm,0.7s,baz=52,slow=5.8,SNR=6.5									
NVAR	**Mina Array Bea**	**60.35**	**297**	P			**P**	**14 47 22.3**	**+2.0**	
	0.1nm,0.5s,baz=45,slow=5.2,SNR=1.5									

*IDC **06** 14:43:07.7±3.9,38°.00S×176°.19E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.4/21, mbtmp3.3/2, MS3.2/1, Ms1 3.1/1, ms1mx2.6/9, Error ellipse: s-maj=373.5km s-min=63.7km az=4.0*
*WEL **06** 14:43:10.2, 37°.85S±1°.0×175°.7E±0°.6, h7km±1km, M3.8/41, ML4.0/39, MLv3.8/41, Error ellipse: s-maj=0.0km s-min=0.0km az=11.3*
*NEIC **06** 14:43:11.8±2.6, 37°.75S±0°.05×175°.68E±0°.04, h10km±2km, Error ellipse: s-maj=8.0km s-min=5.2km az=352.0*
ISC 06 14:43:10.8±0.9,**37°.76S**±0°.02×**175°.72E**±0°.02,**h10**km±7km,
n158,σ1s**10**/166,**North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOZ	**Tahuroa Road**	**0.18**	**280**	P	**Pg**	**14 43 14.8**	**+0.2**
TOZ				S	**Sg**	**14 43 17.5**	**+0.3**
KMRZ	**Kaimai**	**0.19**	**116**	P	**Pg**	**14 43 15.2**	**+0.2**
KMRZ				S	**Sg**	**14 43 18.1**	**+0.3**
TGRZ	**Tauranga**	**0.43**	**86**	P	**Pb**	**14 43 19.7**	**-0.8**
TGRZ				S	**Sb**	**14 43 26.0**	**-1.0**
KARZ	**Kaharoa**	**0.49**	**122**	P	**Pb**	**14 43 20.7**	**-0.8**
KARZ				S	**Sg**	**14 43 27.4**	**+0.6**
NGNZ	**Ngongotaha**	**0.50**	**133**	P	**Pb**	**14 43 21.0**	**-0.7**
NGRZ				S	**Sb**	**14 43 28.8**	**-0.3**
UTU	**Utuhina**	**0.56**	**138**	P	**Pb**	**14 43 22.1**	**-0.6**
UTU				S	**Sb**	**14 43 29.8**	**-0.9**
LIRZ	**Lichensteins R**	**0.58**	**115**	P	**Pb**	**14 43 22.5**	**-0.5**
LIRZ				S	**Sb**	**14 43 30.6**	**-0.7**
TLZ	**Tolley Road**	**0.58**	**194**	P	**Pg**	**14 43 21.7**	**-0.4**
TLZ				S	**Sg**	**14 43 29.6**	**-0.3**
OMRZ	**Omania**	**0.62**	**124**	P	**Pb**	**14 43 23.1**	**-0.6**
OMRZ				S	**Sb**	**14 43 31.5**	**-1.0**
MYRZ	**Mayor Island**	**0.63**	**41**	P	**Pb**	**14 43 23.8**	**-0.1**
GRRZ	**Galatos Road**	**0.66**	**152**	P	**Pb**	**14 43 23.8**	**-0.7**
OPRZ	**Ohinepanea**	**0.67**	**97**	P	**Pb**	**14 43 23.9**	**-0.6**
OPRZ				S	**Sg**	**14 43 32.6**	**+0.2**
HSRZ	**Hossack Road**	**0.69**	**143**	P	**Pb**	**14 43 24.5**	**-0.4**
HLRZ	**Highlands Stat**	**0.70**	**135**	P	**Pb**	**14 43 25.0**	**-0.1**
MKRZ	**Makatiti**	**0.70**	**123**	P	**Pb**	**14 43 25.1**	**-0.1**
KUTZ	**Kaahu Road**	**0.73**	**174**	P	**Pb**	**14 43 24.9**	**-0.7**
HRTZ	**Handcock Road**	**0.77**	**145**	P	**Pb**	**14 43 26.0**	**-0.3**
TARZ	**Mount Tarawera**	**0.78**	**128**	P	**Pb**	**14 43 26.7**	**+0.2**
MARZ	**Manawahe**	**0.79**	**107**	P	**Pb**	**14 43 26.5**	**-0.1**
MKAZ	**Moumakai**	**0.79**	**326**	P	**Pb**	**14 43 26.0**	**-0.6**
WPRZ	**Whakapapatarin**	**0.83**	**155**	P	**Pb**	**14 43 27.0**	**-0.3**
RRRZ	**Republican Roa**	**0.85**	**133**	P	**Pb**	**14 43 27.4**	**-0.3**
EDRZ	**Edgecumbe**	**0.88**	**113**	P	**Pb**	**14 43 27.8**	**-0.3**
PRRZ	**Plateau Road**	**0.91**	**144**	P	**Pb**	**14 43 28.2**	**-0.4**
WHTZ	**Whakaora**	**0.92**	**168**	P	**Pb**	**14 43 28.9**	**0.0**
ALRZ	**Allen Road**	**0.94**	**149**	P	**Pb**	**14 43 28.8**	**-0.4**
WATZ	**Wairara**	**0.94**	**179**	P	**Pg**	**14 43 28.5**	**-0.5**
WHRZ	**Whale Island**	**1.00**	**96**	P	**Pn**	**14 43 30.5**	**-0.4**
HIZ	**Hauiti**	**1.01**	**222**	P	**Pg**	**14 43 29.7**	**-0.5**
HIZ	**Hauiti**	**1.01**	**222**		**Pg**	**14 43 29.8**	**-0.5**
HIZ					**Sn**	**14 43 45.2**	**-0.1**
KUZ	**Kuaotunu**	**1.01**	**0**	P	**Pg**	**14 43 29.7**	**-0.6**
ETAZ	**East Tamaki Re**	**1.02**	**322**	P	**Pb**	**14 43 30.3**	**-0.2**
WIAZ	**Waiheke Island**	**1.07**	**334**	P	**Pb**	**14 43 30.9**	**-0.5**
MUGZ	**Murupara**	**1.09**	**131**	P	**Pg**	**14 43 30.8**	**-1.0**
RATZ	**Rangitukua**	**1.10**	**178**	P	**Pg**	**14 43 31.3**	**-0.7**
AWAZ	**Awhitu Peninsu**	**1.10**	**309**	P	**Pb**	**14 43 31.7**	**-0.3**
HATZ	**Hinemaiaia**	**1.17**	**166**	P	**Pg**	**14 43 32.1**	**-1.1**
EPAZ	**Eden Park BICE**	**1.18**	**318**	P	**Pn**	**14 43 33.7**	**+0.5**
MBAZ	**Motutapu North**	**1.19**	**326**	P	**Pg**	**14 43 32.9**	**-0.8**
WIZ	**White Island**	**1.19**	**79**	P	**Pn**	**14 43 34.6**	**+1.1**
MRHZ	**Matea Rd**	**1.20**	**153**

BFZ	Birch Farm	2.94 172	Pn	Pn	14 43 58.0	+0.4		
OUZ	Omahuta	3.06 325	P	Pn	14 43 59.5	+0.3		
OUZ	Omahuta	3.06 325	Pn	Pn	14 43 59.7	+0.5		
OGWZ	Otaki Gorge	3.08 188	P	Pb	14 44 02.5	-3.2		
HOWZ	Holdsworth Sta	3.14 183	P	Pn	14 44 02.1	+1.8		
KIW	Kapiti Island	3.16 191	P	Pb	14 44 04.7	-2.3		
DUWZ	D'Urville Isla	3.34 204	P	Pn	14 44 05.0	+1.9		
TMWZ	Te Maipa	3.34 178	P	Pn	14 44 03.8	+0.7		
CAW	Cannon Point	3.38 188	P	Pb	14 44 09.0	-1.8		
TCW	Tory Channel	3.62 198	P	Pn	14 44 09.7	+2.8		
SNZO	South Karori	3.63 192	Pn	Pn	14 44 09.9	+2.9		
TRWZ	Traveller	3.63 180	P	Pn	14 44 08.4	+1.4		
MSWZ	Moikau Station	3.67 186	P	Pn	14 44 09.3	+1.8		
PLWZ	Palliser	3.82 185	Pn	Pn	14 44 11.6	+1.9		
NNZ	Nelson	3.90 207	P	Pn	14 44 11.9	+1.2		
NNZ	Nelson	3.90 207	Pn	Pn	14 44 11.8	+1.1		
TUWZ	Tuamarina	3.91 200	P	Pn	14 44 13.5	+2.6		
TUWZ	Tuamarina	3.91 200	Pn	Pn	14 44 13.3	+2.4		
QRZ	Quartz Range	3.94 218	P	Pn	14 44 11.1	-0.1		
QRZ	Quartz Range	3.94 218	Pn	Pn	14 44 11.1	-0.1		
BSWZ	Blackbirch Sta	4.20 199	P	Pb	14 44 19.6	-5.1		
BSWZ	Blackbirch Sta	4.20 199	Pn	Pn	14 44 17.3	+2.5		
THZ	Tophouse	4.55 208	P	Pn	14 44 21.8	+2.1		
THZ	Tophouse	4.55 208	Pn	Pn	14 44 21.6	+1.9		
KHZ	Kahutara	4.94 199	P	Pn	14 44 26.2	+1.2		
DSZ	Denniston Nort	4.99 216	P	Pn	14 44 26.4	+0.6		
GVZ	Greta Valley S	5.59 201	P	Pn	14 44 34.7	+0.8		
LTZ	Lake Taylor	5.67 207	P	Pn	14 44 36.6	+1.6		
LTZ	Lake Taylor	5.67 207	Pn	Pn	14 44 36.4	+1.4		
INZ	Inchbonnie	5.94 212	P	Pn	14 44 39.1	+0.4		
OXZ	Oxford	6.22 206	P	Pn	14 44 44.2	+1.5		
OXZ	Oxford	6.22 206	Pn	Pn	14 44 43.9	+1.3		
MQZ	McQueen's Vall	6.38 200	P	Pn	14 44 43.5	-1.3		
WVZ	Waitaha Valley	6.53 214	P	Pn	14 44 47.7	+1.0		
GCSZ	Gaunt Creek Bo	6.90 215	P	Pn	14 44 53.9	+2.0		
FOZ	Fox Glacier	7.30 216	P	Pn	14 44 57.8	+0.4		
JCZ	Jackson Bay	8.20 218	P	Pn	14 45 10.4	+0.5		
ODZ	Otahua Downs	8.21 206	Pn	Pn	14 45 10.9	+0.9		
STKA	Stephens Creek	28.52 272	LR	LR	14 58 55.7			
	comp=Z,42nm,19.4s,baz=93,slow=33							
ASAR	Alice Springs	38.28 279	P	P	14 50 33.6	+2.2		
	0.7nm,0.9s,baz=130,slow=8.7,SNR=8.9							
ASAR			PcP	PcP	14 52 44.8	-0.8		
	0.2nm,0.8s,baz=121,slow=3.6,SNR=1.8							
WRA	Warramunga Arr	39.98 285	P	P	14 50 47.2	+1.4		
	0.2nm,0.7s,baz=120,slow=8.2,SNR=1.5							
ARCES	ARCESS Array B	144.37 343	PKP	PKPbc	15 02 45.0	+0.6		
	6.4nm,1.1s,baz=49,slow=2.9,SNR=8.2							

ASRS ***06*** *14:49:46.6±0.3,50°N±2°×9°2E±°, h10km,MLh3.4/12, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
NNC ***06*** *14:49:47.8±2.4,50.04N×91.37E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=19.4km s-min=12.6km az=78.0*

ISC 06 14:49:46.2±0.9,50.08N±0.04×91.73E±0.03, h10km, n26, σ1§99/48, 2C-5D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEL	Teeli	1.36	315	Pg	Pb	14 50 11.9	+0.2
TEL				Sg	Sg	14 50 30.3	+0.4
CUR	Chagan-Uzun	2.18	272	Pn	Pn	14 50 23.0	+0.4
CUR				Pg	Pb	14 50 25.4	-0.3
CUR				Sg	Sb	14 50 54.0	+1.2
ERNS	Erzin	2.21	84	Pg	Pb	14 50 26.0	-0.2
ERNS				Sg	Sg	14 50 56.2	-0.9
KZLR	Kyzyl	2.37	46	Pg	Pg	14 50 30.3	-1.3
KZLR				Sg	Sg	14 51 01.7	-0.7
ULGR	Ulagan, Altay	2.48	284	Pg	Pb	14 50 30.6	-0.2
ULGR				Sg	Sb	14 51 03.1	+1.7
AKAR	Aktash	2.65	277	Pn	Pn	14 50 29.7	+0.6
AKAR				Pg	Pb	14 50 34.0	+0.2
AKAR				Sg	Sb	14 51 07.9	+1.4
ARDR	Aradan	2.72	22	Pg	Pg	14 50 36.5	-1.8
ARDR				Sg	Sg	14 51 11.9	-1.7
CHBI	Chibit, Altay	2.73	277	Pn	Pn	14 50 30.9	+0.9
CHBI				Pg	Pb	14 50 35.2	+0.1
CHBI				Sg	Sb	14 51 10.7	+2.1
DJO	Djoy, Khakassi	2.73	353	Pg	Pb	14 50 35.9	+0.8
DJOS	Djoyskaya Sosn	2.73	356	Sg	Sg	14 51 14.1	+0.3
CERR	Cheremushki	2.79	356	Sg	Sg	14 51 15.2	-0.4
DGZ	Jazzator, Alta	2.81	264	Pn	Pn	14 50 31.9	+0.6
DGZ				Pg	Pb	14 50 36.0	-0.4
DGZ				Sg	Sb	14 51 13.0	+2.0
TBTR	Tabat	2.92	348	Pg	Pg	14 50 40.9	-1.2
TBTR				Sg	Sg	14 51 19.4	-0.7
BLRR	Bol'shaya Rech	3.00	8	Pg	Pg	14 50 41.8	-1.7
BLRR				Sg	Sg	14 51 21.6	-0.8
ARTR	Artybash	3.30	303	Pn	Pn	14 50 40.6	+2.7
ARTR				Pg	Pb	14 50 46.8	+2.0
ARTR				Sg	Sg	14 51 29.4	-2.7
TUNR	Tungur	3.48	273	Pg	Pb	14 50 48.4	+0.6
TUNR				Sg	Sg	14 51 35.0	-2.8
KNGR	Kungurtug, Tuv	3.74	80	Pg	Pb	14 50 53.1	+0.7
KNGR				Sg	Sg	14 51 46.2	0.0
UKR	Ust'-Kan	4.52	284	Pg	Pb	14 51 07.9	+2.2
UKR				Sg	Sg	14 52 10.0	-1.3
SHRR	Shira	4.53	348	Pg	Pg	14 51 10.2	-2.5
SHRR				Sg	Sg	14 52 11.8	+0.4
ELT	Eltsovka	4.67	315	Pg	Pb	14 51 11.1	+2.9
ELT				Sg	Sg	14 52 12.8	-3.3
KTRR	Kuturchin	5.10	16	Pg	Pg	14 51 21.0	-2.7
KTRR				Sg	Sg	14 52 27.9	-1.8
SALR	Pechorkino, Sa	5.71	322	Sg	Sg	14 52 42.9	-6.3
ZAA0	Zalesovo Array	5.76	315	⇑Lg	Lg	14 52 46.8	
	2.5nm,0.9s						
MK31	Makanchi Array	7.09	246	⇓Pn	Pn	14 51 29.4	-0.5
	0.5nm,0.5s,baz=65,slow=14,SNR=6.3						
MK31				⇓Pg	Pb	14 51 53.4	+4.1
	2.0nm,0.7s,baz=74,slow=16,SNR=6.5						
MK31				⇓Lg	Lg	14 53 26.1	
	2.3nm,0.5s,baz=61,slow=30,SNR=3.9						
MAKZ	Makanchi	7.26	247	⇓Pg	Pb	14 51 56.4	+4.1
	1.1nm,0.6s						
MAKZ				⇓Lg	Lg	14 53 31.3	
	6.8nm,0.8s						
KURK	Kurchatov	8.40	279	⇑Lg	Lg	14 54 05.8	
	6.5nm,0.8s						

IDC 06 14:58:32.8±6.7,23.01S×177.74W,h146km±51km, mb3.6/3,mb1 3.9/4,mb1mx3.4/28,mbtmp4.2/4,MS2.9/1, Ms1 2.9/1,ms1mx2.3/22, Error ellipse: s-maj=135.2km s-min=27.6km az=143.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	10.67	33	P	Pn	15 01 02.0	0.0
	5.8nm,0.3s,baz=234,slow=17,SNR=7.2						
URZ	Urewera	15.83	195	LR	LR	15 07 26.0	
	comp=Z,45nm,19.6s,baz=31,slow=34						
STKA	Stephens Creek	36.98	247	P	P	15 05 26.8	-1.5
	0.8nm,0.4s,baz=101,slow=11,SNR=5.2						
ASAR	Alice Springs	44.23	259	P	P	15 06 28.4	+0.4
	1.5nm,0.9s,baz=91,slow=8.6,SNR=23						
ASAR				PcP	PcP	15 08 08.9	-1.2
	0.2nm,0.6s,baz=104,slow=3.6,SNR=1.6						
WRA	Warramunga Arr	44.55	264	P	P	15 06 30.9	+0.4
	1.6nm,0.5s,baz=93,slow=8.3,SNR=24						
AKASG	Malin Array Be	145.30	330	PKPbc	PKPdf	15 17 52.6	-0.5
	2.0nm,0.4s,baz=38,slow=4.1,SNR=8.1						

THE ***06*** *15:13:47.3,38.09N×20.40E,h14km, ML2.9/4, Error ellipse: s-maj=1.5km s-min=0.6km az=270.0*
ATH ***06*** *15:13:47.3,38.11N×20.45E,h20km±1km, ML2.8/7, Error ellipse: s-maj=2.9km s-min=1.2km az=60.0*

ISC 06 15:13:46.8±1.1,38.10N±0.03×20.39E±0.05,h18km±6km, n34,σ0§87/48, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	Argostoli	0.12	44	P	Pg	15 13 50.9	+0.4
KEF4	Livadi, Kephal	0.17	11	P	Pb	15 13 51.9	+0.6
KEF4				S	Sb	15 13 55.1	+1.0
VLS	Valsamata	0.18	63	P	Pg	15 13 51.4	0.0
VLS				S	Sg	15 13 54.2	-0.4
	comp=N,39707µm,0.2s						
VLS				AML	AML	15 13 54.4	
	comp=E,35113µm,0.1s						
VLS	Valsamata	0.18	63	P	Pg	15 13 51.4	0.0
VLS				S	Sg	15 13 54.2	-0.4
	comp=E,21µm,0.2s						
KEF5	Kardakata, Kep	0.19	20	P	Pb	15 13 52.1	+0.4
KEF5				S	Sb	15 13 55.4	+0.4
VLMS	Volimes, Zakyn	0.31	135	P	Pg	15 13 53.4	0.0
VLMS				S	Sg	15 13 57.5	-0.5
VLMS				AML	AML	15 13 58.7	
	comp=E,4134µm,0.2s						
VLMS				AML	AML	15 13 59.7	
	comp=N,5053µm,0.2s						
VLMS	Volimes, Zakyn	0.31	135	P	Pg	15 13 53.5	0.0
FSK	Fiskardo	0.39	21	P	Pg	15 13 55.0	+0.2
FSK				S	Sb	15 14 01.0	+0.2
FSK				AML	AML	15 14 02.3	
	comp=E,5057µm,0.1s						
FSK				AML	AML	15 14 02.5	
	comp=N,1937µm,0.2s						
FSK	Fiskardo	0.39	21	P	Pg	15 13 55.0	+0.2
FSK				S	Sb	15 14 01.1	+0.2
	comp=N,2µm,0.2s						
KRI1	kERI	0.55	142	P	Pg	15 13 57.6	-0.1
MGNA	Meganis	0.64	30	P	Pg	15 13 59.2	-0.3
MGNA				S	Sb	15 14 08.8	+0.6
LKD2	Lefkada island	0.72	17	P	Pb	15 14 01.4	+0.5
PDO	Prodromos	0.80	51	P	Pb	15 14 02.0	-0.2
PDO				AML	AML	15 14 19.5	
	comp=N,1270µm,0.4s						
PDO				AML	AML	15 14 22.5	
	comp=E,988µm,0.3s						
PDO	Prodromos	0.80	51	P	Pb	15 14 02.1	-0.2
PDO				S	Sg	15 14 13.7	+0.6
	comp=E,882nm,0.3s						
RLS	Riolos of Patr	0.85	92	P	Pb	15 14 03.0	0.0
RLS	Riolos of Patr	0.85	92	P	Pb	15 14 03.1	0.0
RLS				S	Sn	15 14 15.8	-0.2
	comp=E,248nm,0.4s						
DRO	Drossia	1.06	97	P	Pb	15 14 06.5	-0.1
DRO				AML	AML	15 14 28.7	
	comp=N,914µm,0.4s						
DRO				AML	AML	15 14 29.1	
	comp=E,425µm,0.4s						
DRO	Drossia	1.06	97	P	Pb	15 14 06.5	-0.1
AMT	Artemida-Makis	1.19	118	P	Pg	15 14 10.7	+0.9
ANX	Ano Chora	1.30	67	P	Pg	15 14 12.6	+0.6
ANX				AML	AML	15 14 36.0	
	comp=E,498µm,0.5s						
ANX				AML	AML	15 14 36.1	
	comp=N,629µm,0.4s						
TRIZ	Trizonia	1.36	78	P	Pn	15 14 11.2	+0.3
EVR	Evrytania	1.39	53	P	Pg	15 14 14.0	+0.5
KLV	Kalavryta, Ach	1.39	92	P	Pb	15 14 12.3	0.0
KALE	Kalithea	1.41	77	P	Pn	15 14 12.2	+0.5
IGT	Igoumenitsa	1.44	358	P	Pb	15 14 13.7	+0.7
ITM	Ithomi	1.53	126	P	Pb	15 14 15.3	+0.8
GUR	Goura	1.55	95	P	Pb	15 14 14.7	-0.3
GUR				AML	AML	15 14 44.2	
	comp=N,453µm,0.5s						
GUR				AML	AML	15 14 47.1	
	comp=E,389µm,0.5s						
TRIP	Tripoli	1.60	110	P	Pg	15 14 17.5	0.0
KEK	Kerkira	1.68	344	P	Pb	15 14 17.3	+0.1
AGG	Agios Georgios	1.78	58	P	Pg	15 14 20.2	-0.8
STON	Ston	5.19	338	*e*Pn	Pn	15 15 04.2	+0.7
STON				Sn	Sn	15 15 59.9	-3.0
RICI	Ricice	5.93	336	*e*Pn	Pn	15 15 14.6	+0.9
RICI				Sn	Sn	15 16 20.4	-0.8
KIJV	Kijevo	6.63	334	*e*Pn	Pn	15 15 24.6	+1.4
KIJV				Sn	Sn	15 16 36.8	-1.6
MORI	Morici	6.76	330	*e*Pn	Pn	15 15 26.7	+1.6
MORI				Sn	Sn	15 16 38.8	-2.9

IDC ***06*** *15:22:56.0±1.2,27.98N×101.22E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/34, mbtmp3.4/5, MS3.1/5, Ms1 3.1/5, ms1mx2.8/35, Error ellipse: s-maj=43.9km s-min=19.2km az=72.0*
BJI ***06*** *15:22:57.8±0.0,27.97N×101.06E, h13km, ML3.6/17*

ISC 06 15:22:58.2±1.0,28.12N±0.05×101.05E±0.07,h10km,n14, σ1§53/17,mb3.6/4,MS3.0/4,1C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	3.34	153	⇓*e*Pg	Pn	15 23 50.6	-0.2
KMI				Sg	Sb	15 24 36.5	-2.1
KMI				smax	smax		
	comp=N,280nm,0.9s						
KMI				smax	smax		
	comp=E,270nm,0.9s						
CD2	Chengdu	3.65	40	Pn	Pb	15 24 01.8	-1.1
CD2				Pg	Pg	15 24 08.8	+0.6
CD2				Sg	Sg	15 24 54.7	-0.8
CD2				smax	smax		
	comp=N,1µm,0.7s						
CD2				smax	smax		
	comp=E,1µm,1.0s						
CD2	Chengdu	3.65	40	Pg	Pb	15 24 03.7	+0.8
CD2				Sg	Sg	15 24 52.3	-3.2
CD2				smax	smax		
	comp=E,670nm,0.7s						
CD2				smax	smax		
	comp=E,830nm,0.9s						
GYA	Guiyang	5.26	107	⇑Pn	Pn	15 24 18.1	+1.0
GYA				Pg	Pb	15 24 31.9	+1.5
GYA				Sn	Sn	15 25 19.3	+1.4
GYA				Sg	Sg	15 25 46.9	-0.4
GYA				smax	smax		
	comp=E,68nm,1.4s						
GYA				smax	smax		
	comp=E,51nm,1.1s						
CMAR	Chiang Mai Arr	9.81	192	Pg	Pn	15 25 52.3	+33
	comp=E,0.0nm,0.3s,baz=3.3,slow=17,SNR=1.9						
CMAR				Lg	Lg	15 28 04.3	
	comp=E,0.1nm,0.3s,baz=14,slow=28,SNR=4.1						
CMAR				LR	LR	15 28 30.8	
	comp=E,30nm,20.4s,baz=330,slow=34						
WMQ	Urumqi	19.00	329	*e*P	P	15 27 20.7	+0.7
SONM	Songino Array	20.12	11	P	P	15 27 33.3	+0.9
	comp=E,0.3nm,0.8s,baz=186,slow=13,SNR=2.1						
SONM				LR	LR	15 36 25.5	
	comp=E,64nm,22.0s,baz=202,slow=40						
TLY	Talaya	23.62	4	LR	LR	15 38 08.4	
	comp=E,62nm,18.4s,baz=170,slow=38						
MKAR	Makanchi Array	23.75	327	P	P	15 28 11.1	+0.4
	comp=E,0.6nm,0.8s,baz=128,slow=11,SNR=3.9						
KSRS	Korea Array	24.37	61	LR	LR	15 38 51.2	
	comp=E,50nm,20.3s,baz=263,slow=39						
KURBB	Kurchatov Arra	28.22	329	P	P	15 28 52.3	+1.2
	comp=E,0.3nm,0.3s,baz=141,slow=8.8,SNR=1.5						
ZALV	Zalesovo Beam	28.42	340	LR	LR	15 41 07.2	
	comp=E,57nm,19.5s,baz=124,slow=38						
WRA	Warramunga Arr	57.61	142	P	P	15 32 46.7	-1.9
	comp=E,0.7nm,0.7s,baz=330,slow=7.8,SNR=4.9						
ASAR	Alice Springs	60.45	145	P	P	15 33 06.4	-1.8
	comp=E,0.4nm,0.6s,baz=328,slow=6.6,SNR=11						

WEL 06 15:32:38.6,38°S±3°×17°6E±°, h203km±6km, M2.8/60, MLv2.8/60, Error ellipse: s-maj=0.0km s-min=0.0km az=108.5, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLZ	Tolley Road	0.23	303	P	Pn	15 33 03.5	-2.0
WATZ	Wairara	0.26	189	P	Pn	15 33 04.8	-0.6
RATZ	Rangitukua	0.41	181	P	Pn	15 33 05.3	-0.5
RITZ	Rihia Road	0.52	173	P	Pn	15 33 06.2	0.0
MRHZ	Matea Rd	0.62	127	P	Pn	15 33 05.7	-1.0
TMVZ	Te Maari	0.66	185	P	Pn	15 33 07.0	+0.1
TWVZ	Taurewa	0.67	204	P	Pn	15 33 06.9	0.0
WTVZ	West Tongariro	0.68	193	P	Pn	15 33 07.0	0.0
OTVZ	Oturere	0.71	187	P	Pn	15 33 07.0	-0.2
HIZ	Hauiti	0.73	265	P	Pn	15 33 07.5	+0.4
NGZ	Ngauruhoe	0.73	191	P	Pn	15 33 07.4	+0.1
TOZ	Tahuroa Road	0.76	343	P	Pn	15 33 07.2	-0.1
MUGZ	Murupara	0.78	92	P	Pn	15 33 06.1	-1.2
TUVZ	Tukino	0.82	187	P	Pn	15 33 07.9	+0.1
FWVZ	Far West T-bar	0.82	193	P	Pn	15 33 08.0	+0.1
WHVZ	Whangaehu Hut	0.84	190	P	Pn	15 33 08.2	+0.2
WNVZ	Wahianoa	0.88	189	P	Pn	15 33 08.3	+0.1
PKVZ	Pokaka	0.90	202	P	Pn	15 33 08.4	+0.3
BKZ	Black Stump Fm	0.90	142	P	Pn	15 33 07.6	-0.5
MTHZ	Maungataniwha	0.92	116	P	Pn	15 33 07.7	-0.6
MOVZ	Moawhango	0.95	181	P	Pn	15 33 08.3	-0.2
RTZ	Ruatahuna	0.95	100	P	Pn	15 33 07.6	-0.9
NMHZ	Naumai	1.03	129	P	Pn	15 33 09.4	+0.5
VRZ	Vera Road	1.04	230	P	Pn	15 33 09.9	+1.0
BHHZ	Black Hill Sta	1.05	168	P	Pn	15 33 09.0	-0.2
URZ	Urewera	1.06	80	P	Pn	15 33 07.8	-1.3
RAHZ	Arahi	1.12	115	P	Pn	15 33 09.5	0.0
MCHZ	McNeill Hill	1.22	144	P	Pn	15 33 10.9	+0.7
ARHZ	Aropaoanui	1.25	131	P	Pn	15 33 10.8	+0.4
SNGZ	Shannon Statio	1.26	105	P	Pn	15 33 10.5	-0.2
KRHZ	Kereru	1.27	159	P	Pn	15 33 11.0	+0.3
MWZ	Matawai	1.38	85	P	Pn	15 33 10.8	-0.8
MKAZ	Moumakai	1.44	340	P	Pn	15 33 12.9	+0.8
WAZ	Wanganui	1.44	205	P	Pn	15 33 13.0	+1.0
PNHZ	Pukenui	1.49	168	P	Pn	15 33 12.9	+0.3
RUGZ	Raukumara Rang	1.57	72	P	Pn	15 33 12.0	-1.4
RIGZ	Rimuhau	1.57	100	P	Pn	15 33 13.7	+0.5
KAHZ	Kahuranaki	1.58	148	P	Pn	15 33 14.2	+0.8
TSZ	Takapari Road	1.61	175	P	Pn	15 33 14.1	+0.5
TKGZ	Te Karaka	1.62	90	P	Pn	15 33 14.4	+0.8
WPHZ	Waipukurau	1.69	163	P	Pn	15 33 14.8	+0.5
HAZ	Te Kaha	1.73	67	P	Pn	15 33 13.8	-0.9
TWGZ	Tauwhareparae	1.75	82	P	Pn	15 33 15.3	+0.4
PXZ	Pawanui	1.78	152	P	Pn	15 33 15.8	+0.6
MHGZ	Mahia Peninsul	1.80	113	P	Pn	15 33 15.8	+0.4
DVHZ	Dannevirke	1.86	171	P	Pn	15 33 16.3	+0.3
PKGZ	Pakihiroa	1.90	73	P	Pn	15 33 17.2	+0.9
CNGZ	Carnagh Statio	1.90	92	P	Pn	15 33 16.9	+0.5
PRHZ	Porangahau	1.93	160	P	Pn	15 33 17.0	+0.4
POWZ	Post Office Ro	1.93	180	P	Pn	15 33 17.1	+0.5
PUZ	Puketiti	1.99	80	P	Pn	15 33 17.0	-0.2
ANWZ	Angora Road	2.07	165	P	Pn	15 33 18.9	+0.8
PRWZ	Puri Road	2.10	176	P	Pn	15 33 19.0	+0.7
WMGZ	Waiomatatini S	2.17	74	P	Pn	15 33 20.5	+1.4
MRZ	Mangatainoka R	2.21	184	P	Pn	15 33 19.9	+0.4
BFZ	Birch Farm	2.25	171	P	Pn	15 33 20.4	+0.4
TIWZ	Tintock	2.32	178	P	Pn	15 33 21.2	+0.5
OGWZ	Otaki Gorge	2.41	191	P	Pn	15 33 22.3	+0.7
HOWZ	Holdsworth Sta	2.45	185	P	Pn	15 33 22.5	+0.4
KIW	Kapiti Island	2.50	195	P	Pn	15 33 23.1	+0.5
TMWZ	Te Maipa	2.65	178	P	Pn	15 33 24.8	+0.4
CAW	Cannon Point	2.71	192	P	Pn	15 33 25.5	+0.5
MTW	Mount Morrison	2.71	184	P	Pn	15 33 25.2	+0.2
DUWZ	D'Urville Isla	2.75	211	P	Pn	15 33 26.3	+0.8
WEL	Wellington	2.93	195	P	Pn	15 33 27.9	+0.4
PAWZ	Paruwai Farm	2.94	185	P	Pn	15 33 27.8	+0.2
TRWZ	Traveller	2.94	181	P	Pn	15 33 28.2	+0.5
MSWZ	Moikau Station	2.98	188	P	Pn	15 33 28.4	+0.2
PLWZ	Palliser	3.14	187	P	Pn	15 33 30.0	0.0
TUWZ	Tuamarina	3.29	205	P	Pn	15 33 32.4	+0.6
NNZ	Nelson	3.32	213	P	Pn	15 33 32.8	+0.6
QRZ	Quartz Range	3.45	226	P	Pn	15 33 34.0	+0.2
BSWZ	Blackbirch Sta	3.57	204	P	Pn	15 33 36.2	+1.0
THZ	Tophouse	3.97	213	P	Pn	15 33 40.6	+0.4
KHZ	Kahutara	4.31	203	P	Pn	15 33 45.2	+0.9
GVZ	Greta Valley S	4.97	204	P	Pn	15 33 53.1	+0.5
LTZ	Lake Taylor	5.08	211	P	Pn	15 33 54.2	+0.1
MQZ	McQueen's Vall	5.75	203	P	Pn	15 34 01.9	-0.7

TEH ***06*** *15:40:33.9,32.56N×47.94E,h12km, ML3.4*
ISN ***06*** *15:40:36.8±1.6,32.60N×47.91E,h15km±6km, ML3.2*

ISC 06 15:40:36.1±1.0,32.53N±0.04×48.04E±0.04,h10km,n33, σ1§49/38, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKFM	Kafar-mosalman	1.01	351	*e*Pg	Pg	15 40 52.6	-2.9
IKFM				*e*		15 41 17.0	
IKMR	Kamar-syah	1.03	16	*e*Pg	Pg	15 40 54.0	-1.9
IKMR				*e*		15 41 19.2	
IDOB	Doab	1.26	5	*e*Pg	Pn	15 40 58.4	-1.6
AHWZ	Ahwaz	1.30	156	*e*Pg	Pn	15 40 59.2	-1.1
AHWZ				*e*Sg	Sg	15 41 20.5	+2.6
BMDN	Meydan	1.32	30	*e*Pg	Pn	15 40 59.2	-1.6
BMDN				*e*		15 41 02.9	
IKOM	Komasi	1.70	345	*e*		15 41 10.0	
IKOM				*e*Pg	Pn	15 41 05.4	-0.6
HSAM	Samen	1.75	16	*e*		15 41 10.9	
HSAM				*e*Pg	Pn	15 41 06.9	+0.2
IBDR	Badra	1.87	289	*e*Pg	Pn	15 41 08.0	-0.1
IBDR				*e*Sg	Sn	15 41 31.0	-0.7
IBDR				AML	AML	15 41 53.7	
	comp=N,152nm,0.6s						
IBDR				AML	AML	15 41 58.6	
	comp=E,246nm,0.6s						
KCHF	Cheshme Sefid,	1.93	335	*e*		15 41 41.2	
KCHF				*e*Pg	Pn	15 41 09.8	+0.6
IBZA	Bozab	1.94	356	*e*		15 41 47.6	
IBZA				*e*Pn	Pn	15 41 08.8	-0.6
KER	Kermanshah	2.00	338	*e*Pn	Pn	15 41 10.2	+0.1
IGHG	Ghaleghazi	2.18	326	*e*	Sg	15 41 51.9	+5.7
NSR	Nassriya	2.21	227	*e*Pn	Pn	15 41 13.0	+0.1
NSR				*e*Sn	Sn	15 41 41.0	+0.7
N

J05D				S		Sb	15 42 27.7 +1.3
	baz=139						
L04D	Klamath Falls	2.01	280	P		Pn	15 42 03.0 -1.5
	baz=98,SNR=23						
L04D					Sb	Sb	15 42 33.5 +1.2
	baz=98						
PINE	Pine Mountain	2.11	333			Pb	15 42 08.1 -0.4
BEKR	Beckworth	2.12	195			Pb	15 42 06.8 -1.9
I07A	Izee	2.17	3			Pb	15 42 08.8 -0.7
PAHR	Pah Rah Range	2.21	175			Pb	15 42 07.0 -0.3
J04D	Umpqua Nationa	2.25	307		Pb	Pb	15 42 11.7 +0.6
	baz=125,SNR=24						
O03E	Paynes Creek	2.30	226	P		Pn	15 42 06.7 -1.8
	baz=44,SNR=82						
O03E					Sb	Sb	15 42 40.3 -0.3
	baz=44						
YBH	Yreka Blue Hor	2.30	266	Pn		Pn	15 42 06.6 -1.9
M02C	Callahan	2.47	259	P		Pn	15 42 09.2 -1.5
	baz=76,SNR=36						
M02C					Sb	Sb	15 42 46.4 +1.1
	baz=76						
N02D	Trinity Center	2.49	249	P		Pn	15 42 09.5 -1.6
	baz=66,SNR=8.9						
N02D					Sb	Sb	15 42 47.1 +1.1
	baz=66						
HUMO	Hull Mountain	2.56	287	Pn		Pn	15 42 10.2 -1.8
WDC	Whiskeytown Da	2.56	240	Pn		Pn	15 42 10.2 -1.7
VCNR	Virginia City	2.62	180			Pn	15 42 11.3 -1.6
I05D	Terrebonne, OR	2.72	333	Pb		Pb	15 42 19.4 +0.4
	baz=152,SNR=18						
ORV	Oroville	2.75	212			Pn	15 42 13.8 -0.7
PNTR	Pine Nut	2.82	179			Pn	15 42 15.8 +0.1
RUBR	Rubicon Trail	2.89	188			Pn	15 42 16.9 +0.2
L02E	Cave Junction	2.96	276	P		Pn	15 42 17.7 +0.3
	baz=93,SNR=21						
K02D	Willamette Mer	3.09	286	P		Pn	15 42 19.1 -0.1
	baz=103,SNR=87						
KVN	Kaiserville	3.09	157			Pn	15 42 20.2 +0.8
AFDM	Forest Hills D	3.13	199			Pn	15 42 19.8 -0.1
MFID	Camas Ranch	3.18	61	Pn		Pn	15 42 19.7 -0.9
KRMB	Red Mountain	3.22	264			Pn	15 42 20.2 -1.0
KHMM	Horse Mountain	3.25	253			Pn	15 42 21.7 +0.2
H04A	Detroit Lake	3.33	327			Pn	15 42 23.3 +0.7
BMO	Blue Mountains	3.39	29			Pn	15 42 24.3 +0.8
RYN	Ryan	3.39	165			Pn	15 42 24.4 +0.9
G08A	Pilot Rock	3.41	8			Pn	15 42 23.4 -0.3
WAKR	Walker	3.41	177			Pn	15 42 24.1 +0.3
KBO	Bosley Butte	3.43	276	Pn		Pn	15 42 24.2 +0.2
JCC	Jacoby Creek,	3.48	253			Pn	15 42 24.3 -0.3
ELK	Elko	3.51	108			Pn	15 42 25.6 +0.3
KMRM	Mail Ridge	3.51	243			Pn	15 42 25.8 +0.7
KEBM	Edson Butte	3.61	287	Pn		Pn	15 42 24.5 -1.9
NVAR	Mina Array Bea	3.63	163			Pn	15 42 25.2 -1.6
NV11	Mina Array Sit	3.66	161			Pn	15 42 27.8 +0.6
KCPM	Cahto Peak	3.73	235			Pn	15 42 26.2 -1.9
LHV	Little Huntoon	3.76	166			Pn	15 42 27.5 -0.9
CMB	Columbia Colle	3.92	189			Pn	15 42 32.0 +1.4
HOPS	Hopland Field	3.92	223			Pn	15 42 30.6 -0.1
GDXM	Geysers	3.93	219	Pn		Pn	15 42 33.3 +2.5
PLID	Pearl Lake	4.13	39			Pn	15 42 34.1 +0.4
HLID	Hailey	4.18	65	Pn		Pn	15 42 34.3 -0.1
TPH	Tonopah	4.26	153			Pn	15 42 36.2 +0.7
MDPB	Devils Postpil	4.30	174			Pn	15 42 35.3 -0.8
OMMB	Old Mammoth Mi	4.33	173			Pn	15 42 36.6 +0.1
F10A	Beach Ranch, E	4.41	22			Pn	15 42 38.7 +1.2
BGU	Big Grassy Mou	5.07	99	Pn		Pn	15 42 46.8 +0.2
HVU	Hansel Valley	5.13	89			Pn	15 42 46.8 -0.6
BCYI	Bear Canyon	5.15	60			Pn	15 42 46.4 -1.4
SPUT	South Promonto	5.42	94			Pn	15 42 50.3 -1.1
DUG	Dugway, Tooele	5.44	106			Pn	15 42 50.5 -1.1
PSUT	Pine Spring	5.57	125	Pn		Pn	15 42 53.9 +0.5
TPNV	Topopah Spring	5.61	151			Pn	15 42 53.4 -0.7
PRN	Pahroc Range	5.73	140			Pn	15 42 56.4 +0.8
MCMT	McKenzie Canyo	5.74	57			Pn	15 42 53.9 -2.0
DLMT	Dillon	6.16	54			Pn	15 43 02.4 +0.8
ECR	Eagle Creek	6.22	77			Pn	15 43 00.3 -2.0
ISA	Isabella, Lake	6.31	171			Pn	15 43 04.5 +1.0
AHID	Auburn Hatcher	6.38	80			Pn	15 43 04.3 -0.4
TCRU	Three Creeks R	6.41	119			Pn	15 43 04.7 -0.4
SHPR	Sheep Range	6.42	146	Pn		Pn	15 43 04.6 -0.5
CCUT	Cedar City	6.51	130			Pn	15 43 05.8 -0.7
TPAW	Teton Pass	6.59	73			Pn	15 43 08.3 +0.7
SZCU	Shurtz Canyon	6.64	128			Pn	15 43 08.1 -0.1
REDW	Red Top Meadow	6.64	74			Pn	15 43 08.6 +0.4
IMW	Indian Meadow	6.69	70			Pn	15 43 08.2 -0.8
YHB	Horse Butte	6.78	62			Pn	15 43 09.6 -0.5
YHL	Hebgen Lake	6.82	62			Pn	15 43 10.3 -0.5
YPP	Pitchstone Pla	6.88	67			Pn	15 43 11.9 +0.3
YMR	Madison River	6.90	64			Pn	15 43 11.3 -0.4
FLWY	Flagg Ranch	6.90	69			Pn	15 43 11.9 +0.1
MTPU	Mount Pierson	6.91	122			Pn	15 43 10.7 -1.3
LCMT	Little Creek M	6.96	133			Pn	15 43 11.7 -0.9
KNB	Kanab	7.19	131			Pn	15 43 15.7 -0.1
YNE	Yellowstone No	7.66	63			Pn	15 43 22.3 +0.1

BJI ***06*** *15:46:13.3±0.0, 7.°09N×94.°06E, h10km, mB5.1/54, mb4.9/68, Ms5.2/65, Ms7 4.8/63*

IDC ***06*** *15:46:16.0±0.4, 7.°42N×94.°31E, h0km, mb4.8/35, mb1 4.9/39, mb1mx4.8/51, mbtmp4.8/39, ML4.5/4, MS4.5/33, Ms1 4.5/33, ms1mx4.5/39, Error ellipse: s-maj=14.0km s-min=8.8km az=50.0*

MOS ***06*** *15:46:16.7±0.9, 7.°44N×94.°30E, h16km, mb5.2/60, MS4.5/10, Error ellipse: s-maj=7.1km s-min=3.9km az=108.3*

NEIC ***06*** *15:46:20.4±1.9, 7.°42N±0.°05×94.°33E±0.°06, h29km±3km, mb5.3/154, Error ellipse: s-maj=8.7km s-min=6.9km az=89.0*

GCMT ***06*** *15:46:21.4±0.2, 7.°49N±0.°01×94.°45E±0.°01, h16km, MW5.2/128, Moment Tensor Solution. s58,c77; s128,c211; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr=0.19±.01; Mθθ=0.54±.01; Mφφ=0.72±.01; Mrθ=0.41±.05; Mrφ=0.21±.01; Mθφ=0.30±.04; Best double couple: M=0.85300×10^17 NP1:φs147.00000°, δ51.00000°, λ-169.00000°. NP2:φs49.00000°, δ81.00000°, λ-40.00000°. Principal axes: T 0.8940, Plg20.0000°, Azm104.0000°; N -0.0830, Plg49.0000°, Azm219.0000°; P -0.8120, Plg34.0000°, Azm0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***06*** *15:46:21.2±1.1, 7.°N±2.°×9.°4E±.°, h14km±7km, M5.0/61, mb5.1/61, mB5.5/25, MLv5.2/10, Mw(mB)5.0/25, Mwp5.2/7*

NDI ***06*** *15:46:21.3±3.0, 7.°29N×94.°42E, h56km±19km, mb5.0, mb5.3(NEIC)*

KLM ***06*** *15:46:21.0, 7.°54N×94.°60E, h17km, mb5.2*

ISC 06 15:46:18.7±0.4, 7.°43N±0.°03×94.°36E±0.°03, h14km±2km, h15km:pP-P, n673, σ1°63/691, mb5.2/193, MS4.6/62, 28C-29D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LHMI	Lhok Sumawe	3.37	130	P		Pn	15 47 11.4	+0.4
LHMI	Lhok Sumawe	3.37	130	Pn		Pn	15 47 11.5	+0.4
LHMI				Sn		Sn	15 47 47.6	-3.3
PKDT	Phuket	3.97	83	P		Pn	15 47 19.3	+0.1
PKDT				S		Sn	15 48 01.3	-4.3
PBA	Port Blair	4.50	339	*e*P		Pn	15 47 28.5	+2.0
PBA				*e*S		Sn	15 48 18.2	-0.3
PBA	Port Blair	4.50	339	Pn		Pn	15 47 28.4	+1.9
KRAB	Krabi	4.86	80	P		Pn	15 47 31.8	+0.4
KRAB				S		Sn	15 48 23.4	-4.2
TPTI		5.00	146	P		Pn	15 47 34.8	+1.4
KCSI	Kotacane, Aceh	5.16	139	P		Pn	15 47 37.3	+1.7
	1.5nm4μm283nm,0.8s							
TRTT	Trang	5.30	85	P		Pn	15 47 37.5	0.0
TRTT				S		Sn	15 48 33.1	-5.4
TSI	Tuntungan	5.72	133	P		Pn	15 47 43.1	-0.2
	3.0nm6μm174nm,0.8s							
DGPR	DIGLIPUR	5.89	346	*e*P		Pn	15 47 48.0	+2.4
DGPR				IAmb		IAmb	15 47 54.9	
	comp=Z,188nm,0.7s							
DGPR				*ex*		x	15 49 04.5	
PSI	Prapat	6.46	135	Pn		Pn	15 47 55.0	+1.3
	comp=Z,6.3nm,0.3s,baz=359,slow=14,SNR=22							
PSI				LR		LR	15 50 37.0	
	comp=Z,6μm,20.5s,baz=269,slow=40							
PSI	Prapat	6.46	135	P		Pn	15 47 55.0	+1.3
RPSI	Rantau Prapat	6.54	136	Pn		Pn	15 47 54.5	0.0
RPSI	Rantau Prapat	6.54	136			Pn	15 47 55.0	+0.4
KULM	Kulim	6.60	108	Pn		Pn	15 47 54.3	-1.2
KULM	Kulim	6.60	108	P		Pn	15 47 55.0	-0.5
GSI	Gunungsitoli	6.88	152	P		Pn	15 47 58.0	-1.2
	comp=Z,0.6nmcomp=Z,116nm,0.7s							
GSI	Gunungsitoli	6.88	152	Pn		Pn	15 47 59.3	+0.1
IPM	Ipoh	7.25	113	Pn		Pn	15 48 02.4	-1.9
PHET	Kaeng Krachan	7.52	43	P		Pn	15 48 08.5	+0.4
SRDT	SRDT	8.32	34	P		Pn	15 48 20.5	+1.5
MNSI	Mandailing Nat	8.39	141	P		Pn	15 48 22.1	+2.0
	comp=Z,1μmcomp=Z,124nm,0.6s							
BKNI	Bangkinang	9.70	136	P		Pn	15 48 38.9	+0.9
	comp=Z,2μmcomp=Z,3μmcomp=Z,222nm,1.0s							
BKNI	Bangkinang	9.70	136	Pn		Pn	15 48 39.1	+1.1
SRAK	Srakaew	9.99	48	P		Pn	15 48 50.0	+8.1
SDSI	Sungai Dareh	10.89	139	P		Pn	15 48 54.2	-0.1
	comp=Z,45nm,1.2s							
MYKOM	Kota Tinggi	10.99	120			Pn	15 48 55.0	-0.7
MYKOM	Kota Tinggi	10.99	120	P		Pn	15 48 56.0	+0.3
MHMT	Maesarieng	11.24	18	P		Pn	15 49 02.1	+3.1
CHAI	Chaiyaphum	11.26	41	P		Pn	15 49 02.0	+2.7
PHIT	Phitsanulok	11.36	31	P		Pn	15 49 02.4	+1.6
CM05	Chiang Mai Arr	11.79	22	P		Pn	15 49 08.8	+2.3
CM13	Chiang Mai Arr	11.79	22	P		Pn	15 49 09.1	+2.5
CM04	Chiang Mai Arr	11.80	22	P		Pn	15 49 09.3	+2.6
CM01	Chiang Mai Arr	11.81	22	P		Pn	15 49 09.3	+2.5
KRJI	Kerinci	11.82	143	P		Pn	15 49 06.1	-1.0
	comp=Z,215nm,0.7s							
CM02	Chiang Mai Arr	11.82	22	P		Pn	15 49 09.9	+2.8
CM15	Chiang Mai Arr	11.83	22	P		Pn	15 49 10.0	+2.9
CM31	Chiang Mai Arr	11.84	22	P		Pn	15 49 10.8	+3.6
	SNR=12							
CM31	Chiang Mai Arr	11.84	22	P		Pn	15 49 09.6	+2.3
CM31	Chiang Mai Arr	11.84	22			Pn	15 49 07.9	+0.6
CMAR	Chiang Mai Arr	11.84	22	Pn		Pn	15 49 08.6	+1.3
	comp=Z,2.6nm,0.3s,baz=212,slow=14,SNR=59							
CMAR				LR		LR	15 53 52.3	
	comp=Z,3μm,18.1s,baz=252,slow=38							
CMAR	Chiang Mai Arr	11.84	22	*i* P		Pn	15 49 09.1	+1.8
CMAR				pmax		pmax		
	comp=Z,11nm,0.4s							
CMAR	Chiang Mai Arr	11.84	22			Pn	15 49 09.0	+1.8
CM09	Chiang Mai Arr	11.84	22	P		Pn	15 49 09.5	+2.1
UTTA	Uttaradit	11.90	30	P		Pn	15 49 09.5	+1.3
CHTO	Chiang Mai	12.17	21	P		Pn	15 49 12.7	+0.9
CHTO	Chiang Mai	12.17	21	Pn		Pn	15 49 12.7	+0.9
CMMT	Chiang Mai	12.17	21	P		Pn	15 49 13.8	+2.0
PAYA	Payao	13.02	24	P		Pn	15 49 25.6	+2.3
UBPT	Khong Chiam	13.40	53	Pn		Pn	15 49 29.7	+1.2
PALK	Pallekele	13.55	270	Pn		Pn	15 49 30.2	-0.5
	comp=Z,1.6nm,0.3s,baz=176,slow=15,SNR=11							
PALK	Pallekele	13.55	270	⇑ *e*P		Pn	15 49 31.6	+0.9
PALK				pmax		pmax		
	comp=Z,12nm,0.5s							
PALK	Pallekele	13.55	270	Pn		Pn	15 49 31.6	+0.9
NONG	Nongkai	13.60	38	P		Pn	15 49 33.9	+2.5
KSI	Kapahiang	13.73	143	P		Pn	15 49 33.3	+0.1
	comp=Z,137nm,0.9s							
CRAI	Chiangrai	14.00	24	P		Pn	15 49 39.2	+2.3
LHSI	Lahat	14.44	140	P		Pn	15 49 41.3	-1.6
	comp=Z,178nm,1.0s							
MNAI	Manna	14.52	144	Pn		Pn	15 49 42.4	-1.5
PMBI	Palembang	14.62	134	Pn		Pn	15 49 46.2	+0.9
DLV	T Lat	14.63	71			P	15 49 49.3	-2.6
CHLP	Challavanipeta	14.89	319	*e*P		Pn	15 49 48.3	-0.7
MDRS	Chennai	14.97	293	IAmb		IAmb	15 50 03.6	
	comp=Z,98nm,1.1s							
SAIH	SAIHA	15.04	355	*e*P		Pn	15 49 51.5	+0.5
SAIH				IAmb		IAmb	15 49 56.8	
	comp=Z,31nm,0.9s							
PPBI	Pangkal Pinang	15.13	129	P		Pn	15 49 54.0	+1.8
	comp=Z,5μmcomp=Z,49nm,1.2s							
MDSI	Maura Dua	15.36	140	P		Pn	15 49 53.8	-1.5
	comp=Z,52nm,0.9s							
LWLI	Liwa	15.70	142	P		P	15 50 08.2	+4.4
SKHT	Srikalahasti	15.70	295	*e*P		Pn	15 49 59.6	-0.1
PVM	Polavaram	15.80	309	*e*P		Pn	15 50 00.2	-0.8
KLSI		15.87	139	P		Pn	15 50 00.8	-1.1
	comp=Z,16nm,0.8s							
MYLAV	Mylavaram	16.30	306	*e*P		Pn	15 50 05.6	-1.8
ADKI	Addanki	16.38	302	*e*P		Pn	15 50 08.9	+0.5
SLVN	Son La	16.62	33	P		P	15 50 16.0	+2.1
TPI	Tanjungpandan	16.68	127	P		Pn	15 50 12.9	+0.6
	comp=Z,872nmcomp=Z,51nm,1.4s							
KSM	Kuching	16.96	110	P		P	15 50 17.1	-0.6
KSM				IAmb		IAmb	15 50 28.2	
	comp=Z,222nm,1.2s							
GGR	Gangavaram	17.24	308	*e*P		Pn	15 50 18.5	-0.8
NJS	Nagarjunasagar	17.28	303	*e*P		P	15 50 21.4	+0.2
CGJI	Cibinong	17.95	141	P		Pn	15 50 28.2	+0.1
	comp=Z,53nm,1.0s							
CUPL	Choutuppal	17.97	305	*e*P		Pn	15 50 26.9	-1.5
BOK	Bokaro	18.19	334	*e*P		Pn	15 50 30.4	-0.7
BOK				IAmb		IAmb	15 50 37.2	
	comp=Z,65nm,0.7s							
BOK				*e*S		S	15 53 57.7	-1.6
SHL	Shillong	18.19	353	*e*P		Pn	15 50 30.7	-0.5
SHL				IAmb		IAmb	15 50 37.6	
	comp=Z,41nm,1.2s							
SHL	Shillong	18.19	353	P		P	15 50 34.7	+3.3
	SNR=19							
SHL	Shillong	18.19	353	P		Pn	15 50 28.3	-2.9
SHL				pmax		pmax		
	comp=Z,124nm,1.3s							
SHL	Shillong	18.19	353	P		Pn	15 50 28.3	-2.9
KOHI	KOHIMA	18.20	359	*ex*		Pn	15 50 29.5	-1.7
KOHI				IAmb		IAmb	15 50 35.8	
	comp=Z,60nm,0.8s							
HYB	Hyderabad	18.34	304	*i* P		Pn	15 50 32.0	-0.9
HYB				*e*S		Sn	15 53 59.0	+1.3
HYB	Hyderabad	18.34	304	*e*P		Pn	15 50 32.2	-0.7
HYB				IAmb		IAmb	15 50 35.9	
	comp=Z,33nm,1.1s							
HYB				*e*S		Sn	15 53 58.2	+0.5
HYBB	Hyderabad (bro	18.34	304	*e*P		P	15 50 33.1	+0.2
URV	Uravakonda	18.35	296	*e*P		P	15 50 33.3	+0.2
TURI	Tura	18.43	348	*e*P		P	15 50 31.7	-2.1
SBUM	Sibu	18.46	105	P		Pn	15 50 35.3	+0.9
RPR	Rampur	18.54	309	*e*P		P	15 50 34.9	-0.1
STKI	Sintang	18.57	112	P		Pn	15 50 38.6	+2.9
	comp=Z,46nm,0.8s							
MOKO	MOKOCHONG	18.79	0	*e*P		P	15 50 38.0	0.0
MOKO				IAmb		IAmb	15 50 45.3	
	comp=Z,42nm,0.5s							
GUWA	GUWAHATI	18.84	353	AMP			15 50 52.2	
	comp=Z,597nm,1.5s							
QIZ	Qiongzhong	18.96	51	P		P	15 50 37.9	-1.8
QIZ				S		Sn	15 54 11.0	-1.6
QIZ				LR		LR		
	comp=Z,10μm,13.1s							
QIZ				LR		LR		
	comp=Z,3μm,13.5s							
QIZ				LR		LR		
	comp=Z,2μm,10.6s							
TEZP	TEZPUR	19.14	356	*e*P		P	15 50 41.0	-0.6
KMI	Kunming	19.34	24	⇑ *e*P		Pn	15 50 48.3	+3.2
KMI				pP		pwP	15 50 51.1	+0.9
KMI				sP		sP	15 50 53.6	+4.6
KMI				S		Sn	15 54 21.2	-0.8
KMI				sS		sS	15 54 28.5	+0.4
KMI				pmax		pmax		
	comp=Z,76nm,1.1s							
KMI				pmax		pmax		
	comp=Z,470nm,4.3s							
KMI				LR		LR		
	comp=Z,2μm,15.5s							
KMI				LR		LR		
	comp=Z,1μm,13.9s							
KMI				LR		LR		
	comp=Z,2μm,16.1s							
KMI	Kunming	19.34	24	P		Pn	15 50 47.8	+2.7
KMI				pmax		pmax		
	comp=Z,77nm,1.0s							
KMI	Kunming	19.34	24	P		Pn	15 50 47.8	+2.7
LEM	Lembang	19.37	137	P		Pn	15 50 45.0	-0.5
	comp=Z,0.9nm,0.3s,baz=159,slow=24,SNR=2.3							
LEM				LR		LR	15 59 23.0	
	comp=Z,3μm,18.1s,baz=299,slow=41							
LKP	Lekhapani	19.85	4	*e*P		P	15 50 50.0	+0.6
LKP				IAmb		IAmb	15 50 55.2	
	comp=Z,108nm,0.9s							
PBKI	Pangkalan Bun	19.99	120	P		Pn	15 50 55.8	+3.0
	comp=Z,3μmcomp=Z,177nm,1.4s							
ZIRO	ZIRO	20.00	359	*e*P		P	15 50 51.4	+0.2
CISI	Cisompet, Garu	20.04	138	P		Pn	15 50 53.0	-0.4
NGP	Nagpur	20.13	314	*e*P		P	15 50 52.8	+0.3
NGP				*e*S		S	15 54 35.5	-2.8
KLRI	Killari	20.27	303	*e*P		P	15 50 54.5	+0.3
ODAN	Odare	20.43	342	*e*P		P	15 50 55.5	-0.5
	comp=Z,124nm,0.8s							
GTK	Tadong	20.53	345	*e*P		Pn	15 50 58.2	-0.9
GTK				AMP			15 51 02.5	
	comp=Z,1μm,1.3s							
KPJI	Karang Pucung	20.64	135	P		Pn	15 51 16.4	+16
RAMN	Ramite	20.77	340	*e*P		P	15 50 58.8	-0.9
	comp=Z,390nm,1.1s							
TAPN	Taplejung	20.80	343	*e*P		P	15 50 59.3	-0.7
	comp=Z,315nm,0.9s							
XMIS	Christmas Isla	21.04	148	P		P	15 51 03.3	+0.8
XMIS				IAmb		IAmb	15 51 19.1	
	comp=Z,100nm,0.9s							
SMRI	Semarang	21.54	132	P		P	15 51 14.7	+6.9
SMRI	Semarang	21.54	132	P		P	15 51 10.2	+2.4
SMRI				IAmb		IAmb	15 51 13.8	
	comp=Z,152nm,0.8s							
GOA	Goa	21.65	294	*e*P		P	15 51 09.9	+1.0
KKM	Kota Kinabalu	21.75	92	P		P	15 51 12.1	+1.9
KKM				IAmb		IAmb	15 51 18.4	
	comp=Z,204nm,1.5s							
PKI	Pulchoki	21.76	338	*e*P		P	15 51 09.5	-0.9
	comp=Z,416nm,1.2s							
PKIN	Phulchoki	21.77	338	*e*P		P	15 51 09.5	-0.9
	comp=Z,231nm,1.0s							
GUN	Gumba	21.90	340	*e*P		P	15 51 11.0	-0.9
	comp=Z,324nm,0.9s							
DMN	Daman	21.91	338	*e*P		P	15 51 11.3	-0.6
	comp=Z,265nm,1.0s							
KKN	Kakani	22.00	338	*e*P		P	15 51 12.0	-0.9
	comp=Z,342nm,1.1s							
MTKI	Muara Teweh, K	22.11	111	P		P	15 51 15.9	+2.0
	comp=Z,4μmcomp=Z,68nm,1.1s							
UGM	Wanagama	22.18	133	P		P	15 51 16.2	+1.5
GYA	Guiyang	22.26	30	⇓ P		P	15 51 17.9	+2.4
GYA				S		S	15 55 21.8	+1.5
GYA				pmax		pmax		
	comp=Z,31nm,0.7s							
GYA				pmax		pmax		
	comp=Z,310nm,4.9s							
GYA				LR		LR		
	comp=Z,2μm,12.9s							
GYA				LR		LR		
	comp=Z,870nm,12.9s							
GYA				LR		LR		
	comp=Z,2μm,13.5s							
LSA	Lhasa	22.36	353	P		P	15 51 15.9	-1.1
LSA				S		S	15 55 28.1	+5.3
LSA				LR		LR		
	comp=Z,2μm,23.5s							
LSA				LR		LR		
	comp=Z,2μm,23.1s							
LSA				LR		LR		
	comp=Z,5μm,24.2s							
LSA	Lhasa	22.36	353	P		P	15 51 15.4	-1.6
LSA				pmax		pmax		
	comp=Z,96nm,0.8s							
LSA	Lhasa	22.36	353	P		P	15 51 15.4	-1.6
LSA				IAmb		IAmb	15 51 26.2	
	comp=Z,96nm,0.8s							
WOJI	Wonogiri, Jawa	22.42	132	P		P	15 51 26.2	+8.9
GKN	Gorkha	22.44	337	*e*P		P	15 51 16.6	-0.9
	comp=Z,333nm,1.1s							
TBJI	Tambak Boyo	22.46	129	P		P	15 51 25.2	+7.5
BWJI	Bawean	22.52	125	P		P	15 51 24.6	+6.2
BHPL	Bhopal	22.63	316	*e*P		P	15 51 20.6	+1.1
BHPL				IAmb		IAmb	15 51 26.8	
	comp=Z,36nm,0.6s							
BHPL				*e*S		S	15 55 25.7	-1.4
KOLN	Koldanda	22.66	335	*e*P		P	15 51 19.2	-0.7
	comp=Z,550nm,1.3s							
DANN	Dangsing	23.10	336	*e*P		P	15 51 23.7	-0.9
	comp=Z,185nm,0.8s							
BBKI	Banjar Baru	23.12	117	P		P	15 51 26.1	+1.4
	comp=Z,44nm,0.9s							
PWJI	Pagerwojo	23.20	131	P		P	15 51 34.3	+8.9
PYUN	Piuthan	23.21	334	*e*P		P	15 51 25.1	-0.5
	comp=Z,739nm,1.3s							
BKB	Balikpapan	24.08	110	P		P	15 51 34.1	0.0
MYLDM	Lahad Datu	24.10	94	P		P	15 51 34.9	+0.7
HKPS	Hong Kong Po S	24.11	50	P		P	15 51 34.1	-0.2
HKPS				IAmb		IAmb	15 51 38.1	
	comp=Z,124nm,1.3s							
KMMI	Kalianget	24.27	126	P		P	15 51 39.9	+4.1
	comp=Z,82nm,1.1s							
BLJI	Banyuglugur	24.39	128	P		P	15 51 39.0	+2.1
	comp=Z,2μmcomp=Z,205nm,0.9s							
ABJI	Asem Bagus	24.93	127	P		P	15 51 45.8	+4.1
	comp=Z,135nm,0.9s							
CD2	Chengdu	24.97	19	P		P	15 51 42.6	+0.6
CD2				sP		sP	15 51 47.7	+0.6
CD2				S		S	15 56 07.0	+1.6
CD2				sS		sS	15 56 11.9	+0.2
CD2				pmax		pmax		
	comp=Z,60nm,0.6s							
CD2				pmax		pmax		
	comp=Z,270nm,4.7s				

XAN					LR	LR				
	comp=Z,4μm,15.7s									
XAN	**Xi'an**	**29.70**	**25**		P	**P**	**15 52 24.4**	**-0.1**		
XAN					pmax	pmax				
	comp=Z,24nm,0.9s									
XAN	**Xi'an**	**29.70**	**25**		P	**P**	**15 52 24.4**	**-0.1**		
LZH	**Lanzhou**	**29.82**	**16**	*eP*	**P**	**P**	**15 52 27.6**	**+2.0**		
LZH					pP	sP	15 52 31.0	+0.3		
LZH					sP	pwP	15 52 34.0	+1.8		
LZH					S	**S**	**15 57 22.2**	**+0.1**		
LZH					SS	**SnSn**	**15 59 00.0**	**+7.4**		
LZH					pmax	pmax				
	comp=Z,30nm,1.1s									
LZH					pmax	pmax				
	comp=Z,210nm,5.2s									
LZH					LR	LR				
	comp=Z,2μm,11.9s									
LZH					LR	LR				
	comp=Z,2μm,11.4s									
LZH					LR	LR				
	comp=Z,2μm,15.0s									
DHRM	**DHARAMSHALA**	**29.88**	**328**	*eP*	**P**	**15 52 24.5**	**-1.7**			
DHRM					lAmb	lAmb	15 52 32.3			
	comp=Z,29nm,0.6s									
SSLB	**Suanglung**	**30.25**	**54**		P	**P**	**15 52 29.2**	**-0.2**		
SSLB					lAmb	lAmb	15 53 00.1			
	comp=Z,134nm,2.0s									
YULB	**Yu-li**	**30.35**	**55**		P	**P**	**15 52 30.6**	**+0.4**		
YULB					lAmb	lAmb	15 52 40.7			
	comp=Z,152nm,1.9s									
KCP	**Kidapawan**	**30.49**	**89⇑**	*eP*	**P**	**15 52 34.8**	**+3.1**			
NACB	**Ninganchiao**	**30.95**	**54**		P	**P**	**15 52 35.1**	**-0.4**		
NACB					lAmb	lAmb	15 53 04.9			
	comp=Z,56nm,1.4s									
YHNB	**Yeheng**	**31.01**	**53**		P	**P**	**15 52 35.6**	**-0.6**		
YHNB					lAmb	lAmb	15 52 38.3			
	comp=Z,116nm,1.6s									
DDMP	**Don Marcelino,**	**31.16**	**90**	*eS*	**P**	**15 52 40.0**	**+2.5**			
EDFI	**Ende, Flores**	**31.63**	**120**		P	**P**	**15 52 45.3**	**+3.6**		
	comp=Z,5.9nm,1.4s									
GTA	**Gaotai**	**32.22**	**8**	⇑P		**P**	**15 52 47.2**	**+0.5**		
GTA					pP	pwP	15 52 56.5	+3.1		
GTA					sP	sP	15 53 01.0	+9.1		
GTA					S	**S**	**15 57 57.3**	**-2.3**		
GTA					sS	sS	15 58 12.9	+7.1		
GTA					pmax	pmax				
	comp=Z,12nm,0.7s									
GTA					pmax	pmax				
	comp=Z,110nm,7.1s									
GTA					LR	LR				
	comp=Z,680nm,17.1s									
GTA					LR	LR				
	comp=Z,880nm,12.7s									
GTA					LR	LR				
	comp=Z,840nm,17.1s									
NIL	**Nilore**	**32.59**	**326**		P	**P**	**15 52 49.1**	**-0.8**		
NIL					pmax	pmax				
	comp=Z,57nm,0.7s									
NIL	**Nilore**	**32.59**	**326**		P	**P**	**15 52 49.1**	**-0.8**		
NJ2	**Nanjing**	**33.47**	**40**	*eP*	**P**	**15 52 59.8**	**+2.2**			
NJ2					pmax	pmax				
	comp=Z,24nm,0.7s									
BATI	**Baumata**	**34.03**	**121**		P	**P**	**15 53 00.4**	**-2.4**		
	comp=Z,24nm,0.7s,baz=288,slow=3.2,SNR=11									
BATI	**Baumata**	**34.03**	**121**		P	**P**	**15 53 00.4**	**-2.4**		
	comp=Z,15nm,0.6s									
SOEI	**Soe**	**34.33**	**119**		P	**P**	**15 53 04.8**	**-0.7**		
	comp=Z,44nm,0.8s									
SOEI	**Soe**	**34.33**	**119**		P	**P**	**15 53 04.9**	**-0.5**		
SOEI					lAmb	lAmb	15 53 24.7			
	comp=Z,29nm,0.7s									
SSE	**Sheshan**	**34.40**	**43**		P	**P**	**15 53 05.1**	**-0.5**		
SSE					S	**S**	**15 58 31.4**	**-1.9**		
SSE					pmax	pmax				
	comp=Z,10.0nm,0.8s									
SSE					LR	LR				
	comp=Z,1μm,16.7s									
SSE					LR	LR				
	comp=Z,960nm,18.0s									
SSE					LR	LR				
	comp=Z,970nm,16.0s									
TIA	**Tai'an**	**35.41**	**33**		P	**P**	**15 53 15.9**	**+1.6**		
TIA					S	**S**	**15 58 56.0**	**+7.3**		
TIA					pmax	pmax				
	comp=Z,18nm,0.7s									
TIA					LR	LR				
	comp=Z,750nm,11.2s									
TIA					LR	LR				
	comp=Z,1μm,18.0s									
TIA					LR	LR				
	comp=Z,2μm,12.4s									
KBL	**Kabul**	**35.66**	**323**		P	**P**	**15 53 15.8**	**-1.0**		
KBL					pmax	pmax				
	comp=Z,20nm,0.9s									
KBL	**Kabul**	**35.66**	**323**		P	**P**	**15 53 15.8**	**-1.0**		
KBL					lAmb	lAmb	15 53 24.3			
	comp=Z,20nm,0.8s									
GIRL	**Giralia**	**35.66**	**147**		P	**P**	**15 53 16.6**	**-0.1**		
KSH	**Kashi**	**35.97**	**335**	*eP*	**P**	**15 53 17.4**	**-1.9**			
KSH					S	**S**	**15 58 51.6**	**-5.9**		
KSH					SS	**SnSn**	**16 01 19.9**	**-1.9**		
KSH					pmax	pmax				
	comp=Z,22nm,0.6s									
KSH					pmax	pmax				
	comp=Z,180nm,5.0s									
KSH					LR	LR				
	comp=Z,2μm,15.1s									
KSH					LR	LR				
	comp=Z,630nm,10.2s									
KSH					LR	LR				
	comp=Z,1μm,18.2s									
HHC	**Hu-ho-hao-te**	**36.65**	**22**	*eP*	**P**	**15 53 24.1**	**-0.9**			
HHC					sP	pwP	15 53 31.6	-0.1		
HHC					PP	**PP**	**15 54 56.4**	**+7.8**		
HHC					S	**S**	**15 59 09.9**	**+2.0**		
HHC					pmax	pmax				
	comp=Z,18nm,1.0s									
HHC					pmax	pmax				
	comp=Z,210nm,4.6s									
HHC					LR	LR				
	comp=Z,1μm,12.9s									
HHC					LR	LR				
	comp=Z,3μm,14.2s									
HHC					LR	LR				
	comp=Z,1μm,14.6s									
WMQ	**Urumqi**	**36.72**	**352**	*eP*	**P**	**15 53 26.3**	**+0.8**			
WMQ					pP	pwP	15 53 31.7	-0.5		
WMQ					S	**S**	**15 59 10.0**	**+1.2**		
WMQ					ScS	**ScS**	**16 03 41.0**	**-0.3**		
WMQ					pmax	pmax				
	comp=Z,65nm,0.9s									
WMQ					pmax	pmax				
	comp=Z,270nm,3.7s									
WMQ					LR	LR				
	comp=Z,1μm,16.5s									
WMQ					LR	LR				
	comp=Z,1μm,22.9s									
WMQ					LR	LR				
	comp=Z,1μm,19.5s									
WMQ	**Urumqi**	**36.72**	**352**		P	**P**	**15 53 25.8**	**+0.2**		
WMQ					pmax	pmax				
	comp=Z,42nm,0.9s									
WMQ	**Urumqi**	**36.72**	**352**		P	**P**	**15 53 25.8**	**+0.2**		
WMQ					lAmb	lAmb	15 53 34.9			
	comp=Z,42nm,0.9s									
PRZ	**Przheval'sk**	**37.65**	**341**		P	**P**	**15 53 33.0**	**-0.7**		
PRZ	**Przheval'sk**	**37.65**	**341**		P	**P**	**15 53 33.0**	**-0.7**		
SIJI	**Sorong**	**37.73**	**101**		P	**P**	**15 53 34.7**	**+0.3**		
	comp=Z,20nm,0.8s,baz=307,slow=7.2,SNR=11									
WSAR	**Wadi Sarin**	**37.73**	**299**		LR	LR	16 09 31.2			
	comp=Z,639nm,18.4s,baz=120,slow=37									
KDJ	**Kajisay**	**37.76**	**339**		P	**P**	**15 53 34.1**	**-0.4**		
KDJ					pmax	pmax				
	comp=Z,33nm,1.0s									
KDJ	**Kajisay**	**37.76**	**339**		P	**P**	**15 53 34.1**	**-0.4**		
KDJ					lAmb	lAmb	15 53 41.2			
	comp=Z,33nm,0.9s									
MBWA	**Marble Bar**	**37.79**	**139**		P	**P**	**15 53 36.2**	**+1.4**		
BJT	**Baijiatuau**	**37.88**	**28**		P	**P**	**15 53 35.0**	**-0.3**		
BJT					pmax	pmax				
	comp=Z,24nm,1.1s									
BJT	**Baijiatuau**	**37.88**	**28**		P	**P**	**15 53 35.0**	**-0.3**		
BJI	**Beijing**	**37.90**	**28**		P	**P**	**15 53 38.3**	**+2.8**		
BJI					S	**S**	**15 59 29.6**	**+3.0**		
BJI					pmax	pmax				
	comp=Z,10.0nm,1.1s									
BJI					LR	LR				
	comp=Z,830nm,16.2s									
BJI					LR	LR				
	comp=Z,870nm,15.4s									
BJI					LR	LR				
	comp=Z,440nm,23.9s									
SHLS	**Shalkode**	**37.92**	**342**	*eP*	**P**	**15 53 35.0**	**-0.9**			
	comp=Z,13nm,1.2s,baz=343									
SHLS	**Shalkode**	**37.92**	**342**	*eP*	**P**	**15 53 34.9**	**-0.9**			
SHLS					pmax	pmax				
	comp=Z,13nm,1.2s									
PSAD1	**Pilbara Seismi**	**38.06**	**139**		P	**P**	**15 53 36.0**	**-1.1**		
PSAD1					lAmb	lAmb	15 53 37.4			
	comp=Z,28nm,0.7s									
PDGK	**Podgornoye**	**38.07**	**342**		P	**P**	**15 53 36.4**	**-0.7**		
PSAC1	**Pilbara Seismi**	**38.10**	**140**		P	**P**	**15 53 36.6**	**-0.9**		
PSAC1					lAmb	lAmb	15 53 37.8			
	comp=Z,31nm,0.7s									
PSA00	**Pilbara Seismi**	**38.16**	**140**		P	**P**	**15 53 37.0**	**-0.9**		
PSA00					lAmb	lAmb	15 53 38.2			
	comp=Z,25nm,0.7s									
PSA00	**Pilbara Seismi**	**38.16**	**140**		P	**P**	**15 53 37.5**	**-0.4**		
PSA00					lAmb	lAmb	15 53 39.1			
	comp=Z,16nm,0.7s									
SATY	**Saty**	**38.17**	**341**	*eP*	**P**	**15 53 37.7**	**-0.3**			
	comp=Z,4.2nm,0.8s,baz=341									
SATY	**Saty**	**38.17**	**341**	*eP*	**P**	**15 53 37.6**	**-0.3**			
SATY					pmax	pmax				
	comp=Z,4.0nm,0.8s									
GAR	**Garm**	**38.17**	**329**		P	**P**	**15 53 37.3**	**-0.7**		
BIDO	**Bidbid**	**38.26**	**299**		P	**P**	**15 53 41.2**	**+2.4**		
KPKS	**Kokpek**	**38.44**	**342**	*eP*	**P**	**15 53 39.7**	**-0.6**			
	comp=Z,5.4nm,1.1s,baz=342									
KPKS	**Kokpek**	**38.44**	**342**	*eP*	**P**	**15 53 39.6**	**-0.6**			
KPKS					pmax	pmax				
	comp=Z,5.0nm,1.1s									
BOOM	**Boomskoye usch**	**38.52**	**338**		P	**P**	**15 53 40.4**	**-0.6**		
BOOM					pmax	pmax				
	comp=Z,13nm,0.8s									
BOOM	**Boomskoye usch**	**38.52**	**338**		P	**P**	**15 53 40.4**	**-0.6**		
TNSS	**Tian-Shan**	**38.64**	**339**	*eP*	**P**	**15 53 41.5**	**-0.8**			
	baz=340									
TNSS	**Tian-Shan**	**38.64**	**339**	*eP*	**P**	**15 53 41.4**	**-0.8**			
MDOK	**Medeo**	**38.71**	**340**	*i* P	**P**	**15 53 42.5**	**-0.1**			
	baz=340									
MDOK				*eS*	**S**	**15 59 37.7**	**-1.5**			
	baz=340									
MDOK					LR	LR	16 10 05.9			
	comp=Z,261nm,17.2s,baz=340									
MDOK	**Medeo**	**38.71**	**340**	*i* P	**P**	**15 53 42.4**	**-0.1**			
MDOK				*eS*	**S**	**15 59 37.7**	**-1.5**			
MDOK					MLR	MLR				
	comp=Z,261nm,17.0s									
BTK	**Batken**	**38.73**	**331**		P	**P**	**15 53 42.9**	**+0.3**		
BTK	**Batken**	**38.73**	**331**		P	**P**	**15 53 42.9**	**+0.3**		
AAA	**Alma-Ata**	**38.80**	**340**	*eP*	**P**	**15 53 42.7**	**-0.5**			
	baz=340									
AAA					LR	LR	16 10 06.8			
	comp=Z,331nm,17.0s,baz=340									
AAA	**Alma-Ata**	**38.80**	**340**	*eP*	**P**	**15 53 42.6**	**-0.5**			
AAA					MLR	MLR				
	comp=Z,331nm,17.0s									
BSY	**Bisya**	**38.83**	**297**		P	**P**	**15 53 45.6**	**+1.9**		
BSY					P	**P**	**15 53 45.6**	**+1.9**		
HOQ	**Hoqain**	**38.99**	**299**		P	**P**	**15 53 47.2**	**+2.2**		
HOQ					P	**P**	**15 53 47.2**	**+2.2**		
TKM2	**Tokmak 2**	**39.02**	**338**		P	**P**	**15 53 45.1**	**-0.1**		
	SNR=12									
TKM2	**Tokmak 2**	**39.02**	**338**	*i* P		**P**	**15 53 44.7**	**-0.5**		
TKM2					pmax	pmax				
	comp=Z,26nm,1.3s									
KBK	**Karagaybulak**	**39.04**	**337**		P	**P**	**15 53 45.4**	**+0.1**		
	SNR=20									
AML	**Almayashu**	**39.10**	**335**		P	**P**	**15 53 46.0**	**-0.1**		
	SNR=33									
FAKI	**Fak Fak**	**39.18**	**104**		P	**P**	**15 53 46.0**	**-0.7**		
AAK	**Ala-Archa**	**39.20**	**337**		P	**P**	**15 53 47.1**	**+0.5**		
	SNR=11									
AAK	**Ala-Archa**	**39.20**	**337**	*d i* P		**P**	**15 53 47.0**	**+0.3**		
AAK					pmax	pmax				
	comp=Z,60nm,1.3s									
FRU1	**Bishkek**	**39.30**	**337**		P	**P**	**15 53 48.1**	**+0.8**		
FRU1					pmax	pmax				
	comp=Z,85nm,1.6s									
FRU1	**Bishkek**	**39.30**	**337**		P	**P**	**15 53 48.1**	**+0.8**		
FRU1					lAmb	lAmb	15 53 54.2			
	comp=Z,85nm,1.6s									
EKS2	**Erkin-Say**	**39.51**	**336**		P	**P**	**15 53 49.2**	**0.0**		
	SNR=11									
KUU	**Kurty**	**39.60**	**339**	*eP*		**P**	**15 53 48.3**	**-1.5**		
	comp=Z,5.9nm,1.0s,baz=340									
KUU					LR	LR	16 12 22.3			
	comp=Z,326nm,15.4s,baz=340									
KUU	**Kurty**	**39.60**	**339**	*eP*		**P**	**15 53 48.3**	**-1.5**		
KUU					pmax	pmax				
	comp=Z,6.0nm,1.0s									
KUU					MLR	MLR				
	comp=Z,326nm,15.0s									
DMTO	**DMTO**	**39.72**	**289**		P	**P**	**15 53 53.3**	**+2.1**		
DMTO					P	**P**	**15 53 53.3**	**+2.1**		
USP	**Ospenovka**	**39.73**	**337**		P	**P**	**15 53 50.5**	**-0.4**		
	SNR=7.1									
DL2	**Dalian**	**39.82**	**34**		P	**P**	**15 53 54.4**	**+2.8**		
DL2				*eS*		**S**	**16 00 01.9**	**+6.3**		
DL2					pmax	pmax				
	comp=Z,53nm,1.2s									
DL2					LR	LR				
	comp=Z,1μm,14.7s									
DL2					LR	LR				
	comp=Z,960nm,11.4s									
DL2					LR	LR				
	comp=Z,1μm,14.5s									
SGDS	**Sogindy**	**39.84**	**337**	*eP*		**P**	**15 53 51.3**	**-0.6**		
	baz=338									
SGDS	**Sogindy**	**39.84**	**337**	*eP*		**P**	**15 53 51.2**	**-0.6**		
TDK	**Taldyqorghan**	**39.92**	**342**	*eP*		**P**	**15 53 51.6**	**-0.8**		
	baz=342									
TDK					LR	LR	16 10 25.4			
	comp=Z,314nm,19.2s,baz=342									
TDK	**Taldyqorghan**	**39.92**	**342**	*eP*		**P**	**15 53 51.6**	**-0.8**		
TDK					MLR	MLR				
	comp=Z,314nm,19.0s									
HRA	**Herat**	**39.93**	**317**			**P**	**15 53 51.2**	**-1.7**		
FITZ	**Fitzroy Crossi**	**39.96**	**130**		P	**P**	**15 53 51.8**	**-1.3**		
	comp=Z,11nm,1.2s,baz=335,slow=10,SNR=13									
FITZ					PcP	**PcP**	**15 55 58.1**	**-0.3**		
	comp=Z,5.3nm,0.7s,baz=153,slow=1.9,SNR=4.7									
FITZ	**Fitzroy Crossi**	**39.96**	**130**		P	**P**	**15 53 52.3**	**-0.8**		
SOCY	**Socotra**	**40.03**	**280**			**P**	**15 53 51.8**	**-2.1**		
UOSS	**Minazif**	**40.38**	**300**		P	**P**	**15 53 55.0**	**-1.5**		
UOSS					lAmb	lAmb	15 54 05.1			
	comp=Z,66nm,1.6s									
RBK	**Rabkut**	**40.38**	**288**		P	**P**	**15 53 58.2**	**+1.5**		
RBK					P	**P**	**15 53 58.2**	**+1.5**		
MK31	**Makanchi Array**	**40.57**	**347**	*i* P		**P**	**15 53 57.0**	**-0.8**		
MK31					pmax	pmax				
	comp=Z,32nm,0.6s									
MK31	**Makanchi Array**	**40.57**	**347**		P	**P**	**15 53 56.8**	**-1.0**		
MK31					lAmb	lAmb	15 54 03.8			
	comp=Z,39nm,0.8s									
MKAR	**Makanchi Array**	**40.57**	**347**		P	**P**	**15 53 57.1**	**-0.7**		
	comp=Z,27nm,0.7s,baz=168,slow=8.0,SNR=182									
MKAR	**Makanchi Array**	**40.57**	**347**		P	**P**	**15 53 56.7**	**-1.1**		
MAKZ	**Makanchi**	**40.65**	**347**		P	**P**	**15 53 57.5**	**-1.0**		
MAKZ					pmax	pmax				
	comp=Z,39nm,0.7s									
MAKZ	**Makanchi**	**40.65**	**347**		P	**P**	**15 53 57.5**	**-1.0**		
MAKZ					lAmb	lAmb	15 54 04.4			
	comp=Z,39nm,0.7s									
ZSN	**Zaisan**	**40.70**	**350⇑**	*i* P		**P**	**15 53 58.9**	**+0.1**		
	comp=Z,8.3nm,0.8s,baz=350									
ZSN	**Zaisan**	**40.70**	**350**	*c i* P		**P**	**15 53 58.9**	**+0.1**		
ZSN					pmax	pmax				
	comp=Z,8.0nm,0.8s									
IUG	**luzhnay**	**40.72**	**332**	*eP*		**P**	**15 53 58.9**	**-0.3**		
	comp=Z,29nm,2.5s,baz=332									
IUG					LR	LR	16 10 55.5			
	comp=Z,215nm,16.0s,baz=332									
IUG	**luzhnay**	**40.72**	**332**	*eP*		**P**	**15 53 58.9**	**-0.3**		
IUG					pmax	pmax				
	comp=Z,29nm,2.5s									
IUG					MLR	MLR				
	comp=Z,215nm,16.0s									
WHFO	**Wadi Hawf**	**40.86**	**289**		P	**P**	**15 54 02.1**	**+1.5**		
	SNR=14									
WHFO					P	**P**	**15 54 02.1**	**+1.5**		
	SNR=14									
KNRA	**Kununurra**	**41.09**	**124**		P	**P**	**15 54 00.9**	**-1.5**		
KNRA					lAmb	lAmb	15 55 07.5			
	comp=Z,114nm,1.9s									
ABTO	**Aybut**	**41.22**	**288**		P	**P**	**15 54 05.2**	**+1.6**		
	SNR=13									
ABTO					P	**P**	**15 54 05.2**	**+1.6**		
	SNR=13									
KK06	**Karatay Array**	**41.24**	**333**		P	**P**	**15 54 02.7**	**-0.7**		
KK07	**Karatay Array**	**41.25**	**333**		P	**P**	**15 54 02.8**	**-0.7**		
KK31	**Karatay Array**	**41.26**	**333**		P	**P**	**15 54 02.6**	**-0.9**		
KK31					pmax	pmax				
	comp=Z,53nm,1.5s									
KK31	**Karatay Array**	**41.26**	**333**		P	**P**	**15 54 02.5**	**-0.9**		
KKAR	**Karatay Array**	**41.26**	**333**		P	**P**	**15 54 02.3**	**-1.2**		
KKAR							15 54 02.8			
KKAR	**Karatay Array**	**41.26**	**333**		P	**P**	**15 54 02.8**	**-0.7**		
KKAR	**Karatay Array**	**41.26**	**333**		P	**P**	**15 54 02.3**	**-1.2**		
JSU	**Suzuyama**	**41.30**	**50**		P	**P**	**15 54 03.7**	**-0.4**		
JSU					lAmb	lAmb	15 54 33.7			
	comp=Z,58nm,1.4s									
BTLS	**Baital**	**41.42**	**338**	*eP*		**P**	**15 54 03.8**	**-1.0**		
	baz=338									
BTLS					LR	LR	16 12 37.8			
	comp=Z,112nm,15.2s,baz=338									
BTLS	**Baital**	**41.42**	**338**	*eP*		**P**	**15 54 03.7**	**-1.0**		
BTLS					MLR	MLR				
	comp=Z,112nm,15.0s									
SONM	**Songino Array**	**41.55**	**12**		P	**P**	**15 54 05.9**	**-0.1**		
	comp=Z,7.7nm,0.9s,baz=195,slow=8.0,SNR=22									
SONM					PcP	**PcP**	**15 56 03.2**	**-0.1**		
	comp=Z,3.3nm,0.8s,baz=208,slow=3.6,SNR=4.8									
SONM					LR	LR	16 12 29.4			
	comp=Z,625nm,21.0s,baz=186,slow=38									
SONM	**Songino Array**	**41.55**	**12**		P	**P**	**15 54 05.5**	**-0.5**		
TJN	**Taejon**	**41.67**	**41**	*de*	P	**P**	**15 54 07.4**	**+0.5**		
MTN	**Manton Dam**	**41.72**	**119**		P	**P**	**15 54 06.2**	**-1.5**		
ULN	**Ulaanbaatar**	**41.72**	**13**	*de*	P	**P**	**15 54 07.7**	**+0.3**		
ULN					pmax	pmax				
	comp=Z,5.0nm,1.0s									
ULN	**Ulaanbaatar**	**41.72**	**13**		P	**P**	**15 54 06.0**	**-1.4**		
INCN	**Inchon**	**41.86**	**40**		P	**P**	**15 54 07.1**	**-1.4**		
INCN					pmax	pmax				
	comp=Z,154nm,1.8s									
INCN	**Inchon**	**41.86**	**40**		P	**P**	**15 54 07.1**	**-1.4**		
INCN					lAmb	lAmb	15 54 16.7			
	comp=Z,154nm,1.8s									
MORW	**Morawa**	**41.87**	**151**		P	**P**	**15 54 07.9**	**-0.7**		
MORW					lAmb	lAmb	15 54 50.2			
	comp=Z,80nm,1.8s									
JNU	**Nakatsue**	**42.38**	**48**		LR	LR	16 12 20.6			
	comp=Z,1μm,20.4s,baz=245,slow=37									
JNU	**Nakatsue**	**42.38**	**48**		P	**P**	**15 54 13.0**	**+0.1**		
KSAR	**Wonju Array Be**	**42.63**	**40**		P	**P**	**15 54 14.6**	**-0.2**		
KSAR	**Wonju Array Be**	**42.63**	**40**		P	**P**	**15 54 14.6**	**-0.2**		
KSRS	**Korea Array**	**42.66**	**40**		P	**P**	**15 54 15.7**	**+0.7**		
	comp=Z,5.0nm,0.8s,baz=234,slow=9.3,SNR=10.0									
KSRS					LR	LR	16 14 02.6			
	comp=Z,655nm,18.8s,baz=230,slow=39									
SNY	**Shenyang**	**42.93**	**32**	⇓P		**P**	**15 54 14.6**	**-2.5**		
SNY					S	**S**	**16 00 40.2**	**-1.5**		
SNY					pmax	pmax				
	comp=Z,12nm,0.8s									
SNY					pmax	pmax				
	comp=Z,240nm,3.6s									
SNY					LR	LR				
	comp=Z,900nm,13.4s									
SNY					LR	LR				
	comp=Z,1μm,15.2s									
SNY					LR	LR				
	comp=Z,1μm,13.5s									
ZAK	**Zakamensk**	**43.46**	**8**	*eP*		**P**	**15 54 20.4**	**-1.0**		
ZAK				*e*			15 56 08.2			
ZAK					pmax	pmax				
	comp=Z,8.0nm,1.3s									
GYB1	**ALIBECK ARRAY**	**44.66**	**318**		P	**P**	**15 54 30.8**	**-0.5**		
GYB1					lAmb	lAmb	15 54 38.7			
	comp=Z,45nm,0.7s									
GEYT	**Alibeck**	**44.68**	**318**		P	**P**	**15 54 31.6**	**+0.2**		
	comp=Z,24nm,0.7s,baz=148,slow=8.7,SNR=58									
GEYT					LR	LR	16 16 27.0			
	comp=Z,769nm,19.0s,baz=130,slow=41									
GEYT	**Alibeck**	**44.68**	**318**		P	**P**	**15 54 31.4**	**+0.1**		
GYA0B	**ALIBECK ARRAY**	**44.68**	**318**		P	**P**	**15 54 31.7**	**+0.3**		
TLY	**Talaya**	**44.78**	**8**	*eP*		**P**	**15 54 35.8**	**+3.9**		
TLY				*eS*		**S**	**16 01 13.1**	**+4.6**		
TLY					pmax	pmax				
	comp=Z,12nm,0.5s									
TLY					MLR	MLR				
	comp=Z,1μm,19.0s									
TLY	**Talaya**	**44.78**	**8**		P	**P**	**15 54 31.6**	**-0.3**		
JMN	**Monobe**	**44.89**	**49**		P	**P**	**15 54 32.7**	**-0.3**		
JHS	**Saijyo**	**44.91**	**47**		P	**P**	**15 54 35.0**	**+1.7**		
KURBB	**Kurchatov Arra**	**45.03**	**346**		P	**P**	**15 54 32.9**	**-1.0**		
KURK	**Kurchatov**	**45.09**	**346**	*c i* P		**P**	**15 54 34.1**	**-0.3**		
KURK					pmax	pmax				
	comp=Z,54nm,1.3s									
KURK	**Kurchatov**	**45.09**	**346**		P	**P**	**15 54 34.1**	**-0.3**		
NWAO	**Narrogin (SRO)**	**45.65**	**153**		P	**P**	**15 54 39.1**	**0.0**		
NWAO					pmax	pmax				
	comp=Z,84nm,1.4s									
NWAO	**Narrogin (SRO)**	**45.65**	**153**		P	**P**	**15 54 38.8**	**-0.3**		
NWAO					lAmb	lAmb	15 55 39.5			
	comp=Z,63nm,1.4s									
NWAO	**Narrogin (SRO)**	**45.65**	**153**		P	**P**	**15 54 39.1**	**0.0**		

WR0	**Warramunga Arr**	**48.00**	**125**	P	**P**	**15 54 56.2**	**-1.5**
WR0				IAmb	IAmb	15 55 14.9	
	comp=Z,18nm,0.8s						
WR0				PcP	**PcP**	**15 56 25.4**	**-0.3**
MDJ	**Mudanjiang**	**48.06**	**34**	P	**P**	**15 54 59.0**	**+1.3**
MDJ				pP	pP	15 55 01.7	+0.2
MDJ				sP	sP	15 55 03.5	+0.5
MDJ				S	**S**	**16 01 56.7**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,71nm,3.5s						
MDJ				LR	LR		
	comp=Z,920nm,15.4s						
MDJ				LR	LR		
	comp=Z,1μm,15.1s						
MDJ				LR	LR		
	comp=Z,1μm,17.5s						
JGF	**Kuroka**	**48.28**	**48**	P	**P**	**15 55 00.3**	**+0.7**
USA0B	**Ussuriysk Arra**	**49.15**	**35**⇓	*eP*	**P**	**15 55 07.9**	**+1.8**
USRK	**Ussuriysk Ar.**	**49.15**	**35**	P	**P**	**15 55 04.5**	**-1.7**
	comp=Z,2.3nm,0.8s,baz=255,slow=4.3,SNR=3.3						
USRK	**Ussuriysk Ar.**	**49.15**	**35**	P	**P**	**15 55 06.0**	**-0.1**
USRK	**Ussuriysk Ar.**	**49.15**	**35**	P	**P**	**15 55 06.0**	**-0.1**
MAJO	**Matsushiro**	**49.30**	**47**	P	**P**	**15 55 08.1**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s						
MAJO	**Matsushiro**	**49.30**	**47**	P	**P**	**15 55 08.1**	**+0.6**
MAT	**Matsushiro**	**49.30**	**47**	P	**P**	**15 55 09.2**	**+1.7**
MJAR	**Matsushiro Arr**	**49.30**	**47**	P	**P**	**15 55 08.8**	**+1.3**
	comp=Z,5.8nm,0.7s,baz=243,slow=8.7,SNR=9.6						
MJAR				PcP	**PcP**	**15 56 30.5**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=240,slow=2.7,SNR=2.6						
MJAR	**Matsushiro Arr**	**49.30**	**47**	P	**P**	**15 55 08.6**	**+1.0**
AS31	**Alice Springs**	**49.46**	**130**	P	**P**	**15 55 07.4**	**-1.5**
AS31				PcP	**PcP**	**15 56 30.6**	**-0.5**
ASAR	**Alice Springs**	**49.46**	**130**	P	**P**	**15 55 07.8**	**-1.2**
	comp=Z,11nm,0.9s,baz=302,slow=7.9,SNR=108						
ASAR				PcP	**PcP**	**15 56 30.9**	**-0.1**
	comp=Z,8.9nm,0.6s,baz=313,slow=3.7,SNR=18						
ASAR				LR	LR	16 18 11.2	
	comp=Z,636nm,20.4s,baz=298,slow=39						
ASAR	**Alice Springs**	**49.46**	**130**	P	**P**	**15 55 07.6**	**-1.3**
ASAR				PcP	**PcP**	**15 56 30.7**	**-0.4**
DAMY	**Dhamar**	**49.48**	**283**	P	**P**	**15 55 08.8**	**-0.7**
DAMY				IAmb	IAmb	15 55 19.6	
	comp=Z,59nm,1.3s						
BRVK	**Borovoye**	**49.54**	**341**	*de*P	**P**	**15 55 08.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,15nm,0.8s						
BRVK	**Borovoye**	**49.54**	**341**	P	**P**	**15 55 07.7**	**-1.3**
BRVK				IAmb	IAmb	15 55 15.0	
	comp=Z,30nm,0.8s						
BRVK				PcP	**PcP**	**15 56 30.9**	**+0.3**
FORT	**Forrest**	**49.86**	**141**	P	**P**	**15 55 12.4**	**+0.7**
AB06	**Akbulak array**	**50.72**	**331**	P	**P**	**15 55 17.4**	**-0.6**
AB31	**Akbulak array**	**50.73**	**331**	*i* P	**P**	**15 55 17.3**	**-0.7**
ABKAR	**Akbulak array**	**50.73**	**331**	P	**P**	**15 55 17.5**	**-0.5**
ABKAR	**Akbulak array**	**50.73**	**331**	P	**P**	**15 55 17.4**	**-0.7**
ABKAR				PcP	**PcP**	**15 56 34.9**	**-0.2**
ATD	**Arta Tunnel**	**50.92**	**279**	LR	LR	16 13 43.6	
	comp=Z,309nm,21.8s,baz=92,slow=32						
JMM	**Marumori**	**51.73**	**47**	P	**P**	**15 55 26.2**	**+0.4**
JMM				IAmb	IAmb	15 55 34.4	
	comp=Z,71nm,1.3s						
KLR	**Kul'dur**	**52.16**	**30**⇑	*eP*	**P**	**15 55 28.6**	**-0.2**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.8s						
AKTO	**Aktyubinsk**	**52.44**	**331**	LR	LR	16 20 07.8	
	comp=Z,200nm,18.8s,baz=142,slow=39						
ZEA	**Zeya**	**53.27**	**24**	*eP*	**P**	**15 55 38.0**	**+1.0**
ZEA				*eS*	**S**	**16 03 04.6**	**-3.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEA				smax	smax		
	comp=E,100nm,4.9s						
ZEA				MLR	MLR		
	comp=E,400nm,14.0s						
ZEA				MLR	MLR		
	comp=N,600nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,15.0s						
MAK	**Makhachkala**	**54.19**	**319**	*eP*	P	15 55 37.3	-6.6
MAK				*e*		15 57 40.1	
MAK				*eS*	S	16 03 10.3	-10
MAK				*eSS*	**SKiKP**	**16 06 54.7**	**-0.9**
MAK				*eSSS*	SSS	16 08 54.2	
MAK				pmax	pmax		
	comp=Z,86nm,0.9s						
GNI	**Garni**	**54.90**	**314**	*d iP*	**P**	**15 55 48.7**	**-0.6**
GNI				pmax	pmax		
	comp=Z,15nm,1.3s						
PMG	**Port Moresby**	**55.20**	**107**	P	**P**	**15 55 51.8**	**+0.2**
	comp=Z,18nm,0.7s,baz=314,slow=5.5,SNR=8.6						
PMG	**Port Moresby**	**55.20**	**107**	*c iP*	**P**	**15 55 51.6**	**0.0**
PMG				pmax	pmax		
	comp=Z,14nm,0.7s						
PMG	**Port Moresby**	**55.20**	**107**	P	**P**	**15 55 51.3**	**-0.3**
PMG				IAmb	IAmb	15 55 53.0	
	comp=Z,18nm,0.7s						
GEVA	**Gevas**	**55.45**	**312**	P	**P**	**15 55 52.2**	**-1.2**
SVE	**Sverdlovsk**	**55.90**	**338**	*de*P	**P**	**15 55 55.9**	**0.0**
SVE				pmax	pmax		
	comp=Z,191nm,1.4s						
SVE				MLR	MLR		
	comp=Z,733nm,22.0s						
AKH	**Akhalkalaki**	**56.26**	**315**	P	**P**	**15 55 58.5**	**-0.6**
AKH				pmax	pmax		
	comp=Z,11nm,1.1s						
AKH	**Akhalkalaki**	**56.26**	**315**	P	**P**	**15 55 58.5**	**-0.6**
BBOO	**Buckleboo**	**56.34**	**138**	P	**P**	**15 55 58.8**	**-0.7**
ARU	**Arti**	**56.38**	**337**	LR	LR	16 22 05.4	
	comp=Z,715nm,21.7s,baz=142,slow=38						
ARU	**Arti**	**56.38**	**337**	*c iP*	**P**	**15 55 59.1**	**-0.3**
ARU						15 56 56.2	
ARU						15 58 05.1	
ARU				S	**S**	**16 03 52.6**	**+3.1**
ARU				SS	**SS**	**16 07 35.4**	**-1.2**
ARU				pmax	pmax		
	comp=Z,25nm,0.9s						
ARU				MLR	MLR		
	comp=Z,688nm,20.0s						
ARU	**Arti**	**56.38**	**337**	P	**P**	**15 55 58.1**	**-1.4**
ZEI	**Tsey**	**56.52**	**317**	*eP*	**P**	**15 55 59.4**	**-1.5**
ZEI				pmax	pmax		
	comp=Z,11nm,0.7s						
MARD	**Mardin**	**56.84**	**310**	P	**P**	**15 56 01.4**	**-1.8**
MARD				IAmb	IAmb	15 56 08.7	
	comp=Z,14nm,0.7s						
YSS	**Yuzh-Sakhalins**	**57.00**	**38**⇓	*eP*	**P**	**15 56 05.0**	**+1.0**
YSS				*eS*	**S**	**16 03 54.6**	**-3.4**
YSS				MLR	MLR		
	comp=Z,1μm,12.0s						
KBZ	**Khabaz**	**57.56**	**318**	P	**P**	**15 56 07.0**	**-1.0**
	comp=Z,5.1nm,0.9s,baz=56,slow=24,SNR=11						
KBZ				LR	LR	16 24 07.0	
	comp=Z,144nm,19.9s,baz=152,slow=40						
KBZ	**Khabaz**	**57.56**	**318**	*de*P	**P**	**15 56 07.0**	**-1.0**
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMBO	**Kilima Mbogo**	**57.59**	**264**	LR	LR	16 18 45.4	
	comp=Z,538nm,18.0s,baz=92,slow=34						
KMBO	**Kilima Mbogo**	**57.59**	**264**	*i* P	**P**	**15 56 12.3**	**+3.3**
KMBO				pmax	pmax		
	comp=Z,17nm,0.8s						
KMBO	**Kilima Mbogo**	**57.59**	**264**	P	**P**	**15 56 10.0**	**+0.9**
KMBO				IAmb	IAmb	15 56 11.9	
	comp=Z,19nm,0.8s						
KIV	**Kislovodsk**	**57.79**	**318**	*eP*	**P**	**15 56 08.4**	**-1.4**
KIV				pmax	pmax		
	comp=Z,55nm,1.0s						
KIV				MLR	MLR		
	comp=Z,472nm,17.0s						
KIV	**Kislovodsk**	**57.79**	**318**	P	**P**	**15 56 08.8**	**-1.0**
KIV				IAmb	IAmb	15 56 16.2	
	comp=Z,15nm,0.7s						
CTA	**Charters Tower**	**57.90**	**119**	P	**P**	**15 56 09.6**	**-1.3**
	comp=Z,3.0nm,0.5s,baz=296,slow=6.2,SNR=4.5						
GAZ	**Gaziantep**	**59.54**	**309**	P	**P**	**15 56 20.9**	**-1.2**
STKA	**Stephens Creek**	**59.64**	**134**	P	**P**	**15 56 22.2**	**-0.5**
STKA				LR	LR	16 26 59.8	
	comp=Z,5.4nm,0.6s,baz=314,slow=8.4,SNR=20						
	comp=Z,398nm,18.2s,baz=295,slow=41						
STKA	**Stephens Creek**	**59.64**	**134**	P	**P**	**15 56 22.0**	**-0.7**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
STKA	**Stephens Creek**	**59.64**	**134**	P	**P**	**15 56 22.0**	**-0.7**
SOC	**Sochi**	**59.65**	**317**	*eP*	**P**	**15 56 20.1**	**-2.5**
SOC				*e*		15 58 30.8	
SOC				*eS*	**S**	**16 04 32.1**	**-0.7**
SOC				*eSS*	**SS**	**16 08 26.4**	**-2.1**
SOC				pmax	pmax		
	comp=Z,15nm,0.6s						
SOC				MLR	MLR		
	comp=Z,242nm,19.0s						
YAK	**Yakutsk**	**60.35**	**18**	P	**P**	**15 56 26.9**	**-0.1**
	comp=Z,28nm,0.7s,baz=330,slow=0.4,SNR=8.3						
YAK	**Yakutsk**	**60.35**	**18**⇑	*i P*	**P**	**15 56 26.7**	**-0.3**
YAK				*eS*	**S**	**16 04 33.0**	**-8.1**
YAK				pmax	pmax		
	comp=Z,40nm,0.7s						
YAK	**Yakutsk**	**60.35**	**18**	P	**P**	**15 56 26.8**	**-0.3**
VRH	**Novokhopyorsk**	**61.42**	**325**	*eP*	**P**	**15 56 32.5**	**-2.0**
VRH				*e**SP	**sP**	**15 56 39.2**	**-0.6**
VRH				pmax	pmax		
	comp=Z,20nm,0.6s						
KIRV	**Kirov**	**61.51**	**335**	*c iP*	**P**	**15 56 34.0**	**-0.9**
ANN	**Anapa**	**61.61**	**317**	*eP*	P	15 56 44.1	+8.2
ANN				pmax	pmax		
	comp=Z,74nm,1.1s						
NRIK	**Noril'sk**	**62.00**	**357**	P	**P**	**15 56 37.7**	**-0.4**
	comp=Z,7.9nm,0.7s,baz=159,slow=6.6,SNR=15						
NRIK				LR	LR	16 28 18.1	
	comp=Z,388nm,19.3s,baz=197,slow=41						
NRIK	**Noril'sk**	**62.00**	**357**	*d iP*	**P**	**15 56 37.8**	**-0.3**
NRIK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VSR	**Storozhevoye**	**62.88**	**325**	*eP*	**P**	**15 56 41.5**	**-2.8**
VSR				*e**SP	**pP**	**15 56 48.2**	**0.0**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BR131	**Keskin Array S**	**62.88**	**311**	P	**P**	**15 56 42.6**	**-2.2**
BR131				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BR131	**Keskin Array S**	**62.88**	**311**	P	**P**	**15 56 42.6**	**-2.2**
BRTR	**Keskin Array B**	**62.88**	**311**	P	**P**	**15 56 42.5**	**-2.3**
	comp=Z,5.9nm,0.7s,baz=127,slow=7.3,SNR=22						
BRTR				LR	LR	16 26 47.5	
	comp=Z,143nm,21.8s,baz=117,slow=39						
BRTR	**Keskin Array B**	**62.88**	**311**	P	**P**	**15 56 42.0**	**-2.8**
ILGA	**Ilgaz**	**63.15**	**312**	P	**P**	**15 56 45.4**	**-1.2**
ILGA				IAmb	IAmb	15 56 55.0	
	comp=Z,54nm,1.7s						
BZK	**Bozkurt**	**63.17**	**313**	⇑P	**P**	**15 56 44.5**	**-1.9**
LPSR	**Galich'ya Gora**	**63.58**	**326**	*eP*	**P**	**15 56 47.3**	**-1.6**
LPSR				*e**SP	**sP**	**15 56 53.9**	**-0.3**
LPSR				pmax	pmax		
	comp=Z,20nm,0.8s						
MBAR	**Mbarara**	**63.94**	**266**	P	**P**	**15 56 52.7**	**+0.4**
MBAR				pmax	pmax		
	comp=Z,15nm,1.2s						
MBAR	**Mbarara**	**63.94**	**266**	P	**P**	**15 56 52.7**	**+0.4**
AKAS	**Kas**	**65.32**	**306**	IAmb	IAmb	15 57 12.1	
	comp=Z,22nm,1.4s						
TOO	**Toolangi**	**65.39**	**137**	P	**P**	**15 57 01.7**	**+0.6**
TOO				pmax	pmax		
	comp=Z,20nm,1.0s						
TOO	**Toolangi**	**65.39**	**137**	P	**P**	**15 57 01.7**	**+0.6**
TOO				IAmb	IAmb	15 57 03.4	
	comp=Z,20nm,0.9s						
MOS	**Moscow**	**65.57**	**329**	*eP*	**P**	**15 57 00.4**	**-1.5**
MOS				pmax	pmax		
	comp=Z,91nm,1.3s						
OBN	**Obninsk**	**65.87**	**328**	*de*P	**P**	**15 57 02.9**	**-0.9**
OBN				*i*		15 57 07.9	
OBN				*i*		15 57 30.7	
OBN				*i*		15 59 30.1	
OBN				*i* S	S	16 05 40.4	-10
OBN				*i* SS	**SS**	**16 10 09.8**	**+4.6**
OBN				pmax	pmax		
	comp=Z,31nm,0.4s						
OBN	**Obninsk**	**65.87**	**328**	P	**P**	**15 57 03.2**	**-0.6**
CAN	**Canberra**	**66.71**	**133**	P	**P**	**15 57 09.4**	**-0.2**
CAN				pmax	pmax		
	comp=Z,19nm,0.6s						
CAN	**Canberra**	**66.71**	**133**	P	**P**	**15 57 09.4**	**-0.2**
CAN				IAmb	IAmb	15 57 10.7	
	comp=Z,19nm,0.6s						
KLMR	**Klimovskoe**	**66.95**	**334**	*eP*	**P**	**15 57 08.5**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,35nm,0.8s						
KLMR	**Klimovskoe**	**66.95**	**334**	*eP*	**P**	**15 57 08.6**	**-2.1**
KLMR				*eP*	**P**	**15 57 08.6**	**-2.1**
KLMR				*eP*	**P**	**15 57 08.6**	**-2.1**
KLMR				AMP		15 57 17.4	
	comp=Z,35nm,0.8s						
KLMR				LQ	LQ	16 19 48.9	
KLMR				LQ	LQ	16 19 48.9	
MA2	**Magadan**	**67.06**	**27**	P	**P**	**15 57 11.2**	**-0.2**
	baz=194,slow=15,SNR=2.6						
TLCR		**67.60**	**316**	⇓P	**P**	**15 57 13.3**	**-1.7**
TIXI	**Tiksi**	**67.63**	**11**	*c iP*	**P**	**15 57 13.8**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,152nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,2μm,17.0s						
TIXI	**Tiksi**	**67.63**	**11**	P	**P**	**15 57 13.5**	**-1.2**
TIRR	**Tirgusor**	**67.72**	**315**	⇑P	**P**	**15 57 14.0**	**-1.9**
TIRR	**Tirgusor**	**67.72**	**315**	IAmb	IAmb	15 57 22.0	
	comp=Z,21nm,0.7s						
TPGR	**Topolog**	**67.80**	**315**	⇑P	**P**	**15 57 14.5**	**-1.9**
CFR	**Carcaliu**	**68.06**	**316**	⇓P	**P**	**15 57 15.9**	**-2.1**
HARR	**Harsova**	**68.11**	**315**	⇓P	**P**	**15 57 16.3**	**-2.0**
PETK	**Petropavlovsk-**	**68.24**	**35**	LR	LR	16 28 19.4	
	comp=Z,271nm,21.2s,baz=237,slow=37						
SORM	**Soroca**	**68.56**	**319**	⇑P	**P**	**15 57 19.0**	**-2.1**
AKASG	**Malin Array Be**	**68.64**	**322**	P	**P**	**15 57 19.1**	**-2.4**
	comp=Z,2.7nm,0.8s,baz=89,slow=5.0,SNR=15						
AKASG				LR	LR	16 32 06.3	
	comp=Z,240nm,18.9s,baz=95,slow=40						
AKASG	**Malin Array Be**	**68.64**	**322**	*i* P	**P**	**15 57 19.1**	**-2.4**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKASG	**Malin Array Be**	**68.64**	**322**	P	**P**	**15 57 18.8**	**-2.7**
AKBB	**Malin Array Si**	**68.64**	**322**	*de*P	**P**	**15 57 19.3**	**-2.2**
IDI	**Anoyia**	**69.00**	**305**	⇓P	**P**	**15 57 23.7**	**-0.4**
IDI	**Anoyia**	**69.00**	**305**	IAmb	IAmb	15 57 30.4	
	comp=Z,25nm,0.6s						
BISRR	**Bisoca**	**69.12**	**316**	⇑P	**P**	**15 57 23.0**	**-1.7**
TMCR	**Tamitsa**	**69.12**	**337**	*eP*	**P**	**15 57 21.6**	**-2.6**
VRI	**Vrincioaia**	**69.17**	**316**	⇑P	**P**	**15 57 23.6**	**-1.4**
PLOR	**Plostina**	**69.22**	**316**	⇑P	**P**	**15 57 24.3**	**-1.0**
SEY	**Seymchan**	**69.24**	**25**	P	**P**	**15 57 24.9**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=147,slow=0.8,SNR=9.6						
SEY	**Seymchan**	**69.24**	**25**⇑	*eP*	**P**	**15 57 24.5**	**-0.5**
LSZ	**Lusaka**	**69.32**	**251**	P	**P**	**15 57 26.0**	**-0.5**
LSZ	**Lusaka**	**69.32**	**251**	P	**P**	**15 57 26.0**	**-0.5**
TESR	**Tescani**	**69.35**	**317**	⇑P	**P**	**15 57 24.5**	**-1.6**
SECR		**69.47**	**315**	⇑P	**P**	**15 57 24.9**	**-1.9**
MLR	**Muntele Rosu**	**69.64**	**316**	⇓P	**P**	**15 57 26.6**	**-1.4**
MLR	**Muntele Rosu**	**69.64**	**316**	IAmb	IAmb	15 57 37.3	
	comp=Z,31nm,1.1s						
BIZ	**Bicaz**	**69.80**	**317**	⇑P	**P**	**15 57 27.7**	**-1.1**
DOPR	**Dopca**	**70.11**	**316**	⇓P	**P**	**15 57 29.2**	**-1.5**
VOIR		**70.25**	**316**	⇓P	**P**	**15 57 30.3**	**-1.4**
BURAR	**Bucovina Array**	**70.52**	**318**	⇓P	**P**	**15 57 31.9**	**-1.5**
BURAR	**Bucovina Array**	**70.52**	**318**	P	**P**	**15 57 31.8**	**-1.5**
PUL	**Pulkovo**	**70.71**	**331**	*de*P	**P**	**15 57 33.7**	**-0.3**
PUL				pmax	pmax		
	comp=Z,61nm,0.4s						
NACGM	**Naroch**	**71.14**	**326**	*e*	**P**	**15 57 34.0**	**-2.8**
IDID	**Didziasalis**	**71.26**	**326**	*eP*	**P**	**15 57 37.0**	**-0.5**
LIT	**Litokhoron**	**71.39**	**310**	IAmb	IAmb	15 57 43.6	
	comp=Z,21nm,0.7s						
IIGN	**Ignalina**	**71.56**	**326**	*eP*	**P**	**15 57 38.2**	**-1.1**
IZAR	**Zarasai**	**71.64**	**326**	*eP*	**P**	**15 57 39.5**	**-0.4**
ISAL	**Salakas**	**71.67**	**326**	*eP*	**P**	**15 57 38.9**	**-1.0**
HERR	**Herculane**	**72.01**	**315**	⇑P	**P**	**15 57 41.1**	**-1.1**
VSU	**Vasula**	**72.08**	**329**	*eP*	**P**	**15 57 41.3**	**-1.0**
APA	**Apatity**	**72.34**	**339**	⇓*iP*	**P**	**15 57 48.0**	**+4.2**
APA				pmax	pmax		
	comp=Z,18nm,0.6s						
APA				MLR	MLR		
	comp=Z,1μm,16.0s						
KWP	**Kalwaria Pacla**	**72.51**	**320**	*eP*	**P**	**15 57 44.3**	**-0.8**
KWP	**Kalwaria Pacla**	**72.51**	**320**	P	**P**	**15 57 43.9**	**-1.3**
KWP				pmax	pmax		
	comp=Z,22nm,1.0s						
KWP	**Kalwaria Pacla**	**72.51**	**320**	P	**P**	**15 57 43.9**	**-1.3**
KWP				IAmb	IAmb	15 57 55.3	
	comp=Z,22nm,1.0s						
UZH	**Uzhgorod**	**72.62**	**319**	*d iP*	P	15 57 52.7	+6.9
UZH				*e*		15 57 59.6	
KOLS	**Kolonicke sedl**	**72.68**	**319**	*eP*	**P**	**15 57 45.6**	**-0.7**
KOLS				*e*		15 57 51.7	
KOLS	**Kolonicke sedl**	**72.68**	**319**	*eP*	**P**	**15 57 45.5**	**-0.7**
KOLS				*e*		15 57 51.7	
PABE	**Paberze**	**72.85**	**326**	*eP*	**P**	**15 57 46.3**	**-0.7**
SUW	**Suwalki**	**72.99**	**324**	*eP*	**P**	**15 57 46.7**	**-1.2**
FIA1	**FINESS Array S**	**73.20**	**332**	IAmb	IAmb	15 57 48.9	
	comp=Z,23nm,0.7s						
CRVS	**Cervenica-Dubn**	**73.21**	**319**	*eP*	**P**	**15 57 49.7**	**+0.4**
CRVS				*e*		15 57 56.5	
CRVS				pmax	pmax		
	comp=Z,14nm,1.1s						
CRVS	**Cervenica-Dubn**	**73.21**	**319**	*eP*	**P**	**15 57 49.7**	**+0.4**
CRVS				*e*		15 57 56.5	
FINES	**FINESS Array B**	**73.21**	**332**	P	**P**	**15 57 48.2**	**-0.8**
	comp=Z,20nm,0.7s,baz=97,slow=6.2,SNR=45						
FINES				LR	LR	16 34 18.2	
	comp=Z,295nm,19.4s,baz=115,slow=39						
FINES	**FINESS Array B**	**73.21**	**332**	P	**P**	**15 57 47.6**	**-1.4**
PBUR	**Paburge**	**74.08**	**326**	*eP*	**P**	**15 57 53.8**	**-0.5**
PSZ	**Piszkesteto**	**74.12**	**318**	⇑P	**P**	**15 57 53.9**	**-0.9**
PSZ	**Piszkesteto**	**74.12**	**318**	IAmb	IAmb	15 58 07.6	
	comp=Z,46nm,1.8s						
LBTB	**Lobatse**	**74.22**	**241**	P	**P**	**15 57 56.5**	**+0.7**
LBTB				pmax	pmax		
	comp=Z,13nm,0.8s						
LBTB	**Lobatse**	**74.22**	**241**	P	**P**	**15 57 56.5**	**+0.7**
OJC	**Ojcow**	**74.45**	**320**	*eP*	**P**	**15 57 55.4**	**-1.2**
OJC				*ep*P	**pP**	**15 57 59.6**	**-0.9**
OJC	**Ojcow**	**74.45**	**320**	IAmb	IAmb	15 57 56.6	
	comp=Z,17nm,0.9s						
VYHS	**Vyhne**	**74.88**	**318**	*eP*	**P**	**15 57 58.2**	**-1.0**
VYHS				*e*		15 58 03.4	
VYHS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VYHS	**Vyhne**	**74.88**	**318**	*eP*	**P**	**15 57 58.2**	**-1.0**
VYHS				*e*		15 58 03.4	
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**15 58 04.0**	**+0.6**
	comp=Z,12nm,0.6s,baz=84,slow=5.1,SNR=34						
BOSA				LR	LR	16 26 59.1	
	comp=Z,220nm,19.8s,baz=46,slow=32						
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**15 58 03.5**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,12nm,0.7s						
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**15 58 03.5**	**+0.1**
JAVC	**Velka Javorina**	**75.69**	**318**	*eP*	**P**	**15 58 03.6**	**-0.2**
ARCES	**ARCESS Array B**	**75.76**	**340**	P	**P**	**15 58 03.6**	**-0.1**
	comp=Z,8.0nm,0.9s,baz=79,slow=5.5,SNR=8.9						
ARCES				LR	LR	16 34 02.8	
	comp=Z,654nm,21.0s,baz=110,slow=38						
MORC	**Moravsky Berou**	**75.85**	**319**	⇓P	**P**	**15 58 03.8**	**-1.0**
MORC	**Moravsky Berou**	**75.85**	**319**	*eP*	**P**	**15 58 03.9**	**-0.8**
MORC	**Moravsky Berou**	**75.85**	**319**	IAmb	IAmb	15 58 14.3	
	comp=Z,64nm,1.8s						
MODS	**Modra-Piesok**	**75.91**	**318**	*eP*	**P**	**15 58 03.8**	**-1.2**
MODS				pmax	pmax		
	comp=Z,52nm,2.3s						
MODS	**Modra-Piesok**	**75.91**	**318**	*eP*	**P**	**15 58 03.8**	**-1.2**
KRLC	**Kraliky**	**76.37**	**320**	*eP*	**P**	**15 58 06.9**	**-0.8**
KRLC				*e*		15 58 13.2	
KRLC	**Kraliky**	**76.37**	**320**	*eP*	**P**	**15 58 06.9**	**-0.8**
KRLC				*ep*P	**sP**	**15 58 13.2**	**+0.2**
KTK1	**Kautokeino**	**76.39**	**339**	*eP*	**P**	**15 58 07.2**	**-0.2**
BILL	**Bilibino**	**76.42**	**22**	*i* P	**P**	**15 58 07.5**	**0.0**
BILL				*i*		15 58 22.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BILL				MLR	MLR		
	comp=Z,959nm,17.0s						
BILL	**Bilibino**	**76.42**	**22**	P	**P**	**15 58 07.4**	**-0.2**
BILL				IAmb	IAmb	15 58 14.1	
	comp=Z,28nm,1.5s						
VRAC	**Vranov**	**76.43**	**319**	*eP*	**P**	**15 58 07.1**	**-0.9**
KOGS	**Kog**	**76.46**	**316**	*i* P	**P**	**15 58 07.6**	**-0.6**
KRUC	**Moravsky**	**76.54**	**319**	*eP*	**P**	**15 58 07.6**	**-1.0**
HAMF	**Hammerfest**	**76.67**	**341**	*eP*	**P**	**15 58 07.3**	**-1.6**
DPC	**Dobruska-Polom**	**76.69**	**320**	*eP*	**P**	**15 58 09.1**	**-0.4**
DPC				*e*		15 58 15.3	
DPC	**Dobruska-Polom**	**76.69**	**320**	*eP*	**P**	**15 58 09.1**	**-0.4**
DPC				*ep*P	**sP**	**15 58 15.3**	**+0.5**
KSP	**Ksiaz**	**76.74**	**320**	*eP*	**P**	**15 58 09.0**	**-0.7**
KSP				*ep*P	**pP**	**15 58 13.0**	**-0.6**
OSTC	**Ostas**	**76.77**	**320**	*eP*	**P**	**15 58 09.2**	**-0.7**
OSTC				*ex*	x	15 58 15.6	
CONA	**Conrad Observa**	**76.82**	**317**	*eP*	**P**	**15 58 09.8**	**-0.6**
	comp=Z,2.5nm,0.7s						
CHVC	**Chvalec**	**76.88**	**320**	*eP*	**P**	**15 58 09.8**	**-0.7**
CHVC				*ex*	x	15 58 13.6	
BOJS	**Bojanci**	**77.11**	**315**	*eP*	**P**	**15 58 10.9**	**-1.0**
TREC	**Trest**	**77.15**	**319**	*eP*	**P**	**15 58 11.1**	**-1.0**
T

CLL					eS		S	16 08 23.0	+3.9		
N2ST	Straumen	78.86	337		eP		P	15 58 19.1	-2.0		
FAUS	Fauske	78.98	337		eP		P	15 58 21.0	-0.8		
STEI	Steigen	79.07	338		eP		P	15 58 21.4	-0.9		
CIMO	Cimolais	79.09	316	IAmb	IAmb	15 58 32.0					
	comp=Z,35nm,1.1s										
MOR8	Moi Rana	79.17	336		eP		P	15 58 20.5	-2.5		
GUNZ	Gunzen	79.24	320		eP		P	15 58 22.9	-0.7		
	comp=Z,22nm,1.5s,baz=91,slow=5.5										
ROTZ	Rotzenmuhle	79.31	319		eP		P	15 58 23.6	-0.4		
	comp=Z,8.8nm,0.9s,baz=91,slow=5.5										
PLN	Plauen	79.35	320		eP		P	15 58 23.7	-0.5		
	comp=Z,12nm,1.4s,baz=91,slow=5.5										
MANZ	Manzenberg	79.38	319		eP		P	15 58 24.2	-0.2		
	baz=91,slow=5.5										
N2VI	Vinje	79.50	338		eP		P	15 58 23.8	-0.9		
NBB30	Finnes	79.54	337		eP		P	15 58 23.1	-1.7		
LATE	Laterza	79.54	312		P		P	15 58 23.6	-1.8		
NEUB	Neuenburg	79.61	321		eP		P	15 58 25.3	-0.2		
	comp=Z,11nm,0.5s,baz=91,slow=5.5										
WTTA	Wattenberg	79.66	317		eP		P	15 58 24.6	-1.6		
	comp=Z,5.2nm,0.4s										
WATA	Walderalm	79.70	317		eP		P	15 58 25.2	-1.2		
	comp=Z,6.1nm,0.6s										
LOF	Lofoten	79.73	338		eP		P	15 58 24.9	-1.0		
GRF	Grafenberg Arr	79.94	319		eP		P	15 58 27.5	0.0		
	comp=Z,28nm,1.5s,baz=91,slow=5.5										
GRF					epP		sP	15 58 33.4	+0.5		
SQTA	Sankt Quirin	79.95	317		eP		P	15 58 26.2	-1.5		
	comp=Z,7.4nm,0.6s										
MOTA	Moosalm	80.02	317		eP		P	15 58 26.5	-1.6		
	comp=Z,6.2nm,0.8s										
NC602	NORSAR Array S	80.05	330		eP		P	15 58 27.0	-0.8		
NSS	Namsos	80.06	334		eP		P	15 58 27.6	-0.2		
TSUM	Tsumeb	80.07	249		P		P	15 58 29.8	+0.9		
NC303	NORSAR Array S	80.16	331		P		P	15 58 27.5	-0.9		
NB2	NORSAR Subarra	80.22	331		P		P	15 58 27.1	-1.7		
	comp=Z,5.1nm,0.6s,baz=97,slow=5.1										
NB2	NORSAR Subarra	80.22	331		P		P	15 58 27.1	-1.7		
	baz=97,slow=5.1										
NOA	NORSAR Array B	80.22	331		P		P	15 58 27.5	-1.3		
	comp=Z,6.8nm,0.7s,baz=93,slow=5.5,SNR=31										
NOA					LR		LR	16 37 46.0			
	comp=Z,214nm,19.5s,baz=115,slow=38										
FETA	Feichten	80.28	316		eP		P	15 58 28.1	-1.4		
	comp=Z,3.9nm,0.7s										
SPA0	Spitsbergen Ar	80.32	348		eP		P	15 58 28.1	-0.8		
OSL	Oslo	80.43	330		eP		P	15 58 27.4	-2.4		
NC204	NORSAR Array S	80.45	331		eP		P	15 58 28.9	-1.2		
CLZ	Clausthal	80.49	321		eP		P	15 58 29.8	-0.7		
	comp=Z,36nm,1.5s,baz=91,slow=5.5										
BSEG	Bad Segeberg	80.54	323		eP		P	15 58 30.3	-0.2		
	comp=Z,38nm,1.3s,baz=91,slow=5.5										
UBR	Ueberruh	80.69	317		eP		P	15 58 30.3	-1.3		
	comp=Z,77nm,2.1s,baz=91,slow=5.5										
TUE	Stuetta	81.23	316		P		P	15 58 33.8	-0.9		
TUE					IAmb		IAmb	15 58 43.3			
	comp=Z,32nm,1.2s										
DOMB	Dombas	81.28	332		eP		P	15 58 33.1	-1.3		
SKAR	Skarslia	81.64	330		eP		P	15 58 36.2	-0.1		
KEST	Kesra	81.67	305		P		P	15 58 36.4	-0.7		
	comp=Z,6.7nm,0.7s,baz=354,slow=2.6,SNR=7.3										
KEST	Kesra	81.67	305		IAmb		IAmb	16 00 23.3			
	comp=Z,85nm,1.8s										
TNS	Taunus Mts	81.73	320		eP		P	15 58 36.5	-0.5		
	comp=Z,5.2nm,0.8s,baz=91,slow=5.5										
MOL	Molde	81.99	332		eP		P	15 58 37.7	-0.4		
IBBN	Ibbenburen	82.10	322		eP		P	15 58 38.9	0.0		
	comp=Z,17nm,0.8s,baz=91,slow=5.5										
AHRW	Bad Neuenahr-A	82.60	320		eP		P	15 58 41.9	+0.4		
	comp=Z,9.1nm,0.7s,baz=91,slow=5.5										
SENIN	Lac Senin/Sane	82.65	316		IAmb		IAmb	15 58 51.1			
	comp=Z,41nm,1.8s										
SYO	Syowa Base	85.04	197		eP		P	15 58 53.6	+0.1		
SYO	Syowa Base	85.04	197		ePcP		PcP	15 58 55.6	-1.1		
SYO	Syowa Base	85.04	197		epP		pP	15 59 02.8	+5.4		
NOR	Nord	85.72	352	*i*	P		P	15 58 55.7	-1.1		
NOR				*i*				15 59 02.4			
NOR					pmax		pmax				
	comp=Z,11nm,0.8s										
NOR	Nord	85.72	352	*i*	P		P	15 58 55.7	-1.1		
	comp=Z,11nm,0.8s										
NOR				*i*				15 59 02.4			
NOR	Nord	85.72	352	*i*	P		P	15 58 55.7	-1.1		
NOR					IAmb		IAmb	15 58 56.4			
	comp=Z,11nm,0.8s										
NOR				*i*				15 59 02.5			
DAG	Danmarks Havn	87.96	348	*i*	P		P	15 59 06.2	-1.6		
DAG				*i*				15 59 13.0			
DAG					pmax		pmax				
	comp=Z,3.0nm,0.7s										
DAG	Danmarks Havn	87.96	348	*i*	P		P	15 59 06.2	-1.6		
	comp=Z,3.2nm,0.7s										
DAG				*i*				15 59 13.0			
DAG	Danmarks Havn	87.96	348	*i*	P		P	15 59 06.2	-1.6		
DAG					IAmb		IAmb	15 59 07.0			
	comp=Z,3.2nm,0.7s										
DAG				*i*				15 59 13.0			
URZ	Urewera	88.89	129		P		P	15 59 11.8	-1.2		
	comp=Z,7.5nm,0.8s,baz=190,slow=11,SNR=1.9										
TOA0	Torodi Ar. Sit	90.91	283		IAmb		IAmb	15 59 33.1			
	comp=Z,17nm,1.5s										
TORD	Torodi Ar. Bea	90.91	283		P		P	15 59 22.7	-0.2		
	comp=Z,3.4nm,0.7s,baz=87,slow=4.6,SNR=18										
TORD	Torodi Ar. Bea	90.91	283		P		P	15 59 22.5	-0.4		
ESDC	Sonseca Array	91.67	310		LR		LR	16 44 08.1			
	comp=Z,120nm,20.6s,baz=45,slow=38										
TTA	Tatalina	92.19	26		P		P	15 59 28.2	+0.2		
TTA					pmax		pmax				
	comp=Z,30nm,1.5s										
TTA	Tatalina	92.19	26		P		P	15 59 28.1	+0.2		
TTA					IAmb		IAmb	15 59 35.6			
	comp=Z,30nm,1.5s										
TOLK	Toolik Lake Re	92.30	19		P		P	15 59 29.0	+0.7		
	baz=297										
TOLK	Toolik Lake Re	92.30	19		IAmb		IAmb	15 59 35.9			
	comp=Z,13nm,1.1s										
VNDA	Vanda	92.45	168		P		P	15 59 28.8	+0.2		
	comp=Z,1.5nm,0.7s,baz=288,slow=6.4,SNR=16										
VNDA					LR		LR	16 38 20.5			
	comp=Z,166nm,18.3s,baz=310,slow=34										
VNDA	Vanda	92.45	168		P		P	15 59 29.0	+0.3		
VNDA					pmax		pmax				
	comp=Z,13nm,1.9s										
VNDA	Vanda	92.45	168		P		P	15 59 29.0	+0.3		
COLD	Coldfoot	92.73	21		P		P	15 59 31.0	+0.8		
	baz=296										
COLD	Coldfoot	92.73	21		IAmb		IAmb	15 59 38.0			
	comp=Z,16nm,1.5s										
SVW2	Sparrevohn	93.04	27		IAmb		IAmb	15 59 39.9			
	comp=Z,21nm,1.5s										
MLY	Manley	93.50	23		P		P	15 59 35.3	+1.4		
	baz=296										
PPLA	Purkeypile	93.82	25		P		P	15 59 35.9	+0.4		
PPLA					IAmb		IAmb	15 59 53.8			
	comp=Z,17nm,1.1s										
TRF	Thorofare Moun	94.37	24		IAmb		IAmb	16 00 50.6			
	comp=Z,35nm,1.8s										
MDM	Murphy Dome	94.48	22		IAmb		IAmb	15 59 46.2			
	comp=Z,25nm,1.6s										
MCK	McKinley	94.78	24		P		P	15 59 40.1	+0.3		
	baz=297										
ILAR	Eielson Array	95.08	22		P		P	15 59 39.9	-1.2		
	comp=Z,1.1nm,0.7s,baz=294,slow=4.4,SNR=10										
ILAR					LR		LR	16 44 55.1			
	comp=Z,214nm,19.1s,baz=318,slow=37										
HDA	Harding Lake	95.23	22		P		P	15 59 40.6	-1.3		
	baz=299										
SCRK	Sand Creek	96.57	22		P		P	15 59 48.6	+0.5		
	baz=302										
MENT	Mentasta	97.22	23		IAmb		IAmb	15 59 58.4			
	comp=Z,6.8nm,0.8s										
INK	Inuvik	97.36	16		P		P	15 59 51.0	-0.3		
	comp=Z,6.8nm,1.2s,baz=275,slow=3.7,SNR=3.1										
INK	Inuvik	97.36	16		IAmb		IAmb	15 59 58.8			
	comp=Z,16nm,1.4s										
N25K	Chitina, Valde	97.57	24		P		Pdif	15 59 53.8	+1.2		
	baz=301										
EPYK	Eagle Plains	97.68	18		P		P	15 59 52.8	-0.2		
	baz=309										
RES	Resolute Bay	97.84	2		P		Pdif	15 59 53.7	+0.3		
	comp=Z,2.0nm,0.8s,baz=284,slow=4.0,SNR=4.2										
DBIC	Dimbokro	98.22	278		P		P	15 59 56.3	-0.1		
	comp=Z,1.2nm,0.6s,baz=98,slow=9.8,SNR=3.2										
DBIC					LR		LR	16 44 06.4			
	comp=Z,434nm,19.0s,baz=64,slow=35										

C36M	Paulatuk	98.95	13		P		P	15 59 58.3	-0.2		
	baz=321										
MSO	Missoula	120.41	22		P		PKPdf	16 05 09.5	-0.6		
	baz=327										
EGMT	Eagleton	120.83	19		P		PKPdf	16 05 10.5	-0.4		
	baz=332										
ULM	Lac du Bonnet	121.88	8		PKP		PKPdf	16 05 11.3	-1.4		
	comp=Z,9nm,0.4s,baz=189,slow=0.2,SNR=5.4										
O03E	Paynes Creek	121.99	32		P		PKPdf	16 05 12.7	-0.6		
	baz=316										
HLID	Hailey	122.94	25		P		PKPdf	16 05 15.1	-0.1		
	baz=325										
LSQQ	Lebel-sur-Quev	123.25	353		P		PKPdf	16 05 14.9	-0.5		
	baz=10										
EYMN	Ely	124.63	5		P		PKPdf	16 05 17.6	-0.5		
	baz=353										
E61A	Lac Etchemin	124.70	347		P		PKPdf	16 05 18.1	-0.2		
	baz=18										
D56A	ZEC Mazanza, M	124.91	351		P		PKPdf	16 05 17.6	-1.0		
	baz=13										
D55A	Sainte-Anne-du	125.05	352		P		PKPdf	16 05 18.1	-0.8		
	baz=12										
NVAR	Mina Array Bea	125.19	31		PKP		PKPdf	16 05 19.8	0.0		
	comp=Z,2.7nm,0.7s,baz=276,slow=1.9,SNR=5.2										
NVAR	Mina Array Bea	125.19	31		PKPdf		PKPdf	16 05 19.1	-0.6		
G64A	Maxfield	125.41	345		P		PKPdf	16 05 18.8	-0.8		
	baz=21										
E57A	Chemin Saint G	125.43	350		P		PKPdf	16 05 18.6	-1.1		
	baz=14										
E56A	St. Veronique	125.44	351		P		PKPdf	16 05 19.2	-0.5		
	baz=13										
BW06	Boulder Array	125.50	22		P		PKPdf	16 05 19.4	-0.8		
	baz=330										
PDAR	Pinedale Array	125.50	22		PKP		PKPdf	16 05 19.1	-1.1		
	comp=Z,1.1nm,0.4s,baz=66,slow=1.1,SNR=5.7										
PDAR	Pinedale Array	125.50	22		PKPdf		PKPdf	16 05 19.0	-1.2		
R11A	Troy Canyon, C	126.61	29		P		PKiKP	16 05 22.8	-0.1		
	baz=322										
MPMC	Manual Prospec	127.40	33		P		PKiKP	16 05 24.6	+0.1		
	baz=319										
ECSD	EROS Data Cent	128.12	10		P		PKPdf	16 05 25.1	+0.2		
	baz=346										
X16A	Lo Mia Camp, P	131.75	29		PKPdf		PKPdf	16 05 31.9	-0.5		
ANMO	Albuquerque	133.50	24		PKP		PKPdf	16 05 36.0	+0.4		
	comp=Z,2.2nm,0.6s,baz=43,slow=3.1,SNR=5.9										
ANMO	Albuquerque	133.50	24		PKPdf		PKPdf	16 05 35.4	-0.2		
RIB01	Linhares ES	134.56	250		eP		PKPdf	16 05 38.3	+0.6		
TKL	Tuckaleechee C	137.11	358		PKP		PKPdf	16 05 41.3	-0.8		
	comp=Z,3.7nm,0.9s,baz=138,slow=5.6,SNR=4.2										
TXAR	Lajitas Array	139.54	25		PKP		PKPdf	16 05 46.7	-0.1		
	comp=Z,1.0nm,0.7s,baz=169,slow=1.7,SNR=7.4										
TXAR	Lajitas Array	139.54	25				PKPdf	16 05 44.3	-2.5		
TIJ01	Guaruva-PR	140.79	239		eP		PKPdf	16 05 49.8	+0.7		
CPSB	Cacapava Do Su	142.15	229		eP		PKPdf	16 05 51.7	+0.4		
BDFB	Brasilia	142.29	254		PKhKP		PKPpre	16 05 47.8			
	comp=Z,3.5nm,0.6s,baz=145,slow=6.7,SNR=4.8										
PCMB	Pacaembu	143.97	243		eP		PKPdf	16 05 55.5	+0.7		
PLCA	Paso Flores	144.20	200		PKP		PKPbc	16 05 52.9	+0.1		
	comp=Z,8.7nm,0.8s,baz=186,slow=2.7,SNR=14										
PLCA	Paso Flores	144.20	200		PKPdf		PKPab	16 05 52.2	-0.3		
PLCA	Paso Flores	144.20	200		eP		PKPdf	16 05 55.5	+0.8		
PRPB	Parauapebas	144.41	270		eP		PKPbc	16 05 54.7	+0.5		
TRCB	Terra Rica	144.78	241		eP		PKPab	16 05 54.3	-0.8		
ITQB	Itaqui	144.88	227		eP		PKPab	16 05 54.9	-0.3		
MCPB	Macapa, AP	145.79	280		eP		PKPab	16 05 58.9	-0.1		
SNDB	Serra Nova Dou	145.86	260		eP		PKPdf	16 05 58.3	0.0		
ARAG	Araguaiana, MT	145.89	253		eP		PKPdf	16 05 58.0	-0.2		
LC01	Cunco	146.30	200				PKPdf	16 05 57.9	-0.4		
CPUP	Villa Florida	147.16	232		PKPbc		PKPbc	16 06 01.3	-0.9		
	comp=Z,11nm,0.7s,baz=102,slow=2.8,SNR=30										
CPUP	Villa Florida	147.16	232		PKPdf		PKPdf	16 06 00.6	+0.5		
CPUP	Villa Florida	147.16	232		eP		PKPdf	16 06 00.8	+0.7		
AQDB	Aquidauana	148.25	243		eP		PKPdf	16 06 02.5	+0.4		
MALB	Monte Alegre	148.25	278		eP		PKPdf	16 06 02.5	+0.2		
OBIP	Obispado Ponce	148.48	324				PKPbc	16 06 04.8	-1.2		
NPGB	Novo Progresso	149.96	269		eP		PKPdf	16 06 05.8	+0.8		
ITTB	Itaituba	150.10	274		eP		PKPdf	16 06 05.8	+0.6		
SDDR	Presa de Saban	150.19	332				PKPbc	16 06 09.7	-0.6		
SDDR					PKPab		PKPab	16 06 16.1	-0.1		
CLDB	Colider	150.34	261		eP		PKPdf	16 06 05.8	+0.2		
PTLB	Pontes e Lacer	152.85	251		eP		PKPdf	16 06 09.4	+0.1		
LVC	Limon Verde	157.92	225		eP		PKPdf	16 06 16.1	-0.3		
LPAZ	La Paz	160.75	241		PKP		PKPdf	16 06 18.3	-1.9		
	comp=Z,1.6nm,0.8s,baz=64,slow=0.4,SNR=8.1										
LPAZ	La Paz	160.75	241		PKPdf		PKPdf	16 06 18.1	-2.2		

NEIC ***06*** *15:46:54.0±2.6, 60.01N±0.03×153.31W±0.09, h155km±3km, Error ellipse: s-maj=6.7km s-min=4.3km az=112.0*

AEIC ***06*** *15:46:55±2.6, 60.01N±0.04×153.30W±0.06, h150km±3km, ML4.0, mb4.2/55(NEIC), Error ellipse: s-maj=6.3km s-min=2.3km az=144.0*

IDC ***06*** *15:46:55.4±3.2, 60.27N×153.38W, h145km±31km, mb3.9/12, mb1 4.0/16, mb1mx3.7/48, mbtmp4.3/16, MS3.6/3, Ms1 3.6/3, ms1mx2.8/46, Error ellipse: s-maj=26.7km s-min=10.6km az=30.0*

ANF ***06*** *15:46:56.1±0.7, 60.17N×153.17W, h142km±3km, ML4.4/13, Error ellipse: s-maj=10.0km s-min=4.3km az=83.0*

ISC 06 15:46:54.8±0.6, 60.07N±0.04×153.27W±0.04, h150km±5km, n324, σ1s27/354, mb4.3/36, 1D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILW	Iliamna West	0.07	101		Pn	15 47 15.0	-0.2
INE	Iliamna NE	0.11	96		Pn	15 47 15.1	-0.1
ILS	Iliamna Low So	0.15	138		Pn	15 47 14.7	-0.5
ILIM	Iliamna	0.16	87		Pn	15 47 14.8	-0.3
OPT	Oil Point	0.42	177		Pn	15 47 15.6	-0.3
OPT					Sn	15 47 30.7	-1.2
RDWB	Redoubt West	0.47	27		Pn	15 47 16.1	-0.1
RDWB					Sn	15 47 32.3	-0.3
RSO	Redoubt South	0.47	33		Pn	15 47 16.0	-0.3
NCT	North Crescent	0.52	19		Pn	15 47 16.4	0.0
NCT					Sn	15 47 32.8	-0.2
DFR	Drift River	0.60	29		Pn	15 47 16.7	-0.2
DFR					Sn	15 47 33.6	-0.1
RDT	Redoubt	0.66	40		Pn	15 47 17.2	0.0
AUL	Augustine Lava	0.70	187		Pn	15 47 16.8	-0.6
AUL					Sn	15 47 33.7	-0.7
AU22	Augustine Moun	0.71	183		Pn	15 47 16.7	-0.7
AU22					Sn	15 47 33.3	-1.2
AUW	Augustine West	0.71	188		Pn	15 47 17.0	-0.5
AUH	Augustine H	0.72	187		Pn	15 47 16.9	-0.6
AUCH	Augustine Cone	0.72	187		Pn	15 47 16.9	-0.7
HOM	Homer	0.92	116	P	Pn	15 47 18.8	-0.1
	baz=294,SNR=33						
HOM	Homer	0.92	116		Pn	15 47 19.0	+0.1
HOM					Sn	15 47 37.1	-0.2
CNPM	China Poot	1.17	117		Pn	15 47 20.6	-0.5
CNPM				Sn	Sn	15 47 39.5	-1.7
BRLK	Bradley Lake	1.24	103	Pn	Pn	15 47 21.6	-0.3
BRLK				Sn	Sn	15 47 41.5	-0.9
SPCR	Spurr Chakacha	1.25	24		Pn	15 47 22.1	+0.2
CAPN	Captain Cook N	1.26	56	P	Pn	15 47 23.6	+1.7
	baz=235						
CAPN	Captain Cook N	1.26	56		Pn	15 47 23.6	+1.7
SPBG	Spurr Blockage	1.27	20		Pn	15 47 22.7	+0.6
SPBG					Sn	15 47 44.1	+1.0
SPCN	Chakachatna No	1.27	24		Pn	15 47 22.6	+0.5
BRSE	Bradley Lake S	1.32	104		Pn	15 47 22.3	-0.3
SPCP	Crater Peak Br	1.32	24		Pn	15 47 23.1	+0.4
SPNN	North Nagishla	1.33	12		Pn	15 47 23.2	+0.4
SPCG	Spurr Capps Gl	1.37	26		Pn	15 47 23.5	+0.3
SVW2	Sparrevohn	1.53	313		Pn	15 47 24.3	-0.5
SVW2				Sn	Sn	15 47 46.5	-1.2
KAPH	Katmai Pasha	1.58	201		Pn	15 47 24.2	-1.1
SLKM	Skilak Lake	1.58	73		Pn	15 47 25.1	-0.1
SLKM					Sn	15 47 47.2	-1.4
STLK	Strandline Lak	1.60	26		Pn	15 47 25.6	+0.2
KAHG	Katmai Hook Gl	1.71	203		Pn	15 47 25.7	-1.1
KARR	Katmai Rainbow	1.74	206		Pn	15 47 26.0	-1.0
O22K	Cooper Landing	1.81	75	P	Pn	15 47 27.5	-0.3
	baz=257,SNR=72						
O22K				S	Sn	15 47 51.7	-1.3
	baz=257						
O22K	Cooper Landing	1.81	75		Pn	15 47 27.5	-0.3
O22K				Sn	Sn	15 47 51.4	-1.7
FIS	Fire Island	1.85	53		Pn	15 47 28.3	+0.2
SUA	Susitna One	1.87	41		Pn	15 47 28.5	0.0
SUA				Sn	Sn	15 47 54.5	+0.1

SEW	Seward	1.92	87				Pn	15 47 28.4	-0.5		
SEW	Seward	1.92	87				Sn	15 47 53.2	-1.9		
KAKN	Katmai Knife C	2.00	208				Pn	15 47 28.7	-1.4		
KCG	Knife Ck. Glac	2.01	209				Pn	15 47 28.9	-1.2		
RC01	Rabbit Creek A	2.02	58		P		Pn	15 47 29.6	-0.6		
	baz=240,SNR=12										
RC01					S		Sn	15 47 56.2	-1.2		
	baz=240										
RC01	Rabbit Creek A	2.02	58				Pn	15 47 29.6	-0.6		
KABU	Katmai Buttres	2.08	211				Pn	15 47 29.9	-1.1		
SKT	Skwentna	2.09	23				Pn	15 47 31.0	0.0		
SKT							Sn	15 47 59.1	+0.2		
ANCK	Angle Creek	2.20	212				Pn	15 47 31.3	-1.1		
CAHL	Cahill	2.28	208				Pn	15 47 32.3	-1.1		
KDAK	Kodiak Island	2.33	171				Pn	15 47 30.9	-2.8		
KDAK							Sn	15 47 59.6	-4.2		
KJL	Kejulik	2.35	211				Pn	15 47 33.0	-1.1		
PMR	Palmer	2.54	51				Pn	15 47 35.0	-1.3		
PMR							Sn	15 48 05.9	-2.4		
PWL	Port Wells	2.57	70				Pn	15 47 35.5	-1.3		
KNK	Knik Glacier	2.72	58				Pn	15 47 37.3	-1.3		
GHO	Glory Hole Cre	2.72	49				Pn	15 47 37.5	-1.3		
CUT	Chulitna	2.75	31		P		Pn	15 47 38.7	-0.3		
	baz=213,SNR=71										
CUT					S		Sn	15 48 12.5	-0.7		
	baz=213										
CUT	Chulitna	2.75	31				Pn	15 47 38.7	-0.3		
PLK2	Peulik 2	2.80	216				Pn	15 47 38.5	-1.2		
PLK3	Peulik 3	2.85	214				Pn	15 47 39.3	-1.1		
OHAK	Old Harbor	2.86	180				Pn	15 47 37.3	-3.0		
PLK1	Peulik 1	2.86	219				Pn	15 47 39.3	-1.1		
PPLA	Purkeypile	2.88	10		Pn		Pn	15 47 41.5	+0.7		
SML	Sawmill	2.97	52				Pn	15 47 40.6	-1.2		
TT01	Tatalina	3.13	336				Pn	15 47 43.6	-0.2		
TTA	Tatalina	3.15	337		Pn		Pn	15 47 43.7	-0.4		
GLI	Glacier Island	3.16	73				Pn	15 47 43.5	-0.7		
HIN	Hinchinbrook I	3.39	82				Pn	15 47 46.4	-0.8		
SCM	Sheep Creek Mo	3.40	56				Pn	15 47 46.2	-1.0		
HUR	Hurricane	3.40	29				Pn	15 47 46.7	-0.5		
FID	Port Fidalgo	3.44	76				Pn	15 47 46.6	-1.1		
JPK	Jack Peak	3.44	70				Pn	15 47 47.7	-0.1		
WAT7	Susitna Watana	3.49	36				Pn	15 47 47.6	-0.8		
VMT	TAPS Tl Valdez	3.56	70				Pn	15 47 49.5	+0.3		
VMT							Sn	15 48 29.9	-1.4		
SII	Sitkinak Islan	3.56	188				Pn	15 47 46.3	-3.0		
Q23K	Middleton Isla	3.56	97		P		Pn	15 47 48.5	-0.7		
	baz=282										
Q23K					S		Sn	15 48 31.0	-0.6		
	baz=282										
Q23K	Middleton Isla	3.56	97		Pn		Pn	15 47 48.4	-0.9		
Q23K	Middleton Isla	3.56	97				Sn	15 48 31.5	0.0		
MID	Middleton Isla	3.57	97		Pn		Pn	15 47 48.3	-1.0		
MID	Middleton Isla	3.57	97				Sn	15 48 30.8	-0.9		
WAT1	Susitna Watana	3.58	37				Pn

SDPT Sand Point 6.11 222 Pn Pn 15 48 20.4 -2.5
LOGN Logan Glacier 6.12 78 Pn 15 48 23.3 +0.1
SAMH Samovar Hills 6.25 84 Pn 15 48 25.4 +0.5
BC03 6.25 56 Pn 15 48 25.1 +0.4
BCAR Beaver Creek A 6.25 56 Pn 15 48 24.5 -0.3
YUK2 White River 6.30 69 Pn 15 48 25.9 +0.4
BVCY Beaver Creek 6.43 63 Pn 15 48 27.7 +0.5
YUK3 Moose Creek 6.48 69 Pn 15 48 28.1 +0.2
PRP Porcupine Dome 6.51 30 Pn 15 48 27.6 -0.7
PCA Pinnacle 6.51 84 Pn 15 48 28.4 0.0
K27K Chicken 6.59 48 Pn 15 48 28.8 -0.4
PS4A Pavlof South-4 6.60 228 Pn 15 48 29.1 -0.3
BCPM Bancas Point 6.84 85 Pn 15 48 32.3 -0.3
YKU2 Yakutat 6.89 89 Pn Pn 15 48 32.8 -0.4
DT1 Dutton Round H 6.94 228 Pn 15 48 33.2 -0.8
PNL Peninsula 7.00 87 Pn 15 48 34.6 -0.1
ANM Nome 7.21 314 Pn Pn 15 48 35.5 -2.0
YUK4 Talbot Arm 7.29 74 Pn 15 48 39.5 +0.8
COLD Coldfoot 7.31 9 P Pn 15 48 38.0 -0.8
baz=192,SNR=5.7
COLD S Sn 15 49 59.1 -1.3
baz=192
COLD Coldfoot 7.31 9 Pn 15 48 38.3 -0.5
EGAK Eagle 7.33 45 Pn 15 48 38.4 -0.7
YUK6 Outpost Mounta 7.41 77 Pn 15 48 40.7 +0.2
FYU Fort Yukon 7.45 26 Pn 15 48 39.8 -0.9
YUK7 Dusty Glacier 7.53 80 Pn 15 48 42.0 0.0
FALS False Pass 7.56 231 Pn Pn 15 48 40.3 -2.0
DAWY Dawson 7.64 52 Pn 15 48 43.4 +0.1
YUK5 Granite Creek 7.66 75 Pn 15 48 43.9 +0.2
HYT Haines Junctio 7.83 78 Pn 15 48 45.8 -0.2
SSLS Shishaldin Sou 7.90 232 Pn 15 48 46.0 -0.7
BMAR Burnt Mountain 8.32 24 Pn 15 48 50.7 -1.6
TNA Tin City 8.66 316 Pn Pn 15 48 57.2 +0.4
TOLK Toolik Lake Re 8.75 9 P Pn 15 48 57.9 -0.1
baz=192,SNR=8.4
TOLK Toolik Lake Re 8.75 9 Pn 15 48 57.9 -0.1
AKUT Akutan 9.03 234 Pn Pn 15 48 59.8 -1.9
RDOG Red Dog Mine 9.04 336 Pn Pn 15 49 02.4 +0.6
SKAG Skagway 9.07 86 Pn 15 49 01.9 -0.4
AKLV Akutan Long Va 9.08 235 Pn 15 49 00.8 -1.7
WHY Whitehorse 9.13 78 Pn 15 49 02.4 -0.8
WHY Sn 15 50 42.4 -2.0
SPIA Saint Paul Isl 9.31 259 Pn Pn 15 49 04.8 -0.8
BESE Bessie Mountai 9.53 91 Pn 15 49 09.1 +0.6
UNV Unalaska Valle 9.54 235 Pn Pn 15 49 06.0 -2.5
EPYK Eagle Plains 9.76 43 Pn 15 49 11.7 +0.3
SIT Sitka 9.85 100 Pn Pn 15 49 11.6 -1.0
JIS Juneau Island 9.86 92 Pn 15 49 13.3 +0.5
NIKH Nikolski High 11.14 237 Pn Pn 15 49 28.1 -1.7
CRAG Craig 11.68 104 Pn Pn 15 49 36.8 0.0
INK Inuvik 11.86 38 P Pn 15 49 38.7 -0.2
0.7nm,0.3s,baz=233,slow=16,SNR=17
INK Inuvik 11.86 38 Pn 15 49 39.1 +0.1
DLBC Dease Lake 11.99 88 P Pn 15 49 44.1 +3.3
2.5nm,0.3s,baz=244,slow=7.8,SNR=24
DLBC Dease Lake 11.99 88 Pn 15 49 39.8 -1.1
DIB Dawson Inlet, 13.31 112 P P 15 50 00.3 -1.7
ATKA Atka Island 14.03 245 Pn 15 50 08.1 +1.3
C36M Paulatuk 15.38 41 P Pn 15 50 22.8 -0.6
baz=247
C36M Paulatuk 15.38 41 P Pn 15 50 21.4 -2.1
C36M IAmb IAmb 15 50 25.0
comp=Z,12nm,1.1s
YKA Yellowknife Ar 18.55 66 P P 15 51 00.2 +0.5
comp=Z,0.2nm,0.3s,baz=273,slow=10,SNR=2.0
D05A Enumclaw 22.33 111 P P 15 51 42.1 +2.2
B08A Colville Reser 22.76 106 P P 15 51 45.4 +1.3
B08A IAmb IAmb 15 51 46.8
comp=Z,4.8nm,0.7s
NEW Newport 23.90 103 P P 15 51 56.2 +1.7
comp=Z,6.4nm,0.9s,baz=311,slow=9.7,SNR=6.8
NEW Newport 23.90 103 P P 15 51 56.3 +1.8
baz=313
NEW Newport 23.90 103 P P 15 51 55.7 +1.2
NEW IAmb IAmb 15 51 57.0
comp=Z,6.3nm,0.8s
KEBM Edson Butte 24.62 121 P P 15 51 60.0 -1.1
HUMO Hull Mountain 25.43 120 P P 15 52 10.9 +2.6
SEY Seymchan 25.43 300 P P 15 52 07.1 -1.1
comp=Z,1.3nm,0.6s,baz=197,slow=19,SNR=1.7
F10A Beach Ranch, E 25.47 107 P P 15 52 10.5 +1.8
F10A IAmb IAmb 15 52 11.0
comp=Z,5.6nm,0.6s
I07A Izee 25.81 113 P P 15 52 14.4 +2.5
I07A IAmb IAmb 15 52 14.8
comp=Z,10nm,1.4s
YBH Yreka Blue Hor 26.24 121 LR LR 16 01 00.3
comp=Z,57nm,18.4s,baz=72,slow=32
YBH Yreka Blue Hor 26.24 121 P P 15 52 18.3 +2.6
BMO Blue Mountains 26.26 109 P P 15 52 17.6 +1.7
JCC Jacoby Creek, 26.44 124 P P 15 52 19.5 +2.1
PET Petropavlovsk 26.89 276 P P 15 52 20.1 -1.2
PEA0B Petropavlovsk- 27.32 277 P P 15 52 25.1 0.0
PETK Petropavlovsk- 27.32 277 P P 15 52 25.2 +0.1
comp=Z,3.1nm,0.7s,baz=76,slow=14,SNR=22
O03E Paynes Creek 27.82 121 P P 15 52 31.4 +1.6
baz=326
MCMT McKenzie Canyo 28.42 104 P P 15 52 36.5 +1.2
BCYI Bear Canyon 28.53 106 P P 15 52 37.9 +1.7
HLID Hailey 28.60 108 P P 15 52 38.2 +1.4
BEKR Beckworth 28.79 120 P P 15 52 40.4 +1.8
BEKR IAmb IAmb 15 52 40.8
comp=Z,2.1nm,0.5s
YHH Holmes Hill 29.42 102 P P 15 52 46.7 +2.5
YNE Yellowstone No 29.68 101 P P 15 52 48.7 +2.2
PNTR Pine Nut 29.77 120 P P 15 52 48.9 +1.6
PNTR IAmb IAmb 15 52 51.4
comp=Z,4.5nm,0.7s
FLWY Flagg Ranch 30.01 103 P P 15 52 51.9 +2.5
FLWY IAmb IAmb 15 53 17.2
comp=Z,13nm,1.6s
IMW Indian Meadow 30.03 103 P P 15 52 51.9 +2.3
IMW IAmb IAmb 15 52 53.0
comp=Z,6.5nm,0.8s
WAKR Walker 30.32 120 P P 15 52 54.5 +2.4
TPAW Teton Pass 30.33 104 P P 15 52 54.7 +2.5
TPAW IAmb IAmb 15 52 55.5
comp=Z,4.6nm,0.6s
ELK Elko 30.39 112 P P 15 52 54.5 +1.8
KVN Kaiserville 30.46 118 P P 15 52 54.6 +1.4
NVAR Mina Array Bea 30.88 119 P P 15 52 59.2 +2.2
comp=Z,1.4nm,0.7s,baz=314,slow=9.2,SNR=12
NVAR Mina Array Bea 30.88 119 P P 15 52 58.6 +1.6
NV11 Mina Array Sit 30.94 119 P P 15 52 59.6 +2.1
NV11 IAmb IAmb 15 53 04.8
comp=Z,5.7nm,1.6s
OMMB Old Mammoth Mi 31.25 120 P P 15 53 02.5 +2.0
BW06 Boulder Array 31.54 103 P P 15 53 04.0 +1.1
baz=318
BW06 Boulder Array 31.54 103 P P 15 53 04.7 +1.8
PD31 Pinedale Array 31.54 103 P P 15 53 04.4 +1.5
PDAR Pinedale Array 31.54 103 P P 15 53 04.7 +1.8
comp=Z,0.8nm,0.4s,baz=317,slow=3.5,SNR=8.7
PDAR Pinedale Array 31.54 103 P P 15 53 04.5 +1.6
TPH Tonopah 31.65 118 P P 15 53 05.2 +1.4
PMPB Monarch Peak 31.68 124 P P 15 53 05.6 +1.7
TCUT Toone Canyon 31.91 107 P P 15 53 08.5 +2.4
DUG Dugway, Tooele 31.96 110 P P 15 53 07.5 +1.1
baz=322
DUG Dugway, Tooele 31.96 110 P P 15 53 08.0 +1.6
DUG IAmb IAmb 15 53 09.4
comp=Z,2.8nm,0.9s
R11A Troy Canyon, C 32.16 115 P P 15 53 09.4 +1.2
baz=325
JLU Jordanelle 32.28 108 P P 15 53 10.4 +1.1
PSUT Pine Spring 32.80 113 P P 15 53 15.7 +1.9
TPNV Topopah Spring 33.01 118 P P 15 53 17.4 +1.8
baz=326
TPNV Topopah Spring 33.01 118 P P 15 53 17.7 +2.1
TPNV IAmb IAmb 15 53 18.1
comp=Z,2.1nm,0.6s
K22A Casper 33.12 100 P P 15 53 18.4 +1.9
baz=318
PRN Pahroc Range 33.17 116 P P 15 53 19.2 +2.2
PRN IAmb IAmb 15 53 20.9
comp=Z,6.2nm,1.5s
RDMU Red Mountain 33.21 106 P P 15 53 19.2 +1.8
MPMC Manual Prospec 33.22 120 P P 15 53 19.1 +1.7
baz=328
PKM Mcpherson Peak 33.23 124 P P 15 53 19.2 +1.7
baz=330
RSSD Black Hills 33.28 96 P P 15 53 18.6 +0.7
baz=316
LRMC Laurel Mtn Rad 33.62 121 P P 15 53 22.3 +1.4
baz=328
SRU San Rafael Swe 33.90 109 P P 15 53 25.7 +2.4
O20A White River Ci 34.19 105 P P 15 53 27.2 +1.4
baz=321
PV17 East Wray Mesa 35.30 108 P P 15 53 37.1 +1.8
PV17 IAmb IAmb 15 53 37.8
comp=Z,6.4nm,1.0s
PV18 Skein Mesa, Pa 35.35 108 P P 15 53 37.5 +1.7
PV18 IAmb IAmb 15 53 38.7
comp=Z,5.8nm,0.8s
PV03 Paradox Valley 35.37 108 P P 15 53 37.8 +1.8
PV03 IAmb IAmb 15 53 38.5
comp=Z,3.4nm,0.9s
PV05 Paradox Valley 35.39 108 P P 15 53 37.5 +1.3
PV05 IAmb IAmb 15 53 38.6
comp=Z,3.7nm,0.7s
PV13 Radium Mtn., P 35.46 108 P P 15 53 38.1 +1.4
PV01 Paradox Valley 35.60 108 P P 15 53 38.9 +1.0
PV01 IAmb IAmb 15 53 40.4
comp=Z,5.7nm,0.8s
MONP2 Monument Peak 36.37 122 P P 15 53 46.5 +1.9
baz=330
MVCO Mesa Verde 36.37 109 P P 15 53 46.2 +1.6
baz=324
WUAZ Wupatki 36.40 113 P P 15 53 46.8 +2.1
baz=326
WUAZ Wupatki 36.40 113 P P 15 53 46.2 +1.5
WUAZ IAmb IAmb 15 53 47.6
comp=Z,5.2nm,0.8s
Q24A Divide 36.60 103 P P 15 53 47.3 +0.8
baz=321
IKP In-Ko-Pah, Jac 36.71 122 P P 15 53 48.4 +1.2
baz=330
S22A 4UR Ranch, Cre 36.74 106 P P 15 53 48.8 +1.1
baz=323
EYMN Ely 36.88 81 P P 15 53 49.1 +0.6
baz=313
SDCO Great Sand Dun 37.39 105 P P 15 53 55.0 +1.8
baz=322
SDCO Great Sand Dun 37.39 105 P P 15 53 54.9 +1.7
ANMO Albuquerque 39.17 109 P P 15 54 09.4 +1.4
baz=325
121A Cookes Peak, D 40.54 112 P P 15 54 20.2 +0.9
baz=327
MSTX Muleshoe 41.73 106 P P 15 54 30.2 +1.3
baz=324
MNTX Cornudas Mount 42.35 110 P P 15 54 35.4 +1.6
baz=326
MNTX Cornudas Mount 42.35 110 P P 15 54 35.3 +1.4
T35A Sooner Cattle 42.46 97 P P 15 54 34.8 +0.1
T35A IAmb IAmb 15 54 36.6
comp=Z,7.5nm,0.8s
L44A Lake County Fo 42.76 84 P P 15 54 38.0 +1.0
baz=318
WMOK Wichita Mounta 43.06 101 P P 15 54 40.8 +1.2
baz=323
WMOK Wichita Mounta 43.06 101 P P 15 54 40.7 +1.2
WMOK IAmb IAmb 15 54 41.6
comp=Z,4.5nm,0.9s
NRIK Noril'sk 43.77 333 P P 15 54 44.7 0.0
comp=Z,7.0nm,0.7s,baz=54,slow=8.6,SNR=12
TX31 Lajitas Ar. Si 45.13 110 P P 15 54 57.6 +1.5
TX31 IAmb IAmb 15 54 58.8
comp=Z,8.5nm,1.0s
TX32 Lajitas Array 45.13 110 P P 15 54 57.4 +1.2
TXAR Lajitas Array 45.14 110 P P 15 54 57.9 +1.7
comp=Z,1.3nm,0.8s,baz=324,slow=5.8,SNR=11
TXAR Lajitas Array 45.14 110 P P 15 54 57.4 +1.2
JCT Junction City 46.03 105 P P 15 55 04.4 +1.2
baz=326
JCT Junction City 46.03 105 P P 15 55 04.3 +1.2
MDJ Mudanjiang 46.74 287 P P 15 55 05.1 -3.3
P57A Homestead Farm 49.71 79 P P 15 55 30.9 -0.4
baz=321
I63A Otisfield 49.80 69 P P 15 55 32.5 +0.7
baz=319
L61A Hillsdale 1, H 49.80 73 P P 15 55 32.2 +0.3
baz=320
TKL Tuckaleechee C 49.82 87 LR LR 16 15 32.8
comp=Z,48nm,19.4s,baz=306,slow=34
KSRS Korea Array 53.03 282 P P 15 55 56.6 +0.7
comp=Z,4.1nm,0.8s,baz=39,slow=7.1,SNR=10
SONM Songino Array 54.64 306 P P 15 56 08.3 +0.7
comp=Z,3.2nm,0.7s,baz=41,slow=7.2,SNR=8.1
SONM Songino Array 54.64 306 IAmb IAmb 15 56 09.2
comp=Z,4.0nm,0.8s
ZAA0 Zalesovo Array 57.23 323 PcP P 15 56 26.0 +0.2
ZALV Zalesovo Beam 57.23 323 P P 15 56 25.9 +0.1
comp=Z,15nm,0.5s,baz=34,slow=6.9,SNR=26
ZALV Zalesovo Beam 57.23 323 PcP P 15 56 25.7 -0.2
HHC Hu-ho-hao-te 58.03 297 eP 15 56 32.6 +0.9
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.5s
GTA Gaotai 64.27 305 P P 15 57 13.4 -0.4
GTA pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 64.29 321 P P 15 57 13.1 -0.6
comp=Z,3.5nm,0.5s,baz=44,slow=7.4,SNR=37
WMQ Urumqi 65.11 316 eP P 15 57 22.0 +2.9
LZH Lanzhou 65.37 300 ⇓P P 15 57 20.9 -0.1
LZH pP pP 15 57 56.6 -0.4
LZH sP sP 15 58 13.0 -0.3
LZH PP PP 15 59 48.2 +2.1
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,100nm,5.6s
KRVT Keravat (AS076 77.03 237 LR LR 16 27 17.5
comp=Z,80nm,21.7s,baz=278,slow=31
CMAR Chiang Mai Arr 82.71 294 P P 15 59 00.8 -0.8
comp=Z,0.7nm,0.6s,baz=10,slow=5.5,SNR=5.6

*DJA **06** 15:50:53.7±0.4, 1°N±4°×12°6E±°, h10km, M4.3/9, mB5.6/2, mb5.4/2, MLv3.8/9, Mw(mB)5.1/2, Mwp6.6/1*
ISC 06 15:50:53.6±1.4, **1°35N**±0°06×**126°48E**±0°06, **h10km, n9, σ1§16/10, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	Ternate	1.06	123	P	Pn			15 51 15.1	+0.6
TNTI				S	Sb			15 51 27.3	-0.6
SGSI	Sangihe	2.51	338	P	Pn			15 51 32.7	-1.8
KMSI	Cibinong	2.61	253	P	Pn			15 51 36.1	+0.2
SANI	Sanana	3.41	188	P	Pn			15 51 46.0	-0.9
GTOI	Gorontalo	3.54	258	P	Pn			15 51 49.1	+0.5
LUWI	Luwuk	4.40	237	P	Pn			15 51 59.5	-1.0
DDMP	Don Marcelino,	4.79	351	eP	Pn			15 52 07.1	+1.3
APSI	Ampana	5.32	245	P	Pn			15 52 14.0	+0.8
	0.3nm710nm66nm,1.1s								
WSI	Waingapu	12.56	209	P	Pn			15 53 53.5	+1.1

*IDC **06** 15:57:59.9±0.9, 41°.99N×119°.62W, h0km, mb1 3.7/5, mb1mx3.5/60, mbtmp3.4/5, ML3.4/5, Error ellipse: s-maj=13.6km s-min=5.6km az=6.0*
*REN **06** 15:58:01.4±3.1, 41°.91N±0°.04×119°.63W±0°.04, h1km±5km, ML4.2/4, ML4.0/85(SEA), Mwr4.2/103(NEIC), Error ellipse: s-maj=5.8km s-min=3.6km az=163.0*
*ANF **06** 15:58:01.4±0.4, 41°.87N×119°.72W, h0km, ML4.2/17, Error ellipse: s-maj=4.5km s-min=3.9km az=19.0*
*NEIC **06** 15:58:02.9±3.2, 41°.86N±0°.04×119°.63W±0°.04, h5km±2km, Error ellipse: s-maj=6.7km s-min=4.3km az=165.0*
*SEA **06** 15:58:02.4±2.6, 41°.84N±0°.04×119°.69W±0°.03, h0km±5km, Error ellipse: s-maj=5.6km s-min=3.0km az=155.0*
*NEIC **06** 15:58:03, 41°.87N×119°.64W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.54; $M_{\theta\theta}$=0.15; $M_{\phi\phi}$ 1.68; $M_{r\theta}$=0.50; $M_{r\phi}$=1.60; $M_{\theta\phi}$=0.64; Fault plane solution: M_o=2.41000×10^{15} NP1:ϕ_s=241.32000°, δ51.36000°, λ=-41.45000°. NP2:ϕ_s=0.20000°, δ58.87000°, λ=-133.16000°. Principal axes: T 2.6318, Plg4.0000°, Azm119.0000°; N -0.5256, Plg36.0000°, Azm26.0000°; P -2.1061, Plg54.0000°, Azm215.0000°;*
ISC 06 15:58:01.9±1.6, **41°.86N**±0°.03×**119°.66W**±0°.03, **h0km**±13km, **n145, σ1§90/160, Nevada**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOD	Modoc Plateau	0.48	276	Pg	Pg			15 58 10.9	-0.3
MOD					Sg		Sg	15 58 18.2	+0.7
K05A	Summer Lake	1.26	314	Pg	Pn			15 58 24.9	-2.1
K05A					Sg		Sg	15 58 43.9	+1.4
HATC	Hat Creek Radi	1.71	233		Pn			15 58 32.1	-0.9
K04D	Chiloquin, OR	1.73	297	P	Pn			15 58 31.7	-1.7
baz=114,SNR=73									
K04D					Sb		Sn	15 58 56.5	+0.1
baz=114									
J08A	Circle Bar Ran	1.74	30		Pn			15 58 32.9	-0.5
J08A							Sb	15 58 56.2	-1.0
J05D	Fort Rock, OR	1.84	321	P	Pn			15 58 33.2	-1.7
baz=139,SNR=1000									
J05D					S		Sb	15 59 00.6	+0.4
baz=139									
LHEM	Herd Peak	1.93	264		Pn			15 58 37.0	+0.8
L04D	Klamath Falls	2.00	281	P	Pn			15 58 35.1	-2.0
baz=98,SNR=185									
L04D					Sb		Sb	15 59 05.2	+0.4
baz=98									
BEKR	Beckworth	2.06	195		Pn			15 58 37.0	-0.9
PINE	Pine Mountain	2.15	334	Pn	Pn			15 58 38.3	-1.0
PAHR	Pah Rah Range	2.16	174	Pn	Pb			15 58 41.4	-0.5
I07A	Izee	2.23	3		Pn			15 58 41.0	+0.8
O03E	Paynes Creek	2.25	227	P	Pn			15 58 38.9	-1.5
baz=45,SNR=314									
O03E					Sb		Sb	15 59 11.1	-0.7
baz=45									
J04D	Umpqua Nationa	2.28	308	P	Pn			15 58 39.7	-1.2
baz=125,SNR=71									
YBH	Yreka Blue Hor	2.29	268	Pn	Pn			15 58 39.1	-1.8
9.2nm,0.3s,baz=78,slow=14,SNR=58									
YBH					Lg		Lg	15 59 13.6	
90nm,0.3s,baz=348,slow=11,SNR=20									
M02C	Callahan	2.44	260	P	Pn			15 58 40.9	-2.1
baz=77,SNR=29									
M02C					Sb		Sb	15 59 17.5	+0.2
baz=77									
N02D	Trinity Center	2.45	250	P	Pn			15 58 41.4	-1.9
baz=67,SNR=102									
N02D					Sb		Sb	15 59 19.2	+1.5
baz=67									
WDC	Whiskeytown Da	2.52	241	Pn	Pn			15 58 42.3	-1.8
VCNR	Virginia City	2.56	180		Pn			15 58 46.2	+1.5
HUMO	Hull Mountain	2.56	288	Pn	Pn			15 58 42.3	-2.4
ORV	Oroville	2.69	212	Pn	Pn			15 58 46.2	-0.3
PNTR	Pine Nut	2.76	179		Pn			15 58 49.5	+1.8
I05D	Terrebonne, OR	2.77	334	Pb	Pb			15 58 50.6	-1.7
baz=152									
I05D					Sb		Sb	15 59 28.0	+1.1
baz=152									
I04A	Tendick Farm,	2.80	315	Pb	Pb			15 58 51.7	-1.2
baz=132									
I04A					Sb		Sb	15 59 29.6	+1.9
baz=132									
RUBR	Rubicon Trail	2.83	188		Pn			15 58 49.6	+1.1
L02E	Cave Junction	2.96	277	P	Pn			15 58 49.1	-1.0
baz=94,SNR=49									
L02E					Sb		Sb	15 59 32.8	+0.7
baz=94									
KVN	Kaiserville	3.04	156		Pn			15 58 51.8	+0.3
AFDM	Forest Hills D	3.07	199		Pn			15 58 52.8	+1.1
K02D	Willamette Mer	3.09	287	P	Pn			15 58 51.2	-0.8
baz=103,SNR=119									
KRMB	Red Mountain	3.20	265		Pn			15 58 52.6	-1.0
KHMM	Horse Mountain	3.22	254		Pn			15 58 53.1	-0.7
MFID	Camas Ranch	3.23	60	Pn	Pn			15 58 52.2	-1.7
RYN	Ryan	3.34	165		Pn			15 58 56.9	+1.4
WAKR	Walker	3.35	177		Pn			15 58 57.6	+1.9
H04A	Detroit Lake	3.38	328		Pn			15 58 57.4	+1.5
J01E	Myrtle Point	3.42	294	P	Pn			15 58 55.7	-0.7
baz=110									
KBO	Bosley Butte	3.42	278		Pn			15 58 56.3	-0.2
JCC	Jacoby Creek,	3.45	254		Pn			15 58 55.8	-1.0
BMO	Blue Mountains	3.45	29		Pn			15 59 00.0	+3.0
KMRM	Mail Ridge	3.47	243		Pn			15 58 56.8	-0.4
G08A	Pilot Rock	3.47	8		Pn			15 58 57.8	+0.5
H04D	Lebanon	3.49	321	Pb	Pb			15 59 04.0	-0.6
baz=138									
ELK	Elko	3.51	107	Pn	Pn			15 58 57.1	-0.9
3.6nm,0.3s,baz=295,slow=16,SNR=54									
ELK					Pg		Pb	15 59 02.2	-2.8
40nm,0.3s,baz=294,slow=17,SNR=144									
ELK					Sn		Sn	15 59 38.1	-2.1
22nm,0.3s,baz=125,slow=22,SNR=6.4									
ELK					Lg		Lg	15 59 49.7	
36nm,0.3s,baz=34,slow=20,SNR=6.3									
ELK	Elko	3.51	107		Pn			15 58 56.2	-1.7
NVAR	Mina Array Bea	3.58	163	Pn	Pn			15 58 59.4	+0.6
3.1nm,0.3s,baz=342,slow=13,SNR=52									
NVAR					Lg		Lg	15 59 56.1	
49nm,0.3s,baz=347,slow=30,SNR=8.1									
NVAR	Mina Array Bea	3.58	163		Pn			15 58 59.6	+0.8
G05D	Wamic, OR	3.59	341	Pb	Pb			15 59 06.0	-0.3
baz=159									
G05D					Sb		Sb	15 59 53.4	+2.9
baz=159									
NV11	Mina Array Sit	3.61	161		Pn			15 59 00.4	+1.2
KEBM	Edson Butte	3.61	288		Pn			15 58 58.6	-0.6
KCPM	Cahto Peak	3.68	235		Pn			15 58 59.6	-0.6
LHV	Little Huntoon	3.71	166		Pn			15 59 02.4	+2.1
I02D	Swisshome	3.81	308	Pb	Pb			15 59 09.2	-0.7
baz=124									
COR	Corvallis	3.81	317		Pn			15 59 03.2	+1.3
CMB	Columbia Colle	3.86	189		Pn			15 59 04.9	+2.4
HOPS	Hopland Field	3.87	223		Pn			15 59 01.4	-1.2
GDXM	Geysers	3.87	219		Pn			15 59 02.7	-0.1
F07A	Phinny Hill Vi	4.04	357		Pb			15 59 10.3	-3.7
PLID	Pearl Lake	4.19	38	Pn	Pn			15 59 07.9	+0.7
TPH	Tonopah	4.21	153		Pn			15 59 08.5	+0.9
HLID	Hailey	4.22	64	P	Pn			15 59 06.2	-1.5
baz=248									
HLID					Sb		Sb	16 00 10.5	+1.7
baz=248									
HLID	Hailey	4.22	64	Pn	Pn			15 59 07.0	-0.7
MDPB	Devils Postpil	4.24	174		Pn			15 59 09.7	+1.7
OMMB	Old Mammoth Mi	4.27	173	Pn	Pn			15 59 06.9	-1.5
MCCM	Marconi Confer	4.46	215	Pn	Pn			15 59 11.1	+0.5
F10A	Beach Ranch, E	4.48	22		Pn			15 59 10.4	-0.7
F04A	Amboy	4.54	335		Pn			15 59 13.3	+1.5
HAWA	Hanford	4.54	1		Pn			15 59 10.4	-1.5
E08A	Dider Farm, El	4.66	5		Pn			15 59 15.3	+1.8
R11A	Troy Canyon, C	4.69	137	P	Pn			15 59 15.8	+1.7
baz=320									
E07A	Sunnyside	4.71	358		Pn			15 59 15.8	+1.7
E09A	Wood Farm, Sta	4.78	13		Pn			15 59 16.6	+1.4
BGU	Big Grassy Mou	5.07	98	Pn	Pn			15 59 19.8	+0.5
HVU	Hansel Valley	5.14	89	Pn	Pn			15 59 22.3	+2.0
BCYI	Bear Canyon	5.20	60		Pn			15 59 20.0	-1.1
D08A	Wollman Farm,	5.23	6		Pn			15 59 23.6	+2.3
SAO	San Andreas Ge	5.27	196		Pn			15 59 23.2	+1.4
SPUT	South Promonto	5.43	93		Pn			15 59 25.1	+0.8
DUG	Dugway, Tooele	5.44	105	P	Pn			15 59 25.1	+0.8
baz=291									
DUG	Dugway, Tooele	5.44	105	Pn	Pn			15 59 25.3	+1.0
LTY	Liberty	5.45	353		Pn			15 59 27.3	+2.9
E03A	Lebam	5.46	330		Pn			15 59 21.8	-2.8
PSUT	Pine Spring	5.54	125	Pn	Pn			15 59 27.6	+1.7
TPNV	Topopah Spring	5.56	151	P	Pn			15 59 28.8	+2.7
baz=333									
TPNV	Topopah Spring	5.56	151	Pn	Pn			15 59 28.2	+2.1
D05A	Enumclaw	5.59	343	Pn	Pn			15 59 23.3	-2.9
PRN	Pahroc Range	5.69	140		Pn			15 59 29.9	+2.1
MCMT	McKenzie Canyo	5.79	57		Pn			15 59 29.1	-0.1
HWUT	Hardware Ranch	6.06	90		Pn			15 59 34.3	+1.4
DLMT	Dillon	6.21	53		Pn			15 59 37.3	+2.4
TCUT	Toone Canyon	6.24	94		Pn			15 59 37.8	+2.4
ISA	Isabella, Lake	6.25	171	Pn	Pn			15 59 36.0	+0.6
JLU	Jordanelle	6.31	99		Pn			15 59 37.4	+0.9
SHPR	Sheep Range	6.38	145	Pn	Pn			15 59 40.0	+2.7
MSO	Missoula	6.44	38	P	Pn			15 59 40.5	+2.4
baz=222									
MSO	Missoula	6.44	38	Pn	Pn			15 59 40.0	+1.9
CCUT	Cedar City	6.48	129	Pn	Pn			15 59 40.3	+1.5
B08A	Colville Reser	6.51	2	Pn	Pn			15 59 38.7	-0.2
LRM	Limekiln Ridge	6.55	50		Pn			15 59 39.5	-0.1
MVU	Marysvale	6.61	118		Pn			15 59 42.1	+1.6
SZCU	Shurtz Canyon	6.61	128		Pn			15 59 41.9	+1.3
MSU	Marysvale	6.63	118	Pn	Pn			15 59 42.5	+1.7
NEW	Newport	6.66	15	Lg	Lg			16 01 27.7	
0.5nm,0.3s,baz=299,slow=17,SNR=2.2									
NEW	Newport	6.66	15	Pn	Pn			15 59 42.9	+1.9
QLMT	Earthquake Lak	6.70	61		Pn			15 59 41.4	-0.3
SNOW	Snow King Moun	6.76	73		Pn			15 59 45.1	+2.5
YHB	Horse Butte	6.82	62		Pn			15 59 43.2	-0.2

YHL	Hebgen Lake	6.87	61		Pn	15 59 46.9	+2.8
MTPU	Mount Pierson	6.89	121		Pn	15 59 46.4	+1.9
TMUT	Trail Mountain	6.92	109		Pn	15 59 46.5	+1.7
LCMT	Little Creek M	6.93	132		Pn	15 59 46.8	+2.0
YMR	Madison River	6.94	63		Pn	15 59 48.2	+3.2
JTMT	Jette	7.02	31	Pn	Pn	15 59 49.1	+3.1
YHH	Holmes Hill	7.06	63		Pn	15 59 47.2	+0.5
Q16A	Castle Valley	7.11	112	Pn	Pn	15 59 48.5	+1.1
KNB	Kanab	7.16	130	Pn	Pn	15 59 50.4	+2.3
PKCU	Pink Cliffs	7.18	125		Pn	15 59 50.3	+1.9
P17A	Butcher Ranch,	7.19	106		Pn	15 59 51.3	+3.0
SRU	San Rafael Swe	7.48	108		Pn	15 59 54.9	+2.5
BW06	Boulder Array	7.54	80		Pn	15 59 56.9	+3.6
PD31	Pinedale Array	7.54	80		Pn	15 59 56.2	+2.9
PDAR	Pinedale Array	7.54	80	Pn	Pn	15 59 55.1	+1.8
	0.1nm,0.3s,baz=266,slow=10,SNR=11						
PDAR	Pinedale Array	7.54	80	Pn	Pn	15 59 56.2	+2.9
RDMU	Red Mountain	7.71	96	Pn	Pn	15 59 57.7	+2.1
MWC	Mount Wilson	7.72	170		Pn	15 59 56.3	+0.6
PV23	Carpenter Ridg	8.83	109		Pn	16 00 14.1	+3.1
PV14	Lion Creek, Pa	8.86	110		Pn	16 00 14.2	+2.8
PV20	West Nyswonger	8.91	110		Pn	16 00 14.7	+2.6
PV04	Paradox Valley	8.93	109		Pn	16 00 15.2	+2.9
PV17	East Wray Mesa	8.95	110		Pn	16 00 15.9	+3.4
PV22	Blue Mesa, Par	8.96	108		Pn	16 00 16.1	+3.4
PV16	Nyswonger Mesa	8.96	110		Pn	16 00 16.1	+3.4
PV18	Skein Mesa, Pa	9.00	110	Pn	Pn	16 00 16.3	+3.1
PV11	David Mesa, Pa	9.00	110		Pn	16 00 16.9	+3.7
PV03	Paradox Valley	9.04	110		Pn	16 00 16.2	+2.4
PV12	Saucer Basin,	9.04	109		Pn	16 00 16.7	+2.8
WUAZ	Wupatki	9.05	132	Pn	Pn	16 00 15.9	+2.0
PV13	Radium Mtn., P	9.10	110		Pn	16 00 17.6	+2.9
PV02	Paradox Valley	9.13	110		Pn	16 00 18.8	+3.6
PV15	Paradox Valley	9.26	109		Pn	16 00 19.4	+2.6
PV01	Paradox Valley	9.29	110		Pn	16 00 20.0	+2.8
RWWY	Rawlins	9.30	87		Pn	16 00 19.3	+1.7
MVCO	Mesa Verde	9.79	115	Pn	Pn	16 00 28.1	+4.0
SMCO	Snowmass	10.02	101	Pn	Pn	16 00 30.1	+2.6
SDCO	Great Sand Dun	11.64	106	Pn	Pn	16 00 52.3	+2.9
TXAR	Lajitas Array	18.00	129	P	Pn	16 02 13.3	-0.3
	0.0nm,0.3s,baz=336,slow=11,SNR=2.2						

*SOME **06** 16:09:30.7,40.78N×79.10E,h10km*
*KRNET **06** 16:09:32.7±0.1,40.90N×79.26E,mb2.7*
ISC 06 16:09:31.1±2.3,40.74N±0.10×79.42E±0.07,h10km,n25,
σ1°31/49,10C-8D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.91**	**337**	⇓*i*P	**Pn**	**16 10 03.7**	**-0.1**
	baz=39						
PRZ				⇓*i*S	**Sn**	**16 10 27.2**	**-0.8**
	baz=39						
KDJ	**Kajisay**	**2.19**	**310**	⇓*i*P	**Pn**	**16 10 08.0**	**+0.3**
	baz=9.0						
KDJ				⇓*i*S	**Sn**	**16 10 34.4**	**-0.5**
	baz=9.0						
SHLS	**Shalkode**	**2.42**	**1**	*e*P	**Pb**	**16 10 15.5**	**+0.8**
	9.9nm,0.3s						
SHLS				*e*S	**Sg**	**16 10 48.4**	**-0.4**
	19nm,0.4s						
UZB	**Uzynbulak**	**2.43**	**353**	*e*P	**Pb**	**16 10 14.2**	**-0.7**
	4.5nm,0.3s						
UZB				*e*S	**Sb**	**16 10 46.0**	**+1.0**
	10nm,0.5s						
ANVS	**Anan'yevo**	**2.43**	**328**	⇑*i*P	**Pn**	**16 10 12.4**	**+1.4**
	baz=28						
ANVS				⇑*i*S	**Sn**	**16 10 40.4**	**-0.5**
	baz=28						
SATY	**Saty**	**2.44**	**342**	*e*P	**Pb**	**16 10 14.1**	**-1.0**
	10nm,0.5s						
SATY				*e*S	**Sb**	**16 10 45.8**	**+0.4**
	18nm,0.5s						
KPKS	**Kokpek**	**2.78**	**349**	*e*P	**Pb**	**16 10 20.7**	**-0.3**
	7.3nm,0.3s						
KPKS				*e*S	**Sb**	**16 10 56.7**	**+1.6**
	34nm,0.4s						
ULHL	**Ulahol**	**2.83**	**303**	⇑*i*P	**Pn**	**16 10 17.9**	**+1.4**
	baz=2.0						
ULHL				⇑*i*S	**Sn**	**16 10 50.4**	**-0.3**
	baz=2.0						
KURS	**Kuram**	**2.90**	**342**	*e*P	**Pb**	**16 10 22.4**	**-0.6**
	5.0nm,0.5s						
KURS				*e*S	**Sb**	**16 10 59.9**	**+1.3**
	13nm,0.5s						
TNSS	**Tian-Shan**	**2.95**	**322**	*e*P	**Pb**	**16 10 22.6**	**-1.3**
	3.1nm,0.3s						
TNSS				*e*S	**Sb**	**16 11 00.4**	**+0.2**
	8.2nm,0.5s						
MDOK	**Medeo**	**3.00**	**325**	*e*P	**Pb**	**16 10 23.5**	**-1.2**
	2.1nm,0.5s						
MDOK				*e*S	**Sb**	**16 11 01.6**	**+0.1**
	11nm,0.5s						
KOTS	**Kotyrbulak**	**3.03**	**326**	*e*P	**Pb**	**16 10 24.3**	**-0.9**
	5.4nm,0.4s						
KOTS				*e*S	**Sb**	**16 11 03.0**	**+0.7**
	13nm,0.3s						
BOOM	**Boomskoye usch**	**3.14**	**305**	⇓*i*P	**Pn**	**16 10 22.1**	**+1.3**
	baz=4.0						
BOOM				⇓*i*S	**Sn**	**16 10 57.8**	**-0.7**
	baz=4.0						
MNBS	**Baschi**	**3.42**	**348**	*e*P	**Pb**	**16 10 32.4**	**+0.5**
MNBS				*e*S	**Sb**	**16 11 16.7**	**+3.1**
KST	**Kastek**	**3.46**	**313**	*e*P	**Pb**	**16 10 31.9**	**-0.6**
	1.8nm,0.4s						
KST				*e*S	**Sb**	**16 11 16.1**	**+1.5**
	5.1nm,0.5s						
TKM2	**Tokmak 2**	**3.60**	**309**	⇑*i*P	**Pn**	**16 10 28.2**	**+1.1**
	baz=8.0						
TKM2				⇑*i*S	**Sn**	**16 11 08.5**	**-1.2**
	baz=8.0						
KTBS	**Karatobe**	**3.60**	**327**	*e*P	**Pb**	**16 10 34.1**	**-0.8**
	0.9nm,0.4s						
KTBS				*e*S	**Sb**	**16 11 19.9**	**+1.2**
	9.6nm,0.4s						
DJR	**Jarkent**	**3.60**	**4**	*e*P	**Pb**	**16 10 36.5**	**+1.5**
	1.0nm,0.6s						
DJR				*e*S	**Sg**	**16 11 23.7**	**-3.1**
	5.1nm,0.3s						
ARXS	**Arharly**	**3.67**	**342**	*e*P	**Pb**	**16 10 35.8**	**-0.2**
	2.3nm,0.4s						
ARXS				*e*S	**Sb**	**16 11 22.7**	**+2.1**
	9.5nm,0.5s						
DGS	**Degeres**	**3.70**	**314**	*e*P	**Pb**	**16 10 35.5**	**-1.0**
	2.1nm,0.6s						
DGS				*e*S	**Sb**	**16 11 22.4**	**+1.0**
	4.6nm,0.5s						
ARLS	**Aral**	**4.00**	**288**	⇓*e*P	**Pn**	**16 10 33.9**	**+1.3**
	baz=86						
ARLS				⇓*i*S	**Sn**	**16 11 19.4**	**-0.2**
	baz=86						
KRBS	**Karabastau**	**4.06**	**318**	*e*P	**Pb**	**16 10 42.7**	**0.0**
	0.7nm,0.3s						
KRBS				*e*S	**Sb**	**16 11 34.4**	**+2.6**
	3.1nm,0.4s						
AAK	**Ala-Archa**	**4.15**	**299**	⇑*i*P	**Pn**	**16 10 36.3**	**+1.7**
	baz=98						
AAK				⇑*i*S	**Sn**	**16 11 22.5**	**-0.8**
	baz=98						
AML	**Almayashu**	**4.53**	**290**	⇑*i*P	**Pn**	**16 10 41.2**	**+1.2**
	baz=88						
AML				⇑*i*S	**Sn**	**16 11 31.4**	**-1.5**
	baz=88						
WMQ	**Urumqi**	**6.87**	**61**	*e*P	**Pn**	**16 11 09.1**	**-2.7**

*SKHL **06** 16:14:44.0±0.5,50.97N×143.66E,h10km,mb4.7/4*
*IDC **06** 16:14:45.4±1.6,50.86N×143.51E,h0km,mb3.6/3,*
mb1 3.7/4,mb1mx3.4/39,mbtmp3.6/4,ML2.3/1,Error ellipse: s-maj=42.8km s-min=36.3km az=11.0
ISC 06 16:14:46.9±1.0,51.04N±0.07×143.48E±0.09,h10km,n7,
σ0°90/9,mb3.4/3,Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	**0.55**	**251**	*e*Pg	**Pg**	**16 14 56.9**	**-0.7**
TYV				AMB	AMB	16 14 58.1	
	760nm,0.2s						
TYV				A	A	16 15 05.1	
	2µm,0.3s						
TYV				A	A	16 15 05.1	
	2µm,0.3s						
UGL	**Uglegorsk**	**2.17**	**205**	*e*Pg	**Pb**	**16 15 27.2**	**+1.0**
UGL				AMB	AMB	16 15 29.2	
	120nm,0.5s						
UGL				*e*Sg	**Sg**	**16 15 56.6**	**+0.1**
UGL				A	A	16 16 02.5	
	600nm,0.9s						
UGL				A	A	16 16 02.5	
	500nm,0.9s						
NKL	**Nikolayevsk**	**2.73**	**322**	*e*P	**Pn**	**16 15 30.9**	**+0.2**
NKL				*e*S	**Sn**	**16 16 03.9**	**+0.2**
NKL				A	A	16 16 10.5	
	70nm,0.6s						
NKL				A	A	16 16 10.5	
	80nm,0.6s						
PETK	**Petropavlovsk-**	**9.00**	**71**	Pn	**Pn**	**16 16 57.0**	**+0.1**
	0.1nm,0.3s,baz=270,slow=6.4,SNR=8.2						
MKAR	**Makanchi Array**	**39.42**	**289**	P	**P**	**16 22 17.3**	**+0.5**
	0.3nm,0.7s,baz=44,slow=8.8,SNR=3.8						
WRA	**Warramunga Arr**	**71.13**	**189**	P	**P**	**16 26 03.7**	**-1.7**
	0.2nm,0.7s,baz=3.7,slow=6.4,SNR=3.9						
ASAR	**Alice Springs**	**74.86**	**189**	P	**P**	**16 26 27.2**	**-0.2**
	0.4nm,0.5s,baz=5.1,slow=5.4,SNR=20						

*ANF **06** 16:35:06.3±0.4,35.88N×115.28W,h12km±2km,ML2.6/14, Error ellipse: s-maj=2.7km s-min=1.7km az=62.0*
*REN **06** 16:35:07.2±1.8,35.89N±0.02×115.29W±0.05,h9km±6km, ML2.7/6, Error ellipse: s-maj=6.1km s-min=2.4km az=81.0*
*NEIC **06** 16:35:07.1±1.6,35.89N±0.04×115.30W±0.05,h8km±1km, Error ellipse: s-maj=6.2km s-min=5.1km az=106.0*
ISC 06 16:35:07.1±1.2,35.88N±0.02×115.29W±0.03,
h10km±11km,n48,σ0°84/58,California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHPR	**Sheep Range**	**0.63**	**10**	Pg	**Pg**	**16 35 18.6**	**-0.9**
TUQ	**Turquoise Moun**	**0.68**	**230**	P	**Pg**	**16 35 20.3**	**+0.1**
	baz=48,SNR=128						
TUQ				S	**Sg**	**16 35 29.2**	**+0.1**
	baz=48						
SHOC	**Shoshone, Teco**	**0.80**	**272**	P	**Pg**	**16 35 22.6**	**+0.1**
	baz=90						
SHOC				S	**Sb**	**16 35 33.5**	**-0.4**
	baz=90						
GMRC	**Granite Mounta**	**1.13**	**196**	P	**Pg**	**16 35 28.0**	**-0.8**
	baz=15,SNR=27						
GMRC				S	**Sg**	**16 35 43.0**	**-0.6**
	baz=15						
NEE2	**Needles Airpor**	**1.24**	**153**	P	**Pn**	**16 35 29.3**	**-1.1**
	baz=335						
NEE2				S	**Sb**	**16 35 46.4**	**-0.2**
	baz=335						
TPNV	**Topopah Spring**	**1.32**	**324**	Pg	**Pn**	**16 35 31.7**	**-0.1**
	baz=143,SNR=323						
TPNV				S	**Sb**	**16 35 48.6**	**-0.5**
	baz=143						
TPNV	**Topopah Spring**	**1.32**	**324**		**Pn**	**16 35 31.6**	**-0.1**
TPNV					**Sb**	**16 35 48.8**	**-0.3**
HEC	**Hector,Ludlow**	**1.35**	**219**	P	**Pn**	**16 35 31.2**	**-0.9**
	baz=38,SNR=18						
HEC				Sg	**Sg**	**16 35 51.8**	**+1.2**
	baz=38						
GSC	**Goldstone, Bar**	**1.36**	**245**	Pg	**Pb**	**16 35 32.9**	**+0.1**
	baz=64,SNR=60						
GSC				Sg	**Sg**	**16 35 52.0**	**+1.1**
	baz=64						
GSC	**Goldstone, Bar**	**1.36**	**245**		**Pn**	**16 35 31.8**	**-0.5**
FURC	**Furnace Creek,**	**1.40**	**295**	Pg	**Pb**	**16 35 33.2**	**-0.1**
	baz=114						
FURC				Sg	**Sg**	**16 35 52.9**	**+0.8**
	baz=114						
PRN	**Pahroc Range**	**1.54**	**7**		**Pn**	**16 35 34.8**	**+0.1**
PRN				Sn	**Sn**	**16 35 55.1**	**+0.3**
ICU	**Indian Springs**	**1.68**	**41**		**Pn**	**16 35 36.0**	**-0.6**
IRM	**Iron Mountain**	**1.72**	**176**	Pg	**Pb**	**16 35 39.2**	**+0.4**
	baz=356						
MPMC	**Manual Prospec**	**1.79**	**276**	P	**Pn**	**16 35 37.6**	**-0.7**
	baz=94						
BELC	**Belle Mtn. Jos**	**1.96**	**197**	P	**Pn**	**16 35 39.8**	**-0.8**
	baz=17,SNR=11						
LRMC	**Laurel Mtn Rad**	**1.99**	**259**	P	**Pn**	**16 35 40.4**	**-0.5**
	baz=77						
LCMT	**Little Creek M**	**2.00**	**55**		**Pn**	**16 35 41.1**	**0.0**
CCUT	**Cedar City**	**2.28**	**42**		**Pn**	**16 35 45.6**	**+0.6**
KNB	**Kanab**	**2.29**	**60**		**Pn**	**16 35 45.2**	**+0.1**
EDW2	**Edwards Air Fo**	**2.42**	**247**	P	**Pn**	**16 35 46.2**	**-0.6**
	baz=64,SNR=9.7						
PFO	**Pinyon Flats O**	**2.46**	**203**	P	**Pn**	**16 35 46.8**	**-0.5**
	baz=23						
PFO	**Pinyon Flats O**	**2.46**	**203**	Pn	**Pn**	**16 35 47.1**	**-0.2**
SZCU	**Shurtz Canyon**	**2.46**	**45**		**Pn**	**16 35 47.8**	**+0.3**
ISA	**Isabella, Lake**	**2.60**	**266**		**Pn**	**16 35 48.8**	**-0.4**
TPH	**Tonopah**	**2.68**	**325**		**Pn**	**16 35 51.5**	**+1.0**
MWC	**Mount Wilson**	**2.81**	**235**	Pn	**Pn**	**16 35 52.6**	**+0.4**
GLA	**Glamis**	**2.85**	**172**	Pn	**Pn**	**16 35 52.2**	**-0.4**
PSUT	**Pine Spring**	**2.89**	**23**		**Pn**	**16 35 54.2**	**+0.8**
WUAZ	**Wupatki**	**3.21**	**95**		**Pn**	**16 35 58.2**	**+0.5**
MTPU	**Mount Pierson**	**3.29**	**48**		**Pn**	**16 36 00.3**	**+1.3**
113A	**Mohawk Valley,**	**3.35**	**157**	Pn	**Pn**	**16 36 01.9**	**+2.4**
NV11	**Mina Array Sit**	**3.42**	**319**		**Pn**	**16 36 00.2**	**-0.4**
OMMB	**Old Mammoth Mi**	**3.44**	**301**		**Pn**	**16 36 00.2**	**-0.9**
X16A	**Lo Mia Camp, P**	**3.48**	**114**	Pn	**Pn**	**16 36 00.1**	**-1.3**
TKX	**Tecate**	**3.48**	**199**	Pn	**Pn**	**16 36 02.8**	**+1.5**
LHV	**Little Huntoon**	**3.49**	**314**		**Pn**	**16 36 02.1**	**+0.6**
NVAR	**Mina Array Bea**	**3.50**	**318**		**Pn**	**16 36 02.8**	**+1.0**
MDPB	**Devils Postpil**	**3.51**	**301**		**Pn**	**16 36 02.2**	**+0.2**
TCRU	**Three Creeks R**	**3.55**	**39**		**Pn**	**16 36 03.1**	**+0.7**
MVU	**Marysvale**	**3.59**	**42**		**Pn**	**16 36 03.4**	**+0.3**
MSU	**Marysvale**	**3.62**	**42**		**Pn**	**16 36 04.5**	**+1.1**
RYN	**Ryan**	**3.77**	**318**		**Pn**	**16 36 04.9**	**-0.5**
KVN	**Kaiserville**	**3.88**	**326**		**Pn**	**16 36 06.6**	**-0.3**
ELK	**Elko**	**4.86**	**0**	Pn	**Pn**	**16 36 18.8**	**-1.7**
MVCO	**Mesa Verde**	**5.63**	**74**	Pn	**Pn**	**16 36 30.3**	**-0.7**
PV23	**Carpenter Ridg**	**5.63**	**61**		**Pn**	**16 36 29.4**	**-1.8**
PV04	**Paradox Valley**	**5.69**	**62**	Pn	**Pn**	**16 36 33.4**	**+1.6**

IDC 06 16:37:23.2±8.3,2.43S×140.09E,h0km,mb3.4/2,
mb1 3.5/3,mb1mx3.3/28,mbtmp3.4/3,ML3.2/1,Error ellipse: s-maj=152.9km s-min=95.1km az=134.0,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.29**	**197**	P	P	16 41 39.2	+0.4
	0.1nm,0.3s,baz=17,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**21.95**	**195**	P	P	16 42 18.6	0.0
	0.3nm,0.5s,baz=24,slow=10,SNR=13						
STKA	**Stephens Creek**	**29.33**	**177**	P	P	16 43 27.4	-0.4
	1.1nm,0.8s,baz=23,slow=7.7,SNR=2.9						

*ANF **06** 16:56:42.7±0.7,31.35N×115.42W,h6km±6km,ML3.5/10, Error ellipse: s-maj=6.9km s-min=3.5km az=36.0*
*MEX **06** 16:56:44.7±1.0,31.10N×114.87W,h20km,MD3.8*
*PAS **06** 16:56:45.9±2.5,31.43N±0.01×115.37W±0.02,h10km±2km, Error ellipse: s-maj=3.5km s-min=3.2km az=93.0*
*ECX **06** 16:56:46.8±0.6,31.43N×115.34W,h6km±4km,MD3.5, ML3.9,Fault plane solution: NP1:ϕs180.00000°, δ0.00000°,λ-151.43000°.*
*NEIC **06** 16:56:46.1±2.2,31.44N±0.02×115.34W±0.02,h6km±6km, Error ellipse: s-maj=3.0km s-min=2.0km az=170.0*
ISC 06 16:56:45.9±1.0,31.44N±0.02×115.35W±0.02,h6km±9km,
n105,σ1°03/133,7C-5D,Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECBX	**El Chinero**	**0.26**	**82**	⇑*i*P	**Pg**	**16 56 51.2**	**+0.1**
VTX	**Valle De La Tr**	**0.37**	**263**	⇑*i*P	**Pg**	**16 56 54.0**	**+0.8**
VTX				*e*S	**Sg**	**16 56 59.2**	**+1.2**
VTX				⇑*e*		16 56 59.9	
VTX				IAML		16 56 59.9	
	comp=N,14µm,0.2s						
SPIG	**San Pedro Mart**	**0.40**	**194**	*i* P	**Pg**	**16 56 54.2**	**+0.4**
SPIG				*i* S	**Sg**	**16 57 00.1**	**+0.9**
SPIG	**San Pedro Mart**	**0.40**	**194**		**Pg**	**16 56 54.2**	**+0.4**
SPIG					**Sg**	**16 57 00.1**	**+0.9**
SPIG	**San Pedro Mart**	**0.40**	**194**	*e*P	**Pg**	**16 56 54.0**	**+0.1**
SPIG				*e*S	**Sg**	**16 56 59.9**	**+0.8**
SPX	**San Pedro Mart**	**0.41**	**193**		**Pg**	**16 56 53.3**	**-0.7**
SPX					**Sg**	**16 56 58.8**	**-0.6**
SPX	**San Pedro Mart**	**0.41**	**193**	⇑*i*P	**Pg**	**16 56 53.3**	**-0.7**
SPX				*e*S	**Sg**	**16 56 58.8**	**-0.6**
SFX	**San Felipe**	**0.59**	**133**		**Pg**	**16 56 57.2**	**-0.1**
SFX					**Sg**	**16 57 04.7**	**-0.2**
SFX	**San Felipe**	**0.59**	**133**	⇑*e*P	**Pg**	**16 56 57.2**	**-0.1**
SFX				*e*S	**Sg**	**16 57 04.8**	**-0.2**
SJX	**San Joaquin**	**0.61**	**302**	⇓*e*P	**Pb**	**16 56 59.6**	**+0.6**
SJX				*e*S	**Sb**	**16 57 09.8**	**+2.0**
SJX				IAML		16 57 12.5	
	comp=N,4µm,0.1s						
SJX				⇓*e*		16 57 12.5	
ESJX	**Sierra Juarez**	**0.76**	**318**		**Pg**	**16 56 59.5**	**-1.0**
ESJX					**Sg**	**16 57 09.8**	**-0.6**
SVX	**San Vicente**	**0.78**	**262**	*e*P	**Pg**	**16 57 00.8**	**0.0**
GUVIX	**Guadalupe Vict**	**0.90**	**15**		**Pb**	**16 57 03.9**	**0.0**
GUVIX					**Sb**	**16 57 17.1**	**+1.0**
SQX	**San Quintin**	**0.97**	**208**	⇑*i*P	**Pg**	**16 57 03.9**	**-0.6**
SQX				*e*S	**Sg**	**16 57 16.7**	**-0.4**
MBIG	**Mexicali**	**0.98**	**8**	*e*P	**Pb**	**16 57 05.4**	**+0.1**
MBIG				*e*S	**Sn**	**16 57 20.3**	**0.0**
MBIG	**Mexicali**	**0.98**	**8**		**Pb**	**16 57 05.4**	**+0.1**
MBIG					**Sn**	**16 57 20.3**	**0.0**
CPBX	**Cerro Prieto**	**0.98**	**2**		**Pg**	**16 57 04.3**	**-0.5**
CPBX					**Sb**	**16 57 18.6**	**+0.1**
CPBX	**Cerro Prieto**	**0.98**	**2**	⇓*e*P	**Pg**	**16 57 04.3**	**-0.5**
CPBX				IAML		16 57 29.3	
	comp=N,8µm,0.3s						
CPBX				⇑*e*		16 57 29.3	
CPBX				⇓*e*		16 57 29.8	
CPBX				IAML		16 57 29.8	
	comp=E,8µm,0.4s						
UABX	**UABC, Campus M**	**1.19**	**357**		**Sb**	**16 57 25.3**	**+0.6**
CCX	**Cicese**	**1.20**	**291**		**Pg**	**16 57 08.0**	**-0.9**
CCX					**Sg**	**16 57 24.1**	**-0.4**
SGL	**Mount Signal**	**1.25**	**345**		**Pn**	**16 57 09.7**	**-0.3**
SGL					**Sg**	**16 57 25.8**	**-0.3**
YUH	**Yuha Desert**	**1.30**	**338**		**Pn**	**16 57 08.7**	**-1.9**
YMD	**Yuma Desert**	**1.31**	**31**		**Pn**	**16 57 08.5**	**-2.3**
RMX	**La Rumorosa**	**1.31**	**332**		**Pn**	**16 57 09.4**	**-1.6**
RMX	**La Rumorosa**	**1.31**	**332**	⇓*e*P	**Pn**	**16 57 09.2**	**-1.8**
RMX				*e*S	**Sg**	**16 57 25.9**	**-2.4**
EMSC	**East Mesa**	**1.34**	**13**		**Pn**	**16 57 11.2**	**+0.1**
WESC	**Westside Schoo**	**1.36**	**346**		**Pb**	**16 57 11.9**	**+0.2**
WESC					**Sn**	**16 57 30.5**	**+0.8**
IKP	**Ik-Ko-Pah, Jac**	**1.37**	**332**	P	**Pn**	**16 57 09.3**	**-2.3**
	baz=153,SNR=104						
IKP				S	**Sb**	**16 57 29.3**	**-0.5**
	baz=153						
IKP	**Ik-Ko-Pah, Jac**	**1.37**	**332**		**Pn**	**16 57 10.4**	**-1.3**
SNR	**Schaffner Ranc**	**1.42**	**357**		**Pg**	**16 57 13.3**	**+0.1**
SNR					**Sg**	**16 57 33.2**	**+1.5**
COA	**Coachella**	**1.44**	**8**		**Sg**	**16 57 33.4**	**+1.3**
COK2	**Cook Ranch 2**	**1.45**	**347**		**Pb**	**16 57 13.3**	**+0.1**
TJIG	**Tijuana**	**1.50**	**312**	*e*P	**Pb**	**16 57 14.0**	**-0.2**
TJIG	**Tijuana**	**1.50**	**312**		**Pb**	**16 57 14.0**	**-0.2**
SWSC	**Sam W. Stewart**	**1.55**	**346**	Sb	**Sb**	**16 57 35.5**	**+0.6**
	baz=166						
TKX	**Tecate**	**1.55**	**317**		**Sn**	**16 57 33.6**	**-1.0**
PIX	**Pinacate**	**1.62**	**85**	Pn	**Pn**	**16 57 12.1**	**-3.0**
CBKC	**Canebrake**	**1.65**	**333**		**Pb**	**16 57 16.7**	**0.0**
BAR	**Barrett**	**1.67**	**318**		**Pn**	**16 57 15.4**	**-0.4**
BAR					**Sn**	**16 57 37.8**	**+0.3**
GLA	**Glamis**	**1.67**	**15**	P	**Pn**	**16 57 13.7**	**-2.0**
	baz=196,SNR=30						
GLA				S	**Sn**	**16 57 38.1**	**+0.5**
	baz=196						
GLA	**Glamis**	**1.67**	**15**		**Pn**	**16 57 13.8**	**-2.0**
GLA	**Glamis**	**1.67**	**15**		**Sb**	**16 57 38.9**	**+0.4**
MONP2	**Monument Peak**	**1.71**	**328**	P	**Pn**	**16 57 14.3**	**-2.2**
	baz=148,SNR=87						
MONP2				Sb	**Sn**	**16 57 39.3**	**+0.5**
	baz=148						
MONP2	**Monument Peak**	**1.71**	**328**		**Pb**	**16 57 17.5**	**-0.4**
MONP2					**Sn**	**16 57 38.9**	**+0.1**
OLP	**Otay Lakes Par**	**1.78**	**311**		**Pb**	**16 57 18.6**	**-0.3**
TJX	**Tijuana**	**1.80**	**307**	Pn	**Pn**	**16 57 18.1**	**+0.7**
SDRC	**San Diego Road**	**1.87**	**314**		**Pb**	**16 57 19.9**	**-0.6**
SDRC					**Sn**	**16 57 43.3**	**+0.9**
113A	**Mohawk Valley,**	**1.89**	**45**		**Pn**	**16 57 16.8**	**-1.9**
SLH	**Sleepy Hollow**	**1.91**	**337**		**Pb**	**16 57 21.1**	**-0.1**
BORC	**Borrego Spring**	**2.04**	**334**		**Pb**	**16 57 23.6**	**+0.2**
BORC					LR	16 57 50.0	
DPP	**Dos Picos Cty**	**2.06**	**320**		**Sb**	**16 57 49.4**	**-0.1**
MATG	**Mataguay Scout**	**2.07**	**328**		**Pb**	**16 57 23.8**	**-0.2**
MATG					**Sb**	**16 57 50.4**	**+0.4**
109C	**Camp Elliot, M**	**2.07**	**315**	Pg	**Pb**	**16 57 23.0**	**-1.0**
	baz=134						
109C				Sb	**Sb**	**16 57 49.3**	**-0.7**
	baz=134						
109C	**Camp Elliot, M**	**2.07**	**315**		**Pb**	**16 57 23.0**	**-1.0**
BC3	**Big Chuckawall**	**2.21**	**358**	P	**Pn**	**16 57 21.6**	**-1.7**
	baz=178						
214A	**Organ Pipe Nat**	**2.23**	**76**	P	**Pn**	**16 57 21.5**	**-1.9**
	baz=257,SNR=16						
214A	**Organ Pipe Nat**	**2.23**	**76**		**Pn**	**16 57 21.6**	**-1.9**
PLM	**Palomar**	**2.30**	**327**		**Pb**	**16 57 27.3**	**-0.6**
FRD	**Ford Ranch, An**	**2.31**	**333**

TOSP	**Speyside**	**0.98**	**87**	*eP*	Pg	17 16 09.8	-0.4
TOSP				*eS*	Sb	17 16 24.0	-0.4
GRSS	**Sisters**	**1.05**	**356**	*eP*	Pb	17 16 11.9	-0.3
GRSS				*eS*	Sb	17 16 27.1	+0.7
SVB	**Belmont**	**2.04**	**8**	*eP*	Pn	17 16 27.6	+1.0
SVB				*eS*	Sn	17 16 53.0	+0.4
SVCV	**St. Vincent, C**	**2.05**	**11**	*eP*	Pn	17 16 27.1	+0.3
SVCV				*eS*	Sn	17 16 52.6	-0.3
MCLT	**Moule a Chique**	**2.52**	**13**	*eP*	Pn	17 16 33.4	+0.1
MCLT				*eS*	Sn	17 17 03.9	-0.6
SLB	**Belfond**	**2.61**	**11**	*eP*	Pn	17 16 35.7	+1.2
SLB				*eS*	Sn	17 17 07.0	+0.1
SLPA	**Patience**	**2.66**	**13**	*eP*	Pn	17 16 36.3	+1.1
SLPA				*eS*	Sn	17 17 08.7	+0.7
SLCP	**Castries, St.**	**2.80**	**11**	*eS*	Sn	17 17 11.9	+0.5
SLBI	**Saint Lucia, B**	**2.82**	**11**	*eP*	Pn	17 16 37.8	+0.5
SLBI				*eS*	Sn	17 17 10.6	-1.2
SLW	**Petit Monier**	**2.82**	**12**	*eP*	Pn	17 16 38.4	+1.0
SLW				*eS*	Sn	17 17 13.1	+1.1
ORIV	**Oritupano**	**2.84**	**221**	*eP*	Pn	17 16 36.0	-1.6
ORIV				*eS*	Sn	17 17 12.1	-0.3
BIM	**Bigot**	**3.29**	**8**	*eP*	Pn	17 16 44.0	+0.2
BIM				*eS*	Sn	17 17 23.4	-0.1
FDF	**Fort de France**	**3.49**	**6**	*eP*	Pn	17 16 46.8	+0.2
FDF				*eS*	Sn	17 17 27.5	-1.0
TDBA	**Terre de Bas,**	**4.58**	**359**	*eP*	Pn	17 17 03.5	+1.9
TDBA	**Terre de Bas,**	**4.58**	**359**	*eS*	Sn	17 17 54.3	-1.0
TBG	**Guadaloupe-3**	**4.58**	**359**	*eP*	Pn	17 17 01.9	+0.3
MAGL	**Barre de l'ile**	**4.68**	**3**	*eP*	Pn	17 17 03.7	+0.7
MAGL	**Barre de l'ile**	**4.68**	**3**	*eS*	Sn	17 17 57.8	-0.1
CBE	**Ff, Capester**	**4.80**	**359**	*eP*	Pn	17 17 05.2	+0.6
CBE	**Ff, Capester**	**4.80**	**359**	*eS*	Sn	17 17 59.8	-1.0
ANBD	**Bethesda, Anti**	**5.77**	**358**	*eP*	Pn	17 17 18.6	+0.6
ANBD	**Bethesda, Anti**	**5.77**	**358**	*eS*	Sn	17 18 23.3	-1.5
BPA	**Boggy Peak**	**5.78**	**357**	*eP*	Pn	17 17 19.1	+1.1
BPA	**Boggy Peak**	**5.78**	**357**	*eS*	Sn	17 18 24.2	-0.8

*IDC **06** 17:21:21.1±1.1,34.°31N×141.°86E,h0km,mb3.7/7, mb1 3.9/10,mb1mx3.7/50,mbtmp3.8/10,ML3.3/3,MS3.1/8, Ms1 3.1/8,ms1mx2.8/50,Error ellipse: s-maj=27.7km s-min=18.2km az=78.0*
*JMA **06** 17:21:21.5±0.4,34.°10N×141.°80E,h25km±3km,M3.7*
*NEIC **06** 17:21:26.5±1.5,34.°28N±0.°07×141.°7E±0.°1,h38km±10km, mb4.2/5,Error ellipse: s-maj=18.0km s-min=8.9km az=112.0*

ISC 06 17:21:24.0±0.9,**34.°26N**±0.°05×**141.°78E**±0.°07,**h21**km,**n49,** σ**0**s**93**/50,**mb3.9**/9,**MS3.2**/5,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.77**	**301**	P		**Pb**		**17 21 37.6**	**-0.7**
BSO2	**Boso 2**	**0.98**	**300**	S		**Sn**		**17 21 55.2**	**-0.1**
BSO3	**Boso 3**	**1.18**	**298**	P		**Pn**		**17 21 44.3**	**-0.7**
BSO3				S		**Sn**		**17 22 02.1**	**+1.8**
BSO4	**Boso 4**	**1.40**	**302**	P		**Pn**		**17 21 48.2**	**+0.1**
BSO4				S		**Sb**		**17 22 06.3**	**-0.3**
KTR	**Katsuura**	**1.50**	**307**	*eS*		**Sn**		**17 22 08.7**	**+0.2**
JKUC	**kamogawauchiur**	**1.58**	**305**	P		**Pn**		**17 21 50.5**	**-0.3**
JKUC				*eS*		**Sn**		**17 22 09.9**	**-0.7**
CHOJ	**Chosi**	**1.63**	**333**	S		**Sn**		**17 22 11.8**	**+0.1**
JMKN	**Mikurajimanish**	**1.85**	**259**	P		**Pn**		**17 21 53.1**	**-1.4**
JHJ2	**Mitsune**	**2.00**	**236**	Pn		**Pn**		**17 21 56.8**	**+0.3**
JHJ	**Hachijo jima 2**	**2.01**	**236**	Pn		**Pn**		**17 21 57.7**	**+0.9**
	36nm,0.3s,baz=338,slow=22,SNR=5.2								
JHJ				Sn		**Sn**		**17 22 19.4**	**-1.8**
	129nm,0.3s,baz=264,slow=23,SNR=7.8								
JHJ				LR		LR		17 22 37.7	
	comp=Z,159nm,18.5s,baz=197,slow=37								
JYT	**Yasato**	**2.35**	**327**			**Pn**		**17 22 02.0**	**+0.6**
JOD2	**Odawara 2**	**2.43**	**295**	P		**Pn**		**17 22 01.4**	**-1.1**
JIZS	**Izushimoda**	**2.44**	**282**	P		**Pn**		**17 22 01.3**	**-1.3**
JMM	**Marumori**	**3.69**	**348**			**Pn**		**17 22 19.6**	**-0.1**
MJAR	**Matsushiro Arr**	**3.70**	**309**	Pn		**Pn**		**17 22 20.7**	**+0.8**
	0.9nm,0.3s,baz=149,slow=11,SNR=23								
MJAR				Sn		**Sn**		**17 23 04.6**	**+1.7**
	1.7nm,0.3s,baz=299,slow=20,SNR=8.5								
MJAR				LR		LR		17 24 00.6	
	comp=Z,133nm,19.9s,baz=155,slow=43								
MAJO	**Matsushiro**	**3.70**	**309**			**Pn**		**17 22 20.9**	**+0.9**
MAT	**Matsushiro**	**3.70**	**309**	P		**Pn**		**17 22 20.6**	**+0.6**
MAT				S		**Sn**		**17 23 02.8**	**-0.2**
JGF	**Kuroka**	**3.87**	**291**			**Pn**		**17 22 23.4**	**+1.1**
INU	**Inuyama**	**4.07**	**287**	Pn		**Pn**		**17 22 26.2**	**+1.3**
JSD	**Sado**	**4.72**	**324**	Pn		**Pn**		**17 22 34.7**	**+0.7**
JWT	**Wachi**	**5.35**	**283**	Pn		**Pn**		**17 22 42.1**	**-0.4**
JTM	**Tenmabayashi**	**6.54**	**355**	Pn		**Pn**		**17 22 59.2**	**+0.2**
ASAJ	**Asahikawa**	**9.87**	**3**	Pn		**Pn**		**17 23 42.0**	**-2.5**
	0.4nm,0.3s,baz=192,slow=19,SNR=1.7								
KSRS	**Korea Array**	**11.69**	**290**	LR		LR		17 28 55.9	
	comp=Z,64nm,18.3s,baz=108,slow=39								
MA2	**Magadan**	**26.01**	**10**	LR		LR		17 39 08.2	
	comp=Z,28nm,18.4s,baz=41								
SONM	**Songino Array**	**29.65**	**308**	P		**P**		**17 27 27.6**	**-0.6**
	0.6nm,0.6s,baz=117,slow=8.3,SNR=3.6								
TLY	**Talaya**	**32.42**	**314**	LR		LR		17 41 42.4	
	comp=Z,35nm,18.2s,baz=91,slow=38								
ZALV	**Zalesovo Beam**	**44.04**	**315**	P		**P**		**17 29 30.8**	**+0.9**
	0.7nm,0.7s,baz=101,slow=7.5,SNR=2.5								
ZALV	**Zalesovo Beam**	**44.04**	**315**	P		**P**		**17 29 30.5**	**+0.6**
MK31	**Makanchi Array**	**45.89**	**304**	P		**P**		**17 29 42.9**	**-1.9**
MKAR	**Makanchi Array**	**45.89**	**304**	P		**P**		**17 29 45.4**	**+0.6**
	1.1nm,0.8s,baz=96,slow=7.4,SNR=6.8								
MKAR				LR		LR		17 48 48.3	
	comp=Z,24nm,18.1s,baz=98,slow=36								
MKAR	**Makanchi Array**	**45.89**	**304**	P		**P**		**17 29 43.0**	**-1.8**
KURK	**Kurchatov**	**47.91**	**310**	P		**P**		**17 30 00.5**	**-0.1**
KURBB	**Kurchatov Arra**	**47.98**	**310**	P		**P**		**17 30 01.6**	**+0.6**
	2.2nm,0.8s,baz=83,slow=7.5,SNR=3.0								
ILAR	**Eielson Array**	**51.69**	**31**	P		**P**		**17 30 29.4**	**+0.3**
	0.8nm,0.9s,baz=259,slow=5.7,SNR=6.1								
ILAR	**Eielson Array**	**51.69**	**31**	P		**P**		**17 30 29.0**	**-0.1**
WRA	**Warramunga Arr**	**54.36**	**189**	P		**P**		**17 30 50.0**	**+0.8**
	0.9nm,0.7s,baz=2.9,slow=7.8,SNR=18								
WRA	**Warramunga Arr**	**54.36**	**189**	P		**P**		**17 30 49.3**	**+0.1**
KKAR	**Karatay Array**	**54.81**	**302**	P		**P**		**17 30 53.1**	**+0.8**
ASAR	**Alice Springs**	**58.09**	**189**	P		**P**		**17 31 16.5**	**+0.7**
	0.3nm,0.6s,baz=3.4,slow=6.4,SNR=6.6								
AB07	**Akbulak array**	**59.97**	**311**	P		**P**		**17 31 28.2**	**-0.4**
AB01	**Akbulak array**	**59.98**	**311**	P		**P**		**17 31 28.7**	**0.0**
AB31	**Akbulak array**	**59.98**	**311**	P		**P**		**17 31 28.5**	**-0.2**
AB31				IAmb		IAmb		17 31 31.3	
	comp=Z,1.6nm,0.9s								
ABKAR	**Akbulak array**	**59.98**	**311**	P		**P**		**17 31 28.7**	**0.0**
ABKAR				IAmb		IAmb		17 31 31.3	
	comp=Z,1.6nm,0.9s								
ABKAR	**Akbulak array**	**59.98**	**311**	P		**P**		**17 31 29.3**	**+0.6**
AB03	**Akbulak array**	**59.98**	**311**	P		**P**		**17 31 29.0**	**+0.3**
AB04	**Akbulak array**	**59.98**	**311**	P		**P**		**17 31 28.6**	**-0.1**
GEYT	**Alibeck**	**65.46**	**300**	LR		LR		18 03 43.2	
	comp=Z,18nm,18.5s,baz=15,slow=39								
AKASG	**Malin Array Be**	**76.68**	**323**	LR		LR		18 09 01.6	
	comp=Z,25nm,19.2s,baz=355,slow=37								

*IDC **06** 17:32:00.8±4.3,37.°29N×72.°08E,h136km±35km,mb3.4/5, mb1 3.4/10,mb1mx3.1/54,mbtmp3.9/10,MS4.3/1, Ms1 4.3/1,ms1mx2.6/32,Error ellipse: s-maj=37.8km s-min=17.0km az=158.0*
*BJI **06** 17:32:04.5±0.0,37.°61N×72.°07E,h192km,mb4.3/4*
*NEIC **06** 17:32:06.3±1.5,37.°51N±0.°05×72.°1E±0.°1,h196km±6km, mb4.2/9,Error ellipse: s-maj=13.4km s-min=7.6km az=82.0*
*NNC **06** 17:32:12.0±2.3,37.°96N×72.°28E,h204km±18km,mb3.2, mpv3.9,Error ellipse: s-maj=23.0km s-min=11.0km az=20.0*

ISC 06 17:32:05.6±0.5,**37.°45N**±0.°04×**72.°12E**±0.°05,**h200**km,**n76,** σ**2**s**01**/85,**mb3.6**/7,**8C-6D**,**Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.10**	**318**	Pn		**Pn**		**17 32 45.9**	**+0.6**
GAR				Sn		**Sn**		**17 33 14.0**	**-2.2**
BTK	**Batken**	**2.80**	**339**	Pn		**Pn**		**17 32 54.3**	**+1.4**
CEP	**Cherat**	**3.62**	**183**	P		**Pn**		**17 33 03.9**	**+1.0**
CEP				S		**Sn**		**17 33 47.0**	**-0.7**
KBL	**Kabul**	**3.83**	**222**	Pn		**Pn**		**17 33 07.2**	**+1.8**
NIL	**Nilore**	**3.90**	**166**	Pn		**Pn**		**17 33 07.8**	**+1.6**
THW	**Thamme Wali**	**4.65**	**184**	P		**Pn**		**17 33 16.1**	**+0.5**
AML	**Almayashu**	**4.83**	**14**	P		**Pn**		**17 33 18.1**	**-0.1**
	SNR=101								

UCH	**Uchtor**	**5.12**	**20**	P		**Sn**		**17 34 18.4**	**-3.6**
	SNR=7.4								
JMU	**Jammu**	**5.24**	**153**	*eP*		**Pn**		**17 33 23.4**	**+0.4**
JMU				*eS*		**Sn**		**17 34 20.0**	**-4.2**
EKS2	**Erkin-Say**	**5.36**	**13**	P		**Pn**		**17 33 25.0**	**+0.4**
	SNR=32								
AAK	**Ala-Archa**	**5.49**	**19**	P		**Pn**		**17 33 26.9**	**+0.5**
	SNR=14								
AAK	**Ala-Archa**	**5.49**	**19**	⇑P		**Pn**		**17 33 27.1**	**+0.7**
	16nm,0.6s								
SARP	**Sargodha**	**5.53**	**175**	P		**Pn**		**17 33 26.5**	**-0.3**
KBK	**Karagaybulak**	**5.64**	**22**	P		**Pn**		**17 33 29.6**	**+1.4**
	SNR=10.0								
ULHL	**Ulahol**	**5.75**	**32**	P		**Pn**		**17 33 29.3**	**-0.4**
	SNR=7.8								
KK31	**Karatay Array**	**5.78**	**348**	⇑P		**Pn**		**17 33 30.3**	**+0.4**
	6.7nm,0.4s,baz=171,slow=15,SNR=92								
KK31				⇑S		**Sn**		**17 34 32.7**	**-4.0**
	44nm,0.4s,baz=166,slow=15,SNR=31								
KK31	**Karatay Array**	**5.78**	**348**	Pn		**Pn**		**17 33 30.3**	**+0.4**
KKAR	**Karatay Array**	**5.78**	**348**			**Pn**		**17 33 30.3**	**+0.4**
KKAR	**Karatay Array**	**5.78**	**348**	Pn		**Pn**		**17 33 30.1**	**+0.1**
BOOM	**Boomskoye usch**	**5.83**	**29**	Pn		**Pn**		**17 33 30.7**	**0.0**
CHMS	**Chumysh**	**5.90**	**19**	P		**Pn**		**17 33 32.1**	**+0.6**
	SNR=8.2								
TKM2	**Tokmak 2**	**6.08**	**25**	P		**Pn**		**17 33 34.4**	**+0.4**
	SNR=5.3								
TKM2	**Tokmak 2**	**6.08**	**25**	⇓P		**Pn**		**17 33 34.1**	**+0.2**
	15nm,0.6s								
TKM2				⇓S		**Sn**		**17 34 39.1**	**-4.9**
	13nm,0.7s								
KDJ	**Kajisay**	**6.08**	**38**	Pn		**Pn**		**17 33 33.7**	**-0.3**
DHRM	**DHARAMSHALA**	**6.22**	**145**	*eP*		**Pn**		**17 33 36.2**	**+0.2**
DHRM				*eS*		**Sn**		**17 34 43.0**	**-4.4**
DHRM				IAML				17 34 46.9	
	comp=E,274nm,0.4s								
DHRM				IAML				17 34 47.4	
	comp=N,234nm,0.6s								
SMLA	**Simla**	**7.56**	**145**	*eS*		**Sn**		**17 35 11.6**	**-6.9**
SMLA				IAML				17 35 13.4	
	comp=N,216nm,0.5s								
SMLA				IAML				17 35 15.4	
	comp=E,164nm,0.5s								
PDGK	**Podgornoye**	**8.13**	**41**	⇑P		**Pn**		**17 33 59.2**	**-1.4**
	comp=E,2.3nm,0.7s								
KUDL	**Kundal**	**9.98**	**157**	*eP*		**Pn**		**17 34 22.2**	**-2.4**
KUDL				AMP				17 34 23.1	
	comp=Z,43nm,0.4s								
KUDL				*eS*		Sn		17 36 06.2	-10
GEYT	**Alibeck**	**11.11**	**277**	P		**Pn**		**17 34 37.2**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=108,slow=8.2,SNR=3.3								
GEYT				S		**Sn**		**17 36 36.1**	**-6.9**
	comp=Z,0.2nm,0.3s,baz=108,slow=32,SNR=2.6								
MAKZ	**Makanchi**	**11.86**	**35**	⇓P		**Pn**		**17 34 47.3**	**-1.3**
	comp=Z,4.5nm,1.0s								
MAKZ	**Makanchi**	**11.86**	**35**	Pn		**Pn**		**17 34 47.6**	**-1.0**
MK31	**Makanchi Array**	**12.00**	**36**	⇓P		**Pn**		**17 34 50.6**	**+0.3**
	comp=Z,2.2nm,0.5s,baz=228,slow=17,SNR=46								
MK31	**Makanchi Array**	**12.00**	**36**			**Pn**		**17 34 50.5**	**+0.2**
MKAR	**Makanchi Array**	**12.00**	**36**	P		**Pn**		**17 34 49.6**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=202,slow=9.8,SNR=12								
MKAR	**Makanchi Array**	**12.00**	**36**	Pn		**Pn**		**17 34 51.0**	**+0.7**
PYUN	**Piuthan**	**13.05**	**132**	*eP*		**Pn**		**17 35 02.3**	**-1.6**
	comp=Z,19nm,0.3s								
DANN	**Dangsing**	**13.33**	**130**	*eP*		**Pn**		**17 35 05.9**	**-1.6**
	comp=Z,9.4nm,0.3s								
KOLN	**Koldanda**	**13.65**	**132**	*eP*		**Pn**		**17 35 10.9**	**-0.5**
	comp=Z,9.2nm,0.4s								
KURBB	**Kurchatov Arra**	**13.95**	**17**	P		**Pn**		**17 35 13.2**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=204,slow=11,SNR=48								
KURBB	**Kutov Arra**	**13.95**	**17**	⇓P		**P**		**17 35 16.7**	**+0.2**
	comp=Z,25nm,1.1s								
KURK	**Kurchatov**	**14.05**	**17**			**P**		**17 35 17.5**	**-0.2**
GKN	**Gorkha**	**14.12**	**128**	*eP*		**Pn**		**17 35 17.4**	**+0.3**
	comp=Z,30nm,0.5s								
KKN	**Kakani**	**14.67**	**127**	*eP*		**Pn**		**17 35 24.4**	**+0.4**
	comp=Z,11nm,0.5s								
DMN	**Daman**	**14.69**	**128**	*eP*		**Pn**		**17 35 24.8**	**+0.5**
AB31	**Akbulak array**	**14.73**	**327**	⇑P		**P**		**17 35 25.3**	**0.0**
	comp=Z,3.8nm,0.5s,baz=143,slow=12,SNR=78								
AB31				S		**S**		**17 38 04.6**	**-3.3**
	comp=Z,1.8nm,0.5s,baz=152,slow=22,SNR=18								
ABKAR	**Akbulak array**	**14.73**	**327**	P		**Pn**		**17 35 24.6**	**+0.3**
ABKAR	**Akbulak array**	**14.73**	**327**			**P**		**17 35 25.6**	**+0.3**
PKIN	**Phulchoki**	**14.89**	**128**	*eP*		**P**		**17 35 28.1**	**+0.5**
	comp=Z,11nm,0.4s								
PKI	**Pulchoki**	**14.90**	**128**	*eP*		**Pn**		**17 35 27.6**	**+0.6**
	comp=Z,6.8nm,0.3s								
GUN	**Gumba**	**14.97**	**125**	*eP*		**P**		**17 35 28.8**	**+0.3**
	comp=Z,10.0nm,0.4s								
BVAR	**Borovoye Array**	**15.62**	**356**	P		**P**		**17 35 35.0**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=213,slow=29,SNR=28								
BVAR				S		**S**		**17 38 24.6**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=283,slow=13,SNR=4.3								
BRVK	**Borovoye**	**15.66**	**356**	⇑P		**P**		**17 35 35.8**	**+0.3**
	comp=Z,9.4nm,0.9s								
BRVK	**Borovoye**	**15.66**	**356**			**Pn**		**17 35 36.5**	**+0.9**
BRVK				IAmb		IAmb		17 35 38.0	
	comp=Z,8.5nm,0.8s								
RAMN	**Ramite**	**16.10**	**126**	*eP*		**Pn**		**17 35 44.4**	**+3.1**
AKTO	**Aktyubinsk**	**16.45**	**327**	P		**Pn**		**17 35 46.6**	**+1.6**
	comp=Z,1.8nm,0.3s,baz=112,slow=8.0,SNR=25								
AKTO				S		**S**		**17 38 43.5**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=202,slow=19,SNR=4.5								
AKTO	**Aktyubinsk**	**16.45**	**327**	⇓P		**Pn**		**17 35 47.3**	**+2.2**
	comp=Z,3.6nm,0.5s								
AKTO				⇑S		**S**		**17 38 46.2**	**+0.2**
	comp=Z,3.9nm,0.8s								
TAPN	**Taplejung**	**16.55**	**123**	*eP*		**Pn**		**17 35 50.8**	**+4.0**
ZAA0	**Zalesovo Array**	**18.68**	**24**	⇑P		**P**		**17 36 09.1**	**+0.6**
	comp=Z,4.8nm,0.8s								
ZAA0	**Zalesovo Array**	**18.68**	**24**	P		**P**		**17 36 09.5**	**+1.0**
ZALV	**Zalesovo Beam**	**18.68**	**24**	P		**P**		**17 36 09.6**	**+1.0**
	comp=Z,5.3nm,0.3s,baz=221,slow=10.0,SNR=137								
ZALV	**Zalesovo Beam**	**18.68**	**24**	P		**P**		**17 36 09.2**	**+0.7**
ARU	**Arti**	**21.05**	**339**	P		**P**		**17 36 34.1**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=152,slow=9.2,SNR=6.3								
ARU	**Arti**	**21.05**	**339**	P		**P**		**17 36 34.2**	**+0.4**
ARU				IAmb		IAmb		17 36 36.8	
	comp=Z,7.0nm,1.0s								
GTA	**Gaotai**	**21.75**	**76**	*eP*		**P**		**17 36 44.2**	**+2.8**
SONM	**Songino Array**	**27.06**	**57**	P		**P**		**17 37 31.6**	**+2.1**
	comp=Z,0.6nm,0.4s,baz=258,slow=7.3,SNR=4.9								
SONM	**Songino Array**	**27.06**	**57**	P		**P**		**17 37 30.1**	**+0.6**
ANTO	**Ankara**	**30.64**	**287**	P		**P**		**17 38 02.7**	**+1.6**
PALK	**Pallekele**	**31.03**	**163**	LR		LR		17 50 11.4	
	comp=Z,513nm,20.7s,baz=53,slow=35								
AKASG	**Malin Array Be**	**33.07**	**308**	P		P		17 38 29.9	+7.9
	comp=Z,0.4nm,0.3s,baz=81,slow=7.3,SNR=4.1								
AKASG	**Malin Array Be**	**33.07**	**308**	P		**P**		**17 38 20.9**	**-1.1**
ARCES	**ARCESS Array B**	**40.62**	**337**	P		**P**		**17 39 28.2**	**+2.8**
	comp=Z,0.7nm,0.4s,baz=101,slow=6.3,SNR=7.1								
NOA	**NORSAR Array B**	**44.17**	**322**	P		**P**		**17 39 56.7**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=103,slow=8.2,SNR=2.3								
TIXI	**Tiksi**	**44.56**	**22**	P		**P**		**17 39 58.9**	**+1.8**
TIXI				IAmb		IAmb		17 39 59.4	
	comp=Z,10nm,0.8s								
TORD	**Torodi Ar. Bea**	**66.64**	**269**	P		**P**		**17 42 36.4**	**+1.5**
	comp=Z,2.2nm,0.4s,baz=49,slow=5.8,SNR=36								
TORD	**Torodi Ar. Bea**	**66.64**	**269**	P		**P**		**17 42 36.0**	**+1.1**
PSA00	**Pilbara Seismi**	**73.92**	**134**	P		**P**		**17 43 18.6**	**-0.2**

*NEIC **06** 17:36:49.7±7.3,32.°93N±0.°04×13.°22W±0.°07,h15km±7km, Error ellipse: s-maj=9.4km s-min=4.8km az=64.0*
*CNRM **06** 17:36:51.9±1.4,32.°84N×13.°21W,h24km±15km,Error ellipse: s-maj=10.3km s-min=4.1km az=73.0*
*IGIL **06** 17:36:54.9,32.°84N×13.°12W,h24km,ML3.1*
*MDD **06** 17:36:54.1±0.6,32.°52N×12.°70W,h30km,mb4.1/19,Error ellipse: s-maj=13.9km s-min=5.1km az=142.0,PRXIMO*
*INMG **06** 17:36:59.0±2.6,32.°73N×12.°72W,h10km,ML3.1,Error ellipse: s-maj=8.5km s-min=3.7km az=130.0*

ISC 06 17:36:48.5±0.7,**32.°84N**±0.°05×**13.°04W**±0.°04,**h10**km,**n93,** σ**3**s**19**/137,**2C-1D**,**Madeira Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMPS	**Porto Santo**	**2.78**	**275**	P		**Pb**		**17 37 41.4**	**+3.2**
PMPS				S		**Sb**		**17 38 13.4**	**+1.1**
	35nm,0.2s								
PMPS	**Porto Santo**	**2.78**	**275**	*eP*		**Pb**		**17 37 41.4**	**+3.2**
PMPS				*eS*		**Sb**		**17 38 13.4**	**+1.1**
PMPS				A		A		17 38 17.9	
	70nm,0.2s								
EAH	**EAH**	**3.16**	**111**	P		**Pn**		**17 37 41.8**	**+3.6**

PMAR	**Madeira**	**3.27**	**269**	P		**Pb**		**17 37 47.9**	**+1.2**
PMAR				S		**Sb**		**17 38 24.7**	**-1.9**
	122nm,0.3s								
PMAR	**Madeira**	**3.27**	**269**	*eP*		**Pb**		**17 37 47.9**	**+1.2**
PMAR				*eS*		**Sb**		**17 38 24.7**	**-1.9**
PMAR				A		A		17 38 31.3	
	245nm,0.3s								
PMOZ	**Porto Moniz, M**	**3.50**	**271**	⇑P		**Pb**		**17 37 51.2**	**+0.7**
	12nm,0.2s,SNR=18								
PMOZ				S		**Sn**		**17 38 30.2**	**+5.5**
	123nm,0.4s,SNR=7.9								
PMOZ	**Porto Moniz, M**	**3.50**	**271**	⇑*eP*		**Pb**		**17 37 51.3**	**+0.7**
PMOZ				*eS*		**Sb**		**17 38 31.2**	**-2.1**
PMOZ				A		A		17 38 36.7	
	148nm,0.4s								
PMOZ	**Porto Moniz, M**	**3.50**	**271**			**Pb**		**17 37 51.3**	**+0.7**
PMOZ				IAML				17 38 35.3	
	comp=N,274nm,0.3s								
PMOZ				IAML				17 38 42.6	
	comp=E,264nm,0.5s								
EFAM	**Famara**	**3.73**	**187**	P		Pn		17 37 52.3	+6.2
	comp=E,1.1nm,0.1s,SNR=7.9								
EFAM				S		**Sn**		**17 38 29.1**	**-0.8**
	comp=E,1.2nm,0.3s,SNR=7.9								
EFAM	**Famara**	**3.73**	**187**			**Pn**		**17 37 48.4**	**+2.3**
EFAM						**Sn**		**17 38 29.1**	**-0.8**
CFUE	**Fuerteventura**	**4.25**	**191**	P		**Pn**		**17 37 56.8**	**+3.6**
	comp=E,4.1nm,0.1s,SNR=7.9								
CFUE				S		**Sn**		**17 38 40.7**	**-2.3**
	comp=E,16nm,0.4s,SNR=7.9								
CFUE	**Fuerteventura**	**4.25**	**191**			**Pn**		**17 37 57.2**	**+3.9**
CFUE						**Sn**		**17 38 40.9**	**-2.0**
OUK	**Oukaimeden**	**4.68**	**109**	P		**Pn**		**17 38 03.4**	**+3.9**
AVE	**Averroes**	**4.74**	**83**	P		**Pn**		**17 38 03.7**	**+3.7**
AVE	**Averroes**	**4.74**	**83**	*eP*		**Pn**		**17 38 04.1**	**+4.0**
AVE				*eS*		Sn		17 38 50.8	-4.3
EBAJ	**Bajamar**	**5.15**	**214**	P		**Pn**		**17 38 06.8**	**+1.2**
	comp=E,0.7nm,0.1s,SNR=7.9								
EBAJ				S		**Sn**		**17 39 02.0**	**-3.0**
	comp=E,19nm,0.6s,SNR=7.9								
EBAJ	**Bajamar**	**5.15**	**214**			**Pn**		**17 38 06.8**	**+1.2**
EBAJ						**Sn**		**17 39 02.0**	**-3.0**
GGC	**Guia, Gran Can**	**5.21**	**206**	S		**Sn**		**17 39 04.6**	**-2.1**
	comp=E,41nm,0.6s,SNR=7.9								
GGC	**Guia, Gran Can**	**5.21**	**206**			**Pn**		**17 38 07.3**	**+0.8**
GGC						**

EMIN						Sn	17 39 51.3	-3.2
PMTG	**Montargil**	**7.34**	**31**	P		**Pn**	17 38 39.3	+3.7
PMTG				S		**Sn**	17 39 54.5	-4.5
	comp=N,4.3nm,0.9s							
PMTG	**Montargil**	**7.34**	**31**	*e*Pn		**Pn**	17 38 39.3	+3.7
PMTG				*e*Sn		**Sn**	17 39 54.5	-4.5
PMTG				A		A	17 39 58.8	
	comp=N,4.3nm,0.9s							
PMRV	**Marv??o**	**8.00**	**33**	P		**Pn**	17 38 48.0	+3.2
PMRV				S		**Sn**	17 40 11.3	-4.1
	comp=N,3.1nm,0.2s							
PMRV	**Marv??o**	**8.00**	**33**	*e*Pn		**Pn**	17 38 48.0	+3.2
PMRV				*e*Sn		**Sn**	17 40 11.3	-4.1
PMRV				A		A	17 40 16.3	
	comp=N,3.1nm,0.2s							
HORN	**Hornachuelos**	**8.08**	**50**	P		**Pn**	17 38 49.7	+3.9
ECAB	**El Cabril**	**8.12**	**48**	P		**Pn**	17 38 50.2	+3.8
	comp=N,1.0nm,0.2s,SNR=6.5							
ECAB				S		**Sn**	17 40 14.1	-4.1
	comp=N,0.6nm,0.3s,SNR=7.9							
ECAB	**El Cabril**	**8.12**	**48**			**Pn**	17 38 50.2	+3.8
ECAB						**Sn**	17 40 14.1	-4.1
EGOR	**Sierra Gorda,**	**8.47**	**57**	S		**Sn**	17 40 23.9	-3.3
	comp=N,7.5nm,0.4s,SNR=7.9							
EADA	**Adamuz**	**8.71**	**50**	P		**Pn**	17 38 57.8	+3.3
	comp=N,0.4nm,0.1s,SNR=7.9							
EADA				S		Sn	17 40 27.0	-5.7
	comp=N,5.5nm,0.3s,SNR=7.9							
EADA	**Adamuz**	**8.71**	**50**			**Pn**	17 38 57.8	+3.3
EADA						Sn	17 40 27.0	-5.7
ELGU	**Los Guajares,**	**8.71**	**60**	S		Sn	17 40 24.3	-8.7
	comp=N,2.8nm,0.3s,SNR=7.9							
EQUE	**Quentar**	**8.99**	**58**	P		Pn	17 39 04.0	+5.5
	comp=N,0.1nm,0.0s,SNR=7.9							
EQUE				S		Sn	17 40 34.5	-5.4
	comp=N,25nm,1.2s,SNR=7.9							
EPLA	**Plasencia**	**9.13**	**36**	P		**Pn**	17 39 03.4	+3.2
	comp=N,0.3nm,0.1s,SNR=7.9							
EPLA				S		**Sn**	17 40 38.6	-4.5
	comp=N,4.2nm,0.4s,SNR=7.9							
EPLA	**Plasencia**	**9.13**	**36**			**Pn**	17 39 03.4	+3.2
EPLA						**Sn**	17 40 38.6	-4.5
EQES	**Quesada**	**9.53**	**56**	P		**Pn**	17 39 09.5	+3.7
	comp=N,0.3nm,0.1s,SNR=7.9							
EQES				S		Sn	17 40 46.9	-6.1
	comp=N,0.1nm,0.4s,SNR=7.9							
EQES	**Quesada**	**9.53**	**56**			**Pn**	17 39 09.0	+3.2
EQES						Sn	17 40 46.9	-6.1
MVO	**Moncorvo**	**9.59**	**28**	P		**Pn**	17 39 10.3	+3.6
	SNR=7.9							
MVO				S		**Sn**	17 40 49.9	-4.6
	comp=N,2.2nm,0.5s,SNR=7.9							
MVO	**Moncorvo**	**9.59**	**28**			**Sn**	17 40 49.9	-4.6
PAB	**San Pablo**	**9.70**	**44**	P		**Pn**	17 39 11.2	+3.2
	comp=N,0.0nm,0.1s,SNR=7.9							
PAB				S		Sn	17 40 51.8	-5.3
	comp=N,1.4nm,0.5s,SNR=7.9							
PAB	**San Pablo**	**9.70**	**44**			**Pn**	17 39 10.6	+2.5
ELOB	**Lobios**	**9.84**	**22**	S		**Sn**	17 40 56.1	-4.5
	SNR=7.9							
ESBB	**Sonseca Array**	**10.01**	**44**	Pn		**Pn**	17 39 12.6	+0.3
SESP	**Santiago Espad**	**10.04**	**55**	S		Sn	17 40 59.5	-6.2
	SNR=7.9							
ETOB	**Tobarra**	**10.98**	**55**	P		**Pn**	17 39 28.6	+2.9
	comp=N,0.4nm,0.1s,SNR=7.9							
ETOB				S		Sn	17 41 19.8	-8.9
	comp=N,1.7nm,0.3s,SNR=7.4							
ETOB	**Tobarra**	**10.98**	**55**			**Pn**	17 39 28.6	+2.9
ETOR	**Torete**	**11.86**	**45**	P		**Pn**	17 39 41.0	+3.3
	comp=N,0.4nm,0.1s,SNR=7.9							
ETOR				S		Sn	17 41 45.0	-5.1
	comp=N,26nm,3.7s,SNR=7.9							

*JMA **06** 17:38:28.2±0.2,26°.33N×125°.34E,h141km,M3.4*
*NEIC **06** 17:38:29.4±1.2,26°.2N±0°.1×125°.2E±0°.1,h155km±9km, mb4.1/12, Error ellipse: s-maj=18.6km s-min=15.6km az=80.0*
*IDC **06** 17:38:47.0±8.5,26°.65N×125°.71E,h357km±112km, mb3.0/5,mb1 3.1/7,mb1mx2.9/37,mbtmp3.8/7, Error ellipse: s-maj=77.0km s-min=14.9km az=60.0*
ISC 06 17:38:28.1±0.7,26°.32N±0°.08×125°.34E±0°.06,h145km±9km, n49,σ0s92/65,mb3.8/10,Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**1.30**	**89**	P	**Pn**	**17 38 55.5**	**+0.4**
JKE				S	**Sn**	17 39 15.6	-0.1
JIKM	**Ikemajima**	**1.39**	**183**	P	**Pn**	**17 38 56.3**	**+0.2**
JIKM				*e*S	**Sn**	17 39 17.5	0.0
JIRB	**Irabujima**	**1.49**	**186**	P	**Pn**	**17 38 57.3**	**+0.1**
JIRB				S	**Sn**	17 39 18.4	-1.0
JOGS	**Gusukube**	**1.56**	**178**	S	**Pn**	**17 38 58.5**	**+0.7**
JOGS				S	**Sn**	17 39 20.4	-0.2
JMJ2	**Miyako jima3**	**1.57**	**180**	P	**Pn**	**17 38 58.7**	**+0.7**
JMJ2				S	**Sn**	17 39 20.5	-0.4
JAGN	**Aguni-jima**	**1.73**	**81**	P	**Pn**	**17 39 00.1**	**+0.4**
JAGN				S	**Sn**	17 39 23.9	0.0
JTJ	**Tarama**	**1.77**	**199**	P	**Pn**	**17 39 00.6**	**+0.4**
JTJ				S	**Sn**	17 39 23.6	-1.2
JISG	**Ishigakijimahi**	**1.96**	**209**	P	**Pn**	**17 39 02.7**	**+0.3**
JISG				S	**Sn**	17 39 27.5	-1.3
JJT3	**Tamagusuku3**	**2.20**	**94**	P	**Pn**	**17 39 05.8**	**+0.5**
JJT3				S	**Sn**	17 39 34.2	+0.3
JIJ	**Ishigaki jima**	**2.23**	**209**	P	**Pn**	**17 39 05.3**	**-0.3**
JIJ				S	**Sn**	17 39 31.9	-2.6
JKRS	**Kuro-shima**	**2.40**	**210**	P	**Pn**	**17 39 07.5**	**-0.2**
JKRS				*e*S	**Sn**	17 39 37.7	-0.5
JNTH	**Nagotoyohara**	**2.41**	**85**	P	**Pn**	**17 39 07.9**	**+0.1**
JNTH				S	**Sn**	17 39 36.4	-2.0
IRIF	**Iriomote-Funau**	**2.46**	**217**	P	**Pn**	**17 39 08.3**	**-0.1**
IRIF				S	**Sn**	17 39 38.7	-0.7
JIH	**Iheya**	**2.46**	**73**	S	**Sn**	**17 39 38.5**	**-0.9**
HATJ	**Hateruma jima**	**2.65**	**212**	P	**Pn**	**17 39 10.6**	**-0.2**
HATJ				*e*S	**Sn**	17 39 43.7	0.0
JOW	**Kunigami**	**2.68**	**78**	P	**Pn**	**17 39 10.8**	**-0.3**
JOW				S	**Sn**	17 39 41.9	-2.4
YOJ	**Yonaguni jima**	**2.80**	**229**		**Pn**	**17 39 14.1**	**+1.3**
JYRO	**Yoronjima**	**2.87**	**75**	P	**Pn**	**17 39 13.2**	**-0.3**
JTK	**Tokunoshima**	**3.54**	**65**	P	**Pn**	**17 39 21.6**	**-0.5**
JTK				*e*S	**Sn**	17 40 01.7	-2.3
YHNB	**Yeheng**	**3.94**	**246**		**Pn**	**17 39 28.0**	**+0.5**
NACB	**Ninganchiao**	**4.01**	**239**		**Pn**	**17 39 28.0**	**-0.3**
YULB	**Yu-li**	**4.69**	**232**	Pn	**Pn**	**17 39 35.6**	**-1.7**
SSLB	**Suanglung**	**4.71**	**239**	Pn	**Pn**	**17 39 37.5**	**-0.1**
TPUB	**Ta-pu**	**5.23**	**236**	Pn	**Pn**	**17 39 44.6**	**+0.1**
KSRS	**Korea Array**	**11.31**	**11**	P	**P**	**17 41 15.5**	**+1.9**
	0.4nm,0.3s,baz=182,slow=10,SNR=8.8						
USA0B	**Ussuriysk Arra**	**18.64**	**15**	P	**Pn**	**17 42 36.0**	**-0.5**
USA0B				IAmb	IAmb	17 42 42.9	
	comp=Z,6.7nm,1.1s						
USRK	**Ussuriysk Ar.**	**18.64**	**15**	P	**P**	**17 42 35.5**	**+1.1**
	baz=193,slow=9.1,SNR=9.5						
USRK	**Ussuriysk Ar.**	**18.64**	**15**	P	**Pn**	**17 42 36.0**	**-0.5**
SONM	**Songino Array**	**26.13**	**330**	P	**P**	**17 43 48.9**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=154,slow=8.0,SNR=5.1						
SONM	**Songino Array**	**26.13**	**330**	P	**P**	**17 43 48.9**	**+0.2**
MTN	**Manton Dam**	**39.33**	**171**	P	**P**	**17 45 42.0**	**-1.3**
MK31	**Makanchi Array**	**39.55**	**313**	P	**P**	**17 45 44.9**	**0.0**
MKAR	**Makanchi Array**	**39.55**	**313**	P	**P**	**17 45 44.4**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=99,slow=10,SNR=11						
MKAR	**Makanchi Array**	**39.55**	**313**	P	**P**	**17 45 44.2**	**-0.6**
ZAA0	**Zalesovo Array**	**40.62**	**324**	P	**P**	**17 45 52.6**	**-1.0**
ZAA0				IAmb	IAmb	17 45 58.4	
	comp=Z,1.9nm,1.0s						
ZALV	**Zalesovo Beam**	**40.62**	**324**	P	**P**	**17 45 52.8**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=113,slow=8.6,SNR=5.6						
ZALV	**Zalesovo Beam**	**40.62**	**324**	P	**P**	**17 45 52.9**	**-0.6**
WRA	**Warramunga Arr**	**46.81**	**168**	P	**P**	**17 46 43.1**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=351,slow=8.5,SNR=4.9						
WRA	**Warramunga Arr**	**46.81**	**168**	P	**P**	**17 46 42.4**	**-0.9**
WB2	**Warramunga Arr**	**46.81**	**168**	P	**P**	**17 46 43.2**	**-0.1**
WB2				IAmb	IAmb	17 47 06.7	
	comp=Z,7.9nm,1.3s						
WC3	**Warramunga Arr**	**46.83**	**168**	P	**P**	**17 46 43.4**	**-0.1**
WC3				IAmb	IAmb	17 47 06.6	
	comp=Z,6.2nm,1.2s						
WR0	**Warramunga Arr**	**46.86**	**168**	P	**P**	**17 46 43.7**	**0.0**
WR0				IAmb	IAmb	17 46 46.2	
	comp=Z,8.5nm,1.5s						
AS31	**Alice Springs**	**50.38**	**170**	P	**P**	**17 47 10.4**	**-0.2**
ASAR	**Alice Springs**	**50.38**	**170**	P	**P**	**17 47 11.6**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=356,slow=14,SNR=20						
ASAR	**Alice Springs**	**50.38**	**170**	P	**P**	**17 47 11.1**	**+0.5**
AB07	**Akbulak array**	**54.68**	**313**	P	**P**	**17 47 41.3**	**-0.6**
AB02	**Akbulak array**	**54.69**	**313**	P	**P**	**17 47 41.6**	**-0.5**
POKR	**Poker Plat Res**	**65.29**	**28**	P	**P**	**17 48 55.4**	**+1.2**
POKR				IAmb	IAmb	17 49 20.2	
	comp=Z,5.6nm,0.9s						
SML	**Sawmill**	**65.46**	**31**	P	**P**	**17 48 56.6**	**+1.4**

IDC 06 17:52:50.7±2.4,7°.65N×93°.88E,h0km,mb3.5/3,mb1 3.6/4, mb1mx3.3/43,mbtmp3.5/4,ML3.4/1,MS3.7/2,Ms1 3.7/2, ms1mx2.7/40,Error ellipse: s-maj=86.8km s-min=27.7km az=64.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.82**	**24**	Pn	Pn	17 55 41.5	+0.8
	0.1nm,0.3s,baz=215,slow=14,SNR=4.6						
PALK	**Pallekele**	**13.07**	**269**	LR	LR	18 00 39.5	
	comp=Z,72nm,19.9s,baz=207,slow=36						
MKAR	**Makanchi Array**	**40.25**	**348**	P	P	18 00 28.9	-0.4
	0.6nm,0.6s,baz=166,slow=8.2,SNR=6.7						
ZALV	**Zalesovo Beam**	**46.74**	**353**	P	P	18 01 21.3	-0.2
	0.4nm,0.5s,baz=177,slow=5.1,SNR=2.5						
ASAR	**Alice Springs**	**49.98**	**130**	P	P	18 01 47.0	0.0
	0.2nm,0.7s,baz=310,slow=7.2,SNR=3.5						
FINES	**FINESS Array B**	**72.78**	**332**	LR	LR	18 39 08.8	
	comp=Z,214nm,21.3s,baz=272,slow=38						

*JMA **06** 18:25:43.9,24°.80N×122°.00E,h27km,M2.5*
*TAP **06** 18:25:43.0,24°.82N×122°.03E,h9km,ML2.9,C*
ISC 06 18:25:43.3±0.8,24°.82N±0°.02×122°.04E±0°.02,h12km±5km, n79,σ0s77/106,2C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.10**	**287**	*i* P	**Pg**	**18 25 45.8**	**-0.3**
	baz=288						
EGS				*i* S	**Sg**	18 25 47.7	-0.5
	baz=288						
NTC	**Toucheng**	**0.20**	**282**	*i* P	**Pb**	**18 25 47.7**	**-1.1**
	baz=281						
NTC				S	**Sb**	**18 25 50.8**	**+0.3**
	baz=281						
TWB1	**Santiao Chiao**	**0.20**	**346**	*i* P	**Pg**	**18 25 47.6**	**0.0**
	baz=349						
TWB1				*i* S	**Sb**	**18 25 50.5**	**-0.1**
	baz=349						
TIPB	**Shuangxi**	**0.25**	**309**	*i* P	**Pg**	**18 25 48.8**	**+0.3**
	baz=308						
TIPB				*i* S	**Sg**	**18 25 52.3**	**+0.3**
	baz=308						
TWC	**Suao**	**0.27**	**220**	P	**Pg**	**18 25 48.8**	**0.0**
	baz=228						
TWC				*i* S	**Sg**	**18 25 52.1**	**-0.4**
	baz=228						
NWF	**Wu-fen Shan**	**0.35**	**317**	P	**Pg**	**18 25 50.9**	**+0.6**
	baz=309						
NWF				S	**Sg**	**18 25 55.0**	**+0.1**
	baz=309						
WFSB	**Wu-fen Shan**	**0.35**	**317**	P	**Pg**	**18 25 50.7**	**+0.5**
	baz=309						
WFSB				S	**Sg**	**18 25 55.1**	**+0.2**
	baz=309						
TWE	**Neicheng**	**0.35**	**255**	P	**Pg**	**18 25 50.3**	**0.0**
	baz=253						
ENAH	**Nanao**	**0.42**	**210**	*e*P	**Pb**	**18 25 53.0**	**+0.4**
	baz=211						
TWA	**Mucha**	**0.45**	**292**	*e*P	**Pb**	**18 25 52.6**	**-0.5**
	baz=282						
TWA				S	**Sb**	**18 25 58.7**	**-1.1**
	baz=282						
ENTT	**Nioudou**	**0.47**	**248**	*e*P	**Pg**	**18 25 52.5**	**+0.1**
	baz=248						
NWLT	**Wulai**	**0.49**	**266**	P	**Pg**	**18 25 52.9**	**0.0**
	baz=266						
TAP1	**Taipei**	**0.52**	**296**	*e*P	**Pb**	**18 25 54.5**	**+0.2**
	baz=286						
TAP1				*e*S	**Sb**	**18 26 01.4**	**-0.5**
	baz=286						
NDT	**Datong Townshi**	**0.52**	**246**	P	**Pb**	**18 25 53.9**	**-0.6**
	baz=247						
TATO	**Taipei**	**0.53**	**288**	P	**Pb**	**18 25 54.2**	**-0.3**
	baz=279						
TATO				S	**Sg**	**18 26 00.7**	**+0.2**
	baz=279						
TAP	**Taipei**	**0.53**	**295**	*e*P	**Pn**	**18 25 56.5**	**-0.2**
	baz=286						
TAP				*e*S	**Sb**	**18 26 01.9**	**-0.4**
	baz=286						
YM01	**YM01**	**0.54**	**308**	P	**Pb**	**18 25 54.7**	**0.0**
	baz=307						
YM11	**YM11**	**0.55**	**310**	P	**Pb**	**18 25 55.2**	**+0.3**
	baz=308						
YM10	**YM10**	**0.55**	**308**	P	**Pb**	**18 25 54.9**	**0.0**
	baz=297						
YM10				*e*S	**Sg**	**18 26 01.6**	**+0.2**
	baz=297						
YM08	**YM08**	**0.55**	**312**	P	**Pb**	**18 25 54.6**	**-0.3**
	baz=311						
YM05	**YM05**	**0.55**	**309**	P	**Pb**	**18 25 55.0**	**0.0**
	baz=308						
YM04	**YM04**	**0.57**	**307**	P	**Pb**	**18 25 55.1**	**-0.1**
	baz=305						
YM03	**YM03**	**0.58**	**309**	*e*P	**Pn**	**18 25 56.6**	**-0.9**
	baz=308						
ANP	**Anpu**	**0.60**	**308**	*e*P	**Pb**	**18 25 55.9**	**+0.1**
	baz=297						
ANP				*e*S	**Sg**	**18 26 02.0**	**-0.9**
	baz=297						
YHNB	**Yeheng**	**0.62**	**257**	P	**Pg**	**18 25 55.2**	**-0.2**
	baz=249						
YHNB				*e*S	**Sb**	**18 26 04.4**	**-0.4**
	baz=249						
TWS1	**Kuangyinshan**	**0.63**	**297**	*e*P	**Pn**	**18 25 56.9**	**-1.2**
	baz=297						
NSK	**Sanguang**	**0.64**	**258**	P	**Pg**	**18 25 55.5**	**-0.1**
	baz=267						
NNSB	**Datong**	**0.71**	**237**	*e*P	**Pb**	**18 25 56.8**	**-0.9**
	baz=244						
NNSH	**Datong**	**0.71**	**237**	*e*P	**Pb**	**18 25 57.0**	**-0.7**
	baz=238						
NNS	**Nan Shan**	**0.71**	**239**	*e*P	**Pg**	**18 25 57.1**	**0.0**
	baz=245						
NACB	**Ninganchiao**	**0.76**	**213**	*e*P	**Pb**	**18 25 57.9**	**0.0**
	baz=204						
NACB				*e*S	**Sg**	**18 26 07.7**	**-0.1**
	baz=204						
ETLH	**Xiulin Townshi**	**0.79**	**220**	*e*P	**Pg**	**18 25 58.6**	**0.0**
	baz=232						
ETLH				*e*S	**Sg**	**18 26 09.7**	**+0.8**
	baz=232						
NCUH	**Zhongli**	**0.79**	**281**	*e*P	**Pn**	**18 26 02.1**	**+1.9**
	baz=280						
NCUH				*e*S	**Sn**	**18 26 12.0**	**0.0**
	baz=280						
TWD	**Chiawan**	**0.84**	**209**	*e*P	**Pg**	**18 25 59.4**	**0.0**
	baz=204						
JYNG	**Yonagunijimaku**	**0.90**	**114**	P	**Pb**	**18 26 00.6**	**-0.2**
JYNG				S	**Sb**	**18 26 13.0**	**+0.2**
LIOB	**Emei**	**0.95**	**260**	*e*P	**Pn**	**18 26 02.9**	**+0.5**
	baz=260						
LIOB				*e*S	**Sn**	**18 26 17.7**	**+1.8**
	baz=260						
YOJ	**Yonaguni jima**	**0.95**	**111**	P	**Pb**	**18 26 01.7**	**0.0**
	baz=112						
YOJ				S	**Sb**	**18 26 14.6**	**+0.3**
	baz=112						
YOJ	**Yonaguni jima**	**0.95**	**111**	P	**Pb**	**18 26 01.7**	**0.0**
YOJ				S	**Sb**	**18 26 14.5**	**+0.2**
SBCB	**Hsinchu**	**0.96**	**269**	*e*P	**Pn**	**18 26 05.2**	**+2.6**
	baz=285						
SBCB				*e*S	**Sn**	**18 26 17.9**	**+1.7**
	baz=285						
NSTT	**Nanjuang**	**0.96**	**259**	*e*P	**Pn**	**18 26 03.0**	**+0.4**
	baz=259						
NSTT				*e*S	**Sn**	**18 26 17.8**	**+1.5**
	baz=259						
TWT	**Tachien**	**0.96**	**235**	*e*P	**Pn**	**18 26 03.2**	**+0.4**
	baz=228						
WHF	**Hehuan Shan**	**0.97**	**227**	*e*P	**Pn**	**18 26 02.4**	**-0.7**
	baz=228						
WHF				*e*S	**Sn**	**18 26 15.3**	**-1.8**
	baz=228						
TDCB	**Techi**	**0.98**	**235**	*e*P	**Pn**	**18 26 02.8**	**-0.2**
	baz=228						
CHGB	**Renai**	**1.09**	**227**	*e*P	**Pg**	**18 26 04.3**	**+0.1**
	baz=228						
CHGB				*e*S	**Sg**	**18 26 20.3**	**+1.8**
	baz=228						
WHP	**Taichung City**	**1.13**	**242**	*e*P	**Pg**	**18 26 05.2**	**+0.2**
	baz=243						
ESL	**Shilin**	**1.14**	**209**	*e*P	**Pb**	**18 26 04.7**	**-0.3**
	baz=210						
NMLH	**Miaoli**	**1.17**	**257**	*e*P	**Pn**	**18 26 04.3**	**-1.1**
	baz=271						
NSY	**Sanyi**	**1.23**	**251**	*e*P	**Pg**	**18 26 08.9**	**+1.9**
	baz=269						
EGFH	**Guangfu**	**1.27**	**206**	*e*P	**Pg**	**18 26 08.6**	**+0.9**
	baz=214						
DPDB	**Guoxing**	**1.28**	**233**	*e*P	**Pg**	**18 26 08.2**	**+0.4**
	baz=234						
VWDT	**VWDT**	**1.34**	**218**	*e*P	**Pg**	**18 26 08.9**	**-0.1**
	baz=219						
SMLT	**Sun Moon Lake**	**1.39**	**228**	*e*P	**Pg**	**18 26 10.0**	**-0.1**
	baz=230						
TYC	**Yuchr**	**1.41**	**230**	*e*P	**Pg**	**18 26 11.1**	**+0.8**
	baz=222						
SSLB	**Suanglung**	**1.42**	**224**	*e*P	**Pg**	**18 26 10.2**	**-0.5**
	baz=226						
HGSD	**Ruisui**	**1.43**	**203**	*e*P	**Pg**	**18 26 10.8**	**0.0**
	baz=222						
EHY	**Hungye**	**1.46**	**207**	*e*P	**Pb**	**18 26 09.7**	**-0.7**
	baz=219						
WNT	**Mingjian**	**1.55**	**233**	*e*P	**Pb**	**18 26 11.1**	**-0.8**
	baz=225						
YULB	**Yu-li**	**1.57**	**206**	*e*P	**Pb**	**18 26 11.6**	**-0.7**
	baz=219						
TWF1	**Yuli**	**1.61**	**205**	*e*P	**Pb**	**18 26 13.1**	**+0.2**
	baz=218						
IRIF	**Iriomote-Funau**	**1.61**	**107**	P	**Pb**	**18 26 12.5**	**-0.5**
ALS	**Alishan**	**1.72**	**221**	*e*P	**Pg**	**18 26 16.8**	**+0.5**
	baz=223						
CHN5	**Tsauling**	**1.74**	**226**	*e*P	**Pg**	**18 26 16.6**	**0.0**
	baz=228						
WGK	**Gukeng**	**1.76**	**231**	*e*P	**Pg**	**18 26 16.4**	**-0.5**
	baz=232						
WDLH	**Douliu**	**1.77**	**231**	*e*P	**Pg**	**18 26 17.4**	**+0.2**
	baz=233						
ELDTW	**Lidau**	**1.87**	**210**	*e*P	**Pb**	**18 26 17.2**	**-0.2**
	baz=196						
JKRS	**Kuro-shima**	**1.88**	**107**	P	**Pn**	**18 26 15.2**	**-0.1**
JKRS				*e*S	**Sn**	**18 26 38.3**	**-0.7**
JIJ	**Ishigaki jima**	**1.97**	**103**	P	**Pn**	**18 26 17.0**	**+0.5**
TPUB	**Ta-pu**	**1.98**	**221**	*e*P	**Pg**	**18 26 20.3**	**-1.0**
	baz=224						
STYT	**Tauyuan**	**2.02**	**216**	*e*P	**Pg**	**18 26 21.8**	**-0.3**
	baz=219						
WTP	**Ta-pu**	**2.03**	**220**	*e*P	**Pg**	**18 26 21.8**	**-0.5**
	baz=209						
JISG	**Ishigakijimahi**	**2.08**	**96**	P	**Pn**	**18 26 19.2**	**+1.2**
JISG				*e*S	**Sn**	**18 26 42.8**	**-1.0**
TWK	**Hsinying**	**2.10**	**223**	*e*P	**Pg**	**18 26 22.1**	**-1.4**
	baz=226						
CHN1	**Nanshi**	**2.13**	**221**	*e*P	**Pg**	**18 26 22.7**	**-1.4**
	baz=224						
SGST	**Jiashian**	**2.18**	**218**	*e*P	**Pb**	**18 26 22.6**	**-0.1**
	baz=209						
SLGT	**Liugui**	**2.22**	**215**	*e*P	**Pb**	**18 26 23.9**	**+0.6**
	baz=219						
SSD	**Sandimen**	**2.43**	**212**	*e*P	**Pb**	**18 26 27.6**	**+0.6**
	baz=216						
MASBT	**Mashibuluo**	**2.54**	**211**	*e*P	**Pb**	**18 26 27.7**	**-1.2**
	baz=215						
LYJJ	**Jianjiangzhen**	**2.69**	**311**	*e*P	**Pn**	**18 26 24.7**	**-1.7**
	baz=305						
AXDP	**Jialang**	**3.70**	**272**	*e*P	**Pn**	**18 26 41.5**	**+1.2**
	baz=270						

*REY **06** 18:26:29.5,64°.66N×17°.40W,h1km*
*BGR **06** 18:26:32.0±0.0,65°.75N×16°.29W,h10km,mb4.7*
*MOS **06** 18:26:31.2±1.2,64°.61N×17°.48W,h10km,mb4.8/29, MS4.0/17,Error ellipse: s-maj=10.1km s-min=5.9km az=111.3*
*IDC **06** 18:26:31.1±0.5,64°.54N×17°.47W,h0km,mb4.3/20, mb1 4.5/23,mb1mx4.3/40,mbtmp4.3/23,ML3.0/2,MS4.0/43, Ms1 4.0/43,ms1mx3.9/53,Error ellipse: s-maj=16.4km s-min=10.2km az=23.0*
*NEIC **06** 18:26:32.9±1.8,64°.62N±0°.08×17°.3W±0°.1,h7km±4km, mb4.7/138,Error ellipse: s-maj=12.3km s-min=8.0km az=190.0*
*GCMT **06** 18:26:35.9±0.3,64°.70N±0°.02×16°.89W±0°.07,h15km±1km, MW4.8/103,Moment Tensor Solution. s20,c22; s103,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.14±.14; $M_{\theta\theta}$1.47±.09; $M_{\phi\phi}$0.67±.08; $M_{r\theta}$0.28±.17; $M_{\theta\phi}$0.02±.04; $M_{\phi r}$-0.72±.20; Best double couple: M_o1.91300×10^{16} NP1:ϕ_s79.00000°,δ42.00000°, λ-110.00000°. NP2:ϕ_s285.00000°,δ51.00000°, λ-73.00000°. Principal axes: T 1.4930, Plg5.0000°, Azm3.0000°; N 0.8390, Plg13.0000°, Azm94.0000°; P -2.3330, Plg76.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 06 18:26:31.0±0.7,64°.66N±0°.02×17°.38W±0°.02,h2km±4km, n433,σ1s66/389,mb4.6/139,MS4.0/55,17C-14D,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**2**	P	**Pg**	**18 26 32.7**	**-0.9**
	baz=5.3						
IDYN				S	**Sg**	**18 26 35.0**	**-0.4**
	baz=5.3						
IVON	**Vonarskard**	**0.16**	**275**	P	**Pg**	**18 26 33.0**	**-1.2**
	baz=276						
IVON				S	**Sg**	**18 26 35.8**	**-0.5**
	baz=276						
IHUS	**Husbondi**	**0.39**	**198**	P	**Pg**	**18 26 37.2**

IGRA Granastaoir 1.27 356 P **Pn** **18 26 51.5 -4.2**
baz=357
IGYG Gygjarholskot 1.29 254 P **Pn** **18 26 52.1 -3.9**
baz=254
IHVO Lagu-Hvolar 1.31 210 P **Pn** **18 26 53.3 -3.0**
baz=210
BORG Borgarnes 1.70 275 Pn **Pn** **18 26 59.5 -2.2**
19nm,0.3s,baz=99,slow=9.4,SNR=47
BORG Sn **Sg** **18 27 23.1 -2.4**
28nm,0.3s,baz=210,slow=20,SNR=5.6
SCO Scoresbysund 6.11 345 *e* **Pn** **18 27 58.6 -3.5**
baz=158,slow=8.6
SCO *i* P **Pn** **18 28 02.6 +0.5**
SCO *e*S Sb 18 29 20.7 -11
JMIC Jan Mayen 7.18 24 LR LR 18 30 37.8
comp=Z,1µm,18.2s,baz=286,slow=34
SUMG Summit 10.98 325 P **Pn** **18 29 09.6 +0.4**
SUMG Summit 10.98 325 Pn **Pn** **18 29 09.6 +0.4**
EKA Eskdalemuir Ar 11.72 136 Pn **Pn** **18 29 18.7 -0.3**
baz=325,slow=14,SNR=19
ESK Eskdalemuir 11.72 136 P **Pn** **18 29 20.0 +1.0**
ESK Eskdalemuir 11.72 136 Pn **Pn** **18 29 17.6 -1.4**
DAG Danmarks Havn 12.18 359 P Pn 18 29 29.1 +3.8
DAG Danmarks Havn 12.18 359 *i* P Pn 18 29 31.5 +6.2
DAG Danmarks Havn 12.18 359 *i* P Pn 18 29 31.6 +6.3
NC204 NORSAR Array S 13.18 92 **Pn** **18 29 38.1 -0.9**
NB2 NORSAR Subarra 13.48 92 Pn **Pn** **18 29 41.0 -2.1**
comp=Z,2.5nm,0.7s,baz=297,slow=14
NOA NORSAR Array B 13.48 92 Pn **Pn** **18 29 41.3 -1.8**
comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=6.5
NOA LR LR 18 34 55.7
comp=Z,499nm,21.3s,baz=300,slow=37
SFJD Kangerlussuaq 13.72 295 LR LR 18 34 27.2
comp=Z,893nm,22.0s,baz=88,slow=35
HFS Hagfors 14.99 93 Pn **P** **18 30 09.5 +0.1**
comp=Z,0.2nm,0.3s,baz=323,slow=6.1,SNR=14
HFS LR LR 18 35 52.6
comp=Z,463nm,21.7s,baz=292,slow=37
MUD Monsted U'grnd 15.31 110 *e*P **P** **18 30 11.1 -1.7**
MUD Monsted U'grnd 15.31 110 *i* P **P** **18 30 11.1 -1.7**
MUD Monsted U'grnd 15.31 110 *e*P **P** **18 30 11.2 -1.7**
SPITS Spitsbergen Ar 20.85 23 LR LR 18 35 25.1
comp=Z,360nm,21.5s,baz=200,slow=31
ARCES ARCESS Array B 17.08 55 LR LR 18 35 54.3
comp=Z,942nm,21.7s,baz=275,slow=33
BSEG Bad Segeberg 17.59 115 *e*P **P** **18 30 36.5 -1.5**
comp=Z,32nm,1.4s,baz=329,slow=11
IBBN Ibbenburen 17.88 122 *e*P **P** **18 30 42.4 +1.1**
comp=Z,73nm,1.7s,baz=329,slow=11
BUG Bochum--Univer 18.41 124 *e*P **Pn** **18 30 49.6 +2.4**
comp=Z,91nm,1.6s,baz=329,slow=11
BMRD Maredsous 18.52 130 P **Pn** **18 30 49.0 +0.6**
NRDL Niedersach Rie 18.61 118 *e*P **Pn** **18 30 49.1 -0.4**
comp=Z,56nm,1.3s,baz=329,slow=11
MEM Membach 18.67 128 P **Pn** **18 30 49.9 -0.3**
AHRW Bad Neuenahr-A 19.09 126 *e*P **Pn** **18 30 58.2 +2.8**
comp=Z,46nm,1.3s,baz=329,slow=11
CLZ Clausthal 19.23 119 *e*P **Pn** **18 30 56.8 -0.3**
comp=Z,50nm,1.1s,baz=329,slow=11
GTTG Gottingen 19.31 120 *e*P **Pn** **18 30 59.1 +1.1**
comp=Z,91nm,1.7s,baz=329,slow=11
WLF Walferdange 19.52 129 *e*P **Pn** **18 31 02.1 +1.6**
comp=Z,59nm,1.6s,baz=329,slow=11
FINES FINESS Array B 19.66 79 P **Pn** **18 31 01.8 -0.3**
comp=Z,0.2nm,0.3s,baz=308,slow=4.6,SNR=11
FINES FINESS Array B 19.66 79 P **Pn** **18 31 01.4 -0.6**
TNS Taunus Mts 19.84 124 *e*P **Pn** **18 31 06.3 +1.9**
comp=Z,27nm,1.1s,baz=329,slow=11
UBBA Unterbreizbach 19.91 121 *e*P **Pn** **18 31 04.7 -0.4**
comp=Z,51nm,1.7s,baz=329,slow=11
NEUB Neuenburg 20.26 118 *e*P Pn 18 31 08.9 -0.4
comp=Z,43nm,0.9s,baz=329,slow=11
MFF Saint Martin d 20.41 144 *e*P Pn 18 31 10.5 -0.7
MFF pmax pmax
comp=Z,47nm,1.3s
MOX Moxa 20.65 119 *e*P Pn 18 31 13.3 -0.7
comp=Z,85nm,1.8s,baz=329,slow=11
CLL Collm 20.66 116 *i* P Pn 18 31 12.5 -1.4
comp=Z,27nm,1.1s
CLL *e* 18 33 00.0
CLL *e*S Sn 18 35 08.0 +0.9
CLL Collm 20.66 116 *i* P Pn 18 31 12.5 -1.4
CLL pmax pmax
comp=Z,27nm,1.1s
CLL Collm 20.66 116 *e*P Pn 18 31 12.8 -1.1
comp=Z,27nm,1.1s,baz=329,slow=11
CLL Collm 20.66 116 P Pn 18 31 10.6 -3.3
PLN Plauen 20.99 118 *e*P Pn 18 31 16.1 -1.8
comp=Z,47nm,1.1s,baz=329,slow=11
WERD Werda 21.07 118 *e*P **P** **18 31 17.5 +1.2**
comp=Z,20nm,1.2s,baz=329,slow=11
FBE Freiberg 21.10 116 *e*P **P** **18 31 17.0 +0.6**
comp=Z,45nm,1.1s,baz=329,slow=11
ECH Echery 21.11 130 P **P** **18 31 15.3 -1.4**
ECH pmax pmax
comp=Z,26nm,1.1s
ECH Echery 21.11 130 P **P** **18 31 15.3 -1.4**
GUNZ Gunzen 21.15 118 *e*P **P** **18 31 18.2 +1.1**
comp=Z,91nm,1.6s,baz=329,slow=11
TANN Tannenbergstha 21.16 118 *e*P **P** **18 31 18.4 +1.2**
comp=Z,152nm,1.6s,baz=329,slow=11
WERN Wernitzgruen 21.23 118 *e*P **P** **18 31 18.6 +0.7**
comp=Z,72nm,1.2s,baz=329,slow=11
GRA1 Grafenberg Arr 21.29 121 P **P** **18 31 17.5 -1.0**
GRA1 IAmb IAmb 18 31 35.2
comp=Z,47nm,1.1s
GRF Grafenberg Ar 21.29 121 P **P** **18 31 17.5 -1.0**
GRF pmax pmax
comp=Z,47nm,1.1s
GRF Grafenberg Arr 21.29 121 *e*P **P** **18 31 20.3 +1.8**
comp=Z,51nm,1.5s,baz=329,slow=11
NKC Novy Kostel 21.30 118 *e*P **P** **18 31 19.5 +0.8**
NKC *e* 18 31 23.4
NKC *e*S Sn 18 35 21.0 -1.7
NKC MLR MLR
comp=Z,700nm,20.8s
NKC Novy Kostel 21.30 118 *e*P **P** **18 31 19.5 +0.8**
NKC *ep*P **sP** **18 31 23.4 +3.3**
NKC *e*S Sn 18 35 21.0 -1.7
NKC AMS AMS 18 38 50.0
comp=Z,700nm,20.8s
STU Stuttgart 21.33 126 P **P** **18 31 19.8 +0.8**
STU pmax pmax
comp=Z,69nm,1.2s
STU Stuttgart 21.33 126 *e*P **P** **18 31 21.0 +2.0**
comp=Z,48nm,0.9s,baz=329,slow=11
STU Stuttgart 21.33 126 P **P** **18 31 19.8 +0.8**
BRG Berggiesshubel 21.36 115 *i* P **P** **18 31 20.0 +0.7**
comp=Z,28nm,1.0s
BRG S Sn 18 35 28.0 +3.9
comp=N,429nm,13.7s
comp=E,972nm,26.9s
comp=Z,705nm,15.7s
BRG Berggiesshubel 21.36 115 *i* P **P** **18 31 20.0 +0.7**
BRG S Sn 18 35 28.0 +3.9
BRG pmax pmax
comp=Z,28nm,1.0s
BRG MLR MLR
comp=N,429nm,13.7s
BRG MLR MLR
comp=E,972nm,26.9s
BRG MLR MLR
comp=Z,705nm,15.7s
BRG Berggiesshubel 21.36 115 *e*P **P** **18 31 20.3 +1.0**
comp=Z,79nm,1.6s,baz=329,slow=11
MANZ Manzenberg 21.37 119 *e*P **P** **18 31 21.2 +1.7**
comp=Z,87nm,2.1s,baz=329,slow=11
BFO Black Forest 21.40 128 P **P** **18 31 19.1 -0.7**
BFO pmax pmax
comp=Z,28nm,1.1s
BFO Black Forest 21.40 128 *e*P **P** **18 31 21.2 +1.4**
comp=Z,66nm,1.7s,baz=329,slow=11
BFO Black Forest 21.40 128 P **P** **18 31 19.1 -0.7**
BFO IAmb IAmb 18 31 27.9
comp=Z,28nm,1.1s
VSU Vasula 21.52 86 *e*P **P** **18 31 20.9 +0.1**
ROTZ Rotzenmuhle 21.59 120 *e*P **P** **18 31 21.7 -0.1**
comp=Z,20nm,1.4s,baz=329,slow=11
FRB Frobisher Bay 21.80 291 LR LR 18 39 30.8
comp=Z,679nm,19.8s,baz=56,slow=36
PVCC Panska Ves 21.88 115 *e*P P 18 31 31.9 +7.0
PVCC MLR MLR
comp=Z,500nm,22.1s
PVCC Panska Ves 21.88 115 *e*P P 18 31 31.9 +7.0
PVCC *e*S Sn 18 35 37.9 +1.4
PVCC AMS AMS 18 40 20.0
comp=Z,500nm,22.1s
PABE Paberze 22.16 95 *e*P **P** **18 31 28.2 +0.4**
PRA Prague 22.19 116 *e*S Sn 18 35 40.0 -4.0
PRA AMS AMS 18 41 30.0
comp=Z,300nm,15.1s
PRU Pruhonice 22.30 116 *e*P **P** **18 31 30.1 +0.7**
PRU MLR MLR
comp=Z,700nm,25.0s
PRU Pruhonice 22.30 116 *e*P **P** **18 31 30.1 +0.7**
PRU *ex* x 18 31 40.3
PRU *e*S Sn 18 35 41.1 -5.5
PRU AMS AMS 18 39 20.0
comp=Z,700nm,25.0s
KSP Ksiaz 22.31 112 *e*P **P** **18 31 30.9 +1.4**
KSP *e*S Sn 18 35 45.6 -1.3
PBCC Pribram 22.33 117 *e*P **P** **18 31 30.9 +1.1**
PBCC *ex* x 18 31 34.1
WET Wettzell 22.35 120 *e*P **P** **18 31 30.8 +0.8**
comp=Z,45nm,1.8s,baz=329,slow=11
CHVC Chvalec 22.42 113 *e*P **P** **18 31 31.7 +1.0**
CHVC *e*S Sn 18 35 45.1 -4.3
CHVC AMS AMS 18 39 10.0
comp=Z,800nm,25.5s
UPC Upice 22.46 113 *e*P **P** **18 31 33.9 +2.8**
UPC MLR MLR
comp=Z,700nm,20.4s
UPC Upice 22.46 113 *e*P **P** **18 31 33.9 +2.8**
UPC *e*S Sn 18 35 45.8 -4.7
UPC AMS AMS 18 40 50.0
comp=Z,700nm,20.4s
OSTC Ostas 22.50 113 *e*P P 18 31 36.4 +4.8
OSTC *ex* x 18 31 40.0
OSTC *e*S Sn 18 35 45.7 -5.8
OSTC AMS AMS 18 39 10.0
comp=Z,800nm,25.8s
UBR Ueberruh 22.58 126 *e*P **P** **18 31 34.5 +2.0**
comp=Z,41nm,1.2s,baz=329,slow=11
FUR Furstenfeldbru 22.58 123 *e*P **P** **18 31 34.9 +2.5**
comp=Z,21nm,0.7s,baz=329,slow=11
KHC Kasperske Hory 22.62 119 *e*P **P** **18 31 33.3 +0.4**
KHC *e* 18 31 35.8
KHC *e*S **S** **18 35 43.5 +2.2**
KHC MLR MLR
comp=Z,800nm,25.6s
KHC Kasperske Hory 22.62 119 *e*P **P** **18 31 33.3 +0.4**
KHC *ep*P **sP** **18 31 35.8 +1.4**
KHC *e*S **S** **18 35 43.5 +2.2**
KHC AMS AMS 18 39 30.0
comp=Z,800nm,25.6s
DPC Dobruska-Polom 22.71 113 *e*P **P** **18 31 34.9 +1.1**
DPC MLR MLR
comp=Z,500nm,15.9s
DPC Dobruska-Polom 22.71 113 *e*P **P** **18 31 34.9 +1.1**
DPC *ex* x 18 31 48.3
DPC *e*S Sn 18 35 49.6 -6.9
DPC AMS AMS 18 41 10.0
comp=Z,500nm,15.9s
SENIN Lac Senin/Sane 22.78 132 P **P** **18 31 33.5 -1.3**
SENIN IAmb IAmb 18 31 55.0
comp=Z,18nm,1.0s
SUW Suwalki 22.83 98 *e*P **P** **18 31 34.9 -0.1**
SUW Suwalki 22.83 98 P **P** **18 31 36.0 +1.0**
SUW pmax pmax
comp=Z,38nm,1.0s
SUW Suwalki 22.83 98 P **P** **18 31 36.0 +1.0**
SUW IAmb IAmb 18 31 40.6
comp=Z,38nm,1.0s
DAVA Damuels 22.84 127 *e*P **P** **18 31 37.6 +2.3**
comp=Z,26nm,1.1s
GEC2 GERESS Array S 22.91 119 *e*P **P** **18 31 37.0 +1.1**
baz=329,slow=11
GEC2 GERESS Array S 22.91 119 P **P** **18 31 36.0 0.0**
GERES GERESS Array B 22.91 119 P **P** **18 31 37.0 +1.1**
comp=Z,5.4nm,0.9s,baz=327,slow=7.1,SNR=23
GERES LR LR 18 40 54.9
comp=Z,683nm,21.2s,baz=328,slow=38
GERES GERESS Array B 22.91 119 P **P** **18 31 37.0 +1.1**
GERES GERESS Array B 22.91 119 P **P** **18 31 36.8 +0.8**
RETA Reutte 22.97 125 *e*P **P** **18 31 38.4 +1.8**
comp=Z,6.7nm,1.1s
IZAR Zarasai 22.98 92 *e*P **P** **18 31 38.2 +1.8**
ISAL Salakas 23.04 93 *e*P **P** **18 31 39.2 +2.0**
KRLC Kraliky 23.11 113 *e*P **P** **18 31 38.8 +0.8**
KRLC MLR MLR
comp=Z,600nm,22.1s
KRLC Kraliky 23.11 113 *e*P **P** **18 31 38.8 +0.8**
KRLC *e*S Sn 18 35 56.6 -9.4
KRLC AMS AMS 18 41 10.0
comp=Z,600nm,22.1s
MOTA Moosalm 23.21 125 *e*P **P** **18 31 40.7 +1.5**
comp=Z,14nm,1.1s
TREC Trest 23.22 116 *e*P **P** **18 31 40.2 +1.1**
TREC MLR MLR
comp=Z,700nm,26.2s
TREC Trest 23.22 116 *e*P **P** **18 31 40.2 +1.1**
TREC *e*S Sn 18 36 00.3 -8.4
TREC AMS AMS 18 40 00.0
comp=Z,700nm,26.2s
IIGN Ignalina 23.23 93 *e*P **P** **18 31 40.8 +1.7**
DAVOX Davos/Dischmat 23.27 127 P **P** **18 31 40.2 +0.4**
comp=Z,7.3nm,0.8s,baz=314,slow=11,SNR=9.6
DAVOX LR LR 18 41 42.4
comp=Z,510nm,19.0s,baz=330,slow=39
TMCR Tamitsa 23.30 66 *e*P **P** **18 31 40.1 +0.4**
TMCR pmax pmax
comp=Z,18nm,0.4s
SQTA Sankt Quirin 23.36 125 *e*P **P** **18 31 41.5 +0.9**
comp=Z,17nm,1.0s
FETA Feichten 23.36 126 *e*P **P** **18 31 45.0 +4.4**
comp=Z,16nm,1.4s
TUE Stuetta 23.36 128 P **P** **18 31 42.1 +1.3**
TUE IAmb IAmb 18 32 03.2
comp=Z,32nm,1.1s
WATA Walderalm 23.39 124 *e*P **P** **18 31 43.9 +2.9**
comp=Z,14nm,1.0s
WTTA Wattenberg 23.47 124 P **P** **18 31 44.1 +2.2**
comp=Z,11nm,1.4s
IDID Didziasalis 23.47 92 *e*P **P** **18 31 40.9 -0.7**
RJOB Jochberg 23.49 122 *e*P **P** **18 31 41.5 -0.4**
comp=Z,11nm,1.0s,baz=329,slow=11
FUORN Ofenpass-Fuorn 23.54 127 P **P** **18 31 44.3 +1.7**
VRAC Vranov 23.64 114 P **P** **18 31 44.5 +1.2**
comp=Z,6.5nm,1.0s,baz=301,slow=8.3,SNR=5.4
VRAC LR LR 18 42 18.0
comp=Z,524nm,18.3s,baz=328,slow=40
VRAC Vranov 23.64 114 ⇓P **P** **18 31 43.7 +0.4**
VRAC Vranov 23.64 114 *e*P **P** **18 31 44.5 +1.2**
MORC Moravsky Berou 23.65 112 ⇑P **P** **18 31 44.8 +1.4**
MORC Moravsky Berou 23.65 112 *e*P **P** **18 31 44.2 +0.8**
MORC Moravsky Berou 23.65 112 P **P** **18 31 45.1 +1.7**
MORC pmax pmax
comp=Z,30nm,1.6s
MORC Moravsky Berou 23.65 112 P **P** **18 31 45.1 +1.7**
MORC IAmb IAmb 18 32 13.0
comp=Z,30nm,1.6s
BNI Bardonecchia 23.76 134 P **P** **18 31 46.6 +2.0**
BNI pmax pmax
comp=Z,29nm,1.4s
BNI Bardonecchia 23.76 134 P **P** **18 31 46.5 +2.0**
BNI IAmb IAmb 18 31 56.6
comp=Z,29nm,1.4s
KRUC Moravsky 23.76 115 *e*P **P** **18 31 44.9 +0.4**
NACGM Naroch 23.77 93 *e* **P** **18 31 43.0 -1.4**
OKC Ostrava-Krasne 23.84 111 *e*P **P** **18 31 46.6 +1.4**
OKC Ostrava-Krasne 23.84 111 *e*P **P** **18 31 46.6 +1.4**
OKC *e*S **S** **18 36 08.4 +6.8**
OJC Ojcow 24.21 109 *e*P **P** **18 31 49.4 +0.7**
OJC Ojcow 24.21 109 P **P** **18 31 49.1 +0.4**
OJC pmax pmax
comp=Z,13nm,1.1s
OJC Ojcow 24.21 109 P **P** **18 31 49.1 +0.4**
JAVC Velka Javorina 24.43 113 *e*P **P** **18 31 52.9 +2.1**
CONA Conrad Observa 24.48 117 *e*P **P** **18 31 52.8 +1.5**
comp=Z,13nm,1.0s
CTI Castel Tesino 24.52 125 P **P** **18 31 52.9 +1.2**
CTI pmax pmax
comp=Z,18nm,0.7s
CTI Castel Tesino 24.52 125 P **P** **18 31 52.9 +1.2**
CTI IAmb IAmb 18 31 58.5
comp=Z,18nm,0.7s
CIMO Cimolais 24.57 124 P **P** **18 31 53.5 +1.4**
CIMO IAmb IAmb 18 32 08.5
comp=Z,12nm,0.9s
SMOL Smolenice 24.61 114 *e*P **P** **18 31 54.2 +1.8**
SMOL pmax pmax
comp=Z,13nm,1.0s
SMOL Smolenice 24.61 114 *e*P **P** **18 31 54.2 +1.8**
MODS Modra-Piesok 24.66 115 *e*P **P** **18 31 53.9 +1.0**
MODS Modra-Piesok 24.66 115 *e*P **P** **18 31 53.9 +1.0**
STAL STALIGIAL 24.71 124 P **P** **18 31 53.4 +0.1**
PRED Cave del Predi 24.87 122 P **P** **18 31 56.2 +1.4**
PRED IAmb IAmb 18 32 01.0
comp=Z,13nm,1.1s
LANS Liptovska Anna 24.91 111 *e*P **P** **18 31 57.6 +2.5**
LANS pmax pmax
comp=Z,11nm,0.9s
LANS Liptovska Anna 24.91 111 *e*P **P** **18 31 57.6 +2.5**
ARSA Arzberg 24.91 119 *e*P **P** **18 31 56.9 +1.7**
comp=Z,7.4nm,0.8s
MTE Manteigas 24.96 162 P **P** **18 31 56.9 +1.2**
NIE Niedzica 25.04 109 *e*P **P** **18 31 56.5 +0.3**
NIE *e*S **S** **18 36 26.1 +5.2**
TEOL Teolo 25.12 126 P **P** **18 31 58.2 +1.2**
VYHS Vyhne 25.18 113 *e*P **P** **18 31 59.0 +1.5**
VYHS pmax pmax
comp=Z,264nm,3.2s
VYHS Vyhne 25.18 113 *e*P **P** **18 31 59.0 +1.5**
KLMR Klimovskoe 25.56 72 *e*P **P** **18 32 00.2 -0.5**
KLMR pmax pmax
comp=Z,27nm,1.4s
KLMR MLR MLR
comp=Z,160nm,12.0s
KLMR Klimovskoe 25.56 72 *e*P **P** **18 32 00.3 -0.5**
KLMR *e*P **P** **18 32 00.3 -0.5**
KLMR *e*P **P** **18 32 00.3 -0.5**
KLMR AMP 18 32 08.4
comp=Z,27nm,1.4s
KLMR LQ LQ 18 39 18.0
KLMR LQ LQ 18 39 18.0
KLMR LR LR 18 39 29.9
KLMR AMP 18 41 25.3
comp=Z,160nm,11.6s
KWP Kalwaria Pacla 25.86 106 *e*P **P** **18 32 05.0 +1.4**
KWP Kalwaria Pacla 25.86 106 P **P** **18 32 05.2 +1.6**
KWP pmax pmax
comp=Z,70nm,1.1s
KWP Kalwaria Pacla 25.86 106 P **P** **18 32 05.2 +1.6**
CRVS Cervenica-Dubn 25.91 109 *e*P **P** **18 32 05.7 +1.5**
CRVS pmax pmax
comp=Z,30nm,1.3s
CRVS Cervenica-Dubn 25.91 109 *e*P **P** **18 32 05.7 +1.5**
PSZ Piszkesteto 26.07 112 ⇓P **P** **18 32 07.2 +1.6**
PSZ Piszkesteto 26.07 112 P **P** **18 32 06.7 +1.1**
PSZ pmax pmax
comp=Z,20nm,1.1s
PSZ Piszkesteto 26.07 112 P **P** **18 32 06.7 +1.1**
PSZ IAmb IAmb 18 32 10.3
comp=Z,20nm,1.1s
SCHQ Schefferville 26.09 272 P **P** **18 32 06.7 +0.9**
comp=Z,10nm,0.7s,baz=35,slow=6.8,SNR=8.5
SCHQ LR LR 18 41 45.4
comp=Z,266nm,19.7s,baz=74,slow=35
SCHQ Schefferville 26.09 272 P **P** **18 32 07.9 +2.2**
SCHQ IAmb IAmb 18 32 10.7
comp=Z,12nm,0.8s
KOLS Kolonicke sedl 26.22 108 *e*P **P** **18 32 07.7 +0.7**
KOLS pmax pmax
comp=Z,16nm,1.0s
KOLS Kolonicke sedl 26.22 108 *e*P **P** **18 32 07.7 +0.7**
ESBB Sonseca Array 26.23 156 P **P** **18 32 08.4 +1.3**
ESBB IAmb IAmb 18 32 29.6
comp=Z,17nm,1.4s
ESDC Sonseca Array 26.23 156 P **P** **18 32 07.1 0.0**
comp=Z,5.0nm,0.9s,baz=347,slow=10,SNR=20
ESDC LR LR 18 42 17.6
comp=Z,215nm,18.2s,baz=350,slow=36
ESDC Sonseca Array 26.23 156 P **P** **18 32 07.6 +0.5**
LVV L'vov 26.26 104 *e*P **P** **18 32 08.1 +0.8**
LVV *e* 18 32 44.1
LVV *e*S **S** **18 36 35.4 -4.8**
LVV *e* 18 37 54.8
LVV pmax pmax
comp=Z,50nm,1.5s
LVV MLR MLR
comp=N,100nm,12.0s
LVV MLR MLR
comp=E,200nm,12.0s
LVV MLR MLR
comp=Z,200nm,12.0s
UZH Uzhgorod 26.47 108 *de*P **P** **18 32 10.4 +1.3**
UZH *e* 18 32 11.7
UZH *i* 18 32 14.6
RES Resolute Bay 26.50 324 LR LR 18 42 30.6
comp=Z,406nm,18.6s,baz=66,slow=36
RES Resolute Bay 26.50 324 P **P** **18 32 11.9 +2.7**
RES pmax pmax
comp=Z,20nm,1.5s
RES Resolute Bay 26.50 324 P **P** **18 32 11.9 +2.7**
RES IAmb IAmb 18 32 15.5
comp=Z,20nm,1.4s
OSSC Osservatorio P 26.59 129 P **P** **18 32 10.0 -0.3**
AKASG Malin Array Be 27.79 98 P **P** **18 32 20.4 -0.6**
comp=Z,4.6nm,0.9s,baz=324,slow=9.8,SNR=9.0
AKASG LR LR 18 44 15.9
comp=Z,139nm,19.8s,baz=310,slow=38
AKASG Malin Array Be 27.79 98 P **P** **18 32 20.4 -0.6**
AKBB Malin Array Si 27.79 98 P **P** **18 32 21.2 +0.2**
AKBB pmax pmax
comp=Z,11nm,1.2s
AKBB Malin Array Si 27.79 98 P **P** **18 32 21.2 +0.2**
OBN Obninsk 27.83 84 LR LR 18 43 53.0
comp=Z,68nm,20.1s,baz=334,slow=37
OBN Obninsk 27.83 84 *i* P **P** **18 32 21.4 +0.1**
OBN *e* 18 33 07.1
OBN pmax pmax
comp=Z,35nm,1.3s
OBN MLR MLR
comp=Z,232nm,17.0s
BUR08 Bucovina Ar. S 28.44 106 P **P** **18 32 27.8 +0.8**
BURAR Bucovina Array 28.47 106 P **P** **18 32 27.9 +0.7**
CJR Cluj-Napoca 28.53 109 ⇓P **P** **18 32 29.7 +1.9**
BZS Buzias 28.63 113 ⇑P **P** **18 32 29.2 +0.7**
GZR Gura Zlata 29.28 112 ⇑P **P** **18 32 35.2 +0.9**
SORM Soroca 29.37 102 ⇑P **P** **18 32 36.3 +1.2**
BIZ Bicaz 29.38 106 ⇑P P 18 32 37.5 +2.3
HERR Herculane 29.55 113 ⇑P **P** **18 32 38.6 +1.8**
VOIR 30.16 109 ⇑P **P** **18 32 43.9 +1.8**
PLOR Plostina 30.48 107 ⇓P **P** **18 32 47.0 +2.1**
MLR Muntele Rosu 30.48 108 ⇑P **P** **18 32 47.0 +1.9**
VRI Vrincioaia 30.50 107 ⇑P P 18 32 47.3 +2.2
LPSR Galich'ya Gora 30.58 86 *e*P **P** **18 32 46.8 +1.1**
LPSR pmax pmax
comp=Z,9.0nm,0.6s
NEHR Nehoiu 30.67 108 ⇑P **P** **18 32 48.6 +1.9**
BISRR Bisoca 30.75 107 ⇓P P 18 32 49.6 +2.2
KIRV Kirov 30.93 69 ⇑*e*P **P** **18 32 49.0 +0.2**
CFR Carcaliu 31.64 106 ⇑P **P** **18 32 56.7 +1.6**
VSR Storozhevoye 31.68 88 *e*P **P** **18 32 55.4 0.0**
VSR pmax pmax
comp=Z,5.0nm,0.6s
VORD Divnogorie 31.92 88 *e*P **P** **18 32 56.8 -0.7**
VORD pmax pmax
comp=Z,5.0nm,1.0s
VRH Novokhopyorsk 32.79 85 *e*P **P** **18 33 04.0 -1.1**
VRH pmax pmax
comp=Z,9.0nm,1.0s
AGG Agios Georgios 34.52 119 P **P** **18 33 21.4 +1.0**
AGG pmax pmax
comp=Z,26nm,1.1s
AGG Agios Georgios 34.52 119 P **P** **18 33 21.4 +1.0**
ARU Arti 36.04 66 LR LR 18 47 45.1
comp=Z,672nm,21.8s,baz=313,slow=35
ARU Arti 36.04 66 P P 18 33 35.8 +2.6
ARU S **S** **18 39 14.6 +2.0**
ARU SS **SnSn** **18 41 34.3 -1.8**
ARU MLR MLR
comp=Z,688nm,22.0s
NRIK Noril'sk 36.43 35 P **P** **18 33 38.3 +1.8**
comp=Z,2.1nm,0.7s,baz=342,slow=8.1,SNR=4.4
NRIK LR LR 18 51 37.0
comp=Z,86nm,18.3s,baz=8.5,slow=41
NRIK Noril'sk 36.43 35 ⇓*e*P P 18 33 39.4 +2.9
SOC Sochi 37.81 96 *e*P **P** **18 33 46.4 -2.1**
SOC *e*PPP PPP 18 35 42.2
SOC *e*S **S** **18 39 35.0 -4.9**
SOC *e*SS **SS** **18 42 20.0 -5.2**
SOC *e*SSS SSS 18 42 45.8
SOC MLR MLR

comp=Z,112nm,11.0s
GOF Gofitskoye 38.06 91 eP P 18 33 52.6 +2.0
GOF pmax pmax
comp=Z,63nm,1.4s
BR131 Keskin Array S 38.43 105 P P 18 33 53.8 -0.1
BR131 pmax pmax
comp=Z,5.0nm,1.0s
BR131 Keskin Array S 38.43 105 P P 18 33 53.8 -0.1
BRTR Keskin Array B 38.43 105 P P 18 33 53.9 0.0
comp=Z,4.3nm,0.8s,baz=308,slow=6.2,SNR=14
BRTR LR LR 18 52 29.8
comp=Z,52nm,19.8s,baz=309,slow=41
BRTR Keskin Array B 38.43 105 P P 18 33 54.9 +1.0
BRTR Keskin Array B 38.43 105 P P 18 33 54.9 +1.0
IDI Anoyia 38.77 119 LR LR 18 53 12.8
comp=Z,78nm,19.3s,baz=328,slow=41
IDI Anoyia 38.77 119 P P 18 33 55.7 -1.0
KIV Kislovodsk 38.79 93 eP P 18 33 59.1 +2.3
KIV e 18 35 27.8
KIV eS **S 18 39 55.6 +0.8**
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,616nm,16.0s
KIV Kislovodsk 38.79 93 P P 18 33 58.5 +1.7
KVAR Kislovodsk Arr 38.79 93 LR LR 18 50 43.6
comp=Z,144nm,18.8s,baz=264,slow=37
KBZ Khabaz 39.06 93 P P 18 33 59.8 +0.9
comp=Z,8.7nm,0.9s,baz=236,slow=24,SNR=21
KBZ LR LR 18 50 39.8
comp=Z,222nm,19.2s,baz=333,slow=37
KBZ Khabaz 39.06 93 *de*P P 18 34 01.5 +2.6
KBZ pmax pmax
comp=Z,11nm,0.9s
YKA Yellowknife Ar 39.26 313 LR LR 18 49 49.0
comp=Z,331nm,20.0s,baz=0.0,slow=36
ELL Elmali 39.45 112 P P 18 34 04.0 +1.6
ELL pmax pmax
comp=Z,47nm,1.0s
ELL Elmali 39.45 112 P P 18 34 04.0 +1.6
AKAS Kas 39.77 112 P P 18 34 06.1 +1.0
INK Inuvik 39.88 329 P P 18 34 07.0 +1.6
comp=Z,3.5nm,0.9s,baz=41,slow=14,SNR=5.1
INK PcP **PcP 18 36 11.9 +1.0**
comp=Z,1.9nm,0.9s,baz=66,slow=2.6,SNR=3.3
INK Inuvik 39.88 329 P P 18 34 06.6 +1.2
INK pmax pmax
comp=Z,9.0nm,1.3s
INK Inuvik 39.88 329 P P 18 34 06.6 +1.2
AKTO Aktyubinsk 40.24 73 LR LR 18 50 45.1
comp=Z,545nm,20.4s,baz=344,slow=36
ZEI Tsey 40.25 92 eP P 18 34 10.1 +0.9
ZEI pmax pmax
comp=Z,5.0nm,1.1s
AKH Akhalkalaki 41.20 94 P P 18 34 18.6 +1.6
AKH pmax pmax
comp=Z,21nm,1.3s
AKH Akhalkalaki 41.20 94 P P 18 34 18.6 +1.6
AKH IAmb IAmb 18 34 23.8
comp=Z,20nm,1.3s
ULM Lac du Bonnet 41.65 289 LR LR 18 51 22.0
comp=Z,142nm,18.9s,baz=41,slow=36
MAK Makhachkala 41.66 89 eP P 18 34 17.2 -3.3
MAK eS **S 18 40 30.4 -7.1**
MAK pmax pmax
comp=Z,122nm,1.0s
MAK MLR MLR
comp=Z,264nm,16.0s
ALLY Alegheny Colle 41.82 268 P P 18 34 24.0 +2.1
ABKAR Akbulak array 41.94 73 P P 18 34 23.1 +0.4
ABKAR Akbulak array 41.94 73 P P 18 34 22.7 0.0
TIXI Tiksi 42.02 15 eP P 18 34 25.3 +2.2
TIXI pmax pmax
comp=Z,59nm,1.3s
TIXI Tiksi 42.02 15 P P 18 34 25.4 +2.2
GAZ Gaziantep 42.08 104 P P 18 34 26.2 +2.2
GAZ IAmb IAmb 18 34 29.7
comp=Z,9.9nm,0.9s
TOLK Toolik Lake Re 42.77 336 P P 18 34 31.7 +2.3
TOLK IAmb IAmb 18 34 36.0
comp=Z,11nm,0.9s
GNI Garni 42.78 94 *e*P P 18 34 33.1 +3.3
GNI pmax pmax
comp=Z,17nm,1.3s
BMAR Burnt Mountain 42.92 333 P P 18 34 32.6 +2.0
BRVK Borovoye 43.09 62 eP P 18 34 32.9 +0.9
BRVK pmax pmax
comp=Z,11nm,1.7s
BRVK Borovoye 43.09 62 P P 18 34 32.6 +0.6
MARD Mardin 43.46 100 P P 18 34 36.2 +0.9
MARD IAmb IAmb 18 34 41.0
comp=Z,17nm,0.9s
FYU Fort Yukon 43.80 333 P P 18 34 38.8 +1.2
COLD Coldfoot 44.15 336 P P 18 34 40.7 +0.3
COLD IAmb IAmb 18 34 44.8
comp=Z,11nm,1.2s
TAM Tamanrasset 44.48 149 P P 18 34 43.5 -0.2
TAM pmax pmax
comp=Z,4.0nm,1.0s
TAM Tamanrasset 44.48 149 P P 18 34 43.5 -0.2
EGAK Eagle 44.51 329 P P 18 34 45.2 +1.9
DAWY Dawson 44.73 328 P P 18 34 47.4 +2.3
DAWY IAmb IAmb 18 34 54.0
comp=Z,9.9nm,1.2s
MMAI Mount Meron Ar 44.91 109 LR LR 18 56 12.6
comp=Z,64nm,20.2s,baz=50,slow=40
K27K Chicken 45.36 329 P P 18 34 50.9 +0.8
K27K IAmb IAmb 18 34 59.2
comp=Z,7.0nm,1.1s
POKR Poker Plat Res 45.52 333 P P 18 34 53.2 +1.9
POKR IAmb IAmb 18 34 56.9
comp=Z,13nm,1.5s
IL31 45.72 332 P P 18 34 55.2 +2.4
IL31 IAmb IAmb 18 34 59.8
comp=Z,12nm,1.4s
ILAR Eielson Array 45.72 332 P P 18 34 54.2 +1.4
comp=Z,7.0nm,1.2s,baz=21,slow=6.1,SNR=16
ILAR PcP **PcP 18 36 31.1 +0.5**
comp=Z,2.2nm,0.9s,baz=353,slow=3.1,SNR=8.9
ILAR LR LR 18 56 10.9
comp=Z,192nm,19.0s,baz=26,slow=39
ILAR Eielson Array 45.72 332 P P 18 34 54.9 +2.1
MDM Murphy Dome 45.81 333 P P 18 34 55.1 +1.5
COLA College 45.81 333 eP P 18 34 56.1 +2.5
COLA pmax pmax
comp=Z,11nm,1.2s
COLA College 45.81 333 P P 18 34 54.9 +1.3
COLA IAmb IAmb 18 34 60.0
comp=Z,12nm,1.1s
TCOL CIGO, UAF Yank 45.82 333 P P 18 34 55.2 +1.6
TCOL IAmb IAmb 18 34 60.0
comp=Z,11nm,1.1s
I23K Minto, Yukon-K 45.86 334 P P 18 34 58.0 +4.0
I23K IAmb IAmb 18 35 00.2
comp=Z,8.7nm,1.1s
IMAR Indian Mountai 45.88 337 P P 18 34 56.0 +1.8
P48A Milroy 45.90 271 P P 18 34 55.8 +1.2
P48A IAmb IAmb 18 34 57.3
comp=Z,13nm,1.1s
HDA Harding Lake 46.05 332 P P 18 34 56.6 +1.1
HDA IAmb IAmb 18 35 02.3
comp=Z,12nm,1.4s
DOT Dot Lake 46.13 330 P P 18 34 57.0 +0.8
BCAR Beaver Creek A 46.14 329 P P 18 34 58.1 +1.8
WCI Wyandotte Cave 47.30 271 P P 18 35 06.9 +1.3
WCI pmax pmax
comp=Z,11nm,0.7s
WCI Wyandotte Cave 47.30 271 P P 18 35 06.9 +1.3
ZAA0 Zalesovo Array 47.60 51 P P 18 35 07.5 -0.3
ZAA0 IAmb IAmb 18 35 12.8
comp=Z,9.7nm,1.4s
ZALV Zalesovo Beam 47.60 51 P P 18 35 08.2 +0.5
comp=Z,5.2nm,1.0s,baz=316,slow=6.4,SNR=7.2
ZALV LR LR 18 57 40.5
comp=Z,84nm,19.0s,baz=322,slow=39
ZALV Zalesovo Beam 47.60 51 P P 18 35 07.9 +0.2
EIL Elat 47.67 111 LR LR 18 56 12.8
comp=Z,175nm,21.1s,baz=294,slow=37
KURK Kurchatov 48.07 58 *de*P **P 18 35 12.3 +0.9**
KURK pmax pmax
comp=Z,11nm,0.8s
KURK Kurchatov 48.07 58 P P 18 35 11.9 +0.5
T47A Sharon Grove 48.69 271 P P 18 35 17.7 +1.3
EGMT Eagleton 48.92 297 P P 18 35 19.9 +1.7
W50A Signal Mountai 49.43 268 P P 18 35 24.3 +2.2
W50A IAmb IAmb 18 35 30.4
comp=Z,8.6nm,0.9s
GEYT Alibeck 50.37 84 P P 18 35 30.7 +1.4
comp=Z,4.6nm,0.8s,baz=302,slow=8.6,SNR=8.4
GEYT LR LR 18 59 14.5
comp=Z,237nm,19.7s,baz=320,slow=39
GEYT Alibeck 50.37 84 P P 18 35 30.5 +1.3
GYA0B ALIBECK ARRAY 50.37 84 P P 18 35 30.4 +1.1
GYA0B IAmb IAmb 18 35 32.2
comp=Z,6.4nm,0.9s
S39A Bolivar 50.77 277 P P 18 35 32.4 +0.2
KOWA Kowa 50.94 163 P P 18 35 34.8 +1.1
KOWA IAmb IAmb 18 35 35.2
comp=Z,6.9nm,1.1s
KK31 Karatay Array 51.23 70 P P 18 35 36.6 +1.0
KK31 pmax pmax
comp=Z,7.0nm,1.1s
KK31 Karatay Array 51.23 70 P P 18 35 36.6 +1.0
KK31 IAmb IAmb 18 35 42.2
comp=Z,7.2nm,1.1s
KKAR Karatay Array 51.23 70 P P 18 35 36.2 +0.6
KKAR 18 35 36.6
KKAR Karatay Array 51.23 70 P P 18 35 36.6 +1.0
KKAR Karatay Array 51.23 70 P P 18 35 36.2 +0.6
YNE Yellowstone No 51.52 295 P P 18 35 40.1 +2.0
YMP Mirror Lake Pl 51.80 295 P P 18 35 42.3 +2.1
YHL Hebgen Lake 52.11 296 P P 18 35 45.0 +2.5
K22A Casper 52.12 291 P P 18 35 44.4 +1.9
K22A IAmb IAmb 18 35 49.9
comp=Z,7.3nm,0.9s
H17A Grant Village 52.26 295 P P 18 35 43.0 -0.6
H17A IAmb IAmb 18 35 51.1
comp=Z,12nm,1.4s
SEY Seymchan 52.49 6 *e*P P 18 35 46.9 +2.2
MAKZ Makanchi 52.56 59 P P 18 35 46.0 +0.5
MAKZ pmax pmax
comp=Z,6.0nm,1.2s
MAKZ Makanchi 52.56 59 P P 18 35 46.0 +0.5
MK31 Makanchi Array 52.68 58 *e*P **P 18 35 46.4 0.0**
MK31 Makanchi Array 52.68 58 P P 18 35 46.4 0.0
MKAR Makanchi Array 52.68 58 P P 18 35 47.0 +0.6
comp=Z,3.3nm,0.9s,baz=326,slow=5.3,SNR=21
MKAR LR LR 19 00 02.1
comp=Z,90nm,18.9s,baz=306,slow=38
MKAR Makanchi Array 52.68 58 P P 18 35 46.4 0.0
TOA0 Torodi Ar. Sit 53.11 157 P P 18 35 49.6 -0.3
TOA0 IAmb IAmb 18 35 52.3
comp=Z,11nm,1.4s
TORD Torodi Ar. Bea 53.11 157 P P 18 35 49.1 -0.8
comp=Z,6.2nm,1.1s,baz=343,slow=8.1,SNR=15
TORD Torodi Ar. Bea 53.11 157 P P 18 35 50.0 +0.1
TPAW Teton Pass 53.16 295 P P 18 35 45.8 -4.5
AAK Ala-Archa 53.21 67 *e*P **P 18 35 51.6 +1.0**
AAK pmax pmax
comp=Z,17nm,1.0s
BW06 Boulder Array 53.23 293 P P 18 35 51.5 +0.7
BW06 IAmb IAmb 18 35 54.8
comp=Z,6.5nm,0.9s
PD31 Pinedale Array 53.23 293 P P 18 35 51.4 +0.6
PD31 IAmb IAmb 18 35 54.8
comp=Z,6.0nm,0.9s
PDAR Pinedale Array 53.23 293 P P 18 35 51.2 +0.5
comp=Z,3.9nm,0.8s,baz=55,slow=6.6,SNR=20
PDAR LR LR 18 57 57.9
comp=Z,352nm,21.8s,baz=30,slow=35
PDAR Pinedale Array 53.23 293 P P 18 35 50.8 +0.1
REDW Red Top Meadow 53.23 295 P P 18 35 52.4 +1.6
N23A Red Feather La 53.36 289 P P 18 35 52.6 +0.8
N23A IAmb IAmb 18 35 57.4
comp=Z,8.9nm,1.0s
PLID Pearl Lake 53.74 300 P P 18 35 55.5 +0.9
BOOM Boomskoye usch 53.91 66 P P 18 35 57.4 +1.7
BOOM pmax pmax
comp=Z,8.0nm,1.0s
BOOM Boomskoye usch 53.91 66 P P 18 35 57.4 +1.7
BOOM IAmb IAmb 18 35 59.2
comp=Z,7.9nm,1.0s
BTK Batken 53.91 72 P P 18 35 56.3 +0.7
BTK pmax pmax
comp=Z,23nm,1.3s
BTK Batken 53.91 72 P P 18 35 56.3 +0.7
GAR Garm 54.60 73 P P 18 36 01.8 +1.1
MOY Mondy 54.63 42 *e*P **P 18 36 02.6 +1.9**
MOY pmax pmax
comp=Z,55nm,3.2s
O20A White River Ci 54.93 291 P P 18 36 05.2 +2.0
O20A IAmb IAmb 18 36 07.8
comp=Z,6.1nm,0.8s
HWUT Hardware Ranch 55.00 294 P P 18 36 04.6 +0.9
HWUT IAmb IAmb 18 36 07.7
comp=Z,6.9nm,0.9s
RDMU Red Mountain 55.09 292 P P 18 36 05.2 +0.9
HRA Herat 55.14 82 P P 18 36 06.4 +1.7
TCUT Toone Canyon 55.36 294 P P 18 36 07.5 +1.2
TLY Talaya 55.37 40 *e*P **P 18 36 07.7 +1.7**
TLY *e*S S 18 43 56.2 +5.5
TLY *e*SS **SS 18 47 34.0 -0.2**
TLY pmax pmax
comp=Z,16nm,1.3s
TLY MLR MLR
comp=Z,282nm,14.0s
ZAK Zakamensk 56.43 41 *e*P **P 18 36 14.8 +1.1**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
KSH Kashi 56.45 68 *e*P P 18 36 18.4 +4.4
KSH pmax pmax
comp=Z,25nm,0.9s
KSH pmax pmax
comp=Z,290nm,4.0s
P17A Butcher Ranch, 56.50 292 P P 18 36 15.6 +1.2
PV22 Blue Mesa, Par 56.51 290 P P 18 36 16.8 +2.2
PV23 Carpenter Ridg 56.67 290 P P 18 36 16.8 +1.0
PV23 IAmb IAmb 18 36 18.5
comp=Z,9.0nm,0.9s
DUG Dugway, Tooele 56.70 294 P P 18 36 15.5 -0.3
DUG pmax pmax
comp=Z,10.0nm,1.3s
DUG Dugway, Tooele 56.70 294 P P 18 36 15.5 -0.3
DUG IAmb IAmb 18 36 36.2
comp=Z,9.9nm,1.3s
PV12 Saucer Basin, 56.71 290 P P 18 36 16.4 +0.4
SRU San Rafael Swe 56.72 292 P P 18 36 16.2 +0.2
SRU pmax pmax
comp=Z,7.0nm,1.1s
SRU San Rafael Swe 56.72 292 P P 18 36 16.2 +0.2
PV14 Lion Creek, Pa 56.75 290 P P 18 36 16.5 +0.2
PV14 IAmb IAmb 18 36 19.4
comp=Z,7.6nm,0.8s
PV11 David Mesa, Pa 56.75 290 P P 18 36 16.7 +0.4
PV20 West Nyswonger 56.75 290 P P 18 36 17.7 +1.4
PV20 IAmb IAmb 18 36 24.1
comp=Z,5.6nm,0.9s
PV16 Nyswonger Mesa 56.76 290 P P 18 36 15.6 -0.7
PV16 IAmb IAmb 18 36 24.5
comp=Z,6.6nm,0.9s
PV01 Paradox Valley 56.77 290 P P 18 36 17.2 +0.8
PV01 IAmb IAmb 18 36 25.6
comp=Z,11nm,1.2s
PV02 Paradox Valley 56.77 290 P P 18 36 17.4 +0.9
PV02 IAmb IAmb 18 36 20.0
comp=Z,8.6nm,0.8s
PV03 Paradox Valley 56.78 290 P P 18 36 17.7 +1.2
PV03 IAmb IAmb 18 36 24.6
comp=Z,8.8nm,1.1s
PV17 East Wray Mesa 56.80 290 P P 18 36 17.5 +0.8
PV17 IAmb IAmb 18 36 24.7
comp=Z,7.8nm,1.0s
PV18 Skein Mesa, Pa 56.81 290 P P 18 36 16.7 0.0
PV18 IAmb IAmb 18 36 24.7
comp=Z,12nm,1.1s
PV13 Radium Mtn., P 56.85 290 P P 18 36 18.3 +1.3
PV05 Paradox Valley 57.03 290 P P 18 36 18.7 +0.4
Q16A Castle Valley 57.14 292 P P 18 36 19.9 +0.9
WMQ Urumqi 57.19 56 P P 18 36 20.6 +1.4
WMQ pmax pmax
comp=Z,16nm,1.2s
WMQ Urumqi 57.19 56 P P 18 36 20.6 +1.4
KBL Kabul 57.88 77 P P 18 36 25.2 +0.9
KBL pmax pmax
comp=Z,3.0nm,0.8s
KBL Kabul 57.88 77 P P 18 36 25.2 +0.9
MSU Marysvale 57.89 293 P P 18 36 25.3 +1.0
MSU Marysvale 57.89 293 P P 18 36 25.3 +1.0
MVU Marysvale 57.91 293 P P 18 36 26.4 +1.9
MTPU Mount Pierson 58.30 292 P P 18 36 29.1 +1.7
SPR3 Spring Creek 3 58.32 295 P P 18 36 29.3 +1.8
SPR3 IAmb IAmb 18 36 39.9
comp=Z,7.4nm,1.2s
PSUT Pine Spring 58.54 294 P P 18 36 31.3 +2.5
DBIC Dimbokro 58.57 165 P P 18 36 28.0 -1.0
comp=Z,8.4nm,0.9s,baz=354,slow=9.2,SNR=8.1
DBIC LR LR 19 02 15.1
comp=Z,81nm,18.5s,baz=354,slow=37
DBIC Dimbokro 58.57 165 P P 18 36 28.8 -0.2
DBIC pmax pmax
comp=Z,14nm,1.1s
DBIC Dimbokro 58.57 165 P P 18 36 28.8 -0.2
ANMO Albuquerque 58.64 286 *e*P P 18 36 33.8 +4.2
ANMO pmax pmax
comp=Z,7.0nm,2.5s
PKCU Pink Cliffs 58.87 292 P P 18 36 33.7 +2.5
SZCU Shurtz Canyon 59.05 293 P P 18 36 34.7 +2.3
R11A Troy Canyon, C 59.37 295 P P 18 36 34.9 +0.3
R11A IAmb IAmb 18 36 43.2
comp=Z,8.4nm,1.4s
BNM Barren Site 59.40 286 P P 18 36 34.9 0.0
LENM Lemitar 59.53 286 P P 18 36 37.2 +1.5
LCMT Little Creek M 59.61 293 P P 18 36 36.7 +0.5
SONM Songino Array 59.61 40 P P 18 36 36.7 +0.7
comp=Z,2.0nm,0.9s,baz=330,slow=6.7,SNR=9.1
SONM LR LR 19 04 44.1
comp=Z,161nm,20.4s,baz=319,slow=38
SONM Songino Array 59.61 40 P P 18 36 36.5 +0.4
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 59.61 40 P 18 36 36.5 +0.4
JCT Junction City 59.70 278 P P 18 36 37.9 +1.1
JCT pmax pmax
comp=Z,9.0nm,1.1s
JCT Junction City 59.70 278 P P 18 36 37.9 +1.1
JCT IAmb IAmb 18 36 40.0
comp=Z,9.1nm,1.1s
KVN Kaiserville 59.73 298 P P 18 36 37.7 +0.6
KVN pmax pmax
comp=Z,4.0nm,1.1s
KVN Kaiserville 59.73 298 P P 18 36 37.7 +0.6
U15A North Rim 59.74 292 P P 18 36 38.9 +1.7
U15A IAmb IAmb 18 36 44.7
comp=Z,8.4nm,1.1s
ULN Ulaanbaatar 59.77 40 *de*P P **18 36 38.8 +1.6**
ULN pmax pmax
comp=Z,5.0nm,1.0s
ULN Ulaanbaatar 59.77 40 P P 18 36 36.1 -1.1
ULN IAmb IAmb 18 36 40.0
comp=Z,4.7nm,0.9s
WUAZ Wupatki 60.16 290 P P 18 36 41.4 +1.4
NVAR Mina Array Bea 60.35 297 P P 18 36 42.8 +1.4
comp=Z,0.2nm,0.3s,baz=49,slow=4.0,SNR=3.8
NVAR LR LR 19 02 30.2
comp=Z,490nm,20.7s,baz=36,slow=36
NVAR Mina Array Bea 60.35 297 P P 18 36 42.5 +1.1
NIL Nilore 60.40 74 P P 18 36 41.7 +0.1
NIL pmax pmax
comp=Z,18nm,1.1s
NIL Nilore 60.40 74 P P 18 36 41.7 +0.1
SHPR Sheep Range 60.81 294 P P 18 36 46.3 +1.8
SHPR IAmb IAmb 18 36 53.4
comp=Z,11nm,1.4s
MNTX Cornudas Mount 61.00 283 P P 18 36 47.5 +1.9
X16A Lo Mia Camp, P 61.14 290 P P 18 36 48.8 +2.0
X16A IAmb IAmb 18 36 55.5
comp=Z,4.8nm,1.0s
TX31 Lajitas Ar. Si 62.34 280 P P 18 36 56.0 +1.2
TX32 Lajitas Array 62.34 280 P P 18 36 56.2 +1.5
TX32 IAmb IAmb 18 37 22.8
comp=Z,6.8nm,1.9s
TXAR Lajitas Array 62.34 280 LR LR 19 03 24.7
comp=Z,296nm,19.9s,baz=0.0,slow=36
TXAR Lajitas Array 62.34 280 P P 18 36 55.1 +0.4
TXAR Lajitas Array 62.34 280 P P 18 36 55.1 +0.4
PETK Petropavlovsk- 62.51 3 LR LR 19 03 42.7
comp=Z,39nm,18.4s,baz=359,slow=36
GTA Gaotai 65.27 49 *e*P P 18 37 16.2 +2.2
GTA pP sP 18 37 22.4 +6.9
GTA sP pP 18 37 25.8 +11
GTA pmax pmax
comp=Z,4.0nm,0.9s
ROSC El Rosal 71.97 241 LR LR 19 10 03.4
comp=Z,57nm,18.0s,baz=302,slow=36
KSRS Korea Array 74.63 28 LR LR 19 12 34.6
comp=Z,56nm,20.3s,baz=340,slow=37
KMBO Kilima Mbogo 76.62 123 LR LR 19 15 21.6
comp=Z,71nm,18.9s,baz=89,slow=38
CMAR Chiang Mai Arr 84.09 59 P P 18 39 04.0 +0.8
comp=Z,1.9nm,0.9s,baz=323,slow=7.2,SNR=10
CMAR LR LR 19 19 35.2
comp=Z,69nm,18.2s,baz=346,slow=38
CMAR Chiang Mai Arr 84.09 59 *i* **P 18 39 04.8 +1.6**
CMAR pmax pmax
comp=Z,2.0nm,0.9s
NNA Nana 88.42 237 LR LR 19 14 50.5
comp=Z,20nm,21.8s,baz=178,slow=33
CPUP Villa Florida 95.86 215 LR LR 19 19 23.2
comp=Z,62nm,19.3s,baz=31,slow=33
BOSA Boshof 98.72 143 LR LR 19 26 32.7
comp=Z,58nm,18.4s,baz=356,slow=36
ASAR Alice Springs 134.94 38 PKP PKiKP 18 45 51.5 -1.1
comp=Z,1.1nm,0.9s,baz=326,slow=2.2,SNR=7.6
ASAR Alice Springs 134.94 38 PKIKP PKiKP 18 45 51.7 -0.9
ASAR Alice Springs 134.94 38 PKiKP 18 45 51.7 -0.9
MAW Mawson 143.69 140 PKP PKiKP 18 46 05.3 -3.7
comp=Z,1.1nm,0.7s,baz=315,slow=4.4,SNR=4.5
STKA Stephens Creek 144.70 32 PKP PKPdf 18 46 07.3 -1.2
comp=Z,1.6nm,0.6s,baz=315,slow=8.6,SNR=6.4
STKA Stephens Creek 144.70 32 PKIKP PKiKP 18 46 07.9 -4.4
STKA Stephens Creek 144.70 32 PKiKP 18 46 07.9 -4.4

*IDC **06** 18:34:05.4± 1.1, 36.°01N× 141.°64E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.3/44, mbtmp3.4/4, ML2.4/1, MS2.6/2, Ms1 2.6/2, ms1mx2.4/23, Error ellipse: s-maj=25.1km s-min=5.3km az=38.0*
*JMA **06** 18:34:13.7± 0.2, 35.°74N× 140.°96E, h35km± 1km, M2.9*
ISC 06 18:34:12.9± 1.5, 35.76N± 0.°06× 141.°1E± 0.°1, h35km, n19, σ0.°69/14, mb3.3/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.20**	**253**	P	Pn	**18 34 19.4**	**-0.3**
CHOJ				*e*S	Sn	**18 34 23.6**	**-0.7**
JHYU	**Hitachinakayam**	**0.71**	**325**	P	Pn	**18 34 26.9**	**+0.5**
JCN	**Nagara**	**0.80**	**245**	P	Pn	**18 34 27.9**	**+0.2**
JYT	**Yasato**	**0.86**	**303**	P	Pn	**18 34 28.2**	**-0.3**
JHO	**Hitachi**	**0.95**	**334**	P	Pn	**18 34 30.3**	**+0.6**
BSO4	**Boso 4**	**0.99**	**219**	P	Pn	**18 34 31.1**	**+1.0**
BSO3	**Boso 3**	**1.07**	**207**	P	Pn	**18 34 31.6**	**+0.5**
MJAR	**Matsushiro Arr** 0.6nm,0.3s,baz=93,slow=12,SNR=16	**2.46**	**289**	Pn	Pn	**18 34 51.4**	**+0.9**
MJAR					LR	LR	18 36 09.4
	comp=Z,95nm,18.2s,baz=140,slow=44						
MAT	**Matsushiro**	**2.46**	**289**	P	Pn	**18 34 51.8**	**+1.3**
MAT				S	Sn	**18 35 19.3**	**-0.1**
KSRS	**Korea Array**	**10.72**	**283**	LR	LR	18 41 20.3	
	comp=Z,24nm,18.3s,baz=128,slow=39						
H11N2	**WAKE ISLAND Hy 27.75** baz=310,slow=75,SNR=20	**118**		T	T	19 09 05.7	
H11N1	**WAKE ISLAND Hy 27.75** baz=310,slow=75,SNR=15	**118**		T	T	19 09 00.6	
H11N3	**WAKE ISLAND Hy 27.77** baz=310,slow=75,SNR=17	**118**		T	T	19 09 05.1	
H11S1	**WAKE ISLAND Hy 28.41** baz=312,slow=75,SNR=30	**120**		T	T	19 09 54.3	
H11S3	**WAKE ISLAND Hy 28.41** baz=312,slow=75,SNR=30	**121**		T	T	19 09 51.6	
H11S2	**WAKE ISLAND Hy 28.43** baz=312,slow=75,SNR=27	**120**		T	T	19 09 55.5	
MKAR	**Makanchi Array** 0.3nm,0.8s,baz=75,slow=8.2,SNR=2.7	**44.59**	**303**	P	Pn	**18 42 21.0**	**-0.5**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=6.1,slow=7.5,SNR=11	**55.77**	**188**	P	Pn	**18 43 46.3**	**0.0**
ASAR	**Alice Springs** 0.1nm,0.4s,baz=24,slow=9.3,SNR=2.7	**59.49**	**189**	P	Pn	**18 44 12.4**	**-0.1**

*OMAN **06** 18:43:29.8± 0.1, 27.°69N× 55.°24E, h104km± 1km, ml4.7/13, Error ellipse: s-maj=3.9km s-min=2.4km az=288.0*
*THR **06** 18:43:30.2± 0.5, 26.°97N× 55.°04E, h16km± 8km, ML4.5*
*IDC **06** 18:43:31.2± 0.5, 27.°16N× 55.°16E, h0km, mb4.5/29,*

mb1 4.6/35,mb1mx4.5/46,mbtmp4.5/35,ML4.3/6,MS3.5/7, Ms1 3.5/7,ms1mx3.1/48,Error ellipse: s-maj=13.3km s-min=10.1km az=23.0

MOS ***06*** *18:43:31.9±1.0,27.˙19N×55.˙15E,h17km,mb4.8/21,Error ellipse: s-maj=6.4km s-min=4.4km az=110.7*

DSN ***06*** *18:43:31.8±1.3,27.˙40N×55.˙26E,h10km,ML4.6/12,Error ellipse: s-maj=19.0km s-min=6.3km az=34.0*

NEIC ***06*** *18:43:32.7±1.5,27.˙19N±0.˙06×55.˙09E±0.˙07,h10km±1km, Error ellipse: s-maj=10.8km s-min=10.3km az=217.0*

TEH ***06*** *18:43:33.1,27.˙19N×55.˙15E,h12km, ML4.6*

BGR ***06*** *18:43:36.5±0.0,27.˙71N×55.˙71E,h33km,mb4.6*

ISC 06 18:43:33.3±0.6,27.˙15N±0.˙03×55.˙15E±0.˙03,h13km±4km, **n510,σ1§15**/524,**mb4.7**/140,**MS3.5/8,12C-15D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.86**	**307**	*e*Pg		**Pg**	**18 43 49.2**	**-0.8**
LAR1				*e*			18 44 13.9	
BNDS	**Bandar-Abbas**	**0.94**	**75**	*e*Pg		**Pg**	**18 43 50.7**	**-0.8**
BNDS	comp=N,11μm,0.4s			IAML			18 44 11.0	
BNDS	**Bandar-Abbas**	**0.94**	**75**	*e*Pg		**Pg**	**18 43 50.7**	**-0.8**
GENO	**Geno**	**0.94**	**75**	*e*Pg		**Pg**	**18 43 50.6**	**-0.9**
GENO				*e*			18 44 09.8	
SHME	**Shamm** SNR=74	**1.41**	**141**	*e*P		**Pn**	**18 43 59.1**	**+0.5**
SHME				S		**Sg**	**18 44 20.6**	**+1.9**
SHME	**Shamm**	**1.41**	**141**	*e*Pn		**Pb**	**18 44 00.0**	**+0.6**
BANOM	**Banah** SNR=739	**1.60**	**140**	*e*P		**Pb**	**18 44 02.2**	**-0.4**
BANOM				S		**Sg**	**18 44 25.6**	**+0.9**
BANOM	**Banah** SNR=24	**1.60**	**140**	P		**Pb**	**18 44 02.4**	**-0.2**
BANOM				S		**Sg**	**18 44 25.7**	**+0.9**
BANOM	**Banah**	**1.60**	**140**	*e*Pn		**Pg**	**18 44 03.8**	**-0.2**
UMQ	**Umm Al-Quwin** SNR=9.1	**1.68**	**164**	*e*P		**Pg**	**18 44 05.9**	**+0.3**
UMQ	**Umm Al-Quwin**	**1.68**	**164**	P		**Pg**	**18 44 06.1**	**+0.5**
UMQ	SNR=18			S		**Sg**	**18 44 32.2**	**+4.8**
UMQ	**Umm Al-Quwin**	**1.68**	**164**	*e*Pn		**Pg**	**18 44 05.3**	**-0.3**
LMD1	**Lamerd**	**1.78**	**276**	*e*			18 44 45.8	
LMD1				*e*Pg		**Pb**	**18 44 06.2**	**+0.5**
JHRM	**Jahrom**	**1.94**	**314**	*e*Pn		**Pb**	**18 44 07.7**	**-0.8**
MSFE	**Esma-Masafi** SNR=32	**2.00**	**153**	*e*P		**Pb**	**18 44 08.8**	**-0.7**
MSFE	**Esma-Masafi**	**2.00**	**153**	*e*Pn		**Pb**	**18 44 09.1**	**-0.4**
MDH	**Madha** SNR=42	**2.11**	**151**	*e*P		**Pn**	**18 44 09.8**	**+1.6**
MDH	**Madha** SNR=23	**2.11**	**151**	P		**Pn**	**18 44 09.9**	**+1.6**
MDH				S		**Sg**	**18 44 42.1**	**+0.8**
MDH	**Madha**	**2.11**	**151**	*e*Pn		**Pb**	**18 44 11.8**	**+0.4**
NAZ	**Nazwa, Dubai** SNR=18	**2.20**	**168**	*e*P		**Pb**	**18 44 12.0**	**-0.9**
NAZ	**Nazwa, Dubai** SNR=13	**2.20**	**168**	P		**Pb**	**18 44 12.6**	**-0.3**
NAZ	**Nazwa, Dubai**	**2.20**	**168**	*e*Pn		**Pb**	**18 44 12.7**	**-0.3**
UOSS	**Minazif**	**2.39**	**156**	P		**Pn**	**18 44 13.8**	**+1.7**
UOSS	**Minazif**	**2.39**	**156**			**Pn**	**18 44 13.9**	**+1.8**
KHNJ	**Kahnooj**	**2.40**	**70**	*e*Pn		**Pn**	**18 44 12.9**	**+0.6**
FAQ	**Al Faqa, Dubai** SNR=16	**2.43**	**171**	*e*P		**Pb**	**18 44 15.0**	**-1.8**
FAQ	**Al Faqa, Dubai** SNR=17	**2.43**	**171**	P		**Pb**	**18 44 15.4**	**-1.4**
FAQ	**Al Faqa, Dubai**	**2.43**	**171**	*e*Pn		**Pb**	**18 44 15.4**	**-1.4**
HATD	**Hatta, Dubai** SNR=56	**2.48**	**159**	*e*P		**Pn**	**18 44 15.4**	**+2.1**
HATD	**Hatta, Dubai** SNR=19	**2.48**	**159**	P		**Pb**	**18 44 15.7**	**-2.0**
HATD	**Hatta, Dubai**	**2.48**	**159**	*e*Pn		**Pb**	**18 44 16.8**	**-0.9**
ASUD	**Al Ashush, Dub** SNR=48	**2.52**	**176**	*e*P		**Pb**	**18 44 17.0**	**-1.4**
ASUD	**Al Ashush, Dub** SNR=48	**2.52**	**176**	P		**Pb**	**18 44 17.0**	**-1.4**
ASUD	**Al Ashush, Dub**	**2.52**	**176**	*e*Pn		**Pb**	**18 44 17.3**	**-1.1**
ASHO	**Ashiyiah** SNR=346	**2.59**	**161**	*e*P		**Pn**	**18 44 17.0**	**+2.1**
ASHO	**Ashiyiah** SNR=341	**2.59**	**161**	P		**Pn**	**18 44 17.1**	**+2.2**
ASHO	**Ashiyiah**	**2.59**	**161**	*e*Pn		**Pb**	**18 44 17.6**	**-2.0**
NGRK	**Negar Kerman**	**2.84**	**29**	*e*Pn		**Pn**	**18 44 19.4**	**+0.7**
NGRK				*e*			18 45 08.4	
ALNE	**Al Ain** SNR=14	**3.13**	**170**	*i* P		**Pn**	**18 44 24.6**	**+2.3**
ALNE	**Al Ain**	**3.13**	**170**	*e*Pn		**Pn**	**18 44 24.8**	**+2.5**
KRBR	**Kerman**	**3.15**	**26**	*e*Pn		**Pn**	**18 44 24.7**	**+1.8**
KRBR	comp=N,898nm,0.5s			IAML			18 45 22.2	
KRBR	**Kerman**	**3.15**	**26**	*e*Pn		**Pn**	**18 44 24.7**	**+1.8**
TVBK	**TV Kerman**	**3.16**	**26**	*e*Pn		**Pn**	**18 44 24.8**	**+1.8**
TVBK				*e*			18 45 09.3	
SOHO	**SOHO** SNR=36	**3.25**	**157**	*i* P		**Pn**	**18 44 25.0**	**+1.0**
SOHO	**SOHO**	**3.25**	**157**	*e*Pn		**Pn**	**18 44 26.8**	**+2.8**
SHI	**Shiraz**	**3.40**	**317**	*e*Pn		**Pn**	**18 44 27.5**	**+1.4**
SHI				*e*			18 45 35.7	
KHGB	**Koh Gabri**	**3.42**	**20**	*e*Pn		**Pn**	**18 44 28.8**	**+2.4**
KHGB				*e*			18 44 31.7	
CHMN	**Cheshme madani**	**3.42**	**37**	*e*Pn		**Pn**	**18 44 28.4**	**+1.8**
CHMN				*e*			18 45 42.6	
KBAM	**BAM**	**3.52**	**55**	*e*Pn		**Pn**	**18 44 29.5**	**+1.8**
GHWR	**Ruwais**	**3.78**	**213**	*e*Pn		**Pn**	**18 44 33.0**	**+1.8**
KAZ1	**Kazerun**	**3.96**	**309**	*e*Pn		**Pn**	**18 44 34.7**	**+1.0**
KAZ1				*e*			18 46 32.5	
ARQ	**Araqi** SNR=53	**4.00**	**162**	P		**Pn**	**18 44 36.1**	**+1.9**
HOQ	**Hoqain** SNR=6.0	**4.06**	**151**	P		**Pn**	**18 44 35.3**	**+0.2**
IMEH	**Mehriz**	**4.25**	**354**	*e*Pn		**Pn**	**18 44 39.9**	**+2.0**
SLWR	**Sila**	**4.38**	**226**	*e*Pn		**Pn**	**18 44 41.1**	**+1.7**
UMZA	**Um Al Zommool**	**4.42**	**180**	*e*Pn		**Pn**	**18 44 41.9**	**+1.9**
IBAF	**Bafgh**	**4.44**	**5**	*e*Pn		**Pn**	**18 44 41.8**	**+1.4**
BIDO	**Bidbid** SNR=11	**4.51**	**143**	P		**Pn**	**18 44 42.1**	**+0.9**
BIDO	**Bidbid**	**4.51**	**143**	*e*Pn		**Pn**	**18 44 43.7**	**+2.5**
ISAD	**Sadrabad**	**4.91**	**345**	*e*Pn		**Pn**	**18 44 49.3**	**+2.2**
KLNJ	**Kolanjah**	**4.95**	**322**	*e*Pn		**Pn**	**18 44 48.0**	**+0.4**
WSAR	**Wadi Sarin** comp=N,16nm,0.3s,baz=328,slow=4.5,SNR=128	**5.01**	**140**	Pn		**Pn**	**18 44 49.2**	**+1.0**
WSAR	comp=N,18nm,0.3s,baz=71,slow=17,SNR=6.0			Sn		**Sn**	**18 45 45.1**	**-0.8**
CHBR	**Chabahar**	**5.03**	**107**	*e*Pn		**Pn**	**18 44 47.9**	**-0.5**
CHBR	**Chabahar**	**5.03**	**107**	*e*Pn		**Pn**	**18 44 47.9**	**-0.5**
ICHK	**Chekchek**	**5.12**	**353**	*e*Pn		**Pn**	**18 44 51.4**	**+1.6**
IRAM	**Ramesheh**	**5.23**	**333**	*e*Pn		**Pn**	**18 44 52.9**	**+1.5**
YZKH	**Yazd**	**5.24**	**355**	*e*Pn		**Pn**	**18 44 53.1**	**+1.7**
YZKH	**Yazd**	**5.24**	**355**	*e*Pn		**Pn**	**18 44 53.1**	**+1.7**
IGAR	**Gharneh**	**5.89**	**333**	*e*Pn		**Pn**	**18 45 01.9**	**+1.5**
BSRN	**Basiran**	**5.91**	**35**	*e*Pn		**Pn**	**18 45 01.8**	**+1.1**
BSRN	**Basiran**	**5.91**	**35**	*e*Pn		**Pn**	**18 45 01.8**	**+1.1**
NASN	**Na'in**	**5.98**	**341**	*e*Pn		**Pn**	**18 45 02.5**	**+0.7**
NASN	**Na'in**	**5.98**	**341**	*e*Pn		**Pn**	**18 45 02.5**	**+0.7**
TPRV	**Parvadeh(Tabas**	**6.00**	**12**	*e*Pn		**Pn**	**18 45 03.8**	**+1.9**
NHDN	**Nehbandan**	**6.01**	**44**	*e*Pn		**Pn**	**18 45 03.2**	**+1.2**
ANAR	**Anarak**	**6.14**	**349**	*e*Pn		**Pn**	**18 45 04.9**	**+1.1**
IZEF	**Zefreh**	**6.22**	**338**	*e*Pn		**Pn**	**18 45 05.4**	**+0.3**
IKOO	**Kooshah**	**6.23**	**32**	*e*Pn		**Pn**	**18 45 06.4**	**+1.3**
ROKH	**ROKH**	**6.29**	**326**	*e*Pn		**Pn**	**18 45 06.4**	**+0.5**
ITEG	**Tejag**	**6.52**	**28**	*e*Pn		**Pn**	**18 45 11.0**	**+2.0**
IPIR	**Pirpir**	**6.64**	**327**	*e*Pn		**Pn**	**18 45 10.8**	**0.0**
TKDS	**Koohdasht(Taba**	**6.66**	**14**	*e*Pn		**Pn**	**18 45 12.8**	**+1.9**
TABS	**Tabas**	**6.69**	**14**	*e*Pn		**Pn**	**18 45 13.1**	**+1.8**
TABS	**Tabas**	**6.69**	**14**	*e*Pn		**Pn**	**18 45 13.1**	**+1.8**
IKLH	**Kolahrood**	**6.88**	**334**	*e*Pn		**Pn**	**18 45 14.3**	**+0.3**
TNSJ	**Nastanj**	**6.90**	**10**	*e*Pn		**Pn**	**18 45 15.4**	**+1.2**
IDAH	**Dahanechah**	**6.91**	**35**	*e*Pn		**Pn**	**18 45 17.0**	**+2.6**
AFRZ	**Afriz**	**7.09**	**27**	*e*Pn		**Pn**	**18 45 18.3**	**+1.5**
KRSH	**Karshahi**	**7.28**	**340**	*e*Pn		**Pn**	**18 45 20.5**	**+1.1**
QAM	**Ghamsar**	**7.32**	**335**	*e*Pn		**Pn**	**18 45 21.0**	**+0.9**
KHMZ	**Khomeyn**	**7.95**	**327**	*e*Pn		**Pn**	**18 45 29.0**	**+0.3**
KHMZ	**Khomeyn**	**7.95**	**327**	*e*Pn		**Pn**	**18 45 29.0**	**+0.3**
GHVR	**GHOM**	**8.02**	**337**	*e*Pn		**Pn**	**18 45 30.6**	**+1.0**
GHVR	**GHOM**	**8.02**	**337**	*e*Pn		**Pn**	**18 45 30.6**	**+1.0**
IVRN	**Varamin**	**8.35**	**340**	*e*Pn		**Pn**	**18 45 34.7**	**+0.6**
IANJ	**Anjilo**	**8.36**	**353**	*e*Pn		**Pn**	**18 45 35.0**	**+0.7**
ILAS	**Lasjerd**	**8.42**	**348**	*e*Pn		**Pn**	**18 45 35.8**	**+0.7**
IQOM	**Qom**	**8.43**	**336**	*e*Pn		**Pn**	**18 45 35.3**	**0.0**
BMDN	**Meydan**	**8.49**	**321**	*e*Pn		**Pn**	**18 45 36.3**	**+0.3**
IKMR	**Kamar-syah**	**8.63**	**319**	*e*Pn		**Pn**	**18 45 37.1**	**-0.7**
ISHM	**Shahmirzad**	**8.77**	**350**	*e*Pn		**Pn**	**18 45 40.6**	**+0.6**
IDMV	**Damavand**	**8.81**	**343**	*e*Pn		**Pn**	**18 45 42.3**	**+1.7**
IHSB	**Hasanabad**	**8.90**	**339**	*e*Pn		**Pn**	**18 45 42.4**	**+0.8**
IDOB	**Doab**	**8.94**	**319**	*e*Pn		**Pn**	**18 45 41.3**	**-1.0**
IKFM	**Kafar-mosalman**	**8.95**	**317**	*e*Pn		**Pn**	**18 45 42.4**	**+0.2**
HSAM	**Samen**	**9.02**	**323**	*e*Pn		**Pn**	**18 45 42.7**	**-0.7**
IKIA	**Kiasar**	**9.11**	**352**	*e*Pn		**Pn**	**18 45 45.8**	**+1.1**
HAGD	**Aghdareh**	**9.22**	**327**	*e*Pn		**Pn**	**18 45 45.0**	**-1.2**
IMHD	**Mahdasht**	**9.33**	**337**	*e*Pn		**Pn**	**18 45 47.6**	**+0.1**
IRAZ	**Razeghan**	**9.36**	**333**	*e*Pn		**Pn**	**18 45 47.6**	**-0.4**
IPRN	**Peran**	**9.37**	**346**	*e*Pn		**Pn**	**18 45 50.2**	**+2.1**
IGLO	**Ghaloghah**	**9.39**	**353**	*e*Pn		**Pn**	**18 45 51.1**	**+2.7**
HRA	**Herat**	**9.44**	**38**	Pn		**Pn**	**18 45 50.0**	**+0.8**
SBZV	**Sabzevar**	**9.44**	**12**	*e*Pn		**Pn**	**18 45 49.7**	**+0.5**
RAYN	**Ar Rayn**	**9.45**	**250**	P		**Pn**	**18 45 47.7**	**-1.4**
RAYN	**Ar Rayn**	**9.45**	**250**	Pn		**Pn**	**18 45 47.7**	**-1.4**
IKOM	**Komasi**	**9.60**	**319**	*e*Pn		**Pn**	**18 45 50.1**	**-1.2**
IBZA	**Bozab**	**9.61**	**321**	*e*Pn		**Pn**	**18 45 50.6**	**-1.0**
IALM	**Almabolaq**	**9.74**	**324**	*e*Pn		**Pn**	**18 45 52.6**	**-0.7**
QABG	**Abgarm-Qazvin**	**9.76**	**332**	*e*Pn		**Pn**	**18 45 53.4**	**-0.2**
KCHF	**Cheshme Sefid,**	**9.95**	**317**	*e*Pn		**Pn**	**18 45 55.4**	**-0.7**
KER	**Kermanshah**	**9.97**	**318**	*e*Pn		**Pn**	**18 45 55.0**	**-1.4**
HSRG	**Sareghieh**	**9.98**	**326**	*e*Pn		**Pn**	**18 45 56.2**	**-0.4**
QALM	**Alamut, Qazvin**	**10.01**	**339**	*e*Pn		**Pn**	**18 45 58.2**	**+1.2**
IMYA	**Miami**	**10.08**	**23**	*e*Pn		**Pn**	**18 46 00.5**	**+2.6**
ILIN	**Lien**	**10.45**	**320**	*e*Pn		**Pn**	**18 46 03.0**	**0.0**
QSDN	**Sirdan**	**10.62**	**333**	*e*Pn		**Pn**	**18 46 05.0**	**-0.3**
IDHR	**Dehrash**	**10.64**	**317**	*e*Pn		**Pn**	**18 46 04.6**	**-0.9**
GEYT	**Alibeck** comp=N,0.3nm,0.3s,baz=178,slow=9.8,SNR=7.5	**11.03**	**12**	Pn		**Pn**	**18 46 13.4**	**+2.6**
GEYT	**Alibeck**	**11.03**	**12**			**Pn**	**18 46 10.4**	**-0.4**
GYA0B	**ALIBECK ARRAY**	**11.03**	**12**	Pn		**Pn**	**18 46 09.7**	**-1.1**
ISRB	**Sarab**	**12.37**	**331**	*e*Pn		**Pn**	**18 46 30.7**	**+1.5**
IHRS	**Heris**	**13.05**	**331**	*e*Pn		**Pn**	**18 46 38.5**	**-0.1**
KBL	**Kabul**	**14.01**	**55**	P		**Pn**	**18 46 53.2**	**+1.5**
KBL	**Kabul**	**14.01**	**55**	Pn		**Pn**	**18 46 53.2**	**+1.5**
SOCY	**Socotra**	**14.93**	**184**			**Pn**	**18 47 01.2**	**-2.9**
GEVA	**Gevas**	**15.06**	**321**	Pn		**Pn**	**18 47 04.3**	**-1.6**
GEVA	comp=Z,22nm,0.8s			IAmb	IAmb		18 47 07.2	
GNI	**Garni**	**15.58**	**329**	↑*e*P		**P**	**18 47 15.4**	**-1.5**
GNI	comp=Z,70nm,0.8s			pmax	pmax			
MARD	**Mardin**	**15.81**	**313**	Pn		**Pn**	**18 47 11.2**	**-4.5**
DAMY	**Dhamar**	**16.04**	**221**	P		**Pn**	**18 47 16.5**	**-2.5**
DAMY	comp=Z,37nm,0.9s			IAmb	IAmb		18 47 28.7	
LGD	**Lagodekhi**	**16.37**	**336**	P		**P**	**18 47 26.6**	**+1.1**
CHGR	**Chuyangaron**	**16.41**	**42**	P		**Pn**	**18 47 24.1**	**+0.8**
ASF	**Jabal al Asfar** comp=Z,0.4nm,0.3s,baz=4.7,slow=2.0,SNR=9.6	**16.63**	**292**	Pn		**Pn**	**18 47 24.5**	**-1.7**
KZRT	**Kazreti**	**16.73**	**331**	P		**P**	**18 47 32.3**	**+2.7**
NIL	**Nilore**	**16.89**	**63**	P		**Pn**	**18 47 27.1**	**-2.4**
NIL	comp=Z,16nm,0.6s			pmax	pmax			
NIL	**Nilore**	**16.89**	**63**	Pn		**Pn**	**18 47 27.1**	**-2.4**
MAK	**Makhachkala**	**16.96**	**340**	*e*P		**P**	**18 47 34.1**	**+2.1**
AKH	**Akhalkalaki**	**17.15**	**329**	P		**Pn**	**18 47 31.7**	**-1.1**
AKH	comp=Z,11nm,0.9s			pmax	pmax			
AKH	**Akhalkalaki**	**17.15**	**329**			**Pn**	**18 47 31.7**	**-1.1**
GAR	**Garm**	**17.32**	**43**			**Pn**	**18 47 34.7**	**-0.2**
KOPT	**Kop Dagi**	**17.68**	**320**	P		**Pn**	**18 47 39.2**	**-0.2**
GROC	**Groznyy**	**17.73**	**337**	*e*P		**P**	**18 47 41.5**	**+1.0**
GROC				*e*S		**S**	**18 51 02.2**	**-1.9**
GROC	comp=Z,72nm,0.8s			pmax	pmax			
MALT	**Malatya**	**17.91**	**313**	P		**Pn**	**18 47 42.2**	**+0.1**
EIL	**Elat** comp=Z,0.8nm,0.3s,baz=82,slow=2.1,SNR=11	**17.95**	**283**	P		**Pn**	**18 47 42.0**	**-0.6**
QRWL	**Qaraoun**	**17.96**	**295**	*e*P		**Pn**	**18 47 42.9**	**+0.1**
MMAI	**Mount Meron Ar** comp=Z,2.1nm,0.3s,baz=105,slow=16,SNR=20	**18.05**	**294**	P		**Pn**	**18 47 42.9**	**-1.0**
BHL	**Bhannes**	**18.08**	**297**	*e*P		**P**	**18 47 44.5**	**-0.2**
ZEI	**Tsey**	**18.09**	**332**	*e*P		**P**	**18 47 45.7**	**+0.9**
ZEI	comp=Z,54nm,0.8s			pmax	pmax			
DQRL	**Deir Qamar**	**18.09**	**296**	*e*P		**P**	**18 47 45.2**	**+0.4**
ONI	**Oni**	**18.12**	**331**	P		**P**	**18 47 47.6**	**+2.7**
GAZ	**Gaziantep**	**18.15**	**308**	P		**Pn**	**18 47 42.3**	**-2.8**
BTK	**Batken**	**18.29**	**41**	P		**Pn**	**18 47 45.4**	**-1.4**
BTK	comp=Z,11nm,1.0s			pmax	pmax			
BTK	**Batken**	**18.29**	**41**	P		**Pn**	**18 47 45.4**	**-1.4**
KBZ	**Khabaz**	**19.28**	**332**	P		**P**	**18 47 57.9**	**+0.3**
KBZ	comp=Z,0.5nm,0.3s,baz=56,slow=24,SNR=18			pmax	pmax			
KBZ	**Khabaz**	**19.28**	**332**	*de*P		**Pn**	**18 48 00.2**	**+1.6**
KBZ	comp=Z,21nm,1.3s			pmax	pmax			
ATD	**Arta Tunnel** comp=Z,90nm,19.2s,baz=27,slow=40	**19.37**	**219**	LR	LR		18 56 26.5	
KVAR	**Kislovodsk Arr** baz=73,slow=20,SNR=7.4	**19.55**	**332**	P		**Pn**	**18 48 02.2**	**+0.2**
KIV	**Kislovodsk**	**19.56**	**332**	*e*P		**Pn**	**18 48 02.1**	**0.0**
KIV	comp=Z,116nm,1.1s			pmax	pmax			
KIV	**Kislovodsk**	**19.56**	**332**	Pn		**Pn**	**18 48 01.8**	**-0.3**
KIV	comp=Z,30nm,0.8s			IAmb	IAmb		18 48 18.1	
KK07	**Karatay Array**	**20.21**	**34**	P		**P**	**18 48 07.0**	**-0.8**
KK08	**Karatay Array**	**20.21**	**34**	P		**P**	**18 48 07.5**	**-0.4**
KK03	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.3**	**-0.6**
KK01	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.5**	**-0.4**
KK02	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.4**	**-0.5**
KK06	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.4**	**-0.5**
KK31	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.3**	**-0.7**
KK31	comp=Z,20nm,1.3s			pmax	pmax			
KK31	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.3**	**-0.7**
KKAR	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.5**	**-0.4**
KKAR	comp=Z,20nm,1.3s			pmax	pmax			
KKAR	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.5**	**-0.4**
KKAR	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 08.1**	**+0.1**
KK04	**Karatay Array**	**20.22**	**34**	P		**P**	**18 48 07.2**	**-0.7**
CSS	**Mathiatis**	**20.23**	**298**			**P**	**18 48 07.5**	**-0.6**
CSS	comp=Z,31nm,1.0s			IAmb	IAmb		18 48 11.9	
KK09	**Karatay Array**	**20.23**	**34**	P		**P**	**18 48 07.6**	**-0.4**
KK05	**Karatay Array**	**20.24**	**34**	P		**P**	**18 48 07.5**	**-0.6**
TOKA	**Tokat**	**20.29**	**315**	P		**P**	**18 48 08.2**	**-0.5**
TOKA	comp=Z,26nm,1.0s			IAmb	IAmb		18 48 16.5	
GOF	**Gofitskoye**	**20.33**	**335**	↑*e*P		Pn	18 48 10.6	-0.5
GOF	comp=Z,57nm,0.6s			pmax	pmax			
SOC	**Sochi**	**20.61**	**327**	*e*P		**P**	**18 48 11.2**	**-0.9**
SOC				*e*			18 48 29.2	
SOC				*e*S		**S**	**18 52 01.6**	**-0.6**
SOC				*e*SS		**SnSn**	**18 52 29.1**	**+7.6**
SOC				*e*SSS		SSS	18 52 40.0	
SOC	comp=Z,36nm,0.9s			pmax	pmax			
SOC	comp=Z,132nm,13.0s			MLR	MLR			
BR131	**Keskin Array S**	**21.83**	**310**	P		**P**	**18 48 24.5**	**-1.0**
BR131	comp=Z,14nm,0.8s			pmax	pmax			
BR131	**Keskin Array S**	**21.83**	**310**	P		**P**	**18 48 24.5**	**-1.0**
BRTR	**Keskin Array B** comp=Z,9.8nm,0.7s,baz=131,slow=13,SNR=29	**21.83**	**310**	P		**P**	**18 48 25.5**	**0.0**
BRTR	**Keskin Array B**	**21.83**	**310**	P		**P**	**18 48 25.3**	**-0.2**
AAK	**Ala-Archa**	**22.07**	**41**	↑*e*P		**P**	**18 48 28.6**	**+0.6**
AAK	comp=Z,32nm,1.5s			pmax	pmax			
AAK	**Ala-Archa**	**22.07**	**41**	P		**P**	**18 48 27.4**	**-0.6**
FRU1	**Bishkek**	**22.25**	**40**	P		**P**	**18 48 29.4**	**-0.5**
FRU1	comp=Z,28nm,1.3s			pmax	pmax			
FRU1	**Bishkek**	**22.25**	**40**	P		**P**	**18 48 29.4**	**-0.5**
FRU1	comp=Z,28nm,1.2s			IAmb	IAmb		18 48 46.5	
AB08	**Akbulak array**	**22.36**	**8**	P		**P**	**18 48 30.7**	**-0.1**
AB07	**Akbulak array**	**22.37**	**8**	P		**P**	**18 48 30.8**	**-0.1**
AB03	**Akbulak array**	**22.37**	**8**	P		**P**	**18 48 30.6**	**-0.4**
AB01	**Akbulak array**	**22.38**	**8**	P		**P**	**18 48 30.7**	**-0.4**
AB31	**Akbulak array**	**22.38**	**8**	P		**P**	**18 48 30.7**	**-0.3**
AB31	comp=Z,16nm,0.7s			IAmb	IAmb		18 48 39.6	
ABKAR	**Akbulak array**	**22.38**	**8**	P		**P**	**18 48 30.6**	**-0.4**
ABKAR	comp=Z,16nm,0.7s			IAmb	IAmb		18 48 39.6	
ABKAR	**Akbulak array**	**22.38**	**8**	P		**P**	**18 48 30.6**	**-0.4**
AB04	**Akbulak array**	**22.38**	**8**	P		**P**	**18 48 30.6**	**-0.5**
AB09	**Akbulak array**	**22.38**	**8**	P		**P**	**18 48 30.5**	**-0.6**
ILGA	**Ilgaz**	**22.45**	**314**	P		**P**	**18 48 31.2**	**-0.9**
ILGA	comp=Z,32nm,0.9s			IAmb	IAmb		18 48 38.6	
BOOM	**Boomskoye usch**	**22.83**	**43**	P		**P**	**18 48 35.7**	**-0.5**
BOOM	comp=Z,16nm,1.2s			pmax	pmax			
BOOM	**Boomskoye usch**	**22.83**	**43**	P		**P**	**18 48 35.7**	**-0.5**
AKTO	**Aktyubinsk** comp=Z,11nm,0.4s,baz=184,slow=10,SNR=64	**23.35**	**5**	P		**P**	**18 48 41.5**	**+0.3**
KDJ	**Kajisay**	**23.39**	**45**	P		**P**	**18 48 40.2**	**-1.8**
KDJ	comp=Z,14nm,1.0s			pmax	pmax			
KDJ	**Kajisay**	**23.39**	**45**	P		**P**	**18 48 40.1**	**-1.8**
ELL	**Elmali**	**23.40**	**300**	P		**P**	**18 48 41.3**	**-0.7**
ELL	comp=Z,73nm,0.8s			pmax	pmax			
ELL	**Elmali**	**23.40**	**300**	P		**P**	**18 48 41.3**	**-0.7**
AKAS	**Kas**	**23.49**	**299**	P		**P**	**18 48 43.6**	**+0.7**
MDUB	**Mudurnu**	**23.84**	**310**	P		**P**	**18 48 46.5**	**+0.3**
MANT	**Manisa**	**24.96**	**304**	P		**P**	**18 48 56.0**	**-0.6**
KARP	**Karpathos**	**25.26**	**296**	P		**P**	**18 48 59.0**	**-0.2**
VRH	**Novokhopyorsk**	**26.09**	**341**	*e*P		**P**	**18 49 06.6**	**+0.1**
VRH	comp=Z,90nm,0.6s			pmax	pmax			
VSR	**Storozhevoye**	**26.92**	**338**	*e*P		**P**	**18 49 13.3**	**-0.7**
VSR	comp=Z,10.0nm,0.5s			pmax	pmax			
IDI	**Anoyia** comp=Z,11nm,0.6s,baz=76,slow=15,SNR=13	**27.04**	**295**	P		**P**	**18 49 16.4**	**+1.1**
IDI	**Anoyia**	**27.04**	**295**	⇑P		**P**	**18 49 15.9**	**+0.6**
IDI	**Anoyia**	**27.04**	**295**	P		**P**	**18 49 14.6**	**-0.8**
TIRR	**Tirgusor**	**27.54**	**316**	P		**P**	**18 49 18.9**	**-0.7**
TIRR	comp=Z,17nm,0.8s			pmax	pmax			
TIRR	**Tirgusor**	**27.54**	**316**	P		**P**	**18 49 18.9**	**-0.7**
TIRR	comp=Z,17nm,0.8s			IAmb	IAmb		18 49 44.2	
LPSR	**Galich'ya Gora**	**28.17**	**339**	*e*P		**P**	**18 49 24.4**	**-0.7**
LPSR	comp=Z,9.0nm,0.7s			pmax	pmax			
BRVK	**Borovoye**	**28.23**	**19**	⇓*e*P		**P**	**18 49 25.7**	**0.0**
BRVK	comp=Z,8.0nm,1.7s			pmax	pmax			
BRVK	**Borovoye**	**28.23**	**19**	P		**P**	**18 49 24.7**	**-0.9**
BVAR	**Borovoye Array** comp=Z,2.7nm,0.7s,baz=224,slow=31,SNR=8.9	**28.23**	**20**	P		**P**	**18 49 25.0**	**-0.7**
BVAR	comp=Z,1.0nm,0.4s,baz=44,slow=4.6,SNR=6.4			PcP		**PcP**	**18 52 38.9**	**-0.1**
MAKZ	**Makanchi**	**28.83**	**40**	P		**P**	**18 49 30.7**	**-0.4**
MAKZ	comp=Z,7.0nm,1.0

LANS Liptovska Anna 35.16 318 eP P 18 50 27.7 +1.0
LANS pmax pmax
comp=Z,11nm,0.9s
LANS Liptovska Anna 35.16 318 eP P 18 50 27.7 +1.0
VYHS Vyhne 35.26 317 eP P 18 50 27.4 -0.1
VYHS pmax pmax
comp=Z,4.0nm,1.0s
VYHS Vyhne 35.26 317 eP P 18 50 27.4 -0.1
ISAL Salakas 35.30 332 eP P 18 50 27.6 -0.1
KLMR Klimovskoe 35.33 347 eP P 18 50 26.7 -1.1
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR Klimovskoe 35.33 347 eP P 18 50 26.8 -1.1
KLMR AMP 18 50 30.2
comp=Z,12nm,1.2s
KIJV Kijevo 35.34 309 ePn P 18 50 27.9 -0.4
IZAR Zarasai 35.37 332 eP P 18 50 28.6 +0.3
OJC Ojcow 35.44 320 eP P 18 50 29.1 +0.1
OJC Ojcow 35.44 320 P P 18 50 28.8 -0.2
OJC pmax pmax
comp=Z,16nm,0.8s
OJC Ojcow 35.44 320 P P 18 50 28.8 -0.2
OJC IAmb IAmb 18 50 29.9
comp=Z,16nm,0.8s
SUW Suwalki 35.65 328 P P 18 50 29.6 -1.2
SUW pmax pmax
comp=Z,27nm,0.6s
SUW Suwalki 35.65 328 P P 18 50 29.6 -1.2
MORI Morici 35.79 308 ePn P 18 50 31.8 -0.3
JAVC Velka Javorina 36.12 317 eP P 18 50 35.9 +1.0
PABE Paberze 36.20 330 eP P 18 50 35.5 +0.1
OKC Ostrava-Krasne 36.23 319 eP P 18 50 35.6 -0.2
OKC Ostrava-Krasne 36.23 319 eP P 18 50 35.6 -0.2
MORC Moravsky Berou 36.56 318 eP P 18 50 38.5 -0.2
MORC Moravsky Berou 36.56 318 P P 18 50 38.2 -0.5
MORC pmax pmax
comp=Z,9.0nm,0.8s
MORC Moravsky Berou 36.56 318 P P 18 50 38.2 -0.5
MORC IAmb IAmb 18 50 39.2
comp=Z,8.8nm,0.8s
INTR Introdacqua 36.68 305 P P 18 50 40.6 +0.8
INTR IAmb IAmb 18 50 53.7
comp=Z,33nm,1.1s
ARSA Arzberg 36.89 314 eP P 18 50 41.3 -0.2
comp=Z,3.2nm,0.7s
CONA Conrad Observa 36.90 315 eP P 18 50 41.6 -0.1
comp=Z,1.3nm,0.6s
VRAC Vranov 36.94 317 ⇓P P 18 50 41.9 0.0
VRAC Vranov 36.94 317 eP P 18 50 42.1 +0.2
KRUC Moravsky 36.97 317 eP P 18 50 42.1 0.0
VSU Vasula 37.05 335 eP P 18 50 42.7 0.0
NRCA Norcia 37.41 306 P P 18 50 45.0 -1.0
NRCA IAmb IAmb 18 51 07.3
comp=Z,29nm,1.2s
DPC Dobruska-Polom 37.51 319 eP P 18 50 46.1 -0.7
DPC e 18 50 51.4
DPC Dobruska-Polom 37.51 319 eP P 18 50 46.1 -0.7
DPC epP pP 18 50 51.4 +0.3
TREC Trest 37.61 317 eP P 18 50 47.9 +0.3
TREC Trest 37.61 317 eP P 18 50 47.9 +0.3
OSTC Ostas 37.66 319 eP P 18 50 47.9 -0.1
KSP Ksiaz 37.73 319 eP P 18 50 48.2 -0.3
UPC Upice 37.76 319 eP P 18 50 48.2 -0.6
UPC Upice 37.76 319 eP P 18 50 48.2 -0.6
CHVC Chvalec 37.76 319 eP P 18 50 48.3 -0.6
MOA Molln 37.88 314 eP P 18 50 49.6 -0.3
comp=Z,4.3nm,0.8s
PRED Cave del Predi 37.93 312 P 18 50 47.2 -3.2
KBA Koelnbreinsper 38.25 313 eP P 18 50 52.9 -0.3
comp=Z,7.3nm,0.6s
GEC2 GERESS Array S 38.56 315 P P 18 50 54.5 -1.1
GERES GERESS Array B 38.56 315 P P 18 50 55.1 -0.6
comp=Z,17nm,0.5s,baz=103,slow=7.7,SNR=18
GERES GERESS Array B 38.56 315 P P 18 50 54.2 -1.4
CIMO Cimolais 38.65 311 P P 18 50 54.5 -1.8
KHC Kasperske Hory 38.73 316 eP P 18 50 55.8 -1.2
KHC e 18 51 03.2
KHC Kasperske Hory 38.73 316 eP P 18 50 55.8 -1.2
KHC epP sP 18 51 03.2 +0.2
GTA Gaotai 38.92 60 ⇑P P 18 50 59.9 +1.0
GTA pP sP 18 51 10.2 +5.4
GTA sP pP 18 51 14.6 +11
GTA pmax pmax
comp=Z,8.0nm,0.8s
GTA pmax pmax
comp=Z,53nm,6.2s
GTA LR LR
comp=N,140nm,17.1s
GTA LR LR
comp=E,110nm,16.0s
GTA LR LR
comp=Z,130nm,15.3s
BRG Berggiesshubel 39.11 319 eP P 18 50 59.6 -0.6
comp=Z,6.2nm,0.8s
BRG Berggiesshubel 39.11 319 eP P 18 50 59.6 -0.6
BRG pmax pmax
comp=Z,6.0nm,0.8s
BRG Berggiesshubel 39.11 319 eP P 18 50 59.7 -0.5
comp=Z,6.2nm,0.8s,baz=112,slow=9.2
ZCCA Zocca 39.22 308 P P 18 51 01.1 -0.1
ZCCA IAmb IAmb 18 51 12.8
comp=Z,30nm,1.1s
WTTA Wattenberg 39.42 312 i P P 18 51 02.3 -0.8
comp=Z,9.2nm,0.4s,SNR=11
FIA1 FINESS Array S 39.44 338 P P 18 51 02.5 -0.2
FIA1 IAmb IAmb 18 51 24.9
comp=Z,36nm,1.5s
FINES FINESS Array B 39.44 338 P P 18 51 02.3 -0.4
comp=Z,2.9nm,0.4s,baz=145,slow=9.8,SNR=24
FINES FINESS Array B 39.44 338 P P 18 51 02.2 -0.6
WATA Walderalm 39.48 312 eP P 18 51 02.8 -0.7
comp=Z,9.8nm,0.6s
SQTA Sankt Quirin 39.70 312 P P 18 51 04.4 -0.8
comp=Z,22nm,0.5s,SNR=21
KEST Kesra 39.71 294 P P 18 51 06.8 +1.3
comp=Z,5.5nm,0.8s,baz=22,slow=6.8,SNR=5.5
KEST Kesra 39.71 294 P P 18 51 06.8 +1.3
ROTZ Rotzenmuhle 39.78 316 eP P 18 51 05.4 -0.3
comp=Z,7.4nm,0.8s,baz=112,slow=9.2
VSL Villasalto 39.79 300 P P 18 51 06.1 +0.2
VSL IAmb IAmb 18 51 14.7
comp=Z,17nm,0.7s
MOTA Moosalm 39.80 312 P P 18 51 04.9 -1.2
comp=Z,5.7nm,0.4s,SNR=9.0
CLL Collm 39.82 319 i P P 18 51 05.8 -0.3
comp=Z,10.0nm,1.1s
CLL e 18 51 11.0
CLL e 18 51 23.0
CLL ePP PP 18 52 38.0 +0.5
CLL LmV 19 12 00.0
comp=Z,100nm,18.9s
CLL Collm 39.82 319 i P P 18 51 05.8 -0.3
CLL e*PP pP 18 51 11.0 +0.6
CLL pmax pmax
comp=Z,10.0nm,1.1s
CLL Collm 39.82 319 eP P 18 51 05.8 -0.3
comp=Z,9.8nm,1.1s,baz=112,slow=9.2
CLL Collm 39.82 319 P P 18 51 05.8 -0.3
FETA Feichten 39.96 312 P P 18 51 07.0 -0.6
comp=Z,8.0nm,0.4s,SNR=7.9
FUORN Ofenpass-Fuorn 40.18 311 P P 18 51 09.5 +0.1
FUORN IAmb IAmb 18 51 22.1
comp=Z,20nm,1.5s
MSSA Maissana 40.25 307 P P 18 51 08.7 -1.1
MSSA IAmb IAmb 18 51 32.7
comp=Z,44nm,1.3s
GRA1 Grafenberg Arr 40.37 316 P P 18 51 10.3 -0.4
GRA1 IAmb IAmb 18 51 11.1
comp=Z,13nm,0.8s
GRF Grafenberg Arr 40.37 316 P P 18 51 10.3 -0.4
GRF pmax pmax
comp=Z,13nm,0.8s
GRF Grafenberg Arr 40.37 316 eP P 18 51 10.5 -0.1
comp=Z,14nm,0.9s,baz=112,slow=9.2
UBR Ueberruh 40.53 313 eP P 18 51 11.3 -0.8
comp=Z,22nm,0.9s,baz=112,slow=9.2
DAVA Damuels 40.59 312 i P P 18 51 11.9 -0.8
comp=Z,50nm,0.5s,SNR=63
TUE Stuetta 40.77 311 P P 18 51 13.5 -0.7
TUE IAmb IAmb 18 51 19.2
comp=Z,10nm,0.9s
CHTO Chiang Mai 40.99 92 P P 18 51 17.0 +0.8
CHTO pmax pmax
comp=Z,10.0nm,1.3s
CHTO Chiang Mai 40.99 92 P P 18 51 17.0 +0.8
CMAR Chiang Mai Arr 41.12 93 P P 18 51 18.4 +1.3
comp=Z,1.6nm,0.6s,baz=286,slow=9.0,SNR=14
CMAR PcP PcP 18 53 17.2 +0.5
comp=Z,1.0nm,0.8s,baz=278,slow=3.8,SNR=4.9
CMAR Chiang Mai Arr 41.12 93 P P 18 51 17.0 -0.2
CLZ Clausthal 41.55 319 eP P 18 51 20.5 +0.1
comp=Z,16nm,0.7s,baz=112,slow=9.2
BFO Black Forest 41.85 313 P P 18 51 22.3 -0.6
BFO pmax pmax
comp=Z,10.0nm,1.2s
BFO Black Forest 41.85 313 P P 18 51 22.3 -0.6
NRDL Niedersach Rie 41.92 320 eP P 18 51 24.0 +0.8
comp=Z,19nm,1.1s,baz=112,slow=9.2
SENIN Lac Senin/Sane 42.14 310 P P 18 51 24.3 -1.2
BNI Bardonecchia 42.36 308 P P 18 51 26.2 -1.1
BNI pmax pmax
comp=Z,9.0nm,0.9s
BNI Bardonecchia 42.36 308 P P 18 51 26.2 -1.1
BNI IAmb IAmb 18 51 40.9
comp=Z,8.9nm,0.9s
KMI Kunming 42.57 82 P P 18 51 29.2 -0.1
KMI pmax pmax
comp=Z,13nm,1.2s
KMI Kunming 42.57 82 P P 18 51 29.2 -0.1
KMI IAmb IAmb 18 51 33.4
comp=Z,13nm,1.2s
ECH Echery 42.59 313 P P 18 51 28.1 -0.8
ECH pmax pmax
comp=Z,17nm,1.3s
ECH Echery 42.59 313 P P 18 51 28.1 -0.8
ECH IAmb IAmb 18 51 50.3
comp=Z,17nm,1.3s
AHRW Bad Neuenahr-A 43.16 316 eP P 18 51 36.8 +3.3
comp=Z,11nm,0.8s,baz=112,slow=9.2
WLF Walferdange 43.54 315 P P 18 51 35.9 -0.7
WLF pmax pmax
comp=Z,17nm,1.0s
WLF Walferdange 43.54 315 P P 18 51 35.9 -0.7
WLF IAmb IAmb 18 51 36.9
comp=Z,16nm,1.0s
NC602 NORSAR Array S 44.57 331 eP P 18 51 43.8 -0.8
SONM Songino Array 44.66 48 P P 18 51 46.5 +0.8
comp=Z,0.5nm,0.5s,baz=272,slow=10,SNR=5.1
SONM Songino Array 44.66 48 P P 18 51 46.6 +0.8
NC405 NORSAR Array S 44.68 332 P P 18 51 44.6 -0.9
NB2 NORSAR Subarra 44.86 331 P P 18 51 45.9 -1.1
comp=Z,2.5nm,0.5s,baz=118,slow=7.9
NB2 NORSAR Subarra 44.86 331 P P 18 51 45.9 -1.1
baz=118,slow=7.9
NOA NORSAR Array B 44.86 331 P P 18 51 46.1 -0.9
comp=Z,2.2nm,0.5s,baz=120,slow=7.5,SNR=15
NOA LR LR 19 12 37.8
comp=Z,34nm,20.5s,baz=145,slow=39
NAO01 NORSAR Array S 44.91 331 P P 18 51 46.3 -1.0
TAM Tamanrasset 44.97 276 P P 18 51 47.9 -0.7
TAM pmax pmax
comp=Z,4.0nm,1.0s
TAM Tamanrasset 44.97 276 P P 18 51 47.9 -0.7
NBO00 NORSAR Array S 45.04 331 P P 18 51 48.2 -0.2
ULN Ulaanbaatar 45.10 48⇑ eP P 18 51 50.8 +1.5
ULN pmax pmax
comp=Z,1.0nm,0.9s
ULN Ulaanbaatar 45.10 48 P P 18 51 48.0 -1.3
NC204 NORSAR Array S 45.17 332 P P 18 51 48.7 -0.8
NC204 IAmb IAmb 18 52 01.1
comp=Z,20nm,1.2s
KEV Kevo 45.65 347 P P 18 51 52.9 -0.2
KEV pmax pmax
comp=Z,51nm,1.4s
KEV Kevo 45.65 347 P P 18 51 52.9 -0.2
ARD4 ARCESS Array S 45.78 346 P P 18 51 54.1 -0.1
ARD5 ARCESS Array S 45.78 346 P P 18 51 54.4 +0.3
ARD3 ARCESS Array S 45.78 346 P P 18 51 54.2 0.0
ARD3 IAmb IAmb 18 52 03.8
comp=Z,10nm,1.1s
ARC4 ARCESS Array S 45.78 346 P P 18 51 54.2 0.0
ARC4 IAmb IAmb 18 52 15.0
comp=Z,26nm,1.4s
ARD6 ARCESS Array S 45.78 346 P P 18 51 54.0 -0.2
ARD6 IAmb IAmb 18 52 14.1
comp=Z,24nm,1.2s
ARC3 ARCESS Array S 45.78 346 P P 18 51 54.2 0.0
ARC3 IAmb IAmb 18 52 11.9
comp=Z,14nm,1.1s
ARB3 ARCESS Array S 45.79 346 P P 18 51 54.2 0.0
ARB3 IAmb IAmb 18 52 15.0
comp=Z,25nm,1.3s
ARC5 ARCESS Array S 45.79 346 P P 18 51 54.2 0.0
CLF Chambon-Foret 45.79 312 P P 18 51 52.6 -1.9
ARA2 ARCESS Array S 45.79 346 P P 18 51 54.3 +0.1
ARA2 IAmb IAmb 18 52 14.9
comp=Z,27nm,1.3s
ARB2 ARCESS Array S 45.79 346 P P 18 51 54.2 0.0
ARB2 IAmb IAmb 18 52 14.9
comp=Z,28nm,1.3s
ARC2 ARCESS Array S 45.79 346 P P 18 51 54.3 +0.1
ARC2 IAmb IAmb 18 52 11.8
comp=Z,12nm,1.1s
ARA0 ARCESS Array S 45.79 346 P P 18 51 54.4 +0.1
ARA0 IAmb IAmb 18 52 14.9
comp=Z,25nm,1.2s
ARB4 ARCESS Array S 45.79 346 P P 18 51 54.2 0.0
ARCES ARCESS Array B 45.79 346 P P 18 51 54.0 -0.2
comp=Z,2.4nm,0.6s,baz=140,slow=9.6,SNR=24
ARCES PcP PcP 18 53 31.4 -0.2
comp=Z,0.8nm,0.5s,baz=167,slow=2.5,SNR=5.7
ARCES LR LR 19 12 04.1
comp=Z,34nm,19.3s,baz=205,slow=37
ARA1 ARCESS Array S 45.79 346 P P 18 51 54.4 +0.1
ARA1 IAmb IAmb 18 52 14.9
comp=Z,26nm,1.3s
ARA3 ARCESS Array S 45.79 346 P P 18 51 54.4 +0.1
ARA3 IAmb IAmb 18 52 14.9
comp=Z,28nm,1.3s
ARB1 ARCESS Array S 45.79 346 P P 18 51 54.4 +0.2
ARB1 IAmb IAmb 18 52 11.9
comp=Z,17nm,1.1s
ARB5 ARCESS Array S 45.79 346 P P 18 51 54.4 +0.2
ARC6 ARCESS Array S 45.79 346 P P 18 51 54.2 0.0
ARD2 ARCESS Array S 45.79 346 P P 18 51 54.3 +0.1
ARD7 ARCESS Array S 45.79 346 P P 18 51 54.8 +0.5
ARC1 ARCESS Array S 45.80 346 P P 18 51 53.4 -0.9
ARC1 IAmb IAmb 18 52 15.0
comp=Z,22nm,1.3s
ARC7 ARCESS Array S 45.80 346 P P 18 51 54.2 -0.1
ARC7 IAmb IAmb 18 52 14.9
comp=Z,24nm,1.2s
ARD1 ARCESS Array S 45.80 346 P P 18 51 53.2 -1.1
ARD8 ARCESS Array S 45.80 346 P P 18 51 54.4 +0.1
ARD8 IAmb IAmb 18 52 22.0
comp=Z,25nm,1.3s
ARD9 ARCESS Array S 45.80 346 P P 18 51 55.0 +0.6
ARD9 IAmb IAmb 18 52 10.9
comp=Z,11nm,1.0s
KTK1 Kautokeino 45.90 345 eP P 18 51 54.9 -0.2
SKAR Skarslia 45.97 330 eP P 18 51 56.1 +0.3
DOMB Dombas 46.24 332 eP P 18 51 57.7 -0.3
NRIK Noril'sk 46.26 15 LR LR 19 12 07.8
comp=Z,66nm,20.3s,baz=203,slow=37
NRIK Noril'sk 46.26 15⇑ eP P 18 51 58.8 +0.9
NRIK pmax pmax
comp=Z,11nm,1.5s
FAUS Fauske 46.91 340 eP P 18 52 02.5 -0.5
HAMF Hammerfest 47.05 346 eP P 18 52 04.3 +0.2
KULM Kulim 48.43 108 P P 18 52 16.5 +1.0
KULM IAmb IAmb 18 52 41.8
comp=Z,23nm,1.5s
IPM Ipoh 49.18 109 P P 18 52 20.7 -0.6
IPM IAmb IAmb 18 52 24.1
comp=Z,6.8nm,0.7s
ESBB Sonseca Array 50.08 300 P P 18 52 28.1 +0.1
ESDC Sonseca Array 50.09 300 P P 18 52 27.8 -0.2
comp=Z,1.2nm,0.4s,baz=66,slow=7.2,SNR=7.0
ESDC Sonseca Array 50.09 300 P P 18 52 27.3 -0.7
ESK Eskdalemuir 50.23 321 P P 18 52 28.4 -0.4
ESK pmax pmax
comp=Z,28nm,1.3s
ESK Eskdalemuir 50.23 321 P P 18 52 28.4 -0.4
ESK IAmb IAmb 18 52 36.5
comp=Z,28nm,1.2s
PAB San Pablo 50.39 300 P P 18 52 30.4 0.0
PAB pmax pmax
comp=Z,19nm,1.5s
PAB San Pablo 50.39 300 P P 18 52 30.4 0.0
PAB IAmb IAmb 18 52 40.3
comp=Z,19nm,1.5s
BOD Bodaibo 50.94 36 eP P 18 52 25.9 -8.2
BOD pmax pmax
comp=Z,8.0nm,1.6s
TOA0 Torodi Ar. Sit 51.73 265 P P 18 52 40.5 -0.1
TOA0 IAmb IAmb 18 52 41.2
comp=Z,15nm,0.6s
TORD Torodi Ar. Bea 51.73 265 P P 18 52 40.4 -0.2
comp=Z,16nm,0.7s,baz=59,slow=7.1,SNR=109
TORD LR LR 19 17 09.4
comp=Z,114nm,19.7s,baz=345,slow=39
TORD Torodi Ar. Bea 51.73 265 P P 18 52 40.2 -0.4
DSB Dublin 51.82 318 P P 18 52 39.5 -1.2
MYKOM Kota Tinggi 52.99 110 P P 18 52 50.4 +0.5
MYKOM IAmb IAmb 18 52 50.7
comp=Z,13nm,1.0s
SPA0 Spitsbergen Ar 54.03 351 P P 18 52 57.1 +0.4
SPA0 Spitsbergen Ar 54.03 351 eP P 18 52 56.9 +0.2
PFVI Vila Bisbo 54.18 298 P P 18 52 57.7 -0.8
KOWA Kowa 56.27 270 P P 18 53 13.7 -0.2
KOWA IAmb IAmb 18 53 14.5
comp=Z,9.1nm,0.6s
LWLI Liwa 57.04 117 P P 18 53 20.1 +0.7
TSUM Tsumeb 58.73 222 P P 18 53 32.7 +1.5
TSUM IAmb IAmb 18 53 33.1
comp=Z,4.6nm,0.8s
SSLB Suanglung 58.89 77 P P 18 53 32.0 -0.2
LBTB Lobatse 59.18 211 P P 18 53 34.7 +0.6
LBTB pmax pmax
comp=Z,14nm,1.5s
LBTB Lobatse 59.18 211 P P 18 53 34.7 +0.6
LBTB IAmb IAmb 18 53 45.6
comp=Z,14nm,1.4s
TWG Pinlang 59.30 78 P P 18 53 36.0 +1.0
YULB Yu-li 59.32 78 P P 18 53 35.2 +0.1
TIXI Tiksi 59.36 21⇑ eP P 18 53 33.6 -1.0
TIXI pmax pmax
comp=Z,15nm,1.0s
TIXI Tiksi 59.36 21 P P 18 53 33.6 -1.0
TIXI IAmb IAmb 18 53 52.0
comp=Z,13nm,0.8s
DBIC Dimbokro 60.34 262 P P 18 53 42.2 -0.1
comp=Z,6.6nm,0.6s,baz=31,slow=7.6,SNR=16
DBIC LR LR 19 20 42.9
comp=Z,67nm,18.0s,baz=32,slow=37
DBIC Dimbokro 60.34 262 P P 18 53 42.4 +0.1
DBIC pmax pmax
comp=Z,8.0nm,0.7s
DBIC Dimbokro 60.34 262 P P 18 53 42.4 +0.1
DBIC IAmb IAmb 18 53 44.6
comp=Z,8.0nm,0.7s
KIC Kosan Boka 60.38 262 eP P 18 53 42.4 -0.2
comp=Z,12nm,0.8s
TIC Tounodi 60.50 262 eP P 18 53 43.0 -0.4
LIC Lamto 60.70 262 eP P 18 53 44.3 -0.4
comp=Z,23nm,0.8s
KS19 Wonju Array Si 60.94 60 P P 18 53 45.5 -0.5
KSRS Korea Array 60.99 60 P P 18 53 45.9 -0.6
comp=Z,2.3nm,0.5s,baz=276,slow=7.1,SNR=13
KLR Kul'dur 61.43 47⇓ eP P 18 53 49.3 +0.1
KLR pmax pmax
comp=Z,24nm,2.5s
BOSA Boshof 62.43 210 P P 18 53 56.3 +0.1
comp=Z,1.7nm,0.4s,baz=11,slow=2.3,SNR=11
BOSA Boshof 62.43 210 P P 18 53 56.3 +0.1
BOSA IAmb IAmb 18 54 00.7
comp=Z,3.7nm,0.8s
USA0B Ussuriysk Arra 62.53 52⇓ eP P 18 53 56.0 -0.6
USRK Ussuriysk Ar. 62.53 52 P P 18 53 55.6 -1.0
comp=Z,1.4nm,0.6s,baz=257,slow=8.4,SNR=6.5
USRK Ussuriysk Ar. 62.53 52 P P 18 53 55.8 -0.8
USRK Ussuriysk Ar. 62.53 52 P P 18 53 55.8 -0.8
MYLDM Lahad Datu 63.97 98 P P 18 54 08.2 +1.5
MYLDM IAmb IAmb 18 54 11.1
comp=Z,5.9nm,0.8s
BILL Bilibino 72.55 22 i P P 18 54 57.7 -1.9
BILL pmax pmax
comp=Z,3.0nm,0.9s
BATI Baumata 76.03 109 P P 18 55 20.9 +0.2
comp=Z,6.5nm,0.5s,baz=296,slow=4.4,SNR=7.3
FITZ Fitzroy Crossi 81.78 115 P P 18 55 52.4 +0.2
comp=Z,2.9nm,0.5s,baz=333,slow=6.2,SNR=22
FITZ Fitzroy Crossi 81.78 115 P P 18 55 53.0 +0.8
KNRA Kununurra 83.09 111 P P 18 55 59.7 +0.6
MTN Manton Dam 83.67 108 P P 18 56 03.1 +1.0
NWAO Narrogin (SRO) 83.96 132 P P 18 56 04.3 +1.1
NWAO pmax pmax
comp=Z,62nm,1.5s
NWAO Narrogin (SRO) 83.96 132 P P 18 56 04.3 +1.1
SCHQ Schefferville 84.42 330 P P 18 56 04.9 -0.5
comp=Z,3.8nm,0.8s,baz=16,slow=7.4,SNR=3.6
SCHQ Schefferville 84.42 330 P P 18 56 03.5 -1.9
BMAR Burnt Mountain 84.55 8 P P 18 56 06.3 +0.5
IMAR Indian Mountai 84.55 11 P P 18 56 04.8 -1.0
ILAR Eielson Array 86.78 9 P P 18 56 16.1 -0.7
comp=Z,0.8nm,0.6s,baz=324,slow=4.3,SNR=10
ILAR Eielson Array 86.78 9 P P 18 56 16.0 -0.9
KTH Kantishna Hill 87.28 11 P P 18 56 18.6 -0.8
KTH IAmb IAmb 18 56 30.7
comp=Z,13nm,1.4s
EGAK Eagle 87.49 7 P P 18 56 19.8 -0.5
EGAK IAmb IAmb 18 56 40.8
comp=Z,9.6nm,1.4s
PPLA Purkeypile 87.65 12 P P 18 56 20.7 -0.6
PPLA IAmb IAmb 18 56 45.6
comp=Z,8.5nm,1.2s
GBN Guysborough 87.68 321 P P 18 56 21.2 -0.3
K27K Chicken 88.12 7 P P 18 56 23.9 +0.6
K27K IAmb IAmb 18 56 33.0
comp=Z,5.2nm,1.1s
DAWY Dawson 88.37 6 P P 18 56 24.5 -0.1
DAWY IAmb IAmb 18 56 33.7
comp=Z,4.8nm,1.4s
BCAR Beaver Creek A 89.08 8 P P 18 56 28.5 +0.5
SUA Susitna One 89.24 12 P P 18 56 28.6 -0.2
WB0 Warramunga Arr 89.77 112 P P 18 56 31.8 0.0
WB0 IAmb IAmb 18 56 34.1
comp=Z,3.2nm,0.6s
WRA Warramunga Arr 89.81 112 P P 18 56 31.5 -0.5
comp=Z,2.8nm,0.6s,baz=313,slow=4.0,SNR=69
WRA Warramunga Arr 89.81 112 P P 18 56 32.1 +0.1
WRA Warramunga Arr 89.81 112 P P 18 56 32.0 +0.1
WRAB Tennant Creek 89.81 112 P P 18 56 31.9 -0.1
WRAB pmax pmax
comp=Z,4.0nm,0.6s
WRAB Tennant Creek 89.81 112 P P 18 56 31.9 -0.1
WRAB IAmb IAmb 18 56 34.5
comp=Z,4.1nm,0.6s
WB2 Warramunga Arr 89.82 112 P P 18 56 31.9 -0.2
WB2 IAmb IAmb 18 56 34.5
comp=Z,4.5nm,0.6s
WR0 Warramunga Arr 89.98 112 P P 18 56 32.6 -0.2
WR0 IAmb IAmb 18 56 46.1
comp=Z,6.9nm,1.5s
ASAR Alice Springs 91.25 116 P P 18 56 38.2 -0.5
comp=Z,2.5nm,0.8s,baz=305,slow=4.6,SNR=21
ASAR Alice Springs 91.25 116 P P 18 56 38.3 -0.4
LPAZ La Paz 126.59 269 PKP PKPdf 19 02 37.8 +0.1
comp=Z,0.6nm,0.4s,baz=302,slow=2.7,SNR=3.9

*IDC **06** 18:45:32.6±2.5,6°.78S×149°.28E,h64km±27km,mb3.3/2, mb1 3.6/5,mb1mx3.2/31,mbtmp3.7/5,ML3.7/2,MS2.4/1, Ms1 2.4/1,ms1mx2.2/22,Error ellipse: s-maj=69.7km s-min=17.2km az=132.0*

ISC 06 18:45:30.8±1.3,6°.3S±0°.2×148°.8E±0°.3,h35km,n6,σ0s70/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.45	207	P		Pn		18 46 22.3	+0.3
	5.1nm,0.3s,baz=49,slow=5.0,SNR=17								
PMG				S		Sn		18 47 02.0	+0.4
	20nm,0.3s,baz=45,slow=22,SNR=13								
KRVT	Keravat (AS076	3.82	59	P		Pn		18 46 27.3	+0.2
	6.4nm,0.3s,baz=337,slow=7.7,SNR=2.3								
KRVT				LR	LR			18 47 50.5	
	comp=Z,59nm,20.7s,baz=336,slow=38								
WRA	Warramunga Arr	19.48	225	P		P		18 49 54.3	-0.6
	0.2nm,0.3s,baz=51,slow=11,SNR=28								
ASAR	Alice Springs	22.39	218	P		P		18 50 25.4	-0.9
	0.4nm,0.5s,baz=55,slow=9.1,SNR=8.3								
FITZ	Fitzroy Crossi	25.41	241	P		P		18 50 56.0	+0.8
	2.6nm,0.8s,baz=60,slow=11,SNR=8.9								

TORD	**Torodi Ar. Bea**	**146.87**	**284**	PKPbc	**PKPbc**	**19**	**05**	**10.6**	**0.0**
	0.9nm,0.6s,baz=68,slow=3.7,SNR=4.4								

*TAP **06** 18:53:04.3,24˚.81N×122˚.06E,h7km,ML2.8,C*
*JMA **06** 18:53:05.1±0.1,24˚.86N×121˚.98E,h40km±4km,M2.4*
ISC 06 18:53:03.7±0.9,**24˚.86N**±0˚.03×**122˚.09E**±0˚.02,**h14**km±6km,
n78,σ0**890**/100,**2C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.15**	**265**	⇑*i*	P	**g**	**18 53 07.4**	**0.0**
	baz=286						
EGS				S		**Sg**	**18 53 09.4**	**-0.5**
	baz=286						
TWB1	**Santiao Chiao**	**0.18**	**328**	*i* P		**Pb**	**18 53 09.2**	**+0.4**
	baz=345						
TWB1				*i* S		**Sb**	**18 53 12.0**	**-0.2**
	baz=345						
NTC	**Toucheng**	**0.24**	**269**	P		**Pg**	**18 53 09.2**	**+0.3**
	baz=281						
NTC				S		**Sg**	**18 53 12.3**	**0.0**
	baz=281						
TIPB	**Shuangxi**	**0.27**	**295**	⇑*i*	P	**Pb**	**18 53 10.2**	**-0.1**
	baz=306						
TIPB				*i* S		**Sb**	**18 53 13.9**	**-0.9**
	baz=306						
TWC	**Suao**	**0.33**	**222**	P		**Pg**	**18 53 10.3**	**-0.2**
	baz=220						
TWC				S		**Sg**	**18 53 13.6**	**-1.5**
	baz=220						
NWF	**Wu-fen Shan**	**0.35**	**307**	P		**Pb**	**18 53 12.1**	**+0.2**
	baz=304						
NWF				*e*S		**Sb**	**18 53 17.1**	**-0.2**
	baz=304						
WFSB	**Wu-fen Shan**	**0.35**	**307**	P		**Pb**	**18 53 12.2**	**+0.4**
	baz=304						
WFSB				S		**Sb**	**18 53 17.5**	**+0.3**
	baz=304						
TWE	**Neicheng**	**0.41**	**251**	P		**Pg**	**18 53 11.9**	**0.0**
	baz=254						
TWA	**Mucha**	**0.48**	**285**	*e*P		**Pb**	**18 53 14.3**	**+0.4**
	baz=291						
ENAH	**Nanao**	**0.48**	**212**	*e*P		**Pb**	**18 53 14.5**	**+0.5**
	baz=201						
ENTT	**Nioudou**	**0.53**	**246**	P		**Pb**	**18 53 14.6**	**-0.1**
	baz=248						
NWLT	**Wulai**	**0.54**	**262**	P		**Pg**	**18 53 14.4**	**+0.1**
	baz=265						
NWLT				*e*S		**Sg**	**18 53 20.5**	**-1.1**
	baz=265						
TAP1	**Taipei**	**0.55**	**289**	*e*P		**Pn**	**18 53 16.1**	**-1.0**
	baz=294						
YM01	**YM01**	**0.55**	**301**	*e*P		**Pn**	**18 53 16.2**	**-1.0**
	baz=306						
TATO	**Taipei**	**0.56**	**282**	*e*P		**Pb**	**18 53 15.6**	**+0.3**
	baz=279						
TATO				*e*S		**Sb**	**18 53 22.3**	**-0.9**
	baz=279						
YM11	**YM11**	**0.56**	**303**	*e*P		**Pn**	**18 53 16.7**	**-0.7**
	baz=308						
YM08	**YM08**	**0.56**	**306**	*e*P		**Pn**	**18 53 15.8**	**-1.5**
	baz=311						
YM10	**YM10**	**0.56**	**302**	P		**Pn**	**18 53 16.4**	**-1.1**
	baz=307						
YM05	**YM05**	**0.57**	**303**	P		**Pn**	**18 53 16.5**	**-1.0**
	baz=308						
YM04	**YM04**	**0.58**	**300**	*e*P		**Pn**	**18 53 16.5**	**-1.1**
	baz=306						
NDT	**Datong Townshi**	**0.58**	**244**	*e*P		**Pb**	**18 53 15.6**	**-0.2**
	baz=246						
NDT				*e*S		**Sb**	**18 53 25.0**	**+1.1**
	baz=246						
YM03	**YM03**	**0.59**	**303**	*e*P		**Pn**	**18 53 16.7**	**-1.1**
	baz=298						
TWY	**Chenhua**	**0.61**	**313**	*e*P		**Pn**	**18 53 17.2**	**-0.8**
	baz=318						
ANP	**Anpu**	**0.61**	**302**	*e*P		**Pn**	**18 53 17.9**	**-0.2**
	baz=308						
NTST	**Danshui**	**0.66**	**298**	*e*P		**Pn**	**18 53 18.3**	**-0.3**
	baz=302						
TWS1	**Kuangyinshan**	**0.66**	**292**	*e*P		**Pn**	**18 53 18.3**	**-0.3**
	baz=296						
YHNB	**Yeheng**	**0.68**	**254**	P		**Pg**	**18 53 16.6**	**-0.3**
	baz=266						
NSK	**Sanguang**	**0.69**	**255**	*e*P		**Pg**	**18 53 16.8**	**-0.3**
	baz=267						
NNSB	**Datong**	**0.77**	**237**	*e*P		**Pb**	**18 53 18.1**	**-1.0**
	baz=237						
NNSB				*e*S		**Sn**	**18 53 30.5**	**-1.4**
	baz=237						
NNSH	**Datong**	**0.77**	**237**	*e*P		**Pb**	**18 53 18.7**	**-0.3**
	baz=237						
NNSH				*e*S		**Sg**	**18 53 30.4**	**+1.4**
	baz=237						
NNS	**Nan Shan**	**0.78**	**238**	*e*P		**Pg**	**18 53 19.3**	**+0.5**
	baz=238						
NNS				*e*S		**Sg**	**18 53 29.6**	**+0.6**
	baz=238						
NACB	**Ninganchiao**	**0.82**	**214**	*e*P		**Pb**	**18 53 19.7**	**0.0**
	baz=202						
NACB				*e*S		**Sb**	**18 53 29.9**	**-0.8**
	baz=202						
ETLH	**Xiulin Townshi**	**0.85**	**221**	*e*P		**Pb**	**18 53 20.2**	**-0.2**
	baz=219						
JYNG	**Yonagunijimaku**	**0.88**	**117**	P		**Pn**	**18 53 22.4**	**+0.8**
JYNG				S		**Sn**	**18 53 34.6**	**+0.4**
TWD	**Chiawan**	**0.90**	**210**	*e*P		**Pn**	**18 53 22.6**	**+0.7**
	baz=202						
YOJ	**Yonaguni jima**	**0.93**	**115**	*e*P		**Pn**	**18 53 22.8**	**+0.5**
	baz=112						
YOJ				S		**Sn**	**18 53 36.1**	**+0.7**
	baz=112						
YOJ	**Yonaguni jima**	**0.93**	**115**	P		**Pn**	**18 53 23.3**	**+1.0**
YOJ				S		**Sn**	**18 53 36.2**	**+0.8**
LIOB	**Emei**	**1.00**	**258**	*e*P		**Pg**	**18 53 23.3**	**+0.2**
	baz=260						
NSTT	**Nanjuang**	**1.02**	**257**	*e*P		**Pg**	**18 53 24.4**	**+1.0**
	baz=258						
NSTT				*e*S		**Sn**	**18 53 39.4**	**+1.6**
	baz=258						
TWT	**Tachien**	**1.03**	**234**	*e*P		**Pg**	**18 53 24.9**	**+1.3**
	baz=226						
WHF	**Hehuan Shan**	**1.03**	**227**	*e*P		**Pg**	**18 53 24.4**	**+0.7**
	baz=225						
TDCB	**Techi**	**1.04**	**235**	*e*P		**Pg**	**18 53 24.9**	**+1.0**
	baz=226						
CHGB	**Renai**	**1.15**	**227**	*e*P		**Pg**	**18 53 26.7**	**+0.7**
	baz=224						
WHP	**Taichung City**	**1.19**	**241**	*e*P		**Pg**	**18 53 27.4**	**+0.7**
	baz=241						
NMLH	**Miaoli**	**1.23**	**255**	*e*P		**Pg**	**18 53 28.0**	**+0.7**
	baz=271						
TWQ1	**Liyutan**	**1.30**	**247**	*e*P		**Pg**	**18 53 30.1**	**+1.3**
	baz=264						
DPDB	**Guoxing**	**1.34**	**233**	*e*P		**Pg**	**18 53 30.1**	**+0.5**
	baz=218						
VWDT	**VWDT**	**1.40**	**218**	*e*P		**Pg**	**18 53 31.6**	**+1.0**
	baz=207						
SMLT	**Sun Moon Lake**	**1.46**	**228**	*e*P		**Pg**	**18 53 33.2**	**+1.5**
	baz=226						
TYC	**Yuchr**	**1.47**	**230**	*e*P		**Pg**	**18 53 33.2**	**+1.2**
	baz=229						
SSLB	**Suanglung**	**1.49**	**224**	*e*P		**Pn**	**18 53 30.5**	**+0.4**
	baz=222						
HGSD	**Ruisui**	**1.49**	**204**	*e*P		**Pg**	**18 53 33.2**	**+0.9**
	baz=216						
EHY	**Hungye**	**1.52**	**208**	*e*P		**Pb**	**18 53 31.2**	**-0.5**
	baz=202						
IRIF	**Iriomote-Funau**	**1.58**	**109**	P		**Pb**	**18 53 32.2**	**-0.5**
IRIF				*e*S		**Sb**	**18 53 52.8**	**+0.2**
WNT	**Mingjian**	**1.61**	**233**	*e*P		**Pg**	**18 53 36.6**	**+1.9**
	baz=221						
WJS	**Zhushan**	**1.62**	**231**	*e*P		**Pg**	**18 53 36.8**	**+2.1**
	baz=218						
WHYT	**Xinyi Township**	**1.62**	**225**	*e*P		**Pg**	**18 53 36.1**	**+1.4**
	baz=222						
YULB	**Yu-li**	**1.63**	**207**	*e*P		**Pb**	**18 53 33.7**	**+0.1**
	baz=213						
TWF1	**Yuli**	**1.67**	**206**	*e*P		**Pb**	**18 53 34.1**	**-0.1**
	baz=216						
ALS	**Alishan**	**1.78**	**221**	*e*P		**Pg**	**18 53 38.4**	**+0.4**
	baz=201						
CHN5	**Tsauling**	**1.80**	**226**	*e*P		**Pg**	**18 53 38.4**	**+0.1**
	baz=223						
WDLH	**Douliu**	**1.83**	**231**	*e*P		**Pg**	**18 53 38.2**	**-0.7**
	baz=227						
JKRS	**Kuro-shima**	**1.85**	**109**	P		**Pb**	**18 53 36.8**	**-0.6**
JKRS				S		**Sn**	**18 53 59.2**	**+0.9**
JIJ	**Ishigaki jima**	**1.93**	**104**	P		**Pb**	**18 53 37.7**	**-1.0**
JIJ				*e*S		**Sb**	**18 54 01.6**	**-1.1**
JISG	**Ishigakijimahi**	**2.04**	**97**	*e*S		**Sb**	**18 54 05.0**	**-0.7**
TPUB	**Ta-pu**	**2.05**	**221**	*e*P		**Pb**	**18 53 42.0**	**+1.3**
	baz=201						
TPUB				*e*S		**Sb**	**18 54 07.7**	**+1.7**
	baz=201						
STYT	**Tauyuan**	**2.08**	**216**	*e*P		**Pg**	**18 53 43.1**	**-0.5**
	baz=211						
WTP	**Ta-pu**	**2.10**	**220**	*e*P		**Pg**	**18 53 43.4**	**-0.6**
	baz=199						
WLGB	**Puzi**	**2.14**	**230**	*e*P		**Pb**	**18 53 41.6**	**-0.6**
	baz=230						
TWK	**Hsinying**	**2.16**	**223**	*e*P		**Pb**	**18 53 43.8**	**+1.2**
	baz=218						
CHN1	**Nanshi**	**2.19**	**221**	*e*P		**Pg**	**18 53 44.7**	**-1.1**
	baz=217						
TWGBT	**Beinan**	**2.23**	**205**	*e*P		**Pn**	**18 53 38.9**	**-1.5**
	baz=199						
SGST	**Jiashian**	**2.24**	**218**	*e*P		**Pb**	**18 53 43.8**	**-0.2**
	baz=212						
SLGT	**Liugui**	**2.28**	**216**	*e*P		**Pg**	**18 53 46.3**	**-1.1**
	baz=210						
MASBT	**Mashibuluo**	**2.61**	**211**	*e*P		**Pb**	**18 53 48.6**	**-1.6**
	baz=205						
XPSS	**Dashiqiu**	**2.68**	**321**	*e*P		**Pb**	**18 53 52.2**	**+0.7**
	baz=315						
LYJJ	**Jianjiangzhen**	**2.69**	**309**	*e*P		**Pb**	**18 53 51.5**	**-0.2**
	baz=304						
EAST	**Anshuo**	**2.71**	**205**	*e*P		**Pb**	**18 53 50.2**	**-2.0**
	baz=188						

*ATH **06** 19:10:11.6,34˚.18N×26˚.13E,h18km±7km,ML2.1/1,Error ellipse: s-maj=15.1km s-min=3.6km az=356.0*
*NIC **06** 19:10:13.9±0.0,33˚.96N×26˚.48E,h28km±8km,Ml3.4/2*
ISC 06 19:10:09.4±1.6,**34˚.08N**±0˚.09×**26˚.25E**±0˚.05,**h10**km,**n14,**
σ1**827**/17,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**1.03**	**359**	P		**Pb**	**19 10 29.1**	**-0.3**
LAST	**Lasithi**	**1.25**	**330**	P		**Pb**	**19 10 32.2**	**-0.9**
LAST				S		**Sb**	**19 10 47.7**	**-1.7**
LAST				AML	AML	19 11 00.0	
	comp=E,188μm,0.8s						
LAST				AML	AML	19 11 01.1	
	comp=N,177μm,0.9s						
NPS	**Neapolis**	**1.29**	**336**	P		**Pg**	**19 10 34.5**	**+0.2**
IDI	**Anoyia**	**1.65**	**318**	P		**Pb**	**19 10 40.3**	**+0.4**
KARP	**Karpathos**	**1.65**	**27**	P		**Pg**	**19 10 41.1**	**+0.1**
KARP	**Karpathos**	**1.65**	**27**	P		**Pg**	**19 10 41.1**	**+0.1**
KARP				S		**Sg**	**19 11 02.8**	**+0.4**
IMMV	**Iera Moni Meta**	**2.32**	**307**	P		**Pn**	**19 10 48.8**	**+1.1**
KSL	**Kastellorizon**	**3.43**	**52**	P		**Pn**	**19 11 04.4**	**+1.5**
OSC1	**CSNet OBS 1**	**4.23**	**96**	P		**Pn**	**19 11 14.2**	**+0.3**
OSC1				S		**Sn**	**19 12 01.0**	**-2.3**
AKMS	**Akamas**	**5.11**	**78**	P		**Pn**	**19 11 27.2**	**+1.1**
AKMS				AML	AML	19 12 24.6	
	comp=N,0.1nm,0.4s						
AKMS				AML	AML	19 12 25.6	
	comp=N,0.1nm,0.3s						
ALFC	**Alefka**	**5.35**	**77**	P		**Pn**	**19 11 30.3**	**+1.0**
ALFC				AML	AML	19 12 32.4	
	comp=N,0.1nm,0.5s						
ALFC				AML	AML	19 12 32.4	
	comp=N,0.1nm,0.4s						
SZAC	**Souni**	**5.53**	**81**	P		**Pn**	**19 11 33.3**	**+1.5**
ASGA	**Asgata**	**5.83**	**81**	P		**Pn**	**19 11 37.1**	**+1.2**
MVOU	**Mavrovouni**	**6.17**	**79**	P		**Pn**	**19 11 42.3**	**+1.8**

*TIF **06** 19:23:05.7,41˚.49N×48˚.65E,h27km±1km*
*MOS **06** 19:23:07.0±1.6,41˚.50N×48˚.60E,h11km,mb3.8/1,Error ellipse: s-maj=16.1km s-min=5.9km az=134.1*
*DRS **06** 19:23:07.3±0.0,41˚.40N×48˚.82E,h22km*
ISC 06 19:23:06.2±1.9,**41˚.54N**±0˚.05×**48˚.58E**±0˚.06,**h2**km±11km,
n34,σ1**848**/59,**4C-2D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSMR	**Kasumkent**	**0.35**	**281**	*i* Pg		**Pn**	**19 23 16.5**	**-1.8**
KSMR				*e*Sg		**Sb**	**19 23 23.5**	**+2.4**
	2μm,0.1s						
KSMR	**Kasumkent**	**0.35**	**281**	⇓*i* PG		**Pn**	**19 23 16.5**	**-1.8**
KSMR				*e*S		**Sb**	**19 23 23.5**	**+2.4**
AKT	**Akhty**	**0.64**	**265**	*i* Pg		**Pb**	**19 23 19.7**	**-0.5**
	2μm,0.2s						
AKT				*e*Sg		**Sb**	**19 23 29.9**	**+0.3**
	1μm,0.3s						
AKT	**Akhty**	**0.64**	**265**	*i* PG		**Pb**	**19 23 19.7**	**-0.5**
AKT				*e*S		**Sb**	**19 23 30.2**	**+0.6**
AKT				pmax	pmax		
	comp=Z,2μm,0.2s						
AKT				smax	smax		
	comp=E,1μm,0.3s						
URKR	**Urkarakh**	**0.95**	**312**	*e*Pg		**Pb**	**19 23 25.1**	**-0.3**
	comp=E,86nm,0.4s						
URKR				*e*Sg		**Sn**	**19 23 39.3**	**-1.6**
	comp=E,633nm,0.5s						
URKR	**Urkarakh**	**0.95**	**312**	*e*PG		**Pb**	**19 23 25.1**	**-0.3**
URKR				*e*S		**Sn**	**19 23 39.2**	**-1.6**
URKR				pmax	pmax		
	comp=Z,86nm,0.4s						
SGKR	**Sergokala**	**1.15**	**324**	*e*Pg		**Pg**	**19 23 28.7**	**+0.4**
SGKR				*e*Sg		**Sn**	**19 23 45.0**	**-0.6**
SGKR	**Sergokala**	**1.15**	**324**	*e*PG		**Pg**	**19 23 28.6**	**+0.4**
SGKR				*e*S		**Sn**	**19 23 45.0**	**-0.6**
KMKR	**Kumukh**	**1.26**	**299**	*e*Pg		**Pn**	**19 23 29.7**	**-1.3**
	comp=Z,28nm,0.3s						
KMKR				*e*Sg		**Sg**	**19 23 47.3**	**+0.8**
	comp=Z,405nm,0.4s						
KMKR	**Kumukh**	**1.26**	**299**	*e*PG		**Pn**	**19 23 29.7**	**-1.3**
KMKR				*e*S		**Sg**	**19 23 47.3**	**+0.8**
KMKR				pmax	pmax		
	comp=Z,28nm,0.3s						
GNBR	**Gunib**	**1.48**	**306**	*i* Pg		**Pb**	**19 23 33.9**	**-0.5**
	comp=Z,22nm,0.1s						
GNBR				*i* Sg		**Sg**	**19 23 53.8**	**+0.2**
	comp=Z,153nm,0.2s						
GNBR	**Gunib**	**1.48**	**306**	⇑*i* PG		**Pb**	**19 23 33.9**	**-0.5**
GNBR				*i* S		**Sg**	**19 23 53.8**	**+0.2**
GNBR				pmax	pmax		
	comp=Z,22nm,0.1s						
MAK	**Makhachkala**	**1.63**	**331**	⇓*i* PN		**Pb**	**19 23 36.0**	**-1.0**
MAK				*e*			19 23 40.9	
MAK				*e*			19 24 05.1	
MAK				pmax	pmax		
	comp=Z,72nm,0.3s						
BUJR	**Buynaksk**	**1.69**	**320**	*e*Pg		**Pb**	**19 23 37.5**	**-0.5**
	comp=Z,46nm,0.4s						
BUJR				*e*Sg		**Sb**	**19 23 59.8**	**0.0**
	comp=Z,312nm,0.5s						
BUJR	**Buynaksk**	**1.69**	**320**	*e*PN		**Pb**	**19 23 37.5**	**-0.5**
BUJR				*e*S		**Sb**	**19 23 59.7**	**0.0**
BUJR				pmax	pmax		
	comp=Z,46nm,0.4s						
UNCR	**Uncukul**	**1.77**	**312**	*e*Pg		**Pb**	**19 23 38.0**	**-1.4**
UNCR				*e*Sg		**Sb**	**19 24 02.0**	**-0.2**
	comp=Z,220nm,0.6s						
UNCR	**Uncukul**	**1.77**	**312**	*e*PN		**Pb**	**19 23 38.0**	**-1.4**
LGD	**Lagodekhi**	**1.78**	**280**	P		**Pb**	**19 23 38.7**	**-0.8**
LGD				S		**Sb**	**19 24 02.0**	**-0.2**
LGD	**Lagodekhi**	**1.78**	**280**	*e*PN		**Pn**	**19 23 35.7**	**-2.2**
KRNR	**Karanay**	**1.79**	**317**	*e*Pg		**Pn**	**19 23 38.0**	**-0.2**
	comp=Z,20nm,0.1s						
KRNR				*e*Sg		**Sb**	**19 24 03.0**	**+0.3**
	comp=Z,80nm,0.3s						
KRNR	**Karanay**	**1.79**	**317**	*e*PN		**Pn**	**19 23 38.0**	**-0.2**
KRNR				pmax	pmax		
	comp=Z,20nm,0.1s						
DDFL	**Dedoflistskaro**	**1.85**	**268**	P		**Pg**	**19 23 41.1**	**-0.6**
DDFL				S		**Sg**	**19 24 08.4**	**+2.7**
DBC	**Dubki**	**1.97**	**319**	*e*Pg		**Pb**	**19 23 42.9**	**+0.1**
	comp=Z,30nm,0.6s						
DBC				*e*Sg		**Sg**	**19 24 09.5**	**0.0**
	comp=Z,135nm,0.6s						
DBC	**Dubki**	**1.97**	**319**	*e*PN		**Pb**	**19 23 42.9**	**+0.1**
DBC				*e*S		**Sg**	**19 24 09.4**	**0.0**
DBC				pmax	pmax		
	comp=Z,30nm,0.6s						
BTLR	**Botlikh**	**2.08**	**303**	*e*PN		**Pb**	**19 23 43.0**	**-1.8**
BTLR				*e*S		**Sg**	**19 24 13.9**	**+0.7**
BTLR				pmax	pmax		
	comp=Z,61nm,0.1s						
BTLR				smax	smax		
	comp=N,87nm,0.4s						
DVE	**Vedeno**	**2.31**	**309**	*e*PN		**Pb**	**19 23 48.8**	**+0.2**
DVE				*e*S		**Sg**	**19 24 20.0**	**-0.4**
DVE				pmax	pmax		
	comp=Z,14nm,0.2s						
DVE				smax	smax		
	comp=N,105nm,0.7s						
GROC	**Groznyy**	**2.65**	**310**	*e*PN		**Pb**	**19 23 54.8**	**+0.4**
GROC				*e*S		**Sg**	**19 24 29.9**	**-1.4**
GUDG	**Gudauri**	**3.20**	**288**	P		**Pb**	**19 24 03.6**	**-0.2**
GUDG	**Gudauri**	**3.20**	**288**	*e*PN		**Pb**	**19 24 02.9**	**-0.9**
GUDG				*e*S		**Sb**	**19 24 39.2**	**-4.1**
KBZ	**Khabaz**	**4.73**	**299**	⇑*e*PN		**Pn**	**19 24 20.3**	**+1.8**
KIV	**Kislovodsk**	**4.97**	**301**	*e*PN		**Pn**	**19 24 24.2**	**+2.3**
KIV				*e*S		**Sn**	**19 25 25.6**	**+5.7**
KIV				pmax	pmax		
	comp=E,11nm,1.1s						
OBN	**Obninsk**	**15.72**	**334**	*i* P		**P**	**19 26 51.1**	**-1.6**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK	**Ala-Archa**	**19.25**	**78**	⇑*e*P		**Pn**	**19 27 32.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**22.62**	**56**	⇑*e*P		**P**	**19 28 10.1**	**+2.0**

*DSN **06** 19:29:19.6±1.1,25˚.65N×57˚.58E,h10km,ML2.8/4,Error ellipse: s-maj=12.9km s-min=4.2km az=42.0*
*OMAN **06** 19:29:20.5±3.6,25˚.51N×57˚.49E,h5km,ml2.5/10,Error ellipse: s-maj=174.7km s-min=20.2km az=279.0*
ISC 06 19:29:19.8±1.9,**25˚.60N**±0˚.07×**57˚.54E**±0˚.06,**h7**km±13km,
n14,σ0**845**/24,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDH	**Madha**	**1.16**	**255**	P		**Pn**	**19 29 43.0**	**+0.6**
BANOM	**Banah**	**1.16**	**286**	P		**Pg**	**19 29 41.7**	**-0.4**
BANOM				S		**Sn**	**19 29 58.6**	**+0.1**
BANOM	**Banah**	**1.16**	**286**	P		**Pg**	**19 29 41.8**	**-0.2**
	SNR=77						
BANOM				S		**Sn**	**19 29 58.8**	**+0.2**
	SNR=22						
SHME	**Shamm**	**1.33**	**290**	*e*P		**Pn**	**19 29 45.0**	**+0.2**
	SNR=9.2						
UOSS	**Minazif**	**1.37**	**242**	P		**Pn**	**19 29 45.5**	**+0.2**
UOSS	**Minazif**	**1.37**	**242**	P		**Pb**	**19 29 45.8**	**+0.1**
UOSS				S		**Sg**	**19 30 04.4**	**+0.5**
HATD	**Hatta, Dubai**	**1.49**	**239**	P		**Pb**	**19 29 47.6**	**-0.1**
HATD				S		**Sn**	**19 30 05.6**	**-1.0**
ASHO	**Ashiyiah**	**1.62**	**236**	P		**Pb**	**19 29 49.7**	**-0.3**
ASHO				S		**Sn**	**19 30 09.1**	**-0.8**
SOHO	**SOHO**	**1.72**	**212**	*e*P		**Pn**	**19 29 50.3**	**+0.2**
	SNR=26						
SOHO	**SOHO**	**1.72**	**212**	P		**Pn**	**19 29 50.3**	**+0.2**
SOHO				S		**Sn**	**19 30 12.5**	**+0.3**
HOQ	**Hoqain**	**2.02**	**186**	P		**Pn**	**19 29 54.5**	**+0.2**
	SNR=18						
HOQ				S		**Sn**	**19 30 20.2**	**+0.5**
WSAR	**Wadi Sarin**	**2.55**	**157**	P		**Pn**	**19 30 02.4**	**+0.8**
WSAR				S		**Sn**	**19 30 32.8**	**-0.2**
WBK	**Wadi Bani Khal**	**3.25**	**156**	P		**Pn**	**19 30 11.3**	**+0.1**
	SNR=18						
WBK				S		**Sn**	**19 30 50.2**	**0.0**
	SNR=6.3						
JLN	**Jalan Bani Buh**	**3.84**	**153**	P		**Pn**	**19 30 18.8**	**-0.4**
	SNR=7.7						
JLN				S		**Sn**	**19 31 04.4**	**-0.3**
	SNR=6.6						

*IDC **06** 19:32:08.3±5.5,39˚.89N×75˚.84E,h0km,mb3.2/2,*
mb1 3.3/4,mb1mx3.2/41,mbtmp3.2/4,ML2.8/2,Error ellipse: s-maj=142.1km s-min=31.1km az=101.0
*KRNET **06** 19:32:12.1±0.1,40˚.15N×76˚.09E,mb3.9*
*SOME **06** 19:32:13.0,40˚.27N×76˚.02E,h10km*
*NNC **06** 19:32:14.8±0.7,40˚.27N×76˚.10E,h0km,mb4.2,mpv3.9,*
Error ellipse: s-maj=5.2km s-min=3.9km az=165.0
ISC 06 19:32:16.1±0.8,**40˚.31N**±0˚.03×**76˚.09E**±0˚.03,**h10**km,**n83,**
σ1**872**/124,**29C-16D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.80**	**186**	Pg	**Pg**	**19 32 32.8**	**+1.4**
KSH				Sg	**Sn**	**19 32 47.1**	**+1.6**
KSH				smax	smax		
	comp=N,1μm,0.3s						
KSH				smax	smax		
	comp=E,2μm,0.3s						
ULHL	**Ulahol**	**1.94**	**3**	⇓*e*P		**Pn**	**19 32 50.6**	**+1.3**
	baz=3.0						
ULHL				⇓*i*S		**Sb**	**19 33 16.8**	**+0.8**
	baz=3.0						
ULHL	**Ulahol**	**1.94**	**3**	P		**Pb**	**19 32 51.2**	**-0.5**
	SNR=36						
KDJ	**Kajisay**	**2.00**	**24**	⇑*i*P		**Pn**	**19 32 51.6**	**+1.5**
	baz=22						
KDJ				⇑*i*S		**Sb**	**19 33 18.5**	**+0.8**
	baz=22						
ARLS	**Aral**	**2.05**	**320**	⇑*i*P		**Pn**	**19 32 51.8**	**+1.1**
	baz=23						
ARLS				⇑*i*S		**Sb**	**19 33 20.2**	**+1.2**
	baz=23						
BOOM	**Boomskoye usch**	**2.18**	**357**	⇑*i*P		**Pn**	**19 32 54.6**	**+2.0**
	baz=57						
BOOM				⇑*i*S		**Sb**	**19 33 23.1**	**+0.1**
	baz=57						
UCH	**Uchtor**	**2.25**	**329**	⇑*i*P		**Pn**	**19 32 55.8**	**+1.9**
	baz=31						
UCH				⇑*i*S		**Sb**	**19 33 25.4**	**+0.1**
	baz=31						
UCH	**Uchtor**	**2.25**	**329**	P		**Pb**	**19 32 56.8**	**-0.4**
	SNR=29						
KBK	**Karagaybulak**	**2.50**	**340**	⇓*e*P		**Pn**	**19 32 58.9**	**+1.9**
	baz=41						
KBK				⇓*i*S		**Sb**	**19 33 30.7**	**-1.3**
	baz=41						
KBK	**Karagaybulak**	**2.50**	**340**	P		**Pb**	**19 33 01.6**	**+0.4**
	SNR=32						
AML	**Almayashu**	**2.56**	**316**	⇓*e*P		**Pn**	**19 32 59.3**	**+1.2**
	baz=18						
AML				⇓*e*S		**Sb**	**19 33 32.8**	**-

TNSS	**Tian-Shan**	**2.80**	**13**	*eP*	**Pb**	**19 33 07.0**	**+0.6**	
	comp=E,46nm,0.5s							
TNSS				*eS*	**Sg**	**19 33 46.0**	**-0.2**	
	comp=E,70nm,0.5s							
TNSS	**Tian-Shan**	**2.80**	**13**	Pg	**Pb**	**19 33 07.0**	**+0.6**	
	comp=E,46nm,0.5s							
TNSS				Lg	Lg	19 33 45.9		
	comp=E,70nm,0.5s							
MTBS	**Maitube**	**2.83**	**5**	*eP*	**Pb**	**19 33 06.6**	**-0.2**	
	comp=E,27nm,0.6s							
MTBS				*eS*	**Sg**	**19 33 45.8**	**-1.3**	
	comp=E,43nm,0.5s							
MTBS	**Maitube**	**2.83**	**5**	Pg	**Pb**	**19 33 07.9**	**+1.1**	
	comp=E,27nm,0.6s							
MTBS				Lg	Lg	19 33 47.7		
	comp=E,43nm,0.5s							
CHMS	**Chumysh**	**2.87**	**340⇑**	*eP*	**Pn**	**19 33 03.5**	**+1.6**	
	baz=41							
CHMS				⇑*iS*	**Sn**	**19 33 39.7**	**+3.2**	
	baz=41							
CHMS	**Chumysh**	**2.87**	**340**	P	**Pn**	**19 33 05.0**	**+3.1**	
	SNR=5.4							
EKS2	**Erkin-Say**	**2.92**	**324⇓**	*eP*	**Pn**	**19 33 04.7**	**+1.9**	
	baz=26							
EKS2				⇓*iS*	**Sn**	**19 33 40.9**	**+2.9**	
	baz=26							
EKS2	**Erkin-Say**	**2.92**	**324**	P	**Pn**	**19 33 05.1**	**+2.3**	
	SNR=32							
DGS	**Degeres**	**2.94**	**356**	*eP*	**Pb**	**19 33 09.3**	**+0.7**	
	comp=E,60nm,0.6s							
DGS				*eS*	**Sg**	**19 33 50.0**	**-0.6**	
	comp=E,94nm,0.5s							
DGS	**Degeres**	**2.94**	**356**	Pg	**Pb**	**19 33 09.4**	**+0.7**	
	comp=E,60nm,0.6s							
DGS				Lg	Lg	19 33 50.0		
	comp=E,94nm,0.5s							
MDOK	**Medeo**	**2.94**	**14**	*eP*	**Pb**	**19 33 08.9**	**+0.2**	
	comp=E,64nm,0.6s							
MDOK				*eS*	**Sg**	**19 33 49.3**	**-1.3**	
	comp=E,184nm,0.6s							
MDOK	**Medeo**	**2.94**	**14**	Pg	**Pb**	**19 33 08.9**	**+0.2**	
	comp=E,64nm,0.6s							
MDOK				Lg	Lg	19 33 49.3		
	comp=E,184nm,0.6s							
KNDC	**Almaty**	**2.98**	**12**	⇑Pn	**Pn**	**19 33 05.6**	**+2.1**	
	comp=E,22nm,0.5s							
KNDC				⇑Pg	**Pb**	**19 33 10.5**	**+1.2**	
	comp=E,71nm,0.8s							
KNDC				⇑Lg	Lg	19 33 51.0		
	comp=E,269nm,1.3s							
KOTS	**Kotyrbulak**	**3.02**	**14**	*eP*	**Pb**	**19 33 11.0**	**+0.9**	
	comp=E,118nm,0.5s							
KOTS				*eS*	**Sg**	**19 33 52.8**	**-0.4**	
	comp=E,134nm,0.8s							
KOTS	**Kotyrbulak**	**3.02**	**14**	Pg	**Pb**	**19 33 11.0**	**+0.9**	
	comp=E,118nm,0.5s							
KOTS				Lg	Lg	19 33 52.8		
	comp=E,134nm,0.8s							
USP	**Ospenovka**	**3.19**	**339⇑**	*eP*	**Pn**	**19 33 08.3**	**+2.0**	
	baz=40							
USP				⇑*iS*	**Sn**	**19 33 47.1**	**+2.7**	
	baz=40							
USP	**Ospenovka**	**3.19**	**339**	P	**Pn**	**19 33 08.3**	**+2.0**	
	SNR=12							
MRKS	**Merke**	**3.25**	**320**	*eP*	**Pb**	**19 33 14.0**	**+0.1**	
	comp=E,49nm,0.5s							
MRKS				*eS*	**Sg**	**19 33 58.4**	**-2.0**	
	comp=E,60nm,0.5s							
MRKS	**Merke**	**3.25**	**320**	Pg	**Pb**	**19 33 14.0**	**+0.1**	
	comp=E,49nm,0.5s							
MRKS				Lg	Lg	19 33 58.3		
	comp=E,60nm,0.5s							
SATY	**Saty**	**3.25**	**32**	*eP*	**Pb**	**19 33 14.1**	**+0.1**	
	comp=E,57nm,0.6s							
SATY				*eS*	**Sg**	**19 33 58.1**	**-2.5**	
	comp=E,89nm,0.7s							
SATY	**Saty**	**3.25**	**32**	Pg	**Pb**	**19 33 14.1**	**+0.1**	
	comp=E,57nm,0.6s							
SATY				Lg	Lg	19 33 58.1		
	comp=E,89nm,0.7s							
SGDS	**Sogindy**	**3.33**	**341**	Pg	**Pb**	**19 33 15.7**	**+0.5**	
	comp=E,22nm,0.5s							
SGDS				Lg	Lg	19 34 01.1		
	comp=E,99nm,0.6s							
ZHN	**Zhinishke**	**3.35**	**31**	Pg	**Pb**	**19 33 15.9**	**+0.2**	
	comp=E,24nm,0.2s							
ZHN				Lg	Lg	19 34 01.0		
	comp=E,16nm,0.4s							
KRBS	**Karabastau**	**3.40**	**355**	*eP*	**Pb**	**19 33 17.2**	**+0.7**	
	comp=E,38nm,0.4s							
KRBS				*eS*	**Sg**	**19 34 03.4**	**-1.9**	
	comp=E,66nm,0.7s							
KRBS	**Karabastau**	**3.40**	**355**	Pg	**Pb**	**19 33 17.2**	**+0.7**	
	comp=E,38nm,0.4s							
KRBS				Lg	Lg	19 34 03.4		
	comp=E,66nm,0.7s							
KTBS	**Karatobe**	**3.43**	**7**	*eP*	**Pb**	**19 33 17.6**	**+0.6**	
	comp=E,36nm,0.6s							
KTBS				*eS*	**Sg**	**19 34 04.5**	**-1.7**	
	comp=E,99nm,0.4s							
KTBS	**Karatobe**	**3.43**	**7**	Pg	**Pb**	**19 33 17.6**	**+0.6**	
	comp=E,36nm,0.6s							
KTBS				Lg	Lg	19 34 04.5		
	comp=E,99nm,0.4s							
MNAS	**Manas**	**3.46**	**310⇑**	*eP*	**Pn**	**19 33 11.3**	**+1.1**	
	baz=12							
MNAS				⇑*iS*	**Sn**	**19 33 53.7**	**+2.3**	
	baz=12							
KURS	**Kuram**	**3.54**	**25**	*eP*	**Pb**	**19 33 19.3**	**+0.5**	
	comp=E,29nm,0.6s							
KURS				*eS*	**Sg**	**19 34 07.3**	**-2.4**	
	comp=E,77nm,1.0s							
KURS	**Kuram**	**3.54**	**25**	Pg	**Pb**	**19 33 19.3**	**+0.5**	
	comp=E,29nm,0.6s							
KURS				Lg	Lg	19 34 07.3		
	comp=E,77nm,1.0s							
KUU	**Kurty**	**3.59**	**3**	*eP*	**Pb**	**19 33 20.8**	**+1.2**	
	comp=E,26nm,0.8s							
KUU				*eS*	**Sg**	**19 34 09.6**	**-1.7**	
	comp=E,149nm,0.9s							
KUU	**Kurty**	**3.59**	**3**	Pg	**Pb**	**19 33 20.8**	**+1.2**	
	comp=E,26nm,0.8s							
KUU				Lg	Lg	19 34 09.6		
	comp=E,149nm,0.9s							
UZB	**Uzynbulak**	**3.59**	**37**	*eP*	**Pb**	**19 33 20.1**	**+0.4**	
	comp=E,24nm,0.7s							
UZB				*eS*	**Sg**	**19 34 08.4**	**-2.9**	
	comp=E,38nm,1.0s							
UZB	**Uzynbulak**	**3.59**	**37**	Pg	**Pb**	**19 33 20.1**	**+0.4**	
	comp=E,24nm,0.7s							
UZB				Lg	Lg	19 34 08.4		
	comp=E,38nm,1.0s							
KPKS	**Kokpek**	**3.70**	**31**	*eP*	**Pb**	**19 33 21.9**	**+0.3**	
	comp=E,34nm,0.7s							
KPKS				*eS*	**Sg**	**19 34 11.9**	**-3.1**	
	comp=E,267nm,0.6s							
SHLS	**Shalkode**	**3.81**	**40**	*eP*	**Pg**	**19 33 28.6**	**-0.4**	
	comp=E,46nm,0.8s							
SHLS				*eS*	**Sg**	**19 34 22.9**	**+4.7**	
	comp=E,43nm,0.5s							
SHLS	**Shalkode**	**3.81**	**40**	Pg	**Pg**	**19 33 28.5**	**-0.4**	
	comp=E,46nm,0.8s							
SHLS				Lg	Lg	19 34 22.9		
	comp=E,43nm,0.5s							
PDGK	**Podgornoye**	**3.95**	**39**	Pg	**Pb**	**19 33 26.2**	**+0.3**	
	comp=E,8.6nm,0.5s							
PDGK				Lg	Lg	19 34 18.9		
	comp=E,28nm,0.8s							
PDGK	**Podgornoye**	**3.95**	**39**	⇓Pn	**Pn**	**19 33 16.4**	**-0.5**	
	comp=E,9.7nm,0.9s							
PDGK				⇑Pg	**Pb**	**19 33 27.2**	**+1.4**	
	comp=E,17nm,0.7s							
PDGK				⇓Lg	Lg	19 34 21.0		
	comp=E,71nm,0.8s							
BTK	**Batken**	**4.04**	**268**	⇓*iP*	**Pn**	**19 33 19.0**	**+0.9**	
	baz=70							
BTK				⇓*iS*	**Sn**	**19 34 06.3**	**+0.7**	
	baz=70							
ARXS	**Arharly**	**4.11**	**18**	*eP*	**Pb**	**19 33 29.8**	**+1.2**	
	comp=E,25nm,0.6s							
ARXS				*eS*	**Sg**	**19 34 24.8**	**-3.2**	
	comp=E,52nm,0.6s							
ARXS	**Arharly**	**4.11**	**18**	Pg	**Pb**	**19 33 29.8**	**+1.2**	
	comp=E,25nm,0.6s							
ARXS				Lg	Lg	19 34 24.8		
	comp=E,52nm,0.6s							
MNBS	**Baschi**	**4.14**	**24**	*eP*	**Pb**	**19 33 30.9**	**+1.7**	
	comp=E,21nm,0.6s							
MNBS				*eS*	**Sg**	**19 34 26.8**	**-2.3**	
	comp=E,54nm,0.7s							
MNBS	**Baschi**	**4.14**	**24**	Pg	**Pb**	**19 33 30.9**	**+1.7**	
	comp=E,21nm,0.6s							
MNBS				Lg	Lg	19 34 26.7		
	comp=E,54nm,0.7s							
KTMS	**Ketmen**	**4.47**	**44**	Pg	**Pb**	**19 33 36.4**	**+1.7**	
KTMS				Lg	Lg	19 34 36.3		
DJR	**Jarkent**	**4.87**	**33**	*eP*	**Pb**	**19 33 43.9**	**+2.4**	
	comp=E,11nm,0.6s							
DJR				*eS*	**Sg**	**19 34 49.7**	**-2.7**	
	comp=E,19nm,0.9s							
DJR	**Jarkent**	**4.87**	**33**	Pg	**Pb**	**19 33 42.2**	**+0.7**	
	comp=E,6.0nm,0.7s							
DJR				Lg	Lg	19 34 46.9		
	comp=E,19nm,0.9s							
IUG	**luzhnay**	**4.92**	**294**	*eP*	**Pb**	**19 33 43.7**	**+1.3**	
	comp=E,16nm,0.5s							
IUG				*eS*	**Sg**	**19 34 49.5**	**-4.7**	
	comp=E,49nm,0.8s							
IUG	**luzhnay**	**4.92**	**294**	Pg	**Pb**	**19 33 43.7**	**+1.3**	
	comp=E,16nm,0.5s							
IUG				Lg	Lg	19 34 49.5		
	comp=E,49nm,0.8s							
BTLS	**Baital**	**4.96**	**343**	*eP*	**Pb**	**19 33 46.0**	**+2.9**	
	comp=E,6.2nm,0.5s							
BTLS				*eS*	**Sg**	**19 34 52.5**	**-2.9**	
	comp=E,31nm,0.6s							
BTLS	**Baital**	**4.96**	**343**	Pg	**Pb**	**19 33 44.8**	**+1.7**	
	comp=E,6.2nm,0.5s							
BTLS				Lg	Lg	19 34 51.1		
	comp=E,31nm,0.6s							
TDK	**Taldyqorghan**	**4.99**	**19**	*eP*	**Pb**	**19 33 46.4**	**+2.8**	
	comp=E,35nm,0.5s							
TDK				*eS*	**Sg**	**19 34 53.9**	**-2.5**	
	comp=E,68nm,0.6s							
TDK	**Taldyqorghan**	**4.99**	**19**	Pg	**Pb**	**19 33 46.4**	**+2.8**	
	comp=E,35nm,0.5s							
TDK				Lg	Lg	19 34 53.9		
	comp=E,68nm,0.6s							
KK31	**Karatay Array**	**5.02**	**306**	Pn	**Pn**	**19 33 30.6**	**-0.9**	
	comp=E,0.9nm,0.4s,baz=120,slow=12,SNR=8.6							
KK31				Pg	**Pb**	**19 33 45.2**	**+1.2**	
	comp=E,4.5nm,0.7s,baz=115,slow=17,SNR=27							
KK31				Lg	Lg	19 34 54.3		
	comp=E,6.3nm,0.5s,baz=124,slow=26,SNR=6.2							
MAKZ	**Makanchi**	**7.78**	**31**	⇓Pn	**Pn**	**19 34 12.0**	**+2.7**	
	comp=E,1.4nm,0.9s							
MAKZ				⇓Pg	Pb	19 34 37.5	+6.5	
	comp=E,1.8nm,0.9s							
MAKZ				⇑Lg	Lg	19 36 21.3		
	comp=E,5.0nm,1.1s							
MK31	**Makanchi Array**	**7.89**	**33**	Pn	**Pn**	**19 34 11.3**	**+0.4**	
	comp=E,1.0nm,0.6s,baz=198,slow=14,SNR=6.5							
MK31				⇑Pg	Pb	19 34 37.9	+5.0	
	comp=E,0.8nm,0.5s,baz=208,slow=13,SNR=4.3							
MK31				⇑Lg	Lg	19 36 26.0		
	comp=E,5.7nm,1.1s,baz=207,slow=23,SNR=4.0							
MKAR	**Makanchi Array**	**7.89**	**33**	Pn	**Pn**	**19 34 11.6**	**+0.6**	
	comp=E,0.1nm,0.3s,baz=217,slow=12,SNR=6.4							
MKAR				Lg	Lg	19 36 22.2		
	comp=E,0.1nm,0.3s,baz=225,slow=24,SNR=3.1							
WMQ	**Urumqi**	**9.32**	**64**	*eP*	**Pn**	**19 34 28.7**	**-1.8**	
WMQ				smax	smax			
	comp=N,15nm,0.7s							
WMQ				smax	smax			
	comp=E,15nm,0.3s							
ZALV	**Zalesovo Beam**	**14.87**	**20**	Pn	**Pn**	**19 35 44.2**	**-2.0**	
	comp=E,0.1nm,0.3s,baz=222,slow=15,SNR=2.8							
SONM	**Songino Array**	**22.93**	**61**	P	**P**	**19 37 17.4**	**-2.9**	
	comp=E,0.3nm,0.7s,baz=265,slow=11,SNR=3.5							
WRA	**Warramunga Arr**	**80.79**	**126**	P	P	19 44 23.5	-6.6	
	comp=E,0.2nm,0.6s,baz=334,slow=5.8,SNR=4.0							

NEIC ***06*** *19:32:20.7±1.6, 42°.26N±0°.08×127°.0W±0°.1, h10km±2km, ML3.0/36, Error ellipse: s-maj=18.9km s-min=13.1km az=258.0*
IDC ***06*** *19:32:21.7±3.1, 42°.47N×126°.73W, h0km, mb2.9/1, mb1 3.7/5, mb1mx3.4/53, mbtmp3.3/5, ML3.4/4, MS3.0/6, Ms1 3.0/6, ms1mx2.8/12, Error ellipse: s-maj=48.0km s-min=24.1km az=42.0*
ANF ***06*** *19:32:27.2±1.1, 42°.30N×126°.18W, h0km, ML2.9/5, Error ellipse: s-maj=13.4km s-min=6.4km az=89.0*
ISC 06 19:32:21.8±1.7, 42°.28N±0°.05×126°.8W±0°.1, h10km, n47, σ1§45/46**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.93**	**91**	Pn	**Pn**	**Pn**	**19 32 54.4**	**-0.4**
KBO				IAML			19 33 22.8	
	comp=N,116nm,1.7s							
KBO				IAML			19 34 04.2	
	comp=E,157nm,1.9s							
KEBM	**Edson Butte**	**1.93**	**71**	Pn	**Pn**	**Pn**	**19 32 55.7**	**+0.9**
KEBM				IAML			19 33 20.5	
	comp=E,167nm,1.3s							
KEBM				IAML			19 33 21.8	
	comp=N,199nm,1.8s							
J01E	**Myrtle Point**	**2.31**	**67**	P		**Pn**	**19 32 59.9**	**0.0**
	baz=243							
J01E				S		**Sn**	**19 33 25.7**	**-2.6**
	baz=243							
KRMB	**Red Mountain**	**2.31**	**108**			**Pn**	**19 32 59.7**	**-0.3**
KRMB				IAML			19 34 05.8	
	comp=E,57nm,2.9s							
K02D	**Willamette Mer**	**2.38**	**79**	P		**Pn**	**19 33 01.0**	**+0.2**
	baz=259,SNR=33							
L02E	**Cave Junction**	**2.40**	**92**	P		**Pn**	**19 33 01.2**	**0.0**
	baz=275,SNR=37							
JCC	**Jacoby Creek,**	**2.56**	**124**	Pn		**Pn**	**19 33 03.1**	**-0.2**
JCC				IAML			19 33 35.0	
	comp=E,48nm,3.6s							
JCC				IAML			19 34 46.8	
	comp=N,47nm,2.4s							
KHMM	**Horse Mountain**	**2.72**	**120**			**Pn**	**19 33 05.9**	**+0.3**
KHMM				IAML			19 33 55.0	
	comp=E,47nm,2.5s							
KHMM				IAML			19 34 12.6	
	comp=N,46nm,3.1s							
I02D	**Swisshome**	**2.84**	**49**	P		**Pn**	**19 33 08.7**	**+1.5**
	baz=224,SNR=6.5							
HUMO	**Hull Mountain**	**2.88**	**82**	Pn		**Pn**	**19 33 08.3**	**+0.4**
I03D	**Drain, OR**	**2.92**	**60**	P		**Pn**	**19 33 08.8**	**+0.6**
	baz=237,SNR=11							
I03D				S		**Sn**	**19 33 41.4**	**-1.9**
	baz=237							
M02C	**Callahan**	**3.10**	**105**	P		**Pn**	**19 33 11.1**	**+0.2**
	baz=291,SNR=5.9							
YBH	**Yreka Blue Hor**	**3.12**	**99**	Pn		**Pn**	**19 33 12.6**	**+1.5**
	comp=N,2.1nm,0.3s,baz=287,slow=15,SNR=49							
YBH				Sn		**Sn**	**19 33 49.4**	**+0.9**
	comp=N,1.2nm,0.3s,baz=209,slow=20,SNR=3.6							
YBH	**Yreka Blue Hor**	**3.12**	**99**	Pn		**Pn**	**19 33 12.2**	**+1.1**
YBH				IAML			19 33 52.9	
	comp=N,25nm,1.6s							
KMRM	**Mail Ridge**	**3.13**	**130**	Pn		**Pn**	**19 33 11.8**	**+0.6**
KMRM				IAML			19 33 54.4	
	comp=N,31nm,2.3s							
KMRM				IAML			19 34 51.6	
	comp=E,35nm,4.2s							
N02D	**Trinity Center**	**3.36**	**112**	P		**Pn**	**19 33 14.8**	**+0.4**
	baz=298							
L04D	**Klamath Falls**	**3.36**	**90**	P		**Pn**	**19 33 15.5**	**+1.0**
	baz=273,SNR=36							
COR	**Corvallis**	**3.45**	**47**	Pn		**Pn**	**19 33 15.8**	**+0.3**
I04A	**Tendick Farm,**	**3.57**	**64**	P		**Pn**	**19 33 18.0**	**+0.7**
	baz=243							
KCPM	**Cahto Peak**	**3.57**	**135**	Pn		**Pn**	**19 33 17.4**	**0.0**
KCPM				IAML			19 34 02.5	
	comp=E,29nm,4.7s							
KCPM				IAML			19 35 20.9	
	comp=N,25nm,4.3s							
WDC	**Whiskeytown Da**	**3.65**	**116**	Pn		**Pn**	**19 33 19.8**	**+1.5**
H04D	**Lebanon**	**3.73**	**52**	P		**Pn**	**19 33 21.1**	**+1.7**
	baz=230							
H04A	**Detroit Lake**	**4.14**	**53**	Pn		**Pn**	**19 33 26.6**	**+1.5**
H04A				IAML			19 34 05.1	
	comp=N,26nm,3.7s							
H04A				IAML			19 34 13.8	
	comp=E,28nm,3.7s							
O03E	**Paynes Creek**	**4.28**	**116**	P		**Pn**	**19 33 28.2**	**+1.2**
	baz=303							
K05A	**Summer Lake**	**4.41**	**82**	Pn		**Pn**	**19 33 30.3**	**+1.3**
PINE	**Pine Mountain**	**4.57**	**69**	Pn		**Pn**	**19 33 31.0**	**-0.1**
F04A	**Amboy**	**4.83**	**40**	Pn		**Pn**	**19 33 36.2**	**+1.7**
MOD	**Modoc Plateau**	**4.87**	**92**	Pn		**Pn**	**19 33 36.0**	**+0.8**
MOD				IAML			19 35 13.6	
	comp=E,17nm,4.6s							
MOD				IAML			19 36 10.2	
	comp=N,14nm,0.7s							
ORV	**Oroville**	**4.87**	**122**	Pn		**Pn**	**19 33 35.8**	**+0.7**
BEKR	**Beckworth**	**5.45**	**114**			**Pn**	**19 33 44.1**	**+0.8**
AFDM	**Forest Hills D**	**5.56**	**125**	Pn		**Pn**	**19 33 45.5**	**+0.9**
I07A	**Izee**	**5.65**	**69**	Pn		**Pn**	**19 33 47.3**	**+1.4**
LON	**Longmire**	**5.73**	**37**			**Pn**	**19 33 48.9**	**+2.0**
PNTR	**Pine Nut**	**6.35**	**118**	Pn		**Pn**	**19 33 56.3**	**+0.6**
G08A	**Pilot Rock**	**6.44**	**60**	Pn		**Pn**	**19 33 56.8**	**0.0**
CMB	**Columbia Colle**	**6.51**	**129**	Pn		**Pn**	**19 33 58.5**	**+0.8**
NVAR	**Mina Array Bea**	**7.56**	**118**	Pn		**Pn**	**19 34 14.1**	**+1.9**
	comp=N,0.2nm,0.3s,baz=297,slow=14,SNR=4.9							
NVAR				LR		LR	19 37 23.5	
	comp=N,91nm,21.7s,baz=274,slow=39							
NVAR	**Mina Array Bea**	**7.56**	**118**			**Pn**	**19 34 13.8**	**+1.5**
ELK	**Elko**	**8.83**	**96**	LR		LR	19 38 02.1	
	comp=N,151nm,18.2s,baz=270,slow=39							
BBB	**Bella Bella**	**9.94**	**355**	LR		LR	19 37 51.0	
	comp=N,63nm,18.9s,baz=332,slow=34							
PFO	**Pinyon Flats O**	**11.90**	**133**	LR		LR	19 39 46.2	
	comp=N,79nm,19.8s,baz=10.0,slow=37							
PDAR	**Pinedale Array**	**12.75**	**82**	Pn		**Pn**	**19 35 27.8**	**+4.4**
	comp=N,0.0nm,0.3s,baz=266,slow=11,SNR=2.6							
PDAR				LR		LR	19 40 30.0	
	comp=N,39nm,19.7s,baz=300,slow=39							
PDAR	**Pinedale Array**	**12.75**	**82**			**Pn**	**19 35 25.9**	**+2.6**
X16A	**Lo Mia Camp, P**	**14.39**	**118**	P		**P**	**19 35 51.0**	**-1.7**
DLBC	**Dease Lake**	**16.30**	**354**	Pn		**Pn**	**19 36 08.6**	**-2.0**
	comp=N,0.2nm,0.3s,baz=157,slow=13,SNR=3.1							
ANMO	**Albuquerque**	**17.50**	**108**	LR		LR	19 43 43.9	
	comp=N,87nm,18.9s,baz=310,slow=39							
TXAR	**Lajitas Array**	**22.71**	**117**	P		**P**	**19 37 26.6**	**+2.8**
	comp=N,0.3nm,0.7s,baz=304,slow=9.7,SNR=5.2							

NEIC ***06*** *20:02:16.9±1.5, 43°.57N±0°.03×105°.46W±0°.09, h0km±2km, mb_Lg2.5/46, Error ellipse: s-maj=11.2km s-min=3.7km az=75.0*
IDC ***06*** *20:02:17.6±2.2, 43°.59N×105°.46W, h0km, mb1 3.7/2, mb1mx3.3/35, mbtmp3.5/2, ML3.3/2, Error ellipse: s-maj=51.8km s-min=10.9km az=151.0*
ISC 06 20:02:16.2±1.0, 43°.57N±0°.04×105°.48W±0°.04, h0km, n53, σ1§12/49**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.18**	**62**			**Pg**	**20 02 38.4**	**-0.4**
K22A	**Casper**	**1.20**	**220**			**Pn**	**20 02 41.5**	**+1.1**
K22A				IAmb_Lg			20 02 55.1	
	comp=Z,42nm,0.8s							
PHWY	**Pilot Hill**	**2.27**	**180**	Pn		**Pn**	**20 02 55.5**	**+0.2**
RWWY	**Rawlins**	**2.28**	**215**			**Pg**	**20 03 00.5**	**+0.7**
RWWY				IAmb_Lg			20 03 33.4	
	comp=Z,22nm,0.9s							
N23A	**Red Feather La**	**2.70**	**188**			**Pb**	**20 03 05.0**	**-0.6**
BW06	**Boulder Array**	**3.09**	**256**			**Pn**	**20 03 08.1**	**+1.5**
PD31	**Pinedale Array**	**3.09**	**256**			**Pn**	**20 03 08.1**	**+1.6**
PDAR	**Pinedale Array**	**3.09**	**256**	Pn		**Pb**	**20 03 11.1**	**-1.2**
	comp=Z,2.1nm,0.3s,baz=81,slow=14,SNR=15							
PDAR				Lg		Lg	20 03 55.0	
	comp=Z,4.9nm,0.3s,baz=75,slow=35,SNR=2.1							
PDAR	**Pinedale Array**	**3.09**	**256**			**Pn**	**20 03 07.5**	**+1.0**
RLMT	**Red Lodge**	**3.13**	**301**	Pn		**Pn**	**20 03 07.1**	**+0.1**
LAO	**LASA Array**	**3.16**	**351**			**Pn**	**20 03 08.5**	**+1.2**
LAO				IAmb_Lg			20 04 00.4	
	comp=Z,18nm,0.8s							
YNE	**Yellowstone No**	**3.56**	**295**			**Pn**	**20 03 15.8**	**+3.0**
YMP	**Mirror Lake Pl**	**3.56**	**291**			**Pn**	**20 03 14.2**	**+1.2**
GCMT	**Greycliff**	**3.72**	**308**	Pn		**Pn**	**20 03 15.8**	**+0.8**
H17A	**Grant Village**	**3.77**	**284**			**Pn**	**20 03 16.7**	**+0.9**
ISCO	**Idaho Springs**	**3.77**	**182**			**Pn**	**20 03 16.7**	**+0.7**
ISCO				IAmb_Lg			20 04 23.7	
	comp=Z,9.1nm,0.8s							
FLWY	**Flagg Ranch**	**3.81**	**279**			**Pn**	**20 03 16.9**	**+0.5**
SNOW	**Snow King Moun**	**3.84**	**270**			**Pg**	**20 03 28.9**	**-0.9**
YPP	**Pitchstone Pla**	**3.91**	**282**	Pn		**Pn**	**20 03 18.6**	**+0.8**
YPP						**Pg**	**20 03 32.7**	**+1.6**
YNR	**Norris Junctio**	**3.91**	**289**	Pn		**Pn**	**20 03 20.2**	**+2.4**
REDW	**Red Top Meadow**	**3.92**	**269**			**Pn**	**20 03 18.3**	**+0.5**
REDW				IAmb_Lg			20 04 28.3	
	comp=Z,13nm,1.1s							
IMW	**Indian Meadow**	**3.97**	**277**			**Pn**	**20 03 19.0**	**+0.4**
TPAW	**Teton Pass**	**3.98**	**271**			**Pn**	**20 03 19.4**	**+0.6**
TPAW				IAmb_Lg			20 04 29.5	
	comp=Z,8.9nm,0.9s							
O20A	**White River Ci**	**4.01**	**212**			**Pn**	**20 03 19.6**	**+0.6**
O20A				IAmb_Lg			20 04 33.8	
	comp=Z,9.0nm,0.9s							
YHH	**Holmes Hill**	**4.05**	**289**			**Pn**	**20 03 20.3**	**+0.5**
AHID	**Auburn Hatcher**	**4.19**	**261**			**Pn**	**20 03 21.4**	**-0.2**
RDMU	**Red Mountain**	**4.28**	**227**			**Pn**	**20 03 23.6**	**+0.8**
YHL	**Hebgen Lake**	**4.30**	**289**			**Pn**	**20 03 23.4**	**+0.2**
ECR	**Eagle Creek**	**4.33**	**265**			**Pg**	**20 03 37.9**	**-1.3**
QLMT	**Earthquake Lak**	**4.46**	**288**			**Pg**	**20 03 40.9**	**-0.8**
E28A	**Huff**	**4.53**	**47**			**Pn**	**20 03 27.1**	**+1.0**
BOZ	**Bozeman (W)**	**4.84**	**297**	Pn		**Pn**	**20 03 29.3**	**-1.2**
BOZ				IAmb_Lg

IHUS	Husbondi	0.39	189	P		Pg	20 24 53.9	-1.4
	baz=190							
ISKR	Skrokkalda	0.39	253	P		Pg	20 24 54.2	-1.3
	baz=254							
IVOT	Vottur	0.43	160	P		Pg	20 24 54.6	-1.5
	baz=161							
IJOK	Jokulheimar	0.47	221	P		Pg	20 24 55.3	-1.7
	baz=222							
IASK	Askja	0.53	44	P		Pg	20 24 56.3	-1.8
	baz=43							
IASK				S		Sg	20 25 04.4	-0.7
	baz=43							
IMKO	Mokollar	0.59	58	P		Pg	20 24 57.3	-1.9
	baz=57							
IMKO				S		Sg	20 25 05.8	-1.2
	baz=57							
IIEY	Innrieyrar	0.64	205	P		Pg	20 24 58.3	-1.7
	baz=206							
ISVA	Svartarkot	0.68	9	P		Pg	20 24 58.9	-1.8
	baz=8.7							
ISVA				S		Sg	20 25 08.7	-0.9
	baz=8.7							
IKSK	Karasker	0.69	138	P		Pg	20 24 58.5	-2.5
	baz=138							
IKAL	Kalfafell	0.73	186	P		Pg	20 24 59.7	-2.2
	baz=186							
IKAL				S		Sg	20 25 09.9	-1.5
	baz=186							
IVAT	Vatnsfell	0.78	232	P		Pg	20 25 00.7	-2.0
	baz=232							
IVSH	V-Sauoahnukur	0.78	79	P		Pg	20 25 00.2	-2.6
	baz=79							
IVSH				S		Sg	20 25 10.8	-2.1
	baz=79							
IHVE	Hveravellir	0.90	284	P		Pg	20 25 02.5	-2.5
	baz=284							
IMEL	Melhnausar	0.97	22	P		Pg	20 25 03.7	-2.7
	baz=21							
IREN	Reynihlio	1.01	15	P		Pg	20 25 04.5	-2.7
	baz=14							
ISNB	Snabyli	1.06	208	P		Pg	20 25 05.6	-2.5
	baz=208							
IKVO	Krokottuvotn	1.08	14	P		Pg	20 25 05.5	-2.9
	baz=14							
ISLY	Slysaalda	1.10	220	P		Pg	20 25 06.0	-2.9
	baz=220							
IGRS	Grimsstaoir	1.13	31	P		Pb	20 25 06.4	-3.0
	baz=30							
IFED	Fedgar	1.15	236	P		Pb	20 25 07.3	-2.3
	baz=237							
IRJU	Rjupnafell	1.18	206	P		Pb	20 25 07.3	-2.8
	baz=206							
IMJO	Mjoaskard	1.20	233	P		Pb	20 25 08.2	-2.3
	baz=233							
ISKI	Skildingahlsh	1.22	10	P		Pn	20 25 07.9	-2.9
	baz=9.2							
ISKI				S		Sb	20 25 24.7	-1.9
	baz=9.2							
IGHA	Grjothals	1.23	17	P		Pn	20 25 07.8	-3.2
	baz=16							
IGHA				S		Sb	20 25 24.6	-2.3
	baz=16							
IGYG	Gygjarholskot	1.23	253	P		Pn	20 25 08.1	-2.9
	baz=253							
IGRA	Granastaoir	1.25	359	P		Pn	20 25 08.2	-3.0
	baz=358							
IGRA				S		Sb	20 25 25.2	-2.3
	baz=358							
IHAU	Haukadalur	1.28	237	P		Pn	20 25 09.1	-2.5
	baz=238							
IHVO	Lagu-Hvolar	1.29	207	P		Pn	20 25 09.8	-2.0
	baz=208							
IDIM	Dimmadalss	1.32	11	P		Pn	20 25 09.3	-2.8
	baz=10							
IALF	Alftagrof	1.40	212	P		Pn	20 25 11.3	-1.9
	baz=213							
IHED	Heoinshofoi	1.42	3	P		Pn	20 25 10.9	-2.6
	baz=3.1							
IESK	Eystri-Skogar	1.43	217	P		Pn	20 25 11.5	-2.2
	baz=218							
ISAU	Saurbar	1.44	243	P		Pn	20 25 11.3	-2.5
	baz=243							
IMID	Miomork	1.45	227	P		Pn	20 25 12.4	-1.6
	baz=227							
IBRE	Brettingsstaoi	1.46	354	P		Pn	20 25 11.7	-2.4
	baz=354							
IGIL	Gilhagi	1.49	19	P		Pn	20 25 11.8	-2.8
	baz=18							
ISIG	Siglufjorour	1.58	339	P		Pn	20 25 13.5	-2.2
	baz=339							
IASM	Asmuli	1.59	239	P		Pn	20 25 14.2	-1.7
	baz=240							
BORG	Borgarnes	1.64	274	Pn		Pn	20 25 14.4	-2.1
	41nm,0.3s,baz=96,slow=9.5,SNR=92							
BORG				Sn		Sg	20 25 39.2	-1.1
	11nm,0.3s,baz=71,slow=23,SNR=15							
BORG				LR		LR	20 25 47.9	
	comp=Z,87nm,20.1s,baz=107,slow=40							
BORG	Borgarnes	1.64	274			Pn	20 25 14.3	-2.2
IKRO	Krokur	1.67	251	P		Pn	20 25 15.2	-1.7
	baz=252							
ISOL	Solvholt	1.67	245	P		Pn	20 25 15.1	-1.8
	baz=245							
IHEI	Heioarbar	1.68	255	P		Pn	20 25 15.3	-1.9
	baz=256							
ILEI	Leirhofn	1.79	13	P		Pn	20 25 16.6	-2.0
	baz=13							
IBJA	Bjarnastaoir	1.80	248	P		Pn	20 25 17.1	-1.7
	baz=248							
IHRN	Hraun	1.81	324	P		Pn	20 25 17.1	-1.8
	baz=324							
SCO	Scoresbysund	6.08	346			Pn	20 26 18.4	+1.0
SCO	Scoresbysund	6.08	346	*e*		Pn	20 26 17.5	0.0
	baz=175,slow=7.4							
SCO				*i*	P	Pn	20 26 18.6	+1.1
SCO				*i*	S	Sn	20 27 30.6	+3.7
JMIC	Jan Mayen	7.19	24	LR		LR	20 28 39.0	
	comp=Z,116nm,18.2s,baz=198,slow=32							
EKA	Eskdalemuir Ar	11.77	136	Pn		Pn	20 27 36.6	+1.2
	baz=319,slow=13,SNR=8.0							
ESK	Eskdalemuir	11.77	136	Pn		Pn	20 27 33.9	-1.5
NOA	NORSAR Array B	13.54	92	Pn		Pn	20 28 01.3	+1.6
	0.0nm,0.3s,baz=299,slow=13,SNR=1.5							
NOA				LR		LR	20 33 07.5	
	comp=Z,50nm,18.2s,baz=300,slow=37							
SFJD	Kangerlussuaq	13.65	295	LR		LR	20 32 26.3	
	comp=Z,193nm,20.2s,baz=25,slow=34							
HFS	Hagfors	15.06	93	Pn		P	20 28 28.1	+2.6
	0.1nm,0.3s,baz=242,slow=3.2,SNR=4.6							
HFS				LR		LR	20 33 43.1	
	comp=Z,74nm,18.3s,baz=258,slow=35							
ARCES	ARCESS Array B	17.12	55	P		P	20 28 49.1	+0.7
	baz=275,slow=14,SNR=1.3							
FINES	FINESS Array B	19.71	79	P		Pn	20 29 18.9	+0.5
	0.1nm,0.3s,baz=278,slow=11,SNR=3.2							
CLL	Collm	20.72	116	*eP*		Pn	20 29 28.0	-2.2
NKC	Novy Kostel	21.36	118	*eP*		P	20 29 41.2	+6.3
NKC				*ex*		x	20 29 47.5	
FRB	Frobisher Bay	21.74	291	LR		LR	20 37 05.2	
	comp=Z,71nm,19.1s,baz=80,slow=34							
KHC	Kasperske Hory	22.69	118	*eP*		P	20 29 50.9	+1.8
KHC				*ex*		x	20 30 00.9	
DPC	Dobruska-Polom	22.77	113	*eP*		P	20 29 51.8	+1.8
GEC2	GERESS Array S	22.97	119	P		P	20 29 51.0	-1.2
GEC2					IAmb	IAmb	20 30 17.4	
	comp=Z,13nm,1.5s							
GEC2B	GERESS ARRAY S	22.97	119	P		P	20 29 51.5	-0.6
GERES	GERESS Array B	22.97	119	P		P	20 29 53.8	+1.6
	comp=Z,1.0nm,0.8s,baz=323,slow=8.4,SNR=6.3							
GERES	GERESS Array B	22.97	119	P		P	20 29 52.2	+0.1
TREC	Trest	23.29	116	*eP*		P	20 29 56.7	+1.4
DAVOX	Davos/Dischmat	23.33	127	LR		LR	20 39 37.2	
	comp=Z,64nm,18.6s,baz=298,slow=38							
VRAC	Vranov	23.71	114	LR		LR	20 40 41.9	
	comp=Z,86nm,18.9s,baz=319,slow=40							
ESDC	Sonseca Array	26.26	156	P		P	20 30 24.1	+1.2
	comp=Z,1.1nm,0.8s,baz=348,slow=8.9,SNR=5.4							
ESDC				LR		LR	20 40 51.0	
	comp=Z,55nm,18.6s,baz=335,slow=37							
KEST	Kesra	33.17	138	LR		LR	20 45 39.8	
	comp=Z,44nm,18.4s,baz=215,slow=38							
ABKAR	Akbulak array	42.00	73	P		P	20 32 39.7	+1.1
TIXI	Tiksi	42.03	15	P		P	20 32 40.5	+1.9
TIXI					IAmb	IAmb	20 32 42.4	
	comp=Z,5.4nm,1.1s							
ILAR	Eielson Array	45.67	332	P		P	20 33 09.8	+1.8
	comp=Z,2.7nm,1.1s,baz=28,slow=5.6,SNR=11							
ILAR	Eielson Array	45.67	332	P		P	20 33 09.2	+1.3
ZALV	Zalesovo Beam	47.64	51	P		P	20 33 24.8	+1.3
	comp=Z,0.9nm,0.8s,baz=327,slow=7.8,SNR=4.3							
KKAR	Karatay Array	51.28	70	P		P	20 33 49.0	-2.5
KK07	Karatay Array	51.29	70	P		P	20 33 52.7	+1.2
MK31	Makanchi Array	52.73	58	P		P	20 34 03.3	+1.1
MKAR	Makanchi Array	52.73	58	P		P	20 34 03.4	+1.2
	comp=Z,5.7nm,1.4s,baz=316,slow=5.1,SNR=4.6							
MKAR	Makanchi Array	52.73	58	P		P	20 34 02.7	+0.5
TORD	Torodi Ar. Bea	53.15	156	P		P	20 34 05.8	+0.3
	comp=Z,1.2nm,1.0s,baz=343,slow=9.2,SNR=4.9							
TORD				LR		LR	20 58 56.2	
	comp=Z,27nm,18.9s,baz=290,slow=39							
TORD	Torodi Ar. Bea	53.15	156	P		P	20 34 05.0	-0.5
BW06	Boulder Array	53.16	293	P		P	20 34 05.9	+0.2
BW06					IAmb	IAmb	20 34 07.6	
	comp=Z,4.3nm,1.1s							
PDAR	Pinedale Array	53.16	293	P		P	20 34 06.5	+0.7
	comp=Z,1.8nm,0.9s,baz=54,slow=7.5,SNR=11							
BTK	Batken	53.97	72	P		P	20 34 12.3	+0.9
BTK					IAmb	IAmb	20 34 16.5	
	comp=Z,7.5nm,1.1s							
CHGR	Chuyangaron	54.47	74	P		P	20 34 14.3	-0.9
CHGR					IAmb	IAmb	20 34 29.6	
	comp=Z,7.0nm,0.9s							
GAR	Garm	54.66	73	P		P	20 34 18.4	+1.9
TLY	Talaya	55.40	40	LR		LR	20 59 32.3	
	comp=Z,20nm,18.4s,baz=300,slow=38							
PV13	Radium Mtn., P	56.79	290	P		P	20 34 32.8	+0.8
PV13					IAmb	IAmb	20 34 34.5	
	comp=Z,7.3nm,1.0s							
NIL	Nilore	60.46	73	P		P	20 34 58.3	+1.0
TXAR	Lajitas Array	62.27	280	P		P	20 35 09.1	-0.7
	comp=Z,0.4nm,0.7s,baz=26,slow=7.0,SNR=2.9							
TXAR	Lajitas Array	62.27	280	P		P	20 35 08.7	-1.0
BOSA	Boshof	98.77	143	LR		LR	21 24 28.9	
	comp=Z,35nm,19.2s,baz=358,slow=36							

*IDC **06** 20:25:21.2±2.7, 6.54S×130.62E, h69km±26km, mb3.5/6, mb1 3.8/8, mb1mx3.5/38, mbtmp3.9/8, Error ellipse: s-maj=36.4km s-min=15.7km az=74.0*
*DJA **06** 20:25:23.5±0.3, 7.7°S±3°×13.1°E±°, h122km±8km, M4.5/12, mb4.5/12, mB5.1/7, MLv4.7/9, Mw(mB)4.5/7*
*NEIC **06** 20:25:24.1±1.6, 6.39S±0.05×130.7E±0.1, h104km±7km, mb4.2/10, Error ellipse: s-maj=17.5km s-min=6.6km az=81.0*
ISC 06 20:25:23.0±0.6, **6.45S**±0.05×**130.77E**±0.07, **h100km, n53, σ2s01/47, mb4.1/9, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.61	161	P	Pn	20 25 52.8	+2.1
SAUI	Saumlaki	1.61	161	Pn	Pn	20 25 52.7	+2.1
SAUI				Sn	Sn	20 26 11.5	-0.2
BNDI	Bandanaira	2.10	336	P	Pn	20 25 59.2	+2.4
MSAI	Masohi	3.58	329	P	Pn	20 26 19.7	+3.1
FAKI	Fak Fak	3.80	23	P	Pn	20 26 20.4	+0.8
FAKI	Fak Fak	3.80	23	Pn	Pn	20 26 20.5	+0.9
NLAI	Namlea	4.85	311	P	Pn	20 26 41.1	+7.4
SIJI	Sorong	5.56	5	P	Pn	20 26 43.6	+0.2
	47nm,0.3s,baz=217,slow=22,SNR=120						
SIJI				S	Sn	20 27 41.6	-4.5
	38nm,0.3s,baz=148,slow=23,SNR=19						
MTN	Manton Dam	6.37	177	Pn	Pn	20 26 53.9	-0.4
MTN				Sn	Sn	20 28 00.7	-4.9
SANI	Sanana	6.46	312	P	Pn	20 26 58.6	+3.0
	0.1nm647nm32nm,0.8s						
SOEI	Soe	7.23	243	P	Pn	20 27 07.3	+1.2
	0.4nm36nm,0.7s						
SOEI	Soe	7.23	243	Pn	Pn	20 27 07.5	+1.4
TNTI	Ternate	7.93	335	Pn	Pn	20 27 14.8	-0.9
BATI	Baumata	7.96	242	P	Pn	20 27 16.9	+0.9
	12nm,0.3s,baz=98,slow=4.5,SNR=11						
BATI				S	Sn	20 28 41.4	-3.1
	12nm,0.3s,baz=314,slow=21,SNR=9.8						
BATI	Baumata	7.96	242	P	Pn	20 27 17.4	+1.4
	0.2nm19nm,0.4s						
EDFI	Ende, Flores	9.28	255	P	Pn	20 27 36.8	+2.7
	5.0nm,0.8s						
KNRA	Kununurra	9.38	192	Pn	Pn	20 27 33.7	-1.6
KMSI	Cibinong	9.72	316	P	Pn	20 28 03.0	+23
WBSI	Waikabubak, Su	11.70	254	P	Pn	20 28 06.1	-0.7
	22nm,0.9s						
FITZ	Fitzroy Crossi	12.62	203	P	Pn	20 28 14.9	-3.9
	2.1nm,0.3s,baz=34,slow=10,SNR=50						
FITZ				S	Sn	20 30 24.5	-13
	6.4nm,0.3s,baz=288,slow=22,SNR=13						
PLAI	Plampang	13.09	259	P	Pn	20 28 24.7	-0.5
	26nm,0.8s						
WB0	Warramunga Arr	13.70	165	Pn	Pn	20 28 27.9	-5.3
WRAB	Tennant Creek	13.85	166		Pn	20 28 30.0	-5.1
WRA	Warramunga Arr	13.86	166	P	Pn	20 28 30.2	-5.0
	4.7nm,0.3s,baz=349,slow=13,SNR=100						
WRA				S	Sn	20 30 52.9	-15
	2.8nm,0.3s,baz=341,slow=22,SNR=7.0						
WRA	Warramunga Arr	13.86	166		Pn	20 28 29.6	-5.6
WB2	Warramunga Arr	13.86	166		Pn	20 28 30.1	-5.1
WR0	Warramunga Arr	13.92	165	Pn	Pn	20 28 30.7	-5.3
BBKI	Banjar Baru	16.14	280	P	P	20 29 09.9	+4.4
JAGI	Jajag, Banyuwa	16.60	262		Pn	20 29 06.4	-3.4
JAGI					IAmb	IAmb	20 29 14.9	
	comp=Z,29nm,1.4s							
AS31	Alice Springs	17.38	170		P	20 29 17.8	-1.5
AS31					IAmb	IAmb	20 29 20.2	
	comp=Z,5.3nm,0.5s							
ASAR	Alice Springs	17.39	170	P	P	20 29 17.4	-1.8
	comp=Z,2.3nm,0.3s,baz=344,slow=9.1,SNR=95							
ASAR				S	Sn	20 32 20.3	-13
	comp=Z,0.6nm,0.3s,baz=352,slow=28,SNR=7.0							
ASAR	Alice Springs	17.39	170		P	20 29 17.9	-1.3
PSA00	Pilbara Seismi	18.38	214		P	20 29 31.6	+1.5
PSA00					IAmb	IAmb	20 29 37.9	
	comp=Z,28nm,1.2s							
CTA	Charters Tower	20.25	134	P	P	20 29 52.0	+1.5
	comp=Z,4.1nm,1.0s,baz=308,slow=12,SNR=2.3							
STKI	Sintang	20.31	288	P	Pn	20 29 59.0	+4.9
STKA	Stephens Creek	27.25	160	P	P	20 30 58.4	+0.5
	comp=Z,1.5nm,0.7s,baz=356,slow=13,SNR=2.2							
NWAO	Narrogin (SRO)	29.20	204	P	P	20 31 16.1	+0.9
	comp=Z,22nm,1.1s,baz=356,slow=14,SNR=2.0							
NWAO	Narrogin (SRO)	29.20	204	P	P	20 31 16.2	+1.1
CMAR	Chiang Mai Arr	39.97	309	P	P	20 32 49.4	+1.3
	comp=Z,0.4nm,0.5s,baz=136,slow=6.8,SNR=2.3							
MK31	Makanchi Array	68.19	326	P	P	20 36 14.2	+1.6
MKAR	Makanchi Array	68.19	326	P	P	20 36 14.2	+1.5
	comp=Z,1.1nm,0.4s,baz=116,slow=7.9,SNR=25							
MKAR	Makanchi Array	68.19	326	P	P	20 36 14.0	+1.3
ZALV	Zalesovo Beam	71.43	333	P	P	20 36 33.2	+0.9
	comp=Z,0.3nm,0.5s,baz=107,slow=4.8,SNR=1.5							
ZALV	Zalesovo Beam	71.43	333	P	P	20 36 33.6	+1.2
GAR	Garm	71.82	314	P	P	20 36 33.1	-2.1
GAR					IAmb	IAmb	20 36 55.1	
	comp=Z,11nm,1.3s							
BTK	Batken	71.91	316	P	P	20 36 33.5	-2.2
KURK	Kurchatov	72.45	328	P	P	20 36 38.2	-0.3
KURK					IAmb	IAmb	20 37 05.0	
	comp=Z,5.1nm,1.4s							
VNDA	Vanda	72.90	173	P	P	20 36 42.2	+1.4
	comp=Z,0.3nm,0.5s,baz=319,slow=7.2,SNR=6.2							
VNDA	Vanda	72.90	173	P	P	20 36 41.8	+1.0
QSPA	South Pole Qui	83.53	180	P	P	20 37 39.3	-0.4
QSPA					IAmb	IAmb	20 37 53.9	
	comp=Z,3.4nm,1.4s							
TORD	Torodi Ar. Bea	129.45	282	PKP	PKPdf	20 44 22.2	+1.1	
	comp=Z,0.4nm,0.6s,baz=82,slow=2.7,SNR=2.4							
LPAZ	La Paz	150.67	141	PKPbc	PKiKP	20 45 07.4	+1.5	
	comp=Z,1.2nm,0.4s,baz=188,slow=2.3,SNR=5.0							
LPAZ	La Paz	150.67	141		PKiKP	20 45 06.6	+0.7	

*NEIC **06** 20:28:27.4±2.5, 81.7N±0.1×120.8E±0.8, h10km±1km, mb4.6/35, Error ellipse: s-maj=24.2km s-min=16.5km az=142.0*
*IDC **06** 20:28:28.1±0.6, 81.79N×119.10E, h0km, mb3.9/16, mb1 4.1/18, mb1mx3.9/59, mbtmp4.0/18, ML3.7/2, MS3.3/18, Ms1 3.3/18, ms1mx3.1/49, Error ellipse: s-maj=17.4km s-min=14.5km az=166.0*
ISC 06 20:28:27.8±0.5, **81.77N**±0.09×**120.37E**±0.08, **h10km, n77, σ1s55/65, mb4.4/27, MS3.3/17, East of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRIK	Noril'sk	14.51	230	Pn	Pn	20 31 50.6	-2.1
	0.4nm,0.3s,baz=24,slow=11,SNR=5.7						
NRIK				LR	LR	20 37 43.9	
	comp=Z,267nm,18.9s,baz=18,slow=39						
SPITS	Spitsbergen Ar	16.03	314	Pn	Pn	20 32 12.0	-0.9
	baz=57,slow=14,SNR=0.8						
YAK	Yakutsk	19.99	167	P	Pn	20 33 01.7	+0.1
	3.8nm,0.4s,baz=125,slow=3.3,SNR=8.7						
YAK	Yakutsk	19.99	167	P	P	20 32 59.1	-0.7
YAK				IAmb	IAmb	20 33 18.6	
	comp=Z,36nm,1.1s						
SEY	Seymchan	20.63	137	P	Pn	20 33 11.0	+1.9
	comp=Z,3.9nm,0.9s,baz=344,slow=12,SNR=3.8						
ARCES	ARCESS Array B	22.77	295	P	P	20 33 30.4	+0.6
	comp=Z,10nm,1.1s,baz=12,slow=12,SNR=4.6						
ARCES				LR	LR	20 42 03.7	
	comp=Z,29nm,21.5s,baz=295,slow=36						
COLD	Coldfoot	24.21	72	P	P	20 33 42.7	-1.2
BMAR	Burnt Mountain	24.77	67	P	P	20 33 49.6	+0.4
IMAR	Indian Mountai	24.89	76	P	P	20 33 53.4	+3.2
INK	Inuvik	25.34	57	P	P	20 33 57.9	+3.8
	comp=Z,6.1nm,0.9s,baz=359,slow=12,SNR=7.9						
INK				LR	LR	20 45 08.8	
	comp=Z,82nm,18.3s,baz=334,slow=39						
INK	Inuvik	25.34	57	P	P	20 33 56.5	+2.4
INK				IAmb	IAmb	20 34 07.5	
	comp=Z,16nm,1.0s						
C36M	Paulatuk	25.43	48	P	P	20 33 53.7	-1.2
EPYK	Eagle Plains	26.80	61	P	P	20 34 05.1	-2.2
EPYK				IAmb	IAmb	20 34 19.0	
	comp=Z,14nm,1.0s						
IL31		26.99	71	P	P	20 34 08.1	-0.9
IL31				IAmb	IAmb	20 34 21.6	
	comp=Z,8.8nm,1.1s						
ILAR	Eielson Array	26.99	71	P	P	20 34 12.7	+3.6
	comp=Z,2.5nm,0.9s,baz=341,slow=9.0,SNR=18						
ILAR				LR	LR	20 44 33.5	
	comp=Z,82nm,21.7s,baz=356,slow=36						
ILAR	Eielson Array	26.99	71	P	P	20 34 08.3	-0.8
KLMR	Klimovskoe	29.06	276	*e*	P	20 34 40.4	+13
KLMR					AMP	20 34 43.2	
	comp=Z,20nm,1.5s						
BCAR	Beaver Creek A	29.30	67	P	P	20 34 26.4	-3.4
KIRV	Kirov	29.82	265	LR	LR	20 47 48.1	
	comp=Z,32nm,18.1s,baz=10,slow=39						
ZALV	Zalesovo Beam	29.83	224	LR	LR	20 47 22.0	
	comp=Z,101nm,19.6s,baz=5.0,slow=38						
KNK	Knik Glacier	29.98	74	P	P	20 34 33.9	-1.9
KLU	Klutina	30.26	72	P	P	20 34 36.6	-1.7
KLU				IAmb	IAmb	20 34 50.6	
	comp=Z,11nm,0.9s						
NB2	NORSAR Subarra	32.71	302	P	P	20 34 59.9	+0.1
	comp=Z,2.2nm,0.7s,baz=15,slow=9.3						
NOA	NORSAR Array B	32.71	302	P	P	20 35 00.0	+0.2
	comp=Z,2.5nm,0.8s,baz=13,slow=8.8,SNR=4.3						
HFS	Hagfors	33.28	299	P	P	20 35 04.7	0.0
	comp=Z,3.9nm,1.0s,baz=23,slow=12,SNR=4.1						
SONM	Songino Array	34.36	197	P	P	20 35 17.2	+2.8
	comp=Z,0.8nm,0.9s,baz=6.6,slow=14,SNR=3.4						
SONM				LR	LR	20 49 52.0	
	comp=Z,53nm,18.8s,baz=3.5,slow=37						
SONM	Songino Array	34.36	197	P	P	20 35 14.8	+0.3
OBN	Obninsk	35.03	276	LR	LR	20 50 52.9	
	comp=Z,17nm,19.6s,baz=203,slow=39						
AKTO	Aktyubinsk	36.53	252	LR	LR	20 51 45.0	
	comp=Z,75nm,21.4s,baz=5.7,slow=38						
MK31	Makanchi Array	37.16	225	P	P	20 35 37.8	-0.5
MKAR	Makanchi Array	37.16	225	P	P	20 35 38.9	+0.6
	comp=Z,1.1nm,0.8s,baz=7.6,slow=7.2,SNR=7.7						
MKAR				LR	LR	20 51 36.9	
	comp=Z,57nm,20.6s,baz=3.5,slow=38						
MKAR	Makanchi Array	37.16	225	P	P	20 35 38.0	-0.3
MAKZ	Makanchi	37.18	225	P	P	20 35 38.0	-0.5
ABKAR	Akbulak array	37.42	250	P	P	20 35 39.3	-1.2
ABKAR	Akbulak array	37.42	250	P	P	20 35 39.1	-1.3
ABKAR				IAmb	IAmb	20 35 57.7	
	comp=Z,5.0nm,1.1s						
AKASG	Malin Array Be	40.37	281	LR	LR	20 54 28.8	
	comp=Z,51nm,19.8s,baz=355,slow=39						
CLL	Collm	41.98	296	*eP*	P	20 36 18.0	-0.3
KK31	Karatay Array	42.12	237	P	P	20 36 20.1	+0.5
KKAR	Karatay Array	42.12	237	P	P	20 36 20.6	+1.1
KKAR	Karatay Array	42.12	237	P	P	20 36 20.4	+0.8
KKAR				IAmb	IAmb	20 36 37.7	
	comp=Z,3.8nm,0.9s						
VRAC	Vranov	43.47	292	LR	LR	20 54 50.1	
	comp=Z,18nm,20.4s,baz=34,slow=36						
BURAR	Bucovina Array	43.95	284	P	P	20 36 34.9	+0.4
GERES	GERESS Array B	44.31	295	P	P	20 36 38.4	+1.1
	comp=Z,0.7nm,0.7s,baz=33,slow=10.0,SNR=5.9						
GERES	GERESS Array B	44.31	295	P	P	20 36 37.5	+0.2
KSRS	Korea Array	44.53	171	LR	LR	20 55 01.4	
	comp=Z,16nm,19.4s,baz=313,slow=36						
BTK	Batken	45.08	236	P	P	20 36 45.5	+2.0
BTK				IAmb	IAmb	20 37 02.1	
	comp=Z,9.6nm,1.1s						
MJAR	Matsushiro Arr	45.80	160	LR	LR	20 56 40.0	
	comp=Z,20nm,18.6s,baz=115,slow=37						
DAVOX	Davos/Dischmat	46.83	298	P	P	20 36 58.5	+1.1
	comp=Z,2.4nm,0.8s,baz=7.1,slow=8.1,SNR=3.1						
JTMT	Jette	47.63	48	P	P	20 37 03.3	-0.2
GEYT	Alibeck	48.79	248	LR	LR	21 01 09.3	
	comp=Z,42nm,19.0s,baz=175

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.59**	**154**	*e*Pg	**Pg**	**20 29 42.5**	**0.0**
IBDR				*e*Sg	**Sg**	**20 29 50.5**	**+0.4**
IBDR				AML	AML	20 29 54.7	
	comp=E,194nm,0.5s						
IBDR				AML	AML	20 29 56.0	
	comp=N,144nm,0.6s						
IGHG	**Ghaleghazi**	**1.04**	**48**	*e*Pg	**Pg**	**20 29 50.9**	**-0.3**
IGHG				*e*		20 30 09.9	
BHD	**Baghdad**	**1.10**	**251**	*e*Pg	**Pb**	**20 29 52.0**	**-0.3**
BHD				*e*Sg	**Sn**	**20 30 08.0**	**+0.1**
BHD				AML	AML	20 30 17.6	
	comp=E,440nm,0.6s						
IDHR	**Dehrash**	**1.23**	**31**	*e*Pg	**Pn**	**20 29 54.8**	**+0.2**
IDHR				*e*		20 30 16.0	
KCHF	**Cheshme Sefid,**	**1.34**	**61**	*e*Pg	**Pn**	**20 29 55.9**	**-0.1**
KCHF				*e*		20 30 16.4	
IVIS	**Veis**	**1.35**	**49**	*e*Pg	**Pg**	**20 29 57.4**	**+0.4**
IVIS				*e*		20 30 18.4	
KER	**Kermanshah**	**1.46**	**59**	*e*Pg	**Pn**	**20 29 58.0**	**+0.4**
KER				*e*		20 30 21.2	
IKOM	**Komasi**	**1.66**	**71**	*e*Pg	**Pb**	**20 30 01.4**	**-0.4**
IKOM				*e*		20 30 26.9	
IKFM	**Kafar-mosalman**	**1.86**	**93**	*e*		20 30 38.6	
IKFM				*e*Pg	**Pb**	**20 30 05.0**	**-0.1**
NSR	**Nassriya**	**2.66**	**170**	*e*Pn	**Pn**	**20 30 14.0**	**0.0**
NSR				*e*Sn	**Sn**	**20 30 46.0**	**-0.2**
NSR				AML	AML	20 30 58.8	
	comp=E,88nm,0.1s						

ATA ***06*** *20:31:31.4±0.4,38.92N×43.37E,h10km±70km,ML1.6, MW4.1*

DDA ***06*** *20:31:31.3,38.84N×43.58E,h13km± 1km,ML1.7*

ISC 06 20:31:30.3±1.7**,38.78N**±0.07×**43.6E**±0.1**,h7**km±13km**,n10,** σ1⁰**65**/18**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VMUR	**Van-Muradiye**	**0.22**	**347**	*i* P	**Pg**	**20 31 34.7**	**0.0**
VMUR				*i* S	**Sg**	**20 31 38.1**	**+0.4**
VMUR				IAML		20 31 39.0	
	comp=N,317nm,0.2s						
VMUR				IAML		20 31 40.0	
	comp=E,360nm,0.4s						
TVAN	**Van**	**0.31**	**215**	*e*P	**Pn**	**20 31 39.8**	**-1.6**
TVAN				*e*S	**Sb**	**20 31 46.7**	**+3.2**
TVAN				IAML		20 31 48.5	
	comp=Z,41nm,0.5s						
TVAN	**Van**	**0.31**	**215**	*i* P	**Pn**	**20 31 39.1**	**-2.3**
TVAN				*i* S	**Sb**	**20 31 47.2**	**+3.7**
TVAN				IAML		20 31 48.0	
	comp=N,66nm,0.4s						
TVAN				IAML		20 31 53.0	
	comp=E,70nm,0.6s						
CLDR	**Caldiran**	**0.43**	**31**	*i* P	**Pb**	**20 31 39.6**	**-0.8**
CLDR				*i* S	**Sg**	**20 31 45.0**	**+0.6**
CLDR				IAML		20 31 51.0	
	comp=E,40nm,0.3s						
CLDR				IAML		20 31 54.0	
	comp=N,42nm,0.7s						
GEVA	**Gevas**	**0.65**	**224**	*i* P	**Pn**	**20 31 44.4**	**-1.6**
GEVA				*i* S	**Sb**	**20 31 54.2**	**+1.0**
DYDN	**Diyadin**	**0.77**	**3**	*e*P	**Pg**	**20 31 45.0**	**-0.1**
DYDN				*e*S	**Sg**	**20 31 55.2**	**+0.2**
DYDN				IAML		20 31 56.9	
	comp=Z,24nm,0.3s						
DYDN	**Diyadin**	**0.77**	**3**	*i* P	**Pg**	**20 31 45.2**	**+0.1**
DYDN				*i* S	**Sg**	**20 31 55.0**	**0.0**
DYDN				IAML		20 31 56.0	
	comp=E,57nm,0.2s						
DYDN				IAML		20 31 56.0	
	comp=N,38nm,0.2s						
IGDI	**IGDIR**	**1.14**	**17**	*i* P	**Pn**	**20 31 52.4**	**-0.3**
IGDI				*i* S	**Sn**	**20 32 08.8**	**+0.1**
BLIS	**Bitlis-Merkez**	**1.24**	**253**	*e*P	**Pn**	**20 31 52.8**	**-1.4**
BLIS				IAML		20 31 55.5	
	comp=Z,9.7nm,0.7s						
BLIS	**Bitlis-Merkez**	**1.24**	**253**	*i* P	**Pg**	**20 31 54.1**	**-0.1**

IDC ***06*** *20:38:47.8±1.4,32.53N×47.72E,h0km,mb3.8/9, mb1 3.9/12,mb1mx3.7/39,mbtmp3.9/12,ML3.8/3,MS3.2/1, Ms1 3.2/1,ms1mx2.1/50,Error ellipse: s-maj=30.7km s-min=19.3km az=166.0*

NEIC ***06*** *20:38:49.0±2.1,32.51N±0.07×47.8E±0.1,h10km±2km, Error ellipse: s-maj=18.9km s-min=10.6km az=256.0*

TEH ***06*** *20:38:49.9,32.58N×47.80E,h12km,ML3.7*

ISN ***06*** *20:38:50.5±1.0,32.54N×47.77E,h14km±7km,ML3.6*

ISC 06 20:38:49.7±0.5**,32.52N**±0.04×**47.79E**±0.03**,h10**km**,n84,** σ1⁰**86**/85**,mb4.0**/13**,2C-8D,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.01**	**3**	*e*Pg	**Pb**	**20 39 08.1**	**-1.1**
IKMR	**Kamar-syah**	**1.11**	**26**	*e*Pg	**Pn**	**20 39 10.4**	**-1.0**
IKMR				*e*		20 39 31.3	
IDOB	**Doab**	**1.31**	**14**	*e*Pg	**Pn**	**20 39 14.8**	**+0.5**
AHWZ	**Ahwaz**	**1.39**	**148**	*e*Pg	**Pg**	**20 39 16.7**	**+0.4**
AHWZ				*e*Sg	**Sg**	**20 39 38.7**	**+4.4**
BMDN	**Meydan**	**1.44**	**37**	*e*Pg	**Pn**	**20 39 16.6**	**+0.5**
BMDN				*e*		20 39 42.1	
IKOM	**Komasi**	**1.67**	**352**	*e*Pg	**Pn**	**20 39 21.1**	**+1.9**
IKOM				*e*		20 39 48.7	
IBDR	**Badra**	**1.68**	**291**	*e*Pg	**Pn**	**20 39 20.0**	**+0.9**
IBDR				*e*Sg	**Sb**	**20 39 43.0**	**+1.2**
IBDR				AML	AML	20 39 52.9	
	comp=N,602nm,0.5s						
IBDR				AML	AML	20 40 05.3	
	comp=E,708nm,0.6s						
HSAM	**Samen**	**1.82**	**22**	*e*Pg	**Pn**	**20 39 23.4**	**+2.0**
HSAM				*e*		20 39 58.9	
KCHF	**Cheshme Sefid,**	**1.86**	**341**	*e*Pn	**Pn**	**20 39 23.2**	**+1.3**
KCHF				*e*		20 39 55.2	
KER	**Kermanshah**	**1.94**	**344**	*e*Pn	**Pn**	**20 39 24.6**	**+1.7**
IBZA	**Bozab**	**1.95**	**2**	*e*Pn	**Pn**	**20 39 25.1**	**+2.0**
IBZA				*e*		20 40 00.8	
NSR	**Nassriya**	**2.06**	**224**	*e*Pn	**Pb**	**20 39 26.0**	**-1.1**
NSR				*e*Sn	**Sb**	**20 39 51.0**	**-1.8**
NSR				AML	AML	20 39 57.5	
	comp=E,931nm,0.4s						
IGHG	**Ghaleghazi**	**2.08**	**331**	*e*Pn	**Pn**	**20 39 26.1**	**+1.2**
IGHG				*e*		20 40 26.1	
IVIS	**Veis**	**2.15**	**339**	*e*Pn	**Pn**	**20 39 27.4**	**+1.6**
IVIS				*e*		20 40 03.5	
IALM	**Almabolaq**	**2.36**	**8**	*e*Pn	**Pn**	**20 39 30.7**	**+1.9**
IDHR	**Dehrash**	**2.47**	**332**	*e*Pn	**Pn**	**20 39 32.5**	**+2.2**
IDHR				*e*		20 39 39.7	
ILIN	**Lien**	**2.49**	**344**	*e*Pn	**Pn**	**20 39 32.9**	**+2.3**
ILIN				*e*		20 40 23.9	
HAGD	**Aghdareh**	**2.56**	**26**	*e*Pn	**Pn**	**20 39 33.4**	**+1.9**
HAGD				*e*		20 40 15.1	
IPIR	**Pirpir**	**2.62**	**86**	*e*Pn	**Pn**	**20 39 34.4**	**+2.0**
IPIR				*e*		20 40 26.6	
ROKH	**ROKH**	**2.75**	**93**	*e*Pn	**Pn**	**20 39 35.9**	**+1.8**
ROKH				*e*		20 40 36.2	
HSRG	**Sareghieh**	**2.75**	**8**	*e*Pn	**Pn**	**20 39 36.0**	**+1.8**
HSRG				*e*		20 40 21.3	
BHD	**Baghdad**	**2.97**	**286**	*e*Pn	**Pn**	**20 39 39.0**	**+2.2**
BHD				*e*Sn	**Sn**	**20 40 14.0**	**+1.5**
BHD				AML	AML	20 40 22.1	
	comp=E,330nm,0.2s						
IKLH	**Kolahrood**	**3.28**	**75**	*e*Pn	**Pn**	**20 39 43.5**	**+2.0**
IKLH				*e*		20 40 50.5	
IRAZ	**Razeghan**	**3.38**	**31**	*e*Pn	**Pn**	**20 39 45.1**	**+2.3**
QABG	**Abgarm-Qazvin**	**3.51**	**25**	*e*Pn	**Pn**	**20 39 46.5**	**+1.9**
KLNJ	**Kolanjah**	**3.57**	**114**	*e*Pn	**Pn**	**20 39 47.4**	**+1.9**
KLNJ				*e*		20 41 04.3	
IGAR	**Gharneh**	**3.59**	**91**	*e*Pn	**Pn**	**20 39 47.3**	**+1.6**
IZEF	**Zefreh**	**3.84**	**83**	*e*Pn	**Pn**	**20 39 51.1**	**+1.9**
KRSH	**Karshahi**	**3.92**	**67**	*e*Pn	**Pn**	**20 39 52.0**	**+1.9**
IRAM	**Rameshеh**	**3.96**	**99**	*e*Pn	**Pn**	**20 39 51.3**	**+0.6**
QSDN	**Sirdan**	**4.14**	**16**	*e*Pn	**Pn**	**20 39 55.5**	**+2.3**
IGZV	**Ghazvin**	**4.35**	**27**	*e*Pn	**Pn**	**20 39 58.4**	**+2.3**
QALM	**Alamut, Qazvin**	**4.56**	**30**	*e*Pn	**Pn**	**20 40 01.3**	**+2.3**
MAHB	**Mahabad**	**4.58**	**339**	*e*Pn	**Pn**	**20 40 00.6**	**+1.5**
IDMV	**Damavand**	**4.66**	**48**	*e*Pn	**Pn**	**20 40 02.0**	**+1.6**
ISAD	**Sadrabad**	**5.03**	**95**	*e*Pn	**Pn**	**20 40 06.6**	**+1.1**
ANAR	**Anarak**	**5.04**	**81**	*e*Pn	**Pn**	**20 40 06.6**	**+1.1**
ILAS	**Lasjerd**	**5.16**	**55**	*e*Pn	**Pn**	**20 40 08.5**	**+1.3**
IFIR	**Firoozkooh**	**5.16**	**52**	*e*Pn	**Pn**	**20 40 09.0**	**+1.7**
IPRN	**Peran**	**5.29**	**44**	*e*Pn	**Pn**	**20 40 11.6**	**+2.7**
ISRB	**Sarab**	**5.30**	**359**	*e*Pn	**Pn**	**20 40 11.2**	**+2.1**
ICHK	**Chekchek**	**5.60**	**91**	*e*Pn	**Pn**	**20 40 14.2**	**+0.9**
ISHM	**Shahmirzad**	**5.62**	**53**	*e*Pn	**Pn**	**20 40 15.1**	**+1.5**
IHRS	**Heris**	**5.82**	**354**	*e*Pn	**Pn**	**20 40 18.4**	**+2.1**
IANJ	**Anjilo**	**5.88**	**58**	*e*Pn	**Pn**	**20 40 17.8**	**+0.7**
IGLO	**Ghaloghah**	**6.38**	**50**	*e*Pn	**Pn**	**20 40 26.8**	**+2.9**
GEVA	**Gevas**	**6.95**	**328**	Pn	**Pn**	**20 40 30.5**	**-1.3**
RAYN	**Ar Rayn**	**9.18**	**193**	Pn	**Pn**	**20 41 00.9**	**-1.4**
WSAR	**Wadi Sarin**	**13.31**	**131**	Pn	**Pn**	**20 41 57.4**	**-1.4**
	comp=E,0.4nm,0.3s,baz=311,slow=7.5,SNR=7.6						
WSAR				Sn	Sn	20 44 16.9	-10
	comp=E,0.2nm,0.3s,baz=7.5,slow=19,SNR=2.9						
BZK	**Bozkurt**	**14.46**	**315**	⇑P	P	20 43 26.7	+66
KBL	**Kabul**	**17.83**	**78**	P	**Pn**	**20 42 59.0**	**+0.8**
KBL				IAmb	IAmb	20 43 00.8	
	comp=Z,4.8nm,1.1s						
ABKAR	**Akbulak array**	**19.04**	**25**	P	**P**	**20 43 09.7**	**-2.1**
IDI	**Anoyia**	**19.20**	**285**	P	**P**	**20 43 14.4**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=85,slow=13,SNR=2.3						
IDI	**Anoyia**	**19.20**	**285**	P	**P**	**20 43 14.3**	**+0.5**
IDI				IAmb	IAmb	20 43 21.3	
	comp=Z,17nm,1.2s						
AKTO	**Aktyubinsk**	**19.44**	**20**	P	**P**	**20 43 15.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=203,slow=9.9,SNR=6.8						
KKAR	**Karatay Array**	**20.77**	**53**	P	**P**	**20 43 29.6**	**-1.2**
VRI	**Vrincioaia**	**21.00**	**316**	⇓P	**P**	20 43 42.6	+9.4
PLOR	**Plostina**	**21.03**	**315**	⇓P	**P**	**20 43 37.0**	**+3.3**
MLR	**Muntele Rosu**	**21.27**	**314**	P	**P**	**20 43 39.1**	**+2.8**
	comp=Z,6.3nm,0.8s,baz=105,slow=2.6,SNR=11						
MLR	**Muntele Rosu**	**21.27**	**314**	⇓P	**P**	**20 43 43.2**	**+6.9**
MLR	**Muntele Rosu**	**21.27**	**314**	P	**P**	**20 43 36.1**	**-0.2**
MLR				IAmb	IAmb	20 43 42.9	
	comp=Z,5.4nm,0.8s						
NIL	**Nilore**	**21.35**	**80**	P	**P**	**20 43 35.4**	**-1.7**
NIL				IAmb	IAmb	20 43 39.4	
	comp=Z,6.8nm,0.9s						
TESR	**Tescani**	**21.39**	**317**	⇓P	**P**	**20 43 41.0**	**+3.6**
VOIR		**21.80**	**313**	⇑P	**P**	**20 43 43.2**	**+1.3**
DOPR	**Dopca**	**21.85**	**314**	⇓P	**P**	**20 43 42.9**	**+0.6**
BIZ	**Bicaz**	**21.94**	**317**	⇓P	**P**	**20 43 43.8**	**+0.5**
AKASG	**Malin Array Be**	**22.75**	**328**	P	**P**	**20 43 49.4**	**-2.6**
	comp=Z,0.8nm,0.4s,baz=136,slow=9.3,SNR=5.2						
HERR	**Herculane**	**23.23**	**309**	⇓P	**P**	**20 43 58.8**	**+1.8**
ARU	**Arti**	**25.05**	**14**	P	**P**	**20 44 13.8**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=208,slow=7.4,SNR=5.7						
PSZ	**Piszkesteto**	**26.09**	**314**	⇓P	**P**	**20 44 25.9**	**+2.4**
PSZ	**Piszkesteto**	**26.09**	**314**	P	**P**	**20 44 24.0**	**+0.4**
BRVK	**Borovoye**	**26.14**	**32**	P	**P**	**20 44 23.6**	**-0.3**
KURBB	**Kurchatov Arra**	**28.96**	**42**	P	**P**	**20 44 49.3**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=247,slow=9.2,SNR=5.1						
KURK	**Kurchatov**	**29.05**	**42**	P	**P**	**20 44 50.2**	**+0.3**
KURK				IAmb	IAmb	20 44 52.3	
	comp=Z,2.7nm,1.1s						
MK31	**Makanchi Array**	**29.88**	**51**	P	**P**	**20 44 57.4**	**0.0**
MK31				IAmb	IAmb	20 44 59.0	
	comp=Z,1.9nm,0.8s						
MKAR	**Makanchi Array**	**29.88**	**51**	P	**P**	**20 44 57.9**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=250,slow=7.8,SNR=19						
MKAR	**Makanchi Array**	**29.88**	**51**	P	**P**	**20 44 57.5**	**+0.1**
GERES	**GERESS Array B**	**30.25**	**313**	LR	LR	20 58 01.8	
	comp=Z,42nm,19.6s,baz=4.0,slow=38						
FINES	**FINESS Array B**	**32.19**	**341**	P	**P**	**20 45 16.6**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=146,slow=7.2,SNR=11						
ZALV	**Zalesovo Beam**	**33.88**	**40**	P	**P**	**20 45 31.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=236,slow=8.2,SNR=7.2						
ZALV	**Zalesovo Beam**	**33.88**	**40**	P	**P**	**20 45 31.2**	**-1.1**
ARCES	**ARCESS Array B**	**39.13**	**348**	P	**P**	**20 46 17.1**	**+0.1**
	comp=Z,3.5nm,1.0s,baz=155,slow=8.7,SNR=4.0						
ESDC	**Sonseca Array**	**41.94**	**295**	P	**P**	**20 46 39.8**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=70,slow=8.7,SNR=3.2						
TORD	**Torodi Ar. Bea**	**46.24**	**256**	P	**P**	**20 47 14.4**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=63,slow=7.6,SNR=5.1						

ISN ***06*** *20:45:43.3±1.2,33.62N×45.60E,h5km±4km,ML2.9*

TEH ***06*** *20:45:44.2,33.55N×45.69E,h11km,ML3.2*

ISC 06 20:45:45.8±1.0**,33.57N**±0.04×**45.67E**±0.04**,h10**km**,n23,** σ0⁰**78**/27**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.51**	**154**	*e*Pg	**Pb**	**20 45 57.0**	**+0.3**
IBDR				*e*Sg	**Sb**	**20 46 05.0**	**+0.8**
IBDR				AML	AML	20 46 08.4	
	comp=E,391nm,0.5s						
IBDR				AML	AML	20 46 08.9	
	comp=N,508nm,0.5s						
IGHG	**Ghaleghazi**	**1.07**	**44**	*e*		20 46 23.8	
IGHG				*e*Pg	**Pg**	**20 46 05.1**	**-1.2**
BHD	**Baghdad**	**1.12**	**255**	*e*Pg	**Pb**	**20 46 07.0**	**-0.2**
BHD				*e*Sg	**Sn**	**20 46 24.0**	**+1.1**
BHD				AML	AML	20 46 32.0	
	comp=E,607nm,0.7s						
IDHR	**Dehrash**	**1.28**	**28**	*e*		20 46 31.5	
IDHR				*e*Pg	**Pn**	**20 46 09.1**	**-0.8**
KCHF	**Cheshme Sefid,**	**1.34**	**58**	*e*Pg	**Pn**	**20 46 10.1**	**-0.6**
KCHF				*e*Sg	**Sg**	**20 46 29.5**	**+0.5**
KCHF				*e*		20 46 30.6	
IVIS	**Veis**	**1.37**	**45**	*e*		20 46 32.8	
IVIS				*e*Pg	**Pn**	**20 46 09.9**	**-1.2**
KER	**Kermanshah**	**1.46**	**56**	*e*Pg	**Pn**	**20 46 12.2**	**-0.2**
IKOM	**Komasi**	**1.65**	**68**	*e*Pg	**Pn**	**20 46 15.2**	**+0.3**
IKOM				*e*		20 46 44.5	
ILIN	**Lien**	**1.72**	**38**	*e*Pg	**Pn**	**20 46 16.9**	**+0.9**
ILIN				*e*		20 46 17.5	
IKFM	**Kafar-mosalman**	**1.82**	**91**	*e*Pg	**Pb**	**20 46 18.8**	**-0.3**
IKFM				*e*		20 46 46.0	
IBZA	**Bozab**	**2.03**	**63**	*e*Pn	**Pn**	**20 46 20.9**	**+0.6**
IBZA				*e*		20 46 47.4	
IDOB	**Doab**	**2.10**	**83**	*e*Pn	**Pn**	**20 46 21.4**	**+0.2**
IKMR	**Kamar-syah**	**2.27**	**91**	*e*Pn	**Pn**	**20 46 24.2**	**+1.0**
IALM	**Almabolaq**	**2.44**	**57**	*e*Pn	**Pn**	**20 46 26.6**	**+0.7**
HSAM	**Samen**	**2.52**	**74**	*e*Pn	**Pn**	**20 46 27.3**	**+0.2**
HSAM				*e*		20 47 09.5	
NSR	**Nassriya**	**2.58**	**171**	*e*Pn	**Pn**	**20 46 27.0**	**-0.6**
NSR				*e*Sn	**Sn**	**20 46 58.0**	**-1.0**
NSR				AML	AML	20 47 04.3	
	comp=E,100nm,0.4s						
BMDN	**Meydan**	**2.63**	**87**	*e*Pn	**Pn**	**20 46 29.3**	**+0.8**
BMDN				*e*		20 47 17.5	
HSRG	**Sareghieh**	**2.73**	**52**	*e*Pn	**Pn**	**20 46 30.9**	**+1.0**
HSRG				*e*		20 47 12.6	
HAGD	**Aghdareh**	**3.14**	**66**	*e*Pn	**Pn**	**20 46 36.2**	**+0.7**
HAGD				*e*		20 47 31.1	
MAHB	**Mahabad**	**3.19**	**1**	*e*Pn	**Pn**	**20 46 36.8**	**+0.7**
MAHB				*e*		20 47 18.3	
IRAZ	**Razeghan**	**3.97**	**61**	*e*Pn	**Pn**	**20 46 47.9**	**+1.0**
QSDN	**Sirdan**	**4.10**	**43**	*e*Pn	**Pn**	**20 46 49.5**	**+0.7**
KRSH	**Karshahi**	**5.40**	**84**	*e*Pn	**Pn**	**20 47 07.0**	**+0.5**

TEH ***06*** *20:51:21.9,33.56N×45.78E,h9km,ML3.0*

ISN ***06*** *20:51:24.3±1.7,33.53N×45.62E,h0km±6km,ML2.8*

ISC 06 20:51:23.5±1.0**,33.60N**±0.05×**45.78E**±0.05**,h10**km**,n17,** σ1⁰**14**/20**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.50**	**166**	*e*Pg	**Pn**	**20 51 36.0**	**-0.7**
IBDR				*e*Sg	**Sb**	**20 51 42.0**	**+0.3**
IBDR				AML	AML	20 51 44.9	
	comp=E,428nm,0.4s						
IBDR				AML	AML	20 51 45.3	
	comp=N,309nm,0.5s						
IGHG	**Ghaleghazi**	**0.98**	**41**	*e*Pg	**Pg**	**20 51 41.7**	**-0.7**
IGHG				*e*		20 52 00.5	
IDHR	**Dehrash**	**1.21**	**24**	*e*Pg	**Pn**	**20 51 45.5**	**-1.2**
IDHR				*e*		20 52 06.6	
BHD	**Baghdad**	**1.22**	**255**	*e*Pg	**Pg**	**20 51 47.0**	**+0.1**
BHD				*e*Sg	**Sn**	**20 52 05.0**	**+1.9**
BHD				AML	AML	20 52 08.3	
	comp=E,316nm,0.6s						
KCHF	**Cheshme Sefid,**	**1.25**	**57**	*e*Pg	**Pn**	**20 51 46.5**	**-0.6**
KCHF				*e*		20 52 07.2	
IVIS	**Veis**	**1.28**	**43**	*e*Pg	**Pn**	**20 51 46.6**	**-1.0**
IVIS				*e*		20 52 08.9	
KER	**Kermanshah**	**1.37**	**55**	*e*Pg	**Pn**	**20 51 48.8**	**0.0**
IKOM	**Komasi**	**1.55**	**68**	*e*Pg	**Pn**	**20 51 51.8**	**+0.5**
IKOM				*e*		20 52 17.9	
ILIN	**Lien**	**1.64**	**36**	*e*Pg	**Pn**	**20 51 53.5**	**+0.9**
ILIN				*e*		20 51 53.8	
IKFM	**Kafar-mosalman**	**1.72**	**92**	*e*Pg	**Pb**	**20 51 54.6**	**-0.6**
IKFM				*e*		20 52 22.6	
IBZA	**Bozab**	**1.93**	**63**	*e*Pn	**Pn**	**20 51 57.4**	**+0.8**
IBZA				*e*		20 52 00.3	
IDOB	**Doab**	**2.00**	**84**	*e*Pn	**Pn**	**20 51 57.8**	**+0.2**
IALM	**Almabolaq**	**2.34**	**57**	*e*Pn	**Pn**	**20 52 03.1**	**+0.8**
HSAM	**Samen**	**2.42**	**75**	*e*Pn	**Pn**	**20 52 03.5**	**+0.1**
HSAM				*e*		20 52 35.6	
BMDN	**Meydan**	**2.54**	**87**	*e*Pn	**Pn**	**20 52 06.4**	**+1.5**
NSR	**Nassriya**	**2.60**	**173**	*e*Pn	**Pb**	**20 52 08.0**	**-2.1**
NSR				*e*Sn	**Sn**	**20 52 39.0**	**+1.9**
NSR				AML	AML	20 52 45.5	
	comp=E,133nm,0.1s						
HSRG	**Sareghieh**	**2.64**	**51**	*e*		20 52 14.0	
HSRG				*e*Pn	**Pn**	**20 52 07.7**	**+1.3**

IDC ***06*** *21:02:49.3±2.6,6.84S×130.80E,h56km±28km,mb3.5/2, mb1 4.1/7,mb1mx3.6/30,mbtmp4.1/7,ML4.1/5,Error ellipse: s-maj=30.7km s-min=22.8km az=111.0*

NEIC ***06*** *21:02:49.6±2.5,6.59S±0.04×130.65E±0.08,h55km±9km, mb4.2/12,Error ellipse: s-maj=12.0km s-min=6.3km az=80.0*

DJA ***06*** *21:02:51.9±0.3,7°S±3°×13°E±°,h104km±9km,M4.4/9, mB4.8/1,mb4.3/9,MLv4.4/9,Mw(mB)4.1/1*

ISC 06 21:02:53.0±0.7**,6.94S**±0.06×**130.70E**±0.08**,h100**km**,n54,** σ2⁰**29**/52**,mb3.9/6,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.20**	**150**	P	**Pn**	**21 03 17.6**	**+1.9**
SAUI	**Saumlaki**	**1.20**	**150**	Pn	**Pn**	**21 03 17.1**	**+1.4**
SAUI				Sn	**Sn**	**21 03 32.7**	**0.0**
BNDI	**Bandanaira**	**2.53**	**342**	P	Pn	21 03 27.9	-4.6
FAKI	**Fak Fak**	**4.28**	**21**	P	Pn	21 03 50.1	-5.9
FAKI	**Fak Fak**	**4.28**	**21**		Pn	21 03 50.1	-5.9
NLAI	**Namlea**	**5.13**	**315**	P	**Pn**	**21 04 08.0**	**+0.4**
MTN	**Manton Dam**	**5.89**	**176**		**Pn**	**21 04 19.6**	**+1.7**
SIJI	**Sorong**	**6.05**	**5**	P	Pn	21 04 14.6	-5.5
	4.0nm,0.3s,baz=295,slow=22,SNR=9.2						
SIJI				S	Sn	21 05 14.6	-13
	5.8nm,0.3s,baz=250,slow=23,SNR=12						
SANI	**Sanana**	**6.76**	**316**	P	**Pn**	**21 04 29.1**	**-0.5**
	0.2nm51nm,0.9s						
SOEI	**Soe**	**6.96**	**246**	P	**Pn**	**21 04 34.7**	**+2.2**
	0.2nm19nm,0.7s						
SOEI	**Soe**	**6.96**	**246**		**Pn**	**21 04 34.0**	**+1.5**
BATI	**Baumata**	**7.68**	**244**	P	**Pn**	**21 04 41.6**	**-0.7**
	2.1nm,0.3s,baz=100,slow=12,SNR=3.6						
BATI				S	**Sn**	**21 06 07.4**	**-0.4**
	8.0nm,0.3s,baz=184,slow=15,SNR=4.2						
BATI	**Baumata**	**7.68**	**244**	P	**Pn**	**21 04 46.1**	**+3.8**
	0.1nm14nm,0.6s						
KNRA	**Kununurra**	**8.89**	**192**		**Pn**	**21 04 59.5**	**+0.7**
FITZ	**Fitzroy Crossi**	**12.14**	**204**	P	**Pn**	**21 05 40.6**	**-2.1**
	4.2nm,0.3s,baz=32,slow=10,SNR=94						
FITZ				S	Sn	21 07 48.0	-8.2
	2.0nm,0.3s,baz=151,slow=19,SNR=6.9						
FITZ	**Fitzroy Crossi**	**12.14**	**204**		**Pn**	**21 05 41.0**	**-1.7**
WB0	**Warramunga Arr**	**13.25**	**165**		**Pn**	**21 05 56.8**	**-0.4**
WRAB	**Tennant Creek**	**13.40**	**165**		**Pn**	**21 05 59.2**	**0.0**
WRA	**Warramunga Arr**	**13.40**	**165**	P	**Pn**	**21 05 57.0**	**-2.3**
	0.5nm,0.3s,baz=349,slow=13,SNR=37						
WRA				S	**Sn**	**21 08 19.8**	**-7.1**
	3.0nm,0.3s,baz=342,slow=22,SNR=14						
WRA	**Warramunga Arr**	**13.40**	**165**		**Pn**	**21 05 58.3**	**-1.0**
WB2	**Warramunga Arr**	**13.41**	**165**		**Pn**	**21 05 58.3**	**-1.0**
WC3	**Warramunga Arr**	**13.43**	**165**	Pn	**Pn**	**21 05 59.2**	**-0.4**
WR0	**Warramunga Arr**	**13.47**	**164**	Pn	**Pn**	**21 05 59.2**	**-1.0**
DAV	**Davao City (W)**	**14.82**	**340**	Pn	Pn	21 06 11.3	-6.3
AS31	**Alice Springs**	**16.92**	**170**		**P**	**21 06 45.2

s-min=0.0km az=122.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.21**	**129**	P	Pg	21 18 11.8	+1.3
RACZ	**Rakaia**	**0.26**	**234**	P	Pb	21 18 13.2	+0.4
OXZ	**Oxford**	**0.38**	**311**	P	Pb	21 18 14.8	-0.1
AMCZ	**Amberley**	**0.43**	**23**	P	Pb	21 18 15.9	+0.1
OKCZ	**Okains Bay**	**0.48**	**108**	P	Pb	21 18 16.9	+0.2
WACZ	**Wakanui South**	**0.56**	**229**	P	Pb	21 18 19.1	+1.0
MHCZ	**Mount Hutt**	**0.62**	**274**	P	Pb	21 18 19.9	+0.7
GVZ	**Greta Valley S**	**0.75**	**36**	P	Pn	21 18 22.2	-0.6
LTZ	**Lake Taylor**	**0.80**	**352**	P	Pn	21 18 22.9	-0.6
ARCZ	**Arundel**	**0.98**	**247**	P	Pn	21 18 26.8	+0.9
RPZ	**Rata Peaks**	**1.00**	**262**	P	Pn	21 18 26.3	0.0
INZ	**Inchbonnie**	**1.11**	**319**	P	Pn	21 18 28.2	+0.4
KHZ	**Kahutara**	**1.42**	**36**	P	Pn	21 18 31.4	-0.5
ODZ	**Otahua Downs**	**1.95**	**220**	P	Pg	21 18 43.4	0.0
TLZ	**Tolley Road**	**5.75**	**25**	P	Pn	21 19 30.8	-0.7
GLKZ	**Green Lake**	**16.24**	**32**	P	P	21 21 57.9	+0.5

*NEIC **06** 21:19:41.9±1.9, 18°.31S±0°.10×178°.2W±0°.1, h697km±11km, mb4.1/24, Error ellipse: s-maj=19.1km s-min=12.2km az=62.0*

*IDC **06** 21:19:43.5±24.0, 18°.59S×178°.33W, h687km±207km, mb3.0/5, mb1 3.1/6, mb1mx2.8/43, mbtmp4.2/6, Error ellipse: s-maj=235.4km s-min=94.0km az=67.0*

ISC 06 21:19:38.7±0.8, 18°.2S±0°.1×178°.1W±0°.1, h650km, n36, σ1°51/36, mb4.1/17, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.73**	**277**	P	**P**	**21 21 10.5**	**+4.2**
DZM	**Mont Dzumac**	**15.05**	**253**	P	**P**	**21 22 46.6**	**+1.1**
	0.3nm,0.3s,baz=127,slow=20,SNR=3.7						
OXZ	**Oxford**	**26.40**	**196**	P	**P**	**21 24 29.5**	**+2.9**
OXZ				IAmb	IAmb	21 24 34.8	
	comp=Z,12nm,1.0s						
MQZ	**McQueen's Vall**	**26.59**	**195**	P	**P**	**21 24 28.4**	**+0.1**
FOZ	**Fox Glacier**	**27.24**	**199**	P	**P**	**21 24 36.1**	**+2.2**
ARMA	**Armidale**	**30.08**	**240**	P	**P**	**21 24 58.1**	**-0.6**
ARMA				IAmb	IAmb	21 25 17.2	
	comp=Z,5.7nm,1.1s						
CTA	**Charters Tower**	**33.73**	**261**	P	**P**	**21 25 30.2**	**+0.8**
	comp=Z,2.8nm,0.4s,baz=74,slow=7.4,SNR=4.3						
STKA	**Stephens Creek**	**38.77**	**242**	P	**P**	**21 26 10.4**	**0.0**
	comp=Z,0.6nm,0.4s,baz=61,slow=10,SNR=2.6						
BBOO	**Buckleboo**	**43.55**	**241**	P	**P**	**21 26 46.5**	**-1.4**
BBOO				IAmb	IAmb	21 26 53.5	
	comp=Z,8.2nm,1.1s						
WR0	**Warramunga Arr**	**44.71**	**260**	P	**P**	**21 26 56.9**	**0.0**
WC3	**Warramunga Arr**	**44.87**	**260**	P	**P**	**21 26 58.1**	**-0.1**
WB0	**Warramunga Arr**	**44.87**	**260**	P	**P**	**21 26 58.3**	**+0.1**
WB0				IAmb	IAmb	21 26 58.7	
	comp=Z,4.0nm,0.5s						
WB2	**Warramunga Arr**	**44.89**	**260**	P	**P**	**21 26 57.9**	**-0.5**
WRAB	**Tennant Creek**	**44.89**	**260**	P	**P**	**21 26 58.5**	**+0.2**
WRA	**Warramunga Arr**	**44.90**	**260**	P	**P**	**21 26 58.4**	**0.0**
	comp=Z,1.7nm,0.3s,baz=97,slow=7.2,SNR=93						
WRA				PcP	**PcP**	**21 28 25.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=92,slow=3.3,SNR=3.4						
WRA	**Warramunga Arr**	**44.90**	**260**	IAmb	IAmb	21 26 58.8	
	comp=Z,0.1nm,0.8s						
AS31	**Alice Springs**	**45.03**	**255**	P	**P**	**21 26 58.9**	**-0.4**
ASAR	**Alice Springs**	**45.03**	**255**	P	**P**	**21 26 59.4**	**0.0**
	comp=Z,2.6nm,0.5s,baz=87,slow=8.2,SNR=40						
ASAR				PcP	**PcP**	**21 28 25.7**	**0.0**
	comp=Z,0.2nm,0.5s,baz=104,slow=3.9,SNR=3.6						
ASAR	**Alice Springs**	**45.03**	**255**	P	**P**	**21 26 58.7**	**-0.6**
FORT	**Forrest**	**50.18**	**245**	P	**P**	**21 27 35.7**	**-1.7**
FORT				IAmb	IAmb	21 27 54.2	
	comp=Z,15nm,1.1s						
KNRA	**Kununurra**	**50.79**	**264**	P	**P**	**21 27 42.3**	**+0.3**
KNRA				IAmb	IAmb	21 27 42.9	
	comp=Z,7.9nm,1.0s						
FAKI	**Fak Fak**	**50.96**	**281**	P	**P**	**21 27 42.6**	**-0.7**
FAKI				IAmb	IAmb	21 27 53.5	
	comp=Z,14nm,1.0s						
FITZ	**Fitzroy Crossi**	**53.31**	**261**	P	**P**	**21 28 00.8**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=127,slow=5.1,SNR=5.1						
FITZ	**Fitzroy Crossi**	**53.31**	**261**	P	**P**	**21 27 59.8**	**-0.1**
PSAD1	**Pilbara Seismi**	**58.19**	**256**	P	**P**	**21 28 32.7**	**-0.6**
PSAC1	**Pilbara Seismi**	**58.19**	**256**	P	**P**	**21 28 32.6**	**-0.8**
KAPI	**Kappang**	**62.05**	**274**	P	**P**	**21 28 57.4**	**-1.4**
KAPI				IAmb	IAmb	21 28 58.3	
	comp=Z,5.0nm,0.5s						
MYLDM	**Lahad Datu**	**66.71**	**284**	P	**P**	**21 29 26.3**	**-1.7**
MYLDM				IAmb	IAmb	21 29 36.5	
	comp=Z,7.9nm,1.0s						
JEM	**Erimo**	**69.82**	**330**	P	P	21 29 57.8	+12
NACB	**Ninganchiao**	**72.36**	**304**	P	**P**	**21 30 00.4**	**-0.9**
SAO	**San Andreas Ge**	**76.41**	**44**	P	**P**	**21 30 26.6**	**+3.0**
SAO				IAmb	IAmb	21 30 39.6	
	comp=Z,4.9nm,0.9s						
MDPB	**Devils Postpil**	**78.46**	**44**	P	**P**	**21 30 35.0**	**0.0**
MDPB				IAmb	IAmb	21 30 50.9	
	comp=Z,3.3nm,1.0s						
KDAK	**Kodiak Island**	**78.62**	**14**	P	**P**	**21 30 34.9**	**0.0**
NV11	**Mina Array Sit**	**79.51**	**44**	P	**P**	**21 30 37.0**	**-3.3**
MOD	**Modoc Plateau**	**80.11**	**40**	P	**P**	**21 30 45.7**	**+2.4**
MOD				IAmb	IAmb	21 30 46.9	
	comp=Z,5.2nm,0.8s						
BELA	**Belgrano 2**	**81.82**	**173**	P	**P**	**21 30 49.3**	**-2.1**

IDC 06 21:25:50.9±1.6, 0°.78N×123°.03E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/48, mbtmp3.3/4, ML3.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/16, Error ellipse: s-maj=130.0km s-min=23.2km az=65.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.93**	**172**	P	P	21 30 13.5	-0.1
	0.0nm,0.3s,baz=360,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**23.39**	**152**	P	P	21 31 01.8	+0.3
	0.6nm,0.5s,baz=330,slow=10,SNR=12						
ASAR	**Alice Springs**	**26.50**	**157**	P	P	21 31 29.9	-0.4
	0.3nm,0.5s,baz=345,slow=14,SNR=5.6						
USRK	**Ussuriysk Ar.**	**43.96**	**9**	LR	LR	21 53 17.4	
	comp=Z,12nm,19.8s,baz=318,slow=38						
MKAR	**Makanchi Array**	**57.97**	**328**	P	P	21 35 45.3	0.0
	0.2nm,0.6s,baz=148,slow=6.5,SNR=2.9						

*IDC **06** 21:38:07.0±4.5, 7°.58N×94°.52E, h69km±39km, mb3.4/6, mb1 3.5/8, mb1mx3.3/37, mbtmp3.7/8, ML3.4/2, MS2.8/3, Ms1 2.9/3, ms1mx2.5/31, Error ellipse: s-maj=65.4km s-min=17.2km az=58.0*

ISC 06 21:38:10.2±1.1, 7°.7N±0°.1×94°.8E±0°.2, h100km, n10, σ1°12/8, mb3.8/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**6.39**	**140**	P	**Pn**	**21 39 41.2**	**-0.7**
	0.5nm,0.3s,baz=3.1,slow=7.1,SNR=3.7						
CMAR	**Chiang Mai Arr**	**11.42**	**20**	P	**Pn**	**21 40 49.6**	**-0.5**
	0.1nm,0.3s,baz=215,slow=14,SNR=5.2						
CMAR				LR	LR	21 45 37.8	
	comp=Z,28nm,18.9s,baz=295,slow=39						
PALK	**Pallekele**	**13.97**	**269**	LR	LR	21 45 14.2	
	comp=Z,30nm,20.4s,baz=218,slow=31						
MKAR	**Makanchi Array**	**40.38**	**347**	P	**P**	**21 45 38.8**	**+0.5**
	0.8nm,0.5s,baz=162,slow=8.1,SNR=10						
GEYT	**Alibeck**	**44.74**	**318**	P	**P**	**21 46 12.9**	**-0.9**
	1.2nm,0.5s,baz=181,slow=7.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**46.80**	**352**	P	**P**	**21 46 31.1**	**+1.5**
	0.9nm,0.7s,baz=186,slow=3.0,SNR=4.6						
WRA	**Warramunga Arr**	**47.65**	**126**	P	**P**	**21 46 36.7**	**-0.1**
	0.3nm,0.7s,baz=308,slow=8.1,SNR=5.8						
ASAR	**Alice Springs**	**49.33**	**130**	P	**P**	**21 46 51.0**	**+1.4**
	0.5nm,0.9s,baz=298,slow=6.8,SNR=3.6						
KLR	**Kul'dur**	**51.70**	**30**	LR	LR	22 11 38.2	
	comp=Z,21nm,18.3s,baz=16,slow=39						
FINES	**FINESS Array B**	**73.15**	**332**	P	**P**	**21 49 29.6**	**-0.1**
	3.7nm,1.0s,baz=99,slow=8.7,SNR=3.9						

*SJA **06** 21:45:47.5±0.6, 32°.76S×72°.48W, h29km±15km, ML4.4, MW4.4*

*GUC **06** 21:45:55.6±0.6, 32°.51S×71°.78W, h33km±3km, ML4.1*

*NEIC **06** 21:45:56.3±2.2, 32°.55S±0°.02×71°.82W±0°.07, h40km±8km, Error ellipse: s-maj=8.2km s-min=1.3km az=74.0*

*IDC **06** 21:45:58.8±3.2, 32°.58S×71°.54W, h51km±27km, mb3.9/4, mb1 3.9/8, mb1mx3.7/29, mbtmp4.0/8, ML3.8/4, MS3.3/5, Ms1 3.2/5, ms1mx3.0/17, Error ellipse: s-maj=36.6km s-min=25.4km az=100.0*

ISC 06 21:45:54.6±0.9, 32°.55S±0°.02×71°.85W±0°.04, h26km±6km, n99, σ2°.02/117, mb4.2/8, 3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.50**	**160**	*eP*	**Pn**	**21 46 06.0**	**-0.2**
VA01				*i* S	**Sn**	**21 46 13.5**	**-0.6**
VA01				IAML		21 46 16.0	
	comp=E,7μm,0.2s						
VA01	**Torpederas**	**0.50**	**160**		**Pn**	**21 46 06.1**	**0.0**
VA01					**Sn**	**21 46 14.3**	**+0.2**
ROC1	**El Roble**	**0.82**	**121**		**Pn**	**21 46 10.8**	**-0.1**
ROC1				Sn	**Sn**	**21 46 21.3**	**-1.0**
ROCH	**El Roble**	**0.83**	**121**	*eP*	**Pn**	**21 46 10.5**	**-0.4**
ROCH				*i* S	**Sn**	**21 46 21.2**	**-1.1**
ROCH				IAML		21 46 22.6	
	comp=N,5μm,0.4s						
MT02	**Curacav**	**0.93**	**140**		**Pn**	**21 46 12.6**	**+0.5**
MT02				Sn	**Sn**	**21 46 24.2**	**-0.4**
VA03	**San Esteban**	**1.12**	**101**		**Pn**	**21 46 14.6**	**-0.2**
VA03				Sn	**Sb**	**21 46 29.1**	**-0.6**
VA05	**Santo Domingo**	**1.12**	**170**	*eP*	**Pb**	**21 46 15.6**	**+0.1**
VA05				*eS*	**Sb**	**21 46 31.3**	**+1.6**
VA05				IAML		21 46 35.7	
	comp=E,7μm,0.6s						
PEL	**Peldehue**	**1.15**	**121**	*eP*	**Pb**	**21 46 15.4**	**-0.4**
PEL				*i* S	**Sb**	**21 46 30.6**	**+0.2**
PEL				IAML		21 46 31.6	
	comp=E,9μm,0.2s						
PEL	**Peldehue**	**1.15**	**121**		**Pb**	**21 46 15.8**	**-0.1**
PEL				Sn	**Sn**	**21 46 29.3**	**-0.7**
PEL	**Peldehue**	**1.15**	**121**	*eP*	**Pb**	**21 46 15.7**	**-0.1**
PEL				*eS*	**Sb**	**21 46 31.5**	**+1.1**
MT05	**Renca**	**1.26**	**132**	*eP*	**Pb**	**21 46 17.6**	**-0.2**
MT05				*eS*	**Sb**	**21 46 33.8**	**+0.3**
MT05				IAML		21 46 34.7	
	comp=N,9μm,0.3s						
MT05	**Renca**	**1.26**	**132**	Pn	**Pb**	**21 46 17.7**	**-0.1**
MT05				Sn	**Sb**	**21 46 33.9**	**+0.3**
MT09	**Talagante**	**1.42**	**150**	*eP*	**Pb**	**21 46 20.6**	**0.0**
MT09				*eS*	**Sb**	**21 46 38.9**	**+0.5**
MT09				IAML		21 46 45.9	
	comp=E,3μm,0.4s						
FSR	**Penalolen**	**1.45**	**130**	*eP*	**Pb**	**21 46 21.8**	**+0.7**
FSR				*eS*	**Sb**	**21 46 40.4**	**+1.3**
MT03	**Universidad Ad**	**1.47**	**130**	*eP*	**Pb**	**21 46 20.6**	**-0.8**
MT03				*i* S	**Sb**	**21 46 39.8**	**0.0**
MT03				IAML		21 46 45.6	
	comp=N,5μm,0.5s						
CO02	**Combarbal**	**1.52**	**29**	*iP*	**Pn**	**21 46 20.8**	**+0.4**
CO02				*i* S	**Sn**	**21 46 40.4**	**+1.0**
CO02				IAML		21 46 42.2	
	comp=E,16μm,0.2s						
CO02	**Combarbal**	**1.52**	**29**	Pn	**Pn**	**21 46 21.1**	**+0.8**
CO02				Sn	**Sn**	**21 46 39.5**	**+0.2**
LMEL	**Las Melosas**	**1.90**	**134**	*eP*	**Pb**	**21 46 27.3**	**-1.4**
LMEL				*eS*	**Sb**	**21 46 51.8**	**-0.1**
LMEL				IAML		21 47 00.1	
	comp=N,3μm,0.5s						
CO03	**El Pedregal**	**1.97**	**31**		**Pn**	**21 46 27.6**	**+1.2**
AUSP	**Uspallata**	**2.11**	**82**	*eP*	**Pb**	**21 46 31.8**	**-0.7**
RTLS	**Leoncito**	**2.29**	**72**	*eP*	**Pb**	**21 46 34.3**	**-1.2**
RTLS				*eS*	**Sb**	**21 47 04.4**	**+0.9**
RTLS				IAML		21 47 10.9	
	comp=Z,949nm,0.9s						
BO02	**Sierra Bellavi**	**2.41**	**159**		**Pn**	**21 46 34.9**	**+2.4**
ARCO	**CERRO ARCO**	**2.48**	**98**	*eP*	**Pb**	**21 46 38.2**	**-0.4**
ARCO				IAML		21 47 20.8	
	comp=Z,832nm,0.5s						
GO04	**Tololo Observa**	**2.53**	**21**	*eP*	**Pn**	**21 46 34.8**	**+0.4**
GO04				*eS*	**Sn**	**21 47 06.2**	**+1.7**
GO04				IAML		21 47 20.6	
	comp=N,6μm,0.6s						
GO04	**Tololo Observa**	**2.53**	**21**		**Pn**	**21 46 35.2**	**+0.9**
GO04	**Tololo Observa**	**2.53**	**21**	*eP*	**Pn**	**21 46 35.4**	**+1.1**
GO04				*eS*	**Sb**	**21 47 11.1**	**+0.7**
ASAL	**Salagasta**	**2.55**	**92**	*eP*	**Pb**	**21 46 38.9**	**-0.8**
ASAL				*eS*	Sb	21 47 22.8	+12
ASAL				IAML		21 47 28.5	
	comp=Z,576nm,0.7s						
AAGR	**Agrelo**	**2.60**	**103**	*eP*	**Pb**	**21 46 40.1**	**-0.6**
AAGR				IAML		21 47 26.8	
	comp=Z,747nm,1.1s						
ZON	**Zonda**	**2.88**	**71**		**Pb**	**21 46 42.6**	**-2.6**
ZON	**Zonda**	**2.88**	**71**	*eP*	**Pb**	**21 46 42.7**	**-2.6**
ZON				*eS*	**Sb**	**21 47 23.1**	**+3.1**
ZON				IAML		21 47 32.3	
	comp=Z,445nm,0.6s						
RTCV	**Cerro Valdivia**	**2.89**	**77**	*eP*	**Pb**	**21 46 42.8**	**-2.7**
RTCV				*eS*	**Sb**	**21 47 23.0**	**+2.5**
RTCV				IAML		21 47 26.9	
	comp=Z,426nm,1.9s						
AVIZ	**Vizcacheras**	**2.95**	**109**	*eP*	**Pb**	**21 46 48.0**	**+1.4**
CO01	**Juntas del Tor**	**2.97**	**31**		**Pn**	**21 46 42.2**	**+1.8**
ACCO	**Cerro Coronel**	**3.08**	**51**	*eP*	**Pb**	**21 46 45.5**	**-3.4**
ACCO				*eS*	**Sb**	**21 47 26.6**	**+0.4**
ACCO				IAML		21 47 30.4	
	comp=Z,834nm,0.9s						
RTLL	**Cerro Villicun**	**3.12**	**68**	*eP*	**Pn**	**21 46 45.6**	**+3.4**
RTLL				*eS*	**Sb**	**21 47 28.9**	**+1.8**
RTLL				IAML		21 47 33.5	
	comp=Z,601nm,0.4s						
LAMA	**Las Malvinas**	**3.24**	**138**	*eP*	**Pb**	**21 46 50.1**	**-1.4**
LCO	**Las Campanas**	**3.66**	**16**	Pn	**Pn**	**21 46 50.4**	**+0.5**
AC05	**El Transito**	**3.94**	**21**	Pn	**Pn**	**21 46 55.0**	**+1.4**
BI02	**San Fabin de**	**4.13**	**174**		**Pn**	**21 46 58.1**	**+1.9**
AGUA	**GUANDACOL**	**4.20**	**44**	*eP*	**Pn**	**21 47 01.2**	**+4.1**
AGUA				IAML		21 48 11.2	
	comp=Z,474nm,0.5s						
AC04	**Llanos de Chal**	**4.38**	**9**	Pn	**Pn**	**21 47 00.4**	**+0.8**
BI03	**Tigo**	**4.39**	**192**	Pn	**Pn**	**21 47 00.6**	**+0.9**
BI03					**Sn**	**21 47 48.8**	**-1.2**
VCA	**Vinchina**	**4.93**	**41**	*eP*	**Pn**	**21 47 10.8**	**+3.6**
VCA				*eS*	**Sb**	**21 48 22.5**	**+3.2**
VCA				IAML		21 48 23.8	
	comp=Z,644nm,0.5s						
APLL	**PUNTA DE LOS L**	**5.03**	**66**	*eP*	**Pn**	**21 47 12.1**	**+3.6**
APLL				IAML		21 48 22.4	
	comp=Z,148nm,0.4s						
GO03	**Copiap**	**5.13**	**16**		**Pn**	**21 47 10.5**	**+0.6**
MRA	**San Martin**	**5.19**	**90**	*eP*	**Pn**	**21 47 12.7**	**+2.0**
MRA				*eS*	**Sb**	**21 48 18.2**	**-8.4**
MRA				IAML		21 48 20.3	
	comp=Z,172nm,0.7s						
ACLC	**CERRO LA CRUZ**	**5.23**	**55**	*eP*	**Pn**	**21 47 15.8**	**+4.4**
ACLC				*eS*	**Sb**	**21 48 23.9**	**-4.1**
ACLC				IAML		21 48 25.7	
	comp=Z,364nm,0.5s						
VA04	**Juan Fernndez**	**5.96**	**258**	Pn	**Pn**	**21 47 22.5**	**+1.4**
H03N1	**Juan Fernandez**	**6.00**	**260**	T	T	21 53 55.5	
	baz=86,slow=73,SNR=1451						
H03N3	**Juan Fernandez**	**6.01**	**259**	T	T	21 53 49.2	
	baz=86,slow=73,SNR=1587						
H03N2	**Juan Fernandez**	**6.01**	**260**	T	T	21 53 53.8	
	baz=86,slow=73,SNR=1211						
H03S1	**Juan Fernandez**	**6.05**	**256**	T	T	21 53 48.4	
	baz=83,slow=76,SNR=23						
H03S3	**Juan Fernandez**	**6.05**	**256**	T	T	21 53 51.3	
	baz=83,slow=76,SNR=28						
H03S2	**Juan Fernandez**	**6.07**	**256**	T	T	21 53 47.9	
	baz=83,slow=76,SNR=34						
AC02	**Maricunga**	**6.17**	**23**	Pn	**Pn**	**21 47 26.1**	**+1.6**
TCA	**Tanti**	**6.29**	**81**	*eP*	**Pn**	**21 47 27.4**	**+1.6**
TCA				*eS*	**Sn**	**21 48 42.4**	**+5.6**
TCA				IAML		21 48 46.7	
	comp=Z,187nm,0.7s						
LC01	**Cunco**	**6.34**	**180**		**Pn**	**21 47 25.7**	**-0.7**
AC01	**Pan de Azucar**	**6.47**	**10**	Pn	**Pn**	**21 47 30.2**	**+1.9**
CYA	**Choya**	**6.63**	**53**	*eP*	**Pn**	**21 47 32.2**	**+1.6**
CYA				*eS*	**Sn**	**21 48 52.8**	**+7.5**
CYA				IAML		21 48 55.5	
	comp=Z,90nm,1.1s						
PB14	**IPOC Station P**	**8.00**	**10**	Pn	**Pn**	**21 47 48.6**	**-0.9**
PLCA	**Paso Flores**	**8.24**	**173**	P	**Pn**	**21 47 54.6**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=334,slow=10,SNR=3.1						
PLCA				LR	LR	21 51 09.0	
	comp=Z,126nm,18.4s,baz=336,slow=38						
PLCA	**Paso Flores**	**8.24**	**173**		**Pn**	**21 47 54.2**	**+1.7**
PB06	**IPOC Station P**	**10.01**	**12**	Pn	**Pn**	**21 48 16.6**	**-0.4**
LVC	**Limon Verde**	**10.24**	**15**	P	**Pn**	**21 48 24.4**	**+4.1**
	comp=Z,0.7nm,0.3s,baz=219,slow=8.9,SNR=4.1						
LVC				LR	LR	21 52 19.5	
	comp=Z,158nm,20.6s,baz=203,slow=37						
LVC	**Limon Verde**	**10.24**	**15**		**Pn**	**21 48 18.6**	**-1.6**
PB04	**IPOC Station P**	**10.29**	**9**	Pn	**Pn**	**21 48 20.7**	**-0.1**
PB07	**IPOC Station P**	**10.92**	**10**	Pn	**Pn**	**21 48 25.9**	**-3.6**
PB09	**IPOC Station P**	**10.96**	**13**	Pn	**Pn**	**21 48 29.8**	**-0.1**
PB01	**IPOC Station P**	**11.65**	**11**	Pn	**Pn**	**21 48 38.0**	**-1.3**
TA01	**Diego Aracena**	**12.03**	**8**	Pn	**Pn**	**21 48 47.1**	**+2.6**
PB08	**IPOC Station P**	**12.59**	**12**	Pn	**Pn**	**21 48 55.0**	**+2.5**
PB11	**IPOC Station P**	**12.89**	**9**	Pn	**Pn**	**21 48 58.8**	**+2.4**
MNMC	**Minye Minyo**	**13.51**	**9**	Pn	**Pn**	**21 49 06.5**	**+1.5**
CPUP	**Villa Florida**	**14.08**	**68**	P	**P**	**21 49 16.6**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=206,slow=14,SNR=3.1						
CPUP				LR	LR	21 54 28.3	
	comp=Z,57nm,18.9s,baz=254,slow=37						
LPAZ	**La Paz**	**16.54**	**13**	P	**Pn**	**21 49 46.3**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=170,slow=6.9,SNR=11						
LPAZ	**La Paz**	**16.54**	**13**		**Pn**	**21 49 44.5**	**-1.0**
SIV	**San Ignacio**	**19.17**	**33**	P	**P**	**21 50 16.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=225,slow=12,SNR=7.0						
SAML	**Samuel**	**24.82**	**21**	P	**P**	**21 51 13.8**	**-1.0**
SAML				IAmb	IAmb	21 51 16.4	
	comp=Z,2.7nm,0.9s						
BDFB	**Brasilia**	**27.41**	**58**	P	**P**	**21 51 37.4**	**-1.0**
	comp=Z,6.1nm,1.1s,baz=200,slow=10,SNR=4.5						
BDFB				LR	LR	22 04 01.5	
	comp=Z,95nm,20.3s,baz=294,slow=40						
SNAA	**Sanae**	**52.87**	**158**	P	**P**	**21 55 07.2**	**-0.6**
SNAA				IAmb	IAmb	21 55 17.0	
	comp=Z,1.5nm,1.0s						
TXAR	**Lajitas Array**	**68.55**	**330**	P	**P**	**21 56 57.0**	**+1.9**
	comp=Z,0.5nm,0.6s,baz=140,slow=5.7,SNR=3.7						
MAW	**Mawson**	**74.53**	**164**	LR	LR	22 33 28.1	
	comp=Z,35nm,18.2s,baz=230,slow=38						
DBIC	**Dimbokro**	**74.57**	**72**	P	**P**	**21 57 31.4**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=229,slow=7.6,SNR=4.6						
DBIC	**Dimbokro**	**74.57**	**72**	IAmb	IAmb	21 57 32.7	
	comp=Z,3.8nm,0.9s						
BOSA	**Boshof**	**80.61**	**118**	P	**P**	**21 58 04.5**	**-1.0**
BOSA				IAmb	IAmb	21 58 06.9	
	comp=Z,2.6nm,0.9s						
NLU	**North Lily Min**	**81.19**	**330**	P	**P**	**21 58 08.0**	**-0.1**
B35A	**Bob, Littlefor**	**82.89**	**345**	P	**P**	**21 58 16.2**	**-0.4**
TOA0	**Torodi Ar. Sit**	**83.57**	**70**	P	**P**	**21 58 21.2**	**+0.3**
TOA0				IAmb	IAmb	21 58 21.9	
	comp=Z,3.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**83.57**	**70**	P	**P**	**21 58 20.9**	**0.0**
	comp=Z,2.4nm,0.7s,baz=266,slow=4.5,SNR=17						
TORD	**Torodi Ar. Bea**	**83.57**	**70**	P	**P**	**21 58 21.2**	**+0.3**
WRA	**Warramunga Arr**	**122.10**	**209**	PKP	**PKPdf**	**22 04 47.9**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=158,slow=1.7,SNR=3.2						
H11S2	**WAKE ISLAND Hyd**	**25.94**	**270**	T	T	00 23 57.8	
	baz=118,slow=75,SNR=83						
H11S1	**WAKE ISLAND Hyd**	**25.95**	**270**	T	T	00 23 56.0	
	baz=118,slow=75,SNR=88						
H11S3	**WAKE ISLAND Hyd**	**25.95**	**270**	T	T	00 23 55.2	
	baz=118,slow=75,SNR=53						
H11N3	**WAKE ISLAND Hyd**	**26.31**	**272**	T	T	00 24 20.9	
	baz=117,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hyd**	**26.33**	**272**	T	T	00 24 29.1	
	baz=117,slow=75,SNR=4.3						
H11N2	**WAKE ISLAND Hyd**	**26.33**	**272**	T	T	00 24 22.5	
	baz=117,slow=75,SNR=25						
ZALV	**Zalesovo Beam**	**152.91**	**31**	PKPbc	**PKiKP**	**22 05 49.6**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=307,slow=3.1,SNR=12						
ZALV				PKPab	**sPKPbc**	**22 05 59.5**	**0.0**
	comp=Z,1.5nm,0.9s,baz=328,slow=5.3,SNR=4.0						
MKAR	**Makanchi Array**	**155.68**	**47**	PKPab	**PKPab**	**22 06 12.7**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=300,slow=3.6,SNR=5.8						

*IDC **06** 21:54:55.6±0.8, 75°.94N×108°.28W, h0km, mb3.7/9, mb1 4.1/13, mb1mx3.8/54, mbtmp3.9/13, ML4.2/4, MS3.2/4, Ms1 3.2/4, ms1mx2.6/38, Error ellipse: s-maj=21.4km s-min=15.3km az=91.0*

*NEIC **06** 21:54:56.7±2.5, 75°.69N±0°.08×108°.2W±0°.2, h18km±4km, mb4.0/60, Error ellipse

ILAR			Sn	Sn	22 01 37.8	-12	
	comp=Z,0.1nm,0.3s,baz=50,slow=16,SNR=2.7						
ILAR	**Eielson Array**	**16.54 249**	P	**P**	**21 58 50.6**	**+1.4**	
COLA	**College**	**16.68 250**	Pn	**P**	**21 58 50.3**	**-0.4**	
TCOL	**CIGO, UAF Yank**	**16.68 250**	Pn	**Pn**	**21 58 49.8**	**+1.4**	
MDM	**Murphy Dome**	**16.69 251**		**P**	**21 58 50.1**	**-0.9**	
MDM			IAmb	IAmb	21 59 00.6		
	comp=Z,14nm,1.5s						
I23K	**Minto, Yukon-K**	**16.80 253**	Pn	**P**	**21 58 51.5**	**-0.6**	
CCB	**Clear Creek Bu**	**16.86 250**	Pn	**P**	**21 58 52.7**	**0.0**	
HDA	**Harding Lake**	**16.86 248**		**Pn**	**21 58 51.9**	**+1.1**	
HDA			IAmb	IAmb	21 59 01.4		
	comp=Z,11nm,1.2s						
DOT	**Dot Lake**	**16.86 243**		**P**	**21 58 52.8**	**-0.1**	
BCAR	**Beaver Creek A**	**16.88 239**	P	**P**	**21 58 52.8**	**-0.3**	
WRH	**Wood River Hil**	**17.07 250**		**P**	**21 58 56.3**	**+1.2**	
IMAR	**Indian Mountai**	**17.17 260**	P	**Pn**	**21 58 54.4**	**-0.2**	
MENT	**Mentasta**	**17.41 242**	Pn	**Pn**	**21 58 58.4**	**+0.8**	
BWN	**Browne**	**17.65 251**		**P**	**21 59 02.2**	**+0.8**	
BWN			IAmb	IAmb	21 59 14.9		
	comp=Z,21nm,1.2s						
ILULI	**Ilulissat**	**17.72 81**	Pn	**Pn**	**21 59 00.2**	**-1.1**	
ILULI			IAmb	IAmb	21 59 00.5		
	comp=Z,35nm,1.4s						
WHY	**Whitehorse**	**17.73 226**		**P**	**21 59 05.3**	**+2.8**	
WHY			IAmb	IAmb	21 59 21.9		
	comp=Z,11nm,1.4s						
PAX	**Paxson**	**17.77 244**		**P**	**21 59 03.5**	**+0.5**	
FRB	**Frobisher Bay**	**17.80 111**	P	**P**	**21 59 03.2**	**0.0**	
	comp=Z,0.4nm,0.3s,baz=323,slow=15,SNR=1.6						
FRB	**Frobisher Bay**	**17.80 111**	PN	**Pn**	**21 59 01.3**	**-1.1**	
FRB			SN	Sn	22 02 09.1	-11	
RDOG	**Red Dog Mine**	**17.81 273**	P	**P**	**21 59 03.7**	**+0.4**	
RDOG			IAmb	IAmb	21 59 18.4		
	comp=Z,17nm,1.5s						
FCC	**Fort Churchill**	**17.86 155**	Pn	**Pn**	**21 59 01.1**	**-2.0**	
HYT	**Haines Junctio**	**18.05 230**		**P**	**21 59 08.2**	**+2.1**	
DHY	**Denali Highway**	**18.11 247**		**P**	**21 59 08.7**	**+2.0**	
RND	**Reindeer**	**18.16 249**	P	**P**	**21 59 08.0**	**+0.8**	
SUMG	**Summit**	**18.34 64**	P	**Pn**	**21 59 06.9**	**-2.5**	
SUMG			IAmb	IAmb	21 59 19.7		
	comp=Z,8.4nm,0.7s						
TRF	**Thorofare Moun**	**18.45 251**	P	**Pn**	**21 59 12.8**	**+2.2**	
TRF			IAmb	IAmb	21 59 18.4		
	comp=Z,17nm,1.3s						
KTH	**Kantishna Hill**	**18.52 252**	P	**Pn**	**21 59 13.6**	**+2.4**	
KTH			IAmb	IAmb	21 59 20.3		
	comp=Z,10.0nm,1.2s						
MCARA	**McCarthy VSAT**	**18.65 238**	P	**P**	**21 59 11.8**	**-0.8**	
MCARA			IAmb	IAmb	21 59 21.7		
	comp=Z,8.6nm,1.0s						
BARN	**Barnard Glacie**	**18.66 236**	P	**Pn**	**21 59 14.3**	**+1.1**	
CTGM	**Chitina Glacie**	**18.68 236**	P	**P**	**21 59 11.0**	**-2.1**	
M24K	**Tolsona, Glenn**	**18.69 244**	P	**P**	**21 59 12.7**	**-0.3**	
M24K			IAmb	IAmb	21 59 22.0		
	comp=Z,24nm,1.5s						
GLB	**Gilahina Butte**	**18.77 240**	P	**Pn**	**21 59 15.0**	**+0.7**	
GLB			IAmb	IAmb	21 59 27.4		
	comp=Z,8.7nm,1.4s						
N25K	**Chitina, Valde**	**18.79 241**	P	**Pn**	**21 59 15.1**	**+0.5**	
BALM	**Baldy**	**18.82 237**	P	**Pn**	**21 59 16.9**	**+1.9**	
BALM			IAmb	IAmb	21 59 25.6		
	comp=Z,5.9nm,1.0s						
VRDI	**Verde Repeater**	**18.88 239**	P	**P**	**21 59 13.7**	**-1.6**	
VRDI			IAmb	IAmb	21 59 21.8		
	comp=Z,9.9nm,1.2s						
KLU	**Klutina**	**19.18 242**	P	**Pn**	**21 59 20.8**	**+1.5**	
KLU			IAmb	IAmb	21 59 27.1		
	comp=Z,11nm,1.4s						
TGL	**Tana Glacier**	**19.18 237**	P	**P**	**21 59 18.4**	**0.0**	
TGL			IAmb	IAmb	21 59 36.0		
	comp=Z,9.0nm,1.0s						
SCM	**Sheep Creek Mo**	**19.18 245**	P	**Pn**	**21 59 19.9**	**+0.5**	
SCM			IAmb	IAmb	21 59 38.9		
	comp=Z,13nm,1.1s						
ISLE	**Juniper Island**	**19.22 236**	P	**Pn**	**21 59 20.0**	**+0.1**	
ISLE			IAmb	IAmb	21 59 33.6		
	comp=Z,19nm,1.2s						
CRQM	**Cirque**	**19.24 238**	P	**P**	**21 59 19.2**	**-0.1**	
CRQM			IAmb	IAmb	21 59 25.6		
	comp=Z,21nm,1.4s						
PCA	**Pinnacle**	**19.26 233**	P	**Pn**	**21 59 25.4**	**+5.1**	
PPLA	**Purkeypile**	**19.38 252**	P	**Pn**	**21 59 22.9**	**+1.2**	
PPLA			IAmb	IAmb	21 59 34.4		
	comp=Z,15nm,1.4s						
SFJD	**Kangerlussuaq**	**19.52 86**	LR	LR	22 07 47.6		
	comp=Z,52nm,18.6s,baz=348,slow=40						
GHO	**Glory Hole Cre**	**19.60 247**	P	**Pn**	**21 59 24.4**	**0.0**	
GHO			IAmb	IAmb	21 59 37.7		
	comp=Z,9.3nm,1.2s						
FID	**Port Fidalgo**	**19.96 242**	P	**Pn**	**21 59 29.9**	**+1.3**	
SUCK	**Suckling Hills**	**20.00 238**	P	Pn	21 59 30.6	+1.6	
SKT	**Skwentna**	**20.02 250**	P	Pn	21 59 28.9	-0.3	
SKT			IAmb	IAmb	21 59 36.7		
	comp=Z,14nm,1.5s						
HIN	**Hinchinbrook I**	**20.29 242**	P	**P**	**21 59 31.5**	**+1.1**	
SUA	**Susitna One**	**20.29 248**	P	Pn	21 59 33.8	+1.3	
ANM	**Nome**	**21.19 269**	P	**P**	**21 59 39.2**	**-0.9**	
SEW	**Seward**	**21.20 245**	P	**P**	**21 59 42.2**	**+2.0**	
FFC	**Flin Flon**	**21.27 169**	P	**P**	**21 59 43.5**	**+2.5**	
FFC			IAmb	IAmb	21 59 57.6		
	comp=Z,16nm,1.2s						
SVW2	**Sparrevohn**	**21.74 254**	P	**P**	**21 59 47.7**	**+1.6**	
SVW2			IAmb	IAmb	21 59 53.7		
	comp=Z,5.3nm,1.0s						
BRLK	**Bradley Lake**	**21.83 246**	P	**P**	**21 59 49.4**	**+2.3**	
CNPM	**China Poot**	**22.12 247**	P	**P**	**21 59 55.5**	**+5.2**	
ULM	**Lac du Bonnet**	**26.11 161**	P	**P**	**22 00 33.2**	**+4.6**	
	comp=Z,2.6nm,0.5s,baz=346,slow=8.3,SNR=4.4						
ULM	**Lac du Bonnet**	**26.11 161**	P	**P**	**22 00 28.1**	**-0.5**	
PDAR	**Pinedale Array**	**33.09 181**	P	**P**	**22 01 35.1**	**+4.3**	
	comp=Z,0.3nm,0.6s,baz=26,slow=6.5,SNR=3.0						
P52A	**Corning**	**38.12 146**	P	**P**	**22 02 13.3**	**-0.4**	
MDPB	**Devils Postpil**	**38.52 193**	P	**P**	**22 02 17.7**	**+0.3**	
MDPB			IAmb	IAmb	22 02 19.6		
	comp=Z,2.8nm,0.7s						
FINES	**FINESS Array B**	**40.00 32**	P	**P**	**22 02 30.3**	**+1.1**	
	comp=Z,2.2nm,0.5s,baz=350,slow=11,SNR=18						
TXAR	**Lajitas Array**	**46.56 174**	P	**P**	**22 03 26.0**	**+3.4**	
	comp=Z,0.3nm,0.6s,baz=5.2,slow=11,SNR=2.2						
TXAR			LR	LR	22 24 15.5		
	comp=Z,31nm,18.5s,baz=0.0,slow=38						
TXAR	**Lajitas Array**	**46.56 174**	P	**P**	**22 03 23.5**	**+1.0**	
GERES	**GERESS Array B**	**50.21 47**	P	**P**	**22 03 51.3**	**+0.8**	
	comp=Z,0.3nm,0.6s,baz=9.5,slow=9.0,SNR=2.8						
ZALV	**Zalesovo Beam**	**50.28 350**	P	**P**	**22 03 52.1**	**+1.3**	
	comp=Z,1.2nm,0.5s,baz=3.2,slow=11,SNR=3.0						
SONM	**Songino Array**	**54.60 332**	P	**P**	**22 04 22.7**	**-0.5**	
	comp=Z,0.6nm,0.7s,baz=7.6,slow=4.5,SNR=4.5						
SONM			LR	LR	22 29 27.7		
	comp=Z,29nm,20.2s,baz=172,slow=38						
SONM	**Songino Array**	**54.60 332**	IAmb	IAmb	22 04 25.4		
	comp=Z,0.6nm,0.8s						
ESDC	**Sonseca Array**	**55.40 65**	P	**P**	**22 04 29.8**	**+0.9**	
	comp=Z,0.5nm,0.7s,baz=338,slow=9.7,SNR=2.9						
ESDC	**Sonseca Array**	**55.40 65**	IAmb	IAmb	22 04 36.6		
	comp=Z,5.1nm,1.4s						
MKAR	**Makanchi Array**	**57.53 351**	P	**P**	**22 04 45.0**	**+1.0**	
	comp=Z,0.8nm,0.6s,baz=22,slow=6.8,SNR=6.3						
MKAR			LR	LR	22 32 48.7		
	comp=Z,19nm,18.0s,baz=114,slow=40						

NEIC ***06*** *22:00:02.2±1.8, 7°.34N±0°.07×94°.20E±0°.08, h10km±1km, mb4.5/44, Error ellipse: s-maj=14.8km s-min=10.0km az=229.0*

IDC ***06*** *22:00:08.2±2.8, 7°.51N×94°.45E, h50km±25km, mb3.8/17, mb1 3.9/20, mb1mx3.8/54, mbtmp4.0/20, ML3.9/3, MS3.4/12, Ms1 3.4/12, ms1mx3.1/39, Error ellipse: s-maj=20.1km s-min=13.3km az=59.0*

DJA ***06*** *22:00:08.3±0.8, 8°.N±4°×9°.E±°, h34km±9km, M4.3/13, mb4.5/13, mB4.7/1, MLv4.3/6, Mw(mB)4.0/1*

NDI ***06*** *22:00:10.8±2.7, 8°.13N×95°.19E, h10km, mb4.1, mb4.5(NEIC)*

ISC 06 22:00:07.9±1.0, 7°.43N±0°.05×94°.40E±0°.05, h52km±10km, n120, σ1§44/110, mb4.4/45, MS3.4/12, 1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.35**	**131**	P	**Pn**	**22 00 56.4**	**-1.3**
LHMI				S	**Sn**	**22 01 35.7**	**-0.6**
LHMI	**Lhok Sumawe**	**3.35**	**131**	Pn	**Pn**	**22 00 56.5**	**-1.3**

PKDT	**Phuket**	**3.93**	**83**	P	**Pn**	**22 01 04.5**	**-1.2**
PBA	**Port Blair**	**4.51**	**339**	Pn	Pn	22 01 10.7	-3.0
TPTI		**4.98**	**146**	P	**Pn**	**22 01 20.8**	**+0.6**
KCSI	**Kotacane, Aceh**	**5.13**	**139**	P	Pn	22 01 24.3	+2.0
	0.3nm66nm,0.9s						
TRTT	**Trang**	**5.26**	**85**	P	**Pn**	**22 01 22.5**	**-1.5**
PSI	**Prapat**	**6.44**	**135**	P	**Pn**	**22 01 40.8**	**+0.5**
	1.5nm,0.3s,baz=360,slow=15,SNR=14						
RPSI	**Rantau Prapat**	**6.51**	**136**		**Pn**	**22 01 40.8**	**-0.4**
RPSI	**Rantau Prapat**	**6.51**	**136**		**Pn**	**22 01 40.0**	**-1.2**
KULM	**Kulim**	**6.57**	**109**	Pn	**Pn**	**22 01 39.6**	**-2.3**
GSI	**Gunungsitoli**	**6.86**	**152**	Pn	**Pn**	**22 01 44.0**	**-2.0**
IPM	**Ipoh**	**7.21**	**114**	Pn	**Pn**	**22 01 47.3**	**-3.5**
PHET	**Kaeng Krachan**	**7.50**	**43**	P	Pn	22 01 56.7	+2.1
	0.1nm541nm45nm,0.8s						
MNSI	**Mandailing Nat**	**8.37**	**142**	P	**Pn**	**22 02 08.0**	**+1.3**
	30nm,0.7s						
BKNI	**Bangkinang**	**9.68**	**137**	P	**Pn**	**22 02 25.6**	**+1.0**
	58nm,0.5s						
SRAK	**Srakaew**	**9.96**	**48**	P	Pn	22 02 43.1	+15
CHAI	**Chaiyaphum**	**11.23**	**41**	P	Pn	22 02 53.1	+7.3
	0.1nm7.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**11.82**	**22**	P	**Pn**	**22 02 54.1**	**+0.2**
	0.5nm,0.3s,baz=214,slow=13,SNR=7.1						
CMAR				LR	LR	22 07 27.3	
	comp=Z,139nm,18.6s,baz=256,slow=38						
CHTO	**Chiang Mai**	**12.15**	**21**	Pn	**Pn**	**22 02 57.9**	**-0.5**
PAYA	**Payao**	**13.00**	**24**	P	P	22 03 26.9	+7.9
NONG	**Nongkai**	**13.58**	**38**	P	**P**	**22 03 27.6**	**+2.2**
	16nm,1.5s						
PALK	**Pallekele**	**13.59**	**270**	P	**Pn**	**22 03 19.9**	**+1.8**
	0.4nm,0.3s,baz=176,slow=6.9,SNR=2.2						
PALK				S	Sn	22 05 31.8	-16
	0.2nm,0.3s,baz=112,slow=16,SNR=1.4						
PALK				LR	LR	22 08 22.9	
	comp=Z,203nm,18.8s,baz=191,slow=36						
SLVN	**Son La**	**16.60**	**33**	Pn	**Pn**	**22 03 58.1**	**+0.9**
KSM	**Kuching**	**16.92**	**110**	Pn	**Pn**	**22 04 00.3**	**-0.9**
KOHI	**KOHIMA**	**18.19**	**359**	*e*P	**P**	**22 04 15.2**	**-1.5**
KOHI				IAmb	IAmb	22 04 21.8	
	comp=Z,15nm,0.8s						
SHL	**Shillong**	**18.20**	**353**	*e*P	**P**	**22 04 16.7**	**-0.1**
SHL				IAmb	IAmb	22 04 25.6	
	comp=Z,12nm,1.3s						
SHL	**Shillong**	**18.20**	**353**	P	**P**	**22 04 15.7**	**-1.1**
HYB	**Hyderabad**	**18.37**	**304**	*i* P	**P**	**22 04 18.0**	**-0.6**
SBUM	**Sibu**	**18.43**	**105**	P	**P**	**22 04 19.9**	**+0.7**
QIZ	**Qiongzhong**	**18.93**	**51**	P	**P**	**22 04 24.3**	**-0.4**
QIZ				S	**Sn**	**22 07 56.5**	**-0.5**
QIZ				LR	LR		
	comp=N,560nm,10.6s						
QIZ				LR	LR		
	comp=E,340nm,2.5s						
QIZ				LR	LR		
	comp=Z,170nm,13.0s						
KMI	**Kunming**	**19.32**	**23**↓↓	*e*P	**Pn**	**22 04 33.5**	**+2.9**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMI	**Kunming**	**19.32**	**23**	P	**P**	**22 04 29.4**	**+0.2**
LEM	**Lembang**	**19.35**	**137**	LR	LR	22 13 09.2	
	comp=Z,166nm,18.3s,baz=256,slow=40						
ZIRO	**ZIRO**	**20.00**	**359**	*e*P	**P**	**22 04 36.7**	**+0.2**
ZIRO				IAmb	IAmb	22 04 44.4	
	comp=Z,11nm,0.6s						
GTK	**Tadong**	**20.53**	**345**	*e*P	Pn	22 04 44.8	0.0
GTK				IAmb	IAmb	22 04 53.1	
	comp=Z,7.3nm,0.6s						
MTKI	**Muara Teweh, K**	**22.07**	**111**	P	**P**	**22 04 57.2**	**-1.6**
	comp=Z,39nm,0.4s						
GYA	**Guiyang**	**22.23**	**30**	*e*P	P	22 05 07.1	+6.6
GYA				S	**S**	**22 08 59.4**	**-2.9**
GYA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GYA				pmax	pmax		
	comp=Z,120nm,3.5s						
LSA	**Lhasa**	**22.36**	**353**	P	**P**	**22 05 03.9**	**+1.7**
LSA				pmax	pmax		
	comp=Z,38nm,0.8s						
LSA	**Lhasa**	**22.36**	**353**	P	**P**	**22 05 01.9**	**-0.4**
LSA				IAmb	IAmb	22 05 10.1	
	comp=Z,11nm,0.8s						
MYLDM	**Lahad Datu**	**24.06**	**94**	P	**P**	**22 05 19.4**	**+0.8**
MYLDM				IAmb	IAmb	22 05 32.9	
	comp=Z,31nm,1.2s						
CD2	**Chengdu**	**24.95**	**19**	*e*P	**P**	**22 05 27.0**	**+0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MPSI	**Mapaga**	**26.38**	**104**	P	**P**	**22 05 41.9**	**+2.2**
	comp=Z,12nm,1.2s						
H08S3	**Diego Garcia H**	**26.48**	**236**	T	T	22 32 23.5	
	baz=54,slow=74						
H08S2	**Diego Garcia H**	**26.48**	**236**	T	T	22 32 16.9	
	baz=54,slow=74						
H08S1	**Diego Carcia H**	**26.50**	**236**	T	T	22 32 17.2	
	baz=54						
ENH	**Enshi**	**26.77**	**30**	P	**P**	**22 05 44.9**	**+1.8**
ENH				IAmb	IAmb	22 05 50.8	
	comp=Z,12nm,1.2s						
KAPI	**Kappang**	**28.16**	**115**	LR	LR	22 16 56.0	
	comp=Z,90nm,18.3s,baz=292,slow=36						
LUWI	**Luwuk**	**29.53**	**105**	P	**P**	**22 06 08.9**	**+1.1**
WHN	**Wuhan**	**29.64**	**37**	P	P	22 06 22.2	+14
XAN	**Xi'an**	**29.68**	**25**	P	**P**	**22 06 09.9**	**+0.9**
XAN				IAmb	IAmb	22 06 15.1	
	comp=Z,4.6nm,0.9s						
LZH	**Lanzhou**	**29.80**	**16**	*e*P	**P**	**22 06 12.9**	**+2.7**
LZH				pP	pP	22 06 24.0	+1.2
LZH				sP	sP	22 06 29.5	+0.9
LZH				*e*PP	**PnPn**	**22 07 12.3**	**+4.5**
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,5.0s						
LZH				LR	LR		
	comp=N,340nm,13.0s						
LZH				LR	LR		
	comp=E,350nm,13.2s						
LZH				LR	LR		
	comp=Z,510nm,16.3s						
MMRI	**Maumere**	**32.01**	**119**	P	**P**	**22 06 27.2**	**-2.4**
GTA	**Gaotai**	**32.21**	**8**	*e*P	**P**	**22 06 31.9**	**+0.6**
GTA				pP	pP	22 06 44.7	+0.9
GTA				sP	pwP	22 06 49.3	+1.9
GTA				PcP	**PcP**	**22 09 20.2**	**+1.2**
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,95nm,5.8s						
GTA				LR	LR		
	comp=N,90nm,17.5s						
GTA				LR	LR		
	comp=E,72nm,16.4s						
GTA				LR	LR		
	comp=Z,76nm,14.9s						
NIL	**Nilore**	**32.61**	**326**	P	**P**	**22 06 33.3**	**-1.4**
NJ2	**Nanjing**	**33.45**	**40**	*e*P	**P**	**22 06 42.9**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BATI	**Baumata**	**34.00**	**121**	LR	LR	22 20 52.1	
	comp=Z,109nm,18.8s,baz=216,slow=37						
HHC	**Hu-ho-hao-te**	**36.63**	**22**	*e*P	**P**	**22 07 08.8**	**-0.7**
HHC				S	S	22 12 38.8	-10
HHC				SS	**SnSn**	**22 15 23.1**	**+0.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.9s						
HHC				LR	LR		
	comp=N,130nm,14.6s						
HHC				LR	LR		
	comp=E,190nm,14.8s						
HHC				LR	LR		
	comp=Z,130nm,14.5s						
WMQ	**Urumqi**	**36.72**	**352**	*e*P	**P**	**22 07 11.4**	**+1.2**
WMQ				pP	pP	22 07 22.4	-0.6
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.5s						
WMQ	**Urumqi**	**36.72**	**352**	P	**P**	**22 07 09.8**	**-0.3**
PSA00	**Pilbara Seismi**	**38.13**	**140**	P	**P**	**22 07 19.8**	**-2.5**
PSA00	**Pilbara Seismi**	**38.13**	**140**	P	**P**	**22 07 22.6**	**+0.3**
PSA00				IAmb	IAmb	22 07 27.2	

	comp=Z,37nm,1.4s						
GAR	**Garm**	**38.19**	**329**	P	**P**	**22 07 21.7**	**-1.0**
GAR				IAmb	IAmb	22 07 28.3	
	comp=Z,11nm,0.8s						
BOOM	**Boomskoye usch**	**38.53**	**338**	P	**P**	**22 07 23.4**	**-2.2**
BOOM				IAmb	IAmb	22 07 28.1	
	comp=Z,7.7nm,1.1s						
CHGR	**Chuyangaron**	**38.53**	**328**	P	**P**	**22 07 23.9**	**-1.7**
BTK	**Batken**	**38.74**	**331**	P	**P**	**22 07 26.8**	**-0.6**
BTK				IAmb	IAmb	22 07 37.3	
	comp=Z,6.8nm,0.8s						
HRA	**Herat**	**39.95**	**317**	P	**P**	**22 07 36.8**	**-0.9**
SOCY	**Socotra**	**40.07**	**280**	P	**P**	**22 07 36.1**	**-2.6**
SOCY				IAmb	IAmb	22 07 38.8	
	comp=Z,14nm,1.1s						
MK31	**Makanchi Array**	**40.58**	**347**	P	**P**	**22 07 41.9**	**-0.5**
MK31				IAmb	IAmb	22 07 48.2	
	comp=Z,10nm,1.3s						
MKAR	**Makanchi Array**	**40.58**	**347**	P	**P**	**22 07 41.5**	**-0.9**
	comp=Z,2.1nm,0.5s,baz=168,slow=7.8,SNR=24						
MKAR				PcP	**PcP**	**22 09 45.0**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=132,slow=1.8,SNR=2.6						
MKAR	**Makanchi Array**	**40.58**	**347**	P	**P**	**22 07 41.8**	**-0.5**
MAKZ	**Makanchi**	**40.66**	**347**	P	**P**	**22 07 43.0**	**0.0**
MAKZ				IAmb	IAmb	22 07 49.3	
	comp=Z,5.0nm,0.7s						
KK31	**Karatay Array**	**41.27**	**333**	P	**P**	**22 07 48.5**	**+0.3**
KKAR	**Karatay Array**	**41.27**	**333**	P	**P**	**22 07 48.6**	**+0.4**
KKAR				IAmb	IAmb	22 07 53.4	
	comp=Z,7.4nm,1.4s						
KKAR	**Karatay Array**	**41.27**	**333**	P	**P**	**22 07 47.6**	**-0.5**
SONM	**Songino Array**	**41.54**	**12**	P	**P**	**22 07 51.5**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=198,slow=7.3,SNR=4.7						
SONM				PcP	**PcP**	**22 09 46.6**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=204,slow=3.2,SNR=3.3						
SONM	**Songino Array**	**41.54**	**12**	P	**P**	**22 07 51.4**	**+1.0**
KSAR	**Wonju Array Be**	**42.60**	**40**	P	**P**	**22 08 01.6**	**+2.5**
GEYT	**Alibeck**	**44.70**	**318**	P	**P**	**22 08 16.3**	**+0.3**
	comp=Z,3.6nm,0.6s,baz=139,slow=9.2,SNR=7.9						
GEYT				LR	LR	22 29 51.0	
	comp=Z,40nm,19.0s,baz=190,slow=40						
GEYT	**Alibeck**	**44.70**	**318**	P	**P**	**22 08 16.0**	**0.0**
GYA0B	**ALIBECK ARRAY**	**44.70**	**318**	P	**P**	**22 08 15.6**	**-0.5**
GYA0B				IAmb	IAmb	22 08 23.8	
	comp=Z,5.3nm,0.7s						
TLY	**Talaya**	**44.77**	**8**	LR	LR	22 28 17.6	
	comp=Z,36nm,20.2s,baz=218,slow=38						
KURK	**Kurchatov**	**45.10**	**346**	P	**P**	**22 08 19.3**	**+0.4**
NWAO	**Narrogin (SRO)**	**45.64**	**153**	LR	LR	22 26 08.5	
	comp=Z,34nm,18.9s,baz=244,slow=34						
ZAA0	**Zalesovo Array**	**47.03**	**352**	P	**P**	**22 08 34.9**	**+0.9**
ZAA0				IAmb	IAmb	22 08 42.5	
	comp=Z,9.1nm,1.2s						
ZALV	**Zalesovo Beam**	**47.03**	**352**	P	**P**	**22 08 34.0**	**0.0**
	comp=Z,1.9nm,0.6s,baz=178,slow=7.3,SNR=9.0						
ZALV	**Zalesovo Beam**	**47.03**	**352**	P	**P**	**22 08 34.4**	**+0.4**
WRA	**Warramunga Arr**	**47.80**	**125**	P	**P**	**22 08 40.1**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=305,slow=8.4,SNR=11						
WRA				PcP	**PcP**	**22 10 09.5**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=302,slow=2.9,SNR=2.9						
WRA	**Warramunga Arr**	**47.80**	**125**	IAmb	IAmb	22 08 42.2	
	comp=Z,0.2nm,1.2s						
ASAR	**Alice Springs**	**49.44**	**130**	P	**P**	**22 08 53.3**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=304,slow=7.9,SNR=11						
ASAR				PcP	**PcP**	**22 10 15.9**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=305,slow=3.5,SNR=5.2						
AS31	**Alice Springs**	**49.44**	**130**	P	**P**	**22 08 52.9**	**-0.2**
RAYN	**Ar Rayn**	**49.50**	**295**	P	**P**	**22 08 53.8**	**+0.1**
RAYN				IAmb	IAmb	22 09 02.1	
	comp=Z,6.3nm,0.7s						
ABKAR	**Akbulak array**	**50.74**	**331**	P	**P**	**22 09 00.1**	**-2.4**
ABKAR	**Akbulak array**	**50.74**	**331**	P	**P**	**22 09 00.9**	**-1.7**
ABKAR				IAmb	IAmb	22 09 09.2	
	comp=Z,5.9nm,1.1s						
ARU	**Arti**	**56.40**	**337**	P	**P**	**22 09 44.0**	**+0.1**
KMBO	**Kilima Mbogo**	**57.63**	**264**	P	**P**	**22 09 55.8**	**+2.2**
	comp=Z,2.6nm,0.8s,baz=56,slow=15,SNR=10						
KMBO				LR	LR	22 31 37.2	
	comp=Z,30nm,19.4s,baz=96,slow=33						
KMBO	**Kilima Mbogo**	**57.63**	**264**	P	**P**	**22 09 53.2**	**-0.4**
KMBO				IAmb	IAmb	22 09 57.4	
	comp=Z,2.7nm,0.8s						
KIV	**Kislovodsk**	**57.82**	**318**	P	**P**	**22 09 53.5**	**-0.8**
KIV				IAmb	IAmb	22 10 05.4	
	comp=Z,4.9nm,1.0s						
BRTR	**Keskin Array B**	**62.91**	**311**	P	**P**	**22 10 28.0**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=96,slow=9.0,SNR=2.3						
BRTR				LR	LR	22 39 43.4	
	comp=Z,8.4nm,20.1s,baz=181,slow=38						
MBAR	**Mbarara**	**63.98**	**266**	P	**P**	**22 10 33.7**	**-3.1**
MBAR				IAmb	IAmb	22 10 45.6	
	comp=Z,5.2nm,1.2s						
AKASG	**Malin Array Be**	**68.66**	**322**	P	**P**	**22 11 04.5**	**-

MEEK				S		**Sn**	**22 15 03.2**	**+0.5**
	baz=5.9								
WRKA	**Warakurna**	**6.32**	**121**	P		Pn	22 14 06.7	+5.5
	baz=6.6,SNR=15								
GIRL	**Giralia**	**7.55**	**262**	P		**Pn**	**22 14 20.0**	**+2.0**
	baz=7.4,SNR=15								
GIRL				S		**Sn**	**22 15 38.1**	**-6.2**
	baz=7.4								
GIRL	**Giralia**	**7.55**	**262**	Pn		**Pn**	**22 14 19.9**	**+2.0**
KNRA	**Kununurra**	**8.64**	**46**	P		**Pn**	**22 14 35.1**	**+2.3**
	baz=8.7,SNR=6.2								
KNRA				S		**Sn**	**22 16 07.2**	**-3.8**
	baz=8.7								
KNRA	**Kununurra**	**8.64**	**46**	Pn		**Pn**	**22 14 35.0**	**+2.1**
KNRA						**Sn**	**22 16 08.4**	**-2.6**
MORW	**Morawa**	**9.17**	**217**	P		**Pn**	**22 14 41.3**	**+1.1**
	baz=9.2,SNR=8.3								
MORW				S		**Sn**	**22 16 19.1**	**-5.1**
	baz=9.2								
MORW	**Morawa**	**9.17**	**217**			**Pn**	**22 14 41.1**	**+0.9**
KMBL	**Kambalda**	**9.49**	**182**	P		**Pn**	**22 14 47.4**	**+2.8**
	baz=9.7								
KMBL				S		**Sn**	**22 16 29.9**	**-2.2**
	baz=9.7								
FORT	**Forrest**	**10.27**	**151**	P		**Pn**	**22 14 58.5**	**+3.3**
	baz=10								
FORT				S		**Sn**	**22 16 50.0**	**-1.1**
	baz=10								
FORT	**Forrest**	**10.27**	**151**	Pn		**Pn**	**22 14 58.5**	**+3.3**
KLBR	**Kellerberrin**	**10.54**	**202**	P		**Pn**	**22 15 01.2**	**+2.3**
	baz=11,SNR=11								
KLBR				S		**Sn**	**22 16 52.2**	**-5.5**
	baz=11								
ASAR	**Alice Springs**	**10.82**	**102**	Pn		**Pn**	**22 15 06.0**	**+3.1**
	2.0nm,0.3s,baz=280,slow=12,SNR=75								
ASAR				Sn		**Sn**	**22 17 00.9**	**-3.9**
	0.5nm,0.3s,baz=273,slow=23,SNR=5.9								
ASAR				Lg		Lg	22 18 11.3		
	baz=284,slow=31,SNR=2.2								
ASAR	**Alice Springs**	**10.82**	**102**			**Pn**	**22 15 05.3**	**+2.4**
AS31	**Alice Springs**	**10.82**	**102**			**Pn**	**22 15 06.0**	**+3.1**
WRA	**Warramunga Arr**	**11.37**	**83**	Pn		**Pn**	**22 15 10.8**	**+0.4**
	0.9nm,0.3s,baz=264,slow=15,SNR=49								
WRA				Sn		**Sn**	**22 17 12.6**	**-5.7**
	1.3nm,0.3s,baz=263,slow=25,SNR=6.8								
WRA				Lg		Lg	22 18 29.6		
	baz=265,slow=27,SNR=3.0								
WRA	**Warramunga Arr**	**11.37**	**83**			**Pn**	**22 15 12.1**	**+1.7**
WRA						**Sn**	**22 17 14.3**	**-4.0**
WB2	**Warramunga Arr**	**11.38**	**83**	Pn		**Pn**	**22 15 12.6**	**+2.0**
WRAB	**Tennant Creek**	**11.38**	**83**	Pn		**Pn**	**22 15 12.4**	**+1.9**
WB0	**Warramunga Arr**	**11.46**	**82**			**Pn**	**22 15 12.2**	**+0.6**
MUN	**Mundaring**	**11.48**	**207**	P		**Pn**	**22 15 13.9**	**+2.2**
	baz=12,SNR=3.6								
WR0	**Warramunga Arr**	**11.55**	**83**			**Pn**	**22 15 14.7**	**+1.8**
NWAO	**Narrogin (SRO)**	**11.93**	**201**	Pn		**Pn**	**22 15 19.4**	**+1.4**
	1.4nm,0.3s,baz=27,slow=13,SNR=8.0								
NWAO				Sn		Sn	22 17 24.3	-7.6	
	1.6nm,0.3s,baz=87,slow=22,SNR=1.7								
NWAO				Lg		Lg	22 18 37.7		
	0.6nm,0.3s,baz=300,slow=20,SNR=1.6								
NWAO	**Narrogin (SRO)**	**11.93**	**201**	P		**Pn**	**22 15 19.4**	**+1.4**
	baz=12,SNR=7.7								
NWAO	**Narrogin (SRO)**	**11.93**	**201**	Pn		**Pn**	**22 15 19.6**	**+1.6**
MTN	**Manton Dam**	**12.26**	**45**	P		**Pn**	**22 15 22.5**	**-0.1**
	baz=12,SNR=12								
MTN	**Manton Dam**	**12.26**	**45**			**Pn**	**22 15 23.2**	**+0.7**
OOD	**Oodnadatta**	**13.48**	**119**	P		**Pn**	**22 15 41.0**	**+1.8**
	baz=14,SNR=11								
QIS	**Mount Isa**	**16.15**	**89**	P		**Pn**	**22 16 17.0**	**+1.9**
	baz=16,SNR=4.4								
BBOO	**Buckleboo**	**16.35**	**135**	P		**Pn**	**22 16 17.1**	**-0.5**
	baz=17,SNR=5.4								
BBOO	**Buckleboo**	**16.35**	**135**	Pn		**Pn**	**22 16 18.0**	**+0.4**
BBOO				IAmb		IAmb	22 16 33.9		
	comp=Z,10nm,1.1s								
STKA	**Stephens Creek**	**19.84**	**124**	P		**P**	**22 17 00.9**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=302,slow=13,SNR=4.5								
STKA				S		S	22 20 32.8	-11	
	comp=Z,0.2nm,0.3s,baz=246,slow=16,SNR=1.6								
STKA	**Stephens Creek**	**19.84**	**124**	IAmb		IAmb	22 17 03.9		
	comp=Z,0.6nm,0.9s								

*IDC **06** 22:13:24.6±1.1,0.0°04S×97.36E,h0km,mb4.2/11,*
mb1 4.3/12,mb1mx3.9/41,mbtmp4.2/12,ML3.6/2,MS3.1/4,
Ms1 3.1/4,ms1mx2.8/35,Error ellipse: s-maj=34.3km
s-min=17.0km az=53.0
*DJA **06** 22:13:27.4±3.1,0.0°N±5.9°×9.7E±1.2°,h24km±35.5km,M4.2/7,*
mB6.0/1,mb4.5/3,MLv4.1/7,Mw(mB)5.7/1
*NEIC **06** 22:13:29.8±1.1,0.0°16N±0.06°×97.32E±0.06°,h30km±6km,*
mb4.5/28,Error ellipse: s-maj=9.4km s-min=8.3km
az=166.0

ISC 06 22:13:29.8±0.6,**0.0°16N**±0.07°×**97.32E**±0.09°,**h35**km,**n81,**
σ1§**47**/73,**mb4.4**/28,**MS3.8**/5,**1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.26**	**12**	P	**Pn**	**22 13 50.1**	**-0.9**
GSI				S	**Sn**	**22 14 07.1**	**+0.4**
GSI	**Gunungsitoli**	**1.26**	**12**		**Pn**	**22 13 50.1**	**-0.9**
SISI	**Saibi**	**2.25**	**128**	P	**Pn**	**22 14 02.5**	**-2.1**
MNSI	**Mandailing Nat**	**2.38**	**72**	P	**Pn**	**22 14 05.1**	**-1.3**
RPSI	**Rantau Prapat**	**3.07**	**32**		**Pn**	**22 14 15.6**	**-0.3**
RPSI	**Rantau Prapat**	**3.07**	**32**		**Pn**	**22 14 13.6**	**-2.3**
PSI	**Prapat**	**3.16**	**31**	Pn	**Pn**	**22 14 13.6**	**-3.6**
	1.4nm,0.3s,baz=180,slow=10,SNR=8.1						
PSI				LR	LR	22 15 26.1	
	comp=Z,261nm,19.2s,baz=212,slow=39						
TPTI		**3.18**	**358**	P	**Pn**	**22 14 15.8**	**-1.6**
KCSI	**Kotacane, Aceh**	**3.47**	**8**	P	**Pn**	**22 14 20.0**	**-1.4**
BKNI	**Bangkinang**	**3.73**	**86**	P	Pn	22 14 34.3	+9.3
BKNI	**Bangkinang**	**3.73**	**86**	Pn	**Pn**	**22 14 25.8**	**+0.8**
KRJI	**Kerinci**	**4.67**	**117**	P	**Pn**	**22 14 38.3**	**+0.4**
LHMI	**Lhok Sumawe**	**5.14**	**356**	Pn	**Pn**	**22 14 43.0**	**-1.4**
IPM	**Ipoh**	**5.74**	**40**		**Pn**	**22 14 51.8**	**-0.9**
KULM	**Kulim**	**6.17**	**33**		**Pn**	**22 14 57.6**	**-1.0**
KSI	**Kapahiang**	**6.44**	**125**	P	**Pn**	**22 15 04.4**	**+2.1**
MNAI	**Manna**	**7.15**	**128**	Pn	**Pn**	**22 15 14.1**	**+2.1**
MDSI	**Maura Dua**	**8.21**	**123**	P	**Pn**	**22 15 25.2**	**-1.4**
	37nm,0.8s						
KLSI		**8.78**	**123**	P	**Pn**	**22 15 32.6**	**-1.8**
LEM	**Lembang**	**12.35**	**124**	LR	LR	22 21 33.1	
	comp=Z,86nm,22.0s,baz=231,slow=40						
CISI	**Cisompet, Garu**	**12.92**	**126**	Pn	**Pn**	**22 16 33.2**	**+2.0**
CMAR	**Chiang Mai Arr**	**18.35**	**5**	P	**Pn**	**22 17 41.6**	**-0.1**
	0.2nm,0.3s,baz=195,slow=11,SNR=30						
CMAR	**Chiang Mai Arr**	**18.35**	**5**	P	**P**	**22 17 41.0**	**-0.6**
CHTO	**Chiang Mai**	**18.70**	**5**	P	**Pn**	**22 17 45.3**	**-0.7**
SLVN	**Son La**	**22.10**	**17**	P	**P**	**22 18 22.5**	**+0.2**
SLVN				IAmb	IAmb	22 18 29.3	
	comp=Z,17nm,1.2s						
KAPI	**Kappang**	**22.97**	**103**	P	**P**	**22 18 30.3**	**-1.2**
	comp=Z,2.3nm,0.3s,baz=210,slow=20,SNR=3.6						
KAPI	**Kappang**	**22.97**	**103**	IAmb	IAmb	22 18 37.7	
	comp=Z,12nm,1.1s						
KMI	**Kunming**	**25.46**	**12**⇑	*eP*	**P**	**22 18 58.5**	**+3.5**
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
H08S2	**Diego Garcia H**	**25.91**	**252**	T	T	22 45 56.0	
	baz=73,slow=75,SNR=97						
H08S3	**Diego Garcia H**	**25.91**	**252**	T	T	22 45 53.5	
	baz=73,slow=75,SNR=896						
H08S1	**Diego Carcia H**	**25.92**	**252**	T	T	22 45 54.9	
	baz=73,slow=75,SNR=28						
FITZ	**Fitzroy Crossi**	**33.18**	**124**	P	**P**	**22 20 01.9**	**-1.6**
	comp=Z,4.2nm,0.8s,baz=280,slow=6.1,SNR=3.3						
XAN	**Xi'an**	**35.51**	**17**	P	**P**	**22 20 23.7**	**+0.2**
XAN				pP	pP	22 20 29.8	-3.0
XAN				pmax	pmax		
	comp=Z,13nm,0.9s						
XAN	**Xi'an**	**35.51**	**17**	P	**P**	**22 20 23.0**	**-0.5**
LZH	**Lanzhou**	**36.35**	**9**	*eP*	**P**	**22 20 33.2**	**+2.4**
LZH				pP	pwP	22 20 42.3	-1.2
LZH				sP	sP	22 20 46.0	+1.9
LZH				*e*PP	**PP**	**22 21 57.4**	**+3.4**
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,98nm,5.3s						
LZH				LR	LR		
	comp=N,300nm,13.2s						
LZH				LR	LR		
	comp=E,310nm,13.5s						
LZH				LR	LR		
	comp=Z,480nm,16.6s						
NJ2	**Nanjing**	**37.77**	**31**	*e*P	**P**	**22 20 44.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
H01W3	**Cape Leeuwin H**	**38.16**	**157**	T	T	23 00 57.7	
	baz=333,slow=76,SNR=103						
H01W2	**Cape Leeuwin H**	**38.17**	**157**	T	T	23 01 00.8	
	baz=333,slow=76,SNR=98						
H01W1	**Cape Leeuwin H**	**38.17**	**157**	T	T	23 00 58.8	
	baz=333,slow=76,SNR=101						
GTA	**Gaotai**	**39.23**	**3**	*e*P	**P**	**22 20 55.7**	**+0.7**
GTA				pP	pP	22 21 05.8	+1.5
GTA				sP	sP	22 21 09.8	+1.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,42nm,7.6s						
GTA				LR	LR		
	comp=N,110nm,15.3s						
GTA				LR	LR		
	comp=E,130nm,16.0s						
GTA				LR	LR		
	comp=Z,59nm,15.6s						
NIL	**Nilore**	**40.34**	**328**	P	**P**	**22 21 03.8**	**-0.4**
WB0	**Warramunga Arr**	**41.32**	**121**	P	**P**	**22 21 13.7**	**+1.1**
WB0				IAmb	IAmb	22 21 14.3	
	comp=Z,8.6nm,1.0s						
WRA	**Warramunga Arr**	**41.35**	**121**	P	**P**	**22 21 11.6**	**-1.2**
	comp=Z,2.5nm,0.8s,baz=299,slow=9.3,SNR=4.6						
WRA	**Warramunga Arr**	**41.35**	**121**	P	**P**	**22 21 12.0**	**-0.7**
WR0	**Warramunga Arr**	**41.53**	**121**	P	**P**	**22 21 14.2**	**0.0**
WR0				IAmb	IAmb	22 21 19.8	
	comp=Z,7.4nm,0.8s						
HHC	**Hu-ho-hao-te**	**42.61**	**16**	*e*P	**P**	**22 21 23.8**	**+0.9**
HHC				PP	**PP**	**22 22 57.6**	**-4.5**
HHC				sS	sS	22 28 06.4	+7.5
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,140nm,14.7s						
HHC				LR	LR		
	comp=E,230nm,15.9s						
HHC				LR	LR		
	comp=Z,140nm,15.8s						
AS31	**Alice Springs**	**42.63**	**126**	P	**P**	**22 21 24.0**	**+0.8**
ASAR	**Alice Springs**	**42.63**	**126**	P	**P**	**22 21 23.5**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=295,slow=8.8,SNR=3.4						
ASAR	**Alice Springs**	**42.63**	**126**	P	**P**	**22 21 24.4**	**+1.2**
WMQ	**Urumqi**	**44.41**	**350**	*e*P	**P**	**22 21 38.6**	**+1.4**
CHGR	**Chuyangaron**	**46.29**	**329**	P	**P**	**22 21 52.1**	**-0.2**
BOOM	**Boomskoye usch**	**46.41**	**338**	P	**P**	**22 21 52.3**	**-0.9**
BOOM				IAmb	IAmb	22 21 55.6	
	comp=Z,7.0nm,0.9s						
BTK	**Batken**	**46.56**	**332**	P	**P**	**22 21 54.6**	**+0.2**
BTK				IAmb	IAmb	22 22 12.5	
	comp=Z,8.2nm,1.3s						
KSRS	**Korea Array**	**46.72**	**34**	LR	LR	22 42 02.6	
	comp=Z,25nm,18.8s,baz=185,slow=37						
SONM	**Songino Array**	**48.23**	**8**	P	**P**	**22 22 08.4**	**+1.1**
	comp=Z,2.7nm,0.8s,baz=191,slow=10,SNR=11						
SONM	**Songino Array**	**48.23**	**8**	P	**P**	**22 22 06.6**	**-0.7**
ULN	**Ulaanbaatar**	**48.36**	**9**	P	**P**	**22 22 08.3**	**0.0**
MK31	**Makanchi Array**	**48.37**	**346**	P	**P**	**22 22 08.9**	**+0.7**
MKAR	**Makanchi Array**	**48.37**	**346**	P	**P**	**22 22 09.7**	**+1.4**
	comp=Z,6.3nm,0.7s,baz=156,slow=7.8,SNR=55						
MKAR	**Makanchi Array**	**48.37**	**346**	P	**P**	**22 22 09.1**	**+0.9**
MAKZ	**Makanchi**	**48.45**	**346**	P	**P**	**22 22 09.1**	**+0.2**
MAKZ				IAmb	IAmb	22 22 10.9	
	comp=Z,4.7nm,0.8s						
KK31	**Karatay Array**	**49.12**	**334**	P	**P**	**22 22 13.9**	**-0.2**
KK31				IAmb	IAmb	22 22 16.2	
	comp=Z,5.2nm,1.3s						
KKAR	**Karatay Array**	**49.12**	**334**	P	**P**	**22 22 14.6**	**+0.5**
KKAR	**Karatay Array**	**49.12**	**334**	P	**P**	**22 22 15.3**	**+1.2**
KKAR				IAmb	IAmb	22 22 16.1	
	comp=Z,5.2nm,1.3s						
GEYT	**Alibeck**	**52.16**	**321**	P	**P**	**22 22 37.0**	**-0.2**
GYA0B	**ALIBECK ARRAY**	**52.16**	**321**	P	**P**	**22 22 36.8**	**-0.3**
KURK	**Kurchatov**	**52.91**	**345**	P	**P**	**22 22 42.9**	**+0.5**
KURK				IAmb	IAmb	22 22 44.5	
	comp=Z,7.3nm,1.1s						
USRK	**Ussuriysk Ar.**	**53.68**	**31**	P	**P**	**22 22 48.3**	**+0.1**
	comp=Z,7.7nm,0.8s,baz=230,slow=4.6,SNR=6.2						
USRK				LR	LR	22 45 53.5	
	comp=Z,30nm,21.8s,baz=216,slow=36						
ZAA0	**Zalesovo Array**	**54.69**	**351**	P	**P**	**22 22 55.5**	**+0.1**
ZALV	**Zalesovo Beam**	**54.69**	**351**	P	**P**	**22 22 56.2**	**+0.9**
	comp=Z,12nm,0.9s,baz=178,slow=6.1,SNR=35						
ABKAR	**Akbulak array**	**58.57**	**332**	P	**P**	**22 23 23.1**	**+0.1**
ABKAR	**Akbulak array**	**58.57**	**332**	IAmb	IAmb	22 23 23.9	
	comp=Z,4.9nm,0.8s						
TOKA	**Tokat**	**68.08**	**314**	P	**P**	**22 24 25.0**	**-1.3**
TOKA				IAmb	IAmb	22 24 28.2	
	comp=Z,3.2nm,0.9s						
PET	**Petropavlovsk**	**73.11**	**34**	P	**P**	**22 24 56.2**	**-0.3**
TIXI	**Tiksi**	**74.28**	**10**	P	**P**	**22 25 02.8**	**-0.3**
AKASG	**Malin Array Be**	**76.22**	**323**	P	**P**	**22 25 14.7**	**0.0**
	comp=Z,0.4nm,0.4s,baz=89,slow=4.7,SNR=5.0						
AKASG	**Malin Array Be**	**76.22**	**323**	P	**P**	**22 25 10.3**	**-4.4**
BURAR	**Bucovina Array**	**77.95**	**319**	P	**P**	**22 25 25.1**	**+0.4**
FINES	**FINESS Array B**	**81.05**	**333**	P	**P**	**22 25 41.7**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=93,slow=12,SNR=3.6						
GERES	**GERESS Array B**	**85.74**	**319**	P	**P**	**22 26 06.2**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=111,slow=5.4,SNR=3.7						
CPUP	**Villa Florida**	**144.24**	**221**	PKP	**PKPab**	**22 33 01.4**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=151,slow=2.0,SNR=4.7						

*IDC **06** 22:21:03.7±3.3,0.0°03S×97.43E,h0km,mb3.6/5,mb1 3.8/6,*
mb1mx3.5/39,mbtmp3.7/6,ML4.2/1,MS3.0/1,Ms1 3.2/1,
ms1mx2.4/31,Error ellipse: s-maj=127.6km s-min=22.1km
az=59.0
*NEIC **06** 22:21:08.4±1.3,0.0°15N±0.06°×97.38E±0.05,h32km±7km,*
mb4.2/10,Error ellipse: s-maj=8.4km s-min=7.2km
az=157.0

ISC 06 22:21:09.0±0.9,**0.0°16N**±0.09°×**97.5E**±0.1,**h35**km,**n34,**
σ0§**96**/28,**mb4.0**/8,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.14**	**7**	Pn	**Pn**	**22 21 28.8**	**+0.4**
GSI				Sn	**Sn**	**22 21 41.7**	**-1.2**
RPSI	**Rantau Prapat**	**2.92**	**30**	Pn	**Pn**	**22 21 53.2**	**+0.3**
BKNI	**Bangkinang**	**3.60**	**87**	Pn	**Pn**	**22 22 03.7**	**+1.5**
LHMI	**Lhok Sumawe**	**5.06**	**354**	Pn	**Pn**	**22 22 22.1**	**-0.2**
IPM	**Ipoh**	**5.58**	**40**	Pn	**Pn**	**22 22 30.3**	**+0.7**
KULM	**Kulim**	**6.01**	**32**	Pn	**Pn**	**22 22 34.9**	**-0.7**
MYKOM	**Kota Tinggi**	**6.61**	**76**	Pn	**Pn**	**22 22 44.3**	**+0.7**
MNAI	**Manna**	**7.11**	**129**	Pn	**Pn**	**22 22 50.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**18.24**	**5**	P	**Pn**	**22 25 20.8**	**+1.3**
	0.3nm,0.3s,baz=185,slow=9.1,SNR=1.4						
CMAR				LR	LR	22 32 28.8	
	comp=Z,45nm,18.7s,baz=182,slow=37						
CMAR	**Chiang Mai Arr**	**18.24**	**5**	P	**Pn**	**22 25 20.2**	**+0.8**
JAGI	**Jajag, Banyuwa**	**18.73**	**118**	P	**P**	**22 25 23.8**	**-1.0**
JAGI				IAmb	IAmb	22 25 36.3	
	comp=Z,9.4nm,0.9s						
H08S2	**Diego Garcia H**	**26.06**	**252**	T	T	22 53 27.2	
	baz=72,slow=74,SNR=62						
H08S3	**Diego Garcia H**	**26.06**	**252**	T	T	22 53 26.5	
	baz=72,slow=74,SNR=763						
H08S1	**Diego Carcia H**	**26.08**	**252**	T	T	22 53 30.4	
	baz=72,slow=74,SNR=33						
H01W3	**Cape Leeuwin H**	**38.20**	**158**	T	T	23 08 36.4	
	baz=333,slow=76,SNR=92						
H01W2	**Cape Leeuwin H**	**38.21**	**158**	T	T	23 08 36.6	
	baz=333,slow=76,SNR=72						
H01W1	**Cape Leeuwin H**	**38.21**	**158**	T	T	23 08 35.2	
	baz=333,slow=76,SNR=70						
WRA	**Warramunga Arr**	**41.29**	**121**	P	**P**	**22 28 49.9**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=302,slow=9.1,SNR=8.4						
WRA	**Warramunga Arr**	**41.29**	**121**	IAmb	IAmb	22 28 57.8	
	comp=Z,0.1nm,1.0s						
WR0	**Warramunga Arr**	**41.47**	**121**	P	**P**	**22 28 50.7**	**-2.2**
FORT	**Forrest**	**42.33**	**139**	P	**P**	**22 28 59.2**	**-0.6**
ASAR	**Alice Springs**	**42.58**	**126**	P	**P**	**22 29 01.7**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=294,slow=6.7,SNR=2.7						
SONM	**Songino Array**	**48.12**	**8**	P	**P**	**22 29 47.1**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=191,slow=8.7,SNR=2.4						
SONM	**Songino Array**	**48.12**	**8**	P	**P**	**22 29 46.0**	**+0.4**
MK31	**Makanchi Array**	**48.30**	**346**	P	**P**	**22 29 46.5**	**-0.3**
MK31				IAmb	IAmb	22 29 54.8	
	comp=Z,0.8nm,0.7s						
MKAR	**Makanchi Array**	**48.30**	**346**	P	**P**	**22 29 48.2**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=161,slow=9.0,SNR=11						
MKAR	**Makanchi Array**	**48.30**	**346**	P	**P**	**22 29 47.2**	**+0.4**
KKAR	**Karatay Array**	**49.09**	**334**	P	**P**	**22 29 52.4**	**-0.6**
ZAA0	**Zalesovo Array**	**54.62**	**351**	P	**P**	**22 30 33.8**	**-0.1**
ZAA0				IAmb	IAmb	22 30 41.7	
	comp=Z,1.7nm,0.8s						
ZALV	**Zalesovo Beam**	**54.62**	**351**	P	**P**	**22 30 35.0**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=179,slow=5.7,SNR=5.7						
ZALV	**Zalesovo Beam**	**54.62**	**351**	P	**P**	**22 30 34.6**	**+0.7**
ABKAR	**Akbulak array**	**58.54**	**332**	P	**P**	**22 31 01.9**	**-0.1**
ABKAR	**Akbulak array**	**58.54**	**332**	P	**P**	**22 31 01.7**	**-0.2**
ABKAR				IAmb	IAmb	22 31 08.7	
	comp=Z,0.9nm,0.9s						
AKH	**Akhalkalaki**	**63.61**	**317**	P	**P**	**22 31 36.9**	**+0.1**
AKH				IAmb	IAmb	22 31 38.1	
	comp=Z,6.0nm,1.0s						

WEL 06 22:37:24.4,44°S±54°×17°1E±1°,h10km±20km,**M2.1**/6,
ML2.2/6,**MLv2.1**/6,**Error ellipse: s-maj=0.1km**
s-min=0.0km az=3.3,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHCZ	**Mount Hutt**	**0.17**	**90**	P	Pg	22 37 29.6	+1.5
RPZ	**Rata Peaks**	**0.27**	**227**	P	Pg	22 37 29.2	-0.7
ARCZ	**Arundel**	**0.43**	**195**	P	Pg	22 37 33.0	+0.1
WACZ	**Wakanui South**	**0.55**	**138**	P	Pb	22 37 36.9	+0.7
OXZ	**Oxford**	**0.56**	**69**	P	Pb	22 37 36.4	+0.1
WVZ	**Waitaha Valley**	**0.63**	**316**	P	Pg	22 37 34.5	-2.0
LTZ	**Lake Taylor**	**1.02**	**43**	P	Pn	22 37 44.6	-0.2
FOZ	**Fox Glacier**	**1.10**	**269**	P	Pb	22 37 45.3	-0.2
LBZ	**Lake Benmore**	**1.19**	**224**	P	Pb	22 37 47.0	-0.1

WEL 06 22:39:13.3,41°S±2°×17°3E±°,h167km±3km,**M3.4**/41,
MLv3.4/41,**Error ellipse: s-maj=0.0km s-min=0.0km**
az=74.1,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.50**	**125**	P	Pn	22 39 37.3	+0.6
DUWZ				S	Sn	22 39 54.6	0.0
NNZ	**Nelson**	**0.70**	**180**	P	Pn	22 39 38.1	+0.5
NNZ				S	Sn	22 39 56.3	-0.1
QRZ	**Quartz Range**	**0.71**	**244**	P	Pn	22 39 37.9	+0.2
QRZ				S	Sn	22 39 55.8	-0.7
TCW	**Tory Channel**	**0.97**	**136**	P	Pn	22 39 40.5	+1.0
TCW				S	Sn	22 39 59.3	-0.4
TUWZ	**Tuamarina**	**1.01**	**155**	P	Pn	22 39 40.6	+0.9
TUWZ				S	Sn	22 39 59.6	-0.6
NMEZ	**Namu Road**	**1.17**	**19**	P	Pn	22 39 41.4	+0.3
NMEZ				S	Sn	22 40 02.7	+0.2
KIW	**Kapiti Island**	**1.22**	**107**	P	Pn	22 39 42.0	+0.5
KIW				S	Sn	22 40 02.2	-1.1
BSWZ	**Blackbirch Sta**	**1.25**	**163**	P	Pn	22 39 42.7	+0.8
THZ	**Tophouse**	**1.29**	**196**	P	Pn	22 39 42.6	+0.3
NBEZ	**Newall Road No**	**1.30**	**17**	P	Pn	22 39 42.6	+0.2
WEL	**Wellington**	**1.30**	**126**	P	Pn	22 39 43.0	+0.7
KHEZ	**Kahui Hut**	**1.32**	**22**	P	Pn	22 39 42.7	+0.1
LREZ	**Lake Rotokare**	**1.32**	**37**	P	Pn	22 39 43.5	+1.0
LREZ				S	Sn	22 40 05.6	+0.7
PREZ	**Palmer Road**	**1.32**	**27**	P	Pn	22 39 42.3	-0.3
NEZ	**North Egmont**	**1.36**	**24**	P	Pn	22 39 42.9	-0.2
NEZ				S	Sn	22 40 04.5	-1.3
OGWZ	**Otaki Gorge**	**1.40**	**103**	P	Pn	22 39 43.8	+0.6
OGWZ				S	Sn	22 40 05.2	-1.0
CAW	**Cannon Point**	**1.41**	**115**	P	Pn	22 39 43.9	+0.6
BHW	**Baring Head**	**1.44**	**129**	P	Pn	22 39 44.0	+0.5
WAZ	**Wanganui**	**1.45**	**59**	P	Pn	22 39 44.5	+0.8
HOWZ	**Holdsworth Sta**	**1.67**	**104**	P	Pn	22 39 46.3	+0.4
MSWZ	**Moikau Station**	**1.68**	**123**	P	Pn	22 39 46.4	+0.4
MSWZ				S	Sn	22 40 10.0	-1.3
MRZ	**Mangatainoka R**	**1.68**	**96**	P	Pn	22 39 46.4	+0.3
MRZ				S	Sn	22 40 10.0	-1.4
DSZ	**Denniston Nort**	**1.71**	**224**	P	Pn	22 39 46.3	-0.1
MTW	**Mount

MT03					IAML		22 42 50.0	
	comp=N,4µm,0.2s							
CO02	**Combarbal**	**1.58**	**31**	⇓*i*	*i*P	**Pn**	**22 42 29.2**	**-0.7**
CO02					*e*S	**Sn**	**22 42 48.4**	**-1.8**
CO02					IAML		22 42 51.5	
	comp=E,7µm,0.4s							
BO03	**Pichilemu**	**1.94**	**180**		*e*P	**Pn**	**22 42 35.3**	**+0.6**
BO03					*i*S	**Sn**	**22 42 58.0**	**-0.9**
LMEL	**Las Melosas**	**1.96**	**132**		*e*P	**Pn**	**22 42 36.0**	**+0.8**
LMEL					*e*S	**Sn**	**22 42 59.9**	**+0.2**
LMEL					IAML		22 43 04.3	
	comp=N,1µm,0.2s							
CO03	**El Pedregal**	**2.03**	**33**		*e*P	**Pn**	**22 42 36.0**	**-0.1**
CO03					*i*S	**Sn**	**22 43 00.8**	**-0.5**
CO03					IAML		22 43 07.4	
	comp=E,1µm,0.2s							
AUSP	**Uspallata**	**2.20**	**82**		*e*P	**Pn**	**22 42 40.2**	**+1.5**
AUSP					*e*S	**Sn**	**22 43 06.7**	**+0.8**
RTLS	**Leoncito**	**2.38**	**72**		*e*P	**Pn**	**22 42 42.8**	**+1.6**
BO02	**Sierra Bellavi**	**2.44**	**157**		*e*P	**Pn**	**22 42 42.7**	**+1.0**
BO02					*e*S	**Sb**	**22 43 14.9**	**-1.0**
ARCO	**CERRO ARCO**	**2.57**	**97**		*e*P	**Pn**	**22 42 46.1**	**+2.5**
ARCO					IAML		22 43 27.5	
	comp=E,416nm,0.6s							
GO04	**Tololo Observa**	**2.58**	**23**		*e*P	**Pn**	**22 42 43.4**	**-0.3**
GO04					*e*S	**Sn**	**22 43 13.8**	**-1.3**
GO04					IAML		22 43 23.7	
	comp=N,3µm,0.5s							
GO04	**Tololo Observa**	**2.58**	**23**		*e*P	**Pn**	**22 42 44.0**	**+0.3**
GO04					*e*S	**Sn**	**22 43 13.1**	**-2.0**
ASAL	**Salagasta**	**2.64**	**92**		*e*P	**Pn**	**22 42 46.9**	**+2.4**
AAGR	**Agrelo**	**2.69**	**102**		*e*P	**Pb**	**22 42 48.1**	**-2.1**
AAGR					*e*S	**Sn**	**22 43 19.5**	**+1.8**
AAGR					IAML		22 43 31.6	
	comp=Z,310nm,1.1s							
ZON	**Zonda**	**2.96**	**71**		*e*P	**Pn**	**22 42 51.6**	**+2.7**
ZON					*e*S	**Sb**	**22 43 29.2**	**-1.8**
RTCV	**Cerro Valdivia**	**2.98**	**77**		*e*P	**Pn**	**22 42 51.0**	**+1.9**
RTCV					*e*S	**Sb**	**22 43 29.7**	**-1.8**
CO01	**Juntas del Tor**	**3.03**	**32**		*e*P	**Pn**	**22 42 50.9**	**+0.9**
CO01					*e*S	**Sn**	**22 43 26.6**	**+0.4**
CO01					IAML		22 43 34.7	
	comp=E,297nm,0.2s							
AVIZ	**Vizcacheras**	**3.04**	**108**		*e*P	**Pg**	**22 42 59.9**	**-0.4**
AVIZ					*e*S	**Sg**	**22 43 44.8**	**+5.1**
AROD	**Rodeo**	**3.19**	**42**		*e*P	**Pn**	**22 42 54.7**	**+2.4**
RTLL	**Cerro Villicun**	**3.21**	**69**		*e*P	**Pn**	**22 42 53.9**	**+1.7**
RTLL					*e*S	**Sb**	**22 43 35.6**	**-2.4**
RTLL					IAML		22 43 40.6	
	comp=Z,330nm,0.3s							
AGUA	**GUANDACOL**	**4.27**	**45**		*e*P	**Pn**	**22 43 08.8**	**+1.9**
AGUA					*e*S	**Sb**	**22 44 08.5**	**-0.1**
AGUA					IAML		22 44 19.1	
	comp=Z,274nm,0.4s							
VCA	**Vinchina**	**5.00**	**41**		*e*P	**Pn**	**22 43 18.9**	**+1.9**
VCA					*e*S	**Sb**	**22 44 30.4**	**+0.8**
VCA					IAML		22 44 31.9	
	comp=Z,308nm,0.5s							
GO03	**Copiap**	**5.17**	**17**		*e*P	**Pn**	**22 43 19.0**	**-0.2**
GO03					*e*S	**Sb**	**22 44 34.1**	**-0.3**
MRA	**San Martin**	**5.28**	**90**		*e*P	**Pn**	**22 43 21.5**	**+0.7**
MRA					*e*S	**Sn**	**22 44 22.5**	**+1.0**
MRA					IAML		22 44 28.4	
	comp=Z,68nm,0.6s							
TCA	**Tanti**	**6.38**	**81**		*e*P	**Pn**	**22 43 36.2**	**+0.3**
TCA					*e*S	**Sn**	**22 44 48.8**	**+0.2**
TCA					IAML		22 44 54.8	
	comp=Z,71nm,0.8s							
CYA	**Choya**	**6.71**	**54**		*e*P	**Pn**	**22 43 43.0**	**+2.6**
CYA					*e*S	**Sn**	**22 44 59.7**	**+2.9**
CYA					IAML		22 45 05.8	
	comp=Z,34nm,0.7s							

*ISK **06** 22:42:12.2, 40°.04N×38°.78E, h5km, ML2.0/8*
*DDA **06** 22:42:12.9, 40°.00N×38°.78E, h13km, ML1.9*
*ATA **06** 22:42:12.6±0.7, 40°.00N×38°.82E, h10km±4km, ML1.5, MW3.5*

ISC 06 22:42:12.7±1.0, **40°.02N**±0°.02×**38°.77E**±0°.02, **h11**km±9km, **n34**, σ0**s59/47**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.40**	**70**	*e*P	**Pg**	**22 42 20.7**	**+0.1**
KELT				*e*S	**Sg**	**22 42 26.4**	**+0.5**
KELT				IAML		22 42 27.8	
	comp=Z,75nm,0.2s						
KELT	**Kelkit**	**0.40**	**70**	*i*P	**Pg**	**22 42 21.0**	**+0.4**
KELT				*i*S	**Sg**	**22 42 25.6**	**-0.3**
KELT				IAML		22 42 27.0	
	comp=N,75nm,0.4s						
KELT				IAML		22 42 28.0	
	comp=E,76nm,0.5s						
SUSE	**Susehri**	**0.47**	**294**	*i*P	**Pg**	**22 42 22.6**	**+0.5**
SUSE				*i*S	**Sb**	**22 42 30.2**	**-0.2**
SUSE				IAML		22 42 31.0	
	comp=N,206nm,0.2s						
SUSE				IAML		22 42 32.0	
	comp=E,68nm,0.3s						
REFA	**Refahiye_ERZN**	**0.62**	**180**	*e*P	Pg	22 42 16.3	-8.5
REFA				*e*S	Sg	22 42 18.2	-15
REFA				IAML		22 42 18.7	
	comp=Z,514nm,0.2s						
REFA	**Refahiye_ERZN**	**0.62**	**180**	*i*P	Pg	22 42 16.2	-8.6
REFA				IAML		22 42 18.0	
	comp=E,541nm,0.2s						
REFA				IAML		22 42 18.0	
	comp=N,566nm,0.1s						
REFA				*i*S	Sg	22 42 18.2	-15
EUZM	**Uzumlu**	**0.78**	**113**	*e*P	**Pg**	**22 42 27.4**	**-0.4**
EUZM				IAML		22 42 40.8	
	comp=Z,4.4nm,0.3s						
EUZM	**Uzumlu**	**0.78**	**113**	*i*P	**Pg**	**22 42 27.6**	**-0.2**
EUZM				*i*S	**Sb**	**22 42 39.6**	**+0.6**
KEMA	**Kemaliye**	**0.78**	**196**	*e*P	**Pg**	**22 42 27.5**	**-0.3**
KEMA				IAML		22 42 43.5	
	comp=Z,4.0nm,0.4s						
KEMA	**Kemaliye**	**0.78**	**196**	*i*P	**Pg**	**22 42 27.8**	**0.0**
KEMA				*i*S	**Sb**	**22 42 38.8**	**-0.1**
KEMA				IAML		22 42 43.0	
	comp=N,33nm,0.5s						
CUZAR	**Zara_SIVAS**	**0.78**	**261**	*i*P	**Pg**	**22 42 28.0**	**+0.2**
CUZAR				*i*S	**Sb**	**22 42 39.4**	**+0.4**
CUZAR				IAML		22 42 40.0	
	comp=N,27nm,0.4s						
ERZN	**Erzincan**	**0.85**	**120**	PG	**Pg**	**22 42 29.3**	**+0.1**
ERZN				SG	**Sb**	**22 42 41.6**	**+0.5**
ESPY	**Espiye-Giresun**	**0.90**	**358**	PG	**Pg**	**22 42 29.9**	**-0.2**
ESPY				SG	**Sg**	**22 42 42.1**	**+0.3**
ARPR	**Arapgir-MALATY**	**0.98**	**200**	PG	**Pb**	**22 42 32.0**	**+0.1**
ARPR				SG	**Sn**	**22 42 46.6**	**0.0**
TNCL	**Tunceli-Merkez**	**1.08**	**146**	*e*P	**Pg**	**22 42 33.1**	**-0.5**
TNCL				*e*S	**Sn**	**22 42 48.6**	**-0.3**
TNCL				IAML		22 42 50.0	
	comp=Z,16nm,0.3s						
TNCL	**Tunceli-Merkez**	**1.08**	**146**	*i*P	**Pg**	**22 42 33.2**	**-0.3**
TNCL				*i*S	**Sn**	**22 42 48.7**	**-0.3**
TNCL				IAML		22 42 50.0	
	comp=N,17nm,0.6s						
BAYT	**Aydıntepe-Bayb**	**1.11**	**70**	PN	**Pg**	**22 42 33.4**	**-0.8**
BAYB	**BAYBURT**	**1.17**	**78**	*i*P	**Pb**	**22 42 33.3**	**-1.7**
RSDY	**Resadiye-TOKAT**	**1.17**	**289**	PN	**Pb**	**22 42 34.6**	**-0.4**
ORDU	**Ordu-Boztepe**	**1.20**	**325**	*i*P	**Pb**	**22 42 35.1**	**-0.4**
MACK	**Trabzon**	**1.20**	**39**	*i*P	**Pb**	**22 42 35.6**	**+0.1**
MACK				*i*S	**Sb**	**22 42 50.8**	**-0.2**
MACK				IAML		22 42 53.0	
	comp=N,55nm,0.2s						
MACK				IAML		22 42 54.0	
	comp=E,55nm,0.2s						
PTK	**Pertek**	**1.22**	**157**	PN	**Pn**	**22 42 36.0**	**0.0**
CUKAN	**kangal_SIVAS**	**1.23**	**236**	*i*P	**Pn**	**22 42 34.5**	**-1.4**
SCER	**sogukcermik**	**1.27**	**263**	*i*P	**Pn**	**22 42 36.7**	**+0.1**
HEKM	**Malatya_Hekimh**	**1.30**	**209**	*i*P	**Pn**	**22 42 37.0**	**0.0**
HEKM				*i*S	**Sn**	**22 42 56.4**	**+1.9**
HEKM				IAML		22 42 59.0	
	comp=N,47nm,0.4s						
HEKM				IAML		22 42 59.0	
	comp=E,44nm,0.5s						
KOPT	**Kop Dagi**	**1.33**	**89**	*e*P	**Pn**	**22 42 37.3**	**-0.1**
KOPT				IAML		22 43 08.2	
	comp=Z,6.7nm,0.8s						
KOPT	**Kop Dagi**	**1.33**	**89**	*i*P	**Pg**	**22 42 38.3**	**0.0**
SVSK	**Karacayir**	**1.36**	**266**	PN	**Pg**	**22 42 38.7**	**-0.2**
YEDI	**Yedisu-Bingol**	**1.49**	**112**	PN	**Pb**	**22 42 40.4**	**0.0**
ELZG	**Elazig**	**1.53**	**174**	*i*P	**Pb**	**22 42 41.3**	**+0.1**
ELZG				*i*S	**Sg**	**22 43 02.1**	**+0.3**
ELZG				IAML		22 43 09.0	
	comp=E,16nm,0.5s						
KRIK	**Erzurum-spir**	**1.68**	**78**	*e*P	**Pb**	**22 42 44.0**	**+0.1**
KRIK	**Erzurum-spir**	**1.68**	**78**	*i*P	**Pb**	**22 42 43.2**	**-0.7**
KRIK				*i*S	**Sb**	**22 43 05.7**	**+0.5**
TOKT	**Tokat**	**1.73**	**281**	PN	**Pb**	**22 42 43.9**	**-0.7**
CHOM	**Cayeli-Rize**	**1.86**	**54**	PN	**Pn**	**22 42 45.4**	**+0.8**
CUSAR	**Sarkisla-SIVAS**	**2.04**	**254**	*i*P	**Pb**	**22 42 49.2**	**-0.7**

*SOME **06** 23:01:46.7, 39°.28N×72°.98E, h5km*
*KRNET **06** 23:01:54.2±0.1, 39°.54N×73°.16E, mb3.1*
*NNC **06** 23:01:54.5±1.9, 39°.52N×73°.24E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=16.3km s-min=10.2km az=158.0*

ISC 06 23:01:57.8±1.5, **39°.44N**±0°.07×**73°.01E**±0°.04, **h23**km±15km, **n36**, σ2**s86/57**, **19C-10D**, **Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**1.09**	**351**	⇓*i*P	**Pn**	**23 02 13.6**	**-4.2**
	baz=44						
OHH				⇓*i*S	**Sn**	**23 02 27.8**	**-4.4**
	baz=44						
BTK	**Batken**	**1.80**	**291**	⇑*i*P	**Pn**	**23 02 28.6**	**+1.1**
	baz=87						
BTK				⇑*i*S	**Sb**	**23 02 54.4**	**+2.1**
	baz=87						
GAR	**Garm**	**2.14**	**259**	⇓*i*P	**Pb**	**23 02 34.4**	**-1.6**
	baz=57						
GAR				⇓*i*S	**Sb**	**23 03 03.5**	**+1.4**
	baz=57						
ARLS	**Aral**	**2.61**	**22**	⇓*i*P	**Pn**	**23 02 37.5**	**-1.2**
	baz=21						
ARLS				⇓*i*S	**Sn**	**23 03 09.3**	**-0.5**
	baz=21						
AML	**Almayashu**	**2.73**	**11**	⇓*e*P	**Pn**	**23 02 39.6**	**-1.0**
	baz=9.0						
AML				⇓*i*S	**Sn**	**23 03 12.0**	**-1.2**
	baz=9.0						
MNAS	**Manas**	**3.07**	**353**	⇑*i*P	**Pn**	**23 02 44.5**	**-0.4**
	baz=51						
MNAS				⇑*i*S	**Sn**	**23 03 21.1**	**+0.1**
	baz=51						
CHGR	**Chuyangaron**	**3.10**	**257**	⇑*i*P	**Pn**	**23 02 47.7**	**+2.3**
	baz=56						
CHGR				⇑*i*S	**Sb**	**23 03 26.9**	**-2.9**
	baz=56						
EKS2	**Erkin-Say**	**3.27**	**10**	⇓*e*P	**Pn**	**23 02 46.8**	**-0.9**
	baz=8.0						
EKS2				⇓*i*S	**Sn**	**23 03 24.5**	**-1.4**
	baz=8.0						
MRKS	**Merke**	**3.30**	**3**	*e*P	**Pn**	**23 02 50.7**	**+2.6**
	3.2nm,0.2s						
MRKS				*e*S	**Sb**	**23 03 36.5**	**+1.0**
	17nm,0.3s						
MRKS	**Merke**	**3.30**	**3**	Pg	**Pn**	**23 02 50.7**	**+2.6**
	2.6nm,0.2s						
MRKS				Lg	Lg	23 03 36.1	
	11nm,0.4s						
TAS	**Tashkent**	**3.41**	**305**	⇑*e*P	**Pn**	**23 02 50.1**	**+0.6**
	baz=3.0						
TAS				⇑*e*S	**Sn**	**23 03 32.7**	**+3.5**
	baz=3.0						
IUG	**luzhnay**	**3.52**	**321**	*e*P	**Pn**	**23 02 53.8**	**+2.6**
	5.4nm,0.2s						
IUG				*e*S	**Sb**	**23 03 41.9**	**0.0**
	18nm,0.6s						
IUG	**luzhnay**	**3.52**	**321**	Pg	**Pn**	**23 02 52.0**	**+0.8**
	4.8nm,0.3s						
IUG				Lg	Lg	23 03 38.5	
	18nm,0.6s						
KBK	**Karagaybulak**	**3.53**	**24**	⇑*i*P	**Pn**	**23 02 50.5**	**-0.8**
	baz=23						
KBK				⇑*i*S	**Sn**	**23 03 31.0**	**-1.4**
	baz=23						
FRU1	**Bishkek**	**3.58**	**19**	⇑*i*P	**Pn**	**23 02 50.6**	**-1.3**
	baz=18						
FRU1				⇑*i*S	**Sn**	**23 03 32.0**	**-1.5**
	baz=18						
TKM2	**Tokmak 2**	**3.98**	**28**	⇑*i*P	**Pn**	**23 02 56.9**	**-0.7**
	baz=28						
TKM2				⇑*e*S	**Sn**	**23 03 41.9**	**-1.8**
	baz=28						
TKM2	**Tokmak 2**	**3.98**	**28**	⇑Pn	**Pn**	**23 02 56.5**	**-1.1**
	1.1nm,0.5s						
TKM2				⇑Lg	Lg	23 03 57.3	
	6.2nm,0.8s						
KK31	**Karatay Array**	**4.12**	**334**	⇑Pn	**Pn**	**23 02 59.9**	**+0.7**
	0.9nm,0.3s,baz=143,slow=16,SNR=6.4						
KK31				⇑Sn	**Sn**	**23 03 49.4**	**+2.8**
	4.3nm,0.4s,baz=147,slow=23,SNR=5.3						
SGDS	**Sogindy**	**4.19**	**16**	Pg	**Pb**	**23 03 08.0**	**-2.7**
	1.7nm,0.5s						
SGDS				Lg	Lg	23 04 05.8	
	3.1nm,0.5s						
KST	**Kastek**	**4.23**	**31**	*e*P	**Pb**	**23 03 08.1**	**-3.5**
	2.3nm,0.2s						
KST				*e*S	**Sb**	**23 04 05.5**	**+3.3**
	8.8nm,0.9s						
KST	**Kastek**	**4.23**	**31**	Pg	**Pb**	**23 03 08.1**	**-3.5**
	2.3nm,0.2s						
KST				Lg	Lg	23 04 05.5	
	8.8nm,0.9s						
TNSS	**Tian-Shan**	**4.66**	**38**	*e*P	**Pb**	**23 03 15.3**	**-3.7**
	1.5nm,0.5s						
TNSS				*e*S	**Sb**	**23 04 18.3**	**+3.6**
	2.7nm,0.5s						
TNSS	**Tian-Shan**	**4.66**	**38**	Pg	**Pb**	**23 03 15.3**	**-3.7**
	1.5nm,0.5s						
TNSS				Lg	Lg	23 04 18.3	
	2.7nm,0.5s						
MDOK	**Medeo**	**4.80**	**38**	*e*P	**Pb**	**23 03 18.6**	**-2.7**
	3.5nm,0.6s						
MDOK				*e*S	**Sb**	**23 04 23.9**	**+5.3**
	6.9nm,0.9s						
MDOK	**Medeo**	**4.80**	**38**	Pg	**Pb**	**23 03 18.6**	**-2.7**
	3.5nm,0.6s						
MDOK				Lg	Lg	23 04 23.9	
	6.9nm,0.9s						
KOTS	**Kotyrbulak**	**4.88**	**38**	*e*P	**Pb**	**23 03 19.8**	**-2.9**
	5.4nm,0.6s						
KOTS				*e*S	**Sb**	**23 04 25.9**	**+4.8**
	38nm,0.5s						
KOTS	**Kotyrbulak**	**4.88**	**38**	Pg	**Pb**	**23 03 19.8**	**-2.9**
	5.4nm,0.6s						
KOTS				Lg	Lg	23 04 25.9	
	38nm,0.5s						
KTBS	**Karatobe**	**5.08**	**32**	*e*P	**Pb**	**23 03 23.2**	**-2.7**
	1.7nm,0.6s						
KTBS				*e*S	**Sb**	**23 04 31.4**	**+5.0**
	15nm,0.8s						
KTBS	**Karatobe**	**5.08**	**32**	Pg	**Pb**	**23 03 23.2**	**-2.7**
	1.7nm,0.6s						
KTBS				Lg	Lg	23 04 31.4	
	15nm,0.8s						
KUU	**Kurty**	**5.10**	**28**	*e*P	**Pb**	**23 03 23.6**	**-2.6**
	0.5nm,0.1s						
KUU				*e*S	**Sb**	**23 04 31.9**	**+4.9**
	6.9nm,0.5s						
KUU	**Kurty**	**5.10**	**28**	Pg	**Pb**	**23 03 23.5**	**-2.7**
	0.5nm,0.1s						
KUU				Lg	Lg	23 04 31.7	
	6.9nm,0.5s						
ARXS	**Arharly**	**5.97**	**35**	*e*P	**Pb**	**23 03 40.0**	**-1.2**
	2.9nm,0.3s						
ARXS				*e*S	**Sb**	**23 05 00.1**	**+8.0**
	3.8nm,0.4s						
ARXS	**Arharly**	**5.97**	**35**	Pg	**Pb**	**23 03 40.0**	**-1.2**
	2.9nm,0.3s						
ARXS				Lg	Lg	23 05 00.1	
	3.8nm,0.4s						
MNBS	**Baschi**	**6.14**	**39**	*e*P	**Pb**	**23 03 43.8**	**-0.2**
	1.1nm,0.5s						
MNBS				*e*S	Sb	23 05 06.6	+10
	4.8nm,1.2s						
MNBS	**Baschi**	**6.14**	**39**	Pg	**Pb**	**23 03 42.3**	**-1.7**
	1.0nm,0.6s						
MNBS				Lg	Lg	23 05 04.5	
	4.8nm,1.2s						
PDGK	**Podgornoye**	**6.23**	**49**	⇑Lg	Lg	23 05 06.4	
	6.0nm,1.1s						

WEL 06 23:11:15.3, 38°S±3°×**17°6E**±°, **h292**km±6km, **M3.3**/61, **ML3.0/5, ML**v**3.3/61, Error ellipse: s-maj=0.0km s-min=0.0km az=22.3, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	**0.34**	**62**	P	Pn	23 11 52.0	-0.6
TOZ	**Tahuroa Road**	**0.34**	**297**	P	Pn	23 11 52.7	+0.1
OMRZ	**Omania**	**0.44**	**120**	P	Pn	23 11 52.7	-0.1
GRRZ	**Galatos Road**	**0.49**	**159**	P	Pn	23 11 53.1	+0.2
OPRZ	**Ohinepanea**	**0.53**	**85**	P	Pn	23 11 52.6	-0.4
TARZ	**Mount Tarawera**	**0.60**	**125**	P	Pn	23 11 54.2	+0.8
TARZ				S	S	23 12 19.8	-3.7
RRRZ	**Republican Roa**	**0.67**	**132**	P	Pn	23 11 53.6	+0.2
PRRZ	**Plateau Road**	**0.73**	**147**	P	Pn	23 11 53.7	+0.1
PRRZ				S	S	23 12 21.7	-2.3
WATZ	**Wairara**	**0.83**	**188**	P	Pn	23 11 54.6	+0.6
MUGZ	**Murupara**	**0.91**	**130**	P	Pn	23 11 54.0	-0.3
MUGZ				S	S	23 12 23.2	-2.2
MKAZ	**Moumakai**	**0.97**	**323**	P	Pn	23 11 54.8	+0.1
HIZ	**Hauiti**	**1.02**	**232**	P	Pn	23 12 54.9	0.0
MRHZ	**Matea Rd**	**1.03**	**156**	P	Pn	23 11 54.6	-0.3
MRHZ				S	S	23 12 23.8	-2.7
URZ	**Urewera**	**1.04**	**111**	P	Pn	23 11 54.1	-0.8
URZ				S	S	23 12 23.3	-3.0
RITZ	**Rihia Road**	**1.09**	**181**	P	Pn	23 11 55.6	+0.5
RTZ	**Ruatahuna**	**1.13**	**130**	P	Pn	23 11 55.3	-0.2
RTZ				S	S	23 12 25.7	-1.7
KUZ	**Kuaotunu**	**1.15**	**353**	P	Pn	23 11 55.3	-0.3
ETAZ	**East Tamaki Re**	**1.21**	**320**	P	Pn	23 11 56.0	+0.1
KRVZ	**Karewarewa**	**1.22**	**189**	P	Pn	23 11 56.0	0.0
MTHZ	**Maungataniwha**	**1.22**	**142**	P	Pn	23 11 55.9	0.0
MTHZ				S	S	23 12 26.3	-1.9
TMVZ	**Te Maari**	**1.23**	**187**	P	Pn	23 11 56.0	-0.1
WIAZ	**Waiheke Island**	**1.25**	**331**	P	Pn	23 11 56.2	+0.1
WTVZ	**West Tongariro**	**1.25**	**191**	P	Pn	23 11 56.0	-0.2
ETVZ	**East Tongariro**	**1.25**	**186**	P	Pn	23 11 56.1	-0.1
OTVZ	**Oturere**	**1.28**	**188**	P	Pn	23 11 56.3	-0.1
AWAZ	**Awhitu Peninsu**	**1.29**	**309**	P	Pn	23 11 56.5	+0.2
NGZ	**Ngauruhoe**	**1.30**	**190**	P	Pn	23 11 56.4	-0.1
RAGZ	**Rawiri**	**1.35**	**117**	P	Pn	23 11 56.8	+0.1
BKZ	**Black Stump Fm**	**1.36**	**160**	P	Pn	23 11 56.6	-0.2
MBAZ	**Motutapu North**	**1.37**	**325**	P	Pn	23 11 56.9	+0.1
MWZ	**Matawai**	**1.37**	**109**	P	Pn	23 11 56.6	-0.2
FWVZ	**Far West T-bar**	**1.39**	**191**	P	Pn	23 11 56.8	-0.3
TUVZ	**Tukino**	**1.39**	**187**	P	Pn	23 11 56.9	-0.1
RAHZ	**Arahi**	**1.39**	**138**	P	Pn	23 11 57.4	+0.4
NMHZ	**Naumai**	**1.41**	**149**	P	Pn	23 11 57.9	+0.8
DRZ	**Dome Shelter**	**1.41**	**190**	P	Pn	23 11 57.7	+0.3
WHVZ	**Whangaehu Hut**	**1.41**	**189**	P	Pn	23 11 57.1	-0.2
WTAZ	**Waiatarua**	**1.42**	**312**	P	Pn	23 11 57.6	+0.4
RUGZ	**Raukumara Rang**	**1.42**	**94**	P	Pn	23 11 55.9	-1.3
SNGZ	**Shannon Statio**	**1.45**	**128**	P	Pn	23 11 57.6	+0.3
WNVZ	**Wahianoa**	**1.45**	**189**	P	Pn	23 11 57.2	-0.2
PKVZ	**Pokaka**	**1.46**	**197**	P	Pn	23 11 57.1	-0.3
HAZ	**Te Kaha**	**1.51**	**86**	P	Pn	23 11 56.4	-1.2
VRZ	**Vera Road**	**1.52**	**215**	P	Pn	23 11 57.8	+0.2
MOVZ	**Moawhango**	**1.52**	**184**	P	Pn	23 11 57.3	-0.5
MTVZ	**Mangateitei**	**1.53**	**192**	P	Pn	23 11 57.6	-0.3
ABAZ	**Army Bay**	**1.54**	**327**	P	Pn	23 11 58.1	+0.1
KWHZ	**Kaweka Forest**	**1.59**	**165**	P	Pn	23 11 58.6	+0.3
WHHZ	**Waihua**	**1.59**	**139**	P	Pn	23 11 58.6	+0.4
BHHZ	**Black Hill Sta**	**1.60**	**175**	P	Pn	23 11 58.0	-0.4
ARHZ	**Aropaoanui**	**1.62**	**148**	P	Pn	23 11 58.9	+0.5
TKGZ	**Te Karaka**	**1.64**	**110**	P	Pn	23 11 58.9	+0.3
GRZ	**Great Barrier**	**1.67**	**348**	P	Pn	23 11 58.8	-0.1
MCHZ	**McNeill Hill**	**1.68**	**158**	P	Pn	23 11 59.3	+0.5
TWGZ	**Tauwhareparae**	**1.68**	**101**	P	Pn	23 11 59.1	+0.2
RIGZ	**Rimuhau**	**1.69**	**120**	P	Pn	23 11 59.3	+0.3
PKGZ	**Pakihiroa**	**1.73**	**91**	P	Pn	23 11 59.1	-0.2
KRHZ	**Kereru**	**1.79**	**168**	P	Pn	23 11 59.4	-0.3
KNZ	**Kokohu**	**1.80**	**129**	P	Pn	23 11 59.8	+0.1
PRGZ	**Paritu Road**	**1.88**	**124**	P	Pn	23 12 00.6	+0.3
PUZ	**Puketiti**	**1.88**	**96**	P	Pn	23 12 00.3	-0.1
CNGZ	**Carnagh Statio**	**1.92**	**109**	P	Pn	23 12 01.1	+0.5
MXZ	**Matakaoa Point**	**1.95**	**81**	P	Pn	23 12 00.5	-0.4
LREZ	**Lake Rotokare**	**1.95**	**216**	P	Pn	23 12 01.4	+0.5
NEZ	**North Egmont**	**1.97**	**225**	P	Pn	23 12 01.5	+0.4
PKE	**Pukeiti**	**1.98**	**228**	P	Pn	23 12 01.7	+0.6
WAZ	**Wanganui**	**1.99**	**200**	P	Pn	23 12 00.8	-0.4
WMGZ	**Waiomatatini S**	**2.00**	**89**	P	Pn	23 12 01.4	+0.1
MHGZ	**Mahia Peninsul**	**2.03**	**129**	P	Pn	23 12 01.8	+0.3
KHEZ	**Kahui Hut**	**2.03**	**226**	P	Pn	23 12 02.0	+0.4
PNHZ	**Pukenui**	**2.04**	**173**	P	Pn	23 12 01.1	-0.5
KAHZ	**Kahuranaki**	**2.05**	**158**	P	Pn	23 12 02.0	+0.3
NBEZ	**Newall Road No**	**2.10**	**228**	P	Pn	23 12 02.7	+0.6
TSZ	**Takapari Road**	**2.17**	**178**	P	Pn	23 12 02.1	-0.6
WPHZ	**Waipukurau**	**2.21**	**169**	P	Pn	23 12 02.7	-0.4
PXZ	**Pawanui**	**2.27**	**161**	P	Pn	23 12 03.4	-0.1
WCZ	**Waipu Caves**	**2.30**	**327**	P	Pn	23 12 03.9	0.0
OHWZ	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.40**	**259**		**Pg**	**23 20 54.0**	**-0.4**
MOD					**Sg**	**23 21 01.1**	**+1.4**
K05A	**Summer Lake**	**1.11**	**312**	Pg	**Pn**	**23 21 07.7**	**-0.7**
M04C	**Macdoel** baz=84,SNR=39	**1.55**	**263**	P	**Pn**	**23 21 13.3**	**-1.1**
M04C				Sb	**Sg**	**23 21 36.9**	**+0.5**
K04D	**Chiloquin, OR** baz=113,SNR=23	**1.60**	**294**	Pb	**Pb**	**23 21 15.7**	**-0.6**
K04D				Sb	**Sg**	**23 21 39.5**	**+1.6**
J08A	**Circle Bar Ran**	**1.68**	**35**		**Pn**	**23 21 15.5**	**-0.6**
J05D	**Fort Rock, OR** baz=138,SNR=29	**1.69**	**321**	Pb	**Pb**	**23 21 17.6**	**-0.2**
J05D				Sb	**Sg**	**23 21 42.5**	**+1.7**
HATC	**Hat Creek Radi**	**1.72**	**228**		**Pn**	**23 21 15.7**	**-0.9**
LHEM	**Herd Peak**	**1.86**	**260**		**Pn**	**23 21 18.9**	**+0.3**
L04D	**Klamath Falls** baz=97,SNR=8.6	**1.90**	**278**	P	**Pn**	**23 21 18.1**	**-1.0**
L04D				Sb	**Sg**	**23 21 47.7**	**+0.3**
LGBM	**Gray Butte**	**1.92**	**251**		**Pn**	**23 21 20.2**	**+0.7**
PINE	**Pine Mountain**	**2.00**	**335**		**Pn**	**23 21 21.1**	**+0.5**
WVA	**Winnemucca Val**	**2.04**	**181**		**Pn**	**23 21 20.6**	**-0.4**
I07A	**Izee**	**2.11**	**5**	Pg	**Pb**	**23 21 25.5**	**+0.6**
BEKR	**Beckworth**	**2.16**	**192**		**Pn**	**23 21 22.0**	**-0.7**
YBH	**Yreka Blue Hor**	**2.20**	**264**		**Pn**	**23 21 21.9**	**-1.4**
YBH	**Yreka Blue Hor**	**2.20**	**264**		**Pn**	**23 21 22.7**	**-0.6**
O03E	**Paynes Creek** baz=44	**2.28**	**223**	P	**Pn**	**23 21 22.4**	**-1.8**
O03E				Sb	**Sb**	**23 21 55.5**	**-0.5**
PAHR	**Pah Rah Range**	**2.29**	**172**		**Pn**	**23 21 24.6**	**0.0**
LOY	**Loyalton**	**2.35**	**189**		**Pn**	**23 21 26.1**	**+0.8**
PEAR	**Peavine Mounta**	**2.38**	**183**		**Pn**	**23 21 26.7**	**+0.9**
M02C	**Callahan** baz=76	**2.38**	**257**	P	**Pn**	**23 21 23.9**	**-1.7**
M02C				Sb	**Sg**	**23 22 01.5**	**-1.3**
N02D	**Trinity Center** baz=66,SNR=15	**2.42**	**246**	Pb	**Pn**	**23 21 27.9**	**+1.6**
N02D				Sb	**Sb**	**23 22 02.1**	**+2.0**
HUMO	**Hull Mountain**	**2.44**	**286**		**Pn**	**23 21 26.4**	**0.0**
KBF	**Kyburz Flat**	**2.50**	**188**		**Pn**	**23 21 29.2**	**+1.8**
WDC	**Whiskeytown Da**	**2.51**	**237**		**Pn**	**23 21 26.6**	**-0.8**
VPK	**Verdi Peak**	**2.51**	**185**		**Pn**	**23 21 30.2**	**+2.5**
IND	**Independence**	**2.58**	**189**		**Pn**	**23 21 31.2**	**+2.7**
VCNR	**Virginia City**	**2.69**	**178**		**Pn**	**23 21 28.8**	**-1.2**
ORV	**Oroville**	**2.75**	**209**		**Pn**	**23 21 29.7**	**-1.1**
L02E	**Cave Junction** baz=93,SNR=8.7	**2.85**	**275**	P	**Pn**	**23 21 32.1**	**-0.1**
PNTR	**Pine Nut**	**2.89**	**177**	Pg	**Pn**	**23 21 35.5**	**+2.6**
RUBR	**Rubicon Trail**	**2.94**	**186**	Pn	**Pn**	**23 21 31.1**	**-2.5**
K02D	**Willamette Mer** baz=103,SNR=32	**2.97**	**285**	P	**Pn**	**23 21 33.8**	**0.0**
AFDM	**Forest Hills D**	**3.17**	**197**		**Pb**	**23 21 41.9**	**-1.0**
KHMM	**Horse Mountain**	**3.17**	**251**	Pg	**Pg**	**23 21 46.1**	**-1.1**
KVN	**Kaiserville**	**3.19**	**156**		**Pn**	**23 21 34.8**	**-2.3**
MFID	**Camas Ranch**	**3.25**	**62**		**Pn**	**23 21 35.5**	**-2.1**
BMO	**Blue Mountains**	**3.39**	**31**	Pg	**Pg**	**23 21 49.9**	**-1.5**
KMRM	**Mail Ridge**	**3.45**	**241**	Pg	**Pb**	**23 21 49.7**	**+1.9**
WAKR	**Walker**	**3.48**	**176**		**Pb**	**23 21 46.2**	**-2.3**
RYN	**Ryan**	**3.48**	**164**		**Pb**	**23 21 48.1**	**-0.3**
ELK	**Elko**	**3.63**	**108**		**Pn**	**23 21 43.0**	**-0.1**
NVAR	**Mina Array Bea**	**3.72**	**162**	Pg	**Pb**	**23 21 53.8**	**+1.2**
LHV	**Little Huntoon**	**3.85**	**165**		**Pn**	**23 21 45.6**	**-0.3**
CMB	**Columbia Colle**	**3.97**	**187**		**Pb**	**23 21 55.8**	**-0.8**
HCK	**Huntoon Valley**	**4.01**	**166**		**Pn**	**23 21 49.9**	**+1.9**
HLID	**Hailey** baz=249	**4.25**	**66**	Pb	Pb	23 21 57.1	-4.4
HLID	**Hailey**	**4.25**	**66**		**Pn**	**23 21 52.6**	**+1.0**
TPH	**Tonopah**	**4.37**	**152**		**Pb**	**23 22 06.7**	**+3.2**
OMMB	**Old Mammoth Mi**	**4.41**	**172**		**Pg**	**23 22 09.6**	**-1.3**

NEIC ***06*** *23:30:47.4±2.2,63.28N±0.02×151.21W±0.03,h10km±7km, Error ellipse: s-maj=2.7km s-min=1.5km az=211.0*
AEIC ***06*** *23:30:47±2.1,63.29N±0.03×151.23W±0.08,h13km±6km, ML3.6,Error ellipse: s-maj=5.3km s-min=4.9km az=73.0*
ANF ***06*** *23:30:48.0±0.6,63.24N×151.08W,h21km±5km,ML4.1/15, Error ellipse: s-maj=5.1km s-min=2.2km az=98.0*

ISC 06 23:30:46.8±1.1,63.28N±0.02×151.22W±0.02,h4km±10km, n121,σ0§87/141,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.31**	**26**		**Pg**	**23 30 53.7**	**+0.9**
KTH					**Sg**	**23 30 57.6**	**+0.8**
CAST	**Castle Rocks**	**0.41**	**290**		**Pg**	**23 30 55.2**	**+0.5**
TRF	**Thorofare Moun**	**0.45**	**68**		**Pg**	**23 30 56.1**	**+0.5**
TRF					**Sg**	**23 31 02.8**	**+1.3**
PPLA	**Purkeypile**	**0.58**	**229**		**Pg**	**23 30 58.0**	**0.0**
PPLA					**Sg**	**23 31 05.9**	**+0.3**
CHUM	**Lake Minchumin**	**0.78**	**322**		**Pb**	**23 31 02.5**	**-0.5**
CHUM					**Sb**	**23 31 12.7**	**-1.1**
HUR	**Hurricane**	**0.78**	**112**		**Pg**	**23 31 01.6**	**-0.2**
BPAW	**Bear Paw Mtn.**	**0.83**	**7**		**Pg**	**23 31 03.0**	**+0.3**
BPAW					**Sg**	**23 31 13.8**	**+0.4**
CUT	**Chulitna** baz=334,SNR=225	**0.98**	**153**	P	**Pg**	**23 31 05.6**	**0.0**
CUT				S	**Sg**	**23 31 17.8**	**-0.5**
CUT	**Chulitna**	**0.98**	**153**		**Pg**	**23 31 05.6**	**0.0**
RND	**Reindeer**	**1.08**	**82**		**Pg**	**23 31 06.8**	**-0.6**
RND	**Reindeer**	**1.08**	**82**		**Sg**	**23 31 21.1**	**-0.3**
MCK	**McKinley** baz=248,SNR=162	**1.12**	**65**	P	**Pg**	**23 31 07.6**	**-0.6**
MCK				S	**Sg**	**23 31 22.8**	**0.0**
MCK	**McKinley**	**1.12**	**65**		**Pg**	**23 31 07.7**	**-0.6**
WAT7	**Susitna Watana**	**1.17**	**111**		**Pg**	**23 31 08.6**	**-0.7**
WAT7					**Sg**	**23 31 23.5**	**-0.9**
BWN	**Browne**	**1.19**	**40**		**Pb**	**23 31 10.1**	**+0.1**
WAT2	**Susitna Watana**	**1.24**	**104**		**Pg**	**23 31 09.8**	**-0.7**
WAT1	**Susitna Watana**	**1.30**	**109**		**Pg**	**23 31 11.0**	**-0.7**
SKT	**Skwentna**	**1.31**	**186**		**Pg**	**23 31 10.9**	**-1.0**
SKT					**Sg**	**23 31 27.8**	**-1.2**
NEA2	**Nenana** baz=217,SNR=140	**1.62**	**35**	P	**Pn**	**23 31 14.7**	**-1.5**
NEA2				Sb	**Sg**	**23 31 38.5**	**-0.5**
NEA2	**Nenana**	**1.62**	**35**		**Pn**	**23 31 14.7**	**-1.5**
DHY	**Denali Highway**	**1.76**	**95**		**Pn**	**23 31 17.8**	**-0.4**
MLY	**Manley** baz=187	**1.77**	**7**	P	**Pn**	**23 31 17.6**	**-0.7**
MLY				Sb	**Sg**	**23 31 43.0**	**-0.6**
MLY	**Manley**	**1.77**	**7**		**Pn**	**23 31 17.7**	**-0.7**
STLK	**Strandline Lak**	**1.81**	**189**		**Pn**	**23 31 18.6**	**-0.3**
WRH	**Wood River Hil**	**1.83**	**48**		**Pn**	**23 31 17.8**	**-1.3**
SUA	**Susitna One**	**1.84**	**173**		**Pn**	**23 31 19.0**	**-0.2**
GHO	**Glory Hole Cre**	**1.85**	**144**		**Pn**	**23 31 18.9**	**-0.5**
PMR	**Palmer**	**1.95**	**149**		**Pn**	**23 31 20.6**	**-0.1**
SML	**Sawmill**	**2.00**	**137**		**Pn**	**23 31 20.1**	**-1.3**
SPCG	**Spurr Capps Gl**	**2.03**	**191**		**Pn**	**23 31 21.7**	**-0.2**
CCB	**Clear Creek Bu**	**2.04**	**46**		**Pn**	**23 31 20.6**	**-1.3**
SPNN	**North Nagishla**	**2.04**	**200**		**Pn**	**23 31 22.4**	**+0.3**
I23K	**Minto, Yukon-K** baz=205,SNR=76	**2.04**	**23**	P	**Pn**	**23 31 21.2**	**-0.8**
I23K				Sb	**Sb**	**23 31 50.9**	**+0.6**
I23K	**Minto, Yukon-K**	**2.04**	**23**		**Pn**	**23 31 21.2**	**-0.8**
SPCP	**Crater Peak Br**	**2.07**	**193**		**Pn**	**23 31 22.5**	**0.0**
MDM	**Murphy Dome**	**2.14**	**37**		**Pn**	**23 31 22.1**	**-1.2**
TCOL	**CIGO, UAF Yank** baz=225,SNR=23	**2.18**	**41**	P	**Pn**	**23 31 22.7**	**-1.1**
TCOL				Sb	**Sb**	**23 31 54.5**	**+0.4**
TCOL	**CIGO, UAF Yank**	**2.18**	**41**		**Pn**	**23 31 22.7**	**-1.1**
COLA	**College**	**2.18**	**41**		**Pn**	**23 31 22.7**	**-1.2**
COLA	**College**	**2.18**	**41**		**Pn**	**23 31 22.9**	**-1.0**
TTA	**Tatalina**	**2.21**	**263**		**Pn**	**23 31 24.4**	**0.0**
HDA	**Harding Lake** baz=241,SNR=44	**2.21**	**57**	P	**Pn**	**23 31 23.0**	**-1.2**
HDA				Sb	**Sb**	**23 31 55.3**	**+0.3**
HDA				Sb	**Sb**	**23 31 55.3**	**+0.3**
HDA	**Harding Lake** baz=241	**2.21**	**57**		**Pn**	**23 31 23.2**	**-1.1**
TT01	**Tatalina**	**2.21**	**262**		**Pn**	**23 31 23.1**	**-1.2**
KNK	**Knik Glacier**	**2.27**	**144**		**Pn**	**23 31 25.6**	**+0.4**
RC01	**Rabbit Creek A** baz=343	**2.31**	**162**	Sb	**Sn**	**23 31 56.3**	**+1.9**
RC01	**Rabbit Creek A**	**2.31**	**162**		**Pn**	**23 31 26.3**	**+0.7**
SCM	**Sheep Creek Mo**	**2.32**	**127**		**Pn**	**23 31 25.4**	**-0.4**
PS08	**TAPS Pump Stn8**	**2.32**	**55**		**Pn**	**23 31 24.5**	**-1.3**
IL31		**2.43**	**50**		**Pn**	**23 31 26.0**	**-1.2**
ILAR	**Eielson Array**	**2.43**	**50**		**Pn**	**23 31 25.3**	**-1.9**
POKR	**Poker Plat Res** baz=224,SNR=14	**2.48**	**40**	P	**Pn**	**23 31 26.9**	**-1.0**
POKR				Sb	**Sb**	**23 32 03.5**	**+0.7**
POKR	**Poker Plat Res**	**2.48**	**40**		**Pn**	**23 31 27.0**	**-1.0**
M24K	**Tolsona, Glenn** baz=299,SNR=30	**2.61**	**115**	P	**Pn**	**23 31 30.1**	**+0.3**
M24K				Sb	**Sb**	**23 32 07.1**	**+0.6**
M24K	**Tolsona, Glenn**	**2.61**	**115**		**Pn**	**23 31 30.1**	**+0.3**
PAX	**Paxson**	**2.63**	**94**		**Pn**	**23 31 31.2**	**+1.0**
PS06	**TAPS Pump Stn6**	**2.66**	**13**		**Pn**	**23 31 30.4**	**-0.2**
PWL	**Port Wells**	**2.78**	**149**		**Pn**	**23 31 32.8**	**+0.6**
DFR	**Drift River**	**2.79**	**195**		**Pn**	**23 31 32.8**	**+0.6**
RDJH	**Redoubt Jeurge**	**2.80**	**196**		**Pn**	**23 31 31.7**	**-0.8**
SLKM	**Skilak Lake**	**2.82**	**170**		**Pn**	**23 31 33.5**	**+0.7**
NCT	**North Crescent**	**2.84**	**197**		**Pn**	**23 31 33.7**	**+0.5**
O22K	**Cooper Landing** baz=346	**2.90**	**165**	Sb	**Sb**	**23 32 14.3**	**-0.4**
O22K	**Cooper Landing**	**2.90**	**165**		**Pn**	**23 31 34.0**	**+0.2**
RDWB	**Redoubt West**	**2.91**	**196**		**Pn**	**23 31 34.7**	**+0.7**
PS11	**TAPS Pump St11**	**2.91**	**112**		**Pn**	**23 31 34.5**	**+0.6**
RSO	**Redoubt South**	**2.92**	**195**		**Pn**	**23 31 35.1**	**+0.9**
IM03		**2.92**	**339**		**Pn**	**23 31 34.0**	**-0.1**
IMAR	**Indian Mountai**	**2.92**	**339**		**Pn**	**23 31 33.7**	**-0.4**
SVW2	**Sparrevohn**	**3.00**	**225**		**Pn**	**23 31 34.4**	**-0.7**
KLU	**Klutina**	**3.05**	**124**		**Pn**	**23 31 36.8**	**+0.9**
GLI	**Glacier Island**	**3.09**	**139**		**Pn**	**23 31 37.8**	**+1.3**
DOT	**Dot Lake**	**3.21**	**80**	Pn	**Pn**	**23 31 40.2**	**+1.8**
SEW	**Seward**	**3.30**	**164**		**Pn**	**23 31 40.0**	**+0.8**
SCRK	**Sand Creek** baz=261	**3.31**	**75**	Sb	**Sb**	**23 32 27.9**	**+1.3**
PRP	**Porcupine Dome**	**3.34**	**45**		**Pn**	**23 31 39.2**	**-0.7**
DIV	**Divide**	**3.34**	**128**		**Pn**	**23 31 40.3**	**+0.4**
FID	**Port Fidalgo**	**3.38**	**137**		**Pn**	**23 31 40.8**	**+0.4**
IVE	**Iliamna Volcan**	**3.38**	**195**		**Pn**	**23 31 41.5**	**+1.0**
N25K	**Chitina, Valde** baz=302,SNR=20	**3.51**	**116**	P	**Pn**	**23 31 43.5**	**+1.3**
N25K	**Chitina, Valde**	**3.51**	**116**		**Pn**	**23 31 43.5**	**+1.3**
BRLK	**Bradley Lake**	**3.53**	**177**		**Pn**	**23 31 43.9**	**+1.4**
PS05	**TAPS Pump Stn5**	**3.55**	**4**		**Pn**	**23 31 43.4**	**+0.6**
BRSE	**Bradley Lake S**	**3.56**	**176**		**Pn**	**23 31 44.1**	**+1.3**
L26K	**Log Cabin Wild** baz=278,SNR=20	**3.58**	**91**	P	**Pn**	**23 31 44.7**	**+1.5**
L26K	**Log Cabin Wild**	**3.58**	**91**		**Pn**	**23 31 42.2**	**-1.0**
HIN	**Hinchinbrook I**	**3.66**	**140**	Pn	**Pn**	**23 31 43.4**	**-0.8**
HIN					**Pg**	**23 31 56.1**	**-0.7**
CNPM	**China Poot**	**3.77**	**180**		**Pn**	**23 31 46.0**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.77**	**134**	Pn	**Pn**	**23 31 45.7**	**0.0**
GLB	**Gilahina Butte**	**3.92**	**115**		**Pn**	**23 31 48.6**	**+0.8**
COLD	**Coldfoot** baz=187,SNR=28	**3.99**	**6**	P	**Pn**	**23 31 49.0**	**+0.3**
COLD				S	**Sn**	**23 32 35.1**	**-0.7**
COLD	**Coldfoot**	**3.99**	**6**	Pn	**Pn**	**23 31 48.3**	**-0.4**
FYU	**Fort Yukon**	**4.17**	**35**		**Pn**	**23 31 51.4**	**+0.2**
VRDI	**Verde Repeater**	**4.18**	**116**		**Pn**	**23 31 52.2**	**+0.7**
RAGM	**Ragged Mountai**	**4.25**	**130**	Pn	**Pn**	**23 31 50.3**	**-2.1**
MCARA	**McCarthy VSAT**	**4.27**	**113**		**Pn**	**23 31 53.2**	**+0.6**
BCAR	**Beaver Creek A**	**4.28**	**89**		**Pn**	**23 31 52.9**	**+0.1**
HMT	**Hamilton**	**4.43**	**129**	Pn	**Pn**	**23 31 55.2**	**+0.4**
CRQM	**Cirque**	**4.57**	**120**		**Pn**	**23 31 58.1**	**+1.2**
PTPK	**Patty Peak**	**4.60**	**113**		**Pn**	**23 31 57.9**	**+0.5**
KAIM	**Kayak Island**	**4.68**	**133**	Pn	**Pn**	**23 31 58.5**	**+0.4**
TGL	**Tana Glacier**	**4.70**	**119**		**Pn**	**23 31 58.7**	**+0.1**
BALM	**Baldy**	**4.73**	**114**		**Pn**	**23 31 59.6**	**+0.5**
KIAG	**Kiagna River**	**4.79**	**116**		**Pn**	**23 32 00.6**	**+0.7**
ISLE	**Juniper Island**	**4.98**	**119**	Pn	**Pn**	**23 32 03.0**	**+0.5**
BARN	**Barnard Glacie**	**5.00**	**112**		**Pn**	**23 32 03.4**	**+0.6**
BMAR	**Burnt Mountain**	**5.01**	**31**		**Pn**	**23 32 01.3**	**-1.4**
CTGM	**Chitina Glacie**	**5.19**	**112**		**Pn**	**23 32 06.0**	**+0.6**
YUK3	**Moose Creek**	**5.21**	**102**		**Pn**	**23 32 06.8**	**+1.1**
DAWY	**Dawson**	**5.33**	**76**		**Pn**	**23 32 07.1**	**0.0**
YAH	**Yahtse**	**5.36**	**119**	Pn	**Pn**	**23 32 08.6**	**+0.9**
MESA	**MESA**	**5.39**	**121**	Pn	**Pn**	**23 32 09.5**	**+1.3**
KABU	**Katmai Buttres**	**5.41**	**203**		**Pn**	**23 32 09.6**	**+1.3**
TOLK	**Toolik Lake Re** baz=188	**5.43**	**6**	P	**Pn**	**23 32 09.6**	**+1.2**
TOLK				S	**Sn**	**23 33 11.3**	**-0.1**
TOLK	**Toolik Lake Re**	**5.43**	**6**	Pn	**Pn**	**23 32 09.2**	**+0.7**
TABL	**Table Mountain**	**5.56**	**116**		**Pn**	**23 32 09.6**	**-0.8**
PCA	**Pinnacle**	**6.12**	**117**		**Pn**	**23 32 17.1**	**-0.9**
RDOG	**Red Dog Mine**	**6.79**	**320**	Pn	**Pn**	**23 32 27.3**	**+0.1**
HYT	**Haines Junctio**	**6.90**	**105**		**Pn**	**23 32 28.9**	**+0.1**
EPYK	**Eagle Plains**	**6.92**	**57**		**Pn**	**23 32 26.8**	**-2.1**
TNA	**Tin City** baz=100	**7.58**	**295**	S	**Sn**	**23 34 04.0**	**-0.1**

SNET ***06*** *23:41:17.9±0.9, 14.31N×91.27W,h15km±18km, ML2.9*
GCG ***06*** *23:41:18.9±0.3, 14.37N×91.43W,h53km±16km,MD3.8*

ISC 06 23:41:17.9±1.7,14.2N±0.1×91.40W±0.09,h27km±16km, n11,σ0§87/16,2C,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.30**	**327**	⇑*eP*	**Pn**	**23 41 27.3**	**+0.8**
RTAL	**Retalhuleu**	**0.44**	**320**	⇑*iP*	**Pb**	**23 41 27.1**	**-0.1**
RTAL				*eS*	**Sb**	**23 41 34.0**	**+0.4**
RTAL	comp=Z,2μm,0.4s			IAML		23 41 38.3	
STG3	**Santiaguito 3,**	**0.54**	**343**	*eP*	**Pb**	**23 41 29.5**	**+0.4**
FUG	**Fuego 3**	**0.60**	**65**	*eP*	**Pn**	**23 41 31.8**	**+0.9**
PCG	**Pacaya**	**0.80**	**75**	*eP*	**Pn**	**23 41 34.7**	**+1.1**
HUEH	**Huehuetenango**	**1.13**	**355**	*eP*	**Pn**	**23 41 37.2**	**-0.9**
HUEH				*eS*	**Sb**	**23 41 52.0**	**-1.3**
NUBE	**Las Nubes**	**1.60**	**100**	*eP*	**Pn**	**23 41 44.2**	**-0.4**
NUBE				*eS*	**Sn**	**23 42 04.2**	**-0.3**
NUBE	comp=Z,179nm,0.3s			IAML		23 42 06.3	
SBLS	**San Blas**	**1.76**	**101**	*eP*	**Pn**	**23 41 47.5**	**+0.6**
MRL	**Marmol**	**1.89**	**62**	*eP*	**Pn**	**23 41 48.9**	**+0.3**
TACO	**Tacachico**	**2.00**	**96**	*eP*	**Pn**	**23 41 49.1**	**-0.8**
TACO				*eS*	**Sn**	**23 42 13.7**	**-0.4**
TACO	comp=Z,51nm,0.3s			IAML		23 42 23.3	
LFRS	**El Faro**	**2.34**	**104**	*eP*	**Pn**	**23 41 53.9**	**-0.8**
LFRS				*eS*	**Sn**	**23 42 23.7**	**+1.0**

REN ***06*** *23:53:18.8±3.5, 41.93N±0.04×119.58W±0.05, h0km±2km, ML3.1/2, ML3.1/22(SEA), Error ellipse: s-maj=5.8km s-min=5.2km az=118.0*
SEA ***06*** *23:53:20±3.4, 41.87N±0.04×119.62W±0.05, h0km±7km, Error ellipse: s-maj=5.7km s-min=5.4km az=169.0*
ANF ***06*** *23:53:20.2±2.1, 41.82N×119.82W, h3km±10km, ML3.1/9, Error ellipse: s-maj=11.5km s-min=5.3km az=91.0*
NEIC ***06*** *23:53:22.5±3.0, 41.94N±0.04×119.75W±0.04, h14km±7km, Error ellipse: s-maj=6.4km s-min=3.6km az=149.0*

ISC 06 23:53:21.9±1.2,41.96N±0.03×119.76W±0.03, h10km±11km,n46,σ1§54/54,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.41**	**262**		**Pg**	**23 53 29.2**	**-0.8**
MOD					**Sg**	**23 53 36.3**	**+0.8**
K05A	**Summer Lake**	**1.14**	**313**		**Pb**	**23 53 42.9**	**-0.8**
M04C	**Macdoel** baz=84,SNR=45	**1.57**	**264**	P	**Pn**	**23 53 48.6**	**-1.3**
M04C				S	**Sn**	**23 54 09.4**	**-0.9**
K04D	**Chiloquin, OR** baz=113,SNR=20	**1.62**	**295**	P	**Pn**	**23 53 50.4**	**-0.2**
K04D				Sg	**Sg**	**23 54 14.9**	**+0.8**
J08A	**Circle Bar Ran**	**1.69**	**34**	Pn	**Pn**	**23 53 50.9**	**-0.6**
J05D	**Fort Rock, OR** baz=138,SNR=46	**1.71**	**321**	P	**Pn**	**23 53 52.7**	**+0.8**
J05D				S	**Sg**	**23 54 17.5**	**+0.4**
L04D	**Klamath Falls** baz=97,SNR=43	**1.91**	**279**	P	**Pn**	**23 53 53.3**	**-1.4**
WVA	**Winnemucca Val**	**2.02**	**182**		**Pn**	**23 53 55.8**	**-0.3**
PINE	**Pine Mountain**	**2.03**	**335**		**Pn**	**23 53 56.9**	**+0.6**
I07A	**Izee**	**2.13**	**5**		**Pb**	**23 54 00.4**	**-0.2**
BEKR	**Beckworth**	**2.14**	**193**		**Pn**	**23 53 56.1**	**-1.8**
J04D	**Umpqua Nationa** baz=124	**2.16**	**307**	Pb	**Pb**	**23 54 00.6**	**-0.5**
YBH	**Yreka Blue Hor**	**2.22**	**265**		**Pn**	**23 53 57.4**	**-1.4**
PAHR	**Pah Rah Range**	**2.27**	**173**		**Pn**	**23 53 57.2**	**-2.4**
O03E	**Paynes Creek** baz=45	**2.27**	**224**	P	**Pn**	**23 53 57.5**	**-2.1**
O03E				Sg	**Sb**	**23 54 31.0**	**-0.2**
LOY	**Loyalton**	**2.33**	**189**		**Pn**	**23 54 01.2**	**+0.8**
PEAR	**Peavine Mounta**	**2.36**	**184**		**Pn**	**23 54 02.0**	**+1.2**
M02C	**Callahan** baz=76	**2.39**	**257**	P	**Pn**	**23 53 59.1**	**-2.0**
M02C				Sg	**Sb**	**23 54 36.8**	**+2.2**
N02D	**Trinity Center** baz=67,SNR=28	**2.43**	**247**	Pb	**Pn**	**23 54 02.9**	**+1.2**
N02D				Sg	**Sb**	**23 54 37.6**	**+1.9**
HUMO	**Hull Mountain**	**2.46**	**286**		**Pn**	**23 54 03.1**	**+1.0**
VPK	**Verdi Peak**	**2.49**	**185**		**Pn**	**23 54 04.2**	**+1.5**
WDC	**Whiskeytown Da**	**2.51**	**238**		**Pn**	**23 54 03.6**	**+0.9**
VCNR	**Virginia City**	**2.67**	**178**		**Pn**	**23 54 04.2**	**-0.9**
I04A	**Tendick Farm,** baz=131	**2.68**	**314**	Pb	**Pb**	**23 54 09.7**	**-0.2**
ORV	**Oroville**	**2.75**	**209**		**Pn**	**23 54 05.2**	**-0.8**
L02E	**Cave Junction** baz=93	**2.87**	**275**	P	**Pn**	**23 54 07.8**	**+0.1**
PNTR	**Pine Nut**	**2.87**	**178**		**Pb**	**23 54 10.8**	**-2.6**
RUBR	**Rubicon Trail**	**2.92**	**186**		**Pb**	**23 54 12.8**	**-1.5**
K02D	**Willamette Mer** baz=103	**2.99**	**285**	P	**Pn**	**23 54 09.9**	**+0.5**
AFDM	**Forest Hills D**	**3.15**	**198**		**Pb**	**23 54 16.9**	**-1.0**
KVN	**Kaiserville**	**3.17**	**156**	Pg	**Pb**	**23 54 18.7**	**+0.3**
KHMM	**Horse Mountain**	**3.18**	**251**	Pg	**Pb**	**23 54 21.0**	**+2.4**
MFID	**Camas Ranch**	**3.24**	**62**	Pn	**Pn**	**23 54 12.6**	**-0.3**
G08A	**Pilot Rock**	**3.38**	**10**		**Pg**	**23 54 25.6**	**-1.0**
RYN	**Ryan**	**3.46**	**164**	Pg	**Pb**	**23 54 23.4**	**0.0**
WAKR	**Walker**	**3.46**	**176**		**Pn**	**23 54 15.1**	**-0.9**
WAKR				Pg	**Pb**	**23 54 22.5**	**-0.9**
ELK	**Elko**	**3.61**	**108**		**Pn**	**23 54 20.3**	**+2.2**
NVAR	**Mina Array Bea**	**3.70**	**162**	Pg	**Pb**	**23 54 28.6**	**+1.2**
NV11	**Mina Array Sit**	**3.73**	**160**		**Pb**	**23 54 30.7**	**+2.8**
LHV	**Little Huntoon**	**3.83**	**165**		**Pb**	**23 54 29.5**	**0.0**
CMB	**Columbia Colle**	**3.95**	**187**		**Pb**	**23 54 29.7**	**-1.9**
HLID	**Hailey**	**4.25**	**66**		**Pb**	**23 54 22.9**	**-3.8**
MDPB	**Devils Postpil**	**4.36**	**173**		**Pb**	**23 54 40.4**	**+1.8**
SPR3	**Spring Creek 3**	**5.09**	**124**	Pg	**Pb**	**23 54 54.7**	**+3.6**
BGU	**Big Grassy Mou**	**5.16**	**99**	Pn	**Pn**	**23 54 36.9**	**-2.5**
BCYI	**Bear Canyon**	**5.21**	**61**	Pg	**Pb**	**23 54 53.8**	**+0.7**

GCG ***07*** *00:04:19.2±0.4, 13.22N×90.01W, h34km, MD3.2*
SNET ***07*** *00:04:19.1±1.2, 13.30N×89.83W, h30km±5km, MD2.5*

ISC 07 00:04:18.4±2.2,13.2N±0.1×89.86W±0.06,h31km±14km, n12,σ0§46/21,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.63**	**21**	*eP*	**Pn**	**00 04 31.5**	**-0.1**
SBLS				*eS*	**Sn**	**00 04 40.1**	**-0.6**
SNJE	**San Jose**	**0.67**	**21**	*eP*	**Pn**	**00 04 31.8**	**-0.2**
SNJE				*eS*	**Sn**	**00 04 41.1**	**-0.4**
RTR	**El Retiro**	**0.68**	**18**	*eP*	**Pn**	**00 04 32.1**	**0.0**
RTR				*eS*	**Sn**	**00 04 42.1**	**+0.3**
BOQS	**Boqueron**	**0.74**	**49**	*eP*	**Pn**	**00 04 33.4**	**+0.3**
BOQS				*eS*	**Sn**	**00 04 44.1**	**+0.7**
LFRS	**El Faro**	**0.86**	**64**	*eP*	**Pn**	**00 04 34.6**	**0.0**
LFRS				*eS*	**Sn**	**00 04 46.2**	**+0.1**
LFU	**La Fuente**	**0.88**	**55**	*eP*	**Pb**	**00 04 35.2**	**-0.1**
LBRS	**Las Brisas**	**0.93**	**58**	*eP*	**Pb**	**00 04 35.9**	**-0.3**
LBRS				*eS*	**Sb**	**00 04 49.3**	**+1.0**
TECA	**Tecapa**	**1.34**	**79**	*eP*	**Pn**	**00 04 41.1**	**-0.2**
TECA				*eS*	**Sb**	**00 04 59.6**	**-0.4**
**

POKR	**Poker Plat Res**	**1.73 22**	P	**Pn**	**00 12 00.7**	**-0.4**
	baz=204,SNR=154					
POKR			S	**Sn**	**00 12 23.7**	**+0.5**
	baz=204					
POKR	**Poker Plat Res**	**1.73 22**		**Pn**	**00 12 00.9**	**-0.2**
SML	**Sawmill**	**1.75 170**		**Pn**	**00 12 01.0**	**-0.5**
GHO	**Glory Hole Cre**	**1.76 179**		**Pn**	**00 12 01.3**	**-0.3**
RIDG	**Independent Ri**	**1.86 82**		**Pn**	**00 12 03.4**	**+0.4**
SCM	**Sheep Creek Mo**	**1.86 155**		**Pn**	**00 12 02.7**	**-0.4**
M24K	**Tolsona, Glenn**	**1.92 137**	P	**Pn**	**00 12 04.7**	**+0.9**
	baz=319,SNR=171					
M24K			Sb	**Sb**	**00 12 31.7**	**+1.5**
	baz=319					
M24K	**Tolsona, Glenn**	**1.92 137**		**Pn**	**00 12 04.7**	**+0.9**
PMR	**Palmer**	**1.94 182**		**Pn**	**00 12 04.5**	**+0.5**
SKT	**Skwentna**	**1.95 218**		**Pn**	**00 12 04.2**	**+0.1**
KNK	**Knik Glacier**	**2.14 173**		**Pn**	**00 12 07.0**	**+0.2**
DOT	**Dot Lake**	**2.20 85**		**Pn**	**00 12 07.8**	**+0.1**
SUA	**Susitna One**	**2.23 202**		**Pn**	**00 12 08.4**	**+0.3**
SCRK	**Sand Creek**	**2.27 76**	P	**Pn**	**00 12 08.3**	**-0.3**
	baz=260,SNR=114					
SCRK			Sb	**Sb**	**00 12 41.3**	**+1.1**
	baz=260					
SCRK	**Sand Creek**	**2.27 76**		**Pn**	**00 12 08.5**	**-0.1**
STLK	**Strandline Lak**	**2.43 214**		**Pn**	**00 12 10.9**	**+0.1**
MENT	**Mentasta**	**2.46 102**		**Pn**	**00 12 12.8**	**+1.7**
RC01	**Rabbit Creek A**	**2.47 189**	P	**Pn**	**00 12 13.2**	**+1.8**
	baz=7.8,SNR=10.0					
RC01	**Rabbit Creek A**	**2.47 189**		**Pn**	**00 12 13.4**	**+2.0**
KLU	**Klutina**	**2.49 144**		**Pn**	**00 12 12.3**	**+0.7**
PRP	**Porcupine Dome**	**2.50 35**		**Pn**	**00 12 12.0**	**+0.2**
SPCG	**Spurr Capps Gl**	**2.65 214**		**Pn**	**00 12 14.5**	**+0.6**
PWL	**Port Wells**	**2.70 173**		**Pn**	**00 12 15.9**	**+1.5**
SPCP	**Crater Peak Br**	**2.71 214**		**Pn**	**00 12 15.3**	**+0.6**
SPCN	**Chakachatna No**	**2.75 214**		**Pn**	**00 12 15.2**	**0.0**
SPNN	**North Nagishla**	**2.77 220**		**Pn**	**00 12 16.2**	**+0.6**
N25K	**Chitina, Valde**	**2.80 132**	P	**Pn**	**00 12 17.6**	**+1.7**
	baz=315,SNR=79					
N25K	**Chitina, Valde**	**2.80 132**		**Pn**	**00 12 18.0**	**+2.1**
GLI	**Glacier Island**	**2.80 161**		**Pn**	**00 12 17.2**	**+1.3**
DIV	**Divide**	**2.83 147**		**Pn**	**00 12 17.7**	**+1.3**
FID	**Port Fidalgo**	**3.03 156**		**Pn**	**00 12 20.7**	**+1.8**
O22K	**Cooper Landing**	**3.08 187**	Pb	**Pb**	**00 12 25.8**	**0.0**
	baz=6.2					
O22K			Sb	**Sb**	**00 13 04.7**	**+1.4**
	baz=6.2					
GLB	**Gilahina Butte**	**3.19 129**		**Pn**	**00 12 23.4**	**+2.2**
IMAR	**Indian Mountai**	**3.20 322**		**Pn**	**00 12 21.2**	**-0.1**
TTA	**Tatalina**	**3.24 262**		**Pb**	**00 12 29.2**	**+0.6**
BCAR	**Beaver Creek A**	**3.28 95**		**Pn**	**00 12 22.2**	**-0.3**
BMRM	**Bremner River**	**3.29 139**		**Pn**	**00 12 24.1**	**+1.5**
HIN	**Hinchinbrook I**	**3.35 158**	Pn	**Pn**	**00 12 24.1**	**+0.7**
EYAK	**Cordova Ski Ar**	**3.35 152**		**Pn**	**00 12 24.4**	**+1.0**
DFR	**Drift River**	**3.42 212**		**Pn**	**00 12 25.6**	**+1.1**
FYU	**Fort Yukon**	**3.44 26**		**Pn**	**00 12 25.2**	**+0.7**
SEW	**Seward**	**3.44 184**		**Pn**	**00 12 26.4**	**+1.8**
VRDI	**Verde Repeater**	**3.46 129**		**Pn**	**00 12 26.4**	**+1.3**
MCARA	**McCarthy VSAT**	**3.51 125**		**Pn**	**00 12 27.3**	**+1.8**
RSO	**Redoubt South**	**3.55 212**		**Pn**	**00 12 29.4**	**+3.1**
EGAK	**Eagle**	**3.65 66**		**Pn**	**00 12 27.7**	**+0.2**
COLD	**Coldfoot**	**3.75 353**	P	**Pn**	**00 12 29.5**	**+0.6**
	baz=172,SNR=12					
COLD			Sb	**Sb**	**00 13 25.1**	**+2.4**
	baz=172					
COLD	**Coldfoot**	**3.75 353**		**Pn**	**00 12 29.7**	**+0.8**
BVCY	**Beaver Creek**	**3.87 103**		**Pn**	**00 12 31.2**	**+0.6**
BRLK	**Bradley Lake**	**3.88 194**	Pn	**Pn**	**00 12 33.4**	**+2.7**
HMT	**Hamilton**	**3.90 143**		**Pn**	**00 12 32.0**	**+1.0**
CRQM	**Cirque**	**3.91 133**		**Pn**	**00 12 32.2**	**+1.0**
SVW2	**Sparrevohn**	**3.93 235**		**Pn**	**00 12 32.3**	**+0.9**
BALM	**Baldy**	**3.98 126**		**Pn**	**00 12 33.0**	**+0.9**
TGL	**Tana Glacier**	**4.01 131**		**Pn**	**00 12 32.7**	**+0.2**
KIAG	**Kiagna River**	**4.05 127**		**Pn**	**00 12 34.7**	**+1.5**
CNPM	**China Poot**	**4.16 196**		**Pn**	**00 12 36.1**	**+1.6**
BARN	**Barnard Glacie**	**4.22 123**		**Pn**	**00 12 37.0**	**+1.5**
ISLE	**Juniper Island**	**4.29 130**		**Pn**	**00 12 37.1**	**+0.7**
DAWY	**Dawson**	**4.29 78**	Pn	**Pn**	**00 12 36.4**	**+0.1**
BMAR	**Burnt Mountain**	**4.33 23**		**Pn**	**00 12 36.2**	**-0.5**
CTGM	**Chitina Glacie**	**4.41 122**		**Pn**	**00 12 40.7**	**+2.7**
TABL	**Table Mountain**	**4.82 126**	Pn	**Pn**	**00 12 42.5**	**-1.3**
TOLK	**Toolik Lake Re**	**5.14 358**	P	**Pn**	**00 12 49.7**	**+1.7**
	baz=177,SNR=18					
TOLK			S	**Sn**	**00 13 46.5**	**-0.7**
	baz=177					
TOLK	**Toolik Lake Re**	**5.14 358**	Pn	**Pn**	**00 12 49.9**	**+1.9**
PCA	**Pinnacle**	**5.38 126**	Pn	**Pn**	**00 12 53.4**	**+2.1**
BCPM	**Bancas Point**	**5.71 125**	Pn	**Pn**	**00 12 55.4**	**-0.3**
EPYK	**Eagle Plains**	**5.94 56**	P	**Pn**	**00 12 59.1**	**+0.2**
	baz=247,SNR=7.7					
EPYK	**Eagle Plains**	**5.94 56**	Pn	**Pn**	**00 12 59.2**	**+0.3**
HYT	**Haines Junctio**	**6.02 112**	Pn	**Pn**	**00 13 02.6**	**+2.5**
KDAK	**Kodiak Island**	**6.03 199**	Pn	**Pn**	**00 13 00.6**	**+0.4**
OHAK	**Old Harbor**	**6.67 201**	Pn	**Pn**	**00 13 07.6**	**-1.4**
WHY	**Whitehorse**	**7.21 107**	Pn	**Pn**	**00 13 17.7**	**+1.2**
ANM	**Nome**	**7.27 286**	Pn	**Pn**	**00 13 18.0**	**+0.9**
INK	**Inuvik**	**7.92 46**	Pn	**Pn**	**00 13 25.8**	**-0.1**

IDC ***07*** *00:17:16.7±1.7,6.96S×129.19E, h0km, mb3.7/3, mb1 3.6/6, mb1mx3.4/48, mbtmp3.5/6, ML3.5/3, Error ellipse: s-maj=87.5km s-min=25.0km az=77.0*

ISC 07 00:17:19.1±1.5, 7.1S±0.1×129.9E±0.3, h35km, n6, σ2.2s65/8, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**11.65**	**200**	Pn		**Pn**	**00 20 02.5**	**-0.6**
	0.6nm,0.3s,baz=14,slow=9.4,SNR=32							
FITZ				Sn		Sn	00 21 57.8	-14
	0.5nm,0.3s,baz=99,slow=22,SNR=6.8							
WRA	**Warramunga Arr**	**13.46**	**162**	Pn		**P**	**00 20 34.4**	**-2.2**
	0.2nm,0.3s,baz=344,slow=13,SNR=20							
WRA				Sn		**Sn**	**00 22 56.6**	**+0.5**
	0.5nm,0.3s,baz=337,slow=22,SNR=11							
ASAR	**Alice Springs**	**16.89**	**167**	P		**P**	**00 21 20.1**	**+5.3**
	0.1nm,0.3s,baz=335,slow=9.1,SNR=2.0							
ASAR				S		**Sn**	**00 24 19.1**	**-0.7**
	0.1nm,0.3s,baz=315,slow=16,SNR=2.7							
MKAR	**Makanchi Array**	**68.26**	**327**	P		**P**	**00 28 16.0**	**-0.5**
	0.3nm,0.5s,baz=126,slow=7.3,SNR=8.8							
ZALV	**Zalesovo Beam**	**71.64**	**334**	P		**P**	**00 28 36.9**	**-0.1**
	0.5nm,0.4s,baz=128,slow=9.5,SNR=1.9							
KURBB	**Kurchatov Arra**	**72.55**	**329**	P		**P**	**00 28 43.2**	**+0.6**
	0.3nm,0.6s,baz=115,slow=4.5							

BJI ***07*** *00:20:45.3±0.0, 4.77N×94.99E, h44km, mB5.4/57, mb5.8/81, Ms5.3/86, Ms7 5.2/82*

MOS ***07*** *00:20:46.4±1.0, 4.88N×95.13E, h46km, mb6.0/111, Error ellipse: s-maj=5.9km s-min=3.5km az=111.5*

NEIC ***07*** *00:20:47.2±2.2, 4.78N±0.06×95.07E±0.06, h39km±1km, mb5.7/284, Ms_20 5.3/451, Mwb5.4/38, Mww5.5, Mwc5.6(GCMT), Error ellipse: s-maj=9.7km s-min=9.5km az=46.0*

NEIC ***07*** *00:20:48, 4.65N×94.98E, h25km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.01; Mθθ-0.29; Mφφ0.29; Mrθ3.40; Mθφ-0.09; Mφr-1.37; Fault plane solution: Mw3.68000×10^17 NP1:φ210.00000°, δ4.00000°, λ8.00000°. NP2:φ112.00000°, δ89.00000°, λ94.00000°. Principal axes: T 3.6057, Plg45.0000°, Azm26.0000°; N 0.1410, Plg4.0000°, Azm292.0000°; P -3.7467, Plg44.0000°, Azm198.0000°;*

NEIC ***07*** *00:20:48.3, 4.80N×95.12E, h40km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.01; Mθθ-0.04; Mφφ0.04; Mrθ1.56; Mθφ-0.35; Mφr-0.78; Fault plane solution: Mw1.78000×10^17 NP1:φ295.01000°, δ88.13000°, λ-98.40000°. NP2:φ192.55000°, δ8.60000°, λ-12.60000°. Principal axes: T 1.8948, Plg43.0000°, Azm33.0000°; N -0.2565, Plg8.0000°, Azm295.0000°; P -1.6383, Plg46.0000°, Azm196.0000°;*

IDC ***07*** *00:20:48.4±0.4, 4.90N×95.10E, h47km±3km, mb5.3/51, mb1 5.3/53, mb1mx5.2/58, mbtmp5.5/53, MS4.6/37, Ms1 4.6/37, ms1mx4.5/44 Error ellipse: s-maj=9.2km s-min=6.3km az=45.0*

BGR ***07*** *00:20:48.1±0.0, 4.17N×95.06E, h53km±3km, mb5.7*

GCMT ***07*** *00:20:49.2±0.1, 4.71N±0.01×94.98E±0.01, h26km, MW5.6/138, Moment Tensor Solution. s106,c170; s138,c252; Duration: 1ŝ6 Moment tensor: Scale 10^17 Nm; Mrr0.18±.02; Mθθ-0.42±.01; Mφφ0.23±.02; Mrθ3.19±.07; Mθφ-0.09±.01; Mφr-1.28±.05; Best double couple: Mw3.45700×10^17 NP1:φ223.00000°, δ5.00000°, λ21.00000°. NP2:φ112.00000°, δ88.00000°, λ95.00000°. Principal axes: T 3.4170, Plg47.0000°, Azm27.0000°; N 0.0800, Plg5.0000°, Azm292.0000°; P -3.4970, Plg43.0000°, Azm197.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***07*** *00:20:49.7±0.2, 5.5N±2.9×95.5E±1.1, h57km±2km, M5.3/115, mB5.8/73, mb5.6/115, MLv5.9/13, Mw(mB)5.3/73, Mwp5.5/12*

NEIC ***07*** *00:20:50, 4.39N×94.71E, h40km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.03; Mθθ-0.42; Mφφ0.39; Mrθ2.03; Mθφ-0.09; Mφr-1.22; Fault plane solution: Mw2.41000×10^17 NP1:φ216.00000°, δ10.00000°, λ5.00000°. NP2:φ121.00000°, δ89.00000°, λ100.00000°. Principal axes: T 2.3608, Plg45.0000°, Azm41.0000°; N 0.0892, Plg10.0000°, Azm301.0000°; P -2.4499, Plg43.0000°, Azm202.0000°;*

KLM ***07*** *00:20:52.0, 4.83N×95.15E, h77km, mb5.6*

ISC 07 00:20:48.4±0.2, 4.84N±0.03×95.06E±0.03, h52km±1km, h52km:pP-P, n1628, σ1.58/1635, mb5.7/350, MS5.2/320, 126C-43D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LHMI	**Lhok Sumawe**	**1.92**	**78**	P		**Pn**	**00 21 21.5**	**+2.8**
LHMI				S		**Sn**	**00 21 44.4**	**+2.7**
LHMI	**Lhok Sumawe**	**1.92**	**78**			**Pn**	**00 21 20.0**	**+1.3**
TPTI		**2.63**	**126**	P		**Pn**	**00 21 28.5**	**+0.1**
TPTI				S		**Sn**	**00 21 58.9**	**-0.3**
KCSI	**Kotacane, Aceh**	**3.00**	**116**	P		**Pn**	**00 21 36.2**	**+2.6**
KCSI				S		**Sn**	**00 22 10.7**	**+2.3**
TSI	**Tuntungan**	**3.74**	**111**	P		**Pn**	**00 21 40.6**	**+2.4**
TSI				S		**Sn**	**00 22 29.2**	**+2.8**
GSI	**Gunungsitoli**	**4.32**	**144**	P		**Pn**	**00 21 50.2**	**-1.4**
GSI	**Gunungsitoli**	**4.32**	**144**	Pn		**Pn**	**00 21 50.5**	**-1.1**
PSI	**Prapat**	**4.36**	**118**	P		**Pn**	**00 21 54.5**	**+2.3**
	58nm,0.3s,baz=360,slow=6.8,SNR=9							
PSI				S		**Sn**	**00 22 46.2**	**+4.5**
	215nm,0.3s,baz=0.3,slow=9.8,SNR=6.9							
PSI				LR		LR	00 24 05.9	
	comp=Z,4μm,19.3s,baz=174,slow=45							
RPSI	**Rantau Prapat**	**4.41**	**119**			**Pn**	**00 21 54.5**	**+1.7**
RPSI						**Sn**	**00 22 46.2**	**+3.4**
RPSI	**Rantau Prapat**	**4.41**	**119**	Pn		**Pn**	**00 21 54.0**	**+1.2**
PKDT	**Phuket**	**4.45**	**47**	P		**Pn**	**00 21 57.1**	**+3.7**
TRTT	**Trang**	**5.48**	**57**	P		**Pn**	**00 22 10.4**	**+2.8**
KULM	**Kulim**	**5.59**	**85**	Pn		**Pn**	**00 22 10.9**	**+1.9**
KULM	**Kulim**	**5.59**	**85**	P		**Pn**	**00 22 11.0**	**+1.9**
SRIT	**Nakonsritamara**	**5.86**	**50**	P		**Pn**	**00 22 16.0**	**+3.3**
IPM	**Ipoh**	**5.96**	**93**	Pn		**Pn**	**00 22 15.4**	**+1.3**
IPM	**Ipoh**	**5.96**	**93**	P		**Pn**	**00 22 17.0**	**+2.9**
MNSI	**Mandailing Nat**	**6.04**	**132**	P		**Pn**	**00 22 15.2**	**0.0**
	8.6nm21μm31μm1μm,0.8s							
PBA	**Port Blair**	**7.15**	**341**	*e*P		Pn	00 22 27.7	-2.7
PBA				*ex*		x	00 23 52.5	
PBA	**Port Blair**	**7.15**	**341**	Pn		Pn	00 22 33.2	+2.7
SISI	**Saibi**	**7.33**	**147**	P		**Pn**	**00 22 31.8**	**-1.1**
	1.9nm6μm466nm,0.9s							
BKNI	**Bangkinang**	**7.47**	**127**	P		**Pn**	**00 22 35.2**	**+0.4**
	6.7nm5μm10μm957nm,0.7s							
BKNI	**Bangkinang**	**7.47**	**127**	Pn		**Pn**	**00 22 35.1**	**+0.4**
RGRI	**Rengat**	**8.91**	**125**	P		**Pn**	**00 22 55.3**	**+0.8**
	3.1nm44μm371nm,0.9s							
MYKOM	**Kota Tinggi**	**9.28**	**109**			**Pn**	**00 23 01.3**	**+1.6**
MYKOM	**Kota Tinggi**	**9.28**	**109**	P		**Pn**	**00 23 01.0**	**+1.3**
PATY	**Pattaya**	**9.87**	**35**	P		Pn	00 23 12.5	+4.8
SRDT	**SRDT**	**10.27**	**23**	P		Pn	00 23 17.9	+4.8
KSI	**Kapahiang**	**11.30**	**138**	P		**Pn**	**00 23 26.5**	**-0.9**
	471nm,0.9s							
SRAK	**Srakaew**	**11.42**	**37**	P		Pn	00 23 39.5	+11
MNAI	**Manna**	**12.07**	**139**	P		**Pn**	**00 23 37.7**	**-0.1**
	950nm,1.2s							
MNAI	**Manna**	**12.07**	**139**	Pn		**Pn**	**00 23 35.8**	**-2.0**
CHAI	**Chaiyaphum**	**12.93**	**31**	P		**Pn**	**00 23 53.7**	**+4.1**
PPBI	**Pangkal Pinang**	**13.07**	**122**	P		**Pn**	**00 23 51.3**	**-0.2**
LWLI	**Liwa**	**13.29**	**137**	P		**Pn**	**00 23 53.9**	**-0.7**
	326nm,0.8s							
SUKH	**Sukhothai**	**13.34**	**19**	P		**P**	**00 24 00.5**	**-2.8**
PHIT	**Phitsanulok**	**13.35**	**23**	P		**P**	**00 24 00.6**	**-2.8**
KLSI		**13.52**	**134**	P		**Pn**	**00 23 56.0**	**-1.7**
	556nm52nm,0.8s							
MHMT	**Maesarieng**	**13.55**	**12**	P		**Pn**	**00 24 01.3**	**+3.2**
CM05	**Chiang Mai Arr**	**14.01**	**15**	P		**P**	**00 24 08.5**	**-2.2**
CM04	**Chiang Mai Arr**	**14.01**	**16**	P		**P**	**00 24 08.5**	**-2.3**
CM13	**Chiang Mai Arr**	**14.02**	**15**	P		**P**	**00 24 08.5**	**-2.3**
CM01	**Chiang Mai Arr**	**14.03**	**15**	P		**P**	**00 24 09.1**	**-1.9**
CM02	**Chiang Mai Arr**	**14.04**	**15**	P		**P**	**00 24 08.7**	**-2.3**
CM15	**Chiang Mai Arr**	**14.05**	**15**	P		**P**	**00 24 09.0**	**-2.2**
CM09	**Chiang Mai Arr**	**14.06**	**15**	P		**P**	**00 24 09.0**	**-2.3**
CM31	**Chiang Mai Arr**	**14.06**	**15**	P		**P**	**00 24 09.0**	**-2.3**
CM31	**Chiang Mai Arr**	**14.06**	**15**	P		**P**	**00 24 08.8**	**-2.5**
CMAR	**Chiang Mai Arr**	**14.06**	**15**	P		**Pn**	**00 24 06.8**	**+1.8**
	6.6nm,0.3s,baz=207,slow=12,SNR=50							
CMAR				LR		LR	00 29 36.3	
	comp=Z,5μm,20.8s,baz=248,slow=38							
CMAR				ScP		**ScP**	**00 32 52.8**	**+0.9**
	0.7nm,0.3s,baz=219,slow=3.1,SNR=27							
CMAR				ScS		**ScS**	**00 36 29.8**	**+0.5**
	0.3nm,0.3s,baz=134,slow=6.2,SNR=4.6							
CMAR	**Chiang Mai Arr**	**14.06**	**15**	*ce*P		**Pn**	**00 24 03.0**	**-1.9**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**14.06**	**15**			**P**	**00 24 09.6**	**-1.7**
CMAR						**ScP**	**00 32 52.2**	**+0.4**
BLSI	**Bandar Lampung**	**14.36**	**135**	P		**Pn**	**00 24 08.1**	**-0.9**
	comp=Z,165nm,0.6s							
CHTO	**Chiang Mai**	**14.40**	**15**	P		**Pn**	**00 24 12.1**	**+2.6**
CHTO	**Chiang Mai**	**14.40**	**15**			**Pn**	**00 24 12.1**	**+2.6**
CHTO	**Chiang Mai**	**14.40**	**15**			**P**	**00 24 12.8**	**-2.2**
CMMT	**Chiang Mai**	**14.40**	**15**	P		**Pn**	**00 24 12.1**	**+2.7**
PALK	**Pallekele**	**14.48**	**280**	P		**Pn**	**00 24 10.7**	**+0.2**
	comp=Z,4.9nm,0.3s,baz=194,slow=13,SNR=20							
PALK				S		Sn	00 26 36.7	-13
	comp=Z,19nm,0.3s,baz=118,slow=20,SNR=12							
PALK				LR		LR	00 29 12.2	
	comp=Z,4μm,21.2s,baz=206,slow=35							
PALK	**Pallekele**	**14.48**	**280**	P		**Pn**	**00 24 11.5**	**+0.9**
PALK	**Pallekele**	**14.48**	**280**			**Pn**	**00 24 11.5**	**+0.9**
UBPT	**Khong Chiam**	**14.58**	**44**	P		**P**	**00 24 15.5**	**-1.6**
UBPT	**Khong Chiam**	**14.58**	**44**			**P**	**00 24 15.5**	**-1.6**
TPI	**Tanjungpandan**	**14.67**	**121**	P		**Pn**	**00 24 12.8**	**-0.2**
	comp=Z,1μmcomp=Z,78nm,1.4s							
DLV	**T Lat**	**15.04**	**61**			**P**	**00 24 22.2**	**-0.2**
DLV					IAmb	IAmb	00 24 26.5	
	comp=Z,395nm,0.7s							
PAYA	**Payao**	**15.18**	**18**	P		**P**	**00 24 22.5**	**-1.3**
NONG	**Nongkai**	**15.34**	**30**	P		**P**	**00 24 24.3**	**-1.3**
SBJI	**Serang**	**15.51**	**134**	P		**Pn**	**00 24 23.2**	**-0.7**
	comp=Z,178nm,0.7s							
CGJI	**Cibinong**	**15.56**	**137**	P		**Pn**	**00 24 21.5**	**-3.0**
	comp=Z,3μmcomp=Z,371nm,1.0s							
KSM	**Kuching**	**15.59**	**102**			**P**	**00 24 27.0**	**-1.3**
KSM	**Kuching**	**15.59**	**102**	P		**P**	**00 24 29.0**	**+0.7**
DBJI	**Dramaga**	**16.25**	**134**	P		**P**	**00 24 34.6**	**-1.1**
	comp=Z,88μmcomp=Z,145nm,1.3s							
SKJI	**Sukabumi**	**16.43**	**136**	P		**Pn**	**00 24 36.0**	**+0.3**
	comp=Z,274nm,0.8s							
MDRS	**Chennai**	**16.75**	**300**	*e*P		**P**	**00 24 41.8**	**+0.6**
MDRS				*i* pP		**pwP**	**00 24 55.9**	**+0.7**
COCO	**West Island**	**17.01**	**174**	P		**Pn**	**00 24 41.6**	**-1.2**
COCO				pmax		pmax		
	comp=Z,888nm,1.1s							
COCO	**West Island**	**17.01**	**174**	P		**Pn**	**00 24 41.6**	**-1.2**
COCO					IAmb	IAmb	00 24 47.0	
	comp=Z,888nm,1.1s							
CNJI	**Cibinong**	**17.05**	**135**	P		**Pn**	**00 24 42.3**	**-1.0**
	comp=Z,2μmcomp=Z,170nm,0.8s							
LEM	**Lembang**	**17.07**	**133**	P		**Pn**	**00 24 41.2**	**-2.5**
	comp=Z,3.3nm,0.3s,baz=334,slow=22,SNR=2.2							
LEM				ScP		**ScP**	**00 32 57.1**	**-0.6**
	comp=Z,2.7nm,0.3s,baz=168,slow=6.3,SNR=3.9							
LEM				LR		LR	00 33 04.7	
	comp=Z,4μm,18.1s,baz=300,slow=43							
LEM				ScS		**ScS**	**00 36 39.3**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=325,slow=22,SNR=3.6							
STKI	**Sintang**	**17.07**	**106**	P		**P**	**00 24 45.5**	**+0.7**
	comp=Z,75nm,0.9s							
SBUM	**Sibu**	**17.29**	**97**			**P**	**00 24 47.8**	**+0.6**
SBUM	**Sibu**	**17.29**	**97**	P		**P**	**00 24 49.0**	**+1.8**
CHLP	**Challavanipeta**	**17.32**	**323**	*e*P		**Pn**	**00 24 46.6**	**-0.1**
CHLP				IVmB	BB		00 25 03.2	
	comp=Z,2μm,1.6s							
SKHT	**Srikalahasti**	**17.53**	**301**	*e*P		**P**	**00 24 50.9**	**+1.1**
SKHT				IVmB	BB		00 25 06.3	
	comp=Z,1μm,2.2s							
SAIH	**SAIHA**	**17.66**	**354**	*e*P		**Pn**	**00 24 47.8**	**-3.2**
SAIH				*i* pP		**P**	**00 24 54.6**	**+3.2**
CISI	**Cisompet, Garu**	**17.71**	**134**	P		**Pn**	**00 24 49.0**	**-2.5**
	comp=Z,3μmcomp=Z,4μmcomp=Z,193nm,0.8s							
CISI	**Cisompet, Garu**	**17.71**	**134**	Pn		**Pn**	**00 24 49.1**	**-2.4**
PVM	**Polavaram**	**18.04**	**314**	*e*P		**Pn**	**00 24 57.1**	**+1.6**
PVM				IVmB	BB		00 25 12.4	
	comp=Z,1μm,1.3s							
PBKI	**Pangkalan Bun**	**18.21**	**114**	P		**Pn**	**00 24 59.5**	**+1.9**
	comp=Z,6μmcomp=Z,539nm,1.0s							
TRD	**Trivandrum**	**18.34**	**282**	*e*P		**Pn**	**00 25 01.1**	**+1.9**
KPJI	**Karang Pucung**	**18.38**	**131**	P		**P**	**00 24 58.9**	**-0.3**
	comp=Z,72nm,0.7s							
ADKI	**Addanki**	**18.42**	**308**	*e*P		**Pn**	**00 25 02.4**	**+2.2**
ADKI				IVmB	BB		00 25 18.1	
	comp=Z,1μm,1.6s							
MYLAV	**Mylavaram**	**18.44**	**311**	*e*P		**Pn**	**00 25 02.4**	**+1.9**
MYLAV				IVmB	BB		00 25 03.3	
	comp=Z,576nm,1.6s							
SLVN	**Son La**	**18.51**	**27**	P		**Pn**	**00 25 02.8**	**+1.5**
XMIS	**Christmas Isla**	**18.52**	**145**	P		**P**	**00 25 00.6**	**-0.1**
NJS	**Nagarjunasagar**	**19.35**	**308**	*e*P		**Pn**	**00 25 11.5**	**+0.2**
NJS				IVmB	BB		00 25 34.3	
	comp=Z,870nm,3.6s							
SMRI	**Semarang**	**19.37**	**127**	P		**P**	**00 25 10.7**	**+0.7**
	comp=Z,350nm,0.9s							
SMRI	**Semarang**	**19.37**	**127**	P		**P**	**00 25 10.5**	**+0.5**
SMRI				IAmb		IAmb	00 25 11.8	
	comp=Z,249nm,0.9s							
CUPL	**Choutuppal**	**20.08**	**309**	*e*P		Pn	00 25 20.0	+0.1
CUPL				IVmB	BB		00 25 25.6	
	comp=Z,634nm,1.0s							
QIZ	**Qiongzhong**	**20.18**	**44**	P		**P**	**00 25 18.8**	**0.0**
QIZ				sP		**pP**	**00 25 33.3**	**+2.7**
QIZ				S		**S**	**00 29 04.2**	**+1.5**
QIZ				pmax		pmax		
	comp=Z,54nm,1.7s							
QIZ				pmax		pmax		
	comp=Z,770nm,4.1s							
QIZ				LR		LR		
	comp=Z,4μm,19.4s							
QIZ				LR		LR		
	comp=Z,3μm,24.7s							
QIZ				LR		LR		
	comp=Z,4μm,20.0s							
QIZ	**Qiongzhong**	**20.18**	**44**	IAmb		IAmb	00 25 38.0	
	comp=Z,406nm,1.4s							
QIZ				ScP		**ScP**	**00 33 05.3**	**+1.0**
URV	**Uravakonda**	**20.19**	**301**	*e*P		Pn	00 25 20.7	-0.6
URV				IVmB	BB		00 25 40.8	
	comp=Z,551nm,2.3s							
WOJI	**Wonogiri, Jawa**	**20.22**	**128**	P		**P**	**00 25 17.8**	**-1.6**
	comp=Z,64nm,1.7s							
TBJI	**Tambak Boyo**	**20.37**	**125**	P		**P**	**00 25 21.6**	**+0.7**
	comp=Z,3μmcomp=Z,301nm,1.1s							
HYB	**Hyderabad**	**20.43**	**309**	*i* P		Pn	00 25 24.0	-0.2
	comp=Z,220nm,1.0s							
HYB				*e*S		Sn	00 29 15.0	+1.1
HYB				*e*S		Sn	00 29 15.0	+1.1
HYBB	**Hyderabad (bro**	**20.43**	**309**	*e*P		**P**	**00 25 22.8**	**+1.1**
HYBB				IVmB	BB		00 25 39.4	
	comp=Z,1μm,2.3s							
BWJI	**Bawean**

GYA LR LR
comp=Z,7μm,18.1s
POO Poona 24.79 305 *e*P P 00 26 08.6 +2.9
POO *i* x x 00 26 22.6
BHPL Bhopal 24.99 319 *e*P P 00 26 08.9 +1.4
BHPL IAmb IAmb 00 26 13.2
comp=Z,109nm,1.0s
BHPL *i* x x 00 26 24.5
LSA Lhasa 25.00 352 P P **00 26 08.7 +0.6**
LSA S S **00 30 28.9 0.0**
LSA pmax pmax
comp=Z,330nm,0.6s
LSA LR LR
comp=Z,7μm,25.6s
LSA LR LR
comp=Z,15μm,24.9s
LSA Lhasa 25.00 352 *i* P P **00 26 08.2 +0.1**
SNR=73
LSA Lhasa 25.00 352 P P **00 26 07.9 -0.1**
LSA P P **00 26 07.9 -0.1**
LSA Lhasa 25.00 352 IAmb IAmb 00 26 11.7
comp=Z,147nm,0.5s
LSA ScP ScP **00 33 19.0 +1.8**
MPSI Mapaga 25.21 99 P P **00 26 11.1 +1.5**
comp=Z,4μmcomp=Z,304nm,0.8s
HKPS Hong Kong Po S 25.33 45 P P **00 26 12.1 +1.5**
HKPS IAmb IAmb 00 26 28.2
comp=Z,416nm,1.4s
TWSI Taliwang, Sumb 25.60 122 P P **00 26 11.8 -1.3**
comp=Z,1μmcomp=Z,152nm,1.0s
DGAR Diego Garcia 25.63 242 P P **00 26 14.4 +1.0**
DGAR pmax pmax
comp=Z,574nm,1.2s
DGAR MLR MLR
comp=Z,4μm,22.0s
DGAR Diego Garcia 25.63 242 P P **00 26 14.4 +1.0**
H08S2 Diego Garcia H 25.70 241 T T 00 53 21.5
baz=60,slow=75,SNR=347
H08S3 Diego Garcia H 25.70 241 T T 00 53 26.9
baz=60,slow=75,SNR=7.9
H08S1 Diego Garcia H 25.72 241 T T 00 53 31.9
baz=60,slow=75,SNR=72
TTSI Tana Toraja 25.95 107 P P **00 26 17.2 +0.9**
comp=Z,112nm,1.2s
SPSI Sidrap Palu 26.19 109 P P **00 26 18.6 +0.1**
comp=Z,1μmcomp=Z,113nm,1.2s
PLAI Plampang 26.41 121 P P **00 26 18.9 -1.5**
comp=Z,1μmcomp=Z,124nm,1.2s
KAPI Kappang 26.53 111 P P **00 26 22.5 +0.9**
comp=Z,30nm,0.6s,baz=281,slow=8.5,SNR=22
KAPI ScP ScP **00 33 20.8 -0.5**
comp=Z,44nm,1.2s,baz=260,slow=3.8,SNR=10
KAPI Kappang 26.53 111 P P **00 26 23.0 +1.4**
KAPI pmax pmax
comp=Z,161nm,1.3s
KAPI Kappang 26.53 111 P P **00 26 23.0 +1.4**
BNSI Bone 26.65 110 P P **00 26 24.3 +1.7**
comp=Z,1μmcomp=Z,112nm,1.0s
BKSI Bulukumba 26.99 112 P P **00 26 26.5 +0.8**
comp=Z,2μmcomp=Z,190nm,0.7s
TGY Tagaytay City 27.11 68 P P **00 26 28.8 +2.0**
comp=Z,324nm,0.6s,baz=214,slow=5.4,SNR=5.7
APSI Ampana 27.17 101 P P **00 26 29.4 +2.1**
comp=Z,2μmcomp=Z,180nm,1.0s
CD2 Chengdu 27.20 17 P P **00 26 27.2 -0.2**
CD2 S S **00 31 02.6 -0.2**
CD2 pmax pmax
comp=Z,680nm,0.7s
CD2 LR LR
comp=Z,4μm,16.1s
CD2 LR LR
comp=Z,5μm,15.7s
CD2 LR LR
comp=Z,5μm,18.1s
BSSI Bau Bau, Buton 27.64 113 P P **00 26 31.1 -0.4**
comp=Z,719nmcomp=Z,53nm,0.9s
WBSI Waikabubak, Su 28.19 121 P P **00 26 33.6 -2.9**
comp=Z,152nm,0.8s
LGTI Lohaghat 28.21 332 *e*P P **00 26 37.6 +1.2**
GTOI Gorontalo 28.22 98 P P **00 26 36.2 -0.5**
comp=Z,686nmcomp=Z,90nm,0.9s
LUWI Luwuk 28.30 101 P P **00 26 38.8 +1.4**
comp=Z,12μmcomp=Z,387nm,1.1s
LUWI Luwuk 28.30 101 P P **00 26 39.0 +1.6**
ENH Enshi 28.73 27 IAmb IAmb 00 26 43.0
comp=Z,92nm,0.7s
ENH IAMs_20 IAMs_20 00 39 10.8
comp=Z,7μm,20.0s
NDI New Delhi 29.14 326 *e*P P **00 26 45.0 +0.3**
KMSI Cibinong 29.19 97 P P **00 26 46.8 +1.5**
comp=Z,273nm,0.9s
BASI Baing, Sumba 29.49 121 P P **00 26 46.7 -1.3**
comp=Z,2μmcomp=Z,100nm,0.7s
KNMB Chin-men Tao 29.74 47 P P **00 26 50.6 +0.6**
EDFI Ende, Flores 29.79 117 P P **00 26 49.4 -1.3**
comp=Z,311nmcomp=Z,23nm,0.9s
DDI Dehra Dun 30.00 330 *e*P P **00 26 52.1 -0.2**
QZH Quanzhou 30.17 46⇑ *i*P P **00 26 55.5 +1.6**
QZH S S **00 31 49.8 +0.2**
QZH pmax pmax
comp=Z,97nm,0.6s
QZH LR LR
comp=Z,2μm,18.5s
QZH LR LR
comp=Z,900nm,19.4s
QZH LR LR
comp=Z,3μm,23.2s
MMRI Maumere 30.23 116 P P **00 26 54.1 -0.4**
BHUJ Bhuj 30.60 309 *e*P P **00 27 00.0 +2.3**
BHUJ *i* pP sP **00 27 15.2 -0.9**
TPUB Ta-pu 30.75 51 P P **00 27 00.1 +1.0**
TWG Pinlang 30.84 52 P P **00 27 01.2 +1.3**
TWG IAmb IAmb 00 27 03.4
comp=Z,195nm,1.2s
SSLB Suanglung 31.27 50 IAmb IAmb 00 27 06.8
comp=Z,182nm,1.4s
YULB Yu-li 31.32 51 P P **00 27 05.5 +1.4**
YULB IAMs_20 IAMs_20 00 39 45.9
comp=Z,4μm,21.0s
WHN Wuhan 31.38 33 P P **00 27 05.3 +0.9**
WHN pP pP **00 27 18.0 +0.3**
WHN S S **00 32 12.3 +4.0**
WHN ScP ScP **00 33 35.0 -1.3**
WHN pmax pmax
comp=Z,310nm,1.2s
WHN LR LR
comp=Z,9μm,14.7s
WHN LR LR
comp=Z,6μm,12.5s
WHN LR LR
comp=Z,15μm,14.4s
SANI Sanana 31.65 102 P P **00 27 06.3 -0.8**
comp=Z,36nm,0.7s
BHK Bhakra 31.71 329 *ex* P **00 27 09.5 +2.1**
BHK *ex* x 00 27 53.6
XAN Xi'an 31.78 22 P P **00 27 07.9 -0.1**
XAN pP pP 00 27 16.8 -4.5
XAN PP **PnPn 00 28 13.4 -0.6**
XAN S S **00 32 13.9 -0.8**
XAN SS **SnSn 00 34 11.7 +5.5**
XAN pmax pmax
comp=Z,840nm,3.5s
XAN LR LR
comp=Z,5μm,16.6s
XAN LR LR
comp=Z,5μm,16.3s
XAN LR LR
comp=Z,9μm,17.1s
XAN Xi'an 31.78 22 P P **00 27 07.9 -0.1**
XAN pmax pmax
comp=Z,652nm,0.6s
XAN MLR MLR
comp=Z,6μm,18.0s
XAN Xi'an 31.78 22 P P **00 27 07.9 -0.1**
XAN Xi'an 31.78 22 IAMs_20 IAMs_20 00 41 25.3
comp=Z,6μm,18.0s
NACB Ninganchiao 31.97 50 P P **00 27 10.3 +0.6**
NACB IAmb IAmb 00 27 16.1
comp=Z,50nm,0.7s
YHNB Yeheng 32.07 49 P P **00 27 10.1 -0.6**
YHNB IAmb IAmb 00 27 16.7
comp=Z,283nm,1.5s
LZH Lanzhou 32.13 13 *e*P P **00 27 10.7 -0.5**
LZH pP pP 00 27 23.2 -1.3
LZH sP sP 00 27 31.0 +0.5
LZH PP **PnPn 00 28 19.0 +0.4**
LZH PcP **PcP 00 30 02.0 +2.5**
LZH *e*S **S 00 32 21.5 +1.1**
LZH sS sS 00 32 42.0 -0.3
LZH ScP **ScP 00 33 39.0 0.0**
LZH ScS **ScS 00 37 36.8 -1.1**
LZH pmax pmax
comp=Z,170nm,1.1s
LZH pmax pmax
comp=Z,440nm,5.2s
LZH LR LR
comp=Z,2μm,15.2s
LZH LR LR
comp=Z,2μm,15.7s
LZH LR LR
comp=Z,3μm,19.5s
DHRM DHARAMSHALA 32.44 329 *e*P P **00 27 13.3 -0.7**
DHRM IAmb IAmb 00 27 17.6
comp=Z,134nm,0.7s
SOEI Soe 32.51 116 P P **00 27 12.2 -2.6**
comp=Z,1μmcomp=Z,142nm,0.8s
SOEI Soe 32.51 116 P P **00 27 12.5 -2.3**
SOEI IAmb IAmb 00 27 24.2
comp=Z,103nm,0.9s
TNTI Ternate 32.51 96 P P **00 27 13.9 -0.8**
NLAI Namlea 33.00 103 P P **00 27 19.8 +0.9**
comp=Z,869nmcomp=Z,74nm,0.6s
GIRL Giralia 33.13 146 P P **00 27 21.6 +1.7**
baz=33,SNR=5.5
GIRL Giralia 33.13 146 P P **00 27 20.2 +0.3**
YOJ Yonaguni jima 33.21 51 P P **00 27 22.1 +1.4**
YOJ pmax pmax
comp=Z,205nm,1.3s
YOJ MLR MLR
comp=Z,3μm,19.0s
YOJ Yonaguni jima 33.21 51 P P **00 27 22.1 +1.4**
YOJ IAmb IAmb 00 27 24.6
comp=Z,205nm,1.3s
YOJ IAMs_20 IAMs_20 00 40 56.1
comp=Z,3μm,19.0s
GTA Gaotai 34.69 6⇑ *i*P P **00 27 33.3 -0.1**
GTA pP pP 00 27 43.2 -3.5
GTA sP sP 00 27 46.9 -5.9
GTA PcP **PcP 00 30 06.9 +0.3**
GTA S S **00 32 57.7 -2.1**
GTA ScP **ScP 00 33 48.0 +0.2**
GTA SS **SnSn 00 35 12.1 -4.4**
GTA ScS **ScS 00 37 48.9 -2.1**
GTA pmax pmax
comp=Z,180nm,0.8s
GTA pmax pmax
comp=Z,470nm,8.5s
GTA LR LR
comp=Z,1μm,20.0s
GTA LR LR
comp=Z,1μm,18.5s
GTA LR LR
comp=Z,2μm,21.4s
NJ2 Nanjing 35.07 37⇑ *i*P P **00 27 37.8 +1.2**
NJ2 pP **pP 00 27 44.1 -5.8**
NJ2 sP **sP 00 27 48.7 -7.3**
NJ2 PcP **PcP 00 30 04.4 -3.2**
NJ2 S S **00 33 07.4 +1.9**
NJ2 sS **sS 00 33 24.5 -3.1**
NJ2 ScP **ScP 00 33 48.2 -0.9**
NJ2 pmax pmax
comp=Z,130nm,1.0s
NJ2 pmax pmax
comp=Z,340nm,3.8s
NJ2 LR LR
comp=Z,2μm,13.7s
NJ2 LR LR
comp=Z,3μm,14.2s
NJ2 LR LR
comp=Z,4μm,12.3s
PSA00 Pilbara Seismi 35.76 138 P P **00 27 42.0 -0.7**
SSE Sheshan 35.85 40 P P **00 27 44.7 +1.3**
SSE pmax pmax
comp=Z,24nm,0.9s
SSE LR LR
comp=Z,840nm,19.0s
SSE LR LR
comp=Z,500nm,16.8s
SSE LR LR
comp=Z,860nm,20.6s
BNDI Bandanaira 36.03 104 P P **00 27 43.2 -1.9**
comp=Z,9μmcomp=Z,190nm,0.8s
TIY Taiyuan 36.37 24 *e*P P **00 27 48.5 +0.7**
TIY pP **pP 00 28 00.0 -1.2**
TIY sP **sP 00 28 05.5 -1.7**
TIY S S **00 33 27.6 +2.1**
TIY pmax pmax
comp=Z,120nm,1.0s
TIY LR LR
comp=Z,6μm,16.8s
TIY LR LR
comp=Z,5μm,20.7s
TIY LR LR
comp=Z,7μm,17.8s
SIJI Sorong 36.61 98 P P **00 27 49.9 -0.2**
comp=Z,122nm,0.8s,baz=309,slow=5.5,SNR=42
SIJI ScP ScP **00 33 54.5 -0.7**
comp=Z,4.6nm,0.3s,baz=359,slow=5.2,SNR=4.6
TIA Tai'an 37.24 30 P P **00 27 55.9 +0.8**
TIA S S **00 33 38.5 -0.2**
TIA pmax pmax
comp=Z,180nm,0.7s
TIA LR LR
comp=Z,2μm,15.9s
TIA LR LR
comp=Z,1μm,15.5s
TIA LR LR
comp=Z,4μm,15.7s
FITZ Fitzroy Crossi 37.80 128 P P **00 27 59.3 -0.8**
comp=Z,39nm,0.7s,baz=306,slow=5.4,SNR=104
FITZ ScP ScP **00 33 58.8 -0.7**
comp=Z,19nm,0.8s,baz=334,slow=3.2,SNR=11
FITZ LR LR 00 45 50.3
comp=Z,616nm,20.1s,baz=300,slow=40
FITZ Fitzroy Crossi 37.80 128 P P **00 27 59.3 -0.8**
baz=38,SNR=71
FITZ Fitzroy Crossi 37.80 128 P P **00 27 59.1 -1.0**
BTO Baotou 38.07 19 *e*P P **00 28 02.1 -0.1**
BTO S S **00 33 51.1 -0.3**
KBL Kabul 38.14 324 P P **00 28 03.4 +0.4**
KBL pmax pmax
comp=Z,27nm,0.8s
KBL MLR MLR
comp=Z,800nm,19.0s
KBL Kabul 38.14 324 P P **00 28 03.4 +0.4**
SAUI Saumlaki 38.33 109 P P **00 28 04.8 +0.2**
comp=Z,8μmcomp=Z,266nm,1.0s
SAUI Saumlaki 38.33 109 P P **00 28 04.1 -0.5**
SAUI S S **00 33 59.0 +3.2**
JLN Jalan Bani Buh 38.55 300 P P **00 28 09.7 +3.3**
SNR=14
JLN P P **00 28 09.7 +3.3**
SNR=14
KSH Kashi 38.60 336⇑ *i*P P **00 28 05.7 -1.0**
KSH pP pP 00 28 17.1 -2.9
KSH S S **00 33 56.1 -3.4**
KSH sS sS 00 34 18.9 -2.8
KSH ScS **ScS 00 38 11.4 -1.5**
KSH LR LR
comp=Z,1μm,13.7s
KSH LR LR
comp=Z,3μm,19.3s
KSH LR LR
comp=Z,3μm,21.7s
MEEK Meekatharra 38.72 145 P P **00 28 07.8 +0.1**
baz=39,SNR=10
HHC Hu-ho-hao-te 38.80 20 *e*P P **00 28 09.0 +0.7**
HHC PP **PnPn 00 29 42.4 +1.8**
HHC S S **00 34 04.1 +1.7**
HHC SS **SS 00 36 47.4 -7.6**
HHC pmax pmax
comp=Z,170nm,1.0s
HHC pmax pmax
comp=Z,260nm,6.9s
HHC LR LR
comp=Z,4μm,19.2s
HHC LR LR
comp=Z,3μm,14.8s
HHC LR LR
comp=Z,5μm,19.0s
WBK Wadi Bani Khal 39.09 300 P P **00 28 14.2 +3.3**
SNR=12
WBK P P **00 28 14.2 +3.3**
SNR=12
KNRA Kununurra 39.10 122 P P **00 28 10.1 -0.9**
baz=39,SNR=12
KNRA Kununurra 39.10 122 P P **00 28 09.9 -1.1**
KNRA IAmb IAmb 00 28 10.9
comp=Z,85nm,0.8s
MORW Morawa 39.28 150 P P **00 28 13.1 +0.7**
baz=39,SNR=9.3
MORW Morawa 39.28 150 P P **00 28 12.3 -0.1**
WMQ Urumqi 39.37 352 *e*P P **00 28 13.6 +0.6**
WMQ pP pP 00 28 26.1 -0.3
WMQ PP **PnPn 00 29 46.3 -1.0**
WMQ ScP **ScP 00 34 05.2 +0.1**
WMQ S S **00 34 10.1 -0.7**
WMQ ScS **ScS 00 38 16.0 -1.0**
WMQ pmax pmax
comp=Z,170nm,0.9s
WMQ pmax pmax
comp=Z,480nm,3.7s
WMQ LR LR
comp=Z,550nm,15.3s
WMQ LR LR
comp=Z,860nm,22.7s
WMQ LR LR
comp=Z,2μm,29.0s
WMQ Urumqi 39.37 352 IAmb IAmb 00 28 15.8
comp=Z,132nm,1.1s
MHTO MHTO 39.41 297 P P **00 28 15.5 +1.9**
SNR=8.2
MHTO P P **00 28 15.5 +1.9**
SNR=8.2
DQM DQM 39.47 296 P P **00 28 16.6 +2.5**
SNR=5.3
DQM P P **00 28 16.6 +2.5**
SNR=5.3
WSAR Wadi Sarin 39.61 301 LR LR 00 44 39.5
comp=Z,323nm,20.8s,baz=127,slow=36
WSAR Wadi Sarin 39.61 301 P P **00 28 18.3 +3.0**
BJT Baijiatuau 39.87 26 ScP **ScP 00 34 06.7 -0.3**
BJI Beijing 39.89 26 P P **00 28 19.1 +1.9**
BJI PP **PnPn 00 29 53.5 +0.1**
BJI S S **00 34 19.0 +0.5**
BJI pmax pmax
comp=Z,430nm,0.8s
BJI LR LR
comp=Z,2μm,22.2s
MTN Manton Dam 39.91 116 P P **00 28 16.7 -1.0**
baz=40,SNR=49
MTN Manton Dam 39.91 116 P P **00 28 16.8 -1.0**
MTN IAmb IAmb 00 28 27.0
comp=Z,53nm,0.5s
SMDO Samad 40.05 300 P P **00 28 21.9 +2.9**
SNR=13
SMDO P P **00 28 21.9 +2.9**
SNR=13
BIDO Bidbid 40.15 301 P P **00 28 22.8 +3.1**
SNR=16
BIDO P P **00 28 22.8 +3.1**
SNR=16
PRZ Przheval'sk 40.31 341 P P **00 28 23.0 +2.0**
PRZ pmax pmax
comp=Z,201nm,0.8s
PRZ MLR MLR
comp=Z,1μm,21.0s
PRZ Przheval'sk 40.31 341 P P **00 28 23.0 +2.0**
PRZ IAmb IAmb 00 28 24.0
comp=Z,201nm,0.8s
JMZ Minamidaito 2 40.41 55 P P **00 28 22.4 +0.5**
JMZ IAmb IAmb 00 28 24.1
comp=Z,199nm,0.8s
SHLS Shalkode 40.59 342⇑ *i*P P **00 28 23.6 +0.4**
comp=Z,110nm,0.9s,baz=343
SHLS *i* S S **00 34 28.5 -0.6**
baz=343
SHLS Shalkode 40.59 342 *c i*P P **00 28 23.5 +0.4**
SHLS *i* S S **00 34 28.5 -0.6**
SHLS pmax pmax
comp=Z,110nm,0.9s
BSY Bisya 40.67 300 P P **00 28 27.2 +3.2**
SNR=16
BSY P P **00 28 27.2 +3.2**
SNR=16
SHAO Shalim 40.70 292 *i*P P **00 28 27.2 +2.9**
SNR=14
SHAO Shalim 40.70 292 P P **00 28 27.1 +2.8**
SHAO P P **00 28 27.1 +2.8**
PDGK Podgornoye 40.73 343 P P **00 28 25.2 +0.8**
SATY Saty 40.83 341⇑ *i*P P **00 28 26.6 +1.4**
comp=Z,402nm,2.0s,baz=341
SATY *e*S S **00 34 34.0 +1.2**
baz=341
SATY Saty 40.83 341 *c i*P P **00 28 26.6 +1.4**
SATY *e*S S **00 34 33.9 +1.2**
SATY pmax pmax
comp=Z,402nm,2.0s
ULHL Ulahol 40.85 339 P P **00 28 26.9 +1.4**
SNR=35
KDU Kakadu 41.05 115 P P **00 28 26.2 -1.1**
baz=41,SNR=16
KPKS Kokpek 41.10 342⇑ *i*P P **00 28 28.6 +1.2**
comp=Z,446nm,1.7s,baz=342
KPKS Kokpek 41.10 342 *c i*P P **00 28 28.6 +1.2**
KPKS pmax pmax
comp=Z,446nm,1.7s
BOOM Boomskoye usch 41.17 338 P P **00 28 29.1 +1.1**
BOOM pmax pmax
comp=Z,267nm,0.7s
BOOM MLR MLR
comp=Z,2μm,20.0s
BOOM Boomskoye usch 41.17 338 P P **00 28 29.1 +1.1**
SOCY Socotra 41.23 283 P P **00 28 30.5 +1.7**
DMTO DMTO 41.26 291 P P **00 28 31.3 +2.4**
DMTO P P **00 28 31.3 +2.4**
TNSS Tian-Shan 41.29 340⇑ *i*P P **00 28 30.6 +1.3**
baz=340
TNSS Tian-Shan 41.29 340 *c i*P P **00 28 30.6 +1.3**
MDOK Medeo 41.37 340 *i* P P **00 28 31.4 +1.8**
comp=Z,13μm,1.7s,baz=340
MDOK *e*S S **00 34 42.4 +1.6**
baz=340
MDOK LR LR 00 45 59.3
comp=Z,465nm,18.2s,baz=340
MDOK Medeo 41.37 340 *i* P P **00 28 31.4 +1.8**
MDOK *e*S S **00 34 42.4 +1.6**
MDOK MLR MLR
comp=Z,465nm,18.0s
KNDC Almaty 41.44 340 P P **00 28 31.8 +1.6**
AAA Alma-Ata 41.45 340 *e*P P **00 28 32.1 +1.9**
comp=Z,578nm,0.7s,baz=340
AAA *e*S S **00 34 43.6 +1.6**
baz=340
AAA LR LR 00 45 55.9
comp=Z,384nm,15.1s,baz=340
AAA Alma-Ata 41.45 340 *e*P P **00 28 32.1 +1.9**
AAA *e*S S **00 34 43.5 +1.6**
AAA pmax pmax
comp=Z,578nm,0.7s
AAA MLR MLR
comp=Z,384nm,15.0s
ARQ Araqi 41.46 300 P P **00 28 33.9 +3.3**
ARQ P P **00 28 33.9 +3.3**
UCH Uchtor 41.48 337 P P **00 28 32.7 +1.7**
SNR=54
DL2 Dalian 41.60 32⇑ *i*P P **00 28 32.8 +1.4**
DL2 S S **00 34 46.7 +2.6**
DL2 pmax pmax
comp=Z,1μm,4.9s
DL2 LR LR
comp=Z,2μm,16.7s
DL2 LR LR
comp=Z,1μm,14.9s
DL2 LR LR
comp=Z,2μm,19.8s
TKM2 Tokmak 2 41.67 338 P P **00 28 33.6 +1.4**
SNR=258
TKM2 Tokmak 2 41.67 338 *i* P P **00 28 32.9 +0.7**
TKM2 pmax pmax
comp=Z,467nm,1.2s
KBK Karagaybulak 41.68 338 P P **00 28 34.1 +1.9**
SNR=416
SOHO SOHO 41.73 301 *i* P P **00 28 35.5 +2.8**
SNR=9.1
AML Almayashu 41.73 336 P P **00 28 34.5 +1.6**
SNR=91
MUN Mundaring 41.78 153 P P **00 28 33.6 +0.6**

baz=42,SNR=9.5
AAK Ala-Archa 41.84 337 *i* P **P 00 28 34.7 +1.2**
SNR=260
AAK Ala-Archa 41.84 337*c i* P **P 00 28 35.1 +1.6**
AAK pmax pmax
comp=Z,2µm,1.7s
RBK Rabkut 41.90 291 P **P 00 28 36.7 +2.5**
SNR=8.9
RBK P **P 00 28 36.7 +2.5**
SNR=8.9
CHMS Chumysh 42.05 338 P **P 00 28 36.8 +1.7**
SNR=12
EKS2 Erkin-Say 42.14 336 P **P 00 28 37.8 +1.9**
SNR=83
KLBR Kellerberrin 42.20 151 P **P 00 28 36.8 +0.4**
baz=42,SNR=6.9
KUU Kurty 42.25 340⇑ *i* P **P 00 28 37.4 +0.7**
comp=Z,629nm,1.6s,baz=340
KUU *e*S **S 00 34 54.3 +0.7**
baz=340
KUU Kurty 42.25 340*c i* P **P 00 28 37.4 +0.7**
KUU *e*S **S 00 34 54.3 +0.7**
KUU pmax pmax
comp=Z,629nm,1.6s
HRA Herat 42.30 318 P **P 00 28 37.7 +0.3**
HRA ScP **ScP 00 34 17.2 +0.2**
UOSS Minazif 42.30 302 P **P 00 28 39.2 +1.8**
UOSS Minazif 42.30 302 P **P 00 28 39.3 +1.9**
HATD Hatta, Dubai 42.32 302 P **P 00 28 40.4 +2.8**
ASHO Ashiyiah 42.33 302 *i* P **P 00 28 40.2 +2.5**
SNR=9.3
MDH Madha 42.36 303 P **P 00 28 39.3 +1.5**
ALNE Al Ain 42.37 301 *i* P **P 00 28 40.9 +2.9**
SNR=18
USP Ospenovka 42.38 338 P **P 00 28 39.8 +2.0**
SNR=70
WHFO Wadi Hawf 42.40 291 P **P 00 28 40.4 +2.2**
SNR=21
WHFO P **P 00 28 40.4 +2.2**
SNR=21
SGDS Sogindy 42.48 338⇑ *i* P **P 00 28 39.9 +1.2**
comp=Z,72nm,0.6s,baz=338
SGDS *e*S **S 00 34 58.3 +1.1**
baz=338
SGDS Sogindy 42.48 338*c i* P **P 00 28 39.8 +1.2**
SGDS *e*S **S 00 34 58.3 +1.1**
SGDS pmax pmax
comp=Z,72nm,0.6s
JSU Suzuyama 42.49 47 IAmb IAmb 00 28 41.8
comp=Z,71nm,0.7s
MSFE Esma-Masafi 42.50 303 P **P 00 28 42.1 +3.1**
TDK Taldyqorghan 42.58 343 *i* P **P 00 28 39.9 +0.5**
comp=Z,86nm,0.8s,baz=342
TDK *e*S **S 00 34 58.8 +0.4**
baz=342
TDK LR LR 00 46 31.0
comp=Z,372nm,19.0s,baz=342
TDK Taldyqorghan 42.58 343 *i* P **P 00 28 39.8 +0.5**
TDK *e*S **S 00 34 58.8 +0.4**
TDK pmax pmax
comp=Z,88nm,0.8s
TDK MLR MLR
comp=Z,372nm,19.0s
BANOM Banah 42.59 304 P **P 00 28 43.1 +3.3**
ABTO Aybut 42.72 290 P **P 00 28 43.1 +2.2**
SNR=11
ABTO P **P 00 28 43.1 +2.2**
SNR=11
FAQ Al Faqa, Dubai 42.75 302 *i* P **P 00 28 43.5 +2.5**
SNR=7.6
ASUD Al Ashush, Dub 42.93 301 *i* P **P 00 28 45.6 +3.1**
SNR=29
ASUD Al Ashush, Dub 42.93 301 P **P 00 28 45.6 +3.1**
SNR=9.8
ASUD P **P 00 28 45.6 +3.1**
SNR=9.8
TAS Tashkent 43.03 331 P **P 00 28 44.4 +1.4**
TAS pmax pmax
comp=Z,488nm,1.3s
TAS Tashkent 43.03 331 P **P 00 28 44.4 +1.4**
NWAO Narrogin (SRO) 43.05 152 P **P 00 28 43.8 +0.5**
comp=Z,89nm,0.8s,baz=332,slow=9.4,SNR=19
NWAO ScS ScS 00 38 38.9 -0.6
comp=Z,11nm,0.9s,baz=289,slow=23,SNR=3.3
NWAO LR LR 00 47 13.8
comp=Z,893nm,19.1s,baz=318,slow=37
NWAO Narrogin (SRO) 43.05 152 P **P 00 28 43.5 +0.2**
baz=43,SNR=14
NWAO Narrogin (SRO) 43.05 152 P **P 00 28 42.8 -0.5**
NWAO pmax pmax
comp=Z,92nm,0.9s
NWAO MLR MLR
comp=Z,1µm,20.0s
NWAO Narrogin (SRO) 43.05 152 P **P 00 28 42.8 -0.5**
NWAO IAmb IAmb 00 28 44.6
comp=Z,92nm,0.9s
NWAO Narrogin (SRO) 43.05 152 P **P 00 28 43.1 -0.1**
NWAO IAmb IAmb 00 28 44.5
comp=Z,116nm,0.9s
TJN Taejon 43.18 39*c i* P **P 00 28 44.8 +0.5**
AJN Ajban 43.20 301 *i* P **P 00 28 47.1 +2.5**
SNR=8.0
MK31 Makanchi Array 43.23 347*c i* P **P 00 28 44.9 +0.3**
MK31 pmax pmax
comp=Z,141nm,0.7s
MK31 Makanchi Array 43.23 347 IAmb IAmb 00 28 46.0
comp=Z,136nm,0.8s
MKAR Makanchi Array 43.23 347 P **P 00 28 44.9 +0.2**
comp=Z,153nm,0.6s,baz=168,slow=8.0,SNR=1376
MKAR pP **pP 00 28 57.4 -0.6**
comp=Z,40nm,0.7s,baz=160,slow=7.5,SNR=4.1
MKAR S **S 00 35 08.1 +0.1**
comp=Z,4.8nm,0.8s,baz=172,slow=14,SNR=3.5
MKAR ScS **ScS 00 38 39.0 -1.2**
comp=Z,2.9nm,1.0s,baz=153,slow=6.7,SNR=4.5
MKAR LR LR 00 49 38.0
comp=Z,2µm,21.9s,baz=164,slow=40
MKAR PKPPKP **P'P'df 01 00 38.0 -0.6**
comp=Z,0.4nm,0.7s,baz=318,slow=1.6,SNR=3.6
MKAR Makanchi Array 43.23 347 P **P 00 28 44.4 -0.2**
MAKZ Makanchi 43.32 347 P **P 00 28 45.5 +0.2**
MAKZ pmax pmax
comp=Z,160nm,0.7s
MAKZ MLR MLR
comp=Z,2µm,22.0s
MAKZ Makanchi 43.32 347 P **P 00 28 45.5 +0.2**
MAKZ IAmb IAmb 00 28 46.5
comp=Z,160nm,0.7s
IUG luzhnay 43.33 333 *i* P **P 00 28 46.8 +1.2**
comp=Z,74nm,0.5s,baz=333
IUG *e*S **S 00 35 09.9 +0.3**
baz=333
IUG luzhnay 43.33 333 *i* P **P 00 28 46.7 +1.2**
IUG *e*S **S 00 35 09.9 +0.3**
IUG pmax pmax
comp=Z,74nm,0.5s
DZA Taraz 43.35 334 *e*P **P 00 28 46.1 +0.5**
comp=Z,118nm,0.6s,baz=334
DZA *e*S **S 00 35 10.2 +0.5**
baz=334
DZA LR LR 00 47 05.0
baz=334
DZA Taraz 43.35 334 *e*P **P 00 28 46.1 +0.5**
DZA *e*S **S 00 35 10.2 +0.5**
DZA pmax pmax
comp=Z,118nm,0.6s
ZSN Zaisan 43.35 350⇑ *i* P **P 00 28 46.5 +0.9**
comp=Z,77nm,0.8s,baz=350
ZSN *e*S **S 00 35 10.4 +0.8**
baz=350
ZSN Zaisan 43.35 350*c i* P **P 00 28 46.4 +0.9**
ZSN *e*S **S 00 35 10.4 +0.8**
ZSN pmax pmax
comp=Z,77nm,0.8s
JTU Tsushima 43.40 43 IAmb IAmb 00 28 48.6
comp=Z,263nm,1.5s
JTU IAMs_20 IAMs_20 00 47 57.8
comp=Z,2µm,20.0s
H01W3 Cape Leeuwin H 43.40 157 T T 01 14 28.2
baz=330,slow=74,SNR=26
H01W2 Cape Leeuwin H 43.41 157 T T 01 12 47.2
baz=330,SNR=38
H01W1 Cape Leeuwin H 43.42 157 T T 01 14 41.3
baz=330,slow=74,SNR=52
INCN Inchon 43.44 37 P **P 00 28 46.5 +0.1**
INCN pmax pmax
comp=Z,177nm,1.1s
INCN MLR MLR
comp=Z,2µm,22.0s
INCN Inchon 43.44 37 P **P 00 28 46.5 +0.1**
INCN IAmb IAmb 00 28 47.5
comp=Z,177nm,1.1s
JNU Nakatsue 43.65 45 P **P 00 28 48.9 +0.7**
comp=Z,72nm,0.7s,baz=254,slow=2.9,SNR=41
JNU LR LR 00 49 29.8
comp=Z,2µm,18.6s,baz=232,slow=40
JNU Nakatsue 43.65 45 IAmb IAmb 00 28 50.1
comp=Z,98nm,0.8s
JNU IAMs_20 IAMs_20 00 49 18.4
comp=Z,2µm,19.0s
KK31 Karatay Array 43.87 334 *i* P **P 00 28 50.4 +0.6**
KK31 Karatay Array 43.87 334 IAmb IAmb 00 29 06.1
comp=Z,197nm,1.1s
KKAR Karatay Array 43.87 334 IAmb IAmb 00 29 06.1
comp=Z,197nm,1.1s
WRKA Warakurna 43.88 134 P **P 00 28 50.0 -0.2**
baz=44,SNR=23
SONM Songino Array 43.93 11 P **P 00 28 50.0 -0.3**
comp=Z,41nm,0.7s,baz=189,slow=8.9,SNR=282
SONM PcP **PcP 00 30 36.5 +0.9**
comp=Z,15nm,0.5s,baz=188,slow=3.9,SNR=14
SONM ScP **ScP 00 34 22.7 -0.5**
comp=Z,13nm,0.9s,baz=198,slow=4.1,SNR=7.9
SONM ScS **ScS 00 38 43.6 -1.2**
comp=Z,4.4nm,0.9s,baz=166,slow=20,SNR=13
SONM LR LR 00 49 28.3
comp=Z,1µm,20.9s,baz=190,slow=39
SONM Songino Array 43.93 11 P **P 00 28 49.1 -1.2**
SONM 00 30 36.5
SONM pmax pmax
comp=Z,33nm,0.7s
SONM Songino Array 43.93 11 P **P 00 28 49.1 -1.2**
PYAG Pyongyang 43.97 35 P **P 00 28 49.9 -0.7**
PYAG S **S 00 35 25.4 +6.6**
SUJ Sinuiju 43.99 33 P **P 00 28 50.7 -0.1**
SUJ S **S 00 35 27.3 +8.1**
BTLS Baital 44.06 339⇑ *i* P **P 00 28 52.3 +1.0**
comp=Z,96nm,0.7s,baz=338
BTLS LR LR 00 47 44.0
comp=Z,239nm,16.2s,baz=338
BTLS Baital 44.06 339*c i* P **P 00 28 52.2 +1.0**
BTLS pmax pmax
comp=Z,96nm,0.7s
BTLS MLR MLR
comp=Z,239nm,16.0s
ULN Ulaanbaatar 44.09 12*ce*P **P 00 28 51.1 -0.5**
ULN pmax pmax
comp=Z,23nm,0.6s
ULN Ulaanbaatar 44.09 12 P **P 00 28 51.1 -0.5**
ULN ScP **ScP 00 34 23.7 -0.2**
ULN Ulaanbaatar 44.09 12 IAMs_20 IAMs_20 00 49 36.2
comp=Z,2µm,19.0s
BRLS Borolday 44.11 333 *e*P **P 00 28 50.8 -0.9**
comp=Z,93nm,2.2s,baz=333
BRLS Borolday 44.11 333 *e*P **P 00 28 50.8 -0.9**
BRLS pmax pmax
comp=Z,93nm,2.2s
PYS Pyongsong 44.16 35 P **P 00 28 52.4 +0.3**
KMBL Kambalda 44.17 146 P **P 00 28 52.8 +0.5**
baz=44,SNR=11
KS19 Wonju Array Si 44.20 38 IAmb IAmb 00 28 54.1
comp=Z,75nm,0.8s
KSRS Korea Array 44.21 38 P **P 00 28 52.6 +0.1**
comp=Z,58nm,0.7s,baz=219,slow=8.9,SNR=120
KSRS ScP **ScP 00 34 23.2 -1.1**
comp=Z,22nm,1.1s,baz=220,slow=4.2,SNR=22
KSRS LR LR 00 47 56.5
comp=Z,550nm,21.5s,baz=234,slow=37
SNY Shenyang 44.76 30⇑ P **P 00 28 57.2 +0.3**
SNY S **S 00 35 25.7 -4.6**
SNY pmax pmax
comp=Z,190nm,0.6s
SNY pmax pmax
comp=Z,240nm,2.6s
SNY LR LR
comp=Z,2µm,17.1s
SNY LR LR
comp=Z,1µm,19.9s
SNY LR LR
comp=Z,2µm,18.5s
HHU Hamhung 45.57 35 P **P 00 29 03.2 -0.1**
HHU pP **P 00 29 05.3 +2.0**
HHU S **S 00 35 46.6 +4.6**
WRA Warramunga Arr 45.79 124 P **P 00 29 05.7 +0.3**
comp=Z,169nm,0.7s,baz=302,slow=9.2,SNR=1090
WRA pP **pP 00 29 17.3 -1.9**
comp=Z,132nm,0.9s,baz=302,slow=9.3,SNR=11
WRA ScP **ScP 00 34 30.3 -1.0**
comp=Z,11nm,1.0s,baz=308,slow=3.7,SNR=9.8
WRA S **S 00 35 41.5 -4.3**
comp=Z,14nm,1.1s,baz=293,slow=16,SNR=8.3
WRA LR LR 00 48 51.7
comp=Z,614nm,21.1s,baz=275,slow=37
WRA Warramunga Arr 45.79 124 P **P 00 29 05.1 -0.3**
WRA Warramunga Arr 45.79 124 P **P 00 29 05.1 -0.3**
WRAB Tennant Creek 45.80 124 P **P 00 29 05.9 +0.5**
WRAB pmax pmax
comp=Z,217nm,0.8s
WRAB MLR MLR
comp=Z,900nm,21.0s
WRAB Tennant Creek 45.80 124 P **P 00 29 05.9 +0.5**
WC3 Warramunga Arr 45.83 124 P **P 00 29 05.9 +0.2**
baz=46
ZAK Zakamensk 45.91 7 *e*P **P 00 29 05.4 -0.6**
ZAK pmax pmax
comp=Z,34nm,1.3s
JHS Saijyo 46.21 45 IAmb IAmb 00 29 11.0
comp=Z,128nm,0.7s
JHS IAMs_20 IAMs_20 00 49 08.4
comp=Z,2µm,21.0s
RER Riviere de l'E 46.40 235 P **P 00 29 10.5 +0.2**
RER IAmb IAmb 00 29 13.0
comp=Z,122nm,0.8s
ASHT Ashkhabad 46.91 320 P **P 00 29 15.5 +1.6**
ASHT pmax pmax
comp=Z,289nm,1.4s
ASHT MLR MLR
comp=Z,500nm,19.0s
ASHT Ashkhabad 46.91 320 P **P 00 29 15.5 +1.6**
MOY Mondy 46.94 5 *e*P **P 00 29 13.9 -0.1**
MOY pmax pmax
comp=Z,56nm,2.5s
GEYT Alibeck 47.07 320 P **P 00 29 16.5 +1.3**
comp=Z,88nm,0.7s,baz=148,slow=8.7,SNR=142
GEYT pP **pP 00 29 28.4 -0.2**
comp=Z,35nm,0.6s,baz=142,slow=5.6,SNR=6.1
GEYT ScP **ScP 00 34 36.4 0.0**
comp=Z,20nm,1.0s,baz=202,slow=3.2,SNR=9.3
GEYT LR LR 00 53 01.5
comp=Z,463nm,18.2s,baz=75,slow=41
GEYT Alibeck 47.07 320 P **P 00 29 16.5 +1.3**
GYA0B ALIBECK ARRAY 47.07 320 IAmb IAmb 00 29 18.4
comp=Z,94nm,0.7s
GYA0B ScP **ScP 00 34 37.0 +0.6**
TLY Talaya 47.23 7 P **P 00 29 17.2 +1.0**
comp=Z,32nm,0.7s,baz=215,slow=7.0,SNR=22
TLY Talaya 47.23 7 P **P 00 29 16.8 +0.6**
TLY Talaya 47.23 7*c i* P **P 00 29 16.5 +0.3**
TLY *e* 00 31 07.6
TLY *e*S **S 00 36 07.4 +1.8**
TLY pmax pmax
comp=Z,80nm,0.6s
TLY MLR MLR
comp=Z,3µm,19.0s
TLY Talaya 47.23 7 P **P 00 29 16.7 +0.5**
ASAR Alice Springs 47.30 129 P **P 00 29 17.4 +0.2**
comp=Z,45nm,0.7s,baz=301,slow=7.9,SNR=404
ASAR pP **pP 00 29 29.1 -2.0**
comp=Z,68nm,0.8s,baz=299,slow=7.7,SNR=10
ASAR ScP **ScP 00 34 37.6 0.0**
comp=Z,7.1nm,0.8s,baz=304,slow=3.9,SNR=8.2
ASAR S **S 00 36 03.9 -3.5**
comp=Z,9.4nm,0.9s,baz=293,slow=14,SNR=16
ASAR ScS **ScS 00 39 13.5 +6.3**
comp=Z,1.2nm,0.7s,baz=299,slow=5.6,SNR=4.6
ASAR LR LR 00 51 02.4
comp=Z,438nm,19.5s,baz=304,slow=38
ASAR Alice Springs 47.30 129 P **P 00 29 16.5 -0.7**
FORT Forrest 47.42 140 P **P 00 29 18.7 +0.7**
baz=48,SNR=61
FORT Forrest 47.42 140 P **P 00 29 18.6 +0.6**
KURBB Kurchatov Arra 47.70 346 ScP **ScP 00 34 38.5 -0.2**
comp=Z,10nm,0.8s,baz=162,slow=3.4,SNR=6.6
KURBB S **S 00 36 06.9 -5.2**
comp=Z,6.8nm,0.9s,baz=155,slow=15,SNR=4.1
KURBB Kurchatov Arra 47.70 346 P **P 00 29 20.6 +0.8**
KURK Kurchatov 47.76 346 P **P 00 29 21.1 +0.8**
KURK P **P 00 29 21.1 +0.8**
KURK Kurchatov 47.76 346 P **P 00 29 21.0 +0.8**
KURK pmax pmax
comp=Z,180nm,0.7s
KURK MLR MLR
comp=Z,2µm,22.0s
KURK Kurchatov 47.76 346 P **P 00 29 21.0 +0.8**
KURK Kurchatov 47.76 346 IAMs_20 IAMs_20 00 51 40.4
comp=Z,2µm,22.0s
IRK Irkutsk 47.87 8 *e*P **P 00 29 20.2 -0.9**
IRK pmax pmax
comp=Z,98nm,2.4s
JWT Wachi 47.97 45 IAmb IAmb 00 29 23.4
comp=Z,42nm,0.8s
JWT IAMs_20 IAMs_20 00 52 19.8
comp=Z,2µm,18.0s
BRZS Berezniki 48.79 341⇑ *i* P **P 00 29 29.4 +1.0**
comp=Z,138nm,1.2s,baz=341
BRZS *e*S **S 00 36 28.2 +0.5**
baz=341
BRZS Berezniki 48.79 341*c i* P **P 00 29 29.3 +1.0**
BRZS *e*S **S 00 36 28.1 +0.5**
BRZS pmax pmax
comp=Z,138nm,1.2s
HIA Hailar 48.97 21*c i* P **P 00 29 30.0 +0.3**
HIA pmax pmax
comp=Z,63nm,0.8s
HIA Hailar 48.97 21 IAmb IAmb 00 29 32.0
comp=Z,84nm,0.6s
INU Inuyama 49.16 46 IAmb IAmb 00 29 32.7
comp=Z,105nm,0.7s
INU IAMs_20 IAMs_20 00 52 05.5
comp=Z,2µm,19.0s
JGF Kuroka 49.52 46 IAMs_20 IAMs_20 00 52 16.9
comp=Z,2µm,20.0s
ZALV Zalesovo Beam 49.67 352 P **P 00 29 35.1 +0.2**
comp=Z,147nm,0.5s,baz=179,slow=7.3,SNR=643
ZALV pP **pP 00 29 47.5 -1.2**
comp=Z,32nm,0.5s,baz=169,slow=8.3,SNR=4.0
ZALV ScP **ScP 00 34 46.4 -0.6**
comp=Z,8.4nm,0.7s,baz=147,slow=3.0,SNR=4.3
ZALV S **S 00 36 39.1 -0.6**
comp=Z,13nm,0.8s,baz=170,slow=15,SNR=11
ZALV ScS **ScS 00 39 15.5 -6.3**
comp=Z,9.1nm,1.0s,baz=193,slow=6.1,SNR=6.9
ZALV LR LR 00 54 35.7
comp=Z,949nm,21.6s,baz=168,slow=41
ZALV Zalesovo Beam 49.67 352 P **P 00 29 34.0 -0.9**
MDJ Mudanjiang 49.84 32 P **P 00 29 37.7 +1.3**
MDJ pP **pP** 00 29 48.9 -1.4
MDJ sP sP 00 29 53.8 -2.4
MDJ PP **PP 00 31 33.1 +1.6**
MDJ S **S 00 36 46.3 +3.8**
MDJ sS sS 00 37 06.6 +1.3
MDJ pmax pmax
comp=Z,160nm,0.7s
MDJ LR LR
comp=Z,1µm,25.6s
MDJ LR LR
comp=Z,1µm,22.8s
MDJ LR LR
comp=Z,2µm,22.8s
MDJ Mudanjiang 49.84 32 ScP **ScP 00 34 46.4 -1.5**
MDJ IAMs_20 IAMs_20 00 51 49.5
comp=Z,2µm,21.0s
GUMO Guam 49.85 76 LR LR 00 50 51.4
comp=Z,338nm,21.0s,baz=272,slow=36
VLA Vladivostok 50.13 35*c i* P **P 00 29 39.3 +0.8**
VLA pmax pmax
comp=Z,136nm,0.9s
QIS Mount Isa 50.49 122 P **P 00 29 42.0 +0.3**
baz=50,SNR=29
MAJO Matsushiro 50.57 45 P **P 00 29 42.4 +0.3**
MAJO pmax pmax
comp=Z,38nm,0.8s
MAJO MLR MLR
comp=Z,2µm,21.0s
MAJO Matsushiro 50.57 45 P **P 00 29 42.4 +0.3**
MAJO ScP **ScP 00 34 49.8 -1.5**
MAJO Matsushiro 50.57 45 IAMs_20 IAMs_20 00 52 00.7
comp=Z,2µm,21.0s
MAT Matsushiro 50.57 45 P **P 00 29 42.0 -0.1**
MAT S **S 00 36 45.0 -8.0**
MJB9 Matsu-Tunnel 50.57 45 IAMs_20 IAMs_20 00 52 12.7
comp=Z,2µm,20.0s
MJAR Matsushiro Arr 50.57 45 P **P 00 29 42.1 +0.1**
comp=Z,103nm,0.8s,baz=98,slow=4.2,SNR=38
MJAR PcP **PcP 00 30 59.9 +0.6**
comp=Z,13nm,0.7s,baz=231,slow=2.9,SNR=6.1
MJAR ScP **ScP 00 34 50.0 -1.3**
comp=Z,38nm,1.1s,baz=236,slow=4.0,SNR=24
MJAR LR LR 00 52 34.0
comp=Z,1µm,20.7s,baz=250,slow=38
MJAR Matsushiro Arr 50.57 45 P **P 00 29 42.2 +0.1**
MJAR pmax pmax
comp=Z,20nm,0.7s
MJAR Matsushiro Arr 50.57 45 P **P 00 29 42.2 +0.1**
DAMY Dhamar 50.77 285 P **P 00 29 47.3 +3.1**
SNR=15
DAMY Dhamar 50.77 285 P **P 00 29 45.7 +1.5**
USA0B Ussuriysk Arra 50.87 34*c i* P **P 00 29 44.5 +0.4**
USA0B Ussuriysk Arra 50.87 34 IAmb IAmb 00 29 45.9
comp=Z,84nm,0.8s
USRK Ussuriysk Ar. 50.87 34 P **P 00 29 44.7 +0.6**
comp=Z,60nm,0.6s,baz=239,slow=8.0,SNR=120
USRK ScP **ScP 00 34 50.4 -1.9**
comp=Z,2.9nm,0.7s,baz=215,slow=3.5,SNR=4.5
USRK LR LR 00 54 06.9
comp=Z,2µm,19.4s,baz=217,slow=39
JSD Sado 51.32 44 P **P 00 29 47.6 -0.1**
JSD IAmb IAmb 00 29 48.5
comp=Z,85nm,0.7s
ATD Arta Tunnel 52.04 281 P **P 00 29 56.0 +2.5**
SNR=6.7
ATD Arta Tunnel 52.04 281 P **P 00 29 55.1 +1.6**
ATD IAmb IAmb 00 30 13.1
comp=Z,91nm,1.3s
BVAR Borovoye Array 52.14 341 P **P 00 29 53.3 -0.2**
comp=Z,85nm,0.6s,baz=204,slow=29,SNR=541
BVAR S **S 00 37 12.8 -1.2**
comp=Z,12nm,1.0s,baz=226,slow=18,SNR=11
BRVK Borovoye 52.20 341*c i* P **P 00 29 54.4 +0.5**
BRVK pmax pmax
comp=Z,214nm,0.6s
BRVK Borovoye 52.20 341 P **P 00 29 54.4 +0.5**
OPO Ambohidratompo 52.59 242 P **P 00 29 59.3 +1.7**
comp=Z,28nm,0.9s,baz=54,slow=9.4,SNR=22
MANU Manus Island 52.70 96 P **P 00 29 59.0 +0.6**
MANU IAmb IAmb 00 30 00.2
comp=Z,79nm,0.7s
ABPO Ambohimpanom 52.72 242 P **P 00 29 59.5 +1.0**
ABPO pmax pmax
comp=Z,61nm,1.1s
ABPO Ambohimpanom 52.72 242 P **P 00 29 59.5 +1.0**
ABPO IAmb IAmb 00 30 01.1
comp=Z,61nm,1.1s
JMM Marumori 53.01 45 IAmb IAmb 00 30 01.1
comp=Z,109nm,0.7s
AB31 Akbulak array 53.32 332 *i* P **P 00 30 03.0 +0.7**
ABKAR Akbulak array 53.32 332 P **P 00 30 03.3 +1.0**
MTSU Mount Surprise 53.66 117 P **P 00 30 05.7 +0.4**
baz=54,SNR=30
PMG Port Moresby 53.81 105 P **P 00 30 06.3 -0.2**
comp=Z,22nm,0.4s,baz=28,slow=3.7,SNR=11
PMG ScP **ScP 00 35 05.5 -0.2**
comp=Z,19nm,0.3s,baz=180,slow=22,SNR=5.3
PMG Port Moresby 53.81 105*c i* P **P 00 30 06.2 -0.2**
PMG pmax pmax
comp=Z,32nm,0.7s
PMG Port Moresby 53.81 105 P **P 00 30 06.6 +0.1**
PMG IAmb IAmb 00 30 20.3
comp=Z,62nm,1.0s
BBOO Buckleboo 53.97 137 P **P 00 30 07.0 -0.3**
baz=54,SNR=18
TEY Ternei 53.99 36⇑ *i* P **P 00 30 07.4 +0.1**
TEY *e* 00 30 27.0
TEY *e* 00 32 09.7
TEY pmax pmax
comp=E,20nm,1.0s
TEY pmax pmax
comp=Z,80nm,1.0s
TEY pmax pmax

comp=N,30nm,0.9s
TEY pmax pmax
comp=Z,200nm,3.6s
KLR Kul'dur 54.05 29 P **P 00 30 08.6 +1.0**
comp=Z,52nm,0.6s,baz=229,slow=6.2,SNR=120
KLR ScP **ScP 00 35 04.0 -2.1**
comp=Z,16nm,1.0s,baz=278,slow=4.7,SNR=8.7
KLR LR LR 00 54 02.5
comp=Z,1µm,21.5s,baz=220,slow=37
KLR Kul'dur 54.05 29*c iP* **P 00 30 08.5 +0.9**
KLR pmax pmax
comp=Z,235nm,1.3s
JTM Tenmabayashi 54.55 42 P **P 00 30 10.7 -0.7**
BOD Bodaibo 54.89 12 *eP* **P 00 30 12.8 -0.7**
BOD pmax pmax
comp=Z,59nm,1.2s
AKTO Aktyubinsk 55.04 332 P **P 00 30 14.9 +0.2**
comp=Z,36nm,0.5s,baz=113,slow=8.5,SNR=93
AKTO pP **pP 00 30 28.0 -0.6**
comp=Z,130nm,0.9s,baz=139,slow=7.6,SNR=20
AKTO ScP **ScP 00 35 10.0 -0.4**
comp=Z,20nm,1.1s,baz=91,slow=1.9,SNR=5.4
AKTO S **S 00 37 52.5 -0.9**
comp=Z,5.3nm,0.8s,baz=138,slow=24,SNR=12
AKTO Aktyubinsk 55.04 332 P **P 00 30 15.0 +0.2**
AKTO *PP **pP 00 30 28.0 -0.6**
FOMA Nahampoana Res 55.32 235 P **P 00 30 17.8 +0.6**
FOMA IAmb IAmb 00 30 19.6
comp=Z,104nm,1.0s
FOMA IAMs_20 IAMs_20 00 47 42.4
comp=Z,2µm,21.0s
ZEA Zeya 55.37 23*ce*P **P 00 30 17.5 +0.5**
ZEA *e*PP **pP 00 30 31.5 +0.4**
ZEA *e* 00 31 12.3
ZEA *e* 00 32 19.4
ZEA *e*PPP PPP 00 33 42.0
ZEA *e*S **S 00 37 56.2 -1.4**
ZEA *e*SS **sS 00 38 22.3 +1.4**
ZEA *e*SS **SS 00 41 37.8 -5.0**
ZEA pmax pmax
comp=Z,50nm,0.6s
ZEA pmax pmax
comp=E,100nm,3.1s
ZEA pmax pmax
comp=N,200nm,4.1s
ZEA pmax pmax
comp=Z,100nm,6.8s
ZEA pmax pmax
comp=E,100nm,4.6s
ZEA pmax pmax
comp=N,100nm,4.3s
ZEA pmax pmax
comp=Z,200nm,4.2s
ZEA smax smax
comp=N,200nm,7.7s
ZEA MLR MLR
comp=N,1µm,16.0s
ZEA MLR MLR
comp=E,800nm,16.0s
ZEA MLR MLR
comp=Z,2µm,17.0s
JEW Eniwo 55.79 40 IAMs_20 IAMs_20 00 54 03.7
comp=Z,2µm,19.0s
CTA Charters Tower 56.06 118 P **P 00 30 23.2 +0.6**
comp=Z,11nm,0.7s,baz=295,slow=9.6,SNR=23
CTA ScP **ScP 00 35 15.4 -0.1**
comp=Z,4.1nm,0.8s,baz=36,slow=4.3,SNR=3.6
CTA S **S 00 38 06.2 -1.7**
comp=Z,2.4nm,1.0s,baz=15,slow=20,SNR=4.3
CTAO Charters Tower 56.06 118 P **P 00 30 23.0 +0.4**
CTAO pmax pmax
comp=Z,64nm,1.2s
CTAO MLR MLR
comp=Z,700nm,22.0s
CTAO Charters Tower 56.06 118 P **P 00 30 23.0 +0.4**
CTAO IAmb IAmb 00 30 36.8
comp=Z,64nm,1.1s
FURI Furi 56.08 277 P **P 00 30 26.4 +3.1**
HTT Hallett 56.30 136 P **P 00 30 24.5 +0.4**
baz=56,SNR=10
ERM Erimo 56.51 42 P **P 00 30 26.3 +0.9**
ERM pmax pmax
comp=Z,54nm,0.7s
ERM Erimo 56.51 42 P **P 00 30 26.3 +0.9**
ERM IAmb IAmb 00 30 41.1
comp=Z,54nm,0.7s
JEM Erimo 56.51 42 P **P 00 30 28.5 +3.1**
JEM IAmb IAmb 00 30 41.1
comp=Z,54nm,0.7s
MAK Makhachkala 56.59 320 *eP* **P 00 30 25.3 -0.7**
MAK *e* 00 32 31.4
MAK *e*S **S 00 38 13.3 -1.0**
MAK *e*SS **SS 00 42 03.1 +0.6**
MAK pmax pmax
comp=Z,172nm,1.0s
QLP Quilpie 56.90 126 P **P 00 30 29.3 +0.8**
baz=57,SNR=9.4
ASAJ Asahikawa 57.14 39 P **P 00 30 30.0 +0.1**
comp=Z,78nm,0.6s
ASAJ LR LR 00 55 18.5
comp=Z,794nm,21.4s,baz=240,slow=36
JKA Kamikawa-asahi 57.14 39 P **P 00 30 30.0 +0.1**
JKA Kamikawa-asahi 57.14 39 IAmb IAmb 00 30 32.9
comp=Z,92nm,0.7s
JKA IAMs_20 IAMs_20 00 53 35.4
comp=Z,1µm,22.0s
GNI Garni 57.21 315 P **P 00 30 31.6 +0.8**
GNI Garni 57.21 315*c iP* **P 00 30 30.9 +0.2**
GNI pmax pmax
comp=Z,129nm,1.7s
GRNR Gornyy 57.34 30⇑ *iP* **P 00 30 32.0 +0.8**
GRNR *e*S **S 00 38 27.1 +3.1**
GRNR pmax pmax
comp=N,30nm,0.9s
GRNR pmax pmax
comp=Z,40nm,0.9s
GRNR MLR MLR
comp=E,3µm,15.0s
STKA Stephens Creek 57.37 133 P **P 00 30 31.9 +0.1**
comp=E,18nm,0.8s,baz=310,slow=7.4,SNR=33
STKA LR LR 00 57 55.8
comp=E,458nm,20.1s,baz=295,slow=39
STKA Stephens Creek 57.37 133 P **P 00 30 31.9 +0.2**
baz=58,SNR=25
GEVA Gevas 57.70 313 P **P 00 30 33.8 -0.4**
GROC Groznyy 57.81 319 *eP* **P 00 30 34.9 +0.2**
GROC *e* 00 31 26.9
GROC *e*S **S 00 38 29.1 -1.3**
GROC pmax pmax
comp=Z,102nm,0.6s
KMBO Kilima Mbogo 58.05 266 P **P 00 30 40.6 +3.5**
comp=Z,40nm,0.9s,baz=66,slow=9.6,SNR=136
KMBO LR LR 00 51 25.0
comp=Z,1µm,21.8s,baz=90,slow=32
KMBO Kilima Mbogo 58.05 266 *i* P **P 00 30 38.7 +1.5**
SNR=43
KMBO Kilima Mbogo 58.05 266 P **P 00 30 38.6 +1.5**
KMBO pmax pmax
comp=Z,60nm,1.0s
KMBO Kilima Mbogo 58.05 266 P **P 00 30 38.6 +1.5**
KMBO IAmb IAmb 00 30 40.4
comp=Z,60nm,1.0s
PAF Port-aux-Franc 58.13 199 P **P 00 30 37.6 +0.9**
PAF pmax pmax
comp=Z,397nm,1.2s
PAF Port-aux-Franc 58.13 199 P **P 00 30 37.6 +0.9**
SVE Sverdlovsk 58.54 339*d iP* **P 00 30 40.1 +0.6**
SVE *e*S **S 00 38 39.0 -0.4**
SVE pmax pmax
comp=Z,331nm,0.9s
SVE MLR MLR
comp=Z,1µm,23.0s
AKH Akhalkalaki 58.59 316⇑P **P 00 30 41.3 +1.0**
AKH Akhalkalaki 58.59 316 IAmb IAmb 00 30 43.2
comp=Z,129nm,1.1s
YSS Yuzh-Sakhalins 58.64 36⇑ *eP* **P 00 30 40.9 +0.6**
YSS *e**PP **pP 00 30 54.6 +0.1**
YSS *e**SP **sP 00 31 02.8 +2.4**
YSS *e* 00 32 46.6
YSS *e*S **S 00 38 38.5 -2.4**
YSS *e*SS **SS 00 42 40.3 +5.8**
YSS *e*SSS SSS 00 44 58.2
YSS pmax pmax
comp=Z,270nm,1.0s
YSS MLR MLR
comp=E,700nm,18.0s
YSS MLR MLR
comp=Z,1µm,18.0s
YSS Yuzh-Sakhalins 58.64 36 P **P 00 30 41.0 +0.7**
ZEI Tsey 58.88 318 *eP* **P 00 30 41.9 -0.5**
ZEI pmax pmax
comp=Z,40nm,0.7s
ARU Arti 59.02 337 P **P 00 30 42.8 0.0**
comp=Z,30nm,0.8s,baz=138,slow=4.0,SNR=112
ARU S **S 00 38 44.1 -1.6**
comp=Z,2.0nm,0.8s,baz=344,slow=22,SNR=6.8
ARU Arti 59.02 337*c iP* **P 00 30 42.8 0.0**
ARU *PP **pP 00 30 56.1 -0.6**
ARU 00 31 31.4
ARU 00 32 51.7
ARU S **S 00 38 45.4 -0.3**
ARU *SS **sS 00 39 10.3 +1.3**
ARU 00 40 27.0
ARU SS **SS 00 42 37.6 -2.7**
ARU pmax pmax
comp=Z,164nm,1.0s
ARU MLR MLR
comp=Z,689nm,20.0s
ARU Arti 59.02 337 P **P 00 30 42.7 -0.2**
MARD Mardin 59.04 311 IAmb IAmb 00 30 45.8
comp=Z,67nm,0.9s
LODK Lodwar 59.54 271 P **P 00 30 50.0 +2.6**
SNR=10.0
KBZ Khabaz 59.95 319 P **P 00 30 49.6 +0.2**
comp=Z,17nm,0.8s,baz=236,slow=24,SNR=43
KBZ ScP **ScP 00 35 32.1 -0.1**
comp=Z,13nm,1.1s,baz=236,slow=23,SNR=4.1
KBZ LR LR 01 02 18.1
comp=Z,170nm,18.2s,baz=146,slow=42
KBZ Khabaz 59.95 319*c iP* **P 00 30 49.4 0.0**
KBZ pmax pmax
comp=Z,41nm,1.0s
CHVG Ch'k'valeri 60.08 317 ⇓P **P 00 30 51.1 +0.7**
KVAR Kislovodsk Arr 60.17 319 P **P 00 30 51.9 +0.7**
comp=Z,14nm,0.7s,baz=272,slow=23,SNR=13
KOPT Kop Dagi 60.17 314 P **P 00 30 52.3 +0.9**
KIV Kislovodsk 60.18 319⇑P **P 00 30 51.5 +0.4**
KIV Kislovodsk 60.18 319 *i* P **P 00 30 51.4 +0.2**
SNR=11
KIV Kislovodsk 60.18 319 *eP* **P 00 30 51.1 -0.1**
KIV *e*S **S 00 39 00.3 -0.9**
KIV *e*SS **SS 00 43 00.1 +1.0**
KIV pmax pmax
comp=Z,182nm,1.1s
KIV pmax pmax
comp=Z,130nm,4.6s
KIV MLR MLR
comp=Z,616nm,17.0s
KIV Kislovodsk 60.18 319 P **P 00 30 51.4 +0.2**
KIV IAmb IAmb 00 31 10.1
comp=Z,65nm,1.0s
CMSA Cobar Meteorol 60.26 131 P **P 00 30 52.5 +0.7**
baz=60,SNR=40
GOF Gofitskoye 60.41 320⇑ *eP* **P 00 30 52.8 +0.2**
GOF pmax pmax
comp=Z,72nm,1.0s
RMQ Roma 60.56 124 P **P 00 30 55.2 +1.2**
baz=61,SNR=7.5
TYV Tymovskoe 60.62 32 *eP* **P 00 30 54.3 +0.4**
TYV *e*S **S 00 39 07.8 +1.5**
TYV pmax pmax
comp=Z,66nm,1.8s
TYV pmax pmax
comp=Z,800nm,4.5s
TYV smax smax
comp=N,700nm,9.0s
GAZ Gaziantep 61.71 310 P **P 00 31 03.4 +1.8**
RCY Rachaya 61.83 305 *eP* **P 00 31 04.7 +2.0**
HWQ Hawqa 61.93 306 *eP* **P 00 31 04.9 +1.6**
SOC Sochi 62.01 317 *eP* **P 00 31 01.7 -1.7**
SOC *e**PP **pP 00 31 15.2 -1.8**
SOC *e* 00 33 18.9
SOC *e*PPP PPP 00 34 46.3
SOC *e*S **S 00 39 20.0 -4.3**
SOC *e*SSS SSS 00 46 14.2
SOC pmax pmax
comp=Z,60nm,0.8s
BHL Bhannes 62.07 306 *eP* **P 00 31 05.6 +1.4**
EIDS Eidsvold 62.09 122 P **P 00 31 04.9 +0.6**
baz=62,SNR=3.8
EIDS Eidsvold 62.09 122 P **P 00 31 04.3 0.0**
DQRL Deir Qamar 62.09 306 *eP* **P 00 31 06.6 +2.2**
YAK Yakutsk 62.58 18 P **P 00 31 06.3 -0.5**
comp=Z,77nm,0.5s,baz=282,slow=0.4,SNR=20
YAK S **S 00 39 28.2 -2.6**
comp=Z,5.2nm,0.3s,baz=170,slow=23,SNR=21
YAK Yakutsk 62.58 18 *eP* **P 00 31 06.2 -0.7**
YAK *e**PP **sP 00 31 27.1 +0.1**
YAK *e* 00 31 41.0
YAK *e*S **S 00 39 28.7 -2.1**
YAK *e**SS **sS 00 39 58.1 +3.1**
YAK *e* 00 40 47.4
YAK *e*SS **SS 00 43 38.3 +2.5**
YAK pmax pmax
comp=Z,81nm,0.6s
YAK pmax pmax
comp=N,36nm,1.0s
YAK pmax pmax
comp=E,34nm,1.1s
YAK pmax pmax
comp=Z,91nm,2.0s
YAK pmax pmax
comp=N,97nm,2.2s
YAK smax smax
comp=E,144nm,1.4s
YAK smax smax
comp=N,333nm,1.3s
YAK MLR MLR
comp=Z,3µm,17.0s
YAK MLR MLR
comp=N,1µm,15.0s
YAK MLR MLR
comp=E,2µm,16.0s
YAK Yakutsk 62.58 18 P **P 00 31 06.5 -0.4**
TOO Toolangi 63.03 137 P **P 00 31 12.1 +1.7**
baz=63,SNR=8.7
TOO Toolangi 63.03 137 P **P 00 31 10.9 +0.5**
TOO pmax pmax
comp=Z,46nm,0.9s
TOO Toolangi 63.03 137 P **P 00 31 10.9 +0.5**
TOO IAmb IAmb 00 31 13.2
comp=Z,46nm,0.9s
TOKA Tokat 63.18 313 IAmb IAmb 00 31 13.6
comp=Z,36nm,0.8s
YNG Young 63.54 132 P **P 00 31 14.5 +0.7**
baz=64,SNR=13
CRZF Crozet Islands 63.77 212 P **P 00 31 15.2 +0.2**
CRZF IAmb IAmb 00 31 17.2
comp=Z,92nm,1.0s
VRH Novokhopyorsk 63.93 326 *eP* **P 00 31 15.4 -0.6**
VRH *e*S **S 00 39 42.9 -5.1**
VRH pmax pmax
comp=Z,160nm,0.6s
VRH smax smax
comp=E,280nm,1.0s
KIRV Kirov 64.14 335 P **P 00 31 17.3 +0.1**
comp=E,120nm,0.5s,baz=136,slow=3.8,SNR=37
KIRV S **S 00 39 47.5 -2.7**
comp=E,5.5nm,0.5s,baz=265,slow=21,SNR=6.4
KIRV Kirov 64.14 335*c iP* **P 00 31 16.4 -0.8**
CSS Mathiatis 64.19 307 P **P 00 31 18.7 +0.6**
CSS IAmb IAmb 00 31 34.8
comp=Z,110nm,1.0s
ARMA Armidale 64.40 127 P **P 00 31 21.7 +2.0**
baz=64,SNR=4.6
ARMA Armidale 64.40 127 P **P 00 31 19.9 +0.2**
ARMA IAmb IAmb 00 31 35.9
comp=Z,49nm,1.1s
CAN Canberra 64.44 133 P **P 00 31 20.5 +0.8**
baz=64
CAN Canberra 64.44 133 P **P 00 31 19.7 0.0**
CAN pmax pmax
comp=Z,44nm,1.0s
CAN MLR MLR
comp=Z,2µm,22.0s
CAN Canberra 64.44 133 P **P 00 31 19.7 0.0**
CAN IAmb IAmb 00 31 21.8
comp=Z,44nm,1.0s
CAN IAMs_20 IAMs_20 00 59 35.4
comp=Z,1µm,22.0s
DIKM Dikmen 64.46 314 ⇓P **P 00 31 20.0 +0.3**
MBAR Mbarara 64.47 267 P **P 00 31 22.4 +1.9**
MBAR P **P 00 31 22.4 +1.9**
MBAR Mbarara 64.47 267 P **P 00 31 21.8 +1.3**
MBAR pmax pmax
comp=Z,61nm,1.3s
MBAR Mbarara 64.47 267 P **P 00 31 21.8 +1.3**
MBAR IAmb IAmb 00 31 40.7
comp=Z,61nm,1.2s
MBAR Mbarara 64.47 267 IAMs_20 IAMs_20 00 55 23.2
comp=Z,1µm,20.0s
LEF Lefka 64.57 307⇑P **P 00 31 21.8 +1.2**
NRIK Noril'sk 64.60 357 P **P 00 31 19.9 -0.2**
comp=Z,46nm,0.5s,baz=160,slow=5.4,SNR=132
NRIK S **S 00 39 53.9 -1.9**
comp=Z,5.2nm,1.0s,baz=164,slow=6.7,SNR=3.8
NRIK LR LR 01 03 02.4
comp=Z,726nm,20.7s,baz=180,slow=39
NRIK Noril'sk 64.60 357*c iP* **P 00 31 19.7 -0.4**
NRIK pmax pmax
comp=Z,306nm,2.0s
CNB Canberra Magne 64.70 133 P **P 00 31 22.2 +0.7**
baz=65,SNR=10
BR131 Keskin Array S 65.10 312 P **P 00 31 24.3 +0.2**
BR131 pmax pmax
comp=Z,43nm,1.0s
BR131 Keskin Array S 65.10 312 P **P 00 31 24.3 +0.2**
BR131 IAmb IAmb 00 31 25.4
comp=Z,43nm,1.0s
BRTR Keskin Array B 65.10 312 P **P 00 31 24.1 -0.1**
comp=Z,36nm,0.8s,baz=126,slow=6.4,SNR=108
BRTR LR LR 01 01 06.7
comp=Z,107nm,21.4s,baz=110,slow=37
BRTR Keskin Array B 65.10 312 P **P 00 31 23.7 -0.5**
VORD Divnogorie 65.20 325 *eP* **P 00 31 23.3 -1.1**
VORD *e*S **S 00 39 58.4 -5.3**
VORD pmax pmax
comp=Z,20nm,0.6s
VORD smax smax
comp=N,160nm,0.7s
VSR Storozhevoye 65.38 325 *eP* **P 00 31 24.8 -0.7**
VSR *e*S **S 00 40 00.7 -5.2**
VSR pmax pmax
comp=Z,20nm,0.5s
VSR smax smax
comp=N,130nm,1.2s
BZK Bozkurt 65.45 314 ⇓P **P 00 31 27.9 +1.8**
VORR Voronezh 65.55 326 *eP* **P 00 31 27.0 +0.4**
VORR pmax pmax
comp=Z,250nm,1.4s
BR231 Keskin MP Arra 65.78 312 P **P 00 31 28.7 +0.3**
BR231 IAmb IAmb 00 31 30.0
comp=Z,67nm,0.9s
LPSR Galich'ya Gora 66.10 326 *eP* **P 00 31 29.7 -0.4**
LPSR *e*S **S 00 40 10.5 -4.1**
LPSR pmax pmax
comp=Z,100nm,0.8s
LPSR smax smax
comp=N,420nm,1.5s
HNR Honiara 66.20 102 P **P 00 31 31.1 -0.3**
comp=N,50nm,0.3s,baz=237,slow=9.1,SNR=1.6
SIM Simferopol' 66.26 317*ce*P **P 00 31 30.3 -1.0**
SIM *e*S **S 00 40 12.0 -4.8**
SIM pmax pmax
comp=Z,48nm,0.5s
TAU Tasmania Unive 66.97 141 P **P 00 31 36.5 +0.7**
TAU pmax pmax
comp=Z,37nm,0.9s
TAU Tasmania Unive 66.97 141 P **P 00 31 36.5 +0.7**
TAU IAmb IAmb 00 31 38.1
comp=Z,37nm,0.8s
ISP Isparta 67.02 309 P **P 00 31 37.3 +0.9**
ISP pmax pmax
comp=Z,86nm,0.9s
ISP Isparta 67.02 309 P **P 00 31 37.3 +0.9**
ISP IAmb IAmb 00 31 38.7
comp=Z,86nm,0.9s
MDUB Mudurnu 67.10 312 P **P 00 31 37.4 +0.4**
ELL Elmali 67.28 308 P **P 00 31 38.3 +0.2**
ELL pmax pmax
comp=Z,588nm,1.0s
ELL Elmali 67.28 308 P **P 00 31 38.3 +0.2**
KSL Kastellorizon 67.42 307 P **P 00 31 38.5 -0.4**
FETY Fethiye 67.91 308 P **P 00 31 42.1 +0.1**
MOS Moscow 68.13 329 *eP* **P 00 31 40.2 -2.7**
MOS *e**PP **pP 00 31 53.9 -3.3**
MOS *e* 00 32 07.4
MOS *e* 00 34 12.6
MOS *e*S **S 00 40 33.1 -5.9**
MOS *e**SS **pS 00 40 57.8 +1.8**
MOS *e* 00 41 33.9
MOS pmax pmax
comp=Z,200nm,0.9s
MOS pmax pmax
comp=Z,204nm,0.7s
MOS MLR MLR
comp=Z,400nm,20.0s
SKR Severo-Kuril's 68.20 37 *eP* **P 00 31 43.6 +0.2**
SKR *e* 00 32 06.7
SKR *e*S **S 00 40 44.6 +4.7**
SKR pmax pmax
comp=Z,25nm,1.0s
SKR pmax pmax
comp=Z,200nm,6.0s
SKR pmax pmax
comp=Z,400nm,8.8s
SKR MLR MLR
comp=Z,800nm,17.0s
SKR MLR MLR
comp=Z,500nm,17.0s
OBN Obninsk 68.42 328 P **P 00 31 44.6 -0.1**
comp=Z,19nm,0.6s,baz=95,slow=5.2,SNR=23
OBN pP **pP 00 31 58.5 -0.4**
comp=Z,33nm,1.1s,baz=99,slow=10,SNR=7.4
OBN Obninsk 68.42 328 ⇓P **P 00 31 44.8 0.0**
OBN Obninsk 68.42 328*c iP* **P 00 31 44.3 -0.4**
OBN *i* 00 31 58.8
OBN *i* 00 32 10.2
OBN *e* 00 34 17.8
OBN *i*S **S 00 40 38.0 -4.4**
OBN *e*SS **SS 00 45 03.0 -3.8**
OBN pmax pmax
comp=Z,263nm,1.7s
OBN MLR MLR
comp=Z,522nm,23.0s
OBN Obninsk 68.42 328 P **P 00 31 44.7 0.0**
ARG Arkhangelos 68.59 307 P **P 00 31 47.0 +0.8**
KULA Kula-Manisa 68.60 309 P **P 00 31 47.0 +0.7**
YER Yerkesik 68.63 308 P **P 00 31 46.8 +0.3**
MANT Manisa 68.67 309 P **P 00 31 46.6 -0.3**
ISK Istanbul-Kandi 68.82 312 P **P 00 31 47.9 +0.4**
MA2 Magadan 69.03 27 P **P 00 31 48.2 -0.3**
comp=Z,48nm,0.7s,baz=238,slow=6.9,SNR=9.4
MA2 Magadan 69.03 27*c iP* **P 00 31 48.2 -0.3**
MA2 pmax pmax
comp=Z,119nm,1.7s
MA2 MLR MLR
comp=Z,882nm,17.0s
MA2 Magadan 69.03 27 P **P 00 31 48.7 +0.2**
MA2 IAmb IAmb 00 31 49.3
comp=Z,64nm,0.7s
MA2 IAMs_20 IAMs_20 01 04 29.0
comp=Z,984nm,20.0s
LSZ Lusaka 69.16 252 *i* P **P 00 31 51.2 +0.9**
LSZ Lusaka 69.16 252 P **P 00 31 51.4 +1.2**
LSZ pmax pmax
comp=Z,81nm,1.0s
LSZ Lusaka 69.16 252 P **P 00 31 51.4 +1.2**
LSZ IAmb IAmb 00 31 52.6
comp=Z,81nm,1.0s
LSZ Lusaka 69.16 252 IAMs_20 IAMs_20 00 58 31.7
comp=Z,2µm,20.0s
LSZ Lusaka 69.16 252 *i* P **P 00 31 51.2 +0.9**
KARP Karpathos 69.25 306 P **P 00 31 50.4 0.0**
BODT Bodrum 69.38 308 P **P 00 31 51.3 +0.1**
NIS1 Nisyros Isl. 69.41 307 P **P 00 31 50.2 -1.1**
KLMR Klimovskoe 69.57 334*c iP* **P 00 31 51.4 -0.3**
KLMR *i* *PP **pP 00 32 04.2 -1.8**
KLMR *e* 00 34 28.2
KLMR pmax pmax
comp=Z,307nm,1.2s
KLMR Klimovskoe 69.57 334⇑ *iP* **P 00 31 51.5 -0.3**
KLMR *e*P **P 00 31 51.5 -0.3**
KLMR ⇓ *iP* **P 00 31 51.5 -0.3**
KLMR *i* pP **pP 00 32 04.2 -1.8**

KLMR AMP 00 32 07.1
comp=Z,307nm,1.2s
KLMR *e*PP **PP** **00 34 28.3 +2.3**
KLMR LQ LQ 00 57 51.7
KLMR LQ LQ 00 57 51.7
KLMR LR LR 01 03 02.6
BLWY Bulawayo 69.79 247 *i* P **P** **00 31 55.4 +1.3**
BLWY Bulawayo 69.79 247 *i* P **P** **00 31 55.4 +1.3**
JURR Jurilovca 69.79 316 ⇑P **P** **00 31 53.2 -0.2**
BLCB Balcova 69.82 309 P **P** **00 31 54.4 +0.6**
SMG Samos 69.86 308 P **P** **00 31 54.9 +0.8**
TLCR 69.93 316 ⇑P **P** **00 31 55.2 +0.9**
PETK Petropavlovsk- 69.94 35 ⇑P **P** **00 31 54.0 -0.3**
comp=Z,3.9nm,0.6s,baz=209,slow=2.7,SNR=4.9
PETK LR LR 01 03 02.5
comp=Z,981nm,21.9s,baz=234,slow=36
PETK Petropavlovsk- 69.94 35 P **P** **00 31 54.0 -0.3**
ZKR Zakros 69.95 306 P **P** **00 31 55.8 +1.1**
MATP Matopo 69.96 246 P **P** **00 31 55.8 +0.6**
comp=Z,78nm,0.8s,baz=61,slow=4.2,SNR=95
MFTR Murfatlar 69.97 315 ⇓P **P** **00 31 54.7 +0.1**
TIXI Tiksi 70.02 11*c i*P **P** **00 31 52.9 -1.4**
TIXI Tiksi 70.02 11 P **P** **00 31 53.3 -1.1**
TIRR Tirgusor 70.04 316 ⇓P **P** **00 31 55.4 +0.4**
TIRR Tirgusor 70.04 316 P **P** **00 31 55.6 +0.6**
TIRR pmax pmax
comp=Z,129nm,0.7s
TIRR Tirgusor 70.04 316 P **P** **00 31 55.6 +0.6**
TPGR Topolog 70.13 316 ⇓P **P** **00 31 56.1 +0.5**
CVDA Cernavoda 70.28 315 ⇓P **P** **00 31 56.6 +0.2**
TLBR Topalu 70.32 316 ⇓P **P** **00 31 57.3 +0.6**
MILM Milestii Mici 70.36 318 ⇓P **P** **00 31 56.8 -0.1**
KIS Kishinev 70.38 318 *e*P **P** **00 31 57.0 0.0**
KIS Kishinev 70.38 318 *e*PcP **PcP** **00 32 11.0 -7.3**
KIS Kishinev 70.38 318 *e*PP PP 00 34 45.0 +12
KIS *e*S **S** **00 41 02.0 -3.8**
KIS Kishinev 70.38 318 *e*P **P** **00 31 57.0 0.0**
KIS *e* 00 32 11.0
KIS *e*S **S** **00 41 02.0 -3.8**
KIS *e*PS **PnS** **00 41 26.0 -13**
ICOR Ion Corvin 70.39 315 ⇑P **P** **00 31 58.1 +1.0**
CFR Carcaliu 70.40 316 ⇓P **P** **00 31 57.8 +0.7**
HARR Harsova 70.43 316 ⇓P **P** **00 31 57.6 +0.2**
PET Petropavlovsk 70.46 35 *e*P **P** **00 31 56.8 -0.6**
PET *e**SP **pP** **00 32 09.7 -2.2**
PET *e*S **S** **00 41 07.1 +0.6**
PET pmax pmax
comp=Z,130nm,0.7s
PET pmax pmax
comp=Z,100nm,12.8s
PET MLR MLR
comp=Z,1µm,22.0s
PET Petropavlovsk 70.46 35 P **P** **00 31 57.3 -0.1**
PET IAmb IAmb 00 31 58.0
comp=Z,70nm,0.8s
NPS Neapolis 70.46 306 P **P** **00 31 59.1 +1.3**
PRD Provadia 70.48 314 *i* P **P** **00 31 58.3 +0.6**
ANAF Anafi Island 70.49 307 P **P** **00 31 58.2 +0.2**
LAST Lasithi 70.56 305 P **P** **00 31 59.5 +1.0**
PRK Paraskevi 70.56 310 P **P** **00 32 00.2 +1.9**
NEF NEVSHA 70.58 314 *i* P **P** **00 31 59.4 +1.0**
THR8 Santorini-Mono 70.73 307 P **P** **00 31 59.3 -0.1**
SANT Santorini 70.74 307 IAmb IAmb 00 32 15.0
comp=Z,141nm,1.0s
VARL Varlezi 70.76 317 ⇑P **P** **00 31 59.3 -0.1**
LHI Lord Howe Isla 70.77 126 P **P** **00 31 58.3 -1.3**
LHI IAmb IAmb 00 32 06.7
comp=Z,170nm,1.4s
SNT1 Gialos, Santor 70.78 307 P **P** **00 31 59.0 -0.6**
APE Apeiranthos 70.79 307 ⇑P **P** **00 31 59.5 -0.3**
APE Apeiranthos 70.79 307*de*P **P** **00 31 59.1 -0.7**
APE pmax pmax
comp=Z,31nm,0.9s
THR3 Thira Island, 70.80 307 P **P** **00 31 59.9 +0.1**
CMBO Columbo, Santo 70.80 307 P **P** **00 31 59.9 +0.1**
AMRR Amara 70.83 316 ⇓P **P** **00 32 01.3 +1.6**
SIGR SIGRI 70.88 310 P **P** **00 32 00.9 +0.7**
ENEZ Enez 70.92 311 P **P** **00 32 01.1 +0.7**
SORM Soroca 70.97 319 ⇓P **P** **00 32 00.2 -0.4**
GADA Gvkgeada 71.01 311 P **P** **00 32 01.7 +0.7**
IDI Anoyia 71.05 306 IAmb IAmb 00 32 17.9
comp=Z,86nm,0.8s
IDI Anoyia 71.05 306 P **P** **00 32 01.9 +0.4**
WAKE Wake Island 71.05 71 P **P** **00 32 01.0 -0.6**
SIVA Sivas 71.08 305 P **P** **00 32 02.5 +1.0**
AKASG Malin Array Be 71.09 322 P **P** **00 32 00.6 -0.7**
comp=Z,24nm,0.4s,baz=85,slow=5.3,SNR=99
AKASG pP **pP** **00 32 14.1 -1.3**
comp=Z,15nm,0.5s,baz=87,slow=4.9,SNR=7.5
AKASG PP **PP** **00 34 41.1 +1.7**
comp=Z,3.1nm,0.7s,baz=95,slow=7.4,SNR=4.9
AKASG S S 00 41 02.7 -11
comp=Z,0.2nm,0.4s,baz=97,slow=12,SNR=4.2
AKASG LR LR 01 09 05.4
comp=Z,196nm,18.2s,baz=95,slow=41
AKASG Malin Array Be 71.09 322 P **P** **00 32 00.7 -0.6**
AKASG pmax pmax
comp=Z,36nm,1.3s
AKASG Malin Array Be 71.09 322 P **P** **00 32 00.7 -0.6**
AKBB Malin Array Si 71.09 322 P **P** **00 32 00.3 -1.0**
AKBB pmax pmax
comp=Z,40nm,0.9s
AKBB MLR MLR
comp=Z,400nm,21.0s
AKBB Malin Array Si 71.09 322 P **P** **00 32 00.3 -1.0**
GHRR 71.10 317 ⇓P **P** **00 32 02.8 +1.4**
PETR Petresti 71.14 317 ⇓P **P** **00 32 02.5 +0.8**
RAZG Razgrad 71.19 314 ⇓P **P** **00 32 03.1 +1.0**
IAS Iasi 71.25 318 ⇑P **P** **00 32 02.2 -0.1**
ODBI Odobesti 71.27 317 ⇑P **P** **00 32 04.2 +1.8**
SEY Seymchan 71.30 24 P **P** **00 32 01.7 -0.6**
comp=Z,15nm,0.5s,baz=245,slow=3.6,SNR=27
SEY Seymchan 71.30 24 ⇓*j*P **P** **00 32 02.3 0.0**
SMTH Samothraki Isl 71.33 311 P **P** **00 32 03.3 +0.3**
RDO Rodhopi 71.45 317 P **P** **00 32 03.9 +0.3**
BISRR Bisoca 71.46 316 ⇓P **P** **00 32 05.1 +1.4**
LIA Limnos Island 71.50 310 P **P** **00 32 04.4 +0.4**
SZH Strazhica 71.54 314 *i* P **P** **00 32 01.4 -2.8**
PLOR Plostina 71.57 317 ⇓P **P** **00 32 04.8 +0.5**
DIM Dimitrovgrad 71.61 313 *i* P **P** **00 32 05.2 +0.6**
VAM Vamos 71.63 306 P **P** **00 32 06.2 +1.4**
SGRR Singureni 71.70 315 ⇑P **P** **00 32 06.3 +1.2**
TESR Tescani 71.71 317 ⇓P **P** **00 32 05.4 +0.3**
NEHR Nehoiu 71.72 316 ⇑P **P** **00 32 06.6 +1.3**
TMCR Tamitsa 71.76 337 *e*P **P** **00 32 03.2 -1.8**
TMCR pmax pmax
comp=Z,124nm,0.5s
SECR 71.80 316 ⇓P **P** **00 32 07.2 +1.5**
PLAR PLOIESTI 71.80 316 ⇓P **P** **00 32 07.3 +1.7**
IMMV Iera Moni Meta 71.81 306 P **P** **00 32 07.2 +1.3**
CASY Casey 71.83 173 P **P** **00 32 05.7 +0.4**
CASY Casey 71.83 173 IAMs_20 IAMs_20 00 56 26.5
comp=Z,2µm,21.0s
THAS Thassos island 71.97 311 P **P** **00 32 06.9 +0.1**
MLR Muntele Rosu 71.97 316 ⇑P **P** **00 32 08.0 +1.1**
MLR Muntele Rosu 71.97 316 P **P** **00 32 07.7 +0.8**
MLR pmax pmax
comp=Z,172nm,1.0s
MLR Muntele Rosu 71.97 316 P **P** **00 32 07.7 +0.8**
MLR IAmb IAmb 00 32 09.8
comp=Z,172nm,1.0s
KWAJ Kwajalein Atol 72.06 82 P **P** **00 32 06.0 -1.8**
KWAJ pmax pmax
comp=Z,279nm,1.3s
KWAJ Kwajalein Atol 72.06 82 P **P** **00 32 06.0 -1.8**
KYMI Kymi, Euboea I 72.14 309 P **P** **00 32 08.0 +0.1**
RZN Rozhen 72.15 312 *i* P **P** **00 32 08.5 +0.4**
BIZ Bicaz 72.17 318 ⇓P **P** **00 32 08.9 +1.0**
KAVA Kavala 72.18 311 P **P** **00 32 08.6 +0.5**
DION Dionisos Attik 72.19 308 P **P** **00 32 07.5 -0.7**
COPA Copaceanca 72.22 315 ⇑P **P** **00 32 08.6 +0.4**
VLY Voula,Athens 72.27 308 P **P** **00 32 08.1 -0.6**
ATH Athens Observa 72.35 308 P **P** **00 32 08.6 -0.5**
DOPR Dopca 72.45 317 ⇓P **P** **00 32 10.4 +0.7**
OUR Ouranopolis 72.48 311 P **P** **00 32 10.2 +0.4**
MTUR Matau 72.53 316 ⇓P **P** **00 32 10.1 -0.1**
STFAR Stefanesti-Arg 72.53 315 ⇓P **P** **00 32 11.2 +1.1**
VILL Villia 72.69 308 P **P** **00 32 10.3 -0.9**
PGB Panagyurishte 72.69 313 *i* P **P** **00 32 11.5 +0.3**
NVR Nevrokopi 72.73 312 P **P** **00 32 11.5 +0.1**
EPID Epidavros 72.77 308 P **P** **00 32 10.7 -1.0**
ARR Arges 72.86 316 ⇓P **P** **00 32 13.3 +1.2**

MMB Musomiste 72.86 312 *i* P **P** **00 32 12.1 -0.1**
SRS Serrai 72.89 311 P **P** **00 32 12.2 -0.1**
PLG Polygyros 72.89 311 P **P** **00 32 12.3 -0.1**
BURAR Bucovina Array 72.90 318 ⇑P **P** **00 32 13.6 +1.2**
BURAR Bucovina Array 72.90 318 P **P** **00 32 12.8 +0.4**
BUR08 Bucovina Ar. S 72.92 318 **P** **00 32 13.4 +1.0**
BUR08 IAmb IAmb 00 32 15.4
comp=Z,91nm,1.2s
MICGM Minsk 72.93 326⇓*e*P **P** **00 32 12.0 -0.2**
MICGM PM 00 32 13.0
comp=Z,0.6nm,1.0s
MICGM *e*pP **pP** **00 32 27.0 +0.7**
MICGM *e*PcP **sP** **00 32 38.0 +6.0**
MICGM *e*PP **PP** **00 34 50.0 -5.0**
MICGM *e*S **S** **00 41 30.0 -4.9**
MICGM *e*sS **sS** **00 41 59.0 +0.4**
MNK Minsk 72.93 326⇓*e*P **P** **00 32 12.0 -0.2**
MNK *e**PP **pP** **00 32 27.0 +0.7**
MNK *e*S **S** **00 41 30.0 -4.9**
MNK pmax pmax
comp=Z,600nm,1.0s
LTK Loutraki 72.94 308 P **P** **00 32 11.4 -1.3**
XOR Xorichti 72.94 310 P **P** **00 32 10.1 -2.6**
LKR Lokris 73.00 309 P **P** **00 32 11.8 -1.1**
SOH Sokhos 73.03 311 P **P** **00 32 12.2 -1.0**
MPEP Malo Peshtene 73.14 314 *i* P **P** **00 32 13.6 -0.1**
THAL Thalero 73.18 308 P **P** **00 32 13.4 -0.6**
HORT Hortiatis 73.19 311 P **P** **00 32 13.8 -0.3**
THE Thessaloniki 73.29 311 P **P** **00 32 13.9 -0.7**
PUL Pulkovo 73.30 331⇓*e*P **P** **00 32 14.9 +0.7**
PUL pmax pmax
comp=Z,156nm,0.6s
VLX Vlachokerasia 73.32 307 P **P** **00 32 14.7 -0.3**
DSF Desfina 73.33 309 P **P** **00 32 14.2 -0.8**
ARCR ARCALIA 73.37 318 ⇓P **P** **00 32 16.2 +1.2**
KKB Krupnik 73.38 312 *i* P **P** **00 32 15.1 -0.1**
VTS Vitosha 73.38 313 *i* P **P** **00 32 15.8 +0.4**
KNT Kendrikon 73.42 311 P **P** **00 32 15.1 -0.3**
GUR Goura 73.42 308 P **P** **00 32 14.8 -0.8**
TRIP Tripoli 73.43 308 P **P** **00 32 15.5 -0.1**
LOT Lotru 73.47 316 ⇓P **P** **00 32 16.3 +0.6**
AGGG Agios Georgios 73.56 309 P **P** **00 32 14.7 -1.6**
AGG pmax pmax
comp=Z,29nm,0.7s
AGG Agios Georgios 73.56 309 P **P** **00 32 14.7 -1.6**
LIT Litokhoron 73.58 310 P **P** **00 32 15.7 -0.7**
LIT pmax pmax
comp=Z,76nm,0.7s
LIT Litokhoron 73.58 310 P **P** **00 32 15.7 -0.7**
LIT IAmb IAmb 00 32 16.9
comp=Z,76nm,0.7s
LIT Litokhoron 73.58 310 P **P** **00 32 15.8 -0.7**
KLV Kalavryta, Ach 73.58 308 P **P** **00 32 15.8 -0.7**
LBTB Lobatse 73.62 242 *i* P **P** **00 32 18.5 +1.5**
LBTB Lobatse 73.62 242 P **P** **00 32 17.8 +0.8**
LBTB pmax pmax
comp=Z,130nm,0.8s
LBTB Lobatse 73.62 242 P **P** **00 32 17.8 +0.8**
LBTB IAmb IAmb 00 32 19.4
comp=Z,130nm,0.8s
LBTB Lobatse 73.62 242 *i* P **P** **00 32 18.5 +1.5**
KALE Kalithea 73.63 308 P **P** **00 32 15.9 -0.9**
NACGM Naroch 73.66 326 *e*P **P** **00 32 16.0 -0.5**
NACGM PM 00 32 18.0
comp=Z,0.4nm,1.0s
NACGM *e*S **SKiKP** **00 41 37.0 -5.0**
ITM Ithomi 73.66 307 P **P** **00 32 16.5 -0.4**
ITM IAmb IAmb 00 32 32.2
comp=Z,70nm,0.7s
TRIZ Trizonia 73.68 308 P **P** **00 32 15.3 -1.7**
MAKR Makrakomi, Fth 73.71 309 P **P** **00 32 16.3 -0.9**
IDID Didziasalis 73.79 326 *e*P **P** **00 32 18.1 +0.8**
CJR Cluj-Napoca 73.81 317 ⇑P **P** **00 32 19.1 +1.4**
ANX Ano Chora 73.83 309 P **P** **00 32 17.6 -0.4**
THL Klokotos Trika 73.87 310 P **P** **00 32 16.1 -2.0**
DRO Drossia 73.92 308 P **P** **00 32 18.7 +0.3**
EVR Evrytania 73.95 309 P **P** **00 32 18.1 -0.6**
STIP Stip 74.02 312 *i* P **P** **00 32 17.7 -1.3**
BMR Baia Mare 74.05 318 ⇓P **P** **00 32 20.5 +1.6**
IIGN Ignalina 74.08 326 *e*P **P** **00 32 19.8 +0.8**
LVV L'vov 74.12 320 *e*P **P** **00 32 20.3 +1.0**
LVV *e* 00 35 12.1
LVV *e* 00 36 49.8
LVV *e*S **S** **00 41 48.3 -0.2**
RLS Riolos of Patr 74.12 308 P **P** **00 32 19.5 0.0**
DEV Deva 74.14 316 ⇑P **P** **00 32 20.8 +1.3**
GZR Gura Zlata 74.15 316 ⇓P **P** **00 32 20.0 +0.3**
IZAR Zarasai 74.17 327 *e*P **P** **00 32 20.4 +0.9**
SANVU Saraoutou 74.19 107 P **P** **00 32 19.3 -1.0**
SANVU IAmb IAmb 00 32 32.0
comp=Z,76nm,1.0s
ISAL Salakas 74.19 327 *e*P **P** **00 32 20.1 +0.5**
HERR Herculane 74.32 315 ⇑P **P** **00 32 21.4 +0.8**
PDO Prodromos 74.40 309 P **P** **00 32 21.4 +0.2**
VSU Vasula 74.65 330 *e*P **P** **00 32 22.8 +0.6**
VSU Vasula 74.65 330*c i*P **P** **00 32 22.1 -0.1**
VSU pmax pmax
comp=Z,149nm,0.9s
LVZ Lovozero 74.71 340*c i*P **P** **00 32 22.2 -0.2**
LVZ pmax pmax
comp=Z,148nm,0.6s
LVZ Lovozero 74.71 340 P **P** **00 32 22.2 -0.2**
BOSA Boshof 74.78 239 P **P** **00 32 24.5 +0.8**
comp=Z,80nm,0.9s,baz=88,slow=4.8,SNR=126
BOSA LR LR 01 00 07.8
comp=Z,824nm,21.0s,baz=70,slow=32
BOSA Boshof 74.78 239 *i* P **P** **00 32 24.6 +1.0**
BOSA Boshof 74.78 239 P **P** **00 32 24.2 +0.3**
BOSA P **P** **00 32 24.2 +0.6**
BOSA IAmb IAmb 00 32 25.7
comp=Z,183nm,1.2s
BOSA Boshof 74.78 239 *i* P **P** **00 32 24.6 +1.0**
MDVR Moldovita 74.80 315 ⇓P **P** **00 32 23.4 0.0**
LKD2 Lefkada island 74.83 309 P **P** **00 32 23.8 +0.1**
KWP Kalwaria Pacla 74.92 320 *e*P **P** **00 32 24.9 +0.9**
KWP *e*sP **sP** **00 32 41.8 -2.1**
KWP *e*L L 01 08 13.7
comp=Z,258nm,27.7s
BZS Buzias 74.99 316 ⇑P **P** **00 32 24.6 +0.2**
APA Apatity 74.99 340 ⇑*i*P **P** **00 32 23.2 -0.8**
APA *i* 00 32 37.8
APA *i* S **S** **00 41 55.5 -2.6**
APA *i* SS **SS** **00 46 53.0 +6.1**
APA *i* SSS SSS 00 50 10.0
APA pmax pmax
comp=Z,81nm,0.6s
UZH Uzhgorod 75.02 319*d i*P **P** **00 32 25.2 +0.7**
UZH *e* 00 32 37.9
KOLS Kolonicke sedl 75.08 319 *e*P **P** **00 32 25.3 +0.4**
KOLS pmax pmax
comp=Z,87nm,0.9s
KOLS Kolonicke sedl 75.08 319 *e*P **P** **00 32 25.3 +0.4**
PHP Peshkopia 75.32 312 P **P** **00 32 25.7 -0.8**
PABE Paberze 75.37 326 *e*P **P** **00 32 26.9 +0.5**
SUW Suwalki 75.49 325 *e*P **P** **00 32 26.8 -0.3**
SUW *e*PcP **pP** **00 32 41.8 +0.4**
SUW *e*L L 01 11 10.6
comp=Z,389nm,20.6s
CRVS Cervenica-Dubn 75.60 319 *e*P **P** **00 32 29.2 +1.3**
CRVS pmax pmax
comp=Z,238nm,1.2s
CRVS Cervenica-Dubn 75.60 319 *e*P **P** **00 32 29.2 +1.3**
MAW Mawson 75.77 192 P **P** **00 32 29.9 +1.5**
comp=Z,15nm,0.6s,baz=19,slow=5.9,SNR=78
MAW LR LR 00 59 21.4
comp=Z,654nm,21.9s,baz=38,slow=30
MAW Mawson 75.77 192 P **P** **00 32 29.8 +1.5**
baz=76,SNR=55
FIA1 FINESS Array S 75.81 332 IAmb IAmb 00 32 44.4
comp=Z,96nm,0.8s
FINES FINESS Array B 75.81 332 P **P** **00 32 28.8 0.0**
comp=Z,46nm,0.5s,baz=99,slow=5.6,SNR=481
FINES pP **pP** **00 32 42.4 -0.5**
comp=Z,61nm,0.7s,baz=101,slow=6.8,SNR=13
FINES LR LR 01 09 25.6
comp=Z,444nm,21.4s,baz=112,slow=38
DIVS Divibare 75.93 314⇑*i*P **P** **00 32 30.1 +0.1**
KECS Kecovo 76.18 319 *e*P **P** **00 32 32.5 +1.3**
KECS pmax pmax
comp=Z,42nm,0.9s
KECS Kecovo 76.18 319 *e*P **P** **00 32 32.5 +1.3**
FRGS Fruska Gora 76.19 315⇑*i*P **P** **00 32 31.5 +0.1**

PDG Podgorica 76.28 312 ⇑P **P** **00 32 31.6 -0.3**
PDG Podgorica 76.28 312 *e*P **P** **00 32 31.6 -0.3**
PDG Podgorica 76.28 312 IAmb IAmb 00 32 48.7
comp=Z,79nm,1.0s
DRME Dracevica, Mon 76.30 312 *e*P **P** **00 32 31.7 -0.3**
TEKS Tekeris 76.31 315 *e*P **P** **00 32 32.1 0.0**
BBLS Lazići 76.32 314⇑*i*P **P** **00 32 32.9 +0.7**
NIE Niedzica 76.44 320 *e*P **P** **00 32 34.0 +1.3**
NIE *e*sP **pP** **00 32 48.9 +1.9**
NIE *e*L L 01 14 49.7
comp=Z,186nm,21.3s
PSZ Piszkesteto 76.49 318 ⇓P **P** **00 32 34.5 +1.4**
PSZ Piszkesteto 76.49 318 IAmb IAmb 00 32 35.2
comp=Z,101nm,1.0s
BEL Belsk 76.51 322 *e*P **P** **00 32 33.7 +0.8**
BEL *e*S **S** **00 42 12.8 -2.1**
BEL *e*L L 01 09 41.9
comp=Z,370nm,25.8s
PBUR Paburge 76.60 326 *e*P **P** **00 32 34.2 +0.8**
HAPS Han Pijesak,BI 76.67 314⇑*i*P **P** **00 32 34.4 +0.1**
BRY Bratogost 76.85 313⇑*i*P **P** **00 32 35.2 -0.1**
OJC Ojcow 76.88 320 *e*P **P** **00 32 35.8 +0.7**
OJC *e*sP **sP** **00 32 52.2 -2.8**
OJC *e*S **S** **00 42 17.9 -1.1**
OJC *e*L L 01 10 56.5
comp=Z,283nm,22.9s
LANS Liptovska Anna 76.94 319 *e*P **P** **00 32 37.3 +1.8**
LANS pmax pmax
comp=Z,32nm,1.2s
LANS Liptovska Anna 76.94 319 *e*P **P** **00 32 37.3 +1.8**
TREB Trebinje 76.97 313 *e*P **P** **00 32 35.9 +0.1**
VYHS Vyhne 77.27 319 *e*P **P** **00 32 38.2 +0.8**
VYHS pmax pmax
comp=Z,108nm,1.3s
VYHS Vyhne 77.27 319 *e*P **P** **00 32 38.2 +0.8**
STON Ston 77.46 313 *e*P **P** **00 32 38.1 -0.4**
SRO Srobarova 77.53 318 *e*P **P** **00 32 40.6 +1.8**
SRO pmax pmax
comp=Z,229nm,1.5s
SRO Srobarova 77.53 318 *e*P **P** **00 32 40.6 +1.8**
KOLL Kolacno 77.56 319 *e*P **P** **00 32 40.3 +1.3**
TARA Tarawa 77.80 90 IAMs_20 IAMs_20 00 55 29.9
comp=Z,1µm,18.0s
OKC Ostrava-Krasne 77.88 320 *e*P **P** **00 32 41.3 +0.6**
OKC *e* 00 32 57.4
OKC Ostrava-Krasne 77.88 320 *e*P **P** **00 32 41.3 +0.6**
OKC *e*sP **pP** **00 32 57.4 +2.4**
TIP Timpagrande 77.89 309 P **P** **00 32 41.4 +0.2**
KEV Kevo 77.98 341 P **P** **00 32 41.3 +0.4**
KEV pmax pmax
comp=Z,70nm,0.6s
KEV Kevo 77.98 341 P **P** **00 32 41.3 +0.4**
KEV IAmb IAmb 00 32 42.8
comp=Z,70nm,0.6s
BLY Banja Luka 78.00 315⇑*i*P **P** **00 32 42.3 +0.8**
MGRS Mrkonjic Grad 78.04 314 *e*P pP 00 32 56.4 +0.2
JAVC Velka Javorina 78.08 319 *e*P **P** **00 32 43.5 +1.6**
SMOL Smolenice 78.20 318 *e*P **P** **00 32 43.6 +1.1**
SMOL pmax pmax
comp=Z,17nm,1.1s
SMOL Smolenice 78.20 318 *e*P **P** **00 32 43.6 +1.1**
MORC Moravsky Berou 78.26 320 ⇑P **P** **00 32 44.1 +1.2**
MORC Moravsky Berou 78.26 320 *e*P **P** **00 32 43.9 +1.0**
MORC Moravsky Berou 78.26 320 IAmb IAmb 00 32 45.3
comp=Z,92nm,1.1s
MODS Modra-Piesok 78.28 318 *e*P **P** **00 32 43.0 0.0**
MODS pmax pmax
comp=Z,168nm,1.7s
MODS Modra-Piesok 78.28 318 *e*P **P** **00 32 43.0 0.0**
PRIJ Prijedor 78.35 315 *e*P **P** **00 32 43.9 +0.5**
ARCES ARCESS Array B 78.41 340 P **P** **00 32 43.9 +0.5**
comp=Z,53nm,0.4s,baz=92,slow=5.4,SNR=694
ARCES pP **pP** **00 32 57.1 -0.8**
comp=Z,331nm,1.3s,baz=67,slow=4.1,SNR=8.1
ARCES LR LR 01 10 33.3
comp=Z,948nm,21.5s,baz=105,slow=38
BEHE Becsehely 78.44 316⇑*i*P **P** **00 32 47.5 +3.6**
CEL Celeste 78.52 308 P **P** **00 32 45.2 +0.6**
CEL IAmb IAmb 00 32 47.6
comp=Z,68nm,0.9s
BILL Bilibino 78.56 21*c i*P **P** **00 32 43.5 -0.6**
BILL *e* 00 32 53.1
BILL *e* 00 35 42.8
BILL pmax pmax
comp=Z,55nm,1.3s
BILL MLR MLR
comp=Z,3µm,17.0s
KRLC Kraliky 78.78 320 *e*P **P** **00 32 47.2 +1.4**
KRLC *e* 00 33 03.0
KRLC Kraliky 78.78 320 *e*P **P** **00 32 47.2 +1.4**
KRLC *e*sP **sP** **00 33 03.0 -2.7**
KOGS Kog 78.80 316⇑*i*P **P** **00 32 46.2 +0.3**
comp=Z,249nm,0.9s
KOGS *j* pP **pP** **00 33 01.3 +1.0**
VRAC Vranov 78.83 319 ⇑P **P** **00 32 46.7 +0.7**
VRAC Vranov 78.83 319 *e*P **P** **00 32 46.4 +0.4**
GKP Gorka Klasztor 78.86 323 *e*P **P** **00 32 46.2 +0.2**
GKP *e*S **S** **00 42 40.8 +0.6**
GKP *e*L L 01 13 17.2
comp=Z,411nm,24.3s
ZAG Zagreb 78.93 316⇑*i*P **P** **00 32 47.5 +0.9**
KRUC Moravsky 78.94 319 *e*P **P** **00 32 47.1 +0.5**
KTK1 Kautokeino 79.04 340⇑*i*P **P** **00 32 47.0 +0.2**
DPC Dobruska-Polom 79.11 320 *e*P **P** **00 32 48.5 +1.0**
DPC *e* 00 33 04.4
DPC *e*S **S** **00 42 39.2 -3.9**
DPC MLR MLR
comp=Z,300nm,21.2s
DPC Dobruska-Polom 79.11 320 *e*P **P** **00 32 48.5 +1.0**
DPC *e*sP **pP** **00 33 04.4 +2.5**
DPC *e*S **S** **00 42 39.2 -3.9**
DPC AMS AMS 01 11 50.0
comp=Z,300nm,21.2s
KSP Ksiaz 79.17 321 *e*P **P** **00 32 49.0 +1.2**
KSP *e*sP **sP** **00 33 05.4 -2.4**
KSP *e*S **S** **00 42 43.7 0.0**
KSP *e*L L 01 14 03.2
comp=Z,444nm,21.1s
CONA Conrad Observa 79.19 318 *i* P **P** **00 32 49.3 +1.2**
comp=Z,42nm,1.1s,SNR=12
OSTC Ostas 79.19 320 *e*P **P** **00 32 49.1 +1.1**
OSTC *e*x x 00 33 04.8
OSTC *e*S **S** **00 42 42.4 -1.6**
CHVC Chvalec 79.30 320 *e*P **P** **00 32 49.5 +0.9**
CHVC *e*S **S** **00 42 42.9 -2.2**
CRES Cresnjev 79.30 316⇑*i*P **P** **00 32 49.4 +0.7**
UPC Upice 79.32 320 *e*P **P** **00 32 49.7 +1.1**
UPC MLR MLR
comp=Z,400nm,15.7s
UPC Upice 79.32 320 *e*P **P** **00 32 49.7 +1.1**
UPC AMS AMS 01 14 10.0
comp=Z,400nm,15.7s
HAMF Hammerfest 79.33 341 *e*P **P** **00 32 48.8 +0.5**
ARSA Arzberg 79.36 317 *i* P **P** **00 32 50.6 +1.6**
comp=Z,89nm,1.1s,SNR=24
SUR Sutherland 79.38 236 *i* P **P** **00 32 51.6 +2.0**
SUR Sutherland 79.38 236 P **P** **00 32 50.0 +0.4**
SUR IAmb IAmb 00 32 52.7
comp=Z,128nm,0.9s
SUR Sutherland 79.38 236 *i* P **P** **00 32 51.6 +2.0**
BOJS Bojanci 79.42 315⇑*i*P **P** **00 32 50.2 +0.9**
comp=Z,149nm,0.8s
BOJS *i* pP **pP** **00 33 04.3 +0.6**
TREC Trest 79.55 319 *e*P **P** **00 32 50.6 +0.6**
TREC Trest 79.55 319 *e*P **P** **00 32 50.6 +0.6**
SOKA Soboth 79.66 316 *i* P **P** **00 32 52.1 +1.4**
comp=Z,145nm,1.1s,SNR=30
TSUM Tsumeb 79.81 250 P **P** **00 32 52.4 +0.3**
LJU Ljubljana 79.96 316⇑*i*P **P** **00 32 53.5 +1.3**
LJU *j* pP **pP** **00 33 07.7 +1.0**
LJU Ljubljana 79.96 316⇑*i*P **P** **00 32 53.3 +1.1**
OBKA Obir 79.98 316 *i* P **P** **00 32 54.2 +1.8**
comp=Z,76nm,1.2s,SNR=7.7
CEY Cerknica 80.02 315⇑*i*P **P** **00 32 53.0 +0.4**
PRU Pruhonice 80.22 320 *e*P **P** **00 32 54.4 +0.9**
PRU *e* 00 33 05.1
PRU *e*S **S** **00 42 50.9 -3.9**
PRU MLR MLR
comp=Z,400nm,17.8s
PRU Pruhonice 80.22 320 *e*P **P** **00 32 54.4 +0.9**
PRU *e*pP **pP** **00 33 05.1 -2.8**
PRU *e*S **S** **00 42 50.9 -3.9**
PRU AMS AMS 01 14 30.0

comp=Z,400nm,17.8s
PVCC Panska Ves 80.24 320 AMS AMS 01 14 30.0
comp=Z,300nm,20.9s
MOA Molln 80.25 318 *i* P **P 00 32 55.0 +1.2**
comp=Z,31nm,0.9s,SNR=12
PRA Prague 80.29 320 *e*P **P 00 32 55.1 +1.2**
PRA *e* 00 33 10.2
PRA *e*S **S 00 42 53.9 -1.6**
PRA Prague 80.29 320 *e*P **P 00 32 55.1 +1.2**
PRA *e*SP **pP 00 33 10.2 +1.9**
PRA *e*S **S 00 42 53.9 -1.6**
BSD Bornholm Skovb 80.41 325 *i* P **P 00 32 54.4 0.0**
BSD pmax pmax
comp=Z,79nm,0.7s
BSD Bornholm Skovb 80.41 325 *i* P **P 00 32 54.4 0.0**
comp=Z,79nm,0.7s
BSD Bornholm Skovb 80.41 325 *i* P **P 00 32 54.5 0.0**
BSD *i* P **P 00 32 54.6 +0.2**
BSD IAmb IAmb 00 32 55.5
comp=Z,79nm,0.7s
CORL Corleone 80.54 307 P **P 00 32 55.9 +0.3**
CORL IAmb IAmb 00 33 04.9
comp=Z,123nm,0.9s
PBCC Pribram 80.55 319 *e*P **P 00 32 56.4 +1.1**
AQU L'Aquila 80.60 312⇑ *i*P **P 00 32 56.7 +0.9**
AQU L'Aquila 80.60 312 IAmb IAmb 00 32 57.9
comp=Z,87nm,0.9s
MYKA Terra Mystica 80.61 316 *i* P **P 00 32 56.9 +1.2**
comp=Z,30nm,0.7s,SNR=10
PRED Cave del Predi 80.65 316 IAmb IAmb 00 32 58.0
comp=Z,106nm,0.9s
BRG Berggiesshubel 80.66 321 *i* P **P 00 32 56.7 +0.9**
comp=Z,79nm,1.3s
BRG *i* sP **pP 00 33 12.0 +1.8**
comp=Z,48nm,1.1s
BRG *e*PP PP 00 35 50.2 -10
comp=Z,24nm,1.7s
BRG S **S 00 42 56.0 -3.4**
comp=N,354nm,23.1s
comp=E,243nm,21.7s
comp=Z,340nm,17.8s
BRG Berggiesshubel 80.66 321 *e*P **P 00 32 56.8 +0.9**
comp=Z,79nm,1.3s,baz=92,slow=5.2
TRO Tromso 80.67 340⇑ *i*P **P 00 32 55.3 -0.2**
LNIZ Loecknitz 80.69 323 *e*P **P 00 32 56.7 +0.8**
comp=Z,229nm,1.0s,baz=92,slow=5.2
GEC2 GERESS Array S 80.69 319 *e*P **P 00 32 57.2 +1.0**
comp=Z,116nm,0.9s,baz=92,slow=5.2
GEC2 GERESS Array S 80.69 319 IAmb IAmb 00 32 59.1
comp=Z,117nm,1.1s
GEC2B GERESS ARRAY S 80.69 319 P **P 00 32 57.8 +1.6**
GERES GERESS Array B 80.69 319 P **P 00 32 57.5 +1.3**
comp=Z,59nm,0.9s,baz=101,slow=5.7,SNR=257
GERES pP **pP 00 33 11.8 +1.2**
comp=Z,58nm,1.0s,baz=90,slow=5.3,SNR=14
GERES S **S 00 42 58.0 -2.1**
comp=Z,0.9nm,0.9s,baz=72,slow=10,SNR=5.8
GERES LR LR 01 14 30.6
comp=Z,102nm,20.3s,baz=89,slow=40
GERES GERESS Array B 80.69 319 P **P 00 32 56.3 +0.1**
HOPEN Hopen 80.72 347⇑ *i*P **P 00 32 56.2 +0.5**
KHC Kasperske Hory 80.79 319 *e*P **P 00 32 57.3 +0.7**
KHC *e* 00 33 12.8
KHC *e*S **S 00 42 57.5 -3.4**
KHC MLR MLR
comp=Z,400nm,24.4s
KHC Kasperske Hory 80.79 319 *e*P **P 00 32 57.3 +0.7**
KHC *ex* x 00 33 04.7
KHC *ex* x 00 33 12.8
KHC *e*S **S 00 42 57.5 -3.4**
KHC AMS AMS 01 13 20.0
comp=Z,400nm,24.4s
KBA Koelnbreinsper 80.83 317 *i* P **P 00 32 58.0 +0.9**
comp=Z,22nm,0.6s,SNR=10
RUE Ruedersdorf 80.87 322 *e*P **P 00 32 57.5 +0.6**
DCZ Deep Cove 81.02 137 P **P 00 32 57.2 -0.7**
FBE Freiberg 81.03 321 *e*P **P 00 32 59.0 +1.1**
comp=Z,88nm,1.1s,baz=92,slow=5.2
ZOU Zoufplan 81.06 316 IAmb IAmb 00 33 00.2
comp=Z,70nm,1.0s
STAL STALIGIAL 81.23 316 IAmb IAmb 00 33 00.8
comp=Z,81nm,0.7s
WET Wettzell 81.25 319 *e*P **P 00 32 59.9 +0.8**
comp=Z,80nm,1.3s,baz=92,slow=5.2
MURB Monte Urbino 81.27 313 IAmb IAmb 00 33 14.1
comp=Z,73nm,1.1s
CLL Collm 81.28 321 *i* P **P 00 32 59.5 +0.4**
comp=Z,49nm,1.2s
CLL *i* sP **pP 00 33 15.1 +1.6**
CLL *e*PP **PP 00 36 06.0 +0.9**
CLL *e*S **S 00 43 05.0 -0.8**
CLL *e*PS **PnS 00 43 57.0 -1.7**
CLL *e*SS **SS 00 48 24.0 +1.9**
CLL *e*SSS SSS 00 51 48.0
CLL *e* 00 55 06.0
CLL Lm MLR 01 15 00.0
comp=N,100nm,21.0s
CLL Lm MLR 01 15 00.0
comp=E,300nm,22.0s
CLL Lm MLR 01 15 00.0
comp=Z,300nm,21.3s
CLL Collm 81.28 321 *e*P **P 00 32 59.5 +0.4**
comp=Z,48nm,1.2s,baz=92,slow=5.2
CLL *e*pP **pP 00 33 15.2 +1.6**
RGN Rugen 81.29 324 P **P 00 32 59.8 +0.8**
RGN IAmb IAmb 00 33 16.2
comp=Z,168nm,1.2s
ABTA Abfaltersbach 81.39 316 *i* P **P 00 33 00.5 +0.5**
comp=Z,57nm,1.2s,SNR=7.9
N2IH Innhavet 81.46 338⇑ *i*P **P 00 32 59.9 +0.2**
N2ST Straumen 81.50 337 *e*P **P 00 33 00.6 +0.7**
NKC Novy Kostel 81.58 320 *e*P **P 00 33 02.2 +1.4**
NKC Novy Kostel 81.58 320 *e*P **P 00 33 02.2 +1.4**
TANN Tannenbergstha 81.58 320 *e*P **P 00 33 01.6 +0.7**
comp=Z,80nm,1.3s,baz=92,slow=5.2
FAUS Fauske 81.62 337⇑ *i*P **P 00 33 00.9 +0.3**
WERN Wernitzgruen 81.62 320 *e*P **P 00 33 01.9 +0.8**
comp=Z,36nm,1.2s,baz=92,slow=5.2
MLZ Mavora Lakes 81.65 137 P **P 00 33 00.7 -0.6**
GUNZ Gunzen 81.66 320 *e*P **P 00 33 02.1 +0.8**
comp=Z,53nm,1.2s,baz=92,slow=5.2
WHZ Wether Hill Ro 81.67 138 P **P 00 33 00.4 -1.0**
WERD Werda 81.68 320 *e*P **P 00 33 02.0 +0.6**
comp=Z,48nm,1.3s,baz=92,slow=5.2
N2TV TVrnvik 81.71 338 *e*P **P 00 33 01.6 +0.5**
ROTZ Rotzenmuhle 81.71 319 *e*P **P 00 33 02.6 +1.1**
comp=Z,63nm,1.2s,baz=92,slow=5.2
ROTZ *e*pP **pP 00 33 18.4 +2.5**
STEI Steigen 81.71 338⇑ *i*P **P 00 33 01.1 +0.1**
PLN Plauen 81.77 320 *e*P **P 00 33 02.4 +0.6**
comp=Z,41nm,1.3s,baz=92,slow=5.2
MANZ Manzenberg 81.78 320 *e*P **P 00 33 03.1 +1.2**
comp=Z,98nm,1.2s,baz=92,slow=5.2
LATE Laterza 81.78 312 IAmb IAmb 00 33 18.3
comp=Z,60nm,1.0s
MOR8 Moi Rana 81.81 336⇑ *i*P **P 00 33 01.3 -0.3**
COP Copenhagen 81.87 325 *i* P **P 00 33 03.1 +1.0**
COP Copenhagen 81.87 325 *i* P **P 00 33 03.1 +1.0**
COP Copenhagen 81.87 325 *i* P **P 00 33 03.2 +1.0**
TEOL Teolo 81.94 315 IAmb IAmb 00 33 04.7
comp=Z,51nm,0.9s
CTI Castel Tesino 81.97 316 P **P 00 33 03.7 +0.7**
CTI pmax pmax
comp=Z,115nm,0.8s
CTI Castel Tesino 81.97 316 P **P 00 33 03.7 +0.7**
CTI IAmb IAmb 00 33 05.3
comp=Z,115nm,0.8s
WTTA Wattenberg 82.01 317 *e*P **P 00 33 03.5 +0.1**
comp=Z,57nm,0.5s,SNR=21
NEUB Neuenburg 82.04 321 *e*P **P 00 33 03.7 +0.5**
comp=Z,68nm,1.1s,baz=92,slow=5.2
WATA Walderalm 82.05 317 *i* P **P 00 33 04.1 +0.5**
comp=Z,36nm,0.5s,SNR=17
WKZ Wanaka 82.12 136 P **P 00 33 03.6 -0.2**

MOX Moxa 82.12 320 *e*P **P 00 33 04.4 +0.8**
comp=Z,63nm,1.4s,baz=92,slow=5.2
N2VI Vinje 82.15 338 *e*P **P 00 33 03.2 -0.1**
NBB30 Finnes 82.17 337 *e*P **P 00 33 04.0 +0.5**
FUR Furstenfeldbru 82.27 318 *e*P **P 00 33 04.8 +0.3**
baz=92,slow=5.2
SQTA Sankt Quirin 82.30 317 *i* P **P 00 33 05.5 +0.7**
comp=Z,63nm,0.5s,SNR=27
GRA1 Grafenberg Arr 82.35 319 IAmb IAmb 00 33 07.3
comp=Z,49nm,0.8s
GRF Grafenberg Arr 82.35 319 *e*P **P 00 33 06.0 +1.1**
comp=Z,82nm,1.1s,baz=92,slow=5.2
GRF *e*pP **pP 00 33 20.3 +1.0**
FOZ Fox Glacier 82.35 135 P **P 00 33 04.2 -0.7**
MOTA Moosalm 82.37 317 *e*P **P 00 33 05.2 0.0**
comp=Z,120nm,1.4s,SNR=26
KONS Konsvik 82.37 336 *e*P **P 00 33 05.0 +0.4**
LOF Lofoten 82.37 338⇑ *i*P **P 00 33 04.8 +0.2**
ZCCA Zocca 82.41 314 P **P 00 33 06.8 +1.4**
ZCCA IAmb IAmb 00 33 13.0
comp=Z,101nm,0.9s
N2SV S rvWgen 82.55 338⇑ *i*P **P 00 33 04.9 -0.5**
NC405 NORSAR Array S 82.57 331 P **P 00 33 05.9 +0.2**
RETA Reutte 82.61 317 *i* P **P 00 33 06.8 +0.5**
comp=Z,65nm,0.5s,SNR=22
FETA Feichten 82.62 317 *i* P **P 00 33 07.1 +0.6**
comp=Z,30nm,0.6s,SNR=14
NC602 NORSAR Array S 82.63 331 P **P 00 33 05.7 -0.4**
NC602 NORSAR Array S 82.63 331⇑ *i*P **P 00 33 06.4 +0.3**
N2VA Vr_y 82.65 338⇑ *i*P **P 00 33 05.5 -0.4**
AMKA Amchitka 82.65 39 P **P 00 33 05.9 -0.4**
NSS Namsos 82.68 334⇑ *i*P **P 00 33 06.3 +0.1**
NC605 NORSAR Array S 82.70 331 P **P 00 33 06.9 +0.5**
NC605 IAmb IAmb 00 33 22.1
comp=Z,93nm,1.0s
ASSE Asse, Remlinge 82.76 322 *e*P **P 00 33 07.4 +0.6**
comp=Z,61nm,1.2s,baz=92,slow=5.2
ASSE *e*pP **pP 00 33 22.5 +1.3**
NB201 NORSAR Array S 82.77 331 IAmb IAmb 00 33 22.0
comp=Z,139nm,1.2s
SYO Syowa Base 82.80 197⇑ *e*P **P 00 33 05.1 -1.5**
SYO Syowa Base 82.80 197⇑ *i*PcP **PcP 00 33 12.7 +1.3**
SYO Syowa Base 82.80 197⇑ *i*pP pP 00 33 19.4 -1.6
NB2 NORSAR Subarra 82.81 331 P **P 00 33 06.7 -0.4**
comp=Z,96nm,1.1s,baz=97,slow=4.8
NB2 NORSAR Subarra 82.81 331 P **P 00 33 06.7 -0.4**
baz=97,slow=4.8
NOA NORSAR Array B 82.81 331 P **P 00 33 06.7 -0.4**
comp=Z,17nm,0.8s,baz=98,slow=5.3,SNR=44
NOA pP **pP 00 33 20.1 -1.2**
comp=Z,3.3nm,0.9s,baz=125,slow=23,SNR=4.3
NOA PP **PP 00 36 21.6 +4.0**
comp=Z,4.3nm,0.8s,baz=89,slow=7.6,SNR=5.0
NOA LR LR 01 13 15.9
comp=Z,504nm,21.4s,baz=115,slow=38
LBZ Lake Benmore 82.82 136 P **P 00 33 06.6 -0.7**
N2RO R_st 82.85 337⇑ *i*P **P 00 33 06.8 -0.2**
PRMA PARMA 82.89 314 P **P 00 33 08.8 +1.1**
PRMA IAmb IAmb 00 33 10.8
comp=Z,107nm,1.2s
FUORN Ofenpass-Fuorn 82.94 316 IAmb IAmb 00 33 11.3
comp=Z,50nm,0.8s
CLZ Clausthal 82.94 322 *e*P **P 00 33 08.6 +0.7**
comp=Z,72nm,1.2s,baz=92,slow=5.2
CLZ *e*pP **pP 00 33 24.1 +1.8**
HSPB Hornsund (broa 82.96 347 *e*P **P 00 33 07.3 -0.1**
HSPB *e*L L 01 09 41.0
comp=Z,1μm,29.3s
HSPB Hornsund (broa 82.96 347⇑ *i*P **P 00 33 07.5 +0.1**
SPB1 Spitsbergen Ar 82.97 348 P **P 00 33 07.1 -0.4**
SPB2 Spitsbergen Ar 82.97 348 P **P 00 33 07.7 +0.2**
SPA2 Spitsbergen Ar 82.98 348 P **P 00 33 07.6 0.0**
SPA0 Spitsbergen Ar 82.98 348⇑ *i*P **P 00 33 07.4 -0.1**
SPA1 Spitsbergen Ar 82.98 348 P **P 00 33 07.0 -0.6**
SPB3 Spitsbergen Ar 82.98 348 P **P 00 33 07.7 +0.1**
SPB3 IAmb IAmb 00 33 25.7
comp=Z,159nm,1.2s
SPB5 Spitsbergen Ar 82.98 348 P **P 00 33 07.0 -0.6**
SPA3 Spitsbergen Ar 82.98 348 P **P 00 33 06.9 -0.7**
SPB4 Spitsbergen Ar 82.98 348 P **P 00 33 07.0 -0.6**
OSL Oslo 83.00 330 *e*P **P 00 33 09.3 +1.3**
BSEG Bad Segeberg 83.02 324 *e*P **P 00 33 09.1 +0.9**
comp=Z,123nm,1.2s,baz=92,slow=5.2
NBO00 NORSAR Array S 83.02 331 P **P 00 33 07.7 -0.4**
NC204 NORSAR Array S 83.04 331 IAmb IAmb 00 33 24.2
comp=Z,145nm,1.1s
UBR Ueberruh 83.05 317 *e*P **P 00 33 08.7 0.0**
comp=Z,39nm,0.9s,baz=92,slow=5.2
NRDL Niedersach Rie 83.11 322 *e*P **P 00 33 09.9 +1.2**
comp=Z,119nm,1.4s,baz=92,slow=5.2
UBBA Unterbreizbach 83.15 320 *e*P **P 00 33 09.9 +1.0**
comp=Z,38nm,1.6s,baz=92,slow=5.2
UBBA *e*pP **pP 00 33 25.2 +1.9**
GTTG Gottingen 83.19 321 *e*P **P 00 33 09.9 +0.7**
comp=Z,69nm,1.2s,baz=92,slow=5.2
DAVA Damuels 83.20 317 *i* P **P 00 33 10.8 +1.2**
comp=Z,77nm,1.0s,SNR=12
RPZ Rata Peaks 83.27 135 P **P 00 33 09.5 -0.2**
TBLU Trondheim 83.36 333 *e*P **P 00 33 10.3 +0.6**
OUZ Omahuta 83.45 126 IAMs_20 IAMs_20 01 08 48.1
comp=Z,891nm,20.0s
MSSA Maissana 83.46 314 IAmb IAmb 00 33 11.9
comp=Z,67nm,1.1s
SKMB Sankelmark Bun 83.55 324 *e*P **P 00 33 12.3 +1.4**
comp=Z,372nm,1.6s,baz=92,slow=5.2
KONO Kongsberg 83.56 329 P **P 00 33 11.5 +0.7**
KONO pmax pmax
comp=Z,185nm,1.4s
KONO Kongsberg 83.56 329 P **P 00 33 11.5 +0.7**
KONO Kongsberg 83.56 329⇑ *i*P **P 00 33 11.6 +0.7**
TUE Stuetta 83.57 316 IAmb IAmb 00 33 16.3
comp=Z,42nm,0.9s
VSL Villasalto 83.62 309 IAmb IAmb 00 33 28.9
comp=Z,60nm,1.0s
QRZ Quartz Range 83.71 132 P **P 00 33 12.4 +0.4**
QRZ IAmb IAmb 00 33 30.7
comp=Z,86nm,1.3s
QRZ IAMs_20 IAMs_20 01 07 10.7
comp=Z,1μm,20.0s
MUD Monsted U'grnd 83.72 326 *i* P **P 00 33 12.5 +0.8**
MUD pmax pmax
comp=Z,55nm,0.8s
MUD Monsted U'grnd 83.72 326 *i* P **P 00 33 12.5 +0.8**
comp=Z,55nm,0.8s
MUD Monsted U'grnd 83.72 326 *i* P **P 00 33 12.6 +0.8**
MUD IAmb IAmb 00 33 14.0
comp=Z,55nm,0.8s
KEST Kesra 83.72 305 P **P 00 33 13.7 +1.3**
comp=Z,55nm,0.8s,baz=176,slow=1.2,SNR=27
KEST Kesra 83.72 305 P **P 00 33 13.1 +0.8**
KEST IAmb IAmb 00 33 14.8
comp=Z,56nm,0.8s
DOMB Dombas 83.88 332 *e*P **P 00 33 13.0 +0.5**
HOMB Homborsund 84.10 328 *e*P **P 00 33 15.1 +1.4**
HOMB Homborsund 84.10 328 *i* P **P 00 33 15.1 +1.4**
TNS Taunus Mts 84.14 320 *e*P **P 00 33 14.9 +0.7**
comp=Z,40nm,1.0s,baz=92,slow=5.2
THZ Tophouse 84.18 133 P **P 00 33 14.2 -0.3**
THZ IAmb IAmb 00 33 25.6
comp=Z,30nm,0.7s
SKAR Skarslia 84.22 330⇑ *i*P **P 00 33 15.5 +1.2**
BFO Black Forest 84.24 318 P **P 00 33 14.7 +0.1**
BFO pmax pmax
comp=Z,32nm,0.7s
BFO Black Forest 84.24 318 *e*P **P 00 33 14.8 +0.1**
comp=Z,40nm,0.8s,baz=92,slow=5.2
BFO Black Forest 84.24 318 P **P 00 33 14.7 +0.1**
BFO IAmb IAmb 00 33 16.1
comp=Z,32nm,0.7s
NNZ Nelson 84.42 132 IAMs_20 IAMs_20 01 11 08.4
comp=Z,951nm,19.0s
IBBN Ibbenburen 84.55 322 *e*P **P 00 33 16.9 +0.8**
comp=Z,137nm,1.3s,baz=92,slow=5.2
MOL Molde 84.59 332⇑ *i*P **P 00 33 17.3 +1.3**
SNART Snartemo 84.78 328⇑ *i*P **P 00 33 18.7 +1.6**
SNART Snartemo 84.78 328 *i* P **P 00 33 18.3 +1.2**
BUG Bochum--Univer 84.87 321 *e*P **P 00 33 18.4 +0.7**
comp=Z,97nm,1.3s,baz=92,slow=5.2
SENIN Lac Senin/Sane 84.99 316 IAmb IAmb 00 33 21.6
comp=Z,45nm,0.8s
AHRW Bad Neuenahr-A 85.02 320 *e*P **P 00 33 19.6 +1.1**
comp=Z,45nm,1.0s,baz=92,slow=5.2
ECH Echery 85.03 318 P **P 00 33 18.3 -0.3**
ECH pmax pmax
comp=Z,25nm,0.9s

ECH Echery 85.03 318 P **P 00 33 18.3 -0.3**
ODD1 Odda 85.06 330⇑ *i*P **P 00 33 19.7 +1.1**
ADK Adak 85.15 38 P **P 00 33 18.9 -0.2**
ADK pmax pmax
comp=Z,80nm,0.9s
ADK Adak 85.15 38 P **P 00 33 18.9 -0.2**
ADK IAmb IAmb 00 33 19.1
comp=Z,80nm,0.9s
BLS5 Blasjo 85.16 329 *e*P **P 00 33 20.4 +1.4**
HYA Hoyanger 85.25 331 *e*P **P 00 33 20.6 +1.3**
BNI Bardonecchia 85.47 315 IAmb IAmb 00 33 27.6
comp=Z,29nm,0.9s
BTNL Ternell 85.62 320 PcP **P 00 33 22.6 +1.1**
WLF Walferdange 85.64 319 PcP **P 00 33 23.1 +1.5**
WLF Walferdange 85.64 319 P **P 00 33 22.0 +0.4**
WLF pmax pmax
comp=Z,37nm,1.0s
WLF Walferdange 85.64 319 *e*P **P 00 33 22.7 +1.1**
comp=Z,71nm,1.3s,baz=92,slow=5.2
WLF Walferdange 85.64 319 P **P 00 33 22.0 +0.4**
WLF IAmb IAmb 00 33 24.1
comp=Z,37nm,1.0s
BER Bergen 85.69 330 *e*P **P 00 33 23.1 +1.5**
MEM Membach 85.69 320 PcP **P 00 33 22.8 +1.0**
MEM pP **pP 00 33 33.3 -3.0**
MEM sP **sP 00 33 37.9 -4.0**
ASK Askoy 85.76 330⇑ *i*P **P 00 33 23.4 +1.5**
FOO Floro 85.79 331 *e*P **P 00 33 23.3 +1.3**
SUE Sulen 85.95 331 *e*P **P 00 33 24.2 +1.4**
BCLA Clavier 86.15 320 PcP **P 00 33 25.7 +1.6**
BCLA pP **pP 00 33 36.5 -2.1**
BCLA sP **sP 00 33 41.1 -3.0**
BKZ Black Stump Fm 86.41 130 IAmb IAmb 00 33 36.0
comp=Z,32nm,0.8s
BMRD Maredsous 86.50 320 PcP **P 00 33 27.0 +1.2**
DOU Dourbes 86.62 320 PcP **P 00 33 27.6 +1.2**
ATKA Atka Island 86.67 38 P **P 00 33 26.5 -0.1**
ATKA IAmb IAmb 00 33 27.4
comp=Z,55nm,0.7s
UCC Uccle 86.73 321 P **P 00 33 26.3 -0.6**
UCC pmax pmax
comp=Z,10.0nm,0.6s
UCC Uccle 86.73 321 P **P 00 33 26.2 -0.6**
URZ Urewera 86.74 129 IAmb IAmb 00 33 42.4
comp=Z,33nm,0.9s
SNF Seneffe 86.80 320 PcP **P 00 33 28.4 +1.2**
SSB Saint Sauveur 86.96 315 P **P 00 33 28.8 +0.5**
SSB pmax pmax
comp=Z,35nm,0.9s
SSB Saint Sauveur 86.96 315 P **P 00 33 28.8 +0.5**
SSB IAmb IAmb 00 33 30.1
comp=Z,35nm,0.9s
GAMB Gambell 87.13 26 IAmb IAmb 00 33 29.5
comp=Z,47nm,0.7s
GAMB IAMs_20 IAMs_20 01 14 36.4
comp=Z,2μm,22.0s
TAM Tamanrasset 87.72 293 P **P 00 33 33.3 +0.7**
TAM pmax pmax
comp=Z,25nm,1.1s
TAM Tamanrasset 87.72 293 P **P 00 33 33.2 +0.7**
CLF Chambon-Foret 88.31 318 P **P 00 33 34.4 -0.2**
CLF IAmb IAmb 00 33 36.8
comp=Z,59nm,0.8s
NOR Nord 88.36 352 *i* P **P 00 33 33.7 -0.5**
NOR *i* 00 33 46.8
NOR pmax pmax
comp=Z,38nm,0.9s
NOR Nord 88.36 352 *i* P **P 00 33 33.7 -0.5**
comp=Z,38nm,0.9s
NOR *i* 00 33 46.8
NOR Nord 88.36 352 *i* P **P 00 33 33.8 -0.5**
NOR IAmb IAmb 00 33 34.8
comp=Z,38nm,0.9s
NOR *i* 00 33 46.9
TNA Tin City 88.54 24 P **P 00 33 35.4 +0.1**
baz=278
TNA Tin City 88.54 24 P **P 00 33 34.6 -0.7**
TNA IAmb IAmb 00 33 37.2
comp=Z,31nm,0.8s
ANM Nome 89.77 25 P **P 00 33 41.2 +0.1**
ANM pmax pmax
comp=Z,84nm,1.4s
ANM Nome 89.77 25 P **P 00 33 41.2 +0.1**
ANM IAmb IAmb 00 33 42.5
comp=Z,84nm,1.4s
VNDA Vanda 89.79 168 P **P 00 33 41.6 +0.7**
comp=Z,8.9nm,0.8s,baz=297,slow=4.8,SNR=45
NIKH Nikolski High 89.84 37 P **P 00 33 41.2 -0.4**
RDOG Red Dog Mine 90.03 22 IAmb IAmb 00 33 44.2
comp=Z,30nm,0.6s
DAG Danmarks Havn 90.62 348⇑ *i*P **P 00 33 44.1 -0.7**
DAG pmax pmax
comp=Z,17nm,0.7s
DAG Danmarks Havn 90.62 348⇑ *i*P **P 00 33 44.1 -0.7**
comp=Z,17nm,0.7s
DAG Danmarks Havn 90.62 348⇑ *i*P **P 00 33 44.1 -0.7**
DAG IAmb IAmb 00 33 44.9
comp=Z,17nm,0.7s
ESK Eskdalemuir 90.75 326 P **P 00 33 46.6 +0.8**
ESK pmax pmax
comp=Z,79nm,1.3s
ESK Eskdalemuir 90.75 326 P **P 00 33 46.6 +0.8**
ESK IAmb IAmb 00 33 48.0
comp=Z,79nm,1.2s
A21K Barrow 91.24 18 P **P 00 33 48.5 +0.7**
baz=289
A21K Barrow 91.24 18 P **P 00 33 48.1 +0.3**
A21K IAMs_20 IAMs_20 01 21 07.6
comp=Z,996nm,19.0s
CART Cartagena 91.87 308 P **P 00 33 49.5 -1.9**
CART IAmb IAmb 00 33 50.8
comp=Z,50nm,1.2s
TORD Torodi Ar. Bea 92.18 283 P **P 00 33 54.0 +0.7**
comp=Z,10.0nm,0.8s,baz=80,slow=5.1,SNR=53
TORD pP **pP 00 34 08.4 +0.6**
comp=Z,9.7nm,1.0s,baz=80,slow=5.0,SNR=9.9
TORD PP **PP 00 37 36.1 +2.0**
comp=Z,3.8nm,1.0s,baz=82,slow=6.9,SNR=5.2
TORD PKKPbc **PKKPbc 00 51 10.4 +1.8**
comp=Z,0.3nm,0.5s,baz=296,slow=3.2,SNR=4.3
TORD LR LR 01 14 17.9
comp=Z,295nm,19.8s,baz=85,slow=35
TORD Torodi Ar. Bea 92.18 283 P **P 00 33 54.0 +0.7**
NVL N'lazarevskaya 92.30 199 *e*P **P 00 33 53.9 +1.3**
NVL *e*S **SKSac 00 44 21.9 +0.6**
NVL pmax pmax
comp=Z,17nm,0.8s
KNTN Kanton 93.44 92 P **P 00 33 58.5 -0.6**
KNTN IAmb IAmb 00 34 02.6
comp=Z,36nm,0.9s
ESBB Sonseca Array 93.86 310 P **P 00 34 00.7 +0.1**
ESDC Sonseca Array 93.86 310 P **P 00 34 01.8 +1.1**
comp=Z,6.1nm,0.8s,baz=59,slow=4.0,SNR=55
ESDC LR LR 01 21 23.0
comp=Z,92nm,19.1s,baz=90,slow=39
ESDC Sonseca Array 93.86 310 P **P 00 34 01.8 +1.1**
PAB San Pablo 94.18 310 P **P 00 34 03.3 +1.1**
PAB pmax pmax
comp=Z,9.0nm,0.9s
PAB San Pablo 94.18 310 P **P 00 34 03.3 +1.1**
TTA Tatalina 94.21 26 P **P 00 34 02.2 +0.4**
TTA pmax pmax
comp=Z,17nm,1.1s
TTA Tatalina 94.21 26 P **P 00 34 02.2 +0.4**
TTA IAMs_20 IAMs_20 01 20 30.5
comp=Z,765nm,20.0s
TOLK Toolik Lake Re 94.50 19 P **P 00 34 03.4 +0.4**
baz=295
TOLK Toolik Lake Re 94.50 19 P **P 00 34 03.8 +0.9**
TOLK IAmb IAmb 00 34 05.7
comp=Z,34nm,0.7s
QSPA South Pole Qui 94.76 180 P **P 00 34 04.0 -0.2**
comp=Z,5.7nm,0.8s,baz=295,slow=1.4,SNR=19
QSPA South Pole Qui 94.76 180 P **P 00 34 05.0 +0.8**
CNBA Chernabura Isl 94.84 34 P **P 00 34 04.8 +0.2**
COLD Coldfoot 94.89 21 P **P 00 34 05.3 +0.6**
baz=295
SVW2 Sparrevohn 95.01 27 P **P 00 34 04.8 -0.5**
SVW2 IAMs_20 IAMs_20 01 22 22.0
comp=Z,609nm,19.0s
MLY Manley 95.60 23 P **P 00 34 08.4 +0.3**
baz=294
PPLA Purkeypile 95.86 25 P **P 00 34 08.4 -1.0**
PPLA IAMs_20 IAMs_20 01 23 49.0
comp=Z,699nm,19.0s

BPAW	**Bear Paw Mtn.** comp=Z,21nm,0.7s	95.88	24	IAmb	IAmb	00 34 14.5		
I23K	**Minto, Yukon-K** baz=295	96.08	23	P	**P**	**00 34 10.3**	**+0.2**	
I23K	**Minto, Yukon-K** comp=E,634nm,18.0s	96.08	23	IAMs_20	IAMs_20	01 22 35.7		
KTH	**Kantishna Hill** comp=Z,848nm,19.0s	96.13	24	IAMs_20	IAMs_20	01 23 15.0		
TRF	**Thorofare Moun** comp=Z,970nm,19.0s	96.43	24	IAMs_20	IAMs_20	01 22 34.7		
NEA2	**Nenana** baz=296	96.43	23	P	**P**	**00 34 12.1**	**+0.3**	
BWN	**Browne** comp=Z,942nm,19.0s	96.46	23	IAMs_20	IAMs_20	01 23 40.5		
SKT	**Skwentna** comp=Z,32nm,1.1s	96.50	26	IAmb	IAmb	00 34 12.8		
SKT	comp=E,780nm,19.0s			IAMs_20	IAMs_20	01 24 00.9		
MDM	**Murphy Dome** comp=E,11nm,0.7s	96.59	23	IAmb	IAmb	00 34 16.3		
MDM	comp=E,672nm,18.0s			IAMs_20	IAMs_20	01 22 52.3		
TCOL	**CIGO, UAF Yank** comp=E,719nm,18.0s	96.77	23	IAMs_20	IAMs_20	01 22 58.1		
COLA	**College**	96.78	23	*e*P	**P**	**00 34 12.8**	**-0.5**	
COLA	comp=E,3.0nm,0.8s			pmax	pmax			
COLA	**College** comp=E,689nm,19.0s	96.78	23	IAMs_20	IAMs_20	01 22 58.1		
POKR	**Poker Plat Res** baz=297	96.83	22	P	**P**	**00 34 13.1**	**-0.5**	
POKR	**Poker Plat Res** comp=Z,993nm,18.0s	96.83	22	P	**P**	**00 34 13.4**	**-0.2**	
POKR				IAMs_20	IAMs_20	01 24 16.4		
MCK	**McKinley** baz=296	96.86	24	P	**P**	**00 34 13.3**	**-0.5**	
WRH	**Wood River Hil** comp=Z,677nm,22.0s	96.87	23	IAMs_20	IAMs_20	01 20 09.5		
CUT	**Chulitna** baz=294	96.87	25	P	**P**	**00 34 13.5**	**-0.3**	
CCB	**Clear Creek Bu** comp=Z,695nm,22.0s	96.90	23	IAMs_20	IAMs_20	01 19 48.4		
FYU	**Fort Yukon**	96.94	20	P	**P**	**00 34 15.0**	**+1.0**	
FYU	comp=E,12nm,0.7s			IAmb	IAmb	00 34 17.2		
SUA	**Susitna One** comp=Z,567nm,20.0s	97.05	26	IAMs_20	IAMs_20	01 17 40.4		
SNAA	**Sanae**	97.05	198	P	Pdif	00 34 15.6	+1.0	
SNAA	**Sanae**	97.05	198	*de*P	Pdif	00 34 15.2	+0.6	
SNAA	comp=Z,10.0nm,1.7s			pmax	pmax			
SNAA	**Sanae**	97.05	198	P	Pdif	00 34 14.7	+0.1	
ILAR	**Eielson Array** comp=Z,2.8nm,0.6s,baz=276,slow=4.1,SNR=23	97.19	22	P	**P**	**00 34 14.0**	**-1.2**	
ILAR	comp=Z,1.3nm,0.8s,baz=292,slow=7.1,SNR=4.6			PP	PP	00 37 59.4	-12	
ILAR				PKKPbc	**PKKPbc**	**00 50 54.4**	**-2.7**	
ILAR	comp=Z,1.1nm,0.7s,baz=149,slow=2.1,SNR=6.9			LR	LR	01 23 40.9		
ILAR	comp=Z,341nm,18.4s,baz=312,slow=39	97.19	22	P	**P**	**00 34 13.5**	**-1.7**	
SUMG	**Eielson Array** **Summit**	97.29	347	*i* P	Pdif	00 34 16.6	+0.5	
SUMG	**Summit**	97.29	347	*i* P	Pdif	00 34 16.6	+0.5	
SUMG	**Summit**	97.29	347	*i* P	Pdif	00 34 16.6	+0.6	
HDA	**Harding Lake** baz=298	97.34	23	P	**P**	**00 34 15.3**	**-0.6**	
PRP	**Porcupine Dome** comp=Z,9.4nm,0.6s	97.34	21	IAmb	IAmb	00 34 18.8		
HOM	**Homer** baz=293	97.35	28	P	**P**	**00 34 15.5**	**-0.5**	
KOWA	**Kowa**	97.55	285	P	**P**	**00 34 16.2**	**-1.7**	
CNPM	**China Poot** comp=Z,580nm,22.0s	97.59	28	IAMs_20	IAMs_20	01 21 43.0		
RC01	**Rabbit Creek A** baz=294	97.64	26	P	**P**	**00 34 16.9**	**-0.4**	
BRLK	**Bradley Lake** comp=Z,554nm,20.0s	97.66	28	IAMs_20	IAMs_20	01 22 39.7		
DHY	**Denali Highway** comp=Z,847nm,20.0s	97.78	24	IAMs_20	IAMs_20	01 23 53.7		
O22K	**Cooper Landing** comp=Z,878nm,21.0s	97.90	27	IAMs_20	IAMs_20	01 21 50.1		
SML	**Sawmill** comp=Z,18nm,0.8s	97.95	25	IAmb	IAmb	00 34 28.2		
KNK	**Knik Glacier** comp=Z,11nm,0.6s	98.06	26	IAmb	IAmb	00 34 22.2		
SEW	**Seward** comp=Z,751nm,19.0s	98.18	27	IAMs_20	IAMs_20	01 24 37.5		
TULEG	**Thule**	98.21	356	*i* P	**P**	**00 34 18.5**	**-1.0**	
SCM	**Sheep Creek Mo** comp=Z,604nm,18.0s	98.36	25	IAMs_20	IAMs_20	01 25 11.2		
PAX	**Paxson** comp=Z,716nm,20.0s	98.60	24	IAMs_20	IAMs_20	01 25 04.3		
SCRK	**Sand Creek** baz=300	98.68	22	P	**P**	**00 34 21.7**	**-0.4**	
GLI	**Glacier Island** comp=Z,839nm,20.0s	98.89	26	IAMs_20	IAMs_20	01 25 27.3		
KLU	**Klutina** comp=Z,25nm,1.4s	99.11	25	IAmb	IAmb	00 34 29.6		
KLU	comp=E,651nm,20.0s			IAMs_20	IAMs_20	01 24 41.1		
KIC	**Kosan Boka** comp=Z,16nm,1.0s	99.17	277	*e*P	**Pdif**	**00 34 26.8**	**+1.6**	
FID	**Port Fidalgo** comp=Z,853nm,18.0s	99.22	26	IAMs_20	IAMs_20	01 25 25.9		
DBIC	**Dimbokro** comp=Z,4.4nm,0.9s,baz=32,slow=5.5,SNR=4.7	99.25	278	P	**Pdif**	**00 34 27.0**	**+1.5**	
DBIC	comp=Z,351nm,21.7s,baz=72,slow=34			LR	LR	01 16 34.9		
DBIC	**Dimbokro**	99.25	278	P	**Pdif**	**00 34 27.0**	**+1.5**	
MENT	**Mentasta** comp=Z,712nm,22.0s	99.31	23	IAMs_20	IAMs_20	01 21 32.1		
K27K	**Chicken** comp=Z,845nm,19.0s	99.38	22	IAMs_20	IAMs_20	01 26 17.8		
HIN	**Hinchinbrook I** comp=Z,728nm,20.0s	99.38	26	IAMs_20	IAMs_20	01 25 43.0		
L26K	**Log Cabin Wild** baz=301	99.41	23	P	**Pdif**	**00 34 25.1**	**-0.1**	
TIC	**Toumodi**	99.42	278	*e*P	**Pdif**	**00 34 28.5**	**+2.2**	
LIC	**Lamto** comp=Z,0.7nm,0.2s	99.47	277	*e*P	**Pdif**	**00 34 31.0**	**+4.5**	
N25K	**Chitina, Valde** baz=299	99.62	25	P	**Pdif**	**00 34 26.4**	**+0.2**	
N25K	**Chitina, Valde** comp=Z,670nm,19.0s	99.62	25	IAMs_20	IAMs_20	01 26 08.3		
INK	**Inuvik** comp=Z,5.5nm,0.5s,baz=336,slow=7.5,SNR=14	99.63	16	P	**Pdif**	**00 34 26.4**	**+0.4**	
INK	**Inuvik** comp=Z,25nm,1.5s	99.63	16	IAmb	IAmb	00 34 28.0		
INK	comp=Z,1μm,22.0s			IAMs_20	IAMs_20	01 25 23.4		
Q23K	**Middleton Isla** baz=297	99.89	27	P	**Pdif**	**00 34 27.1**	**-0.3**	
EPYK	**Eagle Plains** baz=307	99.90	19	P	**Pdif**	**00 34 27.3**	**0.0**	
EPYK	**Eagle Plains** comp=Z,13nm,0.7s	99.90	19	IAmb	IAmb	00 34 28.5		
VRDI	**Verde Repeater** comp=Z,739nm,20.0s	100.28	25	IAMs_20	IAMs_20	01 26 28.9		
RES	**Resolute Bay** comp=Z,5.7nm,0.8s,baz=206,slow=3.5,SNR=7.1	100.37	3	P	**Pdif**	**00 34 29.1**	**-0.1**	
MCARA	**McCarthy VSAT** comp=Z,838nm,21.0s	100.38	25	IAMs_20	IAMs_20	01 25 08.6		
CRQM	**Cirque** comp=Z,659nm,19.0s	100.66	25	IAMs_20	IAMs_20	01 25 52.4		
TGL	**Tana Glacier** comp=Z,655nm,20.0s	100.79	25	IAMs_20	IAMs_20	01 24 14.3		
BALM	**Baldy** comp=Z,890nm,20.0s	100.84	25	IAMs_20	IAMs_20	01 25 44.8		
ISLE	**Juniper Island** comp=Z,664nm,20.0s	101.07	25	IAMs_20	IAMs_20	01 26 04.8		
C36M	**Paulatuk** baz=320	101.30	13	P	**Pdif**	**00 34 33.2**	**-0.3**	
C36M	**Paulatuk** comp=Z,948nm,22.0s	101.30	13	IAMs_20	IAMs_20	01 25 31.3		
CTGM	**Chitina Glacie** comp=Z,854nm,19.0s	101.30	24	IAMs_20	IAMs_20	01 25 21.8		
YAH	**Yahtse** comp=Z,931nm,21.0s	101.45	25	IAMs_20	IAMs_20	01 26 18.8		
TABL	**Table Mountain** comp=Z,742nm,21.0s	101.66	25	IAMs_20	IAMs_20	01 29 25.4		
BCPM	**Bancas Point** comp=Z,568nm,19.0s	102.56	25	IAMs_20	IAMs_20	01 28 18.1		
HYT	**Haines Junctio** comp=Z,1μm,21.0s	102.93	24	IAMs_20	IAMs_20	01 28 19.9		
WRAK	**Wrangell Islan** comp=Z,733nm,19.0s	107.77	25	IAMs_20	IAMs_20	01 31 46.8		
TBI	**Tubuai** comp=Z,539nm,23.5s	115.28	113	*e*LR	LR	01 14 08.9		
PPT2	**Papeete2** comp=E,84nm,29.0s	115.61	107	*e*SP	SP	00 50 05.0	+0.8	
PPT2	**Papeete2** comp=E,319nm,22.8s	115.61	107	*e*LR	LR	01 14 25.9		
B05A	**Bryant** baz=317	117.93	27	P	**PKPdf**	**00 39 29.2**	**-0.3**	
D04E	**Lakebay** baz=316	118.40	28	P	**PKPdf**	**00 39 30.3**	**-0.1**	
SCHQ	**Schefferville** comp=Z,5.7nm,0.8s,baz=16,slow=3.1,SNR=6.3	118.66	348	PKP	**PKiKP**	**00 39 30.9**	**+0.2**	
SCHQ	comp=Z,7.2nm,0.9s,baz=254,slow=13,SNR=3.7			PKKPbc	**PKKPbc**	**00 49 45.6**	**-3.4**	
E04D	**Cinebar** baz=316	118.95	29	P	**PKPdf**	**00 39 30.8**	**-0.7**	
F04D	**Rainier, OR** baz=315	119.07	29	P	**PKPdf**	**00 39 31.3**	**-0.5**	
NEW	**Newport** comp=Z,1.9nm,0.6s,baz=240,slow=3.9,SNR=3.3	120.08	24	PKP	**PKiKP**	**00 39 33.9**	**+0.1**	
NEW	**Newport** baz=322	120.08	24	P	**PKPdf**	**00 39 33.1**	**-0.6**	
H04D	**Lebanon** baz=315	120.31	31	P	**PKPdf**	**00 39 33.7**	**-0.5**	
I03D	**Drain, OR** baz=314	120.58	32	P	**PKPdf**	**00 39 34.3**	**-0.4**	
I05D	**Terrebonne, OR** baz=316	121.14	30	P	**PKPdf**	**00 39 35.9**	**0.0**	
J04D	**Umpqua Nationa** baz=315	121.54	31	P	**PKPdf**	**00 39 36.3**	**-0.6**	
J05D	**Fort Rock, OR** baz=316	121.96	31	P	**PKPdf**	**00 39 37.4**	**-0.2**	
L04D	**Klamath Falls** baz=314	122.16	32	P	**PKPdf**	**00 39 37.6**	**-0.4**	
M02C	**Callahan** baz=314	122.44	33	P	**PKPdf**	**00 39 38.6**	**+0.1**	
MSO	**Missoula** baz=325	122.52	23	P	**PKiKP**	**00 39 38.7**	**0.0**	
M04C	**Macdoel** baz=315	122.71	32	P	**PKPdf**	**00 39 38.7**	**-0.3**	
N02D	**Trinity Center** baz=314	122.80	33	P	**PKiKP**	**00 39 39.4**	**0.0**	
EGMT	**Eagleton** baz=330	123.03	20	P	**PKPdf**	**00 39 39.5**	**+0.1**	
PLID	**Pearl Lake** comp=Z,337nm,18.0s	123.06	26	IAMs_20	IAMs_20	01 23 24.5		
MOD	**Modoc Plateau** comp=Z,713nm,20.0s	123.43	31	IAMs_20	IAMs_20	01 42 13.6		
O03E	**Paynes Creek** baz=314	123.77	34	P	**PKPdf**	**00 39 41.0**	**-0.1**	
ULM	**Lac du Bonnet** comp=Z,5.7nm,0.6s,baz=7.6,slow=2.8,SNR=10	124.33	8	PKP	**PKiKP**	**00 39 42.4**	**+0.4**	
ULM	comp=Z,3.8nm,0.8s,baz=103,slow=3.6,SNR=4.6			PKKPbc	**PKKPab**	**00 49 24.8**	**-1.6**	
ULM	**Lac du Bonnet**	124.33	8	*i* PKIKP	**PKPdf**	**00 39 41.1**	**-0.6**	
BOZ	**Bozeman (W)** baz=327	124.43	22	P	**PKPdf**	**00 39 42.2**	**-0.1**	
MFID	**Camas Ranch** comp=Z,478nm,21.0s	124.46	27	IAMs_20	IAMs_20	01 37 15.5		
CHGQ	**Chibougamau** baz=13	124.71	352	P	**PKPdf**	**00 39 42.6**	**+0.1**	
HLID	**Hailey** baz=323,SNR=13	124.97	26	P	**PKPdf**	**00 39 43.5**	**0.0**	
HLID	**Hailey** comp=Z,592nm,18.0s	124.97	26	IAMs_20	IAMs_20	01 42 03.9		
LAO	**LASA Array** baz=334	125.34	18	P	**PKiKP**	**00 39 44.9**	**+0.7**	
PAHR	**Pah Rah Range**	125.50	32		**PKPdf**	**00 39 44.5**	**0.0**	
RLMT	**Red Lodge** comp=Z,741nm,21.0s	125.71	21	IAMs_20	IAMs_20	01 35 15.2		
H17A	**Grant Village** baz=328,SNR=5.4	125.85	22	P	**PKPdf**	**00 39 44.8**	**-0.4**	
H17A	**Grant Village** comp=Z,773nm,21.0s	125.85	22	IAMs_20	IAMs_20	01 36 47.9		
LSQQ	**Lebe-sur-Quev** baz=9.8	125.88	354	P	**PKiKP**	**00 39 45.3**	**+0.1**	
MDND	**Maddock** baz=342	125.98	12	P	**PKPdf**	**00 39 45.1**	**+0.1**	
MDND	**Maddock** comp=Z,754nm,22.0s	125.98	12	IAMs_20	IAMs_20	01 37 29.7		
FLWY	**Flagg Ranch** comp=Z,520nm,19.0s	126.07	23	IAMs_20	IAMs_20	01 42 44.7		
IMW	**Indian Meadow**	126.13	23	PKPdf	**PKiKP**	**00 39 46.7**	**+0.5**	
AGMN	**Agassiz Nation** baz=346	126.23	9	P	**PKPdf**	**00 39 45.4**	**-0.1**	
D63A	**Stockholm** baz=21	126.25	346	P	**PKiKP**	**00 39 45.9**	**-0.1**	
WAKR	**Walker** comp=Z,521nm,20.0s	126.33	33	IAMs_20	IAMs_20	01 44 17.6		
B35A	**Bob, Littlefor** comp=Z,666nm,21.0s	126.47	7	IAMs_20	IAMs_20	01 42 01.6		
D61A	**St Aubert, Com** baz=18	126.57	348	P	**PKiKP**	**00 39 46.6**	**0.0**	
KVN	**Kaiserville** comp=Z,520nm,21.0s	126.66	32	IAMs_20	IAMs_20	01 42 50.1		
E64A	**Bridgewater** baz=21	126.75	345	P	**PKiKP**	**00 39 46.8**	**-0.1**	
E63A	**Oxbow** baz=21	126.90	346	P	**PKiKP**	**00 39 47.1**	**-0.2**	
LATQ	**La Tuque** baz=15	126.91	350	P	**PKiKP**	**00 39 47.1**	**-0.1**	
E28A	**Huff** comp=Z,725nm,21.0s	126.94	14	IAMs_20	IAMs_20	01 40 17.3		
E62A	**Clayton Lake** baz=19	126.97	347	P	**PKiKP**	**00 39 47.4**	**-0.1**	
NVAR	**Mina Array Bea** comp=Z,4.4nm,0.7s,baz=323,slow=1.9,SNR=30	127.00	33	PKP	**PKiKP**	**00 39 49.1**	**+1.1**	
NVAR				SKPbc	SKiKP	00 43 00.1	-20	
NVAR	comp=Z,1.9nm,0.7s,baz=305,slow=3.4,SNR=4.8			PKKPbc		00 49 15.8		
NVAR	comp=Z,0.8nm,0.8s,baz=154,slow=3.8,SNR=5.7 **Mina Array Bea**	127.00	33	PKPdf	**PKiKP**	**00 39 48.4**	**+0.4**	
EYMN	**Ely** baz=352	127.12	6	P	**PKiKP**	**00 39 48.0**	**+0.3**	
HAL	**Halifax** comp=Z,589nm,21.0s	127.15	341	IAMs_20	IAMs_20	01 42 14.3		
D58A	**Chemin du LacG** baz=15	127.20	350	P	**PKiKP**	**00 39 47.7**	**-0.2**	
E61A	**Lac Etchemin** baz=18	127.37	347	P	**PKiKP**	**00 39 48.1**	**-0.1**	
F64A	**Sherman** baz=21	127.40	345	P	**PKiKP**	**00 39 48.2**	**-0.1**	
BW06	**Boulder Array** baz=328	127.62	23	P	**PKiKP**	**00 39 48.9**	**-0.2**	
BW06	**Boulder Array** comp=Z,707nm,22.0s	127.62	23	IAMs_20	IAMs_20	01 38 45.9		
PDAR	**Pinedale Array** comp=Z,3.0nm,0.6s,baz=284,slow=1.2,SNR=33	127.62	23	PKP	**PKiKP**	**00 39 49.1**	**-0.1**	
PDAR	comp=Z,3.0nm,0.9s,baz=52,slow=0.7,SNR=4.6			SKPbc	SKPbc	00 42 59.2		
PDAR				PKKPbc	PKKPdf	00 49 12.6	-49	
PDAR	comp=Z,1.0nm,0.7s,baz=136,slow=5.1,SNR=8.8 **Pinedale Array**	127.62	23	PKPdf	**PKPdf**	**00 39 47.1**	**-1.5**	
E60A	**Ste Agathe de** baz=17	127.63	348	P	**PKiKP**	**00 39 48.7**	**0.0**	
D55A	**Sainte-Anne-du** baz=12	127.69	352	P	**PKiKP**	**00 39 49.4**	**+0.5**	
F63A	**Nahmakanta, Br** baz=20	127.74	346	P	**PKiKP**	**00 39 49.0**	**+0.1**	
HWUT	**Hardware Ranch** comp=Z,672nm,21.0s	127.78	25	IAMs_20	IAMs_20	01 43 03.3		
G65A	**Princeton** baz=22	127.82	344	P	**PKiKP**	**00 39 49.1**	**0.0**	
F61A	**St Evariste** baz=18	127.91	348	P	**PKiKP**	**00 39 49.5**	**+0.2**	
E58A	**La Victoria** baz=15	127.97	350	P	**PKiKP**	**00 39 49.5**	**+0.1**	
G64A	**Maxfield** baz=21	128.07	346	P	**PKiKP**	**00 39 49.7**	**0.0**	
E56A	**St. Veronique** baz=12	128.09	351	P	**PKiKP**	**00 39 49.8**	**+0.2**	
F60A	**Warwick** baz=16	128.11	349	P	**PKiKP**	**00 39 49.8**	**+0.2**	
H66A	**Whiting** baz=22	128.13	344	P	**PKiKP**	**00 39 49.6**	**-0.2**	
PKME	**Peaks-Kenny Pk** baz=20	128.20	346	P	**PKiKP**	**00 39 50.1**	**+0.2**	
RSSD	**Black Hills**	128.32	17	PKIKP	**PKPdf**	**00 39 49.9**	**0.0**	
RSSD	**Black Hills** baz=336	128.32	17	P	**PKPdf**	**00 39 49.9**	**0.0**	
RSSD	**Black Hills**	128.32	17	PKPdf	**PKPdf**	**00 39 49.9**	**0.0**	
DUG	**Dugway, Tooele** baz=324	128.38	27	P	**PKiKP**	**00 39 51.2**	**+0.6**	
DUG	**Dugway, Tooele** comp=E,688nm,22.0s	128.38	27	IAMs_20	IAMs_20	01 40 25.4		
G63A	**Kingsbury** baz=20	128.41	346	P	**PKPdf**	**00 39 50.0**	**+0.3**	
R11A	**Troy Canyon, C** baz=320	128.49	31	P	**PKiKP**	**00 39 51.6**	**+0.7**	
G62A	**West of Eustis**	128.53	347	P	**PKPdf**	**00 39 50.1**	**+0.1**	
GRAC	**Grapevine Rang** baz=317,SNR=5.6	128.55	33	P	**PKPdf**	**00 39 50.5**	**+0.2**	
CWC	**Cottonwood Cre** baz=316	128.56	34	P	**PKPdf**	**00 39 50.8**	**+0.3**	
PKM	**Mcpherson Peak** baz=313	128.64	37	P	**PKiKP**	**00 39 51.4**	**0.0**	
G61A	**St-Isidore-de-** baz=17	128.68	348	P	**PKiKP**	**00 39 50.6**	**-0.3**	
H64A	**Troy** baz=20	128.76	346	P	**PKPdf**	**00 39 50.0**	**-0.4**	
K22A	**Casper** baz=332,SNR=6.8	128.84	20	P	**PKPdf**	**00 39 50.1**	**-0.7**	
ISA	**Isabella, Lake** baz=315	128.89	35	P	**PKiKP**	**00 39 51.6**	**-0.1**	
E46A	**Sault Ste Mari**	129.02	359		**PKiKP**	**00 39 51.9**	**+0.4**	
G60A	**Masonville** baz=16	129.02	349	P	**PKiKP**	**00 39 51.3**	**-0.2**	
COWI	**Conover** comp=Z,712nm,21.0s	129.15	4	IAMs_20	IAMs_20	01 43 21.5		
MPMC	**Manual Prospec** baz=316,SNR=17	129.16	34	P	**PKiKP**	**00 39 52.4**	**0.0**	
TPNV	**Topopah Spring** baz=318	129.19	32	P	**PKiKP**	**00 39 52.4**	**0.0**	
G59A	**Clarenceville** baz=15	129.20	349	P	**PKiKP**	**00 39 52.1**	**+0.3**	
LRMC	**Laurel Mtn Rad** baz=316	129.47	35	P	**PKiKP**	**00 39 53.4**	**+0.5**	
H61A	**Lyndonville** baz=17	129.48	348	P	**PKiKP**	**00 39 52.9**	**+0.4**	
G57A	**Newington** baz=13	129.49	351	P	**PKiKP**	**00 39 53.0**	**+0.6**	
I64A	**Boothbay** baz=20	129.54	346	P	**PKiKP**	**00 39 52.7**	**+0.1**	
F42A	**Maple Grove Fa** comp=Z,610nm,21.0s	129.55	3	IAMs_20	IAMs_20	01 44 46.0		
G54A	**Lake Saint Pet** baz=8.8	129.62	354	P	**PKiKP**	**00 39 53.0**	**+0.2**	
I63A	**Otisfield** baz=19	129.65	347	P	**PKiKP**	**00 39 53.2**	**+0.4**	
SPMN	**Marine on St.** comp=E,634nm,18.0s	129.67	7	IAMs_20	IAMs_20	01 45 27.3		
EDW2	**Edwards Air Fo** baz=315	129.72	36	P	**PKiKP**	**00 39 53.3**	**-0.1**	
H59A	**Cadyville** baz=15	129.72	350	P	**PKiKP**	**00 39 52.9**	**-0.1**	
LBNH	**Lisbon** baz=17	129.76	348	P	**PKiKP**	**00 39 53.4**	**+0.3**	
VT1	**Waterbury** comp=Z,689nm,21.0s	129.84	349	IAMs_20	IAMs_20	01 43 45.3		
LONY	**Lake Ozonia** baz=14	129.90	350	P	**PKiKP**	**00 39 53.7**	**+0.3**	
LONY	**Lake Ozonia** comp=Z,587nm,22.0s	129.90	350	IAMs_20	IAMs_20	01 41 22.4		
G40A	**Rib Lake** comp=E,681nm,20.0s	129.90	5	IAMs_20	IAMs_20	01 45 37.3		
H58A	**Gabriels** baz=14	130.02	350	P	**PKiKP**	**00 39 53.9**	**+0.2**	
GSC	**Goldstone, Bar** baz=317,SNR=7.8	130.09	34	P	**PKiKP**	**00 39 54.5**	**+0.3**	
BFSC	**Mount Baldy Ra** baz=315	130.37	36	P	**PKiKP**	**00 39 55.2**	**+0.4**	
O20A	**White River Ci** baz=329	130.38	23	P	**PKiKP**	**00 39 55.2**	**+0.4**	
PHWY	**Pilot Hill** comp=Z,617nm,20.0s	130.40	20	IAMs_20	IAMs_20	01 44 05.2		
I60A	**Shoreham** baz=15	130.42	349	P	**PKiKP**	**00 39 55.1**	**+0.7**	
DELO	**Deloro Mine** comp=Z,546nm,20.0s	130.43	353	IAMs_20	IAMs_20	01 41 08.5		
NCB	**Newcomb** comp=Z,563nm,21.0s	130.47	350	IAMs_20	IAMs_20	01 41 53.4		
TUQ	**Turquse Moun** baz=318,SNR=6.6	130.49	34	P	**PKiKP**	**00 39 55.0**	**0.0**	
CIS	**Catalina Islan** baz=314	130.50	37	P	**PKiKP**	**00 39 54.8**	**-0.1**	
ECSD	**EROS Data Cent** baz=345	130.52	11	P	**PKiKP**	**00 39 55.1**	**+0.4**	
ECSD	**EROS Data Cent** comp=E,480nm,19.0s	130.52	11	IAMs_20	IAMs_20	01 48 14.9		
I59A	**Olmsteadville** baz=14	130.57	349	P	**PKiKP**	**00 39 54.8**	**+0.1**	
N23A	**Red Feather La** baz=332	130.59	21	P	**PKPdf**	**00 39 54.6**	**+0.3**	
SCI2	**San Clemente I** baz=313	130.71	38	P	**PKiKP**	**00 39 55.4**	**+0.1**	
I57A	**Carthage** baz=12	130.73	351	P	**PKPdf**	**00 39 54.6**	**+0.4**	
J61A	**Chester** baz=16	130.75	348	P	**PKiKP**	**00 39 55.3**	**+0.2**	
H43A	**Windswept, Lux** comp=Z,712nm,20.0s	130.85	3	IAMs_20	IAMs_20	01 45 36.5		
I58A	**Old Forge** baz=13	130.87	350	P	**PKiKP**	**00 39 55.0**	**-0.3**	
PECO	**Prince Edward** comp=Z,627nm,21.0s	130.93	352	IAMs_20	IAMs_20	01 41 37.6		
ACCN	**Adirondack Com** comp=Z,493nm,19.0s	130.93	349	IAMs_20	IAMs_20	01 47 55.9		
J59A	**Piesco** baz=14	131.00	350	P	**PKiKP**	**00 39 55.6**	**0.0**	
J59A	**Piesco** comp=Z,563nm,20.0s	131.00	350	IAMs_20	IAMs_20	01 45 01.8		
J60A	**Lant Hill Farm** baz=15	131.02	349	P	**PKiKP**	**00 39 55.9**	**+0.3**	
MURC	**Murrieta** baz=315	131.09	36	P	**PKiKP**	**00 39 56.4**	**+0.3**	
GMRC	**Granite Mounta** baz=318,SNR=8.6	131.11	34	P	**PKiKP**	**00 39 56.6**	**+0.3**	
I40A	**Norwalk** comp=Z,482nm,19.0s	131.23	5	IAMs_20	IAMs_20	01 46 29.4		
J58A	**Remsen** baz=13	131.24	351	P	**PKiKP**	**00 39 56.4**	**+0.3**	
J58A	**Remsen** comp=Z,721nm,22.0s	131.24	351	IAMs_20	IAMs_20	01 43 23.9		
J57A	**Williamstown** baz=12	131.30	351	P	**PKiKP**	**00 39 56.4**	**+0.2**	
J57A	**Williamstown** comp=Z,518nm,20.0s	131.30	351	IAMs_20	IAMs_20	01 35 55.5		
K62A	**Royalston** baz=17	131.33	348	P	**PKiKP**	**00 39 56.5**	**+0.2**	
HRV	**Adam Dziewonsk** comp=Z,521nm,19.0s	131.34	347	IAMs_20	IAMs_20	01 46 01.7		
I42A	**Draeger Farm,** comp=Z,675nm,20.0s	131.37	4	IAMs_20	IAMs_20	01 44 59.1		
BELC	**Belle Mtn. Jos** baz=317	131.50	35	P	**PKiKP**	**00 39 57.0**	**-0.1**	
PFO	**Pinyon Flats O**	131.51	36	*d* iPKIKP	**PKiKP**	**00 39 57.7**	**+0.6**	
PFO	**Pinyon Flats O** baz=316	131.51	36	P	**PKiKP**	**00 39 57.3**	**+0.3**	
PFO	**Pinyon Flats O**	131.51	36	PKPdf	**PKiKP**	**00 39 58.2**	**+1.1**	
TPFO	**Pinon Flats** baz=316	131.52	36	P	**PKiKP**	**00 39 57.2**	**+0.1**	
J56A	**Wolcott** baz=11	131.56	352	P	**PKiKP**	**00 39 57.2**	**+0.6**	
J56A	**Wolcott** comp=Z,586nm,22.0s	131.56	352	IAMs_20	IAMs_20	01 39 09.2		
TRY	**Troy** comp=Z,508nm,20.0s	131.56	349	IAMs_20	IAMs_20	01 43 51.5		
PV19	**Morning Glory** comp=Z,744nm,21.0s	131.62	25	IAMs_20	IAMs_20	01 44 33.0		
L61B	**Northampton** baz=16	131.63	348	P	**PKiKP**	**00 39 57.1**	**+0.2**	
PV16	**Nyswonger Mesa** comp=Z,596nm,19.0s	131.65	25	IAMs_20	IAMs_20	01 46 14.7		
PV07	**Paradox Valley**	131.66	25	PKPdf	**PKPdf**	**00 39 56.8**	**+0.4**	
J55A	**Hilton** comp=Z,600nm,21.0s	131.69	353	IAMs_20	IAMs_20	01 43 16.8		
SMCO	**Snowmass** comp=Z,669nm,22.0s	131.70	23	IAMs_20	IAMs_20	01 42 18.9		
PV03	**Paradox Valley** comp=Z,651nm,20.0s	131.73	25	IAMs_20	IAMs_20	01 44 34.

comp=Z,729nm,22.0s
K56A Middlesex 132.19 352 P **PKiKP 00 39 57.6 -0.4**
baz=10
L34A Svendsen Farm, 132.27 12 IAMs_20 IAMs_20 01 46 22.2
comp=Z,578nm,18.0s
SWSC Sam W. Stewart 132.37 36 P **PKiKP 00 39 58.5 -0.1**
baz=316
IKP In-Ko-Pah, Jac 132.40 36 P **PKiKP 00 39 58.7 -0.2**
baz=316
BGNE Belgrade 132.42 13 P **PKiKP 00 39 58.5 0.0**
baz=342
BINY Binghamton 132.48 351 P **PKiKP 00 39 58.6 0.0**
baz=12
KSCT Kent School, K 132.49 348 IAMs_20 IAMs_20 01 44 57.3
comp=Z,575nm,22.0s
M63A Gales Ferry 132.50 347 P **PKiKP 00 39 58.7 0.0**
baz=18
Q24A Divide 132.58 21 P **PKiKP 00 39 59.1 -0.3**
baz=332
Q24A Divide 132.58 21 IAMs_20 IAMs_20 01 45 27.9
comp=Z,608nm,21.0s
L58A Harry Jones Me 132.61 351 P **PKiKP 00 39 58.7 -0.3**
baz=12
WVNY West Valley, N 132.63 354 IAMs_20 IAMs_20 01 46 55.6
comp=Z,525nm,20.0s
M62A Hamden 132.65 348 P **PKiKP 00 39 58.7 -0.2**
baz=16
MVCO Mesa Verde 132.75 26 P **PKiKP 00 39 59.3 -0.4**
baz=327
MVCO Mesa Verde 132.75 26 IAMs_20 IAMs_20 01 45 17.9
comp=Z,523nm,21.0s
L56A Greenwood 132.77 353 P **PKiKP 00 39 59.2 -0.1**
baz=10.0
L57A Andrews Acres 132.81 352 P **PKiKP 00 39 59.5 +0.1**
baz=11
ESJX Sierra Juarez 132.96 37 IAMs_20 IAMs_20 01 36 02.4
comp=Z,440nm,22.0s
M59A Waymart 133.03 350 P **PKiKP 00 39 59.6 -0.2**
baz=13
ERPA Erie 133.05 355 P **PKiKP 00 39 59.5 -0.3**
baz=6.7
AAM Ann Arbor 133.07 359 P **PKiKP 00 39 59.6 -0.2**
baz=1.7
AAM Ann Arbor 133.07 359 IAMs_20 IAMs_20 01 45 57.2
comp=Z,691nm,21.0s
KSPA Keystone Colle 133.07 351 IAMs_20 IAMs_20 01 45 21.5
comp=Z,755nm,22.0s
L44A Lake County Fo 133.13 3 P **PKiKP 00 40 00.2 +0.3**
baz=356
TRNY Table Rock, Ra 133.20 349 IAMs_20 IAMs_20 01 46 30.9
comp=Z,552nm,19.0s
PAL Palisades 133.27 349 P **PKiKP 00 40 00.5 +0.2**
baz=15
PAL Palisades 133.27 349 IAMs_20 IAMs_20 01 45 04.9
comp=Z,663nm,22.0s
ODNJ Ogdensburg 133.33 349 IAMs_20 IAMs_20 01 36 25.4
comp=Z,494nm,19.0s
M58A Price's Panora 133.36 351 P **PKiKP 00 40 00.6 +0.2**
baz=12
M56A Emporium 133.49 353 P **PKiKP 00 40 00.9 +0.1**
baz=9.3
M57A Sunshine Farm, 133.50 352 P **PKiKP 00 40 00.9 +0.2**
baz=11
SDCO Great Sand Dun 133.52 23 P **PKiKP 00 40 00.9 -0.4**
baz=331
SDCO Great Sand Dun 133.52 23 PKPdf **PKPdf 00 39 59.7 -0.3**
M54A Oil Creek Stat 133.63 355 P **PKiKP 00 40 01.2 +0.2**
baz=7.2
M52A Chesterland 133.73 356 IAMs_20 IAMs_20 01 49 01.7
comp=Z,619nm,18.0s
M53A WI Miller and 133.78 356 IAMs_20 IAMs_20 01 49 00.1
comp=Z,587nm,19.0s
N58A Sunbury 133.92 351 P **PKPdf 00 40 00.9 +0.6**
baz=11
N58A Sunbury 133.92 351 IAMs_20 IAMs_20 01 43 47.0
comp=Z,666nm,22.0s
M50A Fremont 133.95 358 IAMs_20 IAMs_20 01 45 20.5
comp=Z,723nm,21.0s
O60A Telford 134.22 350 P **PKiKP 00 40 02.1 -0.1**
baz=13
NAN01 Guarapari, ES 134.33 250 *eP* **PKiKP 00 40 03.1 +0.1**
N51A Ashland 134.41 357 IAMs_20 IAMs_20 01 49 46.6
comp=Z,658nm,20.0s
GDU01 Guandu, BA 134.44 256 *eP* **PKPdf 00 40 02.3 +0.4**
N49A Columbus Grove 134.46 359 IAMs_20 IAMs_20 01 44 09.9
comp=Z,661nm,20.0s
T25A Trinidad 134.46 22 P **PKPdf 00 40 02.4 +0.7**
baz=332
T25A Trinidad 134.46 22 IAMs_20 IAMs_20 01 47 57.8
comp=Z,472nm,20.0s
PSUB Penn St. - Bra 134.61 350 IAMs_20 IAMs_20 01 43 02.1
comp=Z,484nm,21.0s
WUPA West Chester U 134.63 350 IAMs_20 IAMs_20 01 46 32.7
comp=Z,322nm,18.0s
HDIL Hopedale 134.65 5 P **PKPdf 00 40 02.3 +0.7**
baz=354
HDIL Hopedale 134.65 5 IAMs_20 IAMs_20 01 47 16.1
comp=Z,544nm,18.0s
O58A Lewisberry 134.66 351 P **PKiKP 00 40 02.7 -0.4**
baz=11
MVL Millersville 134.69 351 IAMs_20 IAMs_20 01 44 22.2
comp=Z,701nm,22.0s
P61A Hammonton 134.73 349 P **PKiKP 00 40 02.8 -0.4**
baz=14
P61A Hammonton 134.73 349 IAMs_20 IAMs_20 01 43 20.4
comp=Z,596nm,22.0s
O56A Blue Knob Stat 134.74 353 P **PKiKP 00 40 02.8 -0.5**
baz=8.9
P60A Greenville 134.75 350 P **PKPdf 00 40 02.5 +0.7**
baz=13
P60A Greenville 134.75 350 IAMs_20 IAMs_20 01 46 35.9
comp=Z,555nm,21.0s
214A Organ Pipe Nat 134.81 34 P **PKPdf 00 40 02.6 +0.3**
baz=319
BSFB Barra de Sao F 134.81 248 *eP* **PKiKP 00 40 03.5 -0.4**
O55A Ligonier 134.88 354 P **PKPdf 00 40 02.6 +0.5**
baz=7.9
KSU1 Kansas State U 134.97 13 IAMs_20 IAMs_20 01 44 20.8
comp=Z,580nm,22.0s
O53A New Philadelph 135.00 356 P **PKPdf 00 40 03.0 +0.7**
baz=5.2
O54A Avella 135.01 355 P **PKiKP 00 40 03.3 -0.5**
baz=6.4
O54A Avella 135.01 355 IAMs_20 IAMs_20 01 46 01.5
comp=Z,590nm,19.0s
P59A Jarrettsville 135.08 351 P **PKiKP 00 40 03.6 -0.4**
baz=12
ACSO Alum Creek Sta 135.12 358 P **PKPdf 00 40 03.2 +0.7**
baz=2.7
ACSO Alum Creek Sta 135.12 358 IAMs_20 IAMs_20 01 47 21.4
comp=Z,715nm,21.0s
SJMB Sao Joao De Ma 135.15 248 *eP* **PKPdf 00 40 03.8 +0.7**
O52A Adamsville 135.18 357 P **PKPdf 00 40 03.0 +0.3**
baz=4.4
O51A Pataskala 135.19 357 P **PKiKP 00 40 03.8 -0.4**
baz=3.3
O49A Covington 135.19 359 IAMs_20 IAMs_20 01 44 52.4
comp=Z,621nm,21.0s
P58A Pank, Wackersv 135.33 352 P **PKiKP 00 40 04.3 -0.2**
baz=11
P57A Homestead Farm 135.44 352 P **PKiKP 00 40 04.5 -0.2**
baz=9.8
P43A Skaggs, Pawnee 135.54 5 IAMs_20 IAMs_20 01 45 31.6
comp=Z,681nm,20.0s
ANMO Albuquerque 135.54 25 *i* PKiKP **PKiKP 00 40 05.1 -0.2**
ANMO pmax pmax
comp=Z,13nm,1.3s
ANMO Albuquerque 135.54 25 P **PKiKP 00 40 05.1 -0.2**
baz=329
ANMO Albuquerque 135.54 25 PKPdf **PKiKP 00 40 05.3 0.0**
P55A Reedsville 135.62 354 P **PKiKP 00 40 04.9 -0.2**
baz=7.3
TUC Tucson 135.63 32 PKiKP **PKiKP 00 40 06.0 +0.6**
TUC Tucson 135.63 32 P **PKiKP 00 40 05.2 -0.2**
baz=322
TUC Tucson 135.63 32 PKPdf **PKiKP 00 40 06.0 +0.6**
P52A Corning 135.68 357 IAMs_20 IAMs_20 01 48 34.2
comp=Z,645nm,21.0s
P53A Whipple 135.78 356 P **PKPdf 00 40 03.6 -0.2**
baz=5.0
P53A Whipple 135.78 356 IAMs_20 IAMs_20 01 48 21.8
comp=Z,633nm,21.0s
P51A Williamsport 135.87 358 IAMs_20 IAMs_20 01 47 53.3
comp=Z,579nm,21.0s
Q58A Fox Den Farm, 135.93 352 P **PKiKP 00 40 04.9 -0.8**
baz=10
Q57A Strasburg 135.93 353 P **PKiKP 00 40 05.3 -0.4**
baz=9.3
Q56A Snyder Ridge, 136.02 354 P **PKiKP 00 40 05.2 -0.7**
baz=8.2
Q56A Snyder Ridge, 136.02 354 IAMs_20 IAMs_20 01 47 22.3
comp=Z,558nm,22.0s
Q55A Buckhannon 136.16 355 P **PKPdf 00 40 05.1 +0.5**
baz=7.0
Q54A Coxs Mills 136.23 355 P **PKPdf 00 40 05.3 +0.6**
baz=5.9
Q44A Meyer Farm, Va 136.32 5 IAMs_20 IAMs_20 01 48 45.1
comp=Z,499nm,21.0s
Q51A Peebles 136.33 358 IAMs_20 IAMs_20 01 46 35.5
comp=Z,676nm,22.0s
Q52A Bidwell 136.35 357 P **PKPdf 00 40 05.4 +0.5**
baz=3.8
Q53A Leroy 136.41 356 P **PKiKP 00 40 05.9 -0.8**
baz=4.9
R60A Leonardtown, M 136.42 350 P **PKiKP 00 40 05.8 -0.8**
baz=12
R58A Rapidan 136.60 352 P **PKPdf 00 40 06.2 +0.8**
baz=10.0
CBN Corbin Frederi 136.60 351 P **PKiKP 00 40 06.5 -0.6**
baz=11
CBN Corbin Frederi 136.60 351 IAMs_20 IAMs_20 01 52 21.9
comp=Z,407nm,20.0s
R56A Bull Pasture M 136.67 354 P **PKiKP 00 40 06.7 -0.6**
baz=8.0
R57A Stanardsville 136.67 353 P **PKiKP 00 40 06.8 -0.5**
baz=9.3
R55A Marlinton 136.87 354 P **PKiKP 00 40 07.0 -0.7**
baz=7.0
R58B Mineral 136.91 352 IAMs_20 IAMs_20 01 44 11.1
comp=Z,556nm,22.0s
CCM Cathedral Cave 136.93 7 P **PKPdf 00 40 06.8 +0.8**
baz=351
CCM Cathedral Cave 136.93 7 IAMs_20 IAMs_20 01 49 54.3
comp=Z,631nm,19.0s
121A Cookes Peak, D 136.96 29 P **PKPdf 00 40 07.3 +0.9**
baz=326,SNR=6.6
121A Cookes Peak, D 136.96 29 PKPdf **PKPdf 00 40 05.2 -1.2**
R53A Hurricane 136.96 357 P **PKPdf 00 40 06.8 +0.8**
baz=4.3
S39A Bolivar 136.98 10 PKPdf **PKPdf 00 40 05.8 -0.3**
R54A Victor 137.04 355 P **PKPdf 00 40 07.0 +0.7**
baz=5.8
FVM French Village 137.09 6 IAMs_20 IAMs_20 01 49 57.8
comp=Z,673nm,20.0s
R50A Paris 137.10 359 IAMs_20 IAMs_20 01 49 09.8
comp=Z,511nm,19.0s
WCI Wyandotte Cave 137.13 2 P **PKiKP 00 40 07.3 -0.9**
baz=358
S57A Dark Hollow, R 137.26 353 P **PKiKP 00 40 07.6 -0.8**
baz=8.8
S57A Dark Hollow, R 137.26 353 IAMs_20 IAMs_20 01 48 22.1
comp=Z,613nm,21.0s
S58A Poland Farm, P 137.28 352 P **PKiKP 00 40 08.0 -0.5**
baz=10
S58A Poland Farm, P 137.28 352 IAMs_20 IAMs_20 01 43 58.9
comp=Z,525nm,22.0s
S55A Lewisburg 137.41 355 P **PKiKP 00 40 08.3 -0.5**
baz=6.5
S44A Carbondale 137.50 5 IAMs_20 IAMs_20 01 46 51.4
comp=Z,685nm,21.0s
MGMO Mountain Grove 137.67 9 IAMs_20 IAMs_20 01 46 45.1
comp=Z,701nm,21.0s
S51A Beattyville 137.72 358 IAMs_20 IAMs_20 01 48 32.4
comp=Z,696nm,21.0s
T59A Double "B" Far 137.84 351 IAMs_20 IAMs_20 01 50 00.7
comp=Z,472nm,20.0s
BSCB Bom Sucesso 137.85 244 *eP* **PKiKP 00 40 09.8 -0.4**
PARB Paraibuna 137.87 240 *eP* **PKiKP 00 40 10.2 +0.1**
MSTX Muleshoe 137.88 22 PKPdf **PKPdf 00 40 08.7 +0.7**
OK029 Liberty Lake 137.91 15 IAMs_20 IAMs_20 01 50 14.7
comp=Z,587nm,18.0s
OK030 Cody Creek RV 137.96 14 PKPdf **PKPdf 00 40 08.7 +0.8**
T42A Van Buren 137.96 7 IAMs_20 IAMs_20 01 49 38.6
comp=Z,482nm,20.0s
U38A Gravette 138.00 11 IAMs_20 IAMs_20 01 47 09.9
comp=Z,615nm,22.0s
T57A Hurt 138.04 353 P **PKiKP 00 40 09.3 -0.8**
baz=8.4
T57A Hurt 138.04 353 IAMs_20 IAMs_20 01 50 05.0
comp=Z,684nm,22.0s
T55A Pulaski 138.08 355 P **PKiKP 00 40 09.6 -0.7**
baz=6.2
T56A Rocky Mt 138.10 354 P **PKPdf 00 40 09.0 +0.8**
baz=7.3
OK025 Westminster Rd 138.14 15 IAMs_20 IAMs_20 01 44 18.9
comp=Z,571nm,21.0s
T54A Tazewell 138.20 356 P **PKPdf 00 40 09.1 +0.7**
baz=5.0
TUL1 Leonard 138.21 13 P **PKiKP 00 40 09.7 -0.8**
baz=344
TUL1 Leonard 138.21 13 PKPdf **PKPdf 00 40 08.6 +0.2**
T45A Paducah 138.22 4 IAMs_20 IAMs_20 01 49 53.5
comp=Z,548nm,20.0s
HHAR Hobbs 138.24 11 PKPdf **PKPdf 00 40 09.1 +0.6**
HHAR IAMs_20 IAMs_20 01 47 35.2
comp=Z,442nm,18.0s
T53A Wise 138.34 357 P **PKPdf 00 40 09.5 +0.8**
baz=3.6
T47A Sharon Grove 138.34 3 IAMs_20 IAMs_20 01 49 35.8
comp=Z,591nm,21.0s
U40A Yellville 138.36 10 P **PKiKP 00 40 09.7 -1.0**
baz=348
U40A Yellville 138.36 10 PKPdf **PKPdf 00 40 09.2 +0.5**
U40A IAMs_20 IAMs_20 01 49 47.3
comp=Z,622nm,20.0s
T50A Nancy 138.36 360 IAMs_20 IAMs_20 01 46 30.2
comp=Z,575nm,20.0s
HENM Henderson Moun 138.45 5 IAMs_20 IAMs_20 01 47 41.6
comp=Z,614nm,20.0s
PARMO Parma 138.47 6 IAMs_20 IAMs_20 01 47 31.2
comp=Z,610nm,21.0s
WMOK Wichita Mounta 138.53 17 PKiKP **PKPdf 00 40 09.1 0.0**
WMOK Wichita Mounta 138.53 17 PKPdf **PKPdf 00 40 09.1 0.0**
WMOK Wichita Mounta 138.53 17 IAMs_20 IAMs_20 01 49 55.3
comp=Z,594nm,20.0s
U58A Oxford 138.55 352 P **PKiKP 00 40 10.1 -1.0**
baz=9.6
PENMO Penman 138.69 6 IAMs_20 IAMs_20 01 47 50.1
comp=Z,692nm,21.0s
U54A Nelsons Funny 138.75 356 P **PKPdf 00 40 09.8 +0.3**
baz=4.7
U54A Nelsons Funny 138.75 356 IAMs_20 IAMs_20 01 46 42.7
comp=Z,476nm,21.0s
MNTX Cornudas Mount 138.77 27 P **PKPdf 00 40 10.4 +0.8**
baz=328
MNTX Cornudas Mount 138.77 27 PKPdf **PKPdf 00 40 10.1 +0.5**
JANB Januaria 138.79 253 *eP* **PKPdf 00 40 10.1 +0.1**
TZTN Tazewell 138.81 358 P **PKiKP 00 40 10.8 -0.9**
baz=2.1
TZTN Tazewell 138.81 358 PKPdf **PKPdf 00 40 08.8 -0.7**
TZTN IAMs_20 IAMs_20 01 50 38.3
comp=Z,594nm,20.0s
V61A Roper 138.83 350 IAMs_20 IAMs_20 01 46 36.9
comp=Z,641nm,20.0s
U49A Red Boiling Sp 138.86 1 IAMs_20 IAMs_20 01 50 57.4
comp=Z,640nm,20.0s
LCAR Lake Charles 138.89 8 PKPdf **PKPdf 00 40 10.0 +0.4**
FCAR Ozark Folk Cen 138.93 9 PKPdf **PKPdf 00 40 10.4 +0.7**
FCAR IAMs_20 IAMs_20 01 47 32.5
comp=Z,618nm,21.0s
X34A Smith Ranch, M 138.93 16 PKPdf **PKiKP 00 40 11.1 -0.9**
PET01 Itanhaem-SP 138.94 238 *eP* **PKiKP 00 40 12.0 -0.2**
V60A Jim Taylor Roa 138.97 350 IAMs_20 IAMs_20 01 47 01.7
comp=Z,689nm,22.0s
PEBM Pemiscott Bayo 139.00 6 IAMs_20 IAMs_20 01 51 02.3
comp=Z,600nm,19.0s
VAO Valinhos 139.14 240 *eP* **PKiKP 00 40 12.8 0.0**
WVT Waverly 139.16 4 PKHKP PKPpre 00 40 03.3
WVT PKP **PKPdf 00 40 08.0 -2.1**
WVT MLR MLR
comp=Z,700nm,21.0s
WVT Waverly 139.16 4 PKPpre 00 40 03.3
WVT PKPdf **PKPdf 00 40 08.0 -2.1**
WVT Waverly 139.16 4 IAMs_20 IAMs_20 01 47 17.4
comp=Z,667nm,21.0s
V57A Coltrane Farms 139.20 354 P **PKiKP 00 40 11.5 -1.0**
baz=7.8
V58A Windy Hill, Pi 139.22 353 P **PKiKP 00 40 12.0 -0.5**
baz=8.9
V58A Windy Hill, Pi 139.22 353 IAMs_20 IAMs_20 01 45 44.0
comp=Z,687nm,22.0s
ROSB Rosrio 139.24 271 *eP* **PKiKP 00 40 12.8 -0.3**
HALT Halls 139.26 5 IAMs_20 IAMs_20 01 48 07.0
comp=Z,661nm,20.0s
W39A Magazine 139.32 11 P **PKiKP 00 40 12.2 -0.6**
baz=346
SPB Sao Paulo 139.33 239 *eP* **PKiKP 00 40 12.8 -0.2**
V56A Mocksville 139.35 354 P **PKiKP 00 40 11.9 -0.9**
baz=6.8
V55A Taylorsville 139.38 355 P **PKiKP 00 40 11.8 -1.0**
baz=5.7
V55A Taylorsville 139.38 355 IAMs_20 IAMs_20 01 45 10.1
comp=Z,658nm,22.0s
LPAR Lepanto 139.46 7 IAMs_20 IAMs_20 01 51 17.4
comp=Z,491nm,20.0s
HBAR Harrisburg 139.47 7 IAMs_20 IAMs_20 01 56 06.5
comp=Z,502nm,20.0s
V54A Nebo 139.50 356 P **PKiKP 00 40 12.1 -1.0**
baz=4.6
V52A Sevierville 139.52 358 IAMs_20 IAMs_20 01 50 57.6
comp=Z,591nm,19.0s
X37A Clayton 139.57 13 PKPdf **PKPdf 00 40 12.0 +1.0**
V51A Loudon 139.57 359 IAMs_20 IAMs_20 01 49 38.3
comp=Z,452nm,20.0s
CNNC Cliffs of the 139.59 351 IAMs_20 IAMs_20 01 51 28.9
comp=Z,518nm,21.0s
V48A Smith Brothers 139.60 2 IAMs_20 IAMs_20 01 47 34.0
comp=Z,704nm,22.0s
CNLB Canela 139.60 229 *eP* **PKiKP 00 40 12.9 -0.6**
W41B Gary Mavity, V 139.61 9 P **PKiKP 00 40 12.3 -1.0**
baz=349
RCLB Rio Claro- Sao 139.83 241 *eP* **PKiKP 00 40 13.7 -0.5**
CPCT Cooper Cave 139.93 359 IAMs_20 IAMs_20 01 52 02.6
comp=Z,521nm,19.0s
W57A Gilead 139.95 354 IAMs_20 IAMs_20 01 49 38.4
comp=Z,504nm,20.0s
TIJ01 Guaruva-PR 139.98 236 *eP* **PKPdf 00 40 12.9 +0.9**
MIAR Mount Ida 139.99 11 PKiKP **PKiKP 00 40 13.2 -0.9**
MIAR Mount Ida 139.99 11 P **PKPdf 00 40 12.8 +1.1**
baz=347
MIAR Mount Ida 139.99 11 PKPdf **PKiKP 00 40 13.2 -0.9**
MIAR IAMs_20 IAMs_20 01 46 51.6
comp=Z,665nm,22.0s
W45A Hickory Valley 140.02 5 IAMs_20 IAMs_20 01 48 37.2
comp=Z,642nm,21.0s
SWET Sewanee 140.15 1 IAMs_20 IAMs_20 01 49 01.6
comp=Z,648nm,20.0s
W54A Cherokee Point 140.21 356 P **PKPdf 00 40 12.2 +0.1**
baz=4.3
ABTX Abilene, Hawle 140.21 20 PKPdf **PKPdf 00 40 12.7 +0.5**
X60A Albert Glenn T 140.25 351 P **PKPdf 00 40 12.8 +0.7**
baz=11
PLTB Pedras Altas 140.25 224 *eP* **PKiKP 00 40 13.5 -1.2**
W52A Murphy 140.27 359 IAMs_20 IAMs_20 01 45 23.8
comp=Z,454nm,20.0s
Z35A Perchaven, San 140.29 16 IAMs_20 IAMs_20 01 51 31.7
comp=Z,614nm,20.0s
BG3 Lake Jocassee 140.34 357 IAMs_20 IAMs_20 01 51 09.6
comp=Z,500nm,21.0s
PAULI Pauline 140.44 356 IAMs_20 IAMs_20 01 51 08.4
comp=Z,526nm,18.0s
X58A Rowland 140.47 353 IAMs_20 IAMs_20 01 52 55.1
comp=Z,517nm,20.0s
BIRD Birdtown, Kers 140.50 354 IAMs_20 IAMs_20 01 51 50.0
comp=Z,516nm,19.0s
OXF Oxford 140.64 6 IAMs_20 IAMs_20 01 48 35.5
comp=Z,440nm,20.0s
X56A White Oak 140.71 355 P **PKPdf 00 40 13.9 +0.9**
baz=6.1
X54A Belton 140.75 357 P **PKPdf 00 40 14.3 +1.3**
baz=4.0
X55A Gracelyn & Ava 140.78 356 P **PKiKP 00 40 15.3 -0.4**
baz=5.2
X51A Calhoun 140.81 360 IAMs_20 IAMs_20 01 51 58.0
comp=Z,662nm,21.0s
Y60A Bolivia 140.85 351 IAMs_20 IAMs_20 01 49 35.3
comp=Z,493nm,21.0s
X48A Hartselle 140.87 3 PKPdf **PKPdf 00 40 13.5 +0.2**
WLAR White Oak Lake 140.91 11 PKPdf **PKiKP 00 40 14.7 -1.3**
WLAR IAMs_20 IAMs_20 01 50 13.0
comp=Z,574nm,20.0s
JSC Jenkinsville 140.94 355 IAMs_20 IAMs_20 01 53 45.5
comp=Z,310nm,18.0s
Y59A Loris 140.96 352 P **PKiKP 00 40 15.3 -0.8**
baz=9.6
Y57A Sumter 141.12 354 P **PKiKP 00 40 15.6 -0.8**
baz=7.2
Y57A Sumter 141.12 354 IAMs_20 IAMs_20 01 54 14.3
comp=Z,387nm,20.0s
Y58A Scranton 141.15 353 P **PKiKP 00 40 15.7 -0.8**
baz=8.3
BB19B Bebedouro 141.16 242 *eP* **PKiKP 00 40 15.7 -1.2**
FRTB Fartura 141.24 238 *eP* **PKiKP 00 40 16.3 -0.7**
WHTX Lake Whitney, 141.49 17 IAMs_20 IAMs_20 01 50 15.5
comp=Z,701nm,22.0s
Y49A Blount Mountai 141.49 2 PKPdf **PKPdf 00 40 14.7 +0.3**
TX31 Lajitas Ar. Si 141.56 27 PKPdf **PKPdf 00 40 15.0 +0.2**
TXAR Lajitas Array 141.56 27 PKhKP PKPpre 00 40 09.7
comp=Z,2.7nm,0.6s,baz=122,slow=1.0,SNR=18
TXAR SKPbc **SKPbc 00 43 46.5 -1.4**
comp=Z,9.8nm,0.9s,baz=256,slow=1.5,SNR=12
TXAR Lajitas Array 141.56 27 PKPpre PKPpre 00 40 09.7
TXAR PKPdf **PKiKP 00 40 16.7 -0.9**
ITAB Concordia 141.61 231 *eP* **PKiKP 00 40 16.4 -1.2**
Z57A Bowman 141.86 354 P **PKPdf 00 40 16.4 +1.3**
baz=6.8
Z56A Williston 141.90 355 IAMs_20 IAMs_20 01 54 30.9
comp=Z,540nm,19.0s
GOGA Godfrey 141.94 358 P **PKPdf 00 40 15.7 +0.5**
baz=2.4
GOGA Godfrey 141.94 358 IAMs_20 IAMs_20 01 51 02.9
comp=Z,562nm,20.0s
PLCA Paso Flores 141.99 198 PKhKP **PKPdf 00 40 11.6 -3.6**
comp=Z,15nm,0.7s,baz=181,slow=1.6,SNR=27
PLCA SKPbc **SKPbc 00 43 46.7 -1.9**
comp=Z,6.9nm,1.0s,baz=159,slow=9.2,SNR=2.8
Z47A Carrollton 142.06 4 IAMs_20 IAMs_20 01 53 14.1
comp=Z,532nm,19.0s
JCT Junction City 142.11 21 PKiKP **PKPdf 00 40 10.7 -5.0**
JCT MLR MLR
comp=Z,700nm,20.0s
JCT Junction City 142.11 21 PKPpre **PKPdf 00 40 10.7 -5.0**
JCT PKPdf **PKiKP 00 40 16.8 -1.8**
BDFB Brasilia 142.18 251 PKhKP **PKPdf 00 40 12.3 -3.9**
comp=Z,8.7nm,0.8s,baz=174,slow=3.2,SNR=16
BDFB Brasilia 142.18 251 PKiKP **PKPdf 00 40 12.7 -3.5**
BDFB Brasilia 142.18 251 PKPdf **PKPdf 00 40 12.7 -3.5**
BDFB IAMs_20 IAMs_20 01 35 14.5
comp=Z,397nm,18.0s
152A Waverly Hall 142.70 360 IAMs_20 IAMs_20 01 52 58.1
comp=Z,604nm,20.0s
250A Grady 143.37 2 IAMs_20 IAMs_20 01 50 19.8
comp=Z,629nm,21.0s
344A Westbrook Farm 143.49 8 PKPbc 00 40 16.2 +0.9
HKT Hockley 143.87 16 IAMs_20 IAMs_20 01 50 33.2
comp=Z,577nm,22.0s
BRAL Brewton 144.14 3 P **PKPdf 00 40 19.1 -0.1**
baz=356
833A Chaparral WMA, 144.21 22 P **PKPdf 00 40 19.5 +0.2**
baz=335
PRPB Parauapebas 145.01 266 *eP* **PKPdf 00 40 21.0 -0.2**
ARAG Araguaiana, MT 145.72 249 *eP* **PKPab 00 40 23.1 0.0**
SNDB Serra Nova Dou 146.00 256 *eP* **PKPdf 00 40 23.0 +0.2**
CPUP Villa Florida 146.03 228 PKPbc **PKPab 00 40 23.8 -0.2**
comp=Z,76nm,0.9s,baz=106,slow=2.7,SNR=111
CPUP Villa Florida 146.03 228 *eP* **PKPbc 00 40 23.4 +0.1**
MDP Montagnes des 146.26 287 PKPbc **PKPab 00 40 25.1 -0.1**
comp=Z,21nm,0.6s,baz=70,slow=3.5,SNR=8.3
MCPB Macapa, AP 146.86 277 *eP* **PKPbc 00 40 25.8 -0.4**
AQDB Aquidauana 147.60 239 *eP* **PKPdf 00 40 25.8 +0.5**
MT05 Renca 148.66 203 IAMs_20 IAMs_20 01 28 27.7
comp=Z,427nm,22.0s
ROC1 El Roble 149.13 203 **PKPbc 00 40 31.8 -0.2**
VA03 San Esteban 149.13 204 PKPbc **PKiKP 00 40 32.8 -0.3**
MALB Monte Alegre 149.24 274 *eP* **PKPdf 00 40 29.2 +1.0**
ZON Zonda 149.36 208 PKP2 **PKiKP 00 40 33.1 -0.4**
ZON Zonda 149.36 208 **PKiKP 00 40 33.1 -0.4**
ZON pPKPdf **PKPab 00 40 38.6 +1.6**
FDF Fort de France 149.43 310 PKP2 **PKiKP 00 40 33.9 -0.1**
FDF Fort de France 149.43 310 **PKiKP 00 40 33.9 -0.1**
HUMP Col San Antoni 150.40 321 PKPbc **PKiKP 00 40 36.9 +1.0**
NPGB Novo Progresso 150.50 264 *eP* **PKPdf 00 40 31.0 +0.8**
SJG San Juan 150.61 321 PKPbc **PKPbc 00 40 34.8 -0.8**
comp=Z,17nm,0.6s,baz=40,slow=15,SNR=4.5
SJG San Juan 150.61 321 *eP* **PKPbc 00 40 34.5 -1.2**
SJG San Juan 150.61 321 **PKiKP 00 40 36.5 +0.2**
CO02 Combarbal 150.68 205 PKPbc **PKiKP 00 40 36.1 -0.3**
VA04 Juan Fernndez 150.78 190 **PKiKP 00 40 36.6 +0.3**
CO03 El Pedregal 150.86 206 **PKPab 00 40 44.9 +1.6**
ITTB Itaituba 150.88 270 *eP* **PKPdf 00 40 31.5 +0.8**
TOSP Speyside 150.90 304 IAMs_20 IAMs_20 01 58 19.2

	comp=Z,444nm,20.0s							
CO01	**Juntas del Tor**	**151.33 208**		PKPbc	**PKiKP**	**00 40 38.4 +0.5**		
LCO	**Las Campanas**	**152.43 208**		PKIKP	**PKPdf**	**00 40 34.7 +1.6**		
LCO	**Las Campanas**	**152.43 208**		PKPdf	**PKPdf**	**00 40 34.7 +1.6**		
LCO				PKPbc	**PKiKP**	**00 40 40.7 +0.5**		
PTLB	**Pontes e Lacer**	**152.53 246**	*eP*		**PKPdf**	**00 40 33.8 +0.6**		
SDDR	**Presa de Saban**	**152.78 331**			**PKPab**	**00 40 53.2 +1.7**		
SDDR				IAMs_20	IAMs_20	02 01 41.8		
	comp=Z,500nm,18.0s							
AC02	**Maricunga**	**153.42 213**		PKPbc	**PKiKP**	**00 40 44.1 +1.5**		
AC02				PKPab	**pPKPbc**	**00 40 56.7 -0.8**		
SIV	**San Ignacio**	**154.08 243**		PKP	**PKPdf**	**00 40 35.9 +0.4**		
	comp=Z,5.2nm,0.9s,baz=124,slow=2.3,SNR=2.3							
SIV				PKPbc	**PKPbc**	**00 40 42.8 -0.8**		
	comp=Z,8.4nm,0.8s,baz=118,slow=5.8,SNR=3.9							
SIV				PKPab	**PKPab**	**00 40 57.4 +0.3**		
	comp=Z,14nm,0.6s,baz=151,slow=4.3,SNR=8.1							
VILB	**Vilhena**	**154.28 250**	*eP*		**PKPdf**	**00 40 37.2 +1.4**		
TEIG	**Tepich**	**154.88 7**		PKPab	**PKPab**	**00 41 07.4 +7.2**		
TEIG	**Tepich**	**154.88 7**		IAMs_20	IAMs_20	01 57 22.8		
	comp=Z,394nm,21.0s							
MACA	**Manacapuru-AM**	**155.75 273**	*eP*		**PKPdf**	**00 40 38.4 +0.7**		
CMIG	**Matias Romero**	**156.10 24**		PKPab	**PKPab**	**00 41 04.5 -1.0**		
	comp=Z,8.0nm,0.7s,baz=5.2,slow=3.9,SNR=7.1							
LVC	**Limon Verde**	**156.49 220**		PKPab	**PKPab**	**00 41 09.1 +1.4**		
	comp=Z,31nm,0.9s,baz=156,slow=3.3,SNR=5.4							
LVC	**Limon Verde**	**156.49 220**	*eP*		**PKPdf**	**00 40 41.0 +2.0**		
PETF	**Flores**	**157.84 13**		IAMs_20	IAMs_20	01 58 12.6		
	comp=Z,586nm,22.0s							
SAML	**Samuel**	**158.02 258**		IAMs_20	IAMs_20	01 54 48.0		
	comp=Z,481nm,21.0s							
SAML	**Samuel**	**158.02 258**	*eP*		**PKPdf**	**00 40 41.3 +0.6**		
MNMC	**Minye Minye**	**159.36 225**		PKPdf	**PKPdf**	**00 40 43.6 +1.1**		
PB16	**IPOC Station P**	**159.81 227**		PKPab	**PKPab**	**00 41 23.3 +0.9**		
LPAZ	**La Paz**	**159.96 234**		PKP	**PKPdf**	**00 40 44.5 +0.8**		
	comp=Z,9.9nm,0.9s,baz=99,slow=1.6,SNR=35							
LPAZ				PKPab	**PKPab**	**00 41 24.1 +0.9**		
	comp=Z,16nm,0.7s,baz=119,slow=3.3,SNR=18							
LPAZ	**La Paz**	**159.96 234**		PKPab	**PKPab**	**00 41 23.8 +0.6**		
LPAZ	**La Paz**	**159.96 234**	*eP*		**PKPdf**	**00 40 44.4 +0.8**		
SDV	**Santo Domingo**	**160.27 314**		PKP	**PKPdf**	**00 40 43.7 +0.2**		
	comp=Z,13nm,0.3s,baz=311,slow=2.5,SNR=3.9							
SDV				PKPab	**PKPab**	**00 41 25.0 +1.0**		
	comp=Z,12nm,0.3s,baz=27,slow=6.4,SNR=3.6							
SDV	**Santo Domingo**	**160.27 314**	*eP*		**PKPdf**	**00 40 46.9 +3.4**		
OCAC	**Ocana**	**162.59 318**	*eP*		**PKPdf**	**00 40 46.9 +0.9**		
PAMC	**Pamplona, Colo**	**162.81 315**	*eP*		**PKPdf**	**00 40 46.9 +0.3**		
LCBC	**Los crdobas,**	**163.93 328**	*eP*		PKPdf	00 40 56.6 +10		
RUSC	**La Rusia**	**164.07 312**	*eP*		**PKPdf**	**00 40 47.7 -0.1**		
UREC	**San Jos de Ur**	**164.36 323**	*eP*		**PKPdf**	**00 40 46.0 -1.4**		
PTBC	**PUERTO BERRIO**	**164.60 317**	*eP*		**PKPdf**	**00 40 47.1 -0.6**		
DBBC	**Dabeiba**	**165.35 323**	*eP*		**PKPdf**	**00 40 47.5 -0.9**		
CHIC	**Chingaza**	**165.38 310**	*eP*		**PKPdf**	**00 40 48.6 -0.3**		
HELC	**Santa Helena**	**165.57 319**	*eP*		PKPdf	00 41 04.2 +15		
NORC	**Norcasia**	**165.58 316**	*eP*		**PKPdf**	**00 40 48.5 0.0**		
GUVC	**San Jose del G**	**165.68 301**	*eP*		**PKPdf**	**00 40 48.9 +0.3**		
ROSC	**El Rosal**	**165.68 312**	PKP		**PKPdf**	**00 40 50.2 +1.1**		
	comp=Z,27nm,0.9s,baz=123,slow=2.4,SNR=9.1							
ROSC	**El Rosal**	**165.68 312**	*eP*		**PKPdf**	**00 40 49.7 +0.6**		
PRAC	**Prado**	**166.84 310**	*eP*		**PKPdf**	**00 40 49.8 +0.3**		
YOTC	**Yotoco, Valle**	**167.73 315**	*eP*		**PKPdf**	**00 40 49.7 -0.6**		
NNA	**Nana**	**169.29 228**	PKP		**PKPdf**	**00 40 51.1 0.0**		
	comp=Z,12nm,0.9s,baz=232,slow=8.0,SNR=4.0							
PAC1	**Pacto, Paraso**	**172.04 309**	*eP*		**PKPdf**	**00 40 52.1 -0.8**		
ATAH	**Atahualpa**	**173.10 250**	PKP		**PKPdf**	**00 40 54.1 +0.5**		
	comp=Z,14nm,1.1s,baz=37,slow=23,SNR=4.8							

TAP 07 00:26:57.0,23.70N×121.09E,h57km±1km,ML2.0,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VWDT	**VWDT**	**0.07**	**42**	*eP*	Pn	00 27 05.9	+0.3
	baz=41						
VWDT				S	Sn	00 27 11.6	-0.1
	baz=41						
SSLB	**Suanglung**	**0.15**	**304**	*eP*	Pn	00 27 05.9	0.0
	baz=304						
SSLB				*eS*	Sn	00 27 12.8	+0.5
	baz=304						
SSLB	**Suanglung**	**0.15**	**304**	P	Pn	00 27 05.5	-0.4
WHYT	**Xinyi Township**	**0.22**	**269**	*eS*	Sn	00 27 13.5	+0.6
	baz=268						
SMLT	**Sun Moon Lake**	**0.25**	**316**	*eP*	Pn	00 27 05.9	-0.7
	baz=316						
SMLT				*eS*	Sn	00 27 14.0	+0.5
	baz=316						
TYC	**Yuchr**	**0.29**	**313**	*eP*	Pn	00 27 06.2	-0.5
	baz=314						
ALS	**Alishan**	**0.32**	**234**	*eS*	Sn	00 27 14.1	-0.7
	baz=232						
YULB	**Yu-li**	**0.36**	**148**	*eP*	Pn	00 27 07.3	-0.1
	baz=148						
YULB				*eS*	Sn	00 27 14.7	-0.1
	baz=148						
CHGB	**Renai**	**0.36**	**12**	*eP*	Pn	00 27 08.6	+0.9
	baz=12						
CHGB				*eS*	Sn	00 27 14.5	-0.8
	baz=12						
HGSD	**Ruisui**	**0.37**	**124**	*eP*	Pn	00 27 07.5	+0.1
	baz=124						
HGSD				*eS*	Sn	00 27 15.2	+0.2
	baz=124						
TWF1	**Yuli**	**0.40**	**151**	*eP*	Pn	00 27 07.1	-0.6
	baz=150						
WHF	**Hehuan Shan**	**0.47**	**20**	*eP*	Pn	00 27 08.7	-0.2
	baz=20						
WHF				*eS*	Sn	00 27 16.2	-1.2
	baz=20						
HWA	**Hwalien**	**0.54**	**60**	*eS*	Sn	00 27 17.8	-0.3
	baz=60						
TDCB	**Techi**	**0.55**	**6**	*eP*	Pn	00 27 09.3	-0.2
	baz=6.0						
TDCB				*eS*	Sn	00 27 18.3	-0.3
	baz=6.0						
TWT	**Tachien**	**0.55**	**8**	*eP*	Pn	00 27 09.8	+0.2
	baz=6.0						
TWD	**Chiawan**	**0.60**	**51**	*eP*	Pn	00 27 10.2	+0.4
	baz=51						
ETLH	**Xiulin Townshi**	**0.62**	**35**	*eP*	Pn	00 27 10.6	+0.4
	baz=35						
NACB	**Ninganchiao**	**0.66**	**44**	*eP*	Pn	00 27 11.0	+0.4
	baz=44						
NACB				*eS*	Sn	00 27 21.0	+0.5
	baz=44						

IDC 07 00:32:41.7±1.4,55.02S×27.53W,h0km,mb3.7/2, mb1 3.8/2,mb1mx3.5/27,mbtmp3.7/2,Error ellipse: s-maj=101.5km s-min=39.1km az=103.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.60**	**183**	P	P	00 41 18.3	-0.2
	0.5nm,0.7s,baz=201,slow=6.8,SNR=1.9						
TORD	**Torodi Ar. Bea**	**72.25**	**30**	P	P	00 44 08.6	0.0
	1.0nm,0.9s,baz=195,slow=4.9,SNR=4.1						
ILAR	**Eielson Array**	**149.28**	**313**	PKPbc	PKPbc	00 52 30.2	-0.6
	0.8nm,0.7s,baz=120,slow=1.2,SNR=4.5						
SONM	**Songino Array**	**150.84**	**85**	PKPbc	PKPbc	00 52 35.1	-0.2
	0.3nm,0.6s,baz=217,slow=3.6,SNR=1.6						

*NEIC **07** 00:46:08.7±1.7, 1°.11N±0°.06×127°.1E±0°.1,h168km±4km, mb4.3/26,Error ellipse: s-maj=15.6km s-min=7.9km az=67.0*

*IDC **07** 00:46:09.7±3.3, 1°.10N×127°.21E,h174km±33km,mb3.7/10, mb1 3.8/12,mb1mx3.5/34,mbtmp4.1/12,Error ellipse: s-maj=39.1km s-min=12.3km az=80.0*

*DJA **07** 00:46:10.1±0.8, 1°.N±5°×12°.7E±°,h145km±9km,M4.5/7, MLv4.5/7*

ISC 07 00:46:07.0±0.4,1°.19N±0°.05×127°.20E±0°.08,h150km,n60, σ1s43/63,mb4.3/22,1D,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.45**	**158**	P	**Pn**	**00 46 31.4**	**+3.3**
TNTI	**Ternate**	**0.45**	**158**		**Pn**	**00 46 31.6**	**+3.5**
SGSI	**Sangihe**	**2.99**	**326**	P	**Pn**	**00 46 58.2**	**+3.9**
KMSI	**Cibinong**	**3.27**	**259**	P	**Pn**	**00 47 02.1**	**+4.2**
SANI	**Sanana**	**3.44**	**201**	P	**Pn**	**00 47 01.5**	**+1.5**
GTOI	**Gorontalo**	**4.22**	**263**	P	Pn	00 47 15.2	+5.0
NLAI	**Namlea**	**4.40**	**181**	P	**Pn**	**00 47 14.7**	**+2.2**
SIJI	**Sorong**	**4.55**	**117**	P	**Pn**	**00 47 17.1**	**+2.6**
	2.3nm,0.3s,baz=300,slow=9.4,SNR=4.5						
DDMP	**Don Marcelino,**	**5.10**	**343**	*eP*	**Pn**	**00 47 21.9**	**+0.1**
DDMP				*eS*	**Sn**	**00 48 18.8**	**-1.4**
SKMP	**Bagumbayan, Su**	**5.92**	**334**	*eP*	**Pn**	**00 47 33.4**	**+0.6**
SKMP				*eS*	**Sn**	**00 48 38.4**	**-1.4**
KCP	**Kidapawan**	**6.15**	**340**	⇓*iP*	**Pn**	**00 47 38.1**	**+2.3**
KCP				*i* S	**Sn**	**00 48 47.4**	**+2.0**
BUKP	**Musuan**	**6.98**	**342**	*eP*	**Pn**	**00 47 47.5**	**+0.6**
BUKP				*eS*	**Sn**	**00 49 03.4**	**-1.8**
PAGZ	**Pagadian**	**7.63**	**330**	*eP*	**Pn**	**00 47 55.4**	**-0.1**
KKM	**Kota Kinabalu**	**11.97**	**294**	Pn	Pn	**00 48 52.6**	**-0.5**
MTN	**Manton Dam**	**14.48**	**164**	Pn	Pn	**00 49 24.2**	**-0.8**
KNRA	**Kununurra**	**16.83**	**175**	P	**Pn**	**00 49 53.9**	**0.0**
KNRA				IAmb	IAmb	00 49 55.2	
	comp=Z,8.0nm,0.6s						
SMRI	**Semarang**	**18.62**	**244**	P	**P**	**00 50 13.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.23**	**185**	P	**P**	**00 50 19.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=335,slow=6.3,SNR=16						
WB0	**Warramunga Arr**	**21.99**	**162**		**P**	**00 50 48.5**	**-0.8**
WRAB	**Tennant Creek**	**22.13**	**162**	P	**P**	**00 50 49.4**	**-1.3**
WRA	**Warramunga Arr**	**22.14**	**162**	P	**P**	**00 50 50.0**	**-0.8**
	comp=Z,5.1nm,0.3s,baz=340,slow=11,SNR=142						
WRA				S	**S**	**00 54 41.5**	**-2.6**
	comp=Z,2.1nm,1.2s,baz=322,slow=16,SNR=5.9						
WRA	**Warramunga Arr**	**22.14**	**162**	IAmb	IAmb	00 50 53.4	
	comp=Z,0.2nm,0.8s						
WB2	**Warramunga Arr**	**22.14**	**162**	P	**P**	**00 50 50.1**	**-0.6**
WB2				IAmb	IAmb	00 50 50.4	
	comp=Z,7.1nm,0.4s						
WR0	**Warramunga Arr**	**22.22**	**161**		**P**	**00 50 50.7**	**-0.8**
WR0				IAmb	IAmb	00 50 51.2	
	comp=Z,5.0nm,0.4s						
YULB	**Yu-li**	**22.80**	**346**	P	**P**	**00 50 57.0**	**-0.1**
YULB				IAmb	IAmb	00 51 00.1	
	comp=Z,14nm,1.0s						
SSLB	**Suanglung**	**23.27**	**345**	P	**P**	**00 51 01.2**	**-0.1**
SSLB				IAmb	IAmb	00 51 17.3	
	comp=Z,12nm,1.0s						
MBWA	**Marble Bar**	**23.38**	**198**	P	**P**	**00 51 02.2**	**-0.1**
AS31	**Alice Springs**	**25.55**	**166**	P	**P**	**00 51 21.9**	**-0.2**
ASAR	**Alice Springs**	**25.55**	**166**	P	**P**	**00 51 21.9**	**-0.3**
	comp=Z,2.4nm,0.5s,baz=349,slow=7.4,SNR=39						
CTA	**Charters Tower**	**28.22**	**140**	P	**P**	**00 51 49.3**	**+3.3**
	comp=Z,1.9nm,0.5s,baz=347,slow=9.6,SNR=2.1						
FORT	**Forrest**	**31.80**	**179**	P	**P**	**00 52 16.8**	**-0.6**
MORW	**Morawa**	**31.93**	**199**	P	**P**	**00 52 17.0**	**-1.6**
MORW				IAmb	IAmb	00 52 29.7	
	comp=Z,6.2nm,1.1s						
BBOO	**Buckleboo**	**34.84**	**167**	P	**P**	**00 52 43.3**	**-0.5**
BBOO				IAmb	IAmb	00 52 43.8	
	comp=Z,5.5nm,0.6s						
EIDS	**Eidsvold**	**35.09**	**140**	P	**P**	**00 52 45.6**	**-0.4**
EIDS				IAmb	IAmb	00 52 46.6	
	comp=Z,3.5nm,0.7s						
NWAO	**Narrogin (SRO)**	**35.21**	**195**	P	**P**	**00 52 46.7**	**-0.2**
STKA	**Stephens Creek**	**35.60**	**159**	P	**P**	**00 52 50.3**	**0.0**
	comp=Z,3.4nm,0.4s,baz=335,slow=10,SNR=12						
STKA	**Stephens Creek**	**35.60**	**159**	IAmb	IAmb	00 52 51.0	
	comp=Z,1.1nm,0.7s						
ARMA	**Armidale**	**39.11**	**146**	P	**P**	**00 53 20.9**	**+0.9**
ARMA				IAmb	IAmb	00 53 21.5	
	comp=Z,8.4nm,0.7s						
SONM	**Songino Array**	**49.84**	**342**	P	**P**	**00 54 45.4**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=155,slow=8.2,SNR=6.4						
SONM	**Songino Array**	**49.84**	**342**	IAmb	IAmb	00 54 47.0	
	comp=Z,0.9nm,0.7s						
PETK	**Petropavlovsk-**	**57.60**	**21**	P	**P**	**00 55 41.9**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=228,slow=0.4,SNR=5.5						
LBZ	**Lake Benmore**	**59.34**	**145**	P	**P**	**00 55 53.1**	**-0.2**
LBZ				IAmb	IAmb	00 56 01.4	
	comp=Z,9.7nm,1.1s						
THZ	**Tophouse**	**59.43**	**142**	P	**P**	**00 55 53.5**	**-0.5**
MK31	**Makanchi Array**	**59.90**	**326**	P	**P**	**00 55 58.1**	**+1.0**
MKAR	**Makanchi Array**	**59.90**	**326**	P	**P**	**00 55 58.4**	**+1.2**
	comp=Z,1.2nm,0.4s,baz=116,slow=7.9,SNR=15						
MKAR				pP	**pwP**	**00 56 35.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=121,slow=9.8,SNR=2.2						
MKAR				PcP	**PcP**	**00 56 41.8**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=145,slow=2.9,SNR=6.7						
MAKZ	**Makanchi**	**60.09**	**326**	P	**P**	**00 55 58.7**	**+0.3**
MAKZ				IAmb	IAmb	00 55 59.9	
	comp=Z,1.6nm,0.6s						
BKZ	**Black Stump Fm**	**60.40**	**137**	P	**P**	**00 55 59.9**	**-0.8**
PLWZ	**Palliser**	**60.80**	**140**	P	**P**	**00 56 03.0**	**-0.4**
ZALV	**Zalesovo Beam**	**63.05**	**333**	P	**P**	**00 56 17.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=123,slow=5.3,SNR=2.0						
KBL	**Kabul**	**63.44**	**308**	P	**P**	**00 56 21.1**	**-0.3**
KKAR	**Karatay Array**	**65.41**	**318**	P	**P**	**00 56 34.7**	**+1.0**
BRVK	**Borovoye**	**69.77**	**327**	P	**P**	**00 57 00.8**	**-0.1**
BRVK				IAmb	IAmb	00 57 01.8	
	comp=Z,2.2nm,0.6s						
SOCY	**Socotra**	**73.34**	**282**	P	**P**	**00 57 22.7**	**-0.4**
ABKAR	**Akbulak array**	**74.41**	**321**	P	**P**	**00 57 27.8**	**-0.7**
VNDA	**Vanda**	**80.86**	**173**	P	**P**	**00 58 03.3**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=324,slow=5.4,SNR=5.6						
VNDA	**Vanda**	**80.86**	**173**	P	**P**	**00 58 03.7**	**0.0**
MAW	**Mawson**	**81.55**	**200**	P	**P**	**00 58 07.0**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=90,slow=4.0,SNR=4.0						
RAYN	**Ar Rayn**	**81.91**	**299**	P	**P**	**00 58 09.7**	**-0.8**
ARCES	**ARCESS Array B**	**92.98**	**340**	P	**P**	**00 59 02.2**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=74,slow=6.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**124.12**	**287**	PKP	**PKPdf**	**01 04 48.4**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=96,slow=2.6,SNR=2.3						

WEL 07 00:56:30.8,44°S±1°×17°2E±°,h5km±2km,M2.1/9,ML2.1/8, MLv2.1/9,Error ellipse: s-maj=0.0km s-min=0.0km az=126.9,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RACZ	**Rakaia**	**0.17**	**240**	P	Pg	00 56 36.5	+2.3
MQZ	**McQueen's Vall**	**0.23**	**106**	P	Pg	00 56 37.0	+1.6
OXZ	**Oxford**	**0.39**	**325**	P	Pb	00 56 40.2	+0.1
WACZ	**Wakanui South**	**0.47**	**230**	P	Pb	00 56 42.4	+0.8
AMCZ	**Amberley**	**0.52**	**26**	P	Pb	00 56 43.0	+0.7
OKCZ	**Okains Bay**	**0.53**	**99**	P	Pb	00 56 43.1	+0.6
MHCZ	**Mount Hutt**	**0.57**	**281**	P	Pb	00 56 44.1	+0.8
LTZ	**Lake Taylor**	**0.86**	**356**	P	Pn	00 56 49.3	-0.2
ARCZ	**Arundel**	**0.90**	**250**	P	Pn	00 56 49.9	-0.2
RPZ	**Rata Peaks**	**0.94**	**265**	P	Pn	00 56 51.0	+0.4
INZ	**Inchbonnie**	**1.13**	**324**	P	Pn	00 56 54.2	+1.0
ODZ	**Otahua Downs**	**1.86**	**220**	P	Pg	00 57 07.6	+1.2
ANWZ	**Angora Road**	**4.42**	**45**	P	Pn	00 57 38.1	-0.4

*INET **07** 01:11:44.8,11°.85N×88°.96W,h30km,MW3.0*

*UCR **07** 01:11:47.3±1.1,12°.04N×88°.89W,h35km±999km,ML3.6*

*SNET **07** 01:11:47.4±1.1,12°.07N×88°.88W,h34km±51km,ML3.7*

ISC 07 01:11:47.4±3.6,12°.0N±0°.2×88°.86W±0°.09,h35km,n24, σ0s69/32,2C,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCY	**Lacayo**	**1.50**	**21**	*eP*	**Pn**	**01 12 12.0**	**0.0**
LCY	**Lacayo**	**1.50**	**21**	*eP*	**Pn**	**01 12 12.0**	**0.0**
TECA	**Tecapa**	**1.51**	**13**	*eP*	**Pn**	**01 12 11.8**	**-0.3**
TECA				*eS*	**Sn**	**01 12 31.3**	**+0.6**
TECA	**Tecapa**	**1.51**	**13**	*eP*	**Pn**	**01 12 11.8**	**-0.3**
TECA				*eS*	**Sn**	**01 12 31.3**	**+0.6**
RANC	**El Ranchito**	**1.51**	**22**	*eP*	**Pn**	**01 12 10.3**	**-1.9**
RANC				IAML		01 12 37.4	
	comp=Z,985nm,0.3s						
RANC	**El Ranchito**	**1.51**	**22**	*eP*	**Pn**	**01 12 10.3**	**-1.9**
RANC				IAML		01 12 37.4	
	comp=Z,985nm,0.3s						
VSM	**San Miguel**	**1.51**	**22**	*eP*	**Pn**	**01 12 12.4**	**+0.1**
VSM	**San Miguel**	**1.51**	**22**	*eP*	**Pn**	**01 12 12.4**	**+0.1**
CSGN	**Cosiguina Volc**	**1.59**	**53**	*eP*	**Pn**	**01 12 12.8**	**-0.3**
CSGN	**Cosiguina Volc**	**1.59**	**53**	*eP*	**Pn**	**01 12 12.8**	**-0.3**
LFRS	**El Faro**	**1.61**	**353**	⇑*eP*	**Pn**	**01 12 12.8**	**-0.7**
LFRS				*eS*	**Sn**	**01 12 32.6**	**-0.4**
LFRS	**El Faro**	**1.61**	**353**	⇑*eP*	**Pn**	**01 12 12.8**	**-0.7**
LFRS				*eS*	**Sn**	**01 12 32.6**	**-0.4**
LBRS	**Las Brisas**	**1.72**	**354**	*eP*	**Pn**	**01 12 15.2**	**+0.2**
LBRS	**Las Brisas**	**1.72**	**354**	*eP*	**Pn**	**01 12 15.2**	**+0.2**
LFU	**La Fuente**	**1.74**	**352**	*eP*	**Pn**	**01 12 14.0**	**-1.2**
LFU				*eS*	**Sn**	**01 12 36.7**	**+0.6**
LFU	**La Fuente**	**1.74**	**352**	*eP*	**Pn**	**01 12 14.0**	**-1.2**
LFU				*eS*	**Sn**	**01 12 36.7**	**+0.6**
BOQS	**Boqueron**	**1.76**	**347**	*eP*	**Pn**	**01 12 15.3**	**-0.3**
BOQS				*eS*	**Sn**	**01 12 37.2**	**+0.3**
BOQS	**Boqueron**	**1.76**	**347**	*eP*	**Pn**	**01 12 15.3**	**-0.3**
BOQS				*eS*	**Sn**	**01 12 37.2**	**+0.3**
SBLS	**San Blas**	**1.96**	**338**	*eP*	**Pn**	**01 12 18.4**	**+0.1**
SBLS	**San Blas**	**1.96**	**338**	*eP*	**Pn**	**01 12 18.4**	**+0.1**
RTR	**El Retiro**	**2.02**	**338**	*eP*	**Pn**	**01 12 19.3**	**+0.2**
RTR	**El Retiro**	**2.02**	**338**	*eP*	**Pn**	**01 12 19.3**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.55**	**37**	*eP*	**Pn**	**01 12 26.6**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.55**	**37**	*eP*	**Pn**	**01 12 26.6**	**+0.2**

*ISN **07** 01:41:44.1±0.5,33°.26N×46°.26E,h0km±2km,ML3.7*

*TEH **07** 01:41:45.6,33°.14N×46°.21E,h8km,ML3.8*

*IDC **07** 01:41:46.1±2.1,33°.35N×46°.14E,h0km,mb3.8/4, mb1 3.9/4,mb1mx3.5/25,mbtmp3.9/4,Error ellipse: s-maj=62.4km s-min=27.9km az=158.0*

*NEIC **07** 01:41:49.1±1.6,33°.13N±0°.08×46°.19E±0°.04,h33km±8km, Error ellipse: s-maj=12.4km s-min=3.5km az=196.0*

ISC 07 01:41:47.1±0.7,33°.15N±0°.05×46°.20E±0°.04,h10km,n68, σ0s95/69,mb4.2/7,3C-4D,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.23**	**261**	*eP*	**Pg**	**01 41 50.9**	**-0.8**
IBDR				*eSg*	**Sg**	**01 41 55.7**	**+0.8**
IBDR				AML	AML	01 42 02.3	
	comp=N,6μm,0.4s						
IBDR				AML	AML	01 42 08.2	
	comp=E,11μm,0.6s						
IGHG	**Ghaleghazi**	**1.22**	**15**	*e*		01 42 31.9	
IGHG				*eP*	**Pn**	**01 42 09.5**	**-0.9**
KCHF	**Cheshme Sefid,**	**1.33**	**32**	*eP*	**Pn**	**01 42 10.9**	**-0.9**
KCHF				*e*		01 42 32.9	
KCHF	**Cheshme Sefid,**	**1.33**	**32**		**Pn**	**01 42 10.9**	**-0.9**
IKFM	**Kafar-mosalman**	**1.43**	**74**	*eP*	**Pn**	**01 42 13.4**	**+0.3**
IKFM				*e*		01 42 41.3	
KER	**Kermanshah**	**1.46**	**32**	*eP*	**Pn**	**01 42 14.1**	**+0.5**
IVIS	**Veis**	**1.48**	**21**	*eP*	**Pn**	**01 42 13.9**	**0.0**
IVIS				*e*		01 42 37.3	
IKOM	**Komasi**	**1.50**	**47**	*eP*	**Pn**	**01 42 14.3**	**+0.1**
IKOM				*eSg*	**Sg**	**01 42 36.1**	**+0.8**
IKOM				*e*		01 42 37.3	
BHD	**Baghdad**	**1.53**	**275**	*ePn*	**Pn**	**01 42 14.0**	**-0.4**
BHD				*eSn*	**Sn**	**01 42 35.0**	**+0.6**
BHD				AML	AML	01 42 44.3	
	comp=E,1μm,0.6s						
IDHR	**Dehrash**	**1.56**	**6**	*ePg*	**Pn**	**01 42 15.1**	**+0.1**
IDHR				*e*		01 42 38.6	
IDOB	**Doab**	**1.77**	**68**	*ePg*	**Pn**	**01 42 18.7**	**+0.7**
IKMR	**Kamar-syah**	**1.86**	**78**	*ePn*	**Pn**	**01 42 20.0**	**+1.0**
IKMR				*e*		01 42 47.7	
ILIN	**Lien**	**1.88**	**20**	*ePn*	**Pn**	**01 42 20.8**	**+1.3**
ILIN				*e*		01 42 47.9	
IBZA	**Bozab**	**1.91**	**46**	*ePg*	**Pn**	**01 42 21.1**	**+1.1**
NSR	**Nassriya**	**2.13**	**181**	*ePn*	**Pn**	**01 42 23.0**	**+0.3**
NSR				*eSn*	**Sn**	**01 42 51.0**	**+1.8**
HSAM	**Samen**	**2.27**	**61**	*ePn*	**Pn**	**01 42 25.6**	**+0.7**
HSAM	**Samen**	**2.27**	**61**	Pn	Pn	**01 42 25.6**	**+0.7**
IALM	**Almabolaq**	**2.37**	**43**	*ePn*	**Pn**	**01 42 27.6**	**+1.4**
HSRG	**Sareghieh**	**2.71**	**39**	*ePn*	**Pn**	**01 42 32.9**	**+1.9**
HSRG				*e*		01 42 37.2	
HAGD	**Aghdareh**	**2.96**	**55**	*ePn*	**Pn**	**01 42 35.6**	**+1.2**
HAGD				*e*		01 42 36.9	
HAGD	**Aghdareh**	**2.96**	**55**	Pn	Pn	**01 42 35.6**	**+1.2**
MAHB	**Mahabad**	**3.63**	**354**	*ePn*	**Pn**

	baz=141,SNR=380						
J05D				S	Sg	01 52 09.6	+0.7
	baz=141						
BMRR	Black Mountain	1.89	194		Pn	01 51 44.5	-0.7
L04D	Klamath Falls	1.97	279	P	Pn	01 51 44.9	-1.3
	baz=98,SNR=114						
WVA	Winnemucca Val	2.00	183		Pn	01 51 46.1	-0.6
PINE	Pine Mountain	2.07	334	Pn	Pn	01 51 48.1	+0.4
BEKR	Beckworth	2.13	194		Pn	01 51 49.0	+0.5
I07A	Izee	2.15	3	Pn	Pn	01 51 49.6	+1.0
J04D	Umpqua Nationa	2.21	307	P	Pn	01 51 51.6	+2.0
	baz=126,SNR=36						
J04D				Sb	Sg	01 52 23.5	+0.2
	baz=126						
PAHR	Pah Rah Range	2.24	174		Pn	01 51 49.6	-0.4
YBH	Yreka Blue Hor	2.27	266	Pn	Pn	01 51 50.2	-0.1
O03E	Paynes Creek	2.29	225	Pb	Pn	01 51 49.8	-0.9
	baz=43						
PEAR	Peavine Mounta	2.34	185		Pn	01 51 52.5	+1.1
M02C	Callahan	2.44	258	P	Pn	01 51 50.6	-2.0
	baz=76,SNR=54						
KBF	Kyburz Flat	2.46	190		Pn	01 51 53.5	+0.4
N02D	Trinity Center	2.47	248	P	Pn	01 51 50.8	-2.2
	baz=66						
HUMO	Hull Mountain	2.52	286	Pn	Pn	01 51 54.2	+0.6
WDC	Whiskeytown Da	2.54	239	Pn	Pn	01 51 54.6	+0.6
VCNR	Virginia City	2.64	179	Pn	Pn	01 51 57.1	+1.6
I05D	Terrebonne, OR	2.69	334	P	Pb	01 51 59.1	-1.6
	baz=154,SNR=11						
I04A	Tendick Farm,	2.73	314	Pb	Pb	01 52 01.5	+0.1
	baz=133						
ORV	Oroville	2.75	211	Pn	Pn	01 51 58.0	+1.1
PNTR	Pine Nut	2.85	179		Pb	01 52 02.4	-1.2
RUBR	Rubicon Trail	2.91	187	Pn	Pn	01 51 59.5	+0.2
L02E	Cave Junction	2.92	276	P	Pn	01 51 58.6	-0.7
	baz=93						
K02D	Willamette Mer	3.05	286	P	Pn	01 52 00.7	-0.3
	baz=104,SNR=49						
KVN	Kaiserville	3.13	157		Pn	01 52 02.0	-0.2
AFDM	Forest Hills D	3.15	199	Pn	Pn	01 52 02.5	+0.2
KRMB	Red Mountain	3.19	264	Pn	Pn	01 52 03.1	+0.1
MFID	Camas Ranch	3.20	61	Pn	Pn	01 52 02.6	-0.6
I03D	Drain, OR	3.22	304	Pb	Pb	01 52 10.3	+0.6
	baz=123						
I03D				Sb	Sb	01 52 52.7	+3.5
	baz=123						
KHMM	Horse Mountain	3.22	252	Pn	Pn	01 52 04.0	+0.5
BMO	Blue Mountains	3.39	30	Pn	Pn	01 52 06.2	+0.5
G08A	Pilot Rock	3.39	9	Pn	Pn	01 52 06.5	+0.8
RYN	Ryan	3.42	165		Pn	01 52 06.6	+0.3
WAKR	Walker	3.44	177		Pn	01 52 06.4	-0.1
ELK	Elko	3.55	108	Pn	Pn	01 52 08.2	+0.1
NVAR	Mina Array Bea	3.66	163	Pn	Pn	01 52 09.4	-0.1
NV11	Mina Array Sit	3.69	161		Pn	01 52 10.3	+0.3
KCPM	Cahto Peak	3.72	234	Pn	Pn	01 52 10.7	+0.5
LHV	Little Huntoon	3.79	166		Pn	01 52 11.4	+0.2
CMB	Columbia Colle	3.94	188		Pn	01 52 13.8	+0.6
PLID	Pearl Lake	4.13	39	Pn	Pn	01 52 16.7	+0.6
HLID	Hailey	4.21	66		Pn	01 52 17.0	-0.1
TPH	Tonopah	4.30	153		Pn	01 52 18.7	+0.4
MDPB	Devils Postpil	4.33	174	Pn	Pn	01 52 18.8	0.0
OMMB	Old Mammoth Mi	4.35	173	Pn	Pn	01 52 19.7	+0.5
R11A	Troy Canyon, C	4.77	137	P	Pn	01 52 25.0	+0.2
	baz=320						
R11A	Troy Canyon, C	4.77	137	Pn	Pn	01 52 24.8	0.0
SPR3	Spring Creek 3	5.03	124	Pn	Pn	01 52 29.6	+1.1
BGU	Big Grassy Mou	5.11	99	Pn	Pn	01 52 28.6	-0.7
HVU	Hansel Valley	5.16	89	Pn	Pn	01 52 31.3	+1.1
HVU					LR	01 53 56.8	
BCYI	Bear Canyon	5.17	61	Pn	Pn	01 52 30.1	-0.2
GVN	Grapevine	5.25	159		Pn	01 52 33.1	+1.7
TMO	Tin Mountain	5.42	160		Pn	01 52 35.6	+1.8
DUG	Dugway, Tooele	5.48	106	P	Pn	01 52 36.6	+2.1
	baz=291						
DUG	Dugway, Tooele	5.48	106		Pn	01 52 33.3	-1.2
PSUT	Pine Spring	5.61	125	Pn	Pn	01 52 36.3	0.0
TPNV	Topopah Spring	5.65	151	Pn	Pn	01 52 36.8	-0.1
MCMT	McKenzie Canyo	5.76	58	Pn	Pn	01 52 38.2	-0.2
PRN	Pahroc Range	5.77	140		Pn	01 52 38.8	+0.4
HWUT	Hardware Ranch	6.08	90	Pn	Pn	01 52 42.0	-0.8
ECR	Eagle Creek	6.25	77	Pn	Pn	01 52 44.8	-0.3
MPU	Maple Canyon	6.39	105	Pn	Pn	01 52 48.2	+1.2
AHID	Auburn Hatcher	6.41	80	Pn	Pn	01 52 47.6	+0.2
TCRU	Three Creeks R	6.46	119	Pn	Pn	01 52 48.1	+0.1
CCUT	Cedar City	6.55	130	Pn	Pn	01 52 49.9	+0.6
TPAW	Teton Pass	6.62	74		Pb	01 53 06.4	-1.4
REDW	Red Top Meadow	6.67	75	Pn	Pn	01 52 50.9	0.0
MVU	Marysvale	6.67	119		Pn	01 52 51.2	+0.2
MSU	Marysvale	6.69	118	Pn	Pn	01 52 51.7	+0.6
YPP	Pitchstone Pla	6.91	67	Pn	Pn	01 52 53.9	-0.3
MTPU	Mount Pierson	6.95	122		Pn	01 52 56.0	+1.1
TMUT	Trail Mountain	6.97	109		Pn	01 52 53.9	-1.2
U15A	North Rim	7.95	131	Pn	Pn	01 53 10.2	+1.6

UPA ***07*** *01:59:15.3±9.4, 13°.53N×91°.08W, h10^{km}±.999^{km}, MW5.1*
UCR ***07*** *01:59:18.2±1.4, 13°.58N×90°.77W, h17^{km}±.8^{km}, ML5.0, MW5.3, mb5.2(NEIC)*
SNET ***07*** *01:59:18.0±1.1, 13°.43N×90°.84W, h36^{km}±.7^{km}, ML5.3, MW5.3*
MOS ***07*** *01:59:19.8±1.4, 13°.71N×90°.58W, h76^{km}, mb5.4/22, Error ellipse: s-maj=12.5km s-min=5.7km az=108.2*
GCMT ***07*** *01:59:19.0±0.2, 13°.57N±0°.01×91°.02W±0°.01, h46^{km}±1^{km}, MW5.2/126, Moment Tensor Solution. s101,c143; s126,c224; Duration: 1ᵗ0 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.56±.02; $M_{\theta\theta}$0.26±.01; $M_{\phi\phi}$0.29±.01; $M_{r\theta}$0.53±.02; $M_{\theta\phi}$-0.55±.01; $M_{\phi r}$-0.25±.01; Best double couple: M₀0.92000×10^{17} NP1:ϕ_s160.00000°, δ30.00000°, λ-53.00000°. NP2:ϕ_s298.00000°, δ67.00000°, λ-109.00000°. Principal axes: T 1.0240, Plg19.0000°, Azm43.0000°; N -0.2080, Plg18.0000°, Azm306.0000°; P -0.8160, Plg63.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***07*** *01:59:20.0±1.8, 13°.64N±0°.06×90°.67W±0°.06, h67^{km}±4^{km}, mb5.4/400, Mwr5.2/16, Md4.8(SNET) Error ellipse: s-maj=10.2km s-min=7.1km az=215.0*
IDC ***07*** *01:59:19.2±0.4, 13°.92N×90°.10W, h58^{km}±2^{km}, mb4.4/27, mb1 4.5/28, mb1mx4.4/41, mbtmp4.6/28, MS4.3/37, Ms1 4.3/37, ms1mx4.2/45, Error ellipse: s-maj=18.3km s-min=7.9km az=55.0*
NEIC ***07*** *01:59:20.0, 13°.64N×90°.67W, h51^{km}, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; M_{rr}-5.51; $M_{\theta\theta}$4.81; $M_{\phi\phi}$0.70; $M_{r\theta}$-0.66; $M_{\theta\phi}$-2.65; $M_{\phi r}$3.60; Fault plane solution: M_o6.89000×10^{16} NP1:ϕ_s274.86000°, δ39.00000°, λ-127.44000°. NP2:ϕ_s139.43000°, δ60.02000°, λ-63.79000°. Principal axes: T 6.5442, Plg11.0000°, Azm211.0000°; N 0.6380, Plg22.0000°, Azm306.0000°; P -7.1822, Plg65.0000°, Azm96.0000°;*
INET ***07*** *01:59:21.5, 13°.53N×90°.60W, h29^{km}, ML5.3*
GCG ***07*** *01:59:24.0±0.7, 14°.00N×90°.83W, h60^{km}±14^{km}, MD5.0*

ISC 07 01:59:18.7±0.3, **13°.58N**±0°.04×**90°.74W**±0°.04, **h59**^{km}±2^{km}, **h59**^{km}:**pP-P, n874,** σ1ˢ**51**/756, **mb5.3**/204, **MS4.4**/39, **15C-11D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCG	Pacaya	0.81	9	↑eP		Pn		01 59 35.8	+1.2
FUG	Fuego 3	0.86	353	↓iP		Pn		01 59 36.2	+1.1
NBG	Las Nubes	1.07	21	↑eP		Pn		01 59 40.3	+2.4
RTR	El Retiro	1.11	74	eP		Pn		01 59 39.3	+1.0
RTR	El Retiro	1.11	74	eP		Pn		01 59 39.3	+1.0
SBLS	San Blas	1.11	77	eP		Pn		01 59 39.0	+0.6
SBLS	San Blas	1.11	77	eP		Pn		01 59 39.0	+0.6
SNJE	San Jose	1.14	75	eP		Pn		01 59 39.5	+0.8
SNJE	San Jose	1.14	75	eP		Pn		01 59 39.5	+0.8
ERG	Entre ros, C	1.17	317	↓iP		Pn		01 59 40.1	+1.2
RTAL	Retalhuleu	1.32	315	eP		Pn		01 59 40.9	0.0
RTAL				↓eS		Sn		01 59 57.7	+0.2
RTAL	Retalhuleu	1.32	315			Pn		01 59 40.9	0.0
RTAL					Sn	Sn		01 59 57.5	-0.1
STG3	Santiaguito 3,	1.38	324	↓iP		Pn		01 59 42.6	+0.7
BOQS	Boqueron	1.43	84	eP		Pn		01 59 43.4	+0.9
BOQS	Boqueron	1.43	84	eP		Pn		01 59 43.4	+0.9
SNET	Serv Nac Est T	1.47	86	eP		Pn		01 59 44.1	+1.2
SNET				eS		Sn		02 00 03.2	+1.9
SNET	Serv Nac Est T	1.47	86	eP		Pn		01 59 44.1	+1.2
SNET				eS		Sn		02 00 03.2	+1.9
CIGS	Centro de Inve	1.53	86	eP		Pn		01 59 45.2	+1.4
CIGS				↓eS		Sn		02 00 05.3	+2.7
LFU	La Fuente	1.59	84	eP		Pn		01 59 45.7	+1.1
LFU	La Fuente	1.59	84	eP		Pn		01 59 45.7	+1.1
LFRS	El Faro	1.63	88	eP		Pn		01 59 46.1	+0.9
LFRS	El Faro	1.63	88	eP		Pn		01 59 46.1	+0.9
LBRS	Las Brisas	1.66	84	eP		Pn		01 59 46.8	+1.2
LBRS	Las Brisas	1.66	84	eP		Pn		01 59 46.8	+1.2
ESQI	Esquipulas	1.67	54	↑iP		Pn		01 59 47.2	+1.5
ESQI				eS		Sn		02 00 11.3	+5.1
ESQI				IAML				02 00 13.7	
	comp=Z,24μm,0.5s								
ESQI	Esquipulas	1.67	54			Pn		01 59 46.6	+0.9
MRL	Marmol	1.81	34	↓iP		Pn		01 59 50.1	+2.4
THIG		1.98	312			Pn		01 59 50.4	+0.6
TECA	Tecapa	2.18	92	eP		Pn		01 59 53.7	+1.0
TECA	Tecapa	2.18	92	eP		Pn		01 59 53.7	+1.0
LCY	Lacayo	2.38	94	eP		Pn		01 59 56.6	+1.2
LCY	Lacayo	2.38	94	eP		Pn		01 59 56.6	+1.2
VSM	San Miguel	2.40	93	eP		Pn		01 59 57.1	+1.3
VSM	San Miguel	2.40	93	eP		Pn		01 59 57.1	+1.3
CCIG	Comitan	3.00	333			Pn		02 00 06.2	+2.2
CSGN	Cosiguina Volc	3.15	101			Pn		02 00 07.2	+1.3
PCIG		3.19	312			Pn		02 00 07.1	+0.7
TGUH	Tegucigalpa,Un	3.40	82	↑iP		Pn		02 00 10.3	+0.9
TGUH	Tegucigalpa,Un	3.40	82	↑iP		Pn		02 00 10.3	+0.9
TGUH	Tegucigalpa,Un	3.40	82	Pn		Pn		02 00 10.2	+0.9
PETF	Flores	3.42	14	↑iP		Pn		02 00 12.0	+2.5
PETF	Flores	3.42	14			Pn		02 00 11.8	+2.3
CRIN	San Cristobal	3.70	103			Pn		02 00 13.8	+0.4
CNGN	Cerro Negro	4.08	105	eP		Pn		02 00 19.3	+0.6
CNGN	Cerro Negro	4.08	105	eP		Pn		02 00 19.3	+0.6
MATN	Matagalpa	4.73	97	Pn		Pn		02 00 27.6	0.0
CMIG	Matias Romero	5.31	312	P		Pn		02 00 36.5	+1.1
	comp=Z,25nm,0.3s,baz=123,slow=12,SNR=172								
CMIG					S	Sn		02 01 36.0	+0.7
	comp=Z,153nm,0.3s,baz=79,slow=16,SNR=7.6								
CMIG					LR	LR		02 03 13.3	
	comp=Z,4μm,18.4s,baz=134,slow=42								
CMIG	Matias Romero	5.31	312			Pn		02 00 36.8	+1.4
ACON	Acoyapa	5.66	106			Pn		02 00 40.0	-0.3
HZTE	Horizontes, Gu	5.78	119	eP		Pn		02 00 44.6	+2.7
ORTG	Ortega, Santa	6.08	121	eP		Pn		02 00 48.5	+2.4
PLVR	Palo Verde	6.17	121	eP		Pn		02 00 49.8	+2.4
DUNO	Dulce Nombre,	6.20	124	eP		Pn		02 00 50.0	+2.3
ESPN	Las Esperanzas	6.43	102			Pn		02 00 50.9	+0.1
JTS	Las Juntas de	6.54	119	P		Pn		02 00 54.5	+2.2
	comp=Z,58nm,0.3s,baz=14,slow=17,SNR=70								
JTS					S	Sn		02 02 04.8	-0.8
	comp=Z,26nm,0.3s,baz=142,slow=23,SNR=5.9								
JTS					LR	LR		02 02 44.0	
	comp=Z,657nm,19.9s,baz=0.5,slow=33								
JTS	Las Juntas de	6.54	119	eP		Pn		02 00 51.8	-0.5
JTS				eS		Sn		02 02 03.0	-2.7
JTS	Las Juntas de	6.54	119	ceP		Pn		02 00 54.3	+2.0
JTS				pmax		pmax			
	comp=Z,78nm,0.3s								
JTS	Las Juntas de	6.54	119	eP		Pn		02 00 54.6	+2.2
JTS	Las Juntas de	6.54	119	Pn		Pn		02 00 54.2	+1.8
ARE1	Arenal 1	6.66	117	eP		Pn		02 00 56.7	+2.8
COVE	Coope Vega, Sa	6.82	114	eP		Pn		02 00 58.0	+1.9
LAFE	Finca La Fe, P	6.83	123	eP		Pn		02 00 58.3	+2.0
TEIG	Tepich	7.01	19	Pn		Pn		02 01 00.7	+1.9
SRA1	San Ramn	7.04	119	eP		Pn		02 01 02.9	+3.6
JACO	JACO, Garabito	7.12	123	eP		Pn		02 01 03.4	+3.1
HDC	Heredia	7.40	118	eP		Pn		02 01 07.1	+2.9
HDC				eS		Sn		02 02 29.9	+3.0
HDC	Heredia	7.40	118	eP		Pn		02 01 06.7	+2.5
HDC	Heredia	7.40	118			Pn		02 01 05.9	+1.7
LCR2	La Lucha 2	7.62	119	eP		Pn		02 01 10.2	+2.9
CVTR	Volcan Turrial	7.70	117	eP		Pn		02 01 11.5	+3.0
RIMA	Rio Macho	7.73	119	eP		Pn		02 01 11.2	+2.4
CDM	Cerro de Muert	7.92	120	eP		Pn		02 01 15.1	+3.4
DRK0	Durika	8.51	120	eP		Pn		02 01 22.3	+2.9
TLIG	Tlapa	8.52	299	Pn		Pn		02 01 22.2	+2.7
EDBA	Buenos Aires	8.53	120	eP		Pn		02 01 23.0	+3.3
RIOS	Rincon, Osa	8.59	124	eP		Pn		02 01 22.7	+2.4
CDITO	Canoas	9.19	122	eP		Pn		02 01 29.6	+1.1
BRU2	Volcan	9.22	120	eP		Pn		02 01 31.2	+2.1
BRU2				eS		Sn		02 03 13.7	+2.2
BC3P	Paso Ancho	9.28	120	eP		Pn		02 01 31.8	+1.8
BC3P				eS		Sn		02 03 11.0	-2.0
BCO2	Palmira	9.39	120	eS		Sn		02 03 15.9	0.0
BAGA3	Bagala, Chiriq	9.53	121	eP		Pn		02 01 36.1	+2.8
BAGA3				eS		Sn		02 03 26.7	+7.8
UNM	Universidad Na	9.91	306	P		Pn		02 01 40.0	+1.4
UNM	Universidad Na	9.91	306	Pn		Pn		02 01 40.0	+1.4
FSCY	Friars Sound, G	10.79	57	Pn		Pn		02 01 51.5	+1.1
GMAL	Guarumal, Vera	10.98	121	eP		Pn		02 01 54.7	+1.5
CACAO	El Cacao, Vera	11.52	122	eP		Pn		02 01 58.6	-1.8
MOIG	Morelia	11.70	303	Pn		Pn		02 02 04.1	+0.9
AZU	Azuero	11.78	118	eP		Pn		02 02 08.8	+4.8
AZU				eS		Sn		02 04 30.4	+16
MTDJ	Mount Denham	13.51	68	Pn		Pn		02 02 27.5	-0.2
CAPC	Capurgana	14.02	109	eP		P		02 02 37.8	-2.8
PAYG	Puerto Ayora	14.17	178	Pn		P		02 02 40.0	-2.3
ZAIG	Zacatecas	14.47	311	Pn		P		02 02 43.5	-2.4
061Z	Ochoppi	15.32	36	Pn		Pn		02 02 50.3	-0.9
SJCC	San Jacinto, C	15.67	102	eP		Pn		02 02 54.1	-1.9
DBBC	Dabeiba	15.71	113	eP		Pn		02 02 56.6	+0.1
UREC	San Jos de Ur	16.02	110	eP		P		02 03 02.7	-0.2
GTBY	Guantanamo Bay	16.23	65	Pn		Pn		02 03 00.4	-2.6
GR1C	Gorgona, Isla	16.27	129	eP		P		02 03 06.0	+0.4
CBOC	Ciudad Bolivar	16.41	116	eP		P		02 03 07.0	-0.3
CBOC				i				02 03 38.0	
	comp=Z,6.4nm,0.7s								
060A	Indiantown	16.53	34	P		P		02 03 08.1	-0.3
HELC	Santa Helena	16.68	115	eP		P		02 03 12.3	+1.8
833A	Chaparral WMA,	16.73	333	P		P		02 03 11.3	+0.7
	baz=149,SNR=10								
HKT	Hockley	16.96	345	c iP		P		02 03 12.7	-0.3
HKT				pmax		pmax			
	comp=Z,73nm,1.2s								
HKT	Hockley	16.96	345			P		02 03 12.5	-0.5
YOTC	Yotoco, Valle	17.11	123	eP		P		02 03 15.9	+0.9
441A	DeRidder	17.23	353	IAmb		IAmb		02 03 21.2	
	comp=Z,433nm,1.1s								
GUY2C	Guyana, Caldas	17.28	117	eP		P		02 03 17.8	+0.5
PTBC	PUERTO BERRIO,	17.48	112	eP		P		02 03 19.4	+0.3
NORC	Norcasia	17.55	115	eP		P		02 03 21.4	+1.6
ANIL	Santa Ana	17.62	119	eP		P		02 03 23.6	+2.7
TOLC	Tolima	17.64	119	eP		P		02 03 24.8	+3.7
POPC	Popayan, Colom	17.71	127	eP		P		02 03 23.4	+1.6
342A	Flagon Creek P	17.77	356	IAmb		IAmb		02 03 40.0	
	comp=Z,339nm,1.1s								
BRAL	Brewton	17.83	10	P		P		02 03 25.2	+2.5
	baz=192,SNR=13								
OCAC	Ocana	17.91	105	eP		Pn		02 03 25.4	+1.5
BRRC	Barranca, Sant	17.94	109	eP		Pn		02 03 26.5	+2.3
CUSE	Cuicocha Este	17.98	136	eP		Pn		02 03 26.9	+1.8
SOTA	Rioblanco	18.02	128	eP		Pn		02 03 29.4	+3.8
PCON	Cinco Dias	18.06	127	eP		Pn		02 03 29.0	+2.8
ORTC	Ortega, Tolima	18.07	121	eP		Pn		02 03 27.9	+2.1
GCUF	Volcan Galeras	18.07	132	eP		Pn		02 03 28.9	+2.7
MARP	Paez Belalcaza	18.09	125	eP		Pn		02 03 29.4	+3.1
LGNH	Logne	18.10	72	IAmb		IAmb		02 04 06.3	
	comp=Z,276nm,1.8s								
CRUC	La Cruz	18.13	130	eP		Pn		02 03 28.9	+2.1
SPBC	San Pablo de B	18.21	114	eP		Pn		02 03 27.5	-0.1
435B	Jarrell	18.24	341	P		Pn		02 03 28.3	+0.6
	baz=158,SNR=6.0								
435B	Jarrell	18.24	341	IAmb		IAmb		02 03 45.2	
	comp=Z,272nm,1.1s								
ROSC	El Rosal	18.38	117	P		Pn		02 03 33.4	+3.5
	comp=Z,1.1nm,0.3s,baz=62,slow=4.5,SNR=7.3								
ROSC	El Rosal	18.38	117	eP		Pn		02 03 32.2	+3.3
ROSC	El Rosal	18.38	117	P		P		02 03 29.3	0.0
URIC	Uribia, Colomb	18.39	94	eP		P		02 03 26.8	-2.2
NATX	Nacogdoches	18.45	349	P		Pn		02 03 30.4	+0.2
	baz=168,SNR=10.0								
NATX	Nacogdoches	18.45	349	P		Pn		02 03 30.7	+0.5
NATX				IAmb		IAmb		02 03 46.8	
	comp=Z,292nm,1.1s								
PRAC	Prado	18.47	121	eP		Pn		02 03 32.2	+1.5
VBMS	Vicksburg	18.55	1	P		Pn		02 03 33.6	+2.2
	baz=180,SNR=38								
BETC	Betania	18.60	124	eP		Pn		02 03 33.0	+0.8
250A	Grady	18.76	12	IAmb		IAmb		02 03 39.2	
	comp=Z,514nm,1.4s								
JCT	Junction City	18.78	335	P		Pn		02 03 34.5	+0.2
JCT				pmax		pmax			
	comp=Z,398nm,2.0s								
JCT	Junction City	18.78	335	P		Pn		02 03 35.6	+1.3
	baz=151,SNR=9.4								
JCT	Junction City	18.78	335			Pn		02 03 34.5	+0.2
JCT				IAmb		IAmb		02 03 51.3	
	comp=Z,398nm,1.9s								
PAMC	Pamplona, Colo	18.79	107	eP		P		02 03 30.4	-3.5
GARC	Garzon, Huila	18.86	126	i P		Pn		02 03 36.2	+0.7
GARC				eP		P		02 03 36.4	+2.0
456A	Hilliard	18.86	24	IAmb		IAmb		02 03 39.5	
	comp=Z,279nm,1.1s								
237A	Washetta, Mont	18.91	347	IAmb		IAmb		02 03 52.7	
	comp=Z,412nm,1.2s								
TIGA	Tifton	18.95	19	P		Pn		02 03 35.9	-0.3
	baz=202,SNR=19								
TIGA	Tifton	18.95	19	IAmb		IAmb		02 03 53.8	
	comp=Z,275nm,0.8s								
CHIC	Chingaza	18.99	116	eP		Pn		02 03 37.4	+0.1
CHIC				i				02 03 49.2	
	comp=Z,11nm,0.4s								
RUSC	La Rusia	18.99	112	eP		Pn		02 03 37.2	-0.2
143A	Socs Landing,	19.04	358	IAmb		IAmb		02 03 42.4	
	comp=Z,410nm,1.4s								
PUAC	Puerto Asis, P	19.09	132	eP		Pn		02 03 38.3	+0.2
FLOC	Florencia	19.10	127	↓eP		Pn		02 03 39.5	+1.2
HPIG		19.27	316	P		Pn		02 03 40.6	+0.3
WHTX	Lake Whitney,	19.33	343	P		Pn		02 03 40.1	-0.6
	baz=160,SNR=40								
SDDR	Presa de Saban	19.42	71	P		P		02 03 40.6	+0.2
LRAL	Lakeview Retre	19.66	9	P		P		02 03 43.7	+0.9
	baz=191,SNR=67								
LRAL	Lakeview Retre	19.66	9	P		P		02 03 43.0	+0.2
LRAL				IAmb		IAmb		02 04 01.8	
	comp=Z,301nm,1.4s								
Z41A	Richland Creek	19.68	355	P		Pn		02 03 44.0	-0.9
	baz=174,SNR=29								
TXAR	Lajitas Array	19.73	325	P		Pn		02 03 47.0	+1.4
	comp=Z,1.2nm,0.3s,baz=146,slow=11,SNR=44								
TXAR					pP	pP		02 03 59.3	+2.8
	comp=Z,1.9nm,0.3s,baz=148,slow=10,SNR=17								
TXAR					PcP	PcP		02 08 01.6	+1.1
	comp=Z,0.2nm,0.3s,baz=150,slow=3.1,SNR=4.8								
TXAR					pPcP			02 08 18.4	
	comp=Z,0.1nm,0.3s,baz=186,slow=4.4,SNR=4.0								
TXAR					ScP	ScP		02 11 34.2	+2.4
	comp=Z,0.0nm,0.3s,baz=171,slow=4.2,SNR=8.2								
TXAR					LR	LR		02 12 44.3	
	comp=Z,288nm,21.4s,baz=0.0,slow=41								
TXAR	Lajitas Array	19.73	325	P		Pn		02 03 45.9	+0.3
TXAR	Lajitas Array	19.73	325			ScP		02 11 35.0	+3.2
TXAR	Lajitas Array	19.73	325	P		Pn		02 03 45.9	+0.3
255A	Hazlehurst	19.77	21	IAmb		IAmb		02 03 50.3	
	comp=Z,362nm,1.3s								
152A	Waverly Hall	19.78	15	IAmb		IAmb		02 04 02.8	
	comp=Z,225nm,0.8s								
TAMC	Tame, Arauca	19.95	109	eP		P		02 03 46.0	-0.2
SC01	Santiago de lo	20.04	70	P		P		02 03 47.7	+0.6
H06E1	SOCORRO T-PHAS	20.06	288	T		T		02 24 07.9	
	SNR=18								
H06S1	SOCORRO T	20.08	287	T		T	

X55A **Gracelyn & Ava** 22.37 20 P P 02 04 11.2 -0.8
baz=204,SNR=13
LCAR **Lake Charles** 22.39 359 IAmb IAmb 02 04 32.8
comp=Z,102nm,0.8s
Y57A **Sumter** 22.41 23 P P 02 04 12.8 +0.4
baz=207,SNR=6.0
BG3 **Lake Jocassee** 22.45 17 IAmb IAmb 02 04 31.8
comp=Z,127nm,0.9s
CPCT **Cooper Cave** 22.48 13 IAmb IAmb 02 04 32.2
comp=Z,182nm,1.1s
MNTX **Cornudas Mount** 22.49 326 P P 02 04 14.7 +1.4
baz=140,SNR=84
MNTX **Cornudas Mount** 22.49 326 IAmb IAmb 02 04 31.4
comp=Z,92nm,0.9s
OKCSW **OKLAHOMA CITY** 22.55 346 P P 02 04 13.0 -1.0
OKCFA **Oklahoma City** 22.57 346 IAmb IAmb 02 04 37.2
comp=Z,177nm,0.9s
Y58A **Scranton** 22.59 25 P P 02 04 14.0 -0.3
baz=209,SNR=6.2
X56A **White Oak** 22.60 21 P P 02 04 14.3 -0.1
baz=205,SNR=7.8
WVT **Waverly** 22.60 6 P P 02 04 14.0 -0.4
WVT pmax pmax
comp=Z,117nm,1.0s
WVT **Waverly** 22.60 6 P P 02 04 14.4 0.0
baz=187
WVT **Waverly** 22.60 6 P P 02 04 14.0 -0.4
WVT IAmb IAmb 02 04 37.7
comp=Z,117nm,0.9s
PAULI **Pauline** 22.63 19 IAmb IAmb 02 04 33.6
comp=Z,98nm,0.9s
TUL1 **Leonard** 22.69 349 P P 02 04 13.7 -1.7
baz=167,SNR=20
TUL1 **Leonard** 22.69 349 IAmb IAmb 02 04 41.5
comp=Z,96nm,0.8s
OK025 **Westminster Rd** 22.70 346 IAmb IAmb 02 04 32.6
comp=Z,180nm,0.8s
U40A **Yellville** 22.76 356 P P 02 04 15.9 -0.2
baz=174,SNR=18
U40A **Yellville** 22.76 356 IAmb IAmb 02 04 31.8
comp=Z,92nm,0.8s
CLTN **Cedars of Leba** 22.76 9 IAmb IAmb 02 04 34.7
comp=Z,172nm,0.9s
W54A **Cherokee Point** 22.76 18 P P 02 04 15.8 -0.3
baz=202,SNR=15
HHAR **Hobbs** 22.78 353 IAmb IAmb 02 04 18.0
comp=Z,86nm,0.9s
TKL **Tuckaleechee C** 22.86 15 P P 02 04 16.9 -0.2
comp=Z,196nm,1.2s,baz=185,slow=7.8,SNR=32
TKL sP pP 02 04 32.9 +2.7
comp=Z,207nm,1.1s,baz=187,slow=8.3,SNR=17
TKL LR LR 02 13 48.8
comp=Z,3µm,21.5s,baz=206,slow=39
V51A **Loudon** 22.86 13 P P 02 04 16.1 -1.1
V51A IAmb IAmb 02 04 38.1
comp=Z,176nm,1.1s
HICK **Hickman** 22.90 3 IAmb IAmb 02 04 36.6
comp=Z,276nm,1.1s
OK030 **Cody Creek RV** 22.90 347 IAmb IAmb 02 04 46.0
comp=Z,127nm,1.2s
X57A **Johnson Farm,** 22.92 23 P P 02 04 18.3 +0.6
baz=207,SNR=5.4
OK029 **Liberty Lake** 22.93 346 IAmb IAmb 02 04 41.9
comp=Z,166nm,1.0s
BIRD **Birdtown, Kers** 22.94 22 IAmb IAmb 02 04 36.1
comp=Z,256nm,1.3s
OK031 **S. Brethren Rd** 22.94 347 IAmb IAmb 02 04 47.0
comp=Z,113nm,1.1s
U38A **Gravette** 22.99 352 IAmb IAmb 02 04 34.7
comp=Z,122nm,0.9s
Y59A **Loris** 23.00 26 P P 02 04 17.3 -1.2
baz=211
PARMO **Parma** 23.00 2 IAmb IAmb 02 04 56.4
comp=Z,140nm,0.9s
MSTX **Muleshoe** 23.05 334 P P 02 04 19.2 -0.1
baz=149,SNR=7.0
MSTX **Muleshoe** 23.05 334 IAmb IAmb 02 04 46.9
comp=Z,86nm,0.9s
KMSC **Kings Mountain** 23.08 20 P P 02 04 18.8 -0.6
baz=204,SNR=7.9
KMSC **Kings Mountain** 23.08 20 IAmb IAmb 02 04 37.6
comp=Z,217nm,1.1s
PBMO **Poplar Bluff** 23.10 1 IAmb IAmb 02 05 00.1
comp=Z,175nm,1.3s
X58A **Rowland** 23.29 24 P P 02 04 21.4 0.0
baz=209
W56A **Indian Trail** 23.34 21 P P 02 04 21.4 -0.4
baz=205,SNR=9.2
T42A **Van Buren** 23.35 359 IAmb IAmb 02 04 34.8
comp=Z,100nm,1.1s
AMTX **Amarillo** 23.40 337 P P 02 04 22.7 +0.1
baz=152
AMTX **Amarillo** 23.40 337 P P 02 04 22.6 +0.1
AMTX IAmb IAmb 02 04 38.1
comp=Z,79nm,0.8s
V54A **Nebo** 23.47 18 P P 02 04 22.8 -0.3
baz=202,SNR=9.5
MGMO **Mountain Grove** 23.51 357 IAmb IAmb 02 04 39.6
comp=Z,196nm,1.1s
W57A **Gilead** 23.57 22 P P 02 04 23.1 -0.8
baz=207
W57A **Gilead** 23.57 22 IAmb IAmb 02 04 52.5
comp=Z,99nm,1.0s
X59A **McDuffie Farm,** 23.61 26 P P 02 04 23.7 -0.6
baz=210
W58A **Raeford** 23.74 24 P P 02 04 24.9 -0.6
baz=209
TZTN **Tazewell** 23.76 14 P P 02 04 25.2 -0.5
baz=197,SNR=8.2
TZTN **Tazewell** 23.76 14 IAmb IAmb 02 04 44.3
comp=Z,165nm,1.1s
V55A **Taylorsville** 23.77 19 P P 02 04 25.3 -0.5
baz=203
V55A **Taylorsville** 23.77 19 IAmb IAmb 02 04 43.4
comp=Z,69nm,0.8s
T35A **Sooner Cattle** 23.80 348 IAmb IAmb 02 04 27.9
comp=Z,108nm,0.8s
X60A **Albert Glenn T** 23.88 27 P P 02 04 26.1 -0.7
baz=212,SNR=6.1
T50A **Nancy** 23.93 12 IAmb IAmb 02 04 30.4
comp=Z,88nm,0.8s
ATAH **Atahualpa** 23.96 149 P P 02 04 31.0 +2.8
comp=Z,36nm,0.9s,baz=342,slow=5.7,SNR=31
ATAH pPcP 02 08 28.9
comp=Z,13nm,0.9s,baz=29,slow=4.3,SNR=4.4
ATAH LR LR 02 12 50.1
comp=Z,496nm,20.2s,baz=329,slow=34
V56A **Mocksville** 23.97 21 P P 02 04 27.1 -0.5
baz=205
GC02 **Grant County #** 24.03 346 P P 02 04 27.8 -0.4
S44A **Carbondale** 24.05 3 IAmb IAmb 02 05 05.4
comp=Z,154nm,0.8s
SJG **San Juan** 24.07 76 LR LR 02 14 34.2
comp=Z,286nm,19.6s,baz=282,slow=39
SJG **San Juan** 24.07 76 P P 02 04 28.7 0.0
SJG pmax pmax
comp=Z,57nm,1.4s
SJG **San Juan** 24.07 76 P P 02 04 28.7 0.0
U54A **Nelsons Funny** 24.20 18 P P 02 04 29.7 -0.1
baz=201,SNR=20
HSIG 24.24 313 P P 02 04 31.3 +1.1
HSIG IAmb IAmb 02 04 48.3
comp=Z,204nm,1.6s
SRIG **Santa Rosalia** 24.29 308 P P 02 04 32.4 +1.7
SRIG IAmb IAmb 02 04 50.4
comp=Z,252nm,1.4s
V57A **Coltrane Farms** 24.30 22 P P 02 04 29.5 -1.1
baz=206,SNR=6.0
CCM **Cathedral Cave** 24.38 359 P P 02 04 31.0 -0.3
CCM pmax pmax
comp=Z,105nm,0.9s
CCM **Cathedral Cave** 24.38 359 P P 02 04 30.9 -0.4
baz=179
CCM **Cathedral Cave** 24.38 359 P P 02 04 31.0 -0.3
CCM IAmb IAmb 02 04 48.5
comp=Z,105nm,0.9s
W60A **Pink Hill** 24.40 27 P P 02 04 30.8 -0.8
baz=212,SNR=5.6
T53A **Wise** 24.43 16 P P 02 04 31.5 -0.4
baz=199,SNR=7.6
USIN **University of** 24.44 6 IAmb IAmb 02 04 49.9
comp=Z,190nm,0.9s
121A **Cookes Peak, D** 24.46 323 P P 02 04 34.6 +2.2
baz=136,SNR=70
121A **Cookes Peak, D** 24.46 323 IAmb IAmb 02 04 51.0
comp=Z,202nm,1.2s
V58A **Windy Hill, Pi** 24.46 23 P P 02 04 32.0 -0.2
baz=208,SNR=13
V58A **Windy Hill, Pi** 24.46 23 IAmb IAmb 02 04 49.9
comp=Z,148nm,0.8s
CNNC **Cliffs of the** 24.48 26 P P 02 04 32.0 -0.3
baz=211,SNR=5.4
CNNC **Cliffs of the** 24.48 26 IAmb IAmb 02 04 50.7
comp=Z,178nm,1.1s
U56A **King** 24.50 20 P P 02 04 32.6 +0.1
baz=205,SNR=6.8
U56A **King** 24.50 20 IAmb IAmb 02 04 51.2
comp=Z,198nm,1.1s
319A **Douglas** 24.57 319 IAmb IAmb 02 04 51.9
comp=Z,220nm,1.3s
MTP **Monte Pirata** 24.63 76 P P 02 04 33.4 -0.5
R40A **Maddies Statio** 24.64 357 IAmb IAmb 02 05 14.1
comp=Z,68nm,0.8s
T54A **Tazewell** 24.77 18 P P 02 04 34.6 -0.5
baz=202,SNR=9.1
V59A **Middlesex** 24.79 25 P P 02 04 35.3 +0.3
baz=210,SNR=8.3
S51A **Beattyville** 24.79 14 IAmb IAmb 02 04 54.5
comp=Z,116nm,0.8s
W61A **Ground Anchor** 24.82 28 P P 02 04 34.8 -0.6
baz=213,SNR=6.4
WCI **Wyandotte Cave** 24.86 8 P P 02 04 35.0 -0.7
WCI pmax pmax
comp=Z,349nm,1.0s
WCI **Wyandotte Cave** 24.86 8 P P 02 04 35.5 -0.2
baz=190
WCI **Wyandotte Cave** 24.86 8 P P 02 04 35.0 -0.7
U57A **Blanch** 24.95 22 P P 02 04 35.7 -0.8
baz=207,SNR=11
T55A **Pulaski** 25.07 19 P P 02 04 38.2 +0.5
baz=203
R49A **Shelbyville** 25.10 10 IAmb IAmb 02 04 55.4
comp=Z,91nm,1.0s
OLIL **Olney** 25.16 5 IAmb IAmb 02 05 20.8
comp=Z,183nm,1.2s
S53A **Williamson** 25.20 16 P P 02 04 37.4 -1.5
baz=200,SNR=5.4
V60A **Jim Taylor Roa** 25.20 26 P P 02 04 38.1 -0.6
baz=212
U58A **Oxford** 25.21 24 P P 02 04 38.9 0.0
baz=209,SNR=5.0
T56A **Rocky Mt** 25.23 20 P P 02 04 38.7 -0.4
baz=205,SNR=6.7
R50A **Paris** 25.25 12 IAmb IAmb 02 04 57.1
comp=Z,166nm,1.2s
Q44A **Meyer Farm, Va** 25.27 3 IAmb IAmb 02 04 58.2
comp=Z,298nm,1.6s
BLA **Blacksburg** 25.27 20 P P 02 04 39.9 +0.3
baz=204,SNR=5.6
BLA **Blacksburg** 25.27 20 IAmb IAmb 02 04 57.5
comp=Z,95nm,0.9s
U59A **Littleton** 25.48 25 P P 02 04 41.3 0.0
baz=210
T57A **Hurt** 25.48 22 P P 02 04 41.7 +0.3
baz=206,SNR=6.4
T57A **Hurt** 25.48 22 IAmb IAmb 02 04 58.8
comp=Z,71nm,0.9s
S54A **Dingess, Beckl** 25.54 18 P P 02 04 41.2 -0.7
baz=202,SNR=6.9
S54A **Dingess, Beckl** 25.54 18 IAmb IAmb 02 04 59.0
comp=Z,97nm,0.9s
ANMO **Albuquerque** 25.58 329 P P 02 04 43.8 +1.3
comp=Z,3.3nm,0.6s,baz=146,slow=12,SNR=10
ANMO pP pP 02 04 57.7 +0.8
comp=Z,11nm,0.8s,baz=152,slow=12,SNR=14
ANMO PcP PcP 02 08 12.3 -0.1
comp=Z,3.5nm,0.8s,baz=162,slow=16,SNR=2.6
ANMO pPcP 02 08 30.3
comp=Z,3.5nm,0.9s,baz=181,slow=2.3,SNR=3.6
ANMO LR LR 02 17 02.8
comp=Z,349nm,19.9s,baz=151,slow=42
ANMO **Albuquerque** 25.58 329‖ eP P 02 04 43.7 +1.2
ANMO **Albuquerque** 25.58 329 P P 02 04 43.5 +1.0
baz=142
ANMO **Albuquerque** 25.58 329 P P 02 04 43.3 +0.8
T58A **Grand View Acr** 25.70 23 P P 02 04 42.8 -0.6
baz=208,SNR=6.0
S55A **Lewisburg** 25.76 19 P P 02 04 43.6 -0.3
baz=203,SNR=5.9
BLO **Bloomington** 25.76 8 P P 02 04 44.2 +0.4
BLO pmax pmax
comp=Z,183nm,1.3s
BLO **Bloomington** 25.76 8 P P 02 04 44.2 +0.4
BLO IAmb IAmb 02 05 17.1
comp=Z,183nm,1.3s
U60A **Pendleton** 25.84 26 P P 02 04 43.9 -0.7
baz=211
R53A **Hurricane** 25.85 16 P P 02 04 45.1 +0.4
baz=200,SNR=5.3
R53A **Hurricane** 25.85 16 IAmb IAmb 02 05 02.0
comp=Z,90nm,1.0s
P40A **Paris** 25.87 358 IAmb IAmb 02 05 02.2
comp=Z,65nm,0.8s
KSU1 **Kansas State U** 25.94 350 P P 02 04 45.7 +0.2
baz=167,SNR=19
KSU1 **Kansas State U** 25.94 350 IAmb IAmb 02 05 03.9
comp=Z,81nm,0.8s
P43A **Skaggs, Pawnee** 25.98 2 IAmb IAmb 02 05 31.4
comp=Z,56nm,0.8s
S56A **Natural Bridge** 25.98 21 P P 02 04 46.2 +0.3
baz=205,SNR=5.4
R54A **Victor** 25.98 18 P P 02 04 46.5 +0.5
baz=202
T59A **Double "B" Far** 26.11 25 P P 02 04 45.7 -1.3
baz=210,SNR=8.3
T59A **Double "B" Far** 26.11 25 IAmb IAmb 02 05 05.0
comp=Z,152nm,1.3s
P46A **Rosedale** 26.12 6 IAmb IAmb 02 05 07.4
comp=Z,130nm,1.0s
TUC **Tucson** 26.15 319 P P 02 04 49.1 +1.5
TUC pmax pmax
comp=Z,50nm,1.0s
TUC **Tucson** 26.15 319 P P 02 04 48.7 +1.1
baz=131
TUC **Tucson** 26.15 319 P P 02 04 49.1 +1.5
P48A **Milroy** 26.20 9 IAmb IAmb 02 05 05.1
comp=Z,150nm,1.2s
R55A **Marlinton** 26.35 19 P P 02 04 49.2 -0.1
baz=204,SNR=5.2
R55A **Marlinton** 26.35 19 IAmb IAmb 02 05 07.5
comp=Z,170nm,1.1s
CBKS **Cedar Bluff** 26.36 344 P P 02 04 49.4 0.0
baz=160
Q52A **Bidwell** 26.37 15 P P 02 04 48.8 -0.6
baz=199
P49A **Miami Univ. Ec** 26.39 11 P P 02 04 48.4 -1.2
baz=193,SNR=5.6
P49A **Miami Univ. Ec** 26.39 11 IAmb IAmb 02 05 06.8
comp=Z,97nm,1.1s
Q53A **Leroy** 26.46 16 P P 02 04 50.4 +0.2
baz=200,SNR=6.5
S58A **Poland Farm, P** 26.47 23 P P 02 04 49.4 -0.9
baz=208,SNR=5.2
O44A **Mansfield** 26.54 4 IAmb IAmb 02 05 26.4
comp=Z,70nm,1.0s
P51A **Williamsport** 26.67 13 P P 02 04 52.2 +0.1
baz=197
P51A **Williamsport** 26.67 13 IAmb IAmb 02 05 10.1
comp=Z,279nm,1.6s
R56A **Bull Pasture M** 26.69 20 P P 02 04 52.0 -0.4
baz=205,SNR=5.6
Q54A **Coxs Mills** 26.77 17 P P 02 04 52.4 -0.6
baz=202,SNR=6.1
R58B **Mineral** 26.84 23 P P 02 04 53.7 0.0
baz=208
SFIN **Lafayette** 26.88 6 P P 02 04 54.0 +0.1
baz=188
S59A **Mechanicsville** 26.89 24 P P 02 04 54.1 0.0
baz=210
R57A **Stanardsville** 26.90 22 P P 02 04 54.0 -0.2
baz=207
HDIL **Hopedale** 26.90 2 P P 02 04 54.0 -0.1
baz=183
Q55A **Buckhannon** 27.01 19 P P 02 04 55.8 +0.6
baz=203
P52A **Corning** 27.04 15 P P 02 04 55.4 0.0
baz=198
P52A **Corning** 27.04 15 IAmb IAmb 02 05 19.5
comp=Z,105nm,1.1s
P53A **Whipple** 27.09 16 P P 02 04 55.1 -0.8
baz=200,SNR=5.9
R58A **Rapidan** 27.09 22 P P 02 04 55.1 -0.8
baz=208,SNR=5.3
O49A **Covington** 27.09 11 IAmb IAmb 02 05 12.6
comp=Z,88nm,1.1s
N38A **Joes South For** 27.20 356 IAmb IAmb 02 05 14.7
comp=Z,132nm,0.8s
214A **Organ Pipe Nat** 27.26 316 P P 02 04 59.2 +1.6
baz=127,SNR=16
214A **Organ Pipe Nat** 27.26 316 IAmb IAmb 02 05 15.7
comp=Z,83nm,0.8s
R59A **King George, V** 27.34 24 P P 02 04 57.4 -0.7
baz=210
ACSO **Alum Creek Sta** 27.41 13 P P 02 04 57.9 -0.8
baz=196,SNR=6.0
O51A **Pataskala** 27.41 14 P P 02 04 58.2 -0.6
baz=197
SDCO **Great Sand Dun** 27.42 334 P P 02 04 59.8 +0.5
baz=147
SDCO **Great Sand Dun** 27.42 334 P P 02 05 00.0 +0.8
P54A **Burton** 27.45 17 P P 02 04 58.8 -0.3
baz=202,SNR=5.6
W18A **Petrified Fore** 27.45 325 P P 02 04 59.8 +0.4
baz=137
W18A **Petrified Fore** 27.45 325 IAmb IAmb 02 05 18.7
comp=Z,92nm,1.2s
N35A **Tabor** 27.51 352 IAmb IAmb 02 05 25.6
comp=Z,117nm,0.9s
O52A **Adamsville** 27.56 15 P P 02 04 59.9 -0.3
baz=199
O52A **Adamsville** 27.56 15 IAmb IAmb 02 05 17.2
comp=Z,86nm,0.9s
CZSB **Cruzeiro do Su** 27.73 139 eP P 02 05 03.7 +1.8
Q58A **Fox Den Farm,** 27.77 22 P P 02 05 00.7 -1.2
baz=208
O53A **New Philadelph** 27.85 16 P P 02 05 01.9 -0.8
baz=200
O53A **New Philadelph** 27.85 16 IAmb IAmb 02 05 19.8
comp=Z,61nm,0.9s
P56A **Dayton Farm, R** 27.87 20 P P 02 05 02.1 -0.7
baz=205
X16A **Lo Mia Camp, P** 27.96 321 IAmb IAmb 02 05 22.1
comp=Z,45nm,0.8s
S22A **4UR Ranch, Cre** 28.01 332 P P 02 05 05.3 +0.9
baz=145,SNR=8.3
O54A **Avella** 28.02 17 P P 02 05 03.3 -0.9
baz=202
O54A **Avella** 28.02 17 IAmb IAmb 02 05 56.0
comp=Z,131nm,1.4s
P57A **Homestead Farm** 28.14 21 P P 02 05 04.8 -0.4
baz=207
P57A **Homestead Farm** 28.14 21 IAmb IAmb 02 05 23.1
comp=Z,102nm,1.4s
N51A **Ashland** 28.20 13 IAmb IAmb 02 05 22.7
comp=Z,117nm,1.1s
SCIA **State Center** 28.30 356 P P 02 05 06.6 0.0
baz=175
O55A **Ligonier** 28.36 19 P P 02 05 07.0 -0.2
baz=204
MVCO **Mesa Verde** 28.38 329 P P 02 05 08.7 +1.0
baz=141,SNR=8.7
L40A **Anamosa** 28.38 359 IAmb IAmb 02 06 00.3
comp=Z,50nm,0.9s
113A **Mohawk Valley,** 28.40 316 IAmb IAmb 02 05 25.9
comp=Z,69nm,1.1s
P58A **Pank, Wackersv** 28.40 22 P P 02 05 08.0 +0.5
baz=208
N53A **Lisbon** 28.47 16 P P 02 05 08.6 +0.4
N53A IAmb IAmb 02 05 25.1
comp=Z,69nm,0.8s
M50A **Fremont** 28.52 12 IAmb IAmb 02 05 26.1
comp=Z,192nm,1.2s
M51A **Elyria** 28.64 14 P P 02 05 10.0 +0.4
baz=197
O56A **Blue Knob Stat** 28.65 20 P P 02 05 11.1 +1.3
baz=205
O56A **Blue Knob Stat** 28.65 20 IAmb IAmb 02 06 02.0
comp=Z,111nm,1.4s
WUAZ **Wupatki** 28.68 323 P P 02 05 12.5 +2.2
baz=134,SNR=16
P59A **Jarrettsville** 28.83 23 P P 02 05 11.3 -0.1
baz=210
N54A **Moraine State** 28.85 17 P P 02 05 10.6 -1.0
baz=202
N54A **Moraine State** 28.85 17 IAmb IAmb 02 05 28.6
comp=Z,110nm,1.2s
NNA **Nana** 28.90 151 P P 02 05 13.1 +0.7
comp=Z,15nm,0.8s,baz=326,slow=9.7,SNR=4.9
NNA LR LR 02 15 56.0
comp=Z,192nm,20.0s,baz=326,slow=34
NNA **Nana** 28.90 151⇑ eP P 02 05 13.0 +0.7
NNA pmax pmax
comp=Z,26nm,0.9s
M53A **WI Miller and** 29.11 16 P P 02 05 13.0 -0.8
baz=200
M53A **WI Miller and** 29.11 16 IAmb IAmb 02 05 30.8
comp=Z,69nm,0.9s
JFWS **Jewell Farm** 29.23 1 P P 02 05 15.4 +0.5
baz=181
AAM **Ann Arbor** 29.27 11 P P 02 05 15.6 +0.4
baz=194
GLA **Glamis** 29.28 316 P P 02 05 17.0 +1.4
baz=126,SNR=11
GLA **Glamis** 29.28 316 IAmb IAmb 02 05 34.0
comp=Z,106nm,1.1s
N56A **West Decatur** 29.32 19 P P 02 05 14.9 -0.9
baz=205
ESJX **Sierra Juarez** 29.48 313 P P 02 05 17.8 +0.4
PV20 **West Nyswonger** 29.49 330 P P 02 05 17.9 +0.4
PDMCI **Parker Dam,Lak** 29.58 318 P P 02 05 20.1 +2.0
baz=128,SNR=11
M55A **Ridgway** 29.68 18 IAmb IAmb 02 05 35.9
comp=Z,69nm,1.1s
M56A **Emporium** 29.87 19 P P 02 05 21.4 +0.7
baz=205
M56A **Emporium** 29.87 19 IAmb IAmb 02 05 38.1
comp=Z,62nm,1.0s
SWSC **Sam W. Stewart** 29.89 314 P P 02 05 22.9 +2.1
baz=124,SNR=11
W13A **Hualapai Mount** 29.92 320 IAmb IAmb 02 05 40.0
comp=Z,45nm,1.0s
IKP **In-Ko-Pah, Jac** 29.94 314 P P 02 05 23.4 +1.9
baz=123,SNR=13
BC3 **Big Chuckawall** 30.06 316 P P 02 05 24.8 +2.3
baz=126,SNR=36
LUPA **Lehigh Univers** 30.09 24 IAmb IAmb 02 05 40.7
comp=Z,48nm,1.1s
M57A **Sunshine Farm,** 30.09 21 P P 02 05 21.4 -1.2
baz=207
IRM **Iron Mountain** 30.15 317 P P 02 05 24.6 +1.3
baz=127,SNR=18
N59A **State Game Lan** 30.21 23 P P 02 05 23.1 -0.6
baz=210
MONP2 **Monument Peak** 30.30 314 P P 02 05 26.4 +1.7
baz=123
M58A **Price's Panora** 30.36 22 P P 02 05 23.7 -1.2
baz=208
I37A **Lemond, Waseca** 30.41 356 IAmb IAmb 02 06 32.8
comp=Z,124nm,1.5s
N60A **Cedar Hill Far** 30.43 24 P P 02 05 24.3 -1.3
baz=211
ECSD **EROS Data Cent** 30.47 352 P P 02 05 25.1 -0.7
baz=169,SNR=6.6
O20A **White River Ci** 30.59 333 P P 02 05 26.8 -0.4
baz=145
BELC **Belle Mtn. Jos** 30.63 316 P P 02 05 29.1 +1.5
baz=125,SNR=15
N61A **South Mountain** 30.65 25 P P 02 05 26.9 -0.6
baz=212
L56A **Greenwood** 30.66 19 P P 02 05 26.8 -0.9
baz=206
TPFO **Pinon Flats** 30.71 315 P P 02 05 29.8 +1.4
baz=124,SNR=6.9
PFO **Pinyon Flats O** 30.72 315 P P 02 05 30.5 +2.1
comp=Z,13nm,1.1s,baz=121,slow=7.2,SNR=9.9
PFO pP pP 02 05 44.3 +1.3
comp=Z,15nm,0.8s,baz=123,slow=9.5,SNR=13
PFO PcP PcP 02 08 25.9 +0.9
comp=Z,3.3nm,0.8s,baz=80,slow=10.0,SNR=3.8
PFO pPcP 02 08 43.5
comp=Z,5.7nm,0.9s,baz=107,slow=1.9,SNR=3.9
PFO **Pinyon Flats O** 30.72 315 P P 02 05 29.7 +1.3
baz=124,SNR=7.2
PFO **Pinyon Flats O** 30.72 315 P P 02 05 29.7 +1.3
GMRC **Granite Mounta** 30.86 317 P P 02 05 31.4 +1.8
baz=127,SNR=16
M59A **Waymart** 30.88 23 P P 02 05 28.5 -1.0
baz=210
M60A **Port Jervis** 31.01 24 P P 02 05 30.0 -0.6
baz=211
MURC **Murrieta** 31.23 314 P P 02 05 34.3 +1.6
baz=123,SNR=5.7
K56A **Middlesex** 31.24 19 P P 02 05 31.8 -1.0
baz=206

I51A Listowel 31.25 14 P P 02 05 32.7 0.0
baz=198
BINY Binghamton 31.25 21 P P 02 05 31.8 -1.0
baz=208
MEDO Medina 31.32 17 P P 02 05 34.0 +0.7
MEDO IAmb IAmb 02 05 50.2
comp=Z,56nm,1.0s
HEC Hector,Ludlow 31.34 317 P P 02 05 36.6 +2.9
baz=126,SNR=10.0
M61A Granite Spring 31.34 25 P P 02 05 32.6 -1.0
baz=213
BBRC Big Bear Solar 31.41 315 P P 02 05 37.4 +2.9
baz=124
TUQ Turquoise Moun 31.43 318 P P 02 05 36.9 +2.2
baz=127,SNR=13
K57A Scipio Center 31.54 20 P P 02 05 33.9 -1.4
baz=207
SUSD Miller 31.55 349 IAmb IAmb 02 06 01.4
comp=Z,51nm,0.8s
L59A Walton 31.59 23 P P 02 05 35.7 -0.1
baz=210
SHPR Sheep Range 31.61 321 IAmb IAmb 02 05 54.7
comp=Z,42nm,1.0s
L60A Shokan 31.73 24 P P 02 05 36.3 -0.7
baz=212
K58A Earlville 31.87 21 P P 02 05 36.5 -1.7
baz=208
BFSC Mount Baldy Ra 31.90 315 P P 02 05 39.6 +0.8
baz=124,SNR=6.1
J56A Wolcott 31.91 19 P P 02 05 38.7 +0.1
baz=206
GSC Goldstone, Bar 31.93 317 P P 02 05 40.0 +1.0
baz=126,SNR=9.3
GSC Goldstone, Bar 31.93 317 P P 02 05 40.4 +1.5
GSC PcP PcP 02 08 28.9 +0.7
SHOC Shoshone, Teco 31.94 319 P P 02 05 40.7 +1.8
baz=128
CIS Catalina Islan 31.98 313 P P 02 05 40.6 +1.3
baz=121
K22A Casper 32.02 338 P P 02 05 40.2 +0.4
baz=150
MWC Mount Wilson 32.17 314 IAmb IAmb 02 05 59.9
comp=Z,65nm,1.1s
PASC Pasadena Art C 32.23 314 IAmb IAmb 02 06 00.3
comp=Z,64nm,1.2s
J57A Williamstown 32.32 20 P P 02 05 41.3 -0.8
baz=207
J57A Williamstown 32.32 20 IAmb IAmb 02 05 59.3
comp=Z,80nm,1.2s
EDW2 Edwards Air Fo 32.48 315 P P 02 05 45.3 +1.5
baz=124,SNR=11
RSSD Black Hills 32.49 342 P P 02 05 44.9 +1.0
RSSD pmax pmax
comp=Z,17nm,1.3s
RSSD Black Hills 32.49 342 P P 02 05 44.1 +0.2
baz=155
RSSD Black Hills 32.49 342 P P 02 05 44.9 +1.0
J58A Remsen 32.52 21 P P 02 05 42.6 -1.2
baz=209
J58A Remsen 32.52 21 IAmb IAmb 02 06 00.7
comp=Z,32nm,0.8s
TPNV Topopah Spring 32.57 320 P P 02 05 46.5 +1.9
baz=129,SNR=12
TPNV Topopah Spring 32.57 320 IAmb IAmb 02 06 03.7
comp=Z,49nm,1.2s
H53A Bobcaygeon 32.58 16 P P 02 05 43.8 -0.6
baz=202,SNR=5.1
LRMC Laurel Mtn Rad 32.61 317 P P 02 05 46.6 +1.6
baz=125,SNR=8.2
SADO Sadowa 32.62 15 IAmb IAmb 02 06 01.2
comp=Z,68nm,1.1s
FURC Furnace Creek, 32.66 319 P P 02 05 47.2 +2.0
baz=127,SNR=8.8
DELO Deloro Mine 32.80 17 IAmb IAmb 02 06 03.5
comp=Z,101nm,1.1s
MPMC Manual Prospec 32.82 318 P P 02 05 48.7 +1.8
baz=126,SNR=16
DUG Dugway, Tooele 32.83 328 P P 02 05 47.6 +0.7
DUG pmax pmax
comp=Z,20nm,1.2s
DUG Dugway, Tooele 32.83 328 P P 02 05 47.6 +0.7
J59A Piesco 32.89 22 P P 02 05 46.5 -0.6
baz=210
I58A Old Forge 32.91 21 P P 02 05 45.7 -1.7
baz=209
E38A The Farm, Brul 32.92 359 IAmb IAmb 02 06 53.9
comp=Z,76nm,1.4s
R11A Troy Canyon, C 33.07 323 P P 02 05 51.8 +2.8
baz=132,SNR=22
R11A Troy Canyon, C 33.07 323 IAmb IAmb 02 06 07.8
comp=Z,51nm,1.3s
SCZ2 Santa Cruz Isl 33.16 313 P P 02 05 51.4 +1.8
baz=121
ARVC Arvin 33.19 315 P P 02 05 51.7 +1.9
baz=123,SNR=5.3
ISA Isabella, Lake 33.25 316 P P 02 05 52.7 +2.2
baz=124,SNR=12
ISA Isabella, Lake 33.25 316 IAmb IAmb 02 06 09.4
comp=Z,46nm,1.1s
GRAC Grapevine Rang 33.30 319 P P 02 05 53.2 +2.3
baz=127,SNR=20
BW06 Boulder Array 33.31 334 P P 02 05 51.7 +0.5
baz=145
PDAR Pinedale Array 33.31 334 P P 02 05 50.8 -0.3
comp=Z,0.6nm,0.6s,baz=132,slow=9.4,SNR=9.1
PDAR pP pP 02 06 08.8 +3.0
comp=Z,1.8nm,0.6s,baz=135,slow=9.3,SNR=8.6
PDAR PcP PcP 02 08 31.4 -0.7
comp=Z,2.6nm,0.9s,baz=117,slow=6.7,SNR=5.6
PDAR pPcP 02 08 48.0
comp=Z,3.5nm,0.9s,baz=132,slow=6.2,SNR=5.8
PDAR ScP ScP 02 12 12.8 +1.1
comp=Z,2.7nm,0.9s,baz=134,slow=5.3,SNR=10
PDAR LR LR 02 21 56.2
comp=Z,257nm,19.8s,baz=147,slow=41
PDAR Pinedale Array 33.31 334 ScP ScP 02 12 11.9 +0.3
PDAR Pinedale Array 33.31 334 P P 02 05 51.8 +0.7
CWC Cottonwood Cre 33.43 318 P P 02 05 53.9 +1.7
baz=126
PLVO Plevna 33.44 18 P P 02 05 51.3 -0.6
PLVO IAmb IAmb 02 06 09.2
comp=Z,54nm,1.0s
H57A Richville 33.45 20 P P 02 05 51.7 -0.3
baz=206
G54A Lake Saint Pet 33.48 16 P P 02 05 51.2 -1.0
baz=202
ETMB Extrema 33.66 132 eP P 02 05 54.4 +0.3
I60A Shoreham 33.66 23 P P 02 05 54.3 +0.4
baz=212
PKM Mcpherson Peak 33.74 314 P P 02 05 56.5 +1.6
baz=122,SNR=14
VES Vestal, Richgr 33.76 316 P P 02 05 56.7 +1.9
baz=124,SNR=22
H58A Gabriels 33.83 22 P P 02 05 55.0 -0.4
baz=210
LONY Lake Ozonia 33.86 21 P P 02 05 54.6 -1.0
baz=209
LONY Lake Ozonia 33.86 21 IAmb IAmb 02 06 13.0
comp=Z,62nm,1.1s
TIN Tinemaha, Big 33.89 319 P P 02 05 58.5 +2.4
baz=126,SNR=7.0
ALGO Algonquin Park 34.00 16 P P 02 05 56.2 -0.5
baz=202
MACA Manacapuru-AM 34.15 117 eP P 02 05 58.2 -0.2
G57A Newington 34.15 20 P P 02 05 56.4 -1.7
baz=208,SNR=5.0
SNOW Snow King Moun 34.39 334 P P 02 06 01.2 +0.8
SNOW IAmb IAmb 02 06 41.2
comp=Z,29nm,1.0s
H60A Morristown 34.50 23 P P 02 06 00.8 -0.3
baz=212
OMMB Old Mammoth Mi 34.72 319 IAmb IAmb 02 06 22.3
comp=Z,54nm,1.4s
B35A Bob, Littlefor 34.76 357 IAmb IAmb 02 06 17.9
comp=Z,34nm,1.2s
NVAR Mina Array Bea 34.77 320 P P 02 06 06.8 +3.0
comp=Z,17nm,0.6s,baz=130,slow=7.5,SNR=133
NVAR pP pP 02 06 21.1 +2.6
comp=Z,96nm,1.0s,baz=135,slow=7.4,SNR=35
NVAR PcP PcP 02 08 37.2 +0.9
comp=Z,8.1nm,0.8s,baz=130,slow=4.4,SNR=6.2
NVAR pPcP 02 08 54.5
comp=Z,13nm,0.9s,baz=133,slow=4.0,SNR=8.3
NVAR ScP ScP 02 12 19.3 +2.5
comp=Z,1.7nm,0.8s,baz=127,slow=4.5,SNR=7.3
NVAR LR LR 02 21 57.4
comp=Z,817nm,21.0s,baz=130,slow=39
NVAR Mina Array Bea 34.77 320 P P 02 06 06.0 +2.2
NVAR PcP PcP 02 08 38.4 +2.1
NVAR ScP ScP 02 12 18.8 +2.0
MDPB Devils Postpil 34.78 319 IAmb IAmb 02 06 22.7
comp=Z,49nm,1.0s
AGMN Agassiz Nation 34.87 354 P P 02 06 02.6 -1.7
baz=171,SNR=11
AGMN Agassiz Nation 34.87 354 IAmb IAmb 02 06 05.3
comp=Z,30nm,1.1s
MDND Maddock 34.95 350 P P 02 06 04.5 -0.4
baz=165,SNR=5.8
E55A Montcerf-Lytto 35.02 18 P P 02 06 03.6 -2.0
baz=205
RYN Ryan 35.02 320 IAmb IAmb 02 06 24.1
comp=Z,28nm,0.9s
KVN Kaiserville 35.03 321 IAmb IAmb 02 06 24.5
comp=Z,61nm,1.0s
PMPB Monarch Peak 35.13 315 IAmb IAmb 02 06 25.2
comp=Z,81nm,1.1s
RLMT Red Lodge 35.16 337 P P 02 06 07.1 +0.1
baz=148
SAML Samuel 35.35 128 P P 02 06 07.8 -0.9
SAML pmax pmax
comp=Z,86nm,1.4s
SAML Samuel 35.35 128 P P 02 06 07.8 -0.9
SAML IAmb IAmb 02 06 08.9
comp=Z,86nm,1.4s
E56A St. Veronique 35.41 19 P P 02 06 08.1 -0.9
baz=207
WAKR Walker 35.52 320 IAmb IAmb 02 06 29.4
comp=Z,92nm,1.5s
E57A Chemin Saint G 35.58 20 P P 02 06 09.2 -1.3
baz=208
D55A Sainte-Anne-du 35.70 18 P P 02 06 09.9 -1.5
baz=206
E58A La Victoria 35.84 21 P P 02 06 11.5 -1.2
baz=210
CMB Columbia Colle 35.85 318 IAmb IAmb 02 06 31.1
comp=Z,31nm,1.1s
G62A West of Eustis 35.90 25 P P 02 06 11.6 -1.5
baz=215,SNR=5.3
G62A West of Eustis 35.90 25 P P 02 06 12.9 -0.3
G62A IAmb IAmb 02 06 35.4
comp=Z,122nm,1.9s
D56A ZEC Mazanza, M 35.95 19 P P 02 06 12.5 -1.0
baz=207
F60A Warwick 35.97 22 P P 02 06 12.4 -1.3
baz=212
PNTR Pine Nut 35.97 320 IAmb IAmb 02 06 32.9
comp=Z,43nm,0.8s
H64A Troy 35.98 26 P P 02 06 12.5 -1.3
baz=217
HLID Hailey 36.13 330 P P 02 06 16.4 +1.0
baz=138,SNR=7.1
PAHR Pah Rah Range 36.21 321 IAmb IAmb 02 06 34.7
comp=Z,27nm,1.0s
D58A Chemin du LacG 36.60 21 P P 02 06 18.2 -1.0
baz=210
MFID Camas Ranch 36.72 329 P P 02 06 20.9 +0.6
ULM Lac du Bonnet 36.80 354 P P 02 06 18.5 -2.3
comp=Z,34nm,1.0s,baz=173,slow=8.3,SNR=19
ULM pP pP 02 06 34.5 -1.1
comp=Z,27nm,1.0s,baz=174,slow=9.0,SNR=7.8
ULM LR LR 02 25 07.5
comp=Z,440nm,18.6s,baz=172,slow=42
ULM Lac du Bonnet 36.80 354 IAmb IAmb 02 06 21.8
comp=Z,50nm,1.1s
LATQ La Tuque 36.89 20 P P 02 06 20.9 -0.6
baz=210
BEKR Beckworth 36.91 321 IAmb IAmb 02 06 40.7
comp=Z,64nm,1.1s
LSQQ Lebel-sur-Quev 37.15 15 P P 02 06 22.0 -1.7
baz=202
LPAZ La Paz 37.15 142 P P 02 06 25.3 +0.5
comp=Z,17nm,1.1s,baz=328,slow=7.8,SNR=39
LPAZ PcP PcP 02 08 45.1 +1.0
comp=Z,7.0nm,1.1s,baz=326,slow=10.0,SNR=4.0
LPAZ pPcP 02 09 03.5
comp=Z,2.5nm,0.4s,baz=24,slow=7.4,SNR=7.2
LPAZ LR LR 02 22 29.7
comp=Z,238nm,20.9s,baz=316,slow=38
LPAZ La Paz 37.15 142 P P 02 06 25.0 +0.2
LPAZ pmax pmax
comp=Z,37nm,1.4s
LPAZ La Paz 37.15 142 P P 02 06 25.0 +0.2
LPAZ La Paz 37.15 142 eP P 02 06 25.1 +0.3
ORV Oroville 37.44 319 IAmb IAmb 02 06 45.3
comp=Z,50nm,1.2s
AP01 Chacalluta 37.59 147 P P 02 06 28.6 +0.9
E63A Oxbow 37.74 25 P P 02 06 28.1 -0.6
baz=217
EGMT Eagleton 37.80 339 P P 02 06 28.6 -0.8
baz=149
PB16 IPOC Station P 38.00 146 P P 02 06 33.1 +1.2
D62A Allapoint, All 38.01 24 P P 02 06 30.3 -0.7
baz=216
D62A Allapoint, All 38.01 24 IAmb IAmb 02 06 50.8
comp=Z,90nm,1.7s
O03E Paynes Creek 38.05 320 P P 02 06 33.4 +1.8
baz=126,SNR=12
HOPS Hopland Field 38.14 318 IAmb IAmb 02 06 58.8
comp=Z,54nm,1.2s
MSO Missoula 38.43 334 P P 02 06 34.4 -0.3
baz=142
MNMC Minye Minye 38.61 147 P P 02 06 37.5 +0.9
CHGQ Chibougamau 38.63 17 P P 02 06 34.8 -1.3
baz=206
PSGCX Pisagua 38.72 148 P P 02 06 38.3 +0.9
M04C Macdoel 38.96 322 P P 02 06 40.6 +1.4
baz=127,SNR=7.4
ITTB Itaituba 39.05 115 eP P 02 06 39.0 -1.2
I07A Izee 39.10 327 IAmb IAmb 02 06 58.5
comp=Z,30nm,1.0s
PB11 IPOC Station P 39.10 148 P P 02 06 41.3 +0.7
GO01 Chusmiza 39.26 147 IAmb IAmb 02 06 45.5
comp=Z,109nm,1.3s
F10A Beach Ranch, E 39.27 331 IAmb IAmb 02 07 00.6
comp=Z,43nm,0.9s
MALB Monte Alegre 39.28 110 eP P 02 06 41.2 -1.0
M02C Callahan 39.34 321 P P 02 06 41.9 -0.5
baz=125
YBH Yreka Blue Hor 39.45 321 P P 02 06 43.5 +0.2
comp=Z,5.2nm,0.6s,baz=102,slow=4.1,SNR=18
YBH pP pP 02 06 58.1 -0.1
comp=Z,6.0nm,0.8s,baz=96,slow=11,SNR=5.6
YBH pPcP 02 09 08.0
comp=Z,4.6nm,0.9s,baz=140,slow=3.9,SNR=3.6
L04D Klamath Falls 39.49 322 P P 02 06 44.5 +0.8
baz=127,SNR=5.7
TA01 Diego Aracena 39.50 149 P P 02 06 45.0 +1.3
PB08 IPOC Station P 39.67 147 IAmb IAmb 02 06 48.5
comp=Z,49nm,1.1s
PINE Pine Mountain 39.69 325 IAmb IAmb 02 07 02.7
comp=Z,40nm,0.9s
J04D Umpqua Nationa 40.00 324 P P 02 06 49.1 +1.1
baz=128,SNR=10.0
VILB Vilhena 40.14 130 eP P 02 06 48.7 -0.5
PB01 IPOC Station P 40.25 148 P P 02 06 51.3 +1.2
PB01 IAmb IAmb 02 06 52.5
comp=Z,42nm,1.0s
PB01 PcP 02 08 54.1 +1.0
I05D Terrebonne, OR 40.26 326 P P 02 06 49.5 -0.4
baz=130
I04A Tendick Farm, 40.52 324 P P 02 06 51.6 -0.4
baz=128
PB07 IPOC Station P 40.62 149 IAmb IAmb 02 06 55.8
comp=Z,101nm,1.1s
NPGB Novo Progresso 40.67 118 eP P 02 06 51.7 -2.0
MCPB Macapa, AP 40.75 107 eP P 02 06 53.6 -0.7
G05D Wamic, OR 40.83 327 P P 02 06 54.4 -0.3
baz=131
D08A Wollman Farm, 40.86 330 P P 02 06 55.5 +0.7
NEW Newport 40.91 333 P P 02 06 55.6 +0.3
comp=Z,3.2nm,0.6s,baz=141,slow=6.6,SNR=11
NEW PcP PcP 02 08 54.5 -0.3
comp=Z,3.4nm,0.9s,baz=293,slow=4.9,SNR=3.6
NEW ScP ScP 02 12 40.2 +0.6
comp=Z,3.3nm,0.9s,baz=148,slow=1.9,SNR=3.8
NEW Newport 40.91 333 P P 02 06 55.9 +0.6
NEW 02 08 54.5
NEW pmax pmax
comp=Z,28nm,1.8s
NEW Newport 40.91 333 P P 02 06 55.5 +0.3
baz=139
NEW Newport 40.91 333 P P 02 06 55.9 +0.6
H04A Detroit Lake 40.95 325 P P 02 06 56.3 +0.7
I03D Drain, OR 40.99 323 P P 02 06 56.0 +0.1
baz=127
PB09 IPOC Station P 41.00 149 P P 02 06 57.6 +1.2
J01E Myrtle Point 41.02 322 P P 02 06 57.6 +1.4
baz=126
F05D White Salmon 41.33 327 P P 02 06 59.7 +1.0
baz=131
SIV San Ignacio 41.52 134 P P 02 07 00.8 +0.3
comp=Z,22nm,0.5s,baz=310,slow=7.5,SNR=133
SIV PcP PcP 02 08 57.6 +0.3
comp=Z,9.4nm,0.9s,baz=327,slow=4.5,SNR=3.0
SIV pPcP 02 09 16.4
comp=Z,16nm,0.9s,baz=312,slow=3.1,SNR=4.6
I02D Swisshome 41.53 324 P P 02 07 02.7 +2.5
baz=127
PB06 IPOC Station P 41.60 150 IAmb IAmb 02 07 03.7
comp=Z,64nm,1.0s
LVC Limon Verde 41.85 149 P P 02 07 04.8 +1.3
comp=Z,54nm,1.0s,baz=310,slow=5.3,SNR=21
LVC Limon Verde 41.85 149 P P 02 07 04.8 +1.3
LVC pmax pmax
comp=Z,79nm,1.1s
LVC Limon Verde 41.85 149 P P 02 07 04.8 +1.3
LVC IAmb IAmb 02 07 06.5
comp=Z,79nm,1.1s
LVC Limon Verde 41.85 149 eP P 02 07 03.3 -0.2
FFC Flin Flon 41.98 350 P P 02 07 03.4 -0.4
FFC pmax pmax
comp=Z,16nm,0.8s
FFC Flin Flon 41.98 350 P P 02 07 03.4 -0.4
PB15 IPOC Station P 42.08 150 P P 02 07 06.4 +1.2
PB15 IAmb IAmb 02 07 07.8
comp=Z,102nm,1.5s
LON Longmire 42.09 328 IAmb IAmb 02 07 22.9
comp=Z,49nm,0.9s
PTLB Pontes e Lacer 42.53 132 eP P 02 07 08.2 -0.6
PB14 IPOC Station P 42.85 152 P P 02 07 12.4 +0.8
GO02 Mina Guanaco 43.69 152 IAmb IAmb 02 07 20.9
comp=Z,120nm,1.1s
PRPB Parauapebas 45.12 113 eP P 02 07 28.2 -1.5
TMAB Tom-Au,PA,Br 45.16 107 eP P 02 07 29.3 -0.7
SCHQ Schefferville 45.20 19 P P 02 07 27.0 -2.7
comp=Z,17nm,0.7s,baz=218,slow=6.4,SNR=25
SCHQ pP pP 02 07 40.0 -4.9
comp=Z,19nm,0.6s,baz=238,slow=5.6,SNR=6.3
SCHQ LR LR 02 26 48.4
comp=Z,1μm,21.4s,baz=220,slow=37
SCHQ Schefferville 45.20 19 P P 02 07 28.7 -1.0
SCHQ IAmb IAmb 02 07 46.5
comp=Z,72nm,0.8s
AC02 Maricunga 45.33 152 IAmb IAmb 02 07 34.7
comp=Z,107nm,1.2s
GO03 Copiap 45.51 154 P P 02 07 32.9 +0.4
GO03 IAmb IAmb 02 07 34.7
comp=Z,54nm,1.1s
LCO Las Campanas 46.56 156 P P 02 07 41.6 +0.5
LCO pmax pmax
comp=Z,115nm,1.1s
LCO Las Campanas 46.56 156 P P 02 07 41.5 +0.5
AC05 El Transito 46.58 155 P P 02 07 42.0 +0.9
SNDB Serra Nova Dou 46.63 121 eP P 02 07 40.9 -0.6
GO04 Tololo Observa 47.56 156 IAmb IAmb 02 07 50.9
comp=Z,67nm,1.1s
CO01 Juntas del Tor 47.66 156 P P 02 07 50.9 +1.3
CO01 IAmb IAmb 02 07 51.5
comp=Z,41nm,1.3s
H03N2 Juan Fernandez 48.10 167 T T 02 59 33.4
baz=346,slow=76,SNR=18
H03N1 Juan Fernandez 48.10 167 T T 02 59 21.8
baz=346,slow=76,SNR=20
H03N3 Juan Fernandez 48.11 167 T T 02 59 32.3
baz=346,slow=76,SNR=21
ARAG Araguaiana, MT 48.26 126 eP P 02 07 53.0 -1.1
SMTB Santa Maria do 48.29 115 eP P 02 07 53.6 -0.9
CO02 Combarbal 48.40 157 P P 02 07 55.8 +0.7
ROSB Rosrio 49.05 106 eP P 02 07 59.3 -1.0
PEXB Peixe 49.21 119 eP P 02 08 00.2 -1.3
ROC1 El Roble 49.99 158 P P 02 08 07.9 +0.5
PEL Peldehue 50.26 158 P P 02 08 09.8 +0.6
PEL pmax pmax
comp=Z,42nm,1.1s
PEL Peldehue 50.26 158 P P 02 08 09.8 +0.6
PEL IAmb IAmb 02 08 11.0
comp=Z,42nm,1.1s
BDFB Brasilia 51.27 123 P P 02 08 15.6 -1.5
comp=Z,13nm,1.0s,baz=275,slow=7.3,SNR=12
BDFB LR LR 02 32 06.7
comp=Z,215nm,19.0s,baz=309,slow=39
CPUP Villa Florida 51.28 141 P P 02 08 15.8 -1.1
comp=Z,21nm,1.0s,baz=227,slow=3.3,SNR=3.0
CPUP LR LR 02 30 30.9
comp=Z,130nm,21.7s,baz=339,slow=37
CPUP Villa Florida 51.28 141 P P 02 08 15.8 -1.1
CPUP pmax pmax
comp=Z,42nm,1.2s
CPUP Villa Florida 51.28 141 P P 02 08 15.8 -1.1
CPUP IAmb IAmb 02 08 17.3
comp=Z,42nm,1.1s
BO02 Sierra Bellavi 51.71 159 P P 02 08 20.5 +0.4
BO02 IAmb IAmb 02 08 22.0
comp=Z,54nm,1.1s
ITRB Iturama 51.71 129 eP P 02 08 19.8 -0.5
YKA Yellowknife Ar 51.72 346 P P 02 08 19.9 +0.2
comp=Z,2.8nm,0.6s,baz=146,slow=8.3,SNR=5.5
YKA pP pP 02 08 35.4 +0.3
comp=Z,6.2nm,0.7s,baz=145,slow=7.2,SNR=6.6
YKA sP sP 02 08 43.0 +1.2
comp=Z,23nm,0.9s,baz=141,slow=7.6,SNR=12
YKA LR LR 02 34 48.3
comp=Z,237nm,18.6s,baz=0.0,slow=41
PCMB Pacaembu 52.19 132 eP P 02 08 23.2 -0.7
SDBA SAO DESIDERIO 52.26 118 eP P 02 08 23.2 -1.4
IPMB Ipameri, GO 52.38 126 eP P 02 08 24.6 -0.7
BI03 Tigo 52.86 162 P P 02 08 28.9 +0.4
BI02 San Fabin de 53.24 160 P P 02 08 32.0 +0.6
DLBC Dease Lake 53.53 336 P P 02 08 34.0 +0.8
PTGB Pitanga 53.60 135 eP P 02 08 33.0 -1.3
TAOE Nuku Hiva Isla 53.88 248 eLR LR 02 24 10.3
comp=Z,1μm,25.7s
TAOE Nuku Hiva Isla 53.88 248 eT T 03 06 10.9
comp=Z,54nm,0.2s
BB19B Bebedouro 53.90 129 eP P 02 08 35.9 -0.5
ITQB Itaqui 54.15 143 eP P 02 08 37.8 -0.2
FRTB Fartura 54.50 132 eP P 02 08 39.3 -1.4
ITAB Concordia 55.23 137 eP P 02 08 45.1 -0.8
VAO Valinhos 56.20 130 eP P 02 08 52.6 -0.4
SPB Sao Paulo 56.20 131 IAmb IAmb 02 08 53.5
comp=Z,73nm,1.3s
SPB Sao Paulo 56.20 131 eP P 02 08 52.5 -0.5
CPSB Cacapava Do Su 56.58 141 eP P 02 08 54.9 -0.6
RKT Rikitea 56.61 230 eLR LR 02 25 38.5
comp=Z,820nm,27.0s
PET01 Itanhaem-SP 56.73 131 eP P 02 08 56.3 -0.4
BSCB Bom Sucesso 56.74 127 eP P 02 08 57.0 0.0
PLCA Paso Flores 57.19 162 P P 02 08 59.6 -0.1
comp=Z,45nm,1.2s,baz=343,slow=7.8,SNR=18
PLCA LR LR 02 28 03.5
comp=Z,369nm,21.3s,baz=348,slow=30
PLCA Paso Flores 57.19 162 P P 02 09 00.1 +0.3
PLCA pmax pmax
comp=Z,94nm,1.3s
PLCA Paso Flores 57.19 162 P P 02 09 00.1 +0.3
PLCA Paso Flores 57.19 162 eP P 02 08 58.7 -1.0
PARB Paraibuna 57.40 129 eP P 02 09 00.3 -1.3
PLTB Pedras Altas 57.45 142 eP P 02 09 00.8 -0.9
ESAR Angra dos Reis 58.12 128 eP P 02 09 06.7 +0.2
LL01 San Ignacio de 58.18 164 P P 02 09 07.2 +0.7
SJMB Sao Joao De Ma 58.43 122 eP P 02 09 08.9 +0.1
VAS01 Vassouras-RJ 58.48 127 eP P 02 09 08.2 -0.8
BSFB Barra de Sao F 58.77 122 eP P 02 09 11.3 +0.2
NAN01 Guarapari, ES 58.89 121 eP P 02 09 12.1 0.0
RIB01 Linhares ES 59.38 122 eP P 02 09 14.7 -0.6
BCAR Beaver Creek A 60.91 336 P P 02 09 25.0 -0.2
RES Resolute Bay 61.14 359 P P 02 09 24.3 -2.2
comp=Z,4.5nm,0.6s,baz=192,slow=9.5,SNR=9.3
RES Resolute Bay 61.14 359 P P 02 09 25.6 -0.9
RES pmax pmax
comp=Z,13nm,0.8s
RES Resolute Bay 61.14 359 P P 02 09 25.6 -0.9
RES IAmb IAmb 02 09 42.3
comp=Z,13nm,0.8s
INK Inuvik 61.19 343 P P 02 09 25.6 -1.3
comp=Z,3.6nm,0.7s,baz=119,slow=9.4,SNR=7.6
INK pP pP 02 09 42.2 -0.5
comp=Z,14nm,0.8s,baz=154,slow=19,SNR=15
INK LR LR 02 39 55.7
comp=Z,662nm,19.0s,baz=141,slow=40

INK	**Inuvik**	**61.19**	**343**	P		**P**	**02 09 25.8**	**-1.1**
INK				pmax		pmax		
	comp=Z,12nm,0.7s							
INK	**Inuvik**	**61.19**	**343**	P		**P**	**02 09 25.8**	**-1.1**
N25K	**Chitina, Valde**	**61.37**	**334**	P		**P**	**02 09 27.9**	**-0.5**
	baz=116							
KKO	**Keanakako`i**	**61.86**	**285**	P		**P**	**02 09 33.9**	**+1.4**
RIM	**Rim**	**61.86**	**285**	P		**P**	**02 09 34.0**	**+1.5**
HPAH	**Hawaii Prepara**	**62.20**	**286**	P		**P**	**02 09 34.9**	**+0.2**
PMOR	**Pomariorio Ree**	**63.28**	**245**	*e*T		T	03 17 55.8	
	comp=Z,8.6nm,0.2s							
HDA	**Harding Lake**	**63.57**	**336**	P		**P**	**02 09 42.1**	**-0.8**
	baz=115							
ILAR	**Eielson Array**	**63.70**	**337**	P		**P**	**02 09 43.5**	**-0.3**
	comp=Z,2.7nm,0.9s,baz=125,slow=4.9,SNR=15							
ILAR				LR		LR	02 39 53.0	
	comp=Z,322nm,21.4s,baz=117,slow=38							
ICESG	**Greenland Ices**	**64.08**	**18**	*i* P		**P**	**02 09 43.8**	**-2.9**
ICESG				*i*			02 10 01.0	
MCK	**McKinley**	**64.09**	**335**	P		**P**	**02 09 46.2**	**-0.2**
	baz=113							
COLA	**College**	**64.12**	**337**	*e*P		**P**	**02 09 46.6**	**+0.1**
COLA				pmax		pmax		
	comp=Z,4.0nm,1.1s							
TRF	**Thorofare Moun**	**64.54**	**335**	P		**P**	**02 09 49.2**	**-0.3**
I23K	**Minto, Yukon-K**	**64.82**	**337**	P		**P**	**02 09 50.1**	**-0.9**
	baz=113							
MLY	**Manley**	**65.31**	**336**	P		**P**	**02 09 53.5**	**-0.8**
	baz=112							
PPT	**Papeete**	**65.80**	**244**	LR		LR	02 30 26.8	
	comp=Z,529nm,20.5s,baz=65,slow=28							
PPT2	**Papeete2**	**65.81**	**243**	*e*S		**S**	**02 18 46.1**	**+5.1**
	comp=Z,444nm,29.0s							
PPT2	**Papeete2**	**65.81**	**243**	*e*LR		LR	02 29 46.0	
	comp=Z,1µm,25.0s,baz=53							
COLD	**Coldfoot**	**65.96**	**338**	P		**P**	**02 09 57.0**	**-1.4**
	baz=113							
SUMG	**Summit**	**66.31**	**15**	P		**P**	**02 10 01.9**	**+0.8**
SUMG				pmax		pmax		
	comp=Z,25nm,1.1s							
SUMG	**Summit**	**66.31**	**15**	P		**P**	**02 10 01.9**	**+0.8**
SUMG	**Summit**	**66.31**	**15**	*i* P		**P**	**02 09 59.5**	**-1.6**
SUMG				*i*			02 10 15.7	
SUMG	**Summit**	**66.31**	**15**	*i* P		**P**	**02 10 00.6**	**-0.5**
SUMG				*i*			02 10 18.1	
SUMG	**Summit**	**66.31**	**15**	*i* P		**P**	**02 09 59.6**	**-1.6**
SUMG				*i*			02 10 15.7	
SUMG	**Summit**	**66.31**	**15**	*i* P		**P**	**02 10 00.6**	**-0.5**
SUMG				*i*			02 10 18.1	
TOLK	**Toolik Lake Re**	**66.33**	**340**	P		**P**	**02 10 00.1**	**-0.7**
	baz=115							
TBI	**Tubuai**	**68.16**	**238**	*e*LR		LR	02 30 53.0	
	comp=Z,903nm,28.2s,baz=63							
BORG	**Borgarnes**	**69.05**	**25**	LR		LR	02 39 31.2	
	comp=Z,228nm,21.6s,baz=276,slow=35							
DAG	**Danmarks Havn**	**72.78**	**13**	*i* P		**P**	**02 10 37.8**	**-2.6**
DAG				*i*			02 10 55.6	
DAG				pmax		pmax		
	comp=Z,5.0nm,0.9s							
DAG	**Danmarks Havn**	**72.78**	**13**	*i* P		**P**	**02 10 37.0**	**-3.4**
DAG				*i*			02 10 56.3	
DAG	**Danmarks Havn**	**72.78**	**13**	*i* P		**P**	**02 10 37.8**	**-2.6**
	comp=Z,5.3nm,0.9s							
DAG				*i*			02 10 55.6	
DAG	**Danmarks Havn**	**72.78**	**13**	*i* P		**P**	**02 10 37.0**	**-3.4**
DAG				*i*			02 10 56.3	
DAG	**Danmarks Havn**	**72.78**	**13**	*i* P		**P**	**02 10 37.8**	**-2.6**
DAG				IAmb		IAmb	02 10 41.2	
	comp=Z,5.3nm,0.9s							
DAG				*i*			02 10 55.6	
RAR	**Rarotonga**	**76.07**	**244**	LR		LR	02 36 39.2	
	comp=Z,127nm,21.4s,baz=101,slow=29							
EKA	**Eskdalemuir Ar**	**77.58**	**36**	LR		LR	02 44 22.5	
	comp=Z,167nm,18.9s,baz=275,slow=35							
ESDC	**Sonseca Array**	**79.01**	**52**	P		**P**	**02 11 12.9**	**-3.8**
	comp=Z,1.0nm,0.6s,baz=291,slow=4.5,SNR=9.9							
ESDC				pP		**pP**	**02 11 30.3**	**-2.8**
	comp=Z,2.4nm,0.6s,baz=288,slow=4.9,SNR=7.1							
ESDC				LR		LR	02 40 08.0	
	comp=Z,112nm,21.3s,baz=285,slow=31							
PMSA	**Palmer Station**	**80.71**	**169**	P		**P**	**02 11 26.2**	**+1.2**
PMSA				IAmb		IAmb	02 13 10.3	
	comp=Z,50nm,0.8s							
HOPE	**Hope Point**	**81.72**	**151**	P		**P**	**02 11 32.2**	**+1.6**
HOPE				pmax		pmax		
	comp=Z,141nm,1.3s							
HOPE	**Hope Point**	**81.72**	**151**	P		**P**	**02 11 32.2**	**+1.6**
KNTN	**Kanton**	**81.89**	**265**	P		**P**	**02 11 33.5**	**+1.0**
BILL	**Bilibino**	**82.30**	**338**	*e*P		**P**	**02 11 32.8**	**-0.8**
BILL				*i*			02 11 49.9	
BILL				*i*			02 14 45.1	
BILL				pmax		pmax		
	comp=Z,11nm,1.0s							
BILL	**Bilibino**	**82.30**	**338**	P		**P**	**02 11 34.4**	**+0.8**
BGES	**Gesves**	**83.33**	**40**	PcP		**PcP**	**02 11 42.1**	**-1.5**
KOWA	**Kowa**	**83.58**	**77**	P		**P**	**02 11 39.9**	**-1.3**
MEM	**Membach**	**83.85**	**40**	P		**P**	**02 11 42.0**	**+0.1**
MEM				PcP		**PcP**	**02 11 46.3**	**+0.4**
NB2	**NORSAR Subarra**	**83.92**	**29**	P		**P**	**02 11 46.2**	**+4.0**
	comp=Z,24nm,0.9s,baz=288,slow=4.8							
NOA	**NORSAR Array B**	**83.92**	**29**	LR		LR	02 46 49.4	
	comp=Z,190nm,21.3s,baz=280,slow=34							
TIC	**Toumodi**	**84.32**	**85**	*e*P		**P**	**02 11 44.6**	**-0.5**
LIC	**Lamto**	**84.41**	**85**	*e*P		**P**	**02 11 45.1**	**-0.4**
	comp=Z,34nm,0.9s							
NIUE	**Niue**	**84.45**	**249**	P		**P**	**02 11 44.5**	**-1.1**
DBIC	**Dimbokro**	**84.47**	**84**	P		**P**	**02 11 43.5**	**-2.3**
	comp=Z,6.5nm,0.7s,baz=239,slow=4.4,SNR=9.0							
DBIC				LR		LR	02 44 45.8	
	comp=Z,232nm,21.9s,baz=249,slow=32							
DBIC	**Dimbokro**	**84.47**	**84**	P		**P**	**02 11 43.8**	**-2.0**
DBIC				pmax		pmax		
	comp=Z,10.0nm,1.0s							
DBIC	**Dimbokro**	**84.47**	**84**	P		**P**	**02 11 43.8**	**-2.0**
KIC	**Kosan Boka**	**84.66**	**85**	*e*P		**P**	**02 11 43.6**	**-3.2**
	comp=Z,38nm,1.0s							
HFS	**Hagfors**	**85.37**	**29**	LR		LR	02 47 32.8	
	comp=Z,224nm,21.6s,baz=264,slow=34							
ARCES	**ARCESS Array B**	**86.14**	**18**	P		**P**	**02 11 52.3**	**-0.8**
	comp=Z,1.9nm,0.8s,baz=265,slow=4.5,SNR=3.7							
ARCES				LR		LR	02 49 21.4	
	comp=Z,191nm,21.8s,baz=295,slow=35							
GRF	**Grafenberg Arr**	**87.33**	**39**	*e*P		pP	02 12 13.2	-2.7
	comp=Z,12nm,1.3s,baz=288,slow=5.4							
DAVOX	**Davos/Dischmat**	**87.34**	**43**	LR		LR	02 45 26.6	
	comp=Z,144nm,21.6s,baz=270,slow=32							
RETA	**Reutte**	**87.71**	**42**	*i* P		**P**	**02 11 58.9**	**-2.3**
	comp=Z,0.6nm,0.4s							
RETA				*e*P		**pP**	**02 12 17.7**	**-0.1**
	comp=Z,2.6nm,0.5s							
FETA	**Feichten**	**87.83**	**42**	*e*P		pP	02 12 18.7	+0.2
	comp=Z,2.4nm,0.5s							
CLL	**Collm**	**87.90**	**38**	*i* pP		**pP**	**02 12 19.2**	**+0.7**
CLL				*i* sP		sP	02 12 26.5	+1.5
CLL				*e*S		**SKKSac**	**02 22 35.0**	**-0.4**
CLL				*e*SP		**SPn**	**02 23 36.0**	**-4.6**
CLL				*e*			02 27 11.0	
CLL				*e*SS		SS	02 28 42.0	+14
CLL				*e*SSS		SSS	02 32 06.0	
CLL				*e*SSSS			02 34 54.0	
CLL	**Collm**	**87.90**	**38**	*e*P		**P**	**02 11 59.0**	**-2.9**
CLL				*i* *PP		**pP**	**02 12 19.2**	**+0.7**
CLL				*i* *SP		**sP**	**02 12 26.5**	**+1.5**
CLL				*e*S		**SKSac**	**02 22 31.0**	**+5.7**
MOTA	**Moosalm**	**87.97**	**42**	*e*P		**P**	**02 12 01.0**	**-1.6**
	comp=Z,0.8nm,0.5s							
BRG	**Berggiesshubel**	**88.60**	**38**	S		**S**	**02 22 51.0**	**+3.9**
KHC	**Kasperske Hory**	**88.97**	**40**	*e*pP		pP	02 12 23.5	-0.2
GERES	**GERESS Array B**	**89.14**	**40**	P		**P**	**02 12 05.4**	**-2.6**
	comp=Z,0.2nm,0.5s,baz=250,slow=2.9,SNR=2.0							
TOA0	**Torodi Ar. Sit**	**89.28**	**77**	P		**P**	**02 12 07.0**	**-2.2**
TORD	**Torodi Ar. Bea**	**89.28**	**77**	P		**P**	**02 12 05.5**	**-3.7**
	comp=Z,1.2nm,0.9s,baz=292,slow=5.2,SNR=6.5							
TORD				pP		**pP**	**02 12 21.6**	**-4.3**
	comp=Z,1.0nm,0.8s,baz=296,slow=4.4,SNR=3.5							
TORD				LR		LR	02 49 39.4	
	comp=Z,111nm,20.6s,baz=295,slow=34							
TORD	**Torodi Ar. Bea**	**89.28**	**77**	P		**P**	**02 12 06.3**	**-2.9**
SEY	**Seymchan**	**89.63**	**336**	P		**P**	**02 12 11.3**	**+1.4**
	comp=Z,5.4nm,0.8s,baz=85,slow=10,SNR=6.2							
SEY				pP		**pP**	**02 12 26.6**	**+0.1**
	comp=Z,8.4nm,0.9s,baz=112,slow=5.4,SNR=5.8							
SEY	**Seymchan**	**89.63**	**336**	*e*P		**P**	**02 12 11.1**	**+1.2**
APA	**Apatity**	**89.65**	**19**	*i* P		**P**	**02 12 12.2**	**+2.3**
APA				pmax		pmax		
	comp=Z,19nm,1.0s							
LVZ	**Lovozero**	**89.83**	**18**	*e*P		**P**	**02 12 10.0**	**-0.8**
LVZ				pmax		pmax		
	comp=Z,23nm,1.1s							
FINES	**FINESS Array B**	**90.35**	**25**	P		**P**	**02 12 13.8**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=299,slow=14,SNR=2.3							
FINES				LR		LR	02 50 19.2	
	comp=Z,212nm,21.7s,baz=320,slow=34							
VRAC	**Vranov**	**90.75**	**39**	LR		LR	02 50 08.5	
	comp=Z,136nm,20.0s,baz=290,slow=34							
TIXI	**Tiksi**	**90.91**	**348**	*e*P		**P**	**02 12 14.9**	**-0.7**
TIXI	**Tiksi**	**90.91**	**348**	P		**P**	**02 12 15.3**	**-0.4**
PETK	**Petropavlovsk-**	**91.68**	**326**	P		**P**	**02 12 21.4**	**+1.8**
	comp=Z,5.8nm,0.9s,baz=48,slow=6.4,SNR=3.0							
PETK				pP		**pP**	**02 12 37.4**	**+1.1**
	comp=Z,8.9nm,0.9s,baz=90,slow=7.4,SNR=4.5							
BELA	**Belgrano 2**	**96.52**	**170**	P		**P**	**02 12 40.8**	**-0.4**
NRIK	**Noril'sk**	**97.28**	**1**	LR		LR	02 59 40.5	
	comp=Z,373nm,20.0s,baz=18,slow=37							
AKASG	**Malin Array Be**	**97.39**	**34**	LR		LR	02 54 49.0	
	comp=Z,129nm,21.1s,baz=270,slow=34							
OBN	**Obninsk**	**98.49**	**28**	LR		LR	02 55 51.3	
	comp=Z,38nm,20.8s,baz=348,slow=35							
SIM	**Simferopol'**	**103.31**	**37**	*e*P		**Pdif**	**02 13 06.2**	**-6.1**
SIM				pmax		pmax		
	comp=Z,18nm,0.4s							
ZALV	**Zalesovo Beam**	**112.63**	**3**	PKiKP		**PKiKP**	**02 17 47.0**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=334,slow=2.7,SNR=5.3							
SYO	**Syowa Base**	**116.39**	**162**	*e*PP		PP	02 19 03.6	+1.7
SONM	**Songino Array**	**116.97**	**347**	PKP		**PKiKP**	**02 17 57.2**	**0.0**
	comp=Z,1.1nm,0.7s,baz=330,slow=1.7,SNR=6.9							
SONM				pPKP		pPKPdf	02 18 13.2	-1.2
	comp=Z,1.3nm,0.7s,baz=244,slow=0.3,SNR=6.3							
SONM				PKKPbc		**PKKPbc**	**02 28 22.4**	**-1.8**
	comp=Z,2.3nm,0.9s,baz=189,slow=4.1,SNR=9.0							
KSRS	**Korea Array**	**117.58**	**326**	PKP		**PKiKP**	**02 17 59.0**	**+0.5**
	comp=Z,3.6nm,0.9s,baz=112,slow=1.3,SNR=5.5							
KSRS				pPKP		**pPKPdf**	**02 18 15.1**	**-0.6**
	comp=Z,2.8nm,0.7s,baz=359,slow=1.1,SNR=4.6							
BOSA	**Boshof**	**119.07**	**115**	PKP		**PKPdf**	**02 18 00.3**	**-1.3**
	comp=Z,9.0nm,0.9s,baz=245,slow=3.0,SNR=11							
BOSA				pPKP		**pPKPdf**	**02 18 18.7**	**-0.2**
	comp=Z,16nm,0.8s,baz=309,slow=1.2,SNR=10							
BOSA	**Boshof**	**119.07**	**115**	PKIKP		**PKiKP**	**02 18 01.7**	**0.0**
BOSA	**Boshof**	**119.07**	**115**			**PKiKP**	**02 18 01.7**	**0.0**
LBTB	**Lobatse**	**119.31**	**111**	PKIKP		**PKPdf**	**02 18 02.2**	**0.0**
LBTB	**Lobatse**	**119.31**	**111**			**PKPdf**	**02 18 02.2**	**0.0**
MAKZ	**Makanchi**	**119.53**	**6**	PKIKP		**PKiKP**	**02 18 03.1**	**+1.0**
MAKZ	**Makanchi**	**119.53**	**6**			**PKiKP**	**02 18 03.1**	**+1.0**
MK31	**Makanchi Array**	**119.58**	**6**	PKIKP		**PKiKP**	**02 18 03.0**	**+0.8**
MK31	**Makanchi Array**	**119.58**	**6**			**PKiKP**	**02 18 03.0**	**+0.8**
MKAR	**Makanchi Array**	**119.58**	**6**	PKP		**PKPdf**	**02 18 00.9**	**-1.1**
	comp=Z,1.3nm,0.7s,baz=294,slow=2.3,SNR=12							
MKAR				pPKP		**pPKPdf**	**02 18 18.1**	**-1.1**
	comp=Z,1.7nm,0.8s,baz=354,slow=2.4,SNR=8.4							
MKAR				PKKPbc		**PKKPab**	**02 28 16.5**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=134,slow=5.2,SNR=3.6							
MKAR	**Makanchi Array**	**119.58**	**6**	PKIKP		**PKPdf**	**02 18 01.2**	**-0.9**
MKAR	**Makanchi Array**	**119.58**	**6**	PKPdf		**PKPdf**	**02 18 01.2**	**-0.9**
LSZ	**Lusaka**	**121.00**	**100**	PKIKP		**PKiKP**	**02 18 06.2**	**+0.4**
LSZ	**Lusaka**	**121.00**	**100**	PKPdf		**PKiKP**	**02 18 06.2**	**+0.4**
GEYT	**Ailbeck**	**121.01**	**29**	PKP		**PKPdf**	**02 18 04.2**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=289,slow=4.5,SNR=4.4							
HHC	**Hu-ho-hao-te**	**122.03**	**340**	*e*PKP		**PKPdf**	**02 18 03.2**	**-3.9**
HHC				LR		LR		
	comp=Z,210nm,17.5s							
HHC				LR		LR		
	comp=Z,150nm,16.1s							
HHC				LR		LR		
	comp=Z,110nm,16.8s							
WMQ	**Urumqi**	**122.86**	**1**	*e*PKP		**PKiKP**	**02 18 09.1**	**+0.4**
MAW	**Mawson**	**123.32**	**168**	PKP		**PKPdf**	**02 18 08.2**	**-0.2**
	comp=Z,4.6nm,1.0s,baz=245,slow=1.4,SNR=10							
MAW				pPKP		**pPKPdf**	**02 18 25.5**	**-0.1**
	comp=Z,5.0nm,1.0s,baz=249,slow=4.4,SNR=6.0							
MAW	**Mawson**	**123.32**	**168**	PKIKP		**PKiKP**	**02 18 08.8**	**+0.1**
MAW	**Mawson**	**123.32**	**168**	PKPdf		**PKiKP**	**02 18 08.8**	**+0.1**
CTA	**Charters Tower**	**125.28**	**255**	pPKP		pPKPdf	02 18 33.4	+2.5
	comp=Z,2.8nm,0.6s,baz=79,slow=5.2,SNR=3.7							
KSH	**Kashi**	**125.74**	**13**	*e*PKP		**PKPdf**	**02 18 08.2**	**-6.1**
GTA	**Gaotai**	**126.37**	**350**	PKP		**PKiKP**	**02 18 18.0**	**+2.1**
GTA				sPKP			02 18 41.9	
NJ2	**Nanjing**	**126.50**	**329**	*e*PKP		**PKiKP**	**02 18 16.0**	**-0.2**
KMBO	**Kilima Mbogo**	**127.01**	**81**	pPKP		pPKPdf	02 18 36.2	+1.4
	comp=Z,1.2nm,0.6s,baz=16,slow=4.4,SNR=2.4							
KBL	**Kabul**	**128.43**	**21**	PKIKP		**PKiKP**	**02 18 20.7**	**+0.4**
KBL	**Kabul**	**128.43**	**21**	PKPdf		**PKiKP**	**02 18 20.6**	**+0.4**
LZH	**Lanzhou**	**128.71**	**345**	*e*PKP		**PKPdf**	**02 18 16.0**	**-4.1**
LZH				sPKP			02 18 46.5	
STKA	**Stephens Creek**	**128.91**	**240**	PKP		**PKiKP**	**02 18 20.8**	**-0.2**
	comp=Z,7.1nm,1.1s,baz=115,slow=8.3,SNR=5.3							
STKA				pPKP		**pPKPdf**	**02 18 40.0**	**+2.5**
	comp=Z,9.6nm,0.9s,baz=64,slow=1.8,SNR=7.7							
STKA	**Stephens Creek**	**128.91**	**240**	PKIKP		**PKiKP**	**02 18 21.2**	**+0.2**
STKA	**Stephens Creek**	**128.91**	**240**	PKPdf		**PKiKP**	**02 18 21.2**	**+0.2**
CDZ	**Chengdu**	**133.62**	**340**	PKP		**PKiKP**	**02 18 36.7**	**+6.1**
WRAB	**Tennant Creek**	**136.47**	**255**	*i* pPKIKP		**PKPdf**	**02 18 35.7**	**+0.9**
WRA	**Warramunga Arr**	**136.48**	**255**	PKhKP		PKPpre	02 18 23.5	
	comp=Z,0.9nm,1.1s,baz=72,slow=3.1,SNR=4.9							
WRA				PKP		**PKPdf**	**02 18 35.2**	**+0.4**
	comp=Z,4.3nm,1.1s,baz=85,slow=1.7,SNR=15							
WRA				PP		**PP**	**02 21 12.8**	**-4.2**
	comp=Z,3.5nm,1.3s,baz=85,slow=7.5,SNR=6.2							
WRA				SKP		**SKPdf**	**02 22 08.3**	**+3.3**
	comp=Z,3.5nm,1.2s,baz=90,slow=3.0,SNR=6.8							
WRA	**Warramunga Arr**	**136.48**	**255**	PKIKP		**PKPdf**	**02 18 33.6**	**-1.3**
WRA	**Warramunga Arr**	**136.48**	**255**	PKPdf		**PKPdf**	**02 18 33.6**	**-1.3**
ASAR	**Alice Springs**	**136.58**	**250**	PKhKP		PKPpre	02 18 24.9	
	comp=Z,0.5nm,0.6s,baz=114,slow=4.8,SNR=4.3							
ASAR				SKP		**SKPdf**	**02 22 07.9**	**+2.6**
	comp=Z,2.1nm,1.0s,baz=103,slow=3.4,SNR=5.1							
GYA	**Guiyang**	**136.75**	**337**	*e*PKP		**PKPdf**	**02 18 32.2**	**-3.2**
MTN	**Manton Dam**	**139.27**	**266**	PKPdf		**PKPdf**	**02 18 40.0**	**-0.1**
KMI	**Kunming**	**139.34**	**341**	*i* *ePKP		**PKPdf**	**02 18 38.6**	**-1.8**
SHL	**Shillong**	**141.00**	**356**	PKIKP		**PKPdf**	**02 18 41.1**	**-2.2**
SHL	**Shillong**	**141.00**	**356**	PKPdf		**PKPdf**	**02 18 41.1**	**-2.2**
GTOI	**Gorontalo**	**143.70**	**290**	PKP		PKPab	02 18 45.3	+0.4
LUWI	**Luwuk**	**144.57**	**288**	PKP		PKPbc	02 18 48.8	+0.4
LUWI	**Luwuk**	**144.57**	**288**	PKPdf		**PKPdf**	**02 18 49.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**144.75**	**258**	PKPdf		**PKPdf**	**02 18 49.7**	**-0.1**
SOEI	**Soe**	**145.53**	**273**	PKP		**PKPab**	**02 18 52.6**	**+0.7**
SOEI	**Soe**	**145.53**	**273**			**PKPab**	**02 18 53.1**	**+1.2**
APSI	**Ampana**	**145.56**	**289**	PKP		**PKPbc**	**02 18 51.6**	**0.0**
CM34	**Chiang Mai Arr**	**146.33**	**343**	P		**PKPbc**	**02 18 54.0**	**+0.3**
CM33	**Chiang Mai Arr**	**146.42**	**343**	P		**PKPbc**	**02 18 54.0**	**0.0**
CHTO	**Chiang Mai**	**146.42**	**343**	PKP2		**PKPbc**	**02 18 53.4**	**-0.6**
CHTO	**Chiang Mai**	**146.42**	**343**	PKPbc		**PKPbc**	**02 18 53.4**	**-0.6**
CMMT	**Chiang Mai**	**146.42**	**343**	P		**PKPbc**	**02 18 54.4**	**+0.3**
	comp=Z,339nmcomp=Z,17nm,1.1s							
CM35	**Chiang Mai Arr**	**146.49**	**343**	P		**PKPbc**	**02 18 54.0**	**-0.2**
CM32	**Chiang Mai Arr**	**146.60**	**343**	P		**PKPab**	**02 18 56.0**	**+0.4**
MPSI	**Mapaga**	**146.65**	**292**	PKP		**PKPdf**	**02 18 53.6**	**+0.4**
CM36	**Chiang Mai Arr**	**146.66**	**343**	P		**PKPbc**	**02 18 55.0**	**+0.3**
CM09	**Chiang Mai Arr**	**146.76**	**343**	P		**PKPab**	**02 18 56.1**	**-0.1**
	comp=Z,337nmcomp=Z,45nm,1.0s							
CM31	**Chiang Mai Arr**	**146.76**	**343**	P		**PKPab**	**02 18 55.9**	**-0.3**
	comp=Z,9µmcomp=Z,1µm,0.7s							
CM31	**Chiang Mai Arr**	**146.76**	**343**			**PKPbc**	**02 18 55.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**146.76**	**343**	PKPbc		**PKPbc**	**02 18 54.8**	**-0.2**
	comp=Z,20nm,0.8s,baz=337,slow=3.5,SNR=46							
CMAR				pPKPbc		pPKPbc	02 19 11.7	-0.5
	comp=Z,34nm,1.0s,baz=335,slow=3.2,SNR=12							
CM15	**Chiang Mai Arr**	**146.77**	**343**	P		**PKPab**	**02 18 56.0**	**-0.2**
	comp=Z,248nmcomp=Z,34nm,1.0s							
CM02	**Chiang Mai Arr**	**146.78**	**343**	P		**PKPab**	**02 18 56.1**	**-0.2**
	comp=Z,284nmcomp=Z,42nm,1.0s							
CM01	**Chiang Mai Arr**	**146.79**	**343**	P		**PKPab**	**02 18 56.2**	**-0.1**
	comp=Z,258nmcomp=Z,30nm,0.9s							
CM04	**Chiang Mai Arr**	**146.81**	**343**	P		**PKPab**	**02 18 56.0**	**-0.4**
	comp=Z,362nmcomp=Z,41nm,0.9s							
CM13	**Chiang Mai Arr**	**146.81**	**343**	P		**PKPab**	**02 18 56.3**	**-0.1**
	comp=Z,26nm,0.8s							
CM05	**Chiang Mai Arr**	**146.81**	**343**	P		**PKPab**	**02 18 56.0**	**-0.4**
	comp=Z,286nmcomp=Z,28nm,1.0s							
UBPT	**Khong Chiam**	**147.14**	**330**	P		**PKiKP**	**02 18 58.2**	**-0.4**
	comp=Z,25nm,0.9s							
UBPT	**Khong Chiam**	**147.14**	**330**			**PKPab**	**02 18 57.2**	**-0.6**
RER	**Riviere de l'E**	**147.19**	**108**			**PKPab**	**02 18 58.2**	**+0.2**
MHMT	**Maesarieng**	**147.30**	**345**	P		**PKiKP**	**02 19 00.7**	**+1.9**
KHON	**Khomkaen**	**147.39**	**335**	P		**PKiKP**	**02 18 59.0**	**0.0**
	comp=Z,201nm,0.8s							
HYB	**Hyderabad**	**147.43**	**19**	*i* PKP		**PKPbc**	**02 18 56.0**	**-1.0**
HYB				*e*pPKP		**pPKPdf**	**02 19 10.0**	**-1.7**
PHIT	**Phitsanulok**	**147.50**	**340**	P		**PKPab**	**02 18 58.9**	**-0.2**
	comp=Z,324nm,1.0s							
NWAO	**Narrogin (SRO)**	**148.05**	**228**	PKP2		**PKPbc**	**02 18 58.8**	**+0.6**
NWAO	**Narrogin (SRO)**	**148.05**	**228**			**PKPbc**	**02 18 58.8**	**+0.6**
CHAI	**Chaiyaphum**	**148.12**	**336**	P		**PKiKP**	**02 19 00.0**	**-0.6**
	comp=Z,35nm,1.0s							
BNSI	**Bone**	**148.23**	**284**	PKP		**PKPdf**	**02 18 56.7**	**+0.9**
SPSI	**Sidrap Palu**	**148.41**	**285**	PKP		**PKPdf**	**02 18 56.8**	**+0.7**
KAPI	**Kappang**	**148.76**	**283**	PKP2		**PKPbc**	**02 19 00.8**	**+0.2**
KAPI	**Kappang**	**148.76**	**283**			**PKPbc**	**02 19 00.8**	**+0.2**
PSA00	**Pilbara Seismi**	**149.82**	**250**	PKPbc		**PKPbc**	**02 19 01.7**	**-1.3**
PSA00	**Pilbara Seismi**	**149.82**	**250**			**PKiKP**	**02 19 03.5**	**-0.4**
WBSI	**Waikabubak, Su**	**150.24**	**274**	PKP		**PKPbc**	**02 19 04.0**	**-0.2**
TWSI	**Taliwang, Sumb**	**152.49**	**277**	PKP		**PKPdf**	**02 19 01.3**	**-1.1**
KSM	**Kuching**	**154.32**	**304**	PKPdf		**PKPdf**	**02 19 03.8**	**-1.3**
KSM				PKPbc		**PKiKP**	**02 19 14.5**	**+1.0**
KSM				PKPab		**sPKPdf**	**02 19 29.0**	**+0.3**
PSI	**Prapat**	**161.11**	**329**	PKIKP		**PKPdf**	**02 19 13.8**	**+0.1**
RPSI	**Rantau Prapat**	**161.20**	**329**			**PKPdf**	**02 19 13.8**	**+0.2**
MDSI	**Maura Dua**	**162.73**	**300**	PKP		**PKPdf**	**02 19 13.6**	**-1.5**

IDC 07 02:27:44.6±2.2, 48.76S×108.98E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/37, mbtmp3.9/4, MS3.6/2, Ms1 3.6/2, ms1mx3.1/27, Error ellipse: s-maj=87.5km s-min=23.7km az=116.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.37**	**17**	T	T	02 46 26.0	
	baz=193,slow=74,SNR=24						
H01W1	**Cape Leeuwin H**	**14.38**	**17**	T	T	02 46 27.8	
	baz=193,slow=74,SNR=20						
H01W3	**Cape Leeuwin H**	**14.38**	**17**	T	T	02 46

comp=Z,17nm,0.7s
HRA Herat 77.07 16 P P 02 39 38.9 -0.6
HRA IAmb IAmb 02 39 40.5
comp=Z,8.5nm,1.1s
SOEI Soe 77.08 92 P P 02 39 39.3 -0.7
MARD Mardin 77.96 358 P P 02 39 43.8 -0.5
MARD IAmb IAmb 02 39 45.5
comp=Z,7.7nm,1.1s
GAZ Gaziantep 77.97 355 P P 02 39 44.7 +0.4
WRA Warramunga Arr 78.16 106 P P 02 39 46.5 +0.6
comp=Z,4.5nm,0.8s,baz=226,slow=4.7,SNR=33
WB2 Warramunga Arr 78.17 106 P P 02 39 45.8 -0.1
WB2 IAmb IAmb 02 39 47.5
comp=Z,7.9nm,0.9s
WRAB Tennant Creek 78.18 106 P P 02 39 46.1 +0.2
CMAR Chiang Mai Arr 78.64 53 P P 02 39 49.0 +0.7
comp=Z,4.1nm,0.7s,baz=236,slow=7.0,SNR=17
CMAR Chiang Mai Arr 78.64 53 P P 02 39 48.3 -0.1
PLCA Paso Flores 78.77 225 P P 02 39 49.6 +0.6
comp=Z,1.9nm,0.8s,baz=83,slow=7.1,SNR=3.1
KBL Kabul 78.89 22 P P 02 39 49.4 -0.2
CHTO Chiang Mai 78.92 53 P P 02 39 49.7 -0.2
CHTO IAmb IAmb 02 39 50.9
comp=Z,5.6nm,0.8s
NIL Nilore 79.33 25 P P 02 39 52.7 +0.9
NIL IAmb IAmb 02 39 53.4
comp=Z,24nm,1.4s
GEYT Alibeck 79.75 12 P P 02 39 53.5 -0.5
comp=Z,2.9nm,0.8s,baz=243,slow=6.5,SNR=7.8
GEYT Alibeck 79.75 12 P P 02 39 54.5 +0.5
GYA0B ALIBECK ARRAY 79.75 12 P P 02 39 52.8 -1.2
GYA0B IAmb IAmb 02 40 02.2
comp=Z,6.7nm,0.8s
MANT Manisa 80.20 349 P P 02 39 57.0 +0.4
SHL Shillong 80.25 44 P P 02 39 55.6 -1.6
SHL IAmb IAmb 02 39 58.2
comp=Z,26nm,1.2s
MPSI Mapaga 80.33 81 P P 02 39 58.4 +0.7
CPUP Villa Florida 80.43 244 P P 02 39 57.6 -0.6
comp=Z,2.0nm,0.5s,baz=272,slow=18,SNR=5.6
CPUP LR LR 03 07 55.2
comp=Z,38nm,20.5s,baz=34,slow=30
CPUP Villa Florida 80.43 244 IAmb IAmb 02 42 20.4
comp=Z,16nm,1.6s
KOPT Kop Dagi 80.66 358 P P 02 39 58.6 -0.6
KOPT IAmb IAmb 02 40 13.8
comp=Z,9.9nm,1.3s
BDFB Brasilia 80.68 257 P P 02 40 00.3 +0.5
comp=Z,2.6nm,0.8s,baz=94,slow=5.6,SNR=3.7
GNI Garni 80.78 1 P P 02 39 59.6 0.0
GNI IAmb IAmb 02 40 01.8
comp=Z,19nm,1.5s
BRTR Keskin Array B 80.79 353 P P 02 39 59.5 -0.3
comp=Z,4.4nm,0.9s,baz=169,slow=6.9,SNR=15
BRTR Keskin Array B 80.79 353 P P 02 39 58.4 -1.3
TOKA Tokat 81.15 355 P P 02 40 00.6 -0.9
TOKA IAmb IAmb 02 40 03.9
comp=Z,5.6nm,0.9s
MDUB Mudurnu 81.79 351 P P 02 40 05.0 +0.1
ILGA Ilgaz 82.10 353 P P 02 40 06.9 +0.2
DIKM Dikmen 82.56 354 ⇑P P 02 40 08.1 -0.7
LSA Lhasa 83.25 41 P P 02 40 13.7 +0.4
KBZ Khabaz 84.34 360 P P 02 40 18.6 +0.7
comp=Z,1.9nm,0.9s,baz=56,slow=24,SNR=5.4
BTK Batken 84.55 21 P P 02 40 19.0 -0.2
BTK IAmb IAmb 02 40 21.0
comp=Z,14nm,1.7s
KIV Kislovodsk 84.57 360 P P 02 40 18.4 -0.8
KIV IAmb IAmb 02 40 20.4
comp=Z,9.2nm,1.2s
KSH Kashi 85.57 25 *eP* **P 02 40 23.0 -1.4**
KSH pmax pmax
comp=Z,180nm,5.0s
TIRR Tirgusor 86.08 350 P P 02 40 26.7 +0.2
CO01 Juntas del Tor 86.16 233 P P 02 40 26.7 -1.3
CFR Carcaliu 86.82 350 ⇓P P 02 40 29.8 -0.4
KK31 Karatay Array 87.31 20 P P 02 40 32.5 -0.3
KK31 IAmb IAmb 02 40 34.5
comp=Z,8.6nm,1.4s
KKAR Karatay Array 87.31 20 P P 02 40 32.5 -0.2
MLR Muntele Rosu 87.45 348 ⇑P P 02 40 32.9 -0.6
HERR Herculane 87.47 345 ⇓P P 02 40 31.8 -1.5
VOIR 87.54 347 ⇓P P 02 40 32.4 -1.5
VRI Vrincioaia 87.69 349 ⇓P P 02 40 33.9 -0.6
GO03 Copiap 87.94 235 P P 02 40 35.4 -1.1
CART Cartagena 87.96 326 P P 02 40 35.2 -0.7
DOPR Dopca 88.00 348 ⇑P P 02 40 35.3 -0.7
BZS Buzias 88.33 345 ⇓P P 02 40 37.4 0.0
MILM Milestii Mici 88.44 350 ⇓P P 02 40 37.9 0.0
ARCR ARCALIA 89.25 347 ⇓P P 02 40 43.5 +1.7
BURAR Bucovina Array 89.63 348 ⇑P P 02 40 44.5 +0.8
BURAR Bucovina Array 89.63 348 P P 02 40 44.5 +0.8
BUR08 Bucovina Ar. S 89.66 348 IAmb IAmb 02 40 46.3
comp=Z,14nm,1.1s
SIV San Ignacio 89.91 249 P P 02 40 45.9 +0.1
comp=Z,1.1nm,0.7s,baz=125,slow=6.5,SNR=6.7
CD2 Chengdu 90.92 49 *eP* **P 02 40 49.8 -0.3**
ESDC Sonseca Array 90.97 326 P P 02 40 51.1 +1.0
comp=Z,2.5nm,1.2s,baz=138,slow=7.2,SNR=5.3
ESDC Sonseca Array 90.97 326 P P 02 40 50.6 +0.6
ABKAR Akbulak array 91.10 11 P P 02 40 49.3 -1.0
CONA Conrad Observa 91.75 342 *eP* **P 02 40 54.3 +0.7**
comp=Z,0.4nm,0.3s
MOA Molln 92.06 341 *eP* **P 02 40 56.0 +1.1**
comp=Z,2.1nm,0.6s
FETA Feichten 92.22 339 *eP* **P 02 40 56.8 +1.0**
comp=Z,5.2nm,1.0s
DAVOX Davos/Dischmat 92.24 338 P P 02 40 55.5 -0.4
comp=Z,2.6nm,0.7s,baz=185,slow=21,SNR=5.0
SQTA Sankt Quirin 92.27 339 *eP* **P 02 40 56.7 +0.7**
comp=Z,1.9nm,0.6s
WMQ Urumqi 93.51 31 *eP* **P 02 41 03.3 +1.5**
MAKZ Makanchi 94.05 26 P P 02 41 03.9 -0.2
MAKZ IAmb IAmb 02 41 04.6
comp=Z,3.6nm,1.0s
MKAR Makanchi Array 94.14 26 P P 02 41 04.2 -0.3
comp=Z,2.0nm,0.9s,baz=223,slow=5.0,SNR=9.0
MKAR Makanchi Array 94.14 26 P P 02 41 03.8 -0.7
LPAZ La Paz 94.60 244 P P 02 41 09.4 +1.2
comp=Z,0.7nm,0.6s,baz=83,slow=8.0,SNR=3.9
LPAZ La Paz 94.60 244 IAmb IAmb 02 43 58.5
comp=Z,9.8nm,1.7s
LZH Lanzhou 94.84 45 *eP* **P 02 41 11.7 +3.5**
LZH pP pwP 02 41 16.7 +1.8
LZH sP sP 02 41 19.4 +8.2
LZH pmax pmax
comp=Z,22nm,1.0s
GTA Gaotai 95.28 41 P P 02 41 10.4 +0.3
GTA pP sP 02 41 14.6 +1.5
GTA sP pwP 02 41 17.5 +0.7
GTA pmax pmax
comp=Z,4.0nm,0.9s
NJ2 Nanjing 100.83 57 *eP* **Pdif 02 41 35.0 0.0**
NJ2 pmax pmax
comp=Z,13nm,0.5s
X34A Smith Ranch, M 148.61 271 PKPbc PKPbc 02 47 33.0 -0.3
N35A Tabor 148.97 284 PKPbc PKPbc 02 47 33.8 -0.2
WMOK Wichita Mounta 149.38 271 PKPbc PKiKP 02 47 36.8 +0.4
KAN10 Anthony SW Sta 149.73 276 PKPdf 02 47 31.7 +0.4
L34A Svendsen Farm, 149.76 285 PKPbc PKPbc 02 47 34.6 -1.3
ULM Lac du Bonnet 150.13 302 PKPbc PKPbc 02 47 35.0 -1.5
comp=Z,2.6nm,0.5s,baz=110,slow=5.0,SNR=4.7
TXAR Lajitas Array 150.56 257 PKP PKPdf 02 47 33.5 +0.5
comp=Z,0.4nm,0.6s,baz=37,slow=0.6,SNR=3.9
TXAR PKPbc PKPbc 02 47 38.5 +0.2
comp=Z,2.0nm,0.7s,baz=126,slow=4.6,SNR=14
INK Inuvik 152.56 357 PKPbc PKPbc 02 47 41.0 -0.5
comp=Z,2.5nm,0.6s,baz=340,slow=5.3,SNR=7.6
INK Inuvik 152.56 357 PKPbc 02 47 41.6 0.0
ILAR Eielson Array 155.50 10 PKPbc PKPbc 02 47 46.5
comp=Z,0.6nm,0.8s,baz=235,slow=0.2,SNR=4.4
ILAR PKPab **PKPab 02 48 02.5 -2.1**
comp=Z,1.0nm,0.8s,baz=326,slow=3.4,SNR=5.7

*REY **07** 02:38:01.4, 64.69N×17.45W, h7km*
*IDC **07** 02:38:02.1±0.8, 64.50N×17.70W, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.7/50, mbtmp3.8/11, ML4.1/1, Error ellipse: s-maj=25.1km s-min=10.5km az=17.0*
*NEIC **07** 02:38:03.4±1.1, 64.53N±0.10×17.7W±0.1, h8km±1km, mb4.4/25, Error ellipse: s-maj=14.0km s-min=7.5km az=192.0*
ISC 07 02:38:03.2±0.5**, 64.57N**±0.03×**17.61W**±0.03**, h10**km**, n94,**
σ1§**58**/81**, mb4.0**/15**, Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.12**	**329**	P		**Pg**	**02 38 04.2**	**-2.0**
	baz=264							
IVON				S		**Sg**	**02 38 06.8**	**-1.5**
	baz=264							
IGRF	**Grimsfjall**	**0.22**	**138**	P		**Pg**	**02 38 07.1**	**-0.7**
	baz=164							
IDYN	**Dyngjuhals**	**0.25**	**25**	P		Pg	02 38 04.0	-4.3
	baz=20							
IHUS	**Husbondi**	**0.27**	**185**	P		**Pg**	**02 38 09.0**	**+0.3**
	baz=193							
ISKR	**Skrokkalda**	**0.34**	**269**	P		**Pg**	**02 38 09.4**	**-0.6**
	baz=253							
IVOT	**Vottur**	**0.35**	**148**	P		**Pg**	**02 38 09.7**	**-0.5**
	baz=164							
IVOT				S		**Sb**	**02 38 15.5**	**-1.6**
	baz=164							
IJOK	**Jokulheimar**	**0.37**	**227**	P		**Pb**	**02 38 10.7**	**-1.2**
	baz=222							
IIEY	**Innrieyrar**	**0.53**	**206**	P		**Pb**	**02 38 13.2**	**-1.4**
	baz=206							
IIEY				S		**Sb**	**02 38 22.5**	**+0.3**
	baz=206							
THOR	**Thorvaldshraun**	**0.54**	**47**	P		Pg	02 38 09.1	-4.6
	baz=53							
IKAL	**Kalfafell**	**0.62**	**183**	P		**Pb**	**02 38 14.7**	**-1.4**
	baz=188							
IASK	**Askja**	**0.64**	**40**	P		Pg	02 38 10.6	-4.9
	baz=43							
IASK				S		Sg	02 38 18.0	-5.9
	baz=43							
IKSK	**Karasker**	**0.64**	**129**	P		**Pg**	**02 38 13.1**	**-2.5**
	baz=141							
IMKO	**Mokollar**	**0.68**	**52**	P		Pg	02 38 11.4	-4.9
	baz=58							
IMKO				S		Sg	02 38 19.4	-5.9
	baz=58							
IVAT	**Vatnsfell**	**0.69**	**237**	P		**Pb**	**02 38 16.1**	**-1.2**
	baz=232							
ISVA	**Svartarkot**	**0.79**	**11**	P		Pg	02 38 13.4	-5.0
	baz=7.3							
ISVA				S		Sg	02 38 22.2	-6.4
	baz=7.3							
IVSH	**V-Sauoahnukur**	**0.84**	**72**	P		Pg	02 38 14.4	-5.0
	baz=80							
IVSH				S		**Sg**	**02 38 25.0**	**-5.4**
	baz=80							
IHVE	**Hveravellir**	**0.90**	**291**	P		**Pg**	**02 38 17.7**	**-2.7**
	baz=282							
ISNB	**Snabyli**	**0.95**	**209**	P		**Pn**	**02 38 20.6**	**-2.0**
	baz=209							
IFED	**Fedgar**	**1.06**	**240**	P		**Pn**	**02 38 22.7**	**-1.4**
	baz=237							
IRJU	**Rjupnafell**	**1.06**	**207**	P		**Pn**	**02 38 22.6**	**-1.5**
	baz=207							
IMEL	**Melhnausar**	**1.08**	**21**	P		Pb	02 38 18.1	-5.9
	baz=20							
IMJO	**Mjoaskard**	**1.10**	**236**	P		**Pn**	**02 38 23.3**	**-1.4**
	baz=233							
IREN	**Reynihlio**	**1.12**	**15**	P		Pn	02 38 18.9	-6.1
	baz=13							
IGYG	**Gygjarholskot**	**1.17**	**257**	P		**Pb**	**02 38 23.3**	**-2.1**
	baz=252							
IHVO	**Lazu-Hvolar**	**1.18**	**208**	P		**Pn**	**02 38 24.6**	**-1.1**
	baz=208							
IHAU	**Haukadalur**	**1.19**	**241**	P		**Pb**	**02 38 24.4**	**-1.4**
	baz=238							
IKVO	**Krokottuvotn**	**1.19**	**15**	P		Pn	02 38 19.9	-6.0
	baz=13							
IGRS	**Grimsstaoir**	**1.25**	**30**	P		Pn	02 38 20.8	-5.8
	baz=30							
IALF	**Alftagrof**	**1.28**	**213**	P		**Pg**	**02 38 26.2**	**-1.6**
	baz=213							
IESK	**Eystri-Skogar**	**1.32**	**219**	P		**Pg**	**02 38 26.8**	**-1.8**
	baz=218							
ISKI	**Skildingahlsh**	**1.33**	**10**	P		Pn	02 38 22.3	-5.5
	baz=8.4							
IGHA	**Grjothals**	**1.34**	**17**	P		Pn	02 38 22.5	-5.5
	baz=16							
IMID	**Miomork**	**1.35**	**229**	P		**Pg**	**02 38 27.5**	**-1.7**
	baz=227							
ISAU	**Saurbar**	**1.36**	**246**	P		**Pn**	**02 38 26.5**	**-1.6**
	baz=243							
IGRA	**Granastaoir**	**1.36**	**0**	P		Pn	02 38 22.8	-5.3
	baz=358							
IDIM	**Dimmadalss**	**1.43**	**11**	P		Pn	02 38 23.8	-5.4
	baz=9.5							
IASM	**Asmuli**	**1.51**	**242**	P		**Pn**	**02 38 29.4**	**-0.8**
	baz=240							
IHED	**Heoinshofoi**	**1.52**	**5**	P		Pn	02 38 25.6	-4.8
	baz=2.4							
IBRE	**Brettingsstaoi**	**1.57**	**355**	P		Pn	02 38 26.5	-4.5
	baz=353							
ISOL	**Solvholt**	**1.59**	**248**	P		**Pn**	**02 38 30.3**	**-1.1**
	baz=245							
IKRO	**Krokur**	**1.60**	**254**	P		**Pn**	**02 38 30.4**	**-1.1**
	baz=251							
IGIL	**Gilhagi**	**1.60**	**19**	P		Pn	02 38 26.5	-5.1
	baz=18							
BORG	**Borgarnes**	**1.61**	**278**	Pg		**Pn**	**02 38 29.6**	**-2.1**
	32nm,0.3s,baz=105,slow=7.8,SNR=64							
BORG					Lg	Lg	02 38 53.2	
	16nm,0.3s,baz=69,slow=15,SNR=11							
BORG	**Borgarnes**	**1.61**	**278**			**Pn**	**02 38 29.9**	**-1.7**
BORG					Sn	**Sn**	**02 38 52.2**	**-0.3**
IHEI	**Heioarbar**	**1.62**	**258**	P		**Pn**	**02 38 30.5**	**-1.3**
	baz=255							
IVME	**Vestmannaeyjar**	**1.65**	**227**	P		**Pb**	**02 38 32.2**	**-1.4**
	baz=226							
ISIG	**Siglufjorour**	**1.67**	**341**	P		Pn	02 38 28.3	-4.1
	baz=338							
IBJA	**Bjarnastaoir**	**1.73**	**251**	P		**Pn**	**02 38 32.9**	**-0.4**
	baz=248							
IHRN	**Hraun**	**1.88**	**327**	P		**Pn**	**02 38 32.3**	**-3.0**
	baz=323							
ILEI	**Leirhofn**	**1.91**	**14**	P		Pn	02 38 31.2	-4.5
	baz=13							
SCO	**Scoresbysund**	**6.17**	**346**			**Pn**	**02 39 34.2**	**0.0**
SCO	**Scoresbysund**	**6.17**	**346**	*e*		Pn	02 39 25.0	-9.2
	baz=157,slow=7.9							
SCO				*i*	P	**Pn**	**02 39 33.0**	**-1.2**
SCO				*e*	S	**Sn**	**02 40 49.1**	**+4.4**
EKA	**Eskdalemuir Ar**	**11.72**	**135**	Pn		**Pn**	**02 40 50.5**	**+0.2**
	baz=321,slow=13,SNR=4.2							
CLL	**Collm**	**20.70**	**115**	*e*	P	**P**	**02 42 38.0**	**-5.2**
CLL				*i*			02 42 43.7	
	comp=Z,17nm,1.6s							
CLL	**Collm**	**20.70**	**115**	P		**P**	**02 42 42.9**	**-0.3**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*	P	**P**	**02 42 51.1**	**+0.3**
	comp=Z,13nm,1.2s							
SUW	**Suwalki**	**22.91**	**98**	P		**P**	**02 43 07.5**	**+0.6**
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**	**02 43 08.5**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=325,slow=8.1,SNR=4.5							
CTI	**Castel Tesino**	**24.55**	**125**	P		**P**	**02 43 23.1**	**+0.3**
PSZ	**Piszkesteto**	**26.12**	**112**	P		**P**	**02 43 37.1**	**0.0**
ESDC	**Sonseca Array**	**26.18**	**156**	P		**P**	**02 43 38.1**	**+0.5**
	comp=Z,2.0nm,1.0s,baz=347,slow=8.4,SNR=4.7							
AKASG	**Malin Array Be**	**27.88**	**97**	P		**P**	**02 43 52.2**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=320,slow=9.6,SNR=3.6							
BRTR	**Keskin Array B**	**38.50**	**105**	P		**P**	**02 45 26.6**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=299,slow=5.9,SNR=5.0							
BRTR	**Keskin Array B**	**38.50**	**105**	P		**P**	**02 45 26.2**	**+0.8**
KBZ	**Khabaz**	**39.16**	**92**	P		**P**	**02 45 31.4**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=236,slow=24,SNR=4.4							
AKH	**Akhalkalaki**	**41.30**	**94**	P		**P**	**02 45 49.5**	**+0.9**
TIXI	**Tiksi**	**42.14**	**15**	P		**P**	**02 45 56.4**	**+1.4**
TIXI					IAmb	IAmb	02 45 57.2	
	comp=Z,6.6nm,1.1s							
BMAR	**Burnt Mountain**	**42.96**	**333**	P		**P**	**02 46 03.5**	**+1.8**
MARD	**Mardin**	**43.54**	**100**	P		**P**	**02 46 07.5**	**+0.6**
MARD					IAmb	IAmb	02 46 12.0	
	comp=Z,10nm,1.3s							
I42A	**Draeger Farm,**	**43.68**	**277**	P		**P**	**02 46 07.3**	**-0.5**
IL31		**45.75**	**332**	P		**P**	**02 46 25.6**	**+1.6**
ILAR	**Eielson Array**	**45.75**	**332**	P		**P**	**02 46 25.1**	**+1.1**
	comp=Z,1.8nm,1.1s,baz=24,slow=6.6,SNR=10.0							
ILAR	**Eielson Array**	**45.75**	**332**	P		**P**	**02 46 25.4**	**+1.4**
MDM	**Murphy Dome**	**45.85**	**333**	P		**P**	**02 46 26.3**	**+1.5**
BCAR	**Beaver Creek A**	**46.17**	**329**	P		**P**	**02 46 28.8**	**+1.4**
WCI	**Wyandotte Cave**	**47.20**	**271**	P		**P**	**02 46 36.0**	**+0.3**
ZAA0	**Zalesovo Array**	**47.73**	**51**	P		**P**	**02 46 40.6**	**+1.0**
ZAA0					IAmb	IAmb	02 48 26.0	
	comp=Z,6.1nm,1.6s							
ZALV	**Zalesovo Beam**	**47.73**	**51**	P		**P**	**02 46 41.5**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=309,slow=7.1,SNR=3.6							
KURK	**Kurchatov**	**48.20**	**58**	P		**P**	**02 46 43.5**	**+0.2**
T47A	**Sharon Grove**	**48.59**	**270**	P		**P**	**02 46 47.6**	**+1.1**
KKAR	**Karatay Array**	**51.35**	**70**	P		**P**	**02 47 08.4**	**+0.9**
MK31	**Makanchi Array**	**52.82**	**58**	P		**P**	**02 47 18.5**	**+0.2**
MKAR	**Makanchi Array**	**52.82**	**58**	P		**P**	**02 47 18.1**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=323,slow=5.2,SNR=4.4							
TOA0	**Torodi Ar. Sit**	**53.07**	**156**	P		**P**	**02 47 20.7**	**+0.3**
TORD	**Torodi Ar. Bea**	**53.07**	**156**	P		**P**	**02 47 19.8**	**-0.6**
	comp=Z,1.4nm,1.0s,baz=340,slow=5.6,SNR=6.0							
TORD	**Torodi Ar. Bea**	**53.07**	**156**	P		**P**	**02 47 20.7**	**+0.3**
PD31	**Pinedale Array**	**53.17**	**293**	P		**P**	**02 47 21.6**	**+0.3**
PD31					IAmb	IAmb	02 47 22.5	
	comp=Z,4.1nm,1.1s							
PDAR	**Pinedale Array**	**53.17**	**293**	P		**P**	**02 47 21.2**	**0.0**
	comp=Z,1.8nm,0.9s,baz=46,slow=5.4,SNR=11							
BW06	**Boulder Array**	**53.17**	**293**	P		**P**	**02 47 21.6**	**+0.3**
BW06					IAmb	IAmb	02 47 22.6	
	comp=Z,4.5nm,1.1s							
BTK	**Batken**	**54.03**	**71**	P		**P**	**02 47 28.3**	**+1.0**
GAR	**Garm**	**54.72**	**73**	P		**P**	**02 47 33.5**	**+1.0**
HWUT	**Hardware Ranch**	**54.95**	**294**	P		**P**	**02 47 34.8**	**+0.7**
PV13	**Radium Mtn., P**	**56.79**	**290**	P		**P**	**02 47 48.4**	**+1.0**
MSU	**Marysvale**	**57.84**	**293**	P		**P**	**02 47 55.9**	**+1.1**

*BJI **07** 02:46:51.4±0.0, 4.13N×95.10E, h54km, mB4.8/9, mb4.7/25, Ms4.3/4, Ms7 4.1/4*
*NEIC **07** 02:46:56.2±2.1, 4.81N±0.06×94.96E±0.09, h35km±1km, mb4.6/41, Error ellipse: s-maj=14.8km s-min=9.6km az=72.0*
*KLM **07** 02:46:57.0, 4.65N×94.78E, h62km, mb4.7*
*IDC **07** 02:46:58.6±3.3, 4.88N×95.08E, h54km±29km, mb4.0/18, mb1 4.2/20, mb1mx4.0/43, mbtmp4.3/20, ML4.1/2, MS3.5/4, Ms1 3.6/4, ms1mx3.1/50, Error ellipse: s-maj=23.0km s-min=12.9km az=50.0*
*DJA **07** 02:47:00.6±0.9, 5.1N±4.3×9.5E±7.1, h55km±5km, M4.7/17, mb4.8/17, mB5.1/4, MLv4.7/11, Mw(mB)4.5/4*
ISC 07 02:46:55.9±0.4**, 4.72N**±0.06×**94.92E**±0.06**, h35**km**, n152,**
σ1§**16**/149**, mb4.5**/48**, 2C-4D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**1.55**	**107**	P		**Pn**	**02 47 22.6**	**+1.6**
LHMI	**Lhok Sumawe**	**2.09**	**76**	P		**Pn**	**02 47 30.9**	**+2.5**
LHMI	**Lhok Sumawe**	**2.09**	**76**			**Pn**	**02 47 30.1**	**+1.7**
TPTI		**2.68**	**123**	P		**Pn**	**02 47 37.5**	**+0.9**
TPTI				S		**Sn**	**02 48 08.2**	**+0.3**
KCSI	**Kotacane, Aceh**	**3.08**	**112**	P		**Pn**	**02 47 44.5**	**+2.3**
TSI	**Tuntungan**	**3.83**	**108**	P		**Pn**	**02 47 54.7**	**+2.2**
GSI	**Gunungsitoli**	**4.30**	**142**	P		**Pn**	**02 47 59.8**	**+0.9**
GSI	**Gunungsitoli**	**4.30**	**142**			**Pn**	**02 47 59.9**	**+0.9**
PSI	**Prapat**	**4.43**	**115**	P		**Pn**	**02 48 04.2**	**+3.4**
	9.5nm,0.3s,baz=360,slow=13,SNR=32							
PSI				LR		LR	02 50 08.0	
	comp=Z,660nm,20.2s,baz=322,slow=43							
RPSI	**Rantau Prapat**	**4.47**	**117**			**Pn**	**02 48 04.6**	**+3.3**
RPSI	**Rantau Prapat**	**4.47**	**117**			**Pn**	**02 48 04.2**	**+2.9**
KULM	**Kulim**	**5.74**	**84**	Pn		**Pn**	**02 48 19.0**	**+0.3**
KULM	**Kulim**	**5.74**	**84**	P		**Pn**	**02 48 20.0**	**+1.3**
MNSI	**Mandailing Nat**	**6.07**	**130**	P		**Pn**	**02 48 25.1**	**+1.9**
	1.1nm6µm123nm,0.5s							
IPM	**Ipoh**	**6.09**	**92**	Pn		**Pn**	**02 48 24.0**	**+0.4**
IPM	**Ipoh**	**6.09**	**92**	P		**Pn**	**02 48 25.0**	**+1.4**
SISI	**Saibi**	**7.31**	**145**	P		**Pn**	**02 48 41.5**	**+1.3**
	0.3nm57nm,0.8s							
BKNI	**Bangkinang**	**7.51**	**125**	P		**Pn**	**02 48 44.3**	**+1.3**
	0.8nm134nm,0.8s							
BKNI	**Bangkinang**	**7.51**	**125**	Pn		**Pn**	**02 48 43.5**	**+0.5**
MDSI	**Maura Dua**	**13.01**	**135**	P		**Pn**	**02 49 58.6**	**+0.3**
	21nm,0.6s							
CM05	**Chiang Mai Arr**	**14.16**	**16**	P		**P**	**02 50 22.0**	**+0.8**
	0.0nm71nm9.9nm,0.8s							
CM04	**Chiang Mai Arr**	**14.17**	**16**	P		**P**	**02 50 22.0**	**+0.8**
	0.0nm15nm,0.7s							
CM13	**Chiang Mai Arr**	**14.17**	**16**	P		**P**	**02 50 22.4**	**+1.1**
	0.0nm12nm,0.8s							
CM01	**Chiang Mai Arr**	**14.18**	**16**	P		**P**	**02 50 22.6**	**+1.2**
	0.1nm15nm,0.7s							
CM02	**Chiang Mai Arr**	**14.19**	**16**	P		**P**	**02 50 22.0**	**+0.5**
	0.0nm9.9nm,0.7s							
CM15	**Chiang Mai Arr**	**14.20**	**16**	P		**P**	**02 50 23.0**	**+1.4**
	0.1nm10nm,0.8s							
CM09	**Chiang Mai Arr**	**14.21**	**16**	P		**P**	**02 50 23.2**	**+1.5**
	0.0nm113nm14nm,0.7s							
CM31	**Chiang Mai Arr**	**14.21**	**16**	Pn		**Pn**	**02 50 14.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**14.21**	**16**	P		**Pn**	**02 50 18.2**	**+3.4**
	0.3nm,0.3s,baz=199,slow=13,SNR=2.3							
CMAR				LR		LR	02 56 40.8	
	comp=Z,88nm,18.1s,baz=234,slow=42							
CMAR	**Chiang Mai Arr**	**14.21**	**16**	Pn		**Pn**	**02 50 14.8**	**-0.1**
CM36	**Chiang Mai Arr**	**14.31**	**16**	P		**P**	**02 50 24.0**	**+1.1**
PALK	**Pallekele**	**14.36**	**281**	P		**P**	**02 50 21.8**	**-1.7**
	1.0nm,0.3s,baz=153,slow=2.3,SNR=2.2							
PALK				S		Sn	02 52 45.7	-9.5
	2.5nm,0.3s,baz=279,slow=15,SNR=10							
PALK				LR		LR	02 55 05.9	
	comp=Z,172nm,21.0s,baz=180,slow=34							
CM35	**Chiang Mai Arr**	**14.48**	**16**	P		**P**	**02 50 25.0**	**+0.3**
CHTO	**Chiang Mai**	**14.55**	**15**	Pn		**Pn**	**02 50 19.8**	**+0.4**
CMMT	**Chiang Mai**	**14.55**	**15**	P		**P**	**02 50 26.2**	**+0.6**
	0.0nm5.9nm,0.8s							
CM33	**Chiang Mai Arr**	**14.56**	**15**	P		**P**	**02 50 26.0**	**+0.4**
KSM	**Kuching**	**15.70**	**101**	Pn		**Pn**	**02 50 32.0**	**-2.7**
KSM	**Kuching**	**15.70**	**101**	P		**P**	**02 50 38.0**	**-0.3**
SBUM	**Sibu**	**17.41**	**97**	P		**P**	**02 50 59.0**	**+1.7**
BOK	**Bokaro**	**20.87**	**336**	*eP*		**P**	**02 51 35.2**	**+0.1**
BOK					IAmb	IAmb	02 51 42.3	
	comp=Z,9.7nm,0.5s							
BBKI	**Banjar Baru**	**21.50**	**112**	P		**P**	**02 51 42.8**	**+0.9**
	comp=Z,18nm,0.4s							
ABJI	**Asem Bagus**	**22.93**	**123**	P		**P**	**02 51 58.2**	**+1.0**
	comp=Z,54nm,0.8s							
MYLDM	**Lahad Datu**	**23.50**	**88**	P		**P**	**02

comp=Z,145nm,18.2s,baz=146,slow=38
FITZ Fitzroy Crossi 37.84 128 P P 02 54 08.6 -1.0
KSH Kashi 38.65 336 *eP* **P 02 54 15.6 -0.7**
KSH pP pP 02 54 26.9 +1.1
HHC Hu-ho-hao-te 38.96 20 *eP* **P 02 54 19.3 +0.5**
HHC pmax pmax
comp=Z,25nm,1.1s
HHC pmax pmax
comp=Z,130nm,6.8s
KNRA Kununurra 39.16 122 P P 02 54 19.0 -1.6
WMQ Urumqi 39.46 352 *eP* **P 02 54 24.7 +1.8**
MTN Manton Dam 39.98 116 P P 02 54 26.4 -1.2
BJI Beijing 40.06 26 P P 02 54 28.7 +0.9
BJI pmax pmax
comp=Z,11nm,0.7s
GAR Garm 40.77 330 P P 02 54 34.3 +0.4
BTK Batken 41.35 332 P P 02 54 39.3 +0.7
BTK IAmb IAmb 02 54 57.7
comp=Z,7.4nm,0.6s
MK31 Makanchi Array 43.32 347 P P 02 54 54.4 -0.1
MKAR Makanchi Array 43.32 347 P P 02 54 54.4 -0.1
comp=Z,4.9nm,0.7s,baz=167,slow=8.4,SNR=42
MKAR PcP **PcP 02 56 43.3 +0.3**
comp=Z,0.6nm,0.6s,baz=146,slow=2.5,SNR=1.9
MKAR Makanchi Array 43.32 347 P P 02 54 54.0 -0.5
MAKZ Makanchi 43.40 347 P P 02 54 55.2 0.0
KK31 Karatay Array 43.92 334 P P 02 55 00.1 +0.7
KK31 IAmb IAmb 02 55 02.1
comp=Z,4.8nm,0.8s
KKAR Karatay Array 43.92 334 P P 02 55 00.1 +0.7
KKAR IAmb IAmb 02 55 02.1
comp=Z,4.8nm,0.8s
KKAR Karatay Array 43.92 334 P P 02 55 00.8 +1.4
SONM Songino Array 44.08 11 P P 02 54 59.2 -1.5
comp=Z,1.5nm,0.7s,baz=188,slow=8.8,SNR=9.5
SONM PcP **PcP 02 56 45.2 -0.4**
comp=Z,1.3nm,0.6s,baz=184,slow=3.7,SNR=5.0
SONM Songino Array 44.08 11 IAmb IAmb 02 55 00.9
comp=Z,1.2nm,0.8s
WB0 Warramunga Arr 45.81 123 P P 02 55 13.8 -0.9
WRA Warramunga Arr 45.84 124 P P 02 55 15.1 +0.1
comp=Z,25nm,0.8s,baz=302,slow=9.2,SNR=199
WRA Warramunga Arr 45.84 124 IAmb IAmb 02 55 16.1
comp=Z,1.2nm,0.9s
WRAB Tennant Creek 45.85 124 P P 02 55 14.2 -0.8
WB2 Warramunga Arr 45.85 124 P P 02 55 13.9 -1.2
WR0 Warramunga Arr 46.02 124 P P 02 55 15.8 -0.6
GEYT Alibeck 47.07 320 P P 02 55 25.9 +1.5
comp=Z,3.1nm,0.7s,baz=161,slow=9.4,SNR=6.5
GEYT Alibeck 47.07 320 P P 02 55 25.3 +0.8
AS31 Alice Springs 47.34 128 P P 02 55 26.1 -0.6
AS31 IAmb IAmb 02 55 27.5
comp=Z,2.3nm,0.6s
ASAR Alice Springs 47.34 128 P P 02 55 26.8 +0.1
comp=Z,6.5nm,0.6s,baz=299,slow=8.0,SNR=106
ASAR PcP **PcP 02 56 57.7 +0.4**
comp=Z,1.5nm,0.8s,baz=302,slow=3.1,SNR=4.6
KURK Kurchatov 47.84 346 P P 02 55 30.5 +0.3
ZAA0 Zalesovo Array 49.77 352 P P 02 55 43.7 -1.1
ZAA0 IAmb IAmb 02 55 45.3
comp=Z,13nm,1.4s
ZALV Zalesovo Beam 49.77 352 P P 02 55 44.8 -0.1
comp=Z,4.5nm,0.5s,baz=175,slow=6.8,SNR=21
ZALV Zalesovo Beam 49.77 352 P P 02 55 44.5 -0.4
USRK Ussuriysk Ar. 51.05 34 P P 02 55 54.3 -0.4
comp=Z,2.6nm,0.7s,baz=226,slow=11,SNR=6.0
USRK Ussuriysk Ar. 51.05 34 P P 02 55 53.9 -0.9
BRVK Borovoye 52.27 341 P P 02 56 03.1 -0.6
ABKAR Akbulak array 53.36 332 P P 02 56 11.9 0.0
STKA Stephens Creek 57.40 133 P P 02 56 40.9 -0.3
comp=Z,0.4nm,0.3s,baz=312,slow=6.5,SNR=3.1
ARU Arti 59.08 337 P P 02 56 52.0 -0.6
ARU IAmb IAmb 02 57 07.6
comp=Z,5.7nm,1.0s
KBZ Khabaz 59.94 319 P P 02 56 58.5 -0.2
comp=Z,1.3nm,0.8s,baz=236,slow=24,SNR=4.0
BRTR Keskin Array B 65.08 312 P P 02 57 33.6 +0.3
comp=Z,1.9nm,0.8s,baz=145,slow=7.4,SNR=7.1
ELL Elmali 67.24 308 P P 02 57 47.4 +0.1
KLMR Klimovskoe 69.62 335 *eP* **P 02 57 59.4 -2.0**
KLMR AMP 02 58 03.9
comp=Z,13nm,1.5s
TIRR Tirgusor 70.03 316 ⇓*P* **P 02 58 04.4 +0.1**
TIRR Tirgusor 70.03 316 P P 02 58 04.3 +0.1
TIXI Tiksi 70.16 11 P P 02 58 02.4 -2.2
HARR Harsova 70.42 316 ⇓*P* **P 02 58 07.0 +0.3**
SORM Soroca 70.97 319 ⇓*P* **P 02 58 09.3 -0.6**
AKASG Malin Array Be 71.10 322 P P 02 58 09.9 -0.8
comp=Z,0.4nm,0.4s,baz=89,slow=5.0,SNR=7.2
AKASG Malin Array Be 71.10 322 IAmb IAmb 02 58 10.5
comp=Z,0.7nm,0.7s
MLR Muntele Rosu 71.97 316 ⇓*P* **P 02 58 17.3 +1.1**
MLR Muntele Rosu 71.97 316 P P 02 58 16.3 +0.1
MLR IAmb IAmb 02 58 18.1
comp=Z,6.7nm,0.9s
VOIR 72.57 316 ⇑*P* **P 02 58 19.9 +0.1**
BURAR Bucovina Array 72.90 318 ⇑*P* **P 02 58 22.5 +0.8**
BURAR Bucovina Array 72.90 318 P P 02 58 21.8 +0.1
BUR08 Bucovina Ar. S 72.92 318 IAmb IAmb 02 59 41.8
comp=Z,12nm,1.6s
BOSA Boshof 74.59 239 P P 02 58 34.1 +2.1
comp=Z,2.1nm,0.7s,baz=37,slow=5.6,SNR=5.0
KOLS Kolonicke sedl 75.08 319 *eP* **P 02 58 35.7 +1.4**
CRVS Cervenica-Dubn 75.60 319 *eP* **P 02 58 38.6 +1.3**
FINES FINESS Array B 75.85 332 P P 02 58 37.9 -0.5
comp=Z,3.4nm,0.6s,baz=104,slow=5.8,SNR=18
PSZ Piszkesteto 76.49 318 P P 02 58 42.5 0.0
PSZ IAmb IAmb 03 00 03.6
comp=Z,7.6nm,0.9s
OJC Ojcow 76.88 320 P P 02 58 44.6 +0.1
VYHS Vyhne 77.27 319 *eP* **P 02 58 47.6 +0.8**
ARCES ARCESS Array B 78.48 340 P P 02 58 53.5 +0.4
comp=Z,2.5nm,0.5s,baz=92,slow=6.1,SNR=34
KTK1 Kautokeino 79.10 340 *eP* **P 02 58 56.5 0.0**
HAMF Hammerfest 79.40 341 *eP* **P 02 58 58.5 +0.4**
GEC2 GERESS Array S 80.69 319 P P 02 59 05.8 +0.2
GEC2 IAmb IAmb 02 59 24.3
comp=Z,8.3nm,1.0s
GERES GERESS Array B 80.69 319 P P 02 59 07.1 +1.5
comp=Z,4.0nm,0.7s,baz=97,slow=5.5,SNR=30
GERES GERESS Array B 80.69 319 P P 02 59 06.3 +0.7
TRO Tromso 80.74 340 *eP* **P 02 59 05.1 -0.2**
CIMO Cimolais 81.41 316 P P 02 59 09.4 0.0
CIMO IAmb IAmb 02 59 27.4
comp=Z,9.3nm,0.8s
FAUS Fauske 81.68 337 *eP* **P 02 59 10.6 +0.3**
STEI Steigen 81.77 338 *eP* **P 02 59 10.9 +0.2**
MOR8 Moi Rana 81.86 336 *eP* **P 02 59 10.8 -0.6**
WTTA Wattenberg 82.00 317 *eP* **P 02 59 12.8 +0.1**
comp=Z,5.1nm,0.6s
WATA Walderalm 82.04 317 *i P* **P 02 59 13.0 +0.1**
comp=Z,1.9nm,0.4s
SQTA Sankt Quirin 82.29 317 *i P* **P 02 59 14.1 0.0**
comp=Z,5.7nm,0.5s
MOTA Moosalm 82.36 317 *i P* **P 02 59 14.4 -0.1**
comp=Z,2.9nm,0.5s
RETA Reutte 82.60 317 *eP* **P 02 59 15.9 +0.2**
comp=Z,7.8nm,0.5s
NB2 NORSAR Subarra 82.85 331 P P 02 59 15.8 -0.9
comp=Z,6.8nm,1.1s,baz=95,slow=5.6
NB2 NORSAR Subarra 82.85 331 P P 02 59 15.8 -0.9
baz=95,slow=5.6
NOA NORSAR Array B 82.85 331 P P 02 59 15.8 -0.9
comp=Z,1.6nm,0.8s,baz=95,slow=5.4,SNR=3.8
KONO Kongsberg 83.59 329 *eP* **P 02 59 20.3 -0.2**
KBS Kingsbay 84.05 349 P P 02 59 22.8 +0.3
SKAR Skarslia 84.26 330 *eP* **P 02 59 23.5 -0.5**
TORD Torodi Ar. Bea 92.07 283 P P 03 00 03.6 +1.3
comp=Z,0.6nm,0.9s,baz=89,slow=6.2,SNR=4.1
ESDC Sonseca Array 93.83 310 P P 03 00 10.4 +0.4
comp=Z,0.6nm,0.8s,baz=66,slow=3.2,SNR=4.4
NVAR Mina Array Bea 127.18 33 PKP **PKiKP 03 05 58.5 +0.5**
comp=Z,1.1nm,0.8s,baz=295,slow=1.7,SNR=10
NVAR Mina Array Bea 127.18 33 PKPdf 03 05 57.8 +0.3
PDAR Pinedale Array 127.79 23 PKP **PKPdf 03 05 58.2 -0.2**
comp=Z,0.6nm,0.5s,baz=95,slow=1.3,SNR=7.2
PDAR Pinedale Array 127.79 23 PKPdf 03 05 58.1 -0.4
TXAR Lajitas Array 141.73 27 PKP **PKPdf 03 06 25.2 +0.6**
comp=Z,0.8nm,0.6s,baz=204,slow=2.7,SNR=6.9
TXAR Lajitas Array 141.73 27 PKPdf 03 06 23.6 -1.1
CPUP Villa Florida 145.85 228 PKPbc **PKPab 03 06 32.8 0.0**
comp=Z,3.7nm,0.9s,baz=129,slow=20,SNR=6.3

*IDC **07** 02:51:38.2±8.3, 13.°19S×166.°97E, h225km±86km, mb3.2/4, mb1 3.4/5, mb1mx3.1/28, mbtmp3.8/5, Error ellipse: s-maj=72.8km s-min=30.5km az=156.0*
ISC 07 02:51:35.9±1.4, **13.°1S**±0.°1×**166.°9E**±0.°2, **h200**km, **n6,** σ**0**s**85**/**7**, **mb3.5/4, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.98**	**183**	P	**Pn**	**02 53 43.1**	**+1.1**
	0.4nm,0.3s,baz=324,slow=13,SNR=2.2						
DZM				S	**Sn**	**02 55 21.6**	**-1.2**
	0.1nm,0.3s,baz=172,slow=22,SNR=1.3						
STKA	**Stephens Creek**	**29.84**	**227**	P	**P**	**02 57 24.6**	**+0.1**
	0.8nm,0.3s,baz=30,slow=10,SNR=3.9						
WRA	**Warramunga Arr**	**31.93**	**253**	P	**P**	**02 57 43.1**	**0.0**
	0.3nm,0.5s,baz=85,slow=9.0,SNR=1.7						
ASAR	**Alice Springs**	**32.98**	**247**	P	**P**	**02 57 52.0**	**-0.1**
	0.6nm,0.4s,baz=75,slow=9.2,SNR=7.2						
ILAR	**Eielson Array**	**85.05**	**18**	P	**P**	**03 03 48.5**	**-0.1**
	0.5nm,0.6s,baz=243,slow=5.3,SNR=5.5						
ARCES	**ARCESS Array B**	**118.55**	**346**	PKP	**PKPdf**	**03 09 58.8**	**-0.5**
	4.1nm,1.0s,baz=72,slow=4.0,SNR=5.0						

WEL 07 03:07:44.8, 38.°S±4.°×**17.°6E**±.°, **h291**km±5km, **M2.8**/35, **MLv2.8**/35, **Error ellipse: s-maj=0.0km s-min=0.0km az=47.9, North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MUGZ	**Murupara**	**0.90**	**138**	P	Pn	03 08 23.3	-0.4
MUGZ				S	S	03 08 51.6	-3.0
MKAZ	**Moumakai**	**0.97**	**316**	P	Pn	03 08 24.1	0.0
URZ	**Urewera**	**0.99**	**117**	P	Pn	03 08 22.4	-1.6
URZ				S	S	03 08 51.6	-3.6
KUZ	**Kuaotunu**	**1.08**	**348**	P	Pn	03 08 24.4	-0.2
RTZ	**Ruatahuna**	**1.11**	**136**	P	Pn	03 08 24.5	-0.3
RTZ				S	S	03 08 53.6	-3.0
HIZ	**Hauiti**	**1.14**	**232**	P	Pn	03 08 25.3	+0.5
WIAZ	**Waiheke Island**	**1.23**	**325**	P	Pn	03 08 25.5	+0.1
MTHZ	**Maungataniwha**	**1.23**	**148**	P	Pn	03 08 25.5	+0.1
MTHZ				S	S	03 08 55.0	-2.6
RAGZ	**Rawiri**	**1.31**	**122**	P	Pn	03 08 25.9	+0.1
RAGZ				S	S	03 08 56.3	-2.2
MWZ	**Matawai**	**1.31**	**114**	P	Pn	03 08 25.7	-0.2
TWVZ	**Taurewa**	**1.33**	**199**	P	Pn	03 08 26.0	-0.1
RUGZ	**Raukumara Rang**	**1.34**	**97**	P	Pn	03 08 24.8	-1.3
RUGZ				S	S	03 08 53.9	-5.1
WTVZ	**West Tongariro**	**1.34**	**194**	P	Pn	03 08 26.2	+0.1
RAHZ	**Arahi**	**1.40**	**143**	P	Pn	03 08 26.8	+0.5
RAHZ				S	S	03 08 57.8	-1.5
NGZ	**Ngauruhoe**	**1.40**	**193**	P	Pn	03 08 26.6	+0.1
BKZ	**Black Stump Fm**	**1.41**	**164**	P	Pn	03 08 26.4	0.0
BKZ				S	S	03 08 56.5	-3.0
HAZ	**Te Kaha**	**1.41**	**88**	P	Pn	03 08 25.6	-0.9
HAZ				S	S	03 08 55.3	-4.2
NMHZ	**Naumai**	**1.43**	**154**	P	Pn	03 08 27.4	+1.3
NMHZ				S	S	03 08 58.6	-1.3
SNGZ	**Shannon Statio**	**1.43**	**133**	P	Pn	03 08 26.8	+0.3
SNGZ				S	S	03 08 57.1	-2.7
FWVZ	**Far West T-bar**	**1.48**	**194**	P	Pn	03 08 27.2	0.0
FWVZ				S	S	03 08 59.9	-0.9
WHVZ	**Whangaehu Hut**	**1.51**	**192**	P	Pn	03 08 27.3	+0.1
WNVZ	**Wahianoa**	**1.55**	**192**	P	Pn	03 08 27.5	0.0
PKVZ	**Pokaka**	**1.56**	**199**	P	Pn	03 08 27.5	+0.1
MOVZ	**Moawhango**	**1.61**	**187**	P	Pn	03 08 27.4	-0.4
MOVZ				S	S	03 08 58.2	-3.8
TWGZ	**Tauwhareparae**	**1.61**	**104**	P	Pn	03 08 28.3	+0.5
TWGZ				S	S	03 09 00.5	-1.5
MTVZ	**Mangateitei**	**1.63**	**195**	P	Pn	03 08 28.0	+0.1
KWHZ	**Kaweka Forest**	**1.65**	**169**	P	Pn	03 08 28.4	+0.4
KWHZ				S	S	03 09 00.5	-2.0
ARHZ	**Aropaoanui**	**1.65**	**152**	P	Pn	03 08 28.5	+0.5
ARHZ				S	S	03 09 00.4	-1.9
RIGZ	**Rimuhau**	**1.65**	**123**	P	Pn	03 08 28.4	+0.3
RIGZ				S	S	03 08 60.0	-2.5
BHHZ	**Black Hill Sta**	**1.68**	**178**	P	Pn	03 08 28.2	0.0
BHHZ				S	S	03 08 59.2	-3.7
MCHZ	**McNeill Hill**	**1.72**	**162**	P	Pn	03 08 29.1	+0.6
MCHZ				S	S	03 09 01.5	-1.8
KRHZ	**Kereru**	**1.85**	**171**	P	Pn	03 08 29.6	0.0
KRHZ				S	S	03 09 02.2	-2.9
CNGZ	**Carnagh Statio**	**1.87**	**112**	P	Pn	03 08 30.1	+0.4
WMGZ	**Waiomatatini S**	**1.91**	**91**	P	Pn	03 08 29.5	-0.5
MHGZ	**Mahia Peninsul**	**2.01**	**132**	P	Pn	03 08 31.1	+0.4
KAHZ	**Kahuranaki**	**2.10**	**161**	P	Pn	03 08 31.9	+0.4
WAZ	**Wanganui**	**2.10**	**202**	P	Pn	03 08 31.7	+0.2
PNHZ	**Pukenui**	**2.11**	**176**	P	Pn	03 08 31.4	-0.2
TSZ	**Takapari Road**	**2.25**	**181**	P	Pn	03 08 32.5	-0.2
WPHZ	**Waipukurau**	**2.28**	**171**	P	Pn	03 08 32.9	-0.1
WCZ	**Waipu Caves**	**2.29**	**324**	P	Pn	03 08 33.6	+0.4
PXZ	**Pawanui**	**2.32**	**163**	P	Pn	03 08 33.4	+0.1
DVHZ	**Dannevirke**	**2.49**	**177**	P	Pn	03 08 34.4	-0.5
PRHZ	**Porangahau**	**2.50**	**169**	P	Pn	03 08 35.0	0.0
ANWZ	**Angora Road**	**2.67**	**172**	P	Pn	03 08 36.7	+0.1
PRWZ	**Pori Road**	**2.74**	**180**	P	Pn	03 08 36.1	-1.2
MRZ	**Mangatainoka R**	**2.87**	**186**	P	Pn	03 08 37.8	-0.7
BFZ	**Birch Farm**	**2.88**	**176**	P	Pn	03 08 38.2	-0.3
OGWZ	**Otaki Gorge**	**3.07**	**192**	P	Pn	03 08 39.9	-0.6
HOWZ	**Holdsworth Sta**	**3.11**	**187**	P	Pn	03 08 39.9	-0.9
KIW	**Kapiti Island**	**3.16**	**195**	P	Pn	03 08 40.6	-0.9
TMWZ	**Te Maipa**	**3.29**	**181**	P	Pn	03 08 42.0	-0.8
CAW	**Cannon Point**	**3.37**	**192**	P	Pn	03 08 42.8	-0.8
DUWZ	**D'Urville Isla**	**3.40**	**208**	P	Pn	03 08 42.9	-0.9
TRWZ	**Traveller**	**3.59**	**184**	P	Pn	03 08 45.1	-0.9
WEL	**Wellington**	**3.60**	**195**	P	Pn	03 08 45.2	-0.8
MSWZ	**Moikau Station**	**3.65**	**189**	P	Pn	03 08 45.4	-1.2
TCW	**Tory Channel**	**3.65**	**201**	P	Pn	03 08 45.6	-1.0
PLWZ	**Palliser**	**3.80**	**188**	P	Pn	03 08 47.1	-1.2
TUWZ	**Tuamarina**	**3.95**	**203**	P	Pn	03 08 48.9	-0.9
NNZ	**Nelson**	**3.96**	**210**	P	Pn	03 08 48.5	-1.4
QRZ	**Quartz Range**	**4.04**	**221**	P	Pn	03 08 49.0	-1.9
BSWZ	**Blackbirch Sta**	**4.23**	**202**	P	Pn	03 08 52.2	-0.8
THZ	**Tophouse**	**4.61**	**210**	P	Pn	03 08 56.0	-1.4
KHZ	**Kahutara**	**4.97**	**202**	P	Pn	03 09 00.5	-1.0
GVZ	**Greta Valley S**	**5.63**	**203**	P	Pn	03 09 07.7	-1.6
LTZ	**Lake Taylor**	**5.73**	**209**	P	Pn	03 09 08.7	-1.8
INZ	**Inchbonnie**	**6.02**	**214**	P	Pn	03 09 09.6	-4.3
OXZ	**Oxford**	**6.28**	**207**	P	Pn	03 09 14.9	-2.2
MQZ	**McQueen's Vall**	**6.41**	**202**	P	Pn	03 09 16.2	-2.4
MHCZ	**Mount Hutt**	**6.63**	**209**	P	Pn	03 09 19.3	-2.1
GCSZ	**Gaunt Creek Bo**	**6.99**	**216**	P	Pn	03 09 23.7	-2.1
FOZ	**Fox Glacier**	**7.40**	**217**	P	Pn	03 09 27.8	-2.9
ODZ	**Otahua Downs**	**8.27**	**207**	P	Pn	03 09 40.4	-1.0
JCZ	**Jackson Bay**	**8.30**	**219**	P	Pn	03 09 38.7	-3.3

IDC 07 03:11:42.0±2.4, **7.°58S**×**130.°29E, h0**km, **mb3.5**/1, **mb1 3.6**/4, **mb1mx3.4**/32, **mbtmp3.4**/4, **ML3.4**/3, **Error ellipse: s-maj=80.1km s-min=30.5km az=78.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.39**	**203**	Pn	Pn	03 14 25.4	-0.7
	0.3nm,0.3s,baz=28,slow=11,SNR=23						
FITZ				Sn	Sn	03 16 23.1	-11
	0.2nm,0.3s,baz=240,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**12.90**	**163**	Pn	Pn	03 14 45.8	-1.0
	0.1nm,0.3s,baz=346,slow=13,SNR=19						
WRA				Sn	Sn	03 17 01.1	-10
	0.3nm,0.3s,baz=343,slow=22,SNR=9.2						
ASAR	**Alice Springs**	**16.37**	**168**	Pn	P	03 15 35.2	-1.1
	0.1nm,0.3s,baz=345,slow=8.9,SNR=7.1						
MKAR	**Makanchi Array**	**68.87**	**327**	P	P	03 22 48.5	0.0
	0.2nm,0.5s,baz=111,slow=7.9,SNR=2.9						

*KRNET **07** 03:14:13.0±0.1, 40.°70N×77.°41E, mb3.4*
*SOME **07** 03:14:13.8, 40.°68N×77.°33E, h15km*
*NNC **07** 03:14:14.9±1.3, 40.°74N×77.°31E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=8.9km s-min=7.1km az=172.0*
ISC 07 03:14:10.4±2.4, **40.°62N**±0.°09×**77.°33E**±0.°04, **h9**km±16km, **n46,** σ**1**s**16**/**75, 19C-10D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.52**	**356**	⇑*eP*	**Pg**	**03 14 40.2**	**+0.7**
	baz=54						
KDJ				⇑*iS*	**Sg**	**03 14 59.8**	**+0.6**
	baz=54						

ULHL Ulahol 1.82 334 ⇑*iP* **Pg 03 14 46.0 +0.7**
baz=31
ULHL ⇑*iS* **Sg 03 15 10.3 +1.3**
baz=31
BOOM Boomskoye usch 2.14 331 ⇑*eP* **Pb 03 14 51.3 +1.8**
baz=29
BOOM ⇑*iS* **Sg 03 15 19.4 +0.2**
baz=29
ANVS Anan'yevo 2.18 7 ⇓*iP* **Pb 03 14 51.3 +1.2**
baz=5.0
ANVS ⇓*iS* **Sg 03 15 19.3 -1.2**
baz=5.0
TNSS Tian-Shan 2.44 353 *eP* **Pg 03 14 57.3 +0.2**
37nm,0.5s
TNSS *eS* **Sg 03 15 28.5 -0.2**
27nm,0.8s
TNSS Tian-Shan 2.44 353 Pg **Pg 03 14 57.3 +0.2**
37nm,0.5s
TNSS Lg Lg 03 15 28.5
27nm,0.8s
IZV Izvestkoviy 2.48 348 *eP* **Pg 03 14 58.2 +0.4**
17nm,0.6s
IZV *eS* **Sg 03 15 29.9 -0.1**
47nm,0.6s
IZV Izvestkoviy 2.48 348 Pg **Pg 03 14 58.2 +0.4**
17nm,0.6s
IZV Lg Lg 03 15 29.9
47nm,0.6s
MDOK Medeo 2.55 355 *eP* **Pg 03 14 58.9 -0.5**
19nm,0.4s
MDOK *eS* **Sg 03 15 31.1 -1.3**
66nm,0.6s
MDOK Medeo 2.55 355 Pg **Pg 03 14 58.9 -0.5**
19nm,0.4s
MDOK Lg Lg 03 15 31.1
66nm,0.6s
SATY Saty 2.57 18 *eP* **Pg 03 15 01.1 +1.5**
8.8nm,0.6s
SATY *eS* **Sg 03 15 34.8 +1.8**
37nm,0.5s
SATY Saty 2.57 18 Pg **Pg 03 15 01.1 +1.5**
8.8nm,0.6s
SATY Lg Lg 03 15 34.8
37nm,0.5s
ARLS Aral 2.58 300 ⇑*iP* **Pb 03 14 58.2 +1.2**
baz=98
ARLS ⇑*iS* **Sb 03 15 31.4 +2.5**
baz=98
MTBS Maitube 2.60 345 *eP* **Pg 03 15 01.5 +1.3**
4.4nm,0.3s
MTBS *eS* **Sg 03 15 35.3 +1.4**
26nm,0.3s
MTBS Maitube 2.60 345 Pg **Pg 03 15 01.5 +1.3**
4.4nm,0.3s
MTBS Lg Lg 03 15 35.3
26nm,0.3s
KOTS Kotyrbulak 2.62 357 *eP* **Pg 03 15 01.0 +0.4**
46nm,0.5s
KOTS *eS* **Sg 03 15 34.6 0.0**
146nm,0.3s
KOTS Kotyrbulak 2.62 357 Pg **Pg 03 15 01.0 +0.4**
46nm,0.5s
KOTS Lg Lg 03 15 34.6
146nm,0.3s
KST Kastek 2.63 338 *eP* **Pg 03 15 01.2 +0.4**
7.8nm,0.4s
KST *eS* **Sg 03 15 35.2 +0.3**
17nm,0.5s
KST Kastek 2.63 338 Pg **Pg 03 15 01.2 +0.4**
7.8nm,0.4s
KST Lg Lg 03 15 35.2
17nm,0.5s
TKM2 Tokmak 2 2.64 331 ⇑*iP* **Pb 03 14 58.2 +0.2**
baz=29
TKM2 ⇑*iS* **Sb 03 15 31.4 +0.8**
baz=29
TKM2 Tokmak 2 2.64 331 ⇑Pg **Pb 03 14 59.0 +1.0**
14nm,0.5s
TKM2 ⇑Lg Lg 03 15 35.7
10nm,0.8s
UCH Uchtor 2.66 308 ⇓*iP* **Pb 03 14 59.4 +1.0**
baz=6.0
UCH ⇓*iS* **Sb 03 15 33.0 +1.6**
baz=6.0
KBK Karagaybulak 2.71 320 ⇑*iP* **Pb 03 14 59.4 +0.3**
baz=17
KBK ⇑*iS* **Sb 03 15 33.4 +0.9**
baz=17
UZB Uzynbulak 2.83 26 *eP* **Pg 03 15 04.5 -0.1**
5.6nm,0.5s
UZB ⇓*iS* **Sg 03 15 40.7 -0.5**
12nm,0.7s
KURS Kuram 2.94 12 *eP* **Pg 03 15 06.0 -0.7**
7.9nm,0.5s
KURS *eS* **Sg 03 15 43.2 -1.6**
15nm,0.9s
KURS Kuram 2.94 12 Pg **Pg 03 15 06.0 -0.7**
7.9nm,0.5s
KURS Lg Lg 03 15 43.2
15nm,0.9s
KPKS Kokpek 3.02 19 *eP* **Pg 03 15 07.2 -1.1**
6.6nm,0.3s
KPKS *eS* **Sg 03 15 44.9 -2.6**
47nm,0.5s
CHMS Chumysh 3.06 322 ⇑*eP* **Pb 03 15 03.9 -1.2**
baz=20
CHMS ⇑*iS* **Sb 03 15 41.4 -1.1**
baz=20
AML Almayashu 3.12 300 ⇓*eP* **Pb 03 15 05.9 -0.4**
baz=98
AML ⇓*iS* **Sb 03 15 44.6 -0.1**
baz=98
KTBS Karatobe 3.13 351 *eP* **Pg 03 15 10.7 +0.4**
5.7nm,0.4s
KTBS *eS* **Sg 03 15 51.1 +0.2**
29nm,0.4s
KTBS Karatobe 3.13 351 Pg **Pg 03 15 10.7 +0.4**
5.7nm,0.4s
KTBS Lg Lg 03 15 51.1
29nm,0.4s
PDGK Podgornoye 3.15 30 Pg **Pg 03 15 10.7 -0.1**
1.3nm,0.5s
PDGK Lg Lg 03 15 51.4
20nm,0.8s
PDGK Podgornoye 3.15 30 ⇑Pg **Pb 03 15 09.7 +3.0**
8.2nm,0.7s
PDGK ⇓Lg Lg 03 15 49.6
49nm,0.8s
KRBS Karabastau 3.31 339 *eP* **Pg 03 15 13.5 -0.3**
7.0nm,0.4s
KRBS *eS* **Sg 03 15 56.0 -0.8**
10nm,0.5s
KRBS Karabastau 3.31 339 Pg **Pg 03 15 13.5 -0.3**
7.0nm,0.4s
KRBS Lg Lg 03 15 56.0
10nm,0.5s
EKS2 Erkin-Say 3.35 309 ⇑*iP* **Pb 03 15 08.6 -1.5**
baz=7.0
EKS2 ⇑*iS* **Sb 03 15 49.2 -1.9**
baz=7.0
KUU Kurty 3.36 348 *eP* **Pg 03 15 14.5 -0.2**
4.6nm,0.6s
KUU *eS* **Sg 03 15 57.7 -0.4**
12nm,0.7s
KUU Kurty 3.36 348 Pg **Pg 03 15 14.5 -0.2**
4.6nm,0.6s
KUU Lg Lg 03 15 57.7
12nm,0.7s
USP Ospenovka 3.39 322 ⇓*eP* **Pb 03 15 08.7 -1.9**
baz=21
USP ⇓*iS* **Sb 03 15 49.3 -2.6**
baz=21
MNBS Baschi 3.55 13 *eP* **Pg 03 15 17.8 -0.7**
5.7nm,0.3s
MNBS *eS* **Sg 03 16 03.5 -1.0**
20nm,0.7s
MNBS Baschi 3.55 13 Pg **Pg 03 15 17.8 -0.7**
5.7nm,0.3s
MNBS Lg Lg 03 16 03.5
20nm,0.7s
ARXS Arharly 3.61 6 *eP* **Pg 03 15 18.6 -1.0**
14nm,0.6s
ARXS *eS* **Sg 03 16 04.9 -1.5**
20nm,0.7s
ARXS Arharly 3.61 6 Pg **Pg 03 15 18.6 -1.0**
14nm,0.6s
ARXS Lg Lg 03 16 04.9
20nm,0.7s

MRKS	**Merke**	**3.74**	**306**	*e*P		**Pg**	**03 15 21.5**	**-0.4**
	2.9nm,0.3s								
MRKS				*e*S		**Sg**	**03 16 09.8**	**-0.6**
	6.4nm,0.5s								
MRKS	**Merke**	**3.74**	**306**	Pg		**Pg**	**03 15 21.5**	**-0.4**
	2.9nm,0.3s								
MRKS				Lg		Lg	03 16 09.8		
	6.4nm,0.5s								
DJR	**Jarkent**	**4.14**	**25**	*e*P		**Pg**	**03 15 27.9**	**-1.7**
	3.0nm,0.6s								
DJR				*e*S		**Sg**	**03 16 20.7**	**-2.5**
	6.5nm,0.6s								

ATA ***07*** *03:24:26.6±0.3,39°.95N×39°.65E,h46km±2km,ML1.2, MW4.0*
DDA ***07*** *03:24:29.6,39°.98N×39°.64E,h7km±2km,ML1.3*
ISC 07 03:24:29.1±1.0,**40°.00N**±0°.05×**39°.71E**±0°.04,**h16**km±10km,
n12,σ**0°53**/18,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUZM	**Uzumlu**	**0.29**	**182**	*e*P	**Pg**	**03 24 35.7**	**+0.2**
EUZM				IAML		03 24 44.9	
	comp=Z,7.9nm,0.4s						
EUZM	**Uzumlu**	**0.29**	**182**	*i* P	**Pg**	**03 24 35.7**	**+0.2**
EUZM				*i* S	**Sg**	**03 24 39.8**	**+0.1**
KELT	**Kelkit**	**0.38**	**293**	*e*P	**Pg**	**03 24 37.1**	**+0.1**
KELT				IAML		03 24 42.1	
	comp=Z,28nm,0.2s						
KELT	**Kelkit**	**0.38**	**293**	*i* P	**Pg**	**03 24 36.9**	**-0.1**
KELT				*i* S	**Sg**	**03 24 41.7**	**-0.6**
KELT				IAML		03 24 42.0	
	comp=N,76nm,0.2s						
KELT				IAML		03 24 42.0	
	comp=E,46nm,0.2s						
BAYB	**BAYBURT**	**0.49**	**58**	*e*P	**Pb**	**03 24 39.7**	**+0.1**
BAYB				IAML		03 24 49.1	
	comp=Z,9.1nm,0.1s						
BAYB	**BAYBURT**	**0.49**	**58**	*i* P	**Pb**	**03 24 40.0**	**+0.4**
BAYB				*i* S	**Sb**	**03 24 47.1**	**+0.4**
BAYB				IAML		03 24 48.0	
	comp=N,19nm,0.2s						
BAYB				IAML		03 24 49.0	
	comp=E,19nm,0.3s						
KOPT	**Kop Dagi**	**0.61**	**88**	*e*P	**Pg**	**03 24 41.2**	**0.0**
KOPT				IAML		03 24 58.4	
	comp=Z,5.1nm,0.7s						
KOPT	**Kop Dagi**	**0.61**	**88**	*i* P	**Pn**	**03 24 42.9**	**-0.5**
KOPT				*i* S	**Sn**	**03 24 52.0**	**-1.0**
MACK	**Trabzon**	**0.94**	**3**	*i* S	**Sn**	**03 25 01.1**	**+0.1**
KRIK	**Erzurum-spir**	**0.99**	**70**	*e*P	**Pb**	**03 24 47.2**	**-0.9**
KRIK	**Erzurum-spir**	**0.99**	**70**	*i* P	**Pn**	**03 24 49.6**	**+1.0**
KRIK				*i* S	**Sn**	**03 25 02.6**	**+0.1**
SUSE	**Susehri**	**1.17**	**281**	*i* P	**Pn**	**03 24 51.4**	**+0.3**
SUSE				*i* S	**Sb**	**03 25 06.2**	**0.0**
SUSE				IAML		03 25 08.0	
	comp=E,5.5nm,0.3s						

NNC ***07*** *03:24:27.0±2.8,40°.53N×77°.42E,h0km,mb3.4,mpv3.1, Error ellipse: s-maj=18.8km s-min=14.9km az=5.0*
SOME ***07*** *03:24:28.6,40°.62N×77°.48E,h10km*
KRNET ***07*** *03:24:30.9±0.1,40°.73N×77°.33E,mb2.6*
ISC 07 03:24:32.4±3.2,**40°.8N**±0°.1×**77°.44E**±0°.05,**h1**km±16km,**n29**,
σ**0°79**/47,**15C-7D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.39**	**352**	⇑*i*P	**Pn**	**03 24 57.4**	**-1.6**
KDJ	baz=56			⇑*i*S	**Sn**	**03 25 17.3**	**-0.8**
	baz=56						
ULHL	**Ulahol**	**1.74**	**329**	⇓*i*P	**Pn**	**03 25 03.4**	**-0.5**
ULHL	baz=32			⇓*i*S	**Sn**	**03 25 27.0**	**+0.1**
	baz=32						
ANVS	**Anan'yevo**	**2.03**	**5**	⇓*i*P	**Pb**	**03 25 09.4**	**-0.8**
ANVS	baz=7.0			⇓*i*S	**Sg**	**03 25 37.2**	**-0.4**
	baz=7.0						
BOOM	**Boomskoye usch**	**2.07**	**327**	⇑*i*P	**Pn**	**03 25 09.0**	**+0.6**
BOOM	baz=30			⇑*i*S	**Sb**	**03 25 36.5**	**-0.5**
	baz=30						
TNSS	**Tian-Shan**	**2.31**	**351**	*e*P	**Pb**	**03 25 14.4**	**-0.6**
TNSS	7.2nm,0.4s			*e*S	**Sg**	**03 25 48.1**	**+1.5**
	8.2nm,0.6s						
TNSS	**Tian-Shan**	**2.31**	**351**	Pg	**Pb**	**03 25 14.4**	**-0.6**
TNSS	7.2nm,0.4s			Lg	Lg	03 25 48.1	
	8.2nm,0.6s						
IZV	**Izvestkoviy**	**2.36**	**345**	*e*P	**Pb**	**03 25 15.6**	**-0.2**
IZV	2.8nm,0.2s			*e*S	**Sg**	**03 25 49.5**	**+1.3**
	11nm,0.3s						
IZV	**Izvestkoviy**	**2.36**	**345**	Pg	**Pb**	**03 25 15.6**	**-0.2**
IZV	2.8nm,0.2s			Lg	Lg	03 25 49.5	
	11nm,0.3s						
SATY	**Saty**	**2.41**	**17**	*e*P	**Pb**	**03 25 16.6**	**0.0**
SATY	4.8nm,0.2s			*e*S	**Sg**	**03 25 51.5**	**+1.7**
	8.9nm,0.5s						
SATY	**Saty**	**2.41**	**17**	Pg	**Pb**	**03 25 16.6**	**0.0**
SATY	4.8nm,0.2s			Lg	Lg	03 25 51.5	
	8.9nm,0.5s						
MDOK	**Medeo**	**2.42**	**353**	*e*P	**Pb**	**03 25 16.0**	**-0.8**
MDOK	4.9nm,0.4s			*e*S	**Sg**	**03 25 50.5**	**+0.3**
	11nm,0.6s						
MDOK	**Medeo**	**2.42**	**353**	Pg	**Pb**	**03 25 16.0**	**-0.8**
MDOK	4.9nm,0.4s			Lg	Lg	03 25 50.5	
	11nm,0.6s						
KOTS	**Kotyrbulak**	**2.49**	**354**	*e*P	**Pb**	**03 25 17.6**	**-0.4**
KOTS	10nm,0.4s			*e*S	**Sg**	**03 25 53.5**	**+1.2**
	40nm,0.4s						
KOTS	**Kotyrbulak**	**2.49**	**354**	Pg	**Pb**	**03 25 17.6**	**-0.4**
KOTS	10nm,0.4s			Lg	Lg	03 25 53.5	
	40nm,0.4s						
KST	**Kastek**	**2.54**	**335**	*e*P	**Pb**	**03 25 18.1**	**-0.7**
KST	2.3nm,0.2s			*e*S	**Sg**	**03 25 54.1**	**+0.2**
	8.3nm,0.8s						
KST	**Kastek**	**2.54**	**335**	Pg	**Pb**	**03 25 18.1**	**-0.7**
KST	2.3nm,0.2s			Lg	Lg	03 25 54.1	
	8.3nm,0.8s						
TKM2	**Tokmak 2**	**2.56**	**328**	⇑*e*P	**Pn**	**03 25 15.7**	**+0.4**
TKM2	baz=30			⇑*e*S	**Sn**	**03 25 48.6**	**+1.4**
	baz=30						
TKM2	**Tokmak 2**	**2.56**	**328**	⇑Pg	**Pn**	**03 25 14.4**	**-0.9**
TKM2	2.3nm,0.6s			⇑Lg	Lg	03 25 53.7	
	4.6nm,0.5s						
ARLS	**Aral**	**2.60**	**296**	⇓*i*P	**Pn**	**03 25 15.6**	**-0.1**
ARLS	baz=98			⇓*i*S	**Sn**	**03 25 48.0**	**+0.1**
	baz=98						
UZB	**Uzynbulak**	**2.66**	**26**	*e*P	**Pb**	**03 25 20.1**	**-0.8**
UZB	1.8nm,0.3s			*e*S	**Sg**	**03 25 57.3**	**-0.6**
	3.9nm,0.5s						
UZB	**Uzynbulak**	**2.66**	**26**	Pg	**Pb**	**03 25 20.1**	**-0.8**
UZB	1.8nm,0.3s			Lg	Lg	03 25 57.3	
	3.9nm,0.5s						
KBK	**Karagaybulak**	**2.66**	**316**	⇑*e*P	**Pn**	**03 25 16.8**	**+0.2**
KBK	baz=18			⇑*i*S	**Sn**	**03 25 50.7**	**+1.1**
	baz=18						
PDGK	**Podgornoye**	**2.99**	**30**	⇑Pg	**Pn**	**03 25 22.2**	**+1.2**
PDGK	6.0nm,1.4s			⇓Lg	Lg	03 26 07.1	
	15nm,1.1s						
AML	**Almayashu**	**3.13**	**297**	⇑*e*P	**Pn**	**03 25 23.3**	**0.0**
AML	baz=98			⇑*e*S	**Sn**	**03 26 01.7**	**+0.2**
	baz=98						
KRBS	**Karabastau**	**3.22**	**336**	*e*P	**Pb**	**03 25 30.1**	**-0.2**
	0.9nm,0.3s						
KRBS				*e*S	**Sg**	**03 26 14.8**	**-1.0**
	3.5nm,0.5s						
KRBS	**Karabastau**	**3.22**	**336**	Pg	**Pb**	**03 25 30.1**	**-0.2**
	0.9nm,0.3s						
KRBS				Lg	Lg	03 26 14.7	
	3.5nm,0.5s						
USP	**Ospenovka**	**3.33**	**320**	⇑*e*P	**Pn**	**03 25 26.3**	**+0.6**
USP	baz=21			⇑*i*S	**Sn**	**03 26 06.4**	**+0.5**
	baz=21						
MNBS	**Baschi**	**3.39**	**12**	*e*P	**Pb**	**03 25 33.4**	**0.0**
	1.1nm,0.4s						
MNBS				*e*S	**Sg**	**03 26 20.8**	**-0.6**
	2.6nm,0.5s						
MNBS	**Baschi**	**3.39**	**12**	Pg	**Pb**	**03 25 33.4**	**0.0**
	1.1nm,0.4s						
MNBS				Lg	Lg	03 26 20.8	
	2.6nm,0.5s						

MOS ***07*** *03:33:53.7±1.1,5°.99S×148°.11E,h49km,mb6.5/67, MS6.0/34,Error ellipse: s-maj=6.9km s-min=4.4km az=108.8*
NEIC ***07*** *03:33:54.6,6°.05S×148°.22E,h46km,Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr0.93; Mθθ-0.82; Mϕϕ-0.12; Mrθ0.51; Mrϕ0.30; Mθϕ-0.10; Fault plane solution: M₀1.07000×10¹⁹ NP1:φs105.90000°, δ59.67000°,λ85.68000°. NP2:φs294.42000°,δ30.60000°, λ97.34000°. Principal axes: T 1.0732, Plg75.0000°, Azm4.0000°; N -0.0135, Plg4.0000°, Azm108.0000°; P -1.0596, Plg15.0000°, Azm199.0000°;*
NEIC ***07*** *03:33:55.3±1.9,5°.99S±0°.05×148°.23E±0°.06,h53km±3km, mb6.4/347,Mwb6.6/56,Mww6.6,Mwc6.6(GCMT) Error ellipse: s-maj=8.6km s-min=7.6km az=116.0*
BJI ***07*** *03:33:55.1±0.0,5°.95S×148°.25E,h50km,mB6.1/81, mb6.0/92,Ms6.2/96,Ms7 6.1/90*
IDC ***07*** *03:33:56.0±1.2,6°.01S×148°.22E,h57km±10km,mb5.9/39, mb1 5.9/45,mb1mx5.8/47,mbtmp6.1/45,MS6.1/29, Ms1 6.1/29,ms1mx5.9/42,Error ellipse: s-maj=9.2km s-min=7.2km az=65.0*
DJA ***07*** *03:33:58.0±0.3,6°.S±2°×14°.8E±°,h73km±3km,M6.4/132, mB6.7/120,mb6.3/132,MLv6.7/4,Mw(mB)6.5/120, Mwp6.3/113*
NEIC ***07*** *03:34:04,6°.25S×148°.32E,h46km,Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr0.97; Mθθ-1.06; Mϕϕ0.09; Mrθ0.50; Mrϕ0.01; Mθϕ-0.22; Fault plane solution: M₀1.16000×10¹⁹ NP1:φs259.00000°, δ33.00000°,λ70.00000°. NP2:φs101.00000°,δ59.00000°, λ102.00000°. Principal axes: T 1.1328, Plg73.0000°, Azm42.0000°; N 0.0469, Plg10.0000°, Azm275.0000°; P -1.1797, Plg13.0000°, Azm183.0000°;*
GCMT ***07*** *03:34:04.3±0.0,6°.40S×148°.36E,h42km,MW6.6/170, Moment Tensor Solution. s170,c451; s160,c632; Duration: 5±1 Moment tensor: Scale 10¹⁹Nm; Mrr0.95±.00; Mθθ-1.07±.00; Mϕϕ0.12±.00; Mrθ0.49±.01; Mθϕ0.00±.00; Mϕr-0.07±.01; Best double couple: M₀1.12500×10¹⁹ NP1:φs265.00000°,δ32.00000°, λ82.00000°. NP2:φs94.00000°,δ58.00000°,λ95.00000°. Principal axes: T 1.0660, Plg76.0000°, Azm19.0000°; N 0.1190, Plg4.0000°, Azm272.0000°; P -1.1850, Plg13.0000°, Azm181.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***07*** *03:34:04,6°.40S×148°.43E,h42km,Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr0.93; Mθθ-1.09; Mϕϕ0.15; Mrθ0.41; Mϕϕ0.00; Mθr-0.08; Fault plane solution: M₀1.10000×10¹⁹ NP1:φs264.00000°, δ34.00000°,λ81.00000°. NP2:φs95.00000°,δ56.00000°, λ96.00000°. Principal axes: T 1.0201, Plg78.0000°, Azm26.0000°; N 0.1473, Plg5.0000°, Azm272.0000°; P -1.1674, Plg11.0000°, Azm181.0000°;*
ISC 07 03:33:55.0±0.3,**6°.03S**±0°.03×**148°.26E**±0°.03,**h53**km±2km,
h53km:**pP-P,n1933,**σ**1°43**/1988,**mb6.3**/346,**MS6.1**/110,
110C-53D,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.53**	**198**	P	**Pn**	**03 34 48.2**	**+0.8**
PMG	**Port Moresby**	**3.53**	**198**	P	**Pn**	**03 34 48.6**	**+1.2**
PMG						03 35 30.9	
PMG	**Port Moresby**	**3.53**	**198**	Pn	**Pn**	**03 34 48.6**	**+1.2**
PMG				Sn	**Sn**	**03 35 30.9**	**+2.9**
MANU	**Manus Island**	**4.06**	**347**		**Pn**	**03 34 57.8**	**+3.1**
KRVT	**Keravat (AS076**	**4.12**	**66**	P	**Pn**	**03 34 57.4**	**+1.9**
	1µm,0.3s,baz=205,slow=0.5,SNR=87						
RABL	**Rabaul**	**4.29**	**65**	Pn	**Pn**	**03 34 59.7**	**+1.9**
GENI	**Genyem**	**8.76**	**293**	P	**Pn**	**03 36 02.6**	**+3.4**
	30nm310µm49µm3µm,0.9s						
HNR	**Honiara**	**12.06**	**107**	P	**Pn**	**03 36 45.6**	**+1.3**
	4.6nm,0.3s,baz=257,slow=8.9,SNR=9.4						
HNR	**Honiara**	**12.06**	**107**	Pn	**Pn**	**03 36 45.1**	**+0.8**
MTSU	**Mount Surprise**	**12.63**	**197**	P	**Pn**	**03 36 53.1**	**+1.0**
	baz=13,SNR=300						
SRPI	**Serui, Papua**	**12.68**	**289**	P	**Pn**	**03 36 56.9**	**+4.1**
	1µm,1.0s						
BAKI	**Biak**	**13.04**	**291**	P	**Pn**	**03 37 00.1**	**+2.4**
CTA	**Charters Tower**	**14.11**	**188**	P	**Pn**	**03 37 12.5**	**+0.2**
	7.7nm,0.3s,baz=10,slow=15,SNR=140						
CTA				LR	LR	03 43 22.5	
	comp=Z,289µm,18.2s,baz=3.0,slow=40						
CTAO	**Charters Tower**	**14.11**	**188**	P	**Pn**	**03 37 11.6**	**-0.6**
CTAO	**Charters Tower**	**14.11**	**188**	Pn	**Pn**	**03 37 11.6**	**-0.6**
PATS	**Pohnpei**	**16.24**	**38**	P	**P**	**03 37 44.0**	**+1.9**
	baz=16,SNR=27						
PATS	**Pohnpei**	**16.24**	**38**		**P**	**03 37 42.2**	**+0.1**
PATS				IAmb	IAmb	03 38 01.1	
	comp=Z,8µm,1.4s						
FAKI	**Fak Fak**	**16.26**	**280**	P	**Pn**	**03 37 40.1**	**+0.1**
	comp=Z,143µmcomp=Z,23µmcomp=Z,636nm,1.2s						
FAKI	**Fak Fak**	**16.26**	**280**		**Pn**	**03 37 38.5**	**-1.6**
QIS	**Mount Isa**	**16.71**	**209**	P	**Pn**	**03 37 45.8**	**+0.1**
	baz=17,SNR=1000						
KDU	**Kakadu**	**16.92**	**246**	P	**Pn**	**03 37 48.2**	**0.0**
	baz=17,SNR=567						
SAUI	**Saumlaki**	**16.95**	**262**	P	**P**	**03 37 51.5**	**+1.6**
	comp=Z,116µmcomp=Z,121µmcomp=Z,7µm,1.7s						
SAUI	**Saumlaki**	**16.95**	**262**		**P**	**03 37 50.4**	**+0.5**
SIJI	**Sorong**	**17.72**	**286**	P	**Pn**	**03 37 57.4**	**-0.7**
	comp=Z,5.6nm,0.3s,baz=99,slow=9.9,SNR=31						
MTN	**Manton Dam**	**18.20**	**247**	P	**Pn**	**03 38 05.1**	**+1.2**
	baz=18,SNR=302						
MTN	**Manton Dam**	**18.20**	**247**	P	**P**	**03 38 03.7**	**0.0**
BNDI	**Bandanaira**	**18.34**	**274**	P	**Pn**	**03 38 07.9**	**+2.1**
	comp=Z,131µmcomp=Z,65µmcomp=Z,4µm,1.5s						
WB0	**Warramunga Arr**	**19.19**	**223**	P	**P**	**03 38 15.2**	**+0.6**
WB0				IAmb	IAmb	03 38 34.8	
	comp=Z,1µm,0.9s						
WR0	**Warramunga Arr**	**19.23**	**223**	P	**P**	**03 38 14.8**	**-0.1**
WR0				IAmb	IAmb	03 38 20.3	
	comp=Z,1µm,0.8s						
WRAB	**Tennant Creek**	**19.34**	**223**	*de*P	**P**	**03 38 15.8**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,2µm,1.3s						
WRAB	**Tennant Creek**	**19.34**	**223**	P	**P**	**03 38 15.5**	**-0.7**
WRAB				IAmb	IAmb	03 38 21.4	
	comp=Z,1µm,0.8s						
WB2	**Warramunga Arr**	**19.34**	**223**	P	**P**	**03 38 16.1**	**-0.2**
WB2				IAmb	IAmb	03 38 21.5	
	comp=Z,970nm,0.8s						
WRA	**Warramunga Arr**	**19.35**	**223**	P	**P**	**03 38 16.1**	**-0.2**
	comp=Z,65nm,0.3s,baz=51,slow=10.0,SNR=755						
WRA				S	**S**	**03 41 48.3**	**-4.3**
	baz=45,slow=22,SNR=11						
WRA				PcP	**PcP**	**03 42 38.6**	**+1.7**
	comp=Z,11nm,0.3s,baz=30,slow=1.6,SNR=11						
WRA				LR	LR	03 46 21.2	
	comp=Z,204µm,21.3s,baz=45,slow=38						
WRA				PKiKP	**PKiKP**	**03 50 25.5**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=312,slow=1.2,SNR=9.7						
WRA				P3KPbc		04 12 44.2	
	comp=Z,0.1nm,0.3s,baz=218,slow=2.5,SNR=11						
WRA	**Warramunga Arr**	**19.35**	**223**	P	**P**	**03 38 15.8**	**-0.5**
WRA				pmax	pmax		
	comp=Z,30nm,1.0s						
WRA	**Warramunga Arr**	**19.35**	**223**	P	**P**	**03 38 15.8**	**-0.5**
EIDS	**Eidsvold**	**19.42**	**172**	P	**Pn**	**03 38 18.0**	**-0.6**
	baz=19,SNR=315						
EIDS	**Eidsvold**	**19.42**	**172**	P	**P**	**03 38 17.1**	**+0.1**
EIDS				IAmb	IAmb	03 38 22.0	
	comp=Z,2µm,1.1s						
GUMO	**Guam**	**19.78**	**350**	P	**Pn**	**03 38 24.9**	**+2.0**
	comp=Z,69nm,0.3s,baz=181,slow=6.1,SNR=75						
GUMO	**Guam**	**19.78**	**350**	P	**Pn**	**03 38 24.0**	**+1.1**
GUMO				pmax	pmax		
	comp=Z,4µm,1.2s						
GUMO	**Guam**	**19.78**	**350**	P	**Pn**	**03 38 24.0**	**+1.1**
GUMO				IAmb	IAmb	03 38 34.8	
	comp=Z,4µm,1.2s						
RMQ	**Roma**	**20.35**	**179**	P	Pn	03 38 28.7	-0.9
	baz=20,SNR=844						
QLP	**Quilpie**	**20.80**	**190**	P	**P**	**03 38 32.8**	**+0.9**
	baz=21,SNR=751						
SANVU	**Saraoutou**	**20.81**	**118**	P	**P**	**03 38 32.5**	**+0.3**
SANVU				IAmb	IAmb	03 39 00.3	
	comp=Z,2µm,1.0s						
NLAI	**Namlea**	**21.27**	**277**	P	**P**	**03 38 39.5**	**+2.3**
	comp=Z,12µmcomp=Z,471nm,1.0s						
KNRA	**Kununurra**	**21.40**	**242**	P	**P**	**03 38 39.1**	**+0.6**
	baz=21,SNR=209						
KNRA	**Kununurra**	**21.40**	**242**	P	**P**	**03 38 38.9**	**+0.5**
KNRA				IAmb	IAmb	03 38 59.2	
	comp=Z,2µm,1.2s						
TNTI	**Ternate**	**21.93**	**287**	P	**P**	**03 38 48.1**	**+3.9**
	comp=Z,52µmcomp=Z,10µmcomp=Z,561nm,1.4s						
TNTI	**Ternate**	**21.93**	**287**	P	**P**	**03 38 45.8**	**+1.6**
TNTI				IAmb	IAmb	03 39 13.1	
	comp=Z,1µm,1.4s						
AS31	**Alice Springs**	**22.32**	**217**	P	**P**	**03 38 49.1**	**+0.6**
AS31				PcP	**PcP**	**03 42 43.5**	**+1.0**
ASAR	**Alice Springs**	**22.33**	**217**	P	**P**	**03 38 49.1**	**+0.7**
	comp=Z,2µm,1.0s,baz=56,slow=8.9,SNR=1970						
ASAR				PcP	**PcP**	**03 42 44.4**	**+1.8**
	comp=Z,330nm,0.8s,baz=49,slow=2.2,SNR=13						
ASAR				S	**S**	**03 42 51.9**	**+1.1**
	comp=Z,585nm,1.1s,baz=24,slow=23,SNR=12						
ASAR				ScP	**ScP**	**03 46 16.9**	**+1.1**
	comp=Z,69nm,0.9s,baz=47,slow=3.4,SNR=6.9						
ASAR				LR	LR	03 48 35.2	
	comp=Z,221µm,20.1s,baz=46,slow=39						
ASAR				P3KPbc		04 12 30.6	
	comp=Z,20nm,0.9s,baz=213,slow=4.1,SNR=65						
ASAR				P3KP		04 13 18.9	
	comp=Z,6.0nm,0.8s,baz=140,slow=2.7,SNR=7.8						
ASAR	**Alice Springs**	**22.33**	**217**	P	**P**	**03 38 46.4**	**-2.1**
ASAR				PcP	**PcP**	**03 42 43.8**	**+1.3**
SANI	**Sanana**	**22.56**	**279**	P	**P**	**03 38 51.0**	**0.0**
	comp=Z,83µmcomp=Z,15µmcomp=Z,634nm,1.0s						
DZM	**Mont Dzumac**	**23.73**	**134**	P	**P**	**03 39 03.0**	**+0.4**
	comp=Z,247nm,0.6s,baz=259,slow=8.0,SNR=114						
DZM				PcP	**PcP**	**03 42 47.6**	**+2.1**
	comp=Z,75nm,0.7s,baz=240,slow=7.0,SNR=5.1						
DZM				LR	LR	03 45 03.8	
	comp=Z,22µm,21.7s,baz=312,slow=28						
SOEI	**Soe**	**24.05**	**260**	P	**P**	**03 39 07.3**	**+1.7**
	comp=Z,91µmcomp=Z,70µmcomp=Z,5µm,1.0s						
SOEI	**Soe**	**24.05**	**260**	P	**P**	**03 39 06.5**	**+0.9**
KWAJ	**Kwajalein Atol**	**24.27**	**53**	P	**P**	**03 39 08.0**	**+0.5**
KWAJ				pmax	pmax		
	comp=Z,3µm,1.7s						
KWAJ	**Kwajalein Atol**	**24.27**	**53**	P	**P**	**03 39 08.0**	**+0.5**
KWAJ				IAmb	IAmb	03 39 36.7	
	comp=Z,3µm,1.7s						
ARMA	**Armidale**	**24.47**	**173**	P	**P**	**03 39 09.7**	**+0.4**
	baz=24,SNR=182						
ARMA	**Armidale**	**24.47**	**173**	P	**P**	**03 39 09.0**	**-0.3**
BATI	**Baumata**	**24.70**	**259**	P	**P**	**03 39 13.3**	**+1.9**
	comp=Z,4µm,0.7s,baz=140,slow=1.8,SNR=222						
BATI				LR	LR	03 52 04.5	
	comp=Z,72µm,19.5s,baz=130,slow=44						
BATI	**Baumata**	**24.70**	**259**	P	**P**	**03 39 13.8**	**+2.4**
	comp=Z,41µmcomp=Z,53µmcomp=Z,4µm,0.8s						
KMSI	**Cibinong**	**25.11**	**284**	P	**P**	**03 39 16.2**	**+1.0**
	comp=Z,1µmcomp=Z,14µmcomp=Z,928nm,0.7s						
FITZ	**Fitzroy Crossi**	**25.13**	**240**	P	**P**	**03 39 16.5**	**+1.3**
	comp=Z,5µm,1.0s,baz=73,slow=8.0,SNR=1287						
FITZ				S	**S**	**03 43 35.0**	**-1.6**
	comp=Z,127nm,1.0s,baz=277,slow=17,SNR=2.1						
FITZ	**Fitzroy Crossi**	**25.13**	**240**	P	**P**	**03 39 16.5**	**+1.3**
	baz=25,SNR=1000						
FITZ	**Fitzroy Crossi**	**25.13**	**240**	P	**P**	**03 39 15.6**	**+0.4**
CMSA	**Cobar Meteorol**	**25.49**	**185**	P	**P**	**03 39 18.7**	**+0.3**
	baz=26,SNR=148						
KDI	**Kendari**	**25.63**	**273**	P	**P**	**03 39 23.1**	**+3.3**
	comp=Z,9µmcomp=Z,294nm,1.1s						
TARA	**Tarawa**	**25.69**	**74**	P	**P**	**03 39 19.8**	**-0.7**
TARA				IAmb	IAmb	03 40 05.9	
	comp=Z,664nm,1.1s						
LUWI	**Luwuk**	**25.91**	**280**	P	**P**	**03 39 24.0**	**+1.6**
	comp=Z,66µmcomp=Z,21µmcomp=Z,917nm,1.0s						
LUWI	**Luwuk**	**25.91**	**280**	P	**P**	**03 39 22.7**	**+0.2**
LUWI				IAmb	IAmb	03 40 06.1	
	comp=Z,2µm,1.1s						
GTOI	**Gorontalo**	**26.07**	**284**	P	**P**	**03 39 24.5**	**+0.7**
	comp=Z,34µmcomp=Z,6µmcomp=Z,231nm,0.7s						
DAV	**Davao City (W)**	**26.11**	**300**	⇑*e*P	**P**	**03 39 22.3**	**-1.9**
STKA	**Stephens Creek**	**26.46**	**193**	P	**P**	**03 39 28.2**	**+1.0**
	comp=Z,550nm,0.9s,baz=354,slow=9.0,SNR=185						
STKA				ScP	**ScP**	**03 46 28.5**	**+1.5**
	comp=Z,105nm,1.0s,baz=16,slow=3.6,SNR=4.7						
STKA				LR	LR	03 51 05.5	
	comp=Z,258µm,19.6s,baz=21,slow=39						
STKA	**Stephens Creek**	**26.46**	**193**	P	**P**	**03 39 28.0**	**+0.8**
	baz=26,SNR=408						
STKA	**Stephens Creek**	**26.46**	**193**	P	**P**	**03 39 27.6**	**+0.4**
STKA						03 42 50.3	
STKA				pmax	pmax		
	comp=Z,217nm,0.8s						
STKA	**Stephens Creek**	**26.46**	**193**	P	**P**	**03 39 27.6**	**+0.4**
STKA				PcP	**PcP**	**03 42 50.3**	**-1.1**
EDFI	**Ende, Flores**	**26.49**	**263**	P	**P**	**03 39 26.7**	**-1.0**
	comp=Z,30µmcomp=Z,34µmcomp=Z,4µm,0.9s						
WRKA	**Warakurna**	**26.89**	**223**	P	**P**	**03 39 31.8**	**+0.5**
	baz=27,SNR=1000						
APSI	**Ampana**	**27.04**	**280**	P	**P**	**03 39 34.6**	**+2.0**
	comp=Z,34µmcomp=Z,9µmcomp=Z,526nm,1.2s						
MGCD	**Mangrove Creek**	**27.18**	**175**	P	**P**	**03 39 35.1**	**+1.6**
	baz=27,SNR=56						
LHI	**Lord Howe Isla**	**27.30**	**160**	P	**P**	**03 39 35.8**	**+1.1**
	baz=27,SNR=3.9						
LHI	**Lord Howe Isla**	**27.30**	**160**	P	**P**	**03 39 35.1**	**+0.4**
BSSI	**Bau Bau, Buton**	**27.61**	**268**	P	**P**	**03 39 38.7**	**+0.9**
	comp=Z,29

H11S3 WAKE ISLAND Hy 30.40 36 P **P** 03 40 03.4 +1.3
baz=216,slow=6.4,SNR=11
H11S3 T T 04 12 33.1
baz=220,slow=75,SNR=64
H11S2 WAKE ISLAND Hy 30.40 36 P **P** 03 40 03.5 +1.3
baz=216,slow=6.4,SNR=10
H11S2 T T 04 12 13.8
baz=220,slow=75,SNR=58
H11S1 WAKE ISLAND Hy 30.41 36 P **P** 03 40 03.3 +1.0
baz=216,slow=6.4,SNR=9.3
H11S1 T T 04 12 29.5
baz=220,slow=75,SNR=42
FUNA Funafuti 30.78 97 P **P** 03 40 05.9 0.0
FUNA IAmb IAmb 03 40 07.5
comp=Z,1μm,1.0s
FORT Forrest 31.09 215 P **P** 03 40 08.9 +0.6
baz=31,SNR=137
FORT Forrest 31.09 215 P **P** 03 40 08.6 +0.3
FORT IAmb IAmb 03 40 11.3
comp=Z,2μm,1.4s
TWSI Taliwang, Sumb 31.23 263 P **P** 03 40 08.3 -1.5
comp=Z,21μmcomp=Z,6μmcomp=Z,474nm,0.8s
MSVF Nonsavu 31.33 114 P **P** 03 40 11.8 +1.1
MSVF IAmb IAmb 03 40 14.8
comp=Z,314nm,0.9s
MSVF PcP **PcP** 03 43 03.7 -0.2
H11N1 WAKE ISLAND Hy 31.47 35 T T 04 13 29.1
baz=219,slow=76,SNR=7.6
SMKI Samarinda 31.48 279 P **P** 03 40 14.9 +2.8
H11N3 WAKE ISLAND Hy 31.48 35 T T 04 13 33.5
baz=219,slow=76,SNR=7.7
H11N2 WAKE ISLAND Hy 31.49 35 T T 04 13 30.9
baz=219,slow=76,SNR=9.4
TOO Toolangi 31.50 184 P **P** 03 40 13.1 +1.1
baz=32,SNR=58
TOO Toolangi 31.50 184 P **P** 03 40 13.0 +1.1
TOO PcP **PcP** 03 43 04.0 0.0
PSA00 Pilbara Seismi 31.54 238 IAmb IAmb 03 40 15.2
comp=Z,956nm,1.1s
BKB Balikpapan 31.65 277 P **P** 03 40 11.8 -1.7
comp=Z,52μmcomp=Z,7μmcomp=Z,442nm,1.3s
BKB Balikpapan 31.65 277 P **P** 03 40 13.3 -0.3
BKB IAmb IAmb 03 40 42.5
comp=Z,586nm,1.2s
MYLDM Lahad Datu 31.73 290 P **P** 03 40 14.7 +0.5
MYLDM IAmb IAmb 03 41 05.1
comp=Z,514nm,1.1s
KBKI Kotabaru 32.10 273 P **P** 03 40 18.2 +0.7
comp=Z,324nmcomp=Z,3μmcomp=Z,75nm,0.8s
SRBI Singaraja 32.86 264 P **P** 03 40 23.3 -0.8
comp=Z,35μmcomp=Z,9μmcomp=Z,551nm,0.9s
BBKI Banjar Baru 33.40 273 P **P** 03 40 30.4 +1.5
comp=Z,22μmcomp=Z,7μmcomp=Z,189nm,0.8s
JCJ Chichijima 33.45 350 P **P** 03 40 29.3 +0.3
JCJ PcP **PcP** 03 43 07.9 -1.5
SPMM Sapulut 33.49 288 P **P** 03 40 31.0 +1.3
TGY Tagaytay City 33.69 307 P **P** 03 40 32.4 +1.0
comp=Z,651nm,0.7s,baz=182,slow=4.1,SNR=14
ABJI Asem Bagus 33.82 265 P **P** 03 40 32.4 -0.1
comp=Z,8μmcomp=Z,615nm,1.0s
JAGI Jajag, Banyuwa 33.92 264 P **P** 03 40 31.7 -1.7
comp=Z,24μmcomp=Z,3μm,1.1s
JAGI Jajag, Banyuwa 33.92 264 P **P** 03 40 31.4 -2.0
KMMI Kalianget 34.08 266 P **P** 03 40 36.2 +1.4
comp=Z,7μmcomp=Z,725nm,1.4s
KKM Kota Kinabalu 34.16 290 P **P** 03 40 34.7 -0.9
BLJI Banyuglugur 34.45 265 P **P** 03 40 37.3 -0.7
comp=Z,9μmcomp=Z,1μm,0.9s
GMJI Gumukmas 34.61 264 P **P** 03 40 38.3 -1.1
comp=Z,27μmcomp=Z,8μmcomp=Z,552nm,1.4s
MEEK Meekatharra 34.90 231 P **P** 03 40 42.7 +0.9
baz=35,SNR=290
KMBL Kambalda 35.30 221 P **P** 03 40 46.0 +1.0
baz=35,SNR=67
BWJI Bawean 35.41 268 P **P** 03 40 47.4 +1.1
comp=Z,22μmcomp=Z,31μmcomp=Z,2μm,1.4s
GRJI Gresik 35.56 267 P **P** 03 40 47.8 +0.3
comp=Z,6μmcomp=Z,818nm,1.0s
TBJI Tambak Boyo 36.19 267 P **P** 03 40 53.6 +0.7
comp=Z,19μmcomp=Z,5μmcomp=Z,215nm,0.8s
PWJI Pagerwojo 36.23 265 P **P** 03 40 52.2 -1.1
comp=Z,25μmcomp=Z,10μmcomp=Z,1μm,1.1s
MOO Moorlands 36.28 181 P **P** 03 40 55.3 +2.0
baz=36,SNR=13
PBKI Pangkalan Bun 36.63 274 P **P** 03 40 59.8 +3.1
comp=Z,15μmcomp=Z,841nm,1.0s
GIRL Giralia 36.74 240 P **P** 03 40 59.1 +1.6
baz=37,SNR=75
GIRL Giralia 36.74 240 P **P** 03 40 59.6 +2.1
GIRL PcP **PcP** 03 43 19.9 +0.7
TAU Tasmania Unive 36.74 181 P **P** 03 40 58.3 +1.1
TAU 03 43 20.2
TAU pmax pmax
comp=Z,595nm,1.2s
TAU Tasmania Unive 36.74 181 P **P** 03 40 58.3 +1.1
TAU IAmb IAmb 03 41 01.6
comp=Z,595nm,1.2s
TAU PcP **PcP** 03 43 20.2 +1.4
SBUM Sibu 36.96 282 P **P** 03 41 00.0 +0.5
WOJI Wonogiri, Jawa 37.10 265 P **P** 03 41 00.6 -0.1
comp=Z,18μmcomp=Z,32μmcomp=Z,3μm,1.2s
OUZ Omahuta 37.26 145 P **P** 03 41 02.4 +0.6
OUZ PcP **PcP** 03 43 21.9 +1.4
UGM Wanagama 37.50 265 P **P** 03 41 04.8 +0.7
comp=Z,33μmcomp=Z,35μmcomp=Z,2μm,1.0s
SMRI Semarang 37.58 266 P **P** 03 41 06.0 +1.2
comp=Z,39μmcomp=Z,29μmcomp=Z,2μm,1.6s
YOGI Yogyakarta 37.73 265 P **P** 03 41 07.0 +1.0
comp=Z,19μmcomp=Z,29μmcomp=Z,2μm,1.0s
MORW Morawa 38.10 229 P **P** 03 41 09.8 +0.9
baz=38,SNR=114
WCZ Waipu Caves 38.20 145 P **P** 03 41 10.0 +0.3
KLBR Kellerberrin 38.23 224 P **P** 03 41 10.6 +0.6
baz=38,SNR=252
KSM Kuching 38.62 280 P **P** 03 41 15.0 +1.5
YOJ Yonaguni jima 39.04 322 P **P** 03 41 17.2 +0.4
YOJ pmax pmax
comp=Z,1μm,1.3s
YOJ Yonaguni jima 39.04 322 P **P** 03 41 17.2 +0.4
YOJ IAmb IAmb 03 41 19.6
comp=Z,1μm,1.3s
KPJI Karang Pucung 39.08 266 P **P** 03 41 18.0 +0.7
comp=Z,35μmcomp=Z,15μmcomp=Z,1μm,0.7s
TWG Pinlang 39.10 318 IAmb IAmb 03 41 20.3
comp=Z,141nm,0.5s
YULB Yu-li 39.35 319 IAmb IAmb 03 41 24.6
comp=Z,267nm,0.7s
NWAO Narrogin (SRO) 39.36 223 P **P** 03 41 20.6 +1.1
comp=Z,419nm,1.1s,baz=59,slow=7.7,SNR=70
NWAO LR LR 03 59 27.4
comp=Z,102μm,18.8s,baz=56,slow=39
NWAO Narrogin (SRO) 39.36 223 P **P** 03 41 20.0 +0.5
baz=39,SNR=63
NWAO Narrogin (SRO) 39.36 223 P **P** 03 41 19.5 0.0
NWAO pmax pmax
comp=Z,423nm,1.0s
NWAO Narrogin (SRO) 39.36 223 P **P** 03 41 19.5 0.0
NWAO IAmb IAmb 03 41 21.8
comp=Z,423nm,0.9s
RAO Raoul Island 39.40 130 P **P** 03 41 21.0 +1.2
comp=Z,804nm,0.6s,baz=149,slow=3.1,SNR=11
RAO Raoul Island 39.40 130 P **P** 03 41 20.3 +0.5
RAO pmax pmax
comp=Z,2μm,0.9s
RAO Raoul Island 39.40 130 P **P** 03 41 20.3 +0.5
MUN Mundaring 39.53 225 P **P** 03 41 22.0 +1.1
baz=40,SNR=28
CMJI Cimerak 39.55 265 P **P** 03 41 21.4 +0.1
comp=Z,19μmcomp=Z,19μmcomp=Z,2μm,0.8s
KUZ Kuaotunu 39.56 144 P **P** 03 41 21.0 0.0
NACB Ninganchiao 39.71 320 IAmb IAmb 03 41 26.3
comp=Z,793nm,1.1s
TPUB Ta-pu 39.73 318 IAmb IAmb 03 41 28.1
comp=Z,483nm,0.8s
JCJI Jatiwangi 39.75 267 P **P** 03 41 24.3 +1.3
comp=Z,41μmcomp=Z,46μmcomp=Z,3μm,1.7s
JHJ Hachijo jima 2 39.76 349 P **P** 03 41 22.8 +0.2
comp=Z,1μm,0.9s,baz=180,slow=11,SNR=9.1
KNTN Kanton 40.02 87 P **P** 03 41 25.5 +0.3
AFI Afiamalu 40.08 104 P **P** 03 41 26.4 +0.7
comp=Z,720nm,0.9s,baz=227,slow=4.0,SNR=40
AFI Afiamalu 40.08 104 P **P** 03 41 26.3 +0.5
AFI pmax pmax
comp=Z,1μm,1.1s
AFI Afiamalu 40.08 104 P **P** 03 41 26.3 +0.5
AFI IAmb IAmb 03 41 28.0
comp=Z,1μm,1.1s
CISI Cisompet, Garu 40.18 265 P **P** 03 41 26.2 -0.4
comp=Z,36μmcomp=Z,47μmcomp=Z,3μm,1.9s
CISI Cisompet, Garu 40.18 265 P **P** 03 41 26.0 -0.6
YHNB Yeheng 40.21 320 P **P** 03 41 27.4 +0.8
YHNB IAmb IAmb 03 41 58.4
comp=Z,994nm,1.1s
HIZ Hauiti 40.33 147 P **P** 03 41 27.5 +0.1
HIZ Hauiti 40.33 147 P **P** 03 41 28.6 +1.2
HIZ PcP **PcP** 03 43 30.5 +0.4
TATO Taipei 40.35 321 P **P** 03 41 28.9 +1.1
LEM Lembang 40.39 267 P **P** 03 41 28.8 +0.3
comp=Z,601nm,0.6s,baz=20,slow=8.4,SNR=64
NEZ North Egmont 40.48 149 P **P** 03 41 29.2 +0.5
RKGY Rocky Gully 40.53 221 P **P** 03 41 30.7 +1.5
baz=41,SNR=49
TPI Tanjungpandan 40.61 273 P **P** 03 41 31.8 +1.7
comp=Z,33μmcomp=Z,6μmcomp=Z,299nm,0.9s
VRZ Vera Road 40.72 148 P **P** 03 41 32.5 +1.8
CNJI Cibinong 40.87 266 P **P** 03 41 30.6 -1.6
comp=Z,48μmcomp=Z,5μm,1.6s
QRZ Quartz Range 40.89 152 P **P** 03 41 33.3 +1.3
QRZ PcP **PcP** 03 43 32.3 +0.5
CBJI Citeko 41.16 267 P **P** 03 41 34.4 -0.2
comp=Z,32μmcomp=Z,17μmcomp=Z,1μm,0.7s
KRVZ Karewarewa 41.17 147 P **P** 03 41 37.2 +2.7
DBJI Dramaga 41.26 267 P **P** 03 41 35.9 +0.5
comp=Z,12μmcomp=Z,525nm,0.9s
TNG Tangerang 41.37 268 P **P** 03 41 37.3 +0.9
comp=Z,21μmcomp=Z,718nm,0.8s
TNG P **P** 03 41 37.1 +0.7
comp=Z,34μmcomp=Z,1μm,0.8s
URZ Urewera 41.40 145 P **P** 03 41 36.7 +0.4
comp=Z,42nm,0.6s,baz=239,slow=3.1,SNR=23
URZ PcP **PcP** 03 43 32.5 -1.1
comp=Z,178nm,0.8s,baz=336,slow=2.6,SNR=9.2
URZ Urewera 41.40 145 P **P** 03 41 36.9 +0.6
URZ Urewera 41.40 145 PcP **PcP** 03 43 32.2 -1.3
SKJI Sukabumi 41.44 266 P **P** 03 41 37.0 +0.1
comp=Z,27μmcomp=Z,30μmcomp=Z,2μm,0.7s
MOVZ Moawhango 41.46 147 P **P** 03 41 38.1 +1.3
RTZ Ruatahuna 41.57 145 P **P** 03 41 37.7 -0.1
JSG Sagara 41.59 347 P **P** 03 41 39.2 +1.4
MXZ Matakaoa Point 41.63 143 P **P** 03 41 38.5 +0.4
SBJI Serang 41.89 268 P **P** 03 41 43.3 +2.7
comp=Z,31μmcomp=Z,10μmcomp=Z,372nm,0.9s
KNMB Chin-men Tao 42.02 317 P **P** 03 41 42.0 +0.6
KNMB IAmb IAmb 03 41 43.7
comp=Z,1μm,1.3s
PPBI Pangkal Pinang 42.18 273 P **P** 03 41 45.0 +2.0
comp=Z,39μmcomp=Z,38μmcomp=Z,274nm,1.1s
QZH Quanzhou 42.21 318 *i* P **P** 03 41 43.8 +0.8
QZH pP **pP** 03 41 56.6 -0.4
QZH S **S** 03 47 59.3 -0.3
QZH pmax pmax
comp=Z,320nm,0.6s
QZH pmax pmax
comp=Z,3μm,4.3s
QZH LR LR
comp=Z,7μm,18.5s
QZH LR LR
comp=Z,12μm,18.9s
QZH LR LR
comp=Z,16μm,19.4s
BSWZ Blackbirch Sta 42.22 151 P **P** 03 41 43.5 +0.6
JNU Nakatsue 42.29 338 P **P** 03 41 44.9 +1.3
comp=Z,287nm,0.7s,baz=144,slow=4.5,SNR=109
JNU LR LR 03 59 50.9
comp=Z,11μm,18.3s,baz=146,slow=37
JNU Nakatsue 42.29 338 IAmb IAmb 03 41 46.4
comp=Z,1μm,1.4s
CGJI Cibinong 42.31 267 P **P** 03 41 43.7 -0.3
comp=Z,38μmcomp=Z,14μmcomp=Z,735nm,0.9s
SNZO South Karori 42.32 150 P **P** 03 41 44.3 +0.7
SNZO IAmb IAmb 03 41 46.0
comp=Z,582nm,1.2s
XMIS Christmas Isla 42.38 261 P **P** 03 41 45.4 +0.9
INU Inuyama 42.50 346 IAmb IAmb 03 42 07.7
comp=Z,1μm,1.4s
RPZ Rata Peaks 42.55 155 P **P** 03 41 46.2 +0.6
comp=Z,98nm,0.5s,baz=279,slow=1.6,SNR=77
RPZ LR LR 03 57 22.0
comp=Z,106μm,21.6s,baz=316,slow=33
H01W1 Cape Leeuwin H 42.58 223 P **P** 03 41 48.9 +3.3
baz=74,slow=8.1,SNR=11
H01W3 Cape Leeuwin H 42.59 223 P **P** 03 41 49.1 +3.4
baz=74,slow=8.1,SNR=8.6
H01W2 Cape Leeuwin H 42.60 223 P **P** 03 41 49.1 +3.3
baz=74,slow=8.1,SNR=8.3
JGF Kuroka 42.66 347 IAmb IAmb 03 42 07.9
comp=Z,649nm,1.1s
NIUE Niue 42.70 112 P **P** 03 41 47.0 0.0
baz=43,SNR=8.2
NIUE Niue 42.70 112 P **P** 03 41 47.9 +0.8
NIUE IAmb IAmb 03 41 49.8
comp=Z,1μm,1.1s
JYT Yasato 42.71 350 IAmb IAmb 03 42 11.4
comp=Z,516nm,1.1s
JWT Wachi 42.84 344 IAmb IAmb 03 41 51.0
comp=Z,447nm,0.9s
PYZ Puysegur Point 43.05 161 P **P** 03 41 51.1 +1.6
PYZ IAmb IAmb 03 41 53.3
comp=Z,1μm,1.2s
JHS Saijyo 43.23 342 IAmb IAmb 03 42 09.8
comp=Z,980nm,1.5s
KLSI 43.35 270 P **P** 03 41 52.9 +0.4
comp=Z,11μmcomp=Z,2μmcomp=Z,57nm,1.1s
MJAR Matsushiro Arr 43.38 348 P **P** 03 41 53.4 +1.1
comp=Z,520nm,0.9s,baz=171,slow=8.1,SNR=471
MJAR ScP **ScP** 03 47 25.1 -2.1
comp=Z,11nm,0.9s,baz=172,slow=4.6,SNR=4.5
MJAR LR LR 03 59 55.1
comp=Z,13μm,18.0s,baz=160,slow=36
MJAR Matsushiro Arr 43.38 348 P **P** 03 41 52.8 +0.4
MJAR **ScP** 03 47 26.3 -0.9
MAJO Matsushiro 43.38 348 *c i* P **P** 03 41 53.3 +1.0
MAJO pmax pmax
comp=Z,2μm,1.5s
MAJO MLR MLR
comp=Z,15μm,17.0s
MAJO Matsushiro 43.38 348 P **P** 03 41 53.6 +1.3
MAJO IAmb IAmb 03 41 55.3
comp=Z,2μm,1.2s
MAT Matsushiro 43.38 348 P **P** 03 41 53.5 +1.2
MAT S **S** 03 48 17.8 +1.2
HKC Hong Kong Obse 43.66 311 ⇑P **P** 03 41 56.0 +1.2
HKPS Hong Kong Po S 43.67 311 P **P** 03 41 55.2 +0.3
HKPS IAmb IAmb 03 41 57.7
comp=Z,591nm,1.4s
MDSI Maura Dua 43.92 270 P **P** 03 41 56.7 -0.3
comp=Z,28μmcomp=Z,6μmcomp=Z,281nm,1.5s
LWLI Liwa 44.00 269 P **P** 03 41 57.9 +0.1
comp=Z,9μmcomp=Z,533nm,0.8s
JMM Marumori 44.22 352 IAmb IAmb 03 42 25.5
comp=Z,2μm,1.7s
GZH Guangzhou 44.74 312 P **P** 03 42 05.7 +2.3
GZH S **S** 03 48 40.8 +4.1
GZH LR LR
comp=Z,8μm,19.7s
GZH LR LR
comp=Z,12μm,20.1s
JSD Sado 44.82 349 IAmb IAmb 03 42 09.3
comp=Z,635nm,1.0s
MYKOM Kota Tinggi 45.02 279 P **P** 03 42 08.0 +2.2
SSE Sheshan 45.09 327 P **P** 03 42 06.8 +0.8
SSE S **S** 03 48 41.8 +0.3
SSE pmax pmax
comp=Z,220nm,1.0s
SSE pmax pmax
comp=Z,2μm,4.7s
SSE LR LR
comp=Z,7μm,21.4s
SSE LR LR
comp=Z,4μm,22.8s
SSE Sheshan 45.09 327 IAmb IAmb 03 42 08.3
comp=Z,477nm,1.0s
MNAI Manna 45.14 270 P **P** 03 42 06.5 -0.4
MNAI IAmb IAmb 03 42 23.4
comp=Z,630nm,1.0s
QIZ Qiongzhong 45.30 304 P **P** 03 42 08.2 +0.2
QIZ sP **pP** 03 42 24.6 +2.5
QIZ S **S** 03 48 47.0 +2.0
QIZ pmax pmax
comp=Z,38nm,1.0s
QIZ pmax pmax
comp=Z,950nm,13.2s
QIZ LR LR
comp=Z,6μm,21.6s
QIZ LR LR
comp=Z,8μm,19.1s
QIZ LR LR
comp=Z,16μm,22.9s
KSI Kapahiang 45.56 271 P **P** 03 42 10.2 0.0
comp=Z,329nm,1.5s
RGRI Rengat 46.18 275 P **P** 03 42 18.8 +3.8
comp=Z,293nm,0.8s
TJN Taejon 46.51 337 *c i* P **P** 03 42 17.9 +0.7
KRJI Kerinci 46.83 273 P **P** 03 42 21.3 +1.1
comp=Z,35μmcomp=Z,15μmcomp=Z,868nm,1.0s
JTM Tenmabayashi 47.05 353 IAmb IAmb 03 42 44.9
comp=Z,1μm,1.2s
NJ2 Nanjing 47.11 325 ⇑ *i* P **P** 03 42 23.4 +1.5
NJ2 pP **pP** 03 42 35.8 -0.3
NJ2 sP **sP** 03 42 39.0 -3.3
NJ2 PcP **PcP** 03 43 52.8 -0.3
NJ2 S **S** 03 49 13.0 +2.5
NJ2 sS **sS** 03 49 33.3 -0.9
NJ2 pmax pmax
comp=Z,380nm,1.0s
NJ2 pmax pmax
comp=Z,4μm,4.1s
NJ2 LR LR
comp=Z,14μm,24.4s
NJ2 LR LR
comp=Z,8μm,20.8s
NJ2 LR LR
comp=Z,23μm,22.7s
KSRS Korea Array 47.24 338 P **P** 03 42 24.4 +1.6
comp=Z,180nm,0.9s,baz=156,slow=8.4,SNR=249
KSAR Wonju Array Be 47.24 338 P **P** 03 42 23.5 +0.6
KSAR Wonju Array Be 47.24 338 P **P** 03 42 23.5 +0.6
KS19 Wonju Array Si 47.30 338 IAmb IAmb 03 42 26.1
comp=Z,1μm,1.5s
JOHN Johnston Islan 47.47 61 P **P** 03 42 26.3 +1.4
JOHN IAmb IAmb 03 42 27.5
comp=Z,499nm,1.1s
BKNI Bangkinang 47.56 276 P **P** 03 42 27.4 +1.6
comp=Z,41μmcomp=Z,5μmcomp=Z,410nm,1.1s
BKNI Bangkinang 47.56 276 P **P** 03 42 26.2 +0.4
BKNI IAmb IAmb 03 42 54.4
comp=Z,391nm,1.0s
INCN Inchon 47.76 337 P **P** 03 42 28.6 +1.7
INCN pmax pmax
comp=Z,372nm,1.0s
INCN Inchon 47.76 337 P **P** 03 42 28.6 +1.7
INCN IAmb IAmb 03 42 29.9
comp=Z,372nm,0.9s
ERM Erimo 48.04 355 *ce* P **P** 03 42 31.0 +2.1
ERM pmax pmax
comp=Z,149nm,2.0s
ERM Erimo 48.04 355 P **P** 03 42 30.2 +1.3
ERM IAmb IAmb 03 43 09.8
comp=Z,556nm,1.4s
IPM Ipoh 48.31 281 P **P** 03 42 33.0 +1.4
WHN Wuhan 48.75 320 ⇑ *i* P **P** 03 42 35.9 +1.2
WHN sP **sP** 03 42 57.5 +2.4
WHN S **S** 03 49 33.8 0.0
WHN pmax pmax
comp=Z,710nm,1.1s
WHN pmax pmax
comp=Z,5μm,6.9s
WHN LR LR
comp=Z,14μm,18.3s
WHN LR LR
comp=Z,13μm,17.5s
WHN LR LR
comp=Z,24μm,18.8s
KULM Kulim 48.85 282 P **P** 03 42 34.8 -0.9
KULM Kulim 48.85 282 P **P** 03 42 36.0 +0.3
MNSI Mandailing Nat 49.07 276 P **P** 03 42 37.9 +0.5
comp=Z,30μmcomp=Z,9μmcomp=Z,184nm,1.0s
MCQ Macquarie Isla 49.10 172 P **P** 03 42 39.3 +2.4
baz=49,SNR=8.4
MCQ Macquarie Isla 49.10 172 P **P** 03 42 38.9 +2.0
MCQ pmax pmax
comp=Z,622nm,1.1s
MCQ Macquarie Isla 49.10 172 P **P** 03 42 38.9 +2.0
MCQ IAmb IAmb 03 42 40.1
comp=Z,622nm,1.1s
SISI Saibi 49.27 273 P **P** 03 42 38.7 -0.3
comp=Z,134nm,0.8s
PYAG Pyongyang 49.46 337 P **P** 03 42 41.6 +1.7
HHU Hamhung 49.57 339 P **P** 03 42 42.5 +1.8
HHU pP **pP** 03 42 54.6 -0.4
HHU S S 03 49 54.3 +9.4
PYS Pyongsong 49.59 337 P **P** 03 42 42.6 +1.7
YUK Yuzh-Kuril'sk 49.88 358 *e* P **P** 03 42 41.6 -1.4
YUK *i* S **S** 03 49 52.3 +3.2
YUK pmax pmax
comp=N,700nm,1.3s
YUK pmax pmax
comp=Z,1μm,1.3s
YUK pmax pmax
comp=E,228nm,0.8s
SRAK Srakaew 50.00 294 P **P** 03 42 41.4 -3.0
PSI Prapat 50.04 279 P **P** 03 42 43.5 -1.5
comp=E,17nm,0.4s,baz=177,slow=3.0,SNR=26
JKA Kamikawa-asahi 50.17 355 IAmb IAmb 03 42 49.3
comp=Z,520nm,1.2s
ASAJ Asahikawa 50.17 355 P **P** 03 42 47.9 +2.6
comp=Z,281nm,1.1s,baz=220,slow=12,SNR=33
ASAJ LR LR 04 02 56.5
comp=Z,7μm,19.6s,baz=152,slow=35
TRTT Trang 50.37 285 P **P** 03 42 47.0 -0.3
comp=Z,4μmcomp=Z,83nm,1.0s
TSI Tuntungan 50.52 280 P **P** 03 42 50.3 +1.8
comp=Z,36μmcomp=Z,307nm,1.2s
NONG Nongkai 50.54 299 P **P** 03 42 48.2 -0.3
PATY Pattaya 50.71 292 P **P** 03 42 52.0 +2.2
CHAI Chaiyaphum 50.73 296 P **P** 03 42 49.9 0.0
SUJ Sinuiju 50.86 337 P **P** 03 42 52.1 +1.6
SUJ pP **pP** 03 43 04.2 -0.6
SUJ S **S** 03 49 59.3 -3.6
KUR Kuril'sk 51.03 360 *c i* P **P** 03 42 54.2 +2.5
KUR *e* 03 44 06.7
KUR *i* 03 44 51.2
KUR *e* PPP PPP 03 45 51.2
KUR *e* S **S** 03 50 11.2 +6.1
KUR pmax pmax
comp=N,1μm,1.5s
KUR pmax pmax
comp=Z,3μm,1.5s
KUR pmax pmax
comp=E,455nm,1.4s
KUR pmax pmax
comp=Z,9μm,4.8s
DL2 Dalian 51.07 333 ⇑ *i* P **P** 03 42 53.1 +1.0
DL2 pP **pP** 03 43 06.1 -0.3
DL2 sP **sP** 03 43 10.6 -2.0
DL2 PcP **PcP** 03 44 06.6 -0.7
DL2 S **S** 03 50 06.7 +0.9
DL2 pmax pmax
comp=Z,320nm,1.3s
DL2 pmax pmax
comp=Z,2μm,7.8s
DL2 LR LR
comp=Z,16μm,21.0s
DL2 LR LR
comp=Z,8μm,23.7s
DL2 LR LR
comp=Z,22μm,21.4s
COCO West Island 51.08 259 P **P** 03 42 54.0 +1.3
COCO pmax pmax
comp=Z,2μm,0.9s
COCO West Island 51.08 259 P **P** 03 42 54.0 +1.3
VLA Vladivostok 51.12 345 *c i* P **P** 03 42 54.1 +1.7
VLA pmax pmax
comp=Z,580nm,1.3s
VLA MLR MLR
comp=Z,15μm,19.0s
GSI Gunungsitoli 51.13 277 P **P** 03 42 53.1 +0.1
comp=Z,36μmcomp=Z,10μmcomp=Z,340nm,1.0s
GSI Gunungsitoli 51.13 277 IAmb IAmb 03 43 17.0
comp=Z,238nm,0.9s
TIA Tai'an 51.16 328 P **P** 03 42 52.9 0.0
TIA pmax pmax
comp=Z,290nm,1.1s
TIA pmax pmax
comp=Z,2μm,3.9s
TIA LR LR
comp=Z,10μm,18.6s

TIA LR LR
comp=Z,12μm,20.6s
TIA LR LR
comp=Z,25μm,20.1s
KCSI Kotacane, Aceh 51.30 279 P **P** **03 42 53.7 -0.7**
comp=Z,27μmcomp=Z,4μmcomp=Z,217nm,0.9s
SURT Suratani 51.51 286 P **P** **03 42 57.3 +1.5**
comp=Z,45nmcomp=Z,4.9nm,1.1s
GYA Guiyang 51.65 311 ⇑P **P** **03 42 57.1 +0.3**
GYA pP sP 03 43 15.3 -2.0
GYA S **S** **03 50 10.9 -3.7**
GYA pmax pmax
comp=Z,67nm,1.5s
GYA pmax pmax
comp=Z,2μm,5.8s
GYA LR LR
comp=Z,6μm,19.8s
GYA LR LR
comp=Z,5μm,21.3s
GYA LR LR
comp=Z,8μm,24.2s
PKDT Phuket 51.68 285 P **P** **03 42 57.8 +0.6**
ENH Enshi 51.80 316 P **P** **03 42 57.3 -0.5**
ENH IAmb IAmb 03 42 59.5
comp=Z,488nm,1.3s
TPTI 51.84 279 P **P** **03 42 59.1 +0.8**
comp=Z,3μmcomp=Z,164nm,1.0s
PHET Kaeng Krachan 51.85 291 P **P** **03 42 58.0 -0.4**
TEY Ternei 51.90 350 ⇑*i*P **P** **03 42 59.7 +1.5**
TEY *e*S **S** **03 50 22.7 +5.7**
TEY pmax pmax
comp=N,110nm,1.0s
TEY pmax pmax
comp=E,70nm,1.0s
TEY pmax pmax
comp=Z,230nm,1.0s
TEY pmax pmax
comp=Z,4μm,9.0s
USA0B Ussuriysk Arra 52.11 345*c i*P **P** **03 43 01.2 +1.5**
USA0B Ussuriysk Arra 52.11 345 IAmb IAmb 03 43 02.5
comp=Z,387nm,0.8s
USRK Ussuriysk Ar. 52.11 345 P **P** **03 43 01.6 +1.8**
comp=Z,292nm,0.6s,baz=170,slow=6.8,SNR=774
USRK Ussuriysk Ar. 52.11 345 P **P** **03 43 00.9 +1.2**
LHMI Lhok Sumawe 52.44 281 P **P** **03 43 03.1 +0.3**
comp=Z,37μmcomp=Z,6μmcomp=Z,341nm,1.0s
RAR Rarotonga 52.46 112 P **P** **03 43 04.5 +1.7**
comp=Z,218nm,1.0s,baz=240,slow=4.5,SNR=19
RAR Rarotonga 52.46 112 P **P** **03 43 03.4 +0.6**
RAR pmax pmax
comp=Z,418nm,1.1s
RAR Rarotonga 52.46 112 P **P** **03 43 03.4 +0.6**
RAR IAmb IAmb 03 43 05.4
comp=Z,418nm,1.1s
PHIT Phitsanulok 52.60 297 P **P** **03 43 04.9 +1.0**
UTTA Uttaradit 52.69 298 P **P** **03 43 04.6 +0.1**
comp=Z,1μmcomp=Z,141nm,0.7s
SNY Shenyang 52.69 337 ⇑P **P** **03 43 05.1 +1.0**
SNY S **S** **03 50 30.5 +2.4**
SNY pmax pmax
comp=Z,240nm,1.3s
SNY pmax pmax
comp=Z,3μm,4.9s
SNY LR LR
comp=Z,14μm,18.5s
SNY LR LR
comp=Z,8μm,17.1s
SNY LR LR
comp=Z,25μm,17.1s
SRDT SRDT 52.78 293 P **P** **03 43 07.7 +2.4**
UTHA Uthaitani 52.89 295 P **P** **03 43 06.7 +0.7**
YSS Yuzh-Sakhalins 52.98 355 ⇑*i*P **P** **03 43 07.8 +1.7**
YSS *e**PP **pP** **03 43 19.3 -1.2**
YSS *e**SP **sP** **03 43 27.4 +0.8**
YSS *e* 03 44 22.1
YSS *e* 03 45 10.3
YSS *e*S **S** **03 50 31.4 -0.3**
YSS *e*PS PKiKP 03 50 39.2 -13
YSS pmax pmax
comp=Z,380nm,1.4s
YSS pmax pmax
comp=N,170nm,1.6s
YSS pmax pmax
comp=E,100nm,1.3s
YSS pmax pmax
comp=Z,4μm,5.4s
YSS pmax pmax
comp=N,2μm,5.2s
YSS pmax pmax
comp=E,900nm,3.6s
YSS MLR MLR
comp=E,3μm,17.0s
YSS Yuzh-Sakhalins 52.98 355 P **P** **03 43 07.1 +1.0**
YSS IAmb IAmb 03 43 09.5
comp=Z,874nm,1.4s
MDJ Mudanjiang 53.14 343 P **P** **03 43 08.9 +1.5**
MDJ pP pP 03 43 21.1 -0.7
MDJ sP sP 03 43 26.5 -1.4
MDJ PP **PP** **03 45 09.8 +1.9**
MDJ S **S** **03 50 39.2 +5.2**
MDJ sS sS 03 50 59.9 +2.6
MDJ ScS **ScS** **03 52 53.8 +1.5**
MDJ pmax pmax
comp=Z,510nm,0.5s
MDJ pmax pmax
comp=Z,4μm,3.7s
MDJ LR LR
comp=Z,10μm,24.2s
MDJ LR LR
comp=Z,8μm,21.4s
MDJ LR LR
comp=Z,22μm,25.6s
MDJ Mudanjiang 53.14 343 P **P** **03 43 08.3 +1.0**
MDJ IAmb IAmb 03 43 09.8
comp=Z,322nm,0.8s
CN2 Changchun 53.71 340 ⇑P **P** **03 43 12.4 +0.8**
CN2 *e*pP sP 03 43 31.4 -0.8
CN2 *e*S **S** **03 50 40.2 -1.7**
CN2 pmax pmax
comp=Z,100nm,1.2s
CN2 pmax pmax
comp=Z,3μm,5.0s
CN2 LR LR
comp=Z,8μm,20.0s
CN2 LR LR
comp=Z,9μm,20.0s
CN2 LR LR
comp=Z,13μm,21.0s
KMI Kunming 54.01 307 ⇑*e*P **P** **03 43 15.2 +0.8**
KMI pP pP 03 43 28.8 -0.1
KMI sP sP 03 43 34.2 -0.8
KMI S **S** **03 50 48.5 +1.4**
KMI SS **SS** **03 54 30.4 +1.1**
KMI pmax pmax
comp=Z,130nm,0.9s
KMI pmax pmax
comp=Z,2μm,10.7s
KMI LR LR
comp=Z,4μm,17.9s
KMI LR LR
comp=Z,7μm,22.3s
KMI LR LR
comp=Z,9μm,21.2s
KMI Kunming 54.01 307 IAmb IAmb 03 43 38.3
comp=Z,441nm,1.3s
CM36 Chiang Mai Arr 54.26 298 P **P** **03 43 16.0 -0.1**
CM35 Chiang Mai Arr 54.27 298 P **P** **03 43 16.0 -0.1**
CM04 Chiang Mai Arr 54.32 298 P **P** **03 43 17.5 +1.0**
comp=Z,822nmcomp=Z,90nm,1.0s
CM09 Chiang Mai Arr 54.33 298 P **P** **03 43 17.5 +0.9**
comp=Z,853nmcomp=Z,110nm,1.0s
CM34 Chiang Mai Arr 54.34 298 P **P** **03 43 16.0 -0.7**
CM01 Chiang Mai Arr 54.34 298 P **P** **03 43 17.6 +0.9**
comp=Z,839nmcomp=Z,105nm,1.1s
CM05 Chiang Mai Arr 54.35 298 P **P** **03 43 17.0 +0.3**
comp=Z,682nmcomp=Z,71nm,1.1s
CM02 Chiang Mai Arr 54.36 298 P **P** **03 43 17.7 +0.9**
comp=Z,715nmcomp=Z,89nm,1.1s
CM31 Chiang Mai Arr 54.37 298 P **P** **03 43 17.6 +0.7**
SNR=14
CM31 P **P** **03 43 17.6 +0.7**
SNR=14
CM31 Chiang Mai Arr 54.37 298 P **P** **03 43 18.0 +1.1**
comp=Z,24μmcomp=Z,2μm,0.9s
CMAR Chiang Mai Arr 54.37 298 P **P** **03 43 16.8 -0.1**
comp=Z,23nm,0.7s,baz=125,slow=5.8,SNR=68
CMAR LR LR 04 04 50.1
comp=Z,4μm,21.7s,baz=162,slow=34
CMAR PKPPKP **P'P'df** **04 13 31.5 0.0**
comp=Z,6.1nm,0.9s,baz=299,slow=3.9,SNR=5.6
CMAR PKP2bc 04 13 46.4
comp=Z,38nm,1.2s,baz=286,slow=4.0,SNR=5.5
CMAR Chiang Mai Arr 54.37 298 P **P** **03 43 16.0 -0.9**
CM15 Chiang Mai Arr 54.39 298 P **P** **03 43 18.1 +1.1**
comp=Z,781nmcomp=Z,94nm,1.1s
CM13 Chiang Mai Arr 54.39 298 P **P** **03 43 17.9 +0.9**
comp=Z,546nmcomp=Z,70nm,1.1s
CMMT Chiang Mai 54.50 298 P **P** **03 43 18.1 +0.3**
comp=Z,1μmcomp=Z,38nm,1.3s
CM33 Chiang Mai Arr 54.50 298 P **P** **03 43 17.0 -0.9**
CHTO Chiang Mai 54.50 298 P **P** **03 43 18.2 +0.3**
CHTO pmax pmax
comp=Z,106nm,1.2s
CHTO Chiang Mai 54.50 298 P **P** **03 43 18.1 +0.3**
XAN Xi'an 54.51 320 P **P** **03 43 17.4 -0.3**
XAN pP pP 03 43 31.7 -0.4
XAN PP **PP** **03 45 20.1 -0.4**
XAN pmax pmax
comp=Z,350nm,1.7s
XAN pmax pmax
comp=Z,4μm,6.5s
XAN LR LR
comp=Z,11μm,20.5s
XAN LR LR
comp=Z,9μm,21.8s
XAN LR LR
comp=Z,19μm,23.0s
XAN Xi'an 54.51 320 P **P** **03 43 17.1 -0.6**
XAN pmax pmax
comp=Z,1μm,1.5s
XAN Xi'an 54.51 320 P **P** **03 43 17.1 -0.6**
XAN IAmb IAmb 03 43 19.2
comp=Z,1μm,1.5s
CM32 Chiang Mai Arr 54.53 298 P **P** **03 43 19.0 +1.0**
BJT Baijiatuan 54.53 330 P **P** **03 43 17.6 -0.1**
BJT pmax pmax
comp=Z,584nm,1.7s
BJT Baijiatuan 54.53 330 P **P** **03 43 17.6 -0.1**
BJT IAmb IAmb 03 43 19.7
comp=Z,584nm,1.7s
BJI Beijing 54.55 330 P **P** **03 43 18.1 +0.4**
BJI pmax pmax
comp=Z,180nm,1.5s
BJI pmax pmax
comp=Z,3μm,4.1s
BJI LR LR
comp=Z,14μm,20.4s
BJI LR LR
comp=Z,11μm,19.8s
BJI LR LR
comp=Z,15μm,19.6s
XMAS Kiritimati 54.80 83 P **P** **03 43 21.1 +1.0**
TIY Taiyuan 54.83 325 *e*P **P** **03 43 20.2 +0.2**
TIY pP **pP** **03 43 34.5 0.0**
TIY sP **sP** **03 43 39.0 -1.6**
TIY PP **PP** **03 45 27.4 +4.0**
TIY S **S** **03 50 57.1 -0.3**
TIY pmax pmax
comp=Z,230nm,1.3s
TIY pmax pmax
comp=Z,2μm,6.1s
TIY LR LR
comp=Z,11μm,19.8s
TIY LR LR
comp=Z,2μm,16.3s
TIY LR LR
comp=Z,22μm,24.2s
MHMT Maesarieng 55.16 297 P **P** **03 43 25.0 +2.4**
CD2 Chengdu 56.20 314 P **P** **03 43 29.9 0.0**
CD2 sP sP 03 43 47.9 -2.6
CD2 S **S** **03 51 14.2 -1.6**
CD2 sS sS 03 51 38.7 -1.2
CD2 pmax pmax
comp=Z,210nm,1.3s
CD2 LR LR
comp=Z,6μm,24.3s
CD2 LR LR
comp=Z,15μm,20.8s
CD2 LR LR
comp=Z,18μm,19.6s
TYV Tymovskoe 56.87 356 *e*P **P** **03 43 36.3 +2.1**
TYV *e*S **S** **03 51 30.4 +6.6**
TYV pmax pmax
comp=Z,522nm,1.4s
TYV smax smax
comp=E,24nm,1.7s
TYV smax smax
comp=N,10μm,10.1s
KLR Kul'dur 56.89 347 P **P** **03 43 36.0 +1.6**
comp=N,439nm,1.1s,baz=173,slow=4.6,SNR=362
KLR Kul'dur 56.89 347*c i*P **P** **03 43 35.9 +1.6**
KLR pmax pmax
comp=Z,1μm,1.5s
SKR Severo-Kuril's 56.89 6 *e*P **P** **03 43 35.7 +1.4**
SKR *e* 03 44 25.9
SKR *e*S S 03 51 40.9 +17
SKR *e*SSS SSS 03 57 30.9
SKR pmax pmax
comp=Z,4μm,4.6s
SKR pmax pmax
comp=Z,817nm,1.5s
SKR pmax pmax
comp=Z,1μm,5.6s
SKR MLR MLR
comp=Z,4μm,17.0s
SKR MLR MLR
comp=Z,4μm,16.0s
GRNR Gornyy 57.48 351 ⇑*i*P **P** **03 43 40.6 +2.0**
GRNR *e*S **S** **03 51 38.8 +6.8**
GRNR *e*SS **SS** **03 55 18.7 -4.0**
GRNR pmax pmax
comp=E,20nm,1.0s
GRNR pmax pmax
comp=N,70nm,1.2s
GRNR pmax pmax
comp=Z,120nm,1.2s
GRNR MLR MLR
comp=E,2μm,18.0s
GRNR MLR MLR
comp=Z,4μm,18.0s
HHC Hu-ho-hao-te 57.52 327 *e*P **P** **03 43 41.0 +1.8**
HHC PP **PP** **03 45 50.4 +3.0**
HHC S **S** **03 51 33.1 +0.1**
HHC SS **SS** **03 55 24.6 +0.7**
HHC pmax pmax
comp=Z,150nm,1.2s
HHC pmax pmax
comp=Z,1μm,7.9s
HHC LR LR
comp=Z,10μm,19.2s
HHC LR LR
comp=Z,12μm,20.4s
HHC LR LR
comp=Z,17μm,20.2s
BTO Baotou 58.19 326 *e*P **P** **03 43 44.9 +1.0**
BTO S **S** **03 51 37.4 -4.4**
LZH Lanzhou 59.05 319 ⇑P **P** **03 43 50.9 +0.9**
LZH pP sP 03 44 09.1 -1.6
LZH sP pP 03 44 14.7 +10
LZH *e*S **S** **03 51 48.4 -4.9**
LZH SS **SS** **03 55 46.0 -2.2**
LZH pmax pmax
comp=Z,570nm,1.2s
LZH pmax pmax
comp=Z,3μm,5.2s
LZH LR LR
comp=Z,9μm,14.9s
LZH LR LR
comp=Z,21μm,15.3s
LZH LR LR
comp=Z,17μm,15.9s
HON Honolulu 59.28 61 P **P** **03 43 52.2 +0.5**
HON pmax pmax
comp=Z,849nm,1.3s
HON Honolulu 59.28 61 P **P** **03 43 52.2 +0.5**
HON IAmb IAmb 03 43 54.3
comp=Z,849nm,1.3s
KIP Kipapa 59.31 61*de*P **P** **03 43 53.0 +1.2**
KIP pmax pmax
comp=Z,855nm,1.7s
KIP Kipapa 59.31 61 P **P** **03 43 51.8 0.0**
KIP IAmb IAmb 03 43 54.3
comp=Z,550nm,1.1s
PEA0B Petropavlovsk- 59.45 7 P **P** **03 43 53.3 +1.1**
PEA0B pmax pmax
comp=Z,2μm,1.0s
PEA0B Petropavlovsk- 59.45 7 P **P** **03 43 53.3 +1.1**
PETK Petropavlovsk- 59.45 7 P **P** **03 43 54.0 +1.8**
comp=Z,1μm,0.9s,baz=173,slow=7.3,SNR=518
PETK LR LR 04 06 19.5
comp=Z,16μm,21.8s,baz=187,slow=33
PETK PKP2bc 04 13 31.4
comp=Z,33nm,1.1s,baz=60,slow=7.0,SNR=8.1
PETK Petropavlovsk- 59.45 7 P **P** **03 43 53.3 +1.1**
PETK Petropavlovsk- 59.45 7 P **P** **03 43 53.3 +1.1**
PET Petropavlovsk 59.48 7α*i*P **P** **03 43 54.0 +1.6**
PET *i*S **S** **03 52 01.7 +3.9**
PET pmax pmax
comp=Z,7μm,7.0s
PET pmax pmax
comp=Z,1μm,1.0s
PET pmax pmax
comp=Z,2μm,13.2s
PET MLR MLR
comp=Z,10μm,19.0s
PET Petropavlovsk 59.48 7 P **P** **03 43 53.5 +1.1**
HIA Hailar 60.42 339 P **P** **03 43 59.7 +0.7**
HIA pmax pmax
comp=Z,1μm,1.3s
HIA Hailar 60.42 339 P **P** **03 43 59.6 +0.7**
LKP Lekhapani 60.53 306 *e*P **P** **03 43 58.6 -1.5**
LKP IAmb IAmb 03 44 01.2
comp=Z,111nm,0.5s
LKP *ex* x 04 03 36.5
KHLU Kahalu`u 60.55 64 P **P** **03 44 01.2 +0.7**
KHLU IAmb IAmb 03 44 02.8
comp=Z,498nm,1.2s
HLK Haleakala 60.62 62 IAmb IAmb 03 44 03.8
comp=Z,824nm,1.3s
POHA Pohakuloa 60.92 64 P **P** **03 44 04.0 +0.8**
MLH Mauna Loa 60.97 64 IAmb IAmb 03 44 06.0
comp=Z,474nm,1.4s
SAIH SAIHA 61.03 300 *e*P **P** **03 44 03.4 -0.4**
SAIH IAmb IAmb 03 44 08.1
comp=Z,220nm,0.7s
SAIH *i* x x 03 52 37.4
IMP Imphal 61.08 303 *e*P **P** **03 44 02.1 -1.9**
IMP IAmb IAmb 03 44 05.0
comp=Z,81nm,0.4s
IMP *i* sP **PcP** **03 44 45.4 -1.3**
IMP *ex* x 04 03 49.2
MOKO MOKOCHONG 61.19 304 *e*P **P** **03 44 03.5 -1.3**
MOKO *ex* x 04 04 06.1
KOHI KOHIMA 61.29 304 *e*P **P** **03 44 04.1 -1.4**
KOHI IAmb IAmb 03 44 06.3
comp=Z,166nm,0.6s
KOHI *ex* x 03 52 33.1
KOHI *i* x x 03 52 37.4
KOHI *ex* x 04 04 14.5
JORH JORHAT 61.58 305 *e*P **P** **03 44 06.1 -1.1**
JORH IAmb IAmb 03 44 11.2
comp=Z,170nm,0.6s
PAE Paea 61.68 107 *e*P **P** **03 44 09.5 +1.4**
comp=Z,105nm,1.2s
PPT Papeete 61.68 107 P **P** **03 44 10.3 +2.2**
comp=Z,385nm,0.9s,baz=22,slow=1.9,SNR=20
PPT LR LR 04 07 57.9
comp=Z,5μm,19.8s,baz=260,slow=33
PPT2 Papeete2 61.68 107 *e*P **P** **03 44 10.0 +1.8**
comp=Z,474nm,1.1s
PPT2 *e*S **S** **03 52 27.2 -0.2**
comp=Z,26μm,27.5s
PPT2 *e*LQ LQ 03 59 47.2
comp=Z,54μm,34.2s
PPT2 *e*LR LR 04 02 21.9
comp=Z,47μm,27.2s,baz=269
PPTF Pamatai, Papee 61.70 107 P **P** **03 44 08.1 -0.2**
PPTF IAmb IAmb 03 44 13.5
comp=Z,362nm,0.8s
TIAR Tiarei 61.90 107 *e*P **P** **03 44 11.4 +1.8**
comp=Z,254nm,1.0s
TVO Taravao 62.00 107 *e*P **P** **03 44 12.1 +1.8**
comp=Z,194nm,1.1s
SILR SILCHAR 62.02 302 *e*P **P** **03 44 11.0 +0.7**
ZEA Zeya 62.12 346*c i*P **P** **03 44 12.1 +1.8**
ZEA *e* 03 44 43.9
ZEA *e*S **S** **03 52 33.9 +2.5**
ZEA *e*SS **SS** **03 56 32.3 -3.0**
ZEA *e*SSS SSS 03 59 23.0
ZEA pmax pmax
comp=E,140nm,1.0s
ZEA pmax pmax
comp=N,1μm,1.2s
ZEA pmax pmax
comp=Z,2μm,1.2s
ZEA pmax pmax
comp=Z,2μm,4.9s
ZEA smax smax
comp=N,2μm,8.4s
ZEA smax smax
comp=E,2μm,11.3s
ZEA MLR MLR
comp=E,2μm,16.0s
ZEA MLR MLR
comp=N,4μm,17.0s
ZEA MLR MLR
comp=Z,4μm,18.0s
TBI Tubuai 62.20 113 *e*P **P** **03 44 13.0 +1.5**
comp=Z,1μm,1.3s
TBI *e*S **S** **03 52 33.9 +0.3**
comp=Z,18μm,29.5s
TBI *e*LQ LQ 04 00 00.5
comp=Z,20μm,46.5s
TBI *e*LR LR 04 02 36.6
comp=Z,44μm,35.2s
ZIRO ZIRO 62.22 305 *e*P **P** **03 44 11.2 -0.6**
BELO BELONIA 62.63 300 *e*P **P** **03 44 14.8 +0.5**
TEZP TEZPUR 62.72 304 *e*P **P** **03 44 13.4 -1.5**
SHL Shillong 63.09 302 *e*P **P** **03 44 16.2 -1.4**
SHL IAmb IAmb 03 44 19.6
comp=Z,517nm,0.1s
SHL Shillong 63.09 302 P **P** **03 44 17.0 -0.6**
SNR=63
SHL Shillong 63.09 302 P **P** **03 44 16.2 -1.4**
SHL pmax pmax
comp=Z,183nm,1.0s
SHL Shillong 63.09 302 P **P** **03 44 16.2 -1.4**
SHL IAmb IAmb 03 44 42.7
comp=Z,182nm,1.0s
MEH Mehetia 63.13 107 *e*P **P** **03 44 19.3 +1.4**
comp=Z,214nm,0.9s
PMOR Pomariorio Ree 63.22 104 *e*P **P** **03 44 20.2 +1.8**
comp=Z,1μm,1.1s
GUWA GUWAHATI 63.48 303 *e*P **P** **03 44 18.8 -1.2**
GUWA IAmb IAmb 03 44 24.8
comp=Z,133nm,0.9s
GUWA *i* x x 03 52 37.4
VAH Vaihoa 63.48 104 *e*P **P** **03 44 21.6 +1.4**
comp=Z,389nm,1.0s
GTA Gaotai 63.57 320 ⇑P **P** **03 44 21.1 +0.6**
GTA pP pP 03 44 33.3 -1.9
GTA sP sP 03 44 38.1 -3.2
GTA S **S** **03 52 50.4 -0.1**
GTA sS sS 03 53 12.2 -3.1
GTA SS **SS** **03 57 00.3 +1.5**
GTA pmax pmax
comp=Z,150nm,1.3s
GTA pmax pmax
comp=Z,2μm,10.5s
GTA LR LR
comp=Z,5μm,21.1s
GTA LR LR
comp=Z,5μm,18.5s
GTA LR LR
comp=Z,9μm,25.4s
ULN Ulaanbaatar 64.74 331 P **P** **03 44 28.3 +0.3**
ULN pmax pmax
comp=Z,450nm,1.4s
ULN Ulaanbaatar 64.74 331 P **P** **03 44 28.3 +0.3**
ULN IAmb IAmb 03 44 30.7
comp=Z,450nm,1.4s
CIT Chita 64.96 337 *e*P **P** **03 44 30.8 +1.6**
CIT *e* 03 44 48.4
CIT *e* 03 44 58.6
CIT *e* 03 53 11.2
CIT *e* 03 53 38.0
CIT pmax pmax

comp=Z,1µm,1.6s
ADK Adak 64.99 23 P P 03 44 29.8 +0.5
ADK pmax pmax
comp=Z,1µm,1.1s
ADK Adak 64.99 23 P P 03 44 29.8 +0.5
SONM Songino Array 65.04 330 P P 03 44 30.6 +0.7
comp=Z,176nm,1.0s,baz=148,slow=5.2,SNR=328
SONM LR LR 04 11 49.3
comp=Z,24µm,21.9s,baz=140,slow=35
SONM PKPPKP **P'P'df 04 13 14.6 +2.1**
comp=Z,26nm,1.0s,baz=297,slow=1.4,SNR=7.0
SONM PKP2bc 04 13 18.7
comp=Z,22nm,0.9s,baz=290,slow=2.1,SNR=18
SONM Songino Array 65.04 330 P P 03 44 29.5 -0.4
SONM pmax pmax
comp=Z,222nm,1.1s
SONM Songino Array 65.04 330 P P 03 44 29.5 -0.4
LSA Lhasa 65.26 306 P P 03 44 31.8 -0.3
LSA pmax pmax
comp=Z,370nm,1.7s
LSA LR LR
comp=Z,16µm,29.2s
LSA LR LR
comp=Z,17µm,29.2s
LSA LR LR
comp=Z,32µm,27.4s
LSA Lhasa 65.26 306 P P 03 44 32.2 +0.1
LSA pmax pmax
comp=Z,90nm,0.7s
LSA Lhasa 65.26 306 P P 03 44 32.2 +0.1
MA2 Magadan 65.42 1 P P 03 44 33.0 +1.1
comp=Z,265nm,0.9s,baz=168,slow=6.6,SNR=49
MA2 Magadan 65.42 1*c i*P **P 03 44 32.6 +0.6**
MA2 pmax pmax
comp=Z,878nm,1.7s
MA2 MLR MLR
comp=Z,8µm,18.0s
MA2 Magadan 65.42 1 P P 03 44 32.6 +0.6
MA2 IAmb IAmb 03 44 34.8
comp=Z,506nm,1.0s
CASY Casey 65.57 196 P P 03 44 32.3 -0.6
CASY IAmb IAmb 03 44 35.0
comp=Z,521nm,1.4s
GTK Tadong 66.46 303 *e*P **P 03 44 39.1 -0.4**
GTK IAmb IAmb 03 44 41.4
comp=Z,130nm,1.0s
GTK *ex* x 03 53 36.5
BOK Bokaro 67.63 299 *e*P **P 03 44 46.2 -0.6**
BOK *ex* x 03 53 38.6
CHLP Challavanipeta 67.81 293 *e*P **P 03 44 47.7 -0.2**
CHLP IVmBBB 03 45 16.8
comp=Z,1µm,1.5s
CHLP IVmBBB 03 45 16.9
comp=Z,1µm,1.5s
ZAK Zakamensk 68.27 331 *e*P **P 03 44 50.5 +0.1**
ZAK *e* 03 45 18.8
ZAK pmax pmax
comp=Z,272nm,1.3s
PALK Pallekele 68.69 280*de*P **P 03 44 53.8 +0.1**
PALK *i* *PP **pP 03 45 06.3 -2.2**
PALK pmax pmax
comp=Z,81nm,1.3s
PALK MLR MLR
comp=Z,13µm,24.0s
PALK Pallekele 68.69 280 P P 03 44 53.5 -0.2
SEY Seymchan 68.84 2 P P 03 44 54.5 +0.9
comp=Z,218nm,1.1s,baz=178,slow=4.9,SNR=96
SEY PKPPKP **P'P'df 04 13 04.6 -0.2**
comp=Z,18nm,1.0s,baz=30,slow=2.8,SNR=10
SEY Seymchan 68.84 2⇑*e*P **P 03 44 54.4 +0.9**
SEY *i* *PP **pP 03 45 06.4 -2.0**
TLY Talaya 68.95 332 P **P 03 44 55.2 +0.7**
comp=Z,26nm,0.7s,baz=164,slow=5.4,SNR=50
TLY PKP2bc 04 13 07.8
comp=Z,17nm,0.7s,baz=302,slow=2.9,SNR=22
TLY LR LR 04 14 26.3
comp=Z,11µm,21.9s,baz=129,slow=35
TLY Talaya 68.95 332*c i*P **P 03 44 54.9 +0.4**
TLY *e* 03 47 34.1
TLY *e*S **S 03 53 54.2 -0.9**
TLY *e*SS **SS 03 58 26.4 +4.7**
TLY pmax pmax
comp=Z,522nm,1.5s
TLY MLR MLR
comp=Z,16µm,14.0s
TLY Talaya 68.95 332 P P 03 44 55.1 +0.5
IRK Irkutsk 69.04 333 *e*P **P 03 44 54.6 -0.5**
IRK pmax pmax
comp=Z,419nm,2.0s
YAK Yakutsk 69.36 351 P P 03 44 57.4 +0.7
comp=Z,92nm,0.7s,baz=148,slow=2.2,SNR=42
YAK Yakutsk 69.36 351*c i*P **P 03 44 57.5 +0.7**
YAK *e**PP **sP 03 45 15.5 -2.2**
YAK *e* 03 47 33.7
YAK *e*S **S 03 53 59.7 +0.3**
YAK *e**SS **sS 03 54 24.0 0.0**
YAK *e* 03 54 55.0
YAK *e*SS **SS 03 58 31.7 +4.2**
YAK pmax pmax
comp=Z,666nm,1.4s
YAK pmax pmax
comp=N,275nm,1.3s
YAK pmax pmax
comp=E,67nm,1.4s
YAK pmax pmax
comp=Z,471nm,2.6s
YAK pmax pmax
comp=N,470nm,2.0s
YAK pmax pmax
comp=E,91nm,1.8s
YAK smax smax
comp=N,812nm,4.6s
YAK smax smax
comp=E,251nm,3.9s
YAK Yakutsk 69.36 351 P P 03 44 56.9 +0.1
YAK IAmb IAmb 03 45 00.0
comp=Z,568nm,1.1s
BOD Bodaibo 69.40 341 *e*P **P 03 44 56.9 -0.2**
BOD pmax pmax
comp=Z,373nm,1.4s
PVM Polavaram 69.75 291 *e*P **P 03 44 59.1 -1.0**
PVM IVmBBB 03 45 00.2
comp=Z,520nm,1.6s
MDRS Chennai 70.16 286 *e*P **P 03 45 00.8 -1.8**
MOY Mondy 70.20 331 *e*P **P 03 45 02.8 +0.4**
MOY pmax pmax
comp=Z,597nm,2.5s
MYLAV Mylavaram 70.56 290 *e*P **P 03 45 04.2 -0.9**
MYLAV IVmBBB 03 45 08.5
comp=Z,542nm,0.6s
UNV Unalaska Valle 70.67 26 IAmb IAmb 03 45 07.7
comp=Z,724nm,0.8s
SKHT Srikalahasti 70.81 287 *e*P **P 03 45 05.9 -0.7**
SKHT IVmBBB 03 45 06.8
comp=Z,414nm,1.4s
TAOE Nuku Hiva Isla 70.95 97 *e*P **P 03 45 08.6 +0.9**
comp=Z,2µm,1.1s
TAOE *e*S **S 03 54 19.8 -0.2**
comp=Z,15µm,30.5s
TAOE Nuku Hiva Isla 70.95 97 *e*LR LR 04 06 36.6
comp=Z,12µm,22.3s
TAOE Nuku Hiva Isla 70.95 97 P **P 03 45 08.6 +0.9**
TAOE IAmb IAmb 03 45 10.1
comp=Z,850nm,1.1s
ADKI Addanki 70.99 289 *e*P **P 03 45 06.5 -1.2**
ADKI IVmBBB 03 45 11.4
comp=Z,670nm,0.7s
ADKI IVmBBB 03 45 11.4
comp=Z,683nm,0.7s
GGR Gangavaram 71.20 291 *e*P **P 03 45 07.7 -1.3**
GGR IVmBBB 03 45 12.1
comp=Z,418nm,0.8s
SPIA Saint Paul Isl 71.44 22 IAmb IAmb 03 45 13.3
comp=Z,937nm,1.0s
NJS Nagarjunasagar 71.76 290 *e*P **P 03 45 10.8 -1.6**
NJS IVmBBB 03 45 12.0
comp=Z,594nm,1.7s
VNDA Vanda 71.81 177 P **P 03 45 12.4 +0.8**
comp=Z,225nm,1.0s,baz=331,slow=6.7,SNR=562
VNDA LR LR 04 14 51.5
comp=Z,17µm,20.1s,baz=339,slow=34
VNDA Vanda 71.81 177 P **P 03 45 11.8 +0.2**
VNDA pmax pmax
comp=Z,667nm,1.4s
VNDA Vanda 71.81 177 P **P 03 45 11.8 +0.2**
VNDA IAmb IAmb 03 45 14.4
comp=Z,667nm,1.4s
RPR Rampur 72.27 292 *e*P **P 03 45 14.2 -1.2**
RPR IVmBBB 03 45 15.1
comp=Z,709nm,1.8s
CUPL Choutuppal 72.28 290 *e*P **P 03 45 13.6 -1.9**
CUPL IVmBBB 03 45 18.1
comp=Z,522nm,0.6s
CUPL IVmBBB 03 45 18.2
comp=Z,531nm,0.7s
TRD Trivandrum 72.54 281 *e*P **P 03 45 17.2 +0.1**
TRD IAmb IAmb 03 45 21.1
comp=Z,288nm,0.8s
HYB Hyderabad 72.65 290 *i* P **P 03 45 16.0 -1.7**
HYB *e*PcP **pP 03 45 33.0 +0.4**
HYB *e*PP **PP 03 48 03.0 +3.0**
HYBB Hyderabad (bro 72.65 290 *e*P **P 03 45 16.2 -1.5**
HYBB IVmBBB 03 45 20.3
comp=Z,599nm,0.5s
NGP Nagpur 73.02 294⇑*i*P **P 03 45 18.0 -1.8**
NGP *i* sP sP 03 45 57.7 +17
URV Uravakonda 73.37 287 *e*P **P 03 45 20.8 -1.2**
URV IVmBBB 03 45 21.8
comp=Z,472nm,1.6s
WMQ Urumqi 73.63 319 P **P 03 45 23.2 +0.1**
WMQ pP pP 03 45 34.3 -3.8
WMQ sP sP 03 45 42.3 -1.8
WMQ S **S 03 54 49.3 -0.3**
WMQ SKS **SKKSac 03 55 25.6 0.0**
WMQ SS **SS 03 59 36.4 +2.4**
WMQ pmax pmax
comp=Z,220nm,1.5s
WMQ pmax pmax
comp=Z,2µm,4.9s
WMQ LR LR
comp=Z,6µm,24.5s
WMQ LR LR
comp=Z,3µm,19.5s
WMQ LR LR
comp=Z,13µm,28.9s
WMQ Urumqi 73.63 319 IAmb IAmb 03 45 46.1
comp=Z,684nm,1.5s
LGTI Lohaghat 74.12 303 *e*P **P 03 45 25.1 -1.0**
CNBA Chernabura Isl 74.45 28 IAmb IAmb 03 45 30.3
comp=Z,1µm,1.2s
KLRI Killari 74.61 291 *e*P **P 03 45 27.5 -1.7**
KLRI IVmBBB 03 45 31.6
comp=Z,544nm,0.7s
BHPL Bhopal 74.97 296 *e*P **P 03 45 30.1 -1.2**
BHPL IAmb IAmb 03 45 34.9
comp=Z,90nm,1.0s
BHPL *i* x x 03 56 00.2
BILL Bilibino 74.98 7*c i*P **P 03 45 30.7 +0.4**
BILL *i* 03 45 43.9
BILL *i* S **sS 03 55 25.9 -2.8**
BILL pmax pmax
comp=Z,354nm,1.3s
BILL Bilibino 74.98 7 P **P 03 45 30.6 +0.3**
BILL IAmb IAmb 03 45 36.5
comp=Z,253nm,1.0s
H08S2 Diego Garcia H 75.16 264 P **P 03 45 34.4 +2.3**
baz=41,slow=7.0,SNR=10.0
H08S3 Diego Garcia H 75.17 264 P **P 03 45 34.2 +2.0**
baz=41,slow=7.0,SNR=49
H08S1 Diego Garcia H 75.18 264 P **P 03 45 34.6 +2.4**
baz=41,slow=7.0,SNR=6.4
DGAR Diego Garcia 75.22 264 P **P 03 45 34.4 +1.6**
DGAR Diego Garcia 75.22 264 P **P 03 45 34.4 +1.6**
DGAR IAmb IAmb 03 45 35.9
comp=Z,651nm,0.8s
RKT Rikitea 75.50 112 *e*S **S 03 55 10.9 -0.2**
comp=Z,14µm,30.8s
RKT Rikitea 75.50 112 *e*LQ LQ 04 05 35.7
comp=Z,20µm,39.5s
RKT *e*LR LR 04 08 51.5
comp=Z,54µm,32.5s
DDI Dehra Dun 76.18 303 *e*P **P 03 45 37.2 -0.9**
DDI IAmb IAmb 03 45 40.5
comp=Z,106nm,0.9s
DDI *i* x x 03 56 08.6
NDI New Delhi 76.47 301 *e*P **P 03 45 36.0 -3.6**
NDI *ex* x 03 53 15.0
GOA Goa 76.73 287 *e*P **P 03 45 40.8 -0.5**
GOA *i* x x 03 56 12.8
ZSN Zaisan 76.96 321⇑*i*P **P 03 45 41.7 -0.4**
comp=Z,447nm,4.1s,baz=322
ZSN *e*S **S 03 55 26.6 +0.3**
comp=Z,248nm,5.0s,baz=322
ZSN Zaisan 76.96 321*c i*P **P 03 45 41.6 -0.4**
ZSN *e*S **S 03 55 26.5 +0.3**
ZSN smax smax
comp=N,248nm,5.0s
POO Poona 77.26 290 *e*P **P 03 45 41.7 -2.6**
POO IAmb IAmb 03 45 47.5
comp=Z,100nm,0.6s
BHK Bhakra 77.83 304 *ex* **P 03 45 46.2 -1.0**
DHRM DHARAMSHALA 78.14 305 *e*P **P 03 45 47.5 -1.7**
DHRM IAmb IAmb 03 45 49.6
comp=Z,208nm,0.8s
DHRM *i* x x 03 45 53.3
AJM Ajmer 78.16 299⇑*i*P **P 03 45 47.0 -2.2**
TNA Tin City 78.25 17 P **P 03 45 48.8 +0.1**
baz=225
MK31 Makanchi Array 78.32 320*c i*P **P 03 45 48.8 -0.8**
MK31 pmax pmax
comp=Z,61nm,0.6s
MKAR Makanchi Array 78.32 320 P **P 03 45 49.1 -0.5**
comp=Z,70nm,0.7s,baz=98,slow=7.1,SNR=300
MKAR PKKPbc **PKKPbc 04 04 47.8 -1.6**
comp=Z,12nm,0.9s,baz=292,slow=1.9,SNR=24
MKAR PKPPKP **P'P'df 04 12 53.1 +3.0**
comp=Z,6.2nm,0.9s,baz=316,slow=3.3,SNR=10
MKAR LR LR 04 21 30.6
comp=Z,4µm,20.8s,baz=110,slow=36
MKAR Makanchi Array 78.32 320 P **P 03 45 48.5 -1.2**
ANM Nome 78.33 19 IAmb IAmb 03 45 52.9
comp=Z,386nm,1.1s
MAKZ Makanchi 78.53 320 P **P 03 45 49.9 -0.9**
MAKZ pmax pmax
comp=Z,126nm,0.7s
MAKZ Makanchi 78.53 320 P **P 03 45 49.9 -0.9**
TIXI Tiksi 78.57 354*c i*P **P 03 45 49.1 -1.3**
TIXI pmax pmax
comp=Z,607nm,2.5s
TIXI Tiksi 78.57 354 P **P 03 45 48.8 -1.5**
THN Thein Dam 78.66 305 *e*P **P 03 45 51.5 -0.3**
OHAK Old Harbor 78.72 28 IAmb IAmb 03 45 54.4
comp=Z,589nm,0.9s
SHLS Shalkode 78.93 316⇑*i*P **P 03 45 51.2 -2.0**
comp=Z,139nm,1.2s,baz=316
SHLS Shalkode 78.93 316*c i*P **P 03 45 51.1 -2.0**
SHLS pmax pmax
comp=Z,139nm,1.2s
KDAK Kodiak Island 79.33 28 P **P 03 45 56.3 +1.4**
KDAK pmax pmax
comp=Z,706nm,1.1s
KDAK Kodiak Island 79.33 28 P **P 03 45 56.3 +1.4**
KDAK IAmb IAmb 03 45 57.8
comp=Z,706nm,1.1s
PRZ Przheval'sk 79.45 315 IAmb IAmb 03 45 58.4
comp=Z,550nm,1.3s
KPKS Kokpek 79.56 316⇑*i*P **P 03 45 55.8 -0.9**
comp=Z,259nm,1.9s,baz=316
KPKS Kokpek 79.56 316*c i*P **P 03 45 55.7 -0.9**
KPKS pmax pmax
comp=Z,259nm,1.9s
SATY Saty 79.63 316⇑*i*P **P 03 45 56.5 -0.5**
comp=Z,172nm,2.1s,baz=316
SATY Saty 79.63 316*c i*P **P 03 45 56.5 -0.5**
SATY pmax pmax
comp=Z,172nm,2.1s
ZALV Zalesovo Beam 79.71 327 P **P 03 45 55.6 -1.4**
comp=Z,108nm,0.7s,baz=111,slow=5.6,SNR=179
ZALV PKKPbc **PKKPbc 04 04 44.9 -1.7**
comp=Z,21nm,0.7s,baz=294,slow=2.7,SNR=26
ZALV LR LR 04 20 34.6
comp=Z,12µm,21.4s,baz=122,slow=35
ZALV Zalesovo Beam 79.71 327 P **P 03 45 55.1 -1.9**
SVW2 Sparrevohn 79.75 24 IAmb IAmb 03 46 01.2
comp=Z,682nm,1.0s
PTCN Pitcairn Islan 79.92 114 P **P 03 45 59.4 +0.6**
KDJ Kajisay 80.20 314 P **P 03 46 00.3 +0.1**
KDJ pmax pmax
comp=Z,203nm,1.2s
KDJ Kajisay 80.20 314 P **P 03 46 00.3 +0.1**
TDK Taldyqorghan 80.24 317 *e*P **P 03 45 59.9 -0.3**
comp=Z,239nm,1.2s,baz=318
TDK *e*S **S 03 56 01.6 +0.1**
baz=318
TDK LR LR 04 19 45.5
comp=Z,3µm,19.1s,baz=318
TDK Taldyqorghan 80.24 317 *e*P **P 03 45 59.8 -0.3**
TDK *e*S **S 03 56 01.5 +0.1**
TDK pmax pmax
comp=Z,239nm,1.2s
TDK MLR MLR
comp=Z,3µm,19.0s
KSH Kashi 80.33 312⇑*i*P **P 03 46 01.5 +0.6**
KSH pP pP 03 46 18.2 +2.1
KSH S **S 03 55 59.1 -3.8**
KSH sS sS 03 56 28.4 -0.4
KSH pmax pmax
comp=Z,170nm,0.9s
KSH pmax pmax
comp=Z,3µm,12.7s
KSH LR LR
comp=Z,12µm,24.4s
KSH LR LR
comp=Z,13µm,20.5s
KSH LR LR
comp=Z,18µm,26.4s
TTA Tatalina 80.59 23 IAmb IAmb 03 46 06.0
comp=Z,349nm,1.1s
MDOK Medeo 80.61 315 *i* P **P 03 46 02.0 -0.3**
baz=315
MDOK *e*S **S 03 56 05.4 -0.3**
baz=315
MDOK LR LR 04 19 04.0
comp=Z,3µm,20.9s,baz=315
MDOK Medeo 80.61 315 *i* P **P 03 46 02.0 -0.3**
MDOK *e*S **S 03 56 05.3 -0.3**
MDOK MLR MLR
comp=Z,3µm,21.0s
TNSS Tian-Shan 80.64 315 *e*P **P 03 46 02.6 -0.2**
baz=315
TNSS Tian-Shan 80.64 315 *e*P **P 03 46 02.6 -0.2**
HOM Homer 80.68 26 P **P 03 46 01.5 -0.6**
baz=241,SNR=29
AAA Alma-Ata 80.71 315 *e*P **P 03 46 02.6 -0.2**
baz=316
AAA *e*S **S 03 56 07.4 +0.8**
baz=316
AAA LR LR 04 19 11.1
comp=Z,2µm,17.8s,baz=316
AAA Alma-Ata 80.71 315 *e*P **P 03 46 02.6 -0.2**
AAA *e*S **S 03 56 07.4 +0.8**
AAA MLR MLR
comp=Z,2µm,18.0s
ULHL Ulahol 80.91 314 P **P 03 46 03.9 -0.1**
SNR=9.7
NIL Nilore 80.97 305 P **P 03 46 03.5 -0.8**
NIL pmax pmax
comp=Z,241nm,0.8s
NIL Nilore 80.97 305 P **P 03 46 03.5 -0.8**
NIL IAmb IAmb 03 46 05.2
comp=Z,241nm,0.8s
BOOM Boomskoye usch 81.19 315 P **P 03 46 05.2 -0.3**
BOOM pmax pmax
comp=Z,94nm,0.7s
BOOM Boomskoye usch 81.19 315 P **P 03 46 05.2 -0.3**
KUU Kurty 81.31 316⇑*i*P **P 03 46 05.1 -0.8**
comp=Z,473nm,1.7s,baz=316
KUU LR LR 04 22 36.9
comp=Z,2µm,17.3s,baz=316
KUU Kurty 81.31 316*c i*P **P 03 46 05.1 -0.8**
KUU pmax pmax
comp=Z,473nm,1.7s
KUU MLR MLR
comp=Z,2µm,17.0s
RDOG Red Dog Mine 81.41 17 IAmb IAmb 03 46 09.1
comp=Z,423nm,0.8s
CAPN Captain Cook N 81.44 26 P **P 03 46 06.2 +0.1**
baz=241
TKM2 Tokmak 2 81.55 315 P **P 03 46 06.9 -0.5**
SNR=46
SKT Skwentna 81.87 24 IAmb IAmb 03 46 09.4
comp=Z,230nm,0.8s
O22K Cooper Landing 81.92 26 P **P 03 46 08.3 -0.4**
baz=242,SNR=90
KBK Karagaybulak 81.94 314 P **P 03 46 08.9 -0.5**
SNR=20
SUA Susitna One 81.94 25 IAmb IAmb 03 46 10.9
comp=Z,438nm,0.8s
BHUJ Bhuj 81.97 294 *e*P **P 03 46 08.7 -1.1**
BHUJ IAmb IAmb 03 46 12.4
comp=Z,115nm,1.0s
BHUJ *i* sP sP 03 46 49.2 +18
BHUJ *ex* x 03 56 29.8
KURK Kurchatov 81.98 323*c i*P **P 03 46 07.9 -1.3**
KURK pmax pmax
comp=Z,219nm,1.1s
KURK MLR MLR
comp=Z,10µm,21.0s
KURK Kurchatov 81.98 323 P **P 03 46 08.4 -0.8**
KURBB Kurchatov Arra 82.01 323 P **P 03 46 08.3 -1.0**
comp=Z,41nm,0.8s,baz=120,slow=4.2,SNR=37
KURBB PKKPbc **PKKPbc 04 04 40.2 -0.9**
comp=Z,19nm,1.0s,baz=292,slow=3.0,SNR=28
PPLA Purkeypile 82.06 23 IAmb IAmb 03 46 17.1
comp=Z,318nm,0.9s
UCH Uchtor 82.13 314 P **P 03 46 11.6 +0.7**
SNR=14
CHMS Chumysh 82.17 315 P **P 03 46 09.9 -0.6**
SNR=27
RC01 Rabbit Creek A 82.20 26 P **P 03 46 09.0 -1.1**
baz=242,SNR=55
AAK Ala-Archa 82.26 314*c i*P **P 03 46 10.2 -0.9**
AAK pmax pmax
comp=Z,453nm,1.7s
AAK MLR MLR
comp=Z,18µm,20.0s
SGDS Sogindy 82.38 315⇑*i*P **P 03 46 10.7 -0.9**
comp=Z,142nm,2.3s,baz=315
SGDS *e*S **S 03 56 22.6 -1.3**
baz=315
SGDS Sogindy 82.38 315*c i*P **P 03 46 10.7 -0.9**
SGDS *e*S **S 03 56 22.5 -1.3**
SGDS pmax pmax
comp=Z,142nm,2.3s
USP Ospenovka 82.42 315 P **P 03 46 11.3 -0.5**
SNR=50
CUT Chulitna 82.59 24 P **P 03 46 10.5 -1.6**
baz=242,SNR=137
PMR Palmer 82.69 25 IAmb IAmb 03 46 15.1
comp=Z,748nm,0.9s
AML Almayashu 82.70 314 P **P 03 46 13.6 -0.1**
SNR=68
MAW Mawson 82.71 203 P **P 03 46 12.9 +0.3**
comp=Z,209nm,0.8s,baz=87,slow=6.2,SNR=514
MAW PKiKP **PKiKP 03 51 33.2 +0.8**
comp=Z,12nm,0.9s,baz=98,slow=4.7,SNR=6.5
MAW PKKPbc **PKKPbc 04 04 37.3 -2.4**
comp=Z,8.8nm,1.2s,baz=292,slow=5.5,SNR=5.7
MAW LR LR 04 23 00.8
comp=Z,15µm,18.9s,baz=86,slow=36
MAW Mawson 82.71 203 P **P 03 46 13.0 +0.3**
baz=83,SNR=453
MAW Mawson 82.71 203 P **P 03 46 13.0 +0.3**
MAW pmax pmax
comp=Z,180nm,1.5s
MAW Mawson 82.71 203 P **P 03 46 13.0 +0.3**
EKS2 Erkin-Say 82.77 314 P **P 03 46 13.6 -0.1**
SNR=57
KTH Kantishna Hill 82.88 23 IAmb IAmb 03 46 15.8
comp=Z,825nm,1.0s
Q23K Middleton Isla 82.99 28 P **P 03 46 13.2 -1.0**
baz=246,SNR=9.2
TRF Thorofare Moun 83.08 23 P **P 03 46 14.6 -0.3**
TRF IAmb IAmb 03 46 20.6
comp=Z,474nm,0.9s
BPAW Bear Paw Mtn. 83.12 23 IAmb IAmb 03 46 16.8
comp=Z,317nm,0.9s
BTLS Baital 83.21 317⇑*i*P **P 03 46 15.3 -0.4**
comp=Z,296nm,2.8s,baz=317
BTLS *e*S **S 03 56 31.6 -0.4**
baz=317
BTLS Baital 83.21 317*c i*P **P 03 46 15.3 -0.4**
BTLS *e*S **S 03 56 31.6 -0.4**
BTLS pmax pmax
comp=Z,295nm,2.8s
MLY Manley 83.67 22 P **P 03 46 17.1 -0.6**
baz=241,SNR=245
EYAK Cordova Ski Ar 83.72 27 IAmb IAmb 03 46 20.6

comp=Z,430nm,0.9s
MCK McKinley 83.75 23 P **P** **03 46 16.4 -1.7**
baz=243,SNR=653
QSPA South Pole Qui 83.94 180 P **P** **03 46 19.5 +0.3**
comp=Z,721nm,0.9s,baz=335,slow=1.2,SNR=994
QSPA PKKPbc **PKKPbc** **04 04 34.4 -3.2**
QSPA comp=Z,5.1nm,0.5s,baz=248,slow=0.7,SNR=8.7
LR LR 04 23 48.1
comp=Z,27µm,19.4s,baz=6.5,slow=36
QSPA South Pole Qui 83.94 180 P **P** **03 46 19.4 +0.2**
NEA2 Nenana 84.09 23 P **P** **03 46 18.4 -1.5**
baz=243,SNR=87
M24K Tolsona, Glenn 84.18 25 P **P** **03 46 20.3 -0.1**
baz=246,SNR=196
I23K Minto, Yukon-K 84.24 22 P **P** **03 46 19.9 -0.6**
baz=242,SNR=42
I23K Minto, Yukon-K 84.24 22 P **P** **03 46 19.7 -0.8**
BTK Batken 84.31 311 P **P** **03 46 20.6 -1.1**
BTK pmax pmax
comp=Z,274nm,1.5s
BTK Batken 84.31 311 P **P** **03 46 20.6 -1.1**
BTK IAmb IAmb 03 46 22.4
comp=Z,274nm,1.5s
WRH Wood River Hil 84.42 23 P **P** **03 46 21.7 +0.2**
SUCK Suckling Hills 84.44 28 IAmb IAmb 03 46 24.9
comp=Z,399nm,0.9s
GAR Garm 84.47 310 IAmb IAmb 03 46 22.9
comp=Z,305nm,1.2s
KBL Kabul 84.57 305 P **P** **03 46 21.0 -2.2**
SNR=30
KBL Kabul 84.57 305 P **P** **03 46 21.5 -1.7**
KBL pmax pmax
comp=Z,40nm,0.9s
KBL Kabul 84.57 305 P **P** **03 46 21.5 -1.7**
DZA Taraz 84.58 314 *e*P **P** **03 46 22.1 -0.7**
comp=Z,658nm,1.6s,baz=314
DZA *e*S **SKSac** **03 56 40.7 -1.9**
baz=314
DZA LR LR 04 25 01.8
baz=314
DZA Taraz 84.58 314 *e*P **P** **03 46 22.1 -0.7**
DZA *e*S **SKSac** **03 56 40.6 -1.9**
DZA pmax pmax
comp=Z,658nm,1.6s
MDM Murphy Dome 84.58 22 IAmb IAmb 03 46 23.7
comp=Z,328nm,1.2s
CCB Clear Creek Bu 84.61 23 IAmb IAmb 03 46 23.7
comp=Z,592nm,0.9s
N25K Chitina, Valde 84.66 26 P **P** **03 46 22.4 -0.5**
baz=247,SNR=112
N25K Chitina, Valde 84.66 26 IAmb IAmb 03 46 25.7
comp=Z,253nm,0.8s
TCOL CIGO, UAF Yank 84.68 23 P **P** **03 46 21.1 -1.7**
baz=244,SNR=95
COLA College 84.69 23*ce*P **P** **03 46 21.1 -1.7**
COLA pmax pmax
comp=Z,701nm,1.0s
COLA College 84.69 23 P **P** **03 46 22.3 -0.5**
PAX Paxson 84.83 25 IAmb IAmb 03 46 26.5
comp=Z,235nm,0.8s
HDA Harding Lake 84.83 23 P **P** **03 46 22.1 -1.5**
baz=245,SNR=256
HDA Harding Lake 84.83 23 IAmb IAmb 03 46 27.3
comp=Z,422nm,1.0s
COLD Coldfoot 84.92 20 P **P** **03 46 24.0 0.0**
baz=241,SNR=315
COLD Coldfoot 84.92 20 IAmb IAmb 03 46 28.1
comp=Z,285nm,0.8s
POKR Poker Plat Res 84.95 23 P **P** **03 46 22.6 -1.6**
baz=244,SNR=57
POKR Poker Plat Res 84.95 23 IAmb IAmb 03 46 25.9
comp=Z,190nm,0.9s
IL31 85.01 23 IAmb IAmb 03 46 25.5
comp=Z,507nm,0.8s
ILAR Eielson Array 85.01 23 P **P** **03 46 22.2 -2.2**
comp=Z,446nm,0.8s,baz=250,slow=4.1,SNR=400
ILAR PKKPbc **PKKPbc** **04 04 31.9 -2.9**
ILAR comp=Z,6.3nm,0.6s,baz=1.7,slow=1.0,SNR=20
LR LR 04 21 46.0
comp=Z,4µm,20.4s,baz=252,slow=34
ILAR Eielson Array 85.01 23 P **P** **03 46 23.4 -1.1**
ILAR Eielson Array 85.01 23 P **P** **03 46 23.4 -1.1**
VRDI Verde Repeater 85.02 27 IAmb IAmb 03 46 27.4
comp=Z,490nm,0.9s
TGL Tana Glacier 85.13 27 IAmb IAmb 03 46 28.1
comp=Z,658nm,1.0s
A21K Barrow 85.15 15 P **P** **03 46 24.8 -0.2**
baz=235,SNR=13
A21K Barrow 85.15 15 IAmb IAmb 03 46 27.7
comp=Z,334nm,1.0s
KK31 Karatay Array 85.21 314 P **P** **03 46 23.9 -2.1**
KK31 Karatay Array 85.21 314 IAmb IAmb 03 46 27.6
comp=Z,431nm,1.3s
KKAR Karatay Array 85.21 314 P **P** **03 46 24.7 -1.3**
KKAR Karatay Array 85.21 314 P **P** **03 46 24.7 -1.3**
KKAR Karatay Array 85.21 314 IAmb IAmb 03 46 27.6
comp=Z,431nm,1.3s
MCARA McCarthy VSAT 85.27 27 IAmb IAmb 03 46 29.2
comp=Z,701nm,1.1s
CHGR Chuyangaron 85.28 310 P **P** **03 46 24.8 -1.7**
CHGR IAmb IAmb 03 46 26.9
comp=Z,277nm,0.9s
ISLE Juniper Island 85.30 28 IAmb IAmb 03 46 28.8
comp=Z,510nm,1.0s
MESA MESA 85.33 28 IAmb IAmb 03 46 29.4
comp=Z,537nm,1.0s
IUG luzhnay 85.35 313⇑ *i*P **P** **03 46 26.0 -0.8**
comp=Z,187nm,1.6s,baz=313
IUG luzhnay 85.35 313*c i*P **P** **03 46 26.0 -0.8**
IUG pmax pmax
comp=Z,187nm,1.6s
BRZS Berezniki 85.40 321⇑ *i*P **P** **03 46 25.8 -1.0**
comp=Z,231nm,1.7s,baz=321
BRZS LR LR 04 26 10.8
comp=Z,1µm,16.3s,baz=321
BRZS Berezniki 85.40 321*c i*P **P** **03 46 25.7 -1.0**
BRZS pmax pmax
comp=Z,231nm,1.7s
BRZS MLR MLR
comp=Z,1µm,16.0s
YAH Yahtse 85.49 28 IAmb IAmb 03 46 30.2
comp=Z,431nm,1.0s
BRLS Boroldav 85.68 314 *e*P **P** **03 46 27.6 -0.8**
comp=Z,238nm,2.2s,baz=314
BRLS Boroldav 85.68 314 *e*P **P** **03 46 27.5 -0.8**
BRLS pmax pmax
comp=Z,238nm,2.2s
NRIK Noril'sk 85.69 342 P **P** **03 46 26.5 -1.2**
comp=Z,152nm,0.8s,baz=119,slow=4.8,SNR=89
NRIK PKKPbc **PKKPbc** **04 04 30.3 -3.0**
NRIK comp=Z,7.2nm,0.7s,baz=359,slow=2.3,SNR=5.9
LR LR 04 27 06.2
comp=Z,5µm,18.4s,baz=122,slow=37
NRIK Noril'sk 85.69 342*c i*P **P** **03 46 26.7 -1.0**
TAS Tashkent 85.71 312 P **P** **03 46 27.8 -0.8**
TAS pmax pmax
comp=Z,499nm,1.4s
TAS Tashkent 85.71 312 P **P** **03 46 27.8 -0.8**
TAS IAmb IAmb 03 46 29.4
comp=Z,499nm,1.4s
L26K Log Cabin Wild 85.74 25 P **P** **03 46 27.8 -0.4**
baz=248,SNR=513
TOLK Toolik Lake Re 85.81 19 P **P** **03 46 28.4 0.0**
baz=242,SNR=191
TOLK Toolik Lake Re 85.81 19 IAmb IAmb 03 46 31.4
comp=Z,228nm,0.8s
SCRK Sand Creek 85.84 24 P **P** **03 46 28.0 -0.8**
baz=247,SNR=256
BCAR Beaver Creek A 86.42 25 P **P** **03 46 32.2 +0.6**
K27K Chicken 86.64 24 P **P** **03 46 33.0 +0.5**
baz=249
BMAR Burnt Mountain 86.97 21 P **P** **03 46 34.4 +0.2**
BVAR Borovoye Array 87.53 324 P **P** **03 46 35.0 -2.2**
comp=Z,59nm,0.7s,baz=224,slow=21,SNR=167
BRVK Borovoye 87.60 324*c i*P **P** **03 46 35.7 -1.7**
BRVK pmax pmax
comp=Z,198nm,1.3s
BRVK MLR MLR
comp=Z,8µm,24.0s
BRVK Borovoye 87.60 324 P **P** **03 46 35.8 -1.6**
BRVK IAmb IAmb 03 46 38.0
comp=Z,159nm,1.1s
SIT Sitka 87.69 32 IAmb IAmb 03 46 40.9
comp=Z,304nm,0.9s
H02S1 DAWSON INLET T 88.39 36 P **P** **03 46 42.1 +1.0**
SNR=177
CRAG Craig 88.51 34 IAmb IAmb 03 46 44.8
comp=Z,282nm,1.0s
WHY Whitehorse 88.82 29 IAmb IAmb 03 46 46.7
comp=Z,431nm,1.0s
EPYK Eagle Plains 89.53 23 P **P** **03 46 46.0 -0.4**
baz=254
CRZF Crozet Islands 90.08 223 IAmb IAmb 03 46 50.6
comp=Z,428nm,1.4s
HRA Herat 90.09 304 IAmb IAmb 03 46 50.0
comp=Z,168nm,1.2s
RER Riviere de l'E 90.19 249 P **P** **03 46 51.7 +1.3**
SNR=26
RER Riviere de l'E 90.19 249 P **P** **03 46 50.6 +0.1**
DLBC Dease Lake 90.76 31 P **P** **03 46 51.7 -0.6**
comp=Z,139nm,1.0s,baz=259,slow=4.4,SNR=137
DLBC PKKPbc **PKKPbc** **04 04 19.4 -1.0**
comp=Z,15nm,1.0s,baz=108,slow=2.0,SNR=12
DLBC Dease Lake 90.76 31 IAmb IAmb 03 46 55.3
comp=Z,232nm,1.1s
BBB Bella Bella 90.81 38 IAmb IAmb 03 46 55.4
comp=Z,268nm,1.2s
SYO Syowa Base 91.00 200‖ *i*P **P** **03 46 51.6 -1.5**
SYO Syowa Base 91.00 200‖ *i*PcP **P** **03 46 52.1 -1.0**
SYO Syowa Base 91.00 200‖ *i*pP pP 03 47 08.6 +0.4
SYO Syowa Base 91.00 200‖ *i*sP sP 03 47 13.4 -0.6
JLN Jalan Bani Buh 91.18 292 P **P** **03 46 55.0 0.0**
SNR=5.2
INK Inuvik 91.22 21 P **P** **03 46 53.1 -0.9**
comp=Z,239nm,1.2s,baz=242,slow=6.0,SNR=24
INK Inuvik 91.22 21 IAmb IAmb 03 46 57.0
comp=Z,262nm,1.2s
WBK Wadi Bani Khal 91.64 292 P **P** **03 46 56.2 -0.9**
SNR=6.5
KRMB Red Mountain 92.33 49 IAmb IAmb 03 47 02.8
comp=Z,162nm,1.4s
KMRM Mail Ridge 92.34 50 IAmb IAmb 03 47 02.8
comp=Z,157nm,1.4s
KCPM Cahto Peak 92.39 51 IAmb IAmb 03 47 03.8
comp=Z,73nm,0.9s
KHMM Horse Mountain 92.39 49 IAmb IAmb 03 47 03.2
comp=Z,136nm,1.2s
MHTO MHTO 92.40 291 P **P** **03 46 59.2 -1.4**
SNR=11
J01E Myrtle Point 92.48 47 P **P** **03 47 00.1 -0.3**
baz=264
BIDO Bidbid 92.50 293 P **P** **03 46 59.9 -1.1**
SNR=5.1
L02E Cave Junction 92.62 48 P **P** **03 47 01.1 -0.1**
baz=264,SNR=8.7
K02D Willamette Mer 92.62 48 P **P** **03 47 01.1 -0.2**
baz=264,SNR=8.4
I02D Swisshome 92.63 46 P **P** **03 47 02.1 +0.9**
baz=264
DQM DQM 92.70 290 P **P** **03 47 00.4 -1.6**
HOPS Hopland Field 92.71 51 IAmb IAmb 03 47 04.1
comp=Z,207nm,1.8s
I03D Drain, OR 92.95 47 P **P** **03 47 03.4 +0.8**
baz=265
E03A Lebam 93.07 44 IAmb IAmb 03 47 09.5
comp=Z,92nm,0.9s
M02C Callahan 93.10 49 P **P** **03 47 03.1 -0.4**
baz=265,SNR=40
HUMO Hull Mountain 93.14 48 IAmb IAmb 03 47 06.2
comp=Z,112nm,1.1s
G03D McMinnville, O 93.16 45 P **P** **03 47 04.4 +0.8**
baz=265
N02D Trinity Center 93.18 49 P **P** **03 47 03.6 -0.2**
baz=265,SNR=39
YBH Yreka Blue Hor 93.24 49 PKKPbc PKKPbc 04 04 13.0 -0.4
comp=Z,6.7nm,0.8s,baz=162,slow=7.8,SNR=4.3
YBH Yreka Blue Hor 93.24 49 IAmb IAmb 03 47 06.7
comp=Z,121nm,1.1s
HOQ Hoqain 93.25 293 P **P** **03 47 02.6 -1.9**
F04D Rainier, OR 93.41 44 P **P** **03 47 06.1 +1.4**
baz=265
AB31 Akbulak array 93.42 319 *i*P **P** **03 47 01.9 -2.8**
ABKAR Akbulak array 93.42 319 P **P** **03 47 02.6 -2.1**
ABKAR IAmb IAmb 03 47 04.7
comp=Z,127nm,1.1s
H04D Lebanon 93.47 46 P **P** **03 47 04.0 -1.0**
baz=265
D03D Eldon 93.49 43 P **P** **03 47 05.1 +0.1**
baz=265
L04D Klamath Falls 93.58 48 P **P** **03 47 05.6 -0.2**
baz=265,SNR=18
I04A Tendick Farm, 93.64 47 P **P** **03 47 05.1 -0.8**
baz=265,SNR=7.1
D04E Lakebay 93.67 43 P **P** **03 47 05.7 -0.2**
baz=265
SVE Sverdlovsk 93.70 327 *d i*P **P** **03 47 03.6 -2.2**
SVE *e* 03 50 48.8
SVE *e*S **SKSac** **03 57 32.8 -3.0**
SVE pmax pmax
comp=Z,119nm,1.5s
SVE MLR MLR
comp=Z,8µm,23.0s
E04D Cinebar 93.76 44 P **P** **03 47 05.5 -0.8**
baz=265
GEYT Alibeck 93.78 308 P **P** **03 47 04.6 -2.0**
comp=Z,66nm,1.1s,baz=119,slow=1.9,SNR=55
GEYT PKKPbc **PKKPbc** **04 04 11.8 -0.1**
comp=Z,7.2nm,0.6s,baz=318,slow=4.0,SNR=8.4
GEYT LR LR 04 33 04.0
comp=Z,3µm,19.9s,baz=145,slow=38
GEYT Alibeck 93.78 308 P **P** **03 47 04.8 -1.8**
GYA0B ALIBECK ARRAY 93.78 308 IAmb IAmb 03 47 07.1
comp=Z,16nm,1.3s
O03E Paynes Creek 93.80 50 P **P** **03 47 05.8 -0.9**
baz=265,SNR=47
J04D Umpqua Nationa 93.81 47 P **P** **03 47 06.2 -0.7**
baz=265,SNR=20
A04D Lummi Island 93.84 42 P **P** **03 47 06.6 0.0**
baz=265
M04C Macdoel 93.89 49 P **P** **03 47 06.6 -0.6**
baz=265,SNR=38
ORV Orroville 93.98 51 IAmb IAmb 03 47 09.4
comp=Z,102nm,1.2s
SOHO SOHO 94.00 294 P **P** **03 47 06.0 -1.9**
K04D Chiloquin, OR 94.02 48 P **P** **03 47 07.0 -0.8**
baz=266,SNR=14
D05A Enumclaw 94.20 43 IAmb IAmb 03 47 11.1
comp=Z,215nm,1.6s
B05A Bryant 94.21 42 P **P** **03 47 07.8 -0.5**
baz=266,SNR=8.7
AFDM Forest Hills D 94.34 51 IAmb IAmb 03 47 11.3
comp=Z,104nm,1.2s
BANOM Banah 94.36 295 P **P** **03 47 08.1 -1.5**
HATD Hatta, Dubai 94.42 294 P **P** **03 47 09.2 -0.6**
I05D Terrebonne, OR 94.45 46 P **P** **03 47 10.3 +0.6**
baz=266,SNR=6.9
J05D Fort Rock, OR 94.45 47 P **P** **03 47 09.5 -0.3**
baz=266,SNR=37
F05D White Salmon 94.47 44 P **P** **03 47 09.1 -0.5**
baz=266
ASHO Ashiyiah 94.48 294 P **P** **03 47 09.6 -0.6**
G05D Wamic, OR 94.53 45 P **P** **03 47 09.3 -0.7**
baz=266
K05A Summer Lake 94.66 48 IAmb IAmb 03 47 13.2
comp=Z,111nm,1.1s
PAGB Antelope Grade 94.68 55 IAmb IAmb 03 47 13.6
comp=Z,96nm,1.0s
PINE Pine Mountain 94.70 47 IAmb IAmb 03 47 13.4
comp=Z,117nm,1.2s
AKTO Aktyubinsk 94.76 320 PKKPbc PKKPbc 04 04 08.1 -1.5
comp=Z,9.4nm,1.0s,baz=26,slow=0.7,SNR=10.0
AKTO LR LR 04 33 08.7
comp=Z,2µm,18.3s,baz=88,slow=38
C36M Paulatuk 94.77 21 P **P** **03 47 09.5 -0.9**
baz=266
C36M Paulatuk 94.77 21 IAmb IAmb 03 47 13.0
comp=Z,84nm,1.0s
ARU Arti 94.81 326 PKKPbc PKKPbc 04 04 08.2 -1.5
comp=Z,4.3nm,0.5s,baz=330,slow=3.9,SNR=13
ARU PKPPKP **P'P'df** **04 12 17.7 -1.5**
comp=Z,1.7nm,0.2s,baz=247,slow=6.4,SNR=3.6
ARU LR LR 04 29 36.8
comp=Z,4µm,22.0s,baz=88,slow=35
ARU Arti 94.81 326*c i*P **P** **03 47 08.2 -2.7**
ARU 03 50 56.9
ARU S **SKSac** **03 57 39.0 -2.8**
ARU SP **SP** **03 59 45.4 +9.1**
ARU SS SS 04 04 56.9 +11
ARU SSS SSS 04 08 23.4
ARU pmax pmax
comp=Z,120nm,1.3s
ARU Arti 94.81 326 P **P** **03 47 08.5 -2.4**
ARU IAmb IAmb 03 47 09.9
comp=Z,87nm,1.1s
SMMC Simmler 94.86 55 P **P** **03 47 11.7 0.0**
baz=266,SNR=21
BEKR Beckworth 94.88 51 P **P** **03 47 11.7 -0.1**
BEKR IAmb IAmb 03 47 13.9
comp=Z,102nm,1.3s
PKM Mcpherson Peak 94.98 56 P **P** **03 47 12.8 +0.3**
baz=266,SNR=36
C06D Leavenworth 94.99 42 P **P** **03 47 11.6 -0.4**
baz=267
SBC Santa Barbara 95.03 56 P **P** **03 47 12.2 -0.2**
baz=266
MOD Modoc Plateau 95.05 49 IAmb IAmb 03 47 14.7
comp=Z,104nm,1.2s
SCZ2 Santa Cruz Isl 95.07 56 P **P** **03 47 12.5 -0.2**
baz=266,SNR=5.6
LTY Liberty 95.11 43 IAmb IAmb 03 47 14.6
comp=Z,112nm,1.6s
SNCC San Nicolas Is 95.11 57 P **P** **03 47 13.0 +0.2**
baz=266,SNR=9.2
SNCC San Nicolas Is 95.11 57 IAmb IAmb 03 47 15.9
comp=Z,170nm,1.1s
PNTR Pine Nut 95.42 51 IAmb IAmb 03 47 16.8
comp=Z,104nm,1.3s
SOCY Socotra 95.42 282 P **P** **03 47 13.6 -1.1**
VOG Valley Oaks Go 95.42 54 P **P** **03 47 13.3 -0.9**
baz=266,SNR=5.6
F07A Phinny Hill Vi 95.54 45 IAmb IAmb 03 47 16.9
comp=Z,113nm,1.7s
PAHR Pah Rah Range 95.62 51 P **P** **03 47 15.8 +0.6**
PAHR IAmb IAmb 03 47 17.5
comp=Z,105nm,1.5s
E07A Sunnyside 95.63 44 IAmb IAmb 03 47 17.2
comp=Z,84nm,1.3s
VES Vestal, Richgr 95.64 55 P **P** **03 47 14.3 -0.9**
baz=267,SNR=27
RBK Rabkut 95.64 287 P **P** **03 47 15.1 -0.5**
SNR=7.9
ARVC Arvin 95.80 55 P **P** **03 47 15.8 -0.1**
baz=267,SNR=11
MLAC Mammoth, Mammo 95.93 53 P **P** **03 47 16.7 -0.1**
baz=267
CIS Catalina Islan 96.05 57 P **P** **03 47 16.9 -0.2**
baz=267,SNR=16
B08A Colville Reser 96.06 42 IAmb IAmb 03 47 18.7
comp=Z,176nm,1.6s
WHFO Wadi Hawf 96.09 287 P **P** **03 47 15.8 -1.8**
SNR=5.5
ISA Isabella, Lake 96.12 55 P **P** **03 47 17.0 -0.5**
baz=267,SNR=37
DECC Green Verdugo 96.16 56 P **P** **03 47 17.2 -0.4**
baz=267,SNR=5.6
FMP Fort Macarthur 96.17 57 P **P** **03 47 17.2 -0.4**
baz=267
G08A Pilot Rock 96.19 45 IAmb IAmb 03 47 19.7
comp=Z,125nm,1.8s
BELA Belgrano 2 96.20 179 P **P** **03 47 16.1 -0.8**
LHV Little Huntoon 96.23 52 IAmb IAmb 03 47 20.5
comp=Z,68nm,1.0s
PASC Pasadena Art C 96.28 56 IAmb IAmb 03 47 20.5
comp=Z,105nm,1.1s
D08A Wollman Farm, 96.29 43 IAmb IAmb 03 47 19.3
comp=Z,92nm,1.5s
TIN Tinemaha, Big 96.39 53 P **P** **03 47 18.0 -0.7**
baz=267,SNR=27
MWC Mount Wilson 96.39 56 IAmb IAmb 03 47 21.3
comp=Z,153nm,1.1s
NVAR Mina Array Bea 96.39 52 P **P** **03 47 18.4 -0.5**
comp=Z,26nm,0.9s,baz=255,slow=5.7,SNR=74
NVAR PP **PP** **03 51 12.0 -1.2**
comp=Z,4.3nm,0.9s,baz=256,slow=8.7,SNR=4.6
NVAR PKKP **PKKPdf** **04 04 06.2 -0.2**
comp=Z,4.2nm,0.6s,baz=64,slow=4.3,SNR=13
NVAR PKPPKP **P'P'df** **04 12 13.7 -4.2**
comp=Z,3.6nm,1.1s,baz=97,slow=4.7,SNR=9.2
NVAR LR LR 04 24 00.6
comp=Z,12µm,21.9s,baz=278,slow=31
NVAR Mina Array Bea 96.39 52 P **P** **03 47 18.5 -0.3**
EDW2 Edwards Air Fo 96.47 56 P **P** **03 47 19.1 0.0**
baz=267,SNR=55
CWC Cottonwood Cre 96.48 54 P **P** **03 47 18.6 -0.6**
baz=267
ABTO Aybut 96.50 287 P **P** **03 47 17.9 -1.6**
SNR=7.3
SBV Sambava 96.68 256 P **P** **03 47 20.4 +0.1**
SNR=12
BFSC Mount Baldy Ra 96.72 56 P **P** **03 47 19.9 -0.4**
baz=267,SNR=27
C09A Chrisman Ranch 96.75 43 IAmb IAmb 03 47 21.8
comp=Z,142nm,1.7s
LRMC Laurel Mtn Rad 96.76 55 P **P** **03 47 20.3 -0.1**
baz=267,SNR=77
E09A Wood Farm, Sta 96.80 44 IAmb IAmb 03 47 22.3
comp=Z,76nm,1.1s
MPMC Manual Prospec 96.94 54 P **P** **03 47 20.6 -0.8**
baz=268,SNR=64
GRAC Grapevine Rang 97.08 54 P **P** **03 47 20.8 -0.9**
baz=268,SNR=13
MURC Murrieta 97.08 57 P **P** **03 47 21.3 -0.5**
baz=268,SNR=8.6
109C Camp Elliot, M 97.12 58 P **P** **03 47 21.8 -0.1**
baz=267,SNR=7.6
RRX Edison Barstow 97.29 56 P **P** **03 47 22.4 -0.4**
baz=268
BBRC Big Bear Solar 97.33 56 P **P** **03 47 22.8 -0.4**
baz=268,SNR=7.7
FURC Furnace Creek, 97.46 54 P **P** **03 47 23.4 0.0**
baz=268,SNR=33
GSC Goldstone, Bar 97.47 55 P **P** **03 47 23.4 -0.2**
baz=268,SNR=29
TKX Tecate 97.53 58 P Pdif 03 47 24.3 +0.4
NEW Newport 97.53 42 P **P** **03 47 23.1 -0.4**
comp=Z,37nm,1.0s,baz=243,slow=3.8,SNR=33
NEW PP **PP** **03 51 21.6 +0.2**
comp=Z,9.6nm,0.9s,baz=302,slow=7.9,SNR=5.0
NEW PKPPKP **P'P'df** **04 12 13.7 -1.1**
comp=Z,2.5nm,1.0s,baz=122,slow=9.1,SNR=3.4
NEW Newport 97.53 42 P **P** **03 47 23.1 -0.4**
baz=269
NEW Newport 97.53 42 IAmb IAmb 03 47 25.4
comp=Z,69nm,1.1s
FOMA Nahampoana Res 97.63 244 IAmb IAmb 03 47 28.3
comp=Z,140nm,1.2s
PFO Pinyon Flats O 97.69 57 PKKP **PKKPbc** **04 04 01.9 +0.7**
comp=Z,3.4nm,0.6s,baz=70,slow=3.9,SNR=4.1
PFO Pinyon Flats O 97.69 57*ce*P Pdif 03 47 25.9 +1.2
PFO pmax pmax
comp=Z,58nm,1.0s
PFO Pinyon Flats O 97.69 57 P **P** **03 47 24.6 -0.1**
baz=268,SNR=25
PFO Pinyon Flats O 97.69 57 P Pdif 03 47 25.6 +0.8
MONP2 Monument Peak 97.69 58 P Pdif 03 47 25.3 +0.4
baz=268,SNR=26
TPFO Pinon Flats 97.69 57 P **P** **03 47 24.5 -0.2**
baz=268,SNR=28
HEC Hector,Ludlow 97.83 56 P **P** **03 47 25.1 -0.1**
baz=268,SNR=12
SHOC Shoshone, Teco 97.92 55 P **P** **03 47 25.3 -0.3**
baz=268,SNR=38
IKP In-Ko-Pah, Jac 97.95 58 P Pdif 03 47 26.3 +0.5
baz=268,SNR=10
TPNV Topopah Spring 97.97 54 P **P** **03 47 25.8 -0.1**
baz=268,SNR=37
NVL N'lazarevskaya 98.07 193⇑ *i*P **P** **03 47 23.9 -1.5**
NVL *e* 03 51 22.8
NVL *e*S **SKSac** **03 57 57.5 -0.9**
NVL *e*SS **SS** **04 05 39.5 +9.3**
NVL pmax pmax
comp=Z,208nm,1.4s
NVL MLR MLR
comp=Z,23µm,18.0s
BELC Belle Mtn. Jos 98.09 57 P Pdif 03 47 26.6 +0.1
baz=268,SNR=40
TUQ Turquoise Moun 98.19 55 P **P** **03 47 26.7 -0.2**
baz=268,SNR=32
SWSC Sam W. Stewart 98.22 58 P Pdif 03 47 27.1 +0.1
baz=268,SNR=9.8
RPN Rapa Nui 98.23 118 LR LR 04 23 53.5
comp=Z,8µm,21.9s,baz=253,slow=30
VOI Vohitsoka 98.33 247 P Pdif 03 47 28.0 +0.1
SNR=9.2
GMRC Granite Mounta 98.39 56 P Pdif 03 47 27.9 +0.1
baz=268,SNR=26
ABPO Ambohimpanom 98.41 250 P **P** **03 47 28.0 -0.3**
ABPO pmax pmax
comp=Z,136nm,1.1s
ABPO Ambohimpanom 98.41 250 P **P** **03 47 28.0 -0.3**
ABPO IAmb IAmb 03 47 29.6
comp=Z,136nm,1.1s

OPO **Ambohidratompo** 98.52 250 PKKP **PKKPbc** 04 04 00.0 +1.6
comp=Z,6.5nm,0.7s,baz=180,slow=4.1,SNR=8.2
R11A **Troy Canyon, C** 98.53 52 P **P** 03 47 27.9 -0.6
baz=269,SNR=21
BC3 **Big Chuckawall** 98.53 57 P **P** 03 47 28.4 0.0
baz=268,SNR=24
YKA **Yellowknife Ar** 98.61 28 P **P** 03 47 26.9 -1.0
comp=Z,78nm,1.0s,baz=277,slow=4.8,SNR=42
YKA PP **PP** 03 51 27.0 -2.1
comp=Z,17nm,0.9s,baz=271,slow=7.6,SNR=4.5
YKA PKKPbc **PKKPbc** 04 03 56.5 -3.0
comp=Z,15nm,0.8s,baz=90,slow=4.0,SNR=21
YKA Yellowknife Ar 98.61 28 *ce*P Pdif 03 47 28.8 +0.8
YKA pmax pmax
comp=Z,76nm,1.0s
IRM Iron Mountain 98.80 56 P Pdif 03 47 29.7 +0.2
baz=269,SNR=17
GLA Glamis 99.04 58 P **Pdif** 03 47 31.4 +0.7
baz=269,SNR=7.4
HLID Hailey 99.43 47 P **Pdif** 03 47 32.3 0.0
baz=271
PDMCI Parker Dam,Lak 99.63 56 P **Pdif** 03 47 33.2 0.0
baz=269,SNR=13
MSO Missoula 99.70 44 P **Pdif** 03 47 33.3 -0.1
baz=272
KIRV Kirov 99.73 328 P **Pdif** 03 47 30.9 -2.1
comp=Z,16nm,0.6s,baz=89,slow=6.7,SNR=5.2
KIRV PKPPKP **P'P'df** 04 12 11.1 +1.4
comp=Z,4.7nm,0.6s,baz=257,slow=2.6,SNR=12
KIRV Kirov 99.73 328 *c iP* **Pdif** 03 47 30.4 -2.6
BCYI Bear Canyon 100.14 46 Pdif **Pdif** 03 47 35.7 +0.2
SNAA Sanae 100.17 189 Pdiff **Pdif** 03 47 33.8 -1.1
SNAA Sanae 100.17 189 P **Pdif** 03 47 35.0 +0.1
comp=Z,122nm,1.1s,baz=155,slow=4.4,SNR=122
SNAA PP **PP** 03 51 39.0 -1.5
comp=Z,25nm,1.1s,baz=165,slow=6.9,SNR=5.1
SNAA PKIKP **PKiKP** 03 52 02.2 +0.1
comp=Z,18nm,0.8s,baz=206,slow=6.4,SNR=14
SNAA PKKPbc **PKKPbc** 04 03 51.9 -3.4
comp=Z,4.9nm,0.8s,baz=197,slow=3.7,SNR=7.9
SNAA Sanae 100.17 189 *c iP* **Pdif** 03 47 35.0 +0.1
SNAA pmax pmax
comp=Z,206nm,1.3s
SNAA Sanae 100.17 189 Pdif **Pdif** 03 47 33.9 -1.1
CCUT Cedar City 100.28 53 Pdif **Pdif** 03 47 36.9 +0.6
BGU Big Grassy Mou 100.50 50 Pdif **Pdif** 03 47 37.3 +0.2
Y14A Wickenburg 100.57 57 Pdif **Pdif** 03 47 38.7 +1.2
DUG Dugway, Tooele 100.67 50 P **Pdif** 03 47 37.5 -0.4
baz=271
DLMT Dillon 100.68 45 Pdif **Pdif** 03 47 38.7 +0.8
214A Organ Pipe Nat 100.72 59 P **Pdif** 03 47 39.1 +0.9
baz=270
214A Organ Pipe Nat 100.72 59 Pdif **Pdif** 03 47 40.1 +2.0
PKCU Pink Cliffs 101.11 53 Pdif **Pdif** 03 47 41.9 +1.7
HRY Holter Researc 101.15 44 Pdif **Pdif** 03 47 40.0 +0.1
MTPU Mount Pierson 101.20 53 Pdif **Pdif** 03 47 41.2 +0.7
BOZ Bozeman (W) 101.35 45 P **Pdif** 03 47 40.5 -0.3
baz=273
VNA2 Neumayer--Watz 101.50 188 Pdiff **Pdif** 03 47 41.1 +0.3
VNA3 Neumayer Olymp 101.51 187 Pdiff **Pdif** 03 47 40.3 -0.5
QLMT Earthquake Lak 101.53 46 Pdif **Pdif** 03 47 43.7 +2.0
ECR Eagle Creek 101.66 47 Pdif **Pdif** 03 47 43.5 +1.2
YHL Hebgen Lake 101.71 46 Pdif **Pdif** 03 47 44.5 +1.9
VNA1 Neumayer--Stat 101.87 188 Pdiff **Pdif** 03 47 42.4 +0.1
AHID Auburn Hatcher 101.87 48 Pdif **Pdif** 03 47 44.0 +0.7
WUAZ Wupatki 101.90 55 P **Pdif** 03 47 43.6 +0.1
baz=271
IMW Indian Meadow 101.93 47 Pdif **Pdif** 03 47 44.2 +0.6
YHH Holmes Hill 101.95 46 Pdif **Pdif** 03 47 45.0 +1.4
MAK Makhachkala 101.95 313 *eP* **Pdif** 03 47 40.0 -3.3
MAK *i* 03 52 02.8
MAK *e*SSS SSS 04 10 20.1
MAK pmax pmax
comp=Z,107nm,1.5s
Q16A Castle Valley 101.98 52 Pdif **Pdif** 03 47 45.2 +1.4
YNR Norris Junctio 102.07 46 Pdif **Pdif** 03 47 46.4 +2.2
H17A Grant Village 102.17 46 P **Pdif** 03 47 44.5 -0.1
baz=274
H17A Grant Village 102.17 46 Pdif **Pdif** 03 47 46.5 +2.0
LKWY Lake 102.28 46 P **Pdif** 03 47 47.0 +1.9
LKWY Lake 102.28 46 Pdif **Pdif** 03 47 47.0 +1.9
TUC Tucson 102.44 58 P **Pdif** 03 47 48.5 +2.7
TUC Tucson 102.44 58 P **Pdif** 03 47 45.3 -0.5
baz=271
TUC Tucson 102.44 58 Pdif **Pdif** 03 47 48.5 +2.7
EGMT Eagleton 102.47 42 P **Pdif** 03 47 44.9 -0.7
baz=275
SRU San Rafael Swe 102.47 51 P **Pdif** 03 47 46.4 +0.4
SRU San Rafael Swe 102.47 51 Pdif **Pdif** 03 47 46.4 +0.4
RES Resolute Bay 102.70 14 P **Pdif** 03 47 46.5 +0.6
comp=Z,12nm,1.1s,baz=283,slow=7.6,SNR=6.2
GCMT Greycliff 102.71 45 Pdif **Pdif** 03 47 48.2 +1.4
BW06 Boulder Array 103.01 48 P **Pdif** 03 47 47.2 -1.1
baz=274
PD31 Pinedale Array 103.01 48 Pdif **Pdif** 03 47 47.0 -1.4
PDAR Pinedale Array 103.01 48 Pdiff **Pdif** 03 47 47.5 -0.8
comp=Z,24nm,0.9s,baz=236,slow=1.6,SNR=107
PDAR PP **PP** 03 52 03.1 -0.2
comp=Z,4.0nm,0.9s,baz=269,slow=5.6,SNR=4.6
PDAR PKiKP **PKiKP** 03 52 09.8 +1.5
comp=Z,5.1nm,0.9s,baz=250,slow=4.4,SNR=6.3
PDAR PKKPbc **PKKPbc** 04 03 44.9 -1.6
comp=Z,3.0nm,0.7s,baz=106,slow=5.3,SNR=9.8
PDAR PKKP **PKKPdf** 04 03 57.0 +2.7
comp=Z,4.6nm,0.6s,baz=114,slow=4.1,SNR=11
PDAR PKPPKP **P'P'df** 04 12 02.5 -2.5
comp=Z,6.8nm,1.1s,baz=105,slow=3.5,SNR=11
RLMT Red Lodge 103.04 45 P **Pdif** 03 47 48.6 +0.2
baz=275
RDMU Red Mountain 103.14 50 Pdif **Pdif** 03 47 48.8 -0.1
W18A Petrified Fore 103.25 55 P **Pdif** 03 47 50.2 +0.6
baz=272
PV10 Paradox Valley 103.67 52 Pdif **Pdif** 03 47 53.2 +1.8
PV19 Morning Glory 103.72 52 Pdif **Pdif** 03 47 52.7 +1.1
TMCR Tamitsa 104.15 335 *eP* **Pdif** 03 47 50.0 -2.5
TMCR pmax pmax
comp=Z,46nm,0.7s
MVCO Mesa Verde 104.16 53 P **Pdif** 03 47 53.4 -0.2
baz=273
O20A White River Ci 104.18 50 P **Pdif** 03 47 53.0 -0.6
baz=274
KLMR Klimovskoe 104.32 331 *eP* **Pdif** 03 47 49.5 -3.9
KLMR *i* 03 52 12.9
KLMR PS **PS** 04 01 23.6 -1.8
KLMR SS SS 04 06 57.5 -0.4
KLMR pmax pmax
comp=Z,91nm,1.0s
KLMR MLR MLR
comp=Z,2μm,17.0s
KLMR Klimovskoe 104.32 331 *e*Pdif **Pdif** 03 47 49.5 -3.9
KLMR *e*Pdif **Pdif** 03 47 49.5 -3.9
KLMR *e*Pdif **Pdif** 03 47 49.5 -3.9
KLMR AMP 03 47 53.2
comp=Z,91nm,1.0s
KLMR *i* PP **PP** 03 52 12.9 +0.8
KLMR PS **PS** 04 01 23.7 -1.7
KLMR PS **PS** 04 01 23.7 -1.7
KLMR *e*PKKPbc **PKKPbc** 04 03 39.4 -3.4
KLMR SS **SS** 04 06 57.5 -0.4
KLMR SS **SS** 04 06 57.5 -0.4
KLMR LQ LQ 04 24 15.7
KLMR LQ LQ 04 24 15.7
KLMR LR LR 04 28 50.5
KLMR AMP 04 36 36.4
comp=Z,2μm,16.7s
ZEI Tsey 104.61 313 *eP* **Pdif** 03 47 52.7 -2.7
ZEI pmax pmax
comp=Z,14nm,1.4s
APA Apatity 104.88 339 ⇑ *iP* **Pdif** 03 47 53.9 -1.8
APA *i* 03 52 14.0
APA *i* 03 59 21.0
APA *i* PS **PS** 04 01 30.0 -1.0
121A Cookes Peak, D 104.97 58 P **PKiKP** 03 52 11.0 -1.1
baz=272
121A Cookes Peak, D 104.97 58 Pdif **Pdif** 03 47 59.3 +2.0
LAO LASA Array 105.00 43 P **PKiKP** 03 52 11.3 -0.2
baz=277
VRH Novokhopyorsk 105.02 321 *eP* **Pdif** 03 47 54.5 -2.2
VRH *e*SP SP 04 01 38.6 +13
VRH pmax pmax
comp=Z,40nm,1.3s
VRH MLR MLR
comp=Z,6μm,23.0s
K22A Casper 105.25 48 P **PKiKP** 03 52 11.6 -0.7
baz=276
K22A Casper 105.25 48 Pdif **Pdif** 03 47 58.2 0.0
KIV Kislovodsk 105.37 314 *i* P **Pdif** 03 47 54.7 -3.9
KIV *e*PS **PS** 04 01 34.3 -3.0
KIV *e*SS SS 04 07 11.4 -2.1
KIV MLR MLR
comp=Z,8μm,21.0s
PMSA Palmer Station 105.42 166 *eP* **Pdif** 03 48 00.2 +2.0
S22A 4UR Ranch, Cre 105.45 53 P **PKiKP** 03 52 13.0 +0.1
baz=274
S22A 4UR Ranch, Cre 105.45 53 Pdif **Pdif** 03 48 00.9 +1.5
Y22D IRIS PASSCAL I 105.62 56 P **PKiKP** 03 52 12.1 -1.0
baz=273
N23A Red Feather La 105.86 49 P **PKiKP** 03 52 11.1 -2.4
baz=276
BNM Barren Site 105.86 56 Pdif **Pdif** 03 48 01.7 +0.5
ANMO Albuquerque 105.95 56 PKKPab PKKPab 04 03 53.4 +0.4
comp=Z,26nm,1.2s,baz=122,slow=5.6,SNR=17
ANMO Albuquerque 105.95 56 P **PKiKP** 03 52 11.6 -2.2
baz=274
ISCO Idaho Springs 106.22 50 P **Pdif** 03 48 03.5 +0.7
ISCO Idaho Springs 106.22 50 P **PKiKP** 03 52 13.1 -1.2
baz=276
ISCO Idaho Springs 106.22 50 Pdif **Pdif** 03 48 03.5 +0.7
LPSR Galich'ya Gora 106.47 323 *eP* **Pdif** 03 48 00.9 -2.2
LPSR *e*SP SP 04 01 51.9 +11
LPSR pmax pmax
comp=Z,30nm,1.1s
LPSR MLR MLR
comp=Z,2μm,18.0s
SDCO Great Sand Dun 106.50 53 P **PKiKP** 03 52 13.7 -1.2
baz=275
MOS Moscow 106.52 326 *eP* **Pdif** 03 47 59.9 -3.4
MOS *e* 03 52 26.3
MOS *e*PS **PS** 04 01 52.9 +4.5
MOS pmax pmax
comp=Z,100nm,0.9s
MOS pmax pmax
comp=Z,35nm,0.8s
MOS MLR MLR
comp=N,4μm,22.0s
MOS MLR MLR
comp=E,8μm,22.0s
MOS MLR MLR
comp=Z,12μm,22.0s
VORD Divnogorie 106.57 321 *eP* **Pdif** 03 48 01.3 -2.3
VORD pmax pmax
comp=Z,20nm,1.3s
VSR Storozhevoye 106.60 322 *eP* **Pdif** 03 48 01.2 -2.6
VSR *e*SP SP 04 01 52.9 +11
VSR *e*SS **SS** 04 07 34.4 +4.8
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR MLR MLR
comp=Z,3μm,19.0s
Q24A Divide 106.66 51 P **PKiKP** 03 52 13.8 -1.3
baz=276
ARCES ARCESS Array B 106.67 342 Pdiff **Pdif** 03 48 02.4 -1.3
comp=Z,18nm,0.7s,baz=66,slow=6.9,SNR=38
ARCES PKiKP **PKiKP** 03 52 14.2 +0.4
comp=Z,9.0nm,0.8s,baz=70,slow=1.8,SNR=12
ARCES PKKPbc **PKKPbc** 04 03 32.5 -3.4
comp=Z,8.9nm,0.6s,baz=253,slow=2.8,SNR=20
RSSD Black Hills 106.87 46 P **Pdif** 03 48 05.4 0.0
RSSD Black Hills 106.87 46 P **PKiKP** 03 52 14.1 -1.2
baz=278
RSSD Black Hills 106.87 46 Pdif **Pdif** 03 48 05.4 0.0
MNTX Cornudas Mount 107.05 59 P **PKiKP** 03 52 15.0 -0.7
baz=274,SNR=5.3
OBN Obninsk 107.25 326 Pdiff **Pdif** 03 48 05.1 -1.4
comp=Z,2.3nm,0.5s,baz=7.7,slow=4.6,SNR=5.4
OBN Obninsk 107.25 326 *eP* **Pdif** 03 48 04.1 -2.4
OBN pmax pmax
comp=Z,46nm,1.7s
T25A Trinidad 107.42 53 P **PKiKP** 03 52 15.0 -1.5
baz=276
T25A Trinidad 107.42 53 Pdif **Pdif** 03 48 09.4 +1.3
SOC Sochi 107.55 314 *eP* **Pdif** 03 48 01.3 -6.9
SOC *i* 03 52 34.6
SOC *e* 03 58 40.3
SOC *e*PS **PS** 04 01 53.8 -5.8
SOC *e*SS SS 04 07 39.3 -3.6
SOC *e*SSS SSS 04 11 43.4
KSCO Kaye Shedlock' 108.61 51 P **PKiKP** 03 52 17.6 -1.0
baz=278
KSCO Kaye Shedlock' 108.61 51 Pdif **Pdif** 03 48 14.7 +1.5
TXAR Lajitas Array 108.67 61 Pdiff **Pdif** 03 48 16.8 +3.2
comp=Z,1.0nm,0.7s,baz=236,slow=4.0,SNR=7.5
TXAR PKiKP **PKiKP** 03 52 19.4 +0.5
comp=Z,3.1nm,0.7s,baz=143,slow=1.7,SNR=14
TXAR PP **PP** 03 52 45.1 -0.3
comp=Z,8.7nm,1.0s,baz=252,slow=6.4,SNR=11
TXAR PKKPbc **PKKPbc** 04 03 25.8 -2.7
comp=Z,5.4nm,0.6s,baz=110,slow=4.3,SNR=33
TXAR PKKPab **PKKPab** 04 03 42.0 +1.2
comp=Z,27nm,0.8s,baz=113,slow=6.9,SNR=36
TXAR PKPPKP **P'P'df** 04 11 57.0 +2.0
comp=Z,2.5nm,0.9s,baz=114,slow=3.1,SNR=8.6
DAG Danmarks Havn 108.94 357 *i* P **PKiKP** 03 52 15.4 -2.5
comp=Z,4μm,23.0s
DAG Danmarks Havn 108.94 357 *i* P **PKiKP** 03 52 15.5 -2.5
DAG IAMs_20 IAMs_20 04 46 05.9
comp=Z,4μm,22.8s
MSTX Muleshoe 109.06 56 P **PKiKP** 03 52 18.6 -1.0
baz=276
MDND Maddock 109.24 41 P **PKiKP** 03 52 19.0 -0.3
baz=283
AMTX Amarillo 109.86 55 P **PKiKP** 03 52 21.0 0.0
baz=277
FINES FINESS Array B 110.24 334 Pdiff **Pdif** 03 48 18.1 -1.6
comp=Z,12nm,0.7s,baz=69,slow=5.3,SNR=33
FINES PKiKP **PKiKP** 03 52 20.3 -0.4
comp=Z,6.8nm,0.7s,baz=78,slow=1.7,SNR=12
FINES PP **PP** 03 52 55.7 +0.3
comp=Z,17nm,1.0s,baz=75,slow=10,SNR=5.1
FINES PKKPbc **PKKPbc** 04 03 21.9 -2.4
comp=Z,9.8nm,0.7s,baz=145,slow=4.7,SNR=16
FINES PKKPab **PKKPab** 04 03 33.2 +0.1
comp=Z,18nm,0.9s,baz=204,slow=4.2,SNR=8.5
FINES FINESS Array B 110.24 334 Pdif **Pdif** 03 48 17.7 -2.0
KMBO Kilima Mbogo 110.76 267 Pdiff **Pdif** 03 48 26.4 +2.9
comp=Z,2.1nm,0.8s,baz=97,slow=3.7,SNR=6.9
KMBO Kilima Mbogo 110.76 267 P **Pdif** 03 48 25.2 +1.8
KMBO Kilima Mbogo 110.76 267 Pdif **Pdif** 03 48 25.2 +1.8
CBKS Cedar Bluff 110.86 51 P **PKiKP** 03 52 22.4 -0.3
baz=279
ULM Lac du Bonnet 111.01 38 Pdiff **Pdif** 03 48 24.1 +0.7
comp=Z,5.9nm,1.0s,baz=210,slow=8.5,SNR=3.7
ULM PKiKP **PKiKP** 03 52 22.3 -0.2
comp=Z,8.3nm,0.4s,baz=262,slow=1.9,SNR=29
ULM PP **PP** 03 52 58.6 -2.7
comp=Z,16nm,1.0s,baz=283,slow=8.5,SNR=7.5
ULM PKKPbc **PKKPbc** 04 03 19.2 -2.3
comp=Z,11nm,0.9s,baz=77,slow=3.7,SNR=6.6
ULM PKKP **PKKPdf** 04 03 40.4 +1.1
comp=Z,5.3nm,0.6s,baz=84,slow=2.8,SNR=7.7
ULM Lac du Bonnet 111.01 38 *c iP*KIKP **PKiKP** 03 52 22.1 -0.4
VSU Vasula 111.23 331 *eP* **PKiKP** 03 52 22.4 -0.2
ABTX Abilene, Hawle 111.82 57 P **PKiKP** 03 52 23.6 -1.0
baz=277,SNR=6.6
JCT Junction City 111.92 60 P **PKiKP** 03 52 24.0 -1.0
baz=276
BZK Bozkurt 111.98 313 ⇓ P **PKKPbc** 04 03 17.7 -0.3
USHA Ushuaia 112.11 158 PKiKP **PKiKP** 03 52 26.3 +1.8
comp=Z,22nm,0.7s,baz=196,slow=5.9,SNR=3.6
ECSD EROS Data Cent 112.20 45 P **PKiKP** 03 52 24.0 -1.0
baz=284
MICGM Minsk 112.22 327 *e*PKP **PKiKP** 03 52 22.0 -2.6
MICGM *e*pPKP PP 03 52 48.0 -22
MICGM *e*PP PP 03 53 12.0 +2.2
MICGM *e*PPP PPP 03 55 45.0
MICGM *e*SKS **SKSac** 03 58 54.0 -8.8
MICGM *e*SKKS **SKSdf** 03 59 35.0 +2.8
MICGM *e*SS **SS** 04 08 36.0 -8.6
MICGM *e*SSS SSS 04 13 10.0
MICGM *e*LQ LQ 04 27 20.0
MICGM *e*LR LR 04 36 30.0
MICGM LRM MLR 04 42 30.0
comp=E,6.3nm,20.0s
MICGM LRM MLR 04 42 32.0
comp=Z,8.6nm,18.0s
MNK Minsk 112.22 327 *e*PKIKP **PKiKP** 03 52 22.0 -2.6
MNK *e* 03 53 12.0
MNK *e* 03 59 35.0
MNK MLR MLR
comp=Z,9μm,18.0s
WMOK Wichita Mounta 112.25 55 P **PKiKP** 03 52 24.8 -0.6
baz=278,SNR=6.8
833A Chaparral WMA, 112.49 62 P **PKiKP** 03 52 24.2 -1.7
baz=275
IDID Didziasalis 112.51 328 *eP* **PKiKP** 03 52 25.5 +0.3
IZAR Zarasai 112.59 329 *eP* **PKiKP** 03 52 26.5 +1.1
NACGM **Naroch** 112.65 328 *e*PKP **PKiKP** 03 52 25.0 -0.5
NACGM *e*PP **PP** 03 53 14.0 +1.2
NACGM *e*PPP PPP 03 56 14.0
NACGM *e*PS **SP** 04 02 32.0 -8.8
NACGM *e*SS **SS** 04 08 54.0 +3.7
NACGM *e*SSS SSS 04 13 28.0
NACGM *e*LQ LQ 04 29 30.0
NACGM *e*LR LR 04 37 00.0
NACGM LRM MLR 04 44 50.0
comp=Z,16nm,18.0s
BRTR Keskin Array B 112.70 311 PKiKP **PKiKP** 03 52 25.7 -0.6
comp=Z,5.0nm,0.9s,baz=170,slow=2.6,SNR=8.4
BRTR PP **PP** 03 53 12.6 -1.5
comp=Z,3.3nm,0.9s,baz=134,slow=3.6,SNR=4.2
BRTR PKKPbc **PKKPbc** 04 03 15.8 0.0
comp=Z,13nm,0.9s,baz=209,slow=4.1,SNR=22
ISAL Salakas 112.73 329 *eP* **PKiKP** 03 52 25.7 +0.1
IIGN Ignalina 112.77 328 *eP* **PKiKP** 03 52 25.7 0.0
AKASG **Malin Array Be** 112.80 323 Pdiff **Pdif** 03 48 29.6 -1.8
comp=Z,1.7nm,0.7s,baz=57,slow=4.2,SNR=8.1
AKASG PKiKP **PKiKP** 03 52 24.9 -0.9
comp=Z,16nm,0.7s,baz=61,slow=2.3,SNR=35
AKASG PP **PP** 03 53 12.6 -1.5
comp=Z,39nm,1.3s,baz=55,slow=6.7,SNR=11
AKASG PKKPbc **PKKPbc** 04 03 13.7 -1.9
comp=Z,18nm,0.7s,baz=266,slow=3.9,SNR=11
AKASG PKPPKP **P'P'df** 04 11 45.7 +0.4
comp=Z,1.0nm,0.6s,baz=270,slow=2.5,SNR=5.4
AKASG **Malin Array Be** 112.80 323 *i* PKIKP **PKiKP** 03 52 25.0 -0.9
AKASG **Malin Array Be** 112.80 323 Pdif **Pdif** 03 48 29.0 -2.3
AKBB Malin Array Si 112.80 323 ⇓ *i*PKIKP **PKiKP** 03 52 25.2 -0.7
KSU1 Kansas State U 113.21 50 P **PKiKP** 03 52 26.3 -0.8
baz=282
WHTX Lake Whitney, 113.73 58 P **PKiKP** 03 52 27.6 -0.6
baz=278,SNR=5.0
435B Jarrell 113.79 59 P **PKiKP** 03 52 27.3 -1.1
baz=277
PABE Paberze 113.86 329 *eP* **PKiKP** 03 52 27.0 -0.8
LEF Lefka 114.15 306 ⇓ P **PKiKP** 03 52 29.4 +0.5
SORM Soroca 114.18 320 ⇓ P **PKiKP** 03 52 28.2 -0.4
SORM Soroca 114.18 320 ⇑ P **PKKPbc** 04 03 08.8 -2.0
SORM Soroca 114.18 320 ⇓ PKIKP PKPdf 03 52 28.2 -0.4
KIS Kishinev 114.25 319 *e*PKP **PKiKP** 03 52 32.0 +3.2
KIS Kishinev 114.25 319 *e*PP **PP** 03 53 24.0 -0.5
KIS Kishinev 114.25 319 *e*PKIKP **PKiKP** 03 52 32.0 +3.2
KIS *e* 03 53 24.0
KIS *e*PS **SP** 04 02 50.0 -6.0
MILM Milestii Mici 114.28 319 ⇓ P PKPdf 03 52 28.6 -0.2
SPMN Marine on St. 114.45 43 P PKPdf 03 52 28.1 -1.1
baz=287
EYMN Ely 114.45 40 P PKPdf 03 52 28.3 -0.9
baz=289
TUL1 Leonard 114.47 53 P PKPdf 03 52 28.8 -0.8
baz=281,SNR=7.6
PBUR Paburge 114.65 330 *eP* **PKiKP** 03 52 27.8 -1.5
TLCR 114.80 317 ⇑ P **PKiKP** 03 52 29.6 -0.3
TLCR 114.80 317 ⇑ PKIKP **PKiKP** 03 52 29.6 -0.3
JURR Jurilovca 114.89 317 ⇓ P **PKKPbc** 04 03 08.3 0.0
SUW Suwalki 114.93 328 *e*PKiKP **PKiKP** 03 52 29.5 -0.3
SUW *e*PP **PP** 03 53 28.5 -0.5
SUW *e*SS SS 04 10 11.8 +51
SUW *e*L L 04 38 56.5
comp=Z,11μm,26.4s
SUW Suwalki 114.93 328 P **Pdif** 03 48 39.6 -1.2
SUW Suwalki 114.93 328 Pdif **Pdif** 03 48 39.5 -1.2
SCIA State Center 115.08 46 P **PKiKP** 03 52 29.8 -0.7
baz=285
ORH Orhaniye 115.11 312 P PKKPbc 04 02 53.4 -14
TPGR Topolog 115.17 317 ⇓ P **PKiKP** 03 52 30.2 -0.4
TPGR Topolog 115.17 317 ⇑ P **PKKPbc** 04 03 06.9 -0.4
BOSA Boshof 115.25 235 PKP **PKPdf** 03 52 32.4 +0.9
comp=Z,40nm,0.7s,baz=129,slow=2.9,SNR=29
BOSA PKKPbc **PKKPbc** 04 03 08.3 +1.5
comp=Z,6.8nm,0.8s,baz=287,slow=4.3,SNR=7.0
BOSA PKKPab **PKKPab** 04 03 13.6 +1.0
comp=Z,11nm,1.0s,baz=277,slow=7.1,SNR=6.5
BOSA Boshof 115.25 235 *i* P **PKPdf** 03 52 32.2 +0.8
BOSA Boshof 115.25 235 *i* P **PKPdf** 03 52 32.2 +0.8
CFR Carcaliu 115.26 317 ⇓ P **PKPdf** 03 52 31.0 +0.2
CFR Carcaliu 115.26 317 ⇓ PKIKP **PKPdf** 03 52 31.0 +0.2
TIRR Tirgusor 115.30 317 ⇑ P **PKiKP** 03 52 29.8 -1.0
TIRR Tirgusor 115.30 317 ⇑ P **PKiKP** 03 52 29.8 -1.0
TIRR Tirgusor 115.30 317 ⇓ P **PKKPbc** 04 03 04.8 -2.1
TIRR Tirgusor 115.30 317 ⇑ PKIKP **PKiKP** 03 52 29.8 -1.0
TIRR Tirgusor 115.30 317 PKIKP **PKiKP** 03 52 30.4 -0.4
MFTR Murfatlar 115.37 316 ⇓ P **PKPdf** 03 52 31.2 +0.2
HKT Hockley 115.40 60 ⇓ *i*PKIKP **PKPdf** 03 52 31.4 0.0
HKT MLR MLR
comp=Z,17μm,18.0s
HKT Hockley 115.40 60 **PKiKP** 03 52 32.0 +0.6
GHRR 115.47 319 ⇑ P **PKPdf** 03 52 31.8 +0.7
GHRR 115.47 319 ⇑ P **PKKPbc** 04 03 05.6 -0.7
U38A Gravette 115.48 53 **PKiKP** 03 52 31.3 -0.2
TLBR Topalu 115.52 317 ⇓ P **PKPdf** 03 52 31.6 +0.3
HARR Harsova 115.55 317 ⇑ P **PKPdf** 03 52 31.4 +0.1
HARR Harsova 115.55 317 ⇑ PKIKP **PKPdf** 03 52 31.4 +0.1
PRAR RASCA 115.79 320 ⇓ P **PKKPbc** 04 03 04.5 -0.8
ISK Istanbul-Kandi 115.80 313 P **PKiKP** 03 52 30.6 -1.3
ODBI Odobesti 115.80 318 ⇑ P **PKPdf** 03 52 33.4 +1.6
TESR Tescani 115.82 319 ⇑ P **PKPdf** 03 52 32.4 +0.6
VRI Vrincioaia 115.98 319 ⇓ P **PKPdf** 03 52 32.0 -0.2
VRI Vrincioaia 115.98 319 ⇑ P **PKKPbc** 04 03 03.1 -1.4
VRI Vrincioaia 115.98 319 ⇓ PKIKP **PKPdf** 03 52 32.0 -0.2
BIZ Bicaz 116.02 320 ⇑ P **PKiKP** 03 52 32.6 +0.4
S39A Bolivar 116.04 51 **PKPdf** 03 52 32.1 -0.4
PLOR Plostina 116.04 319 ⇓ P **PKPdf** 03 52 32.2 -0.1
PLOR Plostina 116.04 319 ⇓ P **PKKPbc** 04 03 02.6 -1.8
PLOR Plostina 116.04 319 ⇓ PKIKP **PKPdf** 03 52 32.2 -0.1
HFS Hagfors 116.08 337 PKP **PKPdf** 03 52 32.4 +0.5
comp=Z,6.6nm,0.7s,baz=70,slow=5.2,SNR=10
BISRR Bisoca 116.10 318 ⇓ P **PKiKP** 03 52 33.0 +0.5
NATX Nacogdoches 116.12 58 P **PKPdf** 03 52 31.7 -1.1
baz=280
W39A Magazine 116.21 54 P **PKPdf** 03 52 32.5 -0.5
baz=282,SNR=8.8
LVV L'vov 116.22 323 *e*PKIKP **PKPdf** 03 52 31.5 -1.0
LVV MLR MLR
comp=N,4μm,22.0s
LVV MLR MLR
comp=E,4μm,22.0s
LVV MLR MLR
comp=Z,5μm,22.0s
NC303 NORSAR Array S 116.27 338 **PKiKP** 03 52 32.5 +0.2
LBTB Lobatse 116.31 238 PKKPbc PKKPbc 04 03 04.0 +1.0
comp=Z,13nm,0.7s,baz=282,slow=4.9,SNR=22
LBTB Lobatse 116.31 238 *i* P **PKiKP** 03 52 34.2 +0.7
LBTB Lobatse 116.31 238 *i* P **PKiKP** 03 52 34.2 +0.7
BURAR **Bucovina Array** 116.34 321 ⇑ P **PKKPbc** 04 03 03.4 -0.1
BURAR **Bucovina Array** 116.34 321 **PKiKP** 03 52 33.5 +0.5
NEHR Nehoiu 116.41 318 ⇑ P **PKiKP** 03 52 33.6 +0.6
NEHR Nehoiu 116.41 318 ⇓ P **PKKPbc** 04 03 01.3 -1.8
NB2 NORSAR Subarra 116.45 338 P **Pdif** 03 48 45.6 -1.8
comp=Z,3.9nm,0.9s,baz=50,slow=4.4
NB2 NORSAR Subarra 116.45 338 PKPdf **PKPdf** 03 52 31.5 -1.2
comp=Z,25nm,1.7s,baz=44,slow=1.9
NB2 NORSAR Subarra 116.45 338 PKPdf **PKPdf** 03 52 31.5 -1.2
baz=44,slow=1.9
NB2 NORSAR Subarra 116.45 338 P **Pdif** 03 48 45.6 -1.8
baz=50,slow=4.4
NOA NORSAR Array B 116.45 338 PKP **PKPdf** 03 52 31.4 -1.3
comp=Z,12nm,0.9s,baz=51,slow=2.0,SNR=22
NOA PP **PP** 03 53 38.8 -0.6
comp=Z,17nm,1.1s,baz=46,slow=6.4,SNR=5.1
NOA PKKPbc **PKKPbc** 04 03 01.5 -1.9
comp=Z,13nm,0.7s,baz=50,slow=3.4,SNR=50
L40A Anamosa 116.47 46 **PKPdf** 03 52 33.0 -0.3
MIAR Mount Ida 116.51 54 PKIKP **PKiKP** 03 52 33.8 +0.3
MIAR Mount Ida 116.51 54 P **PKPdf** 03 52 32.7 -0.8
baz=282,SNR=9.0
MIAR Mount Ida 116.51 54 **PKiKP** 03 52 33.8 +0.3
OZUR 116.52 319 ⇓ P **PKiKP** 03 52 34.0 +0.8
OZUR 116.52 319 ⇑ P **PKKPbc** 04 02 58.6 -4.2
AKAS Kas 116.55 308 **PKPdf** 03 52 33.5 -0.2
MLR Muntele Rosu 116.62 318 PKP **PKPdf** 03 52 32.6 -1.0
comp=Z,28nm,0.9s,baz=29,slow=4.2,SNR=21
MLR PP **PP** 03 53 44.2 +2.8
comp=Z,17nm,1.2s,baz=40,slow=4.1,SNR=6.2
MLR Muntele Rosu 116.62 318 ⇑ P **PKPdf** 03 52 33.2 -0.4
MLR Muntele Rosu 116.62 318 ⇓ P **PKKPbc** 04 03 01.0 -1.5

MLR	**Muntele Rosu**	**116.62**	**318**	⇑PKIKP	**PKPdf**	**03 52 33.2**	**-0.4**
MLR	**Muntele Rosu**	**116.62**	**318**	PKPdf	**PKPdf**	**03 52 32.7**	**-0.9**
SECR		**116.70**	**318**	⇑P	**PKiKP**	**03 52 34.6**	**+1.1**
U40A	**Yellville**	**116.70**	**52**	P	**PKPdf**	**03 52 32.6**	**-1.3**
	baz=283,SNR=27						
R40A	**Maddies Statio**	**116.70**	**50**		**PKPdf**	**03 52 33.4**	**-0.4**
ICESG	**Greenland Ices**	**116.81**	**3**	*i* P	**PKPdf**	**03 52 33.2**	**-0.3**
ICESG				IAmb	IAmb	03 52 34.3	
	comp=Z,30nm,0.9s						
FETY	**Fethiye**	**116.87**	**308**	P	**PKiKP**	**03 52 34.2**	**0.0**
JFWS	**Jewell Farm**	**116.90**	**45**	P	**PKPdf**	**03 52 32.6**	**-1.4**
	baz=288						
LSZ	**Lusaka**	**116.98**	**250**	PKKPbc	PKKPbc	04 03 02.2	+1.8
	comp=Z,8.2nm,0.9s,baz=239,slow=0.6,SNR=7.6						
LSZ	**Lusaka**	**116.98**	**250**	*i* P	**PKiKP**	**03 52 36.6**	**+1.5**
LSZ	**Lusaka**	**116.98**	**250**	PKIKP	**PKiKP**	**03 52 36.1**	**+1.0**
LSZ	**Lusaka**	**116.98**	**250**		**PKiKP**	**03 52 36.1**	**+1.0**
LSZ	**Lusaka**	**116.98**	**250**	*i* P	**PKiKP**	**03 52 36.6**	**+1.5**
X40A	**Basin Creek Fa**	**117.12**	**54**	P	**PKPdf**	**03 52 33.6**	**-1.1**
	baz=282						
SUR	**Sutherland**	**117.14**	**229**	PKP	**PKiKP**	**03 52 36.2**	**+1.1**
	comp=Z,54nm,0.6s,baz=122,slow=3.2,SNR=79						
BEL	**Belsk**	**117.21**	**326**	*e*PKiKP	**PKiKP**	**03 52 34.4**	**0.0**
BEL				*e*PP	**PP**	**03 53 46.2**	**+1.2**
BEL				*e*SKKSdf	SKKSdf	04 10 53.7	+18
BEL				*e*L	L	04 39 47.7	
	comp=Z,10μm,29.1s						
VOIR		**117.23**	**319**	⇑P	**PKiKP**	**03 52 35.5**	**+0.8**
VOIR		**117.23**	**319**	⇑P	**PKKPbc**	**04 02 58.3**	**-1.9**
VOIR		**117.23**	**319**	⇑PKIKP	**PKiKP**	**03 52 35.5**	**+0.8**
MBAR	**Mbarara**	**117.29**	**266**	*i* P	**PKiKP**	**03 52 37.2**	**+1.4**
MBAR	**Mbarara**	**117.29**	**266**	*c i* PKIKP	**PKiKP**	**03 52 36.4**	**+0.6**
MBAR				MLR	MLR		
	comp=Z,7μm,21.0s						
MBAR	**Mbarara**	**117.29**	**266**		**PKiKP**	**03 52 36.3**	**+0.4**
MBAR	**Mbarara**	**117.29**	**266**	*i* P	**PKiKP**	**03 52 37.2**	**+1.4**
Z41A	**Richland Creek**	**117.39**	**56**	P	**PKPdf**	**03 52 34.8**	**-0.4**
	baz=281						
CMIG	**Matias Romero**	**117.39**	**74**	PKKPab	PKKPab	04 03 03.4	+1.0
	comp=Z,25nm,1.1s,baz=72,slow=5.6,SNR=13						
W41B	**Gary Mavity, V**	**117.44**	**53**	P	**PKPdf**	**03 52 34.1**	**-1.1**
	baz=283,SNR=16						
ARR	**Arges**	**117.53**	**319**	⇑P	**PKiKP**	**03 52 36.7**	**+1.4**
CCM	**Cathedral Cave**	**117.54**	**50**	PKIKP	**PKPdf**	**03 52 34.6**	**-0.8**
CCM	**Cathedral Cave**	**117.54**	**50**	P	**PKPdf**	**03 52 34.7**	**-0.8**
	baz=285						
CCM	**Cathedral Cave**	**117.54**	**50**		**PKPdf**	**03 52 34.6**	**-0.8**
COPA	**Copaceanca**	**117.57**	**317**	⇓P	**PKPdf**	**03 52 35.0**	**-0.2**
HUMR	**Humele**	**117.60**	**318**	⇓P	**PKPdf**	**03 52 35.2**	**-0.1**
HUMR	**Humele**	**117.60**	**318**	⇓P	**PKKPbc**	**04 02 57.7**	**-1.0**
KOLS	**Kolonicke sedl**	**117.63**	**323**	*e*PKIKP	**PKPdf**	**03 52 34.5**	**-0.8**
KOLS	**Kolonicke sedl**	**117.63**	**323**	*e*PKP	**PKPdf**	**03 52 34.5**	**-0.8**
ZIMR		**117.63**	**317**	⇑P	**PKiKP**	**03 52 36.3**	**+0.9**
ZIMR		**117.63**	**317**	⇑PKIKP	**PKiKP**	**03 52 36.3**	**+0.9**
CJR	**Cluj-Napoca**	**117.70**	**320**	⇓P	**PKiKP**	**03 52 35.9**	**+0.3**
CJR	**Cluj-Napoca**	**117.70**	**320**	⇓PKIKP	**PKiKP**	**03 52 35.9**	**+0.3**
UZH	**Uzhgorod**	**117.75**	**323**	*e*PKIKP	**PKPdf**	**03 52 34.5**	**-1.0**
UZH				*i*		03 52 43.3	
UZH				*i*		03 52 51.2	
UZH				*i*		03 53 50.6	
SFJD	**Kangerlussuaq**	**117.76**	**8**	PKP	**PKiKP**	**03 52 34.9**	**0.0**
	comp=Z,16nm,0.8s,baz=354,slow=2.9,SNR=7.0						
SFJD				PKKPbc	**PKKPbc**	**04 02 57.9**	**-0.9**
	comp=Z,8.5nm,0.7s,baz=164,slow=10.0,SNR=4.5						
SFJD	**Kangerlussuaq**	**117.76**	**8**	*i* PKIKP	**PKPdf**	**03 52 34.5**	**-0.4**
SFJD	**Kangerlussuaq**	**117.76**	**8**		**PKiKP**	**03 52 35.0**	**+0.1**
SFJD	**Kangerlussuaq**	**117.76**	**8**	*i* P	**PKPdf**	**03 52 34.5**	**-0.4**
SFJD	**Kangerlussuaq**	**117.76**	**8**	*i* P	**PKPdf**	**03 52 34.5**	**-0.4**
CCAR	**Cane Creek**	**118.10**	**55**	PKPdf	**PKiKP**	**03 52 37.5**	**+0.8**
CRVS	**Cervenica-Dubn**	**118.13**	**323**	*e*PKIKP	**PKPdf**	**03 52 36.2**	**0.0**
CRVS	**Cervenica-Dubn**	**118.13**	**323**	*e*PKP	**PKPdf**	**03 52 36.2**	**0.0**
BODT	**Bodrum**	**118.15**	**309**	P	**PKPdf**	**03 52 36.2**	**-0.4**
HDIL	**Hopedale**	**118.30**	**47**	P	**PKPdf**	**03 52 36.2**	**-0.6**
	baz=288						
RDO	**Rodhopi**	**118.32**	**314**	P	**PKPdf**	**03 52 36.0**	**-0.8**
SMG	**Samos**	**118.35**	**310**	P	**PKPdf**	**03 52 35.5**	**-1.5**
GKP	**Gorka Klasztor**	**118.39**	**329**	*e*PKiKP	**PKPdf**	**03 52 36.5**	**-0.1**
GKP				*e*PP	**PP**	**03 53 54.1**	**+1.0**
GKP				*e*SKKSdf	SKKSdf	04 11 00.1	+26
GKP				*e*L	L	04 45 43.8	
	comp=Z,18μm,20.5s						
OJC	**Ojcow**	**118.51**	**325**	*e*PKiKP	**PKPdf**	**03 52 36.3**	**-0.6**
OJC				*e*PP	**PP**	**03 53 54.2**	**+0.1**
OJC				*e*L	L	04 38 52.6	
	comp=Z,8μm,28.8s						
BSD	**Bornholm Skovb**	**118.53**	**332**	*i* PKIKP	**PKPdf**	**03 52 36.4**	**-0.3**
BSD				MLR	MLR		
	comp=Z,11μm,20.0s						
BSD	**Bornholm Skovb**	**118.53**	**332**	*i* P	**PKPdf**	**03 52 36.4**	**-0.3**
	comp=Z,11μm,20.0s						
BSD	**Bornholm Skovb**	**118.53**	**332**	*i* P	**PKPdf**	**03 52 36.5**	**-0.3**
BSD				IAms_20	IAms_20	04 45 48.2	
	comp=Z,11μm,20.2s						
SMTH	**Samothraki Isl**	**118.53**	**313**	P	**PKPdf**	**03 52 36.4**	**-0.9**
NIE	**Niedzica**	**118.59**	**324**	*e*PKiKP	**PKiKP**	**03 52 37.5**	**+0.4**
NIE				*e*SKKSdf	SKKSdf	04 10 40.8	+7.5
NIE				*e*L	L	04 39 41.4	
	comp=Z,5μm,31.3s						
143A	**Socs Landing,**	**118.66**	**56**		**PKiKP**	**03 52 38.2**	**+0.5**
X43A	**Marvell**	**118.69**	**54**	P	**PKPdf**	**03 52 37.1**	**-0.6**
	baz=283						
GZR	**Gura Zlata**	**118.74**	**319**	⇑P	**PKKPbc**	**04 02 52.6**	**-2.2**
L44A	**Lake County Fo**	**118.77**	**45**	P	**PKPdf**	**03 52 35.8**	**-1.8**
	baz=290						
MPEP	**Malo Peshtene**	**118.85**	**317**	P	**PKPdf**	**03 52 37.0**	**-0.8**
LPAR	**Lepanto**	**118.89**	**53**		**PKiKP**	**03 52 38.5**	**+0.4**
GNAR	**Gosnell**	**119.02**	**52**		**PKiKP**	**03 52 39.1**	**+0.7**
GNAR					**PKKPab**	**04 02 55.7**	**+0.9**
PUNG	**Punghina**	**119.06**	**318**	⇓P	**PKiKP**	**03 52 38.7**	**+0.5**
PEBM	**Pemiscott Bayo**	**119.11**	**52**	PKPdf	**PKPdf**	**03 52 38.1**	**-0.3**
PEBM					**PKKPab**	**04 02 55.0**	**+0.6**
S44A	**Carbondale**	**119.16**	**50**	PKKPbc	PKKPbc	04 02 54.2	+1.2
HERR	**Herculane**	**119.17**	**319**	⇑P	**PKPdf**	**03 52 37.7**	**-0.7**
HERR	**Herculane**	**119.17**	**319**	⇓P	**PKKPbc**	**04 02 51.0**	**-2.1**
LANS	**Liptovska Anna**	**119.20**	**324**	*e*PKIKP	**PKiKP**	**03 52 39.4**	**+1.0**
LANS	**Liptovska Anna**	**119.20**	**324**	*e*PKP	**PKiKP**	**03 52 39.4**	**+1.0**
BZS	**Buzias**	**119.40**	**320**	⇓P	**PKKPbc**	**04 02 51.5**	**-0.8**
LNXT	**Lenox**	**119.40**	**52**		PKKPab	04 02 53.7	+0.5
NVR	**Nevrokopi**	**119.45**	**314**	P	**PKPdf**	**03 52 36.1**	**-2.9**
VTS	**Vitosha**	**119.45**	**316**	P	**PKPdf**	**03 52 37.6**	**-1.6**
344A	**Westbrook Farm**	**119.47**	**57**		**PKiKP**	**03 52 40.3**	**+0.9**
344A					**PKKPab**	**04 02 54.3**	**+1.4**
HICK	**Hickman**	**119.49**	**51**	PKKPbc	PKKPbc	04 02 53.0	+1.3
VBMS	**Vicksburg**	**119.49**	**56**	P	**PKPdf**	**03 52 38.5**	**-0.8**
	baz=282						
VBMS	**Vicksburg**	**119.49**	**56**		PKKPab	04 02 53.5	+0.7
PSZ	**Piszkesteto**	**119.50**	**323**	⇑P	**PKPdf**	**03 52 38.9**	**-0.1**
PSZ	**Piszkesteto**	**119.50**	**323**	⇑PKIKP	**PKPdf**	**03 52 38.9**	**-0.1**
PSZ	**Piszkesteto**	**119.50**	**323**	PKKPbc	PKKPbc	04 02 52.4	+0.2
GLAT	**Glass**	**119.52**	**52**	PKKPbc	PKKPbc	04 02 52.5	+0.9
APE	**Apeiranthos**	**119.52**	**309**	⇓P	**PKPdf**	**03 52 38.3**	**-1.0**
APE	**Apeiranthos**	**119.52**	**309**	⇓PKIKP	**PKPdf**	**03 52 38.3**	**-1.0**
APE	**Apeiranthos**	**119.52**	**309**	P	**PKPdf**	**03 52 37.4**	**-1.9**
HALT	**Halls**	**119.57**	**52**	PKKPbc	PKKPbc	04 02 52.4	+1.0
OKC	**Ostrava-Krasne**	**119.63**	**325**	*e*PKIKP	**PKiKP**	**03 52 39.1**	**0.0**
OKC				MLR	MLR		
	comp=Z,6μm,19.7s						
OKC	**Ostrava-Krasne**	**119.63**	**325**	*e*PKPDF	**PKiKP**	**03 52 39.1**	**0.0**
OKC				*e*PKKP	**PKKPbc**	**04 02 51.4**	**-0.2**
OKC				*ex*	x	04 04 01.4	
OKC				AMS	AMS	04 45 10.0	
	comp=Z,6μm,19.7s						
MDVR	**Moldovita**	**119.67**	**319**	⇓P	**PKiKP**	**03 52 39.5**	**0.0**
OLIL	**Olney**	**119.73**	**49**	PKKPbc	PKKPbc	04 02 51.3	+0.4
SNART	**Snartemo**	**119.78**	**338**	*i* P	**PKPdf**	**03 52 37.0**	**-2.0**
SNART				*i* P	**PKiKP**	**03 52 39.3**	**+0.2**
HOPE	**Hope Point**	**119.78**	**177**	PKIKP	**PKiKP**	**03 52 39.4**	**+0.1**
HOPE	**Hope Point**	**119.78**	**177**		**PKiKP**	**03 52 39.4**	**+0.1**
LNIZ	**Loecknitz**	**119.79**	**330**	*e*PKP	**PKPdf**	**03 52 38.9**	**-0.3**
	baz=54,slow=1.9						
BANR	**Banloc**	**119.81**	**320**	⇓P	**PKiKP**	**03 52 41.1**	**+1.5**
T45A	**Paducah**	**119.81**	**51**	PKKPbc	PKKPbc	04 02 51.6	+1.1
KKB	**Krupnik**	**119.82**	**315**	P	**PKPdf**	**03 52 38.9**	**-0.8**
UTMT	**University of**	**119.83**	**51**	PKKPbc	PKKPbc	04 02 51.6	+1.2
OXF	**Oxford**	**119.87**	**54**	P	**PKPdf**	**03 52 38.7**	**-1.3**
	baz=284						
OXF	**Oxford**	**119.87**	**54**	PKKPbc	PKKPbc	04 02 49.7	-0.5
VYHS	**Vyhne**	**119.87**	**324**	*e*PKIKP	**PKPdf**	**03 52 39.3**	**-0.3**
VYHS	**Vyhne**	**119.87**	**324**	*e*PKP	**PKPdf**	**03 52 39.3**	**-0.3**
W45A	**Hickory Valley**	**119.89**	**53**	PKKPbc	PKKPbc	04 02 50.7	+0.5
Y45A	**Yeager Farm, C**	**119.92**	**54**		PKKPab	04 02 51.4	+0.5
SFIN	**Lafayette**	**119.94**	**46**	P	**PKPdf**	**03 52 38.8**	**-1.2**
	baz=289						
MORC	**Moravsky Berou**	**120.00**	**325**	⇓P	**PKKPbc**	**04 02 50.2**	**-0.1**
MORC	**Moravsky Berou**	**120.00**	**325**	*e*PKP	**PKPdf**	**03 52 39.6**	**-0.3**
MORC				*e*PKKP	**PKKPbc**	**04 02 48.8**	**-1.5**
MORC				*e*PS	**PS**	**04 03 59.8**	**+4.6**
MORC				*e*PKPPKP	P'P'df	04 11 00.2	-31
MORC	**Moravsky Berou**	**120.00**	**325**	PKIKP	**PKiKP**	**03 52 40.0**	**+0.1**
MORC	**Moravsky Berou**	**120.00**	**325**		**PKiKP**	**03 52 40.0**	**+0.1**
MORC				PKKPbc	**PKKPbc**	**04 02 50.1**	**-0.1**
GLMI	**Grayling**	**120.03**	**41**	P	**PKPdf**	**03 52 38.9**	**-1.1**
	baz=294						
CCIG	**Comitan**	**120.06**	**75**	PKKPbc	PKKPbc	04 02 50.6	+1.3
LAST	**Lasithi**	**120.07**	**307**	P	**PKiKP**	**03 52 40.9**	**+0.3**
P46A	**Rosedale**	**120.11**	**47**	PKKPbc	PKKPbc	04 02 49.3	-0.2
KSP	**Ksiaz**	**120.15**	**327**	*e*PKiKP	**PKPdf**	**03 52 39.9**	**-0.1**
KSP				*e*PP	**PP**	**03 54 06.6**	**+1.3**
KSP				*e*L	L	04 41 40.5	
	comp=Z,9μm,27.2s						
NUUK	**Nuuk**	**120.20**	**10**	*i* P	**PKiKP**	**03 52 40.0**	**+0.2**
NUUK				IAmb	IAmb	03 52 41.1	
	comp=Z,37nm,0.9s						
MUD	**Monsted U'grnd**	**120.27**	**335**	*i* P	**PP**	**03 54 05.0**	**-0.8**
MUD	**Monsted U'grnd**	**120.27**	**335**	*e*P	**PKiKP**	**03 52 40.6**	**+0.5**
MUD				IAmb	IAmb	03 52 42.7	
	comp=Z,16nm,0.8s						
MUD				*i* P	**PP**	**03 54 05.0**	**-0.8**
MUD				IAMs_20	IAMs_20	04 44 09.1	
	comp=Z,10μm,23.6s						
MUD	**Monsted U'grnd**	**120.27**	**335**				
	comp=Z,10μm,24.0s						
KRLC	**Kraliky**	**120.28**	**326**	*e*PKIKP	**PKiKP**	**03 52 40.5**	**0.0**
KRLC				MLR	MLR		
	comp=Z,6μm,19.7s						
KRLC	**Kraliky**	**120.28**	**326**	*e*PKPDF	**PKiKP**	**03 52 40.5**	**0.0**
KRLC				*e*PKKP	**PKKPab**	**04 02 48.7**	**-0.4**
KRLC				AMS	AMS	04 45 30.0	
	comp=Z,6μm,19.7s						
USIN	**University of**	**120.28**	**49**	PKKPbc	PKKPbc	04 02 47.7	-1.1
OSTC	**Ostas**	**120.34**	**327**	*e*PKPDF	**PKPdf**	**03 52 40.2**	**-0.3**
OSTC				*e*PP	**PP**	**03 54 08.9**	**+2.2**
OSTC				*e*PKKP	**PKKPab**	**04 02 48.5**	**-0.3**
OSTC				*e*SP	SP	04 04 01.8	+11
OSTC				AMS	AMS	04 44 50.0	
	comp=Z,7μm,22.4s						
ISOG	**Isortoq, Green**	**120.36**	**3**	*i* P	**PKPdf**	**03 52 39.4**	**-0.6**
ANGG	**Ammassalik, Gr**	**120.37**	**3**	*i* P	**PKPdf**	**03 52 38.8**	**-1.2**
JAVC	**Velka Javorina**	**120.38**	**324**	*e*PKP	**PKiKP**	**03 52 41.1**	**+0.4**
JAVC				*e*PKKP	**PKKPbc**	**04 02 48.9**	**0.0**
JAVC				*e*PS	**PS**	**04 03 58.5**	**-0.1**
JAVC				*e*PKPPKP	P'P'df	04 11 02.6	-28
DPC	**Dobruska-Polom**	**120.39**	**326**	*e*PKIKP	**PKiKP**	**03 52 40.9**	**+0.2**
DPC				*e*SP	SP	04 03 58.4	+7.1
DPC				MLR	MLR		
	comp=Z,6μm,21.3s						
DPC	**Dobruska-Polom**	**120.39**	**326**	*e*PKPDF	**PKiKP**	**03 52 40.9**	**+0.2**
DPC				*e*PKKP	**PKKPab**	**04 02 48.3**	**-0.3**
DPC				*e*PS	**PS**	**04 03 58.4**	**-0.3**
DPC				AMS	AMS	04 45 20.0	
	comp=Z,6μm,21.3s						
CHVC	**Chvalec**	**120.42**	**327**	*e*PKPDF	**PKPdf**	**03 52 40.1**	**-0.5**
CHVC				*e*PKKP	**PKKPab**	**04 02 48.3**	**-0.2**
CHVC				AMS	AMS	04 45 00.0	
	comp=Z,7μm,21.8s						
DION	**Dionisos Attik**	**120.44**	**311**	P	**PKPdf**	**03 52 38.4**	**-2.6**
UPC	**Upice**	**120.48**	**327**	*e*PKIKP	**PKiKP**	**03 52 41.1**	**+0.3**
UPC				*e*SP	SP	04 04 04.0	+12
UPC				MLR	MLR		
	comp=Z,7μm,23.6s						
UPC	**Upice**	**120.48**	**327**	*e*PKP	**PKiKP**	**03 52 41.1**	**+0.3**
UPC				*e*PKKP	**PKKPab**	**04 02 48.2**	**0.0**
UPC				*e*PS	**PS**	**04 04 04.0**	**+4.7**
UPC				AMS	AMS	04 45 10.0	
	comp=Z,7μm,23.6s						
SRO	**Srobarova**	**120.50**	**323**	*e*PKIKP	**PKiKP**	**03 52 41.1**	**+0.2**
SRO	**Srobarova**	**120.50**	**323**	*e*PKP	**PKiKP**	**03 52 41.1**	**+0.2**
IDI	**Anoyia**	**120.50**	**308**	⇑P	**PKiKP**	**03 52 41.5**	**+0.1**
IDI	**Anoyia**	**120.50**	**308**	⇓P	**PKKPbc**	**04 02 48.3**	**+0.3**
IDI	**Anoyia**	**120.50**	**308**	PKKPbc	PKKPbc	04 02 49.0	+1.0
STIP	**Stip**	**120.51**	**315**	*i* P	**PKPdf**	**03 52 40.0**	**-1.0**
J47A	**Sunmer**	**120.51**	**43**		**PKiKP**	**03 52 41.4**	**+0.3**
346A	**Big Creek Wild**	**120.54**	**57**	PKKPbc	PKKPbc	04 02 48.5	+0.8
RUE	**Ruedersdorf**	**120.58**	**330**	*e*P	**PKiKP**	**03 52 41.2**	**+0.4**
146A	**Union**	**120.60**	**56**	PKKPbc	PKKPbc	04 02 48.4	+0.9
SMOL	**Smolenice**	**120.69**	**324**	*e*PKIKP	**PKiKP**	**03 52 41.3**	**0.0**
SMOL	**Smolenice**	**120.69**	**324**	*e*PKP	**PKiKP**	**03 52 41.3**	**0.0**
WVT	**Waverly**	**120.69**	**51**	P	**PKPdf**	**03 52 40.2**	**-1.3**
	baz=286						
WVT	**Waverly**	**120.69**	**51**		**PKPdf**	**03 52 40.7**	**-0.8**
WVT				PKKPbc	**PKKPab**	**04 02 47.4**	**-0.1**
HUEH	**Huehuetenango**	**120.70**	**76**	PKPdf	**PKPdf**	**03 52 42.2**	**-0.2**
FRGS	**Fruska Gora**	**120.75**	**320**	⇑P	**PKiKP**	**03 52 39.5**	**-1.9**
VRAC	**Vranov**	**120.77**	**325**	PKP	**PKPdf**	**03 52 40.8**	**-0.5**
	comp=Z,20nm,0.9s,baz=132,slow=3.6,SNR=12						
VRAC				PKKPbc	**PKKPab**	**04 02 46.7**	**-0.2**
	comp=Z,8.5nm,1.0s,baz=275,slow=3.3,SNR=6.6						
VRAC	**Vranov**	**120.77**	**325**	⇑P	**PKPdf**	**03 52 40.3**	**-1.0**
VRAC	**Vranov**	**120.77**	**325**	⇑P	**PKKPbc**	**04 02 45.9**	**-1.5**
VRAC	**Vranov**	**120.77**	**325**	*e*PKP	**PKPdf**	**03 52 40.6**	**-0.7**
VRAC				*e*PKKP	**PKKPab**	**04 02 46.5**	**-0.4**
VRAC				*e*PS	**PS**	**04 04 07.2**	**+5.2**
VRAC				*e*PKPPKP	P'P'df	04 11 04.9	-25
VRAC	**Vranov**	**120.77**	**325**	⇑PKIKP	**PKPdf**	**03 52 40.3**	**-1.0**
PLAL	**Pickwick Lake**	**120.81**	**53**	PKPdf	**PKPdf**	**03 52 40.1**	**-1.7**
PLAL				PKKPbc	**PKKPbc**	**04 02 46.4**	**-0.3**
MODS	**Modra-Piesok**	**120.84**	**324**	*e*PKIKP	**PKPdf**	**03 52 40.9**	**-0.6**
MODS	**Modra-Piesok**	**120.84**	**324**	*e*PKP	**PKPdf**	**03 52 40.9**	**-0.6**
LIT	**Litokhoron**	**120.86**	**314**	PKKPbc	PKKPbc	04 02 46.5	-0.3
BORG	**Borgarnes**	**120.92**	**355**	PKP	**PKiKP**	**03 52 42.2**	**+1.0**
	comp=Z,32nm,0.9s,baz=268,slow=1.5,SNR=3.2						
SKO	**Skopje**	**120.93**	**316**	*i* P	**PKPdf**	**03 52 41.0**	**-0.8**
ATAL	**Atalanti**	**120.93**	**312**	P	PKPpre	03 52 28.2	
LKR	**Lokris**	**120.96**	**312**	P	**PKPdf**	**03 52 40.7**	**-1.3**
T47A	**Sharon Grove**	**121.00**	**50**	PKKPbc	PKKPbc	04 02 45.6	-0.5
KRUC	**Moravsky**	**121.01**	**325**	*e*PKP	**PKPdf**	**03 52 41.3**	**-0.4**
KRUC				*e*PKKP	**PKKPab**	**04 02 45.6**	**-0.3**
KRUC				*e*PS	**PS**	**04 04 06.5**	**+2.4**
KRUC				*e*PKPPKP	P'P'df	04 11 08.0	-21
MORH	**Mrgy, Hungar**	**121.03**	**321**	*e*P	**PKPdf**	**03 52 39.9**	**-1.9**
DIVS	**Divibare**	**121.07**	**319**	*i* P	**PKPdf**	**03 52 40.4**	**-1.7**
DIVS	**Divibare**	**121.07**	**319**	PKKPbc	PKKPbc	04 02 44.5	-1.6
IMMV	**Iera Moni Meta**	**121.17**	**308**	P	**PKiKP**	**03 52 43.0**	**+0.4**
PAYG	**Puerto Ayora**	**121.18**	**94**		**PKiKP**	**03 52 44.6**	**+1.4**
AXAR	**Agios Charalam**	**121.18**	**312**	P	**PKPdf**	**03 52 41.9**	**-0.5**
TEKS	**Tekeris**	**121.19**	**319**	*e*P	**PKPdf**	**03 52 41.8**	**-0.5**
WCI	**Wyandotte Cave**	**121.23**	**49**	P	**PKPdf**	**03 52 41.2**	**-1.3**
	baz=289						
WCI	**Wyandotte Cave**	**121.23**	**49**		**PKPdf**	**03 52 42.2**	**-0.3**
WCI				PKKPbc	**PKKPab**	**04 02 44.9**	**-0.3**
PVCC	**Panska Ves**	**121.25**	**327**	*e*PKIKP	**PKPdf**	**03 52 41.9**	**-0.3**
PVCC				MLR	MLR		
	comp=Z,7μm,19.8s						
PVCC	**Panska Ves**	**121.25**	**327**	*e*PKPDF	**PKPdf**	**03 52 41.9**	**-0.3**
PVCC				*e*PKKP	**PKKPab**	**04 02 44.9**	**+0.1**
PVCC				AMS	AMS	04 50 10.0	
	comp=Z,7μm,19.8s						
L48A	**N Adams**	**121.27**	**44**	PKKPbc	PKKPbc	04 02 44.5	-0.7
Z47A	**Carrollton**	**121.27**	**55**	PKKPbc	PKKPbc	04 02 45.5	+0.6
SKMB	**Sankelmark Bun**	**121.28**	**333**	*e*PKP	**PKPdf**	**03 52 41.9**	**-0.1**
	baz=54,slow=1.9						
AGG	**Agios Georgios**	**121.33**	**312**	PKIKP	**PKPdf**	**03 52 41.8**	**-0.9**
AGG	**Agios Georgios**	**121.33**	**312**	PKPdf	**PKPdf**	**03 52 41.8**	**-0.9**
AGG				PKKPbc	**PKKPbc**	**04 02 46.1**	**+1.1**
BSEG	**Bad Segeberg**	**121.38**	**332**	*e*PKP	**PKPdf**	**03 52 41.8**	**-0.4**
	baz=54,slow=1.9						
DSF	**Desfina**	**121.39**	**312**	P	**PKPdf**	**03 52 42.1**	**-0.8**
BRG	**Berggiesshubel**	**121.40**	**328**	*e*PDIFF	**Pdif**	**03 49 09.7**	**+0.1**
	comp=Z,25nm,1.9s						
BRG	**Berggiesshubel**	**121.40**	**328**	*i* PKP	**PKPdf**	**03 52 42.0**	**-0.4**
	comp=Z,62nm,0.9s						
BRG				PP	**PP**	**03 54 12.0**	**-1.8**
BRG				SKP		03 56 06.0	
BRG				*e*PKKS		04 06 05.1	
	comp=Z,49nm,2.0s						
BRG				SS	SS	04 10 56.0	+12
	comp=N,6μm,21.3s						
	comp=E,6μm,22.7s						
	comp=Z,2μm,21.6s						
BRG	**Berggiesshubel**	**121.40**	**328**	*i* PKIKP	**PKPdf**	**03 52 42.0**	**-0.4**
BRG						03 54 12.0	
BRG				SS	SS	04 10 56.0	+12
BRG				pmax	pmax		
	comp=Z,62nm,0.9s						
BRG				MLR	MLR		
	comp=N,6μm,21.3s						
BRG				MLR	MLR		
	comp=E,6μm,22.7s						
BRG				MLR	MLR		
	comp=Z,2μm,21.6s						
BRG	**Berggiesshubel**	**121.40**	**328**	*e*PKP	**PKPdf**	**03 52 41.6**	**-0.8**
	baz=54,slow=1.9						
TREC	**Trest**	**121.40**	**326**	*e*PKIKP	**PKPdf**	**03 52 42.0**	**-0.5**
TREC				MLR	MLR		
	comp=Z,8μm,20.5s						
TREC	**Trest**	**121.40**	**326**	*e*PKPDF	**PKPdf**	**03 52 42.0**	**-0.5**
TREC				AMS	AMS	04 49 40.0	
	comp=Z,8μm,20.5s						
PLCA	**Paso Flores**	**121.41**	**146**	PKP	**PKiKP**	**03 52 43.9**	**+0.9**
	comp=Z,147nm,0.7s,baz=232,slow=2.4,SNR=218						
PLCA				PKKPbc	**PKKPbc**	**04 02 44.2**	**-0.7**
	comp=Z,16nm,0.9s,baz=51,slow=4.8,SNR=11						
PLCA	**Paso Flores**	**121.41**	**146**	PKKPbc	PKKPbc	04 02 44.8	-0.1
P48A	**Milroy**	**121.46**	**47**	PKKPbc	PKKPbc	04 02 43.9	-0.5
MAKR	**Makrakomi, Fth**	**121.48**	**312**	P	**PKPdf**	**03 52 41.4**	**-1.6**
BBLS	**Lazići**	**121.56**	**319**	⇑*i* P	**PKPdf**	**03 52 41.6**	**-1.5**
PRU	**Pruhonice**	**121.56**	**327**	*e*PKIKP	**PKPdf**	**03 52 41.4**	**-1.4**
PRU				*e*		03 54 15.8	
PRU				*e*SP	SP	04 04 04.6	+3.0
PRU				MLR	MLR		
	comp=Z,8μm,23.0s						
PRU	**Pruhonice**	**121.56**	**327**	*e*PKPDF	**PKPdf**	**03 52 41.4**	**-1.4**
PRU				*e*PP	**PP**	**03 54 15.8**	**+0.9**
PRU				*e*PKKP	**PKKPab**	**04 02 43.6**	**+0.1**

KHC AMS AMS 04 46 50.0
comp=Z,9µm,21.1s
WERN Wernitzgruen 122.55 328 *e*PKP **PKPdf** 03 52 44.0 -0.8
baz=54,slow=1.9
PLN Plauen 122.55 328 *e*PKP **PKPdf** 03 52 43.8 -0.9
baz=54,slow=1.9
BLY Banja Luka 122.61 320 *e*P **PKPdf** 03 52 43.4 -1.5
BRAL Brewton 122.61 57 P **PKPdf** 03 52 44.1 -1.2
baz=284
GEC2 GERESS Array S 122.64 326 *e*PKP **PKPdf** 03 52 44.0 -1.0
baz=54,slow=1.9
GERES GERESS Array B 122.64 326 PKP **PKPdf** 03 52 43.5 -1.5
comp=Z,23nm,0.6s,baz=73,slow=1.4,SNR=93
GERES PKKPab **PKKPab** 04 02 38.7 -0.3
comp=Z,4.0nm,0.7s,baz=201,slow=2.3,SNR=16
GERES PKKP **PKKPdf** 04 03 16.1 -1.2
comp=Z,4.8nm,0.7s,baz=205,slow=2.2,SNR=8.7
GERES GERESS Array B 122.64 326 PKPdf **PKPdf** 03 52 44.3 -0.7
CLZ Clausthal 122.65 330 *e*PKP **PKPdf** 03 52 44.4 -0.4
baz=54,slow=1.9
MOX Moxa 122.74 329 *e*PKP **PKPdf** 03 52 44.2 -0.9
baz=54,slow=1.9
I51A Listowel 122.80 41 P **PKPdf** 03 52 44.2 -1.2
baz=296
ESQI Esquipulas 122.82 77 PKPdf **PKiKP** 03 52 47.0 +0.6
MGRS Mrkonjic Grad 122.82 320 *e*P PKiKP 03 53 00.5 +15
ZAG Zagreb 122.84 322 *e*P **PKPdf** 03 52 45.1 -0.3
MOA Molln 122.85 325 *i* P **PKPdf** 03 52 44.3 -1.1
comp=Z,21nm,1.0s,SNR=5.9
MOA *i* P **PKKPbc** 04 02 39.1 -0.3
comp=Z,52nm,1.4s,SNR=12
MANZ Manzenberg 122.86 328 *e*PKP **PKPdf** 03 52 44.6 -0.7
baz=54,slow=1.9
WET Wettzell 122.93 327 *e*PKP **PKPdf** 03 52 44.8 -0.7
baz=54,slow=1.9
ACSO Alum Creek Sta 122.94 45 P **PKPdf** 03 52 44.5 -1.3
baz=293,SNR=17
ROTZ Rotzenmuhle 122.94 328 *e*PKP **PKPdf** 03 52 44.6 -0.8
baz=54,slow=1.9
SOKA Soboth 123.00 323 *i* P **PKPdf** 03 52 45.0 -0.8
comp=Z,60nm,1.2s,SNR=12
SOKA *i* P **PKKPbc** 04 02 38.8 -0.1
comp=Z,30nm,1.1s,SNR=6.6
GTTG Gottingen 123.03 330 *e*PKP **PKPdf** 03 52 45.1 -0.5
baz=54,slow=1.9
M51A Elyria 123.06 44 P **PKPdf** 03 52 44.2 -1.7
baz=294
STON Ston 123.10 318 *e*P **PKPdf** 03 52 45.1 -0.8
P51A Williamsport 123.17 46 P **PKPdf** 03 52 44.8 -1.4
baz=292,SNR=14
CRES Cresnjev 123.17 322 *e*P **PKPdf** 03 52 45.1 -0.9
RICI Ricice 123.20 319 *e*Pn **PKPdf** 03 52 45.3 -0.8
O51A Pataskala 123.24 45 P **PKPdf** 03 52 45.0 -1.3
baz=293,SNR=17
OBKA Obir 123.38 323 *e*P **PKPdf** 03 52 45.5 -1.0
comp=Z,32nm,1.0s
OBKA *i* P **PKKPbc** 04 02 37.4 0.0
comp=Z,76nm,1.4s,SNR=6.8
BIGH Upper Bighouse 123.41 343 *e*P **PKPdf** 03 52 45.8 -0.2
TEIG Tepich 123.42 70 **PKiKP** 03 52 47.5 +0.1
KIJV Kijevo 123.44 320 *e*Pn **PKPdf** 03 52 46.2 -0.4
BOJS Bojanci 123.45 322 *i* PKPdf **PKPdf** 03 52 45.5 -1.1
UBBA Unterbreizbach 123.46 330 *e*PKP **PKPdf** 03 52 45.8 -0.5
baz=54,slow=1.9
GRF Grafenberg Arr 123.50 328 *e*PKP **PKPdf** 03 52 45.5 -1.0
baz=54,slow=1.9
GRF *e*PKKP **PKKPbc** 04 02 36.6 -0.3
CHGQ Chibougamau 123.55 32 P **PKPdf** 03 52 44.9 -1.7
baz=306,SNR=7.6
Z51A Franklin 123.58 54 **PKPdf** 03 52 47.0 -0.2
IBBN Ibbenburen 123.61 332 *e*PKP **PKPdf** 03 52 46.1 -0.5
baz=54,slow=1.9
LJU Ljubljana 123.62 323 *i* PKPdf **PKPdf** 03 52 45.2 -1.7
LJU Ljubljana 123.62 323 ⇑ *i*P **PKPdf** 03 52 45.2 -1.7
ALGO Algonquin Park 123.64 37 P **PKPdf** 03 52 45.2 -1.7
baz=300
SCHQ Schefferville 123.77 24 PKP **PKPdf** 03 52 46.5 -0.4
comp=Z,14nm,0.7s,baz=19,slow=2.7,SNR=16
SCHQ PP **PP** 03 54 26.6 -3.0
comp=Z,40nm,1.0s,baz=344,slow=5.5,SNR=8.1
SCHQ PKKPab **PKKPab** 04 02 34.7 +0.8
comp=Z,31nm,0.9s,baz=142,slow=3.6,SNR=17
P52A Corning 123.77 46 P **PKPdf** 03 52 45.9 -1.4
baz=293,SNR=15
KBA Koelnbreinsper 123.79 324 *i* P **PKPdf** 03 52 46.3 -1.1
comp=Z,46nm,1.0s,SNR=11
KBA *i* P **PKKPbc** 04 02 35.4 -0.5
comp=Z,38nm,1.4s,SNR=5.6
O52A Adamsville 123.79 45 P **PKPdf** 03 52 46.2 -1.2
baz=294,SNR=7.0
CEY Cerknica 123.84 323 ⇑ *i*P **PKPdf** 03 52 45.7 -1.6
TZTN Tazewell 123.85 50 P **PKPdf** 03 52 46.2 -1.4
baz=290,SNR=12
MYKA Terra Mystica 123.85 324 *e*P **PKPdf** 03 52 46.2 -1.2
comp=Z,34nm,1.1s
MYKA *i* P **PKKPbc** 04 02 35.1 -0.4
comp=Z,40nm,0.9s,SNR=7.7
G54A Lake Saint Pet 123.89 38 P **PKPdf** 03 52 45.6 -1.9
baz=300
Q52A Bidwell 123.93 46 P **PKPdf** 03 52 46.6 -1.1
baz=292,SNR=7.6
MORI Morici 123.95 320 *e*Pn **PKPdf** 03 52 47.5 0.0
PRED Cave del Predi 123.99 324 **PKPdf** 03 52 46.9 -0.8
H53A Bobcaygeon 123.99 39 P **PKPdf** 03 52 46.4 -1.2
baz=299
RIY Rijeka 124.01 322 *e*P PKPpre 03 52 33.4
NRS Narsarsuaq 124.04 8 *i* PKIKP **PKPdf** 03 52 47.0 -0.1
NRS pmax pmax
comp=Z,70nm,0.8s
NRS Narsarsuaq 124.04 8 *i* P **PKPdf** 03 52 47.0 -0.1
comp=Z,70nm,0.8s
NRS Narsarsuaq 124.04 8 *i* P **PKPdf** 03 52 47.0 -0.1
NRS IAmb IAmb 03 52 47.4
comp=Z,70nm,0.8s
M53A WI Miller and 124.05 43 P **PKPdf** 03 52 46.6 -1.3
baz=295,SNR=8.7
L53A Girard 124.11 42 P **PKPdf** 03 52 46.7 -1.3
baz=296
NVLJ Novalja 124.15 321 *e*Pn **PKPdf** 03 52 47.2 -0.6
O53A New Philadelph 124.18 45 P **PKPdf** 03 52 47.2 -1.0
baz=294,SNR=10
ERPA Erie 124.22 42 P **PKPdf** 03 52 46.4 -1.7
baz=296
ZOU Zoufplan 124.28 324 **PKPdf** 03 52 47.5 -0.9
352A Blakely 124.29 56 **PKiKP** 03 52 49.0 +0.2
FUR Furstenfeldbru 124.36 326 *e*PKP **PKPdf** 03 52 47.3 -1.0
baz=54,slow=1.9
P53A Whipple 124.36 46 P **PKPdf** 03 52 47.5 -1.0
baz=294,SNR=19
R53A Hurricane 124.40 47 P **PKPdf** 03 52 47.1 -1.5
baz=292,SNR=8.5
BUG Bochum--Univer 124.41 331 *e*PKP **PKPdf** 03 52 47.5 -0.6
baz=54,slow=1.9
MDO Dochfour 124.42 342 *e*P **PKPdf** 03 52 47.6 -0.5
ABTA Abfaltersbach 124.44 324 *e*P **PKPdf** 03 52 46.9 -1.6
comp=Z,88nm,1.2s,SNR=18
ABTA *i* P **PKKPbc** 04 02 32.8 -0.4
comp=Z,32nm,0.7s,SNR=6.9
T53A Wise 124.46 49 P **PKPdf** 03 52 47.6 -1.2
baz=291,SNR=13
Q53A Leroy 124.51 46 P **PKPdf** 03 52 47.6 -1.2
baz=293,SNR=14
S53A Williamson 124.51 48 P **PKPdf** 03 52 47.8 -1.1
baz=292
LEWI Lewis, Hebride 124.54 344 *e*P **PKPdf** 03 52 47.6 -0.6
E55A Montcerf-Lytto 124.56 36 P **PKPdf** 03 52 47.8 -0.8
baz=303,SNR=9.6
D55A Sainte-Anne-du 124.59 35 P **PKPdf** 03 52 48.0 -0.7
baz=304,SNR=8.3
TNS Taunus Mts 124.61 330 *e*PKP **PKPdf** 03 52 48.0 -0.7
baz=54,slow=1.9
WATA Walderalm 124.66 325 *i* P **PKPdf** 03 52 48.1 -0.9
comp=Z,91nm,1.1s,SNR=17
WATA *i* P **PKKPbc** 04 02 31.6 -0.8
comp=Z,35nm,1.4s,SNR=5.8
WTTA Wattenberg 124.66 325 *i* P **PKPdf** 03 52 48.4 -0.7
comp=Z,127nm,0.8s,SNR=34
WTTA *i* P **PKKPab** 04 02 31.4 +0.9
comp=Z,22nm,0.8s,SNR=7.1
M54A Oil Creek Stat 124.71 43 P **PKPdf** 03 52 48.2 -1.0
baz=296,SNR=13
M54A Oil Creek Stat 124.71 43 **PKPdf** 03 52 49.2 +0.1
N54A Moraine State 124.72 43 P **PKPdf** 03 52 48.1 -1.1
baz=296,SNR=8.3
O54A Avella 124.79 44 P **PKPdf** 03 52 48.4 -0.9
baz=295,SNR=24
KPL Plockton 124.89 343 *e*P **PKPdf** 03 52 48.5 -0.4

MOTA Moosalm 124.92 326 *i* P **PKPdf** 03 52 48.1 -1.4
comp=Z,105nm,0.8s,SNR=35
MOTA *i* P **PKKPbc** 04 02 30.9 -0.5
comp=Z,22nm,0.7s,SNR=5.4
GOGA Godfrey 124.92 53 P **PKPdf** 03 52 48.7 -1.0
baz=288,SNR=16
SQTA Sankt Quirin 124.93 325 *i* P **PKPdf** 03 52 48.1 -1.4
comp=Z,82nm,0.8s,SNR=23
SQTA *i* P **PKKPbc** 04 02 30.9 -0.4
comp=Z,17nm,0.7s,SNR=7.3
Q54A Coxs Mills 124.95 46 P **PKPdf** 03 52 48.6 -1.0
baz=294,SNR=28
P54A Burton 124.95 45 P **PKPdf** 03 52 48.4 -1.2
baz=294,SNR=11
D56A ZEC Mazanza, M 124.98 35 P **PKPdf** 03 52 47.4 -2.1
baz=304
WVNY West Valley, N 125.01 41 **PKPdf** 03 52 49.7 0.0
RETA Reutte 125.03 326 *i* P **PKPdf** 03 52 49.0 -0.6
comp=Z,42nm,1.1s,SNR=8.8
RETA *e*P **PKKPbc** 04 02 30.7 -0.2
comp=Z,32nm,1.4s
S54A Dingess, Beckl 125.07 47 P **PKPdf** 03 52 49.0 -1.0
baz=292,SNR=11
AHRW Bad Neuenahr-A 125.08 331 *e*PKP **PKPdf** 03 52 49.0 -0.5
baz=54,slow=1.9
E56A St. Veronique 125.11 35 P **PKPdf** 03 52 49.3 -0.4
baz=304,SNR=5.8
STU Stuttgart 125.12 328 *e*PKP **PKPdf** 03 52 48.8 -0.8
baz=54,slow=1.9
T54A Tazewell 125.15 48 P **PKPdf** 03 52 49.4 -0.8
baz=292,SNR=9.9
R54A Victor 125.16 47 P **PKPdf** 03 52 49.1 -0.9
baz=293,SNR=8.6
U54A Nelsons Funny 125.16 49 P **PKPdf** 03 52 49.3 -0.9
baz=291
INVG Invergeldie, C 125.17 342 *e*P **PKPdf** 03 52 49.3 -0.2
BO02 Sierra Bellavi 125.20 141 PKPdf **PKPdf** 03 52 50.3 -0.1
UBR Ueberruh 125.28 326 *e*PKP **PKPdf** 03 52 48.9 -1.2
baz=54,slow=1.9
TIP Timpagrande 125.30 315 ⇓ P **PKPdf** 03 52 50.4 0.0
FETA Feichten 125.31 326 *i* P **PKPdf** 03 52 49.3 -1.0
comp=Z,94nm,0.9s,SNR=35
FETA *i* P **PKKPdf** 04 03 10.7 -1.6
comp=Z,20nm,1.1s
CTI Castel Tesino 125.33 324 PKIKP **PKPdf** 03 52 49.6 -0.7
CTI Castel Tesino 125.33 324 **PKPdf** 03 52 49.6 -0.7
V54A Nebo 125.33 50 P **PKPdf** 03 52 50.3 -0.2
baz=291,SNR=12
TSUM Tsumeb 125.35 241 PKKPab PKKPab 04 02 30.5 +1.7
comp=Z,2.5nm,0.7s,baz=303,slow=6.4,SNR=3.8
TSUM Tsumeb 125.35 241 *i* P **PKiKP** 03 52 52.8 +1.3
TSUM Tsumeb 125.35 241 **PKiKP** 03 52 51.5 +0.1
TSUM Tsumeb 125.35 241 *i* P **PKiKP** 03 52 52.8 +1.3
MCWV Mont Chateau 125.38 45 P **PKPdf** 03 52 49.2 -1.2
baz=295,SNR=5.6
EBL Broad Law 125.38 341 *e*P **PKPdf** 03 52 50.0 +0.1
W54A Cherokee Point 125.38 51 P **PKPdf** 03 52 49.8 -0.8
baz=290,SNR=10.0
TIGA Tifton 125.40 56 P **PKPdf** 03 52 50.2 -0.5
baz=286,SNR=14
X54A Belton 125.42 52 P **PKPdf** 03 52 50.5 -0.2
baz=289,SNR=12
P55A Reedsville 125.45 45 P **PKPdf** 03 52 50.1 -0.5
baz=295,SNR=7.1
EAB Aberfoyle 125.46 342 *e*P **PKPdf** 03 52 49.9 -0.2
Q55A Buckhannon 125.48 46 P **PKPdf** 03 52 49.9 -0.8
baz=294,SNR=13
BTNL Ternell 125.51 331 PKPdf **PKPdf** 03 52 50.0 -0.3
BTNL pPKP **pPKPdf** 03 53 04.4 -2.0
O55A Ligonier 125.52 44 P **PKPdf** 03 52 50.0 -0.7
baz=296,SNR=8.6
MEM Membach 125.55 331 PKPdf **PKPdf** 03 52 49.9 -0.5
MEM pPKP **pPKPdf** 03 53 03.6 -2.8
BEBN Eben Emael 125.58 332 PKiKP **PKiKP** 03 52 50.8 -0.1
DAVA Damuels 125.63 326 *e*P **PKPdf** 03 52 48.4 -2.5
comp=Z,87nm,1.4s,SNR=19
DAVA *i* P **PKKPdf** 04 03 10.3 -1.3
comp=Z,21nm,1.6s
S55A Lewisburg 125.67 47 P **PKPdf** 03 52 49.5 -1.6
baz=293
E57A Chemin Saint G 125.69 35 P **PKPdf** 03 52 49.5 -1.3
baz=304
TEOL Teolo 125.69 323 **PKPdf** 03 52 50.7 -0.1
K56A Middlesex 125.70 40 P **PKPdf** 03 52 49.5 -1.5
baz=299
F57A Harrington 125.71 36 P **PKPdf** 03 52 49.3 -1.5
baz=304
M56A Emporium 125.71 42 P **PKPdf** 03 52 50.4 -0.6
baz=298,SNR=11
T55A Hallstead 125.71 48 P **PKPdf** 03 52 50.4 -0.8
baz=292,SNR=6.5
J56A Wolcott 125.72 40 P **PKPdf** 03 52 49.6 -1.3
baz=300
BHOU Houvegnez 125.72 331 PKiKP **PKPdf** 03 52 50.9 +0.2
LAWE Loch Awe, Argy 125.73 342 *e*P **PKPdf** 03 52 50.1 -0.4
R55A Marlinton 125.75 46 P **PKPdf** 03 52 50.3 -1.0
baz=294,SNR=22
EDMD Edmundbyers 125.77 339 *e*P **PKPdf** 03 52 50.2 -0.4
EKA Eskdalemuir Ar 125.78 340 PKhKP PKPpre 03 52 38.0
comp=Z,0.9nm,0.5s,baz=35,slow=3.1,SNR=5.6
EKA PKP **PKPdf** 03 52 50.5 -0.2
comp=Z,28nm,0.7s,baz=33,slow=3.7,SNR=24
EKA PP **PP** 03 54 42.8 0.0
comp=Z,18nm,1.1s,baz=40,slow=6.6,SNR=5.0
EKA PKKPab **PKKPbc** 04 02 27.0 -1.1
comp=Z,7.0nm,0.9s,baz=216,slow=3.1,SNR=6.4
BSTI Sart Tilman 125.78 332 PKPdf **PKPdf** 03 52 50.1 -0.7
FUORN Ofenpass-Fuorn 125.80 325 PKPdf **PKPdf** 03 52 50.1 -1.3
L56A Greenwood 125.82 41 P **PKPdf** 03 52 50.0 -1.2
baz=298,SNR=9.8
BFO Black Forest 125.84 328 PKiKP **PKPdf** 03 52 50.7 -0.4
BFO Black Forest 125.84 328 *e*PKP **PKPdf** 03 52 49.7 -1.4
baz=54,slow=1.9
BFO Black Forest 125.84 328 **PKPdf** 03 52 50.7 -0.4
V55A Taylorsville 125.86 50 P **PKPdf** 03 52 50.3 -1.2
baz=291,SNR=9.2
LATQ La Tuque 125.89 33 P **PKPdf** 03 52 49.7 -1.5
baz=306
N56A West Decatur 125.89 43 P **PKPdf** 03 52 50.4 -1.0
baz=297,SNR=13
G57A Newington 125.92 37 P **PKPdf** 03 52 50.4 -0.8
baz=303,SNR=9.9
DAVOX Davos/Dischmat 125.93 326 PKhKP PKPpre 03 52 37.8
comp=Z,2.7nm,0.8s,baz=70,slow=6.7,SNR=3.7
DAVOX PKP **PKPdf** 03 52 51.0 -0.5
comp=Z,52nm,0.8s,baz=186,slow=3.5,SNR=54
DAVOX PKKPab **PKKPbc** 04 02 27.2 -0.4
comp=Z,14nm,1.0s,baz=202,slow=9.7,SNR=13
DAVOX PKKP **PKKPdf** 04 03 11.2 +0.1
comp=Z,4.6nm,0.6s,baz=209,slow=6.5,SNR=5.2
BLA Blacksburg 125.95 48 P **PKPdf** 03 52 51.0 -0.7
baz=293,SNR=12
O56A Blue Knob Stat 126.00 44 P **PKPdf** 03 52 51.1 -0.6
baz=296,SNR=9.6
D58A Chemin du LacG 126.00 34 P **PKPdf** 03 52 50.3 -1.1
baz=306,SNR=6.2
BCLA Clavier 126.02 332 PKPdf **PKPdf** 03 52 50.9 -0.4
BCLA pPKP **pPKPdf** 03 53 04.7 -2.6
H57A Richville 126.02 38 P **PKPdf** 03 52 50.5 -1.0
baz=302,SNR=8.3
KMSC Kings Mountain 126.02 50 P **PKPdf** 03 52 50.9 -0.9
baz=291,SNR=14
X55A Gracelyn & Ava 126.02 51 P **PKPdf** 03 52 51.0 -0.8
baz=290,SNR=20
Q56A Snyder Ridge, 126.10 45 P **PKPdf** 03 52 51.1 -0.7
baz=295,SNR=8.9
WLF Walferdange 126.11 330 PKPdf **PKPdf** 03 52 50.6 -0.9
WLF PKiKP **PKiKP** 03 52 51.9 0.0
WLF Walferdange 126.11 330 *e*PKP **PKPdf** 03 52 51.5 0.0
baz=54,slow=1.9
NRCA Norcia 126.11 320 PKPdf **PKPdf** 03 52 51.0 -0.9
MT05 Renca 126.12 139 PKPdf **PKiKP** 03 52 53.3 +0.7
I57A Carthage 126.13 38 P **PKPdf** 03 52 50.9 -0.8
baz=302,SNR=12
BGES Gesves 126.14 332 PKPdf **PKPdf** 03 52 51.0 -0.6
BGES PKiKP **PKiKP** 03 52 51.5 -0.5
BGES pPKiKP **pPKPdf** 03 53 05.1 -2.4
P56A Dayton Farm, R 126.15 45 P **PKPdf** 03 52 51.3 -0.5
baz=296,SNR=12
AQU L'Aquila 126.16 319 *e*P **PKPdf** 03 52 49.2 -2.7
F58A St-Lin Laurent 126.19 35 P **PKPdf** 03 52 50.2 -1.5
baz=304
J57A Williamstown 126.19 39 P **PKPdf** 03 52 51.1 -0.8
baz=301,SNR=6.4
UCC Uccle 126.20 332 PKPdf **PKPdf** 03 52 50.5 -1.1
UCC pPKP **pPKPdf** 03 53 05.8 -1.8

E58A La Victoria 126.20 35 P **PKPdf** 03 52 51.6 -0.2
baz=305,SNR=10
K57A Scipio Center 126.20 40 P **PKPdf** 03 52 51.1 -0.8
baz=300,SNR=7.3
R56A Bull Pasture M 126.21 46 P **PKPdf** 03 52 51.9 -0.2
baz=294,SNR=7.8
RCHB Rochefort 126.23 331 PKPdf **PKPdf** 03 52 49.4 -2.3
RCHB pPKP **pPKPdf** 03 53 05.6 -2.1
U56A King 126.30 49 P **PKPdf** 03 52 51.2 -1.1
baz=292
T56A Rocky Mt 126.30 48 P **PKPdf** 03 52 51.7 -0.6
baz=293,SNR=7.5
NEWG New Galloway 126.31 341 *e*P **PKPdf** 03 52 51.3 -0.4
PEL Peldehue 126.31 139 PKIKP **PKPdf** 03 52 52.7 +0.2
PEL Peldehue 126.31 139 PKPdf **PKPdf** 03 52 52.7 +0.2
BMRD Maredsous 126.35 332 PKPdf **PKPdf** 03 52 51.5 -0.5
BMRD pPKP **pPKPdf** 03 53 05.9 -2.0
L57A Andrews Acres 126.35 41 P **PKPdf** 03 52 51.4 -0.9
baz=299,SNR=8.5
KESW Keswick, Cumbr 126.36 340 *e*P **PKPdf** 03 52 51.8 0.0
S56A Natural Bridge 126.39 47 P **PKPdf** 03 52 50.8 -1.7
baz=294
V56A Mocksville 126.42 49 P **PKPdf** 03 52 51.5 -1.0
baz=292,SNR=7.7
LONY Lake Ozonia 126.42 37 P **PKPdf** 03 52 51.1 -1.1
baz=303,SNR=12
SNF Seneffe 126.43 332 PKPdf **PKPdf** 03 52 51.5 -0.6
SNF PKiKP **PKiKP** 03 52 52.4 -0.1
G58A Ormstown 126.45 36 P **PKPdf** 03 52 51.3 -1.0
baz=304,SNR=6.2
N57A Milroy 126.47 43 P **PKPdf** 03 52 51.7 -0.8
baz=298,SNR=11
X56A White Oak 126.48 51 P **PKPdf** 03 52 52.1 -0.5
baz=290,SNR=14
M57A Sunshine Farm, 126.48 42 P **PKPdf** 03 52 52.2 -0.3
baz=298,SNR=10.0
Y56A Pelion 126.50 52 P **PKPdf** 03 52 52.9 +0.1
baz=290,SNR=6.0
DOU Dourbes 126.57 332 PKPdf **PKPdf** 03 52 52.3 -0.1
DOU PKiKP **PKiKP** 03 52 52.7 -0.1
E59A St. Maurice 126.57 34 P **PKPdf** 03 52 51.0 -1.5
baz=306
W56A Indian Trail 126.60 50 P **PKPdf** 03 52 52.5 -0.4
baz=291,SNR=11
Z56A Williston 126.61 53 P **PKPdf** 03 52 52.5 -0.4
baz=289
D59A Saint-Raymond 126.63 33 P **PKPdf** 03 52 51.5 -1.1
baz=307
Q57A Strasburg 126.65 45 P **PKPdf** 03 52 52.5 -0.4
baz=296,SNR=5.6
ZCCA Zocca 126.65 323 PKPdf **PKiKP** 03 52 54.5 +1.3
J58A Remsen 126.66 39 P **PKPdf** 03 52 52.2 -0.6
baz=302,SNR=11
O57A Amberson 126.66 43 P **PKPdf** 03 52 52.3 -0.6
baz=297,SNR=11
GAL1 Galloway 126.67 341 *e*P **PKPdf** 03 52 52.3 -0.1
I58A Old Forge 126.68 38 P **PKPdf** 03 52 53.0 +0.2
baz=302,SNR=5.6
P57A Homestead Farm 126.73 44 P **PKPdf** 03 52 52.3 -0.7
baz=296,SNR=5.5
K58A Earlville 126.74 40 P **PKPdf** 03 52 52.3 -0.6
baz=301,SNR=7.1
H58A Gabriels 126.78 37 P **PKPdf** 03 52 52.2 -0.8
baz=303,SNR=18
S57A Dark Hollow, R 126.80 47 P **PKPdf** 03 52 51.3 -1.9
baz=294
BINY Binghamton 126.81 40 P **PKPdf** 03 52 52.4 -0.8
baz=300,SNR=7.4
R57A Stanardsville 126.88 46 P **PKPdf** 03 52 52.6 -0.7
baz=295,SNR=6.0
T57A Hurt 126.89 48 P **PKPdf** 03 52 52.4 -1.0
baz=294,SNR=8.6
M58A Price's Panora 126.91 41 P **PKPdf** 03 52 52.3 -1.0
baz=299,SNR=6.8
OSSC Osservatorio P 126.93 322 PKPdf **PKPdf** 03 52 52.3 -1.0
V57A Coltrane Farms 126.93 49 P **PKPdf** 03 52 52.9 -0.6
baz=292,SNR=10
CLGH Cloghs, Cushen 126.94 342 *e*P **PKPdf** 03 52 52.6 -0.3
H59A Cadyville 126.94 37 P **PKPdf** 03 52 52.4 -0.9
baz=304
L58A Harry Jones Me 126.97 40 P **PKPdf** 03 52 52.9 -0.5
baz=300,SNR=6.5
N58A Sunbury 126.99 42 P **PKPdf** 03 52 52.9 -0.5
baz=298,SNR=7.8
G59A Clarenceville 127.00 36 P **PKPdf** 03 52 52.1 -1.2
baz=305
W57A Gilead 127.04 50 P **PKPdf** 03 52 53.1 -0.6
baz=292,SNR=11
U57A Blanch 127.05 48 P **PKPdf** 03 52 52.9 -0.9
baz=293,SNR=6.5
LATE Laterza 127.05 320 PKPdf **PKPdf** 03 52 53.5 -0.1
J59A Piesco 127.09 38 P **PKPdf** 03 52 53.0 -0.6
baz=302,SNR=8.8
157A Early Branch 127.12 53 P **PKPdf** 03 52 53.2 -0.7
baz=289
Y57A Sumter 127.14 51 P **PKPdf** 03 52 53.5 -0.4
baz=291,SNR=7.9
Z57A Bowman 127.14 52 P **PKPdf** 03 52 53.4 -0.6
baz=296
CWF Charnwood Fore 127.17 337 *e*P **PKPdf** 03 52 52.9 -0.5
D60A Saint Jean D'O 127.19 33 P **PKPdf** 03 52 53.5 -0.1
baz=308
F60A Warwick 127.19 34 P **PKPdf** 03 52 52.5 -1.2
baz=306,SNR=6.2
O58A Lewisberry 127.19 43 P **PKPdf** 03 52 53.3 -0.6
baz=298,SNR=9.5
JTS Las Juntas de 127.20 82 PP PP 03 54 56.1 +1.7
comp=Z,26nm,1.0s,baz=318,slow=4.8,SNR=5.1
JTS Las Juntas de 127.20 82*c i*PKIKP **PKPdf** 03 52 54.6 0.0
JTS Las Juntas de 127.20 82 **PKiKP** 03 52 55.1 0.0
Q58A Fox Den Farm, 127.20 45 P **PKPdf** 03 52 53.6 -0.3
baz=296,SNR=9.7
X57A Johnson Farm, 127.21 51 P **PKPdf** 03 52 53.9 -0.2
baz=291,SNR=5.5
P58A Pank, Wackersv 127.22 44 P **PKPdf** 03 52 53.6 -0.3
baz=297,SNR=7.5
E60A Ste Agathe de 127.23 34 P **PKPdf** 03 52 52.4 -1.3
baz=307
K59A Cooperstown 127.24 39 P **PKPdf** 03 52 53.0 -0.9
baz=302,SNR=7.4
R58A Rapidan 127.25 46 P **PKPdf** 03 52 53.0 -1.0
baz=296
I59A Olmsteadville 127.30 38 P **PKPdf** 03 52 53.4 -0.6
baz=303,SNR=14
D61A St Aubert, Com 127.40 32 P **PKPdf** 03 52 53.0 -1.1
baz=309
L59A Walton 127.42 40 P **PKPdf** 03 52 53.8 -0.5
baz=301,SNR=6.0
T58A Grand View Acr 127.44 47 P **PKPdf** 03 52 53.7 -0.7
baz=294,SNR=11
V58A Windy Hill, Pi 127.46 49 P **PKPdf** 03 52 53.9 -0.6
baz=293,SNR=7.3
G60A Masonville 127.48 36 P **PKPdf** 03 52 52.8 -1.5
baz=306
R58B Mineral 127.48 46 P **PKPdf** 03 52 53.5 -0.9
baz=296,SNR=6.2
M59A Wayart 127.50 41 P **PKPdf** 03 52 53.5 -0.9
baz=300,SNR=9.9
S58A Poland Farm, P 127.51 46 P **PKPdf** 03 52 53.6 -0.9
baz=295,SNR=6.5
CASP Castiglione de 127.55 321 PKPdf **PKPdf** 03 52 53.7 -0.8
H60A Morristown 127.58 36 P **PKPdf** 03 52 53.7 -0.8
baz=305
N59A State Game Lan 127.58 42 P **PKPdf** 03 52 54.1 -0.6
baz=299
O59A Robesonia 127.60 43 P **PKPdf** 03 52 53.9 -0.8
baz=299,SNR=6.5
SENIN Lac Senin/Sane 127.61 327 **PKPdf** 03 52 54.6 -0.1
NHSC New Hope 127.62 52 P **PKPdf** 03 52 54.5 -0.3
baz=290
I60A Shoreham 127.62 37 P **PKPdf** 03 52 53.8 -0.8
baz=304,SNR=18
MVL Millersville 127.64 43 **PKPdf** 03 52 55.0 +0.3
U58A Oxford 127.65 48 P **PKPdf** 03 52 54.2 -0.6
baz=294,SNR=10
W58A Raeford 127.67 50 P **PKPdf** 03 52 54.6 -0.3
baz=292,SNR=9.6
E61A Lac Etchemin 127.72 33 P **PKPdf** 03 52 53.9 -0.8
baz=308
F61A St Evariste 127.72 34 P **PKPdf** 03 52 53.9 -0.8
baz=307
158A Hollywood 127.74 53 P **PKPdf** 03 52 54.6 -0.5
baz=290
CBN Corbin Frederi 127.74 45 P **PKPdf** 03 52 54.5 -0.5
baz=296
WME Mynydd Eilian 127.74 340 *e*P **PKPdf** 03 52 54.4 -0.1
Y58A Scranton 127.74 51 P **PKPdf** 03 52 55.0 -0.1

baz=291,SNR=5.1
P59A Jarrettsville 127.76 43 P PKPdf 03 52 54.5 -0.5
baz=298,SNR=5.5
FOEL Foel Wylfa 127.76 339 eP PKPdf 03 52 54.6 0.0
X58A Rowland 127.76 50 P PKPdf 03 52 54.7 -0.4
baz=292
X58A Rowland 127.76 50 PKiKP 03 52 56.1 +0.5
Z58A St. Stephen 127.83 52 P PKPdf 03 52 54.2 -1.0
baz=291
G61A St-Isidore-de- 127.83 35 P PKPdf 03 52 54.1 -0.8
baz=306
WLF1 Llynfaes 127.86 340 eP PKPdf 03 52 54.9 +0.2
J60A Lant Hill Farm 127.88 38 P PKPdf 03 52 54.8 -0.3
baz=303,SNR=7.1
YLL Llanberis 127.91 339 eP PKPdf 03 52 53.6 -1.2
R59A King George, V 127.92 45 P PKPdf 03 52 54.1 -1.1
baz=296
K60A Five Rivers En 127.92 39 P PKPdf 03 52 54.5 -0.7
baz=302
HLM1 Long Mynd 127.94 338 eP PKPdf 03 52 54.7 -0.3
Q59A Harwood 127.95 44 P PKPdf 03 52 54.3 -1.0
baz=297
LLW Llanuwchllyn 127.96 339 eP PKPdf 03 52 55.0 +0.1
S59A Mechanicsville 127.99 46 P PKPdf 03 52 54.2 -1.3
baz=296
H61A Lyndonville 128.04 36 P PKPdf 03 52 54.9 -0.5
baz=306,SNR=9.5
L60A Shokan 128.05 40 P PKPdf 03 52 54.5 -1.0
baz=302
N60A Cedar Hill Far 128.05 41 P PKPdf 03 52 54.7 -0.8
baz=300,SNR=5.9
GO04 Tololo Observa 128.07 136 PKPdf 03 52 55.9 -0.3
D62A Allapoint, All 128.08 32 P PKPdf 03 52 53.9 -1.4
baz=310
O60A Telford 128.12 42 P PKPdf 03 52 55.0 -0.7
baz=299,SNR=9.0
E62A Clayton Lake 128.12 32 P PKPdf 03 52 54.2 -1.2
baz=309
M60A Port Jervis 128.13 41 P PKPdf 03 52 54.3 -1.4
baz=301
V59A Middlesex 128.13 49 P PKPdf 03 52 55.2 -0.5
baz=294,SNR=7.4
T59A Double "B" Far 128.14 47 P PKPdf 03 52 55.1 -0.6
baz=295,SNR=12
P60A Greenville 128.21 43 P PKPdf 03 52 55.1 -0.7
baz=299,SNR=5.7
W59A Clinton 128.21 49 P PKPdf 03 52 55.1 -0.9
baz=293
LBNH Lisbon 128.21 36 P PKPdf 03 52 55.1 -0.6
baz=305,SNR=5.8
I61A Oroboro, Fairl 128.22 37 P PKPdf 03 52 54.9 -0.8
baz=305,SNR=6.3
U59A Littleton 128.22 48 P PKPdf 03 52 55.3 -0.6
baz=294
STRD Stroud 128.25 337 eP PKPdf 03 52 55.1 -0.4
ODNJ Ogdensburg 128.26 41 PKiKP 03 52 56.4 -0.1
R60A Leonardtown, M 128.27 45 P PKPdf 03 52 55.5 -0.5
baz=297
K61A Williamstown 128.28 39 P PKPdf 03 52 55.2 -0.7
baz=303,SNR=7.4
Z59A Georgetown, SC 128.28 52 P PKPdf 03 52 56.0 -0.1
baz=291
SWN1 Swindon 128.32 337 eP PKPdf 03 52 55.6 0.0
X59A McDuffie Farm, 128.32 50 P PKPdf 03 52 55.7 -0.4
baz=292
Y59A Loris 128.33 51 P PKPdf 03 52 55.3 -0.9
baz=292
J61A Chester 128.35 37 P PKPdf 03 52 55.1 -0.8
baz=304,SNR=6.7
L61A Hillsdale 1, H 128.36 39 P PKPdf 03 52 55.3 -0.8
baz=302
MCH1 Michaelchurch 128.40 338 eP PKPdf 03 52 54.7 -1.1
G62A West of Eustis 128.44 34 P PKPdf 03 52 55.1 -1.1
baz=307
Q60A Greensboro 128.45 44 P PKPdf 03 52 56.3 0.0
baz=298,SNR=7.2
H62A Milan 128.47 35 P PKPdf 03 52 55.5 -0.7
baz=306
S60A Water View 128.47 46 P PKPdf 03 52 55.9 -0.5
baz=296
D63A Stockholm 128.60 31 P PKPdf 03 52 55.6 -0.8
baz=311
CNNC Cliffs of the 128.60 49 P PKPdf 03 52 55.4 -1.2
baz=294
N61A South Mountain 128.63 41 P PKPdf 03 52 55.7 -0.9
baz=301
ZON Zonda 128.63 139 PKiKP PKiKP 03 52 58.4 +0.7
ZON Zonda 128.63 139 PKPdf PKiKP 03 52 58.4 +0.7
U60A Pendleton 128.64 47 P PKPdf 03 52 54.7 -2.0
baz=295
T60A Surry 128.66 46 P PKPdf 03 52 55.2 -1.5
baz=296
M61A Granite Spring 128.69 40 P PKPdf 03 52 55.7 -1.0
baz=302
BNI Bardonecchia 128.75 326 PKiKP PKPdf 03 52 56.8 -0.1
BNI Bardonecchia 128.75 326 PKPdf PKPdf 03 52 56.8 -0.1
PAL Palisades 128.76 41 P PKPdf 03 52 55.9 -0.9
baz=301
L61B Northampton 128.77 38 P PKPdf 03 52 56.2 -0.7
baz=303,SNR=5.6
I62A Tamworth 128.77 36 P PKPdf 03 52 55.8 -1.0
baz=306
X60A Albert Glenn T 128.79 50 P PKPdf 03 52 56.4 -0.7
baz=293
O61A Allentown 128.80 42 P PKPdf 03 52 55.7 -1.2
baz=300
W60A Pink Hill 128.81 49 P PKPdf 03 52 56.2 -0.9
baz=294
Y60A Bolivia 128.83 51 P PKPdf 03 52 56.5 -0.7
baz=292
LCO Las Campanas 128.83 135 PKiKP PKiKP 03 52 58.3 -0.1
LCO Las Campanas 128.83 135 PKiKP 03 52 58.3 -0.1
E63A Oxbow 128.83 32 P PKPdf 03 52 55.8 -1.0
baz=310
P61A Hammonton 128.84 43 P PKPdf 03 52 56.0 -1.0
baz=300
V60A Jim Taylor Roa 128.85 48 P PKPdf 03 52 56.4 -0.8
baz=294
J62A Henniker 128.86 37 P PKPdf 03 52 56.2 -0.8
baz=305
K62A Royalston 128.92 38 P PKPdf 03 52 56.1 -1.0
baz=304
F63A Nahmakanta, Br 128.93 33 P PKPdf 03 52 55.9 -1.2
baz=309
L62A Suffield 129.01 39 P PKPdf 03 52 56.6 -0.6
baz=303
G63A Kingsbury 129.01 34 P PKPdf 03 52 56.9 -0.3
baz=308,SNR=5.3
H63A New Sharon 129.06 35 P PKPdf 03 52 56.2 -1.0
baz=308
PKME Peaks-Kenny Pk 129.10 34 P PKPdf 03 52 56.5 -0.8
baz=309
CLF Chambon-Foret 129.11 331 PKiKP 03 52 58.7 +0.7
I63A Otisfield 129.11 36 P PKPdf 03 52 56.3 -1.1
baz=307
E64A Bridgewater 129.15 32 P PKPdf 03 52 56.1 -1.2
baz=311
J63A Strafford 129.27 37 P PKPdf 03 52 57.0 -0.7
baz=306
K63A Dunstable 129.34 38 P PKPdf 03 52 56.5 -1.3
baz=305
HRV Adam Dziewonsk 129.42 38 P PKPdf 03 52 57.5 -0.5
baz=305
H64A Troy 129.53 34 P PKPdf 03 52 56.8 -1.4
baz=308
M63A Gales Ferry 129.74 39 P PKPdf 03 52 57.8 -0.9
baz=303
L63A North Scituate 129.75 39 P PKPdf 03 52 57.6 -1.1
baz=304
SSB Saint Sauveur 129.79 327 PKiKP PKPdf 03 52 58.8 +0.1
SSB Saint Sauveur 129.79 327 PKPdf 03 52 58.8 +0.1
H65A Eastbrook 130.03 34 P PKPdf 03 52 58.4 -0.7
baz=310
G65A Princeton 130.08 33 P PKPdf 03 52 57.8 -1.4
baz=311
M64A Tiverton 130.18 39 P PKPdf 03 52 58.4 -1.1
baz=304
MAPC Malpelo 130.29 90 eP PKPdf 03 52 59.4 -1.1
H66A Whiting 130.49 33 P PKPdf 03 52 59.2 -0.7
baz=311
AC02 Maricunga 131.24 134 PKPdf PKiKP 03 53 04.1 +0.5
ATAH Atahualpa 131.65 105 PKhKP PKPpre 03 52 55.8
comp=Z,11nm,0.8s,baz=270,slow=5.4,SNR=5.0
ATAH PKP PKiKP 03 53 05.4 +0.8
comp=Z,195nm,1.0s,baz=270,slow=1.8,SNR=101
ATAH SKPab SKPab 03 56 27.5 +1.9
comp=Z,21nm,0.8s,baz=236,slow=3.9,SNR=6.7

NNA Nana 131.71 112 PKP PKiKP 03 53 03.9 -0.3
comp=Z,235nm,1.1s,baz=267,slow=5.1,SNR=34
NNA SKPab SKPab 03 56 26.7 +1.4
comp=Z,20nm,0.8s,baz=239,slow=5.5,SNR=8.1
NNA Nana 131.71 112 d/ PKiKP PKPdf 03 53 03.0 -0.2
NNA MLR MLR
comp=Z,6μm,18.0s
NNA Nana 131.71 112 PKPdf 03 53 03.6 +0.4
KEST Kesra 132.11 314 PKP PKPdf 03 53 03.7 +0.2
comp=Z,25nm,0.8s,baz=299,slow=4.5,SNR=11
LPA La Plata 132.38 151 ce PKiKP PKPpre 03 52 55.3
LPA PP PP 03 55 17.0 -9.2
LPA pPP 03 55 35.8
LPA PKS PKSdf 03 56 29.5 -11
LPA SSS SSS 04 13 04.2
PB15 IPOC Station P 133.06 130 PKPdf PKiKP 03 53 07.0 0.0
CUSE Cuicocha Este 133.09 95 eP PKiKP 03 53 07.3 -0.2
MAHO Mahon 133.28 322 PP PP 03 55 36.5 +4.1
H09W1 TRISTAN DA CUN 133.42 201 PKP PKiKP 03 53 07.3 +0.3
SNR=39
H09N1 TRISTAN DA CUN 133.44 201 PKP PKiKP 03 53 07.6 +0.6
SNR=11
GR1C Gorgona, Isla 133.63 92 eP PKPdf 03 53 07.2 +0.4
LVC Limon Verde 133.82 129 PKP PKiKP 03 53 09.0 +0.2
comp=Z,80nm,0.6s,baz=252,slow=2.4,SNR=44
LVC SKPab SKPab 03 56 34.0 -0.6
comp=Z,152nm,1.4s,baz=208,slow=5.0,SNR=13
LVC Limon Verde 133.82 129 PKiKP PKPdf 03 53 07.7 +0.2
LVC Limon Verde 133.82 129 PKPdf 03 53 07.7 +0.2
CCUFI Cufio, Nario 134.25 94 eP PKiKP 03 53 10.3 +0.3
GCUF Volcan Galeras 134.25 94 eP PKPpre 03 52 55.5
CPAS1 Pasto 134.27 94 eP PKiKP 03 53 10.2 +0.2
CPAS2 Pasto 134.34 94 eP PKiKP 03 53 10.0 +0.1
MALC Bahia Malaga 134.54 90 eP PKiKP 03 53 10.7 +0.8
SOLC Bahia Solano 134.60 87 eP PKiKP 03 53 10.7 -0.3
SET Setif 134.64 317 P PKiKP 03 53 10.0 +0.4
CRUC La Cruz 134.68 94 eP PKiKP 03 53 10.1 -0.6
CAPC Capurgana 134.70 84 eP PKPdf 03 53 07.2 -1.6
PB11 IPOC Station P 134.74 125 PKPdf PKPdf 03 53 08.9 -0.1
PUAC Puerto Asis, P 134.93 95 eP PKPpre 03 52 56.3
POPC Popayan, Colom 135.06 92 eP PKPpre 03 53 02.4
SOTA Rioblanco 135.09 93 eP PKPpre 03 53 03.6
PCON Cinco Dias 135.32 93 eP PKPpre 03 53 02.1
YOTC Yotoco, Valle 135.53 90 eP PKPpre 03 52 57.9
LCBC Los crdobas, 135.68 84 eP PKPpre 03 53 03.6
MARP Paez Belalcaza 135.81 92 eP PKPpre 03 52 58.6
DBBC Dabeiba 135.82 86 eP PKPpre 03 53 03.5
CBOC Ciudad Bolivar 135.97 88 eP PKPdf 03 53 09.6 -1.9
FLOC Florencia 135.97 94 eP PKPpre 03 52 58.3
FLOC eP PKPpre 03 52 58.6
BETC Betania 136.31 92 eP PKPdf 03 53 12.5 +0.6
MOTC Monteria, Cord 136.37 84 eP PKPpre 03 52 59.1
HELC Santa Helena 136.47 87 eP PKPpre 03 53 01.0
ANIL Santa Ana 136.50 90 eP PKPdf 03 53 12.7 +0.1
RREF El Recreo 136.58 89 eP PKPpre 03 53 03.7
GUY2C Guyana, Caldas 136.58 89 eP PKPpre 03 53 00.2
TOLC Tolima 136.59 90 eP PKPpre 03 53 01.1
ORTC Ortega, Tolima 136.61 91 eP PKPpre 03 52 59.9
PTLC Puerto Leguiza 136.63 96 eP PKPpre 03 53 01.4
SJCC San Jacinto, C 136.83 82 eP PKPpre 03 53 01.0
PRAC Prado 136.95 91 eP PKPpre 03 53 01.5
NORC Norcasia 137.09 88 eP PKPpre 03 53 02.2
UCM Universidad Co 137.36 327 PKP PKPpre 03 53 01.8
UCM Universidad Co 137.36 327 PP PP 03 55 52.1 -5.9
ROSC El Rosal 137.60 89 PKhKP PKPpre 03 53 09.1
comp=Z,174nm,0.5s,baz=351,slow=6.1,SNR=58
ROSC PKP PKPdf 03 53 15.6 +0.8
comp=Z,198nm,0.5s,baz=104,slow=23,SNR=23
ROSC El Rosal 137.60 89 eP PKPpre 03 53 03.7
LPAZ La Paz 137.71 122 PKhKP PKPpre 03 53 01.9
comp=Z,22nm,0.8s,baz=232,slow=0.9,SNR=45
LPAZ PKP PKiKP 03 53 16.2 -0.9
comp=Z,177nm,0.9s,baz=285,slow=0.3,SNR=35
LPAZ SKPbc SKPbc 03 56 45.1 +0.5
comp=Z,29nm,0.9s,baz=260,slow=2.1,SNR=4.5
SMRC Santa Marta, M 137.71 80 eP PKPdf 03 53 14.2 -0.2
CTAB Cerro Tablazo, 137.72 89 eP PKPdf 03 53 10.1 -4.9
CVER Cruz Verde, Cu 137.82 90 eP PKPdf 03 53 10.5 -4.7
MACC Macarena, Meta 137.83 93 eP PKPpre 03 53 02.6
SPBC San Pablo de B 137.89 88 eP PKPpre 03 53 03.1
CART Cartagena 137.94 323 PP PP 03 55 56.5 -5.2
PBRG Braganca 138.00 332 ePKPdf PKPdf 03 53 15.0 +0.7
PBRG Braganca 138.00 332 eSS SS 04 14 49.0 +41
CHIC Chingaza 138.17 90 eP PKPpre 03 53 09.3
ESDC Sonseca Array 138.20 327 PKhKP PKPpre 03 53 03.3
comp=Z,2.3nm,0.8s,baz=24,slow=2.0,SNR=11
ESDC PKP PKPdf 03 53 14.0 -0.7
comp=Z,5.1nm,0.7s,baz=12,slow=2.2,SNR=11
ESDC PP PP 03 56 04.2 +1.0
comp=Z,12nm,1.2s,baz=42,slow=6.3,SNR=8.0
ESDC PKKP PKKPdf 04 02 46.5 -0.6
comp=Z,3.4nm,0.7s,baz=279,slow=1.7,SNR=18
ESDC Sonseca Array 138.20 327 PKPdf PKPdf 03 53 14.2 -0.5
CPSB Cacapava Do Su 138.23 151 eP PKPdf 03 53 14.5 -0.5
BRRC Barranca, Sant 138.30 86 eP PKPpre 03 53 10.2
PAB San Pablo 138.50 328 PKiKP PKPdf 03 53 15.0 -0.3
PAB San Pablo 138.50 328 PKPdf 03 53 15.0 -0.3
PGAV Gavieira, Arco 138.58 333 ePKPdf PKiKP 03 53 17.1 -0.4
PGAV Gavieira, Arco 138.58 333 eSS SS 04 15 06.2 +51
PGAV Gavieira, Arco 138.58 333 eLQ LQ 04 34 20.6
PGAV eLR LR 04 42 07.8
comp=Z,8μm,20.0s
MVO Moncorvo 138.64 331 ePKPdf PKPdf 03 53 14.0 -1.5
MVO Moncorvo 138.64 331 eSS SS 04 15 09.0 +53
MVO Moncorvo 138.64 331 eLQ LQ 04 33 59.0
MVO eLR LR 04 42 39.8
comp=Z,11μm,20.0s
OCAC Ocana 138.69 84 eP PKPpre 03 53 06.3
BARC Barichara 138.81 87 eP PKPdf 03 53 11.9 -4.8
POLO Lamas de Olo 138.83 332 ePKPdf PKiKP 03 53 17.8 -0.2
POLO Lamas de Olo 138.83 332 eSS SS 04 14 58.7 +41
PVRL Vila Real 138.87 332 ePKPdf PKPdf 03 53 16.0 +0.1
RUSC La Rusia 138.88 88 eP PKPpre 03 53 07.1
PAMC Pamplona, Colo 139.30 86 eP PKPpre 03 53 08.5
CPUP Villa Florida 139.37 143 PKhKP PKPpre 03 53 07.0
comp=Z,19nm,0.9s,baz=231,slow=1.8,SNR=26
CPUP PKP PKPdf 03 53 18.2 +1.0
comp=Z,216nm,1.0s,baz=245,slow=1.6,SNR=46
PVIS Viseu 139.40 332 ePKPdf PKiKP 03 53 18.3 -0.9
MTE Manteigas 139.48 331 ePKPdf PKiKP 03 53 18.7 -0.6
MTE Manteigas 139.48 331 eSS SS 04 15 08.3 +43
MTE Manteigas 139.48 331 eLQ LQ 04 33 48.7
MTE eLR LR 04 42 05.5
comp=Z,11μm,20.0s
PTGC Puerto Gaitan, 139.73 91 eP PKPpre 03 53 07.7
SC01 Santiago de lo 139.82 67 PKPpre 03 53 09.9
SC01 PKPdf PKPdf 03 53 19.3 +1.2
URIC Uribia, Colomb 139.86 79 eP PKPpre 03 53 10.0
PCBR Castelo Branco 139.88 331 ePKPdf PKPdf 03 53 15.4 -2.3
COI Coimbra 140.04 332 eSS SS 04 15 13.9 +42
PMRV Marv??o 140.15 330 ePKPdf PKPdf 03 53 15.3 -2.9
PMRV Marv??o 140.15 330 ePP PP 03 56 22.3 +0.2
PMRV Marv??o 140.15 330 eSS SS 04 16 22.2 +49
PMRV Marv??o 140.15 330 eLR LR 04 47 18.4
comp=Z,6μm,20.0s
TAMC Tame, Arauca 140.19 87 eP PKPdf 03 53 06.6 -12
PCAS Casmilo, Conde 140.20 332 ePKPdf PKPdf 03 53 19.1 +0.8
PCAS Casmilo, Conde 140.20 332 eSS SS 04 15 24.7 +51
CNLB Canela 140.34 153 eP PKPdf 03 53 19.4 +0.5
TAM Tamanrasset 140.41 299 PKiKP PKPdf 03 53 19.3 0.0
TAM Tamanrasset 140.41 299 PKPdf PKPdf 03 53 19.3 0.0
EMAL Malaga-Limoner 140.52 325 PP PP 03 56 13.3 -4.2
MELI Melilla 140.62 322 PKP PKPdf 03 53 06.1 -13
MELI Melilla 140.62 322 PP PP 03 56 14.2 -4.0
PSBE So Bento 140.77 332 ePKPdf PKPdf 03 53 19.3 0.0
PSBE So Bento 140.77 332 eSS SS 04 15 18.1 +37
PMTG Montargil 140.84 331 ePKPdf PKPdf 03 53 19.6 +0.2
PMTG Montargil 140.84 331 ePP PP 03 56 21.8 +2.5
PMTG Montargil 140.84 331 eSS SS 04 14 48.1 +6.5
EVO Evora 141.15 330 PKP PKPdf 03 53 08.5 -12
EVO Evora 141.15 330 PP PP 03 56 24.5 +3.4
EVO Evora 141.15 330 ePKPdf PKPdf 03 53 13.2 -6.8
EVO Evora 141.15 330 ePPP PP 03 56 23.8 +2.6
SDV Santo Domingo 141.34 83 PKhKP PKPpre 03 53 13.2
comp=Z,157nm,0.8s,baz=165,slow=1.3,SNR=47
SDV PKP PKPdf 03 53 21.8 +0.6
comp=Z,323nm,0.7s,baz=258,slow=3.6,SNR=33
SDV SKPbc SKPbc 03 56 54.0 0.0
comp=Z,34nm,0.9s,baz=249,slow=2.7,SNR=4.5
SDV Santo Domingo 141.34 83 eP PKPdf 03 53 13.8 -7.4
PMAFR Mafra 141.44 331 ePKPdf PKPdf 03 53 12.6 -7.9
PMAFR Mafra 141.44 331 eSS SS 04 15 26.2 +38

PBEJ Beja 141.46 329 ePKPdf PKPdf 03 53 20.9 +0.3
PBEJ Beja 141.46 329 ePP PP 03 56 23.1 0.0
ITAB Concordia 141.49 150 eP PKiKP 03 53 22.5 -1.3
PVLZ Peæn de 141.53 323 PP PP 03 56 30.0 +6.2
LIS Lisbon 141.56 331 ePKPdf PKPdf 03 53 18.9 -1.8
LIS ePP PP 03 56 23.5 -0.1
LIS AMS AMS 05 00 33.4
comp=Z,10μm,18.5s
LIS Lisbon 141.56 331 ePKIKP PKPdf 03 53 18.9 -1.8
LIS e 03 56 23.5
CEU Ceuta 141.66 324 PKP PKPdf 03 53 07.5 -13
CEU Ceuta 141.66 324 PPP PP 03 56 22.4 -2.1
PNCL Nicolau / Gran 141.73 330 ePKPdf PKPdf 03 53 15.3 -5.8
PNCL Nicolau / Gran 141.73 330 ePPP PP 03 56 27.9 +3.2
PNCL Nicolau / Gran 141.73 330 eSS SS 04 15 28.2 +36
SFS San Fernando 141.74 326 PKP PKPdf 03 53 10.2 -11
SFS San Fernando 141.74 326 PP PP 03 56 38.0 +13
PCVE Castro Verde 141.85 329 ePKPdf PKPdf 03 53 16.6 -4.7
PCVE Castro Verde 141.85 329 ePPP PP 03 56 27.9 +2.4
PCVE Castro Verde 141.85 329 eSS SS 04 15 03.0 +10
PVAQ Vaqueiros 141.86 328 ePKPdf PKiKP 03 53 23.1 -1.1
PVAQ Vaqueiros 141.86 328 ePPP PP 03 56 27.2 +1.7
PVAQ Vaqueiros 141.86 328 eSS SS 04 15 26.7 +33
PVAQ Vaqueiros 141.86 328 eLR LR 04 52 54.2
comp=Z,4μm,20.0s
PBDV Barranco-do-Ve 142.09 328 ePKPdf PKPdf 03 53 21.7 -0.1
PBDV Barranco-do-Ve 142.09 328 eSS SS 04 15 41.2 +45
PTEO Sao Teotonio 142.27 329 ePKPdf PKPdf 03 53 20.6 -1.4
MORF Marmelete 142.41 329 ePKPdf PKPdf 03 53 20.7 -1.7
MORF ePP PP 03 56 29.1 +0.1
MORF AMS AMS 05 25 34.3
comp=Z,7μm,19.8s
MORF Marmelete 142.41 329 ePKIKP PKPdf 03 53 20.7 -1.7
MORF e 03 56 29.1
MORF Marmelete 142.41 329 ePKPdf PKPdf 03 53 19.8 -2.6
MORF Marmelete 142.41 329 eSS SS 04 15 55.3 +55
PFVI Vila Bisbo 142.64 329 ePKPdf PKPdf 03 53 23.0 +0.3
PFVI Vila Bisbo 142.64 329 eSS SS 04 15 49.9 +47
IFR Ifrane 143.15 321 PKP PKPab 03 53 14.2 -5.3
IFR Ifrane 143.15 321 PP PP 03 56 45.7 +12
SIV San Ignacio 143.64 127 PKP PKPbc 03 53 22.9 +0.3
comp=Z,579nm,1.0s,baz=242,slow=3.8,SNR=326
RTC Rabat Centre 143.87 324 PKPdf PKPbc 03 53 22.9 +0.2
SJG San Juan 144.35 67 PKP PKPab 03 53 23.8 -0.5
comp=Z,117nm,0.6s,baz=297,slow=2.9,SNR=32
SJG San Juan 144.35 67 eP PKPab 03 53 21.3 -3.0
PDPR Patillas Dam, 144.49 67 PKPdf PKPab 03 53 24.6 -0.3
TIJ01 Guaruva-PR 144.60 152 eP PKPab 03 53 24.0 -1.2
AVE Averroes 144.69 323 PKP PKPab 03 53 21.7 -3.4
AVE Averroes 144.69 323 PP PP 03 56 56.1 +13
TRCB Terra Rica 144.81 145 eP PKPab 03 53 25.6 -0.4
MTP Monte Pirata 144.90 67 PKPab 03 53 26.0 -0.4
SAML Samuel 145.30 115 PKP2 PKPbc 03 53 27.5 -0.3
SAML Samuel 145.30 115 PKPbc 03 53 27.5 -0.3
SAML Samuel 145.30 115 eP PKPbc 03 53 27.3 -0.5
PTLB Pontes e Lacer 145.47 128 eP PKPbc 03 53 28.3 0.0
FRTB Fartura 146.01 150 eP PKPbc 03 53 29.7 -0.1
VILB Vilhena 146.01 124 eP PKPbc 03 53 30.2 +0.1
SHEL Horse Pasture 146.25 229 PKP2 PKPab 03 53 31.5 0.0
SHEL Horse Pasture 146.25 229 PKPab 03 53 31.5 0.0
PET01 Itanhaem-SP 146.27 154 eP PKPbc 03 53 30.8 +0.2
TOA0 Torodi Ar. Sit 146.31 285 PKPdf 03 53 29.4 -0.3
TORD Torodi Ar. Bea 146.31 285 PKP PKPdf 03 53 27.8 -1.9
comp=Z,133nm,0.7s,baz=51,slow=3.1,SNR=222
TORD PKPbc PKPbc 03 53 30.0 -0.9
comp=Z,131nm,0.7s,baz=35,slow=2.4,SNR=129
TORD Torodi Ar. Bea 146.31 285 PKPdf 03 53 29.4 -0.3
H07N1 FLORES T-PHASB 146.48 359 ePKP PKPab 03 53 31.6 -0.1
H07N1 FLORES T-PHASB 146.48 359 PKPbc PKPab 03 53 31.6 -0.1
SNR=7.1
PCMB Pacaembu 146.52 146 eP PKPdf 03 53 30.6 +0.7
H07S1 FLORES T-PHASB 146.79 359 ePKP PKPab 03 53 32.5 -0.4
H07S1 FLORES T-PHASB 146.79 359 PKPbc PKPab 03 53 32.7 -0.2
SNR=9.7
SPB Sao Paulo 146.81 153 eP PKPbc 03 53 31.4 -0.7
SRBC Serra Branca 146.97 355 ePKP PKPab 03 53 33.1 -0.5
PGRA Graciosa 146.97 355 ePKP PKPbc 03 53 32.7 +0.6
PCRV Puerto La Cruz 147.18 81 PKP PKPdf 03 53 29.6 -1.6
comp=Z,379nm,0.7s,baz=347,slow=2.1,SNR=91
PCRV PKPbc PKPbc 03 53 33.2 -0.3
comp=Z,272nm,0.4s,baz=288,slow=1.4,SNR=255
PSCM Serra do Cume 147.21 353 ePKP PKPbc 03 53 32.4 -0.4
PLCV Puerto La Cruz 147.23 81 PKPbc 03 53 29.6 -1.6
ADH Angra Heroismo 147.26 353 ePKP PKPbc 03 53 33.2 +0.3
ROSA Rosais 147.30 355 ePKP PKPab 03 53 34.1 -0.8
SEUS St. Eustatius 147.42 67 eP PKPdf 03 53 31.7 +0.3
SEUS St. Eustatius 147.42 67 PKPdf 03 53 31.7 +0.3
PCED Cedros 147.43 356 ePKP PKPbc 03 53 33.6 +0.2
CALA Caldeira 147.48 356 ePKP PKPbc 03 53 34.1 +0.4
HOR Horta 147.53 355 ePKP PKPbc 03 53 34.5 +0.8
VAO Valinhos 147.53 153 eP PKPdf 03 53 32.9 +1.2
PICO Pico 147.53 355 ePKP PKPbc 03 53 34.0 +0.2
PID Ribeirinha 147.56 355 ePKP PKPbc 03 53 33.9 +0.1
PCAN Candelaria 147.58 355 ePKP PKPbc 03 53 34.7 +0.8
SKI Saint Kitts 147.69 67 eP PKPdf 03 53 33.0 +1.1
SKI Saint Kitts 147.69 67 PKIKP PKPdf 03 53 33.0 +1.1
SKI Saint Kitts 147.69 67 PKPdf 03 53 33.0 +1.1
SKOC St. Kitts, UWI 147.70 67 eP PKPbc 03 53 35.3 +0.5
SKOC St. Kitts, UWI 147.70 67 PKPbc 03 53 35.3 +0.5
PAAB Paraibuna 147.81 156 eP PKPbc 03 53 32.5 +0.4
BART Pico Bartolome 147.84 350 ePKP PKPbc 03 53 34.9 +0.2
NVRH Round Hill, Ne 147.85 67 eP PKiKP 03 53 36.5 -0.6
NVRH Round Hill, Ne 147.85 67 PKiKP 03 53 36.5 -0.6
NVBH Bath Hotel, Ne 147.86 67 eP PKiKP 03 53 36.8 -0.3
NVBH Bath Hotel, Ne 147.86 67 PKiKP 03 53 36.8 -0.3
PSET Sete Cidades 147.88 351 ePKP PKPbc 03 53 35.1 +0.4
GRON Grota Negra 147.90 351 ePKP PKPbc 03 53 34.7 -0.1
CMLA Cha da Macela 147.91 351 ePKP PKPbc 03 53 34.6 -0.2
CMLA Cha da Macela 147.91 351 PKP2 PKPbc 03 53 35.7 +1.0
CMLA Cha da Macela 147.91 351 PKPbc 03 53 35.7 +1.0
PDA Ponta Delgada 147.94 351 ePKP PKPbc 03 53 35.5 +0.7
MLYT Lee's Yard 148.36 68 eP PKPbc 03 53 35.0 -1.5
BB19B Bebedouro 148.43 149 eP PKPdf 03 53 33.9 +0.8
ORIV Oritupano 148.47 83 eP PKPdf 03 53 32.8 -0.5
ORIV Oritupano 148.47 83 PKPdf 03 53 32.8 -0.5
ITRB Iturama 148.54 145 eP PKPdf 03 53 35.1 +1.8
PSMN Pico do Norte, 148.57 350 ePKP PKPbc 03 53 35.0 -1.5
ESAR Angra dos Reis 148.57 157 eP PKPdf 03 53 32.0 -1.2
BPA Boggy Peak 148.57 67 eP PKPdf 03 53 34.5 +1.1
BPA Boggy Peak 148.57 67 PKPdf 03 53 34.5 +1.1
PSMA Santa Maria 148.59 350 ePKP PKPbc 03 53 36.1 -0.4
ANBD Bethesda, Anti 148.66 67 eP PKPdf 03 53 35.2 +1.7
ANBD Bethesda, Anti 148.66 67 PKPdf 03 53 35.2 +1.7
MAN01 Angra dos Reis 148.89 158 eP PKPdf 03 53 33.2 -0.7
ABD La Joyeuse, An 149.08 68 eP PKPbc 03 53 36.8 -1.6
ABD La Joyeuse, An 149.08 68 PKPbc 03 53 36.8 -1.6
CBE Ff, Capester 149.08 69 eP PKPbc 03 53 36.9 -1.5
CBE Ff, Capester 149.08 69 PKPbc 03 53 36.9 -1.5
TDBA Terre de Bas, 149.11 69 eP PKPdf 03 53 36.3 +2.1
TDBA Terre de Bas, 149.11 69 PKPdf 03 53 36.3 +2.1
MAGL Barre de l'ile 149.41 69 eP PKPdf 03 53 35.7 +1.0
MAGL Barre de l'ile 149.41 69 eP PKiKP 03 53 41.0 +0.8
MAGL Barre de l'ile 149.41 69 PKPdf 03 53 35.7 +1.0
MAGL PKiKP 03 53 41.0 +0.8
DSLB Salisbury 149.41 70 eP PKPdf 03 53 34.3 -0.4
DSLB Salisbury 149.41 70 PKPdf 03 53 34.3 -0.4
MDN Morne-Daniel 149.47 70 eP PKPbc 03 53 38.3 -1.1
MDN Morne-Daniel 149.47 70 PKPbc 03 53 38.3 -1.1
DRTD Roseau, Domini 149.48 70 eP PKPbc 03 53 38.5 -0.9
DRTD Roseau, Domini 149.48 70 PKPbc 03 53 38.5 -0.9
H05N1 Guadeloupe/Mar 149.52 68 PKPbc PKPbc 03 53 39.3 -0.2
SNR=168
PMPS Porto Santo 149.52 334 ePKPbc PKPbc 03 53 38.9 -0.1
DLPL La Plaine 149.60 70 eP PKPbc 03 53 37.6 -2.1
DLPL La Plaine 149.60 70 PKPbc 03 53 37.6 -2.1
FDF Fort de France 149.84 71 eP PKPdf 03 53 34.0 -1.5
FDF Fort de France 149.84 71 PKiKP PKPdf 03 53 34.0 -1.5
FDF Fort de France 149.84 71 PKPdf 03 53 34.0 -1.5
GRHS Sauteurs 149.86 76 eP PKPbc 03 53 39.1 -1.2
GRGR Grenville 149.86 76 eP PKPdf 03 53 36.7 +1.1
GRGR Grenville 149.86 76 PKPdf 03 53 36.7 +1.1
GRSS Sisters 149.87 76 PKPbc 03 53 39.1 -1.3
BIM Bigot 149.96 71 eP PKPdf 03 53 35.5 -0.2
BIM Bigot 149.96 71 PKPdf 03 53 35.5 -0.2
GCMP Grenada, Carri 150.02 75 eP PKPdf 03 53 37.1 +1.3
GCMP Grenada, Carri 150.02 75 PKPdf 03 53 37.1 +1.3
SVB Belmont 150.05 74 eP PKPdf 03 53 37.6 +1.8
SVB Belmont 150.05 74 PKPdf 03 53 37.6 +1.8
PMAR Madeira 150.06 334 ePKPbc PKPbc 03 53 40.7 +0.1
SVV Soufriere Volc 150.07 74 eP PKiKP 03 53 41.5 -0.2

SVV	Soufriere Volc	150.07	74			PKiKP	03 53 41.5	-0.2
ILAM	Ilet Lapin Mar	150.09	71	eP		PKPbc	03 53 38.6	-2.2
PMOZ	Porto Moniz, M	150.09	335	ePKPbc		PKiKP	03 53 41.4	0.0
PMOZ	Porto Moniz, M	150.09	335	eSS		SS	04 17 42.8	+76
PMOZ	Porto Moniz, M	150.09	335			PKiKP	03 53 41.4	0.0
SVOC	Richmond Hill,	150.10	74	eP		PKiKP	03 53 41.6	-0.1
SVOC	Richmond Hill,	150.10	74			PKiKP	03 53 41.6	-0.1
SFAN	Fancy Village	150.10	74	eP		PKiKP	03 53 41.6	-0.1
SFAN	Fancy Village	150.10	74			PKiKP	03 53 41.6	-0.1
FUL	Funchal	150.12	334	ePKPbc		PKPbc	03 53 40.3	-0.2
SLDE	Delcer	150.13	73	eP		PKPbc	03 53 41.2	+0.2
SLDE	Delcer	150.13	73			PKPbc	03 53 41.2	+0.2
SLB	Belfond	150.14	73	eP		PKiKP	03 53 41.9	-0.1
SLB	Belfond	150.14	73			PKiKP	03 53 41.9	-0.1
SLCP	Castries, St.	150.15	72	eP		PKPbc	03 53 41.2	+0.2
SLCP	Castries, St.	150.15	72			PKPbc	03 53 41.2	+0.2
SVCV	St. Vincent, C	150.15	74	eP		PKPbc	03 53 40.3	-0.8
SVCV	St. Vincent, C	150.15	74			PKPbc	03 53 40.3	-0.8
SLBI	Saint Lucia, B	150.16	72	eP		PKPbc	03 53 39.6	-1.5
SLBI	Saint Lucia, B	150.16	72			PKPbc	03 53 39.6	-1.5
BHS	Barnard House	150.16	74	eP		PKiKP	03 53 42.3	+0.4
BHS	Barnard House	150.16	74			PKiKP	03 53 42.3	+0.4
MPOM	Morne Pois Mar	150.18	71	eP		PKPdf	03 53 36.3	+0.4
MPOM	Morne Pois Mar	150.18	71			PKPdf	03 53 36.3	+0.4
SLW	Petit Monier	150.19	72	eP		PKPbc	03 53 41.4	+0.2
SLW	Petit Monier	150.19	72			PKPbc	03 53 41.4	+0.2
H05S1	Guadeloupe/Mar	150.20	71	PKPbc		PKPbc	03 53 41.1	0.0
SLPA	Patience	150.25	73	eP		PKPbc	03 53 41.3	0.0
SLPA	Patience	150.25	73			PKPbc	03 53 41.3	0.0
MCLT	Moule a Chique	150.26	73	eP		PKPdf	03 53 37.3	+1.2
MCLT	Moule a Chique	150.26	73			PKPdf	03 53 37.3	+1.2
TPP	Pointe-a-Pierr	150.29	80	eP		PKiKP	03 53 42.6	+0.4
TPP	Pointe-a-Pierr	150.29	80	PKIKP		PKiKP	03 53 42.6	+0.4
TPP	Pointe-a-Pierr	150.29	80			PKiKP	03 53 42.6	+0.4
TRN	Trinidad (W)	150.30	79	eP		PKPbc	03 53 41.1	-0.3
TRN	Trinidad (W)	150.30	79	PKIKP		PKPbc	03 53 41.1	-0.3
TRN	Trinidad (W)	150.30	79			PKPbc	03 53 41.1	-0.3
ARAG	Araguaiana, MT	150.65	138	eP		PKPdf	03 53 36.8	+0.1
TBH	Brigand Hill	150.65	79	eP		PKiKP	03 53 44.1	+1.2
TBH	Brigand Hill	150.65	79	PKIKP		PKiKP	03 53 44.1	+1.2
TBH	Brigand Hill	150.65	79			PKiKP	03 53 44.1	+1.2
CLDB	Colider	150.75	125	eP		PKPdf	03 53 36.3	-0.6
TPR	Prospect	150.85	78	eP		PKPbc	03 53 43.0	+0.2
TPR	Prospect	150.85	78			PKPbc	03 53 43.0	+0.2
TOSP	Speyside	151.06	78	eP		PKPdf	03 53 37.8	+0.4
TOSP	Speyside	151.06	78			PKPdf	03 53 37.8	+0.4
IPMB	Ipameri, GO	151.13	146	eP		PKPdf	03 53 37.3	-0.2
KOWA	Kowa	151.48	289			PKPdf	03 53 37.2	-0.8
KOWA					PKPbc	PKPbc	03 53 43.8	-0.3
BCHC	Barbados, Cave	151.62	74	eP		PKPab	03 53 55.6	+2.3
BCHC	Barbados, Cave	151.62	74			PKPab	03 53 55.6	+2.3
BBGH	Gun Hill	151.69	73	eP		PKPbc	03 53 44.5	-0.2
BBGH	Gun Hill	151.69	73			PKPbc	03 53 44.5	-0.2
NPGB	Novo Progresso	153.09	119	eP		PKPdf	03 53 40.5	0.0
BDFB	Brasilia	153.10	143	PKP		PKPdf	03 53 41.3	+0.7
	comp=Z,157nm,0.8s,baz=238,slow=1.1,SNR=194							
BDFB					PKPbc	PKiKP	03 53 48.6	+0.5
	comp=Z,624nm,0.9s,baz=194,slow=0.9,SNR=80							
BDFB	Brasilia	153.10	143			PKPdf	03 53 41.3	+0.7
BDFB					PKPbc	PKiKP	03 53 48.3	+0.2
BDFB					PKPab	PKPab	03 54 00.3	+0.9
KIC	Kosan Boka	153.16	272	ePKiKP		PKPdf	03 53 40.5	-0.1
	comp=Z,246nm,0.8s							
DBIC	Dimbokro	153.28	273	PKP		PKPdf	03 53 39.6	-1.1
	comp=Z,13nm,0.8s,baz=86,slow=2.3,SNR=17							
DBIC					PKPbc	PKiKP	03 53 48.9	+0.6
	comp=Z,90nm,0.7s,baz=77,slow=2.5,SNR=46							
RIB01	Linhares ES	153.41	161	eP		PKPdf	03 53 41.6	+0.8
TIC	Toumodi	153.44	273	ePKiKP		PKPdf	03 53 40.8	-0.2
LIC	Lamto	153.44	272	ePKiKP		PKPdf	03 53 40.8	-0.2
	comp=Z,429nm,0.7s							
SNDB	Serra Nova Dou	153.58	133	eP		PKPdf	03 53 41.7	+0.5
MACI	Morro de la Ar	153.60	329			PKPbc	03 53 48.6	-0.2
BSFB	Barra de Sao F	153.72	160	eP		PKPdf	03 53 41.0	-0.3
SJMB	Sao Joao De Ma	153.72	159	eP		PKPdf	03 53 41.6	+0.4
ITTB	Itaituba	153.91	113	eP		PKPdf	03 53 41.6	0.0
NAN01	Guarapari, ES	154.88	161	eP		PKPdf	03 53 43.0	+0.1
JANB	Januaria	155.62	149	eP		PKPdf	03 53 43.8	-0.2
MALB	Monte Alegre	156.18	109	eP		PKPdf	03 53 44.3	-0.5
SDBA	SAO DESIDERIO	157.49	144	eP		PKPdf	03 53 47.5	+1.1
PRPB	Parauapebas	158.26	124	eP		PKPdf	03 53 46.4	-1.0
SMTB	Santa Maria do	158.36	133	eP		PKPdf	03 53 46.8	-0.8
MCPB	Macapa, AP	158.75	107	eP		PKPdf	03 53 48.0	0.0
GDU01	Guandu, BA	158.89	158	eP		PKPdf	03 53 47.9	-0.2
MDP	Montagnes des	159.17	91	PKP		PKPdf	03 53 48.5	+0.1
	comp=Z,94nm,1.2s,baz=273,slow=1.3,SNR=32							
MDP					PKPab	PKPab	03 54 25.6	-0.1
	comp=Z,121nm,0.9s,baz=248,slow=5.3,SNR=5.0							
MDP				PP		PP	03 58 06.3	-0.7
	comp=Z,15nm,1.0s,baz=236,slow=1.8,SNR=3.6							
TMAB	Tom-Au,PA,Br	161.66	117	eP		PKPdf	03 53 51.5	+0.3
ROSB	Rosrio	164.78	125	eP		PKPdf	03 53 54.8	+0.6
RCBR	Riachuelo	167.51	160	PKP		PKPdf	03 53 56.2	-0.2
	comp=Z,53nm,1.0s,baz=132,slow=2.1,SNR=9.9							
RCBR					PKPab	PKPab	03 55 02.6	+0.7
	comp=Z,109nm,1.1s,baz=161,slow=7.0,SNR=13							
RCBR	Riachuelo	167.51	160			PKPdf	03 53 56.6	+0.2
RCBR						PKPab	03 55 02.6	+0.7
NBMO	Morrinhos-CE	167.56	138	eP		PKPdf	03 53 57.4	+1.0

*ISN **07** 03:42:59.8±0.8,33°.48N×45°.70E, h0km±5km, ML3.5*
*TEH **07** 03:43:00.2,33°.58N×45°.95E, h16km, ML3.6*

ISC 07 03:42:59.8±0.9, 33°.58N±0°.04×45°.86E±0°.05, h10km, n29, σ0$ 99/33, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
IBDR	Badra	0.47	172	eP	g	Pg	03 43 09.0	+0.1
IBDR				eS	g	Sg	03 43 15.0	-0.1
IBDR				AML		AML	03 43 20.6	
	comp=N,4μm,0.8s							
IGHG	Ghaleghazi	0.96	38	eP	g	Pg	03 43 17.5	-0.7
IGHG					e		03 43 39.7	
IDHR	Dehrash	1.20	21	eP	g	Pb	03 43 22.0	-0.8
IDHR				eS	g	Sb	03 43 38.9	+0.4
IDHR					e		03 43 44.0	
KCHF	Cheshme Sefid,	1.21	54	eP	g	Pb	03 43 22.0	-0.8
KCHF					e		03 43 42.7	
IVIS	Veis	1.26	41	eP	g	Pn	03 43 22.8	-0.7
IVIS					e		03 43 24.6	
BHD	Baghdad	1.27	257	eP	n	Pn	03 43 23.0	-0.6
BHD				eS	n	Sb	03 43 40.0	-0.2
KER	Kermanshah	1.33	52	eP	g	Pn	03 43 24.9	+0.3
IKOM	Komasi	1.50	66	eP	g	Pn	03 43 28.0	+1.1
IKOM					e		03 43 51.1	
ILIN	Lien	1.62	34	eP	g	Pn	03 43 29.5	+0.8
ILIN					e		03 43 31.3	
IKFM	Kafar-mosalman	1.66	91	eP	n	Pn	03 43 30.4	+1.4
IBZA	Bozab	1.89	61	eP	n	Pn	03 43 33.4	+1.1
IBZA					e		03 44 00.0	
IDOB	Doab	1.95	83	eP	n	Pn	03 43 34.2	+1.1
IALM	Almabolaq	2.30	56	eP	n	Pn	03 43 39.6	+1.5
HSAM	Samen	2.37	74	eP	n	Pn	03 43 39.4	+0.4
NSR	Nassriya	2.57	175	eP	n	Pn	03 43 43.0	+1.6
NSR				eS	n	Sn	03 44 13.0	+0.3
HSRG	Sareghieh	2.60	50	eP	n	Pn	03 43 43.3	+1.1
HSRG					e		03 44 31.2	
HAGD	Aghdareh	2.99	65	eP	n	Pn	03 43 48.7	+1.2
HAGD					e		03 44 26.3	
MAHB	Mahabad	3.19	358	eP	n	Pn	03 43 52.7	+2.6
MAHB					e		03 44 33.7	
QABG	Abgarm-Qazvin	3.74	54	eP	n	Pn	03 43 57.8	+0.1
IRAZ	Razeghan	3.83	60	eP	n	Pn	03 44 00.0	+1.1
IPIR	Pirpir	4.32	101	eP	n	Pn	03 44 05.4	-0.4
QAM	Ghamsar	4.66	86	eP	n	Pn	03 44 11.1	+0.7
IKLH	Kolahrood	4.79	91	eP	n	Pn	03 44 13.4	+1.2
IKLH					e		03 45 25.8	
IHRS	Heris	4.83	11	eP	n	Pn	03 44 14.0	+1.3
QALM	Alamut, Qazvin	4.86	53	eP	n	Pn	03 44 13.4	+0.3
IVRN	Varamin	5.06	72	eP	n	Pn	03 44 15.6	-0.2
KRSH	Karshahi	5.24	84	eP	n	Pn	03 44 19.2	+0.8
KLNJ	Kolanjah	5.49	116	eP	n	Pn	03 44 21.9	0.0
IRAM	Ramesheh	5.78	106	eP	n	Pn	03 44 25.5	-0.3

*ATH **07** 03:44:05.4,38°.11N×20°.45E, h17km±1km, ML2.6/4, Error ellipse: s-maj=2.4km s-min=1.1km az=252.0*
*THE **07** 03:44:05.4,38°.09N×20°.40E, h12km±1km, ML2.5/6, Error ellipse: s-maj=1.7km s-min=0.6km az=71.0*

ISC 07 03:44:04.6±1.0, 38°.09N±0°.03×20°.37E±0°.05, h18km±2km, n24, σ0$ 99/41, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ARG2	Argostoli	0.13	47	P		Pg	03 44 08.7	+0.1
ARG2				S		Sg	03 44 10.9	-0.4
	14μm,0.1s							
KEF4	Livadi, Kephal	0.17	14	P		Pg	03 44 09.6	+0.4
KEF4				S		Sg	03 44 12.6	+0.3
VLS	Valsamata	0.19	64	P		Pb	03 44 09.2	+0.2
VLS				S		Sb	03 44 11.8	-0.1
VLS				AML		AML	03 44 12.1	
	comp=E,11672μm,0.1s							
VLS				AML		AML	03 44 12.1	
	comp=N,9098μm,0.2s							
VLS	Valsamata	0.19	64	P		Pb	03 44 09.2	+0.2
VLS				S		Sb	03 44 12.1	+0.2
	comp=N,5μm,0.1s							
KEF5	Kardakata, Kep	0.20	22	P		Pg	03 44 09.9	+0.2
KEF5				S		Sb	03 44 12.9	+0.6
VLMS	Volimes, Zakyn	0.32	133	P		Pg	03 44 11.5	0.0
VLMS				S		Sb	03 44 16.9	+0.4
VLMS				AML		AML	03 44 22.1	
	comp=N,4112μm,0.3s							
VLMS				AML		AML	03 44 22.4	
	comp=E,3285μm,0.3s							
VLMS	Volimes, Zakyn	0.32	133	P		Pg	03 44 11.5	0.0
VLMS				S		Sg	03 44 16.0	-0.1
	comp=E,2μm,0.3s							
FSK	Fiskardo	0.40	22	P		Pg	03 44 12.9	0.0
FSK				S		Sg	03 44 18.6	+0.1
FSK				AML		AML	03 44 19.5	
	comp=E,1678μm,0.2s							
FSK				AML		AML	03 44 20.1	
	comp=N,960μm,0.1s							
FSK	Fiskardo	0.40	22	P		Pg	03 44 12.9	0.0
FSK				S		Sg	03 44 18.7	+0.2
	comp=N,662nm,0.1s							
MGNA	Meganis	0.65	30	P		Pb	03 44 17.1	-0.3
MGNA				S		Sb	03 44 25.9	-0.2
LKD2	Lefkada island	0.73	18	P		Pb	03 44 18.9	+0.1
LKD2	Lefkada island	0.73	18	P		Pb	03 44 19.3	+0.5
LKD2				S		Sn	03 44 30.3	-0.5
	comp=N,205nm,0.2s							
PDO	Prodromos	0.81	51	P		Pb	03 44 19.8	-0.4
PDO				AML		AML	03 44 38.0	
	comp=E,544μm,0.5s							
PDO				AML		AML	03 44 39.8	
	comp=N,686μm,0.3s							
RLS	Riolos of Patr	0.86	92	P		Pb	03 44 20.8	-0.3
RLS	Riolos of Patr	0.86	92	P		Pb	03 44 20.8	-0.3
RLS				S		Sn	03 44 34.0	0.0
	comp=N,120nm,0.4s							
AMT	Artemida-Makis	1.20	117	P		Pb	03 44 27.4	+0.6
ANX	Ano Chora	1.32	67	P		Pg	03 44 29.8	-0.3
KLV	Kalavryta, Ach	1.41	91	P		Pb	03 44 30.0	-0.3
IGT	Igoumenitsa	1.44	359	P		Pb	03 44 31.6	+0.7
IGT				S		Sg	03 44 52.5	+1.3
GUR	Goura	1.56	95	P		Pb	03 44 33.0	-0.1
STON	Ston	5.19	338	ePn		Pn	03 45 21.5	+0.2
STON				Sn		Sn	03 46 17.1	-3.6
RICI	Ricice	5.93	337	iPn		Pn	03 45 32.3	+0.8
RICI				Sn		Sn	03 46 35.6	-3.3
KIJV	Kijevo	6.62	334	ePn		Pn	03 45 42.4	+1.4
KIJV				Sn		Sn	03 46 55.0	-1.0
MORI	Morici	6.76	330	ePn		Pn	03 45 44.4	+1.5
MORI				Sn		Sn	03 46 57.9	-1.4

*IDC **07** 03:49:27.8±4.0, 17°.16N×146°.46E, h72km±34km, mb3.6/4, mb1 3.9/5, mb1mx3.4/62, mbtmp4.0/5, ML4.1/1, Error ellipse: s-maj=136.3km s-min=24.6km az=114.0*
*NEIC **07** 03:49:27.4±1.1, 17°.1N±0°.1×146°.7E±0°.3, h69km±12km, mb4.2/6, Error ellipse: s-maj=38.6km s-min=14.9km az=112.0*

ISC 07 03:49:23.9±1.3, 17°.2N±0°.1×146°.8E±0°.3, h35km, n10, σ1$ 82/11, mb4.0/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
GUMO	Guam	4.06	207	P		Pn	03 50 25.6	+2.0
GUMO	14nm,0.3s,baz=5.3,slow=16,SNR=7.7			S		Sn	03 51 09.4	-0.7
	29nm,0.3s,baz=177,slow=22,SNR=4.6							
GUMO	Guam	4.06	207			Sn	03 51 12.8	+2.8
JSG	Sagara	18.99	338	P		Pn	03 53 44.9	+1.5
BKB	Balikpapan	34.71	241	P		P	03 56 09.0	-1.8
WRA	Warramunga Arr	38.91	199	P		P	03 56 44.9	-1.5
	2.2nm,0.7s,baz=24,slow=9.1,SNR=31							
KSM	Kuching	39.12	250	P		P	03 56 47.1	-1.3
KSM				IAmb		IAmb	03 57 05.7	
	comp=Z,5.6nm,0.9s							
FITZ	Fitzroy Crossi	40.81	212	P		P	03 57 00.5	-1.7
	comp=Z,1.3nm,0.5s,baz=19,slow=8.2,SNR=10							
ASAR	Alice Springs	42.55	198	P		P	03 57 15.6	-0.9
	comp=Z,0.8nm,0.6s,baz=18,slow=12,SNR=6.3							
IL31		64.50	26	P		P	03 59 57.1	+0.3
IL31				IAmb		IAmb	03 59 58.8	
	comp=Z,1.1nm,0.8s							
ILAR	Eielson Array	64.50	26	P		P	03 59 57.8	+0.9
	comp=Z,0.5nm,0.6s,baz=246,slow=6.1,SNR=4.6							

PRU 07 03:51:28.8±0.0, 50°.35N×18°.82E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
OKC	Ostrava-Krasne	0.67	220	ePG		Pg	03 51 40.6	-1.0
OKC				eSG		Sg	03 51 50.1	-0.2
MORC	Moravsky Berou	1.00	236	ePG		Pg	03 51 46.7	-1.3
MORC				eSG		Sg	03 52 01.2	+0.2
LANS	Liptovska Anna	1.27	160	ePG		Pn	03 51 54.4	+0.5
LANS				eSG		Sg	03 52 09.3	-0.3
LANS				eLG		Lg	03 52 13.3	
KRLC	Kraliky	1.34	259	ePG		Pg	03 51 52.5	-1.9
KRLC				eSG		Sg	03 52 11.6	-0.2
	6.6nm,0.6s							
DPC	Dobruska-Polom	1.60	271	ePG		Pb	03 51 58.9	-0.3
DPC				eSG		Sg	03 52 21.0	+0.8
VRAC	Vranov	1.78	235	ePN		Pg	03 52 02.8	-0.1
VRAC				eSG		Sn	03 52 23.8	-0.3
VYHS	Vyhne	1.86	180	ePN		Pn	03 52 02.6	+0.7
VYHS				eSN		Sn	03 52 26.1	0.0
KRUC	Moravsky	2.04	232	eSG		Sb	03 52 31.8	-0.7

*IDC **07** 03:51:57.4±0.7, 27°.17S×67°.12E, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.1/61, mbtmp4.3/11, Error ellipse: s-maj=21.9km s-min=18.6km az=136.0*
*NEIC **07** 03:51:58.7±1.4, 27°.1S±0°.1×67°.01E±0°.07, h10km±1km, mb4.5/15, Error ellipse: s-maj=19.0km s-min=7.8km az=153.0*

ISC 07 03:51:58.7±0.6, 27°.1S±0°.1×67°.1E±0°.1, h10km, n29, σ0$ 64/21, mb4.4/13, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RER	Riviere de l'E	11.93	297	Pn		Pn	03 54 43.5	-5.6
ABPO	Ambohimpanom	19.96	290	P		P	03 56 30.0	-1.4
LSZ	Lusaka	37.98	280	P		P	03 59 17.4	+0.1
	5.6nm,0.9s,baz=118,slow=5.2,SNR=4.3							
LSZ	Lusaka	37.98	280	IAmb		IAmb	03 59 20.1	
	comp=Z,6.2nm,0.8s							
MAW	Mawson	40.57	182	P		P	03 59 38.2	+0.1
	comp=Z,3.7nm,0.6s,baz=357,slow=7.9,SNR=13							
H01W2	Cape Leeuwin H	40.76	113	T		T	04 42 40.7	
	baz=267,slow=75,SNR=15							
H01W3	Cape Leeuwin H	40.76	113	T		T	04 42 40.9	
	baz=267,slow=75,SNR=12							
H01W1	Cape Leeuwin H	40.77	113	T		T	04 42 42.0	
	baz=267,slow=75,SNR=12							
TSUM	Tsumeb	45.95	269	P		P	04 00 23.8	+1.5
	comp=Z,3.0nm,0.7s,baz=118,slow=11,SNR=3.8							
TSUM	Tsumeb	45.95	269	IAmb		IAmb	04 00 26.1	
	comp=Z,7.0nm,1.0s							
FITZ	Fitzroy Crossi	54.39	94	P		P	04 01 26.7	+0.4
	comp=Z,4.7nm,1.0s,baz=294,slow=6.9,SNR=4.8							
CM31	Chiang Mai Arr	54.85	38	P		P	04 01 29.6	+0.2
CMAR	Chiang Mai Arr	54.85	38	P		P	04 01 30.2	+0.8
	comp=Z,5.9nm,0.7s,baz=229,slow=7.5,SNR=24							
CHTO	Chiang Mai	55.14	38	P		P	04 01 31.7	+0.2
CHTO				IAmb		IAmb	04 01 32.3	
	comp=Z,3.7nm,0.8s							
SHL	Shillong	57.59	27	P		P	04 01 49.1	0.0
SNAA	Sanae	58.19	200	P		P	04 01 52.5	-0.2
	comp=Z,1.6nm,0.6s,baz=85,slow=6.3,SNR=8.8							
SNAA	Sanae	58.19	200	IAmb		IAmb	04 01 57.7	
	comp=Z,4.5nm,1.1s							
ASAR	Alice Springs	59.82	103	P		P	04 02 04.7	-0.1
	comp=Z,0.8nm,0.6s,baz=252,slow=6.2,SNR=7.7							
KBL	Kabul	61.37	2	P		P	04 02 15.8	+0.7
KBL				IAmb		IAmb	04 02 16.9	
	comp=Z,3.4nm,0.8s							
WRA	Warramunga Arr	61.45	99	P		P	04 02 15.7	-0.2
	comp=Z,1.1nm,0.7s,baz=248,slow=6.4,SNR=11							
WRA	Warramunga Arr	61.45	99	IAmb		IAmb	04 02 23.0	
	comp=Z,0.2nm,1.1s							
QSPA	South Pole Qui	63.01	180	P		P	04 02 25.4	-0.3
	comp=Z,6.8nm,0.8s,baz=281,slow=3.4,SNR=8.7							
QSPA	South Pole Qui	63.01	180	P		P	04 02 25.7	0.0
VNDA	Vanda	64.75	166	P		P	04 02 36.5	-0.2
	comp=Z,2.7nm,0.8s,baz=273,slow=7.4,SNR=15							
VNDA	Vanda	64.75	166	P		P	04 02 36.5	-0.2
ABKAR	Akbulak array	76.31	355	P		P	04 03 46.9	-0.7
ZAA0	Zalesovo Array	82.19	10	P		P	04 04 18.9	-0.6
ZALV	Zalesovo Beam	82.19	10	P		P	04 04 18.9	-0.6
	comp=Z,3.4nm,0.8s,baz=205,slow=3.0,SNR=7.3							
ZALV	Zalesovo Beam	82.19	10	P		P	04 04 19.0	-0.6

*IDC **07** 04:37:00.5±0.8, 31°.71S×58°.49E, h0km, mb4.1/9, mb1 4.2/9, mb1mx3.9/44, mbtmp4.1/9, Error ellipse: s-maj=26.1km s-min=20.1km az=37.0*
*NEIC **07** 04:37:01.9±1.3, 31°.81S±0°.07×58°.5E±0°.2, h10km±1km, mb4.4/17, Error ellipse: s-maj=23.8km s-min=7.7km az=248.0*

ISC 07 04:37:02.0±0.6, 31°.8S±0°.1×58°.4E±0°.1, h10km, n49, σ1$ 40/41, mb4.2/12, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CRZF	Crozet Islands	15.48	197	Pn		Pn	04 40 38.5	-1.8
H08S1	Diego Carcia H	27.36	32	T		T	05 10 59.8	
	baz=205,slow=76,SNR=14							
H08S2	Diego Garcia H	27.36	32	T		T	05 11 03.3	
	baz=205,slow=76,SNR=17							
H08S3	Diego Garcia H	27.38	32	T		T	05 11 17.2	
	baz=205,slow=76,SNR=186							
LSZ	Lusaka	32.08	294	P		P	04 43 29.2	-0.3
LSZ				IAmb		IAmb	04 43 31.7	
	comp=Z,5.3nm,1.2s							
MAW	Mawson	35.95	177	P		P	04 44 03.5	+1.2
	comp=Z,1.7nm,0.8s,baz=343,slow=9.6,SNR=5.6							
MAW	Mawson	35.95	177	IAmb		IAmb	04 44 12.7	
	comp=Z,2.7nm,1.7s							
TSUM	Tsumeb	38.72	279	P		P	04 44 26.9	+0.2
	comp=Z,5.9nm,0.8s,baz=121,slow=6.7,SNR=15							
TSUM	Tsumeb	38.72	279	P		P	04 44 26.9	+0.2
TSUM				IAmb		IAmb	04 44 27.8	
	comp=Z,7.9nm,0.8s							
H01W2	Cape Leeuwin H	46.14	110	T		T	05 34 31.1	
	baz=257,slow=75,SNR=77							
H01W3	Cape Leeuwin H	46.14	110	T		T	05 34 31.6	
	baz=257,slow=75,SNR=90							
H01W1	Cape Leeuwin H	46.15	110	T		T	05 34 32.5	
	baz=257,slow=75,SNR=83							
QSPA	South Pole Qui	58.38	180	P		P	04 46 57.9	+0.4
	comp=Z,1.4nm,0.7s,baz=242,slow=7.2,SNR=4.2							
VNDA	Vanda	62.06	166	P		P	04 47 22.7	+0.5
	comp=Z,0.7nm,0.8s,baz=267,slow=7.2,SNR=5.5							
SUKH	Sukhothai	62.94	45	P		P	04 47 33.0	+4.2
	comp=Z,0.1nmcomp=Z,29nm,0.9s							
CM13	Chiang Mai Arr	63.23	44	P		P	04 47 31.6	+0.8
	comp=Z,0.1nmcomp=Z,203nmcomp=Z,20nm,0.9s							
CM05	Chiang Mai Arr	63.24	44	P		P	04 47 31.0	+0.1
	comp=Z,0.1nmcomp=Z,152nmcomp=Z,18nm,0.7s							
CM04	Chiang Mai Arr	63.26	44	P		P	04 47 32.0	+1.0
	comp=Z,0.1nmcomp=Z,156nmcomp=Z,19nm,0.8s							
CM01	Chiang Mai Arr	63.26	44	P		P	04 47 31.2	+0.2
	comp=Z,0.1nmcomp=Z,181nmcomp=Z,23nm,0.8s							
CM02	Chiang Mai Arr	63.27	44	P		P	04 47 31.0	0.0
	comp=Z,0.1nmcomp=Z,168nmc

RTR	El Retiro	2.33	88	eP		Pn	04 48 49.9 +0.9
RTR	El Retiro	2.33	88	eP		Pn	04 48 49.9 +0.9
SNJE	San Jose	2.37	89	eP		Pn	04 48 50.4 +0.9
SNJE	San Jose	2.37	89	eP		Pn	04 48 50.4 +0.9
UNIC	Universidad Ca	2.43	86	eP		Pn	04 48 50.7 +0.5
UNIC	Universidad Ca	2.43	86	eP		Pn	04 48 50.7 +0.5
CCIG	Comitan	2.44	358			Pb	04 48 53.9 -0.7
CEDA	San Andres	2.57	90	eP		Pn	04 48 53.3 +1.1
CEDA				IAML			04 49 40.2
	comp=Z,3µm,0.5s						
CEDA	San Andres	2.57	90	eP		Pn	04 48 53.3 +1.1
CEDA				IAML			04 49 40.2
	comp=Z,3µm,0.5s						
TACO	Tacachico	2.62	87	eP		Pn	04 48 52.9 +0.1
TACO	Tacachico	2.62	87	eP		Pn	04 48 52.9 +0.1
BOQS	Boqueron	2.69	92	eP		Pn	04 48 55.6 +1.7
BOQS	Boqueron	2.69	92	eP		Pn	04 48 55.6 +1.7
ESQI	Esquipulas	2.72	74			Pn	04 48 54.4 +0.1
OPAM	Oficina de Pla	2.77	92	eP		Pn	04 48 55.7 +0.8
OPAM				IAML			04 49 43.9
	comp=Z,1µm,0.3s						
OPAM	Oficina de Pla	2.77	92	eP		Pn	04 48 55.7 +0.8
OPAM				IAML			04 49 43.9
	comp=Z,1µm,0.3s						
AEIL	Aeropuerto Ilo	2.85	92	eP		Pn	04 48 57.7 +1.7
AEIL	Aeropuerto Ilo	2.85	92	eP		Pn	04 48 57.7 +1.7
LFU	La Fuente	2.85	91	eP		Pn	04 48 57.8 +1.7
LFU	La Fuente	2.85	91	eP		Pn	04 48 57.8 +1.7
LFRS	El Faro	2.91	94	eP		Pn	04 48 57.9 +1.0
LFRS	El Faro	2.91	94	eP		Pn	04 48 57.9 +1.0
LBRS	Las Brisas	2.92	91	eP		Pn	04 48 57.7 +0.8
LBRS	Las Brisas	2.92	91	eP		Pn	04 48 57.7 +0.8
PAVA	Las Pavas	3.02	92	eP		Pn	04 48 58.6 +0.1
PAVA				IAML			04 49 54.1
	comp=Z,861nm,0.6s						
PAVA	Las Pavas	3.02	92	eP		Pn	04 48 58.6 +0.1
PAVA				IAML			04 49 54.1
	comp=Z,861nm,0.6s						
LLGN	La Laguna	3.03	83	eP		Pn	04 48 58.8 +0.3
LLGN	La Laguna	3.03	83	eP		Pn	04 48 58.8 +0.3
TGIG		3.12	341			Pn	04 49 00.1 +0.4
TECA	Tecapa	3.46	95	eP		Pn	04 49 04.9 +0.4
TECA	Tecapa	3.46	95	eP		Pn	04 49 04.9 +0.4
PETF	Flores	3.72	34			Pn	04 49 08.8 +0.8
LCND	La Caada	4.07	97	eP		Pn	04 49 12.5 -0.3
LCND				IAML			04 50 18.4
	comp=Z,666nm,0.4s						
LCND	La Caada	4.07	97	eP		Pn	04 49 12.5 -0.3
LCND				IAML			04 50 18.4
	comp=Z,666nm,0.4s						
CMIG	Matias Romero	4.25	320	Pn		Pn	04 49 14.5 -0.7
	comp=Z,3.2nm,0.3s,baz=134,slow=10,SNR=27						
CMIG				Sn		Sn	04 50 06.8 +1.9
	comp=Z,40nm,0.3s,baz=208,slow=7.3,SNR=4.4						
CSGN	Cosiguina Volc	4.45	100			Pn	04 49 17.9 -0.1
TGUH	Tegucigalpa,Un	4.64	87			Pn	04 49 21.1 +0.4
CRIN	San Cristobal	4.99	102			Pn	04 49 25.8 +0.3
MATN	Matagalpa	6.02	98			Pn	04 49 39.3 -0.4
ACON	Acoyapa	6.95	105			Pn	04 49 52.5 +0.2
TLIG	Tlapa	7.30	301	Pn		Pn	04 49 58.1 +0.8
TEIG	Tepich	7.31	29	Pn		Pn	04 49 58.4 +1.1
ESPN	Las Esperanzas	7.72	101			Pn	04 50 03.3 +0.4
JTS	Las Juntas de	7.77	116	Pn		Pn	04 50 05.7 +2.0
	comp=Z,1.9nm,0.3s,baz=15,slow=20,SNR=8.6						
JTS	Las Juntas de	7.77	116	Pn		Pn	04 50 05.0 +1.2
HDC	Heredia	8.64	115	Pn		Pn	04 50 16.4 +0.7
UNM	Universidad Na	8.76	310	Pn		Pn	04 50 20.8 +3.3
MOIG	Morelia	10.52	305			Pn	04 50 44.9 +3.4
ZAIG	Zacatecas	13.37	313	Pn		Pn	04 51 23.2 +2.6
833A	Chaparral WMA,	15.97	336	Pn		P	04 51 57.4 -1.4
HKT	Hockley	16.43	348	Pn		Pn	04 52 01.8 +0.8
HKT				IAmb		IAmb	04 52 05.0
	comp=Z,57nm,1.6s						
SJCC	San Jacinto, C	16.96	101	eP		Pn	04 52 07.1 -0.9
060A	Indiantown	17.09	38	Pn		Pn	04 52 09.6 +0.1
344A	Westbrook Farm	17.59	4			Pn	04 52 16.5 +0.8
344A				IAmb		IAmb	04 52 21.5
	comp=Z,57nm,1.1s						
CBOC	Ciudad Bolivar	17.66	115	eP		Pn	04 52 16.1 -0.8
HELC	Santa Helena	17.93	113	eP		Pn	04 52 20.2 -0.3
NATX	Nacogdoches	18.01	353	Pn		Pn	04 52 20.4 -0.5
NATX				IAmb		IAmb	04 52 24.6
	comp=Z,93nm,1.6s						
JCT	Junction City	18.05	338			Pn	04 52 21.5 0.0
HPIG		18.23	318	P		P	04 52 25.0 +0.9
YOTC	Yotoco, Valle	18.32	121	eP		P	04 52 31.0 +5.9
VBMS	Vicksburg	18.36	4	P		P	04 52 26.0 +0.8
VBMS				IAmb		IAmb	04 52 32.9
	comp=Z,27nm,0.7s						
237A	Washetta, Mont	18.42	350	P		Pn	04 52 25.1 -0.8
237A				IAmb		IAmb	04 52 41.0
	comp=Z,90nm,1.6s						
GUY2C	Guyana, Caldas	18.52	116	eP		P	04 52 27.6 -0.1
PTBC	PUERTO BERRIO,	18.75	111	eP		P	04 52 26.6 -3.1
H06E1	SOCORRO T-PHAS	18.78	288	T		T	05 11 40.9
	SNR=35						
143A	Socs Landing,	18.80	2	P		P	04 52 30.3 +0.2
143A				IAmb		IAmb	04 52 34.0
	comp=Z,24nm,0.8s						
NORC	Norcasia	18.80	114	eP		P	04 52 30.9 +0.6
TX32	Lajitas Array	18.82	327	P		Pn	04 52 31.3 +0.3
TXAR	Lajitas Array	18.82	327	Pn		Pn	04 52 32.3 +1.3
	comp=Z,0.2nm,0.3s,baz=154,slow=12,SNR=25						
TXAR	Lajitas Array	18.82	327	P		Pn	04 52 32.1 +1.1
TX31	Lajitas Ar. Si	18.82	327	P		Pn	04 52 31.2 +0.3
TX31				IAmb		IAmb	04 52 35.5
	comp=Z,67nm,1.2s						
ANIL	Santa Ana	18.85	118	eP		Pn	04 52 34.6 +3.0
TOLC	Tolima	18.87	118	eP		Pn	04 52 33.1 +1.1
POPC	Popayan, Colom	18.88	125	eP		P	04 52 32.1 +0.7
146A	Union	18.92	8	IAmb		IAmb	04 52 36.6
	comp=Z,74nm,1.4s						
GCUF	Volcan Galeras	19.19	129	eP		Pn	04 52 38.1 +2.2
ORTC	Ortega, Tolima	19.28	119	eP		Pn	04 52 37.1 +0.5
ROSC	El Rosal	19.62	115	eP		Pn	04 52 41.5 +0.5
ROSC	El Rosal	19.62	115	P		P	04 52 39.1 -0.6
ROSC				IAmb		IAmb	04 52 53.2
	comp=Z,36nm,1.1s						
Z47A	Carrollton	19.62	10	P		P	04 52 39.6 +0.5
Z47A				IAmb		IAmb	04 52 42.7
	comp=Z,39nm,0.8s						
LRAL	Lakeview Retre	19.67	13	P		P	04 52 39.0 -0.6
LRAL				IAmb		IAmb	04 52 46.6
	comp=Z,50nm,1.4s						
BETC	Betania	19.79	123	eP		P	04 52 38.2 -3.0
WLAR	White Oak Lake	19.80	357	P		Pn	04 52 43.2 +0.7
WLAR				IAmb		IAmb	04 52 48.4
	comp=Z,60nm,1.1s						
ABTX	Abilene, Hawle	19.96	341	IAmb		IAmb	04 52 50.1
	comp=Z,100nm,1.9s						
PAMC	Pamplona, Colo	20.07	107	eP		P	04 52 41.3 -3.3
Y45A	Yeager Farm, C	20.08	6	P		P	04 52 44.4 +0.3
CHIC	Chingaza	20.23	115	eP		P	04 52 47.9 +1.5
RUSC	La Rusia	20.26	111	eP		P	04 52 46.9 +0.1
FLOC	Florencia	20.27	125	eP		P	04 52 47.7 +1.4
154A	Montrose	20.41	22	P		P	04 52 47.8 +0.2
Y49A	Blount Mountai	20.59	13	IAmb		IAmb	04 53 14.6
	comp=Z,26nm,1.1s						
MIAR	Mount Ida	20.68	356	P		Pn	04 52 52.2 -0.7
X37A	Clayton	20.89	352	P		P	04 52 53.3 +0.4
X37A				IAmb		IAmb	04 53 22.2
	comp=Z,62nm,1.4s						
GOGA	Godfrey	21.00	20	P		P	04 52 54.3 +0.2
X48A	Hartselle	21.03	12	IAmb		IAmb	04 53 03.2
	comp=Z,58nm,1.4s						
X34A	Smith Ranch, M	21.34	347	P		P	04 52 58.8 +1.1
X34A				IAmb		IAmb	04 53 38.3
	comp=Z,47nm,1.3s						
FPAL	Fort Paine	21.43	15	IAmb		IAmb	04 53 22.2
	comp=Z,25nm,1.0s						
SDV	Santo Domingo	21.55	101	P		P	04 52 59.5 -0.9
MNTX	Cornudas Mount	21.59	328	P		P	04 53 01.0 +0.5
MNTX				IAmb		IAmb	04 53 05.7
	comp=Z,17nm,0.8s						
W35A	Tecumseh	21.68	349	P		P	04 53 00.6 -0.8
W50A	Signal Mountai	22.13	15	IAmb		IAmb	04 53 19.3
	comp=Z,18nm,0.9s						
OK025	Westminster Rd	22.18	349	IAmb		IAmb	04 53 08.9
	comp=Z,23nm,0.6s						
MSTX	Muleshoe	22.29	336	IAmb		IAmb	04 53 09.7
	comp=Z,12nm,0.7s						
V48A	Smith Brothers	22.32	11	IAmb		IAmb	04 53 18.8
	comp=Z,42nm,1.6s						
OK029	Liberty Lake	22.41	348	IAmb		IAmb	04 54 02.5
	comp=Z,19nm,0.9s						
WVT	Waverly	22.53	9	P		P	04 53 09.3 -1.2
WVT				IAmb		IAmb	04 53 19.9
	comp=Z,35nm,1.6s						
CPCT	Cooper Cave	22.57	16	IAmb		IAmb	04 53 29.8
	comp=Z,20nm,1.0s						
AMTX	Amarillo	22.70	339	P		P	04 53 11.8 -0.7
CLTN	Cedars of Leba	22.76	12	IAmb		IAmb	04 53 22.7
	comp=Z,65nm,1.9s						
PBMO	Poplar Bluff	22.90	3	IAmb		IAmb	04 53 44.9
	comp=Z,17nm,1.0s						
V51A	Loudon	22.95	16	IAmb		IAmb	04 53 25.7
	comp=Z,37nm,1.2s						
TKL	Tuckaleechee C	22.98	17	P		P	04 53 14.9 -0.4
	comp=Z,5.4nm,0.7s,baz=198,slow=12,SNR=10						
HSIG		23.15	314	P		P	04 53 17.6 +0.5
U49A	Red Boiling Sp	23.28	13	IAmb		IAmb	04 53 29.6
	comp=Z,31nm,1.1s						
121A	Cookes Peak, D	23.53	325	IAmb		IAmb	04 53 49.0
	comp=Z,21nm,1.1s						
319A	Douglas	23.57	321	IAmb		IAmb	04 53 47.6
	comp=Z,16nm,0.8s						
ANMO	Albuquerque	24.73	331	P		P	04 53 32.6 +0.3
	comp=Z,8.0nm,0.6s,baz=148,slow=12,SNR=34						
ANMO	Albuquerque	24.73	331	P		P	04 53 33.2 +0.9
ANMO				IAmb		IAmb	04 53 36.5
	comp=Z,8.6nm,0.7s						
WCI	Wyandotte Cave	24.84	11	P		P	04 53 32.4 -0.6
WCI				IAmb		IAmb	04 53 35.2
	comp=Z,17nm,0.8s						
TUC	Tucson	25.14	320	P		P	04 53 36.6 +0.7
KSU1	Kansas State U	25.50	352	IAmb		IAmb	04 54 11.7
	comp=Z,12nm,0.8s						
MVCO	Mesa Verde	27.53	331	P		P	04 53 57.9 +0.3
MVCO				IAmb		IAmb	04 54 00.3
	comp=Z,23nm,1.2s						
WUAZ	Wupatki	27.73	325	IAmb		IAmb	04 55 00.4
	comp=Z,16nm,1.5s						
U15A	North Rim	28.91	325	IAmb		IAmb	04 54 20.3
	comp=Z,17nm,1.8s						
P17A	Butcher Ranch,	30.40	331	P		P	04 54 23.8 +0.8
HWUT	Hardware Ranch	32.47	332	IAmb		IAmb	04 54 43.5
	comp=Z,8.0nm,1.1s						
PD31	Pinedale Array	32.56	336	P		P	04 54 41.8 -0.2
PDAR	Pinedale Array	32.56	336	P		P	04 54 41.9 -0.2
	comp=Z,0.5nm,0.5s,baz=123,slow=11,SNR=4.0						
PDAR				PcP		PcP	04 57 29.7 +1.1
	comp=Z,0.3nm,0.5s,baz=139,slow=5.8,SNR=2.5						
AHID	Auburn Hatcher	33.20	334	IAmb		IAmb	04 54 50.2
	comp=Z,4.5nm,0.8s						
NV11	Mina Array Sit	33.69	321	IAmb		IAmb	04 54 55.4
	comp=Z,14nm,1.4s						
OMMB	Old Mammoth Mi	33.70	320	P		P	04 54 53.9 +1.6
MDPB	Devils Postpil	33.77	320	P		P	04 54 53.6 +0.9
MDPB				IAmb		IAmb	04 55 06.3
	comp=Z,7.8nm,1.3s						
NVAR	Mina Array Bea	33.78	321	P		P	04 54 54.2 +1.4
	comp=Z,2.3nm,0.7s,baz=133,slow=8.2,SNR=21						
LHV	Little Huntoon	33.79	321	IAmb		IAmb	04 55 06.3
	comp=Z,19nm,1.5s						
RYN	Ryan	34.04	321	IAmb		IAmb	04 54 58.1
	comp=Z,7.9nm,1.3s						
KVN	Kaiserville	34.06	322	IAmb		IAmb	04 55 01.2
	comp=Z,7.3nm,1.1s						
IMW	Indian Meadow	34.06	335	IAmb		IAmb	04 55 53.6
	comp=Z,10nm,1.4s						
HLID	Hailey	35.31	331	IAmb		IAmb	04 55 08.1
	comp=Z,13nm,1.4s						
MFID	Camas Ranch	35.87	330	P		P	04 55 12.3 +1.6
MFID				IAmb		IAmb	04 55 15.0
	comp=Z,22nm,1.8s						
SAML	Samuel	36.50	127	P		P	04 55 15.7 -0.5
EGMT	Eagleton	37.14	340	IAmb		IAmb	04 55 23.9
	comp=Z,8.1nm,0.6s						
PLID	Pearl Lake	37.21	332	IAmb		IAmb	04 55 23.8
	comp=Z,14nm,1.2s						
MSO	Missoula	37.67	335	IAmb		IAmb	04 55 27.5
	comp=Z,16nm,1.4s						
LPAZ	La Paz	38.13	141	P		P	04 55 29.4 -1.3
	comp=Z,1.0nm,0.7s,baz=324,slow=9.7,SNR=5.6						
F10A	Beach Ranch, E	38.44	331	IAmb		IAmb	04 55 37.8
	comp=Z,10nm,0.8s						
C09A	Chrisman Ranch	40.29	333	P		P	04 55 48.1 +0.4
C09A				IAmb		IAmb	04 55 49.3
	comp=Z,36nm,1.6s						
SIV	San Ignacio	42.60	133	P		P	04 56 04.8 -2.3
	comp=Z,2.3nm,0.8s,baz=319,slow=9.8,SNR=13						
H03N2	Juan Fernandez	48.64	165	T		T	05 49 22.3
	baz=343						
H03N1	Juan Fernandez	48.64	165	T		T	05 49 26.1
	baz=343,SNR=5.1						
H03N3	Juan Fernandez	48.65	165	T		T	05 49 26.1
	baz=343						
YKA	Yellowknife Ar	51.19	347	P		P	04 57 12.2 -1.4
	comp=Z,1.9nm,0.5s,baz=131,slow=9.5,SNR=6.7						
CPUP	Villa Florida	52.28	140	P		P	04 57 19.3 -3.0
	comp=Z,1.5nm,0.8s,baz=299,slow=13,SNR=3.1						
CPUP	Villa Florida	52.28	140	IAmb		IAmb	04 58 19.1
	comp=Z,9.9nm,1.4s						
DLBC	Dease Lake	52.80	336	P		P	04 57 26.9 +1.2
BCAR	Beaver Creek A	60.18	336	P		P	04 58 18.3 0.0
HDA	Harding Lake	62.84	336	P		P	04 58 35.6 -0.6
IL31		62.98	337	P		P	04 58 37.2 +0.2
ILAR	Eielson Array	62.98	337	P		P	04 58 36.8 -0.3
	comp=Z,3.9nm,1.0s,baz=120,slow=4.7,SNR=21						
RND	Reindeer	63.17	335	P		P	04 58 38.6 +0.2
BMAR	Burnt Mountain	63.44	340	P		P	04 58 39.7 -0.5
TOLK	Toolik Lake Re	65.57	340	P		P	04 58 54.5 -0.2
BILL	Bilibino	81.61	338	P		P	05 00 28.6 +0.3
NOA	NORSAR Array B	84.32	28	P		P	05 00 41.1 -1.5
	comp=Z,1.5nm,0.9s,baz=290,slow=5.1,SNR=2.9						
ARCES	ARCESS Array B	86.32	18	P		P	05 00 50.0 -2.3
	comp=Z,1.3nm,0.6s,baz=352,slow=3.7,SNR=4.8						
TIXI	Tiksi	90.42	348	P		P	05 01 10.7 -1.1
WMQ	Urumqi	122.64	0	eP		PKPdf	05 07 07.4 +0.6
LZH	Lanzhou	128.14	344	ePKP		PKPdf	05 07 17.8 +0.1
LZH				sPKP			05 07 31.6
CD2	Chengdu	133.00	341	PKP		PKPdf	05 07 25.0 -1.9
WRA	Warramunga Arr	135.31	256	PKP		PKPdf	05 07 30.9 -0.5
	comp=Z,0.5nm,0.8s,baz=73,slow=2.5,SNR=4.7						

IDC 07 04:54:17.1±4.2, 21°.95S×148°.26E, h0km, mb1 3.5/4, mb1mx3.3/24, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=41.9km s-min=23.5km az=75.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	2.63	314	Pn	Pn	04 55 01.6	+0.7
	2.1nm,0.3s,baz=136,slow=17,SNR=18						
CTA				Pg	Pb	04 55 05.2	0.0
	4.9nm,0.3s,baz=140,slow=18,SNR=14						
CTA				Lg	Lg	04 55 40.8	
	26nm,0.3s,baz=72,slow=16,SNR=6.9						
STKA	Stephens Creek	11.53	210	Pn	Pn	04 57 01.7	-1.4
	0.1nm,0.3s,baz=20,slow=15,SNR=3.4						
WRA	Warramunga Arr	13.15	276	Pn	Pn	04 57 26.5	+1.2
	0.0nm,0.3s,baz=97,slow=13,SNR=2.5						
WRA				Lg	Lg	05 01 15.3	
	0.3nm,0.3s,baz=100,slow=27,SNR=5.9						
ASAR	Alice Springs	13.35	260	Pn	Pn	04 57 27.5	-0.5
	baz=75,slow=14,SNR=2.7						
ASAR				Sn	Sn	04 59 49.5	-7.8
	0.1nm,0.3s,baz=86,slow=23,SNR=5.3						
ASAR				Lg	Lg	05 01 20.3	
	0.2nm,0.3s,baz=75,slow=28,SNR=5.4						

IDC 07 05:06:54.6±6.6, 5°.52S×147°.26E, h158km±67km, mb3.5/1, mb1 3.7/3, mb1mx3.1/34, mbtmp4.1/3, Error ellipse: s-maj=101.1km s-min=50.3km az=120.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.87	181	P	Pn	05 07 55.0	+1.6
	13nm,0.3s,baz=336,slow=10.0,SNR=12						
PMG				S	Sn	05 08 38.9	-0.3
	20nm,0.3s,baz=250,slow=22,SNR=17						
WRA	Warramunga Arr	19.07	220	P	P	05 11 05.6	+0.5
	0.7nm,0.3s,baz=43,slow=11,SNR=38						
ASAR	Alice Springs	22.16	214	P	P	05 11 38.3	+0.3
	4.0nm,0.8s,baz=47,slow=8.9,SNR=37						
TORD	Torodi Ar. Bea	145.22	285	PKPbc	PKPbc	05 26 12.8	-1.7
	0.4nm,0.5s,baz=76,slow=4.1,SNR=4.6						

*IDC **07** 05:13:23.6±2.3, 6°.71N×93°.06E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/36, mbtmp3.7/6, ML3.5/1, MS4.3/1, Ms1 4.3/1, ms1mx3.6/38, Error ellipse: s-maj=85.6km s-min=20.6km az=59.0*

*NEIC **07** 05:13:32.7±1.2, 7°.8N±0°.1×94°.7E±0°.2, h27km±5km, mb4.3/11, Error ellipse: s-maj=27.5km s-min=10.3km az=52.0*

ISC 07 05:13:33.8±0.8, 7°.8N±0°.1×94°.7E±0°.2, h35km, n26, σ0s91/25, mb4.2/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	3.40	138	Pn	Pn	05 14 22.7	-1.7
LHMI				Sn	Sn	05 15 04.0	+0.4
KULM	Kulim	6.45	112	Pn	Pn	05 15 06.3	+0.1
PSI	Prapat	6.52	139	Pn	Pn	05 15 09.8	+2.5
	0.9nm,0.3s,baz=358,slow=8.3,SNR=5.0						
RPSI	Rantau Prapat	6.60	140		Pn	05 15 09.8	+1.5
RPSI	Rantau Prapat	6.60	140	Pn	Pn	05 15 07.6	-0.7
IPM	Ipoh	7.13	117	Pn	Pn	05 15 15.4	-0.3
CMAR	Chiang Mai Arr	11.41	21	Pn	Pn	05 16 30.3	+16
	baz=219,slow=14,SNR=5.2						
SHL	Shillong	17.89	352	P	Pn	05 17 41.0	+0.8
SHL				IAmb	IAmb	05 17 54.0	
	comp=Z,8.0nm,0.5s						
CHGR	Chuyangaron	38.38	327	P	P	05 20 51.5	-0.4
BTK	Batken	38.57	330	P	P	05 20 52.9	-0.5
BTK				IAmb	IAmb	05 21 00.4	
	comp=Z,6.4nm,1.1s						
MK31	Makanchi Array	40.30	347	P	P	05 21 07.1	-0.6
MKAR	Makanchi Array	40.30	347	P	P	05 21 08.4	+0.7
	comp=Z,1.7nm,0.6s,baz=167,slow=8.1,SNR=18						
MKAR	Makanchi Array	40.30	347	P	P	05 21 07.1	-0.6
MAKZ	Makanchi	40.38	347	P	P	05 21 08.4	+0.1
KKAR	Karatay Array	41.08	333	P	P	05 21 14.2	0.0
GEYT	Alibeck	44.62	318	P	P	05 21 43.3	+0.4
KURK	Kurchatov	44.83	346	P	P	05 21 44.7	+0.4
KURK				IAmb	IAmb	05 21 52.7	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	46.73	352	P	P	05 22 00.8	+1.6
	comp=Z,2.2nm,0.8s,baz=172,slow=7.4,SNR=7.4						
ZALV	Zalesovo Beam	46.73	352	P	P	05 21 59.0	-0.3
WB0	Warramunga Arr	47.74	126	P	P	05 22 07.1	-0.7
WB0				IAmb	IAmb	05 22 30.0	
	comp=Z,4.1nm,1.1s						
WRA	Warramunga Arr	47.79	126	P	P	05 22 07.8	-0.3
	comp=Z,0.8nm,1.0s,baz=306,slow=8.5,SNR=12						
WB2	Warramunga Arr	47.80	126	P	P	05 22 08.1	0.0
ASAR	Alice Springs	49.46	130	P	P	05 22 20.4	-0.5
	comp=Z,0.2nm,0.4s,baz=297,slow=6.9,SNR=4.6						
RAYN	Ar Rayn	49.59	294	P	P	05 22 21.7	-0.2
RAYN				IAmb	IAmb	05 22 30.3	
	comp=Z,3.2nm,1.1s						
ABKAR	Akbulak array	50.56	331	P	P	05 22 28.6	-0.2
ASAJ	Asahikawa	55.16	41	LR	LR	05 49 12.7	
	comp=Z,250nm,19.3s,baz=322,slow=38						

MEX 07 05:17:17.9±0.4, 15°.91N×95°.56W, h15km, MD3.4, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.54	255	i P	Pg	05 17 26.8	-1.8
HUIG				i S	Sg	05 17 34.4	-1.5
HUIG	Huatulco	0.54	255	i P	Pg	05 17 26.8	-1.8
HUIG				i S	Sg	05 17 34.4	-1.5
CMIG	Matias Romero	1.34	29	eP	Pn	05 17 39.0	-3.2
CMIG				i S	Sn	05 17 54.5	-5.2
CMIG	Matias Romero	1.34	29	eP	Pn	05 17 39.0	-3.2
CMIG				eS	Sn	05 17 56.2	-3.5
PEIG	Puerto Escondi	1.53	273	eP	Pn	05 17 41.6	-3.0
PEIG				eS	Sn	05 17 59.1	-5.2
PEIG	Puerto Escondi	1.53	273	eP	Pn	05 17 39.2	-5.4
PEIG				i S	Sn	05 17 56.5	-7.7

IDC 07 05:52:22.7±391.0, 32°.28N×132°.61E, h0km, Error ellipse: s-maj=178.1km s-min=124.2km az=78.0, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I30JP	ISUMI INFRASON	7.09	63	i		06 34 40.0	
	baz=246,slow=308,SNR=13						
I45RU	USSURIYSK INFR	11.91	358	i		07 07 40.0	
	baz=180,slow=326,SNR=4.7						
I39PW	PALAU INFRASON	24.69	175	i		08 24 25.1	
	baz=357,slow=325,SNR=1.2						

*ANF **07** 06:06:06.5±0.8, 41°.88N×119°.62W, h0km, ML3.1/6, Error ellipse: s-maj=5.5km s-min=5.3km az=80.0*

*REN **07** 06:06:07.7±3.2, 41°.87N±0°.04×119°.63W±0°.04, h0km±7km, ML3.3/2, Md2.9/8(SEA), Error ellipse: s-maj=5.3km s-min=4.2km az=211.0*

*SEA **07** 06:06:09.1±3.4, 41°.84N±0°.04×119°.69W±0°.03, h0km±8km, Error ellipse: s-maj=6.4km s-min=3.0km az=201.0*

*NEIC **07** 06:06:09.1±2.7, 41°.88N±0°.04×119°.71W±0°.02, h10km±7km, Error ellipse: s-maj=6.3km s-min=2.6km az=184.0*

ISC 07 06:06:08.9±1.4, 41°.84N±0°.03×119°.73W±0°.04, h13km±14km, n34, σ0s87/39, Nevada

| Code | Station Name | Δ° | AZ° | Phase

*REN **07** 06:40:02.3±2.3,41.92N±0.03×119.65W±0.04,h2km±7km, ML2.8/2,ML2.9/19(SEA),Error ellipse: s-maj=5.5km s-min=3.2km az=225.0*
*SEA **07** 06:40:03±2.7,41.87N±0.04×119.69W±0.02,h0km±7km, Error ellipse: s-maj=5.3km s-min=2.1km az=184.0*
*NEIC **07** 06:40:03.5±2.3,41.96N±0.04×119.74W±0.05,h15km±7km, Error ellipse: s-maj=6.5km s-min=5.5km az=156.0*

ISC 07 06:40:02.9±1.5,41.94N±0.03×119.73W±0.04, h11km±14km,n31,σ0↑91/39,Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MOD	**Modoc Plateau**	**0.43**	**265**			**Pg**	**06 40 11.4**	**-0.1**
MOD						**Sg**	**06 40 18.3**	**+1.1**
K05A	**Summer Lake**	**1.17**	**313**			**Pn**	**06 40 25.4**	**-0.1**
M04C	**Macdoel**	**1.58**	**265**	P		**Pn**	**06 40 30.9**	**-0.2**
	baz=85,SNR=152							
M04C				S		**Sg**	**06 40 54.1**	**+0.2**
	baz=85							
K04D	**Chiloquin, OR**	**1.65**	**295**	Pb		**Pb**	**06 40 33.1**	**-0.3**
	baz=114,SNR=7.4							
K04D				Sb		**Sg**	**06 40 57.2**	**+1.1**
	baz=114							
J08A	**Circle Bar Ran**	**1.69**	**33**			**Pn**	**06 40 32.7**	**+0.1**
J05D	**Fort Rock, OR**	**1.75**	**321**	Pb		**Pb**	**06 40 35.1**	**0.0**
	baz=139,SNR=92							
J05D				Sb		**Sg**	**06 41 00.0**	**+1.0**
	baz=139							
L04D	**Klamath Falls**	**1.94**	**279**	P		**Pn**	**06 40 35.5**	**-0.5**
	baz=98,SNR=15							
L04D				Sb		**Sg**	**06 41 05.2**	**-0.1**
	baz=98							
WVA	**Winnemucca Val**	**1.99**	**182**			**Pn**	**06 40 38.1**	**+1.3**
PINE	**Pine Mountain**	**2.06**	**335**			**Pb**	**06 40 39.3**	**-1.1**
BEKR	**Beckworth**	**2.12**	**193**			**Pn**	**06 40 39.9**	**+0.3**
I07A	**Izee**	**2.15**	**4**			**Pb**	**06 40 41.9**	**0.0**
J04D	**Umpqua Nationa**	**2.19**	**307**	Pb		**Pb**	**06 40 42.4**	**-0.3**
	baz=125							
YBH	**Yreka Blue Hor**	**2.24**	**266**			**Pn**	**06 40 39.5**	**-0.6**
PAHR	**Pah Rah Range**	**2.25**	**173**			**Pn**	**06 40 39.7**	**-0.5**
O03E	**Paynes Creek**	**2.27**	**224**	P		**Pn**	**06 40 39.7**	**-0.7**
	baz=44,SNR=18							
O03E				Sb		**Sb**	**06 41 13.8**	**+1.6**
	baz=44							
LOY	**Loyalton**	**2.31**	**190**			**Pb**	**06 40 43.5**	**-1.2**
PEAR	**Peavine Mounta**	**2.34**	**184**			**Pb**	**06 40 44.3**	**-0.9**
M02C	**Callahan**	**2.41**	**258**	P		**Pn**	**06 40 41.5**	**-0.8**
	baz=77,SNR=6.4							
M02C				Sb		**Sg**	**06 41 18.8**	**-1.4**
	baz=77							
N02D	**Trinity Center**	**2.44**	**248**	P		**Pn**	**06 40 41.8**	**-0.9**
	baz=67							
N02D				Sb		**Sg**	**06 41 20.0**	**-1.2**
	baz=67							
KBF	**Kyburz Flat**	**2.46**	**189**			**Pn**	**06 40 45.7**	**+2.5**
VPK	**Verdi Peak**	**2.47**	**186**			**Pb**	**06 40 47.6**	**+0.1**
HUMO	**Hull Mountain**	**2.49**	**287**			**Pn**	**06 40 43.2**	**-0.2**
WDC	**Whiskeytown Da**	**2.52**	**238**			**Pn**	**06 40 43.8**	**0.0**
IND	**Independence**	**2.54**	**190**			**Pb**	**06 40 47.6**	**-1.0**
VCNR	**Virginia City**	**2.64**	**179**			**Pn**	**06 40 45.0**	**-0.7**
I04A	**Tendick Farm,**	**2.71**	**314**	Sb		**Sg**	**06 41 28.9**	**-1.0**
	baz=132							
ORV	**Oroville**	**2.74**	**210**			**Pn**	**06 40 46.6**	**-0.2**
L02E	**Cave Junction**	**2.89**	**276**	P		**Pn**	**06 40 49.7**	**+0.8**
	baz=93,SNR=17							
EMB	**Emerald Bay**	**2.98**	**186**			**Pb**	**06 40 56.3**	**+0.2**
K02D	**Willamette Mer**	**3.02**	**286**	P		**Pn**	**06 40 51.9**	**+1.1**
	baz=103,SNR=35							
MFID	**Camas Ranch**	**3.23**	**62**	Pn		**Pn**	**06 40 53.0**	**-0.7**

*IDC **07** 06:50:53.6±0.4,60.04S×26.88W,h0km,mb4.8/15, mb1 4.8/15,mb1mx4.6/28,mbtmp4.8/15,MS4.3/3, Ms1 4.3/3,ms1mx3.9/18,Error ellipse: s-maj=21.0km s-min=13.9km az=60.0*
*NEIC **07** 06:51:01.0±1.3,60.14S±0.10×26.9W±0.2,h54km±5km, mb5.1/45,Error ellipse: s-maj=16.9km s-min=11.8km az=47.0*
*BJI **07** 06:51:02.0±0.0,60.30S×26.90W,h60km,mB5.2/3, Ms5.6/3,Ms7 5.4/5*

ISC 07 06:50:58.6±0.3,60.10S±0.07×26.78W±0.08,h35km,n201, σ1↑30/192,mb5.0/34,MS4.8/3,1C-1D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
HOPE	**Hope Point**	**7.86**	**314**	Pn		Pn	06 52 56.2	+6.0
VNA1	**Neumayer--Stat**	**13.01**	**152**	P		**Pn**	**06 53 57.7**	**-2.9**
VNA3	**Neumayer Olymp**	**13.14**	**155**	P		**Pn**	**06 53 58.2**	**-4.2**
VNA2	**Neumayer--Watz**	**13.41**	**152**	P		**Pn**	**06 54 03.2**	**-3.0**
	baz=311,slow=17							
SNAA	**Sanae**	**15.01**	**150**	P		**Pn**	**06 54 24.4**	**-3.5**
SNAA	**Sanae**	**15.01**	**150**	Pn		**Pn**	**06 54 24.4**	**-3.5**
	2.9nm,0.3s,baz=314,slow=13,SNR=117							
SNAA				Sn		Sn	06 57 02.2	-10
	0.5nm,0.3s,baz=9.5,slow=23,SNR=2.8							
SNAA				LR		LR	06 59 09.2	
	comp=Z,1μm,19.3s,baz=8.0,slow=33							
SNAA	**Sanae**	**15.01**	**150**	Pn		**Pn**	**06 54 24.8**	**-3.1**
PMSA	**Palmer Station**	**17.67**	**239**	P		**P**	**06 55 03.2**	**+0.9**
PMSA	**Palmer Station**	**17.67**	**239**	*eP*		**P**	**06 55 05.3**	**+3.1**
BELA	**Belgrano 2**	**18.04**	**185**	P		**Pn**	**06 55 05.6**	**-0.5**
EFI	**East Falkland**	**19.30**	**282**			**P**	**06 55 19.4**	**-0.9**
EFI					IAmb	IAmb	06 55 24.8	
	comp=Z,103nm,1.1s							
SYO	**Syowa Base**	**28.39**	**136**	*eP*		**P**	**06 56 44.8**	**-4.3**
SYO	**Syowa Base**	**28.39**	**136**	*es*P		sP	06 57 08.8	+6.4
QSPA	**South Pole Qui**	**30.13**	**180**	P		**P**	**06 57 06.2**	**+1.4**
	comp=Z,15nm,1.0s,baz=203,slow=4.7,SNR=38							
QSPA	**South Pole Qui**	**30.13**	**180**	P		**P**	**06 57 06.3**	**+1.4**
QSPA					IAmb	IAmb	06 57 14.3	
	comp=Z,39nm,1.2s							
PLCA	**Paso Flores**	**33.13**	**286**	P		**P**	**06 57 30.8**	**-0.5**
	comp=Z,4.9nm,0.7s,baz=131,slow=9.8,SNR=9.5							
PLCA	**Paso Flores**	**33.13**	**286**	P		**P**	**06 57 30.9**	**-0.3**
PLTB	**Pedras Altas**	**33.47**	**316**	*eP*		**P**	**06 57 35.0**	**+0.8**
CPSB	**Cacapava Do Su**	**34.65**	**317**	*eP*		**P**	**06 57 44.1**	**-0.3**
CNLB	**Canela**	**34.81**	**321**	*eP*		**P**	**06 57 45.7**	**-0.2**
LC01	**Cunco**	**35.20**	**286**			**P**	**06 57 46.5**	**-2.6**
LC01					IAmb	IAmb	06 57 54.1	
	comp=Z,18nm,1.1s							
ITQB	**Itaqui**	**36.45**	**313**	*eP*		**P**	**06 58 00.4**	**+0.6**
MAW	**Mawson**	**36.81**	**140**	P		**P**	**06 58 03.7**	**+1.2**
	comp=Z,7.7nm,1.0s,baz=237,slow=8.0,SNR=18							
MAW	**Mawson**	**36.81**	**140**	P		**P**	**06 58 03.3**	**+0.8**
ITAB	**Concordia**	**37.15**	**321**	*eP*		**P**	**06 58 05.9**	**+0.1**
BO02	**Sierra Bellavi**	**37.99**	**292**	P		**P**	**06 58 12.5**	**-0.5**
BO02					IAmb	IAmb	06 58 17.6	
	comp=Z,19nm,0.6s							
MT05	**Renca**	**39.13**	**293**	P		**P**	**06 58 23.3**	**+0.8**
SPB	**Sao Paulo**	**39.24**	**329**	*eP*		**P**	**06 58 22.9**	**-0.6**
PEL	**Peldehue**	**39.31**	**293**	P		**P**	**06 58 25.0**	**+1.0**
MT02	**Curacav**	**39.42**	**293**	P		**P**	**06 58 25.4**	**+0.5**
PTGB	**Pitanga**	**39.48**	**322**	*eP*		**P**	**06 58 25.1**	**-0.5**
VA03	**San Esteban**	**39.56**	**294**	P		**P**	**06 58 27.6**	**+1.4**
ROC1	**El Roble**	**39.60**	**293**	P		**P**	**06 58 27.3**	**+0.6**
CPUP	**Villa Florida**	**39.74**	**314**	P		**P**	**06 58 27.9**	**+0.3**
	comp=Z,19nm,0.5s,baz=150,slow=6.8,SNR=63							
CPUP					LR	LR	07 13 20.6	
	comp=Z,289nm,22.0s,baz=178,slow=34							
CPUP	**Villa Florida**	**39.74**	**314**	P		**P**	**06 58 27.9**	**+0.3**
CPUP					IAmb	IAmb	06 58 31.6	
	comp=Z,62nm,1.4s							
CPUP	**Villa Florida**	**39.74**	**314**	*eP*		**P**	**06 58 28.4**	**+0.8**
ZON	**Zonda**	**39.74**	**297**	P		**P**	**06 58 27.9**	**+0.2**
ZON					IAmb	IAmb	06 58 28.9	
	comp=Z,29nm,0.6s							
VA01	**Torpederas**	**39.85**	**292**	P		**P**	**06 58 29.6**	**+1.2**
VA01					IAmb	IAmb	06 58 52.6	
	comp=Z,34nm,1.1s							
FRTB	**Fartura**	**40.05**	**326**	*eP*		**P**	**06 58 29.8**	**-0.4**
CO02	**Combarbal**	**41.08**	**295**	P		**P**	**06 58 39.6**	**+0.8**
BSCB	**Bom Sucesso**	**41.11**	**334**	*eP*		**P**	**06 58 38.4**	**-0.6**
CO03	**El Pedregal**	**41.25**	**295**	P		**P**	**06 58 40.7**	**+0.5**
CO03					IAmb	IAmb	06 58 42.0	
	comp=Z,40nm,0.8s							
TRCB	**Terra Rica**	**41.46**	**323**	*eP*		**P**	**06 58 41.4**	**-0.5**
CO01	**Juntas del Tor**	**41.71**	**297**	P		**P**	**06 58 44.2**	**0.0**
GO04	**Tololo Observa**	**41.86**	**296**	P		**P**	**06 58 45.6**	**+0.2**
GO04					IAmb	IAmb	06 58 48.0	
	comp=Z,45nm,0.8s							
RIB01	**Linhares ES**	**41.90**	**341**	*eP*		**P**	**06 58 45.3**	**-0.2**
BB19B	**Bebedouro**	**41.94**	**329**	*eP*		**P**	**06 58 46.2**	**+0.4**
PCMB	**Pacaembu**	**42.17**	**325**	*eP*		**P**	**06 58 48.5**	**+0.8**
BSFB	**Barra de Sao F**	**42.45**	**340**	*eP*		**P**	**06 58 50.2**	**+0.4**
VNDA	**Vanda**	**42.52**	**183**	P		**P**	**06 58 51.8**	**+1.9**
	comp=Z,7.2nm,0.9s,baz=187,slow=6.7,SNR=43							
VNDA	**Vanda**	**42.52**	**183**	P		**P**	**06 58 50.2**	**+0.3**
SJMB	**Sao Joao De Ma**	**42.63**	**340**	*eP*		**P**	**06 58 51.3**	**-0.1**
AC05	**El Transito**	**42.77**	**297**	P		**P**	**06 58 52.6**	**-0.1**
LCO	**Las Campanas**	**42.81**	**297**	P		**P**	**06 58 52.9**	**-0.2**
LCO					IAmb	IAmb	06 58 54.1	
	comp=Z,44nm,0.8s							
NAN01	**Guarapari, ES**	**43.29**	**341**	*eP*		**P**	**06 58 54.7**	**-2.1**
AC04	**Llanos de Chal**	**43.67**	**297**	P		**P**	**06 58 59.2**	**-0.5**
ITRB	**Iturama**	**43.73**	**327**	*eP*		**P**	**06 58 59.9**	**-0.4**
AC02	**Maricunga**	**44.00**	**300**	P		**P**	**06 59 02.7**	**-0.2**
AC02					IAmb	IAmb	06 59 06.9	
	comp=Z,25nm,0.8s							
IPMB	**Ipameri, GO**	**44.82**	**330**	*eP*		**P**	**06 59 09.2**	**+0.1**
GO02	**Mina Guanaco**	**45.66**	**301**	P		**P**	**06 59 15.2**	**-0.7**
PB14	**IPOC Station P**	**46.48**	**300**	P		**P**	**06 59 21.9**	**-0.6**
PB14					IAmb	IAmb	06 59 23.5	
	comp=Z,24nm,0.9s							
JANB	**Januaria**	**46.77**	**336**	*eP*		**P**	**06 59 24.3**	**-0.2**
BOSA	**Boshof**	**46.90**	**72**	P		**P**	**06 59 26.6**	**+1.2**
	comp=Z,3.2nm,0.7s,baz=192,slow=11,SNR=4.6							
BOSA					PcP	**PcP**	**07 00 59.3**	**+1.6**
	comp=Z,7.7nm,1.0s,baz=143,slow=3.1,SNR=5.3							
BOSA	**Boshof**	**46.90**	**72**	P		**P**	**06 59 25.9**	**+0.4**
BOSA					IAmb	IAmb	06 59 27.5	
	comp=Z,32nm,1.5s							
BDFB	**Brasilia**	**47.02**	**332**	P		**P**	**06 59 26.8**	**+0.3**
	comp=Z,3.4nm,0.4s,baz=153,slow=7.2,SNR=10							
BDFB	**Brasilia**	**47.02**	**332**	P		**P**	**06 59 27.2**	**+0.8**
LVC	**Limon Verde**	**47.62**	**303**	P		**P**	**06 59 31.8**	**+0.4**
LVC					IAmb	IAmb	06 59 36.2	
	comp=Z,14nm,0.8s							
LVC	**Limon Verde**	**47.62**	**303**	*eP*		**P**	**06 59 31.9**	**+0.5**
ARAG	**Araguaiana, MT**	**47.94**	**327**	*eP*		**P**	**06 59 33.1**	**-0.3**
SDBA	**SAO DESIDERIO**	**49.47**	**336**	*eP*		**P**	**06 59 45.0**	**-0.3**
PB08	**IPOC Station P**	**49.91**	**304**	P		**P**	**06 59 48.9**	**-0.1**
PB08					IAmb	IAmb	06 59 56.7	
	comp=Z,16nm,0.7s							
LBTB	**Lobatse**	**50.10**	**69**	P		**P**	**06 59 50.9**	**+0.8**
LBTB					IAmb	IAmb	07 00 00.7	
	comp=Z,14nm,1.1s							
GO01	**Chusmiza**	**50.35**	**304**	P		**P**	**06 59 53.2**	**+0.7**
GO01					IAmb	IAmb	06 59 58.8	
	comp=Z,24nm,0.8s							
PTLB	**Pontes e Lacer**	**50.42**	**318**	*eP*		**P**	**06 59 52.3**	**-0.1**
MNMC	**Minye Minye**	**51.00**	**304**	P		**P**	**06 59 57.6**	**+0.5**
SNDB	**Serra Nova Dou**	**51.36**	**329**	*eP*		**P**	**06 59 59.9**	**+0.4**
TSUM	**Tsumeb**	**51.58**	**57**	P		**P**	**07 00 02.5**	**+1.2**
PB16	**IPOC Station P**	**51.67**	**305**	P		**P**	**07 00 03.0**	**+0.5**
PB16					IAmb	IAmb	07 00 03.9	
	comp=Z,8.4nm,0.6s							
H10S2	**ASCENSION HYDR**	**51.85**	**15**	T		T	07 56 10.5	
	baz=187,slow=74,SNR=3.4							
H10S3	**ASCENSION HYDR**	**51.85**	**15**	T		T	07 56 14.1	
	baz=93,slow=74,SNR=11							
LPAZ	**La Paz**	**52.96**	**307**	P		**P**	**07 00 12.4**	**+0.3**
	comp=Z,13nm,0.5s,baz=139,slow=5.4,SNR=134							
LPAZ	**La Paz**	**52.96**	**307**	P		**P**	**07 00 11.7**	**-0.4**
LPAZ					IAmb	IAmb	07 00 13.3	
	comp=Z,16nm,0.6s							
LPAZ	**La Paz**	**52.96**	**307**	*eP*		**P**	**07 00 12.5**	**+0.3**
H10N1	**ASCENSION HYDR**	**52.97**	**15**	T		T	07 57 42.4	
	baz=177							
H10N3	**ASCENSION HYDR**	**52.97**	**15**	T		T	07 57 42.3	
	baz=177,slow=74,SNR=8.9							
H10N2	**ASCENSION HYDR**	**52.98**	**15**	T		T	07 57 39.2	
	baz=177,slow=74,SNR=9.1							
VILB	**Vilhena**	**53.10**	**318**	*eP*		**P**	**07 00 12.5**	**-0.1**
SMTB	**Santa Maria do**	**53.47**	**334**	*eP*		**P**	**07 00 15.1**	**-0.1**
CLDB	**Colider**	**53.67**	**324**	*eP*		**P**	**07 00 15.1**	**-1.6**
RCBR	**Riachuelo**	**54.59**	**349**	*eP*		**P**	**07 00 22.6**	**-0.8**
PRPB	**Parauapebas**	**56.58**	**332**	*eP*		**P**	**07 00 38.4**	**+0.7**
NPGB	**Novo Progresso**	**57.18**	**326**	*eP*		**P**	**07 00 40.9**	**-1.0**
SAML	**Samuel**	**57.85**	**316**	P		**P**	**07 00 46.1**	**-0.5**
SAML					IAmb	IAmb	07 00 47.6	
	comp=Z,23nm,1.1s							
SAML	**Samuel**	**57.85**	**316**	*eP*		**P**	**07 00 46.2**	**-0.4**
ETMB	**Extrema**	**58.14**	**313**	*eP*		**P**	**07 00 48.0**	**-0.6**
LSZ	**Lusaka**	**59.72**	**66**	P		**P**	**07 01 00.8**	**+1.0**
LSZ					IAmb	IAmb	07 01 01.9	
	comp=Z,11nm,0.9s							
ITTB	**Itaituba**	**59.83**	**326**	*eP*		**P**	**07 00 58.7**	**-1.7**
TMAB	**Tom-Au,PA,Br**	**59.88**	**335**	*eP*		**P**	**07 01 00.7**	**+0.1**
MALB	**Monte Alegre**	**61.84**	**328**	*eP*		**P**	**07 01 13.7**	**-0.3**
MACA	**Manacapuru-AM**	**62.45**	**321**	*eP*		**P**	**07 01 16.5**	**-1.6**
CZSB	**Cruzeiro do Su**	**62.55**	**307**	*eP*		**P**	**07 01 17.6**	**-1.2**
MCPB	**Macapa, AP**	**62.72**	**331**	*eP*		**P**	**07 01 19.5**	**-0.4**
LIC	**Lamto**	**68.32**	**23**	*eP*		**P**	**07 01 56.3**	**+0.3**
	comp=Z,29nm,0.5s							
KIC	**Kosan Boka**	**68.51**	**24**	*eP*		**P**	**07 01 57.4**	**+0.2**
	comp=Z,20nm,0.8s							
TIC	**Tromodi**	**68.73**	**23**	*eP*		**P**	**07 01 58.9**	**+0.3**
DBIC	**Dimbokro**	**68.79**	**23**	P		**P**	**07 01 59.4**	**+0.5**
	comp=Z,6.3nm,0.5s,baz=169,slow=7.6,SNR=18							
DBIC	**Dimbokro**	**68.79**	**23**	P		**P**	**07 01 58.8**	**-0.1**
PTLC	**Puerto Leguiza**	**70.58**	**308**	*eP*		**P**	**07 02 07.3**	**-2.8**
GUVC	**San Jose del G**	**71.92**	**311**	*eP*		**P**	**07 02 14.3**	**-3.9**
MACC	**Macarena, Meta**	**72.02**	**310**	*eP*		**P**	**07 02 14.6**	**-4.1**
FLOC	**Florencia**	**72.21**	**308**	*eP*		**P**	**07 02 16.9**	**-2.9**
GCUF	**Volcan Galeras**	**72.56**	**306**	*eP*		**P**	**07 02 23.6**	**+1.1**
GARC	**Garzon, Huila**	**72.69**	**308**	*eP*		**P**	**07 02 22.3**	**-0.7**
SOTA	**Rioblanco**	**73.09**	**307**	*eP*		**P**	**07 02 27.3**	**+1.6**
BETC	**Betania**	**73.13**	**308**	*eP*		**P**	**07 02 24.4**	**-1.0**
PCON	**Cinco Dias**	**73.18**	**307**	*eP*		**P**	**07 02 27.1**	**+0.8**
POPC	**Popayan, Colom**	**73.49**	**307**	*eP*		**P**	**07 02 27.3**	**-0.4**
PRAC	**Prado**	**73.85**	**309**	*eP*		**P**	**07 02 28.7**	**-1.0**
MBAR	**Mbarara**	**73.86**	**61**	P		**P**	**07 02 30.4**	**+0.5**
ORTC	**Ortega, Tolima**	**74.17**	**309**	*eP*		**P**	**07 02 31.0**	**-0.5**
CHIC	**Chingaza**	**74.25**	**311**	*eP*		**P**	**07 02 30.2**	**-2.2**
YOTC	**Yotoco, Valle**	**74.67**	**308**	*eP*		**P**	**07 02 32.7**	**-1.8**
TOLC	**Tolima**	**74.82**	**309**	*eP*		**P**	**07 02 33.6**	**-2.0**
RUSC	**La Rusia**	**75.17**	**312**	*eP*		**P**	**07 02 35.7**	**-2.1**
GUY2C	**Guyana, Caldas**	**75.42**	**309**	*eP*		**P**	**07 02 37.7**	**-1.6**
CBOC	**Ciudad Bolivar**	**76.26**	**309**	*eP*		**P**	**07 02 41.7**	**-1.9**
PTBC	**PUERTO BERRIO,**	**76.28**	**311**	*eP*		**P**	**07 02 40.3**	**-3.3**
LTZ	**Lake Taylor**	**76.28**	**194**	P		**P**	**07 02 45.9**	**+2.5**
LTZ					IAmb	IAmb	07 03 04.5	
	comp=Z,31nm,1.5s							
HELC	**Santa Helena**	**76.37**	**310**	*eP*		**P**	**07 02 42.6**	**-1.9**
TOA0	**Torodi Ar. Sit**	**76.50**	**29**	P		**P**	**07 02 45.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**76.50**	**29**	P		**P**	**07 02 45.9**	**+1.1**
	comp=Z,25nm,0.5s,baz=200,slow=6.2,SNR=371							
TORD	**Torodi Ar. Bea**	**76.50**	**29**	P		**P**	**07 02 45.0**	**+0.3**
KOWA	**Kowa**	**76.58**	**23**	P		**P**	**07 02 45.4**	**+0.3**
SDV	**Santo Domingo**	**77.05**	**315**	P		**P**	**07 02 47.6**	**-0.4**
	comp=Z,9.2nm,0.7s,baz=129,slow=2.4,SNR=6.8							
SDV	**Santo Domingo**	**77.05**	**315**	P		**P**	**07 02 47.0**	**-1.1**
SDV					IAmb	IAmb	07 02 48.2	
	comp=Z,16nm,0.9s							
SDV	**Santo Domingo**	**77.05**	**315**	*eP*		**P**	**07 02 47.5**	**-0.6**
MOTC	**Monteria, Cord**	**78.79**	**311**	*eP*		**P**	**07 02 56.0**	**-1.5**
SJCC	**San Jacinto, C**	**79.64**	**311**	*eP*		**P**	**07 03 01.6**	**-0.6**
JTS	**Las Juntas de**	**83.90**	**303**	P		**P**	**07 03 24.6**	**0.0**
	comp=Z,5.0nm,0.9s,baz=308,slow=1.0,SNR=6.2							
STKA	**Stephens Creek**	**87.86**	**170**	P		**P**	**07 03 45.5**	**+1.4**
	comp=Z,3.4nm,0.8s,baz=134,slow=11,SNR=4.7							
ASAR	**Alice Springs**	**95.05**	**162**	P		**P**	**07 04 17.9**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=192,slow=4.4,SNR=12							
ASAR	**Alice Springs**	**95.05**	**162**	P		**P**	**07 04 16.2**	**-1.5**
WRA	**Warramunga Arr**	**98.77**	**162**	P		**P**	**07 04 34.3**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=201,slow=4.3,SNR=3.5							
WRA					LR	LR	07 47 31.4	
	comp=Z,286nm,18.9s,baz=210,slow=34							
EDW2	**Edwards Air Fo**	**120.10**	**288**	P		**PKiKP**	**07 09 45.5**	**+0.5**
	baz=145							
TPNV	**Topopah Spring**	**120.95**	**291**	P		**PKiKP**	**07 09 47.4**	**+0.6**
	baz=144							
CWC	**Cottonwood Cre**	**121.40**	**289**	P		**PKiKP**	**07 09 48.1**	**+0.4**
	baz=144							
DUG	**Dugway, Tooele**	**122.00**	**296**	P		**PKiKP**	**07 09 49.2**	**+0.5**
	baz=144							
PDAR	**Pinedale Array**	**122.63**	**300**	PKP		**PKPdf**	**07 09 48.4**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=127,slow=5.1,SNR=9.5							
NVAR	**Mina Array Bea**	**123.11**	**290**	PKP		**PKiKP**	**07 09 51.5**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=138,slow=3.0,SNR=7.0							
NVAR	**Mina Array Bea**	**123.11**	**290**			**PKiKP**	**07 09 51.1**	**+0.1**
ULM	**Lac du Bonnet**	**123.29**	**314**	PKP		**PKPdf**	**07 09 49.7**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=104,slow=1.1,SNR=4.9							
CMAR	**Chiang Mai Arr**	**123.36**	**113**	PKP		**PKPdf**	**07 09 50.1**	**-1.5**
	comp=Z,2.3nm,0.4s,baz=224,slow=3.3,SNR=10							
NB2	**NORSAR Subarra**	**124.33**	**21**	PKPdf		**PKPdf**	**07 09 52.3**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=188,slow=1.9							
NOA	**NORSAR Array B**	**124.33**	**21**	PKP		**PKiKP**	**07 09 52.4**	**0.0**
	comp=Z,2.2nm,0.8s,baz=189,slow=1.7,SNR=8.0							
MSO	**Missoula**	**127.75**	**300**	P		**PKiKP**	**07 09 59.9**	**+0.1**
	baz=141							
FINES	**FINESS Array B**	**127.86**	**29**	PKP		**PKPdf**	**07 09 58.8**	**0.0**
	comp=Z,5.3nm,0.6s,baz=141,slow=2.5,SNR=22							
QIZ	**Qiongzhong**	**128.68**	**124**	PKP		**PKiKP**	**07 10 02.4**	**0.0**
QIZ				PP		**PP**	**07 12 09.0**	**+1.1**
QIZ				SS		SS	07 29 24.6	+2.1
QIZ				LR		LR		
	comp=Z,370nm,12.7s							
QIZ				LR		LR		
	comp=Z,500nm,21.6s							
ABKAR	**Akbulak array**	**129.42**	**58**			**PKiKP**	**07 10 02.7**	**-0.2**
ABKAR	**Akbulak array**	**129.42**	**58**			**PKiKP**	**07 10 02.7**	**-0.2**
KKAR	**Karatay Array**	**129.48**	**70**			**PKPdf**	**07 10 02.5**	**-0.1**
ARCES	**ARCESS Array B**	**134.62**	**23**	PKP		**PKPdf**	**07 10 11.7**	**+0.3**
	comp=Z,4.2nm,0.6s,baz=193,slow=1.7,SNR=19							
MKAR	**Makanchi Array**	**137.84**	**75**	PKhKP		PKPpre	07 10 10.2	
	comp=Z,0.6nm,0.6s,baz=63,slow=0.6,SNR=5.1							
WMQ	**Urumqi**	**138.36**	**83**	*e*PKP		**PKPdf**	**07 10 14.6**	**-4.7**
YKA	**Yellowknife Ar**	**139.26**	**315**	PKP		**PKPdf**	**07 10 19.7**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=127,slow=2.7,SNR=15							
LZH	**Lanzhou**	**140.51**	**105**	*e*PKP		**PKPdf**	**07 10 23.9**	**+0.4**
WHN	**Wuhan**	**140.72**	**121**	PKPbc		PKiKP	07 10 38.0	+12
GTA	**Gaotai**	**141.13**	**98**	*e*P		PKiKP	07 10 37.8	+11
GTA				pP		sPKPdf	07 10 45.2	+6.1
GTA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
GTA	**Gaotai**	**141.13**	**98**	*e*PKP		**PKiKP**	**07 10 28.8**	**+1.6**
ZALV	**Zalesovo Beam**	**143.81**	**69**	PKP		PKPbc	07 10 26.4	+0.1
	comp=Z,9.1nm,0.5s,baz=229,slow=4.0,SNR=38							
NJ2	**Nanjing**	**143.92**	**126**	*e*PKP		**PKPdf**	**07 10 30.8**	**+1.3**
WHY	**Whitehorse**	**146.09**	**303**	PKPdf		**PKPdf**	**07 10 32.9**	**+0.4**
C36M	**Paulatuk**	**146.28**	**321**	P		**PKPbc**	**07 10 33.1**	**-0.5**
	baz=117							
BTO	**Baotou**	**147.05**	**107**	*e*PKPbc		**PKPbc**	**07 10 37.7**	**+0.8**
HHC	**Hu-ho-hao-te**	**147.97**	**108

I04A				Sb	**Sg**	**07 00 08.3**	**-1.7**
	baz=131						
ORV	**Oroville**	**2.77**	**211**		**Pn**	**06 59 26.3**	**+0.4**
PNTR	**Pine Nut**	**2.84**	**179**		**Pb**	**06 59 30.4**	**-2.1**
RUBR	**Rubicon Trail**	**2.91**	**188**		**Pb**	**06 59 32.3**	**-1.2**
L02E	**Cave Junction**	**2.96**	**276**	P	**Pn**	**06 59 28.5**	**0.0**
	baz=93,SNR=19						
L02E				Sb	**Sb**	**07 00 11.7**	**+1.1**
	baz=93						
K02D	**Willamette Mer**	**3.08**	**286**	P	**Pn**	**06 59 30.0**	**-0.2**
	baz=103,SNR=155						
K02D				Sb	**Sb**	**07 00 16.6**	**+2.6**
	baz=103						
KVN	**Kaiserville**	**3.11**	**157**		**Pn**	**06 59 32.0**	**+1.2**
AFDM	**Forest Hills D**	**3.15**	**199**		**Pn**	**06 59 32.4**	**+1.2**
MFID	**Camas Ranch**	**3.18**	**61**	Pn	**Pn**	**06 59 31.6**	**0.0**
KRMB	**Red Mountain**	**3.22**	**264**		**Pn**	**06 59 32.2**	**0.0**
I03D	**Drain, OR**	**3.25**	**304**	Pg	**Pg**	**06 59 41.9**	**-1.8**
	baz=122						
I03D				Sb	**Sb**	**07 00 21.9**	**+3.1**
	baz=122						
KHMM	**Horse Mountain**	**3.25**	**252**		**Pn**	**06 59 33.2**	**+0.5**
H04A	**Detroit Lake**	**3.32**	**327**		**Pn**	**06 59 33.4**	**-0.1**
G08A	**Pilot Rock**	**3.39**	**8**		**Pn**	**06 59 36.1**	**+1.5**
RYN	**Ryan**	**3.41**	**165**		**Pn**	**06 59 34.0**	**-0.8**
KBO	**Bosley Butte**	**3.42**	**276**		**Pn**	**06 59 35.2**	**+0.2**
WAKR	**Walker**	**3.43**	**177**		**Pn**	**06 59 35.5**	**+0.3**
JCC	**Jacoby Creek,**	**3.49**	**253**		**Pn**	**06 59 36.9**	**+1.2**
KMRM	**Mail Ridge**	**3.52**	**242**		**Pn**	**06 59 36.6**	**+0.3**
ELK	**Elko**	**3.52**	**108**	Pn	**Pn**	**06 59 37.3**	**+0.9**
	3.9nm,0.3s,baz=290,slow=13,SNR=20						
ELK				Pg	**Pb**	**06 59 40.8**	**-3.2**
	3.9nm,0.3s,baz=288,slow=17,SNR=17						
ELK				Sn	**Sn**	**07 00 17.2**	**-1.1**
	4.2nm,0.3s,baz=190,slow=12,SNR=1.7						
ELK				Lg	Lg	07 00 31.6	
	24nm,0.3s,baz=31,slow=22,SNR=12						
ELK	**Elko**	**3.52**	**108**		**Pn**	**06 59 35.8**	**-0.7**
KEBM	**Edson Butte**	**3.60**	**287**		**Pn**	**06 59 38.0**	**+0.6**
NVAR	**Mina Array Bea**	**3.65**	**163**	Pn	**Pn**	**06 59 38.2**	**0.0**
	0.8nm,0.3s,baz=337,slow=12,SNR=16						
NVAR				Lg	Lg	07 00 35.2	
	23nm,0.3s,baz=345,slow=24,SNR=10						
NVAR	**Mina Array Bea**	**3.65**	**163**	Pn	**Pn**	**06 59 38.0**	**-0.2**
NV11	**Mina Array Sit**	**3.68**	**162**		**Pn**	**06 59 38.5**	**0.0**
KCPM	**Cahto Peak**	**3.74**	**234**		**Pn**	**06 59 40.7**	**+1.3**
LHV	**Little Huntoon**	**3.78**	**166**		**Pn**	**06 59 39.7**	**-0.1**
CMB	**Columbia Colle**	**3.94**	**189**		**Pn**	**06 59 42.8**	**+0.8**
PLID	**Pearl Lake**	**4.12**	**39**		**Pn**	**06 59 44.8**	**+0.2**
F05D	**White Salmon**	**4.16**	**342**	Sb	**Sg**	**07 00 50.4**	**-4.7**
	baz=161						
HLID	**Hailey**	**4.18**	**65**	P	**Pn**	**06 59 44.9**	**-0.5**
	baz=248						
HLID				Sb	**Sb**	**07 00 48.0**	**+2.3**
	baz=248						
HLID	**Hailey**	**4.18**	**65**	Pn	**Pn**	**06 59 45.2**	**-0.2**
MDPB	**Devils Postpil**	**4.32**	**174**		**Pn**	**06 59 49.6**	**+2.1**
MLAC	**Mammoth, Mammo**	**4.34**	**172**	Pg	**Pb**	**07 00 01.0**	**+2.9**
	baz=352						
OMMB	**Old Mammoth Mi**	**4.34**	**173**		**Pn**	**06 59 49.3**	**+1.4**
R11A	**Troy Canyon, C**	**4.74**	**138**	P	**Pn**	**06 59 53.7**	**+0.5**
	baz=320						
R11A	**Troy Canyon, C**	**4.74**	**138**	Pn	**Pn**	**06 59 52.5**	**-0.7**
BGU	**Big Grassy Mou**	**5.07**	**99**	Pn	**Pn**	**06 59 58.6**	**+0.9**
SPUT	**South Promonto**	**5.43**	**94**		**Pn**	**07 00 01.7**	**-0.9**
DUG	**Dugway, Tooele**	**5.45**	**106**	P	**Pn**	**07 00 03.0**	**+0.1**
	baz=291						
DUG	**Dugway, Tooele**	**5.45**	**106**	Pn	**Pn**	**07 00 03.4**	**+0.6**
PSUT	**Pine Spring**	**5.58**	**126**	Pn	**Pn**	**07 00 05.0**	**+0.3**
TPNV	**Topopah Spring**	**5.63**	**151**	P	**Pn**	**07 00 06.4**	**+1.0**
	baz=334						
TPNV	**Topopah Spring**	**5.63**	**151**	Pn	**Pn**	**07 00 05.8**	**+0.5**
MCMT	**McKenzie Canyo**	**5.73**	**57**		**Pn**	**07 00 05.6**	**-1.2**
PRN	**Pahroc Range**	**5.74**	**140**		**Pn**	**07 00 08.3**	**+1.4**
MSO	**Missoula**	**6.37**	**38**	Pn	**Pn**	**07 00 16.3**	**+0.9**
ICU	**Indian Springs**	**6.51**	**135**		**Pn**	**07 00 19.6**	**+2.2**
CCUT	**Cedar City**	**6.52**	**130**	Pn	**Pn**	**07 00 16.7**	**-1.0**
MVU	**Marysvale**	**6.64**	**119**		**Pn**	**07 00 18.2**	**-1.0**
SZCU	**Shurtz Canyon**	**6.65**	**129**		**Pn**	**07 00 18.7**	**-0.7**
MSU	**Marysvale**	**6.66**	**118**		**Pn**	**07 00 18.8**	**-0.7**
MTPU	**Mount Pierson**	**6.92**	**122**		**Pn**	**07 00 22.8**	**-0.4**
PDAR	**Pinedale Array**	**7.51**	**80**	Pn	**Pn**	**07 00 34.0**	**+2.7**
	0.1nm,0.3s,baz=267,slow=12,SNR=6.5						
TXAR	**Lajitas Array**	**18.04**	**129**	P	**P**	**07 02 55.0**	**+2.2**
	0.0nm,0.3s,baz=316,slow=8.8,SNR=3.7						
ILAR	**Eielson Array**	**27.64**	**335**	P	**P**	**07 04 30.5**	**+1.5**
	1.5nm,1.0s,baz=153,slow=6.4,SNR=8.7						

*SOF **07** 07:01:40.9, 42°.59N×22°.99E, h13km, MD2.8*
*BEO **07** 07:01:41.5±0.3, 42°.58N×22°.94E, h0km, ML2.5/11*
*SKO **07** 07:01:42.1, 42°.61N×22°.99E, h0km*
ISC 07 07:01:40.6±1.1, **42°.56N**±0°.03×**22°.93E**±0°.02, **h10**km±9km, **n37**, σ1°**00**/54, **16C-4D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.23**	**75**	*i* Pg	**Pg**	**07 01 45.4**	**0.0**
SOF	**Sofiya**	**0.33**	**67**	Pg	**Pg**	**07 01 47.5**	**+0.4**
BOSS	**Bosilegrad**	**0.34**	**260**	*e*Pg	**Pb**	**07 01 49.1**	**+0.4**
BOSS				*e*Sg	**Sb**	**07 01 54.2**	**0.0**
PRVS	**Prvonek**	**0.63**	**266**	*e*Pg	**Pg**	**07 01 53.7**	**+0.9**
PRVS				*e*Sg	**Sb**	**07 02 02.8**	**+0.1**
KKB	**Krupnik**	**0.70**	**171**	*i* Pg	**Pb**	**07 01 55.8**	**+0.9**
ZAPS	**Zavoj**	**0.75**	**343**	*e*Pg	**Pg**	**07 01 54.9**	**-0.1**
ZAPS				*e*Sg	**Sb**	**07 02 06.1**	**0.0**
PGB	**Panagyurishte**	**0.91**	**90**	*i* Pg	**Pg**	**07 01 57.8**	**-0.4**
MPEP	**Malo Peshtene**	**0.99**	**36**	*i* Pg	**Pg**	**07 01 59.8**	**+0.1**
STIP	**Stip**	**1.02**	**213**	*i* Pg	**Pg**	**07 01 58.1**	**-2.2**
STIP				*i* Sg	**Sg**	**07 02 11.4**	**-2.2**
BLKB	**Belogradchik**	**1.08**	**350**	*e*Pg	**Pg**	**07 02 01.4**	**0.0**
BLKB				*e*Sg	**Sn**	**07 02 16.4**	**-0.6**
BLKB	**Belogradchik**	**1.08**	**350**	⇑S	**Sn**	**07 02 16.9**	**-0.1**
MMB	**Musomiste**	**1.14**	**148**	*i* P	**Pn**	**07 02 04.3**	**+1.7**
ZAGS	**Zajecar**	**1.35**	**338**	*e*Pg	**Pn**	**07 02 05.3**	**-0.3**
ZAGS				*e*Sg	**Sg**	**07 02 24.7**	**+0.6**
PLD	**Plovdiv**	**1.39**	**108**	*e*Sg	**Sg**	**07 02 25.4**	**+0.1**
PLD	**Plovdiv**	**1.39**	**108**	P	**Pb**	**07 02 06.7**	**+0.1**
BOVS	**Bovan**	**1.40**	**321**	*e*Pg	**Pn**	**07 02 06.4**	**+0.2**
BOVS				*e*Sg	**Sn**	**07 02 25.0**	**+0.2**
SELS	**Selova**	**1.49**	**297**	*e*Pn	**Pb**	**07 02 08.2**	**-0.1**
RZN	**Rozhen**	**1.59**	**123**	*i* P	**Pg**	**07 02 10.7**	**-0.3**
PUNG	**Punghina**	**1.72**	**0**	⇑S	**Sn**	**07 02 31.5**	**-1.1**
PVL	**Pavlikeni**	**1.89**	**69**	P	**Pn**	**07 02 12.0**	**-0.8**
DIM	**Dimitrovgrad**	**2.00**	**104**	P	**Pb**	**07 02 17.3**	**+0.3**
GRUS	**Gruza**	**2.10**	**310**	*e*Pn	**Pn**	**07 02 16.8**	**+1.0**
GRUS				*e*Sg	**Sb**	**07 02 46.7**	**+1.9**
SRE	**Strehaia**	**2.11**	**5**	⇑P	**Pb**	**07 02 17.8**	**-1.2**
IVAS	**Ivanjica**	**2.28**	**298**	*e*Pn	**Pn**	**07 02 19.9**	**+1.6**
SJES	**Sjenica**	**2.28**	**289**	*e*Pn	**Pn**	**07 02 19.4**	**+1.0**
HERR	**Herculane**	**2.35**	**351**	⇑P	**Pn**	**07 02 19.5**	**+0.2**
HERR				⇑S	**Sn**	**07 02 47.4**	**-0.8**
MDVR	**Moldovita**	**2.39**	**339**	⇑P	**Pn**	**07 02 20.6**	**+0.7**
MDVR				⇓S	**Sn**	**07 02 49.3**	**0.0**
TRUS	**Trudelj**	**2.48**	**313**	*e*Pn	**Pn**	**07 02 21.4**	**+0.3**
TRUS				*e*Sg	**Sg**	**07 02 59.7**	**-0.6**
DIVS	**Divibare**	**2.64**	**307**	*e*Pn	**Pn**	**07 02 24.1**	**+0.8**
GZR	**Gura Zlata**	**2.84**	**358**	⇓P	**Pn**	**07 02 25.9**	**-0.1**
GZR				⇑S	**Sn**	**07 02 58.7**	**-1.6**
BBLS	**Lazići**	**2.89**	**298**	*e*Pn	**Pn**	**07 02 28.4**	**+1.7**
LOT	**Lotru**	**2.95**	**12**	⇑P	**Pn**	**07 02 28.4**	**+0.7**
LOT				⇑S	**Sn**	**07 03 01.8**	**-1.5**
ARR	**Arges**	**3.07**	**23**	⇑P	**Pn**	**07 02 30.2**	**+1.0**
ARR				⇑S	**Sn**	**07 03 03.6**	**-2.4**
BZS	**Buzias**	**3.20**	**343**	⇑P	**Pn**	**07 02 31.0**	**0.0**
BZS				⇑S	**Sn**	**07 03 08.8**	**-0.4**
VOIR		**3.26**	**27**	⇓P	**Pn**	**07 02 33.1**	**+1.2**
VOIR				⇑S	**Sn**	**07 03 10.4**	**-0.4**
MLR	**Muntele Rosu**	**3.65**	**36**	⇑P	**Pn**	**07 02 38.1**	**+0.8**
MLR				⇓S	**Sn**	**07 03 20.0**	**-0.5**
CFR	**Carcaliu**	**4.59**	**53**	⇑P	**Pn**	**07 02 51.9**	**+1.9**

*BGR **07** 07:11:15.4±0.0, 65°.18N×20°.23W, h33km, mb5.1*
*IEPN **07** 07:11:21.0, 64°.93N×18°.80W, h10km*
*BJI **07** 07:11:22.7±0.0, 64°.71N×17°.56W, h11km, mB5.4/38, mb4.8/47, Ms5.2/31, Ms7 4.8/31*
*REY **07** 07:11:23.1, 64°.66N×17°.51W, h6km*
*MOS **07** 07:11:23.2±1.3, 64°.66N×17°.65W, h12km, mb5.1/80, MS4.8/37, Error ellipse: s-maj=7.9km s-min=5.2km az=104.4*

*IDC **07** 07:11:23.9±0.4, 64°.65N×17°.56W, h0km, mb4.5/29, mb1 4.7/33, mb1mx4.5/49, mbtmp4.5/33, ML3.1/3, MS4.5/38, Ms1 4.5/38, ms1mx4.4/53, Error ellipse: s-maj=13.4km s-min=9.1km az=20.0*
*NEIC **07** 07:11:23.5±2.1, 64°.59N±0°.07×17°.5W±0°.1, h8km±4km, mb5.2/232, Ms_20 4.7/568, Error ellipse: s-maj=10.5km s-min=7.7km az=177.0*
*BGS **07** 07:11:24.6±2.4, 64°.59N×17°.53W, h5km, MS5.1*
*GCMT **07** 07:11:27.5±0.3, 64°.58N±0°.03×17°.39W±0°.03, h12km, MW5.2/90, Moment Tensor Solution. s32,c32; s90,c149; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr-0.59±.03; Mθθ0.04±.03; Mφφ0.54±.02; Mrθ-0.73±.09; Mθφ-0.29±.02; Mφr-0.11±.07; Best double couple: M₀0.92400×10^17 NP1:φs357.00000°, δ40.00000°, λ-37.00000°. NP2:φs118.00000°, δ67.00000°, λ-124.00000°. Principal axes: T 0.7400, Plg16.0000°, Azm232.0000°; N 0.3680, Plg31.0000°, Azm132.0000°; P -1.1090, Plg55.0000°, Azm345.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DNK **07** 07:11:31.0±6.4, 64°.80N×17°.51W, h19km±111km, ML2.9, Ms4.9*
ISC 07 07:11:25.2±0.2, **64°.70N**±0°.02×**17°.64W**±0°.02, **h10**km, **n1214**, σ1°**88**/1068, **mb5.1**/227, **MS4.7**/356, **18C-15D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.06**	**243**	P	**Pg**	**07 11 25.4**	**-1.9**
	baz=279						
IDYN	**Dyngjuhals**	**0.15**	**52**	P	**Pg**	**07 11 26.3**	**-2.3**
	baz=25						
IGRF	**Grimsfjall**	**0.34**	**151**	P	**Pg**	**07 11 28.4**	**-3.5**
	baz=157						
ISKR	**Skrokkalda**	**0.35**	**247**	P	**Pg**	**07 11 30.3**	**-1.8**
	baz=256						
IHUS	**Husbondi**	**0.40**	**181**	P	**Pg**	**07 11 30.2**	**-3.0**
	baz=190						
IJOK	**Jokulheimar**	**0.46**	**214**	P	**Pg**	**07 11 31.4**	**-2.7**
	baz=222						
IJOK				S	**Sg**	**07 11 38.1**	**-2.1**
	baz=222						
IVOT	**Vottur**	**0.47**	**155**	P	**Pg**	**07 11 30.8**	**-3.6**
	baz=160						
THOR	**Thorvaldshraun**	**0.48**	**60**	P	**Pg**	**07 11 31.4**	**-3.0**
	baz=52						
IASK	**Askja**	**0.55**	**50**	P	**Pg**	**07 11 32.7**	**-3.2**
	baz=43						
IMKO	**Mokollar**	**0.62**	**63**	P	**Pg**	**07 11 33.8**	**-3.5**
	baz=57						
IMKO				S	**Sg**	**07 11 42.1**	**-3.4**
	baz=57						
IIEY	**Innrieyrar**	**0.64**	**199**	P	**Pg**	**07 11 34.3**	**-3.2**
	baz=205						
ISVA	**Svartarkot**	**0.66**	**14**	P	**Pg**	**07 11 35.4**	**-2.6**
	baz=9.1						
IKSK	**Karasker**	**0.74**	**136**	P	**Pg**	**07 11 34.7**	**-4.7**
	baz=137						
IKAL	**Kalfafell**	**0.75**	**181**	P	**Pg**	**07 11 35.8**	**-3.9**
	baz=186						
IKAL				S	**Sg**	**07 11 45.6**	**-3.9**
	baz=186						
IVSH	**V-Sauoahnukur**	**0.83**	**81**	P	**Pg**	**07 11 36.7**	**-4.4**
	baz=78						
IVSH				S	**Sg**	**07 11 47.6**	**-4.3**
	baz=78						
IHVE	**Hveravellir**	**0.84**	**283**	P	**Pg**	**07 11 38.6**	**-2.7**
	baz=284						
IMEL	**Melhnausar**	**0.97**	**25**	P	**Pg**	**07 11 40.1**	**-3.7**
	baz=21						
IMEL				S	**Sg**	**07 11 53.2**	**-3.2**
	baz=21						
IREN	**Reynihlio**	**1.00**	**18**	P	**Pg**	**07 11 40.9**	**-3.6**
	baz=14						
ISNB	**Snabyli**	**1.06**	**205**	P	**Pg**	**07 11 41.4**	**-4.1**
	baz=208						
IKVO	**Krokottuvotn**	**1.07**	**17**	P	**Pb**	**07 11 42.0**	**-3.8**
	baz=14						
ISLY	**Slysaalda**	**1.09**	**217**	P	**Pg**	**07 11 42.2**	**-3.8**
	baz=221						
ISLY				S	**Sg**	**07 11 56.0**	**-4.2**
	baz=221						
IFED	**Fedgar**	**1.12**	**234**	P	**Pg**	**07 11 43.1**	**-3.5**
	baz=237						
IGRS	**Grimsstaoir**	**1.14**	**34**	P	Pb	07 11 42.9	-4.1
	baz=30						
IMJO	**Mjoaskard**	**1.17**	**230**	P	**Pb**	**07 11 44.0**	**-3.5**
	baz=233						
IRJU	**Rjupnafell**	**1.18**	**203**	P	**Pb**	**07 11 43.4**	**-4.1**
	baz=206						
IGHA	**Grjothals**	**1.22**	**19**	P	**Pn**	**07 11 44.3**	**-4.0**
	baz=16						
IGHA				S	**Sb**	**07 12 00.7**	**-3.5**
	baz=16						
IGRA	**Granastaoir**	**1.23**	**1**	P	**Pn**	**07 11 44.6**	**-3.7**
	baz=359						
IHAU	**Haukadalur**	**1.25**	**235**	P	**Pb**	**07 11 44.9**	**-3.8**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.29**	**205**	P	**Pn**	**07 11 45.5**	**-3.7**
	baz=208						
IDIM	**Dimmadalss**	**1.30**	**13**	P	**Pn**	**07 11 45.7**	**-3.7**
	baz=10						
IALF	**Alftagrof**	**1.39**	**210**	P	**Pn**	**07 11 47.1**	**-3.4**
	baz=213						
IHED	**Heoinshofoi**	**1.40**	**6**	P	**Pn**	**07 11 47.3**	**-3.4**
	baz=3.3						
ISAU	**Saurbar**	**1.40**	**241**	P	**Pn**	**07 11 47.1**	**-3.6**
	baz=243						
IESK	**Eystri-Skogar**	**1.42**	**215**	P	**Pn**	**07 11 47.7**	**-3.3**
	baz=20						
IMID	**Miomork**	**1.43**	**224**	P	**Pn**	**07 11 48.4**	**-2.8**
	baz=227						
IBRE	**Brettingsstaoi**	**1.44**	**356**	P	**Pn**	**07 11 48.0**	**-3.2**
	baz=354						
IGIL	**Gilhagi**	**1.49**	**21**	P	**Pn**	**07 11 48.2**	**-3.7**
	baz=18						
ISIG	**Siglufjorour**	**1.54**	**340**	P	**Pn**	**07 11 49.7**	**-2.8**
	baz=339						
IASM	**Asmuli**	**1.56**	**238**	P	**Pn**	**07 11 50.3**	**-2.6**
	baz=240						
BORG	**Borgarnes**	**1.58**	**273**	Pn	**Pn**	**07 11 50.6**	**-2.6**
	120nm,0.3s,baz=102,slow=7.4,SNR=91						
BORG				Sn	**Sn**	**07 12 13.3**	**-0.3**
	96nm,0.3s,baz=64,slow=20,SNR=6.1						
BORG	**Borgarnes**	**1.58**	**273**	P	**Pn**	**07 11 50.6**	**-2.6**
BORG						07 12 14.3	
BORG	**Borgarnes**	**1.58**	**273**	Pn	**Pn**	**07 11 50.6**	**-2.6**
BORG				Sn	**Sb**	**07 12 14.3**	**-0.2**
IKRO	**Krokur**	**1.63**	**250**	P	**Pn**	**07 11 50.9**	**-2.9**
	baz=252						
ISOL	**Solvholt**	**1.63**	**243**	P	**Pn**	**07 11 51.3**	**-2.6**
	baz=246						
IHEI	**Heioarbar**	**1.64**	**254**	P	**Pn**	**07 11 51.4**	**-2.6**
	baz=256						
IVME	**Vestmannaeyjar**	**1.73**	**224**	P	**Pn**	**07 11 52.9**	**-2.3**
	baz=226						
IHRN	**Hraun**	**1.76**	**325**	P	**Pn**	**07 11 53.5**	**-2.2**
	baz=324						
IBJA	**Bjarnastaoir**	**1.76**	**246**	P	**Pn**	**07 11 53.4**	**-2.3**
	baz=248						
ILEI	**Leirhofn**	**1.78**	**15**	P	**Pn**	**07 11 53.2**	**-2.7**
	baz=13						
SCO	**Scoresbysund**	**6.04**	**346**	*i* P	**Pn**	**07 12 54.8**	**+0.5**
SCO				*i* S	**Sn**	**07 14 07.1**	**+3.7**
SCO				MLR	MLR		
	comp=Z,23μm,12.0s						
SCO	**Scoresbysund**	**6.04**	**346**	Pn	**Pn**	**07 12 54.9**	**+0.6**
SCO				Sn	**Sn**	**07 14 04.3**	**+0.9**
SCO	**Scoresbysund**	**6.04**	**346**	*i* P	**Pn**	**07 12 54.8**	**+0.5**
SCO				*i* S	**Sn**	**07 14 07.1**	**+3.7**
	comp=Z,23μm,12.0s						
SCO	**Scoresbysund**	**6.04**	**346**	*e*	**Pn**	**07 12 52.9**	**-1.4**
	baz=175,slow=6.2						
SCO				*i* P	**Pn**	**07 12 54.9**	**+0.5**
SCO				*i* S	**Sn**	**07 14 07.1**	**+3.7**
SCO				IAML		07 14 14.0	
	comp=Z,6.0nm,0.5s						
SCO				IAMs_20	IAMs_20	07 14 58.2	
	comp=Z,23μm,12.1s						
JMIC	**Jan Mayen**	**7.19**	**25**	LR	LR	07 15 15.2	
	comp=Z,2μm,18.3s,baz=154,slow=32						
LEWI	**Lewis, Hebride**	**8.35**	**137**	*e*P	**Pn**	**07 13 24.3**	**-1.8**
ANGG	**Ammassalik, Gr**	**8.46**	**285**	IAMs_20	IAMs_20	07 17 10.3	
	comp=Z,33μm,7.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LINV	**Loch Inver, As**	**8.86**	**132**	*e*P	**Pn**	**07 13 31.6**	**-1.5**
BIGH	**Upper Bighouse**	**9.02**	**127**	*e*P	**Pn**	**07 13 33.9**	**-1.3**
KAC	**Achnashellach**	**9.36**	**135**	*e*P	**Pn**	**07 13 37.9**	**-2.0**
KPL	**Plockton**	**9.38**	**136**	*e*P	**Pn**	**07 13 38.3**	**-1.9**
KPL				IAMs_20	IAMs_20	07 18 16.2	
	comp=Z,11μm,14.3s						
DBG	**Daneborg**	**9.70**	**356**	*i* P	Pn	07 13 51.2	+6.8
DBG				IAMs_20	IAMs_20	07 16 48.9	
	comp=Z,10μm,15.4s						
MCD	**Coleburn Disti**	**9.94**	**129**	*e*P	**Pn**	**07 13 47.5**	**-0.4**
LAWE	**Loch Awe, Argy**	**10.38**	**139**	*e*P	**Pn**	**07 13 53.6**	**-0.2**
INVG	**Invergeldie, C**	**10.63**	**135**	*e*P	**Pn**	**07 13 57.4**	**+0.1**
INVG				IAMs_20	IAMs_20	07 18 44.9	
	comp=Z,14μm,11.0s						
EAB	**Aberfoyle**	**10.74**	**136**	*e*P	**Pn**	**07 13 57.6**	**-1.3**
SUE	**Sulen**	**10.83**	**99**	*e*P	**Pn**	**07 13 58.8**	**-1.2**
SUMG	**Summit**	**10.88**	**325**	P	**Pn**	**07 14 02.2**	**+1.2**
SUMG	**Summit**	**10.88**	**325**		**Pn**	**07 14 02.2**	**+1.2**
SUMG	**Summit**	**10.88**	**325**	*i* P	Pn	07 14 08.8	+7.8
SUMG	**Summit**	**10.88**	**325**	*i* P	Pn	07 14 08.8	+7.8
SUMG				IAMs_20	IAMs_20	07 18 19.4	
	comp=Z,46μm,9.3s						
PGBU	**Glenifferbraes**	**11.03**	**138**	*e*P	**Pn**	**07 14 01.9**	**-0.9**
PGBU				IAMs_20	IAMs_20	07 18 47.6	
	comp=Z,10μm,12.8s						
CLGH	**Cloghs, Cushen**	**11.22**	**144**	*e*P	**Pn**	**07 14 02.9**	**-2.5**
CLGH				IAMs_20	IAMs_20	07 19 59.2	
	comp=Z,15μm,10.3s						
HYA	**Hoyanger**	**11.38**	**97**	*e*P	**Pn**	**07 14 08.3**	**+0.7**
BER	**Bergen**	**11.42**	**102**	*e*P	**Pn**	**07 14 08.3**	**+0.3**
GAL1	**Galloway**	**11.79**	**141**	*e*P	**Pn**	**07 14 11.8**	**-1.3**
GAL1				IAMs_20	IAMs_20	07 19 32.1	
	comp=Z,15μm,11.0s						
EKA	**Eskdalemuir Ar**	**11.82**	**136**	Pn	**Pn**	**07 14 12.9**	**-0.7**
	baz=327,slow=13,SNR=26						
ESK	**Eskdalemuir**	**11.82**	**136**	*e*P	**Pn**	**07 14 11.9**	**-1.8**
ESK				IAMs_20	IAMs_20	07 19 35.5	
	comp=Z,12μm,11.2s						
ESK	**Eskdalemuir**	**11.82**	**136**	P	**Pn**	**07 14 11.9**	**-1.8**
ESK	**Eskdalemuir**	**11.82**	**136**	Pn	**Pn**	**07 14 11.9**	**-1.8**
DY2G	**Dye2**	**11.92**	**291**	IAMs_20	IAMs_20	07 18 52.1	
	comp=Z,15μm,10.0s						
DAG	**Danmarks Havn**	**12.14**	**359**	*i* P	**Pn**	**07 14 21.0**	**+3.2**
DAG	**Danmarks Havn**	**12.14**	**359**	*i* P	**Pn**	**07 14 21.0**	**+3.2**
DAG	**Danmarks Havn**	**12.14**	**359**	*i* P	**Pn**	**07 14 21.0**	**+3.2**
DAG				IAMs_20	IAMs_20	07 20 09.4	
	comp=Z,4μm,9.1s						
DOMB	**Dombas**	**12.23**	**90**	*e*P	**Pn**	**07 14 18.6**	**-0.6**
BLS5	**Blasjo**	**12.42**	**104**	*e*P	**Pn**	**07 14 19.7**	**-2.1**
SKAR	**Skarslia**	**12.53**	**97**	*e*P	**Pn**	**07 14 21.6**	**-1.6**
NSS	**Namsos**	**12.65**	**77**	*e*P	**Pn**	**07 14 26.9**	**+2.1**
KONS	**Konsvik**	**12.77**	**68**	*e*P	**Pn**	**07 14 28.9**	**+2.4**
LOF	**Lofoten**	**12.86**	**61**	*e*P	**Pn**	**07 14 26.7**	**-0.9**
NRS	**Narsarsuaq**	**13.08**	**267**	P	**Pn**	**07 14 31.2**	**+0.5**
NRS	**Narsarsuaq**	**13.08**	**267**		**Pn**	**07 14 31.2**	**+0.5**
NRS	**Narsarsuaq**	**13.08**	**267**	*i* P	P	07 14 35.9	-5.1
NRS	**Narsarsuaq**	**13.08**	**267**	*i* P	P	07 14 35.9	-5.1
NRS				IAMs_20	IAMs_20	07 21 39.8	
	comp=Z,11μm,7.6s						
NC204	**NORSAR Array S**	**13.29**	**92**		**Pn**	**07 14 31.8**	**-1.9**
NBO00	**NORSAR Array S**	**13.41**	**93**	Pn	**Pn**	**07 14 34.4**	**-0.9**
STEI	**Steigen**	**13.50**	**62**	*e*P	**Pn**	**07 14 35.8**	**-0.6**
FAUS	**Fauske**	**13.54**	**64**	*e*P	**Pn**	**07 14 37.6**	**+0.6**
SFJD	**Kangerlussuaq**	**13.60**	**294**	IAMs_20	IAMs_20	07 19 42.4	
	comp=Z,1μm,9.6s						
NB2	**NORSAR Subarra**	**13.60**	**92**	Pn	**Pn**	**07 14 34.6**	**-3.2**
	comp=Z,2.4nm,0.7s,baz=298,slow=14						
NOA	**NORSAR Array B**	**13.60**	**92**	Pn	**Pn**	**07 14 34.5**	**-3.3**
	comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=6.0						
NOA				LR	LR	07 19 53.5	
	comp=Z,2μm,19.7s,baz=300,slow=38						
ILULI	**Ilulissat**	**13.73**	**304**	I

comp=N,2µm,11.4s
comp=E,3µm,13.1s
comp=Z,3µm,12.6s
BRG Berggiesshubel 21.48 115 *i* P **P** **07 16 13.3 -0.3**
BRG S Sn 07 20 18.0 -1.6
BRG pmax pmax
comp=Z,108nm,1.3s
BRG MLR MLR
comp=N,2µm,11.4s
BRG MLR MLR
comp=E,3µm,13.1s
BRG MLR MLR
comp=Z,3µm,12.6s
BFO Black Forest 21.52 127 P **P** **07 16 10.3 -3.7**
BFO pmax pmax
comp=Z,56nm,1.2s
BFO MLR MLR
comp=Z,1µm,19.0s
BFO Black Forest 21.52 127 P **P** **07 16 10.3 -3.7**
VSU Vasula 21.63 86 *eP* **P** **07 16 14.6 -0.4**
VSU Vasula 21.63 86 *i* P **P** **07 16 13.4 -1.6**
VSU pmax pmax
comp=Z,114nm,1.0s
FRB Frobisher Bay 21.68 291 LR LR 07 23 57.5
comp=Z,1µm,20.3s,baz=65,slow=35
PVCC Panska Ves 22.00 115 AMS AMS 07 29 00.0
comp=Z,3µm,10.7s
SLVR Solovky 22.11 65 *eP* **P** **07 16 17.3 -2.9**
comp=Z,139nm,1.2s
SLVR *i* S **S** **07 20 22.7 -0.7**
PABE Paberze 22.27 95 *eP* **P** **07 16 23.2 +1.1**
PRA Prague 22.31 116 *eS* **S** **07 20 31.4 +3.9**
PRA AMS AMS 07 29 00.0
comp=Z,2µm,11.1s
PRU Pruhonice 22.42 116 *eP* **P** **07 16 24.8 +1.2**
PRU *eS* **S** **07 20 31.9 +2.4**
PRU MLR MLR
comp=Z,2µm,13.8s
PRU Pruhonice 22.42 116 *eP* **P** **07 16 24.8 +1.2**
PRU *eS* **S** **07 20 31.9 +2.4**
PRU AMS AMS 07 27 40.0
comp=Z,2µm,13.8s
KSP Ksiaz 22.43 112 *eP* **P** **07 16 24.5 +0.7**
PBCC Pribram 22.45 117 *eP* **P** **07 16 27.1 +3.1**
CHVC Chvalec 22.54 113 *eP* **P** **07 16 25.7 +0.8**
CHVC *eS* Sn 07 20 37.6 -7.3
CHVC AMS AMS 07 29 20.0
comp=Z,2µm,11.4s
UPC Upice 22.58 113 *eP* **P** **07 16 26.9 +1.5**
UPC *eS* **S** **07 20 35.4 +2.8**
UPC MLR MLR
comp=Z,3µm,11.8s
UPC Upice 22.58 113 *eP* **P** **07 16 26.9 +1.5**
UPC *eS* **S** **07 20 35.4 +2.8**
UPC AMS AMS 07 29 50.0
comp=Z,3µm,11.8s
OSTC Ostas 22.63 113 *eP* **P** **07 16 25.8 -0.1**
OSTC *eS* **S** **07 20 39.1 +5.7**
OSTC AMS AMS 07 29 30.0
comp=Z,2µm,10.4s
KHC Kasperske Hory 22.74 118 *eP* **P** **07 16 26.8 -0.3**
KHC MLR MLR
comp=Z,3µm,12.1s
KHC Kasperske Hory 22.74 118 *eP* **P** **07 16 26.8 -0.3**
KHC *eS* **S** **07 20 40.3 +4.7**
KHC AMS AMS 07 27 00.0
comp=Z,3µm,12.1s
DPC Dobruska-Polom 22.83 113 *eP* **P** **07 16 28.1 +0.1**
DPC *eS* **S** **07 20 39.1 +2.0**
DPC MLR MLR
comp=Z,3µm,11.0s
DPC Dobruska-Polom 22.83 113 *eP* **P** **07 16 28.1 +0.1**
DPC *eS* **S** **07 20 39.1 +2.0**
DPC AMS AMS 07 30 00.0
comp=Z,3µm,11.0s
DAVA Damuels 22.95 126 *eP* **P** **07 16 31.3 +1.8**
comp=Z,79nm,1.5s
SUW Suwalki 22.95 98 *eP* **P** **07 16 29.7 +0.5**
SUW Suwalki 22.95 98 P **P** **07 16 27.5 -1.7**
SUW Suwalki 22.95 98 P **P** **07 16 27.5 -1.7**
SSB Saint Sauveur 23.02 137 P **P** **07 16 29.0 -1.0**
SSB pmax pmax
comp=Z,26nm,1.3s
SSB MLR MLR
comp=Z,4µm,19.0s
SSB Saint Sauveur 23.02 137 P **P** **07 16 29.0 -1.0**
SSB Saint Sauveur 23.02 137 IAMs_20 IAMs_20 07 26 13.3
comp=Z,4µm,19.0s
GEC2 GERESS Array S 23.02 119 P **P** **07 16 29.3 -0.9**
GEC2 IAmb IAmb 07 16 40.2
comp=Z,123nm,1.5s
GERES GERESS Array B 23.02 119 P **P** **07 16 29.6 -0.5**
comp=Z,11nm,1.1s,baz=325,slow=8.1,SNR=19
GERES LR LR 07 26 02.9
comp=Z,1µm,18.4s,baz=330,slow=38
GERES GERESS Array B 23.02 119 P **P** **07 16 27.3 -2.8**
ZFI2 Zemlya Franca- 23.06 22 *eP* **P** **07 16 26.5 -3.7**
comp=Z,28nm,1.2s
ZFI2 *eS* **S** **07 20 38.0 -2.6**
ZFI Zemlya Franca- 23.06 22 *eP* **P** **07 16 31.8 +1.6**
comp=Z,100nm,1.5s
ZFI S **S** **07 20 47.0 +6.4**
RETA Reutte 23.09 125 *eP* **P** **07 16 32.5 +1.7**
comp=Z,18nm,0.9s
IZAR Zarasai 23.09 92 *eP* **P** **07 16 31.4 +0.7**
ISAL Salakas 23.16 92 *eP* **P** **07 16 32.4 +1.1**
KRLC Kraliky 23.23 113 *eP* **P** **07 16 32.5 +0.3**
KRLC *eS* **S** **07 20 47.5 +3.6**
KRLC MLR MLR
comp=Z,3µm,10.5s
KRLC Kraliky 23.23 113 *eP* **P** **07 16 32.5 +0.3**
KRLC *eS* **S** **07 20 47.5 +3.6**
KRLC AMS AMS 07 30 20.0
comp=Z,3µm,10.5s
MOTA Moosalm 23.33 124 *eP* **P** **07 16 33.0 -0.3**
comp=Z,36nm,1.3s
TREC Trest 23.34 115 *eP* **P** **07 16 33.9 +0.6**
TREC *eS* **S** **07 20 49.6 +3.8**
TREC MLR MLR
comp=Z,3µm,8.9s
TREC Trest 23.34 115 *eP* **P** **07 16 33.9 +0.6**
TREC *eS* **S** **07 20 49.6 +3.8**
TREC AMS AMS 07 30 10.0
comp=Z,3µm,8.9s
IIGN Ignalina 23.34 93 *eP* **P** **07 16 34.0 +0.8**
DAVOX Davos/Dischmat 23.39 127 P **P** **07 16 34.3 +0.3**
comp=Z,7.5nm,0.9s,baz=320,slow=16,SNR=5.2
DAVOX LR LR 07 26 36.6
comp=Z,2µm,18.1s,baz=320,slow=39
TMCR Tamitsa 23.39 66 *eP* **P** **07 16 32.5 -1.0**
TMCR *eS* **S** **07 20 48.4 +2.2**
TMCR Tamitsa 23.39 66 *eP* **P** **07 16 32.5 -1.0**
TMCR *eS* **S** **07 20 48.5 +2.3**
TMCR pmax pmax
comp=Z,123nm,1.0s
PGAV Gavieira, Arco 23.40 162 *eP* **P** **07 16 36.0 +2.0**
PGAV *eS* **S** **07 20 51.7 +4.8**
PGAV *eLR* LR 07 23 02.7
comp=Z,3µm,16.0s
SQTA Sankt Quirin 23.47 124 *eP* **P** **07 16 34.5 -0.2**
comp=Z,54nm,1.2s
TUE Stuetta 23.47 128 P **P** **07 16 33.1 -1.7**
FETA Feichten 23.47 125 P **P** **07 16 36.4 +1.7**
comp=Z,45nm,1.4s
WATA Walderalm 23.51 124 *eP* **P** **07 16 36.2 +1.2**
comp=Z,41nm,1.4s
BEL Belsk 23.51 105 *eP* **P** **07 16 35.3 +0.4**
WTTA Wattenberg 23.59 124 *eP* **P** **07 16 36.8 +0.9**
comp=Z,26nm,1.3s
IDID Didziasalis 23.59 92 *eP* **P** **07 16 36.2 +0.6**
FUORN Ofenpass-Fuorn 23.66 126 IAMs_20 IAMs_20 07 27 00.5
comp=Z,2µm,18.0s
PCAB Cabril 23.68 162 *eP* **P** **07 16 37.8 +1.1**
comp=Z,122nm,1.5s
VRAC Vranov 23.76 114 P **P** **07 16 37.4 0.0**
comp=Z,2.7nm,0.3s,baz=330,slow=11,SNR=12
VRAC LR LR 07 26 57.3
comp=Z,2µm,18.2s,baz=330,slow=39
VRAC Vranov 23.76 114 ||P **P** **07 16 36.5 -0.9**
VRAC Vranov 23.76 114 *eP* **P** **07 16 37.1 -0.3**
VRAC *eS* **S** **07 21 01.7 +9.2**
MORC Moravsky Berou 23.77 112 ||P **P** **07 16 37.8 +0.3**
MORC Moravsky Berou 23.77 112 *eP* **P** **07 16 36.9 -0.6**
MORC *eS* **S** **07 21 01.7 +9.1**
MORC Moravsky Berou 23.77 112 P **P** **07 16 36.7 -0.8**

MORC pmax pmax
comp=Z,60nm,1.5s
MORC Moravsky Berou 23.77 112 P **P** **07 16 36.7 -0.8**
PBRG Braganca 23.77 159 *eP* **P** **07 16 37.7 +0.1**
comp=Z,81nm,1.4s
PBRG *eS* **S** **07 20 57.4 +4.6**
BNI Bardonecchia 23.86 134 P **P** **07 16 35.5 -3.1**
BNI Bardonecchia 23.86 134 P **P** **07 16 35.5 -3.1**
NACGM Naroch 23.88 93 *eP* **P** **07 16 37.0 -1.5**
NACGM *ePP* **PnPn** **07 17 12.0 +5.7**
NACGM *eS* **S** **07 20 50.0 -4.2**
NACGM *eLQ* LQ 07 25 23.0
NACGM *eLR* LR 07 26 54.0
NACGM LRM MLR 07 28 29.0
comp=Z,2.6nm,12.0s
KRUC Moravsky 23.88 115 *eP* **P** **07 16 37.3 -1.3**
KRUC *eS* **S** **07 20 59.7 +5.3**
OKC Ostrava-Krasne 23.96 111 AMS AMS 07 30 20.0
comp=Z,2µm,9.8s
POLO Lamas de Olo 24.05 162 *eS* **S** **07 21 01.2 +4.0**
MOA Molln 24.06 119 *eP* **P** **07 16 41.8 +1.6**
comp=Z,31nm,1.6s
PVRL Vila Real 24.15 161 *eP* **P** **07 16 42.5 +1.3**
comp=Z,83nm,1.6s
OJC Ojcow 24.33 109 *eP* **P** **07 16 42.2 -0.5**
OJC Ojcow 24.33 109 P **P** **07 16 41.5 -1.2**
OJC pmax pmax
comp=Z,36nm,1.5s
OJC Ojcow 24.33 109 P **P** **07 16 41.5 -1.2**
ABTA Abfaltersbach 24.34 123 *eP* **P** **07 16 45.8 +2.8**
comp=Z,32nm,1.5s
MVO Moncorvo 24.36 160 *eP* **P** **07 16 43.3 +0.2**
comp=Z,69nm,1.9s
MVO *eS* **S** **07 21 05.6 +3.4**
MVO *eLR* LR 07 23 35.5
comp=Z,2µm,20.0s
KBA Koelnbreinsper 24.36 121 *eP* **P** **07 16 45.9 +2.6**
comp=Z,54nm,1.9s
JAVC Velka Javorina 24.55 113 *eP* **P** **07 16 45.4 +0.6**
JAVC *eS* **S** **07 21 15.0 +10**
CONA Conrad Observa 24.60 117 *eP* **P** **07 16 45.2 -0.1**
comp=Z,31nm,1.3s
MICGM Minsk 24.62 93 *eP* **P** **07 16 48.0 +2.7**
MICGM *eS* **S** **07 21 08.0 +1.8**
MICGM *eLR* LR 07 25 30.0
MNK Minsk 24.62 93 *eP* **P** **07 16 46.0 +0.7**
MNK *eS* **S** **07 21 08.0 +1.8**
CTI Castel Tesino 24.64 125 P **P** **07 16 43.4 -2.2**
CTI pmax pmax
comp=Z,66nm,1.3s
CTI Castel Tesino 24.64 125 P **P** **07 16 43.4 -2.2**
CTI IAmb IAmb 07 16 57.4
comp=Z,66nm,1.3s
ZOU Zoufplan 24.67 123 P **P** **07 16 42.7 -3.4**
PVIS Viseu 24.68 162 *eP* **P** **07 16 49.8 +3.8**
comp=Z,65nm,1.6s
CIMO Cimolais 24.69 124 P **P** **07 16 43.3 -2.7**
CIMO IAMs_20 IAMs_20 07 27 42.9
comp=Z,2µm,18.0s
SMOL Smolenice 24.73 114 *eP* **P** **07 16 47.3 +1.0**
SMOL pmax pmax
comp=Z,405nm,3.5s
SMOL Smolenice 24.73 114 *eP* **P** **07 16 47.3 +1.0**
MODS Modra-Piesok 24.79 114 *eP* **P** **07 16 48.7 +1.8**
MODS pmax pmax
comp=Z,1µm,3.8s
MODS Modra-Piesok 24.79 114 *eP* **P** **07 16 48.6 +1.7**
MODS *eS* **S** **07 21 13.9 +5.0**
STAL STALIGIAL 24.83 123 P **P** **07 16 45.5 -1.8**
MYKA Terra Mystica 24.85 122 *eP* **P** **07 16 50.1 +2.5**
comp=Z,36nm,1.6s
PRED Cave del Predi 24.98 122 P **P** **07 16 46.7 -2.0**
PRED IAmb IAmb 07 16 53.1
comp=Z,48nm,1.3s
ARSA Arzberg 25.03 118 *eP* **P** **07 16 49.4 +0.3**
comp=Z,20nm,1.5s
LANS Liptovska Anna 25.03 111 *eP* **P** **07 16 50.3 +1.2**
LANS Liptovska Anna 25.03 111 *eP* **P** **07 16 50.3 +1.2**
MTE Manteigas 25.04 162 *eP* **P** **07 16 51.4 +2.2**
MTE *eS* **S** **07 21 19.4 +6.3**
MTE *eLR* LR 07 23 44.9
comp=Z,2µm,18.0s
COI Coimbra 25.11 163 IAMs_20 IAMs_20 07 25 44.7
comp=Z,2µm,18.0s
NIE Niedzica 25.16 109 *eP* **P** **07 16 51.0 +0.7**
PCAS Casmilo, Conde 25.25 163 *eS* S 07 21 28.0 +11
VYHS Vyhne 25.30 112 *eP* **P** **07 16 51.5 0.0**
VYHS pmax pmax
comp=Z,889nm,3.9s
VYHS Vyhne 25.30 112 *eP* **P** **07 16 51.5 0.0**
VYHS *eS* **S** **07 21 22.0 +4.8**
SOKA Soboth 25.33 120 *eP* **P** **07 16 51.7 -0.1**
comp=Z,30nm,1.4s
PCBR Castelo Branco 25.60 162 *eP* **P** **07 16 58.4 +4.2**
comp=Z,60nm,1.7s
SRO Srobarova 25.65 114 *eP* **P** **07 16 55.3 +0.7**
SRO Srobarova 25.65 114 *eP* **P** **07 16 55.3 +0.7**
KLMR Klimovskoe 25.65 72 *eP* **P** **07 16 53.3 -1.2**
comp=Z,99nm,1.3s
KLMR *ePcP* **PcP** **07 20 25.3 +0.8**
KLMR *eS* **S** **07 21 24.4 +2.0**
KLMR Klimovskoe 25.65 72 *eP* **P** **07 16 53.3 -1.2**
KLMR *e* 07 20 25.4
KLMR *eS* **S** **07 21 24.5 +2.0**
KLMR pmax pmax
comp=Z,99nm,1.3s
KLMR Klimovskoe 25.65 72 *eP* **P** **07 16 53.4 -1.2**
KLMR AMP 07 16 59.0
comp=Z,99nm,1.3s
KLMR *ePcP* **PcP** **07 20 25.5 +1.0**
KLMR *eS* **S** **07 21 24.6 +2.2**
KLMR *eS* **S** **07 21 24.6 +2.2**
KLMR LQ LQ 07 23 35.8
KLMR LQ LQ 07 23 35.8
KLMR LR LR 07 25 42.4
PSBE So Bento 25.75 164 *eS* S 07 21 38.6 +14
UCM Universidad Co 25.82 154 *eP* **P** **07 16 55.8 -0.6**
UCM *eS* S 07 21 36.6 +11
ZCCA Zocca 25.89 128 IAMs_20 IAMs_20 07 28 18.4
comp=Z,2µm,19.0s
SCHQ Schefferville 25.98 271 P **P** **07 16 58.5 +0.9**
comp=Z,18nm,0.9s,baz=56,slow=10.0,SNR=9.2
SCHQ LR LR 07 25 51.8
comp=Z,1µm,20.2s,baz=60,slow=33
SCHQ Schefferville 25.98 271 P **P** **07 16 56.2 -1.4**
KWP Kalwaria Pacla 25.98 106 *eP* **P** **07 16 59.5 +1.8**
KWP Kalwaria Pacla 25.98 106 P **P** **07 16 54.8 -2.9**
KWP Kalwaria Pacla 25.98 106 P **P** **07 16 54.8 -2.9**
LSH Leshukonskoye 26.00 61 *eP* **P** **07 16 56.6 -1.1**
comp=Z,89nm,0.9s
LSH *eS* **S** **07 21 30.2 +2.2**
PMRV Marv??o 26.01 162 *eP* **P** **07 17 02.6 +4.6**
comp=Z,106nm,1.7s
PMRV *eS* S 07 21 39.6 +11
PMRV *eLR* LR 07 24 04.5
comp=Z,3µm,18.0s
CRVS Cervenica-Dubn 26.04 109 *eP* **P** **07 16 59.5 +1.3**
CRVS pmax pmax
comp=Z,89nm,1.5s
CRVS Cervenica-Dubn 26.04 109 *eP* **P** **07 16 59.5 +1.3**
CRVS *eS* **S** **07 21 35.1 +6.3**
DRLN Deer Lake 26.07 253 IAMs_20 IAMs_20 07 25 02.2
comp=Z,2µm,19.0s
PSZ Piszkesteto 26.19 112 ||P **P** **07 17 00.4 +0.8**
PSZ Piszkesteto 26.19 112 P **P** **07 16 57.1 -2.5**
PSZ Piszkesteto 26.19 112 P **P** **07 16 57.0 -2.5**
PMAFR Mafra 26.25 165 *eS* S 07 21 42.2 +10
PMTG Montargil 26.26 163 *eS* S 07 21 43.6 +11
ES18 SONSECA Array 26.27 156 IAMs_20 IAMs_20 07 27 48.4
comp=Z,3µm,18.0s
ES17 SONSECA Array 26.28 156 IAMs_20 IAMs_20 07 27 08.6
comp=Z,2µm,19.0s
ES16 SONSECA Array 26.29 156 IAMs_20 IAMs_20 07 27 33.8
comp=Z,3µm,18.0s
ES07 SONSECA Array 26.30 156 IAMs_20 IAMs_20 07 27 27.0
comp=Z,3µm,18.0s
ES08 SONSECA Array 26.30 156 IAMs_20 IAMs_20 07 27 17.0
comp=Z,2µm,18.0s
ESBB Sonseca Array 26.31 156 IAMs_20 IAMs_20 07 27 25.3
comp=Z,3µm,18.0s
ES06 SONSECA Array 26.31 156 IAMs_20 IAMs_20 07 27 36.3
comp=Z,3µm,18.0s
ESDC Sonseca Array 26.31 156 P **P** **07 16 36.7 -0.8**
comp=Z,5.5nm,0.8s,baz=349,slow=9.2,SNR=16

ESDC LR LR 07 27 10.2
comp=Z,2µm,18.5s,baz=330,slow=36
ESDC Sonseca Array 26.31 156 P **P** **07 16 57.8 -2.9**
ES02 SONSECA Array 26.31 156 IAMs_20 IAMs_20 07 27 19.3
comp=Z,2µm,19.0s
ES09 SONSECA Array 26.32 156 IAMs_20 IAMs_20 07 27 51.5
comp=Z,3µm,18.0s
ES14 SONSECA Array 26.32 156 IAMs_20 IAMs_20 07 27 35.7
comp=Z,3µm,18.0s
ES10 SONSECA Array 26.33 156 IAMs_20 IAMs_20 07 27 35.0
comp=Z,3µm,18.0s
ES11 SONSECA Array 26.34 156 IAMs_20 IAMs_20 07 27 29.1
comp=Z,3µm,18.0s
KOLS Kolonicke sedl 26.34 108 *eP* **P** **07 17 01.1 +0.2**
KOLS pmax pmax
comp=Z,59nm,1.5s
KOLS Kolonicke sedl 26.34 108 *eP* **P** **07 17 01.1 +0.2**
KOLS *eS* S 07 21 47.8 +14
PAB San Pablo 26.36 156 IAMs_20 IAMs_20 07 27 24.8
comp=Z,2µm,18.0s
LVV L'vov 26.38 104 *eP* **P** **07 17 02.5 +1.2**
LVV *eS* **S** **07 21 33.0 -1.2**
LVV pmax pmax
comp=Z,400nm,1.8s
LVV smax smax
comp=N,1µm,8.0s
LVV smax smax
comp=E,3µm,7.0s
LVV MLR MLR
comp=N,2µm,12.0s
LVV MLR MLR
comp=E,2µm,12.0s
LVV MLR MLR
comp=Z,1µm,12.0s
RES Resolute Bay 26.41 324 P **P** **07 17 02.5 +1.3**
comp=Z,6.6nm,1.1s,baz=140,slow=8.3,SNR=4.4
RES LR LR 07 27 22.2
comp=Z,1µm,18.4s,baz=77,slow=36
RES Resolute Bay 26.41 324 P **P** **07 17 00.2 -1.1**
RES pmax pmax
comp=Z,19nm,1.4s
RES MLR MLR
comp=Z,2µm,20.0s
RES Resolute Bay 26.41 324 P **P** **07 17 00.1 -1.1**
LIS Lisbon 26.50 165 *eP* **P** **07 17 00.6 -1.8**
LIS AMb AMB 07 17 04.9
comp=Z,259nm,1.4s
LIS *eS* **S** **07 21 35.0 -1.1**
LIS Lisbon 26.50 165 *eP* **P** **07 17 00.6 -1.8**
LIS *eS* **S** **07 21 35.0 -1.1**
UZH Uzhgorod 26.59 108 *eP* **P** **07 17 02.0 -1.1**
UZH *i* 07 17 04.4
UZH *i* 07 17 06.3
UZH *e* 07 17 42.5
UZH *i* PPP PPP 07 17 52.2
UZH *eS* **S** **07 21 32.2 -5.2**
UZH *eSS* **SnSn** **07 22 42.7 +3.4**
UZH MLR MLR
comp=N,540nm,15.0s
UZH MLR MLR
comp=E,500nm,15.0s
UZH MLR MLR
comp=Z,160nm,15.0s
OSSC Osservatorio P 26.71 129 P **P** **07 17 00.7 -3.6**
OSSC IAmb IAmb 07 17 11.1
comp=Z,34nm,1.0s
EVO Evora 26.81 163 *eP* P 07 16 54.4 -11
EVO *eS* **S** **07 21 46.6 +5.5**
PNCL Nicolau / Gran 27.17 164 *eP* **P** **07 17 09.4 +1.0**
PNCL *eS* **S** **07 21 52.4 +5.7**
PCVE Castro Verde 27.70 163 *eS* **S** **07 21 59.7 +4.6**
AKASG Malin Array Be 27.91 97 P **P** **07 17 14.7 -0.3**
comp=Z,4.2nm,0.8s,baz=287,slow=26,SNR=5.0
AKASG LR LR 07 28 39.6
comp=Z,883nm,19.4s,baz=320,slow=37
AKASG Malin Array Be 27.91 97 P **P** **07 17 12.9 -2.1**
AKASG pmax pmax
comp=Z,3.0nm,1.0s
AKASG Malin Array Be 27.91 97 P **P** **07 17 12.9 -2.1**
AKBB Malin Array Si 27.91 97 P **P** **07 17 13.2 -1.7**
AKBB pmax pmax
comp=Z,37nm,1.5s
AKBB Malin Array Si 27.91 97 P **P** **07 17 13.2 -1.7**
MAHO Mahon 27.92 142 *eP* **P** **07 17 18.5 +3.4**
MAHO *eS* **S** **07 22 03.0 +4.4**
OBN Obninsk 27.94 84 P **P** **07 17 14.6 -0.5**
comp=Z,6.2nm,0.4s,baz=299,slow=4.4,SNR=7.0
OBN LR LR 07 28 17.6
comp=Z,137nm,18.8s,baz=323,slow=36
OBN Obninsk 27.94 84 *eP* **P** **07 17 15.1 -0.1**
OBN *i* 07 18 01.8
OBN *e* 07 18 22.0
OBN *i* S **S** **07 22 03.8 +5.2**
OBN *eSS* **SnSn** **07 23 17.4 +5.3**
OBN pmax pmax
comp=Z,65nm,1.2s
OBN MLR MLR
comp=Z,1µm,15.0s
OBN Obninsk 27.94 84 P **P** **07 17 14.1 -1.1**
MORF Marmelete 27.95 165 *eP* **P** **07 17 13.6 -1.9**
MORF AMb AMB 07 17 17.2
comp=Z,64nm,1.2s
MORF *eS* **S** **07 21 58.0 -1.1**
MORF Marmelete 27.95 165 *eP* **P** **07 17 13.6 -1.9**
MORF *eS* **S** **07 21 58.0 -1.1**
MORF Marmelete 27.95 165 *eS* S 07 22 10.5 +11
PVAQ Vaqueiros 27.96 163 *eS* **S** **07 22 05.2 +5.9**
PVAQ *eLR* LR 07 25 14.0
comp=Z,2µm,18.0s
PVAQ Vaqueiros 27.96 163 IAMs_20 IAMs_20 07 27 49.1
comp=Z,2µm,18.0s
MOS Moscow 27.98 82 *eP* **P** **07 17 14.2 -1.3**
MOS *e* 07 18 00.7
MOS *eS* **S** **07 22 01.9 +2.7**
MOS *eSS* **SnSn** **07 23 22.3 +9.4**
MOS pmax pmax
comp=Z,36nm,0.8s
MOS MLR MLR
comp=Z,900nm,13.0s
PBDV Barranco-do-Ve 28.09 163 *eS* S 07 22 14.0 +13
PBDV *eLR* LR 07 25 04.6
comp=Z,2µm,16.0s
PFVI Vila Bisbo 28.10 165 *eS* S 07 22 12.8 +11
PFVI *eLR* LR 07 24 58.1
comp=Z,1µm,20.0s
BUR08 Bucovina Ar. S 28.56 106 P **P** **07 17 18.4 -2.5**
BURAR Bucovina Array 28.59 106 ||P **P** **07 17 22.9 +1.7**
BURAR Bucovina Array 28.59 106 P **P** **07 17 20.7 -0.5**
CART Cartagena 28.89 152 *eP* **P** **07 17 26.9 +3.1**
CART *eS* S 07 22 22.8 +8.9
EMAL Malaga-Limoner 29.07 158 *eP* **P** **07 17 26.8 +1.4**
EMAL *eS* S 07 22 29.1 +12
SFS San Fernando 29.09 161 *eS* S 07 22 28.7 +12
GZR Gura Zlata 29.40 111 ||P **P** **07 17 28.8 +0.5**
BIZ Bicaz 29.50 106 ||P **P** **07 17 30.6 +1.4**
HERR Herculane 29.68 112 ||P **P** **07 17 31.4 +0.7**
CEU Ceuta 29.77 160 *eP* **P** **07 17 29.1 -2.4**
ARR Arges 30.16 109 ||P **P** **07 17 36.4 +1.2**
VOIR 30.28 109 ||P **P** **07 17 37.1 +0.9**
PLOR Plostina 30.60 106 ||P **P** **07 17 39.8 +0.9**
MLR Muntele Rosu 30.60 108 ||P **P** **07 17 38.9 -0.1**
MLR Muntele Rosu 30.60 108 P **P** **07 17 36.5 -2.5**
MLR Muntele Rosu 30.60 108 P **P** **07 17 36.5 -2.5**
PVLZ Peæn de 30.64 158 *eP* **P** **07 17 41.3 +2.0**
PVLZ *eS* **S** **07 22 48.4 +7.0**
LPSR Galich'ya Gora 30.69 86 *eP* **P** **07 17 40.2 +0.6**
LPSR pmax pmax
comp=Z,20nm,0.6s
LPSR MLR MLR
comp=Z,1µm,11.0s
MELI Melilla 30.75 156 *eS* **S** **07 22 49.6 +6.5**
KIRV Kirov 31.03 69 *eP* **P** **07 17 42.0 -0.5**
VSR Storozhevoye 31.79 87 *eP* **P** **07 17 48.8 -0.5**
VSR pmax pmax
comp=Z,20nm,1.2s
VSR MLR MLR
comp=Z,720nm,11.0s
PMOZ Porto Moniz, M 31.90 179 *eLR* LR 07 27 26.0
comp=Z,976nm,20.0s
AVE Averroes 32.05 164 *eS* **S** **07 23 06.9 +3.5**
TPGR Topolog 32.13 106 ||P **P** **07 17 51.8 -0.6**
IFR Ifrane 32.14 160 *eS* **S** **07 23 11.4 +6.2**
D63A Stockholm 32.24 261 P **P** **07 17 53.0 -0.3**
baz=38

CORL	Corleone	32.45	131		IAMs_20	IAMs_20	07 26 59.1		
	comp=Z,1µm,18.0s								
PQI	Presque Isle	32.49	261		IAMs_20	IAMs_20	07 29 19.4		
	comp=Z,1µm,18.0s								
D62A	Allapoint, All	32.61	262		P	P	07 17 54.9	-1.6	
	baz=39								
E64A	Bridgewater	32.61	260		P	P	07 17 55.2	-1.4	
	baz=38								
CHGQ	Chibougamau	32.73	271		P	P	07 17 57.2	-0.3	
	baz=42								
E63A	Oxbow	32.86	261		P	P	07 17 58.3	-0.5	
	baz=38								
VRH	Novokhopyorsk	32.90	85	*e*	P	P	07 17 57.8	-1.2	
VRH					pmax	pmax			
	comp=Z,30nm,0.9s								
VRH					MLR	MLR			
	comp=Z,1µm,14.0s								
D61A	St Aubert, Com	33.00	264		P	P	07 17 59.2	-0.7	
	baz=39								
E62A	Clayton Lake	33.17	262		IAMs_20	IAMs_20	07 29 34.5		
	comp=Z,1µm,20.0s								
KEST	Kesra	33.22	138		LR	LR	07 31 22.5		
	comp=Z,962nm,18.8s,baz=328,slow=36								
GGN	Saint George	33.23	258		IAMs_20	IAMs_20	07 30 05.7		
	comp=Z,1µm,18.0s								
G65A	Princeton	33.47	259		P	P	07 18 03.0	-1.0	
	baz=37								
D60A	Saint Jean D'O	33.54	264		P	P	07 18 03.9	-0.7	
	baz=39								
H66A	Whiting	33.70	258		P	P	07 18 05.3	-0.7	
	baz=36								
F63A	Nahmakanta, Br	33.72	261		P	P	07 18 05.5	-0.7	
	baz=37								
E61A	Lac Etchemin	33.73	263		P	P	07 18 05.5	-0.9	
	baz=38								
D59A	Saint-Raymond	33.85	265		P	P	07 18 06.9	-0.5	
	baz=39								
G64A	Maxfield	33.93	260		P	P	07 18 06.9	-1.2	
	baz=37								
PKME	Peaks-Kenny Pk	34.15	261		P	P	07 18 08.4	-1.5	
	baz=37								
H65A	Eastbrook	34.16	259		P	P	07 18 09.1	-0.9	
	baz=36								
E60A	Ste Agathe de	34.19	264		P	P	07 18 09.6	-0.7	
	baz=38,SNR=6.0								
D58A	Chemin du LacG	34.23	266		P	P	07 18 09.2	-1.5	
	baz=39,SNR=5.7								
F61A	St Evariste	34.31	263		P	P	07 18 10.6	-0.7	
	baz=38								
G63A	Kingsbury	34.41	261		P	P	07 18 11.6	-0.6	
	baz=37								
LSQQ	Lebel-sur-Quev	34.49	272		P	P	07 18 12.0	-0.8	
	baz=41								
FCC	Fort Churchill	34.60	297		IAMs_20	IAMs_20	07 31 30.5		
	comp=Z,2µm,18.0s								
H64A	Troy	34.62	260		P	P	07 18 13.2	-0.8	
	baz=36								
G62A	West of Eustis	34.71	262		P	P	07 18 13.4	-1.4	
	baz=37								
G62A	West of Eustis	34.71	262		IAMs_20	IAMs_20	07 30 56.2		
	comp=Z,1µm,19.0s								
F60A	Warwick	34.72	264		P	P	07 18 13.6	-1.3	
	baz=38								
H63A	New Sharon	34.95	261		P	P	07 18 15.4	-1.4	
	baz=37								
E58A	La Victoria	34.97	266		P	P	07 18 15.9	-1.2	
	baz=38								
D56A	ZEC Mazanza, M	35.08	268		P	P	07 18 16.3	-1.7	
	baz=39								
G61A	St-Isidore-de-	35.08	263		P	P	07 18 16.2	-1.9	
	baz=37								
E57A	Chemin Saint G	35.31	267		P	P	07 18 18.1	-1.9	
	baz=38								
MOQ	Mont Orford	35.37	264		P	P	07 18 18.8	-1.8	
I64A	Boothbay	35.38	260		P	P	07 18 19.1	-1.4	
	baz=36								
D55A	Sainte-Anne-du	35.41	268		P	P	07 18 20.3	-0.5	
	baz=39,SNR=6.9								
VLDQ	Val d'Or	35.41	271		P	P	07 18 20.3	-0.5	
VLDQ					IAmb	IAmb	07 18 24.8		
	comp=Z,67nm,1.5s								
H62A	Milan	35.49	262		IAMs_20	IAMs_20	07 31 28.9		
	comp=Z,2µm,18.0s								
G60A	Masonville	35.58	263		P	P	07 18 21.3	-1.0	
	baz=37								
E56A	St. Veronique	35.59	268		P	P	07 18 21.1	-1.3	
	baz=39								
G59A	Clarenceville	35.95	264		P	P	07 18 24.9	-0.6	
	baz=37								
ANN	Anapa	35.98	96	*e*	P	P	07 18 23.3	-2.4	
ANN					pmax	pmax			
	comp=Z,31nm,0.7s								
ANN					MLR	MLR			
	comp=Z,2µm,14.0s								
LBNH	Lisbon	36.09	262		P	P	07 18 26.0	-0.7	
	baz=36								
ARU	Arti	36.13	66	*d i*	P	P	07 18 26.8	-0.1	
ARU							07 19 45.8		
ARU					S	S	07 24 08.9	+2.9	
ARU					SS	SnSn	07 26 30.7	-0.1	
ARU					pmax	pmax			
	comp=Z,53nm,2.1s								
ARU					MLR	MLR			
	comp=Z,1µm,15.0s								
ARU	Arti	36.13	66		P	P	07 18 25.2	-1.6	
ARU					IAMs_20	IAMs_20	07 32 33.5		
	comp=Z,2µm,21.0s								
I62A	Tamworth	36.13	261		P	P	07 18 25.2	-1.9	
	baz=36								
G58A	Ormstown	36.27	265		P	P	07 18 27.9	-0.3	
	baz=37								
FRNY	Flat Rock	36.32	264		P	P	07 18 27.0	-1.7	
FRNY					IAmb	IAmb	07 18 33.9		
	comp=Z,57nm,1.4s								
I61A	Oroboro, Fairl	36.46	262		P	P	07 18 29.5	-0.3	
	baz=36								
NRIK	Noril'sk	36.47	35		P	P	07 18 30.3	+0.7	
	comp=Z,12nm,1.0s,baz=322,slow=6.5,SNR=11								
NRIK					LR	LR	07 35 20.1		
	comp=Z,797nm,18.5s,baz=354,slow=39								
NRIK	Noril'sk	36.47	35	*ce*	P	P	07 18 28.7	-0.9	
NRIK					pmax	pmax			
	comp=Z,17nm,1.1s								
H59A	Cadyville	36.52	264		P	P	07 18 29.0	-1.3	
	baz=37								
SVE	Sverdlovsk	36.65	64	*e*	P	P	07 18 32.6	+1.2	
SVE				*e*	S	S	07 24 18.3	+4.3	
SVE					pmax	pmax			
	comp=Z,25nm,1.2s								
SVE					MLR	MLR			
	comp=Z,2µm,20.0s								
G57A	Newington	36.70	266		P	P	07 18 31.4	-0.5	
	baz=37,SNR=7.3								
C36M	Paulatuk	36.77	325		P	P	07 18 32.0	-0.1	
	baz=44,SNR=5.2								
C36M	Paulatuk	36.77	325		P	P	07 18 31.4	-0.8	
C36M					IAmb	IAmb	07 18 36.7		
	comp=Z,64nm,1.5s								
H58A	Gabriels	36.91	265		P	P	07 18 33.0	-0.7	
	baz=37								
LONY	Lake Ozonia	36.92	265		P	P	07 18 33.3	-0.4	
	baz=37								
LONY	Lake Ozonia	36.92	265		P	P	07 18 32.1	-1.7	
LONY					IAmb	IAmb	07 18 37.9		
	comp=Z,42nm,1.3s								
J61A	Chester	37.08	262		P	P	07 18 34.5	-0.7	
	baz=36								
WES	Weston	37.34	260		IAMs_20	IAMs_20	07 32 20.8		
	comp=Z,963nm,18.0s								
ALGO	Algonquin Park	37.35	270		P	P	07 18 36.7	-0.6	
	baz=38								
H57A	Richville	37.39	266		P	P	07 18 36.7	-1.1	
	baz=37								
PLVO	Plevna	37.65	268		IAMs_20	IAMs_20	07 32 25.3		
	comp=Z,1µm,20.0s								
G54A	Lake Saint Pet	37.80	269		P	P	07 18 39.9	-1.4	
	baz=38								
J59A	Piesco	37.81	264		P	P	07 18 41.0	-0.4	
	baz=36								
J59A	Piesco	37.81	264		IAMs_20	IAMs_20	07 32 15.4		
	comp=Z,915nm,18.0s								
I58A	Old Forge	37.83	265		P	P	07 18 41.3	-0.3	
	baz=36								
QUA2	Belchertown	37.87	261		IAMs_20	IAMs_20	07 33 04.6		
	comp=Z,1µm,18.0s								
L63A	North Scituate	37.89	260		P	P	07 18 41.1	-0.9	
	baz=34								
I57A	Carthage	37.93	265		P	P	07 18 42.1	-0.2	
	baz=36,SNR=5.3								
SOC	Sochi	37.93	95	*e*	P	P	07 18 39.6	-2.7	
SOC				*e*	S	S	07 24 31.9	-1.8	
SOC					pmax	pmax			
	comp=Z,13nm,0.6s								
SOC					MLR	MLR			
	comp=Z,1µm,14.0s								
K61A	Williamstown	37.93	262		P	P	07 18 41.3	-1.1	
	baz=35								
M64A	Tiverton	37.98	259		P	P	07 18 41.7	-1.1	
	baz=34								
GOF	Gofitskoye	38.18	91⇑	*e*	P	P	07 18 45.6	+1.2	
GOF					pmax	pmax			
	comp=Z,50nm,0.7s								
L62A	Suffield	38.20	261		P	P	07 18 43.5	-1.1	
	baz=35								
J58A	Remsen	38.23	265		P	P	07 18 43.2	-1.7	
	baz=36								
J58A	Remsen	38.23	265		P	P	07 18 44.1	-0.8	
J58A					IAMs_20	IAMs_20	07 32 27.5		
	comp=Z,1µm,20.0s								
DELO	Deloro Mine	38.30	268		IAMs_20	IAMs_20	07 32 44.5		
	comp=Z,1µm,19.0s								
L61A	Hillsdale 1, H	38.45	262		P	P	07 18 46.2	-0.4	
	baz=35								
M63A	Gales Ferry	38.45	260		P	P	07 18 45.1	-1.7	
	baz=34								
J57A	Williamstown	38.50	265		P	P	07 18 45.4	-1.7	
	baz=36								
K59A	Cooperstown	38.52	264		P	P	07 18 46.2	-1.2	
	baz=36								
BR131	Keskin Array S	38.55	105		P	P	07 18 45.7	-2.1	
BR131					pmax	pmax			
	comp=Z,9.0nm,1.0s								
BR131	Keskin Array S	38.55	105		P	P	07 18 45.7	-2.1	
BRTR	Keskin Array B	38.55	105		P	P	07 18 48.2	+0.4	
	comp=Z,4.2nm,0.7s,baz=319,slow=6.9,SNR=14								
BRTR	Keskin Array B	38.55	105		P	P	07 18 46.1	-1.6	
H53A	Buctouche	38.67	269		P	P	07 18 46.8	-1.8	
	baz=37								
SADO	Sadowa	38.76	270		IAMs_20	IAMs_20	07 33 09.6		
	comp=Z,967nm,19.0s								
M62A	Hamden	38.78	260		P	P	07 18 48.4	-1.1	
	baz=34								
KSCT	Kent School, K	38.80	261		IAMs_20	IAMs_20	07 33 18.4		
	comp=Z,2µm,18.0s								
K58A	Earlville	38.87	264		P	P	07 18 49.9	-0.4	
	baz=36								
K58A	Earlville	38.87	264		IAMs_20	IAMs_20	07 32 47.5		
	comp=Z,1µm,20.0s								
L60A	Shokan	38.90	262		P	P	07 18 48.9	-1.6	
	baz=35								
KIV	Kislovodsk	38.91	92	*e*	P	P	07 18 52.9	+2.3	
KIV				*e*	S	S	07 24 52.1	+3.5	
KIV					pmax	pmax			
	comp=Z,39nm,1.1s								
KIV					MLR	MLR			
	comp=Z,2µm,16.0s								
KIV	Kislovodsk	38.91	92		P	P	07 18 49.1	-1.6	
KIV					IAMs_20	IAMs_20	07 36 04.0		
	comp=Z,970nm,18.0s								
J56A	Wolcott	38.98	266		P	P	07 18 50.0	-1.1	
	baz=36								
L59A	Walton	39.08	263		P	P	07 18 51.1	-1.0	
	baz=35								
YKA	Yellowknife Ar	39.15	313		P	P	07 18 53.0	+0.7	
	comp=Z,7.0nm,1.0s,baz=37,slow=7.9,SNR=4.2								
YKA					LR	LR	07 33 32.6		
	comp=Z,463nm,21.6s,baz=0.0,slow=34								
YKA	Yellowknife Ar	39.15	313	*ce*	P	P	07 18 56.7	+4.4	
YKA					pmax	pmax			
	comp=Z,6.0nm,1.0s								
KBZ	Khabaz	39.18	92		P	P	07 18 54.1	+1.3	
	comp=Z,11nm,1.0s,baz=236,slow=24,SNR=14								
KBZ					LR	LR	07 35 17.7		
	comp=Z,1µm,20.4s,baz=316,slow=37								
KBZ	Khabaz	39.18	92	*ce*	P	P	07 18 53.6	+0.8	
KBZ					pmax	pmax			
	comp=Z,14nm,1.0s								
WSPT	Westport, CT	39.19	261		IAMs_20	IAMs_20	07 33 28.7		
	comp=Z,1µm,18.0s								
M61A	Granite Spring	39.26	261		P	P	07 18 52.8	-0.8	
	baz=34								
K57A	Scipio Center	39.27	265		P	P	07 18 52.9	-0.7	
	baz=36								
BINY	Binghamton	39.48	264		P	P	07 18 55.0	-0.4	
	baz=35								
BINY	Binghamton	39.48	264		IAMs_20	IAMs_20	07 33 06.5		
	comp=Z,1µm,20.0s								
L58A	Harry Jones Me	39.55	264		P	P	07 18 54.7	-1.3	
	baz=35								
ELL	Elmali	39.57	112		P	P	07 18 53.7	-2.6	
ELL					pmax	pmax			
	comp=Z,105nm,1.3s								
ELL					MLR	MLR			
	comp=Z,4µm,18.0s								
ELL	Elmali	39.57	112		P	P	07 18 53.7	-2.6	
ELL					IAmb	IAmb	07 19 02.1		
	comp=Z,105nm,1.3s								
PAL	Palisades	39.57	261		P	P	07 18 55.0	-1.1	
	baz=34								
M60A	Port Jervis	39.61	262		P	P	07 18 55.8	-0.7	
	baz=34								
K56A	Middlesex	39.64	266		P	P	07 18 55.9	-0.8	
	baz=36								
E46A	Sault Ste Mari	39.71	276		IAMs_20	IAMs_20	07 34 07.9		
	comp=Z,1µm,19.0s								
J54A	Appleton	39.74	268		IAMs_20	IAMs_20	07 33 26.6		
	comp=Z,1µm,20.0s								
MEDO	Medina	39.75	267		IAMs_20	IAMs_20	07 33 17.8		
	comp=Z,1µm,21.0s								
M59A	Waymart	39.78	263		P	P	07 18 57.4	-0.5	
	baz=35								
INK	Inuvik	39.78	328		P	P	07 18 58.2	+0.6	
	comp=Z,11nm,1.1s,baz=31,slow=9.2,SNR=12								
INK					PcP	PcP	07 21 03.6	+0.2	
	comp=Z,11nm,1.2s,baz=14,slow=4.7,SNR=4.5								
INK					LR	LR	07 34 53.3		
	comp=Z,611nm,21.2s,baz=26,slow=35								
INK	Inuvik	39.78	328		P	P	07 18 56.3	-1.2	
INK					pmax	pmax			
	comp=Z,34nm,1.4s								
INK					MLR	MLR			
	comp=Z,1µm,18.0s								
INK	Inuvik	39.78	328		P	P	07 18 56.3	-1.2	
INK					IAMs_20	IAMs_20	07 36 06.8		
	comp=Z,1µm,18.0s								
ODNJ	Ogdensburg	39.81	262		IAMs_20	IAMs_20	07 33 26.1		
	comp=Z,996nm,21.0s								
MMNY	Mt. Morris Dam	39.87	266		P	P	07 18 56.9	-1.7	
MMNY					IAmb	IAmb	07 19 03.9		
	comp=Z,83nm,1.5s								
AKAS	Kas	39.89	112		P	P	07 18 56.6	-2.4	
L57A	Andrews Acres	40.01	265		P	P	07 18 59.5	-0.3	
	baz=35								
BRNJ	Basking Ridge	40.12	261		IAMs_20	IAMs_20	07 34 08.4		
	comp=Z,1µm,18.0s								
L56A	Greenwood	40.20	266		P	P	07 19 00.4	-1.0	
	baz=35								
L56A	Greenwood	40.20	266		P	P	07 18 59.0	-2.4	
L56A					IAmb	IAmb	07 19 06.4		
	comp=Z,60nm,1.2s								
I51A	Listowel	40.34	270		P	P	07 19 01.7	-0.8	
	baz=36								
M58A	Price's Panora	40.36	264		P	P	07 19 01.5	-1.2	
	baz=35								
ZEI	Tsey	40.37	92	*e*	P	P	07 19 05.5	+2.5	
ZEI					pmax	pmax			
	comp=Z,11nm,1.1s								
WVNY	West Valley, N	40.43	267		P	P	07 19 01.6	-1.7	
WVNY					IAmb	IAmb	07 19 08.7		
	comp=Z,88nm,1.3s								
WVNY					IAMs_20	IAMs_20	07 33 38.8		
	comp=Z,1µm,22.0s								
N59A	State Game Lan	40.44	263		P	P	07 19 02.3	-1.1	
	baz=34								
N59A	State Game Lan	40.44	263		IAMs_20	IAMs_20	07 33 46.9		
	comp=Z,1µm,22.0s								
FFC	Flin Flon	40.53	297		IAMs_20	IAMs_20	07 34 52.2		
	comp=Z,1µm,18.0s								
LUPA	Lehigh Univers	40.53	262		IAMs_20	IAMs_20	07 34 14.3		
	comp=Z,1µm,18.0s								
M57A	Sunshine Farm,	40.67	264		P	P	07 19 04.0	-1.2	
	baz=35								
M57A	Sunshine Farm,	40.67	264		IAMs_20	IAMs_20	07 33 54.1		
	comp=Z,1µm,20.0s								
O60A	Telford	40.78	262		P	P	07 19 05.4	-0.8	
	baz=34								
E43A	Lone Tree Farm	40.85	278		IAMs_20	IAMs_20	07 34 49.2		
	comp=Z,964nm,20.0s								
GROC	Groznyy	40.85	90	*e*	P	P	07 19 03.7	-3.0	
GROC				*e*			07 20 39.9		
GROC				*e*	S	S	07 25 20.6	+3.1	
GROC					pmax	pmax			
	comp=Z,63nm,1.2s								
N58A	Sunbury	40.91	264		P	P	07 19 07.1	-0.1	
	baz=34								
N58A	Sunbury	40.91	264		IAMs_20	IAMs_20	07 33 52.3		
	comp=Z,991nm,22.0s								
D41A	Chassel	40.98	280		IAMs_20	IAMs_20	07 34 30.6		
	comp=Z,1µm,18.0s								
M56A	Emporium	41.00	266		P	P	07 19 07.3	-0.7	
	baz=35								
P61A	Hammonton	41.05	261		IAMs_20	IAMs_20	07 34 35.1		
	comp=Z,933nm,18.0s								
GLMI	Grayling	41.06	274		P	P	07 19 08.2	-0.2	
	baz=37								
GLMI	Grayling	41.06	274		IAMs_20	IAMs_20	07 34 14.8		
	comp=Z,1µm,20.0s								
O59A	Robesonia	41.12	263		P	P	07 19 08.1	-0.8	
	baz=34								
PSUB	Penn St. - Bra	41.12	262		IAMs_20	IAMs_20	07 33 53.9		
	comp=Z,876nm,20.0s								
ERPA	Erie	41.26	268		P	P	07 19 09.3	-0.8	
	baz=35								
P60A	Greenville	41.30	262		P	P	07 19 08.8	-1.6	
	baz=34								
P60A	Greenville	41.30	262		IAMs_20	IAMs_20	07 33 58.6		
	comp=Z,914nm,20.0s								
AKH	Akhalkalaki	41.32	94		P	P	07 19 09.5	-1.3	
AKH					pmax	pmax			
	comp=Z,40nm,1.5s								
AKH	Akhalkalaki	41.32	94		P	P	07 19 09.5	-1.3	
N57A	Milroy	41.33	264		P	P	07 19 10.2	-0.5	
	baz=34								
G45A	Suttons Bay	41.34	276		IAMs_20	IAMs_20	07 35 08.0		
	comp=Z,916nm,18.0s								
A21K	Barrow	41.38	341		P	P	07 19 11.6	+0.9	
	baz=25								
A21K	Barrow	41.38	341		P	P	07 19 10.0	-0.7	
PAGS	Pennsylvania G	41.41	263		IAMs_20	IAMs_20	07 34 29.7		
	comp=Z,1µm,20.0s								
MVL	Millersville	41.45	263		IAMs_20	IAMs_20	07 34 26.5		
	comp=Z,1µm,21.0s								
EYMN	Ely	41.52	283		P	P	07 19 12.6	+0.4	
	baz=39								
EYMN	Ely	41.52	283		P	P	07 19 10.7	-1.4	
N56A	West Decatur	41.52	265		P	P	07 19 12.3	+0.1	
	baz=34								
ULM	Lac du Bonnet	41.53	289		LR	LR	07 35 11.8		
	comp=Z,674nm,21.0s,baz=64,slow=34								
ULM	Lac du Bonnet	41.53	289		P	P	07 19 11.4	-0.8	
ULM					pmax	pmax			
	comp=Z,26nm,1.5s								
ULM	Lac du Bonnet	41.53	289		P	P	07 19 11.4	-0.8	
ULM					IAMs_20	IAMs_20	07 34 50.6		
	comp=Z,895nm,20.0s								
O58A	Lewisberry	41.59	263		P	P	07 19 12.7	-0.1	
	baz=34								
M54A	Oil Creek Stat	41.62	267		P	P	07 19 12.7	-0.4	
	baz=35								
M54A	Oil Creek Stat	41.62	267		IAMs_20	IAMs_20	07 34 14.3		
	comp=Z,1µm,22.0s								
ALLY	Alegheny Colle	41.71	268		IAMs_20	IAMs_20	07 32 14.7		
	comp=Z,1µm,18.0s								
MAK	Makhachkala	41.78	89	*e*	P	P	07 19 08.6	-5.7	
MAK				*e*	S	S	07 25 24.1	-7.2	
MAK				*e*	SS	SS	07 28 32.7	-4.0	
MAK					pmax	pmax			
	comp=Z,162nm,1.3s								
MAK					MLR	MLR			
	comp=Z,933nm,15.0s								
O57A	Amberson	41.82	264		P	P	07 19 14.2	-0.5	
	baz=34								
F42A	Maple Grove Fa	41.82	278		IAMs_20	IAMs_20	07 35 29.9		
	comp=Z,892nm,18.0s								
COWI	Conover	41.98	279		IAMs_20	IAMs_20	07 35 35.1		
	comp=Z,1µm,20.0s								
TIXI	Tiksi	42.02	15	*ce*	P	P	07 19 17.3	+1.4	
TIXI	Tiksi	42.02	15		P	P	07 19 15.9	0.0	
TIXI					IAmb	IAmb	07 19 20.8		
	comp=Z,42nm,1.2s								
ABKAR	Akbulak array	42.04	73		P	P	07 19 15.5	-0.9	
ABKAR	Akbulak array	42.04	73		P	P	07 19 15.1	-1.3	
Q60A	Greensboro	42.06	261		P	P	07 19 15.6	-1.1	
	baz=33								
EPYK	Eagle Plains	42.08	328		P	P	07 19 16.7	+0.1	
	baz=34,SNR=6.2								
EPYK	Eagle Plains	42.08	328		P	P	07 19 16.2	-0.4	
EPYK					IAmb	IAmb	07 19 20.3		
	comp=Z,48nm,1.4s								
EPYK					IAMs_20	IAMs_20	07 37 34.6		
	comp=Z,1µm,20.0s								
M53A	WI Miller and	42.11	268		P	P	07 19 16.1	-0.9	
	baz=35								
M53A	WI Miller and	42.11	268		IAMs_20	IAMs_20	07 35 01.2		
	comp=Z,958nm,20.0s								
B35A	Bob, Littlefor	42.12	285		P	P	07 19 16.4	-0.7	
B35A					IAmb	IAmb	07 19 21.4		
	comp=Z,42nm,1.3s								
B35A					IAMs_20	IAMs_20	07 35 48.1		
	comp=Z,1µm,18.0s								
O56A	Blue Knob Stat	42.17	265		P	P	07 19 16.9	-0.7	
	baz=34								
O56A	Blue Knob Stat	42.17	265		IAMs_20	IAMs_20	07 34 50.7		
	comp=Z,756nm,18.0s								
N54A	Moraine State	42.21	267		P	P	07 19 16.6	-1.3	
	baz=35,SNR=6.4								
P58A	Pank, Wackersv	42.28	263		P	P	07 19 18.1	-0.3	
	baz=34								
M52A	Chesterland	42.32	269		IAMs_20	IAMs_20	07 35 16.8		
	comp=Z,1µm,19.0s								
I45A	Fountain	42.39	275		IAMs_20	IAMs_20	07 34 56.8		
	comp=Z,888nm,21.0s								
R61A	Willards	42.41	260		P	P	07 19 19.6	0.0	
	baz=33								
O55A	Ligonier	42.54	266		P	P	07 19 20.5	0.0	
	baz=34								
P57A	Homestead Farm	42.59	264		P	P	07 19 19.9	-1.0	
	baz=34								
P57A	Homestead Farm	42.59	264		IAMs_20	IAMs_20	07 35 31.7		
	comp=Z,982nm,18.0s								
TOLK	Toolik Lake Re	42.69	336		P	P	07 19 22.0	+0.4	
	baz=28,SNR=38								
TOLK	Toolik Lake Re	42.69	336		P	P	07 19 21.6	+0.1	
TOLK					IAMs_20	IAMs_20	07 40 28.7		
	comp=Z,898nm,20.0s								
N53A	Lisbon	42.70	268		IAMs_20	IAMs_20	07 35 38.9		
	comp=Z,846nm,20.0s								
BMAR	Burnt Mountain	42.84	333		P	P	07 19 22.4	-0.4	
M51A	Elyria	42.84	269		P	P	07 19 22.7	-0.3	
	baz=35								
GNI

baz=34
N51A Ashland 43.27 269 P **P** **07 19 24.6 -1.9**
N51A IAmb IAmb 07 19 31.2
comp=Z,80nm,1.2s
N51A IAMs_20 IAMs_20 07 35 46.9
comp=Z,1µm,19.0s
O53A New Philadelph 43.32 267 P **P** **07 19 26.0 -0.9**
baz=34
O53A New Philadelph 43.32 267 IAMs_20 IAMs_20 07 36 06.3
comp=Z,915nm,21.0s
P55A Reedsville 43.34 266 P **P** **07 19 26.4 -0.7**
baz=34
CBN Corbin Frederi 43.38 262 IAMs_20 IAMs_20 07 35 12.7
comp=Z,842nm,21.0s
Q56A Snyder Ridge, 43.46 265 P **P** **07 19 27.8 -0.2**
baz=33
P54A Burton 43.54 266 P **P** **07 19 28.5 -0.3**
baz=34
R58A Rapidan 43.57 263 P **P** **07 19 28.9 0.0**
baz=33
I42A Draeger Farm, 43.65 277 IAMs_20 IAMs_20 07 36 32.3
comp=Z,1µm,18.0s
O52A Adamsville 43.70 268 P **P** **07 19 29.0 -0.9**
baz=34,SNR=6.4
O52A Adamsville 43.70 268 P **P** **07 19 28.3 -1.7**
O52A IAMs_20 IAMs_20 07 36 27.3
comp=Z,850nm,20.0s
FYU Fort Yukon 43.72 333 P **P** **07 19 29.4 -0.3**
S59A Mechanicsville 43.72 262 P **P** **07 19 30.2 +0.1**
baz=32
R57A Stanardsville 43.80 263 P **P** **07 19 30.6 -0.1**
baz=33
R58B Mineral 43.80 262 P **P** **07 19 30.4 -0.3**
baz=33
Q55A Buckhannon 43.88 265 P **P** **07 19 32.2 +0.7**
baz=33
O51A Pataskala 44.00 269 P **P** **07 19 32.3 -0.1**
baz=34,SNR=7.2
F36A Milaca 44.02 283 P **P** **07 19 31.0 -1.4**
F36A IAmb IAmb 07 19 37.1
comp=Z,35nm,1.3s
P53A Whipple 44.03 267 P **P** **07 19 33.7 +1.1**
baz=34,SNR=9.3
P53A Whipple 44.03 267 P **P** **07 19 30.9 -1.7**
P53A IAMs_20 IAMs_20 07 36 32.0
comp=Z,849nm,19.0s
N49A Columbus Grove 44.04 271 P **P** **07 19 30.6 -2.1**
N49A IAMs_20 IAMs_20 07 36 54.5
comp=Z,830nm,19.0s
L46A Eue Claire 44.05 273 IAMs_20 IAMs_20 07 36 29.9
comp=Z,947nm,22.0s
COLD Coldfoot 44.06 336 P **P** **07 19 33.2 +0.7**
baz=27,SNR=6.0
COLD Coldfoot 44.06 336 IAMs_20 IAMs_20 07 40 15.9
comp=Z,718nm,18.0s
R56A Bull Pasture M 44.08 264 P **P** **07 19 33.4 +0.3**
baz=33
ACSO Alum Creek Sta 44.09 269 P **P** **07 19 32.9 -0.2**
baz=34,SNR=5.3
ACSO Alum Creek Sta 44.09 269 P **P** **07 19 31.5 -1.7**
ACSO IAmb IAmb 07 19 37.8
comp=Z,54nm,1.1s
ACSO IAMs_20 IAMs_20 07 36 12.8
comp=Z,916nm,19.0s
S58A Poland Farm, P 44.17 262 P **P** **07 19 34.2 +0.5**
baz=32
Q54A Coxs Mills 44.21 266 P **P** **07 19 35.5 +1.5**
baz=33
Q54A Coxs Mills 44.21 266 P **P** **07 19 32.6 -1.5**
Q54A IAmb IAmb 07 19 38.5
comp=Z,55nm,1.4s
Q54A IAMs_20 IAMs_20 07 35 55.8
comp=Z,983nm,22.0s
SPMN Marine on St. 44.22 282 P **P** **07 19 34.8 +0.7**
baz=37
SPMN Marine on St. 44.22 282 P **P** **07 19 32.2 -1.9**
SPMN IAmb IAmb 07 19 38.9
comp=Z,48nm,1.3s
P52A Corning 44.23 268 P **P** **07 19 35.2 +1.0**
baz=34
P52A Corning 44.23 268 P **P** **07 19 32.7 -1.4**
P52A IAmb IAmb 07 19 38.8
comp=Z,64nm,1.2s
P52A IAMs_20 IAMs_20 07 36 44.2
comp=Z,927nm,20.0s
K43A Burlington 44.36 276 IAMs_20 IAMs_20 07 37 09.1
comp=Z,1µm,18.0s
EGAK Eagle 44.42 329 P **P** **07 19 34.9 -0.6**
EGAK IAmb IAmb 07 19 39.3
comp=Z,47nm,1.5s
EGAK IAMs_20 IAMs_20 07 39 10.4
comp=Z,1µm,20.0s
S57A Dark Hollow, R 44.43 263 P **P** **07 19 37.0 +1.2**
baz=33
S57A Dark Hollow, R 44.43 263 IAMs_20 IAMs_20 07 36 35.5
comp=Z,1µm,18.0s
R55A Marlinton 44.49 265 P **P** **07 19 37.8 +1.4**
baz=33
R55A Marlinton 44.49 265 IAMs_20 IAMs_20 07 36 04.1
comp=Z,1µm,21.0s
T59A Double "B" Far 44.50 261 P **P** **07 19 38.2 +1.9**
baz=32
T59A Double "B" Far 44.50 261 IAMs_20 IAMs_20 07 35 20.3
comp=Z,936nm,22.0s
TAM Tamanrasset 44.57 149 IAMs_20 IAMs_20 07 38 01.9
comp=Z,892nm,19.0s
Q53A Leroy 44.61 267 P **P** **07 19 38.2 +0.9**
baz=33,SNR=8.1
L44A Lake County Fo 44.61 275 IAMs_20 IAMs_20 07 37 07.7
comp=Z,754nm,20.0s
DAWY Dawson 44.64 328 P **P** **07 19 36.8 -0.4**
DAWY IAmb IAmb 07 19 41.7
comp=Z,42nm,1.4s
P51A Williamsport 44.75 268 P **P** **07 19 38.8 +0.5**
baz=34,SNR=6.1
P51A Williamsport 44.75 268 P **P** **07 19 36.9 -1.4**
P51A IAMs_20 IAMs_20 07 36 59.2
comp=Z,898nm,19.0s
S56A Natural Bridge 44.76 264 P **P** **07 19 39.5 +1.0**
baz=33
Q52A Bidwell 44.84 267 P **P** **07 19 39.6 +0.5**
baz=34
HQIL Hanson Quary C 44.90 275 IAMs_20 IAMs_20 07 37 26.2
comp=Z,931nm,18.0s
MDND Maddock 44.94 289 P **P** **07 19 40.8 +1.0**
baz=37
R54A Victor 44.95 266 P **P** **07 19 40.7 +0.7**
baz=33
JFWS Jewell Farm 45.01 278 P **P** **07 19 40.7 +0.3**
baz=36
JFWS Jewell Farm 45.01 278 IAMs_20 IAMs_20 07 37 16.3
comp=Z,1µm,19.0s
S55A Lewisburg 45.08 265 P **P** **07 19 42.1 +1.0**
baz=33
F33A 5 Mile Ranch, 45.19 285 P **P** **07 19 40.4 -1.4**
F33A IAmb IAmb 07 19 46.7
comp=Z,48nm,1.2s
F33A IAMs_20 IAMs_20 07 37 31.2
comp=Z,925nm,18.0s
T57A Hurt 45.20 263 P **P** **07 19 41.9 -0.1**
baz=32
T57A Hurt 45.20 263 IAMs_20 IAMs_20 07 36 58.9
comp=Z,1µm,18.0s
R53A Hurricane 45.23 267 P **P** **07 19 43.0 +0.8**
baz=33
R53A Hurricane 45.23 267 IAMs_20 IAMs_20 07 37 10.9
comp=Z,1µm,19.0s
Q51A Peebles 45.25 268 P **P** **07 19 40.7 -1.7**
Q51A IAMs_20 IAMs_20 07 37 06.4
comp=Z,747nm,18.0s
RDOG Red Dog Mine 45.25 342 P **P** **07 19 43.3 +1.2**
RDOG IAmb IAmb 07 19 47.7
comp=Z,51nm,1.2s
K27K Chicken 45.27 329 P **P** **07 19 43.0 +0.8**
baz=30
K27K Chicken 45.27 329 P **P** **07 19 41.6 -0.6**
K27K IAmb IAmb 07 19 47.7
comp=Z,42nm,1.4s
K27K IAMs_20 IAMs_20 07 40 10.9
comp=Z,795nm,18.0s
M44A Midewin, Midew 45.31 274 IAMs_20 IAMs_20 07 37 46.3
comp=Z,956nm,18.0s
S54A Dingess, Beckl 45.40 266 P **P** **07 19 44.3 +0.7**
baz=33
S54A Dingess, Beckl 45.40 266 P **P** **07 19 42.9 -0.7**
S54A IAMs_20 IAMs_20 07 36 34.4
comp=Z,1µm,21.0s

U58A Oxford 45.41 262 P **P** **07 19 44.0 +0.4**
baz=32
P49A Miami Univ. Ec 45.42 270 P **P** **07 19 43.6 -0.1**
baz=34,SNR=5.3
P49A Miami Univ. Ec 45.42 270 P **P** **07 19 43.2 -0.5**
P49A IAmb IAmb 07 19 47.9
comp=Z,45nm,1.1s
POKR Poker Plat Res 45.43 333 P **P** **07 19 44.4 +0.9**
baz=28
POKR Poker Plat Res 45.43 333 P **P** **07 19 44.8 +1.3**
POKR IAmb IAmb 07 19 48.7
comp=Z,47nm,1.5s
POKR IAMs_20 IAMs_20 07 39 56.0
comp=Z,859nm,21.0s
I37A Lemond, Waseca 45.45 281 P **P** **07 19 43.9 0.0**
I37A IAmb IAmb 07 19 48.4
comp=Z,46nm,1.2s
I37A IAMs_20 IAMs_20 07 37 09.1
comp=Z,974nm,20.0s
T56A Rocky Mt 45.51 264 P **P** **07 19 45.5 +1.1**
baz=32
BLA Blacksburg 45.52 264 IAMs_20 IAMs_20 07 36 35.3
comp=Z,1µm,22.0s
IL31 45.63 332 P **P** **07 19 45.8 +0.8**
IL31 IAmb IAmb 07 19 50.5
comp=Z,55nm,1.4s
ILAR Eielson Array 45.63 332 P **P** **07 19 46.2 +1.2**
comp=Z,16nm,1.1s,baz=26,slow=5.4,SNR=30
ILAR PcP **PcP** **07 21 23.0 +0.1**
comp=Z,7.9nm,1.1s,baz=1.4,slow=3.2,SNR=11
ILAR LR LR 07 41 21.4
comp=Z,664nm,18.8s,baz=32,slow=39
ILAR Eielson Array 45.63 332 P **P** **07 19 45.7 +0.6**
U57A Blanch 45.71 263 P **P** **07 19 46.9 +0.8**
baz=32
MDM Murphy Dome 45.73 333 P **P** **07 19 46.6 +0.7**
COLA College 45.73 333 *i* P **P** **07 19 47.0 +1.2**
COLA pmax pmax
comp=Z,32nm,1.2s
TCOL CIGO, UAF Yank 45.73 333 P **P** **07 19 47.1 +1.3**
baz=27
TCOL CIGO, UAF Yank 45.73 333 P **P** **07 19 47.1 +1.3**
TCOL IAMs_20 IAMs_20 07 39 42.0
comp=Z,801nm,21.0s
SCRK Sand Creek 45.73 330 P **P** **07 19 47.4 +1.3**
baz=29
SFIN Lafayette 45.74 273 P **P** **07 19 45.8 -0.4**
baz=34
T55A Pulaski 45.75 265 P **P** **07 19 44.9 -1.5**
baz=32
I23K Minto, Yukon-K 45.77 334 P **P** **07 19 47.4 +1.3**
baz=27
I23K Minto, Yukon-K 45.77 334 P **P** **07 19 47.2 +1.1**
I23K IAmb IAmb 07 19 51.6
comp=Z,50nm,1.4s
P48A Milroy 45.78 271 P **P** **07 19 47.1 +0.5**
P48A IAMs_20 IAMs_20 07 36 39.6
comp=Z,1µm,22.0s
IMAR Indian Mountai 45.80 337 P **P** **07 19 46.5 +0.1**
S53A Williamson 45.85 266 P **P** **07 19 47.3 +0.1**
baz=33
CCB Clear Creek Bu 45.92 333 IAMs_20 IAMs_20 07 39 59.1
comp=Z,716nm,20.0s
HDA Harding Lake 45.96 332 P **P** **07 19 46.9 -0.8**
baz=28,SNR=6.6
HDA Harding Lake 45.96 332 P **P** **07 19 48.3 +0.6**
HDA IAmb IAmb 07 19 53.0
comp=Z,58nm,1.4s
BCAR Beaver Creek A 46.05 328 P **P** **07 19 48.7 +0.2**
CNNC Cliffs of the 46.11 260 IAMs_20 IAMs_20 07 36 19.0
comp=Z,829nm,21.0s
L40A Anamosa 46.12 278 P **P** **07 19 49.7 +0.5**
L40A IAMs_20 IAMs_20 07 37 49.7
comp=Z,1µm,20.0s
WRH Wood River Hil 46.13 333 P **P** **07 19 49.6 +0.6**
WRH IAmb IAmb 07 19 55.4
comp=Z,35nm,1.4s
WRH IAMs_20 IAMs_20 07 39 42.7
comp=Z,817nm,21.0s
MLY Manley 46.14 335 P **P** **07 19 48.6 -0.5**
baz=26,SNR=12
T54A Tazewell 46.14 265 P **P** **07 19 49.3 -0.2**
baz=32,SNR=6.8
V58A Windy Hill, Pi 46.16 262 IAMs_20 IAMs_20 07 36 20.3
comp=Z,854nm,22.0s
NEA2 Nenana 46.22 333 P **P** **07 19 49.8 +0.1**
baz=26
U56A King 46.23 264 P **P** **07 19 49.9 -0.2**
baz=32
U56A King 46.23 264 P **P** **07 19 50.2 +0.1**
U56A IAmb IAmb 07 19 54.4
comp=Z,34nm,1.1s
DGMT Dagmar 46.28 293 IAMs_20 IAMs_20 07 37 55.2
comp=Z,1µm,20.0s
R50A Paris 46.30 269 P **P** **07 19 51.1 +0.5**
R50A IAmb IAmb 07 19 55.1
comp=Z,49nm,1.4s
R50A IAMs_20 IAMs_20 07 37 59.1
comp=Z,940nm,20.0s
K38A Parkersburg 46.30 279 IAMs_20 IAMs_20 07 38 17.5
comp=Z,1µm,18.0s
V57A Coltrane Farms 46.36 263 P **P** **07 19 51.2 +0.1**
baz=32
E28A Huff 46.40 289 IAMs_20 IAMs_20 07 38 34.5
comp=Z,1µm,18.0s
P46A Rosedale 46.42 272 P **P** **07 19 51.0 -0.6**
L26K Log Cabin Wild 46.43 329 P **P** **07 19 52.1 +0.7**
baz=29
WHY Whitehorse 46.45 323 P **P** **07 19 52.9 +1.2**
WHY IAmb IAmb 07 20 00.6
comp=Z,25nm,1.5s
O44A Mansfield 46.52 274 P **P** **07 19 52.7 +0.4**
S51A Beattyville 46.52 268 P **P** **07 19 52.1 -0.2**
S51A IAMs_20 IAMs_20 07 37 40.9
comp=Z,789nm,19.0s
BRZS Berezniki 46.52 63 *e*P **P** **07 19 51.5 -0.8**
comp=Z,8.2nm,1.0s,baz=63
BRZS *e*PP **PP** **07 21 41.0 -0.2**
baz=63
BRZS *e*S **S** **07 26 41.5 +1.2**
baz=63
BRZS Berezniki 46.52 63 *e*P **P** **07 19 51.5 -0.8**
BRZS *e* 07 21 41.0
BRZS *e*S **S** **07 26 41.5 +1.2**
BRZS pmax pmax
comp=Z,8.0nm,1.0s
HDIL Hopedale 46.54 275 P **P** **07 19 52.2 -0.2**
baz=34
HDIL Hopedale 46.54 275 IAMs_20 IAMs_20 07 38 25.6
comp=Z,884nm,19.0s
MENT Mentasta 46.59 329 P **P** **07 19 53.6 +1.0**
MENT IAmb IAmb 07 19 57.8
comp=Z,29nm,1.4s
T53A Wise 46.62 266 P **P** **07 19 53.5 +0.3**
baz=32
R49A Shelbyville 46.65 269 P **P** **07 19 53.0 -0.3**
R49A IAmb IAmb 07 19 58.0
comp=Z,34nm,1.4s
U54A Nelsons Funny 46.70 265 P **P** **07 19 54.1 +0.2**
baz=32
U54A Nelsons Funny 46.70 265 IAMs_20 IAMs_20 07 37 43.7
comp=Z,910nm,20.0s
V56A Mocksville 46.74 263 P **P** **07 19 53.8 -0.3**
baz=32
PAX Paxson 46.94 330 IAMs_20 IAMs_20 07 41 28.9
comp=Z,927nm,21.0s
MCK McKinley 46.96 333 P **P** **07 19 56.5 +0.9**
baz=26,SNR=9.7
HYT Haines Junctio 46.98 324 P **P** **07 19 56.8 +1.0**
HYT IAmb IAmb 07 20 01.8
comp=Z,41nm,1.5s
HYT IAMs_20 IAMs_20 07 39 59.0
comp=Z,1µm,18.0s
V55A Taylorsville 47.01 264 P **P** **07 19 57.5 +1.3**
baz=32,SNR=6.1
V55A Taylorsville 47.01 264 P **P** **07 19 55.8 -0.4**
DLBC Dease Lake 47.01 318 P **P** **07 19 56.5 +0.4**
comp=Z,4.7nm,1.0s,baz=46,slow=2.9,SNR=3.4
DLBC PP **PP** **07 21 49.4 +3.3**
comp=Z,3.4nm,1.1s,baz=3.7,slow=3.9,SNR=3.6
DLBC Dease Lake 47.01 318 P **P** **07 19 56.9 +0.8**
DLBC IAmb IAmb 07 20 01.2
comp=Z,26nm,1.4s
DLBC IAMs_20 IAMs_20 07 39 58.8
comp=Z,857nm,18.0s
BPAW Bear Paw Mtn. 47.03 334 P **P** **07 19 57.2 +1.1**
BPAW IAmb IAmb 07 20 00.6

comp=Z,35nm,1.2s
ECSD EROS Data Cent 47.03 284 P **P** **07 19 56.8 +0.5**
baz=35,SNR=7.3
ECSD EROS Data Cent 47.03 284 IAMs_20 IAMs_20 07 38 14.9
comp=Z,1µm,21.0s
W57A Gilead 47.08 262 P **P** **07 19 57.2 +0.4**
baz=31
W57A Gilead 47.08 262 IAMs_20 IAMs_20 07 36 58.6
comp=Z,704nm,20.0s
SCIA State Center 47.09 279 P **P** **07 19 56.9 +0.1**
baz=35
SCIA State Center 47.09 279 P **P** **07 19 57.3 +0.5**
SCIA IAMs_20 IAMs_20 07 37 57.5
comp=Z,1µm,22.0s
WCI Wyandotte Cave 47.18 270 P **P** **07 19 57.3 -0.3**
WCI pmax pmax
comp=Z,80nm,1.3s
WCI Wyandotte Cave 47.18 270 P **P** **07 19 57.0 -0.5**
baz=33
WCI Wyandotte Cave 47.18 270 P **P** **07 19 57.3 -0.3**
WCI IAMs_20 IAMs_20 07 38 11.6
comp=Z,1µm,22.0s
DHY Denali Highway 47.24 332 IAMs_20 IAMs_20 07 41 08.9
comp=Z,1µm,20.0s
RND Reindeer 47.24 333 IAMs_20 IAMs_20 07 41 60.0
comp=Z,930nm,18.0s
X58A Rowland 47.31 261 P **P** **07 19 58.9 +0.3**
baz=31
W56A Indian Trail 47.35 263 P **P** **07 19 58.7 -0.2**
baz=31,SNR=5.4
V54A Nebo 47.38 265 P **P** **07 20 00.3 +1.2**
baz=32,SNR=7.0
P43A Skaggs, Pawnee 47.39 274 IAMs_20 IAMs_20 07 38 52.3
comp=Z,722nm,19.0s
TZTN Tazewell 47.42 267 P **P** **07 19 59.9 +0.5**
baz=32
TZTN Tazewell 47.42 267 IAMs_20 IAMs_20 07 38 16.8
comp=Z,799nm,18.0s
KTH Kantishna Hill 47.51 334 IAMs_20 IAMs_20 07 41 31.0
comp=Z,653nm,19.0s
BILL Bilibino 47.52 358 *i* P **P** **07 20 00.0 +0.2**
BILL *e* 07 21 56.0
BILL *e*S S 07 27 03.4 +9.4
BILL *e*SS **SS** **07 30 16.6 -4.4**
BILL pmax pmax
comp=Z,13nm,1.3s
BILL MLR MLR
comp=Z,533nm,17.0s
BILL Bilibino 47.52 358 P **P** **07 20 00.1 +0.3**
BILL IAmb IAmb 07 20 06.8
comp=Z,25nm,1.4s
BILL IAMs_20 IAMs_20 07 41 58.1
comp=Z,701nm,19.0s
OLIL Olney 47.54 272 P **P** **07 19 59.4 -0.9**
T50A Nancy 47.57 268 IAMs_20 IAMs_20 07 38 49.9
comp=Z,797nm,22.0s
SKAG Skagway 47.59 322 IAMs_20 IAMs_20 07 40 07.3
comp=Z,1µm,20.0s
ZAA0 Zalesovo Array 47.66 51 P **P** **07 20 00.1 -0.9**
ZALV Zalesovo Beam 47.66 51 P **P** **07 20 00.9 -0.1**
comp=Z,10.0nm,1.0s,baz=319,slow=6.1,SNR=15
ZALV PcP **PcP** **07 21 30.5 +0.2**
comp=Z,1.2nm,0.6s,baz=321,slow=1.8,SNR=2.5
ZALV LR LR 07 42 10.9
comp=Z,303nm,19.2s,baz=334,slow=39
ZALV Zalesovo Beam 47.66 51 P **P** **07 19 59.9 -1.2**
BARN Barnard Glacie 47.78 327 IAMs_20 IAMs_20 07 41 20.1
comp=Z,1µm,18.0s
CTGM Chitina Glacie 47.78 327 IAMs_20 IAMs_20 07 41 20.3
comp=Z,897nm,19.0s
V53A Saluda 47.85 265 IAMs_20 IAMs_20 07 38 10.0
comp=Z,1µm,21.0s
GLB Gilahina Butte 47.93 328 P **P** **07 20 02.7 -0.5**
GLB IAmb IAmb 07 20 07.9
comp=Z,46nm,1.5s
BALM Baldy 47.96 327 IAMs_20 IAMs_20 07 41 02.9
comp=Z,809nm,19.0s
N25K Chitina, Valde 47.96 329 P **P** **07 20 03.8 +0.3**
baz=28
USIN University of 47.99 271 P **P** **07 20 02.9 -0.9**
V52A Sevierville 48.04 266 IAMs_20 IAMs_20 07 38 16.1
comp=Z,944nm,21.0s
VRDI Verde Repeater 48.04 328 IAMs_20 IAMs_20 07 41 28.1
comp=Z,977nm,20.0s
W54A Cherokee Point 48.07 264 P **P** **07 20 06.0 +1.5**
baz=32
X56A White Oak 48.09 263 P **P** **07 20 05.5 +0.9**
baz=31
PAULI Pauline 48.14 264 IAMs_20 IAMs_20 07 38 23.8
comp=Z,774nm,21.0s
KURK Kurchatov 48.15 58 *ce*P **P** **07 20 04.2 -0.7**
KURK pmax pmax
comp=Z,34nm,1.3s
KURK Kurchatov 48.15 58 P **P** **07 20 03.8 -1.0**
KURK IAmb IAmb 07 20 07.6
comp=Z,22nm,0.9s
Y57A Sumter 48.22 262 P **P** **07 20 06.5 +0.8**
baz=31
Y57A Sumter 48.22 262 IAMs_20 IAMs_20 07 38 56.8
comp=Z,696nm,19.0s
BESE Bessie Mountai 48.23 321 IAMs_20 IAMs_20 07 39 52.0
comp=Z,1µm,18.0s
TNA Tin City 48.25 344 IAMs_20 IAMs_20 07 41 28.6
comp=Z,750nm,20.0s
BCPM Bancas Point 48.26 325 IAMs_20 IAMs_20 07 40 59.0
comp=Z,972nm,19.0s
TKL Tuckaleechee C 48.27 266 P **P** **07 20 06.6 +0.5**
comp=Z,20nm,1.2s,baz=44,slow=11,SNR=5.4
TKL Tuckaleechee C 48.27 266 IAMs_20 IAMs_20 07 38 58.2
comp=Z,880nm,19.0s
TGL Tana Glacier 48.32 327 IAMs_20 IAMs_20 07 40 42.4
comp=Z,742nm,18.0s
ISLE Juniper Island 48.34 327 IAMs_20 IAMs_20 07 40 54.0
comp=Z,863nm,20.0s
KLU Klutina 48.35 330 IAMs_20 IAMs_20 07 41 09.3
comp=Z,658nm,20.0s
JIS Juneau Island 48.36 321 IAMs_20 IAMs_20 07 43 54.6
comp=Z,1µm,18.0s
X55A Gracelyn & Ava 48.36 263 P **P** **07 20 07.8 +1.1**
baz=31
L34A Svendsen Farm, 48.38 282 IAMs_20 IAMs_20 07 39 00.6
comp=Z,683nm,18.0s
V51A Loudon 48.39 267 IAMs_20 IAMs_20 07 39 08.5
comp=Z,842nm,19.0s
U49A Red Boiling Sp 48.41 269 P **P** **07 20 05.6 -1.5**
U49A IAmb IAmb 07 20 11.5
comp=Z,39nm,1.2s
U49A IAMs_20 IAMs_20 07 39 22.9
comp=Z,1µm,19.0s
BG3 Lake Jocassee 48.47 265 IAMs_20 IAMs_20 07 38 28.6
comp=Z,894nm,22.0s
LAO LASA Array 48.53 293 P **P** **07 20 09.3 +1.3**
baz=35
LAO LASA Array 48.53 293 IAMs_20 IAMs_20 07 39 15.7
comp=Z,944nm,22.0s
P40A Paris 48.57 276 P **P** **07 20 07.2 -1.1**
P40A IAmb IAmb 07 20 11.2
comp=Z,34nm,1.4s
T47A Sharon Grove 48.57 270 P **P** **07 20 07.4 -1.0**
T47A IAMs_20 IAMs_20 07 38 47.5
comp=Z,651nm,20.0s
X54A Belton 48.61 264 P **P** **07 20 09.1 +0.4**
baz=31
CPCT Cooper Cave 48.77 267 P **P** **07 20 08.3 -1.5**
CPCT IAMs_20 IAMs_20 07 39 44.4
comp=Z,806nm,18.0s
EGMT Eagleton 48.80 297 P **P** **07 20 10.6 +0.5**
baz=35,SNR=31
EGMT Eagleton 48.80 297 P **P** **07 20 10.4 +0.3**
EGMT IAMs_20 IAMs_20 07 37 52.1
comp=Z,1µm,20.0s
W52A Murphy 48.81 266 IAMs_20 IAMs_20 07 39 23.6
comp=Z,1µm,19.0s
HODGE Hodges 48.83 264 IAMs_20 IAMs_20 07 38 54.1
comp=Z,645nm,18.0s
ANM Nome 48.89 342 IAMs_20 IAMs_20 07 41 16.4
comp=Z,730nm,20.0s
NHSC New Hope 48.91 261 P **P** **07 20 11.8 +0.9**
baz=30
PMR Palmer 48.94 332 IAMs_20 IAMs_20 07 41 59.8
comp=Z,736nm,21.0s
KNK Knik Glacier 48.96 331 IAMs_20 IAMs_20 07 40 01.4
comp=Z,753nm,20.0s
Z57A Bowman 48.97 262 P **P** **07 20 12.3 +0.8**
baz=31
N35A Tabor 48.99 281 IAMs_20 IAMs_20 07 39 09.6
comp=Z,1µm,21.0s

CLTN Cedars of Leba 49.00 269 P P 07 20 10.4 -1.2
CLTN IAmb IAmb 07 20 16.1
comp=Z,36nm,1.4s
CLTN IAMs_20 IAMs_20 07 39 40.6
comp=Z,1µm,19.0s
TTA Tatalina 49.01 336 P P 07 20 11.0 -0.4
TTA pmax pmax
comp=Z,33nm,1.5s
TTA Tatalina 49.01 336 P P 07 20 11.0 -0.4
TTA IAmb IAmb 07 20 16.9
comp=Z,33nm,1.5s
SKT Skwentna 49.06 333 P P 07 20 11.6 -0.2
FVM French Village 49.16 274 P P 07 20 12.0 -0.9
FVM pmax pmax
comp=Z,34nm,1.4s
FVM French Village 49.16 274 P P 07 20 12.0 -0.9
FVM IAmb IAmb 07 20 16.4
comp=Z,34nm,1.4s
Z56A Williston 49.23 262 P P 07 20 14.2 +0.8
baz=31
W50A Signal Mountai 49.32 267 P P 07 20 12.8 -1.3
W50A IAMs_20 IAMs_20 07 39 17.0
comp=Z,874nm,19.0s
CCM Cathedral Cave 49.45 275 P P 07 20 14.4 -0.7
CCM pmax pmax
comp=Z,21nm,1.5s
CCM MLR MLR
comp=Z,600nm,18.0s
CCM Cathedral Cave 49.45 275 P P 07 20 15.5 +0.4
baz=33
CCM Cathedral Cave 49.45 275 P P 07 20 14.4 -0.7
CCM Cathedral Cave 49.45 275 IAMs_20 IAMs_20 07 41 46.9
comp=Z,617nm,18.0s
V48A Smith Brothers 49.51 269 P P 07 20 13.4 -2.1
V48A IAmb IAmb 07 20 19.2
comp=Z,63nm,1.5s
RC01 Rabbit Creek A 49.52 332 P P 07 20 14.4 -0.8
baz=25
SWET Sewanee 49.57 268 IAMs_20 IAMs_20 07 40 01.7
comp=Z,881nm,20.0s
BGNE Belgrade 49.59 283 IAMs_20 IAMs_20 07 39 34.6
comp=Z,869nm,21.0s
WVT Waverly 49.61 270 IAMs_20 IAMs_20 07 39 36.9
comp=Z,1µm,20.0s
X51A Calhoun 49.66 267 IAMs_20 IAMs_20 07 39 58.1
comp=Z,816nm,18.0s
SIT Sitka 49.67 321 IAMs_20 IAMs_20 07 41 47.2
comp=Z,832nm,19.0s
RSSD Black Hills 49.77 290 P P 07 20 16.8 -0.8
RSSD pmax pmax
comp=Z,15nm,1.2s
RSSD Black Hills 49.77 290 P P 07 20 18.4 +0.8
baz=34
RSSD Black Hills 49.77 290 P P 07 20 16.8 -0.8
RSSD Black Hills 49.77 290 IAMs_20 IAMs_20 07 39 46.5
comp=Z,796nm,22.0s
HENM Henderson Moun 49.82 272 IAMs_20 IAMs_20 07 41 57.5
comp=Z,824nm,20.0s
N33A J Bar K, Exete 49.85 282 IAMs_20 IAMs_20 07 39 36.6
comp=Z,656nm,21.0s
Y52A Lilburn 49.92 265 P P 07 20 16.9 -1.8
Y52A IAmb IAmb 07 20 23.2
comp=Z,49nm,1.2s
FPAL Fort Paine 50.01 267 IAMs_20 IAMs_20 07 39 27.3
comp=Z,740nm,20.0s
GOGA Godfrey 50.05 264 P P 07 20 19.7 0.0
baz=31,SNR=6.1
PENMO Penman 50.11 272 IAMs_20 IAMs_20 07 42 07.2
comp=Z,784nm,20.0s
GLAT Glass 50.12 272 IAMs_20 IAMs_20 07 40 11.4
comp=Z,897nm,19.0s
PVMO Portageville 50.17 272 IAMs_20 IAMs_20 07 42 09.8
comp=Z,746nm,20.0s
PBMO Poplar Bluff 50.18 273 P P 07 20 19.7 -0.9
PBMO IAMs_20 IAMs_20 07 44 41.0
comp=Z,585nm,19.0s
T42A Van Buren 50.25 274 IAMs_20 IAMs_20 07 40 12.9
comp=Z,787nm,20.0s
LNXT Lenox 50.35 272 P P 07 20 21.6 -0.2
HALT Halls 50.44 272 P P 07 20 22.1 -0.5
HALT IAMs_20 IAMs_20 07 44 45.0
comp=Z,640nm,19.0s
GEYT Alibeck 50.48 83 P P 07 20 23.4 +0.4
comp=Z,4.2nm,0.7s,baz=319,slow=8.8,SNR=7.7
GEYT PP PP 07 22 18.5 +0.1
comp=Z,3.3nm,0.8s,baz=294,slow=11,SNR=3.7
GEYT LR LR 07 43 53.3
comp=Z,652nm,18.1s,baz=305,slow=39
GEYT Alibeck 50.48 83 P P 07 20 22.0 -1.0
GYA0B ALIBECK ARRAY 50.48 83 IAMs_20 IAMs_20 07 45 13.7
comp=Z,749nm,19.0s
154A Montrose 50.58 264 IAMs_20 IAMs_20 07 40 06.4
comp=Z,574nm,18.0s
GCMT Greycliff 50.62 295 P P 07 20 23.0 -1.0
S39A Bolivar 50.65 276 P P 07 20 23.3 -0.9
S39A IAmb IAmb 07 20 27.2
comp=Z,32nm,1.2s
MGMO Mountain Grove 50.65 275 P P 07 20 23.9 -0.3
MGMO IAMs_20 IAMs_20 07 40 45.5
comp=Z,693nm,18.0s
GNAR Gosnell 50.69 272 P P 07 20 24.0 -0.5
GNAR IAMs_20 IAMs_20 07 44 55.5
comp=Z,1µm,22.0s
X48A Hartselle 50.70 268 P P 07 20 23.5 -1.0
X48A IAmb IAmb 07 20 28.2
comp=Z,31nm,1.1s
X48A IAMs_20 IAMs_20 07 40 10.6
comp=Z,815nm,20.0s
KSU1 Kansas State U 50.86 280 P P 07 20 24.7 -1.0
baz=33,SNR=5.1
KSU1 Kansas State U 50.86 280 P P 07 20 25.8 +0.1
KSU1 IAmb IAmb 07 20 30.0
comp=Z,34nm,1.1s
Z51A Franklin 50.87 266 P P 07 20 25.0 -0.8
Z51A IAmb IAmb 07 20 32.2
comp=Z,42nm,1.4s
Y49A Blount Mountai 50.93 268 IAMs_20 IAMs_20 07 39 41.8
comp=Z,911nm,22.0s
KOWA Kowa 51.01 163 P P 07 20 25.0 -2.1
KOWA IAMs_20 IAMs_20 07 42 50.6
comp=Z,914nm,18.0s
RLMT Red Lodge 51.02 294 P P 07 20 27.9 +0.8
baz=34,SNR=22
RLMT Red Lodge 51.02 294 P P 07 20 26.7 -0.4
W45A Hickory Valley 51.02 271 P P 07 20 25.5 -1.4
W45A IAmb IAmb 07 20 30.2
comp=Z,64nm,1.3s
LCAR Lake Charles 51.09 273 IAMs_20 IAMs_20 07 45 11.1
comp=Z,693nm,20.0s
BTLS Baital 51.11 66 eP P 07 20 27.4 -0.1
comp=Z,5.2nm,1.1s,baz=65
BTLS eS S 07 27 47.0 +2.1
baz=65
BTLS Baital 51.11 66 eP P 07 20 27.4 -0.1
BTLS eS S 07 27 47.0 +2.1
BTLS pmax pmax
comp=Z,5.0nm,1.1s
LPAR Lepanto 51.12 272 IAMs_20 IAMs_20 07 40 57.9
comp=Z,724nm,18.0s
152A Waverly Hall 51.23 265 IAMs_20 IAMs_20 07 40 02.5
comp=Z,1µm,22.0s
YAK Yakutsk 51.26 19 i P P 07 20 29.8 +1.4
YAK pmax pmax
comp=Z,5.0nm,0.7s
KK31 Karatay Array 51.32 70 P P 07 20 27.8 -1.4
KK31 pmax pmax
comp=Z,29nm,1.3s
KK31 Karatay Array 51.32 70 P P 07 20 27.8 -1.4
KK31 IAmb IAmb 07 20 35.2
comp=Z,29nm,1.3s
KKAR Karatay Array 51.32 70 P P 07 20 28.1 -1.1
KKAR Karatay Array 51.32 70 P P 07 20 28.1 -1.1
NEW Newport 51.35 302 P P 07 20 29.6 +0.2
baz=33
MET Memphis--Engin 51.37 272 IAMs_20 IAMs_20 07 40 51.4
comp=Z,733nm,18.0s
MSO Missoula 51.38 299 P P 07 20 29.5 -0.2
baz=33,SNR=6.1
MSO Missoula 51.38 299 P P 07 20 28.3 -1.4
MSO IAmb IAmb 07 20 33.7
comp=Z,33nm,1.4s
YNE Yellowstone No 51.40 295 P P 07 20 29.1 -0.9
BOZ Bozeman (W) 51.54 297 P P 07 20 30.2 -0.7
BOZ pmax pmax
comp=Z,71nm,1.3s
BOZ Bozeman (W) 51.54 297 P P 07 20 28.5 -2.4
baz=33,SNR=41
BOZ Bozeman (W) 51.54 297 P P 07 20 30.1 -0.7
U40A Yellville 51.57 275 P P 07 20 30.5 -0.6
baz=32,SNR=9.5
U40A Yellville 51.57 275 P P 07 20 30.6 -0.5
U40A IAmb IAmb 07 20 35.0
comp=Z,52nm,1.4s
U40A IAMs_20 IAMs_20 07 41 41.0
comp=Z,786nm,19.0s
FCAR Ozark Folk Cen 51.66 274 P P 07 20 29.9 -1.8
OXF Oxford 51.66 271 IAMs_20 IAMs_20 07 40 49.2
comp=Z,837nm,21.0s
YMP Mirror Lake Pl 51.68 295 P P 07 20 31.2 -1.0
TIGA Tifton 51.80 263 IAMs_20 IAMs_20 07 41 25.7
comp=Z,692nm,18.0s
DZA Taraz 51.83 69 eP P 07 20 33.6 +0.5
comp=Z,12nm,0.8s,baz=69
DZA eS S 07 27 57.2 +2.2
baz=69
DZA Taraz 51.83 69 eP P 07 20 33.5 +0.5
DZA eS S 07 27 57.1 +2.2
DZA pmax pmax
comp=Z,12nm,0.8s
LRAL Lakeview Retre 51.89 268 P P 07 20 32.7 -0.8
baz=31
LRAL Lakeview Retre 51.89 268 IAMs_20 IAMs_20 07 43 26.1
comp=Z,694nm,19.0s
YHH Holmes Hill 51.91 295 P P 07 20 32.3 -1.7
IUG luzhnay 51.93 71 eP P 07 20 34.0 +0.2
comp=Z,11nm,1.3s,baz=70
IUG luzhnay 51.93 71 eP P 07 20 34.0 +0.2
IUG pmax pmax
comp=Z,11nm,1.3s
YHL Hebgen Lake 51.99 296 P P 07 20 33.3 -1.2
K22A Casper 51.99 291 P P 07 20 33.6 -0.8
baz=33,SNR=7.5
K22A Casper 51.99 291 IAMs_20 IAMs_20 07 40 41.4
comp=Z,756nm,19.0s
YMR Madison River 52.06 295 P P 07 20 33.6 -1.3
B08A Colville Reser 52.07 304 P P 07 20 33.3 -1.4
YHB Hoe Butte 52.08 296 P P 07 20 34.0 -1.1
QLMT Earthquake Lak 52.10 296 P P 07 20 34.8 -0.4
H17A Grant Village 52.14 295 P P 07 20 33.9 -1.6
baz=33,SNR=9.9
H17A Grant Village 52.14 295 P P 07 20 34.6 -0.9
H17A IAmb IAmb 07 20 42.3
comp=Z,57nm,1.2s
U38A Gravette 52.16 276 IAMs_20 IAMs_20 07 42 00.5
comp=Z,790nm,20.0s
Z47A Carrollton 52.21 269 IAMs_20 IAMs_20 07 40 56.6
comp=Z,991nm,21.0s
WHAR Wooly Hollow 52.24 274 IAMs_20 IAMs_20 07 42 03.5
comp=Z,612nm,20.0s
Y45A Yeager Farm, C 52.27 270 IAMs_20 IAMs_20 07 40 38.3
comp=Z,635nm,20.0s
X43A Marvell 52.29 272 IAMs_20 IAMs_20 07 42 00.8
comp=Z,644nm,18.0s
W41B Gary Mavity, V 52.32 274 P P 07 20 35.7 -0.9
baz=32
W41B Gary Mavity, V 52.32 274 IAMs_20 IAMs_20 07 45 06.7
comp=Z,671nm,19.0s
R32A Long Quarter, 52.32 281 P P 07 20 37.0 +0.3
R32A IAmb IAmb 07 20 40.5
comp=Z,34nm,1.1s
R32A IAMs_20 IAMs_20 07 41 14.9
comp=Z,1µm,21.0s
YPP Pitchstone Pla 52.33 295 P P 07 20 37.0 -0.1
352A Blakely 52.34 265 IAMs_20 IAMs_20 07 41 19.9
comp=Z,953nm,18.0s
CBKS Cedar Bluff 52.42 282 P P 07 20 37.1 -0.4
baz=32
CBKS Cedar Bluff 52.42 282 IAMs_20 IAMs_20 07 41 14.6
comp=Z,612nm,18.0s
FLWY Flagg Ranch 52.45 295 P P 07 20 37.1 -0.7
FLWY IAmb IAmb 07 20 52.3
comp=Z,27nm,1.2s
FLWY IAMs_20 IAMs_20 07 40 49.5
comp=Z,1µm,22.0s
SEY Seymchan 52.46 6 P P 07 20 39.2 +1.8
comp=Z,3.3nm,0.8s,baz=341,slow=14,SNR=4.0
SEY LR LR 07 43 17.4
comp=Z,180nm,19.3s,baz=343,slow=36
SEY Seymchan 52.46 6 i P P 07 20 38.3 +1.0
MCMT McKenzie Canyo 52.65 297 P P 07 20 38.4 -0.9
T35A Sooner Cattle 52.66 278 P P 07 20 38.3 -0.9
T35A IAmb IAmb 07 20 42.3
comp=Z,49nm,1.4s
SGDS Sogindy 52.67 66 eP P 07 20 39.2 -0.1
comp=Z,7.1nm,1.3s,baz=66
SGDS eS S 07 28 08.3 +1.7
baz=66
SGDS Sogindy 52.67 66 eP P 07 20 39.2 -0.1
SGDS eS S 07 28 08.2 +1.7
SGDS pmax pmax
comp=Z,7.0nm,1.3s
PHWY Pilot Hill 52.70 289 IAMs_20 IAMs_20 07 42 30.0
comp=Z,924nm,18.0s
IMW Indian Meadow 52.70 295 P P 07 20 38.1 -1.7
IMW IAmb IAmb 07 20 45.0
comp=Z,26nm,1.2s
UALR University of 52.70 273 IAMs_20 IAMs_20 07 46 34.7
comp=Z,748nm,21.0s
MK31 Makanchi Array 52.76 58 P P 07 20 37.6 -2.2
MK31 pmax pmax
comp=Z,10.0nm,1.1s
MK31 Makanchi Array 52.76 58 P P 07 20 37.6 -2.2
MKAR Makanchi Array 52.76 58 P P 07 20 39.5 -0.3
comp=Z,10nm,1.1s,baz=321,slow=5.2,SNR=24
MKAR LR LR 07 43 14.1
comp=Z,193nm,19.9s,baz=322,slow=36
MKAR Makanchi Array 52.76 58 ceP P 07 20 40.0 +0.2
MKAR pmax pmax
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 52.76 58 P P 07 20 38.2 -1.6
TDK Taldyqorghan 52.83 62 eP P 07 20 39.6 -0.8
baz=62
TDK eS S 07 28 09.8 +1.3
baz=62
TDK Taldyqorghan 52.83 62 eP P 07 20 39.5 -0.8
TDK eS S 07 28 09.8 +1.3
W39A Magazine 52.96 275 P P 07 20 41.2 -0.1
baz=32
KUU Kurty 52.97 65 eP P 07 20 41.1 -0.3
comp=Z,25nm,1.8s,baz=64
KUU eS S 07 28 11.8 +1.3
baz=64
KUU LR LR 07 42 20.4
comp=Z,419nm,13.3s,baz=64
KUU Kurty 52.97 65 eP P 07 20 41.1 -0.3
KUU eS S 07 28 11.8 +1.3
KUU pmax pmax
comp=Z,25nm,1.8s
KUU MLR MLR
comp=Z,419nm,13.0s
TPAW Teton Pass 53.05 295 IAMs_20 IAMs_20 07 41 19.3
comp=Z,954nm,20.0s
BW06 Boulder Array 53.11 293 P P 07 20 41.9 -0.8
baz=32,SNR=37
BW06 Boulder Array 53.11 293 P P 07 20 41.4 -1.3
PD31 Pinedale Array 53.11 293 P P 07 20 40.5 -2.2
PD31 IAmb IAmb 07 20 46.6
comp=Z,53nm,1.2s
PDAR Pinedale Array 53.11 293 P P 07 20 42.6 -0.1
comp=Z,40nm,1.2s,baz=53,slow=5.7,SNR=29
PDAR LR LR 07 43 11.1
comp=Z,650nm,18.6s,baz=34,slow=36
PDAR Pinedale Array 53.11 293 P P 07 20 40.8 -2.0
146A Union 53.11 269 IAMs_20 IAMs_20 07 41 34.6
comp=Z,972nm,20.0s
REDW Red Top Meadow 53.11 294 P P 07 20 41.3 -1.5
REDW IAmb IAmb 07 20 48.4
comp=Z,49nm,1.4s
ZSN Zaisan 53.13 56 eP P 07 20 42.0 -0.5
comp=Z,8.7nm,1.2s,baz=56
ZSN eS S 07 28 14.4 +1.7
baz=56
ZSN Zaisan 53.13 56 eP P 07 20 42.0 -0.5
ZSN eS S 07 28 14.3 +1.7
ZSN pmax pmax
comp=Z,9.0nm,1.2s
656A Willston 53.15 261 IAMs_20 IAMs_20 07 42 07.3
comp=Z,968nm,19.0s
X40A Basin Creek Fa 53.15 274 P P 07 20 42.6 -0.2
baz=31,SNR=5.3
X40A Basin Creek Fa 53.15 274 IAMs_20 IAMs_20 07 41 51.8
comp=Z,637nm,20.0s
TOC1 Torodi Ar. Sit 53.17 156 IAMs_20 IAMs_20 07 42 41.8
comp=Z,719nm,18.0s
TOB5 Torodi Ar. Sit 53.19 156 IAMs_20 IAMs_20 07 42 42.2
comp=Z,526nm,18.0s
TOC2 Torodi Ar. Sit 53.19 156 IAMs_20 IAMs_20 07 42 43.3
comp=Z,597nm,19.0s
TOA0 Torodi Ar. Sit 53.20 156 P P 07 20 40.0 -3.3
TORD Torodi Ar. Bea 53.20 156 P P 07 20 42.0 -1.3
comp=Z,9.5nm,1.1s,baz=340,slow=8.7,SNR=23
TORD Torodi Ar. Bea 53.20 156 P P 07 20 40.7 -2.6
TOB4 Torodi Ar. Sit 53.20 156 IAMs_20 IAMs_20 07 47 33.6
comp=Z,558nm,19.0s
E09A Wood Farm, Sta 53.21 302 IAMs_20 IAMs_20 07 42 12.6
comp=Z,702nm,19.0s
TUL1 Leonard 53.21 277 IAMs_20 IAMs_20 07 41 32.3
comp=Z,1µm,22.0s
N23A Red Feather La 53.24 289 P P 07 20 43.8 +0.1
baz=32,SNR=21
N23A Red Feather La 53.24 289 P P 07 20 42.4 -1.4
N23A IAMs_20 IAMs_20 07 42 58.3
comp=Z,787nm,20.0s
553A Crawfordville 53.24 263 IAMs_20 IAMs_20 07 42 10.9
comp=Z,935nm,19.0s
AAK Ala-Archa 53.30 67 ceP P 07 20 44.6 +0.5
AAK pmax pmax
comp=Z,148nm,2.5s
MIAR Mount Ida 53.42 274 P P 07 20 44.8 0.0
baz=31,SNR=5.6
MIAR Mount Ida 53.42 274 IAMs_20 IAMs_20 07 42 11.9
comp=Z,920nm,19.0s
KSCO Kaye Shedlock' 53.46 285 P P 07 20 44.4 -0.9
baz=32
KSCO Kaye Shedlock' 53.46 285 P P 07 20 42.8 -2.4
KSCO IAmb IAmb 07 20 50.0
comp=Z,45nm,1.1s
LTY Liberty 53.48 304 IAMs_20 IAMs_20 07 43 24.9
comp=Z,975nm,20.0s
OK030 Cody Creek RV 53.62 278 IAMs_20 IAMs_20 07 41 07.1
comp=Z,855nm,21.0s
OK031 S. Brethren Rd 53.62 278 P P 07 20 43.9 -2.3
OK031 IAmb IAmb 07 20 50.4
comp=Z,56nm,1.4s
OK031 IAMs_20 IAMs_20 07 41 06.2
comp=Z,1000nm,22.0s
PLID Pearl Lake 53.62 299 P P 07 20 44.4 -2.1
PLID IAmb IAmb 07 20 49.8
comp=Z,42nm,1.4s
AHID Auburn Hatcher 53.72 294 P P 07 20 45.0 -2.1
AHID IAmb IAmb 07 20 52.5
comp=Z,44nm,1.4s
AHID IAMs_20 IAMs_20 07 42 45.0
comp=Z,1µm,22.0s
AAA Alma-Ata 53.77 65 eS S 07 28 23.3 +1.8
baz=64
MDOK Medeo 53.86 65 eS S 07 28 24.5 +1.6
baz=64
WLAR White Oak Lake 53.96 273 IAMs_20 IAMs_20 07 42 25.0
comp=Z,623nm,20.0s
BTK Batken 54.01 71 P P 07 20 46.4 -2.8
BTK pmax pmax
comp=Z,52nm,1.2s
BTK MLR MLR
comp=Z,1µm,21.0s
BTK Batken 54.01 71 P P 07 20 46.4 -2.8
ISCO Idaho Springs 54.03 288 P P 07 20 49.9 +0.3
baz=32
VBMS Vicksburg 54.10 270 IAMs_20 IAMs_20 07 43 04.8
comp=Z,836nm,18.0s
X37A Clayton 54.15 276 IAMs_20 IAMs_20 07 43 34.3
comp=Z,576nm,20.0s
U32A Winter Ranch, 54.17 280 P P 07 20 48.4 -1.9
BCOK Bluff Creek, N 54.20 279 P P 07 20 48.4 -2.1
KPKS Kokpek 54.23 63 eP P 07 20 50.7 -0.1
comp=Z,13nm,1.4s,baz=63
KPKS Kokpek 54.23 63 eP P 07 20 50.6 -0.1
KPKS pmax pmax
comp=Z,13nm,1.4s
060A Indiantown 54.27 258 IAMs_20 IAMs_20 07 43 19.9
comp=Z,599nm,18.0s
BMO Blue Mountains 54.31 300 P P 07 20 50.3 -1.0
BMO pmax pmax
comp=Z,28nm,1.4s
BMO Blue Mountains 54.31 300 P P 07 20 50.3 -1.0
BMO IAmb IAmb 07 20 54.4
comp=Z,28nm,1.4s
LON Longmire 54.32 305 IAMs_20 IAMs_20 07 43 04.1
comp=Z,952nm,19.0s
HLID Hailey 54.32 297 P P 07 20 51.4 -0.1
baz=32,SNR=6.6
HLID Hailey 54.32 297 P P 07 20 49.9 -1.6
HLID IAmb IAmb 07 20 56.4
comp=Z,24nm,1.5s
HLID IAMs_20 IAMs_20 07 41 30.1
comp=Z,1µm,22.0s
FNO Franklin 54.45 278 P P 07 20 51.1 -1.2
SATY Saty 54.47 64 eP P 07 20 52.9 +0.3
comp=Z,8.2nm,1.3s,baz=63
SATY Saty 54.47 64 eP P 07 20 52.9 +0.3
SATY pmax pmax
comp=Z,8.0nm,1.3s
Q24A Divide 54.54 287 P P 07 20 52.6 -0.7
baz=32
Q24A Divide 54.54 287 IAMs_20 IAMs_20 07 42 45.9
comp=Z,707nm,21.0s
GAR Garm 54.70 73 P P 07 20 52.1 -2.2
SHLS Shalkode 54.79 63 eP P 07 20 56.2 +1.3
baz=62
SHLS Shalkode 54.79 63 eP P 07 20 56.2 +1.3
O20A White River Ci 54.81 290 P P 07 20 55.2 +0.1
baz=32,SNR=16
O20A White River Ci 54.81 290 IAMs_20 IAMs_20 07 42 26.9
comp=Z,708nm,20.0s
F05D White Salmon 54.94 304 P P 07 20 56.0 +0.3
baz=31
PRZ Przheval'sk 54.96 64 IAMs_20 IAMs_20 07 44 14.1
comp=Z,995nm,22.0s
RDMU Red Mountain 54.97 292 P P 07 20 55.0 -1.3
MFID Camas Ranch 54.98 298 IAMs_20 IAMs_20 07 42 44.7
comp=Z,974nm,20.0s
SMCO Snowmass 55.11 289 IAMs_20 IAMs_20 07 42 48.8
comp=Z,604nm,21.0s
Z38A Mt. Pleasant 55.12 275 IAMs_20 IAMs_20 07 43 55.0
comp=Z,919nm,19.0s
HVU Hansel Valley 55.21 295 P P 07 20 58.4 +0.5
HVU pmax pmax
comp=Z,12nm,0.9s
HVU Hansel Valley 55.21 295 P P 07 20 58.4 +0.5
TCUT Toone Canyon 55.24 293 P P 07 20 56.6 -1.7
HRA Herat 55.25 82 P P 07 20 58.4 0.0
TLY Talaya 55.41 40 i P P 07 20 59.5 +0.4
TLY pmax pmax
comp=Z,11nm,0.9s
TLY Talaya 55.41 40 IAMs_20 IAMs_20 07 47 38.5
comp=Z,559nm,18.0s
WMOK Wichita Mounta 55.48 279 P P 07 21 00.6 +0.8
WMOK pmax pmax
comp=Z,38nm,1.4s
WMOK Wichita Mounta 55.48 279 P P 07 20 59.7 -0.1
baz=31
WMOK Wichita Mounta 55.48 279 P P 07 21 00.6 +0.8
WMOK IAmb IAmb 07 21 04.8
comp=Z,38nm,1.4s
JLU Jordanelle 55.69 293 P P 07 21 02.1 +0.6
SDCO Great Sand Dun 55.73 287 P P 07 21 01.9 0.0
baz=31,SNR=7.1
SDCO Great Sand Dun 55.73 287 P P 07 21 02.5 +0.6
SDCO IAMs_20 IAMs_20 07 43 34.1
comp=Z,756nm,20.0s
MA2 Magadan 55.73 7 i P P 07 21 01.7 +0.4
MA2 pmax pmax
comp=Z,35nm,1.3s
T25A Trinidad 55.79 285 P P 07 21 03.0 +0.7
baz=31,SNR=6.2
Z35A Perchaven, San 56.03 277 P P 07 21 03.8 0.0
Z35A IAMs_20 IAMs_20 07 44 31.1
comp=Z,726nm,20.0s
BGU Big Grassy Mou 56.04 295 P P 07 21 04.5 +0.6
MPU Maple Canyon 56.27 293 P P 07 21 06.4 +0.8
S22A 4UR Ranch, Cre 56.27 288 P P 07 21 06.6 +0.8
baz=31,SNR=9.2
S22A 4UR Ranch, Cre 56.27 288 IAMs_20 IAMs_20 07 44 38.6
comp=Z,827nm,18.0s
NATX Nacogdoches 56.27 274 IAMs_20 IAMs_20 07 43 56.4
comp=Z,541nm,20.0s
P17A Butcher Ranch, 56.38 292 P P 07 21 06.9 +0.5
PV22 Blue Mesa, Par 56.39 290 P P 07 21 06.9 +0.3

PV22 IAmb IAmb 07 21 10.8
comp=Z,27nm,1.4s
PV07 Paradox Valley 56.42 290 P **P** **07 21 06.3 -0.4**
PV15 Paradox Valley 56.43 289 P **P** **07 21 07.0 +0.1**
PV15 IAmb IAmb 07 21 11.3
comp=Z,28nm,1.3s
ZAK Zakamensk 56.48 41 *e*P **P** **07 21 07.4 +0.6**
ZAK pmax pmax
comp=Z,16nm,1.3s
NLU North Lily Min 56.49 293 P **P** **07 21 06.9 -0.3**
KSH Kashi 56.55 68 P **P** **07 21 09.9 +2.4**
KSH pP sP 07 21 14.1 +1.6
KSH S **S** **07 28 59.0 +0.2**
KSH sS sS 07 29 05.4 +0.5
KSH pmax pmax
comp=Z,32nm,1.0s
KSH pmax pmax
comp=Z,460nm,4.8s
KSH LR LR
comp=Z,1μm,12.2s
KSH LR LR
comp=Z,2μm,11.1s
KSH LR LR
comp=Z,930nm,13.1s
PV23 Carpenter Ridg 56.55 290 P **P** **07 21 08.0 +0.2**
PV23 IAmb IAmb 07 21 12.0
comp=Z,28nm,1.1s
PV04 Paradox Valley 56.56 290 P **P** **07 21 08.2 +0.5**
PV04 IAmb IAmb 07 21 11.5
comp=Z,31nm,1.2s
DUG Dugway, Tooele 56.58 294 P **P** **07 21 08.5 +0.7**
DUG pmax pmax
comp=Z,47nm,1.4s
DUG Dugway, Tooele 56.58 294 P **P** **07 21 07.8 0.0**
baz=31,SNR=13
DUG Dugway, Tooele 56.58 294 P **P** **07 21 08.5 +0.7**
DUG IAmb IAmb 07 21 13.0
comp=Z,47nm,1.4s
DUG IAMs_20 IAMs_20 07 43 33.8
comp=Z,858nm,20.0s
PV12 Saucer Basin, 56.59 290 P **P** **07 21 08.2 +0.3**
PV12 IAmb IAmb 07 21 12.4
comp=Z,47nm,1.3s
SRU San Rafael Swe 56.60 291 P **P** **07 21 08.5 +0.5**
SRU pmax pmax
comp=Z,35nm,1.3s
SRU San Rafael Swe 56.60 291 P **P** **07 21 08.5 +0.5**
PV14 Lion Creek, Pa 56.63 290 P **P** **07 21 08.4 +0.1**
PV14 IAmb IAmb 07 21 16.0
comp=Z,32nm,1.2s
PV11 David Mesa, Pa 56.63 290 P **P** **07 21 08.6 +0.3**
PV16 Nyswonger Mesa 56.64 290 IAMs_20 IAMs_20 07 48 15.3
comp=Z,573nm,18.0s
PV18 Skein Mesa, Pa 56.69 290 IAMs_20 IAMs_20 07 44 52.7
comp=Z,814nm,19.0s
Q16A Castle Valley 57.02 292 P **P** **07 21 09.7 -1.3**
ELK Elko 57.05 296 P **P** **07 21 09.3 -1.9**
ELK pmax pmax
comp=Z,32nm,1.5s
ELK MLR MLR
comp=Z,900nm,20.0s
ELK Elko 57.05 296 P **P** **07 21 09.2 -1.9**
ELK IAmb IAmb 07 21 16.6
comp=Z,32nm,1.4s
ELK IAMs_20 IAMs_20 07 46 28.3
comp=Z,878nm,20.0s
J05D Fort Rock, OR 57.10 302 P **P** **07 21 11.2 -0.2**
baz=30,SNR=6.9
WMQ Urumqi 57.27 56 *e*P **P** **07 21 13.0 +0.5**
WMQ pP sP 07 21 18.3 +0.7
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ pmax pmax
comp=Z,360nm,5.1s
WHTX Lake Whitney, 57.27 276 P **P** **07 21 12.5 -0.1**
baz=30,SNR=7.4
WHTX Lake Whitney, 57.27 276 IAMs_20 IAMs_20 07 44 00.9
comp=Z,919nm,20.0s
MVCO Mesa Verde 57.41 289 P **P** **07 21 13.9 +0.1**
baz=31,SNR=8.7
ABTX Abilene, Hawle 57.66 278 P **P** **07 21 15.0 -0.4**
baz=30,SNR=13
MSU Marysvale 57.77 292 P **P** **07 21 15.2 -1.1**
MSU Marysvale 57.77 292 P **P** **07 21 15.2 -1.1**
SDDR Presa de Saban 57.79 244 IAMs_20 IAMs_20 07 42 02.7
comp=Z,686nm,21.0s
MVU Marysvale 57.79 292 P **P** **07 21 14.9 -1.6**
MSTX Muleshoe 57.82 282 P **P** **07 21 16.8 +0.2**
baz=30
MSTX Muleshoe 57.82 282 IAMs_20 IAMs_20 07 44 29.6
comp=Z,830nm,20.0s
KBL Kabul 57.98 76 P **P** **07 21 17.0 -0.8**
KBL pmax pmax
comp=Z,14nm,1.2s
KBL Kabul 57.98 76 P **P** **07 21 17.0 -0.8**
J01E Myrtle Point 58.18 304 P **P** **07 21 18.7 -0.1**
baz=29
MTPU Mount Pierson 58.18 292 P **P** **07 21 17.4 -1.9**
435B Jarrell 58.37 276 P **P** **07 21 18.8 -1.5**
435B IAmb IAmb 07 21 24.1
comp=Z,16nm,1.1s
PSUT Pine Spring 58.42 294 P **P** **07 21 19.1 -1.8**
L04D Klamath Falls 58.42 302 P **P** **07 21 21.5 +0.8**
baz=29
GTBY Guantanamo Bay 58.44 249 IAMs_20 IAMs_20 07 41 12.1
comp=Z,812nm,21.0s
K02D Willamette Mer 58.49 304 P **P** **07 21 20.8 -0.4**
baz=29
ANMO Albuquerque 58.52 286*ce*P **P** **07 21 22.3 +0.7**
ANMO pmax pmax
comp=Z,18nm,1.7s
ANMO Albuquerque 58.52 286 P **P** **07 21 22.9 +1.3**
baz=30
M04C Macdoel 58.63 302 P **P** **07 21 23.1 +0.9**
baz=29
DBIC Dimbokro 58.64 165 P **P** **07 21 21.5 -0.8**
comp=Z,9.6nm,1.0s,baz=323,slow=8.7,SNR=6.8
DBIC LR LR 07 47 08.5
comp=Z,635nm,18.9s,baz=352,slow=37
TIC Toumodi 58.64 165 *e*P **P** **07 21 21.0 -1.3**
PKCU Pink Cliffs 58.75 292 P **P** **07 21 22.1 -1.2**
SZCU Shurtz Canyon 58.92 293 P **P** **07 21 24.0 -0.4**
L02E Cave Junction 58.94 303 P **P** **07 21 25.2 +1.1**
baz=29
KIC Kosan Boka 58.95 165 *e*P **P** **07 21 23.2 -1.3**
comp=Z,90nm,1.6s
LIC Lamto 59.06 165 *e*P **P** **07 21 23.8 -1.4**
comp=Z,48nm,1.4s
CCUT Cedar City 59.07 293 P **P** **07 21 23.6 -1.8**
R11A Troy Canyon, C 59.25 295 P **P** **07 21 26.6 0.0**
baz=30,SNR=34
R11A Troy Canyon, C 59.25 295 P **P** **07 21 25.6 -1.0**
R11A IAmb IAmb 07 21 31.7
comp=Z,43nm,1.4s
R11A IAMs_20 IAMs_20 07 45 39.6
comp=Z,871nm,20.0s
BNM Barren Site 59.28 285 P **P** **07 21 25.4 -1.4**
KNB Kanab 59.32 292 P **P** **07 21 25.6 -1.5**
KNB pmax pmax
comp=Z,51nm,1.5s
KNB Kanab 59.32 292 P **P** **07 21 25.6 -1.5**
M02C Callahan 59.34 302 P **P** **07 21 27.3 +0.3**
baz=29
Y22D IRIS PASSCAL I 59.47 286 IAMs_20 IAMs_20 07 45 44.1
comp=Z,604nm,19.0s
PAHR Pah Rah Range 59.53 299 P **P** **07 21 27.0 -1.4**
PAHR IAmb IAmb 07 21 33.5
comp=Z,24nm,1.2s
JCT Junction City 59.58 277 P **P** **07 21 26.5 -2.3**
JCT pmax pmax
comp=Z,71nm,1.3s
JCT Junction City 59.58 277 P **P** **07 21 28.7 -0.1**
baz=30,SNR=27
JCT Junction City 59.58 277 P **P** **07 21 26.5 -2.3**
JCT IAMs_20 IAMs_20 07 44 59.0
comp=Z,723nm,21.0s
U15A North Rim 59.62 291 IAMs_20 IAMs_20 07 45 59.2
comp=Z,697nm,19.0s
N02D Trinity Center 59.65 302 P **P** **07 21 29.8 +0.6**
baz=29
SONM Songino Array 59.66 40 P **P** **07 21 29.6 +0.4**
comp=Z,4.4nm,1.0s,baz=328,slow=6.4,SNR=12
SONM LR LR 07 50 30.6
comp=Z,438nm,19.2s,baz=346,slow=39
SONM Songino Array 59.66 40 P **P** **07 21 28.0 -1.2**
SONM pmax pmax
comp=Z,6.0nm,1.1s
SONM Songino Array 59.66 40 P **P** **07 21 28.0 -1.2**
W18A Petrified Fore 59.72 288 IAMs_20 IAMs_20 07 45 37.9
comp=Z,675nm,19.0s
ULN Ulaanbaatar 59.81 40 P **P** **07 21 28.6 -1.7**
ULN pmax pmax
comp=Z,24nm,1.4s
ULN MLR MLR
comp=Z,700nm,20.0s
ULN Ulaanbaatar 59.81 40 P **P** **07 21 28.6 -1.7**
ULN IAmb IAmb 07 21 34.0
comp=Z,24nm,1.4s
ULN IAMs_20 IAMs_20 07 49 15.8
comp=Z,704nm,20.0s
PRN Pahroc Range 59.86 294 P **P** **07 21 28.9 -1.9**
PRN IAmb IAmb 07 21 35.8
comp=Z,25nm,1.4s
PRN IAMs_20 IAMs_20 07 46 12.8
comp=Z,739nm,21.0s
O03E Paynes Creek 59.92 301 P **P** **07 21 31.3 +0.2**
baz=29
VCNR Virginia City 59.99 299 P **P** **07 21 29.8 -1.9**
VCNR IAmb IAmb 07 21 36.5
comp=Z,17nm,1.2s
WUAZ Wupatki 60.04 290 P **P** **07 21 32.8 +0.8**
baz=30,SNR=28
WUAZ Wupatki 60.04 290 P **P** **07 21 30.3 -1.8**
WUAZ IAMs_20 IAMs_20 07 47 04.4
comp=Z,589nm,20.0s
PNTR Pine Nut 60.15 299 P **P** **07 21 30.6 -2.2**
NVAR Mina Array Bea 60.23 297 P **P** **07 21 33.4 0.0**
comp=Z,3.9nm,1.0s,baz=50,slow=4.6,SNR=11
NVAR LR LR 07 46 42.5
comp=Z,833nm,21.4s,baz=24,slow=35
NVAR Mina Array Bea 60.23 297 P **P** **07 21 32.3 -1.0**
NIL Nilore 60.50 73 P **P** **07 21 32.8 -2.3**
NIL pmax pmax
comp=Z,30nm,1.1s
NIL Nilore 60.50 73 P **P** **07 21 32.8 -2.3**
NIL IAmb IAmb 07 21 40.0
comp=Z,30nm,1.1s
WAKR Walker 60.60 298 P **P** **07 21 34.6 -1.2**
WAKR IAmb IAmb 07 21 40.3
comp=Z,28nm,1.4s
WAKR IAMs_20 IAMs_20 07 45 55.3
comp=Z,659nm,20.0s
TPNV Topopah Spring 60.73 295 P **P** **07 21 34.8 -1.9**
TPNV pmax pmax
comp=Z,23nm,1.4s
TPNV MLR MLR
comp=Z,1μm,18.0s
TPNV Topopah Spring 60.73 295 P **P** **07 21 37.2 +0.4**
baz=29,SNR=5.5
TPNV Topopah Spring 60.73 295 P **P** **07 21 34.8 -1.9**
TPNV IAmb IAmb 07 21 40.8
comp=Z,23nm,1.4s
AFDM Forest Hills D 60.79 300 P **P** **07 21 35.7 -1.2**
MNTX Cornudas Mount 60.88 283 P **P** **07 21 37.9 +0.3**
baz=29,SNR=8.8
MNTX Cornudas Mount 60.88 283 IAMs_20 IAMs_20 07 45 28.6
comp=Z,648nm,22.0s
GRAC Grapevine Rang 61.12 296 P **P** **07 21 39.6 +0.4**
baz=29
121A Cookes Peak, D 61.16 285 P **P** **07 21 40.4 +0.7**
baz=29
121A Cookes Peak, D 61.16 285 P **P** **07 21 40.1 +0.4**
121A IAmb IAmb 07 21 44.2
comp=Z,19nm,1.1s
121A IAMs_20 IAMs_20 07 52 10.0
comp=Z,464nm,18.0s
OMMB Old Mammoth Mi 61.21 297 P **P** **07 21 40.7 +0.5**
OMMB IAmb IAmb 07 21 45.6
comp=Z,20nm,1.3s
MDPB Devils Postpil 61.23 297 P **P** **07 21 40.9 +0.7**
MDPB IAmb IAmb 07 21 45.5
comp=Z,20nm,1.2s
833A Chaparral WMA, 61.28 276 P **P** **07 21 41.0 +0.6**
baz=29
833A Chaparral WMA, 61.28 276 P **P** **07 21 40.1 -0.2**
EPT El Paso 61.29 284 IAMs_20 IAMs_20 07 47 39.4
comp=Z,747nm,20.0s
CMB Columbia Colle 61.37 299 P **P** **07 21 41.1 +0.2**
CMB pmax pmax
comp=Z,16nm,1.5s
CMB Columbia Colle 61.37 299 P **P** **07 21 41.1 +0.2**
FURC Furnace Creek, 61.39 295 P **P** **07 21 41.5 +0.6**
baz=29
HIA Hailar 61.63 30 *i* P **P** **07 21 42.9 +0.4**
HIA pmax pmax
comp=Z,7.0nm,1.1s
SHOC Shoshone, Teco 61.66 294 P **P** **07 21 43.7 +0.9**
baz=29,SNR=5.9
CWC Cottonwood Cre 61.89 296 P **P** **07 21 44.4 -0.1**
baz=29
TUQ Turquoise Moun 61.92 294 P **P** **07 21 44.3 -0.4**
baz=29
MPMC Manual Prospec 61.99 295 P **P** **07 21 44.4 -1.0**
baz=29,SNR=7.2
PDMCI Parker Dam,Lak 62.21 292 P **P** **07 21 47.1 +0.6**
baz=29,SNR=7.9
TX31 Lajitas Ar. Si 62.22 280 P **P** **07 21 47.2 +0.4**
TXAR Lajitas Array 62.22 280 P **P** **07 21 46.9 +0.1**
comp=Z,5.4nm,1.0s,baz=50,slow=5.0,SNR=13
TXAR LR LR 07 48 21.0
comp=Z,1μm,18.4s,baz=0.0,slow=36
TX32 Lajitas Array 62.22 280 P **P** **07 21 46.9 +0.1**
GSC Goldstone, Bar 62.39 294 P **P** **07 21 46.6 -1.2**
GSC pmax pmax
comp=Z,21nm,1.4s
GSC Goldstone, Bar 62.39 294 P **P** **07 21 48.1 +0.2**
baz=29,SNR=5.7
GSC Goldstone, Bar 62.39 294 P **P** **07 21 46.6 -1.2**
GSC IAmb IAmb 07 21 52.5
comp=Z,21nm,1.4s
GMRC Granite Mounta 62.39 293 P **P** **07 21 48.4 +0.5**
baz=29,SNR=21
PETK Petropavlovsk- 62.47 3 LR LR 07 50 19.4
comp=Z,190nm,18.9s,baz=3.1,slow=37
LRMC Laurel Mtn Rad 62.57 295 P **P** **07 21 49.1 -0.1**
baz=28
TUC Tucson 62.59 288 P **P** **07 21 49.9 +0.7**
TUC Tucson 62.59 288 P **P** **07 21 50.0 +0.8**
baz=29
TUC Tucson 62.59 288 P **P** **07 21 49.9 +0.7**
TUC IAmb IAmb 07 21 53.9
comp=Z,29nm,1.2s
TUC Tucson 62.59 288 IAMs_20 IAMs_20 07 46 50.9
comp=Z,544nm,18.0s
HEC Hector,Ludlow 62.62 294 P **P** **07 21 50.5 +1.1**
baz=29
ISA Isabella, Lake 62.72 296 P **P** **07 21 51.2 +1.1**
baz=28,SNR=7.3
IRM Iron Mountain 62.73 292 P **P** **07 21 51.1 +1.0**
baz=29,SNR=8.6
319A Douglas 62.79 286 P **P** **07 21 51.2 +0.6**
319A IAMs_20 IAMs_20 07 53 17.1
comp=Z,626nm,19.0s
BELC Belle Mtn. Jos 63.21 293 P **P** **07 21 54.7 +1.3**
baz=28,SNR=21
EDW2 Edwards Air Fo 63.22 295 P **P** **07 21 54.2 +0.8**
baz=28,SNR=6.4
BC3 Big Chuckawall 63.30 292 P **P** **07 21 54.9 +0.9**
baz=28,SNR=8.2
BBRC Big Bear Solar 63.34 294 P **P** **07 21 54.3 -0.1**
baz=28
WSAR Wadi Sarin 63.38 92 LR LR 07 50 19.5
comp=Z,77nm,21.4s,baz=350,slow=37
113A Mohawk Valley, 63.40 290 P **P** **07 21 54.7 +0.3**
113A IAmb IAmb 07 21 58.6
comp=Z,13nm,1.1s
GLA Glamis 63.58 291 P **P** **07 21 56.5 +0.8**
GLA pmax pmax
comp=Z,40nm,1.5s
GLA Glamis 63.58 291 P **P** **07 21 56.0 +0.3**
baz=28,SNR=5.6
GLA Glamis 63.58 291 P **P** **07 21 56.5 +0.8**
BFSC Mount Baldy Ra 63.65 294 P **P** **07 21 56.3 0.0**
baz=28
214A Organ Pipe Nat 63.73 289 P **P** **07 21 56.8 +0.1**
baz=28
214A Organ Pipe Nat 63.73 289 P **P** **07 21 57.1 +0.5**
214A IAmb IAmb 07 22 02.4
comp=Z,36nm,1.5s
PFO Pinyon Flats O 63.73 293 P **P** **07 21 57.0 +0.1**
PFO pmax pmax
comp=Z,15nm,1.4s
PFO Pinyon Flats O 63.73 293 P **P** **07 21 56.1 -0.7**
baz=28
PFO Pinyon Flats O 63.73 293 P **P** **07 21 57.0 +0.1**
PFO IAMs_20 IAMs_20 07 46 48.2
comp=Z,739nm,20.0s
XPFO Pion Flat 63.73 293 IAMs_20 IAMs_20 07 46 48.2
comp=Z,713nm,20.0s
TPFO Pinon Flats 63.74 293 P **P** **07 21 56.1 -0.8**
baz=28
MWC Mount Wilson 63.82 295 P **P** **07 21 57.2 -0.3**
MWC pmax pmax
comp=Z,13nm,1.2s
MWC MLR MLR
comp=Z,900nm,18.0s
MWC Mount Wilson 63.82 295 P **P** **07 21 57.2 -0.3**
PKM Mcpherson Peak 63.92 297 P **P** **07 21 58.4 +0.2**
baz=28
KLR Kul'dur 63.93 22 *i* P **P** **07 21 58.9 +1.1**
KLR pmax pmax
comp=Z,4.0nm,1.3s
MURC Murrieta 64.03 294 P **P** **07 21 59.0 +0.3**
baz=28
SWSC Sam W. Stewart 64.06 292 P **P** **07 21 59.4 +0.6**
baz=28
PIX Pinacate 64.33 290 IAMs_20 IAMs_20 07 48 19.0
comp=Z,439nm,21.0s
MONP2 Monument Peak 64.35 293 P **P** **07 22 01.7 +0.7**
baz=28,SNR=7.2
IKP In-Ko-Pah, Jac 64.44 292 P **P** **07 22 02.6 +1.2**
baz=28,SNR=5.6
SKR Severo-Kuril's 64.85 4 *e*P P 07 22 15.3 +12
SKR pmax pmax
comp=Z,39nm,2.7s
SKR pmax pmax
comp=Z,100nm,4.0s
SKR MLR MLR
comp=Z,300nm,16.0s
ESJX Sierra Juarez 64.94 292 P **P** **07 22 04.9 0.0**
SCI2 San Clemente I 65.11 295 P **P** **07 22 05.5 -0.2**
baz=28
HPIG 65.16 281 P **P** **07 22 06.5 +0.1**
GTA Gaotai 65.33 49 P **P** **07 22 08.1 +0.9**
GTA pP sP 07 22 12.5 +0.4
GTA sP pP 07 22 15.2 +4.4
GTA S **S** **07 30 54.7 +3.9**
GTA sS sS 07 31 00.5 +3.6
GTA SS **SS** **07 35 07.4 +4.6**
GTA pmax pmax
comp=Z,9.0nm,1.4s
GTA pmax pmax
comp=Z,290nm,7.5s
GTA LR LR
comp=Z,450nm,16.7s
GTA LR LR
comp=Z,660nm,16.7s
GTA LR LR
comp=Z,300nm,18.2s
SFX San Felipe 65.36 290 IAMs_20 IAMs_20 07 50 28.1
comp=Z,639nm,18.0s
HSIG 65.54 286 IAMs_20 IAMs_20 07 49 14.0
comp=Z,511nm,20.0s
SPX San Pedro Mart 65.60 291 P **P** **07 22 09.8 +0.5**
SPX IAmb IAmb 07 22 14.6
comp=Z,31nm,1.4s
SDV Santo Domingo 66.78 239 *e*P **P** **07 22 17.6 +0.7**
SDV Santo Domingo 66.78 239 P **P** **07 22 16.5 -0.3**
SDV Santo Domingo 66.78 239 *e*P **P** **07 22 17.7 +0.8**
PETF Flores 67.25 261 IAMs_20 IAMs_20 07 53 56.8
comp=Z,402nm,19.0s
HHC Hu-ho-hao-te 67.53 40 *e*P **P** **07 22 22.2 +1.0**
HHC pmax pmax
comp=Z,20nm,0.9s
HHC pmax pmax
comp=Z,270nm,6.3s
HHC LR LR
comp=Z,260nm,18.7s
HHC LR LR
comp=Z,460nm,13.3s
HHC LR LR
comp=Z,200nm,19.4s
SJCC San Jacinto, C 67.58 244 *e*P **P** **07 22 22.8 +1.1**
YSS Yuzh-Sakhalins 67.64 14 *e*P **P** **07 22 20.0 -1.6**
YSS *e* 07 24 47.1
YSS *e*S **S** **07 31 15.9 -2.3**
YSS *e*SSS SSS 07 38 42.9
YSS pmax pmax
comp=Z,500nm,8.6s
YSS MLR MLR
comp=Z,800nm,12.0s
CN2 Changchun 68.04 28 *e*P **P** **07 22 26.8 +2.6**
CN2 *e*S **S** **07 31 24.5 +1.3**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,300nm,5.0s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,500nm,18.0s
MDJ Mudanjiang 68.04 25 P **P** **07 22 25.8 +1.6**
MDJ pmax pmax
comp=Z,16nm,1.6s
MDJ pmax pmax
comp=Z,330nm,6.9s
OCAC Ocana 68.38 242 *e*P **P** **07 22 25.8 -1.1**
MOTC Monteria, Cord 68.79 244 *e*P **P** **07 22 30.4 +1.2**
USRK Ussuriysk Ar. 68.86 23 LR LR 07 54 48.9
comp=Z,220nm,18.1s,baz=347,slow=38
PAMC Pamplona, Colo 68.98 241 *e*P **P** **07 22 31.4 +0.4**
TAMC Tame, Arauca 69.47 239 *e*P **P** **07 22 35.1 +1.6**
BJI Beijing 69.50 36 P **P** **07 22 34.8 +1.4**
BJI S **S** **07 31 43.6 +3.0**
BJI pmax pmax
comp=Z,9.0nm,2.0s
BJI LR LR
comp=Z,460nm,13.3s
BJI LR LR
comp=Z,390nm,14.0s
BJI LR LR
comp=Z,300nm,15.5s
BJT Baijiatuan 69.52 36 IAMs_20 IAMs_20 07 56 36.9
comp=Z,583nm,18.0s
BRRC Barranca, Sant 69.57 241 *e*P **P** **07 22 34.2 +0.1**
MCPB Macapa, AP 69.58 217 *e*P **P** **07 22 34.6 +0.4**
LZH Lanzhou 69.65 47 *e*P **P** **07 22 35.9 +1.3**
LZH pP sP 07 22 39.4 -0.2
LZH sP pP 07 22 42.2 +3.9
LZH *e*S **S** **07 31 48.0 +5.1**
LZH SS **SS** **07 36 08.1 -1.8**
LZH pmax pmax
comp=Z,35nm,1.2s
LZH pmax pmax
comp=Z,460nm,4.9s
LZH LR LR
comp=Z,2μm,15.8s
LZH LR LR
comp=Z,1μm,15.6s
LZH LR LR
comp=Z,1μm,17.9s
PTBC PUERTO BERRIO, 70.37 242 *e*P **P** **07 22 39.8 +0.7**
RUSC La Rusia 70.45 240 *e*P **P** **07 22 41.1 +1.0**
TMAB Tom-Au,PA,Br 70.55 212 *e*P **P** **07 22 41.0 +1.0**
DBBC Dabeiba 70.61 244 *e*P **P** **07 22 41.8 +1.3**
SPBC San Pablo de B 71.05 241 *e*P **P** **07 22 44.4 +1.1**
HDC Heredia 71.05 253 IAMs_20 IAMs_20 07 50 09.2
comp=Z,517nm,20.0s
HELC Santa Helena 71.10 243 *e*P **P** **07 22 44.4 +0.4**
NORC Norcasia 71.43 242 *e*P **P** **07 22 45.7 +0.2**
CBOC Ciudad Bolivar 71.59 243 *e*P **P** **07 22 46.9 +0.2**
MALB Monte Alegre 71.59 219 *e*P **P** **07 22 47.7 +1.3**
CHIC Chingaza 71.86 241 *e*P **P** **07 22 48.7 +0.2**
ROSC El Rosal 71.89 241 P **P** **07 22 50.2 +1.6**
comp=Z,15nm,1.0s,baz=12,slow=8.3,SNR=11
ROSC LR LR 07 52 55.4
comp=Z,143nm,19.5s,baz=30,slow=35
ROSC El Rosal 71.89 241 P **P** **07 22 48.7 0.0**
GUY2C Guyana, Caldas 71.93 242 *e*P **P** **07 22 49.4 +0.4**
TOLC Tolima 72.50 242 *e*P **P** **07 22 51.5 -0.8**
ORTC Ortega, Tolima 73.09 242 *e*P **P** **07 22 56.0 +0.6**
XAN Xi'an 73.11 44 P **P** **07 22 55.2 -0.2**
XAN pP sP 07 23 02.8 +2.4
XAN pmax pmax
comp=Z,9.0nm,1.3s
XAN Xi'an 73.11 44 IAMs_20 IAMs_20 07 59 23.9

	comp=Z,464nm,18.0s								
PRAC	**Prado**	**73.13**	**241**	*eP*		**P**		**07 22 56.6**	**+0.9**
MBAR	**Mbarara**	**73.98**	**129**	IAMs_20	IAMs_20	IAMs_20		07 57 19.3	
	comp=Z,331nm,18.0s								
CD2	**Chengdu**	**74.39**	**50**	*eP*		**P**		**07 23 05.2**	**+2.3**
ITTB	**Itaituba**	**74.40**	**220**	*eP*		**P**		**07 23 03.5**	**+0.5**
PRPB	**Parauapebas**	**74.62**	**213**	*eP*		**P**		**07 23 04.4**	**+0.1**
MACA	**Manacapuru-AM**	**74.68**	**225**	*eP*		**P**		**07 23 05.2**	**+0.6**
POPC	**Popayan, Colom**	**74.89**	**243**	*eP*		**P**		**07 23 03.2**	**-3.0**
FLOC	**Florencia**	**75.38**	**241**	*eP*		**P**		**07 23 07.5**	**-1.3**
PTLC	**Puerto Leguiza**	**76.36**	**240**	*eP*		**P**		**07 23 15.4**	**+1.1**
SMTB	**Santa Maria do**	**76.72**	**210**	*eP*		**P**		**07 23 16.7**	**+0.5**
NPGB	**Novo Progresso**	**76.86**	**219**	*eP*		**P**		**07 23 17.5**	**+0.4**
NJ2	**Nanjing**	**77.75**	**37**	*eP*		**P**		**07 23 21.7**	**-0.3**
NJ2				pmax	pmax				
	comp=Z,11nm,0.8s								
KMI	**Kunming**	**79.38**	**53**ĥ	*eP*		**P**		**07 23 29.6**	**-1.8**
KMI				pmax	pmax				
	comp=Z,8.0nm,0.5s								
GYA	**Guiyang**	**79.45**	**49**	*eP*		**P**		**07 23 31.7**	**+0.1**
GYA				S		**S**		**07 33 35.2**	**+2.5**
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
GYA				pmax	pmax				
	comp=Z,220nm,5.7s								
GYA				LR	LR				
	comp=Z,170nm,7.4s								
GYA				LR	LR				
	comp=Z,290nm,13.3s								
GYA				LR	LR				
	comp=Z,240nm,14.6s								
SNDB	**Serra Nova Dou**	**80.57**	**213**	*eP*		**P**		**07 23 38.0**	**+0.6**
CLDB	**Colider**	**80.64**	**218**	*eP*		**P**		**07 23 38.0**	**+0.2**
SAML	**Samuel**	**80.92**	**226**	*eP*		**P**		**07 23 39.4**	**+0.1**
ETMB	**Extrema**	**82.69**	**228**	*eP*		**P**		**07 23 48.4**	**-0.3**
CZSB	**Cruzeiro do Su**	**82.92**	**235**	*eP*		**P**		**07 23 50.3**	**+0.4**
BDFB	**Brasilia**	**83.38**	**209**	LR	LR	LR		07 54 48.6	
	comp=Z,446nm,20.7s,baz=341,slow=31								
VILB	**Vilhena**	**83.83**	**222**	*eP*		**P**		**07 23 55.6**	**+1.0**
CMAR	**Chiang Mai Arr**	**84.17**	**59**	P		**P**		**07 23 55.6**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=318,slow=5.9,SNR=10								
CMAR				LR	LR			08 04 30.1	
	comp=Z,141nm,20.4s,baz=344,slow=38								
CMAR	**Chiang Mai Arr**	**84.17**	**59***c*	eP		**P**		**07 23 56.7**	**+0.3**
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
ARAG	**Araguaiana, MT**	**84.29**	**213**	*eP*		**P**		**07 23 57.9**	**+1.1**
IPMB	**Ipameri, GO**	**85.69**	**209**	*eP*		**P**		**07 24 03.8**	**-0.1**
PTLB	**Pontes e Lacer**	**85.91**	**220**	*eP*		**P**		**07 24 05.7**	**+0.8**
QIZ	**Qiongzhong**	**87.41**	**49**	P		**P**		**07 24 10.6**	**-1.9**
QIZ				S		**SKKSac**		**07 34 50.1**	**+0.8**
QIZ				LR	LR				
	comp=Z,510nm,12.2s								
QIZ				LR	LR				
	comp=Z,280nm,7.9s								
QIZ				LR	LR				
	comp=Z,150nm,6.5s								
LPAZ	**La Paz**	**89.38**	**228**	P		**P**		**07 24 23.7**	**+1.4**
	comp=Z,1.4nm,1.0s,baz=62,slow=4.3,SNR=5.0								
LPAZ				LR	LR			08 02 48.1	
	comp=Z,80nm,18.1s,baz=358,slow=34								
LPAZ	**La Paz**	**89.38**	**228**	*eP*		**P**		**07 24 22.1**	**-0.2**
FRTB	**Fartura**	**91.18**	**209**	*eP*		**P**		**07 24 29.7**	**-0.2**
KKM	**Kota Kinabalu**	**101.64**	**47**	IAMs_20	IAMs_20	IAMs_20		08 17 02.4	
	comp=Z,248nm,20.0s								
TAOE	**Nuku Hiva Isla**	**111.49**	**296**	*e*LR	LR	LR		08 03 09.7	
	comp=Z,438nm,26.5s								
PPT2	**Papeete2**	**123.03**	**302**	*e*LR	LR	LR		08 08 22.7	
	comp=Z,204nm,22.5s								
HNR	**Honiara**	**124.79**	**3**	IAMs_20	IAMs_20	IAMs_20		08 14 42.0	
	comp=Z,225nm,18.0s								
TBI	**Tubuai**	**128.26**	**299**	*e*LR	LR	LR		08 10 54.8	
	comp=Z,294nm,25.0s								
WRA	**Warramunga Arr**	**131.53**	**36**	PKP		**PKPdf**		**07 30 37.3**	**-0.3**
	comp=Z,4.0nm,1.2s,baz=339,slow=1.8,SNR=7.7								
WRA	**Warramunga Arr**	**131.53**	**36***c*	*i*PKIKP		**PKiKP**		**07 30 38.5**	**-0.1**
WRA				pmax	pmax				
	comp=Z,4.0nm,1.2s								
ASAR	**Alice Springs**	**134.98**	**38**	PKP		**PKPdf**		**07 30 44.1**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=340,slow=3.6,SNR=9.0								
DZM	**Mont Dzumac**	**137.30**	**354**	*e*LR	LR	LR		08 15 01.9	
	comp=Z,326nm,24.8s								
SYO	**Syowa Base**	**139.33**	**152**ǁ	*e*Pdiff		**Pdif**		**07 28 04.4**	**+0.6**
SYO	**Syowa Base**	**139.33**	**152**ǁ	*e*PKPdf		**PKPdf**		**07 30 50.0**	**-0.5**
SYO	**Syowa Base**	**139.33**	**152**ǁ	*e*PKiKP		**PKiKP**		**07 30 54.6**	**+1.8**
STKA	**Stephens Creek**	**144.73**	**31**	PKP		**PKPab**		**07 30 59.9**	**-0.3**
	comp=Z,5.9nm,0.9s,baz=325,slow=8.1,SNR=5.3								
VNDA	**Vanda**	**167.11**	**180**	PKP		**PKPdf**		**07 31 27.7**	**-1.3**
	comp=Z,0.6nm,1.0s,baz=247,slow=4.8,SNR=3.1								
VNDA				PKPab		**pPKPab**		**07 32 34.9**	**-2.3**
	comp=Z,0.6nm,0.8s,baz=209,slow=3.2,SNR=3.7								

*NEIC **07** 07:28:02.3±1.6,51.8N±0.1×176.23E±0.04,h56km±9km, Error ellipse: s-maj=20.8km s-min=2.2km az=171.0*
*AEIC **07** 07:28:02±2.1,51.8N±0.1×176.3E±0.1,h48km±6km,ML4.1, mb4.4/32(NEIC),Error ellipse: s-maj=19.8km s-min=9.2km az=180.0*
*IDC **07** 07:28:05.4±5.1,52.07N×176.39E,h41km±46km,mb3.5/9, mb1 3.8/10,mb1mx3.5/59,mbtmp3.7/10,ML3.1/1,Error ellipse: s-maj=37.0km s-min=16.8km az=169.0*

ISC 07 07:28:03.6±0.7,52.0N±0.1×176.34E±0.06,h35km,n74, σ1§22/67,mb4.3/22,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.34**	**92**		**Pn**	**07 28 25.8**	**-0.1**
LSSA					**Sn**	**07 28 43.0**	**+0.5**
LSNW	**Little Sitkin**	**1.35**	**92**		**Pn**	**07 28 25.8**	**0.0**
LSPA	**Little Sitkin**	**1.38**	**92**		**Pn**	**07 28 26.4**	**+0.1**
LSPA					**Sn**	**07 28 44.8**	**+1.5**
AMKA	**Amchitka**	**1.95**	**108**		**Pn**	**07 28 32.5**	**-1.6**
AMKA					**Sn**	**07 28 55.5**	**-1.9**
CESW	**Semis' Southwe**	**2.00**	**92**		**Pn**	**07 28 34.9**	**+0.1**
CEAP	**Semis' Anvil P**	**2.00**	**89**		**Pn**	**07 28 35.5**	**+0.7**
CERAA	**Semis' Rag'd T**	**2.07**	**92**		**Pn**	**07 28 35.8**	**0.0**
TASE	**Tanaga Southea**	**3.48**	**91**		**Pn**	**07 28 55.9**	**+0.6**
KIMD	**Kanaga Island**	**3.99**	**91**		**Pn**	**07 29 02.9**	**+0.8**
ADK	**Adak**	**4.32**	**89**		**Pn**	**07 29 06.8**	**+0.2**
GSTR	**Great Sitkin T**	**4.69**	**86**	Pn	**Pn**	**07 29 10.6**	**-1.2**
ATKA	**Atka Island**	**5.83**	**85**	Pn	**Pn**	**07 29 27.4**	**0.0**
UNV	**Unalaska Valle**	**10.51**	**73**	Pn	**Pn**	**07 30 33.0**	**+1.4**
PEA0B	**Petropavlovsk-**	**11.40**	**283**	Pn	**Pn**	**07 30 41.6**	**-2.1**
PETK	**Petropavlovsk-**	**11.40**	**283**	P	**Pn**	**07 30 45.7**	**+2.0**
	0.7nm,0.3s,baz=99,slow=19,SNR=11						
PETK	**Petropavlovsk-**	**11.40**	**283**		**Pn**	**07 30 40.5**	**-3.2**
TNA	**Tin City**	**15.76**	**25**	Pn	**Pn**	**07 31 42.1**	**-0.3**
TNA				IAmb	IAmb	07 31 48.7	
	comp=Z,80nm,1.4s						
BILL	**Bilibino**	**16.79**	**347**	P	**P**	**07 31 56.2**	**-1.3**
OHAK	**Old Harbor**	**18.24**	**61**	P	**Pn**	**07 32 14.5**	**+0.9**
KDAK	**Kodiak Island**	**18.66**	**60**	P	**Pn**	**07 32 19.2**	**+0.6**
RSO	**Redoubt South**	**18.98**	**52**	P	**P**	**07 32 20.5**	**-1.3**
CNPM	**China Poot**	**19.56**	**55**	P	**P**	**07 32 28.0**	**0.0**
BRLK	**Bradley Lake**	**19.77**	**54**	P	**P**	**07 32 30.1**	**-0.2**
BRLK				IAmb	IAmb	07 32 51.6	
	comp=Z,41nm,1.4s						
PPLA	**Purkeypile**	**19.89**	**45**	P	**P**	**07 32 30.9**	**-0.9**
PPLA				IAmb	IAmb	07 32 40.7	
	comp=Z,25nm,1.5s						
SKT	**Skwentna**	**19.92**	**47**	P	**P**	**07 32 31.4**	**-0.5**
SUA	**Susitna One**	**20.15**	**49**	P	**P**	**07 32 33.2**	**-1.3**
IMAR	**Indian Mountai**	**20.51**	**36**	P	**P**	**07 32 38.6**	**+0.4**
SEW	**Seward**	**20.53**	**53**	P	**P**	**07 32 37.2**	**-1.3**
SEW				IAmb	IAmb	07 33 05.6	
	comp=Z,39nm,1.3s						
KTH	**Kantishna Hill**	**20.65**	**43**	P	**P**	**07 32 39.2**	**-0.6**
TRF	**Thorofare Moun**	**20.88**	**44**	P	**P**	**07 32 42.7**	**+0.1**
GHO	**Glory Hole Cre**	**21.07**	**49**	P	**P**	**07 32 43.6**	**-0.9**
GHO				IAmb	IAmb	07 33 05.3	
	comp=Z,14nm,1.0s						
RND	**Reindeer**	**21.49**	**45**	P	**P**	**07 32 49.0**	**0.0**
GLI	**Glacier Island**	**21.79**	**52**	P	**P**	**07 32 50.9**	**-1.2**
SCM	**Sheep Creek Mo**	**21.82**	**49**	P	**P**	**07 32 52.4**	**-0.2**
SCM				IAmb	IAmb	07 33 01.2	
	comp=Z,22nm,1.0s						
DHY	**Denali Highway**	**22.05**	**46**	P	**P**	**07 32 54.2**	**-0.9**
DHY				IAmb	IAmb	07 33 01.8	
	comp=Z,16nm,1.4s						
WRH	**Wood River Hil**	**22.12**	**42**	P	**P**	**07 32 53.9**	**-1.7**
CCB	**Clear Creek Bu**	**22.29**	**42**	P	**P**	**07 32 56.7**	**-0.7**
CCB				IAmb	IAmb	07 33 07.1	
	comp=Z,15nm,1.4s						
M24K	**Tolsona, Glenn**	**22.41**	**49**		**P**	**07 32 58.0**	**-0.8**
M24K				IAmb	IAmb	07 33 09.7	
	comp=Z,31nm,1.1s						
KLU	**Klutina**	**22.43**	**50**	P	**P**	**07 32 58.1**	**-1.0**
KLU				IAmb	IAmb	07 33 02.6	
	comp=Z,31nm,1.4s						
ILAR	**Eielson Array**	**22.70**	**42**	P	**P**	**07 33 02.7**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=249,slow=8.5,SNR=8.0						
ILAR	**Eielson Array**	**22.70**	**42**	P	**P**	**07 33 01.3**	**-0.5**
TOLK	**Toolik Lake Re**	**23.21**	**31**	P	**P**	**07 33 06.8**	**-0.2**
TOLK				IAmb	IAmb	07 33 15.5	
	comp=Z,10nm,0.9s						
GLB	**Gilahina Butte**	**23.44**	**51**	P	**P**	**07 33 08.5**	**-0.8**
GLB				IAmb	IAmb	07 33 12.6	
	comp=Z,12nm,1.1s						
PRP	**Porcupine Dome**	**23.47**	**40**	P	**P**	**07 33 08.2**	**-1.5**
VRDI	**Verde Repeater**	**23.59**	**51**	P	**P**	**07 33 09.7**	**-1.3**
VRDI				IAmb	IAmb	07 33 33.5	
	comp=Z,22nm,1.4s						
CRQM	**Cirque**	**23.71**	**53**	P	**P**	**07 33 09.7**	**-2.4**
BMAR	**Burnt Mountain**	**24.43**	**36**	P	**P**	**07 33 17.3**	**-1.2**
BCAR	**Beaver Creek A**	**24.56**	**47**	P	**P**	**07 33 17.9**	**-1.8**
TABL	**Table Mountain**	**24.68**	**53**	P	**P**	**07 33 19.7**	**-1.4**
EGAK	**Eagle**	**25.09**	**43**	P	**P**	**07 33 24.3**	**-0.2**
EGAK				IAmb	IAmb	07 33 31.5	
	comp=Z,11nm,0.8s						
DAWY	**Dawson**	**25.74**	**45**	P	**P**	**07 33 28.6**	**-1.9**
DAWY				IAmb	IAmb	07 33 41.0	
	comp=Z,11nm,1.2s						
HYT	**Haines Junctio**	**26.47**	**52**	P	**P**	**07 33 36.8**	**-0.4**
HYT				IAmb	IAmb	07 33 45.1	
	comp=Z,9.1nm,0.9s						
BESE	**Bessie Mountai**	**28.00**	**57**	P	**P**	**07 33 49.7**	**-1.1**
BESE				IAmb	IAmb	07 33 49.9	
	comp=Z,19nm,1.2s						
KLR	**Kul'dur**	**28.09**	**282**	P	**P**	**07 33 53.2**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=4.9,slow=15,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**33.07**	**196**	T	T	08 09 42.6	
	baz=11,slow=76,SNR=1912						
H11N3	**WAKE ISLAND Hy**	**33.08**	**196**	T	T	08 09 36.4	
	baz=11,slow=76,SNR=1927						
H11N1	**WAKE ISLAND Hy**	**33.09**	**196**	T	T	08 09 44.0	
	baz=11,slow=76,SNR=2358						
H11S1	**WAKE ISLAND Hy**	**34.30**	**196**	T	T	08 11 13.0	
	baz=10,slow=76,SNR=918						
H11S3	**WAKE ISLAND Hy**	**34.31**	**196**	T	T	08 11 14.1	
	baz=10,slow=76,SNR=691						
H11S2	**WAKE ISLAND Hy**	**34.31**	**196**	T	T	08 11 14.2	
	baz=10,slow=76,SNR=512						
SONM	**Songino Array**	**43.63**	**293**	P	**P**	**07 36 06.2**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=46,slow=6.4,SNR=4.1						
NVAR	**Mina Array Bea**	**46.44**	**80**	P	**P**	**07 36 29.3**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=298,slow=7.7,SNR=2.6						
PDAR	**Pinedale Array**	**48.96**	**70**	P	**P**	**07 36 46.2**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=289,slow=2.8,SNR=2.1						
MKAR	**Makanchi Array**	**57.23**	**305**	P	**P**	**07 37 47.3**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=59,slow=6.5,SNR=6.5						
TXAR	**Lajitas Array**	**61.51**	**78**	P	**P**	**07 38 17.3**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=312,slow=5.3,SNR=6.1						
TXAR	**Lajitas Array**	**61.51**	**78**	P	**P**	**07 38 14.8**	**-2.1**
ABKAR	**Akbulak array**	**65.54**	**320**		**P**	**07 38 41.1**	**-2.0**
WRA	**Warramunga Arr**	**80.48**	**220**	P	**P**	**07 40 12.7**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=30,slow=5.8,SNR=8.8						
WRA	**Warramunga Arr**	**80.48**	**220**	P	P	07 40 06.8	-4.9
ASAR	**Alice Springs**	**84.02**	**218**	P	**P**	**07 40 31.7**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=28,slow=5.7,SNR=8.0						
H03N2	**Juan Fernandez**	**124.23**	**102**	T	T	10 04 21.1	
	baz=323						
H03N1	**Juan Fernandez**	**124.25**	**102**	T	T	10 04 34.0	
	baz=323						
H03N3	**Juan Fernandez**	**124.25**	**102**	T	T	10 04 26.1	
	baz=323						
BOSA	**Boshof**	**148.23**	**306**	PKPbc	**PKiKP**	**07 47 47.1**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=34,slow=3.4,SNR=4.8						

*IDC **07** 07:29:36.9±2.4,6.99N×93.53E,h0km,mb3.7/4,mb1 3.9/5, mb1mx3.5/56,mbtmp3.7/5,ML4.3/1,MS3.3/1,Ms1 3.5/1, ms1mx2.9/63,Error ellipse: s-maj=92.0km s-min=24.8km az=62.0*
*NEIC **07** 07:29:39.8±1.1,6.8N±0.1×93.4E±0.2,h40km±12km, mb4.4/7,Error ellipse: s-maj=28.5km s-min=12.7km az=50.0*

ISC 07 07:29:40.2±1.1,6.9N±0.1×93.5E±0.2,h35km,n23, σ1§04/20,mb4.3/8,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.84**	**115**	Pn	**Pn**	**07 30 36.5**	**-0.3**
RPSI	**Rantau Prapat**	**6.86**	**127**	Pn	**Pn**	**07 31 18.5**	**+0.2**
KULM	**Kulim**	**7.32**	**102**	Pn	**Pn**	**07 31 24.7**	**0.0**
IPM	**Ipoh**	**7.90**	**107**	Pn	**Pn**	**07 31 33.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**12.68**	**24**	Pn	**Pn**	**07 32 37.4**	**-0.7**
	0.5nm,0.3s,baz=215,slow=13,SNR=5.2						
CMAR				LR	LR	07 37 14.9	
	comp=Z,145nm,19.2s,baz=95,slow=36						
CISI	**Cisompet, Garu**	**20.27**	**135**	P	**P**	**07 34 11.0**	**-2.0**
MYLDM	**Lahad Datu**	**24.96**	**93**	P	**P**	**07 35 00.9**	**+0.3**
MYLDM				IAmb	IAmb	07 35 12.0	
	comp=Z,13nm,1.0s						
H08S3	**Diego Garcia H**	**25.41**	**236**	T	T	08 01 53.8	
	baz=54,slow=74,SNR=66						
H08S2	**Diego Garcia H**	**25.41**	**236**	T	T	08 01 57.0	
	baz=54,slow=74,SNR=5.2						
H08S1	**Diego Garcia H**	**25.43**	**236**	T	T	08 02 05.6	
	baz=54,slow=74,SNR=19						
NIL	**Nilore**	**32.55**	**328**	P	**P**	**07 36 07.7**	**-0.4**
MK31	**Makanchi Array**	**40.90**	**348**	P	**P**	**07 37 19.0**	**-0.1**
MKAR	**Makanchi Array**	**40.90**	**348**	P	**P**	**07 37 20.1**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=163,slow=7.6,SNR=10						
MKAR	**Makanchi Array**	**40.90**	**348**	P	**P**	**07 37 19.1**	**0.0**
KKAR	**Karatay Array**	**41.34**	**334**	P	**P**	**07 37 22.8**	**+0.1**
ZAA0	**Zalesovo Array**	**47.44**	**353**	P	**P**	**07 38 11.8**	**+0.6**
ZAA0				IAmb	IAmb	07 38 19.2	
	comp=Z,2.6nm,0.7s						
ZALV	**Zalesovo Beam**	**47.44**	**353**	P	**P**	**07 38 12.3**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=170,slow=9.6,SNR=6.0						
ZALV	**Zalesovo Beam**	**47.44**	**353**	P	**P**	**07 38 11.6**	**+0.4**
WRA	**Warramunga Arr**	**48.25**	**124**	P	**P**	**07 38 19.8**	**+1.7**
	comp=Z,0.6nm,1.0s,baz=308,slow=8.3,SNR=2.7						
WRAB	**Tennant Creek**	**48.26**	**124**	P	**P**	**07 38 17.9**	**-0.2**
WRAB				IAmb	IAmb	07 38 20.4	
	comp=Z,5.0nm,1.2s						
WB2	**Warramunga Arr**	**48.26**	**124**	P	**P**	**07 38 18.9**	**+0.8**
WB2				IAmb	IAmb	07 38 47.5	
	comp=Z,4.9nm,1.5s						
ASAR	**Alice Springs**	**49.81**	**129**	P	**P**	**07 38 32.1**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=304,slow=6.6,SNR=2.5						
ASAR	**Alice Springs**	**49.81**	**129**	P	**P**	**07 38 28.9**	**-1.1**

ATH 07 07:41:18.7,38.11N×20.49E,h18km±1km,ML3.3/4,Error ellipse: s-maj=2.1km s-min=0.9km az=250.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.10**	**50**	P	Pg	07 41 22.3	-0.1
VLS				S	Sg	07 41 25.1	+0.2
VLS				AML	AML	07 41 25.3	
VLS				AML	AML	07 41 25.4	
	comp=N,75310μm,0.1s						
KEF4	**Livadi, Kephal**	**0.15**	**341**	P	Pb	07 41 22.7	0.0
KEF4				S	Sg	07 41 26.1	+0.2
KEF5	**Kardakata, Kep**	**0.17**	**355**	P	Pb	07 41 23.0	0.0
KEF5				S	Sg	07 41 26.4	+0.2
VLMS	**Volimes, Zakyn**	**0.27**	**149**	P	Pg	07 41 24.6	-0.1
VLMS				S	Sb	07 41 29.9	+0.6
VLMS				AML	AML	07 41 35.3	
	comp=N,27082μm,0.4s						
VLMS				AML	AML	07 41 36.5	
	comp=E,15505μm,0.3s						
FSK	**Fiskardo**	**0.35**	**9**	P	Pg	07 41 26.0	-0.1
FSK				S	Sb	07 41 31.8	0.0
FSK				AML	AML	07 41 32.2	
	comp=E,11130μm,0.1s						
FSK				AML	AML	07 41 32.8	
	comp=N,6517μm,0.2s						
MGNA	**Meganis**	**0.59**	**24**	P	Pg	07 41 30.2	-0.3
MGNA				S	Sg	07 41 38.1	-0.3
MGNA				AML	AML	07 41 40.9	
	comp=N,2437μm,0.1s						
MGNA				AML	AML	07 41 43.2	
	comp=E,5842μm,0.4s						
LKD2	**Lefkada island**	**0.69**	**11**	P	Pb	07 41 31.7	-0.5
PDO	**Prodromos**	**0.73**	**48**	P	Pb	07 41 32.9	0.0
RLS	**Riolos of Patr**	**0.77**	**94**	P	Pb	07 41 33.4	-0.2
RLS				S	Sg	07 41 44.5	+0.4
DRO	**Drossia**	**0.98**	**99**	P	Pg	07 41 37.6	0.0
AMT	**Artemida-Makis**	**1.13**	**120**	P	Pg	07 41 40.6	+0.1
EFP	**Efpalio**	**1.16**	**74**	P	Pb	07 41 40.3	+0.1
LAKA	**Lakka**	**1.18**	**83**	P	Pg	07 41 41.1	-0.4
ANX	**Ano Chora**	**1.23**	**66**	P	Pg	07 41 42.8	+0.4
TRIZ	**Trizonia**	**1.27**	**78**	P	Pb	07 41 42.2	+0.1
EVR	**Evrytania**	**1.31**	**52**	P	Pb	07 41 43.0	+0.1
KALE	**Kalithea**	**1.33**	**77**	P	Pb	07 41 43.3	+0.1
ITM	**Ithomi**	**1.47**	**129**	P	Pb	07 41 45.6	+0.1
TRIP	**Tripoli**	**1.53**	**112**	P	Pg	07 41 48.0	-0.1
PYL	**PYLOS**	**1.57**	**140**	P	Pb	07 41 47.0	-0.1
MAKR	**Makrakomi, Fth**	**1.57**	**55**	P	Pb	07 41 48.0	+0.7
AXAR	**Agios Charalam**	**1.83**	**68**	P	Pb	07 41 52.5	+0.9
ATAL	**Atalanti**	**2.07**	**73**	P	Pb	07 41 55.2	-0.6

*TIR **07** 07:41:27.8,37.61N×20.98E,h12km±3km,Md4.5*
*BGR **07** 07:41:33.2±1.3,38.03N×21.83E,h10km,Ms3.8,Error ellipse: s-maj=58.9km s-min=18.9km az=55.0*
*BJI **07** 07:41:34.4±0.0,38.07N×20.26E,h17km,mB5.3/35, mb5.0/53,Ms5.1/12,Ms7 4.7/13*
*IDC **07** 07:41:35.9±0.4,38.19N×20.49E,h0km,mb4.8/34, mb1 4.8/44,mb1mx4.7/54,mbtmp4.7/44,ML4.3/10, MS4.1/28,Ms1 4.1/28,ms1mx4.0/56,Error ellipse: s-maj=9.7km s-min=8.5km az=101.0*
*NEIC **07** 07:41:36.9±2.1,38.11N±0.05×20.39E±0.05,h10km±1km, Error ellipse: s-maj=8.8km s-min=6.4km az=201.0*
*BEO **07** 07:41:36.8±0.7,37.95N×20.27E,h18km±4km,ML5.1/15*
*MOS **07** 07:41:36.0±1.1,38.09N×20.39E,h17km,mb4.5/30,Error ellipse: s-maj=4.7km s-min=2.9km az=73.3*
*PDG **07** 07:41:38.2±0.5,38.20N×20.33E,h13km±1km,MD5.2/9, ML4.8/14,Error ellipse: s-maj=1.0km s-min=1.0km az=90.0*
*ATH **07** 07:41:38.4,38.10N×20.44E,h18km,ML4.7/22,Error ellipse: s-maj=1.5km s-min=0.6km az=60.0*
*MED_RC **07** 07:41:39.0±0.6,38.15N×20.40E,h17km±7km,MW4.9/8, Moment Tensor Solution.Mantle waves: s8,c11; Duration: 1§2 Moment tensor: Scale 10^16Nm; Mrr=1.52±.86; Mθθ=0.86±.49; Mφφ=0.66±.56; Mrθ=-0.81±.51; Mθφ2.08±.23; Mφr=1.47±.84; Best double couple: M◎2.98000×10^16 NP1:φs279.00000°,δ53.00000°,λ33.00000°. NP2: φs168.00000°,δ64.00000°,λ139.00000°. Principal axes: T 3.0700, Plg47.0000°, Azm129.0000°; N -0.1700, Plg42.0000°, Azm322.0000°; P -2.8900, Plg6.0000°, Azm226.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*THE **07** 07:41:39.0,38.09N×20.45E,h6km±1km,ML4.8/7 Error ellipse: s-maj=2.1km s-min=0.9km az=65.0*
*GII **07** 07:41:43.9±0.0,37.26N×21.02E,h5km,mb4.9/4,MD4.9/4*

ISC 07 07:41:38.3±0.5,38.10N±0.02×20.42E±0.02,h18km±2km, n993,σ1§66/1068,mb5.1/183,MS4.6/54,78C-10D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.10**	**33**	P	**Pg**	**07 41 41.8**	**-0.2**
ARG2				S	**Sg**	**07 41 43.7**	**-0.7**
VLS	**Valsamata**	**0.16**	**59**	P	**Pb**	**07 41 42.4**	**+0.3**
VLS				S	**Sg**	**07 41 45.2**	**-0.4**
VLS	**Valsamata**	**0.16**	**59**	P	**Pb**	**07 41 42.4**	**+0.3**
VLS				S	**Sg**	**07 41 45.1**	**-0.5**
VLS	**Valsamata**	**0.16**	**59**	P	**Pb**	**07 41 42.4**	**+0.3**
KEF4	**Livadi, Kephal**	**0.16**	**1**	P	**Pg**	**07 41 42.8**	**+0.1**
KEF4				S	**Sg**	**07 41 46.2**	**+0.5**
KEF5	**Kardakata, Kep**	**0.18**	**12**	P	**Pg**	**07 41 43.0**	**-0.1**
KEF5				S	**Sg**	**07 41 46.3**	**0.0**
VLMS	**Volimes, Zakyn**	**0.29**	**139**	P	**Pg**	**07 41 44.7**	**-0.1**
VLMS				S	**Sb**	**07 41 49.3**	**-0.1**
VLMS				AML	AML	07 41 58.5	
VLMS				AML	AML	07 42 01.4	
VSK1	**VASILIKIADES**	**0.33**	**20**	P	**Pg**	**07 41 45.1**	**-0.3**
VSK1				S	**S

ITM S Sg 07 42 27.8 +0.8
ITM AML AML 07 42 47.4
comp=E,34358µm,0.7s
ITM AML AML 07 42 52.7
comp=N,32645µm,0.8s
ITM Ithomi 1.51 127 Pn Pb 07 42 06.0 +0.3
ITM Sn Sb 07 42 25.2 +0.7
ITM Ithomi 1.51 127 P Pb 07 42 05.8 +0.1
TRIP Tripoli 1.57 111 P Pg 07 42 08.3 -0.3
TRIP S Sg 07 42 28.3 -0.8
TRIP AML AML 07 42 50.8
comp=N,36652µm,0.8s
TRIP AML AML 07 42 55.6
comp=E,39824µm,0.8s
JAN Janina 1.59 12 P Pb 07 42 07.8 +0.6
JAN S Sg 07 42 29.3 -0.5
JAN AML AML 07 42 38.5
comp=E,71729µm,0.7s
JAN AML AML 07 42 41.9
comp=N,53710µm,0.8s
JAN Janina 1.59 12 P Pb 07 42 07.9 +0.6
JAN S Sg 07 42 29.1 -0.7
JAN Janina 1.59 12 P Pb 07 42 07.9 +0.6
JAN S Sg 07 42 29.1 -0.7
comp=N,32µm,1.2s
PYL PYLOS 1.59 138 P Pb 07 42 06.7 -0.6
MAKR Makrakomi, Fth 1.62 55 P Pg 07 42 09.2 -0.4
MAKR AML AML 07 42 39.0
comp=E,42191µm,1.1s
MAKR AML AML 07 42 49.8
comp=N,41286µm,1.0s
DLFA Delphi 1.68 76 P Pb 07 42 08.7 0.0
DLFA S Sb 07 42 30.8 +1.3
DLFA AML AML 07 42 48.2
comp=E,33203µm,0.9s
DLFA AML AML 07 42 50.8
comp=N,23987µm,0.8s
KEK Kerkira 1.69 343 P Pb 07 42 08.0 -0.8
KEK S Sg 07 42 31.7 -1.0
KEK AML AML 07 42 47.0
comp=N,36589µm,0.8s
KEK AML AML 07 42 49.4
comp=E,59730µm,0.7s
DSF Desfina 1.69 79 P Pb 07 42 08.9 0.0
KASA Kassiopi 1.69 347 P Pb 07 42 08.7 -0.2
KASA S Sg 07 42 31.8 -1.0
KASA AML AML 07 42 42.2
comp=E,55261µm,0.5s
KASA AML AML 07 42 45.9
comp=N,46403µm,0.8s
VLX Vlachokerasia 1.71 114 P Pb 07 42 09.8 +0.4
VLX AML AML 07 42 46.3
comp=E,43093µm,0.7s
VLX AML AML 07 42 49.1
comp=N,44298µm,0.6s
AGG Agios Georgios 1.76 58 P Pb 07 42 11.1 +1.0
AGG Agios Georgios 1.76 58 P Pb 07 42 10.8 +0.7
AGG Agios Georgios 1.76 58 Pn Pb 07 42 10.8 +0.7
THAL Thalero 1.77 91 P Pb 07 42 11.0 +0.7
AXAR Agios Charalam 1.88 68 P Pb 07 42 12.8 +0.6
THL Klokotos Trika 1.92 40 P Pb 07 42 13.3 +0.5
LTK Loutraki 2.01 91 P Pb 07 42 13.4 -0.9
LOUT Loutraki 2.02 92 P Pb 07 42 13.4 -1.1
LSK Leskovik 2.06 4 P Pb 07 42 14.2 -1.0
baz=354
LSK S Sg 07 42 45.3 +0.8
baz=354
LKR Lokris 2.10 74 P Pb 07 42 14.5 -1.4
PENT Pentalofos 2.17 15 P Pb 07 42 16.8 -0.3
EPID Epidavros 2.19 102 P Pb 07 42 16.3 -1.1
VIL2 Platees 2.25 86 P Pb 07 42 17.2 -1.2
VIL2 AML AML 07 43 04.0
comp=E,28302µm,0.9s
VIL2 AML AML 07 43 14.4
comp=N,15616µm,1.0s
VOL2 Volos 2.35 57 P Pb 07 42 18.7 -1.4
NEST Nestorio 2.37 12 P Pb 07 42 19.1 -1.4
VLI Veliai 2.43 124 P Pb 07 42 20.8 -0.7
KZN Kozani 2.44 25 P Pb 07 42 20.3 -1.5
VLO Vlora 2.48 343 P Pn 07 42 19.4 +1.7
baz=339
VLO S Sg 07 42 59.2 +1.3
baz=339
SCTE Santa Cesarea 2.49 323 P Pn 07 42 18.8 +0.8
SCTE Santa Cesarea 2.49 323 Pn 07 42 18.7 +0.8
LIT Litokhoron 2.57 38 P Pn 07 42 21.4 +2.3
LIT Litokhoron 2.57 38 Pn Pn 07 42 21.4 +2.3
ATH Athens Observa 2.61 92 P Pn 07 42 21.3 +1.8
ATH AML AML 07 43 16.9
comp=N,17097µm,0.9s
ATH AML AML 07 43 17.5
comp=E,12372µm,1.2s
ATHU Athens Univers 2.66 92 P Pn 07 42 21.8 +1.5
VLY Voula,Athens 2.68 94 P Pn 07 42 22.0 +1.5
PTL Penteli 2.72 90 P Pn 07 42 22.9 +1.8
DION Dionisos Attik 2.77 89 P Pn 07 42 23.7 +1.9
KTHA Kythira Island 2.80 130 P Pb 07 42 25.2 -2.5
AOS Alonnisos 2.91 67 P Pn 07 42 26.1 +2.3
KYMI Kymi, Euboea I 2.94 78 P Pn 07 42 25.8 +1.7
OHR Ohrid 3.02 5 *i* Pn Pn 07 42 27.9 +2.5
TIP Timpagrande 3.06 292 ⇑P Pn 07 42 26.7 +0.8
TIP Timpagrande 3.06 292 Pn 07 42 26.6 +0.7
KARY Karystos 3.17 90 P Pn 07 42 28.8 +1.5
ANKY Antikythira Is 3.21 133 P Pn 07 42 29.9 +2.2
TIR Tirane 3.27 353 ⇑P Pn 07 42 30.2 +1.5
TIR Tirane 3.27 353 P Pn 07 42 30.2 +1.5
TIR Tirane 3.27 353 Pn 07 42 30.2 +1.5
TIR Tirane 3.27 353 P Pn 07 42 30.6 +1.8
baz=348
TIR S Sb 07 43 18.1 +2.7
baz=348
TAR1 Taranto 3.44 316 *e*Pn Pn 07 42 32.6 +1.7
CEL Celeste 3.57 274 Pn 07 42 33.2 +0.3
PHP Peshkopia 3.58 0 P Pn 07 42 35.0 +2.0
baz=355
STIP Stip 3.84 20 *i* Pn Pn 07 42 29.0 -7.6
MATE Matera 3.85 313 ⇑P Pn 07 42 37.0 +0.5
SKO Skopje 3.95 11 *i* Pn Pn 07 42 39.7 +1.7
PUK Puka 3.96 354 P Pn 07 42 39.3 +1.0
baz=350
ULC Ulcinj 3.97 347 ⇓*i* Pn Pn 07 42 38.4 +0.1
ULC *i* Sn Sn 07 43 24.1 -0.2
SG1 Sgolgore (BA) 3.99 315 *e*Pn Pn 07 42 39.7 +1.2
BAI Bari 4.06 319 ⇓*i* Pn Pn 07 42 40.2 +0.6
APE Apeiranthos 4.19 103 ⇑P Pn 07 42 45.8 +4.5
APE Apeiranthos 4.19 103 *i* P Pn 07 42 41.7 +0.4
DRME Dracevica, Mon 4.19 347 ⇑*i* Pn Pn 07 42 41.5 +0.1
DRME *i* Sn Sn 07 43 29.4 -0.5
DRME Dracevica, Mon 4.19 347 ⇑*i* Pn Pn 07 42 41.3 -0.1
BCI Bajram Curri 4.27 356 P Pn 07 42 44.6 +2.1
baz=352
BUM Brajici-Budva 4.36 345 ⇓*i* Pn Pn 07 42 43.7 0.0
BUM *i* Sn Sn 07 43 33.3 -0.8
SANT Santorini 4.37 112 Pn Pn 07 42 45.5 +1.6
PDG Podgorica 4.42 349 ⇑P Pn 07 42 44.6 +0.2
PDG Podgorica 4.42 349 *e*Pn Pn 07 42 44.2 -0.2
PDG Podgorica 4.42 349 Pn Pn 07 42 45.0 +0.6
TTG Podgorica 4.42 349 *e*Pn Pn 07 42 45.0 +0.6
TTG Podgorica 4.42 349 ⇑*i* Pn Pn 07 42 45.1 +0.6
TTG *i* Sn Sn 07 43 35.0 -0.4
PVY Plav 4.51 356 ⇓*i* Pn Pn 07 42 46.8 +1.0
PVY *i* Sn Sn 07 43 37.1 -0.7
IDI Anoyia 4.56 127 Pn Pn 07 42 45.7 -0.7
comp=E,4.2nm,0.3s,baz=300,slow=16,SNR=17.7
IDI Sn Sn 07 43 38.5 -0.5
comp=E,58nm,0.3s,baz=90,slow=12,SNR=8.6
IDI LR LR 07 45 06.8
comp=E,2µm,18.4s,baz=313,slow=46
IDI Anoyia 4.56 127 ⇑P Pn 07 42 48.9 +2.5
IDI Anoyia 4.56 127 Pn Pn 07 42 47.9 +1.4
PRVS Prvonek 4.58 16 *e*Pn Pn 07 42 45.8 -1.0
PRVS *e*Sn Sn 07 43 41.0 +1.4
HCY Herceg Novi 4.59 342 *e*Pn Pn 07 42 46.3 -0.5
HCY *i* Sn Sn 07 43 39.0 -0.6
HCY Herceg Novi 4.59 342 *e*Pn Pn 07 42 46.0 -0.8
CEME Cevo 4.59 346 ⇑*i* Pn Pn 07 42 46.6 -0.3
CEME *i* Sn Sn 07 43 39.1 -0.7
BOSS Bosilegrad 4.67 19 *e*Pn Pn 07 42 49.1 +1.2
BOSS *e*Sn Sn 07 43 42.7 +1.1
IVA Berane 4.79 355 *e*Pn Pn 07 42 50.4 +0.8
IVA Berane 4.79 355 *e*Pn Pn 07 42 51.1 +1.5
IVA *i* Sn Sn 07 43 44.0 -0.6
NKME Niksic 4.80 347 ⇓*i* Pn Pn 07 42 50.3 +0.6

NKME *i* Sn Sn 07 43 43.7 -1.1
KOME Kolasin 4.80 352 ⇓*i* Pn Pn 07 42 50.5 +0.7
KOME *i* Sn Sn 07 43 43.9 -1.0
VAE Valguarnera 4.80 264 Pn Pn 07 42 51.1 +1.4
comp=E,14nm,0.3s,baz=142,slow=8.7,SNR=6.5
VAE Sn Sn 07 43 46.8 +1.9
comp=E,99nm,0.3s,baz=269,slow=12,SNR=5.1
BARS Barje 4.83 12 *e*Pn Pg 07 43 06.9 -4.0
BARS *e*Sn Sg 07 44 16.6 +3.2
NKY Niksic 4.83 347 ⇑*i* Pn Pn 07 42 50.9 +0.6
NKY *i* Sn Sn 07 43 44.9 -1.0
TREB Trebinje 4.88 342 *e*Pn Pn 07 42 50.2 -0.6
BRY Bratogost 5.01 344 *e*Pn Pn 07 42 52.3 -0.4
BRY *i* Sn Sn 07 43 48.9 -1.3
BRY Bratogost 5.01 344 *e*Pn Pn 07 42 52.0 -0.7
SGRT San Giovanni R 5.12 317 Pn Pn 07 42 54.4 +0.2
SGRT Sn Sn 07 43 52.4 -0.6
SELS Selova 5.14 6 *e*Pn Pn 07 42 54.6 +0.1
SELS *e*Sn Sn 07 43 53.0 -0.4
SJES Sjenica 5.17 356 *e*Pn Pn 07 42 56.2 +1.3
SJES *e*Sn Sn 07 43 55.1 +1.0
STON Ston 5.20 337 ⇑*i* Pn Pn 07 42 54.4 -0.8
STON Ston 5.20 337 *e*Pn Pn 07 42 54.8 -0.3
UPM Unac-Piva 5.23 348 ⇑*i* Pn Pn 07 42 56.2 +0.4
UPM *i* Sn Sn 07 43 54.1 -1.6
UPM Unac-Piva 5.23 348 *e*Pn Pn 07 42 56.1 +0.3
PLE Pljevlja 5.29 352 *e*Pn Pn 07 42 57.3 +0.8
PLE *i* Sn Sn 07 43 55.7 -1.3
LSTV Lastovo 5.39 331 *e*Pn Pn 07 42 57.4 -0.3
PAOL Paolisi 5.39 305 Pn Pn 07 42 59.4 +1.6
ZAPS Zavoj 5.44 17 *e*Pn Pn 07 43 00.0 +1.5
IVAS Ivanjica 5.48 358 *e*Pn Pn 07 42 58.9 -0.2
IVAS *e*Sn Sn 07 44 01.4 -0.2
RUDO Rudo 5.57 352 *e*Pn Pn 07 42 56.3 -4.0
BOVS Bovan 5.62 10 *e*Pn Pn 07 43 00.6 -0.3
BOVS *e*Sn Sn 07 44 04.4 -0.6
CORL Corleone 5.62 270 Pn Pn 07 43 01.9 +0.8
CLTB Caltabellotta 5.73 267 Pn Pn 07 43 03.9 +1.4
GRUS Gruza 5.79 2 *e*Pn Pn 07 43 03.8 +0.5
GRUS *e*Sn Sn 07 44 08.5 -0.7
MAKA Makarska 5.79 335 *e*Pnn 07 43 03.9
BBLS Lazići 5.81 353 *e*Pn Pn 07 43 04.1 +0.4
BBLS *e*Sn Sn 07 44 09.5 -0.4
BBLS Lazići 5.81 353 ⇑*i* Pn Pn 07 43 02.7 -1.0
ZAGS Zajecar 5.87 13 *e*Pn Pn 07 43 04.8 +0.4
ZAGS *e*Sn Sn 07 44 11.5 +0.3
RICI Ricice 5.94 336 *i* Pn Pn 07 43 05.4 +0.1
KARP Karpathos 5.98 113 Pn Pn 07 43 08.4 +2.6
KARP Sn Sn 07 44 14.8 +0.9
DIVS Divibare 6.00 357 *e*Pn Pn 07 43 06.2 -0.1
DIVS *e*Sn Sn 07 44 12.8 -1.8
DIVS Divibare 6.00 357 ⇑*i* Pn Pn 07 43 05.7 -0.6
DIVS Divibare 6.00 357 Pn Pn 07 43 06.2 -0.1
HAPS Han Pijesak,Bl 6.09 350 *e*Pn Pn 07 43 06.5 -1.0
TRUS Trudelj 6.12 360 *e*Pn Pn 07 43 07.9 +0.1
TRUS *e*Sn Sn 07 44 16.8 -0.6
PUNG Punghina 6.46 16 ⇑P Pn 07 43 14.3 +1.8
TEKS Tekeris 6.48 354 *e*Pn Pn 07 43 12.7 -0.1
TEKS *e*Sn Sn 07 44 23.6 -2.7
TEKS Tekeris 6.48 354 *e*Pn Pn 07 43 12.3 -0.5
VLAD Vladila 6.62 26 ⇑P Pn 07 43 16.2 +1.6
KIJV Kijevo 6.64 334 *i* Pn Pn 07 43 15.6 +0.7
ZIMR 6.70 32 ⇑P Pn 07 43 18.0 +2.3
MDVR Moldovita 6.75 8 ⇑P Pn 07 43 17.4 +0.9
MORI Morici 6.78 330 *e*Pn Pn 07 43 17.9 +1.1
MGRS Mrkonjic Grad 6.80 339 *e*Pn Pb 07 43 31.7 -4.2
AQU L'Aquila 6.85 311 P Pn 07 43 18.7 +0.8
AQU L'Aquila 6.85 311 *e*Pn Pn 07 43 18.9 +1.0
AQU L'Aquila 6.85 311 Pn Pn 07 43 18.7 +0.8
SRE Strehaia 6.89 17 ⇑P Pn 07 43 19.1 +0.8
HERR Herculane 6.94 12 ⇑P Pn 07 43 19.9 +0.8
FRGS Fruska Gora 7.07 356 *e*Pn Pn 07 43 20.1 -0.8
FRGS *e*Sn Sn 07 44 37.3 -3.5
FRGS Fruska Gora 7.07 356 ⇑*i* Pn Pn 07 43 20.2 -0.7
BLY Banja Luka 7.08 341 *e*Pn Pn 07 43 20.5 -0.4
DUGI Dugi Otok 7.15 327 *e*Pn Pn 07 43 23.0 +1.1
RAZG Razgrad 7.15 38 ⇑P Pn 07 43 25.1 +3.1
HUMR Humele 7.28 27 ⇑P Pn 07 43 25.7 +2.0
NRCA Norcia 7.31 313 Pn Pn 07 43 23.9 -0.3
UDBI Udbina 7.32 333 *i* Pn Pn 07 43 26.2 +1.9
SGRR Singureni 7.42 33 ⇑P Pn 07 43 28.2 +2.5
GZR Gura Zlata 7.50 13 ⇑P Pn 07 43 27.6 +0.8
AKAS Kas 7.57 101 Pn Pn 07 43 30.3 +2.5
BZS Buzias 7.57 6 ⇑P Pn 07 43 27.5 -0.2
STFAR Stefanesti-Arg 7.57 25 ⇑P Pn 07 43 30.6 +2.9
NVLJ Novalja 7.69 329 *e*Pn Pn 07 43 30.1 +0.8
LOT Lotru 7.76 18 ⇑P Pn 07 43 31.4 +1.0
MURB Monte Urbino 7.91 313 Pn Pn 07 43 33.6 +1.1
ARR Arges 7.92 22 ⇑P Pn 07 43 34.6 +2.1
MTUR Matau 7.92 25 ⇑P Pn 07 43 35.0 +2.4
LATE Laterza 7.98 307 Pn Pn 07 43 34.6 +1.3
MOSL Moslavina 7.99 341 *e*Pn Pn 07 43 32.5 -1.1
VOIR 8.11 24 ⇓P Pn 07 43 37.2 +2.1
SECR 8.12 30 ⇑P Pn 07 43 36.5 +1.3
MORH Mrgy, Hungar 8.22 351 *e*Pn Pn 07 43 35.6 -1.0
BOJS Bojanci 8.35 334 *e*Pn Pn 07 43 38.4 +0.1
BOJS *e*Sn Sn 07 45 07.1 -5.0
comp=Z,318nm,0.8s
OZLJ Ozalj 8.37 335 *i* Pn Pn 07 43 38.8 +0.2
ISR Istrita 8.38 31 ⇑P Pn 07 43 41.9 +3.1
ZAG Zagreb 8.40 338 *e*Pn Pn 07 43 39.1 0.0
MANR Mangalia 8.41 45 ⇑P Pn 07 43 42.5 +3.2
MLR Muntele Rosu 8.46 27 Pn Pn 07 43 42.5 +2.5
comp=Z,2.7nm,0.3s,baz=215,slow=5.5,SNR=36
MLR LR LR 07 47 21.9
comp=Z,857nm,18.8s,baz=196,slow=41
MLR Muntele Rosu 8.46 27 ⇑P Pn 07 43 42.9 +2.9
MLR Muntele Rosu 8.46 27 P Pn 07 43 42.4 +2.4
MLR Muntele Rosu 8.46 27 Pn Pn 07 43 42.4 +2.4
RIY Rijeka 8.48 330 *e*Pn Pn 07 43 39.8 -0.3
RIY Rijeka 8.48 330 *e*Pn Pn 07 43 40.7 +0.8
PTJ Puntijarka 8.48 338 *e*Pn Pn 07 43 39.4 -0.8
NEHR Nehoiu 8.54 29 ⇑P Pn 07 43 43.9 +2.9
KALN Kalnik 8.55 341 *e*Pn Pn 07 43 39.9 -1.3
CRES Cresnjev 8.56 336 *i* Pn Pn 07 43 40.8 -0.6
CRES *e*Sn Sn 07 45 10.1 -7.3
comp=Z,209nm,0.6s
CRES Cresnjev 8.56 336 ⇑*i* Pn Pn 07 43 40.7 -0.6
TLBR Topalu 8.62 39 ⇑P Pn 07 43 44.5 +2.4
CASP Castiglione de 8.66 306 Pn Pn 07 43 43.6 +0.9
HARR Harsova 8.67 38 ⇑P Pn 07 43 44.9 +2.1
DOPR Dopca 8.69 24 ⇑P Pn 07 43 45.2 +2.2
VSL Villasalto 8.73 283 Pn Pn 07 43 43.3 -0.4
TIRR Tirgusor 8.75 41 ⇑P Pn 07 43 45.9 +2.0
TIRR Tirgusor 8.75 41 ⇑P Pn 07 43 45.9 +2.0
TIRR Tirgusor 8.75 41 P Pn 07 43 45.9 +2.0
TIRR Tirgusor 8.75 41 Pn Pn 07 43 45.9 +2.0
BEHE Becsehely 8.79 343 ⇑*i* Pn Pn 07 43 45.1 +0.6
OSSC Osservatorio P 8.82 311 Pn Pn 07 43 45.8 +0.9
CEY Cerknica 8.84 332 *e*Pn Pn 07 43 44.8 -0.4
CJR Cluj-Napoca 8.93 14 ⇑P Pn 07 43 48.1 +1.8
GBAS Gorenja Brezov 9.01 332 *i* Pn Pn 07 43 47.5 +0.1
GBAS *e*Sn Sn 07 45 21.8 -6.5
comp=Z,291nm,0.8s
PLOR Plostina 9.03 29 ⇓P Pn 07 43 50.7 +2.9
PLOR Plostina 9.03 29 P Pn 07 43 50.6 +2.9
TPGR Topolog 9.03 39 ⇑P Pn 07 43 49.6 +1.8
LJU Ljubljana 9.07 333 ⇑*i* Pn Pn 07 43 47.7 -0.5
CFR Carcaliu 9.13 37 ⇑P Pn 07 43 50.7 +1.6
KEST Kesra 9.18 258 Pn Pn 07 43 51.3 +1.4
comp=Z,3.2nm,0.3s,baz=43,slow=15,SNR=9.4
KEST Sn Sn 07 45 33.5 +0.7
comp=Z,5.4nm,0.3s,baz=66,slow=21,SNR=12
KEST LR LR 07 48 20.7
comp=Z,987nm,19.5s,baz=15,slow=44
KEST Kesra 9.18 258 Pn Pn 07 43 50.7 +0.8
SOKA Soboth 9.45 337 *i* Pn Pn 07 43 53.0 -0.7
comp=Z,51nm,0.4s,SNR=40
SOKA *e*Sn Sn 07 45 32.3 -7.1
comp=Z,57nm,0.8s
OBKA Obir 9.46 335 *e*Pn Pn 07 43 54.7 +1.0
comp=Z,49nm,0.4s,SNR=14
OBKA *e*Sn Sn 07 45 37.9 -1.7
comp=Z,167nm,0.6s
OBKA Obir 9.46 335 *e*Pn Pn 07 43 53.3 -0.5
TLCR 9.46 39 ⇑P Pn 07 43 55.3 +1.7
TESR Tescani 9.59 27 ⇑P Pn 07 43 56.6 +1.2
PRED Cave del Predi 9.76 331 Pn Pn 07 43 57.4 -0.4
TEOL Teolo 9.77 321 Pn Pn 07 43 59.2 +1.4
PSZ Piszkesteto 9.82 358 ⇑P Pn 07 44 00.5 +1.8
PSZ Piszkesteto 9.82 358 P Pn 07 44 00.7 +2.0

PSZ Piszkesteto 9.82 358 Pn 07 44 00.7 +2.0
ARSA Arzberg 9.83 340 *e*Pn Pn 07 43 58.1 -0.7
comp=Z,22nm,0.3s,SNR=12
ARSA *e*Sn Sn 07 45 42.8 -5.8
comp=Z,31nm,0.8s
ARSA Arzberg 9.83 340 *e*Pn Pn 07 43 58.0 -0.7
SRO Srobarova 9.83 352 *e*SN Sn 07 45 45.0 -3.6
MYKA Terra Mystica 9.89 332 *i* Pn Pn 07 44 00.1 +0.5
comp=Z,22nm,0.5s,SNR=9.6
MYKA *e*Sn Sn 07 45 44.3 -5.8
comp=Z,54nm,0.6s
STAL STALIGIAL 9.96 327 Pn 07 44 00.8 +0.3
ZOU Zoufplan 10.09 329 Pn 07 44 02.3 -0.2
CIMO Cimolais 10.11 327 Pn 07 44 02.6 0.0
VASR Vaslui 10.13 30 ⇑P Pn 07 44 05.3 +2.6
BURAR Bucovina Array 10.14 19 ⇑P Pn 07 44 05.2 +2.2
BURAR Bucovina Array 10.14 19 Pn Pn 07 44 04.2 +1.2
BUR08 Bucovina Ar. S 10.16 19 Pn Pn 07 44 04.5 +1.2
PRAR RASCA 10.19 23 ⇑P Pn 07 44 06.5 +2.8
CTI Castel Tesino 10.27 323 P Pn 07 44 04.2 -0.7
CTI Castel Tesino 10.27 323 Pn Pn 07 44 04.2 -0.7
CONA Conrad Observa 10.38 343 *e*Pn Pn 07 44 05.9 -0.4
comp=Z,14nm,0.4s
KBA Koelnbreinsper 10.38 332 *e*Pn Pn 07 44 06.5 +0.1
comp=Z,11nm,0.3s,SNR=14
KBA *e*Sn Sn 07 45 56.9 -5.3
comp=Z,59nm,0.6s
KBA Koelnbreinsper 10.38 332 *e*Pn Pn 07 44 06.4 +0.1
KBA *e*L L 07 49 10.7
comp=Z,1µm,18.6s
KECS Kecovo 10.38 0 *e*P Pn 07 44 06.4 +0.2
KECS *e* 07 45 56.4
KECS Kecovo 10.38 0 *e*PN Pn 07 44 06.4 +0.2
KECS *e*SN Sn 07 45 56.4 -5.7
ABTA Abfaltersbach 10.43 328 *i* Pn Pn 07 44 07.5 +0.6
comp=Z,36nm,0.5s,SNR=15
ABTA *e*Sn Sn 07 45 59.2 -4.1
comp=Z,98nm,0.6s
BR131 Keskin Array S 10.43 77 P Pn 07 44 08.5 +1.4
BR131 Keskin Array S 10.43 77 Pn Pn 07 44 08.4 +1.4
BRTR Keskin Array B 10.43 77 Pn Pn 07 44 10.4 +3.3
comp=Z,0.5nm,0.3s,baz=258,slow=12,SNR=9.5
BRTR LR LR 07 49 05.4
comp=Z,1µm,19.2s,baz=266,slow=43
LEF Lefka 10.46 103 ⇑P Pn 07 44 09.8 +2.5
VYHS Vyhne 10.46 354 *e*P Pn 07 44 06.6 -0.7
VYHS *e* 07 45 56.8
VYHS MLR MLR
comp=Z,2µm,18.2s
VYHS Vyhne 10.46 354 *e*PN Pn 07 44 06.6 -0.7
VYHS *e*SN Sn 07 45 56.8 -7.1
VYHS *e*L L 07 49 03.7
MODS Modra-Piesok 10.52 348 *e*P Pn 07 44 08.0 -0.2
MODS *e* 07 45 59.0
MODS MLR MLR
comp=Z,3µm,16.8s
MODS Modra-Piesok 10.52 348 *e*PN Pn 07 44 08.0 -0.2
MODS *e*SN Sn 07 45 59.0 -6.6
MODS *e*L L 07 49 22.2
UZH Uzhgorod 10.62 7 *e*P Pn 07 44 11.0 +1.6
UZH *e*S Sn 07 46 10.0 +2.2
UZH MLR MLR
comp=N,350nm,12.0s
UZH MLR MLR
comp=E,400nm,12.0s
UZH MLR MLR
comp=Z,300nm,12.0s
MOA Molln 10.73 337 *e*Pn Pn 07 44 12.5 +1.4
comp=Z,40nm,0.3s,SNR=26
MOA *e*Sn Sn 07 46 06.1 -4.7
comp=Z,26nm,0.4s
MOA Molln 10.73 337 *e*Pn Pn 07 44 12.0 +0.9
MOA *e*Sn Sn 07 46 05.6 -5.2
CRVS Cervenica-Dubn 10.83 4 *e*P Pn 07 44 12.6 +0.2
CRVS MLR MLR
comp=Z,2µm,16.5s
CRVS Cervenica-Dubn 10.83 4 *e*PN Pn 07 44 12.6 +0.2
CRVS *e*L L 07 49 02.9
KIS Kishinev 10.83 32 *e*P Pn 07 44 14.0 +1.6
KIS *e*S Sn 07 46 20.0 +6.9
KIS *e*LR LR 07 48 40.0
comp=Z,1µm,14.0s
KIS Kishinev 10.83 32 *e*P Pn 07 44 14.0 +1.6
KIS *e*S Sn 07 46 20.0 +6.9
KIS MLR MLR
comp=Z,1µm,14.0s
CSS Mathiatis 10.85 103 Pn Pn 07 44 11.8 -0.9
CSS Mathiatis 10.85 103 Pn 07 44 12.2 -0.5
KOLS Kolonicke sedl 10.91 6 *e*P Pn 07 44 13.9 +0.3
KOLS MLR MLR
comp=Z,1µm,15.2s
KOLS Kolonicke sedl 10.91 6 *e*PN Pn 07 44 13.9 +0.3
KOLS *e*L L 07 49 02.6
JAVC Velka Javorina 10.94 350 *e*PN Pn 07 44 15.4 +1.5
WTTA Wattenberg 11.21 328 *i* Pn Pn 07 44 19.5 +1.9
comp=Z,28nm,0.4s,SNR=14
WTTA *e*Sn Sn 07 46 19.7 -2.8
comp=Z,121nm,0.7s
WTTA Wattenberg 11.21 328 *e*Pn Pn 07 44 18.7 +1.0
WATA Walderalm 11.29 328 *i* Pn Pn 07 44 20.2 +1.4
comp=Z,52nm,0.6s,SNR=19
WATA *e*Sn Sn 07 46 21.8 -2.6
comp=Z,201nm,0.8s
NIE Niedzica 11.32 360 *e*P Pn 07 44 21.3 +2.2
KRUC Moravsky 11.34 346 *e*PN Pn 07 44 18.8 -0.6
KRUC *e*SN Sn 07 46 18.6 -6.9
FUORN Ofenpass-Fuorn 11.35 322 Pn Pn 07 44 21.2 +1.5
SQTA Sankt Quirin 11.36 326 *i* Pn Pn 07 44 21.8 +2.1
comp=Z,18nm,0.5s,SNR=12
SQTA *e*Sn Sn 07 46 24.8 -1.3
comp=Z,60nm,0.5s
FETA Feichten 11.42 324 *e*Pn Pn 07 44 23.4 +2.8
comp=Z,12nm,0.9s
FETA *e*Sn Sn 07 46 26.2 -1.5
comp=Z,41nm,0.7s
MOTA Moosalm 11.50 326 *i* Pn Pn 07 44 23.2 +1.6
comp=Z,32nm,0.5s,SNR=15
MOTA *e*Sn Sn 07 46 28.6 -1.0
comp=Z,101nm,0.9s
VRAC Vranov 11.54 347 Pn Pn 07 44 21.9 -0.2
comp=Z,0.7nm,0.3s,baz=187,slow=12,SNR=6.2
VRAC Vranov 11.54 347 ⇑P Pn 07 44 22.0 -0.2
VRAC Vranov 11.54 347 *e*PN Pn 07 44 21.5 -0.6
VRAC Vranov 11.54 347 *e*SN Sn 07 46 30.1 -0.4
SORM Soroca 11.58 27 ⇑P Pn 07 44 25.3 +2.7
ZUGS Zugspitze, Sch 11.61 326 *e*Pn Pn 07 44 25.4 +2.1
ZUGS *e*Sn Sn 07 46 30.1 -2.3
DAVOX Davos/Dischmat 11.65 321 P Pn 07 44 22.0 -1.8
comp=Z,0.3nm,0.3s,baz=126,slow=17,SNR=2.9
DAVOX LR LR 07 51 12.6
comp=Z,765nm,19.1s,baz=126,slow=50
DAVOX Davos/Dischmat 11.65 321 P Pn 07 44 22.0 -1.8
DFRA Djebel Bou Aff 11.69 267 P Pn 07 44 28.5 +4.3
TUE Stuetta 11.71 319 Pn Pn 07 44 25.4 +0.8
TREC Trest 11.75 344 AMS AMS 07 50 50.0
comp=Z,2µm,10.0s
RETA Reutte 11.76 326 *e*Pn Pn 07 44 28.4 +3.3
comp=Z,6.3nm,0.3s
RETA *e*Sn Sn 07 46 35.1 -0.7
comp=Z,60nm,0.9s
GEC2 GERESS Array S 11.79 338 *e*L L 07 50 24.2
comp=Z,613nm,18.1s
GEC2 GERESS Array S 11.79 338 Pn Pn 07 44 24.8 -0.8
GERES GERESS Array B 11.79 338 Pn Pn 07 44 24.6 -1.0
comp=Z,3.6nm,0.3s,baz=157,slow=14,SNR=42
GERES Sn Sn 07 46 32.1 -4.7
comp=Z,3.2nm,0.3s,baz=155,slow=24,SNR=3.2
GERES LR LR 07 50 34.4
comp=Z,652nm,18.6s,baz=140,slow=46
GERES GERESS Array B 11.79 338 Pn 07 44 24.9 -0.8
OKC Ostrava-Krasne 11.85 353 AMS AMS 07 49 40.0
comp=Z,2µm,12.2s
MORC Moravsky Berou 11.86 351 ⇑P Pn 07 44 27.8 +1.3
MORC Moravsky Berou 11.86 351 *e*PN Pn 07 44 26.6 +0.1
MORC Moravsky Berou 11.86 351 *e*SN Sn 07 46 33.3 -5.0
MORC Moravsky Berou 11.86 351 P Pn 07 44 26.6 +0.1
MORC Moravsky Berou 11.86 351 Pn Pn 07 44 26.6 +0.1
LVV L'vov 12.00 11 *e*P Pn 07 44 31.1 +2.7
LVV *e*S Sn 07 46 44.0 +2.3
LVV MLR MLR
comp=N,400nm,11.0s
LVV MLR MLR
comp=E,200nm,11.0s
LVV MLR MLR

comp=Z,500nm,11.0s
DAVA Damuels 12.01 323 *e*Pn **P** **07 44 37.8 -3.8**
comp=Z,16nm,0.4s
KHC Kasperske Hory 12.09 338 *e*P **Pn** **07 44 28.2 -1.4**
KHC *e*S **Sn** **07 46 37.2 -6.6**
KHC MLR MLR
comp=Z,2µm,10.9s
KHC Kasperske Hory 12.09 338 *e*P **Pn** **07 44 28.2 -1.4**
KHC *e*S **Sn** **07 46 37.2 -6.6**
KHC AMS AMS 07 50 00.0
comp=Z,2µm,10.9s
OJC Ojcow 12.13 358 *e*P **Pn** **07 44 34.9 +4.7**
SET Setif 12.14 266 P **Pn** **07 44 31.0 +0.6**
KRLC Kraliky 12.26 349 *e*P **Pn** **07 44 33.7 +1.8**
KRLC MLR MLR
comp=Z,2µm,9.9s
KRLC Kraliky 12.26 349 *e*P **Pn** **07 44 33.7 +1.8**
KRLC AMS AMS 07 50 50.0
comp=Z,2µm,9.9s
PBCC Pribram 12.47 340 *e*P **Pn** **07 44 34.7 -0.1**
DPC Dobruska-Polom 12.60 348 *e*P **Pn** **07 44 40.4 +3.9**
DPC MLR MLR
comp=Z,3µm,13.2s
DPC Dobruska-Polom 12.60 348 *e*P **Pn** **07 44 40.4 +3.9**
DPC AMS AMS 07 50 30.0
comp=Z,3µm,13.2s
PRU Pruhonice 12.61 342 *e*P **Pn** **07 44 36.2 -0.5**
PRU MLR MLR
comp=Z,2µm,9.2s
PRU Pruhonice 12.61 342 *e*P **Pn** **07 44 36.2 -0.5**
PRU AMS AMS 07 51 20.0
comp=Z,2µm,9.2s
PRA Prague 12.71 342 AMS AMS 07 51 20.0
comp=Z,700nm,10.1s
SENIN Lac Senin/Sane 12.75 315 **Pn** **07 44 40.3 +1.5**
UPC Upice 12.80 347 AMS AMS 07 50 30.0
comp=Z,3µm,11.2s
OSTC Ostas 12.81 348 *e*P Pn 07 44 31.6 -7.9
OSTC AMS AMS 07 50 30.0
comp=Z,2µm,13.4s
CHVC Chvalec 12.87 347 AMS AMS 07 50 30.0
comp=Z,3µm,11.6s
ROTZ Rotzenmuhle 13.07 336 *e*Pn **Pn** **07 44 41.8 -1.2**
PVCC Panska Ves 13.11 343 AMS AMS 07 51 40.0
comp=Z,1µm,9.8s
MMA0B Mount Meron ar 13.21 108 Pn **Pn** **07 44 42.6 -2.4**
MMA0B Sn **Sn** **07 47 03.3 -8.1**
MMAI Mount Meron Ar 13.21 108 Pn **Pn** **07 44 43.2 -1.8**
comp=Z,4.0nm,0.3s,baz=296,slow=12,SNR=6.9
MMAI LR LR 07 51 29.2
comp=Z,488nm,18.7s,baz=290,slow=45
GEM Giv'at Ha'Em 13.32 107 Pn **Pn** **07 44 43.9 -2.5**
NKC Novy Kostel 13.40 337 *e*P **Pn** **07 44 48.7 +1.2**
NKC MLR MLR
comp=Z,3µm,11.4s
NKC Novy Kostel 13.40 337 *e*P **Pn** **07 44 48.7 +1.2**
NKC AMS AMS 07 50 50.0
comp=Z,3µm,11.4s
BFO Black Forest 13.49 323 P **Pn** **07 44 49.3 +0.6**
BFO Black Forest 13.49 323 Pn **Pn** **07 44 49.3 +0.6**
KZIT Kziot 13.57 118 Pn **Pn** **07 44 46.1 -3.8**
KZIT Sn Sn 07 47 08.9 -11
BRG Berggiesshubel 13.58 342 *e*P **Pn** **07 44 48.4 -1.5**
comp=Z,6.7nm,0.8s
BRG Berggiesshubel 13.58 342 *e*P **Pn** **07 44 48.4 -1.5**
BRG pmax pmax
comp=Z,7.0nm,0.8s
AMAZ Amatzia 13.58 114 Pn **Pn** **07 44 46.8 -3.3**
HMDT Nahal Hemdat 13.66 111 Pn **Pn** **07 44 48.2 -2.9**
HMDT Sn Sn 07 47 12.5 -10
ECH Echery 13.98 321 P **Pn** **07 44 55.8 +0.4**
ECH Echery 13.98 321 Pn **Pn** **07 44 55.8 +0.4**
MOX Moxa 14.02 336 P **Pn** **07 44 56.5 +0.5**
MOX Moxa 14.02 336 *e*Pn **Pn** **07 44 55.5 -0.5**
AKASG Malin Array Be 14.07 24 Pn **Pn** **07 44 55.5 -1.1**
comp=Z,2.6nm,0.3s,baz=216,slow=12,SNR=14
AKASG PcP **PcP** **07 50 16.2 +0.2**
comp=Z,0.5nm,0.3s,baz=254,slow=1.1,SNR=5.2
AKASG LR LR 07 51 42.7
comp=Z,1µm,20.0s,baz=200,slow=43
AKBB Malin Array Si 14.07 24 *i*P **Pn** **07 44 55.5 -1.1**
AKBB Malin Array Si 14.07 24 Pn **Pn** **07 44 56.7 +0.1**
MALT Malatya 14.17 84 P **P** **07 45 02.9 -2.6**
CLL Collm 14.21 341 *e*P **Pn** **07 45 01.0 +2.5**
CLL *es*P **P** **07 45 07.0 +1.1**
CLL *i* PP **PnPn** **07 45 09.2 +2.7**
comp=Z,28nm,1.0s
CLL *i* sPP 07 45 14.1
CLL Lmax 07 52 00.0
CLL Collm 14.21 341 *e*P Pn 07 44 51.0 -7.5
KRMI Paran Flat 14.26 120 Pn **Pn** **07 44 55.3 -4.1**
KRMI Sn Sn 07 47 24.6 -13
PRNI Paran 14.32 118 Pn **Pn** **07 44 56.4 -3.7**
PRNI Sn Sn 07 47 27.3 -11
ZFRI Zfri 14.32 117 Pn **Pn** **07 44 56.5 -3.6**
ZFRI Sn Sn 07 47 27.1 -11
ANN Anapa 14.40 57 *e*P **Pn** **07 45 04.1 +3.0**
ANN pmax pmax
comp=Z,120nm,1.0s
HRFI Mount Harif 14.53 119 Pn **Pn** **07 44 58.9 -4.1**
HRFI Sn Sn 07 47 33.2 -10
MBRI Mt Berech 14.59 120 Pn **Pn** **07 45 00.4 -3.6**
EIL Elat 14.69 121 Pn **Pn** **07 45 01.7 -3.5**
comp=Z,2.1nm,0.3s,baz=307,slow=6.5,SNR=8.2
EIL LR LR 07 52 57.1
comp=Z,320nm,19.3s,baz=282,slow=46
EIL Elat 14.69 121 Pn **Pn** **07 45 01.5 -3.8**
EIL Sn Sn 07 47 36.3 -11
RUE Ruedersdorf 15.11 344 *e*P **P** **07 45 16.3 +0.4**
WLF Walferdange 15.45 323 P **P** **07 45 20.4 +0.8**
WLF Walferdange 15.45 323 P **P** **07 45 20.4 +0.8**
SOC Sochi 15.59 63 *e*P **Pn** **07 45 17.3 +0.3**
SOC *e* 07 48 10.9
SOC pmax pmax
comp=Z,84nm,1.0s
SOC MLR MLR
comp=Z,161nm,12.0s
SUW Suwalki 16.03 6 *e*P **Pn** **07 45 23.8 +1.1**
SUW Suwalki 16.03 6 P **Pn** **07 45 22.1 -0.6**
SUW Suwalki 16.03 6 Pn **Pn** **07 45 22.1 -0.6**
BTNL Ternell 16.10 325 PnPn **P** **07 45 31.9 +5.0**
BTNL PbPb PbPb 07 46 14.9 -2.5
MARD Mardin 16.13 86 Pn **Pn** **07 45 24.6 +0.4**
MEM Membach 16.17 325 pPn **P** **07 45 28.8 +1.2**
DOU Dourbes 16.48 322 pPn **P** **07 45 32.5 +1.4**
BMRD Maredsous 16.54 323 pPn **P** **07 45 34.5 +2.9**
SNF Seneffe 16.91 322 Pn **Pn** **07 45 33.5 -0.3**
SNF pPn **pPn** **07 45 37.8 -0.4**
SNF PnPn **pwP** **07 45 42.1 -0.8**
MICGM Minsk 17.18 15 *e* **Pn** **07 45 34.0 -3.3**
MNK Minsk 17.18 15 *e*P **Pn** **07 45 34.0 -3.3**
NACGM Naroch 17.36 12 *e* **Pn** **07 45 37.0 -2.5**
BSD Bornholm Skovb 17.43 349 *i*P **P** **07 45 43.7 +2.3**
BSD pmax pmax
comp=Z,21nm,0.7s
BSD Bornholm Skovb 17.43 349 *i*P **P** **07 45 43.7 +2.3**
comp=Z,21nm,0.7s
BSD Bornholm Skovb 17.43 349 *i*P **P** **07 45 44.0 +2.6**
BSD Bornholm Skovb 17.43 349 *i*P **P** **07 45 43.7 +2.3**
BSD IAmb IAmb 07 45 44.8
comp=Z,21nm,0.7s
BSD Bornholm Skovb 17.43 349 *e*P **P** **07 45 44.1 +2.6**
PABE Paberze 17.58 7 *e*P **Pn** **07 45 41.9 -0.3**
PABE IAmb IAmb 07 45 46.0
comp=Z,239nm,1.0s
IIGN Ignalina 17.70 11 *e*P **P** **07 45 45.2 +0.7**
IIGN IAmb IAmb 07 45 46.6
comp=Z,40nm,0.6s
IDID Didziasalis 17.75 12 *e*P **P** **07 45 46.0 +1.0**
KIV Kislovodsk 17.77 64 *e*P **P** **07 45 45.7 +0.2**
KIV *e*S **Sn** **07 49 05.2 +2.9**
KIV pmax pmax
comp=Z,258nm,1.0s
KIV MLR MLR
comp=Z,401nm,13.0s
KIV Kislovodsk 17.77 64 **P** **07 45 45.4 0.0**
KVAR Kislovodsk Arr 17.77 64 LR LR 07 55 07.5
comp=Z,776nm,19.1s,baz=95,slow=46
GEVA Gevas 17.79 82 **P** **07 45 46.6 +0.8**
KBZ Khabaz 17.88 65*c*e**P** **P** **07 45 47.3 +0.8**
ISAL Salakas 17.90 11 *e*P **Pn** **07 45 45.4 -0.8**
ISAL IAmb IAmb 07 45 49.4
comp=Z,34nm,0.8s

PBUR Paburge 17.96 3 *e*P **P** **07 45 47.5 +0.1**
AKH Akhalkalaki 18.04 72 P **P** **07 45 48.6 +0.1**
AKH pmax pmax
comp=Z,111nm,0.8s
AKH Akhalkalaki 18.04 72 **P** **07 45 48.6 +0.1**
AKH IAmb IAmb 07 45 58.8
comp=Z,111nm,0.8s
IZAR Zarasai 18.09 11 *e*P **Pn** **07 45 47.1 -1.4**
GOF Gofitskoye 18.27 60‖ *e*P **P** **07 45 52.6 +1.8**
GOF pmax pmax
comp=Z,125nm,0.8s
ZEI Tsey 18.46 68 *e*P **P** **07 45 53.1 -0.1**
ZEI pmax pmax
comp=Z,74nm,1.2s
VORD Divnogorie 18.55 40 *e*P **P** **07 45 52.9 -0.9**
VORD pmax pmax
comp=Z,60nm,1.0s
VSR Storozhevoye 18.63 39 *e*P **P** **07 45 54.7 -0.1**
VSR pmax pmax
comp=Z,50nm,0.6s
VSR MLR MLR
comp=Z,1µm,16.0s
FIGM Figuig 18.69 258 P **Pn** **07 45 56.8 +0.7**
SNR=9.5
KZRT Kazreti 18.72 72 P **Pn** **07 45 57.8 +1.5**
JBK JBK 18.91 266 P **Pn** **07 45 59.0 +0.1**
JBK P **P** **07 45 59.4 +1.1**
VORR Voronezh 18.93 38 P **P** **07 45 58.0 -0.1**
VORR pmax pmax
comp=Z,250nm,1.2s
GNI Garni 18.97 76*ce*P **Pn** **07 45 59.7 +0.2**
GNI pmax pmax
comp=Z,293nm,1.7s
GNI Garni 18.97 76 P **Pn** **07 45 59.4 -0.1**
GNI IAmb IAmb 07 46 03.4
comp=Z,219nm,1.3s
ESDC Sonseca Array 19.04 282 P **P** **07 45 59.7 +0.3**
comp=Z,0.4nm,0.3s,baz=78,slow=11,SNR=24
PAB San Pablo 19.34 282 P **P** **07 46 02.5 -0.3**
PAB pmax pmax
comp=Z,25nm,0.9s
PAB San Pablo 19.34 282 P **P** **07 46 02.5 -0.3**
LPSR Galich'ya Gora 19.40 36 *e*P **P** **07 46 02.7 -0.5**
LPSR pmax pmax
comp=Z,120nm,0.7s
LPSR MLR MLR
comp=Z,700nm,12.0s
NAX Nakhchivan 19.61 79 P **P** **07 46 06.2 +0.5**
MUD Monsted U'grnd 19.84 341 *i*P **P** **07 46 08.0 +0.1**
MUD Monsted U'grnd 19.84 341 *i*P **P** **07 46 08.7 +0.8**
MUD Monsted U'grnd 19.84 341 *i*P **P** **07 46 08.7 +0.8**
MUD Monsted U'grnd 19.84 341 *i*P **P** **07 46 08.0 +0.1**
GROC Groznyy 19.89 67 *e*P **Pn** **07 46 10.5 +0.3**
GROC pmax pmax
comp=Z,179nm,1.2s
GROC MLR MLR
comp=Z,439nm,12.0s
TAM Tamanrasset 19.90 224 P **P** **07 46 07.4 -1.6**
TAM pmax pmax
comp=Z,26nm,1.1s
TAM Tamanrasset 19.90 224 P **P** **07 46 07.4 -1.6**
VRH Novokhopyorsk 19.94 42 *e*P **P** **07 46 09.3 +0.2**
VRH pmax pmax
comp=Z,420nm,1.6s
VRH MLR MLR
comp=Z,840nm,12.0s
DDFL Dedoflistskaro 20.01 72 P Pn 07 46 12.3 +0.5
LGD Lagodekhi 20.11 71 P Pn 07 46 12.1 -0.9
GANJ Ganja 20.16 75 P **P** **07 46 11.9 +0.2**
OBN Obninsk 20.23 28 P **P** **07 46 12.1 -0.1**
comp=Z,15nm,0.5s,baz=215,slow=9.5,SNR=7.2
OBN LR LR 07 55 25.1
comp=Z,217nm,19.2s,baz=195,slow=41
OBN Obninsk 20.23 28*ce*P **P** **07 46 11.5 -0.7**
OBN *i* 07 46 16.6
OBN *i* 07 46 29.9
OBN *e*S **S** **07 49 58.9 +0.6**
OBN *es*S **SnSn** **07 50 20.9 +5.0**
OBN pmax pmax
comp=Z,64nm,0.6s
OBN MLR MLR
comp=Z,1µm,15.0s
OBN Obninsk 20.23 28 P **P** **07 46 12.0 -0.2**
OBN IAmb IAmb 07 46 31.6
comp=Z,100nm,0.9s
ZKTA Zakatala 20.39 72 P **P** **07 46 14.9 +0.8**
MNGR Mingechevir, A 20.74 74 P **P** **07 46 18.8 +0.9**
VSU Vasula 20.79 9 *e*P **P** **07 46 19.0 +0.7**
VSU IAmb IAmb 07 46 20.4
comp=Z,547nm,0.8s
VSU Vasula 20.79 9*c i*P **P** **07 46 18.3 +0.1**
VSU pmax pmax
comp=Z,757nm,0.9s
SEKA Sheki 20.82 73 P **P** **07 46 18.6 -0.2**
LCRM LCR 20.92 266 P Pn 07 46 24.3 +1.6
MDT Midelt 21.03 263 P **P** **07 46 22.0 +0.8**
comp=Z,10nm,0.8s,baz=72,slow=9.3,SNR=18
MDT LR LR 07 55 49.5
comp=Z,194nm,21.8s,baz=92,slow=40
MDT Midelt 21.03 263 P **P** **07 46 23.0 +1.8**
SNR=9.9
MOS Moscow 21.10 28 *e*P **P** **07 46 20.1 -1.5**
MOS *e* 07 46 26.5
MOS *es*S **S** **07 50 16.8 +1.3**
MOS pmax pmax
comp=Z,120nm,1.1s
MOS pmax pmax
comp=Z,200nm,1.4s
MOS MLR MLR
comp=Z,1µm,15.0s
MAK Makhachkala 21.11 68 *e*P **P** **07 46 21.5 -0.3**
MAK *e*S **S** **07 50 17.2 +1.3**
MAK *es*S **SnSn** **07 50 38.2 +0.7**
MAK pmax pmax
comp=Z,657nm,1.1s
MAK MLR MLR
comp=Z,380nm,11.0s
PBRG Braganca 21.11 289 *e*P **P** **07 46 22.6 +0.6**
comp=Z,73nm,1.6s
SICH Sidi Chahed 21.15 267 P **P** **07 46 23.6 +1.2**
CZD Col de Zad 21.29 264 P **P** **07 46 25.5 +1.3**
RSA Sarsar 21.32 269 P **P** **07 46 25.1 +0.9**
MVO Moncorvo 21.33 287 *e*P **P** **07 46 24.7 +0.4**
comp=Z,85nm,1.1s
PMRV Marv??o 21.70 282 *e*P **P** **07 46 28.3 +0.1**
comp=Z,64nm,1.5s
PCBR Castelo Branco 21.73 283 *e*P **P** **07 46 28.6 +0.1**
comp=Z,58nm,1.3s
MTE Manteigas 21.75 285 *e*P **P** **07 46 28.9 +0.1**
comp=Z,104nm,1.1s
MTE Manteigas 21.75 285 P **P** **07 46 28.5 -0.3**
POLO Lamas de Olo 21.90 287 *e*P **P** **07 46 33.1 +2.6**
PVIS Viseu 22.00 286 *e*P **P** **07 46 31.5 0.0**
comp=Z,82nm,1.8s
SNART Snartemo 22.01 341 *i*P **P** **07 46 35.0 +3.7**
SNART Snartemo 22.01 341 *i*P **P** **07 46 38.2 +6.9**
PVAQ Vaqueiros 22.23 277 P **P** **07 46 35.9 +1.9**
PVAQ Vaqueiros 22.23 277 *e*P **P** **07 46 36.9 +3.0**
comp=Z,49nm,1.0s
PVAQ Vaqueiros 22.23 277 P **P** **07 46 33.6 -0.3**
PBEJ Beja 22.24 279 *e*P **P** **07 46 34.4 +0.3**
comp=Z,58nm,1.3s
PGAV Gavieira, Arco 22.26 289 *e*P **P** **07 46 34.7 +0.4**
comp=Z,95nm,1.6s
PMTG Montargil 22.38 281 *e*P **P** **07 46 34.9 -0.6**
comp=Z,68nm,1.5s
ZHG ZHG 22.41 266 P **P** **07 46 37.0 +1.1**
PBDV Barranco-do-Ve 22.43 277 *e*P **P** **07 46 36.6 +0.5**
comp=Z,72nm,2.3s
PCVE Castro Verde 22.44 278 *e*P **P** **07 46 38.9 +2.7**
comp=Z,53nm,1.3s
HFS Hagfors 22.47 351 P **P** **07 46 35.2 -1.1**
comp=Z,30nm,0.6s,baz=150,slow=12,SNR=27
HFS LR LR 07 55 44.6
comp=Z,418nm,21.4s,baz=164,slow=38
PCAS Casmilo, Conde 22.50 284 *e*P **P** **07 46 38.0 +1.2**
comp=Z,85nm,1.3s
TZRR Tazzarine 22.59 259 P **P** **07 46 39.1 +1.1**
SNR=22
PUL Pulkovo 22.60 13*ce*P **P** **07 46 37.5 -0.1**
PUL pmax pmax
comp=Z,387nm,1.0s
KONO Kongsberg 22.66 346 *i*P **P** **07 46 37.6 -0.7**
KONO pmax pmax
comp=Z,51nm,1.1s

KONO Kongsberg 22.66 346 P **P** **07 46 39.4 +1.2**
KONO IAmb IAmb 07 46 46.9
comp=Z,72nm,1.2s
KONO Kongsberg 22.66 346 *e*P **P** **07 46 39.0 +0.7**
OSL Oslo 22.72 347 *e*P **P** **07 46 38.6 -0.3**
PNCL Nicolau / Gran 22.75 279 *e*P **P** **07 46 39.7 +0.3**
comp=Z,73nm,2.0s
PSBE So Bento 22.77 283 *e*P **P** **07 46 39.5 -0.2**
ZGR Zagora 22.93 257 P **P** **07 46 42.1 +0.6**
SNR=8.1
PFVI Vila Bisbo 23.15 277 *e*P **P** **07 46 45.1 +1.5**
comp=Z,135nm,1.7s
NC602 NORSAR Array S 23.34 349 P **P** **07 46 44.6 -0.7**
NC602 NORSAR Array S 23.34 349 *e*P **P** **07 46 45.4 +0.1**
EKA Eskdalemuir Ar 23.45 325 P **P** **07 46 46.7 +0.3**
comp=Z,26nm,0.9s,baz=127,slow=10,SNR=23
ESK Eskdalemuir 23.46 325 P **P** **07 46 46.7 +0.2**
ESK pmax pmax
comp=Z,92nm,1.3s
ESK Eskdalemuir 23.46 325 P **P** **07 46 46.7 +0.2**
ESK IAmb IAmb 07 46 58.7
comp=Z,92nm,1.2s
OUZM OUZ 23.47 260 P **P** **07 46 49.1 +2.1**
SNR=21
NAO01 NORSAR Array S 23.55 348 P **P** **07 46 47.5 +0.1**
FINES FINESS Array B 23.64 7 P **P** **07 46 46.9 -1.3**
comp=Z,23nm,0.6s,baz=170,slow=10,SNR=42
FINES PcP **PcP** **07 50 33.4 +1.1**
comp=Z,4.8nm,0.7s,baz=174,slow=4.1,SNR=3.5
FINES LR LR 07 57 07.3
comp=Z,857nm,19.3s,baz=192,slow=40
FINES FINESS Array B 23.64 7 P **P** **07 46 47.2 -1.0**
FIA1 FINESS Array S 23.64 7 P **P** **07 46 47.4 -0.8**
NC405 NORSAR Array S 23.68 349 P **P** **07 46 48.5 -0.2**
NB201 NORSAR Array S 23.68 349 P **P** **07 46 48.1 -0.6**
NB2 NORSAR Subarra 23.68 349 P **P** **07 46 48.2 -0.5**
comp=Z,121nm,1.7s,baz=159,slow=11
NB2 NORSAR Subarra 23.68 349 P **P** **07 46 48.2 -0.5**
baz=159,slow=11
NOA NORSAR Array B 23.68 349 P **P** **07 46 48.1 -0.5**
comp=Z,18nm,0.8s,baz=149,slow=9.8,SNR=38
NOA LR LR 07 56 53.3
comp=Z,323nm,19.7s,baz=170,slow=39
NBO00 NORSAR Array S 23.74 348 P **P** **07 46 48.7 -0.6**
NC303 NORSAR Array S 23.84 349 P **P** **07 46 49.1 -1.1**
SKAR Skarslia 23.86 345 *e*P **P** **07 46 52.0 +1.5**
NC204 NORSAR Array S 23.98 348 P **P** **07 46 51.0 -0.6**
OUK Oukaimeden 24.20 262 P **P** **07 46 55.4 +1.2**
TTIG Tnine Tigouga, 24.93 261 P **P** **07 47 03.9 +3.3**
DOMB Dombas 24.98 347 *e*P **P** **07 47 01.7 +1.1**
MOL Molde 25.74 346 *e*P **P** **07 47 09.9 +2.4**
KLMR Klimovskoe 25.75 22 *e*P **P** **07 47 05.8 -1.7**
KLMR pmax pmax
comp=Z,109nm,1.1s
KLMR Klimovskoe 25.75 22 *e*P **P** **07 47 05.9 -1.6**
KLMR AMP 07 47 10.8
comp=Z,109nm,1.1s
KLMR LQ LQ 07 55 09.4
KLMR LQ LQ 07 55 09.4
KLMR LR LR 07 57 33.2
NSS Namsos 26.94 352 *e*P **P** **07 47 18.4 +0.1**
KIRV Kirov 27.77 33 P **P** **07 47 25.0 -0.8**
comp=Z,40nm,0.8s,baz=242,slow=6.9,SNR=7.7
KIRV LR LR 07 58 30.6
comp=Z,283nm,19.9s,baz=244,slow=37
KIRV Kirov 27.77 33*ce*P **P** **07 47 24.6 -1.1**
TMCR Tamitsa 28.14 16 *e*P **P** **07 47 28.6 -0.4**
TMCR pmax pmax
comp=Z,35nm,0.6s
MOR8 Moi Rana 28.33 355 *e*P **P** **07 47 31.1 +0.4**
KONS Konsvik 28.75 354 *e*P **P** **07 47 35.1 +0.7**
NBB30 Finnes 29.17 355 *e*P **P** **07 47 39.8 +1.7**
AKTO Aktyubinsk 29.29 53 P **P** **07 47 38.7 -0.8**
comp=Z,9.3nm,0.6s,baz=257,slow=9.5,SNR=17
FAUS Fauske 29.48 356 *e*P **P** **07 47 40.9 0.0**
GEYT Alibeck 29.57 78 P **P** **07 47 41.5 -0.6**
comp=Z,6.3nm,0.6s,baz=273,slow=10,SNR=11
GEYT Alibeck 29.57 78 P **P** **07 47 41.1 -1.0**
GYA0B ALIBECK ARRAY 29.57 78 P **P** **07 47 41.3 -0.8**
TOA0 Torodi Ar. Sit 29.92 219 P **P** **07 47 45.0 -0.3**
TORD Torodi Ar. Bea 29.92 219 P **P** **07 47 45.6 +0.4**
comp=Z,28nm,0.9s,baz=32,slow=8.6,SNR=102
TORD LR LR 08 00 44.5
comp=Z,395nm,18.4s,baz=15,slow=38
TORD Torodi Ar. Bea 29.92 219 P **P** **07 47 45.2 0.0**
STEI Steigen 30.03 356 *e*P **P** **07 47 45.5 -0.2**
N2IH Innhavet 30.03 357 *e*P **P** **07 47 46.6 +0.9**
AB31 Akbulak array 30.35 56 *i*P **P** **07 47 47.7 -1.2**
ABKAR Akbulak array 30.35 56 P **P** **07 47 48.4 -0.5**
APA Apatity 30.41 10‖ *i*P **P** **07 47 48.6 -0.5**
APA pmax pmax
comp=Z,10.0nm,1.6s
APA MLR MLR
comp=Z,1µm,15.0s
KTK1 Kautokeino 31.01 2 *e*P **P** **07 47 55.2 +0.8**
ARU Arti 31.17 42 P **P** **07 47 55.0 -1.0**
comp=Z,2.0nm,0.4s,baz=237,slow=10,SNR=11
ARU Arti 31.17 42*c i*P **P** **07 47 54.9 -1.1**
ARU 07 48 57.7
ARU S **S** **07 53 03.2 +2.3**
ARU SS **SnSn** **07 54 43.8 +0.7**
ARU pmax pmax
comp=Z,20nm,1.1s
ARU MLR MLR
comp=Z,685nm,14.0s
ARU Arti 31.17 42 P **P** **07 47 54.5 -1.4**
ARU IAmb IAmb 07 48 02.0
comp=Z,16nm,0.6s
TRO Tromso 31.61 359 *e*P **P** **07 48 00.3 +0.7**
ARCES ARCESS Array B 31.62 3 P **P** **07 48 00.0 +0.2**
comp=Z,8.9nm,0.8s,baz=190,slow=9.9,SNR=18
ARCES LR LR 08 02 52.6
comp=Z,261nm,20.6s,baz=195,slow=40
KOWA Kowa 31.95 229 P **P** **07 48 03.8 +0.6**
comp=Z,13nm,0.6s,baz=37,slow=9.5,SNR=35
KOWA LR LR 08 02 04.8
comp=Z,922nm,18.4s,baz=20,slow=38
KOWA Kowa 31.95 229 P **P** **07 48 03.2 0.0**
KOWA IAmb IAmb 07 48 05.7
comp=Z,13nm,0.7s
SVE Sverdlovsk 32.39 42*de*P **P** **07 48 06.4 -0.3**
SVE pmax pmax
comp=Z,59nm,0.9s
SVE MLR MLR
comp=Z,1µm,13.0s
UOSS Minazif 32.99 103 P **P** **07 48 11.9 -0.4**
UOSS IAmb IAmb 07 48 31.5
comp=Z,21nm,0.8s
SOHO SOHO 33.68 104 P **P** **07 48 17.7 -0.6**
HRA Herat 33.73 83 P **P** **07 48 18.4 -0.5**
WHFO Wadi Hawf 35.38 115 P **P** **07 48 32.6 -0.4**
ABTO Aybut 35.41 117 P **P** **07 48 33.6 +0.2**
SNR=8.0
SMDO Samad 35.43 104 P **P** **07 48 32.7 -0.9**
RBK Rabkut 35.96 115 P **P** **07 48 38.1 0.0**
SNR=8.5
MHTO MHTO 36.55 107 P **P** **07 48 43.5 +0.4**
SNR=5.9
LODK Lodwar 37.12 155 P **P** **07 48 50.1 +2.1**
SNR=5.2
BRVK Borovoye 37.17 50*ce*P **P** **07 48 47.4 -0.6**
BRVK pmax pmax
comp=Z,20nm,1.7s
BRVK Borovoye 37.17 50 P **P** **07 48 47.8 -0.2**
BRVK IAmb IAmb 07 48 59.5
comp=Z,21nm,0.8s
IUG Iuzhnay 37.72 68 *e*P **P** **07 48 51.7 -1.3**
comp=Z,5.5nm,0.8s,baz=68
IUG Iuzhnay 37.72 68 *e*P **P** **07 48 51.6 -1.3**
IUG pmax pmax
comp=Z,5.0nm,0.8s
CHGR Chuyangaron 37.85 74 P **P** **07 48 53.7 -0.4**
KK31 Karatay Array 37.90 66 P **P** **07 48 54.3 -0.1**
KK31 pmax pmax
comp=Z,23nm,0.6s
KK31 Karatay Array 37.90 66 P **P** **07 48 54.3 -0.1**
KK31 IAmb IAmb 07 49 02.7
comp=Z,23nm,0.6s
KKAR Karatay Array 37.90 66 P **P** **07 48 54.5 +0.1**
KKAR pmax pmax
comp=Z,23nm,0.6s
KKAR Karatay Array 37.90 66 P **P** **07 48 54.5 +0.1**
KKAR IAmb IAmb 07 49 02.7
comp=Z,23nm,0.6s
GAR Garm 38.64 73 P **P** **07 49 00.9 +0.2**

GAR IAmb IAmb 07 49 17.6
comp=Z,33nm,0.7s
BRZS Berezniki 38.65 55 *e*P **P 07 48 59.4 -1.2**
baz=55
BRZS Berezniki 38.65 55 *e*P **P 07 48 59.3 -1.2**
BTK Batken 38.75 71 P **P 07 49 00.8 -0.8**
BTK pmax pmax
comp=Z,19nm,0.7s
BTK Batken 38.75 71 P **P 07 49 00.8 -0.8**
DBIC Dimbokro 38.78 223 P **P 07 49 02.3 +0.4**
comp=Z,29nm,0.6s,baz=12,slow=9.6,SNR=44
DBIC LR LR 08 05 48.2
comp=Z,447nm,18.5s,baz=32,slow=37
DBIC Dimbokro 38.78 223 P **P 07 49 01.7 -0.2**
DBIC pmax pmax
comp=Z,31nm,0.7s
DBIC Dimbokro 38.78 223 P **P 07 49 01.7 -0.2**
DBIC IAmb IAmb 07 49 03.1
comp=Z,31nm,0.7s
TIC Toumodi 38.89 223 *e*P **P 07 49 03.1 +0.2**
KIC Kosan Boka 38.98 222 *e*P **P 07 49 04.0 +0.4**
comp=Z,66nm,0.7s
KBL Kabul 38.99 80 P **P 07 49 03.3 -0.5**
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL Kabul 38.99 80 P **P 07 49 03.3 -0.5**
SCO Scoresbysund 39.23 339 *i* P **P 07 49 06.8 +1.7**
SCO pmax pmax
comp=Z,56nm,1.0s
SCO Scoresbysund 39.23 339 *i* P **P 07 49 06.8 +1.7**
comp=Z,56nm,1.0s
SCO Scoresbysund 39.23 339 *i* P **P 07 49 06.8 +1.7**
SCO IAmb IAmb 07 49 12.7
comp=Z,56nm,1.0s
LIC Lamto 39.24 222 *e*P **P 07 49 06.2 +0.4**
comp=Z,170nm,0.7s
SOCY Socotra 39.50 122 P **P 07 49 06.5 -1.6**
SNR=5.3
SOCY Socotra 39.50 122 P **P 07 49 06.2 -1.8**
SOCY IAmb IAmb 07 49 07.0
comp=Z,25nm,0.8s
MBAR Mbarara 39.67 164 P **P 07 49 11.3 +1.7**
comp=Z,2.8nm,0.3s,baz=325,slow=9.9,SNR=8.0
MBAR Mbarara 39.67 164 P **P 07 49 08.1 -1.4**
MBAR pmax pmax
comp=Z,11nm,1.0s
MBAR MLR MLR
comp=Z,400nm,18.0s
MBAR Mbarara 39.67 164 P **P 07 49 08.1 -1.4**
BTLS Baital 40.09 62 *e*P **P 07 49 11.2 -1.4**
comp=Z,2.7nm,0.7s,baz=62
BTLS Baital 40.09 62 *e*P **P 07 49 11.2 -1.4**
BTLS pmax pmax
comp=Z,3.0nm,0.7s
SPA0 Spitsbergen Ar 40.23 359 *e*P **P 07 49 15.1 +1.8**
SGDS Sogindy 40.79 65 *e*P **P 07 49 17.6 -0.9**
baz=65
SGDS Sogindy 40.79 65 *e*P **P 07 49 17.6 -0.9**
AAK Ala-Archa 40.86 66 *i* P **P 07 49 19.2 -0.1**
AAK pmax pmax
comp=Z,17nm,1.0s
TKM2 Tokmak 2 41.59 65 P **P 07 49 27.0 +1.7**
KUU Kurty 41.91 64 *e*P **P 07 49 27.1 -0.7**
comp=Z,12nm,0.8s,baz=64
KUU *e*S **S 07 55 46.4 +1.3**
baz=64
KUU Kurty 41.91 64 *e*P **P 07 49 27.0 -0.7**
KUU *e*S **S 07 55 46.4 +1.3**
KUU pmax pmax
comp=Z,12nm,0.8s
KMBO Kilima Mbogo 42.01 154 P **P 07 49 32.8 +3.9**
comp=Z,4.3nm,0.7s,baz=349,slow=8.2,SNR=11
KMBO Kilima Mbogo 42.01 154 P **P 07 49 29.4 +0.4**
KMBO pmax pmax
comp=Z,6.0nm,0.8s
KMBO MLR MLR
comp=Z,500nm,18.0s
KMBO Kilima Mbogo 42.01 154 P **P 07 49 29.4 +0.4**
DAG Danmarks Havn 42.36 348 *i* P P 07 49 35.7 +4.9
DAG pmax pmax
comp=Z,5.0nm,0.8s
DAG Danmarks Havn 42.36 348 *i* P P 07 49 35.7 +4.9
comp=Z,5.2nm,0.8s
DAG Danmarks Havn 42.36 348 *i* P P 07 49 35.7 +4.9
DAG IAmb IAmb 07 49 36.8
comp=Z,5.2nm,0.8s
KURK Kurchatov 42.39 53 P **P 07 49 30.8 -0.6**
KURK Kurchatov 42.39 53*ce*P **P 07 49 29.7 -1.7**
KURK pmax pmax
comp=Z,30nm,1.3s
KURK Kurchatov 42.39 53 P **P 07 49 30.9 -0.5**
KURK IAmb IAmb 07 49 33.8
comp=Z,45nm,1.4s
NIL Nilore 42.57 79 P **P 07 49 32.5 -0.7**
NIL pmax pmax
comp=Z,55nm,1.0s
NIL Nilore 42.57 79 P **P 07 49 32.5 -0.7**
NIL IAmb IAmb 07 49 42.5
comp=Z,55nm,1.0s
MDOK Medeo 42.58 65 *e*P **P 07 49 32.2 -1.1**
baz=65
MDOK Medeo 42.58 65 *e*P **P 07 49 32.1 -1.1**
KSH Kashi 42.73 70 P **P 07 49 33.5 -1.0**
KSH S **S 07 55 54.7 -2.7**
KSH SS SS 07 58 56.3 -12
KSH pmax pmax
comp=Z,25nm,1.0s
KSH pmax pmax
comp=Z,480nm,6.0s
KSH LR LR
comp=Z,350nm,6.9s
KSH LR LR
comp=Z,500nm,6.0s
KSH LR LR
comp=Z,570nm,8.2s
TDK Taldyqorghan 43.13 62 *e*P **P 07 49 36.7 -1.0**
comp=Z,14nm,0.6s,baz=62
TDK Taldyqorghan 43.13 62 *e*P **P 07 49 36.6 -1.0**
TDK pmax pmax
comp=Z,14nm,0.6s
KIBK Kibwezi 43.41 154 P **P 07 49 42.1 +1.9**
SATY Saty 43.57 64 *e*P **P 07 49 40.3 -1.0**
comp=Z,9.6nm,1.4s,baz=64
SATY Saty 43.57 64 *e*P **P 07 49 40.3 -1.0**
SATY pmax pmax
comp=Z,10.0nm,1.4s
KPKS Kokpek 43.67 64 *e*P **P 07 49 40.9 -1.2**
comp=Z,7.7nm,1.5s,baz=64
KPKS Kokpek 43.67 64 *e*P **P 07 49 40.8 -1.2**
KPKS pmax pmax
comp=Z,8.0nm,1.5s
PDGK Podgornoye 44.27 64 P **P 07 49 46.0 -0.9**
SHLS Shalkode 44.30 64 *e*P **P 07 49 48.1 +0.9**
baz=64
SHLS Shalkode 44.30 64 *e*P **P 07 49 48.0 +0.9**
ICESG Greenland Ices 44.38 334 *i* P **P 07 49 50.4 +2.8**
SUMG Summit 44.87 339 *i* P **P 07 49 53.0 +1.5**
SUMG pmax pmax
comp=Z,130nm,1.1s
SUMG Summit 44.87 339 P **P 07 49 51.3 -0.3**
SUMG Summit 44.87 339 *i* P **P 07 49 53.0 +1.5**
comp=Z,133nm,1.1s
SUMG Summit 44.87 339 *i* P **P 07 49 53.1 +1.5**
SUMG IAmb IAmb 07 49 58.6
comp=Z,133nm,1.1s
MAKZ Makanchi 45.20 58 P **P 07 49 53.3 -0.8**
MAKZ pmax pmax
comp=Z,13nm,0.8s
MAKZ Makanchi 45.20 58 P **P 07 49 53.3 -0.8**
MK31 Makanchi Array 45.41 58*ce*P **P 07 49 54.5 -1.3**
MKAR Makanchi Array 45.41 58 P **P 07 49 54.8 -1.0**
comp=Z,13nm,0.8s,baz=282,slow=6.8,SNR=25
MKAR LR LR 08 12 05.3
comp=Z,198nm,18.3s,baz=272,slow=40
MKAR Makanchi Array 45.41 58 P **P 07 49 54.9 -0.9**
NOR Nord 45.55 353 *i* P **P 07 49 56.8 +0.4**
NOR pmax pmax
comp=Z,38nm,1.5s
NOR Nord 45.55 353 *i* P **P 07 49 56.8 +0.4**
comp=Z,38nm,1.5s
NOR Nord 45.55 353 *i* P **P 07 49 56.9 +0.4**
NOR IAmb IAmb 07 50 03.8
comp=Z,38nm,1.5s
ZAA0 Zalesovo Array 45.80 48 P **P 07 49 57.6 -1.2**
ZALV Zalesovo Beam 45.80 48 P **P 07 49 58.0 -0.7**
comp=Z,45nm,0.4s,baz=276,slow=8.7,SNR=75

ZALV PP **PP 07 51 46.0 +0.1**
comp=Z,17nm,0.8s,baz=276,slow=10,SNR=3.7
ZALV LR LR 08 12 47.4
comp=Z,185nm,18.4s,baz=276,slow=41
ZALV Zalesovo Beam 45.80 48 P **P 07 49 57.8 -0.9**
NRIK Noril'sk 46.90 27 P **P 07 50 08.1 +1.0**
comp=Z,6.2nm,0.6s,baz=239,slow=8.1,SNR=8.3
NRIK Noril'sk 46.90 27*ce*P **P 07 50 07.9 +0.7**
NRIK pmax pmax
comp=Z,14nm,1.3s
ZSN Zaisan 46.98 57 *e*P **P 07 50 07.2 -0.9**
comp=Z,7.8nm,1.2s,baz=57
ZSN Zaisan 46.98 57 *e*P **P 07 50 07.2 -0.9**
ZSN pmax pmax
comp=Z,8.0nm,1.2s
WMQ Urumqi 49.87 61 *e*P **P 07 50 30.2 -0.3**
WMQ pP sP 07 50 38.3 -0.1
WMQ sP pP 07 50 41.4 +5.2
WMQ pmax pmax
WMQ comp=Z,30nm,0.9s
WMQ pmax pmax
comp=Z,790nm,11.6s
WMQ LR LR
comp=Z,960nm,29.1s
WMQ LR LR
comp=Z,2μm,28.9s
WMQ LR LR
comp=Z,2μm,29.1s
PYUN Piuthan 52.48 81 *e*P **P 07 50 49.1 -1.4**
comp=Z,54nm,0.6s
DANN Dangsing 52.97 81 *e*P **P 07 50 53.2 -1.0**
comp=Z,62nm,0.7s
KOLN Koldanda 53.12 81 *e*P **P 07 50 53.0 -2.2**
comp=Z,25nm,0.8s
LSZ Lusaka 53.59 171 P **P 07 51 00.3 +1.8**
comp=Z,24nm,0.8s,baz=7.5,slow=7.5,SNR=36
LSZ Lusaka 53.59 171 P **P 07 51 00.3 +1.8**
LSZ Lusaka 53.59 171 P **P 07 50 58.2 -0.3**
LSZ pmax pmax
comp=Z,26nm,0.9s
LSZ Lusaka 53.59 171 P **P 07 50 58.2 -0.3**
LSZ IAmb IAmb 07 51 01.2
comp=Z,26nm,0.9s
GKN Gorkha 53.81 81 *e*P **P 07 50 58.5 -1.8**
comp=Z,35nm,0.7s
DMN Daman 54.37 81 *e*P **P 07 51 02.9 -1.5**
comp=Z,28nm,0.6s
KKN Kakani 54.41 80 *e*P **P 07 51 03.6 -1.1**
comp=Z,9.7nm,0.4s
HYB Hyderabad 54.52 95 *i* P **P 07 51 03.0 -2.3**
PKIN Phulchoki 54.61 81 *e*P **P 07 51 04.5 -1.7**
comp=Z,16nm,0.6s
PKI Pulchoki 54.62 81 *e*P **P 07 51 04.2 -2.1**
comp=Z,12nm,0.6s
GUN Gumba 54.82 80 *e*P **P 07 51 06.9 -0.9**
comp=Z,46nm,0.8s
RAMN Ramite 55.85 81 *e*P **P 07 51 13.3 -1.8**
comp=Z,28nm,0.8s
MOY Mondy 55.86 48 *e*P **P 07 51 15.3 +0.6**
MOY pmax pmax
comp=Z,17nm,1.8s
ODAN Odare 56.51 80 *e*P **P 07 51 18.3 -1.5**
comp=Z,8.2nm,0.6s
TAPN Taplejung 56.52 80 *e*P **P 07 51 18.3 -1.6**
comp=Z,12nm,0.6s
TSUM Tsumeb 57.05 183 P **P 07 51 23.5 0.0**
TLY Talaya 57.40 47 *e*P **P 07 51 25.7 +0.2**
TLY pmax pmax
comp=Z,61nm,1.3s
TLY MLR MLR
comp=Z,872nm,14.0s
TLY Talaya 57.40 47 P **P 07 51 26.0 +0.5**
TLY IAmb IAmb 07 51 32.4
comp=Z,18nm,1.0s
ZAK Zakamensk 57.67 49 *e*P **P 07 51 27.4 -0.2**
ZAK pmax pmax
comp=Z,10.0nm,0.9s
LSA Lhasa 58.03 75 P **P 07 51 29.8 -1.0**
LSA pmax pmax
comp=Z,14nm,0.5s
LSA Lhasa 58.03 75 P **P 07 51 29.8 -1.0**
LSA IAmb IAmb 07 51 31.6
comp=Z,14nm,0.5s
SCHQ Schefferville 58.47 317 P **P 07 51 33.3 +0.4**
comp=Z,8.2nm,0.7s,baz=80,slow=4.8,SNR=10
SCHQ Schefferville 58.47 317 P **P 07 51 32.9 0.0**
SCHQ IAmb IAmb 07 51 56.3
comp=Z,14nm,0.8s
MATP Matopo 58.70 171 P **P 07 51 36.5 +1.5**
comp=Z,27nm,0.7s,baz=355,slow=6.6,SNR=62
TIXI Tiksi 59.75 20*ce*P **P 07 51 42.1 +0.6**
TIXI Tiksi 59.75 20 P **P 07 51 41.5 -0.1**
TIXI IAmb IAmb 07 51 51.2
comp=Z,15nm,1.1s
GTA Gaotai 59.93 62 P **P 07 51 43.1 -0.4**
GTA pP pP 07 51 47.8 -1.5
GTA sP sP 07 51 50.0 -1.4
GTA pmax pmax
comp=Z,12nm,1.2s
GTA LR LR
comp=Z,130nm,17.5s
GTA LR LR
comp=Z,220nm,16.4s
BOD Bodaibo 60.49 38 *e*P **P 07 51 46.0 -0.8**
BOD pmax pmax
comp=Z,21nm,1.0s
SONM Songino Array 60.57 51 P **P 07 51 47.4 -0.3**
comp=Z,7.3nm,0.8s,baz=286,slow=9.2,SNR=31
SONM LR LR 08 19 00.1
comp=Z,138nm,18.1s,baz=356,slow=37
SONM Songino Array 60.57 51 P **P 07 51 46.9 -0.8**
SHL Shillong 60.64 79 P **P 07 51 47.7 -0.9**
SHL pmax pmax
comp=Z,14nm,0.8s
SHL Shillong 60.64 79 P **P 07 51 47.7 -0.9**
SHL IAmb IAmb 07 51 58.1
comp=Z,14nm,0.8s
HAL Halifax 60.73 306 P **P 07 51 48.9 +0.3**
HAL pmax pmax
comp=Z,34nm,0.8s
HAL Halifax 60.73 306 P **P 07 51 48.9 +0.3**
ULN Ulaanbaatar 60.96 50 P **P 07 51 50.0 -0.4**
ULN pmax pmax
comp=Z,12nm,0.7s
ULN Ulaanbaatar 60.96 50 P **P 07 51 50.0 -0.4**
ULN IAmb IAmb 07 51 56.2
comp=Z,12nm,0.7s
ABPO Ambohimpanom 62.15 151 P **P 07 51 58.7 +0.1**
ABPO pmax pmax
comp=Z,20nm,1.1s
ABPO Ambohimpanom 62.15 151 P **P 07 51 58.7 +0.1**
ABPO IAmb IAmb 07 52 01.6
comp=Z,20nm,1.1s
PALK Pallekele 62.27 103 *i* P **P 07 51 59.2 -0.3**
PALK pmax pmax
comp=Z,34nm,1.0s
E64A Bridgewater 62.59 309 P **P 07 52 01.0 -0.2**
baz=63
PQI Presque Isle 62.59 309 P **P 07 52 01.8 +0.7**
PQI IAmb IAmb 07 52 14.0
comp=Z,20nm,1.1s
E63A Oxbow 62.95 309 P **P 07 52 04.1 +0.5**
E63A IAmb IAmb 07 52 09.9
comp=Z,18nm,1.1s
LBTB Lobatse 62.97 175 P **P 07 52 05.1 +1.2**
LBTB pmax pmax
comp=Z,35nm,1.2s
LBTB Lobatse 62.97 175 P **P 07 52 05.1 +1.2**
D62A Allapoint, All 63.03 310 P **P 07 52 05.5 +1.4**
baz=62
D62A Allapoint, All 63.03 310 P **P 07 52 05.1 +1.0**
E62A Clayton Lake 63.53 310 P **P 07 52 08.5 +1.0**
E62A IAmb IAmb 07 52 26.8
comp=Z,21nm,1.1s
LZH Lanzhou 64.31 63 *e*P **P 07 52 12.9 -0.1**
LZH pP pP 07 52 16.0 -2.8
LZH sP sP 07 52 18.7 -2.2
LZH pmax pmax
comp=Z,23nm,1.1s
CHGQ Chibougamau 64.78 315 P **P 07 52 16.5 +0.9**
baz=60
YAK Yakutsk 65.22 29 *e*P **P 07 52 17.5 -0.7**
YAK *e* 07 54 45.6
YAK *e*S **S 08 00 52.7 -7.5**
YAK *e**SS sS 08 01 29.0 +19
YAK *e*SS **SS 08 05 08.6 -3.5**

YAK *e*SSS SSS 08 08 07.9
YAK pmax pmax
comp=Z,21nm,0.6s
YAK pmax pmax
comp=N,6.0nm,0.9s
YAK pmax pmax
comp=E,15nm,1.1s
YAK pmax pmax
comp=Z,50nm,2.5s
YAK pmax pmax
comp=N,47nm,1.9s
YAK pmax pmax
comp=E,21nm,2.3s
YAK smax smax
comp=N,140nm,2.7s
YAK smax smax
comp=E,185nm,3.1s
YAK Yakutsk 65.22 29 P **P 07 52 17.2 -0.9**
D58A Chemin du LacG 65.32 311 P **P 07 52 20.1 +0.9**
baz=60
F60A Warwick 65.32 310 P **P 07 52 20.6 +1.5**
baz=60
H62A Milan 65.53 308 P **P 07 52 22.1 +1.5**
baz=60
F59A Saint Guilaume 65.88 310 P **P 07 52 24.5 +1.7**
baz=60
E58A La Victoria 65.92 311 P **P 07 52 24.4 +1.4**
baz=60
LBNH Lisbon 66.17 308 P **P 07 52 25.1 +0.4**
LBNH pmax pmax
comp=Z,28nm,1.2s
LBNH Lisbon 66.17 308 P **P 07 52 25.1 +0.4**
E57A Chemin Saint G 66.41 311 P **P 07 52 26.9 +0.7**
baz=59
D56A ZEC Mazanza, M 66.44 312 P **P 07 52 27.5 +1.0**
baz=59
BOSA Boshof 66.52 175 P **P 07 52 27.9 +0.8**
comp=Z,9.3nm,0.5s,baz=358,slow=7.0,SNR=35
BOSA Boshof 66.52 175 P **P 07 52 27.6 +0.6**
BOSA pmax pmax
comp=Z,51nm,1.4s
BOSA Boshof 66.52 175 P **P 07 52 27.6 +0.6**
LSQQ Lebel-sur-Quev 66.68 315 P **P 07 52 29.2 +1.4**
baz=58
E56A St. Veronique 66.87 312 P **P 07 52 30.5 +1.4**
baz=59
CD2 Chengdu 66.88 68 *e*P P 07 52 35.8 +6.3
FRNY Flat Rock 66.89 309 P **P 07 52 30.1 +0.9**
FRNY IAmb IAmb 07 52 51.3
comp=Z,17nm,1.2s
H59A Cadyville 67.05 309 P **P 07 52 32.0 +1.7**
baz=59
HHC Hu-ho-hao-te 67.15 55 *e*P **P 07 52 33.7 +2.6**
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,140nm,6.9s
VLDQ Val d'Or 67.44 314 P **P 07 52 34.6 +1.9**
E55A Montcerf-Lytto 67.52 312 P **P 07 52 34.8 +1.6**
baz=58
I58A Old Forge 68.34 309 P **P 07 52 40.4 +1.9**
baz=58
I57A Carthage 68.62 310 P **P 07 52 41.7 +1.4**
baz=57
XAN Xi'an 68.93 63 P **P 07 52 42.2 -0.2**
XAN pP pP 07 52 47.5 -0.7
XAN pmax pmax
comp=Z,13nm,1.3s
XAN Xi'an 68.93 63 P **P 07 52 41.6 -0.8**
XAN pmax pmax
comp=Z,14nm,1.0s
XAN Xi'an 68.93 63 P **P 07 52 41.6 -0.8**
XAN IAmb IAmb 07 52 48.0
comp=Z,14nm,1.0s
ALGO Algonquin Park 68.95 312 P **P 07 52 43.6 +1.4**
baz=57
ZEA Zeya 68.99 38 *e*P **P 07 52 44.2 +1.9**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 69.21 74⇑ *e*P **P 07 52 43.4 -1.0**
KMI pmax pmax
comp=Z,9.0nm,1.1s
G54A Lake Saint Pet 69.28 312 P **P 07 52 46.1 +1.8**
baz=56
MHMT Maesarieng 69.35 83 P **P 07 52 45.3 +0.3**
comp=Z,1μmcomp=Z,56nm,0.8s
C36M Paulatuk 69.72 347 P **P 07 52 47.3 +0.8**
baz=29
C36M Paulatuk 69.72 347 P **P 07 52 46.8 +0.2**
C36M IAmb IAmb 07 52 52.6
comp=Z,14nm,0.7s
BINY Binghamton 69.77 308 P **P 07 52 49.4 +2.0**
baz=57
CHTO Chiang Mai 69.78 82 P **P 07 52 46.8 -1.0**
CHTO pmax pmax
comp=Z,8.0nm,0.9s
CHTO Chiang Mai 69.78 82 P **P 07 52 46.8 -1.0**
CM33 Chiang Mai Arr 69.78 82 P **P 07 52 47.0 -0.8**
CMMT Chiang Mai 69.78 82 P **P 07 52 48.3 +0.5**
comp=Z,5.7nm,1.0s
CM34 Chiang Mai Arr 69.92 81 P **P 07 52 48.0 -0.6**
CM15 Chiang Mai Arr 69.97 82 P **P 07 52 49.0 +0.1**
comp=Z,552nmcomp=Z,16nm,0.8s
CM13 Chiang Mai Arr 69.97 82 P **P 07 52 49.1 +0.2**
comp=Z,97nmcomp=Z,12nm,0.8s
CM31 Chiang Mai Arr 69.98 82 P **P 07 52 49.5 +0.5**
comp=Z,310nm,0.7s
CM31 Chiang Mai Arr 69.98 82 P **P 07 52 47.9 -1.1**
CMAR Chiang Mai Arr 69.98 82 P **P 07 52 48.1 -0.9**
comp=Z,8.1nm,0.8s,baz=306,slow=7.5,SNR=34
CMAR Chiang Mai Arr 69.98 82 P **P 07 52 48.4 -0.6**
CMAR Chiang Mai Arr 69.98 82 P **P 07 52 48.4 -0.6**
CM02 Chiang Mai Arr 70.00 82 P **P 07 52 49.0 -0.1**
comp=Z,119nmcomp=Z,16nm,0.8s
CM01 Chiang Mai Arr 70.01 82 P **P 07 52 49.4 +0.2**
comp=Z,207nmcomp=Z,14nm,0.8s
CM05 Chiang Mai Arr 70.01 82 P **P 07 52 49.4 +0.2**
comp=Z,95nmcomp=Z,11nm,0.8s
CM35 Chiang Mai Arr 70.02 82 P **P 07 52 51.0 +1.8**
CM09 Chiang Mai Arr 70.02 82 P **P 07 52 49.9 +0.6**
comp=Z,114nmcomp=Z,13nm,0.8s
CM04 Chiang Mai Arr 70.04 82 P **P 07 52 49.6 +0.2**
comp=Z,15nm,1.0s
CM36 Chiang Mai Arr 70.06 82 P **P 07 52 49.0 -0.5**
PAYA Payao 70.19 81 P **P 07 52 50.0 -0.3**
K56A Middlesex 70.32 309 P **P 07 52 52.8 +2.0**
baz=56
L57A Andrews Acres 70.42 308 P **P 07 52 53.3 +2.0**
baz=56
O60A Telford 70.44 306 P **P 07 52 53.5 +2.0**
baz=56
BJI Beijing 70.55 54 P **P 07 52 51.7 -0.4**
BJI pmax pmax
comp=Z,8.0nm,1.1s
BJT Baijiatuau 70.56 54 P **P 07 52 51.4 -0.8**
BJT pmax pmax
comp=Z,8.0nm,0.7s
BJT Baijiatuau 70.56 54 P **P 07 52 51.4 -0.8**
M57A Sunshine Farm, 70.96 308 P **P 07 52 56.5 +1.9**
baz=56
N58A Sunbury 70.98 307 P **P 07 52 56.4 +1.7**
baz=56
SUKH Sukhothai 71.07 82 P **P 07 52 55.6 0.0**
BILL Bilibino 71.11 13 *e*P **P 07 52 54.8 -0.3**
BILL *e* 07 55 30.5
BILL *e*S **S 08 02 05.2 -5.2**
BILL pmax pmax
comp=Z,12nm,1.1s
BILL MLR MLR
comp=Z,223nm,22.0s
ENH Enshi 71.38 66 P **P 07 52 56.0 -1.4**
ENH IAmb IAmb 07 53 03.9
comp=Z,18nm,0.9s
GYA Guiyang 71.42 71 ⇑P **P 07 52 57.6 -0.2**
GYA pmax pmax
comp=Z,7.0nm,1.7s
GYA pmax pmax
comp=Z,80nm,3.6s
UTTA Uttaradit 71.64 82 P **P 07 52 60.0 +0.9**
comp=Z,9.1nm,0.9s
PHIT Phitsanulok 71.85 82 P **P 07 53 01.7 +1.4**
comp=Z,79nm,0.9s
UTHA Uthaitani 72.03 84 P **P 07 53 01.0 -0.4**
P58A Pank, Wackersv 72.11 306 P **P 07 53 03.4 +1.8**
baz=55
INK Inuvik 72.13 350 P **P 07 53 01.3 +0.1**

INK pmax pmax
comp=Z,10.0nm,1.0s
INK Inuvik 72.13 350 P **P** **07 53 01.3 +0.1**
SEY Seymchan 72.24 21 LR LR 08 27 25.1
comp=Z,182nm,20.6s,baz=322,slow=38
SEY Seymchan 72.24 21 *i* P **P** **07 53 02.7 +0.8**
ERPA Erie 72.27 310 P **P** **07 53 04.1 +1.6**
baz=54
O56A Blue Knob Stat 72.47 308 P **P** **07 53 05.5 +1.7**
baz=55
N54A Moraine State 72.95 309 P **P** **07 53 08.4 +1.8**
baz=54
O55A Ligonier 72.96 308 P **P** **07 53 08.5 +1.8**
baz=54
P56A Dayton Farm, R 73.08 307 P **P** **07 53 09.0 +1.7**
baz=54
M53A WI Miller and 73.08 310 P **P** **07 53 08.7 +1.3**
baz=54
TOLK Toolik Lake Re 73.32 356 P **P** **07 53 10.0 +1.6**
baz=8.2
TOLK Toolik Lake Re 73.32 356 P **P** **07 53 07.8 -0.6**
TOLK IAmb IAmb 07 53 15.4
comp=Z,16nm,1.0s
R58B Mineral 73.36 305 IAMs_20 IAMs_20 08 25 41.6
comp=Z,470nm,19.0s
YKA Yellowknife Ar 73.44 340 P **P** **07 53 09.6 +0.6**
comp=Z,4.9nm,0.8s,baz=39,slow=5.7,SNR=4.6
NONG Nongkai 73.48 80 P **P** **07 53 10.3 +0.3**
comp=Z,17nm,0.7s
Q56A Snyder Ridge, 73.57 307 P **P** **07 53 11.9 +1.6**
baz=54
MCWV Mont Chateau 73.62 308 P **P** **07 53 12.6 +2.0**
baz=54
O54A Avella 73.64 308 P **P** **07 53 12.3 +1.6**
baz=54
P55A Reedsville 73.70 308 P **P** **07 53 12.7 +1.6**
baz=54
PHET Kaeng Krachan 73.72 86 P **P** **07 53 12.5 +1.1**
CHAI Chaiyaphum 73.82 82 P **P** **07 53 11.9 -0.1**
comp=Z,853nmcomp=Z,42nm,0.8s
KLR Kulʻdur 73.99 39 *ce* P **P** **07 53 11.8 -0.7**
KLR pmax pmax
comp=Z,19nm,1.1s
P54A Burton 74.05 308 P **P** **07 53 15.0 +1.9**
baz=54
Q55A Buckhannon 74.16 307 P **P** **07 53 15.2 +1.5**
baz=54
KHON Khomkaen 74.22 81 P **P** **07 53 15.3 +0.9**
comp=Z,46μmcomp=Z,53nm,0.4s
V60A Jim Taylor Roa 74.23 303 P **P** **07 53 15.8 +1.6**
baz=54
EPYK Eagle Plains 74.38 351 P **P** **07 53 15.3 +0.8**
baz=18
EPYK Eagle Plains 74.38 351 P **P** **07 53 15.1 +0.5**
EPYK IAmb IAmb 07 53 20.5
comp=Z,18nm,0.8s
MA2 Magadan 74.40 24 *i* P **P** **07 53 15.0 +0.2**
MA2 pmax pmax
comp=Z,41nm,1.1s
O52A Adamsville 74.58 309 P **P** **07 53 17.7 +1.5**
baz=53
Q54A Coxs Mills 74.64 308 P **P** **07 53 17.8 +1.3**
baz=53
WHN Wuhan 74.69 63 P P 07 53 10.3 -6.6
COLD Coldfoot 74.76 356 P **P** **07 53 18.4 +1.7**
baz=7.6
O51A Pataskala 75.03 309 P **P** **07 53 20.2 +1.4**
baz=53
COWI Conover 75.08 317 IAMs_20 IAMs_20 08 19 38.3
comp=Z,540nm,18.0s
FYU Fort Yukon 75.08 354 IAMs_20 IAMs_20 08 26 29.8
comp=Z,290nm,21.0s
EYMN Ely 75.12 320 P **P** **07 53 20.0 +0.9**
baz=49
GRNR Gornyy 75.23 36 *i* P **P** **07 53 20.1 +0.4**
GRNR pmax pmax
comp=Z,20nm,1.2s
GRNR MLR MLR
comp=N,260nm,14.0s
GRNR MLR MLR
comp=E,340nm,14.0s
GRNR MLR MLR
comp=Z,330nm,17.0s
Q52A Bidwell 75.54 308 P **P** **07 53 22.7 +1.0**
baz=52
ULM Lac du Bonnet 75.72 324 P **P** **07 53 23.5 +1.0**
comp=Z,19nm,0.8s,baz=40,slow=6.2,SNR=8.1
ULM Lac du Bonnet 75.72 324 IAMs_20 IAMs_20 08 26 08.8
comp=Z,263nm,18.0s
L46A Eue Claire 76.08 313 IAMs_20 IAMs_20 08 20 17.1
comp=Z,369nm,22.0s
PRP Porcupine Dome 76.14 354 P **P** **07 53 24.9 +0.1**
PRP IAMs_20 IAMs_20 08 23 42.7
comp=Z,472nm,18.0s
IMAR Indian Mountai 76.15 358 P **P** **07 53 25.0 +0.3**
POKR Poker Plat Res 76.68 355 P **P** **07 53 29.4 +1.6**
baz=9.8
POKR Poker Plat Res 76.68 355 P **P** **07 53 26.8 -1.0**
POKR IAmb IAmb 07 53 34.6
comp=Z,14nm,0.9s
POKR IAMs_20 IAMs_20 08 23 53.1
comp=Z,428nm,18.0s
V55A Taylorsville 76.76 305 P **P** **07 53 30.6 +1.9**
baz=52
I23K Minto, Yukon-K 76.78 356 P **P** **07 53 27.9 -0.4**
I23K IAmb IAmb 07 53 35.2
comp=Z,17nm,1.1s
MDM Murphy Dome 76.89 355 P **P** **07 53 29.2 +0.2**
MDM IAmb IAmb 07 53 35.5
comp=Z,21nm,1.1s
NJ2 Nanjing 76.92 60 *e* P **P** **07 53 28.9 -0.8**
NJ2 pmax pmax
comp=Z,23nm,1.0s
DAWY Dawson 76.93 351 P **P** **07 53 28.6 -0.6**
DAWY IAmb IAmb 07 53 35.9
comp=Z,17nm,0.9s
COLA College 76.95 355 *i* P **P** **07 53 28.0 -1.2**
COLA pmax pmax
comp=Z,8.0nm,1.0s
MLY Manley 76.97 356 P **P** **07 53 31.3 +1.8**
baz=7.1
IL31 76.98 354 P **P** **07 53 28.6 -0.8**
ILAR Eielson Array 76.98 354 P **P** **07 53 30.5 +1.1**
comp=Z,2.9nm,0.8s,baz=355,slow=4.4,SNR=25
ILAR Eielson Array 76.98 354 P **P** **07 53 29.3 -0.2**
K27K Chicken 77.27 352 P **P** **07 53 33.1 +2.0**
baz=14
KMSC Kings Mountain 77.27 305 IAMs_20 IAMs_20 08 27 16.2
comp=Z,475nm,21.0s
V54A Nebo 77.28 305 P **P** **07 53 32.7 +1.1**
baz=52
HDA Harding Lake 77.34 354 P **P** **07 53 32.6 +1.1**
baz=10
HDA Harding Lake 77.34 354 P **P** **07 53 30.5 -1.0**
HDA IAmb IAmb 07 53 37.5
comp=Z,22nm,0.8s
WRH Wood River Hil 77.37 355 P **P** **07 53 30.8 -0.8**
WRH IAmb IAmb 07 53 37.7
comp=Z,16nm,0.8s
USRK Ussuriysk Ar. 77.39 43 P **P** **07 53 31.9 -0.3**
comp=Z,3.8nm,0.5s,baz=301,slow=5.5,SNR=14
USRK Ussuriysk Ar. 77.39 43 P **P** **07 53 30.9 -1.3**
SCRK Sand Creek 77.52 353 P **P** **07 53 34.0 +1.4**
baz=12
SPMN Marine on St. 77.59 318 P **P** **07 53 34.1 +0.8**
baz=48
SPMN Marine on St. 77.59 318 P **P** **07 53 32.1 -1.1**
SPMN IAmb IAmb 07 53 39.7
comp=Z,19nm,1.1s
RIDG Independent Ri 77.83 353 P **P** **07 53 33.2 -1.1**
DOT Dot Lake 77.84 353 P **P** **07 53 33.3 -1.0**
W54A Cherokee Point 77.86 305 P **P** **07 53 36.1 +1.2**
baz=52
BLO Bloomington 78.01 311 P **P** **07 53 34.4 -1.2**
BLO pmax pmax
comp=Z,22nm,1.0s
BLO Bloomington 78.01 311 P **P** **07 53 34.4 -1.2**
BLO IAmb IAmb 07 53 42.3
comp=Z,22nm,1.0s
MCK McKinley 78.16 355 P **P** **07 53 37.1 +1.0**
baz=8.5
BCAR Beaver Creek A 78.18 352 P **P** **07 53 36.2 0.0**
L26K Log Cabin Wild 78.38 353 P **P** **07 53 39.1 +1.8**
baz=13
WCI Wyandotte Cave 78.47 310 IAMs_20 IAMs_20 08 21 26.5
comp=Z,358nm,18.0s
RND Reindeer 78.48 355 P **P** **07 53 37.1 -0.8**
RND pmax pmax
comp=Z,7.0nm,0.7s
RND Reindeer 78.48 355 P **P** **07 53 37.1 -0.8**
DHY Denali Highway 78.70 354 P **P** **07 53 38.8 -0.4**
DHY IAmb IAmb 07 53 45.4
comp=Z,17nm,0.7s
L40A Anamosa 78.85 315 P **P** **07 53 38.9 -1.3**
L40A IAmb IAmb 07 53 46.3
comp=Z,25nm,1.1s
F33A 5 Mile Ranch, 78.97 320 P **P** **07 53 39.5 -1.3**
KULM Kulim 79.07 92 IAMs_20 IAMs_20 08 28 06.2
comp=Z,312nm,22.0s
PPLA Purkeypile 79.17 357 P **P** **07 53 40.1 -1.8**
PPLA IAmb IAmb 07 53 57.4
comp=Z,19nm,1.1s
PSI Prapat 79.23 95 P **P** **07 53 40.8 -2.1**
PSI pmax pmax
comp=Z,14nm,0.8s
OLIL Olney 79.23 311 IAMs_20 IAMs_20 08 19 38.6
comp=Z,356nm,22.0s
RPSI Rantau Prapat 79.29 95 P **P** **07 53 40.8 -2.3**
RPSI IAmb IAmb 07 53 43.4
comp=Z,14nm,0.8s
KSAR Wonju Array Be 79.43 51 P **P** **07 53 41.4 -2.1**
KSAR Wonju Array Be 79.43 51 P **P** **07 53 41.4 -2.1**
KSRS Korea Array 79.44 51 P **P** **07 53 43.5 0.0**
comp=Z,8.0nm,0.7s,baz=310,slow=4.7,SNR=18
KSRS LR LR 08 32 38.9
comp=Z,145nm,18.2s,baz=115,slow=39
WHY Whitehorse 79.53 348 IAMs_20 IAMs_20 08 17 50.6
comp=Z,318nm,19.0s
T47A Sharon Grove 79.76 309 P **P** **07 53 44.3 -1.0**
T47A IAmb IAmb 07 53 55.7
comp=Z,21nm,0.9s
HYT Haines Junctio 79.78 349 P **P** **07 53 44.8 -0.4**
HYT IAmb IAmb 07 53 57.6
comp=Z,19nm,1.1s
SDDR Presa de Saban 79.84 286 P **P** **07 53 45.9 -0.2**
SDDR IAmb IAmb 07 53 53.3
comp=Z,20nm,1.0s
N25K Chitina, Valde 79.90 353 P **P** **07 53 47.3 +1.6**
baz=12
154A Montrose 79.99 304 IAMs_20 IAMs_20 08 24 06.3
comp=Z,322nm,18.0s
E28A Huff 80.59 323 P **P** **07 53 48.7 -0.9**
S44A Carbondale 80.60 311 P **P** **07 53 48.5 -1.3**
S44A IAmb IAmb 07 53 59.5
comp=Z,16nm,1.0s
ECSD EROS Data Cent 80.60 319 P **P** **07 53 50.7 +0.9**
baz=45
ECSD EROS Data Cent 80.60 319 P **P** **07 53 49.0 -0.8**
ECSD IAmb IAmb 07 53 56.2
comp=Z,21nm,1.1s
YSS Yuzh-Sakhalins 80.88 36 *ie* P **P** **07 53 51.4 +0.3**
YSS 07 53 57.6
YSS pmax pmax
comp=Z,60nm,0.8s
YSS MLR MLR
comp=Z,700nm,18.0s
YSS MLR MLR
comp=E,400nm,16.0s
YSS Yuzh-Sakhalins 80.88 36 P **P** **07 53 50.9 -0.2**
FVM French Village 81.10 312 IAMs_20 IAMs_20 08 33 42.2
comp=Z,221nm,19.0s
CCM Cathedral Cave 81.53 312 P **P** **07 53 55.7 +0.9**
baz=48
L34A Svendsen Farm, 81.72 318 P **P** **07 53 55.9 +0.1**
P38A Dawn 81.78 315 P **P** **07 53 55.7 -0.4**
P38A IAmb IAmb 07 54 02.5
comp=Z,22nm,1.1s
PETK Petropavlovsk- 81.91 24 LR LR 08 35 20.7
comp=Z,359nm,19.1s,baz=318,slow=39
R40A Maddies Statio 81.97 313 P **P** **07 53 56.5 -0.6**
R40A IAmb IAmb 07 54 07.7
comp=Z,16nm,0.8s
T42A Van Buren 82.13 311 P **P** **07 53 58.0 +0.1**
T42A IAmb IAmb 07 54 04.2
comp=Z,13nm,0.9s
GNAR Gosnell 82.20 310 IAMs_20 IAMs_20 08 20 38.3
comp=Z,367nm,21.0s
BRLK Bradley Lake 82.23 356 P **P** **07 53 58.3 +0.2**
LRAL Lakeview Retre 82.24 306 P **P** **07 53 59.1 +0.5**
baz=49
MGMO Mountain Grove 82.74 312 P **P** **07 54 01.0 -0.2**
MGMO IAmb IAmb 07 54 08.7
comp=Z,29nm,1.2s
OXF Oxford 82.79 308 IAMs_20 IAMs_20 08 21 13.0
comp=Z,219nm,18.0s
ASAJ Asahikawa 82.90 38 P **P** **07 54 02.5 +0.7**
ASAJ pmax pmax
comp=Z,64nm,1.3s
JKA Kamikawa-asahi 82.90 38 P **P** **07 54 02.5 +0.7**
S39A Bolivar 82.99 313 P **P** **07 54 02.9 +0.5**
LAO LASA Array 83.02 326 P **P** **07 54 04.5 +2.0**
baz=40
BGNE Belgrade 83.05 318 P **P** **07 54 04.8 +2.1**
baz=44
BGNE Belgrade 83.05 318 P **P** **07 54 02.1 -0.6**
BDFB Brasilia 83.41 244 P **P** **07 54 07.0 +2.1**
comp=Z,3.3nm,0.6s,baz=63,slow=7.7,SNR=6.1
BDFB Brasilia 83.41 244 P **P** **07 54 07.0 +2.1**
EGMT Eagleton 83.47 329 P **P** **07 54 07.3 +2.4**
baz=37
EGMT Eagleton 83.47 329 P **P** **07 54 05.7 +0.9**
FCAR Ozark Folk Cen 83.51 311 P **P** **07 54 05.6 +0.5**
FCAR IAmb IAmb 07 54 15.7
comp=Z,11nm,0.9s
FCAR IAMs_20 IAMs_20 08 35 14.0
comp=Z,236nm,21.0s
U40A Yellville 83.63 312 P **P** **07 54 07.0 +1.2**
baz=47
U40A Yellville 83.63 312 P **P** **07 54 05.5 -0.2**
U40A IAmb IAmb 07 54 12.0
comp=Z,14nm,1.1s
U40A IAMs_20 IAMs_20 08 19 22.0
comp=Z,224nm,18.0s
KSU1 Kansas State U 83.86 316 P **P** **07 54 08.0 +1.1**
baz=45
KSU1 Kansas State U 83.86 316 P **P** **07 54 07.4 +0.5**
RSSD Black Hills 83.99 323 P **P** **07 54 08.1 +0.4**
RSSD pmax pmax
comp=Z,13nm,0.9s
RSSD Black Hills 83.99 323 P **P** **07 54 09.0 +1.3**
baz=41
RSSD Black Hills 83.99 323 P **P** **07 54 08.1 +0.4**
RSSD IAmb IAmb 07 54 14.5
comp=Z,13nm,0.9s
W41B Gary Mavity, V 84.07 311 P **P** **07 54 09.1 +1.0**
baz=47
W41B Gary Mavity, V 84.07 311 P **P** **07 54 08.0 -0.1**
W41B IAmb IAmb 07 54 10.2
comp=Z,20nm,1.2s
JNU Nakatsue 84.10 52 P **P** **07 54 08.0 -0.2**
comp=Z,9.4nm,0.8s,baz=321,slow=5.1,SNR=4.6
KDAK Kodiak Island 84.30 356 P **P** **07 54 08.7 0.0**
KDAK pmax pmax
comp=Z,142nm,1.5s
KDAK Kodiak Island 84.30 356 P **P** **07 54 08.7 0.0**
U38A Gravette 84.47 313 P **P** **07 54 09.8 -0.2**
U38A IAmb IAmb 07 54 12.0
comp=Z,21nm,1.2s
X40A Basin Creek Fa 84.89 310 P **P** **07 54 13.0 +0.8**
baz=47
W39A Magazine 84.97 311 P **P** **07 54 13.6 +1.0**
baz=46
GCMT Greycliff 85.21 328 P **P** **07 54 13.4 -0.4**
MIAR Mount Ida 85.30 311 P **P** **07 54 13.6 -0.7**
MIAR pmax pmax
comp=Z,17nm,1.0s
MIAR Mount Ida 85.30 311 P **P** **07 54 16.0 +1.7**
baz=46
MIAR Mount Ida 85.30 311 P **P** **07 54 13.6 -0.7**
MIAR IAmb IAmb 07 54 21.2
comp=Z,17nm,1.0s
SDV Santo Domingo 85.41 278 *e* P **P** **07 54 16.4 +1.0**
SDV Santo Domingo 85.41 278 P **P** **07 54 14.8 -0.5**
SDV Santo Domingo 85.41 278 *e* P **P** **07 54 15.7 +0.3**
JTMT Jette 85.48 331 P **P** **07 54 15.7 +0.6**
R32A Long Quarter, 85.49 317 P **P** **07 54 14.3 -0.9**
RLMT Red Lodge 85.57 327 P **P** **07 54 17.9 +2.3**
baz=37
TUL1 Leonard 85.65 313 P **P** **07 54 17.2 +1.2**
baz=45
TUL1 Leonard 85.65 313 P **P** **07 54 15.6 -0.4**
Z41A Richland Creek 85.72 309 P **P** **07 54 18.5 +2.1**
baz=46
KAN13 South Haven SW 85.83 315 P **P** **07 54 15.9 -0.9**
NEW Newport 86.09 333 P **P** **07 54 17.1 -0.9**
NEW pmax pmax
comp=Z,15nm,0.9s
NEW Newport 86.09 333 P **P** **07 54 19.4 +1.4**
baz=32
NEW Newport 86.09 333 P **P** **07 54 17.1 -0.9**
NEW IAmb IAmb 07 54 24.7
comp=Z,15nm,0.8s
MAJO Matsushiro 86.10 46 *i* P **P** **07 54 16.4 -1.8**
MAJO pmax pmax
comp=Z,8.0nm,1.0s
MAT Matsushiro 86.10 46 P **P** **07 54 18.0 -0.2**
MJAR Matsushiro Arr 86.10 46 P **P** **07 54 18.3 +0.1**
comp=Z,111nm,0.9s,baz=323,slow=4.5,SNR=9.8
MJAR LR LR 08 34 15.0
comp=Z,69nm,18.0s,baz=105,slow=37
MJAR Matsushiro Arr 86.10 46 P **P** **07 54 16.9 -1.3**
MSO Missoula 86.11 331 P **P** **07 54 19.2 +1.1**
baz=34
MSO Missoula 86.11 331 P **P** **07 54 16.9 -1.3**
MSO IAmb IAmb 07 54 28.0
comp=Z,9.5nm,0.9s
BOZ Bozeman (W) 86.19 328 P **P** **07 54 17.6 -1.1**
BOZ pmax pmax
comp=Z,22nm,1.1s
BOZ Bozeman (W) 86.19 328 P **P** **07 54 20.0 +1.4**
baz=36
BOZ Bozeman (W) 86.19 328 P **P** **07 54 17.6 -1.1**
BOZ IAmb IAmb 07 54 25.8
comp=Z,22nm,1.1s
OK030 Cody Creek RV 86.20 314 P **P** **07 54 18.4 -0.4**
K22A Casper 86.28 324 P **P** **07 54 20.1 +0.9**
baz=39
YHH Holmes Hill 86.51 328 P **P** **07 54 18.9 -1.6**
YHL Hebgen Lake 86.60 328 P **P** **07 54 19.6 -1.3**
YMR Madison River 86.66 328 P **P** **07 54 19.7 -1.4**
YHB Horse Butte 86.69 328 P **P** **07 54 18.8 -2.5**
OK025 Westminster Rd 86.77 314 P **P** **07 54 21.7 +0.2**
DLMT Dillon 86.77 329 P **P** **07 54 20.4 -1.1**
DLMT IAmb IAmb 07 54 29.2
comp=Z,14nm,1.1s
COCO West Island 87.00 108 IAMs_20 IAMs_20 08 37 50.9
comp=Z,264nm,21.0s
KSCO Kaye Shedlock' 87.14 319 P **P** **07 54 24.9 +1.5**
baz=41
IMW Indian Meadow 87.27 327 P **P** **07 54 23.5 -0.6**
MCMT McKenzie Canyo 87.31 329 P **P** **07 54 23.8 -0.5**
N23A Red Feather La 87.36 322 P **P** **07 54 25.7 +1.1**
baz=39
PD31 Pinedale Array 87.57 326 P **P** **07 54 24.0 -1.5**
PDAR Pinedale Array 87.57 326 P **P** **07 54 25.5 -0.1**
comp=Z,1.3nm,0.8s,baz=63,slow=4.7,SNR=11
PDAR Pinedale Array 87.57 326 P **P** **07 54 25.1 -0.4**
MDSI Maura Dua 87.83 97 P **P** **07 54 28.5 +1.6**
comp=Z,2μmcomp=Z,14nm,0.8s
E09A Wood Farm, Sta 87.94 333 P **P** **07 54 25.2 -1.7**
F10A Beach Ranch, E 88.07 332 P **P** **07 54 26.8 -0.9**
F10A IAmb IAmb 07 54 40.4
comp=Z,13nm,1.0s
WMOK Wichita Mounta 88.19 314 P **P** **07 54 28.0 -0.4**
WMOK pmax pmax
comp=Z,16nm,1.2s
WMOK Wichita Mounta 88.19 314 P **P** **07 54 29.8 +1.4**
baz=43
WMOK Wichita Mounta 88.19 314 P **P** **07 54 28.0 -0.4**
WMOK IAmb IAmb 07 54 35.5
comp=Z,16nm,1.2s
AHID Auburn Hatcher 88.25 327 P **P** **07 54 28.6 -0.1**
AHID IAmb IAmb 07 54 39.0
comp=Z,11nm,0.9s
SJCC San Jacinto, C 88.33 281 *e* P **P** **07 54 31.1 +1.7**
HAWA Hanford 88.54 334 P **P** **07 54 28.6 -1.2**
HLID Hailey 88.99 329 P **P** **07 54 33.8 +1.6**
baz=34
O20A White River Ci 89.05 323 P **P** **07 54 33.3 +0.7**
baz=38
O20A White River Ci 89.05 323 P **P** **07 54 32.4 -0.2**
O20A IAmb IAmb 07 54 44.5
comp=Z,13nm,0.8s
HWUT Hardware Ranch 89.39 326 P **P** **07 54 34.5 +0.4**
MOTC Monteria, Cord 89.40 281 *e* P **P** **07 54 36.1 +1.8**
E04D Cinebar 89.43 335 P **P** **07 54 35.9 +2.0**
baz=28
T25A Trinidad 89.47 319 P **P** **07 54 36.0 +1.3**
baz=40
T25A Trinidad 89.47 319 P **P** **07 54 33.5 -1.1**
T25A IAmb IAmb 07 54 41.6
comp=Z,10.0nm,1.1s
SDCO Great Sand Dun 89.56 320 P **P** **07 54 36.2 +1.0**
baz=40
SDCO Great Sand Dun 89.56 320 P **P** **07 54 34.0 -1.1**
PTBC PUERTO BERRIO, 89.83 278 *e* P **P** **07 54 37.2 +0.8**
SPBC San Pablo de B 90.08 277 *e* P **P** **07 54 36.5 -1.1**
JLU Jordanelle 90.15 325 P **P** **07 54 35.5 -2.3**
ABTX Abilene, Hawle 90.22 313 P **P** **07 54 39.9 +1.9**
baz=43
S22A 4UR Ranch, Cre 90.23 321 P **P** **07 54 39.5 +1.3**
baz=39
SAML Samuel 90.46 259 IAMs_20 IAMs_20 08 36 45.3
comp=Z,222nm,20.0s
SAML Samuel 90.46 259 *e* P **P** **07 54 39.1 -0.1**
VILB Vilhena 90.66 254 *e* P **P** **07 54 42.4 +2.3**
NORC Norcasia 90.76 278 *e* P **P** **07 54 41.6 +0.8**
PV01 Paradox Valley 90.78 322 IAMs_20 IAMs_20 08 40 58.5
comp=Z,361nm,22.0s
PV03 Paradox Valley 90.82 322 IAMs_20 IAMs_20 08 21 53.6
comp=Z,250nm,22.0s
PV19 Morning Glory 90.84 323 IAMs_20 IAMs_20 08 39 03.1
comp=Z,339nm,20.0s
SRU San Rafael Swe 90.93 324 P **P** **07 54 40.8 -0.6**
SRU pmax pmax
comp=Z,15nm,0.8s
SRU San Rafael Swe 90.93 324 P **P** **07 54 40.8 -0.6**
DUG Dugway, Tooele 91.09 326 P **P** **07 54 40.5 -1.5**
DUG pmax pmax
comp=Z,15nm,1.0s
DUG Dugway, Tooele 91.09 326 P **P** **07 54 43.3 +1.3**
baz=35
DUG Dugway, Tooele 91.09 326 P **P** **07 54 40.5 -1.5**
TMUT Trail Mountain 91.10 325 P **P** **07 54 40.4 -1.8**
GUY2C Guyana, Caldas 91.35 278 *e* P **P** **07 54 45.5 +1.5**
PTLB Pontes e Lacer 91.42 252 *e* P **P** **07 54 44.6 +1.1**
CBOC Ciudad Bolivar 91.47 279 *e* P **P** **07 54 45.5 +1.3**
TOLC Tolima 91.71 277 *e* P **P** **07 54 47.5 +2.0**
I04A Tendick Farm, 91.81 334 P **P** **07 54 46.1 +1.0**
baz=28
ANIL Santa Ana 91.83 277 *e* P **P** **07 54 47.4 +1.3**
J05D Fort Rock, OR 91.84 333 P **P** **07 54 47.6 +2.2**
baz=29
JCT Junction City 91.88 312 P **P** **07 54 47.0 +1.2**
baz=43
PRAC Prado 91.91 276 *e* P **P** **07 54 47.0 +0.9**
ORTC Ortega, Tolima 92.07 277 *e* P **P** **07 54 47.5 +0.7**
ANMO Albuquerque 92.21 319 *i* P **P** **07 54 47.1 -0.3**
ANMO pmax pmax
comp=Z,2.0nm,1.0s
ANMO Albuquerque 92.21 319 P **P** **07 54 47.8 +0.4**
baz=39
YOTC Yotoco, Valle 92.89 277 *e* P **P** **07 54 51.2 +0.6**
PSUT Pine Spring 92.91 326 P **P** **07 54 49.4 -1.2**
R11A Troy Canyon, C 93.82 327 P **P** **07 54 55.9 +1.2**
baz=33
R11A Troy Canyon, C 93.82 327 P **P** **07 54 54.0 -0.7**
MNTX Cornudas Mount 94.14 316 P **P** **07 54 56.8 +0.7**
baz=40
MNTX Cornudas Mount 94.14 316 P **P** **07 54 56.1 +0.1**
NVAR Mina Array Bea 94.90 329 P **P** **07 55 00.5 +0.8**
comp=Z,1.1nm,0.8s,baz=40,slow=3.9,SNR=7.8
NVAR PP **PP** **07 58 50.0 +2.3**
comp=Z,0.8nm,0.9s,baz=60,slow=5.3,SNR=3.9
NVAR LR LR 08 39 18.0
comp=Z,127nm,18.4s,baz=44,slow=36
NVAR Mina Array Bea 94.90 329 P **P** **07 54 59.2 -0.5**
TX31 Lajitas Ar. Si 94.97 313 P **P** **07 54 59.0 -1.0**
TX31 IAmb IAmb 07 55 06.8
comp=Z,8.9nm,1.0s
TX32 Lajitas Array 94.97 313 P **P** **07 54 58.7 -1.3**
TXAR Lajitas Array 94.97 313 P **P** **07 55 01.3 +1.3**
comp=Z,1.1nm,0.8s,baz=78,slow=4.5,SNR=10
TXAR Lajitas Array 94.97 313 P **P** **07 55 00.4 +0.3**
SFX San Felipe 99.55 322 IAMs_20 IAMs_20 08 43 51.7
comp=Z,283nm,19.0s
SYO Syowa Base 107.74 173 *e* Pdiff **Pdif** **07 55 57.1 +1.4**
SYO Syowa Base 107.74 173 *i* pPdiff pPdif 07 56 01.8 +0.2

SYO	Syowa Base	107.74	173	⇑*es*Pdiff	Pdif	07 56 04.2	+8.5
BELA	Belgrano 2	120.33	192		PKPdf	08 00 26.9	-0.1
WRA	Warramunga Arr	120.61	92	PKP	PKPdf	08 00 28.6	-0.7
	comp=Z,1.9nm,0.8s,baz=320,slow=1.4,SNR=21						
ASAR	Alice Springs	122.24	96	PKIKP	PKPdf	08 00 31.8	-0.6
	comp=Z,2.8nm,0.8s,baz=325,slow=2.1,SNR=24						
ASAR	Alice Springs	122.24	96		PKPdf	08 00 32.3	-0.1
ASAR	Alice Springs	122.24	96		PKPdf	08 00 32.3	-0.1
CTA	Charters Tower	130.09	85	PKP	PKiKP	08 00 47.9	-0.3
	comp=Z,1.6nm,0.7s,baz=188,slow=5.4,SNR=4.1						
STKA	Stephens Creek	132.10	101	PKP	PKPdf	08 00 51.3	+0.4
	comp=Z,1.6nm,0.8s,baz=334,slow=5.6,SNR=3.7						

IDC ***07*** *07:53:53.5±1.5,38.00N×20.32E,h0km,mb3.9/6, mb1 4.0/9,mb1mx3.6/65,mbtmp3.9/9,ML4.0/3,Error ellipse: s-maj=30.9km s-min=22.8km az=112.0*
ATH ***07*** *07:53:57.8,38.10N×20.45E,h16km,ML3.6/18,Error ellipse: s-maj=2.5km s-min=1.0km az=61.0*
PDG ***07*** *07:53:57.3±0.4,38.13N×20.37E,h21km±1km,MD5.3/1, ML4.1/11,Error ellipse: s-maj=1.1km s-min=1.4km az=0.0*
THE ***07*** *07:53:57.3,38.10N×20.33E,h9km±1km,ML4.1/8,Error ellipse: s-maj=2.1km s-min=0.7km az=81.0*
NEIC ***07*** *07:53:57.4±2.3,38.11N±0.03×20.38E±0.05,h10km±1km, Error ellipse: s-maj=7.5km s-min=3.8km az=295.0*
ISC 07 07:53:57.1±0.9,38.09N±0.02×20.38E±0.04,h17km±5km, n158,σ1§23/188,mb4.0/8,14C-8D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.13**	**42**	P	**Pb**	**07 54 01.2**	**+0.1**
ARG2				S	**Sg**	**07 54 03.6**	**0.0**
	251μm,0.1s						
KEF4	**Livadi, Kephal**	**0.18**	**11**	P	**Pb**	**07 54 02.1**	**+0.2**
KEF4				S	**Sb**	**07 54 05.4**	**+0.3**
VLS	**Valsamata**	**0.19**	**61**	P	**Pg**	**07 54 01.8**	**-0.1**
VLS				S	**Sg**	**07 54 04.6**	**-0.5**
VLS	**Valsamata**	**0.19**	**61**	P	**Pg**	**07 54 01.8**	**-0.1**
VLS				S	**Sg**	**07 54 04.7**	**-0.4**
	318μm,0.2s						
KEF5	**Kardakata, Kep**	**0.20**	**20**	P	**Pb**	**07 54 02.4**	**0.0**
KEF5				S	**Sb**	**07 54 05.7**	**-0.3**
VLMS	**Volimes, Zakyn**	**0.30**	**133**	P	**Pb**	**07 54 04.1**	**0.0**
VLMS				S	**Sb**	**07 54 08.5**	**-0.3**
VLMS				AML	AML	07 54 09.2	
	comp=E,40337μm,0.2s						
VLMS				AML	AML	07 54 09.5	
	comp=N,49943μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.30**	**133**	P	**Pb**	**07 54 04.2**	**0.0**
VLMS				S	**Sb**	**07 54 09.0**	**+0.2**
	comp=N,29μm,0.4s						
VSK1	**VASILIKIADES**	**0.35**	**24**	P	**Pb**	**07 54 04.6**	**-0.4**
VSK1				S	**Sg**	**07 54 09.8**	**+0.2**
	comp=N,47μm,0.3s						
FSK	**Fiskardo**	**0.40**	**21**	P	**Pb**	**07 54 05.4**	**-0.4**
FSK				S	**Sg**	**07 54 11.1**	**+0.1**
FSK				AML	AML	07 54 13.0	
	comp=E,40955μm,0.3s						
FSK				AML	AML	07 54 14.6	
	comp=N,43542μm,0.5s						
FSK	**Fiskardo**	**0.40**	**21**	P	**Pb**	**07 54 05.4**	**-0.4**
FSK				S	**Sg**	**07 54 10.2**	**-0.8**
	comp=N,21μm,0.4s						
KRI1	**kERI**	**0.55**	**141**	P	**Pb**	**07 54 08.1**	**-0.1**
KRI1				S	**Sb**	**07 54 17.4**	**+1.7**
	comp=N,16μm,0.3s						
MGNA	**Meganis**	**0.66**	**29**	P	**Pg**	**07 54 09.4**	**-0.6**
MGNA				AML	AML	07 54 22.7	
	comp=N,13894μm,0.4s						
MGNA				AML	AML	07 54 23.0	
	comp=E,13462μm,0.4s						
AST1	**Astakos**	**0.72**	**51**	P	**Pg**	**07 54 10.8**	**-0.5**
LKD2	**Lefkada island**	**0.74**	**17**	P	**Pg**	**07 54 11.1**	**-0.5**
LKD2				AML	AML	07 54 28.3	
	comp=E,11717μm,0.3s						
LKD2				AML	AML	07 54 28.8	
	comp=N,14086μm,0.4s						
LKD2	**Lefkada island**	**0.74**	**17**	P	**Pg**	**07 54 11.1**	**-0.5**
PDO	**Prodromos**	**0.81**	**51**	P	**Pg**	**07 54 12.4**	**-0.6**
PDO				AML	AML	07 54 32.2	
	comp=E,18579μm,0.3s						
PDO				AML	AML	07 54 32.2	
	comp=N,38820μm,0.4s						
PDO	**Prodromos**	**0.81**	**51**	P	**Pg**	**07 54 12.4**	**-0.6**
PDO				S	**Sn**	**07 54 25.9**	**+0.5**
	comp=N,21μm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**92**	P	**Pg**	**07 54 13.1**	**-0.7**
RLS				AML	AML	07 54 30.5	
	comp=E,2856μm,0.4s						
RLS				AML	AML	07 54 30.7	
	comp=N,3144μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**92**	P	**Pg**	**07 54 13.2**	**-0.7**
DRO	**Drossia**	**1.06**	**97**	P	**Pb**	**07 54 17.0**	**0.0**
DRO				AML	AML	07 54 38.3	
	comp=E,3287μm,0.4s						
DRO				AML	AML	07 54 41.5	
	comp=N,9261μm,0.6s						
AMT	**Artemida-Makis**	**1.19**	**117**	P	**Pg**	**07 54 19.6**	**-0.5**
AMT				AML	AML	07 54 41.2	
	comp=N,5441μm,0.9s						
AMT				AML	AML	07 54 45.1	
	comp=E,7030μm,0.8s						
AMT	**Artemida-Makis**	**1.19**	**117**	P	**Pg**	**07 54 19.6**	**-0.5**
AMT				S	**Sg**	**07 54 37.9**	**+2.2**
	comp=E,3μm,0.8s						
EFP	**Efpalio**	**1.25**	**74**	P	**Pn**	**07 54 19.9**	**+0.2**
EFP				AML	AML	07 54 45.0	
	comp=E,4448μm,0.4s						
EFP				AML	AML	07 54 46.0	
	comp=N,5216μm,0.4s						
EFP	**Efpalio**	**1.25**	**74**	P	**Pn**	**07 54 19.9**	**+0.2**
ANX	**Ano Chora**	**1.31**	**67**	P	**Pb**	**07 54 21.6**	**+0.2**
ANX				AML	AML	07 54 45.4	
	comp=N,10957μm,0.5s						
ANX				AML	AML	07 54 46.5	
	comp=E,6114μm,0.4s						
ANX	**Ano Chora**	**1.31**	**67**	P	**Pb**	**07 54 21.6**	**+0.2**
TRIZ	**Trizonia**	**1.36**	**78**	P	**Pn**	**07 54 21.8**	**+0.5**
TRIZ	**Trizonia**	**1.36**	**78**	P	**Pn**	**07 54 21.8**	**+0.5**
ALIK	**Aliki, Aigiali**	**1.38**	**82**	P	**Pb**	**07 54 22.5**	**+0.1**
EVR	**Evrytania**	**1.40**	**53**	P	**Pb**	**07 54 23.3**	**+0.5**
EVR				AML	AML	07 54 54.2	
	comp=N,2216μm,0.6s						
EVR				AML	AML	07 54 54.4	
	comp=E,2088μm,0.9s						
KLV	**Kalavryta, Ach**	**1.40**	**91**	P	**Pn**	**07 54 22.3**	**+0.4**
KLV				AML	AML	07 54 48.3	
	comp=E,1506μm,0.6s						
KLV				AML	AML	07 54 55.7	
	comp=N,1600μm,0.8s						
KLV	**Kalavryta, Ach**	**1.40**	**91**	P	**Pb**	**07 54 22.7**	**-0.1**
KALE	**Kalithea**	**1.42**	**77**	P	**Pn**	**07 54 22.6**	**+0.5**
KALE				AML	AML	07 54 57.2	
	comp=N,3374μm,0.7s						
KALE				AML	AML	07 54 58.3	
	comp=E,1791μm,0.6s						
KALE	**Kalithea**	**1.42**	**77**	P	**Pn**	**07 54 22.7**	**+0.5**
IGT	**Igoumenitsa**	**1.45**	**359**	P	**Pb**	**07 54 23.9**	**+0.3**
IGT				AML	AML	07 54 48.2	
	comp=E,2709μm,0.4s						
IGT				AML	AML	07 54 50.1	
	comp=N,2788μm,0.5s						
ITM	**Ithomi**	**1.52**	**126**	P	**Pb**	**07 54 25.3**	**+0.4**
ITM				AML	AML	07 54 55.7	
	comp=N,2051μm,0.7s						
ITM				AML	AML	07 55 01.1	
	comp=E,1853μm,1.0s						
ITM	**Ithomi**	**1.52**	**126**		**Pb**	**07 54 25.2**	**+0.3**
ITM				Sn	**Sn**	**07 54 43.5**	**+0.5**
ITM	**Ithomi**	**1.52**	**126**	P	**Pb**	**07 54 25.3**	**+0.4**
GUR	**Goura**	**1.56**	**95**	P	**Pb**	**07 54 25.1**	**-0.4**
GUR				AML	AML	07 54 57.9	
	comp=E,4536μm,0.4s						
GUR				AML	AML	07 54 60.0	
	comp=N,3153μm,0.4s						
TRIP	**Tripoli**	**1.60**	**110**	P	**Pg**	**07 54 27.7**	**-0.2**
PYL	**PYLOS**	**1.61**	**137**	P	**Pb**	**07 54 26.6**	**+0.3**
PYL	**PYLOS**	**1.61**	**137**	P	**Pb**	**07 54 26.1**	**-0.2**
JAN	**Janina**	**1.61**	**13**	P	**Pb**	**07 54 27.0**	**+0.5**
JAN				AML	AML	07 54 59.8	
	comp=N,2244μm,0.6s						
JAN				AML	AML	07 55 00.8	
	comp=E,2702μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.66**	**55**	P	**Pg**	**07 54 28.9**	**-0.1**

KEK	**Kerkira**	**1.69**	**345**	P	**Pb**	**07 54 27.6**	**-0.1**
KASA	**Kassiopi**	**1.69**	**348**	P	**Pb**	**07 54 28.0**	**+0.2**
DLFA	**Delphi**	**1.71**	**76**	P	**Pg**	**07 54 29.4**	**-0.6**
DSF	**Desfina**	**1.72**	**78**	P	**Pn**	**07 54 27.5**	**+1.2**
VLX	**Vlachokerasia**	**1.74**	**114**	P	**Pb**	**07 54 29.4**	**+0.8**
AGG	**Agios Georgios**	**1.79**	**58**	P	**Pb**	**07 54 30.4**	**+0.9**
AGG				AML	AML	07 55 05.2	
	comp=N,2214μm,0.7s						
AGG				AML	AML	07 55 06.5	
	comp=E,1744μm,0.6s						
AGG	**Agios Georgios**	**1.79**	**58**		**Pb**	**07 54 30.4**	**+0.9**
THAL	**Thalero**	**1.80**	**91**	P	**Pb**	**07 54 30.2**	**+0.6**
THL	**Klokotos Trika**	**1.95**	**40**	P	**Pb**	**07 54 32.4**	**+0.2**
LTK	**Loutraki**	**2.04**	**91**	P	**Pb**	**07 54 32.8**	**-0.9**
LOUT	**Loutraki**	**2.05**	**92**	P	**Pb**	**07 54 32.8**	**-1.1**
LKR	**Lokris**	**2.13**	**74**	P	**Pb**	**07 54 34.3**	**-1.0**
ATAL	**Atalanti**	**2.16**	**73**	P	**Pb**	**07 54 34.6**	**-1.2**
PENT	**Pentalofos**	**2.19**	**15**	P	**Pb**	**07 54 36.1**	**-0.2**
EPID	**Epidavros**	**2.22**	**101**	P	**Pb**	**07 54 35.6**	**-1.1**
VIL2	**Platees**	**2.28**	**86**	P	**Pb**	**07 54 36.6**	**-1.3**
NEST	**Nestorio**	**2.38**	**12**	P	**Pb**	**07 54 39.1**	**-0.5**
VLI	**Veliai**	**2.45**	**123**	P	**Pb**	**07 54 39.5**	**-1.2**
KZN	**Kozani**	**2.47**	**26**	P	**Pb**	**07 54 39.5**	**-1.5**
SCTE	**Santa Cesarea**	**2.48**	**324**	Pn	**Pn**	**07 54 37.4**	**+0.7**
NEO	**Neokhori**	**2.54**	**60**	P	**Pn**	**07 54 39.8**	**+2.3**
XOR	**Xorichti**	**2.54**	**59**	P	**Pn**	**07 54 39.7**	**+2.1**
LIT	**Litokhoron**	**2.60**	**39**		**Pn**	**07 54 40.6**	**+2.2**
VLY	**Voula,Athens**	**2.71**	**94**	P	**Pn**	**07 54 42.0**	**+2.2**
DION	**Dionisos Attik**	**2.80**	**89**	P	**Pn**	**07 54 43.2**	**+2.0**
KTHA	**Kythira Island**	**2.81**	**130**	P	**Pb**	**07 54 44.4**	**-2.5**
AOS	**Alonnisos**	**2.95**	**67**	P	**Pn**	**07 54 45.3**	**+2.2**
AOS	**Alonnisos**	**2.95**	**67**	P	**Pn**	**07 54 43.9**	**+0.8**
KYMI	**Kymi, Euboea I**	**2.98**	**78**	P	**Pn**	**07 54 45.4**	**+1.9**
TIP	**Timpagrande**	**3.04**	**292**	⇑P	**Pn**	**07 54 46.9**	**+2.4**
TIP	**Timpagrande**	**3.04**	**292**	Pn	**Pn**	**07 54 46.1**	**+1.6**
HORT	**Hortiatis**	**3.28**	**39**	P	**Pn**	**07 54 49.3**	**+1.5**
TIR	**Tirane**	**3.28**	**353**	⇑P	**Pn**	**07 54 49.9**	**+2.2**
TIR	**Tirane**	**3.28**	**353**		**Pn**	**07 54 49.3**	**+1.6**
PLG	**Polygyros**	**3.30**	**45**	P	**Pn**	**07 54 49.5**	**+1.5**
CEL	**Celeste**	**3.54**	**274**	Pn	**Pn**	**07 54 52.4**	**+1.1**
SOH	**Sokhos**	**3.57**	**39**	P	**Pn**	**07 54 54.3**	**+2.5**
MATE	**Matera**	**3.83**	**313**	⇑P	**Pn**	**07 54 57.9**	**+2.7**
ULC	**Ulcinj**	**3.97**	**348**	⇑*i*Pn	**Pn**	**07 54 57.9**	**+0.7**
ULC				*i* Sn	**Sn**	**07 55 42.9**	**-0.5**
DRME	**Dracevica, Mon**	**4.20**	**348**	⇑*i*Pn	**Pn**	**07 55 01.2**	**+0.9**
DRME				*i* Sn	**Sn**	**07 55 48.4**	**-0.5**
APE	**Apeiranthos**	**4.21**	**102**	⇓P	**Pb**	**07 55 09.1**	**-1.7**
BUM	**Brajici-Budva**	**4.36**	**345**	⇓*i*Pn	**Pn**	**07 55 03.1**	**+0.5**
BUM				*i* Sn	**Sn**	**07 55 52.2**	**-0.9**
PDG	**Podgorica**	**4.42**	**349**	⇑P	**Pn**	**07 55 03.7**	**+0.3**
PDG	**Podgorica**	**4.42**	**349**	Pn	**Pn**	**07 55 04.6**	**+1.2**
TTG	**Podgorica**	**4.42**	**349**	⇑*i*Pn	**Pn**	**07 55 04.2**	**+0.8**
TTG				*i* Sn	**Sn**	**07 55 53.7**	**-0.8**
PVY	**Plav**	**4.52**	**356**	⇓*i*Pn	**Pn**	**07 55 05.4**	**+0.6**
PVY				*i* Sn	**Sn**	**07 55 56.2**	**-0.7**
IDI	**Anoyia**	**4.57**	**126**	Sn	**Sn**	**07 55 59.0**	**+0.6**
	comp=E,5.1nm,0.3s,baz=139,slow=23,SNR=34						
IDI	**Anoyia**	**4.57**	**126**	⇑P	**Pb**	**07 55 14.1**	**-2.9**
IDI	**Anoyia**	**4.57**	**126**	Pn	**Pn**	**07 55 08.9**	**+3.4**
HCY	**Herceg Novi**	**4.59**	**342**	⇑*i*Pn	**Pn**	**07 55 05.9**	**+0.2**
HCY				*i* Sn	**Sn**	**07 55 57.8**	**-0.8**
CEME	**Cevo**	**4.59**	**346**	⇓*i*Pn	**Pn**	**07 55 06.1**	**+0.7**
CEME				*i* Sn	**Sn**	**07 55 57.6**	**-1.2**
NKME	**Niksic**	**4.80**	**347**	*e*Pn	**Pn**	**07 55 08.6**	**-0.1**
NKME				*i* Sn	**Sn**	**07 56 02.7**	**-1.2**
KOME	**Kolasin**	**4.81**	**352**	⇓*i*Pn	**Pn**	**07 55 09.6**	**+0.9**
KOME				*i* Sn	**Sn**	**07 56 02.9**	**-1.1**
BRY	**Bratogost**	**5.01**	**344**	⇑*i*Pn	**Pn**	**07 55 12.0**	**+0.4**
BRY				*i* Sn	**Sn**	**07 56 07.4**	**-1.8**
SGRT	**San Giovanni R**	**5.11**	**317**	Pn	**Pn**	**07 55 14.1**	**+1.1**
STON	**Ston**	**5.20**	**338**	*e*Pn	**Pn**	**07 55 14.3**	**+0.3**
UPM	**Unac-Piva**	**5.23**	**348**	⇓*i*Pn	**Pn**	**07 55 15.3**	**+0.6**
UPM				*i* Sn	**Sn**	**07 56 12.1**	**-2.6**
PLE	**Pljevlja**	**5.29**	**352**	*e*Pn	**Pn**	**07 55 15.8**	**+0.3**
PLE				*i* Sn	**Sn**	**07 56 15.2**	**-0.9**
PAOL	**Paolisi**	**5.37**	**305**	Pn	**Pn**	**07 55 17.6**	**+1.2**
LSTV	**Lastovo**	**5.38**	**331**	*e*Pn	**Pn**	**07 55 16.8**	**+0.3**
MAKA	**Makarska**	**5.79**	**335**	*e*Pn	**Pn**	**07 55 23.1**	**+0.9**
RICI	**Ricice**	**5.94**	**337**	*e*Pn	**Pn**	**07 55 24.9**	**+0.7**
KARP	**Karpathos**	**6.00**	**113**	Pn	**Pn**	**07 55 27.9**	**+2.8**
DIVS	**Divibare**	**6.01**	**357**		**Pn**	**07 55 25.6**	**+0.3**
KIJV	**Kijevo**	**6.63**	**334**	*e*Pn	**Pn**	**07 55 35.0**	**+1.3**
MORI	**Morici**	**6.77**	**330**	*e*Pn	**Pn**	**07 55 36.9**	**+1.3**
MORI				*i* Sn	**Sn**	**07 56 50.2**	**-2.0**
HERR	**Herculane**	**6.96**	**12**	⇑P	**Pn**	**07 55 39.8**	**+1.6**
DUGI	**Dugi Otok**	**7.14**	**327**	*e*Pn	**Pn**	**07 55 42.7**	**+2.0**
NRCA	**Norcia**	**7.29**	**313**		**Pn**	**07 55 44.6**	**+1.8**
GZR	**Gura Zlata**	**7.52**	**13**	⇑P	**Pn**	**07 55 47.0**	**+1.0**
NVLJ	**Novalja**	**7.68**	**329**	*e*Pn	**Pn**	**07 55 49.0**	**+0.9**
LOT	**Lotru**	**7.78**	**18**	⇓P	**Pn**	**07 55 51.3**	**+1.7**
MURB	**Monte Urbino**	**7.90**	**313**	Pn	**Pn**	**07 55 52.9**	**+1.7**
VOIR		**8.13**	**24**	⇑P	**Pn**	**07 55 56.6**	**+2.2**
BOJS	**Bojanci**	**8.34**	**334**	*i* Pn	**Pn**	**07 55 58.8**	**+1.6**
MLR	**Muntele Rosu**	**8.48**	**28**	Pn	**Pn**	**07 56 00.6**	**+1.4**
	comp=E,0.3nm,0.3s,baz=239,slow=12,SNR=4.6						
MLR	**Muntele Rosu**	**8.48**	**28**	⇓P	**Pn**	**07 56 02.4**	**+3.1**
MLR	**Muntele Rosu**	**8.48**	**28**		**Pn**	**07 56 00.4**	**+1.1**
GBRS	**Gornja Briga**	**8.52**	**333**	*i* Pn	**Pn**	**07 56 00.9**	**+1.2**
PLOR	**Plostina**	**9.05**	**29**	⇑P	**Pn**	**07 56 10.2**	**+3.2**
SOKA	**Soboth**	**9.45**	**337**	*i* Pn	**Pn**	**07 56 12.7**	**+0.2**
	comp=E,6.2nm,0.3s						
SOKA				*e*Sn	**Sn**	**07 57 53.9**	**-4.4**
	comp=E,1.7nm,0.3s						
OBKA	**Obir**	**9.46**	**335**	*e*Pn	**Pn**	**07 56 14.5**	**+1.9**
	comp=E,5.8nm,0.2s						
OBKA				*e*Sn	**Sn**	**07 57 58.8**	**+0.3**
	comp=E,20nm,0.7s						
TEOL	**Teolo**	**9.75**	**321**	Pn	**Pn**	**07 56 16.8**	**+0.2**
PRED	**Cave del Predi**	**9.76**	**331**	Pn	**Pn**	**07 56 17.6**	**+0.9**
ARSA	**Arzberg**	**9.83**	**340**	*e*Pn	**Pn**	**07 56 18.1**	**+0.4**
	comp=E,2.5nm,0.3s						
ZOU	**Zoufplan**	**10.08**	**329**	Pn	**Pn**	**07 56 22.0**	**+0.8**
CIMO	**Cimolais**	**10.11**	**327**	Pn	**Pn**	**07 56 21.1**	**-0.3**
MSSA	**Maissana**	**10.28**	**311**	Pn	**Pn**	**07 56 25.5**	**+1.7**
KBA	**Koelnbreinsper**	**10.37**	**332**	*i* Pn	**Pn**	**07 56 26.2**	**+1.0**
	comp=E,3.3nm,0.4s,SNR=4.3						
MOA	**Molln**	**10.73**	**337**	*i* Pn	**Pn**	**07 56 32.0**	**+2.0**
	comp=E,3.8nm,0.4s						
WTTA	**Wattenberg**	**11.20**	**328**	*i* Pn	**Pn**	**07 56 37.9**	**+1.4**
	comp=E,2.7nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**11.34**	**322**	Pn	**Pn**	**07 56 39.3**	**+0.8**
GERES	**GERESS Array B**	**11.79**	**338**	Pn	**Pn**	**07 56 43.9**	**-0.6**
	comp=E,0.4nm,0.3s,baz=156,slow=15,SNR=6.6						
GERES	**GERESS Array B**	**11.79**	**338**	Pn	**Pn**	**07 56 45.8**	**+1.3**
KHC	**Kasperske Hory**	**12.09**	**338**	*e*P	**Pn**	**07 56 49.0**	**+0.5**
KHC				*e*S	**Sn**	**07 59 04.0**	**+1.3**
BNI	**Bardonecchia**	**12.39**	**309**	Pn	**Pn**	**07 56 53.5**	**+0.7**
SENIN	**Lac Senin/Sane**	**12.73**	**315**	Pn	**Pn**	**07 56 59.2**	**+1.8**
AKASG	**Malin Array Be**	**14.09**	**24**	Pn	**Pn**	**07 57 15.4**	**-0.4**
	comp=E,1.0nm,0.3s,baz=215,slow=16,SNR=5.3						
AKASG	**Malin Array Be**	**14.09**	**24**		**Pn**	**07 57 16.1**	**+0.3**
WLF	**Walferdange**	**15.44**	**323**	Pn	**Pn**	**07 57 34.1**	**+0.1**
HFS	**Hagfors**	**22.47**	**351**	P	**P**	**07 58 56.6**	**+1.3**
	comp=E,5.0nm,0.8s,baz=149,slow=12,SNR=5.1						
FINES	**FINESS Array B**	**23.65**	**7**	P	**P**	**07 59 06.9**	**-0.3**
	comp=E,3.1nm,0.7s,baz=179,slow=11,SNR=11						
FINES	**FINESS Array B**	**23.65**	**7**	P	**P**	**07 59 06.1**	**-1.1**
TORD	**Torodi Ar. Bea**	**29.89**	**219**	P	**P**	**08 00 02.3**	**-1.6**
	comp=E,0.4nm,0.6s,baz=32,slow=9.4,SNR=2.9						
ABKAR	**Akbulak array**	**30.39**	**56**	P	**P**	**08 00 07.9**	**-0.1**
ARCES	**ARCESS Array B**	**31.63**	**3**	P	**P**	**08 00 18.5**	**-0.3**
	comp=E,3.0nm,1.0s,baz=184,slow=12,SNR=1.8						
KKAR	**Karatay Array**	**37.94**	**66**	P	**P**	**08 01 14.8**	**+1.2**
SOCY	**Socotra**	**39.52**	**122**	P	**P**	**08 01 25.6**	**-1.5**
MK31	**Makanchi Array**	**45.44**	**58**	P	**P**	**08 02 14.1**	**-0.8**
MK31				IAmb	IAmb	08 02 36.9	
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**45.44**	**58**	P	**P**	**08 02 14.5**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=275,slow=7.7,SNR=15						
MKAR	**Makanchi Array**	**45.44**	**58**		**P**	**08 02 14.8**	**-0.2**
ZAA0	**Zalesovo Array**	**45.84**	**48**	P	**P**	**08 02 18.3**	**+0.4**
ZAA0				IAmb	IAmb	08 02 24.6	
	comp=Z,2.4nm,0.6s						
ZALV	**Zalesovo Beam**	**45.84**	**48**	P	**P**	**08 02 17.3**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=281,slow=7.4,SNR=4.7						
TIXI	**Tiksi**	**59.78**	**20**	P	**P**	**08 04 00.4**	**-0.2**

WEL 07 07:55:22.0,41°S±2°×17°3E±°,h112km±5km,M2.9/24, MLv2.9/24,Error ellipse: s-maj=0.0km s-min=0.0km az=82.8,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNZ	**Nelson**	**0.32**	**79**	P	Pn	07 55 38.4	+0.3
THZ	**Tophouse**	**0.48**	**185**	P	Pn	07 55 39.6	+0.5
QRZ	**Quartz Range**	**0.56**	**324**	P	Pn	07 55 39.5	0.0
TUWZ	**Tuamarina**	**0.75**	**102**	P	Pn	07 55 41.5	+0.5
BSWZ	**Blackbirch Sta**	**0.81**	**123**	P	Pn	07 55 41.9	+0.4
DUWZ	**D'Urville Isla**	**0.87**	**57**	P	Pn	07 55 42.8	+0.8
DSZ	**Denniston Nort**	**0.99**	**242**	P	Pn	07 55 43.2	-0.1
TCW	**Tory Channel**	**0.99**	**86**	P	Pn	07 55 43.9	+0.7
KHZ	**Kahutara**	**1.21**	**160**	P	Pn	07 55 46.1	+0.6
WEL	**Wellington**	**1.36**	**91**	P	Pn	07 55 47.2	0.0
KIW	**Kapiti Island**	**1.53**	**75**	P	Pn	07 55 49.2	0.0
LTZ	**Lake Taylor**	**1.59**	**199**	P	Pn	07 55 50.2	+0.2
CAW	**Cannon Point**	**1.59**	**85**	P	Pn	07 55 49.6	-0.4
GVZ	**Greta Valley S**	**1.69**	**178**	P	Pn	07 55 51.5	+0.3
PLWZ	**Palliser**	**1.75**	**100**	P	Pn	07 55 51.1	-0.8
INZ	**Inchbonnie**	**1.84**	**218**	P	Pn	07 55 53.0	0.0
MTW	**Mount Morrison**	**1.92**	**87**	P	Pn	07 55 53.3	-0.7
KHEZ	**Kahui Hut**	**2.14**	**22**	P	Pn	07 55 57.6	+0.7
WAZ	**Wanganui**	**2.17**	**46**	P	Pn	07 55 58.1	+0.9
PKE	**Pukeiti**	**2.22**	**21**	P	Pn	07 55 58.9	+0.9
MQZ	**McQueen's Vall**	**2.44**	**185**	P	Pn	07 55 59.6	-1.0
WVZ	**Waitaha Valley**	**2.44**	**222**	P	Pn	07 56 00.1	-0.6
OKCZ	**Okains Bay**	**2.44**	**178**	P	Pn	07 56 00.4	-0.3
MHCZ	**Mount Hutt**	**2.48**	**204**	P	Pn	07 56 00.5	-0.7
VRZ	**Vera Road**	**2.55**	**33**	P	Pn	07 56 02.6	+0.5
WNVZ	**Wahianoa**	**2.80**	**47**	P	Pn	07 56 06.2	+0.6
GCSZ	**Gaunt Creek Bo**	**2.82**	**223**	P	Pn	07 56 05.2	-0.5
OTVZ	**Oturere**	**2.96**	**45**	P	Pn	07 56 09.1	+1.5
HIZ	**Hauiti**	**3.12**	**28**	P	Pn	07 56 09.4	-0.2
FOZ	**Fox Glacier**	**3.24**	**225**	P	Pn	07 56 10.2	-0.9
ODZ	**Otahua Downs**	**4.13**	**204**	P	Pn	07 56 21.8	-1.2
JCZ	**Jackson Bay**	**4.16**	**226**	P	Pn	07 56 22.2	-1.3

GUC ***07*** *07:55:52.3±0.7,21.42S×67.16W,h272km±10km,ML3.8*
SCB ***07*** *07:55:53.7±1.8,21.43S×66.72W,h208km±10km,ML3.6/1, Error ellipse: s-maj=6.0km s-min=4.4km az=0.0*
ISC 07 07:55:51.2±2.0,21.44S±0.05×66.73W±0.05, h219km±15km,n31,σ1§20/52,7C-4D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOCB	**Mochara**	**1.03**	**79**	P	**Pn**	**07 56 24.3**	**+0.6**
MOCB				S	**S**	**07 56 46.6**	**-2.2**
MOCB				IAML		07 56 48.9	
	414nm,0.4s						
YJA	**Yavi**	**1.34**	**123**	P	**Pn**	**07 56 26.9**	**+1.1**
YJA				S	**S**	**07 56 51.8**	**-0.9**
PB09	**IPOC Station P**	**2.37**	**261**	⇓*i*P	**Pn**	**07 56 36.3**	**+1.3**
PB09	**IPOC Station P**	**2.37**	**261**	P	**Pn**	**07 56 36.2**	**+1.2**
PB01	**IPOC Station P**	**2.61**	**278**	⇓*i*P	**Pn**	**07 56 37.9**	**+0.4**
PB01				*i* S	**S**	**07 57 13.4**	**-0.1**
PB01				IAML		07 57 14.4	
	comp=N,160nm,0.3s						
PB01	**IPOC Station P**	**2.61**	**278**	P	**Pn**	**07 56 38.2**	**+0.7**
PB01				S	**S**	**07 57 13.8**	**+0.3**
PB08	**IPOC Station P**	**2.62**	**299**	⇑*i*P	**Pn**	**07 56 39.0**	**+1.0**
PB08				*i* S	**S**	**07 57 15.3**	**+1.1**
PB08				IAML		07 57 18.7	
	comp=E,43nm,0.3s						
PB08	**IPOC Station P**

MBAR Mbarara 17.91 323 *i* P **Pn 08 01 16.8 -4.3**
MBAR Mbarara 17.91 323 P **Pn 08 01 20.4 -0.7**
MBAR Mbarara 17.91 323 *i* P **Pn 08 01 16.8 -4.3**
BOSA Boshof 20.14 226 P **P 08 01 46.5 +0.4**
comp=Z,38nm,0.6s,baz=52,slow=11,SNR=64
BOSA Boshof 20.14 226 *i* P **P 08 01 46.6 +0.4**
BOSA Boshof 20.14 226 P **P 08 01 46.4 +0.2**
BOSA IAmb IAmb 08 01 47.2
comp=Z,74nm,1.1s
BOSA Boshof 20.14 226 *i* P **P 08 01 46.6 +0.4**
TSUM Tsumeb 23.18 257 *i* P **P 08 02 16.9 -2.0**
TSUM Tsumeb 23.18 257 P **P 08 02 18.4 -0.4**
TSUM Tsumeb 23.18 257 *i* P **P 08 02 16.9 -2.0**
SUR Sutherland 25.48 224 P **P 08 02 41.1 +0.9**
comp=Z,84nm,0.8s,baz=63,slow=7.4,SNR=36
SUR LR LR 08 13 44.9
comp=Z,626nm,18.8s,baz=30,slow=39
SUR Sutherland 25.48 224 *i* P **P 08 02 41.0 +0.8**
SUR Sutherland 25.48 224 P **P 08 02 41.0 +0.8**
SUR Sutherland 25.48 224 *i* P **P 08 02 41.0 +0.8**
ATD Arta Tunnel 26.51 3 P **P 08 02 50.2 +0.7**
comp=Z,35nm,1.2s,baz=180,slow=11,SNR=3.8
ATD Arta Tunnel 26.51 3 P **P 08 02 48.3 -1.2**
ATD IAmb IAmb 08 03 00.3
comp=Z,30nm,1.1s
SOCY Socotra 29.82 25 P **P 08 03 21.4 +2.2**
TOA0 Torodi Ar. Sit 48.36 303 P **P 08 05 53.7 -0.2**
TORD Torodi Ar. Bea 48.36 303 P **P 08 05 53.9 -0.1**
comp=Z,25nm,0.8s,baz=120,slow=7.8,SNR=142
TORD PcP **PcP 08 07 21.4 +0.8**
comp=Z,2.6nm,0.8s,baz=105,slow=4.0,SNR=2.8
TORD Torodi Ar. Bea 48.36 303 P **P 08 05 53.5 -0.5**
DBIC Dimbokro 50.77 292 P **P 08 06 12.3 -0.1**
comp=Z,32nm,0.7s,baz=97,slow=8.4,SNR=41
DBIC LR LR 08 27 16.9
comp=Z,128nm,18.9s,baz=237,slow=36
DBIC Dimbokro 50.77 292 P **P 08 06 12.3 -0.1**
ELL Elmali 52.73 348 P **P 08 06 26.9 +0.2**
ELL IAmb IAmb 08 06 40.5
comp=Z,28nm,1.0s
HRA Herat 53.05 22 P **P 08 06 28.5 -0.7**
KOWA Kowa 53.75 301 P **P 08 06 34.3 -0.3**
KOWA IAmb IAmb 08 06 36.4
comp=Z,6.0nm,0.7s
SYO Syowa Base 53.87 181⇑ *eP* **P 08 06 35.2 +0.6**
SYO Syowa Base 53.87 181⇑ *sP* sP 08 06 39.6 +1.8
MAW Mawson 54.27 170 P **P 08 06 39.5 +2.0**
comp=Z,1.8nm,0.8s,baz=311,slow=7.3,SNR=8.7
MAW Mawson 54.27 170 P **P 08 06 38.2 +0.7**
BRTR Keskin Array B 55.05 353 P **P 08 06 43.9 +0.3**
comp=Z,1.0nm,0.5s,baz=185,slow=7.2,SNR=2.1
CHGR Chuyangaron 59.44 25 P **P 08 07 14.2 -0.5**
PSI Prapat 59.57 78 LR LR 08 28 38.6
comp=Z,183nm,20.8s,baz=244,slow=32
GAR Garm 60.21 26 P **P 08 07 18.8 -1.2**
CFR Carcaliu 61.22 349⇑ P **P 08 07 27.3 +0.7**
MLR Muntele Rosu 61.94 348⇑ P **P 08 07 32.4 +0.8**
VOIR 62.08 347⇑ P **P 08 07 32.8 +0.2**
HERR Herculane 62.18 345⇑ P **P 08 07 32.9 -0.1**
SNAA Sanae 62.32 194 P **P 08 07 36.1 +2.2**
SNAA Sanae 62.32 194 P **P 08 07 33.9 0.0**
LOT Lotru 62.38 346⇑ P **P 08 07 34.8 +0.2**
GZR Gura Zlata 62.57 345⇑ P **P 08 07 35.9 +0.1**
BZS Buzias 63.07 344⇑ P **P 08 07 38.6 -0.4**
VNA1 Neumayer--Stat 63.10 197 P **P 08 07 42.1 +3.1**
KK31 Karatay Array 63.77 23 P **P 08 07 43.0 -0.8**
KK31 IAmb IAmb 08 07 53.3
comp=Z,9.3nm,1.0s
KKAR Karatay Array 63.77 23 P **P 08 07 43.0 -0.8**
VNA3 Neumayer Olymp 63.82 196 P **P 08 07 46.0 +2.2**
BURAR Bucovina Array 64.12 348⇓ P **P 08 07 47.4 +1.3**
BURAR Bucovina Array 64.12 348 P **P 08 07 45.1 -1.0**
BUR08 Bucovina Ar. S 64.15 348 P **P 08 07 46.2 -0.1**
BUR08 IAmb IAmb 08 07 58.0
comp=Z,11nm,1.3s
MDT Midelt 64.89 318 P **P 08 07 54.1 +2.7**
comp=Z,4.2nm,1.0s,baz=112,slow=10,SNR=4.2
PSZ Piszkesteto 65.65 344⇑ P **P 08 07 55.8 -0.2**
PSZ Piszkesteto 65.65 344 P **P 08 07 54.8 -1.2**
PSZ IAmb IAmb 08 07 57.9
comp=Z,4.1nm,0.8s
CMAR Chiang Mai Arr 65.70 61 P **P 08 07 57.3 +0.5**
comp=Z,1.1nm,0.4s,baz=251,slow=9.2,SNR=7.7
CMAR LR LR 08 31 28.6
comp=Z,37nm,21.6s,baz=290,slow=31
ABKAR Akbulak array 66.14 13 P **P 08 07 57.9 -1.1**
ABKAR IAmb IAmb 08 07 59.5
comp=Z,14nm,1.5s
ABKAR Akbulak array 66.14 13 P **P 08 07 58.4 -0.7**
CRVS Cervenica-Dubn 66.17 346 *eP* **P 08 07 59.7 +0.5**
AKASG Malin Array Be 66.41 352 P **P 08 07 59.5 -1.2**
comp=Z,0.2nm,0.2s,baz=174,slow=6.0,SNR=4.4
AKBB Malin Array Si 66.41 352 P **P 08 07 59.7 -1.0**
AKBB IAmb IAmb 08 08 09.8
comp=Z,4.8nm,0.9s
VYHS Vyhne 66.46 344 *eP* **P 08 08 01.4 +0.3**
MODS Modra-Piesok 66.78 343 *eP* **P 08 08 03.5 +0.3**
KBA Koelnbreinsper 66.86 339 *i* P **P 08 08 04.4 +0.4**
comp=Z,2.4nm,0.5s
AKTO Aktyubinsk 66.87 11 P **P 08 08 03.1 -0.6**
comp=Z,1.6nm,0.5s,baz=184,slow=6.3,SNR=6.5
FETA Feichten 67.74 338 *i* P **P 08 08 10.1 +0.6**
comp=Z,10nm,0.8s
GERES GERESS Array B 68.29 341 P **P 08 08 12.4 -0.4**
comp=Z,2.5nm,0.7s,baz=145,slow=4.9,SNR=15
GERES GERESS Array B 68.29 341 P **P 08 08 11.7 -1.2**
ESDC Sonseca Array 69.01 324 P **P 08 08 17.7 +0.3**
comp=Z,2.8nm,0.8s,baz=130,slow=5.6,SNR=12
ESDC Sonseca Array 69.01 324 P **P 08 08 15.7 -1.8**
NWAO Narrogin (SRO) 70.12 120 P **P 08 08 24.3 -0.2**
CLL Collm 70.66 342 *eP* **P 08 08 27.0 -0.3**
MAKZ Makanchi 71.57 28 P **P 08 08 32.8 -0.2**
MAKZ IAmb IAmb 08 08 33.8
comp=Z,8.7nm,0.8s
MK31 Makanchi Array 71.70 28 P **P 08 08 33.6 -0.1**
MK31 IAmb IAmb 08 08 36.2
comp=Z,5.5nm,0.8s
MKAR Makanchi Array 71.70 28 P **P 08 08 33.4 -0.4**
comp=Z,5.8nm,0.7s,baz=216,slow=6.1,SNR=45
SBUM Sibu 72.10 82 P **P 08 08 36.6 -0.3**
SBUM IAmb IAmb 08 08 55.6
comp=Z,6.5nm,0.9s
WMQ Urumqi 72.25 33 *eP* **P 08 08 38.6 +1.5**
BRVK Borovoye 72.29 18 P **P 08 08 37.0 -0.1**
BVAR Borovoye Array 72.29 18 P **P 08 08 36.5 -0.7**
comp=Z,1.3nm,0.8s,baz=253,slow=28,SNR=9.9
BELA Belgrano 2 72.40 192 P **P 08 08 37.0 -0.5**
KURBB Kurchatov Arra 73.07 24 P **P 08 08 41.8 +0.1**
comp=Z,3.8nm,0.7s,baz=221,slow=6.9,SNR=14
KURK Kurchatov 73.18 24 P **P 08 08 42.0 -0.4**
KURK IAmb IAmb 08 08 51.0
comp=Z,12nm,1.1s
QSPA South Pole Qui 75.00 180 P **P 08 08 52.9 -0.3**
QSPA IAmb IAmb 08 09 04.9
comp=Z,13nm,0.9s
GYA Guiyang 75.61 57 *eP* **P 08 08 57.0 -0.3**
GYA pmax pmax
comp=Z,7.0nm,0.8s
KLMR Klimovskoe 75.73 359 *e* **P 08 08 55.4 -1.6**
KLMR AMP 08 09 07.5
comp=Z,21nm,1.4s
GTA Gaotai 76.77 43 *eP* **P 08 09 04.3 +0.7**
GTA pP pwP 08 09 12.2 +2.4
GTA sP PcP 08 09 15.7 +0.8
GTA pmax pmax
comp=Z,5.0nm,0.9s
FINES FINESS Array B 77.28 352 P **P 08 09 06.0 +0.2**
comp=Z,5.4nm,1.0s,baz=120,slow=7.5,SNR=5.4
FINES FINESS Array B 77.28 352 P **P 08 09 04.6 -1.2**
KAPI Kappang 77.40 92 LR LR 08 38 43.1
comp=Z,90nm,19.3s,baz=252,slow=32
LZH Lanzhou 77.83 47 *eP* **P 08 09 10.2 +0.5**
LZH pP pwP 08 09 15.2 -0.6
LZH sP PcP 08 09 18.1 -1.5
LZH pmax pmax
comp=Z,22nm,1.0s
ZAA0 Zalesovo Array 78.10 24 P **P 08 09 09.1 -1.5**
ZAA0 IAmb IAmb 08 09 11.0
comp=Z,5.3nm,0.8s
ZALV Zalesovo Beam 78.10 24 P **P 08 09 09.9 -0.7**
comp=Z,4.3nm,0.6s,baz=228,slow=6.3,SNR=21
ZALV Zalesovo Beam 78.10 24 P **P 08 09 08.9 -1.6**
HFS Hagfors 78.27 346 P **P 08 09 11.2 -0.2**
comp=Z,5.0nm,0.8s,baz=117,slow=5.6,SNR=4.6
HFS LR LR 08 48 36.7
comp=Z,64nm,19.1s,baz=180,slow=40
EKA Eskdalemuir Ar 79.63 336 P **P 08 09 19.6 +0.7**
comp=Z,3.8nm,0.8s,baz=128,slow=5.6,SNR=8.5
NB2 NORSAR Subarra 79.65 346 P **P 08 09 18.4 -0.6**
comp=Z,9.7nm,1.1s,baz=150,slow=5.6
NOA NORSAR Array B 79.65 346 P **P 08 09 19.4 +0.4**
comp=Z,2.7nm,0.8s,baz=142,slow=5.3,SNR=5.7
VNDA Vanda 81.56 169 P **P 08 09 31.0 +1.9**
comp=Z,2.5nm,1.1s,baz=264,slow=5.8,SNR=6.8
VNDA Vanda 81.56 169 P **P 08 09 28.9 -0.2**
WHN Wuhan 83.43 56 P **P 08 09 40.6 +1.0**
SONM Songino Array 85.16 38 P **P 08 09 49.4 +1.2**
comp=Z,1.9nm,0.9s,baz=226,slow=3.9,SNR=5.3
SONM Songino Array 85.16 38 P **P 08 09 48.5 +0.3**
ARCES ARCESS Array B 85.18 354 P **P 08 09 47.9 +0.2**
comp=Z,15nm,1.0s,baz=151,slow=2.8,SNR=11
HHC Hu-ho-hao-te 85.37 46 *eP* **P 08 09 48.6 -0.8**
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,150nm,7.6s
BDFB Brasilia 85.55 255 P **P 08 09 54.2 +3.4**
comp=Z,7.3nm,0.7s,baz=105,slow=5.8,SNR=14
ASAR Alice Springs 86.22 113 P **P 08 09 54.2 +0.3**
comp=Z,1.6nm,0.6s,baz=258,slow=4.4,SNR=26
ASAR Alice Springs 86.22 113 P **P 08 09 53.2 -0.8**
WRA Warramunga Arr 87.56 110 P **P 08 10 00.7 +0.1**
comp=Z,1.6nm,0.9s,baz=249,slow=3.4,SNR=24
WRA Warramunga Arr 87.56 110 P **P 08 09 59.6 -1.0**
NJ2 Nanjing 87.57 56 *eP* **P 08 10 00.3 +0.1**
NJ2 pmax pmax
comp=Z,13nm,0.6s
CPUP Villa Florida 91.05 242 P **P 08 10 19.4 +2.5**
comp=Z,5.2nm,0.9s,baz=98,slow=5.9,SNR=6.2
ILAR Eielson Array 130.07 5 PKP **PKPdf 08 16 20.7 -0.7**
comp=Z,0.3nm,0.6s,baz=326,slow=3.2,SNR=4.3
PDAR Pinedale Array 142.90 324 PKP **PKPdf 08 16 46.5 +0.4**
comp=Z,0.9nm,0.9s,baz=130,slow=2.3,SNR=4.2
TXAR Lajitas Array 144.92 300 PKP **PKPdf 08 16 49.6 -0.2**
comp=Z,7.6nm,0.8s,baz=96,slow=3.9,SNR=57
ANMO Albuquerque 145.10 310 PKPbc **PKPdf 08 16 50.7 +0.7**
comp=Z,3.6nm,0.9s,baz=95,slow=3.6,SNR=13
NVAR Mina Array Bea 150.72 326 PKP **PKPdf 08 17 00.8 +1.6**
comp=Z,1.0nm,0.8s,baz=154,slow=1.4,SNR=5.5
NVAR PKPbc **PKiKP 08 17 05.8 +0.4**
comp=Z,5.0nm,1.0s,baz=115,slow=1.7,SNR=5.9

SEA ***07*** *08:05:54.1±2.9, 41.76N±0.04×119.57W±0.05, h0km±5km, Error ellipse: s-maj=5.3km s-min=4.9km az=155.0*
REN ***07*** *08:05:54.9±2.0, 41.88N±0.04×119.63W±0.05, h0km±3km, ML4.7/4, mb4.6/45(NEIC), ML4.7/99(SEA), Mwr4.5/6(NCEDC), Mwr4.6/138(NEIC), Mww4.7(NEIC), Error ellipse: s-maj=6.1km s-min=4.2km az=216.0*
NEIC ***07*** *08:05:54.9, 41.88N×119.63W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr=0.70; Mθθ=0.16; Mθφ 0.86; Mrθ=-0.39; Mφφ 0.12; Mφr=0.55; Fault plane solution: M0 1.05000×10^16 NP1:φs164.63000°, δ30.29000°, λ=-127.31000°. NP2:φs26.06000°, δ66.35000°, λ=-70.51000°. Principal axes: T 1.0791, Plg19.0000°, Azm102.0000°; N -0.0686, Plg18.0000°, Azm198.0000°; P -1.0106, Plg63.0000°, Azm328.0000°;*
IDC ***07*** *08:05:54.1±0.5, 41.79N×119.59W, h0km, mb4.3/14, mb1 4.4/19, mb1mx4.2/52, mbtmp4.2/19, ML3.8/5, MS3.8/20, Ms1 3.8/20, ms1mx3.6/60 Error ellipse: s-maj=10.2km s-min=5.1km az=12.0*
NEIC ***07*** *08:05:55.2±1.9, 41.88N±0.04×119.66W±0.05, h6km±4km, Error ellipse: s-maj=6.1km s-min=5.5km az=214.0*
ANF ***07*** *08:05:58.6±0.9, 41.90N×119.78W, h30km±9km, ML4.8/24, Error ellipse: s-maj=3.4km s-min=2.1km az=49.0*
NEIC ***07*** *08:05:58.2, 41.90N×119.95W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^15Nm; Mrr=5.06; Mθθ=2.66; Mθφ 7.72; Mrθ=-2.49; Mφφ 0.58; Mφr=0.01; Fault plane solution: M0 7.26000×10^15 NP1:φs155.01000°, δ52.78000°, λ=-132.15000°. NP2:φs31.25000°, δ53.82000°, λ=-48.54000°. Principal axes: T 7.7575, Plg1.0000°, Azm93.0000°; N -1.1228, Plg32.0000°, Azm184.0000°; P -6.6347, Plg58.0000°, Azm2.0000°;*
NCEDC ***07*** *08:05:58.2±2.5, 41.90N±0.04×119.95W±0.06, h24km±6km Error ellipse: s-maj=6.6km s-min=6.1km az=121.0*
NEIC ***07*** *08:06:01, 41.78N×119.76W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr=0.93; Mθθ=0.04; Mθφ 0.97; Mrθ=-0.73; Mφφ 0.22; Mφr=0.57; Fault plane solution: M0 1.35000×10^16 NP1:φs171.00000°, δ30.00000°, λ=-131.00000°. NP2:φs36.00000°, δ67.00000°, λ=-69.00000°. Principal axes: T 1.2740, Plg20.0000°, Azm111.0000°; N 0.1375, Plg19.0000°, Azm208.0000°; P -1.4115, Plg62.0000°, Azm339.0000°;*

ISC 07 08:05:54.8±1.3, 41.82N±0.03×119.64W±0.03, h2km±9km, n296, σt‰40/304, mb4.5/30, MS3.8/10, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
MOD	**Modoc Plateau**	**0.50**	**279**		**Pg**	**08 06 04.2**	**-0.2**
MOD				Sg	**Sg**	**08 06 11.5**	**+0.6**
K05A	**Summer Lake**	**1.29**	**315**	Pg	**Pg**	**08 06 18.7**	**-1.0**
K05A				Sg	**Sg**	**08 06 36.1**	**-0.3**
M04C	**Macdoel**	**1.64**	**269**	P	**Pn**	**08 06 23.6**	**-1.3**
M04C	baz=86,SNR=1000			S	**Sn**	**08 06 45.5**	**-1.1**
	baz=86						
HATC	**Hat Creek Radi**	**1.70**	**234**		**Pn**	**08 06 25.1**	**-0.4**
J08A	**Circle Bar Ran**	**1.76**	**29**		**Pn**	**08 06 25.2**	**-1.2**
J08A				Sn	**Sn**	**08 06 47.4**	**-2.1**
K04D	**Chiloquin, OR**	**1.76**	**298**	P	**Pn**	**08 06 25.1**	**-1.4**
K04D	baz=115,SNR=559			S	**Sn**	**08 06 48.3**	**-1.2**
	baz=115						
J05D	**Fort Rock, OR**	**1.88**	**322**	P	**Pn**	**08 06 26.8**	**-1.2**
J05D	baz=139,SNR=1000			S	**Sn**	**08 06 52.3**	**0.0**
	baz=139						
LHEM	**Herd Peak**	**1.94**	**265**		**Pn**	**08 06 28.1**	**-0.9**
LMEM	**Manzanita Entr**	**1.94**	**229**		**Pn**	**08 06 28.8**	**-0.1**
LGBM	**Gray Butte**	**1.97**	**257**		**Pn**	**08 06 28.3**	**-1.2**
L04D	**Klamath Falls**	**2.02**	**282**	P	**Pn**	**08 06 28.4**	**-1.7**
L04D	baz=99,SNR=1000			Sb	**Sb**	**08 06 57.8**	**-0.3**
	baz=99						
BEKR	**Beckworth**	**2.03**	**196**		**Pb**	**08 06 32.2**	**-0.3**
PAHR	**Pah Rah Range**	**2.12**	**175**		**Pn**	**08 06 31.6**	**+0.1**
PINE	**Pine Mountain**	**2.19**	**335**		**Pn**	**08 06 31.6**	**-0.8**
O03E	**Paynes Creek**	**2.23**	**228**	P	**Pn**	**08 06 32.3**	**-0.6**
O03E	baz=45,SNR=628			Sb	**Sb**	**08 07 03.9**	**-0.2**
	baz=45						
I07A	**Izee**	**2.26**	**3**	Pn	**Pn**	**08 06 32.4**	**-0.9**
YBH	**Yreka Blue Hor**	**2.30**	**269**	Pn	**Pn**	**08 06 32.1**	**-1.7**
YBH	31nm,0.3s,baz=72,slow=13,SNR=306			Pg	**Pb**	**08 06 35.6**	**-1.4**
	50nm,0.3s,baz=78,slow=14,SNR=48						
YBH				Lg	Lg	08 07 07.0	
	226nm,0.3s,baz=109,slow=4.2,SNR=13						
YBH				LR	LR	08 07 24.5	
	comp=Z,585nm,20.1s,baz=183,slow=39						
YBH	**Yreka Blue Hor**	**2.30**	**269**	Pn	**Pn**	**08 06 32.3**	**-1.5**
J04D	**Umpqua Nationa**	**2.31**	**309**	P	**Pn**	**08 06 32.9**	**-1.1**
J04D	baz=126,SNR=238			S	**Sn**	**08 07 01.0**	**-2.2**
	baz=126						
M02C	**Callahan**	**2.45**	**261**	P	**Pn**	**08 06 34.0**	**-1.8**
	baz=78,SNR=190						
N02D	**Trinity Center**	**2.45**	**251**	P	**Pn**	**08 06 34.2**	**-1.7**
N02D	baz=68,SNR=145			Sb	**Sb**	**08 07 10.7**	**+0.3**
	baz=68						
WDC	**Whiskeytown Da**	**2.51**	**241**		**Pn**	**08 06 35.6**	**-1.1**
HUMO	**Hull Mountain**	**2.58**	**289**		**Pn**	**08 06 36.2**	**-1.4**
ORV	**Oroville**	**2.67**	**213**		**Pn**	**08 06 40.2**	**+1.4**
PNTR	**Pine Nut**	**2.73**	**179**		**Pn**	**08 06 41.1**	**+1.2**
RUBR	**Rubicon Trail**	**2.79**	**188**		**Pn**	**08 06 43.1**	**+2.4**
I05D	**Terrebonne, OR**	**2.81**	**334**	P	**Pn**	**08 06 40.0**	**-0.8**
I05D	baz=152,SNR=227			Sb	**Sb**	**08 07 22.1**	**+1.6**
	baz=152						
I04A	**Tendick Farm,**	**2.83**	**315**	P	**Pn**	**08 06 40.2**	**-1.0**
I04A	baz=132,SNR=81			Sb	**Sb**	**08 07 22.2**	**+0.9**
	baz=132						

KOMM Orleans Mounta 2.91 261 **Pn 08 06 42.4 +0.1**
L02E Cave Junction 2.97 278 P **Pn 08 06 41.5 -1.5**
L02E baz=94,SNR=292 Sb **Sb 08 07 25.4 +0.2**
baz=94
KVN Kaiserville 3.01 156 **Pn 08 06 45.6 +2.0**
AFDM Forest Hills D 3.04 200 Pn **Pn 08 06 45.3 +1.3**
K02D Willamette Mer 3.11 288 P **Pn 08 06 44.4 -0.5**
baz=104,SNR=974
KRMB Red Mountain 3.21 266 **Pn 08 06 46.4 0.0**
KHMM Horse Mountain 3.22 254 **Pn 08 06 48.4 +1.9**
MFID Camas Ranch 3.23 59 Pn **Pn 08 06 46.2 -0.5**
RYN Ryan 3.30 165 **Pn 08 06 50.2 +2.5**
I03D Drain, OR 3.31 306 P **Pn 08 06 46.8 -0.8**
I03D baz=122,SNR=18 Sb **Sb 08 07 36.1 +1.1**
baz=122
WAKR Walker 3.32 177 **Pn 08 06 49.8 +1.9**
H04A Detroit Lake 3.41 328 **Pn 08 06 49.1 0.0**
KBO Bosley Butte 3.44 278 **Pn 08 06 49.9 +0.5**
J01E Myrtle Point 3.44 294 P **Pn 08 06 49.0 -0.4**
baz=110
JCC Jacoby Creek, 3.45 255 **Pn 08 06 49.5 0.0**
KMRM Mail Ridge 3.47 244 **Pn 08 06 49.7 -0.2**
BMO Blue Mountains 3.48 29 **Pn 08 06 49.8 -0.2**
ELK Elko 3.49 107 Pn **Pn 08 06 49.9 -0.4**
9.7nm,0.3s,baz=296,slow=12,SNR=174
ELK Pg **Pb 08 06 55.5 -1.9**
64nm,0.3s,baz=293,slow=16,SNR=58
ELK Sn **Sn 08 07 31.6 -0.7**
37nm,0.3s,baz=290,slow=20,SNR=5.3
ELK Lg Lg 08 07 41.8
140nm,0.3s,baz=197,slow=20,SNR=7.7
ELK Elko 3.49 107 Pn **Pn 08 06 51.6 +1.3**
G08A Pilot Rock 3.50 8 Pn **Pn 08 06 50.7 +0.3**
H04D Lebanon 3.52 321 P **Pn 08 06 50.2 -0.3**
baz=138
H04D Sb **Sb 08 07 43.4 +2.3**
baz=138
NVAR Mina Array Bea 3.54 163 Pn **Pn 08 06 52.0 +1.0**
5.0nm,0.3s,baz=341,slow=13,SNR=90
NVAR Lg Lg 08 07 49.8
67nm,0.3s,baz=345,slow=28,SNR=5.4
NVAR LR LR 08 08 39.8
comp=Z,2μm,18.6s,baz=340,slow=47
NVAR Mina Array Bea 3.54 163 Pn **Pn 08 06 52.4 +1.4**
NV11 Mina Array Sit 3.57 161 **Pn 08 06 52.1 +0.7**
G05D Wamic, OR 3.63 341 P **Pn 08 06 52.0 -0.1**
baz=159
G05D Sb **Sb 08 07 45.4 +1.2**
baz=159
KEBM Edson Butte 3.63 288 **Pn 08 06 51.7 -0.5**
LHV Little Huntoon 3.67 166 **Pn 08 06 52.6 +0.1**
KCPM Cahto Peak 3.67 236 **Pn 08 06 52.4 -0.4**
CMB Columbia Colle 3.83 189 **Pn 08 06 56.4 +1.7**
I02D Swisshome 3.84 308 P **Pn 08 06 54.9 0.0**
baz=124
COR Corvallis 3.84 317 Pn **Pn 08 06 55.4 +0.4**
HOPS Hopland Field 3.85 224 Pn **Pn 08 06 55.8 +0.7**
TPH Tonopah 4.18 153 **Pn 08 07 01.8 +2.0**
PLID Pearl Lake 4.21 38 Pn **Pn 08 07 00.0 -0.2**
MDPB Devils Postpil 4.21 174 **Pn 08 07 03.2 +3.0**
HLID Hailey 4.23 64 P **Pn 08 06 59.8 -0.7**
baz=248
HLID Hailey 4.23 64 Pn **Pn 08 07 00.0 -0.4**
OMMB Old Mammoth Mi 4.23 173 Pn **Pn 08 07 03.0 +2.4**
F05D White Salmon 4.27 343 Sb **Sb 08 08 06.4 +3.8**
baz=161
MCCM Marconi Confer 4.43 215 Pn **Pn 08 07 03.7 +0.6**
HAWA Hanford 4.57 1 **Pn 08 07 05.8 +0.8**
F04A Amboy 4.57 335 **Pn 08 07 05.8 +0.8**
R11A Troy Canyon, C 4.66 137 P **Pn 08 07 07.1 +0.8**
baz=320
E09A Wood Farm, Sta 4.81 12 **Pn 08 07 08.1 -0.2**
TIN Tinemaha, Big 4.88 167 P **Pn 08 07 12.5 +3.1**
baz=348
F04D Rainier, OR 4.90 331 P **Pn 08 07 11.0 +1.5**
baz=149
BGU Big Grassy Mou 5.06 98 Pn **Pn 08 07 11.9 +0.1**
GRAC Grapevine Rang 5.13 159 P **Pn 08 07 15.4 +2.7**
baz=341
HVU Hansel Valley 5.13 88 Pn **Pn 08 07 13.7 +0.9**
LON Longmire 5.17 343 **Pn 08 07 13.0 -0.2**
E04D Cinebar 5.18 337 P **Pn 08 07 15.7 +2.4**
baz=155
BCYI Bear Canyon 5.20 59 **Pn 08 07 13.7 -0.2**
DUG Dugway, Tooele 5.42 105 P **Pn 08 07 18.0 +1.3**
baz=290
DUG Dugway, Tooele 5.42 105 Pn **Pn 08 07 17.2 +0.5**
SPUT South Promonto 5.42 93 **Pn 08 07 16.7 -0.1**
CWC Cottonwood Cre 5.51 167 P **Pn 08 07 20.3 +2.3**
baz=348
PSUT Pine Spring 5.52 125 Pn **Pn 08 07 19.7 +1.5**
TPNV Topopah Spring 5.53 151 P **Pn 08 07 20.4 +2.1**
baz=333
PRN Pahroc Range 5.66 140 Pn **Pn 08 07 21.1 +1.1**
PMPB Monarch Peak 5.67 190 Pn **Pn 08 07 20.5 +0.3**
FURC Furnace Creek, 5.77 157 P **Pn 08 07 23.9 +2.6**
baz=339
MCMT McKenzie Canyo 5.79 56 **Pn 08 07 21.4 -0.6**
VES Vestal, Richgr 5.99 176 P **Pn 08 07 27.3 +2.9**
baz=356
MPMC Manual Prospec 6.00 163 P **Pn 08 07 27.1 +2.4**
baz=345
NLU North Lily Min 6.03 106 Pn **Pn 08 07 25.1 -0.1**
HWUT Hardware Ranch 6.05 89 **Pn 08 07 25.4 0.0**
D03D Eldon 6.22 338 P **Pn 08 07 29.3 +1.7**
baz=155,SNR=7.7
ISA Isabella, Lake 6.22 171 P **Pn 08 07 29.6 +1.9**
baz=352
TCUT Toone Canyon 6.23 94 **Pn 08 07 28.7 +0.8**
TCRU Three Creeks R 6.37 118 Pn **Pn 08 07 31.7 +1.7**
ICU Indian Springs 6.43 135 **Pn 08 07 33.6 +2.9**
MSO Missoula 6.46 37 P **Pn 08 07 32.6 +1.5**
baz=221
SHOC Shoshone, Teco 6.47 155 P **Pn 08 07 32.9 +1.8**
baz=337
LRM Limekiln Ridge 6.56 50 **Pn 08 07 32.4 -0.1**
SZCU Shurtz Canyon 6.58 128 **Pn 08 07 32.4 -0.4**
REDW Red Top Meadow 6.67 74 **Pn 08 07 33.0 -1.0**
B05A Bryant 6.67 346 P **Pn 08 07 35.0 +1.2**
baz=164,SNR=19
NEW Newport 6.68 15 Pn **Pn 08 07 36.4 +2.3**
0.3nm,0.3s,baz=173,slow=12,SNR=8.0
NEW LR LR 08 10 31.8
comp=Z,925nm,20.2s,baz=184,slow=41
NEW Newport 6.68 15 P **Pn 08 07 34.3 +0.3**
baz=196
MTPU Mount Pierson 6.86 121 **Pn 08 07 37.0 +0.3**
GSC Goldstone, Bar 6.88 160 P **Pn 08 07 38.1 +1.3**
baz=342
LCMT Little Creek M 6.90 132 **Pn 08 07 37.5 +0.4**
TMUT Trail Mountain 6.90 109 **Pn 08 07 37.1 -0.2**
BOZ Bozeman (W) 6.92 54 P **Pn 08 07 38.1 +0.7**
baz=240
BOZ Bozeman (W) 6.92 54 **Pn 08 07 36.4 -1.0**
TUQ Turquoise Moun 7.01 154 P **Pn 08 07 40.6 +2.0**
baz=337
JTMT Jette 7.04 31 Pn **Pn 08 07 38.0 -1.0**
EDW2 Edwards Air Fo 7.05 169 P **Pn 08 07 42.5 +3.4**
baz=350
Q16A Castle Valley 7.09 111 Pn **Pn 08 07 40.8 +1.1**
KNB Kanab 7.13 130 Pn **Pn 08 07 40.2 -0.2**
PKCU Pink Cliffs 7.15 125 **Pn 08 07 41.6 +0.9**
HEC Hector,Ludlow 7.45 159 P **Pn 08 07 46.0 +1.4**
baz=341
SRU San Rafael Swe 7.46 108 **Pn 08 07 44.5 -0.3**
BW06 Boulder Array 7.54 79 P **Pn 08 07 48.8 +2.9**
baz=267
PDAR Pinedale Array 7.54 79 Pn **Pn 08 07 48.0 +2.1**
0.8nm,0.3s,baz=258,slow=13,SNR=56
PDAR LR LR 08 11 26.7
comp=Z,393nm,19.9s,baz=266,slow=44
PDAR Pinedale Array 7.54 79 Pn **Pn 08 07 46.5 +0.6**
MWC Mount Wilson 7.69 170 Pn **Pn 08 07 49.4 +1.4**
GMRC Granite Mounta 7.69 155 P **Pn 08 07 50.4 +2.4**
baz=338
PASC Pasadena Art C 7.72 171 Pn **Pn 08 07 49.3 +1.0**
BFSC Mount Baldy Ra 7.73 168 P **Pn 08 07 49.3 +0.8**
baz=349
GCMT Greycliff 8.23 58 Pn **Pn 08 07 54.6 -0.8**
RLMT Red Lodge 8.23 63 Pn **Pn 08 07 54.8 -0.7**
WALA Waterton Lakes 8.28 27 Pn **Pn 08 07 56.4 +0.4**
BELC Belle Mtn. Jos 8.32 159 P **Pn 08 07 59.3 +2.7**
baz=341

MURC	Murrieta baz=348	8.43	166	P	Pn	08 08 00.3	+2.2
IRM	Iron Mountain baz=337	8.43	154	P	Pn	08 08 01.0	+3.0
PFO	Pinyon Flats O comp=Z,129nm,19.7s,baz=344,slow=35	8.57	162	LR	LR	08 10 55.3	
PFO	Pinyon Flats O baz=344	8.57	162	P	Pn	08 08 02.4	+2.3
O20A	White River Ci baz=285	8.79	97	P	Pn	08 08 06.1	+3.1
BC3	Big Chuckawall baz=339	8.80	157	P	Pn	08 08 07.2	+4.1
PV23	Carpenter Ridg	8.81	109		Pn	08 08 04.4	+1.0
PV10	Paradox Valley	8.82	109		Pn	08 08 04.5	+0.9
PV14	Lion Creek, Pa	8.84	109		Pn	08 08 04.5	+0.8
PV20	West Nyswonger	8.89	110		Pn	08 08 05.2	+0.8
PV19	Morning Glory	8.89	110		Pn	08 08 05.6	+1.1
PV04	Paradox Valley	8.91	109		Pn	08 08 06.2	+1.5
PV17	East Wray Mesa	8.92	110		Pn	08 08 06.4	+1.5
PV16	Nyswonger Mesa	8.94	110		Pn	08 08 06.1	+0.9
PV18	Skein Mesa, Pa	8.97	110	Pn	Pn	08 08 07.6	+2.0
PV11	David Mesa, Pa	8.98	110		Pn	08 08 06.1	+0.5
WUAZ	Wupatki baz=317	9.02	132	P	Pn	08 08 08.7	+2.5
WUAZ	Wupatki	9.02	132	Pn	Pn	08 08 07.2	+1.0
RWWY	Rawlins	9.29	87		Pn	08 08 11.2	+1.1
Y14A	Wickenburg	9.46	144	Pn	Pn	08 08 13.3	+1.2
MVCO	Mesa Verde baz=302	9.76	114	P	Pn	08 08 19.3	+2.8
MVCO	Mesa Verde	9.76	114	Pn	Pn	08 08 17.4	+1.0
K22A	Casper baz=270	9.77	81	P	Pn	08 08 17.8	+1.3
K22A	Casper	9.77	81		Pn	08 08 16.0	-0.4
N23A	Red Feather La baz=280	10.34	91	P	Pn	08 08 24.9	+0.5
N23A	Red Feather La	10.34	91	Pn	Pn	08 08 25.3	+0.9
PHWY	Pilot Hill	10.65	88	Pn	Pn	08 08 29.3	+0.7
S22A	4UR Ranch, Cre baz=297	10.67	108	P	Pn	08 08 30.9	+2.0
ISCO	Idaho Springs baz=286	10.83	96	P	Pn	08 08 33.0	+1.9
ISCO	Idaho Springs	10.83	96	Pn	Pn	08 08 30.2	-0.9
214A	Organ Pipe Nat baz=333	11.26	149	P	Pn	08 08 40.1	+3.3
Q24A	Divide baz=289	11.42	100	P	Pn	08 08 42.1	+2.9
Q24A	Divide	11.42	100	Pn	Pn	08 08 40.0	+0.8
SDCO	Great Sand Dun baz=295	11.62	106	P	Pn	08 08 44.8	+3.0
RSSD	Black Hills baz=264	11.66	73	P	Pn	08 08 44.8	+2.4
TUC	Tucson baz=326	11.83	141	P	Pn	08 08 48.6	+4.0
TUC	Tucson	11.83	141	Pn	Pn	08 08 44.7	0.0
BBB	Bella Bella comp=Z,608nm,18.1s,baz=152,slow=40	11.86	334	LR	LR	08 13 45.6	
ANMO	Albuquerque 0.1nm,0.3s,baz=318,slow=13,SNR=11	12.41	119	Pn	Pn	08 08 55.6	+2.9
ANMO	comp=Z,842nm,21.0s,baz=304,slow=41			LR	LR	08 14 25.4	
ANMO	Albuquerque baz=308	12.41	119	P	Pn	08 08 55.5	+2.9
LENM	Lemitar	12.57	123	Pn	Pn	08 08 54.7	-0.1
T25A	Trinidad baz=297	12.66	107	P	Pn	08 08 59.1	+3.0
T25A	Trinidad	12.66	107		Pn	08 08 54.9	-1.2
121A	Cookes Peak, D baz=318	13.23	131	P	Pn	08 09 07.7	+3.9
121A	Cookes Peak, D	13.23	131	Pn	Pn	08 09 03.5	-0.3
KSCO	Kaye Shedlock' baz=288	13.27	97	P	Pn	08 09 06.1	+1.8
319A	Douglas	13.33	138	Pn	Pn	08 09 04.4	-0.7
MNTX	Cornudas Mount baz=316	15.23	127	P	P	08 09 34.3	-1.8
MSTX	Muleshoe baz=306	15.44	115	P	Pn	08 09 36.1	+2.4
GDL2	Guadalupe Moun	15.51	123	Pn	Pn	08 09 35.0	+0.3
AMTX	Amarillo baz=302	15.69	110	P	P	08 09 40.3	-0.9
R32A	Long Quarter, comp=Z,25nm,0.8s	16.36	95	P	Pn	08 09 46.5	+0.9
R32A				IAmb	IAmb	08 09 54.6	
N33A	J Bar K, Exete comp=Z,74nm,0.8s	16.71	86	P	P	08 09 52.6	+0.2
N33A				IAmb	IAmb	08 09 54.3	
ECSD	EROS Data Cent baz=272	17.01	76	P	Pn	08 09 54.4	+0.7
ECSD	EROS Data Cent	17.01	76		Pn	08 09 54.7	+0.9
F33A	5 Mile Ranch,	17.30	69	P	P	08 09 58.8	-0.1
FFC	Flin Flon	17.39	36	P	Pn	08 09 58.6	+0.2
DLBC	Dease Lake comp=Z,0.1nm,0.3s,baz=154,slow=6.7,SNR=6.3	17.88	342	P	P	08 10 06.3	+1.1
DLBC	Dease Lake	17.88	342	P	Pn	08 10 04.4	-0.1
AGMN	Agassiz Nation baz=258	17.97	61	P	Pn	08 10 03.4	-2.2
TX32	Lajitas Array	17.97	129	P	P	08 10 06.5	+0.1
TXAR	Lajitas Array comp=Z,0.1nm,0.3s,baz=314,slow=7.2,SNR=23	17.97	129	P	P	08 10 08.6	+2.2
TXAR	comp=Z,202nm,19.8s,baz=0.0,slow=41			LR	LR	08 18 10.6	
TXAR	Lajitas Array	17.97	129	P	P	08 10 07.7	+1.2
N35A	Tabor comp=Z,59nm,0.8s	18.04	85	P	Pn	08 10 06.6	0.0
N35A				IAmb	IAmb	08 10 09.9	
ABTX	Abilene, Hawle baz=306	18.35	114	P	Pn	08 10 10.5	0.0
ABTX	Abilene, Hawle	18.35	114	P	P	08 10 10.9	+0.3
ULM	Lac du Bonnet comp=Z,228nm,19.0s,baz=284,slow=36	18.47	55	LR	LR	08 16 51.0	
LPIG	La Paz comp=Z,323nm,18.3s,baz=338,slow=39	19.31	153	LR	LR	08 18 23.7	
TUL1	Leonard baz=295	19.46	100	P	P	08 10 22.8	+0.1
JCT	Junction City baz=311	19.57	119	P	P	08 10 24.2	+0.2
SCIA	State Center baz=279	19.66	81	P	P	08 10 24.8	-0.1
SPMN	Marine on St. baz=270	19.72	71	P	P	08 10 25.2	-0.3
SPMN	Marine on St. comp=Z,20nm,1.1s	19.72	71	P	P	08 10 25.1	-0.5
SPMN				IAmb	IAmb	08 10 27.6	
N38A	Joes South For comp=Z,47nm,1.1s	19.84	84	P	P	08 10 26.4	-0.5
N38A				IAmb	IAmb	08 10 29.9	
P38A	Dawn	19.89	88	P	P	08 10 26.8	-0.6
K38A	Parkersburg comp=Z,28nm,0.7s	19.89	79	P	P	08 10 28.1	+0.7
K38A				IAmb	IAmb	08 10 29.2	
WHTX	Lake Whitney, baz=306	20.23	112	P	P	08 10 31.0	0.0
X37A	Clayton	20.35	103	P	P	08 10 32.4	0.0
S39A	Bolivar comp=Z,21nm,0.9s	20.62	93	P	P	08 10 34.8	-0.6
S39A				IAmb	IAmb	08 10 38.7	
HHAR	Hobbs	20.68	97	P	P	08 10 36.8	+0.8
435B	Jarrell baz=308	20.86	115	P	P	08 10 37.7	-0.3
435B	Jarrell comp=Z,29nm,1.2s	20.86	115	P	P	08 10 37.2	-0.8
435B				IAmb	IAmb	08 10 54.7	
YKA	Yellowknife Ar comp=Z,10nm,1.0s,baz=193,slow=9.6,SNR=7.6	20.92	7	P	P	08 10 38.4	0.0
P40A	Paris	21.02	87	P	P	08 10 39.9	+0.2
R40A	Maddies Statio	21.21	90	P	P	08 10 41.0	-0.7
W39A	Magazine baz=296	21.24	100	P	P	08 10 41.7	-0.4
833A	Chaparral WMA, baz=315	21.29	123	P	P	08 10 43.7	+1.1
I40A	Norwalk comp=Z,36nm,0.8s	21.33	75	P	P	08 10 41.8	-1.3
I40A				IAmb	IAmb	08 10 44.7	
237A	Washetta, Mont comp=Z,28nm,0.8s	21.37	110	P	P	08 10 42.8	-0.7
237A				IAmb	IAmb	08 10 45.5	
U40A	Yellville baz=293	21.45	96	P	P	08 10 43.6	-0.7
U40A	Yellville comp=Z,16nm,1.0s	21.45	96	P	P	08 10 44.1	-0.3
U40A				IAmb	IAmb	08 10 48.4	
MGMO	Mountain Grove	21.59	93	P	P	08 10 45.5	-0.4
N41A	Harden Midland	21.63	83	P	P	08 10 44.8	-1.4
N41A	comp=Z,16nm,0.7s			IAmb	IAmb	08 10 49.6	
MIAR	Mount Ida baz=298	21.69	101	P	P	08 10 44.3	-2.6
JFWS	Jewell Farm baz=277	21.70	77	P	P	08 10 45.6	-1.3
JFWS	Jewell Farm	21.70	77	P	P	08 10 46.3	-0.7
CCM	Cathedral Cave baz=289	22.05	90	P	P	08 10 50.0	-0.8
CCM	Cathedral Cave comp=Z,36nm,1.4s	22.05	90	P	P	08 10 49.9	-0.8
CCM				IAmb	IAmb	08 10 56.5	
X40A	Basin Creek Fa baz=297	22.26	100	P	P	08 10 50.9	-2.1
COWI	Conover comp=Z,14nm,0.8s	22.30	69	P	P	08 10 52.5	-0.9
COWI				IAmb	IAmb	08 10 57.8	
WHAR	Wooly Hollow comp=Z,14nm,0.9s	22.31	98	P	P	08 10 51.4	-2.2
WHAR				IAmb	IAmb	08 10 56.4	
W41B	Gary Mavity, V baz=296	22.39	98	P	P	08 10 53.4	-1.0
WLAR	White Oak Lake comp=Z,20nm,0.8s	22.43	103	P	P	08 10 54.1	-0.7
WLAR				IAmb	IAmb	08 10 59.6	
T42A	Van Buren comp=Z,13nm,1.0s	22.52	93	P	P	08 10 55.0	-0.7
T42A				IAmb	IAmb	08 11 01.6	
SLM	Saint Louis comp=Z,26nm,0.8s	22.63	88	P	P	08 10 56.1	-0.7
SLM				IAmb	IAmb	08 10 59.5	
HDIL	Hopedale baz=283	22.82	83	P	P	08 10 57.8	-1.1
Z41A	Richland Creek baz=300	22.87	103	P	P	08 10 58.1	-1.4
P43A	Skaggs, Pawnee comp=Z,26nm,0.8s	22.88	85	P	P	08 10 58.6	-0.9
P43A				IAmb	IAmb	08 11 00.6	
PBMO	Poplar Bluff comp=Z,26nm,1.3s	23.10	93	P	P	08 11 01.2	-0.6
PBMO				IAmb	IAmb	08 11 03.8	
Q44A	Meyer Farm, Va	23.46	87	P	P	08 11 04.7	-0.8
O44A	Mansfield	23.53	84	P	P	08 11 05.5	-0.7
342A	Flagon Creek P	24.19	107	P	P	08 11 12.0	-0.6
SFIN	Lafayette baz=284	24.49	82	P	P	08 11 15.1	-0.2
SFIN	Lafayette	24.49	82	P	P	08 11 14.5	-0.8
W45A	Hickory Valley	24.67	96	P	P	08 11 15.7	-1.2
USIN	University of	24.76	88	P	P	08 11 17.0	-0.7
OXF	Oxford baz=296	24.78	97	P	P	08 11 18.3	+0.4
OXF	Oxford	24.78	97	P	P	08 11 17.3	-0.6
N25K	Chitina, Valde baz=131	24.85	331	P	P	08 11 16.0	-2.4
WVT	Waverly baz=293	25.29	92	P	P	08 11 21.7	-0.8
WVT	Waverly comp=Z,15nm,0.7s	25.29	92	P	P	08 11 21.4	-1.1
WVT				IAmb	IAmb	08 11 25.6	
L26K	Log Cabin Wild baz=136	25.40	335	P	P	08 11 22.6	-0.8
PLAL	Pickwick Lake comp=Z,16nm,0.7s	25.57	95	P	P	08 11 24.8	-0.2
PLAL				IAmb	IAmb	08 11 25.9	
WCI	Wyandotte Cave baz=289	25.70	87	P	P	08 11 24.8	-1.4
WCI	Wyandotte Cave	25.70	87	P	P	08 11 25.0	-1.2
K27K	Chicken baz=139	25.75	337	P	P	08 11 27.0	+0.5
SCRK	Sand Creek baz=136	26.29	336	P	P	08 11 32.3	+0.8
Z47A	Carrollton	26.37	99	P	P	08 11 32.4	+0.1
LRAL	Lakeview Retre baz=298	27.24	98	P	P	08 11 39.6	-0.6
LRAL	Lakeview Retre comp=Z,8.3nm,0.7s	27.24	98	P	P	08 11 39.5	-0.6
LRAL				IAmb	IAmb	08 11 41.2	
HDA	Harding Lake baz=132	27.52	334	P	P	08 11 42.1	-0.3
INK	Inuvik comp=Z,4.4nm,1.1s,baz=152,slow=12,SNR=8.5	27.57	349	P	P	08 11 43.5	+0.7
INK				LR	LR	08 22 31.1	
ILAR	Eielson Array comp=Z,5.6nm,0.8s,baz=150,slow=8.1,SNR=48	27.75	335	P	P	08 11 45.7	+1.3
ILAR				LR	LR	08 22 10.5	
MCK	McKinley baz=128	27.75	332	P	P	08 11 45.1	+0.6
POKR	Poker Plat Res baz=132	28.15	335	P	P	08 11 47.7	-0.4
TKL	Tuckaleechee C comp=Z,169nm,21.4s,baz=310,slow=39	28.50	91	LR	LR	08 24 24.7	
SADO	Sadowa comp=Z,190nm,20.2s,baz=336,slow=35	29.41	70	LR	LR	08 22 49.5	
GOGA	Gogfey baz=297	29.69	95	P	P	08 12 00.4	-1.6
X54A	Belton baz=295	30.00	92	P	P	08 12 03.6	-1.2
X55A	Gracelyn & Ava baz=296	30.59	91	P	P	08 12 08.6	-1.4
IMAR	Indian Mountai	30.75	333	P	P	08 12 12.0	+0.9
L56A	Greenwood baz=284	31.06	75	P	P	08 12 11.3	-2.9
TOLK	Toolik Lake Re baz=134	31.19	339	P	P	08 12 13.9	-1.1
CMIG	Matias Romero comp=Z,237nm,18.4s,baz=314,slow=38	32.52	132	LR	LR	08 26 27.0	
SCHQ	Schefferville comp=Z,170nm,20.2s,baz=218,slow=36	36.56	51	LR	LR	08 27 50.0	
SEY	Seymchan comp=Z,1.2nm,0.4s,baz=86,slow=9.7,SNR=4.7	52.93	325	P	P	08 15 12.6	+0.6
BORG	Borgarnes comp=Z,198nm,20.2s,baz=313,slow=37	56.38	31	LR	LR	08 40 30.2	
NRIK	Norilsk comp=Z,3.6nm,0.8s,baz=21,slow=4.3,SNR=7.0	67.35	350	P	P	08 16 50.9	+0.1
KLR	Kul'dur comp=Z,69nm,21.4s,baz=55,slow=36	69.80	319	LR	LR	08 47 17.4	
NB2	NORSAR Subarra comp=Z,0.9nm,0.6s,baz=320,slow=6.2	69.98	23	P	P	08 17 07.2	-0.2
NOA	NORSAR Array B comp=Z,2.0nm,0.8s,baz=322,slow=6.1,SNR=4.3	69.98	23	P	P	08 17 07.5	+0.1
USRK	Ussuriysk Ar. comp=Z,1.2nm,0.5s,baz=352,slow=6.7,SNR=4.5	73.01	314	P	P	08 17 26.3	+0.3
FINES	FINESS Array B comp=Z,1.4nm,0.5s,baz=336,slow=4.2,SNR=10	73.39	16	P	P	08 17 27.6	-0.2
KLMR	Klimovskoe comp=Z,24nm,1.3s	76.27	10	eP	P	08 17 43.3	-1.2
KLMR				AMP		08 17 46.2	
SONM	Songino Array comp=Z,1.0nm,0.6s,baz=62,slow=2.7,SNR=6.0	81.88	331	P	P	08 18 16.4	+0.8
SONM				LR	LR	08 56 06.9	
ZALV	Zalesovo Beam comp=Z,2.3nm,0.6s,baz=46,slow=6.4,SNR=9.5	82.32	346	P	P	08 17 47.4	-0.2
ZALV				LR	LR	09 01 41.5	
AKASG	Malin Array Be comp=Z,0.3nm,0.3s,baz=334,slow=4.5,SNR=8.2	83.92	19	P	P	08 18 25.7	-0.4
BVAR	Borovoye Array comp=Z,1.3nm,0.7s,baz=248,slow=24,SNR=6.1	85.13	354	P	P	08 18 31.8	-0.3
HHC	Hu-ho-hao-te comp=Z,13nm,1.0s	85.55	324	eP	P	08 18 36.0	+1.4
HHC				pmax	pmax		
HHC	comp=Z,130nm,7.1s			pmax	pmax		
KURBB	Kurchatov Arra comp=Z,2.7nm,0.7s,baz=12,slow=5.1,SNR=18	86.57	349	P	P	08 18 38.9	-0.4
NJ2	Nanjing comp=Z,14nm,0.7s	88.90	314	eP	P	08 18 49.4	-1.4
NJ2				pmax	pmax		
MKAR	Makanchi Array comp=Z,1.2nm,0.9s,baz=14,slow=6.2,SNR=8.1	89.64	345	P	P	08 18 53.5	-0.5
WMQ	Urumqi	91.27	341	eP	P	08 19 03.2	+1.4
WRA	Warramunga Arr comp=Z,0.3nm,0.7s,baz=34,slow=2.2,SNR=14	114.79	265	PKP	PKPdf	08 24 36.5	-0.7

WEL 07 08:07:57.6, 43°S ±3° × 17°2E ±°, h5km ±2km, M2.3/10, ML2.4/10, MLv2.3/10, Error ellipse: s-maj=0.0km s-min=0.0km az=145.4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTZ	Lake Taylor	0.28	102	P	Pb	08 08 04.7	-0.5
INZ	Inchbonnie	0.33	269	P	Pb	08 08 05.7	-0.4
OXZ	Oxford	0.61	170	P	Pn	08 08 12.0	-1.0
MHCZ	Mount Hutt	0.84	196	P	Pn	08 08 16.1	-0.1
GVZ	Greta Valley S	0.87	107	P	Pn	08 08 16.4	-0.1
WVZ	Waitaha Valley	0.92	247	P	Pb	08 08 16.5	+0.5
DSZ	Denniston Nort	0.98	356	P	Pg	08 08 16.5	+0.1
MQZ	McQueen's Vall	1.13	151	P	Pn	08 08 20.1	0.0
RPZ	Rata Peaks	1.17	212	P	Pn	08 08 21.6	+1.0
THZ	Tophouse	1.22	38	P	Pg	08 08 19.6	-1.4
KHZ	Kahutara	1.25	76	P	Pn	08 08 22.4	+0.7
GCSZ	Gaunt Creek Bo	1.29	242	P	Pg	08 08 23.9	+1.4
ARCZ	Arundel	1.33	203	P	Pg	08 08 25.1	+1.9
FOZ	Fox Glacier	1.73	241	P	Pg	08 08 30.4	-0.3
QRZ	Quartz Range	1.95	14	P	Pb	08 08 32.9	-0.7
LBZ	Lake Benmore	2.08	216	P	Pg	08 08 38.6	+1.1
ODZ	Otahua Downs	2.49	201	P	Pn	08 08 39.2	+0.4

IDC 07 08:11:47.7±1.5, 5.76S×150.15E, h0km, mb3.2/2, mb1 3.6/3, mb1mx3.3/35, mbtmp3.4/3, ML3.7/1, Error ellipse: s-maj=98.0km s-min=21.4km az=138.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076 20nm,0.3s,baz=174,slow=2.2,SNR=6.9	2.36	52	Pn	Pn	08 12 28.1	+0.4
KRVT				Sn	Sb	08 12 59.6	-1.2
WRA	Warramunga Arr 0.6nm,0.7s,baz=53,slow=10,SNR=7.3	20.86	226	P	P	08 16 32.0	+0.6
ASAR	Alice Springs 0.4nm,0.4s,baz=60,slow=8.9,SNR=7.6	23.70	220	P	P	08 17 01.5	0.0
TORD	Torodi Ar. Bea 0.3nm,0.5s,baz=29,slow=3.3,SNR=2.0	148.06	286	PKPbc	PKPdf	08 31 34.8	+1.6

IDC 07 08:22:54.5±4.8, 9.71S×159.74E, h21km±32km, mb4.0/8, mb1 4.1/9, mb1mx3.8/44, mbtmp4.1/9, ML3.5/1, Error ellipse: s-maj=30.8km s-min=9.3km az=129.0

ISC 07 08:22:53.5±0.7, 9.7S±0.1×159.6E±0.1, h10km, n16, σ0s79/11, mb4.2/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara 3μm,0.3s,baz=218,slow=4.9,SNR=344	0.47	52	Pn	Pb	08 23 04.2	+0.4
HNR	comp=Z,182nm,20.4s,baz=70,slow=40			LR	LR	08 23 08.3	
HNR	13μm,0.3s,baz=210,slow=19,SNR=31			Sn	Sb	08 23 10.7	-0.1
DZM	Mont Dzumac 0.2nm,0.3s,baz=324,slow=19,SNR=1.4	13.94	153	Pn	Pn	08 26 11.6	+0.3
WRA	Warramunga Arr 0.8nm,0.8s,baz=74,slow=9.9,SNR=5.9	26.39	244	P	P	08 28 30.6	+0.3
STKA	Stephens Creek 2.9nm,0.8s,baz=41,slow=17,SNR=7.3	27.63	214	P	P	08 28 40.9	-0.4
ASAR	Alice Springs 0.4nm,0.4s,baz=60,slow=10.0,SNR=8.2	28.16	237	P	P	08 28 45.8	-0.5
H11S2	WAKE ISLAND Hy baz=194,slow=76,SNR=73	28.91	14	T	T	08 57 40.1	
H11S3	WAKE ISLAND Hy baz=194,slow=76,SNR=45	28.91	14	T	T	08 57 38.1	
H11S1	WAKE ISLAND Hy baz=194,slow=76,SNR=33	28.92	14	T	T	08 57 56.0	
H11N1	WAKE ISLAND Hy baz=194,slow=75,SNR=32	30.13	14	T	T	08 59 32.4	
H11N3	WAKE ISLAND Hy baz=194,slow=75,SNR=30	30.14	14	T	T	08 59 29.9	
H11N2	WAKE ISLAND Hy baz=194,slow=75,SNR=46	30.15	14	T	T	08 59 33.8	
PETK	Petropavlovsk- 7.7nm,0.8s,baz=158,slow=6.3,SNR=5.0	62.60	359	P	P	08 33 18.2	+0.5
CMAR	Chiang Mai Arr 0.8nm,0.3s,baz=125,slow=5.5,SNR=5.2	66.04	295	P	P	08 33 42.0	+1.0
VNDA	Vanda 0.6nm,0.8s,baz=308,slow=3.6,SNR=6.0	67.79	179	P	P	08 33 51.2	+0.1
ILAR	Eielson Array 1.9nm,0.4s,baz=245,slow=4.9,SNR=58	84.29	20	P	P	08 35 23.5	-1.7
MKAR	Makanchi Array 0.8nm,0.5s,baz=94,slow=10,SNR=1.2	88.44	318	P	P	08 35 46.1	0.0

NEIC 07 08:24:58.6±1.3, 4.28S±0.08×102.27E±0.08, h65km±7km, mb4.6/15, Error ellipse: s-maj=14.4km s-min=8.5km az=220.0

IDC 07 08:24:58.2±7.5, 4.19S×102.28E, h52km±66km, mb4.0/12, mb1 4.1/12, mb1mx3.7/57, mbtmp4.2/12, MS3.1/1, Ms1 3.1/1, ms1mx2.6/45, Error ellipse: s-maj=52.7km s-min=13.4km az=58.0

DJA 07 08:24:58.7±0.6, 4°S±4°×10°2E±°, h27km±6km, M4.6/11, mb4.5/1, MLv4.6/11

ISC 07 08:24:55.6±0.7, 4.39S±0.08×102.10E±0.08, h35km, n62, σ1s44/57, mb4.6/23, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.86	88	P	Pn	08 25 12.7	+1.4
MNAI	Manna	0.86	88		Pn	08 25 13.1	+1.9
MNAI				Sn	Sn	08 25 23.6	+1.0
KSI	Kapahiang	0.88	34	P	Pn	08 25 12.9	+1.2
LHSI	Lahat	1.53	69	P	Pn	08 25 22.2	+1.7
LWLI	Liwa	2.06	108	P	Pn	08 25 30.0	+2.2
LWLI				S	Sn	08 25 52.5	+0.2
MDSI	Maura Dua	2.08	93	P	Pn	08 25 29.9	+1.9
KRJI	Kerinci	2.37	344	P	Pn	08 25 36.3	+4.2
KLSI		2.64	97	P	Pn	08 25 38.7	+2.9
PMBI	Palembang	3.04	62	Pn	Pn	08 25 40.2	-1.1
CGJI	Cibinong	4.21	122	P	Pn	08 25 59.5	+2.1
DSRI	Dabo	4.61	33	P	Pn	08 26 04.9	+2.1
BKNI	Bangkinang	4.80	347	Pn	Pn	08 26 07.3	+1.8
LEM	Lembang comp=Z,175nm,19.7s,baz=324,slow=43	6.01	114	LR	LR	08 29 12.9	
MYKOM	Kota Tinggi	6.38	16	Pn	Pn	08 26 28.3	+1.0
CISI	Cisompet, Garu	6.50	119	Pn	Pn	08 26 30.7	+1.7
GSI	Gunungsitoli	7.24	321	P	Pn	08 26 42.2	+3.2
GSI	Gunungsitoli	7.24	321		Pn	08 26 41.7	+2.7
KULM	Kulim	9.72	351	Pn	Pn	08 27 14.7	+1.6
UBPT	Khong Chiam	19.82	10	P	P	08 29 24.2	+0.8
LUWI	Luwuk	20.92	81	P	P	08 29 36.2	+0.8
CMAR	Chiang Mai Arr 1.7nm,0.3s,baz=185,slow=8.8,SNR=14	22.91	352	P	P	08 29 56.7	0.0
CMAR	Chiang Mai Arr	22.91	352	P	P	08 29 55.8	-0.9
FITZ	Fitzroy Crossi 2.3nm,0.5s,baz=315,slow=6.9,SNR=6.7	26.76	122	P	P	08 30 32.8	+0.4
FITZ	Fitzroy Crossi	26.76	122	P	P	08 30 31.7	-0.7
KNRA	Kununurra comp=Z,17nm,1.3s	28.51	115	P	P	08 30 46.6	-1.4
KNRA				IAmb	IAmb	08 30 52.9	
H08S2	Diego Garcia H baz=88	29.61	262	T	T	09 01 18.7	
H08S3	Diego Garcia H baz=88,slow=74,SNR=26	29.62	262	T	T	09 01 19.5	
H08S1	Diego Garcia H baz=88,slow=74,SNR=12	29.63	262	T	T	09 01 34.1	
H01W3	Cape Leeuwin H baz=338,slow=76,SNR=22	32.33	161	T	T	09 05 20.9	
H01W2	Cape Leeuwin H baz=338,slow=76,SNR=28	32.34	161	T	T	09 05 23.1	
H01W1	Cape Leeuwin H baz=338,slow=76,SNR=26	32.35	161	T	T	09 05 18.0	
WB0	Warramunga Arr comp=Z,8.0nm,1.4s	34.98	119	P	P	08 31 44.7	-0.2
WB0				IAmb	IAmb	08 31 58.1	
WRA	Warramunga Arr comp=Z,1.1nm,0.3s,baz=308,slow=9.5,SNR=50	35.00	119	P	P	08 31 44.9	-0.2
WRA				PcP	PcP	08 34 17.5	+0.5
WRA	Warramunga Arr comp=Z,0.9nm,0.7s,baz=302,slow=2.2,SNR=7.5	35.00	119	P	P	08 31 43.6	-1.5
WR0	Warramunga Arr comp=Z,13nm,1.5s	35.18	119	P	P	08 31 46.5	-0.2
WR0				IAmb	IAmb	08 31 46.7	
ASAR	Alice Springs comp=Z,1.2nm,0.7s,baz=299,slow=8.1,SNR=10	36.17	125	P	P	08 31 55.5	+0.4
ASAR	Alice Springs	36.17	125	P	P	08

	comp=Z,130nm,6.5s						
STKA	**Stephens Creek**	**46.01**	**131**	P	**P**	**08 33 17.3**	**+1.4**
	comp=Z,2.9nm,0.5s,baz=307,slow=7.9,SNR=11						
STKA	**Stephens Creek**	**46.01**	**131**	P	**P**	**08 33 15.9**	**-0.1**
BJI	**Beijing**	**46.07**	**15**	P	**P**	**08 33 15.1**	**-1.0**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
JNU	**Nakatsue**	**46.21**	**34**	P	**P**	**08 33 16.5**	**-1.0**
KDJ	**Kajisay**	**51.55**	**336**	P	**P**	**08 33 58.8**	**+0.4**
SONM	**Songino Array**	**52.14**	**4**	P	**P**	**08 34 03.1**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=182,slow=9.0,SNR=11						
SONM	**Songino Array**	**52.14**	**4**	P	**P**	**08 34 02.2**	**-0.5**
BTK	**Batken**	**52.75**	**330**	P	**P**	**08 34 06.6**	**-0.7**
BTK				IAmb	IAmb	08 34 21.1	
	comp=Z,9.5nm,1.1s						
MJAR	**Matsushiro Arr**	**52.87**	**37**	P	**P**	**08 34 06.3**	**-1.9**
	comp=Z,1.3nm,0.6s,baz=208,slow=7.8,SNR=4.3						
USRK	**Ussuriysk Ar.**	**55.32**	**26**	P	**P**	**08 34 24.9**	**-1.0**
	comp=Z,3.1nm,0.5s,baz=202,slow=4.5,SNR=9.1						
USRK	**Ussuriysk Ar.**	**55.32**	**26**	P	**P**	**08 34 24.2**	**-1.7**
KURBB	**Kurchatov Arra**	**58.43**	**343**	P	**P**	**08 34 47.5**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=159,slow=6.6,SNR=17						
KURK	**Kurchatov**	**58.48**	**343**	P	**P**	**08 34 47.4**	**-0.7**
KURK				IAmb	IAmb	08 34 48.7	
	comp=Z,3.5nm,0.7s						
ZAA0	**Zalesovo Array**	**59.90**	**348**	P	**P**	**08 34 57.2**	**-0.7**
ZALV	**Zalesovo Beam**	**59.90**	**348**	P	**P**	**08 34 57.3**	**-0.6**
	comp=Z,5.0nm,0.4s,baz=164,slow=5.0,SNR=21						
ZALV	**Zalesovo Beam**	**59.90**	**348**	P	**P**	**08 34 57.1**	**-0.8**
ABKAR	**Akbulak array**	**64.73**	**331**	P	**P**	**08 35 30.3**	**0.0**
AKTO	**Aktyubinsk**	**66.44**	**331**	P	**P**	**08 35 41.2**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=126,slow=8.7,SNR=4.2						
NRIK	**Noril'sk**	**74.25**	**355**	P	**P**	**08 36 27.9**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=186,slow=5.3,SNR=3.6						
SNAA	**Sanae**	**90.53**	**198**	P	**P**	**08 37 53.4**	**-0.3**
SNAA				IAmb	IAmb	08 38 14.1	
	comp=Z,5.8nm,1.4s						
TXAR	**Lajitas Array**	**145.20**	**42**	PKP	**PKPab**	**08 44 30.2**	**0.0**
	comp=Z,2.2nm,0.5s,baz=261,slow=0.8,SNR=95						

*SOME **07** 08:32:38.6, 44.°20N × 82.°53E, h10km*
*NNC **07** 08:32:40.2 ± 2.2, 44.°22N × 82.°40E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=22.3km s-min=6.8km az=131.0*
ISC 07 08:32:38.9 ± 1.6, 44.°18N ± 0.°05 × 82.°45E ± 0.°05, h1km ± 14km, n22, σ 1°29/33, 5C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.69**	**245**	*eP*	**Pg**	**08 33 11.8**	**+0.7**
	17nm,0.2s						
KTMS				*eS*	**Sg**	**08 33 35.8**	**+2.8**
	360nm,0.3s						
DJR	**Jarkent**	**1.92**	**275**	*eP*	**Pg**	**08 33 16.1**	**+0.6**
	16nm,0.3s						
DJR				*eS*	**Sg**	**08 33 43.0**	**+2.6**
	96nm,0.3s						
DJR	**Jarkent**	**1.92**	**275**	Pg	**Pg**	**08 33 16.1**	**+0.6**
	16nm,0.3s						
DJR				Lg	Lg	08 33 43.0	
	96nm,0.3s						
PDGK	**Podgornoye**	**2.31**	**249**	Pg	**Pb**	**08 33 21.9**	**+0.5**
	2.7nm,0.2s						
PDGK				Lg	Lg	08 33 53.3	
	46nm,0.5s						
PDGK	**Podgornoye**	**2.31**	**249**	⇓Pg	**Pb**	**08 33 21.8**	**+0.4**
	2.2nm,0.3s						
PDGK				⇓Lg	Lg	08 33 53.2	
	62nm,0.5s						
SHLS	**Shalkode**	**2.40**	**246**	*eP*	**Pn**	**08 33 19.2**	**-0.2**
	34nm,0.2s						
SHLS				*eS*	**Sn**	**08 33 48.6**	**-0.9**
	240nm,0.2s						
MK31	**Makanchi Array**	**2.62**	**358**	⇑Pg	**Pb**	**08 33 27.0**	**+0.4**
	1.4nm,0.2s,baz=168,slow=17,SNR=10						
MK31				⇑Lg	Lg	08 33 58.0	
	24nm,0.5s,baz=178,slow=26,SNR=12						
MAKZ	**Makanchi**	**2.65**	**353**	⇑Pg	**Pg**	**08 33 28.8**	**-0.8**
	2.5nm,0.3s						
MAKZ				⇑Lg	Lg	08 33 59.4	
	7.6nm,0.6s						
UZB	**Uzynbulak**	**2.69**	**249**	*eP*	**Pb**	**08 33 28.1**	**+0.1**
	3.4nm,0.2s						
UZB				*eS*	**Sg**	**08 34 04.0**	**-1.4**
	45nm,0.3s						
UZB	**Uzynbulak**	**2.69**	**249**	Pg	**Pb**	**08 33 28.0**	**+0.1**
	3.4nm,0.2s						
UZB				Lg	Lg	08 34 04.0	
	45nm,0.3s						
KPKS	**Kokpek**	**2.82**	**257**	*eP*	**Pb**	**08 33 30.7**	**+0.7**
	15nm,0.2s						
KPKS				*eS*	**Sg**	**08 34 08.2**	**-1.2**
	94nm,0.3s						
MNBS	**Baschi**	**2.92**	**269**	*eP*	**Pb**	**08 33 32.5**	**+0.7**
	5.4nm,0.0s						
MNBS				*eS*	**Sg**	**08 34 11.2**	**-1.3**
	57nm,0.4s						
MNBS	**Baschi**	**2.92**	**269**	Pg	**Pb**	**08 33 32.5**	**+0.7**
	5.4nm,0.0s						
MNBS				Lg	Lg	08 34 11.2	
	57nm,0.4s						
KURS	**Kuram**	**3.17**	**259**	*eP*	**Pb**	**08 33 37.0**	**+0.9**
	4.2nm,0.7s						
KURS				*eS*	**Sg**	**08 34 18.7**	**-2.1**
	13nm,0.3s						
KURS	**Kuram**	**3.17**	**259**	Pg	**Pb**	**08 33 37.0**	**+0.9**
	4.2nm,0.7s						
KURS				Lg	Lg	08 34 18.7	
	13nm,0.3s						
ARXS	**Arharly**	**3.32**	**272**	*eP*	**Pb**	**08 33 40.0**	**+1.3**
	3.3nm,0.2s						
ARXS				*eS*	**Sg**	**08 34 24.1**	**-1.5**
	35nm,0.3s						
ZSN	**Zaisan**	**3.68**	**26**	*eP*	**Pb**	**08 33 43.7**	**-1.0**
	17nm,0.2s						
ZSN				*eS*	**Sb**	**08 34 30.7**	**+0.8**
	80nm,0.7s						
ZSN	**Zaisan**	**3.68**	**26**	Pg	**Pb**	**08 33 46.6**	**+1.9**
	6.5nm,0.4s						
ZSN				Lg	Lg	08 34 35.1	
	80nm,0.7s						
WMQ	**Urumqi**	**3.80**	**94**	*eP*	**Pb**	**08 33 47.4**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,78nm,4.9s						
WMQ				LR	LR		
	comp=N,800nm,29.1s						
WMQ				LR	LR		
	comp=E,740nm,28.9s						
WMQ				LR	LR		
	comp=Z,470nm,29.2s						
TNSS	**Tian-Shan**	**4.16**	**256**	*eP*	**Pg**	**08 33 56.9**	**-1.6**
TNSS				*eS*	**Sg**	**08 34 52.8**	**+0.4**
KUU	**Kurty**	**4.42**	**268**	*eP*	**Pg**	**08 34 01.6**	**-1.8**
	comp=Z,1.0nm,0.1s						
KUU				*eS*	**Sg**	**08 35 01.6**	**+0.9**
	comp=Z,15nm,0.5s						
TKM2	**Tokmak 2**	**5.14**	**258**	⇓Pg	**Pb**	**08 34 10.8**	**+1.2**
	comp=Z,6.8nm,0.8s						
TKM2				⇑Lg	Lg	08 35 21.5	
	comp=Z,16nm,1.2s						

TAP 07 08:32:49.1, 24.°15N × 121.°61E, h6km, ML1.4, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.03**	**328**	P	Pg	08 32 50.9	+0.4
	baz=327						
NACB				*eS*	Sg	08 32 51.4	0.0
	baz=327						
TWD	**Chiawan**	**0.07**	**194**	P	Pg	08 32 51.5	+0.7
	baz=187						
TWD				S	Sg	08 32 52.8	+0.8
	baz=187						
ETLH	**Xiulin Townshi**	**0.14**	**297**	P	Pg	08 32 53.0	+1.0
	baz=296						
ETLH				S	Sg	08 32 55.5	+1.5
	baz=296						
HWA	**Hwalien**	**0.17**	**183**	*eP*	Pg	08 32 53.7	+1.2
	baz=180						
HWA				*eS*	Sg	08 32 56.5	+1.7
	baz=180						
WHF	**Hehuan Shan**	**0.32**	**270**	P	Pb	08 32 56.7	-0.8
	baz=269						
ENAH	**Nanao**	**0.35**	**31**	*eP*	Pb	08 32 57.1	-0.6
	baz=30						
NNSH	**Datong**	**0.35**	**323**	*eP*	Pg	08 32 56.4	+0.4
	baz=323						
NNSB	**Datong**	**0.35**	**323**	*eP*	Pb	08 32 57.4	-0.5
	baz=323						
NNSB				*eS*	Sb	08 33 03.4	-0.4
	baz=323						
NNS	**Nan Shan**	**0.37**	**323**	*eP*	Pb	08 32 57.5	-0.6
	baz=323						
NNS				*eS*	Sb	08 33 03.5	-0.6
	baz=323						
ESL	**Shilin**	**0.37**	**207**	*eP*	Pg	08 32 56.6	+0.3
	baz=205						
CHGB	**Renai**	**0.41**	**258**	*eP*	Pb	08 32 58.6	-0.3
	baz=258						
CHGB				*eS*	Sb	08 33 04.6	-0.9
	baz=258						
TWT	**Tachien**	**0.41**	**285**	*eP*	Pb	08 32 58.6	-0.4
	baz=284						
TWT				*eS*	Sb	08 33 04.6	-1.0
	baz=284						
TDCB	**Techi**	**0.43**	**284**	*eP*	Pb	08 32 58.7	-0.5
	baz=284						
TDCB				*eS*	Sb	08 33 05.4	-0.5
	baz=284						
NDT	**Datong Townshi**	**0.46**	**349**	*eP*	Pb	08 32 59.0	-0.7
	baz=348						
YHNB	**Yeheng**	**0.56**	**337**	*eP*	Pb	08 33 01.6	+0.1
	baz=337						
YHNB				*eS*	Sb	08 33 10.2	+0.4
	baz=337						
NSK	**Sanguang**	**0.58**	**336**	*eP*	Pb	08 33 02.1	+0.5
	baz=336						
NSK				*eS*	Sb	08 33 10.5	+0.4
	baz=336						
VWDT	**VWDT**	**0.58**	**228**	*eP*	Pb	08 33 01.6	0.0
	baz=227						
VWDT				*eS*	Sb	08 33 11.1	+0.9
	baz=227						
WHP	**Taichung City**	**0.62**	**282**	*eP*	Pb	08 33 02.5	+0.1
	baz=282						
WHP				*eS*	Sb	08 33 12.1	+0.5
	baz=282						
NWLT	**Wulai**	**0.64**	**351**	*eP*	Pb	08 33 03.0	+0.3
	baz=350						
NWLT				*eS*	Sb	08 33 12.3	+0.4
	baz=350						
NTC	**Toucheng**	**0.73**	**16**	*eS*	Sb	08 33 15.2	+0.7
	baz=15						
NSTT	**Nanjuang**	**0.74**	**311**	*eP*	Pg	08 33 03.5	+0.2
	baz=311						
NSTT				*eS*	Sb	08 33 14.8	+0.1
	baz=311						
EGS		**0.75**	**23**	*eP*	Pb	08 33 04.8	+0.1
	baz=23						
EGS				*eS*	Sb	08 33 15.2	+0.1
	baz=23						

*IDC **07** 08:47:35.2 ± 8.3, 31.°12S × 179.°89W, h391km ± 97km, mb2.6/2, mb1 3.0/3, mb1mx2.8/21, mbtmp3.6/3, Error ellipse: s-maj=99.3km s-min=40.0km az=6.0*
ISC 07 08:47:31.6 ± 0.9, 30.°93S ± 0.°09 × 179.°8W ± 0.°2, h350km, n46, σ 1°91/59, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.33**	**45**	P	**Pn**	**08 48 26.5**	**+1.0**
RIZ	**Raoul Island**	**2.34**	**45**	S	**S**	**08 49 06.3**	**-2.5**
WMGZ	**Waiomatatini S**	**7.03**	**192**	P	**Pn**	**08 49 17.3**	**+3.1**
WMGZ				S	**S**	**08 50 37.8**	**+0.2**
HAZ	**Te Kaha**	**7.09**	**196**	P	**Pn**	**08 49 16.8**	**+1.8**
HAZ				S	**S**	**08 50 38.6**	**-0.4**
PKGZ	**Pakihiroa**	**7.16**	**194**	P	**Pn**	**08 49 19.3**	**+3.5**
PUZ	**Puketiti**	**7.30**	**192**	P	**Pn**	**08 49 19.5**	**+2.1**
PUZ				S	**S**	**08 50 40.9**	**-2.7**
RUGZ	**Raukumara Rang**	**7.32**	**196**	P	**Pn**	**08 49 20.0**	**+2.3**
RUGZ				S	**S**	**08 50 39.2**	**-4.8**
TWGZ	**Tauwhareparae**	**7.45**	**194**	P	**Pn**	**08 49 20.9**	**+1.6**
TWGZ				S	**S**	**08 50 46.2**	**-0.7**
MWZ	**Matawai**	**7.70**	**196**	P	**Pn**	**08 49 25.3**	**+3.1**
MWZ				S	**S**	**08 50 49.7**	**-2.5**
TKGZ	**Te Karaka**	**7.73**	**194**	P	**Pn**	**08 49 23.8**	**+1.3**
TKGZ				S	**S**	**08 50 51.8**	**-1.1**
URZ	**Urewera**	**7.74**	**198**	P	**Pn**	**08 49 26.0**	**+3.5**
	3.7nm,0.3s,baz=272,slow=4.5,SNR=20						
URZ				S	**S**	**08 50 51.9**	**-1.0**
	6.9nm,0.3s,baz=255,slow=22,SNR=19						
URZ	**Urewera**	**7.74**	**198**	P	**Pn**	**08 49 24.3**	**+1.7**
RAGZ	**Rawiri**	**7.88**	**196**	P	**Pn**	**08 49 27.2**	**+2.9**
RIGZ	**Rimuhau**	**8.01**	**194**	P	**Pn**	**08 49 27.3**	**+1.5**
RIGZ				S	**S**	**08 50 57.5**	**-1.4**
MUGZ	**Murupara**	**8.04**	**200**	P	**Pn**	**08 49 27.6**	**+1.5**
MUGZ				S	**S**	**08 51 00.3**	**+0.9**
RTZ	**Ruatahuna**	**8.11**	**198**	P	**Pn**	**08 49 27.9**	**+0.9**
RTZ				S	**S**	**08 50 57.6**	**-3.5**
GRTZ	**Galatos Road**	**8.13**	**203**	P	**P**	**08 49 32.1**	**+1.9**
SNGZ	**Shannon Statio**	**8.17**	**196**	P	**P**	**08 49 30.6**	**-0.1**
SNGZ				S	**S**	**08 51 01.6**	**-0.9**
PRGZ	**Paritu Road**	**8.19**	**193**	P	**P**	**08 49 31.6**	**+0.7**
PRGZ				S	**S**	**08 51 02.2**	**-0.7**
ALRZ	**Allen Road**	**8.24**	**202**	P	**P**	**08 49 32.0**	**+0.6**
TLZ	**Tolley Road**	**8.31**	**206**	P	**P**	**08 49 36.3**	**+4.1**
RAHZ	**Arahi**	**8.36**	**197**	P	**P**	**08 49 31.9**	**-0.9**
MTHZ	**Maungataniwha**	**8.37**	**198**	P	**P**	**08 49 33.7**	**+0.8**
MRHZ	**Matea Rd**	**8.47**	**200**	P	**P**	**08 49 34.2**	**+0.2**
NMHZ	**Naumai**	**8.61**	**198**	P	**P**	**08 49 34.5**	**-1.0**
HIZ	**Hauiti**	**8.74**	**209**	P	**P**	**08 49 41.0**	**+4.0**
BKZ	**Black Stump Fm**	**8.76**	**199**	P	**Pn**	**08 49 34.6**	**-0.1**
RITZ	**Rihia Road**	**8.78**	**203**	P	**Pn**	**08 49 31.7**	**-3.2**
TMVZ	**Te Maari**	**8.95**	**203**	P	**P**	**08 49 40.2**	**+0.8**
MCHZ	**McNeill Hill**	**8.96**	**198**	P	**P**	**08 49 40.5**	**+1.1**
ETVZ	**East Tongariro**	**8.97**	**203**	P	**P**	**08 49 39.3**	**-0.3**
TWVZ	**Taurewa**	**9.01**	**204**	P	**Pn**	**08 49 35.5**	**-2.2**
OTVZ	**Oturere**	**9.01**	**203**	P	**P**	**08 49 39.4**	**-0.7**
NGZ	**Ngauruhoe**	**9.04**	**203**	P	**P**	**08 49 40.8**	**+0.3**
FWVZ	**Far West T-bar**	**9.13**	**203**	P	**P**	**08 49 40.7**	**-0.8**
WHVZ	**Whangaehu Hut**	**9.14**	**203**	P	**P**	**08 49 42.0**	**+0.3**
BHHZ	**Black Hill Sta**	**9.18**	**200**	P	**Pn**	**08 49 40.6**	**+0.9**
WNVZ	**Wahianoa**	**9.18**	**203**	P	**Pn**	**08 49 40.7**	**+0.9**
KRHZ	**Kereru**	**9.23**	**199**	P	**Pn**	**08 49 41.4**	**+1.1**
KAHZ	**Kahuranaki**	**9.25**	**196**	P	**P**	**08 49 43.3**	**+0.7**
PXZ	**Pawanui**	**9.47**	**196**	P	**Pn**	**08 49 43.0**	**-0.2**
PNHZ	**Pukenui**	**9.53**	**199**	P	**Pn**	**08 49 43.6**	**-0.3**
PRHZ	**Porangahau**	**9.75**	**196**	P	**P**	**08 49 48.4**	**+0.2**
ASAR	**Alice Springs**	**41.53**	**268**	P	**P**	**08 54 46.7**	**+0.4**
	0.1nm,0.3s,baz=108,slow=7.1,SNR=2.3						
WRA	**Warramunga Arr**	**42.57**	**274**	P	**P**	**08 54 53.9**	**-0.7**
	0.5nm,0.6s,baz=111,slow=8.0,SNR=13						
FINES	**FINESS Array B**	**145.09**	**338**	PKPbc	**PKPdf**	**09 06 25.8**	**-1.2**
	1.8nm,0.4s,baz=59,slow=3.8,SNR=19						

IDC 07 09:33:29.4 ± 62.0, 20.°18S × 178.°77E, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/38, mbtmp3.7/3, Error ellipse: s-maj=1106.0km s-min=153.9km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.21**	**243**	P	P	09 40 25.3	-0.3
	2.0nm,0.8s,baz=56,slow=7.3,SNR=3.1						
WRA	**Warramunga Arr**	**41.64**	**262**	P	P	09 41 20.1	+0.3
	0.3nm,0.3s,baz=95,slow=7.8,SNR=28						
ASAR	**Alice Springs**	**41.64**	**257**	P	P	09 41 19.4	-0.4
	0.3nm,0.5s,baz=101,slow=7.7,SNR=8.8						

WEL 07 09:40:42.1, 42.°3S ± 2.°3 × 17.°4E ± .°1, h15km ± 2km, M2.2/11, ML2.3/11, MLv2.2/11, Error ellipse: s-maj=0.0km s-min=0.0km az=129.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.10**	**93**	P	Pg	09 40 45.9	+0.5
BSWZ	**Blackbirch Sta**	**0.16**	**281**	P	Pg	09 40 46.4	+0.3
TUWZ	**Tuamarina**	**0.33**	**342**	P	Pb	09 40 49.6	-0.1
TCW	**Tory Channel**	**0.55**	**15**	P	Pb	09 40 53.3	-0.2
NNZ	**Nelson**	**0.74**	**315**	P	Pb	09 40 56.9	+0.1
KHZ	**Kahutara**	**0.78**	**211**	P	Pn	09 40 59.2	+0.6
THZ	**Tophouse**	**0.88**	**268**	P	Pn	09 40 59.7	-0.3
PLWZ	**Palliser**	**0.90**	**79**	P	Pb	09 41 51.1	-8.3
MSWZ	**Moikau Station**	**0.94**	**70**	P	Pb	09 40 51.0	-9.1
CAW	**Cannon Point**	**0.98**	**50**	P	Pb	09 40 55.3	-5.4
KIW	**Kapiti Island**	**1.08**	**36**	P	Pg	09 41 03.1	+0.1
MTW	**Mount Morrison**	**1.22**	**62**	P	Pb	09 41 04.8	-0.1
OGWZ	**Otaki Gorge**	**1.24**	**42**	P	Pg	09 41 05.9	-0.1
QRZ	**Quartz Range**	**1.49**	**308**	P	Pb	09 41 10.0	+0.5
MRZ	**Mangatainoka R**	**1.56**	**47**	P	Pn	09 41 09.9	+0.5
LTZ	**Lake Taylor**	**1.70**	**232**	P	Pb	09 41 12.6	-0.4
DSZ	**Denniston Nort**	**1.70**	**269**	P	Pb	09 41 13.5	+0.3

IDC 07 09:40:59.1 ± 3.6, 30.°31S × 177.°74W, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.4/23, mbtmp3.3/2, Error ellipse: s-maj=74.6km s-min=23.4km az=107.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.07**	**351**	Pn	Pn	09 41 21.7	+0.5
	184nm,0.3s,baz=67,slow=22,SNR=9.5						
RAO				Sn	Sn	09 41 37.3	+0.5
	399nm,0.3s,baz=18,slow=21,SNR=8.4						
ASAR	**Alice Springs**	**43.34**	**267**	P	P	09 49 03.8	+0.6
	0.2nm,0.5s,baz=106,slow=7.6,SNR=5.6						
WRA	**Warramunga Arr**	**44.32**	**272**	P	P	09 49 10.5	-0.6
	0.3nm,0.3s,baz=112,slow=8.0,SNR=16						
FINES	**FINESS Array B**	**145.14**	**340**	PKPbc	PKPbc	10 00 36.0	-1.4
	3.2nm,0.9s,baz=59,slow=5.1,SNR=2.5						

*HEL **07** 10:05:47.1 ± 0.4, 67.°59N × 34.°11E, h0km, ML2.6, Explosion*
*KOLA **07** 10:05:48.7, 67.°67N × 33.°90E, h0km*
*UPP **07** 10:05:49.3 ± 3.0, 67.°61N × 33.°71E, h0km, ML2.4, Suspected explosion*
*NAO **07** 10:05:49.5 ± 1.1, 67.°66N × 33.°78E, ML2.9*
*IDC **07** 10:05:50.0 ± 1.9, 67.°75N × 33.°84E, h0km, mb1 3.7/5, mb1mx3.3/43, mbtmp3.7/5, ML2.8/5, Error ellipse: s-maj=21.4km s-min=10.0km az=80.0*
ISC 07 10:05:47.9 ± 1.5, 67.69N ± 0.°04 × 33.88E ± 0.°08, h0km, n45, σ 1°66/69, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.22**	**236**	P	**Pg**	**10 05 52.5**	**+0.5**
APA				S	**Sg**	**10 05 55.3**	**+0.5**
APZ9	**Apatity**	**0.22**	**236**	Pg	**Pg**	**10 05 52.5**	**+0.4**
APZ9				Lg	Lg	10 05 55.6	
APZ9	**Apatity**	**0.22**	**236**	Pg	**Pg**	**10 05 52.5**	**+0.4**
APZ9				Sg	**Sg**	**10 05 55.6**	**+0.8**
APA0	**Apatity Array**	**0.35**	**256**	Pg	**Pg**	**10 05 55.1**	**+0.5**
	baz=106,slow=18						
APA0				Lg	Lg	10 06 00.1	
	baz=90,slow=28						
APA0				Rg	Rg	10 06 00.8	
APA0	**Apatity Array**	**0.35**	**256**	P	**Pg**	**10 05 55.0**	**+0.5**
APA0				S	**Sg**	**10 05 59.6**	**+0.5**
APA0	**Apatity Array**	**0.35**	**256**	Pg	**Pg**	**10 05 55.1**	**+0.5**
	baz=106,slow=18						
APA0				Sg	**Sg**	**10 06 00.1**	**+1.0**
	baz=90,slow=28						
VRF	**Varrio**	**1.63**	**274**	PG	**Pn**	**10 06 18.1**	**+0.3**
	baz=84						
VRF				MSG		10 06 38.7	
	comp=Z,78nm,0.2s						
VRF				SG	**Sn**	**10 06 39.4**	**0.0**
KU6	**Riekki**	**2.30**	**225**	PG	**Pn**	**10 06 27.6**	**+0.7**
	baz=49						
KU6				MSG		10 06 55.0	
	comp=Z,30nm,0.2s						
KU6				SG	**Sb**	**10 06 58.5**	**-0.5**
MSF	**Maaselka**	**2.62**	**229**	PG	**Pn**	**10 06 32.7**	**+1.3**
	baz=50						
MSF				SG	**Sb**	**10 07 07.8**	**-0.5**
SGF	**Sodankyl**	**2.83**	**268**	PN	**Pn**	**10 06 34.6**	**+0.3**
	baz=74						
SGF				SB	**Sb**	**10 07 14.6**	**+0.2**
RNF	**Rovaniemi**	**3.26**	**254**	PN	**Pn**	**10 06 40.4**	**+0.3**
	baz=66						
ARA0	**ARCESS Array S**	**3.58**	**305**	Pn	**Pn**	**10 06 45.9**	**+1.3**
	baz=123,slow=16						
ARA0				Pg	**Pb**	**10 06 54.1**	**+2.0**
	baz=117,slow=16						
ARA0				Sn	**Sn**	**10 07 28.0**	**+0.4**
	baz=120,slow=28						
ARA0				Lg	Lg	10 07 38.6	
	baz=116,slow=37						
ARA0	**ARCESS Array S**	**3.58**	**305**	PN	**Pn**	**10 06 45.7**	**+1.1**
	baz=120						
ARA0				SG	**Sg**	**10 07 41.2**	**-1.6**
ARA0	**ARCESS Array S**	**3.58**	**305**	Pn	**Pn**	**10 06 45.9**	**+1.3**
	baz=123,slow=16						
ARA0				Pg	**Pb**	**10 06 54.1**	**+2.0**
	baz=117,slow=16						
ARA0				Sn	**Sn**	**10 07 28.0**	**+0.4**
	baz=120,slow=28						
ARA0				Sg	**Sb**	**10 07 38.6**	**+2.6**
	baz=116,slow=37						
ARA0				IAML		10 07 42.9	
	comp=Z,22nm,0.3s						
ARCES	**ARCESS Array B**	**3.58**	**305**	Pn	**Pn**	**10 06 45.8**	**+1.1**
	baz=118,slow=15,SNR=370						
ARCES				Sn	**Sn**	**10 07 28.4**	**+0.8**
	baz=121,slow=26,SNR=14						
ARCES				Lg	Lg	10 07 39.8	
	baz=116,slow=30,SNR=8.5						
TOF	**Tornio**	**4.10**	**251**	PN	**Pn**	**10 06 51.5**	**-0.1**
OUL	**Oulu**	**4.14**	**235**	PN	**Pn**	**10 06 53.5**	**+1.3**
	baz=37						
KTK1	**Kautokeino**	**4.16**	**293**	*eP*	**Pn**	**10 06 54.0**	**+1.5**
KTK1				*eS*	**Sn**	**10 07 38.3**	**-3.5**
KTK1				IAML		10 08 00.7	
	comp=Z,11nm,0.2s						
PAJU	**Pajala**	**4.22**	**266**	P	**Pn**	**10 06 53.1**	**-0.3**
PAJU				S	**Sn**	**10 07 42.6**	**-0.6**
KALU	**Kalix**	**4.55**	**251**	PN	**Pn**	**10 06 57.2**	**-0.7**
	baz=59						
HAMF	**Hammerfest**	**4.69**	**314**	*eP*	**Pn**	**10 07 01.1**	**+1.3**
HAMF				*eS*	**Sn**	**10 07 54.3**	**-0.5**
HAMF				IAML		10 08 15.6	
	comp=Z,11nm,0.3s						
KIF	**Kilpisjarvi**	**5.02**	**291**	*eP*	**Pn**	**10 07 05.0**	**+0.7**
KIF				*eS*	**Sn**	**10 07 56.8**	**-6.1**
**K

comp=Z,0.0nm,0.3s,baz=40,slow=10,SNR=4.1

NRA0	NORESS Array S	11.90	245	Pn	Pn	10 08 36.3	-2.3
	baz=56,slow=18						
NRA0	NORESS Array S	11.90	245	Pn	Pn	10 08 36.3	-2.3
	baz=56,slow=18						

DJA 07 10:05:59.4±0.4, 3°S±3°×12°9E±°, h10km, M3.9/8, mb4.6/1, MLv3.6/8, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	Masohi	0.91	218	P	Pg	10 06 15.5	-1.4
MSAI				S	Sb	10 06 29.8	+0.4
AAI	Ambon	1.67	231	P	Pn	10 06 28.5	-0.2
BNDI	Bandanaira	1.93	168	P	Pn	10 06 32.9	+0.7
NLAI	Namlea	2.46	256	P	Pn	10 06 40.1	+0.5
FAKI	Fak Fak	2.77	96	P	Pn	10 06 43.0	-0.9
SANI	Sanana	3.55	279	P	Pn	10 06 54.4	-0.2
APSI	Ampana	8.02	282	P	Pn	10 07 55.5	-0.6

WEL 07 10:19:13.3±0.9, 45°S±5°×167°E±°, h5km, M4.0/12, ML4.2/12, MLv4.0/12, Error ellipse: s-maj=0.0km s-min=0.0km az=113.4, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.32	95	P	Pb	10 19 21.1	-0.4
DCZ				S	Sb	10 19 25.7	-1.4
PYZ	Puysegur Point	0.73	181	P	Pg	10 19 27.0	-0.3
WHZ	Wether Hill Ro	0.99	118	P	Pg	10 19 32.0	-0.2
MLZ	Mavora Lakes	1.00	86	P	Pg	10 19 32.4	-0.1
MLZ				S	Sg	10 19 45.5	0.0
MSZ	Milford Sound	1.16	49	P	Pg	10 19 33.6	-1.9
APZ	The Paps	1.66	148	P	Pn	10 19 42.9	-0.2
APZ				S	Sn	10 20 05.0	+0.3
WKZ	Wanaka	1.75	70	P	Pn	10 19 44.2	-0.2
EAZ	Earnscleugh	1.85	84	P	Pn	10 19 45.7	0.0
EAZ				S	Sn	10 20 09.3	-0.2
JCZ	Jackson Bay	2.02	48	P	Pb	10 19 49.5	-1.0
JCZ				S	Sg	10 20 19.4	+1.3
SYZ	Scrubby Hill	2.03	124	P	Pn	10 19 48.2	+0.1
TUZ	Tuapeka	2.12	105	P	Pn	10 19 49.8	+0.5
LBZ	Lake Benmore	2.69	68	P	Pn	10 19 56.4	-0.9
LBZ				S	Sn	10 20 31.8	+1.6
HHSZ	Highcliff Hill	2.77	101	P	Pn	10 19 58.3	0.0
ODZ	Otahua Downs	2.82	83	P	Pn	10 19 57.9	-1.0
FOZ	Fox Glacier	2.94	51	P	Pn	10 20 00.6	0.0
RPZ	Rata Peaks	3.56	63	P	Pn	10 20 07.6	-1.6
RPZ				S	Sn	10 20 52.4	+0.8
WVZ	Waitaha Valley	3.74	52	P	Pn	10 20 12.1	+0.5
INZ	Inchbonnie	4.37	53	P	Pn	10 20 19.5	-0.8
OXZ	Oxford	4.37	63	P	Pn	10 20 19.5	-0.8
OXZ				S	Sn	10 21 10.3	-1.4
MQZ	McQueen's Vall	4.59	70	P	Pn	10 20 21.1	-2.3
MQZ				S	Sn	10 21 14.7	-2.4
LTZ	Lake Taylor	4.81	58	P	Pn	10 20 25.3	-1.1
AMCZ	Amberley	4.83	64	P	Pn	10 20 26.0	-0.7
OKCZ	Okains Bay	4.86	72	P	Pn	10 20 27.4	+0.3
GVZ	Greta Valley S	5.18	64	P	Pn	10 20 30.0	-1.5
DSZ	Denniston Nort	5.23	47	P	Pn	10 20 31.3	-0.9
KHZ	Kahutara	5.79	61	P	Pn	10 20 40.1	+0.3
THZ	Tophouse	5.81	53	P	Pn	10 20 40.6	+0.4
QRZ	Quartz Range	6.28	45	P	Pn	10 20 45.7	-0.9
BSWZ	Blackbirch Sta	6.41	57	P	Pn	10 20 53.6	+5.3
NNZ	Nelson	6.45	51	P	Pn	10 20 50.1	+1.3
CMWZ	Cape Campbell	6.59	59	P	Pn	10 20 55.3	+4.5
TUWZ	Tuamarina	6.62	55	P	Pn	10 20 54.1	+2.9
TCW	Tory Channel	6.96	55	P	Pn	10 20 59.1	+3.3
DUWZ	D'Urville Isla	7.03	51	P	Pn	10 20 58.4	+1.6
CAW	Cannon Point	7.49	58	P	Pn	10 21 03.4	+0.3
KIW	Kapiti Island	7.55	56	P	Pn	10 21 06.1	+2.1
OGWZ	Otaki Gorge	7.73	56	P	Pn	10 21 08.6	+2.2
NBEZ	Newall Road No	8.13	43	P	Pn	10 21 12.7	+0.7
KHEZ	Kahui Hut	8.19	44	P	Pn	10 21 13.7	+0.9
NEZ	North Egmont	8.24	44	P	Pn	10 21 14.3	+0.7
PKE	Pukeiti	8.25	43	P	Pn	10 21 16.0	+2.4
WAZ	Wanganui	8.34	50	P	Pn	10 21 17.7	+2.8
DREZ	Durham Road	8.36	44	P	Pn	10 21 16.9	+1.8
VRZ	Vera Road	8.69	46	P	Pn	10 21 23.0	+3.4
WNVZ	Wahianoa	8.98	50	P	Pn	10 21 30.0	+6.2
NGZ	Ngauruhoe	9.09	50	P	Pn	10 21 28.4	+3.2
WTVZ	West Tongariro	9.13	49	P	Pn	10 21 30.0	+4.2
OTVZ	Oturere	9.13	50	P	Pn	10 21 28.5	+2.6
ETVZ	East Tongariro	9.18	50	P	Pn	10 21 32.4	+6.0
TMVZ	Te Maari	9.19	50	P	Pn	10 21 30.8	+4.2
HIZ	Hauiti	9.21	44	P	Pn	10 21 28.4	+1.8
BKZ	Black Stump Fm	9.59	53	P	Pn	10 21 36.5	+4.5

IDC 07 10:29:47.4±4.0, 3.68S×149.21E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.6/25, mbtmp4.0/3, Error ellipse: s-maj=116.2km s-min=52.7km az=111.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.71	221	P	P	10 34 38.8	-1.5
	2.6nm,0.6s,baz=46,slow=11,SNR=42						
ASAR	Alice Springs	24.76	215	P	P	10 35 11.4	+0.4
	1.1nm,0.7s,baz=47,slow=8.5,SNR=17						
FITZ	Fitzroy Crossi	27.16	236	P	P	10 35 33.4	+0.8
	3.2nm,0.4s,baz=53,slow=10,SNR=13						
TORD	Torodi Ar. Bea	146.56	288	PKPbc	PKPdf	10 49 30.7	+0.3
	0.2nm,0.4s,baz=61,slow=7.4,SNR=2.1						

*ANF **07** 10:49:47.8±0.7, 41.85N×119.58W, h0km, ML3.2/9, Error ellipse: s-maj=5.5km s-min=3.6km az=99.0*
*REN **07** 10:49:50.1±3.1, 41.89N±0.03×119.64W±0.04, h2km±6km, ML3.1/4, ML3.2/17(SEA), Error ellipse: s-maj=4.8km s-min=3.9km az=47.0*
*SEA **07** 10:49:51.6±3.8, 41.89N±0.03×119.67W±0.03, h30km±8km, Error ellipse: s-maj=5.0km s-min=1.5km az=145.0*
*NEIC **07** 10:49:51.3±2.4, 41.95N±0.02×119.69W±0.03, h9km±6km, Error ellipse: s-maj=4.6km s-min=1.4km az=136.0*
ISC 07 10:49:51.6±1.3, 41.94N±0.03×119.73W±0.03, h10km±11km, n56, σ1s20/67, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.43	265	Pg	Pg	10 49 59.6	-0.5
MOD	Modoc Plateau	0.43	265		Sg	10 50 06.4	+0.7
K05A	Summer Lake	1.17	313	Pg	Pg	10 50 13.6	-0.4
K05A				Sg	Sn	10 50 31.2	+1.0
M04C	Macdoel	1.58	265	P	Pn	10 50 18.6	-1.1
	baz=86						
M04C				Sb	Sg	10 50 42.8	+0.4
	baz=86						
K04D	Chiloquin, OR	1.65	295	P	Pn	10 50 19.9	-0.8
	baz=115,SNR=30						
K04D				Sb	Sg	10 50 45.9	+1.3
	baz=115						
J08A	Circle Bar Ran	1.69	33	Pn	Pn	10 50 19.9	-1.4
J08A				Sn	Sb	10 50 43.3	-0.9
J05D	Fort Rock, OR	1.74	321	Pb	Pb	10 50 23.5	-0.2
	baz=140,SNR=52						
J05D				Sb	Sg	10 50 49.2	+1.6
	baz=140						
LHEM	Herd Peak	1.89	261		Pn	10 50 23.1	-0.9
LHEM					Sg	10 50 52.8	+0.6
L04D	Klamath Falls	1.94	279	P	Pn	10 50 23.4	-1.2
	baz=99,SNR=159						
L04D				Sb	Sg	10 50 53.8	0.0
	baz=99						
LGBM	Gray Butte	1.94	253		Pn	10 50 23.9	-0.9
WVA	Winnemucca Val	2.00	182		Pn	10 50 25.2	-0.2
PINE	Pine Mountain	2.05	335	Pn	Pb	10 50 29.5	+0.4
BEKR	Beckworth	2.12	193		Pn	10 50 25.9	-1.4
BEKR				Sn	Sn	10 50 54.0	+0.2
I07A	Izee	2.15	4	Pn	Pn	10 50 28.2	+0.7
J04D	Umpqua Nationa	2.18	307	Pb	Pb	10 50 30.8	-0.5
	baz=126,SNR=18						
YBH	Yreka Blue Hor	2.23	266	Pn	Pn	10 50 27.4	-1.3
PAHR	Pah Rah Range	2.25	173	Pn	Pn	10 50 29.0	0.0
PAHR				Sn	Sn	10 50 57.3	+0.6
O03E	Paynes Creek	2.27	224	P	Pn	10 50 27.3	-1.8
	baz=45,SNR=19						
O03E				S	Sn	10 50 56.8	-0.3
	baz=45						
LOY	Loyalton	2.31	190		Pn	10 50 30.7	+0.9
PEAR	Peavine Mounta	2.34	184		Pn	10 50 31.4	+1.2
M02C	Callahan	2.40	258	P	Pn	10 50 29.0	-2.0
	baz=77,SNR=26						
N02D	Trinity Center	2.43	248	P	Pn	10 50 29.3	-2.1
	baz=67,SNR=17						
N02D				Sb	Sb	10 51 07.3	+1.8
	baz=67						
KBF	Kyburz Flat	2.46	189		Pn	10 50 32.6	+0.7
VPK	Verdi Peak	2.47	185		Pn	10 50 33.7	+1.6
HUMO	Hull Mountain	2.48	287	Pn	Pn	10 50 31.2	-0.9
WDC	Whiskeytown Da	2.52	238		Pn	10 50 32.0	-0.5
IND	Independence	2.54	190		Pn	10 50 34.9	+1.9
VCNR	Virginia City	2.64	179	Pn	Pn	10 50 34.0	-0.4
I05D	Terrebonne, OR	2.67	334	Sb	Sg	10 51 17.1	-0.3
	baz=153						
ORV	Oroville	2.73	210		Pn	10 50 34.9	-0.6
PNTR	Pine Nut	2.85	178	Pn	Pn	10 50 39.4	+2.1
L02E	Cave Junction	2.89	276	P	Pn	10 50 37.4	-0.2
	baz=94,SNR=27						
K02D	Willamette Mer	3.01	286	P	Pn	10 50 39.4	0.0
	baz=104,SNR=101						
AFDM	Forest Hills D	3.13	198	Pn	Pn	10 50 38.3	-2.7
KVN	Kaiserville	3.14	156	Pn	Pn	10 50 43.5	+2.3
KRMB	Red Mountain	3.15	264	Pn	Pn	10 50 41.4	0.0
KHMM	Horse Mountain	3.19	252	Pn	Pn	10 50 40.6	-1.3
MFID	Camas Ranch	3.23	62	Pn	Pn	10 50 41.2	-1.2
G08A	Pilot Rock	3.40	9	Pn	Pn	10 50 47.4	+2.7
BMO	Blue Mountains	3.41	30	Pn	Pn	10 50 44.7	-0.1
RYN	Ryan	3.44	164	Pn	Pn	10 50 45.3	0.0
WAKR	Walker	3.44	176	Pn	Pn	10 50 44.6	-0.7
NVAR	Mina Array Bea	3.67	162	Pn	Pn	10 50 47.8	-0.8
NV11	Mina Array Sit	3.71	160	Pn	Pn	10 50 48.7	-0.2
LHV	Little Huntoon	3.80	165	Pn	Pn	10 50 48.5	-1.6
CMB	Columbia Colle	3.93	188	Pn	Pn	10 50 50.9	-1.1
PLID	Pearl Lake	4.16	40	Pn	Pn	10 50 55.3	+0.1
HLID	Hailey	4.24	66	Pn	Pn	10 50 54.2	-2.2
MDPB	Devils Postpil	4.33	173	Pn	Pn	10 50 57.0	-0.7
R11A	Troy Canyon, C	4.79	137	Pn	Pn	10 51 04.0	+0.1
SPR3	Spring Creek 3	5.06	124	Pn	Pn	10 51 08.9	+1.2
BGU	Big Grassy Mou	5.14	99	Pn	Pn	10 51 07.2	-1.5
SPUT	South Prismonto	5.50	94	Pn	Pn	10 51 11.8	-1.8
DUG	Dugway, Tooele	5.51	106	Pn	Pn	10 51 13.5	-0.3
PSUT	Pine Spring	5.64	125	Pn	Pn	10 51 14.4	-1.2
PRN	Pahroc Range	5.79	140	Pn	Pn	10 51 18.1	+0.5

*JMA **07** 10:50:10.6, 38.53N×141.72E, h54km±1km, M3.7*
JMA Felt I J1.
*IDC **07** 10:50:11.1±9.9, 38.57N×141.86E, h66km±66km, mb3.3/2, mb1 3.4/4, mb1mx3.1/37, mbtmp3.4/4, ML2.2/2, Error ellipse: s-maj=126.3km s-min=29.5km az=72.0*
ISC 07 10:50:09.9±1.4, 38.52N±0.05×141.8E±0.1, h48km±9km, n23, σ1s24/28, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	Ishinomakikobu	0.36	235	P	Pn	10 50 20.0	+0.6
JIKH				S	Sn	10 50 26.4	+0.2
JIO	Ouri	0.39	261	P	Pn	10 50 20.0	+0.3
JIO				S	Sn	10 50 26.4	-0.4
JKMT	Kesennumamotoy	0.41	316	P	Pn	10 50 20.4	+0.4
JKMT				*i* S	Sn	10 50 27.1	-0.1
OFUJ	Ofunato	0.58	347	P	Pn	10 50 22.6	+0.6
OFUJ				S	Sn	10 50 30.8	+0.1
JMK	Ichinoseki	0.65	312	P	Pn	10 50 23.1	+0.2
JMK				S	Sn	10 50 31.8	-0.5
JOU	Okura	0.94	261	P	Pn	10 50 26.2	-0.5
JOU				S	Sn	10 50 38.0	-1.1
JOM	Ohasama	1.05	336	P	Pn	10 50 28.4	+0.2
JOM				S	Sn	10 50 41.6	-0.1
JMM	Marumori	1.05	232	P	Pn	10 50 27.7	-0.5
JMM				S	Sn	10 50 40.6	-1.2
JYK	Kaneyama	1.23	290	P	Pn	10 50 30.3	-0.3
JRG	Rokugo	1.29	313	P	Pn	10 50 31.3	-0.2
JFK	Kawauchi	1.38	214	P	Pn	10 50 32.7	0.0
JFK				S	Sn	10 50 48.9	-0.9
JYS	Shirataka	1.43	259	P	Pn	10 50 33.2	-0.1
JYS				S	Sn	10 50 50.3	-0.7
MJAR	Matsushiro Arr	3.50	237	P	Pn	10 51 03.4	+1.7
	0.3nm,0.3s,baz=35,slow=13,SNR=15						
MAT	Matsushiro	3.50	237	P	Pn	10 51 03.4	+1.7
MAT				*e*S	Sn	10 51 46.8	+4.9
USRK	Ussuriysk Ar.	9.33	311	P	Pn	10 52 22.3	+0.7
	baz=113,slow=13,SNR=2.8						
H11N2	WAKE ISLAND Hy	28.65	124	T	T	11 26 35.6	
	baz=317,slow=76,SNR=65						
H11N1	WAKE ISLAND Hy	28.66	124	T	T	11 26 26.4	
	baz=317,slow=76,SNR=61						
H11N3	WAKE ISLAND Hy	28.67	124	T	T	11 26 26.9	
	baz=317,slow=76,SNR=65						
H11S1	WAKE ISLAND Hy	29.41	126	T	T	11 27 15.2	
	baz=318,slow=76,SNR=81						
H11S3	WAKE ISLAND Hy	29.41	126	T	T	11 27 16.4	
	baz=318,slow=76,SNR=87						
H11S2	WAKE ISLAND Hy	29.43	126	T	T	11 27 18.0	
	baz=318,slow=76,SNR=79						
MKAR	Makanchi Array	43.64	301	P	P	10 58 09.1	-0.4
	0.8nm,0.8s,baz=83,slow=9.9,SNR=4.7						
WRA	Warramunga Arr	58.57	188	P	P	11 00 01.1	-0.6
	0.6nm,0.7s,baz=5.9,slow=7.4,SNR=7.4						

*THE **07** 10:54:28.9, 38.10N×20.42E, h10km±1km, ML3.5/4, Error ellipse: s-maj=2.4km s-min=0.8km az=75.0*
*ATH **07** 10:54:28.6, 38.11N×20.43E, h15km±1km, ML3.3/5, Error ellipse: s-maj=2.2km s-min=1.0km az=69.0*
ISC 07 10:54:28.7±1.3, 38.11N±0.03×20.43E±0.06, h15km±6km, n34, σ0s45/45, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	Argostoli	0.09	34	P	Pg	10 54 31.7	-0.1
ARG2				S	Sg	10 54 33.7	-0.1
VLS	Valsamata	0.15	61	P	Pg	10 54 32.3	-0.2
VLS				S	Sg	10 54 35.1	-0.1
VLS				AML	AML	10 54 35.2	
VLS				AML	AML	10 54 35.8	
VLS	Valsamata	0.15	61	P	Pg	10 54 32.4	-0.2
VLS				S	Sg	10 54 35.1	-0.1
	93μm,0.2s						
KEF4	Livadi, Kephal	0.15	360	P	Pg	10 54 32.5	-0.1
KEF4				S	Sg	10 54 35.7	+0.5
KEF5	Kardakata, Kep	0.18	11	P	Pg	10 54 32.9	-0.1
KEF5				S	Sg	10 54 36.1	+0.3
VLMS	Volimes, Zakyn	0.30	140	P	Pg	10 54 34.6	-0.3
VLMS				S	Sg	10 54 39.0	-0.2
VLMS				AML	AML	10 54 39.4	
	comp=E,17236μm,0.2s						
VLMS				AML	AML	10 54 46.6	
	comp=N,27608μm,0.3s						
VLMS	Volimes, Zakyn	0.30	140	P	Pg	10 54 34.6	-0.3
VLMS				S	Sg	10 54 39.0	-0.2
	comp=N,11μm,0.2s						
VSK1	VASILIKIADES	0.32	20	P	Pg	10 54 35.3	-0.1
VSK1				S	Sg	10 54 40.7	+0.7
	comp=N,16μm,0.2s						
FSK	Fiskardo	0.37	17	P	Pg	10 54 35.8	-0.4
FSK				S	Sg	10 54 41.2	-0.2
FSK				AML	AML	10 54 45.0	
	comp=N,9615μm,0.4s						
FSK				AML	AML	10 54 45.6	
	comp=E,10880μm,0.3s						
FSK	Fiskardo	0.37	17	P	Pg	10 54 35.9	-0.4
FSK				S	Sg	10 54 41.4	0.0
	comp=E,6μm,0.4s						
MGNA	Meganis	0.62	27	P	Pg	10 54 40.1	-0.8
MGNA				S	Sg	10 54 49.6	+0.5
MGNA				AML	AML	10 54 53.8	
	comp=N,3990μm,0.2s						
MGNA				AML	AML	10 54 53.9	
	comp=E,5779μm,0.3s						
AST1	Astakos	0.68	50	P	Pg	10 54 41.3	-0.7
LKD2	Lefkada island	0.71	15	P	Pg	10 54 41.8	-0.7
LKD2				AML	AML	10 54 58.6	
	comp=E,3699μm,0.2s						
LKD2				AML	AML	10 54 59.1	
	comp=N,5209μm,0.2s						
LKD2	Lefkada island	0.71	15	P	Pg	10 54 41.8	-0.7
PDO	Prodromos	0.77	50	P	Pg	10 54 43.0	-0.8
PDO	Prodromos	0.77	50	P	Pg	10 54 43.1	-0.7
RLS	Riolos of Patr	0.82	93	P	Pg	10 54 44.8	+0.1
RLS	Riolos of Patr	0.82	93	P	Pb	10 54 45.0	+0.2
DRO	Drossia	1.03	98	P	Pn	10 54 48.9	+0.3
ANX	Ano Chora	1.27	67	P	Pg	10 54 53.9	+0.6
TRIZ	Trizonia	1.32	78	P	Pn	10 54 52.6	-0.1
EVR	Evrytania	1.35	53	P	Pg	10 54 55.1	+0.3
KLV	Kalavryta, Ach	1.36	92	P	Pb	10 54 54.2	+0.2
KLV	Kalavryta, Ach	1.36	92	P	Pn	10 54 53.6	+0.3
KALE	Kalithea	1.38	78	P	Pb	10 54 54.6	+0.3
KALE	Kalithea	1.38	78	P	Pn	10 54 53.4	-0.2
IGT	Igoumenitsa	1.43	357	P	Pn	10 54 54.7	+0.5
ITM	Ithomi	1.51	127	P	Pg	10 54 57.7	0.0
GUR	Goura	1.52	96	P	Pg	10 54 57.6	-0.4
TRIP	Tripoli	1.57	111	P	Pg	10 54 59.2	+0.3
JAN	Janina	1.58	12	P	Pg	10 54 58.7	-0.5
DSF	Desfina	1.68	79	P	Pb	10 54 59.9	+0.5
DSF	Desfina	1.68	79	P	Pn	10 54 57.4	-0.3
LOUT	Loutraki	2.02	93	P	Pb	10 55 04.0	-1.1

IDC 07 11:04:32.1±7.8, 7.40N×93.53E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/46, mbtmp3.5/4, Error ellipse: s-maj=383.2km s-min=26.5km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	Diego Garcia H	25.76	235	T	T	11 36 58.3	
	baz=58,slow=74,SNR=9.0						
H08S2	Diego Garcia H	25.76	235	T	T	11 36 50.7	
	baz=58						
H08S1	Diego Garcia H	25.77	235	T	T	11 36 59.0	
	baz=58,slow=74,SNR=8.6						
MKAR	Makanchi Array	40.42	348	P	P	11 12 11.0	-1.1
	0.6nm,0.8s,baz=171,slow=10,SNR=3.4						
ZALV	Zalesovo Beam	46.95	353	P	P	11 13 05.4	+0.9
	1.5nm,0.7s,baz=189,slow=8.0,SNR=3.5						
WRA	Warramunga Arr	48.48	125	P	P	11 13 16.8	-0.2
	0.3nm,1.0s,baz=305,slow=8.7,SNR=1.5						
ASAR	Alice Springs	50.08	129	P	P	11 13 29.1	-0.1
	0.2nm,0.5s,baz=303,slow=7.6,SNR=4.7						

*ANF **07** 11:07:22.6±1.7, 41.26N×119.67W, h3km±15km, ML2.9/5, Error ellipse: s-maj=9.0km s-min=6.3km az=83.0*
*REN **07** 11:07:23.5±2.5, 41.88N±0.03×119.66W±0.04, h0km±6km, ML2.6/3, Md2.7/9(SEA), Error ellipse: s-maj=4.6km s-min=3.9km az=62.0*
*SEA **07** 11:07:24.5±3.0, 41.83N±0.03×119.71W±0.02, h0km±6km, Error ellipse: s-maj=4.3km s-min=1.7km az=176.0*
*NEIC **07** 11:07:25.1±2.7, 41.89N±0.03×119.67W±0.04, h8km±5km, Error ellipse: s-maj=5.6km s-min=3.9km az=137.0*
ISC 07 11:07:23.6±1.5, 41.89N±0.03×119.66W±0.03, h3km±13km, n38, σ1s31/48, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	Modoc Plateau	0.48	272		Pg	11 07 32.7	-0.1
MOD					Sg	11 07 39.7	+0.6
K05A	Summer Lake	1.24	313	Pg	Pg	11 07 47.1	-0.6
K05A				Sg	Sg	11 08 04.7	+1.3
M04C	Macdoel	1.63	267	P	Pn	11 07 52.0	-1.4
	baz=86						
M04C				Sb	Sb	11 08 15.7	+0.2
	baz=86						
J08A	Circle Bar Ran	1.71	30		Pn	11 07 53.6	-0.8
J08A				Sn	Sn	11 08 16.7	-0.2
K04D	Chiloquin, OR	1.72	296	Pb	Pn	11 07 54.9	+0.3
	baz=115,SNR=16						
K04D				Sb	Sb	11 08 18.9	+0.9
	baz=115						
J05D	Fort Rock, OR	1.81	321	Pb	Pn	11 07 57.1	+1.1
	baz=140,SNR=15						
J05D				Sb	Sb	11 08 22.0	+1.2
	baz=140						
WVA	Winnemucca Val	1.95	184		Pn	11 07 58.5	+0.7
L04D	Klamath Falls	2.00	280	P	Pn	11 07 57.1	-1.3
	baz=99,SNR=7.5						
L04D				Sb	Sb	11 08 26.7	+0.8
	baz=99						
BEKR	Beckworth	2.09	195		Pn	11 07 59.7	0.0
BEKR				Sn	Sn	11 08 27.1	+0.8
PINE	Pine Mountain	2.12	334		Pb	11 08 02.7	-0.2
PAHR	Pah Rah Range	2.19	174		Pn	11 08 02.5	+1.4
I07A	Izee	2.19	3		Pn	11 08 03.1	+2.0
O03E	Paynes Creek	2.27	226	P	Pn	11 08 01.1	-1.1
	baz=45,SNR=9.9						
O03E				S	Sn	11 08 29.7	-1.0
	baz=45						
LOY	Loyalton	2.27	191		Pn	11 08 03.8	+1.6
YBH	Yreka Blue Hor	2.28	267	Pn	Pn	11 08 00.7	-1.7
PEAR	Peavine Mounta	2.29	186		Pn	11 08 04.6	+2.1
KBF	Kyburz Flat	2.42	190		Pn	11 08 06.8	+2.4
VPK	Verdi Peak	2.43	187		Pn	11 08 08.1	-0.1
N02D	Trinity Center	2.46	249	Sb	Sb	11 08 40.0	+0.6
	baz=67						
IND	Independence	2.50	191		Pn	11 08 08.2	+2.7
WDC	Whiskeytown Da	2.54	240	Pn	Pn	11 08 06.8	+1.1
HUMO	Hull Mountain	2.55	287	Pn	Pn	11 08 05.5	-0.4
VCNR	Virginia City	2.59	180	Pn	Pb	11 08 10.0	-0.9
ORV	Oroville	2.72	212	Pn	Pn	11 08 09.7	+1.4
PNTR	Pine Nut	2.80	179	Pn	Pn	11 08 10.0	+0.4
RUBR	Rubicon Trail	2.86	188	Pn	Pn	11 08 11.2	+0.8
L02E	Cave Junction	2.95	277	P	Pn	11 08 10.7	-0.7
	baz=94,SNR=17						
KVN	Kaiserville	3.08	157	Pn	Pn	11 08 13.1	-0.2
AFDM	Forest Hills D	3.10	199	Pn	Pn	11 08 14.5	+0.9
MFID	Camas Ranch	3.21	60	Pn	Pn	11 08 15.4	+0.3
RYN	Ryan	3.37	165	Pn	Pn	11 08 17.9	+0.5
WAKR	Walker	3.39	177	Pn	Pb	11 08 22.0	-2.4
KBO	Bosley Butte	3.41	277	Pn	Pn	11 08 15.6	-2.3
JCC	Jacoby Creek,	3.46	253	Pn	Pn	11 08 18.8	+0.5
KEBM	Edson Butte	3.60	287	Pn	Pn	11 08 20.6	+

CMB	Columbia Colle	3.72	190	Pn	Pb	11 14 35.4 -3.1
HLID	Hailey	4.25	62	Pn	Pn	11 14 38.8 +1.1

NEIC ***07*** *11:14:04.4±1.2, 17.9S±0.2×177.8W±0.1, h616km±14km, mb4.3/17, Error ellipse: s-maj=28.6km s-min=15.7km az=172.0*
IDC ***07*** *11:14:04.6±1.9, 17.94S×178.09W, h577km±26km, mb3.5/7, mb1 3.6/9, mb1mx3.1/47, mbtmp4.4/9, Error ellipse: s-maj=58.1km s-min=18.3km az=157.0*

ISC 07 11:14:04.9±0.8, 18.0S±0.2×178.0W±0.1, h600km, n31, σ0.9 96/33, mb4.3/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	3.82	274	P	P	11 15 30.8	+1.6
AFI	Afiamalu	7.20	56	P	P	11 15 55.8	-1.1
	3.5nm,0.3s,baz=110,slow=4.2,SNR=6.4						
AFI	Afiamalu	7.20	56	P	P	11 15 56.4	-0.5
DZM	Mont Dzumac	15.21	252	P	P	11 17 15.4	+0.3
	0.4nm,0.3s,baz=93,slow=19,SNR=6.7						
DZM	Mont Dzumac	15.21	252	P	P	11 17 15.4	+0.3
DZM				IAmb	IAmb	11 17 23.8	
	comp=Z,13nm,1.1s						
CTA	Charters Tower	33.86	261	P	P	11 19 59.5	+0.1
	comp=Z,4.1nm,0.6s,baz=96,slow=9.8,SNR=13						
CTAO	Charters Tower	33.86	261	P	P	11 19 59.6	+0.1
CTAO				IAmb	IAmb	11 20 00.3	
	comp=Z,4.5nm,0.7s						
CAN	Canberra	33.99	233	P	P	11 20 00.9	+0.5
PMG	Port Moresby	34.91	279	P	P	11 20 07.1	-1.1
TOO	Toolangi	37.45	231	P	P	11 20 29.7	+0.9
STKA	Stephens Creek	38.97	241	P	P	11 20 41.9	+0.7
	comp=Z,3.8nm,0.5s,baz=86,slow=9.3,SNR=14						
STKA	Stephens Creek	38.97	241	P	P	11 20 41.7	+0.6
BBOO	Buckleboo	43.74	241	P	P	11 21 19.1	+0.4
WR0	Warramunga Arr	44.85	260	P	P	11 21 26.7	-0.7
WB0	Warramunga Arr	45.01	260	P	P	11 21 28.2	-0.5
WB0				IAmb	IAmb	11 21 28.9	
	comp=Z,5.4nm,0.5s						
WB2	Warramunga Arr	45.03	260	P	P	11 21 28.4	-0.4
WB2				IAmb	IAmb	11 21 29.0	
	comp=Z,5.8nm,0.6s						
WRAB	Tennant Creek	45.03	260	P	P	11 21 27.9	-0.9
WRAB				IAmb	IAmb	11 21 29.0	
	comp=Z,4.9nm,0.6s						
WRA	Warramunga Arr	45.04	260	P	P	11 21 28.5	-0.4
	comp=Z,3.2nm,0.4s,baz=96,slow=7.0,SNR=110						
WRA	Warramunga Arr	45.04	260	P	P	11 21 28.4	-0.4
AS31	Alice Springs	45.18	254	P	P	11 21 30.0	0.0
AS31				IAmb	IAmb	11 21 31.0	
	comp=Z,4.4nm,0.5s						
ASAR	Alice Springs	45.19	254	P	P	11 21 29.9	0.0
	comp=Z,12nm,0.6s,baz=88,slow=8.6,SNR=126						
ASAR				PcP	PcP	11 22 57.7	+0.6
	comp=Z,0.6nm,0.5s,baz=100,slow=3.9,SNR=3.7						
ASAR	Alice Springs	45.19	254	P	P	11 21 28.1	-1.8
ASAR					PcP	11 22 57.1	0.0
MTN	Manton Dam	49.23	268	P	P	11 21 59.2	-1.0
MTN				IAmb	IAmb	11 22 17.2	
	comp=Z,14nm,1.3s						
FORT	Forrest	50.36	245	P	P	11 22 07.9	-0.3
KNRA	Kununurra	50.91	264	P	P	11 22 12.2	-0.3
KNRA				IAmb	IAmb	11 22 33.8	
	comp=Z,19nm,1.5s						
SIJI	Sorong	52.68	283	P	P	11 22 25.9	+0.7
	comp=Z,6.8nm,0.3s,baz=95,slow=6.1,SNR=5.2						
FITZ	Fitzroy Crossi	53.44	261	P	P	11 22 30.7	+0.2
	comp=Z,1.4nm,0.7s,baz=80,slow=6.5,SNR=9.9						
MBWA	Marble Bar	58.47	256	P	P	11 23 04.9	-0.2
QSPA	South Pole Qui	72.05	180	P	P	11 24 27.4	-1.7
KSAR	Wonju Array Be	75.08	318	P	P	11 24 44.8	-1.8
TXAR	Lajitas Array	85.68	57	P	P	11 25 44.4	+2.6
	comp=Z,0.4nm,0.7s,baz=208,slow=5.3,SNR=6.2						

IDC ***07*** *11:22:32.2±3.1, 23.40S×179.95W, h518km±32km, mb3.5/7, mb1 3.7/8, mb1mx3.3/34, mbtmp4.4/8, Error ellipse: s-maj=29.7km s-min=19.6km az=31.0*
NEIC ***07*** *11:22:32.2±1.5, 23.5S±0.1×179.9E±0.1, h519km±13km, mb4.3/26, Error ellipse: s-maj=20.5km s-min=19.0km az=142.0*

ISC 07 11:22:33.9±0.6, 23.52S±0.08×179.95W±0.10, h550km, n59, σ1.963/64, mb4.2/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	6.00	163	P	P	11 24 12.3	0.0
MSVF	Nonsavu	6.06	342	P	P	11 24 10.0	-3.3
NIUE	Niue	10.34	67	P	P	11 24 54.2	-1.1
AFI	Afiamalu	12.30	40	P	P	11 25 16.1	+0.4
HAZ	Te Kaha	14.32	187	P	P	11 25 36.9	+0.7
PUZ	Puketiti	14.58	186	P	P	11 25 39.2	+0.3
TOZ	Tahuroa Road	14.69	194	P	P	11 25 43.4	+3.5
TWGZ	Tauwhareparae	14.71	186	P	P	11 25 41.5	+1.2
URZ	Urewera	14.90	189	P	P	11 25 41.3	-0.8
	1.9nm,0.3s,baz=291,slow=5.8,SNR=12						
URZ	Urewera	14.90	189	P	P	11 25 41.5	-0.6
URZ				S	S	11 28 11.1	-6.1
URZ	Urewera	14.90	189	P	P	11 25 41.2	-1.0
MWZ	Matawai	14.92	188	P	P	11 25 43.2	+0.8
ALRZ	Allen Road	15.32	191	P	P	11 25 44.6	-1.9
MTHZ	Maungataniwha	15.53	189	P	P	11 25 49.5	+0.9
BKZ	Black Stump Fm	15.89	190	P	P	11 25 50.3	-1.9
BKZ				S	S	11 28 31.8	-2.4
BKZ	Black Stump Fm	15.89	190	P	P	11 25 50.4	-1.9
OTVZ	Oturere	16.03	192	P	P	11 25 53.0	-0.7
VRZ	Vera Road	16.19	195	P	P	11 25 57.9	+2.8
WNVZ	Wahianoa	16.20	192	P	P	11 25 54.1	-1.2
BHHZ	Black Hill Sta	16.27	191	P	P	11 25 54.0	-1.9
BHHZ				S	S	11 28 37.3	-3.3
BFZ	Birch Farm	17.41	190	P	P	11 26 04.9	-1.3
BFZ				S	S	11 28 57.9	-1.1
BFZ	Birch Farm	17.41	190	P	P	11 26 04.8	-1.3
MRZ	Mangatainoka R	17.50	191	P	P	11 26 06.1	-0.9
OGWZ	Otaki Gorge	17.73	192	P	P	11 26 07.9	-1.1
QRZ	Quartz Range	18.38	198	P	P	11 26 16.0	+1.0
PLWZ	Palliser	18.44	191	P	P	11 26 16.0	+0.4
TUWZ	Tuamarina	18.57	195	P	P	11 26 16.4	-0.3
THZ	Tophouse	19.14	196	P	P	11 26 24.2	+2.1
THZ				IAmb	IAmb	11 26 37.5	
	comp=Z,13nm,1.0s						
KHZ	Kahutara	19.61	194	P	P	11 26 25.9	-0.3
LTZ	Lake Taylor	20.26	197	P	P	11 26 30.9	-1.3
RPZ	Rata Peaks	21.46	198	P	P	11 26 43.1	+0.2
	comp=Z,6.0nm,0.5s,baz=319,slow=3.2,SNR=8.2						
WKZ	Wanaka	23.09	200	P	P	11 26 57.3	-0.1
EIDS	Eidsvold	26.41	260	P	P	11 27 25.9	-1.3
EIDS				IAmb	IAmb	11 27 51.7	
	comp=Z,8.6nm,1.4s						
CAN	Canberra	29.37	239	P	P	11 27 54.5	+1.6
CAN				IAmb	IAmb	11 28 12.9	
	comp=Z,11nm,1.3s						
CTA	Charters Tower	31.52	270	P	P	11 28 12.6	+1.0
	comp=Z,10nm,0.4s,baz=93,slow=11,SNR=39						
CTAO	Charters Tower	31.52	270	P	P	11 28 12.1	+0.5
CTAO				IAmb	IAmb	11 28 13.1	
	comp=Z,11nm,0.7s						
PMG	Port Moresby	34.41	289	P	P	11 28 35.4	-0.6
PMG				IAmb	IAmb	11 28 37.4	
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	34.91	248	P	P	11 28 41.0	+1.1
	comp=Z,3.8nm,0.6s,baz=98,slow=11,SNR=14						
STKA	Stephens Creek	34.91	248	P	P	11 28 40.8	+0.8
AS31	Alice Springs	42.14	260	P	P	11 29 37.8	-0.9
ASAR	Alice Springs	42.14	260	P	P	11 29 39.0	+0.3
	comp=Z,5.6nm,0.8s,baz=96,slow=8.0,SNR=45						
ASAR	Alice Springs	42.14	260	P	P	11 29 37.1	-1.6
WR0	Warramunga Arr	42.29	266	P	P	11 29 38.8	-1.1
WB2	Warramunga Arr	42.47	266	P	P	11 29 40.8	-0.4
WB2				IAmb	IAmb	11 29 41.3	
	comp=Z,6.5nm,0.6s						
WB0	Warramunga Arr	42.47	266	P	P	11 29 40.7	-0.6
WB0				IAmb	IAmb	11 29 41.5	
	comp=Z,7.4nm,0.7s						
WRAB	Tennant Creek	42.47	266	P	P	11 29 40.7	-0.6
WRAB				IAmb	IAmb	11 29 41.5	
	comp=Z,4.7nm,0.8s						
WRA	Warramunga Arr	42.48	266	P	P	11 29 41.0	-0.4
	comp=Z,5.9nm,0.6s,baz=94,slow=8.4,SNR=264						
WRA				ScP	ScP	11 34 23.1	+3.0
	comp=Z,0.3nm,0.8s,baz=95,slow=3.8,SNR=4.5						
WRA	Warramunga Arr	42.48	266	P	P	11 29 40.6	-0.7
FORT	Forrest	46.48	249	P	P	11 30 11.6	-0.4
MTN	Manton Dam	47.47	274	P	P	11 30 18.0	-1.6
MTN				IAmb	IAmb	11 30 46.1	
	comp=Z,8.3nm,1.1s						
KNRA	Kununurra	48.73	269	P	P	11 30 28.7	-0.3
KNRA				IAmb	IAmb	11 30 31.4	
	comp=Z,10.0nm,1.1s						
FITZ	Fitzroy Crossi	50.90	265	P	P	11 30 45.7	+0.8
VNDA	Vanda	54.76	185	P	P	11 31 13.6	+2.2
	comp=Z,0.7nm,0.6s,baz=8.3,slow=7.7,SNR=5.6						
VNDA	Vanda	54.76	185	P	P	11 31 13.2	+1.8
PSA00	Pilbara Seismi	55.28	259	P	P	11 31 15.7	-0.3
PSA00				IAmb	IAmb	11 31 21.1	
	comp=Z,19nm,1.4s						
CASY	Casey	60.47	206	P	P	11 31 50.9	+0.6
CASY				IAmb	IAmb	11 32 06.6	
	comp=Z,41nm,1.4s						
QSPA	South Pole Qui	66.56	180	P	P	11 32 31.1	+1.7
QSPA				IAmb	IAmb	11 32 48.9	
	comp=Z,7.2nm,1.4s						
TXAR	Lajitas Array	90.19	58	P	P	11 34 37.3	+1.0
	comp=Z,0.7nm,0.8s,baz=212,slow=6.5,SNR=7.8						
TXAR	Lajitas Array	90.19	58	P	P	11 34 37.4	+1.1

NAO ***07*** *11:32:02.0±2.2, 61.01N×29.68E, ML2.5*

BER 07 11:32:00.6±3.1, 60.94N×29.81E, h0km, ML2.5(NAO), Suspected explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FIA0	FINESS Array S	1.88	287	Pg	Pn	11 32 34.4	+0.4
	baz=107,slow=16						
FIA0				Lg	Lg	11 32 58.9	
FIA0				Rg	Rg	11 33 08.9	
	baz=97,slow=37						
FIA0	FINESS Array S	1.88	287	Pg	Pn	11 32 34.4	+0.4
	baz=107,slow=16						
FIA0				Sg	Sn	11 32 58.9	+0.7
HFS	Hagfors	7.99	271	Pn	Pn	11 33 57.0	-0.8
	baz=98,slow=14						
HFS				Sn	Sn	11 35 22.2	-6.5
	baz=86,slow=37						
HFS				Lg	Lg	11 36 08.9	
	baz=75,slow=22						
HFS	Hagfors	7.99	271	Pn	Pn	11 33 57.0	-0.8
	baz=98,slow=14						
HFS				Sn	Sn	11 35 22.2	-6.5
	baz=86,slow=37						
HFS				Sg	Sg	11 36 08.9	-7.9
	baz=75,slow=22						
ARA0	ARCESS Array S	8.81	350	Pn	Pn	11 34 06.8	-2.2
	baz=168,slow=12						
ARA0	ARCESS Array S	8.81	350	Pn	Pn	11 34 06.8	-2.2
	baz=168,slow=12						
NRA0	NORESS Array S	8.92	277	Pn	Pn	11 34 09.4	-1.2
	baz=82,slow=8.6						
NRA0	NORESS Array S	8.92	277	Pn	Pn	11 34 09.4	-1.2
	baz=82,slow=8.6						

ISC 07 11:34:26.9±1.5, 48.42N±0.08×19.38E±0.04, h10km±13km, n5, σ0.823/10, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VYHS	Vyhne	0.37	282	ePG	Pg	11 34 34.1	-0.1
VYHS				eSG	Sg	11 34 39.5	+0.4
KOLL	Kolacno	0.67	284	ePG	Pg	11 34 39.8	-0.1
KOLL				eSG	Sg	11 34 48.4	-0.2
LANS	Liptovska Anna	0.73	4	ePG	Pg	11 34 41.2	+0.1
LANS				eSG	Sg	11 34 50.4	-0.2
LANS				eLG	Lg	11 34 52.2	
KECS	Kecovo	0.74	85	ePG	Pg	11 34 41.2	+0.1
KECS				eSG	Sb	11 34 52.0	-0.1
KECS				eLG	Lg	11 34 53.5	
JAVC	Velka Javorina	1.22	292	ePG	Pg	11 34 50.4	+0.1
JAVC				eSG	Sn	11 35 06.7	0.0

IDC ***07*** *11:36:06.3±1.8, 57.40S×158.79E, h0km, mb4.0/6, mb1 4.1/6, mb1mx4.0/24, mbtmp4.0/6, MS3.6/6, Ms1 3.6/6, ms1mx3.3/22, Error ellipse: s-maj=80.9km s-min=19.3km az=75.0*
NEIC ***07*** *11:36:08.7±1.6, 57.51S±0.08×158.4E±0.3, h10km±1km, mb4.3/12, Error ellipse: s-maj=30.8km s-min=14.3km az=90.0*

ISC 07 11:36:08.7±0.7, 57.47S±0.07×158.2E±0.2, h10km, n37, σ0.878/32, mb4.2/11, MS3.6/5, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MCQ	Macquarie Isla	3.01	8	Pn	Pn	11 36 57.3	+1.0
MCQ				Sn	Sn	11 37 33.0	+0.6
PYZ	Puysegur Point	12.46	28	Pn	Pn	11 39 06.0	0.0
DCZ	Deep Cove	13.24	29	Pn	Pn	11 39 16.9	+0.4
MLZ	Mavora Lakes	13.59	31	Pn	Pn	11 39 21.1	-0.3
ODZ	Otahua Downs	14.64	37	Pn	Pn	11 39 35.4	-0.4
RPZ	Rata Peaks	15.96	36	LR	LR	11 45 22.2	
	comp=Z,160nm,18.9s,baz=192,slow=35						
TAU	Tasmania Unive	16.12	330	Pn	P	11 39 56.9	-1.7
VNDA	Vanda	20.18	178	P	P	11 40 42.5	-0.4
	0.6nm,0.7s,baz=348,slow=11,SNR=10						
VNDA				LR	LR	11 47 14.3	
	comp=Z,238nm,19.1s,baz=3.0,slow=33						
VNDA	Vanda	20.18	178	P	P	11 40 42.4	-0.4
STKA	Stephens Creek	28.03	329	LR	LR	11 52 10.2	
	comp=Z,220nm,18.7s,baz=202,slow=34						
QSPA	South Pole Qui	32.63	180	P	P	11 42 40.7	+0.3
	1.2nm,0.6s,baz=326,slow=1.3,SNR=16						
QSPA				PcP	PcP	11 45 25.2	-0.8
	1.2nm,0.6s,baz=305,slow=0.6,SNR=14						
QSPA	South Pole Qui	32.63	180	P	P	11 42 40.5	+0.2
QSPA				IAmb	IAmb	11 43 01.2	
	comp=Z,5.0nm,1.4s						
QSPA				PcP	PcP	11 45 25.5	-0.5
H01W1	Cape Leeuwin H	37.02	288	T	T	12 22 52.9	
	baz=141,slow=76,SNR=19						
H01W2	Cape Leeuwin H	37.03	288	T	T	12 22 44.5	
	baz=141,slow=76,SNR=20						
H01W3	Cape Leeuwin H	37.04	288	T	T	12 22 51.2	
	baz=141,slow=76,SNR=19						
ASAR	Alice Springs	38.06	322	P	P	11 43 27.8	+0.5
	comp=Z,4.3nm,0.8s,baz=162,slow=8.2,SNR=32						
ASAR				PcP	PcP	11 45 41.4	-1.0
	comp=Z,0.6nm,0.7s,baz=142,slow=2.3,SNR=5.3						
ASAR	Alice Springs	38.06	322	P	P	11 43 27.7	+0.4
ASAR					PcP	11 45 41.7	-0.7
AS31	Alice Springs	38.06	322	P	P	11 43 28.3	+1.0
AS31				IAmb	IAmb	11 43 28.8	
	comp=Z,1.6nm,0.8s						
MAW	Mawson	40.71	216	P	P	11 43 50.2	+1.3
	comp=Z,0.8nm,0.6s,baz=124,slow=11,SNR=2.5						
MAW				LR	LR	12 00 15.3	
	comp=Z,82nm,19.1s,baz=60,slow=35						
MAW	Mawson	40.71	216	P	P	11 43 51.2	+2.3
WR0	Warramunga Arr	41.32	325	P	P	11 43 54.2	-0.2
WR0				IAmb	IAmb	11 43 55.6	
	comp=Z,7.1nm,0.9s						
WB2	Warramunga Arr	41.40	325	P	P	11 43 55.2	+0.2
WB2				IAmb	IAmb	11 43 55.6	
	comp=Z,7.8nm,1.1s						
WRA	Warramunga Arr	41.40	325	P	P	11 43 55.2	+0.1
	comp=Z,3.4nm,0.8s,baz=163,slow=7.2,SNR=20						
WRA	Warramunga Arr	41.40	325	P	P	11 43 55.1	+0.1
WRAB	Tennant Creek	41.40	325	P	P	11 43 55.2	+0.1
WRAB				IAmb	IAmb	11 43 55.7	
	comp=Z,5.2nm,0.9s						
WB0	Warramunga Arr	41.55	325	P	P	11 43 55.8	-0.5
WB0				IAmb	IAmb	11 43 57.2	
	comp=Z,4.3nm,0.8s						
FITZ	Fitzroy Crossi	46.14	315	P	P	11 44 33.8	+0.6
FITZ				IAmb	IAmb	11 44 34.7	
	comp=Z,3.9nm,0.8s						
HNR	Honiara	47.95	2	LR	LR	12 01 21.3	
	comp=Z,51nm,18.3s,baz=225,slow=32						
PPT	Papeete	55.37	66	LR	LR	12 05 25.0	
	comp=Z,24nm,18.0s,baz=126,slow=32						
H03S2	Juan Fernandez	77.15	134	T	T	13 13 36.6	
	baz=206,slow=74,SNR=7.5						
H03S1	Juan Fernandez	77.16	134	T	T	13 13 33.7	
	baz=206,slow=74,SNR=7.5						
H03S3	Juan Fernandez	77.17	134	T	T	13 13 20.7	
	baz=206,slow=74,SNR=7.1						
BOSA	Boshof	85.57	220	P	P	11 48 46.6	-0.5
	comp=Z,1.8nm,0.6s,baz=157,slow=4.2,SNR=3.7						
BOSA	Boshof	85.57	220	P	P	11 48 46.8	-0.4
AKASG	Malin Array Be	149.95	279	PKPbc	PKPbc	11 55 57.4	-0.6
	comp=Z,0.9nm,0.4s,baz=98,slow=1.7,SNR=4.8						
AKASG	Malin Array Be	149.95	279		PKPbc	11 55 57.3	-0.7
BURAR	Bucovina Array	150.33	271		PKiKP	11 56 00.3	+0.2

BER 07 11:59:52.6±1.0, 61.25N×5.83E, h0km, ML0.9, 3C, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HYA	Hoyanger	0.19	116	i P	Pg	11 59 55.8	-0.4
HYA				eS	Sg	11 59 58.5	-0.1
HYA				IAML		11 59 59.5	
	comp=Z,17nm,0.2s						
FOO	Floro	0.52	313	eP	Pg	12 00 02.0	-0.5
FOO				eS	Sg	12 00 08.4	-0.7
FOO				IAML		12 00 12.0	
	comp=Z,4.0nm,0.2s						
SUE	Sulen	0.55	250	i P	Pg	12 00 02.3	-0.9
SUE				eS	Sg	12 00 10.1	-0.2
SUE				IAML		12 00 10.7	
	comp=Z,6.8nm,0.7s						
ASK	Askoy	0.83	202	eP	Pg	12 00 07.6	-0.9
ASK				eS	Sg	12 00 18.8	-0.3
AKN	Aaknes	1.08	30	eP	Pg	12 00 11.9	-1.5
AKN				eS	Sg	12 00 27.0	-0.4
AKN				IAML		12 00 38.8	
	comp=Z,4.1nm,0.8s						
SKAR	Skarslia	1.33	114	i P	Pg	12 00 16.2	-1.9
SKAR				eS	Sg	12 00 34.5	-0.9
SKAR				IAML		12 00 39.5	
	comp=Z,3.5nm,0.3s						
ODD1	Odda	1.40	163	eP	Pg	12 00 17.4	-1.9
ODD1				eS	Sg	12 00 35.3	-2.2
ODD1				IAML		12 00 42.6	
	comp=Z,4.6nm,0.5s						
NC204	NORSAR Array S	2.38	87	eP	Pn	12 00 29.8	-3.1
NC204				IAML		12 01 22.6	
	comp=Z,1.6nm,0.8s						
NAO01	NORSAR Array S	2.49	97	eP	Pn	12 00 33.2	-1.2
NAO01				IAML		12 01 14.4	
	comp=Z,2.0nm,0.9s						

HEL 07 12:00:09.5±0.4, 65.74N×24.72E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUL	Oulu	0.82	142	PG	Pg	12 00 23.8	-1.3
RNF	Rovaniemi	1.02	30	PG	Pg	12 00 27.9	-1.1
ERTU	Ertsjaerv	1.32	310	SN	Sn	12 00 54.1	+0.8
OUF	Meríjarvi	1.37	180	PG	Pg	12 00 34.1	-1.7
	baz=4.0						
OUF				MSG		12 00 51.0	
	comp=Z,1.1nm,0.2s						
MSF	Maaselka	1.79	82	SG	Sn	12 01 04.9	-0.1
BURU	Burvik	1.82	232	PG	Pn	12 00 41.9	-0.1
	baz=55						
BURU				SG	Sg	12 01 07.6	-0.4
KU6	Riekki	2.14	80	SG	Sn	12 01 14.8	+1.1
UMAU	Umeaa	2.54	225	PN	Pn	12 00 51.7	-0.2
LANU	Lannavaara	2.56	336	PG	Pn	12 00 53.5	+1.2
LANU				SG	Sb	12 01 28.4	+0.1
KIF	Kilpisjarvi	3.62	337	PG	Pb	12 01 15.0	+0.8

CNRM ***07*** *12:09:30.3±0.9, 36.74N×8.62W, h30km±21km, Error ellipse: s-maj=22.8km s-min=6.3km az=108.0*
SFS ***07*** *12:09:33.0, 36.91N×8.63W, h30km, ML2.9, GOLFO DE CADIZ*
IGIL ***07*** *12:09:33.5, 36.84N×8.60W, h22km, ML2.7*
INMG ***07*** *12:09:33.4±1.6, 36.86N×8.61W, h22km±3km, MD2.3, ML2.5, Error ellipse: s-maj=5.4km s-min=3.1km az=58.0*
MDD ***07*** *12:09:33.5±0.7, 36.88N×8.64W, h29km±5km, mbLg2.9/21, Error ellipse: s-maj=8.5km s-min=4.9km az=46.0, PRXIMO*

ISC 07 12:09:31.5±1.3, 36.86N±0.04×8.63W±0.03, h34km±2km, n74, σ1.948/134, 8C-2D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	0.32	330	⇓P	Pn	12 09 40.3	+0.5
	121nm,0.1s,SNR=18						
PFVI				S	Sn	12 09 45.5	+0.8
	2μm,0.1s,SNR=13						
PFVI	Vila Bisbo	0.32	330	P	Pb	12 09 39.8	+0.2
PFVI				S	Sb	12 09 44.1	-0.9
PFVI	Vila Bisbo	0.32	330	⇓eP	Pn	12 09 40.3	+0.5
PFVI				eSg	Sn	12 09 45.2	+0.5
PFVI				A	A	12 09 46.2	
	553nm,0.1s						
MORF	Marmelete	0.45	357	eP	Pn	12 09 42.4	+0.7
MORF				eS	Sn	12 09 48.8	+0.2
MORF				AML	AML	12 09 50.4	
	comp=N,429nm,0.2s						
MORF	Marmelete	0.45	357	P	Pn	12 09 42.4	+0.7
MORF				S	Sn	12 09 49.0	+0.4
MORF	Marmelete	0.45	357	i Pg	Pn	12 09 42.4	+0.7
MORF				eSg	Sn	12 09 49.0	+0.4
PBDV	Barranco-do-Ve	0.68	55	P	Pn	12 09 46.1	+1.4
PBDV				S	Sn	12 09 55.0	+0.9
	comp=N,68nm,0.1s						
PBDV	Barranco-do-Ve	0.68	55	⇑ePg	Pn	12 09 46.1	+1.4
PBDV				eSg	Sn	12 09 55.0	+0.9
PBDV				A	A	12 09 57.0	
	comp=N,68nm,0.1s						
PTEO	Sao Teotonio	0.69	354	P	Pn	12 09 45.8	+0.9
PTEO				S	Sn	12 09 55.3	+0.8
	comp=N,50nm,0.3s						
PTEO	Sao Teotonio	0.69	354	i Pg	Pn	12 09 45.8	+0.9
PTEO				eSg	Sn	12 09 55.3	+0.8
PTEO				A	A	12 09 56.0	
	comp=N,101nm,0.3s						
PCVE	Castro Verde	0.91	31	P	Pb	12 09 49.2	+0.4
PCVE				S	Sn	12 10 01.3	+1.6
	comp=N,32nm,0.4s						
PCVE	Castro Verde	0.91	31	i P	Pb	12 09 49.2	+0.4
PCVE				eS	Sn	12 10 01.3	+1.6
PCVE				A	A	12 10 15.3	
	comp=N,32nm,0.4s						
PVAQ	Vaqueiros	0.91	53	P	Pb	12 09 49.2	+0.4
PVAQ				S	Sn	12 10 01.0	+1.2
	comp=N,92nm,0.1s						
PVAQ	V

PBAR					A	A	12 10 38.1		
	comp=N,25nm,0.5s								
PMAFR	**Mafra**	**2.16**	**346**		P	**Pn**	**12 10 07.1**	**+2.0**	
	comp=N,6.8nm,0.1s,SNR=11								
PMAFR					S	**Sn**	**12 10 29.9**	**-0.8**	
	comp=N,46nm,0.1s,SNR=14								
PMAFR	**Mafra**	**2.16**	**346**		*e*Pn	**Pn**	**12 10 07.1**	**+2.0**	
PMAFR					*e*Sn	**Sn**	**12 10 31.8**	**+1.1**	
PMAFR					A	A	12 10 34.5		
	comp=N,50nm,0.2s								
ESPR	**Espera**	**2.22**	**89**		P	**Pn**	**12 10 07.6**	**+1.6**	
	comp=N,9.4nm,0.1s,SNR=11								
ESPR					S	**Sn**	**12 10 33.5**	**+1.3**	
	comp=N,11nm,0.2s,SNR=7.9								
PMTG	**Montargil**	**2.23**	**8**		P	**Pn**	**12 10 06.9**	**+0.8**	
PMTG					S	**Sn**	**12 10 31.7**	**-0.8**	
	comp=N,19nm,0.1s								
PMTG	**Montargil**	**2.23**	**8**		*e*Pn	**Pn**	**12 10 06.9**	**+0.8**	
PMTG					*e*Sn	**Sn**	**12 10 31.7**	**-0.8**	
PMTG					A	A	12 10 35.6		
	comp=N,19nm,0.1s								
PSBE	**So Bento**	**2.66**	**357**		*e*Pn	**Pn**	**12 10 13.6**	**+1.6**	
PSBE					*e*Sn	**Sn**	**12 10 43.4**	**+0.4**	
PSBE					A	A	12 10 47.0		
	comp=N,14nm,0.2s								
PMRV	**Marv??o**	**2.75**	**20**		P	**Pn**	**12 10 13.9**	**+0.7**	
PMRV					S	**Sn**	**12 10 45.4**	**+0.2**	
	comp=N,10nm,0.3s								
PMRV	**Marv??o**	**2.75**	**20⇑**		*e*Pn	**Pn**	**12 10 13.9**	**+0.7**	
PMRV					*e*Sn	**Sn**	**12 10 45.4**	**+0.2**	
PMRV					A	A	12 10 46.7		
	comp=N,10nm,0.3s								
ECAB	**El Cabril**	**2.83**	**64**		P	**Pn**	**12 10 16.0**	**+1.7**	
	comp=N,7.2nm,0.2s,SNR=22								
ECAB					S	**Sn**	**12 10 46.1**	**-1.1**	
	comp=N,8.8nm,0.1s,SNR=10								
HORN	**Hornachuelos**	**2.86**	**69**		P	**Pn**	**12 10 15.6**	**+0.9**	
PCBR	**Castelo Branco**	**3.11**	**17**		P	**Pn**	**12 10 19.3**	**+1.1**	
PCBR					S	**Sn**	**12 10 53.9**	**-0.3**	
	comp=N,8.9nm,0.4s								
PCBR	**Castelo Branco**	**3.11**	**17**		*e*Pn	**Pn**	**12 10 19.3**	**+1.1**	
PCBR					*e*Sn	**Sn**	**12 10 53.9**	**-0.3**	
PCBR					A	A	12 10 55.4		
	comp=N,18nm,0.4s								
PCAS	**Casmilo, Conde**	**3.19**	**2**		P	**Pn**	**12 10 20.9**	**+1.6**	
PCAS					S	**Sn**	**12 10 56.2**	**0.0**	
	comp=N,17nm,0.2s								
PCAS	**Casmilo, Conde**	**3.19**	**2**		*e*Pn	**Pn**	**12 10 20.9**	**+1.6**	
PCAS					*e*Sn	**Sn**	**12 10 56.2**	**0.0**	
PCAS					A	A	12 10 57.4		
	comp=N,17nm,0.2s								
EADA	**Adamuz**	**3.48**	**67**		P	**Pn**	**12 10 24.6**	**+1.4**	
	comp=N,1.9nm,0.1s,SNR=7.9								
EADA					S	**Sn**	**12 11 01.3**	**-1.9**	
	comp=N,10.0nm,0.1s,SNR=7.9								
EGOR	**Sierra Gorda,**	**3.62**	**85**		P	**Pn**	**12 10 28.9**	**+3.6**	
	comp=N,0.9nm,0.2s,SNR=7.9								
EGOR					S	**Sn**	**12 11 08.8**	**+1.7**	
	comp=N,3.3nm,0.2s,SNR=7.9								
MTE	**Manteigas**	**3.64**	**13**		S	**Sn**	**12 11 06.5**	**-0.8**	
	comp=N,11nm,0.2s								
MTE	**Manteigas**	**3.64**	**13**		*e*Sn	**Sn**	**12 11 06.5**	**-0.8**	
MTE					A	A	12 11 08.0		
	comp=N,21nm,0.2s								
ZHG	**ZHG**	**3.77**	**154**		P	**Pn**	**12 10 27.9**	**+0.6**	
ZHG					S	**Sn**	**12 11 08.7**	**-1.8**	
EPLA	**Plasencia**	**3.77**	**31**		P	**Pn**	**12 10 27.7**	**+0.4**	
	comp=N,1.8nm,0.1s,SNR=7.9								
EPLA					S	**Sn**	**12 11 09.4**	**-1.2**	
	comp=N,4.4nm,0.1s								
PVIS	**Viseu**	**3.90**	**8**		S	**Sn**	**12 11 12.9**	**-0.7**	
	comp=N,5.7nm,0.3s								
PVIS	**Viseu**	**3.90**	**8**		*e*Sn	**Sn**	**12 11 12.9**	**-0.7**	
PVIS					A	A	12 11 14.3		
	comp=N,11nm,0.3s								
ELGU	**Los Guajares,**	**4.01**	**88**		P	**Pn**	**12 10 33.1**	**+2.5**	
	comp=N,1.7nm,0.1s,SNR=7.9								
ELGU					S	**Sn**	**12 11 17.4**	**+1.0**	
	comp=N,6.1nm,0.2s,SNR=7.9								
EQUE	**Quentar**	**4.16**	**84**		S	**Sn**	**12 11 21.4**	**+1.1**	
	comp=N,2.5nm,0.2s,SNR=7.9								
PAB	**San Pablo**	**4.31**	**50**		P	**Pn**	**12 10 35.8**	**+1.1**	
	comp=N,1.8nm,0.1s,SNR=7.9								
PAB					S	**Sn**	**12 11 20.8**	**-3.0**	
	comp=N,4.4nm,0.2s,SNR=7.9								
PVRL	**Vila Real**	**4.47**	**9**		S	**Sn**	**12 11 26.3**	**-1.4**	
	comp=N,5.3nm,0.3s								
PVRL	**Vila Real**	**4.47**	**9**		*e*Sn	**Sn**	**12 11 26.3**	**-1.4**	
PVRL					A	A	12 11 28.2		
	comp=N,11nm,0.3s								
MVO	**Moncorvo**	**4.48**	**16**		P	**Pn**	**12 10 37.6**	**+0.5**	
	comp=N,1.5nm,0.1s,SNR=7.9								
MVO					S	**Sn**	**12 11 25.1**	**-2.8**	
	comp=N,2.5nm,0.1s,SNR=7.9								
MVO	**Moncorvo**	**4.48**	**16**		*e*Pn	**Pn**	**12 10 38.0**	**+1.0**	
MVO					*e*Sn	**Sn**	**12 11 26.5**	**-1.5**	
MVO					A	A	12 11 28.4		
	comp=N,4.5nm,0.4s								
EQES	**Quesada**	**4.53**	**76**		P	**Pn**	**12 10 38.8**	**+1.0**	
	comp=N,1.3nm,0.2s,SNR=7.9								
EQES					S	**Sn**	**12 11 27.6**	**-1.6**	
	comp=N,8.8nm,0.2s,SNR=7.9								
POLO	**Lamas de Olo**	**4.56**	**8**		P	**Pn**	**12 10 39.1**	**+1.0**	
POLO					S	**Sn**	**12 11 28.5**	**-1.5**	
	comp=N,4.6nm,0.3s								
POLO	**Lamas de Olo**	**4.56**	**8**		*e*Pn	**Pn**	**12 10 39.1**	**+1.0**	
POLO					*e*Sn	**Sn**	**12 11 28.5**	**-1.5**	
POLO					A	A	12 11 30.5		
	comp=N,4.6nm,0.3s								
ESDC	**Sonseca Array**	**4.62**	**51**		P	**Pn**	**12 10 40.0**	**+1.0**	
	comp=N,1.7nm,0.1s,spac=237,slow=13,SNR=5.5								
ESDC					S	**Sn**	**12 11 30.0**	**-1.6**	
	comp=N,6.2nm,0.2s,baz=238,slow=23,SNR=73								
CZD	**Col de Zad**	**4.82**	**141**		P	**Pn**	**12 10 41.6**	**-0.3**	
CZD					S	**Sn**	**12 11 34.5**	**-2.2**	
SESP	**Santiago Espad**	**5.00**	**74**		P	**Pn**	**12 10 45.3**	**+1.0**	
	comp=N,0.8nm,0.1s,SNR=7.9								
SESP					S	**Sn**	**12 11 39.0**	**-1.9**	
	comp=N,9.8nm,0.2s,SNR=7.9								
SESP	**Santiago Espad**	**5.00**	**74**		P	**Pn**	**12 10 44.4**	**+0.1**	
SESP					S	**Sn**	**12 11 39.9**	**-1.0**	
ELOB	**Lobios**	**5.02**	**5**		P	**Pn**	**12 10 45.4**	**+0.9**	
	comp=N,0.6nm,0.1s,SNR=7.9								
ELOB					S	**Sn**	**12 11 37.8**	**-3.6**	
	comp=N,3.9nm,0.1s,SNR=7.9								
MD31	**MD31**	**5.09**	**140**		P	**Pn**	**12 10 45.6**	**+0.1**	
MD31					S	**Sn**	**12 11 39.4**	**-3.8**	
PGAV	**Gavieira, Arco**	**5.11**	**3**		P	**Pn**	**12 10 46.9**	**+1.2**	
PGAV					S	**Sn**	**12 11 41.5**	**-2.1**	
	comp=N,4.9nm,0.6s								
PGAV	**Gavieira, Arco**	**5.11**	**3**		*e*Pn	**Pn**	**12 10 46.9**	**+1.2**	
PGAV					*e*Sn	**Sn**	**12 11 41.5**	**-2.1**	
PGAV					A	A	12 11 43.4		
	comp=N,4.9nm,0.6s								
GUD	**Guadarrama**	**5.15**	**41**		P	**Pn**	**12 10 47.0**	**+0.7**	
	comp=N,1.1nm,0.2s,SNR=7.9								
GUD					S	**Sn**	**12 11 41.7**	**-2.9**	
	comp=N,1.3nm,0.2s,SNR=7.9								
MDT	**Midelt**	**5.21**	**139**		P	**Pn**	**12 10 47.0**	**-0.2**	
MDT					S	**Sn**	**12 11 42.0**	**-4.2**	
ECAL	**Calabor**	**5.29**	**15**		S	**Sn**	**12 11 45.2**	**-2.7**	
	comp=N,5.8nm,0.3s,SNR=7.9								
OUK	**Oukaimeden**	**5.67**	**173**		P	**Pn**	**12 10 51.6**	**-2.1**	
OUK					S	**Sn**	**12 11 54.8**	**-3.0**	
ETOB	**Tobarra**	**5.89**	**70**		P	**Pn**	**12 10 57.5**	**+1.1**	
	comp=N,1.0nm,0.2s,SNR=7.9								
ETOB					S	**Sn**	**12 11 59.8**	**-2.9**	
	comp=N,1.7nm,0.1s,SNR=7.9								
EMAZ	**Mazaricos**	**6.09**	**358**		S	**Sn**	**12 12 03.2**	**-4.5**	
	comp=N,2.1nm,0.1s,SNR=7.9								
TTIG	**Tnine Tigouga,**	**6.29**	**179**		P	Pn	12 10 58.8	-3.3	
ETOR	**Torete**	**6.48**	**50**		P	**Pn**	**12 11 05.2**	**+0.7**	
	comp=N,2.5nm,0.2s,SNR=7.9								
ETOR					S	**Sn**	**12 12 14.3**	**-3.0**	
	comp=N,7.2nm,0.3s,SNR=7.9								

*IDC **07** 12:16:40.3±1.5,5°.93S×146°.48E, h0km, mb3.5/3, mb1 3.9/6, mb1mx3.6/26, mbtmp3.7/6, ML3.2/3, Error ellipse: s-maj=49.2km s-min=26.0km az=112.0*

ISC 07 12:16:40.4±1.3, 6°.3S±0°.1×146°.6E±0°.2, h10km, n7, σ3.8°01/9, mb3.8/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.13**	**170**		Pn	**Pb**	**12 17 35.5**	**-0.6**
	24nm,0.3s,baz=350,slow=11,SNR=45							
PMG					Sn	**Sn**	**12 18 08.5**	**+1.2**
	8.1nm,0.3s,baz=170,slow=23,SNR=7.8							
CTA	**Charters Tower**	**13.70**	**181**		Pn	**P**	**12 20 02.6**	**-1.1**
	0.2nm,0.3s,baz=3.6,slow=12,SNR=6.0							
WRA	**Warramunga Arr**	**18.05**	**220**		P	**P**	**12 20 55.9**	**+3.9**
	0.1nm,0.3s,baz=42,slow=12,SNR=9.7							
WRA					S	**Sn**	**12 24 09.3**	**-3.8**
	0.0nm,0.3s,baz=43,slow=23,SNR=2.1							
ASAR	**Alice Springs**	**21.15**	**214**		P	**P**	**12 21 29.6**	**+3.8**
	0.8nm,0.8s,baz=49,slow=9.0,SNR=11							
FITZ	**Fitzroy Crossi**	**23.57**	**238**		P	**P**	**12 21 52.8**	**+1.3**
	3.9nm,1.3s,baz=61,slow=9.4,SNR=2.1							
ILAR	**Eielson Array**	**85.92**	**23**		P	**P**	**12 29 20.3**	**-0.1**
	0.5nm,0.7s,baz=259,slow=4.8,SNR=6.0							
TORD	**Torodi Ar. Bea**	**144.78**	**284**		PKP	**PKiKP**	**12 36 20.3**	**-2.2**
	0.8nm,0.6s,baz=97,slow=2.8,SNR=8.4							

IDC 07 12:25:45.2±3.2, 6°.24S×148°.12E, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.6/32, mbtmp3.9/4, ML3.8/1, MS2.8/3, Ms1 2.9/3, ms1mx2.5/29, Error ellipse: s-maj=74.7km s-min=33.8km az=100.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.29**	**197**		Pn	Pn	12 26 38.6	+0.6
	8.7nm,0.3s,baz=26,slow=9.8,SNR=15							
PMG					Sn	Sn	12 27 17.9	0.0
	4.9nm,0.3s,baz=285,slow=21,SNR=5.9							
PMG					LR	LR	12 28 03.4	
	comp=Z,62nm,20.0s,baz=84,slow=42							
KRVT	**Keravat (AS076**	**4.34**	**64**		LR	LR	12 28 42.7	
	comp=Z,65nm,19.8s,baz=209,slow=41							
WRA	**Warramunga Arr**	**19.10**	**223**		P	P	12 30 09.8	0.0
	0.3nm,0.3s,baz=48,slow=11,SNR=27							
ASAR	**Alice Springs**	**22.20**	**217**		P	P	12 30 41.2	-0.8
	1.3nm,0.6s,baz=51,slow=9.8,SNR=14							
FITZ	**Fitzroy Crossi**	**24.90**	**240**		P	P	12 31 11.5	+1.4
	4.1nm,0.5s,baz=51,slow=8.8,SNR=27							
ILAR	**Eielson Array**	**85.26**	**23**		LR	LR	13 13 37.0	
	comp=Z,18nm,20.5s,baz=107,slow=34							
TORD	**Torodi Ar. Bea**	**146.22**	**284**		PKPbc	PKPdf	12 45 26.8	-1.0
	0.5nm,0.5s,baz=54,slow=3.3,SNR=5.3							

*NEIC **07** 12:36:35.9±0.6, 49°.2S±0°.2×108°.8E±0°.5, h10km±2km, mb4.5/9, Error ellipse: s-maj=55.2km s-min=23.4km az=291.0*

*IDC **07** 12:36:35.4±1.7, 49°.36S×109°.25E, h0km, mb4.3/5, mb1 4.4/5, mb1mx3.9/24, mbtmp4.3/5, MS3.7/11, Ms1 3.6/11, ms1mx3.4/25, Error ellipse: s-maj=69.7km s-min=19.1km az=114.0*

ISC 07 12:36:35.7±1.5, 49°.2S±0°.2×108°.8E±0°.4, h10km, n30, σ0.44°/19, mb4.3/7, MS3.6/10, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.83**	**17**	T	T	T	12 55 22.0	
	baz=194,slow=74,SNR=109							
H01W1	**Cape Leeuwin H**	**14.84**	**17**	T	T	T	12 55 20.3	
	baz=194,slow=74,SNR=101							
H01W3	**Cape Leeuwin H**	**14.84**	**17**	T	T	T	12 55 20.8	
	baz=194,slow=74,SNR=124							
NWAO	**Narrogin (SRO)**	**17.44**	**24**	LR	LR	LR	12 45 40.3	
	comp=Z,208nm,21.5s,baz=30,slow=31							
MAW	**Mawson**	**29.30**	**214**	LR	LR	LR	12 51 26.1	
	comp=Z,100nm,19.6s,baz=59,slow=30							
STKA	**Stephens Creek**	**30.03**	**67**	LR	LR	LR	12 52 27.6	
	comp=Z,196nm,21.8s,baz=209,slow=32							
ASAR	**Alice Springs**	**32.23**	**47**	P	P	**P**	**12 43 04.5**	**+0.3**
	1.4nm,0.7s,baz=208,slow=8.1,SNR=21							
ASAR					LR	LR	12 54 26.3	
	comp=Z,128nm,20.2s,baz=202,slow=33							
FITZ	**Fitzroy Crossi**	**33.88**	**30**	LR	LR	LR	12 56 15.2	
	comp=Z,117nm,18.8s,baz=223,slow=35							
FITZ	**Fitzroy Crossi**	**33.88**	**30**	P	P	**P**	**12 43 19.3**	**+0.7**
VNDA	**Vanda**	**34.66**	**162**	P	P	**P**	**12 43 24.6**	**-0.1**
	3.1nm,0.7s,baz=294,slow=8.7,SNR=23							
VNDA					LR	LR	12 56 23.4	
	comp=Z,86nm,20.3s,baz=306,slow=34							
VNDA	**Vanda**	**34.66**	**162**	P		**P**	**12 43 25.0**	**+0.2**
WRA	**Warramunga Arr**	**35.64**	**44**	P		**P**	**12 43 34.1**	**+0.4**
	2.1nm,0.8s,baz=207,slow=8.7,SNR=20							
WRA					LR	LR	12 56 12.4	
	comp=Z,152nm,21.7s,baz=225,slow=33							
WRA	**Warramunga Arr**	**35.64**	**44**	P		**P**	**12 43 32.9**	**-0.9**
WB2	**Warramunga Arr**	**35.65**	**44**	P		**P**	**12 43 34.4**	**+0.6**
WB2					IAmb	IAmb	12 44 05.2	
	comp=Z,10nm,1.4s							
WRAB	**Tennant Creek**	**35.65**	**44**	P		**P**	**12 43 34.1**	**+0.3**
WR0	**Warramunga Arr**	**35.72**	**44**	P		**P**	**12 43 33.9**	**-0.5**
WB0	**Warramunga Arr**	**35.82**	**44**	P		**P**	**12 43 35.6**	**+0.3**
WB0					IAmb	IAmb	12 44 09.9	
	comp=Z,7.2nm,1.3s							
QSPA	**South Pole Qui**	**40.93**	**180**	P		**P**	**12 44 18.4**	**+0.4**
	comp=Z,4.9nm,0.7s,baz=330,slow=3.3,SNR=45							
QSPA	**South Pole Qui**	**40.93**	**180**	P		**P**	**12 44 17.9**	**-0.1**
QSPA					IAmb	IAmb	12 44 19.1	
	comp=Z,6.2nm,0.8s							
SNAA	**Sanae**	**50.24**	**202**	P		**P**	**12 45 31.4**	**-0.1**
SNAA	**Sanae**	**50.24**	**202**	P		**P**	**12 45 31.5**	**0.0**
	comp=Z,5.3nm,0.7s,baz=133,slow=9.3,SNR=34							
SNAA	**Sanae**	**50.24**	**202**	P		**P**	**12 45 31.5**	**0.0**
SNAA					IAmb	IAmb	12 45 32.5	
	comp=Z,5.4nm,0.8s							
BOSA	**Boshof**	**64.88**	**255**	LR	LR	LR	13 09 42.5	
	comp=Z,96nm,19.4s,baz=160,slow=30							
CMAR	**Chiang Mai Arr**	**67.92**	**350**	LR	LR	LR	13 15 55.1	
	comp=Z,25nm,18.3s,baz=194,slow=35							
AFI	**Afiamalu**	**72.71**	**91**	LR	LR	LR	13 13 02.9	
	comp=Z,28nm,20.1s,baz=254,slow=30							
KMBO	**Kilima Mbogo**	**77.16**	**283**	LR	LR	LR	13 16 39.3	
	comp=Z,45nm,18.7s,baz=95,slow=31							
NVAR	**Mina Array Bea**	**144.87**	**90**	PKP		**PKPdf**	**12 56 12.8**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=224,slow=3.8,SNR=2.9							
NVAR	**Mina Array Bea**	**144.87**	**90**			**PKPdf**	**12 56 12.3**	**-0.4**
TXAR	**Lajitas Array**	**148.33**	**117**	PKPbc		**PKPbc**	**12 56 21.5**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=197,slow=2.8,SNR=3.5							
TXAR	**Lajitas Array**	**148.33**	**117**			**PKPbc**	**12 56 22.1**	**0.0**

IDC 07 12:53:28.3±1.9, 3°.00S×139°.89E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.5/23, mbtmp3.4/4, ML3.6/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/19, Error ellipse: s-maj=106.1km s-min=29.8km az=114.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**17.21**	**17**	LR	LR	LR	13 03 48.6	
	comp=Z,32nm,20.1s,baz=132,slow=36							
WRA	**Warramunga Arr**	**17.69**	**197**	P		Pn	12 57 35.6	-0.6
	0.2nm,0.3s,baz=18,slow=13,SNR=27							
WRA				S		Sn	13 00 45.3	-8.8
	0.1nm,0.3s,baz=11,slow=22,SNR=1.8							
FITZ	**Fitzroy Crossi**	**20.50**	**222**	P		P	12 58 08.6	+0.5
	0.8nm,0.6s,baz=38,slow=9.3,SNR=7.0							
FITZ				S		S	13 01 50.2	-8.3
	1.9nm,0.8s,baz=236,slow=5.2,SNR=3.1							
ASAR	**Alice Springs**	**21.34**	**195**	P		P	12 58 17.0	-0.2
	0.4nm,0.5s,baz=21,slow=10,SNR=14							
STKA	**Stephens Creek**	**28.77**	**177**	LR		LR	13 12 05.9	
	comp=Z,56nm,21.6s,baz=20,slow=39							
ILAR	**Eielson Array**	**85.61**	**24**	P		P	13 06 08.5	+0.1
	0.3nm,0.7s,baz=261,slow=5.4,SNR=2.1							

*VAO **07** 12:55:53.3±0.6, 21°.91S×68°.36W, h10km, mb4.4*
*SJA **07** 12:55:53.3±0.8, 22°.39S×68°.81W, h110km±4km, ML4.2, MW4.0*
*IDC **07** 12:55:55.3±0.6, 22°.44S×68°.71W, h94km±6km, mb3.4/4, mb1 3.5/7, mb1mx3.4/23, mbtmp3.7/7, MS3.1/2, Ms1 3.2/2, ms1mx2.7/11, Error ellipse: s-maj=26.6km s-min=20.3km az=140.0*
*GUC **07** 12:55:55.2±0.7, 22°.38S×68°.93W, h114km±4km, ML4.1*

ISC 07 12:55:55.2±0.7, 22°.37S±0°.03×68°.84W±0°.05, h106km±5km, n51, σ1°.41/68, mb3.8/3, 10C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.24**	**195**	P	**Pn**	**Pn**	**12 56 10.7**	**0.0**
	273nm,0.3s,baz=322,slow=4.9,SNR=1834							
LVC				LR	LR		12 56 18.9	
	comp=Z,78nm,19.9s,baz=69,slow=93							
LVC				S	**Sn**	**Sn**	**12 56 21.6**	**-0.8**
	760nm,0.3s,baz=144,slow=22,SNR=26							
LVC	**Limon Verde**	**0.24**	**195**	*e*P	**Pn**	**Pn**	**12 56 10.8**	**0.0**
LVC				*i* S	**Sn**	**Sn**	**12 56 21.5**	**-0.8**
LVC	**Limon Verde**	**0.24**	**195**	*e*S	**Sn**	**Sn**	**12 56 21.9**	**-0.5**
LVC	**Limon Verde**	**0.24**	**195**	*e*P	**Pn**	**Pn**	**12 56 10.3**	**-0.5**
PB09	**IPOC Station P**	**0.68**	**327⇑**	*i*P	**Pn**	**Pn**	**12 56 13.8**	**+0.5**
PB09				*i* S	**Sn**	**Sn**	**12 56 27.1**	**+0.4**
PB09				IAML			12 56 28.9	
	comp=N,6μm,0.1s							
PB06	**IPOC Station P**	**0.75**	**244**	*e*P	**Pn**	**Pn**	**12 56 13.6**	**-0.2**
PB06				*i* S	**Sn**	**Sn**	**12 56 27.5**	**-0.3**
PB06				IAML			12 56 28.5	
	comp=E,6μm,0.1s							
PB06	**IPOC Station P**	**0.75**	**244**	*e*S	**Sn**	**Sn**	**12 56 28.2**	**+0.4**
PB06				IAML			12 56 29.1	
	comp=Z,2μm,0.2s							
PB15	**IPOC Station P**	**1.01**	**215⇑**	*i*P	**Pn**	**Pn**	**12 56 16.7**	**+0.2**
PB15				*i* S	**Sn**	**Sn**	**12 56 32.7**	**+0.2**
PB15	**IPOC Station P**	**1.01**	**215**	*e*P	**Pn**	**Pn**	**12 56 16.8**	**+0.3**
PB15				*e*S	**Sn**	**Sn**	**12 56 32.9**	**+0.4**
PB15				IAML			12 56 34.4	
	comp=Z,7μm,0.3s							
PB07	**IPOC Station P**	**1.16**	**303⇑**	*i*P	**Pn**	**Pn**	**12 56 18.1**	**0.0**
PB07				*i* S	**Sn**	**Sn**	**12 56 34.8**	**-0.4**
PB07				IAML			12 56 35.9	
	comp=N,5μm,0.4s							
PB07	**IPOC Station P**	**1.16**	**303**	*e*S	**Sn**	**Sn**	**12 56 35.4**	**+0.1**
PB07				IAML			12 56 36.2	
	comp=Z,3μm,0.2s							
PB04	**IPOC Station P**	**1.21**	**272⇑**	*e*P	**Pn**	**Pn**	**12 56 18.3**	**-0.3**
PB04				*i* S	**Sn**	**Sn**	**12 56 35.1**	**-1.1**
PB04				IAML			12 56 39.0	
	comp=E,4μm,0.6s							
PB04	**IPOC Station P**	**1.21**	**272**	*e*P	**Pn**	**Pn**	**12 56 18.2**	**-0.3**
PB05	**IPOC Station P**	**1.34**	**249⇑**	*e*P	**Pn**	**Pn**	**12 56 19.6**	**-0.4**
PB05				*i* S	**Sn**	**Sn**	**12 56 37.7**	**-1.1**
PB05	**IPOC Station P**	**1.34**	**249**	*e*P	**Pn**	**Pn**	**12 56 19.6**	**-0.4**
PB05				*e*S	**Sn**	**Sn**	**12 56 38.2**	**-0.6**
PB05				IAML			12 56 39.7	
	comp=Z,1μm,1.0s							
PB02	**IPOC Station P**	**1.43**	**317⇑**	*i*P	**Pn**	**Pn**	**12 56 21.1**	**0.0**
PB02				*i* S	**Sn**	**Sn**	**12 56 40.3**	**-0.5**
PB02				IAML			12 56 41.8	
	comp=E,6μm,0.2s							
PB02	**IPOC Station P**	**1.43**	**317**	*e*S	**Sn**	**Sn**	**12 56 41.0**	**+0.2**
PB02				IAML			12 56 42.6	
	comp=Z,5μm,0.3s							
PB01	**IPOC Station P**	**1.45**	**335⇑**	*e*P	**Pn**	**Pn**	**12 56 21.5**	**+0.1**
PB01				*e*S	**Sn**	**Sn**	**12 56 41.4**	**+0.3**
PB01				IAML			12 56 43.5	
	comp=E,4μm,0.5s							
PB10	**IPOC Station P**	**1.94**	**234**	*e*P	**Pn**	**Pn**	**12 56 26.3**	**-1.0**
PB10				*e*S	**Sn**	**Sn**	**12 56 49.2**	**-2.6**
PB10	**IPOC Station P**	**1.94**	**234**	*e*P	**Pn**	**Pn**	**12 56 27.0**	**-0.3**
TA01	**Diego Aracena**	**2.19**	**325**	*e*P	**Pn**	**Pn**	**12 56 29.5**	**-0.9**
TA01				*i* S	**Sn**	**Sn**	**12 56 56.8**	**-0.6**
TA01				IAML			12 57 04.1	
	comp=N,784nm,0.3s							
PB08	**IPOC Station P**	**2.24**	**353⇑**	*i*P	**Pn**	**Pn**	**12 56 32.3**	**+0.8**
PB08				*e*S	**Sn**	**Sn**	**12 57 00.5**	**+1.3**
TA02	**Huaiquique**	**2.41**	**330**	*e*P	**Pn**	**Pn**	**12 56 32.0**	**-0.9**
TA02				*i* S	**Sn**	**Sn**	**12 57 02.0**	**-0.6**
TA02				IAML			12 57 11.2	
	comp=N,1μm,0.1s							
PB14	**IPOC Station P**	**2.66**	**212**	*e*P	**Pn**	**Pn**	**12 56 36.2**	**-0.7**
PB11	**IPOC Station P**	**2.71**	**344⇑**	*e*P	**Pn**	**Pn**	**12 56 36.7**	**-0.7**
PB11				*e*S	**Sn**	**Sn**	**12 57 09.3**	**-0.5**
PB11				IAML			12 57 13.2	
	comp=E,705nm,0.3s							
PB11	**IPOC Station P**	**2.71**	**344**	*e*S	**Sn**	**Sn**	**12 57 10.3**	**+0.5**

WRAB					IAmb	IAmb	13 27 53.4		
	comp=Z,4.3nm,1.2s								
WB2	**Warramunga Arr**	**28.23**	**249**		P	**P**	**13 27 42.6**	**+1.3**
WB2					IAmb	IAmb	13 27 57.4		
	comp=Z,7.3nm,1.4s								
WRA	**Warramunga Arr**	**28.24**	**249**		P	**P**	**13 27 42.5**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=80,slow=9.2,SNR=8.0								
WRA					PcP	**PcP**	**13 30 55.6**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=84,slow=3.3,SNR=4.7								
WRA	**Warramunga Arr**	**28.24**	**249**		P	**P**	**13 27 41.3**	**-0.1**
AS31	**Alice Springs**	**29.64**	**242**		P	**P**	**13 27 55.1**	**+1.3**
ASAR	**Alice Springs**	**29.64**	**242**		P	**P**	**13 27 54.9**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=64,slow=9.9,SNR=17								
ASAR	**Alice Springs**	**29.64**	**242**		P	**P**	**13 27 53.8**	**-0.1**
TOO	**Toolangi**	**29.98**	**208**		P	**P**	**13 27 55.9**	**-0.7**
TOO					IAmb	IAmb	13 28 13.3		
	comp=Z,6.0nm,1.2s								
H11S2	**WAKE ISLAND Hy**	**30.22**		**8**	T	T	13 58 49.7		
	baz=188,slow=76,SNR=67								
H11S3	**WAKE ISLAND Hy**	**30.22**		**8**	T	T	13 58 49.4		
	baz=188,slow=76,SNR=46								
H11S1	**WAKE ISLAND Hy**	**30.23**		**8**	T	T	13 58 50.4		
	baz=188,slow=76,SNR=33								
H11N1	**WAKE ISLAND Hy**	**31.45**		**8**	T	T	14 00 21.9		
	baz=188,slow=76,SNR=40								
H11N3	**WAKE ISLAND Hy**	**31.45**		**8**	T	T	14 00 24.2		
	baz=188,slow=76,SNR=39								
H11N2	**WAKE ISLAND Hy**	**31.46**		**8**	T	T	14 00 23.2		
	baz=188,slow=76,SNR=30								
KNRA	**Kununurra**	**32.95**	**259**		P	**P**	**13 28 23.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**36.09**	**255**		P	**P**	**13 28 50.9**	**+0.7**
SONM	**Songino Array**	**77.24**	**325**		P	**P**	**13 33 42.9**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=136,slow=5.8,SNR=7.7								
SONM					LR	LR	14 06 22.5		
	comp=Z,11nm,20.1s,baz=137,slow=35								
SONM	**Songino Array**	**77.24**	**325**		P	**P**	**13 33 42.6**	**+0.4**
ILAR	**Eielson Array**	**85.11**	**19**		P	**P**	**13 34 23.8**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=238,slow=5.2,SNR=1.4								
MKAR	**Makanchi Array**	**91.73**	**317**		P	**P**	**13 34 55.9**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=97,slow=6.2,SNR=11								

*ISU **07** 13:25:18.9, 40°.20N×70°.78E, h5km*
*KRNET **07** 13:25:19.9±0.1, 40°.14N×70°.72E, h19km, mb3.2*
*SOME **07** 13:25:19.7, 40°.20N×70°.75E, h10km*
*NNC **07** 13:25:23.2±1.1, 40°.36N×70°.81E, h0km, mb3.9, mpv3.4, Error ellipse: s-maj=8.8km s-min=4.8km az=13.0*

ISC 07 13:25:19.9±1.2, 40°.09N±0°.04×70°.60E±0°.03, h1km±11km, n33, σ1s89/56, 15C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.17**	**100**	⇑	*i*P		**Pg**	**13 25 22.6**	**-0.6**
	baz=39								
BTK				⇑	*i*S		**Sg**	**13 25 25.0**	**-0.4**
	baz=39								
BTK	**Batken**	**0.17**	**100**	*i*	P		**Pg**	**13 25 22.1**	**-1.1**
BTK				*i*	S		**Sg**	**13 25 24.8**	**-0.6**
GAR	**Garm**	**1.11**	**191**	⇑	*i*P		**Pn**	**13 25 41.9**	**-0.8**
	baz=95								
GAR				⇑	*i*S		**Sn**	**13 25 57.9**	**-0.8**
	baz=95								
ANR	**Andizhan**	**1.50**	**63**	*e*	P		**Pn**	**13 25 47.2**	**-0.8**
ANR				*e*	S		**Sb**	**13 26 07.9**	**-0.2**
TAS	**Tashkent**	**1.58**	**322**	⇑	*i*P		**Pb**	**13 25 49.5**	**-0.5**
	baz=18								
TAS				⇑	*i*S		**Sb**	**13 26 10.8**	**+0.3**
	baz=18								
TAS	**Tashkent**	**1.58**	**322**	*e*	P		**Pn**	**13 25 48.9**	**-0.2**
TAS				*e*	S		**Sb**	**13 26 10.7**	**+0.2**
CHRV	**Charvak**	**1.63**	**343**	*e*	P		**Pn**	**13 25 49.1**	**-0.7**
CHRV				*e*	S		**Sn**	**13 26 10.9**	**-0.5**
OHH	**Osh**	**1.73**	**75**	⇓	*i*P		**Pn**	**13 25 49.9**	**-1.2**
	baz=76								
OHH				⇓	*i*S		**Sn**	**13 26 11.5**	**-2.4**
	baz=76								
OHH	**Osh**	**1.73**	**75**	*e*	P		**Pn**	**13 25 48.5**	**-2.6**
OHH				*e*	S		**Sn**	**13 26 11.9**	**-2.0**
CHGR	**Chuyangaron**	**1.81**	**218**	⇑	*i*P		**Pg**	**13 25 54.7**	**0.0**
	baz=20								
CHGR				⇑	*i*S		**Sg**	**13 26 20.2**	**+2.0**
	baz=20								
IUG	**Iuzhnay**	**2.10**	**348**	*e*	P		**Pb**	**13 25 57.4**	**-1.5**
	192nm,0.2s								
IUG					*e*S		**Sn**	**13 26 23.2**	**0.0**
	192nm,0.4s								
IUG	**Iuzhnay**	**2.10**	**348**		Pg		**Pb**	**13 25 57.4**	**-1.5**
	192nm,0.2s								
IUG					Lg	Lg	13 26 23.2		
	192nm,0.4s								
MNAS	**Manas**	**2.79**	**30**	⇓	*i*P		**Pn**	**13 26 05.6**	**-0.3**
	baz=29								
MNAS				⇓	*i*S		**Sn**	**13 26 39.3**	**-1.0**
	baz=29								
KK31	**Karatay Array**	**3.01**	**359**	⇓	Pn		**Pn**	**13 26 09.0**	**+0.2**
	0.7nm,0.2s,baz=140,slow=11,SNR=22								
KK31				⇓	Pg		**Pb**	**13 26 13.5**	**-0.9**
	2.1nm,0.3s,baz=180,slow=17,SNR=11								
KK31				⇑	Lg	Lg	13 26 51.3		
	4.1nm,0.3s,baz=178,slow=31,SNR=8.0								
AML	**Almayashu**	**3.10**	**48**	⇑	*i*P		**Pn**	**13 26 09.8**	**-0.6**
	baz=48								
AML				⇑	*i*S		**Sn**	**13 26 46.5**	**-1.8**
	baz=48								
MRKS	**Merke**	**3.31**	**36**	*e*	P		**Pb**	**13 26 17.8**	**-1.6**
	12nm,0.4s								
MRKS				⇓	*i*S		**Sb**	**13 26 58.7**	**-1.5**
	14nm,0.4s								
MRKS	**Merke**	**3.31**	**36**		Pg		**Pb**	**13 26 17.8**	**-1.6**
	12nm,0.4s								
MRKS					Lg	Lg	13 26 58.7		
	14nm,0.4s								
ARLS	**Aral**	**3.33**	**57**	⇑	*i*P		**Pn**	**13 26 12.8**	**-0.4**
	baz=57								
ARLS				⇑	*i*S		**Sn**	**13 26 51.3**	**-2.2**
	baz=57								
EKS2	**Erkin-Say**	**3.51**	**42**	⇓	*i*P		**Pn**	**13 26 15.5**	**-0.2**
	baz=41								
EKS2				⇓	*i*S		**Sn**	**13 26 55.7**	**-2.2**
	baz=41								
SGDS	**Sogindy**	**4.51**	**41**		Pg		**Pb**	**13 26 39.6**	**-0.4**
	3.4nm,0.3s								
SGDS					Lg	Lg	13 27 35.4		
	5.4nm,0.2s								
TKM2	**Tokmak 2**	**4.70**	**51**	⇑	Pn		**Pn**	**13 26 31.4**	**-0.7**
	16nm,1.2s								
TKM2				⇑	Lg	Lg	13 27 43.3		
	5.5nm,0.6s								
KST	**Kastek**	**4.99**	**52**	*e*	P		**Pb**	**13 26 49.9**	**+1.8**
	10nm,0.7s								
KST					*e*S		**Sb**	**13 27 53.1**	**+4.5**
	9.0nm,0.4s								
KST	**Kastek**	**4.99**	**52**		Pg		**Pb**	**13 26 49.9**	**+1.8**
	10nm,0.7s								
KST					Lg	Lg	13 27 53.1		
	9.0nm,0.4s								
DGS	**Degeres**	**4.99**	**49**	*e*	P		**Pb**	**13 26 48.4**	**+0.3**
	2.3nm,0.3s								
DGS					*e*S		**Sb**	**13 27 50.6**	**+1.9**
	5.3nm,0.4s								
DGS	**Degeres**	**4.99**	**49**		Pg		**Pb**	**13 26 48.4**	**+0.3**
	2.3nm,0.3s								
DGS					Lg	Lg	13 27 50.6		
	5.3nm,0.4s								
KRBS	**Karabastau**	**5.23**	**45**	*e*	P		**Pb**	**13 26 52.5**	**+0.4**
	1.1nm,0.5s								
KRBS					*e*S		**Sb**	**13 27 57.9**	**+2.4**
	4.3nm,0.4s								
KRBS	**Karabastau**	**5.23**	**45**		Pg		**Pb**	**13 26 52.5**	**+0.4**
	1.1nm,0.5s								
KRBS					Lg	Lg	13 27 57.8		
	4.3nm,0.4s								
BTLS	**Baital**	**5.56**	**26**	*e*	P		**Pb**	**13 26 58.6**	**+0.8**
	2.2nm,0.3s								
BTLS					*e*S		**Sb**	**13 28 08.5**	**+3.5**
	2.0nm,0.3s								
BTLS	**Baital**	**5.56**	**26**		Pg		**Pb**	**13 26 58.6**	**+0.8**
	2.2nm,0.3s								
BTLS					Lg	Lg	13 28 08.5		
	2.0nm,0.3s								
KUU	**Kurty**	**5.72**	**46**	*e*	P		**Pb**	**13 27 02.1**	**+1.6**
	1.2nm,0.3s								
KUU					*e*S		**Sb**	**13 28 14.0**	**+4.5**
	4.0nm,0.5s								
KUU	**Kurty**	**5.72**	**46**		Pg		**Pb**	**13 27 02.1**	**+1.6**
	1.2nm,0.3s								
KUU					Lg	Lg	13 28 14.0		
	4.0nm,0.5s								
KTBS	**Karatobe**	**5.80**	**49**	*e*	P		**Pb**	**13 27 04.4**	**+2.4**
	1.4nm,0.5s								
KTBS				*e*	S		**Sb**	**13 28 18.6**	**+6.6**
	9.6nm,0.7s								
KTBS	**Karatobe**	**5.80**	**49**		Pg		**Pb**	**13 27 04.4**	**+2.4**
	1.4nm,0.5s								
KTBS					Lg	Lg	13 28 18.6		
	9.6nm,0.7s								

*IGQ **07** 13:25:26.1±0.6, 1°.S±2°.×8°.1W±°, h10km, M4.0*

ISC 07 13:25:25.9±1.3, 1°.08S±0°.04×80°.84W±0°.07, h10km, n50, σ1s75/53, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PPLP	**Puerto Lpez**	**0.47**	**172**			P	**Pb**	**13 25 36.4**	**+0.2**
PPLP						S	**Sb**	**13 25 42.8**	**-0.4**
JAMA	**Jama**	**1.03**	**38**			P	**Pn**	**13 25 46.2**	**-0.3**
SALI	**Salinas**	**1.11**	**188**			P	**Pn**	**13 25 47.6**	**+0.1**
SALI						S	**Sn**	**13 26 02.7**	**-0.2**
MAG1	**Magdalena**	**1.46**	**47**			P	**Pg**	**13 25 54.3**	**+0.3**
AMIL	**Milagro (Trans**	**1.62**	**130**			P	**Pg**	**13 25 56.8**	**-0.3**
AMIL						S	**Sg**	**13 26 20.2**	**+2.0**
MORR	**Playas El Morr**	**1.63**	**162**			P	**Pg**	**13 25 57.2**	**+0.1**
MILO	**Milagro-Astudi**	**1.75**	**133**			P	**Pn**	**13 25 54.9**	**-1.4**
BV15	**Puerto Quito-O**	**2.03**	**53**			P	**Pn**	**13 26 00.4**	**+0.2**
COHC	**Cochancay**	**2.10**	**131**			P	**Pn**	**13 26 00.8**	**-0.3**
ILLI	**Illinizas Sur**	**2.14**	**80**			P	**Pn**	**13 26 03.0**	**+0.9**
SAGO	**Sagoatoa**	**2.17**	**92**			P	**Pb**	**13 26 04.6**	**-1.1**
IGUA	**Igualata**	**2.23**	**101**			P	**Pb**	**13 26 05.7**	**-1.0**
BBIL	**Ulba Tungurahu**	**2.38**	**99**			P	**Pb**	**13 26 07.8**	**-1.2**
BNAS	**Cotopaxi Volca**	**2.39**	**80**			P	**Pn**	**13 26 07.2**	**+1.6**
BMAS	**Trigal station**	**2.39**	**100**			P	**Pn**	**13 26 07.1**	**+1.5**
BMOR	**Cotopaxi Volca**	**2.40**	**82**			P	**Pn**	**13 26 06.2**	**+0.4**
PINO	**Pino**	**2.41**	**68**			P	**Pn**	**13 26 06.8**	**+0.9**
GGPC	**Guagua Pichinc**	**2.41**	**68**			P	**Pn**	**13 26 07.2**	**+1.3**
ARRY	**Arrayan**	**2.42**	**100**			P	**Pn**	**13 26 07.6**	**+1.8**
RETU	**Refugio**	**2.42**	**99**			P	**Pb**	**13 26 08.2**	**-1.6**
BREF	**Cotopaxi Volca**	**2.43**	**80**			P	**Pb**	**13 26 09.4**	**-0.7**
PAC1	**Pacto, Paraso**	**2.44**	**57**	*e*	P		**Pn**	**13 26 07.1**	**+1.1**
PAC1	**Pacto, Paraso**	**2.44**	**57**		P		**Pn**	**13 26 06.4**	**+0.4**
BRUN	**Tungurahua Vol**	**2.45**	**98**		P		**Pb**	**13 26 08.6**	**-1.6**
PIS1	**Pisayambo**	**2.45**	**90**		P		**Pb**	**13 26 08.5**	**-1.8**
BULB	**Ulba Tungurahu**	**2.45**	**98**		P		**Pb**	**13 26 08.5**	**-1.9**
VCES	**Cotopaxi**	**2.46**	**84**		P		**Pb**	**13 26 09.0**	**-1.5**
BTAM	**Cotopaxi Volca**	**2.47**	**81**		P		**Pb**	**13 26 09.3**	**-1.5**
VC1	**Cotopaxi 1**	**2.47**	**80**		P		**Pb**	**13 26 08.9**	**-1.9**
TAMB	**Tambo**	**2.50**	**81**		P		**Pb**	**13 26 10.2**	**-1.0**
ARNL	**Arenillas**	**2.57**	**163**		P		**Pn**	**13 26 08.4**	**+0.8**
PULU	**Pululahua**	**2.58**	**65**		P		**Pb**	**13 26 10.2**	**-2.3**
ANTG	**Antisana-Guama**	**2.65**	**78**		P		**Pb**	**13 26 11.6**	**-2.1**
SANGA	**Volcan Sangay**	**2.65**	**111**		P		**Pn**	**13 26 11.0**	**+1.9**
ANTM	**Antisana-La Mi**	**2.67**	**78**		P		**Pb**	**13 26 12.2**	**-1.9**
ANTS	**Antisana-Sarah**	**2.73**	**78**		P		**Pb**	**13 26 12.9**	**-2.3**
ANTI	**Antisana**	**2.75**	**77**		P		**Pb**	**13 26 13.0**	**-2.5**
CUSE	**Cuicocha Este**	**2.80**	**61**	*e*	P		**Pb**	**13 26 13.7**	**-2.6**
CUSE	**Cuicocha Este**	**2.80**	**61**		P		**Pn**	**13 26 13.0**	**+1.8**
CUIC	**Cuicocha-Domo**	**2.83**	**61**		P		**Pn**	**13 26 13.6**	**+2.0**
CUSW	**Cuicocha Oeste**	**2.83**	**61**		P		**Pn**	**13 26 12.9**	**+1.3**
IMBA	**Imbabura, San**	**2.96**	**63**		P		**Pn**	**13 26 15.0**	**+1.6**
URCU	**Urcuqui**	**2.99**	**60**		P		**Pb**	**13 26 16.7**	**-2.8**
ARDO	**Archidona, Ten**	**3.04**	**88**		P		**Pb**	**13 26 17.9**	**-2.2**
BOSC	**San Juan Bosco**	**3.12**	**131**		P		**Pb**	**13 26 19.0**	**-2.6**
YAHU	**Yahuarcocha**	**3.12**	**63**		P		**Pb**	**13 26 19.2**	**-2.5**
MCRA	**Macar, Loja**	**3.38**	**165**		P		**Pn**	**13 26 19.6**	**+0.8**
GCUF	**Volcan Galeras**	**4.18**	**57**	*e*	P		**Pn**	**13 26 33.2**	**+3.4**
PCON	**Cinco Dias**	**5.58**	**53**	*e*	P		**Pn**	**13 26 51.2**	**+1.6**
YOTC	**Yotoco, Valle**	**6.74**	**42**	*e*	P		**Pn**	**13 27 09.5**	**+4.4**

OTT 07 13:49:09.4±0.4, 41°.90N×55°.39W, h18km, ML3.7/3, Atlantic Ocean. 578km southeast from Louisbourg, Ns, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GBN	**Guysborough**	**5.66**	**310**			PN	Pn	13 50 32.2	-0.4
GBN						SN	Sn	13 51 33.2	-3.8
GBN						Trac		13 51 33.7	
	comp=Z,4.1nm,0.2s								
CHEG	**Cheticamp, Nov**	**6.20**	**324**			PN	Pn	13 50 39.1	-0.9
CHEG						SN	Sn	13 51 46.0	-4.4
CHEG						Trac		13 51 51.9	
	comp=Z,17nm,0.4s								
DRLN	**Deer Lake**	**7.50**	**349**			PN	Pn	13 50 56.8	-1.1
DRLN						SN	Sn	13 52 16.9	-5.6
DRLN						Trac		13 52 21.4	
	comp=Z,384nm,2.9s								
LMN	**Caledonia Moun**	**7.87**	**303**			PN	Pn	13 51 02.0	-0.9
LMN						SN	Sn	13 52 23.4	-8.0
LMN						Trac		13 52 30.1	
	comp=Z,12nm,0.5s								
ELNB	**Elgin, New Bru**	**8.08**	**303**			SN	Sn	13 52 32.7	-4.0
GGN	**Saint George**	**8.92**	**295**			PN	Pn	13 51 17.1	-0.3

*GII **07** 13:51:07.5±0.0, 35°.30N×27°.00E, h1km, MD3.3/1*
*ISK **07** 13:51:21.9, 35°.23N×27°.22E, h24km, ML3.2/13*
*DDA **07** 13:51:22.0, 35°.39N×27°.19E, h44km±3km, MW3.3*
*THE **07** 13:51:24.8, 35°.38N×27°.03E, h19km, ML3.2/3, Error ellipse: s-maj=2.2km s-min=0.5km az=326.0*
*ATH **07** 13:51:24.4, 35°.50N×27°.04E, h33km±1km, ML3.2/4, Error ellipse: s-maj=5.3km s-min=1.2km az=149.0*

ISC 07 13:51:21.3±1.2, 35°.17N±0°.05×27°.25E±0°.03, h25km±11km, n47, σ1s28/62, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.39**	**349**			P	**Pb**	**13 51 29.8**	**+0.1**
KARP						S	**Sb**	**13 51 35.1**	**-0.3**
KARP						AML	AML	13 51 36.5	
	comp=E,14888µm,0.2s								
KARP						AML	AML	13 51 37.2	
	comp=N,9401µm,0.3s								
KARP	**Karpathos**	**0.39**	**349**		PG	PG	**Pb**	**13 51 29.7**	**0.0**
KARP					SG	SG	**Sb**	**13 51 35.6**	**+0.2**
KARP	**Karpathos**	**0.39**	**349**		P	P	**Pb**	**13 51 29.8**	**+0.1**
KARP					S	S	**Sb**	**13 51 33.8**	**-1.6**
	comp=N,6µm,0.3s								
ZKR	**Zakros**	**0.85**	**267**		P	P	**Pn**	**13 51 39.2**	**+1.5**
ZKR					AML	AML	13 51 53.8		
	comp=N,2755µm,0.7s								
ZKR					AML	AML	13 51 54.4		
	comp=E,4428µm,0.6s								
ZKR	**Zakros**	**0.85**	**267**		PG	P	**Pn**	**13 51 38.7**	**+1.0**
ZKR					SG	S	**Sn**	**13 51 50.8**	**+1.4**
ZKR	**Zakros**	**0.85**	**267**		P	P	**Pn**	**13 51 37.9**	**+0.2**
ZKR					S	S	**Sb**	**13 51 48.8**	**+0.4**
	comp=E,2µm,0.7s								
ARG	**Arkhangelos**	**1.27**	**34**		P	P	**Pb**	**13 51 45.4**	**+0.9**
ARG					S	S	**Sb**	**13 52 01.3**	**+0.8**
ARG					AML	AML	13 52 03.1		
	comp=E,3355µm,0.7s								
ARG					AML	AML	13 52 06.3		
	comp=N,2404µm,0.8s								
ARG	**Arkhangelos**	**1.27**	**34**		PN	P	**Pb**	**13 51 44.6**	**+0.1**
ARG					SN	S	**Sb**	**13 52 00.7**	**+0.3**
ARG	**Arkhangelos**	**1.27**	**34**		P	P	**Pb**	**13 51 45.4**	**+0.9**
ARG					S	S	**Sb**	**13 52 01.4**	**+1.0**
	comp=N,2µm,1.4s								
NPS	**Neapolis**	**1.34**	**275**		P	P	**Pb**	**13 51 46.6**	**+0.8**
NPS					AML	AML	13 52 13.3		
	comp=N,2279µm,0.7s								
NPS					AML	AML	13 52 13.5		
	comp=E,2060µm,0.6s								
NPS	**Neapolis**	**1.34**	**275**		P	P	**Pn**	**13 51 44.9**	**+0.3**
NISR	**Nisiros**	**1.45**	**356**		P	P	**Pn**	**13 51 45.0**	**-1.0**
NISR	**Nisiros**	**1.45**	**356**		P	P	**Pn**	**13 51 45.2**	**-0.7**
LAST	**Lasithi**	**1.45**	**270**		P	P	**Pb**	**13 51 49.1**	**+1.4**
KOSK	**Kos Island**	**1.60**	**352**		PN	P	**Pn**	**13 51 48.7**	**+0.7**
DATC	**Datca-Mugla**	**1.62**	**12**		PN	P	**Pn**	**13 51 48.9**	**+0.5**
ANAF	**Anafi Island**	**1.69**	**315**		P	P	**Pn**	**13 51 49.0**	**-0.3**
ANAF	**Anafi Island**	**1.69**	**315**		P	P	**Pn**	**13 51 48.1**	**-1.2**
HRKL	**Herakleio**	**1.76**	**275**		PN	P	**Pn**	**13 51 51.2**	**+0.9**
TURN	**Turunc**	**1.80**	**26**		PN	P	**Pn**	**13 51 51.5**	**+0.7**
TURN	**Turunc**	**1.80**	**26**	*i*	P	P	**Pb**	**13 51 53.8**	**+0.3**
TURN				*i*	S	S	**Sb**	**13 52 14.7**	**-0.9**
SANT	**Santorini**	**1.89**	**310**		PN	P	**Pn**	**13 51 52.4**	**+0.3**
SANT	**Santorini**	**1.89**	**310**	*i*	P	P	**Pn**	**13 51 51.4**	**-0.7**
SANT				*i*	S	S	**Sn**	**13 52 13.6**	**-1.5**

BODT	**Bodrum**	**1.89**	**2**		PN	P	**Pn**	**13 51 52.6**	**+0.5**
IDI	**Anoyia**	**1.93**	**274**		PN	P	**Pn**	**13 51 54.1**	**+1.4**
THT2	**Imerovigli**	**1.95**	**311**		PN	P	**Pn**	**13 51 53.5**	**+0.6**
AMGA	**Amorgos Island**	**1.99**	**327**		P	P	**Pn**	**13 51 52.7**	**-0.8**
AMGA	**Amorgos Island**	**1.99**	**327**		P	P	**Pn**	**13 51 52.5**	**-1.0**
DALY	**Dalyan (Mula)**	**2.00**	**34**		PN	P	**Pn**	**13 51 54.6**	**+1.0**
FETY	**Fethiye**	**2.09**	**45**		PN	P	**Pn**	**13 51 56.0**	**+1.2**
YER	**Yerkesik**	**2.13**	**23**		PN	P	**Pn**	**13 51 56.4**	**+0.9**
MLSB	**Milas**	**2.17**	**11**		PN	P	**Pn**	**13 51 56.8**	**+0.9**
AKAS	**Kas**	**2.19**	**60**		PN	P	**Pn**	**13 51 57.9**	**+1.5**
AKAS	**Kas**	**2.19**	**60**	*i*	P	P	**Pn**	**13 51 57.5**	**+1.1**
AKAS				*i*	S	S	**Sn**	**13 52 22.6**	**-0.2**
APE	**Apeiranthos**	**2.35**	**324**		PN	P	**Pn**	**13 51 59.0**	**+0.5**
CAME	**Cameli-Denizli**	**2.43**	**43**		PN	P	**Pn**	**13 52 00.9**	**+1.2**
GCAM	**G?zelcami?**	**2.53**	**360**		PN	P	**Pn**	**13 52 01.9**	**+1.1**
AYDN	**Tasoluk**	**2.54**	**11**	*i*	P	P	**Pn**	**13 51 59.6**	**-1.5**
AYDN				*i*	S	S	**Sb**	**13 52 35.2**	**-1.8**
TAVA	**DENIZLI_Tavas**	**2.66**	**30**	*i*	P	P	**Pn**	**13 52 05.2**	**+2.5**
TAVA				*i*	S	S	**Sn**	**13 52 37.0**	**+2.7**
AKUM	**Antalya-Kumluc**	**2.77**	**65**	*i*	P	P	**Pn**	**13 52 05.5**	**+1.3**
AKUM				*i*	S	S	**Sn**	**13 52 36.1**	**-0.7**
GOLH	**Golhisar**	**2.79**	**41**	*i*	P	P	**Pn**	**13 52 05.9**	**+1.4**
GOLH				*i*	S	S	**Sn**	**13 52 37.2**	**-0.2**
KORT	**Korkueli**	**3.11**	**53**	*i*	P	P	**Pn**	**13 52 06.7**	**-2.3**
KORT				*i*	S	S	**Sn**	**13 52 45.7**	**+0.3**
KEPZ	**Antalya-Kepez**	**3.93**	**63**	*i*	P	P	**Pn**	**13 52 21.7**	**+1.5**
KEPZ				*i*	S	S	**Sn**	**13 53 06.5**	**+0.9**
ZFRI	**Zfri**	**8.10**	**122**		Pn	Pn	13 53 11.1	-6.3	
ZFRI					Sn	**Sn**	**13 54 44.9**	**-3.3**	
PRNI	**Paran**	**8.11**	**124**		Pn	Pn	13 53 10.3	-7.2	
PRNI					Sn	**Sn**	**13 54 44.6**	**-3.8**	
MBRI	**Mt Berech**	**8.40**	**127**		Pn	Pn	13 53 15.1	-6.5	
EIL	**Elat**	**8.51**	**128**		Pn	Pn	13 53 15.4	-7.6	

ROM 07 13:55:50.1±0.3, 43°.423N±0°.004×12°.42E±0°.02, h8km±1km, Md0.9/1, ML0.9/1, 1C, Error ellipse: s-maj=1.4km s-min=0.6km az=267.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.03**	**332**			P	Pg	13 55 52.2	+0.4
ATPI						S	Sg	13 55 53.3	+0.3
ATPI						END			
ATVO	**AVT- Monte Val**	**0.04**	**196**			P	Pg	13 55 52.1	+0.3
ATVO						S	Sg	13 55 53.1	0.0
ATVO						AML	AML		
	comp=E,248µm,0.2s								
ATVO						AML	AML		
	comp=N,151µm,1.4s								
ATVO						AML	AML		
	comp=N,152µm,1.4s								
APEC	**Apecchio**	**0.14**	**359**			P	Pg	13 55 53.2	+0.1
APEC						AML	AML		
	comp=E,75µm,1.6s								
APEC						AML	AML		
	comp=N,71µm,1.4s								
MURB	**Monte Urbino**	**0.18**	**155**			P	Pg	13 55 54.4	+0.6
MURB						S	Sg	13 55 57.4	+1.1
NARO	**Abbazia di Nar**	**0.22**	**31**			P	Pg	13 55 55.4	+0.8
NARO						S	Sg	13 55 59.1	+1.4
ERBM	**Eremo**	**1.76**	**305**			S	Pg	13 56 25.0	+1.1
TREM	**Isole Tremiti**	**2.62**	**119**			P	Pn	13 56 33.7	+1.0
T0702	**Acquaformosa (**	**4.61**	**142**	⇑		P	Pn	13 56 58.9	-1.2

*IDC **07** 14:12:55.0±1.3, 34°.05N×138°.79E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.4/72, mbtmp3.6/4, ML2.8/1, Error ellipse: s-maj=36.2km s-min=20.0km az=68.0*
*JMA **07** 14:12:57.3±0.1, 34°.46N×139°.79E, h23km±2km, M3.2*
JMA Felt I J1.
*NEIC **07** 14

az=74.0
*BJI **07** 14:14:14.4±0.0, 37.°17N×71.°00E, h96km, mB4.4/9, mb3.9/9*

ISC 07 14:14:12.6±0.4, **36.°82N**±0.°05×**71.°09E**±0.°05, **h88**km, **n151,** σ2s**12**/153, **mb4.3**/35, **9C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.26**	**345**			**Pn**	**14 14 47.6**	**-0.7**
CHGR	**Chuyangaron**	**2.39**	**321**	Pn		**Pn**	**14 14 47.7**	**-2.3**
KBL	**Kabul**	**2.82**	**217**	PN		**Pn**	**14 14 56.7**	**+0.8**
KBL	**Kabul**	**2.82**	**217**	Pn		**Pn**	**14 14 56.7**	**+0.8**
BTK	**Batken**	**3.24**	**356**	PN		**Pn**	**14 15 02.7**	**+1.2**
BTK	**Batken**	**3.24**	**356**	Pn		**Pn**	**14 15 02.7**	**+1.2**
NIL	**Nilore**	**3.62**	**150**	PN		**Pn**	**14 15 09.7**	**+3.1**
NIL	**Nilore**	**3.62**	**150**	Pn		**Pn**	**14 15 09.7**	**+3.1**
KSH	**Kashi**	**4.70**	**54**	P		**Pn**	**14 15 20.2**	**-1.0**
KSH				S		**Sn**	**14 16 06.7**	**-7.9**
KSH				smax		smax		
	comp=N,340nm,1.0s							
KSH				smax		smax		
	comp=E,260nm,0.6s							
AML	**Almayashu**	**5.68**	**20**	P		**Pn**	**14 15 35.9**	**+1.1**
	SNR=91							
EKS2	**Erkin-Say**	**6.19**	**19**	P		**Pn**	**14 15 43.4**	**+1.8**
	SNR=30							
DHRM	**DHARAMSHALA**	**6.27**	**135**	*e*P		**Pn**	**14 15 44.2**	**+1.5**
DHRM				*e*S		**Sn**	**14 16 53.3**	**+0.3**
DHRM				IAML			14 16 55.6	
	comp=E,423nm,0.5s							
DHRM				IAML			14 16 56.0	
	comp=N,556nm,0.5s							
KK31	**Karatay Array**	**6.29**	**356**	P		**Pn**	**14 15 42.2**	**-0.7**
	comp=N,9.0nm,0.4s,baz=184,slow=12,SNR=146							
KK31				⇓S		**Sn**	**14 16 50.8**	**-2.5**
	comp=N,14nm,0.3s,baz=193,slow=28,SNR=4.2							
KK31	**Karatay Array**	**6.29**	**356**	*i* PN		**Pn**	**14 15 42.1**	**-0.7**
KK31	**Karatay Array**	**6.29**	**356**	Pn		**Pn**	**14 15 42.6**	**-0.2**
KKAR	**Karatay Array**	**6.29**	**356**	PN		**Pn**	**14 15 42.5**	**-0.3**
KKAR	**Karatay Array**	**6.29**	**356**	Pn		**Pn**	**14 15 42.5**	**-0.3**
KKAR	**Karatay Array**	**6.29**	**356**	Pn		**Pn**	**14 15 42.4**	**-0.5**
AAK	**Ala-Archa**	**6.38**	**23**	*ce*PN		**Pn**	**14 15 45.7**	**+1.6**
AAK				pmax		pmax		
	comp=Z,124nm,0.8s							
AAK	**Ala-Archa**	**6.38**	**23**	Pn		**Pn**	**14 15 45.7**	**+1.6**
KBK	**Karagaybulak**	**6.55**	**26**	P		**Pn**	**14 15 48.9**	**+2.5**
	SNR=16							
FRU1	**Bishkek**	**6.58**	**23**	PN		**Pn**	**14 15 47.9**	**+1.2**
FRU1	**Bishkek**	**6.58**	**23**	Pn		**Pn**	**14 15 47.9**	**+1.2**
CHMS	**Chumysh**	**6.79**	**23**	P		**Pn**	**14 15 51.1**	**+1.6**
	SNR=70							
BOOM	**Boomskoye usch**	**6.79**	**32**	PN		**Pn**	**14 15 51.6**	**+1.8**
BOOM	**Boomskoye usch**	**6.79**	**32**	Pn		**Pn**	**14 15 51.6**	**+1.8**
USP	**Ospenovka**	**6.95**	**21**	P		**Pn**	**14 15 52.6**	**+0.8**
	SNR=24							
TKM2	**Tokmak 2**	**7.01**	**28**	P		**Pn**	**14 15 55.0**	**+2.2**
	SNR=23							
TKM2	**Tokmak 2**	**7.01**	**28**	⇓P		**Pn**	**14 15 54.4**	**+1.6**
	comp=Z,37nm,0.5s							
TKM2	**Tokmak 2**	**7.01**	**28**	*i* PN		**Pn**	**14 15 54.3**	**+1.6**
TKM2				pmax		pmax		
	comp=Z,37nm,0.5s							
DDI	**Dehra Dun**	**8.70**	**136**	*e*P		**Pn**	**14 16 17.9**	**+2.2**
DDI				*e*S		**Sn**	**14 17 47.6**	**-4.6**
DDI				AMP			14 17 54.8	
	comp=N,2μm,0.3s							
PDGK	**Podgornoye**	**9.15**	**42**	P		**Pn**	**14 16 22.7**	**+0.9**
NDI	**New Delhi**	**9.61**	**146**	*e*P		**Pn**	**14 16 29.6**	**+1.5**
NDI				*e*S		**Sn**	**14 18 10.9**	**-3.4**
KUDL	**Kundal**	**9.78**	**151**	*e*P		**Pn**	**14 16 29.5**	**-0.8**
KUDL				*e*S		Sn	14 18 12.2	-6.1
SONA	**Sohna**	**9.93**	**148**	*e*S		**Sn**	**14 18 16.4**	**-5.6**
SONA				IAML			14 18 19.1	
	comp=E,37nm,0.3s							
SONA				IAML			14 18 19.1	
	comp=N,25nm,0.5s							
GEYT	**Alibeck**	**10.38**	**280**	Pn		Pn	14 16 32.1	-6.5
	comp=N,6.1nm,0.3s,baz=120,slow=10,SNR=48							
GEYT				Sn		Sn	14 18 19.4	-14
	comp=N,3.4nm,0.3s,baz=102,slow=20,SNR=2.3							
GEYT	**Alibeck**	**10.38**	**280**			Pn	14 16 32.8	-5.8
GYA0	**ALIBECK ARRAY**	**10.38**	**280**	P		Pn	14 16 32.7	-5.9
GYA0B	**ALIBECK ARRAY**	**10.38**	**280**	⇓P		Pn	14 16 32.7	-5.9
GYA0B				⇓S		Sn	14 18 20.8	-12
GYA0B	**ALIBECK ARRAY**	**10.38**	**280**	Pn		Pn	14 16 32.2	-6.4
MK31	**Makanchi Array**	**12.99**	**36**	*i* P		**Pn**	**14 17 13.4**	**-0.3**
MK31				pmax		pmax		
	comp=Z,3.0nm,0.5s							
MK31	**Makanchi Array**	**12.99**	**36**	Pn		**Pn**	**14 17 14.7**	**+0.9**
MKAR	**Makanchi Array**	**12.99**	**36**	Pn		**Pn**	**14 17 11.9**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=222,slow=16,SNR=10.0							
MKAR				LR		LR	14 22 59.2	
	comp=Z,31nm,18.6s,baz=206,slow=40							
MKAR	**Makanchi Array**	**12.99**	**36**	P		**Pn**	**14 17 14.3**	**+0.6**
MKAR	**Makanchi Array**	**12.99**	**36**	Pn		**Pn**	**14 17 14.3**	**+0.6**
PYUN	**Piuthan**	**13.28**	**127**	*e*P		**Pn**	**14 17 15.1**	**-2.7**
DANN	**Dangsing**	**13.61**	**125**	*e*P		**Pn**	**14 17 20.3**	**-1.9**
KOLN	**Koldanda**	**13.90**	**127**	*e*P		Pn	14 17 23.1	-2.8
GKN	**Gorkha**	**14.42**	**124**	*e*P		**Pn**	**14 17 30.8**	**-1.8**
	comp=Z,23nm,0.3s							
BHPL	**Bhopal**	**14.60**	**156**	*e*P		**Pn**	**14 17 32.1**	**-2.7**
BHPL				*e*S		Sn	14 20 05.8	-10
KURBB	**Kurchatov Arra**	**14.80**	**19**	Pn		**Pn**	**14 17 34.4**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=210,slow=12,SNR=8.9							
AB31	**Akbulak array**	**14.84**	**330**	⇓P		**Pn**	**14 17 33.8**	**-3.9**
	comp=Z,5.1nm,0.3s							
AB31				⇓S		Sn	14 20 10.4	-11
	comp=Z,5.7nm,0.6s,baz=149,slow=23,SNR=6.3							
AB31	**Akbulak array**	**14.84**	**330**	P		**Pn**	**14 17 33.8**	**-3.9**
AB31				S		Sn	14 20 10.4	-11
ABKAR	**Akbulak array**	**14.84**	**330**	Pn		**Pn**	**14 17 34.0**	**-3.7**
ABKAR	**Akbulak array**	**14.84**	**330**	Pn		**Pn**	**14 17 33.5**	**-4.2**
KURK	**Kurchatov**	**14.91**	**19**	*i* P		**Pn**	**14 17 39.8**	**+1.3**
KURK				pmax		pmax		
	comp=Z,5.0nm,0.6s							
KURK	**Kurchatov**	**14.91**	**19**	Pn		**Pn**	**14 17 37.5**	**-1.0**
DMN	**Daman**	**14.99**	**124**	*e*P		**Pn**	**14 17 38.0**	**-2.0**
	comp=Z,11nm,0.4s							
PKIN	**Phulchoki**	**15.21**	**123**	*e*P		**Pn**	**14 17 41.4**	**-1.4**
	comp=Z,15nm,0.3s							
PKI	**Pulchoki**	**15.22**	**123**	*e*P		**Pn**	**14 17 41.9**	**-1.1**
	comp=Z,5.2nm,0.2s							
GUN	**Gumba**	**15.32**	**121**	*e*P		**Pn**	**14 17 42.6**	**-1.7**
	comp=Z,8.7nm,0.3s							
BVAR	**Borovoye Array**	**16.21**	**358**	Pn		**Pn**	**14 17 52.5**	**-2.5**
	comp=Z,9.9nm,0.3s,baz=121,slow=11,SNR=10							
BRVK	**Borovoye**	**16.25**	**358**	*i* P		**Pn**	**14 17 53.7**	**-1.7**
BRVK				pmax		pmax		
	comp=Z,17nm,1.0s							
BRVK	**Borovoye**	**16.25**	**358**	Pn		**Pn**	**14 17 53.5**	**-1.8**
RAMN	**Ramite**	**16.42**	**122**	*e*P		**Pn**	**14 17 56.2**	**-1.8**
	comp=Z,16nm,0.5s							
AKTO	**Aktyubinsk**	**16.54**	**329**	Pn		**Pn**	**14 17 56.5**	**-2.5**
	comp=Z,2.3nm,0.3s,baz=132,slow=12,SNR=23							
AKTO				Sn		Sn	14 20 48.8	-13
	comp=Z,0.6nm,0.3s,baz=119,slow=15,SNR=2.9							
AKTO				LR		LR	14 24 48.1	
	comp=Z,51nm,18.8s,baz=119,slow=38							
AKTO	**Aktyubinsk**	**16.54**	**329**	⇑P		**Pn**	**14 17 56.6**	**-2.5**
	comp=Z,23nm,0.6s							
AKTO				⇓S		**Sn**	**14 20 55.0**	**-7.1**
	comp=Z,8.5nm,0.8s							
AKTO	**Aktyubinsk**	**16.54**	**329**	P		**Pn**	**14 17 56.6**	**-2.5**
AKTO				S		**Sn**	**14 20 55.3**	**-6.8**
TAPN	**Taplejung**	**16.94**	**119**	*e*P		**Pn**	**14 18 03.8**	**-0.6**
	comp=Z,13nm,0.4s							
TAPN				*e*S		Sn	14 20 57.1	-15
ODAN	**Odare**	**17.02**	**121**	*e*P		**Pn**	**14 18 03.8**	**-1.6**
	comp=Z,19nm,0.5s							
WSAR	**Wadi Sarin**	**17.28**	**222**	P		**Pn**	**14 18 03.6**	**-4.7**
	comp=Z,0.2nm,0.3s,baz=125,slow=23,SNR=1.7							
ZAA0	**Zalesovo Array**	**19.60**	**25**	P		**P**	**14 18 34.3**	**+0.7**
ZAA0				IAmb		IAmb	14 18 34.8	
	comp=Z,13nm,0.5s							
ZALV	**Zalesovo Beam**	**19.60**	**25**	P		**P**	**14 18 34.2**	**+0.6**
	comp=Z,4.3nm,0.3s,baz=213,slow=10,SNR=60							
ZALV				LR		LR	14 26 49.1	
	comp=Z,34nm,19.1s,baz=228,slow=38							
ZALV	**Zalesovo Beam**	**19.60**	**25**	*i* P		**P**	**14 18 34.2**	**+0.6**
ZALV				pmax		pmax		
	comp=Z,15nm,0.4s							
ZALV	**Zalesovo Beam**	**19.60**	**25**	P		**P**	**14 18 33.7**	**+0.1**
HYB	**Hyderabad**	**20.42**	**159**	*i* P		Pn	14 18 47.0	+1.3
GNI	**Garni**	**20.86**	**287**	*ce*P		**P**	**14 18 48.0**	**+0.4**
GNI				pmax		pmax		
	comp=Z,25nm,1.7s							
SVE	**Sverdlovsk**	**21.21**	**344**	*e*P		**P**	**14 18 51.4**	**+0.5**
SVE				pmax		pmax		
	comp=Z,19nm,1.0s							
ARU	**Arti**	**21.36**	**341**	P		**P**	**14 18 53.0**	**+0.5**
	comp=Z,3.8nm,0.5s,baz=160,slow=8.9,SNR=16							
ARU	**Arti**	**21.36**	**341**	*c i* P		**P**	**14 18 52.9**	**+0.5**
ARU							14 19 23.8	
ARU				S		**S**	**14 22 46.0**	**+1.5**
ARU				SS		**SnSn**	**14 23 21.8**	**+7.2**
ARU				pmax		pmax		
	comp=Z,10.0nm,0.6s							
ARU	**Arti**	**21.36**	**341**	P		**P**	**14 18 52.1**	**-0.4**
ARU				IAmb		IAmb	14 18 56.4	
	comp=Z,15nm,0.7s							
ZEI	**Tsey**	**21.67**	**294**	*e*P		**P**	**14 18 53.3**	**-2.9**
ZEI				pmax		pmax		
	comp=Z,6.0nm,0.8s							
KBZ	**Khabaz**	**22.52**	**297**	P		**P**	**14 19 03.9**	**-1.0**
	comp=Z,4.8nm,0.6s,baz=236,slow=24,SNR=8.8							
KBZ	**Khabaz**	**22.52**	**297**	*ce*P		**P**	**14 19 03.8**	**-1.2**
KBZ				pmax		pmax		
	comp=Z,3.0nm,0.8s							
KVAR	**Kislovodsk Arr**	**22.70**	**297**	LR		LR	14 30 19.4	
	comp=Z,54nm,21.4s,baz=51,slow=43							
KIV	**Kislovodsk**	**22.70**	**297**	*e*P		**P**	**14 19 06.1**	**-0.9**
KIV				pmax		pmax		
	comp=Z,25nm,1.0s							
KIV				MLR		MLR		
	comp=Z,49nm,14.0s							
GTA	**Gaotai**	**22.71**	**75**	*e*P		**P**	**14 19 11.0**	**+3.8**
GTA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
VRH	**Novokhopyorsk**	**25.34**	**314**	*e*P		**P**	**14 19 31.2**	**+0.1**
VRH				pmax		pmax		
	comp=Z,6.0nm,0.4s							
KIRV	**Kirov**	**25.98**	**334**	P		**P**	**14 19 37.9**	**+1.1**
	comp=Z,12nm,0.6s,baz=173,slow=3.6,SNR=5.6							
KIRV	**Kirov**	**25.98**	**334**	*ce*P		**P**	**14 19 37.7**	**+0.9**
VORD	**Divnogorie**	**26.68**	**312**	*e*P		**P**	**14 19 44.8**	**+1.6**
VORD				pmax		pmax		
	comp=Z,4.0nm,0.5s							
VSR	**Storozhevoye**	**26.84**	**313**	*e*P		**P**	**14 19 46.2**	**+1.6**
VSR				pmax		pmax		
	comp=Z,20nm,1.6s							
SONM	**Songino Array**	**28.10**	**56**	P		**P**	**14 19 58.1**	**+2.1**
	comp=Z,1.2nm,0.8s,baz=260,slow=9.9,SNR=4.8							
ULN	**Ulaanbaatar**	**28.54**	**56**	*ce*P		**P**	**14 20 01.3**	**+1.3**
ULN				pmax		pmax		
	comp=Z,1.0nm,0.8s							
BR131	**Keskin Array S**	**29.40**	**287**	P		**P**	**14 20 07.9**	**+0.1**
BR131				pmax		pmax		
	comp=Z,6.0nm,0.7s							
BR131	**Keskin Array S**	**29.40**	**287**	P		**P**	**14 20 07.9**	**+0.1**
BR131				IAmb		IAmb	14 20 09.7	
	comp=Z,5.6nm,0.7s							
BRTR	**Keskin Array B**	**29.40**	**287**	P		**P**	**14 20 08.0**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=112,slow=8.5,SNR=12							
BRTR	**Keskin Array B**	**29.40**	**287**	*i* P		**P**	**14 20 09.3**	**+1.5**
BRTR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**30.55**	**119**	P		**P**	**14 20 18.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=317,slow=9.1,SNR=2.9							
CMAR				LR		LR	14 35 07.1	
	comp=Z,24nm,18.4s,baz=325,slow=41							
KLMR	**Klimovskoe**	**31.24**	**330**	*e*P		**P**	**14 20 22.7**	**-0.7**
KLMR				pmax		pmax		
	comp=Z,8.0nm,0.8s							
KLMR	**Klimovskoe**	**31.24**	**330**	*e*P		**P**	**14 20 22.8**	**-0.7**
KLMR				AMP			14 20 24.8	
	comp=Z,8.0nm,0.8s							
AKASG	**Malin Array Be**	**32.80**	**308**	P		**P**	**14 20 38.0**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=80,slow=7.2,SNR=12							
AKASG	**Malin Array Be**	**32.80**	**308**	P		**P**	**14 20 38.0**	**+0.7**
NRIK	**Noril'sk**	**33.80**	**10**	P		**P**	**14 20 47.8**	**+2.0**
	comp=Z,1.7nm,0.4s,baz=215,slow=2.5,SNR=3.8							
NRIK	**Noril'sk**	**33.80**	**10**	*ce*P		**P**	**14 20 47.1**	**+1.3**
NRIK				pmax		pmax		
	comp=Z,4.0nm,1.0s							
FINES	**FINESS Array B**	**37.26**	**326**	P		**P**	**14 21 16.4**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=119,slow=7.2,SNR=14							
FINES	**FINESS Array B**	**37.26**	**326**	*i* P		**P**	**14 21 16.3**	**+0.8**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.3s							
FINES	**FINESS Array B**	**37.26**	**326**	P		**P**	**14 21 15.7**	**+0.2**
ARD3	**ARCESS Array S**	**40.87**	**337**	P		**P**	**14 21 44.9**	**-0.6**
VRAC	**Vranov**	**40.87**	**305**	P		**P**	**14 21 47.6**	**+1.8**
	comp=Z,2.0nm,0.5s,baz=105,slow=8.6,SNR=4.8							
ARA0	**ARCESS Array S**	**40.88**	**337**	*e*P		**P**	**14 21 46.7**	**+1.2**
ARCES	**ARCESS Array B**	**40.88**	**337**	P		**P**	**14 21 47.2**	**+1.6**
	comp=Z,6.3nm,0.7s,baz=115,slow=7.6,SNR=21							
KTK1	**Kautokeino**	**41.35**	**336**	*e*P		**P**	**14 21 50.6**	**+1.2**
GERES	**GERESS Array B**	**42.80**	**305**	P		**P**	**14 22 01.9**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=79,slow=6.9,SNR=3.7							
HFS	**Hagfors**	**42.86**	**322**	P		**P**	**14 22 02.7**	**+1.0**
	comp=Z,7.9nm,0.4s,baz=103,slow=11,SNR=29							
TRO	**Tromso**	**43.01**	**336**	*e*P		**P**	**14 22 04.5**	**+1.7**
CLL	**Collm**	**43.05**	**309**	*e*P		**P**	**14 22 03.0**	**-0.4**
CLL	**Collm**	**43.05**	**309**	*e*P		**P**	**14 22 03.0**	**-0.4**
CLL				*e*(pP)		**pP**	**14 22 18.0**	**-7.0**
CLL				*e*PP		**PP**	**14 23 44.0**	**-0.8**
CLL	**Collm**	**43.05**	**309**	*e*P		**P**	**14 22 03.0**	**-0.4**
MOR8	**Moi Rana**	**43.57**	**331**	*e*P		**P**	**14 22 06.5**	**-1.0**
STEI	**Steigen**	**43.72**	**333**	*e*P		**P**	**14 22 10.1**	**+1.6**
NC602	**NORSAR Array S**	**43.98**	**322**	*e*P		**P**	**14 22 11.1**	**+0.3**
NB2	**NORSAR Subarra**	**44.17**	**323**	P		**P**	**14 22 12.7**	**+0.3**
	baz=97,slow=7.9							
NB2	**NORSAR Subarra**	**44.17**	**323**	P		**P**	**14 22 12.7**	**+0.3**
	baz=97,slow=7.9							
NOA	**NORSAR Array B**	**44.17**	**323**	P		**P**	**14 22 13.0**	**+0.6**
	comp=Z,2.9nm,0.5s,baz=97,slow=7.8,SNR=16							
NOA	**NORSAR Array B**	**44.17**	**323**	P		**P**	**14 22 13.0**	**+0.6**
KONO	**Kongsberg**	**44.88**	**321**	*e*P		**P**	**14 22 18.9**	**+0.9**
TIXI	**Tiksi**	**45.45**	**22**	*ce*P		**P**	**14 22 22.8**	**+0.5**
TIXI	**Tiksi**	**45.45**	**22**	P		**P**	**14 22 23.0**	**+0.7**
SKAR	**Skarslia**	**45.57**	**322**	*e*P		**P**	**14 22 24.8**	**+1.3**
DAVOX	**Davos/Dischmat**	**45.65**	**303**	P		**P**	**14 22 25.0**	**+0.6**
	comp=Z,2.0nm,0.4s,baz=117,slow=13,SNR=4.8							
SPITS	**Spitsbergen Ar**	**47.20**	**347**	P		**P**	**14 22 37.3**	**+1.3**
	comp=Z,7.9nm,0.8s,baz=123,slow=5.3,SNR=1.7							
EKA	**Eskdalemuir Ar**	**52.11**	**316**	P		**P**	**14 23 13.5**	**+0.1**
	comp=Z,2.7nm,0.7s,baz=66,slow=9.2,SNR=4.1							
ESDC	**Sonseca Array**	**57.37**	**298**	P		**P**	**14 23 52.6**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=63,slow=7.1,SNR=7.8							
PETK	**Petropavlovsk-**	**59.69**	**44**	P		**P**	**14 24 09.5**	**+1.8**
	comp=Z,5.0nm,0.9s,baz=293,slow=7.7,SNR=1.7							
SUMG	**Summit**	**60.78**	**341**	P		**P**	**14 24 16.8**	**+1.5**
SUMG	**Summit**	**60.78**	**341**	P		**P**	**14 24 16.8**	**+1.5**
LUWI	**Luwuk**	**60.88**	**116**	P		**P**	**14 24 18.1**	**+1.9**
TORD	**Torodi Ar. Bea**	**65.79**	**269**	P		**P**	**14 24 48.0**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=49,slow=6.2,SNR=9.4							
A21K	**Barrow**	**66.99**	**15**	P		**P**	**14 24 57.5**	**+2.0**
A21K				IAmb		IAmb	14 24 58.0	
	comp=Z,3.8nm,0.7s							
RES	**Resolute Bay**	**68.39**	**356**	LR		LR	14 56 51.0	
	comp=Z,31nm,18.4s,baz=118,slow=37							
TOLK	**Toolik Lake Re**	**70.60**	**15**	P		**P**	**14 25 19.4**	**+1.4**
COLD	**Coldfoot**	**71.65**	**16**	P		**P**	**14 25 24.3**	**0.0**
PPLA	**Purkeypile**	**74.76**	**19**	P		**P**	**14 25 44.3**	**+1.4**
WRA	**Warramunga Arr**	**82.10**	**122**	P		**P**	**14 26 23.7**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=325,slow=5.0,SNR=6.8							
WRAB	**Tennant Creek**	**82.10**	**122**	P		**P**	**14 26 23.4**	**-0.2**
WRAB				pmax		pmax		
	comp=Z,5.0nm,1.2s							
WRAB	**Tennant Creek**	**82.10**	**122**	P		**P**	**14 26 23.4**	**-0.2**
WRAB				IAmb		IAmb	14 26 34.7	
	comp=Z,4.8nm,1.2s							
WB2	**Warramunga Arr**	**82.11**	**122**	P		**P**	**14 26 23.7**	**0.0**
WB2				IAmb		IAmb	14 26 34.6	
	comp=Z,5.2nm,1.2s							
WR0	**Warramunga Arr**	**82.25**	**122**	P		**P**	**14 26 24.1**	**-0.3**
WR0				IAmb		IAmb	14 26 41.7	
	comp=Z,6.3nm,1.4s							
ASAR	**Alice Springs**	**84.38**	**125**	P		**P**	**14 26 35.7**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=311,slow=5.2,SNR=8.4							
ASAR	**Alice Springs**	**84.38**	**125**	P		**P**	**14 26 35.1**	**-0.2**

IDC 07 14:16:59.1±10.0, **19.°01S**×**178.°02W**, **h474**km±109km, **mb3.2**/6, **mb1 3.4**/6, **mb1mx3.0**/41, **mbtmp4.1**/6, **Error ellipse: s-maj=46.8km s-min=28.8km az=83.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.44**	**242**	P		P	14 23 39.5	+0.2
	1.0nm,0.3s,baz=89,slow=11,SNR=6.4							
WRA	**Warramunga Arr**	**44.81**	**261**	P		P	14 24 29.6	-0.5
	0.4nm,0.3s,baz=98,slow=7.2,SNR=21							
WRA				PcP		pwP	14 26 02.0	0.0
	0.1nm,0.4s,baz=94,slow=3.5,SNR=1.5							
ASAR	**Alice Springs**	**44.86**	**255**	P		P	14 24 30.4	0.0
	6.1nm,0.7s,baz=91,slow=8.5,SNR=134							
ASAR				PcP		PcP	14 26 02.0	-0.4
	0.3nm,1.0s,baz=36,slow=3.4,SNR=1.5							
QSPA	**South Pole Qui**	**71.05**	**180**	P		P	14 27 28.3	+0.1
	0.8nm,0.8s,baz=130,slow=2.9,SNR=6.5							
PETK	**Petropavlovsk-**	**74.83**	**345**	P		P	14 27 50.1	+0.1
	4.2nm,0.9s,baz=150,slow=9.2,SNR=1.5							
ILAR	**Eielson Array**	**86.87**	**13**	P		P	14 28 52.0	-0.1
	0.4nm,0.9s,baz=203,slow=6.7,SNR=1.5							

*NEIC **07** 14:21:56.8±2.3, 64.°4N±0.°1×17.°8W±0.°2, h8km±3km, mb4.3/7, Error ellipse: s-maj=19.0km s-min=11.9km az=161.0*
*REY **07** 14:21:57.1, 64.°68N×17.°46W, h7km*
*IDC **07** 14:21:57.4±0.6, 64.°63N×17.°65W, h0km, mb3.8/15, mb1 4.0/17, mb1mx3.8/58, mbtmp3.8/17, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/43, Error ellipse: s-maj=22.3km s-min=9.7km az=9.0*

ISC 07 14:21:57.9±0.4, **64.°68N**±0.°02×**17.°54W**±0.°03, **h10**km, **n80,** σ2s**07**/89, **mb3.8**/18, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.09**	**266**	P		**Pg**	**14 21 59.9**	**-0.6**
	baz=266							
IDYN	**Dyngjuhals**	**0.13**	**34**	P		**Pg**	**14 21 59.9**	**-1.1**
	baz=21							
IGRF	**Grimsfjall**	**0.30**	**157**	P		**Pg**	**14 22 02.7**	**-1.3**
	baz=163							
ISKR	**Skrokkalda**	**0.38**	**252**	P		**Pb**	**14 22 05.0**	**-1.8**
	baz=253							
IHUS	**Husbondi**	**0.39**	**187**	P		**Pg**	**14 22 04.8**	**-0.8**
	baz=192							
IVOT	**Vottur**	**0.44**	**159**	P		**Pg**	**14 22 05.2**	**-1.3**
	baz=164							
THOR	**Thorvaldshraun**	**0.45**	**55**	P		**Pg**	**14 22 05.0**	**-1.7**
	baz=53							
IJOK	**Jokulheimar**	**0.47**	**219**	P		**Pb**	**14 22 06.3**	**-2.0**
	baz=222							
IASK	**Askja**	**0.53**	**45**	P		**Pg**	**14 22 06.3**	**-1.9**
	baz=43							
IASK				S		**Sg**	**14 22 13.5**	**-1.8**
	baz=43							
IMKO	**Mokollar**	**0.59**	**59**	P		**Pg**	**14 22 07.3**	**-2.1**
	baz=58							
IMKO				S		**Sg**	**14 22 15.2**	**-2.0**
	baz=58							
IIEY	**Innrieyrar**	**0.64**	**204**	P		**Pg**	**14 22 08.9**	**-1.3**
	baz=206							
IIEY				S		**Sb**	**14 22 18.0**	**-2.1**
	baz=206							
ISVA	**Svartarkot**	**0.67**	**10**	P		**Pg**	**14 22 09.1**	**-1.7**
	baz=7.6							
IKAL	**Kalfafell**	**0.74**	**185**	P		**Pg**	**14 22 10.4**	**-1.6**
	baz=188							
IVAT	**Vatnsfell**	**0.78**	**231**	P		**Pb**	**14 22 11.6**	**-1.9**
	baz=232							
IVSH	**V-Sauoahnukur**	**0.79**	**80**	P		**Pg**	**14 22 10.2**	**-2.9**
	baz=80							
IVSH				S		**Sg**	**14 22 20.7**	**-2.6**

AKASG **Malin Array Be** 27.86 98 P P 14 27 46.9 -0.3
comp=Z,0.4nm,0.4s,baz=328,slow=8.7,SNR=1.2
BRTR **Keskin Array B** 38.50 105 P P 14 29 22.8 +2.7
comp=Z,1.2nm,0.7s,baz=284,slow=1.2,SNR=2.4
KBZ **Khabaz** 39.13 92 P P 14 29 27.9 +2.8
comp=Z,2.0nm,0.9s,baz=56,slow=24,SNR=3.3
AKTO **Aktyubinsk** 40.30 73 P P 14 29 35.4 +0.7
comp=Z,0.5nm,0.4s,baz=45,slow=11,SNR=3.9
ABKAR **Akbulak array** 42.00 73 P P 14 29 48.6 -0.2
TIXI **Tiksi** 42.02 15 P P 14 29 51.4 +2.7
TIXI IAmb IAmb 14 29 56.1
comp=Z,11nm,1.4s
ILAR **Eielson Array** 45.66 332 P P 14 30 19.8 +1.8
comp=Z,1.3nm,1.1s,baz=38,slow=6.3,SNR=5.4
ILAR PcP PcP 14 31 57.3 +1.5
comp=Z,0.6nm,0.9s,baz=12,slow=4.6,SNR=3.7
ILAR **Eielson Array** 45.66 332 P P 14 30 20.0 +1.9
ZALV **Zalesovo Beam** 47.64 51 P P 14 30 34.7 +1.1
comp=Z,0.4nm,0.3s,baz=329,slow=14,SNR=3.7
ZALV **Zalesovo Beam** 47.64 51 P P 14 30 34.1 +0.6
KURK **Kurchatov** 48.12 58 P P 14 30 38.4 +1.0
KURK IAmb IAmb 14 30 39.4
comp=Z,2.9nm,1.0s
GEYT **Alibeck** 50.44 84 P P 14 30 57.2 +1.9
comp=Z,1.1nm,0.5s,baz=269,slow=12,SNR=2.0
MKAR **Makanchi Array** 52.73 58 P P 14 31 13.3 +1.0
comp=Z,0.9nm,0.9s,baz=316,slow=4.0,SNR=4.2
PD31 **Pinedale Array** 53.16 293 P P 14 31 16.6 +0.9
PD31 IAmb IAmb 14 31 18.6
comp=Z,3.8nm,1.1s
PDAR **Pinedale Array** 53.16 293 P P 14 31 16.2 +0.4
comp=Z,1.6nm,0.9s,baz=64,slow=7.1,SNR=7.8
PDAR **Pinedale Array** 53.16 293 P P 14 31 15.3 -0.5
TORD **Torodi Ar. Bea** 53.16 156 P P 14 31 15.6 -0.1
comp=Z,1.1nm,0.9s,baz=336,slow=11,SNR=4.3
SONM **Songino Array** 59.64 40 P P 14 32 02.5 +0.7
comp=Z,0.5nm,0.7s,baz=321,slow=3.7,SNR=1.5
TXAR **Lajitas Array** 62.26 280 P P 14 32 21.3 +1.5
comp=Z,0.3nm,0.6s,baz=35,slow=5.2,SNR=3.9

*NEIC **07** 14:23:24.5±1.8,48.8°S±0.1°×108.8°E±0.2,h10km±1km, mb4.4/16,Error ellipse: s-maj=32.6km s-min=8.3km az=123.0*
*IDC **07** 14:23:24.8±1.1,49.03°S×108.46°E,h0km,mb4.0/7, mb1 4.2/7,mb1mx3.9/36,mbtmp4.0/7,MS3.7/11, Ms1 3.7/11,ms1mx3.5/25,Error ellipse: s-maj=43.7km s-min=17.8km az=111.0*
ISC 07 14:23:24.9±0.7,48.9°S±0.1°×108.7°E±0.2,h10km,n39, σ1°80/31,mb4.2/11,MS3.7/10,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.52**	**18**	T	T	14 42 04.1	
	baz=194,slow=74,SNR=155						
H01W1	**Cape Leeuwin H**	**14.53**	**18**	T	T	14 42 06.8	
	baz=194,slow=74,SNR=127						
H01W3	**Cape Leeuwin H**	**14.54**	**18**	T	T	14 42 05.1	
	baz=194,slow=74,SNR=198						
NWAO	**Narrogin (SRO)**	**17.16**	**25**	LR	LR	14 32 30.5	
	comp=Z,227nm,21.4s,baz=230,slow=31						
NWAO	**Narrogin (SRO)**	**17.16**	**25**		**Pn**	**14 27 24.3**	**-0.3**
NWAO				IAmb	IAmb	14 27 25.3	
	comp=Z,28nm,1.2s						
MORW	**Morawa**	**20.55**	**19**	P	**P**	**14 28 00.9**	**-2.6**
MORW				IAmb	IAmb	14 28 14.6	
	comp=Z,25nm,1.3s						
TOO	**Toolangi**	**28.81**	**81**	P	**P**	**14 29 19.9**	**-3.1**
TOO				IAmb	IAmb	14 29 38.0	
	comp=Z,15nm,1.5s						
MBWA	**Marble Bar**	**29.02**	**22**	P	**P**	**14 29 23.2**	**-1.7**
MAW	**Mawson**	**29.55**	**214**	LR	LR	14 38 18.5	
	comp=Z,124nm,21.0s,baz=62,slow=30						
MAW	**Mawson**	**29.55**	**214**	P	**P**	**14 29 27.1**	**-2.0**
STKA	**Stephens Creek**	**29.95**	**68**	P	**P**	**14 29 35.9**	**+2.8**
	comp=Z,1.8nm,0.7s,baz=210,slow=5.4,SNR=3.6						
STKA				LR	LR	14 39 29.0	
	comp=Z,221nm,21.1s,baz=207,slow=32						
STKA	**Stephens Creek**	**29.95**	**68**	P	**P**	**14 29 32.2**	**-0.9**
ASAR	**Alice Springs**	**32.04**	**47**	P	**P**	**14 29 55.1**	**+3.5**
	comp=Z,1.7nm,0.7s,baz=208,slow=7.9,SNR=23						
ASAR				PcP	**PcP**	**14 32 44.9**	**+3.7**
	comp=Z,0.6nm,0.8s,baz=174,slow=0.9,SNR=4.2						
ASAR				LR	LR	14 41 06.0	
	comp=Z,200nm,21.5s,baz=207,slow=33						
ASAR	**Alice Springs**	**32.04**	**47**	P	**P**	**14 29 50.4**	**-1.3**
AS31	**Alice Springs**	**32.05**	**47**	P	**P**	**14 29 50.5**	**-1.2**
CAN	**Canberra**	**32.41**	**81**	P	**P**	**14 29 54.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**33.62**	**30**	P	**P**	**14 30 04.1**	**-1.3**
VNDA	**Vanda**	**35.00**	**162**	P	**P**	**14 30 16.8**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=295,slow=9.1,SNR=21						
VNDA				LR	LR	14 43 34.2	
	comp=Z,130nm,18.1s,baz=314,slow=35						
VNDA	**Vanda**	**35.00**	**162**	P	**P**	**14 30 16.5**	**-0.3**
VNDA				IAmb	IAmb	14 30 24.6	
	comp=Z,3.0nm,0.7s						
WRA	**Warramunga Arr**	**35.44**	**45**	P	**P**	**14 30 25.0**	**+3.8**
	comp=Z,2.4nm,0.8s,baz=208,slow=8.5,SNR=13						
WRA				LR	LR	14 43 12.9	
	comp=Z,197nm,21.2s,baz=210,slow=33						
WRA	**Warramunga Arr**	**35.44**	**45**	P	**P**	**14 30 20.3**	**-0.8**
WRAB	**Tennant Creek**	**35.45**	**45**	P	**P**	**14 30 21.6**	**+0.3**
WRAB				IAmb	IAmb	14 30 33.1	
	comp=Z,6.6nm,1.1s						
WR0	**Warramunga Arr**	**35.52**	**45**	P	**P**	**14 30 22.5**	**+0.7**
WB0	**Warramunga Arr**	**35.61**	**44**	P	**P**	**14 30 23.0**	**+0.3**
WB0				IAmb	IAmb	14 30 34.4	
	comp=Z,9.4nm,1.4s						
KNRA	**Kununurra**	**36.95**	**33**	P	**P**	**14 30 34.0**	**0.0**
KNRA				IAmb	IAmb	14 30 41.7	
	comp=Z,12nm,1.1s						
QSPA	**South Pole Qui**	**41.27**	**180**	P	**P**	**14 31 09.8**	**-0.1**
	comp=Z,2.6nm,0.7s,baz=297,slow=0.8,SNR=25						
QSPA	**South Pole Qui**	**41.27**	**180**	P	**P**	**14 31 10.2**	**+0.2**
QSPA				IAmb	IAmb	14 31 17.8	
	comp=Z,12nm,1.4s						
LEM	**Lembang**	**41.91**	**358**	LR	LR	14 44 51.8	
	comp=Z,58nm,21.0s,baz=352,slow=31						
SNAA	**Sanae**	**50.53**	**202**	Pdiff	**P**	**14 32 23.4**	**+0.6**
SNAA	**Sanae**	**50.53**	**202**	P	**P**	**14 32 23.1**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=143,slow=13,SNR=7.3						
SNAA	**Sanae**	**50.53**	**202**	P	**P**	**14 32 23.8**	**+0.9**
SNAA				IAmb	IAmb	14 32 31.6	
	comp=Z,4.5nm,0.9s						
BOSA	**Boshof**	**64.92**	**255**	LR	LR	14 56 25.0	
	comp=Z,127nm,19.8s,baz=156,slow=31						
CMAR	**Chiang Mai Arr**	**67.58**	**350**	P	**P**	**14 34 22.4**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=182,slow=5.9,SNR=1.9						
CMAR				LR	LR	15 02 29.2	
	comp=Z,35nm,18.8s,baz=224,slow=35						
CMAR	**Chiang Mai Arr**	**67.58**	**350**	P	**P**	**14 34 20.9**	**-0.6**
PPT	**Papeete**	**84.40**	**110**	LR	LR	15 07 33.5	
	comp=Z,29nm,20.9s,baz=194,slow=31						
MKAR	**Makanchi Array**	**98.01**	**342**	LR	LR	15 19 22.2	
	comp=Z,16nm,20.5s,baz=179,slow=34						
NVAR	**Mina Array Bea**	**144.92**	**89**	PKPbc	**PKPdf**	**14 43 01.7**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=242,slow=5.8,SNR=2.0						
TXAR	**Lajitas Array**	**148.53**	**116**	PKPbc	**PKiKP**	**14 43 13.5**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=201,slow=4.8,SNR=2.4						
PDAR	**Pinedale Array**	**152.85**	**88**	PKPbc	**PKiKP**	**14 43 24.9**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=318,slow=1.2,SNR=2.3						

*ANF **07** 14:24:31.2±1.9,41.66N×119.77W,h2km±23km,ML3.0/7, Error ellipse: s-maj=19.9km s-min=9.9km az=118.0*
*REN **07** 14:24:31.4±2.5,41.84N±0.03×119.63W±0.04,h0km±7km, ML3.1/3,Md2.8/10(SEA),Error ellipse: s-maj=5.8km s-min=2.3km az=144.0*
*NEIC **07** 14:24:32.9±2.5,41.91N±0.04×119.66W±0.05,h11km±7km, Error ellipse: s-maj=6.1km s-min=4.8km az=149.0*
*SEA **07** 14:24:33.2±3.5,41.84N±0.04×119.68W±0.04,h0km±7km, Error ellipse: s-maj=5.6km s-min=4.7km az=161.0*
ISC 07 14:24:32.6±1.0,41.87N±0.03×119.73W±0.04,h10km,n31, σ0°68/35,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.43**	**274**		**Pb**	**14 24 41.5**	**-0.9**
MOD				Sg	**Sb**	**14 24 48.6**	**-0.3**
K05A	**Summer Lake**	**1.21**	**315**		**Pg**	**14 24 55.9**	**0.0**
M04C	**Macdoel**	**1.58**	**268**	P	**Pn**	**14 25 00.6**	**-0.2**
	baz=87,SNR=22						
M04C				S	**Sb**	**14 25 21.9**	**-0.1**
	baz=87						
K04D	**Chiloquin, OR**	**1.68**	**297**	P	**Pb**	**14 25 03.3**	**-0.4**
	baz=116,SNR=14						
K04D				S	**Sg**	**14 25 26.6**	**+0.1**
	baz=116						
J08A	**Circle Bar Ran**	**1.75**	**32**		**Pn**	**14 25 02.4**	**-0.8**
J05D	**Fort Rock, OR**	**1.80**	**322**	P	**Pb**	**14 25 05.7**	**0.0**
	baz=140,SNR=36						
WVA	**Winnemucca Val**	**1.93**	**182**		**Pb**	**14 25 07.1**	**-0.8**
L04D	**Klamath Falls**	**1.95**	**281**	P	**Pn**	**14 25 05.4**	**-0.4**
	baz=100,SNR=53						
L04D				Sb	**Sg**	**14 25 35.3**	**+0.1**
	baz=100						
BEKR	**Beckworth**	**2.06**	**194**		**Pn**	**14 25 08.0**	**+0.6**
PINE	**Pine Mountain**	**2.12**	**336**	Pn	**Pb**	**14 25 10.2**	**-0.9**
PAHR	**Pah Rah Range**	**2.18**	**173**	Pn	**Pn**	**14 25 09.6**	**+0.6**
I07A	**Izee**	**2.22**	**4**	Pn	**Pn**	**14 25 11.2**	**+1.7**
O03E	**Paynes Creek**	**2.22**	**225**	Pb	**Pn**	**14 25 09.2**	**-0.3**
	baz=46						
J04D	**Umpqua Nationa**	**2.23**	**309**	Pb	**Pb**	**14 25 13.8**	**+0.7**
	baz=127						
YBH	**Yreka Blue Hor**	**2.23**	**267**	Pn	**Pn**	**14 25 09.7**	**0.0**
LOY	**Loyalton**	**2.24**	**190**		**Pb**	**14 25 12.6**	**-0.7**
PEAR	**Peavine Mounta**	**2.27**	**184**		**Pb**	**14 25 13.4**	**-0.4**
KBF	**Kyburz Flat**	**2.39**	**189**		**Pb**	**14 25 15.5**	**-0.4**
VPK	**Verdi Peak**	**2.40**	**186**		**Pb**	**14 25 16.5**	**+0.4**
IND	**Independence**	**2.47**	**190**		**Pb**	**14 25 17.4**	**+0.2**
WDC	**Whiskeytown Da**	**2.48**	**240**	Pn	**Pn**	**14 25 12.8**	**-0.3**
HUMO	**Hull Mountain**	**2.50**	**288**	Pn	**Pn**	**14 25 13.7**	**+0.3**
VCNR	**Virginia City**	**2.57**	**179**	Pn	**Pn**	**14 25 14.1**	**-0.5**
EMB	**Emerald Bay**	**2.91**	**186**		**Pb**	**14 25 25.6**	**+0.9**
K02D	**Willamette Mer**	**3.03**	**287**	P	**Pn**	**14 25 22.3**	**+1.6**
	baz=105						
KEBM	**Edson Butte**	**3.55**	**288**	Pn	**Pn**	**14 25 28.4**	**+0.6**
ELK	**Elko**	**3.57**	**107**	Pn	**Pn**	**14 25 28.2**	**0.0**
NVAR	**Mina Array Bea**	**3.61**	**162**	Pn	**Pn**	**14 25 27.8**	**-1.0**
HCK	**Huntoon Valley**	**3.89**	**167**		**Pb**	**14 25 42.0**	**+0.7**
PLID	**Pearl Lake**	**4.21**	**39**	Pn	**Pn**	**14 25 36.5**	**-0.6**
R11A	**Troy Canyon, C**	**4.74**	**137**	Pn	**Pn**	**14 25 45.2**	**+0.8**

IDC 07 14:29:17.4±2.4,7.76N×94.25E,h0km,mb3.3/4,mb1 3.5/5, mb1mx3.3/47,mbtmp3.3/5,ML3.9/1,Error ellipse: s-maj=88.6km s-min=25.0km az=63.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.57**	**23**	Pn	Pn	14 32 05.4	+1.4
	0.2nm,0.3s,baz=210,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**40.22**	**347**	P	P	14 36 55.2	-0.6
	0.5nm,0.8s,baz=156,slow=6.8,SNR=3.5						
ZALV	**Zalesovo Beam**	**46.68**	**352**	P	P	14 37 47.4	-0.3
	0.4nm,0.3s,baz=162,slow=8.4,SNR=2.1						
WRA	**Warramunga Arr**	**48.11**	**126**	P	P	14 37 57.5	-1.9
	0.1nm,0.5s,baz=309,slow=8.5,SNR=1.0						
ASAR	**Alice Springs**	**49.76**	**130**	P	P	14 38 13.6	+1.5
	0.3nm,0.7s,baz=304,slow=7.9,SNR=5.5						

*REY **07** 14:40:51.4,64.67N×17.41W,h6km*
*IDC **07** 14:40:51.9±0.8,64.58N×17.50W,h0km,mb3.7/9, mb1 4.0/11,mb1mx3.8/37,mbtmp3.8/11,ML3.4/2,MS3.0/5, Ms1 3.0/5,ms1mx2.6/49,Error ellipse: s-maj=23.6km s-min=11.1km az=12.0*
*NEIC **07** 14:40:52.6±2.6,64.5N±0.1×17.2W±0.1,h10km±2km, mb4.4/7,Error ellipse: s-maj=16.0km s-min=7.6km az=195.0*
ISC 07 14:40:52.2±0.5,64.66N±0.03×17.37W±0.03,h10km,n52, σ2°01/48,mb3.8/15,MS2.8/4,Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.13**	**2**	P	**Pg**	**14 40 54.2**	**-1.2**
	baz=8.7						
IVON	**Vonarskard**	**0.17**	**274**	P	**Pg**	**14 40 54.5**	**-1.4**
	baz=273						
IGRF	**Grimsfjall**	**0.26**	**170**	P	**Pg**	**14 40 56.5**	**-1.1**
	baz=167						
IHUS	**Husbondi**	**0.39**	**198**	P	**Pg**	**14 40 58.9**	**-1.0**
	baz=196						
IVOT	**Vottur**	**0.40**	**168**	P	**Pg**	**14 40 59.0**	**-1.1**
	baz=166						
THOR	**Thorvaldshraun**	**0.40**	**47**	P	**Pg**	**14 40 59.1**	**-1.1**
	baz=49						
ISKR	**Skrokkalda**	**0.45**	**257**	P	**Pg**	**14 40 59.5**	**-1.6**
	baz=256						
IASK	**Askja**	**0.50**	**38**	P	**Pg**	**14 41 00.5**	**-1.5**
	baz=40						
IASK				S	**Sg**	**14 41 07.1**	**-1.4**
	baz=40						
IMKO	**Mokollar**	**0.54**	**54**	P	**Pg**	**14 41 01.4**	**-1.4**
	baz=55						
IKSK	**Karasker**	**0.64**	**142**	P	**Pg**	**14 41 02.4**	**-2.2**
	baz=141						
IIEY	**Innrieyrar**	**0.66**	**210**	P	**Pg**	**14 41 02.9**	**-2.1**
	baz=209						
ISVA	**Svartarkot**	**0.68**	**4**	P	**Pg**	**14 41 03.4**	**-1.9**
	baz=5.6						
IVSH	**V-Sauoahnukur**	**0.72**	**78**	P	**Pg**	**14 41 04.3**	**-1.9**
	baz=78						
IKAL	**Kalfafell**	**0.73**	**191**	P	**Pg**	**14 41 04.3**	**-2.0**
	baz=190						
IVAT	**Vatnsfell**	**0.82**	**235**	P	**Pg**	**14 41 06.3**	**-1.7**
	baz=234						
IMEL	**Melhnausar**	**0.96**	**18**	P	**Pg**	**14 41 08.1**	**-2.6**
	baz=19						
IREN	**Reynihlio**	**1.01**	**11**	P	**Pg**	**14 41 08.9**	**-2.7**
	baz=12						
BORG	**Borgarnes**	**1.70**	**275**	Pg	**Pn**	**14 41 20.1**	**-1.7**
	12nm,0.3s,baz=121,slow=11,SNR=19						
BORG				Lg	Lg	14 41 44.4	
	6.2nm,0.3s,baz=239,slow=20,SNR=8.1						
BORG	**Borgarnes**	**1.70**	**275**	Pn	**Pn**	**14 41 20.6**	**-1.3**
BORG					**Pb**	**14 41 20.8**	**-2.8**
BORG				Sn	**Sg**	**14 41 46.5**	**-0.3**
SCO	**Scoresbysund**	**6.10**	**345**	Pn	Pn	14 42 27.4	+5.1
ANGG	**Ammassalik, Gr**	**8.58**	**286**	Pn	Pn	14 43 01.4	+5.2
EKA	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**14 43 39.7**	**+0.4**
	baz=322,slow=13,SNR=5.0						
NC303	**NORSAR Array S**	**13.46**	**92**	Pn	**Pn**	**14 43 58.9**	**-4.1**
ARD8	**ARCESS Array S**	**17.06**	**55**	Pn	**P**	**14 44 51.8**	**-0.5**
ARD8				IAmb	IAmb	14 45 07.2	
	comp=Z,70nm,1.5s						
ARCES	**ARCESS Array B**	**17.08**	**55**	LR	LR	14 49 59.6	
	comp=Z,33nm,18.2s,baz=295,slow=32						
FINES	**FINESS Array B**	**19.65**	**79**	P	**Pn**	**14 45 22.8**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=260,slow=6.6,SNR=2.0						
BRG	**Berggiesshubel**	**21.36**	**115**	*eP*	**P**	**14 45 42.1**	**+2.8**
	comp=Z,8.9nm,1.3s						
BRG				*e*		14 45 52.4	
	comp=Z,11nm,1.3s						
FRB	**Frobisher Bay**	**21.80**	**291**	LR	LR	14 53 01.7	
	comp=Z,37nm,21.3s,baz=206,slow=34						
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**14 45 58.2**	**+2.2**
	comp=Z,0.6nm,0.6s,baz=327,slow=9.5,SNR=4.5						
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**14 45 54.5**	**-1.4**
TUE	**Stuetta**	**23.36**	**128**	P	**P**	**14 45 58.5**	**-2.3**
TUE				IAmb	IAmb	14 46 08.4	
	comp=Z,6.1nm,1.2s						
VRAC	**Vranov**	**23.64**	**114**	LR	LR	14 54 58.1	
	comp=Z,38nm,18.8s,baz=321,slow=36						
MORC	**Moravsky Berou**	**23.65**	**112**	P	**P**	**14 46 02.9**	**-0.5**
COI	**Coimbra**	**25.05**	**164**	P	**P**	**14 46 14.6**	**-1.6**
COI				IAmb	IAmb	14 46 20.7	
	comp=Z,61nm,1.3s						
SCHQ	**Schefferville**	**26.09**	**271**	LR	LR	14 55 24.1	
	comp=Z,22nm,20.9s,baz=280,slow=34						
ESDC	**Sonseca Array**	**26.23**	**156**	P	**P**	**14 46 28.4**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=342,slow=9.8,SNR=5.4						
AKASG	**Malin Array Be**	**27.79**	**98**	P	**P**	**14 46 39.6**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=330,slow=9.0,SNR=1.4						
AQU	**L'Aquila**	**28.36**	**127**	P	**P**	**14 46 43.7**	**-2.5**
BUR08	**Bucovina Ar. S**	**28.44**	**106**	P	**P**	**14 46 42.2**	**-4.8**
BUR08				IAmb	IAmb	14 46 53.3	
	comp=Z,4.6nm,1.2s						
KBZ	**Khabaz**	**39.06**	**93**	P	**P**	**14 48 19.4**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=236,slow=24,SNR=4.8						
TIXI	**Tiksi**	**42.02**	**15**	P	**P**	**14 48 44.9**	**+1.9**
TIXI				IAmb	IAmb	14 48 48.9	
	comp=Z,12nm,1.4s						
ILAR	**Eielson Array**	**45.71**	**332**	P	**P**	**14 49 15.8**	**+3.0**
	comp=Z,2.0nm,1.1s,baz=24,slow=7.0,SNR=9.8						
ILAR				PcP	**PcP**	**14 50 53.1**	**+2.8**
	comp=Z,0.8nm,1.1s,baz=346,slow=3.1,SNR=3.0						
ILAR	**Eielson Array**	**45.71**	**332**	P	P	14 49 16.6	+3.8
IMAR	**Indian Mountai**	**45.88**	**337**	P	**P**	**14 49 16.2**	**+2.1**
BCAR	**Beaver Creek A**	**46.14**	**329**	P	**P**	**14 49 19.0**	**+2.8**
GEYT	**Alibeck**	**50.37**	**84**	P	**P**	**14 49 49.6**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=240,slow=44,SNR=1.3						
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**14 50 07.6**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=327,slow=8.7,SNR=5.4						
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**14 50 06.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**53.12**	**157**	P	**P**	**14 50 10.8**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=351,slow=7.5,SNR=3.6						
PDAR	**Pinedale Array**	**53.23**	**293**	LR	LR	15 14 53.8	
	comp=Z,29nm,19.4s,baz=348,slow=38						
SONM	**Songino Array**	**59.61**	**40**	P	**P**	**14 50 57.9**	**+2.0**
	comp=Z,0.4nm,0.4s,baz=324,slow=7.1,SNR=2.3						
CMAR	**Chiang Mai Arr**	**84.09**	**59**	P	**P**	**14 53 24.3**	**+1.2**
	comp=Z,0.6nm,0.9s,baz=316,slow=5.0,SNR=3.2						

*BGS **07** 14:44:26.9±1.0,49.05N×2.31W,h8km,ML2.2*
*STR **07** 14:44:27.1±0.4,49°N±2°×±°,h0km,MLv2.9/4, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary*
*LDG **07** 14:44:27.2±0.1,49.04N×2.32W,h8km,Md2.9/5,Ml3.1/45, Error ellipse: s-maj=1.3km s-min=1.0km az=157.0*
ISC 07 14:44:25.4±0.8,49.01N±0.02×2.23W±0.02,h10km,n72, σ1°61/133,2C,France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSA	**Saint Aubin**	**0.19**	**13**	*iP*	**Pg**	**14 44 30.9**	**+1.6**
JSA				*eS*	**Sg**	**14 44 33.7**	**+1.6**
JSA				IAML		14 44 33.9	
	comp=N,473nm,0.4s						
JSA				IAML		14 44 34.0	
	comp=E,549nm,0.2s						
JSA	**Saint Aubin**	**0.19**	**13**	*iP*	**Pg**	**14 44 30.9**	**+1.6**
JSA				*eS*	**Sg**	**14 44 33.7**	**+1.6**
JSA				IAML		14 44 33.9	
	comp=N,473nm,0.4s						
JSA				IAML		14 44 34.0	
	comp=E,549nm,0.2s						
JSA	**Saint Aubin**	**0.19**	**13**	Pg	**Pg**	**14 44 30.9**	**+1.6**
JSA				Sg	**Sg**	**14 44 33.8**	**+1.7**
SGMF	**Saint Gilles**	**0.78**	**196**	*e*Pg	**Pb**	**14 44 42.3**	**+1.2**
SGMF	**Saint Gilles**	**0.78**	**196**	*e*Pn	**Pn**	**14 44 43.1**	**+0.6**
SGMF	**Saint Gilles**	**0.78**	**196**	*eP*	**Pn**	**14 44 43.8**	**+1.3**
SGMF				*e*Sg	**Sb**	**14 44 52.7**	**+1.0**
	comp=E,28nm,0.2s						
SGMF				*e*Sn	**Sn**	**14 44 54.6**	**+0.3**
	comp=E,194nm,0.2s						
ROSF	**Rostrenen**	**0.96**	**226**	*eP*	**Pg**	**14 44 44.6**	**+0.8**
ROSF				*e*S	**Sg**	**14 44 56.6**	**+0.2**
ROSF	**Rostrenen**	**0.96**	**226**	*eP*	**Pg**	**14 44 44.6**	**+0.8**
ROSF				*e*S	**Sg**	**14 44 56.6**	**+0.2**
ROSF	**Rostrenen**	**0.96**	**226**	Pg	**Pb**	**14 44 44.9**	**+0.7**
ROSF				Sg	**Sg**	**14 44 57.4**	**+1.0**
ROSF	**Rostrenen**	**0.96**	**226**	*e*Pg	**Pg**	**14 44 44.7**	**+0.8**
ROSF	**Rostrenen**	**0.96**	**226**	*eP*	**Pn**	**14 44 46.1**	**+1.2**
ROSF				*e*Sg	**Sg**	**14 44 57.0**	**+0.6**
	comp=E,46nm,0.2s						
ROSF				*e*Sn	**Sb**	**14 44 58.0**	**+1.1**
	comp=E,88nm,0.2s						
RENF	**Rennes**	**0.97**	**156**	*eP*	**Pn**	**14 44 47.7**	**+2.6**
RENF				*e*S	**Sn**	**14 45 01.1**	**+2.1**
RENF	**Rennes**	**0.97**	**156**	*eP*	**Pn**	**14 44 47.7**	**+2.6**
RENF				*e*S	**Sn**	**14 45 01.1**	**+2.1**
RENF	**Rennes**	**0.97**	**156**	Pg	**Pn**	**14 44 47.3**	**+2.2**
RENF				Sg	**Sn**	**14 45 01.0**	**+2.1**
GRR	**Gorron**	**1.10**	**124**	*eP*	**Pn**	**14 44 50.1**	**+3.2**
GRR				*e*Sg	**Sn**	**14 45 04.4**	**+2.3**
	comp=E,122nm,0.2s						
FLN	**La Foliniere**	**1.18**	**101**	*e*Pg	**Pg**	**14 44 50.4**	**+2.3**
	baz=283						
FLN	**La Foliniere**	**1.18**	**101**	*eP*	**Pg**	**14 44 51.1**	**+3.0**
FLN				*e*Sg	**Sn**	**14 45 06.9**	**+2.8**
	comp=E,116nm,0.3s,baz=283						
QUIF	**Quistinic**	**1.25**	**210**	*e*Pn	**Pn**	**14 44 49.2**	**+0.2**
QUIF	**Quistinic**	**1.25**	**210**	*e*Pg	**Pg**	**14 44 50.6**	**+1.1**
QUIF	**Quistinic**	**1.25**	**210**	*eP*	**Pg**	**14 44 51.2**	**+1.7**
QUIF				*e*Sg	**Sn**	**14 45 06.8**	**+0.9**
	comp=E,166nm,0.4s						
LDF	**La Druitiere**	**1.46**	**106**	*eP*	**Pg**	**14 44 54.7**	**+1.4**
LDF	**La Druitiere**	**1.46**	**106**	*e*Pg	**Pg**	**14 44 55.6**	**+2.3**
LDF				*e*Sg	**Sg**	**14 45 15.4**	**+3.2**
	comp=E,64nm,0.2s						
SBD	**Saint Breward**	**2.23**	**315**	*eP*	**Pn**	**14 45 02.1**	**-0.3**
SBD				IAML		14 45 32.4	
	comp=N,20nm,0.3s						
SBD				IAML		14 45 33.4	
	comp=E,18nm,0.1s						
CCA1	**Carnmenellis**	**2.28**	**302**	*eP*	**Pn**	**14 45 02.8**	**-0.3**
CCA1				IAML		14 45 35.5	
	comp=E,16nm,0.2s						
CCA1				IAML		14 45 39.3	
	comp=N,20nm,0.2s						
CCA1	**Carnmenellis**	**2.28**	**302**	*eP*	**Pn**	**14 45 02.8**	**-0.3**
CCA1				IAML		14 45 35.5	
	comp=E,16nm,0.2s						
CCA1				IAML		14 45 39.3	
	comp=N,20nm,0.2s						
CCA1	**Carnmenellis**	**2.28**	**302**	Pn	**Pn**	**14 45 01.0**	**-2.0**
HTL	**Hartland**	**2.46**	**325**	Pn	**Pn**	**14 45 05.7**	**+0.1**
MFF	**Saint Mart

SMF				*e*Sg		**Sg**	**14 46 56.9**	**-0.1**
	comp=N,3.3nm,0.2s							
MEZF	**Maizieres J'vi**	**4.85**	**93**	*e*Pn		**Pn**	**14 45 38.9**	**+0.6**
MEZF	**Maizieres J'vi**	**4.85**	**93**	*e*Pg		**Pg**	**14 45 57.7**	**-0.5**
	baz=274							
MEZF				*e*Sn		**Sn**	**14 46 32.3**	**-2.2**
	comp=N,3.5nm,0.2s,baz=260							
MEZF				*e*Sg		**Sg**	**14 47 00.7**	**-0.2**
	comp=N,13nm,0.5s,baz=265							
SFTF	**Sexfontaines**	**4.89**	**97**	*e*Pn		**Pn**	**14 45 37.3**	**-1.7**
	baz=277							
SFTF				*e*Sn		**Sn**	**14 46 33.7**	**-1.9**
	comp=N,2.4nm,0.2s,baz=280							
SFTF				*e*Sg		**Sg**	**14 47 02.1**	**-0.2**
	comp=N,6.7nm,0.3s							
CAF	**Calviac**	**5.03**	**143**	*e*Pn		**Pn**	**14 45 41.3**	**+0.4**
CAF	**Calviac**	**5.03**	**143**	*e*Pg		**Pg**	**14 46 02.3**	**+0.6**
CAF				*e*Sn		**Sn**	**14 46 37.1**	**-2.0**
	comp=N,3.5nm,0.3s							
CAF				*e*Sg		**Sg**	**14 47 06.6**	**-0.3**
	comp=N,8.7nm,0.4s							
HAU	**Haudompre**	**5.79**	**97**	*e*Pn		**Pn**	**14 45 51.8**	**+0.5**
HAU	**Haudompre**	**5.79**	**97**	*e*Pg		**Pg**	**14 46 15.7**	**-0.5**
HAU				*e*Sn		**Sn**	**14 46 54.9**	**-2.9**
HAU				*e*Sg		**Sg**	**14 47 29.8**	**-1.4**
	comp=N,7.1nm,0.3s							
SJPF	**Ste Jean**	**5.94**	**173**	*e*Pn		**Pn**	**14 45 53.6**	**+0.3**
SJPF	**Ste Jean**	**5.94**	**173**	*e*Pg		**Pg**	**14 46 17.5**	**-1.5**
SJPF				*e*Sn		**Sn**	**14 46 57.6**	**-3.8**
	comp=N,1.2nm,0.2s							
SJPF				*e*Sg		**Sg**	**14 47 34.2**	**-1.7**
	comp=N,1.8nm,0.4s							
CABF	**La Chapelle**	**6.10**	**110**	*e*Pn		**Pn**	**14 45 55.6**	**0.0**
CABF				*e*Sn		**Sn**	**14 47 02.3**	**-3.1**
CABF				*e*Sg		**Sg**	**14 47 40.2**	**-0.8**
	comp=N,1.9nm,0.4s							
HINF	**Hinteralfeld**	**6.17**	**98**	*e*Pn		**Pn**	**14 45 57.1**	**+0.6**
HINF	**Hinteralfeld**	**6.17**	**98**	*e*Pg		**Pg**	**14 46 21.8**	**-1.6**
HINF				*e*Sn		**Sn**	**14 47 03.8**	**-3.3**
HINF				*e*Sg		**Sg**	**14 47 41.8**	**-1.4**
	comp=N,4.2nm,0.3s							
EPF	**Esparros**	**6.24**	**162**	*e*Pn		**Pn**	**14 45 57.9**	**+0.4**
EPF				*e*Sn		**Sn**	**14 47 05.0**	**-3.9**
	comp=N,1.6nm,0.2s							
EPF				*e*Sg		**Sg**	**14 47 44.5**	**-1.1**
VIVF	**Saint-Julien-l**	**6.29**	**129**	*e*Pn		**Pn**	**14 46 01.4**	**+3.2**
CDF	**Champ du Feu**	**6.32**	**92**	*e*Pn		**Pn**	**14 45 58.8**	**+0.1**
CDF	**Champ du Feu**	**6.32**	**92**	*e*Pg		**Pg**	**14 46 25.0**	**-1.4**
CDF				*e*Sn		**Sn**	**14 47 08.0**	**-3.0**
	comp=N,1.3nm,0.3s							
CDF				*e*Sg		**Sg**	**14 47 46.7**	**-1.5**
	comp=N,2.9nm,0.4s							
MTLF	**Montolieu**	**6.45**	**150**	*e*Pn		**Pn**	**14 46 01.0**	**+0.6**
MTLF	**Montolieu**	**6.45**	**150**	*e*Pg		**Pg**	**14 46 27.2**	**-1.7**
MTLF				*e*Sn		**Sn**	**14 47 10.2**	**-3.9**
	comp=N,1.9nm,0.3s							
MTLF				*e*Sg		**Sg**	**14 47 50.5**	**-2.0**
	comp=N,1.8nm,0.3s							
LASF	**Ste Croix**	**6.48**	**137**	*e*Pn		**Pn**	**14 46 01.7**	**+0.9**
LASF	**Ste Croix**	**6.48**	**137**	*e*Pg		**Pg**	**14 46 28.7**	**-0.7**
LASF				*e*Sn		**Sn**	**14 47 10.8**	**-3.9**
LASF				*e*Sg		**Sg**	**14 47 51.7**	**-1.5**
	comp=N,2.9nm,0.4s							

WEL **07** *14:53:05.6,39°S±2°×17°4E±°, h277km±8km, M2.8/55, ML2.5/7, MLv2.8/55, Error ellipse: s-maj=0.0km s-min=0.0km az=93.7, North Island*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEZ	**North Egmont**	**0.21**	**356**	P	Pn	14 53 41.5	+0.2
VRZ	**Vera Road**	**0.61**	**55**	P	Pn	14 53 41.4	-0.6
WAZ	**Wanganui**	**0.73**	**113**	P	Pn	14 53 42.8	+0.5
MTVZ	**Mangateitei**	**1.05**	**85**	P	Pn	14 53 43.9	0.0
TWVZ	**Taurewa**	**1.10**	**69**	P	Pn	14 53 43.9	-0.3
HIZ	**Hauiti**	**1.12**	**31**	P	Pn	14 53 44.0	-0.3
FWVZ	**Far West T-bar**	**1.14**	**79**	P	Pn	14 53 44.4	-0.2
WHVZ	**Whangaehu Hut**	**1.16**	**81**	P	Pn	14 53 44.7	0.0
WNVZ	**Wahianoa**	**1.16**	**83**	P	Pn	14 53 44.5	-0.1
NGZ	**Ngauruhoe**	**1.19**	**76**	P	Pn	14 53 44.8	0.0
WTVZ	**West Tongariro**	**1.20**	**73**	P	Pn	14 53 44.8	0.0
TUVZ	**Tukino**	**1.21**	**81**	P	Pn	14 53 45.1	+0.2
OTVZ	**Oturere**	**1.24**	**76**	P	Pn	14 53 45.1	0.0
KRVZ	**Karewarewa**	**1.25**	**73**	P	Pn	14 53 45.1	0.0
MOVZ	**Moawhango**	**1.27**	**87**	P	Pn	14 53 44.8	-0.3
ETVZ	**East Tongariro**	**1.28**	**75**	P	Pn	14 53 45.7	+0.4
TMVZ	**Te Maari**	**1.29**	**74**	P	Pn	14 53 45.7	+0.4
DUWZ	**D'Urville Isla**	**1.33**	**186**	P	Pn	14 53 45.5	+0.1
BHHZ	**Black Hill Sta**	**1.51**	**91**	P	Pn	14 53 46.4	-0.3
KIW	**Kapiti Island**	**1.51**	**156**	P	Pn	14 53 46.5	-0.1
TSZ	**Takapari Road**	**1.54**	**113**	P	Pn	14 53 47.0	+0.2
OGWZ	**Otaki Gorge**	**1.56**	**149**	P	Pn	14 53 47.2	+0.3
MRZ	**Mangatainoka R**	**1.63**	**137**	P	Pn	14 53 47.4	0.0
PNHZ	**Pukenui**	**1.67**	**106**	P	Pn	14 53 48.0	+0.2
TCW	**Tory Channel**	**1.73**	**176**	P	Pn	14 53 48.4	+0.2
KRHZ	**Kereru**	**1.75**	**96**	P	Pn	14 53 48.7	+0.3
DVHZ	**Dannevirke**	**1.78**	**118**	P	Pn	14 53 48.7	+0.1
CAW	**Cannon Point**	**1.78**	**156**	P	Pn	14 53 48.6	+0.1
QRZ	**Quartz Range**	**1.81**	**222**	P	Pn	14 53 48.8	0.0
NNZ	**Nelson**	**1.83**	**198**	P	Pn	14 53 49.1	+0.3
BKZ	**Black Stump Fm**	**1.87**	**81**	P	Pn	14 53 49.3	-0.1
TIWZ	**Tintock**	**1.88**	**134**	P	Pn	14 53 49.3	0.0
WPHZ	**Waipukurau**	**1.89**	**109**	P	Pn	14 53 49.9	+0.5
MRHZ	**Matea Rd**	**1.90**	**71**	P	Pn	14 53 49.2	-0.4
TUWZ	**Tuamarina**	**1.95**	**184**	P	Pn	14 53 50.0	+0.1
MTW	**Mount Morrison**	**1.98**	**148**	P	Pn	14 53 50.2	0.0
MCHZ	**McNeill Hill**	**2.00**	**90**	P	Pn	14 53 51.4	+1.1
PRHZ	**Porangahau**	**2.09**	**113**	P	Pn	14 53 51.8	+0.6
NMHZ	**Naumai**	**2.12**	**81**	P	Pn	14 53 52.7	+1.2
KAHZ	**Kahuranaki**	**2.16**	**99**	P	Pn	14 53 52.6	+0.9
PXZ	**Pawanui**	**2.19**	**105**	P	Pn	14 53 52.5	+0.6
MTHZ	**Maungataniwha**	**2.21**	**74**	P	Pn	14 53 52.2	0.0
BSWZ	**Blackbirch Sta**	**2.24**	**185**	P	Pn	14 53 52.9	+0.5
PLWZ	**Palliser**	**2.26**	**158**	P	Pn	14 53 52.9	+0.3
MUGZ	**Murupara**	**2.30**	**65**	P	Pn	14 53 52.6	-0.5
RAHZ	**Arahi**	**2.38**	**77**	P	Pn	14 53 54.4	+0.7
RTZ	**Ruatahuna**	**2.39**	**70**	P	Pn	14 53 53.9	-0.1
THZ	**Tophouse**	**2.46**	**202**	P	Pn	14 53 55.0	+0.5
SNGZ	**Shannon Statio**	**2.60**	**76**	P	Pn	14 53 56.4	+0.5
URZ	**Urewera**	**2.64**	**63**	P	Pn	14 53 55.7	-0.5
RAGZ	**Rawiri**	**2.75**	**70**	P	Pn	14 53 57.7	+0.3
DSZ	**Denniston Nort**	**2.87**	**217**	P	Pn	14 53 58.7	+0.3
MWZ	**Matawai**	**2.90**	**68**	P	Pn	14 53 58.8	-0.1
RIGZ	**Rimuhau**	**2.94**	**76**	P	Pn	14 53 59.8	+0.6
MHGZ	**Mahia Peninsul**	**2.96**	**85**	P	Pn	14 54 00.3	+0.9
KHZ	**Kahutara**	**2.97**	**188**	P	Pn	14 53 59.7	+0.4
TKGZ	**Te Karaka**	**3.09**	**72**	P	Pn	14 54 01.5	+0.8
RUGZ	**Raukumara Rang**	**3.17**	**63**	P	Pn	14 54 01.0	-0.8
HAZ	**Te Kaha**	**3.35**	**60**	P	Pn	14 54 02.7	-0.7
GVZ	**Greta Valley S**	**3.58**	**193**	P	Pn	14 54 06.0	+0.1
LTZ	**Lake Taylor**	**3.58**	**202**	P	Pn	14 54 06.3	+0.3
WMGZ	**Waiomatatini S**	**3.75**	**65**	P	Pn	14 54 08.3	+0.4
INZ	**Inchbonnie**	**3.82**	**211**	P	Pn	14 54 08.6	+0.1
OXZ	**Oxford**	**4.15**	**201**	P	Pn	14 54 12.1	-0.2
OKCZ	**Okains Bay**	**4.32**	**190**	P	Pn	14 54 14.2	0.0
MQZ	**McQueen's Vall**	**4.37**	**194**	P	Pn	14 54 14.0	-0.7
MHCZ	**Mount Hutt**	**4.48**	**204**	P	Pn	14 54 16.1	0.0
RACZ	**Rakaia**	**4.50**	**199**	P	Pn	14 54 16.2	-0.1
GCSZ	**Gaunt Creek Bo**	**4.78**	**215**	P	Pn	14 54 20.3	+0.8
ARCZ	**Arundel**	**4.98**	**205**	P	Pn	14 54 22.1	+0.2
ODZ	**Otahua Downs**	**6.13**	**204**	P	Pn	14 54 36.9	+1.2

IDC **07** *14:59:20.4±5.1,5°97S×148°41E, h42km±43km, mb3.8/7, mb1 4.0/9, mb1mx3.7/29, mbtmp4.0/9, ML4.0/1, Error ellipse: s-maj=36.2km s-min=29.1km az=100.0*
ISC 07 14:59:19.5±1.1,5°9S±0°1×148°4E±0°3, h35km, n10, σ1s01/13, mb3.9/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.70**	**199**	P	**Pn**	**15 00 15.8**	**+1.6**
	14nm,0.3s,baz=36,slow=10,SNR=30						
PMG				S	**Sn**	**15 00 55.8**	**-0.9**
	11nm,0.3s,baz=197,slow=22,SNR=1.9						
WRA	**Warramunga Arr**	**19.54**	**223**	P	**P**	**15 03 44.3**	**0.0**
	0.4nm,0.3s,baz=49,slow=11,SNR=38						
WRA				S	S	15 07 07.6	-16
	0.0nm,0.3s,baz=40,slow=19,SNR=2.0						
WRA				PcP	**PcP**	**15 08 04.1**	**+0.1**
	0.0nm,0.3s,baz=39,slow=2.0,SNR=3.0						
ASAR	**Alice Springs**	**22.51**	**217**	P	**P**	**15 04 16.3**	**-0.1**
	4.3nm,0.6s,baz=52,slow=9.2,SNR=115						
ASAR				PcP	**PcP**	**15 08 09.6**	**0.0**
	0.5nm,0.9s,baz=35,slow=3.4,SNR=3.1						
BATI	**Baumata**	**24.85**	**258**	P	**P**	**15 04 39.2**	**+0.2**
	7.1nm,0.5s,baz=68,slow=19,SNR=1.6						
FITZ	**Fitzroy Crossi**	**25.30**	**239**	P	**P**	**15 04 43.6**	**+0.5**
	2.8nm,0.5s,baz=56,slow=8.6,SNR=34						
STKA	**Stephens Creek**	**26.62**	**193**	P	**P**	**15 04 52.5**	**-2.4**
	1.7nm,0.7s,baz=345,slow=13,SNR=1.6						
VNDA	**Vanda**	**71.94**	**177**	P	**P**	**15 10 39.3**	**+0.4**
	0.3nm,0.7s,baz=317,slow=5.1,SNR=2.4						
MKAR	**Makanchi Array**	**78.30**	**320**	P	**P**	**15 11 15.4**	**-0.7**
	0.4nm,0.8s,baz=139,slow=3.2,SNR=2.3						
ILAR	**Eielson Array**	**84.84**	**23**	P	**P**	**15 11 50.5**	**+0.3**
	0.5nm,0.6s,baz=251,slow=5.0,SNR=9.3						
TORD	**Torodi Ar. Bea**	**146.40**	**285**	PKPbc	**PKPbc**	**15 18 58.3**	**+0.4**
	0.2nm,0.4s,baz=81,slow=5.2,SNR=1.7						

MAN **07** *15:13:14.3, 7°79N×126°67E, h5km, mb4.5, ML3.4, MS3.2*
IDC **07** *15:13:17.4±2.6, 7°86N×126°81E, h64km±25km, mb3.6/7, mb1 3.7/8, mb1mx3.4/37, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=25.0km s-min=15.4km az=59.0*
ISC 07 15:13:12.7±1.7, 7°92N±0°05×126°84E±0°07, h26km±12km, n22, σ1s41/32, mb3.8/7, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIP	**Bislig**	**0.66**	**297**	*i*P	**Pb**	**15 13 25.9**	**+0.2**
BIP				*i* S	**Sb**	**15 13 32.8**	**-1.6**
MATI	**Mati**	**1.13**	**211**	*e*P	**Pb**	**15 13 32.6**	**-0.3**
MATI				*e*S	**Sn**	**15 13 45.9**	**-1.7**
DAV	**Davao City (W)**	**1.51**	**236**	P	**Pb**	**15 13 41.7**	**+1.6**
	146nm,0.3s,baz=247,slow=7.7,SNR=8.2						
DAV				S	**Sb**	**15 13 59.8**	**+1.0**
	82nm,0.3s,baz=284,slow=22,SNR=2.8						
BUKP	**Musuan**	**1.76**	**269**	*e*P	**Pb**	**15 13 44.0**	**-0.5**
BUKP				*e*S	**Sn**	**15 14 02.6**	**-0.7**
KCP	**Kidapawan**	**1.96**	**243**	*e*P	**Pn**	**15 13 44.8**	**+0.4**
KCP				*i* S	**Sn**	**15 14 08.6**	**+0.4**
DDMP	**Don Marcelino,**	**2.12**	**212**	*e*P	**Pn**	**15 13 48.1**	**+1.5**
DDMP				*e*S	**Sn**	**15 14 13.0**	**+0.8**
CGP	**Cagayan de Oro**	**2.19**	**284**	*e*P	**Pb**	**15 13 50.6**	**-1.0**
CGP				*e*S	**Sb**	**15 14 16.4**	**-2.0**
SKMP	**Bagumbayan, Su**	**2.67**	**239**	*e*P	**Pn**	**15 13 54.7**	**+0.6**
SKMP				*e*S	**Sn**	**15 14 26.6**	**+0.9**
PAGZ	**Pagadian**	**3.43**	**269**	*e*P	**Pn**	**15 14 06.0**	**+1.5**
TBP	**Tagbilaran**	**3.43**	**301**	*e*P	**Pn**	**15 14 07.3**	**+2.8**
TBP				*e*S	**Pb**	**15 14 11.6**	**-1.2**
SIJI	**Sorong**	**9.78**	**153**	P	**Pn**	**15 15 33.6**	**+1.7**
	1.6nm,0.3s,baz=91,slow=13,SNR=9.4						
SIJI				S	**Sn**	**15 17 17.3**	**-3.7**
	0.5nm,0.3s,baz=185,slow=23,SNR=1.3						
FITZ	**Fitzroy Crossi**	**25.88**	**183**	P	**P**	**15 18 40.9**	**-1.8**
	0.6nm,0.4s,baz=8.7,slow=11,SNR=1.7						
KRVT	**Keravat (AS076**	**27.91**	**115**	P	**P**	**15 19 02.1**	**+1.1**
	197nm,0.7s,baz=66,slow=22,SNR=1.5						
WRA	**Warramunga Arr**	**28.66**	**165**	P	**P**	**15 19 07.9**	**+0.3**
	0.2nm,0.4s,baz=341,slow=9.3,SNR=2.4						
WRA				PcP	**PcP**	**15 22 18.1**	**-0.1**
	0.4nm,0.8s,baz=334,slow=2.6,SNR=4.7						
ASAR	**Alice Springs**	**32.14**	**168**	P	**P**	**15 19 38.6**	**+0.2**
	0.4nm,0.3s,baz=342,slow=7.3,SNR=28						
ASAR				PcP	**PcP**	**15 22 27.8**	**+0.5**
	0.5nm,0.6s,baz=352,slow=2.6,SNR=11						
USRK	**Ussuriysk Ar.**	**36.42**	**6**	P	**P**	**15 20 16.6**	**+1.4**
	1.9nm,0.7s,baz=191,slow=7.8,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**40.51**	**69**	T	T	16 04 35.2	
	baz=259,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**40.52**	**69**	T	T	16 04 32.3	
	baz=259,slow=75,SNR=8.7						
H11N3	**WAKE ISLAND Hy**	**40.53**	**69**	T	T	16 04 31.7	
	baz=259,slow=75,SNR=13						
MKAR	**Makanchi Array**	**54.23**	**324**	P	**P**	**15 22 36.7**	**+0.2**
	1.3nm,0.5s,baz=122,slow=8.1,SNR=13						
MKAR				PcP	**PcP**	**15 23 40.3**	**-0.3**
	0.4nm,0.7s,baz=115,slow=3.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**56.95**	**332**	P	**P**	**15 22 55.5**	**-0.3**
	0.3nm,0.3s,baz=104,slow=6.1,SNR=1.3						
FINES	**FINESS Array B**	**88.21**	**332**	P	**P**	**15 26 00.3**	**-1.2**
	3.4nm,1.1s,baz=254,slow=3.6,SNR=1.8						

TAP **07** *15:17:30.5, 23°85N×122°54E, h35km±1km, ML3.2, D*
JMA **07** *15:17:30.2±0.1, 23°84N×122°48E, h27km, M2.9*
ISC 07 15:17:29.8±1.2, 23°81N±0°03×122°51E±0°02, h23km±14km, n69, σ0s89/132, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.76**	**32**	P	**Pn**	**15 17 44.3**	**-0.7**
JYNG				S	**Sb**	**15 17 52.8**	**-1.4**
YOJ	**Yonaguni jima**	**0.80**	**35**	P	**Pn**	**15 17 45.0**	**-0.5**
	baz=35						
YOJ				S	**Sb**	**15 17 54.8**	**-0.6**
	baz=35						
YOJ	**Yonaguni jima**	**0.80**	**35**	P	**Pn**	**15 17 45.1**	**-0.5**
YOJ				S	**Sb**	**15 17 54.8**	**-0.6**
TWD	**Chiawan**	**0.88**	**288**	*e*P	**Pn**	**15 17 46.0**	**-0.8**
	baz=284						
TWD				*e*S	**Sn**	**15 17 57.5**	**-1.2**
	baz=284						
NACB	**Ninganchiao**	**0.91**	**294**	P	**Pn**	**15 17 46.5**	**-0.6**
	baz=278						
NACB				*e*S	**Sb**	**15 17 59.4**	**+0.8**
	baz=278						
ESL	**Shilin**	**0.98**	**271**	*e*P	**Pn**	**15 17 47.1**	**-1.1**
	baz=267						
ESL				*e*S	**Sn**	**15 17 59.4**	**-2.0**
	baz=267						
EGFH	**Guangfu**	**1.00**	**262**	*e*P	**Pn**	**15 17 48.5**	**+0.1**
	baz=259						
EGFH				*e*S	**Sb**	**15 18 01.9**	**+0.8**
	baz=259						
TWC	**Suao**	**1.00**	**323**	P	**Pn**	**15 17 48.1**	**-0.3**
	baz=321						
TWC				S	**Sn**	**15 18 00.6**	**-1.1**
	baz=321						
ETLH	**Xiulin Townshi**	**1.02**	**293**	P	**Pn**	**15 17 48.2**	**-0.5**
	baz=289						
ETLH				S	**Sb**	**15 18 02.0**	**+0.1**
	baz=289						
HGSD	**Ruisui**	**1.04**	**253**	*e*P	**Pn**	**15 17 48.0**	**-1.0**
	baz=249						
HGSD				*e*S	**Sn**	**15 18 01.7**	**-1.1**
	baz=249						
EHY	**Hungye**	**1.13**	**255**	*e*P	**Pn**	**15 17 49.7**	**-0.4**
	baz=251						
EHY				*e*S	**Sn**	**15 18 04.5**	**-0.5**
	baz=251						
YULB	**Yu-li**	**1.19**	**250**	*e*P	**Pn**	**15 17 50.7**	**-0.3**
	baz=247						
YULB				*e*S	**Sn**	**15 18 06.1**	**-0.3**
	baz=247						
WHF	**Hehuan Shan**	**1.19**	**287**	P	**Pn**	**15 17 50.9**	**-0.4**
	baz=283						
WHF				S	**Sn**	**15 18 06.6**	**-0.4**
	baz=283						
TWE	**Neicheng**	**1.19**	**320**	*e*P	**Pb**	**15 17 51.8**	**+0.1**
	baz=318						
TWE				*e*S	**Sn**	**15 18 04.7**	**-1.8**
	baz=318						
ENTT	**Nioudou**	**1.20**	**314**	*e*P	**Pb**	**15 17 52.2**	**+0.4**
	baz=299						
ENTT				*e*S	**Sb**	**15 18 07.4**	**+0.6**
	baz=299						
NNSB	**Datong**	**1.20**	**301**	*e*P	**Pn**	**15 17 51.3**	**0.0**
	baz=288						
NNSB				*e*S	**Sb**	**15 18 06.7**	**-0.3**
	baz=288						
NNSH	**Datong**	**1.20**	**301**	*e*P	**Pn**	**15 17 51.1**	**-0.2**
	baz=288						
NNSH				*e*S	**Sn**	**15 18 06.5**	**-0.4**
	baz=288						
TWF1	**Yuli**	**1.20**	**248**	P	**Pn**	**15 17 51.0**	**-0.2**
	baz=245						
TWF1				S	**Sn**	**15 18 06.9**	**+0.1**
	baz=245						
NDT	**Datong Townshi**	**1.21**	**311**	*e*P	**Pb**	**15 17 51.7**	**-0.3**
	baz=308						
NDT				*e*S	**Sb**	**15 18 07.8**	**+0.7**
	baz=308						
HATJ	**Hateruma jima**	**1.21**	**78**	P	**Pb**	**15 17 51.9**	**-0.1**
HATJ				S	**Sb**	**15 18 08.2**	**+0.9**
NNS	**Nan Shan**	**1.21**	**302**	*e*P	**Pn**	**15 17 51.7**	**+0.2**
	baz=288						
NNS				*e*S	**Sb**	**15 18 07.3**	**-0.1**
	baz=288						
IRIF	**Iriomote-Funau**	**1.23**	**65**	P	**Pb**	**15 17 52.6**	**+0.2**
IRIF				*e*S	**Sb**	**15 18 08.6**	**+0.7**
CHGB	**Renai**	**1.25**	**282**	P	**Pn**	**15 17 51.7**	**-0.3**
	baz=270						
CHGB				S	**Sn**	**15 18 07.6**	**-0.6**
	baz=270						
VWDT	**VWDT**	**1.25**	**268**	P	**Pn**	**15 17 51.8**	**-0.1**
	baz=264						
VWDT				*e*S	**Sn**	**15 18 06.9**	**-1.1**
	baz=264						
CHKT	**Chengkung**	**1.26**	**236**	*e*P	**Pn**	**15 17 51.3**	**-0.8**
	baz=225						
CHKT				*e*S	**Sn**	**15 18 06.3**	**-2.0**
	baz=225						
TIPB	**Shuangxi**	**1.32**	**332**	*e*P	**Pb**	**15 17 54.3**	**+0.5**
	baz=330						
TIPB				*e*S	**Sb**	**15 18 10.6**	**+0.3**
	baz=330						
YHNB	**Yeheng**	**1.34**	**310**	*e*P	**Pb**	**15 17 53.8**	**-0.6**
	baz=308						
NSK	**Sanguang**	**1.36**	**310**	*e*P	**Pn**	**15 17 53.9**	**+0.5**
	baz=308						
WFSB	**Wu-fen Shan**	**1.42**	**332**	*e*P	**Pb**	**15 17 56.0**	**+0.4**
	baz=331						
SSLB	**Suanglung**	**1.42**	**270**	*e*P	**Pn**	**15 17 54.4**	**+0.1**
	baz=266						
SSLB				*e*S	**Sn**	**15 18 11.4**	**-0.9**
	baz=266						
JKRS	**Kuro-shima**	**1.44**	**72**	P	**Pb**	**15 17 55.6**	**-0.3**
JKRS				S	**Sb**	**15 18 14.8**	**+1.0**
DPDB	**Guoxing**	**1.47**	**279**	*e*P	**Pn**	**15 17 54.7**	**-0.1**
	baz=268						
DPDB				*e*S	**Sb**	**15 18 15.5**	**+0.9**
	baz=268						
SMLT	**Sun Moon Lake**	**1.47**	**273**	*e*P	**Pn**	**15 17 55.8**	**+0.8**
	baz=270						
SMLT				*e*S	**Sn**	**15 18 14.3**	**+0.7**
	baz=270						
LDUT	**Ludao**	**1.48**	**220**	*e*P	**Pn**	**15 17 54.5**	**-0.5**
	baz=219						
LDUT				*e*S	**Sn**	**15 18 11.9**	**-1.7**
	baz=219						
ELDTW	**Lidau**	**1.50**	**246**	P	**Pn**	**15 17 55.0**	**-0.4**
	baz=243						
ELDTW				S	**Sn**	**15 18 13.7**	**-0.7**
	baz=243						
WHP	**Taichung City**	**1.50**	**288**	*e*P	**Pb**	**15 17 57.9**	**+0.8**
	baz=285						
WHP				*e*S	**Sn**	**15 18 14.0**	**-0.4**
	baz=285						
TYC	**Yuchr**	**1.52**	**274**	*e*P	**Pn**	**15 17 56.4**	**+0.9**
	baz=270						
TYC				*e*S	**Sn**	**15 18 14.8**	**+0.3**
	baz=270						
ALS	**Alishan**	**1.59**	**260**	P	**Pn**	**15 17 57.5**	**+0.7**
	baz=256						
ALS				*e*S	**Sn**	**15 18 16.4**	**-0.3**
	baz=256						
JIJ	**Ishigaki jima**	**1.59**	**69**	P	**Pn**	**15 17 57.4**	**+0.8**
JIJ				S	**Sn**	**15 18 17.0**	**+0.6**
LIOB	**Emei**	**1.60**	**302**	*e*P	**Pb**	**15 17 58.8**	**+0.1**
	baz=288						
LIOB				*e*S	**Sb**	**15 18 19.8**	**+1.4**
	baz=288						
YM05	**YM05**	**1.60**	**328**	*e*P	**Pb**	**15 17 59.8**	**+1.0**
	baz=326						
NSTT	**Nanjuang**	**1.60**	**301**	*e*P	**Pb**	**15 17 58.3**	**-0.4**
	baz=287						
NSTT				*e*S	**Sb**	**15 18 18.0**	**-0.5**
	baz=287						
TWGBT	**Beinan**	**1.64**	**233**	*e*P	**Pn**	**15 17 57.1**	**-0.2**
	baz=223						
TWGBT				*e*S	**Sn**	**15 18 16.9**	**-0.8**
	baz=223						
TWG	**Pinlang**	**1.65**	**234**	*e*P	**Pn**	**15 17 57.2**	**0.0**
	baz=223						
TWG				*e*S	**Sn**	**15 18 17.0**	**-0.7**
	baz=223						
WNT	**Mingjian**	**1.67**	**273**	*e*P	**Pn**	**15 17 59.8**	**-0.1**
	baz=269						
WNT				*e*S	**Sb**	**15 18 20.7**	**+0.1**
	baz=269						
TWQ1	**Liyutan**	**1.68**	**289**	*e*P	**Pb**	**15 17 59.5**	**-0.5**
	baz=285						
TWQ1				*e*S	**Sb**	**15 18 20.7**	**+0.1**
	baz=285						
CHN5	**Tsauling**	**1.69**	**263**	*e*P	**Pb**	**15 17

	baz=274								
PNG	**Penghu**	**2.72**	**266**	*e*P		**Pn**	**15 18 13.0**	**+1.0**
	baz=261								
PNG				*e*S		**Sn**	**15 18 44.9**	**+0.7**
	baz=261								

IDC 07 15:38:53.5±2.5, 7°11N×93°51E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/40, mbtmp3.4/5, ML3.8/1, Error ellipse: s-maj=88.5km s-min=26.2km az=63.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.46**	**25**	Pn	Pn	15 41 52.7	+0.4
	0.2nm,0.3s,baz=213,slow=14,SNR=6.0						
MKAR	**Makanchi Array**	**40.70**	**348**	P	P	15 46 35.0	-0.8
	0.2nm,0.4s,baz=170,slow=8.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**47.23**	**353**	P	P	15 47 28.4	+0.3
	0.5nm,0.3s,baz=172,slow=12,SNR=1.4						
WRA	**Warramunga Arr**	**48.34**	**125**	P	P	15 47 37.2	0.0
	0.7nm,1.1s,baz=305,slow=8.8,SNR=3.2						
ASAR	**Alice Springs**	**49.91**	**129**	P	P	15 47 49.2	-0.1
	0.2nm,0.7s,baz=296,slow=7.9,SNR=1.5						

*IDC **07** 15:43:14.1±1.4, 7°30N×94°08E, h0km, mb3.7/7, mb1 3.7/9, mb1mx3.6/48, mbtmp3.6/9, ML3.6/2, MS3.4/12, Ms1 3.4/12, ms1mx3.1/41, Error ellipse: s-maj=53.9km s-min=19.4km az=57.0*

ISC 07 15:43:15.7±1.1, 7°3N±0°1×94°1E±0°2, h10km, n14, σ0°55/9, mb3.6/7, MS3.4/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**6.61**	**132**	Pn	**Pn**	**15 44 53.8**	**+0.6**
	0.3nm,0.3s,baz=176,slow=21,SNR=1.2						
PSI				LR	LR	15 47 38.1	
	comp=Z,242nm,18.7s,baz=152,slow=40						
CMAR	**Chiang Mai Arr**	**12.06**	**23**	Pn	**Pn**	**15 46 08.2**	**+0.4**
	0.3nm,0.3s,baz=211,slow=15,SNR=6.5						
CMAR				LR	LR	15 50 31.8	
	comp=Z,130nm,19.3s,baz=240,slow=36						
LEM	**Lembang**	**19.51**	**136**	LR	LR	15 56 33.3	
	comp=Z,169nm,18.7s,baz=269,slow=41						
BATI	**Baumata**	**34.25**	**120**	LR	LR	16 05 10.2	
	comp=Z,184nm,18.1s,baz=262,slow=38						
MKAR	**Makanchi Array**	**40.61**	**348**	P	**P**	**15 50 55.6**	**-0.2**
	0.8nm,0.6s,baz=176,slow=7.5,SNR=8.5						
MKAR				LR	LR	16 11 18.9	
	comp=Z,24nm,18.4s,baz=164,slow=42						
SONM	**Songino Array**	**41.73**	**13**	P	**P**	**15 51 04.6**	**-0.5**
	0.2nm,0.4s,baz=250,slow=38,SNR=1.1						
SONM				LR	LR	16 11 28.9	
	comp=Z,44nm,18.1s,baz=160,slow=41						
KSRS	**Korea Array**	**42.95**	**41**	LR	LR	16 12 19.4	
	comp=Z,29nm,19.0s,baz=214,slow=41						
GEYT	**Alibeck**	**44.55**	**319**	P	**P**	**15 51 28.4**	**+0.4**
	1.9nm,0.7s,baz=141,slow=7.6,SNR=2.5						
ZALV	**Zalesovo Beam**	**47.09**	**353**	P	**P**	**15 51 47.6**	**-0.2**
	2.9nm,0.9s,baz=187,slow=7.1,SNR=5.6						
ZALV				LR	LR	16 12 20.7	
	comp=Z,34nm,18.1s,baz=222,slow=37						
WRA	**Warramunga Arr**	**48.02**	**125**	P	**P**	**15 51 54.6**	**-0.8**
	0.3nm,0.9s,baz=306,slow=8.5,SNR=5.0						
WRA				LR	LR	16 13 31.1	
	comp=Z,26nm,21.0s,baz=215,slow=38						
ASAR	**Alice Springs**	**49.63**	**130**	P	**P**	**15 52 07.5**	**-0.4**
	0.3nm,0.6s,baz=133,slow=28,SNR=2.5						
ASAR				LR	LR	16 15 42.8	
	comp=Z,41nm,18.2s,baz=322,slow=39						
BRTR	**Keskin Array B**	**62.72**	**311**	LR	LR	16 24 05.6	
	comp=Z,14nm,18.4s,baz=74,slow=39						
FINES	**FINESS Array B**	**73.16**	**332**	P	**P**	**15 54 46.6**	**+0.2**
	1.3nm,0.8s,baz=111,slow=10,SNR=3.9						
VNDA	**Vanda**	**92.40**	**168**	LR	LR	16 37 27.2	
	comp=Z,17nm,18.4s,baz=290,slow=35						

IDC 07 15:49:19.6±1.8, 7°27N×94°02E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/50, mbtmp3.5/6, ML3.9/1, Error ellipse: s-maj=74.5km s-min=24.4km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.12**	**23**	Pn	Pn	15 52 14.8	+1.1
	0.2nm,0.3s,baz=210,slow=14,SNR=4.2						
MKAR	**Makanchi Array**	**40.65**	**348**	P	P	15 57 00.6	-1.0
	0.6nm,0.6s,baz=168,slow=8.5,SNR=6.6						
ZALV	**Zalesovo Beam**	**47.14**	**353**	P	P	15 57 53.4	-0.2
	0.3nm,0.4s,baz=166,slow=8.6,SNR=2.5						
WRA	**Warramunga Arr**	**48.01**	**125**	P	P	15 57 59.7	-1.2
	0.2nm,0.8s,baz=305,slow=8.5,SNR=1.7						
ASAR	**Alice Springs**	**49.62**	**129**	P	P	15 58 14.0	+0.8
	0.4nm,1.0s,baz=303,slow=7.9,SNR=1.4						
FINES	**FINESS Array B**	**73.19**	**332**	P	P	16 00 52.8	+0.7
	0.7nm,0.7s,baz=164,slow=7.2,SNR=3.9						

*IDC **07** 16:00:16.6±2.4, 6°05S×151°54E, h56km±15km, mb3.4/8, mb1 3.6/9, mb1mx3.4/32, mbtmp3.7/9, Error ellipse: s-maj=48.1km s-min=8.7km az=122.0*

ISC 07 16:00:13.6±1.5, 6°2S±0°1×151°8E±0°2, h35km, n11, σ1°25/14, mb3.6/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.87**	**7**	P	**Pn**	**16 00 44.0**	**+1.0**
	316nm,0.3s,baz=132,slow=2.5,SNR=39						
KRVT				S	**Sn**	**16 01 07.5**	**+2.0**
	213nm,0.3s,baz=169,slow=20,SNR=11						
PMG	**Port Moresby**	**5.60**	**235**	P	**Pn**	**16 01 36.4**	**+2.0**
	8.7nm,0.3s,baz=54,slow=9.4,SNR=22						
PMG				S	**Sn**	**16 02 37.9**	**+0.3**
	9.1nm,0.3s,baz=80,slow=4.7,SNR=8.5						
WRA	**Warramunga Arr**	**21.79**	**229**	P	**P**	**16 05 02.8**	**+0.1**
	0.8nm,0.8s,baz=53,slow=11,SNR=9.4						
WRA				PcP	**PcP**	**16 09 03.7**	**+1.4**
	0.2nm,0.5s,baz=55,slow=2.6,SNR=1.6						
ASAR	**Alice Springs**	**24.46**	**223**	P	**P**	**16 05 29.8**	**+0.3**
	1.1nm,0.7s,baz=55,slow=8.9,SNR=15						
FITZ	**Fitzroy Crossi**	**28.13**	**243**	P	**P**	**16 06 02.1**	**-0.4**
	1.6nm,0.5s,baz=45,slow=8.0,SNR=18						
CMAR	**Chiang Mai Arr**	**57.56**	**296**	P	**P**	**16 09 58.8**	**-1.4**
	0.3nm,0.7s,baz=115,slow=5.4,SNR=1.1						
SONM	**Songino Array**	**66.95**	**329**	P	**P**	**16 11 02.0**	**-0.7**
	0.3nm,0.4s,baz=180,slow=2.7,SNR=2.0						
MKAR	**Makanchi Array**	**80.69**	**319**	P	**P**	**16 12 23.3**	**+0.1**
	0.2nm,0.6s,baz=101,slow=7.6,SNR=1.8						
ZALV	**Zalesovo Beam**	**81.73**	**327**	P	**P**	**16 12 26.6**	**-1.8**
	0.3nm,0.4s,baz=108,slow=9.3,SNR=2.0						
ILAR	**Eielson Array**	**83.80**	**22**	P	**P**	**16 12 38.9**	**-0.1**
	0.6nm,0.6s,baz=242,slow=5.4,SNR=12						
TORD	**Torodi Ar. Bea**	**149.74**	**285**	PKPbc	**PKPbc**	**16 20 00.5**	**-0.4**
	1.7nm,0.6s,baz=70,slow=3.3,SNR=12						

*KRNET **07** 16:00:20.4±0.1, 42°07N×76°19E, h18km, mb3.1*
*SOME **07** 16:00:20.5, 42°07N×76°18E, h10km*
*NNC **07** 16:00:21.2±0.6, 42°12N×76°20E, h0km, mb3.5, mpv3.5, Error ellipse: s-maj=4.1km s-min=2.2km az=13.0*
*KNET **07** 16:00:21.3±0.4, 42°15N×76°16E, h13km±5km, ml2.2, Error ellipse: s-maj=7.2km s-min=3.2km az=76.0*

ISC 07 16:00:21.4±0.9, 42°13N±0°03×76°18E±0°01, h12km±6km, n81, σ1°08/147, 48C-20D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**0.13**	**21**	⇓*i*P	**Pg**	**16 00 24.5**	**-0.4**
	baz=12						
ULHL				⇓*i*S	**Sg**	**16 00 27.4**	**0.0**
	baz=12						
ULHL	**Ulahol**	**0.13**	**21**	⇑P	**Pg**	**16 00 24.6**	**-0.3**
	84nm,0.1s						
ULHL				⇑S	**Sg**	**16 00 27.5**	**+0.1**
	711nm,0.2s						
BOOM	**Boomskoye usch**	**0.41**	**334**	⇑*i*P	**Pg**	**16 00 29.4**	**-0.1**
	baz=36						
BOOM				⇑*i*S	**Sb**	**16 00 35.9**	**-0.9**
	baz=36						
KDJ	**Kajisay**	**0.74**	**89**	⇓*i*P	**Pg**	**16 00 34.3**	**-1.6**
	baz=85						
KDJ				⇓*i*S	**Sg**	**16 00 44.6**	**-1.1**
	baz=85						
TKM2	**Tokmak 2**	**0.91**	**332**	⇑*i*P	**Pg**	**16 00 38.4**	**-0.5**
	baz=33						
TKM2				⇑*i*S	**Sb**	**16 00 51.7**	**+0.5**
	baz=33						
TKM2	**Tokmak 2**	**0.91**	**332**	P	**Pg**	**16 00 38.5**	**-0.3**
	18nm,0.1s,SNR=220						
TKM2				⇓S	**Sb**	**16 00 51.8**	**+0.6**
	45nm,0.1s						
TKM2	**Tokmak 2**	**0.91**	**332**	⇑P	**Pg**	**16 00 38.5**	**-0.5**
	7.4nm,0.3s						
TKM2				⇑S	**Sb**	**16 00 51.5**	**+0.3**
	20nm,0.3s						
KST	**Kastek**	**0.93**	**350**	⇓*i*P	**Pg**	**16 00 39.1**	**-0.3**
	baz=50						
KST				⇓*i*S	**Sn**	**16 00 52.8**	**-0.9**
	baz=50						
KST	**Kastek**	**0.93**	**350**	⇓*i*P	**Pg**	**16 00 39.1**	**-0.3**
	24nm,0.3s						
KST				⇓*i*S	**Sn**	**16 00 52.8**	**-0.9**
	27nm,0.3s						
KST	**Kastek**	**0.93**	**350**	P	**Pg**	**16 00 39.1**	**-0.3**
	24nm,0.3s						
KST				S	**Sn**	**16 00 52.8**	**-0.9**
	27nm,0.3s						
IZV	**Izvestkoviy**	**0.97**	**19**	*e*P	**Pg**	**16 00 39.6**	**-0.4**
	baz=18						
IZV				*e*S	**Sn**	**16 00 53.5**	**-1.1**
	baz=18						
IZV	**Izvestkoviy**	**0.97**	**19**	*e*P	**Pg**	**16 00 39.6**	**-0.4**
	9.6nm,0.2s						
IZV				*e*S	**Sn**	**16 00 53.5**	**-1.1**
	99nm,0.1s						
IZV	**Izvestkoviy**	**0.97**	**19**	P	**Pg**	**16 00 39.6**	**-0.4**
	9.6nm,0.2s						
IZV				S	**Sn**	**16 00 53.5**	**-1.1**
	99nm,0.1s						
MTBS	**Maitube**	**1.02**	**10**	⇑*i*P	**Pb**	**16 00 40.5**	**-0.6**
	baz=9.0						
MTBS				⇓*i*S	**Sn**	**16 00 55.2**	**-0.7**
	baz=9.0						
MTBS	**Maitube**	**1.02**	**10**	⇑*i*P	**Pb**	**16 00 40.5**	**-0.6**
	14nm,0.1s						
MTBS				⇓*i*S	**Sn**	**16 00 55.2**	**-0.7**
	103nm,0.1s						
MTBS	**Maitube**	**1.02**	**10**	P	**Pb**	**16 00 40.5**	**-0.6**
	14nm,0.1s						
MTBS				S	**Sn**	**16 00 55.2**	**-0.7**
	103nm,0.1s						
KBK	**Karagaybulak**	**1.05**	**301**	⇑*i*P	**Pb**	**16 00 41.1**	**-0.5**
	baz=3.0						
KBK				⇑*i*S	**Sg**	**16 00 56.0**	**+0.5**
	baz=3.0						
KBK	**Karagaybulak**	**1.05**	**301**	⇑P	**Pb**	**16 00 41.2**	**-0.5**
	9.2nm,0.1s,SNR=23						
KBK				⇓S	**Sn**	**16 00 56.4**	**-0.4**
	150nm,0.4s						
TNSS	**Tian-Shan**	**1.07**	**32**	*e*P	**Pb**	**16 00 41.4**	**-0.7**
	baz=29						
TNSS				⇑*i*S	**Sb**	**16 00 56.4**	**+0.2**
	baz=29						
TNSS	**Tian-Shan**	**1.07**	**32**	*e*P	**Pb**	**16 00 41.4**	**-0.7**
	9.0nm,0.1s						
TNSS				⇑*i*S	**Sb**	**16 00 56.5**	**+0.2**
	19nm,0.3s						
TNSS	**Tian-Shan**	**1.07**	**32**	P	**Pb**	**16 00 41.4**	**-0.7**
	9.0nm,0.1s						
TNSS				S	**Sb**	**16 00 56.5**	**+0.2**
	19nm,0.3s						
MDOK	**Medeo**	**1.22**	**31**	⇑*i*P	**Pn**	**16 00 44.0**	**-0.4**
	baz=30						
MDOK				⇑*i*S	**Sn**	**16 01 00.8**	**0.0**
	baz=30						
MDOK	**Medeo**	**1.22**	**31**	⇑*i*P	**Pn**	**16 00 44.0**	**-0.4**
	5.1nm,0.2s						
MDOK				⇑*i*S	**Sn**	**16 01 00.8**	**0.0**
	37nm,0.3s						
MDOK	**Medeo**	**1.22**	**31**	Pg	**Pn**	**16 00 44.0**	**-0.4**
	5.1nm,0.2s						
MDOK				Lg	Lg	16 01 00.8	
	37nm,0.3s						
UCH	**Uchtor**	**1.24**	**275**	⇑*i*P	**Pn**	**16 00 44.1**	**-0.8**
	baz=78						
UCH				⇑*i*S	**Sb**	**16 01 01.0**	**-0.1**
	baz=78						
ANVS	**Anan'yevo**	**1.28**	**59**	⇑*i*P	**Pn**	**16 00 44.7**	**-0.6**
	baz=56						
ANVS				⇑*i*S	**Sg**	**16 01 02.3**	**-0.5**
	baz=56						
KOTS	**Kotyrbulak**	**1.30**	**32**	*e*P	**Pb**	**16 00 45.8**	**-0.1**
	baz=30						
KOTS				*e*S	**Sg**	**16 01 03.8**	**+0.3**
	baz=30						
KOTS	**Kotyrbulak**	**1.30**	**32**	*e*P	**Pb**	**16 00 45.8**	**-0.1**
	15nm,0.3s						
KOTS				*e*S	**Sg**	**16 01 03.8**	**+0.3**
	69nm,0.3s						
KOTS	**Kotyrbulak**	**1.30**	**32**	P	**Pb**	**16 00 45.8**	**-0.1**
	15nm,0.3s						
KOTS				S	**Sg**	**16 01 03.8**	**+0.3**
	69nm,0.3s						
FRU1	**Bishkek**	**1.33**	**301**	⇑*i*P	**Pn**	**16 00 45.9**	**0.0**
	baz=3.0						
FRU1				⇑*i*S	**Sg**	**16 01 04.5**	**+0.1**
	baz=3.0						
CHMS	**Chumysh**	**1.37**	**310**	⇑*i*P	**Pn**	**16 00 46.3**	**0.0**
	baz=12						
CHMS				⇑*i*S	**Sg**	**16 01 05.6**	**+0.1**
	baz=12						
CHMS	**Chumysh**	**1.37**	**310**	⇑P	**Pb**	**16 00 46.8**	**-0.1**
	4.1nm,0.1s,SNR=12						
CHMS				⇓S	**Sg**	**16 01 05.4**	**-0.1**
	36nm,0.2s						
ARLS	**Aral**	**1.41**	**260**	⇑*i*P	**Pn**	**16 00 46.1**	**-0.8**
	baz=63						
ARLS				⇑*i*S	**Sn**	**16 01 05.3**	**-0.2**
	baz=63						
KRBS	**Karabastau**	**1.61**	**347**	*e*P	**Pb**	**16 00 51.4**	**+0.3**
	baz=47						
KRBS				*e*S	**Sg**	**16 01 13.4**	**+0.1**
	baz=47						
KRBS	**Karabastau**	**1.61**	**347**	*e*P	**Pb**	**16 00 51.4**	**+0.3**
	24nm,0.2s						
KRBS				*e*S	**Sg**	**16 01 13.4**	**+0.1**
	17nm,0.3s						
KRBS	**Karabastau**	**1.61**	**347**	P	**Pb**	**16 00 51.4**	**+0.3**
	24nm,0.2s						
KRBS				S	**Sg**	**16 01 13.4**	**+0.1**
	17nm,0.3s						
KTBS	**Karatobe**	**1.63**	**13**	*e*P	**Pb**	**16 00 51.6**	**+0.3**
	baz=12						
KTBS				*e*S	**Sg**	**16 01 13.8**	**0.0**
	baz=12						
KTBS	**Karatobe**	**1.63**	**13**	*e*P	**Pb**	**16 00 51.6**	**+0.3**
	13nm,0.3s						
KTBS				*e*S	**Sg**	**16 01 13.8**	**0.0**
	79nm,0.3s						
KTBS	**Karatobe**	**1.63**	**13**	P	**Pb**	**16 00 51.6**	**+0.3**
	13nm,0.3s						
KTBS				S	**Sg**	**16 01 13.8**	**0.0**
	79nm,0.3s						
USP	**Ospenovka**	**1.68**	**313**	⇑*i*P	**Pb**	**16 00 51.9**	**-0.4**
	baz=14						
USP				⇑*i*S	**Sg**	**16 01 15.3**	**-0.3**
	baz=14						
USP	**Ospenovka**	**1.68**	**313**	⇑P	**Pb**	**16 00 52.4**	**+0.1**
	8.6nm,0.2s,SNR=6.9						
USP				⇑S	**Sg**	**16 01 15.5**	**-0.1**
	33nm,0.2s						
PRZ	**Przheval'sk**	**1.69**	**77**	⇑*i*P	**Pb**	**16 00 51.6**	**-0.8**
	baz=75						
PRZ				⇑*i*S	**Sg**	**16 01 14.3**	**-1.4**
	baz=75						
SGDS	**Sogindy**	**1.75**	**320**	P	**Pb**	**16 00 53.3**	**-0.1**
	13nm,0.2s						
SGDS				S	**Sg**	**16 01 17.1**	**-0.5**
	18nm,0.1s						
KUU	**Kurty**	**1.77**	**4**	⇓*i*P	**Pb**	**16 00 54.1**	**+0.3**
	baz=3.0						
KUU				⇑*i*S	**Sg**	**16 01 18.0**	**-0.4**
	baz=3.0						
KUU	**Kurty**	**1.77**	**4**	⇓*i*P	**Pb**	**16 00 54.1**	**+0.3**
	14nm,0.2s						
KUU				⇑*i*S	**Sg**	**16 01 18.0**	**-0.4**
	32nm,0.3s						
KUU	**Kurty**	**1.77**	**4**	P	**Pb**	**16 00 54.1**	**+0.3**
	14nm,0.2s						
KUU				S	**Sg**	**16 01 18.0**	**-0.4**
	32nm,0.3s						
AML	**Almayashu**	**1.85**	**271**	⇓*i*P	**Pb**	**16 00 54.5**	**-0.8**
	baz=73						
AML				⇓*i*S	**Sb**	**16 01 19.3**	**+0.8**
	baz=73						
AML	**Almayashu**	**1.85**	**271**	⇑P	**Pb**	**16 00 54.8**	**-0.5**
	16nm,0.2s,SNR=56						
AML				⇓S	**Sb**	**16 01 19.7**	**+1.2**
	22nm,0.3s						
EKS2	**Erkin-Say**	**1.86**	**288**	⇑*i*P	**Pb**	**16 00 54.7**	**-0.6**
	baz=89						
EKS2				⇑*i*S	**Sb**	**16 01 19.6**	**+1.1**
	baz=89						
EKS2	**Erkin-Say**	**1.86**	**288**	⇑P	**Pb**	**16 00 55.8**	**+0.5**
	3.1nm,0.2s,SNR=15						
SATY	**Saty**	**1.89**	**60**	*e*P	**Pb**	**16 00 55.1**	**-0.8**
	baz=58						
SATY				*e*S	**Sb**	**16 01 20.0**	**+0.6**
	baz=58						
SATY	**Saty**	**1.89**	**60**	*e*P	**Pb**	**16 00 55.1**	**-0.8**
	7.3nm,0.1s						
SATY				*e*S	**Sb**	**16 01 20.1**	**+0.6**
	106nm,0.1s						
SATY	**Saty**	**1.89**	**60**	P	**Pb**	**16 00 55.1**	**-0.8**
	7.3nm,0.1s						
SATY				S	**Sb**	**16 01 20.1**	**+0.6**
	106nm,0.1s						
ZHN	**Zhinishke**	**1.96**	**57**	*e*P	**Pb**	**16 00 56.7**	**-0.4**
	baz=56						
ZHN				*e*S	**Sb**	**16 01 22.6**	**+1.0**
	baz=56						
ZHN	**Zhinishke**	**1.96**	**57**	*e*P	**Pb**	**16 00 56.7**	**-0.4**
	7.3nm,0.1s						
ZHN				*e*S	**Sb**	**16 01 22.6**	**+1.0**
	29nm,0.1s						
ZHN	**Zhinishke**	**1.96**	**57**	Pg	**Pb**	**16 00 56.7**	**-0.4**
	7.3nm,0.1s						
ZHN				Lg	Lg	16 01 22.6	
	29nm,0.1s						
KURS	**Kuram**	**2.00**	**46**	*e*P	**Pb**	**16 00 57.6**	**-0.1**
	baz=45						
KURS				*e*S	**Sg**	**16 01 24.1**	**-1.6**
	baz=45						
KURS	**Kuram**	**2.00**	**46**	*e*P	**Pb**	**16 00 57.6**	**-0.1**
	5.4nm,0.5s						
KURS				*e*S	**Sg**	**16 01 24.1**	**-1.6**
	26nm,0.3s						
KURS	**Kuram**	**2.00**	**46**	Pg	**Pb**	**16 00 57.6**	**-0.1**
	5.4nm,0.5s						
KURS				Lg	Lg	16 01 24.1	
	26nm,0.3s						
MRKS	**Merke**	**2.27**	**287**	⇓*i*P	**Pb**	**16 01 02.5**	**+0.2**
	8.9nm,0.2s						
MRKS				⇓*i*S	**Sg**	**16 01 32.8**	**-1.6**
	39nm,0.4s						
MRKS	**Merke**	**2.27**	**287**	Pg	**Pb**	**16 01 02.5**	**+0.2**
	8.9nm,0.2s						
MRKS				Lg	Lg	16 01 32.8	
	39nm,0.4s						
KPKS	**Kokpek**	**2.28**	**53**	*e*P	**Pb**	**16 01 02.1**	**-0.3**
	12nm,0.2s						
KPKS				*e*S	**Sb**	**16 01 32.0**	**+1.3**
	57nm,0.4s						
UZB	**Uzynbulak**	**2.33**	**63**	*e*P	**Pb**	**16 01 03.2**	**-0.3**
	4.2nm,0.1s						
UZB				*e*S	**Sb**	**16 01 33.5**	**+1.2**
	21nm,0.3s						
UZB	**Uzynbulak**	**2.33**	**63**	Pg	**Pb**	**16 01 03.2**	**-0.3**
	4.2nm,0.1s						
UZB				Lg	Lg	16 01 33.5	
	21nm,0.3s						
ARXS	**Arharly**	**2.41**	**29**	*e*P	**Pb**	**16 01 05.4**	**+0.7**
	12nm,0.3s						
ARXS				*e*S	**Sg**	**16 01 37.5**	**-1.3**
	60nm,0.2s						
ARXS	**Arharly**	**2.41**	**29**	Pg	**Pb**	**16 01 05.4**	**+0.7**
	12nm,0.3s						
ARXS				Lg	Lg	16 01 37.5	
	60nm,0.2s						
MNBS	**Baschi**	**2.54**	**39**	*e*P	**Pb**	**16 01 08.1**	**+1.1**
	3.9nm,0.2s						
MNBS				*e*S	**Sg**	**16 01 41.9**	**-1.2**
	45nm,0.4s						
MNBS	**Baschi**	**2.54**	**39**	Pg	**Pb**	**16 01 08.1**	**+1.1**
	3.9nm,0.2s						
MNBS				Lg	Lg	16 01 41.9	
	45nm,0.4s						
SHLS	**Shalkode**	**2.63**	**66**	*e*P	**Pg**	**16 01 13.6**	**+1.7**
	5.4nm,0.2s						
SHLS				*e*S	**Sg**	**16 01 51.3**	**+5.3**
	26nm,0.4s						
SHLS	**Shalkode**	**2.63**	**66**	Pg	**Pg**	**16 01 13.6**	**+1.7**
	5.4nm,0.2s						
SHLS				Lg	Lg	16 01 51.3	
	26nm,0.4s						
PDGK	**Podgornoye**	**2.72**	**63**	⇑Pn	**Pn**	**16 01 06.0**	**+1.0**
PDGK				⇑Lg	Lg	16 01 44.2	
MNAS	**Manas**	**2.75**	**279**	⇑*i*P	**Pn**	**16 01 06.9**	**+1.5**
	baz=80						
MNAS				⇑*i*S	**Sn**	**16 01 41.1**	**+2.5**
	baz=80						
TDK	**Taldyqorghan**	**3.30**	**29**	*e*P	**Pb**	**16 01 21.1**	**+1.2**
	16nm,0.2s						
TDK				*e*S	**Sg**	**16 02 04.3**	**-3.1**
	45nm,0.2s						
TDK	**Taldyqorghan**	**3.30**	**29**	Pg	**Pb**	**16 01 21.1**	**+1.2**
	16nm,0.2s						
TDK				Lg	Lg	16 02 04.3	
	45nm,0.2s						
BTLS	**Baital**	**3.30**	**333**	*e*P	**Pb**	**16 01 21.6**	**+1.7**
	2.8nm,0.4s						
BTLS				*e*S	**Sg**	**16 02 05.2**	**-2.2**
	7.4nm,0.3s						
BTLS	**Baital**	**3.30**	**333**	Pg	**Pb**	**16 01 21.6**	**+1.7**
	2.8nm,0.4s						
BTLS				Lg	Lg	16 02 05.2	
	7.4nm,0.3s						
KTMS	**Ketmen**	**3.34**	**65**	*e*P	**Pb**	**16 01 21.6**	**+1.0**
	7.1nm,0.1s						
KTMS				*e*S	**Sg**	**16 02 05.2**	**-3.6**
	9.3nm,0.3s						
KTMS	**Ketmen**	**3.34**	**65**	Pg	**Pb**	**16 01 21.6**	**+1.0**
	7.1nm,0.1s						
KTMS				Lg	Lg	16 02 05.2	
	9.3nm,0.3s						
KK31	**Karatay Array**	**4.29**	**285**	⇑Pg	**Pg**	**16 01 42.2**	**-1.4**
	0.4nm,0.3s,baz=101,slow=16,SNR=6.0						
KK31				⇑Lg	Lg	16 02 39.9	
	4.0nm,0.5s,baz=95,slow=27						
IUG	**Iuzhnay**	**4.57**	**272**	*e*P	**Pb**	**16 01 44.3**	**+2.8**
	4.0nm,0.6s						
IUG				*e*S	**Sg**	**16 02 44.4**	**-3.7**
	4.6nm,0.5s						
IUG	**Iuzhnay**	**4.57**	**272**	Pg	**Pb**	**16 01 44.3**	**+2.8**
	4.0nm,0.6s						
IUG				Lg	Lg	16 02 44.4	
	4.6nm,0.5s						

*TEH **07** 16:15:23.8, 32°64N×47°76E, h8km, ML3.5*
*ISN **07** 16:15:24.3±1.3, 32°63N×47°83E, h15km±6km, ML3

IVIS	**Veis**	**2.06**	**338**	*e*Pn	**Pn**	**16 16 01.6**	**+1.9**
IVIS				*e*		16 16 34.9	
NSR	**Nassriya**	**2.14**	**222**	*e*Pn	**Pn**	**16 16 01.0**	**+0.4**
NSR				*e*Sn	**Sn**	**16 16 27.0**	**-0.2**
IALM	**Almabolaq**	**2.26**	**8**	*e*Pn	**Pn**	**16 16 03.7**	**+1.1**
IDHR	**Dehrash**	**2.39**	**331**	*e*Pn	**Pn**	**16 16 04.8**	**+0.5**
IDHR				*e*		16 16 46.1	
ILIN	**Lien**	**2.40**	**343**	*e*		16 16 46.8	
ILIN				*e*Pn	**Pn**	**16 16 05.4**	**+0.9**
HAGD	**Aghdareh**	**2.47**	**27**	*e*Pn	**Pn**	**16 16 06.5**	**+1.1**
IPIR	**Piripir**	**2.61**	**88**	*e*Pn	**Pn**	**16 16 08.6**	**+1.2**
HSRG	**Sareghieh**	**2.65**	**9**	*e*		16 16 52.9	
HSRG				*e*Pn	**Pn**	**16 16 09.5**	**+1.6**
ROKH	**ROKH**	**2.75**	**95**	*e*Pn	**Pn**	**16 16 10.3**	**+1.0**
BHD	**Baghdad**	**2.95**	**284**	*e*Pn	**Pn**	**16 16 13.0**	**+1.2**
BHD				*e*Sn	**Sn**	**16 16 49.0**	**+1.8**
IKLH	**Kolahrood**	**3.25**	**77**	*e*Pn	**Pn**	**16 16 18.1**	**+1.8**
IKLH				*e*		16 17 25.4	
QAM	**Ghamsar**	**3.26**	**69**	*e*Pn	**Pn**	**16 16 17.8**	**+1.5**
IRAZ	**Razeghan**	**3.29**	**32**	*e*Pn	**Pn**	**16 16 18.4**	**+1.6**
QABG	**Abgarm-Qazvin**	**3.42**	**25**	*e*Pn	**Pn**	**16 16 19.2**	**+0.7**
IQOM	**Qom**	**3.52**	**50**	*e*Pn	**Pn**	**16 16 20.7**	**+0.9**
KLNJ	**Kolanjah**	**3.61**	**115**	*e*Pn	**Pn**	**16 16 22.1**	**+0.9**
IZEF	**Zefreh**	**3.83**	**85**	*e*Pn	**Pn**	**16 16 25.6**	**+1.5**
KRSH	**Karshahi**	**3.87**	**68**	*e*Pn	**Pn**	**16 16 26.0**	**+1.3**
IRAM	**Rameshesh**	**3.97**	**101**	*e*Pn	**Pn**	**16 16 26.7**	**+0.7**
QSDN	**Sirdan**	**4.04**	**16**	*e*Pn	**Pn**	**16 16 28.3**	**+1.3**
IVRN	**Varamin**	**4.04**	**53**	*e*Pn	**Pn**	**16 16 27.0**	**+0.1**
QALM	**Alamut, Qazvin**	**4.47**	**31**	*e*Pn	**Pn**	**16 16 34.1**	**+1.1**
MAHB	**Mahabad**	**4.48**	**338**	*e*Pn	**Pn**	**16 16 33.2**	**+0.2**
IDMV	**Damavand**	**4.59**	**49**	*e*Pn	**Pn**	**16 16 35.6**	**+1.0**
IANJ	**Anjilo**	**5.82**	**59**	*e*Pn	**Pn**	**16 16 52.3**	**+0.8**

DJA 07 16:32:26.4±0.4, 6°S±3°×13°0E±°, h212km±11km, M3.9/6, mB4.8/2, mb3.8/5, MLv3.9/6, Mw(mB)4.0/2, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.68**	**351**	P	Pn	16 33 02.7	-0.1
SAUI	**Saumlaki**	**2.10**	**148**	P	Pn	16 33 07.1	+0.2
MSAI	**Masohi**	**3.08**	**336**	P	Pn	16 33 17.6	-0.1
FAKI	**Fak Fak**	**3.85**	**33**	P	Pn	16 33 26.5	-0.4
KMPI	**Kaimana, Papua**	**4.33**	**55**	P	Pn	16 33 34.4	+1.7

*NEIC **07** 16:46:09.1±1.4, 7.2°S±0.1°×120.8°E±0.1°, h492km±13km, mb4.0/9, Error ellipse: s-maj=22.6km s-min=16.0km az=54.0*

*IDC **07** 16:46:09.5±0.6, 7.11°S×121.05°E, h492km±6km, mb3.2/11, mb1 3.4/16, mb1mx3.1/45, mbtmp4.1/16, Error ellipse: s-maj=25.9km s-min=8.4km az=61.0*

*DJA **07** 16:46:09.7±0.2, 7.5°S±2°×12.1°E±°, h481km±3km, M4.0/20, mb4.0/18, mB4.6/5, MLv4.1/20, Mw(mB)3.8/5*

ISC 07 16:46:09.1±0.6, 7.30S±0.07×120.83E±0.08, h489km±6km, n64, σ1s01/73, mb3.7/10, Flores Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.20**	**343**	P	**P**	**16 47 10.6**	**+0.7**
BSSI				S	**S**	**16 47 59.6**	**+0.5**
EDFI	**Ende, Flores**	**1.67**	**150**	P	**P**	**16 47 10.6**	**-1.2**
EDFI				S	**S**	**16 48 00.7**	**-1.9**
MMRI	**Maumere**	**1.92**	**134**	P	**P**	**16 47 12.3**	**-0.5**
MMRI				S	**S**	**16 48 03.0**	**-1.5**
MMRI	**Maumere**	**1.92**	**134**			**16 47 12.1**	**-0.7**
BKSI	**Bulukumba**	**2.08**	**340**	P	**P**	**16 47 14.1**	**+0.4**
BKSI				S	**S**	**16 48 05.9**	**-0.1**
WSI	**Waingapu**	**2.42**	**193**	P	**P**	**16 47 15.5**	**+0.1**
KAPI	**Kappang**	**2.51**	**335**	P	**P**	**16 47 16.8**	**+0.7**
	13nm,0.3s,baz=130,slow=3.6,SNR=25						
KAPI				S	**S**	**16 48 11.5**	**+1.1**
	2.3nm,0.3s,baz=289,slow=22,SNR=8.7						
KAPI	**Kappang**	**2.51**	**335**	P	**P**	**16 47 17.3**	**+1.2**
WBSI	**Waikabubak, Su**	**2.73**	**211**	P	**P**	**16 47 16.7**	**-0.8**
BASI	**Baing, Sumba**	**2.92**	**185**	P	**P**	**16 47 19.3**	**+0.7**
BNSI	**Bone**	**2.97**	**346**	P	**P**	**16 47 20.5**	**+1.5**
PLAI	**Plampang**	**3.39**	**243**	P	**P**	**16 47 21.7**	**-0.3**
PLAI				S	**S**	**16 48 19.1**	**-2.2**
SPSI	**Sidrap Palu**	**3.48**	**342**	P	**P**	**16 47 23.9**	**+1.2**
BATI	**Baumata**	**4.02**	**136**	P	**P**	**16 47 27.9**	**+0.9**
	41nm,0.3s,baz=269,slow=2.6,SNR=34						
BATI				S	**S**	**16 48 29.8**	**-0.6**
	76nm,0.3s,baz=25,slow=22,SNR=7.2						
BATI	**Baumata**	**4.02**	**136**	P	**P**	**16 47 27.9**	**+0.9**
TWSI	**Taliwang, Sumb**	**4.17**	**250**	P	**P**	**16 47 27.9**	**-0.3**
SOEI	**Soe**	**4.18**	**126**	P	**P**	**16 47 29.2**	**+0.8**
SOEI				S	**S**	**16 48 32.4**	**-0.6**
SOEI	**Soe**	**4.18**	**126**		**P**	**16 47 29.0**	**+0.6**
TTSI	**Tana Toraja**	**4.34**	**346**	P	**P**	**16 47 30.5**	**+0.8**
SRBI	**Singaraja**	**5.63**	**262**	P	**P**	**16 47 40.4**	**-0.9**
	0.1nm22nm,1.4s						
KBKI	**Kotabaru**	**6.11**	**310**	P	**P**	**16 47 46.9**	**+0.8**
	0.1nm268nm30nm,0.9s						
JAGI	**Jajag, Banyuwa**	**6.72**	**260**	P	**P**	**16 47 52.3**	**+0.2**
	0.4nm2µm63nm,0.5s						
JAGI	**Jajag, Banyuwa**	**6.72**	**260**		**P**	**16 47 51.8**	**-0.4**
BBKI	**Banjar Baru**	**7.08**	**302**	P	**P**	**16 47 57.3**	**+1.5**
	0.2nm46nm,0.8s						
SANI	**Sanana**	**7.32**	**45**	P	**P**	**16 47 58.8**	**+0.6**
	0.1nm12nm,1.1s						
NLAI	**Namlea**	**7.43**	**57**	P	**P**	**16 48 00.8**	**+1.5**
	0.2nm18nm,0.6s						
MPSI	**Mapaga**	**7.64**	**353**	P	**P**	**16 48 02.6**	**+1.1**
	0.0nm7.1nm,0.9s						
GTOI	**Gorontalo**	**8.17**	**15**	P	**P**	**16 48 08.5**	**+1.4**
	3.4nm,0.9s						
GRJI	**Gresik**	**8.30**	**272**	P	**P**	**16 48 08.3**	**-0.1**
	668nm31nm,0.6s						
PWJI	**Pagerwojo**	**8.98**	**265**	P	**P**	**16 48 14.3**	**-1.3**
	29nm,0.4s						
BNDI	**Bandanaira**	**9.43**	**74**	P	**P**	**16 48 20.8**	**+0.4**
	61nm,0.7s						
WOJI	**Wonogiri, Jawa**	**9.84**	**266**	P	**P**	**16 48 24.7**	**0.0**
	25nm,1.5s						
UGM	**Wanagama**	**10.24**	**266**	P	**P**	**16 48 29.0**	**0.0**
	112nm,2.1s						
KNRA	**Kununurra**	**11.39**	**138**	P	**P**	**16 48 42.4**	**+1.3**
MTN	**Manton Dam**	**11.54**	**119**	P	**P**	**16 48 44.0**	**+1.2**
FITZ	**Fitzroy Crossi**	**11.71**	**157**	P	**P**	**16 48 46.3**	**+1.7**
	1.8nm,0.3s,baz=352,slow=6.8,SNR=112						
FAKI	**Fak Fak**	**12.17**	**70**	P	**P**	**16 48 48.3**	**-1.3**
CISI	**Cisompet, Garu**	**12.91**	**268**	P	**P**	**16 48 56.3**	**-1.2**
LEM	**Lembang**	**13.13**	**271**	P	**P**	**16 49 00.7**	**+0.8**
	3.6nm,0.3s,baz=359,slow=23,SNR=2.6						
WB0	**Warramunga Arr**	**18.08**	**135**	P	**P**	**16 49 51.2**	**+0.4**
WB0				IAmb	IAmb	16 49 52.9	
	comp=Z,2.5nm,0.5s						
WRA	**Warramunga Arr**	**18.15**	**135**	P	**P**	**16 49 51.9**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=312,slow=9.3,SNR=94						
WRA	**Warramunga Arr**	**18.15**	**135**	P	**P**	**16 49 51.5**	**0.0**
WRAB	**Tennant Creek**	**18.16**	**135**	P	**P**	**16 49 52.4**	**+0.9**
WB2	**Warramunga Arr**	**18.16**	**135**	P	**P**	**16 49 52.3**	**+0.7**
WB2				IAmb	IAmb	16 49 53.7	
	comp=Z,4.1nm,0.7s						
WR0	**Warramunga Arr**	**18.31**	**135**	P	**P**	**16 49 54.0**	**+1.1**
WR0				IAmb	IAmb	16 49 55.2	
	comp=Z,3.3nm,0.8s						
AS31	**Alice Springs**	**20.55**	**144**	P	**P**	**16 50 14.2**	**+0.8**
AS31				IAmb	IAmb	16 50 18.5	
	comp=Z,0.8nm,0.7s						
ASAR	**Alice Springs**	**20.55**	**144**	P	**P**	**16 50 14.3**	**+1.0**
	comp=Z,1.5nm,0.4s,baz=319,slow=8.3,SNR=51						
ASAR				PcP	**PcP**	**16 54 03.0**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=332,slow=1.5,SNR=6.6						
ASAR	**Alice Springs**	**20.55**	**144**	P	**P**	**16 50 15.2**	**+1.8**
STKA	**Stephens Creek**	**31.19**	**144**	P	**P**	**16 51 48.3**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=229,slow=0.8,SNR=3.7						
STKA	**Stephens Creek**	**31.19**	**144**	P	**P**	**16 51 46.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**33.49**	**320**	P	**P**	**16 52 07.5**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=153,slow=7.3,SNR=1.8						
CMAR				PcP	**PcP**	**16 54 34.6**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=180,slow=2.6,SNR=4.2						
MJAR	**Matsushiro Arr**	**46.55**	**19**	P	**P**	**16 53 50.1**	**-1.9**
	comp=Z,1.7nm,0.5s,baz=191,slow=9.3,SNR=6.0						
USRK	**Ussuriysk Ar.**	**52.24**	**10**	P	**P**	**16 54 32.6**	**-1.2**
	comp=Z,1.3nm,0.3s,baz=189,slow=7.5,SNR=12						
USRK	**Ussuriysk Ar.**	**52.24**	**10**	P	**P**	**16 54 32.4**	**-1.4**
SONM	**Songino Array**	**56.36**	**348**	P	**P**	**16 55 02.5**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=161,slow=8.3,SNR=12						
SONM	**Songino Array**	**56.36**	**348**	P	**P**	**16 55 02.5**	**-0.5**
MKAR	**Makanchi Array**	**63.81**	**332**	P	**P**	**16 55 52.4**	**-0.1**
	comp=Z,2.4nm,0.6s,baz=140,slow=7.9,SNR=23						
MKAR	**Makanchi Array**	**63.81**	**332**	P	**P**	**16 55 52.2**	**-0.4**
ZAA0	**Zalesovo Array**	**68.13**	**338**	P	**P**	**16 56 18.0**	**-1.4**
ZAA0				IAmb	IAmb	16 56 18.6	
	comp=Z,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**68.13**	**338**	P	**P**	**16 56 18.0**	**-1.3**
	comp=Z,2.9nm,0.4s,baz=144,slow=5.3,SNR=14						
KURBB	**Kurchatov Arra**	**68.28**	**333**	P	**P**	**16 56 19.8**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=140,slow=5.6,SNR=18						
VNDA	**Vanda**	**73.39**	**171**	P	**P**	**16 56 51.1**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=333,slow=7.8,SNR=2.2						
ILAR	**Eielson Array**	**97.52**	**26**	P	Pdif	16 58 47.8	-2.0
	comp=Z,0.4nm,1.0s,baz=242,slow=5.2,SNR=1.6						
CPUP	**Villa Florida**	**146.53**	**183**	PKPbc	**PKPbc**	**17 04 56.8**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=24,slow=2.5,SNR=3.2						

WEL 07 16:59:32.4, 41°S±2°×17°3E±°, h79km±2km, M2.7/19, ML2.9/19, MLv2.7/19, Error ellipse: s-maj=0.0km s-min=0.0km az=55.3, Cook Strait

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.23**	**180**	P	Pn	16 59 44.7	+0.5
NNZ				S	Sn	16 59 54.0	+1.0
DUWZ	**D'Urville Isla**	**0.45**	**65**	P	Pn	16 59 46.2	+0.5
DUWZ				S	Sn	16 59 56.4	+0.8
TUWZ	**Tuamarina**	**0.61**	**136**	P	Pn	16 59 47.5	+0.4
TUWZ				S	Sn	16 59 58.2	+0.2
QRZ	**Quartz Range**	**0.66**	**284**	P	Pn	16 59 48.3	+0.6
QRZ				S	Sn	16 59 59.9	+1.0
TCW	**Tory Channel**	**0.71**	**108**	P	Pn	16 59 48.5	+0.4
TCW				S	Sn	16 59 59.9	+0.1
BSWZ	**Blackbirch Sta**	**0.81**	**153**	P	Pn	16 59 49.6	+0.3
BSWZ				S	Sn	17 00 03.3	+1.5
THZ	**Tophouse**	**0.85**	**205**	P	Pn	16 59 50.2	+0.5
THZ				S	Sn	17 00 03.9	+1.4
KIW	**Kapiti Island**	**1.17**	**84**	P	Pn	16 59 53.1	-0.4
KIW				S	Sn	17 00 08.6	-0.7
BHW	**Baring Head**	**1.20**	**111**	P	Pn	16 59 55.0	+1.1
CAW	**Cannon Point**	**1.28**	**96**	P	Pn	16 59 54.1	-0.8
OGWZ	**Otaki Gorge**	**1.37**	**83**	P	Pn	16 59 55.6	-0.4
OGWZ				S	Sn	17 00 13.0	-0.7
DSZ	**Denniston Nort**	**1.40**	**237**	P	Pn	16 59 56.9	+0.4
KHZ	**Kahutara**	**1.43**	**175**	P	Pn	16 59 57.3	+0.6
MSWZ	**Moikau Station**	**1.48**	**107**	P	Pn	16 59 58.9	+1.5
PLWZ	**Palliser**	**1.53**	**113**	P	Pn	16 59 56.7	-1.3
PAWZ	**Paruwai Farm**	**1.59**	**105**	P	Pn	17 00 00.6	+1.7
MTW	**Mount Morrison**	**1.61**	**97**	P	Pn	17 00 00.7	+1.5
HOWZ	**Holdsworth Sta**	**1.62**	**87**	P	Pn	16 59 58.1	-1.2
MRZ	**Mangatainoka R**	**1.70**	**80**	P	Pn	17 00 01.5	+1.2
WAZ	**Wanganui**	**1.74**	**45**	P	Pn	17 00 01.9	+1.0
PREZ	**Palmer Road**	**1.75**	**20**	P	Pn	17 00 02.1	+1.0
NBEZ	**Newall Road No**	**1.76**	**12**	P	Pn	17 00 01.4	+0.3
KHEZ	**Kahui Hut**	**1.76**	**16**	P	Pn	17 00 02.0	+0.7
NEZ	**North Egmont**	**1.81**	**18**	P	Pn	17 00 02.4	+0.6
PKE	**Pukeiti**	**1.85**	**15**	P	Pn	17 00 03.6	+1.2
TMWZ	**Te Maipa**	**1.90**	**94**	P	Pn	17 00 01.5	-1.6
POWZ	**Post Office Ro**	**1.91**	**73**	P	Pn	17 00 01.3	-1.8
TIWZ	**Tintock**	**1.91**	**84**	P	Pn	17 00 03.6	+0.4
LTZ	**Lake Taylor**	**1.97**	**204**	P	Pn	17 00 03.7	-0.2
GVZ	**Greta Valley S**	**1.99**	**187**	P	Pn	17 00 04.4	+0.2
PRWZ	**Pori Road**	**2.02**	**78**	P	Pn	17 00 07.8	+3.3
CPWZ	**Castlepoint**	**2.14**	**89**	P	Pn	17 00 06.9	+0.8
VRZ	**Vera Road**	**2.15**	**30**	P	Pn	17 00 06.9	+0.7
TSZ	**Takapari Road**	**2.18**	**66**	P	Pn	17 00 05.3	-1.4
BFZ	**Birch Farm**	**2.20**	**89**	P	Pn	17 00 05.2	-1.7
DVHZ	**Dannevirke**	**2.23**	**73**	P	Pn	17 00 10.7	+3.3
INZ	**Inchbonnie**	**2.25**	**219**	P	Pn	17 00 08.1	+0.4
MTVZ	**Mangateitei**	**2.27**	**46**	P	Pn	17 00 09.3	+1.4
WNVZ	**Wahianoa**	**2.38**	**46**	P	Pn	17 00 09.3	-0.2
WHVZ	**Whangaehu Hut**	**2.41**	**46**	P	Pn	17 00 12.8	+2.9
FWVZ	**Far West T-bar**	**2.41**	**45**	P	Pn	17 00 10.7	+0.8
PNHZ	**Pukenui**	**2.41**	**64**	P	Pn	17 00 07.9	-1.9
MOVZ	**Moawhango**	**2.41**	**50**	P	Pn	17 00 09.7	-0.2
TWVZ	**Taurewa**	**2.49**	**40**	P	Pn	17 00 12.2	+1.3
NGZ	**Ngauruhoe**	**2.49**	**44**	P	Pn	17 00 13.1	+2.1
WTVZ	**West Tongariro**	**2.53**	**43**	P	Pn	17 00 13.7	+2.2
OTVZ	**Oturere**	**2.53**	**45**	P	Pn	17 00 11.4	-0.2
OXZ	**Oxford**	**2.54**	**203**	P	Pn	17 00 09.9	-1.6
BHHZ	**Black Hill Sta**	**2.54**	**55**	P	Pn	17 00 10.7	-1.0
KRVZ	**Karewarewa**	**2.57**	**43**	P	Pn	17 00 13.6	+1.5
ETVZ	**East Tongariro**	**2.58**	**45**	P	Pn	17 00 13.1	+0.9
TMVZ	**Te Maari**	**2.59**	**44**	P	Pn	17 00 14.1	+1.8
KRHZ	**Kereru**	**2.66**	**60**	P	Pn	17 00 11.2	-1.9
HIZ	**Hauiti**	**2.73**	**25**	P	Pn	17 00 14.0	0.0
OKCZ	**Okains Bay**	**2.74**	**185**	P	Pn	17 00 13.7	-0.6
MQZ	**McQueen's Vall**	**2.77**	**191**	P	Pn	17 00 12.9	-1.6
WVZ	**Waitaha Valley**	**2.86**	**223**	P	Pn	17 00 16.6	+0.7
MHCZ	**Mount Hutt**	**2.87**	**207**	P	Pn	17 00 15.9	-0.2
TLZ	**Tolley Road**	**3.14**	**33**	P	Pn	17 00 20.0	+0.3
NMHZ	**Naumai**	**3.24**	**55**	P	Pn	17 00 26.8	+5.8
GCSZ	**Gaunt Creek Bo**	**3.25**	**223**	P	Pn	17 00 21.1	+0.1
ARCZ	**Arundel**	**3.37**	**208**	P	Pn	17 00 22.2	-0.6
MTHZ	**Maungataniwha**	**3.41**	**52**	P	Pn	17 00 27.2	+3.8
TOZ	**Tahuroa Road**	**3.65**	**28**	P	Pn	17 00 26.8	+0.3
FOZ	**Fox Glacier**	**3.67**	**225**	P	Pn	17 00 26.3	-0.4
MKAZ	**Moumakai**	**4.12**	**20**	P	Pn	17 00 33.6	+0.6
ODZ	**Otahua Downs**	**4.52**	**205**	P	Pn	17 00 37.4	-0.9
JCZ	**Jackson Bay**	**4.58**	**226**	P	Pn	17 00 38.3	-1.0
WHZ	**Wether Hill Ro**	**6.29**	**217**	P	Pn	17 01 08.3	+5.8

*IDC **07** 17:11:03.8±6.9, 49.59S×111.43E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/31, mbtmp3.6/3, MS3.1/2, Ms1 3.1/2, ms1mx2.8/29, Error ellipse: s-maj=226.2km s-min=29.5km az=101.0*

*NEIC **07** 17:11:05.0±2.4, 49.47S±0.06×111.4E±0.4, h10km±1km, mb4.6/11, Error ellipse: s-maj=43.0km s-min=8.6km az=260.0*

ISC 07 17:11:05.5±1.4, 49.5S±0.1×111.5E±0.4, h10km, n19, σ1s25/14, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.72**	**9**	T	T	17 29 42.4	
	baz=193,slow=74,SNR=19						
H01W1	**Cape Leeuwin H**	**14.73**	**9**	T	T	17 29 35.9	
	baz=193,slow=74,SNR=20						
H01W3	**Cape Leeuwin H**	**14.74**	**9**	T	T	17 29 48.7	
	baz=193,slow=74,SNR=20						
STKA	**Stephens Creek**	**28.57**	**63**	LR	LR	17 26 38.7	
	comp=Z,40nm,21.5s,baz=204,slow=33						
ASAR	**Alice Springs**	**31.22**	**42**	P	**P**	**17 17 26.2**	**+1.2**
	0.6nm,0.7s,baz=209,slow=8.1,SNR=12						
VNDA	**Vanda**	**33.85**	**162**	P	**P**	**17 17 46.6**	**-0.8**
	0.2nm,0.5s,baz=298,slow=9.5,SNR=5.4						
VNDA	**Vanda**	**33.85**	**162**	P	**P**	**17 17 47.2**	**-0.3**
WC3	**Warramunga Arr**	**34.69**	**40**	P	**P**	**17 17 56.1**	**+0.8**
WC3				IAmb	IAmb	17 18 49.3	
	comp=Z,14nm,1.7s						
WRA	**Warramunga Arr**	**34.69**	**40**	P	**P**	**17 17 55.1**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=207,slow=8.8,SNR=7.4						
WB2	**Warramunga Arr**	**34.70**	**40**	P	**P**	**17 17 56.9**	**+1.5**
WB2				IAmb	IAmb	17 18 12.2	
	comp=Z,11nm,1.6s						
WRAB	**Tennant Creek**	**34.71**	**40**	P	**P**	**17 17 55.3**	**-0.2**
WRAB				IAmb	IAmb	17 18 38.9	
	comp=Z,6.7nm,1.3s						
WR0	**Warramunga Arr**	**34.76**	**40**	P	**P**	**17 17 55.3**	**-0.7**
WR0				IAmb	IAmb	17 18 24.8	
	comp=Z,15nm,1.8s						
WB0	**Warramunga Arr**	**34.87**	**40**	P	**P**	**17 17 58.3**	**+1.4**
WB0				IAmb	IAmb	17 18 00.7	
	comp=Z,21nm,1.9s						
QSPA	**South Pole Qui**	**40.63**	**180**	LR	LR	17 34 37.8	
	comp=Z,25nm,18.9s,baz=54,slow=35						
QSPA	**South Pole Qui**	**40.63**	**180**	P	**P**	**17 18 47.8**	**+2.5**
SBUM	**Sibu**	**51.75**	**1**	P	**P**	**17 20 12.6**	**-0.4**
SBUM				IAmb	IAmb	17 21 14.6	
	comp=Z,11nm,1.3s						
PMSA	**Palmer Station**	**66.01**	**182**	P	**P**	**17 21 50.0**	**-1.5**
PPTF	**Pamatai, Papee**	**82.48**	**108**	P	**P**	**17 23 27.6**	**-0.8**
PPT	**Papeete**	**82.49**	**108**	P	**P**	**17 23 27.6**	**-0.8**

*BGR **07** 17:12:54.2±1.6, 38.16N×23.55E, h10km, Ms4.8, Error ellipse: s-maj=77.8km s-min=24.5km az=55.0*

*BJI **07** 17:12:56.2±0.0, 38.30N×22.10E, h9km, mB5.3/39, mb4.8/54, Ms4.9/27, Ms7 4.7/22*

*HLW **07** 17:12:58.2, 38.40N×22.24E, h10km±46km, Md4.7*

*ATH **07** 17:12:59.4, 38.30N×22.11E, h19km±1km, ML4.8/28, Error ellipse: s-maj=1.0km s-min=0.6km az=319.0*

*ISK **07** 17:12:59.7, 38.43N×22.06E, h16km, ML4.8/53*

*UPSL **07** 17:12:59.5, 38.28N×22.12E, h10km, Mw5.0, Moment Tensor Solution. s7 Moment tensor: Mrr-2.92; Mθθ2.57; Mθφ0.35; Mrθ-2.36; Mrφ-0.17; Mφr0.12; Fault plane solution: NP1:φs93.00000°, δ65.00000°, λ-91.00000°. NP2:φs275.00000°, δ25.00000°, λ-89.00000°.*

*IDC **07** 17:12:59.2±0.3, 38.36N×22.28E, h0km, mb4.7/48, mb1 4.7/62, mb1mx4.6/73, mbtmp4.6/62, ML4.2/13, MS4.4/39, Ms1 4.4/39, ms1mx4.3/55 Error ellipse: s-maj=8.6km s-min=7.9km az=126.0*

*MED_RC **07** 17:12:59.0±0.2, 38.16N×21.99E, h13km, MW5.1/39, Moment Tensor Solution. Body waves: s9,c10;Mantle waves: s39,c62; Duration: 1s3 Moment tensor: Scale 1016Nm; Mrr-5.49±.21; Mθθ5.49±.15; Mφφ0.00±.13; Mrθ-3.28±.33; Mθφ-0.17±.13; Mφr0.74±.37; Best double couple: M0:6.44000×1016 NP1:φs266.00000°, δ30.00000°, λ-100.00000°. NP2:φs97.00000°, δ61.00000°, λ-84.00000°. Principal axes: T 6.4200, Plg16.0000°, Azm183.0000°; N 0.0500, Plg5.0000°, Azm275.0000°; P -6.4600, Plg74.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

*THE **07** 17:13:00.1, 38.29N×22.13E, h9km, ML4.8/21 Error ellipse: s-maj=0.3km s-min=0.2km az=354.0*

*NEIC **07** 17:13:00.6±2.0, 38.35N±0.05×22.27E±0.07, h6km±3km, mb5.3/246, Mwr4.9/16, ML4.8(THE), Error ellipse: s-maj=8.5km s-min=7.2km az=222.0*

*GCMT **07** 17:13:00.6±0.1, 38.15N±0.01×22.12E±0.02, h13km, MW5.1/137, Moment Tensor Solution. s91,c116; s137,c239; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-5.54±.14; Mθθ5.54±.10; Mφφ0.00±.09; Mrθ-1.17±.20; Mθφ-0.21±.07; Mφr-1.10±.27; Best double couple: M0:5.76900×1016 NP1:φs283.00000°, δ40.00000°, λ-73.00000°. NP2:φs81.00000°, δ52.00000°, λ-104.00000°. Principal axes: T 5.6640, Plg6.0000°, Azm181.0000°; N 0.2040, Plg11.0000°, Azm90.0000°; P -5.8750, Plg78.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*PDG **07** 17:13:00.2±0.9, 38.31N×22.17E, h10km±1km, ML4.6/9 Error ellipse: s-maj=0.9km s-min=0.9km az=90.0*

*TIR **07** 17:13:00.1, 38.40N×22.12E, h8km±4km, Ml5.1*

*MOS **07** 17:13:01.7±1.1, 38.43N×22.22E, h24km, mb5.1/29, MS4.5/24, Error ellipse: s-maj=4.3km s-min=2.9km az=88.1*

*NEIC **07** 17:13:01.7, 38.41N×22.19E, h4km, Moment Tensor Solution. Moment tensor: Scale 1016Nm; Mrr-3.08; Mθθ2.96; Mφφ0.12; Mrθ0.50; Mθφ-0.66; Mφr-1.09; Fault plane solution: M0:3.32000×1016 NP1:φs297.96000°, δ53.72000°, λ-70.97000°. NP2:φs87.73000°, δ40.35000°, λ-113.94000°. Principal axes: T 3.1925, Plg7.0000°, Azm15.0000°; N 0.2342, Plg15.0000°, Azm106.0000°; P -3.4267, Plg73.0000°, Azm261.0000°;*

*GII **07** 17:13:03.2±0.0, 37.32N×21.85E, h1km, Mm5.2/2*

ISC 07 17:13:00.7±0.5, 38.31N±0.01×22.15E±0.01, h9km±3km, n1015, σ1s44/1043, mb5.2/222, MS4.4/41, 42C-24D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALIK	**Aliki, Aigiali**	**0.06**	**215**	P	**Pg**	**17 13 01.7**	**-0.9**
ALIK				S	**Sg**	**17 13 03.2**	**-0.7**
KALE	**Kalithea**	**0.09**	**354**	P	**Pg**	**17 13 02.7**	**-0.4**
KALE				S	**Sg**	**17 13 05.5**	**+0.8**
KALE				AML	AML	17 13 05.8	
KALE				AML	AML	17 13 07.0	
KALE	**Kalithea**	**0.09**	**354**	P	**Pg**	**

AGG **Agios Georgios** 0.73 11 P **Pg** 17 13 13.5 -1.2
AGG S **Sb** 17 13 24.9 -0.8
AGG AML AML 17 13 27.4
comp=E,85340µm,0.4s
AGG AML AML 17 13 29.6
comp=N,95528µm,0.4s
AGG Agios Georgios 0.73 11 PG **Pg** 17 13 12.6 -2.2
AGG Agios Georgios 0.73 11 P **Pg** 17 13 13.6 -1.2
AGG 17 13 26.0
AGG Agios Georgios 0.73 11 Pg **Pg** 17 13 13.6 -1.2
AGG Sg **Sb** 17 13 25.9 +0.2
AGG Agios Georgios 0.73 11 P **Pg** 17 13 14.0 -0.8
AGG S **Sb** 17 13 25.1 -0.6
comp=N,47µm,0.4s
LKR Lokris 0.75 62 P **Pg** 17 13 14.2 -0.9
LKR AML AML 17 13 30.7
comp=E,81991µm,0.4s
LKR AML AML 17 13 31.0
LKR Lokris 0.75 62 P **Pg** 17 13 14.4 -0.7
TRIP Tripoli 0.78 173 P **Pg** 17 13 14.3 -1.5
TRIP AML AML 17 13 32.5
TRIP AML AML 17 13 36.4
TRIP Tripoli 0.78 173 P **Pg** 17 13 14.3 -1.5
ATAL Atalanti 0.78 60 P **Pg** 17 13 14.7 -1.1
ATAL AML AML 17 13 32.3
comp=N,78201µm,0.5s
ATAL AML AML 17 13 38.3
comp=E,59539µm,1.4s
ATAL Atalanti 0.78 60 P **Pg** 17 13 15.2 -0.6
ATAL S **Sb** 17 13 26.9 -0.4
comp=E,33µm,0.5s
PDO Prodromos 0.81 291 P **Pg** 17 13 15.2 -1.1
PDO AML AML 17 13 33.0
PDO AML AML 17 13 33.1
PDO Prodromos 0.81 291 P **Pg** 17 13 15.3 -1.1
PDO S **Sb** 17 13 27.1 -1.0
comp=E,131µm,0.4s
AMT Artemida-Makis 0.85 205 P **Pg** 17 13 15.3 -1.7
AMT AML AML 17 13 33.8
AMT AML AML 17 13 35.1
AMT Artemida-Makis 0.85 205 P **Pg** 17 13 15.6 -1.4
AMT S **Sg** 17 13 27.9 -0.1
comp=E,104µm,0.6s
AST1 Astakos 0.87 286 P **Pg** 17 13 16.2 -1.2
AST1 S **Sb** 17 13 28.8 -0.8
comp=E,92µm,0.8s
VIL2 Platees 0.88 96 P **Pb** 17 13 18.1 -0.2
VIL2 AML AML 17 13 40.3
VIL2 AML AML 17 13 45.6
comp=N,82470µm,1.6s
VILL Villia 0.93 98 P **Pg** 17 13 18.1 -0.4
VILL S **Sb** 17 13 31.6 +0.2
comp=N,61µm,0.9s
VLX Vlachokerasia 0.95 169 P **Pg** 17 13 17.1 -1.9
VLX AML AML 17 13 35.2
VLX AML AML 17 13 38.9
VLX Vlachokerasia 0.95 169 P **Pg** 17 13 17.5 -1.5
EPID Epidavros 1.03 132 P **Pg** 17 13 19.1 -1.4
EPID Epidavros 1.03 132 P **Pg** 17 13 19.5 -1.0
MGNA Meganis 1.12 289 P **Pg** 17 13 20.7 -1.5
ITM Ithomi 1.14 189 P **Pb** 17 13 20.3 -2.3
ITM Ithomi 1.14 189 PN **Pb** 17 13 20.0 -2.6
ITM SN **Sn** 17 13 40.4 +1.8
ITM Ithomi 1.14 189 Pg **Pb** 17 13 20.4 -2.1
ITM **Sn** 17 13 39.8 +1.2
ITM Ithomi 1.14 189 P **Pb** 17 13 20.6 -2.0
KRND KRANIDI 1.21 139 P **Pn** 17 13 22.7 -1.2
KRND AML AML 17 13 46.4
KRND AML AML 17 13 48.1
KRND KRANIDI 1.21 139 P **Pn** 17 13 22.5 -1.4
KRND S **Sb** 17 13 39.8 +0.2
comp=N,69µm,0.9s
VOL2 Volos 1.23 30 P **Pg** 17 13 24.6 +0.3
KRI1 kERI 1.23 239 P **Pn** 17 13 22.4 -1.7
VLS Valsamata 1.24 264 P **Pn** 17 13 22.1 -2.1
VLS Valsamata 1.24 264 P **Pn** 17 13 22.1 -2.1
VLS Valsamata 1.24 264 P **Pn** 17 13 22.1 -2.1
VLMS Volimes, Zakyn 1.25 250 P **Pn** 17 13 22.3 -2.1
VLMS Volimes, Zakyn 1.25 250 P **Pn** 17 13 22.6 -1.8
FSK Fiskardo 1.26 277 P **Pn** 17 13 22.3 -2.2
FSK AML AML 17 13 56.8
comp=N,67519µm,1.3s
FSK AML AML 17 13 57.5
comp=E,98838µm,1.0s
FSK Fiskardo 1.26 277 P **Pn** 17 13 22.9 -1.6
FSK S **Sb** 17 13 40.4 -0.5
comp=E,39µm,1.0s
THL Klokotos Trika 1.26 355 P **Pn** 17 13 23.0 -1.5
THL Klokotos Trika 1.26 355 P **Pn** 17 13 23.4 -1.1
LKD2 Lefkada island 1.27 293 P **Pn** 17 13 22.8 -1.8
LKD2 Lefkada island 1.27 293 P **Pn** 17 13 23.3 -1.3
baz=290
LKD2 S **Sn** 17 13 42.1 +0.4
baz=290
LKD2 Lefkada island 1.27 293 P **Pn** 17 13 23.2 -1.4
ATH Athens Observa 1.28 105 P **Pn** 17 13 24.7 -0.1
ATH Athens Observa 1.28 105 P **Pn** 17 13 24.6 -0.1
NEO Neokhori 1.30 40 P **Pn** 17 13 24.6 -0.5
NEO AML AML 17 13 49.9
comp=E,37820µm,0.6s
NEO AML AML 17 13 51.2
comp=N,32025µm,0.4s
NEO Neokhori 1.30 40 P **Pn** 17 13 24.4 -0.7
ARG2 Argostoli 1.32 265 P **Pn** 17 13 23.5 -1.7
KEF5 Kardakata, Kep 1.32 269 P **Pn** 17 13 23.6 -1.8
ATHU Athens Univers 1.33 104 P **Pn** 17 13 25.2 -0.3
ATHU Athens Univers 1.33 104 P **Pn** 17 13 24.9 -0.6
ATHU S **Sb** 17 13 42.6 -0.4
XOR Xorichti 1.33 37 P **Pn** 17 13 25.1 -0.4
XOR AML AML 17 13 52.2
comp=E,19259µm,0.5s
XOR AML AML 17 13 52.7
comp=N,51956µm,0.7s
XOR Xorichti 1.33 37 P **Pn** 17 13 24.3 -1.3
VLY Voula,Athens 1.37 109 P **Pn** 17 13 25.7 -0.4
VLY Voula,Athens 1.37 109 P **Pn** 17 13 25.0 -1.1
PTL Penteli 1.38 100 P **Pn** 17 13 26.0 -0.1
PTL Penteli 1.38 100 P **Pn** 17 13 25.0 -1.1
YDRA Hydra 1.41 132 P **Pn** 17 13 26.7 +0.1
DION Dionisos Attik 1.42 99 P **Pn** 17 13 26.8 +0.1
DION AML AML 17 13 52.4
comp=E,70590µm,0.8s
DION AML AML 17 13 55.1
comp=N,55236µm,0.7s
DION Dionisos Attik 1.42 99 P **Pn** 17 13 26.7 -0.1
DION S **Sn** 17 13 45.0 -0.6
comp=N,32µm,0.8s
PYL PYLOS 1.45 193 P **Pn** 17 13 25.8 -1.3
PYL AML AML 17 13 57.7
comp=N,51477µm,1.5s
PYL AML AML 17 14 01.1
comp=E,45910µm,1.0s
PYL PYLOS 1.45 193 P **Pn** 17 13 25.5 -1.5
KYMI Kymi, Euboea I 1.56 77 P **Pn** 17 13 28.3 -0.4
KYMI Kymi, Euboea I 1.56 77 P **Pn** 17 13 27.7 -1.0
ALNA Alonissos 1.58 57 P **Pn** 17 13 28.9 0.0
ALNA AML AML 17 14 02.1
comp=E,28810µm,0.6s
ALNA AML AML 17 14 03.4
comp=N,24783µm,0.7s
AOS Alonnisos 1.60 57 P **Pn** 17 13 28.2 -1.0
AOS Alonnisos 1.60 57 PN **Pn** 17 13 27.9 -1.3
AOS Alonnisos 1.60 57 P **Pn** 17 13 28.2 -1.0
JAN Janina 1.69 323 P **Pg** 17 13 33.1 0.0
VLI Veliai 1.70 158 P **Pn** 17 13 29.9 -0.7
VLI Veliai 1.70 158 P **Pn** 17 13 29.4 -1.2
MNVA Monemvasia 1.76 156 P **Pn** 17 13 31.0 -0.4
LIT Litokhoron 1.81 8 P **Pn** 17 13 31.5 -0.7
LIT Litokhoron 1.81 8 P **Pn** 17 13 31.4 -0.7
LIT Litokhoron 1.81 8 Pn **Pn** 17 13 31.4 -0.7
LIT Litokhoron 1.81 8 P **Pn** 17 13 31.1 -1.0
KARY Karystos 1.82 98 P **Pn** 17 13 32.3 +0.1
IGT Igoumenitsa 1.87 311 P **Pb** 17 13 34.9 -0.2
IGT Igoumenitsa 1.87 311 P **Pb** 17 13 35.4 +0.3
baz=310
IGT S **Sg** 17 14 00.8 -0.2
baz=310
KZN Kozani 2.02 352 P **Pn** 17 13 35.5 +0.5
KTHA Kythira Island 2.17 160 PN **Pn** 17 13 38.4 +1.4
LSK Leskovik 2.20 327 P **Pb** 17 13 39.8 -0.9
baz=327
LSK S **Sg** 17 14 09.8 -1.7
baz=327
LSK AMP
comp=N,49nm,0.8s,baz=327
PLG Polygyros 2.30 26 P **Pn** 17 13 38.0 -0.8
PLG Polygyros 2.30 26 P **Pn** 17 13 38.0 -0.8
KEK Kerkira 2.31 308 P **Pn** 17 13 39.6 +0.7
HORT Hortiatis 2.40 17 P **Pn** 17 13 39.5 -0.8
HORT Hortiatis 2.40 17 PN **Pn** 17 13 38.6 -1.7
HORT Hortiatis 2.40 17 P **Pn** 17 13 39.4 -0.9
OUR Ouranopolis 2.47 34 PN **Pn** 17 13 39.9 -1.3
OUR Ouranopolis 2.47 34 P **Pn** 17 13 40.5 -0.7
LIA Limnos Island 2.84 55 P **Pn** 17 13 45.9 -0.4
APE Apeiranthos 2.95 114 P **Pn** 17 13 47.9 +0.1
APE Apeiranthos 2.95 114 ⇑P **Pn** 17 13 48.2 +0.3
APE ⇑S **Sn** 17 14 22.1 -1.3
APE Apeiranthos 2.95 114 PN **Pn** 17 13 49.3 +1.5
APE Apeiranthos 2.95 114 P **Pn** 17 13 48.1 +0.3
APE S **Sn** 17 14 22.0 -1.3
APE Apeiranthos 2.95 114 P **Pn** 17 13 47.2 -0.6
VLO Vlora 2.98 317 P **Pb** 17 13 51.5 -2.5
baz=317
VLO S **Sb** 17 14 29.2 -1.3
baz=317
VLO AMP
comp=N,18nm,0.7s,baz=317
OHR Ohrid 2.99 340 *i* Pn **Pb** 17 13 51.0 -3.1
RODP Rodopos 3.03 154 PN **Pn** 17 13 49.5 +0.7
SIGR SIGRI 3.03 72 PN **Pn** 17 13 48.9 0.0
IMMV Iera Moni Meta 3.20 152 PN **Pn** 17 13 52.4 +1.3
THT2 Imerovigli 3.21 125 PN **Pn** 17 13 52.9 +1.6
CESE eme 3.26 88 PN **Pn** 17 13 52.6 +0.6
SANT Santorini 3.27 125 PN **Pn** 17 13 54.1 +2.0
SANT Santorini 3.27 125 Pn **Pn** 17 13 53.1 +1.0
KNDR Palaiochora Ch 3.30 158 PN **Pn** 17 13 54.1 +1.5
SCTE Santa Cesarea 3.36 303 **Pn** 17 13 54.1 +0.7
STIP Stip 3.38 0 *i* Pn **Pn** 17 13 54.6 +0.9
BOZC Bozcaada 3.40 62 PN **Pn** 17 13 54.3 +0.4
GADA Gvkgeada 3.46 56 PN **Pn** 17 13 54.5 -0.3
URLA Izmir 3.50 88 PN **Pn** 17 13 56.1 +0.8
TIR Tirane 3.51 331 P **Pn** 17 13 58.1 +2.7
TIR Tirane 3.51 331 **Pn** 17 13 58.1 +2.7
TIR Tirane 3.51 331 P **Pn** 17 13 58.2 +2.7
baz=331
TIR S **Sb** 17 14 42.5 -3.2
baz=331
TIR AMP
comp=N,7.8nm,0.8s,baz=331
EZN Ezine 3.59 64 PN **Pn** 17 13 56.5 +0.1
PHP Peshkopia 3.62 339 P **Pn** 17 13 59.9 +2.8
baz=340
PHP S **Sb** 17 14 44.8 -4.1
baz=340
PHP AMP
comp=N,11nm,1.7s,baz=340
SKO Skopje 3.70 352 *i* Pn **Pn** 17 13 59.9 +1.8
IDI Anoyia 3.73 143 Pn **Pn** 17 13 58.3 -0.2
comp=N,23nm,0.3s,baz=282,slow=4.5,SNR=67
IDI Sn **Sn** 17 14 40.7 -1.9
comp=N,62nm,0.3s,baz=323,slow=22,SNR=3.4
IDI LR LR 17 16 01.0
comp=N,4µm,21.7s,baz=282,slow=49
IDI Anoyia 3.73 143 ⇓P **Pn** 17 13 58.6 +0.1
IDI ⇓S **Sn** 17 14 42.1 -0.5
IDI Anoyia 3.73 143 PN **Pn** 17 14 00.4 +1.9
IDI Anoyia 3.73 143 Pn **Pn** 17 13 58.0 -0.5
GVD Gavdhos 3.79 155 PN **Pn** 17 14 01.7 +2.4
DKL Dikili 3.80 77 PN **Pn** 17 14 00.2 +0.8
HRKL Herakleio 3.81 141 PN **Pn** 17 14 01.9 +2.3
BLCB Balcova 3.85 87 PN **Pn** 17 14 01.1 +1.1
RDO Rodhopi 3.85 42 PN **Pn** 17 13 59.7 -0.5
ENEZ Enez 3.93 51 PN **Pn** 17 14 00.5 -0.7
GELI Tayfur-Gelibol 3.95 57 PN **Pn** 17 14 01.9 +0.5
GCAM G?zelcaml? 4.06 97 PN **Pn** 17 14 04.5 +1.5
PUK Puka 4.11 336 P **Pn** 17 14 06.9 +3.1
baz=336
PUK S **Sb** 17 14 57.8 -5.3
baz=336
ERIK Erikli-Kesan 4.12 54 PN **Pn** 17 14 03.9 +0.1
LPK Lapseki 4.13 59 PN **Pn** 17 14 04.1 +0.2
KOSK Kos Island 4.14 111 PN **Pn** 17 14 05.9 +1.8
KDZ Kurdzhali 4.18 36 PN **Pn** 17 14 03.1 -1.5
PLD Plovdiv 4.27 26 PN **Pn** 17 14 05.4 -0.4
BODT Bodrum 4.28 105 PN **Pn** 17 14 07.9 +1.9
ULC Ulcinj 4.28 330 *e*Pn **Pn** 17 14 06.9 +0.9
ULC *i* Sn **Sn** 17 14 57.1 +1.0
TIP Timpagrande 4.31 283 ⇑P **Pn** 17 14 07.8 +1.3
TIP Timpagrande 4.31 283 Pn **Pn** 17 14 07.3 +0.9
NIS1 Nisyros Isl. 4.35 111 PN **Pn** 17 14 08.9 +2.0
BCI Bajram Curri 4.36 339 P **Pn** 17 14 10.3 +3.2
baz=340
TAR1 Taranto 4.37 302 ⇑*i* Pn **Pn** 17 14 08.4 +1.1
UKOP Trzunkopru-Edir 4.46 49 PN **Pn** 17 14 08.5 0.0
DRME Dracevica, Mon 4.49 331 *e*Pn **Pn** 17 14 09.9 +1.0
DRME *i* Sn **Sn** 17 15 02.2 +0.9
DRME Dracevica, Mon 4.49 331 *e*Pn **Pn** 17 14 09.8 +0.9
AYDB Zeytinkoy-Aydi 4.54 93 PN **Pn** 17 14 11.3 +1.6
RKY Sarkoy-Tekirda 4.56 57 PN **Pn** 17 14 10.4 +0.5
ZKR Zakros 4.56 133 PN **Pn** 17 14 12.2 +2.3
MLSB Milas 4.57 101 PN **Pn** 17 14 11.7 +1.7
PVY Plav 4.60 339 *e*Pn **Pn** 17 14 11.5 +1.0
PVY *i* Sn **Sn** 17 15 04.7 +0.6
MAR6 Marsite Statio 4.62 57 PN **Pn** 17 14 11.3 +0.6
GONE Gonen-Balikesi 4.64 66 PN **Pn** 17 14 11.9 +1.0
BALB Balikesir 4.66 72 PN **Pn** 17 14 12.2 +1.0
MAR2 Marsite Statio 4.66 57 PN **Pn** 17 14 11.9 +0.7
MAR3 Marsite Statio 4.66 57 PN **Pn** 17 14 11.9 +0.6
PDG Podgorica 4.67 333 ⇑P **Pn** 17 14 12.9 +1.4
PDG Podgorica 4.67 333 *e*Pn **Pn** 17 14 11.8 +0.4
PDG Podgorica 4.67 333 Pn **Pn** 17 14 12.3 +0.9
TTG Podgorica 4.67 333 *e*Pn **Pn** 17 14 12.5 +1.1
TTG *i* Sn **Sn** 17 15 06.7 +0.9
GZKV Gazikoy-Tekird 4.69 57 PN **Pn** 17 14 11.9 +0.3
MAR4 Marsite Statio 4.69 56 PN **Pn** 17 14 12.2 +0.5
BUM Brajici-Budva 4.70 329 *e*Pn **Pn** 17 14 12.5 +0.6
BUM *i* Sn **Sn** 17 15 07.7 +1.1
MRMT Marmara Adasi 4.80 60 PN **Pn** 17 14 13.7 +0.5
MATE Matera 4.82 301 ⇑P **Pn** 17 14 14.8 +1.4
KARP Karpathos 4.87 123 PN **Pn** 17 14 16.5 +2.4
KARP Karpathos 4.87 123 Pn **Pn** 17 14 16.3 +2.2
IVA Berane 4.87 340 *e*Pn **Pn** 17 14 15.2 +0.9
IVA *i* Sn **Sn** 17 15 12.0 +1.2
EDC Edincik 4.88 64 PN **Pn** 17 14 14.6 +0.4
CEME Cevo 4.90 331 *e*Pn **Pn** 17 14 15.3 +0.7
CEME *i* Sn **Sn** 17 15 12.5 +1.0
CEL Celeste 4.92 271 **Pn** 17 14 16.4 +1.4
SG1 Sgolgore (BA) 4.93 303 *e*Pn **Pn** 17 14 15.9 +1.0
BAI Bari 4.94 306 ⇓*i* Pn **Pn** 17 14 15.7 +0.7
TKR Tekirdag 4.95 55 PN **Pn** 17 14 15.7 +0.6
KOME Kolasin 4.96 337 *e*Pn **Pn** 17 14 16.0 +0.5
KOME *i* Sn **Sn** 17 15 13.9 +0.9
EDRB Edirne 4.99 43 PN **Pn** 17 14 15.6 -0.2
HCY Herceg Novi 4.99 327 *e*Pn **Pn** 17 14 16.6 +0.8
HCY *i* Sn **Sn** 17 15 14.6 +1.0
HCY Herceg Novi 4.99 327 *e*Pn **Pn** 17 14 16.3 +0.5
YER Yerkesik 5.00 102 PN **Pn** 17 14 18.1 +2.1
YER Yerkesik 5.00 102 P **Pn** 17 14 18.1 +2.1
MANT Manisa 5.04 86 Pn **Pn** 17 14 17.8 +1.2
NKME Niksic 5.08 332 *e*Pn **Pn** 17 14 17.8 +0.8
NKME *i* Sn **Sn** 17 15 17.0 +1.2
TURN Turunc 5.08 106 PN **Pn** 17 14 19.1 +2.1
NKY Niksic 5.10 333 *e*Pn **Pn** 17 14 18.4 +1.0
NKY *i* Sn **Sn** 17 15 17.1 +0.6
KULA Kula-Manisa 5.12 86 PN **Pn** 17 14 19.1 +1.5
ARG Arkhangelos 5.20 112 PN **Pn** 17 14 20.9 +2.2
TREB Trebinje 5.27 328 *e*Pn **Pn** 17 14 19.6 0.0
BRY Bratogost 5.35 330 *e*Pn **Pn** 17 14 21.3 +0.5
BRY *i* Sn **Sn** 17 15 23.0 +0.3
BRY Bratogost 5.35 330 *e*Pn **Pn** 17 14 21.7 +0.9
SIMA Simav-Kutahya 5.40 80 PN **Pn** 17 14 22.7 +1.2
PLE Pljevlja 5.44 338 *e*Pn **Pn** 17 14 22.9 +0.9
PLE *i* Sn **Sn** 17 15 25.5 +0.7
SLVT Silivri 5.50 56 PN **Pn** 17 14 23.6 +0.8
ARMT Armutlu 5.66 64 PN **Pn** 17 14 26.1 +1.1
STON Ston 5.68 325 *e*Pn **Pn** 17 14 25.1 -0.1
STON Ston 5.68 325 *e*Pn **Pn** 17 14 25.5 +0.3
CTYL Yalikoy Yolu 5.68 54 PN **Pn** 17 14 26.1 +0.8
CTKS Kestanelik-??a 5.70 57 PN **Pn** 17 14 26.6 +1.1
RUDO Rudo 5.71 339 *e*Pn **Pn** 17 14 25.8 +0.2
GEDZ Gediz 5.73 80 PN **Pn** 17 14 28.1 +2.1
FETY Fethiye 5.76 105 Pn **Pn** 17 14 29.1 +2.7
TVSB Tavsanli 5.82 76 PN **Pn** 17 14 29.2 +2.0
CAME Cameli-Denizli 5.84 101 PN **Pn** 17 14 29.8 +2.2
GEMT Gemlik 5.85 67 PN **Pn** 17 14 29.4 +1.8
BGKT Bogazkoy 5.86 59 PN **Pn** 17 14 28.7 +1.1
TRML Termal-Yalova 5.90 65 PN **Pn** 17 14 29.6 +1.3
BBLS Lazići 5.93 340 *e*Pn **Pn** 17 14 29.9 +1.2
VLAD Vladila 5.94 16 ⇑P **Pn** 17 14 29.6 +0.9
LSTV Lastovo 5.99 320 *e*Pn **Pn** 17 14 30.0 +0.5
PUNG Punghina 6.00 5 ⇓P **Pn** 17 14 31.1 +1.6
ISK Istanbul-Kandi 6.00 60 PN **Pn** 17 14 30.9 +1.3
KAVV Kandilli-Istan 6.00 61 PN **Pn** 17 14 30.9 +1.3
SGRT San Giovanni R 6.00 307 **Pn** 17 14 30.1 +0.3
DIVS Divibare 6.01 345 *e*Pn **Pn** 17 14 30.5 +0.6
DIVS Divibare 6.01 345 **Pn** 17 14 29.4 -0.4
KLYT Kilyos 6.07 59 PN **Pn** 17 14 31.1 +0.5
VAE Valguarnera 6.18 265 Pn **Pn** 17 14 35.1 +3.0
comp=N,4.3nm,0.3s,baz=135,slow=7.1,SNR=3.8
VAE Sn **Sn** 17 15 45.2 +2.3
comp=N,12nm,0.3s,baz=230,slow=12,SNR=8.7
RAZG Razgrad 6.20 31 ⇑P **Pn** 17 14 32.3 -0.1
BASM Basmaki-Afyon 6.24 91 PN **Pn** 17 14 35.2 +2.2
ADVT Abdulvahap 6.25 68 PN **Pn** 17 14 34.9 +1.8
HAPS Han Pijesak,BI 6.26 338 *e*Pn **Pn** 17 14 32.7 -0.6
CAVI Cavuskoy 6.26 70 PN **Pn** 17 14 34.6 +1.3
COPA Copaceanca 6.26 21 ⇓P **Pn** 17 14 34.6 +1.3
AKAS Kas 6.29 107 **Pn** 17 14 33.8 0.0
MAKA Makarska 6.32 324 *e*Pn **Pn** 17 14 34.3 +0.3
HRT Hereke 6.33 64 PN **Pn** 17 14 35.4 +1.2
ELL Elmali 6.36 102 P Pn 17 14 39.7 +5.0
ELL Elmali 6.36 102 **Pn** 17 14 39.7 +5.0
SRE Strehaia 6.40 7 ⇑P **Pn** 17 14 36.3 +1.2
RICI Ricice 6.43 325 *e*Pn **Pn** 17 14 36.0 +0.5
SILT Sile 6.44 61 PN **Pn** 17 14 37.0 +1.4
PAOL Paolisi 6.45 297 **Pn** 17 14 37.8 +1.9
MDVR Moldovita 6.48 357 ⇑P **Pn** 17 14 37.4 +1.2
TEKS Tekeris 6.54 343 *e*Pn **Pn** 17 14 37.8 +0.7
HERR Herculane 6.57 2 ⇑P **Pn** 17 14 37.8 +0.4
SGRR Singureni 6.57 25 ⇓P **Pn** 17 14 37.8 +0.3
SHUT Suhut-Afyon 6.60 85 PN **Pn** 17 14 40.3 +2.3
ISP Isparta 6.62 92 PN **Pn** 17 14 40.4 +2.1
ISP Isparta 6.62 92 P **Pn** 17 14 40.4 +2.1
ISP Isparta 6.62 92 **Pn** 17 14 40.4 +2.1
SPNC Sapanca-Adapaz 6.74 67 PN **Pn** 17 14 41.6 +1.8
SAUV Serdivan-Sakar 6.77 66 PN **Pn** 17 14 41.6 +1.4
SRCK Saricakaya, Es 6.81 73 PN **Pn** 17 14 42.6 +1.8
GULT Gulveren 6.82 69 PN **Pn** 17 14 42.2 +1.2
STFAR Stefanesti-Arg 6.88 17 ⇓P **Pn** 17 14 42.6 +0.9
CORL Corleone 6.99 269 **Pn** 17 14 43.4 +3.5
FRGS Fruska Gora 7.07 346 ⇓*i* Pn **Pn** 17 14 44.4 +0.1
GZR Gura Zlata 7.10 4 ⇑P **Pn** 17 14 45.9 +1.1
CLTB Caltabellotta 7.10 267 **Pn** 17 14 47.9 +3.0
KIJV Kijevo 7.15 325 *e*Pn **Pn** 17 14 45.7 +0.2
LOT Lotru 7.24 9 ⇓P **Pn** 17 14 46.8 +0.1
MTUR Matau 7.25 17 ⇓P **Pn** 17 14 48.5 +1.7
SLUM Salum 7.25 159 P **Pn** 17 14 46.0 -0.8
baz=159
ARR Arges 7.29 14 ⇑P **Pn** 17 14 48.8 +1.3
BZS Buzias 7.32 357 ⇓P **Pn** 17 14 48.8 +1.1
MDUB Mudurnu 7.33 70 **Pn** 17 14 49.5 +1.5
SECR 7.33 22 ⇑P **Pn** 17 14 49.9 +1.9
MANR Mangalia 7.34 39 ⇑P **Pn** 17 14 48.4 +0.3
MORI Morici 7.38 321 *e*Pn **Pn** 17 14 49.5 +0.8
BLV Banja Luka 7.44 332 ⇓*i* Pn **Pn** 17 14 50.3 +1.0
VOIR 7.45 16 ⇑P **Pn** 17 14 50.4 +0.8
MLR Muntele Rosu 7.71 20 Pn **Pn** 17 14 54.8 +1.5
comp=N,4.1nm,0.3s,baz=28,slow=1.4,SNR=27
MLR Lg Lg 17 17 02.7
comp=N,0.2nm,0.3s,baz=125,slow=18,SNR=1.2
MLR LR LR 17 18 38.1
comp=N,8µm,19.6s,baz=193,slow=44
MLR Muntele Rosu 7.71 20 ⇑P **Pn** 17 14 54.3 +1.0
MLR Muntele Rosu 7.71 20 P **Pn** 17 14 54.9 +1.6
TIRR Tirgusor 7.74 35 ⇓P **Pn** 17 14 54.0 +0.5
TIRR Tirgusor 7.74 35 P **Pn** 17 14 53.4 -0.1
TIRR Tirgusor 7.74 35 **Pn** 17 14 53.4 -0.1
NEHR Nehoiu 7.76 22 ⇑P **Pn** 17 14 54.4 +0.7
DUGI Dugi Otok 7.80 319 *e*Pn **Pn** 17 14 54.9 +0.5
PRIJ Prijedor 7.81 330 *e*Pn **Pn** 17 14 51.9 -2.5
AQU L'Aquila 7.81 304 P **Pn** 17 14 56.3 +1.8
AQU L'Aquila 7.81 304 ⇓*i* Pn **Pn** 17 14 57.1 +2.6
AQU L'Aquila 7.81 304 **Pn** 17 14 56.3 +1.8
UDBI Udbina 7.85 324 *e*Pn **Pn** 17 14 57.2 +2.1
BISRR Bisoca 7.99 24 ⇓P **Pn** 17 14 59.0 +1.9
DOPR Dopca 8.02 16 ⇓P **Pn** 17 14 58.9 +1.4
TPGR Topolog 8.05 34 ⇓P **Pn** 17 14 58.5 +0.7
MATC Matruh 8.10 147 P **Pn** 17 14 58.1 -0.4
baz=148
CFR Carcaliu 8.19 31 ⇓P **Pn** 17 15 01.3 +1.6
NRCA Norcia 8.23 306 **Pn** 17 15 01.6 +1.3
OZUR 8.24 18 ⇑P **Pn** 17 15 02.1 +1.8
PLOR Plostina 8.25 22 ⇑P **Pn** 17 15 02.1 +1.5
PLOR Plostina 8.25 22 P **Pn** 17 15 02.0 +1.5
VRI Vrincioaia 8.28 23 ⇑P **Pn** 17 15 02.6 +1.6
NVLJ Novalja 8.30 321 *e*Pn **Pn** 17 15 01.2 0.0
MORH Mrgy, Hungar 8.32 343 *e*Pn **Pn** 17 15 00.9 -0.5
MOSL Moslavina 8.33 333 *e*Pn **Pn** 17 15 01.2 -0.5
BR231 Keskin MP Arra 8.41 76 **Pn** 17 15 03.7 +0.9
TLCR 8.49 34 ⇓P **Pn** 17 15 04.9 +1.2
MURB Monte Urbino 8.82 307 Pn **Pn** 17 15 10.9 +2.5
TESR Tescani 8.85 21 ⇑P **Pn** 17 15 09.1 +0.4
PTJ Puntijarka 8.87 331 *e*Pn **Pn** 17 15 09.4 +0.3
KALN Kalnik 8.88 333 *e*Pn **Pn** 17 15 09.0 -0.3
LATE Laterza 8.98 302 **Pn** 17 15 12.2 +1.6
CRES Cresnjev 9.01 329 *e*Pn **Pn** 17 15 09.6 -1.3
RIY Rijeka 9.05 323 *e*Pn **Pn** 17 15 11.3 -0.2
RIY Rijeka 9.05 323 *e*Pn **Pn** 17 15 12.1 +0.6
BR131 Keskin Array S 9.05 77 P **Pn** 17 15 15.0 +3.3
SNR=19
BR131 Keskin Array S 9.05 77 *i* P **Pn** 17 15 13.0 +1.3
BR131 Keskin Array S 9.05 77 **Pn** 17 15 12.8 +1.1
BRTR Keskin Array B 9.05 77 Pn **Pn** 17 15 13.3 +1.6
comp=N,3.5nm,0.3s,baz=256,slow=14,SNR=51
BRTR Lg Lg 17 17 42.9
baz=274,slow=14,SNR=1.3
BRTR LR LR 17 19 31.5
comp=N,651nm,20.9s,baz=270,slow=44
BRTR Keskin Array B 9.05 77 **Pn** 17 15 13.2 +1.5
BEHE Becsehely 9.07 336 *e*Pn **Pn** 17 15 15.2 +3.4
BIZ Bicaz 9.11 17 ⇓P **Pn** 17 15 14.1 +1.9
ILGA Ilgaz 9.33 69 **Pn** 17 15 16.9 +1.4
CEY Cerknica 9.39 325 *e*Pn **Pn** 17 15 15.9 -0.2
SWA2 9.45 162 P **Pn** 17 15 14.9 -2.1
baz=162
SWA2 S **Sn** 17 16 56.4 -6.9
baz=162
BURAR Bucovina Array 9.57 13 ⇓P **Pn** 17 15 20.8 +2.0
BURAR Bucovina Array 9.57 13 P **Pn** 17 15 20.7 +2.0
BURAR Bucovina Array 9.57 13 **Pn** 17 15 18.6 -0.1
LJU Ljubljana 9.58 326 *e*Pn **Pn** 17 15 18.2 -0.5
CSS Mathiatis 9.58 107 Pn **Pn** 17 15 22.8 +3.9
CSS Mathiatis 9.58 107 **Pn** 17 15 18.7 -0.2
BUR08 Bucovina Ar. S 9.60 12 **Pn** 17 15 18.6 -0.5
CASP Castiglione de 9.69 301 **Pn** 17 15 21.3 +1.1
PSZ Piszkesteto 9.75 351 ⇑P **Pn** 17 15 23.5 +2.4
PSZ Piszkesteto 9.75 351 P **Pn** 17 15 21.8 +0.7
PSZ Piszkesteto 9.75 351 **Pn** 17 15 21.8 +0.7
OSSC Osservatorio P 9.76 306 **Pn** 17 15 22.4 +1.2
SOKA Soboth 9.88 330 *e*Pn **Pn** 17 15 23.0 +0.1
comp=N,18nm,0.5s,SNR=10
SOKA Sn **Sn** 17 17 14.5 +0.6
comp=N,30nm,0.8s
OBKA Obir 9.94 328 *e*Pn **Pn** 17 15 25.0 +1.3
comp=N,25nm,0.6s
OBKA *e*Sn **Sn** 17 17 16.8 +1.5
comp=N,90nm,0.8s
OBKA Obir 9.94 328 *e*L L 17 20 02.3
comp=N,11µm,21.2s
VSL Villasalto 10.03 281 Pn **Pn** 17 15 26.6 +1.7
ARSA Arzberg 10.18 334 *e*Pn **Pn** 17 15 27.0 0.0
comp=N,20nm,0.9s,SNR=15
ARSA Arzberg 10.18 334 *e*Pn **Pn** 17 15 26.1 -0.8
KECS Kecovo 10.24 354 *e*P **Pn** 17 15 29.8 +2.0
KECS Kecovo 10.24 354 *e*PN **Pn** 17 15 29.8 +2.0
PRED Cave del Predi 10.31 325 **Pn** 17 15 28.8 0.0
UZH Uzhgorod 10.32 1 *c i*P **Pn** 17 15 31.9 +3.0
UZH *e*S **Sn** 17 17 28.9 +4.3
UZH MLR MLR
comp=N,1µm,11.0s
UZH MLR MLR
comp=E,500nm,11.0s
UZH MLR MLR
comp=Z,1µm,11.0s
ZCCA Zocca 10.34 309 **Pn** 17 15 30.6 +1.4
MYKA Terra Mystica 10.42 326 *e*Pn **Pn** 17 15 30.6 +0.3

comp=Z,13nm,0.7s
MYKA eSn Sn 17 17 28.4 +1.3
comp=Z,20nm,0.9s
VYHS Vyhne 10.46 348 eP Pn 17 15 31.7 +0.9
VYHS e 17 17 29.0
VYHS MLR MLR
comp=Z,6µm,15.6s
VYHS Vyhne 10.46 348 ePN Pn 17 15 31.7 +0.9
VYHS eSN Sn 17 17 29.0 +0.8
VYHS eL L 17 20 24.5
TEOL Teolo 10.52 315 Pn 17 15 30.6 -1.0
KEST Kesra 10.56 260 Pn Pn 17 15 35.0 +2.8
comp=Z,0.5nm,0.3s,baz=320,slow=8.6,SNR=4.9
KEST Sn Sn 17 17 34.0 +3.4
comp=Z,0.6nm,0.3s,baz=267,slow=17,SNR=1.4
KEST Kesra 10.56 260 Pn 17 15 34.8 +2.5
STAL STALIGIAL 10.58 322 Pn 17 15 32.1 -0.4
VLC Villacollemand 10.61 307 Pn 17 15 32.9 0.0
KOLS Kolonicke sedl 10.62 0 eP Pn 17 15 34.5 +1.5
KOLS MLR MLR
comp=Z,3µm,15.7s
KOLS Kolonicke sedl 10.62 0 ePN Pn 17 15 34.5 +1.5
KOLS eL L 17 20 06.1
CONA Conrad Observa 10.65 337 ePn Pn 17 15 33.3 -0.2
comp=Z,4.9nm,0.7s
MODS Modra-Piesok 10.67 342 eP Pn 17 15 33.3 -0.3
MODS MLR MLR
comp=Z,7µm,15.2s
MODS Modra-Piesok 10.67 342 ePN Pn 17 15 33.3 -0.3
MODS eL L 17 21 19.9
ZOU Zoufplan 10.67 324 Pn 17 15 32.9 -1.0
CIMO Cimolais 10.75 321 Pn 17 15 32.9 -1.9
SORM Soroca 10.81 23 ⇑P Pn 17 15 35.4 -0.1
KBA Koelnbreinsper 10.89 326 ePn Pn 17 15 36.7 -0.2
comp=Z,14nm,0.6s,SNR=8.4
KBA Sn Sn 17 17 37.2 -1.7
comp=Z,28nm,0.8s
KBA Koelnbreinsper 10.89 326 ePn Pn 17 15 36.9 0.0
KBA eSn Sn 17 17 36.0 -3.0
PRMA PARMA 10.96 310 Pn Pn 17 15 40.3 +2.6
CTI Castel Tesino 10.97 318 P Pn 17 15 37.2 -0.7
CTI Castel Tesino 10.97 318 Pn 17 15 37.2 -0.7
ABTA Abfaltersbach 11.03 323 *i* Pn Pn 17 15 38.8 +0.2
comp=Z,28nm,0.5s,SNR=17
ABTA eSn Sn 17 17 41.0 -1.1
comp=Z,31nm,0.5s
JAVC Velka Javorina 11.04 344 ePN Pn 17 15 39.1 +0.4
MOA Molln 11.14 331 ePn Pn 17 15 40.0 -0.1
comp=Z,13nm,0.6s,SNR=10
MOA eSn Sn 17 17 47.4 +2.6
comp=Z,20nm,0.7s
MOA Molln 11.14 331 ePn Pn 17 15 40.1 0.0
NIE Niedzica 11.19 354 eP Pn 17 15 44.1 +3.3
MSSA Maissana 11.23 306 Pn 17 15 42.6 +1.2
TOKA Tokat 11.28 75 Pn 17 15 42.5 +0.4
KWP Kalwaria Pacla 11.33 2 eP Pn 17 15 47.5 +4.9
KWP Kalwaria Pacla 11.33 2 P Pn 17 15 44.9 +2.2
KWP Kalwaria Pacla 11.33 2 Pn 17 15 44.9 +2.2
RYAN Fayoum 11.41 141 P Pn 17 15 42.3 -1.6
baz=142
KRUC Moravsky 11.53 341 ePN Pn 17 15 44.6 -0.8
KOT Kottamia 11.58 133 P Pn 17 15 45.4 -0.8
baz=134
LVV L'vov 11.59 6 eP Pn 17 15 52.1 +5.9
LVV eS Sn 17 18 03.2 +7.5
LVV MLR MLR
comp=N,2µm,11.0s
LVV MLR MLR
comp=E,1µm,11.0s
LVV MLR MLR
comp=Z,2µm,11.0s
VRAC Vranov 11.70 342 Pn Pn 17 15 47.5 -0.3
comp=Z,0.4nm,0.3s,baz=169,slow=14,SNR=10
VRAC LR LR 17 21 24.7
comp=Z,2µm,18.7s,baz=177,slow=43
VRAC Vranov 11.70 342 ⇓P Pn 17 15 48.8 +1.0
VRAC Vranov 11.70 342 ePN Pn 17 15 47.7 -0.1
WTTA Wattenberg 11.81 323 ePn Pn 17 15 49.9 +0.4
comp=Z,22nm,0.5s,SNR=18
WTTA Sn Sn 17 17 58.2 -3.3
comp=Z,50nm,0.7s
WTTA Wattenberg 11.81 323 ePn Pn 17 15 50.2 +0.7
OKC Ostrava-Krasne 11.88 347 eP Pn 17 15 54.4 +4.2
OKC MLR MLR
comp=Z,7µm,8.7s
OKC Ostrava-Krasne 11.88 347 eP Pn 17 15 54.4 +4.2
OKC AMS AMS 17 21 40.0
comp=Z,7µm,8.7s
WATA Walderalm 11.89 323 ePn Pn 17 15 51.2 +0.6
comp=Z,62nm,0.6s,SNR=28
WATA eSn Sn 17 18 01.7 -1.7
comp=Z,71nm,0.8s
MORC Moravsky Berou 11.93 345 ⇓P Pn 17 15 51.9 +0.9
MORC Moravsky Berou 11.93 345 ePN Pn 17 15 51.0 0.0
MORC Moravsky Berou 11.93 345 P Pn 17 15 51.2 +0.2
MORC Moravsky Berou 11.93 345 Pn 17 15 51.2 +0.2
GAZ Gaziantep 11.98 91 Pn 17 15 51.9 +0.2
TREC Trest 11.99 339 eP Pn 17 15 51.9 +0.2
TREC MLR MLR
comp=Z,9µm,10.2s
TREC Trest 11.99 339 eP Pn 17 15 51.9 +0.2
TREC AMS AMS 17 21 00.0
comp=Z,9µm,10.2s
SQTA Sankt Quirin 11.99 321 ePn Pn 17 15 52.0 +0.1
comp=Z,40nm,0.5s,SNR=43
SQTA eSn Sn 17 18 03.7 -2.0
comp=Z,42nm,0.8s
MMAI Mount Meron Ar 12.00 112 Pn Pn 17 15 51.0 -0.9
comp=Z,2.6nm,0.3s,baz=305,slow=13,SNR=15
MMAI Sn Sn 17 18 04.9 -1.0
comp=Z,1.4nm,0.3s,baz=74,slow=15,SNR=1.4
MMAI LR LR 17 21 19.0
comp=Z,666nm,18.3s,baz=325,slow=42
MMA0B Mount Meron ar 12.00 112 Pn Pn 17 15 54.8 +2.8
OJC Ojcow 12.03 353 eP Pn 17 15 56.9 +4.7
OJC Ojcow 12.03 353 P Pn 17 15 52.1 -0.1
OJC Ojcow 12.03 353 Pn 17 15 52.1 -0.1
FUORN Ofenpass-Fuorn 12.07 317 Pn 17 15 53.3 +0.2
FETA Feichten 12.09 320 ePn Pn 17 15 53.6 +0.4
comp=Z,17nm,0.7s
FETA Sn Sn 17 18 06.6 -1.7
comp=Z,47nm,0.8s
GEM Giv'at Ha'Em 12.09 111 Pn Pn 17 15 55.8 +2.6
MOTA Moosalm 12.13 322 ePn Pn 17 15 53.6 -0.2
comp=Z,65nm,0.7s,SNR=38
MOTA eSn Sn 17 18 08.4 -0.8
comp=Z,94nm,0.9s
SLTI Sal'it 12.14 116 Pn Pn 17 15 55.5 +1.6
SLTI Sn Sn 17 18 09.2 -0.2
GEC2 GERESS Array S 12.18 333 eL L 17 21 11.1
comp=Z,10µm,18.9s
GEC2 GERESS Array S 12.18 333 Pn 17 15 54.4 +0.1
GERES GERESS Array B 12.18 333 Pn Pn 17 15 54.5 +0.1
comp=Z,0.7nm,0.3s,baz=150,slow=14,SNR=18
GERES Sn Sn 17 18 09.4 -0.9
comp=Z,0.7nm,0.3s,baz=144,slow=23,SNR=1.5
GERES LR LR 17 21 21.6
comp=Z,8µm,19.4s,baz=153,slow=41
GERES GERESS Array B 12.18 333 Pn 17 15 53.9 -0.5
PART Garmisch-Parte 12.23 322 ePn Pn 17 15 54.6 -0.5
ZUGS Zugspitze, Sch 12.24 322 ePn Pn 17 15 56.2 +0.8
NBNS Bani Suef 12.30 139 P Pn 17 15 55.2 -0.9
baz=139
MMLI Mount Malkishu 12.31 114 Pn Pn 17 15 58.3 +2.1
KRLC Kraliky 12.38 344 eP Pn 17 15 58.8 +1.8
KRLC Kraliky 12.38 344 eP Pn 17 15 58.8 +1.8
DAVOX Davos/Dischmat 12.38 317 Pn Pn 17 15 57.6 +0.3
comp=Z,1.2nm,0.3s,baz=96,slow=15,SNR=19
DAVOX Sn Sn 17 18 14.8 -0.6
comp=Z,2.1nm,0.3s,baz=253,slow=21,SNR=3.9
RETA Reutte 12.39 321 ePn Pn 17 15 57.2 -0.1
comp=Z,5.4nm,0.3s
RETA eSn Sn 17 18 14.8 -0.7
comp=Z,34nm,0.7s
AMAZ Amatzia 12.46 119 Pn Pn 17 15 58.7 +0.5
KHC Kasperske Hory 12.46 333 eP Pn 17 15 58.9 +0.7
KHC eS Sn 17 18 19.0 +1.9
KHC MLR MLR
comp=Z,12µm,13.1s
KHC Kasperske Hory 12.46 333 eP Pn 17 15 58.9 +0.7
KHC eS Sn 17 18 19.0 +1.9
KHC AMS AMS 17 21 10.0
comp=Z,12µm,13.1s
BE1 Monatshausen 12.47 324 ePn Pn 17 15 57.8 -0.5
HMDT Nahal Hemdat 12.48 115 Pn Pn 17 15 58.8 +0.3
HMDT Sn Sn 17 18 19.2 +1.6
TUE Stuetta 12.48 315 Pn 17 15 58.5 -0.2
KZIT Kziot 12.49 123 Pn Pn 17 15 58.5 -0.2
OBER Oberstdorf 12.57 320 ePn Pn 17 16 02.1 +2.4
DAVA Damuels 12.70 319 ePn Pn 17 16 01.5 -0.2
comp=Z,16nm,0.7s
DAVA eSn Sn 17 18 22.7 -0.5
comp=Z,32nm,0.6s
DAVA Damuels 12.70 319 ePn Pn 17 16 02.5 +0.9
DPC Dobruska-Polom 12.74 343 eP Pn 17 16 02.9 +0.9
DPC MLR MLR
comp=Z,4µm,8.4s
DPC Dobruska-Polom 12.74 343 eP Pn 17 16 02.9 +0.9
DPC AMS AMS 17 22 30.0
comp=Z,4µm,8.4s
PBCC Pribram 12.79 335 eP Pn 17 16 02.7 0.0
PBCC ex x 17 16 08.3
PRU Pruhonice 12.88 337 eP Pn 17 16 03.7 -0.2
PRU MLR MLR
comp=Z,11µm,10.1s
PRU Pruhonice 12.88 337 eP Pn 17 16 03.7 -0.2
PRU AMS AMS 17 21 20.0
comp=Z,11µm,10.1s
OSTC Ostas 12.96 343 eP Pn 17 16 12.0 +7.1
OSTC AMS AMS 17 22 30.0
comp=Z,4µm,11.8s
UPC Upice 12.96 342 AMS AMS 17 21 50.0
comp=Z,5µm,9.5s
PRA Prague 12.99 337 AMS AMS 17 21 30.0
comp=Z,5µm,9.9s
CHVC Chvalec 13.02 343 AMS AMS 17 21 50.0
comp=Z,5µm,8.5s
DAMI2 DAM2 13.04 119 Pn Pn 17 16 05.5 -0.5
ANN Anapa 13.15 56 eP Pn 17 16 03.0 -4.5
ANN eS Sn 17 18 25.4 -8.4
ANN pmax pmax
comp=Z,40nm,1.0s
KSP Ksiaz 13.21 344 eP Pn 17 16 10.6 +2.3
ZFRI Zfri 13.23 122 Pn Pn 17 16 09.1 +0.3
ZFRI Sn Sn 17 18 32.8 -3.3
PRNI Paran 13.25 123 Pn Pn 17 16 08.7 -0.3
PRNI Sn Sn 17 18 33.2 -3.3
PVCC Panska Ves 13.36 339 AMS AMS 17 21 40.0
comp=Z,8µm,9.8s
AKASG Malin Array Be 13.37 20 Pn Pn 17 16 09.3 -1.2
comp=Z,0.8nm,0.3s,baz=203,slow=12,SNR=11
AKASG LR LR 17 21 43.8
comp=Z,2µm,21.0s,baz=195,slow=40
AKASG Malin Array Be 13.37 20 *i* P Pn 17 16 09.6 -0.9
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 13.37 20 Pn 17 16 08.3 -2.2
AKBB Malin Array Si 13.37 20 P Pn 17 16 08.8 -1.8
AKBB Malin Array Si 13.37 20 Pn 17 16 08.8 -1.8
BNI Bardonecchia 13.38 305 P Pn 17 16 12.8 +2.0
BNI Bardonecchia 13.38 305 Pn 17 16 12.8 +2.0
HRFI Mount Harif 13.47 124 Pn Pn 17 16 12.0 -0.1
HRFI Sn Sn 17 18 39.0 -3.0
SET Setif 13.51 266 P P 17 16 27.0 +5.1
MBRI Mt Berech 13.55 125 Pn Pn 17 16 12.8 -0.4
SENIN Lac Senin/Sane 13.61 311 Pn 17 16 14.9 +1.0
EIL Elat 13.66 125 Pn Pn 17 16 13.3 -1.3
comp=Z,2.2nm,0.3s,baz=265,slow=4.6,SNR=15
EIL Sn Sn 17 18 37.1 -9.5
comp=Z,0.7nm,0.3s,baz=9.0,slow=19,SNR=1.6
EIL Elat 13.66 125 Pn Pn 17 16 12.8 -1.8
EIL Sn Sn 17 18 43.9 -2.7
NKC Novy Kostel 13.79 333 AMS AMS 17 22 00.0
comp=Z,10µm,12.4s
GRA1 Grafenberg Arr 13.82 329 Pn 17 16 18.6 +1.9
GRF Grafenberg Arr 13.82 329 P Pn 17 16 18.6 +1.9
BRG Berggiesshubel 13.85 338 S Sn 17 18 41.0 -10
BRG Berggiesshubel 13.85 338 eP Pn 17 16 15.5 -1.5
BRG S Sn 17 18 41.0 -10
BRG pmax pmax
comp=Z,58nm,2.2s
BRG MLR MLR
comp=N,5µm,14.5s
BRG MLR MLR
comp=E,5µm,15.8s
BRG MLR MLR
comp=Z,7µm,11.1s
BRG Berggiesshubel 13.85 338
comp=E,5µm,15.8s
BRG Berggiesshubel 13.85 338
comp=Z,7µm,11.1s
BRG Berggiesshubel 13.85 338
comp=N,5µm,14.5s
BRG Berggiesshubel 13.85 338 eP Pn 17 16 15.5 -1.5
comp=N,58nm,2.2s
STU Stuttgart 14.04 322 P Pn 17 16 17.4 -2.3
STU Stuttgart 14.04 322 Pn 17 16 17.4 -2.3
BFO Black Forest 14.18 319 P Pn 17 16 19.1 -2.5
BFO Black Forest 14.18 319 Pn 17 16 19.1 -2.5
SOC Sochi 14.28 63 eP Pn 17 16 19.9 -3.1
SOC e 17 18 57.9
SOC pmax pmax
comp=Z,9.0nm,0.5s
SOC MLR MLR
comp=Z,650nm,12.0s
KOPT Kop Dagi 14.34 77 P Pn 17 16 26.6 +2.5
CLL Collm 14.51 337 Lmax 17 22 00.0
CLL Collm 14.51 337 P Pn 17 16 25.1 -1.1
CLL Collm 14.51 337 Pn 17 16 25.1 -1.1
CLL Collm 14.51 337 eP Pn 17 16 25.0 -1.1
CLL Collm 14.51 337 *i* PP P 17 16 33.5 +0.6
comp=Z,76nm,1.3s
CLL Collm 14.51 337 *i* sPP 17 16 37.8
CLL Collm 14.51 337 *e* P 17 17 30.0 +57
CLL Collm 14.51 337 *e* 17 19 36.0
ECH Echery 14.72 317 P Pn 17 16 28.2 -0.8
ECH Echery 14.72 317 Pn 17 16 28.2 -0.8
MARD Mardin 14.76 88 P P 17 16 32.9 -3.0
SSB Saint Sauveur 14.85 304 P Pn 17 16 31.4 +0.5
SSB Saint Sauveur 14.85 304 Pn 17 16 31.4 +0.5
SUW Suwalki 15.73 2 eP P 17 16 46.3 +0.1
SUW Suwalki 15.73 2 P Pn 17 16 40.5 -1.8
SUW pmax pmax
comp=Z,234nm,0.9s
SUW Suwalki 15.73 2 P Pn 17 16 40.5 -1.8
SUW lAmb lAmb 17 16 59.8
comp=Z,234nm,0.9s
WLF Walferdange 16.13 320 Pn Pn 17 16 48.8 +1.3
WLF x x 17 16 52.9
WLF Walferdange 16.13 320 P Pn 17 16 46.1 -1.4
WLF pmax pmax
comp=Z,178nm,1.4s
WLF Walferdange 16.13 320 P Pn 17 16 46.1 -1.4
GEVA Gevas 16.41 83 P P 17 16 53.0 -1.2
KIV Kislovodsk 16.45 63 eP Pn 17 16 51.4 -0.4
KIV eS Sn 17 19 53.4 -1.1
KIV pmax pmax
comp=Z,55nm,1.1s
KIV MLR MLR
comp=Z,840nm,13.0s
KIV Kislovodsk 16.45 63 P Pn 17 16 52.2 +0.4
KVAR Kislovodsk Arr 16.46 63 Pn Pn 17 16 51.6 -0.3
baz=287,slow=20,SNR=2.2
KVAR LR LR 17 24 39.8
comp=Z,1µm,20.1s,baz=116,slow=43
EBNR Beni Rached 16.53 269 P P 17 17 06.0 +11
KBZ Khabaz 16.55 64 Pn Pn 17 16 52.5 -0.5
baz=233,slow=20
KBZ LR LR 17 23 55.3
comp=Z,422nm,18.6s,baz=58,slow=40
KBZ Khabaz 16.55 64*ce*P Pn 17 16 52.3 -0.6
MICGM Minsk 16.66 12 *eP* P 17 16 56.0 -0.7
MICGM *e*LR LR 17 22 40.0
MNK Minsk 16.66 12 *eP* P 17 16 56.0 -0.7
ECHA Ech Chlef 16.69 269 P P 17 16 59.2 +2.1
BTNL Ternell 16.73 322 Pn Pn 17 16 55.3 +0.1
BTNL PbPb PbPb 17 17 49.0 -2.4
MEM Membach 16.81 322 Pn Pn 17 16 56.1 0.0
MEM PnPn PnPn 17 17 05.0 -0.5
MEM PbPb PbPb 17 17 53.2 +0.6
NACGM Naroch 16.90 9 *e* P 17 17 02.0 +2.7
NACGM eLQ LQ 17 22 22.0
NACGM eLR LR 17 23 51.0
NACGM LRM MLR 17 24 27.0
comp=Z,9.7nm,14.0s
ETRT Tiaret 16.94 267 P P 17 17 03.0 +3.0
EANR 'Ain N'Sour 16.95 269 P P 17 16 58.9 -1.2
GOF Gofitskoye 16.98 60⇑*eP* P 17 17 02.7 +2.4
GOF pmax pmax
comp=Z,61nm,0.6s
BSTI Sal Tilman 17.01 322 x pP 17 17 02.9 -0.3
BCLA Clavier 17.03 321 sP sP 17 17 02.7 -2.0
BCLA PnPn PnPn 17 17 07.7 -0.8
ZEI Tsey 17.11 68 *eP* P 17 17 01.4 -0.6
ZEI pmax pmax
comp=Z,27nm,1.2s
BGES Gesves 17.12 320 PnPn PnPn 17 17 08.9 -0.9
DOU Dourbes 17.19 319 Pn P 17 17 01.8 -0.8
DOU PnPn PnPn 17 17 10.1 -0.7
BMRD Maredsous 17.23 320 Pn P 17 17 02.2 -0.7
PABE Paberze 17.25 3 *eP* P 17 17 03.3 +0.2
IIGN Ignalina 17.27 8 eP P 17 17 04.0 +0.6
IDID Didziasalis 17.30 9 eP P 17 17 04.3 +0.6
CLF Chambon-Foret 17.42 310 P P 17 17 04.1 -1.0
ISAL Salakas 17.48 8 eP P 17 17 06.1 +0.4
ISAL lAmb lAmb 17 17 18.6
comp=Z,12nm,0.9s
BSD Bornholm Skovb 17.51 346 *i* P P 17 17 06.3 +0.2
BSD MLR MLR
comp=Z,3µm,11.0s
BSD Bornholm Skovb 17.51 346 *i* P P 17 17 06.0 -0.1
BSD Bornholm Skovb 17.51 346 *i* P P 17 17 06.3 +0.2
comp=Z,3µm,11.0s
BSD Bornholm Skovb 17.51 346 *i* P P 17 17 06.0 -0.1
BSD Bornholm Skovb 17.51 346 *i* P P 17 17 06.3 +0.2
BSD lAMs_20 lAMs_20 17 25 55.9
comp=Z,3µm,11.0s
VORD Divnogorie 17.52 38 *eP* P 17 17 07.5 +1.3
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD MLR MLR
comp=Z,480nm,7.0s
GNI Garni 17.59 77*ce*P P 17 17 07.4 +0.1
GNI pmax pmax
comp=Z,61nm,2.5s
GNI Garni 17.59 77 P P 17 17 08.4 +1.2
VSR Storozhevoye 17.62 37 *eP* P 17 17 08.3 +1.0
VSR pmax pmax
comp=Z,20nm,1.2s
VSR MLR MLR
comp=Z,2µm,11.0s
IZAR Zarasai 17.67 8 *eP* Pn 17 17 05.9 -0.9
IZAR lAmb lAmb 17 17 20.4
comp=Z,20nm,1.1s
PBUR Paburge 17.73 360 eP P 17 17 09.1 +0.7
UCC Uccle 17.74 320 P P 17 17 09.1 +0.5
UCC pmax pmax
comp=Z,45nm,0.6s
UCC Uccle 17.74 320 P P 17 17 09.1 +0.5
VORR Voronezh 17.94 36 P Pn 17 17 08.0 -2.3
VORR pmax pmax
comp=Z,250nm,0.8s
NAX Nakhchivan 18.23 80 P P 17 17 16.3 +2.1
CART Cartagena 18.27 275 P P 17 17 15.4 +0.9
LPSR Galich'ya Gora 18.45 34 eP P 17 17 15.7 -0.7
LPSR pmax pmax
comp=Z,70nm,1.1s
LPSR MLR MLR
comp=Z,2µm,10.0s
GROC Groznyy 18.55 67 eP Pn 17 17 20.7 +3.0
GROC pmax pmax
comp=Z,49nm,1.3s
VRH Novokhopyorsk 18.88 41 eP P 17 17 21.2 0.0
VRH pmax pmax
comp=Z,20nm,0.7s
VRH MLR MLR
comp=Z,2µm,16.0s
ZKTA Zakatala 19.03 72 P Pn 17 17 25.9 +2.2
OBN Obninsk 19.44 25 P P 17 17 27.3 +0.1
comp=Z,1.6nm,0.3s,baz=185,slow=5.3,SNR=6.9
OBN LR LR 17 24 57.9
comp=Z,460nm,20.4s,baz=210,slow=37
OBN Obninsk 19.44 25*ce*P P 17 17 25.9 -1.3
OBN *e*S Sn 17 21 05.5 -0.8
OBN pmax pmax
comp=Z,97nm,1.7s
OBN MLR MLR
comp=Z,2µm,18.0s
OBN Obninsk 19.44 25 P P 17 17 26.5 -0.7
MAK Makhachkala 19.77 68 eP P 17 17 26.3 -4.6
MAK *e*S S 17 21 06.0 -7.7
MAK pmax pmax
comp=Z,180nm,1.1s
MAK MLR MLR
comp=Z,449nm,17.0s
MUD Monsted U'grnd 20.11 339 *i* P Pn 17 17 37.9 +1.6
MUD Monsted U'grnd 20.11 339 *i* P Pn 17 17 37.0 +0.7
MUD Monsted U'grnd 20.11 339 *i* P Pn 17 17 37.9 +1.6
MUD Monsted U'grnd 20.11 339 *i* P Pn 17 17 37.0 +0.7
MUD Monsted U'grnd 20.11 339 *i* P Pn 17 17 37.9 +1.6
MOS Moscow 20.30 26 eP P 17 17 36.0 -0.6
MOS *e* 17 18 13.0
MOS pmax pmax
comp=Z,133nm,1.5s
MOS pmax pmax
comp=Z,1µm,4.4s
MOS MLR MLR
comp=Z,1µm,15.0s
ESBB Sonseca Array 20.32 282 P P 17 17 36.7 -0.4
ESBB lAmb lAmb 17 17 43.2
comp=Z,131nm,1.1s
ESDC Sonseca Array 20.33 282 P Pn 17 17 38.3 -0.8
comp=Z,86nm,0.8s,baz=76,slow=10,SNR=120
ESDC Sonseca Array 20.33 282 P P 17 17 36.7 -0.4
VSU Vasula 20.39 7 eP P 17 17 37.7 +0.2
VSU lAmb lAmb 17 17 47.7
comp=Z,410nm,0.6s
VSU Vasula 20.39 7 *i* P P 17 17 36.2 -1.4
VSU pmax pmax
comp=Z,316nm,0.9s
GOET G??ttrup 20.59 340 *i* P P 17 17 39.9 +0.1
GOET G??ttrup 20.59 340 eP P 17 17 40.0 +0.1
PAB San Pablo 20.63 282 P P 17 17 41.3 +0.8
PAB pmax pmax
comp=Z,90nm,0.8s
PAB San Pablo 20.63 282 P P 17 17 41.3 +0.8
PAB lAmb lAmb 17 17 45.3
comp=Z,90nm,0.8s
TAM Tamanrasset 21.02 227 P P 17 17 46.6 +1.7
TAM pmax pmax
comp=Z,44nm,1.1s
TAM Tamanrasset 21.02 227 P P 17 17 46.6 +1.7
HOMB Homborsund 21.86 340 eP P 17 17 52.9 -0.5
SNART Snartemo 22.27 339 eP P 17 17 59.5 +1.7
SNART Snartemo 22.27 339 *i* P P 17 18 01.0 +3.1
PBRG Braganca 22.34 288 eP P 17 18 00.1 +1.3
comp=Z,73nm,1.4s
MDT Midelt 22.41 264 P P 17 17 60.0 +0.3
comp=Z,15nm,0.7s,baz=89,slow=12,SNR=23
MDT LR LR 17 28 12.7
comp=Z,301nm,18.9s,baz=74,slow=41
HFS Hagfors 22.50 349 P P 17 17 58.9 -1.3
comp=Z,12nm,0.6s,baz=156,slow=13,SNR=23
HFS LR LR 17 27 55.0
comp=Z,781nm,21.2s,baz=172,slow=40
MVO Moncorvo 22.57 286 eP P 17 18 00.8 -0.6
comp=Z,66nm,0.9s
KONO Kongsberg 22.82 343 *i* P P 17 18 02.8 -0.8
KONO pmax pmax
comp=Z,51nm,1.1s
KONO Kongsberg 22.82 343 P P 17 18 02.6 -1.0
KONO Kongsberg 22.82 343 eP P 17 18 04.7 +1.0
OSL Oslo 22.84 345 eP P 17 18 04.9 +1.0
PMRV Marv??o 22.99 282 eP P 17 18 05.5 -0.2
comp=Z,110nm,1.6s
PCBR Castelo Branco 23.01 283 eP P 17 18 06.8 +1.0
comp=Z,57nm,1.7s
MTE Manteigas 23.01 285 eP P 17 18 05.3 -0.6
comp=Z,83nm,1.8s
MTE Manteigas 23.01 285 P P 17 18 04.8 -1.2
MTE lAmb lAmb 17 18 21.1
comp=Z,99nm,1.4s
POLO Lamas de Olo 23.14 287 eP P 17 18 10.2 +2.9
PVIS Viseu 23.25 285 eP P 17 18 08.3 -0.1
comp=Z,72nm,2.2s
FINES FINESS Array B 23.29 5 P P 17 18 06.2 -2.3
comp=Z,1.9nm,0.3s,baz=179,slow=9.7,SNR=19
FINES PcP PcP 17 21 55.5 -0.1
comp=Z,7.6nm,0.8s,baz=132,slow=2.1,SNR=9.1
FINES LR LR 17 28 11.1
comp=Z,2µm,18.4s,baz=188,slow=39
FINES FINESS Array B 23.29 5 *i* P P 17 18 06.6 -1.9
FINES pmax pmax

comp=Z,2.0nm,0.3s
FINES FINESS Array B 23.29 5 P **P** 17 18 06.8 -1.7
FINES **PcP** 17 21 55.2 -0.3
FIA1 FINESS Array S 23.29 5 P **P** 17 18 08.8 +0.3
FIA1 PcP **PcP** 17 21 55.7 +0.2
PCAB Cabril 23.31 288 *eP* **P** 17 18 10.8 +1.9
comp=Z,82nm,1.6s
BLS5 Blasjo 23.40 340 *eP* **P** 17 18 10.2 +0.6
NC602 NORSAR Array S 23.42 347 P **P** 17 18 09.0 -0.9
NC602 IAmb IAmb 17 18 18.7
comp=Z,87nm,1.0s
NC602 NORSAR Array S 23.42 347 *eP* **P** 17 18 08.9 -0.9
PBEJ Beja 23.56 279 *eP* **P** 17 18 10.7 -0.7
comp=Z,58nm,1.8s
PVAQ Vaqueiros 23.56 277 *eP* **P** 17 18 14.4 +3.0
comp=Z,88nm,1.3s
PVAQ Vaqueiros 23.56 277 P **P** 17 18 12.3 +0.9
EVO Evora 23.59 280 *eP* **P** 17 18 11.3 -0.4
comp=Z,50nm,1.4s
NAO01 NORSAR Array S 23.64 346 P **P** 17 18 11.2 -0.9
NAO01 IAmb IAmb 17 18 19.4
comp=Z,114nm,1.0s
NAO01 PcP **PcP** 17 21 56.8 +0.5
PMTG Montargil 23.68 281 *eP* **P** 17 18 11.6 -0.9
comp=Z,72nm,1.8s
COI Coimbra 23.69 284 P **P** 17 18 14.1 +1.4
COI pmax pmax
comp=Z,46nm,0.8s
COI Coimbra 23.69 284 P **P** 17 18 14.1 +1.4
NC405 NORSAR Array S 23.75 347 P **P** 17 18 11.8 -1.2
PBDV Barranco-do-Ve 23.76 277 *eP* **P** 17 18 14.7 +1.3
comp=Z,114nm,1.3s
NB201 NORSAR Array S 23.76 347 P **P** 17 18 12.0 -1.2
NB201 PcP **PcP** 17 21 56.9 +0.3
PCVE Castro Verde 23.76 278 *eP* **P** 17 18 14.8 +1.4
NB2 NORSAR Subarra 23.77 347 P **P** 17 18 12.3 -1.0
comp=Z,140nm,1.4s,baz=160,slow=11
NB2 NORSAR Subarra 23.77 347 P **P** 17 18 12.3 -1.0
baz=160,slow=11
NOA NORSAR Array B 23.77 347 P **P** 17 18 12.2 -1.1
comp=Z,14nm,0.9s,baz=160,slow=9.8,SNR=37
NOA PcP **PcP** 17 21 56.8 +0.1
comp=Z,3.3nm,0.9s,baz=127,slow=3.3,SNR=3.8
NOA LR LR 17 29 52.2
comp=Z,1μm,19.8s,baz=155,slow=43
PCAS Casmilo, Conde 23.77 284 *eP* **P** 17 18 14.2 +0.7
comp=Z,100nm,1.7s
NBO00 NORSAR Array S 23.84 346 P **P** 17 18 13.0 -0.9
NBO00 PcP **PcP** 17 21 58.0 +1.3
NC303 NORSAR Array S 23.91 347 P **P** 17 18 14.1 -0.6
NC303 IAmb IAmb 17 18 21.4
comp=Z,87nm,0.8s
SKAR Skarslia 24.03 343 *eP* **P** 17 18 15.7 -0.2
PSBE So Bento 24.06 283 *eP* **P** 17 18 19.5 +3.3
comp=Z,111nm,1.6s
PNCL Nicolau / Gran 24.06 279 *eP* **P** 17 18 16.7 +0.5
comp=Z,69nm,1.1s
NC204 NORSAR Array S 24.07 346 P **P** 17 18 15.8 -0.4
NC204 PcP **PcP** 17 21 58.4 +1.1
EKA Eskdalemuir Ar 24.08 323 P **P** 17 18 16.1 -0.2
comp=Z,80nm,0.8s,baz=124,slow=10,SNR=44
EKA LR LR 17 29 32.6
comp=Z,2μm,19.7s,baz=135,slow=41
ESK Eskdalemuir 24.09 323 P **P** 17 18 16.2 -0.1
ESK pmax pmax
comp=Z,92nm,0.8s
ESK Eskdalemuir 24.09 323 P **P** 17 18 16.2 -0.1
ESK IAmb IAmb 17 18 20.5
comp=Z,92nm,0.8s
PTEO Sao Teotonio 24.32 278 *eP* **P** 17 18 21.4 +2.8
comp=Z,131nm,1.7s
PFVI Vila Bisbo 24.48 277 *eP* **P** 17 18 22.1 +2.0
comp=Z,101nm,1.9s
PFVI Vila Bisbo 24.48 277 P **P** 17 18 20.2 +0.1
PFVI IAmb IAmb 17 18 28.0
comp=Z,175nm,1.8s
BER Bergen 24.52 340 *eP* **P** 17 18 22.1 +2.0
ASK Askoy 24.64 340 *eP* **P** 17 18 22.9 +1.6
DSB Dublin 24.66 317 P **P** 17 18 22.6 +1.0
DSB IAmb IAmb 17 18 33.0
comp=Z,204nm,1.7s
HYA Hoyanger 24.96 342 *eP* **P** 17 18 26.2 +2.1
KLMR Klimovskoe 25.06 20 *eP* **P** 17 18 23.5 -1.5
KLMR *eS* **S** 17 22 48.0 -1.2
KLMR pmax pmax
comp=Z,69nm,1.0s
KLMR MLR MLR
comp=Z,1μm,13.0s
KLMR Klimovskoe 25.06 20 *eP* **P** 17 18 23.6 -1.5
KLMR AMP 17 18 33.2
comp=Z,69nm,1.0s
KLMR *eS* **S** 17 22 48.1 -1.2
KLMR *eS* **S** 17 22 48.1 -1.2
KLMR LQ LQ 17 25 48.2
KLMR LQ LQ 17 25 48.2
KLMR LR LR 17 27 20.3
KLMR AMP 17 29 32.7
comp=Z,1μm,12.7s
DOMB Dombas 25.10 345 *eP* **P** 17 18 25.9 +0.4
FOO Floro 25.62 341 *eP* **P** 17 18 31.9 +1.8
AKN Aaknes 25.66 344 *eP* **P** 17 18 30.2 -0.3
MOL Molde 25.88 344 *eP* **P** 17 18 32.6 +0.1
KIRV Kirov 26.86 32 P **P** 17 18 40.1 -1.2
comp=Z,29nm,0.7s,baz=239,slow=3.1,SNR=15
KIRV LR LR 17 29 37.6
comp=Z,964nm,19.2s,baz=243,slow=37
KIRV Kirov 26.86 32 *ceP* **P** 17 18 40.0 -1.3
NSS Namsos 26.95 350 *eP* **P** 17 18 41.1 -1.0
TMCR Tamitsa 27.57 15 *eP* **P** 17 18 44.9 -2.8
TMCR pmax pmax
comp=Z,14nm,0.6s
AKTO Aktyubinsk 28.08 53 P **P** 17 18 52.5 +0.1
comp=Z,4.3nm,0.7s,baz=256,slow=8.5,SNR=12
GEYT Alibeck 28.19 79 P **P** 17 18 53.3 -0.3
comp=Z,1.5nm,0.4s,baz=282,slow=8.5,SNR=7.3
GEYT LR LR 17 31 08.7
comp=Z,184nm,19.0s,baz=235,slow=39
GEYT Alibeck 28.19 79 P **P** 17 18 54.3 +0.7
GYA0 ALIBECK ARRAY 28.19 79 P **P** 17 18 53.5 -0.1
GYA0 pmax pmax
comp=Z,8.0nm,0.8s
GYA0B ALIBECK ARRAY 28.19 79 P **P** 17 18 53.5 -0.2
MOR8 Moi Rana 28.26 353 *eP* **P** 17 18 54.7 +0.8
AB31 Akbulak array 29.11 56 *eP* **P** 17 19 01.3 -0.3
ABKAR Akbulak array 29.11 56 P **P** 17 19 01.3 -0.3
ABKAR Akbulak array 29.11 56 P **P** 17 19 01.2 -0.4
FAUS Fauske 29.38 355 *eP* **P** 17 19 03.5 -0.2
STEI Steigen 29.93 355 *eP* **P** 17 19 08.4 -0.1
ARU Arti 30.11 41 P **P** 17 19 09.8 -0.7
comp=Z,3.7nm,0.5s,baz=266,slow=8.4,SNR=22
ARU LR LR 17 32 10.5
comp=Z,1μm,18.1s,baz=244,slow=38
ARU Arti 30.11 41 *c iP* **P** 17 19 08.9 -1.5
ARU PPP PPP 17 20 14.1
ARU S **S** 17 24 07.3 -1.7
ARU SS **SnSn** 17 25 45.4 +4.0
ARU pmax pmax
comp=Z,24nm,1.4s
ARU MLR MLR
comp=Z,954nm,14.0s
ARU Arti 30.11 41 P **P** 17 19 10.0 -0.4
DAMY Dhamar 30.75 134 P **P** 17 19 21.0 +4.3
SNR=6.6
DAMY Dhamar 30.75 134 P **P** 17 19 19.1 +2.3
DAMY IAmb IAmb 17 19 22.9
comp=Z,55nm,1.1s
KTK1 Kautokeino 30.77 1 *eP* **P** 17 19 15.4 -0.7
TOA0 Torodi Ar. Sit 30.96 221 P **P** 17 19 19.4 +1.2
SNR=16
TOA0 Torodi Ar. Sit 30.96 221 P **P** 17 19 18.5 +0.3
TOA0 IAmb IAmb 17 19 23.9
comp=Z,57nm,0.8s
TORD Torodi Ar. Bea 30.96 221 P **P** 17 19 19.0 +0.8
comp=Z,55nm,0.8s,baz=30,slow=9.1,SNR=50
TORD PcP **PcP** 17 22 14.4 -0.2
comp=Z,1.9nm,1.0s,baz=25,slow=1.8,SNR=2.8
TORD LR LR 17 32 58.6
comp=Z,765nm,18.7s,baz=30,slow=39
TORD Torodi Ar. Bea 30.96 221 P **P** 17 19 18.1 -0.1
TORD PcP **PcP** 17 22 15.2 +0.7
SVE Sverdlovsk 31.33 41 *eP* **P** 17 19 19.9 -1.2
SVE pmax pmax
comp=Z,27nm,0.9s
SVE MLR MLR
comp=Z,1μm,12.0s

ARA0 ARCESS Array S 31.34 2 *eP* **P** 17 19 20.3 -0.9
ARCES ARCESS Array B 31.34 2 P **P** 17 19 19.6 -1.6
comp=Z,0.9nm,0.3s,baz=188,slow=10.0,SNR=28
ARCES PcP **PcP** 17 22 14.0 -0.7
comp=Z,0.9nm,0.3s,baz=201,slow=2.2,SNR=7.5
ARCES LR LR 17 33 02.4
comp=Z,1μm,20.9s,baz=180,slow=38
KEV Kevo 31.62 3 P **P** 17 19 22.8 -0.7
KEV PcP **PcP** 17 22 15.9 +0.5
UOSS Minazif 31.72 105 P **P** 17 19 25.0 +0.1
UOSS IAmb IAmb 17 20 01.4
comp=Z,34nm,1.1s
UOSS PcP **PcP** 17 22 16.3 -0.2
ATD Arta Tunnel 32.45 140 LR LR 17 32 55.1
comp=Z,74nm,20.7s,baz=346,slow=37
ATD Arta Tunnel 32.45 140 P **P** 17 19 33.0 +1.6
ATD IAmb IAmb 17 19 37.4
comp=Z,51nm,1.3s
KOWA Kowa 33.13 231 P **P** 17 19 38.2 +0.9
comp=Z,22nm,0.6s,baz=40,slow=8.7,SNR=32
KOWA PcP **PcP** 17 22 22.0 +1.6
comp=Z,4.5nm,0.7s,baz=146,slow=4.6,SNR=3.6
KOWA Kowa 33.13 231 P **P** 17 19 38.7 +1.4
KOWA IAmb IAmb 17 19 42.3
comp=Z,117nm,1.7s
ABTO Aybut 34.30 119 P **P** 17 19 52.0 +4.4
SNR=7.8
RBK Rabkut 34.83 118 P **P** 17 19 55.0 +2.8
SNR=7.2
MHTO MHTO 35.32 109 P **P** 17 19 59.2 +2.9
SNR=7.5
BRVK Borovoye 35.99 50 *i* P **P** 17 20 01.0 -0.7
BRVK pmax pmax
comp=Z,18nm,0.9s
BRVK Borovoye 35.99 50 P **P** 17 20 01.2 -0.5
BVAR Borovoye Array 36.05 50 P **P** 17 20 01.3 -1.0
comp=Z,3.0nm,0.6s,baz=225,slow=26,SNR=24
IUG luznay 36.38 68 *eP* **P** 17 20 04.8 -0.5
comp=Z,22nm,1.0s,baz=69
IUG *eS* **S** 17 25 46.0 -0.8
baz=69
IUG luznay 36.38 68 *eP* **P** 17 20 04.8 -0.5
IUG *eS* **S** 17 25 45.9 -0.8
IUG pmax pmax
comp=Z,22nm,1.0s
JMIC Jan Mayen 36.39 344 LR LR 17 35 03.3
comp=Z,264nm,18.4s,baz=23,slow=36
CHGR Chuyangaron 36.48 74 P **P** 17 20 06.0 -0.2
CHGR IAmb IAmb 17 20 16.4
comp=Z,33nm,0.7s
KK31 Karatay Array 36.57 67 P **P** 17 20 06.6 -0.2
KK31 pmax pmax
comp=Z,24nm,0.6s
KK31 Karatay Array 36.57 67 P **P** 17 20 06.6 -0.2
KK31 IAmb IAmb 17 20 09.0
comp=Z,24nm,0.6s
KKAR Karatay Array 36.57 67 P **P** 17 20 06.7 -0.1
KKAR pmax pmax
comp=Z,24nm,0.6s
KKAR Karatay Array 36.57 67 P **P** 17 20 06.7 -0.1
KKAR IAmb IAmb 17 20 08.9
comp=Z,24nm,0.6s
KKAR Karatay Array 36.57 67 P **P** 17 20 06.1 -0.7
KK05 Karatay Array 36.57 67 P **P** 17 20 06.4 -0.5
KK06 Karatay Array 36.58 67 P **P** 17 20 06.8 -0.1
BORG Borgarnes 36.63 330 LR LR 17 35 42.2
comp=Z,721nm,21.9s,baz=124,slow=37
LODK Lodwar 36.76 158 P **P** 17 20 11.8 +3.1
SNR=12
DZA Taraz 37.20 67 *eP* **P** 17 20 11.7 -0.5
baz=67
DZA Taraz 37.20 67 *eP* **P** 17 20 11.6 -0.5
GAR Garm 37.27 73 P **P** 17 20 12.8 -0.2
GAR IAmb IAmb 17 20 18.8
comp=Z,48nm,1.0s
BTK Batken 37.39 72 P **P** 17 20 12.8 -1.2
BTK pmax pmax
comp=Z,13nm,0.8s
BTK Batken 37.39 72 P **P** 17 20 12.8 -1.2
BRZS Berezniki 37.41 55 *eP* **P** 17 20 13.3 -0.7
baz=55
BRZS *eS* **S** 17 26 01.2 -0.9
baz=55
BRZS Berezniki 37.41 55 *eP* **P** 17 20 13.2 -0.7
BRZS *eS* **S** 17 26 01.1 -0.9
SOCY Socotra 38.47 124 P **P** 17 20 21.2 -2.0
BTLS Baital 38.78 63 *eP* **P** 17 20 25.1 -0.4
comp=Z,11nm,1.1s,baz=63
BTLS *eS* **S** 17 26 22.2 -0.7
baz=63
BTLS Baital 38.78 63 *eP* **P** 17 20 25.1 -0.4
BTLS *eS* **S** 17 26 22.2 -0.7
BTLS pmax pmax
comp=Z,11nm,1.1s
EKS2 Erkin-Say 39.01 67 P **P** 17 20 28.3 +0.7
SNR=27
AML Almayashu 39.06 68 P **P** 17 20 29.4 +1.1
SNR=10
USP Ospenovka 39.41 66 P **P** 17 20 31.5 +0.7
SNR=6.4
SGDS Sogindy 39.47 65 *eP* **P** 17 20 31.4 +0.1
comp=Z,5.8nm,0.9s,baz=66
SGDS Sogindy 39.47 65 *eP* **P** 17 20 31.4 +0.1
SGDS pmax pmax
comp=Z,6.0nm,0.9s
MBAR Mbarara 39.52 166 *ceP* **P** 17 20 35.2 +3.1
MBAR pmax pmax
comp=Z,8.0nm,1.0s
MBAR Mbarara 39.52 166 P **P** 17 20 31.4 -0.6
AAK Ala-Archa 39.53 67 *ceP* **P** 17 20 32.1 +0.1
AAK pmax pmax
comp=Z,237nm,1.7s
SCO Scoresbysund 39.53 338 P **P** 17 20 33.6 +2.2
SCO pmax pmax
comp=Z,74nm,1.5s
SCO Scoresbysund 39.53 338 P **P** 17 20 33.6 +2.2
FRU1 Bishkek 39.59 66 P **P** 17 20 32.1 -0.3
FRU1 pmax pmax
comp=Z,43nm,0.8s
FRU1 Bishkek 39.59 66 P **P** 17 20 32.1 -0.3
FRU1 IAmb IAmb 17 20 37.1
comp=Z,42nm,0.8s
CHMS Chumysh 39.64 66 P **P** 17 20 32.7 -0.1
SNR=19
KBK Karagaybulak 39.85 66 P **P** 17 20 35.4 +0.7
SNR=20
DBIC Dimbokro 39.87 225 P **P** 17 20 35.5 +0.7
comp=Z,48nm,1.0s,baz=15,slow=9.3,SNR=25
DBIC LR LR 17 38 19.2
comp=Z,436nm,18.6s,baz=11,slow=38
DBIC Dimbokro 39.87 225 P **P** 17 20 35.8 +1.0
DBIC pmax pmax
comp=Z,87nm,1.3s
DBIC Dimbokro 39.87 225 P **P** 17 20 35.8 +1.0
DBIC IAmb IAmb 17 20 39.2
comp=Z,87nm,1.2s
TIC Toumodi 39.98 225 *eP* **P** 17 20 38.0 +2.2
SPB3 Spitsbergen Ar 40.05 358 P **P** 17 20 36.4 +0.7
SPA2 Spitsbergen Ar 40.05 358 P **P** 17 20 36.0 +0.3
SPA2 IAmb IAmb 17 21 21.6
comp=Z,200nm,1.6s
SPA3 Spitsbergen Ar 40.05 358 P **P** 17 20 35.8 0.0
SPA3 IAmb IAmb 17 22 06.0
comp=Z,152nm,1.3s
SPA0 Spitsbergen Ar 40.05 358 P **P** 17 20 35.5 -0.2
SPA0 IAmb IAmb 17 22 06.0
comp=Z,148nm,1.4s
SPITS Spitsbergen Ar 40.05 358 P **P** 17 20 35.1 -0.7
comp=Z,2.1nm,0.4s,baz=151,slow=12,SNR=12
SPITS LR LR 17 38 50.2
comp=Z,2μm,19.5s,baz=155,slow=39
SPB1 Spitsbergen Ar 40.06 358 P **P** 17 20 34.7 -1.0
SPB1 IAmb IAmb 17 20 39.2
comp=Z,158nm,1.6s
SPB4 Spitsbergen Ar 40.06 358 P **P** 17 20 35.2 -0.5
SPB4 IAmb IAmb 17 22 06.0
comp=Z,140nm,1.2s
KIC Kosan Boka 40.06 224 *eP* **P** 17 20 38.9 +2.4
comp=Z,463nm,1.8s
TKM2 Tokmak 2 40.27 66 P **P** 17 20 39.2 +1.1
SNR=7.6
TKM2 Tokmak 2 40.27 66 *i* P **P** 17 20 38.3 +0.1
TKM2 pmax pmax
comp=Z,12nm,1.0s
LIC Lamto 40.34 225 *eP* **P** 17 20 41.1 +2.4
comp=Z,369nm,1.6s

KUU Kurty 40.60 64 *eP* **P** 17 20 40.7 0.0
comp=Z,34nm,0.9s,baz=64
KUU *eS* **S** 17 26 49.9 -0.3
baz=64
KUU Kurty 40.60 64 *eP* **P** 17 20 40.7 0.0
KUU *eS* **S** 17 26 49.9 -0.3
KUU pmax pmax
comp=Z,34nm,0.9s
BOOM Boomskoye usch 40.61 66 P **P** 17 20 41.0 +0.1
BOOM pmax pmax
comp=Z,26nm,0.8s
BOOM Boomskoye usch 40.61 66 P **P** 17 20 41.0 +0.1
KURBB Kurchatov Arra 41.12 54 P **P** 17 20 44.0 -0.8
comp=Z,16nm,0.6s,baz=280,slow=8.8,SNR=95
KURBB PcP **PcP** 17 22 43.4 -0.8
comp=Z,3.4nm,0.9s,baz=264,slow=3.9,SNR=2.3
KURBB ScP **ScP** 17 26 33.5 -0.5
comp=Z,0.7nm,0.9s,baz=275,slow=5.3,SNR=2.6
KURBB Kurchatov Arra 41.12 54 P **P** 17 20 43.8 -1.0
AAA Alma-Ata 41.15 65 *eP* **P** 17 20 44.6 -0.8
baz=65
AAA Alma-Ata 41.15 65 *eP* **P** 17 20 44.5 -0.8
KURK Kurchatov 41.17 54 *ceP* **P** 17 20 44.2 -1.0
KURK pmax pmax
comp=Z,36nm,1.7s
KURK Kurchatov 41.17 54 P **P** 17 20 43.9 -1.3
NIL Nilore 41.19 80 P **P** 17 20 45.7 +0.1
NIL pmax pmax
comp=Z,36nm,1.5s
NIL Nilore 41.19 80 P **P** 17 20 45.7 +0.1
MDOK Medeo 41.25 65 *i* P **P** 17 20 45.6 -0.7
baz=66
MDOK LR LR 17 38 59.7
comp=Z,160nm,18.0s,baz=66
MDOK Medeo 41.25 65 *i* P **P** 17 20 45.5 -0.7
MDOK MLR MLR
comp=Z,160nm,18.0s
KSH Kashi 41.37 71 P **P** 17 20 46.9 -0.3
KSH pmax pmax
comp=Z,29nm,0.6s
KSH pmax pmax
comp=Z,510nm,5.4s
KDJ Kajisay 41.58 67 P **P** 17 20 49.5 +0.5
KDJ pmax pmax
comp=Z,71nm,1.2s
KDJ Kajisay 41.58 67 P **P** 17 20 49.5 +0.5
KDJ IAmb IAmb 17 20 58.7
comp=Z,71nm,1.2s
KMBO Kilima Mbogo 41.64 157 P **P** 17 20 51.2 +1.5
comp=Z,2.4nm,0.5s,baz=68,slow=22,SNR=4.9
KMBO LR LR 17 39 55.2
comp=Z,250nm,20.2s,baz=282,slow=39
KMBO Kilima Mbogo 41.64 157 P **P** 17 20 50.4 +0.7
KMBO pmax pmax
comp=Z,8.0nm,1.2s
KMBO Kilima Mbogo 41.64 157 P **P** 17 20 50.4 +0.7
TDK Taldyqorghan 41.83 62 *eP* **P** 17 20 49.9 -0.9
comp=Z,39nm,1.3s,baz=62
TDK LR LR 17 39 42.0
comp=Z,334nm,15.7s,baz=62
TDK Taldyqorghan 41.83 62 *eP* **P** 17 20 49.9 -0.9
TDK pmax pmax
comp=Z,39nm,1.3s
TDK MLR MLR
comp=Z,334nm,16.0s
SATY Saty 42.25 65 *eP* **P** 17 20 54.3 -0.1
comp=Z,20nm,1.1s,baz=65
SATY Saty 42.25 65 *eP* **P** 17 20 54.2 -0.1
SATY pmax pmax
comp=Z,20nm,1.1s
KPKS Kokpek 42.35 64 *eP* **P** 17 20 54.3 -0.8
baz=65
KPKS Kokpek 42.35 64 *eP* **P** 17 20 54.3 -0.8
PDGK Podgornoye 42.95 64 P **P** 17 20 59.6 -0.5
SHLS Shalkode 42.98 65 *eP* **P** 17 21 02.0 +1.8
comp=Z,6.6nm,0.6s,baz=65
SHLS Shalkode 42.98 65 *eP* **P** 17 21 02.0 +1.8
SHLS pmax pmax
comp=Z,7.0nm,0.6s
KIBK Kibwezi 43.03 156 P **P** 17 21 04.7 +3.8
SNR=5.2
MAKZ Makanchi 43.92 59 P **P** 17 21 07.2 -0.5
MAKZ pmax pmax
comp=Z,26nm,1.1s
MAKZ Makanchi 43.92 59 P **P** 17 21 07.2 -0.5
MK31 Makanchi Array 44.14 59 P **P** 17 21 08.9 -0.6
MK31 pmax pmax
comp=Z,23nm,0.9s
MK31 Makanchi Array 44.14 59 P **P** 17 21 08.9 -0.6
MKAR Makanchi Array 44.14 59 P **P** 17 21 08.7 -0.8
comp=Z,23nm,0.4s,baz=276,slow=7.9,SNR=222
MKAR PcP **PP** 17 22 52.5 +0.3
comp=Z,2.5nm,0.6s,baz=281,slow=4.9,SNR=1.5
MKAR LR LR 17 43 42.3
comp=Z,284nm,18.2s,baz=278,slow=42
MKAR Makanchi Array 44.14 59 *i* P **P** 17 21 08.6 -0.9
MKAR pmax pmax
comp=Z,23nm,0.4s
MKAR Makanchi Array 44.14 59 P **P** 17 21 08.1 -1.4
ZAA0 Zalesovo Array 44.65 48 P **P** 17 21 12.1 -1.2
ZAA0 IAmb IAmb 17 21 19.9
comp=Z,42nm,1.0s
ZALV Zalesovo Beam 44.65 48 P **P** 17 21 12.6 -0.8
comp=Z,30nm,0.4s,baz=274,slow=8.6,SNR=134
ZALV LR LR 17 40 34.0
comp=Z,151nm,21.5s,baz=276,slow=37
ZALV Zalesovo Beam 44.65 48 P **P** 17 21 12.0 -1.4
ZSN Zaisan 45.72 57 *eP* **P** 17 21 21.7 -0.4
baz=58
ZSN Zaisan 45.72 57 *eP* **P** 17 21 21.7 -0.4
NRIK Noril'sk 46.11 27 P **P** 17 21 24.3 -0.4
comp=Z,8.5nm,0.8s,baz=256,slow=5.3,SNR=18
NRIK LR LR 17 42 12.5
comp=Z,1μm,21.1s,baz=237,slow=38
NRIK Noril'sk 46.11 27 *ceP* **P** 17 21 24.8 +0.1
NRIK pmax pmax
comp=Z,10.0nm,0.9s
WMQ Urumqi 48.57 61 *eP* **P** 17 21 44.5 +0.1
WMQ pP sP 17 21 48.8 +0.7
WMQ pmax pmax
comp=Z,33nm,1.9s
WMQ pmax pmax
comp=Z,260nm,3.7s
WMQ LR LR
comp=Z,2μm,28.9s
WMQ LR LR
comp=Z,2μm,29.1s
LSZ Lusaka 53.60 173 P **P** 17 22 23.5 +1.1
LSZ pmax pmax
comp=Z,10.0nm,1.0s
LSZ Lusaka 53.60 173 P **P** 17 22 23.5 +1.1
MOY Mondy 54.70 48 *eP* **P** 17 22 30.8 +0.6
MOY pmax pmax
comp=Z,58nm,2.3s
DRLN Deer Lake 56.02 309 P **P** 17 22 40.4 +0.8
DRLN IAmb IAmb 17 22 44.2
comp=Z,50nm,0.9s
TLY Talaya 56.25 48 P **P** 17 22 40.6 -0.6
comp=Z,2.8nm,0.4s,baz=246,slow=12,SNR=2.0
TLY Talaya 56.25 48 ⇑ *eP* **P** 17 22 41.6 +0.4
TLY pmax pmax
comp=Z,109nm,2.0s
TLY MLR MLR
comp=Z,1μm,12.0s
TLY Talaya 56.25 48 P **P** 17 22 41.7 +0.5
TLY IAmb IAmb 17 22 48.1
comp=Z,25nm,1.2s
IRK Irkutsk 56.42 47 *eP* **P** 17 22 40.8 -1.6
IRK pmax pmax
comp=Z,61nm,2.2s
ZAK Zakamensk 56.50 49 *eP* **P** 17 22 42.8 -0.3
ZAK pmax pmax
comp=Z,13nm,1.5s
LSA Lhasa 56.66 76 P **P** 17 22 43.8 -1.2
LSA pmax pmax
comp=Z,7.0nm,0.9s
LSA Lhasa 56.66 76 P **P** 17 22 43.8 -1.2
TSUM Tsumeb 57.36 185 P **P** 17 22 50.3 +0.9
GTA Gaotai 58.63 62 ⇑ P **P** 17 22 57.5 -0.8
GTA pP sP 17 23 02.2 +0.1
GTA sP pP 17 23 04.6 +3.6
GTA S **S** 17 31 00.9 -1.9
GTA SS **SS** 17 34 50.8 -4.3
GTA pmax pmax
comp=Z,11nm,1.7s
GTA pmax pmax

comp=Z,140nm,7.1s
GTA LR LR
comp=Z,230nm,18.2s
GTA LR LR
comp=Z,170nm,18.5s
TIXI Tiksi 59.08 21 *ce*P **P 17 23 00.2 -0.5**
TIXI Tiksi 59.08 21 P **P 17 23 01.5 +0.8**
TIXI IAmb IAmb 17 23 44.8
comp=Z,26nm,1.1s
SCHQ Schefferville 59.23 318 P **P 17 23 02.4 +0.3**
comp=Z,7.3nm,0.5s,baz=74,slow=4.2,SNR=18
SCHQ LR LR 17 49 15.3
comp=Z,203nm,18.6s,baz=99,slow=37
SCHQ Schefferville 59.23 318 P **P 17 23 02.8 +0.7**
SHL Shillong 59.26 80 P **P 17 23 05.1 +2.2**
SNR=5.6
SHL Shillong 59.26 80 P **P 17 23 01.2 -1.8**
SHL pmax pmax
comp=Z,50nm,1.6s
SHL Shillong 59.26 80 P **P 17 23 01.2 -1.8**
SHL IAmb IAmb 17 23 06.3
comp=Z,50nm,1.6s
SONM Songino Array 59.38 51 P **P 17 23 02.5 -0.9**
comp=Z,5.1nm,0.5s,baz=282,slow=7.7,SNR=47
SONM Songino Array 59.38 51 P **P 17 23 01.9 -1.5**
SONM pmax pmax
comp=Z,24nm,1.4s
SONM Songino Array 59.38 51 P **P 17 23 01.9 -1.5**
BOD Bodaibo 59.48 38 *eP* **P 17 23 02.9 -0.8**
BOD pmax pmax
comp=Z,29nm,1.6s
ULN Ulaanbaatar 59.77 51 *ce*P **P 17 23 05.1 -1.0**
ULN pmax pmax
comp=Z,27nm,1.7s
RES Resolute Bay 60.00 344 P **P 17 23 07.3 +0.3**
comp=Z,3.2nm,0.8s,baz=92,slow=5.7,SNR=4.9
RES Resolute Bay 60.00 344 P **P 17 23 08.6 +1.6**
RES pmax pmax
comp=Z,49nm,1.9s
RES Resolute Bay 60.00 344 P **P 17 23 08.6 +1.6**
RES IAmb IAmb 17 23 30.7
comp=Z,49nm,1.9s
GBN Guysborough 60.05 306 P **P 17 23 09.0 +1.2**
ABPO Ambohimpanom 61.69 153 P **P 17 23 19.4 0.0**
ABPO pmax pmax
comp=Z,20nm,1.4s
ABPO Ambohimpanom 61.69 153 P **P 17 23 19.4 0.0**
HAL Halifax 61.71 306 P **P 17 23 20.8 +1.7**
HAL pmax pmax
comp=Z,51nm,0.9s
HAL Halifax 61.71 306 P **P 17 23 20.8 +1.7**
LMN Caledonia Moun 61.92 308 P **P 17 23 21.2 +0.6**
LMN PcP **PcP 17 23 59.8 -1.5**
LZH Lanzhou 62.99 64 *eP* **P 17 23 27.8 -0.3**
LZH pP sP 17 23 32.3 +0.4
LZH sP pP 17 23 35.0 +4.1
LZH pmax pmax
comp=Z,29nm,1.0s
LZH pmax pmax
comp=Z,98nm,4.8s
LZH LR LR
comp=Z,350nm,11.9s
LZH LR LR
comp=Z,400nm,13.3s
LZH LR LR
comp=Z,320nm,13.3s
LBTB Lobatse 63.07 176 P **P 17 23 29.4 +1.0**
LBTB pmax pmax
comp=Z,16nm,0.9s
LBTB Lobatse 63.07 176 P **P 17 23 29.4 +1.0**
LBTB IAmb IAmb 17 23 34.6
comp=Z,16nm,0.9s
D62A Allapoint, All 63.94 310 IAmb IAmb 17 23 40.9
comp=Z,26nm,0.8s
YAK Yakutsk 64.36 30 *eP* **P 17 23 35.1 -1.4**
YAK pmax pmax
comp=Z,16nm,0.8s
YAK Yakutsk 64.36 30 P **P 17 23 35.4 -1.0**
YAK IAmb IAmb 17 23 42.1
comp=Z,20nm,0.9s
E62A Clayton Lake 64.44 310 P **P 17 23 38.6 +1.3**
DGAR Diego Garcia 65.21 123 *ce*P **P 17 23 45.1 +2.5**
CD2 Chengdu 65.53 69 P **P 17 23 43.7 -1.0**
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 pmax pmax
comp=Z,410nm,11.2s
HHC Hu-ho-hao-te 65.90 56 *eP* **P 17 23 48.8 +1.8**
HHC pmax pmax
comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,170nm,7.3s
BOSA Boshof 66.64 177 P **P 17 23 51.6 0.0**
comp=Z,8.5nm,0.8s,baz=359,slow=6.8,SNR=18
BOSA LR LR 17 55 55.5
comp=Z,721nm,18.5s,baz=358,slow=39
BOSA Boshof 66.64 177 P **P 17 23 52.4 +0.8**
BOSA pmax pmax
comp=Z,76nm,2.0s
BOSA Boshof 66.64 177 P **P 17 23 52.4 +0.8**
XAN Xi'an 67.62 64 P **P 17 23 57.2 -0.8**
XAN pP sP 17 24 02.1 +0.3
XAN pmax pmax
comp=Z,15nm,1.5s
XAN Xi'an 67.62 64 IAmb IAmb 17 24 03.9
comp=Z,60nm,1.8s
ZEA Zeya 67.99 38 *eP* **P 17 24 00.3 +0.4**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=N,200nm,13.0s
ZEA MLR MLR
comp=Z,400nm,15.0s
VLDQ Val d'Or 68.27 315 IAmb IAmb 17 24 09.5
comp=Z,17nm,0.8s
CHTO Chiang Mai 68.40 83 P **P 17 24 02.6 -0.4**
CHTO pmax pmax
comp=Z,17nm,1.4s
CHTO Chiang Mai 68.40 83 P **P 17 24 02.6 -0.4**
CMAR Chiang Mai Arr 68.60 83 P **P 17 24 02.2 -2.1**
comp=Z,2.9nm,0.7s,baz=302,slow=7.9,SNR=21
CMAR Chiang Mai Arr 68.60 83 P **P 17 24 02.6 -1.7**
CMAR Chiang Mai Arr 68.60 83 P **P 17 24 02.6 -1.7**
BJI Beijing 69.32 55 P **P 17 24 07.7 -0.7**
BJI pmax pmax
comp=Z,8.0nm,2.0s
C36M Paulatuk 69.81 348 IAmb IAmb 17 24 17.3
comp=Z,16nm,1.0s
GYA Guiyang 70.06 72 *eP* **P 17 24 12.3 -1.1**
GYA pmax pmax
comp=Z,10.0nm,1.5s
SUR Sutherland 70.34 181 P **P 17 24 15.1 +0.3**
comp=Z,13nm,1.1s,baz=72,slow=3.2,SNR=3.0
SUR Sutherland 70.34 181 IAmb IAmb 17 24 20.5
comp=Z,143nm,1.8s
BILL Bilibino 70.60 14 *e*P **P 17 24 15.5 -0.3**
BILL *e* 17 24 29.8
BILL pmax pmax
comp=Z,8.0nm,1.1s
BILL MLR MLR
comp=Z,406nm,20.0s
NBMO Morrinhos-CE 70.67 249 *eP* **P 17 24 19.4 +2.3**
A21K Barrow 70.67 360 P **P 17 24 16.9 +0.7**
N59A State Game Lan 71.30 308 IAmb IAmb 17 24 26.3
comp=Z,22nm,0.9s
SEY Seymchan 71.55 22 P **P 17 24 20.9 -0.7**
comp=Z,1.5nm,0.6s,baz=321,slow=5.0,SNR=5.9
SEY Seymchan 71.55 22 *i* P **P 17 24 22.2 +0.5**
M57A Sunshine Farm, 71.90 309 IAmb IAmb 17 24 29.4
comp=Z,32nm,1.1s
INK Inuvik 72.15 351 P **P 17 24 25.1 -0.1**
comp=Z,2.7nm,0.7s,baz=28,slow=6.7,SNR=7.1
INK Inuvik 72.15 351 P **P 17 24 25.3 +0.1**
INK pmax pmax
comp=Z,23nm,1.4s
INK Inuvik 72.15 351 P **P 17 24 25.3 +0.1**
M56A Emporium 72.46 309 IAmb IAmb 17 24 35.2
comp=Z,30nm,1.1s
M55A Ridgway 72.83 309 P **P 17 24 31.1 +1.4**
KLR Kul'dur 72.95 40 P **P 17 24 29.4 -1.0**
comp=Z,6.7nm,0.9s,baz=315,slow=7.4
KLR Kul'dur 72.95 40 *ce*P **P 17 24 29.3 -1.0**
KLR pmax pmax
comp=Z,10.0nm,1.0s

E46A Sault Ste Mari 73.08 316 IAmb IAmb 17 24 43.8
comp=Z,58nm,1.4s
ROSB Rosrio 73.43 253 *eP* **P 17 24 35.9 +2.3**
P57A Homestead Farm 73.53 307 IAmb IAmb 17 24 42.0
comp=Z,44nm,1.4s
MA2 Magadan 73.65 24 P **P 17 24 33.4 -0.8**
comp=Z,28nm,1.2s,baz=300,slow=20,SNR=2.1
YKA Yellowknife Ar 73.70 341 P **P 17 24 34.0 -0.4**
comp=Z,6.2nm,0.8s,baz=44,slow=5.8,SNR=8.0
YKA LR LR 17 57 34.0
comp=Z,330nm,21.4s,baz=0.0,slow=36
BMAR Burnt Mountain 74.11 355 P **P 17 24 38.2 +1.3**
GRNR Gornyy 74.25 37 *i* P **P 17 24 36.4 -1.5**
GRNR pmax pmax
comp=Z,8.0nm,1.0s
GRNR MLR MLR
comp=N,210nm,14.0s
GRNR MLR MLR
comp=E,190nm,14.0s
GRNR MLR MLR
comp=Z,250nm,17.0s
R58B Mineral 74.34 306 P **P 17 24 39.5 +0.8**
R58B IAmb IAmb 17 24 45.9
comp=Z,26nm,1.1s
EPYK Eagle Plains 74.39 351 IAmb IAmb 17 24 44.8
comp=Z,52nm,1.5s
Q56A Snyder Ridge, 74.53 308 IAmb IAmb 17 24 47.1
comp=Z,32nm,0.8s
FYU Fort Yukon 75.00 355 IAmb IAmb 17 24 45.7
comp=Z,33nm,1.0s
O52A Adamsville 75.50 310 P **P 17 24 46.3 +0.9**
O52A IAmb IAmb 17 24 52.5
comp=Z,30nm,0.9s
R55A Marlinton 75.57 307 IAmb IAmb 17 24 56.3
comp=Z,62nm,1.4s
NJ2 Nanjing 75.64 61 *eP* **P 17 24 46.7 +0.5**
NJ2 pmax pmax
comp=Z,12nm,0.6s
TMAB Tom-Au,PA,Br 76.10 256 *eP* **P 17 24 51.4 +2.3**
USA0B Ussuriysk Arra 76.30 44 *i* P **P 17 24 47.9 -1.9**
USRK Ussuriysk Ar. 76.30 44 P **P 17 24 48.4 -1.4**
comp=Z,4.3nm,0.7s,baz=286,slow=5.9,SNR=9.0
USRK Ussuriysk Ar. 76.30 44 P **P 17 24 48.7 -1.1**
USRK Ussuriysk Ar. 76.30 44 P **P 17 24 48.7 -1.1**
ULM Lac du Bonnet 76.35 324 P **P 17 24 49.8 -0.2**
comp=Z,13nm,0.8s,baz=27,slow=3.9,SNR=7.6
ULM LR LR 17 58 55.3
comp=Z,687nm,19.6s,baz=66,slow=36
ULM Lac du Bonnet 76.35 324 IAmb IAmb 17 24 57.2
comp=Z,20nm,0.8s
MDM Murphy Dome 76.79 356 P **P 17 24 53.0 +0.7**
MDM IAmb IAmb 17 25 01.1
comp=Z,26nm,1.2s
COLA College 76.86 356 *i* P **P 17 24 53.0 +0.4**
COLA pmax pmax
comp=Z,8.0nm,1.2s
IL31 76.90 355 IAmb IAmb 17 25 20.9
comp=Z,33nm,1.8s
ILAR Eielson Array 76.90 355 P **P 17 24 52.9 +0.1**
comp=Z,2.6nm,0.8s,baz=3.5,slow=4.5,SNR=23
ILAR LR LR 17 59 29.9
comp=Z,185nm,21.3s,baz=278,slow=36
ILAR Eielson Array 76.90 355 P **P 17 24 53.8 +1.0**
ILAR Eielson Array 76.90 355 P **P 17 24 53.8 +1.0**
DAWY Dawson 76.92 352 IAmb IAmb 17 24 60.0
comp=Z,17nm,0.9s
Q51A Peebles 77.09 310 IAmb IAmb 17 25 01.3
comp=Z,31nm,1.1s
K27K Chicken 77.24 353 IAmb IAmb 17 25 04.6
comp=Z,29nm,1.0s
HDA Harding Lake 77.26 355 P **P 17 24 55.2 +0.3**
HDA IAmb IAmb 17 25 03.7
comp=Z,36nm,1.3s
WRH Wood River Hil 77.27 356 IAmb IAmb 17 25 01.3
comp=Z,23nm,1.0s
PDPR Patillas Dam, 77.66 283 P **P 17 24 59.4 +1.5**
U54A Nelsons Funny 77.72 307 IAmb IAmb 17 25 05.0
comp=Z,31nm,0.8s
DOT Dot Lake 77.79 354 IAmb IAmb 17 25 10.4
comp=Z,50nm,1.7s
MCPB Mapa, AP 77.86 260 *eP* **P 17 25 00.2 +1.2**
PSI Prapat 77.89 96 P **P 17 24 58.7 -0.7**
comp=Z,4.7nm,0.4s,baz=360,slow=15,SNR=2.6
RPSI Rantau Prapat 77.96 96 P **P 17 24 58.7 -0.9**
RPSI Rantau Prapat 77.96 96 IAmb IAmb 17 25 03.4
comp=Z,22nm,1.1s
I40A Norwalk 78.09 317 IAmb IAmb 17 25 03.3
comp=Z,18nm,0.5s
BCAR Beaver Creek A 78.15 353 P **P 17 24 59.5 -0.4**
KSAR Wonju Array Be 78.23 51 P **P 17 25 00.0 -0.8**
KSAR Wonju Array Be 78.23 51 P **P 17 24 60.0 -0.8**
KSRS Korea Array 78.25 51 P **P 17 24 59.9 -1.0**
comp=Z,3.2nm,0.5s,baz=311,slow=4.4,SNR=27
KTH Kantishna Hill 78.33 357 P **P 17 25 00.1 -0.9**
KTH IAmb IAmb 17 25 13.5
comp=Z,52nm,1.4s
SPMN Marine on St. 78.34 319 IAmb IAmb 17 25 08.1
comp=Z,28nm,1.1s
DHY Denali Highway 78.61 355 P **P 17 25 03.4 +0.8**
DHY IAmb IAmb 17 25 08.6
comp=Z,18nm,0.8s
WCI Wyandotte Cave 79.38 311 P **P 17 25 08.5 +1.5**
WCI pmax pmax
comp=Z,59nm,1.0s
WCI Wyandotte Cave 79.38 311 P **P 17 25 08.5 +1.5**
TKL Tuckaleechee C 79.49 307 IAmb IAmb 17 25 19.8
comp=Z,96nm,1.9s
L40A Anamosa 79.65 316 IAmb IAmb 17 25 15.0
comp=Z,77nm,1.4s
PRPB Parauapebas 79.85 254 *eP* **P 17 25 11.1 +1.1**
YSS Yuzh-Sakhalins 79.90 37 *ce*P **P 17 25 09.5 -0.2**
YSS pmax pmax
comp=Z,109nm,1.7s
SMTB Santa Maria do 79.94 250 *eP* **P 17 25 11.6 +1.2**
GHO Glory Hole Cre 80.01 356 IAmb IAmb 17 25 19.2
comp=Z,31nm,1.1s
CPCT Cooper Cave 80.09 307 IAmb IAmb 17 25 21.4
comp=Z,44nm,1.3s
SDBA SAO DESIDERIO 80.34 246 *eP* **P 17 25 14.2 +1.7**
MALB Monte Alegre 80.51 260 *eP* **P 17 25 15.6 +2.1**
W50A Signal Mountai 80.74 308 IAmb IAmb 17 25 25.5
comp=Z,46nm,1.2s
Y52A Lilburn 80.82 306 IAmb IAmb 17 25 25.8
comp=Z,27nm,0.9s
DLBC Dease Lake 80.85 346 P **P 17 25 13.9 -0.9**
comp=Z,2.0nm,0.7s,baz=196,slow=26,SNR=1.9
SDDR Presa de Saban 81.09 287 P **P 17 25 17.8 +1.2**
SDDR IAmb IAmb 17 25 22.7
comp=Z,37nm,0.9s
V48A Smith Brothers 81.32 309 IAmb IAmb 17 27 38.3
comp=Z,18nm,0.6s
FPAL Fort Paine 81.36 307 IAmb IAmb 17 25 21.0
comp=Z,85nm,1.7s
WVT Waverly 81.68 310 P **P 17 25 19.9 +0.5**
WVT pmax pmax
comp=Z,77nm,2.0s
WVT Waverly 81.68 310 P **P 17 25 19.9 +0.5**
WVT IAmb IAmb 17 25 21.0
comp=Z,77nm,2.0s
JANB Januaria 81.71 244 *eP* **P 17 25 21.7 +1.9**
P40A Paris 81.84 315 IAmb IAmb 17 25 26.7
comp=Z,18nm,0.9s
ASAJ Asahikawa 81.89 39 P **P 17 25 19.6 -0.8**
comp=Z,18nm,1.1s,baz=8.1,slow=7.1,SNR=2.6
BSFB Barra de Sao F 81.94 238 *eP* **P 17 25 23.1 +2.2**
RIB01 Linhares ES 81.97 238 *eP* **P 17 25 24.1 +3.0**
SJMB Sao Joao De Ma 82.08 239 *eP* **P 17 25 23.4 +1.8**
CCM Cathedral Cave 82.40 313 P **P 17 25 24.2 +1.0**
CCM pmax pmax
comp=Z,21nm,0.9s
CCM Cathedral Cave 82.40 313 P **P 17 25 24.2 +1.0**
CCM IAmb IAmb 17 25 29.9
comp=Z,21nm,0.8s
PLAL Pickwick Lake 82.59 309 IAmb IAmb 17 25 35.7
comp=Z,58nm,1.7s
PEXB Peixe 82.60 248 *eP* **P 17 25 26.4 +1.9**
P38A Dawn 82.60 315 P **P 17 25 23.8 -0.5**
P38A IAmb IAmb 17 25 31.2
comp=Z,22nm,1.1s
R40A Maddies Statio 82.82 314 IAmb IAmb 17 25 32.5
comp=Z,38nm,1.2s
T42A Van Buren 83.01 312 IAmb IAmb 17 25 33.4
comp=Z,24nm,0.9s
ITTB Itaituba 83.23 259 *eP* **P 17 25 29.1 +1.3**
S39A Bolivar 83.83 314 IAmb IAmb 17 26 11.6
comp=Z,20nm,0.7s

FCAR Ozark Folk Cen 84.40 312 IAmb IAmb 17 25 40.0
comp=Z,24nm,1.2s
U40A Yellville 84.50 313 IAmb IAmb 17 26 14.8
comp=Z,31nm,1.1s
RSSD Black Hills 84.62 324 P **P 17 25 35.2 +0.4**
RSSD pmax pmax
comp=Z,9.0nm,0.9s
RSSD Black Hills 84.62 324 P **P 17 25 35.2 +0.4**
NPGB Novo Progresso 84.62 257 *eP* **P 17 25 36.3 +1.3**
WALA Waterton Lakes 84.70 333 IAmb IAmb 17 25 45.3
comp=Z,23nm,1.4s
SNDB Serra Nova Dou 84.72 250 *eP* **P 17 25 37.0 +1.6**
BDFB Brasilia 84.73 246 P **P 17 25 36.8 +1.2**
comp=Z,3.7nm,0.6s,baz=44,slow=4.5,SNR=4.5
BDFB LR LR 18 04 32.4
comp=Z,318nm,18.2s,baz=84,slow=36
W41B Gary Mavity, V 84.97 312 IAmb IAmb 17 25 48.8
comp=Z,34nm,1.2s
MAJO Matsushiro 84.97 47 *i* P **P 17 25 36.6 +0.1**
MAJO pmax pmax
comp=Z,9.0nm,1.2s
MJAR Matsushiro Arr 84.97 47 P **P 17 25 35.5 -1.0**
comp=Z,4.1nm,0.9s,baz=310,slow=5.2,SNR=6.3
MJAR Matsushiro Arr 84.97 47 P **P 17 25 35.8 -0.7**
MJAR pmax pmax
comp=Z,4.0nm,0.8s
MJAR Matsushiro Arr 84.97 47 P **P 17 25 35.8 -0.7**
HHAR Hobbs 85.17 313 IAmb IAmb 17 27 09.3
comp=Z,36nm,1.0s
U38A Gravette 85.32 314 IAmb IAmb 17 26 32.4
comp=Z,27nm,0.8s
X40A Basin Creek Fa 85.79 311 IAmb IAmb 17 25 52.9
comp=Z,21nm,1.2s
W39A Magazine 85.85 312 IAmb IAmb 17 25 47.6
comp=Z,60nm,1.8s
JTMT Jette 85.94 332 IAmb IAmb 17 25 53.2
comp=Z,36nm,1.1s
VAS01 Vassouras-RJ 86.08 238 *eP* **P 17 25 43.9 +1.9**
BSCB Bom Sucesso 86.09 240 *eP* **P 17 25 44.0 +1.8**
RLMT Red Lodge 86.13 328 IAmb IAmb 17 25 54.6
comp=Z,22nm,1.2s
T35A Sooner Cattle 86.17 315 P **P 17 25 43.4 +0.9**
MIAR Mount Ida 86.18 312 IAmb IAmb 17 25 49.5
comp=Z,20nm,0.9s
IPMB Ipameri, GO 86.43 244 *eP* **P 17 25 45.8 +1.8**
TUL1 Leonard 86.49 314 P **P 17 25 44.8 +0.8**
NEW Newport 86.51 334 P **P 17 25 45.2 +1.3**
comp=Z,6.2nm,0.6s,baz=65,slow=5.5,SNR=3.8
NEW Newport 86.51 334 IAmb IAmb 17 25 55.5
comp=Z,20nm,1.1s
MDSI Maura Dua 86.51 98 P **P 17 25 40.1 -4.3**
SDV Santo Domingo 86.73 279 P **P 17 25 46.7 +1.0**
SDV IAmb IAmb 17 25 52.9
comp=Z,36nm,1.3s
SDV Santo Domingo 86.73 279 *eP* **P 17 25 47.1 +1.4**
MAN01 Angra dos Reis 86.83 238 *eP* **P 17 25 47.9 +2.1**
K22A Casper 86.90 325 IAmb IAmb 17 25 51.4
comp=Z,15nm,0.9s
C09A Chrisman Ranch 87.30 335 IAmb IAmb 17 25 59.6
comp=Z,29nm,1.0s
ARAG Araguaiana, MT 87.52 248 *eP* **P 17 25 50.5 +1.3**
N23A Red Feather La 88.02 323 IAmb IAmb 17 26 03.9
comp=Z,16nm,1.1s
TGY Tagaytay City 88.12 74 LR LR 18 09 50.8
comp=Z,115nm,19.9s,baz=34,slow=39
PDAR Pinedale Array 88.16 327 P **P 17 25 52.2 0.0**
comp=Z,3.3nm,0.9s,baz=66,slow=3.8,SNR=14
PDAR LR LR 18 05 22.3
comp=Z,571nm,21.8s,baz=358,slow=36
PARB Paraibuna 88.26 238 *eP* **P 17 25 54.1 +1.4**
F10A Beach Ranch, E 88.51 333 IAmb IAmb 17 26 04.6
comp=Z,27nm,1.6s
BB19B Bebedouro 88.71 242 *eP* **P 17 25 57.1 +2.4**
AHID Auburn Hatcher 88.82 328 IAmb IAmb 17 27 39.6
comp=Z,17nm,1.3s
VAO Valinhos 88.94 239 *eP* **P 17 25 57.5 +1.7**
ITRB Iturama 89.09 244 *eP* **P 17 25 59.2 +2.6**
SPB Sao Paulo 89.65 239 *eP* **P 17 26 01.6 +2.6**
O20A White River Ci 89.69 324 IAmb IAmb 17 26 04.8
comp=Z,27nm,1.1s
HWUT Hardware Ranch 89.96 327 P **P 17 26 00.8 +0.1**
HWUT IAmb IAmb 17 26 07.8
comp=Z,16nm,0.8s
PCMB Pacaembu 90.97 243 *eP* **P 17 26 07.2 +1.9**
ABTX Abilene, Hawle 91.06 314 IAmb IAmb 17 26 13.0
comp=Z,24nm,1.1s
PV22 Blue Mesa, Par 91.22 324 IAmb IAmb 17 26 12.4
comp=Z,21nm,1.0s
PV15 Paradox Valley 91.23 323 IAmb IAmb 17 26 12.4
comp=Z,16nm,1.0s
PV07 Paradox Valley 91.23 324 IAmb IAmb 17 26 13.9
comp=Z,18nm,1.0s
PV11 David Mesa, Pa 91.45 324 P **P 17 26 08.3 +0.7**
PV02 Paradox Valley 91.46 323 P **P 17 26 08.2 +0.4**
PV02 IAmb IAmb 17 26 13.6
comp=Z,12nm,1.0s
PV14 Lion Creek, Pa 91.46 324 IAmb IAmb 17 26 13.6
comp=Z,28nm,1.1s
PV16 Nyswonger Mesa 91.46 324 IAmb IAmb 17 26 19.1
comp=Z,22nm,1.0s
PV03 Paradox Valley 91.47 324 IAmb IAmb 17 26 19.6
comp=Z,21nm,1.1s
PV17 East Wray Mesa 91.51 324 IAmb IAmb 17 26 13.8
comp=Z,19nm,0.9s
PV18 Skein Mesa, Pa 91.51 324 IAmb IAmb 17 26 13.8
comp=Z,18nm,1.0s
PV13 Radium Mtn., P 91.54 323 IAmb IAmb 17 26 13.9
comp=Z,16nm,1.1s
SAML Samuel 91.84 260 P **P 17 26 09.7 +0.2**
SAML pmax pmax
comp=Z,5.0nm,1.2s
SAML Samuel 91.84 260 P **P 17 26 09.7 +0.2**
TJ01 Guaruva-PR 91.87 239 *eP* **P 17 26 11.5 +2.0**
VILB Vilhena 92.03 255 *eP* **P 17 26 13.4 +3.0**
ROSC El Rosal 92.10 278 LR LR 18 05 08.8
comp=Z,65nm,19.0s,baz=64,slow=34
ELK Elko 92.21 329 P **P 17 26 10.6 -0.6**
comp=Z,0.3nm,0.3s,baz=78,slow=3.0,SNR=4.4
ELK Elko 92.21 329 IAmb IAmb 17 26 18.3
comp=Z,18nm,1.7s
PTLB Pontes e Lacer 92.78 253 *eP* **P 17 26 15.7 +2.0**
PTGB Pitanga 93.56 241 *eP* **P 17 26 19.7 +2.4**
YBH Yreka Blue Hor 94.14 334 P **P 17 26 19.2 -0.7**
comp=Z,1.3nm,0.8s,baz=230,slow=12,SNR=1.8
ETMB Extrema 94.73 261 *eP* **P 17 26 25.1 +2.2**
WUAZ Wupatki 94.87 324 IAmb IAmb 17 26 30.2
comp=Z,33nm,1.9s
NVAR Mina Array Bea 95.42 330 P **P 17 26 25.8 -0.2**
comp=Z,0.9nm,0.9s,baz=66,slow=3.1,SNR=2.6
NVAR LR LR 18 11 14.5
comp=Z,721nm,20.2s,baz=17,slow=37
TX31 Lajitas Ar. Si 95.81 315 IAmb IAmb 17 26 40.1
comp=Z,12nm,1.0s
TXAR Lajitas Array 95.81 315 P **P 17 26 29.0 +1.3**
comp=Z,2.0nm,0.9s,baz=74,slow=3.2,SNR=10
TXAR Lajitas Array 95.81 315 P **P 17 26 28.7 +1.0**
CZSB Cruzeiro do Su 98.54 267 *eP* Pdif 17 26 42.3 +2.2
WSI Waingapu 102.29 93 P **Pdif 17 26 56.1 -0.7**
WRA Warramunga Arr 119.26 93 PKP **PKPdf 17 31 49.0 -1.6**
comp=Z,2.1nm,0.8s,baz=316,slow=1.4,SNR=24
ASAR Alice Springs 120.91 97 PKP **PKPdf 17 31 52.0 -1.8**
comp=Z,2.9nm,0.7s,baz=310,slow=1.6,SNR=37
ASAR Alice Springs 120.91 97 PKPdf 17 31 51.8 -2.0
AS31 Alice Springs 120.91 97 PKPdf 17 31 53.4 -0.4
QSPA South Pole Qui 128.16 180 PKP **PKPdf 17 32 05.6 -0.7**
comp=Z,3.5nm,0.7s,baz=276,slow=0.9,SNR=23
QSPA South Pole Qui 128.16 180 PKiKP 17 32 07.9 +1.0
STKA Stephens Creek 130.80 102 PKP **PKiKP 17 32 12.8 -0.4**
comp=Z,2.6nm,0.8s,baz=346,slow=4.2,SNR=2.9
STKA SKPbc **SKPbc 17 35 35.5 -1.1**
comp=Z,2.6nm,0.7s,baz=307,slow=7.6,SNR=8.5
VNDA Vanda 137.14 168 PKP **PKiKP 17 32 24.0 -0.8**
comp=Z,0.6nm,1.0s,baz=305,slow=7.3,SNR=2.9
VNDA SKPbc **SKPbc 17 35 55.4 -0.7**
comp=Z,0.6nm,1.0s,baz=9.1,slow=4.1,SNR=3.8
DZM Mont Dzumac 145.41 72 PKPbc **PKPab 17 32 39.6 0.0**
comp=Z,17nm,0.7s,baz=190,slow=5.5,SNR=10

ROM 07 17:14:24.4±0.0,**43°437N**±0.003,**12°346E**±0.004,
h9km, ML2.1/26, **8C, Error ellipse: s-maj=0.3km**
s-min=0.3km az=55.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.04**	**71**	P	Pg		17 14 26.4	+0.2

ATPI					S	Sg	17 14 27.4	-0.1	
ATPI					AML	AML			
	comp=E,11250µm,0.7s								
ATPI					AML	AML			
	comp=N,6655µm,1.0s								
ATVO	**AVT- Monte Val**	**0.07**	**141**		P	Pg	17 14 27.0	+0.5	
ATVO					S	Sg	17 14 28.8	+0.8	
ATVO					AML	AML			
	comp=E,3585µm,1.0s								
ATVO					AML	AML			
	comp=N,2370µm,0.3s								
BADI	**Badiali**	**0.10**	**315**		P	Pg	17 14 27.4	+0.5	
BADI					S	Sg	17 14 29.4	+0.6	
BADI					AML	AML			
	comp=N,2620µm,1.4s								
BADI					AML	AML			
	comp=E,2545µm,1.0s								
APEC	**Apecchio**	**0.13**	**24**		P	Pg	17 14 28.1	+0.7	
APEC					S	Sg	17 14 30.6	+1.2	
APEC					AML	AML			
	comp=N,1915µm,0.3s								
APEC					AML	AML			
	comp=N,1910µm,0.3s								
APEC					AML	AML			
	comp=E,1800µm,0.5s								
ATFO	**Monte Foce - G**	**0.18**	**113**	⇑	P	Pg	17 14 28.8	+0.7	
ATFO					S	Sg	17 14 32.2	+1.5	
ATFO					AML	AML			
	comp=E,1114µm,0.6s								
ATFO					AML	AML			
	comp=N,958µm,0.6s								
ATFO					AML	AML			
	comp=N,958µm,0.6s								
MURB	**Monte Urbino**	**0.22**	**143**		P	Pg	17 14 29.6	+0.8	
MURB					AML	AML			
	comp=E,1590µm,0.3s								
MURB					AML	AML			
	comp=N,1725µm,0.2s								
MURB					AML	AML			
	comp=N,1720µm,0.2s								
MURB					AML	AML			
	comp=E,1755µm,0.3s								
PARC	**Parchiule**	**0.23**	**340**	⇑	P	Pg	17 14 29.7	+0.7	
PARC					S	Sg	17 14 33.7	+1.6	
PARC					AML	AML			
	comp=E,1092µm,1.3s								
PARC					AML	AML			
	comp=N,1285µm,1.3s								
ATTE	**AVT- Monte Tez**	**0.24**	**179**	⇑	P	Pg	17 14 29.8	+0.6	
ATTE					S	Sg	17 14 33.8	+1.3	
ATTE					AML	AML			
	comp=E,532µm,0.2s								
ATTE					AML	AML			
	comp=N,446µm,1.2s								
NARO	**Abbazia di Nar**	**0.24**	**44**	⇑	P	Pg	17 14 29.9	+0.5	
NARO					S	Sg	17 14 34.3	+1.7	
NARO					AML	AML			
	comp=E,384µm,0.4s								
NARO					AML	AML			
	comp=N,356µm,1.4s								
NARO					AML	AML			
	comp=N,356µm,1.4s								
PE3	**Peglio**	**0.28**	**23**		P	Pb	17 14 30.9	-0.8	
PE3					AML	AML			
	comp=N,964µm,0.3s								
PE3					AML	AML			
	comp=E,792µm,0.3s								
FRON	**Frontone**	**0.29**	**74**	⇑	P	Pg	17 14 30.8	+0.6	
FRON					S	Sb	17 14 35.7	-1.1	
FRON					AML	AML			
	comp=E,270µm,1.1s								
FRON					AML	AML			
	comp=N,482µm,1.2s								
FRON					AML	AML			
	comp=E,308µm,1.6s								
CAFI	**Castiglion Fio**	**0.30**	**249**		P	Pg	17 14 31.0	+0.6	
CAFI					S	Sb	17 14 35.8	-1.2	
CAFI					AML	AML			
	comp=E,310µm,0.2s								
CAFI					AML	AML			
	comp=N,500µm,0.8s								
SSFR	**Montelago di S**	**0.32**	**90**	⇑	P	Pg	17 14 31.4	+0.6	
SSFR					AML	AML			
	comp=E,909µm,1.3s								
SSFR					AML	AML			
	comp=N,728µm,1.1s								
SSFR					AML	AML			
	comp=N,592µm,1.1s								
SSFR					AML	AML			
	comp=N,592µm,1.1s								
SSFR					AML	AML			
	comp=E,722µm,1.3s								
SSFR					AML	AML			
	comp=N,728µm,1.0s								
ATCC	**AVT- Casa Cast**	**0.33**	**139**		P	Pb	17 14 31.8	-0.8	
ATCC					AML	AML			
	comp=E,434µm,0.3s								
ATCC					AML	AML			
	comp=E,630µm,0.6s								
ATCC					AML	AML			
	comp=N,405µm,0.2s								
FOSV	**Fossato di Vic**	**0.34**	**115**		P	Pg	17 14 31.7	+0.7	
FOSV					AML	AML			
	comp=E,140µm,1.5s								
FOSV					AML	AML			
	comp=N,160µm,0.6s								
FOSV					AML	AML			
	comp=E,289µm,1.1s								
FOSV					AML	AML			
	comp=N,254µm,0.6s								
CRE	**Caprese Michel**	**0.34**	**303**		P	Pg	17 14 31.6	+0.4	
CRE					S	Sb	17 14 37.1	-1.2	
CRE					AML	AML			
	comp=N,323µm,0.7s								
CRE					AML	AML			
	comp=E,267µm,0.3s								
MPAG	**Monte Paganucc**	**0.36**	**57**	⇑	P	Pg	17 14 32.1	+0.6	
MPAG					AML	AML			
	comp=E,158µm,0.7s								
MPAG					AML	AML			
	comp=N,141µm,1.6s								
MPAG					AML	AML			
	comp=E,328µm,0.8s								
MPAG					AML	AML			
	comp=N,255µm,1.1s								
CPGN	**Carpegna, Ital**	**0.36**	**357**		P	Pb	17 14 33.0	-0.3	
CPGN					AML	AML			
	comp=E,590µm,1.0s								
CPGN					AML	AML			
	comp=E,590µm,0.9s								
CPGN					AML	AML			
	comp=N,802µm,0.3s								
CPGN					AML	AML			
	comp=E,628µm,1.1s								
CPGN					AML	AML			
	comp=N,717µm,0.2s								
FSSB	**Fossombrone**	**0.41**	**51**		P	Pg	17 14 32.9	+0.6	
FSSB					AML	AML			
	comp=N,412µm,1.2s								
FSSB					AML	AML			
	comp=E,473µm,0.2s								
FSSB					AML	AML			
	comp=N,458µm,1.6s								
ASSB	**Assisi San Ben**	**0.46**	**150**		P	Pg	17 14 33.7	+0.5	
ASSB					AML	AML			
	comp=E,106µm,1.5s								
ASSB					AML	AML			
	comp=N,178µm,0.6s								
ASSB					AML	AML			
	comp=N,300µm,0.8s								
ASSB					AML	AML			
	comp=E,314µm,1.5s								
SNTG	**Esanatoglia**	**0.47**	**113**		P	Pg	17 14 34.1	+0.5	
SNTG					S	Sb	17 14 41.8	-0.2	
SNTG					AML	AML			
	comp=E,169µm,1.4s								
SNTG					AML	AML			
	comp=N,440µm,0.2s								
SNTG					AML	AML			
	comp=E,226µm,0.8s								
ASQU	**Asqua**	**0.54**	**312**		P	Pg	17 14 35.3	+0.4	
ASQU					S	Sb	17 14 44.3	+0.2	
ASQU					AML	AML			
	comp=E,101µm,0.3s								
ASQU					AML	AML			
	comp=N,96µm,0.6s								
ASQU					AML	AML			
	comp=E,168µm,1.5s								
ASQU					AML	AML			
	comp=N,194µm,0.8s								
MGAB	**Montegabbione**	**0.55**	**198**	⇑	P	Pb	17 14 35.7	-0.6	
MGAB					S	Sb	17 14 44.5	+0.2	
MGAB					AML	AML			
	comp=E,319µm,1.2s								
MGAB					AML	AML			
	comp=N,430µm,0.3s								
MGAB					AML	AML			
	comp=E,356µm,1.2s								
MGAB					AML	AML			
	comp=N,428µm,1.3s								
EL6	**Elcito**	**0.56**	**101**		P	Pg	17 14 35.7	+0.4	
SFI	**Santa Sofia**	**0.59**	**322**		P	Pg	17 14 36.3	+0.4	
SFI					AML	AML			
	comp=E,192µm,1.5s								
SFI					AML	AML			
	comp=N,162µm,1.3s								
CESI	**CESI - Serrava**	**0.59**	**136**		P	Pb	17 14 36.5	-0.6	
CESI					AML	AML			
	comp=E,19µm,1.3s								
CESI					AML	AML			
	comp=N,61µm,1.4s								
CESI					AML	AML			
	comp=N,200µm,0.8s								
CESI					AML	AML			
	comp=E,67µm,0.7s								
SACS	**San Casciano d**	**0.67**	**209**		P	Pb	17 14 37.9	-0.5	
SACS					AML	AML			
	comp=E,143µm,1.3s								
SACS					AML	AML			
	comp=N,157µm,1.3s								
SACS					AML	AML			
	comp=E,147µm,1.3s								
SACS					AML	AML			
	comp=N,144µm,1.3s								
SACS					AML	AML			
	comp=N,250µm,1.6s								
SACS					AML	AML			
	comp=E,220µm,0.8s								
SACS					AML	AML			
	comp=N,246µm,0.9s								
SACS					AML	AML			
	comp=E,206µm,0.8s								
FDMO	**Fiordimonte**	**0.67**	**126**		P	Pg	17 14 37.7	+0.3	
FDMO					AML	AML			
	comp=N,122µm,0.9s								
FDMO					AML	AML			
	comp=N,296µm,0.7s								
FDMO					AML	AML			
	comp=E,408µm,0.6s								
LAV9	**Lanuvio**	**1.78**	**171**		AML	AML			
	comp=N,935µm,0.7s								
LAV9					AML	AML			
	comp=E,1008µm,0.5s								

*IDC **07** 17:22:17.5±3.2, 36°.38N×71°.04E, h192km±29km, mb3.5/13, mb1 3.5/17, mb1mx3.2/75, mbtmpg3.9/17, Error ellipse: s-maj=19.1km s-min=13.6km az=16.0*
*NNC **07** 17:22:19.7±4.2, 36°.98N×70°.78E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=34.1km s-min=26.4km az=167.0*
*NEIC **07** 17:22:21.1±2.9, 36°.63N±0°.05×70°.99E±0°.10, h225km±5km, mb4.0/13, Error ellipse: s-maj=11.6km s-min=7.5km az=89.0*

ISC 07 17:22:19.7±0.5, 36°.61N±0°.04×71°.04E±0°.05, h200km, n78, σ2§07/87, mb3.8/13, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GAR	**Garm**	**2.46**	**347**			**Pn**	**17 23 06.3**	**+3.0**
GAR				S		**Sn**	**17 23 38.7**	**+1.3**
CHGR	**Chuyangaron**	**2.54**	**324**			**Pn**	**17 23 06.5**	**+2.4**
CHGR				S		**Sn**	**17 23 39.4**	**+0.6**
KBL	**Kabul**	**2.63**	**219**			**Pn**	**17 23 08.2**	**+2.9**
KBL				S		**Sn**	**17 23 43.0**	**+2.2**
CEP	**Cherat**	**2.87**	**165**	P		**Pn**	**17 23 11.7**	**+3.7**
BTK	**Batken**	**3.45**	**357**			**Pn**	**17 23 18.6**	**+3.8**
BTK				S		**Sn**	**17 24 00.5**	**+2.4**
NIL	**Nilore**	**3.46**	**148**			**Pn**	**17 23 18.9**	**+4.0**
NIL				S		**Sn**	**17 24 03.4**	**+5.2**
THW	**Thamme Wali**	**3.85**	**171**	P		**Pn**	**17 23 22.6**	**+2.9**
TAS	**Tashkent**	**4.91**	**344**	Pn		**Pn**	**17 23 35.0**	**+2.2**
AML	**Almayashu** SNR=49	**5.89**	**20**	P		**Pn**	**17 23 47.9**	**+2.1**
DHRM	**DHARAMSHALA**	**6.14**	**133**	*e*P		**Pn**	**17 23 51.6**	**+2.5**
DHRM				*e*S		**Sn**	**17 25 00.3**	**+0.5**
EKS2	**Erkin-Say** SNR=7.4	**6.41**	**18**	P		**Pn**	**17 23 54.3**	**+2.1**
KK06	**Karatay Array**	**6.49**	**357**	Pn		**Pn**	**17 23 54.8**	**+1.5**
KK31	**Karatay Array** 5.8nm,0.4s,baz=202,slow=20,SNR=7.8	**6.50**	**357**	⇓P		**Pn**	**17 23 52.4**	**-1.0**
KK31	10nm,0.5s,baz=184,slow=19,SNR=6.3			⇑S		**Sn**	**17 25 04.3**	**-3.4**
KK31	**Karatay Array**	**6.50**	**357**			**Pn**	**17 23 54.8**	**+1.4**
KK31				S		**Sn**	**17 25 06.0**	**-1.7**
KKAR	**Karatay Array**	**6.50**	**357**			**Pn**	**17 23 54.9**	**+1.4**
KKAR	**Karatay Array**	**6.50**	**357**			**Pn**	**17 23 54.6**	**+1.2**
KBK	**Karagaybulak** SNR=7.6	**6.75**	**25**	P		**Pn**	**17 23 59.4**	**+2.6**
BOOM	**Boomskoye usch**	**6.99**	**31**	Pn		**Pn**	**17 24 02.5**	**+2.6**
CHMS	**Chumysh** SNR=8.5	**6.99**	**23**	P		**Pn**	**17 24 02.2**	**+2.4**
USP	**Ospenovka** SNR=11	**7.16**	**21**	P		**Pn**	**17 24 04.1**	**+2.1**
TKM2	**Tokmak 2** SNR=6.9	**7.22**	**28**	P		**Pn**	**17 24 05.0**	**+2.1**
TKM2	**Tokmak 2** 12nm,1.0s	**7.22**	**28**	⇑P		**Pn**	**17 24 04.6**	**+1.7**
TKM2	13nm,0.9s			⇓S		**Sn**	**17 25 23.6**	**-1.2**
KDJ	**Kajisay**	**7.28**	**39**	Pn		**Pn**	**17 24 04.6**	**+0.9**
KUDL	**Kundal**	**9.61**	**150**	*e*P		**Pn**	**17 24 32.9**	**-1.0**
KUDL				*e*S		**Sn**	**17 26 15.8**	**-5.7**
GEYT	**Alibeck** 0.4nm,0.3s,baz=117,slow=12,SNR=1.9	**10.39**	**281**	P		**Pn**	**17 24 43.2**	**-0.7**
GEYT	0.4nm,0.3s,baz=60,slow=29,SNR=1.7			S		**Sn**	**17 26 38.0**	**-1.9**
GEYT	**Alibeck**	**10.39**	**281**	Pn		**Pn**	**17 24 44.5**	**+0.6**
GYB4	**ALIBECK ARRAY**	**10.40**	**281**	Pn		**Pn**	**17 24 43.2**	**-0.9**
MAKZ	**Makanchi**	**13.05**	**35**	P		**Pn**	**17 25 18.9**	**+1.2**
PYUN	**Piuthan** 28nm,0.3s	**13.18**	**127**	*e*P		**Pn**	**17 25 20.1**	**+0.4**
MK31	**Makanchi Array**	**13.19**	**36**	P		**Pn**	**17 25 21.6**	**+2.2**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=217,slow=11,SNR=2.2	**13.19**	**36**	P		**Pn**	**17 25 20.3**	**+0.9**
MKAR	0.0nm,0.3s,baz=311,slow=7.8,SNR=3.1			S		**S**	**17 27 44.7**	**-1.6**
MKAR	**Makanchi Array**	**13.19**	**36**			**Pn**	**17 25 20.6**	**+1.2**
DANN	**Dangsing** 6.9nm,0.2s	**13.52**	**124**	*e*P		**Pn**	**17 25 24.9**	**+0.9**
KOLN	**Koldanda** 5.4nm,0.3s	**13.80**	**126**	*e*P		**Pn**	**17 25 28.3**	**+0.9**
GKN	**Gorkha** 23nm,0.4s	**14.33**	**123**	*e*P		**Pn**	**17 25 34.9**	**+1.0**
DMN	**Daman** 7.0nm,0.4s	**14.90**	**123**	*e*P		**P**	**17 25 42.2**	**+0.4**
KKN	**Kakani** 16nm,0.5s	**14.90**	**122**	*e*P		**Pn**	**17 25 41.7**	**+0.7**
AB06	**Akbulak array**	**15.00**	**331**	P		**Pn**	**17 25 41.1**	**-0.6**
AB31	**Akbulak array** 1.4nm,0.4s,baz=144,slow=12,SNR=31	**15.01**	**331**	P		**P**	**17 25 45.8**	**+3.3**
AB31	2.7nm,1.1s,baz=144,slow=22,SNR=5.3			S		**S**	**17 28 29.2**	**+0.9**
ABKAR	**Akbulak array**	**15.01**	**331**	P		**Pn**	**17 25 41.3**	**-0.6**
KURBB	**Kurchatov Arra** 0.1nm,0.3s,baz=207,slow=11,SNR=4.1	**15.01**	**19**	P		**Pn**	**17 25 41.7**	**-0.2**
KURK	**Kurchatov**	**15.12**	**19**	P		**Pn**	**17 25 41.7**	**-1.5**
KURK	**Kurchatov** comp=Z,7.4nm,1.4s	**15.12**	**19**	IAmb		IAmb	17 26 02.5	
PKIN	**Phulchoki** comp=Z,13nm,0.4s	**15.12**	**122**	*e*P		**Pn**	**17 25 44.3**	**+0.6**
PKI	**Pulchoki** comp=Z,7.2nm,0.2s	**15.13**	**122**	*e*P		**Pn**	**17 25 44.5**	**+0.6**
GUN	**Gumba** comp=Z,12nm,0.4s	**15.24**	**120**	*e*P		**P**	**17 25 46.4**	**+0.7**
RAMN	**Ramite** comp=Z,6.8nm,0.3s	**16.34**	**122**	*e*P		**Pn**	**17 25 59.2**	**+0.8**
BRVK	**Borovoye**	**16.46**	**358**	P		**Pn**	**17 26 00.8**	**+1.5**
AKTO	**Aktyubinsk** comp=Z,1.2nm,0.3s,baz=145,slow=9.4,SNR=14	**16.71**	**330**	P		**Pn**	**17 26 02.5**	**+0.2**
AKTO				S		**S**	**17 29 02.7**	**-2.6**
AKTO	**Aktyubinsk** comp=Z,5.0nm,0.8s	**16.71**	**330**	⇓P		**Pn**	**17 26 07.5**	**+5.2**
TAPN	**Taplejung** comp=Z,9.5nm,0.4s	**16.87**	**118**	*e*P		**Pn**	**17 26 06.2**	**+1.5**
ZAA0	**Zalesovo Array**	**19.80**	**25**	P		**P**	**17 26 35.3**	**+0.6**
ZAA0				IAmb		IAmb	17 26 38.1	
ZALV	**Zalesovo Beam** comp=Z,2.1nm,0.3s,baz=214,slow=10,SNR=8.7	**19.80**	**25**	P		**P**	**17 26 35.6**	**+0.9**
SONM	**Songino Array** comp=Z,0.9nm,1.1s,baz=308,slow=5.3,SNR=2.3	**28.25**	**55**	P		**P**	**17 27 51.9**	**-2.3**
SONM	**Songino Array** comp=Z,1.0nm,0.6s,baz=279,slow=6.4,SNR=2.1	**28.25**	**55**	P		**P**	**17 27 58.9**	**+4.7**
FINES	**FINESS Array B** comp=Z,1.5nm,0.4s,baz=118,slow=8.8,SNR=19	**37.41**	**326**	P		**P**	**17 29 13.7**	**+0.5**
ARCES	**ARCESS Array B** comp=Z,1.2nm,0.4s,baz=114,slow=8.3,SNR=17	**41.06**	**338**	P		**P**	**17 29 43.5**	**+0.3**
HFS	**Hagfors** comp=Z,1.8nm,0.6s,baz=96,slow=13,SNR=6.4	**43.00**	**322**	P		**P**	**17 29 58.5**	**-0.5**
NB2	**NORSAR Subarra** comp=Z,0.7nm,0.5s,baz=99,slow=7.9	**44.32**	**323**	P		**P**	**17 30 09.1**	**-0.4**
NOA	**NORSAR Array B** comp=Z,1.4nm,0.7s,baz=96,slow=7.7,SNR=5.1	**44.32**	**323**	P		**P**	**17 30 08.9**	**-0.6**
KSAR	**Wonju Array Be**	**44.79**	**71**	P		**P**	**17 30 10.0**	**-3.5**
TIXI	**Tiksi**	**45.66**	**22**	P		**P**	**17 30 20.2**	**+0.4**
CASP	**Castiglione de**	**45.86**	**297**	P		**P**	**17 30 21.7**	**-0.1**
SPA0	**Spitsbergen Ar**	**47.40**	**347**	P		**P**	**17 30 33.4**	**0.0**
MJAR	**Matsushiro Arr** comp=Z,1.0nm,0.6s,baz=279,slow=6.4,SNR=2.1	**52.88**	**69**	IAmb		IAmb	17 31 13.3	**-1.8**
MJAR	**Matsushiro Arr** comp=Z,1.2nm,0.7s	**52.88**	**69**	IAmb		IAmb	17 31 18.2	
BORG	**Borgarnes** comp=Z,52nm,1.2s,baz=70,slow=9.2,SNR=3.7	**58.53**	**330**	P		**P**	**17 31 55.0**	**+0.4**
BORG	**Borgarnes** comp=Z,161nm,1.2s	**58.53**	**330**	IAmb		IAmb	17 31 56.5	
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.4s,baz=47,slow=5.8,SNR=7.8	**65.75**	**269**	P		**P**	**17 32 41.0**	**-2.5**
TOLK	**Toolik Lake Re**	**70.81**	**15**	P		**P**	**17 33 14.3**	**+0.3**
TOLK				IAmb		IAmb	17 33 24.3	
IMAR	**Indian Mountai** comp=Z,9.1nm,1.6s	**72.06**	**18**	P		**P**	**17 33 21.5**	**0.0**
INK	**Inuvik** comp=Z,1.2nm,0.4s,baz=26,slow=3.6,SNR=7.4	**73.80**	**9**	P		**P**	**17 33 32.1**	**+0.6**
INK	**Inuvik** comp=Z,2.8nm,0.8s	**73.80**	**9**	IAmb		IAmb	17 33 32.6	
FITZ	**Fitzroy Crossi** comp=Z,1.4nm,1.0s,baz=0.0,slow=5.1,SNR=2.4	**74.93**	**127**	P		**P**	**17 33 38.0**	**-0.9**
YKA	**Yellowknife Ar** comp=Z,1.2nm,0.6s,baz=359,slow=4.9,SNR=4.1	**81.14**	**3**	P		**P**	**17 34 11.5**	**-0.8**
WRA	**Warramunga Arr** comp=Z,0.3nm,0.4s,baz=326,slow=5.0,SNR=10	**82.02**	**122**	P		**P**	**17 34 16.0**	**-1.6**
WRA	**Warramunga Arr** comp=Z,0.2nm,1.1s	**82.02**	**122**	IAmb		IAmb	17 34 17.0	
ASAR	**Alice Springs** comp=Z,0.6nm,0.7s,baz=308,slow=4.8,SNR=6.0	**84.29**	**125**	P		**P**	**17 34 27.4**	**-1.7**

*ISK **07** 17:29:45.8, 38°.66N×43°.04E, h16km±2km, ML2.2/6*
*ATA **07** 17:29:45.1±0.9, 38°.70N×43°.03E, h7km±3km, ML1.8, MW4.4*

ISC 07 17:29:45.9±1.3, 38°.67N±0°.04×43°.04E±0°.03, h15km±13km, n9, σ0§48/15, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VANB	**Van**	**0.29**	**105**	PG		**Pb**	**17 29 53.1**	**+0.3**
VANB				SG		**Sb**	**17 29 58.3**	**+0.9**
TVAN	**Van**	**0.32**	**116**	*e*P		**Pg**	**17 29 52.7**	**-0.1**
TVAN				*e*S		**Sb**	**17 29 58.2**	**-0.3**
TVAN				IAML			17 29 59.0	
	comp=Z,244nm,0.4s							
AKDM	**Akdamar-Van**	**0.34**	**187**	PG		**Pg**	**17 29 53.2**	**+0.2**
AKDM				SG		**Sb**	**17 29 58.6**	**-0.5**
GEVA	**Gevas**	**0.36**	**177**	*e*P		**Pg**	**17 29 53.1**	**-0.2**
GEVA				*e*S		**Sb**	**17 30 00.1**	**+0.6**
GEVA				IAML			17 30 02.6	
	comp=Z,52nm,0.5s							
MLAZ	**Malazgirt-MUS**	**0.60**	**321**	PG		**Pb**	**17 29 58.4**	**+0.1**
MLAZ				SG		**Sb**	**17 30 07.1**	**+0.4**
BLIS	**Bitlis-Merkez**	**0.76**	**251**	*e*P		**Pb**	**17 30 00.9**	**0.0**
BLIS				*e*S		**Sb**	**17 30 11.8**	**+0.6**
BLIS				IAML			17 30 15.4	
	comp=Z,26nm,0.4s							
GURO	**Guroymak-BITLI**	**0.79**	**262**	PG		**Pb**	**17 30 01.6**	**+0.1**
CLDR	**Caldiran**	**0.84**	**55**	PG		**Pb**	**17 30 02.3**	**+0.1**
AGRB	**Hanur-Agry**	**0.91**	**358**	PG		**Pn**	**17 30 03.7**	**-0.6**

*MOS **07** 17:34:47.6±1.3, 6°.30S×148°.44E, h33km, mb4.8/14, Error ellipse: s-maj=10.3km s-min=6.4km az=96.1*
*BJI **07** 17:34:48.4±0.0, 6°.25S×148°.64E, h40km, mB5.2/34, mb4.8/50, Ms5.0/31, Ms7 4.7/32*
*IDC **07** 17:34:48.7±2.5, 6°.35S×148°.65E, h29km±17km, mb4.5/18, mb1 4.6/24, mb1mx4.5/37, mbtmp4.7/24, ML4.2/6, MS4.5/20, Ms1 4.5/20, ms1mx4.4/26, Error ellipse: s-maj=14.8km s-min=10.8km az=97.0*
*NEIC **07** 17:34:51.2±2.5, 6°.44S±0°.06×148°.58E±0°.07, h48km±1km, mb5.2/10, Error ellipse: s-maj=10.1km s-min=8.4km az=112.0*
*DJA **07** 17:34:52.3±0.4, 6°S±2°×14°9E±°, h49km±4km, M5.1/75, mb5.2/75, mB5.5/36, MLv5.3/3, Mw(mB)5.0/36, Mwp5.7/6*
*GCMT **07** 17:34:55.2±0.1, 6°.66S±0°.01×148°.65E±0°.01, h26km, MW5.3/110, Moment Tensor Solution. s105,c170; s110,c189; Duration: 1§0 Moment tensor: Scale 10^{17} Nm; Mrr0.69±.02; Mθθ-0.71±.01; Mφφ0.02±.01; Mrθ0.66±.03; Mθφ-0.16±.01; Mrφ0.20±.03; Best double couple: M₀0.99600×10^{17} NP1:φ263.00000°, δ23.00000°, λ98.00000°. NP2:φ74.00000°, δ67.00000°, λ87.00000°. Principal axes: T 0.9710, Plg68.0000°, Azm338.0000°; N 0.0520, Plg3.0000°, Azm76.0000°; P -1.0220, Plg22.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 17:34:49.7±0.3, 6°39S±0°.04×148°.63E±0°.04, h35km, n372, σ1§45/361, mb5.1/137, MS4.6/29, 1C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby** 242nm,0.3s,baz=353,slow=5.1,SNR=340	**3.33**	**206**	Pn		**Pn**	**17 35 41.0**	**+1.6**
PMG	231nm,0.3s,baz=318,slow=9.3,SNR=11			Sn		**Sn**	**17 36 19.5**	**+1.7**
PMG				LR		LR	17 37 08.2	
	comp=Z,7µm,19.2s,baz=22,slow=41							
PMG	**Port Moresby**	**3.33**	**206**	P		**Pn**	**17 35 40.8**	**+1.4**
PMG							17 36 18.0	
PMG	**Port Moresby**	**3.33**	**206**			**Pn**	**17 35 40.8**	**+1.4**
PMG				Sn		**Sn**	**17 36 18.0**	**+0.3**
KRVT	**Keravat (AS076** 16nm,0.3s,baz=275,slow=11,SNR=2.7	**3.96**	**59**	Pn		**Pn**	**17 35 47.2**	**-0.8**
KRVT	comp=Z,3µm,20.1s,baz=242,slow=39			LR		LR	17 37 22.2	
RABL	**Rabaul**	**4.14**	**58**			Pn	17 35 54.3	+3.9
MANU	**Manus Island**	**4.50**	**344**			Pn	17 36 00.2	+4.7
HNR	**Honiara** 2.6nm,0.3s,baz=205,slow=3.9,SNR=24	**11.61**	**106**	Pn		**Pn**	**17 37 34.1**	**+1.1**
HNR	comp=Z,2µm,21.6s,baz=272,slow=35			LR		LR	17 41 32.9	
HNR	**Honiara**	**11.61**	**106**	P		**Pn**	**17 37 36.4**	**+3.4**
HNR	**Honiara**	**11.61**	**106**			**Pn**	**17 37 36.4**	**+3.4**
MTSU	**Mount Surprise** baz=12,SNR=46	**12.41**	**199**	P		**Pn**	**17 37 45.8**	**+1.8**
SRPI	**Serui, Papua**	**13.15**	**289**	P		**P**	**17 38 06.5**	**+2.8**
CTA	**Charters Tower** 0.8nm,0.3s,baz=17,slow=14,SNR=21	**13.81**	**189**	Pn		**Pn**	**17 38 04.4**	**+1.4**
CTA	comp=Z,3µm,21.1s,baz=5.5,slow=36			LR		LR	17 43 11.2	
CTAO	**Charters Tower**	**13.81**	**189**	P		**Pn**	**17 38 04.5**	**+1.4**
CTAO	**Charters Tower**	**13.81**	**189**	Pn		**Pn**	**17 38 04.5**	**+1.4**
PATS	**Pohnpei**	**16.31**	**36**			**P**	**17 38 42.1**	**+3.3**
PATS	comp=Z,264nm,1.3s			IAmb		IAmb	17 39 12.5	
QIS	**Mount Isa** baz=16,SN

SIJI	**Sorong**	**18.17 287**	P	**Pn**	**17 38 59.1**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=76,slow=14,SNR=4.1					
SIJI			LR	LR	17 47 27.5	
	comp=Z,2µm,21.2s,baz=86,slow=42					
MTN	**Manton Dam**	**18.40 248**	P	**Pn**	**17 39 02.6**	**+0.4**
	baz=18,SNR=12					
MTN	**Manton Dam**	**18.40 248**		**Pn**	**17 39 03.0**	**+0.8**
BNDI	**Bandanaira**	**18.74 275**	P	**Pn**	**17 39 07.1**	**+0.8**
	comp=Z,3µmcomp=Z,4µmcomp=Z,193nm,1.0s					
EIDS	**Eidsvold**	**19.02 173**	P	**Pn**	**17 39 09.6**	**0.0**
	baz=19,SNR=21					
EIDS	**Eidsvold**	**19.02 173**		**P**	**17 39 09.2**	**+0.5**
EIDS			IAmb	IAmb	17 39 12.7	
	comp=Z,123nm,1.2s					
WB0	**Warramunga Arr**	**19.19 225**		**P**	**17 39 10.2**	**-0.4**
WB0			IAmb	IAmb	17 39 31.1	
	comp=Z,146nm,1.6s					
WR0	**Warramunga Arr**	**19.22 224**		**P**	**17 39 09.7**	**-1.3**
WRAB	**Tennant Creek**	**19.33 225**	*i* P	**P**	**17 39 11.6**	**-0.6**
WRAB			pmax	pmax		
	comp=Z,20nm,1.0s					
WRAB	**Tennant Creek**	**19.33 225**	P	**P**	**17 39 11.6**	**-0.6**
WB2	**Warramunga Arr**	**19.34 225**		**P**	**17 39 11.1**	**-1.2**
WRA	**Warramunga Arr**	**19.35 225**	P	**P**	**17 39 12.1**	**-0.3**
	comp=Z,2.8nm,0.3s,baz=51,slow=11,SNR=161					
WRA			S	**S**	**17 42 46.9**	**-2.5**
	baz=46,slow=22,SNR=11					
WRA			ScP	**ScP**	**17 47 08.2**	**+0.8**
	baz=43,slow=2.1,SNR=8.0					
WRA	**Warramunga Arr**	**19.35 225**	*i* P	**P**	**17 39 12.1**	**-0.3**
WRA			pmax	pmax		
	comp=Z,11nm,0.5s					
WRA	**Warramunga Arr**	**19.35 225**	P	**P**	**17 39 10.9**	**-1.4**
WRA				**ScP**	**17 47 08.8**	**+1.5**
MSAI	**Masohi**	**19.86 278**	P	**Pn**	**17 39 25.7**	**+5.9**
RMQ	**Roma**	**19.98 180**	P	Pn	17 39 20.7	-0.4
	baz=20,SNR=31					
GUMO	**Guam**	**20.20 349**	LR	LR	17 46 19.0	
	comp=Z,1µm,19.1s,baz=140,slow=34					
GUMO	**Guam**	**20.20 349**	P	Pn	17 39 23.7	0.0
GUMO			pmax	pmax		
	comp=Z,325nm,1.3s					
GUMO	**Guam**	**20.20 349**	P	Pn	17 39 23.6	0.0
SANVU	**Saraoutou**	**20.32 118**	P	Pn	17 39 24.6	-0.5
SANVU			IAmb	IAmb	17 39 26.0	
	comp=Z,166nm,1.0s					
QLP	**Quilpie**	**20.51 191**	P	**P**	**17 39 25.9**	**+0.9**
	baz=20,SNR=48					
KNRA	**Kununurra**	**21.56 243**	P	**P**	**17 39 35.8**	**-0.5**
	baz=22,SNR=18					
KNRA	**Kununurra**	**21.56 243**	P	**P**	**17 39 35.5**	**-0.8**
KNRA			IAmb	IAmb	17 39 57.4	
	comp=Z,108nm,1.4s					
NLAI	**Namlea**	**21.68 277**	P	**P**	**17 39 38.4**	**+0.7**
	comp=Z,3µmcomp=Z,51nm,0.8s					
AS31	**Alice Springs**	**22.26 218**	P	**P**	**17 39 43.1**	**-0.8**
ASAR	**Alice Springs**	**22.26 218**	P	**P**	**17 39 43.8**	**-0.1**
	comp=Z,20nm,0.5s,baz=54,slow=9.0,SNR=590					
ASAR			S	**S**	**17 43 43.7**	**-3.3**
	comp=Z,4.4nm,0.5s,baz=51,slow=9.6,SNR=3.1					
ASAR			ScP	**ScP**	**17 47 15.6**	**+1.2**
	comp=Z,4.4nm,0.9s,baz=43,slow=4.2,SNR=9.7					
ASAR			LR	LR	17 49 05.7	
	comp=Z,1µm,18.8s,baz=36,slow=38					
ASAR	**Alice Springs**	**22.26 218**	P	**P**	**17 39 43.0**	**-0.9**
ASAR				**ScP**	**17 47 16.2**	**+1.8**
TNTI	**Ternate**	**22.39 288**	P	**P**	**17 39 44.2**	**-1.1**
TNTI			IAmb	IAmb	17 40 28.3	
	comp=Z,105nm,1.9s					
SANI	**Sanana**	**22.99 280**	P	**P**	**17 39 50.0**	**-1.6**
	comp=Z,1µmcomp=Z,54nm,0.8s					
DZM	**Mont Dzumac**	**23.21 134**	P	**P**	**17 39 53.2**	**-0.7**
	comp=Z,28nm,0.8s,baz=134,slow=22,SNR=25					
DZM	**Mont Dzumac**	**23.21 134**	*e*P	**P**	**17 39 53.7**	**-0.2**
	comp=Z,145nm,1.2s					
DZM			*e*S	**S**	**17 44 01.1**	**-2.6**
	comp=Z,956nm,24.2s					
DZM			*e*LR	LR	17 45 43.2	
	comp=Z,4µm,22.6s					
DZM	**Mont Dzumac**	**23.21 134**	P	**P**	**17 39 53.5**	**-0.4**
DZM			IAmb	IAmb	17 40 07.9	
	comp=Z,73nm,1.2s					
ARMA	**Armidale**	**24.07 174**	P	**P**	**17 40 02.0**	**0.0**
	baz=24,SNR=17					
ARMA	**Armidale**	**24.07 174**	P	**P**	**17 40 01.8**	**-0.1**
ARMA			IAmb	IAmb	17 40 17.7	
	comp=Z,57nm,0.9s					
SOEI	**Soe**	**24.35 261**	P	**P**	**17 40 06.1**	**+1.3**
	comp=Z,2µmcomp=Z,121nm,0.8s					
SOEI	**Soe**	**24.35 261**	P	**P**	**17 40 05.3**	**+0.6**
BATI	**Baumata**	**24.99 260**	P	**P**	**17 40 11.7**	**+1.2**
	comp=Z,134nm,0.8s,baz=139,slow=1.1,SNR=37					
BATI			LR	LR	17 52 42.0	
	comp=Z,2µm,19.4s,baz=124,slow=43					
BATI	**Baumata**	**24.99 260**	P	**P**	**17 40 11.2**	**+0.7**
	comp=Z,2µmcomp=Z,124nm,0.8s					
CMSA	**Cobar Meteorol**	**25.17 186**	P	**P**	**17 40 12.2**	**+0.3**
	baz=25,SNR=18					
FITZ	**Fitzroy Crossi**	**25.27 241**	P	**P**	**17 40 13.4**	**+0.5**
	comp=Z,129nm,0.6s,baz=57,slow=8.1,SNR=819					
FITZ			LR	LR	17 51 39.0	
	comp=Z,1µm,18.6s,baz=68,slow=40					
FITZ	**Fitzroy Crossi**	**25.27 241**	P	**P**	**17 40 13.5**	**+0.5**
	baz=25,SNR=268					
FITZ	**Fitzroy Crossi**	**25.27 241**	P	**P**	**17 40 13.4**	**+0.5**
KMSI	**Cibinong**	**25.56 285**	P	**P**	**17 40 16.4**	**+0.8**
	comp=Z,73nm,0.6s					
STKA	**Stephens Creek**	**26.20 194**	P	**P**	**17 40 21.3**	**+0.1**
	comp=Z,20nm,1.0s,baz=7.6,slow=11,SNR=22					
STKA			LR	LR	17 51 43.0	
	comp=Z,2µm,18.7s,baz=360,slow=39					
STKA	**Stephens Creek**	**26.20 194**	P	**P**	**17 40 21.3**	**+0.1**
	baz=26,SNR=11					
STKA	**Stephens Creek**	**26.20 194**	P	**P**	**17 40 19.8**	**-1.4**
STKA			pmax	pmax		
	comp=Z,15nm,1.1s					
STKA	**Stephens Creek**	**26.20 194**	P	**P**	**17 40 19.8**	**-1.4**
MMRI	**Maumere**	**26.26 263**	P	**P**	**17 40 22.1**	**+0.1**
	comp=Z,2µmcomp=Z,295nm,1.0s					
MMRI	**Maumere**	**26.26 263**	P	**P**	**17 40 21.4**	**-0.5**
LUWI	**Luwuk**	**26.34 281**	P	**P**	**17 40 24.4**	**+1.7**
	comp=Z,2µmcomp=Z,72nm,1.3s					
LUWI	**Luwuk**	**26.34 281**	P	**P**	**17 40 21.3**	**-1.4**
LUWI			IAmb	IAmb	17 41 19.4	
	comp=Z,75nm,0.9s					
MGCD	**Mangrove Creek**	**26.78 175**	P	**P**	**17 40 27.3**	**+0.8**
	baz=27,SNR=7.0					
EDFI	**Ende, Flores**	**26.81 263**	P	**P**	**17 40 25.4**	**-1.6**
	comp=Z,524nmcomp=Z,74nm,0.8s					
LHI	**Lord Howe Isla**	**26.84 160**	P	**P**	**17 40 26.5**	**-0.5**
WRKA	**Warakurna**	**26.89 224**	P	**P**	**17 40 27.6**	**0.0**
	baz=27,SNR=147					
APSI	**Ampana**	**27.46 280**	P	**P**	**17 40 33.5**	**+0.7**
	comp=Z,467nmcomp=Z,39nm,1.0s					
BSSI	**Bau Bau, Buton**	**27.98 269**	P	**P**	**17 40 37.9**	**+0.5**
	comp=Z,995nmcomp=Z,88nm,1.2s					
BASI	**Baing, Sumba**	**28.01 260**	P	**P**	**17 40 38.1**	**+0.4**
	comp=Z,1µmcomp=Z,168nm,1.2s					
WSI	**Waingapu**	**28.24 262**	P	**P**	**17 40 40.3**	**+0.6**
	comp=Z,5µmcomp=Z,407nm,1.0s					
HTT	**Hallett**	**28.38 197**	P	**P**	**17 40 40.6**	**-0.2**
	baz=28,SNR=23					
BKSI	**Bulukumba**	**28.38 271**	P	**P**	**17 40 41.0**	**0.0**
	comp=Z,473nmcomp=Z,40nm,0.9s					
BNSI	**Bone**	**28.47 273**	P	**P**	**17 40 42.3**	**+0.5**
	comp=Z,647nmcomp=Z,57nm,1.1s					
KAPI	**Kappang**	**28.77 271**	P	**P**	**17 40 44.7**	**+0.2**
	comp=Z,29nm,0.8s,baz=76,slow=5.6,SNR=16					
KAPI			LR	LR	17 54 34.2	
	comp=Z,692nm,19.9s,baz=80,slow=41					
KAPI	**Kappang**	**28.77 271**	P	**P**	**17 40 44.9**	**+0.4**
KAPI			pmax	pmax		
	comp=Z,93nm,1.3s					
KAPI	**Kappang**	**28.77 271**	P	**P**	**17 40 44.9**	**+0.4**
KAPI			IAmb	IAmb	17 40 45.9	
	comp=Z,93nm,1.3s					
BBOO	**Buckleboo**	**28.78 202**	P	**P**	**17 40 44.1**	**-0.2**
BBOO			IAmb	IAmb	17 41 01.8	
	comp=Z,65nm,1.5s					
CAN	**Canberra**	**28.79 179**	P	**P**	**17 40 43.7**	**-0.8**
CAN			pmax	pmax		
	comp=Z,46nm,1.6s					
CAN	**Canberra**	**28.79 179**	P	**P**	**17 40 43.7**	**-0.8**
SPSI	**Sidrap Palu**	**28.84 273**	P	**P**	**17 40 44.6**	**-0.5**
	comp=Z,31nm,1.2s					
TTSI	**Tana Toraja**	**28.90 275**	P	**P**	**17 40 46.2**	**+0.5**
	comp=Z,514nmcomp=Z,48nm,1.2s					
WBSI	**Waikabubak, Su**	**29.13 262**	P	**P**	**17 40 47.4**	**-0.3**
	comp=Z,2µmcomp=Z,118nm,1.0s					
PLAI	**Plampang**	**30.68 264**	P	**P**	**17 41 00.1**	**-1.3**
	comp=Z,54nm,0.8s					
FORT	**Forrest**	**31.01 216**	P	**P**	**17 41 04.3**	**+0.3**
	baz=31,SNR=8.6					
FORT	**Forrest**	**31.01 216**	P	**P**	**17 41 04.1**	**+0.1**
FORT			IAmb	IAmb	17 41 18.0	
	comp=Z,36nm,0.8s					
TOO	**Toolangi**	**31.17 185**	P	**P**	**17 41 06.6**	**+1.1**
	baz=31,SNR=4.0					
TOO	**Toolangi**	**31.17 185**	P	**P**	**17 41 05.7**	**+0.2**
TOO			pmax	pmax		
	comp=Z,28nm,0.9s					
TOO	**Toolangi**	**31.17 185**	P	**P**	**17 41 05.7**	**+0.2**
TOO			IAmb	IAmb	17 41 20.4	
	comp=Z,28nm,0.9s					
TWSI	**Taliwang, Sumb**	**31.56 264**	P	**P**	**17 41 08.0**	**-1.1**
	comp=Z,22nm,1.0s					
PSAD2	**Pilbara Seismi**	**31.58 238**	P	**P**	**17 41 09.9**	**+0.6**
PSAD2			IAmb	IAmb	17 41 27.7	
	comp=Z,35nm,1.2s					
PSA00	**Pilbara Seismi**	**31.66 239**	P	**P**	**17 41 10.3**	**+0.4**
PSA00			IAmb	IAmb	17 41 28.4	
	comp=Z,34nm,0.9s					
PSA00	**Pilbara Seismi**	**31.66 239**	P	**P**	**17 41 09.4**	**-0.6**
PSA00			IAmb	IAmb	17 41 56.6	
	comp=Z,17nm,0.7s					
MYLDM	**Lahad Datu**	**32.20 290**	P	**P**	**17 41 17.8**	**+3.0**
BBKI	**Banjar Baru**	**33.79 273**	P	**P**	**17 41 29.1**	**+0.4**
	comp=Z,37nm,1.1s					
JCJ	**Chichijima**	**33.87 350**	P	**P**	**17 41 31.1**	**+2.0**
JAGI	**Jajag, Banyuwa**	**34.25 264**	P	**P**	**17 41 30.2**	**-2.5**
	comp=Z,58nm,0.6s					
JAGI	**Jajag, Banyuwa**	**34.25 264**	P	**P**	**17 41 30.6**	**-2.1**
KKM	**Kota Kinabalu**	**34.63 290**	P	**P**	**17 41 37.6**	**+1.5**
GMJI	**Gumukmas**	**34.95 265**	P	**P**	**17 41 38.6**	**-0.1**
	comp=Z,30nm,1.2s					
MEEK	**Meekatharra**	**34.96 231**	P	**P**	**17 41 39.4**	**+0.6**
	baz=35,SNR=18					
KMBL	**Kambalda**	**35.27 222**	P	**P**	**17 41 41.7**	**+0.4**
	baz=35,SNR=15					
BWJI	**Bawean**	**35.77 269**	P	**P**	**17 41 46.1**	**+0.3**
	comp=Z,144nm,1.2s					
MOO	**Moorlands**	**35.92 182**	P	**P**	**17 41 47.9**	**+1.1**
	baz=36,SNR=3.9					
TAU	**Tasmania Unive**	**36.39 182**	P	**P**	**17 41 51.1**	**+0.4**
TAU	**Tasmania Unive**	**36.39 182**	P	**P**	**17 41 51.1**	**+0.4**
PWJI	**Pagerwojo**	**36.57 265**	P	**P**	**17 41 50.6**	**-2.0**
	comp=Z,61nm,1.3s					
OUZ	**Omahuta**	**36.75 145**	P	**P**	**17 41 54.5**	**+0.6**
OUZ			IAmb	IAmb	17 42 09.2	
	comp=Z,26nm,1.0s					
GIRL	**Giralia**	**36.88 240**	P	**P**	**17 41 55.6**	**+0.5**
PBKI	**Pangkalan Bun**	**37.02 274**	P	**P**	**17 41 54.6**	**-1.9**
	comp=Z,2µmcomp=Z,147nm,1.1s					
SBUM	**Sibu**	**37.40 282**	P	**P**	**17 42 01.0**	**+1.3**
WOJI	**Wonogiri, Jawa**	**37.44 265**	P	**P**	**17 41 59.3**	**-0.7**
	comp=Z,114nm,1.1s					
UGM	**Wanagama**	**37.84 265**	P	**P**	**17 42 03.5**	**0.0**
	comp=Z,148nm,1.7s					
UGM	**Wanagama**	**37.84 265**	P	**P**	**17 42 03.4**	**0.0**
SMRI	**Semarang**	**37.93 267**	P	**P**	**17 42 05.2**	**+1.0**
MORW	**Morawa**	**38.14 230**	P	**P**	**17 42 06.6**	**+0.8**
	baz=38,SNR=8.2					
MORW	**Morawa**	**38.14 230**	P	**P**	**17 42 05.7**	**-0.1**
MORW			IAmb	IAmb	17 42 20.4	
	comp=Z,45nm,1.2s					
KLBR	**Kellerberrin**	**38.23 225**	P	**P**	**17 42 06.7**	**+0.2**
	baz=38,SNR=5.1					
KSM	**Kuching**	**39.05 280**	P	**P**	**17 42 14.6**	**+1.0**
NWAO	**Narrogin (SRO)**	**39.35 224**	P	**P**	**17 42 15.8**	**0.0**
	comp=Z,12nm,1.0s,baz=152,slow=7.5,SNR=3.3					
NWAO	**Narrogin (SRO)**	**39.35 224**	P	**P**	**17 42 16.0**	**+0.1**
NWAO			pmax	pmax		
	comp=Z,106nm,1.8s					
NWAO	**Narrogin (SRO)**	**39.35 224**	P	**P**	**17 42 14.6**	**-1.2**
NWAO	**Narrogin (SRO)**	**39.35 224**	P	**P**	**17 42 16.0**	**+0.1**
NWAO			IAmb	IAmb	17 42 39.9	
	comp=Z,106nm,1.8s					
KPJI	**Karang Pucung**	**39.42 266**	P	**P**	**17 42 17.0**	**+0.3**
	comp=Z,116nm,1.1s					
KNTN	**Kanton**	**39.67 87**	P	**P**	**17 42 20.0**	**+1.2**
KNTN			IAmb	IAmb	17 42 37.5	
	comp=Z,68nm,1.1s					
HIZ	**Hauiti**	**39.82 147**	P	**P**	**17 42 18.8**	**-1.0**
YULB	**Yu-li**	**39.87 319**	P	**P**	**17 42 19.4**	**-0.9**
YULB			IAmb	IAmb	17 43 13.6	
	comp=Z,123nm,1.8s					
CMJI	**Cimerak**	**39.89 266**	P	**P**	**17 42 20.5**	**-0.1**
	comp=Z,186nm,0.9s					
JCJI	**Jatiwangi**	**40.10 268**	P	**P**	**17 42 23.6**	**+1.2**
	comp=Z,346nm,0.8s					
NACB	**Ninganchiao**	**40.23 320**	P	**P**	**17 42 22.4**	**-0.9**
NACB			IAmb	IAmb	17 42 44.1	
	comp=Z,97nm,1.7s					
TPUB	**Ta-pu**	**40.24 318**	P	**P**	**17 42 21.4**	**-2.0**
SSLB	**Suanglung**	**40.37 319**	P	**P**	**17 42 22.5**	**-2.0**
SSLB			IAmb	IAmb	17 42 56.8	
	comp=Z,81nm,1.7s					
QRZ	**Quartz Range**	**40.40 152**	P	**P**	**17 42 21.8**	**-2.7**
CISI	**Cisompet, Garu**	**40.52 266**	P	**P**	**17 42 26.9**	**+1.0**
	comp=Z,3µmcomp=Z,299nm,1.1s					
CISI	**Cisompet, Garu**	**40.52 266**	P	**P**	**17 42 25.4**	**-0.5**
YHNB	**Yeheng**	**40.72 320**	P	**P**	**17 42 28.1**	**+0.7**
YHNB			IAmb	IAmb	17 42 43.9	
	comp=Z,125nm,1.6s					
LEM	**Lembang**	**40.74 267**	P	**P**	**17 42 28.5**	**+0.7**
	comp=Z,944nmcomp=Z,88nm,0.9s					
TPI	**Tanjungpandan**	**41.00 273**	P	**P**	**17 42 31.5**	**+1.7**
	comp=Z,1µmcomp=Z,142nm,1.1s					
CNJI	**Cibinong**	**41.21 266**	P	**P**	**17 42 31.4**	**-0.1**
	comp=Z,6µmcomp=Z,683nm,1.1s					
CBJI	**Citeko**	**41.52 268**	P	**P**	**17 42 34.4**	**+0.4**
	comp=Z,133nm,0.8s					
TUWZ	**Tuamarina**	**41.54 151**	P	**P**	**17 42 33.5**	**-0.3**
DBJI	**Dramaga**	**41.61 267**	P	**P**	**17 42 34.9**	**+0.1**
	comp=Z,34µmcomp=Z,115nm,0.6s					
BSWZ	**Blackbirch Sta**	**41.73 151**	P	**P**	**17 42 35.4**	**0.0**
SKJI	**Sukabumi**	**41.78 267**	P	**P**	**17 42 37.7**	**+1.4**
LTZ	**Lake Taylor**	**41.83 154**	P	**P**	**17 42 36.9**	**+0.6**
LTZ			IAmb	IAmb	17 42 58.5	
	comp=Z,52nm,1.6s					
BHW	**Baring Head**	**41.98 150**	P	**P**	**17 42 35.8**	**-1.6**
RPZ	**Rata Peaks**	**42.07 156**	P	**P**	**17 42 38.9**	**+0.8**
MSWZ	**Moikau Station**	**42.17 150**	P	**P**	**17 42 38.2**	**-0.8**
NIUE	**Niue**	**42.22 111**	P	**P**	**17 42 40.1**	**+0.3**
JMN	**Monobe**	**42.28 342**	P	**P**	**17 42 40.8**	**+0.8**
JMN			IAmb	IAmb	17 42 53.1	
	comp=Z,135nm,1.7s					
PPBI	**Pangkal Pinang**	**42.57 274**	P	**P**	**17 42 44.1**	**+1.4**
	comp=Z,2µmcomp=Z,69nm,1.0s					
CGJI	**Cibinong**	**42.66 267**	P	**P**	**17 42 43.3**	**0.0**
	comp=Z,1µmcomp=Z,146nm,1.1s					
XMIS	**Christmas Isla**	**42.69 262**	P	**P**	**17 42 45.2**	**+1.6**
XMIS			IAmb	IAmb	17 42 46.3	
	comp=Z,68nm,0.8s					
WHZ	**Wether Hill Ro**	**42.76 160**	P	**P**	**17 42 45.3**	**+1.6**
WHZ			IAmb	IAmb	17 43 42.3	
	comp=Z,123nm,2.0s					
JNU	**Nakatsue**	**42.76 338**	P	**P**	**17 42 43.8**	**-0.2**
	comp=Z,32nm,0.9s,baz=154,slow=4.2,SNR=20					
JNU	**Nakatsue**	**42.76 338**	P	**P**	**17 42 44.1**	**+0.2**
JNU			IAmb	IAmb	17 42 45.5	
	comp=Z,31nm,0.9s					
INU	**Inuyama**	**42.94 346**	P	**P**	**17 42 45.8**	**+0.6**
INU			IAmb	IAmb	17 42 59.2	
	comp=Z,42nm,1.2s					
JGF	**Kuroka**	**43.09 347**	P	**P**	**17 42 47.1**	**+0.5**
JGF			IAmb	IAmb	17 43 01.9	
	comp=Z,26nm,1.0s					
JWT	**Wachi**	**43.28 344**	P	**P**	**17 42 48.3**	**+0.3**
JWT			IAmb	IAmb	17 43 20.5	
	comp=Z,147nm,1.9s					
JHS	**Saijyo**	**43.69 341**	P	**P**	**17 42 51.8**	**+0.4**
JHS			IAmb	IAmb	17 43 05.4	
	comp=Z,43nm,1.3s					
KLSI		**43.72 270**	P	**P**	**17 42 53.2**	**+1.2**
	comp=Z,7.7nm,1.3s					
MJAR	**Matsushiro Arr**	**43.81 348**	P	**P**	**17 42 51.7**	**-0.6**
	comp=Z,12nm,1.0s,baz=173,slow=8.4,SNR=20					
MJAR	**Matsushiro Arr**	**43.81 348**	P	**P**	**17 42 52.8**	**+0.5**
MJAR			pmax	pmax		
	comp=Z,11nm,2.2s					
MJAR	**Matsushiro Arr**	**43.81 348**	P	**P**	**17 42 52.8**	**+0.5**
MAJO	**Matsushiro**	**43.81 348**	*i* P	**P**	**17 42 51.5**	**-0.8**
MAJO			pmax	pmax		
	comp=Z,17nm,1.0s					
MAJO	**Matsushiro**	**43.81 348**	P	**P**	**17 42 52.3**	**0.0**
MAJO			IAmb	IAmb	17 43 05.5	
	comp=Z,72nm,1.3s					
MAT	**Matsushiro**	**43.81 348**	P	**P**	**17 42 52.2**	**-0.1**
MAT			S	**S**	**17 49 25.0**	**+4.1**
KASI	**Kota Agung**	**43.90 269**	P	**P**	**17 42 52.5**	**-0.9**
	comp=Z,145nm,0.9s					
HKPS	**Hong Kong Po S**	**44.19 311**	P	**P**	**17 42 54.2**	**-1.3**
MDSI	**Maura Dua**	**44.29 270**	P	**P**	**17 42 56.2**	**-0.3**
	comp=Z,684nmcomp=Z,74nm,1.2s					
LWLI	**Liwa**	**44.37 269**	P	**P**	**17 42 57.2**	**-0.1**
	comp=Z,2µmcomp=Z,119nm,0.7s					
JTU	**Tsushima**	**44.57 337**	P	**P**	**17 42 58.1**	**-0.2**
JMM	**Marumori**	**44.63 351**	P	**P**	**17 42 59.8**	**+0.9**
JMM			IAmb	IAmb	17 44 34.0	
	comp=Z,94nm,1.8s					
LHSI	**Lahat**	**44.99 271**	P	**P**	**17 43 02.4**	**+0.3**
	comp=Z,53nm,1.1s					
JSD	**Sado**	**45.24 348**	P	**P**	**17 43 02.1**	**-1.6**
JSD			IAmb	IAmb	17 43 58.1	
	comp=Z,61nm,1.2s					
MYKOM	**Kota Tinggi**	**45.44 279**	P	**P**	**17 43 03.3**	**-2.4**
MYKOM			IAmb	IAmb	17 43 38.9	
	comp=Z,20nm,1.1s					
MNAI	**Manna**	**45.51 270**	P	**P**	**17 43 05.1**	**-1.2**
QIZ	**Qiongzhong**	**45.81 304**	P	**P**	**17 43 08.4**	**-0.1**
QIZ			S	**S**	**17 49 48.6**	**-1.8**
QIZ			LR	LR		
	comp=Z,230nm,10.5s					
QIZ			LR	LR		
	comp=Z,520nm,16.5s					
QIZ			LR	LR		
	comp=Z,440nm,20.4s					
KSI	**Kapahiang**	**45.93 271**	P	**P**	**17 43 08.6**	**-1.1**
	comp=Z,48nm,2.2s					
JOHN	**Johnston Islan**	**47.32 60**	P	**P**	**17 43 22.1**	**+1.8**
JTM	**Tenmabayashi**	**47.46 352**	P	**P**	**17 43 22.1**	**+1.1**
NJ2	**Nanjing**	**47.62 325**	*e*P	**P**	**17 43 22.6**	**+0.2**
NJ2			sP	**sP**	**17 43 42.6**	**+7.0**
NJ2			PP	**PP**	**17 45 11.1**	**-3.3**
NJ2			S	**S**	**17 50 15.3**	**-0.4**
NJ2			pmax	pmax		
	comp=Z,16nm,1.1s					
NJ2			pmax	pmax		
	comp=Z,250nm,4.6s					
NJ2			LR	LR		
	comp=Z,490nm,14.7s					
NJ2			LR	LR		
	comp=Z,600nm,16.6s					
NJ2			LR	LR		
	comp=Z,800nm,19.9s					
KSRS	**Korea Array**	**47.71 338**	P	**P**	**17 43 22.9**	**-0.1**
	comp=Z,9.1nm,0.8s,baz=154,slow=9.0,SNR=30					
KSAR	**Wonju Array Be**	**47.72 338**	P	**P**	**17 43 23.5**	**+0.4**
KSAR	**Wonju Array Be**	**47.72 338**	P	**P**	**17 43 23.5**	**+0.4**
KS19	**Wonju Array Si**	**47.77 338**	P	**P**	**17 43 23.6**	**0.0**
IPM	**Ipoh**	**48.74 282**	P	**P**	**17 43 32.4**	**+0.9**
IPM				**PcP**	**17 44 57.1**	**+0.7**
IPM			IAmb	IAmb	17 44 58.4	
	comp=Z,21nm,1.0s					
KULM	**Kulim**	**49.28 283**	P	**P**	**17 43 36.2**	**+0.6**
MNSI	**Mandailing Nat**	**49.48 277**	P	**P**	**17 43 37.8**	**+0.7**
	comp=Z,36nm,0.8s					
RPSI	**Rantau Prapat**	**50.45 279**	P	**P**	**17 43 44.3**	**-0.2**
RPSI			IAmb	IAmb	17 43 45.5	
	comp=Z,61nm,1.9s					
PSI	**Prapat**	**50.46 279**	P	**P**	**17 43 44.3**	**-0.5**
PSI			pmax	pmax		
	comp=Z,61nm,1.9s					
GSI	**Gunungsitoli**	**51.54 277**	P	**P**	**17 43 52.4**	**-0.3**
	comp=Z,49nm,1.3s					
GSI	**Gunungsitoli**	**51.54 277**	P	**P**	**17 43 52.5**	**-0.2**
DL2	**Dalian**	**51.56 333**	P	**P**	**17 43 52.0**	**-0.3**
DL2			*e*S	**S**	**17 51 10.2**	**-0.5**
DL2			pmax	pmax		
	comp=Z,260nm,4.2s					
DL2			LR	LR		
	comp=Z,690nm,18.7s					
DL2			LR	LR		
	comp=Z,570nm,19.0s					
DL2			LR	LR		
	comp=Z,860nm,22.7s					
KCSI	**Kotacane, Aceh**	**51.73 280**	P	**P**	**17 43 53.7**	**-0.4**
	comp=Z,26nm,1.2s					
USA0B	**Ussuriysk Arra**	**52.55 345**	P	**P**	**17 44 00.0**	**+0.4**
USA0B			pmax	pmax		
	comp=Z,11nm,0.8s					
USA0B	**Ussuriysk Arra**	**52.55 345**	P	**P**	**17 44 00.0**	**+0.4**
USA0B			IAmb	IAmb	17 44 12.6	
	comp=Z,11nm,0.8s					
USRK	**Ussuriysk Ar.**	**52.55 345**	P	**P**	**17 44 00.0**	**+0.4**
	comp=Z,5.5nm,0.8s,baz=188,slow=8.7,SNR=10					
USRK			LR	LR	18 02 42.3	
	comp=Z,557nm,21.5s,baz=158,slow=32					
USRK	**Ussuriysk Ar.**	**52.55 345**	P	**P**	**17 43 60.0**	**+0.4**
MDJ	**Mudanjiang**	**53.59 343**	IAmb	IAmb	17 44 21.1	
	comp=Z,19nm,1.3s					
CN2	**Changchun**	**54.18 339**	*e*P	**P**	**17 44 15.2**	**+3.6**
CN2			pmax	pmax		
	comp=Z,10.0nm,0.7s					
KMI	**Kunming**	**54.52 307**	*e*P	**P**	**17 44 17.2**	**+2.4**
KMI			pmax	pmax		
	comp=Z,5.0nm,0.9s					

comp=Z,16nm,0.9s,baz=158,slow=5.3,SNR=3.5
HIA Hailar 60.89 339 lAmb lAmb 17 45 00.3
comp=Z,9.5nm,0.7s
PPT Papeete 61.23 106 LR LR 18 07 54.6
comp=Z,140nm,19.6s,baz=222,slow=32
PPT2 Papeete2 61.23 106 *e*S **S** **17 53 19.2 -0.6**
comp=Z,325nm,26.8s
PPT2 *e*LQ LQ 18 00 33.5
comp=Z,870nm,32.5s
PPT2 *e*LR LR 18 03 16.5
comp=Z,534nm,25.5s
TBI Tubuai 61.72 113 *e*S **S** **17 53 24.3 -1.5**
comp=Z,447nm,28.2s
TBI Tubuai 61.72 113 *e*LR LR 18 03 31.0
comp=Z,395nm,34.0s
ZEA Zeya 62.56 346 *e*P **P** **17 45 09.4 -0.5**
ZEA pmax pmax
comp=N,10.0nm,1.4s
ZEA pmax pmax
comp=Z,20nm,1.4s
GTA Gaotai 64.08 320 P **P** **17 45 20.5 0.0**
GTA pP sP 17 45 37.3 +3.0
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,68nm,6.9s
GTA LR LR
comp=Z,220nm,18.2s
GTA LR LR
comp=Z,280nm,19.3s
GTA LR LR
comp=Z,230nm,17.8s
ULN Ulaanbaatar 65.24 331 *i* P **P** **17 45 26.7 -1.2**
ULN pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 65.54 330 P **P** **17 45 29.2 -0.6**
comp=Z,2.2nm,0.8s,baz=148,slow=4.8,SNR=11
SONM LR LR 18 12 56.1
comp=Z,978nm,21.6s,baz=134,slow=35
SONM Songino Array 65.54 330 P **P** **17 45 29.6 -0.3**
SONM pmax pmax
comp=Z,9.0nm,1.5s
SONM Songino Array 65.54 330 P **P** **17 45 29.6 -0.3**
TAPN Taplejung 67.72 303 *e*P **P** **17 45 42.4 -2.0**
comp=Z,14nm,0.7s
ODAN Odare 67.83 302 *e*P **P** **17 45 43.5 -1.5**
comp=Z,26nm,0.8s
ZAK Zakamensk 68.77 331 *e*P **P** **17 45 49.0 -1.2**
ZAK pmax pmax
comp=Z,6.0nm,1.1s
SEY Seymchan 69.18 2 *i* P **P** **17 45 51.8 -0.6**
GUN Gumba 69.44 303 *e*P **P** **17 45 53.7 -1.5**
comp=Z,35nm,0.7s
TLY Talaya 69.45 332 LR LR 18 14 48.4
comp=Z,484nm,21.6s,baz=123,slow=35
PKI Pulchoki 69.72 302 *e*P **P** **17 45 55.0 -1.9**
comp=Z,9.8nm,0.8s
PKIN Phulchoki 69.74 302 *e*P **P** **17 45 54.8 -2.1**
comp=Z,6.3nm,0.7s
YAK Yakutsk 69.78 351 *i* P **P** **17 45 55.3 -0.8**
YAK pmax pmax
comp=Z,5.0nm,0.9s
KKN Kakani 69.90 303 *e*P **P** **17 45 56.0 -1.9**
comp=Z,17nm,0.7s
DMN Daman 69.99 302 *e*P **P** **17 45 57.4 -1.1**
comp=Z,13nm,0.6s
GKN Gorkha 70.51 303 *e*P **P** **17 45 59.7 -1.8**
comp=Z,15nm,0.7s
KOLN Koldanda 71.31 302 *e*P **P** **17 46 05.1 -1.3**
comp=Z,26nm,0.7s
DANN Dangsing 71.35 303 *e*P **P** **17 46 04.6 -2.2**
comp=Z,19nm,0.7s
VNDA Vanda 71.43 177 P **P** **17 46 05.9 -0.1**
comp=Z,2.0nm,1.0s,baz=314,slow=6.6,SNR=9.8
VNDA Vanda 71.43 177 P **P** **17 46 05.4 -0.6**
VNDA pmax pmax
comp=Z,9.0nm,1.1s
VNDA Vanda 71.43 177 P **P** **17 46 05.4 -0.6**
PYUN Piuthan 71.92 302 *e*P **P** **17 46 08.5 -1.6**
comp=Z,32nm,0.8s
WMQ Urumqi 74.15 319 *e*P **P** **17 46 21.4 -1.4**
WMQ pmax pmax
comp=Z,16nm,0.9s
WMQ pmax pmax
comp=Z,600nm,6.1s
WMQ LR LR
comp=Z,850nm,29.0s
WMQ LR LR
comp=Z,2μm,29.0s
WMQ LR LR
comp=Z,520nm,29.0s
BILL Bilibino 75.30 7 *e*P **P** **17 46 27.6 -1.2**
BILL *e* 17 49 15.6
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,180nm,18.0s
MK31 Makanchi Array 78.83 320 P **P** **17 46 47.6 -1.6**
MK31 pmax pmax
comp=Z,6.0nm,1.4s
MK31 Makanchi Array 78.83 320 P **P** **17 46 47.6 -1.6**
MKAR Makanchi Array 78.83 320 P **P** **17 46 47.7 -1.5**
comp=Z,2.2nm,0.6s,baz=101,slow=6.9,SNR=21
MKAR LR LR 18 21 48.3
comp=Z,146nm,20.6s,baz=82,slow=36
MKAR Makanchi Array 78.83 320 *i* P **P** **17 46 48.2 -1.0**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
TIXI Tiksi 78.97 354 *i* P **P** **17 46 49.3 -0.1**
MAKZ Makanchi 79.04 320 P **P** **17 46 48.8 -1.6**
MAKZ pmax pmax
comp=Z,4.0nm,0.9s
MAKZ Makanchi 79.04 320 P **P** **17 46 48.8 -1.6**
SHLS Shalkode 79.44 316 *e*P P 17 46 47.2 -5.6
baz=316
SHLS Shalkode 79.44 316 *e*P P 17 46 47.2 -5.6
KPKS Kokpek 80.08 316 *e*P **P** **17 46 52.9 -3.3**
baz=316
KPKS Kokpek 80.08 316 *e*P **P** **17 46 52.9 -3.3**
ZALV Zalesovo Beam 80.21 327 P **P** **17 46 54.5 -1.9**
comp=Z,1.0nm,0.3s,baz=123,slow=5.5,SNR=7.2
ZALV LR LR 18 22 02.7
comp=Z,641nm,20.9s,baz=124,slow=35
ZALV Zalesovo Beam 80.21 327 *i* P **P** **17 46 54.2 -2.3**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 80.21 327 P **P** **17 46 54.0 -2.5**
MDOK Medeo 81.12 315 *e*P **P** **17 46 58.4 -3.5**
baz=315
MDOK Medeo 81.12 315 *e*P **P** **17 46 58.3 -3.5**
NIL Nilore 81.47 305 P **P** **17 47 02.4 -1.4**
NIL pmax pmax
comp=Z,7.0nm,0.7s
NIL Nilore 81.47 305 P **P** **17 47 02.4 -1.4**
KUU Kurty 81.83 316 *e*P **P** **17 47 02.7 -2.8**
comp=Z,3.7nm,0.7s,baz=316
KUU Kurty 81.83 316 *e*P **P** **17 47 02.6 -2.8**
KUU pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 82.50 323 P **P** **17 47 07.5 -1.2**
KURK pmax pmax
comp=Z,16nm,1.8s
KURK Kurchatov 82.50 323 P **P** **17 47 07.5 -1.2**
MAW Mawson 82.52 203 P **P** **17 47 07.8 -0.7**
comp=Z,1.4nm,0.5s,baz=151,slow=4.8,SNR=9.0
MAW Mawson 82.52 203 P **P** **17 47 07.8 -0.7**
MAW pmax pmax
comp=Z,5.0nm,1.8s
AAK Ala-Archa 82.77 314 *i* P **P** **17 47 09.7 -0.9**
AAK pmax pmax
comp=Z,8.0nm,0.9s
IMAR Indian Mountai 83.28 20 P **P** **17 47 15.3 +2.9**
QSPA South Pole Qui 83.58 180 P **P** **17 47 14.3 +0.1**
QSPA lAmb lAmb 17 47 28.9
comp=Z,16nm,0.9s
BTLS Baital 83.73 317 *e*P **P** **17 47 12.4 -2.8**
baz=317
BTLS Baital 83.73 317 *e*P **P** **17 47 12.4 -2.8**
RND Reindeer 83.82 24 P **P** **17 47 15.5 +0.2**
RND pmax pmax
comp=Z,13nm,0.8s
RND Reindeer 83.82 24 P **P** **17 47 15.5 +0.2**
RND lAmb lAmb 17 47 21.0
comp=Z,13nm,0.8s
KLU Klutina 84.19 26 P **P** **17 47 17.4 +0.1**
KLU lAmb lAmb 17 47 20.8
comp=Z,32nm,1.2s
DHY Denali Highway 84.26 24 lAmb lAmb 17 47 37.3
comp=Z,17nm,1.1s
CCB Clear Creek Bu 84.79 23 P **P** **17 47 21.3 +1.1**
COLA College 84.88 23 *i* P **P** **17 47 20.3 -0.3**
COLA pmax pmax
comp=Z,11nm,1.0s
IL31 85.20 23 lAmb lAmb 17 47 24.9
comp=Z,9.7nm,0.9s
ILAR Eielson Array 85.20 23 P **P** **17 47 21.5 -0.7**
comp=Z,7.5nm,0.8s,baz=256,slow=4.6,SNR=35
ILAR LR LR 18 22 45.4
comp=Z,133nm,20.5s,baz=254,slow=34
ILAR Eielson Array 85.20 23 P **P** **17 47 21.8 -0.5**
ILAR Eielson Array 85.20 23 P **P** **17 47 21.8 -0.5**
A21K Barrow 85.40 15 P **P** **17 47 24.3 +1.2**
KKAR Karatay Array 85.73 314 P **P** **17 47 23.5 -1.8**
KKAR Karatay Array 85.73 314 P **P** **17 47 23.5 -1.8**
DOT Dot Lake 85.86 24 lAmb lAmb 17 47 29.3
comp=Z,15nm,1.0s
BRZS Berezniki 85.91 321 *e*P **P** **17 47 23.1 -3.0**
baz=321
BRZS Berezniki 85.91 321 *e*P **P** **17 47 23.1 -3.0**
TOLK Toolik Lake Re 86.03 19 lAmb lAmb 17 47 30.5
comp=Z,9.3nm,0.9s
NRIK Noril'sk 86.15 342 *i* P **P** **17 47 25.4 -1.4**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
BCAR Beaver Creek A 86.59 25 P **P** **17 47 31.5 +2.3**
K27K Chicken 86.82 24 lAmb lAmb 17 47 34.6
comp=Z,12nm,1.0s
BMAR Burnt Mountain 87.18 21 P **P** **17 47 34.0 +2.0**
EGAK Eagle 87.46 24 P **P** **17 47 34.9 +1.6**
EGAK lAmb lAmb 17 47 41.7
comp=Z,12nm,0.9s
HYT Haines Junctio 87.77 28 P **P** **17 47 36.0 +0.9**
DAWY Dawson 87.94 25 **P** **17 47 38.2 +2.5**
DAWY lAmb lAmb 17 47 39.6
comp=Z,15nm,1.1s
BRVK Borovoye 88.11 324 *i* P **P** **17 47 34.8 -1.9**
BRVK pmax pmax
comp=Z,3.0nm,0.9s
EPYK Eagle Plains 89.72 23 lAmb lAmb 17 48 12.4
comp=Z,32nm,1.5s
SYO Syowa Base 90.78 200 *i e*X **P** **17 47 46.0 -2.9**
INK Inuvik 91.42 21 P **P** **17 47 51.0 -0.8**
INK pmax pmax
comp=Z,12nm,1.3s
INK Inuvik 91.42 21 P **P** **17 47 51.0 -0.8**
INK lAmb lAmb 17 47 54.5
comp=Z,12nm,1.2s
ABKAR Akbulak array 93.94 319 P **P** **17 48 02.3 -1.5**
ABKAR Akbulak array 93.94 319 lAmb lAmb 17 48 07.8
comp=Z,8.2nm,1.8s
NVAR Mina Array Bea 96.32 52 P **P** **17 48 16.6 +1.3**
comp=Z,0.6nm,0.6s,baz=251,slow=6.6,SNR=5.4
TXAR Lajitas Array 108.53 61 PKiKP **PKiKP** **17 53 16.0 +0.4**
comp=Z,1.2nm,0.9s,baz=186,slow=0.9,SNR=7.7
U40A Yellville 116.63 53 PKPdf **PKiKP** **17 53 30.8 +0.1**
KOLS Kolonicke sedl 118.14 323 *e*PKiKP **PKPdf** **17 53 32.6 -0.6**
KOLS Kolonicke sedl 118.14 323 *e*PKP **PKPdf** **17 53 32.6 -0.6**
VYHS Vyhne 120.38 324 *e*PKiKP **PKPdf** **17 53 37.1 -0.4**
VYHS Vyhne 120.38 324 *e*PKP **PKPdf** **17 53 37.1 -0.4**
CLL Collm 122.14 329 Lm MLR 18 49 00.0
comp=N,300nm,19.6s
CLL Collm 122.14 329 *e*PKiKP **PKPdf** **17 53 38.0 -2.8**
CLL *e* 17 53 53.0
CLL MLR MLR
comp=Z,500nm,19.9s
CLL Collm 122.14 329 *e*PKPdf **PKPdf** **17 53 38.0 -2.8**
CLL Collm 122.14 329 *e*pPKPdf pPKPdf 17 53 53.0 +2.3
CLL Collm 122.14 329 *e*PS PS 18 05 06.0 -4.4
CLL Collm 122.14 329 *e*PPS PPS 18 06 30.0
CLL Collm 122.14 329 *e*SS SS 18 12 12.0 +20
CLL Collm 122.14 329 *e*SSS SSS 18 16 18.0
CLL Collm 122.14 329 *e* 18 18 06.0
CLL Collm 122.14 329 Lm MLR 18 49 00.0
comp=Z,500nm,19.9s
CLL Collm 122.14 329 Lm MLR 18 49 00.0
comp=E,300nm,18.5s
VLDQ Val d'Or 122.96 35 PKPdf **PKPdf** **17 53 41.1 -1.3**
KHC Kasperske Hory 123.05 326 *e*PKiKP **PKiKP** **17 53 42.5 -0.4**
KHC Kasperske Hory 123.05 326 *e*PKP **PKiKP** **17 53 42.5 -0.4**
GERES GERESS Array B 123.14 326 PKP **PKPdf** **17 53 42.2 -0.7**
comp=E,2.1nm,0.7s,baz=52,slow=2.2,SNR=18
GERES GERESS Array B 123.14 326 PKiKP **PKPdf** **17 53 41.8 -1.1**
GERES GERESS Array B 123.14 326 PKPdf **PKPdf** **17 53 41.8 -1.1**
JTS Las Juntas de 126.89 82 PKiKP **PKiKP** **17 53 51.8 +0.4**
JTS Las Juntas de 126.89 82 PKPdf **PKiKP** **17 53 51.8 +0.4**
PUAC Puerto Asis, P 134.53 96 *e*P **PKiKP** **17 54 06.3 -0.6**
POPC Popayan, Colom 134.68 93 *e*P **PKiKP** **17 54 06.6 -0.8**
PCON Cinco Dias 134.93 91 *e*P **PKiKP** **17 54 08.7 +0.3**
YOTC Yotoco, Valle 135.15 91 *e*P **PKPdf** **17 54 07.1 +0.3**
MOTC Monteria, Cord 136.04 84 *e*P **PKPdf** **17 54 08.3 +0.1**
TOLC Tolima 136.22 90 *e*P **PKiKP** **17 54 10.6 -0.1**
GUY2C Guyana, Caldas 136.22 89 *e*P **PKPdf** **17 54 09.6 +0.4**
ORTC Ortega, Tolima 136.24 91 *e*P **PKPdf** **17 54 08.0 -0.7**
PRAC Prado 136.58 91 *e*P **PKiKP** **17 54 09.8 -1.3**
LPAZ La Paz 137.21 122 PKP **PKPdf** **17 54 10.6 -0.5**
comp=E,3.5nm,0.9s,baz=355,slow=4.1,SNR=7.7
LPAZ La Paz 137.21 122 PKiKP **PKiKP** **17 54 12.0 -1.0**
LPAZ La Paz 137.21 122 **PKiKP** **17 54 12.0 -1.0**
ROSC El Rosal 137.23 90 PKP **PKPdf** **17 54 09.9 -1.0**
comp=E,10nm,0.4s,baz=243,slow=4.2,SNR=4.6
RUSC La Rusia 138.53 88 *e*P **PKPdf** **17 54 08.5 -5.0**
SDV Santo Domingo 141.01 84 *e*P **PKPdf** **17 54 16.9 -0.8**
SDV Santo Domingo 141.01 84 **PKPdf** **17 54 17.0 -0.6**
SIV San Ignacio 143.13 127 PKP PKPbc 17 54 18.4 +0.4
comp=E,3.3nm,0.7s,baz=212,slow=3.1,SNR=14
MDT Midelt 143.80 320 PKP PKPbc 17 54 19.4 -0.1
comp=E,1.5nm,0.8s,baz=143,slow=0.8
SAML Samuel 144.81 115 PKiKP **PKPdf** **17 54 23.3 -0.8**
SAML Samuel 144.81 115 **PKPdf** **17 54 23.3 -0.8**
CDVI St. Croix 145.51 68 PKPdf **PKPab** **17 54 25.3 -0.2**
TORD Torodi Ar. Bea 146.76 284 PKPbc **PKPbc** **17 54 29.3 +0.2**
comp=E,88nm,1.0s,baz=61,slow=2.4,SNR=162
TORD Torodi Ar. Bea 146.76 284 PKPdf **PKPdf** **17 54 26.2 -1.2**
TORD PKPbc **PKPbc** **17 54 29.1 0.0**
KOWA Kowa 151.95 289 **PKPbc** **17 54 41.6 -0.6**
BDFB Brasilia 152.59 143 PKPbc **PKiKP** **17 54 44.1 +0.1**
comp=E,2.7nm,0.5s,baz=190,slow=7.5,SNR=4.0
KIC Kosan Boka 153.54 271 *e*PKiKP **PKPdf** **17 54 37.9 -0.2**
comp=E,22nm,1.4s
DBIC Dimbokro 153.66 272 PKPbc **PKiKP** **17 54 46.3 +0.2**
comp=E,18nm,0.8s,baz=87,slow=2.8,SNR=16
DBIC Dimbokro 153.66 272 PKiKP **PKPdf** **17 54 38.4 +0.2**
DBIC 17 54 45.8
DBIC Dimbokro 153.66 272 PKPdf **PKPdf** **17 54 38.4 +0.2**
DBIC PKPbc **PKiKP** **17 54 45.8 -0.3**
LIC Lamto 153.82 271 *e*PKiKP **PKPdf** **17 54 38.0 -0.5**
comp=E,47nm,1.5s
TIC Toumodi 153.82 272 *e*PKiKP **PKPdf** **17 54 38.1 -0.4**

*IDC **07** 17:37:38.1±1.8,6.37S×148.83E,h0km,mb4.1/8, mb1 4.3/10,mb1mx4.0/32,mbtmp4.1/10,ML3.5/2,MS4.4/2, Ms1 4.4/2,ms1mx3.9/23,Error ellipse: s-maj=58.7km s-min=20.8km az=114.0*
*NEIC **07** 17:37:48.3±1.4,6.5S±0.1×148.6E±0.1,h74km±11km, mb4.6/13,Error ellipse: s-maj=23.6km s-min=10.5km az=124.0*
ISC 07 17:37:43.5±1.0,**6.39S**±0.09×**148.8E**±0.2,**h35**km,**n31,**
σ0**s74/29,mb4.4/14,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.41**	**208**			Pn	**Pn**	**17 38 34.8**	**+0.6**
	52nm,0.3s,baz=14,slow=11,SNR=1.8								
PMG						Sn	**Sn**	**17 39 12.8**	**-0.7**
	74nm,0.3s,baz=58,slow=15,SNR=3.5								
PMG	**Port Moresby**	**3.41**	**208**				**Pn**	**17 38 35.8**	**+1.6**
PMG						Sn	**Sn**	**17 39 13.9**	**+0.4**
RABL	**Rabaul**	**4.00**	**57**	Pn	Pn			17 38 49.8	+7.4
WRAB	**Tennant Creek**	**19.45**	**225**	P	**P**			**17 42 06.5**	**-0.7**
WB2	**Warramunga Arr**	**19.45**	**225**				**P**	**17 42 07.5**	**+0.2**
WB2						lAmb	lAmb	17 42 13.6	
	comp=Z,14nm,0.9s								
WRA	**Warramunga Arr**	**19.46**	**225**	P			**P**	**17 42 06.7**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=51,slow=11,SNR=1.9								
KNRA	**Kununurra**	**21.70**	**243**	P			**P**	**17 42 31.4**	**-0.2**
KNRA						lAmb	lAmb	17 42 33.9	
	comp=Z,23nm,1.2s								
AS31	**Alice Springs**	**22.36**	**218**	P			**P**	**17 42 38.9**	**+0.1**
ASAR	**Alice Springs**	**22.36**	**218**	P			**P**	**17 42 38.3**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=50,slow=9.4,SNR=2.5								
ARMA	**Armidale**	**24.06**	**174**	P			**P**	**17 42 55.4**	**-0.3**
ARMA						lAmb	lAmb	17 43 12.1	
	comp=Z,13nm,1.1s								
SOEI	**Soe**	**24.51**	**261**	P			**P**	**17 42 59.7**	**-0.3**
SOEI						lAmb	lAmb	17 43 12.9	
	comp=Z,49nm,1.3s								
BATI	**Baumata**	**25.15**	**260**	P			**P**	**17 43 06.0**	**+0.2**
	comp=Z,23nm,0.9s,baz=90,slow=7.1,SNR=2.6								
FITZ	**Fitzroy Crossi**	**25.41**	**241**	P			**P**	**17 43 07.3**	**-0.7**
	comp=Z,12nm,0.5s,baz=63,slow=9.4,SNR=4.0								
FITZ	**Fitzroy Crossi**	**25.41**	**241**	P			**P**	**17 43 07.8**	**-0.2**
MMRI	**Maumere**	**26.42**	**263**	P			**P**	**17 43 16.0**	**-1.3**
MMRI						lAmb	lAmb	17 43 19.6	
	comp=Z,22nm,0.7s								
MYLDM	**Lahad Datu**	**32.35**	**290**	P			**P**	**17 44 12.1**	**+2.2**
MYLDM						lAmb	lAmb	17 44 28.2	
	comp=Z,14nm,1.2s								
SBUM	**Sibu**	**37.55**	**282**	P			**P**	**17 44 54.3**	**-0.5**
SBUM						lAmb	lAmb	17 44 56.2	
	comp=Z,18nm,1.6s								
CISI	**Cisompet, Garu**	**40.68**	**266**	P			**P**	**17 45 20.0**	**-1.0**
JNU	**Nakatsue**	**42.82**	**338**	P			**P**	**17 45 38.5**	**+0.3**
JMM	**Marumori**	**44.65**	**351**	P			**P**	**17 45 52.3**	**-0.5**
KSRS	**Korea Array**	**47.77**	**337**	P			**P**	**17 46 17.3**	**0.0**
	comp=Z,1.7nm,0.8s,baz=153,slow=7.9,SNR=4.3								
ASAJ	**Asahikawa**	**50.58**	**354**	LR		LR		18 04 36.1	
	comp=Z,510nm,21.8s,baz=176,slow=32								
SONM	**Songino Array**	**65.61**	**330**	P			**P**	**17 48 24.4**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=133,slow=6.1,SNR=2.3								
SONM	**Songino Array**	**65.61**	**330**	lAmb		lAmb		17 48 25.5	
	comp=Z,1.0nm,1.0s								
MKAR	**Makanchi Array**	**78.93**	**320**	P			**P**	**17 49 43.4**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=97,slow=9.2,SNR=2.5								
ZALV	**Zalesovo Beam**	**80.29**	**327**	P			**P**	**17 49 51.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=120,slow=8.5,SNR=2.0								
ILAR	**Eielson Array**	**85.14**	**23**	P			**P**	**17 50 15.6**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=246,slow=5.2,SNR=3.5								
PFO	**Pinyon Flats O**	**97.44**	**57**	LR		LR		18 25 36.4	
	comp=Z,169nm,20.7s,baz=250,slow=30								
TORD	**Torodi Ar. Bea**	**146.91**	**284**	PKPbc		**PKPbc**		**17 57 23.0**	**-0.4**
	comp=Z,7.7nm,0.8s,baz=60,slow=3.4,SNR=9.8								
TORD	**Torodi Ar. Bea**	**146.91**	**284**			**PKPbc**		**17 57 23.3**	**-0.1**
DBIC	**Dimbokro**	**153.82**	**272**	PKPbc		**PKPbc**		**17 57 40.2**	**0.0**
	comp=Z,3.9nm,0.8s,baz=290,slow=4.1,SNR=3.3								

*IDC **07** 17:38:37.5±1.9,6.17S×148.47E,h0km,mb4.1/4, mb1 4.4/6,mb1mx3.9/33,mbtmp4.2/6,ML3.5/2,Error ellipse: s-maj=68.8km s-min=25.4km az=116.0*
*NEIC **07** 17:38:45.1±1.2,6.37S±0.08×148.4E±0.1,h57km±7km, mb4.5/12,Error ellipse: s-maj=16.3km s-min=10.6km az=117.0*
ISC 07 17:38:43.2±0.7,**6.30S**±0.09×**148.4E**±0.1,**h35**km,**n22,**
σ1**s11/22,mb4.2/6,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.30**	**201**	Pn			**Pn**	**17 39 33.8**	**+1.3**
	39nm,0.3s,baz=2.9,slow=15,SNR=1.7								
PMG						Sn	**Sn**	**17 40 11.1**	**+0.6**
	76nm,0.3s,baz=173,slow=19,SNR=3.8								
RABL	**Rabaul**	**4.34**	**61**	Pn			**Pn**	**17 39 48.3**	**+1.6**
WR0	**Warramunga Arr**	**19.09**	**223**	P			**P**	**17 43 02.0**	**-1.0**
WR0						lAmb	lAmb	17 43 10.5	
	comp=Z,30nm,0.9s								
EIDS	**Eidsvold**	**19.14**	**172**	P			**P**	**17 43 01.4**	**-2.0**
WRAB	**Tennant Creek**	**19.20**	**224**	P			**P**	**17 43 04.7**	**+0.4**
WRAB						lAmb	lAmb	17 43 05.0	
	comp=Z,27nm,0.9s								
WB2	**Warramunga Arr**	**19.20**	**224**	P			**P**	**17 43 04.8**	**+0.6**
WB2						lAmb	lAmb	17 43 15.3	
	comp=Z,28nm,0.9s								
WRA	**Warramunga Arr**	**19.21**	**224**	P			**P**	**17 43 04.5**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=52,slow=11,SNR=2.9								
WRA	**Warramunga Arr**	**19.21**	**224**	lAmb		lAmb		17 43 07.6	
	comp=Z,0.9nm,0.9s								
GUMO	**Guam**	**20.06**	**350**	P			**P**	**17 43 13.0**	**-0.6**
KNRA	**Kununurra**	**21.35**	**243**	P			**P**	**17 43 27.7**	**+0.2**
KNRA						lAmb	lAmb	17 43 51.3	
	comp=Z,44nm,1.0s								
AS31	**Alice Springs**	**22.16**	**217**	P			**P**	**17 43 36.3**	**0.0**
ASAR	**Alice Springs**	**22.16**	**217**	P			**P**	**17 43 37.3**	**+1.0**
	comp=Z,4.4nm,0.6s,baz=47,slow=8.7,SNR=2.8								
ARMA	**Armidale**	**24.19**	**173**	P			**P**	**17 43 53.7**	**-2.9**
ARMA						lAmb	lAmb	17 44 04.1	
	comp=Z,15nm,1.2s								
FITZ	**Fitzroy Crossi**	**25.07**	**240**	P			**P**	**17 44 05.1**	**+0.5**
	comp=Z,10.0nm,0.4s,baz=62,slow=9.2,SNR=5.8								
JHJ2	**Mitsune**	**40.03**	**349**	P			**P**	**17 46 15.6**	**+0.7**
CISI	**Cisompet, Garu**	**40.25**	**266**	P			**P**	**17 46 17.5**	**+0.4**
CASY	**Casey**	**65.33**	**196**	P			**P**	**17 49 22.4**	**+0.9**
MKAR	**Makanchi Array**	**78.59**	**320**	P			**P**	**17 50 40.5**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=104,slow=6.1,SNR=2.2								
ILAR	**Eielson Array**	**85.23**	**23**	P			**P**	**17 51 15.1**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=252,slow=4.4,SNR=2.5								
TOA0	**Torodi Ar. Sit**	**146.47**	**284**				**PKPbc**	**17 58 21.7**	**-0.1**
TORD	**Torodi Ar. Bea**	**146.47**	**284**	PKPbc			**PKPbc**	**17 58 21.5**	**-0.3**
	comp=Z,5.5nm,0.6s,baz=61,slow=3.0,SNR=8.6								
TORD	**Torodi Ar. Bea**	**146.47**	**284**				**PKPdf**	**17 58 20.9**	**+0.6**

ROM 07 17:51:15.7±0.1,**43.447N**±0.005×**12.350E**±0.008,
h7km,**Md1.0/1,ML1.1/2,Error ellipse: s-maj=0.6km s-min=0.5km az=52.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.04**	**84**	P		Pg		17 51 17.3	+0.1
ATPI				S		Sg		17 51 18.3	+0.1
ATPI				END					
ATVO	**AVT- Monte Val**	**0.08**	**148**	P		Pg		17 51 17.9	+0.2
ATVO				S		Sg		17 51 19.5	+0.5
ATVO				AML	AML				
	comp=E,221μm,0.6s								
ATVO				AML	AML				
	comp=N,142μm,1.6s								
BADI	**Badiali**	**0.10**	**309**	P		Pg		17 51 18.3	+0.3
BADI				S		Sg		17 51 20.3	+0.7
BADI				AML	AML				
	comp=E,186μm,0.5s								
BADI				AML	AML				
	comp=N,176μm,1.1s								
ATFO	**Monte Foce - G**	**0.18**	**116**	P		Pg		17 51 20.0	+0.6
ATFO				S		Sg		17 51 23.2	+1.4
PARC	**Parchiule**	**0.22**	**338**	P		Pg		17 51 20.6	+0.5
PARC				S		Sg		17 51 24.5	+1.5
MURB	**Monte Urbino**	**0.22**	**145**	P		Pg		17 51 20.7	+0.6
MURB				S		Sg		17 51 24.7	+1.5

TAP 07 17:51:21.1,23.21N×120.75E,h8km,**ML0.5,C,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan**	**0.05**	**175**	*i* P		Pg		17 51 23.4	+0.5
	baz=166								
STYT				*e*S		Sg		17 51 24.8	+0.6
	baz=166								
WTP	**Ta-pu**	**0.13**	**286**	P		Pg		17 51 24.7	+0.6
	baz=286								
WTP				*e*S		Sg		17 51 27.4	+1.2
	baz=286								
TPUB	**Ta-pu**	**0.15**	**309**	P		Pg		17 51 25.0	+0.7
	baz=308								
TPUB				*e*S		Sg		17 51 27.3	+0.9
	baz=308								
CHN1	**Nanshi**	**0.21**	**263**	*e*P		Pg		17 51 26.5	+1.1
	baz=263								
CHN1				*e*S		Sg		17 51 30.3	+2.0
	baz=263								
SLGT	**Liugui**	**0.24**	**205**	P		Pg		17 51 26.8	+0.9
	baz=204								
SLGT				*e*S		Sg		17 51 30.8	+1.7
	baz=204								
TWK	**Hsinying**	**0.25**	**283**	*e*P		Pb		17 51 27.1	-0.8
	baz=283								

*SNET **07** 17:59:12.5±0.8,12.57N×88.18W,h32km±3km,ML3.4*
*INET **07** 17:59:12.6,12.49N×88.06W,h15km,MW2.9*
*UCR **07** 17:59:12.4±1.3,12.56N×88.18W,h32km±4km,ML3.4, MW3.6*
ISC 07 17:59:12.6±1.7,**12.56N**±0.05×**88.18W**±0.04,**h31**km±15km,

n27,σ0.55/38,4C,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarın**	**0.69**	**354**	*e*P	**Pn**	**17 59 26.0**	**-0.3**
JUCU				*e*S	**Sn**	**17 59 36.5**	**+0.5**
JUCU				IAML		17 59 38.2	
	comp=Z,3μm,0.1s						
JUCU	**Jucuarın**	**0.69**	**354**	*e*P	**Pn**	**17 59 26.0**	**-0.3**
JUCU				*e*S	**Sn**	**17 59 36.5**	**+0.5**
JUCU				IAML		17 59 38.2	
	comp=Z,3μm,0.1s						
CSGN	**Cosiguina Volc**	**0.73**	**56**	*e*P	**Pn**	**17 59 26.6**	**-0.3**
CSGN				*e*S	**Sn**	**17 59 37.1**	**+0.1**
CSGN	**Cosiguina Volc**	**0.73**	**56**	*e*P	**Pn**	**17 59 26.2**	**-0.6**
CSGN				*e*S	**Sn**	**17 59 37.1**	**+0.1**
LCND	**La Caada**	**0.79**	**21**	⇑*i*P	**Pn**	**17 59 27.3**	**-0.4**
LCND				*e*S	**Sb**	**17 59 39.2**	**+0.7**
LCND				IAML		17 59 41.3	
	comp=Z,1μm,0.2s						
LCND	**La Caada**	**0.79**	**21**	⇑*i*P	**Pn**	**17 59 27.3**	**-0.4**
LCND				*e*S	**Sb**	**17 59 39.2**	**+0.7**
LCND				IAML		17 59 41.3	
	comp=Z,1μm,0.2s						
ALJI	**Alcalda de J**	**0.85**	**333**	*e*S	**Sb**	**17 59 40.1**	**-0.1**
ALJI				IAML		17 59 43.5	
	comp=Z,1μm,0.3s						
ALJI	**Alcalda de J**	**0.85**	**333**	*e*S	**Sb**	**17 59 40.1**	**-0.1**
ALJI				IAML		17 59 43.5	
	comp=Z,1μm,0.3s						
LCY	**Lacayo**	**0.86**	**352**	*e*P	**Pn**	**17 59 28.8**	**0.0**
LCY	**Lacayo**	**0.86**	**352**	*e*P	**Pn**	**17 59 28.8**	**0.0**
PACA	**Pacayal**	**0.91**	**351**	*e*P	**Pn**	**17 59 29.4**	**0.0**
PACA				*e*P	**Pn**	**17 59 29.4**	**0.0**
PACA	**Pacayal**	**0.91**	**351**	*e*P	**Pn**	**17 59 29.4**	**0.0**
PACA				*e*P	**Pn**	**17 59 29.4**	**0.0**
COEB	**Comit de Eme**	**0.99**	**340**	*e*S	**Sb**	**17 59 43.8**	**-0.4**
COEB				IAML		17 59 46.5	
	comp=Z,1μm,0.3s						
COEB	**Comit de Eme**	**0.99**	**340**	*e*S	**Sb**	**17 59 43.8**	**-0.4**
COEB				IAML		17 59 46.5	
	comp=Z,1μm,0.3s						
CRIN	**San Cristobal**	**1.11**	**83**	*e*P	**Pn**	**17 59 31.3**	**-0.8**
CRIN				*e*S	**Sb**	**17 59 47.0**	**-0.5**
LFRS	**El Faro**	**1.36**	**321**	⇑*i*P	**Pn**	**17 59 35.4**	**-0.2**
LFRS	**El Faro**	**1.36**	**321**	⇑*i*P	**Pn**	**17 59 35.4**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.73**	**31**	*e*P	**Pn**	**17 59 40.8**	**+0.1**
TGUH	**Tegucigalpa,Un**	**1.73**	**31**	*e*P	**Pn**	**17 59 40.8**	**+0.1**
NUBE	**Las Nubes**	**2.05**	**311**	*e*P	**Pn**	**17 59 44.9**	**-0.2**
NUBE				*e*S	**Sn**	**18 00 09.6**	**-0.2**
NUBE				IAML		18 00 12.9	
	comp=Z,164nm,0.2s						
NUBE	**Las Nubes**	**2.05**	**311**	*e*P	**Pn**	**17 59 44.9**	**-0.2**
NUBE				*e*S	**Sn**	**18 00 09.6**	**-0.2**
NUBE				IAML		18 00 12.9	
	comp=Z,164nm,0.2s						
MATN	**Matagalpa**	**2.23**	**80**	*e*P	**Pn**	**17 59 46.2**	**-1.3**
ORTG	**Ortega, Santa**	**3.45**	**129**	*e*P	**Pn**	**18 00 04.0**	**-0.3**
PLVR	**Palo Verde**	**3.54**	**128**	*e*P	**Pn**	**18 00 05.3**	**-0.3**
LAFE	**Finca La Fe, P**	**4.21**	**130**	*e*P	**Pn**	**18 00 14.1**	**-0.7**
RIMA	**Rio Macho**	**5.06**	**123**	*e*P	**Pn**	**18 00 28.3**	**+1.6**
CDM	**Cerro de Muert**	**5.26**	**124**	*e*P	**Pn**	**18 00 30.7**	**+1.1**

TAP 07 18:01:30.4,24.39N×121.74E,h4km,ML1.1,1C,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.09**	**46**	*i* P	Pg	18 01 32.5	+0.2
	baz=43						
ENAH				*i* S	Sg	18 01 33.8	+0.3
	baz=43						
NACB	**Ninganchiao**	**0.25**	**212**	*e*P	Pg	18 01 36.0	+0.6
	baz=211						
NACB				*e*S	Sg	18 01 39.5	+0.9
	baz=211						
ENTT	**Nioudou**	**0.30**	**327**	⇑*i*P	Pg	18 01 37.1	+0.9
	baz=330						
ENTT				*e*S	Sg	18 01 41.8	+1.7
	baz=330						
NDT	**Datong Townshi**	**0.30**	**316**	*e*S	Sb	18 01 42.3	-1.3
	baz=317						
ETLH	**Xiulin Townshi**	**0.30**	**233**	*e*P	Pg	18 01 36.8	+0.6
	baz=232						
ETLH				*e*S	Sg	18 01 41.1	+0.9
	baz=232						
NNSB	**Datong**	**0.33**	**277**	*e*P	Pb	18 01 38.4	-0.5
	baz=278						
NNSB				*e*S	Sg	18 01 42.3	+1.1
	baz=278						
NNSH	**Datong**	**0.33**	**277**	*e*S	Sg	18 01 42.2	+1.0
	baz=278						
NNS	**Nan Shan**	**0.34**	**279**	*i* S	Sg	18 01 42.7	+1.1
	baz=279						
YHNB	**Yeheng**	**0.43**	**310**	*e*P	Pb	18 01 40.0	-0.7
	baz=310						

JMA 07 18:02:13.3,24.31N×123.59E,h14km±1km,M3.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.13**	**79**	P	Pg	18 02 16.7	-0.1
IRIF				S	Sg	18 02 19.6	+0.4
HATJ	**Hateruma jima**	**0.32**	**142**	P	Pg	18 02 19.7	-0.2
HATJ				S	Sg	18 02 24.7	+0.4
JKRS	**Kuro-shima**	**0.39**	**101**	P	Pg	18 02 21.2	+0.1
JKRS				S	Sb	18 02 27.4	-0.4
JIJ	**Ishigaki jima**	**0.51**	**84**	P	Pg	18 02 22.8	-0.5
JIJ				S	Sg	18 02 30.0	-0.1
YOJ	**Yonaguni jima**	**0.55**	**286**	P	Pg	18 02 24.1	0.0
YOJ				S	Sg	18 02 31.8	+0.4
JYNG	**Yonagunijimaku**	**0.60**	**284**	P	Pg	18 02 25.1	-0.1
JYNG				S	Sg	18 02 33.6	+0.4
JISG	**Ishigakijimahi**	**0.71**	**67**	P	Pg	18 02 26.8	-0.4
JISG				S	Sb	18 02 37.0	-0.2
JTJ	**Tarama**	**1.06**	**72**	P	Pb	18 02 33.4	-0.1
JTJ				S	Sn	18 02 48.4	0.0

IDC 07 19:05:26.5±4.2,6.86S×148.79E,h113km±38km,mb3.3/3, mb1 3.4/5,mb1mx3.1/25,mbtmp3.6/5,Error ellipse: s-maj=77.6km s-min=32.5km az=135.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.00**	**212**	P	Pn	19 06 12.2	-0.4
	8.9nm,0.3s,baz=359,slow=8.9,SNR=16						
PMG				S	Sn	19 06 48.6	+0.5
	18nm,0.3s,baz=30,slow=19,SNR=12						
WRA	**Warramunga Arr**	**19.12**	**226**	P	P	19 09 40.6	-0.2
	0.1nm,0.3s,baz=52,slow=11,SNR=12						
ASAR	**Alice Springs**	**22.00**	**219**	P	P	19 10 12.8	+1.2
	0.7nm,0.4s,baz=55,slow=9.0,SNR=31						
FITZ	**Fitzroy Crossi**	**25.17**	**242**	P	P	19 10 41.1	-0.4
	1.6nm,0.5s,baz=63,slow=8.9,SNR=20						
ILAR	**Eielson Array**	**85.57**	**23**	P	P	19 17 51.8	0.0
	0.2nm,0.5s,baz=254,slow=5.4,SNR=1.9						

*ANF **07** 19:19:54.0±0.9,41.84N×119.58W,h7km±9km,ML3.4/13, Error ellipse: s-maj=3.6km s-min=3.1km az=176.0*
*NEIC **07** 19:19:55.5±2.7,41.96N±0.04×119.62W±0.04,h5km±2km, Error ellipse: s-maj=7.2km s-min=5.1km az=23.0*
*REN **07** 19:19:55.4±2.9,41.89N±0.04×119.62W±0.04,h0km±7km, ML3.6/3,ML3.4/38(SEA),Mwr3.5/25(SLM),Error ellipse: s-maj=6.4km s-min=4.7km az=186.0*
*SEA **07** 19:19:55.5±4.3,41.78N±0.04×119.62W±0.04,h0km±7km, Error ellipse: s-maj=6.4km s-min=3.1km az=219.0*
*NEIC **07** 19:19:55.4,41.89N×119.62W,h10km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.55; $M_{\theta\theta}$=-0.20; $M_{\phi\phi}$ 1.75; $M_{r\theta}$=-0.60; $M_{r\phi}$=0.96; $M_{\theta\phi}$=1.60; Fault plane solution: $M_0$2.57000×10^{14} NP1:φ=50.00000°, δ=35.00000°, λ=-40.00000°. NP2:φ=174.00000°, δ=68.00000°, λ=-118.00000°. Principal axes: T 2.5687, Plg19.0000°, Azm285.0000°; N 0.0010, Plg26.0000°, Azm186.0000°; P -2.5698, Plg57.0000°, Azm47.0000°;*
ISC 07 19:19:55.1±1.4,41.90N±0.03×119.62W±0.03,h2km±13km, n53,σ1.02/61,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.51**	**271**		**Pg**	**19 20 05.2**	**+0.3**
MOD					**Sg**	**19 20 12.4**	**+1.0**
K05A	**Summer Lake**	**1.26**	**312**		**Pg**	**19 20 19.2**	**0.0**
M04C	**Macdoel**	**1.66**	**267**	P	**Pn**	**19 20 24.3**	**-1.0**
	baz=86,SNR=132						
M04C				Sb	**Sb**	**19 20 48.4**	**+0.5**
	baz=86						
K04D	**Chiloquin, OR**	**1.74**	**295**	P	**Pn**	**19 20 25.5**	**-0.9**
	baz=114,SNR=16						
K04D				S	**Sn**	**19 20 49.3**	**0.0**
	baz=114						
J05D	**Fort Rock, OR**	**1.83**	**320**	Pb	**Pb**	**19 20 29.0**	**-0.4**
	baz=139,SNR=406						
J05D				Sb	**Sg**	**19 20 54.6**	**+0.7**
	baz=139						
WVA	**Winnemucca Val**	**1.96**	**185**		**Pb**	**19 20 31.2**	**-0.3**
L04D	**Klamath Falls**	**2.02**	**280**	P	**Pn**	**19 20 29.2**	**-1.2**
	baz=98,SNR=36						
L04D				Sb	**Sb**	**19 20 59.0**	**+0.7**
	baz=98						
BEKR	**Beckworth**	**2.10**	**196**		**Pb**	**19 20 33.2**	**-0.9**
PINE	**Pine Mountain**	**2.13**	**333**		**Pn**	**19 20 32.0**	**+0.2**
PAHR	**Pah Rah Range**	**2.19**	**175**		**Pn**	**19 20 33.6**	**+0.9**
J04D	**Umpqua Nationa**	**2.28**	**307**	Pb	**Pb**	**19 20 36.3**	**-0.7**
	baz=126						
O03E	**Paynes Creek**	**2.29**	**227**	P	**Pn**	**19 20 32.4**	**-1.6**
	baz=45						
PEAR	**Peavine Mounta**	**2.30**	**187**		**Pg**	**19 20 39.3**	**+0.1**
YBH	**Yreka Blue Hor**	**2.31**	**267**		**Pn**	**19 20 32.8**	**-1.5**
KBF	**Kyburz Flat**	**2.43**	**191**		**Pb**	**19 20 39.2**	**-0.4**
VPK	**Verdi Peak**	**2.44**	**188**		**Pg**	**19 20 41.5**	**-0.4**
M02C	**Callahan**	**2.47**	**259**	P	**Pn**	**19 20 34.7**	**-1.8**
	baz=77						
N02D	**Trinity Center**	**2.49**	**249**	Pb	**Pb**	**19 20 38.9**	**-1.7**
	baz=67,SNR=26						
N02D				Sb	**Sb**	**19 21 12.5**	**+0.8**
	baz=67						
IND	**Independence**	**2.51**	**192**		**Pb**	**19 20 41.7**	**+0.6**
WDC	**Whiskeytown Da**	**2.56**	**240**		**Pn**	**19 20 36.6**	**-1.1**
HUMO	**Hull Mountain**	**2.58**	**287**	Pn	**Pn**	**19 20 36.6**	**-1.2**
VCNR	**Virginia City**	**2.60**	**180**		**Pn**	**19 20 38.0**	**-0.2**
ORV	**Oroville**	**2.74**	**212**		**Pn**	**19 20 39.2**	**-0.8**
I05D	**Terrebonne, OR**	**2.75**	**333**	Pb	**Pb**	**19 20 44.8**	**-0.1**
	baz=152						
I04A	**Tendick Farm,**	**2.79**	**314**	Pb	**Pb**	**19 20 45.6**	**-0.2**
	baz=132						
I04A				Sb	**Sb**	**19 21 23.0**	**+2.5**
	baz=132						
PNTR	**Pine Nut**	**2.80**	**180**		**Pn**	**19 20 41.1**	**0.0**
RUBR	**Rubicon Trail**	**2.87**	**188**		**Pn**	**19 20 44.5**	**+2.4**
L02E	**Cave Junction**	**2.98**	**276**	P	**Pn**	**19 20 43.0**	**-0.3**
	baz=94						
L02E				Sb	**Sb**	**19 21 26.7**	**+1.0**
	baz=94						
BFC	**Buffalo Canyon**	**3.00**	**180**		**Pg**	**19 20 52.0**	**-0.6**
KVN	**Kaiserville**	**3.07**	**157**		**Pn**	**19 20 44.4**	**-0.4**
K02D	**Willamette Mer**	**3.10**	**286**	P	**Pn**	**19 20 44.8**	**-0.4**
	baz=104						
AFDM	**Forest Hills D**	**3.12**	**200**		**Pn**	**19 20 46.0**	**+0.7**
KRMB	**Red Mountain**	**3.23**	**265**		**Pn**	**19 20 46.3**	**-0.6**
KHMM	**Horse Mountain**	**3.25**	**253**		**Pn**	**19 20 47.0**	**-0.3**
H04A	**Detroit Lake**	**3.36**	**327**		**Pn**	**19 20 49.3**	**+0.7**
RYN	**Ryan**	**3.37**	**165**		**Pb**	**19 20 54.3**	**-1.4**
WAKR	**Walker**	**3.39**	**178**		**Pn**	**19 20 48.8**	**-0.4**
G08A	**Pilot Rock**	**3.43**	**8**		**Pn**	**19 20 49.0**	**-0.6**
KBO	**Bosley Butte**	**3.44**	**277**		**Pn**	**19 20 49.6**	**-0.2**
KMRM	**Mail Ridge**	**3.51**	**243**		**Pn**	**19 20 51.4**	**+0.6**
NV11	**Mina Array Sit**	**3.64**	**162**		**Pn**	**19 20 53.0**	**+0.5**
LHV	**Little Huntoon**	**3.74**	**166**		**Pn**	**19 20 52.6**	**-1.1**
CMB	**Columbia Colle**	**3.90**	**189**		**Pn**	**19 20 55.7**	**-0.4**
PLID	**Pearl Lake**	**4.14**	**38**		**Pn**	**19 20 58.8**	**-0.7**
HLID	**Hailey**	**4.18**	**65**	Pb	**Pb**	**19 21 07.6**	**-1.9**
	baz=248						
F10A	**Beach Ranch, E**	**4.43**	**22**		**Pn**	**19 21 02.5**	**-0.9**
HVU	**Hansel Valley**	**5.12**	**89**		**Pn**	**19 21 13.9**	**+1.0**
PRN	**Pahroc Range**	**5.70**	**140**		**Pn**	**19 21 22.9**	**+2.0**
ECR	**Eagle Creek**	**6.21**	**76**		**Pb**	**19 21 42.4**	**-1.7**
MSO	**Missoula**	**6.40**	**38**		**Pn**	**19 21 31.7**	**+1.3**
CCUT	**Cedar City**	**6.49**	**130**		**Pn**	**19 21 32.9**	**+1.1**
REDW	**Red Top Meadow**	**6.63**	**74**		**Pn**	**19 21 34.1**	**+0.3**
KNB	**Kanab**	**7.17**	**131**		**Pn**	**19 21 41.5**	**+0.5**

WEL 07 19:45:48.9,38°S±2°×17°6E±°,h179km±4km,M2.9/37, MLv2.9/37,Error ellipse: s-maj=0.0km s-min=0.0km az=4.2,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.43**	**156**	P	Pn	19 46 13.2	-0.1
TOZ	**Tahuroa Road**	**0.77**	**260**	P	Pn	19 46 14.7	-0.2
URZ	**Urewera**	**0.84**	**142**	P	Pn	19 46 15.0	-0.3
URZ				S	Sn	19 46 35.3	-0.6
KUZ	**Kuaotunu**	**1.03**	**325**	P	Pn	19 46 16.9	+0.1
RUGZ	**Raukumara Rang**	**1.04**	**111**	P	Pn	19 46 15.9	-1.0
RUGZ				S	Sn	19 46 36.5	-2.0
HAZ	**Te Kaha**	**1.07**	**99**	P	Pn	19 46 16.4	-0.5
HAZ				S	Sn	19 46 37.5	-1.1
RTZ	**Ruatahuna**	**1.10**	**158**	P	Pn	19 46 17.1	-0.2
RTZ				S	Sn	19 46 38.9	-0.5
MWZ	**Matawai**	**1.12**	**131**	P	Pn	19 46 17.2	-0.3
MWZ				S	Sn	19 46 38.4	-1.2
MKAZ	**Moumakai**	**1.14**	**295**	P	Pn	19 46 18.1	+0.5
RAGZ	**Rawiri**	**1.18**	**140**	P	Pn	19 46 18.4	+0.5
MRHZ	**Matea Rd**	**1.24**	**181**	P	Pn	19 46 18.4	0.0
MRHZ				S	Sn	19 46 40.3	-1.1
WATZ	**Wairara**	**1.25**	**207**	P	Pn	19 46 18.9	+0.5
MTHZ	**Maungataniwha**	**1.29**	**166**	P	Pn	19 46 18.9	0.0
MTHZ				S	Sn	19 46 40.9	-1.4
PKGZ	**Pakihiroa**	**1.32**	**103**	P	Pn	19 46 19.3	+0.1
WIAZ	**Waiheke Island**	**1.32**	**307**	P	Pn	19 46 19.6	+0.4
TWGZ	**Tauwhareparae**	**1.34**	**116**	P	Pn	19 46 19.6	+0.3
TWGZ				S	Sn	19 46 42.8	0.0
SNGZ	**Shannon Statio**	**1.38**	**150**	P	Pn	19 46 19.7	+0.1
SNGZ				S	Sn	19 46 42.6	-0.8
RATZ	**Rangitukua**	**1.38**	**203**	P	Pn	19 46 20.0	+0.4
TKGZ	**Te Karaka**	**1.39**	**128**	P	Pn	19 46 19.8	+0.1
TKGZ				S	Sn	19 46 42.7	-0.8
RAHZ	**Arahi**	**1.41**	**159**	P	Pn	19 46 20.3	+0.4
RITZ	**Rihia Road**	**1.46**	**199**	P	Pn	19 46 21.1	+0.7
MXZ	**Matakaoa Point**	**1.47**	**89**	P	Pn	19 46 20.4	-0.1
MBAZ	**Motutapu North**	**1.49**	**303**	P	Pn	19 46 21.3	+0.6
KATZ	**Kakaramea**	**1.50**	**203**	P	Pn	19 46 22.2	+1.3
PUZ	**Puketiti**	**1.50**	**109**	P	Pn	19 46 21.2	+0.4
RIGZ	**Rimuhau**	**1.51**	**137**	P	Pn	19 46 21.1	+0.2
NMHZ	**Naumai**	**1.52**	**170**	P	Pn	19 46 21.4	+0.8
AWAZ	**Awhitu Peninsu**	**1.54**	**290**	P	Pn	19 46 21.4	+0.3
HIZ	**Hauiti**	**1.56**	**234**	P	Pn	19 46 21.9	+0.6
GRZ	**Great Barrier**	**1.56**	**329**	P	Pn	19 46 21.5	+0.1
BKZ	**Black Stump Fm**	**1.57**	**179**	P	Pn	19 46 20.9	-0.6
WMGZ	**Waiomatatini S**	**1.57**	**99**	P	Pn	19 46 21.3	-0.1
KRVZ	**Karewarewa**	**1.63**	**203**	P	Pn	19 46 22.2	+0.1
TMVZ	**Te Maari**	**1.63**	**201**	P	Pn	19 46 22.3	+0.2
ABAZ	**Army Bay**	**1.63**	**307**	P	Pn	19 46 22.8	+0.7
ETVZ	**East Tongariro**	**1.64**	**201**	P	Pn	19 46 22.6	+0.3
CNGZ	**Carnagh Statio**	**1.65**	**123**	P	Pn	19 46 22.8	+0.7
WTVZ	**West Tongariro**	**1.66**	**204**	P	Pn	19 46 22.6	+0.1
TWVZ	**Taurewa**	**1.68**	**208**	P	Pn	19 46 22.8	+0.3
OTVZ	**Oturere**	**1.68**	**201**	P	Pn	19 46 23.0	+0.3
NGZ	**Ngauruhoe**	**1.71**	**203**	P	Pn	19 46 23.5	+0.5
KNZ	**Kokohu**	**1.72**	**146**	P	Pn	19 46 22.6	-0.2
ARHZ	**Aropaoanui**	**1.72**	**166**	P	Pn	19 46 23.1	+0.3
PRGZ	**Paritu Road**	**1.74**	**140**	P	Pn	19 46 23.3	+0.2
FWVZ	**Far West T-bar**	**1.80**	**203**	P	Pn	19 46 23.7	-0.3
WHVZ	**Whaanehu Hut**	**1.82**	**202**	P	Pn	19 46 24.1	-0.1
KWHZ	**Kaweka Forest**	**1.82**	**181**	P	Pn	19 46 23.9	-0.2
WNVZ	**Wahianoa**	**1.85**	**201**	P	Pn	19 46 24.2	-0.2
MCHZ	**McNeill Hill**	**1.85**	**174**	P	Pn	19 46 24.5	+0.2
MOVZ	**Moawhango**	**1.89**	**197**	P	Pn	19 46 24.2	-0.6
PKVZ	**Pokaka**	**1.90**	**207**	P	Pn	19 46 25.0	+0.1
BHHZ	**Black Hill Sta**	**1.92**	**189**	P	Pn	19 46 24.2	-0.8
MHGZ	**Mahia Peninsul**	**1.93**	**144**	P	Pn	19 46 25.0	-0.1
MTVZ	**Mangateitei**	**1.94**	**203**	P	Pn	19 46 25.3	0.0
VRZ	**Vera Road**	**2.03**	**221**	P	Pn	19 46 27.1	+0.9
KRHZ	**Kereru**	**2.04**	**182**	P	Pn	19 46 25.8	-0.6
CKHZ	**Cape Kidnapper**	**2.12**	**167**	P	Pn	19 46 27.0	-0.2
KAHZ	**Kahuranaki**	**2.22**	**172**	P	Pn	19 46 27.9	-0.5
PNHZ	**Pukenui**	**2.32**	**185**	P	Pn	19 46 28.5	-1.0
WCZ	**Waipu Caves**	**2.37**	**314**	P	Pn	19 46 30.3	+0.3
WAZ	**Wanganui**	**2.44**	**208**	P	Pn	19 46 30.3	-0.6
PXZ	**Pawanui**	**2.45**	**173**	P	Pn	19 46 28.9	-2.0
LREZ	**Lake Rotokare**	**2.46**	**220**	P	Pn	19 46 31.8	+0.8
WPHZ	**Waipukurau**	**2.46**	**180**	P	Pn	19 46 30.0	-1.0
TSZ	**Takapari Road**	**2.49**	**189**	P	Pn	19 46 30.3	-1.1
NEZ	**North Egmont**	**2.49**	**227**	P	Pn	19 46 32.8	+1.3
PKE	**Pukeiti**	**2.51**	**230**	P	Pn	19 46 32.8	+1.2
KHEZ	**Kahui Hut**	**2.56**	**228**	P	Pn	19 46 33.3	+1.1
NBEZ	**Newall Road No**	**2.63**	**230**	P	Pn	19 46 33.6	+0.6
PRHZ	**Porangahau**	**2.67**	**177**	P	Pn	19 46 32.2	-1.3
DVHZ	**Dannevirke**	**2.71**	**185**	P	Pn	19 46 32.2	-1.8
POWZ	**Post Office Ro**	**2.84**	**191**	P	Pn	19 46 33.9	-1.6
PRWZ	**Pori Road**	**2.98**	**187**	P	Pn	19 46 35.8	-1.4
BFZ	**Birch Farm**	**3.09**	**183**	P	Pn	19 46 36.6	-1.9
MRZ	**Mangatainoka R**	**3.13**	**192**	P	Pn	19 46 36.9	-2.2
TIWZ	**Tintock**	**3.21**	**188**	P	Pn	19 46 38.1	-1.9
OUZ	**Omahuta**	**3.31**	**315**	P	Pn	19 46 41.3	0.0
CPWZ	**Castlepoint**	**3.31**	**183**	P	Pn	19 46 40.0	-1.3
OGWZ	**Otaki Gorge**	**3.37**	**197**	P	Pn	19 46 39.6	-2.3
HOWZ	**Holdsworth Sta**	**3.38**	**192**	P	Pn	19 46 39.4	-2.7
KIW	**Kapiti Island**	**3.47**	**200**	P	Pn	19 46 40.5	-2.8
TMWZ	**Te Maipa**	**3.53**	**187**	P	Pn	19 46 41.7	-2.4
MTW	**Mount Morrison**	**3.63**	**191**	P	Pn	19 46 42.1	-3.1
CAW	**Cannon Point**	**3.67**	**197**	P	Pn	19 46 42.9	-2.8
DUWZ	**D'Urville Isla**	**3.76**	**211**	P	Pn	19 46 44.0	-2.9
TRWZ	**Traveller**	**3.84**	**189**	P	Pn	19 46 45.0	-2.9
PAWZ	**Paruwai Farm**	**3.86**	**192**	P	Pn	19 46 45.0	-3.2
WEL	**Wellington**	**3.91**	**199**	P	Pn	19 46 46.0	-2.7
MSWZ	**Moikau Station**	**3.93**	**193**	P	Pn	19 46 45.7	-3.3
TCW	**Tory Channel**	**3.98**	**204**	P	Pn	19 46 46.7	-3.0
BHW	**Baring Head**	**4.00**	**197**	P	Pn	19 46 46.6	-3.3
PLWZ	**Palliser**	**4.08**	**193**	P	Pn	19 46 47.3	-3.6
NNZ	**Nelson**	**4.33**	**212**	P	Pn	19 46 50.6	-3.5
BSWZ	**Blackbirch Sta**	**4.57**	**205**	P	Pn	19 46 53.9	-3.3
THZ	**Tophouse**	**4.98**	**212**	P	Pn	19 46 58.7	-3.9
KHZ	**Kahutara**	**5.31**	**204**	P	Pn	19 47 03.0	-3.8
DSZ	**Dennistone Nort**	**5.48**	**219**	P	Pn	19 47 05.1	-3.9
GVZ	**Greta Valley S**	**5.97**	**205**	P	Pn	19 47 10.9	-4.5
LTZ	**Lake Taylor**	**6.09**	**210**	P	Pn	19 47 12.3	-4.8
OKCZ	**Okains Bay**	**6.64**	**202**	P	Pn	19 47 19.5	-4.8
MQZ	**McQueen's Vall**	**6.75**	**204**	P	Pn	19 47 19.7	-6.0

TAP 07 19:49:01.3,24.30N×121.84E,h12km,ML1.3,D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.15**	**351**	*i* P	Pg	19 49 04.8	0.0
	baz=348						
ENAH				*i* S	Sg	19 49 07.6	+0.3
	baz=348						
NACB	**Ninganchiao**	**0.25**	**240**	P	Pg	19 49 06.7	0.0
	baz=235						
NACB				S	Sg	19 49 10.4	+0.2
	baz=235						
TWC	**Suao**	**0.30**	**2**	*e*P	Pg	19 49 08.0	+0.4
	baz=4.0						
TWC				*e*S	Sb	19 49 13.7	0.0
	baz=4.0						
TWD	**Chiawan**	**0.31**	**225**	*e*P	Pg	19 49 07.8	+0.1
	baz=228						
TWD				S	Sg	19 49 12.4	+0.5
	baz=228						
ETLH	**Xiulin Townshi**	**0.34**	**254**	P	Pg	19 49 08.2	0.0
	baz=254						
ETLH				S	Sg	19 49 13.3	+0.6
	baz=254						
HWA	**Hwalien**	**0.39**	**213**	*e*P	Pb	19 49 10.6	+0.5
	baz=223						
HWA				*e*S	Sb	19 49 17.0	+1.0
	baz=223						
ENTT	**Nioudou**	**0.42**	**324**	*i* P	Pg	19 49 09.9	+0.4
	baz=324						
ENTT				*i* S	Sb	19 49 16.1	-0.8
	baz=324						
NDT	**Datong Townshi**	**0.42**	**316**	*e*P	Pg	19 49 09.9	+0.2
	baz=315						
NDT				*e*S	Sg	19 49 15.9	+0.7
	baz=315						
NNSB	**Datong**	**0.43**	**287**	P	Pg	19 49 10.2	+0.4
	baz=287						
NNSB				S	Sg	19 49 16.1	+0.5
	baz=287						
NNSH	**Datong**	**0.43**	**287**	*e*P	Pg	19 49 10.3	+0.5
	baz=287						
NNSH

YRD				Sn		**Sn**	**19 56 46.2**	**-0.8**
KDMR	**Kurdemir**	**2.96**	**289**	Pn		**Pn**	**19 56 17.2**	**+2.4**
KDMR				Sn		**Sn**	**19 56 49.1**	**-0.1**
IML	**Ismayilli** SNR=7.4	**3.10**	**296**	Pn		**Pn**	**19 56 18.8**	**+2.0**
IML				Sn		**Sn**	**19 56 53.6**	**+0.7**
QUBA	**Quba, Azerbaij**	**3.18**	**307**	Pn		**Pn**	**19 56 20.3**	**+2.4**
QUBA				Sn		**Sn**	**19 56 54.6**	**-0.2**
ZRD	**Zardab** SNR=11	**3.30**	**286**	Pn		**Pn**	**19 56 21.9**	**+2.4**
ZRD				Sn		**Sn**	**19 56 58.8**	**+1.0**
XNQ	**Khinaliq** SNR=17	**3.30**	**302**	Pn		**Pn**	**19 56 22.0**	**+2.2**
XNQ				Sn		**Sn**	**19 56 56.7**	**-1.4**
BLQ	**Beylaqan** SNR=6.3	**3.32**	**276**	Pn		**Pn**	**19 56 21.2**	**+1.4**
BLQ				Sn		**Sn**	**19 56 57.8**	**-0.5**
QBL	**Gabala**	**3.40**	**297**	Pn		**Pn**	**19 56 22.7**	**+1.7**
QBL				Sn		**Sn**	**19 56 59.0**	**-1.4**
QSAR	**Qusar** SNR=17	**3.41**	**308**	Pn		**Pn**	**19 56 23.7**	**+2.6**
QSAR				Sn		**Sn**	**19 57 00.5**	**0.0**
QRD	**Qoradiz**	**3.50**	**271**	Pn		**Pn**	**19 56 24.3**	**+2.0**
QRD				Sn		**Sn**	**19 57 03.9**	**+1.2**
BRDA	**Brd**	**3.68**	**284**	Pn		**Pn**	**19 56 27.4**	**+2.7**
BRDA				Sn		**Sn**	**19 57 08.6**	**+1.6**
AGDM	**Agdam** SNR=3.9	**3.70**	**281**	Pn		**Pn**	**19 56 26.8**	**+1.7**
AGDM				Sn		**Sn**	**19 57 08.4**	**+0.6**
MNGR	**Mingechevir, A**	**3.87**	**291**	Sn		**Sn**	**19 57 10.1**	**-1.7**
SEKA	**Sheki** SNR=2.9	**3.95**	**298**	Pn		**Pn**	**19 56 30.8**	**+2.2**
SEKA				Sn		**Sn**	**19 57 14.3**	**+0.3**
GANJ	**Ganja** SNR=5.9	**4.40**	**287**	Pn		**Pn**	**19 56 35.4**	**+0.8**
GANJ				Sn		**Sn**	**19 57 21.1**	**-3.8**
ZKTA	**Zakatala**	**4.53**	**300**	Pn		**Pn**	**19 56 39.2**	**+2.8**
ZKTA				Sn		**Sn**	**19 57 28.4**	**+0.3**
ORD	**Ordubad** SNR=5.5	**4.58**	**265**	Pn		**Pn**	**19 56 39.2**	**+2.1**
ORD				Sn		**Sn**	**19 57 28.4**	**-1.0**
GDB	**GEDABAY** SNR=9.0	**4.83**	**287**	Pn		**Pn**	**19 56 41.7**	**+0.9**
GDB				Sn		**Sn**	**19 57 32.1**	**-3.7**
SBZ	**Shahbuz** SNR=3.8	**4.87**	**271**	Pn		**Pn**	**19 56 43.4**	**+2.1**
SBZ				Sn		**Sn**	**19 57 36.5**	**-0.2**
NAX	**Nakhchivan**	**4.93**	**269**	Sn		**Sn**	**19 57 38.3**	**+0.2**
QZX	**Qazax, Azerbai** SNR=14	**5.20**	**290**	Pn		**Pn**	**19 56 47.0**	**+1.3**
QZX				Sn		**Sn**	**19 57 41.2**	**-3.4**
AB31	**Akbulak array** 0.9nm,0.8s,baz=208,slow=13,SNR=7.1	**11.37**	**28**	P		**Pn**	**19 58 10.7**	**+0.6**
AB31	0.9nm,0.7s,baz=216,slow=22,SNR=4.1			⇓S		**Sn**	**20 00 14.3**	**-1.7**
AKTO	**Aktyubinsk** 6.6nm,1.4s	**11.80**	**20**	⇑P		**Pn**	**19 58 17.4**	**+1.4**
AKTO	3.5nm,1.0s			⇓S		**Sn**	**20 00 21.6**	**-5.0**

*TUL **07** 20:08:51.4±1.4,36°.61N±0°.01×97°.82W±0°.01,h6km±7km, ML3.2,Error ellipse: s-maj=1.8km s-min=1.2km az=202.0*
*ANF **07** 20:08:51.8±0.5,36°.64N×97°.83W,h7km±3km,ML3.6/9, Error ellipse: s-maj=1.8km s-min=1.6km az=109.0*
*NEIC **07** 20:08:51.4±1.1,36°.60N±0°.01×97°.81W±0°.02,h4km±6km, Error ellipse: s-maj=2.0km s-min=1.6km az=83.0*
ISC 07 20:08:51.7±0.9,36°.60N±0°.02×97°.83W±0°.02,h10km±8km, n43,σ0s82/58,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.15**	**233**	Pg	**Pg**	**20 08 55.2**	**+0.1**
CROK				Sg	**Sg**	**20 08 57.8**	**+0.4**
GC02	**Grant County #**	**0.26**	**355**	Pg	**Pg**	**20 08 56.6**	**-0.4**
GC02				Sg	**Sg**	**20 09 00.6**	**+0.1**
KAN14	**Manchester OK**	**0.38**	**344**	Pg	**Pg**	**20 08 58.9**	**-0.3**
KAN14				Sg	**Sg**	**20 09 04.3**	**+0.2**
KAN13	**South Haven SW**	**0.51**	**34**	Pg	**Pg**	**20 09 01.1**	**-0.5**
KAN13				Sg	**Sg**	**20 09 07.9**	**-0.4**
KAN05	**Bluff City Nor**	**0.51**	**357**	Pg	**Pg**	**20 09 01.4**	**-0.4**
KAN05				Sg	**Sg**	**20 09 08.5**	**0.0**
KAN09	**Caldwell North**	**0.57**	**18**		**Pg**	**20 09 02.2**	**-0.5**
KAN10	**Anthony SW Sta**	**0.57**	**338**	Pg	**Pg**	**20 09 02.4**	**-0.3**
KAN10				Sg	**Sg**	**20 09 10.3**	**+0.1**
KAN08	**Anthony NE Sta**	**0.64**	**350**	Pg	**Pg**	**20 09 03.7**	**-0.4**
KAN12	**Harper NE Stat**	**0.71**	**349**		**Pg**	**20 09 05.1**	**-0.5**
OK029	**Liberty Lake**	**0.85**	**159**		**Pg**	**20 09 07.5**	**-0.7**
OK029				Sg	**Sg**	**20 09 19.3**	**0.0**
BCOK	**Bluff Creek, N**	**0.95**	**169**		**Pg**	**20 09 09.2**	**-0.8**
U32A	**Winter Ranch,**	**0.97**	**257**		**Pg**	**20 09 09.7**	**-0.6**
U32A				Sg	**Sg**	**20 09 23.1**	**+0.3**
OK031	**S. Brethren Rd**	**1.03**	**128**		**Pg**	**20 09 10.6**	**-0.9**
OK031				Sg	**Sg**	**20 09 24.4**	**-0.4**
OK030	**Cody Creek RV**	**1.08**	**128**		**Pg**	**20 09 11.5**	**-1.0**
OK030				Sg	**Sg**	**20 09 26.0**	**-0.5**
OK025	**Westminster Rd**	**1.09**	**158**		**Pg**	**20 09 11.9**	**-0.7**
T35A	**Sooner Cattle**	**1.11**	**73**	Pg	**Pg**	**20 09 11.9**	**-1.1**
T35A				Sg	**Sg**	**20 09 26.4**	**-1.0**
OKCFA	**Oklahoma City**	**1.22**	**165**		**Pg**	**20 09 14.3**	**-0.8**
OKCFA				Sg	**Sb**	**20 09 31.4**	**+0.7**
OKCSW	**OKLAHOMA CITY**	**1.23**	**165**		**Pg**	**20 09 14.5**	**-0.8**
FNO	**Franklin**	**1.38**	**165**		**Pn**	**20 09 17.1**	**0.0**
W35A	**Tecumseh**	**1.64**	**151**	Pn	**Pn**	**20 09 21.0**	**+0.3**
TUL1	**Leonard** baz=294	**1.79**	**112**	P	**Pn**	**20 09 23.2**	**+0.6**
TUL1	baz=294			S	**Sb**	**20 09 47.3**	**+0.2**
TUL1	**Leonard**	**1.79**	**112**	Pn	**Pn**	**20 09 22.8**	**+0.1**
R32A	**Long Quarter,**	**1.95**	**339**		**Pb**	**20 09 26.4**	**-1.1**
X34A	**Smith Ranch, M**	**1.99**	**180**		**Pb**	**20 09 27.3**	**-0.8**
WMOK	**Wichita Mounta** baz=22	**2.01**	**203**	P	**Pn**	**20 09 26.7**	**+0.9**
WMOK	baz=22			S	**Sb**	**20 09 53.6**	**+0.2**
WMOK	**Wichita Mounta**	**2.01**	**203**		**Pn**	**20 09 26.6**	**+0.9**
CBKS	**Cedar Bluff** baz=145	**2.68**	**326**	Sb	**Sb**	**20 10 14.3**	**+1.4**
KSU1	**Kansas State U** baz=201	**2.68**	**21**	Pb	**Pb**	**20 09 39.5**	**-0.4**
KSU1	baz=201			S	**Sn**	**20 10 08.3**	**+0.7**
KSU1	**Kansas State U**	**2.68**	**21**		**Pn**	**20 09 33.8**	**-1.2**
U38A	**Gravette**	**2.78**	**92**		**Pn**	**20 09 37.0**	**+0.6**
X37A	**Clayton**	**2.83**	**134**		**Pn**	**20 09 37.9**	**+0.8**
HHAR	**Hobbs**	**3.15**	**95**		**Pn**	**20 09 42.3**	**+0.7**
AMTX	**Amarillo** baz=60	**3.56**	**243**	Sb	**Sg**	**20 10 43.0**	**-3.2**
W39A	**Magazine** baz=294	**3.57**	**112**	Pb	**Pb**	**20 09 56.1**	**+1.1**
S39A	**Bolivar**	**3.77**	**72**		**Pn**	**20 09 50.7**	**+0.8**
MIAR	**Mount Ida** baz=302	**4.03**	**119**	Pb	**Pb**	**20 10 03.3**	**+0.6**
MIAR	**Mount Ida**	**4.03**	**119**		**Pn**	**20 09 54.6**	**+1.1**
Z38A	**Mt. Pleasant**	**4.07**	**144**		**Pn**	**20 09 54.5**	**+0.4**
ABTX	**Abilene, Hawle**	**4.23**	**201**		**Pn**	**20 09 57.2**	**+0.8**
MGMO	**Mountain Grove**	**4.50**	**81**		**Pn**	**20 10 00.8**	**+0.8**
X40A	**Basin Creek Fa** baz=299	**4.59**	**116**	Pb	**Pb**	**20 10 12.8**	**+0.5**
WHTX	**Lake Whitney,** baz=356	**4.60**	**176**	P	**Pn**	**20 10 02.4**	**+0.9**
FVM	**French Village**	**6.07**	**75**	Pn	**Pn**	**20 10 21.2**	**-0.3**

*IDC **07** 20:24:59.4±2.2,7°.57N×93°.99E,h0km,mb3.5/5,mb1 3.6/6, mb1mx3.3/55,mbtmp3.5/6,ML3.8/1,Error ellipse: s-maj=82.4km s-min=23.9km az=61.0*
*NEIC **07** 20:24:59.6±0.7,7°.6N±0°.1×94°.4E±0°.1,h9km±7km,mb4.2/3, Error ellipse: s-maj=26.0km s-min=14.7km az=45.0*
ISC 07 20:25:00.5±1.1,7°.5N±0°.1×94°.4E±0°.1,h10km,n16, σ1s78/17,mb3.9/7,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.58**	**109**	Pn	**Pn**	**20 26 37.3**	**-0.1**
KULM				Sn	**Sn**	**20 27 51.0**	**-1.6**
GSI	**Gunungsitoli**	**6.91**	**153**	Pn	**Pn**	**20 26 41.9**	**0.0**
IPM	**Ipoh**	**7.23**	**114**	Pn	**Pn**	**20 26 45.5**	**-0.9**
IPM				Sn	**Sn**	**20 28 07.4**	**-1.3**
CMAR	**Chiang Mai Arr** 0.2nm,0.3s,baz=213,slow=14,SNR=5.6	**11.76**	**22**	Pn	**Pn**	**20 27 50.5**	**+2.1**
MKAR	**Makanchi Array**	**40.52**	**347**	P	**P**	**20 32 38.5**	**-1.2**
	0.4nm,0.6s,baz=169,slow=7.7,SNR=2.7						
MKAR	**Makanchi Array**	**40.52**	**347**	P	**P**	**20 32 38.0**	**-1.7**
KURBB	**Kurchatov Arra** 0.6nm,0.4s,baz=165,slow=7.7,SNR=4.9	**44.98**	**346**	P	**P**	**20 33 15.2**	**-0.7**
KURK	**Kurchatov**	**45.04**	**346**	P	**P**	**20 33 15.2**	**-1.2**
KURK	**Kurchatov** comp=Z,2.3nm,0.9s	**45.04**	**346**	IAmb	IAmb	20 33 51.2	
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=176,slow=8.1,SNR=1.9	**46.97**	**352**	P	**P**	**20 33 30.3**	**-1.2**
WRA	**Warramunga Arr** comp=Z,0.5nm,1.0s,baz=306,slow=8.5,SNR=2.6	**47.83**	**125**	P	**P**	**20 33 41.6**	**+2.9**
WRA	**Warramunga Arr**	**47.83**	**125**	P	**P**	**20 33 40.3**	**+1.6**
ASAR	**Alice Springs** comp=Z,0.2nm,0.8s,baz=316,slow=7.8,SNR=1.7	**49.47**	**130**	P	**P**	**20 33 55.1**	**+3.7**
ASAR	**Alice Springs**	**49.47**	**130**	P	**P**	**20 33 50.6**	**-0.8**
ABKAR	**Akbulak array**	**50.69**	**331**	P	**P**	**20 33 59.1**	**-1.0**
ABKAR	comp=Z,2.8nm,0.6s			IAmb	IAmb	20 34 08.8	
ABKAR	**Akbulak array**	**50.69**	**331**	P	**P**	**20 33 59.2**	**-1.0**

*IDC **07** 20:28:03.8±3.6,36°.95N×71°.69E,h80km±34km,mb3.5/7, mb1 3.6/11,mb1mx3.2/54,mbtmp3.8/11,Error ellipse: s-maj=27.6km s-min=20.5km az=14.0*
*NNC **07** 20:28:07.4±3.9,37°.63N×71°.52E,h0km,mb4.1,mpv4.0, Error ellipse: s-maj=30.2km s-min=20.7km az=176.0*
ISC 07 20:28:04.2±0.6,37°.25N±0°.06×72°.16E±0°.09,h100km,n30, σ2s82/35,mb3.7/7,3C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.42**	**184**	P	**Pn**	**20 28 56.5**	**+0.8**
CEP				S	**Sn**	**20 29 35.0**	**-0.5**
THW	**Thamme Wali**	**4.45**	**185**	P	**Pn**	**20 29 09.4**	**-0.2**
JMU	**Jammu**	**5.04**	**153**	*e*P	**Pn**	**20 29 19.1**	**+1.6**
JMU				*e*Pg		20 30 01.0	
JMU				*e*SG	Sn	20 30 52.5	+38
THN	**Thein Dam**	**5.62**	**148**	*e*PG	**Pn**	**20 29 27.5**	**+2.2**
THN				*e*SG	**Sn**	**20 30 27.5**	**-1.0**
KK31	**Karatay Array** 16nm,0.3s,baz=172,slow=12,SNR=240	**5.99**	**348**	⇑P	**Pn**	**20 29 32.5**	**+2.3**
KK31	16nm,0.5s,baz=171,slow=22,SNR=11			⇓S	**Sn**	**20 30 36.9**	**-0.5**
DHRM	**DHARAMSHALA**	**6.04**	**144**	*e*PG	**Pn**	**20 29 31.9**	**+0.7**
DHRM				*e*SG	**Sn**	**20 30 36.0**	**-3.0**
DHRM	comp=E,226nm,0.1s			IAML		20 30 39.7	
DHRM	comp=N,167nm,0.1s			IAML		20 30 40.4	
TKM2	**Tokmak 2** comp=N,2.7nm,0.6s	**6.25**	**24**	⇓P	Pn	20 29 39.1	+5.1
TKM2	comp=N,5.0nm,0.5s			⇓S	Sn	20 30 50.9	+6.8
GEYT	**Alibeck** comp=N,1.2nm,0.3s,baz=98,slow=13,SNR=11	**11.17**	**278**	P	Pn	20 30 35.9	-4.8
GEYT	comp=N,3.3nm,0.3s,baz=111,slow=16,SNR=7.3			S	Sn	20 32 29.3	-14
MKAR	**Makanchi Array** comp=N,0.0nm,0.3s,baz=213,slow=11,SNR=2.0	**12.14**	**35**	P	**P**	**20 30 58.6**	**-3.5**
PYUN	**Piuthan** comp=N,75nm,0.5s	**12.89**	**132**	*e*P	**Pn**	**20 31 01.2**	**-2.6**
DANN	**Dangsing** comp=N,24nm,0.4s	**13.17**	**129**	*e*P	**Pn**	**20 31 05.5**	**-2.1**
KOLN	**Koldanda** comp=N,18nm,0.5s	**13.49**	**131**	*e*P	**Pn**	**20 31 09.3**	**-2.4**
GKN	**Gorkha** comp=N,17nm,0.3s	**13.97**	**128**	*e*P	**Pn**	**20 31 15.3**	**-2.5**
KKN	**Kakani** comp=N,19nm,0.5s	**14.52**	**127**	*e*P	**Pn**	**20 31 22.1**	**-3.0**
DMN	**Daman** comp=N,5.6nm,0.3s	**14.54**	**128**	*e*P	**Pn**	**20 31 22.7**	**-2.6**
PKIN	**Phulchoki** comp=N,15nm,0.4s	**14.74**	**127**	*e*P	**Pn**	**20 31 25.4**	**-2.5**
PKI	**Pulchoki** comp=N,5.5nm,0.2s	**14.76**	**127**	*e*P	**Pn**	**20 31 24.9**	**-3.2**
GUN	**Gumba** comp=N,11nm,0.4s	**14.83**	**125**	*e*P	**Pn**	**20 31 26.6**	**-2.5**
AB31	**Akbulak array** comp=N,0.5nm,0.3s,baz=137,slow=13,SNR=34	**14.92**	**327**	P	**Pn**	**20 31 29.7**	**0.0**
AB31	comp=N,2.7nm,0.7s,baz=49,slow=68,SNR=4.6			⇓S	**Sn**	**20 34 09.6**	**-4.6**
RAMN	**Ramite** comp=N,6.7nm,0.3s	**15.95**	**126**	*e*P	**Pn**	**20 31 40.5**	**-2.6**
AKTO	**Aktyubinsk** comp=N,1.2nm,0.3s,baz=138,slow=11,SNR=15	**16.63**	**327**	P	**P**	**20 31 52.8**	**+1.0**
AKTO	comp=N,0.2nm,0.3s,baz=131,slow=20,SNR=2.1			S	**Sn**	**20 34 48.0**	**-7.5**
AKTO	**Aktyubinsk** comp=N,1.3nm,0.3s	**16.63**	**327**	⇑P	**P**	**20 31 53.5**	**+1.7**
AKTO	comp=N,2.9nm,0.8s			⇑S	**Sn**	**20 34 50.7**	**-4.7**
ZALV	**Zalesovo Beam** comp=N,0.3nm,0.3s,baz=216,slow=11,SNR=6.0	**18.86**	**24**	P	**Pn**	**20 32 22.7**	**+4.9**
CMAR	**Chiang Mai Arr** comp=N,0.4nm,0.7s,baz=308,slow=7.9,SNR=5.4	**30.02**	**121**	P	**P**	**20 34 06.9**	**+3.3**
BRTR	**Keskin Array B** comp=N,0.8nm,0.7s,baz=71,slow=11,SNR=2.9	**30.10**	**287**	P	**P**	**20 34 04.4**	**+0.1**
FINES	**FINESS Array B** comp=N,1.6nm,0.7s,baz=116,slow=9.9,SNR=6.3	**37.40**	**325**	P	**P**	**20 35 08.6**	**+1.6**
ARCES	**ARCESS Array B** comp=N,0.6nm,0.4s,baz=108,slow=7.8,SNR=6.3	**40.82**	**337**	P	**P**	**20 35 37.8**	**+2.3**
NOA	**NORSAR Array B** comp=N,0.7nm,0.8s,baz=111,slow=7.6,SNR=1.8	**44.35**	**323**	P	**P**	**20 36 05.1**	**+0.9**
ESDC	**Sonseca Array** comp=N,0.8nm,1.0s,baz=57,slow=7.4,SNR=4.8	**57.93**	**298**	P	**P**	**20 37 46.6**	**+0.6**
TORD	**Torodi Ar. Bea** comp=N,0.9nm,0.8s,baz=52,slow=6.0,SNR=7.6	**66.67**	**269**	P	**P**	**20 38 43.4**	**-1.2**

IDC 07 20:40:34.8±2.2,6°.50S×128°.68E,h0km,mb3.3/1, mb1 3.4/3,mb1mx3.2/22,mbtmp3.2/3,ML3.3/2,Error ellipse: s-maj=113.5km s-min=32.8km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=337,slow=13,SNR=16	**14.45**	**158**	Pn	Pn	20 44 00.6	-0.2
WRA	0.1nm,0.3s,baz=332,slow=22,SNR=2.8			Sn	Sn	20 46 27.9	-14
ASAR	**Alice Springs** 0.1nm,0.3s,baz=346,slow=9.6,SNR=9.5	**17.79**	**164**	P	Pn	20 44 44.2	+0.1
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=120,slow=6.3,SNR=2.4	**67.10**	**327**	P	P	20 51 30.2	0.0

*JMA **07** 20:53:41.3±0.1,36°.45N×141°.10E,h44km±2km,M3.7*
JMA Felt I J1.
*NIED **07** 20:53:41.4,36°.45N×141°.10E,h44km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-0.04; Mθθ-0.05; Mϕϕ0.09; Mrθ2.65; Mθϕ-0.91; Mϕr5.57; Fault plane solution: M₀6.20000×10¹⁴ NP1:ϕs25.00000°, δ89.00000°,λ84.00000°. NP2:ϕs282.00000°,δ6.00000°, λ168.00000°.*
*IDC **07** 20:53:42.9±1.8,36°.42N×141°.12E,h48km±17km,mb3.4/7, mb1 3.6/10,mb1mx3.4/72,mbtmp3.7/10,ML3.4/3,MS3.0/4, Ms1 3.0/4,ms1mx2.7/33 Error ellipse: s-maj=17.3km s-min=10.6km az=80.0*
ISC 07 20:53:40.9±1.6,36°.43N±0°.04×141°.19E±0°.07,h29km±11km, n36,σ1s18/31,mb3.8/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.50**	**260**	P	**Pn**	**20 53 51.3**	**-0.7**
JHYU				S	**Sn**	**20 53 58.4**	**-1.3**
JHO	**Hitachi**	**0.53**	**290**	P	**Pb**	**20 53 51.5**	**-0.3**
JHO				S	**Sb**	**20 53 58.6**	**-0.6**
JIHU	**Itakohorinouch**	**0.71**	**229**	P	**Pb**	**20 53 55.1**	**+0.4**
ONAJ	**Iwakimizuishiy**	**0.74**	**335**	P	**Pn**	**20 53 54.5**	**-1.0**
JYT	**Yasato**	**0.83**	**256**	P	**Pn**	**20 53 55.6**	**-1.0**
JFK	**Kawauchi**	**0.97**	**345**	P	**Pn**	**20 53 57.6**	**-1.0**
JSMT	**Sammumatsuo**	**0.99**	**218**	P	**Pb**	**20 53 58.7**	**-0.7**
JFT	**Otama**	**1.28**	**328**	P	**Pn**	**20 54 03.3**	**+0.4**
JAG	**Ashikaga**	**1.40**	**270**	P	**Pn**	**20 54 03.9**	**-0.6**
JMM	**Marumori**	**1.47**	**348**	P	**Pn**	**20 54 05.0**	**-0.4**
JMM				*e*S	**Sn**	**20 54 22.5**	**-1.1**
JFY	**Yanaizu**	**1.54**	**310**	P	**Pn**	**20 54 06.6**	**+0.2**
JKT	**Katashina**	**1.60**	**283**	P	**Pn**	**20 54 07.3**	**0.0**
MJAR	**Matsushiro Arr** 3.1nm,0.3s,baz=88,slow=9.1,SNR=140	**2.41**	**273**	P	**Pn**	**20 54 19.0**	**+0.6**
MJAR	3.0nm,0.3s,baz=82,slow=18,SNR=5.3			S	**Sn**	**20 54 46.6**	**-0.3**
MJAR				LR	LR	20 55 35.7	
	comp=Z,101nm,20.4s,baz=110,slow=49						
MAT	**Matsushiro**	**2.41**	**274**	P	**Pn**	**20 54 19.1**	**+0.7**
MAT				S	**Sn**	**20 54 48.6**	**+1.7**
JHJ	**Hachijo jima 2** 14nm,0.3s,baz=66,slow=20,SNR=8.2	**3.50**	**200**	P	**Pn**	**20 54 35.0**	**+1.6**
JHJ	44nm,0.3s,baz=70,slow=21,SNR=5.7			S	**Sn**	**20 55 14.4**	**+0.5**
ASAJ	**Asahikawa** 0.9nm,0.3s,baz=220,slow=13,SNR=4.8	**7.75**	**8**	P	**Pn**	**20 55 33.3**	**+1.6**
ASAJ	0.2nm,0.3s,baz=6.0,slow=19,SNR=1.4			S	**Sn**	**20 56 59.6**	**+1.2**
USRK	**Ussuriysk Ar.** baz=132,slow=14,SNR=7.9	**10.46**	**321**	P	**Pn**	**20 56 12.9**	**+4.0**
KSRS	**Korea Array** 0.2nm,0.3s,baz=93,slow=14,SNR=6.1	**10.67**	**279**	P	Pn	20 56 16.2	+4.5
KSRS	comp=Z,68nm,19.0s,baz=102,slow=36			LR	LR	21 00 08.0	
KLR	**Kul'dur** comp=Z,30nm,20.4s,baz=158,slow=34	**14.53**	**335**	LR	LR	21 02 03.9	
SONM	**Songino Array** 1.3nm,0.7s,baz=109,slow=9.2,SNR=4.6	**27.98**	**305**	P	**P**	**20 59 28.3**	**-0.8**
H11N2	**WAKE ISLAND Hy** baz=312,slow=75,SNR=12	**28.00**	**120**	T	T	21 28 46.2	
H11N1	**WAKE ISLAND Hy** baz=312,slow=75,SNR=13	**28.01**	**120**	T	T	21 28 56.2	
H11N3	**WAKE ISLAND Hy** baz=312,slow=75,SNR=12	**28.02**	**120**	T	T	21 28 54.8	
H11S1	**WAKE ISLAND Hy** baz=314,slow=76,SNR=69	**28.69**	**122**	T	T	21 29 42.0	
H11S3	**WAKE ISLAND Hy** baz=314,slow=76,SNR=46	**28.69**	**122**	T	T	21 29 42.0	
H11S2	**WAKE ISLAND Hy** baz=314,slow=76,SNR=40	**28.70**	**122**	T	T	21 29 43.2	
ZALV	**Zalesovo Beam** 1.0nm,0.5s,baz=98,slow=7.5,SNR=6.7	**42.19**	**313**	P	**P**	**21 01 30.5**	**-0.3**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=81,slow=8.5,SNR=4.0	**44.29**	**303**	P	**P**	**21 01 47.0**	**-0.9**
ILAR	**Eielson Array** 0.4nm,0.7s,baz=261,slow=6.0,SNR=2.6	**50.10**	**32**	P	**P**	**21 02 33.4**	**+0.5**
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=5.8,slow=7.4,SNR=13	**56.44**	**188**	P	**P**	**21 03 19.3**	**-0.7**
ARU	**Arti** 0.6nm,0.4s,baz=125,slow=12,SNR=4.4	**56.70**	**319**	P	**P**	**21 03 20.9**	**-0.6**
ASAR	**Alice Springs** 0.5nm,0.8s,baz=13,slow=5.0,SNR=5.4	**60.17**	**188**	P	**P**	**21 03 45.6**	**-0.4**
FINES	**FINESS Array B** comp=Z,80nm,18.6s,baz=212,slow=37	**69.26**	**332**	LR	LR	21 36 15.5	
H03N2	**Juan Fernandez** baz=291,slow=76,SNR=2.5	**147.13**	**97**	T	T	23 57 59.1	
H03N3	**Juan Fernandez** baz=291,slow=76,SNR=3.2	**147.14**	**97**	T	T	23 58 05.4	
H03N1	**Juan Fernandez** baz=291,slow=76,SNR=3.1	**147.15**	**97**	T	T	23 58 00.8	

DJA 07 21:00:26.3±0.3,5°S±3°×107°4E±°,h10km,M3.6/10, MLv3.6/10,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**0.20**	**153**	P	Pg	21 00 30.8	+0.3
MDSI	**Maura Dua**	**0.41**	**31**	P	Pg	21 00 34.4	0.0
MDSI				S	Sg	21 00 40.4	+0.6
KLSI		**0.77**	**79**	P	Pg	21 00 41.5	+0.3
KLSI				S	Sb	21 00 52.6	+0.2
KASI	**Kota Agung**	**0.86**	**142**	P	Pg	21 00 42.4	-0.5
LHSI	**Lahat**	**1.10**	**336**	P	Pb	21 00 46.9	-0.6
MNAI	**Manna**	**1.12**	**295**	P	Pb	21 00 46.4	-1.3
BLSI	**Bandar Lampung**	**1.37**	**112**	P	Pb	21 00 52.1	0.0
BLSI				S	Sg	21 01 10.5	-0.1
KSI	**Kapahiang**	**1.81**	**311**	P	Pb	21 00 58.9	-0.7
PMBI	**Palembang**	**2.06**	**23**	P	Pn	21 01 01.8	+0.8
DBJI	**Dramaga**	**3.25**	**122**	P	Sg	21 02 11.3	+0.6

GCMT 07 21:04:34.0±0.4,26°.52N±0°.06×44°.52W±0°.04,h18km±1km, MW4.8/78,Moment Tensor Solution. s14,c15; s78,c92; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.09±.17; Mθθ0.78±.13; Mϕϕ1.32±.10; Mrθ-0.05±.39; Mθϕ0.56±.06; Mϕr-0.19±.24; **Best double couple:** M₀1.88800×10¹⁶ **NP1:**ϕs213.00000°,δ42.00000°, λ-88.00000°. **NP2:**ϕs31.00000°,δ48.00000°,λ-92.00000°. **Principal axes:** T 1.6760, Plg3.0000°, Azm122.0000°; N 0.4320, Plg1.0000°, Azm32.0000°; P -2.1010, Plg87.0000°, Azm276.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Northern Mid-Atlantic Ridge**

ASRS 07 21:30:10.5±0.5,49°N±2°×9°5E±°,h5km,MLh3.4/11, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERNS	**Erzin**	**0.91**	**356**	Pg	Pn	21 30 32.1	+2.0
ERNS				Sg	Sn	21 30 47.1	+3.5
KNGR	**Kungurtug, Tuv**	**1.93**	**49**	Pg	Pb	21 30 46.7	+0.5
KNGR				Sg	Sg	21 31 14.2	+1.8
KZLR	**Kyzyl**	**2.41**	**348**	Sg	Sg	21 31 33.9	+6.1
ARDR	**Aradan**	**3.43**	**341**	Pg	Pg	21 31 16.9	+0.8
ARDR				Sg	Sg	21 32 04.1	+3.6
TEL	**Teeli**	**3.65**	**299**	Pg	Pg	21 31 18.5	-1.8
TEL				Sg	Sg	21 32 11.7	+4.2
BLRR	**Bol'shaya Rech**	**4.09**	**335**	Pg	Pg	21 31 28.2	-0.7
BLR

NEIC ***07*** *21:38:07.0±2.5, 28°.34N±0°.04×141°.6E±0°.1, h46km±8km, mb4.6/13, Error ellipse: s-maj=13.5km s-min=5.0km az=103.0*

IDC ***07*** *21:38:10.3±4.5, 28°.45N×141°.48E, h72km±41km, mb3.5/7, mb1 3.8/8, mb1mx3.3/57, mbtmp3.7/8, ML3.1/1, MS3.2/2, Ms1 3.2/2, ms1mx2.4/38, Error ellipse: s-maj=39.3km s-min=19.2km az=95.0*

ISC 07 21:38:06.2±0.6, 28°.38N±0°.06×141°.6E±0°.1, h35km, n49, σ1§56/47, mb4.3/13, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.38**	**158**	P		**Pn**	**21 38 30.0**	**+1.0**
CBIJ				S		**Sn**	**21 38 46.4**	**+0.4**
JCJ	**Chichijima**	**1.38**	**158**			**Pn**	**21 38 30.0**	**+1.1**
JHH2	**Haha-jima-NKT2**	**1.81**	**163**	P		**Pn**	**21 38 36.8**	**+1.9**
JHH2				eS		**Sn**	**21 38 59.7**	**+3.0**
JMKN	**Mikurajimanish**	**5.76**	**343**	P		**Pn**	**21 39 32.4**	**+3.2**
BSO1	**Boso 1**	**6.28**	**355**	P		**Pn**	**21 39 36.9**	**+1.1**
BSO3	**Boso 3**	**6.47**	**352**	P		**Pn**	**21 39 40.4**	**+1.7**
BSO4	**Boso 4**	**6.68**	**351**	P		**Pn**	**21 39 43.9**	**+2.2**
JOD2	**Odawara 2**	**7.19**	**343**	P		**Pn**	**21 39 51.7**	**+2.9**
JHU	**Hanno**	**7.71**	**346**	P		**Pn**	**21 39 58.2**	**+2.3**
JYT	**Yasato**	**7.92**	**352**	Pn		**Pn**	**21 39 58.6**	**-0.1**
JRY	**Ryogami san**	**7.95**	**344**	P		**Pn**	**21 40 02.3**	**+3.0**
JGF	**Kuroka**	**8.05**	**335**	Pn		**Pn**	**21 40 04.2**	**+3.5**
JAG	**Ashikaga**	**8.23**	**348**	P		**Pn**	**21 40 03.7**	**+0.7**
JHO	**Hitachi**	**8.26**	**354**	P		**Pn**	**21 40 03.1**	**-0.3**
JMN	**Monobe**	**8.50**	**311**	Pn		**Pn**	**21 40 07.7**	**+0.8**
MJAR	**Matsushiro Arr**	**8.63**	**341**	P		**Pn**	**21 40 11.4**	**+2.8**
MJAR	0.2nm,0.3s,baz=165,slow=12,SNR=9.8			S		**Sn**	**21 41 45.3**	**+0.6**
	0.1nm,0.3s,baz=179,slow=22,SNR=1.7							
MAJO	**Matsushiro**	**8.63**	**341**	Pn		**Pn**	**21 40 10.7**	**+2.1**
JSD	**Sado**	**10.03**	**345**	Pn		**Pn**	**21 40 27.5**	**-0.2**
JTM	**Tenmabayashi**	**12.39**	**358**	Pn		**Pn**	**21 40 59.2**	**-0.8**
GUMO	**Guam**	**15.03**	**168**	LR		LR	21 46 34.5	
	comp=Z,36nm,19.5s,baz=222,slow=33							
H11N2	**WAKE ISLAND Hy**	**24.61**	**105**	T		T	22 08 56.6	
	baz=296,slow=75,SNR=22							
H11N1	**WAKE ISLAND Hy**	**24.62**	**105**	T		T	22 08 57.4	
	baz=296,slow=75,SNR=15							
H11N3	**WAKE ISLAND Hy**	**24.63**	**105**	T		T	22 08 58.4	
	baz=296,slow=75,SNR=24							
FAKI	**Fak Fak**	**32.39**	**198**	P		**P**	**21 44 31.3**	**-1.4**
CHTO	**Chiang Mai**	**40.06**	**266**	P		**P**	**21 45 36.8**	**-1.6**
KULM	**Kulim**	**45.09**	**247**	P		**P**	**21 46 18.6**	**-0.6**
KULM				IAmb		IAmb	21 46 22.2	
	comp=Z,12nm,1.0s							
WB0	**Warramunga Arr**	**48.37**	**189**	P		**P**	**21 46 44.9**	**+0.2**
WB0				IAmb		IAmb	21 46 45.7	
	comp=Z,2.7nm,0.6s							
CISI	**Cisompet, Garu**	**48.37**	**228**	P		**P**	**21 46 43.2**	**-1.7**
WR0	**Warramunga Arr**	**48.54**	**189**	P		**P**	**21 46 45.2**	**-0.8**
WR0				IAmb		IAmb	21 46 52.8	
	comp=Z,3.1nm,0.8s							
WB2	**Warramunga Arr**	**48.55**	**189**	P		**P**	**21 46 46.0**	**-0.1**
WB2				IAmb		IAmb	21 46 47.5	
	comp=Z,6.9nm,1.1s							
WRA	**Warramunga Arr**	**48.55**	**189**	P		**P**	**21 46 46.7**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=11,slow=8.6,SNR=20							
WRA	**Warramunga Arr**	**48.55**	**189**	P		**P**	**21 46 44.6**	**-1.5**
KURBB	**Kurchatov Arra**	**51.78**	**314**	P		**P**	**21 47 08.7**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=102,slow=7.3,SNR=1.9							
ASAR	**Alice Springs**	**52.27**	**189**	P		**P**	**21 47 14.8**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=14,slow=8.8,SNR=1.8							
IMAR	**Indian Mountai**	**54.14**	**27**	P		**P**	**21 47 27.5**	**0.0**
GHO	**Glory Hole Cre**	**55.75**	**33**	P		**P**	**21 47 38.1**	**-1.2**
KNK	**Knik Glacier**	**55.95**	**33**	P		**P**	**21 47 38.5**	**-2.1**
TOLK	**Toolik Lake Re**	**56.18**	**24**	P		**P**	**21 47 42.1**	**-0.1**
MDM	**Murphy Dome**	**56.28**	**29**	P		**P**	**21 47 43.0**	**0.0**
WRH	**Wood River Hil**	**56.31**	**29**	P		**P**	**21 47 43.5**	**+0.4**
IL31		**56.84**	**29**	P		**P**	**21 47 46.3**	**-0.5**
ILAR	**Eielson Array**	**56.84**	**29**	P		**P**	**21 47 46.5**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=255,slow=6.3,SNR=6.0							
GLB	**Gilahina Butte**	**58.19**	**33**	P		**P**		
GLB				IAmb		IAmb	21 48 13.9	
	comp=Z,9.1nm,1.2s							
WHY	**Whitehorse**	**62.58**	**33**	P		**P**	**21 48 27.7**	**+1.1**
WHY				IAmb		IAmb	21 48 30.4	
	comp=Z,3.9nm,0.8s							
ABKAR	**Akbulak array**	**63.83**	**314**	P		**P**	**21 48 36.3**	**+1.3**
YBH	**Yreka Blue Hor**	**75.63**	**50**	LR		LR	22 16 34.2	
	comp=Z,32nm,19.7s,baz=160,slow=30							
FINES	**FINESS Array B**	**76.57**	**334**	P		**P**	**21 49 52.8**	**+0.2**
	comp=Z,3.6nm,1.0s,baz=69,slow=7.6,SNR=6.3							
NVAR	**Mina Array Bea**	**80.14**	**52**	P		**P**	**21 50 13.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=294,slow=6.7,SNR=2.5							
TXAR	**Lajitas Array**	**95.25**	**53**	P		**P**	**21 51 27.1**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=297,slow=2.6,SNR=4.2							

IDC ***07*** *21:40:41.6±4.6, 19°.03S×176°.79W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/38, mbtmp3.9/4, Error ellipse: s-maj=109.7km s-min=42.5km az=35.0*

NEIC ***07*** *21:41:23.2±1.8, 20°.1S±0°.1×178°.0W±0°.1, h312km±12km, mb4.0/21, Error ellipse: s-maj=20.4km s-min=14.0km az=197.0*

ISC 07 21:41:21.9±0.8, 20°.0S±0°.1×177°.97W±0°.09, h300km, n31, σ1§38/30, mb3.9/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.40**	**301**	Pn		**Pn**	**21 42 34.2**	**+1.5**
NIUE	**Niue**	**7.65**	**84**	Pn		**Pn**	**21 43 13.4**	**+2.2**
RAO	**Raoul Island**	**9.18**	**180**	Pn		**Pn**	**21 43 30.9**	**+1.0**
DZM	**Mont Dzumac**	**14.69**	**259**	P		**P**	**21 44 34.3**	**-1.5**
BFZ	**Birch Farm**	**21.17**	**192**	P		**P**	**21 45 43.3**	**-1.0**
NNZ	**Nelson**	**22.37**	**197**	P		**P**	**21 45 54.8**	**-0.4**
NNZ				IAmb		IAmb	21 45 58.3	
	comp=Z,19nm,1.2s							
THZ	**Tophouse**	**23.01**	**198**	P		**P**	**21 46 01.6**	**+0.5**
THZ				IAmb		IAmb	21 46 08.7	
	comp=Z,6.6nm,1.0s							
LTZ	**Lake Taylor**	**24.13**	**198**	P		**P**	**21 46 11.6**	**+0.4**
LTZ				IAmb		IAmb	21 46 15.0	
	comp=Z,3.1nm,0.8s							
MLZ	**Mavora Lakes**	**27.76**	**201**	P		**P**	**21 46 43.5**	**0.0**
MLZ				IAmb		IAmb	21 46 55.4	
	comp=Z,9.9nm,1.1s							
DCZ	**Deep Cove**	**28.19**	**202**	P		**P**	**21 46 47.7**	**+0.5**
DCZ				IAmb		IAmb	21 46 50.0	
	comp=Z,6.4nm,0.9s							
WHZ	**Wether Hill Ro**	**28.28**	**201**	P		**P**	**21 46 49.8**	**+1.7**
PYZ	**Puysegur Point**	**28.96**	**202**	P		**P**	**21 46 54.4**	**+0.3**
EIDS	**Eidsvold**	**29.00**	**254**	P		**P**	**21 46 54.7**	**-0.1**
EIDS				IAmb		IAmb	21 47 13.5	
	comp=Z,6.0nm,1.1s							
ARMA	**Armidale**	**29.30**	**243**	P		**P**	**21 46 58.6**	**+1.2**
ARMA				IAmb		IAmb	21 47 01.0	
	comp=Z,9.1nm,1.1s							
CTAO	**Charters Tower**	**33.56**	**264**	P		**P**	**21 47 36.3**	**+1.8**
CTAO				IAmb		IAmb	21 47 39.4	
	comp=Z,3.7nm,1.1s							
STKA	**Stephens Creek**	**38.02**	**244**	P		**P**	**21 48 13.7**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=101,slow=16,SNR=3.6							
STKA	**Stephens Creek**	**38.02**	**244**	P		**P**	**21 48 11.7**	**-0.3**
BBOO	**Buckleboo**	**42.78**	**243**	P		**P**	**21 48 50.5**	**-0.3**
BBOO				IAmb		IAmb	21 48 51.6	
	comp=Z,5.7nm,0.8s							
WR0	**Warramunga Arr**	**44.50**	**262**	P		**P**	**21 49 05.7**	**+1.1**
AS31	**Alice Springs**	**44.65**	**256**	P		**P**	**21 49 05.3**	**-0.5**
ASAR	**Alice Springs**	**44.65**	**256**	P		**P**	**21 49 06.9**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=91,slow=7.4,SNR=28							
ASAR	**Alice Springs**	**44.65**	**256**	P		**P**	**21 49 06.6**	**+0.8**
WB0	**Warramunga Arr**	**44.67**	**262**	P		**P**	**21 49 07.0**	**+1.1**
WB0				IAmb		IAmb	21 49 07.3	
	comp=Z,3.0nm,0.4s							
WB2	**Warramunga Arr**	**44.68**	**262**	P		**P**	**21 49 06.9**	**+0.9**
WRA	**Warramunga Arr**	**44.69**	**262**	P		**P**	**21 49 06.7**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=97,slow=7.6,SNR=42							
WRA	**Warramunga Arr**	**44.69**	**262**	IAmb		IAmb	21 49 07.4	
	comp=Z,0.2nm,0.4s							
VNDA	**Vanda**	**58.38**	**185**	P		**P**	**21 50 45.9**	**0.0**
	comp=Z,0.4nm,0.5s,baz=357,slow=6.4,SNR=7.6							
VNDA	**Vanda**	**58.38**	**185**	P		**P**	**21 50 45.8**	**0.0**
RPN	**Rapa Nui**	**62.64**	**111**	P		**P**	**21 51 13.0**	**-2.3**
GIRL	**Giralia**	**62.70**	**254**	P		**P**	**21 51 14.0**	**-1.9**
AKASG	**Malin Array Be**	**142.61**	**331**	PKP		**PKPdf**	**22 00 15.4**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=43,slow=4.0,SNR=7.1							

IDC 07 21:45:23.1±2.4, 8°.25S×112°.62E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.2/49, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=137.5km s-min=26.8km az=50.0, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**16.00**	**129**	Pn		Pn	21 49 10.9	+1.2
	0.1nm,0.3s,baz=307,slow=10,SNR=1.6							
FITZ				Sn		Sn	21 51 50.7	-17
	0.1nm,0.3s,baz=208,slow=21,SNR=1.4							
WRA	**Warramunga Arr**	**24.02**	**121**	P		P	21 50 39.8	-0.2
	0.9nm,0.6s,baz=296,slow=11,SNR=15							
ASAR	**Alice Springs**	**25.50**	**129**	P		P	21 50 53.2	-0.2
	0.2nm,0.3s,baz=304,slow=9.4,SNR=5.1							
STKA	**Stephens Creek**	**35.74**	**135**	P		P	21 52 23.9	0.0
	1.0nm,0.4s,baz=302,slow=9.5,SNR=5.8							
MKAR	**Makanchi Array**	**61.10**	**337**	P		P	21 55 39.1	0.0
	0.1nm,0.5s,baz=148,slow=6.6,SNR=1.6							

IDC 07 21:55:04.5±14.0, 53°.61N×159°.36E, h0km, Error ellipse: s-maj=102.1km s-min=21.5km az=64.0, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
I44RU	**PETROPAVLOVSK-**	**1.10**	**244**	*i*			22 00 30.0	
	baz=62,slow=343,SNR=5.1							
PETK	**Petropavlovsk-**	**1.11**	**244**	Pg		Pg	21 55 26.0	+0.2
	1.0nm,0.3s,baz=67,slow=19,SNR=15							
I53US	**FAIRBANKS INFR**	**28.35**	**46**	*i*			00 45 10.0	
	baz=276,slow=330,SNR=1.2							

NEIC ***07*** *21:58:56.9±2.2, 6°.79N±0°.09×73°.25W±0°.09, h147km±11km, mb4.7/8, Error ellipse: s-maj=16.2km s-min=8.9km az=135.0*

RSNC ***07*** *21:58:57.5±0.9, 6°.90N×73°.41W, h120km±3km, ML3.7, Mw3.9, Fault plane solution: NP1:φs75.00000°, δ15.00000°, λ-165.00000°.*

IDC ***07*** *21:58:57.3±0.8, 6°.73N×73°.11W, h142km±9km, mb3.9/3, mb1 3.9/6, mb1mx3.3/51, mbtmp4.3/6, Error ellipse: s-maj=40.7km s-min=7.2km az=133.0*

ISC 07 21:58:56.0±0.6, 6°.94N±0°.03×73°.40W±0°.03, h128km±5km, n65, σ1§47/111, mb4.5/7, 7C-5D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BRRC	**Barranca, Sant**	**0.35**	**299**	*i*	P	**Pn**	**21 59 14.4**	**+0.3**
BRRC					eS	**Sn**	**21 59 27.8**	**+0.1**
BRRC					*i*		21 59 29.4	
	comp=Z,2μm,0.2s							
BARC	**Barichara**	**0.41**	**147**	⇓	*i* P	**Pn**	**21 59 14.9**	**+0.3**
BARC					eS	**Sn**	**21 59 27.9**	**-0.8**
PAMC	**Pamplona, Colo**	**0.80**	**60**	⇓	*i* P	**Pn**	**21 59 18.2**	**+0.7**
PAMC					eS	**Sn**	**21 59 33.9**	**+0.2**
PAMC					*i*		21 59 37.7	
	comp=Z,624nm,0.4s							
RUSC	**La Rusia**	**1.09**	**163**	⇑	eP	**Pn**	**21 59 20.0**	**-0.1**
RUSC					eS	**Sn**	**21 59 38.1**	**-0.2**
RUSC					*i*		21 59 40.0	
	comp=Z,481nm,0.2s							
PTBC	**PUERTO BERRIO,**	**1.12**	**249**	⇑	*i* P	**Pn**	**21 59 19.1**	**-0.7**
PTBC					eS	**Sn**	**21 59 37.1**	**-0.9**
PTBC					*i*		21 59 39.5	
	comp=Z,2μm,0.5s							
OCAC	**Ocana**	**1.30**	**4**	⇓	*i* P	**Pn**	**21 59 22.4**	**+0.5**
OCAC					eS	**Sn**	**21 59 42.0**	**+0.5**
OCAC					*i*		21 59 44.5	
	comp=Z,2μm,0.2s							
SPBC	**San Pablo de B**	**1.44**	**208**		eP	**Pn**	**21 59 23.0**	**-0.4**
SPBC					eS	**Sn**	**21 59 43.5**	**-0.7**
SPBC					*i*		21 59 48.5	
	comp=Z,1μm,0.3s							
TAMC	**Tame, Arauca**	**1.68**	**107**	⇓	*i* P	**Pn**	**21 59 26.9**	**+0.9**
TAMC					eS	**Sn**	**21 59 49.8**	**+0.9**
TAMC					*i*		21 59 51.1	
	comp=Z,278nm,0.3s							
NORC	**Norcasia**	**2.00**	**227**	⇑	eP	**Pn**	**21 59 29.5**	**-0.4**
NORC					eS	**Sn**	**21 59 55.4**	**-0.4**
NORC					*i*		22 00 00.8	
	comp=Z,871nm,0.2s							
HELC	**Santa Helena**	**2.24**	**251**		eP	**Pn**	**21 59 33.4**	**+0.3**
HELC					eS	**Sn**	**22 00 02.5**	**+0.9**
HELC					*i*		22 00 07.9	
	comp=Z,565nm,0.6s							
UREC	**San Jos de Ur**	**2.26**	**291**		eP	**Pn**	**21 59 32.4**	**-0.7**
UREC					eS	**Sn**	**22 00 00.7**	**-0.9**
UREC					*i*		22 00 07.3	
	comp=Z,504nm,0.2s							
ROSC	**El Rosal**	**2.27**	**204**	P		**Pn**	**21 59 35.2**	**+1.6**
	comp=Z,49nm,0.3s,baz=17,slow=18,SNR=23							
ROSC				S		**Sn**	**22 00 04.5**	**+2.1**
	comp=Z,119nm,0.3s,baz=283,slow=23,SNR=13							
CHIC	**Chingaza**	**2.32**	**188**		eP	**Pn**	**21 59 34.0**	**-0.2**
CHIC					eS	**Sn**	**22 00 05.3**	**+1.8**
CHIC					*i*		22 00 08.8	
	comp=Z,224nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.59**	**229**		eP	**Pn**	**21 59 38.3**	**+0.6**
GUY2C					eS	**Sn**	**22 00 11.6**	**+1.9**
GUY2C					*i*		22 00 15.8	
	comp=Z,462nm,0.4s							
DBBC	**Dabeiba**	**2.79**	**272**	⇑	eP	**Pn**	**21 59 40.5**	**+0.6**
DBBC					eS	**Sn**	**22 00 14.1**	**+0.5**
DBBC					*i*		22 00 18.4	
	comp=Z,644nm,0.2s							
RREF	**El Recreo**	**2.80**	**224**		eP	**Pn**	**21 59 37.4**	**-3.1**
RREF					eS	**Sn**	**22 00 12.8**	**-1.9**
RREF					*i*		22 00 17.6	
	comp=Z,420nm,0.3s							
CBOC	**Ciudad Bolivar**	**2.80**	**248**		eP	**Pn**	**21 59 41.0**	**+0.9**
CBOC					eS	**Sn**	**22 00 15.1**	**+0.9**
CBOC					*i*		22 00 27.1	
	comp=Z,161nm,0.4s							
MOTC	**Monteria, Cord**	**2.89**	**309**		eP	**Pn**	**21 59 40.2**	**-0.9**
MOTC					eS	**Sn**	**22 00 15.5**	**-0.5**
MOTC					*i*		22 00 30.5	
	comp=Z,118nm,0.3s							
PTGC	**Puerto Gaitan,**	**3.00**	**155**		eP	**Pn**	**21 59 42.1**	**-0.5**
PTGC					eS	**Sn**	**22 00 16.5**	**-2.0**
PTGC					*i*		22 00 23.4	
	comp=Z,140nm,0.5s							
TOLC	**Tolima**	**3.02**	**219**		eP	**Pn**	**21 59 43.8**	**+0.7**
TOLC					eS	**Sn**	**22 00 19.8**	**+0.4**
ARGC	**Ariguani, Magd**	**3.02**	**344**		eP	**Pn**	**21 59 44.8**	**+2.0**
ARGC					eS	**Sn**	**22 00 22.5**	**+3.6**
ARGC					*i*		22 00 31.9	
	comp=Z,196nm,0.4s							
ANIL	**Santa Ana**	**3.14**	**219**		eP	**Pn**	**21 59 46.1**	**+1.5**
ANIL					eS	**Sn**	**22 00 22.8**	**+0.6**
ANIL					*i*		22 00 28.9	
	comp=Z,97nm,0.4s							
SDV	**Santo Domingo**	**3.36**	**55**	P		**Pn**	**21 59 48.5**	**+1.1**
	comp=Z,36nm,0.3s,baz=226,slow=10,SNR=119							
SDV				S		**Sn**	**22 00 27.0**	**-0.1**
	comp=Z,140nm,0.3s,baz=47,slow=19,SNR=15							
SDV	**Santo Domingo**	**3.36**	**55**	⇓	eP	**Pn**	**21 59 48.5**	**+1.1**
SDV					eS	**Sn**	**22 00 26.6**	**-0.5**
SDV					*i*		22 00 30.1	
	comp=Z,323nm,0.5s							
SDV	**Santo Domingo**	**3.36**	**55**			**Pn**	**21 59 48.5**	**+1.1**
SDV					Sn	**Sn**	**22 00 27.4**	**+0.3**
SJCC	**San Jacinto, C**	**3.42**	**329**		eP	**Pn**	**21 59 47.6**	**-0.5**
SJCC					eS	**Sn**	**22 00 26.1**	**-2.4**
SJCC					*i*		22 00 44.2	
	comp=Z,90nm,0.2s							
LCBC	**Los crdobas,**	**3.50**	**303**		eP	**Pn**	**21 59 47.9**	**-1.2**
LCBC					eS	**Sn**	**22 00 32.1**	**+1.9**
LCBC					*i*		22 00 37.2	
	comp=Z,119nm,0.3s							
ORTC	**Ortega, Tolima**	**3.52**	**211**	⇑	eP	**Pn**	**21 59 50.1**	**+0.6**
ORTC					eS	**Sn**	**22 00 30.8**	**-0.1**
ORTC					*i*		22 00 41.2	
	comp=Z,215nm,0.4s							
PRAC	**Prado**	**3.53**	**205**		eP	**Pn**	**21 59 49.7**	**+0.2**
PRAC					eS	**Sn**	**22 00 31.3**	**+0.4**
PRAC					*i*		22 00 36.1	
	comp=Z,243nm,0.5s							
YOTC	**Yotoco, Valle**	**4.15**	**225**		eP	**Pn**	**21 59 57.5**	**-0.2**
YOTC					eS	**Sn**	**22 00 43.3**	**-2.4**
CAPC	**Capurgana**	**4.26**	**294**		eP	**Pn**	**21 59 57.5**	**-1.6**
CAPC					eS	**Sn**	**22 00 44.1**	**-4.1**
CAPC					*i*		22 00 48.1	
	comp=Z,69nm,0.1s							
SMRC	**Santa Marta, M**	**4.28**	**349**		eP	**Pn**	**22 00 00.4**	**+1.0**
SMRC					eS	**Sn**	**22 00 47.1**	**-1.6**
PTAC	**Punta Ardita,**	**4.38**	**273**		eP	**Pn**	**22 00 00.4**	**-0.4**
PTAC					eS	**Sn**	**22 00 47.7**	**-3.3**
PTAC					*i*		22 00 56.9	
	comp=Z,158nm,0.3s							
GUVC	**San Jose del G**	**4.43**	**170**		eP	**Pn**	**22 00 02.0**	**+0.5**
GUVC					eS	**Sn**	**22 00 51.0**	**-1.4**
GUVC					*i*		22 00 57.0	
	comp=Z,168nm,0.3s							
BETC	**Betania**	**4.69**	**206**		eP	**Pn**	**22 00 03.6**	**-1.4**
BETC					eS	**Sn**	**22 00 58.9**	**+0.2**
MACC	**Macarena, Meta**	**4.78**	**185**		eP	**Pn**	**22 00 05.4**	**-0.7**
MACC					eS	**Sn**	**22 00 58.0**	**-2.8**
MACC					*i*		22 01 04.2	
	comp=Z,91nm,0.7s							
MARP	**Paez Belalcaza**	**4.80**	**212**		eP	**Pn**	**22 00 07.3**	**+0.6**
MARP					eS	**Sn**	**22 01 02.2**	**+0.7**
URIC	**Uribia, Colomb**	**4.93**	**16**	⇑	eP	**Pn**	**22 00 07.5**	**-0.6**
URIC					eS	**Sn**	**22 01 01.1**	**-3.3**
URIC					*i*		22 01 08.6	
	comp=Z,30nm,0.5s							
GARC	**Garzon, Huila**	**5.16**	**204**		eP	**Pn**	**22 00 09.4**	**-2.0**
GARC					eS	**Sn**	**22 01 08.8**	**-1.3**
GARC					*i*		22 01 14.2	
	comp=Z,102nm,0.3s							
POPC	**Popayan, Colom**	**5.45**	**217**		eP	**Pn**	**22 00 15.3**	**-0.1**
POPC					eS	**Sn**	**22 01 15.9**	**-1.3**
PCON	**Cinco Dias**	**5.46**	**213**		eP	**Pn**	**22 00 17.5**	**+1.6**
PCON					eS	**Sn**	**22 01 20.5**	**+2.5**
PCON					*i*		22 01 30.4	
	comp=Z,28nm,0.6s							
SOTA	**Rioblanco**	**5.74**	**214**		eP	**Pn**	**22 00 20.4**	**+0.9**
FLOC	**Florencia**	**5.77**	**203**		eP	**Pn**	**22 00 19.4**	**-0.1**
FLOC					eS	**Sn**	**22 01 24.0**	**-0.7**
FLOC					*i*		22 01 28.8	
	comp=Z,24nm,0.4s							
PCRV	**Puerto La Cruz**	**9.25**	**69**	P		**Pn**	**22 01 07.0**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=225,slow=8.6,SNR=10							
PCRV				S		**Sn**	**22 02 47.0**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=14,slow=19,SNR=1.8							
PLCV	**Puerto La Cruz**	**9.29**	**69**			**Pn**	**22 01 07.0**	**+0.1**
PLCV						**Sn**	**22 02 47.0**	**-2.6**
BANI	**BANI**	**11.77**	**14**	Pn		**Pn**	**22 01 41.9**	**+1.9**
MTDJ	**Mount Denham**	**11.92**	**341**	Pn		**Pn**	**22 01 45.6**	**+3.5**
GRGR	**Grenville**	**12.68**	**65**	Pn		**Pn**	**22 01 51.3**	**-0.6**
GTBY	**Guantanamo Bay**	**13.02**	**353**	Pn		**Pn**	**22 01 57.5**	**+1.3**
SVB	**Belmont**	**13.51**	**61**	Pn		**Pn**	**22 02 01.3**	**-1.4**
CDVI	**St. Croix**	**13.66**	**37**	Pn		**Pn**	**22 02 04.0**	**-0.4**
LCCY	**Blossom Villag**	**14.22**	**334**	Pn		**Pn**	**22 02 13.1**	**+1.5**
PAYG	**Puerto Ayora**	**18.46**	**246**	P		**P**	**22 03 01.9**	**-0.2**
PAYG				IAmb		IAmb	22 03 11.5	
	comp=Z,58nm,1.1s							
SAML	**Samuel**	**18.78**	**147**	P		**P**	**22 03 02.9**	**-2.6**
BG3	**Lake Jocassee**	**29.27**	**344**	P		**P**	**22 04 46.0**	**-0.2**
BG3				IAmb		IAmb	22 04 50.4	
	comp=Z,7.3nm,0.6s							
T59A	**Double "B" Far**	**30.13**	**353**	P		**P**	**22 04 54.9**	**+1.2**
T59A				IAmb		IAmb	22 05 01.6	
	comp=Z,13nm,0.7s							
V51A	**Loudon**	**30.43**	**342**	P		**P**	**22 04 57.1**	**+0.7**
V51A				IAmb		IAmb	22 05 07.2	
	comp=Z,8.2nm,0.5s							
U49A	**Red Boiling Sp**	**31.54**	**341**	P		**P**	**22 05 09.0**	**+2.9**
U49A				IAmb		IAmb	22 05 25.9	
	comp=Z,6.8nm,0.7s							
Q54A	**Coxs Mills**	**32.60**	**349**	P		**P**	**22 05 13.8**	**-1.6**
SCHQ	**Schefferville**	**48.05**	**5**	P		**P**	**22 07 23.4**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=204,slow=11,SNR=7.4							
TORD	**Torodi Ar. Bea**	**73.99**	**78**	P		**P**	**22 10 16.1**	**-2.1**
	comp=Z,1.1nm,1.2s,baz=268,slow=7.9,SNR=2.2							
ARCES	**ARCESS Array B**	**86.66**	**20**	P		**P**	**22 11 25.4**	**+0.5**
	comp=Z,7.2nm,1.1s,baz=282,slow=4.2,SNR=7.5							
MKAR	**Makanchi Array**	**122.31**	**20**	PKP		**PKPdf**	**22 17 36.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=289,slow=3.4,SNR=1.8							
ASAR	**Alice Springs**	**148.95**	**235**	PKPbc		**PKPdf**	**22 18 28.8**	**+3.2**
	com

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**1.65**	**310**	Pn	**Pn**	**22 04 54.7**	**+0.5**
LPIG	**La Paz**	**2.20**	**167**	Pn	**Pn**	**22 05 00.5**	**-1.2**
	4.7nm,0.3s,baz=18,slow=9.6,SNR=1.7						
LPIG				LR	LR	22 05 17.1	
	comp=Z,88nm,19.4s,baz=62,slow=26						
LPIG				Sn	**Sb**	**22 05 33.3**	**+1.0**
	18nm,0.3s,baz=158,slow=12,SNR=5.4						
SLBS	**Sierra La Lagu**	**2.68**	**162**		**Pn**	**22 05 09.2**	**+0.7**
HSIG		**2.75**	**358**	Pn	**Pn**	**22 05 06.5**	**-2.9**
HPIG		**4.67**	**81**	Pn	**Pn**	**22 05 36.4**	**+0.4**
319A	**Douglas**	**5.28**	**15**	Pn	**Pn**	**22 05 42.1**	**-2.1**
PIX	**Pinacate**	**5.76**	**337**	Pn	**Pn**	**22 05 49.0**	**-1.8**
214A	**Organ Pipe Nat**	**5.94**	**343**	Pn	**Pn**	**22 05 52.6**	**-0.6**
TUC	**Tucson**	**6.03**	**0**	Pn	**Pn**	**22 05 53.2**	**-1.4**
SPX	**San Pedro Mart**	**6.27**	**321**	Pn	**Pn**	**22 05 58.3**	**+0.3**
121A	**Cookes Peak, D**	**6.79**	**22**		**Pn**	**22 06 03.3**	**-1.8**
113A	**Mohawk Valley,**	**6.97**	**339**	Pn	**Pn**	**22 06 07.4**	**0.0**
TX31	**Lajitas Ar. Si**	**7.04**	**63**		**Pn**	**22 06 05.8**	**-2.6**
TX32	**Lajitas Array**	**7.04**	**63**		**Pn**	**22 06 05.9**	**-2.6**
TXAR	**Lajitas Array**	**7.04**	**63**	Pn	**Pn**	**22 06 05.4**	**-3.1**
	0.3nm,0.3s,baz=235,slow=14,SNR=23						
TXAR				Lg	Lg	22 07 56.1	
	1.4nm,0.3s,baz=236,slow=32,SNR=3.1						
TXAR				LR	LR	22 09 00.1	
	comp=Z,253nm,21.3s,baz=0.0,slow=41						
TXAR	**Lajitas Array**	**7.04**	**63**		**Pn**	**22 06 05.6**	**-2.9**
GLA	**Glamis**	**7.61**	**344**	Pn	**Pn**	**22 06 14.8**	**-1.4**
Y14A	**Wickenburg**	**7.88**	**347**	Pn	**Pn**	**22 06 19.8**	**-0.2**
X16A	**Lo Mia Camp, P**	**8.15**	**356**		**Pn**	**22 06 24.3**	**+0.5**
BNM	**Barren Site**	**8.66**	**24**	Pn	**Pn**	**22 06 29.6**	**-1.2**
PFO	**Pinyon Flats O**	**8.81**	**328**	LR	LR	22 09 37.8	
	comp=Z,109nm,21.0s,baz=152,slow=35						
W13A	**Hualapai Mount**	**9.20**	**344**		**Pn**	**22 06 38.1**	**-0.1**
WUAZ	**Wupatki**	**9.24**	**357**	Pn	**Pn**	**22 06 37.9**	**-0.8**
ANMO	**Albuquerque**	**9.44**	**22**	Pn	**Pn**	**22 06 42.2**	**+0.7**
	0.3nm,0.3s,baz=199,slow=15,SNR=1.6						
ANMO				Lg	Lg	22 09 19.3	
	0.3nm,0.3s,baz=177,slow=17,SNR=2.4						
ANMO				LR	LR	22 10 01.6	
	comp=Z,60nm,18.3s,baz=187,slow=36						
U15A	**North Rim**	**10.22**	**353**		**Pn**	**22 06 54.2**	**+2.1**
JCT	**Junction City**	**10.58**	**64**		**Sn**	**22 08 57.6**	**+2.0**
KNB	**Kanab**	**10.86**	**352**	Pn	**Pn**	**22 07 02.3**	**+1.4**
LCMT	**Little Creek M**	**10.92**	**350**	Pn	**Pn**	**22 07 04.1**	**+2.5**
PKCU	**Pink Cliffs**	**11.22**	**354**	Pn	**Pn**	**22 07 05.4**	**-0.6**
CCUT	**Cedar City**	**11.46**	**350**	Pn	**Pn**	**22 07 10.3**	**+1.1**
PRN	**Pahroc Range**	**11.68**	**343**	Pn	**Pn**	**22 07 13.6**	**+1.6**
MTPU	**Mount Pierson**	**11.81**	**355**	Pn	**Pn**	**22 07 15.3**	**+1.4**
PV13	**Radium Mtn., P**	**11.99**	**8**		**Pn**	**22 07 17.3**	**+0.9**
PV03	**Paradox Valley**	**12.08**	**7**		**Pn**	**22 07 19.5**	**+1.9**
PV14	**Lion Creek, Pa**	**12.18**	**7**	Pn	**Pn**	**22 07 19.2**	**+0.3**
PV04	**Paradox Valley**	**12.21**	**7**	Pn	**Pn**	**22 07 19.8**	**+0.5**
PV15	**Paradox Valley**	**12.21**	**9**	Pn	**Pn**	**22 07 21.1**	**+1.7**
MVU	**Marysvale**	**12.27**	**355**	Pn	**Pn**	**22 07 20.6**	**+0.4**
MSU	**Marysvale**	**12.27**	**355**		**Pn**	**22 07 21.4**	**+1.1**
PV07	**Paradox Valley**	**12.29**	**8**	Pn	**Pn**	**22 07 21.5**	**+1.1**
PV22	**Blue Mesa, Par**	**12.36**	**8**	Pn	**Pn**	**22 07 20.9**	**-0.5**
PSUT	**Pine Spring**	**12.50**	**349**	Pn	**Pn**	**22 07 24.4**	**+1.1**
Q16A	**Castle Valley**	**12.63**	**359**	Pn	**Pn**	**22 07 26.9**	**+1.8**
R11A	**Troy Canyon, C**	**12.71**	**343**	Pn	**Pn**	**22 07 26.1**	**-0.1**
OMMB	**Old Mammoth Mi**	**13.27**	**331**	Pn	**Pn**	**22 07 32.4**	**-1.6**
WMOK	**Wichita Mounta**	**13.38**	**48**	Pn	**Pn**	**22 07 33.7**	**-1.6**
RDMU	**Red Mountain**	**14.31**	**4**	Pn	**Pn**	**22 07 49.2**	**+1.0**
BGU	**Big Grassy Mou**	**14.74**	**358**	Pn	**Pn**	**22 07 54.7**	**+0.7**
PNTR	**Pine Nut**	**14.76**	**332**	Pn	**Pn**	**22 07 56.2**	**+1.9**
TCUT	**Toone Canyon**	**14.83**	**358**	Pn	**Pn**	**22 07 56.4**	**+1.2**
ELK	**Elko**	**14.91**	**347**	Pn	**P**	**22 08 01.0**	**-1.0**
	0.1nm,0.3s,baz=168,slow=9.0,SNR=8.3						
ELK	**Elko**	**14.91**	**347**	Pn	**Pn**	**22 07 58.5**	**+2.3**
SPUT	**South Promonto**	**15.07**	**355**	Pn	**Pn**	**22 08 01.1**	**+2.7**
PAHR	**Pah Rah Range**	**15.20**	**334**	Pn	**Pn**	**22 07 59.3**	**-0.8**
PAHR				IAmb	IAmb	22 08 09.2	
	comp=Z,18nm,1.7s						
HWUT	**Hardware Ranch**	**15.32**	**358**	Pn	**Pn**	**22 08 02.6**	**+0.9**
KAN08	**Anthony NE Sta**	**15.45**	**42**	Pn	**P**	**22 08 05.2**	**-2.6**
HVU	**Hansel Valley**	**15.57**	**355**	Pn	**Pn**	**22 08 06.0**	**+1.1**
X37A	**Clayton**	**15.70**	**54**	Pn	**Pn**	**22 08 06.4**	**-0.1**
BEKR	**Beckworth**	**15.73**	**332**	Pn	**Pn**	**22 08 09.0**	**+1.9**
ORV	**Oroville**	**15.99**	**329**	Pn	**Pn**	**22 08 12.0**	**+1.8**
BW06	**Boulder Array**	**16.50**	**3**	Pn	**Pn**	**22 08 17.1**	**+0.1**
BW06				IAmb	IAmb	22 08 28.5	
	comp=Z,17nm,1.4s						
PDAR	**Pinedale Array**	**16.50**	**3**	Pn	**P**	**22 08 20.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=170,slow=9.9,SNR=7.2						
PDAR	**Pinedale Array**	**16.50**	**3**	Pn	**Pn**	**22 08 18.4**	**+1.4**
TPAW	**Teton Pass**	**17.19**	**360**	Pn	**Pn**	**22 08 26.6**	**+0.9**
TPAW				IAmb	IAmb	22 08 39.0	
	comp=Z,18nm,1.8s						
U38A	**Gravette**	**17.31**	**50**		**P**	**22 08 28.6**	**+0.2**
U38A				IAmb	IAmb	22 08 34.8	
	comp=Z,29nm,1.8s						
CMIG	**Matias Romero**	**17.39**	**118**	P	**P**	**22 08 27.3**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=333,slow=11,SNR=3.8						
CMIG				LR	LR	22 14 51.6	
	comp=Z,72nm,18.4s,baz=344,slow=37						
HHAR	**Hobbs**	**17.54**	**51**	Pn	**Pn**	**22 08 28.2**	**-1.6**
IMW	**Indian Meadow**	**17.60**	**360**		**P**	**22 08 32.3**	**+0.4**
IMW				IAmb	IAmb	22 08 40.2	
	comp=Z,37nm,1.9s						
FLWY	**Flagg Ranch**	**17.79**	**0**		**P**	**22 08 34.5**	**+0.6**
FLWY				IAmb	IAmb	22 08 45.8	
	comp=Z,21nm,1.4s						
BCYI	**Bear Canyon**	**18.13**	**354**		**Pn**	**22 08 38.2**	**+0.9**
YHB	**Horse Butte**	**18.46**	**359**	P	**Pn**	**22 08 42.1**	**+0.9**
MCMT	**McKenzie Canyo**	**18.60**	**355**	P	**P**	**22 08 43.6**	**+0.7**
S39A	**Bolivar**	**18.69**	**48**	P	**Pn**	**22 08 44.5**	**+0.5**
S39A				IAmb	IAmb	22 08 49.4	
	comp=Z,6.7nm,0.9s						
BOZ	**Bozeman (W)**	**19.31**	**358**	P	**Pn**	**22 08 52.0**	**+0.5**
BOZ				IAmb	IAmb	22 08 59.9	
	comp=Z,15nm,1.5s						
R40A	**Maddies Statio**	**19.71**	**48**	P	**P**	**22 08 52.3**	**-2.5**
R40A				IAmb	IAmb	22 09 01.3	
	comp=Z,6.3nm,0.9s						
G08A	**Pilot Rock**	**20.09**	**343**	P	**P**	**22 09 00.1**	**+1.1**
F10A	**Beach Ranch, E**	**20.33**	**347**	P	**P**	**22 09 02.5**	**+0.9**
F10A				IAmb	IAmb	22 09 03.7	
	comp=Z,9.1nm,1.0s						
MSO	**Missoula**	**20.68**	**354**	P	**P**	**22 09 06.3**	**+0.9**
MSO				IAmb	IAmb	22 09 07.3	
	comp=Z,6.3nm,0.8s						
EGMT	**Eagleton**	**21.75**	**2**	P	**P**	**22 09 16.5**	**-0.3**
LON	**Longmire**	**22.23**	**340**	P	**P**	**22 09 22.3**	**+0.2**
NEW	**Newport**	**22.52**	**349**	LR	LR	22 19 03.1	
	comp=Z,42nm,20.0s,baz=162,slow=39						
TKL	**Tuckaleechee C**	**24.96**	**61**	LR	LR	22 20 00.5	
	comp=Z,63nm,19.2s,baz=250,slow=38						
JTS	**Las Juntas de**	**29.16**	**118**	LR	LR	22 22 46.3	
	comp=Z,31nm,18.3s,baz=15,slow=38						
ILAR	**Eielson Array**	**44.87**	**339**	P	**P**	**22 12 40.8**	**+1.3**
	comp=Z,2.7nm,0.9s,baz=149,slow=6.7,SNR=19						
WRA	**Warramunga Arr**	**120.26**	**261**	PKP	**PKPdf**	**22 23 16.9**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=69,slow=2.3,SNR=4.2						

*NEIC **07** 22:04:35.9±1.7, 64°.60N±0°.09×17°.8W±0°.1, h7km±4km, mb4.5/24, Error ellipse: s-maj=13.1km s-min=9.3km az=186.0*

*IDC **07** 22:04:35.3±0.8, 64°.58N×17°.76W, h0km, mb3.7/10, mb1 3.9/11, mb1mx3.7/52, mbtmp3.7/11, ML4.2/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/41, Error ellipse: s-maj=25.0km s-min=10.8km az=15.0*

ISC 07 22:04:36.4±0.5, 64°.58N±0°.08×17°.76W±0°.06, h10km, n48, σ0$92/44, mb4.2/22, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.54**	**278**	Pg	**Pn**	**22 05 02.5**	**-1.3**
	25nm,0.3s,baz=94,slow=19,SNR=22						
BORG				Lg	Lg	22 05 24.7	
	25nm,0.3s,baz=86,slow=24,SNR=9.4						
BORG	**Borgarnes**	**1.54**	**278**	Pn	**Pn**	**22 05 01.9**	**-2.0**
SCO	**Scoresbysund**	**6.14**	**347**	Pn	**Pn**	**22 06 06.1**	**-0.9**
ANGG	**Ammassalik, Gr**	**8.44**	**286**	Pn	**Pn**	**22 06 38.9**	**+0.4**
EKA	**Eskdalemuir Ar**	**11.78**	**135**	Pn	**Pn**	**22 07 24.4**	**+0.3**
	baz=322,slow=13,SNR=9.2						
SFJD	**Kangerlussuaq**	**13.60**	**295**	LR	LR	22 12 46.6	
	comp=Z,112nm,18.7s,baz=116,slow=36						
NC303	**NORSAR Array S**	**13.62**	**91**	Pn	**Pn**	**22 07 49.3**	**-0.1**
NOA	**NORSAR Array B**	**13.64**	**92**	LR	LR	22 12 29.7	
	comp=Z,39nm,18.6s,baz=260,slow=35						
ARB4	**ARCESS Array S**	**17.26**	**54**	Pn	**Pn**	**22 08 35.7**	**-1.3**
WLF	**Walferdange**	**19.60**	**128**	P	**Pn**	**22 09 05.2**	**-0.6**
CLL	**Collm**	**20.77**	**115**	P	**P**	**22 09 16.9**	**-0.2**
ECH	**Echery**	**21.19**	**129**	P	**P**	**22 09 20.7**	**-0.9**
ECH				IAmb	IAmb	22 09 24.0	
	comp=Z,16nm,1.3s						
GERES	**GERESS Array B**	**23.01**	**118**	P	**P**	**22 09 41.4**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=336,slow=8.8,SNR=4.9						
GERES				LR	LR	22 19 27.5	
	comp=Z,65nm,18.3s,baz=337,slow=39						
ESDC	**Sonseca Array**	**26.22**	**155**	P	**P**	**22 10 11.8**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=344,slow=9.3,SNR=4.2						
CASP	**Castiglione de**	**27.20**	**130**	P	**P**	**22 10 19.4**	**-0.5**
AKASG	**Malin Array Be**	**27.94**	**97**	P	**P**	**22 10 26.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=320,slow=9.7,SNR=1.9						
CART	**Cartagena**	**28.81**	**152**	P	**P**	**22 10 34.2**	**-0.1**
BRTR	**Keskin Array B**	**38.57**	**105**	P	**P**	**22 12 00.7**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=303,slow=7.9,SNR=3.5						
ABKAR	**Akbulak array**	**42.12**	**73**	P	**P**	**22 12 27.8**	**-0.4**
ABKAR	**Akbulak array**	**42.12**	**73**	P	**P**	**22 12 27.5**	**-0.7**
ABKAR				IAmb	IAmb	22 12 29.4	
	comp=Z,4.0nm,1.3s						
TIXI	**Tiksi**	**42.14**	**15**	P	**P**	**22 12 27.7**	**-0.5**
BMAR	**Burnt Mountain**	**42.92**	**333**	P	**P**	**22 12 35.8**	**+1.2**
M50A	**Fremont**	**43.11**	**270**	P	**P**	**22 12 37.3**	**+1.0**
ILAR	**Eielson Array**	**45.71**	**332**	P	**P**	**22 12 57.6**	**+0.7**
	comp=Z,2.2nm,1.1s,baz=29,slow=5.1,SNR=8.3						
IMAR	**Indian Mountai**	**45.89**	**337**	P	**P**	**22 12 59.5**	**+1.2**
BCAR	**Beaver Creek A**	**46.12**	**328**	P	**P**	**22 13 00.7**	**+0.5**
WRH	**Wood River Hil**	**46.22**	**333**	P	**P**	**22 13 01.7**	**+0.9**
TZTN	**Tazewell**	**47.37**	**267**	P	**P**	**22 13 08.7**	**-1.5**
ZAA0	**Zalesovo Array**	**47.77**	**51**	P	**P**	**22 13 11.8**	**-1.3**
ZAA0				IAmb	IAmb	22 13 14.4	
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**47.77**	**51**	P	**P**	**22 13 13.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=322,slow=9.4,SNR=4.7						
KURK	**Kurchatov**	**48.25**	**58**	P	**P**	**22 13 16.7**	**-0.1**
KURK				IAmb	IAmb	22 13 19.4	
	comp=Z,3.5nm,1.0s						
BG3	**Lake Jocassee**	**48.41**	**265**	P	**P**	**22 13 17.0**	**-1.3**
BG3				IAmb	IAmb	22 13 17.2	
	comp=Z,10.0nm,1.3s						
MKAR	**Makanchi Array**	**52.87**	**58**	P	**P**	**22 13 51.3**	**-0.5**
	comp=Z,1.0nm,1.0s,baz=331,slow=7.0,SNR=4.2						
PDAR	**Pinedale Array**	**53.11**	**293**	P	**P**	**22 13 54.5**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=40,slow=7.1,SNR=7.1						
PDAR	**Pinedale Array**	**53.11**	**293**	P	**P**	**22 13 53.8**	**-0.1**
TORD	**Torodi Ar. Bea**	**53.11**	**156**	P	**P**	**22 13 53.7**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=337,slow=6.9,SNR=5.0						
TORD	**Torodi Ar. Bea**	**53.11**	**156**	IAmb	IAmb	22 14 02.1	
	comp=Z,1.5nm,1.1s						
BTK	**Batken**	**54.09**	**71**	P	**P**	**22 14 01.9**	**+1.0**
BTK				IAmb	IAmb	22 14 04.3	
	comp=Z,12nm,1.4s						
GAR	**Garm**	**54.78**	**72**	P	**P**	**22 14 05.6**	**-0.4**
HWUT	**Hardware Ranch**	**54.88**	**294**	P	**P**	**22 14 07.6**	**+0.8**
HWUT				IAmb	IAmb	22 14 09.0	
	comp=Z,2.7nm,0.9s						
PV13	**Radium Mtn., P**	**56.72**	**289**	P	**P**	**22 14 21.7**	**+1.6**
PV13				IAmb	IAmb	22 14 22.3	
	comp=Z,6.5nm,1.0s						
DBIC	**Dimbokro**	**58.54**	**165**	LR	LR	22 41 09.1	
	comp=Z,32nm,18.3s,baz=277,slow=38						
WDC	**Whiskeytown Da**	**59.96**	**302**	P	**P**	**22 14 43.2**	**+0.8**
WDC				IAmb	IAmb	22 14 58.0	
	comp=Z,6.8nm,1.4s						
WUAZ	**Wupatki**	**60.03**	**290**	P	**P**	**22 14 43.5**	**+0.3**
WUAZ				IAmb	IAmb	22 14 45.0	
	comp=Z,3.4nm,1.0s						
PNTR	**Pine Nut**	**60.16**	**299**	P	**P**	**22 14 45.9**	**+1.8**
PNTR				IAmb	IAmb	22 14 49.8	
	comp=Z,3.5nm,0.9s						
NIL	**Nilore**	**60.58**	**73**	P	**P**	**22 14 47.1**	**+0.3**
NIL				IAmb	IAmb	22 14 49.5	
	comp=Z,7.3nm,1.2s						
SHPR	**Sheep Range**	**60.69**	**294**	P	**P**	**22 14 47.5**	**-0.1**
SHPR				IAmb	IAmb	22 14 53.1	
	comp=Z,4.4nm,1.3s						
TXAR	**Lajitas Array**	**62.19**	**280**	P	**P**	**22 14 58.2**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=35,slow=3.3,SNR=3.3						

*HLW **07** 22:09:13.6, 34°.56N×32°.09E, h4km±11km, Md3.6, Ml3.8*
*NIC **07** 22:09:16.1±0.0, 34°.32N×32°.35E, h12km±2km, Ml2.5/3*

ISC 07 22:09:16.4±1.3, 34°.37N±0°.05×32°.27E±0°.06, h18km±5km, n14, σ0$95/22, 4C-1D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NATA	**Nata**	**0.48**	**32**	⇑P	**Pb**	**22 09 26.9**	**+0.6**
NATA				S	**Sb**	**22 09 33.3**	**+0.2**
NATA				AML	AML	22 09 39.0	
	1.9nm,0.8s						
NATA				AML	AML	22 09 39.0	
	1.9nm,0.8s						
NATA				AML	AML	22 09 39.0	
	1.6nm,0.4s						
NATA				AML	AML	22 09 39.0	
	1.6nm,0.4s						
SZAC	**Souni**	**0.64**	**53**	⇑P	**Pg**	**22 09 28.7**	**-0.3**
SZAC				S	**Sb**	**22 09 38.3**	**+0.8**
SZAC				AML	AML	22 09 38.4	
	1.0nm,0.3s						
SZAC				AML	AML	22 09 38.4	
	1.0nm,0.3s						
SZAC				AML	AML	22 09 39.6	
	1.7nm,0.2s						
SZAC				AML	AML	22 09 39.6	
	1.7nm,0.2s						
AKMS	**Akamas**	**0.65**	**5**	⇓P	**Pb**	**22 09 29.1**	**0.0**
AKMS				AML	AML	22 09 40.5	
	0.9nm,0.2s						
AKMS				AML	AML	22 09 40.5	
	0.9nm,0.2s						
AKMS				AML	AML	22 09 40.6	
	1.1nm,0.2s						
AKMS				AML	AML	22 09 40.6	
	1.1nm,0.2s						
AKMS				S	**Sn**	**22 09 40.7**	**+0.1**
ALFC	**Alefka**	**0.83**	**19**	P	**Pg**	**22 09 32.5**	**-0.1**
ASGA	**Asgata**	**0.91**	**63**	P	**Pb**	**22 09 33.0**	**-0.7**
ASGA				S	**Sb**	**22 09 45.7**	**+0.3**
CSS	**Mathiatis**	**1.06**	**56**	⇑P	**Pb**	**22 09 35.1**	**-1.1**
CSS				S	**Sg**	**22 09 50.5**	**-0.3**
OSC1	**CSNet OBS 1**	**1.20**	**224**	P	**Pn**	**22 09 38.0**	**-0.2**
OSC1				S	**Sg**	**22 09 56.2**	**+1.0**
OSC2	**CSNet OBS 4**	**1.29**	**180**	S	**Sn**	**22 09 57.0**	**+0.7**
MVOU	**Mavrovouni**	**1.30**	**60**	⇑P	**Pn**	**22 09 38.9**	**-0.7**
MVOU				S	**Sn**	**22 09 57.4**	**+0.9**
SUZ	**Suez**	**4.54**	**174**	P	**Pn**	**22 10 25.6**	**+1.3**
	baz=172						
GLL	**Jalalah**	**4.80**	**186**	P	**Pn**	**22 10 29.0**	**+1.1**
	baz=184						
RYAN	**Fayoum**	**5.54**	**198**	P	**Pn**	**22 10 38.6**	**+0.7**
	baz=197						
SWA2		**7.73**	**230**	P	**Pn**	**22 11 07.5**	**-0.4**
	baz=229						
HFRF	**Wahat Farafira**	**7.96**	**206**	P	**Pn**	**22 11 11.5**	**+0.3**
	baz=205						
HFRF				AMP		22 12 00.0	
	baz=205						
HFRF				S	**Sn**	**22 12 38.2**	**-2.6**
	baz=205						

GCMT 07 22:11:13.0±0.3, 24°.47S±0°.02×115°.69W±0°.02, h26km±1km, MW5.0/86, Moment Tensor Solution. s29,c31; s86,c109; Duration: 0 Moment tensor: Scale 10^{16} **Nm;** M_{rr}-0.71±.16; $M_{\theta\theta}$-1.55±.14; $M_{\phi\phi}$2.26±.13; $M_{r\theta}$-0.27±.26; $M_{\theta\phi}$2.85±.12; $M_{\phi r}$-0.56±.25; **Best double couple:** $M_0$3.47000×10^{16} **NP1:**ϕ_s253.00000°,δ84.00000°, λ5.00000°. **NP2:**ϕ_s163.00000°,δ85.00000°,λ174.00000°. **Principal axes:** T 3.8660, Plg8.0000°, Azm118.0000°; N -0.7940, Plg82.0000°, Azm302.0000°; P -3.0730, Plg1.0000°, Azm208.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	**Rikitea**	**17.70**	**270**	eLQ	LQ	22 18 38.1	
	1μm,24.8s						
RKT				eLR	LR	22 19 21.4	
	comp=Z,2μm,26.0s						
TAOE	**Nuku Hiva Isla**	**28.03**	**299**	*e*S	S	22 21 47.7	+2.0
	93nm,28.3s						
TAOE				*e*LR	LR	22 24 01.8	
	comp=Z,1μm,26.5s						
TBI	**Tubuai**	**30.85**	**265**	*e*LQ	LQ	22 24 12.5	
	209nm,28.8s						
TBI				*e*LR	LR	22 25 20.0	
	comp=Z,485nm,28.2s						
PPT2	**Papeete2**	**32.30**	**276**	*e*S	S	22 22 57.7	+5.1
	98nm,26.0s						
PPT2				*e*LQ	LQ	22 24 48.7	
	374nm,27.0s						
PPT2				*e*LR	LR	22 26 07.7	
	comp=Z,455nm,28.0s						
DZM	**Mont Dzumac**	**70.64**	**254**	*e*LR	LR	22 44 01.2	
	comp=Z,172nm,27.4s						

*IDC **07** 22:49:50.0±2.0, 6°.27S×141°.24E, h0km, mb3.5/1, mb1 3.8/4, mb1mx3.4/46, mbtmp3.6/4, ML3.5/3 Error ellipse: s-maj=67.9km s-min=19.9km az=135.0*

*NEIC **07** 22:49:55.6±1.2, 6°.08S±0°.09×141°.1E±0°.1, h57km±9km, mb4.0/8, Error ellipse: s-maj=15.1km s-min=12.4km az=112.0*

ISC 07 22:49:55.1±1.1, 6°.1S±0°.1×141°.10E±0°.09, h35km, n15, σ1$32/17, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.84**	**119**	Pn	**Pn**	**22 51 33.5**	**+0.6**
FAKI	**Fak Fak**	**9.38**	**289**	Pn	**Pn**	**22 52 08.1**	**+0.3**
MTN	**Manton Dam**	**11.88**	**235**	Pn	**Pn**	**22 52 43.4**	**+1.4**
WB0	**Warramunga Arr**	**15.05**	**205**	Pn	**Pn**	**22 53 25.8**	**+0.5**
WB0				IAmb	IAmb	22 54 14.9	
	comp=Z,21nm,1.9s						
WR0	**Warramunga Arr**	**15.16**	**204**	Pn	**Pn**	**22 53 26.7**	**0.0**
WR0				IAmb	IAmb	22 53 45.3	
	comp=Z,11nm,1.4s						
WRAB	**Tennant Creek**	**15.21**	**205**	Pn	**Pn**	**22 53 28.0**	**+0.6**
WRAB				IAmb	IAmb	22 54 19.1	
	comp=Z,7.3nm,0.6s						
WB2	**Warramunga Arr**	**15.22**	**205**	Pn	**Pn**	**22 53 26.4**	**-1.1**
WB2				IAmb	IAmb	22 53 56.1	
	comp=Z,17nm,1.8s						
WRA	**Warramunga Arr**	**15.22**	**205**	Pn	**Pn**	**22 53 25.1**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=30,slow=13,SNR=10						
WRA				Sn	**Sn**	**22 56 16.3**	**+1.2**
	baz=32,slow=26,SNR=1.7						
KNRA	**Kununurra**	**15.38**	**231**	Pn	**Pn**	**22 53 28.3**	**-1.2**
KNRA				IAmb	IAmb	22 53 36.6	
	comp=Z,11nm,0.7s						
AS31	**Alice Springs**	**18.76**	**201**	P	**P**	**22 54 10.4**	**-0.9**
ASAR	**Alice Springs**	**18.76**	**201**	P	**P**	**22 54 11.2**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=31,slow=11,SNR=22						
LUWI	**Luwuk**	**18.97**	**285**	P	**P**	**22 54 12.0**	**-1.5**
FITZ	**Fitzroy Crossi**	**19.21**	**230**	P	**P**	**22 54 14.8**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=61,slow=13,SNR=2.5						
FITZ				S	**S**	**22 57 54.1**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=105,slow=12,SNR=2.5						
BBOO	**Buckleboo**	**26.96**	**189**	P	**P**	**22 55 32.5**	**-0.9**
ILAR	**Eielson Array**	**87.95**	**24**	P	**P**	**23 02 42.1**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=259,slow=4.1,SNR=1.7						

*MAN **07** 22:54:56.3, 6°.80N×126°.93E, h23km, mb5.7, ML4.8, MS5.2*

MAN Intensity IV - Davao City; Mati, Davao Oriental; Tarragona, Davao Oriental; Intensity III - Tagum City, Davao del Norte; Santa Cruz, Davao del Sur; Intensity I - General Santos City.

*MOS **07** 22:54:56.8±0.9, 6°.89N×126°.85E, h68km, mb5.4/34, MS4.5/5, Error ellipse: s-maj=7.9km s-min=4.2km az=112.8*

*IDC **07** 22:54:56.9±0.3, 6°.83N×126°.98E, h54km±2km, mb4.5/42, mb1 4.6/43, mb1mx4.5/49, mbtmp4.8/43, MS4.1/32, Ms1 4.1/32, ms1mx4.1/33, Error ellipse: s-maj=7.1km s-min=5.5km az=50.0*

*DJA **07** 22:54:58.8±0.4, 7°.N±3°×12°.7E±°, h62km±3km, M5.2/93, mb5.4/93, mB5.6/68, MLv5.9/7, Mw(mB)5.1/68, Mwp5.2/8*

*GCMT **07** 22:54:59.1±0.1, 6°.67N±0°.01×126°.72E±0°.01, h66km, MW5.2/131, Moment Tensor Solution. s122,c173; s131,c220; Duration: 1$0 Moment tensor: Scale* 10^{17} *Nm; M_{rr}0.69±.01; $

27nm,0.3s,baz=357,slow=23,SNR=9.1
SIJI LR LR 23 01 24.7
comp=Z,1µm,18.5s,baz=358,slow=44
LQP Lukban 8.93 325 *e*P Pn 22 57 10.3 +6.0
APSI Ampana 9.20 214 P Pn 22 57 12.6 +4.8
5µm579nm,1.1s
TGY Tagaytay City 9.28 322 P Pn 22 57 14.5 +5.5
82nm,0.3s,baz=221,slow=5.8,SNR=6.6
TGY LR LR 23 01 43.7
comp=Z,955nm,21.5s,baz=158,slow=44
TGY Tagaytay City 9.28 322 *e*P **Pn 22 57 12.4 +3.4**
MPSI Mapaga 9.39 227 P Pn **22 57 13.1 +2.7**
1µm75nm,0.7s
NLAI Namlea 9.95 178 P **Pn 22 57 19.0 +0.9**
4µm184nm,0.5s
MSAI Masohi 10.28 168 P Pn 22 57 30.3 +7.7
SPMM Sapulut 10.47 259 P Pn 22 57 31.0 +5.7
AAI Ambon 10.49 172 P **Pn 22 57 27.9 +2.5**
4µm3µm236nm,1.0s
KKM Kota Kinabalu 10.53 267 Pn **Pn 22 57 29.7 +3.6**
FAKI Fak Fak 11.07 150 P **Pn 22 57 35.1 +1.8**
3µm2µm167nm,0.9s
FAKI Fak Fak 11.07 150 Pn **Pn 22 57 35.3 +2.0**
KDI Kendari 11.44 201 P Pn 22 57 44.0 +5.5
6µm96nm,1.2s
BNDI Bandanaira 11.64 164 P **Pn 22 57 44.7 +3.5**
TTSI Tana Toraja 11.98 216 P **Pn 22 57 50.3 +4.5**
4µm468nm,1.1s
BAKI Biak 12.21 130 P **Pn 22 57 49.2 +0.2**
7µm674nm,1.3s
KMPI Kaimana, Papua 12.46 146 P **P 22 57 57.5 -4.6**
BKB Balikpapan 12.70 231 P **Pn 22 57 58.3 +2.7**
4µm316nm,1.1s
BKB Balikpapan 12.70 231 Pn 22 57 55.9 +0.3
SRPI Serui, Papua 12.76 132 P **P 22 58 04.0 -1.5**
SPSI Sidrap Palu 12.76 213 P **Pn 22 57 59.5 +3.0**
1µm2µm123nm,0.8s
BNSI Bone 12.95 211 P **Pn 22 58 02.8 +3.7**
3µm195nm,1.6s
KAPI Kappang 13.65 211 P **Pn 22 58 10.4 +1.8**
3.4nm,0.3s,baz=16,slow=9.8,SNR=12
KAPI Kappang 13.65 211 Pn **Pn 22 58 10.0 +1.4**
BKSI Bulukumba 13.73 209 P **Pn 22 58 11.1 +1.4**
2µm70nm,1.0s
MTKI Muara Teweh, K 14.13 238 P **P 22 58 19.3 -1.4**
4µm89nm,0.8s
BSSI Bau Bau, Buton 14.29 206 P **P 22 58 22.0 -0.5**
1µm109nm,0.8s
KBKI Kotabaru 14.58 227 P **P 22 58 25.4 -0.3**
65nm,0.9s
SMPI Sarmi 14.74 126 P **P 22 58 27.1 -0.5**
SBUM Sibu 15.14 254 P 22 58 30.5 -1.5
SBUM Sibu 15.14 254 P **P 22 58 31.0 -1.0**
SAUI Saumlaki 15.33 163 P **P 22 58 32.8 -1.3**
7µm212nm,0.8s
SAUI Saumlaki 15.33 163 P **Pn 22 58 31.4 +0.8**
SAUI IAmb IAmb 22 58 38.3
comp=Z,105nm,0.7s
BBKI Banjar Baru 15.67 230 P **P 22 58 37.5 -0.4**
comp=Z,4µmcomp=Z,254nm,1.2s
MMRI Maumere 15.97 197 P **P 22 58 42.3 +1.1**
comp=Z,4µmcomp=Z,255nm,0.7s
MMRI Maumere 15.97 197 P **P 22 58 40.5 -0.7**
MMRI IAmb IAmb 22 58 59.6
comp=Z,108nm,0.8s
EDFI Ende, Flores 16.24 198 P **P 22 58 43.9 -0.4**
comp=Z,1µmcomp=Z,104nm,1.0s
GENI Genyem 16.28 124 P **Pn 22 58 42.1 -0.5**
comp=Z,5µmcomp=Z,245nm,0.8s
SOEI Soe 16.61 189 P **P 22 58 51.1 +2.7**
comp=Z,4µmcomp=Z,325nm,0.9s
SOEI Soe 16.61 189 P **Pn 22 58 47.6 +0.7**
SOEI IAmb IAmb 22 59 05.9
comp=Z,147nm,1.1s
TWG Pinlang 16.88 342 Pn **Pn 22 58 50.1 +0.1**
BATI Baumata 17.15 190 P **P 22 58 56.6 +2.3**
comp=Z,16nm,0.3s,baz=33,slow=2.3,SNR=21
BATI S **S 23 02 08.2 -1.7**
comp=Z,1.2nm,0.3s,baz=90,slow=19,SNR=1.4
BATI LR LR 23 05 53.2
comp=Z,1µm,22.0s,baz=350,slow=38
BATI Baumata 17.15 190 P **P 22 58 55.9 +1.6**
comp=Z,2µmcomp=Z,213nm,0.6s
KSM Kuching 17.25 253 P 22 58 56.1 +0.7
YULB Yu-li 17.35 343 Pn 22 58 55.2 -0.6
TPUB Ta-pu 17.47 341 P **Pn 22 58 57.0 -0.3**
WSI Waingapu 17.57 202 P **P 22 59 03.1 +4.2**
comp=Z,21µmcomp=Z,498nm,0.6s
PBKI Pangkalan Bun 17.79 239 P **P 22 59 03.7 +2.4**
comp=Z,3µmcomp=Z,278nm,1.2s
SSLB Suanglung 17.82 342 Pn 22 59 02.4 +0.7
WBSI Waikabubak, Su 17.89 204 P **Pn 22 59 05.5 +2.9**
comp=Z,2µmcomp=Z,163nm,1.3s
PLAI Plampang 17.91 210 P **Pn 22 59 03.9 +1.1**
comp=Z,3µmcomp=Z,263nm,0.9s
YOJ Yonaguni jima 17.96 349 P **Pn 22 59 03.4 +0.2**
BASI Baing, Sumba 17.98 200 P **Pn 22 59 06.6 +3.0**
comp=Z,2µmcomp=Z,178nm,1.0s
NACB Ninganchiao 18.00 344 P 22 59 03.3 -0.3
TWSI Taliwang, Sumb 18.30 213 P **Pn 22 59 10.1 +2.6**
comp=Z,2µmcomp=Z,105nm,1.1s
YHNB Yeheng 18.54 344 P **Pn 22 59 10.8 +0.4**
SRBI Singaraja 18.74 218 P sP 22 59 33.0 +1.1
KMMI Kalianget 18.77 223 P **Pn 22 59 15.2 +2.1**
comp=Z,112nm,0.8s
DLV T Lat 18.77 287 P **Pn 22 59 13.9 +0.5**
DLV IAmb IAmb 22 59 32.4
comp=Z,87nm,0.9s
BWJI Bawean 18.87 229 P **Pn 22 59 17.7 +3.3**
comp=Z,459nm,1.3s
GUMO Guam 19.03 68 P **Pn 22 59 17.6 +1.3**
comp=Z,3.5nm,0.3s,baz=235,slow=18,SNR=1.9
GUMO LR LR 23 06 24.2
comp=Z,632nm,19.9s,baz=234,slow=36
DNP Denpasar 19.20 217 P sP 22 59 35.6 -1.3
JMZ Minamidaito 2 19.41 12 P **P 22 59 19.4 +0.4**
JMZ IAmb IAmb 22 59 31.7
comp=Z,97nm,1.0s
BLJI Banyuglugur 19.52 223 P pP 22 59 35.6 +2.3
HKPS Hong Kong Po S 19.66 323 P **Pn 22 59 22.9 -0.8**
HKPS IAmb IAmb 22 59 26.6
comp=Z,65nm,0.8s
JAGI Jajag, Banyuwa 19.70 220 P **P 22 59 23.0 +0.7**
comp=Z,2µmcomp=Z,239nm,1.0s
JAGI Jajag, Banyuwa 19.70 220 P **Pn 22 59 23.4 -0.8**
JAGI IAmb IAmb 22 59 41.1
comp=Z,187nm,1.0s
GRJI Gresik 19.71 227 P **Pn 22 59 26.1 +1.7**
comp=Z,2µmcomp=Z,223nm,1.0s
MTN Manton Dam 19.96 167 P **Pn 22 59 26.6 -0.7**
baz=20,SNR=12
MTN Manton Dam 19.96 167 P **Pn 22 59 26.7 -0.6**
GMJI Gumukmas 20.01 222 P Pn 22 59 28.3 +0.4
comp=Z,1µmcomp=Z,118nm,1.3s
TBJI Tambak Boyo 20.11 228 P sP 22 59 47.3 0.0
KDU Kakadu 20.14 164 P Pn 22 59 28.2 -1.2
baz=20,SNR=38
QIZ Qiongzhong 20.50 308 P **P 22 59 31.0 +0.1**
QIZ S **S 23 03 17.4 +0.4**
QIZ pmax pmax
comp=Z,40nm,2.6s
QIZ pmax pmax
comp=Z,410nm,3.7s
QIZ LR LR
comp=Z,580nm,16.7s
QIZ LR LR
comp=Z,970nm,18.4s
QIZ LR LR
comp=Z,2µm,19.2s
QIZ Qiongzhong 20.50 308 P 22 59 30.6 -0.3
QIZ IAmb IAmb 22 59 47.2
comp=Z,85nm,1.0s
PWJI Pagerwojo 20.96 226 P Pn 22 59 38.9 -0.2
comp=Z,111nm,1.4s
TPI Tanjungpandan 21.32 244 P **P 22 59 42.4 +2.6**
comp=Z,1µmcomp=Z,181nm,1.0s
SMRI Semarang 21.32 230 P **P 22 59 42.8 +3.0**
comp=Z,235nm,1.1s
SMRI Semarang 21.32 230 P **P 22 59 39.3 -0.5**
WOJI Wonogiri, Jawa 21.47 228 P **P 22 59 46.0 +4.6**
comp=Z,1µmcomp=Z,89nm,1.1s
UGM Wanagama 21.82 228 P pP 23 00 02.7 +4.4
UGM Wanagama 21.82 228 P **P 22 59 44.8 -0.4**
UGM IAmb IAmb 23 00 03.4
comp=Z,145nm,1.0s
KNRA Kununurra 22.39 175 P **P 22 59 52.9 +1.7**
baz=23,SNR=39
KNRA Kununurra 22.39 175 P **P 22 59 52.3 +1.1**
PPBI Pangkal Pinang 22.44 247 P **P 22 59 53.5 +1.6**
comp=Z,2µmcomp=Z,76nm,0.9s
UBPT Khong Chiam 22.55 294 P **P 22 59 59.7 +6.7**
comp=Z,34nm,1.5s
KPJI Karang Pucung 22.66 232 P **P 22 59 55.2 +1.0**
comp=Z,2µmcomp=Z,222nm,0.9s
JCJI Jatiwangi 22.69 235 P sP 23 00 16.4 +1.3
LEM Lembang 23.42 235 P **P 23 00 03.4 +1.5**
comp=Z,53nm,0.7s,baz=358,slow=10.0,SNR=11
LEM pP **pP 23 00 16.2 +0.5**
comp=Z,228nm,0.9s,baz=156,slow=14,SNR=6.5
LEM S **S 23 04 09.7 -1.0**
comp=Z,12nm,0.5s,baz=300,slow=20,SNR=1.6
LEM LR LR 23 10 00.1
comp=Z,428nm,19.1s,baz=40,slow=38
CISI Cisompet, Garu 23.68 233 P **P 23 00 06.0 +1.8**
comp=Z,2µmcomp=Z,132nm,0.9s
CISI Cisompet, Garu 23.68 233 P **P 23 00 05.0 +0.8**
CBJI Citeko 23.82 237 P **P 23 00 08.6 +3.2**
comp=Z,472nm,1.2s
DBJI Dramaga 23.98 237 P sP 23 00 26.6 -1.7
PMBI Palembang 24.00 247 P sP 23 00 26.2 -1.9
PMBI Palembang 24.00 247 P **P 23 00 09.7 +2.7**
CNJI Cibinong 24.09 235 P pP 23 00 24.4 +2.3
SBJI Serang 24.27 239 P pP 23 00 20.7 -3.2
SKJI Sukabumi 24.39 236 P sP 23 00 29.9 -2.2
BLSI Bandar Lampung 24.65 241 P **P 23 00 15.9 +2.9**
comp=Z,3µmcomp=Z,324nm,1.4s
FITZ Fitzroy Crossi 24.74 183 P **P 23 00 14.9 +1.2**
comp=Z,51nm,0.9s,baz=5.6,slow=8.8,SNR=46
FITZ pP **pP 23 00 28.5 +0.9**
comp=Z,88nm,0.8s,baz=11,slow=5.3,SNR=17
FITZ S **S 23 04 31.7 +0.1**
comp=Z,7.9nm,0.9s,baz=147,slow=17,SNR=1.6
FITZ Fitzroy Crossi 24.74 183 P **P 23 00 14.1 +0.5**
baz=25,SNR=54
FITZ Fitzroy Crossi 24.74 183 IAmb IAmb 23 00 31.3
comp=Z,74nm,0.8s
SSE Sheshan 24.76 348 P **P 23 00 13.8 +0.1**
SSE S **S 23 04 33.2 +1.5**
SSE pmax pmax
comp=Z,16nm,0.7s
KLSI 24.79 243 P **P 23 00 15.8 +1.6**
comp=Z,604nmcomp=Z,56nm,1.0s
JSU Suzuyama 24.84 7 P **P 23 00 13.0 -1.6**
CGJI Cibinong 24.90 238 P **P 23 00 15.8 +0.6**
comp=Z,2µmcomp=Z,149nm,0.8s
MDSI Maura Dua 25.19 244 P **P 23 00 19.5 +1.7**
comp=Z,916nmcomp=Z,98nm,1.1s
KHON Khomkaen 25.30 294 P **P 23 00 21.4 +2.6**
comp=Z,2µmcomp=Z,122nm,1.0s
SRAK Srakaew 25.36 288 P **P 23 00 18.3 -1.1**
comp=Z,5µmcomp=Z,428nm,1.4s
KASI Kota Agung 25.38 242 P **P 23 00 22.1 +2.5**
comp=Z,2µmcomp=Z,243nm,0.9s
LHSI Lahat 25.50 246 P **P 23 00 22.6 +1.9**
comp=Z,207nm,0.9s
NONG Nongkai 25.63 298 P **P 23 00 27.3 +5.5**
comp=Z,72nm,1.6s
IPM Ipoh 25.74 266 P **P 23 00 23.6 +0.7**
IPM IAmb IAmb 23 00 28.3
comp=Z,72nm,0.9s
IPM Ipoh 25.74 266 P **P 23 00 24.0 +1.1**
PMG Port Moresby 25.89 128 P **P 23 00 30.3 +6.1**
comp=Z,5.6nm,0.3s,baz=305,slow=18,SNR=1.6
PMG LR LR 23 13 00.6
comp=Z,303nm,18.8s,baz=314,slow=42
PMG Port Moresby 25.89 128 *i* P **P 23 00 23.8 -0.4**
PMG pmax pmax
comp=Z,14nm,1.0s
CHAI Chaiyaphum 25.93 293 P **P 23 00 27.1 +2.6**
comp=Z,707nmcomp=Z,78nm,1.4s
KULM Kulim 26.03 268 P **P 23 00 27.6 +2.1**
KULM IAmb IAmb 23 00 45.1
comp=Z,112nm,1.1s
KULM Kulim 26.03 268 P **P 23 00 29.0 +3.5**
NJ2 Nanjing 26.22 345 *e*P **P 23 00 27.1 +0.2**
NJ2 S **S 23 04 56.4 +1.6**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 LR LR
comp=Z,300nm,15.6s
NJ2 LR LR
comp=Z,270nm,15.6s
NJ2 LR LR
comp=Z,530nm,15.7s
MNAI Manna 26.23 246 P **P 23 00 28.9 +1.5**
KSI Kapahiang 26.28 247 P **P 23 00 27.9 +0.1**
comp=Z,2µmcomp=Z,243nm,0.6s
SDSI Sungai Dareh 26.44 254 P **P 23 00 29.3 +0.1**
comp=Z,27µmcomp=Z,2µmcomp=Z,130nm,1.1s
SLVN Son La 26.44 305 P **P 23 00 29.0 -0.2**
BKNI Bangkinang 26.47 257 P sP 23 00 48.2 -2.9
BKNI Bangkinang 26.47 257 P **P 23 00 30.5 +1.1**
BKNI IAmb IAmb 23 00 49.0
comp=Z,111nm,1.0s
JNU Nakatsue 26.49 8 P **P 23 00 29.4 0.0**
comp=Z,11nm,0.9s,baz=186,slow=7.8,SNR=4.3
JNU Nakatsue 26.49 8 P **P 23 00 29.5 0.0**
XMIS Christmas Isla 27.14 231 P **P 23 00 34.6 -0.9**
GYA Guiyang 27.40 318 *e*P **P 23 00 42.2 +4.4**
GYA PcP **PcP 23 03 55.4 -0.2**
GYA S **S 23 05 12.3 -1.6**
GYA pmax pmax
comp=Z,6.0nm,0.7s
GYA pmax pmax
comp=Z,250nm,6.0s
GYA LR LR
comp=Z,620nm,19.8s
WB0 Warramunga Arr 27.42 164 IAmb IAmb 23 00 53.1
comp=Z,28nm,0.7s
PHET Kog Krachan 27.43 285 P **P 23 00 40.7 +2.6**
comp=Z,70nm,0.8s
KRVT Keravat (AS076 27.49 113 LR LR 23 09 35.7
comp=Z,311nm,21.2s,baz=270,slow=32
WRAB Tennant Creek 27.56 164 P **P 23 00 40.1 +0.9**
WRAB pmax pmax
comp=Z,27nm,0.6s
WRAB Tennant Creek 27.56 164 P **P 23 00 40.1 +0.9**
WRAB IAmb IAmb 23 00 57.3
comp=Z,27nm,0.6s
WRA Warramunga Arr 27.57 165 P **P 23 00 39.5 +0.2**
comp=Z,5.5nm,0.5s,baz=346,slow=12,SNR=26
WRA pP **pP 23 00 53.1 -0.2**
comp=Z,15nm,0.5s,baz=350,slow=10,SNR=11
WRA PcP **PcP 23 03 55.9 0.0**
comp=Z,4.5nm,0.6s,baz=329,slow=2.5,SNR=3.0
WRA S **S 23 05 11.6 -4.8**
comp=Z,3.6nm,1.1s,baz=339,slow=14,SNR=2.3
WRA LR LR 23 15 05.9
comp=Z,222nm,18.9s,baz=340,slow=44
WRA P3KPbc 23 33 06.8
comp=Z,0.4nm,1.1s,baz=156,slow=3.9,SNR=1.5
WRA Warramunga Arr 27.57 165 P **P 23 00 39.3 +0.1**
WB2 Warramunga Arr 27.57 164 IAmb IAmb 23 00 54.7
comp=Z,30nm,0.7s
RABL Rabaul 27.57 113 P **P 23 00 40.7 +1.3**
WC3 Warramunga Arr 27.59 164 P **P 23 00 40.6 +1.1**
WC3 IAmb IAmb 23 01 00.4
comp=Z,30nm,0.7s
JMN Monobe 27.61 13 P **P 23 00 40.2 +0.6**
JMN IAmb IAmb 23 00 59.6
comp=Z,38nm,0.9s
MNSI Mandailing Nat 27.78 259 P **P 23 00 44.1 +2.9**
comp=Z,6µmcomp=Z,31nm,0.6s
UTTA Uttaradit 27.81 295 P P 23 00 50.6 +9.1
PSI Prapat 28.04 263 P **P 23 00 45.7 +2.0**
comp=Z,7.1nm,0.4s,baz=359,slow=1.9,SNR=5.7
PSI pP **pP 23 00 59.2 +0.9**
comp=Z,27nm,0.9s,baz=172,slow=2.5,SNR=4.1
PSI Prapat 28.04 263 P **P 23 00 45.7 +2.0**
PSI pmax pmax
comp=Z,33nm,0.9s
RPSI Rantau Prapat 28.06 263 P **P 23 00 45.7 +2.0**
RPSI IAmb IAmb 23 01 01.5
comp=Z,32nm,0.9s
UTHA Uthaitani 28.18 290 P **P 23 00 47.9 +3.1**
comp=Z,520nmcomp=Z,57nm,0.9s
SUKH Sukhothai 28.56 294 P **P 23 00 51.1 +3.0**
comp=Z,40nm,0.8s
SISI Saibi 28.79 255 P **P 23 00 49.5 -0.7**
PSAD1 Pilbara Seismi 28.87 194 P **P 23 00 51.5 +0.7**
PSAC1 Pilbara Seismi 28.95 194 P **P 23 00 52.5 +1.0**
PSAC2 Pilbara Seismi 28.96 193 P **P 23 00 52.6 +1.0**
PSAB2 Pilbara Seismi 28.96 193 P **P 23 00 52.3 +0.7**
PSAA2 Pilbara Seismi 28.97 193 P **P 23 00 52.7 +1.0**
PSA00 Pilbara Seismi 28.98 193 P **P 23 00 53.0 +1.2**
PSAB1 Pilbara Seismi 28.98 193 P **P 23 00 52.4 +0.6**
PSAA3 Pilbara Seismi 28.99 193 P **P 23 00 53.0 +1.1**
PSAA1 Pilbara Seismi 28.99 193 P **P 23 00 53.0 +1.2**
PAYA Payao 29.00 298 P **P 23 00 52.0 0.0**
comp=Z,4µmcomp=Z,486nm,0.9s
PSAD2 Pilbara Seismi 29.00 193 P **P 23 00 52.8 +0.9**
PSAD2 IAmb IAmb 23 01 11.3
comp=Z,58nm,0.8s
PSAB3 Pilbara Seismi 29.00 193 P **P 23 00 53.1 +1.2**
PSAC3 Pilbara Seismi 29.03 193 P **P 23 00 53.3 +1.0**
PSAC3 IAmb IAmb 23 01 11.6
comp=Z,95nm,1.0s
PSAD3 Pilbara Seismi 29.07 194 P **P 23 00 53.8 +1.3**
PSAD3 IAmb IAmb 23 01 11.9
comp=Z,84nm,0.9s
KCSI Kotacane, Aceh 29.07 265 P **P 23 00 55.9 +3.1**
comp=Z,104nm,0.9s
KMI Kunming 29.36 311 *e*P **P 23 00 56.3 +0.9**
KMI pP pP 23 01 11.3 +0.8
KMI S **S 23 05 45.2 +0.2**
KMI pmax pmax
comp=Z,13nm,1.6s
KMI pmax pmax
comp=Z,190nm,6.0s
KMI LR LR
comp=Z,480nm,20.1s
KMI LR LR
comp=Z,740nm,21.1s
KMI LR LR
comp=Z,1µm,21.1s
KMI Kunming 29.36 311 P **P 23 00 56.0 +0.6**
KMI pmax pmax
comp=Z,19nm,1.2s
KMI Kunming 29.36 311 P **P 23 00 56.0 +0.6**
CM04 Chiang Mai Arr 29.45 296 P **P 23 00 58.8 +2.8**
comp=Z,123nmcomp=Z,16nm,1.1s
CM09 Chiang Mai Arr 29.45 296 P **P 23 00 59.0 +3.0**
comp=Z,150nmcomp=Z,16nm,1.0s
JWT Wachi 29.46 14 IAmb IAmb 23 01 12.1
comp=Z,21nm,0.6s
CM01 Chiang Mai Arr 29.47 296 P P 23 01 01.0 +4.8
comp=Z,163nmcomp=Z,18nm,1.1s
CM05 Chiang Mai Arr 29.48 296 P **P 23 00 59.0 +2.7**
comp=Z,102nmcomp=Z,12nm,1.0s
CM02 Chiang Mai Arr 29.48 296 P **P 23 00 59.8 +3.4**
comp=Z,123nmcomp=Z,15nm,1.1s
CM31 Chiang Mai Arr 29.50 296 P **P 23 00 59.9 +3.4**
comp=Z,242nm,0.7s
CM31 Chiang Mai Arr 29.50 296 P **P 23 00 57.6 +1.1**
CMAR Chiang Mai Arr 29.50 296 P **P 23 00 57.3 +0.8**
comp=Z,3.2nm,0.7s,baz=97,slow=7.8,SNR=13
CMAR pP **pP 23 01 12.6 +1.3**
comp=Z,8.8nm,0.8s,baz=119,slow=6.6,SNR=5.5
CMAR PcP **PcP 23 04 01.6 +0.8**
comp=Z,2.8nm,0.8s,baz=102,slow=1.1,SNR=4.5
CMAR ScP **ScP 23 07 36.5 -1.1**
comp=Z,0.7nm,0.4s,baz=48,slow=1.3,SNR=2.7
CMAR LR LR 23 13 02.4
comp=Z,744nm,18.7s,baz=166,slow=37
CMAR Chiang Mai Arr 29.50 296 *ce*P **P 23 00 57.7 +1.2**
CMAR pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 29.50 296 P **P 23 00 56.5 +0.1**
CM15 Chiang Mai Arr 29.51 296 P P 23 01 02.0 +5.4
CM13 Chiang Mai Arr 29.52 296 P P 23 01 02.0 +5.4
comp=Z,128nmcomp=Z,16nm,1.0s
CMMT Chiang Mai 29.61 296 P **P 23 00 58.5 +1.1**
comp=Z,9.5nm,1.1s
CHTO Chiang Mai 29.62 296 P **P 23 00 58.0 +0.5**
CHTO pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 29.62 296 P **P 23 00 58.0 +0.5**
GSI Gunungsitoli 29.63 261 P P 23 01 02.8 +5.1
comp=Z,147nm,0.8s
GSI Gunungsitoli 29.63 261 P **P 23 00 56.5 -1.2**
LHMI Lhok Sumawe 29.71 269 P **P 23 00 57.4 -1.0**
LHMI IAmb IAmb 23 01 16.3
comp=Z,68nm,0.9s
QIS Mount Isa 29.94 155 P **P 23 01 01.0 +0.7**
baz=30,SNR=32
INU Inuyama 29.95 17 IAmb IAmb 23 01 15.1
comp=Z,35nm,0.8s
MTSU Mount Surprise 30.20 145 P **P 23 01 03.6 +1.0**
baz=30,SNR=12
JGF Kuroka 30.29 17 P **P 23 01 03.2 -0.1**
JGF IAmb IAmb 23 01 19.6
comp=Z,18nm,0.7s
MHMT Maesarieng 30.32 295 P **P 23 01 08.1 +4.4**
KSAR Wonju Array Be 30.54 2 P **P 23 01 06.5 +1.1**
KSAR Wonju Array Be 30.54 2 P **P 23 01 06.5 +1.1**
KSRS Korea Array 30.56 2 P **P 23 01 05.0 -0.6**
comp=Z,1.1nm,0.5s,baz=180,slow=7.8,SNR=2.3
KSRS pP **pP 23 01 19.9 +0.4**
comp=Z,2.9nm,0.8s,baz=178,slow=10,SNR=4.9
KSRS LR LR 23 14 55.7
comp=Z,220nm,19.3s,baz=182,slow=39
ASAR Alice Springs 31.04 167 P **P 23 01 10.2 +0.2**
comp=Z,5.8nm,0.4s,baz=341,slow=6.7,SNR=55
ASAR pP **pP 23 01 24.3 +0.2**
comp=Z,11nm,0.5s,baz=343,slow=7.4,SNR=8.3
ASAR PcP **PcP 23 04 05.0 +0.2**
comp=Z,8.2nm,0.5s,baz=345,slow=2.5,SNR=9.2
ASAR S **S 23 06 09.6 -1.4**
comp=Z,1.1nm,0.8s,baz=351,slow=17,SNR=1.6
ASAR LR LR 23 16 12.4
comp=Z,361nm,19.8s,baz=350,slow=41
ASAR Alice Springs 31.04 167 P **P 23 01 10.1 +0.1**
MJAR Matsushiro Arr 31.41 18 P **P 23 01 12.8 -0.4**
comp=Z,3.6nm,0.6s,baz=191,slow=9.1,SNR=12
MJAR pP **pP 23 01 25.4 -1.6**
comp=Z,8.8nm,0.7s,baz=192,slow=9.1,SNR=10
MJAR LR LR 23 12 06.4
comp=Z,136nm,22.0s,baz=205,slow=33
MJAR Matsushiro Arr 31.41 18 P **P 23 01 13.2 0.0**
MJAR pmax pmax
comp=Z,5.0nm,0.8s
MJAR Matsushiro Arr 31.41 18 P **P 23 01 13.2 0.0**
MAJO Matsushiro 31.42 18 P **P 23 01 11.5 -1.7**
MAJO pmax pmax
comp=Z,20nm,0.9s
MAJO Matsushiro 31.42 18 P **P 23 01 11.5 -1.7**
MAJO IAmb IAmb 23 01 28.7
comp=Z,20nm,0.8s
MAT Matsushiro 31.42 18 P **P 23 01 12.1 -1.1**
MAT *e*S **S 23 06 21.4 +4.8**
WRKA Warakurna 31.65 177 P **P 23 01 16.1 +0.7**
baz=32,SNR=9.2
GIRL Giralia 31.71 202 P **P 23 01 17.6 +1.7**
baz=32,SNR=3.4
GIRL Giralia 31.71 202 P 23 01 16.2 +0.3
XAN Xi'an 31.77 331 P **P 23 01 15.6 -0.7**
XAN S **S 23 06 25.2 +3.0**
XAN pmax pmax
comp=Z,9.0nm,0.5s
XAN pmax pmax
comp=Z,160nm,4.1s
XAN LR LR
comp=Z,680nm,22.1s
XAN LR LR
comp=Z,480nm,21.4s
XAN LR LR
comp=Z,1µm,25.0s
XAN Xi'an 31.77 331 P **P 23 01 15.6 -0.7**
XAN pmax pmax
comp=Z,24nm,0.8s
XAN Xi'an 31.77 331 P **P 23 01 15.6 -0.7**
XAN IAmb IAmb 23 01 20.0
comp=Z,24nm,0.8s
CD2 Chengdu 32.28 321 P **P 23 01 20.9 0.0**
CD2 S **S 23 06 30.9 +0.6**
CD2 pmax pmax
comp=Z,50nm,1.3s
CD2 pmax pmax
comp=Z,500nm,7.4s
CD2 LR LR
comp=Z,1µm,12.1s
CD2 LR LR
comp=Z,1µm,15.1s
CD2 LR LR
comp=Z,1µm,17.7s
DL2 Dalian 32.33 352 P P 23 01 26.7 +5.6
DL2 pP sP 23 01 47.2 +4.7
DL2 S **S 23 06 38.4 +7.8**

DL2 pmax pmax
comp=Z,28nm,0.7s
DL2 LR LR
comp=Z,260nm,16.7s
DL2 LR LR
comp=Z,380nm,17.0s
DL2 LR LR
comp=Z,450nm,16.4s
JSD Sado 32.82 17 P **P** **23 01 25.2 -0.2**
JSD IAmb IAmb 23 01 44.3
comp=Z,37nm,0.9s
CTA Charters Tower 32.85 145 P **P** **23 01 26.6 +0.7**
comp=Z,1.5nm,0.3s,baz=329,slow=10,SNR=4.8
CTA pP **pP** **23 01 39.8 +0.7**
comp=Z,18nm,0.9s,baz=325,slow=12,SNR=11
CTAO Charters Tower 32.85 145 P **P** **23 01 26.6 +0.7**
CTAO pmax pmax
comp=Z,23nm,1.0s
CTAO Charters Tower 32.85 145 P **P** **23 01 26.6 +0.7**
CTAO IAmb IAmb 23 01 42.3
comp=Z,23nm,1.0s
PBA Port Blair 33.94 281 P P 23 01 34.9 -0.6
MEEK Meekatharra 34.15 193 P **P** **23 01 37.5 +0.4**
baz=34,SNR=8.4
BJT Baijiatuan 34.45 346 IAmb IAmb 23 01 46.0
comp=Z,25nm,0.8s
BJI Beijing 34.47 346 P P 23 01 44.8 +5.1
BJI pP pP 23 01 55.5 +1.4
BJI S **S** **23 07 07.7 +4.0**
BJI pmax pmax
comp=Z,33nm,0.7s
BJI LR LR
comp=Z,200nm,13.7s
BJI LR LR
comp=Z,300nm,19.8s
LZH Lanzhou 35.95 327 *e*P **P** **23 01 53.8 +1.0**
LZH pP sP 23 02 11.2 -2.9
LZH sP pP 23 02 23.1 +16
LZH *e*S **S** **23 07 26.7 -0.4**
LZH pmax pmax
comp=Z,49nm,1.2s
LZH pmax pmax
comp=Z,310nm,4.6s
LZH LR LR
comp=Z,650nm,13.6s
LZH LR LR
comp=Z,1μm,17.1s
LZH LR LR
comp=Z,1μm,17.6s
SAIH SAIHA 36.12 299 *e*P **P** **23 01 54.2 -0.1**
SAIH *i* x x 23 02 13.8
KOHI KOHIMA 36.43 305 *e*P **P** **23 01 55.9 -1.0**
HHC Hu-ho-hao-te 36.55 340 *e*P **P** **23 01 59.3 +1.5**
HHC PP **PnPn** **23 03 24.6 +2.3**
HHC S **S** **23 07 37.8 +1.7**
HHC pmax pmax
comp=Z,9.0nm,0.9s
HHC pmax pmax
comp=Z,190nm,7.3s
HHC LR LR
comp=Z,390nm,20.3s
HHC LR LR
comp=Z,340nm,16.8s
HHC LR LR
comp=Z,560nm,18.4s
HNR Honiara 36.75 116 P **P** **23 02 01.3 +1.6**
comp=Z,47nm,0.3s,baz=156,slow=14,SNR=4.3
BTO Baotou 36.88 339 *e*P P 23 02 10.0 +9.5
CN2 Changchun 36.90 358 *e*P **P** **23 02 03.5 +3.0**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
MORW Morawa 37.11 196 P **P** **23 02 03.5 +1.0**
baz=37,SNR=12
QLP Quilpie 37.23 154 P **P** **23 02 04.5 +1.0**
baz=37,SNR=4.8
FORT Forrest 37.36 178 P **P** **23 02 05.5 +1.0**
baz=38,SNR=8.7
ZIRO ZIRO 37.43 307 *e*P **P** **23 02 04.9 -0.6**
USA0B Ussuriysk Arra 37.55 6 P **P** **23 02 06.5 +0.4**
USA0B pmax pmax
comp=Z,9.0nm,0.8s
USA0B Ussuriysk Arra 37.55 6 P **P** **23 02 06.5 +0.4**
USRK Ussuriysk Ar. 37.55 6 P **P** **23 02 06.0 0.0**
comp=Z,3.9nm,0.6s,baz=186,slow=7.7,SNR=21
USRK pP **pP** **23 02 20.4 0.0**
comp=Z,7.3nm,0.7s,baz=197,slow=8.9,SNR=8.1
MDJ Mudanjiang 37.77 3 P **P** **23 02 09.3 +1.4**
MDJ pmax pmax
comp=Z,5.0nm,0.7s
MDJ pmax pmax
comp=Z,18nm,3.8s
TEZP TEZPUR 37.87 305 *e*P **P** **23 02 08.9 -0.1**
TEZP *i* pP **pP** **23 02 22.6 -1.5**
JEW Eniwo 38.18 18 P **P** **23 02 10.0 -1.4**
SHL Shillong 38.19 303 *e*P **P** **23 02 11.5 -0.5**
SHL *i* pP **pP** **23 02 25.8 -1.3**
SHL Shillong 38.19 303 P **P** **23 02 11.8 -0.2**
SNR=9.7
KMBL Kambalda 38.22 187 P **P** **23 02 12.6 +0.8**
baz=38,SNR=25
TEY Ternei 39.06 11⇑ *e*P **P** **23 02 19.2 +0.5**
TEY pmax pmax
comp=N,20nm,1.4s
TEY pmax pmax
comp=Z,20nm,1.4s
KLBR Kellerberrin 39.11 192 P **P** **23 02 20.6 +1.3**
baz=39,SNR=14
ASAJ Asahikawa 39.69 18 P **P** **23 02 25.3 +1.3**
comp=Z,11nm,0.4s,baz=216,slow=8.2,SNR=11
ASAJ pP **pP** **23 02 39.2 +1.0**
comp=Z,21nm,0.6s,baz=197,slow=7.7,SNR=4.5
ASAJ Asahikawa 39.69 18 P **P** **23 02 23.9 -0.1**
ASAJ pmax pmax
comp=Z,17nm,0.6s
JKA Kamikawa-asahi 39.69 18 P **P** **23 02 23.9 0.0**
JKA IAmb IAmb 23 02 41.1
comp=Z,17nm,0.6s
EIDS Eidsvold 39.74 144 P **P** **23 02 25.1 +0.5**
baz=40,SNR=3.2
EIDS Eidsvold 39.74 144 P **P** **23 02 24.9 +0.3**
MUN Mundaring 39.84 194 P **P** **23 02 26.2 +0.9**
baz=40,SNR=12
BBOO Buckleboo 40.34 168 P **P** **23 02 30.3 +0.8**
baz=41,SNR=54
BBOO Buckleboo 40.34 168 P **P** **23 02 30.3 +0.8**
KWAJ Kwajalein Atol 40.49 84 P **P** **23 02 30.2 -0.8**
KWAJ pmax pmax
comp=Z,164nm,0.9s
KWAJ Kwajalein Atol 40.49 84 P **P** **23 02 30.1 -0.8**
NWAO Narrogin (SRO) 40.51 192 P **P** **23 02 31.8 +0.9**
comp=Z,32nm,0.6s,baz=24,slow=7.7,SNR=27
NWAO pP **pP** **23 02 45.7 +0.4**
comp=Z,117nm,0.9s,baz=19,slow=7.3,SNR=11
NWAO Narrogin (SRO) 40.51 192 P **P** **23 02 31.9 +1.0**
baz=41,SNR=5.3
NWAO Narrogin (SRO) 40.51 192 P **P** **23 02 31.9 +1.0**
NWAO pmax pmax
comp=Z,156nm,1.1s
NWAO Narrogin (SRO) 40.51 192 P **P** **23 02 31.9 +0.9**
LSA Lhasa 40.53 309 P **P** **23 02 31.8 0.0**
LSA pmax pmax
comp=Z,58nm,1.3s
H11S3 WAKE ISLAND Hy 40.54 69 T T 23 46 53.3
baz=258,slow=75,SNR=96
H11S1 WAKE ISLAND Hy 40.55 69 T T 23 46 47.7
baz=258,slow=75,SNR=48
H11S2 WAKE ISLAND Hy 40.55 69 T T 23 46 51.5
baz=258,slow=75,SNR=63
GTA Gaotai 40.56 327 ⇑P **P** **23 02 31.8 +0.4**
GTA pP pwP 23 02 51.2 +1.8
GTA sP sP 23 03 00.2 +7.3
GTA PcP **PcP** **23 04 32.9 +0.1**
GTA S **S** **23 08 34.6 -1.9**
GTA sS sS 23 09 04.3 +3.7
GTA SS **SS** **23 11 32.1 -6.3**
GTA pmax pmax
comp=Z,21nm,1.2s
GTA pmax pmax
comp=Z,250nm,7.8s
GTA LR LR
comp=Z,540nm,20.0s
GTA LR LR
comp=Z,680nm,20.0s
GTA LR LR
comp=Z,1μm,18.9s
STKA Stephens Creek 40.95 161 P **P** **23 02 35.1 +0.5**
comp=Z,12nm,0.5s,baz=330,slow=9.1,SNR=31
STKA LR LR 23 22 39.8
comp=Z,192nm,19.0s,baz=342,slow=41
STKA Stephens Creek 40.95 161 P **P** **23 02 35.3 +0.8**
baz=41,SNR=27
STKA Stephens Creek 40.95 161 P **P** **23 02 35.3 +0.8**
STKA pmax pmax
comp=Z,6.0nm,0.7s
STKA Stephens Creek 40.95 161 P **P** **23 02 35.3 +0.8**
H11N1 WAKE ISLAND Hy 40.98 68 T T 23 47 46.3
baz=265,slow=74,SNR=42
H11N2 WAKE ISLAND Hy 40.99 68 T T 23 47 40.2
baz=265,slow=74,SNR=39
H11N3 WAKE ISLAND Hy 41.00 68 T T 23 47 33.2
baz=265,slow=74,SNR=47
GTK Tadong 41.58 304 *e*P **P** **23 02 41.0 +1.0**
HTT Hallett 41.61 165 P **P** **23 02 41.0 +1.0**
baz=42,SNR=8.3
CMSA Cobar Meteorol 42.16 156 P **P** **23 02 45.3 +0.8**
baz=42,SNR=6.8
RKGY Rocky Gully 42.19 192 P **P** **23 02 46.6 +1.9**
baz=42,SNR=24
YSS Yuzh-Sakhalins 42.32 16 *e*P **pP** **23 02 59.1 -0.7**
YSS *e* 23 12 31.0
YSS Yuzh-Sakhalins 42.32 16 P **P** **23 02 43.6 -1.9**
YSS IAmb IAmb 23 02 51.2
comp=Z,17nm,0.7s
TAPN Taplejung 42.33 304 *e*P **P** **23 02 45.9 -0.4**
comp=Z,23nm,0.5s
ODAN Odare 42.42 303 *e*P **P** **23 02 46.7 -0.3**
comp=Z,59nm,0.7s
KLR Kul'dur 42.52 5 P **P** **23 02 47.0 -0.2**
comp=Z,5.4nm,0.5s,baz=244,slow=4.1,SNR=26
KLR Kul'dur 42.52 5 *i* P **P** **23 02 44.8 -2.3**
KLR pmax pmax
comp=Z,3.0nm,0.8s
BOK Bokaro 42.73 298 *e*P **P** **23 02 49.9 +0.7**
BOK IAmb IAmb 23 02 57.1
comp=Z,6.6nm,0.6s
HIA Hailar 42.76 353 P **P** **23 02 49.5 +0.3**
HIA pmax pmax
comp=Z,7.0nm,0.5s
HIA Hailar 42.76 353 P **P** **23 02 49.5 +0.3**
RAMN Ramite 43.11 303 *e*P **P** **23 02 52.5 -0.1**
comp=Z,74nm,0.6s
ARMA Armidale 43.99 148 P **P** **23 03 00.2 +0.8**
baz=44,SNR=6.7
ARMA Armidale 43.99 148 P **P** **23 03 00.9 +1.5**
ARMA IAmb IAmb 23 03 17.3
comp=Z,22nm,0.8s
GUN Gumba 44.05 304 *e*P **P** **23 03 00.0 -0.2**
comp=Z,69nm,0.7s
ULN Ulaanbaatar 44.27 341 *ce*P **P** **23 03 01.1 -0.4**
ULN pmax pmax
comp=Z,27nm,1.3s
ULN Ulaanbaatar 44.27 341 P **P** **23 03 01.5 +0.1**
PKI Pulchoki 44.32 303 *e*P **P** **23 03 01.5 -0.9**
comp=Z,28nm,0.6s
PKIN Phulchoki 44.33 303 *e*P **P** **23 03 01.2 -1.2**
comp=Z,21nm,0.5s
SONM Songino Array 44.46 340 P **P** **23 03 03.0 0.0**
comp=Z,6.4nm,0.7s,baz=161,slow=7.4,SNR=22
SONM LR LR 23 22 12.4
comp=Z,404nm,21.7s,baz=153,slow=37
SONM Songino Array 44.46 340 P **P** **23 03 02.3 -0.6**
SONM pmax pmax
comp=Z,8.0nm,0.9s
SONM Songino Array 44.46 340 P **P** **23 03 02.3 -0.6**
DMN Daman 44.59 303 *e*P **P** **23 03 03.5 -0.9**
comp=Z,27nm,0.7s
GKN Gorkha 45.11 303 *e*P **P** **23 03 07.6 -0.9**
comp=Z,27nm,0.6s
YNG Young 45.68 155 P **P** **23 03 14.3 +1.7**
baz=46,SNR=5.6
SANVU Saraoutou 45.72 119 P **P** **23 03 13.7 +0.4**
KOLN Koldanda 45.90 302 *e*P **P** **23 03 14.4 -0.4**
comp=Z,48nm,0.6s
DANN Dangsing 45.95 303 *e*P **P** **23 03 14.8 -0.5**
comp=Z,80nm,0.6s
TARA Tarawa 46.31 95 P **P** **23 03 18.1 +0.1**
PYUN Piuthan 46.52 303 *e*P **P** **23 03 19.2 -0.4**
comp=Z,44nm,0.7s
CAN Canberra 46.81 155 IAmb IAmb 23 03 38.8
comp=Z,21nm,0.8s
ZEA Zeya 46.83 0 *e*P **P** **23 03 18.5 -2.8**
ZEA pmax pmax
comp=N,20nm,0.6s
ZEA pmax pmax
comp=Z,10.0nm,0.7s
CNB Canberra Magne 46.96 155 P **P** **23 03 24.2 +1.4**
baz=47,SNR=4.9
TOO Toolangi 47.45 160 P **P** **23 03 28.3 +1.8**
baz=48,SNR=4.4
TOO Toolangi 47.45 160 P **P** **23 03 27.3 +0.8**
TOO pmax pmax
comp=Z,21nm,1.2s
TOO Toolangi 47.45 160 P **P** **23 03 27.3 +0.8**
TOO IAmb IAmb 23 03 29.0
comp=Z,21nm,1.1s
ZAK Zakamensk 47.70 340 *e*P **pP** **23 03 39.4 -3.6**
ZAK pmax pmax
comp=Z,10.0nm,1.0s
HYB Hyderabad 48.21 287 *i* P **P** **23 03 32.0 -0.7**
NGP Nagpur 48.28 292 *e*P **P** **23 03 34.2 +1.0**
DZM Mont Dzumac 48.28 128 P **P** **23 03 34.9 +1.7**
comp=Z,9.8nm,0.5s,baz=294,slow=10.0,SNR=45
DZM pP **pP** **23 03 47.0 0.0**
comp=Z,10nm,0.7s,baz=290,slow=16,SNR=4.1
DZM Mont Dzumac 48.28 128 *e*P **P** **23 03 33.9 +0.6**
comp=Z,39nm,1.2s
DZM *ep*P **sP** **23 03 53.0 +0.1**
comp=Z,74nm,0.8s
DZM *e*S **S** **23 10 25.8 -3.2**
comp=Z,214nm,33.8s
DZM *e*LR LR 23 17 24.1
comp=Z,1μm,32.2s
DZM Mont Dzumac 48.28 128 P **P** **23 03 33.6 +0.4**
DZM IAmb IAmb 23 03 35.9
comp=Z,14nm,0.7s
TLY Talaya 48.68 341 P **P** **23 03 36.8 +1.0**
comp=Z,8.2nm,0.6s,baz=212,slow=12,SNR=9.5
TLY pP **pP** **23 03 51.2 +0.7**
comp=Z,6.1nm,0.8s,baz=222,slow=12,SNR=3.5
TLY LR LR 23 26 08.5
comp=Z,275nm,20.5s,baz=144,slow=38
TLY Talaya 48.68 341 *e*P **P** **23 03 39.8 +4.0**
TLY *e*S **S** **23 10 31.7 -2.0**
TLY *e*SS **SS** **23 13 55.2 -9.5**
TLY pmax pmax
comp=Z,28nm,0.9s
TLY MLR MLR
comp=Z,509nm,17.0s
TLY Talaya 48.68 341 P **P** **23 03 37.1 +1.3**
MOY Mondy 49.57 339 *e*P **P** **23 03 45.7 +3.0**
MOY pmax pmax
comp=Z,58nm,1.4s
BHPL Bhopal 50.14 295 *e*P **P** **23 03 46.8 -0.7**
BHPL IAmb IAmb 23 03 52.7
comp=Z,7.4nm,0.6s
WMQ Urumqi 50.30 324 *e*P **P** **23 03 48.6 +0.3**
WMQ PcP **PcP** **23 05 05.8 -0.6**
WMQ PcS **PcS** **23 09 01.3 -2.3**
WMQ pmax pmax
comp=Z,30nm,0.9s
WMQ pmax pmax
comp=Z,110nm,3.8s
WMQ LR LR
comp=Z,660nm,19.3s
WMQ LR LR
comp=Z,610nm,17.5s
WMQ LR LR
comp=Z,2μm,23.9s
WMQ Urumqi 50.30 324 P **P** **23 03 48.9 +0.5**
WMQ pmax pmax
comp=Z,22nm,0.9s
WMQ Urumqi 50.30 324 P **P** **23 03 48.9 +0.5**
WMQ IAmb IAmb 23 03 50.8
comp=Z,22nm,0.9s
BOD Bodaibo 51.88 351 *e*P **P** **23 03 58.2 -1.6**
BOD pmax pmax
comp=Z,22nm,1.3s
PETK Petropavlovsk- 52.61 23 P **P** **23 04 06.6 +1.3**
comp=Z,11nm,0.6s,baz=186,slow=4.5,SNR=21
PETK pP **pP** **23 04 19.9 0.0**
comp=Z,29nm,0.6s,baz=188,slow=5.5,SNR=15
PETK Petropavlovsk- 52.61 23 P **P** **23 04 06.8 +1.4**
PET Petropavlovsk 52.92 24 *e*P **pP** **23 04 24.4 +2.2**
PET *e*S S 23 11 50.4 +18
PET pmax pmax
comp=Z,75nm,0.6s
DHRM DHARAMSHALA 53.30 305 *e*P **P** **23 04 10.3 -0.8**
DHRM IAmb IAmb 23 04 12.9
comp=Z,30nm,0.6s
ZSN Zaisan 54.02 326 *i* P **P** **23 04 15.7 -0.1**
baz=326
ZSN *e*S **S** **23 11 46.5 -0.9**
baz=326
ZSN Zaisan 54.02 326 *i* P **P** **23 04 15.7 -0.1**
ZSN *e*S **S** **23 11 46.4 -0.9**
FUNA Funafuti 54.41 105 P **P** **23 04 20.4 +1.2**
SHLS Shalkode 55.08 319⇑ *i*P **P** **23 04 21.9 -1.8**
comp=Z,40nm,1.5s,baz=319
SHLS Shalkode 55.08 319 *c* *i*P **P** **23 04 21.9 -1.8**
SHLS pmax pmax
comp=Z,40nm,1.5s
MK31 Makanchi Array 55.12 324 *ce*P **P** **23 04 23.5 -0.3**
MK31 Makanchi Array 55.12 324 IAmb IAmb 23 04 24.4
comp=Z,14nm,0.7s
MKAR Makanchi Array 55.12 324 P **P** **23 04 24.0 +0.2**
comp=Z,20nm,0.6s,baz=118,slow=7.6,SNR=295
MKAR pP **pP** **23 04 38.9 -0.5**
comp=Z,13nm,0.5s,baz=121,slow=7.9,SNR=9.5
MKAR LR LR 23 30 01.4
comp=Z,402nm,19.1s,baz=106,slow=38
MKAR Makanchi Array 55.12 324 *i* P **P** **23 04 23.7 -0.1**
MKAR pmax pmax
comp=Z,20nm,0.6s
MKAR Makanchi Array 55.12 324 P **P** **23 04 23.9 +0.1**
YAK Yakutsk 55.18 2 P **P** **23 04 23.7 -0.2**
comp=Z,4.8nm,0.3s,baz=243,slow=4.9,SNR=4.2
YAK Yakutsk 55.18 2 *e*P **P** **23 04 22.7 -1.2**
YAK *e**PP **sP** **23 04 50.3 +5.1**
YAK *e* 23 05 23.7
YAK *e* 23 06 24.9
YAK *e*PPP PPP 23 07 37.8
YAK *e*S **S** **23 12 00.0 -2.4**
YAK *e* 23 14 03.5
YAK *e*SS **SS** **23 15 46.8 -0.5**
YAK pmax pmax
comp=Z,9.0nm,0.8s
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=E,6.0nm,1.3s
YAK pmax pmax
comp=Z,141nm,3.2s
YAK pmax pmax
comp=N,128nm,2.8s
YAK pmax pmax
comp=E,157nm,3.5s
YAK smax smax
comp=N,24nm,1.8s
YAK smax smax
comp=E,23nm,1.6s
YAK Yakutsk 55.18 2 P **P** **23 04 24.0 +0.1**
YAK IAmb IAmb 23 04 41.2
comp=Z,32nm,1.0s
MAKZ Makanchi 55.31 324 P **P** **23 04 25.2 0.0**
MAKZ pmax pmax
comp=Z,18nm,0.7s
MAKZ Makanchi 55.31 324 P **P** **23 04 25.2 0.0**
MAKZ IAmb IAmb 23 04 25.7
comp=Z,18nm,0.7s
KPKS Kokpek 55.72 319⇑ *i*P **P** **23 04 28.3 0.0**
comp=Z,58nm,1.6s,baz=319
KPKS Kokpek 55.72 319 *c* *i*P **P** **23 04 28.3 0.0**
KPKS pmax pmax
comp=Z,58nm,1.6s
SATY Saty 55.73 318⇑ *i*P **P** **23 04 28.6 +0.2**
comp=Z,41nm,1.7s,baz=318
SATY Saty 55.73 318 *c* *i*P **P** **23 04 28.6 +0.2**
SATY pmax pmax
comp=Z,41nm,1.7s
MA2 Magadan 55.76 14 P **P** **23 04 28.4 +0.2**
comp=Z,4.6nm,0.5s,baz=169,slow=16,SNR=1.2
MA2 LR LR 23 26 00.1
comp=Z,64nm,20.5s,baz=202,slow=34
KSH Kashi 55.97 314 P **P** **23 04 31.3 +1.1**
KSH pP sP 23 04 52.3 -0.3
KSH S **S** **23 12 09.6 -4.4**
KSH SS **SS** **23 16 06.1 +5.3**
KSH pmax pmax
comp=Z,140nm,1.6s
KSH pmax pmax
comp=Z,250nm,4.8s
KSH LR LR
comp=Z,1μm,12.8s
KSH LR LR
comp=Z,780nm,11.5s
KSH LR LR
comp=Z,1μm,19.9s
KDJ Kajisay 56.15 317 IAmb IAmb 23 04 32.4
comp=Z,23nm,0.7s
NIL Nilore 56.15 306 P **P** **23 04 31.2 -0.3**
NIL pmax pmax
comp=Z,33nm,0.9s
NIL Nilore 56.15 306 P **P** **23 04 31.2 -0.3**
MSVF Nonsavu 56.16 116 P **P** **23 04 32.0 +0.2**
MSVF pmax pmax
comp=Z,48nm,1.1s
MSVF Nonsavu 56.16 116 P **P** **23 04 32.0 +0.2**
TDK Taldyqorghan 56.60 321 *e*P **P** **23 04 34.5 0.0**
baz=320
TDK Taldyqorghan 56.60 321 *e*P **P** **23 04 34.4 0.0**
MDOK Medeo 56.67 318 *i* P **P** **23 04 35.1 0.0**
comp=Z,264nm,1.6s,baz=318
MDOK Medeo 56.67 318 *i* P **P** **23 04 35.1 0.0**
MDOK pmax pmax
comp=Z,264nm,1.6s
TNSS Tian-Shan 56.68 318 *i* P **P** **23 04 35.8 +0.3**
baz=318
TNSS Tian-Shan 56.68 318 *i* P **P** **23 04 35.8 +0.3**
KUU Kurty 57.44 319⇑ *i*P **P** **23 04 40.4 0.0**
comp=Z,114nm,1.5s,baz=318
KUU Kurty 57.44 319 *c* *i*P **P** **23 04 40.4 0.0**
KUU pmax pmax
comp=Z,114nm,1.5s
TKM2 Tokmak 2 57.54 317 P **P** **23 04 41.6 +0.2**
SNR=11
KBK Karagaybulak 57.88 317 P **P** **23 04 44.1 +0.4**
SNR=13
ZAA0 Zalesovo Array 57.93 332 IAmb IAmb 23 04 46.2
comp=Z,15nm,0.8s
ZALV Zalesovo Beam 57.93 332 P **P** **23 04 42.6 -1.0**
comp=Z,12nm,0.6s,baz=125,slow=6.7,SNR=39
ZALV LR LR 23 30 58.7
comp=Z,292nm,21.3s,baz=134,slow=37
ZALV PKP2bc 23 34 39.0
comp=Z,0.4nm,0.7s,baz=318,slow=1.9,SNR=1.7
ZALV Zalesovo Beam 57.93 332 *i* P **P** **23 04 42.4 -1.2**
ZALV pmax pmax
comp=Z,12nm,0.6s
ZALV Zalesovo Beam 57.93 332 P **P** **23 04 42.0 -1.6**
CHMS Chumysh 58.14 317 P **P** **23 04 45.2 -0.2**
SNR=11
FRU1 Bishkek 58.15 317 P **P** **23 04 45.9 +0.4**
FRU1 pmax pmax
comp=Z,13nm,0.9s
FRU1 Bishkek 58.15 317 P **P** **23 04 45.9 +0.4**
FRU1 IAmb IAmb 23 05 01.4
comp=Z,12nm,0.9s
AAK Ala-Archa 58.18 317 P **P** **23 04 46.1 +0.3**
SNR=7.8
AAK Ala-Archa 58.18 317 *ce*P **P** **23 04 46.0 +0.3**
AAK pmax pmax
comp=Z,67nm,1.7s
AAK Ala-Archa 58.18 317 P **P** **23 04 45.3 -0.4**
AAK IAmb IAmb 23 04 46.9
comp=Z,7.6nm,0.7s
SGDS Sogindy 58.40 318 *i* P **P** **23 04 46.6 -0.6**
baz=317
SGDS Sogindy 58.40 318 *i* P **P** **23 04 46.5 -0.6**
USP Ospenovka 58.41 317 P **P** **23 04 47.3 0.0**
SNR=23
AML Almayashu 58.54 316 P **P** **23 04 49.0 +0.4**
SNR=17
EKS2 Erkin-Say 58.68 316 P **P** **23 04 49.7 +0.5**
SNR=14
SEY Seymchan 59.07 13 P **P** **23 04 54.0 +2.6**
comp=Z,1.6nm,0.4s,baz=214,slow=1.0,SNR=7.9
SEY Seymchan 59.07 13 *i* P **P** **23 04 49.3 -2.1**

KURK **Kurchatov** 59.23 327 *ce* P P 23 04 52.3 -0.4
KURK pmax pmax
comp=Z,57nm,1.3s
KURK **Kurchatov** 59.23 327 P P 23 04 52.3 -0.4
KURBB **Kurchatov Arra** 59.24 326 P P 23 04 52.6 -0.2
comp=Z,16nm,0.6s,baz=124,slow=6.5,SNR=90
BTLS **Baital** 59.41 319⇑ *iP* P 23 04 53.6 -0.5
comp=Z,24nm,1.7s,baz=319
BTLS **Baital** 59.41 319 *c iP* P 23 04 53.5 -0.5
BTLS pmax pmax
comp=Z,24nm,1.7s
KBL **Kabul** 59.76 306 P P 23 04 56.6 -0.4
SNR=8.4
KBL **Kabul** 59.76 306 P P 23 04 56.4 -0.6
KBL pmax pmax
comp=Z,16nm,0.8s
KBL **Kabul** 59.76 306 P P 23 04 56.4 -0.6
KBL IAmb IAmb 23 04 57.6
comp=Z,16nm,0.8s
BTK **Batken** 59.89 313 IAmb IAmb 23 04 58.8
comp=Z,25nm,0.9s
DZA **Taraz** 60.44 316 *e*P P 23 05 00.8 -0.4
baz=316
DZA **Taraz** 60.44 316 *e*P P 23 05 00.8 -0.4
OUZ **Omahuta** 60.71 137 P P 23 05 03.5 +0.4
CHGR **Chuyangaron** 60.71 311 P P 23 05 03.2 0.0
KK06 **Karatay Array** 61.07 316 P P 23 05 05.1 -0.4
KK05 **Karatay Array** 61.08 316 P P 23 05 04.8 -0.7
KK02 **Karatay Array** 61.08 316 P P 23 05 05.1 -0.5
KK31 **Karatay Array** 61.08 316 P P 23 05 05.2 -0.3
KK31 pmax pmax
comp=Z,17nm,0.9s
KK31 **Karatay Array** 61.08 316 P P 23 05 05.2 -0.3
KK31 IAmb IAmb 23 05 07.0
comp=Z,17nm,0.8s
KKAR **Karatay Array** 61.08 316 P P 23 05 05.0 -0.5
KKAR **Karatay Array** 61.08 316 P P 23 05 05.0 -0.5
KKAR **Karatay Array** 61.08 316 IAmb IAmb 23 05 07.0
comp=Z,17nm,0.8s
KK07 **Karatay Array** 61.08 316 P P 23 05 04.8 -0.8
KK01 **Karatay Array** 61.08 316 P P 23 05 05.1 -0.5
KK04 **Karatay Array** 61.08 316 P P 23 05 05.0 -0.6
KK03 **Karatay Array** 61.09 316 P P 23 05 05.2 -0.3
KK09 **Karatay Array** 61.09 316 P P 23 05 05.2 -0.5
KK08 **Karatay Array** 61.10 316 P P 23 05 05.5 -0.2
IUG **luzhnay** 61.10 315⇑ *iP* P 23 05 05.8 -0.1
comp=Z,33nm,1.7s,baz=314
IUG **luzhnay** 61.10 315 *c iP* P 23 05 05.7 -0.1
IUG pmax pmax
comp=Z,33nm,1.7s
TAS **Tashkent** 61.38 314 P P 23 05 07.3 -0.3
TAS pmax pmax
comp=Z,37nm,1.0s
TAS **Tashkent** 61.38 314 P P 23 05 07.3 -0.3
KNTN **Kanton** 62.11 97 P P 23 05 14.1 +1.2
BRZS **Berezniki** 62.27 324⇑ *iP* P 23 05 13.1 -0.4
comp=Z,23nm,1.5s,baz=324
BRZS **Berezniki** 62.27 324 *c iP* P 23 05 13.0 -0.4
BRZS pmax pmax
comp=Z,23nm,1.5s
JOHN **Johnston Islan** 62.91 75 P P 23 05 18.9 +0.7
QRZ **Quartz Range** 63.28 143 P P 23 05 20.4 +0.2
QRZ IAmb IAmb 23 05 32.4
comp=Z,14nm,1.0s
HIZ **Hauiti** 63.39 139 P P 23 05 18.0 -2.9
FOZ **Fox Glacier** 63.41 146 P P 23 05 20.7 -0.3
PYZ **Puysegur Point** 63.56 150 P P 23 05 20.6 -1.3
NNZ **Nelson** 64.03 142 P P 23 05 24.1 -1.1
THZ **Tophouse** 64.07 143 P 23 05 25.2 -0.3
THZ IAmb IAmb 23 05 42.3
comp=Z,15nm,0.6s
LBZ **Lake Benmore** 64.17 147 P 23 05 26.6 +0.6
LBZ IAmb IAmb 23 05 42.1
comp=Z,17nm,0.7s
RPZ **Rata Peaks** 64.22 146 P P 23 05 26.8 +0.5
comp=Z,5.8nm,0.6s,baz=46,slow=4.6,SNR=3.8
RPZ pP pP 23 05 40.9 0.0
comp=Z,18nm,0.6s,baz=220,slow=3.6,SNR=7.2
RPZ **Rata Peaks** 64.22 146 P P 23 05 26.3 0.0
RPZ IAmb IAmb 23 05 44.8
comp=Z,18nm,0.7s
LTZ **Lake Taylor** 64.32 144 P P 23 05 27.3 +0.2
TUWZ **Tuamarina** 64.50 142 P P 23 05 27.2 -0.9
OXZ **Oxford** 64.53 145 P P 23 05 28.6 +0.3
OXZ IAmb IAmb 23 05 48.3
comp=Z,10.0nm,0.6s
BSWZ **Blackbirch Sta** 64.62 143 P P 23 05 28.7 -0.3
URZ **Urewera** 64.73 138 P P 23 05 29.5 -0.2
comp=Z,4.5nm,0.6s,baz=322,slow=12,SNR=2.3
URZ **Urewera** 64.73 138 P P 23 05 29.2 -0.5
BKZ **Black Stump Fm** 64.81 139 P P 23 05 30.6 +0.2
BKZ IAmb IAmb 23 05 47.4
comp=Z,14nm,0.8s
TIXI **Tiksi** 64.82 1 *ce*P P 23 05 27.3 -2.5
TIXI **Tiksi** 64.82 1 P P 23 05 29.1 -0.7
BVAR **Borovoye Array** 64.83 326 P P 23 05 30.5 +0.3
comp=Z,15nm,0.5s,baz=81,slow=12,SNR=62
KHZ **Kahutara** 64.84 143 P P 23 05 30.5 +0.1
KHZ IAmb IAmb 23 05 49.8
comp=Z,12nm,0.7s
BRVK **Borovoye** 64.90 326 *ce*P P 23 05 30.1 -0.6
BRVK pmax pmax
comp=Z,63nm,1.3s
BRVK **Borovoye** 64.90 326 P P 23 05 30.6 0.0
BRVK IAmb IAmb 23 05 32.2
comp=Z,33nm,0.8s
ATKA **Atka Island** 65.98 35 P 23 05 38.2 +0.5
BILL **Bilibino** 66.62 15 *i* P P 23 05 40.4 -1.0
BILL pmax pmax
comp=Z,26nm,1.6s
BILL MLR MLR
comp=Z,127nm,17.0s
WSAR **Wadi Sarin** 67.30 292 P P 23 05 45.9 -0.8
comp=Z,2.8nm,0.5s,baz=154,slow=5.4,SNR=4.9
NRIK **Noril'sk** 67.51 346 P P 23 05 46.5 -0.6
comp=Z,6.4nm,0.6s,baz=119,slow=7.7,SNR=8.8
NRIK pP pP 23 06 02.6 -0.2
comp=Z,16nm,0.6s,baz=136,slow=6.4,SNR=11
NRIK LR LR 23 38 38.7
comp=Z,405nm,18.9s,baz=195,slow=39
NRIK **Noril'sk** 67.51 346 *ce*P P 23 05 45.9 -1.2
NRIK pmax pmax
comp=Z,7.0nm,0.9s
GYB1 **ALIBECK ARRAY** 69.05 308 P P 23 05 57.7 +0.3
GYB1 IAmb IAmb 23 05 59.1
comp=Z,16nm,0.8s
GYA2 **ALIBECK ARRAY** 69.06 308 P P 23 05 57.2 -0.3
GYA1 **ALIBECK ARRAY** 69.06 308 P P 23 05 57.3 -0.1
GYA1 IAmb IAmb 23 05 59.1
comp=Z,18nm,0.9s
GEYT **Alibeck** 69.06 308 P P 23 05 57.4 -0.1
comp=Z,8.1nm,0.6s,baz=126,slow=7.5,SNR=14
GEYT pP pP 23 06 11.5 -1.7
comp=Z,8.9nm,0.8s,baz=131,slow=6.1,SNR=6.1
GEYT LR LR 23 40 40.7
comp=Z,192nm,20.5s,baz=235,slow=40
GEYT **Alibeck** 69.06 308 P P 23 05 57.6 +0.1
GYA0 **ALIBECK ARRAY** 69.06 308 P P 23 05 57.5 0.0
GYA0 pmax pmax
comp=Z,11nm,0.9s
GYA0 **ALIBECK ARRAY** 69.06 308 P P 23 05 57.5 0.0
GYA3 **ALIBECK ARRAY** 69.06 308 P P 23 05 57.0 -0.5
GYB5 **ALIBECK ARRAY** 69.07 308 P P 23 05 57.0 -0.5
GYB5 IAmb IAmb 23 05 59.1
comp=Z,18nm,0.9s
NIKH **Nikolski High** 69.31 36 P P 23 05 59.4 +0.7
AB06 **Akbulak array** 69.84 320 P P 23 06 01.3 -0.6
AB07 **Akbulak array** 69.84 320 P P 23 06 01.2 -0.8
AB02 **Akbulak array** 69.85 320 P P 23 06 01.1 -0.9
AB03 **Akbulak array** 69.85 320 P P 23 06 01.1 -0.9
AB01 **Akbulak array** 69.86 320 P P 23 06 01.3 -0.8
AB31 **Akbulak array** 69.86 320 P P 23 06 01.0 -1.1
AB31 IAmb IAmb 23 06 02.9
comp=Z,17nm,0.8s
ABKAR **Akbulak array** 69.86 320 P P 23 06 01.6 -0.5
ABKAR IAmb IAmb 23 06 03.0
comp=Z,17nm,0.8s
ABKAR **Akbulak array** 69.86 320 P P 23 06 01.1 -1.0
AB04 **Akbulak array** 69.86 320 P P 23 06 01.4 -0.6
AB05 **Akbulak array** 69.86 320 P P 23 06 01.3 -0.8
AB08 **Akbulak array** 69.86 320 P P 23 06 01.4 -0.6
AB09 **Akbulak array** 69.87 320 P P 23 06 01.0 -1.2
UNV **Unalaska Valle** 70.91 35 P P 23 06 09.0 +0.6
UNV IAmb IAmb 23 06 25.1
comp=Z,40nm,0.9s
AKTO **Aktyubinsk** 71.33 321 P P 23 06 10.6 -0.4
comp=Z,13nm,0.6s,baz=95,slow=8.3,SNR=47
AKTO pP pP 23 06 24.9 -2.1
comp=Z,14nm,0.8s,baz=92,slow=6.2,SNR=9.0
AKUT **Akutan** 71.40 35 P P 23 06 09.4 -1.9
RBK **Rabkut** 71.42 286 P P 23 06 11.4 -0.8
SNR=5.7
SVE **Sverdlovsk** 71.42 328 *de*P P 23 06 11.1 -0.3
SVE pmax pmax
comp=Z,69nm,1.4s
GAMB **Gambell** 71.61 24 P P 23 06 12.0 -0.4
GAMB IAmb IAmb 23 06 13.8
comp=Z,28nm,1.1s
WHFO **Wadi Hawf** 71.82 287 P P 23 06 13.3 -1.3
SNR=5.4
SOCY **Socotra** 71.84 281 P P 23 06 13.0 -1.8
SOCY IAmb IAmb 23 06 28.2
comp=Z,36nm,1.1s
ABTO **Aybut** 72.29 286 P P 23 06 16.2 -1.2
SNR=6.9
ARU **Arti** 72.42 327 *d iP* P 23 06 16.7 -0.7
ARU *PP PcP 23 06 34.5 -0.5
ARU 23 08 53.9
ARU S S 23 15 35.0 -1.4
ARU SS SS 23 20 13.4 -2.4
ARU pmax pmax
comp=Z,27nm,0.7s
ARU **Arti** 72.42 327 P P 23 06 16.4 -1.0
ARU IAmb IAmb 23 06 17.0
comp=Z,25nm,0.6s
FALS **False Pass** 72.91 35 P P 23 06 20.7 +0.4
CASY **Casey** 73.83 187 P P 23 06 25.1 -0.3
CASY IAmb IAmb 23 06 42.8
comp=Z,36nm,0.9s
ANM **Nome** 74.49 25 P P 23 06 29.4 0.0
ANM pmax pmax
comp=Z,55nm,1.2s
ANM **Nome** 74.49 25 P P 23 06 29.4 0.0
ANM IAmb IAmb 23 06 36.7
comp=Z,54nm,1.2s
SDPT **Sand Point** 74.66 34 P P 23 06 30.0 -0.5
RER **Riviere de l'E** 74.98 246 P P 23 06 31.7 -1.5
RER IAmb IAmb 23 06 49.9
comp=Z,38nm,1.0s
CHGN **Chignik** 75.97 34 P P 23 06 37.9 -0.1
HPAH **Hawaii Prepara** 76.01 71 P P 23 06 38.4 -0.8
HPAH IAmb IAmb 23 06 48.3
comp=Z,39nm,0.9s
HMH **Humu'ula Sheep** 76.23 72 P P 23 06 40.0 -0.6
RDOG **Red Dog Mine** 76.44 21 P P 23 06 40.7 +0.1
CHIR **Chirikof Islan** 77.46 34 P P 23 06 47.4 +0.9
KIRV **Kirov** 77.67 328 *ce*P P 23 06 46.7 -0.9
SVW2 **Sparrevohn** 78.13 29 P P 23 06 51.5 +1.3
SII **Sitkinak Islan** 78.33 34 P P 23 06 51.2 -0.2
SII IAmb IAmb 23 07 07.4
comp=Z,40nm,0.8s
OHAK **Old Harbor** 78.88 33 P P 23 06 54.5 +0.2
OHAK IAmb IAmb 23 07 11.0
comp=Z,38nm,1.0s
KDAK **Kodiak Island** 79.31 33 P P 23 06 57.4 +0.8
KDAK pmax pmax
comp=Z,43nm,0.7s
KDAK **Kodiak Island** 79.31 33 P P 23 06 57.4 +0.8
A21K **Barrow** 79.33 19 P P 23 06 57.3 +0.8
baz=260
RAYN **Ar Rayn** 79.36 293 P P 23 06 56.5 -1.3
RAYN pmax pmax
comp=Z,13nm,0.8s
RAYN **Ar Rayn** 79.36 293 P P 23 06 56.5 -1.3
RAYN IAmb IAmb 23 07 13.3
comp=Z,13nm,0.8s
RSO **Redoubt South** 79.44 30 P P 23 06 57.9 +0.4
IMAR **Indian Mountai** 79.56 24 P P 23 06 59.3 +1.4
GNI **Garni** 79.60 309 *ce*P P 23 06 59.8 +0.9
GNI pmax pmax
comp=Z,63nm,1.7s
GNI **Garni** 79.60 309 P P 23 06 59.7 +0.9
GNI IAmb IAmb 23 07 15.6
comp=Z,19nm,0.9s
PPLA **Purkeypile** 79.91 27 P P 23 07 00.7 +0.6
PPLA IAmb IAmb 23 07 02.1
comp=Z,28nm,1.1s
CNPM **China Poot** 80.13 31 P P 23 07 01.5 +0.4
CNPM IAmb IAmb 23 07 18.8
comp=Z,30nm,1.0s
ZEI **Tsey** 80.22 312 *eP* P 23 07 01.0 -1.2
ZEI pmax pmax
comp=Z,33nm,1.4s
BRLK **Bradley Lake** 80.32 31 P P 23 07 01.7 -0.5
BRLK IAmb IAmb 23 07 09.8
comp=Z,26nm,1.0s
SUA **Susitna One** 80.48 29 P P 23 07 03.0 -0.1
SUA IAmb IAmb 23 07 21.1
comp=Z,23nm,0.8s
AKH **Akhalkalaki** 80.53 311 ⇑P P 23 07 04.5 +0.6
AKH **Akhalkalaki** 80.53 311 IAmb IAmb 23 07 06.0
comp=Z,25nm,1.0s
KTH **Kantishna Hill** 80.54 27 P P 23 07 04.2 +0.9
BPAW **Bear Paw Mtn.** 80.55 26 P P 23 07 04.0 +0.8
BPAW IAmb IAmb 23 07 05.9
comp=Z,35nm,1.0s
MLY **Manley** 80.72 25 P P 23 07 05.3 +1.1
baz=266
TRF **Thorofare Moun** 80.81 27 IAmb IAmb 23 07 22.3
comp=Z,14nm,0.8s
GOF **Gofitskoye** 80.83 314⇑ *eP* P 23 07 04.4 -0.8
GEVA **Gevas** 80.93 308 P P 23 07 06.6 +0.5
O22K **Cooper Landing** 80.93 30 P P 23 07 06.0 +0.6
KBZ **Khabaz** 80.95 313 P P 23 07 05.3 -0.4
comp=Z,6.9nm,1.1s,baz=236,slow=23,SNR=14
KBZ LR LR 23 47 25.8
comp=Z,132nm,21.1s,baz=124,slow=39
KBZ **Khabaz** 80.95 313 *ce*P P 23 07 05.1 -0.7
KBZ pmax pmax
comp=Z,12nm,1.5s
RC01 **Rabbit Creek A** 80.95 29 P P 23 07 05.4 -0.1
baz=268
DAMY **Dhamar** 80.99 284 P P 23 07 05.2 -1.8
SEW **Seward** 81.06 30 P P 23 07 06.7 +0.7
SEW IAmb IAmb 23 07 08.1
comp=Z,21nm,0.7s
COLD **Coldfoot** 81.08 23 P P 23 07 07.5 +1.5
baz=266
COLD **Coldfoot** 81.08 23 IAmb IAmb 23 07 24.5
comp=Z,19nm,1.1s
KIV **Kislovodsk** 81.10 313 ⇑P P 23 07 07.4 +0.7
KIV **Kislovodsk** 81.10 313 *eP* P 23 07 06.5 -0.2
KIV pmax pmax
comp=Z,34nm,1.1s
KIV MLR MLR
comp=Z,334nm,19.0s
KIV **Kislovodsk** 81.10 313 P P 23 07 06.6 -0.2
KIV IAmb IAmb 23 07 22.7
comp=Z,14nm,0.8s
BWN **Browne** 81.22 26 P P 23 07 08.2 +1.4
BWN IAmb IAmb 23 07 24.1
comp=Z,26nm,0.7s
PMR **Palmer** 81.26 29 P P 23 07 06.9 -0.2
PMR pmax pmax
comp=Z,26nm,1.1s
PMR **Palmer** 81.26 29 P P 23 07 06.9 -0.2
PMR IAmb IAmb 23 07 22.9
comp=Z,26nm,1.1s
I23K **Minto, Yukon-K** 81.31 25 P P 23 07 08.5 +1.2
baz=267
I23K **Minto, Yukon-K** 81.31 25 P P 23 07 07.6 +0.4
I23K IAmb IAmb 23 07 09.5
comp=Z,17nm,0.7s
GHO **Glory Hole Cre** 81.37 29 P P 23 07 08.0 +0.3
GHO IAmb IAmb 23 07 23.4
comp=Z,25nm,1.2s
NEA2 **Nenana** 81.41 26 P P 23 07 08.8 +0.9
baz=268
TOLK **Toolik Lake Re** 81.41 22 P P 23 07 08.8 +1.0
baz=267
MCK **McKinley** 81.43 27 P P 23 07 08.4 +0.4
baz=268
RND **Reindeer** 81.46 27 IAmb IAmb 23 07 27.3
comp=Z,11nm,0.6s
CHVG **Ch'k'valeri** 81.56 312 ⇓P P 23 07 09.4 +0.3
CHVG **Ch'k'valeri** 81.56 312 ⇓P P 23 07 09.4 +0.3
KNK **Knik Glacier** 81.58 29 IAmb IAmb 23 07 10.7
comp=Z,22nm,0.7s
SML **Sawmill** 81.65 29 P P 23 07 09.4 +0.1
SML IAmb IAmb 23 07 25.0
comp=Z,24nm,0.9s
VRH **Novokhopyorsk** 81.67 321 *eP* P 23 07 07.8 -1.7
VRH *e*PP pwP 23 07 28.3 -0.4
VRH pmax pmax
comp=Z,10.0nm,0.8s
WRH **Wood River Hil** 81.83 26 P P 23 07 10.2 +0.2
TCOL **CIGO, UAF Yank** 81.93 25 P P 23 07 11.5 +0.9
COLA **College** 81.94 25 *i* P P 23 07 10.6 +0.1
COLA pmax pmax
comp=Z,5.0nm,0.8s
COLA **College** 81.94 25 P P 23 07 10.6 +0.1
DHY **Denali Highway** 82.12 27 P P 23 07 12.5 +0.8
POKR **Poker Plat Res** 82.12 25 P P 23 07 12.3 +0.7
baz=269
POKR **Poker Plat Res** 82.12 25 P P 23 07 12.3 +0.7
SCM **Sheep Creek Mo** 82.13 29 P P 23 07 10.8 -1.0
SCM pmax pmax
comp=Z,27nm,1.0s
SCM **Sheep Creek Mo** 82.13 29 P P 23 07 10.8 -1.0
SCM IAmb IAmb 23 07 13.8
comp=Z,27nm,1.0s
GLI **Glacier Island** 82.23 30 P P 23 07 12.4 +0.2
HDA **Harding Lake** 82.32 26 P P 23 07 12.3 -0.3
baz=270
HDA **Harding Lake** 82.32 26 P P 23 07 12.1 -0.5
HDA IAmb IAmb 23 07 28.8
comp=Z,18nm,0.9s
ILAR **Eielson Array** 82.35 26 P P 23 07 12.1 -0.7
comp=Z,5.2nm,0.6s,baz=243,slow=4.9,SNR=96
ILAR pP pP 23 07 27.3 -0.9
comp=Z,5.1nm,0.7s,baz=240,slow=6.0,SNR=9.7
ILAR LR LR 23 40 53.6
comp=Z,66nm,21.3s,baz=240,slow=34
ILAR **Eielson Array** 82.35 26 P P 23 07 11.5 -1.2
IL18 **Eielson Array** 82.39 26 P P 23 07 12.8 -0.2
ABPO **Ambohimpanom** 82.40 250 P P 23 07 13.0 -1.1
ABPO pmax pmax
comp=Z,12nm,0.9s
ABPO **Ambohimpanom** 82.40 250 P P 23 07 13.0 -1.1
FID **Port Fidalgo** 82.54 30 P P 23 07 14.7 +0.9
FID IAmb IAmb 23 07 22.8
comp=Z,34nm,1.0s
M24K **Tolsona, Glenn** 82.67 28 P P 23 07 14.2 -0.4
M24K IAmb IAmb 23 07 30.6
comp=Z,31nm,1.1s
ATD **Arta Tunnel** 82.76 281 P P 23 07 15.6 -0.4
KLMR **Klimovskoe** 82.80 330 *eP* P 23 07 13.4 -1.7
KLMR pmax pmax
comp=Z,46nm,0.9s
KLMR **Klimovskoe** 82.80 330 *eP* P 23 07 13.4 -1.7
KLMR AMP 23 07 17.9
comp=Z,46nm,0.9s
KLU **Klutina** 82.80 29 P P 23 07 16.5 +1.2
KLU IAmb IAmb 23 07 17.4
comp=Z,17nm,0.8s
KOPT **Kop Dagi** 82.85 309 P P 23 07 16.2 -0.1
KOPT IAmb IAmb 23 07 34.4
comp=Z,17nm,0.7s
PAX **Paxson** 82.99 27 P P 23 07 16.0 -0.2
PAX pmax pmax
comp=Z,16nm,1.2s
PAX **Paxson** 82.99 27 P P 23 07 16.0 -0.2
FYU **Fort Yukon** 83.03 24 P P 23 07 16.1 -0.2
FYU IAmb IAmb 23 07 34.7
comp=Z,17nm,0.9s
RIDG **Independent Ri** 83.25 27 P P 23 07 17.2 -0.3
SOC **Sochi** 83.26 313 *eP* P 23 07 16.5 -1.4
SOC *e* 23 10 31.3
SOC *e*PPP PPP 23 12 17.7
SOC *e*S S 23 17 31.8 -2.0
SOC *e*SSS SSS 23 26 27.7
SOC pmax pmax
comp=Z,17nm,0.8s
SOC MLR MLR
comp=Z,219nm,17.0s
BMAR **Burnt Mountain** 83.27 23 P P 23 07 18.7 +1.1
VSR **Storozhevoye** 83.28 321 *eP* P 23 07 16.4 -1.4
VSR *e*PP pP 23 07 31.3 -2.9
VSR pmax pmax
comp=Z,30nm,1.7s
LPSR **Galich'ya Gora** 83.37 322 *eP* P 23 07 17.2 -1.1
LPSR *e*PP pwP 23 07 37.5 -1.7
LPSR pmax pmax
comp=Z,10.0nm,0.7s
TMCR **Tamitsa** 83.41 334 *eP* P 23 07 16.0 -2.2
TMCR pmax pmax
comp=Z,40nm,1.0s
N25K **Chitina, Valde** 83.43 29 P P 23 07 20.2 +1.6
baz=272
N25K **Chitina, Valde** 83.43 29 P P 23 07 18.9 +0.4
N25K IAmb IAmb 23 07 35.7
comp=Z,24nm,1.1s
DOT **Dot Lake** 83.60 27 P P 23 07 19.9 +0.6
DOT IAmb IAmb 23 07 31.5
comp=Z,14nm,0.8s
SCRK **Sand Creek** 83.62 26 P P 23 07 20.6 +1.1
baz=272
FOMA **Nahampoana Res** 83.67 244 P P 23 07 20.5 +0.2
FOMA IAmb IAmb 23 07 38.0
comp=Z,17nm,1.1s
GLB **Gilahina Butte** 83.81 29 P P 23 07 20.9 +0.4
GLB IAmb IAmb 23 07 37.3
comp=Z,39nm,1.0s
SUCK **Suckling Hills** 83.90 30 P P 23 07 20.8 -0.1
L26K **Log Cabin Wild** 83.95 27 P P 23 07 22.3 +1.2
baz=273
MOS **Moscow** 83.98 325 *eP* P 23 07 18.8 -2.5
MOS *e* 23 07 41.4
MOS *e* 23 10 30.9
MOS *e*S SKSac 23 17 34.7 -4.5
MOS pmax pmax
comp=Z,42nm,0.6s
MOS pmax pmax
comp=Z,100nm,0.7s
VRDI **Verde Repeater** 84.00 29 P P 23 07 21.6 0.0
VRDI IAmb IAmb 23 07 23.6
comp=Z,17nm,0.6s
CRQM **Cirque** 84.18 30 P P 23 07 24.0 +1.5
CRQM IAmb IAmb 23 07 42.1
comp=Z,26nm,0.9s
MCARA **McCarthy VSAT** 84.20 29 P P 23 07 24.0 +1.6
MCARA IAmb IAmb 23 07 42.2
comp=Z,17nm,0.8s
TGL **Tana Glacier** 84.33 30 IAmb IAmb 23 07 40.0
comp=Z,34nm,1.0s
K27K **Chicken** 84.46 26 P P 23 07 25.5 +1.9
baz=274
K27K **Chicken** 84.46 26 P P 23 07 24.6 +1.0
K27K IAmb IAmb 23 07 41.4
comp=Z,33nm,0.9s
BALM **Baldy** 84.55 29 P P 23 07 24.5 +0.2
BALM IAmb IAmb 23 07 43.0
comp=Z,21nm,0.9s
ISLE **Juniper Island** 84.58 30 P P 23 07 25.3 +0.9
ISLE IAmb IAmb 23 07 43.2
comp=Z,30nm,0.9s
OBN **Obninsk** 84.62 325 ⇑P P 23 07 25.3 +0.8
OBN **Obninsk** 84.62 325 *ce*P P 23 07 23.5 -1.1
OBN *e* 23 07 37.9
OBN *i* 23 10 40.5
OBN pmax pmax
comp=Z,59nm,1.3s
OBN MLR MLR
comp=Z,207nm,19.0s
OBN **Obninsk** 84.62 325 P P 23 07 23.9 -0.7
BCAR **Beaver Creek A** 84.66 27 P P 23 07 25.6 +0.9
EGAK **Eagle** 84.80 25 P P 23 07 25.8 +0.5
BARN **Barnard Glacie** 84.88 29 P P 23 07 26.3 +0.3
YAH **Yahtse** 84.89 30 P P 23 07 26.1 -0.1
CTGM **Chitina Glacie** 85.04 29 P P 23 07 28.1 +1.3
APA **Apatity** 85.08 337 ⇓ *iP* P 23 07 26.4 -0.3
APA pmax pmax
comp=Z,22nm,0.7s
APA MLR MLR
comp=Z,1μm,18.0s
TABL **Table Mountain** 85.18 30 P P 23 07 28.2 +0.6
GAZ **Gaziantep** 85.62 307 IAmb IAmb 23 07 30.9
comp=Z,27nm,1.1s
PCA **Pinnacle** 85.66 30 P P 23 07 30.4 +0.7
TOKA **Tokat** 85.90 310 IAmb IAmb 23 07 32.7
comp=Z,20nm,1.2s
PPT **Papeete** 86.00 108 LR LR 23 38 24.9
comp=Z,70nm,21.0s,baz=344,slow=30
PPT2 **Papeete2** 86.00 108 *e*S SKSac 23 17 56.2 +2.6

comp=Z,72nm,26.0s
PPT2 Papeete2 86.00 108 *e*LR LR 23 34 47.8
comp=Z,417nm,25.8s,baz=280
VNDA Vanda 86.42 173 P **P** **23 07 33.5 +0.5**
comp=Z,2.9nm,0.8s,baz=310,slow=6.0,SNR=19
VNDA pP **pP** **23 07 47.5 -1.3**
comp=Z,7.0nm,0.8s,baz=325,slow=6.4,SNR=16
VNDA LR LR 23 47 18.1
comp=Z,93nm,19.1s,baz=340,slow=36
VNDA Vanda 86.42 173 P **P** **23 07 33.3 +0.2**
VNDA pmax pmax
comp=Z,8.0nm,0.9s
VNDA Vanda 86.42 173 P **P** **23 07 33.2 +0.2**
MAW Mawson 86.61 200 P **P** **23 07 36.2 +2.1**
comp=Z,2.3nm,0.6s,baz=138,slow=6.2,SNR=4.3
MAW pP **pP** **23 07 49.8 -0.4**
comp=Z,9.8nm,0.9s,baz=79,slow=7.0,SNR=6.5
MAW LR LR 23 41 25.9
comp=Z,67nm,21.9s,baz=58,slow=32
MAW Mawson 86.61 200 P **P** **23 07 35.4 +1.3**
MAW pmax pmax
comp=Z,2.0nm,0.8s
MAW Mawson 86.61 200 P **P** **23 07 35.4 +1.3**
HYT Haines Junctio 86.92 29 P **P** **23 07 37.0 +0.9**
HYT IAmb IAmb 23 07 55.6
comp=Z,7.6nm,0.7s
TBI Tubuai 86.95 114 *e*LR LR 23 35 12.8
comp=Z,436nm,23.8s,baz=287
PMOR Pomariorio Ree 87.24 105 *e*T T 00 43 52.0
comp=Z,5.1nm,0.2s
INK Inuvik 87.33 22 P **P** **23 07 37.2 -0.4**
comp=Z,4.2nm,0.8s,baz=314,slow=3.5,SNR=12
INK Inuvik 87.33 22 P **P** **23 07 37.7 0.0**
INK pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 87.33 22 P **P** **23 07 37.7 0.0**
SPB1 Spitsbergen Ar 87.52 349 P **P** **23 07 37.8 -0.7**
SPB2 Spitsbergen Ar 87.52 349 P **P** **23 07 38.3 -0.2**
SPA0 Spitsbergen Ar 87.52 349 P **P** **23 07 37.4 -1.1**
SPA0 IAmb IAmb 23 07 55.5
comp=Z,28nm,1.0s
ARD3 ARCESS Array S 87.61 340 P **P** **23 07 37.9 -1.2**
ARD3 IAmb IAmb 23 07 51.6
comp=Z,26nm,1.1s
ARD2 ARCESS Array S 87.62 340 P **P** **23 07 38.4 -0.7**
ARD2 IAmb IAmb 23 07 55.8
comp=Z,19nm,1.1s
ARD4 ARCESS Array S 87.62 340 P **P** **23 07 38.2 -0.9**
ARD4 IAmb IAmb 23 07 55.2
comp=Z,22nm,1.1s
ARC2 ARCESS Array S 87.62 340 P **P** **23 07 37.9 -1.2**
ARC2 IAmb IAmb 23 07 55.9
comp=Z,20nm,1.0s
ARC3 ARCESS Array S 87.62 340 P **P** **23 07 38.2 -0.9**
ARC3 IAmb IAmb 23 07 55.2
comp=Z,31nm,1.1s
ARD1 ARCESS Array S 87.62 340 P **P** **23 07 37.9 -1.2**
ARD1 IAmb IAmb 23 07 38.3
comp=Z,24nm,1.1s
ARB2 ARCESS Array S 87.63 340 P **P** **23 07 37.5 -1.7**
ARB2 IAmb IAmb 23 07 53.4
comp=Z,33nm,1.1s
ARC1 ARCESS Array S 87.63 340 P **P** **23 07 38.3 -0.8**
ARC1 IAmb IAmb 23 07 53.3
comp=Z,32nm,1.1s
ARB1 ARCESS Array S 87.63 340 P **P** **23 07 37.9 -1.2**
ARB1 IAmb IAmb 23 07 53.4
comp=Z,29nm,1.1s
ARB3 ARCESS Array S 87.63 340 P **P** **23 07 38.1 -1.1**
ARB3 IAmb IAmb 23 07 51.0
comp=Z,12nm,1.1s
ARA0 ARCESS Array S 87.63 340 P **P** **23 07 38.0 -1.1**
ARA0 IAmb IAmb 23 07 53.4
comp=Z,32nm,1.1s
ARA1 ARCESS Array S 87.63 340 P **P** **23 07 37.9 -1.2**
ARA1 IAmb IAmb 23 07 53.4
comp=Z,28nm,1.1s
ARA2 ARCESS Array S 87.63 340 P **P** **23 07 38.0 -1.1**
ARA2 IAmb IAmb 23 07 53.4
comp=Z,31nm,1.1s
ARC4 ARCESS Array S 87.63 340 P **P** **23 07 37.2 -1.9**
ARCES ARCESS Array B 87.63 340 P **P** **23 07 37.9 -1.3**
comp=Z,4.5nm,0.6s,baz=95,slow=4.9,SNR=23
ARCES LR LR 23 50 38.7
comp=Z,197nm,20.7s,baz=40,slow=38
ARD5 ARCESS Array S 87.63 340 P **P** **23 07 38.0 -1.1**
ARA3 ARCESS Array S 87.63 340 P **P** **23 07 38.1 -1.1**
ARA3 IAmb IAmb 23 07 53.4
comp=Z,30nm,1.1s
ARB5 ARCESS Array S 87.63 340 P **P** **23 07 37.6 -1.5**
ARB5 IAmb IAmb 23 07 53.4
comp=Z,32nm,1.1s
ARB4 ARCESS Array S 87.63 340 P **P** **23 07 37.5 -1.6**
ARB4 IAmb IAmb 23 07 53.5
comp=Z,30nm,1.1s
ARC7 ARCESS Array S 87.63 340 P **P** **23 07 37.4 -1.8**
ARC5 ARCESS Array S 87.63 340 P **P** **23 07 37.9 -1.2**
ARC5 IAmb IAmb 23 07 51.7
comp=Z,11nm,0.9s
ARD9 ARCESS Array S 87.63 340 P **P** **23 07 38.2 -0.9**
ARD9 IAmb IAmb 23 07 52.0
comp=Z,7.6nm,0.7s
ARC6 ARCESS Array S 87.64 340 P **P** **23 07 38.1 -1.1**
ARD6 ARCESS Array S 87.64 340 P **P** **23 07 37.8 -1.4**
ARD8 ARCESS Array S 87.64 340 P **P** **23 07 38.0 -1.2**
ARD7 ARCESS Array S 87.64 340 P **P** **23 07 38.4 -0.8**
BR131 Keskin Array S 88.14 310 P **P** **23 07 41.4 -1.0**
BR131 pmax pmax
comp=Z,6.0nm,0.8s
BR131 Keskin Array S 88.14 310 P **P** **23 07 41.4 -1.0**
BRTR Keskin Array B 88.14 310 P **P** **23 07 41.1 -1.3**
comp=Z,1.7nm,0.5s,baz=147,slow=3.8,SNR=7.7
BRTR pP **pP** **23 07 57.5 -1.2**
comp=Z,3.7nm,0.8s,baz=153,slow=3.6,SNR=6.0
BRTR LR LR 23 51 36.3
comp=Z,63nm,21.1s,baz=88,slow=38
BRTR Keskin Array B 88.14 310 *i* P **P** **23 07 42.9 +0.5**
BRTR pmax pmax
comp=Z,2.0nm,0.5s
BRTR Keskin Array B 88.14 310 P **P** **23 07 40.9 -1.4**
SKAG Skagway 88.21 30 P **P** **23 07 42.1 +0.1**
WHY Whitehorse 88.22 29 P **P** **23 07 42.3 0.0**
WHY IAmb IAmb 23 07 44.7
comp=Z,7.7nm,0.8s
CSS Mathiatis 88.99 305 P **P** **23 07 45.6 -0.7**
CSS IAmb IAmb 23 08 00.2
comp=Z,17nm,0.8s
FIA1 FINESS Array S 89.19 332 P **P** **23 07 45.6 -1.1**
FINES FINESS Array B 89.19 332 P **P** **23 07 45.5 -1.2**
comp=Z,11nm,0.7s,baz=54,slow=4.5,SNR=26
FINES pP **pP** **23 08 01.3 -1.5**
comp=Z,6.3nm,0.7s,baz=76,slow=4.0,SNR=3.8
FINES LR LR 23 51 16.5
comp=Z,221nm,18.8s,baz=69,slow=38
FINES FINESS Array B 89.19 332 *i* P **P** **23 07 45.2 -1.4**
FINES pmax pmax
comp=Z,11nm,0.7s
FINES FINESS Array B 89.19 332 P **P** **23 07 46.5 -0.1**
VSU Vasula 89.51 329 *i* P **P** **23 07 46.4 -1.8**
VSU pmax pmax
comp=Z,59nm,1.1s
AKASG Malin Array Be 89.58 321 P **P** **23 07 47.5 -1.3**
comp=Z,3.2nm,0.6s,baz=62,slow=4.7,SNR=14
AKASG pP **pP** **23 08 01.6 -3.2**
comp=Z,4.0nm,0.5s,baz=65,slow=5.0,SNR=9.7
AKASG LR LR 23 52 30.1
comp=Z,138nm,21.0s,baz=70,slow=38
AKASG Malin Array Be 89.58 321 P **P** **23 07 47.6 -1.1**
AKASG pmax pmax
comp=Z,4.0nm,1.0s
AKASG Malin Array Be 89.58 321 P **P** **23 07 47.6 -1.1**
AKBB Malin Array Si 89.58 321 *ce*P **P** **23 07 47.0 -1.7**
AKBB Malin Array Si 89.58 321 IAmb IAmb 23 08 03.1
comp=Z,6.5nm,0.7s
KMBO Kilima Mbogo 89.67 269 P **P** **23 07 49.5 -0.6**
comp=Z,1.6nm,0.8s,baz=91,slow=4.4,SNR=5.4
KMBO pP **pP** **23 08 05.0 -1.6**
comp=Z,2.9nm,0.8s,baz=42,slow=8.1,SNR=4.8
KMBO Kilima Mbogo 89.67 269 P **P** **23 07 49.6 -0.6**
KMBO pmax pmax
comp=Z,7.0nm,1.1s
KMBO Kilima Mbogo 89.67 269 P **P** **23 07 49.6 -0.6**
C36M Paulatuk 90.34 20 P **P** **23 07 51.8 -0.1**
baz=290
C36M Paulatuk 90.34 20 IAmb IAmb 23 08 07.1
comp=Z,10.0nm,1.1s

SORM Soroca 90.61 318 ⇓P **P** **23 07 53.8 +0.2**
SORM Soroca 90.61 318 ⇓P **P** **23 07 53.8 +0.2**
TLCR 90.83 316 ⇓P **P** **23 07 54.1 -0.6**
TLCR 90.83 316 ⇓P **P** **23 07 54.1 -0.6**
TPGR Topolog 91.17 315 ⇓P **P** **23 07 55.6 -0.7**
TIRR Tirgusor 91.25 315 ⇓P **P** **23 07 55.6 -1.1**
TIRR Tirgusor 91.25 315 P **P** **23 07 55.8 -0.8**
TIRR pmax pmax
comp=Z,9.0nm,0.9s
TIRR Tirgusor 91.25 315 P **P** **23 07 55.8 -0.8**
TIRR IAmb IAmb 23 08 11.9
comp=Z,9.4nm,0.9s
CFR Carcaliu 91.31 316 ⇑P **P** **23 07 55.9 -1.0**
CFR Carcaliu 91.31 316 ⇑P **P** **23 07 55.9 -1.0**
HARR Harsova 91.54 315 ⇓P **P** **23 07 57.3 -0.7**
HARR Harsova 91.54 315 ⇓P **P** **23 07 57.3 -0.7**
TESR Tescani 92.06 317 ⇑P **P** **23 07 59.4 -1.0**
PLOR Plostina 92.20 316 ⇓P **P** **23 08 00.6 -0.5**
PLOR Plostina 92.20 316 ⇓P **P** **23 08 00.6 -0.5**
MANT Manisa 92.23 309 P **P** **23 08 00.6 -1.1**
BIZ Bicaz 92.34 318 ⇓P **P** **23 08 01.7 0.0**
SUW Suwalki 92.48 325 *e*P **P** **23 08 00.6 -1.5**
SUW Suwalki 92.48 325 P **P** **23 08 01.3 -0.8**
SUW Suwalki 92.48 325 P **P** **23 08 01.3 -0.8**
NEHR Nehoiu 92.53 316 ⇓P **P** **23 08 02.5 -0.1**
MLR Muntele Rosu 92.76 316 ⇓P **P** **23 08 04.4 +0.6**
MLR Muntele Rosu 92.76 316 P **P** **23 08 03.6 -0.2**
MLR pmax pmax
comp=Z,2.0nm,0.6s
MLR Muntele Rosu 92.76 316 P **P** **23 08 03.6 -0.2**
BURAR Bucovina Array 92.78 318 ⇑P **P** **23 08 03.2 -0.6**
BURAR Bucovina Array 92.78 318 ⇑P **P** **23 08 03.2 -0.6**
BURAR Bucovina Array 92.78 318 P **P** **23 08 03.0 -0.8**
VOIR 93.38 316 ⇓P **P** **23 08 05.8 -0.8**
VOIR 93.38 316 ⇓P **P** **23 08 05.8 -0.8**
ARR Arges 93.69 316 ⇓P **P** **23 08 07.0 -1.0**
KWP Kalwaria Pacla 93.90 321 *e*P **P** **23 08 08.7 -0.1**
KWP Kalwaria Pacla 93.90 321 P **P** **23 08 08.0 -0.8**
KWP pmax pmax
comp=Z,9.0nm,0.9s
KWP Kalwaria Pacla 93.90 321 P **P** **23 08 08.0 -0.8**
KWP IAmb IAmb 23 08 23.5
comp=Z,8.5nm,0.9s
TAOE Nuku Hiva Isla 94.04 98 *e*LR LR 23 38 31.8
comp=Z,516nm,23.0s
TAOE Nuku Hiva Isla 94.04 98 *e*T T 00 52 22.5
comp=Z,26nm,0.2s
LOT Lotru 94.26 317 ⇑P **P** **23 08 10.1 -0.6**
DAG Danmarks Havn 94.26 352 *e* P 23 08 04.3 -5.5
baz=38,slow=4.1
DAG *i* P **PcP** **23 08 08.0 -2.3**
DAG *e*S sP 23 08 35.8 +4.0
DAG IAML 23 08 38.0
comp=Z,12nm,0.8s
UZH Uzhgorod 94.43 320 *e*P **P** **23 08 09.3 -1.9**
UZH *e* 23 08 26.2
RES Resolute Bay 94.83 10 P **P** **23 08 12.8 +0.3**
RES pmax pmax
comp=Z,4.0nm,0.9s
RES Resolute Bay 94.83 10 P **P** **23 08 12.8 +0.3**
CRVS Cervenica-Dubn 94.89 320 *e*P **P** **23 08 13.6 +0.3**
CRVS Cervenica-Dubn 94.89 320 *e*P **P** **23 08 13.6 +0.3**
NIE Niedzica 95.47 321 *e*P **P** **23 08 16.6 +0.6**
OJC Ojcow 95.54 322 *e*P **P** **23 08 16.7 +0.4**
OJC Ojcow 95.54 322 P **P** **23 08 16.4 +0.1**
OJC pmax pmax
comp=Z,10.0nm,1.1s
OJC Ojcow 95.54 322 P **P** **23 08 16.4 +0.1**
OJC IAmb IAmb 23 08 35.2
comp=Z,10nm,1.1s
GKP Gorka Klasztor 96.08 325 *e*P **P** **23 08 16.9 -1.7**
NB2 NORSAR Subarra 96.10 334 P **P** **23 08 20.3 +1.7**
comp=Z,8.1nm,0.8s,baz=66,slow=4.8
NOA NORSAR Array B 96.10 334 P **P** **23 08 18.6 -0.1**
comp=Z,3.4nm,0.8s,baz=65,slow=4.6,SNR=11
NOA pP **pP** **23 08 32.9 -1.9**
comp=Z,2.5nm,0.7s,baz=64,slow=4.6,SNR=5.4
NOA LR LR 23 55 19.9
comp=Z,204nm,19.9s,baz=60,slow=38
QSPA South Pole Qui 96.66 180 P **P** **23 08 21.2 +0.2**
comp=Z,1.9nm,0.8s,baz=35,slow=0.6,SNR=10
QSPA pP **pP** **23 08 35.2 -1.7**
comp=Z,8.3nm,0.9s,baz=297,slow=2.1,SNR=12
QSPA South Pole Qui 96.66 180 P **P** **23 08 21.3 +0.2**
QSPA IAmb IAmb 23 08 37.2
comp=Z,12nm,1.1s
YKA Yellowknife Ar 96.72 24 P **P** **23 08 21.0 -0.3**
comp=Z,1.6nm,0.6s,baz=299,slow=3.7,SNR=6.0
YKA LR LR 00 01 43.0
comp=Z,17nm,18.2s,baz=0.0,slow=42
KSP Ksiaz 97.46 323 *e*P **P** **23 08 24.9 0.0**
BRG Berggiesshubel 98.84 324 *e*P **P** **23 08 30.4 -0.7**
comp=Z,13nm,1.1s
BRG *e* 23 08 47.3
comp=Z,12nm,1.2s
BRG Berggiesshubel 98.84 324 *e*P **P** **23 08 30.4 -0.7**
BRG *e* 23 08 47.3
BRG pmax pmax
comp=Z,13nm,1.1s
CLL Collm 99.22 324 *e*Pdif **Pdif** **23 08 33.0 +0.2**
CLL *e*(pPdif) 23 08 50.0
CLL *e* 23 08 55.0
CLL *e* 23 09 12.0
CLL *e*PP **PP** **23 12 36.0 +0.3**
CLL *e*SP SP 23 21 18.0 -7.4
CLL Collm 99.22 324 *e*P **Pdif** **23 08 33.0 +0.2**
CLL *e* 23 08 50.0
KHC Kasperske Hory 99.71 322 *e*P **Pdif** **23 08 35.0 -0.1**
KHC Kasperske Hory 99.71 322 *e*PDIFF **Pdif** **23 08 35.0 -0.1**
GERES GERESS Array B 99.75 322 P **Pdif** **23 08 34.8 -0.5**
comp=Z,0.5nm,0.6s,baz=59,slow=5.1,SNR=5.4
GERES pP **pP** **23 08 50.4 -1.2**
comp=Z,5.4nm,1.1s,baz=64,slow=6.1,SNR=4.6
GERES LR LR 23 56 46.6
comp=Z,154nm,19.3s,baz=78,slow=37
MATP Matopo 100.07 250 P **Pdif** **23 08 37.1 -0.3**
baz=153,slow=2.3
GRF Grafenberg Arr 100.91 323 *e*Pdiff **Pdif** **23 08 39.9 -0.5**
NVAR Mina Array Bea 104.83 47 PP **PKiKP** **23 13 17.5 +4.0**
comp=Z,0.3nm,0.5s,baz=252,slow=8.4,SNR=2.0
NVAR PKKPbc **PKKPbc** **23 24 42.3 -0.3**
comp=Z,0.4nm,0.6s,baz=116,slow=2.1,SNR=3.8
PDAR Pinedale Array 109.03 40 PKKP **PKKPdf** **23 24 44.2 -0.3**
comp=Z,0.4nm,0.8s,baz=126,slow=5.7,SNR=2.6
SCHQ Schefferville 117.57 9 PKP **PKPdf** **23 13 36.6 -0.2**
comp=Z,4.0nm,0.9s,baz=214,slow=3.6,SNR=3.7
TXAR Lajitas Array 119.67 51 PKP **PKiKP** **23 13 42.1 +0.3**
comp=Z,0.8nm,0.6s,baz=261,slow=0.5,SNR=14
TXAR PKKPbc **PKKPbc** **23 23 52.9 0.0**
comp=Z,0.6nm,0.7s,baz=119,slow=4.5,SNR=6.6
TXAR Lajitas Array 119.67 51 **PKiKP** **23 13 41.9 +0.1**
TORD Torodi Ar. Bea 121.98 290 PKP **PKPdf** **23 13 45.5 -0.8**
comp=Z,5.4nm,0.6s,baz=46,slow=2.0,SNR=28
TORD pPKP **pPKPdf** **23 14 01.0 -2.3**
comp=Z,6.4nm,0.8s,baz=43,slow=1.9,SNR=9.1
TORD PKKPbc **PKKPab** **23 23 44.8 +0.1**
comp=Z,0.3nm,0.5s,baz=261,slow=2.0,SNR=6.4
TORD Torodi Ar. Bea 121.98 290 PKPdf **PKPdf** **23 13 45.4 -0.9**
CCM Cathedral Cave 123.06 35 P **PKiKP** **23 13 48.1 0.0**
baz=313
D56A ZEC Mazanza, M 123.11 17 P **PKPdf** **23 13 47.7 0.0**
baz=334
U40A Yellville 123.24 38 P **PKPdf** **23 13 48.3 0.0**
baz=311
U40A Yellville 123.24 38 PKPdf **PKPdf** **23 13 48.1 -0.1**
W39A Magazine 123.41 40 P **PKPdf** **23 13 48.6 0.0**
baz=310
MIAR Mount Ida 123.95 40 P **PKiKP** **23 13 50.9 +1.0**
baz=309
LRAL Lakeview Retre 129.03 37 P **PKiKP** **23 14 00.1 0.0**
baz=315
KIC Kosan Boka 129.91 284 *e*PKIKP **PKPdf** **23 14 01.9 +0.3**
comp=Z,9.4nm,0.7s
DBIC Dimbokro 129.94 284 PKP **PKPdf** **23 14 01.8 +0.2**
comp=Z,3.5nm,0.7s,baz=69,slow=4.4,SNR=7.8
DBIC pPKP **pPKPdf** **23 14 17.6 -1.0**
comp=Z,9.2nm,1.1s,baz=190,slow=0.8,SNR=3.9
TIC Toumodi 130.10 285 *e*PKIKP **PKiKP** **23 14 02.6 -0.2**
LIC Lamto 130.22 284 *e*PKIKP **PKPdf** **23 14 02.4 +0.3**
comp=Z,19nm,0.9s
PLCA Paso Flores 142.80 158 PKhKP **PKPdf** **23 14 21.6 -3.2**
comp=Z,1.9nm,0.5s,baz=219,slow=2.8,SNR=6.7
PLCA Paso Flores 142.80 158 PKIKP **PKPdf** **23 14 22.5 -2.3**
PLCA Paso Flores 142.80 158 PKPdf **PKPdf** **23 14 22.5 -2.3**

PLCA Paso Flores 142.80 158 *e*P **PKiKP** **23 14 27.9 -0.1**
LC01 Cunco 143.85 155 PKPdf PKPbc 23 14 25.4 +1.0
LC01 pPKPdf sPKPdf 23 14 47.3 -1.9
SDDR Presa de Saban 148.81 35 **PKPbc** **23 14 39.8 +0.3**
ZON Zonda 151.43 152 PKIKP **PKiKP** **23 14 45.9 0.0**
ZON Zonda 151.43 152 **PKiKP** **23 14 45.9 0.0**
CAPC Capurgana 151.48 58 *e*P **PKPab** **23 14 56.3 +1.8**
URIC Uribia, Colomb 153.81 46 *e*P **PKiKP** **23 14 51.4 +0.2**
GUY2C Guyana, Caldas 154.88 62 *e*P **PKPbc** **23 14 53.7 -0.4**
PTBC PUERTO BERRIO 155.02 58 *e*P **PKPdf** **23 14 43.7 -1.2**
NORC Norcasia 155.15 61 *e*P **PKPdf** **23 14 46.0 +0.8**
SPBC San Pablo de B 155.80 60 *e*P **PKPdf** **23 14 45.9 -0.3**
PRAC Prado 155.99 65 *e*P PKPdf 23 14 55.5 +9.2
CHIC Chingaza 156.59 62 *e*P **PKPdf** **23 14 46.6 -1.0**
SDV Santo Domingo 156.69 48 *e*P **PKPdf** **23 14 46.3 -1.1**
SDV Santo Domingo 156.69 48 *e*P **PKPdf** **23 14 50.7 +3.3**
ITQB Itaqui 157.00 172 *e*P **PKPdf** **23 14 50.2 +3.1**
CNLB Canela 157.47 185 *e*P **PKPdf** **23 14 50.9 +3.0**
MACC Macarena, Meta 157.58 67 *e*P PKPdf 23 15 02.6 +14
LVC Limon Verde 158.16 138 *e*P **PKPdf** **23 14 51.5 +2.3**
CPUP Villa Florida 160.16 169 PKPab **PKPab** **23 15 31.5 +0.5**
comp=Z,3.4nm,0.8s,baz=90,slow=3.2,SNR=3.8
CPUP Villa Florida 160.16 169 pPKPab pPKPab 23 15 48.0 +0.9
LPAZ La Paz 162.60 124 PKP **PKPdf** **23 14 55.3 +0.7**
comp=Z,1.3nm,0.6s,baz=1.8,slow=1.8,SNR=6.9
LPAZ PKPab **PKPab** **23 15 44.0 +1.0**
comp=Z,3.5nm,0.9s,baz=213,slow=2.0,SNR=3.8

*SOME **07** 23:07:03.9, 41.°00N×74.°07E, h10km*
*KRNET **07** 23:07:04.5±0.1, 41.°07N×73.°99E, h12km, mb3.2*
*NNC **07** 23:07:05.4±0.8, 41.°05N×74.°08E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=5.7km s-min=3.8km az=167.0
ISC 07 23:07:02.6±1.3, 40.°96N±0.°03×74.°06E±0.°02, h0km±16km, n61, σ1s 46/94, 26C-15D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.92**	**12**	⇑*i*P		**Pg**	**23 07 20.5**	**+0.2**
ARLS	baz=17			⇑*i*S		**Sg**	**23 07 32.0**	**-0.2**
OHH	**Osh**	**1.06**	**246**	⇑*i*P		**Pg**	**23 07 24.3**	**+1.3**
OHH	baz=40			⇑*i*S		**Sg**	**23 07 38.6**	**+1.9**
AML	**Almayashu**	**1.20**	**347**	⇑*i*P		**Pg**	**23 07 25.3**	**-0.3**
AML	baz=48			⇑*i*S		**Sg**	**23 07 40.6**	**-0.6**
AML	**Almayashu** SNR=7.8	**1.20**	**347**	P		**Pg**	**23 07 25.8**	**+0.1**
AAK	**Ala-Archa**	**1.71**	**11**	⇑*i*P		**Pb**	**23 07 35.0**	**+0.1**
AAK	baz=13			⇑*i*S		**Sg**	**23 07 56.9**	**-0.5**
AAK	**Ala-Archa** SNR=7.4	**1.71**	**11**	P		**Pb**	**23 07 35.2**	**+0.3**
AAK	**Ala-Archa** 13nm,0.7s	**1.71**	**11**	⇑P		**Pb**	**23 07 35.1**	**+0.2**
AAK	12nm,0.6s			⇓S		**Sg**	**23 07 57.0**	**-0.5**
EKS2	**Erkin-Say**	**1.71**	**353**	⇑*i*P		**Pb**	**23 07 34.8**	**-0.2**
EKS2	baz=54			⇑*i*S		**Sb**	**23 07 56.6**	**-0.5**
EKS2	**Erkin-Say** SNR=9.7	**1.71**	**353**	P		**Pb**	**23 07 35.0**	**0.0**
KBK	**Karagaybulak**	**1.82**	**21**	⇑*i*P		**Pb**	**23 07 37.3**	**+0.4**
KBK	baz=24			⇑*i*S		**Sg**	**23 08 00.7**	**-0.4**
KBK	**Karagaybulak** SNR=13	**1.82**	**21**	P		**Pg**	**23 07 37.6**	**+0.1**
MRKS	**Merke** 33nm,0.4s	**1.89**	**341**	*e*P		**Pb**	**23 07 38.6**	**+0.6**
MRKS	20nm,0.1s			⇓*i*S		**Sg**	**23 08 03.7**	**+0.4**
FRU1	**Bishkek**	**1.90**	**13**	⇑*i*P		**Pb**	**23 07 38.2**	**+0.1**
FRU1	baz=15			⇑*i*S		**Sg**	**23 08 02.6**	**-0.9**
MNAS	**Manas**	**1.92**	**323**	⇑*i*P		**Pb**	**23 07 38.2**	**-0.4**
MNAS	baz=23			⇑*i*S		**Sb**	**23 08 02.6**	**-0.5**
BOOM	**Boomskoye usch**	**2.08**	**42**	⇓*i*P		**Pg**	**23 07 42.2**	**-0.2**
BOOM	baz=45			⇓*i*S		**Sg**	**23 08 09.1**	**-0.2**
ULHL	**Ulahol**	**2.08**	**51**	⇑*i*P		**Pg**	**23 07 42.4**	**-0.1**
ULHL	baz=54			⇑*i*S		**Sg**	**23 08 09.5**	**+0.1**
ULHL	**Ulahol** SNR=9.6	**2.08**	**51**	P		**Pg**	**23 07 43.8**	**+1.3**
CHMS	**Chumysh**	**2.10**	**14**	⇑*i*P		**Pb**	**23 07 41.8**	**+0.2**
CHMS	baz=16			⇑*i*S		**Sb**	**23 08 08.6**	**+0.4**
CHMS	**Chumysh** SNR=12	**2.10**	**14**	P		**Pg**	**23 07 42.7**	**-0.2**
TKM2	**Tokmak 2**	**2.27**	**30**	⇓*e*P		**Pb**	**23 07 44.6**	**0.0**
TKM2	baz=32			⇓*i*S		**Sb**	**23 08 13.5**	**+0.3**
TKM2	**Tokmak 2** SNR=7.1	**2.27**	**30**	P		**Pg**	**23 07 46.2**	**+0.1**
TKM2	**Tokmak 2** 4.6nm,0.5s	**2.27**	**30**	⇑Pg		**Pb**	**23 07 45.6**	**+1.0**
TKM2	22nm,0.6s			⇑Lg		Lg	23 08 15.7	
USP	**Ospenovka** baz=10.0	**2.33**	**8**	⇓*i*P		**Pb**	**23 07 44.7**	**-0.8**
USP	baz=10.0			⇓*i*S		**Sb**	**23 08 14.3**	**-0.5**
USP	**Ospenovka** SNR=8.3	**2.33**	**8**	P		**Pb**	**23 07 46.2**	**+0.8**
KST	**Kastek**	**2.52**	**34**	*e*P		**Pb**	**23 07 49.9**	**+1.1**
KST	9.2nm,0.5s 19nm,0.6s			*e*S		**Sg**	**23 08 22.9**	**-0.6**
KST	**Kastek**	**2.52**	**34**	Pg		**Pb**	**23 07 49.9**	**+1.1**
KST	9.2nm,0.5s 19nm,0.6s			Lg		Lg	23 08 22.9	
SGDS	**Sogindy**	**2.52**	**9**	Pg		**Pb**	**23 07 49.3**	**+0.5**
SGDS	16nm,0.3s 6.9nm,0.5s			Lg		Lg	23 08 22.2	
DGS	**Degeres**	**2.61**	**29**	*e*P		**Pg**	**23 07 51.8**	**-0.8**
KDJ	30nm,0.7s **Kajisay**	**2.62**	**62**	⇓*e*P		**Pb**	**23 07 50.2**	**-0.3**
KDJ	baz=65 baz=65			⇓*i*S		**Sb**	**23 08 23.5**	**+0.3**
BTK	**Batken**	**2.63**	**251**	⇓*i*P		**Pb**	**23 07 49.9**	**-0.8**
BTK	baz=48 baz=48			⇓*i*S		**Sb**	**23 08 23.0**	**-0.5**
MTBS	**Maitube**	**2.79**	**38**	*e*P		**Pb**	**23 07 54.4**	**+1.0**
MTBS	9.1nm,0.2s 25nm,0.3s			*e*S		**Sg**	**23 08 31.0**	**-1.4**
MTBS	**Maitube**	**2.79**	**38**	Pg		**Pb**	**23 07 54.4**	**+1.0**
MTBS	9.1nm,0.2s 25nm,0.3s			Lg		Lg	23 08 31.0	
IZV	**Izvestkoviy**	**2.81**	**42**	*e*P		**Pg**	**23 07 55.9**	**-0.7**
IZV	11nm,0.8s 42nm,0.6s			*e*S		**Sg**	**23 08 33.1**	**+0.1**
IZV	**Izvestkoviy**	**2.81**	**42**	Pg		**Pg**	**23 07 55.9**	**-0.7**
IZV	11nm,0.8s 42nm,0.6s			Lg		Lg	23 08 33.1	
KRBS	**Karabastau**	**2.98**	**23**	*e*P		**Pb**	**23 07 58.1**	**+1.4**
KRBS	11nm,0.3s 14nm,0.5s			*e*S		**Sg**	**23 08 37.0**	**-1.5**
KRBS	**Karabastau**	**2.98**	**23**	Pg		**Pb**	**23 07 58.1**	**+1.4**
KRBS	11nm,0.3s 14nm,0.5s			Lg		Lg	23 08 37.0	
TNSS	**Tian-Shan** 6.1nm,0.4s	**2.99**	**45**	*e*P		**Pg**	**23 07 59.1**	**-0.8**

TNSS					*e*S		**Sg**	**23 08 38.6**	**0.0**
	14nm,0.8s								
TNSS	**Tian-Shan**	**2.99**	**45**		Pg		**Pg**	**23 07 59.1**	**-0.8**
	6.1nm,0.4s								
TNSS					Lg		Lg	23 08 38.6	
	14nm,0.8s								
MDOK	**Medeo**	**3.13**	**44**		*e*P		**Pb**	**23 08 01.1**	**+2.0**
	12nm,0.9s								
MDOK					⇓*i*S		**Sg**	**23 08 42.4**	**-0.8**
	15nm,0.7s								
MDOK	**Medeo**	**3.13**	**44**		Pg		**Pb**	**23 08 01.1**	**+2.0**
	12nm,0.9s								
MDOK					Lg		Lg	23 08 42.4	
	15nm,0.7s								
KOTS	**Kotyrbulak**	**3.21**	**44**		*e*P		**Pg**	**23 08 02.8**	**-1.3**
	20nm,0.5s								
KOTS					*e*S		**Sg**	**23 08 45.2**	**-0.6**
	44nm,0.4s								
KOTS	**Kotyrbulak**	**3.21**	**44**		Pg		**Pg**	**23 08 02.8**	**-1.3**
	20nm,0.5s								
KOTS					Lg		Lg	23 08 45.2	
	44nm,0.4s								
IUG	**luzhnay**	**3.25**	**293**		*e*P		**Pb**	**23 08 03.4**	**+2.2**
	6.5nm,0.3s								
IUG					*e*S		**Sg**	**23 08 46.1**	**-0.9**
	52nm,0.6s								
IUG	**luzhnay**	**3.25**	**293**		Pg		**Pb**	**23 08 03.3**	**+2.2**
	6.5nm,0.3s								
IUG					Lg		Lg	23 08 46.1	
	52nm,0.6s								
KTBS	**Karatobe**	**3.37**	**34**		*e*P		**Pb**	**23 08 05.0**	**+1.8**
	2.8nm,0.3s								
KTBS					*e*S		**Sg**	**23 08 49.0**	**-1.8**
	43nm,0.5s								
KTBS	**Karatobe**	**3.37**	**34**		Pg		**Pb**	**23 08 05.0**	**+1.8**
	2.8nm,0.3s								
KTBS					Lg		Lg	23 08 49.0	
	43nm,0.5s								
KUU	**Kurty**	**3.38**	**29**		*e*P		**Pb**	**23 08 04.9**	**+1.5**
	4.1nm,0.3s								
KUU					*e*S		**Sg**	**23 08 49.0**	**-2.2**
	11nm,0.4s								
KUU	**Kurty**	**3.38**	**29**		Pg		**Pb**	**23 08 04.9**	**+1.5**
	4.1nm,0.3s								
KUU					Lg		Lg	23 08 49.0	
	11nm,0.4s								
KK31	**Karatay Array**	**3.40**	**310**		Pg		**Pg**	**23 08 08.8**	**+1.1**
	1.0nm,0.4s,baz=127,slow=16,SNR=4.1								
KK31					⇓Lg		Lg	23 08 49.9	
	3.8nm,0.4s,baz=124,slow=29,SNR=13								
GAR	**Garm**	**3.48**	**237**	⇑	*i*P		**Pb**	**23 08 03.1**	**-2.0**
	baz=35								
GAR				⇑	*i*S		**Sb**	**23 08 45.2**	**-2.8**
	baz=35								
BRLS	**Borolday**	**3.77**	**305**		*e*P		**Pb**	**23 08 12.4**	**+2.4**
	26nm,0.4s								
BRLS					*e*S		**Sg**	**23 09 01.6**	**-1.9**
	17nm,0.4s								
BRLS	**Borolday**	**3.77**	**305**		Pg		**Pb**	**23 08 12.4**	**+2.4**
	26nm,0.4s								
BRLS					Lg		Lg	23 09 01.6	
	17nm,0.4s								
SATY	**Saty**	**3.86**	**56**		*e*P		**Pb**	**23 08 13.6**	**+2.0**
	8.4nm,0.8s								
SATY					*e*S		**Sg**	**23 09 03.7**	**-2.8**
	14nm,0.7s								
SATY	**Saty**	**3.86**	**56**		Pg		**Pb**	**23 08 13.6**	**+2.0**
	8.4nm,0.8s								
SATY					Lg		Lg	23 09 03.7	
	14nm,0.7s								
BTLS	**Baital**	**4.08**	**360**		*e*P		**Pb**	**23 08 17.9**	**+2.7**
	3.3nm,0.5s								
BTLS					*e*S		**Sg**	**23 09 10.8**	**-2.8**
	3.2nm,0.5s								
BTLS	**Baital**	**4.08**	**360**		Pg		**Pb**	**23 08 17.9**	**+2.7**
	3.3nm,0.5s								
BTLS					Lg		Lg	23 09 10.8	
	3.2nm,0.5s								
KPKS	**Kokpek**	**4.25**	**52**		*e*P		**Pb**	**23 08 20.1**	**+1.8**
	8.6nm,1.0s								
KPKS					*e*S		**Sg**	**23 09 14.9**	**-4.2**
	10nm,0.5s								
SHLS	**Shalkode**	**4.58**	**60**		*e*P		**Pg**	**23 08 31.5**	**+1.1**
	5.5nm,0.5s								
SHLS					*e*S		**Sg**	**23 09 34.4**	**+4.7**
	12nm,0.8s								
SHLS	**Shalkode**	**4.58**	**60**		Pg		**Pg**	**23 08 31.5**	**+1.1**
	5.5nm,0.5s								
SHLS					Lg		Lg	23 09 34.4	
	12nm,0.8s								
PDGK	**Podgornoye**	**4.68**	**58**		Pg		**Pg**	**23 08 29.5**	**-2.8**
	1.6nm,0.6s								
PDGK					Lg		Lg	23 09 30.8	
	2.4nm,0.6s								
PDGK	**Podgornoye**	**4.68**	**58**		⇓Pg		**Pg**	**23 08 32.6**	**+0.3**
	5.8nm,1.1s								
PDGK					⇑Lg		Lg	23 09 33.2	
	7.5nm,0.8s								

IDC 07 23:30:18.1±17.0,**6°20S**×**147°69E**,**h317**km±165km, **mb2.8**/3,**mb1 3.0**/4,**mb1mx2.8**/24,**mbtmp3.5**/4,**MS3.2**/1, **Ms1 3.2**/1,**ms1mx2.6**/12,**Error ellipse: s-maj=118.6km s-min=64.9km az=81.0**,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.84**	**222**	P	P	23 34 15.9	0.0
	0.1nm,0.3s,baz=48,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**21.85**	**216**	P	P	23 34 46.0	+0.4
	1.0nm,0.7s,baz=49,slow=9.1,SNR=7.0						
FITZ	**Fitzroy Crossi**	**24.55**	**239**	P	P	23 35 09.2	-0.9
	1.0nm,1.0s,baz=45,slow=10.0,SNR=1.6						
FITZ				LR	LR	23 45 17.3	
	comp=Z,56nm,18.7s,baz=68,slow=37						
MKAR	**Makanchi Array**	**78.08**	**320**	P	P	23 41 42.5	+0.1
	0.3nm,0.7s,baz=117,slow=5.2,SNR=2.2						

*ROM **07** 23:36:14.8±0.4,42°.07N±0°.01×15°.89E±0°.02,h6km±1km, ML2.6/1,Error ellipse: s-maj=2.1km s-min=0.1km az=52.0*

ISC 07 23:36:13.9±0.9,**42°10N**±0°.04×**15°88E**±0°.05,**h10**km,**n14**, σ0**s70**/**18**,**Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TREM	**Isole Tremiti**	**0.28**	**275**	P	**Pb**	**23 36 21.1**	**+0.2**
TREM				S	**Sb**	**23 36 25.9**	**+0.2**
TREM				AML	AML		
	comp=E,969μm,0.7s						
TREM				AML	AML		
	comp=N,1465μm,0.6s						
SGRT	**San Giovanni R**	**0.36**	**197**	P	**Pb**	**23 36 22.4**	**0.0**
SGRT				S	**Sb**	**23 36 27.5**	**-0.6**
SGRT				AML	AML		
	comp=E,549μm,0.4s						
SGRT				AML	AML		
	comp=N,688μm,0.4s						
MSAG	**Monte S. Angel**	**0.39**	**177**	P	**Pb**	**23 36 23.0**	**+0.1**
MSAG				S	**Sb**	**23 36 28.9**	**0.0**
MSAG				AML	AML		
	comp=N,1905μm,0.8s						
MSAG				AML	AML		
	comp=N,1900μm,0.8s						
MSAG				AML	AML		
	comp=N,2000μm,0.8s						
MSAG				AML	AML		
	comp=E,1135μm,0.1s						
MSAG				AML	AML		
	comp=E,1250μm,0.1s						
MELA	**Melanico ??? S**	**0.69**	**235**	P	**Pb**	**23 36 28.3**	**+0.4**
MELA				S	**Sb**	**23 36 38.3**	**+0.9**
MELA				AML	AML		
	comp=E,1026μm,0.4s						
MELA				AML	AML		
	comp=N,916μm,0.2s						
MELA				AML	AML		
	comp=E,1051μm,0.3s						
MELA				AML	AML		
	comp=N,976μm,0.2s						
MELA				AML	AML		
	comp=E,1028μm,0.4s						
MELA				AML	AML		
	comp=N,919μm,0.2s						
LSTV	**Lastovo**	**1.00**	**48**	Sn	**Sn**	**23 36 49.6**	**+1.3**
BSSO	**Busso**	**1.11**	**241**	P	**Pn**	**23 36 36.3**	**+0.8**
VULT	**Monte Vulture**	**1.16**	**190**	P	**Pg**	**23 36 36.1**	**-0.1**
SNAL	**S. Angelo Dei**	**1.28**	**204**	P	**Pn**	**23 36 37.2**	**-0.7**
SNAL				AML	AML		
	comp=E,259μm,1.6s						
SNAL				AML	AML		
	comp=N,265μm,1.6s						
MAKA	**Makarska**	**1.46**	**35**	Sn	**Sg**	**23 37 00.5**	**-0.2**
RICI	**Ricice**	**1.67**	**33**	*e*Pn	**Pn**	**23 36 43.3**	**0.0**
MORI	**Morici**	**1.77**	**356**	*e*Pn	**Pn**	**23 36 44.0**	**-0.6**
KIJV	**Kijevo**	**1.94**	**11**	*e*Pn	**Pn**	**23 36 47.6**	**+0.6**
DUGI	**Dugi Otok**	**1.99**	**343**	Sn	**Sn**	**23 37 11.1**	**-1.4**
NVLJ	**Novalja**	**2.57**	**344**	Sn	**Sn**	**23 37 26.2**	**-0.7**

*NEIC **07** 23:47:00.9±1.8,2°.8N±0°.1×122°.4E±0°.2,h545km±10km, mb4.3/23,Error ellipse: s-maj=23.8km s-min=13.9km az=72.0*

*IDC **07** 23:47:03.1±3.3,2°.70N×122°.37E,h571km±50km,mb2.9/7, mb1 3.1/8,mb1mx2.7/43,mbtmp4.0/8,Error ellipse: s-maj=52.9km s-min=15.0km az=76.0*

ISC 07 23:47:01.2±0.5,**2°81N**±0°.06×**122°5E**±0°.1,**h550**km,**n39**, σ1**s22**/**38**,**mb4.0**/15,**Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**3.84**	**176**	P	**P**	**23 48 21.2**	**-0.7**
LUWI				S	**S**	**23 49 25.8**	**-1.8**
MYLDM	**Lahad Datu**	**4.63**	**301**	P	**P**	**23 48 29.2**	**+1.2**
DAV	**Davao City (W)**	**5.23**	**36**	P	**P**	**23 48 31.3**	**-1.8**
TNTI	**Ternate**	**5.28**	**112**	P	**P**	**23 48 33.8**	**+0.3**
BATI	**Baumata**	**12.98**	**175**	P	**P**	**23 49 50.1**	**+0.1**
	5.5nm,0.3s,baz=50,slow=3.7,SNR=3.1						
MTN	**Manton Dam**	**17.76**	**151**	P	**P**	**23 50 38.1**	**+1.1**
MTN				IAmb	IAmb	23 50 41.5	
	comp=Z,5.3nm,0.4s						
KNRA	**Kununurra**	**19.39**	**162**	P	**P**	**23 50 51.9**	**+0.1**
KNRA				IAmb	IAmb	23 51 04.7	
	comp=Z,5.0nm,1.0s						
FITZ	**Fitzroy Crossi**	**21.01**	**172**	P	**P**	**23 51 06.7**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=8.8,slow=5.7,SNR=5.3						
FITZ	**Fitzroy Crossi**	**21.01**	**172**	IAmb	IAmb	23 51 07.4	
	comp=Z,2.4nm,1.0s						
NACB	**Ninganchiao**	**21.26**	**358**	P	**P**	**23 51 04.3**	**-4.3**
YHNB	**Yeheng**	**21.76**	**357**	P	**P**	**23 51 13.2**	**0.0**
YHNB				IAmb	IAmb	23 51 32.0	
	comp=Z,16nm,1.0s						
WB0	**Warramunga Arr**	**25.30**	**153**	P	**P**	**23 51 44.5**	**-0.3**
WRA	**Warramunga Arr**	**25.43**	**153**	P	**P**	**23 51 46.0**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=337,slow=9.7,SNR=22						
WRA	**Warramunga Arr**	**25.43**	**153**	P	**P**	**23 51 45.1**	**-0.8**
WB2	**Warramunga Arr**	**25.43**	**153**	P	**P**	**23 51 46.0**	**+0.1**
WR0	**Warramunga Arr**	**25.53**	**153**	P	**P**	**23 51 45.6**	**-1.2**
ASAR	**Alice Springs**	**26.57**	**158**	P	**P**	**23 52 13.8**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=335,slow=7.7,SNR=9.8						
JNU	**Nakatsue**	**31.16**	**14**	P	**P**	**23 52 37.2**	**+1.5**
	comp=Z,15nm,1.0s,baz=191,slow=0.9,SNR=3.8						
JNU	**Nakatsue**	**31.16**	**14**	P	**P**	**23 52 35.4**	**-0.2**
JNU				IAmb	IAmb	23 52 38.4	
	comp=Z,18nm,1.0s						
JTU	**Tsushima**	**32.20**	**11**	P	**P**	**23 52 41.7**	**-2.7**
MORW	**Morawa**	**32.30**	**191**	P	**P**	**23 52 44.0**	**-1.3**
MORW				IAmb	IAmb	23 52 50.4	
	comp=Z,8.7nm,1.1s						
FORT	**Forrest**	**33.82**	**171**	P	**P**	**23 52 58.4**	**+0.2**
FORT				IAmb	IAmb	23 53 13.8	
	comp=Z,18nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.89**	**188**	P	**P**	**23 53 14.8**	**-0.6**
NWAO				IAmb	IAmb	23 53 28.0	
	comp=Z,13nm,1.0s						
BBOO	**Buckleboo**	**37.68**	**161**	P	**P**	**23 53 30.5**	**+0.3**
BBOO				IAmb	IAmb	23 53 46.5	
	comp=Z,7.2nm,1.1s						
USRK	**Ussuriysk Ar.**	**42.06**	**10**	P	**P**	**23 54 05.9**	**+0.9**
SONM	**Songino Array**	**46.96**	**345**	P	**P**	**23 54 44.2**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=157,slow=7.9,SNR=4.8						
SONM	**Songino Array**	**46.96**	**345**	IAmb	IAmb	23 54 44.7	
	comp=Z,0.6nm,0.8s						
SANVU	**Saraoutou**	**47.81**	**114**	P	**P**	**23 54 50.4**	**+0.9**
SANVU				IAmb	IAmb	23 55 05.5	
	comp=Z,13nm,0.8s						
MK31	**Makanchi Array**	**55.98**	**328**	P	**P**	**23 55 48.1**	**+0.4**
MKAR	**Makanchi Array**	**55.98**	**328**	P	**P**	**23 55 48.3**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=130,slow=8.2,SNR=9.4						
MKAR				PcP	**PcP**	**23 56 37.8**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=167,slow=3.6,SNR=4.1						
MKAR	**Makanchi Array**	**55.98**	**328**	P	**P**	**23 55 48.1**	**+0.3**
ZALV	**Zalesovo Beam**	**59.56**	**335**	P	**P**	**23 56 11.5**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=131,slow=5.5,SNR=3.0						
KURK	**Kurchatov**	**60.31**	**330**	P	**P**	**23 56 17.4**	**+0.5**
KURK				IAmb	IAmb	23 56 17.5	
	comp=Z,2.7nm,0.5s						
OUZ	**Omahuta**	**60.95**	**133**	P	**P**	**23 56 21.8**	**+0.3**
OUZ				IAmb	IAmb	23 56 27.6	
	comp=Z,7.3nm,1.1s						
ABKAR	**Akbulak array**	**70.22**	**322**	P	**P**	**23 57 18.5**	**-0.6**
LVZ	**Lovozero**	**86.60**	**338**	P	**P**	**23 58 47.1**	**+1.0**
BWN	**Browse**	**86.63**	**26**	P	**P**	**23 58 52.0**	**+5.7**
I23K	**Minto, Yukon-K**	**86.69**	**25**	P	**P**	**23 58 48.0**	**+1.5**
TORD	**Torodi Ar. Bea**	**119.16**	**287**	PKP	**PKPdf**	**00 04 48.2**	**-0.8**
	comp=Z,0.4nm,1.0s,baz=89,slow=2.3,SNR=1.6						

*BJI **07** 23:54:19.3±0.0,37°.80N×142°.26E,h33km,mB5.1/57, mb5.3/77,Ms4.7/76,Ms7 4.6/69*

*GCMT **07** 23:54:20.9±0.2,37°.96N±0°.01×142°.23E±0°.02,h35km, MW5.1/15,Moment Tensor Solution. s95,c138; s115,c160; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr6.32±.12; Mθθ-3.92±.09; Mϕϕ-2.40±.08; Mrθ-1.19±.08; Mθϕ0.37±.07; Mϕr-1.36±.07; Best double couple: M₀5.37900×10¹⁶ NP1:ϕs109.00000°,δ40.00000°, λ105.00000°. NP2:ϕs269.00000°,δ51.00000°,λ78.00000°. Principal axes: T 6.6710, Plg79.0000°, Azm127.0000°; N -2.5840, Plg10.0000°, Azm277.0000°; P -4.0870, Plg5.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **07** 23:54:20.4±0.9,37°.90N×142°.33E,h36km,mb5.5/100, MS4.6/20 Error ellipse: s-maj=5.1km s-min=3.4km az=101.2*

*JMA **07** 23:54:21.2±0.1,37°.81N×142°.31E,h40km±2km,M5.2 JMA Felt III J1.*

*NIED **07** 23:54:21.3,37°.81N×142°.32E,h40km,MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr3.71; Mθθ-2.23; Mϕϕ-1.48; Mrθ-0.53; Mθϕ0.34; Mϕr-0.50; Fault plane solution: M₀3.10000×10¹⁶ NP1: ϕs282.00000°,δ49.00000°,λ80.00000°. NP2: ϕs117.00000°,δ42.00000°,λ101.00000°.*

*KEA **07** 23:54:21.6±0.0,37°.90N×142°.80E,h36km,mB5.0/3, MS3.7/3*

*NEIC **07** 23:54:22.9±1.4,37°.80N±0°.05×142°.30E±0°.07,h42km±4km, mb5.3/615,Mww5.1,Error ellipse: s-maj=8.3km s-min=7.3km az=112.0*

*IDC **07** 23:54:23.5±0.4,37°.80N×142°.26E,h47km±3km,mb4.9/38, mb1 5.0/44,mb1mx5.0/52,mbtmp5.1/44,MS4.3/45, Ms1 4.3/45,ms1mx4.3/56,Error ellipse: s-maj=9.6km s-min=6.7km az=132.0*

*NEIC **07** 23:54:24,37°.93N×142°.31E,h36km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr6.61; Mθθ-3.72; Mϕϕ-2.90; Mrθ-0.69; Mθϕ0.82; Mϕr-0.91; Fault plane solution: M₀5.91000×10¹⁶ NP1:ϕs128.00000°, δ45.00000°,λ100.00000°. NP2:ϕs294.00000°,δ46.00000°, λ80.00000°. Principal axes: T 6.7537, Plg83.0000°, Azm126.0000°; N -2.5303, Plg7.0000°, Azm301.0000°; P -4.2234, Plg1.0000°, Azm31.0000°;*

*BGR **07** 23:54:25.1±0.0,38°.16N×142°.08E,h33km,mb5.5,Ms4.8*

ISC 07 23:54:21.7±0.3,**37°82N**±0°.03×**142°37E**±0°.03,**h35**km±1km, **h35**km:**pP-P,n1514**,σ1**s19**/1462,**mb5.3**/452,**MS4.5**/77, **102C-61D**,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.86**	**305**	⇓P	**Pn**	**23 54 36.8**	**-0.6**
JIKH				S	**Sn**	**23 54 47.7**	**-1.1**
JIO	**Ouri**	**1.02**	**309**	⇓P	**Pn**	**23 54 39.2**	**-0.4**
JIO				S	**Sn**	**23 54 52.1**	**-0.6**
JMST	**Minamisoumatoc**	**1.18**	**266**	⇓P	**Pn**	**23 54 40.8**	**-0.9**
JMST				S	**Sn**	**23 54 55.0**	**-1.5**
JKMT	**Kesennumamotoy**	**1.21**	**325**	⇓P	**Pn**	**23 54 42.1**	**-0.1**
JKMT				S	**Sn**	**23 54 56.8**	**-0.6**
JMM	**Marumori**	**1.25**	**273**	⇓P	**Pn**	**23 54 42.0**	**-0.7**
JMM				S	**Sn**	**23 54 57.2**	**-1.0**
JMM	**Marumori**	**1.25**	**273**		**Pn**	**23 54 42.5**	**-0.2**
JMM				Sn	**Sn**	**23 54 57.4**	**-0.9**
JFK	**Kawauchi**	**1.27**	**250**	⇓P	**Pn**	**23 54 42.2**	**-0.8**
JFK				*e*S	**Sn**	**23 54 57.6**	**-1.3**
OFUJ	**Ofunato**	**1.37**	**337**	⇓P	**Pn**	**23 54 44.1**	**-0.3**
JOFO	**Osakifurukawao**	**1.39**	**305**	⇓P	**Pn**	**23 54 45.2**	**+0.6**
ONAJ	**Iwakimizuishiy**	**1.44**	**241**	⇓P	**Pn**	**23 54 44.6**	**-0.8**
JMK	**Ichinoseki**	**1.45**	**322**	⇓P	**Pn**	**23 54 45.6**	**+0.2**
JMK				S	**Sn**	**23 55 03.1**	**0.0**
JOU	**Okura**	**1.45**	**293**	⇓P	**Pn**	**23 54 45.6**	**+0.1**
JOU				S	**Sn**	**23 55 03.5**	**+0.2**
JFFD	**Fukushimafurud**	**1.61**	**244**	P	**Pn**	**23 54 47.2**	**-0.5**
JFT	**Otama**	**1.64**	**260**	⇓P	**Pn**	**23 54 48.5**	**+0.4**
JFT				S	**Sn**	**23 55 08.4**	**+0.4**
MIYJ	**Miyakonagasawa**	**1.81**	**346**	⇓P	**Pn**	**23 54 50.1**	**-0.3**
JOM	**Ohasama**	**1.85**	**333**	⇓P	**Pn**	**23 54 51.4**	**+0.4**
JYS	**Shirataka**	**1.86**	**283**	P	**Pn**	**23 54 52.0**	**+0.9**
JYS				S	**Sn**	**23 55 14.9**	**+1.5**
JHO	**Hitachi**	**1.88**	**230**	⇓P	**Pn**	**23 54 50.6**	**-0.7**
JYK	**Kaneyama**	**1.92**	**305**	⇓P	**Pn**	**23 54 52.4**	**+0.5**
JYK				*e*S	**Sn**	**23 55 15.8**	**+0.9**
JRG	**Rokugo**	**2.08**	**320**	⇓P	**Pn**	**23 54 54.8**	**+0.7**
JSB	**Shiboa**	**2.13**	**247**	⇓P	**Pn**	**23 54 55.6**	**+0.8**
JTH	**Tanohata**	**2.15**	**350**	⇓P	**Pn**	**23 54 54.8**	**-0.3**
JFY	**Yanaizu**	**2.15**	**260**	⇓P	**Pn**	**23 54 55.7**	**+0.5**
JKZ	**Kuzumaki**	**2.31**	**340**	⇓P	**Pn**	**23 54 57.8**	**+0.5**
JYT	**Yasato**	**2.36**	**228**		**Pn**	**23 54 57.9**	**0.0**
JYT				Sn	**Sn**	**23 55 24.8**	**-0.8**
JYW	**Yuwa**	**2.41**	**316**	P	**Pn**	**23 54 59.8**	**+1.2**
JNS	**Sasagawa**	**2.42**	**271**	⇓P	**Pn**	**23 54 59.4**	**+0.7**
JAW	**Awa shima**	**2.54**	**285**	⇓P	**Pn**	**23 55 01.5**	**+1.1**
JKT	**Katashina**	**2.70**	**248**	P	**Pn**	**23 55 04.2**	**+1.5**
JAG	**Ashikaga**	**2.71**	**240**	⇓P	**Pn**	**23 55 03.1**	**+0.3**
JAH	**Hinai**	**2.72**	**331**	⇓P	**Pn**	**23 55 03.9**	**+0.9**
JHK	**Hiroka**	**2.72**	**259**	⇓P	**Pn**	**23 55 03.7**	**+0.7**
JIZZ	**Izumozaki**	**2.92**	**265**	P	**Pn**	**23 55 07.5**	**+1.9**
JTM	**Tenmabayashi**	**3.13**	**342**		**Pn**	**23 55 09.3**	**+0.8**
JKUC	**kamogawauchiur**	**3.18**	**214**	P	**Pn**	**23 55 10.2**	**+1.0**
JGK	**Kuni**	**3.23**	**248**	P	**Pn**	**23 55 11.5**	**+1.5**
JSD	**Sado**	**3.25**	**275**		**Pn**	**23 55 10.1**	**-0.1**
BSO4	**Boso 4**	**3.26**	**211**	P	**Pn**	**23 55 11.4**	**+1.1**
JRY	**Ryogami san**	**3.31**	**238**	⇓P	**Pn**	**23 55 11.4**	**+0.3**
JJN	**Nakama**	**3.42**	**259**	P	**Pn**	**23 55 13.9**	**+1.4**
MJAR	**Matsushiro Arr**	**3.56**	**250**	P	**Pn**	**23 55 16.0**	**+1.6**
	12nm,0.3s,baz=68,slow=13,SNR=388						
MJAR				S	**Sn**	**23 55 55.9**	**+0.6**
	7.9nm,0.3s,baz=98,slow=14,SNR=6.9						
MJAR				LR	LR	23 56 56.1	
	comp=Z,9μm,18.7s,baz=85,slow=44						
MJAR	**Matsushiro Arr**	**3.56**	**250**	P	**Pn**	**23 55 16.0**	**+1.6**
MJAR				S	**Sn**	**23 55 55.9**	**+0.6**
MJAR	**Matsushiro Arr**	**3.56**	**250**	P	**Pn**	**23 55 15.3**	**+0.8**
MAJO	**Matsushiro**	**3.56**	**250**	*d* P	**Pn**	**23 55 16.2**	**+1.7**
MAJO	**Matsushiro**	**3.56**	**250**	P	**Pn**	**23 55 16.0**	**+1.5**
MAT	**Matsushiro**	**3.56**	**250**	P	**Pn**	**23 55 16.2**	**+1.7**
MAT				*e*S	**Sn**	**23 55 59.8**	**+4.5**
MAT	**Matsushiro**	**3.56**	**250**	P	**Pn**	**23 55 16.2**	**+1.7**
MJB9	**Matsu-Tunnel**	**3.56**	**250**		**Pn**	**23 55 15.2**	**+0.7**
JOD2	**Odawara 2**	**3.67**	**227**	⇓P	**Pn**	**23 55 16.5**	**+0.5**
JNG	**Nsakai**	**3.69**	**249**	⇓P	**Pn**	**23 55 17.9**	**+1.5**
AJI	**Ajiro2**	**3.83**	**225**	P	**Pn**	**23 55 18.3**	**+0.2**
JYN	**Shimob**	**3.85**	**234**	⇓P	**Pn**	**23 55 18.4**	**-0.6**
JNT	**Takato**	**3.91**	**241**	⇓P	**Pn**	**23 55 21.2**	**+1.8**
JHTM	**Izuhatsuma**	**3.94**	**225**	⇓P	**Pn**	**23 55 19.7**	**0.0**
ERM	**Erimo**	**4.23**	**8**	*c e* P	**Pn**	**23 55 23.3**	**-0.4**
ERM				pmax	pmax		
	comp=Z,293nm,1.0s						
ERM	**Erimo**	**4.23**	**8**		**Pn**	**23 55 23.4**	**-0.3**
SHZ3	**Shizuoka 3**	**4.33**	**232**	P	**Pn**	**23 55 27.4**	**+2.2**
JGF	**Kuroka**	**4.59**	**243**	⇓P	**Pn**	**23 55 30.9**	**+2.2**
JGF	**Kuroka**	**4.59**	**243**		**Pn**	**23 55 30.5**	**+1.8**
JSG	**Sagara**	**4.61**	**228**		**Pn**	**23 55 31.0**	**+2.1**
HMMJ	**Hamamatsu 2**	**4.78**	**233**	⇓P	**Pn**	**23 55 32.9**	**+1.7**
INU	**Inuyama**	**4.96**	**242**		**Pn**	**23 55 35.4**	**+1.7**
JYTA	**Yamagatataniai**	**5.04**	**246**	⇓P	**Pn**	**23 55 37.1**	**+2.3**
JEW	**Eniwo**	**5.06**	**352**	Pn	**Pn**	**23 55 35.8**	**+0.7**
JHJ2	**Mitsune**	**5.14**	**205**	P	**Pn**	**23 55 35.3**	**-0.8**
JHJ2	**Mitsune**	**5.14**	**205**		**Pn**	**23 55 35.4**	**-0.8**
JHJ2				Sn	**Sn**	**23 56 31.5**	**-2.8**
JHJ	**Hachijo jima 2**	**5.14**	**205**	P	**Pn**	**23 55 35.7**	**-0.6**
	comp=Z,482nm,0.3s,baz=335,slow=15,SNR=85						
JHJ				S	**Sn**	**23 56 31.6**	**-2.8**
	comp=Z,584nm,0.3s,baz=89,slow=24,SNR=12						
JHJ				LR	LR	23 57 10.1	
	comp=Z,2μm,19.6s,baz=87,slow=33						
NMR	**Nemuro--Hokkai**	**6.11**	**24**	*i* P	**Pn**	**23 55 47.4**	**-2.0**
NMR				*i* S	**Sn**	**23 56 51.7**	**-6.3**
JWT	**Wachi**	**6.15**	**248**	Pn	**Pn**	**23 55 52.1**	**+2.0**
ASAJ	**Asahikawa**	**6.29**	**2**	P	**Pn**	**23 55 52.5**	**+0.5**
	comp=Z,43nm,0.3s,baz=219,slow=13,SNR=62						
ASAJ				S	**Sn**	**23 57 01.2**	**-1.4**
	comp=Z,36nm,0.3s,baz=16

comp=E,3µm,2.4s
KUR smax smax
comp=N,2µm,2.5s
KUR smax smax
comp=N,652nm,0.4s
KUR smax smax
comp=E,327nm,0.8s
KUR MLR MLR
comp=Z,1µm,13.0s
KUR MLR MLR
comp=N,2µm,16.0s
YSS Yuzh-Sakhalins 9.13 2 *ceP* **Pn 23 56 31.3 +0.4**
YSS *eS* **Sn 23 58 10.4 -2.0**
YSS pmax pmax
comp=Z,230nm,0.7s
YSS pmax pmax
comp=Z,600nm,2.5s
YSS MLR MLR
comp=Z,2µm,15.0s
YSS MLR MLR
comp=N,700nm,13.0s
YSS MLR MLR
comp=E,2µm,18.0s
YSS Yuzh-Sakhalins 9.13 2 Pn **Pn 23 56 30.8 -0.1**
VLA Vladivostok 9.58 307 *d iP* **Pn 23 56 38.3 +1.3**
VLA pmax pmax
comp=Z,156nm,1.0s
USA0B Ussuriysk Arra 10.10 312 *i* P **Pn 23 56 46.3 +2.1**
USA0B Ussuriysk Arra 10.10 312 Pn **Pn 23 56 45.6 +1.4**
USRK Ussuriysk Ar. 10.10 312 P **Pn 23 56 45.9 +1.7**
baz=124,slow=13,SNR=67
USRK LR LR 00 00 28.5
comp=Z,3µm,18.4s,baz=110,slow=36
USRK Ussuriysk Ar. 10.10 312 P **Pn 23 56 45.9 +1.7**
JFA Akaike 10.26 250 P **Pn 23 56 48.6 +2.2**
JKIT Kitakata 10.32 243 P **Pn 23 56 48.9 +1.6**
JNU Nakatsue 10.47 247 P **Pn 23 56 51.4 +2.0**
comp=Z,1.9nm,0.3s,baz=59,slow=8.0,SNR=26
JNU LR LR 00 01 18.3
comp=Z,3µm,19.2s,baz=68,slow=40
JNU Nakatsue 10.47 247 P **Pn 23 56 51.4 +2.0**
JFI Itaya 10.69 249 P **Pn 23 56 54.8 +2.5**
JCJ Chichijima 10.70 181 Pn **Pn 23 56 50.4 -2.1**
JTU Tsushima 10.99 256 Pn **Pn 23 56 57.8 +1.4**
KSRS Korea Array 11.46 273 P **Pn 23 57 06.5 +3.7**
comp=Z,2.3nm,0.3s,baz=85,slow=14,SNR=68
KSRS LR LR 00 01 11.2
comp=Z,2µm,19.9s,baz=85,slow=36
KSRS PcP **PcP 00 02 53.6 -0.3**
comp=Z,0.2nm,0.3s,baz=145,slow=1.1,SNR=5.6
KSAR Wonju Array Be 11.49 273 P **Pn 23 57 05.1 +1.8**
KSAR Wonju Array Be 11.49 273 Pn **Pn 23 57 05.1 +1.8**
KS19 Wonju Array Si 11.50 273 **Pn 23 57 05.1 +1.7**
JSU Suzuyama 11.65 241 **Pn 23 57 06.0 +0.5**
HHU Hamhung 11.76 285 P Pn 23 57 13.6 +6.7
HHU pP 23 57 20.0
HHU S Sn 23 59 35.2 +18
MDJ Mudanjiang 11.77 309 P **Pn 23 57 08.8 +1.8**
MDJ pP 23 57 16.1
MDJ sP 23 57 20.8
MDJ S **Sn 23 59 17.4 +0.4**
MDJ pmax pmax
comp=Z,86nm,1.2s
MDJ pmax pmax
comp=Z,820nm,3.6s
MDJ LR LR
comp=Z,2µm,15.7s
MDJ LR LR
comp=Z,2µm,17.8s
MDJ LR LR
comp=Z,3µm,17.1s
TJN Taejon 12.07 268 *i* P **Pn 23 57 11.2 0.0**
INCN Inchon 12.48 273 P **Pn 23 57 18.5 +1.7**
INCN Inchon 12.48 273 Pn **Pn 23 57 18.5 +1.7**
PYS Pyongsong 13.01 281 P **Pn 23 57 27.2 +3.2**
TYV Tymovskoe 13.04 1 *eP* **Pn 23 57 23.2 -1.2**
TYV *eS* **Sn 23 59 46.6 -1.5**
TYV pmax pmax
comp=Z,45nm,1.3s
TYV pmax pmax
comp=Z,200nm,3.3s
TYV smax smax
comp=E,700nm,4.4s
TYV MLR MLR
comp=Z,3µm,18.0s
PYAG Pyongyang 13.08 281 P P 23 57 29.8 -5.0
PYAG pP Pn 23 57 39.1 +14
PYAG S **Sn 23 59 52.0 +2.8**
GRNR Gornyy 13.62 344⇑ *iP* **Pn 23 57 31.4 -0.9**
GRNR *eS* **Sn 00 00 03.2 +0.9**
GRNR pmax pmax
comp=Z,7.0nm,0.9s
GRNR smax smax
comp=N,9.0nm,0.9s
GRNR MLR MLR
comp=E,840nm,12.0s
GRNR MLR MLR
comp=N,720nm,16.0s
GRNR MLR MLR
comp=Z,1µm,14.0s
KLR Kul'dur 13.74 329 P **Pn 23 57 33.5 -0.4**
comp=Z,1.0nm,0.3s,baz=154,slow=13,SNR=20
KLR LR LR 00 02 57.4
comp=Z,3µm,18.8s,baz=134,slow=37
KLR Kul'dur 13.74 329 *ceP* **Pn 23 57 34.8 +0.8**
SUJ Sinuiju 14.10 285 P **Pn 23 57 40.4 +1.6**
SUJ pP **P 23 57 45.8 -0.2**
SUJ S **Sn 00 00 19.0 +5.1**
CN2 Changchun 14.13 300 *eP* **Pn 23 57 40.5 +1.2**
CN2 *eS* **Sn 00 00 10.6 -4.1**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,1µm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,2µm,15.0s
JMZ Minamidaito 2 15.24 222 Pn **Pn 23 57 54.5 +0.1**
JMZ IAmb IAmb 23 58 07.4
comp=Z,231nm,1.1s
OKH Okha 15.74 1 *deP* Pn 23 57 51.5 -9.0
SKR Severo-Kuril's 16.16 33 *eP* **Pn 23 58 05.8 -0.2**
SKR pmax pmax
comp=Z,71nm,1.8s
SKR MLR MLR
comp=Z,600nm,17.0s
SKR MLR MLR
comp=Z,1µm,14.0s
DL2 Dalian 16.30 280 P **Pn 23 58 07.9 0.0**
DL2 PP **pP 23 58 20.4 +1.0**
DL2 S **Sn 00 01 10.5 +2.9**
DL2 pmax pmax
comp=Z,210nm,1.0s
DL2 pmax pmax
comp=Z,290nm,3.6s
DL2 LR LR
comp=Z,460nm,12.1s
DL2 LR LR
comp=Z,870nm,18.8s
DL2 LR LR
comp=Z,1µm,21.8s
PEA0B Petropavlovsk- 18.63 30 *i* P **P 23 58 35.7 -0.4**
PEA0B Petropavlovsk- 18.63 30 P **P 23 58 35.4 -0.7**
PETK Petropavlovsk- 18.63 30 P **P 23 58 35.1 -1.0**
comp=Z,0.5nm,0.3s,baz=196,slow=8.7,SNR=7.8
PETK LR LR 00 05 32.1
comp=Z,809nm,21.2s,baz=220,slow=36
PETK Petropavlovsk- 18.63 30 P **Pn 23 58 36.6 0.0**
PETK Petropavlovsk- 18.63 30 P Pn **23 58 36.6 0.0**
SSE Sheshan 18.69 255 P **P 23 58 37.0 +0.1**
SSE S **Sn 00 02 05.1 -0.4**
SSE pmax pmax
comp=Z,47nm,1.0s
SSE pmax pmax
comp=Z,200nm,4.2s
SSE LR LR
comp=Z,270nm,16.3s
SSE LR LR
comp=Z,350nm,11.5s
SSE Sheshan 18.69 255 P **P 23 58 35.9 -1.1**
PET Petropavlovsk 18.95 31 P **P 23 58 39.3 -0.3**
PET pmax pmax
comp=Z,947nm,1.2s
PET Petropavlovsk 18.95 31 P **Pn 23 58 41.1 +0.7**
ZEA Zeya 19.03 332 *eP* **P 23 58 40.3 -0.2**
ZEA *eS* **Sn 00 02 08.4 -4.9**
ZEA pmax pmax
comp=E,30nm,1.1s
ZEA pmax pmax
comp=N,30nm,0.6s
ZEA pmax pmax
comp=Z,70nm,0.7s
ZEA MLR MLR
comp=E,700nm,15.0s
ZEA MLR MLR
comp=Z,1µm,15.0s
NJ2 Nanjing 20.09 260 *eP* **P 23 58 50.9 -1.4**
NJ2 sP **pP 23 59 02.7 +1.4**
NJ2 S **S 00 02 32.0 -4.2**
NJ2 sS **sS 00 02 45.0 -5.6**
NJ2 SS **SnSn 00 02 58.0 +4.2**
NJ2 PcP **PcP 00 03 07.9 +1.2**
NJ2 pmax pmax
comp=Z,26nm,0.9s
NJ2 pmax pmax
comp=Z,360nm,3.6s
NJ2 LR LR
comp=Z,470nm,11.8s
NJ2 LR LR
comp=Z,2µm,12.3s
NJ2 LR LR
comp=Z,2µm,16.1s
TIA Tai'an 20.21 273 P **P 23 58 51.2 -2.3**
TIA pmax pmax
comp=Z,23nm,0.9s
TIA LR LR
comp=Z,330nm,19.4s
TIA LR LR
comp=Z,530nm,15.1s
TIA LR LR
comp=Z,650nm,16.5s
BJI Beijing 20.48 284 P **P 23 58 54.0 -2.4**
BJI pmax pmax
comp=Z,39nm,0.7s
BJI pmax pmax
comp=Z,210nm,3.5s
BJI LR LR
comp=Z,440nm,13.3s
BJI LR LR
comp=Z,440nm,17.4s
TATO Taipei 21.89 240 P **P 23 59 12.8 +1.2**
TATO IAmb IAmb 23 59 15.1
comp=Z,99nm,1.0s
YHNB Yeheng 22.16 240 P **P 23 59 13.8 -1.0**
NACB Ninganchiao 22.34 238 P **P 23 59 15.7 -0.9**
MA2 Magadan 22.43 11 P **P 23 59 19.1 +1.8**
comp=Z,46nm,0.6s,baz=193,slow=9.9,SNR=21
MA2 LR LR 00 09 13.2
comp=Z,480nm,18.4s,baz=226,slow=40
MA2 Magadan 22.43 11 *i* P **P 23 59 16.9 -0.3**
MA2 pmax pmax
comp=Z,48nm,0.9s
MA2 Magadan 22.43 11 P **P 23 59 18.6 +1.3**
MA2 IAmb IAmb 23 59 36.4
comp=Z,91nm,1.0s
SSLB Suanglung 23.03 239 P **P 23 59 22.2 -1.7**
YULB Yu-li 23.07 237 P **P 23 59 24.8 +0.6**
TPUB Ta-pu 23.58 238 IAmb IAmb 23 59 37.8
comp=Z,129nm,0.9s
TWG Pinlang 23.61 237 P **P 23 59 28.9 -0.7**
TWG IAmb IAmb 23 59 45.3
comp=Z,95nm,0.9s
TIY Taiyuan 23.62 279 *eP* **P 23 59 29.0 -0.6**
TIY sP **sP 23 59 43.3 +0.2**
TIY S **S 00 03 40.5 -1.3**
TIY sS **pS 00 03 54.3 +2.2**
TIY SS Sn 00 04 27.3 +23
TIY pmax pmax
comp=Z,31nm,0.6s
TIY LR LR
comp=Z,110nm,4.9s
TIY LR LR
comp=Z,750nm,11.5s
TIY LR LR
comp=Z,990nm,18.7s
WHN Wuhan 24.23 261 P **P 23 59 35.1 -0.1**
WHN S **S 00 03 48.9 -2.6**
WHN pmax pmax
comp=Z,170nm,0.8s
WHN LR LR
comp=Z,510nm,9.6s
WHN LR LR
comp=Z,3µm,14.4s
WHN LR LR
comp=Z,4µm,15.9s
GUMO Guam 24.23 174 LR LR 00 09 22.1
comp=Z,479nm,20.3s,baz=5.5,slow=37
KNMB Chin-men Tao 24.38 244 P **P 23 59 35.1 -1.6**
KNMB IAmb IAmb 23 59 41.0
comp=Z,62nm,0.9s
CIT Chita 24.65 314 *eP* **P 23 59 39.2 +0.2**
CIT *e* 23 59 53.2
CIT *e* 00 00 12.2
CIT *e* 00 03 55.4
CIT pmax pmax
comp=Z,474nm,1.1s
BTO Baotou 25.14 287 *eP* **P 23 59 42.3 -1.3**
YAK Yakutsk 25.48 346 P **P 23 59 46.7 +0.4**
comp=Z,51nm,0.4s,baz=160,slow=1.5,SNR=35
YAK Yakutsk 25.48 346 *d iP* **P 23 59 46.1 -0.2**
YAK *e** PP **pP 23 59 55.6 -0.3**
YAK *e* 00 00 23.7
YAK *e* PPP PPP 00 00 29.8
YAK *e* 00 03 15.8
YAK *eS* **S 00 04 12.2 +1.3**
YAK *e** SS **sS 00 04 32.7 +5.8**
YAK *eSS* 00 05 08.4
YAK *eSSS* SSS 00 05 24.8
YAK *e* 00 10 42.7
YAK pmax pmax
comp=Z,64nm,0.7s
YAK pmax pmax
comp=N,8.0nm,0.7s
YAK pmax pmax
comp=E,5.0nm,0.8s
YAK pmax pmax
comp=Z,54nm,1.2s
YAK pmax pmax
comp=N,53nm,1.4s
YAK pmax pmax
comp=E,53nm,1.5s
YAK smax smax
comp=N,251nm,1.5s
YAK smax smax
comp=E,104nm,1.6s
YAK Yakutsk 25.48 346 P **P 23 59 46.0 -0.2**
SEY Seymchan 25.88 11 P **P 23 59 51.5 +1.6**
comp=E,38nm,0.9s,baz=194,slow=7.5,SNR=26
SEY LR LR 00 11 13.6
comp=E,508nm,18.9s,baz=178,slow=39
SEY Seymchan 25.88 11 *i* P **P 23 59 49.4 -0.5**
XAN Xi'an 27.26 272 P **P 00 00 01.6 -1.1**
XAN pP pP 00 00 06.2 -6.2
XAN S **S 00 04 43.0 +3.3**
XAN pmax pmax
comp=E,17nm,0.8s
XAN pmax pmax
comp=E,150nm,3.5s
XAN LR LR
comp=E,340nm,14.0s
XAN LR LR
comp=E,650nm,14.4s
XAN LR LR
comp=E,730nm,13.4s
BOD Bodaibo 27.28 326 *eP* **P 00 00 02.3 -0.3**
BOD pmax pmax
comp=Z,40nm,1.2s
ULN Ulaanbaatar 27.55 303 P **P 00 00 05.8 +0.5**
ULN P **P 00 00 05.8 +0.5**
ULN Ulaanbaatar 27.55 303 P **P 00 00 05.5 +0.1**
ULN 00 03 23.2
ULN pmax pmax
comp=Z,26nm,0.7s
ULN Ulaanbaatar 27.55 303 P **P 00 00 05.5 +0.1**
ULN **PcP 00 03 23.2 +0.7**
H11N2 WAKE ISLAND Hy 27.92 123 T T 00 29 25.5
baz=315,slow=75,SNR=129
H11N1 WAKE ISLAND Hy 27.93 123 T T 00 29 29.1
baz=315
H11N3 WAKE ISLAND Hy 27.94 123 T T 00 29 22.6
baz=315,slow=75,SNR=152
SONM Songino Array 27.99 303 P **P 00 00 09.5 +0.2**
comp=Z,57nm,0.7s,baz=107,slow=8.8,SNR=269
SONM PcP **PcP 00 03 23.9 +0.3**
comp=Z,2.6nm,0.7s,baz=101,slow=2.2,SNR=4.1
SONM LR LR 00 11 43.1
comp=Z,907nm,18.2s,baz=125,slow=37
SONM Songino Array 27.99 303 P **P 00 00 09.5 +0.2**
SONM pmax pmax
comp=Z,39nm,0.8s
SONM Songino Array 27.99 303 P **P 00 00 09.5 +0.2**
H11S1 WAKE ISLAND Hy 28.67 125 T T 00 30 20.9
baz=317
H11S3 WAKE ISLAND Hy 28.67 125 T T 00 30 21.5
baz=317
H11S2 WAKE ISLAND Hy 28.69 125 T T 00 30 22.1
baz=317
TGY Tagaytay City 30.34 225 LR LR 00 12 10.7
comp=Z,179nm,21.4s,baz=202,slow=35
ZAK Zakamensk 30.39 307 *eP* **P 00 00 30.0 -0.5**
ZAK pmax pmax
comp=Z,24nm,1.2s
TLY Talaya 30.40 310 P **P 00 00 30.7 +0.3**
comp=Z,12nm,0.7s,baz=115,slow=5.2,SNR=5.9
TLY Talaya 30.40 310 *eP* **P 00 00 31.4 +0.9**
TLY *e* 00 01 43.6
TLY *eS* **S 00 05 36.5 +7.8**
TLY *eSS* **SS 00 07 29.0 -10**
TLY pmax pmax
comp=Z,76nm,1.3s
TLY MLR MLR
comp=Z,3µm,18.0s
TLY Talaya 30.40 310 P **P 00 00 30.0 -0.4**
LZH Lanzhou 30.69 279 *eP* **P 00 00 33.4 +0.1**
LZH sP pP 00 00 44.0 +0.9
LZH *eS* **S 00 05 36.8 +3.0**
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,77nm,4.6s
LZH LR LR
comp=Z,560nm,13.0s
LZH LR LR
comp=Z,890nm,13.8s
LZH LR LR
comp=Z,2µm,17.1s
ADK Adak 31.80 50 P **P 00 00 42.8 +0.1**
ADK pmax pmax
comp=Z,59nm,1.1s
ADK Adak 31.80 50 P **P 00 00 42.8 +0.1**
ADK IAmb IAmb 00 01 01.2
comp=Z,59nm,1.1s
MOY Mondy 32.02 309 *eP* **P 00 00 44.6 -0.2**
MOY pmax pmax
comp=Z,5.0nm,1.3s
GYA Guiyang 32.10 260 ⇓P **P 00 00 44.8 -1.0**
GYA PP **PnPn 00 01 48.2 -3.8**
GYA PcP **PcP 00 03 34.8 +0.2**
GYA S **S 00 05 51.6 -4.4**
GYA pmax pmax
comp=Z,74nm,0.9s
GYA pmax pmax
comp=Z,220nm,3.5s
GYA LR LR
comp=Z,270nm,17.0s
GYA LR LR
comp=Z,540nm,17.9s
GYA LR LR
comp=Z,640nm,19.0s
CD2 Chengdu 32.44 269 P **P 00 00 47.3 -1.3**
CD2 S **S 00 06 00.4 -0.6**
CD2 pmax pmax
comp=Z,70nm,0.8s
CD2 pmax pmax
comp=Z,160nm,5.1s
CD2 LR LR
comp=Z,770nm,17.2s
CD2 LR LR
comp=Z,650nm,18.1s
CD2 LR LR
comp=Z,790nm,17.7s
BILL Bilibino 33.06 16 *ceP* **P 00 00 52.8 -0.8**
BILL pmax pmax
comp=Z,35nm,1.7s
GTA Gaotai 33.06 286 P **P 00 00 54.4 +0.3**
GTA pP pP 00 01 04.9 +1.0
GTA sP sP 00 01 08.6 +0.7
GTA PcP **PcP 00 03 37.6 +0.6**
GTA S **S 00 06 10.1 -0.7**
GTA sS sS 00 06 25.2 -2.0
GTA PcS **PcS 00 07 23.2 +0.6**
GTA SS **SnSn 00 08 09.5 -1.1**
GTA pmax pmax
comp=Z,33nm,1.1s
GTA pmax pmax
comp=Z,84nm,7.6s
GTA LR LR
comp=Z,340nm,19.3s
GTA LR LR
comp=Z,810nm,18.5s
GTA LR LR
comp=Z,1µm,18.2s
QIZ Qiongzhong 33.94 246 P **P 00 01 02.2 +0.4**
QIZ S **S 00 06 25.7 +1.3**
QIZ LR LR
comp=Z,700nm,17.0s
QIZ LR LR
comp=Z,400nm,14.1s
QIZ LR LR
comp=Z,470nm,18.8s
DAV Davao City (W) 34.19 211 LR LR 00 13 13.8
comp=Z,643nm,21.8s,baz=83,slow=33
TIXI Tiksi 34.61 353 *ceP* **P 00 01 06.0 -0.9**
TIXI Tiksi 34.61 353 P **P 00 01 06.3 -0.6**
KMI Kunming 35.83 261⇓ *iP* **P 00 01 17.9 -0.4**
KMI pP pP 00 01 25.6 -2.5
KMI sP sP 00 01 29.7 -2.4
KMI PP **PP 00 02 42.5 +2.5**
KMI S **S 00 06 47.9 -6.0**
KMI sS sS 00 07 10.0 -0.3
KMI SS **SnSn 00 09 10.7 -7.5**
KMI pmax pmax
comp=Z,50nm,0.9s
KMI pmax pmax
comp=Z,96nm,3.5s
KMI LR LR
comp=Z,470nm,17.0s
KMI LR LR
comp=Z,530nm,19.1s
KMI LR LR
comp=Z,650nm,21.4s
KMI Kunming 35.83 261 P **P 00 01 17.4 -0.9**
KMI pmax pmax
comp=Z,67nm,0.9s
KMI Kunming 35.83 261 P **P 00 01 17.4 -0.9**
NIKH Nikolski High 36.69 50 P **P 00 01 25.4 +0.3**
NIKH IAmb IAmb 00 01 26.2
comp=Z,65nm,1.0s
KWAJ Kwajalein Atol 36.79 135 P **P 00 01 26.1 -0.2**
KWAJ pmax pmax
comp=Z,125nm,1.0s
KWAJ Kwajalein Atol 36.79 135 P **P 00 01 26.1 -0.2**
SLVN Son La 36.97 255 P **P 00 01 27.8 -0.1**
MYLDM Lahad Datu 39.10 220 P **P 00 01 46.8 +1.1**
MYLDM IAmb IAmb 00 02 04.3
comp=Z,69nm,0.9s
TNTI Ternate 39.37 204 P **P 00 01 48.5 +0.5**
UBPT Khong Chiam 39.55 246 P P 00 01 56.1 +6.7
comp=Z,0.1nmcomp=Z,21nm,1.0s
UBPT Khong Chiam 39.55 246 P **P 00 01 49.8 +0.3**
UBPT IAmb IAmb 00 02 06.3
comp=Z,40nm,1.0s
KKM Kota Kinabalu 39.57 223 P **P 00 01 50.7 +0.9**
DLV T Lat 39.74 239 P **P 00 01 51.2 -0.1**
DLV IAmb IAmb 00 02 06.7
comp=Z,35nm,0.8s
TNA Tin City 39.80 30 P **P 00 01 52.7 +1.7**
baz=251
SIJI Sorong 39.84 197 P **P 00 01 51.9 0.0**
comp=Z,24nm,0.8s,baz=22,slow=4.6,SNR=9.3
ANM Nome 40.53 32 P **P 00 01 58.0 +0.9**
ANM pmax pmax

comp=Z,79nm,1.1s
ANM Nome 40.53 32 P **P** **00 01 58.0 +0.9**
ANM IAmb IAmb 00 02 13.0
comp=Z,79nm,1.1s
LBMI Labuha 40.66 203 P **P** **00 01 59.5 +0.8**
comp=Z,61nm,1.1s,comp=Z,2µm
KMSI Cibinong 40.75 209 P **P** **00 02 00.4 +1.0**
comp=Z,181nm,0.6s
GTOI Gorontalo 41.08 210 P **P** **00 02 02.6 +0.5**
comp=Z,76nm,1.0s,comp=Z,665nm
WMQ Urumqi 41.17 296 *e*P **P** **00 02 03.5 +0.7**
WMQ pP pP 00 02 11.1 -1.6
WMQ PcP **PcP** **00 04 00.9 -0.6**
WMQ ScP **ScP** **00 07 49.5 +0.9**
WMQ S **S** **00 08 16.2 +2.5**
WMQ sS sS 00 08 30.7 +0.3
WMQ pmax pmax
comp=Z,120nm,1.3s
WMQ pmax pmax
comp=Z,180nm,3.7s
WMQ LR LR
comp=Z,510nm,7.5s
WMQ LR LR
comp=Z,310nm,7.1s
WMQ LR LR
comp=Z,710nm,16.5s
WMQ Urumqi 41.17 296 P **P** **00 02 03.4 +0.7**
WMQ pmax pmax
comp=Z,101nm,0.7s
WMQ Urumqi 41.17 296 P **P** **00 02 03.4 +0.7**
FAKI Fak Fak 41.61 195 P **P** **00 02 07.1 +0.6**
comp=Z,48nm,0.9s
FAKI Fak Fak 41.61 195 P **P** **00 02 07.0 +0.6**
FAKI IAmb IAmb 00 02 08.4
comp=Z,38nm,0.9s
UTTA Uttaradit 41.63 253 P **P** **00 02 07.0 +0.3**
comp=Z,0.1nmcomp=Z,187nmcomp=Z,17nm,0.8s
CHAI Chaiyaphum 41.69 250 P **P** **00 02 07.0 -0.2**
comp=Z,0.1nmcomp=Z,478nmcomp=Z,42nm,1.0s
SDPT Sand Point 41.71 46 P **P** **00 02 06.5 -0.4**
SDPT IAmb IAmb 00 02 12.3
comp=Z,99nm,1.1s
LAMP Lampang 41.87 255 P **P** **00 02 09.7 +1.0**
comp=Z,0.2nmcomp=Z,499nmcomp=Z,43nm,0.8s
ZAA0 Zalesovo Array 41.95 312 P **P** **00 02 07.8 -1.1**
ZAA0 IAmb IAmb 00 02 10.1
comp=Z,63nm,0.9s
ZALV Zalesovo Beam 41.95 312 P **P** **00 02 08.8 -0.1**
comp=Z,70nm,0.8s,baz=88,slow=7.3,SNR=214
ZALV PcP **PcP** **00 04 03.5 -0.2**
comp=Z,24nm,0.9s,baz=98,slow=3.3,SNR=7.5
ZALV LR LR 00 20 10.3
comp=Z,701nm,18.2s,baz=82,slow=37
ZALV Zalesovo Beam 41.95 312 *i* P **P** **00 02 08.8 -0.1**
ZALV pmax pmax
comp=Z,70nm,0.9s
ZALV Zalesovo Beam 41.95 312 P **P** **00 02 08.3 -0.7**
CM34 Chiang Mai Arr 42.04 256 P **P** **00 02 10.0 -0.1**
CM35 Chiang Mai Arr 42.14 255 P **P** **00 02 10.0 -0.9**
CMMT Chiang Mai 42.22 256 P **P** **00 02 11.0 -0.5**
comp=Z,0.1nmcomp=Z,188nmcomp=Z,13nm,0.9s
CHTO Chiang Mai 42.22 256 P **P** **00 02 11.6 0.0**
CHTO Chiang Mai 42.22 256 P **P** **00 02 11.5 0.0**
CHTO pmax pmax
comp=Z,17nm,0.8s
CHTO Chiang Mai 42.22 256 P **P** **00 02 11.5 0.0**
CNBA Chernabura Isl 42.22 47 P **P** **00 02 11.8 +0.7**
CNBA IAmb IAmb 00 02 27.3
comp=Z,66nm,0.8s
CM36 Chiang Mai Arr 42.28 255 P **P** **00 02 12.0 0.0**
CM09 Chiang Mai Arr 42.40 255 P **P** **00 02 13.7 +0.7**
comp=Z,0.0nmcomp=Z,125nmcomp=Z,17nm,0.8s
CM31 Chiang Mai Arr 42.43 255 P **P** **00 02 14.3 +1.0**
SNR=5.3
CM31 Chiang Mai Arr 42.43 255 P **P** **00 02 13.9 +0.7**
comp=Z,1.5nmcomp=Z,450nm,0.8s
CM31 Chiang Mai Arr 42.43 255 P **P** **00 02 13.2 -0.1**
CMAR Chiang Mai Arr 42.43 255 P **P** **00 02 13.3 +0.1**
comp=Z,9.8nm,0.8s,baz=47,slow=6.1,SNR=59
CMAR PcP **PcP** **00 04 05.8 -0.1**
comp=Z,7.3nm,0.9s,baz=21,slow=2.6,SNR=9.1
CMAR LR LR 00 22 17.2
comp=Z,358nm,18.7s,baz=96,slow=40
CMAR Chiang Mai Arr 42.43 255 *ce*P **P** **00 02 13.3 +0.1**
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CM04 Chiang Mai Arr 42.44 255 P **P** **00 02 13.0 -0.3**
comp=Z,0.1nmcomp=Z,163nmcomp=Z,23nm,0.8s
CM01 Chiang Mai Arr 42.44 255 P **P** **00 02 13.9 +0.6**
comp=Z,0.0nmcomp=Z,127nmcomp=Z,17nm,0.8s
CM02 Chiang Mai Arr 42.44 255 P **P** **00 02 13.8 +0.5**
comp=Z,0.1nmcomp=Z,151nmcomp=Z,21nm,0.8s
CM15 Chiang Mai Arr 42.45 255 P **P** **00 02 13.0 -0.4**
comp=Z,0.0nmcomp=Z,13nm,0.8s
RDOG Red Dog Mine 42.46 27 P **P** **00 02 13.3 +0.4**
RDOG IAmb IAmb 00 02 28.9
comp=Z,58nm,1.1s
CM05 Chiang Mai Arr 42.46 255 P **P** **00 02 14.1 +0.5**
comp=Z,0.0nmcomp=Z,113nmcomp=Z,14nm,0.8s
SANI Sanana 42.47 205 P **P** **00 02 12.7 -0.8**
comp=Z,84nm,0.7s,comp=Z,1µm
CM13 Chiang Mai Arr 42.48 255 P **P** **00 02 14.2 +0.5**
comp=Z,0.0nmcomp=Z,93nmcomp=Z,12nm,0.8s
SUKH Sukhothai 42.49 254 P **P** **00 02 13.9 +0.2**
comp=Z,0.1nmcomp=Z,24nm,1.0s
ZSN Zaisan 42.51 302⇑ *i*P **P** **00 02 14.1 +0.5**
comp=Z,19nm,0.7s,baz=302
ZSN Zaisan 42.51 302 *c i*P **P** **00 02 14.1 +0.5**
ZSN pmax pmax
comp=Z,19nm,0.7s
MPSI Mapaga 42.66 214 P **P** **00 02 15.8 +0.7**
comp=Z,16nm,1.1s
LUWI Luwuk 42.70 210 P P 00 02 25.6 +10
LUWI Luwuk 42.70 210 P **P** **00 02 14.4 -0.9**
LUWI IAmb IAmb 00 02 32.5
comp=Z,54nm,0.8s
MSAI Masohi 42.81 200 P **P** **00 02 16.8 +0.5**
comp=Z,24nm,1.3s
SRAK Srakaew 42.87 247 P **P** **00 02 14.2 -2.6**
comp=Z,0.9nmcomp=Z,2µmcomp=Z,238nm,0.8s
NRIK Noril'sk 42.88 335 P **P** **00 02 16.1 -0.2**
comp=Z,13nm,0.7s,baz=106,slow=9.2,SNR=18
NRIK LR LR 00 21 12.6
comp=Z,1µm,18.2s,baz=46,slow=38
NRIK Noril'sk 42.88 335 *ce*P **P** **00 02 15.6 -0.6**
NRIK pmax pmax
comp=Z,13nm,0.9s
LSA Lhasa 42.90 275 P **P** **00 02 17.4 -0.1**
LSA pmax pmax
comp=Z,24nm,0.8s
LSA Lhasa 42.90 275 P **P** **00 02 17.4 -0.1**
APSI Ampana 43.03 211 P **P** **00 02 18.2 +0.1**
comp=Z,126nm,1.2s,comp=Z,1µm
NLAI Namlea 43.24 203 P **P** **00 02 18.7 -1.0**
comp=Z,30nm,0.8s,comp=Z,2µm
AAI Ambon 43.34 201 P **P** **00 02 21.1 +0.5**
comp=Z,109nm,0.9s,comp=Z,2µm
MHMT Maesarieng 43.37 256 P **P** **00 02 21.3 +0.5**
comp=Z,0.2nmcomp=Z,70nm,0.9s
BNDI Bandanaira 43.69 198 P **P** **00 02 24.3 +0.9**
UTHA Uthaitani 43.80 251 P P 00 02 30.5 +6.1
SHL Shillong 44.18 269 P **P** **00 02 29.2 +1.8**
SNR=5.5
SHL Shillong 44.18 269 P **P** **00 02 26.6 -0.9**
SHL pmax pmax
comp=Z,34nm,0.9s
SHL Shillong 44.18 269 P **P** **00 02 26.6 -0.9**
SHL IAmb IAmb 00 02 44.3
comp=Z,34nm,0.9s
TTA Tatalina 44.34 35 P **P** **00 02 29.6 +1.4**
TTA pmax pmax
comp=Z,9.0nm,0.9s
TTA Tatalina 44.34 35 P **P** **00 02 29.6 +1.4**
MK31 Makanchi Array 44.35 302 *i* P **P** **00 02 28.3 -0.2**
MK31 pmax pmax
comp=Z,19nm,0.6s
MK31 Makanchi Array 44.35 302 P **P** **00 02 28.1 -0.3**
MKAR Makanchi Array 44.35 302 P **P** **00 02 28.4 -0.1**
comp=Z,26nm,0.8s,baz=87,slow=10,SNR=114
MKAR LR LR 00 21 31.6
comp=Z,373nm,18.3s,baz=78,slow=37
MKAR Makanchi Array 44.35 302 P **P** **00 02 28.4 -0.1**
MKAR Makanchi Array 44.35 302 P **P** **00 02 28.2 -0.3**
SVW2 Sparrevohn 44.44 38 P **P** **00 02 30.7 +1.8**
SVW2 IAmb IAmb 00 02 45.0
comp=Z,47nm,1.0s

MAKZ Makanchi 44.56 302 P **P** **00 02 29.7 -0.4**
MAKZ pmax pmax
comp=Z,25nm,0.9s
MAKZ Makanchi 44.56 302 P **P** **00 02 29.7 -0.4**
SBUM Sibu 44.76 225 P **P** **00 02 31.8 -0.1**
SBUM Sibu 44.76 225 P **P** **00 02 32.0 +0.1**
PHET Kaeng Krachan 45.36 248 P **P** **00 02 37.8 +1.1**
comp=Z,74nm,0.7s
A21K Barrow 45.44 23 P **P** **00 02 37.9 +1.2**
baz=257,SNR=22
A21K Barrow 45.44 23 P **P** **00 02 37.7 +1.0**
A21K IAmb IAmb 00 02 39.1
comp=Z,80nm,1.0s
IMAR Indian Mountai 45.59 31 P **P** **00 02 39.5 +1.5**
OHAK Old Harbor 45.66 43 P **P** **00 02 39.5 +0.9**
TTSI Tana Toraja 45.72 212 P **P** **00 02 39.6 0.0**
comp=Z,20nm,0.6s,comp=Z,1µm
RSO Redoubt South 45.82 39 P **P** **00 02 41.7 +1.6**
KDAK Kodiak Island 46.01 42 P **P** **00 02 42.2 +0.8**
KDAK pmax pmax
comp=Z,93nm,0.8s
KDAK Kodiak Island 46.01 42 P **P** **00 02 42.2 +0.8**
KURK Kurchatov 46.05 308 P **P** **00 02 41.7 -0.2**
KURK P **P** **00 02 41.7 -0.2**
KURK Kurchatov 46.05 308 *i* P **P** **00 02 41.1 -0.7**
KURK pmax pmax
comp=Z,85nm,0.8s
KURK Kurchatov 46.05 308 P **P** **00 02 41.4 -0.5**
PPLA Purkeypile 46.09 35 P **P** **00 02 44.3 +2.1**
PPLA IAmb IAmb 00 02 58.3
comp=Z,51nm,1.1s
KURBB Kurchatov Arra 46.12 308 P **P** **00 02 42.2 -0.1**
comp=Z,84nm,0.6s,baz=82,slow=8.1,SNR=552
KURBB PcP **PcP** **00 04 17.6 -0.4**
comp=Z,4.7nm,0.8s,baz=66,slow=4.5,SNR=1.3
MTKI Muara Teweh, K 46.17 220 P **P** **00 02 44.1 +1.0**
comp=Z,63nm,0.9s,comp=Z,4µm
SKT Skwentna 46.39 37 P **P** **00 02 46.2 +1.8**
SPSI Sidrap Palu 46.57 212 P **P** **00 02 45.9 -0.3**
comp=Z,34nm,1.0s,comp=Z,809nm
CNPM China Poot 46.61 40 P **P** **00 02 47.3 +1.2**
CNPM IAmb IAmb 00 02 49.0
comp=Z,33nm,1.2s
KSM Kuching 46.64 227 P **P** **00 02 47.2 +0.4**
KSM IAmb IAmb 00 03 05.3
comp=Z,52nm,0.9s
KSM Kuching 46.64 227 P **P** **00 02 48.0 +1.1**
BPAW Bear Paw Mtn. 46.65 34 P **P** **00 02 46.9 +0.5**
KTH Kantishna Hill 46.67 34 P **P** **00 02 48.1 +1.5**
KTH IAmb IAmb 00 03 02.3
comp=Z,55nm,1.0s
SAUI Saumlaki 46.72 195 P **P** **00 02 48.5 +1.0**
comp=Z,149nm,1.1s
SAUI Saumlaki 46.72 195 P **P** **00 02 48.4 +1.0**
SUA Susitna One 46.77 37 P **P** **00 02 48.9 +1.4**
BRLK Bradley Lake 46.77 40 P **P** **00 02 48.9 +1.4**
BRLK IAmb IAmb 00 03 03.4
comp=Z,30nm,0.9s
MLY Manley 46.78 32 P **P** **00 02 48.8 +1.3**
baz=268
BNSI Bone 46.82 211 P **P** **00 02 48.9 +0.7**
comp=Z,65nm,1.0s,comp=Z,960nm
TRF Thorofare Moun 46.95 35 P **P** **00 02 50.1 +1.1**
JOHN Johnston Islan 47.04 103 P **P** **00 02 50.6 +0.6**
PDGK Podgornoye 47.08 298 P **P** **00 02 49.1 -1.1**
COLD Coldfoot 47.10 29 P **P** **00 02 50.6 +0.8**
baz=267
SHLS Shalkode 47.15 297⇑ *i*P **P** **00 02 48.2 -2.6**
comp=Z,22nm,0.7s,baz=297
SHLS Shalkode 47.15 297 *c i*P **P** **00 02 48.1 -2.6**
SHLS pmax pmax
comp=Z,22nm,0.7s
PMG Port Moresby 47.19 174 P **P** **00 02 51.9 +0.9**
PMG pmax pmax
comp=Z,20nm,1.0s
PMG Port Moresby 47.19 174 P **P** **00 02 51.9 +0.9**
RC01 Rabbit Creek A 47.27 38 P **P** **00 02 52.7 +1.4**
baz=273
O22K Cooper Landing 47.31 39 P **P** **00 02 52.4 +0.8**
baz=274
I23K Minto, Yukon-K 47.37 32 P **P** **00 02 53.1 +1.2**
baz=270,SNR=6.6
I23K Minto, Yukon-K 47.37 32 P **P** **00 02 53.3 +1.4**
I23K IAmb IAmb 00 03 08.3
comp=Z,24nm,1.1s
TDK Taldyqorghan 47.39 300 *e*P **P** **00 02 52.2 -0.3**
comp=Z,15nm,0.5s,baz=300
TDK LR LR 00 22 53.0
comp=Z,343nm,16.1s,baz=300
TDK Taldyqorghan 47.39 300 *e*P **P** **00 02 52.1 -0.4**
TDK pmax pmax
comp=Z,15nm,0.5s
TDK MLR MLR
comp=Z,343nm,16.0s
TOLK Toolik Lake Re 47.42 27 P **P** **00 02 53.5 +1.1**
baz=266,SNR=9.9
TOLK Toolik Lake Re 47.42 27 P **P** **00 02 54.1 +1.7**
TOLK IAmb IAmb 00 03 08.5
comp=Z,40nm,1.0s
SEW Seward 47.47 39 P **P** **00 02 54.8 +2.0**
SEW IAmb IAmb 00 03 07.2
comp=Z,67nm,1.2s
NEA2 Nenana 47.49 33 P **P** **00 02 53.8 +0.9**
baz=270
KAPI Kappang 47.53 211 P **P** **00 02 54.5 +0.8**
KAPI pmax pmax
comp=Z,74nm,1.1s
KAPI Kappang 47.53 211 P **P** **00 02 54.5 +0.8**
PMR Palmer 47.54 37 P **P** **00 02 54.0 +0.7**
PMR pmax pmax
comp=Z,43nm,1.2s
PMR Palmer 47.54 37 P **P** **00 02 54.0 +0.7**
PMR IAmb IAmb 00 02 54.8
comp=Z,43nm,1.2s
MCK McKinley 47.56 34 P **P** **00 02 54.4 +0.9**
baz=271,SNR=6.4
KBKI Kotabaru 47.59 217 P **P** **00 02 54.5 +0.3**
comp=Z,23nm,0.8s
RND Reindeer 47.60 35 P **P** **00 02 54.6 +0.7**
RND pmax pmax
comp=Z,36nm,1.0s
RND Reindeer 47.60 35 P **P** **00 02 54.6 +0.7**
RND IAmb IAmb 00 03 08.4
comp=Z,36nm,1.0s
GHO Glory Hole Cre 47.63 37 P **P** **00 02 55.3 +1.1**
BKSI Bulukumba 47.65 211 P **P** **00 02 55.1 +0.4**
comp=Z,55nm,0.8s,comp=Z,662nm
MDM Murphy Dome 47.85 33 P **P** **00 02 56.6 +0.9**
KNIK Knik Glacier 47.87 37 P **P** **00 02 57.8 +1.8**
SML Sawmill 47.91 37 P **P** **00 02 56.0 -0.3**
SML IAmb IAmb 00 03 11.2
comp=Z,33nm,0.9s
SATY Saty 47.92 297⇑ *i*P **P** **00 02 56.6 -0.1**
comp=Z,40nm,2.5s,baz=297
SATY Saty 47.92 297 *c i*P **P** **00 02 56.6 -0.1**
SATY pmax pmax
comp=Z,40nm,2.5s
TCOL CIGO, UAF Yank 48.01 33 P **P** **00 02 58.0 +1.2**
baz=271
TCOL CIGO, UAF Yank 48.01 33 P **P** **00 02 57.5 +0.7**
TCOL IAmb IAmb 00 03 15.4
comp=Z,28nm,0.8s
COLA College 48.01 33 *i* P **P** **00 02 56.4 -0.5**
COLA pmax pmax
comp=Z,8.0nm,0.9s
COLA College 48.01 33 P **P** **00 02 58.2 +1.4**
COLA IAmb IAmb 00 03 15.4
comp=Z,30nm,0.9s
PRZ Przheval'sk 48.09 297 P **P** **00 02 58.4 +0.3**
PRZ pmax pmax
comp=Z,87nm,1.0s
PRZ Przheval'sk 48.09 297 P **P** **00 02 58.4 +0.3**
POKR Poker Plat Res 48.18 32 P **P** **00 02 59.9 +1.6**
baz=271,SNR=18
DHY Denali Highway 48.28 35 P **P** **00 03 00.7 +1.5**
BBKI Banjar Baru 48.37 218 P **P** **00 03 00.3 +0.1**
comp=Z,96nm,1.0s,comp=Z,8µm
SCM Sheep Creek Mo 48.38 37 P **P** **00 03 01.3 +1.3**
SCM pmax pmax
comp=Z,34nm,0.9s
SCM Sheep Creek Mo 48.38 37 P **P** **00 03 01.3 +1.3**
SCM IAmb IAmb 00 03 15.0
comp=Z,34nm,0.9s
HDA Harding Lake 48.41 33 P **P** **00 03 00.7 +0.6**
baz=272,SNR=7.6

HDA Harding Lake 48.41 33 P **P** **00 03 00.7 +0.6**
HDA IAmb IAmb 00 03 14.4
comp=Z,34nm,1.0s
IL31 48.42 33 P **P** **00 03 00.9 +0.8**
IL31 IAmb IAmb 00 03 14.6
comp=Z,34nm,0.9s
ILAR Eielson Array 48.42 33 P **P** **00 03 00.7 +0.6**
comp=Z,12nm,0.7s,baz=267,slow=6.4,SNR=83
ILAR pP **sP** **00 03 14.2 0.0**
comp=Z,24nm,0.9s,baz=268,slow=6.7,SNR=22
ILAR PcP **PcP** **00 04 25.6 -0.4**
comp=Z,4.1nm,0.9s,baz=254,slow=3.0,SNR=1.3
ILAR LR LR 00 24 57.4
comp=Z,145nm,20.9s,baz=276,slow=38
ILAR Eielson Array 48.42 33 P **P** **00 03 00.7 +0.6**
ILAR *PP **sP** **00 03 14.2 0.0**
ILAR 00 04 25.6
ILAR Eielson Array 48.42 33 P **P** **00 03 00.8 +0.7**
GLI Glacier Island 48.57 38 P **P** **00 03 01.9 +0.6**
GLI IAmb IAmb 00 03 14.1
comp=Z,41nm,1.1s
MDOK Medeo 48.84 298 *i* P **P** **00 03 03.1 -0.7**
baz=298
MDOK LR LR 00 22 54.1
comp=Z,330nm,16.9s,baz=298
MDOK Medeo 48.84 298 *i* P **P** **00 03 03.9 +0.1**
MDOK MLR MLR
comp=Z,330nm,17.0s
FID Port Fidalgo 48.89 38 P **P** **00 03 03.6 -0.1**
FID IAmb IAmb 00 03 18.1
comp=Z,57nm,1.1s
M24K Tolsona, Glenn 48.91 36 P **P** **00 03 05.4 +1.5**
baz=275
M24K Tolsona, Glenn 48.91 36 P **P** **00 03 05.9 +1.9**
M24K IAmb IAmb 00 03 19.8
comp=Z,44nm,1.0s
AAA Alma-Ata 48.92 298 *e*P **P** **00 03 04.2 -0.2**
comp=Z,10nm,0.5s,baz=298
AAA *e*S **S** **00 10 06.5 +0.6**
baz=298
AAA LR LR 00 23 02.4
comp=Z,311nm,17.7s,baz=298
AAA Alma-Ata 48.92 298 *e*P **P** **00 03 04.1 -0.2**
AAA *e*S **S** **00 10 06.4 +0.6**
AAA pmax pmax
comp=Z,10.0nm,0.5s
AAA MLR MLR
comp=Z,311nm,18.0s
TNSS Tian-Shan 48.95 298 *e*P **P** **00 03 05.4 +0.5**
baz=298
TNSS Tian-Shan 48.95 298 *e*P **P** **00 03 05.4 +0.5**
PRP Porcupine Dome 48.97 32 P **P** **00 03 06.1 +1.6**
PRP IAmb IAmb 00 03 19.8
comp=Z,25nm,1.0s
FYU Fort Yukon 49.05 30 P **P** **00 03 07.4 +2.5**
KDJ Kajisay 49.06 297 P **P** **00 03 05.8 +0.2**
KDJ pmax pmax
comp=Z,72nm,1.2s
KDJ Kajisay 49.06 297 P **P** **00 03 05.8 +0.2**
KLU Klutina 49.08 37 P **P** **00 03 06.8 +1.5**
KLU IAmb IAmb 00 03 07.7
comp=Z,32nm,1.1s
KUU Kurty 49.12 299⇑ *i*P **P** **00 03 05.1 -0.7**
comp=Z,28nm,0.7s,baz=299
KUU *e*S **S** **00 10 08.9 +0.3**
baz=299
KUU Kurty 49.12 299 *c i*P **P** **00 03 05.1 -0.7**
KUU *e*S **S** **00 10 08.9 +0.3**
KUU pmax pmax
comp=Z,28nm,0.7s
EYAK Cordova Ski Ar 49.27 38 P **P** **00 03 08.2 +1.6**
EYAK IAmb IAmb 00 03 22.2
comp=Z,53nm,1.0s
N25K Chitina, Valde 49.70 37 P **P** **00 03 10.8 +0.8**
baz=277
N25K Chitina, Valde 49.70 37 P **P** **00 03 11.5 +1.4**
DOT Dot Lake 49.73 34 P **P** **00 03 10.6 +0.5**
DOT P **P** **00 03 10.8 +0.6**
SCRK Sand Creek 49.73 34 P **P** **00 03 11.1 +0.8**
baz=275,SNR=13
HNR Honiara 49.80 157 LR LR 00 22 54.1
comp=Z,472nm,20.2s,baz=336,slow=34
BOOM Boomskoye usch 49.82 297 IAmb IAmb 00 03 31.1
comp=Z,64nm,1.1s
MMRI Maumere 49.90 206 P **P** **00 03 12.1 +0.2**
comp=Z,49nm,1.1s,comp=Z,4µm
MMRI Maumere 49.90 206 P **P** **00 03 11.8 -0.1**
MMRI IAmb IAmb 00 03 14.4
comp=Z,48nm,1.0s
BRZS Berezniki 49.92 308⇑ *i*P **P** **00 03 11.2 -0.6**
comp=Z,9.3nm,0.6s,baz=308
BRZS Berezniki 49.92 308 *c i*P **P** **00 03 11.2 -0.6**
BRZS pmax pmax
comp=Z,9.0nm,0.6s
TKM2 Tokmak 2 49.93 298 P **P** **00 03 12.3 +0.1**
SNR=25
TKM2 Tokmak 2 49.93 298 *i* P **P** **00 03 11.9 -0.3**
TKM2 pmax pmax
comp=Z,60nm,1.0s
MENT Mentasta 49.96 35 P **P** **00 03 12.9 +1.0**
MENT IAmb IAmb 00 03 31.6
comp=Z,43nm,1.0s
GLB Gilahina Butte 50.09 37 **P** **00 03 14.4 +1.4**
L26K Log Cabin Wild 50.12 35 P **P** **00 03 14.7 +1.6**
baz=277,SNR=12
IPM Ipoh 50.20 239 P **P** **00 03 14.4 +0.1**
IPM IAmb IAmb 00 03 24.1
comp=Z,20nm,0.8s
IPM Ipoh 50.20 239 P **P** **00 03 14.0 -0.3**
EDFI Ende, Flores 50.20 207 P **P** **00 03 12.7 -1.6**
comp=Z,26nm,0.5s,comp=Z,485nm
SOEI Soe 50.27 203 **P** **00 03 13.9 -0.9**
SOEI IAmb IAmb 00 03 33.0
comp=Z,58nm,1.0s
VRDI Verde Repeater 50.30 37 P **P** **00 03 15.8 +1.1**
VRDI IAmb IAmb 00 03 30.1
comp=Z,31nm,1.0s
BTLS Baital 50.35 301⇑ *i*P **P** **00 03 14.7 -0.5**
comp=Z,10nm,0.5s,baz=301
BTLS Baital 50.35 301 *c i*P **P** **00 03 14.6 -0.5**
BTLS pmax pmax
comp=Z,11nm,0.5s
SGDS Sogindy 50.44 299⇑ *i*P **P** **00 03 15.7 -0.2**
comp=Z,8.5nm,1.1s,baz=299
SGDS Sogindy 50.44 299 *c i*P **P** **00 03 15.6 -0.2**
SGDS pmax pmax
comp=Z,9.0nm,1.1s
KBK Karagaybulak 50.46 298 P **P** **00 03 16.6 +0.3**
SNR=34
MCARA McCarthy VSAT 50.48 37 P **P** **00 03 17.2 +1.3**
MCARA IAmb IAmb 00 03 32.1
comp=Z,50nm,1.0s
CHMS Chumysh 50.49 298 P **P** **00 03 16.1 -0.2**
SNR=11
K27K Chicken 50.56 34 P **P** **00 03 17.6 +1.2**
baz=277
K27K Chicken 50.56 34 IAmb IAmb 00 03 33.3
comp=Z,26nm,1.1s
USP Ospenovka 50.58 299 P **P** **00 03 17.0 0.0**
SNR=13
FRU1 Bishkek 50.64 298 P **P** **00 03 17.1 -0.3**
FRU1 pmax pmax
comp=Z,57nm,1.2s
FRU1 Bishkek 50.64 298 P **P** **00 03 17.1 -0.3**
FRU1 IAmb IAmb 00 03 22.2
comp=Z,57nm,1.1s
BRVK Borovoye 50.66 312 P **P** **00 03 17.4 +0.1**
BRVK P **P** **00 03 17.4 +0.1**
BRVK Borovoye 50.66 312 *i* P **P** **00 03 16.7 -0.6**
BRVK pmax pmax
comp=Z,26nm,0.9s
BRVK Borovoye 50.66 312 P **P** **00 03 17.3 0.0**
BRVK IAmb IAmb 00 03 18.2
comp=Z,34nm,1.0s
TGL Tana Glacier 50.66 38 P **P** **00 03 18.5 +1.1**
TGL IAmb IAmb 00 03 32.9
comp=Z,28nm,1.1s
KSH Kashi 50.78 294 P **P** **00 03 22.7 +4.1**
KSH sP sP 00 03 34.5 +1.8
KSH S **S** **00 10 35.8 +3.7**
KSH pmax pmax
comp=Z,82nm,0.9s
KSH pmax pmax
comp=Z,360nm,4.9s
KSH LR LR
comp=Z,1µm,12.9s

KSH LR LR
comp=Z,1µm,13.0s
KSH LR LR
comp=Z,2µm,13.3s
AAK Ala-Archa 50.79 298 *i* P **P** **00 03 18.7 +0.1**
SNR=19
AAK Ala-Archa 50.79 298 P **P** **00 03 18.7 +0.1**
AAK P **P** **00 03 18.7 +0.1**
AAK Ala-Archa 50.79 298 *ce* P **P** **00 03 18.1 -0.6**
AAK pmax pmax
comp=Z,63nm,1.3s
AAK Ala-Archa 50.79 298 P **P** **00 03 18.5 -0.1**
AAK IAmb IAmb 00 03 29.1
comp=Z,19nm,0.8s
BCAR Beaver Creek A 50.82 35 P **P** **00 03 19.4 +1.0**
BALM Baldy 50.85 37 P **P** **00 03 19.8 +1.0**
BALM IAmb IAmb 00 03 34.0
comp=Z,19nm,0.8s
EGAK Eagle 50.87 32 P **P** **00 03 19.4 +0.7**
BATI Baumata 50.88 204 P **P** **00 03 19.2 -0.2**
comp=Z,13nm,0.3s,baz=178,slow=12,SNR=5.2
BATI LR LR 00 22 07.0
comp=Z,253nm,21.7s,baz=3.0,slow=33
BATI Baumata 50.88 204 P **P** **00 03 20.0 +0.6**
comp=Z,45nm,0.8s
ISLE Juniper Island 50.93 38 P **P** **00 03 20.8 +1.4**
ISLE IAmb IAmb 00 03 34.5
comp=Z,38nm,1.0s
BARN Barnard Glacie 51.18 37 P **P** **00 03 22.9 +1.6**
BARN IAmb IAmb 00 03 36.8
comp=Z,29nm,1.0s
YAH Yahtse 51.26 38 P **P** **00 03 23.8 +1.8**
YAH IAmb IAmb 00 03 38.3
comp=Z,32nm,0.9s
EKS2 Erkin-Say 51.28 298 P **P** **00 03 22.0 -0.3**
SNR=10
PBA Port Blair 51.31 253 P P 00 03 23.4 +0.8
PBA IAmb IAmb 00 03 37.4
comp=Z,61nm,1.1s
CTGM Chitina Glacie 51.35 37 P **P** **00 03 24.2 +1.6**
CTGM IAmb IAmb 00 03 38.0
comp=Z,23nm,1.0s
AML Almayashu 51.51 298 P **P** **00 03 24.9 +0.5**
SNR=31
TABL Table Mountain 51.54 38 P **P** **00 03 25.5 +1.4**
TABL IAmb IAmb 00 03 39.1
comp=Z,18nm,0.8s
DAWY Dawson 51.73 33 P **P** **00 03 26.3 +1.0**
PPBI Pangkal Pinang 52.01 229 P P 00 03 44.7 +17
YKU2 Yakutat 52.45 39 P **P** **00 03 31.0 +0.5**
PSI Prapat 52.85 240 P **P** **00 03 34.1 -0.1**
comp=Z,17nm,0.8s,baz=14,slow=5.4,SNR=14
PSI pP **sP** **00 03 46.9 -1.5**
comp=Z,9.1nm,0.6s,baz=16,slow=2.8,SNR=3.8
PSI Prapat 52.85 240 P **P** **00 03 34.5 +0.3**
PSI pmax pmax
comp=Z,19nm,0.8s
DZA Taraz 52.90 299 *eP* **P** **00 03 34.1 -0.2**
comp=Z,14nm,0.9s,baz=299
DZA Taraz 52.90 299 *eP* **P** **00 03 34.0 -0.2**
DZA pmax pmax
comp=Z,14nm,0.9s
RPSI Rantau Prapat 52.92 239 P **P** **00 03 34.5 -0.1**
RPSI IAmb IAmb 00 03 35.1
comp=Z,19nm,0.8s
HYT Haines Junctio 53.22 37 IAmb IAmb 00 03 53.5
comp=Z,51nm,1.0s
BKNI Bangkinang 53.26 235 P **P** **00 03 39.0 +1.9**
comp=Z,129nm,0.8s
BKNI Bangkinang 53.26 235 P **P** **00 03 37.3 +0.2**
INK Inuvik 53.34 27 P **P** **00 03 38.1 +1.1**
comp=Z,9.1nm,0.7s,baz=285,slow=6.8,SNR=27
INK pP **sP** **00 03 50.8 -0.3**
comp=Z,20nm,1.0s,baz=282,slow=4.6,SNR=13
INK Inuvik 53.34 27 P **P** **00 03 38.1 +1.1**
INK *PP **sP** **00 03 50.8 -0.3**
INK Inuvik 53.34 27 IAmb IAmb 00 03 52.2
comp=Z,24nm,1.0s
OPA Opana 53.36 90 P **P** **00 03 39.5 +1.7**
OPA pmax pmax
comp=Z,131nm,1.2s
OPA Opana 53.36 90 P **P** **00 03 39.5 +1.7**
KK05 Karatay Array 53.38 300 P **P** **00 03 37.4 -0.4**
KK06 Karatay Array 53.38 300 P **P** **00 03 37.7 -0.1**
KK02 Karatay Array 53.39 300 P **P** **00 03 37.3 -0.5**
KK31 Karatay Array 53.39 300 P **P** **00 03 38.1 +0.3**
KK31 pmax pmax
comp=Z,41nm,1.0s
KK31 Karatay Array 53.39 300 P **P** **00 03 38.1 +0.3**
KK31 IAmb IAmb 00 03 38.6
comp=Z,41nm,0.9s
KKAR Karatay Array 53.39 300 P **P** **00 03 37.5 -0.3**
KKAR Karatay Array 53.39 300 P **P** **00 03 37.5 -0.3**
KKAR Karatay Array 53.39 300 IAmb IAmb 00 03 38.6
comp=Z,41nm,0.9s
KK04 Karatay Array 53.39 300 P **P** **00 03 37.8 -0.1**
KK09 Karatay Array 53.39 300 P **P** **00 03 37.6 -0.2**
KK01 Karatay Array 53.39 300 P **P** **00 03 37.5 -0.4**
KK03 Karatay Array 53.40 300 P **P** **00 03 37.5 -0.4**
KK07 Karatay Array 53.40 300 P **P** **00 03 37.8 -0.1**
KK08 Karatay Array 53.41 300 P **P** **00 03 37.6 -0.4**
SMRI Semarang 53.65 221 P **P** **00 03 39.3 -0.7**
BRLS Borolday 53.88 300 *eP* **P** **00 03 42.5 +1.0**
comp=Z,16nm,1.0s,baz=300
BRLS Borolday 53.88 300 *eP* **P** **00 03 42.4 +1.0**
BRLS pmax pmax
comp=Z,16nm,1.0s
IUG luzhnay 54.06 299 *eP* **P** **00 03 43.0 +0.1**
comp=Z,35nm,1.7s,baz=299
IUG luzhnay 54.06 299 *eP* **P** **00 03 43.0 +0.1**
IUG pmax pmax
comp=Z,35nm,1.7s
NDI New Delhi 54.27 281 *eP* **P** **00 03 40.0 -4.4**
BTK Batken 54.28 296 IAmb IAmb 00 04 01.5
comp=Z,22nm,0.9s
WHY Whitehorse 54.51 37 P **P** **00 03 47.2 +1.4**
WHY IAmb IAmb 00 04 01.8
comp=Z,19nm,0.9s
SKAG Skagway 54.61 38 P **P** **00 03 47.4 +1.0**
KPJI Karang Pucung 54.68 222 P **P** **00 03 47.4 0.0**
comp=Z,73nm,0.9s
GSI Gunungsitoli 54.85 239 P **P** **00 03 50.0 +1.2**
comp=Z,84nm,0.8s
GSI Gunungsitoli 54.85 239 P **P** **00 03 49.4 +0.6**
KLSI 54.87 228 P **P** **00 03 49.2 +0.4**
TAS Tashkent 54.88 298 P **P** **00 03 49.2 +0.5**
TAS pmax pmax
comp=Z,50nm,0.4s
TAS Tashkent 54.88 298 P **P** **00 03 49.2 +0.5**
LHSI Lahat 54.90 230 P **P** **00 03 49.8 +0.7**
comp=Z,94nm,1.0s
LEM Lembang 54.97 224 P **P** **00 03 49.5 -0.2**
comp=Z,38nm,0.8s,baz=234,slow=17,SNR=6.5
LEM pP **sP** **00 04 03.1 -0.7**
comp=Z,47nm,0.9s,baz=360,slow=16,SNR=2.8
LEM Lembang 54.97 224 P **P** **00 03 49.5 -0.2**
LEM *PP **sP** **00 04 03.1 -0.7**
MDSI Maura Dua 55.03 229 P **P** **00 03 49.8 -0.2**
comp=Z,42nm,0.9s
GAR Garm 55.05 295 IAmb IAmb 00 04 05.8
comp=Z,49nm,1.1s
SVE Sverdlovsk 55.06 318 *de* P **P** **00 03 50.1 +0.4**
SVE pmax pmax
comp=Z,89nm,0.9s
SVE MLR MLR
comp=Z,960nm,19.0s
NIL Nilore 55.09 288 P **P** **00 03 51.2 +0.8**
NIL Nilore 55.09 288 P **P** **00 03 50.7 +0.4**
NIL pmax pmax
comp=Z,66nm,0.8s
NIL Nilore 55.09 288 P **P** **00 03 50.7 +0.4**
JIS Juneau Island 55.42 40 P **P** **00 03 54.3 +2.1**
JIS IAmb IAmb 00 04 08.5
comp=Z,41nm,1.0s
CHGR Chuyangaron 56.02 295 P **P** **00 03 57.0 0.0**
ARU Arti 56.28 318 *c* *i* P **P** **00 03 58.2 -0.3**
ARU *PP **pP** **00 04 07.8 -0.8**
ARU 00 04 55.4
ARU 00 06 00.3
ARU S **S** **00 11 47.5 +1.7**
ARU SS **SS** **00 15 33.8 +1.6**
ARU pmax pmax
comp=Z,66nm,0.7s
ARU MLR MLR
comp=Z,672nm,16.0s

ARU Arti 56.28 318 P **P** **00 03 58.3 -0.1**
POHA Pohakuloa 56.34 90 P **P** **00 04 00.1 +0.3**
C36M Paulatuk 56.40 25 P **P** **00 03 59.8 +0.7**
baz=288,SNR=22
C36M Paulatuk 56.40 25 IAmb IAmb 00 04 14.2
comp=Z,44nm,0.9s
MLOA Mauna Loa Obse 56.43 90 P **P** **00 04 00.9 +0.3**
FUNA Funafuti 57.52 135 P **P** **00 04 08.1 +0.4**
FUNA IAmb IAmb 00 04 25.6
comp=Z,26nm,0.8s
DLBC Dease Lake 57.54 39 P **P** **00 04 09.8 +2.3**
comp=Z,13nm,0.8s,baz=286,slow=7.7,SNR=16
DLBC pP **sP** **00 04 21.1 -0.5**
comp=Z,23nm,0.9s,baz=290,slow=6.2,SNR=12
DLBC Dease Lake 57.54 39 P **P** **00 04 09.1 +1.6**
DLBC IAmb IAmb 00 04 24.1
comp=Z,41nm,1.1s
CTAO Charters Tower 57.71 176 P **P** **00 04 09.2 +0.2**
CTAO pmax pmax
comp=Z,12nm,1.1s
CTAO Charters Tower 57.71 176 P **P** **00 04 09.2 +0.2**
WB0 Warramunga Arr 57.77 189 P **P** **00 04 08.9 -0.4**
FITZ Fitzroy Crossi 57.80 199 P **P** **00 04 10.2 +0.6**
comp=Z,33nm,1.0s,baz=20,slow=7.2,SNR=23
FITZ LR LR 00 26 31.5
comp=Z,113nm,21.1s,baz=42,slow=33
FITZ Fitzroy Crossi 57.80 199 P **P** **00 04 09.8 +0.2**
FITZ IAmb IAmb 00 04 11.4
comp=Z,47nm,1.1s
KBL Kabul 57.84 291 P **P** **00 04 09.8 -0.4**
SNR=40
KBL P **P** **00 04 09.8 -0.4**
SNR=40
KBL Kabul 57.84 291 P **P** **00 04 09.4 -0.8**
KBL pmax pmax
comp=Z,70nm,1.0s
KBL Kabul 57.84 291 P **P** **00 04 09.4 -0.8**
SANVU Saraoutou 57.90 151 P **P** **00 04 10.8 +0.6**
WRAB Tennant Creek 57.94 189 *ce* P **P** **00 04 10.0 -0.5**
WRAB pmax pmax
comp=Z,135nm,1.3s
WRAB Tennant Creek 57.94 189 P **P** **00 04 10.1 -0.5**
WRA Warramunga Arr 57.95 189 P **P** **00 04 10.3 -0.3**
comp=Z,67nm,0.8s,baz=6.5,slow=7.2,SNR=508
WRA LR LR 00 26 21.4
comp=Z,178nm,21.9s,baz=35,slow=33
WRA Warramunga Arr 57.95 189 *i* P **P** **00 04 10.1 -0.5**
WRA pmax pmax
comp=Z,67nm,0.8s
WRA Warramunga Arr 57.95 189 P **P** **00 04 09.1 -1.6**
WC3 Warramunga Arr 57.96 189 P **P** **00 04 10.1 -0.6**
AB06 Akbulak array 58.00 310 P **P** **00 04 10.0 -0.8**
AB05 Akbulak array 58.01 310 P **P** **00 04 09.9 -0.9**
AB07 Akbulak array 58.01 310 P **P** **00 04 10.1 -0.8**
AB02 Akbulak array 58.01 310 P **P** **00 04 10.2 -0.6**
AB01 Akbulak array 58.02 310 P **P** **00 04 10.1 -0.8**
AB31 Akbulak array 58.02 310 *i* P **P** **00 04 10.1 -0.8**
AB31 Akbulak array 58.02 310 P **P** **00 04 10.9 +0.1**
ABKAR Akbulak array 58.02 310 P **P** **00 04 10.0 -0.8**
ABKAR Akbulak array 58.02 310 IAmb IAmb 00 04 11.2
comp=Z,33nm,0.7s
AB03 Akbulak array 58.02 310 P **P** **00 04 10.7 -0.2**
AB04 Akbulak array 58.02 310 P **P** **00 04 10.5 -0.3**
AB09 Akbulak array 58.03 310 P **P** **00 04 10.5 -0.5**
AB08 Akbulak array 58.03 310 P **P** **00 04 10.6 -0.3**
KNTN Kanton 58.60 123 P **P** **00 04 15.8 +0.4**
KNTN IAmb IAmb 00 04 17.5
comp=Z,43nm,1.0s
AKTO Aktyubinsk 58.72 312 P **P** **00 04 14.6 -1.1**
HYB Hyderabad 58.98 269 *i* P **P** **00 04 17.0 -1.1**
SPA0 Spitsbergen Ar 59.90 349 *eP* **P** **00 04 23.9 +0.3**
KIRV Kirov 60.08 323 *ce* P **P** **00 04 25.2 +0.2**
RES Resolute Bay 61.65 15 P **P** **00 04 35.8 +0.4**
comp=Z,26nm,0.9s,baz=310,slow=6.4,SNR=40
RES pP **sP** **00 04 49.5 -0.1**
comp=Z,14nm,0.8s,baz=310,slow=5.0,SNR=7.1
RES Resolute Bay 61.65 15 P **P** **00 04 35.8 +0.4**
RES *PP **sP** **00 04 49.6 -0.1**
RES Resolute Bay 61.65 15 IAmb IAmb 00 04 36.7
comp=Z,29nm,0.9s
ASAR Alice Springs 61.67 189 P **P** **00 04 36.0 -0.2**
comp=Z,21nm,0.8s,baz=11,slow=6.1,SNR=211
ASAR LR LR 00 31 29.5
comp=Z,186nm,20.9s,baz=347,slow=36
ASAR PKPPKP **P'P'df** **00 33 47.4 +6.3**
comp=Z,0.9nm,0.9s,baz=178,slow=2.8,SNR=5.4
ASAR Alice Springs 61.67 189 P **P** **00 04 36.0 -0.2**
ASAR Alice Springs 61.67 189 P **P** **00 04 35.3 -0.9**
LVZ Lovozero 61.71 336 *i* P **P** **00 04 34.3 -1.7**
LVZ pmax pmax
comp=Z,28nm,1.0s
APA Apatity 62.28 336 ⇓ *i* P **P** **00 04 39.2 -0.6**
APA pmax pmax
comp=Z,23nm,0.8s
TMCR Tamitsa 62.42 331 *eP* **P** **00 04 38.4 -2.3**
TMCR pmax pmax
comp=Z,32nm,0.9s
PSAD1 Pilbara Seismi 62.66 204 P **P** **00 04 42.5 -0.3**
PSAC2 Pilbara Seismi 62.73 204 P **P** **00 04 43.3 0.0**
PSAC2 IAmb IAmb 00 04 59.0
comp=Z,42nm,0.9s
PSAC1 Pilbara Seismi 62.74 204 P **P** **00 04 43.2 -0.1**
PSAC1 IAmb IAmb 00 04 58.9
comp=Z,30nm,0.9s
PSAB2 Pilbara Seismi 62.74 204 P **P** **00 04 42.1 -1.3**
PSAB2 IAmb IAmb 00 04 59.0
comp=Z,42nm,1.0s
YKA Yellowknife Ar 62.75 31 P **P** **00 04 43.7 +0.7**
comp=Z,4.5nm,0.6s,baz=305,slow=3.8,SNR=9.9
YKA pP **sP** **00 04 56.9 -0.3**
comp=Z,15nm,0.8s,baz=301,slow=6.6,SNR=14
YKA LR LR 00 36 04.0
comp=Z,83nm,18.2s,baz=0.0,slow=40
YKA Yellowknife Ar 62.75 31 *ce* P **P** **00 04 43.7 +0.7**
YKA pmax pmax
comp=Z,5.0nm,0.6s
PSAA2 Pilbara Seismi 62.75 204 P **P** **00 04 43.0 -0.4**
PSAA2 IAmb IAmb 00 04 59.1
comp=Z,39nm,1.1s
PSA00 Pilbara Seismi 62.76 204 P **P** **00 04 42.4 -1.1**
PSA00 IAmb IAmb 00 04 58.0
comp=Z,23nm,0.9s
PSAA3 Pilbara Seismi 62.76 204 P **P** **00 04 42.1 -1.4**
PSAA3 IAmb IAmb 00 04 54.4
comp=Z,28nm,0.8s
PSAB1 Pilbara Seismi 62.77 204 P **P** **00 04 42.3 -1.2**
PSAB1 IAmb IAmb 00 04 59.1
comp=Z,35nm,1.0s
PSAD2 Pilbara Seismi 62.77 204 P **P** **00 04 42.7 -0.8**
PSAD2 IAmb IAmb 00 04 59.1
comp=Z,39nm,0.9s
PSAA1 Pilbara Seismi 62.77 204 P **P** **00 04 43.1 -0.4**
PSAA1 IAmb IAmb 00 04 59.2
comp=Z,38nm,1.1s
PSAB3 Pilbara Seismi 62.78 204 P **P** **00 04 42.9 -0.7**
PSAB3 IAmb IAmb 00 04 59.2
comp=Z,34nm,0.8s
PSAC3 Pilbara Seismi 62.81 204 P **P** **00 04 43.3 -0.6**
PSAC3 IAmb IAmb 00 04 59.9
comp=Z,22nm,0.8s
PSAD3 Pilbara Seismi 62.85 204 P **P** **00 04 43.5 -0.6**
PSAD3 IAmb IAmb 00 04 59.7
comp=Z,34nm,1.0s
HRA Herat 62.90 294 P **P** **00 04 44.7 0.0**
HRA IAmb IAmb 00 04 58.0
comp=Z,24nm,1.0s
KEV Kevo 62.98 339 P **P** **00 04 44.4 0.0**
KEV pmax pmax
comp=Z,30nm,1.0s
KEV Kevo 62.98 339 P **P** **00 04 44.4 0.0**
KEV IAmb IAmb 00 04 45.0
comp=Z,30nm,1.0s
PALK Pallekele 63.28 258 P **P** **00 04 47.1 -0.1**
comp=Z,8.8nm,0.7s,baz=133,slow=6.5,SNR=5.8
PALK Pallekele 63.28 258 P **P** **00 04 47.1 -0.1**
PALK pmax pmax
comp=Z,12nm,0.8s
PALK Pallekele 63.28 258 IAmb IAmb 00 04 47.4
comp=Z,12nm,0.8s
EIDS Eidsvold 63.38 171 P **P** **00 04 48.2 +0.7**
EIDS IAmb IAmb 00 04 49.3
comp=Z,23nm,0.9s
KLMR Klimovskoe 63.50 328 *eP* **P** **00 04 46.6 -1.3**
KLMR *e* 00 07 05.5
KLMR pmax pmax

comp=Z,25nm,0.9s
KLMR Klimovskoe 63.50 328 *eP* **P** **00 04 46.7 -1.2**
KLMR AMP 00 04 48.2
comp=Z,25nm,0.9s
KLMR *ePP* **PP** **00 07 05.6 -1.7**
KLMR LR LR 00 33 08.5
ARD2 ARCESS Array S 63.52 339 P **P** **00 04 48.4 +0.4**
ARD2 IAmb IAmb 00 04 48.8
comp=Z,20nm,0.9s
ARD1 ARCESS Array S 63.52 339 P **P** **00 04 48.0 0.0**
ARD1 IAmb IAmb 00 04 48.7
comp=Z,29nm,1.0s
ARC2 ARCESS Array S 63.52 339 P **P** **00 04 47.6 -0.4**
ARC1 ARCESS Array S 63.52 339 P **P** **00 04 47.9 -0.1**
ARC1 IAmb IAmb 00 04 48.8
comp=Z,30nm,1.1s
ARB1 ARCESS Array S 63.53 339 P **P** **00 04 47.2 -0.8**
ARB1 IAmb IAmb 00 04 48.9
comp=Z,24nm,1.0s
ARB2 ARCESS Array S 63.53 339 P **P** **00 04 48.4 +0.4**
ARB2 IAmb IAmb 00 04 49.6
comp=Z,25nm,0.9s
ARA1 ARCESS Array S 63.53 339 P **P** **00 04 48.2 +0.1**
ARA1 IAmb IAmb 00 04 48.9
comp=Z,20nm,0.9s
ARA0 ARCESS Array S 63.53 339 P **P** **00 04 48.5 +0.4**
ARA0 IAmb IAmb 00 04 49.6
comp=Z,20nm,0.9s
ARA0 ARCESS Array S 63.53 339 *eP* **P** **00 04 48.4 +0.3**
ARD9 ARCESS Array S 63.53 339 P **P** **00 04 48.2 +0.1**
ARD9 IAmb IAmb 00 04 48.8
comp=Z,38nm,1.1s
ARA2 ARCESS Array S 63.53 339 P **P** **00 04 47.9 -0.1**
ARA2 IAmb IAmb 00 04 49.6
comp=Z,22nm,1.0s
ARB3 ARCESS Array S 63.53 339 P **P** **00 04 47.5 -0.6**
ARC7 ARCESS Array S 63.53 339 P **P** **00 04 48.3 +0.3**
ARC7 IAmb IAmb 00 04 48.8
comp=Z,30nm,1.1s
ARCES ARCESS Array B 63.53 339 P **P** **00 04 48.2 +0.1**
comp=Z,15nm,0.9s,baz=47,slow=6.9,SNR=36
ARCES LR LR 00 36 46.6
comp=Z,365nm,18.1s,baz=35,slow=40
ARCES ARCESS Array B 63.53 339 P **P** **00 04 48.2 +0.1**
ARA3 ARCESS Array S 63.53 339 P **P** **00 04 47.9 -0.1**
ARA3 IAmb IAmb 00 04 48.9
comp=Z,20nm,0.9s
ARB5 ARCESS Array S 63.53 339 P **P** **00 04 48.5 +0.4**
ARB5 IAmb IAmb 00 04 48.9
comp=Z,23nm,1.0s
ARC4 ARCESS Array S 63.53 339 P **P** **00 04 48.4 +0.3**
ARB4 ARCESS Array S 63.53 339 P **P** **00 04 47.9 -0.2**
ARB4 IAmb IAmb 00 04 48.9
comp=Z,18nm,0.9s
ARC6 ARCESS Array S 63.53 339 P **P** **00 04 47.9 -0.2**
ARC6 IAmb IAmb 00 04 48.9
comp=Z,24nm,1.0s
ARD8 ARCESS Array S 63.54 339 P **P** **00 04 47.1 -1.0**
ARD8 IAmb IAmb 00 04 48.9
comp=Z,32nm,1.0s
ARD7 ARCESS Array S 63.54 339 P **P** **00 04 47.8 -0.3**
ARD7 IAmb IAmb 00 04 49.0
comp=Z,24nm,0.9s
DZM Mont Dzumac 63.73 155 LR LR 00 29 36.1
comp=Z,654nm,21.5s,baz=331,slow=33
DZM Mont Dzumac 63.73 155 *eP* **P** **00 04 51.1 +1.1**
comp=Z,139nm,1.2s
DZM Mont Dzumac 63.73 155 *e* LR LR 00 23 56.0
comp=Z,1µm,21.9s
GYA2 ALIBECK ARRAY 64.11 299 P **P** **00 04 52.2 -0.2**
GYA2 IAmb IAmb 00 05 04.6
comp=Z,23nm,0.9s
GYB1 ALIBECK ARRAY 64.12 299 P **P** **00 04 51.0 -1.5**
GYB1 IAmb IAmb 00 05 09.9
comp=Z,19nm,0.8s
GEYT Alibeck 64.12 299 P **P** **00 04 52.5 -0.1**
comp=Z,14nm,0.7s,baz=29,slow=3.4,SNR=21
GEYT LR LR 00 34 40.4
comp=Z,414nm,18.7s,baz=250,slow=38
GEYT Alibeck 64.12 299 P **P** **00 04 52.4 -0.1**
GYA0 ALIBECK ARRAY 64.12 299 P **P** **00 04 52.0 -0.5**
GYA0 ALIBECK ARRAY 64.12 299 P **P** **00 04 52.0 -0.5**
GYA0 IAmb IAmb 00 05 07.6
comp=Z,19nm,0.8s
GYA0B ALIBECK ARRAY 64.12 299 IAmb IAmb 00 05 07.6
comp=Z,20nm,0.8s
GYA3 ALIBECK ARRAY 64.12 299 P **P** **00 04 52.0 -0.5**
GYA3 IAmb IAmb 00 05 07.6
comp=Z,24nm,0.9s
GYA1 ALIBECK ARRAY 64.12 299 P **P** **00 04 52.2 -0.4**
GYA1 IAmb IAmb 00 04 53.4
comp=Z,15nm,0.8s
GYB5 ALIBECK ARRAY 64.13 299 P **P** **00 04 52.6 0.0**
GYB5 IAmb IAmb 00 05 10.7
comp=Z,25nm,1.1s
TULEG Thule 64.22 8 IAmb IAmb 00 04 53.3
comp=Z,39nm,0.9s
TULEG Thule 64.22 8 ⇑ *i* P **P** **00 04 52.2 -0.3**
TULEG IAmb IAmb 00 04 53.0
comp=Z,35nm,0.9s
KTK1 Kautokeino 64.49 340 *eP* **P** **00 04 54.7 +0.4**
MSVF Nonsavu 64.65 142 P **P** **00 04 57.4 +1.3**
MSVF pmax pmax
comp=Z,18nm,1.0s
MSVF Nonsavu 64.65 142 P **P** **00 04 57.4 +1.3**
MSVF IAmb IAmb 00 04 58.9
comp=Z,18nm,1.0s
DAG Danmarks Havn 65.06 355 ⇑ *i* P **P** **00 04 57.8 -0.1**
DAG pmax pmax
comp=Z,32nm,0.9s
DAG Danmarks Havn 65.06 355 ⇑ *i* P **P** **00 04 57.8 -0.1**
comp=Z,32nm,0.9s
DAG Danmarks Havn 65.06 355 ⇑ *i* P **P** **00 04 57.9 -0.1**
DAG IAmb IAmb 00 04 58.5
comp=Z,32nm,0.9s
TRO Tromso 65.22 341 *eP* **P** **00 04 59.0 0.0**
NLWA Neilton Lookou 65.62 48 P **P** **00 05 03.3 +1.2**
NLWA IAmb IAmb 00 05 05.4
comp=Z,30nm,0.9s
A04D Lummi Island 65.64 46 P **P** **00 05 03.3 +1.2**
baz=300
D03D Eldon 66.01 48 P **P** **00 05 06.2 +1.6**
baz=300,SNR=6.3
B05A Bryant 66.22 47 P **P** **00 05 07.1 +1.3**
baz=301
B06A Marblemount 66.44 46 P **P** **00 05 07.4 +0.2**
B06A IAmb IAmb 00 05 22.7
comp=Z,23nm,1.1s
E04D Cinebar 66.82 48 P **P** **00 05 11.2 +1.5**
baz=301
D05A Enumclaw 66.83 48 P **P** **00 05 10.8 +0.9**
AFI Afiamalu 67.06 131 LR LR 00 29 13.8
comp=Z,139nm,20.4s,baz=316,slow=31
MOS Moscow 67.07 324 *eP* **P** **00 05 09.2 -2.0**
MOS *e* 00 05 20.1
MOS *e* 00 07 36.4
MOS pmax pmax
comp=Z,100nm,1.6s
MOS pmax pmax
comp=Z,74nm,1.3s
MOS MLR MLR
comp=Z,400nm,16.0s
G03D McMinnville, O 67.09 50 P **P** **00 05 12.8 +1.3**
baz=301
LON Longmire 67.16 48 P **P** **00 05 11.5 -0.5**
LON pmax pmax
comp=Z,8.0nm,1.1s
LON Longmire 67.16 48 P **P** **00 05 11.5 -0.5**
N2IH Innhavet 67.17 341 *eP* **P** **00 05 11.3 -0.3**
F04A Amboy 67.23 49 IAmb IAmb 00 05 14.8
comp=Z,21nm,0.8s
I02D Swisshome 67.30 51 P **P** **00 05 14.1 +1.3**
baz=301
STEI Steigen 67.38 341 *eP* **P** **00 05 12.8 -0.1**
VRH Novokhopyorsk 67.51 318 *eP* **P** **00 05 12.5 -1.5**
VRH pmax pmax
comp=Z,30nm,0.6s
LTY Liberty 67.56 47 P **P** **00 05 14.7 +0.2**
N2TV TYrnvik 67.67 341 *eP* **P** **00 05 15.2 +0.5**
J01E Myrtle Point 67.74 52 P **P** **00 05 17.4 +1.7**
baz=302
H04D Lebanon 67.77 50 P **P** **00 05 17.3 +1.5**
baz=302
I03D Drain, OR 67.82 51 P **P** **00 05 17.8 +1.6**
baz=302,SNR=5.1

OBN Obninsk 67.92 323 ⇓P P 00 05 16.5 -0.1
OBN Obninsk 67.92 323 *ce*P P 00 05 15.5 -1.0
OBN *e* 00 05 26.8
OBN *e* 00 05 41.9
OBN *e* 00 07 47.1
OBN *e*PPP PPP 00 09 24.6
OBN *e*S S 00 14 12.1 -0.5
OBN pmax pmax
comp=Z,82nm,1.7s
OBN MLR MLR
comp=Z,422nm,16.0s
OBN Obninsk 67.92 323 P P 00 05 16.4 -0.1
OBN lAmb lAmb 00 05 16.7
comp=Z,25nm,0.8s
K02D Willamette Mer 68.15 52 P P 00 05 19.4 +1.0
baz=302
LPSR Galich'ya Gora 68.18 320 *e*P P 00 05 17.1 -1.1
LPSR pmax pmax
comp=Z,40nm,0.8s
N2VA Vr,y 68.22 342 *e*P P 00 05 18.3 +0.1
G05D Wamic, OR 68.25 49 P P 00 05 20.2 +1.3
baz=302
I04A Tendick Farm, 68.35 51 P P 00 05 20.7 +1.2
baz=302,SNR=5.4
E07A Sunnyside 68.41 47 P P 00 05 20.7 +0.9
ARMA Armidale 68.44 171 P P 00 05 21.0 +0.9
ARMA lAmb lAmb 00 05 22.2
comp=Z,25nm,1.1s
FINES FINESS Array B 68.47 332 P P 00 05 19.8 -0.1
comp=Z,39nm,0.6s,baz=37,slow=9.4,SNR=143
FINES LR LR 00 36 56.1
comp=Z,263nm,20.5s,baz=25,slow=37
FINES FINESS Array B 68.47 332 *i*P P 00 05 19.7 -0.1
FINES pmax pmax
comp=Z,39nm,0.6s
L02E Cave Junction 68.47 53 P P 00 05 21.7 +1.3
baz=302
MAK Makhachkala 68.57 308 *e*P P 00 05 20.6 -0.2
MAK *e* 00 07 48.1
MAK *e*S S 00 14 21.6 +0.9
MAK *e*SS SS 00 18 47.9 +3.3
MAK pmax pmax
comp=Z,54nm,1.0s
MAK MLR MLR
comp=Z,372nm,14.0s
C09A Chrisman Ranch 68.64 46 lAmb lAmb 00 05 23.5
comp=Z,24nm,1.1s
D08A Wollman Farm, 68.68 47 P P 00 05 22.0 +0.5
HAWA Hanford 68.69 47 P P 00 05 22.7 +1.2
I05D Terrebonne, OR 68.72 50 P P 00 05 23.1 +1.3
baz=302
F07A Phinny Hill Vi 68.72 48 P P 00 05 22.7 +0.9
J04D Umpqua Nationa 68.83 51 P P 00 05 24.1 +1.3
baz=302,SNR=11
VSR Storozhevoye 68.84 319 *e*P P 00 05 21.4 -1.0
VSR pmax pmax
comp=Z,30nm,0.6s
MOR8 Moi Rana 68.89 340 *e*P P 00 05 21.2 -1.3
E08A Dider Farm, El 68.91 47 P P 00 05 23.7 +0.8
VORD Divnogorie 68.92 319 *e*P P 00 05 21.5 -1.3
VORD pmax pmax
comp=Z,20nm,0.4s
NEW Newport 69.04 45 P P 00 05 24.5 +0.8
baz=304,SNR=8.3
NEW Newport 69.04 45 pP pP 00 05 37.3 +3.1
PINE Pine Mountain 69.25 50 P P 00 05 27.2 +1.8
PINE lAmb lAmb 00 05 28.3
comp=Z,40nm,0.9s
L04D Klamath Falls 69.26 52 P P 00 05 26.6 +1.3
baz=303,SNR=9.1
YBH Yreka Blue Hor 69.26 53 LR LR 00 30 28.3
comp=Z,134nm,20.2s,baz=310,slow=31
YBH Yreka Blue Hor 69.26 53 P P 00 05 27.2 +1.9
YBH pmax pmax
comp=Z,10.0nm,1.0s
YBH Yreka Blue Hor 69.26 53 P P 00 05 27.2 +1.9
STKA Stephens Creek 69.34 181 P P 00 05 25.8 +0.2
comp=Z,11nm,0.8s,baz=346,slow=7.6,SNR=23
STKA Stephens Creek 69.34 181 P P 00 05 25.8 +0.2
STKA pmax pmax
comp=Z,3.0nm,0.9s
STKA Stephens Creek 69.34 181 P P 00 05 25.8 +0.2
J05D Fort Rock, OR 69.35 51 P P 00 05 27.5 +1.6
baz=303,SNR=12
M02C Callahan 69.36 53 P P 00 05 27.6 +1.7
baz=303
K04D Chiloquin, OR 69.38 52 P P 00 05 27.4 +1.3
baz=303
E09A Wood Farm, Sta 69.42 47 P P 00 05 26.9 +0.8
G08A Pilot Rock 69.62 48 P P 00 05 28.1 +0.6
N02D Trinity Center 69.67 54 P P 00 05 29.2 +1.4
baz=303
M04C Macdoel 69.78 52 P P 00 05 30.1 +1.5
baz=303,SNR=8.0
K05A Summer Lake 69.86 51 P P 00 05 30.0 +0.9
K05A lAmb lAmb 00 05 45.4
comp=Z,38nm,1.0s
SUMG Summit 69.90 0 P P 00 05 29.9 +0.8
SUMG pmax pmax
comp=Z,34nm,0.8s
SUMG Summit 69.90 0 P P 00 05 29.9 +0.8
SUMG lAmb lAmb 00 05 30.9
comp=Z,34nm,0.8s
SUMG Summit 69.90 0⇑ *i*P P 00 05 29.9 +0.8
comp=Z,85nm,0.7s
SUMG Summit 69.90 0⇑ *i*P P 00 05 30.0 +0.8
SUMG lAmb lAmb 00 05 30.3
comp=Z,85nm,0.7s
I07A Izee 69.96 49 P P 00 05 31.3 +1.7
GOF Gofitskoye 70.14 312⇑ *e*P P 00 05 30.8 +0.3
GOF pmax pmax
comp=Z,80nm,0.9s
VSU Vasula 70.16 330 *e*P P 00 05 29.2 -1.2
VSU Vasula 70.16 330 *i*P P 00 05 28.0 -2.4
VSU pmax pmax
comp=Z,127nm,1.0s
F10A Beach Ranch, E 70.25 47 P P 00 05 32.3 +0.9
WALA Waterton Lakes 70.34 43 lAmb lAmb 00 05 47.4
comp=Z,25nm,1.0s
BBOO Buckleboo 70.51 186 lAmb lAmb 00 05 33.5
comp=Z,18nm,0.8s
O03E Paynes Creek 70.62 54 P P 00 05 34.6 +0.9
baz=304
MOD Modoc Plateau 70.68 52 P P 00 05 33.9 -0.2
GDXM Geysers 70.80 56 P P 00 05 35.0 +0.3
NSS Namsos 70.81 340 *e*P P 00 05 33.9 -0.4
ZEI Tsey 70.89 310 *e*P P 00 05 33.8 -1.6
ZEI pmax pmax
comp=Z,17nm,0.9s
JTMT Jette 70.90 44 P P 00 05 35.5 +0.2
JTMT lAmb lAmb 00 05 51.0
comp=Z,27nm,1.2s
MORW Morawa 70.96 204 P P 00 05 35.6 +0.1
MORW lAmb lAmb 00 05 36.6
comp=Z,24nm,1.1s
KIV Kislovodsk 70.96 311 ⇑P P 00 05 36.0 +0.3
KIV Kislovodsk 70.96 311 *i*P P 00 05 36.1 +0.3
SNR=59
KIV Kislovodsk 70.96 311 P P 00 05 36.2 +0.5
KIV P P 00 05 36.2 +0.5
KIV Kislovodsk 70.96 311 *e*P P 00 05 35.5 -0.2
KIV pmax pmax
comp=Z,268nm,1.1s
KIV MLR MLR
comp=Z,756nm,18.0s
KIV Kislovodsk 70.96 311 P P 00 05 36.0 +0.3
KBZ Khabaz 70.97 311 P P 00 05 35.9 +0.4
comp=Z,34nm,0.9s,baz=236,slow=24,SNR=99
KBZ LR LR 00 39 24.7
comp=Z,108nm,19.3s,baz=204,slow=38
KBZ Khabaz 70.97 311 *ce*P P 00 05 35.6 +0.1
KBZ pmax pmax
comp=Z,41nm,0.9s
J08A Circle Bar Ran 70.99 50 P P 00 05 36.9 +1.0
WSAR Wadi Sarin 71.39 285 LR LR 00 41 14.2
comp=Z,94nm,18.5s,baz=85,slow=39
JLN Jalan Bani Buh 71.40 284 P P 00 05 38.7 +0.1
WBK Wadi Bani Khal 71.48 285 P P 00 05 39.2 +0.1
WBK P P 00 05 39.2 +0.1
BIDO Bidbid 71.62 286 P P 00 05 40.0 +0.1
MSO Missoula 71.63 45 P P 00 05 40.3 +0.6
baz=306,SNR=5.4
BANOM Banah 71.68 289 P P 00 05 40.3 +0.1
BANOM Banah 71.68 289 P P 00 05 40.4 +0.1
BANOM P P 00 05 40.4 +0.1

SHME Shamm 71.72 289 P P 00 05 40.4 -0.1
GNI Garni 71.84 307 *ce*P P 00 05 42.1 +0.9
GNI pmax pmax
comp=Z,28nm,1.3s
GNI Garni 71.84 307 P P 00 05 41.8 +0.7
GNI lAmb lAmb 00 05 49.4
comp=Z,30nm,1.1s
AFDM Forest Hills D 71.90 55 P P 00 05 42.0 +0.6
AKH Akhalkalaki 71.91 309 ⇑P P 00 05 42.3 +0.7
CHVG Ch'k'valeri 72.03 310 ⇑P P 00 05 41.9 -0.1
MSFE Esma-Masafi 72.09 288 P P 00 05 41.1 -1.7
IZAR Izarsai 72.15 328 *e*P P 00 05 42.2 -0.3
HOQ Hoqain 72.21 286 P P 00 05 43.3 -0.1
HOQ P P 00 05 43.3 -0.1
IDID Didziasalis 72.23 327 *e*P P 00 05 42.7 -0.3
MICGM Minsk 72.27 326 *e* P 00 05 50.0 +6.8
MNK Minsk 72.27 326 *e*P P 00 05 50.0 +6.8
TBLU Trondheim 72.29 339 *e*P P 00 05 42.4 -0.8
UOSS Minazif 72.29 288 P P 00 05 43.5 -0.3
ISAL Salakas 72.32 328 *e*P P 00 05 43.5 0.0
RUBR Rubicon Trail 72.37 54 P P 00 05 45.5 +1.1
HATD Hatta, Dubai 72.41 288 P P 00 05 44.5 -0.1
IIGN Ignalina 72.43 327 *e*P P 00 05 43.7 -0.5
NACGM Naroch 72.48 327 *e* P 00 05 43.0 -1.5
SOHO SOHO 72.49 287 P P 00 05 44.4 -0.7
ASHO Ashiyiah 72.55 288 P P 00 05 45.4 -0.1
VCNR Virginia City 72.55 54 P P 00 05 45.7 +0.3
FFC Flin Flon 72.63 33 P P 00 05 46.1 +0.7
FFC pmax pmax
comp=Z,52nm,1.0s
FFC Flin Flon 72.63 33 P P 00 05 46.1 +0.7
FFC lAmb lAmb 00 06 00.9
comp=Z,52nm,0.9s
NAZ Nazwa, Dubai 72.67 288 P P 00 05 46.3 +0.1
PNTR Pine Nut 72.70 54 P P 00 05 47.2 +0.8
SAO San Andreas Ge 72.82 57 P P 00 05 46.9 0.0
SAO pmax pmax
comp=Z,14nm,1.2s
SAO San Andreas Ge 72.82 57 P P 00 05 46.9 0.0
FAQ Al Faqa, Dubai 72.86 288 P P 00 05 46.5 -0.7
SOC Sochi 72.94 312 *e*P P 00 05 45.7 -1.7
SOC *e* 00 08 24.4
SOC *e*PPP PPP 00 10 13.4
SOC *e*S S 00 15 10.6 -0.9
SOC *e*SS SS 00 19 50.7 -0.8
SOC pmax pmax
comp=Z,32nm,0.7s
SOC MLR MLR
comp=Z,259nm,14.0s
ASUD Al Ashush, Dub 73.13 288 P P 00 05 48.6 -0.2
ALNE Al Ain 73.13 288 P P 00 05 48.5 -0.3
WAKR Walker 73.14 54 P P 00 05 49.9 +0.9
MHTO MHTO 73.16 284 P P 00 05 49.2 +0.1
SNR=5.6
EGMT Eagleton 73.18 42 P P 00 05 49.7 +0.8
baz=308,SNR=9.1
EGMT Eagleton 73.18 42 lAmb lAmb 00 06 04.2
comp=Z,31nm,1.1s
DLMT Dillon 73.25 45 lAmb lAmb 00 05 51.7
comp=Z,29nm,1.1s
PABE Paberze 73.27 328 *e*P P 00 05 48.2 -0.9
HLID Hailey 73.28 48 P P 00 05 50.9 +1.2
baz=307,SNR=17
ICESG Greenland Ices 73.39 1 *i*P P 00 05 50.9 +0.8
ICESG lAmb lAmb 00 05 51.1
comp=Z,36nm,0.7s
BCYI Bear Canyon 73.42 47 P P 00 05 51.3 +0.7
MCMT McKenzie Canyo 73.43 46 P P 00 05 50.3 -0.3
NC405 NORSAR Array S 73.54 337 lAmb lAmb 00 05 51.3
comp=Z,36nm,0.6s
NC303 NORSAR Array S 73.56 338 lAmb lAmb 00 05 51.4
comp=Z,58nm,1.1s
DOMB Dombas 73.59 339 *e*P P 00 05 51.1 +0.1
BOZ Bozeman (W) 73.65 45 P P 00 05 52.8 +1.0
baz=308,SNR=22
KVN Kaiserville 73.68 53 lAmb lAmb 00 05 54.7
comp=Z,27nm,1.2s
PBUR Paburge 73.74 330 *e*P P 00 05 51.7 -0.2
NB2 NORSAR Subarra 73.75 338 P P 00 05 59.2 +7.2
comp=Z,4.2nm,0.6s,baz=37,slow=6.2
NB2 NORSAR Subarra 73.75 338 P P 00 05 59.2 +7.2
baz=37,slow=6.2
NOA NORSAR Array B 73.75 338 P P 00 05 51.9 -0.1
comp=Z,19nm,0.8s,baz=38,slow=5.9,SNR=51
NOA LR LR 00 40 55.6
comp=Z,418nm,20.8s,baz=40,slow=38
NOA NORSAR Array B 73.75 338 P P 00 05 51.9 -0.1
MDPB Devils Postpil 73.87 55 P P 00 05 54.1 +0.7
LHV Little Huntoon 73.89 54 lAmb lAmb 00 06 09.5
comp=Z,38nm,1.1s
NBO00 NORSAR Array S 73.89 338 lAmb lAmb 00 05 53.4
comp=Z,49nm,0.9s
NC602 NORSAR Array S 73.89 337 *e*P P 00 05 52.3 -0.4
NVAR Mina Array Bea 73.91 54 P P 00 05 54.9 +1.3
comp=Z,7.5nm,0.8s,baz=289,slow=6.0,SNR=49
NVAR pP sP 00 06 08.2 +0.3
comp=Z,8.4nm,0.9s,baz=281,slow=6.2,SNR=13
NVAR LR LR 00 32 26.4
comp=Z,131nm,21.5s,baz=282,slow=31
NVAR Mina Array Bea 73.91 54 P P 00 05 54.8 +1.2
OMMB Old Mammoth Mi 73.94 55 P P 00 05 54.7 +0.9
NV11 Mina Array Sit 74.00 54 P P 00 05 53.7 -0.3
MLAC Mammoth, Mammo 74.03 55 P P 00 05 55.6 +1.3
baz=306
AKN Aaknes 74.05 340 *e*P P 00 05 53.9 +0.3
AKASG Malin Array Be 74.14 323 P P 00 05 54.0 -0.3
comp=Z,35nm,0.6s,baz=47,slow=6.1,SNR=115
AKASG LR LR 00 41 16.2
comp=Z,427nm,18.6s,baz=35,slow=38
AKASG Malin Array Be 74.14 323 *ce*P P 00 05 54.0 -0.3
AKASG pmax pmax
comp=Z,35nm,0.6s
AKASG Malin Array Be 74.14 323 P P 00 05 54.0 -0.3
AKBB Malin Array Si 74.14 323 *ce*P P 00 05 53.4 -0.9
AKBB Malin Array Si 74.14 323 lAmb lAmb 00 05 54.9
comp=Z,49nm,0.8s
PAGB Antelope Grade 74.20 57 P P 00 05 55.7 +0.7
PAGB lAmb lAmb 00 06 10.9
comp=Z,24nm,1.0s
QLMT Earthquake Lak 74.23 45 P P 00 05 56.4 +1.1
KTUT Trabzon 74.44 310 ⇑P P 00 05 56.1 -0.2
SMMC Simmler 74.61 57 P P 00 05 59.2 +1.8
baz=306
SUW Suwalki 74.63 328 *e*P P 00 05 57.4 +0.3
SUW *e*L L 00 41 00.2
comp=Z,509nm,17.8s
YNM Yellowstone No 74.70 45 P P 00 05 59.0 +1.0
YNR Norris Junctio 74.72 45 P P 00 05 60.0 +1.8
OSL Oslo 74.77 337 *e*P P 00 05 58.2 +0.4
SKAR Skarslia 74.90 339 *e*P P 00 05 58.5 -0.2
VES Vestal, Richgr 74.91 56 P P 00 06 00.0 +0.9
baz=306
LKWY Lake 74.97 45 P P 00 06 01.5 +1.9
LKWY pmax pmax
comp=Z,21nm,1.0s
LKWY Lake 74.97 45 P P 00 06 01.5 +1.9
H17A Grant Village 74.98 45 P P 00 06 02.7 +3.0
baz=309,SNR=17
H17A Grant Village 74.98 45 P P 00 06 02.0 +2.3
H17A lAmb lAmb 00 06 03.8
comp=Z,39nm,1.0s
PKM Mcpherson Peak 74.98 57 P P 00 06 01.1 +1.4
baz=306
SFJD Kangerlussuaq 75.04 5 *i*P P 00 05 59.7 +0.5
SFJD Kangerlussuaq 75.04 5 *i*P P 00 05 59.7 +0.5
SFJD Kangerlussuaq 75.04 5 *i*P P 00 05 59.7 +0.5
TOO Toolangi 75.08 177 P P 00 06 00.0 +0.3
TOO pmax pmax
comp=Z,14nm,1.1s
TOO Toolangi 75.08 177 P P 00 06 00.0 +0.3
IMW Indian Meadow 75.08 46 P P 00 06 02.0 +1.7
IMW lAmb lAmb 00 06 03.4
comp=Z,20nm,0.9s
HYA Hoyanger 75.10 340 *e*P P 00 06 00.1 +0.4
CWC Cottonwood Cre 75.22 55 P P 00 06 02.0 +0.9
baz=306
RLMT Red Lodge 75.25 44 P P 00 06 02.2 +1.0
baz=309,SNR=8.5
RLMT Red Lodge 75.25 44 P P 00 06 02.1 +1.0
HVU Hansel Valley 75.32 48 P P 00 06 02.3 +0.7
HVU pmax pmax
comp=Z,18nm,1.0s
HVU Hansel Valley 75.32 48 P P 00 06 02.3 +0.7
TPAW Teton Pass 75.33 46 lAmb lAmb 00 06 18.0

comp=Z,24nm,1.1s
KONO Kongsberg 75.35 337 P P 00 06 01.6 +0.4
KONO pmax pmax
comp=Z,11nm,0.7s
KONO Kongsberg 75.35 337 P P 00 06 01.6 +0.4
KONO Kongsberg 75.35 337 *e*P P 00 06 01.6 +0.4
GRAC Grapevine Rang 75.35 55 P P 00 06 03.0 +1.3
baz=306,SNR=12
ECR Eagle Creek 75.36 47 P P 00 06 03.0 +1.2
ISA Isabella, Lake 75.42 56 P P 00 06 01.8 -0.3
ISA pmax pmax
comp=Z,8.0nm,1.1s
ISA Isabella, Lake 75.42 56 P P 00 06 02.7 +0.6
baz=306
ISA Isabella, Lake 75.42 56 P P 00 06 01.8 -0.3
SNOW Snow King Moun 75.46 46 P P 00 06 03.4 +0.9
R11A Troy Canyon, C 75.68 53 P P 00 06 05.0 +1.2
baz=307,SNR=18
BGU Big Grassy Mou 75.69 49 P P 00 06 04.5 +0.8
AHID Auburn Hatcher 75.69 47 P P 00 06 04.8 +1.1
DGMT Dagmar 75.75 39 P P 00 06 04.1 +0.4
DGMT lAmb lAmb 00 06 18.8
comp=Z,51nm,1.0s
SPUT South Promonto 75.80 49 P P 00 06 05.5 +1.1
MPMC Manual Prospec 75.83 55 P P 00 06 05.4 +0.8
baz=307,SNR=14
LAO LASA Array 75.88 41 P P 00 06 05.6 +1.0
baz=311,SNR=8.9
LAO LASA Array 75.88 41 pP pP 00 06 18.6 +3.5
LAO lAmb lAmb 00 06 20.3
comp=Z,34nm,0.9s
ASK Askoy 75.94 340 *e*P P 00 06 05.4 +0.8
BER Bergen 75.99 340 *e*P P 00 06 05.5 +0.7
FURC Furnace Creek, 75.99 55 P P 00 06 06.7 +1.4
baz=307,SNR=7.1
MARD Mardin 76.01 306 lAmb lAmb 00 06 07.0
comp=Z,53nm,0.9s
LRMC Laurel Mtn Rad 76.05 56 P P 00 06 06.3 +0.5
baz=307,SNR=6.0
SPR3 Spring Creek 3 76.07 51 P P 00 06 07.0 +0.9
TPNV Topopah Spring 76.10 54 P P 00 06 06.9 +0.8
baz=307,SNR=15
SNCC San Nicolas Is 76.14 59 P P 00 06 07.3 +1.1
baz=306
HWUT Hardware Ranch 76.14 48 lAmb lAmb 00 06 09.7
comp=Z,28nm,1.1s
EDW2 Edwards Air Fo 76.20 57 P P 00 06 07.7 +1.1
baz=307,SNR=12
SORM Soroca 76.26 321 ⇑P P 00 06 06.1 -0.4
DUG Dugway, Tooele 76.27 50 P P 00 06 08.3 +1.3
baz=308,SNR=20
MWC Mount Wilson 76.54 57 P P 00 06 09.2 +0.5
MWC pmax pmax
comp=Z,15nm,1.1s
MWC Mount Wilson 76.54 57 P P 00 06 09.2 +0.5
BW06 Boulder Array 76.58 46 P P 00 06 09.2 +0.4
baz=310,SNR=12
PDAR Pinedale Array 76.58 46 P P 00 06 09.5 +0.7
comp=Z,8.0nm,0.7s,baz=269,slow=1.8,SNR=71
PDAR pP sP 00 06 23.4 +0.1
comp=Z,7.4nm,0.7s,baz=249,slow=0.5,SNR=13
PDAR Pinedale Array 76.58 46 P P 00 06 09.4 +0.6
PSUT Pine Spring 76.65 52 P P 00 06 10.3 +1.0
DIKM Dikmen 76.72 313 ⇑P P 00 06 09.5 +0.2
GSC Goldstone, Bar 76.73 56 P P 00 06 09.9 +0.3
GSC pmax pmax
comp=Z,11nm,1.1s
GSC Goldstone, Bar 76.73 56 P P 00 06 10.3 +0.7
baz=307,SNR=6.5
GSC Goldstone, Bar 76.73 56 P P 00 06 09.9 +0.3
CIS Catalina Islan 76.79 58 P P 00 06 10.6 +0.7
baz=307
BFSC Mount Baldy Ra 76.80 57 P P 00 06 10.8 +0.7
baz=307,SNR=5.5
TOKA Tokat 76.83 311 lAmb lAmb 00 06 12.2
comp=Z,21nm,0.9s
NLU North Lily Min 76.86 50 P P 00 06 04.8 -5.6
SCI2 San Clemente I 76.96 58 P P 00 06 12.0 +1.2
baz=307
BSD Bornholm Skovb 77.11 332 ⇑*i*P P 00 06 11.1 -0.1
BSD pmax pmax
comp=Z,57nm,1.0s
BSD Bornholm Skovb 77.11 332 ⇑*i*P P 00 06 11.1 -0.1
comp=Z,57nm,1.0s
BSD Bornholm Skovb 77.11 332 ⇑*i*P P 00 06 11.1 -0.1
BSD lAmb lAmb 00 06 11.8
comp=Z,57nm,1.0s
SNART Snartemo 77.14 338 *e*P P 00 06 12.1 +0.8
SNART Snartemo 77.14 338 *i*P P 00 06 12.4 +1.0
SNART lAmb lAmb 00 06 12.5
comp=Z,2.5nm,0.4s
LVV L'vov 77.19 324 *e*P P 00 06 12.0 +0.2
LVV *e*S S 00 15 58.0 -0.6
LVV MLR MLR
comp=Z,300nm,15.0s
BEL Belsk 77.20 327 *e*P P 00 06 12.6 +0.7
BEL *e*L L 00 43 45.7
TUQ Turquoise Moun 77.22 55 P P 00 06 13.4 +1.0
baz=308,SNR=13
BZK Bozkurt 77.25 313 ⇑P P 00 06 12.2 -0.1
IAS Iasi 77.29 321 ⇑P P 00 06 12.5 +0.1
HEC Hector,Ludlow 77.32 56 P P 00 06 14.0 +1.0
baz=307,SNR=5.4
TCRU Three Creeks R 77.47 51 P P 00 06 14.9 +1.0
MURC Murrieta 77.49 57 P P 00 06 14.3 +0.5
baz=307
VASR Vaslui 77.55 320 ⇑P P 00 06 13.9 +0.1
CCUT Cedar City 77.56 52 pP pP 00 06 29.6 +4.6
GKP Gorka Klasztor 77.61 330 *e*P P 00 06 14.1 0.0
GKP *e*L L 00 42 48.8
comp=Z,910nm,19.3s
MVU Marysvale 77.68 51 P P 00 06 16.6 +1.5
GMRC Granite Mounta 77.79 55 P P 00 06 16.5 +0.8
baz=308,SNR=6.1
BIR Birlad 77.89 320 ⇑P P 00 06 16.8 +1.0
KWP Kalwaria Pacla 77.93 325 *e*P P 00 06 16.6 +0.6
KWP *e*L L 00 44 00.9
comp=Z,497nm,17.1s
PFO Pinyon Flats O 77.97 57 *i*P P 00 06 16.6 -0.1
PFO pmax pmax
comp=Z,12nm,1.1s
PFO Pinyon Flats O 77.97 57 P P 00 06 17.4 +0.8
baz=308,SNR=6.2
PFO Pinyon Flats O 77.97 57 P P 00 06 17.9 +1.2
XPFO Pion Flat 77.98 57 P P 00 06 17.1 +0.4
109C Camp Elliot, M 77.98 58 P P 00 06 16.5 0.0
TPFO Pinon Flats 77.98 57 P P 00 06 17.6 +0.9
baz=308,SNR=5.5
TLCR 78.00 318 ⇑P P 00 06 16.9 +0.5
VARL Varlezi 78.02 319 ⇑P P 00 06 17.0 +0.5
BELC Belle Mtn. Jos 78.04 56 P P 00 06 17.4 +0.4
baz=308,SNR=5.9
GHRR 78.14 320 ⇑P P 00 06 17.9 +0.8
BUR08 Bucovina Ar. S 78.15 322 lAmb lAmb 00 06 18.7
comp=Z,30nm,0.8s
BURAR Bucovina Array 78.16 322 ⇑P P 00 06 17.7 +0.3
BURAR Bucovina Array 78.16 322 P P 00 06 17.2 -0.2
BIZ Bicaz 78.19 321 ⇑P P 00 06 18.1 +0.6
TESR Tescani 78.21 321 ⇑P P 00 06 17.7 +0.1
OUZ Omahuta 78.24 154 P P 00 06 18.7 +1.1
OUZ lAmb lAmb 00 06 20.4
comp=Z,24nm,1.2s
JURR Jurilovca 78.25 318 ⇑P P 00 06 17.9 +0.2
PKCU Pink Cliffs 78.28 52 P P 00 06 19.0 +0.5
SCHL Schela 78.30 319 ⇑P P 00 06 18.5 +0.5
TUDR 78.32 319 ⇓P P 00 06 19.1 +1.0
GAZ Gaziantep 78.35 308 lAmb lAmb 00 06 20.5
comp=Z,36nm,0.9s
CFR Carcaliu 78.36 319 ⇑P P 00 06 18.2 -0.2
K22A Casper 78.36 45 P P 00 06 19.3 +0.6
baz=311,SNR=5.3
MDND Maddock 78.43 37 P P 00 06 19.5 +0.7
baz=315
MDND Maddock 78.43 37 P P 00 06 19.5 +0.7
TPGR Topolog 78.43 318 ⇑P P 00 06 19.2 +0.3
ULM Lac du Bonnet 78.43 34 P P 00 06 19.0 +0.3
comp=Z,15nm,0.8s,baz=307,slow=7.9,SNR=7.3
ULM pP sP 00 06 32.6 -0.5
comp=Z,18nm,0.8s,baz=336,slow=6.3,SNR=6.9
ULM Lac du Bonnet 78.43 34 P P 00 06 19.0 +0.3
ULM *PP sP 00 06 32.6 -0.5
ULM Lac du Bonnet 78.43 34 lAmb lAmb 00 06 33.1
comp=Z,32nm,1.1s
MONP2 Monument Peak 78.43 57 P P 00 06 20.0 +0.7
baz=308,SNR=5.8

IRM Iron Mountain 78.51 56 P **P** **00 06 20.4 +0.9**
baz=308,SNR=11
RWWY Rawlins 78.60 46 IAmb IAmb 00 06 22.0
comp=Z,28nm,1.1s
BC3 Big Chuckawall 78.61 56 P **P** **00 06 21.1 +0.9**
baz=308,SNR=7.1
KOLS Kolonicke sedl 78.63 324 *e*P **P** **00 06 19.2 -0.7**
KOLS pmax pmax
comp=Z,17nm,0.9s
PLOR Plostina 78.67 320 ⇑P **P** **00 06 20.6 +0.4**
TIRR Tirgusor 78.70 318 ⇑P **P** **00 06 20.3 0.0**
TIRR Tirgusor 78.70 318 ⇑P **P** **00 06 20.3 0.0**
TIRR Tirgusor 78.70 318 IAmb IAmb 00 06 21.1
comp=Z,26nm,0.8s
RSSD Black Hills 78.74 42 P **P** **00 06 21.1 +0.3**
RSSD pmax pmax
comp=Z,14nm,0.9s
RSSD Black Hills 78.74 42 P **P** **00 06 21.2 +0.3**
baz=312
RSSD Black Hills 78.74 42 P **P** **00 06 21.1 +0.3**
W13A Hualapai Mount 78.74 54 P **P** **00 06 21.7 +0.7**
IKP In-Ko-Pah, Jac 78.79 57 P **P** **00 06 21.9 +0.8**
baz=308,SNR=8.0
HARR Harsova 78.80 319 ⇑P **P** **00 06 21.1 +0.3**
OJC Ojcow 78.81 327 *e*P **P** **00 06 21.2 +0.4**
OJC *e*L L 00 43 54.5
comp=Z,774nm,18.3s
SWSC Sam W. Stewart 78.82 57 P **P** **00 06 22.2 +1.0**
baz=308
TLBR Topalu 78.83 318 ⇑P **P** **00 06 21.4 +0.4**
UZH Uzhgorod 78.84 324 *c*P **P** **00 06 21.3 +0.3**
UZH *i* 00 06 26.5
UZH *e* 00 06 38.4
BISRR Bisoca 78.84 320 ⇑P **P** **00 06 22.2 +1.1**
ABTO Aybut 78.86 283 P **P** **00 06 20.8 -0.9**
SNR=5.1
ABTO P **P** **00 06 20.8 -0.9**
SNR=5.1
MFTR Murfatlar 78.88 318 ⇑P **P** **00 06 21.7 +0.4**
BR131 Keskin Array S 78.90 312 P **P** **00 06 21.9 +0.3**
SNR=7.4
BR131 Keskin Array S 78.90 312 *i*P **P** **00 06 21.8 +0.1**
BRTR Keskin Array B 78.90 312 P **P** **00 06 21.8 +0.1**
comp=Z,5.7nm,0.5s,baz=90,slow=4.1,SNR=35
BRTR LR LR 00 46 20.9
comp=Z,66nm,18.9s,baz=30,slow=40
BRTR Keskin Array B 78.90 312 *ce*P **P** **00 06 21.7 +0.1**
BRTR pmax pmax
comp=Z,6.0nm,0.5s
BRTR Keskin Array B 78.90 312 P **P** **00 06 21.5 -0.2**
OZUR 78.93 321 ⇑P **P** **00 06 22.7 +1.1**
BMR Baia Mare 78.95 323 ⇑P **P** **00 06 22.4 +0.7**
CVDA Cernavoda 78.98 318 ⇑P **P** **00 06 22.1 +0.2**
O20A White River Ci 79.02 47 P **P** **00 06 22.8 +0.4**
baz=311,SNR=8.8
PDMCI Parker Dam,Lak 79.07 55 P **P** **00 06 23.6 +1.1**
baz=308,SNR=6.2
NEHR Nehoiu 79.14 320 ⇓P **P** **00 06 23.5 +0.8**
AMRR Amara 79.16 319 ⇑P **P** **00 06 23.6 +0.8**
NIE Niedzica 79.17 326 *e*P **P** **00 06 23.8 +0.9**
NIE *e*L L 00 44 09.7
comp=Z,347nm,18.9s
DOPR Dopca 79.22 321 ⇑P **P** **00 06 24.2 +1.0**
ISR Istrita 79.22 320 ⇑P **P** **00 06 24.1 +0.8**
ICOR Ion Corvin 79.25 318 ⇑P **P** **00 06 24.3 +1.0**
MLR Muntele Rosu 79.27 320 ⇓P **P** **00 06 23.7 +0.1**
BR231 Keskin MP Arra 79.33 312 IAmb IAmb 00 06 25.4
comp=Z,28nm,0.8s
GLA Glamis 79.39 56 P **P** **00 06 24.0 -0.4**
GLA pmax pmax
comp=Z,11nm,1.0s
GLA Glamis 79.39 56 P **P** **00 06 25.4 +1.0**
baz=308
GLA Glamis 79.39 56 P **P** **00 06 24.0 -0.4**
RUE Ruedersdorf 79.57 331 *e*P **P** **00 06 24.3 -0.5**
CJR Cluj-Napoca 79.58 322 ⇑P **P** **00 06 26.1 +0.9**
PV23 Carpenter Ridg 79.65 49 IAmb IAmb 00 06 41.7
comp=Z,33nm,0.9s
PV10 Paradox Valley 79.69 49 IAmb IAmb 00 06 28.8
comp=Z,67nm,1.0s
PV14 Lion Creek, Pa 79.70 49 IAmb IAmb 00 06 28.6
comp=Z,58nm,1.1s
PV22 Blue Mesa, Par 79.73 49 IAmb IAmb 00 06 28.7
comp=Z,32nm,1.2s
PV20 West Nyswonger 79.75 49 IAmb IAmb 00 06 28.8
comp=Z,39nm,1.0s
PV04 Paradox Valley 79.75 49 IAmb IAmb 00 06 29.0
comp=Z,41nm,1.2s
PV19 Morning Glory 79.76 49 IAmb IAmb 00 06 28.9
comp=Z,45nm,1.0s
VOIR 79.76 321 ⇓P **P** **00 06 26.8 +0.6**
PV17 East Wray Mesa 79.80 49 IAmb IAmb 00 06 29.1
comp=Z,67nm,1.1s
PV16 Nyswonger Mesa 79.80 49 IAmb IAmb 00 06 29.1
comp=Z,36nm,1.1s
OKC Ostrava-Krasne 79.81 327 *e*P **P** **00 06 26.9 +0.7**
OKC MLR MLR
comp=Z,600nm,17.7s
OKC Ostrava-Krasne 79.81 327 *e*P **P** **00 06 26.9 +0.7**
OKC AMS AMS 00 44 30.0
comp=Z,600nm,17.7s
PV11 David Mesa, Pa 79.83 49 P **P** **00 06 27.5 +0.6**
PV11 IAmb IAmb 00 06 28.8
comp=Z,27nm,1.0s
PV05 Paradox Valley 79.84 49 IAmb IAmb 00 06 29.5
comp=Z,71nm,1.1s
N23A Red Feather La 79.84 46 P **P** **00 06 28.0 +1.0**
baz=312,SNR=14
N23A Red Feather La 79.84 46 IAmb IAmb 00 06 29.6
comp=Z,30nm,1.1s
PV18 Skein Mesa, Pa 79.85 49 IAmb IAmb 00 06 29.4
comp=Z,38nm,1.1s
AGMN Agassiz Nation 79.86 35 P **P** **00 06 26.5 -0.1**
baz=317
AGMN Agassiz Nation 79.86 35 P P 00 06 19.1 -7.4
PV12 Saucer Basin, 79.87 49 P **P** **00 06 27.7 +0.6**
PV03 Paradox Valley 79.88 49 IAmb IAmb 00 06 29.5
comp=Z,34nm,1.2s
PV13 Radium Mtn., P 79.96 49 IAmb IAmb 00 06 30.0
comp=Z,50nm,1.1s
PV02 Paradox Valley 79.98 49 IAmb IAmb 00 06 30.2
comp=Z,21nm,0.9s
ARR Arges 80.02 321 ⇑P **P** **00 06 28.9 +1.3**
PV15 Paradox Valley 80.04 49 P **P** **00 06 28.5 +0.4**
OSTC Ostas 80.08 328 *e*P **P** **00 06 28.4 +0.7**
WUAZ Wupatki 80.08 53 P **P** **00 06 29.3 +1.1**
baz=310,SNR=15
WUAZ Wupatki 80.08 53 IAmb IAmb 00 06 30.9
comp=Z,27nm,1.1s
PRD Provadia 80.09 318 P **P** **00 06 23.5 -4.4**
MORC Moravsky Berou 80.11 327 ⇑P **P** **00 06 28.5 +0.5**
MORC Moravsky Berou 80.11 327 *e*P **P** **00 06 28.4 +0.5**
MORC Moravsky Berou 80.11 327 IAmb IAmb 00 06 29.5
comp=Z,39nm,0.9s
CHVC Chvalec 80.12 329 *e*P **P** **00 06 28.3 +0.3**
DPC Dobruska-Polom 80.19 328 *e*P **P** **00 06 29.1 +0.7**
DPC Dobruska-Polom 80.19 328 *e*P **P** **00 06 29.1 +0.7**
UPC Upice 80.20 329 *e*P **P** **00 06 28.6 +0.2**
UPC MLR MLR
comp=Z,500nm,19.2s
UPC Upice 80.20 329 *e*P **P** **00 06 28.6 +0.2**
UPC AMS AMS 00 44 40.0
comp=Z,500nm,19.2s
KRLC Kraliky 80.21 328 *e*P **P** **00 06 29.1 +0.6**
KRLC Kraliky 80.21 328 *e*P **P** **00 06 29.1 +0.6**
SPX San Pedro Mart 80.21 58 P **P** **00 06 29.4 +0.2**
113A Mohawk Valley, 80.27 56 P **P** **00 06 29.7 +0.7**
RAZG Razgrad 80.31 318 ⇓P **P** **00 06 29.9 +0.8**
LOT Lotru 80.39 321 ⇑P **P** **00 06 29.7 0.0**
HUMR Humele 80.44 320 ⇑P **P** **00 06 29.0 -0.7**
PSZ Piszkesteto 80.46 325 ⇑P **P** **00 06 30.6 +0.7**
PSZ Piszkesteto 80.46 325 IAmb IAmb 00 06 31.6
comp=Z,50nm,0.9s
VYHS Vyhne 80.51 326 *e*P **P** **00 06 30.6 +0.5**
VYHS pmax pmax
comp=Z,31nm,1.1s
DEV Deva 80.51 322 ⇓P **P** **00 06 30.5 +0.4**
COPA Copaceanca 80.59 320 ⇑P **P** **00 06 30.3 -0.3**
SFX San Felipe 80.63 58 P **P** **00 06 31.4 +0.4**
SFX IAmb IAmb 00 06 33.0
comp=Z,27nm,1.0s
JAVC Velka Javorina 80.75 327 *e*P **P** **00 06 32.8 +1.4**
BRG Berggiesshubel 80.76 330 *i*P **P** **00 06 31.4 0.0**
comp=Z,29nm,1.0s
BRG *i* 00 06 43.5
comp=Z,15nm,1.1s
comp=N,576nm,19.2s
comp=E,272nm,14.7s
comp=E,674nm,17.9s
BRG Berggiesshubel 80.76 330 *i*P **P** **00 06 31.4 0.0**
BRG *i* 00 06 43.5
BRG pmax pmax
comp=Z,29nm,1.0s
BRG MLR MLR
comp=N,576nm,19.2s
BRG MLR MLR
comp=E,272nm,14.7s
BRG MLR MLR
comp=Z,674nm,17.9s
ISCO Idaho Springs 80.76 46 P **P** **00 06 33.2 +1.2**
baz=312
MVCO Mesa Verde 80.77 50 P **P** **00 06 32.8 +0.8**
baz=311,SNR=14
B35A Bob, Littlefor 80.77 34 IAmb IAmb 00 06 32.1
comp=Z,22nm,0.8s
PVCC Panska Ves 80.78 329 *e*P **P** **00 06 32.3 +0.9**
PVCC Panska Ves 80.78 329 *e*P **P** **00 06 32.3 +0.9**
CLL Collm 80.79 331 ⇑*i*P **P** **00 06 31.2 -0.3**
comp=Z,49nm,1.0s
CLL *e*S **S** **00 16 41.0 +4.1**
CLL *e*SS 00 22 12.0
CLL *e*SSS 00 25 42.0
CLL Collm 80.79 331 ⇑*i*P **P** **00 06 31.2 -0.3**
CLL *e*S **S** **00 16 41.0 +4.1**
CLL pmax pmax
comp=Z,49nm,1.0s
CLL Collm 80.79 331 IAmb IAmb 00 06 32.4
comp=Z,48nm,1.0s
SZH Strazhica 80.82 319 P **P** **00 06 30.0 -1.8**
ZIMR 80.85 319 ⇑P **P** **00 06 32.0 +0.1**
VRAC Vranov 80.87 327 ⇑P **P** **00 06 32.7 +0.6**
VRAC Vranov 80.87 327 *e*P **P** **00 06 32.6 +0.6**
GZR Gura Zlata 80.92 322 ⇑P **P** **00 06 32.3 -0.1**
RAYN Ar Rayn 81.06 293 P **P** **00 06 33.0 -0.5**
RAYN pmax pmax
comp=Z,25nm,1.0s
RAYN Ar Rayn 81.06 293 P **P** **00 06 33.0 -0.5**
RAYN IAmb IAmb 00 06 34.3
comp=Z,25nm,1.0s
SMOL Smolenice 81.11 327 *e*P **P** **00 06 34.4 +1.1**
SMOL pmax pmax
comp=Z,20nm,0.9s
KRUC Moravsky 81.14 327 *e*P **P** **00 06 33.8 +0.4**
SUSD Miller 81.15 39 P **P** **00 06 34.4 +0.8**
baz=316
SUSD Miller 81.15 39 P **P** **00 06 33.7 +0.1**
SUSD IAmb IAmb 00 06 51.0
comp=Z,68nm,1.1s
PRA Prague 81.19 329 *e*P **P** **00 06 34.3 +0.7**
PRA Prague 81.19 329 *e*P **P** **00 06 34.3 +0.7**
PRU Pruhonice 81.20 329 *e*P **P** **00 06 33.8 +0.1**
PRU *e* 00 06 46.1
PRU Pruhonice 81.20 329 *e*P **P** **00 06 33.8 +0.1**
PRU *ex* x 00 06 46.1
PIX Pinacate 81.23 57 P **P** **00 06 34.8 +0.7**
SRO Srobarova 81.25 326 *e*P **P** **00 06 34.8 +0.8**
SRO pmax pmax
comp=Z,48nm,0.9s
TREC Trest 81.35 328 *ex* x 00 06 47.1
W18A Petrified Fore 81.36 52 P **P** **00 06 36.7 +1.5**
baz=310,SNR=5.8
SOCY Socotra 81.38 279 P **P** **00 06 33.1 -2.3**
SOCY IAmb IAmb 00 06 34.1
comp=Z,36nm,0.9s
214A Organ Pipe Nat 81.41 56 P **P** **00 06 36.2 +1.0**
baz=310,SNR=6.6
S22A 4UR Ranch, Cre 81.42 49 P **P** **00 06 36.6 +1.1**
baz=312,SNR=19
F33A 5 Mile Ranch, 81.45 37 P **P** **00 06 35.0 -0.1**
F33A IAmb IAmb 00 06 50.0
comp=Z,43nm,0.9s
HERR Herculane 81.47 321 ⇓P **P** **00 06 35.0 -0.2**
Q24A Divide 81.59 47 P **P** **00 06 37.0 +0.6**
baz=312
HIZ Hauiti 81.64 155 P **P** **00 06 37.6 +1.7**
PUNG Punghina 81.65 321 ⇓P **P** **00 06 36.6 +0.4**
PBCC Pribram 81.66 329 *e*P **P** **00 06 36.5 +0.3**
PBCC *ex* x 00 06 48.8
NKC Novy Kostel 81.85 330 *e*P **P** **00 06 37.3 +0.1**
NKC Novy Kostel 81.85 330 *e*P **P** **00 06 37.3 +0.1**
MDVR Moldovita 81.89 322 ⇑P **P** **00 06 37.4 -0.1**
EYMN Ely 82.07 33 P **P** **00 06 38.3 0.0**
baz=320
MMAI Mount Meron Ar 82.13 306 LR LR 00 46 40.9
comp=Z,191nm,19.4s,baz=45,slow=38
CSS Mathiatis 82.17 308 IAmb IAmb 00 06 39.6
comp=Z,30nm,0.8s
URZ Urewera 82.20 153 LR LR 00 38 30.8
comp=Z,148nm,21.3s,baz=31,slow=32
URZ Urewera 82.20 153 IAmb IAmb 00 06 38.9
comp=Z,21nm,0.9s
SDCO Great Sand Dun 82.20 48 P **P** **00 06 40.3 +0.6**
baz=312,SNR=13
CONA Conrad Observa 82.24 327 *i*P **P** **00 06 40.1 +0.8**
comp=Z,28nm,0.9s,SNR=13
KHC Kasperske Hory 82.27 329 *e*P **P** **00 06 39.7 +0.3**
KHC *e* 00 06 50.2
KHC MLR MLR
comp=Z,600nm,18.6s
KHC Kasperske Hory 82.27 329 *e*P **P** **00 06 39.7 +0.3**
KHC *ex* x 00 06 50.2
KHC AMS AMS 00 45 50.0
comp=Z,600nm,18.6s
LEF Lefka 82.34 309 ⇓P **P** **00 06 39.6 -0.4**
GEC2 GERESS Array S 82.44 329 IAmb IAmb 00 06 41.3
comp=Z,24nm,1.1s
GEC2B GERESS ARRAY S 82.44 329 P **P** **00 06 40.0 -0.4**
GERES GERESS Array B 82.44 329 P **P** **00 06 40.3 -0.1**
comp=Z,11nm,0.8s,baz=40,slow=5.4,SNR=63
GERES PP PP 00 09 39.5 -9.4
comp=Z,1.3nm,0.8s,baz=52,slow=7.1,SNR=3.6
GERES LR LR 00 46 21.3
comp=Z,413nm,19.5s,baz=27,slow=38
GERES GERESS Array B 82.44 329 P **P** **00 06 40.3 -0.1**
GERES GERESS Array B 82.44 329 P **P** **00 06 40.1 -0.3**
TUC Tucson 82.50 55 P **P** **00 06 42.0 +0.9**
baz=310
FRGS Fruska Gora 82.53 323 ⇑*i*P **P** **00 06 41.0 +0.1**
EKB10 Eskdalemuir Ar 82.59 341 P **P** **00 06 41.8 +0.9**
EKB8 Eskdalemuir Ar 82.61 341 P **P** **00 06 42.4 +1.4**
EKB8 IAmb IAmb 00 06 43.0
comp=Z,50nm,1.1s
EKB7 Eskdalemuir Ar 82.62 341 P **P** **00 06 41.5 +0.4**
EKB7 IAmb IAmb 00 06 43.1
comp=Z,63nm,1.1s
MANT Manisa 82.67 314 P **P** **00 06 41.6 -0.4**
VTS Vitosha 82.68 319 P **P** **00 06 41.5 -0.4**
GRA1 Grafenberg Arr 82.77 330 IAmb IAmb 00 06 43.6
comp=Z,39nm,0.9s
GRF Grafenberg Arr 82.77 330 *e*P **P** **00 06 42.4 +0.4**
comp=Z,40nm,1.0s,baz=40,slow=4.5
GRF *e*L L 00 46 33.5
comp=Z,410nm,18.8s
BKZ Black Stump Fm 82.79 154 P **P** **00 06 42.0 0.0**
ECSD EROS Data Cent 82.83 39 P **P** **00 06 42.9 +0.5**
baz=317,SNR=12
ECSD EROS Data Cent 82.83 39 IAmb IAmb 00 06 43.7
comp=Z,24nm,0.9s
MOA Molln 82.98 328 *i*P **P** **00 06 43.3 +0.1**
comp=Z,20nm,1.2s,SNR=6.7
KSCO Kaye Shedlock' 82.99 45 P **P** **00 06 44.3 +0.7**
baz=314
KSCO Kaye Shedlock' 82.99 45 P **P** **00 06 43.2 -0.3**
KSCO IAmb IAmb 00 06 58.8
comp=Z,29nm,1.1s
QRZ Quartz Range 83.00 157 P **P** **00 06 43.6 +0.6**
E38A The Farm, Brul 83.06 34 IAmb IAmb 00 06 57.8
comp=Z,44nm,0.9s
TEKS Tekeris 83.12 323 *e*P **P** **00 06 43.7 -0.2**
DIVS Divibare 83.23 322 ⇑*i*P **P** **00 06 44.4 -0.2**
DIVS Divibare 83.23 322 IAmb IAmb 00 06 45.6
comp=Z,33nm,1.1s
T25A Trinidad 83.25 48 P **P** **00 06 46.0 +1.0**
baz=313,SNR=13
T25A Trinidad 83.25 48 IAmb IAmb 00 06 47.2
comp=Z,20nm,0.8s
ANMO Albuquerque 83.50 50 *ce*P **P** **00 06 46.3 0.0**
ANMO pmax pmax
comp=Z,30nm,1.3s
ANMO Albuquerque 83.50 50 P **P** **00 06 47.7 +1.5**
baz=312
ANMO Albuquerque 83.50 50 P **P** **00 06 47.6 +1.3**
ANMO IAmb IAmb 00 06 49.0
comp=Z,24nm,1.1s
GROS Grobnik 83.52 326 *i*P **P** **00 06 45.8 -0.3**
SPMN Marine on St. 83.55 36 P **P** **00 06 46.7 +0.6**
baz=319
SPMN Marine on St. 83.55 36 IAmb IAmb 00 07 00.6
comp=Z,19nm,1.0s
PERS Pernice 83.56 326 *i*P **P** **00 06 46.1 -0.1**
SOKA Soboth 83.56 327 *e*P **P** **00 06 46.4 +0.1**
comp=Z,32nm,0.8s,SNR=10
NNZ Nelson 83.61 157 P **P** **00 06 44.6 -1.5**
NNZ IAmb IAmb 00 06 56.0
comp=Z,27nm,1.1s
BBLS Lazići 83.68 322 ⇑*i*P **P** **00 06 46.9 0.0**
BGNE Belgrade 83.73 41 P **P** **00 06 46.9 -0.2**
baz=316
HAPS Han Pijesak,Bl 83.74 323 ⇑*i*P **P** **00 06 46.8 -0.4**
PMOR Pomiorio Ree 83.80 114 *e*T T 01 38 17.0
comp=Z,31nm,0.2s
STIP Stip 83.89 319 *i*P **P** **00 06 47.1 -0.8**
OBKA Obir 83.90 327 *i*P **P** **00 06 47.8 -0.2**
comp=Z,11nm,0.8s
MEM Membach 83.95 334 P **P** **00 06 47.7 -0.3**
MEM pP **pP** **00 06 57.8 -0.8**
THZ Tophouse 83.97 158 IAmb IAmb 00 06 48.9
comp=Z,38nm,1.1s
KBA Koelnbreinsper 83.97 328 *e*P **P** **00 06 48.0 -0.5**
comp=Z,20nm,0.7s
LEGS Legarje 84.00 326 *i*P **P** **00 06 48.1 -0.3**
CRES Cresnjev 84.03 326 ⇑*i*P **P** **00 06 47.9 -0.7**
SKO Skopje 84.07 320 *i*P **P** **00 06 49.8 +1.0**
BLY Banja Luka 84.07 324 *e*P **P** **00 06 48.2 -0.6**
319A Douglas 84.08 55 IAmb IAmb 00 06 51.5
comp=Z,39nm,1.0s
MYKA Terra Mystica 84.20 327 *i*P **P** **00 06 49.0 -0.5**
comp=Z,11nm,0.6s
BSWZ Blackbirch Sta 84.22 157 P **P** **00 06 48.9 -0.3**
L34A Svendsen Farm, 84.24 40 P **P** **00 06 49.9 +0.2**
L34A IAmb IAmb 00 07 04.3
comp=Z,40nm,0.9s
LJU Ljubljana 84.28 326 *e*P **P** **00 06 48.2 -1.6**
121A Cookes Peak, D 84.28 53 P **P** **00 06 51.8 +1.5**
baz=312,SNR=13
121A Cookes Peak, D 84.28 53 P **P** **00 06 50.4 +0.1**
121A IAmb IAmb 00 06 52.9
comp=Z,36nm,1.0s
STU Stuttgart 84.29 331 IAmb IAmb 00 06 51.0
comp=Z,34nm,1.0s
PPT Papeete 84.31 117 LR LR 00 38 18.6
comp=Z,158nm,20.8s,baz=345,slow=31
PPT2 Papeete2 84.33 117 *e*S **S** **00 17 10.0 -3.9**
comp=Z,60nm,25.8s
PPT2 Papeete2 84.33 117 *e*LR LR 00 33 06.6
comp=Z,453nm,24.8s,baz=316
PPT2 Papeete2 84.33 117 *e*T T 01 38 55.9
comp=Z,6.2nm,0.3s
SCHQ Schefferville 84.37 16 P **P** **00 06 50.4 +0.3**
comp=Z,10nm,0.8s,baz=341,slow=5.6,SNR=7.3
SCHQ LR LR 00 45 39.0
comp=Z,170nm,21.9s,baz=20,slow=36
SCHQ Schefferville 84.37 16 IAmb IAmb 00 06 51.5
comp=Z,22nm,1.0s
PRED Cave del Predi 84.38 327 IAmb IAmb 00 06 51.1
comp=Z,14nm,0.8s
BGES Gesves 84.45 334 P **P** **00 06 50.4 -0.2**
WATA Walderalm 84.51 329 *i*P **P** **00 06 50.8 -0.3**
comp=Z,7.4nm,0.7s
HSIG 84.52 57 IAmb IAmb 00 06 53.4
comp=Z,25nm,1.1s
COWI Conover 84.52 33 IAmb IAmb 00 07 05.5
comp=Z,20nm,0.8s
WTTA Wattenberg 84.54 329 *i*P **P** **00 06 51.1 -0.2**
comp=Z,16nm,1.0s
CEY Cerknica 84.56 326 *e*P **P** **00 06 49.6 -1.6**
EIL Elat 84.58 303 LR LR 00 48 55.3
comp=Z,177nm,19.1s,baz=50,slow=39
ABTA Abfaltersbach 84.59 328 *i*P **P** **00 06 51.2 -0.2**
comp=Z,17nm,1.1s
SNF Seneffe 84.62 335 P **P** **00 06 51.3 -0.1**
BMRD Maredsous 84.63 334 P **P** **00 06 51.8 +0.3**
BMRD pP **pP** **00 07 02.0 -0.2**
MOTA Moosalm 84.69 329 *e*P **P** **00 06 52.0 -0.1**
comp=Z,22nm,0.9s,SNR=6.8
G40A Rib Lake 84.70 34 IAmb IAmb 00 06 53.2
comp=Z,28nm,0.9s
RETA Reutte 84.72 329 *e*P **P** **00 06 52.3 +0.2**
comp=Z,48nm,1.3s,SNR=11
FOZ Fox Glacier 84.72 160 IAmb IAmb 00 06 53.3
comp=Z,42nm,1.2s
SRIG Santa Rosalia 84.74 59 P **P** **00 06 53.0 +0.6**
SRIG IAmb IAmb 00 06 54.4
comp=Z,35nm,0.8s
CBKS Cedar Bluff 84.74 44 P **P** **00 06 51.7 -0.6**
CBKS pmax pmax
comp=Z,19nm,0.9s
CBKS Cedar Bluff 84.74 44 P **P** **00 06 53.1 +0.8**
baz=316
CBKS Cedar Bluff 84.74 44 P **P** **00 06 51.7 -0.6**
CBKS IAmb IAmb 00 06 52.7
comp=Z,19nm,0.9s
SQTA Sankt Quirin 84.75 329 *i*P **P** **00 06 52.1 -0.2**
comp=Z,15nm,0.9s
BRY Bratogost 84.82 322 *e*P **P** **00 06 51.2 -1.6**
PDG Podgorica 84.83 321 ⇑P **P** **00 06 52.5 -0.1**
PDG Podgorica 84.83 321 ⇑*i*P **P** **00 06 52.2 -0.4**
RIY Rijeka 84.85 326 *e*P **P** **00 06 48.2 -4.5**
BFO Black Forest 84.99 331 P **P** **00 06 53.3 -0.1**
BFO pmax pmax
comp=Z,41nm,1.0s
BFO Black Forest 84.99 331 P **P** **00 06 53.3 -0.1**
BFO IAmb IAmb 00 06 54.4
comp=Z,41nm,1.0s
OHR Ohrid 85.03 320 *i*P **P** **00 06 53.6 -0.2**
DRME Dracevica, Mon 85.04 321 *e*P **P** **00 06 53.1 -0.6**
TREB Trebinje 85.05 322 *e*P **P** **00 06 51.9 -1.9**
FETA Feichten 85.11 329 *i*P **P** **00 06 54.0 -0.1**
comp=Z,20nm,0.8s,SNR=10
OXZ Oxford 85.14 159 IAmb IAmb 00 06 54.9
comp=Z,40nm,1.0s
E43A Lone Tree Farm 85.21 32 IAmb IAmb 00 06 55.6
comp=Z,30nm,0.9s
F42A Maple Grove Fa 85.22 33 P **P** **00 06 54.8 +0.3**
F42A IAmb IAmb 00 07 09.8
comp=Z,26nm,0.9s
RPZ Rata Peaks 85.22 160 LR LR 00 39 54.9
comp=Z,190nm,21.7s,baz=352,slow=32
DAVA Damuels 85.23 330 *i*P **P** **00 06 54.8 0.0**
comp=Z,28nm,0.8s,SNR=9.8
TIR Tirane 85.33 320 ⇓P **P** **00 06 55.2 +0.1**
N35A Tabor 85.43 40 P **P** **00 06 55.5 -0.2**
CTI Castel Tesino 85.50 328 IAmb IAmb 00 06 56.3
comp=Z,15nm,0.9s
ECH Echery 85.52 332 IAmb IAmb 00 06 56.8
comp=Z,19nm,0.9s
I40A Norwalk 85.57 35 IAmb IAmb 00 06 57.0
comp=Z,17nm,0.7s
R32A Long Quarter, 85.58 44 P **P** **00 06 56.6 +0.1**
R32A IAmb IAmb 00 07 12.5
comp=Z,12nm,0.9s
MEH Mehetia 85.58 116 *e*T T 01 40 31.3
comp=Z,25nm,0.3s
TAOE Nuku Hiva Isla 85.63 105 *e*LR LR 00 34 02.7
comp=Z,378nm,23.6s
MQZ McQueen's Vall 85.67 158 P **P** **00 06 56.3 -0.1**
MQZ IAmb IAmb 00 07 04.8
comp=Z,21nm,1.2s
SCIA State Center 85.86 38 P **P** **00 06 58.5 +0.7**
baz=319
TEOL Teolo 86.05 328 IAmb IAmb 00 06 59.1
comp=Z,24nm,0.9s
TUE Stuetta 86.11 330 IAmb IAmb 00 07 00.2
comp=Z,24nm,1.0s
KSU1 Kansas State U 86.22 42 P **P** **00 06 59.4 -0.2**
baz=317,SNR=5.5
KSU1 Kansas State U 86.22 42 IAmb IAmb 00 07 00.6
comp=Z,27nm,0.8s
ODZ Otahua Downs 86.34 160 IAmb IAmb 00 07 01.8
comp=Z,14nm,1.0s
I42A Draeger Farm, 86.35 34 IAmb IAmb 00 07 15.0
comp=Z,33nm,0.9s
MNTX Cornudas Mount 86.35 52 P **P** **00 07 01.2 +0.8**
baz=313,SNR=14
MNTX Cornudas Mount 86.35 52 IAmb IAmb 00 07 02.4
comp=Z,14nm,1.1s

MSTX	Muleshoe	86.39	49	P		P	00 07 01.1	+0.4
	baz=314,SNR=5.7							
MSTX	Muleshoe	86.39	49	IAmb		IAmb	00 07 04.2	
	comp=Z,13nm,1.1s							
MSTX				pP		pP	00 07 14.9	+3.5
H43A	Windswept, Lux	86.39	33	P		P	00 07 00.1	-0.3
AMTX	Amarillo	86.40	48	P		P	00 07 01.5	+0.8
	baz=315							
PYZ	Puysegur Point	86.42	163	P		P	00 07 00.8	+0.7
JFWS	Jewell Farm	86.50	36	P		P	00 07 00.8	-0.2
	baz=321							
N38A	Joes South For	86.69	39	P		P	00 07 01.6	-0.4
L40A	Anamosa	86.70	37	IAmb		IAmb	00 07 03.1	
	comp=Z,32nm,0.9s							
LSQQ	Lebel-sur-Quev	86.73	25	P		P	00 07 02.2	+0.3
	baz=330							
KAN12	Harper NE Stat	86.78	44	P		P	00 07 02.8	+0.4
CHGQ	Chibougamau	86.81	23	P		P	00 07 02.1	-0.3
	baz=332							
U32A	Winter Ranch,	86.88	45	P		P	00 07 03.5	+0.5
U32A				IAmb		IAmb	00 07 04.3	
	comp=Z,24nm,1.1s							
SENIN	Lac Senin/Sane	87.00	331	IAmb		IAmb	00 07 04.3	
	comp=Z,13nm,1.0s							
DAMY	Dhamar	87.35	286	IAmb		IAmb	00 07 19.7	
	comp=Z,15nm,1.1s							
CROK	Carrier	87.36	45	P		P	00 07 05.1	-0.2
VLDQ	Val d'Or	87.39	25	IAmb		IAmb	00 07 18.8	
	comp=Z,28nm,1.0s							
I45A	Fountain	87.41	33	P		P	00 07 05.6	+0.3
GLMI	Grayling	87.45	31	P		P	00 07 06.2	+0.7
	baz=325							
L42A	Oliver, Polo	87.48	36	IAmb		IAmb	00 07 07.2	
	comp=Z,32nm,1.0s							
T35A	Sooner Cattle	87.87	43	IAmb		IAmb	00 07 09.5	
	comp=Z,24nm,1.1s							
L44A	Lake County Fo	88.15	35	P		P	00 07 08.9	0.0
	baz=323							
OK029	Liberty Lake	88.17	45	P		P	00 07 08.9	-0.2
WMOK	Wichita Mounta	88.19	46	P		P	00 07 09.7	+0.5
	baz=316,SNR=16							
WMOK	Wichita Mounta	88.19	46	IAmb		IAmb	00 07 10.9	
	comp=Z,17nm,0.9s							
TBI	Tubuai	88.28	121	*e*LR		LR	00 34 55.0	
	comp=Z,221nm,23.0s							
TBI	Tubuai	88.28	121	*e*T		T	01 43 51.8	
	comp=Z,38nm,0.3s							
OK031	S. Brethren Rd	88.40	44	IAmb		IAmb	00 07 11.9	
	comp=Z,30nm,1.1s							
OK030	Cody Creek RV	88.45	44	P		P	00 07 10.8	+0.4
OK030				IAmb		IAmb	00 07 12.2	
	comp=Z,16nm,0.9s							
OKCFA	Oklahoma City	88.45	45	P		P	00 07 10.3	-0.2
OKCFA				IAmb		IAmb	00 07 12.4	
	comp=Z,36nm,1.2s							
TIP	Timpagrande	88.52	321	⇑P		P	00 07 10.1	-0.7
SLBS	Sierra La Lagu	88.66	61	P		P	00 07 13.7	+1.9
SLBS				IAmb		IAmb	00 07 14.6	
	comp=Z,19nm,1.1s							
HDIL	Hopedale	88.79	37	P		P	00 07 12.4	+0.5
	baz=322							
X34A	Smith Ranch, M	88.83	46	P		P	00 07 12.6	+0.3
I49A	Point Hope	88.91	31	P		P	00 07 12.7	+0.2
W35A	Tecumseh	88.96	45	P		P	00 07 13.0	+0.1
S39A	Bolivar	88.99	41	P		P	00 07 12.5	-0.4
S39A				IAmb		IAmb	00 07 13.8	
	comp=Z,24nm,1.0s							
D55A	Sainte-Anne-du	89.00	25	P		P	00 07 12.8	0.0
	baz=331,SNR=5.6							
TUL1	Leonard	89.00	44	P		P	00 07 13.5	+0.5
	baz=318							
TUL1	Leonard	89.00	44	IAmb		IAmb	00 07 14.7	
	comp=Z,24nm,1.1s							
L46A	Eue Claire	89.00	34	P		P	00 07 13.0	+0.1
ALGO	Algonquin Park	89.03	27	P		P	00 07 13.0	+0.1
	baz=329							
TX32	Lajitas Array	89.04	53	IAmb		IAmb	00 07 15.3	
	comp=Z,15nm,1.1s							
TXAR	Lajitas Array	89.04	53	P		P	00 07 14.2	+0.7
	comp=Z,8.6nm,0.8s,baz=294,slow=3.2,SNR=90							
TXAR				pP		sP	00 07 28.5	+0.5
	comp=Z,5.2nm,0.8s,baz=293,slow=2.9,SNR=9.1							
TXAR				PKKPbc		PKKPbc	00 24 50.5	+0.6
	comp=Z,0.5nm,0.8s,baz=144,slow=4.7,SNR=5.1							
TXAR	Lajitas Array	89.04	53	P		P	00 07 14.2	+0.7
TXAR				*PP		sP	00 07 28.5	+0.5
TXAR	Lajitas Array	89.04	53	P		P	00 07 13.2	-0.3
R40A	Maddies Statio	89.08	40	IAmb		IAmb	00 07 28.1	
	comp=Z,24nm,0.9s							
ABTX	Abilene, Hawle	89.20	48	P		P	00 07 14.7	+0.6
	baz=316,SNR=5.8							
D56A	ZEC Mazanza, M	89.21	24	P		P	00 07 13.9	0.0
	baz=332,SNR=9.6							
E55A	Montcerf-Lytto	89.30	25	P		P	00 07 14.0	-0.2
	baz=331							
U38A	Gravette	89.37	42	IAmb		IAmb	00 07 16.1	
	comp=Z,23nm,1.0s							
HPIG		89.39	56	IAmb		IAmb	00 07 17.3	
	comp=Z,13nm,1.0s							
O44A	Mansfield	89.49	36	P		P	00 07 15.2	-0.1
O44A				IAmb		IAmb	00 07 16.1	
	comp=Z,26nm,1.1s							
G54A	Lake Saint Pet	89.50	27	P		P	00 07 15.0	-0.2
	baz=329,SNR=5.4							
E56A	St. Veronique	89.56	25	P		P	00 07 15.5	+0.1
	baz=331							
SADO	Sadowa	89.65	28	P		P	00 07 15.9	0.0
SADO				IAmb		IAmb	00 07 31.2	
	comp=Z,18nm,1.1s							
HHAR	Hobbs	89.73	42	IAmb		IAmb	00 07 17.5	
	comp=Z,17nm,1.0s							
I51A	Listowel	89.74	30	P		P	00 07 16.9	+0.6
	baz=327							
D58A	Chemin du LacG	89.77	23	P		P	00 07 16.2	-0.3
	baz=333							
CCM	Cathedral Cave	89.77	39	P		P	00 07 17.3	+0.7
CCM				pmax		pmax		
	comp=Z,49nm,1.1s							
CCM	Cathedral Cave	89.77	39	P		P	00 07 16.8	+0.2
	baz=321							
CCM	Cathedral Cave	89.77	39	P		P	00 07 17.3	+0.7
SLM	Saint Louis	89.83	38	P		P	00 07 16.9	0.0
SLM				pmax		pmax		
	comp=Z,50nm,1.1s							
SLM	Saint Louis	89.83	38	P		P	00 07 16.9	0.0
AAM	Ann Arbor	89.91	32	P		P	00 07 17.8	+0.7
	baz=325							
SFIN	Lafayette	89.95	35	P		P	00 07 17.7	+0.3
	baz=323							
SFIN	Lafayette	89.95	35	P		P	00 07 17.3	-0.1
SFIN				IAmb		IAmb	00 07 18.5	
	comp=Z,23nm,0.8s							
E57A	Chemin Saint G	89.97	24	P		P	00 07 17.5	+0.1
	baz=332,SNR=5.6							
H53A	Bobcaygeon	90.02	28	P		P	00 07 17.8	+0.1
	baz=329,SNR=5.4							
PLVO	Plevna	90.17	27	pP		pP	00 07 31.6	+2.6
X37A	Clayton	90.21	44	IAmb		IAmb	00 07 33.3	
	comp=Z,18nm,1.1s							
Q44A	Meyer Farm, Va	90.21	38	pP		pP	00 07 32.8	+3.5
FVM	French Village	90.24	39	IAmb		IAmb	00 07 33.9	
	comp=Z,29nm,1.1s							
U40A	Yellville	90.24	42	P		P	00 07 18.7	-0.1
	baz=320,SNR=27							
E58A	La Victoria	90.29	24	P		P	00 07 19.1	+0.3
	baz=333							
ATD	Arta Tunnel	90.41	285	P		P	00 07 20.1	+0.1
ATD				IAmb		IAmb	00 07 21.8	
	comp=Z,17nm,1.0s							
D60A	Saint Jean D'O	90.53	22	P		P	00 07 19.9	0.0
	baz=334							
W39A	Magazine	90.62	43	P		P	00 07 20.8	+0.1
	baz=319,SNR=5.2							
W39A	Magazine	90.62	43	IAmb		IAmb	00 07 35.5	
	comp=Z,15nm,1.1s							
JCT	Junction City	90.63	50	P		P	00 07 21.1	+0.2
	baz=316,SNR=6.3							
JCT	Junction City	90.63	50	IAmb		IAmb	00 07 22.1	
	comp=Z,14nm,0.8s							
T42A	Van Buren	90.64	40	IAmb		IAmb	00 07 22.1	
	comp=Z,27nm,1.1s							
N49A	Columbus Grove	90.82	33	pP		pP	00 07 35.6	+3.5
G57A	Newington	90.84	25	P		P	00 07 21.5	+0.1
	baz=332							
E60A	Ste Agathe de	90.86	23	P		P	00 07 21.8	+0.3
	baz=334							
F59A	Saint Guilaume	90.91	24	P		P	00 07 21.7	0.0
	baz=333							
D62A	Allapoint, All	90.92	21	P		P	00 07 22.2	+0.4
	baz=336							
WHTX	Lake Whitney,	90.94	47	P		P	00 07 22.9	+0.7
	baz=317,SNR=7.5							
S44A	Carbondale	91.05	38	P		P	00 07 22.9	+0.4
F60A	Warwick	91.07	23	P		P	00 07 22.6	+0.1
	baz=334							
E61A	Lac Etchemin	91.10	22	P		P	00 07 22.5	-0.1
	baz=335							
J54A	Appleton	91.11	29	P		P	00 07 24.4	+1.6
G58A	Ormstown	91.12	25	P		P	00 07 22.8	+0.1
	baz=332							
PECO	Prince Edward	91.16	27	P		P	00 07 22.6	-0.3
BLO	Bloomington	91.18	36	P		P	00 07 23.3	+0.1
BLO				pmax		pmax		
	comp=Z,14nm,0.9s							
BLO	Bloomington	91.18	36	P		P	00 07 23.3	+0.1
BLO				IAmb		IAmb	00 07 24.8	
	comp=Z,14nm,0.9s							
E62A	Clayton Lake	91.21	21	P		P	00 07 23.3	+0.1
	baz=335							
D63A	Stockholm	91.23	20	P		P	00 07 23.0	-0.2
	baz=336							
MIAR	Mount Ida	91.23	43	P		P	00 07 24.0	+0.6
	baz=319,SNR=15							
H57A	Richville	91.27	26	P		P	00 07 23.6	+0.2
	baz=331							
LCAR	Lake Charles	91.35	41	IAmb		IAmb	00 07 24.7	
	comp=Z,8.2nm,0.9s							
O49A	Covington	91.35	34	P		P	00 07 23.9	0.0
O49A				IAmb		IAmb	00 07 38.9	
	comp=Z,21nm,1.1s							
F61A	St Evariste	91.36	23	P		P	00 07 24.4	+0.6
	baz=334							
LONY	Lake Ozonia	91.41	25	P		P	00 07 24.0	-0.1
	baz=332							
J55A	Hilton	91.43	28	P		P	00 07 23.7	-0.5
P48A	Milroy	91.45	35	P		P	00 07 24.4	0.0
P48A				IAmb		IAmb	00 07 25.8	
	comp=Z,13nm,0.9s							
W41B	Gary Mavity, V	91.46	42	P		P	00 07 24.7	+0.2
	baz=320,SNR=9.9							
W41B	Gary Mavity, V	91.46	42	IAmb		IAmb	00 07 25.8	
	comp=Z,15nm,0.8s							
G59A	Clarenceville	91.47	24	P		P	00 07 24.4	0.0
	baz=333							
MOQ	Mont Orford	91.56	24	P		P	00 07 25.0	+0.1
L53A	Girard	91.60	30	P		P	00 07 25.3	+0.3
	baz=328							
USIN	University of	91.60	37	P		P	00 07 24.3	-0.8
USIN				IAmb		IAmb	00 07 40.7	
	comp=Z,13nm,0.8s							
I57A	Carthage	91.63	26	P		P	00 07 25.2	+0.1
	baz=331							
X40A	Basin Creek Fa	91.67	43	P		P	00 07 25.5	0.0
	baz=320,SNR=7.9							
X40A	Basin Creek Fa	91.67	43	P		P	00 07 25.9	+0.4
X40A				IAmb		IAmb	00 07 27.2	
	comp=Z,18nm,1.0s							
H59A	Cadyville	91.68	25	P		P	00 07 25.7	+0.3
	baz=332							
E63A	Oxbow	91.70	21	P		P	00 07 25.5	+0.1
	baz=336							
P49A	Miami Univ. Ec	91.71	35	P		P	00 07 25.5	-0.1
	baz=325							
UALR	University of	91.72	42	P		P	00 07 25.6	-0.1
UALR				IAmb		IAmb	00 07 27.2	
	comp=Z,12nm,1.0s							
H58A	Gabriels	91.72	25	P		P	00 07 25.6	0.0
	baz=332							
G60A	Masonville	91.72	24	P		P	00 07 25.9	+0.3
	baz=333							
435B	Jarrell	91.74	48	P		P	00 07 26.5	+0.6
	baz=317							
435B	Jarrell	91.74	48	P		P	00 07 26.2	+0.3
435B				IAmb		IAmb	00 07 40.8	
	comp=Z,18nm,0.9s							
J56A	Wolcott	91.78	28	P		P	00 07 26.0	+0.2
	baz=330							
G61A	St-Isidore-de-	91.81	23	P		P	00 07 26.6	+0.6
	baz=334							
MMNY	Mt. Morris Dam	91.85	28	P		P	00 07 26.7	+0.5
M53A	WI Miller and	91.87	31	P		P	00 07 27.0	+0.8
	baz=328							
WVNY	West Valley, N	91.87	29	P		P	00 07 25.6	-0.7
E64A	Bridgewater	91.87	20	P		P	00 07 26.7	+0.6
	baz=327							
237A	Washetta, Mont	91.88	46	P		P	00 07 25.6	-0.9
237A				IAmb		IAmb	00 07 41.8	
	comp=Z,8.2nm,0.7s							
ACSO	Alum Creek Sta	91.91	33	P		P	00 07 27.3	+0.8
	baz=326							
HICK	Hickman	91.96	39	P		P	00 07 27.1	+0.3
J57A	Williamstown	91.97	27	P		P	00 07 27.1	+0.5
	baz=331							
J57A	Williamstown	91.97	27	P		P	00 07 27.2	+0.5
WCI	Wyandotte Cave	92.04	36	P		P	00 07 28.1	+0.9
WCI				pmax		pmax		
	comp=Z,15nm,1.0s							
WCI	Wyandotte Cave	92.04	36	P		P	00 07 27.6	+0.5
	baz=324							
WCI	Wyandotte Cave	92.04	36	P		P	00 07 28.1	+0.9
WCI				IAmb		IAmb	00 07 42.3	
	comp=Z,15nm,0.9s							
H60A	Morristown	92.08	24	P		P	00 07 27.8	+0.6
	baz=333							
I58A	Old Forge	92.09	26	P		P	00 07 27.5	+0.2
	baz=332							
NCB	Newcomb	92.10	26	P		P	00 07 28.1	+0.7
NCB				IAmb		IAmb	00 07 42.8	
	comp=Z,24nm,1.1s							
O51A	Pataskala	92.14	33	P		P	00 07 27.9	+0.3
	baz=326							
GLAT	Glass	92.14	39	P		P	00 07 27.6	0.0
LPAR	Lepanto	92.15	40	P		P	00 07 27.6	0.0
F63A	Nahmakanta, Br	92.16	21	P		P	00 07 28.6	+1.0
	baz=336							
G62A	West of Eustis	92.18	23	P		P	00 07 28.4	+0.7
	baz=335							
M54A	Oil Creek Stat	92.22	30	P		P	00 07 28.4	+0.5
	baz=328							
F64A	Sherman	92.23	21	P		P	00 07 28.2	+0.3
	baz=336							
J58A	Remsen	92.27	26	P		P	00 07 28.6	+0.5
	baz=331							
UTMT	University of	92.30	39	P		P	00 07 28.7	+0.4
H61A	Lyndonville	92.36	24	P		P	00 07 29.2	+0.7
	baz=334							
K57A	Scipio Center	92.37	28	P		P	00 07 28.7	+0.1
	baz=330							
I59A	Olmsteadville	92.37	25	P		P	00 07 29.0	+0.4
	baz=332							
833A	Chaparral WMA,	92.42	51	P		P	00 07 29.6	+0.5
	baz=316							
833A	Chaparral WMA,	92.42	51	P		P	00 07 29.6	+0.5
833A				IAmb		IAmb	00 07 31.9	
	comp=Z,11nm,0.9s							
J59A	Pisco	92.45	26	P		P	00 07 29.5	+0.5
	baz=332							
P51A	Williamsport	92.49	33	P		P	00 07 29.6	+0.4
	baz=326							
O52A	Adamsville	92.49	32	P		P	00 07 29.1	-0.1
	baz=327							
L56A	Greenwood	92.50	29	P		P	00 07 29.6	+0.4
	baz=330							
PKME	Peaks-Kenny Pk	92.51	22	P		P	00 07 29.6	+0.5
	baz=336							
I60A	Shoreham	92.53	25	P		P	00 07 29.6	+0.4
	baz=333							
G63A	Kingsbury	92.55	22	P		P	00 07 29.7	+0.3
	baz=335							
N54A	Moraine State	92.55	31	P		P	00 07 29.8	+0.4
	baz=328							
H62A	Milan	92.56	23	P		P	00 07 30.1	+0.6
	baz=334							
H62A	Milan	92.56	23	P		P	00 07 30.8	+1.3
Z41A	Richland Creek	92.62	44	P		P	00 07 30.1	+0.2
	baz=320							
Z41A	Richland Creek	92.62	44	P		P	00 07 30.5	+0.6
Z41A				IAmb		IAmb	00 07 31.9	
	comp=Z,14nm,0.8s							
LBNH	Lisbon	92.62	24	P		P	00 07 30.5	+0.7
	baz=334							
O53A	New Philadelph	92.64	32	P		P	00 07 30.1	+0.2
	baz=327							
T47A	Sharon Grove	92.65	38	IAmb		IAmb	00 07 31.6	
	comp=Z,22nm,0.9s							
K58A	Earlville	92.66	27	P		P	00 07 30.4	+0.5
	baz=331							
G64A	Maxfield	92.67	21	P		P	00 07 30.1	+0.2
	baz=336							
X43A	Marvell	92.68	41	P		P	00 07 30.3	+0.1
	baz=321							
X43A	Marvell	92.68	41	P		P	00 07 29.8	-0.3
P52A	Corning	92.77	33	P		P	00 07 30.5	0.0
	baz=326							
P52A	Corning	92.77	33	P		P	00 07 30.1	-0.4
P52A				IAmb		IAmb	00 07 45.6	
	comp=Z,26nm,1.1s							
I61A	Oroboro, Fairl	92.81	24	P		P	00 07 30.6	0.0
	baz=333							
M56A	Emporium	92.82	29	P		P	00 07 31.5	+0.8
	baz=329							
H63A	New Sharon	92.83	23	P		P	00 07 31.6	+0.9
	baz=335							
R50A	Paris	92.91	35	IAmb		IAmb	00 07 32.7	
	comp=Z,15nm,1.0s							
K59A	Cooperstown	92.93	26	P		P	00 07 31.4	+0.2
	baz=332							
WVT	Waverly	92.98	39	P		P	00 07 32.2	+0.7
WVT				pmax		pmax		
	comp=Z,9.0nm,0.9s							
WVT	Waverly	92.98	39	P		P	00 07 31.9	+0.4
	baz=323							
WVT	Waverly	92.98	39	P		P	00 07 32.2	+0.7
WVT				IAmb		IAmb	00 07 32.9	
	comp=Z,9.5nm,0.9s							
J60A	Lant Hill Farm	93.01	25	P		P	00 07 32.0	+0.4
	baz=333							
BINY	Binghamton	93.03	27	P		P	00 07 32.0	+0.4
	baz=331							
O54A	Avella	93.05	31	P		P	00 07 32.4	+0.6
	baz=328,SNR=6.1							
G65A	Princeton	93.06	21	P		P	00 07 32.2	+0.5
	baz=337							
H64A	Troy	93.09	22	P		P	00 07 31.9	0.0
	baz=336							
P53A	Whipple	93.20	32	P		P	00 07 32.7	+0.2
	baz=327							
L58A	Harry Jones Me	93.21	27	P		P	00 07 32.6	+0.1
	baz=331							
I63A	Otisfield	93.22	23	P		P	00 07 32.6	+0.1
	baz=335							
N56A	West Decatur	93.26	30	P		P	00 07 33.4	+0.6
	baz=329							
Q52A	Bidwell	93.27	33	P		P	00 07 32.9	+0.1
	baz=326							
M57A	Sunshine Farm,	93.35	29	P		P	00 07 33.7	+0.5
	baz=330							
M57A	Sunshine Farm,	93.35	29	IAmb		IAmb	00 07 50.1	
	comp=Z,19nm,0.9s							
HKT	Hockley	93.38	48	P		P	00 07 34.6	+1.3
HKT				pmax		pmax		
	comp=Z,8.0nm,1.2s							
HKT	Hockley	93.38	48	P		P	00 07 34.6	+1.3
L59A	Walton	93.38	27	P		P	00 07 33.9	+0.6
	baz=331							
OXF	Oxford	93.45	41	P		P	00 07 34.1	+0.4
	baz=322							
O55A	Ligonier	93.46	31	P		P	00 07 34.2	+0.4
	baz=328							
P54A	Burton	93.49	32	P		P	00 07 34.1	+0.3
	baz=328,SNR=5.4							
M58A	Price's Panora	93.57	28	P		P	00 07 34.4	+0.2
	baz=330							
U49A	Red Boiling Sp	93.67	37	IAmb		IAmb	00 07 36.1	
	comp=Z,22nm,1.1s							
Q53A	Leroy	93.67	33	P		P	00 07 35.2	+0.5
	baz=327							
N57A	Milroy	93.69	29	P		P	00 07 34.9	+0.2
	baz=330							
T50A	Nancy	93.70	36	IAmb		IAmb	00 07 36.1	
	comp=Z,16nm,0.9s							
MCWV	Mont Chateau	93.71	31	P		P	00 07 35.3	+0.5
	baz=328							
O56A	Blue Knob Stat	93.71	30	P		P	00 07 34.9	+0.1
	baz=329							
CLTN	Cedars of Leba	93.74	38	IAmb		IAmb	00 07 36.0	
	comp=Z,16nm,1.1s							
S51A	Beattyville	93.77	35	P		P	00 07 35.9	+0.8
S51A				IAmb		IAmb	00 07 36.3	
	comp=Z,12nm,1.0s							
V48A	Smith Brothers	93.78	38	P		P	00 07 35.6	+0.4
V48A				IAmb		IAmb	00 07 36.4	
	comp=Z,14nm,1.0s							
P55A	Reedsville	93.84	31	P		P	00 07 35.7	+0.2
	baz=328							
Q54A	Coxs Mills	93.86	32	P		P	00 07 35.9	+0.4
	baz=327							
Y45A	Yeager Farm, C	93.89	41	P		P	00 07 36.2	+0.5
L61A	Hillsdale 1, H	93.90	26	P		P	00 07 35.8	+0.2
	baz=332							
R53A	Hurricane	93.93	33	P		P	00 07 36.3	+0.4
	baz=326							
Q55A	Buckhannon	94.17	32	P		P	00 07 37.7	+0.7
	baz=328							
N59A	State Game Lan	94.22	28	P		P	00 07 37.7	+0.6
	baz=331							
P56A	Dayton Farm, R	94.25	31	P		P	00 07 37.9	+0.6
	baz=329							
M60A	Port Jervis	94.28	27	P		P	00 07 37.8	+0.3
	baz=332							
ZAIG	Zacatecas	94.28	57	IAmb		IAmb	00 07 40.7	
	comp=Z,13nm,0.9s							
R54A	Victor	94.47	33	P		P	00 07 38.9	+0.5
	baz=327							
Q56A	Snyder Ridge,	94.50	31	P		P	00 07 38.8	+0.3
	baz=328							
P57A	Homestead Farm	94.60	30	P		P	00 07 38.6	-0.3
	baz=329							
S54A	Dingess, Beckl	94.65	33	P		P	00 07 39.4	+0.2
	baz=327							
S54A	Dingess, Beckl	94.65	33	P		P	00 07 39.3	0.0
S54A				IAmb		IAmb	00 07 40.5	
	comp=Z,17nm,1.0s							
VBMS	Vicksburg	94.65	43	P		P	00 07 39.6	+0.4
	baz=321							
VBMS	Vicksburg	94.65	43	P		P	00 07 38.5	-0.8
VBMS				IAmb		IAmb	00 07 51.9	
	comp=Z,12nm,0.8s							
TZTN	Tazewell	94.69	35	P		P	00 07 39.9	+0.5
	baz=325							
TZTN	Tazewell	94.69	35	P		P	00 07 39.9	+0.5
TZTN				IAmb		IAmb	00 07 54.8	
	comp=Z,18nm,1.1s							
R55A	Marlinton	94.75	32	P		P	00 07 40.5	+0.7
	baz=328							
T53A	Wise	94.78	35	P		P	00 07 40.6	+0.7
	baz=326							
Q57A	Strasburg	94.82	31	P		P	00 07 40.2	+0.3
	baz=329							
KEST	Kesra	94.85	323	LR		LR	00 55 26.2	
	comp=Z,433nm,18.2s,baz=338,slow=39							
P58A	Pank, Wackersv	94.88	30	P		P	00 07 40.3	+0.2
	baz=330							
S55A	Lewisburg	95.02	33	P		P	00 07 41.6	+0.7
	baz=328							
L64A	Middleborough	95.04	24	P		P	00 07 41.2	+0.4
	baz=334							
T54A	Tazewell	95.15	34	P		P	00 07 42.0	+0.4
	baz=327							
N63A	Mattituck	95.33	26	P		P	00 07 42.9	+0.8
	baz=333							
R57A	Stanardsville	95.41	31	P		P	00 07 43.4	+0.8
	baz=329							
T55A	Pulaski	95.45	33	P		P	00 07

	baz=326						
T58A	**Grand View Acr**	**96.55**	**32**	P	**P**	00 07 48.1	+0.3
	baz=329						
U57A	**Blanch**	**96.65**	**33**	P	**P**	00 07 48.6	+0.3
	baz=328						
S60A	**Water View**	**96.67**	**30**	P	**P**	00 07 48.1	-0.2
	baz=330						
V56A	**Mocksville**	**96.67**	**34**	P	**P**	00 07 48.5	+0.1
	baz=327						
KMSC	**Kings Mountain**	**96.85**	**35**	P	**P**	00 07 49.2	-0.1
	baz=327						
X54A	**Belton**	**96.87**	**36**	P	**P**	00 07 49.8	+0.5
	baz=326						
ESDC	**Sonseca Array**	**96.92**	**334**	P	**P**	00 07 49.2	-0.3
	comp=Z,1.8nm,0.9s,baz=8.8,slow=5.1,SNR=8.1						
ESDC				PP	PP	00 11 33.1	-11
	comp=Z,2.2nm,1.1s,baz=15,slow=6.4,SNR=4.4						
ESDC				LR	LR	00 56 22.6	
	comp=Z,402nm,19.0s,baz=355,slow=38						
ESDC	**Sonseca Array**	**96.92**	**334**	IAmb	IAmb	00 07 49.7	
	comp=Z,8.3nm,1.1s						
V57A	**Coltrane Farms**	**96.92**	**33**	P	**P**	00 07 49.7	+0.2
	baz=328						
T59A	**Double "B" Far**	**96.94**	**31**	P	**P**	00 07 49.9	+0.4
	baz=329						
U58A	**Oxford**	**97.02**	**32**	P	Pdif	00 07 50.0	0.0
	baz=329						
W56A	**Indian Trail**	**97.20**	**34**	P	Pdif	00 07 51.2	+0.4
	baz=327						
X55A	**Gracelyn & Ava**	**97.28**	**35**	P	Pdif	00 07 51.2	-0.1
	baz=326						
V58A	**Windy Hill, Pi**	**97.28**	**33**	P	Pdif	00 07 51.3	+0.1
	baz=328						
W57A	**Gilead**	**97.44**	**34**	P	**P**	00 07 51.7	-0.1
	baz=328						
W58A	**Raeford**	**97.89**	**33**	P	Pdif	00 07 53.9	0.0
	baz=328						
RKT	**Rikitea**	**98.35**	**113**	*e*LR	LR	00 39 40.1	
	comp=Z,326nm,22.8s						
VNDA	**Vanda**	**115.69**	**175**	PKP	**PKiKP**	**00 12 59.0**	**0.0**
	comp=Z,2.1nm,0.8s,baz=302,slow=4.2,SNR=15						
VNDA	**Vanda**	**115.69**	**175**	PKIKP	**PKiKP**	**00 12 59.0**	**0.0**
VNDA	**Vanda**	**115.69**	**175**		**PKPdf**	**00 12 58.8**	**-0.2**
TORD	**Torodi Ar. Bea**	**117.31**	**316**	PKP	**PKPdf**	**00 13 03.1**	**-0.9**
	comp=Z,2.5nm,1.0s,baz=24,slow=2.3,SNR=9.7						
TORD				PP	**PP**	**00 14 12.6**	**-1.6**
	comp=Z,4.4nm,0.9s,baz=23,slow=7.4,SNR=7.9						
TORD				PKKPbc	**PKKPbc**	**00 23 27.1**	**+0.8**
	comp=Z,1.7nm,1.0s,baz=215,slow=2.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**117.31**	**316**	PKPdf	**PKPdf**	**00 13 02.9**	**-1.1**
MAW	**Mawson**	**120.58**	**206**	PKP	**PKPdf**	**00 13 08.1**	**-0.4**
	comp=Z,4.9nm,0.8s,baz=20,slow=2.1,SNR=16						
MAW	**Mawson**	**120.58**	**206**	PKIKP	**PKiKP**	**00 13 08.9**	**+0.3**
MAW	**Mawson**	**120.58**	**206**		**PKiKP**	**00 13 08.9**	**+0.3**
SDV	**Santo Domingo**	**124.23**	**41**	PKPdf	**PKiKP**	**00 13 17.7**	**-0.1**
SDV	**Santo Domingo**	**124.23**	**41**	*e*P	**PKPdf**	**00 13 16.4**	**-1.1**
LBTB	**Lobatse**	**125.48**	**264**	PKIKP	**PKiKP**	**00 13 19.6**	**-0.2**
LBTB	**Lobatse**	**125.48**	**264**	PKPdf	**PKiKP**	**00 13 19.6**	**-0.2**
ROSC	**El Rosal**	**125.57**	**47**	PKP	**PKPdf**	**00 13 20.1**	**-0.2**
	comp=Z,5.6nm,0.4s,baz=323,slow=8.9,SNR=4.7						
DBIC	**Dimbokro**	**126.22**	**318**	PKP	**PKPdf**	**00 13 20.4**	**-0.7**
	comp=Z,5.1nm,0.7s,baz=51,slow=1.6,SNR=7.7						
DBIC	**Dimbokro**	**126.22**	**318**	PKIKP	**PKPdf**	**00 13 20.4**	**-0.7**
TIC	**Toumodi**	**126.33**	**318**	*e*PKIKP	**PKPdf**	**00 13 20.4**	**-1.0**
KIC	**Kosan Boka**	**126.42**	**318**	*e*PKIKP	**PKPdf**	**00 13 20.5**	**-1.0**
	comp=Z,56nm,1.6s						
LIC	**Lamto**	**126.69**	**318**	*e*PKIKP	**PKPdf**	**00 13 21.0**	**-1.0**
	comp=Z,15nm,0.9s						
BOSA	**Boshof**	**127.46**	**260**	PKP	**PKPdf**	**00 13 22.2**	**-1.0**
	comp=Z,6.3nm,1.0s,baz=28,slow=5.3,SNR=4.3						
BOSA	**Boshof**	**127.46**	**260**	PKIKP	**PKPdf**	**00 13 22.2**	**-1.0**
SYO	**Syowa Base**	**129.25**	**207**	*e*X	**PKPdf**	**00 13 23.0**	**-2.1**
SYO	**Syowa Base**	**129.25**	**207**	*e*X	PKiKP	00 13 34.0	+8.2
CZSB	**Cruzeiro do Su**	**136.38**	**56**	*e*P	**PKiKP**	**00 13 41.2**	**-0.8**
CZSB	**Cruzeiro do Su**	**136.38**	**56**	*e*P	**PKPdf**	**00 13 40.5**	**+0.3**
MACA	**Manacapuru-AM**	**139.56**	**37**	*e*P	**PKPdf**	**00 13 46.5**	**+0.3**
MCPB	**Macapa, AP**	**140.42**	**23**	*e*P	**PKPdf**	**00 13 46.0**	**-1.7**
SNAA	**Sanae**	**141.72**	**197**	PKPdf	**PKPdf**	**00 13 41.7**	**-6.7**
SNAA	**Sanae**	**141.72**	**197**	PKIKP	**PKPdf**	**00 13 44.8**	**-3.6**
SNAA	**Sanae**	**141.72**	**197**	PKPdf	**PKPdf**	**00 13 44.8**	**-3.6**
ETMB	**Extrema**	**142.07**	**50**	*e*P	**PKPdf**	**00 13 44.6**	**-6.1**
ITTB	**Itaituba**	**142.82**	**31**	*e*P	**PKPdf**	**00 13 48.9**	**-3.2**
SAML	**Samuel**	**143.16**	**45**	*e*P	PKPbc	00 13 48.9	-0.6
VNA2	**Neumayer--Watz**	**143.28**	**196**	PKPdf	PKPbc	00 13 47.8	-0.5
	baz=109,slow=3.0						
TMAB	**Tom-Au,PA,Br**	**143.44**	**18**	*e*P	**PKPdf**	**00 13 51.8**	**-1.3**
TMAB	**Tom-Au,PA,Br**	**143.44**	**18**	*e*P	PKPbc	00 13 51.5	+1.2
VNA3	**Neumayer Olymp**	**143.52**	**195**	PKPdf	PKPab	00 13 48.2	+0.2
VNA1	**Neumayer--Stat**	**143.68**	**196**	PKPdf	PKPbc	00 13 49.2	-0.1
ROSB	**Rosrio**	**144.74**	**11**	*e*P	**PKPdf**	**00 13 54.8**	**-0.6**
ROSB	**Rosrio**	**144.74**	**11**	*e*P	PKPbc	00 13 54.1	-0.2
NPGB	**Novo Progresso**	**145.40**	**32**	*e*P	**PKPab**	**00 13 56.5**	**-0.1**
NPGB	**Novo Progresso**	**145.40**	**32**	*e*P	**PKPab**	**00 13 56.7**	**+0.1**
LPAZ	**La Paz**	**145.64**	**60**	PKPbc	**PKPbc**	**00 13 57.8**	**0.0**
	comp=Z,52nm,0.9s,baz=342,slow=3.4,SNR=134						
LPAZ	**La Paz**	**145.64**	**60**	PKP2	**PKPbc**	**00 13 57.8**	**0.0**
LPAZ	**La Paz**	**145.64**	**60**	*e*P	**PKPab**	**00 13 58.2**	**0.0**
LPAZ	**La Paz**	**145.64**	**60**	*e*P	**PKPab**	**00 13 58.0**	**-0.2**
PB16	**IPOC Station P**	**146.07**	**64**		**PKPab**	**00 14 00.3**	**+0.7**
H03N2	**Juan Fernandez**	**146.34**	**95**	T	T	02 57 42.3	
	baz=292,slow=76,SNR=33						
H03N3	**Juan Fernandez**	**146.36**	**95**	T	T	02 57 50.5	
	baz=292,slow=76,SNR=41						
H03N1	**Juan Fernandez**	**146.36**	**95**	T	T	02 57 42.6	
	baz=292,slow=76,SNR=30						
PRPB	**Parauapebas**	**146.60**	**22**	*e*P	**PKPbc**	**00 13 59.6**	**-0.5**
PRPB	**Parauapebas**	**146.60**	**22**	*e*P	**PKPdf**	**00 13 59.1**	**+0.6**
PB11	**IPOC Station P**	**146.89**	**66**		**PKPbc**	**00 14 00.3**	**-0.6**
TA01	**Diego Aracena**	**147.01**	**68**		**PKPab**	**00 14 02.1**	**-0.5**
PB07	**IPOC Station P**	**147.94**	**69**		**PKPbc**	**00 14 04.2**	**+0.4**
VILB	**Vilhena**	**148.09**	**45**	*e*P	**PKPbc**	**00 14 02.6**	**-1.6**
VILB	**Vilhena**	**148.09**	**45**	*e*P	**PKPdf**	**00 14 02.3**	**+1.3**
PB04	**IPOC Station P**	**148.10**	**70**		**PKiKP**	**00 14 05.0**	**-1.0**
RCBR	**Riachuelo**	**148.12**	**357**	*e*P	**PKPdf**	**00 14 01.4**	**+0.3**
CLDB	**Colider**	**148.60**	**36**	*e*P	**PKPdf**	**00 14 01.7**	**-0.1**
CLDB	**Colider**	**148.60**	**36**	*e*P	**PKPdf**	**00 14 01.4**	**-0.4**
PMSA	**Palmer Station**	**148.83**	**158**	*e*P	**PKPdf**	**00 14 02.2**	**+1.6**
LVC	**Limon Verde**	**149.19**	**69**	PKP2	**PKiKP**	**00 14 08.2**	**-0.3**
LVC	**Limon Verde**	**149.19**	**69**		**PKiKP**	**00 14 08.2**	**-0.3**
LVC	**Limon Verde**	**149.19**	**69**	*e*P	**PKiKP**	**00 14 08.8**	**+0.3**
LVC	**Limon Verde**	**149.19**	**69**	*e*P	**PKPdf**	**00 14 04.0**	**+1.0**
PB14	**IPOC Station P**	**149.21**	**74**	PKPbc	**PKiKP**	**00 14 08.1**	**-0.3**
PB14					**pPKPdf**	**00 14 13.3**	**-0.7**
SMTB	**Santa Maria do**	**149.80**	**20**	*e*P	**PKPdf**	**00 14 05.0**	**+1.1**
SMTB	**Santa Maria do**	**149.80**	**20**	*e*P	**PKPdf**	**00 14 04.9**	**+1.1**
PTLB	**Pontes e Lacer**	**150.71**	**46**	*e*P	**PKPdf**	**00 14 05.6**	**+0.5**
PTLB	**Pontes e Lacer**	**150.71**	**46**	*e*P	**PKPdf**	**00 14 05.8**	**+0.7**
LCO	**Las Campanas**	**151.15**	**82**	PKIKP	**PKiKP**	**00 14 12.4**	**+0.2**
LCO	**Las Campanas**	**151.15**	**82**		**PKiKP**	**00 14 12.4**	**+0.2**
SNDB	**Serra Nova Dou**	**151.51**	**29**	*e*P	**PKPdf**	**00 14 07.2**	**+0.8**
SNDB	**Serra Nova Dou**	**151.51**	**29**	*e*P	**PKPdf**	**00 14 06.8**	**+0.4**
PEXB	**Peixe**	**152.67**	**23**	*e*P	**PKiKP**	**00 14 15.7**	**+0.2**
PEXB	**Peixe**	**152.67**	**23**	*e*P	**PKPdf**	**00 14 08.7**	**+0.5**
LC01	**Cunco**	**153.22**	**103**	PKPbc	**PKiKP**	**00 14 16.5**	**+0.6**
SDBA	**SAO DESIDERIO**	**153.87**	**16**	*e*P	**PKPdf**	**00 14 10.1**	**+0.2**
SDBA	**SAO DESIDERIO**	**153.87**	**16**	*e*P	**PKPdf**	**00 14 10.1**	**+0.2**
PLCA	**Paso Flores**	**154.43**	**107**	PKPbc	**PKiKP**	**00 14 18.8**	**+0.4**
	comp=Z,4.2nm,1.0s,baz=173,slow=3.4,SNR=3.4						
PLCA				PKPab	**sPKPbc**	**00 14 34.1**	**+1.0**
	comp=Z,7.4nm,0.8s,baz=256,slow=5.1,SNR=8.1						
PLCA	**Paso Flores**	**154.43**	**107**	PKIKP	**PKPdf**	**00 14 09.7**	**-0.3**
PLCA	**Paso Flores**	**154.43**	**107**	PKPdf	**PKPdf**	**00 14 09.7**	**-0.3**
ARAG	**Araguaiana, MT**	**154.66**	**33**	*e*P	**PKPdf**	**00 14 11.8**	**+0.9**
ARAG	**Araguaiana, MT**	**154.66**	**33**	*e*P	**PKPdf**	**00 14 11.8**	**+0.9**
BDFB	**Brasilia**	**156.08**	**25**	PKPab	**PKPab**	**00 14 41.1**	**+0.8**
	comp=Z,8.4nm,0.8s,baz=298,slow=4.4,SNR=11						
BDFB	**Brasilia**	**156.08**	**25**	PKP2	**PKPab**	**00 14 41.5**	**+1.2**
BDFB	**Brasilia**	**156.08**	**25**	PKPab	**PKPab**	**00 14 41.5**	**+1.2**
JANB	**Januaria**	**156.57**	**16**	*e*P	**PKPdf**	**00 14 13.8**	**+0.2**
JANB	**Januaria**	**156.57**	**16**	*e*P	**PKPdf**	**00 14 13.7**	**+0.2**
IPMB	**Ipameri, GO**	**158.17**	**28**	*e*P	PKPab	00 15 03.0	+14
IPMB	**Ipameri, GO**	**158.17**	**28**	*e*P	**PKPdf**	**00 14 14.4**	**-1.1**
ITRB	**Iturama**	**158.82**	**35**	*e*P	**PKPab**	**00 14 52.6**	**+0.6**
ITRB	**Iturama**	**158.82**	**35**	*e*P	**PKPdf**	**00 14 16.7**	**+0.5**
CPUP	**Villa Florida**	**159.80**	**61**	PKPab	**PKPab**	**00 14 56.4**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=339,slow=3.3,SNR=7.0						
CPUP	**Villa Florida**	**159.80**	**61**	PKIKP	**PKPdf**	**00 14 18.7**	**+1.6**
CPUP	**Villa Florida**	**159.80**	**61**	PKPdf	**PKPdf**	**00 14 18.7**	**+1.6**
CPUP	**Villa Florida**	**159.80**	**61**	*e*P	**PKPdf**	**00 14 17.3**	**+0.2**
PCMB	**Pacaembu**	**160.01**	**40**	*e*P	**PKPdf**	**00 14 18.3**	**+0.8**
SJMB	**Sao Joao De Ma**	**160.70**	**10**	*e*P	**PKPdf**	**00 14 19.2**	**+0.8**
BSFB	**Barra de Sao F**	**160.87**	**9**	*e*P	**PKPdf**	**00 14 18.9**	**+0.4**
RIB01	**Linhares ES**	**161.40**	**8**	*e*P	**PKPdf**	**00 14 19.8**	**+0.7**

PTGB	**Pitanga**	**162.06**	**47**	*e*P	**PKPdf**	**00 14 20.6**	**+0.9**
BSCB	**Bom Sucesso**	**162.13**	**22**	*e*P	**PKPdf**	**00 14 20.3**	**+0.4**
ITQB	**Itaqui**	**162.26**	**68**	*e*P	**PKPdf**	**00 14 19.9**	**+0.3**
FRTB	**Fartura**	**162.31**	**39**	*e*P	**PKPdf**	**00 14 20.6**	**+0.7**
VAO	**Valinhos**	**163.20**	**31**	*e*P	**PKPdf**	**00 14 21.6**	**+0.7**

*IDC **07** 23:57:30.9±0.8,57.87S×25.60W,h0km,mb4.0/6, mb1 4.1/6,mb1mx3.9/17,mbtmp4.0/6,Error ellipse: s-maj=32.7km s-min=22.9km az=81.0*
*NEIC **07** 23:57:40.1±2.5,57.9S±0.1×25.1W±0.1,h66km±8km, mb4.1/17,Error ellipse: s-maj=18.0km s-min=9.4km az=205.0*

ISC 07 23:57:36.8±0.5,57.91S±0.08×25.12W±0.09,h35km,n37, σ1s24/33,mb4.1/11,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.32**	**295**	Pn	**Pn**	**23 59 24.7**	**+3.6**
VNA1	**Neumayer--Stat**	**14.64**	**158**	P	**Pn**	**00 01 01.0**	**0.0**
VNA3	**Neumayer Olymp**	**14.86**	**160**	P	**Pn**	**00 01 03.0**	**-0.9**
VNA2	**Neumayer--Watz**	**15.04**	**157**	P	**Pn**	**00 01 06.3**	**0.0**
	baz=320,slow=14						
SNAA	**Sanae**	**16.58**	**155**	P	**Pn**	**00 01 26.9**	**+0.8**
SNAA	**Sanae**	**16.58**	**155**	P	**Pn**	**00 01 27.2**	**+1.1**
PMSA	**Palmer Station**	**19.62**	**233**	P	**Pn**	**00 02 04.4**	**+1.2**
EFI	**East Falkland**	**19.85**	**274**	P	**Pn**	**00 02 05.5**	**-0.5**
BELA	**Belgrano 2**	**20.32**	**186**	P	**P**	**00 02 08.7**	**-0.6**
QSPA	**South Pole Qui**	**32.34**	**180**	P	**P**	**00 04 02.7**	**+0.3**
PLCA	**Paso Flores**	**33.45**	**281**	P	**P**	**00 04 10.4**	**-1.9**
PLCA				IAmb	IAmb	00 04 29.1	
	comp=Z,1.9nm,0.8s						
MAW	**Mawson**	**37.98**	**142**	P	**P**	**00 04 51.1**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=218,slow=7.0,SNR=11						
MAW	**Mawson**	**37.98**	**142**	IAmb	IAmb	00 04 52.4	
	comp=Z,0.4nm,0.8s						
CPUP	**Villa Florida**	**38.89**	**310**	P	**P**	**00 04 58.8**	**+0.2**
CO01	**Juntas del Tor**	**41.58**	**292**	P	**P**	**00 05 21.3**	**+0.1**
CO01				IAmb	IAmb	00 05 38.0	
	comp=Z,7.0nm,1.1s						
VNDA	**Vanda**	**44.76**	**182**	P	**P**	**00 05 46.1**	**0.0**
	comp=Z,2.1nm,0.8s,baz=191,slow=6.5,SNR=15						
VNDA	**Vanda**	**44.76**	**182**	P	**P**	**00 05 46.3**	**+0.2**
VNDA				IAmb	IAmb	00 05 47.2	
	comp=Z,2.9nm,0.8s						
BOSA	**Boshof**	**45.39**	**72**	P	**P**	**00 05 52.9**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=210,slow=8.1,SNR=2.1						
BOSA	**Boshof**	**45.39**	**72**	P	**P**	**00 05 51.4**	**-0.4**
BOSA				IAmb	IAmb	00 06 06.3	
	comp=Z,2.1nm,0.9s						
LBTB	**Lobatse**	**48.53**	**70**	P	**P**	**00 06 17.0**	**+0.8**
LBTB				IAmb	IAmb	00 06 24.5	
	comp=Z,1.9nm,1.1s						
H10N1	**ASCENSION HYDR**	**50.62**	**14**	T	T	01 01 22.8	
	baz=188						
H10N3	**ASCENSION HYDR**	**50.62**	**14**	T	T	01 01 32.1	
	baz=188						
H10N2	**ASCENSION HYDR**	**50.63**	**14**	T	T	01 01 32.7	
	baz=188						
LPAZ	**La Paz**	**52.37**	**304**	P	**P**	**00 06 43.8**	**-2.2**
	comp=Z,0.7nm,0.6s,baz=147,slow=5.4,SNR=2.4						
LPAZ	**La Paz**	**52.37**	**304**	P	**P**	**00 06 44.5**	**-1.5**
LPAZ				IAmb	IAmb	00 07 00.7	
	comp=Z,1.2nm,0.8s						
SAML	**Samuel**	**56.91**	**313**	P	**P**	**00 07 15.6**	**-2.6**
SAML				IAmb	IAmb	00 07 22.0	
	comp=Z,0.9nm,0.8s						
LSZ	**Lusaka**	**58.04**	**66**	P	**P**	**00 07 27.2**	**+0.9**
LSZ				IAmb	IAmb	00 07 28.3	
	comp=Z,4.3nm,1.1s						
DBIC	**Dimbokro**	**66.42**	**22**	P	**P**	**00 08 22.6**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=146,slow=7.3,SNR=1.6						
DBIC	**Dimbokro**	**66.42**	**22**	P	**P**	**00 08 20.9**	**-1.3**
DBIC				IAmb	IAmb	00 08 27.9	
	comp=Z,2.9nm,1.0s						
TOA0	**Torodi Ar. Sit**	**74.15**	**27**	P	**P**	**00 09 10.3**	**+0.9**
TORD	**Torodi Ar. Bea**	**74.15**	**27**	P	**P**	**00 09 10.0**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=200,slow=6.1,SNR=33						
TORD	**Torodi Ar. Bea**	**74.15**	**27**	P	**P**	**00 09 10.4**	**+1.1**
DCZ	**Deep Cove**	**76.49**	**189**	P	**P**	**00 09 22.7**	**+0.2**
FINES	**FINESS Array B**	**125.50**	**27**	PKP	**PKPdf**	**00 16 31.5**	**-1.0**
	comp=Z,2.1nm,1.0s,baz=134,slow=4.0,SNR=7.9						
YKA	**Yellowknife Ar**	**138.30**	**316**	PKP	**PKPdf**	**00 16 55.5**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=124,slow=2.7,SNR=1.6						
SONM	**Songino Array**	**149.68**	**88**	PKPbc	**PKPbc**	**00 17 21.2**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=223,slow=3.5,SNR=15						
ILAR	**Eielson Array**	**152.18**	**309**	PKPbc	**PKPbc**	**00 17 25.6**	**-1.3**
	comp=Z,8.3nm,1.1s,baz=135,slow=2.5,SNR=24						

*IDC **08** 00:01:01.6±1.1,11.42S×116.64E,h0km,mb3.9/6, mb1 4.1/10,mb1mx3.9/31,mbtmp4.0/10,ML4.2/3,Error ellipse: s-maj=34.3km s-min=18.0km az=56.0*
*DJA **08** 00:01:02.5±0.3,11.5S±2.1×11.7E±.1,h10km,M4.5/13, mB4.8/4,mb4.7/8,MLv4.5/13,Mw(mB)4.1/4*
*NEIC **08** 00:01:03.6±2.2,11.49S±0.07×116.66E±0.05,h30km±5km, mb4.7/11,Error ellipse: s-maj=10.5km s-min=6.0km az=202.0*

ISC 08 00:01:04.1±0.5,11.50S±0.05×116.73E±0.05,h35km,n65, σ2s21/73,mb4.4/10,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**2.75**	**3**	P	**Pn**	**00 01 45.7**	**-0.1**
TWSI				S	**Sn**	**00 02 14.1**	**-3.7**
PLAI	**Plampang**	**2.85**	**21**	P	**Pn**	**00 01 47.9**	**+0.7**
PLAI				S	**Sn**	**00 02 16.5**	**-3.8**
WBSI	**Waikabubak, Su**	**3.21**	**55**	P	**Pn**	**00 01 53.2**	**+1.1**
WBSI				S	**Sn**	**00 02 27.5**	**-1.6**
SRBI	**Singaraja**	**3.71**	**336**	P	**Pn**	**00 01 59.8**	**+0.8**
JAGI	**Jajag, Banyuwa**	**3.94**	**320**	P	**Pn**	**00 02 02.1**	**-0.1**
JAGI	**Jajag, Banyuwa**	**3.94**	**320**		**Pn**	**00 02 02.0**	**-0.1**
JAGI				Sn	**Sn**	**00 02 45.0**	**-2.2**
BASI	**Baing, Sumba**	**3.99**	**72**	P	**Pn**	**00 02 04.2**	**+1.3**
GMJI	**Gumukmas**	**4.56**	**314**	P	**Pn**	**00 02 10.8**	**+0.2**
BLJI	**Banyuglugur**	**4.84**	**320**	P	**Pn**	**00 02 15.6**	**+1.0**
EDFI	**Ende, Flores**	**5.60**	**61**	P	**Pn**	**00 02 24.8**	**-0.3**
	0.1nm294nm7.8nm,0.6s						
PWJI	**Pagerwojo**	**5.96**	**305**	P	**Pn**	**00 02 31.3**	**+1.4**
	0.5nm24nm,0.6s						
MMRI	**Maumere**	**6.13**	**63**	Pn	**Pn**	**00 02 34.6**	**+2.3**
MMRI				Sn	**Sn**	**00 03 40.1**	**-1.1**
BSSI	**Bau Bau, Buton**	**6.50**	**35**	P	**Pn**	**00 02 39.1**	**+1.8**
BATI	**Baumata**	**6.93**	**80**	Pn	**Pn**	**00 02 45.7**	**+2.3**
	10.0nm,0.3s,baz=259,slow=5.2,SNR=4.1						
BATI				Sn	**Sn**	**00 04 01.4**	**+0.3**
	6.9nm,0.3s,baz=42,slow=19,SNR=2.2						
BATI	**Baumata**	**6.93**	**80**	P	**Pn**	**00 02 43.9**	**+0.5**
	0.2nm556nm15nm,0.5s						
BKSI	**Bulukumba**	**7.00**	**29**	P	**Pn**	**00 02 44.4**	**+0.2**
	0.2nm664nm55nm,0.8s						
UGM	**Wanagama**	**7.08**	**300**	P	**Pn**	**00 02 45.8**	**+0.4**
	1.0nm149nm,1.8s						
UGM	**Wanagama**	**7.08**	**300**	Pn	**Pn**	**00 02 46.4**	**+1.0**
UGM				Sn	**Sn**	**00 03 59.2**	**-5.5**
KAPI	**Kappang**	**7.11**	**25**	Pn	**Pn**	**00 02 47.5**	**+1.8**
	2.9nm,0.3s,baz=207,slow=6.6,SNR=6.0						
KAPI				Sn	Sn	00 03 57.5	-7.8
	3.5nm,0.3s,baz=119,slow=23,SNR=7.2						
KAPI	**Kappang**	**7.11**	**25**	Pn	**Pn**	**00 02 44.3**	**-1.4**
KAPI				Sn	**Sn**	**00 03 59.7**	**-5.6**
SOEI	**Soe**	**7.61**	**78**	P	**Pn**	**00 02 55.6**	**+2.8**
SOEI	**Soe**	**7.61**	**78**	Pn	**Pn**	**00 02 54.9**	**+2.2**
SMRI	**Semarang**	**7.62**	**305**	Pn	**Pn**	**00 02 53.3**	**+0.5**
BNSI	**Bone**	**7.81**	**26**	P	Pn	00 02 48.5	-6.8
CISI	**Cisompet, Garu**	**9.62**	**293**	Pn	**Pn**	**00 03 18.2**	**-2.1**
MBWA	**Marble Bar**	**10.03**	**164**	Pn	**Pn**	**00 03 26.0**	**+0.2**
BKB	**Balikpapan**	**10.18**	**1**	Pn	**Pn**	**00 03 28.6**	**+0.8**
PSAD1	**Pilbara Seismi**	**10.33**	**164**	Pn	**Pn**	**00 03 30.5**	**+0.5**
PSAC1	**Pilbara Seismi**	**10.40**	**164**	Pn	**Pn**	**00 03 31.4**	**+0.5**
PSAB2	**Pilbara Seismi**	**10.44**	**164**	Pn	**Pn**	**00 03 31.3**	**-0.1**
PSAB1	**Pilbara Seismi**	**10.44**	**164**	Pn	**Pn**	**00 03 31.9**	**+0.4**
PSAA2	**Pilbara Seismi**	**10.44**	**164**	Pn	**Pn**	**00 03 31.9**	**+0.4**
PSA00	**Pilbara Seismi**	**10.45**	**164**		**Pn**	**00 03 31.8**	**+0.2**
PSA00	**Pilbara Seismi**	**10.45**	**164**	Pn	**Pn**	**00 03 31.6**	**+0.1**
PSAA1	**Pilbara Seismi**	**10.45**	**164**	Pn	**Pn**	**00 03 31.5**	**-0.1**
PSAC2	**Pilbara Seismi**	**10.46**	**164**	Pn	**Pn**	**00 03 31.9**	**+0.2**
PSAA3	**Pilbara Seismi**	**10.46**	**164**	Pn	**Pn**	**00 03 31.8**	**+0.1**
PSAB3	**Pilbara Seismi**	**10.47**	**164**	Pn	**Pn**	**00 03 32.2**	**+0.4**
PSAC3	**Pilbara Seismi**	**10.49**	**164**	Pn	**Pn**	**00 03 32.5**	**+0.4**
PSAD3	**Pilbara Seismi**	**10.50**	**164**	Pn	**Pn**	**00 03 32.0**	**-0.2**
PSAD2	**Pilbara Seismi**	**10.53**	**163**	Pn	**Pn**	**00 03 32.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**10.83**	**128**	Pn	**Pn**	**00 03 37.7**	**+1.0**
	0.7nm,0.3s,baz=307,slow=14,SNR=31						
FITZ				Sn	**Sn**	**00 05 30.5**	**-6.2**
	3.1nm,0.3s,baz=184,slow=23,SNR=15						
FITZ	**Fitzroy Crossi**	**10.83**	**128**		**Pn**	**00 03 38.0**	**+1.2**
XMIS	**Christmas Isla**	**10.92**	**274**	Pn	**Pn**	**00 03 36.4**	**-1.7**
GIRL	**Giralia**	**11.33**	**192**	Pn	**Pn**	**00 03 44.8**	**+1.2**
LUWI	**Luwuk**	**12.00**	**30**	Pn	**Pn**	**00 03 55.7**	**+2.9**
MORW	**Morawa**	**17.49**	**182**		**P**	**00 05 06.2**	**0.0**
WRA	**Warramunga Arr**	**18.90**	**119**	P	**Pn**	**00 05 25.9**	**+3.2**
	baz=288,slow=14,SNR=1.1						
WRA				S	Sn	00 08 41.1	-12
	0.5nm,0.3s,baz=288,slow=22,SNR=6.1						
ASAR	**Alice Springs**	**20.33**	**129**	P	Pn	00 05 41.1	+1.4
	1.7nm,0.6s,baz=303,slow=11,SNR=4.6						
ASAR				S	**S**	**00 09 15.7**	**-8.0**
	2.9nm,0.8s,baz=297,slow=24,SNR=7.9						
NWAO	**Narrogin (SRO)**	**21.33**	**179**	P	**P**	**00 05 51.6**	**+3.5**
	15nm,0.6s,baz=4.0,slow=10,SNR=9.1						
NWAO	**Narrogin (SRO)**	**21.33**	**179**	P	**P**	**00 05 52.3**	**+4.1**
NWAO				IAmb	IAmb	00 05 55.6	
	comp=Z,17nm,0.9s						
CMAR	**Chiang Mai Arr**	**34.56**	**329**	P	**P**

VLI	**Veliai**	**1.36**	**309**	P	**Pn**	**00 19 23.3**	**+0.7**
VLI				S	**Sn**	**00 19 39.6**	**-1.1**
VLI				AML	AML	00 19 40.1	
	comp=N,3077μm,0.4s						
VLI				AML	AML	00 19 40.9	
	comp=E,1655μm,0.3s						
VLI	**Veliai**	**1.36**	**309**	P	**Pn**	**00 19 23.3**	**+0.7**
VLI				S	**Sn**	**00 19 39.6**	**-1.1**
	comp=E,775nm,0.3s						
APE	**Apeiranthos**	**1.58**	**40**	P	**Pn**	**00 19 26.2**	**+0.7**
APE				S	**Sn**	**00 19 45.2**	**-0.5**
APE	**Apeiranthos**	**1.58**	**40**	P	**Pn**	**00 19 26.1**	**+0.7**
APE				S	**Sn**	**00 19 45.3**	**-0.4**
YDRA	**Hydra**	**1.61**	**337**	P	**Pn**	**00 19 26.9**	**+1.1**
AMGA	**Amorgos Island**	**1.64**	**53**	P	**Pn**	**00 19 27.3**	**+1.2**
AMGA				S	**Sn**	**00 19 46.9**	**-0.1**
KRND	**KRANIDI**	**1.75**	**330**	P	**Pn**	**00 19 28.8**	**+1.2**
KRND				S	**Sn**	**00 19 50.2**	**+0.6**
KRND	**KRANIDI**	**1.75**	**330**	P	**Pn**	**00 19 28.9**	**+1.2**
KRND				S	**Sn**	**00 19 50.2**	**+0.6**
	comp=E,250nm,0.3s						
ZKR	**Zakros**	**1.77**	**115**	P	**Pn**	**00 19 30.3**	**+2.4**
ZKR	**Zakros**	**1.77**	**115**	P	**Pn**	**00 19 30.4**	**+2.5**
VLY	**Voula,Athens**	**2.02**	**350**	P	**Pn**	**00 19 32.3**	**+1.2**
VLY				S	**Sn**	**00 19 56.1**	**+0.4**
VLY				AML	AML	00 19 58.9	
	comp=E,454μm,0.5s						
VLY				AML	AML	00 19 59.3	
	comp=N,452μm,0.5s						
VLY	**Voula,Athens**	**2.02**	**350**	P	**Pn**	**00 19 32.1**	**+1.0**
VLY				S	**Sn**	**00 19 56.2**	**+0.4**
ATHU	**Athens Univers**	**2.13**	**350**	P	**Pn**	**00 19 33.7**	**+1.1**
ATHU				S	**Sn**	**00 19 57.4**	**-1.1**
ATH	**Athens Observa**	**2.15**	**349**	P	**Pn**	**00 19 34.2**	**+1.4**
KARY	**Karystos**	**2.17**	**4**	P	**Pn**	**00 19 34.8**	**+1.7**
KARY	**Karystos**	**2.17**	**4**	P	**Pn**	**00 19 34.5**	**+1.4**
KARY				S	**Sn**	**00 19 59.3**	**0.0**
PTL	**Penteli**	**2.20**	**352**	P	**Pn**	**00 19 35.0**	**+1.5**
PTL				S	**Sn**	**00 19 59.9**	**-0.2**
DION	**Dionisos Attik**	**2.22**	**353**	P	**Pn**	**00 19 35.5**	**+1.6**
DION				S	**Sn**	**00 20 00.5**	**-0.1**
PYL	**PYLOS**	**2.27**	**298**	P	**Pn**	**00 19 35.2**	**+0.7**
ITM	**Ithomi**	**2.29**	**306**	P	**Pn**	**00 19 36.4**	**+1.7**
ITM				S	**Sn**	**00 20 02.8**	**+0.6**
TRIP	**Tripoli**	**2.30**	**317**	P	**Pn**	**00 19 36.7**	**+1.8**
VIL2	**Platees**	**2.47**	**342**	P	**Pn**	**00 19 37.8**	**+0.7**
THAL	**Thalero**	**2.51**	**330**	P	**Pn**	**00 19 39.2**	**+1.5**
GUR	**Goura**	**2.57**	**324**	P	**Pn**	**00 19 39.6**	**+1.0**
KYMI	**Kymi, Euboea I**	**2.77**	**358**	P	**Pn**	**00 19 42.6**	**+1.5**
SMG	**Samos**	**2.77**	**48**	P	**Pn**	**00 19 42.6**	**+1.5**
ATAL	**Atalanti**	**2.99**	**341**	P	**Pn**	**00 19 45.6**	**+1.5**
NEO	**Neokhori**	**3.53**	**347**	P	**Pn**	**00 19 53.1**	**+1.7**
SLUM	**Salum**	**4.43**	**169**	P	**Pn**	**00 20 04.2**	**+0.5**
	baz=172						
SLUM				AMP		00 20 00.0	
	baz=172						
SLUM				S	**Sn**	**00 20 51.9**	**-2.3**
	baz=172						
SWA2		**6.68**	**171**	P	**Pn**	**00 20 34.4**	**+0.1**
	baz=172						
SWA2				AMP		00 21 00.0	
	baz=172						
CSS	**Mathiatis**	**7.47**	**94**	Pn	**Pn**	**00 20 44.8**	**-0.2**
RYAN	**Fayoum**	**8.46**	**141**	P	**Pn**	**00 20 58.3**	**-0.2**
	baz=142						
HFRF	**Wahat Farafira**	**9.35**	**157**	P	**Pn**	**00 21 10.4**	**-0.3**
	baz=158						
SUZ	**Suez**	**9.39**	**127**	P	**Pn**	**00 21 11.0**	**-0.2**
	baz=128						
MMA0B	**Mount Meron ar**	**9.64**	**104**	Pn	**Pn**	**00 21 13.9**	**-0.7**
MMLI	**Mount Malkishu**	**9.87**	**107**	Pn	**Pn**	**00 21 16.9**	**-0.8**
MMLI				Sn	Sn	00 22 58.7	-8.0
HMDT	**Nahal Hemdat**	**10.02**	**108**	Sn	**Sn**	**00 23 04.0**	**-6.4**
KRMI	**Paran Flat**	**10.49**	**120**	Pn	**Pn**	**00 21 24.1**	**-2.2**
PRNI	**Paran**	**10.56**	**118**	Pn	**Pn**	**00 21 25.1**	**-2.0**
PRNI				Sn	Sn	00 23 14.5	-9.0
MBRI	**Mt Berech**	**10.81**	**121**	Pn	**Pn**	**00 21 29.6**	**-1.1**
EIL	**Elat**	**10.92**	**121**	Pn	**Pn**	**00 21 30.4**	**-1.6**

*IDC **08** 00:34:33.0±4.1,36°.67N×71°.70E,h81km±34km,mb3.5/7, mb1 3.6/13,mb1mx3.3/62,mbtmp3.8/13,Error ellipse: s-maj=32.3km s-min=21.9km az=171.0*
*NEIC **08** 00:34:38.9±2.1,37°.05N±0°.04×71°.53E±0°.10,h128km±8km, mb4.1/9,Error ellipse: s-maj=11.5km s-min=5.5km az=79.0*
*NNC **08** 00:34:43.0±5.4,37°.39N×71°.43E,h126km±84km,mb3.5, mpv4.0,Error ellipse: s-maj=49.0km s-min=35.1km az=4.0*
ISC 08 00:34:35.2±0.5,36°.86N±0°.05×71°.59E±0°.05,h100km,n72, σ1§64/77,mb3.9/12,2C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.37**	**335**			**Pn**	**00 35 14.8**	**+2.1**
GAR					Sn	**Sn**	**00 35 41.1**	**-0.3**
CHGR	**Chuyangaron**	**2.64**	**314**		Pn	**Pn**	**00 35 17.9**	**+1.6**
CHGR					Sn	**Sn**	**00 35 47.5**	**-0.2**
KBL	**Kabul**	**3.10**	**223**			Pn	00 35 29.1	+6.5
BTK	**Batken**	**3.25**	**349**		Pn	**Pn**	**00 35 27.3**	**+2.8**
BTK					Sn	**Sn**	**00 36 03.1**	**+0.7**
NIL	**Nilore**	**3.48**	**156**			Pn	00 35 34.3	+6.9
TAS	**Tashkent**	**4.81**	**339**		Pn	**Pn**	**00 35 46.9**	**+1.5**
AML	**Almayashu**	**5.51**	**17**	P		**Pn**	**00 35 56.7**	**+1.4**
	SNR=162							
DHRM	**DHARAMSHALA**	**6.02**	**138**	*e*P		**Pn**	**00 36 05.9**	**+4.0**
DHRM				*e*S		**Sn**	**00 37 10.0**	**+0.4**
DHRM				IAML			00 37 12.8	
	comp=E,542nm,0.4s							
DHRM				IAML			00 37 13.0	
	comp=N,299nm,0.4s							
EKS2	**Erkin-Say**	**6.04**	**16**	P		**Pn**	**00 36 03.9**	**+1.8**
	SNR=36							
KK31	**Karatay Array**	**6.30**	**353**	P		**Pn**	**00 36 06.7**	**+1.2**
	comp=N,2.7nm,0.2s,baz=178,slow=12,SNR=184							
KK31				⇓S		**Sn**	**00 37 11.3**	**-4.6**
	comp=N,13nm,0.4s,baz=162,slow=17,SNR=12							
KK31	**Karatay Array**	**6.30**	**353**	Pn		**Pn**	**00 36 06.6**	**+1.2**
KKAR	**Karatay Array**	**6.30**	**353**	Pn		**Pn**	**00 36 06.8**	**+1.3**
KKAR	**Karatay Array**	**6.30**	**353**			**Pn**	**00 36 06.2**	**+0.7**
KBK	**Karagaybulak**	**6.34**	**23**	P		**Pn**	**00 36 08.4**	**+2.0**
	SNR=7.5							
FRU1	**Bishkek**	**6.39**	**21**			**Pn**	**00 36 09.1**	**+2.2**
BOOM	**Boomskoye usch**	**6.55**	**29**	Pn		**Pn**	**00 36 10.8**	**+1.7**
CHMS	**Chumysh**	**6.60**	**21**	P		**Pn**	**00 36 11.2**	**+1.5**
	SNR=26							
USP	**Ospenovka**	**6.78**	**18**	P		**Pn**	**00 36 13.4**	**+1.3**
	SNR=9.8							
TKM2	**Tokmak 2**	**6.79**	**26**	P		**Pn**	**00 36 14.3**	**+1.8**
	SNR=10.0							
TKM2	**Tokmak 2**	**6.79**	**26**	⇑P		**Pn**	**00 36 14.2**	**+1.8**
	comp=N,9.6nm,0.5s							
TKM2				⇑S		**Sn**	**00 37 27.1**	**-1.3**
	comp=N,8.5nm,0.8s							
KDJ	**Kajisay**	**6.81**	**38**	Pn		**Pn**	**00 36 14.1**	**+1.4**
PRZ	**Przheval'sk**	**7.69**	**41**	Pn		**Pn**	**00 36 26.8**	**+2.1**
HRA	**Herat**	**8.00**	**255**	Pn		**Pn**	**00 36 32.5**	**+3.6**
NDI	**New Delhi**	**9.42**	**148**	*e*S		**Sn**	**00 38 30.8**	**-1.5**
KUDL	**Kundal**	**9.62**	**153**	*e*P		**Pn**	**00 36 52.4**	**+1.7**
KUDL				*e*S		**Sn**	**00 38 33.6**	**-3.3**
GEYT	**Alibeck**	**10.78**	**280**	P		**Pn**	**00 37 06.2**	**-0.3**
	comp=N,4.0nm,0.3s,baz=112,slow=14,SNR=32							
GEYT				S		**Sn**	**00 38 59.8**	**-5.3**
	comp=N,1.5nm,0.3s,baz=114,slow=18,SNR=3.1							
GEYT	**Allbeck**	**10.78**	**280**	Pn		**Pn**	**00 37 06.4**	**-0.1**
GYA0B	**ALIBECK ARRAY**	**10.78**	**280**			**Pn**	**00 37 06.3**	**-0.1**
MKAR	**Makanchi Array**	**12.73**	**35**	P		**Pn**	**00 37 32.8**	**+0.4**
	comp=N,0.1nm,0.3s,baz=221,slow=13,SNR=3.7							
PYUN	**Piuthan**	**12.98**	**129**	*e*P		**Pn**	**00 37 35.8**	**-0.3**
	comp=N,24nm,0.3s							
DANN	**Dangsing**	**13.30**	**126**	*e*P		**Pn**	**00 37 39.5**	**-0.8**
	comp=N,10nm,0.3s							
KOLN	**Koldanda**	**13.60**	**128**	*e*P		**Pn**	**00 37 43.5**	**-0.6**
	comp=N,5.4nm,0.3s							
GKN	**Gorkha**	**14.11**	**125**	*e*P		**Pn**	**00 37 49.8**	**-0.9**
	comp=N,6.2nm,0.3s							
BHPL	**Bhopal**	**14.47**	**158**	*e*P		**P**	**00 38 00.0**	**+0.8**
KURBB	**Kurchatov Arra**	**14.64**	**18**	P		**Pn**	**00 37 57.8**	**+0.6**
	comp=N,0.1nm,0.3s,baz=205,slow=10,SNR=7.2							
KURK	**Kurchatov**	**14.74**	**18**			**Pn**	**00 37 57.8**	**-0.7**
PKIN	**Phulchoki**	**14.89**	**124**	*e*P		**Pn**	**00 37 59.8**	**-1.0**
	comp=N,12nm,0.5s							
PKI	**Pulchoki**	**14.90**	**124**	*e*P		**Pn**	**00 38 00.2**	**-0.8**
	comp=N,4.8nm,0.3s							
GUN	**Gumba**	**14.99**	**122**	*e*P		**Pn**	**00 38 01.5**	**-0.7**
	comp=N,8.4nm,0.4s							
AB31	**Akbulak array**	**15.01**	**329**	⇓P		**Pn**	**00 38 01.0**	**-0.9**
	comp=N,0.8nm,0.3s,baz=134,slow=15,SNR=99							
ABKAR	**Akbulak array**	**15.01**	**329**			**Pn**	**00 38 01.0**	**-0.9**
ABKAR	**Akbulak array**	**15.01**	**329**			**Pn**	**00 38 01.5**	**-0.5**
BVAR	**Borovoye Array**	**16.19**	**357**	P		**Pn**	**00 38 17.2**	**+0.5**
	comp=N,0.3nm,0.3s,baz=178,slow=12,SNR=6.2							
AKTO	**Aktyubinsk**	**16.72**	**329**	P		**Pn**	**00 38 24.0**	**+0.8**
	comp=N,1.0nm,0.3s,baz=146,slow=9.2,SNR=20							
AKTO	**Aktyubinsk**	**16.72**	**329**	⇓P		**Pn**	**00 38 24.1**	**+0.9**
	comp=N,5.1nm,0.6s							
ZALV	**Zalesovo Beam**	**19.40**	**24**	P		**P**	**00 38 53.2**	**+0.1**
	comp=N,0.3nm,0.3s,baz=225,slow=9.9,SNR=6.5							
GNI	**Garni**	**21.24**	**287**	P		**P**	**00 39 15.0**	**+1.7**
GNI				IAmb		IAmb	00 39 24.6	
	comp=Z,7.5nm,1.1s							
ARU	**Arti**	**21.46**	**340**	P		**P**	**00 39 14.8**	**-0.5**
ARU				IAmb		IAmb	00 39 19.5	
	comp=Z,2.5nm,0.9s							
KBZ	**Khabaz**	**22.86**	**296**	P		**P**	**00 39 31.3**	**+1.3**
	comp=Z,1.7nm,0.9s,baz=56,slow=24,SNR=3.9							
KIV	**Kislovodsk**	**23.05**	**297**	P		**P**	**00 39 30.2**	**-1.7**
CSS	**Mathiatis**	**30.91**	**278**	P		**P**	**00 40 44.2**	**+1.8**
AKASG	**Malin Array Be**	**33.10**	**308**	P		**P**	**00 41 02.8**	**+1.5**
	comp=Z,1.1nm,0.5s,baz=103,slow=9.7,SNR=4.4							
ELL	**Elmali**	**33.19**	**283**	P		**P**	**00 40 59.1**	**-3.3**
BURAR	**Bucovina Array**	**35.49**	**302**	P		**P**	**00 41 21.8**	**-0.5**
BUR08	**Bucovina Ar. S**	**35.51**	**303**	P		**P**	**00 41 23.3**	**+1.0**
BUR08				IAmb		IAmb	00 41 34.1	
	comp=Z,1.3nm,0.9s							
KWP	**Kalwaria Pacla**	**37.19**	**306**	P		**P**	**00 41 36.9**	**+0.5**
FIA1	**FINESS Array S**	**37.46**	**326**	P		**P**	**00 41 38.9**	**+0.3**
FIA1				IAmb		IAmb	00 41 51.5	
	comp=Z,11nm,1.1s							
FINES	**FINESS Array B**	**37.46**	**326**	P		**P**	**00 41 40.0**	**+1.4**
	comp=Z,2.0nm,0.3s,baz=119,slow=9.5,SNR=35							
FINES	**FINESS Array B**	**37.46**	**326**			**P**	**00 41 39.1**	**+0.5**
ARD7	**ARCESS Array S**	**41.01**	**337**	P		**P**	**00 42 08.0**	**-0.1**
ARD7				IAmb		IAmb	00 42 11.5	
	comp=Z,10nm,1.1s							
NC405	**NORSAR Array S**	**44.15**	**323**	P		**P**	**00 42 32.2**	**-1.3**
NC602	**NORSAR Array S**	**44.20**	**322**	P		**P**	**00 42 32.6**	**-1.4**
NC303	**NORSAR Array S**	**44.33**	**323**	P		**P**	**00 42 36.2**	**+1.3**
NB201	**NORSAR Array S**	**44.35**	**323**	P		**P**	**00 42 35.6**	**+0.4**
NB2	**NORSAR Subarra**	**44.38**	**323**	P		**P**	**00 42 36.1**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=98,slow=7.9							
NOA	**NORSAR Array B**	**44.38**	**323**	P		**P**	**00 42 36.1**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=107,slow=7.2,SNR=8.5							
NBO00	**NORSAR Array S**	**44.59**	**323**	P		**P**	**00 42 38.0**	**+0.9**
NC204	**NORSAR Array S**	**44.62**	**323**	P		**P**	**00 42 38.5**	**+1.1**
ESDC	**Sonseca Array**	**57.71**	**298**	P		**P**	**00 44 16.3**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=56,slow=8.4,SNR=5.6							
TORD	**Torodi Ar. Bea**	**66.20**	**269**	P		**P**	**00 45 12.6**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=54,slow=6.6,SNR=6.2							
WRA	**Warramunga Arr**	**81.78**	**122**	P		**P**	**00 46 42.0**	**-1.1**
	comp=Z,0.3nm,1.0s,baz=326,slow=4.3,SNR=1.5							
TXAR	**Lajitas Array**	**114.01**	**355**	PKP		PKPdf	00 53 04.2	+1.2
	comp=Z,0.1nm,0.4s,baz=0.0,slow=2.0,SNR=1.6							

*IDC **08** 00:35:51.4±0.9,49°.14S×108°.64E,h0km,mb4.3/8, mb1 4.4/8,mb1mx4.0/35,mbtmp4.3/8,MS3.8/8,Ms1 3.8/8, ms1mx3.6/16,Error ellipse: s-maj=37.9km s-min=16.4km az=125.0*
*NEIC **08** 00:35:52.8±1.6,49°.11S±0°.03×108°.5E±0°.2,h10km±1km, mb4.6/31,Error ellipse: s-maj=22.4km s-min=3.0km az=281.0*
ISC 08 00:35:52.7±0.5,49°.09S±0°.08×108°.7E±0°.1,h10km,n54, σ1§06/49,mb4.6/20,MS3.8/7,1C-1D,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.74**	**18**	T		T	00 54 36.3	
	baz=194,slow=74,SNR=93							
H01W1	**Cape Leeuwin H**	**14.76**	**18**	T		T	00 54 36.9	
	baz=194,slow=74,SNR=75							
H01W3	**Cape Leeuwin H**	**14.76**	**18**	T		T	00 54 37.4	
	baz=194,slow=74,SNR=106							
CASY	**Casey**	**17.27**	**177**	Pn		**Pn**	**00 39 53.2**	**-0.3**
CASY				IAmb		IAmb	00 40 04.0	
	comp=Z,56nm,1.4s							
NWAO	**Narrogin (SRO)**	**17.38**	**25**	LR		LR	00 44 47.0	
	comp=Z,345nm,21.6s,baz=316,slow=31							
NWAO	**Narrogin (SRO)**	**17.38**	**25**			**P**	**00 39 56.7**	**+0.3**
NWAO	**Narrogin (SRO)**	**17.38**	**25**	Pn		**Pn**	**00 39 55.9**	**+0.7**
NWAO				IAmb		IAmb	00 40 07.4	
	comp=Z,42nm,1.5s							
MORW	**Morawa**	**20.78**	**18**	P		Pn	00 40 35.6	-0.6
MORW				IAmb		IAmb	00 40 46.8	
	comp=Z,26nm,1.1s							
FORT	**Forrest**	**23.46**	**46**	P		**P**	**00 41 01.6**	**-0.5**
FORT				IAmb		IAmb	00 41 11.3	
	comp=Z,39nm,1.4s							
BBOO	**Buckleboo**	**26.12**	**62**	P		**P**	**00 41 27.3**	**+0.6**
BBOO				IAmb		IAmb	00 41 28.5	
	comp=Z,13nm,0.9s							
MAW	**Mawson**	**29.34**	**214**	P		**P**	**00 41 54.3**	**-0.9**
	comp=Z,1.5nm,0.9s,baz=102,slow=8.6,SNR=2.9							
MAW				LR		LR	00 50 43.6	
	comp=Z,170nm,21.2s,baz=60,slow=30							
STKA	**Stephens Creek**	**30.07**	**67**	P		**P**	**00 42 01.8**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=209,slow=10,SNR=6.4							
STKA				LR		LR	00 51 56.9	
	comp=Z,248nm,21.5s,baz=204,slow=32							
STKA	**Stephens Creek**	**30.07**	**67**	P		**P**	**00 42 02.8**	**+0.8**
ASAR	**Alice Springs**	**32.23**	**47**	P		**P**	**00 42 21.8**	**+0.8**
	comp=Z,6.1nm,0.8s,baz=208,slow=8.3,SNR=59							
ASAR				PcP		**PcP**	**00 45 09.6**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=201,slow=1.6,SNR=1.9							
ASAR				LR		LR	00 53 44.6	
	comp=Z,238nm,20.8s,baz=202,slow=33							
ASAR	**Alice Springs**	**32.23**	**47**	P		**P**	**00 42 21.7**	**+0.7**
AS31	**Alice Springs**	**32.23**	**47**	P		**P**	**00 42 22.3**	**+1.2**
FITZ	**Fitzroy Crossi**	**33.83**	**30**	P		**P**	**00 42 36.4**	**+1.4**
FITZ				IAmb		IAmb	00 42 38.8	
	comp=Z,6.6nm,1.1s							
VNDA	**Vanda**	**34.80**	**162**	P		**P**	**00 42 42.8**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=287,slow=8.7,SNR=13							
VNDA				LR		LR	00 56 16.7	
	comp=Z,154nm,18.6s,baz=340,slow=35							
VNDA	**Vanda**	**34.80**	**162**	P		**P**	**00 42 42.9**	**-0.1**
WRA	**Warramunga Arr**	**35.62**	**44**	P		**P**	**00 42 51.8**	**+1.1**
	comp=Z,9.1nm,0.8s,baz=207,slow=8.6,SNR=59							
WRA				PcP		**PcP**	**00 45 19.1**	**0.0**
	comp=Z,0.2nm,0.5s,baz=220,slow=3.1,SNR=1.4							
WRA				LR		LR	00 56 09.4	
	comp=Z,200nm,18.4s,baz=200,slow=34							
WRA	**Warramunga Arr**	**35.62**	**44**	P		**P**	**00 42 51.7**	**+1.1**
WB2	**Warramunga Arr**	**35.63**	**44**	P		**P**	**00 42 52.2**	**+1.5**
WB2				IAmb		IAmb	00 42 52.8	
	comp=Z,14nm,0.9s							
WRAB	**Tennant Creek**	**35.64**	**44**	P		**P**	**00 42 52.4**	**+1.7**
WRAB				IAmb		IAmb	00 42 52.9	
	comp=Z,12nm,0.8s							
WR0	**Warramunga Arr**	**35.70**	**45**	P		**P**	**00 42 52.8**	**+1.5**
WR0				IAmb		IAmb	00 42 53.4	
	comp=Z,10nm,0.9s							
WB0	**Warramunga Arr**	**35.80**	**44**	P		**P**	**00 42 53.5**	**+1.4**
WB0				IAmb		IAmb	00 42 54.2	
	comp=Z,8.7nm,0.9s							
KNRA	**Kununurra**	**37.15**	**33**	P		**P**	**00 43 04.8**	**+1.2**
KNRA				IAmb		IAmb	00 43 07.4	
	comp=Z,15nm,1.4s							
SYO	**Syowa Base**	**38.04**	**213**	‖*e*P		**P**	**00 43 11.2**	**+0.6**
SYO	**Syowa Base**	**38.04**	**213**	‖*e*P		P	00 43 15.9	+5.3
WKZ	**Wanaka**	**40.47**	**108**	P		**P**	**00 43 30.4**	**-0.8**
WKZ				IAmb		IAmb	00 43 45.3	
	comp=Z,24nm,1.2s							
EIDS	**Eidsvold**	**40.53**	**70**	P		**P**	**00 43 32.7**	**+0.8**
EIDS				IAmb		IAmb	00 43 34.7	
	comp=Z,12nm,1.2s							
MTN	**Manton Dam**	**40.63**	**35**	P		**P**	**00 43 33.8**	**+1.0**
JAGI	**Jajag, Banyuwa**	**40.75**	**8**	P		**P**	**00 43 33.4**	**-0.4**
JAGI				IAmb		IAmb	00 43 35.1	
	comp=Z,12nm,0.9s							
QSPA	**South Pole Qui**	**41.04**	**180**	P		**P**	**00 43 35.8**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=307,slow=4.2,SNR=7.4							
QSPA	**South Pole Qui**	**41.04**	**180**	P		**P**	**00 43 36.3**	**+0.3**
QSPA				IAmb		IAmb	00 43 43.9	
	comp=Z,12nm,1.1s							
SOEI	**Soe**	**41.33**	**24**	P		**P**	**00 43 38.3**	**-0.3**
CTAO	**Charters Tower**	**41.68**	**60**	P		**P**	**00 43 41.8**	**+0.3**
FAKI	**Fak Fak**	**50.22**	**31**			**S**	**00 52 01.5**	**+0.5**
SNAA	**Sanae**	**50.31**	**202**	P		**P**	**00 44 49.3**	**+0.4**
	comp=Z,3.1nm,0.5s,baz=146,slow=12,SNR=54							
BELA	**Belgrano 2**	**51.31**	**189**	P		**P**	**00 44 56.0**	**-0.3**
VNA2	**Neumayer--Watz**	**51.92**	**202**	P		**P**	**00 45 01.7**	**+0.7**
	baz=124,slow=7.7							
VNA3	**Neumayer Olymp**	**52.26**	**201**	P		**P**	**00 45 04.3**	**+0.8**
VNA1	**Neumayer--Stat**	**52.32**	**202**	P		**P**	**00 45 05.4**	**+1.5**
SRIT	**Nakonsritamara**	**57.98**	**349**	P		**P**	**00 45 44.0**	**-1.4**
BOSA	**Boshof**	**64.82**	**255**	P		**P**	**00 46 31.9**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=129,slow=6.5,SNR=3.3							
BOSA				LR		LR	01 09 26.0	
	comp=Z,110nm,18.2s,baz=168,slow=31							
BOSA	**Boshof**	**64.82**	**255**	P		**P**	**00 46 31.8**	**0.0**
LSZ	**Lusaka**	**72.40**	**267**	P		**P**	**00 47 20.0**	**+0.7**
LSZ				IAmb		IAmb	00 47 27.7	
	comp=Z,5.4nm,0.8s							
JMZ	**Minamidaito 2**	**77.25**	**21**	P		**P**	**00 47 45.3**	**-1.4**
KWAJ	**Kwajalein Atol**	**77.26**	**60**	P		**P**	**00 47 48.1**	**+1.0**
JCJ	**Chichijima**	**81.54**	**30**	P		**P**	**00 48 06.5**	**-3.6**
PPT	**Papeete**	**84.37**	**110**	LR		LR	01 17 25.9	
	comp=Z,20nm,21.2s,baz=55,slow=30							
NIL	**Nilore**	**88.20**	**331**	P		**P**	**00 48 45.7**	**+2.1**
ILAR	**Eielson Array**	**138.69**	**39**	PKP		**PKPdf**	**00 55 16.7**	**-0.8**
	comp=Z,0.5nm,1.1s,baz=289,slow=2.8,SNR=2.1							
NVAR	**Mina Array Bea**	**144.97**	**90**	PKP		**PKPdf**	**00 55 30.1**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=229,slow=6.0,SNR=5.8							
TXAR	**Lajitas Array**	**148.47**	**117**	PKPbc		**PKPbc**	**00 55 38.9**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=205,slow=5.5,SNR=4.3							

*TAP **08** 00:39:07.1,23°.98N×122°.72E,h40km±1km,ML2.8,D*
*JMA **08** 00:39:07.3±0.1,23°.99N×122°.64E,h37km±4km,M2.3*
ISC 08 00:39:08.4±6.1,24°.00N±0°.04×122°.68E±0°.02,h37km±6km, n46,σ0§98/89,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.52**	**28**	P		**Pn**	**00 39 18.2**	**-1.1**
JYNG				S		**Sn**	**00 39 26.2**	**-0.6**
YOJ	**Yonaguni jima**	**0.56**	**33**	P		**Pn**	**00 39 18.6**	**-1.3**
	baz=28							
YOJ				S		**Sn**	**00 39 27.3**	**-0.6**
	baz=28							
YOJ	**Yonaguni jima**	**0.56**	**33**	P		**Pn**	**00 39 19.1**	**-0.8**
YOJ				S		**Sn**	**00 39 27.1**	**-0.8**
TWC	**Suao**	**0.97**	**309**	*e*P		**Pn**	**00 39 24.0**	**-1.5**
	baz=301							
TWC				*e*S		**Sn**	**00 39 38.0**	**0.0**
	baz=301							
NACB	**Ninganchiao**	**1.00**	**280**	*e*P		**Pn**	**00 39 24.8**	**-1.1**
	baz=271							
IRIF	**Iriomote-Funau**	**1.02**	**71**	P		**Pn**	**00 39 26.2**	**+0.1**
IRIF				*e*S		**Sn**	**00 39 40.1**	**+0.9**
HATJ	**Hateruma jima**	**1.03**	**86**	P		**Pn**	**00 39 26.2**	**-0.1**
HATJ				*e*S		**Sn**	**00 39 40.2**	**+0.7**
ETLH	**Xiulin Townshi**	**1.11**	**281**	*e*P		**Pn**	**00 39 26.5**	**-0.9**
	baz=281							
ETLH				*e*S		**Sn**	**00 39 41.3**	**-0.2**
	baz=281							
ESL	**Shilin**	**1.15**	**261**	*e*P		**Pn**	**00 39 26.2**	**-1.7**
	baz=262							
ESL				*e*S		**Sn**	**00 39 41.6**	**-0.9**
	baz=262							
ENTT	**Nioudou

JTJ				*e*S	**Sn**	**00 40 03.1 +0.8**		
WDLH	**Douliu**	**1.98**	**262**	*e*P	**Pn**	**00 39 39.9 +0.6**		
	baz=261							
WDLH				*e*S	**Sn**	**00 40 04.7 +1.7**		
	baz=261							
TPUB	**Ta-pu**	**2.00**	**250**	*e*P	**Pn**	**00 39 40.3 +0.7**		
	baz=250							
TPUB				*e*S	**Sn**	**00 40 04.5 +1.0**		
	baz=250							
CHN4	**Tsaushan**	**2.01**	**252**	*e*P	**Pn**	**00 39 40.8 +1.0**		
	baz=252							
CHN4				*e*S	**Sn**	**00 40 05.6 +1.8**		
	baz=252							
WTP	**Ta-pu**	**2.03**	**249**	*e*P	**Pn**	**00 39 41.1 +0.9**		
	baz=239							
WTP				*e*S	**Sn**	**00 40 05.7 +1.4**		
	baz=239							
SGST	**Jiashian**	**2.12**	**245**	*e*P	**Pn**	**00 39 42.0 +0.7**		
	baz=236							
SGST				*e*S	**Sn**	**00 40 07.8 +1.3**		
	baz=236							
CHN1	**Nanshi**	**2.13**	**248**	*e*P	**Pn**	**00 39 42.3 +0.9**		
	baz=248							
CHN1				*e*S	**Sn**	**00 40 08.3 +1.7**		
	baz=248							
TWK	**Hsinying**	**2.13**	**251**	*e*P	**Pn**	**00 39 42.0 +0.5**		
	baz=250							
TWK				*e*S	**Sn**	**00 40 07.9 +1.1**		
	baz=250							
MASBT	**Mashibuluo**	**2.33**	**234**	*e*P	**Pn**	**00 39 44.7 +0.6**		
	baz=228							
MASBT				*e*S	**Sn**	**00 40 10.2 -1.3**		
	baz=228							

*HEL **08** 00:42:13.7, 67°.80N×20°.25E, h0km, ML1.8, Explosion*
UPP 08 00:42:13.5±0.0, 67°.84N×20°.18E, h0km, ML2.4, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KUA	**Kurravaara**	**0.13**	**26**	P	Pg		00 42 16.2	+0.2
KUA				S	Sg		00 42 18.1	+0.5
KUA	**Kurravaara**	**0.13**	**26**	*i* P	Pg		00 42 16.2	+0.2
KUA				*i* S	Sg		00 42 18.1	+0.5
RATU	**Laukkuluspa**	**0.23**	**267**	P	Pg		00 42 18.0	+0.2
RATU	**Laukkuluspa**	**0.23**	**267**	*i* P	Pg		00 42 18.0	+0.2
KOVU	**Salmi**	**0.39**	**359**	P	Pg		00 42 21.0	+0.1
KOVU	**Salmi**	**0.39**	**359**	*i* P	Pg		00 42 21.0	+0.1
LANU	**Lannavaara**	**0.71**	**72**	P	Pg		00 42 27.1	-0.1
LANU	**Lannavaara**	**0.71**	**72**	*e*P	Pg		00 42 27.1	-0.1
	baz=259							
LANU				*e*S	Sg		00 42 35.6	-0.8
DUNU	**Dundret**	**0.73**	**168**	P	Pg		00 42 27.3	-0.2
DUNU	**Dundret**	**0.73**	**168**	*i* P	Pg		00 42 27.3	-0.2
SALU	**Saltoluokta**	**0.79**	**235**	P	Pg		00 42 28.4	-0.2
SALU	**Saltoluokta**	**0.79**	**235**	*i* P	Pg		00 42 28.4	-0.2
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*PB	Pb		00 42 36.8	-0.1
	baz=184							
KIF				MSG			00 42 52.1	
	comp=Z,13nm,0.2s							
KIF				*e*SB	Sb		00 42 52.5	-0.4
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*P	Pn		00 42 37.7	+0.3
PAJU	**Pajala**	**1.40**	**124**	P	Pg		00 42 38.9	-1.3
PAJU	**Pajala**	**1.40**	**124**	*e*P	Pg		00 42 38.9	-1.3
ERTU	**Ertsjaerv**	**1.51**	**148**	P	Pn		00 42 41.1	-0.6
ERTU	**Ertsjaerv**	**1.51**	**148**	*e*PG	Pn		00 42 41.0	-0.7
ERTU				*e*SN	Sg		00 43 01.5	-0.3
HARU	**Harads**	**1.71**	**169**	P	Pn		00 42 44.5	+0.1
HARU	**Harads**	**1.71**	**169**	*e*P	Pn		00 42 44.5	+0.1
TOF	**Tornio**	**2.40**	**135**	*e*PB	Pn		00 42 55.4	+1.4
	baz=306							
TOF				MSG			00 43 23.4	
	comp=Z,3.2nm,0.2s							
TOF				*e*SG	Sb		00 43 28.4	+0.8
SGF	**Sodankyl**	**2.46**	**96**	*e*PG	Pb		00 42 57.6	-0.9
	baz=278							
SGF				*e*SG	Sb		00 43 30.1	+0.8
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pb		00 42 58.6	-2.0
	baz=315							
RNF				*e*SG	Sb		00 43 32.2	-0.6
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*P	Pn		00 42 57.0	+0.5

UPP 08 00:42:21.4±0.1, 67°.84N×20°.23E, h0km, ML2.7, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KUA	**Kurravaara**	**0.12**	**20**	P	Pg		00 42 23.9	+0.3
KUA				S	Sg		00 42 25.6	+0.4
RATU	**Laukkuluspa**	**0.24**	**266**	P	Pg		00 42 26.2	+0.2
KOVU	**Salmi**	**0.38**	**356**	S	Sg		00 42 34.3	+0.6
DUNU	**Dundret**	**0.74**	**170**	P	Pg		00 42 35.3	-0.2
PAJU	**Pajala**	**1.38**	**125**	P	Pg		00 42 46.5	-1.3
PAJU				S	Sg		00 43 05.2	-0.5

*BGR **08** 00:56:25.8±0.0, 64°.62N×20°.03W, h33km, mb4.6*
*IDC **08** 00:56:30.8±0.6, 64°.55N×17°.58W, h0km, mb3.8/14, mb1 4.1/18, mb1mx3.9/41, mbtmp3.9/18, ML2.7/3, MS3.3/3, Ms1 3.3/3, ms1mx2.7/44, Error ellipse: s-maj=18.6km s-min=9.7km az=12.0*
*REY **08** 00:56:30.3, 64°.67N×17°.44W, h0km*
*NEIC **08** 00:56:32.5±2.1, 64°.57N±0°.07×17°.7W±0°.1, h8km±4km, mb4.5/78, Error ellipse: s-maj=10.2km s-min=8.3km az=159.0*
ISC 08 00:56:32.3±0.3, 64°.62N±0°.03×17°.57W±0°.03, h10km, n194, σ1§48/182, mb4.4/58, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
IVON	**Vonarskard**	**0.10**	**304**	P	**Pg**		**00 56 33.6**	**-1.4**
	baz=270							
IDYN	**Dyngjuhals**	**0.19**	**27**	P	Pg		00 56 33.3	-3.2
	baz=15							
IGRF	**Grimsfjall**	**0.25**	**148**	P	**Pg**		**00 56 36.0**	**-1.5**
	baz=164							
IHUS	**Husbondi**	**0.33**	**187**	P	**Pg**		**00 56 38.4**	**-0.5**
	baz=194							
IHUS				S	Sg		00 56 44.1	+0.9
	baz=194							
ISKR	**Skrokkalda**	**0.36**	**261**	P	**Pg**		**00 56 38.5**	**-0.9**
	baz=255							
ISKR				S	**Sb**		**00 56 45.1**	**-1.4**
	baz=255							
IVOT	**Vottur**	**0.39**	**154**	P	**Pg**		**00 56 38.7**	**-1.3**
	baz=164							
IJOK	**Jokulheimar**	**0.42**	**223**	P	**Pb**		**00 56 40.0**	**-1.8**
	baz=224							
IJOK				S	**Sb**		**00 56 47.2**	**-1.0**
	baz=224							
THOR	**Thorvaldshraun**	**0.50**	**50**	P	Pg		00 56 38.7	-3.3
	baz=51							
THOR				S	**Sg**		**00 56 45.2**	**-3.3**
	baz=51							
IIEY	**Innrieyrar**	**0.58**	**205**	P	**Pb**		**00 56 42.3**	**-2.3**
	baz=207							
IIEY				S	**Sb**		**00 56 51.9**	**-1.0**
	baz=207							
IASK	**Askja**	**0.59**	**42**	P	Pg		00 56 40.1	-3.6
	baz=41							
IMKO	**Mokollar**	**0.64**	**55**	P	Pg		00 56 41.1	-3.6
	baz=56							
IMKO				S	**Sg**		**00 56 49.6**	**-3.5**
	baz=56							
IKSK	**Karasker**	**0.66**	**134**	P	**Pg**		**00 56 42.1**	**-3.0**
	baz=140							
IVAT	**Vatnsfell**	**0.73**	**234**	P	**Pb**		**00 56 45.5**	**-1.7**
	baz=233							
ISVA	**Svartarkot**	**0.73**	**10**	P	Pg		00 56 42.8	-3.6
	baz=6.7							
ISVA				S	**Sg**		**00 56 52.7**	**-3.3**
	baz=6.7							
IHVE	**Hveravellir**	**0.89**	**287**	P	**Pg**		**00 56 46.8**	**-2.7**
	baz=283							
ISNB	**Snabyli**	**1.00**	**208**	P	**Pb**		**00 56 49.6**	**-2.1**
	baz=210							
IMEL	**Melhnausar**	**1.03**	**22**	P	Pb		00 56 47.6	-4.7
	baz=20							
ISLY	**Slysaalda**	**1.05**	**221**	P	**Pg**		**00 56 50.5**	**-1.9**
	baz=221							
IREN	**Reynihlio**	**1.07**	**15**	P	Pb		00 56 48.2	-4.7
	baz=13							
IFED	**Fedgar**	**1.10**	**238**	P	**Pg**		**00 56 51.6**	**-1.8**
	baz=237							
IRJU	**Rjupnafell**	**1.12**	**206**	P	**Pg**		**00 56 51.5**	**-2.3**
	baz=208							
IKVO	**Krokottuvotn**	**1.14**	**14**	P	Pn		00 56 49.4	-5.0
	baz=12							
IMJO	**Mjoaskard**	**1.15**	**234**	P	**Pg**		**00 56 52.5**	**-1.9**
	baz=234							
IGRS	**Grimsstaoir**	**1.19**	**30**	P	Pn		00 56 50.3	-4.8
	baz=29							
IGYG	**Gygjarholskot**	**1.20**	**255**	P	**Pb**		**00 56 52.3**	**-2.7**
	baz=253							
IHAU	**Haukadalur**	**1.23**	**239**	P	**Pb**		**00 56 54.0**	**-1.7**
	baz=238							
IHVO	**Lagu-Hvolar**	**1.23**	**208**	P	**Pb**		**00 56 53.7**	**-2.0**
	baz=209							
ISKI	**Skildingahlsh**	**1.28**	**10**	P	Pn		00 56 51.8	-4.5
	baz=8.0							
IGHA	**Grjothals**	**1.29**	**17**	P	Pn		00 56 51.6	-4.7
	baz=15							
IGRA	**Granastaoir**	**1.30**	**360**	P	Pn		00 56 52.1	-4.4
	baz=357							
IALF	**Alftagrof**	**1.34**	**213**	P	**Pn**		**00 56 55.2**	**-1.8**
	baz=214							
IDIM	**Dimmadalss**	**1.37**	**11**	P	Pn		00 56 53.2	-4.3
	baz=9.1							
IESK	**Eystri-Skogar**	**1.38**	**218**	P	**Pn**		**00 56 55.9**	**-1.7**
	baz=216							
ISAU	**Saurbar**	**1.39**	**244**	P	**Pn**		**00 56 55.5**	**-2.2**
	baz=244							
IMID	**Miomork**	**1.40**	**228**	P	**Pn**		**00 56 56.6**	**-1.3**
	baz=228							
IHED	**Heoinshofoi**	**1.47**	**4**	P	Pn		00 56 54.8	-4.0
	baz=2.2							
IBRE	**Brettingsstaoi**	**1.52**	**355**	P	Pn		00 56 55.7	-3.8
	baz=352							
IASM	**Asmuli**	**1.55**	**241**	P	**Pn**		**00 56 58.5**	**-1.3**
	baz=240							
IGIL	**Gilhagi**	**1.55**	**19**	P	Pn		00 56 55.7	-4.3
	baz=17							
ISIG	**Siglufjorour**	**1.62**	**340**	P	**Pn**		**00 56 57.6**	**-3.3**
	baz=338							
BORG	**Borgarnes**	**1.62**	**276**	Pg	**Pn**		**00 56 58.8**	**-2.1**
	32nm,0.3s,baz=103,slow=8.2,SNR=67							
BORG				Lg	Lg		00 57 23.1	
	16nm,0.3s,baz=342,slow=21,SNR=11							
BORG	**Borgarnes**	**1.62**	**276**		**Pn**		**00 56 59.1**	**-1.8**
SCO	**Scoresbysund**	**6.12**	**346**	Pn	**Pn**		**00 58 02.4**	**-0.3**
SCO	**Scoresbysund**	**6.12**	**346**	*e*	**Pn**		**00 58 00.3**	**-2.4**
	baz=144,slow=6.5							
SCO				*i* P	**Pn**		**00 58 01.9**	**-0.8**
SCO				*i* S	**Sn**		**00 59 16.1**	**+3.5**
ANGG	**Ammassalik, Gr**	**8.51**	**286**		**Pn**		**00 58 34.3**	**-1.1**
SUMG	**Summit**	**10.96**	**326**	*i* P	Pn		00 59 24.8	+15
EKR2	**Eskdalemuir Ar**	**11.74**	**136**		**Pn**		**00 59 21.0**	**+1.3**
EKA	**Eskdalemuir Ar**	**11.75**	**136**		**Pn**		**00 59 18.4**	**-1.3**
	baz=323,slow=13,SNR=12							
ESK	**Eskdalemuir**	**11.75**	**136**		**Pn**		**00 59 20.1**	**+0.3**
EKB4	**Eskdalemuir Ar**	**11.75**	**136**		**Pn**		**00 59 19.7**	**0.0**
DSB	**Dublin**	**12.76**	**148**		**Pn**		**00 59 32.2**	**-1.4**
NRS	**Narsarsuaq**	**13.10**	**267**		**Pn**		**00 59 36.9**	**-1.3**
NC204	**NORSAR Array S**	**13.26**	**92**		**Pn**		**00 59 37.5**	**-2.9**
NBO00	**NORSAR Array S**	**13.38**	**93**		**Pn**		**00 59 39.0**	**-3.0**
NOA	**NORSAR Array B**	**13.56**	**92**		**Pn**		00 59 39.2	-5.3
	0.0nm,0.3s,baz=299,slow=13,SNR=2.7							
SFJD	**Kangerlussuaq**	**13.66**	**295**		LR		01 04 18.2	
	comp=Z,137nm,18.6s,baz=98,slow=34							
HFS	**Hagfors**	**15.07**	**93**		**Pn**		**01 00 03.6**	**-1.4**
	0.1nm,0.3s,baz=317,slow=10,SNR=2.0							
SPB4	**Spitsbergen Ar**	**16.92**	**23**		**Pn**		**01 00 28.5**	**-0.2**
SPA3	**Spitsbergen Ar**	**16.92**	**23**		**Pn**		**01 00 28.8**	**+0.1**
SPA0	**Spitsbergen Ar**	**16.92**	**23**		**Pn**		**01 00 28.8**	**0.0**
ARCES	**ARCESS Array B**	**17.17**	**54**		**Pn**		**01 00 32.0**	**+0.1**
	baz=268,slow=12,SNR=1.9							
FINES	**FINESS Array B**	**19.74**	**79**		**P**		**01 01 01.6**	**-0.2**
	0.1nm,0.3s,baz=305,slow=9.7,SNR=2.3							
CLL	**Collm**	**20.71**	**115**	*e*P	**P**		**01 01 13.0**	**+0.6**
CLL	**Collm**	**20.71**	**115**	P	Pn		01 01 13.5	-1.3
GRF	**Grafenberg Arr**	**21.34**	**121**	*e*P	**P**		**01 01 19.6**	**+0.3**
	56nm,2.3s,baz=323,slow=10							
STU	**Stuttgart**	**21.37**	**125**	P	**P**		**01 01 21.0**	**+1.4**
STU					IAmb	IAmb	01 01 24.1	
	comp=Z,41nm,1.5s							
BRG	**Berggiesshubel**	**21.42**	**115**	*e*P	**P**		**01 01 20.4**	**+0.3**
	comp=Z,13nm,1.1s							
BFO	**Black Forest**	**21.45**	**127**	P	**P**		**01 01 20.1**	**-0.3**
FRB	**Frobisher Bay**	**21.74**	**291**	LR	LR		01 09 05.6	
	comp=Z,68nm,19.8s,baz=54,slow=35							
PBCC	**Pribram**	**22.39**	**117**	*e*P	**P**		**01 01 35.9**	**+5.4**
OSTC	**Ostas**	**22.57**	**112**	*e*P	**P**		**01 01 32.7**	**+0.3**
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P	**P**		**01 01 33.6**	**0.0**
DPC	**Dobruska-Polom**	**22.77**	**113**	*e*P	**P**		**01 01 34.7**	**+0.1**
DAVA	**Damuels**	**22.88**	**126**	P	**P**		**01 01 38.0**	**+2.2**
	comp=Z,8nm,1.2s							
SUW	**Suwalki**	**22.91**	**98**	P	**P**		**01 01 35.5**	**-0.4**
SUW					IAmb	IAmb	01 01 37.3	
	comp=Z,18nm,1.1s							
GEC2	**GERESS Array S**	**22.96**	**118**	P	**P**		**01 01 37.2**	**+0.6**
GEC2B	**GERESS ARRAY S**	**22.96**	**118**	P	**P**		**01 01 36.2**	**-0.4**
GERES	**GERESS Array B**	**22.96**	**118**	P	**P**		**01 01 36.5**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=340,slow=7.1,SNR=7.0							
MOTA	**Moosalm**	**23.26**	**124**	*e*P	**P**		**01 01 44.2**	**+4.4**
	comp=Z,12nm,1.3s							
MORC	**Moravsky Berou**	**23.71**	**112**	P	**P**		**01 01 45.2**	**+1.2**
MORC					IAmb	IAmb	01 01 47.8	
	comp=Z,16nm,1.5s							
MOA	**Molln**	**23.99**	**119**	*e*P	**P**		**01 01 51.5**	**+4.7**
	comp=Z,7.6nm,1.4s							
CONA	**Conrad Observa**	**24.54**	**117**	*e*P	**P**		**01 01 53.4**	**+1.5**
	comp=Z,2.5nm,0.7s							
SMOL	**Smolenice**	**24.67**	**114**	*e*P	**P**		**01 01 53.7**	**+0.7**
TEOL	**Teolo**	**25.17**	**126**	P	**P**		**01 01 56.4**	**-1.1**
TEOL					IAmb	IAmb	01 02 01.1	
	comp=Z,14nm,1.1s							
VYHS	**Vyhne**	**25.24**	**112**	*e*P	**P**		**01 01 59.0**	**+0.8**
KWP	**Kalwaria Pacla**	**25.93**	**106**	P	**P**		**01 02 06.3**	**+1.9**
KWP					IAmb	IAmb	01 02 10.8	
	comp=Z,20nm,1.1s							
PSZ	**Piszkesteto**	**26.13**	**112**	P	**P**		**01 02 06.5**	**+0.3**
PSZ					IAmb	IAmb	01 02 12.4	
	comp=Z,12nm,1.3s							
ESDC	**Sonseca Array**	**26.22**	**156**	P	**P**		**01 02 06.5**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=354,slow=8.4,SNR=8.2							
KOLS	**Kolonicke sedl**	**26.29**	**107**	*e*P	**P**		**01 02 08.8**	**+1.2**
AKASG	**Malin Array Be**	**27.87**	**97**	P	**P**		**01 02 21.6**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=323,slow=9.3,SNR=1.9							
AKBB	**Malin Array Si**	**27.87**	**97**	P	**P**		**01 02 21.8**	**+0.1**
BURAR	**Bucovina Array**	**28.54**	**106**	P	**P**		**01 02 29.1**	**+1.1**
NRIK	**Noril'sk**	**36.51**	**35**	P	**P**		**01 03 37.7**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=344,slow=2.7,SNR=3.7							
NRIK					LR	LR	01 21 27.1	
	comp=Z,33nm,18.4s,baz=194,slow=41							
BRTR	**Keskin Array B**	**38.50**	**105**	P	**P**		**01 03 54.7**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=309,slow=6.9,SNR=3.3							
BRTR	**Keskin Array B**	**38.50**	**105**	P	**P**		**01 03 56.6**	**+2.1**
KIV	**Kislovodsk**	**38.87**	**92**	P	**P**		**01 03 59.3**	**+1.7**
KBZ	**Khabaz**	**39.14**	**92**	P	**P**		**01 03 59.7**	**0.0**
	comp=Z,2.9nm,0.9s,baz=56,slow=24,SNR=8.3							
KOPT	**Kop Dagi**	**41.15**	**98**	P	**P**		**01 04 17.4**	**+0.7**
KOPT					IAmb	IAmb	01 04 32.7	
	comp=Z,9.2nm,1.3s							
WUPA	**West Chester U**	**41.21**	**262**	P	**P**		**01 04 18.1**	**+1.3**
WUPA					IAmb	IAmb	01 04 18.5	
	comp=Z,6.6nm,1.0s							
AKH	**Akhalkalaki**	**41.28**	**94**	P	**P**		**01 04 19.4**	**+1.7**
AKH					IAmb	IAmb	01 04 22.5	
	comp=Z,8.9nm,1.3s							
A21K	**Barrow**	**41.46**	**341**	P	**P**		**01 04 20.2**	**+1.6**
AB05	**Akbulak array**	**42.02**	**73**	P	**P**		**01 04 24.6**	**+1.2**
AB09	**Akbulak array**	**42.02**	**73**	P	**P**		**01 04 23.7**	**+0.4**
AB04	**Akbulak array**	**42.03**	**73**	P	**P**		**01 04 23.5**	**+0.1**
AB02	**Akbulak array**	**42.03**	**73**	P	**P**		**01 04 24.4**	**+0.9**
AB01	**Akbulak array**	**42.03**	**73**	P	**P**		**01 04 24.1**	**+0.6**
AB31	**Akbulak array**	**42.03**	**73**	P	**P**		**01 04 23.7**	**+0.2**
ABKAR	**Akbulak array**	**42.03**	**73**	P	**P**		**01 04 23.8**	**+0.3**
AB03	**Akbulak array**	**42.04**	**73**	P	**P**		**01 04 24.0**	**+0.5**
AB06	**Akbulak array**	**42.04**	**73**	P	**P**		**01 04 23.3**	**-0.2**
AB08	**Akbulak array**	**42.04**	**73**	P	**P**		**01 04 24.1**	**+0.5**
AB07	**Akbulak array**	**42.05**	**73**	P	**P**		**01 04 23.3**	**-0.4**
TIXI	**Tiksi**	**42.09**	**15**	P	**P**		**01 04 25.3**	**+1.7**
M52A	**Chesterland**	**42.35**	**269**	P	**P**		**01 04 25.4**	**-0.7**
H43A	**Windswept, Lux**	**42.74**	**277**	P	**P**		**01 04 26.9**	**-2.4**
TOLK	**Toolik Lake Re**	**42.78**	**336**	P	**P**		**01 04 31.0**	**+1.6**
TOLK					IAmb	IAmb	01 04 32.4	
	comp=Z,8.6nm,1.1s							
GNI	**Garni**	**42.86**	**94**	P	**P**		**01 04 31.7**	**+1.2**
GNI					IAmb	IAmb	01 04 42.8	
	comp=Z,14nm,1.5s							
MARD	**Mardin**	**43.53**	**100**	P	**P**		**01 04 38.1**	**+2.1**
MARD					IAmb	IAmb	01 04 42.4	
	comp=Z,7.7nm,1.1s							
ACSO	**Alum Creek Sta**	**44.12**	**269**	P	**P**		**01 04 40.0**	**-0.6**
ACSO					IAmb	IAmb	01 04 43.4	
	comp=Z,13nm,1.1s							
IL31		**45.71**	**332**	P	**P**		**01 04 54.7**	**+1.9**
IL31					IAmb	IAmb	01 04 59.6	
	comp=Z,6.1nm,1.2s							
ILAR	**Eielson Array**	**45.71**	**332**	P	**P**		**01 04 54.0**	**+1.1**
	comp=Z,2.3nm,1.2s,baz=14,slow=5.7,SNR=8.1							
ILAR				PcP	**PcP**		**01 06 30.1**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=18,slow=3.2,SNR=4.3							
ILAR	**Eielson Array**	**45.71**	**332**	P	**P**		**01 04 53.9**	**+1.0**
ZALV	**Zalesovo Beam**	**47.69**	**51**	P	**P**		**01 05 08.2**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=324,slow=8.6,SNR=2.8							
KURK	**Kurchatov**	**48.16**	**58**	P	**P**		**01 05 12.3**	**+0.2**
KURK					IAmb	IAmb	01 05 13.4	
	comp=Z,3.4nm,0.9s							
T47A	**Sharon Grove**	**48.61**	**270**	P	**P**		**01 05 16.1**	**+0.3**
EGMT	**Eagleton**	**48.87**	**297**	P	**P**		**01 05 18.8**	**+1.0**
GOGA	**Godfrey**	**50.08**	**265**	P	**P**		**01 05 27.2**	**+0.1**
GEYT	**Alibeck**	**50.46**	**83**	P	**P**		**01 05 30.5**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**50.46**	**83**	P	**P**		**01 05 30.2**	**+0.2**
GYA1	**ALIBECK ARRAY**	**50.47**	**83**	P	**P**		**01 05 30.1**	**+0.1**
GYB1	**ALIBECK ARRAY**	**50.47**	**83**	P	**P**		**01 05 29.4**	**-0.6**
KKAR	**Karatay Array**	**51.32**	**70**	P	**P**		**01 05 36.5**	**+0.1**
KK06	**Karatay Array**	**51.33**	**70**	P	**P**		**01 05 36.8**	**+0.3**
YNE	**Yellowstone No**	**51.47**	**295**	P	**P**		**01 05 38.3**	**+0.7**
BOZ	**Bozeman (W)**	**51.60**	**297**	P	**P**		**01 05 39.9**	**+1.3**
BOZ					IAmb	IAmb	01 05 45.8	
	comp=Z,9.6nm,1.3s							
YMP	**Mirror Lake Pl**	**51.75**	**295**	P	**P**		**01 05 40.3**	**+0.4**
K22A	**Casper**	**52.05**	**291**	P	**P**		**01 05 41.5**	**-0.5**
K22A					IAmb	IAmb	01 05 47.5	
	comp=Z,9.2nm,1.4s							
H17A	**Grant Village**	**52.20**	**295**	P	**P**		**01 05 43.6**	**+0.4**
H17A					IAmb	IAmb	01 05 55.5	
	comp=Z,5.9nm,1.3s							
MK31	**Makanchi Array**	**52.77**	**58**	P	**P**		**01 05 46.8**	**-0.3**
MKAR	**Makanchi Array**	**52.77**	**58**	P	**P**		**01 05 47.2**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=319,slow=5.3,SNR=7.1							
MKAR	**Makanchi Array**	**52.77**	**58**	P	**P**		**01 05 47.0**	**-0.2**
TOA0	**Torodi Ar. Sit**	**53.11**	**156**	P	**P**		**01 05 50.1**	**+0.3**
TOA0					IAmb	IAmb	01 05 51.5	
	comp=Z,5.2nm,1.2s							
TORD	**Torodi Ar. Bea**	**53.11**	**156**	P	**P**		**01 05 49.7**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=336,slow=7.9,SNR=7.5							
TORD	**Torodi Ar. Bea**	**53.11**	**156**	P	**P**		**01 05 49.8**	**-0.1**
146A	**Union**	**53.15**	**269**	P	**P**		**01 05 50.3**	**+0.3**
BW06	**Boulder Array**	**53.17**	**293**	P	**P**		**01 05 51.0**	**+0.6**
BW06					IAmb	IAmb	01 05 51.6	
	comp=Z,6.9nm,1.4s							
PD31	**Pinedale Array**	**53.17**	**293**	P	**P**		**01 05 50.8**	**+0.5**
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**		**01 05 50.5**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=56,slow=6.1,SNR=11							
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**		**01 05 50.3**	**0.0**
TUL1	**Leonard**	**53.25**	**277**	P	**P**		**01 05 51.5**	**+0.8**
BTK	**Batken**	**54.00**	**71**	P	**P**		**01 05 57.3**	**+1.0**
BTK					IAmb	IAmb	01 05 58.0	
	comp=Z,6.6nm,1.1s							
CHGR	**Chuyangaron**	**54.51**	**74**	P	**P**		**01 06 00.3**	**+0.3**
Q24A	**Divide**	**54.60**	**287**	P	**P**		**01 06 01.6**	**+0.7**
Q24A					IAmb	IAmb	01 06 05.5	
	comp=Z,4.6nm,0.8s							
GAR	**Garm**	**54.69**	**73**	P	**P**		**01 06 02.5**	**+1.2**
HWUT	**Hardware Ranch**	**54.94**	**294**	P	**P**		**01 06 04.2**	**+1.0**
HWUT					IAmb	IAmb	01 06 22.6	
	comp=Z,6.0nm,1.1s							
MFID	**Camas Ranch**	**55.05**	**298**	P	**P**		**01 06 03.8**	**-0.1**
TCUT	**Toone Canyon**	**55.30**	**294**	P	**P**		**01 06 07.4**	**+1.5**
MPU	**Maple Canyon**	**56.33**	**293**	P	**P**		**01 06 13.6**	**+0.4**
PV16	**Nyswonger Mesa**	**56.69**	**290**	P	**P**		**01 06 15.9**	**+0.1**
PV16					IAmb	IAmb	01 06 23.3	
	comp=Z,4.4nm,1.1s							
PV01	**Paradox Val

TORD	**Torodi Ar. Bea**	**40.00**	**129**	P	P	01 21 03.9	-0.2
	2.9nm,1.2s,baz=313,slow=6.6,SNR=7.6							
PDAR	**Pinedale Array**	**56.57**	**300**	P	P	01 23 12.0	-0.1
	0.2nm,0.5s,baz=82,slow=6.5,SNR=2.1							
ANMO	**Albuquerque**	**58.61**	**290**	LR	LR	01 47 35.8		
	comp=Z,49nm,20.2s,baz=40,slow=35							
TXAR	**Lajitas Array**	**59.80**	**283**	P	P	01 23 34.9	+0.1	
	0.4nm,1.0s,baz=67,slow=6.9,SNR=2.1							
TXAR				LR	LR	01 48 55.4		
	comp=Z,36nm,18.1s,baz=0.0,slow=36							
MKAR	**Makanchi Array**	**71.89**	**42**	P	P	01 24 52.2	-0.1	
	0.6nm,0.8s,baz=301,slow=6.4,SNR=4.2							

TAP 08 01:32:24.2, 24°44N×121°83E, h13km, ML2.4, 3C-2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ENAH	**Nanao**	**0.02**	**309**	⇑*i*	P	Pg	01 32 26.5	0.0
	baz=302							
ENAH				*i*	S	Sg	01 32 28.0	-0.1
	baz=302							
TWC	**Suao**	**0.17**	**6**	⇓*i*	P	Pg	01 32 28.5	+0.3
	baz=17							
TWC					S	Sg	01 32 31.2	+0.2
	baz=17							
ENTT	**Nioudou**	**0.31**	**310**	⇑*i*	P	Pg	01 32 31.1	+0.5
	baz=311							
ENTT				*e*	S	Sg	01 32 35.4	+0.4
	baz=311							
TWE	**Neicheng**	**0.32**	**333**	*i*	P	Pg	01 32 31.2	+0.5
	baz=330							
TWE					S	Sg	01 32 35.3	+0.2
	baz=330							
NDT	**Datong Townshi**	**0.33**	**300**	⇑*i*	P	Pb	01 32 31.5	-0.5
	baz=300							
NDT				*e*	S	Sg	01 32 36.0	+0.5
	baz=300							
NACB	**Ninganchiao**	**0.34**	**219**	⇓*i*	P	Pg	01 32 30.8	-0.3
	baz=212							
NACB					S	Sg	01 32 35.9	+0.2
	baz=212							
ETLH	**Xiulin Townshi**	**0.39**	**234**	*i*	P	Pg	01 32 31.9	-0.2
	baz=234							
ETLH				*e*	S	Sg	01 32 38.0	+0.7
	baz=234							
NNSB	**Datong**	**0.41**	**269**	*i*	P	Pg	01 32 32.6	+0.3
	baz=269							
NNSB				*e*	S	Sg	01 32 37.9	0.0
	baz=269							
TWD	**Chiawan**	**0.41**	**211**	*e*	P	Pg	01 32 32.3	-0.2
	baz=210							
TWD				*e*	S	Sg	01 32 37.6	-0.3
	baz=210							
NNS	**Nan Shan**	**0.41**	**271**	*e*	P	Pg	01 32 32.5	0.0
	baz=270							
NNS				*e*	S	Sg	01 32 38.0	-0.1
	baz=270							
NWLT	**Wulai**	**0.45**	**319**	*e*	P	Pb	01 32 33.6	-0.4
	baz=313							
NWLT				*e*	S	Sg	01 32 39.1	-0.1
	baz=313							
YHNB	**Yeheng**	**0.47**	**300**		P	Pb	01 32 34.1	-0.4
	baz=305							
YHNB					S	Sg	01 32 40.4	+0.5
	baz=305							
NSK	**Sanguang**	**0.49**	**299**	*e*	P	Pg	01 32 34.3	+0.4
	baz=300							
NSK				*e*	S	Sg	01 32 40.7	+0.3
	baz=300							
TIPB	**Shuangxi**	**0.53**	**360**	*e*	P	Pb	01 32 35.3	-0.2
	baz=360							
TIPB				*e*	S	Sg	01 32 42.1	+0.2
	baz=360							
FUSS	**Fushou**	**0.56**	**251**		P	Pb	01 32 35.8	-0.4
	baz=251							
FUSS				*e*	S	Sg	01 32 43.5	+0.6
	baz=251							
WHF	**Hehuan Shan**	**0.59**	**241**		P	Pg	01 32 35.8	-0.1
	baz=240							
WHF				*e*	S	Sg	01 32 44.1	+0.4
	baz=240							
TWT	**Tachien**	**0.62**	**253**	*e*	P	Pb	01 32 36.8	-0.2
	baz=246							
TWT				*e*	S	Sb	01 32 45.7	-0.1
	baz=246							
NWF	**Wu-fen Shan**	**0.63**	**356**	*e*	P	Pb	01 32 37.6	+0.4
	baz=347							
NWF				*e*	S	Sb	01 32 45.6	-0.4
	baz=347							
WFSB	**Wu-fen Shan**	**0.63**	**356**	*e*	P	Pb	01 32 36.9	-0.3
	baz=347							
WFSB				*e*	S	Sb	01 32 45.5	-0.4
	baz=347							
TDCB	**Techi**	**0.64**	**254**		P	Pb	01 32 37.0	-0.3
	baz=246							
TDCB				*e*	S	Sg	01 32 45.2	+0.1
	baz=246							
CHGB	**Renai**	**0.70**	**238**		P	Pg	01 32 38.1	+0.2
	baz=238							
CHGB				*e*	S	Sg	01 32 47.0	-0.2
	baz=238							
ESL	**Shilin**	**0.72**	**210**	*e*	P	Pg	01 32 37.4	-0.7
	baz=209							
LIOB	**Emei**	**0.77**	**286**	*e*	P	Pn	01 32 40.3	-0.5
	baz=291							
NSTT	**Nanjuang**	**0.78**	**285**	*e*	P	Pn	01 32 40.6	-0.3
	baz=285							
NSTT				*e*	S	Sb	01 32 50.8	+0.7
	baz=285							
VWDT	**VWDT**	**0.93**	**223**	*e*	P	Pg	01 32 41.6	-0.5
	baz=216							
VWDT				*e*	S	Sg	01 32 54.0	-0.2
	baz=216							
HGSD	**Ruisui**	**1.01**	**202**	*e*	P	Pb	01 32 43.2	-0.4
	baz=216							
SSLB	**Suanglung**	**1.03**	**231**	*e*	P	Pb	01 32 43.6	-0.3
	baz=231							
SSLB				*e*	S	Sb	01 32 56.3	-1.0
	baz=231							
TYC	**Yuchr**	**1.03**	**239**	*e*	P	Pb	01 32 43.7	-0.3
	baz=238							
YULB	**Yu-li**	**1.15**	**205**	*e*	P	Pb	01 32 45.6	-0.4
	baz=215							
TWF1	**Yuli**	**1.18**	**204**	*e*	P	Pn	01 32 45.4	-1.1
	baz=214							
ALS	**Alishan**	**1.31**	**226**	*e*	P	Pg	01 32 49.2	-0.3
	baz=210							
CHN4	**Tsaushan**	**1.56**	**227**	*e*	P	Pg	01 32 54.7	+0.4
	baz=225							

JMA 08 01:32:53.3±0.2, 24°33N×123°59E, h13km±1km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IRIF	**Iriomote-Funau**	**0.13**	**88**	P		Pg	01 32 56.6	0.0
IRIF				*e*	S	Sg	01 32 59.0	0.0
HATJ	**Hateruma jima**	**0.34**	**144**	P		Pg	01 33 00.0	-0.1
HATJ				*e*	S	Sg	01 33 04.6	-0.1
JKRS	**Kuro-shima**	**0.39**	**103**	P		Pg	01 33 01.2	0.0
JIJ	**Ishigaki jima**	**0.51**	**86**	P		Pg	01 33 03.0	-0.2
JIJ				S		Sg	01 33 09.9	-0.1

*IDC **08** 01:39:41.1±0.9, 7°28S×155°08E, h0km, mb4.0/9, mb1 4.1/12, mb1mx3.9/39, mbtmp4.0/12, ML2.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.7/35, Error ellipse: s-maj=28.1km s-min=19.0km az=125.0*

*NEIC **08** 01:39:42.7±1.1, 7°38S±0°07×155°10E±0°06, h10km±1km, mb4.3/9, Error ellipse: s-maj=14.4km s-min=7.6km az=145.0*

ISC 08 01:39:42.3±0.6, 7°24S±0°08×155°10E±0°08, h10km, n30, σ1§32/32, mb4.2/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RABL	**Rabaul**	**4.21**	**316**	Pn		**Pn**	**01 40 45.0**	**-1.6**
KRVT	**Keravat (AS076**	**4.22**	**313**	Pn		**Pn**	**01 40 47.8**	**+1.0**
	19nm,0.3s,baz=290,slow=23,SNR=1.9							
KRVT				Sn		**Sn**	**01 41 32.2**	**-4.1**
	57nm,0.3s,baz=277,slow=12,SNR=2.0							
HNR	**Honiara**	**5.27**	**115**	LR		LR	01 43 17.6	
	comp=Z,144nm,18.6s,baz=250,slow=41							
HNR	**Honiara**	**5.27**	**115**	Pn		**Pn**	**01 40 59.0**	**-2.2**
PMG	**Port Moresby**	**8.15**	**254**	Pn		**Pn**	**01 41 39.0**	**-1.7**
	2.1nm,0.3s,baz=72,slow=6.4,SNR=2.0							
PMG				Sn		**Sn**	**01 43 15.2**	**+2.2**
	1.8nm,0.3s,baz=151,slow=20,SNR=4.9							
CTA	**Charters Tower**	**15.38**	**213**	Pn		**Pn**	**01 43 18.3**	**-1.4**
	0.1nm,0.3s,baz=28,slow=18,SNR=1.3							
WR0	**Warramunga Arr**	**23.61**	**236**	P		**P**	**01 44 53.6**	**-0.1**
WR0				IAmb		IAmb	01 45 15.6	
	comp=Z,5.2nm,0.8s							
WB0	**Warramunga Arr**	**23.64**	**236**	P		**P**	**01 44 53.8**	**-0.2**
WB0				IAmb		IAmb	01 45 15.2	
	comp=Z,6.8nm,1.1s							
WB2	**Warramunga Arr**	**23.75**	**236**	P		**P**	**01 44 53.3**	**-1.8**
WB2				IAmb		IAmb	01 45 30.1	
	comp=Z,16nm,1.5s							
WRA	**Warramunga Arr**	**23.76**	**236**	P		**P**	**01 44 54.6**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=57,slow=9.3,SNR=12							
WRA				PcP		**PcP**	**01 48 39.1**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=60,slow=2.2,SNR=1.9							
AS31	**Alice Springs**	**26.09**	**229**	P		**P**	**01 45 16.2**	**-0.3**
ASAR	**Alice Springs**	**26.09**	**229**	P		**P**	**01 45 16.4**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=64,slow=7.4,SNR=7.2							
STKA	**Stephens Creek**	**27.56**	**205**	P		**P**	**01 45 30.5**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=19,slow=11,SNR=6.3							
STKA				LR		LR	01 55 56.2	
	comp=Z,90nm,19.1s,baz=25,slow=35							
ASAJ	**Asahikawa**	**52.35**	**349**	LR		LR	02 08 22.1	
	comp=Z,23nm,19.6s,baz=88,slow=33							
CM31	**Chiang Mai Arr**	**60.98**	**296**	P		**P**	**01 49 56.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**60.98**	**296**	P		**P**	**01 49 57.2**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=121,slow=6.0,SNR=5.7							
SONM	**Songino Array**	**69.60**	**327**	P		**P**	**01 50 52.9**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=132,slow=6.3,SNR=1.7							
IMAR	**Indian Mountai**	**81.92**	**19**	P		**P**	**01 52 03.4**	**+1.5**
IL31		**83.56**	**21**	P		**P**	**01 52 11.3**	**+0.9**
ILAR	**Eielson Array**	**83.56**	**21**	P		**P**	**01 52 10.6**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=242,slow=5.3,SNR=26							
ILAR	**Eielson Array**	**83.56**	**21**	P		**P**	**01 52 10.4**	**0.0**
MK31	**Makanchi Array**	**83.66**	**319**	P		**P**	**01 52 12.5**	**+1.2**
MK31				IAmb		IAmb	01 52 12.9	
	comp=Z,1.5nm,0.8s							
MKAR	**Makanchi Array**	**83.66**	**319**	P		**P**	**01 52 12.2**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=102,slow=5.7,SNR=11							
MAKZ	**Makanchi**	**83.87**	**319**	P		**P**	**01 52 13.0**	**+0.6**
MAKZ				IAmb		IAmb	01 52 24.3	
	comp=Z,2.0nm,0.8s							
ZALV	**Zalesovo Beam**	**84.44**	**326**	P		**P**	**01 52 15.3**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=99,slow=4.7,SNR=2.6							
BCAR	**Beaver Creek A**	**84.67**	**24**	P		**P**	**01 52 17.7**	**+1.5**
NVAR	**Mina Array Bea**	**91.79**	**52**	P		**P**	**01 52 52.0**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=253,slow=5.6,SNR=3.7							
BDFB	**Brasilia**	**147.73**	**135**	PKPbc		**PKPbc**	**01 59 28.3**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=215,slow=18,SNR=4.5							
TORD	**Torodi Ar. Bea**	**153.19**	**285**	PKP		**PKPdf**	**01 59 34.1**	**0.0**
	comp=Z,0.3nm,0.7s,baz=38,slow=1.8,SNR=2.3							
TORD				PKPbc		**PKPbc**	**01 59 41.9**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=54,slow=2.5,SNR=13							
TORD	**Torodi Ar. Bea**	**153.19**	**285**			**PKiKP**	**01 59 42.1**	**+0.4**

*KRNET **08** 01:51:20.6±0.1, 41°20N×71°52E, h17km, mb2.9*

*NNC **08** 01:51:20.9±2.1, 41°13N×71°49E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=17.6km s-min=6.1km az=0.0*

*SOME **08** 01:51:21.0, 41°17N×71°50E, h10km*

ISC 08 01:51:21.9±1.4, 41°10N±0°04×71°44E±0°03, h7km±13km, n26, σ1§34/46, 16C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BTK	**Batken**	**1.15**	**204**	⇑*i*	P	**Pg**	**01 51 44.3**	**+0.5**
BTK	baz=5.0			⇑*i*	S	**Sn**	**01 52 02.1**	**+1.7**
	baz=5.0							
OHH	**Osh**	**1.18**	**119**	⇑*i*	P	**Pn**	**01 51 42.9**	**-2.0**
	baz=25							
OHH				⇑*i*	S	**Sg**	**01 51 59.3**	**-0.4**
	baz=25							
IUG	**Iuzhnay**	**1.48**	**315**	⇑*e*	P	**Pn**	**01 51 48.5**	**-0.7**
	43nm,0.2s							
IUG				*e*	S	**Sn**	**01 52 08.1**	**-0.8**
	297nm,0.4s							
IUG	**Iuzhnay**	**1.48**	**315**		P	**Pn**	**01 51 48.5**	**-0.7**
	44nm,0.2s							
IUG					S	**Sn**	**01 52 08.1**	**-0.8**
	297nm,0.4s							
MNAS	**Manas**	**1.60**	**30**	⇑*i*	P	**Pn**	**01 51 49.0**	**-1.7**
	baz=30							
MNAS				⇑*i*	S	**Sn**	**01 52 09.4**	**-2.3**
	baz=30							
TAS	**Tashkent**	**1.63**	**279**	⇑*i*	P	**Pb**	**01 51 51.7**	**-0.6**
	baz=75							
TAS				⇑*i*	S	**Sg**	**01 52 14.7**	**+0.4**
	baz=75							
AML	**Almayashu**	**1.98**	**58**	⇓*i*	P	**Pn**	**01 51 55.4**	**-0.8**
	baz=60							
AML				⇓*i*	S	**Sn**	**01 52 21.2**	**-0.3**
	baz=60							
KK31	**Karatay Array**	**2.12**	**341**	Pn		**Pb**	**01 51 58.8**	**-1.8**
	4.8nm,0.5s,baz=166,slow=16,SNR=62							
KK31				⇑Sn		**Sb**	**01 52 26.6**	**-0.4**
	9.3nm,0.5s,baz=160,slow=25,SNR=17							
MRKS	**Merke**	**2.12**	**39**	*e*	P	**Pb**	**01 51 59.1**	**-1.5**
	6.7nm,0.2s							
MRKS				*e*	S	**Sb**	**01 52 26.6**	**-0.6**
	18nm,0.3s							
MRKS	**Merke**	**2.12**	**39**	Pg		**Pb**	**01 51 59.0**	**-1.7**
	6.7nm,0.2s							
MRKS				Lg		Lg	01 52 26.6	
	18nm,0.3s							
BRLS	**Borolday**	**2.27**	**329**	*e*	P	**Pn**	**01 52 00.2**	**+0.4**
	14nm,0.2s							
BRLS				*e*	S	**Sn**	**01 52 28.1**	**0.0**
	47nm,0.4s							
BRLS	**Borolday**	**2.27**	**329**	Pg		**Pn**	**01 52 00.2**	**+0.4**
	18nm,0.3s							
BRLS				Lg		Lg	01 52 28.1	
	47nm,0.4s							
GAR	**Garm**	**2.27**	**203**	⇓*i*	P	**Pb**	**01 52 02.8**	**-0.5**
	baz=3.0							
GAR				⇓*i*	S	**Sg**	**01 52 33.7**	**-1.0**
	baz=3.0							
ARLS	**Aral**	**2.30**	**70**	⇓*i*	P	**Pn**	**01 52 00.2**	**-0.2**
	baz=71							
ARLS				⇓*i*	S	**Sn**	**01 52 29.8**	**+0.8**
	baz=71							
EKS2	**Erkin-Say**	**2.34**	**48**	⇑*i*	P	**Pn**	**01 52 00.7**	**-0.3**
	baz=48							
EKS2				⇑*i*	S	**Sn**	**01 52 29.8**	**-0.3**
	baz=48							
KBK	**Karagaybulak**	**3.05**	**58**	⇑*e*	P	**Pn**	**01 52 10.5**	**-0.2**
	baz=59							
KBK				⇑*i*	S	**Sn**	**01 52 47.0**	**-0.6**
	baz=59							
CHMS	**Chumysh**	**3.11**	**51**	⇓*i*	P	**Pn**	**01 52 11.3**	**-0.2**
	baz=52							
CHMS				⇓*i*	S	**Sn**	**01 52 48.6**	**-0.3**
	baz=52							
USP	**Ospenovka**	**3.14**	**45**	⇓*i*	P	**Pn**	**01 52 11.4**	**-0.5**
	baz=46							
USP				⇓*i*	S	**Sn**	**01 52 48.9**	**-0.8**
	baz=46							
SGDS	**Sogindy**	**3.34**	**44**	Pg		**Pb**	**01 52 20.0**	**-1.4**
	2.1nm,0.4s							
SGDS				Lg		Lg	01 53 02.5	
	4.4nm,0.5s							
TKM2	**Tokmak 2**	**3.59**	**58**	⇑*i*	P	**Pn**	**01 52 18.0**	**-0.2**
	baz=59							
TKM2				⇑*i*	S	**Sn**	**01 53 00.3**	**-0.8**
	baz=59							
DGS	**Degeres**	**3.87**	**55**	*e*	P	**Pb**	**01 52 30.2**	**-0.3**
	3.9nm,0.6s							
DGS				*e*	S	**Sb**	**01 53 19.8**	**+2.3**
	5.3nm,0.7s							
DGS	**Degeres**	**3.87**	**55**	Pg		**Pb**	**01 52 30.2**	**-0.3**
	3.9nm,0.6s							
DGS				Lg		Lg	01 53 19.8	
	5.3nm,0.7s							
KST	**Kastek**	**3.89**	**59**	*e*	P	**Pb**	**01 52 30.8**	**-0.1**
	0.8nm,0.2s							
KST				*e*	S	**Sb**	**01 53 20.6**	**+2.4**
	7.8nm,0.6s							
KST	**Kastek**	**3.89**	**59**	Pg		**Pb**	**01 52 30.8**	**-0.1**
	1.3nm,0.5s							
KST				Lg		Lg	01 53 20.6	
	7.4nm,0.6s							
BTLS	**Baital**	**4.38**	**25**	*e*	P	**Pb**	**01 52 40.3**	**+1.2**
BTLS	2.6nm,0.7s			*e*	S	**Sb**	**01 53 37.3**	**+5.2**
	5.4nm,0.5s							
BTLS	**Baital**	**4.38**	**25**	Pg		**Pb**	**01 52 40.3**	**+1.2**
	2.6nm,0.7s							
BTLS				Lg		Lg	01 53 37.3	
	5.4nm,0.5s							

*REN **08** 01:51:57.9±2.1, 41°87N±0°04×119°64W±0°04, h1km±7km, ML2.9/4, Error ellipse: s-maj=5.7km s-min=4.3km az=215.0*

*NEIC **08** 01:51:58.5±2.8, 41°94N±0°02×119°65W±0°04, h5km±7km, Error ellipse: s-maj=4.7km s-min=0.8km az=123.0*

*ANF **08** 01:51:59.6±1.3, 41°76N×119°69W, h16km±15km, ML2.9/7, Error ellipse: s-maj=19.0km s-min=6.2km az=99.0*

ISC 08 01:51:59.0±1.3, 41°93N±0°03×119°69W±0°03, h13km±10km, n43, σ1§06/51, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MOD	**Modoc Plateau**	**0.46**	**267**			**Pg**	**01 52 07.7**	**-0.4**
MOD						**Sg**	**01 52 14.6**	**+0.4**
K05A	**Summer Lake**	**1.20**	**312**			**Pg**	**01 52 21.8**	**-0.3**
M04C	**Macdoel**	**1.61**	**266**	P		**Pn**	**01 52 27.0**	**-0.3**
	baz=86,SNR=69							
M04C				S		**Sb**	**01 52 50.4**	**+1.3**
	baz=86							
K04D	**Chiloquin, OR**	**1.68**	**295**	P		**Pn**	**01 52 29.6**	**+1.3**
	baz=115,SNR=18							
K04D				S		**Sg**	**01 52 53.3**	**+0.2**
	baz=115							
J08A	**Circle Bar Ran**	**1.69**	**32**	Pn		**Pb**	**01 52 29.4**	**-0.7**
J05D	**Fort Rock, OR**	**1.77**	**320**	P		**Pb**	**01 52 31.6**	**+0.1**
	baz=140,SNR=38							
J05D				S		**Sg**	**01 52 55.7**	**-0.3**
	baz=140							
BMRR	**Black Mountain**	**1.87**	**194**			**Pn**	**01 52 31.5**	**+0.5**
L04D	**Klamath Falls**	**1.97**	**279**	P		**Pn**	**01 52 31.9**	**-0.3**
	baz=99,SNR=8.9							
L04D				S		**Sn**	**01 52 58.0**	**+1.1**
	baz=99							
WVA	**Winnemucca Val**	**1.98**	**183**			**Pn**	**01 52 33.7**	**+1.2**
PINE	**Pine Mountain**	**2.08**	**334**			**Pb**	**01 52 36.5**	**-0.2**
BEKR	**Beckworth**	**2.12**	**194**			**Pn**	**01 52 34.9**	**+0.5**
I07A	**Izee**	**2.16**	**4**	Pn		**Pn**	**01 52 36.5**	**+1.6**
J04D	**Umpqua Nationa**	**2.21**	**307**	P		**Pb**	**01 52 39.0**	**0.0**
	baz=126,SNR=9.0							
J04D				S		**Sb**	**01 53 06.1**	**-0.4**
	baz=126							
PAHR	**Pah Rah Range**	**2.23**	**174**			**Pn**	**01 52 35.5**	**-0.4**
YBH	**Yreka Blue Hor**	**2.27**	**266**			**Pn**	**01 52 38.5**	**+2.2**
O03E	**Paynes Creek**	**2.28**	**225**	P		**Pn**	**01 52 36.1**	**-0.4**
	baz=45,SNR=5.5							
O03E				S		**Sn**	**01 53 02.4**	**-2.2**
	baz=45							
LOY	**Loyalton**	**2.31**	**191**			**Pn**	**01 52 39.2**	**+2.3**
PEAR	**Peavine Mounta**	**2.33**	**185**			**Pb**	**01 52 40.1**	**-0.9**
KBF	**Kyburz Flat**	**2.45**	**189**			**Pb**	**01 52 43.0**	**-0.1**
N02D	**Trinity Center**	**2.46**	**248**	Pb		**Pb**	**01 52 42.1**	**-1.0**
	baz=68,SNR=9.3							
N02D				S		**Sn**	**01 53 08.0**	**-0.9**
	baz=68							
HUMO	**Hull Mountain**	**2.52**	**287**			**Pb**	**01 52 42.8**	**-1.3**
IND	**Independence**	**2.53**	**191**			**Pb**	**01 52 44.3**	**-0.2**
WDC	**Whiskeytown Da**	**2.54**	**239**			**Pn**	**01 52 40.2**	**+0.3**
VCNR	**Virginia City**	**2.63**	**179**	Pn		**Pn**	**01 52 41.1**	**-0.3**
PNTR	**Pine Nut**	**2.84**	**179**	Pn		**Pn**	**01 52 44.4**	**+0.1**
RUBR	**Rubicon Trail**	**2.90**	**187**	Pn		**Pn**	**01 52 44.5**	**-0.5**
L02E	**Cave Junction**	**2.92**	**276**	P		**Pn**	**01 52 46.1**	**+0.8**
	baz=94,SNR=7.1							
K02D	**Willamette Mer**	**3.04**	**286**	P		**Pn**	**01 52 48.7**	**+1.7**
	baz=104,SNR=31							
KVN	**Kaiserville**	**3.12**	**157**	Pn		**Pn**	**01 52 47.9**	**-0.3**
AFDM	**Forest Hills D**	**3.13**	**199**			**Pb**	**01 52 56.3**	**+1.7**
MFID	**Camas Ranch**	**3.21**	**61**	Pn		**Pn**	**01 52 49.8**	**+0.5**
RYN	**Ryan**	**3.42**	**164**	Pn		**Pn**	**01 52 51.2**	**-1.0**
WAKR	**Walker**	**3.43**	**177**	Pn		**Pn**	**01 52 51.0**	**-1.4**
NVAR	**Mina Array Bea**	**3.65**	**163**	Pg		**Pb**	**01 53 05.8**	**+2.2**
CMB	**Columbia Colle**	**3.93**	**188**			**Pb**	**01 53 08.7**	**+0.6**
MDPB	**Devils Postpil**	**4.32**	**174**	Pn		**Pn**	**01 53 04.1**	**-0.6**
BGU	**Big Grassy Mou**	**5.11**	**99**	Pn		**Pn**	**01 53 14.4**	**-1.0**
HVU	**Hansel Valley**	**5.17**	**89**	Pn		**Pn**	**01 53 15.9**	**-0.3**
BCYI	**Bear Canyon**	**5.18**	**61**	Pn		**Pn**	**01 53 16.6**	**+0.1**
PSUT	**Pine Spring**	**5.61**	**125**	Pn		**Pn**	**01 53 21.5**	**-0.9**
MSO	**Missoula**	**6.40**	**38**	Pn		**Pn**	**01 53 34.5**	**+1.4**
CCUT	**Cedar City**	**6.55**	**130**	Pn		**Pn**	**01 53 33.6**	**-1.7**
B06A	**Marblemount**	**6.71**	**350**	Pn		**Pn**	**01 53 38.0**	**+0.7**

*IDC **08** 02:10:21.2±1.9, 42°60N×79°94E, h0km, mb3.9/1, mb1 3.7/4, mb1mx3.4/42, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=44.8km s-min=17.1km az=127.0*

*SOME **08** 02:10:24.1, 42°58N×80°17E, h25km*

*NNC **08** 02:10:24.5±1.1, 42°65N×80°12E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=7.2km s-min=5.9km az=32.0*

*KRNET **08** 02:10:24.6±0.1, 42°59N×80°12E, h23km, mb4.1*

*BJI **08** 02:10:24.1±0.0, 42°55N×80°27E, h4km, ML3.3/8*

ISC 08 02:10:23.8±1.6, 42°62N±0°05×80°14E±0°04, h2km±10km, n56, σ1§75/104, 26C-29D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHLS	**Shalkode**	**0.73**	**317**	⇓*e*	P	**Pg**	**02 10 36.4**	**-1.5**
	baz=43							
SHLS				⇓*e*	S	**Sg**	**02 10 45.4**	**-2.0**
	baz=43							
SHLS	**Shalkode**	**0.73**	**317**	⇓*e*	P	**Pg**	**02 10 36.4**	**-1.5**
	3µm,0.1s							
SHLS				*e*	S	**Sg**	**02 10 45.3**	**-2.0**
	2µm,0.2s							
KTMS	**Ketmen**	**0.84**	**11**	⇓*e*	P	**Pg**	**02 10 40.8**	**+0.9**
	baz=11							
KTMS				⇓*e*	S	**Sg**	**02 10 52.8**	**+2.0**
	baz=11							
KTMS	**Ketmen**	**0.84**	**11**	⇓*e*	P	**Pg**	**02 10 40.8**	**

MNBS Baschi 1.93 319 *e*P Pn 02 10 59.1 +1.4
161nm,0.2s
MNBS *e*S Sb 02 11 24.8 +0.5
2µm,0.3s
KDJ Kajisay 2.25 258⇑ *e*P Pn 02 11 03.1 +0.9
baz=59
KDJ ⇑*i*S Sn 02 11 31.4 +0.9
baz=59
KOTS Kotyrbulak 2.31 286 *e*P Pn 02 11 05.5 +2.6
219nm,0.2s
KOTS *e*S Sb 02 11 36.2 +1.0
840nm,0.4s
ARXS Arharly 2.32 314 *e*P Pb 02 11 06.0 -0.3
41nm,0.2s
ARXS *e*S Sb 02 11 36.1 +0.6
318nm,0.2s
MDOK Medeo 2.34 284 *e*P Pn 02 11 05.5 +2.1
83nm,0.2s
MDOK *e*S Sb 02 11 35.9 -0.1
219nm,0.4s
TNSS Tian-Shan 2.39 281 *e*P Pn 02 11 06.6 +2.4
129nm,0.2s
TNSS *e*S Sb 02 11 37.9 +0.2
123nm,0.2s
KNDC Almaty 2.41 285 ⇓Pg Pn 02 11 06.5 +2.3
56nm,0.5s
KNDC ⇑Lg Lg 02 11 39.4
445nm,0.8s
AAA Alma-Ata 2.44 285 *e*P Pb 02 11 08.3 -0.1
125nm,0.2s
AAA *e*S Sb 02 11 40.5 +1.5
221nm,0.3s
IZV Izvestkoviy 2.63 280 *e*P Pb 02 11 11.3 -0.3
40nm,0.1s
IZV *e*S Sb 02 11 45.1 +0.7
342nm,0.3s
TDK Taldyqorghan 2.69 333 *e*P Pb 02 11 12.1 -0.5
86nm,0.3s
TDK *e*S Sb 02 11 46.9 +0.8
338nm,0.2s
KTBS Karatobe 2.75 294 *e*P Pb 02 11 13.5 -0.3
17nm,0.1s
KTBS *e*S Sb 02 11 48.8 +0.8
408nm,0.4s
MTBS Maitube 2.77 282 *e*P Pb 02 11 13.4 -0.7
32nm,0.2s
MTBS *e*S Sb 02 11 48.7 +0.1
144nm,0.3s
ULHL Ulahol 2.91 264 ⇓*i*P Pn 02 11 12.2 +0.9
baz=64
ULHL ⇓*i*S Sn 02 11 47.6 +0.7
baz=64
KUU Kurty 3.05 296 *e*P Pb 02 11 18.8 -0.1
5.2nm,0.2s
KUU *e*S Sb 02 11 57.9 +1.3
140nm,0.3s
KST Kastek 3.10 279 *e*P Pb 02 11 19.3 -0.5
48nm,0.2s
KST *e*S Sb 02 11 59.4 +1.3
151nm,0.5s
BOOM Boomskoye usch 3.11 269 ⇓*i*P Pn 02 11 14.7 +0.8
baz=70
BOOM ⇓*i*S Sn 02 11 52.1 +0.4
baz=70
DGS Degeres 3.27 282 *e*P Pb 02 11 22.5 -0.1
26nm,0.4s
DGS *e*S Sb 02 12 04.2 +1.4
83nm,0.3s
TKM2 Tokmak 2 3.36 277 ⇓*e*P Pn 02 11 18.4 +0.9
baz=77
TKM2 ⇓*i*S Sn 02 11 58.3 +0.3
baz=77
TKM2 Tokmak 2 3.36 277 ⇑Pn Pn 02 11 18.9 +1.4
8.0nm,0.4s
TKM2 ⇓Lg Lg 02 12 07.3
48nm,0.4s
KRBS Karabastau 3.44 290 *e*P Pb 02 11 25.5 +0.1
10nm,0.2s
KRBS *e*S Sb 02 12 09.4 +1.7
56nm,0.2s
KBK Karagaybulak 3.83 272 ⇑*i*P Pn 02 11 24.9 +1.0
baz=73
KBK ⇑*i*S Sn 02 12 09.7 +0.1
baz=73
CHMS Chumysh 3.98 277 ⇑*e*P Pn 02 11 26.9 +1.0
baz=78
CHMS ⇑*i*S Sn 02 12 13.0 -0.1
baz=78
FRU1 Bishkek 4.07 274 ⇓*e*P Pn 02 11 28.2 +1.2
baz=75
FRU1 ⇑*i*S Sn 02 12 14.9 -0.3
baz=75
UCH Uchtor 4.18 266 ⇑*i*P Pn 02 11 29.9 +0.9
baz=67
UCH ⇑*e*S Sn 02 12 18.1 -0.6
baz=67
USP Ospenovka 4.19 281 ⇑*e*P Pn 02 11 30.2 +1.5
baz=81
USP ⇑*i*S Sn 02 12 18.6 +0.3
baz=81
MAKZ Makanchi 4.38 17 ⇑Pn Pn 02 11 32.9 +1.6
1.8nm,0.2s
MAKZ ⇑Sn Sn 02 12 24.3 +1.3
7.5nm,0.4s
MAKZ ⇓Lg Lg 02 12 40.8
11nm,0.4s
ARLS Aral 4.39 262 ⇑*i*P Pn 02 11 32.4 +0.9
baz=62
ARLS ⇑*i*S Sn 02 12 23.4 +0.2
baz=62
MK31 Makanchi Array 4.44 19 ⇑Pn Pn 02 11 33.5 +1.3
2.0nm,0.2s,baz=202,slow=13,SNR=301
MK31 ⇑Sn Sn 02 12 24.7 +0.2
5.6nm,0.3s,baz=201,slow=25,SNR=6.2
MK31 ⇓Lg Lg 02 12 41.8
36nm,0.8s,baz=205,slow=28,SNR=9.5
MKAR Makanchi Array 4.44 19 Pn Pn 02 11 33.5 +1.3
7.2nm,0.3s,baz=203,slow=13,SNR=376
MKAR Sn Sn 02 12 25.8 +1.3
8.7nm,0.3s,baz=202,slow=26,SNR=10.0
MKAR Lg Lg 02 12 42.9
7.2nm,0.3s,baz=203,slow=30,SNR=7.8
EKS2 Erkin-Say 4.70 273 ⇓*i*P Pn 02 11 37.1 +1.4
baz=73
EKS2 ⇓*i*S Sn 02 12 30.1 -0.7
baz=73
AML Almayashu 4.80 266 ⇓*e*P Pn 02 11 38.7 +1.3
baz=67
AML ⇓*e*S Sn 02 12 33.3 -0.5
baz=67
BTLS Baital 5.03 301 *e*P Pb 02 11 55.1 +2.6
2.0nm,0.2s
BTLS *e*S Sb 02 13 00.0 +6.7
12nm,0.2s
MRKS Merke 5.10 274 *e*P Pb 02 11 56.0 +2.3
12nm,0.5s
MRKS *e*S Sb 02 13 01.8 +6.3
20nm,0.3s
WMQ Urumqi 5.65 75 *e*Pn Pn 02 11 51.0 +2.2
WMQ smax smax
comp=N,33nm,1.1s
WMQ smax smax
comp=E,26nm,0.9s
ZSN Zaisan 5.87 33 *e*P Pb 02 12 11.3 +4.4
3.9nm,0.2s
ZSN *e*S Sg 02 13 28.0 -4.4
17nm,0.4s
KK31 Karatay Array 7.09 277 ⇑Pg Pg 02 12 36.7 -3.0
0.8nm,0.4s,baz=91,slow=14,SNR=4.4
KK31 Lg Lg 02 14 07.5
4.0nm,0.5s,baz=95,slow=26,SNR=3.6
KURBB Kurchatov Arra 8.08 353 ⇑Pg Pb 02 12 41.6 -2.8
2.2nm,0.5s
KURBB ⇑Lg Lg 02 14 40.8
31nm,0.7s
ZALV Zalesovo Beam 11.75 14 Pn Pn 02 13 12.3 +0.1
0.2nm,0.3s,baz=204,slow=14,SNR=3.3
ZALV Sn Sn 02 15 18.2 -5.7
0.3nm,0.3s,baz=192,slow=26,SNR=3.1
ZALV Lg Lg 02 16 33.6
baz=196,slow=26,SNR=1.0
SONM Songino Array 19.17 65 P P 02 14 47.5 -1.1
0.2nm,0.3s,baz=277,slow=12,SNR=5.7
HHC Hu-ho-hao-te 23.45 84 *e*P P 02 15 37.4 +2.9
TORD Torodi Ar. Bea 72.75 272 P P 02 21 50.5 -3.2
0.6nm,0.5s,baz=44,slow=5.4,SNR=14

*CRAAG **08** 02:18:01.3, 36°.24N×2°.89E, Ml2.6*
*MDD **08** 02:18:02.4±0.5, 36°.27N×2°.89E, h0km, mb3.6/14, Error ellipse: s-maj=8.3km s-min=4.2km az=38.0, PRXIMO*
ISC 08 02:18:01.2±1.0, 36°.26N±0°.05×2°.95E±0°.04, h10km, n28, σ1°.69/37, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMHD	**Djebel Mahouad**	**0.06**	**180**	P	**Pg**	**02 18 04.0**	**+0.5**
EMHD	**Djebel Mahouad**	**0.06**	**180**	P	**Pg**	**02 18 04.0**	**+0.5**
ADJB	**Djebel Djouab**	**0.41**	**105**	P	**Pg**	**02 18 10.7**	**+1.5**
ADJB	**Djebel Djouab**	**0.41**	**105**	P	**Pg**	**02 18 10.7**	**+1.5**
EBNR	**Beni Rached**	**1.15**	**272**	P	Pn	02 18 28.5	+5.1
ECHA	**Ech Chlef**	**1.29**	**265**	P	**Pb**	**02 18 25.5**	**0.0**
ECHF	**Ech Chlef**	**1.31**	**266**	P	**Pn**	**02 18 25.5**	**-0.1**
EANR	**'Ain N'Sour**	**1.53**	**259**	P	**Pg**	**02 18 33.1**	**+2.5**
EANR	**'Ain N'Sour**	**1.53**	**259**	P	**Pg**	**02 18 33.1**	**+2.5**
OKGL	**Djebel Kef Gue** 3.9nm,0.1s,SNR=7.9	**1.88**	**264**	P	**Pn**	**02 18 32.8**	**-0.7**
OKGL	25nm,0.8s,SNR=7.9			S	**Sn**	**02 18 57.4**	**+0.1**
EIBI	**Ibiza** 2.1nm,0.1s,SNR=7.6	**3.04**	**336**	P	**Pn**	**02 18 50.7**	**+1.3**
EIBI	12nm,0.7s,SNR=7.9			S	**Sn**	**02 19 24.0**	**-1.8**
EBEN2	**Beniarda presa** 1.3nm,0.2s,SNR=7.9	**3.47**	**315**	P	**Pn**	**02 18 55.6**	**+0.3**
EBEN2	27nm,0.8s,SNR=7.9			S	**Sn**	**02 19 33.8**	**-2.7**
ETOS	**Mallorca** 5.0nm,0.3s,SNR=12	**3.50**	**358**	P	**Pn**	**02 18 57.1**	**+1.3**
ETOS	9.1nm,0.5s,SNR=142			S	**Sn**	**02 19 34.2**	**-3.0**
EMUR	**La Murta** 1.8nm,0.4s,SNR=7.9	**3.71**	**296**	P	**Pn**	**02 18 58.9**	**+0.3**
EMUR	12nm,0.6s,SNR=7.9			S	**Sn**	**02 19 40.9**	**-1.4**
ETOB	**Tobarra** 1.2nm,0.2s,SNR=11	**4.30**	**305**	P	**Pn**	**02 19 06.9**	**+0.2**
ETOB	2.5nm,0.4s,SNR=7.9			S	**Sn**	**02 19 55.4**	**-1.6**
ECHE	**Chera** 0.7nm,0.2s,SNR=7.9	**4.54**	**318**	P	**Pn**	**02 19 10.8**	**+0.7**
EMOS	**Mosqueruela** 1.2nm,0.2s,SNR=14	**4.90**	**328**	P	**Pn**	**02 19 16.6**	**+1.5**
EMOS	0.4nm,0.4s,SNR=7.9			S	**Sn**	**02 20 09.9**	**-2.1**
JBK	**JBK**	**4.91**	**249**	P	**Pn**	**02 19 15.5**	**+0.3**
JBK				Lg	Lg	02 20 37.8	
EQES	**Quesada** 0.2nm,0.1s,SNR=4.0	**5.06**	**289**	P	**Pn**	**02 19 18.4**	**+1.2**
EQES	0.9nm,0.5s,SNR=4.0			S	**Sn**	**02 20 13.7**	**-2.1**
ERTA	**Horta de San J** 0.3nm,0.2s,SNR=7.9	**5.12**	**337**	P	**Pn**	**02 19 19.1**	**+1.1**
TDRA	**Tendrara**	**5.21**	**233**	P	**Pn**	**02 19 17.8**	**-1.6**
TDRA				Lg	Lg	02 20 44.7	
EPOB	**Poblet** 0.4nm,0.2s,SNR=4.0	**5.29**	**345**	P	**Pn**	**02 19 21.2**	**+0.9**
EPOB	0.3nm,0.7s,SNR=7.9			S	**Sn**	**02 20 18.6**	**-2.8**
ELGU	**Los Guajares,** 0.3nm,0.5s,SNR=7.9	**5.33**	**278**	S	**Sn**	**02 20 19.5**	**-3.0**
FIGM	**Figuig**	**5.40**	**222**	P	**Pn**	**02 19 22.2**	**+0.3**
FIGM				Lg	Lg	02 20 52.8	
CFON	**Fontmartina** 0.8nm,0.1s,SNR=7.9	**5.51**	**356**	P	**Pn**	**02 19 24.6**	**+1.2**
CFON	8.2nm,0.7s,SNR=7.9			S	**Sn**	**02 20 24.0**	**-2.7**
CLLI	**Llivia** 0.9nm,0.3s,SNR=6.1	**6.25**	**353**	P	**Pn**	**02 19 35.8**	**+2.1**
CSOR	**Sort** 0.4nm,0.2s,SNR=7.9	**6.27**	**348**	P	**Pn**	**02 19 35.0**	**+1.2**
MDT	**Midelt**	**7.12**	**243**	P	**Pn**	**02 19 44.3**	**-1.3**

*IDC **08** 02:29:23.4±9.9, 12°.08S×166°.67E, h331km±116km, mb3.1/5, mb1 3.2/6, mb1mx3.0/30, mbtmp3.8/6, Error ellipse: s-maj=109.9km s-min=27.2km az=160.0*
ISC 08 02:29:19.9±1.2, 12°.1S±0°.2×166°.8E±0°.2, h300km, n7, σ0°.20/7, mb3.3/5, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac** 0.9nm,0.3s,baz=309,slow=8.2,SNR=16	**9.93**	**182**	P	**P**	**02 31 41.0**	**+0.1**
CTA	**Charters Tower** 1.4nm,0.6s,baz=53,slow=9.5,SNR=1.4	**21.26**	**245**	P	**P**	**02 33 43.3**	**-0.1**
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=84,slow=8.9,SNR=13	**32.11**	**252**	P	**P**	**02 35 19.9**	**-0.1**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=73,slow=10.0,SNR=7.5	**33.26**	**245**	P	**P**	**02 35 30.0**	**0.0**
ILAR	**Eielson Array** 0.9nm,0.9s,baz=238,slow=4.9,SNR=8.3	**84.18**	**18**	P	**P**	**02 41 17.3**	**-0.1**
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=92,slow=5.4,SNR=4.1	**94.98**	**317**	P	**P**	**02 42 09.0**	**+0.3**
ARCES	**ARCESS Array B** 6.8nm,0.9s,baz=90,slow=1.2,SNR=3.2	**117.60**	**346**	PKP	**PKPdf**	**02 47 29.7**	**-0.1**

IDC 08 02:33:34.7±3.8, 3°.47S×150°.95E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/26, mbtmp3.7/3, Error ellipse: s-maj=118.1km s-min=51.1km az=116.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.8nm,0.4s,baz=47,slow=9.8,SNR=30	**23.04**	**223**	P	P	02 38 42.5	+0.8
ASAR	**Alice Springs** 0.2nm,0.5s,baz=54,slow=8.9,SNR=6.1	**25.97**	**218**	P	P	02 39 08.8	-0.5
FITZ	**Fitzroy Crossi** 0.8nm,0.3s,baz=50,slow=11,SNR=21	**28.74**	**238**	P	P	02 39 34.0	-0.2
TORD	**Torodi Ar. Bea** 0.1nm,0.4s,baz=84,slow=4.5,SNR=1.2	**148.13**	**289**	PKPbc	PKPbc	02 53 23.0	-0.6

IDC 08 03:00:16.7±14.0, 7°.32N×93°.92E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.2/33, mbtmp3.3/3, Error ellipse: s-maj=697.8km s-min=33.2km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H** baz=55	**26.02**	**236**	T	T	03 32 36.8	
H08S2	**Diego Garcia H** baz=55	**26.03**	**236**	T	T	03 32 36.6	
H08S1	**Diego Carcia H** baz=55	**26.04**	**236**	T	T	03 32 43.2	
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=157,slow=8.2,SNR=4.6	**40.58**	**348**	P	P	03 07 57.6	-0.4
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=153,slow=9.7,SNR=2.0	**47.07**	**353**	P	P	03 08 50.4	+0.2
WRA	**Warramunga Arr** 0.2nm,0.8s,baz=302,slow=9.9,SNR=1.4	**48.12**	**125**	P	P	03 08 58.8	-0.1

*NEIC **08** 03:04:42.3±1.1, 56°.15S±0°.09×27°.5W±0°.3, h111km±5km, mb4.2/10, Error ellipse: s-maj=24.3km s-min=12.4km az=78.0*
*IDC **08** 03:04:45.8±6.3, 56°.16S×27°.52W, h140km±57km, mb3.9/7, mb1 4.0/8, mb1mx3.7/20, mbtmp4.4/8, Error ellipse: s-maj=27.5km s-min=18.1km az=78.0*
ISC 08 03:04:41.4±0.6, 56°.14S±0°.09×27°.5W±0°.1, h100km, n30, σ0°.77/29, mb4.3/8, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.49**	**286**	Pn	**Pn**	**03 06 01.3**	**+0.7**
VNA1	**Neumayer--Stat**	**16.77**	**158**	P	**Pn**	**03 08 30.0**	**+0.4**
VNA3	**Neumayer Olymp**	**16.95**	**160**	P	**Pn**	**03 08 32.0**	**0.0**
VNA2	**Neumayer--Watz** baz=313,slow=13	**17.16**	**158**	P	**Pn**	**03 08 34.2**	**-0.3**
SNAA	**Sanae**	**18.72**	**156**	P	**P**	**03 08 52.3**	**+0.5**
SNAA	**Sanae** 8.0nm,0.3s,baz=308,slow=10,SNR=553	**18.72**	**156**	P	**P**	**03 08 52.2**	**+0.5**
SNAA	**Sanae**	**18.72**	**156**	P	**P**	**03 08 52.1**	**+0.3**
PMSA	**Palmer Station**	**19.72**	**229**	P	**P**	**03 09 02.4**	**-0.1**
BELA	**Belgrano 2**	**21.97**	**184**	P	**P**	**03 09 26.3**	**-0.3**
LL01	**San Ignacio de**	**31.78**	**276**	P	**P**	**03 10 55.2**	**-0.7**
QSPA	**South Pole Qui** 3.7nm,0.6s,baz=22,slow=2.9,SNR=41	**34.11**	**180**	P	**P**	**03 11 16.7**	**+0.6**
QSPA	**South Pole Qui**	**34.11**	**180**	P	**P**	**03 11 15.8**	**-0.3**
MAW	**Mawson**	**40.17**	**144**	P	**P**	**03 12 07.4**	**+0.3**
MAW	**Mawson** 2.9nm,0.5s,baz=236,slow=9.1,SNR=13	**40.17**	**144**	P	**P**	**03 12 07.7**	**+0.7**
VNDA	**Vanda** 1.8nm,0.6s,baz=190,slow=6.7,SNR=30	**46.47**	**183**	P	**P**	**03 12 58.0**	**+0.9**
VNDA	**Vanda** comp=Z,2.4nm,0.7s	**46.47**	**183**	P	**P**	**03 12 57.8**	**+0.2**
VNDA				IAmb	IAmb	03 12 59.8	
H10N1	**ASCENSION HYDR** baz=189	**49.25**	**17**	T	T	04 06 59.8	
H10N3	**ASCENSION HYDR** baz=189	**49.26**	**17**	T	T	04 06 47.7	
H10N2	**ASCENSION HYDR** baz=189	**49.27**	**17**	T	T	04 06 40.5	
LPAZ	**La Paz** comp=Z,1.0nm,0.4s,baz=121,slow=8.9,SNR=8.4	**50.30**	**306**	P	**P**	**03 13 28.4**	**0.0**
LPAZ	comp=Z,1.6nm,0.7s,baz=220,slow=7.9,SNR=5.3			pP	**pP**	**03 13 53.4**	**+1.5**
DBIC	**Dimbokro** comp=Z,2.1nm,1.0s,baz=183,slow=7.6,SNR=1.5	**65.32**	**25**	P	**P**	**03 15 12.9**	**+0.3**
TORD	**Torodi Ar. Bea** comp=Z,1.1nm,0.4s,baz=200,slow=6.3,SNR=29	**73.21**	**30**	P	**P**	**03 16 01.9**	**+0.7**
TORD	comp=Z,0.7nm,0.7s,baz=202,slow=6.5,SNR=4.5			pP	**pwP**	**03 16 28.9**	**+0.4**
ASAR	**Alice Springs** comp=Z,0.4nm,0.5s,baz=184,slow=4.0,SNR=7.8	**98.95**	**163**	P	**P**	**03 18 09.6**	**-1.0**
AS31	**Alice Springs** comp=Z,0.8nm,1.1s	**98.95**	**163**	P	**P**	**03 18 10.4**	**-0.1**
AS31				IAmb	IAmb	03 21 59.9	
WRA	**Warramunga Arr** comp=Z,0.1nm,0.4s,baz=198,slow=4.1,SNR=1.6	**102.66**	**162**	P	**Pdif**	**03 18 25.9**	**-1.2**
NVAR	**Mina Array Bea** comp=Z,0.2nm,0.6s,baz=114,slow=1.1,SNR=2.4	**121.29**	**293**	PKP	**PKPdf**	**03 23 20.7**	**-1.5**
FINES	**FINESS Array B** comp=Z,5.8nm,1.2s,baz=241,slow=2.9,SNR=4.3	**124.54**	**28**	PKP	**PKPdf**	**03 23 26.2**	**-1.1**
ILAR	**Eielson Array** comp=Z,2.1nm,0.7s,baz=135,slow=2.8,SNR=23	**150.06**	**312**	PKPbc	**PKPbc**	**03 24 17.9**	**-0.8**
ILAR	**Eielson Array**	**150.06**	**312**	PKPbc	**PKPbc**	**03 24 17.3**	**-1.4**
SONM	**Songino Array** comp=Z,2.5nm,0.6s,baz=225,slow=3.6,SNR=12	**150.89**	**87**	PKPbc	**PKPbc**	**03 24 20.7**	**-0.6**

*ATA **08** 03:16:31.8±0.3, 38°.95N×43°.10E, h9km±24km, ML1.4, MW2.8*
*DDA **08** 03:16:39.3, 38°.64N×43°.46E, h7km±6km, ML1.3*
ISC 08 03:16:34.2±1.2, 38°.67N±0°.07×43°.06E±0°.05, h10km, n6, σ0°.75/9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	**0.30**	**117**	*e*P	**Pb**	**03 16 41.9**	**-0.1**
TVAN				IAML		03 16 46.9	
TVAN	**Van** comp=Z,42nm,0.4s	**0.30**	**117**	*i* P	**Pb**	**03 16 42.1**	**+0.2**
TVAN				*i* S	**Sg**	**03 16 45.6**	**+1.0**
TVAN	comp=N,107nm,0.5s			IAML		03 16 46.0	
TVAN	comp=E,108nm,0.4s			IAML		03 16 46.0	
GEVA	**Gevas**	**0.35**	**180**	*e*P	**Pn**	**03 16 44.6**	**-1.0**
GEVA	comp=Z,10nm,0.8s			IAML		03 16 54.4	
GEVA	**Gevas**	**0.35**	**180**	*i* P	**Pn**	**03 16 44.9**	**-0.7**
VMUR	**Van-Muradiye**	**0.51**	**51**	*i* P	**Pb**	**03 16 45.5**	**0.0**
VMUR				*i* S	**Sb**	**03 16 52.8**	**-0.2**
VMUR	comp=N,27nm,0.3s			IAML		03 16 53.0	
VMUR	comp=E,30nm,0.3s			IAML		03 16 54.0	
BLIS	**Bitlis-Merkez**	**0.78**	**251**	*e*P	**Pb**	**03 16 50.1**	**+0.1**
BLIS				*e*S	**Sn**	**03 17 04.3**	**+1.0**
BLIS	comp=Z,7.9nm,0.6s			IAML		03 17 08.0	

*IDC **08** 03:18:01.4±2.7, 6°.84N×93°.37E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/35, mbtmp3.8/5, Error ellipse: s-maj=143.0km s-min=24.5km az=56.0*
*NEIC **08** 03:18:05.0±2.6, 7°.1N±0°.1×93°.9E±0°.2, h10km±2km, mb4.1/9, Error ellipse: s-maj=30.2km s-min=13.8km az=238.0*
ISC 08 03:18:11.2±0.9, 7°.1N±0°.1×94°.0E±0°.1, h61km±8km, n22, σ1°.36/20, mb4.1/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.12**	**244**	*i* Pg	**Pn**	**03 18 19.6**	**-0.8**
CMBY				*i* Sg	**Sn**	**03 18 29.1**	**+2.0**
CMBY	comp=N,13µm,0.4s			IAML		03 18 30.6	
CMBY	comp=E,9µm,0.2s			IAML		03 18 30.7	
LHMI	**Lhok Sumawe**	**3.42**	**122**	Pn	**Pn**	**03 19 00.6**	**-1.5**
SRIT	**Nakonsritamara**	**5.72**	**74**	Pn	**Pn**	**03 19 34.2**	**+0.5**
CM31	**Chiang Mai Arr**	**12.29**	**22**	Pn	**Pn**	**03 21 02.0**	**-1.5**
H08S3	**Diego Garcia H** baz=55	**25.98**	**236**	T	T	03 50 29.3	
H08S2	**Diego Garcia H** baz=55	**25.98**	**236**	T	T	03 50 25.3	
H08S1	**Diego Carcia H** baz=55	**25.99**	**236**	T	T	03 50 30.9	
MK31	**Makanchi Array**	**40.85**	**348**	P	**P**	**03 25 45.7**	**-1.3**
MKAR	**Makanchi Array** comp=E,0.9nm,0.6s,baz=163,slow=8.6,SNR=7.0	**40.85**	**348**	P	**P**	**03 25 45.0**	**-2.0**
MKAR	**Makanchi Array**	**40.85**	**348**	P	**P**	**03 25 45.3**	**-1.7**
MAKZ	**Makanchi** comp=Z,2.2nm,0.7s	**40.93**	**347**	P	**P**	**03 25 47.3**	**-0.3**
MAKZ				IAmb	IAmb	03 25 51.1	
ULN	**Ulaanbaatar** comp=Z,4.3nm,1.1s	**42.15**	**13**	P	**P**	**03 25 58.6**	**+0.8**
ULN				IAmb	IAmb	03 27 00.6	
KURK	**Kurchatov**	**45.37**	**346**	P	**P**	**03 26 24.7**	**+1.4**
ZAA0	**Zalesovo Array**	**47.34**	**353**	P	**P**	**03 26 39.1**	**+0.3**
ZALV	**Zalesovo Beam** comp=Z,0.8nm,0.3s,baz=169,slow=8.3,SNR=3.7	**47.34**	**353**	P	**P**	**03 26 37.3**	**-1.5**
ZALV	**Zalesovo Beam**	**47.34**	**353**	P	**P**	**03 26 38.0**	**-0.8**
WRA	**Warramunga Arr** comp=Z,0.6nm,1.0s,baz=306,slow=8.5,SNR=4.0	**47.88**	**125**	P	**P**	**03 26 44.3**	**+0.8**
WRAB	**Tennant Creek**	**47.89**	**125**	P	**P**	**03 26 42.7**	**-0.8**
ASAR	**Alice Springs** comp=Z,0.3nm,0.8s,baz=294,slow=8.2,SNR=2.1	**49.48**	**129**	P	**P**	**03 26 57.0**	**+1.3**
ABKAR	**Akbulak array** comp=Z,6.4nm,1.5s	**50.89**	**332**	P	**P**	**03 27 05.8**	**-0.2**
ABKAR				IAmb	IAmb	03 27 12.3	
TIXI	**Tiksi**	**68.04**	**11**	P	**P**	**03 29 05.4**	**+1.7**
FINES	**FINESS Array B** comp=Z,3.1nm,1.0s,baz=93,slow=7.7,SNR=2.0	**73.38**	**332**	P	**P**	**03 29 35.6**	**-0.8**

*SNET **08** 03:20:42.3±0.8, 13°.02N×88°.77W, h59km±7km, ML3.9*
*UCR **08** 03:20:42.8±0.8, 13°.07N×88°.75W, h61km±6km, ML3.9*
*INET **08** 03:20:42.2, 12°.98N×88°.69W, h15km, ML3.5*
ISC 08 03:20:42.3±2.1, 13°.0N±0°.1×88°.78W±0°.06, h57km±15km, n38, σ0°.35/48, 20D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.41**	**29**	⇓*i*P	**Pn**	**03 20 53.0**	**-0.2**
ALJI				*e*S	**Sn**	**03 21 01.4**	**+0.4**
ALJI	comp=Z,7µm,0.3s			IAML		03 21 04.6	
ALJI	**Alcalda de J**	**0.41**	**29**	⇓*i*P	**Pn**	**03 20 53.0**	**-0.2**
ALJI				*e*S	**Sn**	**03 21 01.4**	**+0.4**
ALJI	comp=Z,7µm,0.3s			IAML		03 21 04.6	
COEB	**Comit de Eme**	**0.58**	**24**	⇓*i*P	**Pn**	**03 20 54.8**	**-0.4**
COEB				*e*S	**Sn**	**03 21 04.6**	**+0.2**
COEB	comp=Z,6µm,0.4s			IAML		03 21 08.7	
COEB	**Comit de Eme**	**0.58**	**24**	⇓*i*P	**Pn**	**03 20 54.8**	**-0.4**
COEB				*e*S	**Sn**	**03 21 04.6**	**+0.2**
COEB	comp=Z,6µm,0.4s			IAML		03 21 08.7	
TECA	**Tecapa**	**0.59**	**27**	⇓*i*P	**Pn**	**03 20 55.0**	**-0.3**
TECA	**Tecapa**	**0.59**	**27**	⇓*i*P	**Pn**	**03 20 55.0**	**-0.3**
LCY	**Lacayo**	**0.66**	**46**	*e*P	**Pn**	**03 20 55.7**	**-0.3**
LCY	**Lacayo**	**0.66**	**46**	*e*P	**Pn**	**03 20 55.7**	**-0.3**
COEG	**Centro de Oper**	**0.66**	**351**	*e*P	**Pn**	**03 20 55.6**	**-0.5**
COEG	comp=Z,5µm,0.5s			IAML		03 21 10.1	
COEG	**Centro de Oper**	**0.66**	**351**	*e*P	**Pn**	**03 20 55.6**	**-0.5**
COEG	comp=Z,5µm,0.5s			IAML		03 21 10.1	
PACA	**Pacayal**	**0.67**	**41**	*e*P	**Pn**	**03 20 56.0**	**-0.2**
PACA	**Pacayal**	**0.67**	**41**	*e*P	**Pn**	**03 20 56.0**	**-0.2**

LFRS	El Faro	0.71	337	⇓*i*P	Pn	03 20 56.1	-0.6
LFRS	El Faro	0.71	337	⇓*i*P	Pn	03 20 56.1	-0.6
PAVA	Las Pavas	0.76	348	⇓*e*P	Pn	03 20 57.0	-0.3
PAVA				*e*S	Sn	03 21 09.1	+0.8
PAVA	Las Pavas	0.76	348	⇓*e*P	Pn	03 20 57.0	-0.3
PAVA				*e*S	Sn	03 21 09.1	+0.8
LBRS	Las Brisas	0.81	341	⇓*e*P	Pn	03 20 58.0	+0.1
LBRS	Las Brisas	0.81	341	⇓*e*P	Pn	03 20 58.0	+0.1
SNET	Serv Nac Est T	0.84	328	*e*P	Pn	03 20 58.3	-0.1
SNET				*e*S	Sn	03 21 09.8	-0.3
SNET				IAML		03 21 14.8	
	comp=Z,1μm,0.3s						
SNET	Serv Nac Est T	0.84	328	*e*P	Pn	03 20 58.3	-0.1
SNET				*e*S	Sn	03 21 09.8	-0.3
SNET				IAML		03 21 14.8	
	comp=Z,1μm,0.3s						
LFU	La Fuente	0.85	337	*e*P	Pn	03 20 58.3	0.0
LFU	La Fuente	0.85	337	*e*P	Pn	03 20 58.3	0.0
UEES	Universidad Ev	0.87	329	*e*P	Pn	03 20 58.8	+0.1
UEES	Universidad Ev	0.87	329	*e*P	Pn	03 20 58.8	+0.1
BOQS	Boqueron	0.91	328	*e*P	Pn	03 20 59.7	+0.3
BOQS	Boqueron	0.91	328	*e*P	Pn	03 20 59.7	+0.3
LCND	La Caada	0.93	68	⇓*e*P	Pn	03 20 59.0	-0.4
LCND				*e*S	Sn	03 21 12.1	+0.2
LCND				IAML		03 21 13.7	
	comp=Z,5μm,0.3s						
LCND	La Caada	0.93	68	⇓*e*P	Pn	03 20 59.0	-0.4
LCND				*e*S	Sn	03 21 12.1	+0.2
LCND				IAML		03 21 13.7	
	comp=Z,5μm,0.3s						
TACO	Tacachico	1.15	331	⇓*i*P	Pn	03 21 01.9	-0.4
TACO	Tacachico	1.15	331	⇓*i*P	Pn	03 21 01.9	-0.4
CSGN	Cosiguina Volc	1.19	89	*e*P	Pn	03 21 02.8	-0.1
CSGN	Cosiguina Volc	1.19	89	*e*P	Pn	03 21 02.8	-0.1
NUBE	Las Nubes	1.35	314	*e*P	Pn	03 21 04.9	-0.2
NUBE	Las Nubes	1.35	314	*e*P	Pn	03 21 04.9	-0.2
MTO3	Montecristo	1.54	338	⇓*i*P	Pn	03 21 07.5	-0.2
MTO3	Montecristo	1.54	338	⇓*i*P	Pn	03 21 07.5	-0.2
TGUH	Tegucigalpa,Un	1.82	53	⇓*i*P	Pn	03 21 11.3	-0.2
TGUH	Tegucigalpa,Un	1.82	53	⇓*i*P	Pn	03 21 11.3	-0.2

IDC ***08*** *03:28:24.1±2.4, 34°.57N×142°.01E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.4/42, mbtmp3.4/6, ML3.0/2, MS2.3/1, Ms1 2.3/1, ms1mx2.1/24, Error ellipse: s-maj=59.9km s-min=24.5km az=65.0*

JMA ***08*** *03:28:26.0±0.4, 34°.62N×142°.00E, h39km, M3.6*

NIED ***08*** *03:28:26.1, 34°.62N×142°.00E, h39km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr 0.43; Mθθ 1.14; Mφφ -1.56; Mrθ 0.86; Mφr -2.67; Mθr -0.94; Fault plane solution: M0 3.27000×10^14 NP1: φs 169.00000°, δ 78.00000°, λ 21.00000°. NP2: φs 74.00000°, δ 70.00000°, λ 167.00000°.*

ISC 08 03:28:26.0±2.4, 34°.60N±0°.05×141°.88E±0°.09, h11km±13km, n26, σ0°70/29, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.74	274	P		Pn	03 28 41.6	-0.3
BSO1				X			03 28 53.9	
BSO3	Boso 3	1.15	281	P		Pg	03 28 47.9	-0.1
BSO4	Boso 4	1.33	288	P		Pb	03 28 50.7	-0.1
BSO4				*e*S		Sb	03 29 09.2	+1.4
CHOJ	Chosi	1.38	323	P		Pn	03 28 51.0	-0.2
JKUC	kamogawauchiur	1.49	293	P		Pn	03 28 52.4	-0.3
JKUC				*e*S		Sn	03 29 11.4	-0.7
JIM2	Oshima 3	2.02	274	P		Pn	03 28 59.7	-0.3
JMKN	Mikurajimanish	2.02	250	P		Pn	03 28 59.6	-0.4
JMKN				S		Sn	03 29 24.2	-1.1
JHJ2	Mitsune	2.27	230	*e*S		Sn	03 29 31.3	0.0
JHJ	Hachijo jima 2	2.29	230	Pn		Pn	03 29 04.0	+0.3
	22nm,0.3s,baz=57,slow=17,SNR=5.6							
JHJ				Sn		Sn	03 29 31.2	-0.5
	63nm,0.3s,baz=63,slow=22,SNR=13							
JOD2	Odawara 2	2.39	287	P		Pn	03 29 04.2	-0.9
JOD2				S		Sn	03 29 33.2	-1.1
JAG	Ashikaga	2.69	313	P		Pn	03 29 08.4	-0.8
JAG				*e*S		Sn	03 29 39.9	-1.8
JRY	Ryogami san	2.82	301	P		Pn	03 29 11.0	0.0
JRY				*e*S		Sn	03 29 45.2	+0.3
JYN	Shimob	2.88	289	P		Pn	03 29 11.5	-0.4
JYN				S		Sn	03 29 46.3	-0.2
MJAR	Matsushiro Arr	3.56	304	Pn		Pn	03 29 21.5	+0.2
	0.5nm,0.3s,baz=101,slow=40,SNR=20							
MJAR				Sn		Sn	03 30 03.5	+0.2
	0.6nm,0.3s,baz=111,slow=17,SNR=8.7							
MAT	Matsushiro	3.57	304	P		Pn	03 29 21.5	+0.2
MAT				S		Sn	03 30 03.6	+0.2
KSRS	Korea Array	11.65	288	LR		LR	03 35 41.2	
	comp=Z,15nm,18.9s,baz=230,slow=37							
H11N2	WAKE ISLAND Hy	26.64	117	T		T	04 01 59.7	
	baz=310							
H11N1	WAKE ISLAND Hy	26.64	117	T		T	04 02 04.6	
	baz=310							
H11N3	WAKE ISLAND Hy	26.65	117	T		T	04 02 06.6	
	baz=310							
H11S3	WAKE ISLAND Hy	27.27	120	T		T	04 02 56.1	
	baz=309							
H11S1	WAKE ISLAND Hy	27.27	120	T		T	04 02 55.9	
	baz=309							
H11S2	WAKE ISLAND Hy	27.29	120	T		T	04 02 58.1	
	baz=309							
SONM	Songino Array	29.51	307	P		P	03 34 30.8	+0.5
	0.2nm,0.3s,baz=98,slow=7.6,SNR=1.4							
MKAR	Makanchi Array	45.76	304	P		P	03 36 48.1	+0.7
	0.2nm,0.4s,baz=89,slow=8.0,SNR=3.5							
WRA	Warramunga Arr	54.71	189	P		P	03 37 55.4	0.0
	0.6nm,0.7s,baz=5.7,slow=7.5,SNR=8.0							
ASAR	Alice Springs	58.44	189	P		P	03 38 21.0	-0.8
	0.1nm,0.5s,baz=3.4,slow=6.5,SNR=1.2							

IDC ***08*** *03:44:43.3±3.7, 3°.04S×102°.58E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/35, mbtmp3.7/6, Error ellipse: s-maj=167.1km s-min=19.8km az=55.0*

NEIC ***08*** *03:44:53.1±0.6, 2°.9S±0°.1×102°.8E±0°.2, h80km±9km, mb4.3/7, Error ellipse: s-maj=30.1km s-min=11.9km az=58.0*

DJA ***08*** *03:44:55.3±0.4, 4°.5S±4°.1×10°.2E±°, h73km±8km, M3.8/12, MLv3.8/12*

ISC 08 03:44:53.3±0.9, 3°.50S±0°.09×102°.1E±0°.1, h100km, n25, σ1°13/24, mb3.8/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	0.40	27	P		Pn	03 45 08.5	0.0
KSI	Kapahiang	0.55	106	P		Pn	03 45 09.7	+0.1
MNAI	Manna	1.24	134	P		Pn	03 45 17.4	+1.0
MNAI				S		Sn	03 45 33.3	-0.6
MNAI	Manna	1.24	134			Pn	03 45 17.7	+1.3
LHSI	Lahat	1.50	103	P		Pn	03 45 20.7	+1.2
KRJI	Kerinci	1.52	337	P		Pn	03 45 20.8	+0.8
MDSI	Maura Dua	2.33	115	P		Pn	03 45 31.7	+1.5
LWLI	Liwa	2.50	127	P		Pn	03 45 34.0	+1.5
SDSI	Sungai Dareh	2.63	346	P		Pn	03 45 35.6	+1.5
KLSI		2.91	114	P		Pn	03 45 39.6	+1.7
RGRI	Rengat	3.14	5	P		Pn	03 45 42.8	+1.8
KASI	Kota Agung	3.15	130	P		Pn	03 45 42.2	+1.1
SISI	Saibi	3.67	306	P		Pn	03 45 49.6	+1.5
KAPI	Kappang	17.71	95	Pn		P	03 48 44.5	-8.6
FITZ	Fitzroy Crossi	27.27	124	P		P	03 50 28.1	-0.4
	0.4nm,0.6s,baz=301,slow=10,SNR=1.7							
WB0	Warramunga Arr	35.44	120	P		P	03 51 39.2	-1.0
WRA	Warramunga Arr	35.47	120	P		P	03 51 39.5	-1.0
	0.5nm,0.4s,baz=301,slow=8.8,SNR=23							
WRA	Warramunga Arr	35.47	120	IAmb		IAmb	03 51 44.2	
	comp=Z,0.6nm,1.9s							
WB2	Warramunga Arr	35.48	120	P		P	03 51 39.4	-1.1
ASAR	Alice Springs	36.71	126	P		P	03 51 51.4	+0.3
	comp=Z,0.4nm,0.3s,baz=298,slow=7.8,SNR=10							
SONM	Songino Array	51.26	4	P		P	03 53 46.3	-0.7
	comp=Z,0.5nm,0.6s,baz=182,slow=8.7,SNR=2.0							
MK31	Makanchi Array	53.04	343	P		P	03 53 59.3	-0.8
MK31				IAmb		IAmb	03 54 09.2	
	comp=Z,5.0nm,1.6s							
MKAR	Makanchi Array	53.04	343	P		P	03 53 59.9	-0.1
	comp=Z,0.3nm,0.4s,baz=152,slow=9.1,SNR=7.0							
ZALV	Zalesovo Beam	59.03	348	P		P	03 54 41.6	-0.9
	comp=Z,0.8nm,0.4s,baz=158,slow=6.4,SNR=3.6							
ABKAR	Akbulak array	63.94	331	P		P	03 55 16.0	+0.3

JMA ***08*** *03:53:32.8±0.2, 24°.46N×122°.18E, h73km±2km, M2.1*

TAP ***08*** *03:53:32.8, 24°.54N×122°.19E, h68km, ML2.9, B*

ISC 08 03:53:33.0±1.2, 24°.56N±0°.03×122°.19E±0°.02, h72km±6km, n70, σ0°78/129, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWC	Suao	0.31	278	P		Pn	03 53 44.3	-0.1
	baz=282							
TWC				S		Sn	03 53 52.5	-0.3
	baz=282							
ENAH	Nanao	0.36	252	P		Pn	03 53 44.8	0.0
	baz=255							
ENAH				*e*S		Sn	03 53 53.6	+0.2
	baz=255							
NTC	Toucheng	0.43	312	*e*P		Pn	03 53 45.4	0.0
	baz=313							
NTC				*e*S		Sn	03 53 54.2	-0.3
	baz=313							
TWE	Neicheng	0.50	288	*e*P		Pn	03 53 46.5	+0.6
	baz=290							
TWE				S		Sn	03 53 56.1	+0.7
	baz=290							
TIPB	Shuangxi	0.52	321	*e*P		Pn	03 53 46.4	+0.1
	baz=322							
TIPB				S		Sn	03 53 55.7	-0.3
	baz=322							
ENTT	Nioudou	0.57	278	*e*P		Pn	03 53 47.1	+0.4
	baz=279							
ENTT				S		Sn	03 53 56.9	+0.1
	baz=279							
NDT	Datong Townshi	0.61	274	P		Pn	03 53 47.5	+0.4
	baz=275							
NDT				S		Sn	03 53 58.1	+0.6
	baz=275							
NWLT	Wulai	0.66	289	*e*P		Pn	03 53 48.6	+1.0
	baz=290							
NWLT				S		Sn	03 53 59.3	+0.9
	baz=290							
NACB	Ninganchiao	0.66	234	P		Pn	03 53 47.0	-0.7
	baz=236							
NACB				S		Sn	03 53 58.1	-0.4
	baz=236							
TWA	Mucha	0.69	307	*e*S		Sn	03 53 58.7	-0.2
	baz=308							
JYNG	Yonagunijimaku	0.70	99	P		Pn	03 53 48.1	0.0
JYNG				S		Sn	03 53 58.9	-0.3
TWD	Chiawan	0.72	228	*e*P		Pn	03 53 47.8	-0.5
	baz=229							
TWD				*e*S		Sn	03 53 59.5	-0.1
	baz=229							
ETLH	Xiulin Townshi	0.73	241	P		Pn	03 53 48.0	-0.5
	baz=242							
ETLH				S		Sn	03 53 59.9	-0.1
	baz=242							
NNSB	Datong	0.74	260	P		Pn	03 53 48.7	0.0
	baz=261							
NNSB				S		Sn	03 54 00.3	0.0
	baz=261							
NNSH	Datong	0.74	260	*e*P		Pn	03 53 48.6	0.0
	baz=261							
NNSH				S		Sn	03 54 00.1	-0.1
	baz=261							
YHNB	Yeheng	0.74	278	P		Pn	03 53 48.8	+0.2
	baz=279							
YHNB				S		Sn	03 54 00.6	+0.4
	baz=279							
NNS	Nan Shan	0.75	261	*e*P		Pn	03 53 48.8	0.0
	baz=262							
NNS				S		Sn	03 54 00.0	-0.4
	baz=262							
YOJ	Yonaguni jima	0.76	98	P		Pn	03 53 48.8	+0.1
	baz=95							
YOJ				S		Sn	03 54 00.2	-0.1
	baz=95							
YOJ	Yonaguni jima	0.76	98	P		Pn	03 53 48.6	-0.1
YOJ				S		Sn	03 53 59.9	-0.4
NSK	Sanguang	0.76	279	P		Pn	03 53 49.1	+0.3
	baz=279							
NSK				S		Sn	03 54 00.8	+0.3
	baz=279							
YM01	YM01	0.81	316	*e*P		Pn	03 53 49.4	0.0
	baz=316							
YM01				*e*S		Sn	03 54 01.1	-0.3
	baz=316							
YM10	YM10	0.82	316	*e*P		Pn	03 53 49.5	+0.1
	baz=316							
YM10				*e*S		Sn	03 54 01.5	-0.2
	baz=316							
YM05	YM05	0.82	317	*e*P		Pn	03 53 49.3	-0.2
	baz=317							
YM05				*e*S		Sn	03 54 01.7	-0.1
	baz=317							
YM08	YM08	0.82	319	*e*P		Pn	03 53 50.7	+1.2
	baz=319							
YM08				*e*S		Sn	03 54 01.4	-0.3
	baz=319							
YM04	YM04	0.83	315	*e*P		Pn	03 53 49.6	0.0
	baz=315							
YM04				*e*S		Sn	03 54 02.0	+0.1
	baz=315							
WHF	Hehuan Shan	0.94	244	*e*P		Pn	03 53 51.0	-0.3
	baz=244							
WHF				*e*S		Sn	03 54 03.9	-0.9
	baz=244							
TWT	Tachien	0.97	252	P		Pn	03 53 52.0	+0.5
	baz=252							
TWT				S		Sn	03 54 05.5	+0.4
	baz=252							
TDCB	Techi	0.99	252	P		Pn	03 53 52.0	+0.4
	baz=252							
TDCB				S		Sn	03 54 05.4	0.0
	baz=252							
ESL	Shilin	1.01	223	*e*P		Pn	03 53 51.1	-0.7
	baz=223							
ESL				*e*S		Sn	03 54 05.1	-0.7
	baz=223							
CHGB	Renai	1.05	242	*e*P		Pn	03 53 52.5	0.0
	baz=242							
CHGB				S		Sn	03 54 06.4	-0.5
	baz=242							
PCYT	Pengchaiyu	1.07	354	*e*P		Pn	03 53 53.0	+0.6
	baz=354							
PCYT				*e*S		Sn	03 54 06.1	-0.8
	baz=354							
LIOB	Emei	1.07	275	*e*P		Pn	03 53 53.3	+0.9
	baz=275							
LIOB				*e*S		Sn	03 54 08.2	+1.2
	baz=275							
NSTT	Nanjuang	1.08	274	*e*P		Pn	03 53 53.3	+0.7
	baz=274							
NSTT				S		Sn	03 54 07.6	+0.4
	baz=274							
EGFH	Guangfu	1.13	218	*e*P		Pn	03 53 52.9	-0.3
	baz=218							
EGFH				*e*S		Sn	03 54 07.8	-0.6
	baz=218							
WHP	Taichung City	1.17	256	*e*P		Pn	03 53 55.1	+1.3
	baz=256							
WHP				*e*S		Sn	03 54 10.3	+1.0
	baz=256							
VWDT	VWDT	1.25	230	*e*P		Pn	03 53 54.7	0.0
	baz=230							
VWDT				*e*S		Sn	03 54 10.4	-0.7
	baz=230							
NMLH	Miaoli	1.27	269	*e*S		Sn	03 54 12.8	+1.2
	baz=269							
HGSD	Ruisui	1.27	213	*e*P		Pn	03 53 54.8	-0.2
	baz=213							
HGSD				*e*S		Sn	03 54 12.6	+0.9
	baz=213							
TWQ1	Liyutan	1.30	261	*e*S		Sn	03 54 12.6	+0.2
	baz=261							
EHY	Hungye	1.32	217	*e*P		Pn	03 53 55.1	-0.6
	baz=217							
EHY				*e*S		Sn	03 54 11.7	-0.9
	baz=217							
SMLT	Sun Moon Lake	1.35	240	*e*P		Pn	03 53 56.7	+0.5
	baz=240							
SMLT				*e*S		Sn	03 54 14.6	+0.9
	baz=240							
SSLB	Suanglung	1.36	236	*e*P		Pn	03 53 57.0	+0.7
	baz=236							
SSLB				*e*S		Sn	03 54 14.5	+0.7
	baz=236							
TYC	Yuchr	1.38	242	*e*P		Pn	03 53 57.2	+0.8
	baz=242							
TYC				*e*S		Sn	03 54 14.9	+0.8
	baz=242							
YULB	Yu-li	1.42	215	*e*P		Pn	03 53 56.3	-0.8
	baz=215							
YULB				*e*S		Sn	03 54 13.5	-1.6
	baz=215							
IRIF	Iriomote-Funau	1.43	99	P		Pn	03 53 56.9	-0.1
IRIF				S		Sn	03 54 14.7	-0.5
TWF1	Yuli	1.45	214	*e*P		Pn	03 53 56.8	-0.7
	baz=214							
TWF1				*e*S		Sn	03 54 15.6	-0.2
	baz=214							
WNT	Mingjian	1.53	244	*e*S		Sn	03 54 18.9	+1.2
	baz=244							
HATJ	Hateruma jima	1.56	109	P		Pn	03 53 59.4	+0.6
HATJ				*e*S		Sn	03 54 19.1	+0.7
ALS	Alishan	1.64	231	*e*S		Sn	03 54 21.4	+0.7
	baz=230							
CHN5	Tsauling	1.68	235	*e*P		Pn	03 54 01.2	+0.7
	baz=235							
CHN5				*e*S		Sn	03 54 22.4	+1.1
	baz=235							
JKRS	Kuro-shima	1.69	101	P		Pn	03 54 00.9	+0.3
JKRS				S		Sn	03 54 21.5	0.0
ELDTW	Lidau	1.74	218	*e*P		Pn	03 54 01.1	-0.2
	baz=218							
ELDTW				*e*S		Sn	03 54 21.3	-1.4
	baz=218							
WDLH	Douliu	1.74	240	*e*S		Sn	03 54 23.8	+1.2
	baz=240							
JIJ	Ishigaki jima	1.79	96	P		Pn	03 54 01.7	-0.2
JIJ				S		Sn	03 54 23.1	-0.8
TPUB	Ta-pu	1.90	229	*e*P		Pn	03 54 04.5	+1.1
	baz=229							
TPUB				*e*S		Sn	03 54 27.0	+0.5
	baz=229							
JISG	Ishigakijimahi	1.94	89	*e*S		Sn	03 54 27.2	-0.1
WTP	Ta-pu	1.95	228	*e*P		Pn	03 54 04.8	+0.7
	baz=228							
WTP				*e*S		Sn	03 54 28.2	+0.5
	baz=228							
TWG	Pinlang	2.01	211	*e*P		Pn	03 54 04.2	-0.7
	baz=210							
TWK	Hsinying	2.02	231	*e*S		Sn	03 54 29.4	0.0
	baz=230							
CHN1	Nanshi	2.05	228	*e*P		Pn	03 54 08.2	+2.8
	baz=228							
CHN1				*e*S		Sn	03 54 30.4	+0.4
	baz=228							
SLGT	Liugui	2.10	222	*e*P		Pn	03 54 07.6	+1.5
	baz=222							
SLGT				*e*S		Sn	03 54 31.7	+0.3
	baz=222							
CHN3	Shinhua	2.23	229	*e*S		Sn	03 54 35.2	+0.8
	baz=228							
JTJ	Tarama	2.29	88	P		Pn	03 54 09.4	+0.8
JTJ				S		Sn	03 54 37.1	+1.2
MASBT	Mashibuluo	2.41	217	*e*P		Pn	03 54 11.3	+1.0
	baz=216							
MASBT				*e*S		Sn	03 54 38.6	-0.1
	baz=216							
EAST	Anshuo	2.49	210	*e*P		Pn	03 54 12.1	+0.7
	baz=209							
EAST				*e*S		Sn	03 54 39.6	-1.2
	baz=209							
VWUC	VWUC	2.52	280	*e*P		Pn	03 54 10.3	-1.4
	baz=280							
VWUC				*e*S		Sn	03 54 39.2	-2.3
	baz=280							
PHUB	P'eng-hu	2.61	247	*e*P		Pn	03 54 12.6	-0.3
	baz=246							
PHUB				*e*S		Sn	03 54 42.2	-1.3
	baz=246							
PTMZ	Houxiangcun	2.83	280	*e*P		Pn	03 54 14.0	-1.9
	baz=280							
PTMZ				*e*S		Sn	03 54 46.2	-2.7
	baz=280							
LYJJ	Jianjiangzhen	2.95	313	*e*P		Pn	03 54 18.1	+0.6
	baz=312							
LYJJ				*e*S		Sn	03 54 51.1	-0.7
	baz=312							
XPSS	Dashiqiu	2.96	323	*e*P		Pn	03 54 17.9	+0.2
	baz=322							

TIR 08 03:54:18.2, 42°.19N×19°.50E, h21km±2km, Md2.4, Ml1.8, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PUK	Puka	0.33	116	P		Pb	03 54 25.4	+0.2
	baz=116							
PUK				S		Sb	03 54 31.3	+1.1
	baz=116							
PUK				AMP				
	comp=N,0.5nm,0.1s,baz=116							
BCI	Bajram Curri	0.46	67	P		Pb	03 54 27.9	+0.4
	baz=66							
BCI				S		Sb	03 54 35.2	+1.4
	baz=66							
PHP	Peshkopia	0.86	125	P		Pn	03 54 35.4	+0.3
	baz=125							
PHP				S		Sn	03 54 47.9	+0.8
	baz=125							
STON	Ston	1.50	298	*e*Pn		Pb	03 54 44.8	-0.4
STON				Sn		Sb	03 55 06.5	+2.8
RICI	Ricice	2.18	308	*e*Pn		Pb	03 54 57.1	+0.3

PDG ***08*** *03:54:47.9±0.2, 42°.14N×19°.51E, h13km±1km, MD2.7/3, ML2.4/12, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*

TIR ***08*** *03:54:48.0, 42°.19N×19°.53E, h24km, Md2.6*

RHSSO ***08*** *03:54:48.2±0.7, 42°.19N×19°.56E, h9km±2km, ML2.4/7*

BEO ***08*** *03:54:48.0±0.3, 42°.34N×19°.69E, h11km±6km, ML2.2/10*

ISC 08 03:54:47.5±1.0, 42°.20N±0°.02×19°.57E±0°.02, h10km±8km, n51, σ1°27/86, 10C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DRME	Dracevica, Mon	0.28	268	*e*Pg		Pg	03 54 53.1	-0.1
DRME				*i* Sg		Sg	03 54 57.1	0.0
DRME	Dracevica, Mon	0.28	268	*e*Pg		Pg	03 54 53.5	+0.3
DRME				*e*Sg		Sg	03 54 58.2	+1.1
PUK	Puka	0.29	122	P		Pb	03 54 55.1	+0.3
	baz=117							
PUK				S		Sb	03 55 00.9	+1.2
	baz=117							
PDG	Podgorica	0.33	315	*e*Pg		Pb	03 54 54.9	-0.5
PDG				*e*Sg		Sb	03 55 00.5	-0.3
PDG	Podgorica	0.33	315	⇑S		Sb	03 55 00.5	-0.3
PDG	Podgorica	0.33	315	⇓*i*Pg		Pg	03 54 54.7	+0.7
PDG				*e*Sg		Sb	03 54 59.9	-0.8
TTG	Podgorica	0.33	315	⇓*i*Pg		Pg	03 54 54.8	+0.7
TTG				*i* Sg		Sb	03 55 00.4	-0.3
ULC	Ulcinj	0.34	226	⇓*i*Pg		Sg	03 54 53.3	-0.9
ULC				*i* Sg		Sg	03 54 57.4	-1.2
BCI	Bajram Curri	0.41	65	P		Pb	03 54 57.6	+0.8
	baz=65							
BCI				S		Sb	03 55 04.5	+1.4
	baz=65							
PVY	Plav	0.49	36	*e*Pg		Pb	03 54 58.6	+0.3
PVY				*i* Sg		Sb	03 55 07.9	+2.3
BUM	Brajici-Budva	0.51	282	⇓*i*Pg		Pg	03 54 57.2	-0.2
BUM				*i* Sg		Sg	03 55 04.7	+0.5
CEME	Cevo	0.59	306	⇓*i*Pg		Pg	03 54 59.3	+0.3
CEME				*i* Sg		Sb	03 55 08.4	-0.1
KOME	Kolasin	0.65	357	*e*Pg		Pb	03 55 01.2	+0.2
K

BRY				*i* Sg	**Sn**	**03 55 22.4**	**-0.4**
BRY	**Bratogost**	**1.03**	**313**	*e*Pg	**Pg**	**03 55 07.1**	**-0.3**
BRY				*e*Sg	**Sb**	**03 55 21.7**	**+0.5**
TREB	**Trebinje**	**1.04**	**300**	*e*Pg	**Pb**	**03 55 07.0**	**-0.5**
TREB				*e*Sg	**Sg**	**03 55 20.6**	**-0.4**
TREB	**Trebinje**	**1.04**	**300**	*e*Pg	**Pb**	**03 55 07.3**	**-0.2**
TREB				*e*Sg	**Sb**	**03 55 21.6**	**+0.4**
SJES	**Sjenica**	**1.10**	**16**	*e*Pg	**Pb**	**03 55 05.7**	**-3.0**
SJES				*e*Sg	**Sb**	**03 55 18.1**	**-5.1**
PLE	**Pljevlja**	**1.14**	**353**	*e*Pg	**Pn**	**03 55 09.8**	**+0.2**
PLE				*i* Sg	**Sn**	**03 55 27.9**	**+2.6**
RUDO	**Rudo**	**1.43**	**354**	*e*Pg	**Pb**	**03 55 14.3**	**+0.1**
RUDO				*e*Sg	**Sg**	**03 55 33.7**	**+0.3**
IVAS	**Ivanjica**	**1.44**	**17**	*e*Pg	**Pn**	**03 55 11.2**	**-2.5**
IVAS				*e*Sg	**Sn**	**03 55 28.3**	**-4.5**
SELS	**Selova**	**1.53**	**48**	*e*Pg	**Pn**	**03 55 11.9**	**-3.0**
STON	**Ston**	**1.54**	**297**	*e*Sn	**Sb**	**03 55 35.7**	**+0.2**
BBLS	**Lazići**	**1.67**	**356**	*e*Pg	**Pn**	**03 55 15.8**	**-1.1**
BBLS				*e*Sg	**Sn**	**03 55 37.1**	**-1.3**
BBLS	**Lazići**	**1.67**	**356**	⇓*i*Pn	**Pb**	**03 55 18.1**	**-0.3**
BBLS				*e*Sn	**Sb**	**03 55 39.9**	**+0.4**
PRVS	**Prvonek**	**1.89**	**80**	*e*Pg	**Pn**	**03 55 19.2**	**-0.6**
PRVS				*e*Sg	**Sb**	**03 55 45.2**	**-0.4**
DIVS	**Divibare**	**1.93**	**9**	*e*Pg	**Pn**	**03 55 19.9**	**-0.5**
DIVS				*e*Sg	**Sn**	**03 55 43.9**	**-0.8**
DIVS	**Divibare**	**1.93**	**9**	*e*Pn	**Pn**	**03 55 21.2**	**+0.8**
DIVS				*e*Sn	**Sn**	**03 55 45.3**	**+0.6**
HAPS	**Han Pijesak,BI**	**1.94**	**347**	*e*Pg	**Pn**	**03 55 21.5**	**+0.9**
HAPS				*e*Sg	**Sb**	**03 55 46.9**	**-0.4**
HAPS	**Han Pijesak,BI**	**1.94**	**347**	*e*Pn	**Pn**	**03 55 21.4**	**+0.9**
HAPS				*e*Sn	**Sn**	**03 55 45.8**	**+0.7**
TRUS	**Trudelj**	**2.12**	**17**	*e*Pg	**Pn**	**03 55 23.8**	**+0.9**
BOVS	**Bovan**	**2.13**	**47**	*e*Pg	**Pn**	**03 55 24.1**	**+1.0**
ZAPS	**Zavoj**	**2.50**	**64**	*e*Sg	**Sb**	**03 56 02.3**	**-1.1**
BLKB	**Belogradchik**	**2.69**	**57**	⇓S	**Sb**	**03 56 08.5**	**-0.3**
FRGS	**Fruska Gora**	**2.96**	**3**	*e*Pn	**Pn**	**03 55 35.4**	**+0.8**
FRGS				*e*Sn	**Sn**	**03 56 10.6**	**+0.4**
MDVR	**Moldovita**	**3.02**	**30**	⇑P	Pn	03 55 23.2	-12
MDVR				⇓S	**Sn**	**03 56 14.1**	**+2.5**
BLY	**Banja Luka**	**3.08**	**327**	*e*Pn	**Pn**	**03 55 37.2**	**+1.0**
BLY				*e*Sn	**Sn**	**03 56 13.7**	**+0.6**
HERR	**Herculane**	**3.39**	**37**	⇑P	Pn	03 55 29.0	-11
HERR				⇑S	**Sn**	**03 56 23.3**	**+2.7**
BZS	**Buzias**	**3.73**	**23**	⇓S	**Sn**	**03 56 29.4**	**+0.4**
BZS	**Buzias**	**3.73**	**23**	⇑P	Pn	03 55 32.6	-12
GZR	**Gura Zlata**	**3.95**	**35**	⇑S	**Sn**	**03 56 35.7**	**+1.2**
GZR	**Gura Zlata**	**3.95**	**35**	⇑P	Pn	03 55 36.0	-12
MORH	**Mrgy, Hungar**	**4.07**	**351**	*e*Pn	**Pn**	**03 55 50.3**	**+0.6**
MORH				*e*Sn	**Sn**	**03 56 36.8**	**-0.6**
VYHS	**Vyhne**	**6.32**	**356**	*e*SN	**Sn**	**03 57 33.9**	**+1.1**

*TIR **08** 03:58:15.9, 42°.18N×19°.49E, h25km, Md2.3*
*PDG **08** 03:58:16.5±0.1, 42°.18N×19°.51E, h14km, MD2.5/1, ML2.1/11, Error ellipse: s-maj=0.2km s-min=0.2km az=0.0*
*RHSSO **08** 03:58:16.8±0.7, 42°.19N×19°.54E, h11km±2km, ML2.2/7*

ISC 08 03:58:16.4±0.9, **42°.18N**±0°.03×**19°.51E**±0°.02, **h15**km±7km, **n32**, σ0**972**/61, **4C-5D**, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRME	**Dracevica, Mon**	**0.24**	**271**	*e*Pg	**Pg**	**03 58 21.4**	**-0.4**
DRME				*i* Sg	**Sg**	**03 58 25.8**	**+0.4**
DRME	**Dracevica, Mon**	**0.24**	**271**	*e*Pg	**Pg**	**03 58 22.1**	**+0.3**
DRME				*e*Sg	**Sb**	**03 58 26.8**	**+0.1**
ULC	**Ulcinj**	**0.30**	**222**	⇓*i*Pg	**Pg**	**03 58 22.6**	**-0.1**
ULC				*i* Sg	**Sg**	**03 58 26.9**	**0.0**
PDG	**Podgorica**	**0.31**	**323**	⇓P	**Pb**	**03 58 23.5**	**-0.3**
PDG				⇑S	**Sb**	**03 58 29.0**	**+0.4**
PDG	**Podgorica**	**0.31**	**323**	*e*Pg	**Pg**	**03 58 22.9**	**-0.1**
PDG				*e*Sg	**Sb**	**03 58 28.6**	**0.0**
TTG	**Podgorica**	**0.31**	**323**	⇓*i*Pg	**Pg**	**03 58 22.8**	**-0.2**
TTG				*i* Sg	**Sb**	**03 58 28.1**	**-0.5**
PUK	**Puka** baz=115	**0.32**	**116**	P	**Pb**	**03 58 23.7**	**-0.2**
PUK	baz=115			S	**Sb**	**03 58 29.4**	**+0.6**
BCI	**Bajram Curri** baz=66	**0.45**	**66**	P	**Pg**	**03 58 25.9**	**+0.4**
BCI	baz=66			S	**Sb**	**03 58 33.4**	**+0.7**
BUM	**Brajici-Budva**	**0.47**	**285**	⇓*i*Pg	**Pg**	**03 58 25.5**	**-0.4**
BUM				*i* Sg	**Sb**	**03 58 33.2**	**-0.2**
PVY	**Plav**	**0.53**	**39**	*e*Pg	**Pg**	**03 58 26.6**	**-0.4**
PVY				*i* Sg	**Sb**	**03 58 35.1**	**+0.1**
CEME	**Cevo**	**0.57**	**310**	*e*Pg	**Pg**	**03 58 27.2**	**-0.5**
CEME				*i* Sg	**Sb**	**03 58 36.3**	**+0.1**
KOME	**Kolasin**	**0.67**	**0**	*e*Pg	**Pg**	**03 58 28.8**	**-0.8**
KOME				*i* Sg	**Sb**	**03 58 39.9**	**+0.9**
NKME	**Niksic**	**0.72**	**325**	⇑*i*Pg	**Pg**	**03 58 29.9**	**-0.5**
NKME				*i* Sg	**Sb**	**03 58 41.1**	**+0.8**
NKY	**Niksic**	**0.74**	**329**	*e*Pg	**Pg**	**03 58 30.3**	**-0.6**
NKY				*i* Sg	**Sb**	**03 58 42.1**	**+1.1**
IVA	**Berane**	**0.74**	**22**	*e*Pg	**Pg**	**03 58 30.3**	**-0.7**
IVA				*i* Sg	**Sb**	**03 58 42.4**	**+1.2**
HCY	**Herceg Novi**	**0.80**	**290**	*e*Pg	**Pg**	**03 58 31.5**	**-0.5**
HCY				*i* Sg	**Sn**	**03 58 44.0**	**-0.8**
HCY	**Herceg Novi**	**0.80**	**290**	*e*Pg	**Pg**	**03 58 31.5**	**-0.5**
HCY				*e*Sg	**Sb**	**03 58 43.4**	**+0.7**
PHP	**Peshkopia** baz=124	**0.85**	**125**	P	**Pg**	**03 58 32.8**	**-0.3**
PHP	baz=124			S	**Sn**	**03 58 45.6**	**-0.6**
TREB	**Trebinje**	**1.01**	**302**	*e*Pg	**Pb**	**03 58 35.3**	**-0.4**
TREB				*e*Sg	**Sg**	**03 58 49.6**	**+0.3**
BRY	**Bratogost**	**1.02**	**315**	*e*Pg	**Pb**	**03 58 35.1**	**-0.7**
BRY				*i* Sg	**Sn**	**03 58 51.3**	**+1.0**
BRY	**Bratogost**	**1.02**	**315**	*e*Pg	**Pb**	**03 58 35.5**	**-0.3**
BRY				*e*Sg	**Sg**	**03 58 49.5**	**0.0**
PLE	**Pljevlja**	**1.15**	**356**	⇑*i*Pg	**Pn**	**03 58 38.3**	**+0.2**
PLE				*i* Sg	**Sn**	**03 58 56.2**	**+2.5**
RUDO	**Rudo**	**1.44**	**356**	*e*Pg	**Pn**	**03 58 42.1**	**+0.1**
RUDO				*e*Sg	**Sb**	**03 59 02.0**	**+0.9**
STON	**Ston**	**1.51**	**298**	*e*Pn	**Pn**	**03 58 43.0**	**+0.1**
STON				*e*Sn	**Sb**	**03 59 03.2**	**+0.2**
STON	**Ston**	**1.51**	**298**	*e*Pn	**Pn**	**03 58 43.0**	**+0.1**
STON				Sn	**Sg**	**03 59 04.3**	**-0.6**
BBLS	**Lazići**	**1.69**	**357**	*e*Pn	**Pb**	**03 58 46.5**	**-0.7**
BBLS				*e*Sn	**Sb**	**03 59 08.1**	**-0.1**
DIVS	**Divibare**	**1.95**	**10**	*e*Pn	**Pn**	**03 58 49.4**	**+0.4**
DIVS				*e*Sn	**Sn**	**03 59 13.5**	**+0.2**
HAPS	**Han Pijesak,BI**	**1.95**	**348**	*e*Pn	**Pn**	**03 58 49.8**	**+0.7**
HAPS				*e*Sn	**Sn**	**03 59 14.0**	**+0.7**
MAKA	**Makarska**	**2.14**	**302**	*e*Pn	**Pn**	**03 58 51.3**	**-0.3**
RICI	**Ricice**	**2.19**	**308**	*e*Pn	**Pn**	**03 58 53.5**	**+1.2**
KIJV	**Kijevo**	**2.92**	**310**	*e*Pn	**Pn**	**03 59 03.7**	**+1.4**
BZS	**Buzias**	**3.75**	**23**	⇓P	**Pn**	**03 59 11.8**	**-2.0**
BZS				⇑S	**Sn**	**03 59 57.1**	**-0.6**

*IDC **08** 04:10:37.2±0.8, 34°.14N×141°.61E, h0km, mb3.6/9, mb1 3.9/10, mb1mx3.7/39, mbtmp3.6/10, ML2.7/1, MS3.1/5, Ms1 3.2/5, ms1mx2.7/55, Error ellipse: s-maj=20.8km s-min=18.2km az=108.0*
*JMA **08** 04:10:37.9±0.7, 34°.16N×141°.65E, h19km±3km, M3.3*
*NEIC **08** 04:10:42.5±1.8, 34°.17N±0°.06×141°.6E±0°.1, h37km±4km, mb4.1/7, Error ellipse: s-maj=13.0km s-min=8.3km az=108.0*

ISC 08 04:10:42.3±0.7, **34°.21N**±0°.05×**141°.54E**±0°.08, **h35**km, **n36**, σ0**999**/38, **mb3.7**/12, **MS3.5**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.64**	**314**	P	**Pn**	**04 10 52.0**	**-2.4**
BSO3	**Boso 3**	**1.03**	**305**	P	**Pn**	**04 10 58.5**	**-1.6**
BSO4	**Boso 4**	**1.26**	**308**	P	**Pn**	**04 11 03.1**	**-0.2**
JKUC	**kamogawauchiur**	**1.46**	**311**	P	**Pn**	**04 11 05.3**	**-0.8**
JKUC				eS	**Sn**	**04 11 24.4**	**+0.5**
CHOJ	**Chosi**	**1.59**	**340**	P	**Pn**	**04 11 06.9**	**-1.1**
JMKN	**Mikurajimanish**	**1.65**	**259**	P	**Pn**	**04 11 07.7**	**-1.1**
JMKN				S	**Sn**	**04 11 29.2**	**+0.4**
JHJ2	**Mitsune**	**1.81**	**233**	P	**Pn**	**04 11 09.7**	**-1.3**
JHJ2	**Mitsune**	**1.81**	**233**	Pn	**Pn**	**04 11 11.3**	**+0.4**
JHJ	**Hachijo jima 2** 22nm,0.3s,baz=36,slow=23,SNR=1.8	**1.83**	**234**	Pn	**Pn**	**04 11 11.3**	**+0.1**
JHJ	60nm,0.3s,baz=71,slow=20,SNR=8.8			Sn	**Sn**	**04 11 32.8**	**-0.4**
JYT	**Yasato**	**2.29**	**332**	Pn	**Pn**	**04 11 17.8**	**+0.2**
MJAR	**Matsushiro Arr** 0.6nm,0.3s,baz=125,slow=8.4,SNR=12	**3.58**	**311**	Pn	**Pn**	**04 11 35.3**	**-0.1**
MJAR				Sn	**Sn**	**04 12 18.8**	**+2.3**
	0.7nm,0.3s,baz=221,slow=53,SNR=3.4						
MJAR				LR	LR	04 13 08.0	
	comp=Z,62nm,18.6s,baz=150,slow=42						
MJAR	**Matsushiro Arr**	**3.58**	**311**		**Pn**	**04 11 34.3**	**-1.0**
MAJO	**Matsushiro**	**3.58**	**311**		**Pn**	**04 11 37.2**	**+1.8**
MAT	**Matsushiro**	**3.58**	**311**	P	**Pn**	**04 11 35.5**	**+0.1**
MAT				S	**Sn**	**04 12 14.9**	**-1.6**
JMM	**Marumori**	**3.70**	**351**		**Pn**	**04 11 35.9**	**-1.0**
JGF	**Kuroka**	**3.71**	**293**		**Pn**	**04 11 37.8**	**+0.7**
KSRS	**Korea Array** comp=Z,31nm,21.3s,baz=140,slow=39	**11.52**	**290**	LR	LR	04 18 11.6	
ULN	**Ulaanbaatar**	**29.11**	**308**	P	**P**	**04 16 40.3**	**+0.5**
ULN				IAmb	IAmb	04 16 49.5	
	comp=Z,8.1nm,1.6s						
SONM	**Songino Array**	**29.53**	**308**	P	**P**	**04 16 44.8**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=93,slow=9.1,SNR=2.3						
SONM				LR	LR	04 28 01.2	
	comp=Z,68nm,18.4s,baz=138,slow=35						
LSA	**Lhasa**	**42.64**	**278**	P	**P**	**04 18 34.9**	**-1.2**
ZAA0	**Zalesovo Array**	**43.93**	**315**	P	**P**	**04 18 45.2**	**-0.3**
ZAA0				IAmb	IAmb	04 19 38.0	
	comp=Z,5.4nm,1.4s						
ZALV	**Zalesovo Beam**	**43.93**	**315**	P	**P**	**04 18 45.9**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=72,slow=9.3,SNR=1.6						
MKAR	**Makanchi Array**	**45.75**	**304**	P	**P**	**04 19 00.1**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=81,slow=9.2,SNR=3.3						
MKAR	**Makanchi Array**	**45.75**	**304**	P	**P**	**04 19 00.7**	**+0.5**
IL31		**51.83**	**31**	P	**P**	**04 19 46.6**	**+0.1**
ILAR	**Eielson Array**	**51.83**	**31**	P	**P**	**04 19 46.5**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=272,slow=5.9,SNR=8.5						
WRA	**Warramunga Arr**	**54.29**	**188**	P	**P**	**04 20 04.3**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=3.9,slow=7.4,SNR=26						
AS31	**Alice Springs**	**58.01**	**188**	P	**P**	**04 20 30.8**	**-0.9**
AS31				IAmb	IAmb	04 22 28.0	
	comp=Z,2.9nm,1.7s						
ASAR	**Alice Springs**	**58.02**	**188**	P	**P**	**04 20 31.4**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=16,slow=7.1,SNR=6.1						
ABKAR	**Akbulak array**	**59.86**	**311**	P	**P**	**04 20 43.7**	**-0.5**
GEYT	**Alibeck**	**65.31**	**300**	LR	LR	04 50 27.4	
	comp=Z,56nm,19.1s,baz=215,slow=36						
NVAR	**Mina Array Bea**	**76.60**	**53**	P	**P**	**04 22 30.4**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=294,slow=4.8,SNR=3.0						
NOA	**NORSAR Array B**	**76.83**	**338**	LR	LR	05 00 51.5	
	comp=Z,24nm,18.7s,baz=180,slow=39						
GERES	**GERESS Array B**	**85.16**	**328**	P	**P**	**04 23 15.3**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=41,slow=6.7,SNR=3.9						
TXAR	**Lajitas Array**	**91.76**	**52**	P	**P**	**04 23 47.0**	**+0.3**
	comp=Z,0.3nm,1.0s,baz=312,slow=3.1,SNR=3.0						
LPAZ	**La Paz**	**147.94**	**64**	PKPbc	**PKPbc**	**04 30 25.9**	**+0.7**
	comp=Z,1.1nm,1.0s,baz=283,slow=2.7,SNR=3.6						

DJA 08 04:12:47.4±0.3, **8°S**±3°×**10°7E**±°, **h10**km, **M3.9**/17, **mb4.1**/1, **MLv3.7**/17, **Mwp5.2**/1, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.60**	**54**	P	Pb	04 13 00.3	+0.3
CNJI				S	Sb	04 13 08.0	-0.5
SKJI	**Sukabumi**	**0.66**	**353**	P	Pb	04 13 01.3	+0.3
SKJI				S	Sg	04 13 09.3	+0.6
DBJI	**Dramaga**	**1.10**	**6**	P	Pb	04 13 08.0	-0.6
CISI	**Cisompet, Garu**	**1.17**	**85**	P	Pb	04 13 07.8	-2.0
LEM	**Lembang**	**1.27**	**50**	P	Pn	04 13 11.3	-0.1
CGJI	**Cibinong**	**1.40**	**318**	P	Pn	04 13 12.6	-0.4
SBJI	**Serang**	**1.61**	**342**	P	Pn	04 13 15.2	-0.7
CMJI	**Cimerak**	**1.80**	**94**	P	Pn	04 13 16.9	-1.6
KPJI	**Karang Pucung**	**2.29**	**82**	P	Pn	04 13 25.5	+0.2
KASI	**Kota Agung**	**3.01**	**315**	P	Pn	04 13 35.0	-0.1
KLSI		**3.51**	**327**	P	Pn	04 13 42.2	+0.2
LWLI	**Liwa**	**3.67**	**316**	P	Pn	04 13 44.8	+0.4
UGM	**Wanagama**	**3.86**	**94**	P	Pn	04 13 47.6	+0.7
MDSI	**Maura Dua**	**3.99**	**322**	P	Pn	04 13 51.4	+2.7
MNAI	**Manna**	**4.92**	**312**	P	Pn	04 13 59.3	-2.1
PWJI	**Pagerwojo**	**5.13**	**94**	P	Pn	04 14 05.1	+0.8

*IDC **08** 04:22:06.7±1.7, 17°.65N×145°.85E, h188km±16km, mb3.6/11, mb1 3.9/13, mb1mx3.5/59, mbtmp4.1/13, Error ellipse: s-maj=20.4km s-min=11.8km az=104.0*
*NEIC **08** 04:22:06.4±1.4, 17°.75N±0°.09×145°.7E±0°.2, h186km±7km, mb4.2/24, Error ellipse: s-maj=22.1km s-min=12.4km az=105.0*

ISC 08 04:22:07.4±0.6, **17°.69N**±0°.07×**145°.7E**±0°.1, **h200**km, **n42**, σ1**910**/42, **mb4.1**/18, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.16**	**192**	P	**Pn**	**04 23 11.5**	**+0.2**
	20nm,0.3s,baz=229,slow=1.4,SNR=15						
GUMO				S	**Sn**	**04 23 59.2**	**-2.3**
	54nm,0.3s,baz=8.4,slow=22,SNR=8.5						
GUMO	**Guam**	**4.16**	**192**	Pn	**Pn**	**04 23 11.6**	**+0.3**
MJAR	**Matsushiro Arr**	**19.92**	**342**	P	**Pn**	**04 26 25.8**	**-2.3**
	0.0nm,0.3s,baz=165,slow=10,SNR=2.3						
MJAR	**Matsushiro Arr**	**19.92**	**342**	P	**P**	**04 26 24.6**	**+0.7**
BJT	**Baijiatuau**	**33.87**	**317**	P	**P**	**04 28 31.1**	**+0.1**
HIA	**Hailar**	**37.85**	**332**	P	**P**	**04 29 04.1**	**-0.7**
WRAB	**Tennant Creek**	**39.02**	**197**	P	**P**	**04 29 15.3**	**+0.5**
WRAB				IAmb	IAmb	04 29 17.2	
	comp=Z,3.4nm,0.7s						
WB2	**Warramunga Arr**	**39.03**	**197**	P	**P**	**04 29 15.2**	**+0.3**
WB2				IAmb	IAmb	04 29 17.7	
	comp=Z,5.2nm,0.9s						
WRA	**Warramunga Arr**	**39.04**	**197**	P	**P**	**04 29 14.6**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=16,slow=8.9,SNR=29						
WRA				PcP	**PcP**	**04 31 20.7**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=13,slow=3.2,SNR=1.8						
FITZ	**Fitzroy Crossi**	**40.69**	**210**	P	**P**	**04 29 29.2**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=10,slow=6.4,SNR=28						
FITZ	**Fitzroy Crossi** comp=Z,16nm,1.9s	**40.69**	**210**	IAmb	IAmb	04 30 11.0	
AS31	**Alice Springs**	**42.70**	**196**	P	**P**	**04 29 46.0**	**+1.2**
ASAR	**Alice Springs**	**42.70**	**196**	P	**P**	**04 29 45.2**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=21,slow=6.7,SNR=11						
SONM	**Songino Array**	**43.94**	**322**	P	**P**	**04 29 55.8**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=136,slow=7.4,SNR=4.3						
SONM	**Songino Array** comp=Z,0.7nm,0.7s	**43.94**	**322**	IAmb	IAmb	04 29 59.8	
CM31	**Chiang Mai Arr**	**44.38**	**279**	P	**P**	**04 29 58.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**44.38**	**279**	P	**P**	**04 30 00.5**	**+2.1**
	comp=Z,1.0nm,0.3s,baz=68,slow=6.3,SNR=4.3						
MKAR	**Makanchi Array**	**59.17**	**314**	P	**P**	**04 31 48.4**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=88,slow=7.5,SNR=6.1						
A21K	**Barrow**	**63.24**	**18**	P	**P**	**04 32 13.4**	**-0.6**
ILAR	**Eielson Array**	**64.53**	**26**	P	**P**	**04 32 22.1**	**-0.5**
	comp=Z,1.3nm,0.4s,baz=252,slow=6.0,SNR=37						
ILAR	**Eielson Array**	**64.53**	**26**	P	**P**	**04 32 21.9**	**-0.8**
INK	**Inuvik**	**70.28**	**23**	P	**P**	**04 32 59.2**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=258,slow=5.7,SNR=17						
INK	**Inuvik**	**70.28**	**23**	P	**P**	**04 32 58.1**	**-0.4**
C36M	**Paulatuk**	**73.67**	**22**	P	**P**	**04 33 18.8**	**+0.2**
YKA	**Yellowknife Ar**	**78.86**	**28**	P	**P**	**04 33 48.1**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=300,slow=4.8,SNR=5.7						
B08A	**Colville Reser**	**80.19**	**42**	P	**P**	**04 33 55.5**	**-0.1**
PINE	**Pine Mountain**	**80.32**	**47**	P	**P**	**04 33 57.6**	**+1.0**
ORV	**Oroville**	**81.03**	**51**	P	**P**	**04 34 00.8**	**+0.6**
NEW	**Newport**	**81.64**	**42**	P	**P**	**04 34 03.5**	**+0.3**
BEKR	**Beckworth**	**81.79**	**51**	P	**P**	**04 34 04.6**	**+0.2**
J08A	**Circle Bar Ran**	**82.16**	**47**	P	**P**	**04 34 06.9**	**+0.8**
J08A				IAmb	IAmb	04 34 08.4	
	comp=Z,6.2nm,1.2s						
KVN	**Kaiserville**	**83.70**	**51**	P	**P**	**04 34 15.9**	**+1.6**
KVN				IAmb	IAmb	04 34 16.0	
	comp=Z,2.4nm,0.6s						
NVAR	**Mina Array Bea**	**83.74**	**52**	P	**P**	**04 34 16.0**	**+1.4**
	comp=Z,1.9nm,0.5s,baz=268,slow=6.1,SNR=30						
NVAR	**Mina Array Bea**	**83.74**	**52**	P	**P**	**04 34 15.9**	**+1.4**
NV11	**Mina Array Sit**	**83.85**	**52**	P	**P**	**04 34 16.2**	**+1.3**
MFID	**Camas Ranch**	**83.98**	**46**	P	**P**	**04 34 16.2**	**+0.7**
HLID	**Hailey**	**84.91**	**46**	P	**P**	**04 34 20.6**	**+0.4**
HLID				IAmb	IAmb	04 34 22.9	
	comp=Z,5.2nm,1.2s						
ELK	**Elko**	**85.26**	**49**	P	**P**	**04 34 23.0**	**+0.9**
ELK				IAmb	IAmb	04 34 24.9	
	comp=Z,4.8nm,1.0s						
FINES	**FINESS Array B**	**87.80**	**335**	P	**P**	**04 34 30.5**	**-3.1**
	comp=Z,2.9nm,1.0s,baz=64,slow=6.3,SNR=3.7						
PDAR	**Pinedale Array**	**88.51**	**45**	P	**P**	**04 34 38.2**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=154,slow=0.4,SNR=7.4						
LPAZ	**La Paz**	**147.62**	**93**	PKPbc	**PKPbc**	**04 41 30.9**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=306,slow=1.5,SNR=6.2						
LPAZ	**La Paz**	**147.62**	**93**		**PKPbc**	**04 41 30.6**	**+0.8**

*ISK **08** 04:25:03.9, 38°.84N×25°.95E, h4km, ML3.5/29*
*ATH **08** 04:25:04.5, 38°.84N×25°.99E, h28km±1km, ML3.1/6, Error ellipse: s-maj=2.3km s-min=1.0km az=62.0*
*DDA **08** 04:25:04.9, 38°.86N×26°.00E, h7km±2km, ML3.0*
*THE **08** 04:25:05.7, 38°.86N×26°.00E, h13km±1km, ML3.2/8, Error ellipse: s-maj=1.6km s-min=0.7km az=58.0*

ISC 08 04:25:04.8±1.0, **38°.85N**±0°.02×**25°.97E**±0°.02, **h14**km±8km, **n94**, σ0**979**/121, **6C-3D**, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.38**	**346**	P	**Pg**	**04 25 12.8**	**+0.4**
SIGR				S	**Sb**	**04 25 18.4**	**-0.5**
SIGR				AML	AML	04 25 18.6	
	comp=N,1926μm,0.9s						
SIGR				AML	AML	04 25 21.8	
	comp=E,6015μm,0.3s						
SIGR	**SIGRI**	**0.38**	**346**	PG	**Pg**	**04 25 11.9**	**-0.5**
SIGR				SG	**Sb**	**04 25 18.2**	**-0.7**
SIGR	**SIGRI**	**0.38**	**346**	P	**Pg**	**04 25 12.8**	**+0.4**
SIGR				S	**Sb**	**04 25 18.2**	**-0.7**
	comp=E,4μm,0.4s						
PRK	**Paraskevi**	**0.46**	**30**	P	**Pb**	**04 25 14.9**	**+0.2**
PRK				S	**Sb**	**04 25 21.8**	**+0.5**
PRK				AML	AML	04 25 23.0	
	comp=N,8745μm,0.3s						
PRK				AML	AML	04 25 25.5	
	comp=E,6413μm,0.7s						
PRK	**Paraskevi**	**0.46**	**30**	P	**Pb**	**04 25 15.0**	**+0.3**
PRK				S	**Sb**	**04 25 21.6**	**+0.2**
	comp=E,4μm,0.5s						
CESE	**eme**	**0.57**	**154**	PG	**Pg**	**04 25 16.0**	**-0.1**
URLA	**Izmir**	**0.69**	**135**	PG	**Pg**	**04 25 18.4**	**+0.2**
URLA				SG	**Sb**	**04 25 28.1**	**+0.2**
URLA	**Izmir**	**0.69**	**135**	*i* P	**Pg**	**04 25 18.2**	**0.0**
URLA				IAML		04 25 31.0	
	comp=E,350nm,0.3s						
AYVA	**Ayvalik**	**0.72**	**50**	*i* P	**Pg**	**04 25 18.7**	**-0.2**
AYVA				*i* S	**Sg**	**04 25 28.0**	**-0.4**
AYVA				IAML		04 25 31.0	
	comp=N,1μm,0.3s						
AYVA				IAML		04 25 31.0	
	comp=E,1μm,0.2s						
DKL	**Dikili**	**0.76**	**73**	PG	**Pb**	**04 25 19.6**	**-0.1**
DKL				SG	**Sn**	**04 25 31.1**	**-1.2**
ZEDA	**zmir-Bergama**	**0.87**	**82**	*i* P	**Pb**	**04 25 21.5**	**-0.1**
ZEDA				*i* S	**Sb**	**04 25 33.8**	**+0.7**
ZEDA				IAML		04 25 34.0	
	comp=N,423nm,0.3s						
ZEDA				IAML		04 25 35.0	
	comp=E,366nm,0.4s						
BLCB	**Balcova**	**0.95**	**118**	PG	**Pg**	**04 25 23.2**	**0.0**
BLCB	**Balcova**	**0.95**	**118**	P	**Pb**	**04 25 22.6**	**-0.5**
BLCB				S	**Sn**	**04 25 36.5**	**-0.6**
BOZC	**Bozcaada**	**1.00**	**4

SIMA	Simav-Kutahya	2.36	83	PN	Pn	04 25 44.9 +1.8
KAVA	Kavala	2.42	333	P	Pn	04 25 44.6 +0.7
YER	Yerkesik	2.50	132	PN	Pn	04 25 45.9 +0.9
EPID	Epidavros	2.56	242	P	Pn	04 25 46.6 +0.7
MDNY	Mudanya-Bursa	2.71	55	PN	Pn	04 25 49.9 +2.0
TVSB	Tavsanli	2.78	76	PN	Pn	04 25 50.9 +2.0
SOH	Sokhos	2.82	315	P	Pn	04 25 50.9 +1.5
KDZ	Kurdzhali	2.83	352	P	Pn	04 25 50.2 +0.6
KDZ				S	Sn	04 26 22.3 -1.2
SRS	Serrai	2.91	322	P	Pn	04 25 51.9 +1.2
DIM	Dimitrovgrad	3.22	354	P	Pn	04 25 55.6 +0.8
CAME	Cameli-Denizli	3.25	125	PN	Pn	04 25 57.5 +2.1
STIP	Stip	4.06	316	*i* Pn	Pn	04 26 07.2 +0.7
TIRR	Tirgusor	5.90	17	⇑P	Pn	04 26 32.2 +0.6
CFR	Carcaliu	6.53	14	⇑P	Pn	04 26 40.9 +0.6
HERR	Herculane	6.59	337	⇑P	Pn	04 26 41.4 +0.3
MLR	Muntele Rosu	6.64	360	⇓P	Pn	04 26 42.5 +0.6
MDVR	Moldovita	6.73	333	⇓P	Pn	04 26 42.6 -0.5
GZR	Gura Zlata	6.96	341	⇓P	Pn	04 26 46.8 +0.5
PLOR	Plostina	7.02	4	⇑P	Pn	04 26 48.5 +1.4
BZS	Buzias	7.50	336	⇑P	Pn	04 26 53.2 -0.4

*NEIC **08** 04:28:19.0±1.6, 28.8°S±0.1°×176.9°W±0.1, h34km±4km, mb4.4/19, Error ellipse: s-maj=18.3km s-min=9.5km az=142.0*
*IDC **08** 04:28:22.4±2.1, 28.86°S×177.12°W, h53km±15km, mb4.0/12, mb1 4.1/12, mb1mx4.0/34, mbtmp4.2/12, MS3.6/9, Ms1 3.6/9, ms1mx3.3/25, Error ellipse: s-maj=24.6km s-min=19.1km az=80.0*

ISC 08 04:28:18.9±0.5, 29.10S±0.06°×176.77W±0.07, h35km, n104, σ1§86/93, mb4.4/14, MS3.6/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.01	261	P	Pn	04 28 37.3	+0.7
	2μm,0.3s,baz=101,slow=17,SNR=78						
RAO				S	Sn	04 28 50.0	+0.4
	3μm,0.3s,baz=96,slow=22,SNR=10						
RAO	Raoul Island	1.01	261		Pn	04 28 37.3	+0.7
RAO					Sn	04 28 48.0	-1.6
GLKZ	Green Lake	1.02	261	P	Pn	04 28 36.9	+0.2
GLKZ				S	Sn	04 28 52.3	+2.5
RIZ	Raoul Island	1.02	262	P	Pn	04 28 36.9	+0.1
RIZ				S	Sn	04 28 53.8	+3.9
HAZ	Te Kaha	9.75	206	P	Pn	04 30 33.4	-3.2
HAZ				S	Sn	04 32 24.4	-0.4
PKGZ	Pakihiroa	9.76	205	P	Pn	04 30 33.1	-3.6
PKGZ				S	Sn	04 32 23.3	-1.9
PUZ	Puketiti	9.86	204	P	Pn	04 30 35.9	-2.2
RUGZ	Raukumara Rang	9.98	206	P	Pn	04 30 35.3	-4.5
RUGZ				S	Sn	04 32 28.5	-2.0
OUZ	Omahuta	10.19	231	Pn	Pn	04 30 43.8	+1.2
CNGZ	Carnagh Statio	10.24	203	P	Pn	04 30 40.0	-3.3
MWZ	Matawai	10.36	206	P	Pn	04 30 41.1	-3.8
MWZ				S	Sn	04 32 38.3	-1.4
MARZ	Manawahe	10.41	210	P	Pn	04 30 44.3	-1.3
URZ	Urewera	10.46	208	P	Pn	04 30 47.9	+1.7
	2.1nm,0.3s,baz=45,slow=1.4,SNR=11						
URZ				S	Sn	04 32 39.7	-2.4
	2.5nm,0.3s,baz=232,slow=14,SNR=5.6						
URZ	Urewera	10.46	208	P	Pn	04 30 41.9	-4.3
URZ				S	Sn	04 32 39.1	-3.0
RIGZ	Rimuhau	10.60	204	S	Sn	04 32 43.8	-1.9
RTZ	Ruatahuna	10.81	207	P	Pn	04 30 45.7	-5.6
RTZ				S	Sn	04 32 48.0	-3.0
NMHZ	Naumai	11.30	206	P	Pn	04 30 53.5	-4.3
NMHZ				S	Sn	04 33 00.4	-2.5
OTVZ	Oturere	11.82	210	P	Pn	04 31 03.9	-1.2
TUWZ	Tuamarina	14.44	209		Pn	04 31 39.4	-1.2
THZ	Tophouse	15.16	211	Pn	Pn	04 31 49.7	-0.7
THZ				IAmb	IAmb	04 32 11.3	
	comp=Z,16nm,0.8s						
KHZ	Kahutara	15.42	208	Pn	Pn	04 31 52.6	-1.2
KHZ				IAmb	IAmb	04 32 15.0	
	comp=Z,32nm,1.1s						
AFI	Afiamalu	15.81	18	P	Pn	04 31 55.1	-3.9
	comp=Z,1.4nm,0.3s,baz=194,slow=4.2,SNR=2.0						
DZM	Mont Dzumac	16.67	291	*e*Pn	P	04 32 14.2	+2.2
	comp=Z,60nm,1.3s						
DZM				*e*LR	LR	04 36 21.0	
	comp=Z,721nm,23.5s						
OXZ	Oxford	16.80	209	Pn	Pn	04 32 10.2	-1.1
RAR	Rarotonga	17.26	67	LR	LR	04 38 20.6	
	comp=Z,47nm,19.6s,baz=242,slow=34						
RPZ	Rata Peaks	17.54	210	P	Pn	04 32 19.6	-1.0
	comp=Z,2.6nm,0.3s,baz=31,slow=5.9,SNR=12						
RPZ				S	Sn	04 35 18.7	-16
	comp=Z,0.5nm,0.3s,baz=234,slow=17,SNR=2.6						
RPZ	Rata Peaks	17.54	210	IAmb	IAmb	04 32 38.6	
	comp=Z,60nm,1.8s						
TBI	Tubuai	25.13	83	*e*LR	LR	04 39 32.5	
	comp=Z,260nm,25.8s,baz=255						
TBI	Tubuai	25.13	83	*e*T	T	04 58 45.3	
	comp=Z,12nm,0.4s						
PAE	Paea	27.36	71	*e*T	T	05 01 44.5	
	comp=Z,4.9nm,0.3s						
PPT2	Papeete2	27.40	71	*e*S	S	04 38 23.0	-16
	comp=Z,33nm,23.2s						
PPT2				*e*LQ	LQ	04 39 22.0	
	comp=Z,229nm,25.5s						
PPT2				*e*LR	LR	04 40 38.0	
	comp=Z,306nm,26.2s,baz=234						
PPT2	Papeete2	27.40	71	*e*T	T	05 01 49.8	
	comp=Z,3.6nm,0.3s						
PPT	Papeete	27.41	71	LR	LR	04 41 56.8	
	comp=Z,94nm,19.6s,baz=197,slow=30						
TVO	Taravao	27.58	72	*e*T	T	05 02 00.2	
	comp=Z,1.1nm,0.3s						
HNR	Honiara	29.32	307	LR	LR	04 45 26.7	
	comp=Z,151nm,18.2s,baz=164,slow=35						
VAH	Vaihoa	30.21	69	*e*T	T	05 05 19.6	
	comp=Z,10nm,0.2s						
CTAO	Charters Tower	34.68	277	P	P	04 35 02.8	-2.6
STKA	Stephens Creek	35.83	255	P	P	04 35 13.4	-1.8
	comp=Z,3nm,0.4s,baz=105,slow=16,SNR=10						
TAOE	Nuku Hiva Isla	39.82	67	*e*LR	LR	04 46 28.3	
	comp=Z,133nm,24.5s						
AS31	Alice Springs	44.27	265	P	P	04 36 24.3	-1.0
ASAR	Alice Springs	44.27	265	P	P	04 36 24.6	-0.8
	comp=Z,3.9nm,0.4s,baz=103,slow=7.3,SNR=89						
ASAR				PcP	PcP	04 38 10.2	+0.8
	comp=Z,0.7nm,0.4s,baz=116,slow=3.5,SNR=4.2						
ASAR				LR	LR	04 54 14.0	
	comp=Z,262nm,18.2s,baz=120,slow=35						
ASAR	Alice Springs	44.27	265		P	04 36 24.0	-1.3
WR0	Warramunga Arr	44.96	270	P	P	04 36 29.4	-1.4
WR0				IAmb	IAmb	04 36 34.6	
	comp=Z,3.9nm,0.6s						
WB2	Warramunga Arr	45.13	270	P	P	04 36 30.9	-1.3
WRAB	Tennant Creek	45.13	270	P	P	04 36 30.7	-1.5
WRAB				IAmb	IAmb	04 36 32.2	
	comp=Z,6.5nm,0.9s						
WRA	Warramunga Arr	45.14	270	P	P	04 36 31.3	-1.0
	comp=Z,4.2nm,0.6s,baz=110,slow=7.8,SNR=57						
WRA				PcP	PcP	04 38 13.4	+0.9
	comp=Z,0.5nm,0.5s,baz=124,slow=4.7,SNR=3.5						
WRA				LR	LR	04 54 08.3	
	comp=Z,75nm,18.8s,baz=155,slow=34						
WRA	Warramunga Arr	45.14	270	P	P	04 36 31.3	-1.0
WB0	Warramunga Arr	45.16	270	P	P	04 36 31.3	-1.1
FORT	Forrest	47.42	254	P	P	04 36 50.5	+0.4
VNDA	Vanda	49.49	186	P	P	04 37 08.7	+3.4
	comp=Z,1.1nm,0.6s,baz=26,slow=2.8,SNR=4.1						
VNDA				LR	LR	04 54 43.3	
	comp=Z,31nm,20.6s,baz=5.5,slow=32						
KNRA	Kununurra	51.69	273	P	P	04 37 22.0	-0.8
FITZ	Fitzroy Crossi	53.45	268	P	P	04 37 34.6	-1.1
CASY	Casey	56.78	207	P	P	04 38 00.6	+1.5
QSPA	South Pole Qui	61.00	180	P	P	04 38 32.2	+3.6
	comp=Z,1.8nm,0.8s,baz=33,slow=1.4,SNR=13						
QSPA	South Pole Qui	61.00	180	P	P	04 38 30.3	+1.7
MAW	Mawson	73.89	200	LR	LR	05 11 51.3	
	comp=Z,65nm,19.0s,baz=56,slow=35						
MJAR	Matsushiro Arr	77.80	324	P	P	04 40 11.8	-0.7
	comp=Z,2.6nm,0.6s,baz=159,slow=5.6,SNR=6.6						
SNAA	Sanae	79.42	178	P	P	04 40 24.2	+3.1
	comp=Z,0.4nm,0.3s,baz=132,slow=6.0,SNR=1.9						
VNA3	Neumayer Olymp	79.52	176	P	P	04 40 23.2	+1.6
VNA2	Neumayer--Watz	79.97	176	P	P	04 40 26.6	+2.6
	baz=159,slow=4.7						
VNA1	Neumayer--Stat	80.19	176	P	P	04 40 27.7	+2.6

H03S2	Juan Fernandez	80.28	123	T	T	06 10 11.1
	baz=239,slow=74,SNR=13					
H03S1	Juan Fernandez	80.30	123	T	T	06 10 11.1
	baz=239,slow=74,SNR=12					
H03S3	Juan Fernandez	80.30	123	T	T	06 10 11.1
	baz=239,slow=74,SNR=14					
H03N3	Juan Fernandez	80.47	123	T	T	06 10 27.0
	baz=236					
H03N2	Juan Fernandez	80.47	123	T	T	06 10 27.4
	baz=236					
H03N1	Juan Fernandez	80.48	123	T	T	06 10 29.5
	baz=236					
PLCA	Paso Flores	82.60	133	LR	LR	05 08 17.4
	comp=Z,30nm,20.9s,baz=201,slow=29					
KSRS	Korea Array	84.07	319	P	P	04 40 47.2 +1.4
	comp=Z,0.8nm,0.6s,baz=148,slow=10,SNR=4.8					
PETK	Petropavlovsk-	84.83	345	P	P	04 40 50.1 +0.7
	comp=Z,9.3nm,1.1s,baz=100,slow=7.7,SNR=5.9					
NVAR	Mina Array Bea	86.56	42	P	P	04 41 00.1 +1.4
	comp=Z,0.6nm,0.8s,baz=225,slow=5.9,SNR=4.0					
NVAR	Mina Array Bea	86.56	42	P	P	04 40 58.2 -0.5
USA0B	Ussuriysk Arra	86.68	326	P	P	04 40 57.9 -0.9
USRK	Ussuriysk Ar.	86.68	326	P	P	04 40 58.9 +0.2
	comp=Z,1.8nm,0.7s,baz=134,slow=4.2,SNR=5.6					
USRK	Ussuriysk Ar.	86.68	326	P	P	04 40 57.6 -1.1
ILAR	Eielson Array	96.43	12	P	P	04 41 43.2 -0.4
	comp=Z,0.3nm,0.5s,baz=224,slow=6.7,SNR=4.6					
LPAZ	La Paz	97.69	113	LR	LR	05 15 27.1
	comp=Z,21nm,21.0s,baz=336,slow=29					
MKAR	Makanchi Array	117.75	310	PKP	PKPdf	04 47 01.1 -0.1
	comp=Z,1.4nm,0.7s,baz=123,slow=1.2,SNR=9.6					
MKAR	Makanchi Array	117.75	310		PKPdf	04 47 00.8 -0.5
ZALV	Zalesovo Beam	117.77	319	PKP	PKPdf	04 47 00.6 -0.4
	comp=Z,1.1nm,0.7s,baz=82,slow=2.0,SNR=4.6					
ZALV	Zalesovo Beam	117.77	319		PKPdf	04 46 59.8 -1.1
MAKZ	Makanchi	117.97	310	PKPdf	PKPdf	04 47 01.4 -0.2
KBL	Kabul	124.69	294	PKPdf	PKPdf	04 47 14.9 -0.3
KK31	Karatay Array	125.24	304	PKPdf	PKPdf	04 47 15.4 -0.3
KKAR	Karatay Array	125.24	304	PKPdf	PKiKP	04 47 16.2 +0.1
BVAR	Borovoye Array	126.22	316	PKP	PKiKP	04 47 17.7 0.0
	comp=Z,1.2nm,0.4s,baz=40,slow=12,SNR=9.2					
BRVK	Borovoye	126.28	316	PKPdf	PKiKP	04 47 17.8 0.0
ARU	Arti	132.76	322	PKP	PKiKP	04 47 30.4 -0.3
	comp=Z,1.8nm,0.4s,baz=100,slow=2.8,SNR=7.3					
AKTO	Aktyubinsk	134.00	313	PKP	PKiKP	04 47 33.6 +0.2
	comp=Z,2.7nm,0.8s,baz=358,slow=3.2,SNR=5.8					
H10N3	ASCENSION HYDR	139.49	152	T	T	07 24 52.7
	baz=204,slow=74,SNR=6.2					
H10N1	ASCENSION HYDR	139.49	152	T	T	07 24 59.2
	baz=204,slow=74,SNR=5.7					
H10N2	ASCENSION HYDR	139.51	152	T	T	07 25 00.8
	baz=204,slow=74,SNR=4.7					
FINES	FINESS Array B	144.28	341	PKP	PKPab	04 47 48.4 0.0
	comp=Z,3.3nm,0.7s,baz=57,slow=3.6,SNR=11					
GNI	Garni	144.40	299	PKPdf	PKPdf	04 47 51.0 -0.5
AKH	Akhalkalaki	145.20	302	PKPdf	PKPdf	04 47 53.8 +0.8
KIV	Kislovodsk	145.35	306	PKPbc	PKPab	04 47 53.2 +0.1
NB2	NORSAR Subarra	147.62	353	PKP	PKPbc	04 47 58.4 -0.5
	comp=Z,1.2nm,0.5s,baz=7.4,slow=2.9					
NOA	NORSAR Array B	147.62	353	PKPbc	PKPbc	04 47 58.5 -0.5
	comp=Z,0.3nm,0.4s,baz=59,slow=1.5,SNR=7.9					
MARD	Mardin	147.70	295	PKPbc	PKPbc	04 48 00.1 0.0
AKASG	Malin Array Be	150.89	325	PKPbc	PKPbc	04 48 07.6 +0.2
	comp=Z,17nm,0.5s,baz=44,slow=3.4,SNR=44					
BRTR	Keskin Array B	152.89	301	PKPbc	PKiKP	04 48 13.2 +0.5
	comp=Z,1.0nm,0.7s,baz=116,slow=3.4,SNR=7.5					
BRTR	Keskin Array B	152.89	301		PKPbc	04 48 12.0 -0.5
GERES	GERESS Array B	158.71	341	PKPab	PKPab	04 48 46.8 -1.4
	comp=Z,0.4nm,0.7s,baz=18,slow=4.1,SNR=2.3					
TORD	Torodi Ar. Bea	164.06	175	PKPab	PKPab	04 49 14.3 +2.1
	comp=Z,0.7nm,0.6s,baz=188,slow=3.8,SNR=7.7					

*HEL **08** 04:35:13.4±0.0, 67.19°N×20.68°E, h1km, ML2.1, ML2.6(UPP), Confirmed Induced event*
*NAO **08** 04:35:13.1±0.9, 67.14°N×20.99°E, ML2.3*
*BER **08** 04:35:16.0±4.5, 67.14°N×20.99°E, h0km, ML1.9, ML2.3(NAO), Suspected explosion*

ISC 08 04:35:12.1±0.7, 67.16N±0.02×20.78E±0.03, h0km, n29, σ1§44/51, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RATU	Laukkuluspa	0.81	326	*i* P	Pg	04 35 27.1	-0.5
RATU				*i* S	Sg	04 35 37.1	-1.0
KUA	Kurravaara	0.82	348	*i* P	Pg	04 35 27.2	-0.5
KUA				*i* S	Sg	04 35 38.9	+0.5
ERTU	Ertsjaerv	0.82	137	*e*P	Pg	04 35 28.9	+1.0
ERTU				*e*S	Sb	04 35 40.7	-0.2
SALU	Saltoluokta	0.91	285	*i* P	Pg	04 35 29.0	-0.5
PAJU	Pajala	0.93	97	*e*P	Pb	04 35 30.9	-0.1
HARU	Harads	1.00	175	*e*P	Pg	04 35 31.9	+0.6
LANU	Lannavaara	1.01	27	*e*P	Pg	04 35 31.4	-0.1
LANU				*e*S	Sg	04 35 43.9	-0.6
SJUU	Sjulsmark	1.69	168	*e*P	Pb	04 35 44.2	+0.2
TOF	Tornio	1.78	126	*e*P	Pb	04 35 45.9	+0.3
TOF				*e*SN	Sg	04 36 09.8	+0.5
TOF				*e*SG	Sb	04 36 10.6	+2.2
TOF				MSG		04 36 12.4	
	comp=Z,18nm,0.2s						
KIF	Kilpisjarvi	1.86	0	Pn	Pb	04 35 46.4	-0.5
KIF				Sn	Sg	04 36 12.0	+0.3
KIF	Kilpisjarvi	1.86	0	*e*P	Pn	04 35 46.0	+0.9
KIF				*e*SG	Sg	04 36 11.7	0.0
KIF				MSG		04 36 13.3	
	comp=Z,16nm,0.2s						
KIF	Kilpisjarvi	1.86	0	*e*P	Pb	04 35 46.5	-0.3
KIF				Sn	Sg	04 36 12.0	+0.3
RNF	Rovaniemi	2.14	103	*e*PB	Pb	04 35 51.4	-0.2
FAUS	Fauske	2.14	279	IAML		04 36 22.6	
	comp=Z,20nm,0.5s						
SGF	Sodankyl	2.25	80	*e*PB	Pb	04 35 52.6	-0.9
SGF				*e*SG	Sg	04 36 23.6	-0.7
SGF				MSG		04 36 27.7	
	comp=Z,4.1nm,0.2s						
STEI	Steigen	2.26	293	Pn	Pn	04 35 51.5	+0.8
STEI				Sn	Sb	04 36 22.6	+0.3
STEI	Steigen	2.26	293	Pn	Pn	04 35 51.5	+0.8
STEI				Sn	Sb	04 36 22.6	+0.3
STEI				IAML		04 36 28.4	
	comp=Z,9.4nm,0.8s						
BURU	Burvik	2.60	174	*e*P	Pn	04 35 57.3	+2.0
ARA0	ARCESS Array S	2.96	34	Pn	Pn	04 36 01.6	+1.3
	baz=209,slow=16						
ARA0				Sn	Sn	04 36 37.1	+0.5
	baz=216,slow=28						
ARA0	ARCESS Array S	2.96	34	Pn	Pn	04 36 01.6	+1.3
	baz=209,slow=16						
ARA0				Sn	Sn	04 36 37.1	+0.5
	baz=216,slow=28						
UMAU	Umeaa	3.29	181	*e*P	Pn	04 36 06.3	+1.5
APA0	Apatity Array	4.74	79	Pn	Pn	04 36 26.0	+1.3
	baz=259,slow=11						
APA0				Sn	Sn	04 37 20.0	-0.2
	baz=284,slow=28						
APA0				Lg	Lg	04 37 39.9	
	baz=282,slow=22						
APA0	Apatity Array	4.74	79	Pn	Pn	04 36 26.0	+1.3
	baz=259,slow=11						
APA0				Sn	Sn	04 37 20.0	-0.2
	baz=284,slow=28						
APA0				Sg	Sg	04 37 39.9	-4.3
	baz=282,slow=22						
FIA0	FINESS Array S	6.18	156	Pn	Pn	04 36 45.2	+0.7
	baz=344,slow=14						
FIA0				Sn	Sn	04 37 56.3	+0.5
	baz=343,slow=28						
FIA0				Lg	Lg	04 38 23.9	
	baz=344,slow=37						
FIA0	FINESS Array S	6.18	156	Pn	Pn	04 36 45.2	+0.7
	baz=344,slow=14						
FIA0				Sn	Sn	04 37 56.3	+0.5
	baz=343,slow=28						
FIA0				Sg	Sg	04 38 23.9	-6.5
	baz=344,slow=37						
NRA0	NORESS Array S	7.61	217	Pn	Pn	04 37 05.8	+1.7
	baz=28,slow=14						
NRA0				Sn	Sn	04 38 29.5	-1.5
	baz=34,slow=22						
NRA0				Lg	Lg	04 39 17.3	
	baz=34,slow=28						
NRA0	NORESS Array S	7.61	217	Pn	Pn	04 37 05.8	+1.7
	baz=28,slow=14						
NRA0				Sn	Sn	04 38 29.5	-1.5
	baz=34,slow=22						
NRA0				Sg	Sg	04 39 17.3	+1.1
	baz=34,slow=28						
HFS	Hagfors	7.72	207	Pn	Pn	04 37 05.5	-0.1
	baz=39,slow=16						
HFS	Hagfors	7.72	207	Pn	Pn	04 37 05.5	-0.1
	baz=39,slow=16						

*TEH **08** 04:47:37.6, 36.44N×53.98E, h8km, ML3.6*
*THR **08** 04:47:38.9±2.0, 36.47N×53.94E, h15km±18km, ML3.9*

ISC 08 04:47:40.5±0.9, 36.44N±0.04×53.92E±0.03, h10km, n64, σ1§21/69, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGLO	Ghaloghah	0.10	312	*e*Pg	Pg	04 47 40.9	-2.4
IKIA	Kiasar	0.30	220	*e*Pg	Pg	04 47 44.1	-2.5
ISHM	Shahmirzad	0.81	219	*e*Pg	Pg	04 47 54.3	-1.8
ISHM				*e*	Sn	04 48 11.1	+0.7
IALA	Alasht	0.96	249	*e*Pg	Pg	04 47 57.4	-1.7
IALA				*e*	Sn	04 48 16.7	+2.4
IANJ	Anjilo	0.97	180	*e*Pg	Pg	04 47 56.7	-2.4
IANJ				*e*	Sn	04 48 15.6	+1.3
IFIR	Firoozkooh	1.23	230	*e*		04 48 07.2	
IFIR				*e*Pg	Pb	04 48 01.6	-2.5
IPRN	Peran	1.29	262	*e*Pg	Pn	04 48 03.3	-1.4
ILAS	Lasjerd	1.31	217	*e*		04 48 26.1	
ILAS				*e*Pg	Pn	04 48 03.2	-1.9
IMND	Minoodasht	1.45	55	*e*Pg	Pn	04 48 03.7	-3.0
IDMV	Damavand	1.75	241	*e*Pg	Pn	04 48 10.9	-0.3
IDMV				*e*		04 48 46.8	
DAMV	Damavand	1.77	244	*e*Pg	Pn	04 48 09.5	-1.9
TEH	Tehran	2.17	252	*e*Pn	Pn	04 48 18.1	+1.3
IVRN	Varamin	2.29	232	*e*Pn	Pn	04 48 18.5	+0.1
IVRN				*e*		04 48 57.3	
CHTH	Charan	2.32	258	*e*Pn	Pn	04 48 19.6	+0.6
CHTH				*e*Sg	Sb	04 48 53.2	+1.8
CHTH	Charan	2.32	258	*e*Pn	Pn	04 48 19.6	+0.6
IHSB	Hasanabad	2.37	246	*e*Pn	Pn	04 48 20.7	+1.2
THKV	Tehran--Karaj	2.52	259	*e*Pn	Pn	04 48 22.1	+0.5
THKV				*e*Sg	Sb	04 48 58.8	+1.9
THKV				IAML		04 49 01.1	
	comp=N,417nm,0.5s						
THKV	Tehran--Karaj	2.52	259	*e*Pn	Pn	04 48 22.1	+0.5
QALM	Alamut, Qazvin	2.64	271	*e*Pn	Pn	04 48 24.1	+0.7
IMHD	Mahdasht	2.74	255	*e*Pn	Pn	04 48 25.1	+0.5
IMHD				*e*		04 49 20.0	
KRSH	Karshahi	2.86	211	*e*Pn	Pn	04 48 26.5	+0.1
KRSH				*e*		04 49 26.8	
GHVR	GHOM	2.90	228	*e*Pn	Pn	04 48 27.8	+1.0
GHVR	GHOM	2.90	228	*e*Pn	Pn	04 48 27.8	+1.0
IGZV	Ghazvin	2.99	270	*e*Pn	Pn	04 48 29.6	+1.5
IGZV				*e*		04 49 26.3	
BJRD	Bojnurd	3.06	65	*e*Pn	Pn	04 48 28.6	-0.5
BJRD	Bojnurd	3.06	65	*e*Pn	Pn	04 48 28.6	-0.5
ANAR	Anarak	3.24	183	*e*Pn	Pn	04 48 31.7	+0.1
TNSJ	Nastanj	3.31	137	*e*Pn	Pn	04 48 31.8	-0.6
QAM	Ghamsar	3.36	218	*e*Pn	Pn	04 48 32.7	-0.5
IRAZ	Razeghan	3.40	254	*e*Pn	Pn	04 48 34.0	+0.2
QABG	Abgarm-Qazvin	3.59	260	*e*Pn	Pn	04 48 36.6	+0.2
IKLH	Kolahrood	3.66	212	*e*Pn	Pn	04 48 38.0	+0.6
IKLH				*e*		04 48 52.2	
ASAO	Ashtian	3.69	240	*e*Pn	Pn	04 48 38.5	+0.6
ASAO	Ashtian	3.69	240	*e*Pn	Pn	04 48 38.5	+0.6
IKRD	Kardeh	3.71	83	*e*Pn	Pb	04 48 49.1	+2.8
IKRD				*e*		04 50 26.4	
NASN	Na'in	3.74	194	*e*Pn	Pn	04 48 38.7	+0.1
NASN	Na'in	3.74	194	*e*Pn	Pn	04 48 38.7	+0.1
IZEF	Zefreh	3.77	201	*e*Pn	Pn	04 48 38.9	0.0
TABS	Tabas	3.82	136	*e*Pn	Pn	04 48 40.2	+0.7
TABS	Tabas	3.82	136	*e*Pn	Pn	04 48 40.2	+0.7
QSDN	Sirdan	3.83	272	*e*Pn	Pn	04 48 40.9	+1.2
TKDS	Koohdasht(Taba	3.85	136	*e*Pn	Pn	04 48 40.0	+0.1
TKDS				*e*		04 49 54.6	
IAKL	Akhelmad	3.90	86	*e*Pn	Pn	04 48 40.8	+0.1
IAKL				*e*		04 49 04.3	
YZKH	Yazd	4.08	172	*e*Pn	Pn	04 48 43.4	+0.4
IPAY	Payeh	4.09	88	*e*Pn	Pn	04 48 42.9	-0.4
TPRV	Parvadeh(Tabas	4.09	145	*e*Pn	Pn	04 48 43.1	-0.1
ICHK	Chekchek	4.20	174	*e*Pn	Pn	04 48 45.1	+0.3
HAGD	Aghdareh	4.21	249	*e*Pn	Pn	04 48 46.2	+1.2
IPIR	Pirpir	4.50	215	*e*Pn	Pn	04 48 50.9	+1.9
ISAD	Sadrabad	4.52	183	*e*Pn	Pn	04 48 49.1	-0.1
IRAM	Ramesheh	4.79	196	*e*Pn	Pn	04 48 53.6	+0.7
HSAM	Samen	4.88	244	*e*Pn	Pn	04 48 55.7	+1.5
IMYA	Miami	4.99	89	*e*Pn	Pn	04

KEK	**Kerkira**	**1.67**	**345**	P	**Pb**	**04 53 14.7**	**-0.3**
STON	**Ston**	**5.18**	**338**	*e*Pn	**Pn**	**04 54 01.0**	**-0.4**
MAKA	**Makarska**	**5.77**	**335**	*e*Pn	**Pn**	**04 54 09.6**	**0.0**
RICI	**Ricice**	**5.92**	**337**	*e*Pn	**Pn**	**04 54 12.0**	**+0.4**
KIJV	**Kijevo**	**6.61**	**334**	*e*Pn	**Pn**	**04 54 22.4**	**+1.3**
KIJV				Sn	**Sn**	**04 55 33.7**	**-2.5**
MORI	**Morici**	**6.75**	**330**	*e*Pn	**Pn**	**04 54 24.6**	**+1.6**
MORI				Sn	**Sn**	**04 55 39.2**	**-0.3**

*ISK **08** 04:55:41.7, 34.86N×26.15E, h5km, ML3.5/12*
*ATH **08** 04:55:42.0, 34.86N×26.14E, h13km±5km, ML3.2/4, Error ellipse: s-maj=6.8km s-min=1.2km az=356.0*
*THE **08** 04:55:41.9, 34.88N×26.11E, h0km, ML3.1/5, Error ellipse: s-maj=1.8km s-min=0.5km az=169.0*
ISC 08 04:55:42.2±1.8, 34.84N±0.08×26.13E±0.03, h8km±10km, n30, σ0.73/43, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.28**	**15**	P	**Pg**	**04 55 47.7**	**0.0**
ZKR				S	**Sg**	**04 55 51.3**	**-0.1**
ZKR				AML	AML	04 55 52.1	
	comp=E,22435μm,0.2s						
ZKR				AML	AML	04 55 52.5	
	comp=N,9789μm,0.3s						
ZKR	**Zakros**	**0.28**	**15**	PG	**Pg**	**04 55 47.8**	**+0.1**
ZKR				SG	**Sg**	**04 55 51.5**	**0.0**
ZKR	**Zakros**	**0.28**	**15**	P	**Pg**	**04 55 47.7**	**0.0**
ZKR				S	**Sg**	**04 55 51.7**	**+0.2**
	comp=N,111μm,0.3s						
NPS	**Neapolis**	**0.59**	**315**	P	**Pg**	**04 55 53.4**	**-0.2**
NPS				S	**Sg**	**04 56 02.1**	**+0.6**
NPS				AML	AML	04 56 03.3	
	comp=E,6763μm,0.2s						
NPS				AML	AML	04 56 05.0	
	comp=N,4136μm,0.3s						
NPS	**Neapolis**	**0.59**	**315**	P	**Pg**	**04 55 53.4**	**-0.2**
NPS				S	**Sb**	**04 56 02.4**	**-1.1**
	comp=N,3μm,0.2s						
LAST	**Lasithi**	**0.62**	**301**	P	**Pg**	**04 55 53.8**	**-0.4**
LAST				S	**Sg**	**04 56 03.0**	**+0.7**
LAST				AML	AML	04 56 04.1	
	comp=E,3278μm,0.4s						
LAST				AML	AML	04 56 04.5	
	comp=N,3923μm,0.3s						
LAST	**Lasithi**	**0.62**	**301**	P	**Pg**	**04 55 53.8**	**-0.4**
LAST				S	**Sb**	**04 56 03.1**	**-1.2**
	comp=N,2μm,0.4s						
HRKL	**Herakleio**	**0.96**	**299**	PG	**Pb**	**04 56 00.9**	**-0.2**
SIVA	**Sivas**	**1.10**	**279**	P	**Pg**	**04 56 02.2**	**-1.0**
SIVA				S	**Sb**	**04 56 18.7**	**+0.8**
SIVA				AML	AML	04 56 21.6	
	comp=E,3230μm,0.7s						
SIVA				AML	AML	04 56 29.1	
	comp=N,2021μm,0.5s						
SIVA	**Sivas**	**1.10**	**279**	P	**Pg**	**04 56 02.2**	**-1.0**
SIVA				S	**Sn**	**04 56 19.9**	**+0.7**
	comp=N,1μm,0.6s						
KARP	**Karpathos**	**1.10**	**50**	P	**Pg**	**04 56 02.6**	**-0.7**
KARP	**Karpathos**	**1.10**	**50**	PN	**Pg**	**04 56 02.6**	**-0.7**
KARP	**Karpathos**	**1.10**	**50**	P	**Pg**	**04 56 02.1**	**-1.2**
KARP				S	**Sn**	**04 56 19.1**	**-0.3**
IDI	**Anoyia**	**1.11**	**294**	P	**Pg**	**04 56 02.6**	**-0.8**
IDI				S	**Sb**	**04 56 18.1**	**-0.3**
IDI	**Anoyia**	**1.11**	**294**	PN	**Pg**	**04 56 02.9**	**-0.6**
IDI				SN	**Sn**	**04 56 19.3**	**-0.3**
IDI	**Anoyia**	**1.11**	**294**	P	**Pg**	**04 56 02.6**	**-0.8**
IDI				S	**Sb**	**04 56 18.5**	**+0.2**
	comp=N,388nm,0.4s						
SANT	**Santorini**	**1.62**	**340**	PN	**Pb**	**04 56 11.9**	**-0.5**
VAM	**Vamos**	**1.68**	**290**	P	**Pn**	**04 56 12.3**	**+0.5**
THT2	**Imerovigli**	**1.69**	**340**	PN	**Pb**	**04 56 12.7**	**-0.8**
IMMV	**Iera Moni Meta**	**1.86**	**290**	P	**Pb**	**04 56 17.0**	**+0.5**
NIS1	**Nisyros Isl.**	**1.95**	**26**	PN	**Pn**	**04 56 16.1**	**+0.4**
ARG	**Arkhangelos**	**2.13**	**49**	PN	**Pn**	**04 56 18.8**	**+0.7**
APE	**Apeiranthos**	**2.27**	**348**	PN	**Pn**	**04 56 20.3**	**+0.2**
TURN	**Turunc**	**2.58**	**41**	PN	**Pn**	**04 56 24.7**	**+0.4**
DALY	**Dalyan (Mula)**	**2.84**	**45**	PN	**Pn**	**04 56 28.9**	**+1.0**
YER	**Yerkesik**	**2.88**	**37**	PN	**Pn**	**04 56 29.4**	**+1.0**
FETY	**Fethiye**	**3.00**	**53**	PN	**Pn**	**04 56 30.7**	**+0.7**
CAME	**Cameli-Denizli**	**3.32**	**50**	PN	**Pn**	**04 56 35.6**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**3.41**	**24**	PN	**Pn**	**04 56 36.8**	**+1.0**
BLCB	**Balcova**	**3.61**	**11**	PN	**Pn**	**04 56 40.0**	**+1.6**

*SOME **08** 05:22:33.3, 41.68N×73.03E, h10km*
*KRNET **08** 05:22:33.0±0.1, 41.67N×73.03E, h21km, mb2.7*
*NNC **08** 05:22:35.0±1.6, 41.75N×73.03E, h0km, mb3.3, mpv3.2, Error ellipse: s-maj=13.9km s-min=7.0km az=167.0*
ISC 08 05:22:33.1±1.0, 41.66N±0.04×73.08E±0.02, h14km±11km, n25, σ0.95/45, 19C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.34**	**193**	⇑*i*P	**Pg**	**05 22 39.9**	**-0.2**
	baz=86						
ARSB				⇑*i*S	**Sg**	**05 22 45.0**	**+0.1**
	baz=86						
AML	**Almayashu**	**0.66**	**44**	⇑*i*P	**Pg**	**05 22 46.3**	**+0.3**
	baz=47						
AML				⇑*i*S	**Sg**	**05 22 55.4**	**+0.7**
	baz=47						
MNAS	**Manas**	**0.93**	**333**	⇑*i*P	**Pb**	**05 22 49.8**	**-1.3**
	baz=35						
MNAS				⇑*i*S	**Sb**	**05 23 02.6**	**-0.9**
	baz=35						
ARLS	**Aral**	**0.95**	**77**	⇑*i*P	**Pb**	**05 22 51.6**	**+0.2**
	baz=78						
ARLS				⇑*i*S	**Sg**	**05 23 04.9**	**+1.0**
	baz=78						
MRKS	**Merke**	**1.09**	**6**	⇓*e*P	**Pb**	**05 22 53.7**	**-0.1**
	11nm,0.1s						
MRKS				*e*S	**Sg**	**05 23 08.4**	**0.0**
	26nm,0.1s						
MRKS	**Merke**	**1.09**	**6**	P	**Pb**	**05 22 53.7**	**-0.1**
	11nm,0.1s						
MRKS				S	**Sg**	**05 23 08.3**	**0.0**
	26nm,0.1s						
EKS2	**Erkin-Say**	**1.13**	**27**	⇓*i*P	**Pb**	**05 22 54.5**	**+0.1**
	baz=29						
EKS2				⇓*i*S	**Sb**	**05 23 08.8**	**-0.2**
	baz=29						
UCH	**Uchtor**	**1.21**	**62**	⇓*e*P	**Pn**	**05 22 56.0**	**0.0**
	baz=63						
UCH				⇓*i*S	**Sg**	**05 23 12.7**	**+0.5**
	baz=63						
KBK	**Karagaybulak**	**1.71**	**54**	⇑*e*P	**Pb**	**05 23 04.6**	**+0.2**
	baz=55						
KBK				⇑*i*S	**Sg**	**05 23 27.2**	**-0.9**
	baz=55						
CHMS	**Chumysh**	**1.82**	**42**	⇑*e*P	**Pb**	**05 23 06.7**	**+0.5**
	baz=43						
CHMS				⇑*i*S	**Sb**	**05 23 30.0**	**+1.0**
	baz=43						
USP	**Ospenovka**	**1.92**	**33**	⇑*i*P	**Pb**	**05 23 07.7**	**-0.2**
	baz=34						
USP				⇑*i*S	**Sb**	**05 23 33.0**	**+1.3**
	baz=34						
SGDS	**Sogindy**	**2.12**	**32**	Pg	**Pb**	**05 23 12.4**	**+1.0**
	3.4nm,0.2s						
SGDS				Lg	Lg	05 23 40.3	
	14nm,0.2s						
TKM2	**Tokmak 2**	**2.25**	**55**	⇓*i*P	**Pb**	**05 23 12.8**	**-0.9**
	baz=56						
TKM2				⇓*i*S	**Sb**	**05 23 41.2**	**-0.3**
	baz=56						
TKM2	**Tokmak 2**	**2.25**	**55**	⇑Pn	**Pb**	**05 23 14.5**	**+0.9**
	2.5nm,0.4s						
TKM2				⇓Sn	**Sg**	**05 23 45.0**	**-0.4**
	4.4nm,0.5s						
BOOM	**Boomskoye usch**	**2.28**	**68**	⇑*i*P	**Pb**	**05 23 13.5**	**-0.7**
	baz=68						
BOOM				⇑*i*S	**Sb**	**05 23 42.1**	**-0.3**
	baz=68						
IUG	**luzhnay**	**2.33**	**283**	*e*P	**Pb**	**05 23 14.9**	**0.0**
	8.5nm,0.3s						
IUG				*e*S	**Sb**	**05 23 44.7**	**+1.1**
	34nm,0.3s						
IUG	**luzhnay**	**2.33**	**283**	Pg	**Pb**	**05 23 15.2**	**+0.3**
	9.7nm,0.5s						
IUG				Lg	Lg	05 23 44.8	
	34nm,0.3s						
KK31	**Karatay Array**	**2.39**	**308**	Pn	**Pb**	**05 23 15.5**	**-0.4**
	0.3nm,0.2s,baz=125,slow=15,SNR=11						
KK31				Sn	**Sb**	**05 23 47.2**	**+1.9**
	1.3nm,0.2s,baz=130,slow=27,SNR=12						
ULHL	**Ulahol**	**2.43**	**75**	⇑*i*P	**Pb**	**05 23 15.3**	**-1.4**
	baz=75						
ULHL				⇑*i*S	**Sb**	**05 23 45.9**	**-0.7**
	baz=75						
DGS	**Degeres**	**2.54**	**51**	*e*P	**Pb**	**05 23 20.3**	**+1.7**
	4.1nm,0.6s						
DGS				*e*S	**Sg**	**05 23 53.9**	**-0.9**
	8.5nm,0.4s						
DGS	**Degeres**	**2.54**	**51**	Pg	**Pb**	**05 23 19.9**	**+1.3**
	2.9nm,0.5s						
DGS				Lg	Lg	05 23 52.8	
	8.5nm,0.4s						
KST	**Kastek**	**2.54**	**56**	*e*P	**Pg**	**05 23 20.8**	**-1.0**
	3.8nm,0.2s						
KST				*e*S	**Sg**	**05 23 54.7**	**-0.1**
	7.4nm,0.3s						
KST	**Kastek**	**2.54**	**56**	Pg	**Pb**	**05 23 19.8**	**+1.2**
	5.9nm,0.4s						
KST				Lg	Lg	05 23 52.9	
	13nm,0.7s						
BRLS	**Borolday**	**2.77**	**301**	*e*P	**Pb**	**05 23 23.7**	**+1.3**
	25nm,0.1s						
BRLS				*e*S	**Sg**	**05 23 59.6**	**-2.4**
	13nm,0.4s						
BRLS	**Borolday**	**2.77**	**301**	Pg	**Pb**	**05 23 23.9**	**+1.6**
	25nm,0.1s						
BRLS				Lg	Lg	05 23 59.8	
	13nm,0.4s						

IDC 08 05:47:20.4±2.0, 3.82S×151.12E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/29, mbtmp3.6/3, Error ellipse: s-maj=39.0km s-min=12.9km az=14.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.02**	**118**	Pg	Pg	05 47 39.3	-0.7
	66nm,0.3s,baz=128,slow=2.1,SNR=32						
KRVT				Lg	Lg	05 47 54.9	
	117nm,0.3s,baz=46,slow=20,SNR=22						
WRA	**Warramunga Arr**	**22.90**	**224**	P	P	05 52 25.2	-0.9
	0.7nm,0.3s,baz=51,slow=9.9,SNR=17						
ASAR	**Alice Springs**	**25.80**	**219**	P	P	05 52 54.6	+1.1
	0.2nm,0.3s,baz=51,slow=9.9,SNR=5.0						
NVAR	**Mina Array Bea**	**92.80**	**52**	P	P	06 00 35.2	-0.3
	0.3nm,0.7s,baz=253,slow=5.4,SNR=2.2						

WEL 08 05:51:21.7, 44.5S×167.8E±, h5km, M4.2/41, ML4.2/13, MLv4.2/41, Error ellipse: s-maj=0.0km s-min=0.0km az=38.6, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.47**	**181**	P	Pb	05 51 31.9	-0.7
MSZ				S	Sg	05 51 37.9	+0.9
JCZ	**Jackson Bay**	**0.62**	**78**	P	Pb	05 51 35.0	-0.1
WKZ	**Wanaka**	**0.99**	**130**	P	Pb	05 51 41.8	+0.4
MLZ	**Mavora Lakes**	**1.17**	**174**	P	Pb	05 51 44.5	0.0
MLZ				S	Sb	05 51 60.0	0.0
DCZ	**Deep Cove**	**1.38**	**204**	P	Pn	05 51 47.5	-0.1
DCZ				S	Sg	05 52 06.2	0.0
EAZ	**Earnscleugh**	**1.42**	**137**	P	Pg	05 51 49.2	+0.3
FOZ	**Fox Glacier**	**1.51**	**64**	P	Pn	05 51 48.5	-0.8
FOZ				S	Sg	05 52 10.8	+0.6
LBZ	**Lake Benmore**	**1.62**	**97**	P	Pg	05 51 53.0	+0.2
WHZ	**Wether Hill Ro**	**1.69**	**180**	P	Pb	05 51 52.9	-0.4
GCSZ	**Gaunt Creek Bo**	**1.94**	**64**	P	Pn	05 51 54.4	-0.9
ODZ	**Otahua Downs**	**2.11**	**115**	P	Pb	05 51 59.6	-0.7
TUZ	**Tuapeka**	**2.12**	**146**	P	Pb	05 51 59.8	-0.8
PYZ	**Puysegur Point**	**2.16**	**204**	P	Pn	05 51 59.4	+1.1
RPZ	**Rata Peaks**	**2.30**	**79**	P	Pn	05 52 01.1	+0.8
WVZ	**Waitaha Valley**	**2.32**	**62**	P	Pn	05 51 59.4	-1.1
ARCZ	**Arundel**	**2.34**	**85**	P	Pn	05 52 01.3	+0.4
SYZ	**Scrubby Hill**	**2.48**	**161**	P	Pn	05 52 04.4	+1.6
HHSZ	**Highcliff Hill**	**2.52**	**133**	P	Pb	05 52 05.5	-2.0
APZ	**The Paps**	**2.63**	**179**	P	Pn	05 52 07.0	+2.2
WACZ	**Wakanui South**	**2.82**	**86**	P	Pn	05 52 07.5	+0.1
INZ	**Inchbonnie**	**2.94**	**61**	P	Pn	05 52 08.4	-0.7
RACZ	**Rakaia**	**3.07**	**83**	P	Pn	05 52 12.0	+1.3
OXZ	**Oxford**	**3.09**	**75**	P	Pn	05 52 10.5	-0.7
MQZ	**McQueen's Vall**	**3.44**	**83**	P	Pn	05 52 15.0	-0.9
LTZ	**Lake Taylor**	**3.45**	**67**	P	Pn	05 52 15.9	-0.3
AMCZ	**Amberley**	**3.56**	**75**	P	Pn	05 52 20.2	+2.5
OKCZ	**Okains Bay**	**3.73**	**84**	P	Pn	05 52 20.6	+0.7
DSZ	**Denniston Nort**	**3.75**	**50**	P	Pn	05 52 19.4	-0.8
GVZ	**Greta Valley S**	**3.90**	**73**	P	Pn	05 52 21.6	-0.6
THZ	**Tophouse**	**4.38**	**58**	P	Pn	05 52 28.9	0.0
KHZ	**Kahutara**	**4.46**	**68**	P	Pn	05 52 32.1	+2.2
QRZ	**Quartz Range**	**4.78**	**47**	P	Pn	05 52 33.0	-1.4
NNZ	**Nelson**	**4.99**	**55**	P	Pn	05 52 38.0	+0.7
BSWZ	**Blackbirch Sta**	**5.01**	**62**	P	Pn	05 52 41.5	+3.9
TCW	**Tory Channel**	**5.54**	**60**	P	Pn	05 52 46.7	+1.9
DUWZ	**D'Urville Isla**	**5.57**	**55**	P	Pn	05 52 45.8	+0.5
KIW	**Kapiti Island**	**6.13**	**59**	P	Pn	05 52 53.8	+0.8
OGWZ	**Otaki Gorge**	**6.32**	**60**	P	Pn	05 52 59.2	+3.7
HOWZ	**Holdsworth Sta**	**6.49**	**62**	P	Pn	05 53 03.5	+5.6
MRZ	**Mangatainoka R**	**6.66**	**61**	P	Pn	05 53 04.5	+4.3
KHEZ	**Kahui Hut**	**6.68**	**45**	P	Pn	05 53 00.1	-0.4
NEZ	**North Egmont**	**6.74**	**45**	P	Pn	05 53 00.9	-0.4
PKE	**Pukeiti**	**6.74**	**44**	P	Pn	05 53 01.3	0.0
WAZ	**Wanganui**	**6.87**	**52**	P	Pn	05 53 06.7	+3.6
VRZ	**Vera Road**	**7.19**	**48**	P	Pn	05 53 13.6	+6.1
WNVZ	**Wahianoa**	**7.51**	**52**	P	Pn	05 53 14.4	+2.4
FWVZ	**Far West T-bar**	**7.54**	**52**	P	Pn	05 53 14.0	+1.6
NGZ	**Ngauruhoe**	**7.62**	**51**	P	Pn	05 53 16.6	+3.1
WTVZ	**West Tongariro**	**7.65**	**51**	P	Pn	05 53 17.2	+3.3
OTVZ	**Oturere**	**7.66**	**52**	P	Pn	05 53 17.2	+3.1
HIZ	**Hauiti**	**7.70**	**45**	P	Pn	05 53 18.1	+3.6
TLZ	**Tolley Road**	**8.19**	**47**	P	Pn	05 53 25.3	+4.1
MTHZ	**Maungataniwha**	**8.55**	**54**	P	Pn	05 53 31.8	+5.7
WTAZ	**Waiatarua**	**8.84**	**37**	P	Pn	05 53 29.8	-0.3
MBAZ	**Motutapu North**	**9.12**	**38**	P	Pn	05 53 33.1	-0.8
OUZ	**Omahuta**	**9.97**	**28**	P	Pn	05 53 45.5	0.0

*NEIC **08** 06:01:24.4±3.4, 13.8N±0.1×93.36W±0.08, h38km±42km, Error ellipse: s-maj=15.4km s-min=10.3km az=195.0*
*MEX **08** 06:01:27.2±0.4, 13.89N×93.28W, h15km±68km, MD4.1*
ISC 08 06:01:23.0±2.7, 13.9N±0.1×93.3W±0.1, h10km, n12, σ0.96/17, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.37**	**46**	*e*P	**Pn**	**06 01 48.2**	**0.0**
THIG				*i* S	**Sn**	**06 02 05.4**	**-1.1**
THIG		**1.37**	**46**		**Pn**	**06 01 48.2**	**0.0**
THIG					**Sn**	**06 02 05.4**	**-1.1**
RTAL	**Retalhuleu**	**1.64**	**69**	Pn	**Pb**	**06 01 53.4**	**0.0**
PCIG		**1.75**	**2**	*e*P	**Pb**	**06 01 54.5**	**-0.8**
PCIG				*i* S	**Sn**	**06 02 15.7**	**-0.2**
PCIG		**1.75**	**2**		**Pb**	**06 01 54.5**	**-0.8**
PCIG					**Sn**	**06 02 15.7**	**-0.2**
HUEH	**Huehuetenango**	**2.20**	**51**	Pn	**Pb**	**06 02 01.9**	**-1.1**
CCIG	**Comitan**	**2.57**	**25**	*i* P	**Pn**	**06 02 06.5**	**+1.6**
CCIG				*i* S	**Sn**	**06 02 36.7**	**+0.3**
CCIG	**Comitan**	**2.57**	**25**		**Pn**	**06 02 06.2**	**+1.3**
CCIG	**Comitan**	**2.57**	**25**		**Sn**	**06 02 36.7**	**+0.3**
CSGN	**Cosiguina Volc**	**5.65**	**99**	Pn	**Pn**	**06 02 48.0**	**+0.9**
UNM	**Universidad Na**	**7.79**	**314**	Pn	**Pn**	**06 03 16.3**	**-0.4**
TEIG	**Tepich**	**7.87**	**37**	Pn	**Pn**	**06 03 19.2**	**+1.7**

*IDC **08** 06:07:51.8±0.9, 49.97S×105.10E, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.0/31, mbtmp4.1/6, MS3.3/6, Ms1 3.2/6, ms1mx3.1/20, Error ellipse: s-maj=42.6km s-min=17.8km az=108.0*
*NEIC **08** 06:07:53.2±1.6, 50.0S±0.1×105.1E±0.3, h10km±1km, mb4.3/10, Error ellipse: s-maj=31.0km s-min=18.3km az=287.0*
ISC 08 06:07:53.0±0.6, 49.9S±0.1×105.1E±0.2, h10km, n41, σ0.88/36, mb4.2/9, MS3.2/5, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**16.42**	**27**	T	T	06 28 34.6	
	baz=200,slow=73,SNR=36						
H01W1	**Cape Leeuwin H**	**16.43**	**27**	T	T	06 28 36.2	
	baz=200,slow=73,SNR=27						
H01W3	**Cape Leeuwin H**	**16.44**	**27**	T	T	06 28 36.5	
	baz=200,slow=73,SNR=30						
NWAO	**Narrogin (SRO)**	**19.23**	**32**	LR	LR	06 18 06.2	
	comp=Z,89nm,20.4s,baz=308,slow=32						
NWAO	**Narrogin (SRO)**	**19.23**	**32**	P	**P**	**06 12 14.4**	**-2.9**
MAW	**Mawson**	**27.34**	**214**	LR	LR	06 23 13.3	
	comp=Z,28nm,18.0s,baz=86,slow=34						
MAW	**Mawson**	**27.34**	**214**	P	**P**	**06 13 36.7**	**-1.0**
STKA	**Stephens Creek**	**32.54**	**70**	LR	LR	06 26 10.4	
	comp=Z,47nm,18.2s,baz=207,slow=34						
ASAR	**Alice Springs**	**34.54**	**51**	P	**P**	**06 14 42.0**	**+0.4**
	1.5nm,0.8s,baz=209,slow=8.2,SNR=26						
ASAR				PcP	**PcP**	**06 17 15.8**	**-0.5**
	0.4nm,0.7s,baz=226,slow=1.9,SNR=5.7						
ASAR	**Alice Springs**	**34.54**	**51**	P	**P**	**06 14 42.0**	**+0.4**
AS31	**Alice Springs**	**34.54**	**51**	P	**P**	**06 14 41.8**	**+0.2**
VNDA	**Vanda**	**34.72**	**161**	P	**P**	**06 14 42.9**	**+0.3**
	2.4nm,0.7s,baz=292,slow=9.1,SNR=15						
VNDA				LR	LR	06 26 38.0	
	comp=Z,37nm,18.9s,baz=338,slow=32						
VNDA	**Vanda**	**34.72**	**161**	P	**P**	**06 14 43.1**	**+0.6**
VNDA				IAmb	IAmb	06 14 43.6	
	comp=Z,3.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**35.79**	**35**	P	**P**	**06 14 53.7**	**+1.4**
FITZ				IAmb	IAmb	06 14 57.3	
	comp=Z,3.2nm,1.1s						
WRA	**Warramunga Arr**	**37.89**	**48**	P	**P**	**06 15 10.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=208,slow=8.6,SNR=16						
WRA				PcP	**PcP**	**06 17 25.6**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=220,slow=3.1,SNR=12						
WRA				LR	LR	06 28 33.2	
	comp=Z,68nm,21.0s,baz=305,slow=33						
WRA	**Warramunga Arr**	**37.89**	**48**	P	**P**	**06 15 10.2**	**-0.1**
WB0	**Warramunga Arr**	**38.07**	**48**	P	**P**	**06 15 12.1**	**+0.4**
WB0				IAmb	IAmb	06 15 30.9	
	comp=Z,6.0nm,1.4s						
XMIS	**Christmas Isla**	**39.34**	**1**	P	**P**	**06 15 22.7**	**+0.3**
QSPA	**South Pole Qui**	**40.20**	**180**	P	**P**	**06 15 29.5**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=311,slow=3.4,SNR=12						
QSPA	**South Pole Qui**	**40.20**	**180**	P	**P**	**06 15 29.2**	**-0.1**
QSPA				IAmb	IAmb	06 15 30.0	
	comp=Z,7.2nm,1.0s						
CTAO	**Charters Tower**	**44.12**	**63**	P	**P**	**06 16 02.4**	**+0.8**
CTAO				IAmb	IAmb	06 16 28.2	
	comp=Z,7.1nm,1.1s						
SNAA	**Sanae**	**48.62**	**204**	P	**P**	**06 16 35.6**	**-0.8**
	comp=Z,2.7nm,1.0s,baz=151,slow=9.3,SNR=12						
SNAA	**Sanae**	**48.62**	**204**	P	**P**	**06 16 36.8**	**+0.4**
BELA	**Belgrano 2**	**50.08**	**190**	P	**P**	**06 16 47.3**	**-0.1**
BOSA	**Boshof**	**62.37**	**258**	LR	LR	06 38 49.9	
	comp=Z,34nm,21.3s,baz=180,slow=30						
CMAR	**Chiang Mai Arr**	**68.31**	**354**	P	**P**	**06 18 55.3**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=195,slow=5.6,SNR=5.3						
ILAR	**Eielson Array**	**140.82**	**40**	PKP	**PKPdf**	**06 27 22.8**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=257,slow=2.7,SNR=4.8						
DAWY	**Dawson**	**143.88**	**42**		**PKPdf**	**06 27 26.3**	**-0.9**
HYT	**Haines Junctio**	**144.19**	**48**	PKPdf	**PKPdf**	**06 27 27.8**	**-0.2**
SPX	**San Pedro Mart**	**144.38**	**107**	PKPdf	**PKPdf**	**06 27 30.4**	**+0.9**
ESJX	**Sierra Juarez**	**144.74**	**105**	PKPdf	**PKPdf**	**06 27 29.4**	**-0.6**
DIB	**Dawson Inlet,**	**144.89**	**62**	PKPdf	**PKPdf**	**06 27 29.7**	**+0.5**
SKAG	**Skagway**	**144.99**	**51**	PKPbc	**PKPdf**	**06 27 30.0**	**+0.8**
BESE	**Bessie Mountai**	**145.04**	**52**	PKPbc	**PKPdf**	**06 27 30.2**	**+0.8**
ISA	**Isabella, Lake**	**145.51**	**98**	PKPbc	**PKPab**	**06 27 32.7**	**+1.3**
INK	**Inuvik**	**146.47**	**35**	PKPbc	**PKPbc**	**06 27 33.0**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=262,slow=2.9,SNR=9.7						
INK	**Inuvik**	**146.47**	**35**	PKPdf	**PKPab**	**06 27 33.5**	**-0.4**
NVAR	**Mina Array Bea**	**147.26**	**94**	PKPbc	**PKPab**	**06 27 37.5**	**-0.8**
	comp=Z,4.1nm,0.9s,baz=216,slow=6.3,SNR=13						
NV11	**Mina Array Sit**	**147.36**	**94**	PKPbc	**PKPab**	**06 27 37.7**	**-0.8**
TXAR	**Lajitas Array**	**150.06**	**123**	PKPbc	**PKiKP**	**06 27 44.1**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=194,slow=5.6,SNR=33						
PDAR	**Pinedale Array**	**155.20**	**93**	PKPab	**PKPab**	**06 28 09.8**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=198,slow=1.4,SNR=5.8						

*NCEDC **08** 06:21:27.1±1.9, 38.79N±0.02×122.76W±0.02, h2km±7km, ML3.2/54, Error ellipse: s-maj=3.6km s-min=1.7km az=214.0*
NEIC 08 06:21:27.1±1.7, 38.76N±0.03×122.74W±0.08, h5km±8km, Error ellipse: s-maj=9.5km s-min=1.0km az=64.0, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCRM	**Castle Rock Sp**	**0.03**	**48**		Pg	06 21 27.9	-0.4
GDXM	**Geysers**	**0.07**	**322**		Pg	06 21 27.9	-0.9
GSGM	**Seigler Mounta**	**0.12**	**12**		Pg	06 21 29.4	-0.1
GPMM	**Pine Mountain**	**0.18**	**300**		Pg	06 21 30.6	-0.2
HOPS	**Hopland Field**	**0.35**	**313**	Pg	Pg	06 21 33.9	-0.1

HAKT	**HAKKARI**	**0.81**	**53**	*i* P	**Pg**	**06 23 36.0**	**-0.1**
HAKT				*i* S	**Sb**	**06 23 48.1**	**-0.2**
HAKT				IAML		06 23 50.0	
	comp=E,190nm,0.3s						
HAKT				IAML		06 23 50.0	
	comp=N,138nm,0.2s						
SRTM	**Siirt_Merkez**	**1.20**	**320**	*i* P	**Pg**	**06 23 43.1**	**-0.3**
SRTM				*i* S	**Sn**	**06 24 01.0**	**+0.7**
SRTM				IAML		06 24 05.0	
	comp=N,378nm,0.4s						
SRTM				IAML		06 24 06.0	
	comp=E,234nm,0.5s						
YOVA	**Hakkari_Yksek**	**1.23**	**65**	*i* P	**Pg**	**06 23 43.5**	**-0.6**
YOVA				*i* S	**Sb**	**06 24 00.8**	**+0.5**
YOVA				IAML		06 24 04.0	
	comp=E,101nm,0.6s						
YOVA				IAML		06 24 05.0	
	comp=N,105nm,0.6s						
GEVA	**Gevas**	**1.24**	**6**	*eP*	**Pn**	**06 23 40.6**	**-3.8**
GEVA				IAML		06 24 07.9	
	comp=Z,45nm,0.5s						
AKDM	**Akdamar-Van**	**1.25**	**3**	PN	**Pn**	**06 23 44.5**	**-0.1**
AKDM				SN	**Sn**	**06 24 03.3**	**+1.5**
BLIS	**Bitlis-Merkez**	**1.47**	**336**	*eP*	**Pn**	**06 23 47.0**	**-0.6**
BLIS				*eS*	**Sn**	**06 24 07.5**	**+0.2**
BLIS				IAML		06 24 11.2	
	comp=Z,61nm,0.4s						
TVAN	**Van**	**1.51**	**16**	*eP*	Pn	06 23 42.6	-5.6
TVAN				IAML		06 23 54.0	
	comp=Z,30nm,0.7s						
BTMN	**Batman**	**1.52**	**303**	*i* P	**Pn**	**06 23 47.8**	**-0.4**
BTMN				*i* S	**Sg**	**06 24 09.6**	**+0.1**
VANB	**Van**	**1.57**	**14**	PN	**Pn**	**06 23 48.6**	**-0.3**
GURO	**Guroymak-BITLI**	**1.62**	**336**	PN	**Pb**	**06 23 50.8**	**0.0**
GURO				SN	**Sg**	**06 24 12.9**	**+0.2**
MARD	**Mardin**	**1.70**	**279**	*i* P	**Pn**	**06 23 50.2**	**-0.5**
MARD				*i* S	**Sb**	**06 24 13.8**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.72**	**309**	PN	**Pb**	**06 23 52.0**	**-0.4**
SVAN				SN	**Sb**	**06 24 14.8**	**+0.5**
SVAN	**Silvan-Diyarba**	**1.72**	**309**	*i* P	**Pb**	**06 23 52.5**	**0.0**
SVAN				IAML		06 24 18.0	
	comp=E,91nm,0.6s						
SVAN				IAML		06 24 19.0	
	comp=N,188nm,0.7s						
MUSM	**Mu-Merkez**	**1.97**	**327**	*i* P	**Pn**	**06 23 54.5**	**0.0**
MUSM				*i* S	**Sn**	**06 24 20.3**	**+0.7**
MAZI	**Mazidag**	**1.99**	**282**	PN	**Pn**	**06 23 53.8**	**-0.8**
MAZI				SN	**Sb**	**06 24 21.2**	**-0.8**
BNGB	**Bingl**	**2.59**	**318**	PN	**Pn**	**06 24 04.6**	**+1.7**
SVRC	**Sivrice-ELAZID**	**3.12**	**296**	PN	**Pn**	**06 24 10.6**	**+0.3**

*ISN **08** 06:39:34.6±0.8,33°.34N×46°.39E,h5km±3km,ML2.4*
*TEH **08** 06:39:36.4,33°.21N×46°.30E,h10km,ML2.5*
ISC 08 06:39:36.4±1.0,**33°.06N**±0°.06×**46°.32E**±0°.04,**h10**km**,n10,**
σ0.81/14,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.33**	**278**	*eP*g	**Pb**	**06 39 45.0**	**+0.5**
IBDR				*eS*g	**Sb**	**06 39 51.1**	**+1.2**
IBDR				AML	AML	06 39 58.1	
	comp=N,228nm,0.6s						
IBDR				AML	AML	06 40 02.5	
	comp=E,284nm,0.6s						
IGHG	**Ghaleghazi**	**1.28**	**9**	*eP*g	**Pn**	**06 39 58.6**	**-2.0**
IGHG				*e*		06 40 19.9	
IKFM	**Kafar-mosalman**	**1.36**	**70**	*eP*g	**Pb**	**06 40 02.4**	**+0.5**
IKFM				*e*		06 40 24.4	
IKOM	**Komasi**	**1.49**	**41**	*eS*g	**Sb**	**06 40 23.7**	**+0.4**
IKOM				*eP*g	**Pn**	**06 40 03.2**	**-0.2**
IKOM				*e*		06 40 27.8	
IVIS	**Veis**	**1.52**	**17**	*e*	**Pn**	**06 40 04.2**	**+0.4**
IDHR	**Dehrash**	**1.64**	**2**	*eP*g	**Pn**	**06 40 05.2**	**-0.3**
BHD	**Baghdad**	**1.64**	**278**	*eP*n	**Pn**	**06 40 05.0**	**-0.4**
BHD				*eS*n	**Sb**	**06 40 27.0**	**-0.6**
IDOB	**Doab**	**1.71**	**64**	*e*		06 40 32.9	
IDOB				*eP*g	**Pb**	**06 40 08.2**	**+0.1**
IBZA	**Bozab**	**1.90**	**42**	*e*		06 40 36.6	
IBZA				*eP*n	**Pn**	**06 40 09.2**	**0.0**
NSR	**Nassriya**	**2.05**	**184**	*eP*n	**Pb**	**06 40 14.0**	**+0.2**
NSR				*eS*n	**Sg**	**06 40 42.0**	**-0.4**

*TAP **08** 06:53:56.0,24°.35N×122°.32E,h58km±1km,ML3.5,B*
*JMA **08** 06:53:56.5±0.1,24°.29N×122°.25E,h59km±2km,M2.3*
ISC 08 06:53:57.5±1.2,**24°.35N**±0°.03×**122°.29E**±0°.02,**h52**km±10km**,**
n88,σ0.81/160,4C-4D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.45**	**283**	*i* P	**Pn**	**06 54 08.2**	**-0.2**
ENAH	baz=282			S	**Sn**	**06 54 16.9**	**+0.8**
TWC	**Suao**	**0.48**	**303**	*i* P	**Pn**	**06 54 08.6**	**-0.1**
TWC	baz=301			*i* S	**Sn**	**06 54 17.0**	**+0.3**
EGS		**0.60**	**326**	*i* P	**Pn**	**06 54 09.7**	**-0.3**
EGS	baz=325			*i* S	**Sn**	**06 54 18.6**	**-0.5**
JYNG	**Yonagunijimaku**	**0.60**	**80**	P	**Pn**	**06 54 10.3**	**+0.2**
JYNG				S	**Sn**	**06 54 20.0**	**+0.8**
ILA	**Ilan**	**0.65**	**310**	*i* P	**Pn**	**06 54 10.7**	**0.0**
ILA	baz=308			*i* S	**Sn**	**06 54 21.2**	**+1.0**
NTC	**Toucheng**	**0.66**	**320**	*eP*	**Pn**	**06 54 10.4**	**-0.4**
NTC	baz=318			S	**Sn**	**06 54 20.8**	**+0.4**
NACB	**Ninganchiao**	**0.66**	**255**	⇑P	**Pn**	**06 54 10.1**	**-0.7**
NACB	baz=255			S	**Sn**	**06 54 20.3**	**-0.2**
YOJ	**Yonaguni jima**	**0.66**	**80**	P	**Pn**	**06 54 10.7**	**-0.1**
YOJ	baz=79			S	**Sn**	**06 54 21.2**	**+0.6**
YOJ	**Yonaguni jima**	**0.66**	**80**	P	**Pn**	**06 54 11.0**	**+0.2**
YOJ				*eS*	**Sn**	**06 54 21.0**	**+0.5**
TWE	**Neicheng**	**0.68**	**303**	*i* P	**Pn**	**06 54 10.9**	**-0.1**
TWE	baz=302			*i* S	**Sn**	**06 54 21.9**	**+1.0**
TWD	**Chiawan**	**0.69**	**248**	⇑*i*P	**Pn**	**06 54 10.6**	**-0.6**
TWD	baz=247			*i* S	**Sn**	**06 54 21.0**	**-0.2**
TWB1	**Santiao Chiao**	**0.71**	**337**	*i* P	**Pn**	**06 54 10.7**	**-0.9**
TWB1	baz=336			*i* S	**Sn**	**06 54 20.7**	**-1.0**
ENTT	**Nioudou**	**0.72**	**294**	*i* P	**Pn**	**06 54 11.8**	**+0.1**
ENTT	baz=293			*i* S	**Sn**	**06 54 22.7**	**+0.7**
HWA	**Hwalien**	**0.73**	**240**	P	**Pn**	**06 54 11.4**	**-0.2**
HWA	baz=239			S	**Sn**	**06 54 23.3**	**+1.3**
ETLH	**Xiulin Townshi**	**0.75**	**260**	P	**Pn**	**06 54 11.5**	**-0.6**
ETLH	baz=259			S	**Sn**	**06 54 22.9**	**+0.1**
TIPB	**Shuangxi**	**0.76**	**326**	*i* P	**Pn**	**06 54 11.3**	**-0.8**
TIPB	baz=324			*i* S	**Sn**	**06 54 21.9**	**-0.8**
NDT	**Datong Townshi**	**0.76**	**290**	*i* P	**Pn**	**06 54 12.2**	**+0.1**
NDT	baz=289			*i* S	**Sn**	**06 54 23.4**	**+0.7**
NNSB	**Datong**	**0.83**	**276**	P	**Pn**	**06 54 12.8**	**-0.3**
NNSB	baz=275			S	**Sn**	**06 54 24.8**	**+0.1**
NNSH	**Datong**	**0.83**	**276**	*eP*	**Pn**	**06 54 12.9**	**-0.3**
NNSH	baz=275			S	**Sn**	**06 54 24.3**	**-0.3**
NWLT	**Wulai**	**0.84**	**301**	P	**Pn**	**06 54 13.2**	**+0.1**
NWLT	baz=299			S	**Sn**	**06 54 25.4**	**+0.8**
NNS	**Nan Shan**	**0.84**	**277**	*i* P	**Pn**	**06 54 12.8**	**-0.5**
NNS	baz=275			*i* S	**Sn**	**06 54 25.2**	**+0.3**
NWF	**Wu-fen Shan**	**0.86**	**327**	⇓*i*P	**Pn**	**06 54 12.6**	**-0.8**
NWF	baz=325			S	**Sn**	**06 54 24.4**	**-0.8**
WFSB	**Wu-fen Shan**	**0.86**	**327**	⇓P	**Pn**	**06 54 12.7**	**-0.7**
WFSB	baz=325			S	**Sn**	**06 54 25.1**	**+0.1**
YHNB	**Yeheng**	**0.90**	**291**	⇓P	**Pn**	**06 54 13.8**	**-0.2**
YHNB	baz=290			S	**Sn**	**06 54 26.2**	**+0.1**
TWA	**Mucha**	**0.90**	**314**	*i* P	**Pn**	**06 54 13.4**	**-0.6**
TWA	baz=313			S	**Sn**	**06 54 25.9**	**-0.2**
NSK	**Sanguang**	**0.91**	**291**	⇓*i*P	**Pn**	**06 54 14.0**	**-0.2**
NSK	baz=290			*i* S	**Sn**	**06 54 26.4**	**0.0**
ESL	**Shilin**	**0.95**	**236**	*i* P	**Pn**	**06 54 13.4**	**-1.2**
ESL	baz=236			*i* S	**Sn**	**06 54 26.6**	**-0.6**
WHF	**Hehuan Shan**	**0.96**	**258**	⇑*i*P	**Pn**	**06 54 14.4**	**-0.7**
WHF	baz=257			*i* S	**Sn**	**06 54 27.7**	**-0.4**
TATO	**Taipei**	**0.96**	**311**	P	**Pn**	**06 54 14.1**	**-0.7**
TATO	baz=309			S	**Sn**	**06 54 28.3**	**+0.8**
TWT	**Tachien**	**1.02**	**265**	*i* P	**Pn**	**06 54 16.1**	**+0.3**
TWT	baz=264			*i* S	**Sn**	**06 54 29.9**	**+0.6**
YM01	**YM01**	**1.03**	**321**	P	**Pn**	**06 54 14.7**	**-1.1**
YM01	baz=319			*eS*	**Sn**	**06 54 30.6**	**+1.3**
TDCB	**Techi**	**1.04**	**265**	⇑P	**Pn**	**06 54 15.9**	**0.0**
TDCB	baz=264			S	**Sn**	**06 54 29.6**	**0.0**
EGFH	**Guangfu**	**1.04**	**230**	*eP*	**Pn**	**06 54 15.0**	**-0.8**
EGFH	baz=230			*eS*	**Sn**	**06 54 29.4**	**+0.1**
YM10	**YM10**	**1.05**	**321**	*eP*	**Pn**	**06 54 15.3**	**-0.6**
YM10	baz=319			*eS*	**Sn**	**06 54 27.9**	**-1.7**
YM11	**YM11**	**1.05**	**321**	P	**Pn**	**06 54 14.7**	**-1.3**
YM05	**YM05**	**1.05**	**321**	P	**Pn**	**06 54 14.5**	**-1.5**
YM05	baz=319			*eS*	**Sn**	**06 54 28.5**	**-1.2**
YM08	**YM08**	**1.05**	**323**	*eP*	**Pn**	**06 54 14.3**	**-1.7**
YM08	baz=321			*eS*	**Sn**	**06 54 30.8**	**+1.0**
YM04	**YM04**	**1.06**	**320**	*eP*	**Pn**	**06 54 15.1**	**-1.0**
CHGB	**Renai**	**1.06**	**255**	P	**Pn**	**06 54 16.0**	**-0.3**
CHGB	baz=254			S	**Sn**	**06 54 29.8**	**-0.4**
TWS1	**Kuangyinshan**	**1.09**	**313**	*i* P	**Pn**	**06 54 15.9**	**-0.7**
TWS1	baz=312			*i* S	**Sn**	**06 54 30.0**	**-0.7**
NTST	**Danshui**	**1.12**	**317**	*eP*	**Pn**	**06 54 16.3**	**-0.5**
NTST	baz=315			*eS*	**Sn**	**06 54 31.2**	**-0.1**
TWY	**Chenhua**	**1.12**	**326**	P	**Pn**	**06 54 16.3**	**-0.5**
TWY	baz=324			*i* S	**Sn**	**06 54 32.2**	**+0.9**
HGSD	**Ruisui**	**1.17**	**223**	P	**Pn**	**06 54 16.7**	**-0.8**
HGSD	baz=223			S	**Sn**	**06 54 32.6**	**+0.3**
NCU	**National Centr**	**1.18**	**302**	S	**Sn**	**06 54 33.4**	**+0.6**
NCUH	**Zhongli**	**1.18**	**302**	*eP*	**Pn**	**06 54 17.4**	**-0.4**
NCUH	baz=300			S	**Sn**	**06 54 33.4**	**+0.6**
LIOB	**Emei**	**1.20**	**285**	*i* P	**Pn**	**06 54 18.0**	**-0.1**
LIOB	baz=284			*i* S	**Sn**	**06 54 34.2**	**+0.9**
VWDT	**VWDT**	**1.21**	**241**	P	**Pn**	**06 54 17.6**	**-0.4**
VWDT	baz=241			S	**Sn**	**06 54 33.2**	**-0.1**
NSTT	**Nanjuang**	**1.21**	**284**	P	**Pn**	**06 54 18.4**	**+0.3**
NSTT	baz=283			*i* S	**Sn**	**06 54 34.0**	**+0.5**
EHY	**Hungye**	**1.22**	**227**	*i* P	**Pn**	**06 54 17.0**	**-1.3**
EHY	baz=227			S	**Sn**	**06 54 33.6**	**-0.1**
WHP	**Taichung City**	**1.23**	**267**	*i* P	**Pn**	**06 54 19.0**	**+0.5**
WHP	baz=266			*i* S	**Sn**	**06 54 34.2**	**+0.1**
DPDB	**Guoxing**	**1.29**	**256**	P	**Pn**	**06 54 18.8**	**-0.4**
DPDB	baz=256			S	**Sn**	**06 54 36.9**	**+1.5**
PCYT	**Pengchaiyu**	**1.29**	**351**	P	**Pn**	**06 54 18.2**	**-1.1**
IRIF	**Iriomote-Funau**	**1.31**	**90**	P	**Pn**	**06 54 19.4**	**0.0**
IRIF				*eS*	**Sn**	**06 54 36.1**	**+0.3**
NHW	**Xinwu Township**	**1.31**	**300**	*eS*	**Sn**	**06 54 35.8**	**0.0**
YULB	**Yu-li**	**1.32**	**224**	P	**Pn**	**06 54 18.4**	**-1.2**
YULB	baz=224			S	**Sn**	**06 54 34.6**	**-1.4**
SSLB	**Suanglung**	**1.34**	**246**	*eP*	**Pn**	**06 54 18.6**	**-1.4**
SSLB	baz=245			*eS*	**Sn**	**06 54 36.2**	**-0.5**
TWF1	**Yuli**	**1.35**	**223**	*i* P	**Pn**	**06 54 18.8**	**-1.2**
TWF1	baz=223			S	**Sn**	**06 54 35.4**	**-1.4**
SMLT	**Sun Moon Lake**	**1.35**	**250**	P	**Pn**	**06 54 20.4**	**+0.2**
SMLT	baz=250			*i* S	**Sn**	**06 54 37.3**	**+0.2**
NMLH	**Miaoli**	**1.38**	**278**	*eS*	**Sn**	**06 54 38.7**	**+1.0**
TYC	**Yuchr**	**1.39**	**252**	P	**Pn**	**06 54 20.0**	**-0.4**
TYC	baz=251			S	**Sn**	**06 54 38.1**	**+0.4**
TWQ1	**Liyutan**	**1.39**	**270**	*eP*	**Pn**	**06 54 19.6**	**-0.9**
TWQ1	baz=269			S	**Sn**	**06 54 39.1**	**+1.3**
NSY	**Sanyi**	**1.40**	**273**	*eS*	**Sn**	**06 54 38.5**	**+0.4**
WHYT	**Xinyi Township**	**1.47**	**244**	*eP*	**Pn**	**06 54 22.8**	**+1.2**
WHYT	baz=244			*eS*	**Sn**	**06 54 41.9**	**+2.2**
TCU	**Taichung**	**1.49**	**263**	*eS*	**Sn**	**06 54 41.5**	**+1.3**
CHKT	**Chengkung**	**1.50**	**215**	*eP*	**Pn**	**06 54 20.8**	**-1.3**
WDJ	**Dajia District**	**1.51**	**270**	*eS*	**Sn**	**06 54 41.9**	**+1.3**
WJS	**Zhushan**	**1.52**	**250**	*eS*	**Sn**	**06 54 42.8**	**+1.7**
WNT	**Mingjian**	**1.54**	**253**	P	**Pn**	**06 54 23.6**	**+1.0**
WNT	baz=252			S	**Sn**	**06 54 43.4**	**+1.8**
JKRS	**Kuro-shima**	**1.57**	**94**	P	**Pn**	**06 54 23.4**	**+0.5**
JKRS				*eS*	**Sn**	**06 54 42.7**	**+0.6**
ALS	**Alishan**	**1.60**	**239**	P	**Pn**	**06 54 24.3**	**+0.6**
ALS	baz=238			S	**Sn**	**06 54 43.6**	**+0.3**
ELDTW	**Lidau**	**1.64**	**226**	P	**Pn**	**06 54 23.1**	**-1.0**
ELDTW	baz=225			S	**Sn**	**06 54 43.4**	**-0.8**
CHN5	**Tsauling**	**1.66**	**244**	*eP*	**Pn**	**06 54 24.7**	**+0.4**
CHN5	baz=243			*eS*	**Sn**	**06 54 45.4**	**+1.0**
JIJ	**Ishigaki jima**	**1.69**	**89**	P	**Pn**	**06 54 24.5**	**-0.1**
JIJ				*eS*	**Sn**	**06 54 44.4**	**-0.6**
WDLH	**Douliu**	**1.73**	**248**	*eS*	**Sn**	**06 54 47.2**	**+1.0**
STYT	**Tauyuan**	**1.84**	**230**	*eP*	**Pn**	**06 54 26.5**	**-0.2**
STYT	baz=230			S	**Sn**	**06 54 49.5**	**+0.7**
CHN4	**Tsaushan**	**1.85**	**238**	*eP*	**Pn**	**06 54 27.3**	**+0.5**
CHN4	baz=237			*eS*	**Sn**	**06 54 50.5**	**+1.5**
TPUB	**Ta-pu**	**1.85**	**236**	*eP*	**Pn**	**06 54 26.5**	**-0.3**
TPUB	baz=235			*eS*	**Sn**	**06 54 48.9**	**-0.1**
TWGBT	**Beinan**	**1.89**	**216**	*eP*	**Pn**	**06 54 26.9**	**-0.4**
TWGBT	baz=216			*eS*	**Sn**	**06 54 49.9**	**-0.1**
TWG	**Pinlang**	**1.89**	**217**	*eS*	**Sn**	**06 54 49.1**	**-0.9**
CHY	**Chiayi**	**1.91**	**244**	*eS*	**Sn**	**06 54 52.3**	**+1.8**
TWK	**Hsinying**	**1.97**	**237**	*eP*	**Pn**	**06 54 29.4**	**+0.8**
TWK	baz=237			*eS*	**Sn**	**06 54 53.5**	**+1.4**
CHN1	**Nanshi**	**1.99**	**235**	*eP*	**Pn**	**06 54 29.4**	**+0.6**
CHN1	baz=234			*eS*	**Sn**	**06 54 53.3**	**+0.8**
SNST	**Tainan City**	**1.99**	**236**	*eS*	**Sn**	**06 54 53.1**	**+0.6**
SGST	**Jiashian**	**2.01**	**232**	*eP*	**Pn**	**06 54 28.9**	**-0.1**
SGST	baz=231			*eS*	**Sn**	**06 54 53.3**	**+0.3**
SLGT	**Liugui**	**2.02**	**229**	*eP*	**Pn**	**06 54 30.2**	**+1.0**
SLGT	baz=228			*eS*	**Sn**	**06 54 53.9**	**+0.6**
ECL	**Taimali**	**2.13**	**216**	*eP*	**Pn**	**06 54 29.9**	**-0.7**
ECL	baz=215			*eS*	**Sn**	**06 54 54.5**	**-1.4**
JTJ	**Tarama**	**2.21**	**82**	S	**Sn**	**06 54 58.9**	**+1.0**
MASBT	**Mashibuluo**	**2.30**	**222**	*eP*	**Pn**	**06 54 32.8**	**-0.2**
MASBT	baz=221			*eS*	**Sn**	**06 54 59.0**	**-1.2**

*IDC **08** 06:57:27.5±0.7,36°.22S×100°.00W,h0km,mb4.3/14,*
mb1 4.4/14,mb1mx4.3/30,mbtmp4.3/14,MS4.0/12,
Ms1 4.0/12,ms1mx3.8/21,Error ellipse: s-maj=20.7km
s-min=15.4km az=112.0
*NEIC **08** 06:57:30.1±1.3,36°.45S±0°.1×99°.8W±0°.2,h10km±1km,*
mb4.8/34,Error ellipse: s-maj=23.1km s-min=19.0km
az=283.0
*GCMT **08** 06:57:32.1±0.2,36°.23S±0°.01×99°.98W±0°.01,h19km±1km,*
MW5.0/120,Moment Tensor Solution. s53,c65;
s120,c188; Duration: 0 Moment tensor: Scale 10¹⁶Nm;
Mrr-0.72±.12; Mθθ-0.10±.10; Mϕϕ0.82±.10; Mrθ0.67±.20;
Mθϕ-3.79±.08; Mϕr-0.27±.19; Best double couple:
M₀3.87900×10¹⁶ NP1:ϕs184.00000°,δ80.00000°,
λ0.00000°. NP2:ϕs94.00000°,δ90.00000°,λ170.00000°.
Principal axes: T 4.2650, Plg7.0000°, Azm48.0000°; N
-0.7710, Plg80.0000°, Azm271.0000°; P -3.4930,
Plg7.0000°, Azm139.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
Triangular moment-rate function
ISC 08 06:57:29.0±0.5,**36°.26S**±0°.08×**100°.04W**±0°.08,**h10**km**,n92,**
σ1.35/71,mb4.6/28,MS4.0/16,1C,Southeast of Easter
Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**17.45**	**88**	T	T	07 19 27.2	
	baz=254,slow=75,SNR=76						
H03S1	**Juan Fernandez**	**17.47**	**88**	T	T	07 19 27.2	
	baz=254,slow=75,SNR=50						
H03S3	**Juan Fernandez**	**17.47**	**88**	T	T	07 19 23.3	
	baz=254,slow=75,SNR=64						
H03N2	**Juan Fernandez**	**17.55**	**87**	T	T	07 19 29.7	
	baz=247,slow=72,SNR=50						
H03N3	**Juan Fernandez**	**17.55**	**87**	T	T	07 19 27.8	
	baz=247,slow=72,SNR=35						
H03N1	**Juan Fernandez**	**17.56**	**87**	T	T	07 19 28.4	
	baz=247,slow=72,SNR=58						
BI02	**San Fabin de**	**23.10**	**100**	P	**P**	**07 02 31.5**	**-3.6**
BI02				IAmb	IAmb	07 02 47.1	
	comp=Z,32nm,1.5s						
PLCA	**Paso Flores**	**23.45**	**110**	P	**P**	**07 02 39.5**	**+0.9**
	comp=Z,4.1nm,0.8s,baz=274,slow=11,SNR=8.1						
BO02	**Sierra Bellavi**	**23.82**	**95**	P	**P**	**07 02 40.1**	**-2.1**
BO02				IAmb	IAmb	07 02 50.4	
	comp=Z,38nm,1.4s						
MT02	**Curacav**	**23.89**	**91**	P	**P**	**07 02 40.5**	**-2.3**
MT05	**Renca**	**24.18**	**92**	P	**P**	**07 02 45.2**	**-0.4**
CO02	**Combarbal**	**24.62**	**87**	P	**P**	**07 02 48.4**	**-1.4**
CO02				IAmb	IAmb	07 02 53.5	
	comp=Z,33nm,1.1s						
CO03	**El Pedregal**	**25.00**	**86**	P	**P**	**07 02 52.8**	**-0.3**
CO03				IAmb	IAmb	07 02 55.9	
	comp=Z,23nm,1.2s						
GO04	**Tololo Observa**	**25.14**	**84**	P	**P**	**07 02 54.0**	**-0.7**
LCO	**Las Campanas**	**25.67**	**82**	P	**P**	**07 02 58.7**	**-0.7**
LCO				IAmb	IAmb	07 03 03.9	
	comp=Z,26nm,1.1s						
CO01	**Juntas del Tor**	**25.79**	**85**	P	**P**	**07 03 00.2**	**-0.2**
CO01				IAmb	IAmb	07 03 09.8	
	comp=Z,15nm,0.9s						
AC05	**El Transito**	**26.09**	**82**	P	**P**	**07 03 03.1**	**+0.1**
AC05				IAmb	IAmb	07 03 10.4	
	comp=Z,46nm,1.5s						
AC01	**Pan de Azucar**	**27.03**	**76**	P	**P**	**07 03 10.3**	**-1.1**
AC02	**Maricunga**	**27.87**	**79**	P	**P**	**07 03 19.3**	**-0.2**
AC02				IAmb	IAmb	07 03 24.7	
	comp=Z,34nm,1.4s						
GO02	**Mina Guanaco**	**28.31**	**76**	P	**P**	**07 03 22.9**	**-0.3**
GO02				IAmb	IAmb	07 03 47.4	
	comp=Z,10nm,0.9s						
LVC	**Limon Verde**	**30.18**	**72**	P	**P**	**07 03 38.3**	**-1.7**
	comp=Z,3.3nm,0.9s,baz=245,slow=14,SNR=2.6						
LVC				LR	LR	07 12 56.4	
	comp=Z,283nm,18.3s,baz=245,slow=31						
LVC	**Limon Verde**	**30.18**	**72**	P	**P**	**07 03 39.3**	**-0.7**
LVC				IAmb	IAmb	07 03 43.2	
	comp=Z,15nm,1.4s						
PB08	**IPOC Station P**	**31.43**	**68**	P	**P**	**07 03 51.3**	**+0.3**
MNMC	**Minye Minye**	**31.72**	**66**	P	**P**	**07 03 54.2**	**+0.8**
NNA	**Nana**	**31.96**	**47**	LR	LR	07 13 50.6	
	comp=Z,278nm,18.1s,baz=212,slow=31						
RKT	**Rikitea**	**32.87**	**284**	*e*LQ	LQ	07 11 13.0	
	comp=Z,667nm,28.5s						
LPAZ	**La Paz**	**34.61**	**63**	P	**P**	**07 04 19.7**	**+0.7**
	comp=Z,10nm,1.0s,baz=229,slow=5.5,SNR=35						
LPAZ				LR	LR	07 15 00.2	
	comp=Z,202nm,20.8s,baz=211,slow=30						
LPAZ	**La Paz**	**34.61**	**63**	P	**P**	**07 04 19.2**	**+0.1**
LPAZ				IAmb	IAmb	07 04 20.9	
	comp=Z,18nm,1.1s						
ATAH	**Atahualpa**	**35.10**	**40**	P	**P**	**07 04 23.9**	**+0.9**
	comp=Z,10.0nm,0.9s,baz=221,slow=8.2,SNR=4.6						
PMSA	**Palmer Station**	**35.68**	**154**	P	**P**	**07 04 27.2**	**+0.2**
PMSA				IAmb	IAmb	07 04 29.8	
	comp=Z,22nm,1.4s						

CPUP	**Villa Florida**	**37.55**	**87**	P		**P**	**07 04 42.6**	**-0.9**
	comp=Z,4.0nm,1.2s,baz=244,slow=7.2,SNR=4.2							
CPUP				LR		LR	07 17 49.0	
	comp=Z,89nm,19.4s,baz=251,slow=33							
CPUP	**Villa Florida**	**37.55**	**87**	P		**P**	**07 04 42.8**	**-0.7**
SIV	**San Ignacio**	**40.04**	**70**	P		**P**	**07 05 03.6**	**-0.8**
	comp=Z,4.3nm,0.7s,baz=242,slow=8.2,SNR=25							
SAML	**Samuel**	**43.12**	**60**	P		**P**	**07 05 29.2**	**-0.4**
TBI	**Tubuai**	**44.34**	**273**	*e*S		**S**	**07 12 10.4**	**-3.4**
	comp=Z,176nm,26.8s							
TBI				*e*LR		LR	07 17 47.0	
	comp=Z,245nm,33.2s							
TBI	**Tubuai**	**44.34**	**273**	*e*T		T	07 52 28.3	
	comp=Z,3.7nm,0.3s							
MACC	**Macarena, Meta**	**45.34**	**38**	*e*P		**P**	**07 05 46.0**	**-1.5**
TAOE	**Nuku Hiva Isla**	**45.50**	**297**	*e*S		**S**	**07 12 28.3**	**-2.6**
	comp=Z,112nm,24.9s							
TAOE				*e*LQ		LQ	07 16 32.4	
	comp=Z,266nm,31.0s							
TAOE				*e*LR		LR	07 18 27.3	
	comp=Z,159nm,25.5s							
MEH	**Mehetia**	**46.02**	**280**	*e*T		T	07 54 35.0	
	comp=Z,13nm,0.2s							
TOLC	**Tolima**	**46.76**	**35**	*e*P		**P**	**07 05 59.0**	**-0.1**
TVO	**Taravao**	**47.02**	**280**	*e*T		T	07 55 49.7	
	comp=Z,0.7nm,0.3s							
TIAR	**Tiarei**	**47.22**	**280**	*e*T		T	07 56 04.8	
	comp=Z,1.9nm,0.2s							
GUY2C	**Guyana, Caldas**	**47.30**	**34**	*e*P		**P**	**07 06 01.5**	**-1.9**
PPT2	**Papeete2**	**47.38**	**280**	*e*S		**S**	**07 12 54.1**	**-3.7**
	comp=Z,163nm,25.0s							
PPT2				*e*LQ		LQ	07 17 18.9	
	comp=Z,192nm,22.0s							
PPT2				*e*LR		LR	07 19 04.2	
	comp=Z,110nm,23.8s							
ROSC	**El Rosal**	**47.45**	**36**	P		**P**	**07 06 04.8**	**+0.3**
	comp=Z,3.4nm,0.4s,baz=216,slow=22,SNR=3.7							
ROSC				LR		LR	07 22 32.4	
	comp=Z,292nm,20.4s,baz=218,slow=32							
ROSC	**El Rosal**	**47.45**	**36**	P		**P**	**07 06 04.4**	**-0.1**
ROSC				IAmb		IAmb	07 06 06.2	
	comp=Z,6.7nm,0.8s							
CHIC	**Chingaza**	**47.55**	**37**	*e*P		**P**	**07 06 04.3**	**-1.0**
CBOC	**Ciudad Bolivar**	**47.58**	**33**	*e*P		**P**	**07 06 04.4**	**-0.8**
PTBC	**PUERTO BERRIO,**	**48.88**	**35**	*e*P		**P**	**07 06 13.7**	**-1.4**
RUSC	**La Rusia**	**48.96**	**37**	*e*P		**P**	**07 06 14.0**	**-2.2**
BELA	**Belgrano 2**	**49.71**	**165**	P		**P**	**07 06 21.0**	**+0.2**
MOTC	**Monteria, Cord**	**50.33**	**32**	*e*P		**P**	**07 06 25.6**	**-0.5**
BDFB	**Brasilia**	**50.44**	**80**	P		**P**	**07 06 26.1**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=233,slow=18,SNR=1.7							
SJCC	**San Jacinto, C**	**51.54**	**32**	*e*P		**P**	**07 06 34.3**	**-0.9**
RAR	**Rarotonga**	**53.71**	**269**	P		**P**	**07 06 53.3**	**+2.0**
QSPA	**South Pole Qui**	**53.95**	**180**	P		**P**	**07 06 53.3**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=261,slow=0.8,SNR=9.3							
QSPA	**South Pole Qui**	**53.95**	**180**	P		**P**	**07 06 53.6**	**+0.9**
MOIG	**Morelia**	**55.65**	**359**	P		**P**	**07 07 07.5**	**+2.0**
VNA3	**Neumayer Olymp**	**56.25**	**157**	P		**P**	**07 07 09.1**	**0.0**
VNDA	**Vanda**	**56.63**	**195**	P		**P**	**07 07 12.8**	**+1.2**
	comp=Z,1.9nm,0.9s,baz=88,slow=5.8,SNR=9.6							
VNDA				LR		LR	07 25 41.6	
	comp=Z,126nm,20.9s,baz=96,slow=30							
VNDA	**Vanda**	**56.63**	**195**	P		**P**	**07 07 11.9**	**+0.2**
VNA1	**Neumayer--Stat**	**56.85**	**157**	P		**P**	**07 07 13.4**	**+0.2**
VNA2	**Neumayer--Watz**	**57.05**	**157**	P		**P**	**07 07 14.5**	**-0.2**
	baz=281,slow=7.5							
SNAA	**Sanae**	**58.22**	**158**	P		**P**	**07 07 22.5**	**-0.5**
SNAA	**Sanae**	**58.22**	**158**	P		**P**	**07 07 22.5**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=269,slow=7.3,SNR=15							
SNAA	**Sanae**	**58.22**	**158**	P		**P**	**07 07 22.9**	**-0.2**
ZAIG	**Zacatecas**	**58.76**	**357**	P		**P**	**07 07 28.1**	**+0.5**
ZAIG				IAmb		IAmb	07 07 37.9	
	comp=Z,13nm,1.5s							
MLPR	**Magueyes Islan**	**62.31**	**36**	P		**P**	**07 07 52.3**	**+0.8**
OBIP	**Obispado Ponce**	**62.58**	**36**	P		**P**	**07 07 52.1**	**-1.2**
HPIG		**63.08**	**354**	P		**P**	**07 07 58.8**	**+2.0**
HPIG				IAmb		IAmb	07 07 59.7	
	comp=Z,4.9nm,0.8s							
TXAR	**Lajitas Array**	**65.34**	**357**	P		**P**	**07 08 10.2**	**-1.2**
	comp=Z,1.9nm,1.0s,baz=182,slow=8.4,SNR=11							
TXAR	**Lajitas Array**	**65.34**	**357**	P		**P**	**07 08 13.2**	**+1.8**
HKT	**Hockley**	**65.98**	**4**	P		**P**	**07 08 17.2**	**+1.9**
HKT				IAmb		IAmb	07 08 39.7	
	comp=Z,6.8nm,1.4s							
MNTX	**Cornudas Mount**	**67.79**	**355**	P		**P**	**07 08 28.3**	**+1.4**
Y14A	**Wickenburg**	**70.88**	**349**	P		**P**	**07 08 48.6**	**+2.6**
Y14A				IAmb		IAmb	07 08 49.2	
	comp=Z,5.4nm,1.0s							
SYO	**Syowa Base**	**70.89**	**166⇑**	*e*P		**P**	**07 08 45.8**	**+0.1**
X16A	**Lo Mia Camp, P**	**71.12**	**350**	P		**P**	**07 08 49.1**	**+1.4**
MAW	**Mawson**	**75.65**	**173**	P		**P**	**07 09 13.5**	**-0.3**
	comp=Z,4.4nm,1.0s,baz=235,slow=8.1,SNR=5.9							
MAW				LR		LR	07 41 53.2	
	comp=Z,62nm,18.7s,baz=234,slow=35							
PDAR	**Pinedale Array**	**79.13**	**353**	P		**P**	**07 09 33.1**	**-0.7**
	comp=Z,2.7nm,0.6s,baz=162,slow=6.3,SNR=20							
DZM	**Mont Dzumac**	**79.98**	**250**	*e*LR		LR	07 34 27.0	
	comp=Z,280nm,26.9s							
SADO	**Sadowa**	**82.85**	**15**	LR		LR	07 43 29.5	
	comp=Z,102nm,18.7s,baz=211,slow=33							
STKA	**Stephens Creek**	**90.99**	**228**	LR		LR	07 42 54.8	
	comp=Z,134nm,21.4s,baz=195,slow=30							
SCHQ	**Schefferville**	**95.11**	**19**	LR		LR	07 49 04.1	
	comp=Z,100nm,18.9s,baz=22,slow=33							
BOSA	**Boshof**	**97.47**	**134**	LR		LR	07 49 55.9	
	comp=Z,43nm,18.8s,baz=180,slow=32							
DBIC	**Dimbokro**	**97.80**	**355**	LR		LR	07 51 48.3	
	comp=Z,52nm,19.7s,baz=220,slow=33							
H01W1	**Cape Leeuwin H**	**102.37**	**208**	T		T	09 06 28.9	
	baz=152,slow=76,SNR=15							
H01W2	**Cape Leeuwin H**	**102.37**	**208**	T		T	09 06 28.1	
	baz=152,slow=76,SNR=11							
H01W3	**Cape Leeuwin H**	**102.38**	**208**	T		T	09 06 29.5	
	baz=152,slow=76,SNR=13							
NRIK	**Noril'sk**	**146.60**	**355**	PKPbc		**PKPbc**	**07 17 10.3**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=66,slow=4.9,SNR=5.6							
KBZ	**Khabaz**	**150.83**	**64**	PKPbc		**PKPbc**	**07 17 21.2**	**-0.1**
	comp=Z,2.2nm,0.7s,baz=233,slow=20,SNR=2.1							
CMAR	**Chiang Mai Arr**	**155.61**	**228**	PKPab		**PKPab**	**07 17 49.0**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=154,slow=2.4,SNR=7.4							
SONM	**Songino Array**	**157.34**	**309**	PKPab		**PKPab**	**07 17 57.7**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=75,slow=6.1,SNR=2.0							

*SOME **08** 07:06:21.3, 40.°70N×73.°27E, h15km*
*ISU **08** 07:06:22.0, 40.°60N×73.°20E, h10km*
*KRNET **08** 07:06:22.6±0.1, 40.°68N×73.°27E, h20km, mb3.6*
*NNC **08** 07:06:24.0±1.3, 40.°80N×73.°25E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=11.3km s-min=5.2km az=173.0*

ISC 08 07:06:19.8±1.2, 40.°66N±0.°03×73.°29E±0.°02, h2km±11km, n68, σ1§76/111, 28C-16D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.41**	**250**	⇑*i*P			**Pb**	**07 06 30.7**	**+0.9**
	baz=47								
OHH				⇑*i*S			**Sb**	**07 06 36.3**	**-0.2**
	baz=47								
OHH	**Osh**	**0.41**	**250**	*e*P			**Pb**	**07 06 30.3**	**+0.5**
OHH				*e*S			**Sb**	**07 06 35.9**	**-0.6**
ARSB	**Arslanbob**	**0.70**	**341**	⇓*i*P			**Pn**	**07 06 35.5**	**-1.5**
	baz=42								
ARSB				⇓*i*S			**Sb**	**07 06 45.0**	**-0.1**
	baz=42								
ANR	**Andizhan**	**0.71**	**278**	*e*P			**Pn**	**07 06 36.3**	**-0.7**
ANR				*e*S			**Sn**	**07 06 47.1**	**-1.4**
FRG	**Fergana**	**1.14**	**274**	*e*P			**Pg**	**07 06 44.6**	**+2.8**
FRG				*e*S			**Sn**	**07 07 00.4**	**+1.2**
ARLS	**Aral**	**1.43**	**33⇑**	*i*P			**Pg**	**07 06 49.0**	**+1.7**
	baz=34								
ARLS				⇑*i*S			**Sg**	**07 07 07.9**	**+2.1**
	baz=34								
AML	**Almayashu**	**1.50**	**12⇑**	*i*P			**Pg**	**07 06 50.1**	**+1.6**
	baz=12								
AML				⇑*i*S			**Sg**	**07 07 10.1**	**+2.1**
	baz=12								
AML	**Almayashu**	**1.50**	**12**	P			**Pg**	**07 06 50.2**	**+1.6**
	SNR=931								
UCH	**Uchtor**	**1.82**	**30⇑**	*i*P			**Pg**	**07 06 55.7**	**+1.1**
	baz=31								
UCH				⇑*i*S			**Sg**	**07 07 19.6**	**+1.4**
	baz=31								
UCH	**Uchtor**	**1.82**	**30**	P			**Pg**	**07 06 55.8**	**+1.1**
	SNR=16								
MNAS	**Manas**	**1.92**	**342⇑**	*i*P			**Pg**	**07 06 56.5**	**0.0**
	baz=43								
MNAS				⇑*i*S			**Sg**	**07 07 21.5**	**+0.1**
	baz=43								
BTK	**Batken**	**1.98**	**253**	⇓*i*P			**Pb**	**07 06 57.8**	**+1.1**
	baz=52								
BTK				⇓*i*S			**Sg**	**07 07 23.6**	**+0.2**
	baz=52								
BTK	**Batken**	**1.98**	**253**	*e*P			**Pb**	**07 06 57.6**	**+0.9**
BTK				*e*S			**Sg**	**07 07 24.3**	**+0.9**
EKS2	**Erkin-Say**	**2.03**	**10⇑**	*i*P			**Pb**	**07 06 58.5**	**+0.9**
	baz=11								
EKS2				⇑*i*S			**Sg**	**07 07 24.4**	**-0.7**
	baz=11								
EKS2	**Erkin-Say**	**2.03**	**10**	P			**Pg**	**07 06 58.9**	**+0.1**
	SNR=100								
MRKS	**Merke**	**2.08**	**359⇑**	*e*P			**Pb**	**07 06 58.9**	**+0.5**
	69nm,0.3s								
MRKS				*e*S			**Sg**	**07 07 26.5**	**-0.2**
	217nm,0.2s								
MRKS	**Merke**	**2.08**	**359**	Pg			**Pb**	**07 06 59.0**	**+0.5**
	89nm,0.4s								
MRKS				Lg			Lg	07 07 26.6	
	217nm,0.2s								
AAK	**Ala-Archa**	**2.17**	**24⇑**	*i*P			**Pb**	**07 07 00.3**	**+0.3**
	baz=25								
AAK				⇑*i*S			**Sb**	**07 07 28.2**	**+0.8**
	baz=25								
AAK	**Ala-Archa**	**2.17**	**24**	P			**Pb**	**07 07 01.1**	**+1.1**
	SNR=74								
AAK	**Ala-Archa**	**2.17**	**24**	⇑Pn			**Pb**	**07 07 01.0**	**+1.0**
	26nm,0.4s								
AAK				⇑Sn			**Sg**	**07 07 29.7**	**+0.1**
	190nm,0.6s								
KBK	**Karagaybulak**	**2.35**	**31⇑**	*i*P			**Pb**	**07 07 03.0**	**0.0**
	baz=32								
KBK				⇑*i*S			**Sb**	**07 07 32.6**	**0.0**
	baz=32								
KBK	**Karagaybulak**	**2.35**	**31**	P			**Pb**	**07 07 03.6**	**+0.6**
	SNR=20								
FRU1	**Bishkek**	**2.37**	**25⇑**	*i*P			**Pb**	**07 07 03.2**	**-0.1**
	baz=25								
FRU1				⇑*i*S			**Sb**	**07 07 33.0**	**-0.1**
	baz=25								
CHMS	**Chumysh**	**2.58**	**25⇑**	*i*P			**Pb**	**07 07 05.9**	**-0.9**
	baz=25								
CHMS				⇑*i*S			**Sb**	**07 07 37.6**	**-1.4**
	baz=25								
CHMS	**Chumysh**	**2.58**	**25**	P			**Pb**	**07 07 06.8**	**-0.1**
	SNR=25								
DZA	**Taraz**	**2.67**	**327**	*e*P			**Pb**	**07 07 09.8**	**+1.5**
	99nm,0.2s								
DZA				*e*S			**Sg**	**07 07 45.0**	**-0.4**
	246nm,0.2s								
DZA	**Taraz**	**2.67**	**327**	Pg			**Pg**	**07 07 10.4**	**-0.5**
	99nm,0.2s								
DZA				Lg			Lg	07 07 45.1	
	246nm,0.2s								
CHRV	**Charvak**	**2.70**	**292**	*e*P			**Pg**	**07 07 12.0**	**+0.4**
CHRV				*e*S			**Sg**	**07 07 44.9**	**-1.7**
BOOM	**Boomskoye usch**	**2.70**	**47⇓**	*i*P			**Pb**	**07 07 07.7**	**-1.3**
	baz=47								
BOOM				⇓*i*S			**Sb**	**07 07 41.1**	**-1.6**
	baz=47								
ULHL	**Ulahol**	**2.73**	**54⇓**	*i*P			**Pb**	**07 07 08.2**	**-1.3**
	baz=54								
ULHL				⇓*i*S			**Sb**	**07 07 42.0**	**-1.5**
	baz=54								
ULHL	**Ulahol**	**2.73**	**54**	P			**Pb**	**07 07 08.5**	**-1.0**
	SNR=28								
USP	**Ospenovka**	**2.75**	**19⇓**	*e*P			**Pb**	**07 07 08.3**	**-1.6**
	baz=19								
USP				⇓*i*S			**Sb**	**07 07 42.2**	**-1.9**
	baz=19								
GAR	**Garm**	**2.83**	**235⇑**	*i*P			**Pb**	**07 07 09.6**	**-1.5**
	baz=34								
GAR				⇑*i*S			**Sb**	**07 07 43.8**	**-2.4**
	baz=34								
TKM2	**Tokmak 2**	**2.84**	**37⇑**	*i*P			**Pb**	**07 07 09.7**	**-1.7**
	baz=37								
TKM2				⇑*i*S			**Sb**	**07 07 44.5**	**-2.3**
	baz=37								
TKM2	**Tokmak 2**	**2.84**	**37**	⇓Pn			**Pb**	**07 07 10.2**	**-1.2**
	3.5nm,0.3s								
TKM2				⇑Lg			Lg	07 07 51.6	
	43nm,0.7s								
IUG	**Iuzhnay**	**2.86**	**302**	*e*P			**Pb**	**07 07 13.2**	**+1.5**
	28nm,0.2s								
IUG				*e*S			**Sg**	**07 07 50.8**	**-1.0**
	107nm,0.5s								
IUG	**Iuzhnay**	**2.86**	**302**	Pg			**Pg**	**07 07 13.8**	**-0.9**
	39nm,0.6s								
IUG				Lg			Lg	07 07 50.4	
	107nm,0.5s								
SGDS	**Sogindy**	**2.96**	**19**	Pg			**Pb**	**07 07 14.9**	**+1.5**
	8.3nm,0.1s								
SGDS				Lg			Lg	07 07 53.2	
	50nm,0.5s								
KST	**Kastek**	**3.11**	**39**	*e*P			**Pg**	**07 07 18.3**	**-1.1**
	13nm,0.5s								
KST				*e*S			**Sg**	**07 07 59.8**	**+0.1**
	50nm,0.5s								
KK31	**Karatay Array**	**3.20**	**321**	Pn			**Pb**	**07 07 14.7**	**-2.8**
	7.4nm,0.6s,baz=144,slow=17,SNR=31								
KK31				⇓Lg			Lg	07 08 01.1	
	19nm,0.5s,baz=132,slow=30,SNR=7.5								
KDJ	**Kajisay**	**3.28**	**62⇓**	*i*P			**Pb**	**07 07 16.1**	**-2.7**
	baz=63								
KDJ				⇓*i*S			**Sb**	**07 07 55.0**	**-4.2**
	baz=63								
MTBS	**Maitube**	**3.40**	**43**	*e*P			**Pg**	**07 07 24.3**	**-0.8**
	8.0nm,0.3s								
MTBS				*e*S			**Sg**	**07 08 09.5**	**+0.4**
	49nm,0.5s								
MTBS	**Maitube**	**3.40**	**43**	Pg			**Pg**	**07 07 24.2**	**-0.8**
	8.0nm,0.3s								
MTBS				Lg			Lg	07 08 09.6	
	49nm,0.5s								
IZV	**Izvestkoviy**	**3.44**	**45**	*e*P			**Pg**	**07 07 24.8**	**-0.9**
	8.0nm,0.7s								
IZV				*e*S			**Sg**	**07 08 10.8**	**+0.6**
	72nm,0.7s								
IZV	**Izvestkoviy**	**3.44**	**45**	Pg			**Pg**	**07 07 26.0**	**+0.3**
	8.0nm,0.7s								
IZV				Lg			Lg	07 08 11.7	
	72nm,0.7s								
BRLS	**Borolday**	**3.50**	**314**	*e*P			**Pb**	**07 07 24.3**	**+1.7**
	9.5nm,0.3s								
BRLS				*e*S			**Sg**	**07 08 09.7**	**-2.5**
	56nm,0.3s								
BRLS	**Borolday**	**3.50**	**314**	Pg			**Pb**	**07 07 24.9**	**+2.4**
	17nm,0.6s								
BRLS				Lg			Lg	07 08 10.0	
	56nm,0.3s								
KRBS	**Karabastau**	**3.51**	**30**	*e*P			**Pb**	**07 07 25.0**	**+2.2**
	12nm,0.5s								
KRBS				*e*S			**Sg**	**07 08 10.7**	**-1.9**
	36nm,0.6s								
KRBS	**Karabastau**	**3.51**	**30**	Pg			**Pg**	**07 07 25.9**	**-1.3**
	12nm,0.5s								
KRBS				Lg			Lg	07 08 11.4	
	36nm,0.6s								
MDOK	**Medeo**	**3.76**	**47**	*e*P			**Pg**	**07 07 30.9**	**-0.9**
	8.3nm,0.7s								
MDOK				*e*S			**Sg**	**07 08 21.2**	**+0.7**
	38nm,0.7s								
KOTS	**Kotyrbulak**	**3.84**	**47**	*e*P			**Pg**	**07 07 31.7**	**-1.7**
	34nm,0.5s								
KOTS				*e*S			**Sg**	**07 08 22.8**	**-0.4**
	181nm,0.4s								
KOTS	**Kotyrbulak**	**3.84**	**47**	Pg			**Pg**	**07 07 33.3**	**-0.2**
	34nm,0.5s								
KOTS				Lg			Lg	07 08 24.1	
	181nm,0.4s								
ANVS	**Anan'yevo**	**3.90**	**56⇓**	*e*P			**Pn**	**07 07 24.6**	**+3.6**
	baz=56								
ANVS				⇓*i*S			**Sn**	**07 08 10.2**	**+2.6**
	baz=56								
KUU	**Kurty**	**3.94**	**34**	*e*P			**Pg**	**07 07 33.9**	**-1.5**
	10nm,0.5s								
KUU				*e*S			**Sg**	**07 08 26.1**	**-0.4**
	33nm,0.6s								
KTBS	**Karatobe**	**3.96**	**39**	*e*P			**Pg**	**07 07 34.3**	**-1.3**
	3.6nm,0.3s								
KTBS				*e*S			**Sg**	**07 08 26.7**	**-0.2**
	81nm,0.6s								
BTLS	**Baital**	**4.41**	**7**	*e*P			**Pb**	**07 07 41.1**	**+3.1**
	4.5nm,0.5s								
BTLS				*e*S			**Sg**	**07 08 38.8**	**-2.8**
	37nm,0.8s								
BTLS	**Baital**	**4.41**	**7**	Pg			**Pg**	**07 07 41.5**	**-2.8**
	4.5nm,0.5s								
BTLS				Lg			Lg	07 08 38.5	
	37nm,0.8s								
SATY	**Saty**	**4.51**	**56**	*e*P			**Pg**	**07 07 43.9**	**-2.4**
	11nm,0.7s								
SATY				*e*S			**Sg**	**07 08 43.8**	**-1.0**
	39nm,0.6s								
SATY	**Saty**	**4.51**	**56**	Pg			**Pg**	**07 07 43.9**	**-2.4**
	11nm,0.7s								
SATY				Lg			Lg	07 08 43.1	
	39nm,0.6s								
KURS	**Kuram**	**4.60**	**51**	*e*P			**Pg**	**07 07 46.7**	**-1.3**
	6.8nm,0.7s								
KURS				*e*S			**Sg**	**07 08 48.6**	**+0.9**
	25nm,0.9s								
ARXS	**Arharly**	**4.89**	**42**	*e*P			**Pb**	**07 07 50.3**	**+4.1**
	11nm,0.8s								
ARXS				*e*S			**Sg**	**07 08 54.7**	**-2.0**
	31nm,0.5s								
ARXS	**Arharly**	**4.89**	**42**	Pg			**Pg**	**07 07 50.7**	**-2.7**
	11nm,0.8s								
ARXS				Lg			Lg	07 08 54.5	
	31nm,0.5s								
KPKS	**Kokpek**	**4.90**	**53**	*e*P			**Pb**	**07 07 49.6**	**+3.2**
	6.2nm,0.5s								
KPKS				*e*S			**Sg**	**07 08 53.2**	**-3.9**
	47nm,0.9s								
UZB	**Uzynbulak**	**4.95**	**58**	*e*P			**Pb**	**07 07 51.4**	**+4.1**
	3.9nm,0.5s								
UZB				*e*S			**Sg**	**07 08 56.2**	**-2.5**
	20nm,0.5s								
UZB	**Uzynbulak**	**4.95**	**58**	Pg			**Pb**	**07 07 51.7**	**+4.4**
	3.9nm,0.5s								
UZB				Lg			Lg	07 08 56.2	
	20nm,0.5s								
MNBS	**Baschi**	**5.10**	**46**	*e*P			**Pg**	**07 07 55.1**	**-2.5**
	3.2nm,0.5s								
MNBS				*e*S			**Sg**	**07 09 02.4**	**-1.2**
	17nm,0.4s								
SHLS	**Shalkode**	**5.24**	**60**	Pg			**Pg**	**07 08 02.7**	**+2.5**
	8.6nm,0.4s								
SHLS				Lg			Lg	07 09 15.0	
	52nm,0.8s								
DJR	**Jarkent**	**6.04**	**51**	Pg			Pb	07 08 11.0	+5.0
	1.8nm,0.6s								

IDC 08 07:28:03.9±1.1, 53.°68N×35.°13W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.4/52, mbtmp3.6/4, MS3.4/3, Ms1 3.4/3, ms1mx2.8/49, Error ellipse: s-maj=69.5km s-min=24.4km az=23.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**25.31**	**111**	P		P	P	07 33 32.4	+0.3
	1.7nm,1.1s,baz=301,slow=8.6,SNR=5.0								
SPITS	**Spitsbergen Ar**	**30.36**	**19**	LR		LR		07 42 41.6	
	comp=Z,62nm,20.6s,baz=35,slow=29								
PDAR	**Pinedale Array**	**48.59**	**289**	P		P		07 36 47.2	-2.0
	0.2nm,0.5s,baz=53,slow=8.3,SNR=2.3								
PDAR				LR		LR		07 56 24.4	
	comp=Z,35nm,18.1s,baz=9.5,slow=35								
TORD	**Torodi Ar. Bea**	**49.79**	**130**	P		P		07 36 57.7	-0.6
	1.3nm,0.8s,baz=329,slow=7.5,SNR=7.9								
TXAR	**Lajitas Array**	**54.42**	**272**	P		P		07 37 34.3	+1.5
	0.3nm,0.9s,baz=64,slow=4.1,SNR=2.5								
LPIG	**La Paz**	**62.26**	**273**	LR		LR		08 05 13.0	
	comp=Z,28nm,19.4s,baz=322,slow=36								
WRA	**Warramunga Arr**	**145.37**	**18**	PKPbc		PKPbc		07 47 43.3	-0.2
	0.3nm,0.8s,baz=345,slow=3.4,SNR=2.7								
ASAR	**Alice Springs**	**148.91**	**20**	PKPbc		PKPbc		07 47 52.8	-0.7
	0.4nm,0.6s,baz=352,slow=2.1,SNR=5.9								

*IDC **08** 07:31:45.1±1.2, 5.°94S×128.°86E, h306km±14km, mb3.3/2, mb1 3.7/7, mb1mx3.2/34, mbtmp4.4/7, Error ellipse: s-maj=24.2km s-min=11.1km az=86.0*
*NEIC **08** 07:31:45.3±2.6, 6.°00S±0.°08×128.°7E±0.°1, h302km±10km, mb4.1/5, Error ellipse: s-maj=18.1km s-min=11.8km az=87.0*

ISC 08 07:31:44.8±0.6, 5.°95S±0.°06×128.°78E±0.°09, h300km, n23, σ1§38/29, mb3.7/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.21**	**129**	Pn		Pn	**Pn**	**07 32 42.9**	**+0.2**
FAKI	**Fak Fak**	**4.59**	**49**	Pn		Pn	**Pn**	**07 32 59.9**	**+2.2**
FAKI				S		S	**S**	**07 33 56.2**	**0.0**
SIJI	**Sorong**	**5.63**	**26**	P		P	**Pn**	**07 33 11.4**	**+1.6**
	8.2nm,0.3s,baz=209,slow=19,SNR=20								
SIJI				S		S	**S**	**07 34 15.8**	**-2.4**
	13nm,0.3s,baz=217,slow=20,SNR=17								
BATI	**Baumata**	**6.60**	**230**	P		P	**Pn**	**07 33 20.9**	**-0.5**
	18nm,0.3s,baz=90,slow=7.9,SNR=4.8								
**M

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAM	**Namangan**	**0.10**	**234**	*i* P	**Pg**	**07 41 27.6**	**-0.1**
NAM				*i* S	**Sg**	**07 41 30.6**	**+1.3**
ANR	**Andizhan**	**0.54**	**123**	*i* P	Pg	07 41 29.1	-6.6
ANR				*i* S	**Sn**	**07 41 51.4**	**+2.8**
OHH	**Osh**	**0.94**	**124**	⇓*i* P	**Pg**	**07 41 42.3**	**-0.9**
	baz=22						
OHH				⇓*i* S	**Sg**	**07 41 55.4**	**0.0**
	baz=22						
ARSB	**Arslanbob**	**0.95**	**73**	⇑*i* P	**Pg**	**07 41 43.4**	**-0.2**
	baz=72						
ARSB				⇑*i* S	**Sb**	**07 41 56.1**	**-1.0**
	baz=72						
BTK	**Batken**	**1.23**	**216**	⇓*i* P	**Pn**	**07 41 47.3**	**-1.6**
	baz=16						
BTK				⇓*i* S	**Sb**	**07 42 03.5**	**-1.4**
	baz=16						
BTK	**Batken**	**1.23**	**216**	*eP*	**Pn**	**07 41 48.0**	**-0.9**
BTK				*eS*	**Sb**	**07 42 04.3**	**-0.6**
CHRV	**Charvak**	**1.49**	**294**	*i* P	**Pn**	**07 41 52.1**	**-0.3**
CHRV				*i* S	**Sn**	**07 42 11.2**	**-0.9**
MNAS	**Manas**	**1.54**	**21**	⇑*i* P	**Pn**	**07 41 52.8**	**-0.4**
	baz=21						
MNAS				⇑*i* S	**Sg**	**07 42 13.7**	**-1.0**
	baz=21						
IUG	**Iuzhnay**	**1.70**	**311**	*eP*	**Pn**	**07 41 56.5**	**+1.1**
	132nm,0.1s						
IUG				*eS*	**Sn**	**07 42 19.3**	**+1.8**
	477nm,0.4s						
IUG	**Iuzhnay**	**1.70**	**311**	P	**Pn**	**07 41 56.5**	**+1.1**
	132nm,0.1s						
IUG				S	**Sn**	**07 42 19.3**	**+1.8**
	645nm,0.6s						
AML	**Almayashu**	**1.80**	**53**	⇓*i* P	**Pn**	**07 41 58.0**	**+0.9**
	baz=52						
AML				⇓*i* S	**Sg**	**07 42 22.0**	**-1.2**
	baz=52						
DZA	**Taraz**	**1.87**	**350**	*eP*	**Pn**	**07 41 59.0**	**+1.3**
	82nm,0.1s						
DZA				*eS*	**Sb**	**07 42 23.5**	**+0.3**
	302nm,0.2s						
DZA	**Taraz**	**1.87**	**350**	P	**Pn**	**07 41 59.0**	**+1.3**
	82nm,0.1s						
DZA				S	**Sb**	**07 42 23.5**	**+0.3**
	302nm,0.2s						
TAS	**Tashkent**	**1.89**	**279**	⇑*eP*	**Pn**	**07 41 58.0**	**+0.1**
	baz=80						
TAS				⇑*iS*	**Sn**	**07 42 21.9**	**0.0**
	baz=80						
MRKS	**Merke**	**2.01**	**32**	*eP*	**Pb**	**07 42 02.1**	**-0.1**
	24nm,0.3s						
MRKS				*eS*	**Sg**	**07 42 28.8**	**-1.1**
	97nm,0.3s						
MRKS	**Merke**	**2.01**	**32**	Pg	**Pb**	**07 42 01.5**	**-0.6**
	24nm,0.3s						
MRKS				Lg	Lg	07 42 28.8	
	97nm,0.3s						
CHM	**Chimkent**	**2.06**	**309**	*eP*	**Pb**	**07 42 03.4**	**+0.5**
	2.6nm,0.3s						
CHM				*eS*	**Sb**	**07 42 31.2**	**+2.5**
	770nm,0.3s						
ARLS	**Aral**	**2.08**	**66**	⇓*i* P	**Pn**	**07 42 01.7**	**+1.0**
	baz=66						
ARLS				⇓*i* S	**Sn**	**07 42 28.6**	**-1.0**
	baz=66						
EKS2	**Erkin-Say**	**2.20**	**42**	⇑*i* P	**Pn**	**07 42 03.9**	**+1.6**
	baz=42						
EKS2				⇑*i* S	**Sb**	**07 42 31.2**	**-1.7**
	baz=42						
KK31	**Karatay Array**	**2.25**	**336**	⇑Pn	**Pn**	**07 42 04.6**	**+1.7**
	10nm,0.3s,baz=149,slow=16,SNR=134						
KK31				⇓Sn	**Sb**	**07 42 33.4**	**-1.0**
	17nm,0.3s,baz=148,slow=28,SNR=10						
GAR	**Garm**	**2.33**	**209**	⇑*i* P	**Pn**	**07 42 04.1**	**0.0**
	baz=9.0						
GAR				⇑*i* S	**Sn**	**07 42 31.8**	**-1.3**
	baz=9.0						
UCH	**Uchtor**	**2.37**	**59**	⇓*i* P	**Pn**	**07 42 06.1**	**+1.2**
	baz=59						
UCH				⇓*i* S	**Sn**	**07 42 34.6**	**+0.2**
	baz=59						
BRLS	**Borolday**	**2.44**	**325**	*eP*	**Pn**	**07 42 06.3**	**+0.8**
	62nm,0.5s						
BRLS				*eS*	**Sn**	**07 42 36.1**	**+0.5**
	107nm,0.3s						
BRLS	**Borolday**	**2.44**	**325**	Pg	**Pn**	**07 42 06.3**	**+0.8**
	62nm,0.5s						
BRLS				Lg	Lg	07 42 36.1	
	107nm,0.3s						
AAK	**Ala-Archa**	**2.58**	**51**	⇑*i* P	**Pn**	**07 42 08.5**	**+1.0**
	baz=51						
AAK				⇑*i* S	**Sn**	**07 42 40.3**	**+1.1**
	baz=51						
AAK	**Ala-Archa**	**2.58**	**51**	Pg	**Pg**	**07 42 17.0**	**+2.3**
	4.8nm,0.5s						
AAK				Lg	Lg	07 42 45.8	
	10.0nm,0.3s						
KBK	**Karagaybulak**	**2.87**	**55**	⇑*eP*	**Pn**	**07 42 12.5**	**+1.0**
	baz=55						
KBK				⇑*iS*	**Sn**	**07 42 46.8**	**+0.5**
	baz=55						
CHMS	**Chumysh**	**2.95**	**48**	⇓*i* P	**Pn**	**07 42 14.2**	**+1.7**
	baz=48						
CHMS				⇓*i* S	**Sn**	**07 42 49.2**	**+1.0**
	baz=48						
USP	**Ospenovka**	**3.00**	**42**	⇑*i* P	**Pn**	**07 42 15.1**	**+1.9**
	baz=42						
USP				⇑*i* S	**Sn**	**07 42 51.0**	**+1.5**
	baz=42						
SGDS	**Sogindy**	**3.20**	**41**	Pg	**Pb**	**07 42 22.5**	**0.0**
	4.3nm,0.5s						
SGDS				Lg	Lg	07 43 03.6	
	22nm,0.5s						
TKM2	**Tokmak 2**	**3.41**	**56**	⇑Pg	**Pg**	**07 42 33.7**	**+3.1**
	2.6nm,0.5s						
TKM2				⇑Lg	Lg	07 43 11.6	
	6.3nm,0.4s						
KST	**Kastek**	**3.70**	**56**	*eP*	**Pb**	**07 42 32.5**	**+1.5**
	17nm,1.3s						
KST				*eS*	**Sg**	**07 43 20.9**	**-3.3**
	16nm,0.6s						
KST	**Kastek**	**3.70**	**56**	Pg	**Pb**	**07 42 32.5**	**+1.5**
	17nm,1.3s						
KST				Lg	Lg	07 43 20.9	
	16nm,0.6s						
KRBS	**Karabastau**	**3.92**	**46**	*eP*	**Pb**	**07 42 35.7**	**+1.0**
	2.9nm,0.7s						
KRBS				*eS*	**Sg**	**07 43 26.4**	**-4.7**
	13nm,0.5s						
KRBS	**Karabastau**	**3.92**	**46**	Pg	**Pb**	**07 42 35.7**	**+1.0**
	2.9nm,0.7s						
KRBS				Lg	Lg	07 43 26.4	
	13nm,0.5s						
MTBS	**Maitube**	**4.04**	**58**	*eP*	**Pb**	**07 42 37.2**	**+0.5**
	3.5nm,0.3s						
MTBS				*eS*	**Sb**	**07 43 28.9**	**+3.0**
	13nm,0.4s						
MTBS	**Maitube**	**4.04**	**58**	Pg	**Pb**	**07 42 37.2**	**+0.5**
	3.5nm,0.3s						
MTBS				Lg	Lg	07 43 28.9	
	13nm,0.4s						
BTLS	**Baital**	**4.32**	**22**	*eP*	**Pb**	**07 42 43.0**	**+1.5**
	7.0nm,0.6s						
BTLS				*eS*	**Sg**	**07 43 39.0**	**-5.0**
	30nm,0.4s						
BTLS	**Baital**	**4.32**	**22**	Pg	**Pb**	**07 42 43.0**	**+1.5**
	7.0nm,0.6s						
BTLS				Lg	Lg	07 43 39.0	
	30nm,0.4s						
TNSS	**Tian-Shan**	**4.34**	**61**	*eP*	**Pg**	**07 42 45.9**	**-2.5**
	0.6nm,0.1s						
TNSS				*eS*	**Sg**	**07 43 43.5**	**-1.0**
	3.2nm,0.5s						
TNSS	**Tian-Shan**	**4.34**	**61**	Pg	**Pg**	**07 42 45.9**	**-2.5**
	3.0nm,0.5s						
TNSS				Lg	Lg	07 43 43.5	
	3.7nm,0.6s						
KUU	**Kurty**	**4.41**	**48**	*eP*	**Pb**	**07 42 44.8**	**+1.7**
	2.8nm,0.5s						
KUU				*eS*	**Sg**	**07 43 41.6**	**-5.4**
	7.4nm,0.6s						
KUU	**Kurty**	**4.41**	**48**	Pg	**Pb**	**07 42 44.1**	**+1.0**
	2.8nm,0.8s						
KUU				Lg	Lg	07 43 41.6	
	8.6nm,0.8s						
MDOK	**Medeo**	**4.46**	**60**	*eP*	**Pb**	**07 42 47.2**	**+3.3**
	2.9nm,0.4s						
MDOK				*eS*	**Sg**	**07 43 46.1**	**-2.3**
	5.2nm,0.3s						
MDOK	**Medeo**	**4.46**	**60**	Pg	**Pb**	**07 42 47.2**	**+3.3**
	3.8nm,0.5s						
MDOK				Lg	Lg	07 43 46.1	
	9.5nm,0.7s						
KTBS	**Karatobe**	**4.51**	**52**	*eP*	**Pb**	**07 42 46.8**	**+2.1**
	1.5nm,0.3s						
KTBS				*eS*	**Sg**	**07 43 45.4**	**-4.6**
	22nm,0.4s						
KTBS	**Karatobe**	**4.51**	**52**	Pg	**Pb**	**07 42 46.8**	**+2.1**
	1.5nm,0.3s						
KTBS				Lg	Lg	07 43 45.4	
	22nm,0.4s						
KOTS	**Kotyrbulak**	**4.53**	**59**	*eP*	**Pg**	**07 42 48.7**	**-3.3**
	8.3nm,0.4s						
KOTS				*eS*	**Sg**	**07 43 49.2**	**-1.6**
	12nm,0.6s						
KOTS	**Kotyrbulak**	**4.53**	**59**	Pg	**Pg**	**07 42 48.7**	**-3.3**
	8.3nm,0.4s						
KOTS				Lg	Lg	07 43 49.2	
	12nm,0.6s						
SATY	**Saty**	**5.33**	**66**	*eP*	**Pb**	**07 43 02.7**	**+3.9**
	1.6nm,0.2s						
SATY				*eS*	**Sg**	**07 44 12.5**	**-4.0**
	2.3nm,0.3s						
SATY	**Saty**	**5.33**	**66**	Pg	**Pb**	**07 43 02.7**	**+3.9**
	2.4nm,0.5s						
SATY				Lg	Lg	07 44 12.5	
	6.7nm,0.5s						
ARXS	**Arharly**	**5.47**	**53**	*eP*	**Pb**	**07 43 03.9**	**+2.7**
	6.3nm,1.1s						
ARXS				*eS*	**Sg**	**07 44 15.2**	**-5.7**
	10nm,0.6s						
ARXS	**Arharly**	**5.47**	**53**	Pg	**Pb**	**07 43 03.9**	**+2.7**
	6.3nm,1.1s						
ARXS				Lg	Lg	07 44 15.2	
	10nm,0.6s						
MNBS	**Baschi**	**5.75**	**56**	*eP*	**Pb**	**07 43 10.2**	**+4.2**
	1.6nm,0.5s						
MNBS				*eS*	**Sg**	**07 44 25.3**	**-4.7**
	6.5nm,0.5s						
MNBS	**Baschi**	**5.75**	**56**	Pg	**Pb**	**07 43 10.2**	**+4.2**
	1.6nm,0.5s						
MNBS				Lg	Lg	07 44 25.3	
	6.5nm,0.5s						
UZB	**Uzynbulak**	**5.79**	**66**	*eP*	**Pb**	**07 43 10.1**	**+3.5**
	0.9nm,0.3s						
UZB				*eS*	**Sg**	**07 44 25.0**	**-6.0**
	2.8nm,0.6s						
UZB	**Uzynbulak**	**5.79**	**66**	Pg	**Pb**	**07 43 10.1**	**+3.5**
	1.1nm,0.3s						
UZB				Lg	Lg	07 44 25.0	
	3.3nm,0.5s						
PDGK	**Podgornoye**	**6.17**	**66**	Pg	**Pb**	**07 43 17.1**	**+4.1**
	0.5nm,1.0s						
PDGK				Lg	Lg	07 44 37.2	
	1.6nm,0.6s						

*IDC **08** 07:59:31.7±1.4, 11°.75N×88°.57W, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.6/39, mbtmp3.7/5, ML3.0/2, Error ellipse: s-maj=92.2km s-min=19.9km az=45.0*
*INET **08** 07:59:36.0, 12°.15N×88°.16W, h15km, ML3.4*
*NEIC **08** 07:59:36.9±1.7, 12°.18N±0°.06×88°.14W±0°.05, h35km±2km, mb4.2/16, Error ellipse: s-maj=10.1km s-min=8.5km az=200.0*
*UCR **08** 07:59:37.9±1.6, 12°.35N×88°.12W, h28km±17km, ML3.6, MW3.4, mb4.2(NEIC)*
*SNET **08** 07:59:37.2±1.2, 12°.31N×88°.10W, h28km±8km, ML3.7*

ISC 08 07:59:36.5±0.7, 12°.21N±0°.05×88°.19W±0°.05, h35km, n80, σ1§61/87, mb4.2/11, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.98**	**39**	*eP*	**Pn**	**07 59 53.6**	**-0.2**
CSGN				*eS*	**Sn**	**08 00 04.3**	**-2.2**
CSGN	**Cosiguina Volc**	**0.98**	**39**	*eP*	**Pn**	**07 59 53.6**	**-0.2**
CSGN				*eS*	**Sn**	**08 00 04.3**	**-2.2**
CSGN	**Cosiguina Volc**	**0.98**	**39**		**Pn**	**07 59 54.4**	**+0.6**
CSGN				Sn	**Sn**	**08 00 06.6**	**+0.1**
LCND	**La Caada**	**1.13**	**15**	⇑*eP*	**Pn**	**07 59 56.0**	**+0.1**
LCND				*eS*	**Sn**	**08 00 10.1**	**0.0**
LCND				IAML		08 00 12.9	
	comp=Z,2μm,0.3s						
LCND	**La Caada**	**1.13**	**15**	⇑*eP*	**Pn**	**07 59 56.0**	**+0.1**
LCND				*eS*	**Sn**	**08 00 10.1**	**0.0**
LCND				IAML		08 00 12.9	
	comp=Z,2μm,0.3s						
ALJI	**Alcalda de J**	**1.17**	**341**	*eP*	**Pn**	**07 59 56.8**	**+0.4**
ALJI	**Alcalda de J**	**1.17**	**341**	*eP*	**Pn**	**07 59 56.8**	**+0.4**
LCY	**Lacayo**	**1.21**	**355**	*eP*	**Pn**	**07 59 57.3**	**+0.3**
LCY	**Lacayo**	**1.21**	**355**	*eP*	**Pn**	**07 59 57.3**	**+0.3**
CRIN	**San Cristobal**	**1.21**	**66**		**Pn**	**07 59 57.2**	**+0.2**
PACA	**Pacayal**	**1.26**	**354**	*eP*	**Pn**	**07 59 58.3**	**+0.6**
PACA	**Pacayal**	**1.26**	**354**	*eP*	**Pn**	**07 59 58.3**	**+0.6**
TECA	**Tecapa**	**1.31**	**346**	*eP*	**Pn**	**07 59 59.0**	**+0.4**
TECA	**Tecapa**	**1.31**	**346**	*eP*	**Pn**	**07 59 59.0**	**+0.4**
COEB	**Comit de Eme**	**1.32**	**345**	*eP*	**Pn**	**07 59 58.9**	**+0.3**
COEB				IAML		08 00 18.4	
	comp=Z,987nm,0.5s						
COEB	**Comit de Eme**	**1.32**	**345**	*eP*	**Pn**	**07 59 58.9**	**+0.3**
COEB				IAML		08 00 18.4	
	comp=Z,987nm,0.5s						
CNGN	**Cerro Negro**	**1.48**	**79**	*eP*	**Pn**	**08 00 00.5**	**-0.3**
CNGN	**Cerro Negro**	**1.48**	**79**	*eP*	**Pn**	**08 00 00.5**	**-0.3**
COEG	**Centro de Oper**	**1.56**	**334**	*eP*	**Pn**	**08 00 02.2**	**+0.5**
COEG				IAML		08 00 26.9	
	comp=Z,868nm,0.4s						
COEG	**Centro de Oper**	**1.56**	**334**	*eP*	**Pn**	**08 00 02.2**	**+0.5**
COEG				IAML		08 00 26.9	
	comp=Z,868nm,0.4s						
LFRS	**El Faro**	**1.64**	**329**	*eP*	**Pn**	**08 00 03.5**	**+0.5**
LFRS	**El Faro**	**1.64**	**329**	*eP*	**Pn**	**08 00 03.5**	**+0.5**
SNET	**Serv Nac Est T**	**1.79**	**325**		**Pn**	**08 00 06.1**	**+1.2**
TGUH	**Tegucigalpa,Un**	**2.04**	**26**		**Pn**	**08 00 09.3**	**+0.9**
TACO	**Tacachico**	**2.09**	**327**	*eP*	**Pn**	**08 00 10.3**	**+1.2**
TACO	**Tacachico**	**2.09**	**327**	*eP*	**Pn**	**08 00 10.3**	**+1.2**
NUBE	**Las Nubes**	**2.29**	**317**	*eP*	**Pn**	**08 00 12.9**	**+0.9**
NUBE	**Las Nubes**	**2.29**	**317**	*eP*	**Pn**	**08 00 12.9**	**+0.9**
MATN	**Matagalpa**	**2.32**	**72**		**Pn**	**08 00 12.5**	**+0.2**
MTO3	**Montecristo**	**2.46**	**332**		**Pn**	**08 00 16.0**	**+1.7**
ESQI	**Esquipulas**	**2.59**	**334**		**Pn**	**08 00 17.6**	**+1.6**
HZTE	**Horizontes, Gu**	**2.94**	**120**	*eP*	**Pn**	**08 00 23.0**	**+2.2**
ACON	**Acoyapa**	**2.96**	**94**		**Pn**	**08 00 20.8**	**-0.2**
GB1A	**Borínquen Arri**	**3.06**	**117**	*eP*	**Pn**	**08 00 25.2**	**+2.6**
BUEV	**Buena Vista**	**3.06**	**117**	*eP*	**Pn**	**08 00 24.7**	**+2.1**
GPS1	**Guardaparques**	**3.13**	**117**	*i* P	**Pn**	**08 00 24.9**	**+1.5**
GPS2	**Hotel Rincn d**	**3.13**	**117**	*eP*	**Pn**	**08 00 25.9**	**+2.5**
ORTG	**Ortega, Santa**	**3.25**	**124**	*eP*	**Pn**	**08 00 26.9**	**+1.8**
GUAI	**GUAI**	**3.26**	**126**	*i* P	**Pn**	**08 00 26.6**	**+1.5**
CUI	**Cuipilapa**	**3.34**	**117**	*eP*	**Pn**	**08 00 28.2**	**+1.9**
DUNO	**Dulce Nombre,**	**3.39**	**128**	*eP*	**Pn**	**08 00 28.6**	**+1.7**
ACAL	**Aguas Claras**	**3.46**	**117**	*i* P	**Pn**	**08 00 29.8**	**+1.7**
JTS	**Las Juntas de**	**3.70**	**121**	Pn	**Pn**	**08 00 32.4**	**+1.2**
	comp=Z,2.8nm,0.3s,baz=16,slow=18,SNR=26						
JTS				Sn	**Sn**	**08 01 10.5**	**-3.2**
	comp=Z,9.2nm,0.3s,baz=355,slow=21,SNR=3.5						
JTS	**Las Juntas de**	**3.70**	**121**	*eP*	**Pn**	**08 00 33.3**	**+2.1**
JTS	**Las Juntas de**	**3.70**	**121**		**Pn**	**08 00 32.2**	**+0.9**
ESPN	**Las Esperanzas**	**3.80**	**90**		**Pn**	**08 00 32.4**	**-0.2**
ARE1	**Arenal 1**	**3.82**	**117**	*eP*	**Pn**	**08 00 35.4**	**+2.5**
CEDE	**Laguna Cedeo**	**3.82**	**116**	*eP*	**Pn**	**08 00 35.6**	**+2.7**
LAFE	**Finca La Fe, P**	**4.01**	**126**	*eP*	**Pn**	**08 00 36.8**	**+1.4**
RTAL	**Retalhuleu**	**4.12**	**304**	Pn	**Pn**	**08 00 37.2**	**+0.2**
JACO	**JACO, Garabito**	**4.29**	**126**	*eP*	**Pn**	**08 00 42.1**	**+2.8**
LCR2	**La Lucha 2**	**4.79**	**120**	*eP*	**Pn**	**08 00 50.1**	**+3.8**
RIMA	**Rio Macho**	**4.89**	**119**	*eP*	**Pn**	**08 00 51.7**	**+3.9**
COCG	**Comitan**	**5.57**	**317**	Pn	**Pn**	**08 00 60.0**	**+2.8**
EDPN	**Palmar Norte**	**5.66**	**124**	*eP*	**Pn**	**08 01 02.0**	**+3.8**
EDBA	**Buenos Aires**	**5.70**	**122**	*eP*	**Pn**	**08 01 01.6**	**+2.9**
TEIG	**Tepich**	**7.97**	**359**	Pn	**Pn**	**08 01 32.6**	**+2.7**
CMIG	**Matias Romero**	**8.10**	**308**	Pn	**Pn**	**08 01 30.3**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=124,slow=7.3,SNR=2.0						
CMIG				Sn	**Sn**	**08 02 57.2**	**-4.7**
	comp=Z,0.1nm,0.3s,baz=149,slow=23,SNR=1.4						
061Z	**Ochoppi**	**15.22**	**26**	Pn	**Pn**	**08 03 08.2**	**-0.7**
456A	**Hilliard**	**19.29**	**16**	P	**Pn**	**08 03 59.5**	**-0.1**
GOGA	**Godfrey**	**21.54**	**11**	P	**P**	**08 04 23.5**	**+0.8**
GOGA				IAmb	IAmb	08 04 33.0	
	comp=Z,11nm,1.2s						
Y52A	**Lilburn**	**21.88**	**9**	P	**P**	**08 04 26.6**	**+0.2**
Y52A				IAmb	IAmb	08 04 43.1	
	comp=Z,9.8nm,1.2s						
TX32	**Lajitas Array**	**22.31**	**322**	P	**P**	**08 04 32.3**	**+1.1**
TXAR	**Lajitas Array**	**22.31**	**322**	P	**P**	**08 04 32.4**	**+1.2**
	comp=Z,3.0nm,0.8s,baz=136,slow=10,SNR=28						
TXAR	**Lajitas Array**	**22.31**	**322**	P	**P**	**08 04 32.2**	**+1.0**
MIAR	**Mount Ida**	**22.77**	**348**	P	**P**	**08 04 35.1**	**-0.8**
W50A	**Signal Mountai**	**23.04**	**6**	P	**P**	**08 04 38.0**	**-0.7**
BG3	**Lake Jocassee**	**23.18**	**11**	P	**P**	**08 04 39.4**	**-0.7**
BIRD	**Birdtown, Kers**	**23.41**	**16**	P	**P**	**08 04 41.7**	**-0.7**
BIRD				IAmb	IAmb	08 04 55.2	
	comp=Z,12nm,1.4s						
W57A	**Gilead**	**24.02**	**17**	P	**P**	**08 04 47.3**	**-0.8**
W57A				IAmb	IAmb	08 05 01.1	
	comp=Z,16nm,1.4s						
V58A	**Windy Hill, Pi**	**24.87**	**18**	P	**P**	**08 04 54.8**	**-1.1**
V58A				IAmb	IAmb	08 04 58.9	
	comp=Z,7.2nm,1.1s						
MSTX	**Muleshoe**	**25.42**	**331**	P	**P**	**08 05 00.8**	**-0.3**
MSTX				IAmb	IAmb	08 05 04.8	
	comp=Z,5.7nm,0.7s						
S39A	**Bolivar**	**25.79**	**351**	P	**P**	**08 05 03.3**	**-0.9**
S39A				IAmb	IAmb	08 05 07.4	
	comp=Z,3.9nm,0.6s						
SAML	**Samuel**	**32.55**	**129**	P	**P**	**08 06 03.3**	**-1.3**
SAML				IAmb	IAmb	08 06 09.1	
	comp=Z,2.5nm,0.8s						
PDAR	**Pinedale Array**	**35.65**	**333**	P	**P**	**08 06 33.9**	**+2.4**
	comp=Z,0.4nm,0.7s,baz=123,slow=7.3,SNR=4.1						
REDW	**Red Top Meadow**	**36.70**	**332**	P	**P**	**08 06 40.9**	**+0.5**
SNOW	**Snow King Moun**	**36.74**	**332**	P	**P**	**08 06 42.3**	**+1.5**
SIV	**San Ignacio**	**38.79**	**136**	P	**P**	**08 06 57.6**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=317,slow=8.4,SNR=8.7						
ASAR	**Alice Springs**	**138.51**	**248**	PKP	**PKPdf**	**08 18 59.2**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=116,slow=2.2,SNR=1.7						
WRA	**Warramunga Arr**	**138.51**	**254**	PKP	**PKPdf**	**08 18 59.9**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=97,slow=2.7,SNR=1.6						

*DDA **08** 08:04:42.5, 41°.43N×43°.88E, h4km±4km, ML2.9*
*TIF **08** 08:04:42.8, 41°.41N×43°.88E, h13km*
*ISK **08** 08:04:43.6, 41°.41N×43°.83E, h4km, ML2.9/6*
*MOS **08** 08:04:43.0±1.7, 41°.33N×43°.84E, h9km, mb3.9/1, Error ellipse: s-maj=7.4km s-min=4.5km az=82.4*
*NORS **08** 08:04:44.5±0.0, 41°.51N×43°.83E, h2km, MPVA4.2*

ISC 08 08:04:43.5±0.9, 41°.41N±0°.01×43°.84E±0°.01, h8km±7km, n82, σ0§94/156, 1D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.23**	**232**	P	**Pg**	**08 04 49.0**	**+0.8**
BGD				S	**Sg**	**08 04 52.8**	**+1.4**
BGD	**Bogdanovka**	**0.23**	**232**	*e*PG	**Pg**	**08 04 49.0**	**+0.8**
BGD				*eS*	**Sg**	**08 04 52.8**	**+1.4**
TRLG	**Trialeti**	**0.24**	**56**	P	**Pg**	**08 04 48.0**	**-0.4**
TRLG				S	**Sg**	**08 04 51.3**	**-0.3**
TRLG	**Trialeti**	**0.24**	**56**	*e*PG	**Pg**	**08 04 47.9**	**-0.4**
AKH	**Akhalkalaki**	**0.26**	**271**	P	**Pb**	**08 04 49.4**	**-1.3**
AKH				S	**Sb**	**08 04 53.6**	**-1.8**
AKH	**Akhalkalaki**	**0.26**	**271**	PG	**Pb**	**08 04 49.4**	**-1.3**
AKH				SG	**Sb**	**08 04 53.5**	**-1.8**
AKH	**Akhalkalaki**	**0.26**	**271**	*e*PG	**Pb**	**08 04 49.3**	**-1.3**
AKH				*eS*	**Sb**	**08 04 53.5**	**-1.8**
DMNI	**Dmanisi**	**0.27**	**106**	P	**Pg**	**08 04 48.9**	**-0.2**
DMNI				S	**Sg**	**08 04 52.7**	**0.0**
DMNI	**Dmanisi**	**0.27**	**106**	*e*PG	**Pg**	**08 04 48.8**	**-0.2**
DMNI				*eS*	**Sg**	**08 04 52.7**	**0.0**
KZRT	**Kazreti**	**0.42**	**92**	P	**Pg**	**08 04 51.2**	**-0.5**
KZRT				S	**Sg**	**08 04 56.8**	**-0.5**
KZRT	**Kazreti**	**0.42**	**92**	*i* P	**Pg**	**08 04 51.1**	**-0.5**
KZRT				*i* S	**Sg**	**08 04 55.5**	**-1.8**
KZRT	**Kazreti**	**0.42**	**92**	*e*PG	**Pg**	**08 04 51.2**	**-0.5**
KZRT				*eS*	**Sg**	**08 04 56.8**	**-0.5**
BKRG	**Bakuriani**	**0.43**	**326**	P	**Pb**	**08 04 52.2**	**-1.3**
BKRG				S	**Sb**	**08 04 58.9**	**-1.3**
BKRG	**Bakuriani**	**0.43**	**326**	*e*PG	**Pb**	**08 04 52.1**	**-1.3**
BKRG				*eS*	**Sb**	**08 04 58.8**	**-1.3**
EAK	**Akyaka**	**0.74**	**194**	*i* P	**Pg**	**08 04 57.5**	**-0.3**
EAK				*i* S	**Sg**	**08 05 07.3**	**-0.2**
EAK				IAML		08 05 09.0	
	comp=E,668nm,0.4s						
EAK				IAML		08 05 13.0	
	comp=N,396nm,0.3s						
BTNK	**Botanikuri**	**0.77**	**69**	P	**Pg**	**08 04 57.3**	**-1.1**
BTNK				S	**Sg**	**08 05 07.8**	**-0.6**
BTNK	**Botanikuri**	**0.77**	**69**	*e*PG	**Pg**	**08 04 57.2**	**-1.1**
BTNK				*eS*	**Sg**	**08 05 07.8**	**-0.6**
SEAG	**Tbilisi Sea**	**0.81**	**63**	P	**Pg**	**08 04 58.6**	**-0.5**
SEAG				S	**Sg**	**08 05 09.0**	**-0.6**
SEAG	**Tbilisi Sea**	**0.81**	**63**	*e*PG	**Pg**	**08 04 58.5**	**-0.5**
SEAG				*eS*	**Sg**	**08 05 08.9**	**-0.6**
EPOS	**Posof**	**0.84**	**277**	*i* P	**Pb**	**08 04 59.8**	**-0.7**
EPOS				*i* S	**Sg**	**08 05 09.6**	**-1.1**
KARS	**Kars**	**0.97**	**217**	PG	**Pb**	**08 05 02.7**	**+

DDFL				*i* S		**Sb**	**08 05 36.7**	**-0.3**	
VLKR	**Vladikavkaz**	**1.75**	**20**	*e*Pg		**Pg**	**08 05 17.7**	**+0.6**	
VLKR				*e*Pg		**Pg**	**08 05 17.8**	**+0.6**	
VLKR				*e*Sg		**Sg**	**08 05 40.7**	**+0.8**	
VLKR				*e*Sg		**Sg**	**08 05 40.9**	**+1.0**	
VLKR	**Vladikavkaz**	**1.75**	**20**	*e*PN		**Pg**	**08 05 17.8**	**+0.6**	
VLKR				*e*S		**Sg**	**08 05 40.9**	**+1.0**	
ARNR	**Ardon**	**1.80**	**10**	*e*Pg		**Pb**	**08 05 16.6**	**-0.1**	
ARNR				*e*Sg		**Sg**	**08 05 42.2**	**+0.7**	
ARNR	**Ardon**	**1.80**	**10**	PN		**Pb**	**08 05 16.7**	**-0.1**	
ARNR				S		**Sg**	**08 05 42.7**	**+1.2**	
KMGR	**Komgaron**	**1.82**	**24**	*e*Pg		**Pg**	**08 05 20.0**	**+1.6**	
KMGR				*e*Sg		**Sg**	**08 05 42.6**	**+0.6**	
KMGR	**Komgaron**	**1.82**	**24**	*e*PN		**Pg**	**08 05 20.0**	**+1.6**	
KMGR				*e*S		**Sg**	**08 05 42.6**	**+0.6**	
LGD	**Lagodekhi**	**1.85**	**76**	P		**Pn**	**08 05 16.1**	**+0.5**	
LGD				S		**Sg**	**08 05 42.0**	**-1.1**	
LGD	**Lagodekhi**	**1.85**	**76**	*e*PN		**Pn**	**08 05 16.1**	**+0.5**	
LGD				*e*S		**Sg**	**08 05 41.9**	**-1.1**	
CHVG	**Ch'k'valeri**	**1.85**	**316**	P		**Pb**	**08 05 17.5**	**-0.1**	
CHVG				S		**Sg**	**08 05 42.4**	**-0.7**	
CHVG	**Ch'k'valeri**	**1.85**	**316**	*e*PN		**Pb**	**08 05 17.5**	**-0.1**	
CHVG				*e*S		**Sg**	**08 05 42.3**	**-0.7**	
EATA	**Eleskirt**	**1.85**	**214**	*i* P		**Pb**	**08 05 18.1**	**+0.2**	
EATA				*i* S		**Sn**	**08 05 39.9**	**+0.2**	
LSNR	**Lesken**	**1.87**	**360**	*e*Pg		**Pg**	**08 05 18.6**	**-0.8**	
LSNR				*e*Sg		**Sg**	**08 05 44.8**	**+1.1**	
LSNR	**Lesken**	**1.87**	**360**	PN		**Pg**	**08 05 18.6**	**-0.8**	
LSNR				S		**Sg**	**08 05 44.8**	**+1.1**	
AGRB	**Hanur-Agry**	**1.94**	**200**	PN		**Pb**	**08 05 18.3**	**-0.9**	
STDR	**Stavd-Durt**	**1.97**	**5**	*e*PN		**Pg**	**08 05 22.1**	**+0.8**	
STDR				*e*S		**Sg**	**08 05 49.4**	**+2.6**	
BTKR	**Batakoyurt**	**2.03**	**15**	*e*Pg		**Pb**	**08 05 20.3**	**-0.5**	
BTKR				*e*Sg		**Sg**	**08 05 50.7**	**+1.9**	
BTKR	**Batakoyurt**	**2.03**	**15**	*e*PN		**Pb**	**08 05 20.3**	**-0.5**	
BTKR				*e*S		**Sg**	**08 05 50.7**	**+1.9**	
BTLR	**Botlikh**	**2.17**	**54**	*e*Pg		**Pb**	**08 05 23.0**	**-0.2**	
BTLR				*e*Sg		**Sb**	**08 05 50.8**	**+0.5**	
BTLR	**Botlikh**	**2.17**	**54**	*e*PN		**Pb**	**08 05 23.0**	**-0.2**	
BTLR				*e*S		**Sb**	**08 05 50.8**	**+0.5**	
GROC	**Groznyy**	**2.31**	**38**	*e*Pg		**Pb**	**08 05 24.9**	**-0.6**	
GROC				*e*Sg		**Sg**	**08 05 58.1**	**+0.4**	
GROC	**Groznyy**	**2.31**	**38**	*e*PN		**Pg**	**08 05 26.9**	**-0.9**	
GROC				*e*			08 06 57.8		
GROC					pmax	pmax			
	comp=Z,36nm,0.6s								
GROC					smax	smax			
	comp=N,177nm,0.5s								
GROC					smax	smax			
	comp=N,147nm,0.6s								
GROC					MLR	MLR			
	comp=Z,10.0nm,1.0s								
KBZ	**Khabaz**	**2.42**	**344**	*i* PN		**Pb**	**08 05 25.4**	**-2.0**	
KRIK	**Erzurum-spir**	**2.45**	**245**	*i* P		**Pg**	**08 05 29.7**	**-0.9**	
KRIK				*i* S		**Sb**	**08 05 58.1**	**-0.4**	
KIV	**Kislovodsk**	**2.69**	**342**	PN		**Pn**	**08 05 28.9**	**+1.7**	
KIV	**Kislovodsk**	**2.69**	**342**	*e*PN		**Pn**	**08 05 27.3**	**+0.1**	
KIV				*e*S		**Sn**	**08 06 01.8**	**+1.9**	
KIV					pmax	pmax			
	comp=Z,22nm,1.0s								
BAYB	**BAYBURT**	**2.95**	**248**	*i* P		**Pb**	**08 05 37.0**	**+0.5**	
BAYB				*i* S		**Sb**	**08 06 11.8**	**-1.0**	
KELT	**Kelkit**	**3.70**	**252**	*i* P		**Pb**	**08 05 50.1**	**+0.8**	
KELT				*i* S		**Sb**	**08 06 33.7**	**-0.6**	
OBN	**Obninsk**	**14.53**	**343**	*e*P		**Pn**	**08 08 09.8**	**+0.5**	
OBN					pmax	pmax			
	comp=Z,11nm,0.5s								
BRVK	**Borovoye**	**21.27**	**48**	*i* P		**P**	**08 09 30.9**	**+0.8**	

*SJA **08** 08:04:58.3±0.8, 37.46S×75.52W, h10km, ML4.2, MW4.3*
*GUC **08** 08:05:10.7±0.4, 37.37S×74.39W, h6km±6km, ML4.1*
*NEIC **08** 08:05:10.0±0.7, 37.37S±0.08×74.38W±0.06, h9km±11km, Error ellipse: s-maj=11.5km s-min=6.4km az=160.0*
*NEIC **08** 08:05:10, 37.37S×74.39W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}1.07; $M_{\theta\theta}$0.67; $M_{\phi\phi}$-1.74; $M_{r\theta}$0.72; $M_{\theta\phi}$-0.21; $M_{r\phi}$1.17; Fault plane solution: $M_0$2.06000×10^{15} NP1:ϕ_s28.67000°, δ70.14000°, λ115.59000°. NP2:ϕ_s154.03000°, δ31.97000°, λ39.91000°. Principal axes: T 1.8240, Plg57.0000°, Azm333.0000°; N 0.4039, Plg24.0000°, Azm199.0000°; P -2.2279, Plg21.0000°, Azm100.0000°;*
ISC 08 08:05:12.3±2.9, 37.19S±0.08×74.31W±0.08, h8km±18km, n41, σ1°74/48, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI03	**Tigo**	**1.08**	**72**	⇑*i*P	**Pb**	**08 05 31.8**	**-1.5**
BI03				*i* S	**Sn**	**08 05 47.8**	**-1.2**
BI03				IAML		08 05 51.6	
	comp=N,22μm,0.3s						
BI03	**Tigo**	**1.08**	**72**	Pg	**Pb**	**08 05 32.5**	**-0.8**
BI03				Sg	**Sn**	**08 05 48.8**	**-0.2**
LAJA	**Laja**	**1.28**	**95**	*e*P	**Pn**	**08 05 33.9**	**-2.6**
LAJA				*i* S	**Sb**	**08 05 51.1**	**-2.1**
LAJA				IAML		08 05 53.4	
	comp=N,2μm,0.6s						
BI02	**San Fabín de**	**2.49**	**79**	*e*P	**Pn**	**08 05 52.1**	**-1.1**
BI02				*i* S	**Sb**	**08 06 26.2**	**-2.0**
BI02				IAML		08 06 31.7	
	comp=N,800nm,0.8s						
BI02	**San Fabín de**	**2.49**	**79**	Pn	**Pn**	**08 05 52.5**	**-0.7**
CANA	**Caviahue**	**2.67**	**106**	*i* P	**Pn**	**08 05 56.7**	**+0.9**
CANA				*i* S	**Sg**	**08 06 39.7**	**+1.4**
CANA				IAML		08 06 51.0	
	comp=Z,553nm,0.8s						
BO02	**Sierra Bellavi**	**3.73**	**51**	*e*P	**Pn**	**08 06 10.5**	**+0.2**
BO02				*i* S	**Sn**	**08 06 54.1**	**-0.2**
BO02	**Sierra Bellavi**	**3.73**	**51**	Pn	**Pn**	**08 06 10.3**	**+0.1**
EDS3	**Malargue**	**4.20**	**72**	*i* P	**Pn**	**08 06 20.4**	**+3.6**
EDS3				*i* S	**Sb**	**08 07 21.1**	**+3.5**
PUMA	**Malargue**	**4.27**	**68**	*i* P	**Pn**	**08 06 20.4**	**+2.7**
COIS	**El Sosneado**	**4.34**	**63**	*i* P	**Pn**	**08 06 20.7**	**+2.1**
PLCA	**Paso Flores**	**4.60**	**142**	Pn	**Pn**	**08 06 18.3**	**-3.8**
PLCA	**Paso Flores**	**4.60**	**142**	*i* P	**Pn**	**08 06 18.4**	**-3.8**
PLCA				IAML		08 07 46.2	
	comp=Z,72nm,1.2s						
MT02	**Curacav**	**4.70**	**34**		**Pn**	**08 06 23.2**	**-0.4**
LAMA	**Las Malvinas**	**4.70**	**63**	*i* P	**Pn**	**08 06 25.6**	**+2.0**
MT05	**Renca**	**4.78**	**39**		**Pn**	**08 06 24.7**	**0.0**
ROC1	**El Roble**	**4.99**	**34**		**Pn**	**08 06 27.9**	**+0.2**
ROC1	**El Roble**	**4.99**	**34**	*i* P	**Pn**	**08 06 28.0**	**+0.2**
PEL	**Peldehue**	**5.01**	**37**	Pn	**Pn**	**08 06 27.8**	**-0.1**
PEL	**Peldehue**	**5.01**	**37**	*i* P	**Pn**	**08 06 28.9**	**+1.1**
VA04	**Juan Fernndez**	**5.11**	**312**	Pn	**Pn**	**08 06 28.4**	**-0.8**
VA03	**San Esteban**	**5.38**	**36**		**Pn**	**08 06 33.2**	**+0.2**
LL01	**San Ignacio de**	**5.39**	**165**	Pn	**Pn**	**08 06 28.6**	**-4.4**
AUSP	**Uspallata**	**6.40**	**41**	*i* P	**Pn**	**08 06 48.5**	**+1.3**
ASAL	**Salagasta**	**6.42**	**46**	*i* P	**Pn**	**08 06 48.6**	**+1.3**
ASAL				IAML		08 08 54.3	
	comp=Z,41nm,1.3s						
CO02	**Combarbal**	**6.57**	**26**	Pn	**Pn**	**08 06 49.3**	**0.0**
RTLS	**Leoncito**	**6.78**	**39**	*i* P	**Pn**	**08 06 53.7**	**+1.3**
CO03	**El Pedregal**	**7.01**	**26**	Pn	**Pn**	**08 06 56.0**	**+0.7**
RTCV	**Cerro Valdivia**	**7.13**	**44**	*i* P	**Pn**	**08 06 56.9**	**-0.1**
ZON	**Zonda**	**7.30**	**41**	Pn	**Pn**	**08 06 59.1**	**-0.3**
RTLL	**Cerro Villicun**	**7.58**	**41**	*i* P	**Pn**	**08 07 04.5**	**+1.3**
GO04	**Tololo Observa**	**7.58**	**24**	Pn	**Pn**	**08 07 02.5**	**-0.9**
CO01	**Juntas del Tor**	**8.00**	**27**	Pn	**Pn**	**08 07 09.4**	**+0.3**
MRA	**San Martin**	**8.52**	**59**	*i* P	**Pn**	**08 07 17.5**	**+1.4**
LCO	**Las Campanas**	**8.69**	**21**	Pn	**Pn**	**08 07 18.6**	**-0.1**
AC05	**El Transito**	**8.99**	**23**	Pn	**Pn**	**08 07 22.8**	**+0.3**
AC04	**Llanos de Chal**	**9.36**	**18**	Pn	**Pn**	**08 07 26.8**	**-0.8**
AC02	**Maricunga**	**11.21**	**25**	Pn	**Pn**	**08 07 53.1**	**-0.3**
CPUP	**Villa Florida**	**18.02**	**58**	P	**P**	**08 09 22.8**	**-0.8**
VNA3	**Neumayer Olymp**	**47.15**	**156**	P	**P**	**08 13 46.0**	**+1.3**
VNA2	**Neumayer--Watz**	**47.83**	**156**	P	**P**	**08 13 52.0**	**+2.0**
	baz=274,slow=6.1						

IDC 08 08:15:32.5±12.0, 21.07S×176.97W, h388km±116km, mb3.3/6, mb1 3.6/6, mb1mx3.2/33, mbtmp4.0/6, Error ellipse: s-maj=81.9km s-min=37.5km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.32**	**257**	P	P	08 23 14.3	+0.3
	2.0nm,0.9s,baz=95,slow=7.6,SNR=19						
ASAR				PcP	PcP	08 24 46.2	+0.1
	0.3nm,0.7s,baz=103,slow=3.6,SNR=4.8						
WRA	**Warramunga Arr**	**45.47**	**262**	P	P	08 23 14.2	-0.9
	0.6nm,0.7s,baz=97,slow=8.4,SNR=9.8						
USRK	**Ussuriysk Ar.**	**79.98**	**325**	P	P	08 26 59.2	-0.4
	2.5nm,0.8s,baz=126,slow=2.6,SNR=5.3						
ILAR	**Eielson Array**	**88.66**	**12**	P	P	08 27 42.8	+0.6
	0.4nm,0.8s,baz=225,slow=6.3,SNR=6.6						
PDAR	**Pinedale Array**	**88.72**	**43**	P	P	08 27 43.3	-0.1
	0.3nm,0.9s,baz=213,slow=6.5,SNR=1.9						
CMAR	**Chiang Mai Arr**	**91.21**	**289**	P	P	08 27 56.2	+1.1
	1.7nm,0.3s,baz=137,slow=2.8,SNR=7.8						
AKASG	**Malin Array Be**	**143.98**	**331**	PKP	PKPab	08 34 19.7	-1.3
	2.7nm,0.7s,baz=42,slow=4.6,SNR=7.9						

*SOME **08** 08:25:19.7, 41.20N×71.75E, h10km*
*KRNET **08** 08:25:20.4±0.1, 41.03N×71.74E, h30km, mb2.4*
*NNC **08** 08:25:29.3±7.8, 41.48N×71.48E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=109.8km s-min=41.5km az=166.0*
ISC 08 08:25:20.5±1.5, 41.01N±0.04×71.73E±0.04, h9km±12km, n15, σ0°91/29, 17C-8D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.94**	**121**	⇑*i*P	**Pg**	**08 25 38.1**	**-0.4**
	baz=22						
OHH				⇑*i*S	**Sg**	**08 25 51.1**	**+0.4**
	baz=22						
ARSB	**Arslanbob**	**0.99**	**71**	⇑*i*P	**Pg**	**08 25 38.8**	**-0.8**
	baz=72						
ARSB				⇑*i*S	**Sg**	**08 25 51.8**	**-0.7**
	baz=72						
BTK	**Batken**	**1.18**	**216**	⇓*i*P	**Pn**	**08 25 43.1**	**-0.2**
	baz=16						
BTK				⇓*e*S	**Sb**	**08 25 58.1**	**-0.5**
	baz=16						
MNAS	**Manas**	**1.58**	**21**	⇑*i*P	**Pn**	**08 25 48.6**	**-0.2**
	baz=21						
MNAS				⇑*i*S	**Sn**	**08 26 08.8**	**-0.7**
	baz=21						
IUG	**Iuzhnay**	**1.71**	**312**	⇑*e*P	**Pn**	**08 25 50.5**	**0.0**
	38nm,0.1s						
IUG				*e*S	**Sb**	**08 26 13.9**	**+0.3**
	63nm,0.3s						
AML	**Almayashu**	**1.85**	**52**	⇑*e*P	**Pn**	**08 25 52.4**	**-0.3**
	baz=52						
AML				⇑*i*S	**Sn**	**08 26 14.9**	**-1.5**
	baz=52						
MRKS	**Merke**	**2.06**	**32**	*e*P	**Pn**	**08 25 55.7**	**+0.3**
	3.5nm,0.3s						
MRKS				*e*S	**Sb**	**08 26 22.8**	**-1.0**
	11nm,0.4s						
ARLS	**Aral**	**2.12**	**66**	⇓*e*P	**Pn**	**08 25 56.1**	**-0.2**
	baz=66						
ARLS				⇓*i*S	**Sn**	**08 26 22.5**	**-0.4**
	baz=66						
EKS2	**Erkin-Say**	**2.25**	**42**	⇑*e*P	**Pn**	**08 25 57.6**	**-0.3**
	baz=42						
EKS2				⇑*i*S	**Sn**	**08 26 24.5**	**-1.3**
	baz=42						
KK31	**Karatay Array**	**2.28**	**337**	⇓Pn	**Pn**	**08 25 58.0**	**-0.3**
	0.9nm,0.3s,baz=154,slow=15,SNR=3.7						
KK31				⇓Sn	**Sn**	**08 26 27.3**	**+0.9**
	1.5nm,0.3s,baz=160,slow=30,SNR=7.2						
GAR	**Garm**	**2.29**	**209**	⇑*i*P	**Pn**	**08 25 58.3**	**-0.2**
	baz=9.0						
GAR				⇑*i*S	**Sn**	**08 26 26.6**	**-0.2**
	baz=9.0						
BRLS	**Borolday**	**2.46**	**326**	*e*P	**Pn**	**08 26 00.2**	**-0.6**
	6.0nm,0.2s						
BRLS				*e*S	**Sn**	**08 26 30.4**	**-0.6**
	10nm,0.2s						
AAK	**Ala-Archa**	**2.62**	**51**	⇑*e*P	**Pn**	**08 26 03.4**	**+0.2**
	baz=51						
AAK				⇑*e*S	**Sn**	**08 26 33.9**	**-1.3**
	baz=51						
AAK	**Ala-Archa**	**2.62**	**51**	⇑Pn	Pg	08 26 16.2	+5.3
	1.1nm,0.4s						
AAK				⇑Sn	**Sb**	**08 26 40.1**	**0.0**
	2.8nm,0.5s						
TKM2	**Tokmak 2**	**3.45**	**55**	⇓Pn	**Pb**	**08 26 23.8**	**+1.8**
	0.4nm,0.4s						
TKM2				⇓Sn	**Sb**	**08 27 06.5**	**+2.4**
	2.2nm,0.6s						

WEL 08 08:28:11.5, 37°S±4°×17°7E±°, h181km±4km, M2.8/24, MLv2.8/24, Error ellipse: s-maj=0.0km s-min=0.0km az=168.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHRZ	**Whale Island**	**0.77**	**192**	P	Pn	08 28 38.0	+0.2
HAZ	**Te Kaha**	**0.81**	**144**	P	Pn	08 28 37.4	-0.5
HAZ				S	Sn	08 28 57.7	-0.9
OPRZ	**Ohinepanea**	**0.89**	**214**	P	Pn	08 28 38.7	+0.1
RUGZ	**Raukumara Rang**	**0.95**	**156**	P	Pn	08 28 38.1	-0.9
TGRZ	**Tauranga**	**0.96**	**229**	P	Pn	08 28 39.2	+0.2
MARZ	**Manawahe**	**0.97**	**204**	P	Pn	08 28 39.5	+0.3
MXZ	**Matakaoa Point**	**1.01**	**118**	P	Pn	08 28 38.3	-1.1
MXZ				S	Sn	08 28 59.7	-1.2
PKGZ	**Pakihiroa**	**1.06**	**138**	P	Pn	08 28 40.0	+0.2
PKGZ				S	Sn	08 29 00.5	-1.4
URZ	**Urewera**	**1.16**	**183**	P	Pn	08 28 40.3	-0.2
URZ				S	Sn	08 29 01.5	-1.7
KARZ	**Kaharoa**	**1.18**	**219**	P	Pn	08 28 41.4	+0.7
WMGZ	**Waiomatatini S**	**1.22**	**126**	P	Pn	08 28 40.9	-0.1
WMGZ				S	Sn	08 29 03.0	-0.9
TWGZ	**Tauwhareparae**	**1.25**	**150**	P	Pn	08 28 41.8	+0.5
TWGZ				S	Sn	08 29 04.4	-0.2
PUZ	**Puketiti**	**1.29**	**139**	P	Pn	08 28 41.6	-0.1
PUZ				S	Sn	08 29 03.0	-2.2
RAGZ	**Rawiri**	**1.41**	**172**	P	Pn	08 28 43.3	+0.6
RAGZ				S	Sn	08 29 06.6	-0.5
MUGZ	**Murupara**	**1.41**	**193**	P	Pn	08 28 42.8	+0.1
MUGZ				S	Sn	08 29 06.6	-0.5
TKGZ	**Te Karaka**	**1.44**	**159**	P	Pn	08 28 42.9	0.0
TKGZ				S	Sn	08 29 06.2	-1.2
CNGZ	**Carnagh Statio**	**1.60**	**150**	P	Pn	08 28 45.1	+0.6
MKAZ	**Moumakai**	**1.61**	**269**	P	Pn	08 28 45.4	+0.8
GRZ	**Great Barrier**	**1.62**	**301**	P	Pn	08 28 42.9	-1.8
WIAZ	**Waiheke Island**	**1.67**	**280**	P	Pn	08 28 45.2	+0.1
RIGZ	**Rimuhau**	**1.67**	**164**	P	Pn	08 28 45.5	+0.3
RIGZ				S	Sn	08 29 10.4	-1.1
SNGZ	**Shannon Statio**	**1.68**	**176**	P	Pn	08 28 45.5	+0.2
SNGZ				S	Sn	08 29 10.5	-1.3
MTHZ	**Maungataniwha**	**1.77**	**189**	P	Pn	08 28 46.7	+0.5
MTHZ				S	Sn	08 29 12.3	-1.0
RAHZ	**Arahi**	**1.81**	**182**	P	Pn	08 28 47.1	+0.4
RAHZ				S	Sn	08 29 13.6	-0.5
PRGZ	**Paritu Road**	**1.90**	**163**	P	Pn	08 28 47.9	+0.3
KNZ	**Kokohu**	**1.96**	**169**	P	Pn	08 28 48.1	0.0
KNZ				S	Sn	08 29 14.7	-2.1
WHHZ	**Waihua**	**1.97**	**179**	P	Pn	08 28 48.6	+0.3
WHHZ				S	Sn	08 29 15.9	-1.2
NMHZ	**Naumai**	**2.02**	**188**	P	Pn	08 28 49.4	+0.5
MHGZ	**Mahia Peninsul**	**2.13**	**165**	P	Pn	08 28 50.2	+0.2
BKZ	**Black Stump Fm**	**2.13**	**195**	P	Pn	08 28 49.7	-0.4
BKZ				S	Sn	08 29 18.4	-1.8
ARHZ	**Aropaoanui**	**2.16**	**184**	P	Pn	08 28 50.7	+0.3
HIZ	**Hauiti**	**2.32**	**232**	P	Pn	08 28 53.7	+1.6
MCHZ	**McNeill Hill**	**2.37**	**189**	P	Pn	08 28 52.8	+0.1
OTVZ	**Oturere**	**2.38**	**210**	P	Pn	08 28 53.8	+0.8
KWHZ	**Kaweka Forest**	**2.40**	**194**	P	Pn	08 28 53.0	-0.1
FWVZ	**Far West T-bar**	**2.50**	**210**	P	Pn	08 28 54.8	+0.3
BHHZ	**Black Hill Sta**	**2.54**	**200**	P	Pn	08 28 54.2	-0.5
WNVZ	**Wahianoa**	**2.55**	**209**	P	Pn	08 28 55.2	+0.2
KRHZ	**Kereru**	**2.62**	**194**	P	Pn	08 28 55.1	-0.5
MTVZ	**Mangateitei**	**2.65**	**210**	P	Pn	08 28 56.4	+0.4
KAHZ	**Kahuranaki**	**2.70**	**185**	P	Pn	08 28 56.2	-0.3
PNHZ	**Pukenui**	**2.91**	**195**	P	Pn	08 28 58.1	-1.0
WPHZ	**Waipukurau**	**3.02**	**191**	P	Pn	08 28 59.3	-1.0
TSZ	**Takapari Road**	**3.10**	**198**	P	Pn	08 29 00.2	-1.2
PRHZ	**Porangahau**	**3.19**	**188**	P	Pn	08 29 01.5	-0.9
MRZ	**Mangatainoka R**	**3.77**	**199**	P	Pn	08 29 07.7	-1.9
TIWZ	**Tintock**	**3.81**	**195**	P	Pn	08 29 08.5	-1.6
HOWZ	**Holdsworth Sta**	**4.01**	**198**	P	Pn	08 29 10.4	-2.2
OGWZ	**Otaki Gorge**	**4.03**	**202**	P	Pn	08 29 10.8	-2.0
TMWZ	**Te Maipa**	**4.12**	**194**	P	Pn	08 29 12.5	-1.7
KIW	**Kapiti Island**	**4.15**	**205**	P	Pn	08 29 12.1	-2.4
CAW	**Cannon Point**	**4.33**	**202**	P	Pn	08 29 14.1	-2.6
DUWZ	**D'Urville Isla**	**4.48**	**213**	P	Pn	08 29 16.3	-2.5
MSWZ	**Moikau Station**	**4.56**	**199**	P	Pn	08 29 17.1	-2.7
TCW	**Tory Channel**	**4.68**	**208**	P	Pn	08 29 18.7	-2.6
PLWZ	**Palliser**	**4.71**	**198**	P	Pn	08 29 18.7	-2.9
TUWZ	**Tuamarina**	**5.00**	**209**	P	Pn	08 29 22.2	-3.1
TUWZ				P	Pn	08 29 27.9	+2.6
NNZ	**Nelson**	**5.06**	**215**	P	Pn	08 29 23.2	-3.0
QRZ	**Quartz Range**	**5.19**	**223**	P	Pn	08 29 24.5	-3.4
BSWZ	**Blackbirch Sta**	**5.27**	**208**	P	Pn	08 29 26.1	-2.7
KHZ	**Kahutara**	**6.00**	**207**	P	Pn	08 29 35.2	-3.2
GVZ	**Greta Valley S**	**6.67**	**207**	P	Pn	08 29 43.6	-3.6
LTZ	**Lake Taylor**	**6.81**	**212**	P	Pn	08 29 45.6	-3.5
INZ	**Inchbonnie**	**7.14**	**216**	P	Pn	08 29 50.1	-3.2
ODZ	**Otahua Downs**	**9.34**	**210**	P	Pn	08 30 18.7	-3.5

*GUC **08** 08:29:18.5±0.5, 37.38S×74.35W, h3km±7km, ML4.4*
*NEIC **08** 08:29:19.5±2.4, 37.33S±0.07×74.4W±0.1, h24km±7km, Error ellipse: s-maj=14.9km s-min=9.1km az=108.0*
*IDC **08** 08:29:20.0±0.8, 37.16S×73.82W, h0km, mb4.1/9, mb1 4.1/12, mb1mx3.9/37, mbtmp4.0/12, ML3.5/3, MS3.6/4, Ms1 3.6/4, ms1mx3.1/24, Error ellipse: s-maj=25.0km s-min=14.8km az=71.0*
*VAO **08** 08:29:27.2±0.5, 36.92S×73.45W, h10km, mb4.5*
ISC 08 08:29:21.3±0.6, 37.15S±0.06×74.07W±0.04, h10km, n88, σ1°59/88, mb4.2/9, MS3.8/3, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI03	**Tigo**	**0.89**	**70**	⇑*i*P	**Pb**	**08 29 39.4**	**+0.6**
BI03				*i* S	**Sn**	**08 29 55.4**	**+2.6**
BI03				IAML		08 29 58.8	
	comp=N,47μm,0.4s						
BI03	**Tigo**	**0.89**	**70**	Pg	**Pb**	**08 29 39.5**	**+0.7**
BI03				Sg	**Sn**	**08 29 55.9**	**+3.1**
LAJA	**Laja**	**1.09**	**97**	*e*P	**Pb**	**08 29 41.4**	**-0.8**
LAJA				*i* S	**Sn**	**08 29 58.3**	**+0.6**
LAJA				IAML		08 30 00.7	
	comp=N,6μm,0.5s						
BI02	**San Fabín de**	**2.29**	**78**	⇑*i*P	**Pn**	**08 29 60.0**	**+0.7**
BI02				*i* S	**Sg**	**08 30 34.0**	**-1.0**
BI02				IAML		08 30 39.1	
	comp=N,2μm,0.8s						
BI02	**San Fabín de**	**2.29**	**78**	Pn	**Pn**	**08 29 59.6**	**+0.3**
BO03	**Pichilemu**	**3.16**	**33**	*e*P	**Pn**	**08 30 11.5**	**+0.5**
BO03				*i* S	**Sb**	**08 30 55.3**	**-0.7**
BO02	**Sierra Bellavi**	**3.56**	**49**	*e*P	**Pn**	**08 30 19.1**	**+2.4**
BO02				*e*S	**Sb**	**08 31 05.4**	**-2.2**
BO02	**Sierra Bellavi**	**3.56**	**49**	Pn	**Pn**	**08 30 19.5**	**+2.8**
MT09	**Talagante**	**4.20**	**38**	*e*P	**Pn**	**08 30 26.5**	**+0.9**
PLCA	**Paso Flores**	**4.50**	**144**	Pn	**Pn**	**08 30 28.8**	**-0.9**
	comp=N,0.4nm,0.3s,baz=322,slow=17,SNR=3.3						
PLCA				Lg	Lg	08 31 38.9	
	comp=N,2.4nm,0.3s,baz=275,slow=16,SNR=3.3						
PLCA	**Paso Flores**	**4.50**	**144**		**Pn**	**08 30 26.1**	**-3.6**
PLCA	**Paso Flores**	**4.50**	**144**	*e*P	**Pn**	**08 30 34.3**	**+4.6**
MT02	**Curacav**	**4.57**	**33**		**Pn**	**08 30 30.7**	**+0.3**
VA01	**Torpederas**	**4.57**	**26**	Pn	**Pn**	**08 30 32.1**	**+1.6**
MT05	**Renca**	**4.64**	**37**	Pn	**Pn**	**08 30 32.8**	**+1.3**
ROC1	**El Roble**	**4.86**	**32**		**Pn**	**08 30 35.5**	**+0.8**
PEL	**Peldehue**	**4.87**	**36**	Pn	**Pn**	**08 30 36.4**	**+1.8**
H03S1	**Juan Fernandez**	**5.15**	**308**	Pn	**Pn**	**08 30 38.2**	**0.0**
	baz=96,slow=11,SNR=32						
H03S1				T	T	08 36 01.0	
	baz=129,slow=74,SNR=332						
H03S3	**Juan Fernandez**	**5.16**	**309**	Pn	**Pn**	**08 30 38.5**	**+0.1**
	baz=96,slow=11,SNR=40						
H03S3				T	T	08 36 01.3	
	baz=129,slow=74,SNR=281						
H03S2	**Juan Fernandez**	**5.16**	**308**	Pn	**Pn**	**08 30 38.6**	**+

comp=Z,1.3nm,0.8s,baz=232,slow=5.0,SNR=6.0
MKAR Makanchi Array 160.02 54 PKPab **PKPab 08 49 59.2 -0.9**
comp=Z,0.8nm,0.8s,baz=298,slow=2.6,SNR=4.2

*REY **08** 08:30:42.3, 64.68N× 17.47W, h7km*
*IDC **08** 08:30:43.7±1.0, 64.55N× 17.73W, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.6/51, mbtmp3.6/8, ML3.5/2, MS2.7/1, Ms1 2.8/1, ms1mx2.4/48, Error ellipse: s-maj=31.4km s-min=11.5km az=18.0*
ISC 08 08:30:42.7±0.7, 64.70N±0.02× 17.50W±0.03, h10km, n56, σ2s03/57, mb3.6/6, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.11**	**33**	P	**Pg**	**08 30 45.2**	**-0.3**
	baz=21						
IVON	**Vonarskard**	**0.11**	**256**	P	**Pg**	**08 30 45.1**	**-0.5**
	baz=269						
IGRF	**Grimsfjall**	**0.31**	**161**	P	**Pg**	**08 30 47.8**	**-1.2**
	baz=162						
ISKR	**Skrokkalda**	**0.41**	**250**	P	**Pb**	**08 30 50.0**	**-2.0**
	baz=254						
IHUS	**Husbondi**	**0.41**	**189**	P	**Pb**	**08 30 49.9**	**-2.3**
	baz=192						
IHUS				S	**Sg**	**08 30 55.3**	**-0.9**
	baz=192						
THOR	**Thorvaldshraun**	**0.42**	**56**	P	**Pb**	**08 30 50.3**	**-2.0**
	baz=52						
IVOT	**Vottur**	**0.45**	**162**	P	**Pg**	**08 30 50.2**	**-1.3**
	baz=163						
IJOK	**Jokulheimar**	**0.50**	**219**	P	**Pb**	**08 30 51.5**	**-2.0**
	baz=222						
IMKO	**Mokollar**	**0.57**	**60**	P	**Pb**	**08 30 52.7**	**-2.1**
	baz=57						
IMKO				S	**Sb**	**08 31 00.7**	**-2.3**
	baz=57						
ISVA	**Svartarkot**	**0.65**	**9**	P	**Pb**	**08 30 54.4**	**-1.7**
	baz=7.8						
IIEY	**Innrieyrar**	**0.67**	**204**	P	**Pg**	**08 30 54.0**	**-1.5**
	baz=206						
IIEY				S	**Sg**	**08 31 03.2**	**-1.0**
	baz=206						
IKSK	**Karasker**	**0.70**	**140**	P	**Pg**	**08 30 53.9**	**-2.4**
	baz=140						
IKAL	**Kalfafell**	**0.76**	**186**	P	**Pg**	**08 30 55.5**	**-1.8**
	baz=187						
IVSH	**V-Sauoahnukur**	**0.77**	**81**	P	**Pg**	**08 30 55.5**	**-2.0**
	baz=79						
IVAT	**Vatnsfell**	**0.80**	**231**	P	**Pb**	**08 30 57.0**	**-1.8**
	baz=233						
IHVE	**Hveravellir**	**0.90**	**282**	P	**Pb**	**08 30 58.4**	**-2.0**
	baz=283						
IMEL	**Melhnausar**	**0.94**	**22**	P	**Pb**	**08 30 59.1**	**-2.0**
	baz=21						
IREN	**Reynihlio**	**0.98**	**15**	P	**Pb**	**08 30 59.9**	**-1.9**
	baz=14						
IKVO	**Krokottuvotn**	**1.05**	**14**	P	**Pg**	**08 31 01.0**	**-1.9**
	baz=13						
ISNB	**Snabyli**	**1.09**	**208**	P	**Pb**	**08 31 01.3**	**-2.3**
	baz=209						
IGRS	**Grimsstaoir**	**1.11**	**31**	P	**Pb**	**08 31 01.9**	**-2.0**
	baz=30						
ISLY	**Slysaalda**	**1.13**	**219**	P	**Pb**	**08 31 02.1**	**-2.2**
	baz=221						
IFED	**Fedgar**	**1.17**	**236**	P	**Pb**	**08 31 03.2**	**-1.8**
	baz=237						
ISKI	**Skildingahlsh**	**1.19**	**9**	P	**Pb**	**08 31 03.4**	**-2.0**
	baz=8.7						
IGHA	**Grjothals**	**1.20**	**17**	P	**Pb**	**08 31 03.5**	**-2.0**
	baz=16						
IRJU	**Rjupnafell**	**1.20**	**206**	P	**Pn**	**08 31 03.5**	**-2.1**
	baz=207						
IGRA	**Granastaoir**	**1.22**	**359**	P	**Pn**	**08 31 03.8**	**-2.1**
	baz=358						
IGYG	**Gygjarholskot**	**1.25**	**251**	P	**Pn**	**08 31 04.3**	**-1.9**
	baz=253						
IDIM	**Dimmadalss**	**1.29**	**10**	P	**Pn**	**08 31 04.8**	**-1.9**
	baz=9.7						
IHAU	**Haukadalur**	**1.30**	**237**	P	**Pb**	**08 31 05.5**	**-1.6**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.32**	**207**	P	**Pn**	**08 31 05.2**	**-1.9**
	baz=208						
IHED	**Heoinshofoi**	**1.39**	**3**	P	**Pb**	**08 31 06.5**	**-2.2**
	baz=2.7						
IALF	**Alftagrof**	**1.42**	**212**	P	**Pn**	**08 31 06.9**	**-1.6**
	baz=213						
IBRE	**Brettingsstaoi**	**1.44**	**353**	P	**Pb**	**08 31 07.5**	**-2.0**
	baz=353						
ISAU	**Saurbar**	**1.46**	**242**	P	**Pn**	**08 31 07.2**	**-1.8**
	baz=243						
IESK	**Eystri-Skogar**	**1.46**	**217**	P	**Pn**	**08 31 07.3**	**-1.8**
	baz=218						
IGIL	**Gilhagi**	**1.46**	**19**	P	**Pn**	**08 31 07.5**	**-1.7**
	baz=18						
IMID	**Miomork**	**1.48**	**226**	P	**Pb**	**08 31 08.4**	**-1.8**
	baz=227						
ISIG	**Siglufjorour**	**1.55**	**338**	P	**Pb**	**08 31 09.2**	**-2.3**
	baz=338						
IASM	**Asmuli**	**1.61**	**239**	P	**Pb**	**08 31 10.2**	**-2.4**
	baz=240						
BORG	**Borgarnes**	**1.64**	**273**	Pg	**Pb**	**08 31 10.8**	**-2.2**
	28nm,0.3s,baz=112,slow=8.8,SNR=43						
BORG				Lg	Lg	08 31 34.2	
	11nm,0.3s,baz=232,slow=22,SNR=11						
IKRO	**Krokur**	**1.68**	**251**	P	**Pn**	**08 31 10.9**	**-1.2**
	baz=252						
ISOL	**Solvholt**	**1.69**	**244**	P	**Pn**	**08 31 11.0**	**-1.2**
	baz=245						
IHEI	**Heioarbar**	**1.69**	**254**	P	**Pb**	**08 31 11.4**	**-2.5**
	baz=255						
ILEI	**Leirhofn**	**1.77**	**13**	P	**Pb**	**08 31 12.3**	**-2.8**
	baz=13						
IHRN	**Hraun**	**1.79**	**323**	P	**Pb**	**08 31 13.0**	**-2.5**
	baz=324						
IBJA	**Bjarnastaoir**	**1.82**	**247**	P	**Pb**	**08 31 13.5**	**-2.5**
	baz=248						
EKA	**Eskdalemuir Ar**	**11.79**	**136**	Pn	**Pn**	**08 33 31.1**	**+0.5**
	baz=320,slow=13,SNR=9.5						
NOA	**NORSAR Array B**	**13.54**	**92**	LR	LR	08 38 59.6	
	comp=Z,28nm,19.3s,baz=255,slow=36						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**08 35 14.6**	**+1.4**
	0.1nm,0.3s,baz=279,slow=11,SNR=1.9						
GERES	**GERESS Array B**	**22.97**	**119**	P	**P**	**08 35 49.6**	**+2.5**
	0.5nm,0.8s,baz=325,slow=6.7,SNR=3.7						
ESDC	**Sonseca Array**	**26.29**	**156**	P	**P**	**08 36 20.5**	**+2.4**
	1.0nm,0.9s,baz=349,slow=12,SNR=2.9						
AKASG	**Malin Array Be**	**27.85**	**98**	P	**P**	**08 36 36.0**	**+4.1**
	0.3nm,0.4s,baz=302,slow=8.7,SNR=1.4						
ILAR	**Eielson Array**	**45.65**	**332**	P	P	08 39 06.2	+3.5
	1.3nm,1.1s,baz=359,slow=5.0,SNR=6.4						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**08 40 02.7**	**+2.1**
	1.3nm,1.0s,baz=60,slow=5.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**53.17**	**156**	P	**P**	**08 40 02.2**	**+1.5**
	1.5nm,1.1s,baz=347,slow=6.1,SNR=3.9						

*IDC **08** 08:31:31.5±0.6, 64.62N× 17.62W, h0km, mb3.9/14, mb1 4.1/18, mb1mx3.9/53, mbtmp3.9/18, ML2.6/3, Error ellipse: s-maj=21.1km s-min=9.7km az=14.0*
*NEIC **08** 08:31:32.1±1.8, 64.62N±0.07× 17.5W±0.2, h8km±3km, mb4.3/8, Error ellipse: s-maj=11.4km s-min=8.8km az=224.0*
ISC 08 08:31:32.6±0.5, 64.61N±0.09× 17.54W±0.07, h10km, n51, σ1s16/52, mb3.9/17, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.63**	**276**	Pg	**Pn**	**08 31 58.9**	**-2.4**
	31nm,0.3s,baz=65,slow=7.7,SNR=11						
BORG				Lg	Lg	08 32 22.6	
	3.3nm,0.3s,baz=30,slow=20,SNR=1.5						
BORG	**Borgarnes**	**1.63**	**276**		**Pn**	**08 32 01.3**	**0.0**
SCO	**Scoresbysund**	**6.13**	**346**		**Pn**	**08 33 03.0**	**0.0**
SCO	**Scoresbysund**	**6.13**	**346**	*i* P	**Pn**	**08 33 03.7**	**+0.7**
SCO	**Scoresbysund**	**6.13**	**346**	*i* P	**Pn**	**08 33 03.8**	**+0.7**
SUMG	**Summit**	**10.97**	**326**	Pn	**Pn**	**08 34 10.1**	**+0.4**
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn	**Pn**	**08 34 19.9**	**+0.1**
	baz=323,slow=13,SNR=6.1						
ESK	**Eskdalemuir**	**11.73**	**136**	Pn	**Pn**	**08 34 21.1**	**+1.3**
NC204	**NORSAR Array S**	**13.25**	**92**	Pn	**Pn**	**08 34 38.2**	**-2.3**
NOA	**NORSAR Array B**	**13.55**	**92**	Pn	**Pn**	**08 34 42.6**	**-2.0**
	0.0nm,0.3s,baz=302,slow=12,SNR=1.9						
HFS	**Hagfors**	**15.06**	**93**	Pn	**Pn**	**08 35 05.2**	**0.0**
	0.1nm,0.3s,baz=273,slow=13,SNR=1.6						
UCC	**Uccle**	**17.98**	**130**	P	**Pn**	**08 35 41.2**	**-1.1**
UCC				IAmb	IAmb	08 35 41.7	
	comp=Z,13nm,0.6s						
FINES	**FINESS Array B**	**19.73**	**79**	P	**P**	**08 36 02.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=330,slow=8.0,SNR=2.4						
TULEG	**Thule**	**19.89**	**327**	P	**P**	**08 36 02.7**	**-0.8**
CLL	**Collm**	**20.70**	**116**	P	**P**	**08 36 13.6**	**+1.0**
CLL				IAmb	IAmb	08 36 16.9	
	comp=Z,21nm,1.5s						
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P	**P**	**08 36 21.4**	**+1.3**
	comp=Z,1.1nm,1.1s						
BFO	**Black Forest**	**21.43**	**127**	P	**P**	**08 36 19.5**	**-1.0**
CHVC	**Chvalec**	**22.46**	**113**	*e*P	**P**	**08 36 34.1**	**+2.6**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**08 36 35.3**	**+1.6**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**08 36 36.9**	**+2.2**
GERES	**GERESS Array B**	**22.95**	**118**	P	**P**	**08 36 37.8**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=321,slow=10,SNR=5.4						
GERES	**GERESS Array B**	**22.95**	**118**	P	**P**	**08 36 35.2**	**-1.5**
DAVOX	**Davos/Dischmat**	**23.30**	**127**	P	**P**	**08 36 41.3**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=315,slow=14,SNR=2.3						
SCHQ	**Schefferville**	**26.02**	**271**	P	**P**	**08 37 07.1**	**+1.7**
	comp=Z,5.6nm,0.8s,baz=37,slow=20,SNR=3.9						
SCHQ	**Schefferville**	**26.02**	**271**	P	**P**	**08 37 03.2**	**-2.1**
ESDC	**Sonseca Array**	**26.21**	**156**	P	**P**	**08 37 08.1**	**+0.8**
	comp=Z,1.9nm,0.9s,baz=24,slow=44,SNR=4.8						
AKASG	**Malin Array Be**	**27.85**	**97**	P	**P**	**08 37 21.1**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=322,slow=9.8,SNR=2.3						
BURAR	**Bucovina Array**	**28.53**	**106**	P	**P**	**08 37 27.7**	**-0.4**
CART	**Cartagena**	**28.80**	**152**	P	**P**	**08 37 31.5**	**+1.1**
MDT	**Mideit**	**32.81**	**160**	P	**P**	**08 38 07.5**	**+1.5**
	comp=Z,5.0nm,1.1s,baz=17,slow=12,SNR=3.7						
BRTR	**Keskin Array B**	**38.48**	**105**	P	**P**	**08 38 55.1**	**+0.5**
	comp=Z,2.2nm,1.0s,baz=316,slow=6.0,SNR=2.1						
BRTR	**Keskin Array B**	**38.48**	**105**	P	**P**	**08 38 55.0**	**+0.4**
KBZ	**Khabaz**	**39.13**	**92**	P	**P**	**08 39 02.2**	**+2.5**
	comp=Z,4.5nm,1.0s,baz=236,slow=24,SNR=5.9						
KARP	**Karpathos**	**39.46**	**115**	P	**P**	**08 39 01.4**	**-1.3**
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**08 39 53.6**	**+0.4**
	comp=Z,2.0nm,1.1s,baz=28,slow=6.8,SNR=7.8						
ILAR				PcP	**PcP**	**08 41 30.1**	**-0.7**
	comp=Z,1.1nm,1.0s,baz=350,slow=4.6,SNR=5.2						
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**08 39 53.8**	**+0.6**
IMAR	**Indian Mountai**	**45.90**	**337**	P	**P**	**08 39 55.0**	**+0.5**
BCAR	**Beaver Creek A**	**46.14**	**329**	P	**P**	**08 39 56.4**	**-0.1**
ZALV	**Zalesovo Beam**	**47.68**	**51**	P	**P**	**08 40 09.0**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=330,slow=8.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**47.68**	**51**	P	**P**	**08 40 08.1**	**-0.5**
KURK	**Kurchatov**	**48.16**	**58**	P	**P**	**08 40 12.1**	**-0.3**
KURK				IAmb	IAmb	08 40 14.1	
	comp=Z,6.3nm,1.1s						
MKAR	**Makanchi Array**	**52.77**	**58**	P	**P**	**08 40 47.6**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=321,slow=9.3,SNR=7.0						
MKAR	**Makanchi Array**	**52.77**	**58**	P	**P**	**08 40 47.2**	**-0.1**
TOA0	**Torodi Ar. Sit**	**53.10**	**156**	P	**P**	**08 40 50.1**	**+0.1**
TOA0				IAmb	IAmb	08 40 52.9	
	comp=Z,6.2nm,1.3s						
TORD	**Torodi Ar. Bea**	**53.10**	**156**	P	**P**	**08 40 49.1**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=345,slow=8.4,SNR=5.0						
TORD	**Torodi Ar. Bea**	**53.10**	**156**	P	**P**	**08 40 49.8**	**-0.2**
PD31	**Pinedale Array**	**53.18**	**293**	P	**P**	**08 40 50.5**	**-0.1**
PD31				IAmb	IAmb	08 40 52.4	
	comp=Z,3.8nm,1.1s						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**08 40 51.6**	**+1.0**
	comp=Z,2.1nm,0.9s,baz=45,slow=5.1,SNR=9.5						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**08 40 50.3**	**-0.3**
TXAR	**Lajitas Array**	**62.27**	**280**	P	**P**	**08 41 54.1**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=72,slow=4.1,SNR=4.5						
TXAR	**Lajitas Array**	**62.27**	**280**	P	**P**	**08 41 55.4**	**+0.8**

*SOME **08** 08:36:18.9, 41.07N× 71.75E, h15km*
*KRNET **08** 08:36:18.5±0.1, 41.14N× 71.58E, h21km, mb2.6*
*NNC **08** 08:36:30.0±10.0, 41.69N× 71.70E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=97.3km s-min=34.1km az=7.0*
ISC 08 08:36:18.1±1.5, 41.09N±0.05× 71.75E±0.03, h5km±14km, n14, σ1s02/23, 13C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.96**	**75**	⇑*i*P	**Pn**	**08 36 38.5**	**+0.2**
	baz=80						
ARSB				⇑*i*S	**Sn**	**08 36 53.2**	**+0.8**
	baz=80						
OHH	**Osh**	**0.96**	**125**	⇑*i*P	**Pn**	**08 36 39.3**	**+0.9**
	baz=23						
OHH				⇑*i*S	**Sn**	**08 36 54.2**	**+1.7**
	baz=23						
BTK	**Batken**	**1.25**	**215**	⇓*e*P	**Pn**	**08 36 40.9**	**-1.4**
	baz=8.0						
BTK				⇓*i*S	**Sb**	**08 36 58.0**	**-0.6**
	baz=8.0						
MNAS	**Manas**	**1.51**	**22**	⇑*i*P	**Pg**	**08 36 46.6**	**-0.5**
	baz=27						
MNAS				⇑*i*S	**Sg**	**08 37 07.0**	**+0.4**
	baz=27						
IUG	**Iuzhnay**	**1.67**	**310**	*e*P	**Pg**	**08 36 50.9**	**+0.8**
	63nm,0.3s						
IUG				*e*S	**Sg**	**08 37 12.7**	**+0.9**
	82nm,0.6s						
AML	**Almayashu**	**1.79**	**54**	⇑*i*P	**Pg**	**08 36 52.4**	**-0.1**
	baz=57						
AML				⇑*i*S	**Sg**	**08 37 16.9**	**+1.2**
	baz=57						
MRKS	**Merke**	**1.99**	**33**	*e*P	**Pg**	**08 36 57.1**	**+0.8**
	3.6nm,0.3s						
MRKS				*e*S	**Sg**	**08 37 23.2**	**+1.2**
	13nm,0.4s						
ARLS	**Aral**	**2.08**	**67**	⇑*i*P	**Pb**	**08 36 56.3**	**-0.1**
	baz=70						
ARLS				⇑*i*S	**Sg**	**08 37 24.6**	**-0.4**
	baz=70						
EKS2	**Erkin-Say**	**2.18**	**43**	⇑*i*P	**Pb**	**08 36 57.2**	**-0.9**
	baz=46						
EKS2				⇑*i*S	**Sg**	**08 37 26.7**	**-1.6**
	baz=46						
KK31	**Karatay Array**	**2.22**	**336**	Pg	**Pb**	**08 36 58.5**	**-0.2**
	0.8nm,0.2s,baz=147,slow=15,SNR=26						
KK31				⇓Lg	Lg	08 37 28.1	
	1.1nm,0.2s,baz=156,slow=30,SNR=8.6						
BRLS	**Boroldaу**	**2.41**	**324**	*e*P	**Pb**	**08 37 01.9**	**0.0**
	20nm,0.2s						
BRLS				*e*S	**Sb**	**08 37 31.1**	**-0.9**
	22nm,0.2s						
AAK	**Ala-Archa**	**2.57**	**52**	⇓*e*P	**Pb**	**08 37 03.0**	**-1.7**
	baz=55						
AAK				⇓*i*S	**Sb**	**08 37 36.1**	**-0.6**
	baz=55						
AAK	**Ala-Archa**	**2.57**	**52**	⇓Pg	Pg	08 37 14.5	+7.1
	1.7nm,0.5s						
AAK				⇑Lg	Lg	08 37 40.0	
	1.6nm,0.3s						
TKM2	**Tokmak 2**	**3.40**	**56**	⇓Lg	Lg	08 38 05.7	
	5.1nm,0.8s						

*NEIC **08** 08:41:10.5±1.4, 37.18S±0.07× 74.15W±0.05, h7km±7km, mb4.2/1, ML4.2(GUC), Error ellipse: s-maj=10.5km s-min=4.0km az=158.0*
*IDC **08** 08:41:11.4±1.9, 37.27S× 73.89W, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/27, mbtmp3.8/5, ML3.3/1, MS3.2/4, Ms1 3.2/4, ms1mx3.0/21, Error ellipse: s-maj=53.3km s-min=18.8km az=63.0*
*GUC **08** 08:41:12.1±0.7, 37.25S× 74.11W, h38km±5km, ML4.2*
*VAO **08** 08:41:14.3±0.9, 37.25S× 73.72W, h10km, mb4.4*
ISC 08 08:41:10.6±1.8, 37.27S±0.05× 74.10W±0.05, h4km±11km, n57, σ1s25/62, mb3.9/5, 3C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BI03	**Tigo**	**0.95**	**64**	⇑*i*P	**Pb**	**08 41 29.2**	**-0.5**
BI03				*i* S	**Sn**	**08 41 43.3**	**-1.5**
BI03				IAML		08 41 50.3	
	comp=E,30μm,0.3s						
BI03	**Tigo**	**0.95**	**64**	Pg	**Pg**	**08 41 29.0**	**+0.2**
BI03					**Sb**	**08 41 42.7**	**0.0**
LAJA	**Laja**	**1.10**	**91**	⇑*i*P	**Pb**	**08 41 31.4**	**-0.9**
LAJA				*i* S	**Sg**	**08 41 47.7**	**+1.6**
BI04	**Isla Mocha**	**1.16**	**172**	*e*P	**Pn**	**08 41 31.7**	**-2.0**
BI04				*i* S	**Sb**	**08 41 47.3**	**-1.3**
BI02	**San Fabin de**	**2.34**	**76**	⇑*i*P	**Pn**	**08 41 49.5**	**-0.4**
BI02				*e*S	**Sn**	**08 42 18.1**	**-1.1**
BI02				IAML		08 42 28.9	
	comp=N,683nm,0.4s						
BI02	**San Fabin de**	**2.34**	**76**		**Pn**	**08 41 49.6**	**-0.4**
LC01	**Cunco**	**2.39**	**134**	*e*P	**Pn**	**08 41 50.7**	**0.0**
LC01				*i* S	**Sn**	**08 42 18.6**	**-1.8**
BO02	**Sierra Bellavi**	**3.65**	**48**	Pn	**Pn**	**08 42 07.2**	**-0.7**
PLCA	**Paso Flores**	**4.43**	**143**	Pn	**Pn**	**08 42 19.5**	**+0.8**
	comp=N,0.4nm,0.3s,baz=316,slow=13,SNR=15						
PLCA				Sn	**Sn**	**08 43 10.5**	**-0.2**
	comp=N,1.9nm,0.3s,baz=299,slow=19,SNR=3.1						
PLCA				Lg	Lg	08 43 29.9	
	comp=N,1.7nm,0.3s,baz=22,slow=19,SNR=1.8						
PLCA				LR	LR	08 43 40.6	
	comp=N,84nm,20.6s,baz=322,slow=34						
PLCA	**Paso Flores**	**4.43**	**143**	*e*P	**Pn**	**08 42 19.1**	**+0.4**
MT02	**Curacav**	**4.67**	**32**		**Pn**	**08 42 20.5**	**-1.5**
VA01	**Torpederas**	**4.68**	**26**	Pn	**Pn**	**08 42 20.6**	**-1.5**
MT05	**Renca**	**4.74**	**36**	Pn	**Pn**	**08 42 22.4**	**-0.5**
ROC1	**El Roble**	**4.97**	**31**		**Pn**	**08 42 25.2**	**-1.1**
PEL	**Peldehue**	**4.97**	**35**	Pn	**Pn**	**08 42 25.9**	**-0.2**
LL01	**San Ignacio de**	**5.27**	**166**	Pn	**Pn**	**08 42 30.3**	**+0.1**
VA04	**Juan Fernndez**	**5.29**	**312**	*e*P	**Pn**	**08 42 29.6**	**-0.9**
VA04	**Juan Fernndez**	**5.29**	**312**	Pn	**Pn**	**08 42 29.8**	**-0.7**
VA03	**San Esteban**	**5.35**	**34**		**Pn**	**08 42 30.4**	**-1.0**
CO02	**Combarbal**	**6.57**	**24**		**Pn**	**08 42 45.8**	**-2.3**
CO03	**El Pedregal**	**7.00**	**25**	Pn	**Pn**	**08 42 52.8**	**-1.4**
ZON	**Zonda**	**7.25**	**40**	Pn	**Pn**	**08 42 57.2**	**-0.2**
GO04	**Tololo Observa**	**7.59**	**22**	Pn	**Pn**	**08 43 00.2**	**-2.1**
CO01	**Juntas del Tor**	**8.00**	**26**		**Pn**	**08 43 06.9**	**-0.9**
LCO	**Las Campanas**	**8.71**	**20**	Pn	**Pn**	**08 43 15.2**	**-2.5**
AC05	**El Transito**	**8.99**	**22**	Pn	**Pn**	**08 43 20.1**	**-1.4**
AC04	**Llanos de Chal**	**9.38**	**17**	Pn	**Pn**	**08 43 25.2**	**-1.5**
GO03	**Copiap**	**10.18**	**20**	Pn	**Pn**	**08 43 37.3**	**-0.4**
AC02	**Maricunga**	**11.22**	**23**	Pn	**Pn**	**08 43 50.4**	**-1.9**
GO02	**Mina Guanaco**	**12.66**	**19**	Pn	**Pn**	**08 44 09.9**	**-2.0**
CPUP	**Villa Florida**	**17.91**	**57**	LR	LR	08 53 12.6	
	comp=N,155nm,18.4s,baz=235,slow=41						
CNLB	**Canela**	**20.95**	**75**	*e*P	**P**	**08 45 52.7**	**-1.9**
ITAB	**Concordia**	**21.05**	**68**	*e*P	**P**	**08 45 55.7**	**0.0**
LPAZ	**La Paz**	**21.55**	**16**	P	**P**	**08 46 03.3**	**+1.5**
	comp=N,2.3nm,0.7s,baz=174,slow=9.3,SNR=8.2						
LPAZ	**La Paz**	**21.55**	**16**	*e*P	**P**	**08 46 03.1**	**+1.3**
PTGB	**Pitanga**	**22.59**	**63**	*e*P	**P**	**08 46 12.5**	**+0.2**
TRCB	**Terra Rica**	**23.44**	**58**	*e*P	**P**	**08 46 19.8**	**-1.3**
SIV	**San Ignacio**	**24.12**	**32**	P	**P**	**08 46 28.8**	**+1.1**
	comp=N,1.7nm,0.9s,baz=227,slow=11,SNR=5.4						
SIV				LR	LR	08 57 53.3	
	comp=N,233nm,18.7s,baz=52,slow=42						
PCMB	**Pacaembu**	**25.18**	**58**	*e*P	**P**	**08 46 36.9**	**-0.3**
FRTB	**Fartura**	**25.23**	**64**	*e*P	**P**	**08 46 38.1**	**+0.4**
PTLB	**Pontes e Lacer**	**25.46**	**35**	*e*P	**P**	**08 46 39.6**	**-0.2**
PET01	**Itanhaem-SP**	**26.32**	**68**	*e*P	**P**	**08 46 48.2**	**+0.6**
SPB	**Sao Paulo**	**26.62**	**67**	*e*P	**P**	**08 46 50.4**	**+0.2**
ITRB	**Iturama**	**27.11**	**56**	*e*P	**P**	**08 46 55.7**	**+1.0**
VILB	**Vilhena**	**27.22**	**31**	*e*P	**P**	**08 46 58.2**	**+2.4**
VAO	**Valinhos**	**27.31**	**66**	*e*P	**P**	**08 46 58.4**	**+1.8**
ETMB	**Extrema**	**28.24**	**17**	*e*P	**P**	**08 47 05.5**	**+0.7**
ARAG	**Araguaiana, MT**	**29.17**	**49**	*e*P	**P**	**08 47 14.8**	**+1.7**
SMTB	**Santa Maria do**	**37.08**	**47**	*e*P	**P**	**08 48 21.9**	**-0.2**
VNA3	**Neumayer Olymp**	**47.01**	**156**	P	**P**	**08 49 43.8**	**+1.2**
VNA2	**Neumayer--Watz**	**47.69**	**156**	P	**P**	**08 49 49.0**	**+1.1**
	baz=288,slow=11						
SNAA	**Sanae**	**49.23**	**157**	P	**P**	**08 50 00.6**	**+0.8**
SNAA	**Sanae**	**49.23**	**157**	P	**P**	**08 50 00.1**	**+0.3**
QSPA	**South Pole Qui**	**52.98**	**180**	P	**P**	**08 50 28.9**	**+0.8**
QSPA				IAmb	IAmb	08 50 39.9	
	comp=Z,3.8nm,1.1s						
PPT	**Papeete**	**68.18**	**264**	LR	LR	09 12 01.8	
	comp=Z,7.6nm,21.0s,baz=5.0,slow=27						
TXAR	**Lajitas Array**	**71.82**	**333**	P	**P**	**08 52 36.6**	**+2.1**
	comp=Z,0.9nm,0.9s,baz=150,slow=9.3,SNR=7.2						
TORD	**Torodi Ar. Bea**	**86.88**	**71**	P	**P**	**08 53 55.9**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=222,slow=3.8,SNR=3.6						

*IDC **08** 08:47:47.4±2.8, 7.03S× 127.01E, h439km±32km, mb3.1/2, mb1 3.3/6, mb1mx2.9/43, mbtmp4.1/6, Error ellipse: s-maj=51.9km s-min=14.8km az=60.0*
*DJA **08** 08:47:47.1±0.6, 7.5S±4× 127.7E±°, h403km±12km, M4.1/10, mB4.5/4, mb3.9/5, MLv4.4/10, Mw(mB)3.6/4*
ISC 08 08:47:45.5±0.8, 6.98S±0.07× 127.22E±0.08, h400km, n16, σ1s90/19, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**3.72

CHGB				S		Sn	08 59 07.7	-1.3	
	baz=283								
VWDT	**VWDT**	**0.62**	**258**	P		Pn	08 58 59.4	-1.1	
	baz=249								
VWDT				S		Sn	08 59 08.3	-0.9	
	baz=249								
NNSB	**Datong**	**0.67**	**324**	P		Pn	08 58 59.7	-1.5	
	baz=327								
NNSB				S		Sn	08 59 08.9	-1.4	
	baz=327								
NNSH	**Datong**	**0.67**	**324**	*e*P		Pn	08 58 59.7	-1.5	
	baz=327								
NNSH				S		Sn	08 59 09.2	-1.1	
	baz=327								
YULB	**Yu-li**	**0.68**	**224**	P		Pn	08 58 59.5	-1.7	
	baz=225								
YULB				S		Sn	08 59 08.9	-1.6	
	baz=225								
NNS	**Nan Shan**	**0.68**	**324**	*i* P		Pn	08 58 59.8	-1.5	
	baz=327								
NNS				*i* S		Sn	08 59 09.3	-1.5	
	baz=327								
TDCB	**Techi**	**0.70**	**302**	P		Pn	08 59 00.4	-1.2	
	baz=305								
TDCB				S		Sn	08 59 09.9	-1.3	
	baz=305								
TWF1	**Yuli**	**0.71**	**221**	*i* P		Pn	08 59 00.1	-1.5	
	baz=222								
TWF1				S		Sn	08 59 09.7	-1.5	
	baz=222								
TWC	**Suao**	**0.72**	**3**	*i* P		Pn	08 59 00.8	-0.9	
	baz=8.0								
TWC				*i* S		Sn	08 59 11.1	-0.5	
	baz=8.0								
NDT	**Datong Townshi**	**0.76**	**339**	*i* P		Pn	08 59 01.1	-1.2	
	baz=343								
NDT				*i* S		Sn	08 59 11.4	-1.1	
	baz=343								
ENTT	**Nioudou**	**0.78**	**344**	*i* P		Pn	08 59 01.4	-1.2	
	baz=348								
ENTT				S		Sn	08 59 12.1	-1.0	
	baz=348								
SSLB	**Suanglung**	**0.79**	**263**	P		Pn	08 59 01.6	-1.1	
	baz=261								
SSLB				S		Sn	08 59 11.4	-1.8	
	baz=261								
DPDB	**Guoxing**	**0.82**	**281**	*e*P		Pn	08 59 01.9	-1.2	
	baz=276								
DPDB				*e*S		Sn	08 59 13.2	-0.9	
	baz=276								
SMLT	**Sun Moon Lake**	**0.83**	**270**	P		Pn	08 59 02.1	-1.2	
	baz=269								
SMLT				S		Sn	08 59 13.8	-0.7	
	baz=269								
TWE	**Neicheng**	**0.84**	**351**	*i* P		Pn	08 59 02.5	-0.8	
	baz=348								
TWE				*i* S		Sn	08 59 13.5	-1.0	
	baz=348								
TYC	**Yuchr**	**0.87**	**271**	P		Pn	08 59 02.4	-1.3	
	baz=271								
TYC				*i* S		Sn	08 59 14.6	-0.6	
	baz=271								
YHNB	**Yeheng**	**0.87**	**333**	P		Pn	08 59 02.7	-1.2	
	baz=337								
YHNB				S		Sn	08 59 13.7	-1.8	
	baz=337								
WHP	**Taichung City**	**0.88**	**297**	P		Pn	08 59 03.3	-0.7	
	baz=298								
WHP				*e*S		Sn	08 59 14.8	-0.8	
	baz=298								
CHKT	**Chengkung**	**0.88**	**207**	P		Pn	08 59 02.9	-1.0	
	baz=195								
CHKT				S		Sn	08 59 13.5	-2.0	
	baz=195								
NSK	**Sanguang**	**0.89**	**333**	*i* P		Pn	08 59 02.8	-1.3	
	baz=337								
NSK				*i* S		Sn	08 59 14.0	-1.8	
	baz=337								
WHYT	**Xinyi Township**	**0.89**	**258**	P		Pn	08 59 03.6	-0.5	
	baz=254								
WHYT				*e*S		Sn	08 59 15.9	0.0	
	baz=254								
NWLT	**Wulai**	**0.93**	**343**	*e*P		Pn	08 59 03.9	-0.7	
	baz=341								
NWLT				*e*S		Sn	08 59 15.1	-1.6	
	baz=341								
NTC	**Toucheng**	**0.96**	**1**	*e*S		Sn	08 59 17.1	-0.4	
	baz=16								
WJS	**Zhushan**	**0.99**	**267**	*e*P		Pn	08 59 04.4	-1.0	
	baz=263								
WJS				*e*S		Sn	08 59 17.4	-0.7	
	baz=263								
ALS	**Alishan**	**0.99**	**248**	P		Pn	08 59 05.0	-0.6	
	baz=237								
ALS				*e*S		Sn	08 59 17.4	-1.2	
	baz=237								
ELDTW	**Lidau**	**1.00**	**226**	*i* P		Pn	08 59 04.2	-1.4	
	baz=218								
ELDTW				*i* S		Sn	08 59 17.6	-1.0	
	baz=218								
NSTT	**Nanjuang**	**1.04**	**315**	P		Pn	08 59 05.7	-0.4	
	baz=304								
NSTT				S		Sn	08 59 19.3	-0.1	
	baz=304								
LIOB	**Emei**	**1.05**	**317**	P		Pn	08 59 05.5	-0.6	
	baz=305								
LIOB				*e*S		Sn	08 59 18.9	-0.7	
	baz=305								
TCU	**Taichung**	**1.07**	**284**	*e*S		Sn	08 59 18.9	-1.1	
	baz=283								
CHN5	**Tsauling**	**1.07**	**255**	P		Pn	08 59 06.0	-0.6	
	baz=251								
CHN5				*e*S		Sn	08 59 20.5	+0.2	
	baz=251								
TIPB	**Shuangxi**	**1.08**	**1**	P		Pn	08 59 06.2	-0.5	
	baz=357								
TIPB				S		Sn	08 59 20.8	+0.4	
	baz=357								
NSY	**Sanyi**	**1.09**	**299**	P		Pn	08 59 06.2	-0.6	
	baz=299								
NSY				*e*S		Sn	08 59 20.5	-0.2	
	baz=299								
TWA	**Mucha**	**1.11**	**349**	*e*S		Sn	08 59 19.8	-1.3	
	baz=345								
TATO	**Taipei**	**1.12**	**345**	*e*S		Sn	08 59 20.5	-0.9	
	baz=350								
TWB1	**Santiao Chiao**	**1.13**	**8**	P		Pn	08 59 06.2	-1.1	
	baz=25								
TWB1				S		Sn	08 59 22.1	+0.5	
	baz=25								
WCHH	**Zhanghua**	**1.16**	**280**	*e*P		Pn	08 59 07.0	-0.7	
	baz=277								
WCHH				*e*S		Sn	08 59 22.1	-0.1	
	baz=277								
NWF	**Wu-fen Shan**	**1.18**	**359**	P		Pn	08 59 07.6	-0.4	
	baz=353								
NWF				*e*S		Sn	08 59 22.9	0.0	
	baz=353								
WFSB	**Wu-fen Shan**	**1.18**	**359**	P		Pn	08 59 07.6	-0.4	
	baz=353								
WFSB				*e*S		Sn	08 59 23.4	+0.6	
	baz=353								
STYT	**Tauyuan**	**1.20**	**233**	*e*S		Sn	08 59 21.8	-1.7	
	baz=237								
TPUB	**Ta-pu**	**1.23**	**242**	*e*P		Pn	08 59 08.3	-0.4	
	baz=237								
TPUB				*e*S		Sn	08 59 24.4	+0.4	
	baz=237								
CHN4	**Tsaushan**	**1.23**	**245**	P		Pn	08 59 07.9	-0.8	
	baz=231								
CHN4				*e*S		Sn	08 59 23.8	-0.4	
	baz=231								
YOJ	**Yonaguni jima**	**1.24**	**62**	P		Pn	08 59 08.4	-0.4	
YOJ				S		Sn	08 59 23.7	-0.6	
TWGBT	**Beinan**	**1.25**	**212**	*e*S		Sn	08 59 24.4	-0.3	
	baz=208								
WTP	**Ta-pu**	**1.27**	**240**	P		Pn	08 59 08.6	-0.6	
	baz=234								
WTP				*e*S		Sn	08 59 25.5	+0.5	
	baz=234								
YM01	**YM01**	**1.27**	**350**	*e*P		Pn	08 59 08.1	-1.2	
	baz=343								
YM01				*e*S		Sn	08 59 24.1	-1.1	
	baz=343								
YM05	**YM05**	**1.29**	**350**	*e*S		Sn	08 59 25.0	-0.7	
	baz=344								
TWK	**Hsinying**	**1.36**	**243**	*e*P		Pn	08 59 10.2	-0.2	
	baz=238								
TWK				*e*S		Sn	08 59 26.3	-0.9	
	baz=238								
CHN1	**Nanshi**	**1.36**	**240**	*e*P		Pn	08 59 10.1	-0.5	
	baz=234								
CHN1				*e*S		Sn	08 59 27.6	+0.2	
	baz=234								
SGST	**Jiashian**	**1.38**	**235**	*e*P		Pn	08 59 09.3	-1.5	
	baz=229								
SGST				*e*S		Sn	08 59 28.0	+0.2	
	baz=229								
SLGT	**Liugui**	**1.39**	**230**	P		Pn	08 59 10.9	0.0	
	baz=227								
SSD	**Sandimen**	**1.57**	**224**	*e*P		Pn	08 59 13.3	0.0	
	baz=220								
MASBT	**Mashibuluo**	**1.67**	**221**	*e*S		Sn	08 59 35.3	+0.5	
	baz=206								
IRIF	**Iriomote-Funau**	**1.81**	**75**	P		Pn	08 59 16.2	-0.5	
IRIF				S		Sn	08 59 38.2	-0.2	
HATJ	**Hateruma jima**	**1.84**	**84**	S		Sn	08 59 39.2	+0.2	
LAY	**Lan-yu**	**1.85**	**187**	*e*P		Pn	08 59 16.3	-1.0	
	baz=180								
LAY				*e*S		Sn	08 59 39.1	-0.4	
	baz=180								
JKRS	**Kuro-shima**	**2.04**	**80**	P		Pn	08 59 19.7	-0.2	
JKRS				*e*S		Sn	08 59 44.2	+0.1	
JIJ	**Ishigaki jima**	**2.19**	**77**	P		Pn	08 59 21.0	-0.8	
JIJ				*e*S		Sn	08 59 46.2	-1.5	
JISG	**Ishigakijimahi**	**2.39**	**73**	P		Pn	08 59 23.7	-0.9	
JISG				S		Sn	08 59 51.1	-1.6	
JTJ	**Tarama**	**2.75**	**74**	P		Pn	08 59 28.8	-0.7	
JTJ				S		Sn	09 00 00.8	-0.7	

IDC 08 09:17:54.6±3.0, 3°58S×135°64E, *h*0km, mb3.1/2, mb1 3.4/3, mb1mx3.3/23, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=117.4km s-min=33.0km az=79.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.31**	**184**	Pn	P	09 21 46.9	-1.4
	0.1nm,0.3s,baz=6.3,slow=12,SNR=6.5						
WRA				Sn	Sn	09 24 32.8	-14
	0.0nm,0.3s,baz=360,slow=23,SNR=3.2						
ASAR	**Alice Springs**	**20.04**	**185**	P	P	09 22 28.7	-0.7
	0.7nm,0.8s,baz=9.5,slow=10,SNR=8.7						
MKAR	**Makanchi Array**	**68.64**	**324**	P	P	09 28 59.9	+0.1
	0.1nm,0.5s,baz=130,slow=6.4,SNR=1.6						

*IDC **08** 09:27:28.7±2.0, 8°16S×117°64E, *h*0km, mb3.3/2, mb1 3.3/4, mb1mx3.2/39, mbtmp3.2/4, ML3.1/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/20, Error ellipse: s-maj=57.3km s-min=24.8km az=62.0*

*DJA **08** 09:27:31.7±0.7, 8°S±5°×117°8E±°, *h*15km±6km, M3.5/7, MLv3.5/7*

ISC 08 09:27:33.1±1.0, 8°19S±0°05×117°76E±0°06, *h*35km, n12, σ1§81/15, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.64**	**178**	P		**Pn**	09 27 45.2	-0.5
PLAI				S		**Sn**	09 27 55.6	+0.9
TWSI	**Taliwang, Sumb**	**1.02**	**238**	P		**Pn**	09 27 50.9	-0.1
TWSI				S		**Sn**	09 28 04.9	+0.7
WBSI	**Waikabubak, Su**	**2.17**	**132**	P		**Pn**	09 28 08.5	+1.7
WSI	**Waingapu**	**2.91**	**121**	P		**Pn**	09 28 18.2	+1.2
BSSI	**Bau Bau, Buton**	**3.39**	**53**	P		**Pn**	09 28 24.1	+0.6
BKSI	**Bulukumba**	**3.69**	**40**	P		**Pn**	09 28 27.9	+0.2
KAPI	**Kappang**	**3.72**	**32**	Pn		**Pn**	09 28 28.1	0.0
	13nm,0.3s,baz=191,slow=3.9,SNR=28						
KAPI				Sn		**Sn**	09 29 09.9	-0.8
	17nm,0.3s,baz=207,slow=22,SNR=21						
BATI	**Baumata**	**6.17**	**109**	LR	LR	09 32 00.1	
	comp=Z,128nm,19.4s,baz=250,slow=43						
FITZ	**Fitzroy Crossi**	**12.49**	**143**	Pn		**Pn**	09 30 29.5	+1.1
	0.0nm,0.3s,baz=318,slow=12,SNR=1.7						
FITZ				Sn		**Sn**	09 32 41.0	-5.4
	0.1nm,0.3s,baz=342,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**19.86**	**128**	P		**Pn**	09 32 02.7	-0.4
	0.0nm,0.3s,baz=301,slow=12,SNR=2.0						
ASAR	**Alice Springs**	**21.83**	**137**	P		**P**	09 32 23.8	+1.2
	0.3nm,0.5s,baz=314,slow=8.9,SNR=13						
MKAR	**Makanchi Array**	**63.18**	**333**	P		**P**	09 37 58.1	+0.4
	0.4nm,0.7s,baz=134,slow=7.0,SNR=3.8						

IDC 08 09:53:42.9±5.6, 1°63S×138°61E, *h*0km, mb3.1/2, mb1 3.2/3, mb1mx3.1/35, mbtmp3.1/3, ML2.7/1, Error ellipse: s-maj=230.6km s-min=32.0km az=85.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.68**	**193**	P		09 58 02.4	-0.4
	0.0nm,0.3s,baz=15,slow=12,SNR=2.7						
ASAR	**Alice Springs**	**22.38**	**191**	P		09 58 43.4	+0.4
	0.4nm,1.0s,baz=16,slow=10.0,SNR=4.3						
MKAR	**Makanchi Array**	**68.88**	**322**	P		10 04 49.4	-0.1
	0.2nm,0.4s,baz=108,slow=7.9,SNR=2.1						

*IDC **08** 09:57:10.5±1.6, 17°85S×168°41E, *h*0km, mb3.6/4, mb1 3.9/5, mb1mx3.6/40, mbtmp3.7/5, ML4.2/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/34, Error ellipse: s-maj=58.8km s-min=30.1km az=146.0*

*NEIC **08** 09:57:16.1±1.3, 18°18S±0°10×168°6E±0°2, *h*43km±8km, mb4.0/4, Error ellipse: s-maj=25.3km s-min=13.3km az=101.0*

ISC 08 09:57:15.5±1.4, 18°20S±0°08×168°6E±0°2, *h*35km, n14, σ1§19/14, mb3.6/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.03**	**334**			**Pn**	09 58 02.1	+1.0
DZM	**Mont Dzumac**	**4.34**	**207**	Pn		**Pn**	09 58 20.5	+1.3
	11nm,0.3s,baz=71,slow=8.9,SNR=132						
DZM				Sn		**Sn**	09 59 06.6	-2.1
	18nm,0.3s,baz=320,slow=23,SNR=12						
DZM				LR	LR	10 00 00.2	
	comp=Z,109nm,19.1s,baz=180,slow=37						
DZM	**Mont Dzumac**	**4.34**	**207**			**Pn**	09 58 20.8	+1.6
DZM				Sn		**Sn**	09 59 08.7	0.0
AFI	**Afiamalu**	**19.36**	**80**	LR	LR	10 08 28.6	
	comp=Z,27nm,18.8s,baz=280,slow=35						
WB0	**Warramunga Arr**	**32.33**	**262**	P		**P**	10 03 41.8	+0.1
WB0				IAmb	IAmb	10 03 53.1	
	comp=Z,3.3nm,1.2s						
WRA	**Warramunga Arr**	**32.37**	**261**	P		**P**	10 03 40.2	-1.9
	comp=Z,0.4nm,0.9s,baz=89,slow=8.0,SNR=1.9						
WRA	**Warramunga Arr**	**32.37**	**261**	P		P	10 03 37.7	-4.4
ASAR	**Alice Springs**	**32.78**	**254**	P		**P**	10 03 45.5	-0.2
	comp=Z,0.4nm,0.4s,baz=78,slow=8.0,SNR=5.8						
ASAR				LR	LR	10 16 45.9	
	comp=Z,60nm,18.1s,baz=52,slow=36						
ASAR	**Alice Springs**	**32.78**	**254**	P		**P**	10 03 46.1	+0.4
KNRA	**Kununurra**	**38.12**	**268**	P		**P**	10 04 31.2	-0.3
FITZ	**Fitzroy Crossi**	**40.73**	**263**	P		**P**	10 04 52.6	-0.7
	comp=Z,1.7nm,0.7s,baz=117,slow=10,SNR=6.1						
FITZ	**Fitzroy Crossi**	**40.73**	**263**	P		**P**	10 04 54.2	+0.9
FITZ				IAmb	IAmb	10 05 14.4	
	comp=Z,3.2nm,1.1s						
NVAR	**Mina Array Bea**	**88.59**	**49**	P		**P**	10 10 04.6	-0.6
	comp=Z,0.1nm,0.4s,baz=222,slow=6.1,SNR=1.8						
ARCES	**ARCESS Array B**	**123.90**	**345**	PKP		**PKiKP**	10 16 09.8	+0.2
	comp=Z,2.5nm,0.8s,baz=28,slow=4.1,SNR=5.4						

*ANF **08** 10:10:17.9±0.3, 36°41N×97°28W, *h*0km, ML3.7/10, Error ellipse: s-maj=3.2km s-min=2.8km az=4.0*

*TUL **08** 10:10:18.5±1.0, 36°393N±0°004×97°30W±0°02, *h*6km±7km, ML3.0, Error ellipse: s-maj=1.9km s-min=0.3km az=71.0*

*NEIC **08** 10:10:18.5±0.9, 36°390N±0°005×97°30W±0°02, *h*3km±7km, Error ellipse: s-maj=1.8km s-min=0.8km az=87.0*

ISC 08 10:10:18.6±1.1, 36°39N±0°02×97°32W±0°03, *h*6km±10km, n36, σ1§16/46, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.54**	**282**			**Pg**	10 10 29.4	+0.3
CROK				Sg		**Sg**	10 10 37.5	+1.4
OK031	**S. Brethren Rd**	**0.59**	**138**			**Pg**	10 10 29.7	-0.2
OK031				Sg		**Sg**	10 10 37.8	+0.3
OK029	**Liberty Lake**	**0.60**	**190**			**Pg**	10 10 30.2	+0.1
OK029				Sg		**Sg**	10 10 38.7	+0.6
GC02	**Grant County #**	**0.63**	**317**	Pg		**Pg**	10 10 30.9	+0.2
KAN13	**South Haven SW**	**0.63**	**349**			**Pg**	10 10 30.8	0.0
KAN13				Sg		**Sg**	10 10 39.8	+0.8
OK030	**Cody Creek RV**	**0.64**	**136**			**Pg**	10 10 30.6	-0.2
OK030				Sg		**Sg**	10 10 39.2	+0.1
KAN14	**Manchester OK**	**0.76**	**318**	Pg		**Pg**	10 10 33.3	0.0
BCOK	**Bluff Creek, N**	**0.77**	**198**			**Pg**	10 10 33.4	0.0
KAN09	**Caldwell North**	**0.78**	**342**			**Pg**	10 10 33.4	-0.2
OK025	**Westminster Rd**	**0.81**	**181**			**Pg**	10 10 34.0	-0.1
T35A	**Sooner Cattle**	**0.84**	**51**	Pg		**Pg**	10 10 34.1	-0.5
KAN05	**Bluff City Nor**	**0.84**	**329**			**Pg**	10 10 34.6	-0.1
KAN10	**Anthony SW Sta**	**0.96**	**320**			**Pg**	10 10 36.9	0.0
OKCFA	**Oklahoma City**	**0.98**	**186**			**Pg**	10 10 37.0	-0.4
KAN08	**Anthony NE Sta**	**0.98**	**328**	Pg		**Pg**	10 10 37.2	-0.2
OKCSW	**OKLAHOMA CITY**	**0.99**	**185**			**Pg**	10 10 37.3	-0.3
KAN12	**Harper NE Stat**	**1.05**	**329**			**Pg**	10 10 38.6	-0.2
FNO	**Franklin**	**1.13**	**183**			**Pb**	10 10 39.8	-0.8
W35A	**Tecumseh**	**1.29**	**163**	Pn		**Pn**	10 10 41.8	-1.4
TUL1	**Leonard**	**1.33**	**111**	P		**Pn**	10 10 42.5	-1.3
	baz=292							
TUL1				S		**Sn**	10 11 00.4	-1.4
	baz=292							
TUL1	**Leonard**	**1.33**	**111**			**Pn**	10 10 42.7	-1.0
U32A	**Winter Ranch,**	**1.35**	**270**			**Pn**	10 10 43.8	-0.3
X34A	**Smith Ranch, M**	**1.83**	**193**			**Pb**	10 10 51.9	-0.7
WMOK	**Wichita Mounta**	**2.03**	**216**	P		**Pn**	10 10 54.0	+0.5
	baz=36							
WMOK				S		**Sb**	10 11 21.2	-0.3
	baz=36							
WMOK	**Wichita Mounta**	**2.03**	**216**	Pn		**Pb**	10 10 54.7	-1.3
R32A	**Long Quarter,**	**2.31**	**332**			**Pb**	10 10 58.8	-1.9
U38A	**Gravette**	**2.37**	**88**			**Pn**	10 10 58.8	+0.7
X37A	**Clayton**	**2.40**	**138**			**Pn**	10 10 59.3	+0.7
KSU1	**Kansas State U**	**2.76**	**12**	Pb		**Pb**	10 11 08.0	-0.4
	baz=192							
KSU1				Sb		**Sb**	10 11 44.2	+1.6
	baz=192							
CBKS	**Cedar Bluff**	**3.08**	**322**	Sb		**Sb**	10 11 53.0	+1.1
	baz=141							
MIAR	**Mount Ida**	**3.57**	**120**	P		**Pn**	10 11 15.2	+0.6
	baz=302							
MIAR				S		**Sn**	10 11 58.2	+1.0
	baz=302							
AMTX	**Amarillo**	**3.85**	**248**	P		**Pn**	10 11 19.7	+1.1
	baz=66							
AMTX				Sb		**Sg**	10 12 19.0	-3.4
	baz=66							
X40A	**Basin Creek Fa**	**4.13**	**116**	P		**Pn**	10 11 23.1	+0.9
	baz=299							
ABTX	**Abilene, Hawle**	**4.22**	**208**	Pb		**Pb**	10 11 33.3	0.0
	baz=27							
WHTX	**Lake Whitney,**	**4.39**	**181**	Sb		**Sb**	10 12 33.6	+4.2
	baz=1.7							
Z41A	**Richland Creek**	**4.86**	**129**	S		**Sn**	10 12 27.7	-1.1
	baz=312							

*SOME **08** 10:16:27.5, 44°72N×82°28E, *h*20km*

*NNC **08** 10:16:29.1±1.0, 44°72N×82°13E, *h*0km, mb3.6, mpv3.3, Error ellipse: s-maj=12.0km s-min=3.8km az=124.0*

ISC 08 10:16:25.4±1.9, 44°70N±0°07×82°45E±0°06, *h*6km±17km, n23, σ1§04/35, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.94**	**260**	*e*P		**Pb**	10 17 01.2	+0.1
	6.4nm,0.2s						
DJR				*e*S		**Sb**	10 17 25.4	-0.2
	12nm,0.2s						
DJR	**Jarkent**	**1.94**	**260**	P		**Pb**	10 17 01.4	+0.2
	6.4nm,0.3s						
DJR				S		**Sb**	10 17 25.3	-0.2
	11nm,0.2s						
KTMS	**Ketmen**	**1.97**	**231**	*e*P		**Pb**	10 17 02.0	+0.4
	11nm,0.3s						
KTMS				*e*S		**Sb**	10 17 26.8	+0.4
	54nm,0.4s						
KTMS	**Ketmen**	**1.97**	**231**	P		**Pb**	10 17 02.0	+0.4
	14nm,0.2s						
KTMS				S		**Sb**	10 17 26.8	+0.4
	51nm,0.3s						
MK31	**Makanchi Array**	**2.10**	**357**	⇑Pn		**Pg**	10 17 05.3	-0.2
	5.4nm,0.3s,baz=179,slow=16,SNR=106						
MK31				⇓Sn		**Sg**	10 17 32.7	-0.1
	6.8nm,0.3s,baz=182,slow=27,SNR=18						
MAKZ	**Makanchi**	**2.13**	**351**	⇓Pn		**Pg**	10 17 05.4	-0.8
	4.8nm,0.4s						
MAKZ				⇑Sn		**Sg**	10 17 33.0	-0.9
	9.7nm,0.3s						
SHLS	**Shalkode**	**2.66**	**236**	*e*P		**Pn**	10 17 09.0	+0.2
	17nm,0.3s						
SHLS				*e*S		**Sn**	10 17 38.7	-2.6
	59nm,0.4s						
SHLS	**Shalkode**	**2.66**	**236**	Pg		**Pn**	10 17 09.4	+0.6
	14nm,0.3s						
SHLS				Lg	Lg	10 17 40.1	
	51nm,0.4s						
UZB	**Uzynbulak**	**2.93**	**239**	*e*P		**Pb**	10 17 17.7	-0.3
	2.3nm,0.3s						
UZB				*e*S		**Sb**	10 17 54.0	0.0
	11nm,0.2s						
UZB	**Uzynbulak**	**2.93**	**239**	Pg		**Pb**	10 17 17.8	-0.2
	2.4nm,0.4s						
UZB				Lg	Lg	10 17 54.4	
	11nm,0.2s						
MNBS	**Baschi**	**2.97**	**259**	*e*P		**Pb**	10 17 18.3	-0.4
	3.7nm,0.3s						
MNBS				*e*S		**Sb**	10 17 54.7	-0.6
	13nm,0.3s						
MNBS	**Baschi**	**2.97**	**259**	Pg		**Pb**	10 17 18.4	-0.4
	4.6nm,0.3s						
MNBS				Lg	Lg	10 17 54.7	
	23nm,0.3s						
KPKS	**Kokpek**	**2.98**	**247**	*e*P		**Pb**	10 17 19.1	+0.2
	11nm,0.1s						
KPKS				*e*S		**Sb**	10 17 56.4	+0.8
	56nm,0.4s						
ZSN	**Zaisan**	**3.22**	**31**	*e*P		**Pb**	10 17 23.2	+0.3
	5.4nm,0.2s						
ZSN				*e*S		**Sb**	10 18 03.3	+0.9
	3.1nm,0.2s						
ZSN	**Zaisan**	**3.22**	**31**	Pg		**Pg**	10 17 27.0	-0.1
	2.5nm,0.2s						
ZSN				Lg	Lg	10 18 10.2	
	7.8nm,0.3s						
ARXS	**Arharly**	**3.35**	**263**	*e*P		**Pb**	10 17 25.6	+0.4
	4.0nm,0.3s						
ARXS				*e*S		**Sb**	10 18 07.2	+1.1
	10nm,0.4s						
ARXS	**Arharly**	**3.35**	**263**	Pg		**Pb**	10 17 25.6	+0.4
	4.0nm,0.4s						
ARXS

0.3nm,0.3s,baz=354,slow=19,SNR=11
DZM Sn **Sb** **10 22 54.8 -2.7**
0.1nm,0.3s,baz=327,slow=19,SNR=1.8
STKA Stephens Creek 29.46 230 P **P** **10 25 27.4 +3.1**
3.8nm,0.5s,baz=48,slow=9.5,SNR=15
WRA Warramunga Arr 32.43 256 P **P** **10 25 48.5 -2.2**
0.2nm,0.7s,baz=86,slow=9.3,SNR=2.2
ASAR Alice Springs 33.26 249 P **P** **10 25 57.0 -0.9**
0.6nm,0.5s,baz=76,slow=9.4,SNR=24
ILAR Eielson Array 86.35 18 P **P** **10 32 01.9 -0.2**
0.2nm,0.7s,baz=243,slow=5.6,SNR=1.2
ARCES ARCESS Array B 120.43 346 PKP **PKPdf** **10 38 10.0 -1.3**
4.0nm,1.1s,baz=63,slow=5.6,SNR=4.7

*IDC **08** 10:34:38.6±1.6, 33.67°S×68.61°W, h0km, mb4.1/3, mb1 4.0/7, mb1mx3.7/30, mbtmp3.9/7, ML3.7/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/21, Error ellipse: s-maj=62.8km s-min=20.6km az=96.0*
*NEIC **08** 10:34:45.2±0.8, 33.56°S±0.06°×70.4°W±0.3°, h117km±11km, Error ellipse: s-maj=40.8km s-min=7.7km az=95.0*
*GUC **08** 10:34:45.7±0.7, 33.58°S×70.35°W, h112km±1km, ML4.1*
ISC 08 10:34:44.7±0.8, 33.65°S±0.04°×70.36°W±0.07°, h114km±6km, n47, σ1s43/62, mb4.0/3, 12C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MT03	**Universidad Ad**	**0.20**	**320**	*i*P	**Pn**	**10 35 00.6**	**-0.2**
MT03				*i* S	**Sn**	**10 35 11.9**	**-1.0**
MT03				IAML		10 35 12.9	
	comp=E,9μm,0.3s						
FSR	**Penalolen**	**0.22**	**319**	*e*P	**Pn**	**10 35 01.4**	**+0.6**
FSR				*i* S	**Sn**	**10 35 12.2**	**-0.7**
LMEL	**Las Melosas**	**0.24**	**148**	*i*P	**Pn**	**10 35 00.9**	**-0.1**
LMEL				*i* S	**Sn**	**10 35 12.9**	**-0.3**
LMEL				IAML		10 35 15.1	
	comp=N,7μm,0.3s						
MT05	**Renca**	**0.41**	**308**	*i*P	**Pn**	**10 35 01.5**	**-0.1**
MT05				*i* S	**Sn**	**10 35 13.3**	**-0.9**
MT05				IAML		10 35 16.0	
	comp=E,7μm,0.1s						
MT05	**Renca**	**0.41**	**308**		**Pn**	**10 35 01.5**	**-0.1**
MT09	**Talagante**	**0.54**	**256**	*i*P	**Pn**	**10 35 02.7**	**+0.2**
MT09				*i* S	**Sn**	**10 35 15.8**	**0.0**
MT09				IAML		10 35 16.5	
	comp=N,13μm,0.3s						
PEL	**Peldehue**	**0.57**	**331**	*i*P	**Pn**	**10 35 02.5**	**-0.1**
PEL				*i* S	**Sn**	**10 35 15.1**	**-1.0**
PEL				IAML		10 35 16.1	
	comp=N,12μm,0.2s						
PEL	**Peldehue**	**0.57**	**331**		**Pn**	**10 35 02.5**	**-0.1**
MT02	**Curacav**	**0.76**	**300**	*i*P	**Pn**	**10 35 04.2**	**+0.2**
MT02				*i* S	**Sn**	**10 35 18.0**	**-0.5**
MT02	**Curacav**	**0.76**	**300**		**Pn**	**10 35 04.1**	**+0.2**
ROC1	**El Roble**	**0.87**	**320**		**Pn**	**10 35 04.9**	**-0.3**
ROCH	**El Roble**	**0.87**	**321**	*i*P	**Pn**	**10 35 05.2**	**0.0**
ROCH				*i* S	**Sn**	**10 35 20.2**	**-0.5**
ROCH				IAML		10 35 24.2	
	comp=N,6μm,0.3s						
VA03	**San Esteban**	**0.89**	**349**	*i*P	**Pn**	**10 35 05.5**	**+0.2**
VA03				*i* S	**Sn**	**10 35 19.9**	**-0.9**
VA03				IAML		10 35 22.3	
	comp=E,10μm,0.4s						
VA03	**San Esteban**	**0.89**	**349**		**Pn**	**10 35 05.6**	**+0.2**
BO02	**Sierra Bellavi**	**1.20**	**197**	*e*P	**Pn**	**10 35 10.0**	**+1.6**
BO02				*i* S	**Sn**	**10 35 27.9**	**+1.5**
BO02	**Sierra Bellavi**	**1.20**	**197**		**Pn**	**10 35 10.1**	**+1.6**
VA01	**Torpederas**	**1.25**	**300**	*e*P	**Pn**	**10 35 09.3**	**+0.5**
VA01				*e*S	**Sn**	**10 35 26.6**	**-0.5**
VA01				IAML		10 35 31.5	
	comp=E,2μm,0.5s						
BO03	**Pichilemu**	**1.58**	**237**	*i*P	**Pn**	**10 35 13.5**	**+0.8**
BO03				*i* S	**Sn**	**10 35 34.8**	**+0.8**
CO02	**Combarbal**	**2.49**	**347**	*e*P	**Pn**	**10 35 24.3**	**-0.1**
CO02				*i* S	**Sn**	**10 35 53.5**	**-1.3**
CO02	**Combarbal**	**2.49**	**347**	Pn	**Pn**	**10 35 24.2**	**-0.1**
CO03	**El Pedregal**	**2.81**	**354**	*i*P	**Pn**	**10 35 29.1**	**+0.7**
CO03				*i* S	**Sn**	**10 36 01.0**	**-1.1**
CO03				IAML		10 36 06.1	
	comp=E,1μm,0.4s						
CO03	**El Pedregal**	**2.81**	**354**	Pn	**Pn**	**10 35 29.2**	**+0.7**
BI02	**San Fabin de**	**3.10**	**194**	*e*P	**Pn**	**10 35 33.9**	**+1.7**
BI02				*i* S	**Sn**	**10 36 02.2**	**-6.7**
BI02	**San Fabin de**	**3.10**	**194**	Pn	**Pn**	**10 35 33.9**	**+1.7**
GO04	**Tololo Observa**	**3.48**	**354**	*e*P	**Pn**	**10 35 37.3**	**-0.2**
GO04				*i* S	**Sn**	**10 36 16.3**	**-1.9**
GO04	**Tololo Observa**	**3.48**	**354**		**Pn**	**10 35 37.0**	**-0.5**
CO01	**Juntas del Tor**	**3.66**	**4**		**Pn**	**10 35 41.0**	**+1.1**
BI03	**Tigo**	**3.87**	**214**	*i*P	**Pn**	**10 35 41.9**	**-0.5**
BI03				*e*S	**Sn**	**10 36 26.4**	**-0.6**
BI03	**Tigo**	**3.87**	**214**	Pn	**Pn**	**10 35 41.8**	**-0.5**
LCO	**Las Campanas**	**4.63**	**356**	Pn	**Pn**	**10 35 52.1**	**-0.8**
AC05	**El Transito**	**4.79**	**1**	Pn	**Pn**	**10 35 55.0**	**0.0**
LC01	**Cunco**	**5.38**	**193**	Pn	**Pn**	**10 36 02.9**	**+0.2**
AC04	**Llanos de Chal**	**5.46**	**353**	Pn	**Pn**	**10 36 03.0**	**-0.8**
GO03	**Copiapo**	**6.03**	**1**	Pn	**Pn**	**10 36 10.8**	**-0.8**
AC02	**Maricunga**	**6.87**	**9**	Pn	**Pn**	**10 36 22.0**	**-1.3**
PLCA	**Paso Flores**	**7.08**	**181**	Pn	**Pn**	**10 36 27.0**	**+1.4**
	comp=E,0.5nm,0.3s,baz=351,slow=12,SNR=7.1						
PLCA	**Paso Flores**	**7.08**	**181**		**Pn**	**10 36 26.5**	**+0.9**
AC01	**Pan de Azucar**	**7.47**	**358**	Pn	**Pn**	**10 36 30.6**	**-0.4**
GO02	**Mina Guanaco**	**8.48**	**5**	Pn	**Pn**	**10 36 41.9**	**-3.0**
LVC	**Limon Verde**	**11.07**	**7**	Pn	**Pn**	**10 37 16.2**	**-3.8**
	comp=E,0.3nm,0.3s,baz=98,slow=5.1,SNR=1.5						
LVC				Sn	**Sn**	**10 39 25.2**	**+3.1**
	comp=E,0.1nm,0.3s,baz=316,slow=18,SNR=1.3						
LPAZ	**La Paz**	**17.40**	**7**	P	**Pn**	**10 38 42.1**	**+1.1**
	comp=E,0.2nm,0.3s,baz=171,slow=8,0,SNR=7.1						
SIV	**San Ignacio**	**19.47**	**28**	P	**P**	**10 39 02.1**	**-0.6**
	comp=E,0.2nm,0.3s,baz=209,slow=9.9,SNR=6.7						
NNA	**Nana**	**22.36**	**343**	LR	LR	10 47 54.3	
	comp=E,30nm,20.6s,baz=354,slow=35						
ATAH	**Atahualpa**	**27.41**	**342**	LR	LR	10 50 50.6	
	comp=E,31nm,21.7s,baz=228,slow=35						
QSPA	**South Pole Qui**	**56.59**	**180**	P	P	10 44 22.4	+7.1
	comp=E,1.7nm,1.0s,baz=352,slow=1.8,SNR=5.6						
BOSA	**Boshof**	**78.99**	**117**		**P**	**10 46 37.6**	**+1.3**
	comp=E,2.4nm,0.9s,baz=229,slow=3.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**82.77**	**69**	P	**P**	**10 46 57.6**	**+1.2**
	comp=E,1.5nm,0.8s,baz=242,slow=3.7,SNR=7.7						

IDC 08 10:38:53.4±1.5, 0.75°N×146.36°E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.6/41, mbtmp3.8/5, MS3.2/9, Ms1 3.2/9, ms1mx3.0/35, Error ellipse: s-maj=64.5km s-min=22.4km az=112.0, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**7.57**	**132**	LR	LR	10 43 21.5	
	comp=Z,161nm,20.5s,baz=356,slow=35						
PMG	**Port Moresby**	**10.12**	**176**	LR	LR	10 45 01.3	
	comp=Z,63nm,19.6s,baz=237,slow=36						
HNR	**Honiara**	**16.89**	**127**	LR	LR	10 49 03.1	
	comp=Z,88nm,21.8s,baz=316,slow=36						
DAV	**Davao City (W)**	**21.65**	**287**	LR	LR	10 51 54.4	
	comp=Z,61nm,18.6s,baz=270,slow=36						
WRA	**Warramunga Arr**	**23.71**	**209**	P	P	10 44 07.3	+0.1
	2.6nm,0.5s,baz=31,slow=11,SNR=75						
WRA				LR	LR	10 53 20.7	
	comp=Z,61nm,20.2s,baz=345,slow=37						
ASAR	**Alice Springs**	**27.13**	**206**	P	P	10 44 39.8	+1.4
	1.3nm,0.7s,baz=26,slow=13,SNR=21						
ASAR				LR	LR	10 55 41.8	
	comp=Z,66nm,19.0s,baz=350,slow=37						
FITZ	**Fitzroy Crossi**	**27.69**	**226**	P	P	10 44 43.5	+0.1
	1.3nm,0.7s,baz=39,slow=9.0,SNR=7.1						
FITZ				LR	LR	10 55 44.2	
	comp=Z,51nm,19.6s,baz=25,slow=36						
STKA	**Stephens Creek**	**32.77**	**188**	LR	LR	10 58 24.3	
	comp=Z,35nm,19.7s,baz=24,slow=36						
MKAR	**Makanchi Array**	**71.95**	**319**	P	P	10 50 18.8	-0.1
	0.2nm,0.5s,baz=116,slow=6.6,SNR=2.4						
MKAR				LR	LR	11 21 32.2	
	comp=Z,25nm,20.6s,baz=27,slow=36						
ILAR	**Eielson Array**	**79.58**	**24**	P	P	10 51 00.9	-1.2
	0.7nm,0.8s,baz=252,slow=5.6,SNR=6.0						

*IDC **08** 10:46:35.7±1.6, 10.10°S×66.71°E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.6/54, mbtmp3.9/8, MS3.6/12, Ms1 3.6/12, ms1mx3.3/34, Error ellipse: s-maj=54.2km s-min=23.6km az=55.0*
*NEIC **08** 10:46:36.1±0.5, 10.2°S±0.1°×66.6°E±0.2°, h10km±1km, mb4.6/6, Error ellipse: s-maj=31.2km s-min=7.5km az=232.0*
ISC 08 10:46:36.4±1.1, 10.2°S±0.2°×66.6°E±0.2°, h10km, n36, σ0s48/22, mb4.2/11, MS3.6/12, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**6.38**	**67**	T	T	10 55 03.8	
	baz=244,slow=74,SNR=297						
H08S3	**Diego Garcia H**	**6.39**	**67**	T	T	10 55 04.1	
	baz=244,slow=74,SNR=362						
H08S2	**Diego Garcia H**	**6.39**	**67**	T	T	10 55 04.1	
	baz=244,slow=74,SNR=87						
PALK	**Pallekele**	**22.36**	**40**	LR	LR	10 58 17.6	
	comp=Z,135nm,20.5s,baz=320,slow=32						
KMBO	**Kilima Mbogo**	**30.49**	**285**	LR	LR	11 03 25.3	
	comp=Z,56nm,20.0s,baz=95,slow=33						
MBAR	**Mbarara**	**36.87**	**283**	P	**P**	**10 53 45.2**	**-0.5**
MBAR				IAmb	IAmb	10 53 56.6	
	comp=Z,3.5nm,1.1s						
BOSA	**Boshof**	**42.77**	**239**	LR	LR	11 11 10.9	
	comp=Z,64nm,18.2s,baz=15,slow=34						
CMAR	**Chiang Mai Arr**	**42.81**	**48**	P	**P**	**10 54 34.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=236,slow=9.7,SNR=2.2						
CMAR				LR	LR	11 10 31.8	
	comp=Z,49nm,19.1s,baz=218,slow=34						
H01W3	**Cape Leeuwin H**	**49.75**	**127**	T	T	11 49 01.9	
	baz=287,slow=75,SNR=10						
H01W2	**Cape Leeuwin H**	**49.75**	**127**	T	T	11 48 51.7	
	baz=287,slow=75,SNR=13						
H01W1	**Cape Leeuwin H**	**49.77**	**127**	T	T	11 49 02.5	
	baz=287,slow=75,SNR=12						
MAW	**Mawson**	**57.38**	**182**	LR	LR	11 15 53.0	
	comp=Z,53nm,18.2s,baz=54,slow=31						
MKAR	**Makanchi Array**	**58.46**	**13**	P	**P**	**10 56 32.3**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=188,slow=7.4,SNR=4.0						
MKAR	**Makanchi Array**	**58.46**	**13**	P	**P**	**10 56 32.6**	**0.0**
ABKAR	**Akbulak array**	**59.49**	**355**	P	**P**	**10 56 39.7**	**+0.1**
AKTO	**Aktyubinsk**	**60.84**	**354**	P	**P**	**10 56 49.0**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=170,slow=6.1,SNR=5.0						
KURBB	**Kurchatov Arra**	**61.47**	**9**	P	**P**	**10 56 52.9**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=206,slow=7.2,SNR=7.3						
KURK	**Kurchatov**	**61.57**	**9**	P	**P**	**10 56 53.5**	**-0.2**
ASAR	**Alice Springs**	**65.30**	**111**	P	**P**	**10 57 19.2**	**0.0**
	comp=Z,0.9nm,0.8s,baz=271,slow=6.7,SNR=10						
ASAR	**Alice Springs**	**65.30**	**111**	P	**P**	**10 57 18.4**	**-0.8**
ZALV	**Zalesovo Beam**	**65.76**	**12**	P	**P**	**10 57 20.9**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=197,slow=4.6,SNR=6.7						
ZALV				LR	LR	11 24 33.1	
	comp=Z,47nm,18.2s,baz=114,slow=35						
ZALV	**Zalesovo Beam**	**65.76**	**12**	P	**P**	**10 57 21.2**	**-0.1**
WRA	**Warramunga Arr**	**65.80**	**107**	P	**P**	**10 57 22.5**	**0.0**
	comp=Z,1.4nm,0.7s,baz=278,slow=5.5,SNR=20						
WRA				LR	LR	11 23 29.8	
	comp=Z,38nm,20.6s,baz=260,slow=34						
WRA	**Warramunga Arr**	**65.80**	**107**	P	**P**	**10 57 22.7**	**+0.2**
WRAB	**Tennant Creek**	**65.81**	**107**	P	**P**	**10 57 22.3**	**-0.2**
WRAB				IAmb	IAmb	10 57 32.8	
	comp=Z,5.1nm,1.1s						
SONM	**Songino Array**	**67.72**	**28**	P	**P**	**10 57 34.3**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=224,slow=6.2,SNR=7.8						
SONM				LR	LR	11 26 39.0	
	comp=Z,82nm,20.1s,baz=212,slow=36						
SONM	**Songino Array**	**67.72**	**28**	P	**P**	**10 57 33.9**	**-0.3**
DBIC	**Dimbokro**	**73.06**	**280**	LR	LR	11 28 29.0	
	comp=Z,33nm,19.9s,baz=81,slow=34						
KSRS	**Korea Array**	**74.41**	**46**	LR	LR	11 32 07.0	
	comp=Z,28nm,18.1s,baz=233,slow=37						
VNDA	**Vanda**	**81.25**	**167**	LR	LR	11 30 09.0	
	comp=Z,53nm,18.9s,baz=268,slow=32						
MAJO	**Matsushiro**	**81.65**	**51**	P	**P**	**10 58 55.0**	**-0.1**
MAJO				IAmb	IAmb	10 59 21.6	
	comp=Z,17nm,1.6s						
MJAR	**Matsushiro Arr**	**81.65**	**51**	LR	LR	11 33 46.9	
	comp=Z,30nm,20.8s,baz=90,slow=35						
PDAR	**Pinedale Array**	**147.39**	**355**	PKPbc	**PKPbc**	**11 06 21.6**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=52,slow=2.4,SNR=5.0						
NVAR	**Mina Array Bea**	**151.56**	**8**	PKPbc	**PKiKP**	**11 06 32.5**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=273,slow=1.6,SNR=18						
NVAR	**Mina Array Bea**	**151.56**	**8**	PKPbc	**PKiKP**	**11 06 33.6**	**+1.5**
TXAR	**Lajitas Array**	**158.89**	**336**	PKPab	**PKPab**	**11 07 11.4**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=38,slow=3.5,SNR=5.3						

*TEH **08** 11:07:33.3, 33.06°N×46.14°E, h10km, ML2.8*
*ISN **08** 11:07:33.6±0.3, 33.21°N×46.29°E, h38km±1km, ML2.5*
ISC 08 11:07:33.8±2.1, 33.05°N±0.06°×46.09°E±0.06°, h1km±18km, n9, σ0s70/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.15**	**295**	*e*Pg	Pg	11 07 42.0	+5.4
IBDR				*e*Sg	Sg	11 07 48.0	+9.5
IBDR				AML	AML	11 07 57.9	
	comp=N,180nm,0.5s						
IBDR				AML	AML	11 08 00.7	
	comp=E,173nm,0.5s						
IGHG	**Ghaleghazi**	**1.34**	**17**	*e*Pg	**Pg**	**11 07 58.8**	**-0.6**
IGHG				*e*		11 08 01.6	
BHD	**Baghdad**	**1.45**	**279**	*e*Pn	**Pn**	**11 08 01.0**	**-0.1**
BHD				*e*Sn	**Sn**	**11 08 21.0**	**+0.3**
BHD				AML	AML	11 08 33.4	
	comp=E,297nm,0.3s						
IKFM	**Kafar-mosalman**	**1.55**	**72**	*e*Pg	**Pn**	**11 08 02.3**	**-0.1**
IKFM				*e*	**Sg**	**11 08 25.0**	**+1.5**
IVIS	**Veis**	**1.60**	**23**	*e*		11 08 05.2	
IVIS				*e*Pg	**Pg**	**11 08 04.3**	**-0.2**
IKOM	**Komasi**	**1.63**	**46**	*e*	**Sg**	**11 08 25.6**	**-0.7**
IKOM				*e*Pg	**Pn**	**11 08 03.4**	**-0.4**
IDHR	**Dehrash**	**1.67**	**8**	*e*	**Sg**	**11 08 28.3**	**+0.9**
IDHR				*e*Pg	**Pn**	**11 08 04.4**	**+0.1**
IDOB	**Doab**	**1.90**	**67**	*e*Pn	**Pn**	**11 08 07.3**	**-0.1**
NSR	**Nassriya**	**2.03**	**179**	*e*Pn	**Pn**	**11 08 09.0**	**-0.1**
NSR				*e*Sn	**Sn**	**11 08 35.0**	**-0.1**

*NCEDC **08** 11:13:27.6±1.5, 37.30°N±0.03°×122.08°W±0.06°, h10km±5km, Md2.8/146, Error ellipse: s-maj=8.1km s-min=2.1km az=58.0*
NEIC 08 11:13:26.6±1.6, 37.21°N±0.03°×122.20°W±0.05°, h14km±6km, Error ellipse: s-maj=7.2km s-min=2.3km az=60.0, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JRSC	**Jasper Ridge**	**0.20**	**351**		Pg	11 13 31.1	0.0
JRSC					Sg	11 13 34.3	+0.1
SCCB	**Santa Clara Co**	**0.28**	**74**		Pg	11 13 31.8	-0.6
MHC	**Mount Hamilton**	**0.46**	**73**		Pg	11 13 35.3	-0.5
MHC					Sg	11 13 41.2	-0.8
HCOM	**Corn Cob Canyo**	**0.51**	**129**		Pb	11 13 37.7	+0.4
MOBB	**Monterey Bay O**	**0.52**	**177**		Pn	11 13 39.2	-0.2
WENL	**Wente Vineyard**	**0.54**	**40**		Pg	11 13 36.6	-0.7
CMCM	**Mills College**	**0.57**	**2**		Pg	11 13 37.7	-0.1
GHS	**Gilroy Hot Spr**	**0.61**	**100**		Pg	11 13 38.4	-0.2
BRK	**Berkeley--Havi**	**0.67**	**356**		Pg	11 13 39.5	-0.1
BL67	**Building 67, L**	**0.67**	**356**		Pg	11 13 39.5	-0.1
BKS	**Berkeley--Byer**	**0.67**	**357**		Pg	11 13 39.5	-0.1
BL88	**Building 88, L**	**0.67**	**356**		Pg	11 13 39.6	-0.1
VAK	**Adit at Lawren**	**0.67**	**357**		Pg	11 13 39.7	0.0
HFEM	**San Felipe**	**0.68**	**109**		Pg	11 13 39.9	+0.1
BRIB	**Briones**	**0.71**	**3**		Pg	11 13 40.5	+0.1
SAO	**San Andreas Ge**	**0.75**	**126**		Pg	11 13 41.2	+0.1
SAO	**San Andreas Ge**	**0.75**	**126**		Pb	11 13 41.3	-0.1
PACP	**Pacheco Peak**	**0.76**	**105**		Pg	11 13 41.3	0.0
BDM	**Black Diamond**	**0.79**	**19**		Pb	11 13 42.1	0.0
FARB	**Farallon Islan**	**0.80**	**308**		Pn	11 13 43.0	-0.5
SCZ	**Santa Cruz**	**0.88**	**133**		Pg	11 13 43.5	-0.2
HAST	**Hastings Reser**	**0.97**	**147**		Pn	11 13 45.9	0.0
BSMM	**Soledad Missio**	**1.03**	**143**		Pn	11 13 47.0	+0.3
MCCM	**Marconi Confer**	**1.08**	**330**		Pb	11 13 46.7	-0.4
MCCM	**Marconi Confer**	**1.08**	**330**		Pb	11 13 46.9	-0.2
CVS	**Carmenet Viney**	**1.15**	**350**		Pb	11 13 46.9	-1.4
LRV	**Little Rabbit**	**1.23**	**129**		Pb	11 13 49.7	+0.1
PAPM	**Alder Peak**	**1.46**	**152**		Pn	11 13 53.1	+0.5
PMPB	**Monarch Peak**	**1.50**	**131**		Pb	11 13 54.0	-0.2
FTR	**Fort Ross**	**1.52**	**330**		Pn	11 13 53.0	-0.4
CMB	**Columbia Colle**	**1.66**	**60**	Pn	Pn	11 13 54.8	-0.6
GDXM	**Geysers**	**1.66**	**344**		Pn	11 13 54.6	-0.9
PKD	**Bear Valley Ra**	**1.84**	**133**		Pn	11 13 58.1	+0.3
RAMR	**Ramage Ranch**	**1.90**	**145**		Pn	11 13 59.2	+0.6
HOPS	**Hopland Field**	**1.91**	**339**	Pn	Pn	11 13 58.3	-0.5
AFDM	**Forest Hills D**	**1.99**	**29**	Pn	Pn	11 13 59.4	-0.5
SUTB	**Sutter Butte**	**2.04**	**9**		Pn	11 13 59.3	-1.3
TCHL	**Shandon**	**2.10**	**136**		Pn	11 14 02.1	+0.8
PAGB	**Antelope Grade**	**2.15**	**133**		Pn	11 14 03.1	+0.9
ORV	**Oroville**	**2.41**	**13**		Pn	11 14 04.5	-1.1
ORV	**Oroville**	**2.41**	**13**		Pn	11 14 05.2	-0.4
RUBR	**Rubicon Trail**	**2.45**	**41**		Pn	11 14 05.9	-0.4
MDPB	**Devils Postpil**	**2.52**	**79**		Pn	11 14 07.9	+0.5
WAKR	**Walker**	**2.54**	**59**		Pn	11 14 08.7	+1.1
OMMB	**Old Mammoth Mi**	**2.58**	**80**		Pn	11 14 08.8	+0.5
KCPM	**Cahto Peak**	**2.70**	**337**	Pn	Pn	11 14 10.4	+0.6
PNTR	**Pine Nut**	**2.78**	**47**		Pn	11 14 12.3	+1.4
VCNR	**Virginia City**	**2.89**	**43**		Pn	11 14 12.7	+0.3
BEKR	**Beckworth**	**3.02**	**28**		Pn	11 14 14.3	+0.1
LHV	**Little Huntoon**	**3.11**	**69**		Pn	11 14 15.9	+0.7
RYN	**Ryan**	**3.23**	**63**		Pn	11 14 17.8	+0.7
NVAR	**Mina Array Bea**	**3.32**	**67**	Pn	Pn	11 14 18.3	0.0
PAHR	**Pah Rah Range**	**3.33**	**41**		Pn	11 14 18.5	0.0
ISA	**Isabella, Lake**	**3.38**	**116**	Pn	Pn	11 14 20.4	+1.3
WDC	**Whiskeytown Da**	**3.38**	**356**	Pn	Pn	11 14 18.6	-0.3

IDC 08 11:40:31.0±6.9, 6.35°S×148.81°E, h94km±52km, mb3.3/2, mb1 3.4/4, mb1mx3.1/29, mbtmp3.5/4, Error ellipse: s-maj=94.9km s-min=52.7km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.45**	**208**	P	Pn	11 41 22.9	+0.1
	2.9nm,0.3s,baz=7.7,slow=8.9,SNR=11						
PMG				S	Sn	11 42 03.0	+0.3
	1.8nm,0.3s,baz=16,slow=18,SNR=2.5						
WRA	**Warramunga Arr**	**19.50**	**225**	P	P	11 44 50.9	-0.1
	0.2nm,0.3s,baz=52,slow=10,SNR=24						
ASAR	**Alice Springs**	**22.41**	**218**	P	P	11 45 22.6	+0.5
	1.0nm,0.7s,baz=49,slow=9.1,SNR=14						
FITZ	**Fitzroy Crossi**	**25.44**	**241**	P	P	11 45 50.4	+0.1
	1.7nm,0.9s,baz=47,slow=7.8,SNR=5.6						
TORD	**Torodi Ar. Bea**	**146.92**	**284**	PKPbc	PKPdf	12 00 02.5	+0.9
	0.2nm,0.3s,baz=89,slow=3.3,SNR=4.1						

*IDC **08** 11:45:43.5±1.9, 21.11°S×178.79°W, h515km±23km, mb3.1/10, mb1 3.4/12, mb1mx3.2/33, mbtmp4.1/12, Error ellipse: s-maj=21.9km s-min=12.1km az=140.0*
*NEIC **08** 11:45:46.0±1.5, 21.1°S±0.1°×178.9°W±0.1°, h539km±9km, mb4.1/16, Error ellipse: s-maj=16.2km s-min=15.9km az=132.0*
ISC 08 11:45:46.9±0.6, 21.3°S±0.1°×178.91°W±0.10°, h550km, n44, σ0s89/41, mb3.8/18, 4C, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.53**	**320**	P	**P**	**11 47 14.7**	**+1.6**
NIUE	**Niue**	**8.71**	**77**	P	P	11 47 47.8	-3.9
NIUE				S	**S**	**11 49 35.3**	**+1.1**
AFI	**Afiamalu**	**9.97**	**44**	P	P	11 47 59.7	-5.1
	7.1nm,0.3s,baz=211,slow=4.3,SNR=22						
AFI				S	S	11 49 46.5	-11
	2.0nm,0.3s,baz=219,slow=18,SNR=2.3						
AFI	**Afiamalu**	**9.97**	**44**	P	P	11 47 60.0	-4.8
OUZ	**Omahuta**	**15.39**	**204**	P	**P**	**11 49 00.8**	**+0.6**
OUZ				IAmb	IAmb	11 49 03.1	
	comp=Z,13nm,0.6s						
URZ	**Urewera**	**17.29**	**191**	P	**P**	**11 49 16.6**	**-1.4**
	comp=Z,2.1nm,0.3s,baz=260,slow=2.4,SNR=14						
URZ	**Urewera**	**17.29**	**191**	P	**P**	**11 49 16.7**	**-1.4**
QRZ	**Quartz Range**	**20.82**	**199**	P	**P**	**11 49 49.8**	**-0.5**
RPZ	**Rata Peaks**	**23.91**	**198**	P	**P**	**11 50 18.1**	**+0.3**
	comp=Z,4.7nm,0.7s,baz=72,slow=11,SNR=2.3						
CTA	**Charters Tower**	**32.58**	**266**	P	**P**	**11 51 34.5**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=44,slow=12,SNR=1.2						
STKA	**Stephens Creek**	**36.70**	**245**	P	**P**	**11 52 07.9**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=111,slow=15,SNR=4.3	

ASAR				S		**Sn**	**11 57 11.1**	**-3.2**
	0.1nm,0.3s,baz=332,slow=37,SNR=1.6							
MKAR	**Makanchi Array**	**68.31 327**		P		**P**	**12 01 12.5**	**-2.8**
	0.3nm,0.4s,baz=118,slow=8.1,SNR=6.3							

MOS ***08*** *12:09:26.4±1.0,38˚.87N×142˚.21E,h48km,mb4.6/14,Error ellipse: s-maj=9.8km s-min=6.4km az=89.8*
JMA ***08*** *12:09:27.9±0.1,38˚.84N×142˚.11E,h44km±1km,M4.0*
JMA Felt II J1.
NIED ***08*** *12:09:27.9,38˚.84N×142˚.11E,h44km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.82; Mθθ-0.01; Mφφ-0.81; Mrθ0.36; Mθφ0.03; Mφr0.70; Fault plane solution: M₀1.13000×10¹⁵ NP1:φs17.00000°, δ67.00000°,λ.104.00000°. NP2:φs163.00000°,δ27.00000°, λ.59.00000°.*
IDC ***08*** *12:09:29.3±2.0,38˚.88N×142˚.15E,h57km±17km,mb3.7/11, mb1 3.9/16,mb1mx3.7/44,mbtmp4.0/16,ML3.4/5,MS3.0/5, Ms1 3.0/5,ms1mx2.8/39 Error ellipse: s-maj=20.0km s-min=10.4km az=109.0*
NEIC ***08*** *12:09:30.2±1.4,38˚.80N±0˚.03×142˚.0E±0˚.1,h62km±9km, mb4.5/16, Error ellipse: s-maj=16.5km s-min=1.8km az=103.0*

ISC 08 12:09:27.0±1.0,38˚.82N±0˚.04×142˚.29E±0˚.05,h41km±9km, n104,σ1$81/112,mb4.4/29,3C-1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
OFUJ	**Ofunato**	**0.55**	**299**	P		**Pn**	**12 09 37.9**	**-0.6**
OFUJ				S		**Sn**	**12 09 44.8**	**-1.8**
JKMT	**Kesennumamotoy**	**0.64**	**270**	P		**Pn**	**12 09 38.7**	**-0.9**
JKMT				S		**Sn**	**12 09 46.1**	**-2.5**
JIO	**Ouri**	**0.82**	**244**	P		**Pn**	**12 09 41.4**	**-0.7**
JIO				S		**Sn**	**12 09 50.5**	**-2.5**
JMK	**Ichinoseki**	**0.84**	**280**	P		**Pn**	**12 09 41.6**	**-0.8**
JMK				S		**Sn**	**12 09 51.1**	**-2.5**
JOM	**Ohasama**	**1.01**	**311**	P		**Pn**	**12 09 44.3**	**-0.5**
JOM				S		**Sn**	**12 09 56.1**	**-1.7**
JOU	**Okura**	**1.35**	**251**	P		**Pn**	**12 09 48.7**	**-0.7**
JOU				eS		**Sn**	**12 10 04.3**	**-1.8**
JRG	**Rokugo**	**1.41**	**295**	P		**Pn**	**12 09 49.6**	**-0.6**
JYK	**Kaneyama**	**1.51**	**274**	P		**Pn**	**12 09 50.9**	**-0.7**
JMM	**Marumori**	**1.51**	**232**	P		**Pn**	**12 09 50.9**	**-0.7**
JMM				eS		**Sn**	**12 10 08.2**	**-1.8**
JMM	**Marumori**	**1.51**	**232**			**Pn**	**12 09 51.0**	**-0.6**
JANG	**Nango**	**1.67**	**339**	P		**Pn**	**12 09 53.8**	**+0.1**
JANG				S		**Sn**	**12 10 13.7**	**-0.2**
JTM	**Tenmabayashi**	**2.18**	**335**			**Pn**	**12 10 02.9**	**+2.1**
JYT	**Yasato**	**3.07**	**213**	Pn		**Pn**	**12 10 13.4**	**+0.3**
JSD	**Sado**	**3.26**	**257**			**Pn**	**12 10 14.9**	**-0.6**
ERM	**Erimo**	**3.26**	**11**	*i* P		**Pn**	**12 10 17.1**	**+1.4**
ERM	**Erimo**	**3.26**	**11**	Pn		**Pn**	**12 10 17.1**	**+1.4**
MJAR	**Matsushiro Arr**	**3.95**	**236**	P		**Pn**	**12 10 26.5**	**+1.3**
	0.9nm,0.3s,baz=35,slow=13,SNR=56							
MJAR				S		**Sn**	**12 11 12.6**	**+2.3**
	0.6nm,0.3s,baz=82,slow=8.1,SNR=5.0							
MJAR				LR		LR	12 12 05.7	
	comp=Z,143nm,19.1s,baz=55,slow=40							
MAJO	**Matsushiro**	**3.95**	**236**	*i* P		**Pn**	**12 10 26.9**	**+1.7**
MAJO	**Matsushiro**	**3.95**	**236**			**Pn**	**12 10 26.7**	**+1.5**
MAT	**Matsushiro**	**3.95**	**236**	P		**Pn**	**12 10 26.6**	**+1.4**
MAT				eS		**Sn**	**12 11 14.6**	**+4.3**
JEW	**Eniwo**	**4.07**	**351**	Pn		**Pn**	**12 10 28.6**	**+1.9**
JGF	**Kuroka**	**5.08**	**232**	Pn		**Pn**	**12 10 43.3**	**+2.6**
NMR	**Nemuro--Hokkai**	**5.24**	**29**	↑*i* P		**Pn**	**12 10 42.8**	**0.0**
NMR				*i* S		**Sn**	**12 11 38.9**	**-3.0**
JKA	**Kamikawa-asahi**	**5.30**	**2**	Pn		**Pn**	**12 10 45.3**	**+1.7**
ASAJ	**Asahikawa**	**5.30**	**2**	P		**Pn**	**12 10 44.8**	**+1.1**
	2.3nm,0.3s,baz=202,slow=18,SNR=12							
ASAJ				S		**Sn**	**12 11 43.0**	**-0.5**
	1.0nm,0.3s,baz=63,slow=28,SNR=2.3							
INU	**Inuyama**	**5.45**	**232**			**Pn**	**12 10 47.8**	**+2.0**
GLVR	**Golovnino**	**5.49**	**25**	P		**Pn**	**12 10 47.3**	**+1.1**
GLVR				*i* S		**Sn**	**12 11 45.8**	**-2.2**
GLVR				pmax	pmax			
	comp=Z,75nm,0.1s							
GLVR				smax	smax			
	comp=N,400nm,0.3s							
GLVR				smax	smax			
	comp=E,613nm,0.3s							
RUSJ	**Misakicho**	**5.73**	**22**	*e*P		**Pn**	**12 10 51.1**	**+1.6**
RUSJ				*i* S		**Sn**	**12 11 52.2**	**-1.8**
GRPR	**Tuman**	**5.80**	**26**	*e*P		**Pn**	**12 10 50.4**	**0.0**
GRPR				*i* S		**Sn**	**12 11 52.2**	**-3.4**
GRPR				pmax	pmax			
	comp=E,25nm,0.2s							
GRPR				pmax	pmax			
	comp=Z,80nm,0.2s							
GRPR				pmax	pmax			
	comp=N,48nm,0.3s							
GRPR				smax	smax			
	comp=N,373nm,0.2s							
GRPR				smax	smax			
	comp=E,337nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**5.87**	**26**	P		**Pn**	**12 10 51.5**	**+0.1**
YUK				*i* S		**Sn**	**12 11 54.5**	**-2.8**
YUK				pmax	pmax			
	comp=N,76nm,0.2s							
YUK				pmax	pmax			
	comp=E,47nm,0.2s							
YUK				pmax	pmax			
	comp=Z,140nm,0.2s							
YUK				smax	smax			
	comp=N,206nm,0.3s							
YUK				smax	smax			
	comp=E,455nm,0.4s							
JHJ	**Hachijo jima 2**	**6.04**	**200**	P		**Pn**	**12 10 55.0**	**+1.3**
	comp=E,7.7nm,0.3s,baz=86,slow=22,SNR=1.3							
JHJ				S		**Sn**	**12 11 57.6**	**-4.0**
	comp=E,14nm,0.3s,baz=88,slow=23,SNR=1.4							
JWT	**Wachi**	**6.54**	**239**	Pn		**Pn**	**12 11 04.9**	**+4.2**
JHS	**Saijyo**	**8.27**	**245**	Pn		**Pn**	**12 11 28.0**	**+3.5**
JMN	**Monobe**	**8.48**	**236**	Pn		**Pn**	**12 11 27.8**	**+0.5**
USA0B	**Ussuriysk Arra**	**9.41**	**308**	P		**Pn**	**12 11 40.9**	**+0.9**
USA0B	**Ussuriysk Arra**	**9.41**	**308**	Pn		**Pn**	**12 11 40.9**	**+0.9**
USRK	**Ussuriysk Ar.**	**9.41**	**308**	P		**Pn**	**12 11 40.4**	**+0.4**
	baz=118,slow=14,SNR=15							
USRK				LR		LR	12 15 40.6	
	comp=E,93nm,18.1s,baz=84,slow=40							
JNU	**Nakatsue**	**10.85**	**242**	LR		LR	12 16 45.6	
	comp=E,55nm,21.7s,baz=43,slow=40							
JNU	**Nakatsue**	**10.85**	**242**			**Pn**	**12 12 01.7**	**+1.9**
KSRS	**Korea Array**	**11.40**	**268**	P		**Pn**	**12 12 09.5**	**+2.3**
	comp=E,0.3nm,0.3s,baz=75,slow=14,SNR=9.7							
KSRS				LR		LR	12 16 04.7	
	comp=E,73nm,19.2s,baz=75,slow=35							
KSAR	**Wonju Array Be**	**11.43**	**268**	P		Pn	12 12 11.9	+4.2
KSAR	**Wonju Array Be**	**11.43**	**268**	Pn		Pn	12 12 11.9	+4.2
KLR	**Kul'dur**	**12.86**	**327**	*i* P		**Pn**	**12 12 23.6**	**-3.6**
KLR				pmax	pmax			
	comp=Z,4.0nm,1.8s							
ZEA	**Zeya**	**18.13**	**330**	*e*P		**Pn**	**12 13 35.5**	**0.0**
ZEA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ULN	**Ulaanbaatar**	**26.98**	**301**	*i* P		**P**	**12 15 03.9**	**-1.0**
ULN				pmax	pmax			
	comp=Z,2.0nm,1.0s							
SONM	**Songino Array**	**27.41**	**301**	P		**P**	**12 15 08.4**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=96,slow=8.2,SNR=5.1							
SONM	**Songino Array**	**27.41**	**301**	IAmb		IAmb	12 15 11.5	
	comp=Z,1.3nm,1.0s							
H11N2	**WAKE ISLAND Hy**	**28.53**	**125**	T		T	12 45 46.1	
	baz=317,slow=75,SNR=1627							
H11N1	**WAKE ISLAND Hy**	**28.54**	**125**	T		T	12 45 47.0	
	baz=317,slow=75,SNR=1862							
H11N3	**WAKE ISLAND Hy**	**28.55**	**125**	T		T	12 45 47.5	
	baz=317,slow=75,SNR=1932							
H11S1	**WAKE ISLAND Hy**	**29.31**	**127**	T		T	12 46 43.2	
	baz=319,slow=76,SNR=135							
H11S3	**WAKE ISLAND Hy**	**29.31**	**127**	T		T	12 46 44.5	
	baz=319,slow=76,SNR=196							
H11S2	**WAKE ISLAND Hy**	**29.32**	**127**	T		T	12 46 44.4	
	baz=319,slow=76,SNR=137							
ZAK	**Zakamensk**	**29.75**	**306**	*e*P		**P**	**12 15 28.6**	**-0.9**
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
BILL	**Bilibino**	**32.12**	**17**	*e*P		**P**	**12 15 54.1**	**+4.0**
BILL				*e*			12 17 01.0	
BILL				pmax	pmax			
	comp=Z,5.0nm,1.3s							
ZAA0	**Zalesovo Array**	**41.25**	**311**	P		**P**	**12 17 08.0**	**+0.1**
ZAA0				IAmb	IAmb		12 17 08.1	
	comp=Z,4.3nm,0.6s							
ZALV	**Zalesovo Beam**	**41.25**	**311**	P		**P**	**12 17 07.2**	**-0.7**
	comp=Z,3.6nm,0.4s,baz=88,slow=8.5,SNR=17							
ZALV				LR		LR	12 35 33.6	
	comp=Z,29nm,18.8s,baz=82,slow=38							
ZALV	**Zalesovo Beam**	**41.25**	**311**	*i* P		**P**	**12 17 07.5**	**-0.4**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.4s							
ZALV	**Zalesovo Beam**	**41.25**	**311**	P		**P**	**12 17 08.1**	**+0.2**
NRIK	**Noril'sk**	**41.95**	**334**	*i* P		**P**	**12 17 13.0**	**-0.4**
NRIK				pmax	pmax			
	comp=Z,8.0nm,1.7s							
MK31	**Makanchi Array**	**43.78**	**301**	P		**P**	**12 17 28.2**	**-0.4**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.9s							
MK31	**Makanchi Array**	**43.78**	**301**	P		**P**	**12 17 28.2**	**-0.4**
MKAR	**Makanchi Array**	**43.78**	**301**	P		**P**	**12 17 28.2**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=86,slow=10,SNR=21							
MKAR	**Makanchi Array**	**43.78**	**301**	P		**P**	**12 17 28.1**	**-0.5**
MAKZ	**Makanchi**	**43.99**	**301**	P		**P**	**12 17 29.8**	**-0.5**
MAKZ				pmax	pmax			
	comp=Z,4.0nm,0.9s							
MAKZ	**Makanchi**	**43.99**	**301**	P		**P**	**12 17 29.8**	**-0.5**
KURK	**Kurchatov**	**45.40**	**307**	*ce*P		**P**	**12 17 40.7**	**-0.6**
KURK				pmax	pmax			
	comp=Z,10.0nm,0.7s							
KURK	**Kurchatov**	**45.40**	**307**	P		**P**	**12 17 40.4**	**-0.9**
IL31		**47.62**	**33**	P		**P**	**12 18 00.6**	**+2.0**
ILAR	**Eielson Array**	**47.62**	**33**	P		**P**	**12 18 00.3**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=264,slow=6.0,SNR=13							
ILAR	**Eielson Array**	**47.62**	**33**	P		**P**	**12 18 00.6**	**+2.0**
ILAR	**Eielson Array**	**47.62**	**33**	P		**P**	**12 18 00.6**	**+2.0**
BRVK	**Borovoye**	**49.95**	**311**	P		**P**	**12 18 16.6**	**-0.1**
BRVK				pmax	pmax			
	comp=Z,4.0nm,0.6s							
BRVK	**Borovoye**	**49.95**	**311**	P		**P**	**12 18 16.6**	**-0.1**
EPYK	**Eagle Plains**	**51.64**	**31**	P		**P**	**12 18 32.6**	**+3.4**
INK	**Inuvik**	**52.49**	**28**	P		**P**	**12 18 37.5**	**+2.2**
	comp=Z,1.7nm,0.9s,baz=257,slow=4.4,SNR=2.1							
INK	**Inuvik**	**52.49**	**28**	IAmb		IAmb	12 18 59.5	
	comp=Z,6.7nm,1.4s							
KKAR	**Karatay Array**	**52.84**	**299**	P		**P**	**12 18 37.6**	**-0.9**
KKAR	**Karatay Array**	**52.84**	**299**	P		**P**	**12 18 37.6**	**-0.9**
ARU	**Arti**	**55.49**	**318**	*d* P		**P**	**12 18 57.3**	**-0.2**
ARU							12 19 57.9	
ARU				S		**S**	**12 26 36.6**	**-2.9**
ARU				SS		**SS**	**12 30 16.0**	**-8.1**
ARU				pmax	pmax			
	comp=Z,13nm,1.1s							
C36M	**Paulatuk**	**55.52**	**25**	P		**P**	**12 18 59.4**	**+1.9**
C36M				IAmb		IAmb	12 18 59.5	
	comp=Z,8.5nm,1.4s							
ABKAR	**Akbulak array**	**57.33**	**310**	P		**P**	**12 19 10.4**	**-0.3**
ABKAR				IAmb		IAmb	12 19 10.8	
	comp=Z,3.7nm,0.7s							
ABKAR	**Akbulak array**	**57.33**	**310**	P		**P**	**12 19 10.2**	**-0.5**
WB0	**Warramunga Arr**	**58.74**	**189**	P		**P**	**12 19 20.9**	**+0.1**
WB0				IAmb		IAmb	12 19 46.7	
	comp=Z,7.5nm,1.4s							
WRAB	**Tennant Creek**	**58.91**	**189**	P		**P**	**12 19 22.1**	**+0.1**
WRAB				pmax	pmax			
	comp=Z,4.0nm,1.3s							
WRAB	**Tennant Creek**	**58.91**	**189**	P		**P**	**12 19 22.1**	**+0.1**
WRAB				IAmb		IAmb	12 19 26.9	
	comp=Z,4.0nm,1.3s							
WR0	**Warramunga Arr**	**58.91**	**189**	P		**P**	**12 19 22.0**	**0.0**
WR0				IAmb		IAmb	12 19 34.6	
	comp=Z,7.4nm,1.4s							
WB2	**Warramunga Arr**	**58.92**	**189**	P		**P**	**12 19 22.2**	**+0.1**
WB2				IAmb		IAmb	12 19 22.8	
	comp=Z,1.9nm,0.7s							
WRA	**Warramunga Arr**	**58.92**	**189**	P		**P**	**12 19 22.1**	**0.0**
	comp=Z,1.4nm,0.5s,baz=6.4,slow=7.1,SNR=55							
WRA	**Warramunga Arr**	**58.92**	**189**	P		**P**	**12 19 21.2**	**-0.8**
ASAR	**Alice Springs**	**62.65**	**189**	P		**P**	**12 19 47.5**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=13,slow=10,SNR=16							
ASAR	**Alice Springs**	**62.65**	**189**	P		**P**	**12 19 48.2**	**+0.8**
ASAR	**Alice Springs**	**62.65**	**189**	P		**P**	**12 19 48.2**	**+0.8**
OBN	**Obninsk**	**67.08**	**323**	*e*P		**P**	**12 20 18.4**	**+2.5**
OBN				pmax	pmax			
	comp=Z,4.0nm,0.6s							
FINES	**FINESS Array B**	**67.56**	**332**	P		**P**	**12 20 18.2**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=47,slow=8.4,SNR=7.6							
FINES	**FINESS Array B**	**67.56**	**332**	*i* P		**P**	**12 20 19.1**	**+0.3**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.6s							
FINES	**FINESS Array B**	**67.56**	**332**	P		**P**	**12 20 18.8**	**0.0**
KIV	**Kislovodsk**	**70.26**	**311**	*e*P		**P**	**12 20 36.6**	**+0.5**
KIV				pmax	pmax			
	comp=Z,26nm,1.0s							
NOA	**NORSAR Array B**	**72.81**	**337**	P		**P**	**12 20 50.9**	**-0.1**
	comp=Z,1.4nm,1.1s,baz=54,slow=7.0,SNR=2.6							
AKASG	**Malin Array Be**	**73.31**	**322**	P		**P**	**12 20 53.5**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=43,slow=6.5,SNR=4.7							
AKASG	**Malin Array Be**	**73.31**	**322**	*ce*P		**P**	**12 20 54.4**	**+0.3**
CLL	**Collm**	**79.89**	**330**	*e*P		**P**	**12 21 31.0**	**-0.3**
CLL	**Collm**	**79.89**	**330**	*e*P		**P**	**12 21 31.0**	**-0.3**
TXAR	**Lajitas Array**	**88.49**	**53**	P		**P**	**12 22 17.2**	**+1.8**
	comp=Z,0.2nm,0.7s,baz=300,slow=3.3,SNR=2.3							

IDC ***08*** *12:28:17.2±1.3,38˚.97N×110˚.94E,h0km,mb3.6/6, mb1 3.9/7,mb1mx3.5/48,mbtmp3.7/7,ML3.2/1,MS2.5/1, Ms1 2.5/1,ms1mx2.3/47,Error ellipse: s-maj=44.7km s-min=17.0km az=62.0*

ISC 08 12:28:18.8±1.4,39˚.0N±0˚.1×110˚.9E±0˚.3,h10km,n8, σ0$67/7,mb3.5/6,Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SONM	**Songino Array**	**9.45**	**341**	Pn		**Pn**	**12 30 34.9**	**-0.2**
	0.2nm,0.3s,baz=155,slow=13,SNR=33							
SONM				Lg		Lg	12 33 15.7	
	0.3nm,0.3s,baz=174,slow=29,SNR=9.9							
KSRS	**Korea Array**	**13.49**	**91**	LR		LR	12 36 11.4	
	comp=Z,18nm,18.7s,baz=55,slow=35							
MKAR	**Makanchi Array**	**22.28**	**300**	P		**P**	**12 33 15.7**	**-0.4**
	1.0nm,0.8s,baz=107,slow=12,SNR=5.3							
CMAR	**Chiang Mai Arr**	**22.91**	**210**	P		**P**	**12 33 23.0**	**+0.1**
	5.3nm,0.8s,baz=13,slow=9.5,SNR=35							
ZALV	**Zalesovo Beam**	**23.21**	**319**	P		**P**	**12 33 26.4**	**+0.6**
	0.3nm,0.3s,baz=128,slow=9.3,SNR=1.5							
KURBB	**Kurchatov Arra**	**25.54**	**308**	P		**P**	**12 33 48.0**	**+0.5**
	0.6nm,0.7s,baz=107,slow=10,SNR=5.3							
WRA	**Warramunga Arr**	**62.58**	**155**	P		**P**	**12 38 43.6**	**+0.6**
	0.4nm,0.9s,baz=349,slow=7.1,SNR=6.3							
ASAR	**Alice Springs**	**65.92**	**157**	P		**P**	**12 39 04.2**	**-0.8**
	0.9nm,0.9s,baz=344,slow=6.5,SNR=7.4							

BJI ***08*** *12:42:38.4±0.0,4˚.77N×126˚.30E,h95km,mB5.1/47, mb5.0/68*
MOS ***08*** *12:42:40.5±1.1,5˚.03N×125˚.87E,h89km,mb4.9/40,Error ellipse: s-maj=11.1km s-min=5.1km az=106.5*
MAN ***08*** *12:42:41.6,4˚.92N×126˚.14E,h64km,mb5.4,ML4.4,MS4.6*
NEIC ***08*** *12:42:42.2±1.9,4˚.99N±0˚.05×126˚.24E±0˚.09,h90km±5km, mb5.0/99,Error ellipse: s-maj=13.0km s-min=7.1km az=75.0*
IDC ***08*** *12:42:43.5±1.0,5˚.01N×126˚.15E,h101km±8km,mb4.4/27, mb1 4.5/30,mb1mx4.4/44,mbtmp4.8/30,MS3.5/15, Ms1 3.5/15,ms1mx3.3/38,Error ellipse: s-maj=15.4km s-min=7.3km az=83.0*
GCMT ***08*** *12:42:43.2±0.3,5˚.04N±0˚.02×126˚.14E±0˚.03,h95km±4km, MW4.8/78,Moment Tensor Solution. s17,c17; s78,c113; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.97±.10; Mθθ-0.63±.11; Mφφ-0.34±.12; Mrθ0.99±.05; Mθφ1.69±.08; Mφr0.60±.07; Best double couple: M₀2.22000×10¹⁶ NP1:φs349.00000°,δ56.00000°,λ.152.00000°. NP2: φs96.00000°, δ67.00000°,λ.37.00000°. Principal axes: T 2.2240, Plg42.0000°, Azm316.0000°; N -0.0070, Plg47.0000°, Azm123.0000°; P -2.2170, Plg7.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***08*** *12:42:45.5±0.8,5˚.N±.8˚×12˚.6E±˚,h88km±7km,M5.0/19, mB5.4/19,mb5.3/18,MLv5.5/11,Mw(mB)4.8/19*
KLM ***08*** *12:42:45.0,5˚.22N×126˚.32E,h109km,mb5.1*

ISC 08 12:42:43.0±0.5,5˚.00N±0˚.03×126˚.21E±0˚.05,h100km±4km, n441,σ1$54/473,mb4.9/126,15C-6D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DDMP	**Don Marcelino,**	**1.20**	**336**	*e*P		**Pn**	**12 43 03.9**	**-1.8**
DDMP				*e*S		**Sn**	**12 43 20.2**	**-2.6**
SGSI	**Sangihe**	**1.47**	**207**	P		**Pn**	**12 43 09.5**	**+0.5**
MATI	**Mati**	**1.93**	**1**	*e*P		**Pn**	**12 43 13.4**	**-1.3**
MATI				*e*S		**Sn**	**12 43 38.8**	**-0.1**
DAV	**Davao City (W)**	**2.15**	**343**	P		**Pn**	**12 43 18.0**	**+0.4**
DAV				S		**Sn**	**12 43 45.5**	**+1.6**
	713nm,0.3s,baz=109,slow=11,SNR=4.9							
DAV				LR		LR	12 44 16.3	
	comp=Z,2μm,21.4s,baz=146,slow=44							
DAV	**Davao City (W)**	**2.15**	**343**			**Pn**	**12 43 17.9**	**+0.4**
DAV				Sn		**Sn**	**12 43 43.4**	**-0.5**
DAV	**Davao City (W)**	**2.15**	**343**	‖*e*P		**Pn**	**12 43 18.4**	**+0.9**
SKMP	**Bagumbayan, Su**	**2.24**	**312**	*e*P		**Pn**	**12 43 17.8**	**-1.0**
SKMP				*e*S		**Sn**	**12 43 45.1**	**-0.9**
BUKP	**Musuan**	**3.08**	**338**	*e*P		**Pn**	**12 43 30.3**	**+0.4**
BUKP				*e*S		**Sn**	**12 44 11.2**	**+5.3**
BIP	**Bislig**	**3.20**	**1**	‖*e*P		**Pn**	**12 43 32.2**	**+0.7**
BIP				*e*S		**Sn**	**12 44 13.3**	**+4.4**
CGP	**Cagayan de Oro**	**3.75**	**336**	‖*e*P		**Pn**	**12 43 39.9**	**+1.1**
CGP				*i* S		**Sn**	**12 44 29.8**	**+7.8**
PAGZ	**Pagadian**	**3.99**	**315**	*e*P		**Pn**	**12 43 41.2**	**-0.9**
PAGZ				*e*S		**Sn**	**12 44 31.6**	**+3.8**
TNTI	**Ternate**	**4.36**	**165**	P		**Pn**	**12 43 46.8**	**-0.3**
TNTI	**Ternate**	**4.36**	**165**	Pn		**Pn**	**12 43 47.1**	**+0.1**
TNTI				Sn		**Sn**	**12 44 34.7**	**-2.1**
ZCP	**Zamboanga City**	**4.54**	**295**	↑*i* P		**Pn**	**12 43 49.8**	**+0.4**
ZCP				*i* S		**Sn**	**12 44 40.4**	**-0.7**
GLSP	**General Luna,**	**4.75**	**359**	*e*P		**Pn**	**12 43 53.0**	**+0.6**
GLSP				*e*S		Sn	12 44 55.8	+9.4
KMSI	**Cibinong**	**4.93**	**207**	P		**Pn**	**12 43 55.7**	**+0.9**
TBP	**Tagbilaran**	**5.21**	**334**	‖*e*P		Pn	12 44 03.8	+5.3
GTOI	**Gorontalo**	**5.39**	**216**	P		**Pn**	**12 44 01.4**	**+0.4**
	4.5nm13μm2μm,0.9s							
LLP	**Lapu-Lapu**	**5.73**	**337**	*e*P		**Pn**	**12 44 06.9**	**+1.3**
LLP				*e*S		**Sn**	**12 45 16.3**	**+6.2**
BESP	**Borongan**	**6.60**	**353**	*e*P		**Pn**	**12 44 19.8**	**+2.3**
GUIM	**Jordan**	**6.64**	**328**	*e*P		**Pn**	**12 44 18.5**	**+0.5**
LUWI	**Luwuk**	**6.92**	**210**	P		**Pn**	**12 44 24.6**	**+2.8**
	6.0nm16μm1μm,0.6s							
LUWI	**Luwuk**	**6.92**	**210**	Pn		**Pn**	**12 44 25.1**	**+3.3**
SANI	**Sanana**	**7.01**	**182**	P		**Pn**	**12 44 19.9**	**-3.2**
	1.4nm7μm235nm,0.8s							
JAP	**San Jose, Anti**	**7.10**	**324**	↑*e*P		**Pn**	**12 44 26.7**	**+2.4**
APSI	**Ampana**	**7.43**	**218**	P		**Pn**	**12 44 31.8**	**+2.9**
	13μm1μm,1.1s							
MYLDM	**Lahad Datu**	**7.68**	**272**	Pn		**Pn**	**12 44 34.9**	**+2.7**
SIJI	**Sorong**	**7.71**	**139**	P		**Pn**	**12 44 32.5**	**-0.2**
	15nm,0.3s,baz=264,slow=22,SNR=35							
SIJI				S		**Sn**	**12 45 56.0**	**-2.5**
	9.7nm,0.3s,baz=227,slow=23,SNR=10							
SIJI				LR		LR	12 47 56.6	
	comp=Z,256nm,18.7s,baz=356,slow=40							
MPSI	**Mapaga**	**7.82**	**234**	P		**Pn**	**12 44 34.9**	**+0.7**
	4μm295nm,0.9s							
NLAI	**Namlea**	**8.23**	**174**	P		**Pn**	**12 44 38.1**	**-1.7**
MSAI	**Masohi**	**8.73**	**162**	P		**Pn**	**12 44 48.1**	**+1.6**
PVCP	**Virac**	**8.78**	**347**	*e*P		**Pn**	**12 44 48.3**	**+1.2**
PVCP				*e*S		**Sn**	**12 46 22.9**	**-1.5**
SPMM	**Sapulut**	**9.71**	**269**	P		**Pn**	**12 45 03.0**	**+3.1**
FAKI	**Fak Fak**	**9.91**	**142**	P		**Pn**	**12 45 03.7**	**+1.1**
	831nm66nm,0.9s							
FAKI	**Fak Fak**	**9.91**	**142**	Pn		**Pn**	**12 45 03.2**	**+0.6**
KKM	**Kota Kinabalu**	**10.00**	**276**	Pn		**Pn**	**12 45 03.8**	**-0.1**
LQP	**Lukban**	**10.15**	**333**	‖*e*P		**Pn**	**12 45 09.3**	**+3.3**
TTSI	**Tana Toraja**	**10.23**	**219**	P		**Pn**	**12 45 09.4**	**+2.5**
	4μm415nm,1.0s							
TGY	**Tagaytay City**	**10.43**	**330**	LR		LR	12 49 16.5	
	comp=Z,270nm,19.0s,baz=210,slow=38							
SMKI	**Samarinda**	**10.49**	**239**	P		Pn	12 45 15.1	+4.6
SPSI	**Sidrap Palu**	**10.99**	**216**	P		**Pn**	**12 45 18.9**	**+1.7**
	984nm101nm,0.8s							
BNSI	**Bone**	**11.15**	**213**	P		**Pn**	**12 45 22.6**	**+3.1**
BKB	**Balikpapan**	**11.

FITZ Fitzroy Crossi 22.96 181 P **P** **12 47 39.3 +0.2**
comp=Z,32nm,0.9s,baz=1.3,slow=7.8,SNR=95
FITZ S **S** **12 51 40.8 -0.9**
comp=Z,6.0nm,0.7s,baz=171,slow=20,SNR=3.1
FITZ Fitzroy Crossi 22.96 181 IAmb IAmb 12 48 05.9
comp=Z,32nm,0.8s
IPM Ipoh 25.10 270 P **P** **12 47 58.9 +0.1**
IPM Ipoh 25.10 270 P **P** **12 47 59.0 +0.2**
SRAK Srakaew 25.44 292 P **P** **12 47 56.8 -4.9**
comp=Z,7µmcomp=Z,1µm,0.7s
KULM Kulim 25.46 272 P **P** **12 48 07.0 +5.0**
WB0 Warramunga Arr 25.90 162 P **P** **12 48 05.7 -0.1**
WB0 IAmb IAmb 12 48 32.0
comp=Z,74nm,1.1s
NONG Nongkai 26.01 302 P **P** **12 48 10.3 +3.4**
comp=Z,41nm,1.6s
WRAB Tennant Creek 26.04 162 *i* P **P** **12 48 07.1 0.0**
WRAB pmax pmax
comp=Z,18nm,0.9s
WRAB Tennant Creek 26.04 162 P **P** **12 48 07.4 +0.3**
WRAB IAmb IAmb 12 48 34.1
comp=Z,52nm,1.1s
WRA Warramunga Arr 26.05 162 P **P** **12 48 07.1 -0.1**
comp=Z,7.1nm,0.5s,baz=342,slow=10,SNR=80
WRA ScP **ScP** **12 55 05.0 +1.3**
comp=Z,1.6nm,0.7s,baz=349,slow=2.8,SNR=5.0
WRA Warramunga Arr 26.05 162 P **P** **12 48 07.0 -0.2**
WRA Warramunga Arr 26.05 162 P **P** **12 48 07.0 -0.2**
WB2 Warramunga Arr 26.05 162 P **P** **12 48 07.5 +0.3**
WB2 IAmb IAmb 12 48 33.1
comp=Z,36nm,0.7s
WR0 Warramunga Arr 26.12 162 P **P** **12 48 07.2 -0.7**
WR0 IAmb IAmb 12 48 34.9
comp=Z,20nm,0.7s
CHAI Chaiyaphum 26.13 296 P **P** **12 48 08.2 +0.2**
comp=Z,395nmcomp=Z,59nm,0.8s
JSU Suzuyama 26.66 8 P **P** **12 48 12.6 -0.1**
JSU IAmb IAmb 12 48 14.0
comp=Z,74nm,1.0s
PSA00 Pilbara Seismi 27.14 193 P **P** **12 48 17.4 +0.4**
PSA00 IAmb IAmb 12 48 18.0
comp=Z,42nm,0.7s
PSA00 Pilbara Seismi 27.14 193 P **P** **12 48 17.0 0.0**
PSA00 IAmb IAmb 12 48 18.3
comp=Z,24nm,0.7s
PSI Prapat 27.31 266 P **P** **12 48 18.4 -0.4**
comp=Z,4.0nm,0.8s,baz=359,slow=4.1,SNR=1.3
PSI Prapat 27.31 266 P **P** **12 48 18.4 -0.4**
PSI pmax pmax
comp=Z,10.0nm,0.7s
RPSI Rantau Prapat 27.32 266 P **P** **12 48 18.8 +0.1**
RPSI Rantau Prapat 27.32 266 P **P** **12 48 18.4 -0.3**
WHN Wuhan 27.76 338 P **P** **12 48 22.7 +0.3**
WHN S **S** **12 52 53.0 -4.8**
WHN LR LR
comp=Z,800nm,18.7s
NJ2 Nanjing 27.78 347 *e*P **P** **12 48 24.1 +1.5**
NJ2 pmax pmax
comp=Z,13nm,0.6s
UTTA Uttaradit 28.11 299 P **P** **12 48 29.0 +3.3**
comp=Z,14nm,0.8s
UTHA Uthaitani 28.31 294 P **P** **12 48 28.5 +1.0**
comp=Z,24nm,0.6s
JNU Nakatsue 28.31 8 P **P** **12 48 27.1 -0.3**
comp=Z,29nm,0.8s,baz=337,slow=1.5,SNR=21
JNU Nakatsue 28.31 8 P **P** **12 48 27.7 +0.3**
JNU IAmb IAmb 12 48 29.1
comp=Z,37nm,1.0s
QIS Mount Isa 28.61 153 P **P** **12 48 31.1 +1.0**
baz=29,SNR=5.7
SUKH Sukhothai 28.82 298 P **P** **12 48 33.3 +1.3**
comp=Z,16nm,0.9s
MTSU Mount Surprise 29.11 143 P **P** **12 48 34.3 -0.4**
baz=29,SNR=4.7
LHMI Lhok Sumawe 29.15 272 P **P** **12 48 35.1 +0.1**
PAYA Payao 29.37 301 P **P** **12 48 38.8 +1.9**
comp=Z,9µmcomp=Z,147nm,0.7s
JMN Monobe 29.46 13 P **P** **12 48 38.1 +0.5**
JMN IAmb IAmb 12 48 41.5
comp=Z,34nm,1.0s
AS31 Alice Springs 29.47 166 P **P** **12 48 38.1 +0.3**
ASAR Alice Springs 29.47 166 P **P** **12 48 38.2 +0.5**
comp=Z,1.9nm,0.5s,baz=347,slow=7.0,SNR=48
ASAR ScP **ScP** **12 55 15.4 +1.2**
comp=Z,1.1nm,0.5s,baz=345,slow=3.9,SNR=4.7
ASAR Alice Springs 29.47 166 P **P** **12 48 37.7 0.0**
ASAR Alice Springs 29.47 166 P **P** **12 48 37.7 0.0**
ENH Enshi 29.67 330 P **P** **12 48 38.6 -0.9**
ENH IAmb IAmb 12 48 39.6
comp=Z,31nm,1.1s
CM36 Chiang Mai Arr 29.69 299 P **P** **12 48 40.0 +0.3**
CM35 Chiang Mai Arr 29.70 300 P **P** **12 48 40.0 +0.1**
CM04 Chiang Mai Arr 29.74 299 P **P** **12 48 41.0 +0.8**
comp=Z,96nmcomp=Z,12nm,0.9s
CM09 Chiang Mai Arr 29.75 299 P **P** **12 48 41.1 +0.8**
comp=Z,71nmcomp=Z,11nm,0.8s
CM01 Chiang Mai Arr 29.77 299 P **P** **12 48 41.0 +0.5**
comp=Z,72nmcomp=Z,9.2nm,1.0s
CM05 Chiang Mai Arr 29.77 299 P **P** **12 48 41.0 +0.5**
comp=Z,54nmcomp=Z,7.9nm,0.9s
CM34 Chiang Mai Arr 29.77 300 P **P** **12 48 42.0 +1.5**
CM02 Chiang Mai Arr 29.78 299 P **P** **12 48 41.0 +0.4**
comp=Z,86nmcomp=Z,12nm,1.0s
CM31 Chiang Mai Arr 29.80 299 P **P** **12 48 41.8 +1.1**
comp=Z,206nm,0.6s
CM31 Chiang Mai Arr 29.80 299 P **P** **12 48 41.0 +0.3**
CMAR Chiang Mai Arr 29.80 299 P **P** **12 48 40.5 -0.2**
comp=Z,4.0nm,0.7s,baz=111,slow=7.1,SNR=32
CMAR ScP **ScP** **12 55 17.1 +1.8**
comp=Z,6.0nm,0.9s,baz=132,slow=1.8,SNR=26
CMAR LR LR 13 01 17.3
comp=Z,72nm,18.2s,baz=157,slow=37
CMAR Chiang Mai Arr 29.80 299 P **P** **12 48 39.4 -1.3**
CMAR Chiang Mai Arr 29.80 299 P **P** **12 48 39.4 -1.3**
CM15 Chiang Mai Arr 29.81 299 P **P** **12 48 41.8 +0.9**
comp=Z,88nmcomp=Z,12nm,0.9s
CM13 Chiang Mai Arr 29.81 299 P **P** **12 48 41.5 +0.7**
comp=Z,67nmcomp=Z,9.6nm,1.0s
WRKA Warakurna 29.93 176 P **P** **12 48 42.3 +0.5**
baz=30,SNR=75
CMMT Chiang Mai 29.93 300 P **P** **12 48 42.3 +0.3**
comp=Z,5.7nm,1.1s
CHTO Chiang Mai 29.94 300 P **P** **12 48 41.7 -0.3**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 29.94 300 P **P** **12 48 41.7 -0.3**
CM33 Chiang Mai Arr 29.94 300 P **P** **12 48 42.0 +0.1**
CM32 Chiang Mai Arr 29.96 299 P **P** **12 48 43.0 +0.9**
KMI Kunming 30.12 314⇑ *e*P **P** **12 48 46.7 +2.9**
KMI pmax pmax
comp=Z,18nm,0.5s
KMI pmax pmax
comp=Z,190nm,5.1s
JHS Saijyo 30.52 11 P **P** **12 48 46.3 -0.7**
JHS IAmb IAmb 12 49 08.9
comp=Z,38nm,1.2s
MHMT Maesarieng 30.58 298 P **P** **12 48 48.2 +0.6**
TJN Taejon 31.24 2 *i* P **P** **12 48 54.8 +1.6**
JWT Wachi 31.30 15 P **P** **12 48 53.8 +0.1**
JWT IAmb IAmb 12 48 55.0
comp=Z,16nm,0.6s
INU Inuyama 31.80 17 P **P** **12 48 58.5 +0.3**
INU IAmb IAmb 12 49 08.5
comp=Z,16nm,0.8s
JGF Kuroka 32.14 17 P **P** **12 49 01.5 +0.4**
TIA Tai'an 32.16 346 P **P** **12 49 00.4 -0.9**
TIA pmax pmax
comp=Z,18nm,0.9s
MEEK Meekatharra 32.30 193 P **P** **12 49 02.7 0.0**
baz=32,SNR=19
KSAR Wonju Array Be 32.32 2 P **P** **12 49 03.8 +1.2**
KSAR Wonju Array Be 32.32 2 P **P** **12 49 03.8 +1.2**
INCN Inchon 32.33 1 P **P** **12 49 04.1 +1.3**
INCN pmax pmax
comp=Z,29nm,1.1s
INCN Inchon 32.33 1 P **P** **12 49 04.1 +1.3**
INCN IAmb IAmb 12 49 05.3
comp=Z,29nm,1.1s
KSRS Korea Array 32.34 3 P **P** **12 49 03.4 +0.6**
comp=Z,15nm,0.7s,baz=184,slow=9.6,SNR=95
KSRS PcP **PcP** **12 51 49.8 +1.3**
comp=Z,1.9nm,0.6s,baz=180,slow=2.8,SNR=5.5
KSRS LR LR 13 01 59.5
comp=Z,63nm,22.0s,baz=182,slow=36
KS19 Wonju Array Si 32.38 2 P **P** **12 49 04.3 +1.1**
XAN Xi'an 33.05 333 P **P** **12 49 07.8 -1.4**
XAN pmax pmax
comp=Z,49nm,1.0s
XAN pmax pmax
comp=Z,58nm,3.5s
XAN Xi'an 33.05 333 P **P** **12 49 07.8 -1.4**
XAN pmax pmax
comp=Z,50nm,1.1s
XAN Xi'an 33.05 333 P **P** **12 49 07.8 -1.4**
XAN IAmb IAmb 12 49 08.7
comp=Z,50nm,1.1s
MJAR Matsushiro Arr 33.27 18 P **P** **12 49 09.5 -1.5**
comp=Z,1.8nm,0.6s,baz=190,slow=8.5,SNR=9.8
MJAR LR LR 13 01 08.5
comp=Z,47nm,21.4s,baz=175,slow=33
MJAR Matsushiro Arr 33.27 18 P **P** **12 49 09.9 -1.1**
MJAR pmax pmax
comp=Z,2.0nm,0.7s
MJAR Matsushiro Arr 33.27 18 P **P** **12 49 09.9 -1.1**
MAJO Matsushiro 33.27 18 P **P** **12 49 09.5 -1.5**
MAJO pmax pmax
comp=Z,9.0nm,1.0s
MAJO Matsushiro 33.27 18 P **P** **12 49 09.5 -1.5**
MAT Matsushiro 33.27 18 P **P** **12 49 09.6 -1.4**
MAT *e*S **S** **12 54 19.0 -5.0**
CD2 Chengdu 33.32 323 P **P** **12 49 11.0 -0.5**
CD2 pmax pmax
comp=Z,30nm,0.6s
DL2 Dalian 34.00 354⇑ P **P** **12 49 17.8 +0.5**
DL2 pmax pmax
comp=Z,110nm,0.6s
JSD Sado 34.67 17 P **P** **12 49 22.0 -1.0**
JSD IAmb IAmb 12 49 37.1
comp=Z,57nm,1.5s
MORW Morawa 35.26 196 P **P** **12 49 28.3 +0.1**
baz=36,SNR=5.1
MORW Morawa 35.26 196 P **P** **12 49 28.1 -0.1**
MORW IAmb IAmb 12 49 29.1
comp=Z,20nm,0.9s
JMM Marumori 35.31 20 P **P** **12 49 28.5 -0.1**
FORT Forrest 35.62 177 P **P** **12 49 32.0 +0.7**
baz=36,SNR=28
FORT Forrest 35.62 177 P **P** **12 49 31.6 +0.3**
BJT Baijiatuan 36.02 347 P **P** **12 49 34.3 -0.3**
BJT pmax pmax
comp=Z,60nm,0.7s
BJT Baijiatuan 36.02 347 P **P** **12 49 34.3 -0.3**
BJI Beijing 36.04 347 P **P** **12 49 34.2 -0.5**
BJI pmax pmax
comp=Z,82nm,0.7s
KMBL Kambalda 36.40 186 P **P** **12 49 38.3 +0.3**
baz=37,SNR=7.9
LZH Lanzhou 37.15 329 *e*P **P** **12 49 44.4 -0.1**
LZH pP pwP 12 50 07.7 -2.9
LZH sP sP 12 50 22.5 +5.2
LZH PcP **PcP** **12 52 04.4 +1.6**
LZH pmax pmax
comp=Z,54nm,1.2s
LZH pmax pmax
comp=Z,190nm,4.3s
KLBR Kellerberrin 37.27 192 P **P** **12 49 45.7 +0.3**
baz=38,SNR=20
MUN Mundaring 37.99 194 P **P** **12 49 51.9 +0.5**
baz=38,SNR=6.4
HHC Hu-ho-hao-te 38.03 342 *e*P **P** **12 49 51.6 -0.2**
HHC pmax pmax
comp=Z,40nm,1.0s
HHC pmax pmax
comp=Z,150nm,5.9s
VLA Vladivostok 38.29 7 *i* P **P** **12 49 54.8 +1.1**
VLA pmax pmax
comp=Z,77nm,1.4s
CN2 Changchun 38.65 359 *e*P **P** **12 49 57.0 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
NWAO Narrogin (SRO) 38.67 192 P **P** **12 49 57.8 +0.7**
baz=39,SNR=6.3
NWAO Narrogin (SRO) 38.67 192 P **P** **12 49 57.0 -0.1**
NWAO pmax pmax
comp=Z,55nm,1.3s
NWAO Narrogin (SRO) 38.67 192 P **P** **12 49 57.0 -0.1**
NWAO IAmb IAmb 12 49 58.7
comp=Z,55nm,1.2s
NWAO Narrogin (SRO) 38.67 192 P **P** **12 49 57.0 -0.1**
NWAO IAmb IAmb 12 49 58.7
comp=Z,44nm,1.2s
SHL Shillong 38.72 305 P **P** **12 49 56.8 -1.0**
SHL pmax pmax
comp=Z,38nm,0.7s
SHL Shillong 38.72 305 P **P** **12 49 56.8 -1.0**
BBOO Buckleboo 38.75 167 P **P** **12 49 58.7 +1.0**
baz=39,SNR=32
BBOO Buckleboo 38.75 167 P **P** **12 49 57.4 -0.4**
BBOO IAmb IAmb 12 50 23.7
comp=Z,26nm,0.8s
USA0B Ussuriysk Arra 39.37 7 P **P** **12 50 03.7 +1.0**
USA0B pmax pmax
comp=Z,47nm,1.0s
USA0B Ussuriysk Arra 39.37 7 P **P** **12 50 03.7 +1.0**
USRK Ussuriysk Ar. 39.37 7 P **P** **12 50 03.9 +1.2**
comp=Z,36nm,0.8s,baz=196,slow=7.8,SNR=61
STKA Stephens Creek 39.49 159 P **P** **12 50 05.1 +1.2**
comp=Z,7.9nm,0.8s,baz=333,slow=8.5,SNR=15
STKA LR LR 13 07 06.2
comp=Z,88nm,20.9s,baz=15,slow=37
STKA Stephens Creek 39.49 159 P **P** **12 50 05.2 +1.2**
baz=40,SNR=5.5
STKA Stephens Creek 39.49 159 P **P** **12 50 04.8 +0.8**
STKA pmax pmax
comp=Z,3.0nm,0.8s
STKA Stephens Creek 39.49 159 P **P** **12 50 04.8 +0.8**
MDJ Mudanjiang 39.57 4 P **P** **12 50 06.2 +1.8**
MDJ pmax pmax
comp=Z,85nm,0.9s
MDJ pmax pmax
comp=Z,250nm,4.8s
MDJ Mudanjiang 39.57 4 P **P** **12 50 05.7 +1.3**
HTT Hallett 40.08 163 P **P** **12 50 10.4 +1.6**
baz=40,SNR=12
RKGY Rocky Gully 40.35 192 P **P** **12 50 12.7 +1.7**
baz=41,SNR=12
TEY Ternei 40.90 11⇑ *e*P **P** **12 50 16.6 +1.3**
TEY pmax pmax
comp=E,10.0nm,0.8s
TEY pmax pmax
comp=N,30nm,0.6s
TEY pmax pmax
comp=Z,70nm,0.6s
LSA Lhasa 41.22 311 P **P** **12 50 21.1 +2.3**
LSA pmax pmax
comp=Z,7.0nm,0.6s
LSA Lhasa 41.22 311 P **P** **12 50 21.1 +2.3**
GTA Gaotai 41.75 329 P **P** **12 50 22.3 -0.3**
GTA pP pP 12 50 45.6 +0.9
GTA sP sP 12 50 57.6 +1.9
GTA PcP **PcP** **12 52 18.7 +1.4**
GTA ScP **ScP** **12 55 58.8 +0.1**
GTA S **S** **12 56 36.3 +3.7**
GTA sS sS 12 57 11.7 +1.0
GTA ScS **ScS** **13 00 14.9 -0.9**
GTA pmax pmax
comp=Z,14nm,1.3s
GTA pmax pmax
comp=Z,130nm,8.0s
GTA LR LR
comp=Z,110nm,20.0s
GTA LR LR
comp=Z,170nm,20.4s
GTA LR LR
comp=Z,140nm,17.1s
H11N1 WAKE ISLAND Hy 42.20 66 T T 13 36 36.4
baz=255,slow=75,SNR=8.8
H11N2 WAKE ISLAND Hy 42.21 66 T T 13 36 34.3
baz=255,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 42.22 66 T T 13 36 34.9
baz=255,slow=75,SNR=10
ARMA Armidale 42.81 147 P **P** **12 50 30.4 -0.9**
baz=43,SNR=4.4
TAPN Taplejung 42.86 306 *e*P **P** **12 50 30.9 -1.1**
comp=Z,13nm,0.4s
ODAN Odare 42.92 305 *e*P **P** **12 50 31.5 -0.9**
comp=Z,22nm,0.5s
RAMN Ramite 43.60 304 *e*P **P** **12 50 37.4 -0.5**
comp=Z,28nm,0.7s
KLR Kul'dur 44.32 5*ce*P **P** **12 50 43.6 +0.6**
HIA Hailar 44.45 354*c i* P **P** **12 50 44.7 +0.6**
HIA pmax pmax
comp=Z,68nm,1.3s
HIA Hailar 44.45 354 P **P** **12 50 44.5 +0.5**
GUN Gumba 44.57 305 *e*P **P** **12 50 44.9 -0.9**
comp=Z,33nm,0.5s
PKI Pulchoki 44.82 305 *e*P **P** **12 50 46.9 -0.8**
comp=Z,10.0nm,0.7s
PKIN Phulchoki 44.83 305 *e*P **P** **12 50 46.7 -1.1**
KKN Kakani 45.01 305 *e*P **P** **12 50 47.9 -1.2**
comp=Z,12nm,0.6s
DMN Daman 45.08 305 *e*P **P** **12 50 48.5 -1.2**
GKN Gorkha 45.62 305 *e*P **P** **12 50 52.8 -1.0**
comp=Z,9.7nm,0.3s
ULN Ulaanbaatar 45.76 342*ce*P **P** **12 50 53.7 -0.9**
ULN pmax pmax
comp=Z,24nm,1.7s
ULN Ulaanbaatar 45.76 342 P **P** **12 50 54.2 -0.4**
ULN IAmb IAmb 12 51 19.9
comp=Z,12nm,0.8s
SONM Songino Array 45.93 341 P **P** **12 50 55.5 -0.5**
comp=Z,3.7nm,0.6s,baz=156,slow=8.8,SNR=22
SONM PcP **PcP** **12 52 31.9 +0.6**
comp=Z,8.9nm,0.9s,baz=172,slow=3.8,SNR=11
SONM LR LR 13 11 34.3
comp=Z,82nm,19.1s,baz=146,slow=38
SONM Songino Array 45.93 341 P **P** **12 50 54.5 -1.5**
SONM pmax pmax
comp=Z,4.0nm,0.7s
SONM Songino Array 45.93 341 P **P** **12 50 54.5 -1.5**
KOLN Koldanda 46.38 304 *e*P **P** **12 50 59.1 -0.8**
comp=Z,23nm,0.5s
GRNR Gornyy 46.41 9⇑ *i* P **P** **12 51 01.1 +1.6**
GRNR pmax pmax
comp=N,10.0nm,1.0s
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR MLR MLR
comp=E,130nm,18.0s
GRNR MLR MLR
comp=Z,240nm,15.0s
DANN Dangsing 46.46 305 *e*P **P** **12 50 59.4 -1.2**
comp=Z,67nm,0.6s
PYUN Piuthan 47.00 304 *e*P **P** **12 51 03.4 -1.4**
comp=Z,31nm,0.5s
HYB Hyderabad 48.21 289 *i* P **P** **12 51 11.0 -3.0**
ZEA Zeya 48.59 1 *e*P **P** **12 51 16.6 +0.3**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZAK Zakamensk 49.16 341 *e*P **P** **12 51 18.1 -2.8**
ZAK pmax pmax
comp=Z,3.0nm,1.5s
TLY Talaya 50.17 342 *e*P **P** **12 51 28.5 +0.1**
TLY pmax pmax
comp=Z,46nm,1.3s
TLY Talaya 50.17 342 P **P** **12 51 28.7 +0.3**
TLY IAmb IAmb 12 51 29.4
comp=Z,17nm,1.1s
MOY Mondy 51.02 340 *e*P **P** **12 51 35.1 +0.2**
MOY pmax pmax
comp=Z,27nm,1.5s
WMQ Urumqi 51.39 325 *e*P **P** **12 51 38.0 +0.2**
WMQ pmax pmax
comp=Z,13nm,1.3s
WMQ pmax pmax
comp=Z,190nm,4.1s
WMQ LR LR
comp=Z,2µm,29.2s
WMQ LR LR
comp=Z,2µm,28.8s
WMQ LR LR
comp=Z,440nm,29.0s
BOD Bodaibo 53.54 352 *e*P **P** **12 51 53.4 +0.1**
BOD pmax pmax
comp=Z,28nm,1.1s
PETK Petropavlovsk- 54.46 23 P **P** **12 52 01.3 +1.2**
comp=Z,17nm,1.0s,baz=183,slow=4.9,SNR=8.8
PETK PcP **PcP** **12 53 01.0 -1.5**
comp=Z,6.4nm,0.4s,baz=36,slow=16,SNR=2.9
PETK Petropavlovsk- 54.46 23 P **P** **12 52 00.7 +0.7**
PETK Petropavlovsk- 54.46 23 P **P** **12 52 00.7 +0.7**
ZSN Zaisan 55.16 327 *e*P **P** **12 52 03.2 -2.1**
baz=327
ZSN Zaisan 55.16 327 *e*P **P** **12 52 03.2 -2.1**
SHLS Shalkode 56.04 320 *e*P **P** **12 52 08.5 -3.3**
comp=Z,6.7nm,0.8s,baz=320
SHLS Shalkode 56.04 320 *e*P **P** **12 52 08.5 -3.3**
SHLS pmax pmax
comp=Z,7.0nm,0.8s
MK31 Makanchi Array 56.22 325 P **P** **12 52 12.7 -0.2**
MK31 pmax pmax
comp=Z,10.0nm,0.6s
MK31 Makanchi Array 56.22 325 P **P** **12 52 12.7 -0.2**
MK31 IAmb IAmb 12 52 13.1
comp=Z,10nm,0.6s
MKAR Makanchi Array 56.22 325 P **P** **12 52 12.3 -0.5**
comp=Z,13nm,0.5s,baz=119,slow=7.6,SNR=95
MKAR PcP **PcP** **12 53 08.8 -0.6**
comp=Z,11nm,0.6s,baz=115,slow=4.7,SNR=8.9
MKAR ScP **ScP** **12 56 59.6 -0.1**
comp=Z,2.1nm,0.7s,baz=110,slow=4.9,SNR=6.3
MKAR LR LR 13 17 27.1
comp=Z,41nm,19.8s,baz=98,slow=37
MKAR Makanchi Array 56.22 325 P **P** **12 52 12.0 -0.9**
MAKZ Makanchi 56.41 325 P **P** **12 52 13.7 -0.5**
MAKZ pmax pmax
comp=Z,13nm,0.6s
MAKZ Makanchi 56.41 325 P **P** **12 52 13.7 -0.5**
MAKZ IAmb IAmb 12 52 14.3
comp=Z,13nm,0.6s
SATY Saty 56.68 319 *e*P **P** **12 52 15.1 -1.3**
comp=Z,12nm,1.2s,baz=320
SATY Saty 56.68 319 *e*P **P** **12 52 15.0 -1.3**
SATY pmax pmax
comp=Z,12nm,1.2s
KPKS Kokpek 56.69 320 *e*P **P** **12 52 14.9 -1.4**
comp=Z,5.9nm,0.8s,baz=320
KPKS Kokpek 56.69 320 *e*P **P** **12 52 14.9 -1.4**
KPKS pmax pmax
comp=Z,6.0nm,0.8s
NIL Nilore 56.74 307 P **P** **12 52 15.8 -1.0**
NIL pmax pmax
comp=Z,14nm,0.9s
NIL Nilore 56.74 307 P **P** **12 52 15.8 -1.0**
NIL IAmb IAmb 12 52 19.1
comp=Z,14nm,0.9s
KSH Kashi 56.78 315 *e*P **P** **12 52 18.1 +1.0**
KSH pmax pmax
comp=Z,11nm,0.8s
KSH pmax pmax
comp=Z,300nm,6.4s
YAK Yakutsk 56.96 2*c i*P **P** **12 52 18.4 +0.7**
YAK *e**PP **pP** **12 52 41.4 +0.2**
YAK *e* 12 53 12.5
YAK *e* 12 54 25.8
YAK *e*PPP PPP 12 55 44.8
YAK *e*S **S** **13 00 05.1 +1.1**
YAK pmax pmax
comp=N,22nm,0.9s
YAK pmax pmax
comp=E,11nm,1.0s
YAK pmax pmax
comp=Z,26nm,1.5s
YAK pmax pmax
comp=N,52nm,1.6s
YAK pmax pmax
comp=E,60nm,1.8s
YAK smax smax
comp=N,111nm,3.7s
YAK smax smax
comp=E,111nm,3.7s
YAK Yakutsk 56.96 2 P **P** **12 52 18.5 +0.8**
TDK Taldyqorghan 57.60 322 *e*P **P** **12 52 21.9 -0.7**
baz=322
TDK Taldyqorghan 57.60 322 *e*P **P** **12 52 21.9 -0.7**
MDOK Medeo 57.61 319 *e*P **P** **12 52 21.0 -2.0**
baz=319
MDOK Medeo 57.61 319 *e*P **P** **12 52 20.9 -2.0**
TNSS Tian-Shan 57.62 319 *e*P **P** **12 52 21.6 -1.7**
baz=319
TNSS Tian-Shan 57.62 319 *e*P **P** **12 52 21.5 -1.7**
KUU Kurty 58.40 320 *e*P **P** **12 52 26.2 -2.1**
comp=E,11nm,0.9s,baz=320
KUU Kurty 58.40 320 *e*P **P** **12 52 26.1 -2.1**
KUU pmax pmax
comp=Z,11nm,0.9s

TKM2	**Tokmak 2**	**58.46**	**318**	*i* P		**P**		**12 52 27.6**	**-1.3**
TKM2				pmax		pmax			
	comp=Z,13nm,1.3s								
ZAA0	**Zalesovo Array**	**59.23**	**333**	P		**P**		**12 52 32.4**	**-1.3**
ZAA0				IAmb		IAmb		12 52 32.9	
	comp=Z,7.9nm,0.8s								
ZALV	**Zalesovo Beam**	**59.23**	**333**	P		**P**		**12 52 32.3**	**-1.4**
	comp=Z,8.2nm,0.4s,baz=133,slow=6.5,SNR=34								
ZALV				LR		LR		13 18 51.1	
	comp=Z,52nm,20.4s,baz=104,slow=37								
ZALV	**Zalesovo Beam**	**59.23**	**333**	*i* P		**P**		**12 52 32.2**	**-1.5**
ZALV				pmax		pmax			
	comp=Z,8.0nm,0.4s								
ZALV	**Zalesovo Beam**	**59.23**	**333**	P		**P**		**12 52 31.9**	**-1.8**
KBL	**Kabul**	**60.34**	**307**	P		**P**		**12 52 40.8**	**-1.3**
KBL				pmax		pmax			
	comp=Z,5.0nm,0.8s								
KBL	**Kabul**	**60.34**	**307**	P		**P**		**12 52 40.8**	**-1.3**
BTLS	**Baital**	**60.37**	**320**	*e*P		**P**		**12 52 39.4**	**-2.4**
	baz=320								
BTLS	**Baital**	**60.37**	**320**	*e*P		**P**		**12 52 39.4**	**-2.4**
KURBB	**Kurchatov Arra**	**60.40**	**327**	P		**P**		**12 52 40.4**	**-1.4**
KURK	**Kurchatov**	**60.40**	**327**	*ce*P		**P**		**12 52 40.3**	**-1.5**
KURK				pmax		pmax			
	comp=Z,29nm,0.7s								
KURK	**Kurchatov**	**60.40**	**327**	P		**P**		**12 52 41.1**	**-0.7**
BTK	**Batken**	**60.67**	**314**	P		**P**		**12 52 43.4**	**-0.6**
BTK				pmax		pmax			
	comp=Z,6.0nm,0.8s								
BTK	**Batken**	**60.67**	**314**	P		**P**		**12 52 43.4**	**-0.6**
GAR	**Garm**	**60.69**	**312**	P		**P**		**12 52 42.9**	**-1.3**
SEY	**Seymchan**	**60.92**	**13**	*i* P		**P**		**12 52 47.1**	**+2.0**
DZA	**Taraz**	**61.32**	**317**	*e*P		**P**		**12 52 46.6**	**-1.7**
	baz=317								
DZA	**Taraz**	**61.32**	**317**	*e*P		**P**		**12 52 46.6**	**-1.7**
CHGR	**Chuyangaron**	**61.44**	**312**	P		**P**		**12 52 47.9**	**-1.4**
CHGR				IAmb		IAmb		12 53 09.6	
	comp=Z,11nm,0.7s								
KK06	**Karatay Array**	**61.94**	**317**	P		**P**		**12 52 51.1**	**-1.3**
IUG	**luzhnay**	**61.95**	**316**	*e*P		**P**		**12 52 51.2**	**-1.4**
	baz=316								
IUG	**luzhnay**	**61.95**	**316**	*e*P		**P**		**12 52 51.2**	**-1.4**
KK31	**Karatay Array**	**61.95**	**317**	P		**P**		**12 52 51.2**	**-1.3**
KK31				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KK31	**Karatay Array**	**61.95**	**317**	P		**P**		**12 52 51.2**	**-1.3**
KKAR	**Karatay Array**	**61.95**	**317**	P		**P**		**12 52 51.2**	**-1.3**
KKAR				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KKAR	**Karatay Array**	**61.95**	**317**	P		**P**		**12 52 51.2**	**-1.3**
BRZS	**Berezniki**	**63.36**	**324**	*e*P		**P**		**12 53 00.3**	**-1.4**
	comp=Z,3.3nm,0.7s,baz=325								
BRZS	**Berezniki**	**63.36**	**324**	*e*P		**P**		**12 53 00.3**	**-1.4**
BRZS				pmax		pmax			
	comp=Z,3.0nm,0.7s								
HRA	**Herat**	**65.78**	**305**	P		**P**		**12 53 16.5**	**-1.5**
BRVK	**Borovoye**	**66.05**	**327**	*i* P		**P**		**12 53 18.0**	**-1.1**
BRVK				pmax		pmax			
	comp=Z,21nm,0.8s								
BRVK	**Borovoye**	**66.05**	**327**	P		**P**		**12 53 18.6**	**-0.5**
BRVK				IAmb		IAmb		12 53 19.1	
	comp=Z,20nm,0.8s								
TIXI	**Tiksi**	**66.58**	**1**	*e*P		**P**		**12 53 22.5**	**+0.3**
TIXI				pmax		pmax			
	comp=Z,259nm,1.7s								
TIXI	**Tiksi**	**66.58**	**1**	P		**P**		**12 53 22.0**	**-0.2**
BILL	**Bilibino**	**68.47**	**15**	*i* P		**P**		**12 53 34.4**	**+0.3**
BILL				pmax		pmax			
	comp=Z,7.0nm,1.2s								
NRIK	**Noril'sk**	**69.08**	**346**	P		**P**		**12 53 38.1**	**+0.2**
	comp=Z,16nm,0.5s,baz=114,slow=7.0,SNR=42								
NRIK	**Noril'sk**	**69.08**	**346**	*ce*P		**P**		**12 53 37.5**	**-0.4**
GEYT	**Alibeck**	**69.70**	**309**	P		**P**		**12 53 43.1**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=70,slow=9.8,SNR=4.8								
GEYT	**Alibeck**	**69.70**	**309**	P		**P**		**12 53 41.7**	**-0.7**
GYA0B	**ALIBECK ARRAY**	**69.70**	**309**	P		**P**		**12 53 41.6**	**-0.8**
AB31	**Akbulak array**	**70.84**	**321**	P		**P**		**12 53 47.4**	**-1.7**
ABKAR	**Akbulak array**	**70.84**	**321**	P		**P**		**12 53 48.0**	**-1.1**
ABKAR	**Akbulak array**	**70.84**	**321**	P		**P**		**12 53 47.8**	**-1.2**
ARU	**Arti**	**73.59**	**328**	*c* *i*P		**P**		**12 54 03.8**	**-1.5**
ARU				*PP		**pP**		**12 54 30.3**	**+0.7**
ARU				S		**SKiKP**		**13 03 25.4**	**-0.4**
ARU				pmax		pmax			
	comp=Z,14nm,0.6s								
ARU	**Arti**	**73.59**	**328**	P		**P**		**12 54 03.7**	**-1.6**
ARU				IAmb		IAmb		12 54 04.6	
	comp=Z,16nm,0.7s								
FALS	**False Pass**	**74.68**	**34**	P		**P**		**12 54 09.5**	**-2.1**
KIRV	**Kirov**	**78.87**	**329**	*ce*P		**P**		**12 54 33.6**	**-1.5**
RAYN	**Ar Rayn**	**79.51**	**293**	P		**P**		**12 54 37.7**	**-1.7**
RAYN				pmax		pmax			
	comp=Z,7.0nm,1.1s								
RAYN	**Ar Rayn**	**79.51**	**293**	P		**P**		**12 54 37.7**	**-1.7**
ZEI	**Tsey**	**80.98**	**312**	*e*P		**P**		**12 54 45.9**	**-1.2**
ZEI				pmax		pmax			
	comp=Z,5.0nm,0.6s								
A21K	**Barrow**	**81.18**	**19**	P		**P**		**12 54 48.3**	**+1.0**
	baz=259								
OPO	**Ambohidratompo**	**81.23**	**250**	P		**P**		**12 54 49.1**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=187,slow=17,SNR=1.9								
IMAR	**Indian Mountai**	**81.40**	**24**	P		**P**		**12 54 49.4**	**+0.9**
KBZ	**Khabaz**	**81.73**	**313**	*ce*P		**P**		**12 54 49.3**	**-1.5**
KIV	**Kislovodsk**	**81.89**	**314**	*e*P		**P**		**12 54 51.3**	**-0.5**
KIV				pmax		pmax			
	comp=Z,20nm,1.0s								
SKT	**Skwentna**	**81.97**	**28**	P		**P**		**12 54 52.5**	**+0.8**
SKT				IAmb		IAmb		12 54 53.6	
	comp=Z,28nm,1.3s								
TRF	**Thorofare Moun**	**82.64**	**27**	P		**P**		**12 54 56.1**	**+0.8**
COLD	**Coldfoot**	**82.93**	**23**	P		**P**		**12 54 58.7**	**+2.1**
	baz=266								
COLD	**Coldfoot**	**82.93**	**23**	P		**P**		**12 54 58.6**	**+2.1**
TOLK	**Toolik Lake Re**	**83.26**	**22**	P		**P**		**12 55 00.3**	**+2.0**
	baz=266								
TOLK	**Toolik Lake Re**	**83.26**	**22**	P		**P**		**12 55 00.4**	**+2.0**
TOLK				IAmb		IAmb		12 55 01.4	
	comp=Z,19nm,0.9s								
RND	**Reindeer**	**83.28**	**27**	P		**P**		**12 54 59.4**	**+0.8**
RND	**Reindeer**	**83.28**	**27**	P		**P**		**12 54 59.4**	**+0.8**
DHY	**Denali Highway**	**83.94**	**27**	P		**P**		**12 55 02.4**	**+0.4**
KLMR	**Klimovskoe**	**84.05**	**331**	P		**P**		**12 55 00.8**	**-1.6**
KLMR				pmax		pmax			
	comp=Z,14nm,0.6s								
KLMR	**Klimovskoe**	**84.05**	**331**	P		**P**		**12 55 00.8**	**-1.6**
KLMR				AMP				12 55 02.3	
	comp=Z,14nm,0.6s								
TMCR	**Tamitsa**	**84.73**	**334**	*e*P		**P**		**12 55 05.9**	**+0.2**
TMCR				pmax		pmax			
	comp=Z,25nm,0.6s								
VNDA	**Vanda**	**84.75**	**173**	P		**P**		**12 55 06.5**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=301,slow=4.5,SNR=9.3								
VNDA				LR		LR		13 33 39.0	
	comp=Z,20nm,19.3s,baz=324,slow=36								
VNDA	**Vanda**	**84.75**	**173**	P		**P**		**12 55 06.9**	**+1.3**
VNDA				pmax		pmax			
	comp=Z,5.0nm,0.8s								
VNDA	**Vanda**	**84.75**	**173**	P		**P**		**12 55 06.9**	**+1.3**
MAW	**Mawson**	**84.76**	**200**	P		**P**		**12 55 06.3**	**+0.6**
	comp=Z,3.2nm,0.8s,baz=32,slow=6.4,SNR=11								
MAW				LR		LR		13 30 05.8	
	comp=Z,20nm,19.2s,baz=55,slow=34								
MAW	**Mawson**	**84.76**	**200**	P		**P**		**12 55 06.9**	**+1.2**
	baz=85,SNR=9.4								
MAW	**Mawson**	**84.76**	**200**	P		**P**		**12 55 06.2**	**+0.5**
MAW	**Mawson**	**84.76**	**200**	P		**P**		**12 55 06.2**	**+0.5**
PAX	**Paxson**	**84.81**	**27**	P		**P**		**12 55 08.3**	**+2.0**
PAX				pmax		pmax			
	comp=Z,14nm,0.9s								
PAX	**Paxson**	**84.81**	**27**	P		**P**		**12 55 08.3**	**+2.0**
PAX				IAmb		IAmb		12 55 37.6	
	comp=Z,14nm,0.9s								
BMAR	**Burnt Mountain**	**85.11**	**23**	P		**P**		**12 55 09.4**	**+1.8**
DOT	**Dot Lake**	**85.43**	**27**	P		**P**		**12 55 10.8**	**+1.4**
SCRK	**Sand Creek**	**85.45**	**26**	P		**P**		**12 55 10.9**	**+1.4**
	baz=272								
ANN	**Anapa**	**85.64**	**314**	*e*P		**P**		**12 55 07.5**	**-3.2**
ANN				*e**PP		**pP**		**12 55 30.4**	**-5.5**
ANN				*e*S		**SKSac**		**13 05 22.3**	**-4.9**
ANN				*e*SS		**SS**		**13 11 07.1**	**-5.9**
ANN				*e*SSS		SSS		13 14 38.1	
ANN				pmax		pmax			
	comp=Z,29nm,0.8s								
OBN	**Obninsk**	**85.73**	**325**	*e*P		**P**		**12 55 10.7**	**-0.2**
OBN				*e*				12 58 30.4	
OBN				*e*PPP		PPP		13 00 23.0	
OBN				pmax		pmax			
	comp=Z,7.0nm,0.9s								
BCAR	**Beaver Creek A**	**86.49**	**27**	P		**P**		**12 55 15.7**	**+1.1**
EGAK	**Eagle**	**86.64**	**25**	P		**P**		**12 55 16.4**	**+1.3**
EPYK	**Eagle Plains**	**88.29**	**24**	P		**P**		**12 55 23.9**	**+0.8**
	baz=278								
EPYK	**Eagle Plains**	**88.29**	**24**	P		**P**		**12 55 23.9**	**+0.8**
EPYK				IAmb		IAmb		12 55 24.6	
	comp=Z,20nm,1.2s								
BRTR	**Keskin Array B**	**88.82**	**310**	P		**P**		**12 55 25.2**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=119,slow=4.4,SNR=9.6								
BRTR				LR		LR		13 41 10.1	
	comp=Z,19nm,18.4s,baz=74,slow=40								
BRTR	**Keskin Array B**	**88.82**	**310**	P		**P**		**12 55 24.0**	**-2.3**
KMBO	**Kilima Mbogo**	**89.06**	**269**	P		**P**		**12 55 29.5**	**+1.4**
	comp=Z,2.7nm,0.7s,baz=48,slow=5.9,SNR=6.3								
ARD3	**ARCESS Array S**	**89.07**	**340**	P		**P**		**12 55 26.6**	**-0.1**
ARD3				IAmb		IAmb		12 55 26.8	
	comp=Z,15nm,0.8s								
ARC3	**ARCESS Array S**	**89.08**	**340**	P		**P**		**12 55 26.5**	**-0.2**
ARA0	**ARCESS Array S**	**89.08**	**340**	*e*P		**P**		**12 55 26.4**	**-0.3**
ARCES	**ARCESS Array B**	**89.08**	**340**	P		**P**		**12 55 26.4**	**-0.4**
	comp=Z,14nm,0.7s,baz=81,slow=6.3,SNR=32								
ARCES				PKiKP		**PKiKP**		**13 00 25.6**	**+0.5**
	comp=Z,5.9nm,1.0s,baz=31,slow=5.7,SNR=3.8								
ARCES				LR		LR		13 38 33.3	
	comp=Z,40nm,18.6s,baz=300,slow=38								
SPA0	**Spitsbergen Ar**	**89.14**	**349**	*e*P		**P**		**12 55 26.7**	**-0.2**
INK	**Inuvik**	**89.17**	**21**	P		**P**		**12 55 27.5**	**+0.3**
	comp=Z,6.4nm,0.9s,baz=302,slow=6.2,SNR=12								
INK	**Inuvik**	**89.17**	**21**	P		**P**		**12 55 27.8**	**+0.7**
INK				pmax		pmax			
	comp=Z,8.0nm,1.1s								
INK	**Inuvik**	**89.17**	**21**	P		**P**		**12 55 27.8**	**+0.7**
INK				IAmb		IAmb		12 55 29.0	
	comp=Z,8.1nm,1.1s								
HAMF	**Hammerfest**	**89.45**	**341**	*e*P		**P**		**12 55 27.6**	**-0.9**
KTK1	**Kautokeino**	**89.99**	**339**	*e*P		**P**		**12 55 30.7**	**-0.3**
FINES	**FINESS Array B**	**90.47**	**332**	P		**P**		**12 55 31.9**	**-1.4**
	comp=Z,2.4nm,0.4s,baz=57,slow=4.7,SNR=25								
FINES	**FINESS Array B**	**90.47**	**332**	*i* P		**P**		**12 55 31.8**	**-1.6**
FINES				pmax		pmax			
	comp=Z,2.0nm,0.4s								
FINES	**FINESS Array B**	**90.47**	**332**	P		**P**		**12 55 32.2**	**-1.2**
TRO	**Tromso**	**91.29**	**340**	*e*P		**P**		**12 55 36.7**	**-0.3**
C36M	**Paulatuk**	**92.19**	**20**	P		**P**		**12 55 41.6**	**+0.4**
	baz=290								
C36M	**Paulatuk**	**92.19**	**20**	P		**P**		**12 55 41.7**	**+0.6**
C36M				IAmb		IAmb		12 55 41.8	
	comp=Z,4.9nm,0.6s								
DLBC	**Dease Lake**	**92.92**	**31**	P		**P**		**12 55 46.0**	**+1.0**
	comp=Z,2.2nm,0.8s,baz=239,slow=5.1,SNR=3.2								
DLBC	**Dease Lake**	**92.92**	**31**	IAmb		IAmb		12 55 46.9	
	comp=Z,10nm,1.2s								
STEI	**Steigen**	**93.13**	**339**	*e*P		**P**		**12 55 44.9**	**-0.6**
FAUS	**Fauske**	**93.31**	**339**	*e*P		**P**		**12 55 45.5**	**-0.9**
SYO	**Syowa Base**	**93.42**	**201**	*e*P		**P**		**12 55 46.8**	**0.0**
BURAR	**Bucovina Array**	**93.71**	**318**	P		**P**		**12 55 48.0**	**-0.8**
BUR08	**Bucovina Ar. S**	**93.72**	**318**	P		**P**		**12 55 48.3**	**-0.5**
BUR08				IAmb		IAmb		12 55 49.2	
	comp=Z,2.8nm,0.8s								
MOR8	**Moi Rana**	**94.07**	**338**	*e*P		**P**		**12 55 48.1**	**-1.9**
KONS	**Konsvik**	**94.44**	**338**	*e*P		**P**		**12 55 51.4**	**-0.1**
NSS	**Namsos**	**95.67**	**337**	*e*P		**P**		**12 55 55.8**	**-1.4**
DAG	**Danmarks Havn**	**95.93**	**352**	*i* P		**P**		**12 55 57.4**	**-0.8**
DAG				pmax		pmax			
	comp=Z,8.0nm,0.7s								
DAG	**Danmarks Havn**	**95.93**	**352**	*i* P		**P**		**12 55 57.4**	**-0.8**
	comp=Z,7.8nm,0.7s								
DAG	**Danmarks Havn**	**95.93**	**352**	*i* P		**P**		**12 55 57.4**	**-0.8**
DAG				IAmb		IAmb		12 55 58.2	
	comp=Z,7.8nm,0.7s								
NC602	**NORSAR Array S**	**97.40**	**333**	*e*P		**P**		**12 56 04.6**	**-0.6**
NB2	**NORSAR Subarra**	**97.42**	**334**	P		**P**		**12 56 03.4**	**-1.9**
	comp=Z,6.9nm,0.9s,baz=66,slow=4.6								
NB2	**NORSAR Subarra**	**97.42**	**334**	P		**P**		**12 56 03.4**	**-1.9**
	baz=66,slow=4.6								
NOA	**NORSAR Array B**	**97.42**	**334**	P		**P**		**12 56 03.8**	**-1.6**
	comp=Z,2.4nm,0.7s,baz=66,slow=4.5,SNR=8.3								
NOA				LR		LR		13 43 47.6	
	comp=Z,30nm,19.4s,baz=70,slow=38								
DOMB	**Dombas**	**97.92**	**335**	*e*P		**P**		**12 56 07.2**	**-0.3**
BLS5	**Blasjo**	**100.27**	**333**	*e*Pdif		**Pdif**		**12 56 18.0**	**0.0**
NVAR	**Mina Array Bea**	**106.44**	**48**	PKiKP		**PKiKP**		**13 00 57.8**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=302,slow=2.0,SNR=4.1								
PDAR	**Pinedale Array**	**110.74**	**41**	PKiKP		**PKiKP**		**13 01 06.7**	**+1.8**
	comp=Z,0.2nm,0.4s,baz=160,slow=4.7,SNR=3.6								
SDCO	**Great Sand Dun**	**115.88**	**44**	P		**PKPdf**		**13 01 16.9**	**+2.0**
	baz=300								
ANMO	**Albuquerque**	**116.55**	**47**	P		**PKiKP**		**13 01 18.3**	**+2.1**
	baz=298								
T25A	**Trinidad**	**116.94**	**44**	P		**PKiKP**		**13 01 17.4**	**+0.5**
	baz=300								
T25A	**Trinidad**	**116.94**	**44**			**PKPdf**		**13 01 16.6**	**-0.3**
CBKS	**Cedar Bluff**	**119.15**	**40**	P		**PKiKP**		**13 01 22.0**	**+1.1**
	baz=305								
SCHQ	**Schefferville**	**119.40**	**9**	PKP		**PKiKP**		**13 01 21.5**	**+0.6**
	comp=Z,6.2nm,1.0s,baz=359,slow=8.9,SNR=3.7								
SCHQ	**Schefferville**	**119.40**	**9**			**PKiKP**		**13 01 21.7**	**+0.8**
MSTX	**Muleshoe**	**119.68**	**46**	P		**PKiKP**		**13 01 23.4**	**+1.2**
	baz=300								
TX31	**Lajitas Ar. Si**	**121.22**	**51**			**PKiKP**		**13 01 25.7**	**+0.3**
TXAR	**Lajitas Array**	**121.22**	**51**	PKP		**PKiKP**		**13 01 26.6**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=222,slow=1.0,SNR=17								
TXAR				PKKPbc		**PKKPbc**		**13 11 27.8**	**0.0**
	comp=Z,0.2nm,0.7s,baz=148,slow=7.4,SNR=3.5								
TXAR	**Lajitas Array**	**121.22**	**51**	PKiKP		**PKiKP**		**13 01 26.8**	**+1.5**
TXAR	**Lajitas Array**	**121.22**	**51**			**PKiKP**		**13 01 26.8**	**+1.5**
TOA0	**Torodi Ar. Sit**	**122.03**	**289**	PKPdf		**PKPdf**		**13 01 27.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**122.03**	**289**	PKP		**PKPdf**		**13 01 26.8**	**-0.1**
	comp=Z,4.4nm,0.7s,baz=45,slow=2.2,SNR=20								
TORD	**Torodi Ar. Bea**	**122.03**	**289**	PKPdf		**PKPdf**		**13 01 27.1**	**+0.1**
JCT	**Junction City**	**123.61**	**48**	PKiKP		**PKiKP**		**13 01 31.2**	**+1.2**
JCT	**Junction City**	**123.61**	**48**	P		**PKiKP**		**13 01 30.9**	**+1.0**
	baz=301								
JCT	**Junction City**	**123.61**	**48**	PKPdf		**PKiKP**		**13 01 31.2**	**+1.2**
S39A	**Bolivar**	**123.83**	**37**			**PKiKP**		**13 01 30.9**	**+0.7**
WHTX	**Lake Whitney,**	**124.52**	**45**	P		**PKiKP**		**13 01 33.0**	**+1.4**
	baz=304								
CCM	**Cathedral Cave**	**124.83**	**36**	P		**PKiKP**		**13 01 32.5**	**+0.4**
	baz=312								
U40A	**Yellville**	**124.98**	**38**	P		**PKiKP**		**13 01 32.9**	**+0.4**
	baz=310								
U40A	**Yellville**	**124.98**	**38**			**PKPdf**		**13 01 32.3**	**+0.2**
LATQ	**La Tuque**	**125.21**	**16**	P		**PKiKP**		**13 01 33.0**	**+0.5**
	baz=337								
MIAR	**Mount Ida**	**125.66**	**41**	PKiKP		**PKiKP**		**13 01 35.2**	**+1.4**
MIAR	**Mount Ida**	**125.66**	**41**	P		**PKiKP**		**13 01 35.2**	**+1.4**
	baz=308								
MIAR	**Mount Ida**	**125.66**	**41**			**PKiKP**		**13 01 35.2**	**+1.4**
E57A	**Chemin Saint G**	**125.71**	**17**	P		**PKiKP**		**13 01 34.0**	**+0.3**
	baz=335								
M54A	**Oil Creek Stat**	**128.03**	**25**	P		**PKiKP**		**13 01 39.0**	**+0.6**
	baz=326								
J59A	**Piesco**	**128.25**	**19**	P		**PKiKP**		**13 01 39.9**	**+1.1**
	baz=333								
BINY	**Binghamton**	**128.86**	**21**	P		**PKiKP**		**13 01 40.8**	**+0.7**
	baz=331								
Q54A	**Cox Mills**	**129.59**	**27**	P		**PKiKP**		**13 01 42.4**	**+0.9**
	baz=324								
KIC	**Kosan Boka**	**129.75**	**282**	*e*PKP1		**PKiKP**		**13 01 42.8**	**+0.2**
	comp=Z,22nm,1.2s								
DBIC	**Dimbokro**	**129.80**	**283**	PKP		**PKPdf**		**13 01 42.2**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=4.3,slow=5.7,SNR=4.0								
TIC	**Toumodi**	**129.96**	**283**	*e*PKP1		**PKPdf**		**13 01 41.9**	**-0.3**
LIC	**Lamto**	**130.06**	**282**	*e*PKP1		**PKiKP**		**13 01 43.3**	**+0.1**
	comp=Z,40nm,1.2s								
R54A	**Vicor**	**130.16**	**28**	P		**PKiKP**		**13 01 43.2**	**+0.4**
	baz=323								
CPUP	**Villa Florida**	**158.52**	**171**	PKP		**PKPdf**		**13 02 30.8**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=224,slow=6.1,SNR=3.3								
LPAZ	**La Paz**	**162.01**	**130**	PKP		**PKPdf**		**13 02 36.3**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=43,slow=2.2,SNR=6.0								

*NEIC **08** 12:54:39.5±2.3, 65.15N±0.02×148.90W±0.04, h10km±5km, Error ellipse: s-maj=4.0km s-min=1.9km az=215.0*

AEIC 08 12:54:39±1.6, 65.14N±0.03×148.99W±0.07, h14km±5km, ML3.1, Error ellipse: s-maj=5.9km s-min=0.8km az=222.0, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I23K	**Minto, Yukon-K**	**0.15**	**271**		Pb	12 54 43.6	0.0
I23K					Sg	12 54 46.0	+0.6
PS07	**TAPS Pump Stn7**	**0.34**	**61**		Pb	12 54 46.8	-0.1
MDM	**Murphy Dome**	**0.37**	**120**		Pb	12 54 47.2	-0.2
MDM					Sg	12 54 51.6	-0.1
TCOL	**CIGO, UAF Yank**	**0.55**	**119**		Pb	12 54 50.6	+0.2
TCOL					Sg	12 54 57.6	+0.4
NEA2	**Nenana**	**0.56**	**183**		Pb	12 54 50.7	+0.2
COLA	**College**	**0.56**	**119**		Pb	12 54 50.5	0.0
COLA					Sg	12 54 57.2	-0.1
POKR	**Poker Plat Res**	**0.66**	**92**	Pg	Pb	12 54 52.2	-0.1
CCB	**Clear Creek Bu**	**0.71**	**134**		Pb	12 54 53.6	+0.5
MLY	**Manley**	**0.75**	**262**		Pb	12 54 53.7	-0.1
PS06	**TAPS Pump Stn6**	**0.78**	**337**		Pn	12 54 54.9	-0.6
PS06					Sb	12 55 04.9	+0.2
WRH	**Wood River Hil**	**0.78**	**150**		Pb	12 54 54.7	+0.4
IL31		**0.97**	**112**		Pn	12 54 58.2	+0.1
ILAR	**Eielson Array**	**0.97**	**112**		Pg	12 54 57.8	0.0
BWN	**Browne**	**1.00**	**192**		Pg	12 54 58.1	-0.1
BWN	**Browne**	**1.00**	**192**	P	Pb	12 54 58.1	+0.1
PS08	**TAPS Pump Stn8**	**1.11**	**122**		Pn	12 55 00.2	+0.1
HDA	**Harding Lake**	**1.15**	**129**		Pb	12 55 00.5	-0.1
BPAW	**Bear Paw Mtn.**	**1.36**	**220**		Pn	12 55 03.3	-0.1
MCK	**McKinley**	**1.42**	**179**		Pn	12 55 04.5	+0.1
PRP	**Porcupine Dome**	**1.50**	**74**		Pn	12 55 05.6	0.0
RND	**Reindeer**	**1.75**	**178**		Pn	12 55 09.2	+0.3
RND					Pb	12 55 09.6	-1.2
TRF	**Thorofare Moun**	**1.79**	**199**		Pn	12 55 09.7	+0.1
KTH	**Kantishna Hill**	**1.81**	**209**		Pn	12 55 09.4	-0.3
PS05	**TAPS Pump Stn5**	**1.81**	**339**		Pb	12 55 12.4	+0.6
CHUM	**Lake Minchumin**	**1.92**	**230**		Pn	12 55 10.9	-0.2
IM03		**2.15**	**295**		Pn	12 55 14.4	+0.1
HUR	**Hurricane**	**2.19**	**188**		Pn	12 55 16.5	+1.5
DHY	**Denali Highway**	**2.20**	**160**		Pn	12 55 15.0	-0.1
WAT2	**Susitna Watana**	**2.20**	**175**		Pn	12 55 16.2	+1.1
RIDG	**Independent Ri**	**2.29**	**126**		Sn	12 55 43.1	-1.1
WAT7	**Susitna Watana**	**2.32**	**178**		Pn	12 55 18.0	+1.2
SCRK	**Sand Creek**	**2.46**	**116**		Pn	12 55 18.5	-0.2
DOT	**Dot Lake**	**2.62**	**123**	Pn	Pn	12 55 19.9	-0.9
WAT6	**Susitna Watana**	**2.63**	**167**		Pn	12 55 21.8	+0.7
PPLA	**Purkeypile**	**2.66**	**213**		Pn	12 55 21.1	-0.4
PAX	**Paxson**	**2.68**	**143**	Pn	Pn	12 55 22.3	+0.6
K27K	**Chicken**	**3.19**	**107**		Pn	12 55 29.4	+0.8
MENT	**Mentasta**	**3.21**	**131**		Pn	12 55 28.4	-0.5
M24K	**Tolsona, Glenn**	**3.30**	**156**		Pn	12 55 32.4	+2.2
EGAK	**Eagle**	**3.35**	**93**	Pn	Pn	12 55 31.6	+0.8
GHO	**Glory Hole Cre**	**3.39**	**179**		Pn	12 55 32.0	+0.6
SCM	**Sheep Creek Mo**	**3.

IKVO	**Krokottuvotn** baz=12	**1.07 12**	P	Pg	13 14 42.1	-1.8
ISNB	**Snabyli** baz=210	**1.08 210**	P	Pg	13 14 42.5	-1.6
IGRS	**Grimsstaoir** baz=29	**1.11 29**	P	Pg	13 14 42.8	-1.9
ISLY	**Slysaalda** baz=222	**1.13 222**	P	Pg	13 14 43.4	-1.6
IFED	**Fedgar** baz=238	**1.19 238**	P	Pb	13 14 44.5	-1.6
IRJU	**Rjupnafell** baz=208	**1.20 208**	P	Pb	13 14 44.4	-1.8
ISKI	**Skildingahlsh** baz=7.4	**1.21 7**	P	Pb	13 14 44.3	-2.2
IGHA	**Grjothals** baz=15	**1.22 15**	P	Pb	13 14 44.2	-2.4
IMJO	**Mjoaskard** baz=234	**1.23 234**	P	Pb	13 14 45.3	-1.6
IGRA	**Granastaoir** baz=357	**1.25 357**	P	Pn	13 14 45.0	-2.1
IGYG	**Gygjarholskot** baz=253	**1.28 253**	P	Pn	13 14 45.7	-1.7
IDIM	**Dimmadalss** baz=8.6	**1.31 9**	P	Pn	13 14 45.8	-2.1
IHVO	**Lagu-Hvolar** baz=210	**1.31 209**	P	Pn	13 14 46.5	-1.4
IHLA	**Hella** baz=343	**1.34 343**	P	Pn	13 14 46.5	-1.8
IHED	**Heoinshofoi** baz=1.6	**1.42 2**	P	Pn	13 14 47.5	-1.9
IALF	**Alftagrof** baz=214	**1.42 214**	P	Pn	13 14 48.3	-1.1
IESK	**Eystri-Skogar** baz=219	**1.46 219**	P	Pn	13 14 49.2	-0.8
IBRE	**Brettingsstaoi** baz=352	**1.47 352**	P	Pn	13 14 48.4	-1.7
ISAU	**Saurbar** baz=244	**1.48 244**	P	Pn	13 14 48.7	-1.5
IMID	**Miomork** baz=228	**1.49 228**	P	Pn	13 14 49.7	-0.6
ISIG	**Siglufjorour** baz=337	**1.60 337**	P	Pn	13 14 50.4	-1.4
IASM	**Asmuli** baz=240	**1.63 240**	P	Pn	13 14 51.8	-0.6
ISOL	**Solvholt** baz=246	**1.71 246**	P	Pn	13 14 52.5	-0.9
IKRO	**Krokur** baz=252	**1.71 252**	P	Pn	13 14 52.6	-0.8
IHEI	**Heioarbar** baz=256	**1.73 256**	P	Pn	13 14 52.9	-0.7
ILEI	**Leirhofn** baz=12	**1.79 12**	P	Pn	13 14 53.3	-1.1
SCO	**Scoresbysund**	**6.09 345**	*i* P	Pn	13 15 55.0	+1.5
SCO			*i* S	Sb	13 17 24.5	+2.1
SCO	**Scoresbysund**	**6.09 345**	*i* P	Pn	13 15 55.0	+1.5
SCO			IAML		13 16 18.1	
	comp=Z,6.5nm,0.5s					
SCO			*i* S	Sb	13 17 24.6	+2.1

*BGR **08** 13:14:30.3±0.0,64.46N×20.27W,h33km,mb4.3*
*IDC **08** 13:14:31.3±0.6,64.72N×18.90W,h0km,mb3.7/16, mb1 3.9/16,mb1mx3.8/50,mbtmp3.8/16,MS3.4/7, Ms1 3.4/7,ms1mx3.0/47,Error ellipse: s-maj=19.5km s-min=8.7km az=4.0*
*NEIC **08** 13:14:32.2±2.5,64.7N±0.1×18.8W±0.2,h10km±5km, mb4.5/7,Error ellipse: s-maj=20.6km s-min=5.6km az=152.0*

ISC 08 13:14:32.6±0.6,**64°69N**±0.09×**18°90W**±0.07,**h10km,n59, σ1°72/55,mb4.1**/33,**MS3.3**/5,**Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.04 274**		Pg	**Pg**	**13 14 52.3**	**-0.4**
BORG	5.3nm,0.3s,baz=91,slow=8.2,SNR=18			Lg	Lg	13 15 04.6	
	10nm,0.3s,baz=103,slow=7.2,SNR=16						
SCO	**Scoresbysund**	**5.93 350**			**Pn**	**13 15 58.3**	**-2.0**
EKA	**Eskdalemuir Ar**	**12.21 133**		Pn	**Pn**	**13 17 23.6**	**-2.7**
	baz=323,slow=14,SNR=14						
NOA	**NORSAR Array B**	**14.14 91**		Pn	Pn	13 17 46.7	-6.0
NOA	0.0nm,0.3s,baz=285,slow=11,SNR=3.3			LR	LR	13 22 37.0	
	comp=Z,72nm,22.0s,baz=305,slow=34						
HFS	**Hagfors**	**15.65 92**		Pn	**P**	**13 18 16.2**	**-0.8**
HFS	0.1nm,0.3s,baz=289,slow=9.0,SNR=6.8			LR	LR	13 23 57.8	
	comp=Z,66nm,19.3s,baz=264,slow=36						
FINES	**FINESS Array B**	**20.29 78**		P	**P**	**13 19 07.0**	**-1.1**
	4.1nm,0.9s,baz=299,slow=12,SNR=5.4						
FINES	**FINESS Array B**	**20.29 78**		P	**P**	**13 19 05.2**	**-2.8**
CLL	**Collm**	**21.26 114**	*i*	P	**P**	**13 19 17.4**	**-1.3**
	comp=Z,20nm,1.5s						
GRF	**Grafenberg Arr**	**21.87 119**	*eP*		**P**	**13 19 24.2**	**-1.0**
	comp=Z,17nm,1.4s,baz=322,slow=10						
NKC	**Novy Kostel**	**21.90 116**	*eP*		**P**	**13 19 28.6**	**+3.1**
BRG	**Berggiesshubel**	**21.97 113**	*eP*		**P**	**13 19 24.7**	**-1.6**
	comp=Z,13nm,1.2s						
CHVC	**Chvalec**	**23.04 111**	*eP*		**P**	**13 19 38.4**	**+0.8**
OSTC	**Ostas**	**23.13 111**	*eP*		**P**	**13 19 39.3**	**+0.8**
KHC	**Kasperske Hory**	**23.22 117**	*eP*		**P**	**13 19 41.4**	**+1.9**
DPC	**Dobruska-Polom**	**23.33 111**	*eP*		**P**	**13 19 38.8**	**-1.8**
DAVA	**Damuels**	**23.39 124**	*eP*		**P**	**13 19 42.4**	**+1.0**
	comp=Z,7.0nm,1.0s						
GEC2	**GERESS Array S**	**23.50 117**		P	**P**	**13 19 41.3**	**-1.1**
GEC2				IAmb	IAmb	13 19 58.9	
	comp=Z,15nm,1.5s						
GERES	**GERESS Array B**	**23.50 117**		P	**P**	**13 19 41.4**	**-1.1**
	comp=Z,1.2nm,0.9s,baz=331,slow=5.2,SNR=6.0						
GERES				LR	LR	13 29 21.5	
	comp=Z,77nm,18.3s,baz=308,slow=38						
GERES	**GERESS Array B**	**23.50 117**		P	**P**	**13 19 40.9**	**-1.5**
KRLC	**Kraliky**	**23.73 111**	*eP*		**P**	**13 19 44.8**	**+0.2**
MOTA	**Moosalm**	**23.78 122**	*i* P		**P**	**13 19 47.1**	**+1.9**
	comp=Z,7.2nm,1.3s						
DAVOX	**Davos/Dischmat**	**23.82 125**	LR		LR	13 29 09.4	
	comp=Z,91nm,18.2s,baz=69,slow=37						
TUE	**Stuetta**	**23.90 126**	P		**P**	**13 19 46.0**	**-0.4**
SQTA	**Sankt Quirin**	**23.92 123**	*eP*		**P**	**13 19 48.7**	**+2.2**
	comp=Z,6.5nm,1.1s						
WATA	**Walderalm**	**23.96 122**	*i* P		**P**	**13 19 49.0**	**+2.1**
	comp=Z,4.3nm,0.8s						
WTTA	**Wattenberg**	**24.04 122**	*i* P		**P**	**13 19 48.3**	**+0.6**
	comp=Z,8.8nm,1.2s						
VRAC	**Vranov**	**24.26 112**	P		**P**	**13 19 48.9**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=330,slow=13,SNR=3.8						
VRAC				LR	LR	13 28 56.4	
	comp=Z,81nm,19.0s,baz=320,slow=36						
MOA	**Molln**	**24.53 117**	*eP*		**P**	**13 19 54.0**	**+1.9**
	comp=Z,13nm,1.5s						
ABTA	**Abfaltersbach**	**24.80 121**	*eP*		**P**	**13 19 57.7**	**+3.1**
	comp=Z,7.9nm,1.3s						
KBA	**Koelnbreinsper**	**24.83 120**	*eP*		**P**	**13 19 59.1**	**+4.2**
	comp=Z,9.2nm,1.3s						
CONA	**Conrad Observa**	**25.08 115**	*eP*		**P**	**13 19 58.4**	**+1.3**
	comp=Z,4.3nm,1.1s						
MYKA	**Terra Mystica**	**25.31 120**	*eP*		**P**	**13 19 57.9**	**-1.2**
	comp=Z,7.1nm,0.9s						
ARSA	**Arzberg**	**25.51 117**	*eP*		**P**	**13 20 03.4**	**+2.5**
	comp=Z,5.3nm,1.0s						
SOKA	**Soboth**	**25.80 118**	*eP*		**P**	**13 20 05.9**	**+2.3**
	comp=Z,6.2nm,1.1s						
ESDC	**Sonseca Array**	**26.54 154**	P		**P**	**13 20 10.8**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=190,slow=33,SNR=4.3						
PSZ	**Piszkesteto**	**26.69 110**	P		**P**	**13 20 10.2**	**-1.4**
PSZ				IAmb	IAmb	13 20 14.9	
	comp=Z,24nm,1.5s						
AKASG	**Malin Array Be**	**28.44 96**	P		**P**	**13 20 27.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=321,slow=9.5,SNR=4.2						
MDT	**Midelt**	**33.10 158**	P		**P**	**13 21 10.2**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=329,slow=4.4,SNR=4.6						
NRIK	**Noril'sk**	**36.78 35**	P		**P**	**13 21 43.5**	**+3.7**
	comp=Z,1.2nm,0.5s,baz=16,slow=8.9,SNR=3.6						
BRTR	**Keskin Array B**	**39.07 104**	P		**P**	**13 21 59.6**	**0.0**
	comp=Z,1.7nm,0.9s,baz=330,slow=4.7,SNR=6.1						
BRTR	**Keskin Array B**	**39.07 104**	P		**P**	**13 21 58.5**	**-1.1**
ILAR	**Eielson Array**	**45.38 332**	P		**P**	**13 22 48.5**	**-2.0**
	comp=Z,0.5nm,1.0s,baz=19,slow=5.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**48.08 51**	P		**P**	**13 23 12.3**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=314,slow=7.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**48.08 51**	P		**P**	**13 23 11.6**	**-0.2**
KURK	**Kurchatov**	**48.61 57**	P		**P**	**13 23 17.4**	**+1.5**
KURK				IAmb	IAmb	13 23 19.4	
	comp=Z,5.7nm,0.9s						
KURBB	**Kurchatov Arra**	**48.65 57**	P		**P**	**13 23 16.4**	**+0.2**
	comp=Z,3.9nm,0.8s,baz=324,slow=7.5,SNR=20						

GEYT	**Alibeck**	**51.02 82**	P		**P**	**13 23 34.3**	**-0.1**
PDAR	**Pinedale Array**	**52.61 292**	P		**P**	**13 23 44.9**	**-1.6**
	comp=Z,0.5nm,0.8s,baz=33,slow=5.7,SNR=4.1						
MKAR	**Makanchi Array**	**53.22 57**	P		**P**	**13 23 49.1**	**-1.5**
	comp=Z,1.5nm,0.9s,baz=14,slow=6.2,SNR=7.9						
MKAR	**Makanchi Array**	**53.22 57**	P		**P**	**13 23 51.5**	**+0.8**
TORD	**Torodi Ar. Bea**	**53.42 155**	P		**P**	**13 23 52.0**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=344,slow=6.8,SNR=6.3						
CHGR	**Chuyangaron**	**55.03 73**	P		**P**	**13 24 05.0**	**+0.9**
SONM	**Songino Array**	**60.01 39**	P		**P**	**13 24 40.7**	**+1.6**
	comp=Z,0.8nm,0.8s,baz=339,slow=7.9,SNR=5.2						
SONM	**Songino Array**	**60.01 39**	P		**P**	**13 24 38.5**	**-0.5**
TXAR	**Lajitas Array**	**61.69 279**	P		**P**	**13 24 52.8**	**+2.1**
	comp=Z,0.1nm,0.9s,baz=12,slow=4.6,SNR=0.9						
PCRV	**Puerto La Cruz**	**63.01 232**	LR		LR	13 49 44.4	
	comp=Z,72nm,19.8s,slow=34						
CMIG	**Matias Romero**	**68.70 265**	LR		LR	13 55 12.8	
	comp=Z,36nm,18.3s,baz=346,slow=36						
CMAR	**Chiang Mai Arr**	**84.63 57**	P		**P**	**13 27 07.9**	**+1.7**
	comp=Z,1.5nm,1.0s,baz=312,slow=5.7,SNR=6.8						
ASAR	**Alice Springs**	**135.31 37**	PKP		**PKiKP**	**13 33 54.3**	**+0.7**
	comp=Z,0.5nm,1.0s,baz=120,slow=32,SNR=3.5						

*IDC **08** 13:40:16.1±1.2,6.81N×72.94W,h168km±10km,mb3.6/8, mb1 3.8/10,mb1mx3.5/28,mbtmp4.1/10,MS3.6/1, Ms1 3.6/1,ms1mx2.5/31,Error ellipse: s-maj=19.9km s-min=13.5km az=135.0*
*RSNC **08** 13:40:17.0±1.0,6.80N×73.16W,h148km±4km,ML3.8, Mw4.0,Fault plane solution: NP1:φs58.00000°, δ45.00000°, λ,74.00000°.*

ISC 08 13:40:15.4±0.7,**6.85N**±0.03×**73.12W**±0.03,**h159km**±5km, **n50,σ1°44/82,mb3.7/8,5C-3D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26 193**		*i*P	**Pn**	**13 40 37.1**	**-0.2**
BARC				*e*S	**Sn**	**13 40 51.6**	**-2.4**
BARC				*i*		13 40 53.7	
	comp=Z,2μm,0.3s						
BRRC	**Barranca, Sant**	**0.64 294**		⇑*i*P	**Pn**	**13 40 39.0**	**+0.4**
BRRC				*e*S	**Sn**	**13 40 55.9**	**-0.4**
BRRC				*i*		13 40 59.5	
	comp=Z,2μm,0.3s						
BRRC				*e*		13 41 01.2	
PAMC	**Pamplona, Colo**	**0.64 41**		⇑*i*P	**Pn**	**13 40 39.9**	**+0.7**
PAMC				*e*S	**Sn**	**13 40 57.2**	**-0.2**
PAMC				*i*		13 40 59.7	
	comp=Z,2μm,0.7s						
RUSC	**La Rusia**	**0.95 178**		⇑*i*P	**Pn**	**13 40 40.9**	**-0.4**
RUSC				*e*S	**Sn**	**13 40 59.4**	**-1.7**
RUSC				*i*		13 41 00.8	
	comp=Z,1μm,0.4s						
PTBC	**PUERTO BERRIO,**	**1.36 257**		⇑*i*P	**Pn**	**13 40 43.5**	**-0.8**
PTBC				*e*S	**Sn**	**13 41 04.7**	**-1.8**
PTBC				*i*		13 41 10.5	
	comp=Z,1μm,0.5s						
TAMC	**Tame, Arauca**	**1.39 107**		⇑*i*P	**Pn**	**13 40 45.3**	**+0.7**
TAMC				*e*S	**Sn**	**13 41 06.8**	**-0.2**
TAMC				*i*		13 41 07.8	
	comp=Z,285nm,0.5s						
OCAC	**Ocana**	**1.39 352**		*e*P	**Pn**	**13 40 45.2**	**+0.4**
OCAC				*e*S	**Sn**	**13 41 07.3**	**-0.2**
OCAC				*i*		13 41 11.7	
	comp=Z,1μm,0.2s						
SPBC	**San Pablo de B**	**1.52 218**		*e*P	**Pn**	**13 40 46.0**	**0.0**
SPBC				*e*S	**Sn**	**13 41 08.2**	**-1.4**
NORC	**Norcasia**	**2.16 234**		*e*P	**Pn**	**13 40 52.8**	**-0.2**
NORC				*e*S	**Sn**	**13 41 20.8**	**-1.2**
NORC				*i*		13 41 23.3	
	comp=Z,844nm,0.2s						
CHIC	**Chingaza**	**2.29 195**		⇓*e*P	**Pn**	**13 40 54.8**	**-0.1**
CHIC				*e*S	**Sn**	**13 41 24.3**	**-1.1**
CHIC				*i*		13 41 27.9	
	comp=Z,428nm,0.5s						
ROSC	**El Rosal**	**2.33 211**	P		**Pn**	**13 40 57.2**	**+1.9**
	comp=Z,153nm,0.3s,baz=329,slow=3.2,SNR=100						
ROSC				S	**Sn**	**13 41 25.5**	**-0.6**
	comp=Z,234nm,0.3s,baz=130,slow=15,SNR=17						
HELC	**Santa Helena**	**2.48 255**		*e*P	**Pn**	**13 40 58.0**	**+0.8**
HELC				*e*S	**Sn**	**13 41 31.3**	**+2.0**
HELC				*i*		13 41 36.2	
	comp=Z,459nm,0.3s						
UREC	**San Jos de Ur**	**2.55 291**		*e*P	**Pn**	**13 40 56.9**	**-0.8**
UREC				*e*S	**Sn**	**13 41 28.2**	**-2.1**
GUY2C	**Guyana, Caldas**	**2.75 234**		*e*P	**Pn**	**13 41 00.7**	**+0.1**
GUY2C				*e*S	**Sn**	**13 41 34.6**	**-0.9**
GUY2C				*i*		13 41 45.0	
	comp=Z,643nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.81 159**		⇓*i*P	**Pn**	**13 40 60.0**	**-0.9**
PTGC				*e*S	**Sn**	**13 41 32.8**	**-3.3**
CBOC	**Ciudad Bolivar**	**3.03 251**		*e*P	**Pn**	**13 41 05.0**	**+1.2**
CBOC				*e*S	**Sn**	**13 41 40.3**	**-0.9**
CBOC				*i*		13 41 53.5	
	comp=Z,223nm,0.8s						
DBBC	**Dabeiba**	**3.07 273**		*e*P	**Pn**	**13 41 04.9**	**+0.8**
DBBC				*e*S	**Sn**	**13 41 40.6**	**-1.3**
TOLC	**Tolima**	**3.14 224**		*e*P	**Pn**	**13 41 05.4**	**+0.1**
TOLC				*e*S	**Sn**	**13 41 42.5**	**-1.3**
TOLC				*i*		13 41 48.9	
	comp=Z,823nm,0.3s						
MOTC	**Monteria, Cord**	**3.17 307**		*e*P	**Pn**	**13 41 04.0**	**-1.2**
MOTC				*e*S	**Sn**	**13 41 42.6**	**-1.3**
MOTC				*i*		13 41 57.7	
	comp=Z,498nm,0.8s						
ARGC	**Ariguani, Magd**	**3.19 340**		*e*P	**Pn**	**13 41 07.0**	**+1.4**
ARGC				*e*S	**Sn**	**13 41 45.0**	**+0.5**
ARGC				*i*		13 41 59.9	
	comp=Z,163nm,0.2s						
SDV	**Santo Domingo**	**3.19 50**	P		**Pn**	**13 41 06.5**	**+0.7**
	comp=Z,16nm,0.3s,baz=232,slow=10.0,SNR=47						
SDV				S	**Sn**	**13 41 43.6**	**-1.2**
	comp=Z,53nm,0.3s,baz=225,slow=14,SNR=33						
SDV	**Santo Domingo**	**3.19 50**		*e*P	**Pn**	**13 41 06.4**	**+0.7**
SDV				*e*S	**Sn**	**13 41 43.4**	**-1.4**
SDV				*i*		13 41 45.8	
	comp=Z,133nm,0.4s						
ANIL	**Santa Ana**	**3.26 224**		*e*P	**Pn**	**13 41 08.0**	**+1.2**
ANIL				*e*S	**Sn**	**13 41 45.3**	**-1.3**
ANIL				*i*		13 41 57.8	
	comp=Z,118nm,0.5s						
PRAC	**Prado**	**3.58 209**		*e*P	**Pn**	**13 41 09.7**	**-0.8**
PRAC				*e*S	**Sn**	**13 41 52.0**	**-1.4**
PRAC				*i*		13 42 00.5	
	comp=Z,271nm,0.3s						
ORTC	**Ortega, Tolima**	**3.61 216**		*e*P	**Pn**	**13 41 10.5**	**-0.4**
ORTC				*e*S	**Sn**	**13 41 53.0**	**-1.1**
ORTC				*i*		13 42 00.9	
	comp=Z,210nm,0.4s						
CVALL	**Valledupar, Ce**	**3.64 358**		*e*P	**Pn**	**13 41 11.1**	**-0.2**
CVALL				*e*S	**Sn**	**13 41 51.6**	**-3.2**
SJCC	**San Jacinto, C**	**3.65 326**		*e*P	**Pn**	**13 41 10.7**	**-0.8**
SJCC				*e*S	**Sn**	**13 41 52.4**	**-2.7**
LCBC	**Los crdobas,**	**3.78 302**		*e*P	**Pn**	**13 41 12.3**	**-0.9**
LCBC				*e*S	**Sn**	**13 41 56.0**	**-2.1**
YOTC	**Yotoco, Valle**	**4.29 229**		*e*P	**Pn**	**13 41 19.4**	**-0.4**
YOTC				*e*S	Sn	13 41 55.9	-14
GUVC	**San Jose del G**	**4.30 173**		*e*P	**Pn**	**13 41 19.1**	**-0.9**
GUVC				*e*S	**Sn**	**13 42 07.3**	**-3.0**
GUVC				*i*		13 42 13.2	
	comp=Z,220nm,0.3s						
SMRC	**Santa Marta, M**	**4.42 346**		*e*P	**Pn**	**13 41 22.0**	**+0.6**
SMRC				*e*S	**Sn**	**13 42 09.9**	**-3.1**
SMRC				*i*		13 42 12.6	
	comp=Z,88nm,0.4s						
CAPC	**Capurgana**	**4.55 293**		*e*P	**Pn**	**13 41 21.9**	**-1.3**
CAPC				*e*S	**Sn**	**13 42 11.7**	**-4.2**
CAPC				*i*		13 42 23.5	
	comp=Z,83nm,0.2s						
URIC	**Uribia, Colomb**	**4.95 13**		*e*P	**Pn**	**13 41 27.3**	**-1.1**
URIC				*e*S	**Sn**	**13 42 21.4**	**-4.0**
URIC				*i*		13 42 27.4	
	comp=Z,33nm,0.5s						
GARC	**Garzon, Huila**	**5.20 207**		*e*P	**Pn**	**13 41 30.9**	**-1.1**
GARC				*e*S	Sn	13 42 19.1	-13
PCON	**Cinco Dias**	**5.55 216**		*e*P	**Pn**	**13 41 37.2**	**+0.3**
PCON				*i*		13 42 52.8	
	comp=Z,25nm,0.4s						
FLOC	**Florencia**	**5.81 206**		*e*P	**Pn**	**13 41 39.2**	**-0.6**
JTS	**Las Juntas de**	**12.19 287**	P		**P**	**13 43 12.2**	**+2.3**
	comp=Z,0.6nm,0.3s,baz=353,slow=1.3,SNR=5.0						
TXAR	**Lajitas Array**	**36.44 312**	P		**P**	**13 47 06.6**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=127,slow=8.9,SNR=11						

ULM	**Lac du Bonnet**	**47.26 340**	P		**P**	**13 48 32.7**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=113,slow=5.7,SNR=5.7						
PDAR	**Pinedale Array**	**48.05 324**	P		**P**	**13 48 39.5**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=125,slow=10,SNR=4.7						
NVAR	**Mina Array Bea**	**51.46 315**	P		**P**	**13 49 05.8**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=118,slow=6.9,SNR=4.5						
YBH	**Yreka Blue Hor**	**55.92 317**	LR		LR	14 17 09.1	
	comp=Z,47nm,18.1s,baz=303,slow=40						
YKA	**Yellowknife Ar**	**63.24 340**	P		**P**	**13 50 26.9**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=253,slow=17,SNR=8.0						
DBIC	**Dimbokro**	**67.73 86**	P		**P**	**13 50 55.1**	**-1.2**
	comp=Z,2.9nm,0.7s,baz=219,slow=8.0,SNR=3.8						
ILAR	**Eielson Array**	**76.94 335**	P		**P**	**13 51 50.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=114,slow=5.0,SNR=5.0						
ARCES	**ARCESS Array B**	**86.64 20**	P		**P**	**13 52 40.6**	**0.0**
	comp=Z,6.7nm,1.1s,baz=256,slow=2.5,SNR=1.3						
MKAR	**Makanchi Array**	**122.30 20**	PKP		**PKPdf**	**13 58 51.1**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=294,slow=3.1,SNR=4.7						
ASAR	**Alice Springs**	**149.13 234**	PKP		**PKPdf**	**13 59 41.2**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=115,slow=1.6,SNR=8.6						
ASAR			PKPbc		**PKPbc**	**13 59 44.9**	**-1.0**
	comp=Z,2.0nm,0.6s,baz=118,slow=3.7,SNR=16						
WRA	**Warramunga Arr**	**150.35 241**	PKPbc		**PKPbc**	**13 59 48.2**	**-0.7**
	comp=Z,1.8nm,0.4s,baz=109,slow=2.6,SNR=48						
CMAR	**Chiang Mai Arr**	**153.66 17**	PKPbc		**PKPbc**	**13 59 56.3**	**0.0**
	comp=Z,0.7nm,0.6s,baz=318,slow=3.6,SNR=5.9						

*IDC **08** 13:55:56.8±1.6, 13.28S×166.83E,h0km,mb3.7/4, mb1 4.0/5,mb1mx3.6/33,mbtmp3.8/5,ML3.6/1,Error ellipse: s-maj=53.3km s-min=29.3km az=127.0*

ISC 08 13:55:58.5±1.4,**13.3S**±0.2×**166.8E**±0.3,**h10km,n6, σ1°28/6,mb3.8/4,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.78 182**		Pn	**Pn**	**13 58 05.9**	**+0.3**
DZM	0.7nm,0.3s,baz=102,slow=15,SNR=9.0			Sn	Sn	13 59 31.9	-13
	baz=129,slow=23,SNR=2.3						
STKA	**Stephens Creek**	**29.61 227**	P		**P**	**14 02 03.3**	**-0.7**
	0.8nm,0.4s,baz=52,slow=8.5,SNR=5.6						
WRA	**Warramunga Arr**	**31.74 254**	P		**P**	**14 02 23.7**	**+0.6**
	0.4nm,0.5s,baz=85,slow=9.4,SNR=5.6						
ASAR	**Alice Springs**	**32.77 247**	P		**P**	**14 02 32.6**	**+0.5**
	0.3nm,0.3s,baz=77,slow=9.4,SNR=18						
ILAR	**Eielson Array**	**85.28 18**	P		**P**	**14 08 36.0**	**+0.8**
	0.5nm,0.7s,baz=238,slow=5.6,SNR=3.6						
ARCES	**ARCESS Array B**	**118.71 345**	PKP		**PKPdf**	**14 14 44.7**	**-1.7**
	2.5nm,0.8s,baz=48,slow=3.6,SNR=3.6						

*ANF **08** 14:00:09.4±0.5,62.79N×148.85W,h68km±11km,ML4.0/18, ML4.0/18,Error ellipse: s-maj=4.5km s-min=2.6km az=94.0*
*AEIC **08** 14:00:09.1±1.1,62.74N±0.03×148.75W±0.06,h60km±3km, ML3.6,Error ellipse: s-maj=4.3km s-min=3.6km az=169.0*
*NEIC **08** 14:00:09.4±1.1,62.73N±0.03×148.75W±0.05,h59km±3km, Error ellipse: s-maj=4.1km s-min=3.3km az=178.0*
*IDC **08** 14:00:12.7±4.3,63.01N×148.50W,h93km±34km,mb3.2/5, mb1 3.5/6,mb1mx3.2/31,mbtmp3.6/6,Error ellipse: s-maj=42.6km s-min=21.3km az=46.0*

ISC 08 14:00:09.0±0.7,**62.78N**±0.02×**148.75W**±0.03,**h60km**±4km, **n154,σ1°26/188,mb3.4/6,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAT7	**Susitna Watana**	**0.07 320**			**Pn**	**14 00 18.5**	**+0.4**
WAT7					**Sn**	**14 00 25.5**	**+0.8**
WAT1	**Susitna Watana**	**0.10 62**			**Pn**	**14 00 18.4**	**+0.3**
WAT1					**Sn**	**14 00 25.6**	**+0.9**
WAT2	**Susitna Watana**	**0.20 23**			**Pn**	**14 00 19.0**	**+0.4**
WAT2					**Sn**	**14 00 26.6**	**+1.1**
HUR	**Hurricane**	**0.45 296**			**Pn**	**14 00 21.0**	**+0.6**
HUR					**Sn**	**14 00 29.9**	**+1.1**
WAT6	**Susitna Watana**	**0.51 113**			**Pn**	**14 00 20.7**	**-0.5**
WAT6					**Sn**	**14 00 29.3**	**-0.7**
RND	**Reindeer**	**0.63 356**			**Pn**	**14 00 23.5**	**+1.0**
RND					**Sn**	**14 00 33.7**	**+1.4**
DHY	**Denali Highway**	**0.70 64**			**Pn**	**14 00 23.8**	**+0.5**
DHY					**Sn**	**14 00 35.0**	**+1.2**
CUT	**Chulitna**	**0.80 242**	P		**Pn**	**14 00 24.4**	**0.0**
	baz=64,SNR=36						
CUT			S		**Sn**	**14 00 35.9**	**+0.3**
	baz=64						
CUT	**Chulitna**	**0.80 242**			**Pn**	**14 00 24.4**	**0.0**
CUT					**Sn**	**14 00 36.0**	**+0.3**
MCK	**McKinley**	**0.96 355**	P		**Pn**	**14 00 27.7**	**+1.2**
	baz=175,SNR=153						
MCK			S		**Sn**	**14 00 41.3**	**+1.9**
	baz=175						
MCK	**McKinley**	**0.96 355**			**Pn**	**14 00 27.7**	**+1.2**
TRF	**Thorofare Moun**	**0.97 315**			**Pn**	**14 00 27.5**	**+0.7**

N25K	**Chitina, Valde**	**2.28 119**		**Pn**	**14 00 44.8**	**+0.6**
DOT	**Dot Lake**	**2.30 66**		**Pn**	**14 00 45.6**	**+1.2**
FID	**Port Fidalgo**	**2.31 151**		**Pn**	**14 00 44.5**	**-0.1**
MENT	**Mentasta**	**2.31 84**		**Pn**	**14 00 46.0**	**+1.3**
CAPN	**Captain Cook N**	**2.32 211**	P	**Pn**	**14 00 48.5**	**+3.8**
	baz=29					
CAPN			S	**Sn**	**14 01 17.9**	**+5.8**
	baz=29					
O22K	**Cooper Landing**	**2.35 192**	P	**Pn**	**14 00 46.0**	**+0.9**
	baz=11,SNR=28					
O22K			S	**Sn**	**14 01 13.2**	**+0.3**
	baz=11					
O22K	**Cooper Landing**	**2.35 192**		**Pn**	**14 00 46.1**	**+1.0**
SLKM	**Skilak Lake**	**2.39 198**		**Pn**	**14 00 46.5**	**+0.8**
I23K	**Minto, Yukon-K**	**2.39 354**	P	**Pn**	**14 00 46.6**	**+0.9**
	baz=173,SNR=58					
I23K			S	**Sn**	**14 01 13.4**	**-0.4**
	baz=173					
I23K	**Minto, Yukon-K**	**2.39 354**		**Pn**	**14 00 46.7**	**+0.9**
POKR	**Poker Plat Res**	**2.42 13**	P	**Pn**	**14 00 46.8**	**+0.8**
	baz=194,SNR=49					
POKR			S	**Sn**	**14 01 14.1**	**-0.4**
	baz=194					
POKR	**Poker Plat Res**	**2.42 13**		**Pn**	**14 00 46.9**	**+0.8**
MLY	**Manley**	**2.42 340**	P	**Pn**	**14 00 47.0**	**+0.8**
	baz=158,SNR=29					
MLY			S	**Sn**	**14 01 15.4**	**+0.7**
	baz=158					
MLY	**Manley**	**2.42 340**		**Pn**	**14 00 47.0**	**+0.8**
SCRK	**Sand Creek**	**2.46 59**	P	**Pn**	**14 00 47.9**	**+1.2**
	baz=242,SNR=38					
SCRK			S	**Sn**	**14 01 16.6**	**+0.9**
	baz=242					
SCRK	**Sand Creek**	**2.46 59**		**Pn**	**14 00 47.9**	**+1.2**
L26K	**Log Cabin Wild**	**2.49 82**	P	**Pn**	**14 00 48.7**	**+1.7**
	baz=266,SNR=30					
L26K			S	**Sn**	**14 01 19.6**	**+3.4**
	baz=266					
L26K	**Log Cabin Wild**	**2.49 82**		**Pn**	**14 00 48.5**	**+1.5**
HIN	**Hinchinbrook I**	**2.62 155**		**Pn**	**14 00 49.2**	**+0.3**
EYAK	**Cordova Ski Ar**	**2.66 146**		**Pn**	**14 00 49.5**	**+0.2**
BMRM	**Bremner River**	**2.68 131**		**Pn**	**14 00 49.5**	**-0.2**
GLB	**Gilahina Butte**	**2.68 118**		**Pn**	**14 00 50.1**	**+0.3**
SEW	**Seward**	**2.71 187**		**Pn**	**14 00 50.4**	**+0.4**
DFR	**Drift River**	**2.89 222**		**Pn**	**14 00 53.6**	**+1.0**
GOAT	**Goat Mountain**	**2.92 137**		**Pn**	**14 00 53.3**	**+0.3**
VRDI	**Verde Repeater**	**2.94 120**		**Pn**	**14 00 53.7**	**+0.2**
RSO	**Redoubt South**	**3.01 221**		**Pn**	**14 00 57.5**	**+3.1**
RDWB	**Redoubt West**	**3.02 222**		**Pn**	**14 00 54.6**	**+0.2**
MCARA	**McCarthy VSAT**	**3.04 115**		**Pn**	**14 00 55.5**	**+1.0**
PRP	**Porcupine Dome**	**3.09 26**		**Pn**	**14 00 56.8**	**+1.4**
BRLK	**Bradley Lake**	**3.20 200**		**Pn**	**14 00 57.2**	**+0.4**
BRSE	**Bradley Lake S**	**3.20 198**		**Pn**	**14 00 57.2**	**+0.5**
BC03		**3.20 82**		**Pn**	**14 00 57.5**	**+0.8**
K27K	**Chicken**	**3.25 64**	P	**Pn**	**14 00 58.8**	**+1.3**
	baz=250					
K27K			S	**Sn**	**14 01 36.5**	**+1.6**
	baz=250					
K27K	**Chicken**	**3.25 64**		**Pn**	**14 00 58.7**	**+1.3**
HMT	**Hamilton**	**3.26 137**		**Pn**	**14 00 57.6**	**0.0**
TTA	**Tatalina**	**3.33 276**		**Pn**	**14 00 58.4**	**-0.2**
TT01	**Tatalina**	**3.34 275**		**Pn**	**14 00 58.5**	**-0.1**
CRQM	**Cirque**	**3.35 125**		**Pn**	**14 00 59.6**	**+0.6**
PTPK	**Patty Peak**	**3.37 116**		**Pn**	**14 00 59.9**	**+0.7**
HOM	**Homer**	**3.43 205**	P	**Pn**	**14 01 01.4**	**+1.5**
	baz=23					
HOM			S	**Sn**	**14 01 39.2**	**-0.1**
	baz=23					
HOM	**Homer**	**3.43 205**		**Pn**	**14 01 00.7**	**+0.8**
TGL	**Tana Glacier**	**3.47 123**		**Pn**	**14 01 00.7**	**+0.2**
CNPM	**China Poot**	**3.48 201**		**Pn**	**14 01 01.5**	**+0.9**
BALM	**Baldy**	**3.50 117**		**Pn**	**14 01 01.0**	**0.0**
KHIT	**Khitrov Hills**	**3.52 129**		**Pn**	**14 01 01.4**	**+0.1**
KAIM	**Kayak Island**	**3.54 142**		**Pn**	**14 01 00.9**	**-0.5**
KIAG	**Kiagna River**	**3.56 119**		**Pn**	**14 01 01.5**	**-0.3**
SVW2	**Sparrevohn**	**3.64 245**		**Pn**	**14 01 03.0**	**+0.2**
BVCY	**Beaver Creek**	**3.67 92**		**Pn**	**14 01 04.0**	**+0.9**
ISLE	**Juniper Island**	**3.75 123**		**Pn**	**14 01 04.3**	**-0.2**
BARN	**Barnard Glacie**	**3.77 114**		**Pn**	**14 01 05.4**	**+0.7**
YUK2	**White River**	**3.83 102**		**Pn**	**14 01 06.2**	**+0.8**
KULT	**Kultieth River**	**3.85 129**		**Pn**	**14 01 06.0**	**+0.3**
IM03		**3.88 328**		**Pn**	**14 01 06.7**	**+0.7**
IMAR	**Indian Mountai**	**3.88 328**		**Pn**	**14 01 06.9**	**+0.9**
GRNC	**Granite Creek**	**3.91 119**		**Pn**	**14 01 06.3**	**-0.4**
EGAK	**Eagle**	**3.92 56**		**Pn**	**14 01 08.0**	**+1.4**
CTGM	**Chitina Glacie**	**3.96 114**		**Pn**	**14 01 07.6**	**+0.4**
FYU	**Fort Yukon**	**4.09 20**		**Pn**	**14 01 10.3**	**+1.4**
AUW	**Augustine West**	**4.12 216**		**Pn**	**14 01 09.3**	**+0.1**
YAH	**Yahtse**	**4.13 123**		**Pn**	**14 01 09.6**	**-0.1**
LOGN	**Logan Glacier**	**4.17 115**		**Pn**	**14 01 10.5**	**+0.3**
MESA	**MESA**	**4.18 126**		**Pn**	**14 01 10.1**	**-0.2**
RKAV	**Rock Avalanche**	**4.33 122**		**Pn**	**14 01 12.2**	**-0.1**
DAWY	**Dawson**	**4.40 69**		**Pn**	**14 01 14.3**	**+1.2**
COLD	**Coldfoot**	**4.51 353**	P	**Pn**	**14 01 15.8**	**+1.2**
	baz=172,SNR=33					
COLD			S	**Sn**	**14 02 04.9**	**-0.8**
	baz=172					
COLD	**Coldfoot**	**4.51 353**		**Pn**	**14 01 15.8**	**+1.2**
SAMH	**Samovar Hills**	**4.66 121**		**Pn**	**14 01 16.1**	**-0.6**
PCA	**Pinnacle**	**4.88 120**		**Pn**	**14 01 20.0**	**+0.1**
BM03	**Burnt Mountain**	**4.98 19**		**Pn**	**14 01 22.2**	**+1.2**
BMAR	**Burnt Mountain**	**4.99 19**		**Pn**	**14 01 21.7**	**+0.5**
BCPM	**Bancas Point**	**5.22 119**		**Pn**	**14 01 24.1**	**-0.3**
YUK6	**Outpost Mounta**	**5.25 106**		**Pn**	**14 01 25.1**	**+0.1**
KAKN	**Katmai Knife C**	**5.47 218**		**Pn**	**14 01 27.5**	**-0.3**
PNL	**Peninsula**	**5.49 120**		**Pn**	**14 01 28.2**	**+0.1**
YUK7	**Dusty Glacier**	**5.54 109**		**Pn**	**14 01 29.2**	**+0.3**
HYT	**Haines Junctio**	**5.68 105**		**Pn**	**14 01 30.9**	**+0.1**
TOLK	**Toolik Lake Re**	**5.90 357**	P	**Pn**	**14 01 36.0**	**+2.4**
	baz=176,SNR=14					
TOLK			S	**Sn**	**14 02 40.5**	**+0.7**
	baz=176					
TOLK	**Toolik Lake Re**	**5.90 357**	Pn	**Pn**	**14 01 36.3**	**+2.6**
OHAK	**Old Harbor**	**6.02 204**		**Pn**	**14 01 34.0**	**-1.3**
EPYK	**Eagle Plains**	**6.31 50**	P	**Pn**	**14 01 41.3**	**+2.0**
	baz=240					
EPYK			S	**Sn**	**14 02 50.9**	**+1.1**
	baz=240					
EPYK	**Eagle Plains**	**6.31 50**		**Pn**	**14 01 40.8**	**+1.5**
PLBC	**Pleasant Camp**	**6.86 113**		**Pn**	**14 01 46.9**	**+0.1**
WHY	**Whitehorse**	**6.92 102**		**Pn**	**14 01 47.8**	**0.0**
BESE	**Bessie Mountai**	**8.01 115**		**Pn**	**14 02 01.8**	**-0.8**
INK	**Inuvik**	**8.38 42**	P	**Pn**	**14 02 07.8**	**+0.3**
	0.9nm,0.3s,baz=234,slow=15,SNR=26					
INK			S	**Sn**	**14 03 37.1**	**-3.4**
	0.1nm,0.3s,baz=316,slow=27,SNR=1.1					
INK	**Inuvik**	**8.38 42**		**Pn**	**14 02 07.7**	**+0.2**
JIS	**Juneau Island**	**8.39 116**		**Pn**	**14 02 07.3**	**-0.4**
C36M	**Paulatuk**	**11.91 46**	P	**Pn**	**14 02 55.6**	**0.0**
	baz=248,SNR=5.4					
C36M			S	**Sn**	**14 05 01.2**	**-5.4**
	baz=248					
C36M	**Paulatuk**	**11.91 46**	Pn	**Pn**	**14 02 54.9**	**-0.8**
PDAR	**Pinedale Array**	**30.32 113**	P	**P**	**14 06 15.4**	**+0.7**
	0.3nm,0.7s,baz=343,slow=5.8,SNR=2.1					
NVAR	**Mina Array Bea**	**30.57 129**	pP	pP	14 06 41.0	+9.0
	0.3nm,0.7s,baz=329,slow=8.6,SNR=2.9					
TXAR	**Lajitas Array**	**44.25 118**	P	**P**	**14 08 12.5**	**+0.2**
	0.3nm,0.7s,baz=326,slow=6.2,SNR=3.8					
TXAR			pP	**sP**	**14 08 36.4**	**+1.4**
	0.3nm,0.6s,baz=330,slow=6.6,SNR=4.0					
FINES	**FINESS Array B**	**56.03 3**	P	**P**	**14 09 39.4**	**-1.5**
	1.5nm,0.8s,baz=44,slow=5.8,SNR=4.6					
ZALV	**Zalesovo Beam**	**56.30 325**	P	**P**	**14 09 43.2**	**+0.3**
	0.6nm,0.6s,baz=27,slow=10,SNR=3.7					
MKAR	**Makanchi Array**	**63.48 323**	P	**P**	**14 10 30.1**	**-2.1**
	0.4nm,0.7s,baz=35,slow=8.8,SNR=2.3					

*THE **08** 14:04:58.6,37.79N×21.92E,h19km±41km, Error ellipse: s-maj=47.2km s-min=4.4km az=32.0*

ATH 08 14:05:07.0,38.28N×22.13E,h8km±3km,ML1.4/1, Error ellipse: s-maj=3.7km s-min=0.7km az=356.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALIK	**Aliki, Aigiali**	**0.03**	**217**	P	Pg	14 05 08.5	-0.1
ALIK				S	Sg	14 05 09.8	+0.1
TRIZ	**Trizonia**	**0.10**	**331**	P	Pg	14 05 09.2	-0.2
TRIZ				S	Sg	14 05 11.0	0.0
TRIZ	**Trizonia**	**0.10**	**331**	P	Pg	14 05 09.2	-0.2
KALE	**Kalithea**	**0.11**	**3**	P	Pg	14 05 09.6	-0.1
KALE				S	Sg	14 05 11.7	+0.2
KALE					AML	AML	14 05 12.2	
	comp=E,582μm,0.1s							
KALE					AML	AML	14 05 12.3	
	comp=N,687μm,0.2s							
EFP	**Efpalio**	**0.23**	**309**	P	Pg	14 05 11.7	0.0
EFP				S	Sg	14 05 15.3	+0.6
EFP	**Efpalio**	**0.23**	**309**	P	Pg	14 05 11.7	+0.1
KLV	**Kalavryta, Ach**	**0.24**	**176**	P	Pg	14 05 11.8	0.0
KLV				S	Sg	14 05 15.4	+0.4
DSF	**Desfina**	**0.34**	**67**	P	Pg	14 05 13.3	-0.3
DSF				S	Sg	14 05 19.1	+0.9
ANX	**Ano Chora**	**0.35**	**332**	P	Pg	14 05 13.7	-0.3
ANX				S	Sg	14 05 19.3	+0.7
ANX	**Ano Chora**	**0.35**	**332**	P	Pg	14 05 13.8	-0.2
GUR	**Goura**	**0.38**	**154**	P	Pg	14 05 14.3	-0.2
GUR				S	Sg	14 05 20.1	+0.5
DRO	**Drossia**	**0.47**	**225**	P	Pg	14 05 16.1	0.0
TRIP	**Tripoli**	**0.76**	**172**	P	Pg	14 05 21.1	-0.6
TRIP				S	Sb	14 05 32.7	-0.3
PDO	**Prodromos**	**0.81**	**293**	P	Pg	14 05 22.8	+0.2

IDC 08 14:15:20.8±4.6,11.80N×92.96E,h0km,mb3.5/2, mb1 3.7/3,mb1mx3.3/41,mbtmp3.4/3,ML3.5/1,MS4.2/2, Ms1 4.2/2,ms1mx2.8/43, Error ellipse: s-maj=111.0km s-min=46.6km az=99.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**8.79**	**40**	Pn	Pn	14 17 28.2	-1.0
	0.2nm,0.3s,baz=221,slow=14,SNR=2.0						
DAV	**Davao City (W)**	**32.51**	**95**	LR	LR	14 35 44.9	
	comp=Z,431nm,21.8s,baz=346,slow=38						
WRA	**Warramunga Arr**	**51.52**	**127**	P	P	14 24 28.9	+0.1
	0.4nm,0.5s,baz=300,slow=10.0,SNR=13						
WRA				PcP	PcP	14 25 41.8	-1.3
	0.3nm,0.9s,baz=316,slow=3.3,SNR=6.3						
ASAR	**Alice Springs**	**53.35**	**131**	P	P	14 24 43.0	+0.6
	0.3nm,0.5s,baz=311,slow=6.9,SNR=10						
CTA	**Charters Tower**	**61.27**	**121**	LR	LR	14 53 59.2	
	comp=Z,166nm,18.6s,baz=134,slow=38						

IDC 08 14:23:39.5±3.2,31.67S×178.25W,h0km,mb3.7/2, mb1 3.9/3,mb1mx3.6/25,mbtmp3.7/3,ML3.6/1, Error ellipse: s-maj=72.3km s-min=47.9km az=118.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.60**	**209**	Pn	Pn	14 25 29.8	-1.6
	0.8nm,0.3s,baz=266,slow=17,SNR=1.3						
URZ				Sn	Sn	14 26 51.7	-6.5
	0.2nm,0.3s,baz=130,slow=22,SNR=2.0						
ASAR	**Alice Springs**	**42.84**	**268**	P	P	14 31 39.6	+0.1
	0.2nm,0.3s,baz=108,slow=7.2,SNR=15						
WRA	**Warramunga Arr**	**43.94**	**274**	P	P	14 31 48.3	-0.1
	0.7nm,0.4s,baz=112,slow=8.0,SNR=24						
FINES	**FINESS Array B**	**146.25**	**339**	PKPbc	PKPdf	14 43 20.4	+0.3
	2.2nm,0.9s,baz=41,slow=4.4,SNR=4.2						

*CNRM **08** 14:45:59.4±1.3,35.92N×14.29W,h10km, Error ellipse: s-maj=19.3km s-min=6.4km az=150.0*
*IGIL **08** 14:46:03.8,36.00N×14.12W,h30km,ML3.0*
*MDD **08** 14:46:03.2±0.8,36.03N×14.13W,h30km,mb4.3/19, Error ellipse: s-maj=13.4km s-min=6.1km az=137.0,PRXIMO*
*INMG **08** 14:46:06.5±1.4,35.96N×14.12W,h10km,ML3.1, Error ellipse: s-maj=7.2km s-min=2.1km az=129.0*

ISC 08 14:46:02.5±3.6,36.3N×0.1×13.9W×0.2,h10km,n88, σ26.27/117,1D,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMPS	**Porto Santo**	**3.82**	**213**	P	Pn	14 46 54.2	-7.2
PMPS				S	Sn	14 47 29.2	-17
	30nm,0.2s						
PMPS	**Porto Santo**	**3.82**	**213**	*i*P	Pn	14 46 54.2	-7.2
PMPS				*e*Sn	Sn	14 47 29.2	-17
PMPS				A	A	14 47 31.4	
	59nm,0.2s						
PFVI	**Vila Bisbo**	**4.13**	**77**	P	**Pn**	**14 47 07.9**	**+2.3**
	14nm,0.2s,SNR=9.0						
PFVI				S	**Sn**	**14 47 52.7**	**-1.3**
	91nm,0.3s,SNR=6.7						
PFVI	**Vila Bisbo**	**4.13**	**77**	*e*Pn	**Pn**	**14 47 07.8**	**+2.2**
PFVI				*e*Sn	**Sn**	**14 47 53.0**	**-1.0**
PFVI				A	A	14 47 54.4	
	18nm,0.2s						
PTEO	**Sao Teotonio**	**4.30**	**72**	P	**Pn**	**14 47 10.6**	**+2.7**
PTEO				S	**Sn**	**14 47 56.5**	**-1.7**
	11nm,0.8s						
PTEO	**Sao Teotonio**	**4.30**	**72**	*e*Pn	**Pn**	**14 47 10.6**	**+2.7**
PTEO				*e*Sn	**Sn**	**14 47 56.5**	**-1.7**
PTEO				A	A	14 47 59.6	
	23nm,0.8s						
MORF	**Marmelete**	**4.30**	**75**	*e*P	**Pn**	**14 47 09.8**	**+1.8**
MORF				*e*S	**Sn**	**14 47 57.5**	**-0.7**
MORF				AML	AML	14 47 59.8	
	comp=N,27nm,0.1s						
MORF	**Marmelete**	**4.30**	**75**	P	**Pn**	**14 47 10.4**	**+2.4**
MORF				S	**Sn**	**14 47 57.2**	**-1.1**
	comp=N,21nm,0.2s						
MORF	**Marmelete**	**4.30**	**75**	*e*Pn	**Pn**	**14 47 10.4**	**+2.4**
MORF				*e*Sn	**Sn**	**14 47 57.2**	**-1.1**
MORF				A	A	14 48 02.1	
	comp=N,21nm,0.2s						
PMAR	**Madeira**	**4.37**	**216**	P	Pn	14 47 02.0	-7.1
PMAR				S	Sn	14 47 42.5	-18
	comp=N,41nm,0.2s						
PMAR	**Madeira**	**4.37**	**216**	P	Pn	14 47 00.3	-8.8
PMAR				S	Sn	14 47 44.0	-16
PMAR	**Madeira**	**4.37**	**216**	*e*Pn	Pn	14 47 02.0	-7.1
PMAR				*e*Sn	Sn	14 47 42.5	-18
PMAR				A	A	14 47 46.4	
	comp=N,83nm,0.2s						
PMOZ	**Porto Moniz, M**	**4.43**	**219**	P	Pn	14 47 03.0	-6.8
	comp=N,24nm,0.3s,SNR=7.9						
PMOZ				S	Sn	14 47 45.5	-16
	comp=N,96nm,0.8s,SNR=7.9						
PMOZ	**Porto Moniz, M**	**4.43**	**219**	P	Pn	14 47 00.4	-9.4
PMOZ	**Porto Moniz, M**	**4.43**	**219**	*e*Pn	Pn	14 47 03.1	-6.7
PMOZ				*e*Sn	Sn	14 47 43.8	-18
PMOZ				A	A	14 47 49.5	
	comp=N,93nm,0.5s						
PMAFR	**Mafra**	**4.50**	**53**	P	**Pn**	**14 47 12.8**	**+2.1**
	comp=N,3.9nm,0.2s,SNR=5.6						
PMAFR				S	**Sn**	**14 48 03.5**	**+0.4**
	comp=N,35nm,0.1s,SNR=11						
PMAFR	**Mafra**	**4.50**	**53**	*e*Sn	**Sn**	**14 48 03.7**	**+0.7**
PMAFR				A	A	14 48 06.4	
	comp=N,47nm,0.2s						
PNCL	**Nicolau / Gran**	**4.63**	**65**	P	**Pn**	**14 47 14.5**	**+2.1**
PNCL				S	**Sn**	**14 48 06.2**	**0.0**
	comp=N,16nm,0.3s						
PNCL	**Nicolau / Gran**	**4.63**	**65**	*e*Pn	**Pn**	**14 47 14.5**	**+2.1**
PNCL				*e*Sn	**Sn**	**14 48 06.2**	**0.0**
PNCL				A	A	14 48 09.0	
	comp=N,16nm,0.3s						
PCVE	**Castro Verde**	**4.85**	**72**	P	**Pn**	**14 47 18.3**	**+2.8**
PCVE				S	**Sn**	**14 48 10.5**	**-1.2**
	comp=N,9.1nm,0.2s						
PCVE	**Castro Verde**	**4.85**	**72**	*e*Pn	**Pn**	**14 47 18.3**	**+2.8**
PCVE				*e*Sn	**Sn**	**14 48 10.5**	**-1.2**
PCVE				A	A	14 48 14.4	
	comp=N,9.1nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.85**	**77**	P	**Pn**	**14 47 18.4**	**+2.8**
PBDV				S	**Sn**	**14 48 11.2**	**-0.7**
	comp=N,7.1nm,0.4s						
PBDV	**Barranco-do-Ve**	**4.85**	**77**	*e*Pn	**Pn**	**14 47 18.4**	**+2.8**
PBDV				*e*Sn	**Sn**	**14 48 11.2**	**-0.7**
PBDV				A	A	14 48 19.9	
	comp=N,7.1nm,0.4s						
PVAQ	**Vaqueiros**	**5.05**	**76**	P	**Pn**	**14 47 20.9**	**+2.7**
PVAQ				S	**Sn**	**14 48 15.2**	**-1.4**
	comp=N,12nm,0.7s						
PVAQ	**Vaqueiros**	**5.05**	**76**	P	**Pn**	**14 47 20.7**	**+2.4**
PVAQ	**Vaqueiros**	**5.05**	**76**	*e*Pn	**Pn**	**14 47 20.9**	**+2.7**
PVAQ				*e*Sn	**Sn**	**14 48 15.2**	**-1.4**
PVAQ				A	A	14 48 18.5	
	comp=N,12nm,0.7s						
PBEJ	**Beja**	**5.09**	**68**	P	**Pn**	**14 47 21.4**	**+2.6**
PBEJ				S	**Sn**	**14 48 17.0**	**-0.6**
	comp=N,5.7nm,0.3s						
PBEJ	**Beja**	**5.09**	**68**	*e*Pn	**Pn**	**14 47 21.4**	**+2.6**
PBEJ				*e*Sn	**Sn**	**14 48 17.0**	**-0.6**
PBEJ				A	A	14 48 20.5	
	comp=N,11nm,0.3s						
PSBE	**So Bento**	**5.13**	**50**	*e*Sn	**Sn**	**14 48 20.0**	**+1.3**
PSBE				A	A	14 48 22.2	
	comp=N,15nm,0.4s						
EVO	**Evora**	**5.16**	**63**	P	**Pn**	**14 47 22.4**	**+2.6**
EVO				S	**Sn**	**14 48 18.5**	**-0.9**
	comp=N,18nm,0.1s						
EVO	**Evora**	**5.16**	**63**	*e*Pn	**Pn**	**14 47 22.4**	**+2.6**
EVO				*e*Sn	**Sn**	**14 48 18.5**	**-0.9**
EVO				A	A	14 48 22.8	
	comp=N,18nm,0.1s						
PMTG	**Montargil**	**5.25**	**57**	P	**Pn**	**14 47 22.9**	**+1.8**
PMTG				S	**Sn**	**14 48 22.9**	**+1.2**
	comp=N,8.6nm,0.2s						
PMTG	**Montargil**	**5.25**	**57**	*e*Pn	**Pn**	**14 47 22.9**	**+1.8**
PMTG				*e*Sn	**Sn**	**14 48 22.9**	**+1.2**
PMTG				A	A	14 48 24.0	
	comp=N,8.6nm,0.2s						
EGRO	**El Granado**	**5.26**	**75**	P	**Pn**	**14 47 23.5**	**+2.4**
	comp=N,2.0nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**14 48 20.6**	**-1.2**
	comp=N,17nm,0.3s,SNR=7.1						
PCAS	**Casmilo, Conde**	**5.65**	**47**	P	**Pn**	**14 47 29.5**	**+3.1**
PCAS				S	**Sn**	**14 48 31.2**	**-0.1**
	comp=N,7.5nm,0.3s						
PCAS	**Casmilo, Conde**	**5.65**	**47**	*e*Pn	**Pn**	**14 47 29.5**	**+3.1**
PCAS				*e*Sn	**Sn**	**14 48 31.2**	**-0.1**
PCAS				A	A	14 48 34.4	
	comp=N,7.5nm,0.3s						
PBAR	**Barrancos**	**5.76**	**69**	S	**Sn**	**14 48 32.9**	**-1.2**
PBAR	**Barrancos**	**5.76**	**69**	*e*Sn	**Sn**	**14 48 32.9**	**-1.2**
EMIN	**Mina Concepcio**	**5.94**	**74**	P	**Pn**	**14 47 32.4**	**+2.0**
	comp=N,1.2nm,0.1s,SNR=22						
EMIN				S	**Sn**	**14 48 36.1**	**-2.4**
	comp=N,5.2nm,0.3s,SNR=8.0						
PMRV	**Marv??o**	**6.00**	**57**	P	**Pn**	**14 47 33.0**	**+1.7**
PMRV				S	**Sn**	**14 48 40.1**	**+0.1**
	comp=N,8.1nm,0.5s						
PMRV	**Marv??o**	**6.00**	**57**	*e*Pn	**Pn**	**14 47 33.0**	**+1.7**
PMRV				*e*Sn	**Sn**	**14 48 40.1**	**+0.1**
PMRV				A	A	14 48 40.5	
	comp=N,8.1nm,0.5s						
PCBR	**Castelo Branco**	**6.15**	**53**	P	**Pn**	**14 47 35.9**	**+2.5**
PCBR				S	**Sn**	**14 48 43.9**	**+0.1**
	comp=N,2.6nm,0.3s						
PCBR	**Castelo Branco**	**6.15**	**53**	*e*Pn	**Pn**	**14 47 35.9**	**+2.5**
PCBR				*e*Sn	**Sn**	**14 48 43.9**	**+0.1**
PCBR				A	A	14 48 49.6	
	comp=N,5.1nm,0.3s						
PVIS	**Viseu**	**6.43**	**45**	S	**Sn**	**14 48 48.8**	**-1.8**
	comp=N,11nm,0.3s						
PVIS	**Viseu**	**6.43**	**45**	*e*Sn	**Sn**	**14 48 48.8**	**-1.8**
PVIS				A	A	14 48 53.1	
	comp=N,21nm,0.3s						
MTE	**Manteigas**	**6.43**	**49**	S	**Sn**	**14 48 50.3**	**-0.5**
	comp=N,6.4nm,0.6s						
MTE	**Manteigas**	**6.43**	**49**	*e*Sn	**Sn**	**14 48 50.3**	**-0.5**
MTE				A	A	14 48 54.6	
	comp=N,13nm,0.6s						
ESPR	**Espera**	**6.47**	**83**	P	**Pn**	**14 47 39.0**	**+1.2**
	comp=N,6.1nm,0.3s,SNR=14						
ESPR				S	**Sn**	**14 48 49.8**	**-1.8**
	comp=N,3.6nm,0.3s,SNR=5.1						
ZHG	**ZHG**	**6.58**	**114**	P	Pn	14 47 38.7	-0.7
PVRL	**Vila Real**	**6.91**	**42**	S	**Sn**	**14 49 01.2**	**-1.2**
	comp=N,3.5nm,0.1s						
PVRL	**Vila Real**	**6.91**	**42**	*e*Sn	**Sn**	**14 49 01.2**	**-1.2**
PVRL				A	A	14 49 03.3	
	comp=N,6.9nm,0.1s						
POLO	**Lamas de Olo**	**6.93**	**41**	S	**Sn**	**14 49 01.3**	**-1.8**
	comp=N,3.8nm,0.5s						
POLO	**Lamas de Olo**	**6.93**	**41**	*e*Sn	**Sn**	**14 49 01.3**	**-1.8**
POLO				A	A	14 49 04.7	
	comp=N,3.8nm,0.5s						
ECAB	**El Cabril**	**6.97**	**73**	P	**Pn**	**14 47 46.8**	**+2.2**
	comp=N,1.8nm,0.2s,SNR=21						
ECAB				S	**Sn**	**14 49 00.3**	**-3.7**
	comp=N,15nm,0.6s,SNR=5.8						
HORN	**Hornachuelos**	**7.05**	**75**	P	**Pn**	**14 47 48.3**	**+2.6**
PCAB	**Cabril**	**7.06**	**38**	S	**Sn**	**14 49 04.6**	**-1.5**
	comp=N,5.7nm,0.3s						
PCAB	**Cabril**	**7.06**	**38**	*e*Sn	**Sn**	**14 49 04.6**	**-1.5**
PCAB				A	A	14 49 06.5	
	comp=N,11nm,0.3s						
EZAM	**Zamans**	**7.08**	**33**	P	**Pn**	**14 47 48.5**	**+2.3**
	comp=N,0.9nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**14 49 02.5**	**-4.2**
	comp=N,3.1nm,0.9s,SNR=7.9						
OUK	**Oukaimeden**	**7.12**	**134**	P	Pn	14 47 45

CZD	Col de Zad	7.97	112	P		Pn	14 47 56.5	-2.1
OUZM	OUZ	8.00	130	P		Pn	14 47 57.4	-1.6
PAB	San Pablo	8.19	64	P		Pn	14 48 03.6	+2.2
	comp=N,0.5nm,0.2s,SNR=7.9							
PAB				S		Sn	14 49 31.1	-2.9
	comp=N,4.3nm,0.7s,SNR=7.9							
MD31	MD31	8.25	112	P		Pn	14 48 02.3	0.0
ELGU	Los Guajares,	8.26	83	S		Sn	14 49 32.6	-3.1
	comp=N,2.7nm,0.3s,SNR=7.9							
TBT	Taburiente	8.34	205	S		Sn	14 49 17.1	-20
	comp=N,8.5nm,0.8s,SNR=7.9							
MDT	Midelt	8.39	112	P		Pn	14 48 02.4	-1.9
EQUE	Quentar	8.42	81	P		Pn	14 48 03.5	-1.1
	SNR=7.9							
EQUE				S		Sn	14 49 36.1	-3.6
	comp=N,10nm,2.1s,SNR=7.9							
ESDC	Sonseca Array	8.51	64	P		Pn	14 48 08.2	+2.4
	comp=N,1.3nm,0.6s,baz=248,slow=13,SNR=7.7							
ESDC				S		Sn	14 49 39.5	-2.4
	comp=N,4.3nm,0.8s,baz=248,slow=23,SNR=4.4							
EPON	Pontenova	8.71	34	P		Pn	14 48 10.2	+1.7
	comp=N,0.7nm,0.2s,SNR=7.9							
EPON				S		Sn	14 49 41.1	-5.6
	comp=N,104nm,1.5s,SNR=7.9							
EQES	Quesada	8.76	77	P		Pn	14 48 10.8	+1.5
	comp=N,0.5nm,0.2s,SNR=7.9							
EQES				S		Sn	14 49 44.6	-3.5
	comp=N,36nm,2.2s,SNR=7.9							
TZRR	Tazzarine	8.84	126	P		Pn	14 48 08.3	-2.2
ETOB	Tobarra	10.06	73	S		Sn	14 50 16.1	-4.0
	comp=N,16nm,1.4s,SNR=7.9							

*ATH **08** 14:53:44.8, 35°.30N ± 27".63E, h10$^{km}_{\pm}$7^{km}, ML2.7/1, Error ellipse: s-maj=7.8km s-min=2.6km az=341.0*
*DDA **08** 14:53:46.4, 35°.55N ± 27".49E, h9$^{km}_{\pm}$1^{km}, ML2.7*
ISC 08 14:53:46.2±1.8, 35°.41N ± 0°.10 × 27°.57E ± 0°.06, h9$^{km}_{\pm}$13^{km}, n14, σ0^{s}76/22, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.36	292	P	Pg	14 53 53.6	+0.2
KARP				S	Sb	14 54 00.3	-0.3
KARP				AML	AML	14 54 02.6	
	comp=N,2988μm,0.3s						
KARP				AML	AML	14 54 02.8	
	comp=E,2441μm,0.2s						
KARP	Karpathos	0.36	292	P	Pg	14 53 53.6	+0.2
KARP				S	Sb	14 54 00.8	+0.2
ARG	Arkhangelos	0.92	29	P	Pg	14 54 03.8	-0.1
ARG	Arkhangelos	0.92	29	P	Pg	14 54 03.7	-0.3
ZKR	Zakros	1.15	255	P	Pb	14 54 07.3	-0.9
ZKR	Zakros	1.15	255	P	Pb	14 54 07.2	-1.0
TURN	Turunc	1.47	22	*i* P	Pn	14 54 13.1	+0.3
TURN				*i* S	Sg	14 54 34.0	+0.7
TURN				IAML		14 54 48.0	
	comp=E,103nm,1.0s						
NPS	Neapolis	1.61	265	P	Pn	14 54 15.5	+0.7
DALY	Dalyan (Mula)	1.65	32	*i* P	Pn	14 54 16.0	+0.6
DALY				*i* S	Sb	14 54 38.1	+0.3
DALY				IAML		14 55 04.0	
	comp=N,119nm,2.7s						
DALY				IAML		14 55 09.0	
	comp=E,95nm,2.2s						
LAST	Lasithi	1.73	262	P	Pn	14 54 17.6	+1.0
FETY	Fethiye	1.73	45	*i* P	Pb	14 54 18.2	-0.1
FETY				*i* S	Sg	14 54 41.5	-0.4
AYDN	Tasoluk	2.26	6	*i* P	Pn	14 54 24.5	+0.7
AYDN				*i* S	Sb	14 54 54.3	-1.0
AYDN				IAML		14 55 31.0	
	comp=N,42nm,2.8s						
TAVA	DENIZLI_Tavas	2.32	27	*i* P	Pn	14 54 26.0	+1.3
TAVA				*i* S	Sb	14 54 55.6	-1.5
TAVA				IAML		14 55 08.0	
	comp=N,65nm,2.6s						
GOLH	Golhisar	2.43	41	*i* P	Pn	14 54 26.9	+0.7
GOLH				*i* S	Sb	14 55 00.2	0.0
GOLH				IAML		14 55 06.0	
	comp=N,107nm,3.7s						
GOLH				IAML		14 55 56.0	
	comp=E,41nm,3.2s						

*KLM **08** 14:56:52.0, 7°.51S × 106°.03E, h42^{km}, mb4.9*
*NEIC **08** 14:56:52.4±2.5, 7°.18S ± 0°.06 × 105°.99E ± 0°.05, h65$^{km}_{\pm}$3^{km}, mb4.6/26, Error ellipse: s-maj=9.9km s-min=7.0km az=209.0*
*DJA **08** 14:56:52.6±0.3, 7°.3S ± 3° × 10°.6E ± °, h55$^{km}_{\pm}$3^{km}, M4.7/24, mB5.2/11, mb4.9/20, MLv4.9/24, Mw(mB)4.6/11, Mwp4.9/1*
*GCMT **08** 14:56:54.4±0.4, 7°.42S ± 0°.03 × 106°.09E ± 0°.03, h57$^{km}_{\pm}$2^{km}, MW4.8/56, Moment Tensor Solution. s31,c35; s56,c77; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.83±.14; M$_{\theta\theta}$-1.65±.10; M$_{\phi\phi}$-0.17±.13; M$_{r\theta}$0.83±.07; M$_{\theta\phi}$0.94±.09; M$_{\phi r}$0.22±.08; Best double couple: M$_o$2.15900×10^{16} NP1:ϕ$_s$313.00000°, δ38.00000°, λ117.00000°. NP2: ϕ$_s$100.00000°, δ57.00000°, λ70.00000°. Principal axes: T 2.1040, Plg71.0000°, Azm323.0000°; N 0.1150, Plg16.0000°, Azm111.0000°; P -2.2150, Plg10.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **08** 14:56:55.9±1.1, 6°.91S × 106°.26E, h90$^{km}_{\pm}$8^{km}, mb4.1/27, mb1 4.2/29, mb1mx4.0/45, mbtmp4.4/29, MS3.7/28, Ms1 3.7/28, ms1mx3.6/43 Error ellipse: s-maj=14.1km s-min=7.0km az=39.0*
ISC 08 14:56:51.6±0.8, 7°.24S ± 0°.05 × 106°.01E ± 0°.04, h58$^{km}_{\pm}$6^{km}, n257, σ1^{s}46/247, mb4.6/41, MS3.7/27, 5C-5D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKJI	Sukabumi	0.59	66	P	Pn	14 57 03.8	-0.7
SKJI				S	Sn	14 57 12.2	-1.6
CGJI	Cibinong	0.70	333	P	Pn	14 57 06.7	+0.9
CGJI				S	Sn	14 57 17.7	+1.5
DBJI	Dramaga	1.00	47	P	Pn	14 57 10.5	+0.8
CNJI	Cibinong	1.11	93	P	Pn	14 57 09.9	-1.1
SBJI	Serang	1.12	6	P	Pn	14 57 12.4	+1.2
CBJI	Citeko	1.17	46	P	Pn	14 57 10.6	-1.2
CBJI				S	Sn	14 57 24.5	-2.3
TNG	Tangerang	1.24	31	P	Pn	14 57 13.8	+1.0
TNG				P	Pn	14 57 13.7	+1.0
LEM	Lembang	1.65	76	P	Pn	14 57 19.4	+1.1
	387nm,0.3s,baz=230,slow=3.8,SNR=332						
LEM				S	Sn	14 57 38.1	-0.5
	486nm,0.3s,baz=318,slow=22,SNR=6.2						
LEM	Lembang	1.65	76	P	Pn	14 57 19.5	+1.1
CISI	Cisompet, Garu	1.81	100	P	Pn	14 57 19.6	-1.0
CISI	Cisompet, Garu	1.81	100	Pn	Pn	14 57 19.6	-1.0
BLSI	Bandar Lampung	2.01	338	P	Pn	14 57 25.0	+1.7
JCJI	Jatiwangi	2.36	72	P	Pn	14 57 28.0	0.0
CMJI	Cimerak	2.47	103	P	Pn	14 57 29.4	-0.1
KLSI		2.84	333	P	Pn	14 57 37.5	+3.0
KPJI	Karang Pucung	2.90	92	P	Pn	14 57 37.1	+1.8
LWLI	Liwa	2.94	319	P	Pn	14 57 39.8	+3.7
XMIS	Christmas Isla	3.24	186	Pn	Pn	14 57 37.2	-2.8
MDSI	Maura Dua	3.29	326	P	Pn	14 57 43.4	+2.7
MNAI	Manna	4.18	313	P	Pn	14 57 55.2	+2.3
MNAI	Manna	4.18	313	Pn	Pn	14 57 55.6	+2.7
LHSI	Lahat	4.20	324	P	Pn	14 57 57.2	+4.0
YOGI	Yogyakarta	4.28	98	P	Pn	14 57 55.5	+1.2
SMRI	Semarang	4.40	88	P	Pn	14 58 00.0	+4.1
SMRI	Semarang	4.40	88	Pn	Pn	14 58 00.2	+4.3
PMBI	Palembang	4.46	344	P	Pn	14 58 01.8	+5.0
PMBI	Palembang	4.46	344		Pn	14 58 00.5	+3.7
UGM	Wanagama	4.52	99	P	Pn	14 57 59.5	+1.9
UGM	Wanagama	4.52	99		Pn	14 57 58.3	+0.7
TPI	Tanjungpandan	4.75	20	P	Pn	14 58 01.4	+0.7
WOJI	Wonogiri, Jawa	4.90	97	P	Pn	14 58 03.6	+0.8
KSI	Kapahiang	4.93	316	P	Pn	14 58 09.0	+5.7
PPBI	Pangkal Pinang	5.05	1	P	Pn	14 58 07.6	+2.8
	0.8nm2μm3μm52nm,0.9s						
PWJI	Pagerwojo	5.79	98	P	Pn	14 58 18.2	+3.2
PBKI	Pangkalan Bun	7.22	52	P	Pn	14 58 36.7	+2.2
	0.7nm2μm110nm,1.0s						
GMJI	Gumukmas	7.43	98	P	Pn	14 58 40.1	+2.6
	0.3nm1μm34nm,0.6s						
JAGI	Jajag, Banyuwa	8.15	99	P	Pn	14 58 49.3	+1.9
	3μm116nm,0.8s						
JAGI	Jajag, Banyuwa	8.15	99	Pn	Pn	14 58 48.9	+1.5
ABJI	Asem Bagus	8.17	94	P	Pn	14 58 53.0	+5.4
SRBI	Singaraja	9.16	96	P	Pn	14 59 03.7	+2.6
	2μm150nm,0.7s						
MYKOM	Kota Tinggi	9.23	346	P	Pn	14 59 09.0	+6.9
BBKI	Banjar Baru	9.56	67	P	Pn	14 59 12.9	+6.3
KBKI	Kotabaru	10.84	69	P	Pn	14 59 28.3	+4.1
TWSI	Taliwang, Sumb	10.87	99	P	Pn	14 59 24.6	+0.1
SBUM	Sibu	11.45	33	P	Pn	14 59 38.0	+5.5
PLAI	Plampang	11.76	98	P	Pn	14 59 44.8	+8.2
GSI	Gunungsitoli	11.96	315		Pn	14 59 35.4	-4.0
PSI	Prapat	12.23	324	LR	LR	15 05 07.8	
	comp=Z,430nm,20.9s,baz=166,slow=41						
IPM	Ipoh	12.66	337	P	P	14 59 54.0	-4.5
KAPI	Kappang	13.84	82	P	Pn	15 00 05.1	+0.1
	0.7nm,0.3s,baz=233,slow=23,SNR=2.4						
KAPI				LR	LR	15 05 30.8	
	comp=Z,260nm,20.8s,baz=264,slow=38						
SPSI	Sidrap Palu	14.07	77	P	P	15 00 15.5	+1.4
BKSI	Bulukumba	14.15	83	P	P	15 00 16.2	+1.1
BNSI	Bone	14.30	79	P	P	15 00 16.7	0.0
WSI	Waingapu	14.33	101	P	P	15 00 22.2	+5.1
BSSI	Bau Bau, Buton	14.42	87	P	P	15 00 18.5	+0.5
EDFI	Ende, Flores	15.60	97	P	Pn	15 00 25.4	-2.7
MPSI	Mapaga	15.77	62	P	P	15 00 36.1	+3.1
SPMM	Sapulut	15.80	42	P	P	15 00 35.0	+1.6
MMRI	Maumere	16.13	96	P	P	15 00 37.6	+0.6
	90nm,0.6s						
MMRI	Maumere	16.13	96	Pn	Pn	15 00 33.6	-1.1
KKM	Kota Kinabalu	16.67	38	P	P	15 00 43.4	+0.3
KKM				IAmb	IAmb	15 00 46.9	
	comp=Z,31nm,0.9s						
APSI	Ampana	16.81	69	P	P	15 00 45.9	+1.3
GIRL	Giralia	17.24	154	P	Pn	15 00 47.8	-0.6
MYLDM	Lahad Datu	17.54	46	P	P	15 00 54.2	+1.6
MYLDM				IAmb	IAmb	15 01 01.7	
	comp=Z,53nm,1.4s						
BATI	Baumata	17.69	101	P	P	15 00 55.0	+0.6
	comp=Z,8.3nm,0.3s,baz=170,slow=9.8,SNR=3.4						
BATI				S	Sn	15 04 10.4	-0.3
	comp=Z,1.5nm,0.3s,baz=152,slow=23,SNR=2.5						
BATI				LR	LR	15 08 59.3	
	comp=Z,195nm,19.1s,baz=330,slow=41						
BATI	Baumata	17.69	101	P	P	15 01 00.4	+6.0
SOEI	Soe	18.23	99	P	Pn	15 01 00.9	+0.1
	comp=Z,1μmcomp=Z,98nm,1.0s						
SOEI	Soe	18.23	99		P	15 01 00.4	+0.1
GTOI	Gorontalo	18.68	66	P	P	15 01 04.5	-0.6
	comp=Z,12nm,1.0s						
PSA00	Pilbara Seismi	19.53	138	P	Pn	15 01 16.4	+0.2
PSA00				IAmb	IAmb	15 01 19.6	
	comp=Z,22nm,0.8s						
PSA00	Pilbara Seismi	19.53	138	P	Pn	15 01 16.4	+0.2
PSA00				IAmb	IAmb	15 01 20.9	
	comp=Z,12nm,1.0s						
SANI	Sanana	20.56	76	P	P	15 01 25.8	+0.1
	comp=Z,14nm,0.9s						
NLAI	Namlea	21.37	80	P	P	15 01 37.7	+3.3
	comp=Z,30nm,0.9s						
FITZ	Fitzroy Crossi	21.95	121	P	P	15 01 41.8	+1.2
	comp=Z,5.8nm,0.7s,baz=295,slow=6.9,SNR=18						
FITZ				S	S	15 05 39.8	-0.1
	comp=Z,2.5nm,0.6s,baz=158,slow=17,SNR=5.9						
TNTI	Ternate	22.74	70	P	P	15 01 50.1	+1.0
KNRA	Kununurra	23.80	113	P	P	15 01 59.6	+0.3
KNRA				IAmb	IAmb	15 02 00.5	
	comp=Z,25nm,0.7s						
DAV	Davao City (W)	24.15	54	LR	LR	15 11 39.2	
	comp=Z,112nm,20.5s,baz=254,slow=37						
MTN	Manton Dam	25.34	105	P	P	15 02 14.1	+0.8
MTN				IAmb	IAmb	15 02 31.0	
	comp=Z,28nm,1.1s						
SIJI	Sorong	25.96	77	P	P	15 02 17.7	-1.3
	comp=Z,42nm,0.9s,baz=288,slow=5.6,SNR=28						
QIZ	Qiongzhong	26.38	8	P	P	15 02 23.1	+0.5
QIZ				S	S	15 06 54.0	+2.1
QIZ				LR	LR		
	comp=N,300nm,17.8s						
QIZ				LR	LR		
	comp=E,110nm,8.6s						
QIZ				LR	LR		
	comp=Z,370nm,24.0s						
CMAR	Chiang Mai Arr	26.47	345	P	P	15 02 22.4	-1.0
	comp=Z,0.8nm,0.6s,baz=183,slow=8.7,SNR=7.7						
CMAR				PcP	PcP	15 05 47.8	+0.3
	comp=Z,1.2nm,0.8s,baz=204,slow=2.0,SNR=6.4						
CMAR				LR	LR	15 12 41.9	
	comp=Z,164nm,21.1s,baz=220,slow=36						
FAKI	Fak Fak	26.48	82	P	P	15 02 23.5	-0.1
FAKI				IAmb	IAmb	15 02 23.7	
	comp=Z,30nm,1.2s						
NWAO	Narrogin (SRO)	27.60	159	LR	LR	15 13 09.3	
	comp=Z,191nm,19.7s,baz=344,slow=35						
H01W3	Cape Leeuwin H	28.51	166	T	T	15 32 21.8	
	baz=344,slow=76,SNR=532						
H01W1	Cape Leeuwin H	28.52	166	T	T	15 32 24.8	
	baz=344,slow=76,SNR=406						
H01W2	Cape Leeuwin H	28.52	166	T	T	15 32 23.9	
	baz=344,slow=76,SNR=524						
PALK	Pallekele	29.07	299	LR	LR	15 13 05.4	
	comp=Z,195nm,21.6s,baz=229,slow=33						
WB0	Warramunga Arr	30.21	117	P	P	15 02 57.8	+0.9
WB0				IAmb	IAmb	15 02 59.0	
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	30.22	118	P	P	15 02 57.6	+0.6
	comp=Z,6.1nm,0.8s,baz=305,slow=9.7,SNR=69						
WRA				PcP	PcP	15 05 57.0	+0.1
	comp=Z,0.7nm,0.5s,baz=316,slow=2.3,SNR=4.2						
WRA				S	S	15 07 52.1	-0.5
	comp=Z,0.7nm,0.8s,baz=299,slow=16,SNR=3.6						
WRA				LR	LR	15 14 04.3	
	comp=Z,76nm,21.6s,baz=265,slow=34						
WRA	Warramunga Arr	30.22	118	P	P	15 02 57.6	+0.6
WRAB	Tennant Creek	30.23	118	P	P	15 02 57.9	+0.9
WRAB				IAmb	IAmb	15 02 59.3	
	comp=Z,10nm,0.7s						
WB2	Warramunga Arr	30.23	118	P	P	15 02 57.8	+0.7
WB2				IAmb	IAmb	15 02 59.3	
	comp=Z,8.9nm,0.6s						
WR0	Warramunga Arr	30.41	117	P	P	15 02 59.5	+0.9
WR0				IAmb	IAmb	15 03 00.5	
	comp=Z,13nm,1.1s						
ASAR	Alice Springs	31.35	124	P	P	15 03 07.8	+0.9
	comp=Z,2.8nm,0.9s,baz=299,slow=7.2,SNR=37						
ASAR				PcP	PcP	15 06 01.1	+1.2
	comp=Z,1.4nm,0.7s,baz=300,slow=2.3,SNR=5.9						
ASAR				S	S	15 08 08.2	-2.1
	comp=Z,1.4nm,1.0s,baz=295,slow=17,SNR=5.7						
ASAR				LR	LR	15 15 28.4	
	comp=Z,131nm,21.2s,baz=304,slow=36						
AS31	Alice Springs	31.35	124	P	P	15 03 07.8	+0.9
H08S2	Diego Garcia H	33.23	267	T	T	15 38 46.7	
	baz=91,slow=75,SNR=113						
H08S3	Diego Garcia H	33.24	267	T	T	15 38 47.0	
	baz=91,slow=75,SNR=116						
H08S1	Diego Garcia H	33.25	267	T	T	15 38 48.3	
	baz=91,slow=75,SNR=28						
WHN	Wuhan	38.41	12	*e*P	pP	15 04 19.3	-3.1
TAPN	Taplejung	38.69	333	*e*P	P	15 04 09.2	-1.1
	comp=Z,9.6nm,0.5s						
RAMN	Ramite	38.85	332	*e*P	P	15 04 11.2	-0.4
	comp=Z,5.6nm,0.5s						
PKI	Pulchoki	39.94	331	*e*P	P	15 04 19.9	-0.9
	comp=Z,2.4nm,0.3s						
GUN	Gumba	40.00	332	*e*P	P	15 04 20.0	-1.3
	comp=Z,6.2nm,0.4s						
GKN	Gorkha	40.68	330	*e*P	P	15 04 25.4	-1.2
	comp=Z,10nm,0.3s						
PMG	Port Moresby	40.75	96	P	P	15 04 28.1	+0.8
	comp=Z,27nm,1.0s,baz=204,slow=6.4,SNR=4.2						
NJ2	Nanjing	40.95	17	*e*P	P	15 04 30.6	+2.0
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KOLN	Koldanda	41.00	329	*e*P	P	15 04 28.0	-1.4
	comp=Z,11nm,0.5s						
CTA	Charters Tower	41.01	112	P	P	15 04 29.6	+0.2
	comp=Z,2.3nm,0.8s,baz=279,slow=13,SNR=4.5						
STKA	Stephens Creek	41.21	131	P	P	15 04 31.7	+0.8
	comp=Z,3.3nm,0.4s,baz=317,slow=7.0,SNR=28						
STKA				LR	LR	15 22 39.7	
	comp=Z,81nm,20.1s,baz=259,slow=37						
STKA	Stephens Creek	41.21	131	P	P	15 04 32.6	+1.7
DANN	Dangsing	41.40	330	*e*P	P	15 04 30.8	-1.9
	comp=Z,8.2nm,0.3s						
PYUN	Piuthan	41.59	329	*e*P	P	15 04 33.4	-0.8
	comp=Z,14nm,0.5s						
GTA	Gaotai	46.77	353	⇑P	P	15 05 14.4	-1.0
GTA				pP	pP	15 05 30.1	-0.3
GTA				sP	sP	15 05 36.7	-0.4
GTA				PcP	PcP	15 06 48.6	+0.7
GTA				S	S	15 12 02.3	+0.9
GTA				sS	sS	15 12 29.0	+3.0
GTA				ScS	ScS	15 15 01.8	-3.2
GTA	Gaotai	46.77	353	SS	SS	15 15 21.7	-7.0
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,6.2s						
GTA				LR	LR		
	comp=N,190nm,19.3s						
GTA				LR	LR		
	comp=E,150nm,18.2s						
GTA				LR	LR		
	comp=Z,250nm,17.4s						
HHC	Hu-ho-hao-te	48.13	6	*e*P	P	15 05 29.0	+3.1
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,93nm,7.3s						
KSRS	Korea Array	48.95	23	P	P	15 05 30.1	-2.1
	comp=Z,1.5nm,0.8s,baz=216,slow=8.4,SNR=5.9						
KSRS				PcP	PcP	15 06 54.7	-0.9
	comp=Z,2.8nm,0.9s,baz=214,slow=3.8,SNR=8.6						
KSRS				LR	LR	15 30 01.0	
	comp=Z,36nm,18.0s,baz=207,slow=41						
NIL	Nilore	51.18	325	P	P	15 05 48.3	-0.9
MJAR	Matsushiro Arr	53.00	33	P	P	15 05 59.9	-2.7
	comp=Z,0.5nm,0.6s,baz=196,slow=10,SNR=1.9						
MJAR				PcP	PcP	15 07 09.9	-0.7
	comp=Z,1.1nm,0.7s,baz=198,slow=4.7,SNR=4.3						
WMQ	Urumqi	53.47	344	*e*P	P	15 06 07.7	+1.8
SONM	Songino Array	54.84	0	P	P	15 06 15.0	-1.0
	comp=Z,1.2nm,0.6s,baz=176,slow=8.1,SNR=7.7						
SONM				PcP	PcP	15 07 17.1	-0.4
	comp=Z,7.1nm,0.8s,baz=176,slow=3.8,SNR=16						
SONM				LR	LR	15 31 18.3	
	comp=Z,198nm,20.2s,baz=182,slow=38						
SONM	Songino Array	54.84	0	P		15 06 14.3	-1.6
SONM					PcP	15 07 18.1	+0.5
WSAR	Wadi Sarin	55.34	305	P	P	15 06 20.9	+1.0
	comp=Z,2.7nm,0.6s,baz=222,slow=6.5,SNR=4.3						
USRK	Ussuriysk Ar.	56.33	22	P	P	15 06 23.8	-2.7
	comp=Z,0.4nm,0.4s,baz=165,slow=2.6,SNR=4.4						
USRK				LR	LR	15 30 52.9	
	comp=Z,52nm,20.1s,baz=240,slow=36						
MK31	Makanchi Array	57.79	341	P	P	15 06 34.8	-2.0
MK31				IAmb	IAmb	15 06 37.5	
	comp=Z,7.2nm,1.4s						
MKAR	Makanchi Array	57.79	341	P	P	15 06 35.3	-1.5
	comp=Z,2.6nm,0.5s,baz=152,slow=8.2,SNR=56						
MKAR				LR	LR	15 34 27.2	
	comp=Z,92nm,21.4s,baz=139,slow=39						
MKAR	Makanchi Array	57.79	341	P	P	15 06 34.9	-1.9
KURK	Kurchatov	62.40	341	P	P	15 07 07.0	-1.3
KURK				IAmb	IAmb	15 07 08.9	
	comp=Z,8.4nm,1.1s						
GEYT	Alibeck	63.30	319	P	P	15 07 14.5	-0.1
	comp=Z,4.2nm,0.6s,baz=162,slow=5.6,SNR=14						
GEYT				LR	LR	15 38 04.5	
	comp=Z,52nm,19.1s,baz=20,slow=39						
ZALV	Zalesovo Beam	63.53	346	P	P	15 07 14.3	-1.4
	comp=Z,0.9nm,0.3s,baz=144,slow=3.5,SNR=6.0						
ZALV				LR	LR	15 37 38.0	
	comp=Z,62nm,18.6s,baz=120,slow=39						
ZALV	Zalesovo Beam	63.53	346	P	P	15 07 13.9	-1.8
MAW	Mawson	66.85	197	P	P	15 07 40.6	+3.6
	comp=Z,1.7nm,0.6s,baz=79,slow=4.4,SNR=13						
MAW				LR	LR	15 30 27.7	
	comp=Z,45nm,21.6s,baz=57,slow=30						
MAW	Mawson	66.85	197	P	P	15 07 39.1	+2.1
RPZ	Rata Peaks	67.06	134	P	P	15 07 40.5	+1.6
	comp=Z,8.7nm,0.9s,baz=51,slow=6.8,SNR=4.0						
BRVK	Borovoye	67.28	338	P	P	15 07 38.1	-1.9
BRVK				IAmb	IAmb	15 07 45.3	
	comp=Z,4.9nm,0.9s						
ABKAR	Akbulak array	69.12	330	P	P	15 07 51.4	-0.2
ABKAR	Akbulak array	69.12	330	P	P	15 07 51.3	-0.3
MATP	Matopo	75.84	251	P	P	15 08 35.2	+2.8
	comp=Z,1.9nm,0.6s,baz=276,slow=0.5,SNR=6.3						
MATP				LR	LR	15 36 59.7	
	comp=Z,81nm,19.7s,baz=100,slow=32						
VNDA	Vanda	75.91	169	P	P	15 08 33.6	+2.1
	comp=Z,1.8nm,0.8s,baz=293,slow=6.6,SNR=14						
VNDA				LR	LR	15 37 46.3	
	comp=Z,42nm,21.0s,baz=316,slow=32						
VNDA	Vanda	75.91	169	P	P	15 08 31.7	+0.1
KBZ	Khabaz	76.17	318	P	P	15 08 34.3	+0.7
	comp=Z,11nm,0.9s,baz=232,slow=20						
NRIK	Noril'sk	77.47	353	P	P	15 08 39.5	-0.9
	comp=Z,4.0nm,0.4s,baz=149,slow=5.1,SNR=11						
LBTB	Lobatse	78.31	246	LR	LR	15 37 12.0	
	comp=Z,68nm,18.8s,baz=92,slow=31						
BOSA	Boshof	78.48	242	P	P	15 08 49.0	+1.9
	comp=Z,2.1nm,0.9s,baz=39,slow=11,SNR=2.0						
BOSA				LR	LR	15 40 23.6	
	comp=Z,20nm,18.6s,baz=28,slow=33						
BRTR	Keskin Array B	81.26	312	P	P	15 09 02.4	+0.6
	comp=Z,4.1nm,0.8s,baz=138,slow=7.4,SNR=13						
BRTR				LR	LR	15 47 14.1	
	comp=Z,31nm,20.1s,baz=122,slow=37						

L61A	**Hillsdale 1, H**	**145.19**	**359**	P		**PKPab**	**15 16 22.7**	**0.0**
	baz=0.8							
L57A	**Andrews Acres**	**145.29**	**4**	P		**PKPbc**	**15 16 22.7**	**-0.2**
	baz=355							
L58A	**Harry Jones Me**	**145.30**	**2**	P		**PKPdf**	**15 16 23.2**	**0.0**
	baz=357							
M54A	**Oil Creek Stat**	**145.51**	**8**	P		**PKPdf**	**15 16 23.5**	**-0.1**
	baz=350,SNR=5.2							
CCM	**Cathedral Cave**	**145.57**	**24**	P		**PKPdf**	**15 16 23.8**	**0.0**
	baz=329							
BDFB	**Brasilia**	**145.66**	**228**	PKPbc		**PKiKP**	**15 16 27.2**	**-1.5**
	comp=Z,3.1nm,0.4s,baz=147,slow=2.8,SNR=6.5							
M56A	**Emporium**	**145.70**	**6**	P		**PKPbc**	**15 16 24.2**	**-0.1**
	baz=353,SNR=6.9							
M59A	**Waymart**	**145.82**	**2**	P		**PKPbc**	**15 16 24.6**	**0.0**
	baz=358							
M57A	**Sunshine Farm,**	**145.93**	**4**	P		**PKPab**	**15 16 25.5**	**0.0**
	baz=355,SNR=6.6							
M58A	**Price's Panora**	**145.94**	**3**	P		**PKPbc**	**15 16 24.9**	**-0.1**
	baz=356,SNR=6.9							
N54A	**Moraine State**	**146.00**	**8**	P		**PKPab**	**15 16 25.8**	**+0.1**
	baz=350,SNR=6.2							
M60A	**Port Jervis**	**146.06**	**1**	P		**PKPab**	**15 16 26.1**	**+0.1**
	baz=359							
ACSO	**Alum Creek Sta**	**146.18**	**12**	P		**PKPab**	**15 16 26.5**	**+0.1**
	baz=344,SNR=10							
N56A	**West Decatur**	**146.25**	**6**	P		**PKPab**	**15 16 26.4**	**-0.4**
	baz=352							
U40A	**Yellville**	**146.28**	**28**	P		**PKPab**	**15 16 26.8**	**-0.2**
	baz=325							
O51A	**Pataskala**	**146.34**	**12**	P		**PKPbc**	**15 16 26.5**	**+0.2**
	baz=345,SNR=7.1							
PAL	**Palisades**	**146.38**	**360**	P		**PKPab**	**15 16 27.2**	**0.0**
	baz=0.2							
N59A	**State Game Lan**	**146.43**	**2**	P		**PKPbc**	**15 16 26.9**	**+0.3**
	baz=357,SNR=12							
P49A	**Miami Univ. Ec**	**146.43**	**15**	P		**PKPbc**	**15 16 26.4**	**-0.1**
	baz=341							
N58A	**Sunbury**	**146.46**	**4**	P		**PKPbc**	**15 16 26.6**	**+0.1**
	baz=355,SNR=8.8							
N57A	**Milroy**	**146.48**	**5**	P		**PKPbc**	**15 16 26.6**	**0.0**
	baz=354,SNR=8.6							
N60A	**Cedar Hill Far**	**146.50**	**2**	P		**PKPbc**	**15 16 26.9**	**+0.3**
	baz=358							
O53A	**New Philadelph**	**146.50**	**10**	P		**PKPbc**	**15 16 27.4**	**-0.3**
	baz=347							
O52A	**Adamsville**	**146.52**	**11**	P		**PKPbc**	**15 16 26.6**	**-0.2**
	baz=346							
JCT	**Junction City**	**146.54**	**43**	P		**PKPbc**	**15 16 27.5**	**+0.3**
	baz=309							
N61A	**South Mountain**	**146.63**	**0**	P		**PKPab**	**15 16 27.8**	**-0.3**
	baz=360							
O54A	**Avella**	**146.71**	**9**	P		**PKPbc**	**15 16 28.1**	**-0.4**
	baz=349,SNR=6.0							
O55A	**Ligonier**	**146.83**	**7**	P		**PKPbc**	**15 16 28.7**	**-0.3**
	baz=350							
O56A	**Blue Knob Stat**	**146.86**	**6**	P		**PKPbc**	**15 16 28.6**	**-0.6**
	baz=352,SNR=8.5							
P51A	**Williamsport**	**146.88**	**13**	P		**PKPbc**	**15 16 28.0**	**+0.2**
	baz=344							
O57A	**Amberson**	**147.01**	**5**	P		**PKPbc**	**15 16 28.7**	**+0.5**
	baz=354							
WHTX	**Lake Witney,**	**147.07**	**38**	P		**PKPab**	**15 16 30.1**	**-0.1**
	baz=314							
O58A	**Lewisberry**	**147.16**	**4**	P		**PKPbc**	**15 16 28.3**	**-0.3**
	baz=355							
WCI	**Wyandotte Cave**	**147.20**	**18**	P		**PKPbc**	**15 16 29.2**	**+0.5**
	baz=337							
P53A	**Whipple**	**147.21**	**11**	P		**PKPbc**	**15 16 28.9**	**+0.1**
	baz=346							
P54A	**Burton**	**147.26**	**9**	P		**PKPbc**	**15 16 29.0**	**+0.1**
	baz=348							
MIAR	**Mount Ida**	**147.38**	**31**	P		**PKPbc**	**15 16 28.7**	**-0.7**
	baz=322							
P55A	**Reedsville**	**147.45**	**8**	P		**PKPbc**	**15 16 29.3**	**-0.2**
	baz=349,SNR=5.9							
P60A	**Greenville**	**147.54**	**2**	P		**PKPbc**	**15 16 29.8**	**+0.1**
	baz=357							
Q52A	**Bidwell**	**147.55**	**12**	P		**PKPbc**	**15 16 29.7**	**0.0**
	baz=345							
P56A	**Dayton Farm, R**	**147.59**	**7**	P		**PKPbc**	**15 16 29.5**	**-0.3**
	baz=351,SNR=5.4							
P57A	**Homestead Farm**	**147.70**	**6**	P		**PKPbc**	**15 16 29.9**	**-0.1**
	baz=353							
P59A	**Jarrettsville**	**147.70**	**4**	P		**PKPbc**	**15 16 28.8**	**-1.3**
	baz=356							
P58A	**Pank, Wackersv**	**147.76**	**5**	P		**PKPbc**	**15 16 30.2**	**0.0**
	baz=354,SNR=5.4							
Q53A	**Leroy**	**147.80**	**11**	P		**PKPbc**	**15 16 30.9**	**+0.5**
	baz=346							
X40A	**Basin Creek Fa**	**147.80**	**30**	P		**PKPbc**	**15 16 31.4**	**+0.9**
	baz=323							
Q54A	**Coxs Mills**	**147.80**	**10**	P		**PKPbc**	**15 16 29.7**	**-0.7**
	baz=347							
Q55A	**Buckhannon**	**147.91**	**9**	P		**PKPbc**	**15 16 30.7**	**-0.1**
	baz=349							
Q56A	**Snyder Ridge,**	**148.00**	**8**	P		**PKPbc**	**15 16 30.8**	**-0.2**
	baz=350							
Q57A	**Strasburg**	**148.10**	**7**	P		**PKPbc**	**15 16 31.4**	**+0.2**
	baz=352							
833A	**Chaparral WMA,**	**148.12**	**46**	P		**PKiKP**	**15 16 33.1**	**-0.2**
	baz=306							
R53A	**Hurricane**	**148.22**	**12**	P		**PKPbc**	**15 16 31.8**	**+0.2**
	baz=345							
Q58A	**Fox Den Farm,**	**148.27**	**5**	P		**PKPbc**	**15 16 31.6**	**0.0**
	baz=353							
WVT	**Waverly**	**148.58**	**22**	P		**PKPbc**	**15 16 32.7**	**+0.2**
	baz=333							
R56A	**Bull Pasture M**	**148.59**	**8**	P		**PKPbc**	**15 16 32.9**	**+0.3**
	baz=350							
R55A	**Marlinton**	**148.60**	**9**	P		**PKPbc**	**15 16 32.7**	**+0.1**
	baz=348							
R57A	**Stanardsville**	**148.81**	**7**	P		**PKPbc**	**15 16 33.4**	**+0.4**
	baz=351							
R58A	**Rapidan**	**148.87**	**6**	P		**PKPbc**	**15 16 33.2**	**0.0**
	baz=352							
R58B	**Mineral**	**149.22**	**6**	P		**PKPab**	**15 16 37.6**	**-0.9**
	baz=353							
S56A	**Natural Bridge**	**149.28**	**9**	P		**PKPab**	**15 16 38.5**	**-0.4**
	baz=349							
S57A	**Dark Hollow, R**	**149.29**	**8**	P		**PKPbc**	**15 16 34.8**	**+0.5**
	baz=350							
T53A	**Wise**	**149.39**	**14**	P		**PKPab**	**15 16 38.7**	**-0.6**
	baz=343							
T54A	**Tazewell**	**149.53**	**12**	P		**PKPbc**	**15 16 34.6**	**-0.4**
	baz=345							
S58A	**Poland Farm, P**	**149.54**	**6**	P		**PKPbc**	**15 16 35.1**	**+0.2**
	baz=352							
TZTN	**Tazewell**	**149.56**	**15**	P		**PKPbc**	**15 16 35.2**	**+0.3**
	baz=341							
T55A	**Pulaski**	**149.63**	**11**	P		**PKPbc**	**15 16 33.1**	**-2.1**
	baz=347							
T56A	**Rocky Mt**	**149.84**	**10**	P		**PKPbc**	**15 16 35.8**	**+0.1**
	baz=348							
T58A	**Grand View Acr**	**150.15**	**7**	P		**PKiKP**	**15 16 36.9**	**-0.3**
	baz=351							
T59A	**Double "B" Far**	**150.23**	**6**	P		**PKiKP**	**15 16 37.2**	**-0.1**
	baz=353							
U57A	**Blanch**	**150.54**	**9**	P		**PKPbc**	**15 16 37.6**	**+0.3**
	baz=349							
V54A	**Nebo**	**150.68**	**13**	P		**PKPbc**	**15 16 38.0**	**+0.3**
	baz=344							
U58A	**Oxford**	**150.69**	**8**	P		**PKiKP**	**15 16 38.3**	**-0.1**
	baz=351							
V56A	**Mocksville**	**150.95**	**11**	P		**PKPbc**	**15 16 38.6**	**+0.3**
	baz=347							
V57A	**Coltrane Farms**	**151.00**	**10**	P		**PKPbc**	**15 16 38.7**	**+0.2**
	baz=348							
X54A	**Belton**	**151.75**	**15**	P		**PKiKP**	**15 16 40.8**	**+0.2**
	baz=342							
X55A	**Gracelyn & Ava**	**152.00**	**14**	P		**PKiKP**	**15 16 41.1**	**-0.1**
	baz=344							

TAP 08 14:57:05.2,25.17N×121.56E,h3km,ML1.4,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YM10	**YM10**	**0.01**	**166**	P		Pg	14 57 06.1	+0.2
	baz=168							
YM10				S		Sg	14 57 06.7	+0.3
	baz=168							
YM11	**YM11**	**0.01**	**91**	*e*P		Pg	14 57 06.4	+0.5
	baz=92							
YM11				*e*S		Sg	14 57 06.9	+0.4
	baz=92							
YM03	**YM03**	**0.02**	**308**	*i* P		Pg	14 57 06.3	+0.3
	baz=306							
YM03				S		Sg	14 57 07.0	+0.4
	baz=306							
YM01	**YM01**	**0.02**	**151**	*i* P		Pg	14 57 06.2	+0.3
	baz=152							
YM01				S		Sg	14 57 07.0	+0.6
	baz=152							
YM04	**YM04**	**0.02**	**238**	*e*P		Pg	14 57 06.1	+0.2
	baz=237							
YM04				*e*S		Sg	14 57 06.9	+0.5
	baz=237							
YM08	**YM08**	**0.04**	**53**	*e*P		Pg	14 57 06.5	+0.4
	baz=52							
YM08				*e*S		Sg	14 57 07.1	+0.4
	baz=52							
ANP	**Anpu**	**0.04**	**301**	P		Pg	14 57 06.5	+0.3
	baz=301							
ANP				*e*S		Sg	14 57 07.4	+0.4
	baz=301							

JMA 08 14:57:21.8±0.2,25.05N×123.60E,h11km,M1.5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.72**	**171**	P		Pg	14 57 35.8	0.0
IRIF				*e*S		Sg	14 57 44.4	-0.8
JISG	**Ishigakijimahi**	**0.79**	**125**	P		Pg	14 57 36.8	-0.3
JISG				*e*S		Sg	14 57 47.7	+0.2
YOJ	**Yonaguni jima**	**0.79**	**223**	P		Pg	14 57 36.9	-0.2
JIJ	**Ishigaki jima**	**0.84**	**144**	P		Pg	14 57 37.4	-0.7
JIJ				*e*S		Sg	14 57 48.5	-0.6
JKRS	**Kuro-shima**	**0.89**	**155**	P		Pg	14 57 38.9	-0.1
JKRS				*e*S		Sb	14 57 51.2	+0.1
HATJ	**Hateruma jima**	**1.01**	**169**	S		Sg	14 57 54.3	0.0
JTJ	**Tarama**	**1.08**	**112**	P		Pb	14 57 42.1	-0.4

*IDC **08** 15:11:34.5±1.8,2.00N×96.46E,h0km,mb3.5/5,mb1 3.6/7, mb1mx3.4/47,mbtmp3.5/7,ML2.4/1,Error ellipse: s-maj=41.3km s-min=22.9km az=49.0*

*DJA **08** 15:11:38.0±1.2,2.1N±4.4×97.7E±.1,h13km±9km,M3.1/7, MLv3.1/7*

ISC 08 15:11:37.0±2.2,2.05N±0.07×96.55E±0.09,h13km±15km, n16,σ0.94/18,mb3.6/5,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSI	**Gunungsitoli**	**1.26**	**126**	P		**Pg**	**15 12 01.5**	**+0.2**
GSI				S		**Sb**	**15 12 16.7**	**-0.1**
TPTI		**1.36**	**28**	P		**Pn**	**15 12 00.5**	**-1.2**
TPTI				S		**Sb**	**15 12 19.1**	**-0.6**
KCSI	**Kotacane, Aceh**	**1.91**	**40**	P		**Pn**	**15 12 09.7**	**+0.4**
KCSI				S		**Sn**	**15 12 33.3**	**+0.1**
MLSI	**Meulaboh, Aceh**	**2.21**	**356**	P		**Pn**	**15 12 14.2**	**+0.8**
MLSI				S		**Sn**	**15 12 41.3**	**+0.6**
TSI	**Tuntungan**	**2.48**	**54**	P		**Pn**	**15 12 15.5**	**-1.6**
PSI	**Prapat**	**2.49**	**72**	Pn		**Pn**	**15 12 17.4**	**0.0**
	0.8nm,0.3s,baz=336,slow=3.5,SNR=2.1							
PSI				Sn		**Sn**	**15 12 50.1**	**+2.4**
	1.2nm,0.3s,baz=181,slow=7.4,SNR=5.7							
LHMI	**Lhok Sumawe**	**3.19**	**7**	P		**Pn**	**15 12 27.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**16.48**	**8**	Pn		**Pn**	**15 15 28.6**	**+0.6**
	baz=198,slow=12,SNR=6.7							
H08S2	**Diego Garcia H**	**25.86**	**248**	T		T	15 44 02.1	
	baz=66							
H08S3	**Diego Garcia H**	**25.86**	**248**	T		T	15 44 02.2	
	baz=66							
H08S1	**Diego Carcia H**	**25.88**	**248**	T		T	15 44 03.3	
	baz=66							
WRA	**Warramunga Arr**	**43.03**	**122**	P		**P**	**15 19 36.8**	**0.0**
	0.2nm,0.6s,baz=303,slow=9.2,SNR=2.3							
ASAR	**Alice Springs**	**44.42**	**127**	P		**P**	**15 19 47.6**	**-0.4**
	0.2nm,0.7s,baz=299,slow=8.2,SNR=1.7							
MKAR	**Makanchi Array**	**46.27**	**346**	P		**P**	**15 20 01.6**	**-0.7**
	0.9nm,0.7s,baz=153,slow=9.2,SNR=6.0							
SONM	**Songino Array**	**46.40**	**9**	P		**P**	**15 20 03.1**	**-0.3**
	0.3nm,0.5s,baz=202,slow=6.1,SNR=2.7							
ZALV	**Zalesovo Beam**	**52.63**	**351**	P		**P**	**15 20 50.5**	**-0.2**
	1.0nm,0.6s,baz=188,slow=7.9,SNR=5.1							

*NEIC **08** 15:13:41.7±0.8,18.2S±0.2×177.88W±0.07,h590km±16km, mb4.2/8,Error ellipse: s-maj=34.7km s-min=9.0km az=174.0*

*IDC **08** 15:13:41.0±1.4,18.12S×178.07W,h554km±19km,mb3.3/9, mb1 3.5/11,mb1mx3.2/40,mbtmp4.2/11,Error ellipse: s-maj=30.1km s-min=13.0km az=146.0*

ISC 08 15:13:40.4±0.7,18.1S±0.2×178.1W±0.1,h550km,n23, σ1.561/28,mb4.0/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.65**	**275**	P		P	15 15 06.1	+6.2
AFI	**Afiamalu**	**7.41**	**57**	P		**P**	**15 15 33.4**	**+0.8**
	5.1nm,0.3s,baz=117,slow=0.4,SNR=14							
AFI				S		**S**	**15 17 03.6**	**-0.8**
	0.7nm,0.3s,baz=357,slow=22,SNR=1.9							
AFI	**Afiamalu**	**7.41**	**57**	P		**P**	**15 15 33.7**	**+1.1**
DZM	**Mont Dzumac**	**15.00**	**252**	P		**P**	**15 16 52.0**	**+1.9**
	0.7nm,0.3s,baz=157,slow=20,SNR=7.5							
DZM	**Mont Dzumac**	**15.00**	**252**	P		**P**	**15 16 51.9**	**+1.9**
DZM				IAmb		IAmb	15 16 55.0	
	comp=Z,6.6nm,0.7s							
URZ	**Urewera**	**20.49**	**191**	P		**P**	**15 17 39.3**	**-1.5**
	comp=Z,3.7nm,0.4s,baz=144,slow=22,SNR=2.2							
URZ	**Urewera**	**20.49**	**191**	P		**P**	**15 17 39.9**	**-0.9**
URZ				IAmb		IAmb	15 17 45.7	
	comp=Z,8.3nm,1.0s							
STKA	**Stephens Creek**	**38.75**	**241**	P		**P**	**15 20 19.9**	**+1.9**
	comp=Z,5.5nm,0.5s,baz=88,slow=11,SNR=24							
STKA	**Stephens Creek**	**38.75**	**241**	P		**P**	**15 20 20.0**	**+1.9**
WB0	**Warramunga Arr**	**44.81**	**260**	P		**P**	**15 21 06.4**	**+0.4**
WB0				IAmb		IAmb	15 21 06.9	
	comp=Z,4.6nm,0.8s							
WB2	**Warramunga Arr**	**44.83**	**260**	P		**P**	**15 21 06.9**	**+0.7**
WB2				IAmb		IAmb	15 21 07.1	
	comp=Z,4.9nm,0.7s							
WRA	**Warramunga Arr**	**44.84**	**260**	P		**P**	**15 21 06.5**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=96,slow=7.2,SNR=75							
WRA				PcP		**PcP**	**15 22 36.0**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=95,slow=3.0,SNR=2.7							
WRA	**Warramunga Arr**	**44.84**	**260**	P		**P**	**15 21 06.6**	**+0.3**
WRA						**PcP**	**15 22 36.5**	**+0.2**
AS31	**Alice Springs**	**44.98**	**254**	P		**P**	**15 21 08.1**	**+0.9**
AS31				IAmb		IAmb	15 21 09.1	
	comp=Z,4.5nm,0.6s							
ASAR	**Alice Springs**	**44.98**	**254**	P		**P**	**15 21 08.0**	**+0.7**
	comp=Z,14nm,0.6s,baz=88,slow=8.7,SNR=351							
ASAR				PcP		**PcP**	**15 22 36.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=102,slow=3.7,SNR=6.5							
ASAR				S		**S**	**15 27 00.8**	**-5.3**
	comp=Z,0.2nm,0.9s,baz=94,slow=15,SNR=2.2							
ASAR	**Alice Springs**	**44.98**	**254**	P		**P**	**15 21 06.5**	**-0.7**
ASAR						**PcP**	**15 22 36.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**53.24**	**261**	P		**P**	**15 22 08.8**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=84,slow=9.0,SNR=2.6							
MJAR	**Matsushiro Arr**	**68.23**	**323**	P		**P**	**15 23 45.8**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=146,slow=5.9,SNR=4.7							
NVAR	**Mina Array Bea**	**79.40**	**44**	P		**P**	**15 24 49.8**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=218,slow=6.5,SNR=5.0							
TXAR	**Lajitas Array**	**85.89**	**58**	P		**P**	**15 25 24.5**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=222,slow=5.8,SNR=8.6							
CMAR	**Chiang Mai Arr**	**89.19**	**290**	P		**P**	**15 25 39.0**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=130,slow=2.7,SNR=4.7							
WMOK	**Wichita Mounta**	**91.76**	**54**	P		**P**	**15 25 46.9**	**-3.1**
GERES	**GERESS Array B**	**147.88**	**345**	PKPbc		**PKPbc**	**15 32 23.6**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=28,slow=4.4,SNR=2.3							

*BJI **08** 16:09:01.2±0.0,20.90S×178.60W,h617km,mB5.0/34, mb5.1/55*

*NEIC **08** 16:09:02.8±1.6,21.01S±0.10×179.0W±0.1,h611km±2km, mb5.1/134,Error ellipse: s-maj=14.7km s-min=12.9km az=131.0*

*MOS **08** 16:09:02.3±1.1,21.00S×179.06W,h618km,mb4.9/22, Error ellipse: s-maj=9.8km s-min=9.8km az=115.8*

*IDC **08** 16:09:03.4±0.4,21.07S×179.04W,h615km±3km,mb4.4/32, mb1 4.5/34,mb1mx4.4/42,mbtmp5.3/34,Error ellipse: s-maj=8.8km s-min=7.7km az=151.0*

*GCMT **08** 16:09:05.8±0.3,21.32S±0.03×178.93W±0.02, h628km±2km,MW5.4/99,Moment Tensor Solution. s99,c136; Duration: 1s2 Moment tensor: Scale 10^17Nm; Mrr0.30±.04; Mθθ0.43±.06; Mϕϕ-0.73±.06; Mrθ-0.09±.06; Mθϕ-0.82±.05; Mϕr-1.24±.04; Best double couple: M₀1.56900×10^17 NP1:ϕ₁74.00000°,δ35.00000°, λ168.00000°. NP2:ϕ₂174.00000°,δ83.00000°,λ55.00000°. Principal axes: T 1.3340, Plg42.0000°, Azm51.0000°; N 0.4700, Plg34.0000°, Azm179.0000°; P -1.8040, Plg29.0000°, Azm291.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*BGR **08** 16:09:06.0±0.0,20.92S×178.40W,h643km±2km*

ISC 08 16:09:02.5±0.3,21.11S±0.04×178.98W±0.04, h613km±3km,h615km:pP-P,n852,σ1§43/959,mb5.1/173, 59C-46D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.38**	**320**	P		**P**	**16 10 33.7**	**+1.9**
MSVF	**Nonsavu**	**4.38**	**320**	P		**P**	**16 10 33.7**	**+1.9**
RIZ	**Raoul Island**	**8.15**	**174**	P		**P**	**16 11 04.0**	**+0.4**
RIZ				S		**S**	**16 12 42.0**	**-1.0**
RAO	**Raoul Island**	**8.16**	**173**	P		**P**	**16 11 03.9**	**+0.2**
	125nm,0.3s,baz=9.4,slow=20,SNR=6.2							
RAO				S		**S**	**16 12 38.4**	**-4.7**
	100nm,0.3s,baz=258,slow=22,SNR=2.5							
RAO	**Raoul Island**	**8.16**	**173**	P		**P**	**16 11 03.3**	**-0.4**
RAO	**Raoul Island**	**8.16**	**173**	P		**P**	**16 11 03.3**	**-0.4**
GLKZ	**Green Lake**	**8.17**	**173**	P		**P**	**16 11 04.0**	**+0.3**
GLKZ				S		**S**	**16 12 43.3**	**+0.1**
NIUE	**Niue**	**8.74**	**78**	P		**P**	**16 11 09.5**	**+0.1**
AFI	**Afiamalu**	**9.92**	**45**	P		**P**	**16 11 19.0**	**-2.0**
	23nm,0.3s,baz=147,slow=1.7,SNR=49							
AFI				S		**S**	**16 13 08.6**	**-6.0**
	10nm,0.3s,baz=208,slow=22,SNR=11							
FUNA	**Funafuti**	**12.64**	**352**	P		**P**	**16 11 46.7**	**-0.9**
DZM	**Mont Dzumac**	**13.60**	**263**	P		**P**	**16 11 57.6**	**+0.4**
	13nm,0.3s,baz=316,slow=4.1,SNR=90							
DZM				S		**S**	**16 14 17.8**	**-2.4**
	0.3nm,0.3s,baz=88,slow=20,SNR=5.7							
DZM	**Mont Dzumac**	**13.60**	**263**	*e*P		**P**	**16 11 56.9**	**-0.3**
	201nm,1.1s							
DZM	**Mont Dzumac**	**13.60**	**263**	P		**P**	**16 11 57.4**	**+0.2**
NFK	**Norfolk Island**	**14.23**	**234**	P		**P**	**16 12 03.1**	**0.0**
	baz=14,SNR=5.9							
SANVU	**Saraoutou**	**14.28**	**291**	P		**P**	**16 12 02.7**	**-1.0**
OUZ	**Omahuta**	**15.50**	**203**	P		**P**	**16 12 17.9**	**+3.4**
OUZ	**Omahuta**	**15.50**	**203**	P		**P**	**16 12 18.1**	**+3.6**
GRZ	**Great Barrier**	**15.85**	**197**	P		**P**	**16 12 19.7**	**+2.0**
WCZ	**Waipu Caves**	**15.89**	**200**	P		**P**	**16 12 21.9**	**+3.9**
WIAZ	**Waiheke Island**	**16.45**	**197**	P		**P**	**16 12 26.8**	**+3.7**
MXZ	**Matakaoa Point**	**16.56**	**188**	P		**P**	**16 12 25.1**	**+0.9**
MXZ	**Matakaoa Point**	**16.56**	**188**	P		**P**	**16 12 24.0**	**-0.2**
MXZ				IAmb		IAmb	16 12 26.8	
	comp=Z,72nm,1.1s							
HBAZ	**Herne Bay Bore**	**16.61**	**198**	P		**P**	**16 12 28.2**	**+3.5**
ETAZ	**East Tamaki Re**	**16.65**	**197**	P		**P**	**16 12 27.7**	**+2.7**
MKAZ	**Moumakai**	**16.73**	**196**	P		**P**	**16 12 28.2**	**+2.4**
HAZ	**Te Kaha**	**16.82**	**189**	P		**P**	**16 12 26.8**	**+0.3**
HAZ				S		**S**	**16 15 06.7**	**-5.9**
PKGZ	**Pakihiroa**	**16.91**	**188**	P		**P**	**16 12 27.7**	**+0.2**
RUGZ	**Raukumara Rang**	**17.04**	**189**	P		**P**	**16 12 27.4**	**-1.4**
RUGZ				S		**S**	**16 15 08.5**	**-7.9**
WHRZ	**Whale Island**	**17.05**	**191**	P		**P**	**16 12 31.2**	**+2.5**
PUZ	**Puketiti**	**17.07**	**187**	P		**P**	**16 12 28.8**	**-0.1**
PUZ				S		**S**	**16 15 12.2**	**-4.4**
OPRZ	**Ohinepanea**	**17.12**	**192**	P		**P**	**16 12 31.1**	**+1.8**
TWGZ	**Tauwhareparae**	**17.21**	**188**	P		**P**	**16 12 29.9**	**-0.3**
TWGZ				S		**S**	**16 15 14.7**	**-4.3**
MARZ	**Manawahe**	**17.23**	**192**	P		**P**	**16 12 31.6**	**+1.2**
LIRZ	**Lichensteins R**	**17.31**	**192**	P		**P**	**16 12 30.7**	**-0.4**
EDRZ	**Edgecumbe**	**17.34**	**191**	P		**P**	**16 12 32.3**	**+0.9**
KARZ	**Kaharoa**	**17.35**	**193**	P		**P**	**16 12 31.8**	**+0.3**
OMRZ	**Omania**	**17.41**	**192**	P		**P**	**16 12 34.3**	**+2.3**
MKRZ	**Makatiti**	**17.42**	**192**	P		**P**	**16 12 34.4**	**+2.2**
URZ	**Urewera**	**17.42**	**190**	P		**P**	**16 12 30.1**	**-2.0**
	comp=Z,12nm,0.3s,baz=290,slow=2.2,SNR=73							
URZ				S		**S**	**16 15 14.2**	**-8.0**
	comp=Z,4.2nm,0.3s,baz=174,slow=22,SNR=7.6							
URZ				ScP		**ScP**	**16 19 15.3**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=222,slow=2.8,SNR=5.3							
URZ	**Urewera**	**17.42**	**190**	P		**P**	**16 12 30.1**	**-2.0**
URZ				S		**S**	**16 15 15.7**	**-6.5**
CNGZ	**Carnagh Statio**	**17.48**	**187**	P		**P**	**16 12 33.1**	**+0.4**
TKGZ	**Te Karaka**	**17.48**	**188**	P		**P**	**16 12 33.2**	**+0.6**
HLRZ	**Highlands Stat**	**17.55**	**192**	P		**P**	**16 12 33.0**	**-0.3**
RRRZ	**Republican Roa**	**17.61**	**192**	P		**P**	**16 12 35.0**	**+1.3**
HSRZ	**Hossack Road**	**17.63**	**192**	P		**P**	**16 12 36.1**	**+2.1**
MUGZ	**Murupara**	**17.69**	**191**	P		**P**	**16 12 33.6**	**-1.0**
MUGZ				S		**S**	**16 15 21.4**	**-5.3**
HRRZ	**Handcock Road**	**17.70**	**192**	P		**P**	**16 12 35.4**	**+0.7**
RIGZ	**Rimuhau**	**

EIDS **Eidsvold** 27.80 255 P **P** 16 14 05.3 +0.6
baz=28,SNR=34
EIDS **Eidsvold** 27.80 255 P **P** 16 14 05.2 +0.5
PAE **Paea** 27.92 88 *e*P **P** 16 14 05.8 0.0
comp=Z,111nm,1.1s
PPT2 **Papeete2** 27.94 88 *e*P **P** 16 14 06.3 +0.3
comp=Z,62nm,1.1s
PPT **Papeete** 27.95 88 P **P** 16 14 06.7 +0.7
comp=Z,39nm,0.8s,baz=56,slow=16,SNR=6.0
PPT ScP **ScP** 16 19 45.3 +1.0
comp=Z,30nm,0.9s,baz=252,slow=5.1,SNR=3.7
ARMA **Armidale** 27.98 245 P **P** 16 14 08.0 +1.7
baz=28,SNR=76
ARMA **Armidale** 27.98 245 P **P** 16 14 08.0 +1.7
TIAR **Tiarei** 28.16 88 *e*P **P** 16 14 08.0 +0.1
comp=Z,23nm,0.9s
TVO **Taravao** 28.21 88 *e*P **P** 16 14 08.3 0.0
comp=Z,27nm,1.2s
MGCD **Mangrove Creek** 29.11 239 P **P** 16 14 17.7 +1.9
baz=29,SNR=9.7
RMQ **Roma** 29.95 253 P **P** 16 14 24.8 +1.6
baz=30,SNR=101
PMOR **Pomariorio Ree** 30.14 84 *e*P **P** 16 14 24.9 0.0
comp=Z,223nm,1.2s
VAH **Vaihoa** 30.32 84 *e*P **P** 16 14 26.1 -0.3
comp=Z,94nm,0.9s
CNB **Canberra Magne** 31.13 236 P **P** 16 14 34.9 +1.7
baz=31,SNR=31
XMAS **Kiritimati** 31.21 45 P **P** 16 14 34.8 +0.8
CAN **Canberra** 31.41 236 P **P** 16 14 37.2 +1.6
CAN pmax pmax
comp=Z,33nm,0.9s
CAN **Canberra** 31.41 236 P **P** 16 14 37.2 +1.6
CAN IAmb IAmb 16 14 38.0
comp=Z,33nm,0.9s
CTA **Charters Tower** 32.52 265 P **P** 16 14 46.0 +0.8
comp=Z,223nm,0.6s,baz=92,slow=11,SNR=424
CTA PcP **PcP** 16 17 13.2 +0.4
comp=Z,6.9nm,0.7s,baz=127,slow=5.1,SNR=2.3
CTA ScP **ScP** 16 20 00.5 +1.0
comp=Z,12nm,0.9s,baz=56,slow=1.5,SNR=5.2
CTAO **Charters Tower** 32.52 265 P **P** 16 14 46.2 +1.0
CTAO pmax pmax
comp=Z,211nm,0.7s
CTAO **Charters Tower** 32.52 265 P **P** 16 14 46.2 +1.0
KRVT **Keravat (AS076** 32.74 297 P **P** 16 14 46.8 -0.3
comp=Z,132nm,0.7s,baz=272,slow=3.2,SNR=2.9
CMSA **Cobar Meteorol** 33.20 244 P **P** 16 14 51.6 +1.0
baz=33,SNR=142
QLP **Quilpie** 34.01 254 P **P** 16 14 58.2 +0.7
baz=34,SNR=111
PMG **Port Moresby** 34.60 284 P **P** 16 15 03.0 +0.5
comp=Z,305nm,0.8s,baz=82,slow=5.6,SNR=88
PMG **Port Moresby** 34.60 284 *ce*P **P** 16 15 02.8 +0.3
PMG pmax pmax
comp=Z,294nm,0.9s
PMG **Port Moresby** 34.60 284 P **P** 16 15 03.2 +0.7
MTSU **Mount Surprise** 34.65 268 P **P** 16 15 03.7 +0.7
baz=35,SNR=240
TOO **Toolangi** 34.80 234 P **P** 16 15 05.1 +1.2
baz=35,SNR=36
TOO **Toolangi** 34.80 234 P **P** 16 15 05.4 +1.4
TOO pmax pmax
comp=Z,40nm,0.7s
TOO **Toolangi** 34.80 234 P **P** 16 15 05.3 +1.4
TOO IAmb IAmb 16 15 06.1
comp=Z,40nm,0.7s
TAU **Tasmania Unive** 35.55 225 P **P** 16 15 11.3 +1.4
TAU pmax pmax
comp=Z,25nm,0.9s
TAU **Tasmania Unive** 35.55 225 P **P** 16 15 11.3 +1.4
STKA **Stephens Creek** 36.70 245 P **P** 16 15 20.9 +1.2
comp=Z,59nm,0.8s,baz=91,slow=9.6,SNR=136
STKA ScP **ScP** 16 20 14.8 +0.3
comp=Z,7.6nm,0.9s,baz=115,slow=3.9,SNR=5.1
STKA **Stephens Creek** 36.70 245 P **P** 16 15 20.8 +1.2
baz=37,SNR=61
STKA **Stephens Creek** 36.70 245 P **P** 16 15 21.0 +1.4
STKA pmax pmax
comp=Z,16nm,0.9s
STKA **Stephens Creek** 36.70 245 P **P** 16 15 21.0 +1.4
QIS **Mount Isa** 38.63 263 P **P** 16 15 35.3 -0.2
baz=39,SNR=39
HTT **Hallett** 39.13 243 P **P** 16 15 40.2 +0.9
baz=39,SNR=60
TAOE **Nuku Hiva Isla** 39.33 78 *e*P **P** 16 15 40.6 -0.5
comp=Z,294nm,1.0s
BBOO **Buckleboo** 41.46 244 P **P** 16 15 58.2 +0.6
baz=42,SNR=143
BBOO **Buckleboo** 41.46 244 P **P** 16 15 58.3 +0.6
WR0 **Warramunga Arr** 43.42 263 P **P** 16 16 13.2 0.0
WR0 IAmb IAmb 16 16 14.8
comp=Z,79nm,0.9s
AS31 **Alice Springs** 43.49 257 P **P** 16 16 14.3 +0.6
AS31 IAmb IAmb 16 16 15.0
comp=Z,55nm,0.8s
ASAR **Alice Springs** 43.49 257 P **P** 16 16 14.1 +0.4
comp=Z,190nm,0.7s,baz=97,slow=7.9,SNR=3210
ASAR PcP **PcP** 16 17 47.9 +0.3
comp=Z,14nm,0.7s,baz=100,slow=4.0,SNR=7.2
ASAR ScP **ScP** 16 20 43.5 +2.0
comp=Z,16nm,0.9s,baz=104,slow=4.2,SNR=16
ASAR S **S** 16 21 57.1 -2.4
comp=Z,31nm,0.8s,baz=95,slow=16,SNR=41
ASAR **Alice Springs** 43.49 257 P **P** 16 16 13.5 -0.2
ASAR **Alice Springs** 43.49 257 P **P** 16 16 13.5 -0.2
WB0 **Warramunga Arr** 43.59 263 P **P** 16 16 14.6 +0.1
WB2 **Warramunga Arr** 43.60 263 P **P** 16 16 14.7 +0.1
WRAB **Tennant Creek** 43.60 263 P **P** 16 16 14.5 -0.1
WRAB pmax pmax
comp=Z,221nm,1.0s
WRAB **Tennant Creek** 43.60 263 P **P** 16 16 14.5 -0.1
WRA **Warramunga Arr** 43.61 263 P **P** 16 16 14.5 -0.1
comp=Z,151nm,0.7s,baz=97,slow=8.8,SNR=418
WRA PcP **PcP** 16 17 48.4 +0.4
comp=Z,8.9nm,0.8s,baz=96,slow=3.9,SNR=6.2
WRA ScP **ScP** 16 20 44.2 +2.2
comp=Z,6.6nm,1.0s,baz=98,slow=4.2,SNR=7.3
WRA S **S** 16 21 54.5 -6.8
comp=Z,6.4nm,0.8s,baz=99,slow=12,SNR=14
WRA **Warramunga Arr** 43.61 263 P **P** 16 16 13.4 -1.3
WRA pmax pmax
comp=Z,15nm,0.8s
WRA **Warramunga Arr** 43.61 263 P **P** 16 16 13.4 -1.3
GENI **Genyem** 43.81 289 P **P** 16 16 16.9 +0.7
comp=Z,4μmcomp=Z,424nm,1.0s
HMH **Humu'ula Sheep** 46.54 31 P **P** 16 16 37.3 +0.2
KDU **Kakadu** 47.05 272 P **P** 16 16 40.7 -0.1
baz=47,SNR=127
BAKI **Biak** 48.05 288 P **P** 16 16 49.5 +1.2
comp=Z,3μmcomp=Z,330nm,0.9s
FORT **Forrest** 48.21 247 P **P** 16 16 49.2 0.0
baz=48,SNR=114
FORT **Forrest** 48.21 247 P **P** 16 16 49.4 +0.2
MTN **Manton Dam** 48.26 271 P **P** 16 16 49.3 -0.5
baz=48,SNR=104
MTN **Manton Dam** 48.26 271 P **P** 16 16 49.6 -0.1
WRKA **Warakurna** 48.42 255 P **P** 16 16 51.0 +0.1
baz=48,SNR=599
GUMO **Guam** 49.50 311 P **P** 16 16 57.1 -1.7
GUMO pmax pmax
comp=Z,318nm,1.0s
GUMO **Guam** 49.50 311 P **P** 16 16 57.1 -1.7
KNRA **Kununurra** 49.71 267 P **P** 16 17 00.6 +0.2
baz=50,SNR=161
KNRA **Kununurra** 49.71 267 P **P** 16 17 00.9 +0.5
FAKI **Fak Fak** 50.75 284 P **P** 16 17 07.8 -0.2
comp=Z,2μmcomp=Z,148nm,1.2s
FAKI **Fak Fak** 50.75 284 P **P** 16 17 07.9 -0.1
FITZ **Fitzroy Crossi** 52.04 263 S **S** 16 23 52.2 -4.4
comp=Z,6.4nm,1.2s,baz=283,slow=20,SNR=9.0
FITZ **Fitzroy Crossi** 52.04 263 P **P** 16 17 17.6 +0.4
baz=52,SNR=175
FITZ **Fitzroy Crossi** 52.04 263 P **P** 16 17 17.9 +0.6
FITZ IAmb IAmb 16 17 18.3
comp=Z,52nm,0.7s
BNDI **Bandanaira** 52.24 281 P **P** 16 17 18.7 0.0
comp=Z,5μmcomp=Z,553nm,0.9s
SIJI **Sorong** 52.52 286 ScP **ScP** 16 21 19.9 -0.1
comp=Z,13nm,1.0s,baz=36,slow=5.2,SNR=4.8
KMBL **Kambalda** 53.48 246 P **P** 16 17 27.1 -0.1
baz=54,SNR=12
SOEI **Soe** 55.61 273 P **P** 16 17 43.8 +1.3
comp=Z,5μmcomp=Z,703nm,0.8s
SOEI **Soe** 55.61 273 P **P** 16 17 44.1 +1.7
BATI **Baumata** 56.03 272 P **P** 16 17 46.9 +1.7
comp=Z,1μmcomp=Z,162nm,0.8s
PSA00 **Pilbara Seismi** 56.64 258 P **P** 16 17 49.3 0.0
TNTI **Ternate** 56.73 286 P **P** 16 17 50.1 +0.1
comp=Z,2μmcomp=Z,264nm,0.9s
TNTI **Ternate** 56.73 286 P **P** 16 17 50.2 +0.2
SANI **Sanana** 56.80 282 P **P** 16 17 49.8 -0.7
comp=Z,2μmcomp=Z,154nm,1.0s
MEEK **Meekatharra** 56.85 251 P **P** 16 17 50.3 -0.5
baz=57,SNR=37
KLBR **Kellerberrin** 56.97 245 P **P** 16 17 51.6 +0.2
baz=57,SNR=101
VNDA **Vanda** 57.22 185 P **P** 16 17 54.4 +2.0
comp=Z,3.9nm,0.7s,baz=355,slow=7.7,SNR=30
VNDA pP **pwP** 16 19 50.2 0.0
comp=Z,1.1nm,0.9s,baz=289,slow=6.3,SNR=1.6
VNDA ScP **ScP** 16 21 39.9 +0.4
comp=Z,2.4nm,0.9s,baz=359,slow=5.4,SNR=5.3
VNDA **Vanda** 57.22 185 P **P** 16 17 54.8 +2.5
VNDA **Vanda** 57.22 185 P **P** 16 17 54.8 +2.5
NWAO **Narrogin (SRO)** 57.28 244 P **P** 16 17 53.9 +0.5
baz=57,SNR=17
NWAO **Narrogin (SRO)** 57.28 244 P **P** 16 17 54.0 +0.5
NWAO pmax pmax
comp=Z,41nm,0.8s
NWAO **Narrogin (SRO)** 57.28 244 P **P** 16 17 54.0 +0.5
RKGY **Rocky Gully** 57.35 242 P **P** 16 17 54.8 +0.9
baz=57,SNR=18
MMRI **Maumere** 57.87 273 P **P** 16 17 57.6 -0.1
comp=Z,2μmcomp=Z,216nm,0.9s
MMRI **Maumere** 57.87 273 P **P** 16 17 57.6 -0.1
MUN **Mundaring** 58.24 245 P **P** 16 18 00.4 +0.5
baz=58,SNR=23
EDFI **Ende, Flores** 58.34 273 P **P** 16 18 00.4 -0.6
comp=Z,871nmcomp=Z,114nm,0.8s
MORW **Morawa** 58.75 248 P **P** 16 18 03.6 +0.2
baz=59,SNR=20
MORW **Morawa** 58.75 248 P **P** 16 18 03.9 +0.4
MORW IAmb IAmb 16 18 04.6
comp=Z,109nm,1.1s
WSI **Waingapu** 59.34 271 P **P** 16 18 08.0 +0.4
comp=Z,5μmcomp=Z,645nm,0.9s
H01W1 **Cape Leeuwin H** 59.64 241 P **P** 16 18 11.1 +2.1
baz=113,slow=6.4,SNR=8.6
H01W2 **Cape Leeuwin H** 59.66 241 P **P** 16 18 11.2 +2.1
baz=113,slow=6.4,SNR=5.1
H01W3 **Cape Leeuwin H** 59.66 241 P **P** 16 18 11.2 +2.1
baz=113,slow=6.4,SNR=6.6
SGSI **Sangihe** 59.67 288 P P 16 18 16.4 +6.7
KMSI **Cibinong** 59.71 284 P **P** 16 18 10.0 0.0
comp=Z,141nm,0.9s
LUWI **Luwuk** 60.15 281 P **P** 16 18 13.5 +0.6
comp=Z,2μmcomp=Z,268nm,1.2s
LUWI **Luwuk** 60.15 281 P **P** 16 18 13.7 +0.7
WBSI **Waikabubak, Su** 60.20 271 P **P** 16 18 13.7 +0.4
comp=Z,1μmcomp=Z,98nm,0.8s
BSSI **Bau Bau, Buton** 60.34 275 P **P** 16 18 13.8 -0.4
comp=Z,626nmcomp=Z,58nm,1.3s
BKSI **Bulukumba** 60.38 276 P **P** 16 18 17.7 -0.6
comp=Z,749nmcomp=Z,52nm,0.8s
APSI **Ampana** 61.23 281 P **P** 16 18 20.9 +0.9
comp=Z,1μmcomp=Z,141nm,1.1s
BNSI **Bone** 61.32 277 P **P** 16 18 20.8 +0.2
comp=Z,1μmcomp=Z,115nm,0.9s
KAPI **Kappang** 61.43 276 P **P** 16 18 21.0 -0.3
KAPI pmax pmax
comp=Z,26nm,0.8s
KAPI **Kappang** 61.43 276 P **P** 16 18 21.0 -0.3
GIRL **Giralia** 61.51 255 P **P** 16 18 23.0 +1.3
baz=62,SNR=8.0
GIRL **Giralia** 61.51 255 P **P** 16 18 23.3 +1.6
SPSI **Sidrap Palu** 61.80 277 P **P** 16 18 22.6 -1.1
comp=Z,624nmcomp=Z,74nm,1.0s
PLAI **Plampang** 61.97 271 P **P** 16 18 24.6 -0.2
comp=Z,3μmcomp=Z,290nm,0.9s
TTSI **Tana Toraja** 62.09 278 P **P** 16 18 27.2 +1.6
comp=Z,448nmcomp=Z,37nm,0.9s
TWSI **Taliwang, Sumb** 62.83 271 P **P** 16 18 30.1 -0.2
comp=Z,1μmcomp=Z,139nm,1.0s
MPSI **Mapaga** 63.33 282 P **P** 16 18 33.2 -0.3
comp=Z,1μmcomp=Z,133nm,1.0s
SRBI **Singaraja** 64.60 271 P **P** 16 18 41.3 -0.3
comp=Z,161nm,1.0s
KBKI **Kotabaru** 65.38 276 P **P** 16 18 47.0 +0.5
comp=Z,686nmcomp=Z,36nm,1.1s
JAGI **Jajag, Banyuwa** 65.47 270 P **P** 16 18 46.1 -0.9
comp=Z,155nm,1.0s
JAGI **Jajag, Banyuwa** 65.47 270 P **P** 16 18 46.1 -0.9
SMKI **Samarinda** 65.49 280 P **P** 16 18 49.8 +2.6
comp=Z,125nm,1.3s
GMJI **Gumukmas** 66.19 270 P **P** 16 18 51.7 +0.2
comp=Z,74nm,0.9s
BBKI **Banjar Baru** 66.55 276 P **P** 16 18 54.3 +0.6
comp=Z,62nm,1.0s
JHJ **Hachijo jima 2** 66.77 323 P **P** 16 18 55.6 +1.0
comp=Z,56nm,0.4s,baz=93,slow=23,SNR=2.6
MTKI **Muara Teweh, K** 67.44 278 P **P** 16 18 59.6 +0.5
comp=Z,49nm,0.9s
PWJI **Parwojo** 67.81 270 P **P** 16 19 01.4 +0.1
comp=Z,114nm,1.0s
SPMM **Sapulut** 68.25 284 P **P** 16 19 06.0 +1.9
WOJI **Wonogiri, Jawa** 68.69 270 P **P** 16 19 07.1 +0.4
comp=Z,100nm,1.2s
QSPA **South Pole Qui** 68.96 180 P **P** 16 19 09.3 +1.8
KKM **Kota Kinabalu** 69.03 285 P **P** 16 19 09.2 +0.3
KKM IAmb IAmb 16 19 09.9
comp=Z,66nm,0.8s
UGM **Wanagama** 69.04 269 P **P** 16 19 09.0 +0.2
SMRI **Semarang** 69.40 270 P **P** 16 19 11.8 +0.8
comp=Z,145nm,1.3s
PBKI **Pangkalan Bun** 69.78 275 P **P** 16 19 14.4 +1.2
comp=Z,167nm,0.8s
JMM **Marumori** 69.80 327 IAmb IAmb 16 19 14.1
comp=Z,43nm,1.0s
JGF **Kuroka** 69.95 323 IAmb IAmb 16 19 14.7
comp=Z,32nm,0.8s
MJAR **Matsushiro Arr** 70.16 324 P **P** 16 19 14.7 -0.2
comp=Z,30nm,0.8s,baz=156,slow=5.8,SNR=88
MJAR pP **pP** 16 21 18.7 +0.6
comp=Z,0.5nm,0.8s,baz=117,slow=4.5,SNR=1.4
MJAR **Matsushiro Arr** 70.16 324 P **P** 16 19 14.2 -0.8
MJAR pmax pmax
comp=Z,18nm,0.9s
MJAR **Matsushiro Arr** 70.16 324 P **P** 16 19 14.2 -0.8
MAJO **Matsushiro** 70.17 324 *d* iP **P** 16 19 15.1 +0.1
MAJO pmax pmax
comp=Z,45nm,0.9s
MAJO **Matsushiro** 70.17 324 P **P** 16 19 14.9 0.0
MAJO IAmb IAmb 16 19 16.0
comp=Z,38nm,0.8s
MAT **Matsushiro** 70.17 324 P **P** 16 19 14.9 -0.1
MAT S **S** 16 27 38.2 -0.6
JMN **Monobe** 70.65 320 P **P** 16 19 17.3 -0.6
JMN IAmb IAmb 16 19 20.0
comp=Z,76nm,1.1s
KPJI **Karang Pucung** 70.72 269 P **P** 16 19 18.7 0.0
comp=Z,106nm,1.1s
STKI **Sintang** 70.98 278 P **P** 16 19 21.8 +1.5
SBUM **Sibu** 71.21 280 P **P** 16 19 22.0 +0.4
CISI **Cisompet, Garu** 71.69 269 P **P** 16 19 23.8 -0.6
comp=Z,2μmcomp=Z,128nm,1.2s
JTM **Tenmabayashi** 71.91 329 P **P** 16 19 25.5 +0.5
JTM IAmb IAmb 16 19 26.8
comp=Z,60nm,1.0s
JHS **Saijyo** 71.98 320 P **P** 16 19 26.6 +1.0
JNU **Nakatsue** 72.10 317 P **P** 16 19 26.4 0.0
comp=Z,48nm,1.0s,baz=72,slow=5.0,SNR=11
JNU **Nakatsue** 72.10 317 P **P** 16 19 25.3 -1.0
JNU IAmb IAmb 16 19 28.2
comp=Z,65nm,1.1s
KSM **Kuching** 72.59 279 P **P** 16 19 30.3 +0.8
KSM **Kuching** 72.59 279 P **P** 16 19 30.0 +0.4
TWG **Pinlang** 72.94 303 IAmb IAmb 16 19 31.0
comp=Z,56nm,0.7s
DBJI **Dramaga** 73.02 269 P **P** 16 19 32.2 +0.2
comp=Z,78nm,1.2s
YULB **Yu-li** 73.07 304 IAmb IAmb 16 19 36.4
comp=Z,45nm,1.0s
ATKA **Atka Island** 73.12 3 P **P** 16 19 31.1 -0.5
ATKA IAmb IAmb 16 19 37.6
comp=Z,50nm,1.0s
TPI **Tanjungpandan** 73.50 273 P **P** 16 19 35.6 +0.9
comp=Z,51nm,1.1s
SSLB **Suanglung** 73.55 304 IAmb IAmb 16 19 34.8
comp=Z,83nm,0.8s
YHNB **Yeheng** 73.70 305 IAmb IAmb 16 19 37.1
comp=Z,70nm,0.9s
JKA **Kamikawa-asahi** 73.83 332 IAmb IAmb 16 19 38.8
comp=Z,52nm,1.0s
ASAJ **Asahikawa** 73.83 332 P **P** 16 19 37.4 +1.5
comp=Z,31nm,0.8s,baz=215,slow=9.3,SNR=10
CGJI **Cibinong** 73.98 269 P **P** 16 19 36.9 -0.6
comp=Z,1μmcomp=Z,97nm,1.2s
PPBI **Pangkal Pinang** 75.12 273 P **P** 16 19 44.9 +1.0
KLSI 75.55 271 P **P** 16 19 45.4 -0.8
comp=Z,11nm,1.2s
YSS **Yuzh-Sakhalins** 76.04 334 *i* P **P** 16 19 47.8 -0.3
YSS pmax pmax
comp=Z,67nm,1.7s
PETK **Petropavlovsk-** 76.63 346 P **P** 16 19 51.6 +0.4
comp=Z,21nm,0.8s,baz=114,slow=8.2,SNR=17
PETK **Petropavlovsk-** 76.63 346 P **P** 16 19 51.4 +0.2
PETK **Petropavlovsk-** 76.63 346 P **P** 16 19 51.4 +0.2
KSRS **Korea Array** 76.74 319 P **P** 16 19 53.1 +0.9
comp=Z,8.0nm,0.9s,baz=140,slow=6.4,SNR=24
KSRS PP **PP** 16 22 59.9 +3.1
comp=Z,0.9nm,0.9s,baz=140,slow=7.7,SNR=4.3
KSAR **Wonju Array Be** 76.76 319 P **P** 16 19 52.6 +0.3
KSAR **Wonju Array Be** 76.76 319 P **P** 16 19 52.6 +0.3
KSI **Kapahiang** 77.90 271 P **P** 16 19 58.4 -0.7
comp=Z,199nm,0.9s
MYKOM **Kota Tinggi** 78.69 276 P **P** 16 20 02.0 -1.2
SCI2 **San Clemente I** 78.86 48 P **P** 16 20 05.9 +2.2
baz=236
USRK **Ussuriysk Ar.** 78.96 326 P **P** 16 20 05.3 +1.5
comp=Z,51nm,1.0s,baz=130,slow=3.4,SNR=103
USA0B **Ussuriysk Arra** 78.96 326 *i* P **P** 16 20 04.2 +0.3
USA0B **Ussuriysk Arra** 78.96 326 IAmb IAmb 16 20 06.3
comp=Z,78nm,1.1s
PKM **Mcpherson Peak** 79.07 46 P **P** 16 20 07.6 +2.6
baz=235
SMMC **Simmler** 79.20 46 P **P** 16 20 07.8 +2.3
baz=235
TYV **Tymovskoe** 79.22 336 *e*P **P** 16 20 04.2 -0.9
TYV pmax pmax
comp=Z,300nm,2.5s
TYV pmax pmax
comp=Z,57nm,1.4s
NJ2 **Nanjing** 79.57 310 ⇓ *i*P **P** 16 20 08.3 +0.9
NJ2 pmax pmax
comp=Z,50nm,1.1s
KMRM **Mail Ridge** 79.81 40 P **P** 16 20 10.2 +1.6
109C **Camp Elliot, M** 79.81 49 P **P** 16 20 10.4 +1.8
baz=237
ARVC **Arvin** 79.87 46 P **P** 16 20 11.3 +2.4
baz=235
SDSI **Sungai Dareh** 79.95 273 P **P** 16 20 09.6 -0.2
comp=Z,40nm,1.1s
MURC **Murrieta** 80.14 48 P **P** 16 20 12.5 +2.1
baz=237,SNR=6.9
ESJX **Sierra Juarez** 80.16 50 P **P** 16 20 11.8 +1.0
BFSC **Mount Baldy Ra** 80.17 48 P **P** 16 20 11.9 +1.2
baz=236,SNR=5.8
KHMM **Horse Mountain** 80.20 39 P **P** 16 20 12.1 +1.4
KHMM IAmb IAmb 16 20 14.9
comp=Z,49nm,1.1s
MONP2 **Monument Peak** 80.30 49 P **P** 16 20 13.3 +1.9
baz=237,SNR=22
EDW2 **Edwards Air Fo** 80.30 47 P **P** 16 20 13.1 +1.9
baz=236,SNR=22
IKP **In-Ko-Pah, Jac** 80.39 50 P **P** 16 20 13.7 +1.9
baz=237,SNR=9.5
ISA **Isabella, Lake** 80.42 46 P **P** 16 20 13.7 +1.8
baz=236,SNR=26
MDJ **Mudanjiang** 80.50 326 P **P** 16 20 13.4 +1.5
MDJ pmax pmax
comp=Z,54nm,1.2s
MDJ pmax pmax
comp=Z,220nm,5.2s
PFO **Pinyon Flats O** 80.66 49 P **P** 16 20 14.8 +1.6
comp=Z,11nm,1.0s,baz=277,slow=4.3,SNR=13
PFO **Pinyon Flats O** 80.66 49 *i* P **P** 16 20 14.1 +0.9
PFO pmax pmax
comp=Z,33nm,1.4s
PFO **Pinyon Flats O** 80.66 49 P **P** 16 20 14.9 +1.7
baz=237,SNR=8.5
MAW **Mawson** 80.68 200 P **P** 16 20 13.5 +1.0
comp=Z,47nm,0.7s,baz=135,slow=7.5,SNR=12
MAW **Mawson** 80.68 200 P **P** 16 20 13.8 +1.3
baz=81,SNR=8.3
MAW **Mawson** 80.68 200 P **P** 16 20 13.8 +1.3
MAW **Mawson** 80.68 200 P **P** 16 20 13.8 +1.3
ORV **Oroville** 80.74 41 P **P** 16 20 13.0 -0.3
ORV pmax pmax
comp=Z,27nm,1.0s
ORV **Oroville** 80.74 41 P **P** 16 20 13.0 -0.3
SWSC **Sam W. Stewart** 80.77 49 P **P** 16 20 15.5 +1.9
baz=238,SNR=4.3
LRMC **Laurel Mtn Rad** 80.85 46 P **P** 16 20 15.9 +1.8
baz=236,SNR=12
N02D **Trinity Center** 80.87 40 P **P** 16 20 16.4 +2.3
baz=232,SNR=29
O03E **Paynes Creek** 81.00 41 P **P** 16 20 16.4 +1.7
baz=233,SNR=37
M02C **Callahan** 81.04 39 P **P** 16 20 17.4 +2.5
baz=232,SNR=29
L02E **Cave Junction** 81.08 38 P **P** 16 20 17.8 +2.8
baz=231,SNR=7.0
CWC **Cottonwood Cre** 81.12 45 P **P** 16 20 17.1 +1.6
baz=236
BELC **Belle Mtn. Jos** 81.19 48 P **P** 16 20 17.7 +1.7
baz=237,SNR=18
MLAC **Mammoth, Mammo** 81.30 44 P **P** 16 20 18.9 +2.4
baz=235
MPMC **Manual Prospec** 81.30 46 P **P** 16 20 18.0 +1.5
baz=236,SNR=35
YBH **Yreka Blue Hor** 81.34 39 P **P** 16 20 18.1 +1.6
comp=Z,28nm,0.8s,baz=182,slow=1.1,SNR=56
YBH **Yreka Blue Hor** 81.34 39 IAmb IAmb 16 20 19.9
comp=Z,33nm,0.9s
GSC **Goldstone, Bar** 81.34 47 P **P** 16 20 17.4 +0.8
GSC pmax pmax
comp=Z,31nm,1.2s
GSC **Goldstone, Bar** 81.34 47 P **P** 16 20 18.1 +1.5
baz=237,SNR=23
GSC **Goldstone, Bar** 81.34 47 P **P** 16 20 17.4 +0.8
TIN **Timemaha, Big** 81.36 45 P **P** 16 20 19.0 +2.2
baz=236,SNR=5.6
K02D **Willamette Mer** 81.39 38 P **P** 16 20 18.8 +2.2
baz=231,SNR=8.4
BC3 **Big Chuckawall** 81.39 49 P **P** 16 20 18.9 +2.0
baz=238,SNR=8.5
HEC **Hector,Ludlow** 81.41 48 P **P** 16 20 18.5 +1.5
baz=237,SNR=29
GLA **Glamis** 81.52 50 P **P** 16 20 19.9 +2.3
baz=238,SNR=6.3
J01E **Myrtle Point** 81.53 37 P **P** 16 20 19.4 +2.2
baz=231,SNR=5.8
PNTR **Pine Nut** 81.65 43 IAmb IAmb 16 20 21.8
comp=Z,72nm,0.9s
HUMO **Hull Mountain** 81.74 38 P **P** 16 20 20.6 +2.2
HUMO IAmb IAmb 16 20 22.6
comp=Z,60nm,1.1s
GMRC **Granite Mounta** 81.85 48 P **P** 16 20 20.7 +1.4
baz=237,SNR=13
L04D **Klamath Falls** 81.88 39 P **P** 16 20 21.0 +1.8
baz=232,SNR=24
IRM **Iron Mountain** 81.88 49 P **P** 16 20 21.2 +1.9
baz=238,SNR=19
M04C **Macdoel** 81.88 39 P **P** 16 20 21.2 +1.9
baz=232,SNR=16
GRAC **Grapevine Rang** 81.90 45 P **P** 16 20 21.3 +1.9
baz=236
FURC **Furnace Creek,** 81.95 46 P **P** 16 20 21.3 +1.8
baz=236,SNR=8.0
TUQ **Turquoise Moun** 82.02 47 P **P** 16 20 22.2 +2.0
baz=237
SHOC **Shoshone, Teco** 82.03 47 P **P** 16 20 21.9 +1.9
baz=237
WHN **Wuhan** 82.07 307 P **P** 16 20 21.0 +0.7
WHN pmax pmax
comp=Z,94nm,1.1s
NVAR **Mina Array Bea** 82.10 44 P **P** 16 20 22.0 +1.5
comp=Z,14nm,0.7s,baz=226,slow=8.0,SNR=117
NVAR pP **pwP** 16 22 30.9 -1.0
comp=Z,0.1nm,0.4s,baz=227,slow=6.0,SNR=1.4
NVAR PP **PP** 16 23 41.0 +0.2
comp=Z,1.6nm,1.0s,baz=225,slow=8.3,SNR=2.8
NVAR PKKPbc **PKKPbc** 16 38 46.5 +1.0
comp=Z,0.5nm,0.7s,baz=82,slow=3.0,SNR=4.7
NVAR **Mina Array Bea** 82.10 44 P **P** 16 20 21.6 +1.0
I03D **Drain, OR** 82.19 37 P **P** 16 20 22.8 +2.3
baz=231,SNR=6.4
CN2 **Changchun** 82.23 323 ⇓ P **P** 16 20 21.0 +0.2
CN2 pmax pmax

comp=Z,60nm,1.2s
MNSI Mandailing Nat 82.30 274 P **P** **16 20 21.3 -0.5**
comp=Z,21µmcomp=Z,90nm,0.8s
IPM Ipoh 82.30 278 P **P** **16 20 23.0 +1.1**
214A Órgan Pipe Nat 82.41 52 P **P** **16 20 24.2 +2.2**
baz=240
K04D Chiloquin, OR 82.45 39 P **P** **16 20 24.9 +2.8**
baz=232
NEE2 Needles Airpor 82.57 48 P **P** **16 20 24.9 +2.2**
baz=238
KVN Kaiserville 82.58 43 IAmb IAmb 16 20 26.1
comp=Z,39nm,1.1s
KLR Kul'dur 82.59 330 *ce*P **P** **16 20 23.2 +0.7**
KLR pmax pmax
comp=Z,31nm,1.0s
J04D Umpqua Nationa 82.62 38 P **P** **16 20 25.0 +2.0**
baz=232,SNR=33
TPNV Topopah Spring 82.62 46 P **P** **16 20 24.7 +1.6**
baz=237,SNR=36
PDMCI Parker Dam,Lak 82.66 49 P **P** **16 20 25.2 +2.0**
baz=238,SNR=13
I04A Tendick Farm, 82.79 38 P **P** **16 20 25.0 +1.3**
baz=232,SNR=10.0
KULM Kulim 82.95 278 IAmb IAmb 16 20 27.2
comp=Z,55nm,0.9s
KULM Kulim 82.95 278 P **P** **16 20 26.0 +0.9**
K05A Summer Lake 83.01 39 IAmb IAmb 16 20 28.8
comp=Z,80nm,1.0s
TIA Tai'an 83.01 313 P **P** **16 20 25.4 +0.5**
TIA pmax pmax
comp=Z,43nm,1.4s
H04D Lebanon 83.06 37 P **P** **16 20 27.2 +2.3**
baz=232,SNR=11
J05D Fort Rock, OR 83.15 38 P **P** **16 20 27.6 +2.0**
baz=233,SNR=55
G03D McMinnville, O 83.19 36 P **P** **16 20 27.7 +2.1**
baz=231
RPSI Rantau Prapat 83.60 275 IAmb IAmb 16 20 29.2
comp=Z,79nm,1.0s
PINE Pine Mountain 83.63 38 IAmb IAmb 16 20 31.9
comp=Z,65nm,1.0s
I05D Terrebonne, OR 83.73 38 P **P** **16 20 30.0 +1.7**
baz=232,SNR=16
R11A Troy Canyon, C 83.83 45 P **P** **16 20 30.3 +1.2**
baz=237
TUC Tucson 84.08 52 P **P** **16 20 32.4 +2.1**
baz=241
TSI Tuntungan 84.22 276 P **P** **16 20 32.1 +0.7**
comp=Z,131nm,1.1s
G05D Wamic, OR 84.29 37 P **P** **16 20 32.8 +1.8**
baz=232
GSI Gunungsitoli 84.35 274 P **P** **16 20 33.3 +1.3**
comp=Z,205nm,1.0s
E04D Cinebar 84.42 35 P **P** **16 20 33.5 +2.0**
baz=231
F05D White Salmon 84.61 36 P **P** **16 20 34.7 +2.2**
baz=232
I07A Izee 84.63 39 IAmb IAmb 16 20 36.4
comp=Z,32nm,1.1s
D03D Eldon 84.75 34 P **P** **16 20 35.3 +2.2**
baz=231,SNR=5.5
KCSI Kotacane, Aceh 84.97 276 P **P** **16 20 35.1 +0.1**
comp=Z,40nm,0.8s
U15A North Rim 85.05 48 IAmb IAmb 16 20 38.4
comp=Z,30nm,0.9s
PSUT Pine Spring 85.07 46 P **P** **16 20 35.8 +0.6**
WUAZ Wupatki 85.23 49 P **P** **16 20 37.8 +1.8**
baz=240
ELK Elko 85.35 43 P **P** **16 20 34.8 -1.7**
ELK pmax pmax
comp=Z,11nm,1.1s
ELK Elko 85.35 43 P **P** **16 20 34.8 -1.7**
TPTI 85.42 275 P **P** **16 20 37.7 +0.5**
comp=Z,36nm,0.9s
SKT Skwentna 85.66 13 P **P** **16 20 36.4 -0.8**
BJI Beijing 85.69 316 P **P** **16 20 38.5 +0.7**
BJI S **S** **16 30 23.4 +3.3**
BJI pmax pmax
comp=Z,28nm,1.3s
B05A Bryant 85.73 34 P **P** **16 20 39.5 +1.7**
baz=232,SNR=12
PMR Palmer 85.83 14 IAmb IAmb 16 20 39.2
comp=Z,32nm,1.2s
SYO Syowa Base 85.93 193⇓ *e*P **P** **16 20 36.0 -2.5**
SYO Syowa Base 85.93 193⇑ *i*PcP **P** **16 20 39.2 +0.7**
GHO Glory Hole Cre 86.03 14 IAmb IAmb 16 20 41.4
comp=Z,51nm,0.8s
GYA Guiyang 86.16 300 ⇑P **P** **16 20 41.0 +0.5**
GYA PP **PP** **16 24 14.9 +1.6**
GYA SKS **SKSac** **16 30 08.1 -1.2**
GYA S **S** **16 30 23.8 -1.7**
GYA pmax pmax
comp=Z,23nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.7s
CUT Chulitna 86.30 13 P **P** **16 20 39.6 -0.5**
baz=207
SCM Sheep Creek Mo 86.45 14 IAmb IAmb 16 20 43.1
comp=Z,48nm,0.7s
DUG Dugway, Tooele 86.63 45 P **P** **16 20 43.5 +1.0**
baz=239
D08A Wollman Farm, 86.71 36 IAmb IAmb 16 20 46.0
comp=Z,47nm,1.1s
SEY Seymchan 86.76 347 *i* P **P** **16 20 42.5 +0.2**
VRDI Verde Repeater 86.89 16 P **P** **16 20 43.6 +0.4**
VRDI IAmb IAmb 16 20 46.3
comp=Z,35nm,1.2s
N25K Chitina, Valde 86.92 16 P **P** **16 20 43.7 +0.5**
baz=212
N25K Chitina, Valde 86.92 16 IAmb IAmb 16 20 45.5
comp=Z,25nm,0.9s
M24K Tolsona, Glenn 86.96 15 P **P** **16 20 44.8 +1.4**
baz=210
M24K Tolsona, Glenn 86.96 15 P **P** **16 20 44.2 +0.9**
M24K IAmb IAmb 16 20 46.0
comp=Z,40nm,0.9s
TIY Taiyuan 87.01 312 *e*P **P** **16 20 45.1 +0.9**
KTH Kantishna Hill 87.20 12 IAmb IAmb 16 20 45.9
comp=Z,23nm,0.9s
TRF Thorofare Moun 87.24 12 IAmb IAmb 16 20 46.1
comp=Z,42nm,0.8s
B08A Colville Reser 87.25 35 P **P** **16 20 44.9 -0.2**
B08A IAmb IAmb 16 20 47.6
comp=Z,36nm,1.0s
HLID Hailey 87.39 41 P **P** **16 20 47.9 +2.0**
baz=238
HLID Hailey 87.39 41 IAmb IAmb 16 20 49.6
comp=Z,25nm,1.1s
SNAA Sanae 87.42 179 P **P** **16 20 45.4 -0.1**
SNAA Sanae 87.42 179 P **P** **16 20 45.5 -0.1**
SNAA pmax pmax
comp=Z,3.0nm,1.0s
SNAA Sanae 87.42 179 P **P** **16 20 45.5 -0.1**
RND Reindeer 87.50 13 IAmb IAmb 16 20 47.7
comp=Z,49nm,0.9s
VNA3 Neumayer Olymp 87.59 177 P **P** **16 20 46.7 +0.4**
ZEA Zeya 87.72 331 *e*P **P** **16 20 47.6 +0.6**
ZEA pmax pmax
comp=N,10.0nm,1.1s
ZEA pmax pmax
comp=Z,20nm,1.2s
MCK McKinley 87.77 13 P **P** **16 20 47.0 -0.1**
baz=208,SNR=10
XAN Xi'an 87.78 308 P **P** **16 20 49.0 +1.1**
XAN pmax pmax
comp=Z,52nm,1.0s
MNTX Cornudas Mount 87.85 55 P **P** **16 20 50.1 +1.8**
baz=244,SNR=15
MNTX Cornudas Mount 87.85 55 P **P** **16 20 49.0 +0.8**
VNA2 Neumayer--Watz 88.02 177 P **P** **16 20 49.0 +0.7**
baz=165,slow=4.5
BWN Browne 88.05 12 P **P** **16 20 47.0 -1.4**
NVL N'lazarevskaya 88.06 184 *i* P **P** **16 20 48.5 +0.1**
NVL pmax pmax
comp=Z,16nm,0.7s
TX32 Lajitas Array 88.16 58 IAmb IAmb 16 20 53.7
comp=Z,28nm,1.0s
TXAR Lajitas Array 88.16 58 P **P** **16 20 51.8 +2.0**
comp=Z,21nm,0.9s,baz=220,slow=4.9,SNR=134
TXAR pP **pwP** **16 23 02.0 -1.5**
comp=Z,2.4nm,1.2s,baz=262,slow=6.3,SNR=2.5
TXAR PKKPbc **PKKPbc** **16 38 31.5 +0.9**
comp=Z,0.8nm,0.7s,baz=98,slow=3.0,SNR=8.0
TXAR Lajitas Array 88.16 58 P **P** **16 20 52.0 +2.2**
TXAR Lajitas Array 88.16 58 P **P** **16 20 52.0 +2.2**
VNA1 Neumayer--Stat 88.25 177 P **P** **16 20 50.2 +0.8**
MENT Mentasta 88.27 15 IAmb IAmb 16 20 51.9
comp=Z,20nm,1.0s
NEW Newport 88.40 36 P **P** **16 20 51.3 +0.9**
comp=Z,5.4nm,0.8s,baz=213,slow=3.2,SNR=7.1
NEW pP **pP** **16 23 02.3 +0.8**
comp=Z,1.6nm,0.9s,baz=149,slow=2.4,SNR=2.0
NEW Newport 88.40 36 P **P** **16 20 51.8 +1.3**
baz=236
L26K Log Cabin Wild 88.43 15 P **P** **16 20 50.9 +0.7**
baz=213
ANMO Albuquerque 88.50 52 P **P** **16 20 52.9 +1.5**
comp=Z,16nm,1.1s,baz=218,slow=5.1,SNR=24
ANMO pP **pwP** **16 23 03.9 -1.5**
comp=Z,1.5nm,0.6s,baz=203,slow=5.6,SNR=2.0
ANMO Albuquerque 88.50 52 *i* P **P** **16 20 52.7 +1.3**
ANMO pmax pmax
comp=Z,21nm,1.2s
ANMO Albuquerque 88.50 52 P **P** **16 20 52.7 +1.3**
baz=243
MLY Manley 88.57 12 P **P** **16 20 50.1 -0.7**
baz=206
HDA Harding Lake 88.78 13 P **P** **16 20 51.3 -0.4**
baz=210,SNR=9.2
HDA Harding Lake 88.78 13 IAmb IAmb 16 20 52.8
comp=Z,15nm,0.7s
DOT Dot Lake 88.78 15 IAmb IAmb 16 20 53.9
comp=Z,22nm,0.9s
CCB Clear Creek Bu 88.81 13 IAmb IAmb 16 20 53.1
comp=Z,36nm,1.0s
KMI Kunming 88.81 297⇑ *i*P **P** **16 20 55.2 +2.1**
KMI pmax pmax
comp=Z,39nm,0.9s
KMI pmax pmax
comp=Z,94nm,3.5s
BCAR Beaver Creek A 88.86 16 P **P** **16 20 52.7 +0.5**
IMAR Indian Mountai 88.91 10 P **P** **16 20 52.6 +0.3**
I23K Minto, Yukon-K 88.94 12 P **P** **16 20 53.2 +0.8**
baz=208
DLBC Dease Lake 88.97 23 P **P** **16 20 53.5 +0.7**
comp=Z,6.4nm,0.8s,baz=244,slow=5.7,SNR=9.9
MDM Murphy Dome 89.00 13 IAmb IAmb 16 20 54.0
comp=Z,47nm,1.2s
TCOL CIGO, UAF Yank 89.00 13 P **P** **16 20 53.4 +0.7**
baz=209
COLA College 89.00 13⇑ *i*P **P** **16 20 52.3 -0.4**
COLA pmax pmax
comp=Z,31nm,1.0s
SCRK Sand Creek 89.08 15 P **P** **16 20 53.7 +0.4**
baz=212
ILAR Eielson Array 89.11 13 P **P** **16 20 52.6 -0.6**
comp=Z,5.2nm,0.5s,baz=214,slow=5.3,SNR=76
ILAR pP **pP** **16 23 05.8 +0.9**
comp=Z,2.3nm,1.1s,baz=222,slow=4.1,SNR=3.8
ILAR PKiKP **PKiKP** **16 25 46.3 -1.0**
comp=Z,0.2nm,0.6s,baz=244,slow=3.2,SNR=4.3
ILAR Eielson Array 89.11 13 P **P** **16 20 52.9 -0.4**
ILAR Eielson Array 89.11 13 P **P** **16 20 52.9 -0.4**
HHC Hu-ho-hao-te 89.13 315 *e*P **P** **16 20 55.6 +1.5**
HHC SKS **SKSac** **16 30 24.8 -1.4**
HHC S **S** **16 30 52.5 +0.2**
HHC pmax pmax
comp=Z,32nm,1.1s
HHC pmax pmax
comp=Z,130nm,6.0s
POKR Poker Plat Res 89.30 13 P **P** **16 20 53.6 -0.6**
baz=209,SNR=6.9
POKR Poker Plat Res 89.30 13 IAmb IAmb 16 20 55.4
comp=Z,18nm,1.1s
MSO Missoula 89.41 38 P **P** **16 20 55.9 +0.7**
baz=238
CMAR Chiang Mai Arr 89.46 290 P **P** **16 20 57.6 +1.7**
comp=Z,33nm,0.9s,baz=125,slow=3.0,SNR=172
CMAR pP **pP** **16 23 08.1 +1.4**
comp=Z,0.1nm,0.4s,baz=104,slow=3.8,SNR=1.4
CMAR PP **PP** **16 24 35.4 -3.8**
comp=Z,1.4nm,0.9s,baz=120,slow=6.2,SNR=4.1
CMAR PKKPbc **PKKPbc** **16 38 27.4 +0.5**
comp=Z,0.5nm,0.8s,baz=281,slow=4.5,SNR=6.1
CMAR SKKPbc SKKPbc 16 41 08.8 +0.3
comp=Z,0.2nm,0.6s,baz=302,slow=5.3,SNR=5.0
S22A 4UR Ranch, Cre 89.51 49 P **P** **16 20 57.4 +1.2**
baz=243,SNR=17
PLCA Paso Flores 89.52 134 P **P** **16 20 58.0 +2.1**
comp=Z,7.8nm,0.8s,baz=224,slow=5.5,SNR=16
PLCA pP **pwP** **16 23 09.0 -1.5**
comp=Z,1.7nm,1.1s,baz=0.0,slow=2.0,SNR=1.4
PLCA Paso Flores 89.52 134 P **P** **16 20 57.5 +1.5**
PLCA pmax pmax
comp=Z,10.0nm,0.9s
PLCA Paso Flores 89.52 134 P **P** **16 20 57.5 +1.5**
BILL Bilibino 89.55 355 *e*P **P** **16 20 55.4 +0.2**
BILL *e* 16 24 35.4
BILL *e*PPP PPP 16 26 44.7
BILL pmax pmax
comp=Z,32nm,1.6s
K27K Chicken 89.58 15 P **P** **16 20 56.0 +0.6**
baz=214
K27K Chicken 89.58 15 IAmb IAmb 16 20 58.8
comp=Z,24nm,1.1s
CHTO Chiang Mai 89.59 290 P **P** **16 20 58.1 +1.5**
CHTO pmax pmax
comp=Z,34nm,0.9s
CHTO Chiang Mai 89.59 290 P **P** **16 20 58.1 +1.5**
CHTO IAmb IAmb 16 20 59.1
comp=Z,34nm,0.9s
O20A White River Ci 89.64 46 P **P** **16 20 57.5 +0.9**
baz=242,SNR=8.1
BW06 Boulder Array 90.03 44 P **P** **16 20 59.1 +0.7**
baz=241,SNR=18
BW06 Boulder Array 90.03 44 IAmb IAmb 16 21 00.9
comp=Z,20nm,1.1s
PD31 Pinedale Array 90.03 44 IAmb IAmb 16 21 00.9
comp=Z,18nm,1.1s
PDAR Pinedale Array 90.03 44 P **P** **16 20 59.1 +0.8**
comp=Z,14nm,0.9s,baz=207,slow=2.8,SNR=54
PDAR pP **pwP** **16 23 11.3 -1.6**
comp=Z,0.3nm,0.6s,baz=256,slow=3.6,SNR=1.5
PDAR PP **PP** **16 24 42.1 -1.4**
comp=Z,1.8nm,1.1s,baz=248,slow=7.8,SNR=4.2
PDAR PKKPbc **PKKPbc** **16 38 26.2 -0.5**
comp=Z,0.3nm,0.6s,baz=57,slow=5.5,SNR=3.9
PDAR Pinedale Array 90.03 44 P **P** **16 20 58.6 +0.3**
BTO Baotou 90.04 314 *e*P **P** **16 20 59.2 +0.9**
BOZ Bozeman (W) 90.14 40 P **P** **16 21 00.0 +1.3**
baz=240
H17A Grant Village 90.19 42 P **P** **16 21 02.0 +2.9**
baz=240
CD2 Chengdu 90.35 303 P **P** **16 21 01.0 +1.1**
CD2 S **S** **16 31 06.0 +2.5**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,130nm,5.1s
EGAK Eagle 90.43 15 IAmb IAmb 16 21 01.5
comp=Z,22nm,1.1s
SDCO Great Sand Dun 90.45 49 P **P** **16 21 01.7 +1.3**
baz=244,SNR=8.7
COLD Coldfoot 90.64 11 P **P** **16 21 01.2 +0.9**
baz=207,SNR=8.5
COLD Coldfoot 90.64 11 IAmb IAmb 16 21 02.8
comp=Z,16nm,1.1s
CMIG Matias Romero 90.73 72 P **P** **16 21 02.7 +0.8**
comp=Z,8.9nm,1.0s,baz=247,slow=3.9,SNR=7.7
MSTX Muleshoe 90.81 54 P **P** **16 21 02.7 +0.7**
baz=245
T25A Trinidad 90.96 50 P **P** **16 21 03.9 +1.1**
baz=244,SNR=6.5
833A Chaparral WMA, 91.16 60 P **P** **16 21 05.3 +1.7**
baz=247
ISCO Idaho Springs 91.28 48 P **P** **16 21 05.5 +1.2**
baz=244
RLMT Red Lodge 91.36 42 P **P** **16 21 06.0 +1.6**
baz=241
N23A Red Feather La 91.55 46 P **P** **16 21 07.1 +1.7**
baz=243,SNR=8.4
JCT Junction City 91.68 58 P **P** **16 21 07.2 +1.2**
baz=247
BMAR Burnt Mountain 91.89 13 P **P** **16 21 07.0 +0.9**
K22A Casper 91.95 45 P **P** **16 21 08.5 +1.4**
baz=243
YAK Yakutsk 92.34 338 *e*P **P** **16 21 06.8 -1.4**
YAK pmax pmax
comp=Z,38nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.3s
LZH Lanzhou 92.42 308 *e*P **P** **16 21 10.8 +1.4**
LZH SKS **SKSac** **16 30 42.0 -2.9**
LZH *e*S **ScS** **16 31 26.2 +3.5**
LZH pmax pmax
comp=E,33nm,1.0s
LZH pmax pmax
comp=E,120nm,4.6s
ABTX Abilene, Hawle 92.66 56 P **P** **16 21 11.8 +1.4**
baz=247
EPYK Eagle Plains 92.82 16 P **P** **16 21 10.6 +0.3**
baz=219
A21K Barrow 93.48 7 P **P** **16 21 13.7 +0.5**
baz=201
LAO LASA Array 93.97 41 P **P** **16 21 18.2 +2.1**
baz=243
RSSD Black Hills 94.23 44 P **P** **16 21 17.9 +0.4**
baz=245
INK Inuvik 95.10 15 P **P** **16 21 20.1 -0.5**
comp=E,5.5nm,1.0s,baz=220,slow=5.9,SNR=5.4
INK pP **pP** **16 23 33.7 +0.7**
comp=E,0.4nm,0.3s,baz=213,slow=4.4,SNR=1.4
ULN Ulaanbaatar 95.23 319 *ce*P **P** **16 21 20.2 -1.7**
ULN pmax pmax
comp=Z,4.0nm,1.0s
SONM Songino Array 95.61 319 P **P** **16 21 23.4 -0.2**
comp=Z,1.7nm,0.9s,baz=107,slow=4.0,SNR=10
SONM PP **PP** **16 25 22.2 -3.9**
comp=Z,1.6nm,0.9s,baz=152,slow=7.1,SNR=5.3
SONM PKKPbc **PKKPbc** **16 38 11.3 -1.1**
comp=Z,0.2nm,0.4s,baz=263,slow=1.2,SNR=3.5
GTA Gaotai 96.65 310 ⇑P **P** **16 21 29.4 +0.9**
GTA pP pP 16 23 41.7 +1.7
GTA sP sP 16 24 39.8 -0.4
GTA pmax pmax
comp=Z,8.0nm,1.4s
TIXI Tiksi 99.10 345 *i* P **Pdif** **16 21 37.5 -0.9**
LPAZ La Paz 102.67 113 P **Pdif** **16 21 58.6 +2.2**
comp=Z,1.4nm,0.7s,baz=265,slow=3.4,SNR=4.8
LPAZ PP **PP** **16 26 20.4 +0.8**
comp=Z,2.1nm,1.1s,baz=236,slow=7.6,SNR=4.4
ZALV Zalesovo Beam 110.39 321 PKiKP **PKiKP** **16 26 24.5 -1.3**
comp=Z,2.4nm,0.6s,baz=171,slow=1.4,SNR=17
ZALV PP **PP** **16 27 13.0 -1.0**
comp=Z,1.0nm,0.7s,baz=101,slow=7.5,SNR=1.9
ZALV SKP 16 29 02.4
comp=Z,0.8nm,0.6s,baz=150,slow=3.2,SNR=2.9
NRIK Noril'sk 110.78 338 PKiKP **PKiKP** **16 26 25.6 -0.5**
comp=Z,1.2nm,0.5s,baz=111,slow=4.8,SNR=6.1
NRIK PP **PP** **16 27 12.8 -3.5**
comp=Z,0.9nm,0.5s,baz=100,slow=5.8,SNR=4.5
MK31 Makanchi Array 110.95 313 *c i*PKiKP **PKiKP** **16 26 27.0 -0.2**
MKAR Makanchi Array 110.95 313 PKiKP **PKiKP** **16 26 26.1 -1.0**
comp=Z,1.1nm,0.4s,baz=166,slow=0.9,SNR=22
MKAR PP **PP** **16 27 16.8 -1.5**
comp=Z,1.4nm,1.0s,baz=87,slow=8.7,SNR=4.1
MKAR SKP 16 29 04.9
comp=Z,1.8nm,0.9s,baz=122,slow=1.6,SNR=3.7
MKAR PKKPbc **PKKPbc** **16 37 26.6 -0.6**
comp=Z,1.5nm,0.8s,baz=268,slow=3.6,SNR=7.3
KURK Kurchatov 113.82 317 *c i*PKiKP **PKiKP** **16 26 31.9 -0.6**
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURBB Kurchatov Arra 113.87 317 PKiKP **PKiKP** **16 26 31.4 -1.2**
comp=Z,2.9nm,0.7s,baz=97,slow=1.9,SNR=23
KURBB PP **PP** **16 27 34.6 -3.8**
comp=Z,1.2nm,0.3s,baz=96,slow=6.5,SNR=6.1
KURBB SKP 16 29 10.1
comp=Z,1.2nm,0.6s,baz=90,slow=0.9,SNR=2.2
KURBB PKKPbc **PKKPbc** **16 37 17.5 -0.2**
comp=Z,0.5nm,0.3s,baz=298,slow=2.7,SNR=1.7
KUU Kurty 114.74 310 *e*PKP PKPdf 16 26 34.1 -0.5
baz=310
KUU Kurty 114.74 310 *e*PKiKP PKPdf 16 26 34.0 -0.5
BTLS Baital 116.47 311 *e*PKP **PKPdf** **16 26 36.8 -1.0**
baz=311
BTLS Baital 116.47 311 *e*PKiKP **PKPdf** **16 26 36.7 -1.0**
SJG San Juan 117.08 80 PKP **PKPdf** **16 26 39.7 0.0**
comp=Z,5.9nm,0.2s,baz=338,slow=5.4,SNR=1.5
BRZS Berezniki 117.59 316 *e*PKP **PKPdf** **16 26 38.3 -1.5**
baz=316
BRZS Berezniki 117.59 316 *e*PKiKP **PKPdf** **16 26 38.3 -1.5**
DZA Taraz 118.30 308 *e*PKP **PKPdf** **16 26 40.7 -0.8**
baz=308
DZA Taraz 118.30 308 *e*PKiKP **PKPdf** **16 26 40.6 -0.8**
KKAR Karatay Array 118.91 308 PKiKP **PKPdf** **16 26 41.9 -0.6**
KKAR Karatay Array 118.91 308 PKPdf **PKPdf** **16 26 41.9 -0.6**
BVAR Borovoye Array 118.95 320 PKP **PKPdf** **16 26 41.4 -0.9**
comp=Z,3.5nm,0.3s,baz=55,slow=2.4,SNR=47
BVAR PP **PP** **16 28 10.0 -3.2**
comp=Z,1.1nm,0.7s,baz=232,slow=17,SNR=4.0
BRVK Borovoye 119.02 320 *c i*PKiKP **PKPdf** **16 26 41.8 -0.6**
BRVK pmax pmax
comp=Z,14nm,1.3s
BRVK Borovoye 119.02 320 PKPdf **PKPdf** **16 26 41.8 -0.6**
IUG luzhnay 119.22 307 *e*PKP **PKPdf** **16 26 42.8 -0.6**
baz=307
IUG luzhnay 119.22 307 *e*PKiKP **PKPdf** **16 26 42.7 -0.6**
SPA0 Spitsbergen Ar 122.42 356 *e*PKPdf **PKPdf** **16 26 48.0 -0.3**
SPITS Spitsbergen Ar 122.42 356 PKP **PKPdf** **16 26 48.0 -0.3**
comp=Z,16nm,0.7s,baz=71,slow=6.3,SNR=15
DAG Danmarks Havn 123.43 5 *i* PKiKP **PKPdf** **16 26 48.9 -1.3**
DAG pmax pmax
comp=Z,4.0nm,0.8s
DAG Danmarks Havn 123.43 5 *i* P **PKPdf** **16 26 48.9 -1.3**
comp=Z,4.3nm,0.8s
DAG Danmarks Havn 123.43 5 *i* PKP **PKPdf** **16 26 48.9 -1.3**
DAG IAmb IAmb 16 26 49.6
comp=Z,4.3nm,0.8s
SFJD Kangerlussuaq 123.85 22 PKP **PKPdf** **16 26 50.7 -0.6**
comp=Z,4.0nm,0.4s,baz=300,slow=2.9,SNR=4.9
SFJD Kangerlussuaq 123.85 22 PKiKP **PKPdf** **16 26 51.1 -0.1**
SFJD Kangerlussuaq 123.85 22 **PKPdf** **16 26 51.1 -0.1**
SVE Sverdlovsk 123.97 325 *e*PKiKP **PKPdf** **16 26 51.8 0.0**
ARU Arti 125.18 325 *i* PKiKP **PKPdf** **16 26 53.4 -0.7**
ARU 16 28 50.9
ARU 16 33 02.8
ARU Arti 125.18 325 PKPdf **PKiKP** **16 26 54.4 -0.1**
BOSA Boshof 125.31 206 PKP **PKPdf** **16 26 54.9 -0.6**
comp=Z,2.2nm,0.7s,baz=43,slow=2.4,SNR=5.2
DBG Daneborg 125.55 7 *i* P **PKPdf** **16 26 53.7 -0.6**
ABKAR Akbulak array 125.89 316 PKPdf **PKPdf** **16 26 55.9 +0.2**
ICESG Greenland Ices 126.05 17 *i* P **PKPdf** **16 26 55.2 -0.7**
AKTO Aktyubinsk 126.91 318 PKP **PKPdf** **16 26 57.9 +0.2**
comp=Z,4.3nm,0.7s,baz=123,slow=2.2,SNR=10
GEYT Alibeck 128.34 302 PKP **PKiKP** **16 27 01.4 -0.2**
comp=Z,6.9nm,0.7s,baz=221,slow=3.4,SNR=14
GEYT PP **PP** **16 29 13.6 -2.1**
comp=Z,1.9nm,0.8s,baz=97,slow=7.6,SNR=4.8
GEYT pPKP **pPKPdf** **16 29 22.2 +1.1**
comp=Z,6.6nm,1.1s,baz=170,slow=0.9,SNR=4.5
GEYT Alibeck 128.34 302 **PKiKP** **16 27 02.0 +0.5**
KIRV Kirov 129.03 330 *i* PKiKP **PKPdf** **16 27 01.0 -0.4**
ARA0 ARCESS Array S 129.35 349 *e*PKPdf **PKPdf** **16 27 01.4 -0.3**
ARCES ARCESS Array B 129.35 349 PKhKP PKPpre 16 26 54.5
comp=Z,2.1nm,0.8s,baz=30,slow=1.0,SNR=6.2
ARCES PKP **PKPdf** **16 27 01.3 -0.4**
comp=Z,13nm,0.7s,baz=66,slow=1.1,SNR=31
ARCES pPKP pPKPdf 16 29 23.3 +0.9
comp=Z,5.0nm,0.9s,baz=85,slow=1.0,SNR=2.6
KTK1 Kautokeino 130.20 350 *e*PKPdf **PKPdf** **16 27 03.0 -0.4**
TRO Tromso 130.28 352 *e*PKPdf **PKPdf** **16 27 02.6 -0.8**
KLMR Klimovskoe 132.06 336 *e*PKiKP **PKPdf** **16 27 06.4 -0.6**
KLMR *e* 16 29 36.4
KLMR pmax pmax
comp=Z,28nm,1.4s
KLMR Klimovskoe 132.06 336 *e*PKPdf **PKPdf** **16 27 06.5 -0.6**
KLMR AMP 16 27 09.8
comp=Z,28nm,1.4s
KLMR *e*PP **PP** **16 29 36.4 -1.8**
STEI Steigen 132.34 353 *e*PKPdf **PKiKP** **16 27 08.5 -0.1**
FAUS Fauske 132.86 353 *e*PKPdf **PKiKP** **16 27 09.2 -0.4**
FINES FINESS Array B 136.09 343 PKhKP PKPpre 16 27 01.3
comp=Z,1.7nm,0.8s,baz=64,slow=3.5,SNR=8.3
FINES PKP **PKiKP** **16 27 16.2 -0.2**
comp=Z,7.3nm,0.7s,baz=64,slow=3.6,SNR=9.0
FINES pPKP pPKPdf 16 29 36.2 +0.9
comp=Z,2.1nm,0.8s,baz=27,slow=1.6,SNR=2.0
FINES SKPbc **SKPbc** **16 29 50.2 +0.3**
comp=Z,8.4nm,0.8s,baz=83,slow=4.4,SNR=13
VRH Novokhopyorsk 136.36 324 *e*PKiKP **PKPdf** **16 27 15.0 -0.4**
VRH pmax pmax
comp=Z,60nm,1.8s
OBN Obninsk 136.85 331 *ce*PKiKP **PKPdf** **16 27 15.1 -1.0**
OBN *e* 16 29 33.2
OBN *e* 16 30 07.0
OBN *e*PPP PPP 16 33 16.1
OBN pmax pmax
comp=Z,20nm,1.0s
LPSR Galich'ya Gora 137.15 327 *e*PKiKP **PKPdf** **16 27 14.6 -2.2**

LPSR pmax pmax
comp=Z,30nm,1.6s
VSR Storozhevoye 137.75 325 *e*PKIKP **PKPdf 16 27 16.6 -1.3**
VSR pmax pmax
comp=Z,20nm,1.3s
VORD Divnogorie 137.81 324 *e*PKIKP **PKPdf 16 27 15.4 -2.6**
VORD pmax pmax
comp=Z,10.0nm,0.8s
KMBO Kilima Mbogo 138.25 243 PKhKP PKPpre 16 27 13.0
comp=Z,0.5nm,0.3s,baz=190,slow=5.6,SNR=4.4
KMBO PKP **PKPdf 16 27 20.9 +0.5**
comp=Z,1.0nm,0.5s,baz=54,slow=3.3,SNR=7.5
KMBO SKiKP **SKiKP 16 30 01.4 -0.1**
comp=Z,5.5nm,0.9s,baz=60,slow=2.7,SNR=9.0
KMBO SKPab **SKPab 16 30 08.8 +0.9**
comp=Z,4.1nm,1.0s,baz=142,slow=5.5,SNR=4.1
GNI Garni 138.35 307 *c i*PKIKP **PKPdf 16 27 20.7 +1.0**
GNI pmax pmax
comp=Z,31nm,1.7s
KBZ Khabaz 138.65 313 PKhKP PKPpre 16 27 11.2
comp=Z,1.3nm,0.7s,baz=56,slow=24,SNR=2.4
DOMB Dombas 138.72 354 *e*PKPdf **PKPdf 16 27 18.4 -1.0**
NB2 NORSAR Subarra139.47 352 PKP PKPpre 16 27 13.5
comp=Z,4.6nm,0.9s,baz=16,slow=3.2
NB2 NORSAR Subarra139.47 352 PKPab PKPpre 16 27 13.5
comp=Z,4.6nm,0.9s,baz=16,slow=3.2
NOA NORSAR Array B139.47 352 PKhKP PKPpre 16 27 13.0
comp=Z,3.0nm,0.7s,baz=13,slow=2.4,SNR=14
NOA PKP **PKPdf 16 27 21.0 +0.1**
comp=Z,0.6nm,0.4s,baz=11,slow=0.5,SNR=5.5
NOA SKPbc **SKPbc 16 30 00.1 +0.5**
comp=Z,3.8nm,1.0s,baz=14,slow=4.3,SNR=5.6
HFS Hagfors 139.99 350 PKhKP PKPpre 16 27 14.3
comp=Z,6.2nm,0.3s,baz=68,slow=4.0,SNR=48
HFS PKP **PKPdf 16 27 20.9 -0.8**
comp=Z,5.5nm,0.6s,baz=72,slow=9.5,SNR=5.3
HFS SKPbc **SKPbc 16 30 01.2 +0.4**
comp=Z,4.3nm,0.8s,baz=41,slow=2.7,SNR=4.3
SUE Sulen 140.00 357 *e*PKPdf **PKPdf 16 27 21.4 -0.3**
BATM Batumi 140.17 310 ⇓P PKiKP 16 27 40.3 +15
BER Bergen 140.65 357 *e*PKPdf **PKPdf 16 27 22.7 -0.2**
ODD1 Odda 141.03 356 *e*PKPdf **PKPdf 16 27 23.2 -0.5**
NACGM Naroch 141.07 336 *e* **PKPdf 16 27 18.0 -5.9**
KTUT Trabzon 141.74 310 ⇑P **PKPdf 16 27 21.7 -3.8**
ANN Anapa 141.85 317 *i* PKHKP **PKPdf 16 27 20.8 -4.7**
ANN *e*SS SS 16 48 20.8 -2.8
ANN pmax pmax
comp=Z,45nm,1.5s
HOMB Homborsund 142.49 354 *e*P **PKPdf 16 27 24.9 -1.4**
SNART Snartemo 142.54 355 *i* P **PKPdf 16 27 24.2 -2.2**
SUW Suwalki 143.07 338 *e*PKP PKPab 16 27 25.3 -0.1
AKASG Malin Array Be 143.09 330 PKhKP **PKPdf 16 27 24.9 -2.6**
comp=Z,74nm,0.7s,baz=43,slow=4.4,SNR=286
AKASG pPKP **pPKPdf 16 29 48.9 +0.6**
comp=Z,1.0nm,0.6s,baz=41,slow=4.3,SNR=2.2
AKASG SKPbc **SKPbc 16 30 09.4 +0.5**
comp=Z,6.3nm,0.8s,baz=43,slow=2.9,SNR=11
AKASG Malin Array Be 143.09 330 PKIKP PKPab 16 27 25.2 -0.4
AKASG Malin Array Be 143.09 330 PKPab 16 27 25.2 -0.4
AKBB Malin Array Si 143.09 330 PKIKP PKPab 16 27 25.3 -0.3
AKBB Malin Array Si 143.09 330 PKPdf PKPab 16 27 25.3 -0.3
KAC Achnashellach 143.36 6 *e*P PKPab 16 27 25.9 -0.5
MCD Coleburn Disti 143.44 4 *e*P PKPab 16 27 26.1 -0.6
KPL Plockton 143.49 6 *e*P PKPab 16 27 26.2 -0.7
URFA Urfa 143.51 305 *e*P **PKPdf 16 27 28.5 -0.4**
MALT Malatya 143.56 306 *e*P **PKPdf 16 27 28.8 -0.2**
GOET G??ttrup 143.62 352 *i* P PKPab 16 27 27.5 +0.1
GOET G??ttrup 143.62 352 *i* P PKPab 16 27 27.5 +0.2
RSDY Resadiye-TOKAT 143.69 310 *e*P **PKPdf 16 27 29.1 +0.1**
SVSK Karacayir 144.09 310 *e*P **PKPab 16 27 30.8 +1.0**
MUD Monsted U'grnd 144.19 352 *i* PKIKP PKPbc 16 27 29.0 -0.1
MUD Monsted U'grnd 144.19 352 *i* P PKPbc 16 27 29.0 -0.1
MUD Monsted U'grnd 144.19 352 *i* P PKPbc 16 27 29.0 -0.1
DARE Darende-Malaty 144.19 307 *e*P **PKPab 16 27 31.1 +0.7**
TOKT Tokat 144.27 310 *e*P **PKPab 16 27 30.8 +0.2**
KVT Kavak 144.33 312 *e*P **PKPab 16 27 31.4 +0.6**
COP Copenhagen 144.43 349 *i* PKIKP PKPbc 16 27 30.2 +0.3
COP Copenhagen 144.43 349 *i* P PKPbc 16 27 30.2 +0.3
COP Copenhagen 144.43 349 *i* P **PKPab 16 27 30.2 -0.3**
BSD Bornholm Skovb 144.47 346 *i* PKIKP **PKPdf 16 27 29.6 -0.2**
BSD pmax pmax
comp=Z,63nm,0.9s
BSD Bornholm Skovb 144.47 346 *i* P **PKPdf 16 27 29.6 -0.2**
comp=Z,63nm,0.9s
BSD Bornholm Skovb 144.47 346 *i* P **PKPdf 16 27 29.6 -0.2**
BSD IAmb IAmb 16 27 31.7
comp=Z,63nm,0.9s
INVG Invergeldie, C 144.53 5 *e*P **PKPdf 16 27 29.3 -0.6**
LAWE Loch Awe, Argy 144.58 6 *e*P **PKPdf 16 27 29.3 -0.7**
GAZ Gaziantep 144.82 305 *e*P PKPbc 16 27 32.2 +0.4
SARI SarD1z-Kayseri 145.03 307 *e*P **PKPab 16 27 33.2 -0.6**
PGBU Glenifferbraes 145.11 5 *e*P **PKPbc 16 27 31.6 -0.3**
ESY Stoneypath 145.14 5 *e*P **PKPdf 16 27 30.7 -0.2**
SORM Soroca 145.24 327 ⇓P **PKPdf 16 27 31.8 +0.5**
SORM Soroca 145.24 327 ⇓PKIKP **PKPdf 16 27 31.8 +0.5**
EBL Broad Law 145.25 4 *e*P **PKPdf 16 27 31.2 +0.1**
BNN Bunyan 145.30 308 *e*P **PKPbc 16 27 33.6 +0.3**
BZK Bozkurt 145.35 314 ⇓P **PKPbc 16 27 33.3 +0.2**
BZK Bozkurt 145.35 314 *e*P **PKPbc 16 27 33.2 +0.1**
PURM Purcari 145.45 324 ⇓P **PKPab 16 27 35.3 +0.5**
GKP Gorka Klasztor 145.57 343 *e*PKP **PKPbc 16 27 33.6 +0.2**
CORM Corum 145.68 311 *e*P **PKPbc 16 27 35.2 +0.9**
EKA Eskdalemuir Ar 145.69 4 PKPbc **PKPbc 16 27 33.3 -0.4**
comp=Z,15nm,0.7s,baz=359,slow=2.8,SNR=11
BEL Belsk 145.69 338 *e*PKP **PKPbc 16 27 34.4 +0.6**
ESK Eskdalemuir 145.70 4 *e*P **PKPdf 16 27 32.6 +0.7**
KOZT Kozan 145.78 306 *e*P **PKPbc 16 27 34.8 +0.3**
NEWG New Galloway 145.81 5 *e*P **PKPbc 16 27 33.6 -0.4**
TAHT Tahtakopru-Hat 145.84 304 *e*P **PKPbc 16 27 35.2 +0.5**
CEYT Ceyhan 145.98 305 *e*P **PKPbc 16 27 35.5 +0.4**
GAL1 Galloway 146.02 6 *e*P **PKPbc 16 27 33.5 -1.1**
LVV L'vov 146.04 333 *e*PKP2 **PKPbc 16 27 34.5 -0.3**
CANT Cankiri 146.21 312 *e*P **PKPbc 16 27 36.2 +0.5**
EDMD Edmundbyers 146.26 3 *e*P **PKPdf 16 27 33.6 +0.7**
KARA Karaisali 146.43 306 *e*P **PKPdf 16 27 33.9 +0.1**
BSEG Bad Segeberg 146.47 350 *e*PKPbc **PKPbc 16 27 36.3 +0.5**
baz=15,slow=2.2
VASR Vaslui 146.50 326 ⇓P **PKPbc 16 27 36.6 +0.4**
BR131 Keskin Array S 146.56 311 PKP2 **PKPbc 16 27 36.7 0.0**
BR131 Keskin Array S 146.56 311 **PKPbc 16 27 36.7 0.0**
BRTR Keskin Array B 146.56 311 PKPbc **PKPbc 16 27 36.3 -0.5**
comp=Z,13nm,0.6s,baz=101,slow=2.5,SNR=44
BRTR pPKPbc **pPKPdf 16 29 56.1 +1.2**
comp=Z,0.8nm,0.7s,baz=129,slow=3.9,SNR=1.8
BRTR PP **PP 16 31 08.5 +1.6**
comp=Z,0.9nm,0.6s,baz=72,slow=4.3,SNR=4.1
BRTR Keskin Array B 146.56 311 PKP2 **PKPbc 16 27 36.8 0.0**
BRTR Keskin Array B 146.56 311 **PKPbc 16 27 36.8 0.0**
KWP Kalwaria Pacla 146.74 334 *e*PKP **PKPbc 16 27 37.0 +0.2**
PRAR RASCA 146.81 328 ⇑P **PKPdf 16 27 35.3 +1.2**
TLCR 146.85 323 ⇑P **PKPbc 16 27 36.9 -0.3**
TLCR 146.85 323 ⇑PKP2 **PKPbc 16 27 36.9 -0.3**
BHL Bhannes 146.91 300 *e*P **PKPbc 16 27 37.2 -0.6**
SERE Sereflikochisa 146.92 310 *e*P **PKPbc 16 27 37.5 -0.2**
VARL Varlezi 146.94 325 ⇓P **PKPbc 16 27 38.0 +0.6**
SHBL Chebaa 146.96 299 *e*P **PKPbc 16 27 37.7 -0.3**
MERS Mersin 146.96 306 *e*P **PKPbc 16 27 37.9 +0.1**
JURR Jurilovca 147.07 322 ⇓P **PKPdf 16 27 35.7 +1.2**
AFSR Afar-Bala (An 147.07 311 *e*P **PKPbc 16 27 38.6 +0.5**
GHRR 147.08 325 ⇓P **PKPbc 16 27 38.3 +0.6**
LOD Lodumlu 147.10 312 *e*P **PKPbc 16 27 38.0 -0.1**
BUR08 Bucovina Ar. S 147.12 329 PKPbc **PKPbc 16 27 38.7 +0.8**
BIZ Bicaz 147.17 328 ⇑P **PKPbc 16 27 38.4 +0.5**
TESR Tescani 147.18 327 ⇓P **PKPbc 16 27 37.7 -0.2**
CFR Carcaliu 147.24 323 ⇓P **PKPbc 16 27 36.8 -1.3**
CFR Carcaliu 147.24 323 ⇓PKIKP **PKPbc 16 27 36.8 -1.3**
SULT Sultanhani-AKS 147.24 309 *e*P **PKPbc 16 27 38.3 -0.2**
TPGR Topolog 147.28 323 ⇑P **PKPbc 16 27 38.3 0.0**
OJC Ojcow 147.38 337 *e*PKP **PKPbc 16 27 38.5 +0.1**
OJC Ojcow 147.38 337 PKP2 **PKPbc 16 27 38.8 +0.4**
OJC Ojcow 147.38 337 PKPbc **PKPbc 16 27 38.8 +0.4**
ODBI Odobesti 147.46 325 ⇓P **PKiKP 16 27 39.7 -0.6**
KOLS Kolonicke sedl 147.46 334 *e*PKP2 **PKPbc 16 27 38.6 0.0**
KOLS Kolonicke sedl 147.46 334 *e*PKP **PKPbc 16 27 38.6 0.0**
TIRR Tirgusor 147.52 322 ⇓P **PKPbc 16 27 39.2 +0.3**
TIRR Tirgusor 147.52 322 ⇓PKP2 **PKPbc 16 27 39.2 +0.3**
CHBY Cihanbeyli 147.55 310 *e*P **PKPbc 16 27 38.5 -0.8**
VRI Vrincioaia 147.56 326 ⇓P **PKPbc 16 27 38.7 -0.3**
VRI Vrincioaia 147.56 326 ⇓PKP2 **PKPbc 16 27 38.7 -0.3**
WLF1 Llynfaes 147.61 6 *e*P **PKPbc 16 27 37.9 -0.9**
PLOR Plostina 147.62 326 ⇓P **PKPbc 16 27 38.9 -0.3**
PLOR Plostina 147.62 326 ⇓PKP2 **PKPbc 16 27 38.9 -0.3**
HARR Harsova 147.66 323 ⇓P **PKPbc 16 27 39.6 +0.4**
HARR Harsova 147.66 323 ⇓PKP2 **PKPbc 16 27 39.6 +0.4**
TLBR Topalu 147.68 323 ⇓P **PKPbc 16 27 39.5 +0.3**
MFTR Murfatlar 147.68 322 ⇓P **PKPbc 16 27 39.4 +0.1**
UZH Uzhgorod 147.69 333 *e*PKIKP **PKPbc 16 27 38.4 -0.8**
UZH *i* 16 27 42.6
UZH *i* 16 29 53.7
KEBE Keben-Mersin 147.71 305 *e*P **PKPbc 16 27 39.9 +0.1**
IKL Isikli 147.80 305 *e*P **PKPbc 16 27 39.9 0.0**
CRVS Cervenica-Dubn 147.82 334 *e*PKP2 **PKPbc 16 27 40.0 +0.4**
CRVS Cervenica-Dubn 147.82 334 *e*PKP **PKPbc 16 27 40.0 +0.4**
CRVS *e* 16 27 43.8
NIE Niedzica 147.86 336 *e*PKP **PKiKP 16 27 40.5 -0.4**
BMR Baia Mare 147.89 331 ⇑P **PKPbc 16 27 40.3 +0.6**
BMR Baia Mare 147.89 331 ⇑PKP2 **PKPbc 16 27 40.3 +0.6**
NRDL Niedersach Rie 147.89 350 *e*PKPdf **PKPdf 16 27 35.8 +0.2**
baz=15,slow=2.2
NRDL *e*PKPbc **PKPbc 16 27 39.7 +0.3**
baz=15,slow=2.2
OZUR 147.90 327 ⇑P **PKPbc 16 27 40.2 +0.3**
MDUB Mudurnu 147.92 314 *e*P **PKPbc 16 27 40.2 0.0**
KSP Ksiaz 147.99 342 *e*PKP **PKPbc 16 27 40.5 +0.6**
ICOR Ion Corvin 148.08 322 ⇑P **PKPbc 16 27 40.7 +0.4**
LADK Ladik-KONYA 148.08 309 *e*P **PKPbc 16 27 40.3 -0.4**
NEHR Nehoiu 148.08 325 ⇓P **PKPbc 16 27 40.4 +0.1**
FOEL Foel Wylfa 148.11 5 *e*P **PKPbc 16 27 39.7 -0.5**
BERE Bereket-Mersin 148.12 305 *e*P **PKPbc 16 27 40.9 0.0**
ASSE Asse, Remlinge 148.14 349 *e*PKPbc **PKPbc 16 27 40.4 +0.3**
baz=15,slow=2.2
ASSE *e*PKPab **PKPab 16 27 46.1 +0.6**
baz=15,slow=2.2
ISR Istrita 148.15 325 ⇑P **PKPbc 16 27 41.1 +0.6**
ISR Istrita 148.15 325 ⇑PKP2 **PKPbc 16 27 41.1 +0.6**
KIZT Kizilcal 148.15 311 *e*P **PKPbc 16 27 40.9 0.0**
SVRH Sivrihisar-ESK 148.16 312 *e*P **PKPbc 16 27 41.2 +0.4**
DOPR Dopca 148.19 327 ⇑P **PKiKP 16 27 41.2 -0.5**
MLR Muntele Rosu 148.22 326 PKPbc **PKPbc 16 27 40.7 -0.1**
comp=Z,43nm,1.0s,baz=197,slow=3.5,SNR=9.2
MLR Muntele Rosu 148.22 326 ⇑P **PKPbc 16 27 40.7 -0.1**
OSTS Ostas 148.27 341 ⇑*e*PKP **PKiKP 16 27 41.4 -0.4**
TEKE Tekeli-Mersin 148.27 305 *e*P **PKPbc 16 27 40.7 -0.4**
OKC Ostrava-Krasne 148.28 339 *e*PKP2 **PKPbc 16 27 41.0 +0.4**
OKC Ostrava-Krasne 148.28 339 ⇑*e*PKP **PKPbc 16 27 41.0 +0.4**
OKC *e*PKPAB **PKPab 16 27 47.1 +0.9**
CHVC Chvalec 148.29 342 ⇑*e*PKP **PKPbc 16 27 41.0 +0.3**
SAUV Serdivan-Sakar 148.37 315 *e*P **PKPbc 16 27 40.7 -0.5**
UPC Upice 148.37 342 *e*PKP2 **PKPbc 16 27 41.3 +0.4**
UPC Upice 148.37 342 ⇑*e*PKP **PKPbc 16 27 41.3 +0.4**
UPC *e*PKPAB **PKPab 16 27 47.7 +1.1**
LANS Liptovska Anna 148.39 337 *e*PKP2 **PKiKP 16 27 42.5 +0.4**
LANS Liptovska Anna 148.39 337 *e*PKP **PKiKP 16 27 42.5 +0.4**
LEHL Lehliu 148.41 324 ⇓P **PKPbc 16 27 41.5 +0.4**
DPC Dobruska-Polom 148.42 341 *e*PKP2 **PKiKP 16 27 41.7 -0.4**
DPC Dobruska-Polom 148.42 341 ⇑*e*PKP **PKiKP 16 27 41.7 -0.4**
DPC *e*pPKP **pPKPab 16 30 06.9 +5.9**
IBBN Ibbenburen 148.43 352 *e*PKPbc **PKPbc 16 27 40.9 0.0**
baz=15,slow=2.2
CLL Collm 148.44 346 *e*PKPdf **PKPdf 16 27 37.0 +0.5**
CLL ⇓*i*PKPbc **PKPbc 16 27 41.2 +0.2**
comp=Z,196nm,1.8s
CLL *e*PKPab **PKPab 16 27 46.0 -0.8**
comp=Z,19nm,1.0s
CLL *e*pPKPbc **pPKPab 16 30 03.0 +2.0**
CLL *e*(pPKPab) 16 30 07.0
CLL Collm 148.44 346 *e* **PKPab 16 27 46.0 -0.8**
CLL pmax pmax
comp=Z,19nm,1.0s
CLL Collm 148.44 346 *e*PKPbc **PKPbc 16 27 41.2 +0.2**
baz=15,slow=2.2
CLL *e*pPKPbc **pPKPab 16 30 06.5 +5.4**
SECR 148.46 325 ⇑P **PKPbc 16 27 41.4 +0.2**
CLZ Clausthal 148.47 349 *e*PKPdf **PKPdf 16 27 36.8 +0.2**
baz=15,slow=2.2
CLZ *e*PKPbc **PKPbc 16 27 41.3 +0.2**
baz=15,slow=2.2
CSS Mathiatis 148.47 303 **PKPbc 16 27 41.7 0.0**
HLM1 Long Mynd 148.50 5 *e*P **PKPbc 16 27 40.5 -0.6**
SRCK Saricakaya, Es 148.50 313 *e*P **PKPbc 16 27 41.3 -0.2**
CIFT Cifteler, Eski 148.52 312 *e*P **PKPbc 16 27 41.5 -0.2**
KRLC Kraliky 148.52 340 *e*PKP2 **PKPbc 16 27 41.7 +0.4**
KRLC Kraliky 148.52 340 ⇑*e*PKP **PKPbc 16 27 41.7 +0.4**
MORC Moravsky Berou 148.53 339 ⇑P **PKPbc 16 27 41.6 +0.2**
MORC Moravsky Berou 148.53 339 *e*PKP **PKPbc 16 27 41.6 +0.2**
MORC *e* 16 27 48.0
MORC Moravsky Berou 148.53 339 ⇑PKP2 **PKPbc 16 27 41.6 +0.2**
KECS Kecovo 148.54 335 *e*PKP2 **PKiKP 16 27 42.4 0.0**
KECS Kecovo 148.54 335 *e*PKP **PKiKP 16 27 42.4 0.0**
KECS *e* 16 27 48.0
CJR Cluj-Napoca 148.55 330 ⇑P **PKPbc 16 27 41.9 +0.4**
CJR Cluj-Napoca 148.55 330 ⇑PKP2 **PKPbc 16 27 41.9 +0.4**
MDB Medias 148.58 328 ⇓P **PKPbc 16 27 41.9 +0.4**
MDB Medias 148.58 328 ⇓PKP2 **PKPbc 16 27 41.9 +0.4**
SULR 148.59 324 ⇑P **PKPbc 16 27 41.0 -0.5**
BRG Berggiesshubel 148.61 344 *e*PKP **PKPdf 16 27 38.4 +1.5**
comp=Z,43nm,1.9s
BRG Berggiesshubel 148.61 344 *i* PKP **PKPbc 16 27 41.6 +0.2**
comp=Z,160nm,1.7s
BRG Berggiesshubel 148.61 344 *i* PKP **PKPab 16 27 47.3 -0.2**
comp=Z,55nm,1.4s
BRG *e*pPKP **pPKPbc 16 29 59.8 -0.8**
comp=Z,25nm,1.7s
BRG Berggiesshubel 148.61 344 *e*PKHKP **PKPdf 16 27 38.4 +1.5**
BRG *i* 16 27 47.3
BRG pmax pmax
comp=Z,43nm,2.0s
BRG pmax pmax
comp=Z,55nm,1.4s
BRG Berggiesshubel 148.61 344 *e*PKPdf **PKPdf 16 27 37.8 +0.9**
baz=15,slow=2.2
BRG *e*PKPbc **PKPbc 16 27 41.6 +0.2**
baz=15,slow=2.2
SILT Sile 148.61 316 *e*P **PKPbc 16 27 41.9 +0.2**
FBE Freiberg 148.71 345 *e*PKPbc **PKPbc 16 27 42.0 +0.3**
baz=15,slow=2.2
FBE *e*PKPab **PKPab 16 27 47.7 -0.3**
baz=15,slow=2.2
VOIR 148.73 326 ⇓P **PKPbc 16 27 42.1 +0.1**
VOIR 148.73 326 ⇓PKP2 **PKPbc 16 27 42.1 +0.1**
PVCC Panska Ves 148.76 343 *e*PKP2 **PKiKP 16 27 42.4 -0.4**
PVCC Panska Ves 148.76 343 ⇑*e*PKP **PKiKP 16 27 42.4 -0.4**
HRT Hereke 148.76 315 *e*P **PKPbc 16 27 41.9 -0.3**
LEF Lefka 148.77 303 *e*P **PKPbc 16 27 42.3 0.0**
NEUB Neuenburg 148.80 347 *e*PKPbc **PKiKP 16 27 42.5 -0.3**
baz=15,slow=2.2
NEUB *e*PKPab **PKPab 16 27 48.8 +0.6**
baz=15,slow=2.2
GTTG Gottingen 148.83 349 *e*PKPbc **PKPbc 16 27 42.1 +0.2**
baz=15,slow=2.2
GAZI Gazipasa 148.85 306 *e*P **PKPbc 16 27 42.3 -0.2**
MTUR Matau 148.86 326 ⇓P **PKPbc 16 27 42.4 +0.1**
ADVT Abdulvahap 148.91 315 *e*P **PKPdf 16 27 39.6 +1.9**
ARR Arges 148.99 327 ⇓P **PKiKP 16 27 43.4 -0.1**
MCH1 Michaelchurch 149.01 5 *e*P **PKPbc 16 27 40.5 -1.9**
ISK Istanbul-Kandi 149.03 316 *e*P **PKPdf 16 27 36.6 -1.2**
SGRR Singureni 149.04 324 ⇓P **PKPbc 16 27 42.8 +0.2**
RAZG Razgrad 149.16 322 ⇑P **PKPbc 16 27 43.0 -0.1**
VYHS Vyhne 149.17 337 *e*PKP **PKPdf 16 27 38.2 +0.3**
VYHS *e* 16 27 43.0
VYHS *e* 16 27 50.4
SHUT Suhut-Afyon 149.23 311 *e*P **PKPbc 16 27 43.7 +0.2**
PSZ Piszkesteto 149.23 335 ⇑P **PKPbc 16 27 42.8 -0.3**
VRAC Vranov 149.25 340 PKPbc **PKPbc 16 27 43.3 +0.2**
comp=Z,14nm,0.9s,baz=63,slow=1.6,SNR=17
VRAC PKPab **PKPab 16 27 50.2 -0.1**
comp=Z,16nm,0.9s,baz=40,slow=5.5,SNR=13
VRAC Vranov 149.25 340 *e*PKP **PKPbc 16 27 43.2 +0.2**
VRAC *e* 16 27 51.0
PRU Pruhonice 149.26 343 ⇑*e*PKP **PKPbc 16 27 43.4 +0.4**
PRU *e*PKPAB **PKPab 16 27 51.2 +1.0**
PRU *e*pPKP **pPKPab 16 30 09.0 +4.8**
JAVC Velka Javorina 149.28 338 *e*PKP **PKiKP 16 27 44.6 +0.6**
BUG Bochum--Univer 149.34 352 *e*PKPdf **PKPdf 16 27 38.8 +0.9**
baz=15,slow=2.2
BUG *e*PKPbc **PKPbc 16 27 42.9 -0.2**
baz=15,slow=2.2
MOX Moxa 149.37 347 *e*PKPbc **PKPbc 16 27 43.5 +0.3**
baz=15,slow=2.2
MOX *e*PKPab **PKPab 16 27 50.3 -0.4**
baz=15,slow=2.2
LOT Lotru 149.37 328 ⇓P **PKPbc 16 27 43.1 -0.5**
TANN Tannenbergstha 149.39 346 *e*PKPbc **PKPbc 16 27 43.3 -0.1**
baz=15,slow=2.2
TANN *e*pPKPbc **pPKPab 16 30 09.5 +4.7**
PLN Plauen 149.40 346 *e*PKPbc **PKiKP 16 27 43.8 -0.3**
baz=15,slow=2.2
ARMT Armutlu 149.42 316 *e*P **PKPbc 16 27 43.5 -0.2**
GUNZ Gunzen 149.47 346 *e*PKPbc **PKiKP 16 27 44.0 -0.3**
baz=15,slow=2.2
GUNZ *e*PKPab **PKPab 16 27 51.7 +0.6**
baz=15,slow=2.2
SLVT Silivri 149.49 317 *e*P **PKiKP 16 27 44.4 -0.2**
MDNY Mudanya-Bursa 149.51 315 *e*P **PKiKP 16 27 44.3 -0.3**
UBBA Unterbreizbach 149.52 349 *e*PKPbc **PKiKP 16 27 44.2 +0.1**
baz=15,slow=2.2
KRUC Moravsky 149.53 340 *e*PKP **PKPbc 16 27 43.9 +0.2**
KRUC *e* 16 27 52.0
WERN Wernitzgruen 149.53 346 *e*PKPbc **PKiKP 16 27 44.2 -0.2**
baz=15,slow=2.2
WERN *e*PKPab **PKPab 16 27 52.0 +0.6**
baz=15,slow=2.2
NKC Novy Kostel 149.57 345 ⇑*e*PKP **PKiKP 16 27 44.2 -0.3**
NKC *e*PKPAB **PKPab 16 27 52.1 +0.6**
TVSB Tavsanli 149.57 313 *e*P **PKPbc 16 27 44.5 +0.2**
TREC Trest 149.61 341 ⇑*e*PKP **PKiKP 16 27 44.4 -0.2**
PBCC Pribram 149.68 343 ⇑*e*PKP **PKPbc 16 27 44.2 +0.1**
PBCC *e*PKPAB **PKPab 16 27 52.3 +0.3**
PBCC *e*pPKP **pPKPab 16 30 10.0 +4.1**
ZIMR 149.74 324 ⇑P **PKiKP 16 27 44.9 0.0**
SIRR Siria 149.78 331 ⇑P **PKPbc 16 27 44.3 -0.1**
MODS Modra-Piesok 149.83 338 *e*PKP **PKPdf 16 27 40.0 +1.1**
MODS *e* 16 27 44.3
MODS *e* 16 27 53.3
MANZ Manzenberg 149.88 346 *e*PKPbc **PKPbc 16 27 44.8 +0.2**
baz=15,slow=2.2
GZR Gura Zlata 149.90 329 ⇑P **PKPbc 16 27 44.4 -0.4**
GZR Gura Zlata 149.90 329 ⇑PKIKP **PKPbc 16 27 44.4 -0.4**
KORT Korkueli 150.03 308 *e*P **PKPbc 16 27 45.7 +0.3**
VLAD Vladila 150.04 325 ⇑P **PKiKP 16 27 45.6 0.0**
ROTZ Rotzenmuhle 150.06 345 *e*PKPbc **PKPbc 16 27 45.0 +0.1**
baz=15,slow=2.2
ROTZ *e*PKPab **PKPab 16 27 53.9 +0.3**
baz=15,slow=2.2
SRE Strehaia 150.21 327 ⇑P **PKiKP 16 27 46.0 0.0**
SRE Strehaia 150.21 327 ⇑PKIKP **PKiKP 16 27 46.0 0.0**
MRMT Marmara Adasi 150.22 317 *e*P **PKPbc 16 27 45.3 -0.4**
AHRW Bad Neuenahr-A 150.24 352 *e*PKPbc **PKPbc 16 27 45.5 +0.2**
baz=15,slow=2.2
AHRW *e*PKPab **PKPab 16 27 53.7 -0.6**
baz=15,slow=2.2
BZS Buzias 150.28 330 ⇑P **PKPbc 16 27 45.4 -0.2**
BZS Buzias 150.28 330 ⇑PKIKP **PKPbc 16 27 45.4 -0.2**
KHC Kasperske Hory 150.30 343 *e*PKIKP **PKPdf 16 27 39.0 -0.6**
KHC *e* 16 27 55.6
KHC Kasperske Hory 150.30 343 *e*PKPDF **PKPdf 16 27 39.0 -0.6**
KHC ⇑*e*PKP **PKiKP 16 27 45.8 -0.3**
KHC *e*PKPAB **PKPab 16 27 55.6 +0.9**
KHC *e*pPKP **pPKPab 16 30 11.6 +3.2**
MEM Membach 150.30 354 PKiKP **PKPbc 16 27 45.5 +0.1**
BTNL Ternell 150.31 353 PKiKP **PKiKP 16 27 45.8 -0.2**
GRF Grafenberg Arr 150.35 347 *e*PKPbc **PKiKP 16 27 46.1 0.0**
baz=15,slow=2.2
GRF *e*PKPab **PKPab 16 27 55.2 +0.4**
baz=15,slow=2.2
TNS Taunus Mts 150.36 350 *e*PKPbc **PKPbc 16 27 45.8 +0.1**
baz=15,slow=2.2
BSTI Sart Tilman 150.37 354 PKiKP **PKPbc 16 27 45.8 +0.2**
BSTI PKPab **PKPab 16 27 54.8 0.0**
HERR Herculane 150.44 328 ⇓P **PKPbc 16 27 45.8 -0.1**
WET Wettzell 150.47 344 *e*PKPbc **PKPbc 16 27 45.9 0.0**
baz=15,slow=2.2
WET *e*PKPab **PKPab 16 27 55.6 +0.2**
baz=15,slow=2.2
GEC2 GERESS Array S 150.53 343 *e*PKPbc **PKiKP 16 27 46.4 -0.2**
baz=15,slow=2.2
GEC2 *e*PKPab **PKPab 16 27 55.8 +0.1**
baz=15,slow=2.2
GERES GERESS Array B 150.53 343 PKP **PKPdf 16 27 39.7 -0.3**
comp=Z,1.2nm,0.7s,baz=48,slow=2.0,SNR=10
GERES PKPbc **PKPbc 16 27 46.2 0.0**
comp=Z,12nm,0.7s,baz=30,slow=2.5,SNR=82
GERES PKPab **PKPab 16 27 55.7 0.0**
comp=Z,2.8nm,0.8s,baz=49,slow=2.5,SNR=6.1
GERES pPKPbc **pPKPab 16 30 07.9 -1.6**
comp=Z,1.3nm,0.8s,baz=42,slow=4.2,SNR=2.6
GERES GERESS Array B 150.53 343 PKIKP **PKiKP 16 27 46.4 -0.2**
GERES GERESS Array B 150.53 343 **PKiKP 16 27 46.4 -0.2**
SNF Seneffe 150.55 356 PKiKP **PKiKP 16 27 46.5 0.0**
SNF PKPab **PKPab 16 27 55.5 0.0**
BHOU Houvegnez 150.55 354 PKiKP **PKiKP 16 27 46.7 +0.2**
BHOU PKPab **PKPab 16 27 55.9 +0.2**
BCLA Clavier 150.56 354 PKiKP **PKPbc 16 27 46.2 +0.1**
BCLA PKPab **PKPab 16 27 55.3 -0.3**
PUNG Punghina 150.62 327 ⇑P **PKPbc 16 27 44.2 -2.2**
CONA Conrad Observa 150.69 339 *e*P **PKPdf 16 27 40.9 +0.6**
comp=Z,8.1nm,1.5s
CONA *i* P **PKiKP 16 27 46.8 -0.2**
comp=Z,35nm,0.8s,SNR=16
CONA *e*P **PKPab 16 27 56.5 +0.1**
comp=Z,45nm,1.5s
CONA *i* P **pPKPbc 16 30 04.9 -1.1**
comp=Z,13nm,1.3s
BMRD Maredsous 150.72 355 PKiKP **PKPbc 16 27 46.5 +0.1**
BMRD PKPab **PKPab 16 27 56.2 -0.1**
MDVR Moldovita 150.86 329 ⇑P **PKPbc 16 27 46.9 -0.1**
AKAS Kas 150.88 307 PKPbc **PKPbc 16 27 47.5 +0.1**
DOU Dourbes 150.94 355 PKiKP **PKPbc 16 27 47.2 -0.1**
MORH Mrgy, Hungar 151.11 334 ⇓*i*P **PKPbc 16 27 47.2 -0.2**
WLF Walferdange 151.22 353 PKiKP **PKiKP 16 27 48.2 +0.3**
WLF PKPab **PKPab 16 27 59.2 +0.7**
WLF Walferdange 151.22 353 *e*PKPbc **PKiKP 16 27 48.2 +0.3**
baz=15,slow=2.2
WLF *e*PKPab **PKPab 16 27 58.7 +0.3**
baz=15,slow=2.2
MOA Molln 151.26 341 *e*P **PKPdf 16 27 41.2 +0.1**
comp=Z,6.8nm,1.8s
MOA *i* P **PKPbc 16 27 47.5 -0.2**
comp=Z,13nm,0.8s,SNR=7.9
MOA *e*P **PKPab 16 27 59.4 +0.6**
comp=Z,20nm,1.2s
MOA *e*P **pPKPbc 16 30 06.6 -0.9**
comp=Z,12nm,1.4s
ARSA Arzberg 151.40 339 *e*P **PKPdf 16 27 41.4 +0.1**
comp=Z,1.1nm,0.5s
ARSA *e*P **PKPbc 16 27 47.7 -0.4**
comp=Z,5.6nm,0.8s
ARSA *e*P **PKPab 16 27 59.5 +0.2**
comp=Z,13nm,1.0s
ARSA *e*P **pPKPbc 16 30 07.2 -0.5**
comp=Z,7.4nm,1.6s
FRGS Fruska Gora 151.46 332 ⇓*i*P **PKPbc 16 27 48.1 -0.2**
BEHE Becsehely 151.63 337 *e*P **PKPdf 16 27 44.7 +3.0**
STU Stuttgart 151.63 349 *e*PKPbc **PKPbc 16 27 48.6 +0.1**
baz=15,slow=2.2
FUR Furstenfeldbru 151.77 345 *e*PKPab **PKPab 16 28

	comp=Z,12nm,0.7s						
RETA	**Reutte**	**152.53 346**	*e*P	**PKPdf**	**16 27 42.7**	**-0.3**	
	comp=Z,11nm,1.7s						
RETA			*e*P	**PKPbc**	**16 27 50.4**	**-0.3**	
	comp=Z,8.4nm,0.7s						
RETA			*e*P	**PKPab**	**16 28 04.5**	**+0.3**	
	comp=Z,12nm,0.9s						
MYKA	**Terra Mystica**	**152.54 341**	*e*P	**PKPbc**	**16 27 49.7**	**-1.0**	
	comp=Z,12nm,0.8s						
MYKA			*e*P	**PKPab**	**16 28 03.9**	**-0.4**	
	comp=Z,13nm,0.9s						
MYKA			*e*P	**pPKPdf**	**16 29 59.5**	**-4.9**	
	comp=Z,8.3nm,1.0s						
MOTA	**Moosalm**	**152.58 345**	*e*P	**PKPbc**	**16 27 50.5**	**-0.4**	
	comp=Z,18nm,0.8s						
MOTA			*e*P	**PKPab**	**16 28 04.8**	**+0.3**	
	comp=Z,16nm,0.9s						
MOTA			P	**pPKPdf**	**16 30 00.1**	**-4.5**	
	comp=Z,6.3nm,1.4s						
BBLS	**Lazići**	**152.64 330**	ǁ *i*P	**PKPbc**	**16 27 51.0**	**0.0**	
CRES	**Cresnjev**	**152.65 338**	*i* PKPbc	**PKPbc**	**16 27 50.8**	**-0.1**	
CRES			*i* PKPab	**PKPab**	**16 28 04.6**	**0.0**	
CRES	**Cresnjev**	**152.65 338**	ǁ *i*P	**PKPbc**	**16 27 50.4**	**-0.5**	
SQTA	**Sankt Quirin**	**152.67 345**	*e*P	**PKPdf**	**16 27 43.0**	**-0.4**	
	comp=Z,6.7nm,1.2s						
SQTA			*i* P	**PKPbc**	**16 27 50.7**	**-0.3**	
	comp=Z,15nm,0.8s,SNR=5.3						
SQTA			*e*P	**PKPab**	**16 28 04.5**	**-0.3**	
	comp=Z,14nm,0.9s						
SQTA			*e*P	**pPKPdf**	**16 30 02.2**	**-2.5**	
	comp=Z,6.1nm,1.4s						
HAPS	**Han Pijesak,Bl**	**152.68 331**	*e*P	**PKPbc**	**16 27 50.1**	**-1.0**	
ABTA	**Abfaltersbach**	**152.77 343**	*e*P	**PKPdf**	**16 27 42.5**	**-0.9**	
	comp=Z,8.0nm,1.1s						
ABTA			*i* P	**PKPbc**	**16 27 50.4**	**-0.8**	
	comp=Z,22nm,0.7s,SNR=6.7						
ABTA			*e*P	**PKPab**	**16 28 04.6**	**-0.6**	
	comp=Z,19nm,1.0s						
ABTA			*e*P	**pPKPdf**	**16 30 05.8**	**+1.0**	
	comp=Z,11nm,1.1s						
LJU	**Ljubljana**	**152.78 339**	*i* PKPdf	**PKPdf**	**16 27 43.1**	**-0.3**	
LJU			*i* PKPbc	**PKPbc**	**16 27 50.9**	**-0.3**	
LJU			*e*PKPab	**PKPab**	**16 28 04.5**	**-0.7**	
LJU	**Ljubljana**	**152.78 339**	ǁ *i*P	**PKPbc**	**16 27 49.5**	**-1.6**	
RUDO	**Rudo**	**152.84 330**	*e*P	**PKPbc**	**16 27 50.5**	**-0.9**	
BLY	**Banja Luka**	**152.90 334**	*e*P	**PKPbc**	**16 27 49.3**	**-2.1**	
DAVA	**Damuels**	**152.92 347**	*e*P	**PKPdf**	**16 27 43.4**	**-0.3**	
	comp=Z,1.9nm,0.8s						
DAVA			*e*P	**PKPbc**	**16 27 50.5**	**-1.1**	
	comp=Z,18nm,1.1s						
DAVA			*e*P	**PKPab**	**16 28 06.1**	**+0.2**	
	comp=Z,13nm,0.8s						
FETA	**Feichten**	**152.98 345**	*e*P	**PKPdf**	**16 27 43.2**	**-0.6**	
	comp=Z,7.0nm,0.9s						
FETA			*e*P	**PKPbc**	**16 27 51.6**	**-0.1**	
	comp=Z,11nm,0.9s						
FETA			*e*P	**PKPab**	**16 28 06.4**	**+0.2**	
	comp=Z,9.8nm,1.0s						
BOJS	**Bojanci**	**153.00 338**	*i* PKPbc	**PKiKP**	**16 27 51.8**	**+0.1**	
JAVS	**Javornik**	**153.07 340**	*i* PKPbc	**PKPbc**	**16 27 51.0**	**-0.9**	
CEY	**Cerknica**	**153.09 339**	ǁ *i*P	**PKPbc**	**16 27 50.2**	**-1.6**	
PDG	**Podgorica**	**153.80 328**	⇑P	**PKPbc**	**16 27 52.6**	**-0.8**	
TREB	**Trebinje**	**154.01 330**	*e*P	**PKPbc**	**16 27 53.5**	**-0.4**	
DRME	**Dracevica, Mon**	**154.02 328**	*e*P	**PKPbc**	**16 27 50.6**	**-3.3**	
ESDC	**Sonseca Array**	**161.01 12**	PKPab	**PKPab**	**16 28 40.7**	**-0.4**	
	comp=Z,7.5nm,1.1s,baz=347,slow=4.8,SNR=13						
ESDC			PP	**PP**	**16 32 26.4**	**+0.9**	
	comp=Z,0.5nm,0.8s,baz=282,slow=6.2,SNR=2.6						
KEST	**Kesra**	**163.71 335**	PKPab	**PKPab**	**16 28 53.5**	**+0.3**	
	comp=Z,16nm,0.8s,baz=65,slow=1.5,SNR=10						
LIC	**Lamto**	**164.08 158**	*e*PKP2	**PKPab**	**16 28 56.8**	**+1.7**	
	comp=Z,54nm,1.3s						
LIC	**Lamto**	**164.08 158**	*e*P	**PKPdf**	**16 27 56.0**	**-1.6**	
	comp=Z,61nm,1.3s						
KIC	**Kosan Boka**	**164.31 158**	*e*PKP2	**PKPab**	**16 28 57.8**	**+1.7**	
	comp=Z,32nm,1.1s						
KIC	**Kosan Boka**	**164.31 158**	*e*P	**PKPdf**	**16 27 57.4**	**-0.4**	
	comp=Z,31nm,1.1s						
TIC	**Toumodi**	**164.47 157**	*e*PKP2	**PKPab**	**16 28 58.4**	**+1.5**	
TIC	**Toumodi**	**164.47 157**	*e*P	**PKPdf**	**16 27 57.6**	**-0.3**	
DBIC	**Dimbokro**	**164.56 158**	PKP	**PKPdf**	**16 27 57.4**	**-0.5**	
	comp=Z,3.4nm,0.7s,baz=74,slow=1.9,SNR=5.5						
DBIC			PKPab	**PKPab**	**16 28 57.9**	**+0.7**	
	comp=Z,6.1nm,0.8s,baz=170,slow=4.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**172.05 185**	PKP	**PKPdf**	**16 28 02.0**	**-0.9**	
	comp=Z,3.8nm,0.8s,baz=318,slow=1.1,SNR=16						
TORD			PKPab	**PKPab**	**16 29 30.4**	**+0.1**	
	comp=Z,2.2nm,0.9s,baz=160,slow=3.2,SNR=6.6						
TORD			pPKPab	**pPKPab**	**16 31 44.0**	**+1.2**	
	comp=Z,0.1nm,0.4s,baz=278,slow=3.5,SNR=1.6						
TORD			PP	**PP**	**16 33 22.5**	**+1.6**	
	comp=Z,1.3nm,1.0s,baz=231,slow=3.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**172.05 185**		**PKPdf**	**16 28 02.2**	**-0.6**	

*MOS **08** 16:09:36.6±1.6,45.°72N×151.°42E,h104km,mb4.5/3,Error ellipse: s-maj=13.4km s-min=8.5km az=136.3*
*SKHL **08** 16:09:38.0±0.4,45.°47N×151.°39E,h111km±8km,mb5.1/4,msh6.0/4*
*JMA **08** 16:09:40.8±0.5,44.°98N×151.°23E,h106km,M4.0*
*IDC **08** 16:09:41.9±2.5,46.°28N×151.°06E,h112km±23km,mb3.6/9,mb1 3.7/13,mb1mx3.5/55,mbtmp3.9/13,Error ellipse: s-maj=35.0km s-min=16.8km az=164.0*
*NEIC **08** 16:09:42.8±1.8,46.°4N±0.°1×150.°9E±0.°2,h112km±12km,mb4.5/12,Error ellipse: s-maj=25.9km s-min=3.3km az=135.0*

ISC 08 16:09:36.4±0.7,45.°38N±0.°09×151.°45E±0.°07,h100km,n95,σ2s04/102,mb4.1/17,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.53**	**268**	*e*P	**Pn**	**16 10 17.0**	**+1.1**
KUR				AMB	AMB	16 10 17.0	
KUR				*i* S	**Sn**	**16 10 46.0**	**-0.2**
KUR				A	A	16 10 48.0	
	576nm,0.4s						
KUR				A	A	16 10 48.0	
	649nm,0.4s						
KUR	**Kuril'sk**	**2.53**	**268**	*de*PN	**Pn**	**16 10 17.4**	**+1.5**
KUR				*i* S	**Sn**	**16 10 46.7**	**+0.5**
KUR				pmax	pmax		
	comp=Z,371nm,0.4s						
KUR				pmax	pmax		
	comp=N,99nm,0.2s						
KUR				pmax	pmax		
	comp=E,80nm,0.3s						
KUR				smax	smax		
	comp=N,576nm,0.3s						
KUR				smax	smax		
	comp=E,649nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**253**	*e*P	**Pn**	**16 10 40.0**	**+1.7**
YUK				AMB	AMB	16 10 41.7	
	comp=E,80nm,0.2s						
YUK				*i* S	**Sn**	**16 11 26.7**	**+0.4**
YUK				A	A	16 11 32.0	
	comp=E,370nm,0.5s						
YUK				A	A	16 11 32.0	
	comp=E,310nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**253**	*e*PN	**Pn**	**16 10 40.9**	**+2.6**
YUK				*i* S	**Sn**	**16 11 27.5**	**+1.2**
YUK				pmax	pmax		
	comp=Z,128μm,0.2s						
YUK				pmax	pmax		
	comp=N,32μm,0.1s						
YUK				pmax	pmax		
	comp=E,26μm,0.1s						
YUK				smax	smax		
	comp=N,469nm,0.5s						
YUK				smax	smax		
	comp=E,310nm,0.4s						
GRPR	**Tuman**	**4.28**	**253**	*e*P	**Pn**	**16 10 41.0**	**+1.7**
GRPR				AMB	AMB	16 10 45.0	
	comp=E,86nm,0.3s						
GRPR				*i* S	**Sn**	**16 11 28.0**	**-0.1**
GRPR				A	A	16 11 31.0	
	comp=E,499nm,0.4s						
GRPR				A	A	16 11 31.0	
	comp=E,252nm,0.4s						
GRPR	**Tuman**	**4.28**	**253**	*e*PN	**Pn**	**16 10 41.7**	**+2.4**
GRPR				*i* S	**Sn**	**16 11 28.9**	**+0.8**
GRPR				pmax	pmax		
	comp=N,67nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,86nm,0.3s						
GRPR				pmax	pmax		
	comp=E,35nm,0.2s						
GRPR				smax	smax		
	comp=E,252nm,0.3s						
GRPR				smax	smax		
	comp=N,499nm,0.4s						
GLVR	**Golovnino**	**4.54**	**251**	*e*P	**Pn**	**16 10 45.0**	**+2.2**
GLVR				AMB	AMB	16 10 47.0	
	comp=N,50nm,0.3s						
GLVR				*i* S	**Sn**	**16 11 35.0**	**+0.5**
GLVR				A	A	16 11 43.0	
	comp=N,424nm,0.3s						
GLVR				A	A	16 11 43.0	
	comp=N,280nm,0.3s						
GLVR	**Golovnino**	**4.54**	**251**	*e*PN	**Pn**	**16 10 45.1**	**+2.2**
GLVR				*i* S	**Sn**	**16 11 35.7**	**+1.2**
GLVR				pmax	pmax		
	comp=Z,50nm,0.2s						
GLVR				smax	smax		
	comp=N,424nm,0.3s						
GLVR				smax	smax		
	comp=E,569nm,0.3s						
NEM2	**Nemuro 2**	**4.56**	**246**	P	**Pn**	**16 10 44.5**	**+1.4**
NEM2				*e*S	**Sn**	**16 11 33.4**	**-1.5**
NMR	**Nemuro--Hokkai**	**4.57**	**246**	*e*P	**Pn**	**16 10 44.0**	**+0.8**
NMR				*i* S	**Sn**	**16 11 34.0**	**-1.0**
NMR	**Nemuro--Hokkai**	**4.57**	**246**	*e*PN	**Pn**	**16 10 44.7**	**+1.5**
NMR				*i* S	**Sn**	**16 11 34.1**	**-1.0**
RUSJ	**Misakicho**	**4.60**	**256**	*e*PN	**Pn**	**16 10 47.1**	**+3.5**
RUSJ				*i* S	**Sn**	**16 11 39.6**	**+3.8**
JNK	**Nakash**	**5.14**	**252**	P	**Pn**	**16 10 53.2**	**+2.3**
JAK	**Akkeshi**	**5.41**	**246**	P	**Pn**	**16 10 56.1**	**+1.5**
JAK				*e*S	**Sn**	**16 11 53.9**	**-1.6**
JTKR	**Abashiri--Toko**	**5.56**	**258**	P	**Pn**	**16 10 59.0**	**+2.4**
JAR	**Ashorobuto**	**5.89**	**252**	P	**Pn**	**16 11 04.0**	**+2.9**
JOB	**Onbets**	**6.01**	**248**	*e*S	**Sn**	**16 12 09.7**	**-0.5**
YSS	**Yuzh-Sakhalins**	**6.24**	**288**	*e*P	**Pn**	**16 11 07.1**	**+1.2**
YSS	**Yuzh-Sakhalins**	**6.24**	**288**	PN	**Pn**	**16 11 07.1**	**+1.2**
YSS	**Yuzh-Sakhalins**	**6.24**	**288**	Pn	**Pn**	**16 11 07.1**	**+1.2**
JKK2	**Kamakawa 2**	**6.39**	**259**	P	**Pn**	**16 11 10.4**	**+2.5**
JKA	**Kamikawa-asahi**	**6.43**	**262**	*e*P	**Pn**	**16 11 11.5**	**+3.1**
JKA	**Kamikawa-asahi**	**6.43**	**262**	Pn	**Pn**	**16 11 11.5**	**+3.1**
ASAJ	**Asahikawa**	**6.43**	**262**	P	**Pn**	**16 11 11.3**	**+2.8**
	comp=E,0.8nm,0.3s,baz=115,slow=16,SNR=6.0						
ASAJ				S	Sn	16 12 29.6	+9.3
	comp=E,0.7nm,0.3s,baz=213,slow=31,SNR=1.9						
ASAJ	**Asahikawa**	**6.43**	**262**	PN	**Pn**	**16 11 11.5**	**+3.0**
JCH	**Churui**	**6.45**	**248**	P	**Pn**	**16 11 10.5**	**+1.7**
JCH				*e*S	**Sn**	**16 12 19.9**	**-1.1**
JEM	**Erimo**	**6.88**	**244**	Pn	**Pn**	**16 11 14.7**	**+0.1**
ERM	**Erimo**	**6.89**	**244**	PN	**Pn**	**16 11 18.4**	**+3.7**
ERM	**Erimo**	**6.89**	**244**	Pn	**Pn**	**16 11 18.4**	**+3.7**
JNBK	**Urakawa-nobuka**	**7.01**	**247**	*e*S	**Sn**	**16 12 32.0**	**-2.5**
JBT2	**Biratori 2**	**7.04**	**252**	P	**Pn**	**16 11 19.1**	**+2.3**
JEW	**Eniwo**	**7.63**	**254**	Pn	**Pn**	**16 11 28.2**	**+3.4**
JNB	**Noboribetsu**	**8.06**	**253**	P	**Pn**	**16 11 32.1**	**+1.5**
JNB				*e*S	**Sn**	**16 12 58.6**	**-1.4**
JKB	**Kayabe**	**8.32**	**249**	P	**Pn**	**16 11 35.2**	**+1.0**
JKB				*e*S	**Sn**	**16 13 02.6**	**-3.8**
JYM2	**Yakumo 2**	**8.66**	**252**	P	**Pn**	**16 11 40.0**	**+1.3**
PEA0B	**Petropavlovsk-**	**8.75**	**26**	PN	**Pn**	**16 11 36.6**	**-3.3**
PEA0B	**Petropavlovsk-**	**8.75**	**26**	Pn	**Pn**	**16 11 36.6**	**-3.3**
PETK	**Petropavlovsk-**	**8.75**	**26**	P	**Pn**	**16 11 36.2**	**-3.7**
	comp=E,0.2nm,0.3s,baz=196,slow=10.0,SNR=4.1						
JANG	**Nango**	**8.84**	**239**	P	**Pn**	**16 11 41.4**	**+0.1**
JANG				*e*S	**Sn**	**16 13 14.5**	**-4.6**
JTM	**Tenmabayashi**	**8.87**	**243**	P	**Pn**	**16 11 42.7**	**+1.0**
JTM				*e*S	**Sn**	**16 13 15.3**	**-4.5**
JTH	**Tanohata**	**8.91**	**236**	*e*S	**Sn**	**16 13 15.5**	**-5.3**
JRG	**Rokugo**	**9.98**	**237**	P	**Pn**	**16 11 58.2**	**+1.4**
JIO	**Ouri**	**10.22**	**231**	*e*S	**Sn**	**16 13 47.9**	**-4.7**
MAJO	**Matsushiro**	**13.33**	**233**	P	P	16 12 53.0	+5.5
MAJO	**Matsushiro**	**13.33**	**233**	Pn	P	16 12 53.0	+5.5
MAT	**Matsushiro**	**13.33**	**233**	P	**Pn**	**16 12 42.3**	**+0.8**
MJAR	**Matsushiro Arr**	**13.33**	**233**	P	P	16 12 53.0	+5.5
	comp=E,0.1nm,0.3s,baz=38,slow=9.1,SNR=17						
USRK	**Ussuriysk Ar.**	**13.87**	**272**	P	**P**	**16 12 51.9**	**-1.5**
	baz=90,slow=13,SNR=1.8						
BILL	**Bilibino**	**23.99**	**14**	*e*P	**P**	**16 14 41.8**	**+0.5**
BILL	**Bilibino**	**23.99**	**14**	*e*P	**P**	**16 14 41.8**	**+0.5**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**28.60**	**148**	T	T	16 47 11.3	
	baz=337,slow=76,SNR=145						
H11N1	**WAKE ISLAND Hy**	**28.61**	**148**	T	T	16 47 12.7	
	baz=337,slow=76,SNR=142						
H11N3	**WAKE ISLAND Hy**	**28.61**	**148**	T	T	16 47 12.2	
	baz=337,slow=76,SNR=180						
H11S1	**WAKE ISLAND Hy**	**29.65**	**150**	T	T	16 48 29.7	
	baz=338,slow=76,SNR=200						
H11S3	**WAKE ISLAND Hy**	**29.66**	**150**	T	T	16 48 31.7	
	baz=338,slow=76,SNR=189						
H11S2	**WAKE ISLAND Hy**	**29.67**	**150**	T	T	16 48 29.5	
	baz=338,slow=76,SNR=149						
IMAR	**Indian Mountai**	**35.56**	**35**	P	**P**	**16 16 23.4**	**-0.1**
A21K	**Barrow**	**35.75**	**26**	P	**P**	**16 16 24.6**	**-0.4**
TOLK	**Toolik Lake Re**	**37.52**	**31**	P	**P**	**16 16 39.8**	**-0.4**
TOLK				lAmb	lAmb	16 16 50.2	
	comp=Z,2.8nm,1.1s						
MDM	**Murphy Dome**	**37.77**	**37**	P	**P**	**16 16 43.6**	**+1.3**
DHY	**Denali Highway**	**38.16**	**40**	P	**P**	**16 16 45.6**	**-0.2**
SCM	**Sheep Creek Mo**	**38.24**	**42**	P	**P**	**16 16 47.8**	**+1.4**
SCM				pmax	pmax		
	comp=Z,22nm,1.2s						
SCM	**Sheep Creek Mo**	**38.24**	**42**	P	**P**	**16 16 47.8**	**+1.4**
IL31		**38.34**	**37**	P	**P**	**16 16 46.5**	**-0.5**
ILAR	**Eielson Array**	**38.34**	**37**	P	**P**	**16 16 47.2**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=261,slow=7.5,SNR=9.9						
ILAR	**Eielson Array**	**38.34**	**37**	P	**P**	**16 16 47.0**	**-0.1**
M24K	**Tolsona, Glenn**	**38.76**	**42**	P	**P**	**16 16 51.9**	**+1.2**
M24K				lAmb	lAmb	16 17 04.9	
	comp=Z,12nm,1.1s						
BMAR	**Burnt Mountain**	**39.30**	**33**	P	**P**	**16 16 56.3**	**+1.2**
BCAR	**Beaver Creek A**	**40.70**	**40**	P	**P**	**16 17 08.3**	**+1.6**
CTGM	**Chitina Glacie**	**41.20**	**43**	P	**P**	**16 17 12.6**	**+1.6**
CTGM				lAmb	lAmb	16 17 22.0	
	comp=Z,17nm,1.2s						
ZALV	**Zalesovo Beam**	**42.48**	**307**	PcP	**PcP**	**16 19 13.3**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=60,slow=4.1,SNR=4.3						
MKAR	**Makanchi Array**	**46.55**	**298**	P	**P**	**16 17 52.7**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=61,slow=4.7,SNR=5.8						
MKAR				PcP	**PcP**	**16 19 27.5**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=74,slow=4.3,SNR=3.2						
ABKAR	**Akbulak array**	**58.41**	**310**	P	**P**	**16 19 20.0**	**-1.2**
ABKAR				lAmb	lAmb	16 19 22.2	
	comp=Z,1.2nm,0.7s						
SUMG	**Summit**	**62.14**	**3**	P	**P**	**16 19 46.6**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	**Summit**	**62.14**	**3**	P	**P**	**16 19 46.6**	**-0.2**
SUMG				lAmb	lAmb	16 19 48.1	
	comp=Z,5.0nm,0.7s						
FINES	**FINESS Array B**	**64.78**	**334**	P	**P**	**16 20 01.3**	**-2.4**
	comp=Z,1.5nm,0.8s,baz=31,slow=8.2,SNR=9.3						
PDAR	**Pinedale Array**	**66.50**	**52**	P	**P**	**16 20 17.4**	**+1.9**
	comp=Z,0.7nm,0.8s,baz=259,slow=1.5,SNR=5.8						
NC303	**NORSAR Array S**	**68.94**	**341**	P	**P**	**16 20 28.3**	**-1.9**
NB201	**NORSAR Array S**	**69.11**	**341**	P	**P**	**16 20 29.8**	**-1.5**
NB201				lAmb	lAmb	16 20 34.7	
	comp=Z,13nm,1.0s						
NB2	**NORSAR Subarra**	**69.14**	**341**	P	**P**	**16 20 29.8**	**-1.7**
	comp=Z,1.2nm,0.4s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**69.14**	**341**	P	**P**	**16 20 30.1**	**-1.4**
	comp=Z,1.2nm,0.6s,baz=29,slow=6.6,SNR=8.1						
KBZ	**Khabaz**	**70.97**	**313**	P	**P**	**16 20 42.5**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=56,slow=24,SNR=7.2						
AKASG	**Malin Array Be**	**72.03**	**326**	P	**P**	**16 20 47.0**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=34,slow=6.2,SNR=4.0						
AKASG	**Malin Array Be**	**72.03**	**326**	P	**P**	**16 20 47.0**	**-2.1**
KRLC	**Kraliky**	**77.10**	**332**	*e*P	**P**	**16 21 18.6**	**+0.1**
KRLC	**Kraliky**	**77.10**	**332**	*e*P	**P**	**16 21 18.6**	**+0.1**
CLL	**Collm**	**77.22**	**335**	*i* P	**P**	**16 21 18.8**	**-0.3**
KHC	**Kasperske Hory**	**78.96**	**333**	*e*P	**P**	**16 21 28.7**	**-0.1**
KHC	**Kasperske Hory**	**78.96**	**333**	*e*P	**P**	**16 21 28.7**	**-0.1**
GERES	**GERESS Array B**	**79.17**	**333**	P	**P**	**16 21 29.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=38,slow=6.5,SNR=3.3						
TXAR	**Lajitas Array**	**79.18**	**59**	P	**P**	**16 21 33.0**	**+2.5**
	comp=Z,1.4nm,0.4s,baz=296,slow=4.3,SNR=18						
TXAR	**Lajitas Array**	**79.18**	**59**	P	**P**	**16 21 33.0**	**+2.5**
H03N2	**Juan Fernandez**	**139.90**	**91**	T	T	19 05 45.4	
	baz=307,slow=77,SNR=22						
H03N1	**Juan Fernandez**	**139.91**	**91**	T	T	19 05 46.8	
	baz=307,slow=77,SNR=22						
H03N3	**Juan Fernandez**	**139.91**	**91**	T	T	19 05 46.9	
	baz=307,slow=77,SNR=20						

ANF 08 16:15:40.4±0.4,38.°18N×87.°24W,h0km,ML3.5/20,Error ellipse: s-maj=4.4km s-min=2.2km az=166.0,Southern Indiana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WCI	**Wyandotte Cave**	**0.74**	**86**	P	Pg	16 15 53.8	-0.8
	baz=266						
WCI				S	Sg	16 16 04.8	+0.5
	baz=266						
WVT	**Waverly**	**2.10**	**193**	P	Pn	16 16 16.6	-0.2
	baz=13						
WVT				S	Sn	16 16 44.7	+1.0
	baz=13						
SFIN	**Lafayette**	**2.20**	**3**	P	Pn	16 16 17.8	-0.4
	baz=183						
SFIN				S	Sb	16 16 47.6	-1.2
	baz=183						
P49A	**Miami Univ. Ec**	**2.39**	**55**	P	Pn	16 16 21.1	+0.3
	baz=236						
P49A				S	Sn	16 16 52.2	+1.4
	baz=236						
CCM	**Cathedral Cave**	**3.16**	**269**	P	Pn	16 16 31.8	+0.4
	baz=86						
CCM				S	Sn	16 17 11.0	+1.1
	baz=86						
TZTN	**Tazewell**	**3.36**	**118**	S	Sn	16 17 16.7	+2.0
	baz=300						
T53A	**Wise**	**3.92**	**106**	Sb	Sb	16 17 41.0	+2.5
	baz=289						
Q52A	**Bidwell**	**3.97**	**77**	Sb	Sb	16 17 41.0	+1.2
	baz=260						
OXF	**Oxford**	**4.06**	**206**	Sb	Sb	16 17 45.3	+3.0
	baz=25						
S53A	**Williamson**	**4.07**	**95**	Sb	Sg	16 17 47.4	-3.8
	baz=279						
R53A	**Hurricane**	**4.16**	**86**	Sb	Sg	16 17 50.7	-3.4
	baz=270						
P52A	**Corning**	**4.24**	**68**	Sb	Sb	16 17 51.3	+3.8
	baz=252						
Q53A	**Leroy**	**4.53**	**80**	Sb	Sb	16 17 60.0	+4.1
	baz=283						
O52A	**Adamsville**	**4.62**	**64**	Sb	Sb	16 18 02.5	+3.9
	baz=247						
U54A	**Nelsons Funny**	**4.62**	**109**	Sb	Sg	16 18 04.1	-4.8
	baz=293						
T54A	**Tazewell**	**4.63**	**102**	Sb	Sb	16 18 02.4	+3.5
	baz=286						
S54A	**Dingess, Beckl**	**4.70**	**93**	Sb	Sb	16 18 04.1	+3.4
	baz=276						
U40A	**Yellville**	**4.84**	**250**	Sb	Sb	16 18 08.4	+3.7
	baz=66						
V54A	**Nebo**	**4.87**	**118**	Sb	Sb	16 18 10.4	+4.8
	baz=301						
R54A	**Victor**	**4.92**	**88**	Sb	Sb	16 18 09.1	+1.9
	baz=272						
W41B	**Gary Mavity, V**	**5.02**	**235**	Sb	Sb	16 18 13.8	+3.7
	baz=52						

*DJA **08** 16:19:48.2±0.5,5.°3S±5.°1×15.°1E±.°,h71km±9km,M4.6/7,mb4.6/7,mB5.0/3,MLv4.7/3,Mw(mB)4.4/3*
*IDC **08** 16:19:54.1±0.5,5.°73S×150.°20E,h95km±5km,mb3.9/19,mb1 4.0/23,mb1mx3.9/43,mbtmp4.3/23,MS3.7/1,Ms1 3.7/1,ms1mx2.8/25,Error ellipse: s-maj=11.7km s-min=6.8km az=126.0*
*NEIC **08** 16:19:57.3±1.9,5.°75S±0.°08×150.°2E±0.°1,h129km±9km,mb4.7/24,Error ellipse: s-maj=17.0km s-min=11.0km az=82.0*

ISC 08 16:19:54.4±0.4,5.°69S±0.°06×150.°16E±0.°06,h100km,n56,σ0s97/68,mb4.2/22,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.31**	**54**	P	**Pn**	**16 20 32.3**	**+1.2**
	77nm,0.3s,baz=306,slow=3.1,SNR=11						
KRVT				S	**Sn**	**16 21 00.1**	**+1.0**
	70nm,0.3s,baz=104,slow=1.6,SNR=4.5						
MANU	**Manus Island**	**4.57**	**322**	Pn	Pn	16 21 07.7	+6.3
PMG	**Port Moresby**	**4.75**	**219**	P	**Pn**	**16 21 05.1**	**+1.4**
	8.8nm,0.3s,baz=38,slow=6.6,SNR=23						
PMG				S	**Sn**	**16 21 56.0**	**-1.7**
	61nm,0.3s,baz=186,slow=18,SNR=19						
PMG	**Port Moresby**	**4.75**	**219**		**Pn**	**16 21 05.0**	**+1.3**
CTA	**Charters Tower**	**14.81**	**195**	P	**Pn**	**16 23 19.7**	**+0.8**
	0.7nm,0.3s,baz=0.5,slow=11,SNR=9.6						
CTAO	**Charters Tower**	**14.81**	**195**	P	**P**	**16 23 22.3**	**+0.1**
SANVU	**Saraoutou**	**19.34**	**121**	P	**P**	**16 24 11.5**	**-0.5**
SIJI	**Sorong**	**19.46**	**284**	P	**Pn**	**16 24 15.8**	**+0.2**
	0.3nm,0.3s,baz=257,slow=22,SNR=2.3						
EIDS	**Eidsvold**

comp=Z,4.7nm,0.5s,baz=336,slow=3.0,SNR=8.1
RPZ Rata Peaks 42.10 157 P **P** **16 27 35.4 -1.2**
RPZ IAmb IAmb 16 27 51.0
comp=Z,69nm,2.0s
JNU Nakatsue 42.72 336 P **P** **16 27 43.7 +1.9**
comp=Z,7.6nm,0.9s,baz=204,slow=1.6,SNR=2.0
MJAR Matsushiro Arr 43.48 346 P **P** **16 27 48.2 +0.4**
comp=Z,0.8nm,0.5s,baz=166,slow=6.2,SNR=7.3
MJAR Matsushiro Arr 43.48 346 P **P** **16 27 48.0 +0.2**
KSRS Korea Array 47.67 336 P **P** **16 28 20.4 -0.4**
comp=Z,1.1nm,0.8s,baz=72,slow=31,SNR=6.7
USRK Ussuriysk Ar. 52.29 344 P **P** **16 28 56.0 +0.4**
comp=Z,0.8nm,0.7s,baz=172,slow=5.2,SNR=5.1
USRK pP **pP** **16 29 20.0 +0.2**
comp=Z,1.6nm,0.8s,baz=172,slow=11,SNR=4.0
CMAR Chiang Mai Arr 55.90 297 P **P** **16 29 22.6 +0.1**
comp=Z,0.5nm,0.7s,baz=111,slow=5.9,SNR=3.8
PETK Petropavlovsk- 58.92 5 P **P** **16 29 43.2 +0.2**
comp=Z,2.5nm,0.6s,baz=156,slow=4.3,SNR=1.6
SONM Songino Array 65.71 329 P **P** **16 30 28.3 -0.3**
comp=Z,0.8nm,0.5s,baz=149,slow=5.3,SNR=6.2
SONM Songino Array 65.71 329 P **P** **16 30 27.6 -0.9**
VNDA Vanda 72.06 177 P **P** **16 31 07.7 +0.4**
comp=Z,0.9nm,0.5s,baz=333,slow=7.5,SNR=17
VNDA pP **pP** **16 31 30.3 -2.4**
comp=Z,1.3nm,0.8s,baz=314,slow=5.9,SNR=5.0
MKAR Makanchi Array 79.28 320 P **P** **16 31 48.5 -0.5**
comp=Z,0.6nm,0.7s,baz=89,slow=6.8,SNR=2.9
MKAR Makanchi Array 79.28 320 P **P** **16 31 47.5 -1.5**
ZALV Zalesovo Beam 80.45 327 P **P** **16 31 54.1 -0.9**
comp=Z,0.8nm,0.6s,baz=108,slow=9.4,SNR=3.4
ILAR Eielson Array 83.97 23 P **P** **16 32 11.8 -1.5**
comp=Z,0.6nm,0.6s,baz=249,slow=5.2,SNR=8.7
QSPA South Pole Qui 84.28 180 P **P** **16 32 15.5 +0.5**
TORD Torodi Ar. Bea 148.05 286 PKPbc **PKPbc** **16 39 28.9 -0.6**
comp=Z,1.1nm,0.3s,baz=102,slow=2.8,SNR=29
TORD pPKPbc **pPKPdf** **16 39 55.0 +1.2**
comp=Z,0.6nm,0.3s,baz=60,slow=2.8,SNR=2.5
BDFB Brasilia 152.19 140 PKPbc **PKiKP** **16 39 39.9 0.0**
comp=Z,3.7nm,0.4s,baz=280,slow=3.0,SNR=5.6

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*IDC **08** 17:06:37.9±0.6,24.°91N×96.°27E,h0km,mb4.2/20,*
mb1 4.3/21,mb1mx4.2/38,mbtmp4.2/21,ML4.3/1,MS3.5/14,
Ms1 3.5/14,ms1mx3.3/40,Error ellipse: s-maj=20.3km
s-min=11.9km az=52.0
*BJI **08** 17:06:41.9±0.0,25.°11N×96.°40E,h27km,mB4.8/31,*
mb4.5/44,ML4.2/7,Ms4.3/33,Ms7 4.0/28
*NEIC **08** 17:06:46.2±1.2,24.°88N±0.°03×96.°30E±0.°08,h66km±6km,*
mb4.8/65,Error ellipse: s-maj=10.1km s-min=4.4km
az=77.0
*NDI **08** 17:06:46.5±2.2,25.°00N×96.°09E,h80km,ML4.5,*
mb4.8(NEIC)
ISC 08 17:06:41.4±0.4,**24.°89N**±0.°05×**96.°24E**±0.°03,**h21**km,**n244,**
σ1°**61**/244,**mb4.6**/67,**MS3.5**/16,**14C-6D,Myanmar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOHI	**KOHIMA**	**2.10**	**294**	*e*P	**Pb**	**17 07 19.9**	**+1.1**
KOHI				*e*S	**Sb**	**17 07 51.0**	**+6.5**
MOKO	**MOKOCHONG**	**2.11**	**313**	*e*P	**Pb**	**17 07 19.6**	**+0.5**
MOKO				*ex*	x	17 07 50.0	
MOKO				IAML		17 07 55.4	
	comp=N,4μm,0.6s						
MOKO				IAML		17 07 56.2	
	comp=E,5μm,0.9s						
LKP	**Lekhapani**	**2.46**	**352**	*e*P	**Pb**	**17 07 22.6**	**-2.4**
LKP				*ex*	x	17 07 55.4	
LKP				IAML		17 08 05.8	
	comp=N,5μm,1.0s						
LKP				IAML		17 08 07.5	
	comp=E,3μm,0.9s						
JORH	**JORHAT**	**2.57**	**316**	*e*P	**Pb**	**17 07 23.9**	**-2.9**
JORH				*ex*	x	17 07 49.3	
SILR	**SILCHAR**	**3.12**	**269**	*ex*	Pg	17 07 44.1	
ZIRO	**ZIRO**	**3.39**	**321**	*e*P	**Pn**	**17 07 34.9**	**+1.6**
ZIRO				IAML		17 08 20.0	
	comp=N,6μm,0.7s						
ZIRO				IAML		17 08 21.9	
	comp=E,5μm,0.7s						
TEZP	**TEZPUR**	**3.55**	**300**	*e*P	**Pn**	**17 07 36.6**	**+1.4**
SHL	**Shillong**	**4.00**	**281**	*e*P	**Pn**	**17 07 43.9**	**+2.3**
SHL	**Shillong**	**4.00**	**281**	Pn	**Pn**	**17 07 43.6**	**+2.0**
SHL				Sn	**Sn**	**17 08 31.6**	**+3.7**
GUWA	**GUWAHATI**	**4.31**	**289**	*e*P	**Pn**	**17 07 47.3**	**+1.6**
GUWA				*ex*	x	17 08 37.5	
AGT	**Agartala**	**4.66**	**259**	*e*P	**Pn**	**17 07 53.2**	**+2.8**
AGT				*ex*	x	17 08 51.6	
AGT				IAML		17 08 57.1	
	comp=E,581nm,0.3s						
KMI	**Kunming**	**5.91**	**86**	⇑*i*Pg	Pb	17 08 30.3	+6.5
KMI				Sg	**Sb**	**17 09 41.4**	**+7.3**
KMI				smax	smax		
	comp=N,270nm,1.4s						
KMI				smax	smax		
	comp=E,200nm,1.5s						
KMI	**Kunming**	**5.91**	**86**	*e*Pn	**Pn**	**17 08 08.0**	**+0.2**
KMI				S	**Sn**	**17 09 14.7**	**-0.3**
KMI				LR	LR		
	comp=E,6μm,8.7s						
KMI				LR	LR		
	comp=E,2μm,8.0s						
KMI				LR	LR		
	comp=E,740nm,7.5s						
KMI	**Kunming**	**5.91**	**86**	Pn	**Pn**	**17 08 07.1**	**-0.8**
CRAI	**Chiangrai**	**6.01**	**140**	P	**Pn**	**17 08 08.6**	**-0.5**
PAYA	**Payao**	**6.45**	**148**	P	**Pn**	**17 08 14.9**	**-0.3**
CHTO	**Chiang Mai**	**6.54**	**157**	Pn	**Pn**	**17 08 16.4**	**0.0**
CMMT	**Chiang Mai**	**6.55**	**157**	P	**Pn**	**17 08 16.7**	**+0.2**
LSA	**Lhasa**	**6.59**	**318**	Pn	**Pn**	**17 08 21.4**	**+3.9**
LSA				Sg	Sb	17 10 15.0	+21
LSA				LR	LR		
	comp=E,1μm,13.2s						
LSA				LR	LR		
	comp=E,2μm,9.3s						
LSA				LR	LR		
	comp=E,3μm,9.6s						
LSA	**Lhasa**	**6.59**	**318**	Pn	**Pn**	**17 08 20.5**	**+3.0**
MHMT	**Maesarieng**	**6.86**	**166**	P	**Pn**	**17 08 22.1**	**+1.3**
CM15	**Chiang Mai Arr**	**6.87**	**158**	P	**Pn**	**17 08 21.3**	**+0.4**
CM31	**Chiang Mai Arr**	**6.87**	**158**		**Pn**	**17 08 21.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**6.87**	**158**	Pn	**Pn**	**17 08 21.3**	**+0.3**
	comp=E,1.6nm,0.3s,baz=335,slow=13,SNR=31						
CMAR				Pg	Pb	17 08 45.1	+5.0
	comp=E,2.5nm,0.3s,baz=338,slow=17,SNR=25						
CMAR				Lg	Lg	17 10 15.9	
	comp=E,0.7nm,0.3s,baz=332,slow=21,SNR=5.4						
CMAR				LR	LR	17 11 12.5	
	comp=E,508nm,18.9s,baz=21,slow=40						
CMAR	**Chiang Mai Arr**	**6.87**	**158**	Pn	**Pn**	**17 08 21.6**	**+0.6**
CM13	**Chiang Mai Arr**	**6.89**	**158**	P	**Pn**	**17 08 21.5**	**+0.3**
CM02	**Chiang Mai Arr**	**6.90**	**158**	P	**Pn**	**17 08 21.9**	**+0.6**
CM09	**Chiang Mai Arr**	**6.90**	**158**	P	**Pn**	**17 08 22.0**	**+0.6**
CM01	**Chiang Mai Arr**	**6.91**	**158**	P	**Pn**	**17 08 21.9**	**+0.3**
CM05	**Chiang Mai Arr**	**6.93**	**158**	P	**Pn**	**17 08 22.1**	**+0.4**
CM04	**Chiang Mai Arr**	**6.94**	**158**	P	**Pn**	**17 08 22.6**	**+0.7**
LAMP	**Lampang**	**7.08**	**153**	P	**Pn**	**17 08 24.0**	**+0.2**
GTK	**Tadong**	**7.28**	**291**	*e*P	**Pn**	**17 08 27.8**	**+1.2**
GTK				*ex*	x	17 09 49.7	
SLVN	**Son La**	**7.89**	**115**	Pn	**Pn**	**17 08 36.9**	**+1.8**
TAPN	**Taplejung**	**8.05**	**290**	*e*P	**Pn**	**17 08 38.8**	**+1.5**
	comp=E,71nm,0.5s						
UTTA	**Uttaradit**	**8.16**	**150**	P	**Pn**	**17 08 38.6**	**-0.1**
ODAN	**Odare**	**8.21**	**286**	*e*P	**Pn**	**17 08 40.9**	**+1.4**
	comp=E,80nm,0.5s						
RAMN	**Ramite**	**8.92**	**285**	*e*P	**Pn**	**17 08 50.7**	**+1.5**
	comp=E,97nm,0.6s						
CD2	**Chengdu**	**8.96**	**46**	*e*P	**Pn**	**17 08 50.0**	**+0.4**
CD2				pmax	pmax		
	comp=E,30nm,0.8s						
CD2				pmax	pmax		
	comp=E,130nm,5.3s						
CD2				LR	LR		
	comp=E,2μm,9.7s						
CD2				LR	LR		
	comp=E,1μm,9.0s						
CD2				LR	LR		
	comp=E,680nm,8.4s						
BOK	**Bokaro**	**9.50**	**266**	*e*P	**Pn**	**17 08 58.2**	**+1.2**
BOK				*ex*	x	17 10 37.4	
GYA	**Guiyang**	**9.54**	**78**	⇓P	Pn	17 09 02.2	+4.6
GYA				S	**Sn**	**17 10 48.4**	**+4.2**
GYA				pmax	pmax		
	comp=E,10.0nm,1.2s						
GYA				pmax	pmax		
	comp=E,160nm,4.4s						
GYA				LR	LR		
	comp=E,960nm,6.3s						
GYA				LR	LR		
	comp=E,720nm,6.5s						
GYA				LR	LR		
	comp=E,760nm,8.7s						
GUN	**Gumba 9.76 290**			*e*P	**Pn**	**17 09 01.8**	**+0.9**
	comp=E,124nm,0.5s						
PKI	**Pulchoki 10.08 288**			*e*P	**Pn**	**17 09 05.5**	**+0.2**
	comp=E,42nm,0.5s						
PKIN	**Phulchoki 10.09 288**			*e*P	**Pn**	**17 09 05.6**	**+0.2**
	comp=E,66nm,0.3s						
KKN	**Kakani 10.24 289**			*e*P	**Pn**	**17 09 07.7**	**+0.3**
	comp=E,69nm,0.3s						
GKN	**Gorkha 10.85 289**			*e*P	**Pn**	**17 09 15.4**	**-0.2**
	comp=E,122nm,0.5s						
DANN	**Dangsing 11.68 290**			*e*P	**Pn**	**17 09 26.2**	**-1.0**
	comp=E,68nm,0.4s						
KOLN	**Koldanda 11.69 287**			*e*P	**Pn**	**17 09 26.1**	**-1.1**
	comp=E,48nm,0.4s						
PYUN	**Piuthan 12.29 288**			*e*P	**Pn**	**17 09 34.3**	**-1.1**
ENH	**Enshi 12.91 63**			Pn	**Pn**	**17 09 42.2**	**-1.5**
LZH	**Lanzhou 12.94 29**			*e*P	**Pn**	**17 09 45.6**	**+1.4**
LZH				pmax	pmax		
	comp=E,18nm,1.3s						
LZH				LR	LR		
	comp=E,440nm,11.1s						
LZH				LR	LR		
	comp=E,860nm,11.7s						
CHLP	**Challavanipeta 12.97 243**			*e*P	**Pn**	**17 09 48.8**	**+4.2**
PBA	**Port Blair 13.57 195**			Pn	Pn	17 09 53.2	+0.5
QIZ	**Qiongzhong 13.90 112**			P	**Pn**	**17 09 58.2**	**+1.0**
QIZ				S	**Sn**	**17 12 30.6**	**-0.4**
QIZ				LR	LR		
	comp=E,380nm,11.8s						
QIZ				LR	LR		
	comp=E,460nm,16.8s						
QIZ				LR	LR		
	comp=E,250nm,11.1s						
XAN	**Xi'an 14.32 48**			P	**P**	**17 10 07.5**	**-2.4**
XAN				pP	Pn	17 10 12.5	+10
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	**Xi'an 14.32 48**			P	**P**	**17 10 07.5**	**-2.4**
GTA	**Gaotai 14.79 11**			*e*P	**P**	**17 10 14.8**	**-0.5**
GTA				pP	Pn	17 10 20.1	+11
GTA				sP		17 10 23.2	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,82nm,6.5s						
GTA				LR	LR		
	comp=N,630nm,9.8s						
GTA				LR	LR		
	comp=E,950nm,14.2s						
GTA				LR	LR		
	comp=Z,530nm,11.6s						
PVM	**Polavaram 15.60 244**			*e*P	**P**	**17 10 22.9**	**-1.3**
NGP	**Nagpur 16.25 260**			*ex*	**Sn**	**17 13 24.2**	**-4.1**
GGR	**Gangavaram 16.50 248**			*e*P	**P**	**17 10 34.6**	**+0.4**
MYLAV	**Mylavaram 16.67 244**			*e*P	**P**	**17 10 36.1**	**0.0**
RPR	**Rampur 16.82 252**			*e*P	**P**	**17 10 39.6**	**+1.8**
WHN	**Wuhan 16.99 67**			P	**P**	**17 10 42.7**	**+3.1**
WHN				S	**Sn**	**17 13 49.1**	**+3.0**
WHN				LR	LR		
	comp=N,1μm,9.3s						
WHN				LR	LR		
	comp=E,600nm,9.4s						
WHN				LR	LR		
	comp=Z,860nm,6.9s						
BHPL	**Bhopal 17.26 268**			*e*P	**Pn**	**17 10 40.9**	**-0.4**
BHPL				*e*SG	**Sn**	**17 13 45.3**	**-7.4**
ADKI	**Addanki 17.69 243**			*e*P	**P**	**17 10 49.9**	**+2.5**
CUPL	**Choutuppal 17.82 248**			*e*P	**P**	**17 10 49.1**	**+0.3**
NJS	**Nagarjunasagar 17.86 246**			*e*P	**P**	**17 10 51.9**	**+2.7**
HYBB	**Hyderabad (bro 18.08 249**			*e*P	**P**	**17 10 54.3**	**+2.6**
DHRM	**DHARAMSHALA 18.97 297**			*e*P	**P**	**17 11 00.3**	**-1.3**
DHRM				*i* x	x	17 11 09.8	
SKHT	**Srikalahasti 19.11 238**			*e*P	**Pn**	**17 11 06.2**	**+2.3**
KLRI	**Killari 19.48 253**			*e*P	**Pn**	**17 11 09.2**	**+0.8**
THN	**Thein Dam 19.50 297**			*e*P	**Pn**	**17 11 08.5**	**+0.1**
KULM	**Kulim 19.94 167**				**Pn**	**17 11 12.8**	**-1.0**
KNMB	**Chin-men Tao 20.14 87**			P	**P**	**17 11 13.1**	**-1.0**
KNMB				IAmb	IAmb	17 11 48.4	
	comp=Z,50nm,0.9s						
WMQ	**Urumqi 20.14 342**			*e*P	Pn	17 11 16.2	+0.1
WMQ				pP	sP	17 11 27.0	+4.1
WMQ				pmax	pmax		
	comp=Z,38nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,95nm,3.7s						
WMQ				LR	LR		
	comp=Z,600nm,7.9s						
WMQ				LR	LR		
	comp=Z,290nm,11.9s						
WMQ				LR	LR		
	comp=Z,180nm,15.9s						
WMQ	**Urumqi 20.14 342**			P	Pn	17 11 15.3	-0.8
HHC	**Hu-ho-hao-te 20.42 35**			*e*P	**P**	**17 11 13.5**	**-3.8**
HHC				sP	sP	17 11 24.7	-1.4
HHC				S	S	17 14 51.3	-14
HHC				SS	**SnSn**	**17 15 22.1**	**-1.8**
HHC				pmax	pmax		
	comp=Z,19nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,8.4s						
HHC				LR	LR		
	comp=Z,200nm,11.6s						
HHC				LR	LR		
	comp=Z,470nm,9.4s						
HHC				LR	LR		
	comp=Z,390nm,10.1s						
NJ2	**Nanjing 21.10 65**			*e*P	**P**	**17 11 24.2**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIA	**Tai'an 21.19 53**			P	**P**	**17 11 24.7**	**-0.8**
TIA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TIA				pmax	pmax		
	comp=Z,180nm,3.3s						
TIA				LR	LR		
	comp=Z,210nm,16.3s						
TIA				LR	LR		
	comp=Z,290nm,12.4s						
TIA				LR	LR		
	comp=Z,400nm,11.8s						
NIL	**Nilore 21.84 299**			P	**P**	**17 11 33.2**	**+0.7**
PSI	**Prapat 22.11 173**			LR	LR	17 20 36.6	
	comp=Z,154nm,18.9s,baz=282,slow=38						
KSH	**Kashi 22.44 315**			P	**P**	**17 11 40.4**	**+1.4**
KSH				S	**S**	**17 15 37.8**	**-6.7**
KSH				pmax	pmax		
	comp=Z,100nm,1.3s						
KSH				pmax	pmax		
	comp=Z,450nm,6.0s						
KSH				LR	LR		
	comp=Z,270nm,7.1s						
BJT	**Baijiatuau 22.52 43**			P	**P**	**17 11 40.7**	**+0.9**
BJI	**Beijing 22.54 43**			P	**P**	**17 11 41.0**	**+1.1**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SHLS	**Shalkode 22.85 327**			*e*P	**P**	**17 11 41.5**	**-1.8**
	comp=Z,24nm,1.7s,baz=328						
PRZ	**Przheval'sk 22.91 324**			P	**P**	**17 11 44.6**	**+0.6**
PALK	**Pallekele 22.97 223**			LR	LR	17 22 35.2	
	comp=Z,98nm,19.5s,baz=143,slow=42						
SATY	**Saty 23.31 325**			*e*P	**P**	**17 11 48.5**	**+0.5**
	comp=Z,10nm,1.1s,baz=325						
KPKS	**Kokpek 23.46 327** baz=326			*e*P	**P**	**17 11 49.7**	**+0.3**
TNSS	**Tian-Shan 24.06 324** baz=323			*e*P	**P**	**17 11 56.9**	**+1.3**
MDOK	**Medeo 24.09 324** baz=324			*e*P	**P**	**17 11 56.9**	**+1.2**
AAA	**Alma-Ata 24.20 324** baz=324			*e*P	**P**	**17 11 58.1**	**+1.6**
BOOM	**Boomskoye usch 24.26 321**			P	**P**	**17 11 57.6**	**+0.5**
BOOM				IAmb	IAmb	17 12 34.4	
	comp=Z,44nm,1.4s						
ZSN	**Zaisan 24.27 341**			*e*P	**P**	**17 11 58.0**	**+1.0**
	comp=Z,8.4nm,0.8s,baz=341						
SONM	**Songino Array 24.28 17**			P	**P**	**17 11 56.7**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=195,slow=11,SNR=13						
SONM				LR	LR	17 22 33.8	
	comp=Z,88nm,18.7s,baz=179,slow=39						
SONM	**Songino Array 24.28 17**			P	**P**	**17 11 56.0**	**-1.3**
YOJ	**Yonaguni jima 24.32 85**			P	**P**	**17 11 55.8**	**-1.9**
ULN	**Ulaanbaatar 24.48 18**			P	**P**	**17 11 58.4**	**-0.8**
MK31	**Makanchi Array 24.54 337**			P	**P**	**17 12 00.0**	**+0.5**
MK31				IAmb	IAmb	17 12 01.3	
	comp=Z,23nm,0.7s						
MKAR	**Makanchi Array 24.54 337**			P	**P**	**17 12 00.6**	**+1.1**
	comp=Z,19nm,0.5s,baz=136,slow=9.1,SNR=263						
MKAR				LR	LR	17 22 35.6	
	comp=Z,104nm,21.3s,baz=154,slow=39						
MKAR	**Makanchi Array 24.54 337**			P	**P**	**17 11 59.6**	**+0.1**
MAKZ	**Makanchi 24.66 336**			P	**P**	**17 12 00.9**	**+0.2**
TDK	**Taldyqorghan 24.73 329**			*e*P	**P**	**17 12 02.4**	**+1.2**
	comp=Z,21nm,0.7s,baz=329						
BKNI	**Bangkinang 24.85 169**			P	**P**	**17 11 59.4**	**-3.1**
BKNI				IAmb	IAmb	17 12 01.0	
	comp=Z,30nm,0.5s						
KUU	**Kurty 24.97 324** baz=324			*e*P	**P**	**17 12 04.1**	**+0.7**
FRU1	**Bishkek 25.21 320**			P	**P**	**17 12 07.5**	**+1.9**
FRU1				IAmb	IAmb	17 12 22.0	
	comp=Z,46nm,1.6s						
KBL	**Kabul 25.44 299**			P	**P**	**17 12 09.2**	**+1.3**
KBL				IAmb	IAmb	17 12 13.4	
	comp=Z,74nm,1.5s						
SGDS	**Sogindy 25.61 322**			*e*P	**P**	**17 12 09.8**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=322						
GAR	**Garm 26.00 309**			P	**P**	**17 12 13.4**	**+0.5**
BTK	**Batken 26.12 312**			P	**P**	**17 12 15.1**	**+1.1**
BTK				IAmb	IAmb	17 12 33.4	
	comp=Z,39nm,1.1s						
CHGR	**Chuyangaron 26.69 307**			P	**P**	**17 12 19.4**	**+0.2**
CHGR				IAmb	IAmb	17 12 39.7	
	comp=Z,15nm,0.8s						
BTLS	**Baital 26.96 324** baz=324			*e*P	**P**	**17 12 21.4**	**+0.1**
TLY	**Talaya 27.35 10**			P	**P**	**17 12 26.2**	**+1.3**
IUG	**Iuzhnay 27.65 315** baz=315			*e*P	**P**	**17 12 28.8**	**+1.0**
KK31	**Karatay Array 27.85 317**			P	**P**	**17 12 29.8**	**+0.4**
KKAR	**Karatay Array 27.85 317**			P	**P**	**17 12 29.7**	**+0.3**
KKAR	**Karatay Array 27.85 317**			P	**P**	**17 12 29.4**	**0.0**
KKAR				IAmb	IAmb	17 12 38.4	
	comp=Z,8.6nm,1.5s						
KURBB	**Kurchatov Arra 29.11 337**			P	**P**	**17 12 41.0**	**+0.5**
	comp=Z,5.8nm,0.4s,baz=155,slow=7.6,SNR=100						
KURK	**Kurchatov 29.15 337**			P	**P**	**17 12 41.0**	**+0.2**
KSRS	**Korea Array 29.72 57**			P	**P**	**17 12 46.5**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=248,slow=8.6,SNR=1.9						
KSRS				LR	LR	17 26 36.9	
	comp=Z,83nm,19.2s,baz=212,slow=40						
ZAA0	**Zalesovo Array 30.26 347**			P	**P**	**17 12 50.8**	**+0.2**
ZALV	**Zalesovo Beam 30.26 347**			P	**P**	**17 12 51.0**	**+0.4**
	comp=Z,5.4nm,0.5s,baz=167,slow=8.3,SNR=40						
ZALV				LR	LR	17 25 19.1	
	comp=Z,35nm,19.2s,baz=148,slow=37						
ZALV	**Zalesovo Beam 30.26 347**			P	**P**	**17 12 50.4**	**-0.2**
HRA	**Herat 30.91 296**			P	**P**	**17 12 57.6**	**+0.8**
BRZS	**Berezniki 31.01 330**			*e*P	**P**	**17 12 58.3**	**+0.9**
	comp=Z,3.5nm,0.6s,baz=330						
BRZS				*e*S	**S**	**17 18 04.5**	**+3.4**
	baz=330						
DAV	**Davao City (W) 33.18 117**			LR	LR	17 26 08.7	
	comp=Z,74nm,21.3s,baz=319,slow=35						
BRVK	**Borovoye 34.25 332**			P	**P**	**17 13 26.0**	**+0.3**
BRVK				IAmb	IAmb	17 13 35.5	
	comp=Z,5.6nm,0.7s						
GEYT	**Alibeck 34.80 301**			P	**P**	**17 13 31.8**	**+1.1**
	comp=Z,3.6nm,0.8s,baz=126,slow=7.7,SNR=7.1						
GEYT				LR	LR	17 31 15.0	
	comp=Z,88nm,20.2s,baz=115,slow=42						
GEYT	**Alibeck 34.80 301**			P	**P**	**17 13 31.4**	**+0.8**
GYA0B	**ALIBECK ARRAY 34.80 301**			P	**P**	**17 13 30.5**	**-0.2**
GYA0B				IAmb	IAmb	17 13 42.7	
	comp=Z,11nm,0.9s						
USRK	**Ussuriysk Ar. 34.83 47**			P	**P**	**17 13 30.2**	**-0.5**
	comp=Z,3.2nm,1.0s,baz=244,slow=6.1,SNR=4.8						
USRK	**Ussuriysk Ar. 34.83 47**			P	**P**	**17 13 29.9**	**-0.8**
ABKAR	**Akbulak array 37.27 320**			P	**P**	**17 13 52.0**	**+0.4**
ABKAR				IAmb	IAmb	17 14 06.7	
	comp=Z,6.0nm,0.8s						
ABKAR	**Akbulak array 37.27 320**			P	**P**	**17 13 51.9**	**+0.3**
MAJO	**Matsushiro 37.64 62**			P	**P**	**17 13 54.6**	**-0.3**
MAT	**Matsushiro 37.64 62**			P	**P**	**17 13 53.5**	**-1.4**
MAT				*e*S	**S**	**17 19 38.6**	**-5.1**
MJAR	**Matsushiro Arr 37.64 62**			P	**P**	**17 13 54.3**	**-0.7**
	comp=Z,3.8nm,0.9s,baz=263,slow=8.5,SNR=11						
MJAR				LR	LR	17 29 40.4	
	comp=Z,57nm,19.2s,baz=260,slow=37						
MJAR	**Matsushiro Arr 37.64 62**			P	**P**	**17 13 57.1**	**+2.2**
JMM	**Marumori 39.83 60**			P	**P**	**17 14 14.5**	**+1.3**
ARU	**Arti 41.64 329**			P	**P**	**17 14 27.6**	**-0.3**
NRIK	**Noril'sk 44.77 356**			P	**P**	**17 14 52.9**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=157,slow=7.0,SNR=6.6						
NRIK				LR	LR	17 33 03.6	
	comp=Z,118nm,19.8s,baz=204,slow=35						
KBZ	**Khabaz 47.05 307**			P	**P**	**17 15 11.3**	**0.0**
	comp=Z,0.8nm,0.5s,baz=236,slow=24,SNR=2.5						
KIV	**Kislovodsk 47.22 308**			P	**P**	**17 15 12.8**	**-0.1**
KIV				IAmb	IAmb	17 15 18.9	
	comp=Z,8.4nm,0.7s						
MARD	**Mardin 48.46 299**			P	**P**	**17 15 22.9**	**+0.3**
MARD				IAmb	IAmb	17 15 40.5	
	comp=Z,10nm,0.7s						
TIXI	**Tiksi 50.27 13**			P	**P**	**17 15 35.2**	**-0.5**
FITZ	**Fitzroy Crossi 51.44 143**			P	**P**	**17 15 46.2**	**+1.0**
FITZ				IAmb	IAmb	17 15 59.9	
	comp=Z,8.5nm,1.4s						
KLMR	**Klimovskoe 52.49 329**			*e*P	**P**	**17 15 52.0**	**-0.5**
KLMR				AMP		17 15 54.5	
	comp=Z,23nm,1.5s						
BR131	**Keskin Array S 53.93 302**			P	**P**	**17 16 04.0**	**+0.3**
BR131				IAmb	IAmb	17 16 09.4	
	comp=Z,10nm,1.6s						
BRTR	**Keskin Array B 53.93 302**			P	**P**	**17 16 04.2**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=109,slow=6.9,SNR=7.2						
BRTR	**Keskin Array B 53.93 302**			P	**P**	**17 16 04.1**	**+0.4**
AKASG	**Malin Array Be 56.73 316**			P	**P**	**17 16 22.3**	**-1.2**
	comp=Z,5.2nm,0.4s,baz=78,slow=6.2,SNR=34						
AKBB	**Malin Array Si 56.73 316**			P	**P**	**17 16 22.0**	**-1.5**
AKBB				IAmb	IAmb	17 16 23.1	
	comp=Z,6.8nm,0.6s

comp=Z,0.9nm,0.7s,baz=323,slow=6.8,SNR=21
ASAR Alice Springs 60.52 140 P **P** **17 16 48.8 -1.4**
CJR Cluj-Napoca 60.65 311 ⇑P P 17 16 55.4 +4.5
LOT Lotru 60.67 310 ⇓P **P** **17 16 50.9 -0.3**
NWAO Narrogin (SRO) 60.88 160 P **P** **17 16 52.0 -0.4**
NWAO IAmb IAmb 17 17 00.3
comp=Z,12nm,1.0s
NWAO Narrogin (SRO) 60.88 160 P **P** **17 16 52.1 -0.3**
NWAO IAmb IAmb 17 17 00.3
comp=Z,14nm,0.9s
KTK1 Kautokeino 60.92 337 *e*P **P** **17 16 52.1 -0.2**
KWP Kalwaria Pacla 60.96 315 P **P** **17 16 52.8 -0.1**
KOLS Kolonicke sedl 61.31 314 *e*P **P** **17 16 58.2 +2.9**
IDI Anoyia 61.42 298 P **P** **17 16 56.0 -0.4**
CRVS Cervenica-Dubn 61.85 314 *e*P **P** **17 17 00.0 +1.1**
SIRR Siria 62.03 311 ⇑P **P** **17 17 00.5 +0.2**
BZS Buzias 62.15 310 ⇑P **P** **17 16 59.9 -1.1**
TRO Tromso 62.49 337 *e*P **P** **17 17 01.3 -1.5**
OJC Ojcow 62.77 315 P **P** **17 17 05.9 +0.8**
OJC IAmb IAmb 17 17 08.7
comp=Z,4.1nm,0.7s
DIVS Divibare 63.53 309 P **P** **17 17 10.1 -0.2**
DIVS IAmb IAmb 17 17 41.3
comp=Z,11nm,1.4s
VYHS Vyhne 63.62 314 *e*P **P** **17 17 08.7 -2.1**
FAUS Fauske 63.82 335 *e*P **P** **17 17 12.2 +0.5**
STEI Steigen 63.82 335 *e*P **P** **17 17 12.0 +0.3**
MOR8 Moi Rana 64.21 333 *e*P **P** **17 17 13.9 -0.5**
MORC Moravsky Berou 64.27 315 *e*P **P** **17 17 15.0 -0.1**
MORC Moravsky Berou 64.27 315 P **P** **17 17 15.1 0.0**
MORC IAmb IAmb 17 17 21.5
comp=Z,10nm,1.3s
LOF Lofoten 64.45 336 *e*P **P** **17 17 16.2 +0.3**
KRLC Kraliky 64.71 316 *e*P **P** **17 17 17.4 -0.6**
VRAC Vranov 64.96 315 ⇑P **P** **17 17 19.9 +0.3**
VRAC Vranov 64.96 315 *e*P **P** **17 17 19.6 +0.1**
DPC Dobruska-Polom 64.96 316 *e*P **P** **17 17 20.0 +0.4**
OSTC Ostas 65.00 316 *e*P **P** **17 17 19.8 0.0**
OSTC *ex* x 17 17 22.5
CHVC Chvalec 65.09 316 *e*P **P** **17 17 20.5 +0.1**
CHVC *ex* x 17 17 23.5
CONA Conrad Observa 65.68 313 *e*P **P** **17 17 23.4 -0.9**
comp=Z,7.7nm,1.4s
NC405 NORSAR Array S 65.92 328 P **P** **17 17 25.3 -0.2**
ARSA Arzberg 66.03 313 *e*P **P** **17 17 26.5 -0.1**
comp=Z,2.5nm,0.7s
NC602 NORSAR Array S 66.06 328 *e*P **P** **17 17 26.9 +0.5**
NC303 NORSAR Array S 66.07 328 P **P** **17 17 26.5 0.0**
PRU Pruhonice 66.15 316 *e*P **P** **17 17 27.5 +0.3**
NB2 NORSAR Subarra 66.18 328 P **P** **17 17 26.1 -1.1**
comp=Z,1.0nm,0.5s,baz=81,slow=6.5
NB2 NORSAR Subarra 66.18 328 P **P** **17 17 26.1 -1.1**
baz=81,slow=6.5
NOA NORSAR Array B 66.18 328 P **P** **17 17 26.4 -0.8**
comp=Z,2.3nm,0.8s,baz=82,slow=6.3,SNR=6.7
NOA LR LR 17 46 23.5
comp=Z,37nm,19.8s,baz=30,slow=36
NC204 NORSAR Array S 66.36 328 P **P** **17 17 28.0 -0.4**
NC204 IAmb IAmb 17 17 32.3
comp=Z,20nm,1.1s
NC204 NORSAR Array S 66.36 328 *e*P **P** **17 17 27.8 -0.6**
SOKA Soboth 66.48 312 *e*P **P** **17 17 28.5 -1.0**
comp=Z,2.8nm,1.0s
CLL Collm 66.86 317 *e*P **P** **17 17 31.0 -0.7**
CLL Collm 66.86 317 P **P** **17 17 31.8 +0.1**
GEC2 GERESS Array S 66.91 315 P **P** **17 17 32.2 -0.1**
GEC2 IAmb IAmb 17 17 34.4
comp=Z,14nm,1.6s
GERES GERESS Array B 66.91 315 P **P** **17 17 31.9 -0.3**
comp=Z,2.5nm,0.8s,baz=69,slow=7.3,SNR=16
GERES GERESS Array B 66.91 315 P **P** **17 17 31.5 -0.7**
KHC Kasperske Hory 66.94 315 *e*P **P** **17 17 32.1 -0.2**
KHC epP **pP** **17 17 35.5 -3.7**
HOMB Homborsund 68.02 325 *e*P **P** **17 17 40.1 +1.2**
WTTA Wattenberg 68.61 313 *e*P **P** **17 17 42.4 -0.7**
comp=Z,3.9nm,0.8s
WATA Walderalm 68.64 313 *e*P **P** **17 17 42.4 -0.7**
comp=Z,5.1nm,1.0s
NRCA Norcia 68.69 308 P **P** **17 17 41.9 -1.6**
SQTA Sankt Quirin 68.91 313 *e*P **P** **17 17 43.0 -1.8**
comp=Z,4.2nm,0.9s
MOTA Moosalm 68.95 313 *e*P **P** **17 17 44.3 -0.8**
comp=Z,8.0nm,1.0s
RETA Reutte 69.14 314 *e*P **P** **17 17 45.4 -0.8**
comp=Z,7.0nm,0.9s
FETA Feichten 69.28 313 *e*P **P** **17 17 45.7 -1.5**
comp=Z,3.6nm,1.0s
FUORN Ofenpass-Fuorn 69.69 313 P **P** **17 17 48.3 -1.5**
DAVA Damuels 69.77 314 *e*P **P** **17 17 49.9 -0.3**
comp=Z,5.9nm,0.9s
TUE Stuetta 70.34 313 P **P** **17 17 52.3 -1.5**
TUE IAmb IAmb 17 18 09.8
comp=Z,11nm,1.2s
STKA Stephens Creek 71.16 140 LR LR 17 52 35.6
comp=Z,31nm,18.0s,baz=10,slow=39
SENIN Lac Senin/Sane 71.73 313 P **P** **17 18 01.9 -0.3**
SENIN IAmb IAmb 17 18 22.9
comp=Z,24nm,1.7s
TOLK Toolik Lake Re 75.34 20 P **P** **17 18 23.1 +0.3**
TOLK IAmb IAmb 17 18 34.8
comp=Z,11nm,1.5s
ILAR Eielson Array 78.34 23 P **P** **17 18 37.8 -2.0**
comp=Z,0.4nm,0.8s,baz=309,slow=5.7,SNR=3.4
ESDC Sonseca Array 81.84 310 P **P** **17 18 58.8 -0.5**
comp=Z,0.8nm,1.0s,baz=41,slow=5.6,SNR=2.0
BOSA Boshof 86.51 236 LR LR 17 58 44.5
comp=Z,20nm,19.1s,baz=7.5,slow=36

MOS ***08*** *17:37:44.9±0.8,37.°57N×97.°03E,h16km,mb4.9/19,Error ellipse: s-maj=6.9km s-min=4.3km az=131.3*
IDC ***08*** *17:37:44.4±0.5,37.°55N×97.°08E,h0km,mb4.4/26, mb1 4.5/31,mb1mx4.4/46,mbtmp4.3/31,ML3.7/5,MS3.7/9, Ms1 3.7/9,ms1mx3.4/40,Error ellipse: s-maj=15.9km s-min=10.1km az=34.0*
BJI ***08*** *17:37:45.5±0.0,37.°56N×96.°92E,h7km,mB4.8/30, mb4.5/41,ML4.5/15,Ms4.3/42,Ms7 4.0/39*
NEIC ***08*** *17:37:47.1±1.3,37.°62N±0.°07×97.°06E±0.°09,h16km±3km, mb4.9/113,Error ellipse: s-maj=10.4km s-min=9.5km az=225.0*
ISC 08 17:37:46.1±0.7,37.°68N±0.°04×97.°03E±0.°03,h9km±4km, h9km:pP-P,n360,σ1s63/370,mb4.8/107,MS4.0/13, 17C-15D,Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**2.79**	**51**	⇑Pn		**Pb**	**17 38 35.3**	**-0.9**
GTA				Pg		**Pg**	**17 38 39.3**	**-0.2**
GTA				Sn		**Sg**	**17 39 10.8**	**-4.8**
GTA				Sg		Sb	17 39 17.4	+6.9
GTA				smax		smax		
	comp=N,400nm,1.1s							
GTA				smax		smax		
	comp=E,260nm,1.2s							
LZH	**Lanzhou**	**5.69**	**104**	*e*Pn		**Pn**	**17 39 12.9**	**+1.9**
LZH				Pg		**Pb**	**17 39 26.6**	**+0.9**
LZH				Sn		**Sn**	**17 40 13.9**	**-2.7**
LZH				Sg		**Sb**	**17 40 38.1**	**+4.0**
LZH				smax		smax		
	comp=N,520nm,1.0s							
LZH				smax		smax		
	comp=E,680nm,0.9s							
LZH				LR		LR		
	comp=N,3μm,6.2s							
LZH				LR		LR		
	comp=E,2μm,6.5s							
LZH				LR		LR		
	comp=Z,2μm,7.3s							
LSA	**Lhasa**	**9.34**	**213**	P		**Pn**	**17 40 01.7**	**+0.3**
LSA	**Lhasa**	**9.34**	**213**	Pn		**Pn**	**17 40 01.7**	**+0.3**
WMQ	**Urumqi**	**9.36**	**314**	*e*P		**Pn**	**17 40 03.1**	**+1.8**
WMQ				S		**Sn**	**17 41 50.2**	**+3.4**
WMQ				smax		smax		
	comp=N,160nm,1.1s							
WMQ				smax		smax		
	comp=E,200nm,1.1s							
WMQ	**Urumqi**	**9.36**	**314**	P		**Pn**	**17 40 03.3**	**+2.0**
WMQ	**Urumqi**	**9.36**	**314**			**Pn**	**17 40 03.2**	**+2.0**
XAN	**Xi'an**	**10.31**	**107**	P		**Pn**	**17 40 13.0**	**-1.3**
XAN				pP			17 40 18.0	
XAN				S		Sn	17 42 21.9	+12
XAN				pmax		pmax		
	comp=Z,10.0nm,1.2s							
XAN				pmax		pmax		
	comp=Z,78nm,3.6s							
XAN				LR		LR		
	comp=N,1μm,13.0s							
XAN				LR		LR		
	comp=E,780nm,13.6s							
XAN				LR		LR		
	comp=Z,580nm,11.2s							
XAN	**Xi'an**	**10.31**	**107**	P		**Pn**	**17 40 13.0**	**-1.3**
XAN	**Xi'an**	**10.31**	**107**			**Pn**	**17 40 13.0**	**-1.3**
BTO	**Baotou**	**10.51**	**70**	*e*P		**Pn**	**17 40 17.2**	**+0.2**
HHC	**Hu-ho-hao-te**	**11.71**	**70**	*e*P		**Pn**	**17 40 36.4**	**+3.0**
HHC				sP			17 40 47.4	
HHC				S		**Sn**	**17 42 46.7**	**+2.4**
HHC				sS			17 42 55.6	
HHC				pmax		pmax		
	comp=Z,17nm,0.9s							
HHC				pmax		pmax		
	comp=Z,48nm,5.9s							
HHC				LR		LR		
	comp=N,570nm,8.4s							
HHC				LR		LR		
	comp=E,530nm,9.2s							
HHC				LR		LR		
	comp=Z,550nm,8.0s							
TIY	**Taiyuan**	**12.21**	**85**	*e*P		**Pn**	**17 40 40.2**	**-0.1**
TIY				LR		LR		
	comp=N,530nm,7.7s							
TIY				LR		LR		
	comp=E,400nm,7.0s							
TIY				LR		LR		
	comp=Z,730nm,10.5s							
SONM	**Songino Array**	**12.25**	**31**	Pn		**Pn**	**17 40 43.6**	**+2.8**
	1.2nm,0.3s,baz=216,slow=15,SNR=48							
SONM				Lg		Lg	17 44 13.3	
	0.2nm,0.3s,baz=212,slow=32,SNR=4.4							
SONM				LR		LR	17 45 59.5	
	comp=Z,153nm,18.2s,baz=237,slow=40							
SONM	**Songino Array**	**12.25**	**31**	Pn		**Pn**	**17 40 43.9**	**+3.0**
ULN	**Ulaanbaatar**	**12.55**	**33**	*ce*P		**Pn**	**17 40 47.5**	**+2.5**
ULN				pmax		pmax		
	comp=Z,8.0nm,1.7s							
ULN	**Ulaanbaatar**	**12.55**	**33**	Pn		**Pn**	**17 40 47.1**	**+2.2**
ENH	**Enshi**	**12.70**	**122**	Pn		**Pn**	**17 40 45.0**	**-2.0**
SHL	**Shillong**	**12.84**	**201**	P		Pn	17 40 45.4	-3.6
SHL	**Shillong**	**12.84**	**201**	Pn		Pn	17 40 45.4	-3.6
TAPN	**Taplejung**	**12.95**	**220**	*e*P		**Pn**	**17 40 51.8**	**+1.2**
ZSN	**Zaisan**	**13.24**	**321**	*e*P		**Pn**	**17 40 53.9**	**-0.4**
	baz=321							
ZSN				LR		LR	17 45 42.7	
	comp=Z,113nm,9.2s,baz=321							
ZSN	**Zaisan**	**13.24**	**321**	*e*P		**Pn**	**17 40 53.8**	**-0.4**
ZSN				MLR		MLR		
	comp=Z,113nm,9.0s							
KMI	**Kunming**	**13.43**	**157**	⇓*e*P		**Pn**	**17 40 58.4**	**+1.3**
KMI				pP		P	17 41 03.0	-3.7
KMI				sP			17 41 06.9	
KMI				pmax		pmax		
	comp=Z,16nm,0.5s							
KMI				pmax		pmax		
	comp=Z,140nm,5.4s							
KMI				LR		LR		
	comp=Z,630nm,14.5s							
KMI				LR		LR		
	comp=Z,1μm,12.1s							
KMI				LR		LR		
	comp=Z,420nm,11.9s							
ZAK	**Zakamensk**	**13.46**	**17**	*e*P		P	17 41 00.6	-6.2
ZAK				pmax		pmax		
	comp=Z,6.0nm,1.5s							
GUN	**Gumba**	**13.51**	**227**	*e*P		Pn	17 40 57.5	-0.8
	comp=Z,17nm,0.7s							
ODAN	**Odare**	**13.51**	**220**	*e*P		**Pn**	**17 40 58.9**	**+0.7**
	comp=Z,29nm,0.8s							
GYA	**Guiyang**	**13.84**	**141**	⇑P		**Pn**	**17 41 05.3**	**+2.6**
GYA				S		**Sn**	**17 43 35.0**	**-1.6**
GYA				pmax		pmax		
	comp=Z,11nm,1.2s							
GYA				pmax		pmax		
	comp=Z,95nm,3.9s							
GYA				LR		LR		
	comp=Z,440nm,11.9s							
GYA				LR		LR		
	comp=Z,470nm,10.1s							
GYA				LR		LR		
	comp=Z,680nm,11.1s							
RAMN	**Ramite**	**13.85**	**222**	*e*P		**Pn**	**17 41 03.1**	**+0.2**
	comp=Z,68nm,1.1s							
PKI	**Pulchoki**	**14.04**	**227**	*e*P		Pn	17 41 03.0	-2.5
	comp=Z,22nm,0.8s							
PKIN	**Phulchoki**	**14.04**	**228**	*e*P		Pn	17 41 02.8	-2.7
	comp=Z,20nm,0.7s							
GKN	**Gorka**	**14.18**	**231**	*e*P		Pn	17 41 05.9	-1.5
	comp=Z,29nm,0.9s							
MK31	**Makanchi Array**	**14.20**	**315**	*ce*P		**Pn**	**17 41 08.3**	**+1.0**
MK31	**Makanchi Array**	**14.20**	**315**	Pn		**Pn**	**17 41 07.1**	**-0.2**
MKAR	**Makanchi Array**	**14.20**	**315**	Pn		**Pn**	**17 41 04.6**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=129,slow=14,SNR=25							
MKAR				Sn		**Sn**	**17 43 45.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=128,slow=26,SNR=1.7							
MKAR				Lg		Lg	17 45 23.4	
	comp=Z,0.1nm,0.3s,baz=125,slow=30,SNR=2.6							
MKAR	**Makanchi Array**	**14.20**	**315**	*i* P		**Pn**	**17 41 08.1**	**+0.8**
MKAR				pmax		pmax		
	comp=Z,4.0nm,0.7s							
MOY	**Mondy**	**14.26**	**10**	*e*P		**P**	**17 41 16.0**	**+0.3**
MOY				pmax		pmax		
	comp=Z,32nm,3.0s							
MAKZ	**Makanchi**	**14.38**	**314**	P		**Pn**	**17 41 05.8**	**-4.0**
MAKZ	**Makanchi**	**14.38**	**314**	Pn		**Pn**	**17 41 05.8**	**-4.0**
SHLS	**Shalkode**	**14.45**	**298**	*e*P		Pn	17 41 06.1	-4.8
	comp=Z,4.8nm,0.8s,baz=298							
SHLS				*e*S		**Sn**	**17 43 45.4**	**-5.8**
	baz=298							
SHLS				LR		LR	17 46 12.2	
	comp=Z,118nm,11.0s,baz=298							
SHLS	**Shalkode**	**14.45**	**298**	*e*P		Pn	17 41 06.9	-4.0
SHLS				*e*S		**Sn**	**17 43 45.4**	**-5.8**
SHLS				pmax		pmax		
	comp=Z,5.0nm,0.8s							
SHLS				MLR		MLR		
	comp=Z,118nm,11.0s							
DANN	**Dangsing**	**14.49**	**234**	*e*P		Pn	17 41 10.6	-1.1
	comp=Z,12nm,0.7s							
KOLN	**Koldanda**	**14.99**	**233**	*e*P		**Pn**	**17 41 18.4**	**-0.1**
	comp=Z,13nm,0.7s							
KPKS	**Kokpek**	**15.08**	**298**	*e*P		**Pn**	**17 41 18.6**	**-0.8**
	baz=298							
KPKS	**Kokpek**	**15.08**	**298**	*e*P		**Pn**	**17 41 18.6**	**-0.8**
BJT	**Baijiatuau**	**15.10**	**75**	P		**Pn**	**17 41 19.1**	**-0.5**
BJT				pmax		pmax		
	comp=Z,16nm,0.8s							
BJT	**Baijiatuau**	**15.10**	**75**			**Pn**	**17 41 19.1**	**-0.5**
BJI	**Beijing**	**15.11**	**75**	P		**P**	**17 41 27.8**	**+2.9**
BJI				S		**Sn**	**17 44 06.7**	**-0.3**
BJI				pmax		pmax		
	comp=Z,20nm,0.8s							
BJI				LR		LR		
	comp=Z,980nm,14.6s							
BJI				LR		LR		
	comp=Z,250nm,10.8s							
BJI				LR		LR		
	comp=Z,100nm,12.8s							
PYUN	**Piuthan**	**15.16**	**235**	*e*P		**Pn**	**17 41 20.9**	**+0.3**
	comp=Z,32nm,0.7s							
SATY	**Saty**	**15.17**	**297**	*e*P		**Pn**	**17 41 20.9**	**+0.3**
	baz=296							
SATY	**Saty**	**15.17**	**297**	*e*P		**Pn**	**17 41 20.9**	**+0.3**
TDK	**Taldyqorghan**	**15.76**	**304**	*e*P		**Pn**	**17 41 27.9**	**-0.5**
	baz=303							
TDK				LR		LR	17 47 01.2	
	comp=Z,182nm,11.2s,baz=303							
TDK	**Taldyqorghan**	**15.76**	**304**	*e*P		**Pn**	**17 41 27.8**	**-0.5**
TDK				MLR		MLR		
	comp=Z,182nm,11.0s							
WHN	**Wuhan**	**16.00**	**111**	⇓*i* P		**P**	**17 41 35.9**	**+0.9**
WHN				S		**Sn**	**17 44 28.9**	**-0.1**
WHN				pmax		pmax		
	comp=Z,68nm,0.8s							
WHN				LR		LR		
	comp=Z,910nm,12.5s							
WHN				LR		LR		
	comp=Z,640nm,10.4s							
WHN				LR		LR		
	comp=Z,960nm,13.1s							
TIA	**Tai'an**	**16.14**	**89**	P		**Pn**	**17 41 34.6**	**+1.4**
TIA				pmax		pmax		
	comp=Z,30nm,0.9s							
MDOK	**Medeo**	**16.16**	**296**	*e*P		**Pn**	**17 41 33.2**	**-0.4**
	comp=Z,107nm,1.4s,baz=296							
MDOK	**Medeo**	**16.16**	**296**	*e*P		**Pn**	**17 41 33.1**	**-0.4**
MDOK				pmax		pmax		
	comp=Z,107nm,1.4s							
KSH	**Kashi**	**16.56**	**283**	P		**Pn**	**17 41 40.3**	**+1.6**
KSH				S		**Sn**	**17 44 40.6**	**-2.1**
KSH				pmax		pmax		
	comp=Z,19nm,0.6s							
KSH				pmax		pmax		
	comp=Z,270nm,4.4s							
KSH				LR		LR		
	comp=Z,2μm,5.9s							
BOOM	**Boomskoye usch**	**16.82**	**293**	P		**Pn**	**17 41 40.9**	**-1.2**
BOOM				pmax		pmax		
	comp=Z,50nm,1.4s							
BOOM	**Boomskoye usch**	**16.82**	**293**	P		**Pn**	**17 41 40.9**	**-1.2**
KUU	**Kurty**	**16.83**	**298**	*e*P		**Pn**	**17 41 42.3**	**+0.3**
	comp=Z,5.6nm,0.8s,baz=298							
KUU				LR		LR	17 47 54.2	
	comp=Z,113nm,9.4s,baz=298							
KUU	**Kurty**	**16.83**	**298**	*e*P		**Pn**	**17 41 42.2**	**+0.3**
KUU				pmax		pmax		
	comp=Z,6.0nm,0.8s							
KUU				MLR		MLR		
	comp=Z,113nm,9.0s							
FRU1	**Bishkek**	**17.83**	**294**	P		**Pn**	**17 41 55.8**	**+1.3**
FRU1				pmax		pmax		
	comp=Z,27nm,1.2s							
FRU1	**Bishkek**	**17.83**	**294**	P		**Pn**	**17 41 55.8**	**+1.3**
SGDS	**Sogindy**	**17.94**	**296**	*e*P		**Pn**	**17 41 55.5**	**-0.4**
	baz=296							
SGDS				LR		LR	17 48 35.1	
	comp=Z,139nm,12.9s,baz=296							
SGDS	**Sogindy**	**17.94**	**296**	*e*P		**Pn**	**17 41 55.5**	**-0.4**
SGDS				MLR		MLR		
	comp=Z,139nm,13.0s							
ZAA0	**Zalesovo Array**	**18.32**	**337**	P		**P**	**17 42 01.1**	**+0.7**
ZALV	**Zalesovo Beam**	**18.32**	**337**	P		**P**	**17 42 01.8**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=143,slow=11,SNR=23							
ZALV				Lg		Lg	17 47 24.6	
	comp=Z,0.1nm,0.3s,baz=131,slow=29,SNR=2.9							
ZALV	**Zalesovo Beam**	**18.32**	**337**	*i* P		**P**	**17 42 02.2**	**+1.8**
ZALV				pmax		pmax		
	comp=Z,7.0nm,0.6s							
ZALV	**Zalesovo Beam**	**18.32**	**337**	P		**P**	**17 42 00.3**	**-0.1**
PAYA	**Payao**	**18.42**	**171**	P		**P**	**17 42 02.0**	**+0.2**
	comp=Z,1μmcomp=Z,169nm,0.8s							
KURBB	**Kurchatov Arra**	**18.47**	**320**	P		**P**	**17 42 02.6**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=132,slow=12,SNR=24							
KURBB				Lg		Lg	17 47 38.2	
	baz=135,slow=33,SNR=4.3							
KURK	**Kurchatov**	**18.48**	**321**	P		**P**	**17 42 02.7**	**+0.5**
KURK	**Kurchatov**	**18.48**	**321**	P		**Pn**	**17 42 01.5**	**-0.8**
BTLS	**Baital**	**18.71**	**300**	*e*P		**P**	**17 42 04.4**	**-0.5**
	baz=300							
BTLS				LR		LR	17 48 54.4	
	comp=Z,180nm,14.1s,baz=300							
BTLS	**Baital**	**18.71**	**300**	*e*P		**P**	**17 42 04.3**	**-0.5**
BTLS				MLR		MLR		
	comp=Z,180nm,14.0s							
NJ2	**Nanjing**	**18.76**	**101**	*e*P		**P**	**17 42 05.6**	**+0.2**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
CM34	**Chiang Mai Arr**	**18.85**	**174**	P		**P**	**17 42 07.0**	**+0.5**
CM33	**Chiang Mai Arr**	**18.87**	**174**	P		**P**	**17 42 09.2**	**+2.5**
CHTO	**Chiang Mai**	**18.87**	**174**	P		**P**	**17 42 06.7**	**0.0**
CHTO				pmax		pmax		
	comp=Z,15nm,1.6s							
CHTO	**Chiang Mai**	**18.87**	**174**			**P**	**17 42 06.7**	**0.0**
CMMT	**Chiang Mai**	**18.87**	**174**	P		**P**	**17 42 08.9**	**+2.2**
	comp=Z,2.5nm,1.1s							
CM32	**Chiang Mai Arr**	**19.02**	**175**	P		**P**	**17 42 12.0**	**+3.6**
CM35	**Chiang Mai Arr**	**19.02**	**174**	P		**P**	**17 42 09.0**	**+0.6**
CM36	**Chiang Mai Arr**	**19.18**	**174**	P		**P**	**17 42 11.0**	**+0.9**
CM31	**Chiang Mai Arr**	**19.23**	**174**	P		**P**	**17 42 14.0**	**+3.4**
	comp=Z,140nm,1.0s							
CM31	**Chiang Mai Arr**	**19.23**	**174**	P		**P**	**17 42 09.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**19.23**	**174**	P		**P**	**17 42 09.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=342,slow=11,SNR=17							
CMAR				PcP		**PcP**	**17 46 33.1**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=282,slow=1.9,SNR=3.7							
CMAR				LR		LR	17 50 00.9	
	comp=Z,250nm,19.1s,baz=16,slow=39							
CMAR	**Chiang Mai Arr**	**19.23**	**174**	*ce*P		**P**	**17 42 10.0**	**-0.6**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
CM15	**Chiang Mai Arr**	**19.23**	**175**	P		**Pn**	**17 42 14.9**	**+3.4**
CM09	**Chiang Mai Arr**	**19.24**	**174**	P		**P**	**17 42 12.0**	**+1.2**
	comp=Z,54nmcomp=Z,5.7nm,0.8s							
CM02	**Chiang Mai Arr**	**19.25**	**174**	P		**P**	**17 42 12.0**	**+1.1**
	comp=Z,66nmcomp=Z,5.3nm,0.9s							
CM13	**Chiang Mai Arr**	**19.26**	**175**	P		**P**	**17 42 15.2**	**+4.2**
	comp=Z,40nmcomp=Z,5.0nm,0.8s							
CM01	**Chiang Mai Arr**	**19.26**	**174**	P		**P**	**17 42 15.0**	**+4.0**
	comp=Z,53nmcomp=Z,6.1nm,1.0s							
CM05	**Chiang Mai Arr**	**19.28**	**174**	P		**P**	**17 42 13.4**	**+2.2**
	comp=Z,3.5nm,1.0s							
CM04	**Chiang Mai Arr**	**19.29**	**174**	P		**P**	**17 42 12.9**	**+1.7**
	comp=Z,6.0nm,1.0s							
MHMT	**Maesariang**	**19.45**	**177**	P		**Pn**	**17 42 19.0**	**+4.8**
	comp=Z,12nm,0.9s							
NIL	**Nilore**	**19.72**	**265**	P		**P**	**17 42 17.0**	**+1.0**
NIL				pmax		pmax		
	comp=Z,12nm,0.8s							
NIL	**Nilore**	**19.72**	**265**			**P**	**17 42 17.0**	**+1.0**
HIA	**Hailar**	**20.06**	**48**	P		**Pn**	**17 42 20.5**	**-0.9**
HIA				pmax		pmax		
	comp=Z,26nm,1.7s							
HIA	**Hailar**	**20.06**	**48**	P		**Pn**	**17 42 20.5**	**-0.9**
UTTA	**Uttaradit**	**20.10**	**170**	P		Pn	17 42 25.2	+3.3
	comp=Z,10nm,0.9s							
SUKH	**Sukhothai**	**20.25**	**173**	P		**P**	**17 42 23.0**	**+1.2**
	comp=Z,8.4nm,0.7s							
BTK	**Batken**	**20.52**	**285**	P		**P**	**17 42 25.5**	**+0.7**
BTK				pmax		pmax		
	comp=Z,13nm,1.2s							
BTK	**Batken**	**20.52**	**285**			**P**	**17 42 25.4**	**+0.7**
KK31	**Karatay Array**	**20.87**	**293**	P		**P**	**17 42 29.0**	**+0.6**
KK31				pmax		pmax		
	comp=Z,11nm,0.8s							
KK31	**Karatay Array**	**20.87**	**293**	P		**P**	**17 42 29.0**	**+0.6**
KKAR	**Karatay Array**	**20.87**	**293**	P		**P**	**17 42 29.1**	**+0.7**
KKAR				pmax		pmax		
	comp=Z,11nm,0.8s							
KKAR	**Karatay Array**	**20.87**	**293**	P		**P**	**17 42 29.1**	**+0.7**
KKAR	**Karatay Array**	**20.87**	**293**	P		**P**	**17 42 28.7**	**+0.4**
SSE	**Sheshan**	**20.96**	**101**	P		**P**	**17 42 29.3**	**-0.1**
SSE				IAmb		IAmb	17 42 34.3	
	comp=Z,62nm,0.7s							
GAR	**Garm**	**20.97**	**282**	P		**P**	**17 42 29.3**	**-0.3**
GAR				IAmb		IAmb	17 42 33.6	
	comp=Z,46nm,0.8s							
IUG	**Iuzhnay**	**21.14**	**291**	*e*P		**P**	**17 42 31.6**	**+0.2**
	comp=Z,18nm,0.9s,baz=290							
IUG				LR		LR	17 50 49.2	
	comp=Z,128nm,14.0s,baz=290							
IUG	**Iuzhnay**	**21.14**	**291**	*e*P		**P**	**17 42 31.6**	**+0.2**
IUG				pmax		pmax		
	comp=Z,18n

comp=Z,310nm,10.0s
CN2 LR LR
comp=Z,190nm,10.0s
CN2 LR LR
comp=Z,310nm,11.0s
KBL Kabul 22.79 271 P **P** **17 42 49.5 +0.2**
KBL pmax pmax
comp=Z,16nm,1.0s
KBL Kabul 22.79 271 P **P** **17 42 49.5 +0.2**
BVAR Borovoye Array 24.01 318 P **P** **17 43 01.9 +0.8**
comp=Z,6.5nm,0.9s,baz=214,slow=21,SNR=18
BRVK Borovoye 24.08 318 P **P** **17 43 02.5 +0.8**
BRVK pmax pmax
comp=Z,17nm,0.9s
BRVK Borovoye 24.08 318 P **P** **17 43 02.5 +0.8**
BRVK IAmb IAmb 17 43 14.1
comp=Z,17nm,0.8s
TJN Taejon 24.21 84*ce*P **P** **17 43 01.5 -1.5**
KS19 Wonju Array Si 24.39 81 P **P** **17 43 05.2 +0.5**
KS19 IAmb IAmb 17 43 06.3
comp=Z,22nm,1.0s
KSAR Wonju Array Be 24.41 81 P **P** **17 43 04.9 0.0**
KSAR Wonju Array Be 24.41 81 P **P** **17 43 04.9 0.0**
KSRS Korea Array 24.44 81 P **P** **17 43 05.3 +0.1**
comp=Z,18nm,0.9s,baz=273,slow=9.5,SNR=41
KSRS LR LR 17 52 12.8
comp=Z,34nm,20.7s,baz=269,slow=36
YHNB Yeheng 24.46 115 P **P** **17 43 05.5 0.0**
PATY Pattaya 24.89 171 P **P** **17 43 10.0 +0.7**
NACB Ninganchiao 24.92 116 P **P** **17 43 09.6 0.0**
NACB IAmb IAmb 17 43 12.4
comp=Z,25nm,0.9s
TWG Pinlang 25.41 119 P **P** **17 43 14.5 +0.5**
TWG IAmb IAmb 17 43 17.4
comp=Z,39nm,1.1s
ZEA Zeya 26.25 43 *e*P **P** **17 43 23.3 +1.9**
ZEA pmax pmax
comp=Z,10.0nm,1.1s
USRK Ussuriysk Ar. 27.06 65 P **P** **17 43 29.7 +0.9**
comp=Z,2.1nm,0.8s,baz=238,slow=11,SNR=4.3
KLR Kul'dur 27.48 54 *i* P **P** **17 43 33.2 +0.6**
KLR pmax pmax
comp=Z,1.0nm,0.6s
JNU Nakatsue 27.87 89 P **P** **17 43 36.1 -0.1**
comp=Z,22nm,1.1s,baz=24,slow=7.8,SNR=4.8
JNU Nakatsue 27.87 89 P **P** **17 43 36.1 -0.1**
JNU IAmb IAmb 17 43 43.6
comp=Z,38nm,1.2s
ABKAR Akbulak array 29.01 305 P **P** **17 43 46.9 +0.7**
ABKAR Akbulak array 29.01 305 P **P** **17 43 46.8 +0.7**
JMN Monobe 30.06 86 P **P** **17 43 55.9 +0.2**
JMN IAmb IAmb 17 43 56.3
comp=Z,18nm,1.0s
AKTO Aktyubinsk 30.43 307 P **P** **17 43 59.9 +1.1**
comp=Z,4.0nm,0.7s,baz=91,slow=9.2,SNR=11
GEYT Alibeck 30.59 283 P **P** **17 44 01.3 +0.9**
comp=Z,5.4nm,1.0s,baz=83,slow=4.6,SNR=7.5
GEYT Alibeck 30.59 283 P **P** **17 44 01.0 +0.6**
JWT Wachi 30.81 83 P **P** **17 44 02.5 +0.3**
JWT IAmb IAmb 17 44 50.8
comp=Z,50nm,1.7s
ARU Arti 31.65 319*d i*P **P** **17 44 10.4 +1.0**
ARU 17 45 12.4
ARU S **S** **17 49 22.8 +4.2**
ARU SS **SnSn** **17 51 12.5 +8.2**
ARU pmax pmax
comp=Z,23nm,1.0s
ARU Arti 31.65 319 P **P** **17 44 10.2 +0.7**
ARU IAmb IAmb 17 44 14.5
comp=Z,22nm,1.0s
TGY Tagaytay City 31.67 131 P **P** **17 44 08.5 -1.5**
comp=Z,101nm,0.3s,baz=18,slow=3.2,SNR=3.7
TGY LR LR 17 57 50.8
comp=Z,157nm,20.2s,baz=114,slow=38
NRIK Noril'sk 32.13 354 P **P** **17 44 13.9 +0.4**
comp=Z,5.3nm,0.8s,baz=133,slow=5.6,SNR=4.2
NRIK Noril'sk 32.13 354 *i* P **P** **17 44 15.5 +2.0**
NRIK pmax pmax
comp=Z,9.0nm,1.3s
KULM Kulim 32.41 173 P **P** **17 44 15.5 -0.9**
MJAR Matsushiro Arr 32.68 79 P **P** **17 44 17.9 -0.8**
comp=Z,1.9nm,0.8s,baz=280,slow=11,SNR=6.2
MJAR PcP **PcP** **17 47 04.2 -0.3**
comp=Z,1.3nm,0.7s,baz=293,slow=1.2,SNR=7.3
MJAR Matsushiro Arr 32.68 79 IAmb IAmb 17 44 24.2
comp=Z,1.5nm,0.9s
PALK Pallekele 33.70 210 P **P** **17 44 27.5 -0.3**
PALK pmax pmax
comp=Z,40nm,1.6s
PALK Pallekele 33.70 210 P **P** **17 44 27.4 -0.3**
PALK IAmb IAmb 17 44 53.3
comp=Z,40nm,1.6s
JMM Marumori 34.36 76 P **P** **17 44 31.6 -1.7**
JMM IAmb IAmb 17 45 19.5
comp=Z,21nm,1.1s
KKM Kota Kinabalu 36.01 146 P **P** **17 44 47.6 -0.2**
KKM IAmb IAmb 17 45 32.2
comp=Z,26nm,1.2s
KIRV Kirov 37.00 320*ce*P **P** **17 44 55.9 +0.3**
MAK Makhachkala 37.68 294 *e*P P 17 44 56.2 -5.5
MAK *e*S **S** **17 50 45.0 -6.7**
MAK *e*SS **SnSn** **17 53 24.6 -6.1**
MAK MLR MLR
comp=Z,159nm,17.0s
MYLDM Lahad Datu 37.82 144 P **P** **17 45 03.6 +0.5**
MYLDM IAmb IAmb 17 45 05.3
comp=Z,18nm,0.8s
GNI Garni 40.27 290 P **P** **17 45 23.5 -0.2**
GNI pmax pmax
comp=Z,14nm,1.4s
GNI Garni 40.27 290 P **P** **17 45 23.5 -0.2**
VRH Novokhopyorsk 40.78 308 *e*P **P** **17 45 31.0 +3.6**
VRH pmax pmax
comp=Z,20nm,0.7s
KBZ Khabaz 40.86 296 P **P** **17 45 28.6 +0.4**
comp=Z,1.1nm,0.8s,baz=56,slow=24,SNR=1.8
KBZ LR LR 18 05 44.0
comp=Z,74nm,18.2s,baz=150,slow=41
KIV Kislovodsk 40.97 296 *e*P **P** **17 45 29.6 +0.3**
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,224nm,16.0s
KIV Kislovodsk 40.97 296 P **P** **17 45 29.4 +0.1**
GEVA Gevas 42.02 288 P **P** **17 45 40.1 +2.1**
KLMR Klimovskoe 42.32 322 *e*P **P** **17 45 39.4 -0.5**
KLMR pmax pmax
comp=Z,17nm,0.8s
KLMR Klimovskoe 42.32 322 *e*P **P** **17 45 39.4 -0.5**
KLMR AMP 17 45 45.0
comp=Z,17nm,0.8s
VSR Storozhevoye 42.38 308 *e*P **P** **17 45 44.2 +3.6**
VSR pmax pmax
comp=Z,10.0nm,0.6s
LPSR Galich'ya Gora 42.43 310 *e*P **P** **17 45 44.9 +3.9**
LPSR pmax pmax
comp=Z,30nm,0.6s
KOPT Kop Dagi 43.46 291 P **P** **17 45 48.6 -1.3**
OBN Obninsk 43.70 314 *e*P **P** **17 45 51.8 +0.6**
OBN pmax pmax
comp=Z,53nm,2.5s
OBN Obninsk 43.70 314 P **P** **17 45 51.2 0.0**
OBN IAmb IAmb 17 46 00.1
comp=Z,72nm,1.8s
MARD Mardin 44.04 288 P **P** **17 45 53.8 -0.6**
MARD IAmb IAmb 17 45 59.3
comp=Z,12nm,1.0s
ANN Anapa 44.49 299 *e*P **P** **17 45 53.9 -3.8**
ANN *e**PP **pP** **17 45 58.6 -3.1**
ANN *e* 17 47 37.0
ANN *e*S **S** **17 52 28.5 -4.4**
ANN pmax pmax
comp=Z,20nm,1.1s
LUWI Luwuk 45.29 142 P **P** **17 46 02.9 -1.4**
LUWI IAmb IAmb 17 46 10.4
comp=Z,17nm,0.9s
TTSI Tana Toraja 45.71 147 P **P** **17 46 08.1 +0.5**
comp=Z,23nm,0.8s
KPJI Karang Pucung 46.14 164 P **P** **17 46 11.6 +0.6**
comp=Z,31nm,1.1s
TNTI Ternate 46.15 136 **P** **17 46 09.8 -1.3**
TNTI IAmb IAmb 17 46 11.9
comp=Z,33nm,1.6s
JOF Joensuu 46.33 325 P **P** **17 46 13.3 +1.3**
JOF pmax pmax
comp=Z,24nm,2.0s
SPSI Sidrap Palu 46.51 148 P **P** **17 46 13.7 -0.3**
comp=Z,37nm,1.0s
KAPI Kappang 47.45 149 P **P** **17 46 20.3 -1.0**
KAPI pmax pmax
comp=Z,9.0nm,0.9s
KAPI Kappang 47.45 149 P **P** **17 46 20.3 -1.0**
KAPI IAmb IAmb 17 46 21.8
comp=Z,8.8nm,0.9s
SANI Sanana 47.77 139 P **P** **17 46 22.5 -1.3**
comp=Z,23nm,0.8s
BILL Bilibino 47.95 28 *e*P **P** **17 46 24.6 0.0**
BILL *e* 17 48 18.3
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL Bilibino 47.95 28 P **P** **17 46 25.1 +0.4**
BILL IAmb IAmb 17 46 58.5
comp=Z,36nm,1.7s
ILGA Ilgaz 48.11 295 P **P** **17 46 26.5 0.0**
ILGA IAmb IAmb 17 46 31.7
comp=Z,11nm,0.6s
BR131 Keskin Array S 48.58 293 P **P** **17 46 29.6 -0.5**
BR131 pmax pmax
comp=Z,4.0nm,0.9s
BR131 Keskin Array S 48.58 293 P **P** **17 46 29.6 -0.5**
BRTR Keskin Array B 48.58 293 P **P** **17 46 30.6 +0.5**
comp=Z,3.5nm,0.7s,baz=105,slow=6.4,SNR=10
BRTR Keskin Array B 48.58 293 P **P** **17 46 29.9 -0.2**
XMIS Christmas Isla 48.58 169 P **P** **17 46 28.2 -1.8**
AKASG Malin Array Be 48.67 308 P **P** **17 46 30.5 +0.1**
comp=Z,2.2nm,0.5s,baz=67,slow=7.9,SNR=6.7
AKASG Malin Array Be 48.67 308 *i* P **P** **17 46 33.9 +3.5**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 48.67 308 IAmb IAmb 17 46 35.6
comp=Z,1.3nm,0.7s
AKBB Malin Array Si 48.67 308 P **P** **17 46 30.4 0.0**
AKBB pmax pmax
comp=Z,9.0nm,1.0s
AKBB Malin Array Si 48.67 308 P **P** **17 46 30.4 0.0**
AKBB IAmb IAmb 17 46 34.7
comp=Z,8.7nm,1.0s
GUMO Guam 48.71 106 P **P** **17 46 30.1 -1.0**
GUMO Guam 48.71 106 P **P** **17 46 30.1 -1.0**
FIA1 FINESS Array S 48.83 323 P **P** **17 46 32.0 +0.5**
FIA1 IAmb IAmb 17 46 36.9
comp=Z,18nm,0.9s
ARCES ARCESS Array B 48.83 334 P **P** **17 46 32.7 +1.3**
comp=Z,6.6nm,1.0s,baz=79,slow=6.3,SNR=6.3
ARCES PcP **PcP** **17 47 55.5 -0.4**
comp=Z,2.3nm,0.5s,baz=96,slow=3.6,SNR=16
FINES FINESS Array B 48.83 323 P **P** **17 46 32.3 +0.8**
comp=Z,9.9nm,0.7s,baz=90,slow=8.4,SNR=37
FINES PcP **PcP** **17 47 55.5 -0.5**
comp=Z,1.9nm,0.5s,baz=71,slow=3.8,SNR=8.4
FINES FINESS Array B 48.83 323 P **P** **17 46 31.8 +0.3**
NACGM Naroch 49.32 314 *e* **P** **17 46 36.0 +0.7**
TLCR 50.31 301 ⇑P **P** **17 46 43.5 +0.5**
TLCR 50.31 301 ⇑P **P** **17 46 43.5 +0.5**
TPGR Topolog 50.67 301 ⇓P **P** **17 46 49.8 +4.0**
ICOR Ion Corvin 51.32 300 ⇑P P 17 46 55.5 +4.9
PRAR RASCA 51.41 305 ⇓P **P** **17 46 54.5 +3.2**
EIL Elat 51.45 281 P **P** **17 46 51.1 -0.8**
comp=Z,7.8nm,0.9s,baz=124,slow=7.3,SNR=2.3
VRI Vrincioaia 51.51 303 ⇓P **P** **17 46 55.8 +3.7**
VRI Vrincioaia 51.51 303 ⇓P **P** **17 46 55.8 +3.7**
PLOR Plostina 51.57 303 ⇓P **P** **17 46 53.6 +1.1**
PLOR Plostina 51.57 303 ⇓P **P** **17 46 53.6 +1.1**
BIZ Bicaz 51.61 304 ⇓P **P** **17 46 56.8 +4.0**
ISR Istrita 51.87 302 ⇑P P 17 47 00.1 +5.3
ISR Istrita 51.87 302 ⇑P P 17 47 00.1 +5.3
NEHR Nehoiu 51.94 302 ⇓P **P** **17 46 57.9 +2.6**
BURAR Bucovina Array 51.99 305 ⇓P **P** **17 46 55.6 -0.1**
BURAR Bucovina Array 51.99 305 ⇓P **P** **17 46 55.6 -0.1**
BURAR Bucovina Array 51.99 305 P **P** **17 46 55.4 -0.4**
BUR08 Bucovina Ar. S 51.99 305 P **P** **17 46 55.7 -0.1**
BUR08 IAmb IAmb 17 47 32.6
comp=Z,14nm,1.4s
MLR Muntele Rosu 52.15 303 P **P** **17 46 57.4 +0.4**
MLR Muntele Rosu 52.15 303 ⇑P **P** **17 46 57.4 +0.4**
DOPR Dopca 52.37 303 ⇑P **P** **17 46 59.6 +1.1**
VOIR 52.77 303 ⇑P **P** **17 47 02.3 +0.8**
VOIR 52.77 303 ⇑P **P** **17 47 02.3 +0.8**
KWP Kalwaria Pacla 52.99 308 *e*P **P** **17 47 04.1 +1.1**
KWP Kalwaria Pacla 52.99 308 P **P** **17 47 03.7 +0.6**
KWP pmax pmax
comp=Z,26nm,0.8s
KWP Kalwaria Pacla 52.99 308 P **P** **17 47 03.6 +0.6**
KWP IAmb IAmb 17 47 08.4
comp=Z,26nm,0.8s
KOLS Kolonicke sedl 53.48 308 *e*P **P** **17 47 07.5 +0.9**
KOLS Kolonicke sedl 53.48 308 *e*P **P** **17 47 07.5 +0.9**
UZH Uzhgorod 53.55 307 *e*P **P** **17 47 03.2 -3.9**
UZH *e* 17 47 06.6
UZH *e* 17 47 12.0
ALN Alexandroupoli 53.63 297 P **P** **17 47 07.0 -0.8**
ALN pmax pmax
comp=Z,18nm,1.5s
ALN Alexandroupoli 53.63 297 P **P** **17 47 07.0 -0.8**
ALN IAmb IAmb 17 47 16.8
comp=Z,18nm,1.5s
SOEI Soe 53.64 146 P **P** **17 47 05.8 -2.4**
SOEI IAmb IAmb 17 47 21.3
comp=Z,15nm,0.9s
GZR Gura Zlata 54.29 303 ⇓P **P** **17 47 13.0 +0.3**
GZR Gura Zlata 54.29 303 ⇓P **P** **17 47 13.0 +0.3**
OJC Ojcow 54.61 310 *e*P **P** **17 47 15.7 +0.9**
OJC Ojcow 54.61 310 P **P** **17 47 15.1 +0.3**
OJC pmax pmax
comp=Z,11nm,0.8s
OJC Ojcow 54.61 310 P **P** **17 47 15.1 +0.3**
OJC IAmb IAmb 17 47 20.3
comp=Z,11nm,0.8s
SIRR Siria 54.73 305 ⇑P **P** **17 47 20.3 +4.5**
NC405 NORSAR Array S 55.70 324 P **P** **17 47 22.5 0.0**
VYHS Vyhne 55.77 308 *e*P **P** **17 47 24.3 +1.0**
VYHS Vyhne 55.77 308 *e*P **P** **17 47 24.3 +1.0**
NC303 NORSAR Array S 55.82 324 P **P** **17 47 24.2 +0.8**
NB201 NORSAR Array S 55.91 324 P **P** **17 47 24.5 +0.4**
NB2 NORSAR Subarra 55.95 324 P **P** **17 47 24.1 -0.3**
comp=Z,7.6nm,0.8s,baz=72,slow=7.4
NOA NORSAR Array B 55.95 324 P **P** **17 47 24.6 +0.2**
comp=Z,5.2nm,0.8s,baz=78,slow=7.9,SNR=15
MORC Moravsky Berou 56.13 310 P **P** **17 47 25.7 -0.1**
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 56.13 310 P **P** **17 47 25.7 -0.1**
KRLC Kraliky 56.49 310 *e*P **P** **17 47 29.1 +0.7**
KRLC *e* 17 47 32.7
KRLC Kraliky 56.49 310 *e*P **P** **17 47 29.1 +0.7**
KRLC *e*pP **pP** **17 47 32.7 +0.2**
OSTC Ostas 56.66 311 *e*P **P** **17 47 33.3 +3.7**
DPC Dobruska-Polom 56.67 311 *e*P **P** **17 47 31.0 +1.3**
DPC *e* 17 47 34.7
DPC Dobruska-Polom 56.67 311 *e*P **P** **17 47 31.0 +1.3**
DPC *e*pP **pP** **17 47 34.7 +0.9**
CHVC Chvalec 56.75 311 *e*P **P** **17 47 31.2 +1.0**
CHVC *e*pP **pP** **17 47 35.0 +0.7**
AGG Agios Georgios 56.99 296 P **P** **17 47 30.6 -1.5**
AGG pmax pmax
comp=Z,21nm,1.4s
AGG Agios Georgios 56.99 296 P **P** **17 47 30.6 -1.5**
AGG IAmb IAmb 17 47 45.4
comp=Z,21nm,1.4s
CONA Conrad Observa 57.83 308 *e*P **P** **17 47 38.9 +0.9**
comp=Z,1.8nm,0.7s
PRU Pruhonice 57.87 311 *e*P **P** **17 47 38.9 +0.8**
PRU *e* 17 47 42.5
PRU Pruhonice 57.87 311 *e*P **P** **17 47 38.9 +0.8**
PRU *e*pP **pP** **17 47 42.5 +0.3**
BRG Berggiesshubel 57.90 312 *e*P **P** **17 47 38.6 +0.3**
comp=Z,34nm,2.1s
BRG Berggiesshubel 57.90 312 *e*P **P** **17 47 38.6 +0.3**
BRG pmax pmax
comp=Z,34nm,2.1s
CLL Collm 58.29 313 *e*P **P** **17 47 41.0 0.0**
comp=Z,4.0nm,0.7s
CLL *e* 17 47 44.0
comp=Z,6.0nm,0.8s
CLL Lm MLR 18 13 00.0
comp=N,300nm,20.7s
CLL Lm MLR 18 13 00.0
comp=E,100nm,21.5s
CLL Lm MLR 18 13 00.0
comp=Z,200nm,20.5s
CLL Collm 58.29 313 *e*P **P** **17 47 41.0 0.0**
CLL *e* 17 47 44.0
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 58.29 313 P **P** **17 47 41.4 +0.4**
CLL IAmb IAmb 17 47 45.8
comp=Z,4.9nm,0.8s
PBCC Pribram 58.31 311 *e*P **P** **17 47 41.8 +0.6**
PBCC *ex* x 17 47 45.8
KHC Kasperske Hory 58.77 310 *e*P **P** **17 47 45.5 +1.0**
KHC Kasperske Hory 58.77 310 *e*P **P** **17 47 45.5 +1.0**
GERES GERESS Array B 58.81 310 P **P** **17 47 45.6 +0.8**
comp=Z,1.8nm,0.8s,baz=64,slow=6.1,SNR=9.3
GERES LR LR 18 13 53.1
comp=Z,132nm,19.3s,baz=82,slow=37
SOKA Soboth 58.84 307 *e*P **P** **17 47 45.3 +0.3**
comp=Z,4.6nm,0.9s
A21K Barrow 59.72 21 P **P** **17 47 52.2 +1.6**
A21K IAmb IAmb 17 48 11.1
comp=Z,25nm,1.6s
WTTA Wattenberg 60.72 309 *e*P **P** **17 47 58.0 -0.1**
comp=Z,9.1nm,1.0s
WATA Walderalm 60.72 309 *e*P **P** **17 47 58.8 +0.7**
comp=Z,6.9nm,1.0s
KNRA Kununurra 60.89 145 P **P** **17 47 58.3 -0.9**
SQTA Sankt Quirin 61.00 309 *e*P **P** **17 47 59.7 -0.2**
comp=Z,6.6nm,0.8s
MOTA Moosalm 61.01 309 *e*P **P** **17 48 00.1 +0.1**
comp=Z,9.2nm,0.9s
RETA Reutte 61.16 309 *e*P **P** **17 48 01.8 +0.9**
comp=Z,3.2nm,0.8s
FETA Feichten 61.38 309 *e*P **P** **17 48 01.3 -1.3**
comp=Z,5.9nm,1.9s
FITZ Fitzroy Crossi 61.67 149 P **P** **17 48 03.5 -1.0**
FITZ IAmb IAmb 17 48 48.5
comp=Z,7.0nm,1.4s
NRCA Norcia 61.69 304 P **P** **17 48 04.8 +0.2**
NRCA IAmb IAmb 17 48 09.1
comp=Z,8.0nm,1.0s
FUORN Ofenpass-Fuorn 61.84 309 P **P** **17 48 06.0 +0.1**
FUORN IAmb IAmb 17 48 15.9
comp=Z,8.1nm,1.1s
DAVOX Davos/Dischmat 62.01 309 LR LR 18 17 33.2
comp=Z,132nm,18.1s,baz=40,slow=38
TUE Stuetta 62.48 309 P **P** **17 48 10.0 0.0**
TUE IAmb IAmb 17 48 13.9
comp=Z,6.6nm,0.7s
TOLK Toolik Lake Re 63.20 22 P **P** **17 48 15.5 +1.2**
TOLK IAmb IAmb 17 48 15.9
comp=Z,5.3nm,0.8s
MSSA Maissana 63.35 307 P **P** **17 48 15.7 0.0**
MSSA IAmb IAmb 17 48 47.3
comp=Z,12nm,1.1s
IMAR Indian Mountai 63.36 26 P **P** **17 48 15.9 +0.6**
SENIN Lac Senin/Sane 63.79 309 P **P** **17 48 17.3 -1.4**
SENIN IAmb IAmb 17 48 24.4
comp=Z,5.7nm,0.9s
COLD Coldfoot 63.83 24 P **P** **17 48 19.5 +1.2**
BNI Bardonecchia 64.79 308 P **P** **17 48 25.4 +0.2**
BNI pmax pmax
comp=Z,27nm,1.7s
BNI Bardonecchia 64.79 308 P **P** **17 48 25.4 +0.2**
BNI IAmb IAmb 17 48 42.0
comp=Z,27nm,1.7s
EKR8 Eskdalemuir Ar 65.18 322 P **P** **17 48 27.7 +0.3**
BPAW Bear Paw Mtn. 65.39 27 P **P** **17 48 29.0 +0.3**
BPAW IAmb IAmb 17 49 08.4
comp=Z,17nm,1.6s
PPLA Purkeypile 65.66 28 P **P** **17 48 30.6 0.0**
KTH Kantishna Hill 65.74 27 P **P** **17 48 32.1 +1.1**
KTH IAmb IAmb 17 49 00.8
comp=Z,29nm,1.7s
MDM Murphy Dome 65.83 25 P **P** **17 48 32.1 +0.6**
MDM IAmb IAmb 17 49 10.6
comp=Z,25nm,1.8s
IL31 66.40 25 P **P** **17 48 35.4 +0.3**
IL31 IAmb IAmb 17 48 38.7
comp=Z,15nm,1.8s
ILAR Eielson Array 66.40 25 P **P** **17 48 34.8 -0.3**
comp=Z,1.0nm,0.7s,baz=291,slow=5.8,SNR=11
ILAR Eielson Array 66.40 25 P **P** **17 48 35.4 +0.3**
ILAR Eielson Array 66.40 25 P **P** **17 48 35.4 +0.3**
IL18 Eielson Array 66.44 25 P **P** **17 48 35.2 -0.2**
SKT Skwentna 66.45 29 P **P** **17 48 36.0 +0.4**
SUA Susitna One 67.06 29 P **P** **17 48 39.4 -0.1**
WB0 Warramunga Arr 67.09 142 P **P** **17 48 38.5 -1.6**
WB0 IAmb IAmb 17 48 39.5
comp=Z,6.3nm,0.8s
KMBO Kilima Mbogo 67.20 250 P **P** **17 48 42.4 +1.2**
comp=Z,1.4nm,0.5s,baz=78,slow=5.8,SNR=4.7
KMBO Kilima Mbogo 67.20 250 IAmb IAmb 17 48 44.7
comp=Z,2.4nm,0.8s
WRAB Tennant Creek 67.21 142*ce*P **P** **17 48 40.2 -0.6**
WRAB pmax pmax
comp=Z,10.0nm,1.7s
WRAB Tennant Creek 67.21 142 P **P** **17 48 39.4 -1.4**
WRAB IAmb IAmb 17 48 40.4
comp=Z,6.4nm,0.8s
WRA Warramunga Arr 67.22 142 P **P** **17 48 39.4 -1.5**
comp=Z,4.2nm,0.8s,baz=342,slow=6.4,SNR=36
WRA Warramunga Arr 67.22 142 P **P** **17 48 39.3 -1.5**
WB2 Warramunga Arr 67.22 142 P **P** **17 48 39.4 -1.5**
WB2 IAmb IAmb 17 48 40.4
comp=Z,6.8nm,0.8s
WC3 Warramunga Arr 67.25 142 P **P** **17 48 39.9 -1.2**
WC3 IAmb IAmb 17 48 40.6
comp=Z,6.9nm,0.9s
DHY Denali Highway 67.30 26 P **P** **17 48 41.0 0.0**
DHY IAmb IAmb 17 48 52.0
comp=Z,21nm,1.7s
WR0 Warramunga Arr 67.33 142 P **P** **17 48 40.1 -1.4**
SML Sawmill 67.76 28 P **P** **17 48 43.9 +0.1**
INK Inuvik 67.81 18 P **P** **17 48 44.3 +0.2**
comp=Z,4.4nm,0.8s,baz=347,slow=7.4,SNR=8.7
INK Inuvik 67.81 18 P **P** **17 48 44.2 +0.2**
INK pmax pmax
comp=Z,9.0nm,1.3s
INK Inuvik 67.81 18 P **P** **17 48 44.1 +0.2**
INK IAmb IAmb 17 48 59.4
comp=Z,8.5nm,1.2s
KNK Knik Glacier 67.96 28 P **P** **17 48 45.9 +0.8**
SCM Sheep Creek Mo 68.11 27 P **P** **17 48 46.8 +0.7**
SCM pmax pmax
comp=Z,91nm,1.8s
SCM Sheep Creek Mo 68.11 27 P **P** **17 48 46.8 +0.7**
M24K Tolsona, Glenn 68.35 27 P **P** **17 48 48.1 +0.6**
KDAK Kodiak Island 68.54 33 P **P** **17 48 49.2 +0.5**
KDAK Kodiak Island 68.54 33 P **P** **17 48 49.2 +0.5**
OHAK Old Harbor 68.57 33 P **P** **17 48 49.5 +0.6**
MORW Morawa 68.75 162 P **P** **17 48 49.8 -0.5**
KLU Klutina 68.84 27 P **P** **17 48 52.0 +1.3**
C36M Paulatuk 69.09 14 P **P** **17 48 52.2 +0.3**
C36M IAmb IAmb 17 48 56.0
comp=Z,23nm,1.6s
DAWY Dawson 69.29 23 P **P** **17 48 53.0 -0.3**
DAWY IAmb IAmb 17 49 04.7
comp=Z,16nm,1.8s
MID Middleton Isla 70.04 29 P **P** **17 48 58.2 +0.2**
MID Middleton Isla 70.04 29 P **P** **17 48 58.2 +0.2**
AS31 Alice Springs 70.19 144 P **P** **17 48 58.7 -0.7**
ASAR Alice Springs 70.19 144 P **P** **17 48 58.1 -1.2**
comp=Z,3.8nm,0.8s,baz=330,slow=6.1,SNR=69
ASAR Alice Springs 70.19 144 P **P** **17 48 58.2 -1.1**
ASAR Alice Springs 70.19 144 P **P** **17 48 58.2 -1.1**
NWAO Narrogin (SRO) 72.73 162 P **P** **17 49 13.4 -1.0**
NWAO pmax pmax
comp=Z,41nm,1.6s
NWAO Narrogin (SRO) 72.73 162 P **P** **17 49 13.4 -1.0**
NWAO Narrogin (SRO) 72.73 162 P **P** **17 49 13.4 -1.0**
NWAO IAmb IAmb 17 49 43.3
comp=Z,50nm,1.6s
SFJD Kangerlussuaq 72.77 347 P **P** **17 49 13.0 -1.3**
SFJD pmax pmax
comp=Z,89nm,1.8s
SFJD Kangerlussuaq 72.77 347 P **P** **17 49 13.0 -1.3**
CTAO Charters Tower 73.79 132 P **P** **17 49 20.5 -0.5**
CTAO pmax pmax
comp=Z,11nm,1.2s
CTAO Charters Tower 73.79 132 P **P** **17 49 20.4 -0.5**
CTAO IAmb IAmb 17 49 21.6
comp=Z,11nm,1.1s
ESDC Sonseca Array 74.32 308 P **P** **17 49 24.2 +0.2**
comp=Z,2.3nm,0.8s,baz=43,slow=6.0,SNR=12
ESDC LR LR 18 24 48.7

comp=Z,82nm,21.5s,baz=5.0,slow=38
ESDC Sonseca Array 74.32 308 P **P** **17 49 22.6 -1.5**
YKA Yellowknife Ar 76.97 14 P **P** **17 49 38.7 0.0**
comp=Z,0.9nm,0.8s,baz=339,slow=4.8,SNR=2.4
BBOO Buckleboo 79.00 147 P **P** **17 49 49.2 -1.1**
BBOO IAmb IAmb 17 49 49.5
comp=Z,10nm,0.8s
STKA Stephens Creek 80.73 143 P **P** **17 49 58.4 -1.3**
comp=Z,5.8nm,0.7s,baz=329,slow=6.1,SNR=15
STKA Stephens Creek 80.73 143 P **P** **17 49 58.4 -1.3**
ARMA Armidale 84.82 135 P **P** **17 50 21.2 +0.1**
TORD Torodi Ar. Bea 86.23 284 P **P** **17 50 27.8 -0.7**
comp=Z,1.0nm,0.7s,baz=39,slow=5.3,SNR=5.3
TORD LR LR 18 34 45.4
comp=Z,46nm,18.1s,baz=315,slow=40
TORD Torodi Ar. Bea 86.23 284 P **P** **17 50 27.3 -1.2**
KOWA Kowa 89.76 288 P **P** **17 50 45.1 -0.3**
KOWA IAmb IAmb 17 50 49.5
comp=Z,6.2nm,0.7s
DBIC Dimbokro 95.28 283 P **P** **17 51 09.8 -1.1**
comp=Z,3.9nm,0.8s,baz=27,slow=2.4,SNR=4.4
DBIC Dimbokro 95.28 283 P **P** **17 51 09.6 -1.3**
DBIC pmax pmax
comp=Z,35nm,1.7s
DBIC Dimbokro 95.28 283 P **P** **17 51 09.6 -1.3**

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*IDC **08** 17:44:39.6±0.8, 34°.64N×81°.37E, h0km, mb3.7/12, mb1 3.9/16, mb1mx3.7/41, mbtmp3.7/16, ML2.0/2, MS3.6/9, Ms1 3.7/9, ms1mx3.3/33, Error ellipse: s-maj=24.2km s-min=15.5km az=49.0*
*BJI **08** 17:44:41.4±0.0, 34°.65N×81°.53E, h6km, mb4.1/6, ML4.2/4*
*NEIC **08** 17:44:45.2±2.4, 34°.68N±0°.09×81°.31E±0°.08, h34km±4km, mb4.1/18, Error ellipse: s-maj=13.3km s-min=9.0km az=195.0*

ISC 08 17:44:42.2±0.5, 34°.73N±0°.08×81°.26E±0°.07, h10km, n75, σ1§95/69, mb4.1/28, MS3.6/9, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NIL	**Nilore**	**6.72**	**263**	Pn		**Pn**	**17 46 22.8**	**+1.8**
BOOM	**Boomskoye usch**	**8.79**	**333**			**Pn**	**17 46 50.5**	**+1.0**
FRU1	**Bishkek**	**9.58**	**329**	Pn		**Pn**	**17 47 03.5**	**+3.2**
LSA	**Lhasa**	**9.76**	**118**			**Pn**	**17 47 04.6**	**+1.4**
BTK	**Batken**	**9.86**	**306**	Pn		**Pn**	**17 47 05.7**	**+1.6**
KBL	**Kabul**	**10.07**	**272**	Pn		**Pn**	**17 47 07.9**	**+0.8**
WMQ	**Urumqi**	**10.35**	**27**	*e*P		**Pn**	**17 47 14.9**	**+4.1**
CHGR	**Chuyangaron**	**10.47**	**295**	Pn		**Pn**	**17 47 13.0**	**+0.5**
KK06	**Karatay Array**	**11.81**	**318**	Pn		**Pn**	**17 47 32.1**	**+1.4**
KK02	**Karatay Array**	**11.82**	**318**	Pn		**Pn**	**17 47 31.9**	**+1.0**
KK31	**Karatay Array**	**11.82**	**318**	Pn		**Pn**	**17 47 32.2**	**+1.4**
KKAR	**Karatay Array**	**11.82**	**318**	Pn		**Pn**	**17 47 32.5**	**+1.6**
KKAR	**Karatay Array**	**11.82**	**318**	Pn		**Pn**	**17 47 31.8**	**+1.0**
MK31	**Makanchi Array**	**12.08**	**3**	Pn		**Pn**	**17 47 36.9**	**+2.6**
MKAR	**Makanchi Array**	**12.08**	**3**	Pn		**Pn**	**17 47 34.4**	**+0.1**
	0.3nm,0.3s,baz=178,slow=12,SNR=5.8							
MKAR	**Makanchi Array**	**12.08**	**3**			**Pn**	**17 47 36.5**	**+2.2**
MAKZ	**Makanchi**	**12.08**	**2**	Pn		**Pn**	**17 47 36.0**	**+1.7**
SHL	**Shillong**	**12.95**	**132**	Pn		Pn	17 47 43.5	-3.0
HRA	**Herat**	**15.67**	**274**	Pn		**Pn**	**17 48 22.8**	**-0.6**
KURBB	**Kurchatov Arra**	**16.01**	**354**	Pn		**Pn**	**17 48 24.6**	**-2.7**
	0.0nm,0.3s,baz=104,slow=19,SNR=4.6							
KURK	**Kurchatov**	**16.09**	**354**			**Pn**	**17 48 24.6**	**-3.7**
KURK	**Kurchatov**	**16.09**	**354**	IAmb		IAmb	17 48 37.9	
	comp=Z,15nm,1.1s							
ZAA0	**Zalesovo Array**	**19.38**	**6**	P		**P**	**17 49 07.0**	**-0.9**
ZALV	**Zalesovo Beam**	**19.38**	**6**	P		**P**	**17 49 07.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=194,slow=9.8,SNR=4.7							
ZALV	**Zalesovo Beam**	**19.38**	**6**	P		**P**	**17 49 06.2**	**-1.8**
BVAR	**Borovoye Array**	**19.85**	**340**	P		**P**	**17 49 14.5**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=237,slow=30,SNR=3.7							
BRVK	**Borovoye**	**19.91**	**340**			**P**	**17 49 14.2**	**+0.4**
BRVK				IAmb		IAmb	17 49 18.6	
	comp=Z,17nm,1.3s							
AB07	**Akbulak array**	**21.36**	**319**	P		**P**	**17 49 31.7**	**+2.1**
AB03	**Akbulak array**	**21.38**	**319**	P		**P**	**17 49 27.4**	**-2.3**
ABKAR	**Akbulak array**	**21.38**	**319**	P		**P**	**17 49 28.3**	**-1.5**
ABKAR	**Akbulak array**	**21.38**	**319**	P		**P**	**17 49 27.7**	**-2.1**
MHMT	**Maesarieng**	**22.19**	**134**	P		**P**	**17 49 42.0**	**+3.4**
	comp=Z,488nmcomp=Z,18nm,1.1s							
CM33	**Chiang Mai Arr**	**22.32**	**131**	P		**P**	**17 49 42.0**	**+1.9**
CHTO	**Chiang Mai**	**22.32**	**131**	P		**P**	**17 49 39.6**	**-0.4**
CHTO				IAmb		IAmb	17 49 58.2	
	comp=Z,6.1nm,1.1s							
CMMT	**Chiang Mai**	**22.32**	**131**	P		**P**	**17 49 42.9**	**+2.8**
	comp=Z,3.4nm,1.4s							
CM32	**Chiang Mai Arr**	**22.38**	**131**	P		**P**	**17 49 43.0**	**+2.3**
CM34	**Chiang Mai Arr**	**22.42**	**130**	P		**P**	**17 49 43.0**	**+1.8**
PAYA	**Payao**	**22.50**	**128**	P		**P**	**17 49 45.9**	**+3.8**
	comp=Z,117nm,0.9s							
CM35	**Chiang Mai Arr**	**22.55**	**131**	P		**P**	**17 49 45.0**	**+2.4**
CM15	**Chiang Mai Arr**	**22.58**	**131**	P		**P**	**17 49 44.7**	**+1.9**
	comp=Z,57nmcomp=Z,6.5nm,0.9s							
CM31	**Chiang Mai Arr**	**22.59**	**131**	P		**P**	**17 49 44.8**	**+1.8**
	comp=Z,139nm,0.8s							
CM31	**Chiang Mai Arr**	**22.59**	**131**	P		**P**	**17 49 42.4**	**-0.6**
CM31				IAmb		IAmb	17 49 50.2	
	comp=Z,11nm,1.1s							
CMAR	**Chiang Mai Arr**	**22.59**	**131**	P		**P**	**17 49 41.6**	**-1.3**
	comp=Z,7.2nm,1.1s,baz=313,slow=11,SNR=29							
CMAR				LR		LR	17 58 39.3	
	comp=Z,126nm,19.1s,baz=358,slow=37							
CMAR	**Chiang Mai Arr**	**22.59**	**131**	P		**P**	**17 49 42.6**	**-0.3**
CM13	**Chiang Mai Arr**	**22.59**	**131**	P		**P**	**17 49 44.8**	**+1.8**
	comp=Z,54nmcomp=Z,8.1nm,0.9s							
CM02	**Chiang Mai Arr**	**22.61**	**131**	P		**P**	**17 49 44.0**	**+0.9**
	comp=Z,85nmcomp=Z,11nm,1.1s							
CM01	**Chiang Mai Arr**	**22.62**	**131**	P		**P**	**17 49 45.6**	**+2.3**
	comp=Z,93nmcomp=Z,13nm,1.0s							
CM09	**Chiang Mai Arr**	**22.62**	**131**	P		**P**	**17 49 46.5**	**+3.1**
	comp=Z,73nmcomp=Z,9.1nm,1.2s							
CM05	**Chiang Mai Arr**	**22.63**	**131**	P		**P**	**17 49 45.1**	**+1.8**
	comp=Z,75nmcomp=Z,10nm,1.0s							
CM04	**Chiang Mai Arr**	**22.65**	**131**	P		**P**	**17 49 45.8**	**+2.2**
	comp=Z,80nmcomp=Z,10nm,1.0s							
XAN	**Xi'an**	**22.82**	**84**	P		**P**	**17 49 46.2**	**+0.9**
XAN				IAmb		IAmb	17 49 59.3	
	comp=Z,5.2nm,0.5s							
SONM	**Songino Array**	**22.86**	**47**	P		**P**	**17 49 45.0**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=251,slow=8.6,SNR=2.2							
SONM				LR		LR	17 59 05.3	
	comp=Z,170nm,20.4s,baz=204,slow=38							
SONM	**Songino Array**	**22.86**	**47**	P		**P**	**17 49 46.5**	**+0.7**
AKTO	**Aktyubinsk**	**23.08**	**320**	P		**P**	**17 49 49.8**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=132,slow=12,SNR=1.7							
ULN	**Ulaanbaatar**	**23.27**	**48**	P		**P**	**17 49 49.9**	**-0.1**
ULN				IAmb		IAmb	17 50 06.0	
	comp=Z,7.5nm,1.3s							
UTTA	**Uttaradit**	**24.13**	**130**	P		**P**	**17 50 00.9**	**+2.6**
	comp=Z,8.4nm,0.8s							
HHC	**Hu-ho-hao-te**	**24.64**	**67**	*e*P		**P**	**17 50 04.6**	**+1.6**
HHC				pmax		pmax		
	comp=Z,14nm,1.0s							
UTHA	**Uthaitani**	**25.13**	**135**	P		**P**	**17 50 10.4**	**+2.9**
PALK	**Pallekele**	**27.33**	**181**	LR		LR	18 00 09.5	
	comp=Z,94nm,18.9s,baz=107,slow=34							
HKPS	**Hong Kong Po S**	**31.30**	**105**	P		**P**	**17 51 01.1**	**-1.6**
KULM	**Kulim**	**34.35**	**144**	P		**P**	**17 51 27.4**	**-1.9**
KSRS	**Korea Array**	**37.51**	**72**	LR		LR	18 08 16.7	
	comp=Z,84nm,19.9s,baz=322,slow=38							
USRK	**Ussuriysk Ar.**	**39.74**	**61**	LR		LR	18 09 55.1	
	comp=Z,97nm,19.6s,baz=338,slow=38							
AKASG	**Malin Array Be**	**40.54**	**310**	P		**P**	**17 52 21.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=77,slow=8.1,SNR=2.7							
KSM	**Kuching**	**42.76**	**134**	P		**P**	**17 52 41.6**	**+1.7**
MLR	**Muntele Rosu**	**42.88**	**302**	P		**P**	**17 52 43.9**	**+3.1**
FINES	**FINESS Array B**	**43.67**	**325**	P		**P**	**17 52 47.2**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=91,slow=9.5,SNR=4.5							
FINES				LR		LR	18 11 42.5	
	comp=Z,100nm,21.6s,baz=119,slow=37							
MJAR	**Matsushiro Arr**	**45.74**	**70**	P		**P**	**17 53 01.6**	**-2.2**
	comp=Z,0.5nm,0.6s,baz=276,slow=11,SNR=1.5							
MJAR				LR		LR	18 12 23.7	
	comp=Z,66nm,18.2s,baz=245,slow=36							
ARCES	**ARCESS Array B**	**46.06**	**336**	LR		LR	18 12 52.6	
	comp=Z,82nm,18.9s,baz=80,slow=37							
ILAR	**Eielson Array**	**73.92**	**19**	P		**P**	**17 56 16.4**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=313,slow=6.0,SNR=2.5							
TORD	**Torodi Ar. Bea**	**74.13**	**275**	P		**P**	**17 56 18.4**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=49,slow=5.2,SNR=7.8							
WRA	**Warramunga Arr**	**74.15**	**129**	P		**P**	**17 56 17.6**	**-1.5**
	comp=Z,1.1nm,0.9s,baz=327,slow=5.5,SNR=7.7							
ASAR	**Alice Springs**	**76.60**	**131**	P		**P**	**17 56 31.4**	**-1.8**
	comp=Z,0.8nm,0.7s,baz=316,slow=5.4,SNR=13							
YKA	**Yellowknife Ar**	**82.27**	**7**	P		**P**	**17 57 01.7**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=345,slow=6.2,SNR=2.4							
DBIC	**Dimbokro**	**83.06**	**273**	P		**P**	**17 57 07.3**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=39,slow=6.5,SNR=1.3							
DBIC				LR		LR	18 37 53.3	
	comp=Z,54nm,19.7s,baz=22,slow=38							

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*IDC **08** 18:05:01.7±1.9, 45°.23N×24°.79W, h0km, mb3.4/4, mb1 3.8/7, mb1mx3.5/54, mbtmp3.6/7, ML4.1/3, MS3.1/3, Ms1 3.2/3, ms1mx2.8/26, Error ellipse: s-maj=45.6km s-min=34.8km az=76.0*
*NEIC **08** 18:05:03.3±2.7, 45°.01N±0°.08×24°.9W±0°.2, h14km±5km, mb4.4/6, Error ellipse: s-maj=21.1km s-min=11.9km az=98.0*

ISC 08 18:05:01.2±1.0, 44°.88N±0°.08×24°.9W±0°.1, h10km, n76, σ2§34/75, mb3.3/5, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PGRA	**Graciosa**	**6.28**	**203**	*e*P		**Pn**	**18 06 34.4**	**+0.6**
PGRA				*e*S		**Sn**	**18 07 43.7**	**-1.9**
PGRA				A		A	18 07 50.0	
	126nm,0.4s							
PSCM	**Serra do Cume**	**6.39**	**196**	*e*P		**Pn**	**18 06 35.9**	**+0.6**
PSCM				*e*S		**Sn**	**18 07 45.4**	**-2.9**
PSCM				A		A	18 07 53.1	
	100nm,0.3s							
ADH	**Angra Heroismo**	**6.46**	**197**	*e*P		**Pn**	**18 06 37.0**	**+0.8**
ADH				*e*S		**Sn**	**18 07 46.9**	**-3.0**
ADH				A		A	18 07 54.0	
	92nm,0.5s							
ROSA	**Rosais**	**6.64**	**203**	Pn		**Pn**	**18 06 42.2**	**+3.4**
PID	**Ribeirinha**	**6.87**	**202**	*e*S		**Sn**	**18 07 58.1**	**-2.0**
PID				A		A	18 08 05.1	
	62nm,0.3s							
PSET	**Sete Cidades**	**7.07**	**185**	*e*P		**Pn**	**18 06 45.0**	**+0.3**
BART	**Pico Bartolome**	**7.09**	**182**	*e*P		**Pn**	**18 06 45.2**	**+0.1**
BART				*e*S		**Sn**	**18 07 59.3**	**-6.5**
BART				A		A	18 08 08.8	
	32nm,0.3s							
CMLA	**Cha da Macela**	**7.12**	**184**	*e*P		**Pn**	**18 06 45.7**	**+0.3**
CMLA	**Cha da Macela**	**7.12**	**184**	Pn		**Pn**	**18 06 46.1**	**+0.7**
PDA	**Ponta Delgada**	**7.15**	**185**	*e*P		**Pn**	**18 06 45.4**	**-0.3**
PSMN	**Pico do Norte,**	**7.87**	**181**	*e*P		**Pn**	**18 06 55.1**	**-0.5**
PSMA	**Santa Maria**	**7.88**	**181**	*e*P		**Pn**	**18 06 56.0**	**+0.3**
PGAV	**Gavieira, Arco**	**12.43**	**98**	*e*P		**Pn**	**18 07 58.9**	**+0.7**
PCAB	**Cabril**	**12.69**	**99**	*e*P		**Pn**	**18 08 03.0**	**+1.4**
POLO	**Lamas de Olo**	**12.97**	**100**	*e*P		**Pn**	**18 08 06.8**	**+1.3**
PMAFR	**Mafra**	**13.04**	**112**	*e*P		**Pn**	**18 08 08.4**	**+2.0**
PVIS	**Viseu**	**13.15**	**102**	*e*P		**Pn**	**18 08 09.4**	**+1.4**
MTE	**Manteigas**	**13.53**	**103**	*e*P		**Pn**	**18 08 14.7**	**+1.6**
MTE	**Manteigas**	**13.53**	**103**	Pn		**Pn**	**18 08 14.2**	**+1.0**
PBRG	**Braganca**	**13.56**	**97**	*e*P		**Pn**	**18 08 15.6**	**+2.0**
MVO	**Moncorvo**	**13.58**	**100**	*e*P		**Pn**	**18 08 14.8**	**+0.9**
PMTG	**Montargil**	**13.68**	**109**	*e*P		**Pn**	**18 08 16.7**	**+1.6**
PCBR	**Castelo Branco**	**13.82**	**105**	*e*P		**Pn**	**18 08 18.3**	**+1.3**
PNCL	**Nicolau / Gran**	**13.99**	**113**	*e*P		**Pn**	**18 08 22.6**	**+3.2**
PMRV	**Marv??o**	**14.07**	**107**	*e*P		**Pn**	**18 08 22.8**	**+2.3**
EVO	**Evora**	**14.10**	**111**	*e*P		**Pn**	**18 08 22.8**	**+1.9**
PFVI	**Vila Bisbo**	**14.37**	**117**	Pn		**Pn**	**18 08 27.4**	**+2.8**
DSB	**Dublin**	**14.71**	**49**	Pn		**Pn**	**18 08 25.1**	**-4.1**
PVAQ	**Vaqueiros**	**14.92**	**114**	Pn		**Pn**	**18 08 34.0**	**+1.9**
ROSF	**Rostrenen**	**15.25**	**69**	*e*P		**Pn**	**18 08 31.9**	**-4.4**
ROSF				*e*Sn		Sn	18 11 09.5	-16
QUIF	**Quistinic**	**15.29**	**71**	*e*P		**Pn**	**18 08 33.0**	**-3.9**
	9.1nm,0.4s							
SGMF	**Saint Gilles**	**15.72**	**70**	*e*P		**Pn**	**18 08 37.9**	**-4.6**
SGMF				*e*Sn		Sn	18 11 23.9	-13
	1.5nm,0.4s							
PAB	**San Pablo**	**16.11**	**102**	Pn		**Pn**	**18 08 49.5**	**+1.8**
PAB				IAmb		IAmb	18 08 59.2	
	comp=Z,49nm,1.9s							
ESBB	**Sonseca Array**	**16.32**	**101**	Pn		**P**	**18 08 52.8**	**-0.6**
ESBB				IAmb		IAmb	18 09 24.9	
	comp=Z,39nm,1.8s							
ESDC	**Sonseca Array**	**16.32**	**101**	Pn		**Pn**	**18 08 52.7**	**+2.3**
	comp=Z,0.8nm,0.3s,baz=298,slow=13,SNR=36							
ESDC				LR		LR	18 14 07.7	
	comp=Z,57nm,18.1s,baz=280,slow=33							
ESDC	**Sonseca Array**	**16.32**	**101**			**Pn**	**18 08 52.0**	**+1.5**
SFS	**San Fernando**	**16.45**	**114**	Pn		**Pn**	**18 08 52.5**	**+0.5**
SFS				IAmb		IAmb	18 09 21.6	
	comp=Z,100nm,1.1s							
GRR	**Gorron**	**16.86**	**69**	*e*P		**Pn**	**18 08 53.1**	**-4.0**
SJPF	**Ste Jean**	**17.11**	**88**	*e*P		**Pn**	**18 08 59.8**	**-0.5**
	comp=Z,3.1nm,0.5s							
FLN	**La Foliniere**	**17.13**	**68**	*e*P		**Pn**	**18 08 55.1**	**-5.4**
	baz=257							
MFF	**Saint Martin d**	**17.34**	**75**	*e*P		**Pn**	**18 09 02.2**	**-1.0**
	comp=Z,6.0nm,0.3s							
EKA	**Eskdalemuir Ar**	**17.36**	**45**	P		**Pn**	**18 09 01.4**	**-1.9**
	baz=240,slow=11,SNR=2.1							
LDF	**La Druitiere**	**17.36**	**69**	*e*P		**Pn**	**18 08 59.9**	**-3.4**
ETSF	**Etsaut**	**17.64**	**88**	*e*P		**Pn**	**18 09 07.6**	**+0.7**
	comp=Z,13nm,0.5s							
LFF	**La Frestale**	**18.14**	**81**	*e*P		**Pn**	**18 09 10.1**	**-2.9**
EPF	**Esparros**	**18.24**	**87**	*e*P		**P**	**18 09 16.1**	**+1.5**
	comp=Z,3.2nm,0.5s							
TCF	**Toulx Ste Croi**	**18.99**	**76**	*e*P		**Pn**	**18 09 24.5**	**+1.0**
	comp=Z,2.9nm,0.3s							
CAF	**Calviac**	**19.07**	**80**	*e*P		**Pn**	**18 09 25.0**	**+0.6**
HYF	**Humbligny**	**19.21**	**73**	*e*P		**Pn**	**18 09 26.5**	**+0.4**
BGF	**Bois d'Agland**	**19.41**	**75**	*e*P		**Pn**	**18 09 30.5**	**+2.1**
	comp=Z,3.1nm,0.2s							
MTLF	**Montolieu**	**19.50**	**85**	*e*P		**Pn**	**18 09 31.9**	**+2.4**
	comp=Z,3.1nm,0.4s							
AVF	**Avril sur Loir**	**19.73**	**74**	*e*P		**Pn**	**18 09 33.8**	**+1.5**
	comp=Z,4.2nm,0.5s							
MDT	**Midelt**	**19.80**	**120**	P		**Pn**	**18 09 35.6**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=340,slow=11,SNR=2.7							
SSF	**Saint Saulge**	**19.82**	**74**	*e*P		**Pn**	**18 09 35.4**	**+2.1**
	comp=Z,5.8nm,0.4s							
LOR	**Lormes**	**20.04**	**73**	*e*P		**P**	**18 09 33.0**	**-1.2**
	comp=Z,3.7nm,0.4s,baz=266							
SMF	**Signal de Mont**	**20.08**	**75**	*e*P		**P**	**18 09 34.6**	**0.0**
BAIF	**Baives**	**20.27**	**65**	*e*P		**P**	**18 09 33.2**	**-3.4**
LASF	**Ste Croix**	**20.49**	**82**	*e*P		Pn	18 09 43.3	+2.0
GIVF	**Givet**	**20.67**	**65**	*e*P		Pn	18 09 43.7	+0.4
	comp=Z,5.0nm,0.4s							
MEZF	**Maizieres J'vi**	**20.79**	**69**	*e*P		**P**	**18 09 41.0**	**-1.3**
	baz=261							
SFTF	**Sexfontaines**	**20.79**	**70**	*e*P		**P**	**18 09 41.8**	**-0.5**
PAGF	**Fort de Pagny**	**21.24**	**69**	*e*P		**P**	**18 09 45.0**	**-2.1**
	baz=258							
CABF	**La Chapelle**	**21.62**	**74**	*e*P		**P**	**18 09 53.7**	**+2.3**
	comp=Z,2.9nm,0.5s							
HAU	**Haudompre**	**21.68**	**71**	*e*P		**P**	**18 09 47.0**	**-4.9**
HINF	**Hinteralfeld**	**22.03**	**71**	*e*P		**P**	**18 09 57.9**	**+2.2**
CDF	**Champ du Feu**	**22.27**	**69**	*e*P		**P**	**18 09 56.4**	**-2.0**
GERES	**GERESS Array B**	**26.49**	**67**	P		**P**	**18 10 39.6**	**+1.0**
	comp=Z,0.6nm,1.0s,baz=301,slow=9.8,SNR=3.5							
FINES	**FINESS Array B**	**33.71**	**42**	LR		LR	18 23 42.2	
	comp=Z,51nm,20.4s,baz=240,slow=34							
ARCES	**ARCESS Array B**	**35.15**	**28**	LR		LR	18 25 22.3	
	comp=Z,24nm,18.7s,baz=10.0,slow=35							
AKASG	**Malin Array Be**	**36.13**	**61**	P		**P**	**18 12 01.6**	**-1.5**
	comp=Z,0.1nm,0.2s,baz=279,slow=9.0,SNR=2.0							
AKASG	**Malin Array Be**	**36.13**	**61**	IAmb		IAmb	18 12 01.7	
	comp=Z,1.2nm,1.2s							
TORD	**Torodi Ar. Bea**	**38.89**	**136**	P		**P**	**18 12 30.1**	**+3.2**
	comp=Z,0.7nm,0.9s,baz=340,slow=9.3,SNR=3.6							
TORD	**Torodi Ar. Bea**	**38.89**	**136**	IAmb		IAmb	18 12 38.3	
	comp=Z,1.9nm,1.1s							
MKAR	**Makanchi Array**	**68.49**	**45**	P		**P**	**18 16 04.6**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=312,slow=5.6,SNR=2.2							
WRA	**Warramunga Arr**	**149.75**	**41**	PKPbc		**PKPbc**	**18 24 50.2**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=335,slow=2.3,SNR=1.5							
ASAR	**Alice Springs**	**152.68**	**46**	PKP		**PKPdf**	**18 24 53.5**	**+2.4**
	comp=Z,0.1nm,0.6s,baz=347,slow=2.7,SNR=1.8							
ASAR				PKPbc		**sPKPbc**	**18 25 00.7**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=345,slow=2.2,SNR=1.4							

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*NDI **08** 18:19:38.8±4.7, 25°.04N×94°.80E, h129km±30km, ML4.8, mb4.8(NEIC)*
*IDC **08** 18:19:39.8±1.4, 24°.91N×95°.06E, h85km±11km, mb4.0/25, mb1 4.2/26, mb1mx4.0/41, mbtmp4.4/26, MS3.4/13, Ms1 3.4/13, ms1mx3.2/55, Error ellipse: s-maj=15.5km s-min=9.1km az=62.0*
*BJI **08** 18:19:39.5±0.0, 25°.13N×94°.77E, h80km, mB4.7/30, mb4.7/36, Ms4.0/10, Ms7 3.8/9*

*NEIC **08** 18:19:40.0±1.6, 24°.87N±0°.04×94°.87E±0°.07, h87km±5km, mb4.8/96, Error ellipse: s-maj=9.3km s-min=5.7km az=103.0*

ISC 08 18:19:40.0±0.6, 24°.92N±0°.04×94°.78E±0°.04, h86km±5km, n232, σ1§45/247, mb4.7/80, 9C-3D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOHI	**KOHIMA**	**1.00**	**323**	*i* Pg		**Pn**	**18 19 58.6**	**-0.9**
KOHI				*i* Sg		**Sn**	**18 20 14.6**	**+0.3**
KOHI				AMP			18 20 18.2	
	comp=N,237μm,0.7s							
MOKO	**MOKOCHONG**	**1.42**	**350**	*e*P		**Pn**	**18 20 03.8**	**-0.8**
MOKO				*e*S		**Sn**	**18 20 26.7**	**+3.5**
SILR	**SILCHAR**	**1.80**	**266**	*e*P		**Pn**	**18 20 10.2**	**+0.9**
SILR				*e*S		**Sn**	**18 20 34.6**	**+2.8**
SILR				IAML			18 20 46.8	
	comp=N,5μm,0.2s							
JORH	**JORHAT**	**1.88**	**345**	*e*P		**Pn**	**18 20 13.4**	**+3.0**
JORH				*ex*		x	18 20 39.6	
JORH				IAML			18 20 40.7	
	comp=E,43μm,0.8s							
TEZP	**TEZPUR**	**2.46**	**314**	*e*P		**Pn**	**18 20 16.3**	**-1.8**
TEZP				*e*S		**Sn**	**18 20 44.7**	**-2.7**
LKP	**Lekhapani**	**2.59**	**22**	*e*P		**Pn**	**18 20 18.6**	**-1.2**
LKP				*ex*		x	18 20 52.2	
SHL	**Shillong**	**2.70**	**284**	*e*P		**Pn**	**18 20 20.9**	**-0.7**
SHL				*e*S		**Sn**	**18 20 50.8**	**-2.6**
SHL				IAML			18 20 53.3	
	comp=N,2μm,0.1s							
SHL				IAML			18 20 53.6	
	comp=E,2μm,0.2s							
SHL	**Shillong**	**2.70**	**284**	Pn		**Pn**	**18 20 20.2**	**-1.3**
SHL				Sn		**Sn**	**18 20 51.6**	**-1.9**
ZIRO	**ZIRO**	**2.73**	**342**	*e*P		**Pn**	**18 20 20.1**	**-1.8**
ZIRO				*e*S		**Sn**	**18 20 51.3**	**-2.8**
ZIRO				IAML			18 21 06.7	
	comp=E,8μm,0.8s							
ZIRO				IAML			18 21 07.0	
	comp=N,11μm,0.7s							
SAIH	**SAIHA**	**2.92**	**215**	*e*P		**Pn**	**18 20 24.8**	**+0.3**
SAIH				IAML			18 21 06.0	
	comp=E,2μm,0.6s							
SAIH				IAML			18 21 07.2	
	comp=N,1μm,0.1s							
GUWA	**GUWAHATI**	**3.06**	**295**	*e*P		**Pn**	**18 20 24.5**	**-1.7**
GUWA				*e*S		**Sn**	**18 20 58.4**	**-3.6**
GUWA				IAML			18 21 00.2	
	comp=N,1μm,0.1s							
GUWA				IAML			18 21 00.3	
	comp=E,1μm,0.1s							
AGT	**Agartala**	**3.38**	**253**	*e*P		**Pn**	**18 20 30.4**	**-0.1**
AGT				*e*S		**Sn**	**18 21 10.9**	**+1.4**
AGT				AMP			18 21 12.9	
	comp=N,28μm,0.2s							
BELO	**BELONIA**	**3.47**	**242**	*e*S		**Sn**	**18 21 13.4**	**+1.6**
BELO				AMP			18 21 46.7	
	comp=N,8μm,1.0s							
LSA	**Lhasa**	**5.75**	**327**	Pn		**Pn**	**18 21 03.5**	**+0.3**
GTK	**Tadong**	**6.04**	**295**	*e*P		**Pn**	**18 21 07.4**	**+0.5**
GTK				*e*S		**S

WMQ LR LR
comp=N,280nm,20.3s
WMQ Urumqi 19.73 345 P **P** **18 24 02.1 -0.6**
WMQ IAmb IAmb 18 24 05.0
comp=Z,30nm,1.0s
KULM Kulim 20.32 163 P **P** **18 24 07.7 -1.5**
NIL Nilore 20.66 300 P **P** **18 24 12.7 -0.2**
NIL IAmb IAmb 18 24 14.6
comp=Z,41nm,0.8s
HHC Hu-ho-hao-te 21.18 37 *eP* **P** **18 24 19.1 +0.7**
HHC pmax pmax
comp=Z,22nm,0.9s
HHC pmax pmax
comp=Z,160nm,6.6s
KCSI Kotacane, Aceh 21.47 172 P **P** **18 24 23.4 +1.8**
comp=Z,2µmcomp=Z,32nm,1.2s
KSH Kashi 21.50 317 P **P** **18 24 22.8 +0.9**
KSH pP pP 18 24 44.8 +5.2
KSH pmax pmax
comp=Z,32nm,0.7s
KSH pmax pmax
comp=Z,300nm,6.6s
TSI Tuntungan 21.61 170 P **P** **18 24 25.1 +2.1**
comp=Z,204nm,0.9s
PALK Pallekele 22.12 220 P **P** **18 24 31.6 +3.1**
comp=Z,4.0nm,0.6s,baz=145,slow=8.9,SNR=9.4
PALK LR LR 18 33 32.1
comp=Z,28nm,20.5s,baz=140,slow=37
PALK Pallekele 22.12 220 P **P** **18 24 30.4 +1.8**
PALK IAmb IAmb 18 24 40.5
comp=Z,75nm,1.8s
SHLS Shalkode 22.12 329 *eP* **P** **18 24 26.7 -1.7**
comp=Z,16nm,1.0s,baz=329
NJ2 Nanjing 22.30 66 *eP* **P** **18 24 30.4 +0.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PSI Prapat 22.35 169 P **P** **18 24 31.8 +0.7**
comp=Z,19nm,0.6s,baz=3.0,slow=8.5,SNR=16
PSI LR LR 18 34 58.9
comp=Z,73nm,18.5s,baz=233,slow=41
RPSI Rantau Prapat 22.45 169 P **P** **18 24 31.7 -0.3**
RPSI IAmb IAmb 18 24 33.5
comp=Z,23nm,0.7s
SATY Saty 22.55 327 *eP* **P** **18 24 33.5 +0.5**
comp=Z,7.4nm,0.9s,baz=327
KPKS Kokpek 22.72 328 *eP* **P** **18 24 34.7 0.0**
comp=Z,8.1nm,0.7s,baz=328
TNSS Tian-Shan 23.27 325 *eP* **P** **18 24 41.6 +1.2**
baz=325
MDOK Medeo 23.30 326 *eP* **P** **18 24 41.9 +1.4**
baz=325
AAA Alma-Ata 23.40 326 *eP* **P** **18 24 41.7 +0.4**
comp=Z,38nm,1.2s,baz=325
BOOM Boomskoye usch 23.42 323 P **P** **18 24 43.3 +1.7**
BOOM IAmb IAmb 18 25 07.8
comp=Z,45nm,1.2s
GSI Gunungsitoli 23.63 173 P **P** **18 24 41.6 -1.9**
GSI Gunungsitoli 23.63 173 P **P** **18 24 42.8 -0.7**
TPUB Ta-pu 23.64 89 P **P** **18 24 44.4 +0.8**
TPUB IAmb IAmb 18 24 53.9
comp=Z,85nm,1.4s
ZSN Zaisan 23.83 343 *eP* **P** **18 24 45.8 +0.8**
comp=Z,5.1nm,0.7s,baz=343
TKM2 Tokmak 2 23.90 323 P **P** **18 24 48.3 +2.4**
SNR=8.6
MK31 Makanchi Array 24.00 339 P **P** **18 24 48.0 +1.4**
MK31 IAmb IAmb 18 24 48.8
comp=Z,18nm,0.6s
MKAR Makanchi Array 24.00 339 P **P** **18 24 47.8 +1.2**
comp=Z,18nm,0.6s,baz=153,slow=8.8,SNR=190
MKAR ScP **ScP** **18 31 57.9 +0.7**
comp=Z,1.7nm,0.9s,baz=131,slow=3.4,SNR=5.9
MKAR LR LR 18 35 38.2
comp=Z,77nm,21.8s,baz=102,slow=40
MKAR Makanchi Array 24.00 339 P **P** **18 24 47.4 +0.8**
TDK Taldyqorghan 24.03 331 *eP* **P** **18 24 47.9 +1.1**
comp=Z,11nm,1.3s,baz=330
KBK Karagaybulak 24.08 322 P **P** **18 24 51.1 +3.6**
SNR=12
MAKZ Makanchi 24.12 338 P **P** **18 24 48.9 +1.3**
MAKZ IAmb IAmb 18 24 50.5
comp=Z,28nm,0.6s
TWG Pinlang 24.12 90 P **P** **18 24 48.6 +0.7**
TWG IAmb IAmb 18 24 50.4
comp=Z,21nm,0.6s
KUU Kurty 24.18 326 *eP* **P** **18 24 49.3 +1.1**
comp=Z,18nm,1.3s,baz=326
YULB Yu-li 24.23 88 P **P** **18 24 49.2 +0.3**
YULB IAmb IAmb 18 24 56.9
comp=Z,32nm,1.2s
KBL Kabul 24.26 299 P **P** **18 24 51.2 +1.9**
KBL IAmb IAmb 18 24 52.2
comp=Z,28nm,0.7s
AAK Ala-Archa 24.32 322 P **P** **18 24 52.2 +2.6**
SNR=7.3
CHMS Chumysh 24.41 323 P **P** **18 24 52.3 +1.9**
SNR=7.3
MNSI Mandailing Nat 24.43 168 P **P** **18 24 51.6 +1.0**
AML Almayashu 24.46 320 P **P** **18 24 53.6 +2.3**
SNR=7.1
SONM Songino Array 24.65 19 P **P** **18 24 52.8 +0.2**
comp=Z,4.3nm,0.6s,baz=205,slow=10.0,SNR=30
SONM ScP **ScP** **18 31 58.6 -0.4**
comp=Z,1.6nm,0.9s,baz=192,slow=3.8,SNR=9.4
SONM LR LR 18 35 38.8
comp=Z,100nm,20.9s,baz=116,slow=39
SONM Songino Array 24.65 19 P **P** **18 24 52.5 -0.1**
USP Ospenovka 24.73 323 P **P** **18 24 55.2 +2.0**
SNR=7.4
EKS2 Erkin-Say 24.74 321 P **P** **18 24 55.7 +2.2**
SNR=10
SGDS Sogindy 24.78 323 *eP* **P** **18 24 54.7 +1.0**
comp=Z,5.8nm,0.8s,baz=323
ULN Ulaanbaatar 24.88 20 P **P** **18 24 54.4 -0.3**
GAR Garm 24.96 310 P **P** **18 24 56.0 +0.5**
GAR IAmb IAmb 18 24 58.4
comp=Z,59nm,1.0s
BTK Batken 25.12 313 P **P** **18 24 58.2 +1.3**
BTK IAmb IAmb 18 25 01.8
comp=Z,16nm,0.7s
CHGR Chuyangaron 25.62 308 P **P** **18 25 02.3 +0.8**
CHGR IAmb IAmb 18 25 06.2
comp=Z,18nm,0.7s
YOJ Yonaguni jima 25.64 85 P **P** **18 25 01.2 -0.5**
YOJ IAmb IAmb 18 25 15.1
comp=Z,55nm,1.0s
BTLS Baital 26.16 325 *eP* **P** **18 25 06.5 +0.4**
comp=Z,1.9nm,1.0s,baz=325
DZA Taraz 26.32 319 *eP* **P** **18 25 09.7 +2.1**
baz=318
IUG luzhnay 26.70 316 *eP* **P** **18 25 12.5 +1.3**
comp=Z,5.0nm,0.8s,baz=316
KK31 Karatay Array 26.93 318 P **P** **18 25 14.2 +1.0**
KKAR Karatay Array 26.93 318 P **P** **18 25 13.8 +0.6**
KKAR Karatay Array 26.93 318 P **P** **18 25 13.9 +0.8**
KURBB Kurchatov Arra 28.57 338 P **P** **18 25 28.4 +0.8**
comp=Z,5.6nm,0.6s,baz=147,slow=8.8,SNR=35
KURBB PcP **PcP** **18 28 37.1 +0.3**
comp=Z,1.5nm,0.7s,baz=150,slow=2.2,SNR=6.4
KURBB ScP **ScP** **18 32 11.0 +0.6**
comp=Z,1.9nm,0.8s,baz=153,slow=2.7,SNR=13
KURK Kurchatov 28.61 338 P **P** **18 25 29.0 +1.0**
KURK Kurchatov 28.61 338 **PcP** **18 28 37.1 +0.2**
KURK **ScP** **18 32 11.0 +0.5**
HRA Herat 29.70 296 P **P** **18 25 39.3 +1.2**
ZAA0 Zalesovo Array 29.93 348 P **P** **18 25 40.4 +0.7**
ZALV Zalesovo Beam 29.93 348 P **P** **18 25 40.6 +1.0**
comp=Z,5.6nm,0.6s,baz=163,slow=7.1,SNR=26
ZALV Zalesovo Beam 29.93 348 P **P** **18 25 40.1 +0.5**
BRZS Berezniki 30.33 331 *eP* **P** **18 25 44.2 +0.9**
comp=Z,3.9nm,0.7s,baz=331
KSRS Korea Array 30.82 58 LR LR 18 39 25.0
comp=Z,40nm,18.1s,baz=100,slow=39
BRVK Borovoye 33.61 333 P **P** **18 26 13.0 +1.1**
GEYT Alibeck 33.65 302 P **P** **18 26 14.8 +2.3**
comp=Z,1.7nm,0.7s,baz=90,slow=4.9,SNR=5.0
GEYT ScP **ScP** **18 32 29.6 +1.9**
comp=Z,3.3nm,0.7s,baz=90,slow=1.5,SNR=6.0
GEYT Alibeck 33.65 302 P **P** **18 26 14.4 +1.9**
GEYT **ScP** **18 32 28.9 +1.2**
GYA0B ALIBECK ARRAY 33.65 302 P **P** **18 26 14.2 +1.7**
LEM Lembang 33.94 157 LR LR 18 41 47.2
comp=Z,60nm,20.1s,baz=350,slow=39
ABKAR Akbulak array 36.40 321 P **P** **18 26 37.1 +1.1**
ABKAR IAmb IAmb 18 26 38.3
comp=Z,8.1nm,0.7s

AKTO Aktyubinsk 38.06 322 P **P** **18 26 51.4 +1.4**
comp=Z,4.9nm,0.8s,baz=110,slow=9.4,SNR=15
JAGI Jajag, Banyuwa 38.18 148 P **P** **18 26 50.8 -0.5**
MJAR Matsushiro Arr 38.79 62 P **P** **18 26 54.3 -2.0**
comp=Z,0.6nm,0.5s,baz=278,slow=9.2,SNR=5.1
ARU Arti 40.94 330 P **P** **18 27 14.5 +0.7**
ARU IAmb IAmb 18 27 15.4
comp=Z,8.4nm,0.5s
BATI Baumata 44.86 138 P **P** **18 27 43.7 -2.3**
comp=Z,10.0nm,0.4s,baz=131,slow=14,SNR=2.0
SOEI Soe 44.88 137 P P 18 27 53.9 +7.6
SOEI Soe 44.88 137 P **P** **18 27 44.0 -2.3**
SOEI IAmb IAmb 18 27 54.0
comp=Z,20nm,0.8s
FAKI Fak Fak 45.69 122 P **P** **18 27 50.7 -1.8**
FAKI IAmb IAmb 18 28 25.4
comp=Z,15nm,1.1s
TIXI Tiksi 50.53 13 P **P** **18 28 28.9 -0.2**
TIXI IAmb IAmb 18 28 29.6
comp=Z,9.6nm,0.6s
MTN Manton Dam 51.64 132 P **P** **18 28 36.0 -2.0**
MTN IAmb IAmb 18 28 51.4
comp=Z,13nm,1.2s
KLMR Klimovskoe 51.78 329 *eP* **P** **18 28 38.6 0.0**
KLMR AMP 18 28 39.7
comp=Z,15nm,1.0s
KNRA Kununurra 52.21 137 P **P** **18 28 41.2 -1.1**
KNRA PcP **PcP** **18 29 50.8 -2.1**
PSA00 Pilbara Seismi 52.24 150 P **P** **18 28 41.3 -1.1**
PSA00 IAmb IAmb 18 28 46.8
comp=Z,31nm,1.5s
FITZ Fitzroy Crossi 52.27 142 P **P** **18 28 41.4 -1.3**
comp=Z,4.2nm,0.6s,baz=338,slow=8.6
FITZ LR LR 18 56 25.6
comp=Z,31nm,19.4s,baz=350,slow=42
FITZ Fitzroy Crossi 52.27 142 P **P** **18 28 41.6 -1.1**
FITZ IAmb IAmb 18 28 42.2
comp=Z,21nm,1.6s
BRTR Keskin Array B 52.79 302 P **P** **18 28 47.6 +1.0**
comp=Z,0.6nm,0.5s,baz=107,slow=7.8,SNR=2.2
AKASG Malin Array Be 55.78 316 P **P** **18 29 08.1 +0.2**
comp=Z,1.9nm,0.4s,baz=79,slow=6.4,SNR=20
AKASG ScP **ScP** **18 33 57.5 +0.2**
comp=Z,0.2nm,0.3s,baz=83,slow=3.9,SNR=5.2
AKASG Malin Array Be 55.78 316 P **P** **18 29 08.1 +0.2**
AKBB Malin Array Si 55.78 316 P **P** **18 29 08.1 +0.2**
AKBB IAmb IAmb 18 29 08.6
comp=Z,6.6nm,0.7s
LVZ Lovozero 56.01 337 P **P** **18 29 09.7 +0.3**
SORM Soroca 56.33 312 ⇓P **P** **18 29 11.3 -0.5**
MORW Morawa 57.44 158 P **P** **18 29 19.1 -0.7**
VRI Vrincioaia 57.53 310 ⇑P **P** **18 29 22.1 +1.7**
PLOR Plostina 57.58 310 ⇑P **P** **18 29 22.9 +2.0**
ISR Istrita 57.70 309 ⇓P **P** **18 29 23.0 +1.3**
MLR Muntele Rosu 58.10 309 ⇑P **P** **18 29 26.1 +1.6**
MLR Muntele Rosu 58.10 309 P **P** **18 29 25.8 +1.3**
FIA1 FINESS Array S 58.27 328 P **P** **18 29 25.7 +0.5**
FINES FINESS Array B 58.27 328 P **P** **18 29 26.1 +0.8**
comp=Z,2.6nm,0.7s,baz=99,slow=7.1,SNR=13
FINES LR LR 18 55 56.3
comp=Z,46nm,19.0s,baz=50,slow=37
FINES FINESS Array B 58.27 328 P **P** **18 29 25.8 +0.5**
DOPR Dopca 58.45 310 ⇑P **P** **18 29 27.9 +1.0**
BURAR Bucovina Array 58.46 312 ⇑P **P** **18 29 27.7 +0.6**
BURAR Bucovina Array 58.46 312 P **P** **18 29 27.2 +0.2**
BUR08 Bucovina Ar. S 58.47 312 P **P** **18 29 28.4 +1.3**
BUR08 IAmb IAmb 18 29 58.6
comp=Z,11nm,1.8s
VOIR 58.73 309 ⇑P **P** **18 29 29.4 +0.5**
MTUR Matau 58.74 309 ⇑P P 18 29 34.4 +5.4
WB0 Warramunga Arr 58.81 135 P **P** **18 29 28.3 -1.3**
WRA Warramunga Arr 58.90 136 P **P** **18 29 28.8 -1.4**
comp=Z,8.2nm,0.6s,baz=322,slow=7.5,SNR=170
WRA ScP **ScP** **18 34 09.2 -2.4**
comp=Z,0.7nm,0.8s,baz=319,slow=4.1,SNR=5.5
WRA Warramunga Arr 58.90 136 P **P** **18 29 28.6 -1.6**
WRAB Tennant Creek 58.91 136 P **P** **18 29 29.2 -1.1**
WRAB IAmb IAmb 18 29 29.8
comp=Z,8.5nm,0.7s
WB2 Warramunga Arr 58.91 136 P **P** **18 29 29.1 -1.2**
WB2 IAmb IAmb 18 29 29.9
comp=Z,7.5nm,0.7s
WR0 Warramunga Arr 59.05 135 P **P** **18 29 30.0 -1.2**
WR0 IAmb IAmb 18 29 30.7
comp=Z,6.8nm,0.7s
ARCR ARCALIA 59.08 311 ⇑P P 18 29 22.4 -8.8
RER Riviere de l'E 59.47 223 P **P** **18 29 35.1 +0.9**
ARCES ARCESS Array B 59.65 338 P **P** **18 29 35.7 +0.9**
comp=Z,3.9nm,0.9s,baz=100,slow=5.5,SNR=7.9
ARCES LR LR 18 58 13.6
comp=Z,61nm,18.7s,baz=10.0,slow=39
KWP Kalwaria Pacla 59.99 314 P **P** **18 29 38.8 +1.4**
KOLS Kolonicke sedl 60.33 314 *eP* **P** **18 29 39.3 -0.5**
KMBO Kilima Mbogo 61.37 254 P **P** **18 29 48.9 +1.4**
comp=Z,1.8nm,0.8s,baz=52,slow=6.0,SNR=6.0
KMBO Kilima Mbogo 61.37 254 IAmb IAmb 18 29 49.9
comp=Z,1.7nm,0.8s
NWAO Narrogin (SRO) 61.38 159 P **P** **18 29 45.5 -1.4**
NWAO Narrogin (SRO) 61.38 159 P **P** **18 29 45.5 -1.4**
NWAO IAmb IAmb 18 29 49.3
comp=Z,41nm,1.6s
PMG Port Moresby 61.39 117 P **P** **18 29 46.4 -1.0**
PMG IAmb IAmb 18 29 47.5
comp=Z,14nm,0.8s
AS31 Alice Springs 61.41 139 P **P** **18 29 46.5 -0.9**
AS31 PcP **PcP** **18 30 27.0 -1.7**
ASAR Alice Springs 61.41 139 P **P** **18 29 46.2 -1.1**
comp=Z,5.3nm,0.6s,baz=321,slow=6.9,SNR=107
ASAR Alice Springs 61.41 139 P **P** **18 29 46.4 -1.0**
ASAR PcP **PcP** **18 30 27.2 -1.6**
VYHS Vyhne 62.64 313 *eP* **P** **18 29 54.9 -0.4**
ABPO Ambohimpanom 63.64 231 P **P** **18 30 03.5 +1.0**
ABPO IAmb IAmb 18 30 03.7
comp=Z,7.2nm,0.8s
FORT Forrest 63.90 148 P **P** **18 30 03.1 -0.6**
FORT IAmb IAmb 18 30 16.3
comp=Z,19nm,1.1s
VRAC Vranov 63.99 315 LR LR 19 04 27.8
comp=Z,52nm,19.7s,baz=68,slow=42
NC405 NORSAR Array S 65.19 328 P **P** **18 30 12.6 +0.7**
NC602 NORSAR Array S 65.32 328 P **P** **18 30 12.6 -0.1**
NB2 NORSAR Subarra 65.44 328 P **P** **18 30 13.5 0.0**
comp=Z,0.6nm,0.4s,baz=93,slow=5.6
NOA NORSAR Array B 65.44 328 P **P** **18 30 13.6 0.0**
comp=Z,0.9nm,0.6s,baz=83,slow=6.3,SNR=3.9
NOA LR LR 19 01 18.4
comp=Z,26nm,18.8s,baz=275,slow=38
NC204 NORSAR Array S 65.63 328 P **P** **18 30 15.6 +0.9**
CLL Collm 65.94 317 P **P** **18 30 16.5 -0.2**
GEC2 GERESS Array S 65.94 314 P **P** **18 30 18.2 +1.2**
GEC2 IAmb IAmb 18 30 49.6
comp=Z,19nm,1.8s
GERES GERESS Array B 65.94 314 P **P** **18 30 17.8 +0.8**
comp=Z,1.0nm,0.6s,baz=67,slow=6.4,SNR=10.0
GERES GERESS Array B 65.94 314 P **P** **18 30 17.4 +0.4**
FOMA Nahampoana Res 67.82 227 P **P** **18 30 29.7 +0.7**
FUORN Ofenpass-Fuorn 68.69 313 P **P** **18 30 36.2 +1.6**
DAVOX Davos/Dischmat 68.91 313 LR LR 19 04 31.9
comp=Z,71nm,18.9s,baz=84,slow=39
BBOO Buckleboo 69.60 144 P **P** **18 30 38.5 -1.4**
BBOO IAmb IAmb 18 30 43.5
comp=Z,43nm,1.6s
MSSA Maissana 69.78 310 P **P** **18 30 43.3 +2.2**
MSSA IAmb IAmb 18 31 10.9
comp=Z,13nm,1.1s
STKA Stephens Creek 72.04 139 P **P** **18 30 53.2 -1.5**
comp=Z,1.6nm,0.5s,baz=359,slow=6.8,SNR=4.9
IMAR Indian Mountai 75.74 23 P **P** **18 31 15.6 -0.3**
TOLK Toolik Lake Re 75.76 20 P **P** **18 31 16.7 +0.6**
LSZ Lusaka 76.20 246 P **P** **18 31 20.5 +1.0**
ARMA Armidale 77.42 132 P **P** **18 31 25.9 -0.1**
ARMA IAmb IAmb 18 31 57.2
comp=Z,26nm,1.6s
BPAW Bear Paw Mtn. 77.72 24 P **P** **18 31 26.3 -0.8**
SUMG Summit 77.75 347 P **P** **18 31 28.5 +0.9**
PPLA Purkeypile 77.89 26 P **P** **18 31 27.8 -0.5**
PPLA IAmb IAmb 18 31 30.1
comp=Z,33nm,1.3s
MDM Murphy Dome 78.24 23 P **P** **18 31 30.1 +0.1**
MDM IAmb IAmb 18 31 55.6
comp=Z,24nm,1.8s
SKT Skwentna 78.63 26 P **P** **18 31 31.2 -1.0**
SKT IAmb IAmb 18 31 49.2
comp=Z,23nm,1.5s

ILAR Eielson Array 78.82 23 P **P** **18 31 32.0 -1.1**
comp=Z,0.6nm,0.7s,baz=286,slow=4.7,SNR=7.8
RND Reindeer 78.89 24 P **P** **18 31 33.3 -0.3**
SUA Susitna One 79.23 26 P **P** **18 31 33.4 -2.2**
SUA IAmb IAmb 18 32 03.2
comp=Z,19nm,1.3s
DHY Denali Highway 79.63 24 P **P** **18 31 37.8 +0.1**
DHY IAmb IAmb 18 32 04.8
comp=Z,14nm,1.5s
BRLK Bradley Lake 80.09 28 P **P** **18 31 39.0 -1.1**
SCM Sheep Creek Mo 80.37 25 P **P** **18 31 41.2 -0.5**
OHAK Old Harbor 80.38 31 P **P** **18 31 40.5 -1.2**
KDAK Kodiak Island 80.41 30 P **P** **18 31 42.0 +0.2**
INK Inuvik 80.53 16 P **P** **18 31 42.1 -0.2**
EGAK Eagle 80.75 21 P **P** **18 31 43.5 -0.1**
EGAK IAmb IAmb 18 32 04.0
comp=Z,17nm,1.5s
K27K Chicken 80.93 22 P **P** **18 31 45.6 +1.1**
K27K IAmb IAmb 18 32 22.7
comp=Z,18nm,1.6s
C36M Paulatuk 81.90 13 P **P** **18 31 49.1 -0.4**
C36M IAmb IAmb 18 31 50.7
comp=Z,9.0nm,0.7s
BALM Baldy 82.75 24 P **P** **18 31 55.0 +0.7**
BALM IAmb IAmb 18 32 13.8
comp=Z,23nm,1.4s
SUCK Suckling Hills 82.82 26 P **P** **18 31 54.0 -0.5**
LBTB Lobatse 83.31 239 P **P** **18 31 58.8 +1.1**
BOSA Boshof 85.43 236 P **P** **18 32 09.4 +1.0**
comp=Z,14nm,0.7s,baz=66,slow=3.4,SNR=35
BOSA Boshof 85.43 236 P **P** **18 32 09.2 +0.8**
BOSA IAmb IAmb 18 32 10.1
comp=Z,13nm,0.8s
TORD Torodi Ar. Bea 87.30 283 P **P** **18 32 18.8 +1.1**
comp=Z,1.0nm,0.6s,baz=47,slow=4.5,SNR=5.9
TORD Torodi Ar. Bea 87.30 283 IAmb IAmb 18 32 20.6
comp=Z,1.0nm,0.7s
YKA Yellowknife Ar 89.78 13 P **P** **18 32 28.2 -0.4**
comp=Z,0.3nm,0.4s,baz=342,slow=5.8,SNR=4.4
PLCA Paso Flores 160.03 214 PKPab **PKPab** **18 40 08.4 -0.9**
comp=Z,2.6nm,0.7s,baz=134,slow=2.6,SNR=7.5

IDC 08 18:29:14.2±1.5, 3.83N×118.23E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/30, mbtmp3.3/4, MS3.2/2, Ms1 3.3/2, ms1mx2.8/21, Error ellipse: s-maj=137.8km s-min=23.0km az=53.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**23.82**	**309**	P	P	18 34 28.6	-0.5
	0.2nm,0.7s,baz=133,slow=7.9,SNR=4.2						
CMAR				LR	LR	18 44 45.1	
	comp=Z,33nm,19.2s,baz=140,slow=39						
WRA	**Warramunga Arr**	**28.44**	**147**	P	P	18 35 10.9	0.0
	0.5nm,0.5s,baz=334,slow=9.6,SNR=8.7						
ASAR	**Alice Springs**	**31.31**	**152**	P	P	18 35 36.3	-0.1
	0.2nm,0.6s,baz=325,slow=7.5,SNR=2.1						
MKAR	**Makanchi Array**	**52.90**	**330**	P	P	18 38 32.4	+0.4
	0.7nm,0.8s,baz=139,slow=7.7,SNR=2.2						
DZM	**Mont Dzumac**	**53.70**	**121**	LR	LR	19 03 50.5	
	comp=Z,33nm,18.1s,baz=58,slow=39						

IDC 08 18:55:28.0±1.2, 3.98N×118.40E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.3/50, mbtmp3.4/5, MS2.8/2, Ms1 2.8/2, ms1mx2.6/28, Error ellipse: s-maj=116.5km s-min=20.3km az=56.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**7.78**	**66**	LR	LR	19 00 49.2	
	comp=Z,66nm,19.1s,baz=140,slow=41						
CMAR	**Chiang Mai Arr**	**23.86**	**309**	P	P	19 00 41.8	-1.5
	0.3nm,0.6s,baz=132,slow=8.0,SNR=4.3						
GUMO	**Guam**	**27.82**	**68**	LR	LR	19 13 26.2	
	comp=Z,23nm,19.6s,baz=104,slow=39						
WRA	**Warramunga Arr**	**28.47**	**147**	P	P	19 01 24.8	-0.2
	0.8nm,0.6s,baz=334,slow=9.6,SNR=16						
ASAR	**Alice Springs**	**31.36**	**152**	P	P	19 01 50.8	+0.2
	0.2nm,0.6s,baz=334,slow=10.0,SNR=5.5						
MKAR	**Makanchi Array**	**52.85**	**329**	P	P	19 04 45.7	+0.2
	0.3nm,0.5s,baz=126,slow=7.3,SNR=2.4						
ZALV	**Zalesovo Beam**	**56.84**	**337**	P	P	19 05 15.2	+0.9
	0.5nm,0.5s,baz=128,slow=6.1,SNR=3.5						

*NNC **08** 18:56:01.6±2.0, 45.01N×79.30E, h0km, mb2.6, mpv2.5, Error ellipse: s-maj=13.3km s-min=11.5km az=177.0*
*SOME **08** 18:56:02.6, 45.00N×79.30E, h5km*
ISC 08 18:56:01.3±1.4, 45.03N±0.04×79.31E±0.05, h5km±12km, n16, σ0.89/28, 3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPS	**Kapalarasan**	**0.26**	**8**	*eP*	**Pb**	**18 56 08.8**	**+0.3**
	2.5nm,0.1s						
KAPS				*eS*	**Sb**	**18 56 13.3**	**-0.1**
	11nm,0.1s						
MNBS	**Baschi**	**1.15**	**215**	*eP*	**Pg**	**18 56 23.1**	**-0.3**
	0.3nm,0.1s						
MNBS				*eS*	**Sg**	**18 56 37.3**	**-0.9**
	4.0nm,0.2s						
MNBS	**Baschi**	**1.15**	**215**	P	**Pg**	**18 56 22.6**	**-0.7**
	0.3nm,0.2s						
MNBS				S	**Sg**	**18 56 37.4**	**-0.8**
	4.6nm,0.2s						
ARXS	**Arharly**	**1.33**	**233**	*eP*	**Pg**	**18 56 27.5**	**+0.6**
	2.1nm,0.2s						
ARXS				*eS*	**Sn**	**18 56 44.8**	**-0.1**
	3.5nm,0.3s						
ARXS	**Arharly**	**1.33**	**233**	P	**Pg**	**18 56 27.3**	**+0.5**
	2.4nm,0.2s						
ARXS				S	**Sn**	**18 56 45.2**	**+0.3**
	4.0nm,0.2s						
KPKS	**Kokpek**	**1.62**	**196**	*eP*	**Pg**	**18 56 33.7**	**+1.3**
	3.3nm,0.1s						
KPKS				*eS*	**Sg**	**18 56 55.5**	**+2.0**
	20nm,0.2s						
PDGK	**Podgornoye**	**1.70**	**175**	P	**Pn**	**18 56 31.8**	**0.0**
	0.9nm,0.2s						
PDGK				S	**Sn**	**18 56 53.4**	**-0.7**
	1.7nm,0.5s						
PDGK	**Podgornoye**	**1.70**	**175**	⇓Pn	**Pn**	**18 56 31.7**	**-0.2**
	0.6nm,0.3s						
PDGK				⇓Sn	**Sb**	**18 56 55.5**	**+0.5**
	1.0nm,0.5s						
UZB	**Uzynbulak**	**1.89**	**186**	*eP*	**Pg**	**18 56 37.5**	**0.0**
	1.4nm,0.3s						
UZB				*eS*	**Sg**	**18 57 01.8**	**-0.2**
	3.5nm,0.2s						
UZB	**Uzynbulak**	**1.89**	**186**	P	**Pb**	**18 56 36.4**	**0.0**
	1.5nm,0.3s						
UZB				S	**Sg**	**18 57 01.3**	**-0.8**
	3.5nm,0.2s						
SATY	**Saty**	**2.07**	**199**	*eP*	**Pg**	**18 56 40.9**	**-0.1**
	1.9nm,0.2s						
SATY				*eS*	**Sg**	**18 57 07.7**	**-0.1**
	2.4nm,0.1s						
SATY	**Saty**	**2.07**	**199**	Pg	**Pb**	**18 56 39.6**	**+0.1**
	1.0nm,0.1s						
SATY				Lg	Lg	18 57 06.5	
	10nm,0.2s						
KTBS	**Karatobe**	**2.30**	**236**	*eP*	**Pg**	**18 56 45.1**	**-0.2**
	0.6nm,0.2s						
KTBS				*eS*	**Sg**	**18 57 14.9**	**-0.2**
	8.8nm,0.5s						
KTBS	**Karatobe**	**2.30**	**236**	Pg	**Pb**	**18 56 43.9**	**+0.7**
	0.5nm,0.2s						
KTBS				Lg	Lg	18 57 15.0	
	6.5nm,0.6s						
KOTS	**Kotyrbulak**	**2.39**	**222**	Pg	**Pg**	**18 56 46.1**	**-1.0**
	1.4nm,0.3s						
KOTS				Lg	Lg	18 57 17.9	
	9.6nm,0.2s						
MK31	**Makanchi Array**	**2.73**	**49**	Pg	**Pb**	**18 56 50.8**	**+0.1**
	0.2nm,0.4s,baz=220,slow=15,SNR=3.2						
MK31				⇓Lg	Lg	18 57 22.5	
	0.1nm,0.2s,baz=222,slow=26,SNR=5.6						

*REY **08** 18:58:04.6, 64.68N×17.46W, h8km*
*IDC **08** 18:58:04.8±0.7, 64.60N×17.61W, h0km, mb3.7/12, mb1 3.9/16, mb1mx3.7/60, mbtmp3.7/16, ML3.1/4, Error ellipse: s-maj=20.6km s-min=10.3km az=12.0*
*NEIC **08** 18:58:06.0±2.0, 64.62N±0.09×17.7W±0.2, h8km±4km,*

mb4.4/13, Error ellipse: s-maj=13.5km s-min=9.5km az=192.0

ISC 08 18:58:05.8±0.4, 64°68N±0°02×17°47W±0°02, h10km, n82, σ1§79/93, mb4.0/23, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**21**	P	**Pg**	**18 58 07.5**	**-1.2**
	baz=19						
IVON	**Vonarskard**	**0.12**	**267**	P	**Pg**	**18 58 07.5**	**-1.3**
	baz=269						
IVON				S	**Sg**	**18 58 09.8**	**-1.1**
	baz=269						
IGRF	**Grimsfjall**	**0.29**	**162**	P	**Pg**	**18 58 10.0**	**-1.6**
	baz=163						
IHUS	**Husbondi**	**0.39**	**192**	P	**Pg**	**18 58 12.2**	**-1.4**
	baz=193						
IHUS				S	**Sg**	**18 58 17.9**	**-0.8**
	baz=193						
ISKR	**Skrokkalda**	**0.41**	**254**	P	**Pg**	**18 58 12.4**	**-1.5**
	baz=254						
THOR	**Thorvaldshraun**	**0.42**	**53**	P	**Pg**	**18 58 12.5**	**-1.6**
	baz=52						
IVOT	**Vottur**	**0.43**	**163**	P	**Pg**	**18 58 12.5**	**-1.7**
	baz=163						
IJOK	**Jokulheimar**	**0.49**	**222**	P	**Pg**	**18 58 13.8**	**-1.5**
	baz=223						
IMKO	**Mokollar**	**0.57**	**58**	P	**Pg**	**18 58 14.9**	**-1.8**
	baz=57						
IMKO				S	**Sg**	**18 58 23.1**	**-1.2**
	baz=57						
IIEY	**Innrieyrar**	**0.65**	**206**	P	**Pg**	**18 58 16.4**	**-2.0**
	baz=207						
IIEY				S	**Sg**	**18 58 25.3**	**-1.6**
	baz=207						
ISVA	**Svartarkot**	**0.67**	**8**	P	**Pg**	**18 58 16.7**	**-1.9**
	baz=7.4						
ISVA				S	**Sg**	**18 58 26.1**	**-1.3**
	baz=7.4						
IKSK	**Karasker**	**0.68**	**140**	P	**Pg**	**18 58 16.0**	**-2.9**
	baz=140						
IKAL	**Kalfafell**	**0.74**	**187**	P	**Pg**	**18 58 17.8**	**-2.2**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.76**	**79**	P	**Pg**	**18 58 17.8**	**-2.6**
	baz=79						
IVSH				S	**Sg**	**18 58 28.2**	**-2.1**
	baz=79						
IVAT	**Vatnsfell**	**0.80**	**232**	P	**Pg**	**18 58 18.9**	**-2.3**
	baz=233						
IHVE	**Hveravellir**	**0.92**	**283**	P	**Pg**	**18 58 20.6**	**-2.8**
	baz=283						
IHVE				S	**Sb**	**18 58 33.4**	**-2.7**
	baz=283						
IMEL	**Melhnausar**	**0.96**	**21**	P	**Pg**	**18 58 21.4**	**-2.8**
	baz=20						
IREN	**Reynihlio**	**1.00**	**13**	P	**Pg**	**18 58 22.2**	**-2.8**
	baz=13						
IKVO	**Krokottuvotn**	**1.07**	**13**	P	**Pg**	**18 58 23.3**	**-3.0**
	baz=13						
ISNB	**Snabyli**	**1.07**	**209**	P	**Pg**	**18 58 23.4**	**-2.9**
	baz=209						
IGRS	**Grimsstaoir**	**1.12**	**30**	P	**Pb**	**18 58 24.1**	**-3.0**
	baz=30						
IGRS				S	**Sb**	**18 58 40.3**	**-1.5**
	baz=30						
ISLY	**Slysaalda**	**1.12**	**221**	P	**Pg**	**18 58 24.4**	**-2.9**
	baz=221						
IFED	**Fedgar**	**1.17**	**237**	P	**Pb**	**18 58 25.5**	**-2.5**
	baz=237						
IRJU	**Rjupnafell**	**1.19**	**207**	P	**Pb**	**18 58 25.5**	**-2.8**
	baz=207						
ISKI	**Skildingahlsh**	**1.21**	**9**	P	**Pn**	**18 58 25.6**	**-3.1**
	baz=8.5						
ISKI				S	**Sb**	**18 58 42.5**	**-1.9**
	baz=8.5						
IGHA	**Grjothals**	**1.22**	**16**	P	**Pn**	**18 58 25.6**	**-3.3**
	baz=16						
IMJO	**Mjoaskard**	**1.22**	**233**	P	**Pb**	**18 58 26.3**	**-2.6**
	baz=233						
IGRA	**Granastaoir**	**1.25**	**358**	P	**Pn**	**18 58 26.0**	**-3.1**
	baz=358						
BORG	**Borgarnes**	**1.66**	**274**	Pg	**Pn**	**18 58 32.5**	**-2.3**
	29nm,0.3s,baz=99,slow=11,SNR=83						
BORG				Lg	Lg	18 58 56.0	
	16nm,0.3s,baz=265,slow=23,SNR=7.9						
BORG	**Borgarnes**	**1.66**	**274**		**Pn**	**18 58 32.2**	**-2.6**
SCO	**Scoresbysund**	**6.08**	**346**		**Pn**	**18 59 34.7**	**-0.7**
SCO	**Scoresbysund**	**6.08**	**346**	*e*	**Pn**	**18 59 34.9**	**-0.6**
	baz=184,slow=9.3						
SCO				*i* P	**Pn**	**18 59 35.8**	**+0.3**
SCO				*i* S	**Sn**	**19 00 49.0**	**+4.1**
SUMG	**Summit**	**10.94**	**325**	Pn	**Pn**	**19 00 42.0**	**-0.4**
EKB9	**Eskdalemuir Ar**	**11.74**	**136**	Pn	**Pn**	**19 00 52.9**	**-0.2**
EKB8	**Eskdalemuir Ar**	**11.74**	**136**	Pn	**Pn**	**19 00 52.8**	**-0.3**
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**19 00 53.1**	**-0.2**
	baz=322,slow=13,SNR=11						
ESK	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**19 00 53.5**	**+0.1**
NRS	**Narsarsuaq**	**13.15**	**267**	Pn	**Pn**	**19 01 12.2**	**-0.1**
NC204	**NORSAR Array S**	**13.22**	**92**	Pn	**Pn**	**19 01 11.6**	**-1.6**
NOA	**NORSAR Array B**	**13.52**	**92**	Pn	**Pn**	**19 01 15.1**	**-2.3**
	0.0nm,0.3s,baz=299,slow=13,SNR=3.3						
ARCES	**ARCESS Array B**	**17.10**	**55**	P	**P**	**19 02 06.2**	**0.0**
	baz=275,slow=9.7,SNR=3.7						
FINES	**FINESS Array B**	**19.69**	**79**	P	**Pn**	**19 02 35.8**	**-0.3**
	0.1nm,0.3s,baz=287,slow=9.9,SNR=1.7						
FINES	**FINESS Array B**	**19.69**	**79**	P	**P**	**19 02 35.1**	**+0.4**
CLL	**Collm**	**20.70**	**116**	*eP*	**P**	**19 02 47.0**	**+1.3**
CLL	**Collm**	**20.70**	**116**	P	**P**	**19 02 46.9**	**+1.1**
ECH	**Echery**	**21.15**	**129**	P	**P**	**19 02 52.4**	**+1.7**
STU	**Stuttgart**	**21.37**	**125**	P	**P**	**19 02 55.2**	**+2.3**
STU				IAmb	IAmb	19 03 26.4	
	comp=Z,14nm,1.1s						
BRG	**Berggiesshubel**	**21.41**	**115**	*eP*	**P**	**19 02 54.0**	**+0.7**
	comp=Z,12nm,1.1s						
CHVC	**Chvalec**	**22.46**	**113**	*eP*	**P**	**19 03 05.4**	**+0.7**
OSTC	**Ostas**	**22.55**	**113**	*eP*	**P**	**19 03 08.4**	**+2.8**
KHC	**Kasperske Hory**	**22.67**	**118**	*eP*	**P**	**19 03 08.1**	**+1.2**
DPC	**Dobruska-Polom**	**22.75**	**113**	*eP*	**P**	**19 03 09.5**	**+1.7**
DAVA	**Damuels**	**22.88**	**126**	*eP*	**P**	**19 03 11.2**	**+1.9**
	comp=Z,9.3nm,1.2s						
GEC2B	**GERESS ARRAY S**	**22.95**	**119**	P	**P**	**19 03 10.2**	**+0.2**
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**19 03 10.8**	**+0.9**
	comp=Z,1.7nm,1.0s,baz=317,slow=9.6,SNR=6.1						
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**19 03 10.3**	**+0.4**
RETA	**Reutte**	**23.02**	**125**	*eP*	**P**	**19 03 11.8**	**+1.2**
	comp=Z,9.4nm,1.5s						
KRLC	**Kraliky**	**23.15**	**113**	*eP*	**P**	**19 03 12.9**	**+0.9**
DAVOX	**Davos/Dischmat**	**23.32**	**127**	P	**P**	**19 03 14.8**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=356,slow=15,SNR=4.2						
WATA	**Walderalm**	**23.43**	**124**	*eP*	**P**	**19 03 15.4**	**+0.4**
	comp=Z,11nm,1.6s						
CONA	**Conrad Observa**	**24.52**	**117**	P	**P**	**19 03 26.6**	**+1.5**
	comp=Z,4.1nm,0.9s						
ARSA	**Arzberg**	**24.96**	**118**	*eP*	**P**	**19 03 31.3**	**+2.3**
	comp=Z,3.5nm,1.0s						
ESDC	**Sonseca Array**	**26.26**	**156**	P	**P**	**19 03 41.7**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=360,slow=9.4,SNR=5.9						
AKASG	**Malin Array Be**	**27.83**	**98**	P	**P**	**19 03 55.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=319,slow=9.8,SNR=2.4						
AKTO	**Aktyubinsk**	**40.27**	**73**	P	**P**	**19 05 43.9**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=337,slow=12,SNR=4.1						
P49A	**Miami Univ. Ec**	**45.49**	**270**	P	**P**	**19 06 25.6**	**+0.8**
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**19 06 27.8**	**+1.8**
	comp=Z,1.2nm,1.0s,baz=20,slow=5.4,SNR=7.8						
ILAR				PcP	**PcP**	**19 08 04.7**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=27,slow=3.2,SNR=4.8						
IMAR	**Indian Mountai**	**45.85**	**337**	P	**P**	**19 06 29.3**	**+1.9**
ZALV	**Zalesovo Beam**	**47.62**	**51**	P	**P**	**19 06 42.4**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=319,slow=6.5,SNR=3.8						
KURK	**Kurchatov**	**48.09**	**58**	P	**P**	**19 06 45.8**	**+0.7**
KURK				IAmb	IAmb	19 06 46.8	
	comp=Z,3.4nm,0.9s						
MKAR	**Makanchi Array**	**52.71**	**58**	P	**P**	**19 07 20.9**	**+0.9**
	comp=Z,1.0nm,0.9s,baz=336,slow=6.8,SNR=3.1						
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P	**P**	**19 07 23.4**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=335,slow=9.8,SNR=5.4						
TORD	**Torodi Ar. Bea**	**53.15**	**156**	IAmb	IAmb	19 07 23.7	
	comp=Z,1.0nm,0.9s						
BW06	**Boulder Array**	**53.18**	**293**	P	**P**	**19 07 24.1**	**+0.2**
BW06				IAmb	IAmb	19 07 24.8	
	comp=Z,5.6nm,1.2s						
PD31	**Pinedale Array**	**53.18**	**293**	P	**P**	**19 07 24.1**	**+0.2**
PD31				IAmb	IAmb	19 07 24.8	
	comp=Z,4.5nm,1.2s						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**19 07 24.6**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=55,slow=5.6,SNR=7.1						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**19 07 23.4**	**-0.4**
BTK	**Batken**	**53.94**	**72**	P	**P**	**19 07 30.9**	**+1.7**
BTK				IAmb	IAmb	19 07 34.1	
	comp=Z,5.8nm,1.0s						
GAR	**Garm**	**54.63**	**73**	P	**P**	**19 07 36.2**	**+1.8**
HWUT	**Hardware Ranch**	**54.96**	**294**	P	**P**	**19 07 37.0**	**+0.2**
HWUT				IAmb	IAmb	19 07 43.9	
	comp=Z,3.1nm,0.9s						
SONM	**Songino Array**	**59.62**	**40**	P	**P**	**19 08 10.9**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=343,slow=4.5,SNR=2.8						
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P	**P**	**19 10 37.6**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=319,slow=6.6,SNR=6.4						

*IDC **08** 19:00:15.8±1.0, 3°97N×118°25E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/48, mbtmp3.7/8, ML4.3/1, MS3.4/2, Ms1 3.5/2, ms1mx2.7/37, Error ellipse: s-maj=76.0km s-min=16.4km az=61.0*

*NEIC **08** 19:00:17.5±2.1, 3°59N±0°06×117°57E±0°07, h10km±1km, mb4.4/12, Error ellipse: s-maj=11.8km s-min=9.5km az=276.0*

*DJA **08** 19:00:18.4±0.4, 4°N±3°×11°8E±°, h10km, M4.4/10, mB4.8/3, mb4.6/6, MLv4.3/10, Mw(mB)4.1/3*

ISC 08 19:00:17.4±0.6, 3°62N±0°05×117°68E±0°08, h10km, n37, σ1§52/38, mb4.2/14, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**1.75**	**28**	Pn	**Pb**	**19 00 49.6**	**-0.1**
MYLDM				Sn	**Sb**	**19 01 11.2**	**-0.6**
KKM	**Kota Kinabalu**	**2.82**	**329**		**Pn**	**19 01 02.7**	**0.0**
MPSI	**Mapaga**	**3.94**	**146**	P	**Pn**	**19 01 17.6**	**-0.4**
SBUM	**Sibu**	**5.58**	**258**	Pn	**Pn**	**19 01 39.7**	**-0.8**
APSI	**Ampana**	**6.00**	**139**	P	**Pn**	**19 01 47.4**	**+1.1**
	0.1nm27nm,0.8s						
LUWI	**Luwuk**	**6.88**	**132**	P	**Pn**	**19 02 00.7**	**+2.3**
	0.2nm45nm,1.0s						
LUWI	**Luwuk**	**6.88**	**132**	Pn	**Pn**	**19 01 58.9**	**+0.6**
TTSI	**Tana Toraja**	**6.96**	**162**	P	**Pn**	**19 02 01.8**	**+2.3**
	0.2nm657nm62nm,0.9s						
KMSI	**Cibinong**	**6.98**	**116**	P	**Pn**	**19 02 00.8**	**+1.0**
	0.2nm1µm40nm,0.6s						
SPSI	**Sidrap Palu**	**7.82**	**165**	P	**Pn**	**19 02 13.0**	**+1.7**
	0.1nm27nm,0.5s						
BNSI	**Bone**	**8.33**	**163**	P	**Pn**	**19 02 21.2**	**+2.9**
	26nm,0.8s						
KAPI	**Kappang**	**8.82**	**166**	Pn	**Pn**	**19 02 27.7**	**+2.6**
	2.9nm,0.3s,baz=337,slow=10,SNR=4.7						
KAPI				Sn	**Sn**	**19 04 01.6**	**-3.1**
	2.0nm,0.3s,baz=30,slow=17,SNR=3.4						
KAPI	**Kappang**	**8.82**	**166**		**Pn**	**19 02 26.5**	**+1.4**
BKSI	**Bulukumba**	**9.21**	**165**	P	**Pn**	**19 02 32.8**	**+2.4**
LEM	**Lembang**	**14.44**	**224**	LR	LR	19 09 59.7	
	comp=Z,201nm,19.5s,baz=45,slow=39						
GSI	**Gunungsitoli**	**20.22**	**264**	P	**P**	**19 04 51.7**	**-1.2**
MTN	**Manton Dam**	**21.12**	**141**	P	**P**	**19 05 02.4**	**-0.1**
MTN				IAmb	IAmb	19 05 12.5	
	comp=Z,11nm,1.1s						
KNRA	**Kununurra**	**22.09**	**151**	P	**P**	**19 05 15.0**	**+2.1**
KNRA				IAmb	IAmb	19 05 16.7	
	comp=Z,13nm,0.8s						
FITZ	**Fitzroy Crossi**	**22.96**	**160**	P	**P**	**19 05 20.2**	**-1.9**
CMAR	**Chiang Mai Arr**	**23.53**	**310**	P	**P**	**19 05 30.4**	**+2.3**
	comp=Z,0.7nm,0.9s,baz=127,slow=7.0,SNR=7.0						
CMAR				LR	LR	19 14 31.9	
	comp=Z,50nm,18.1s,baz=166,slow=36						
ENH	**Enshi**	**27.62**	**345**	P	**P**	**19 06 06.0**	**+0.7**
ENH				IAmb	IAmb	19 06 12.8	
	comp=Z,16nm,1.3s						
WB0	**Warramunga Arr**	**28.46**	**145**	P	**P**	**19 06 12.1**	**-0.7**
WB0				IAmb	IAmb	19 06 13.5	
	comp=Z,5.3nm,0.7s						
WRA	**Warramunga Arr**	**28.57**	**146**	P	**P**	**19 06 13.3**	**-0.5**
	comp=Z,2.8nm,0.6s,baz=334,slow=9.6,SNR=40						
WRA	**Warramunga Arr**	**28.57**	**146**	P	**P**	**19 06 12.6**	**-1.2**
WB2	**Warramunga Arr**	**28.57**	**146**	P	**P**	**19 06 13.2**	**-0.7**
WB2				IAmb	IAmb	19 06 14.5	
	comp=Z,3.2nm,0.8s						
ASAR	**Alice Springs**	**31.39**	**151**	P	**P**	**19 06 39.5**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=330,slow=8.6,SNR=14						
BBOO	**Buckleboo**	**40.20**	**156**	P	**P**	**19 07 53.8**	**-0.4**
BBOO				IAmb	IAmb	19 08 12.8	
	comp=Z,14nm,1.3s						
STKA	**Stephens Creek**	**41.99**	**149**	P	**P**	**19 08 08.2**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=23,slow=1.7,SNR=3.7						
STKA	**Stephens Creek**	**41.99**	**149**	P	**P**	**19 08 08.5**	**-0.4**
SONM	**Songino Array**	**45.11**	**349**	P	**P**	**19 08 32.8**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=156,slow=7.3,SNR=1.4						
SONM	**Songino Array**	**45.11**	**349**	P	**P**	**19 08 36.2**	**+2.2**
MKAR	**Makanchi Array**	**52.80**	**330**	P	**P**	**19 09 32.4**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=124,slow=9.3,SNR=2.0						
ZAA0	**Zalesovo Array**	**56.90**	**337**	P	**P**	**19 10 03.2**	**+0.7**
ZAA0				IAmb	IAmb	19 10 10.3	
	comp=Z,3.8nm,1.2s						
ZALV	**Zalesovo Beam**	**56.90**	**337**	P	**P**	**19 10 01.0**	**-1.5**
	comp=Z,1.3nm,0.4s,baz=123,slow=5.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**56.90**	**337**	P	**P**	**19 10 02.9**	**+0.4**
MLZ	**Mavora Lakes**	**66.19**	**144**	P	**P**	**19 11 06.5**	**+1.0**
ABKAR	**Akbulak array**	**66.65**	**323**	P	**P**	**19 11 07.4**	**-0.9**

*REY **08** 19:00:51.9, 64°67N×17°52W, h7km*

*IDC **08** 19:00:52.9±1.1, 64°59N×17°61W, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.5/55, mbtmp3.6/6, ML4.2/1, MS3.0/1, Ms1 3.1/1, ms1mx2.4/39, Error ellipse: s-maj=30.6km s-min=12.4km az=16.0*

ISC 08 19:00:52.7±0.7, 64.70N±0°03×17°46W±0°03, h10km, n28, σ2§00/32, mb3.7/5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.10**	**24**	P	**Pg**	**19 00 55.0**	**-0.4**
	baz=28						
IVON	**Vonarskard**	**0.13**	**259**	P	**Pg**	**19 00 54.4**	**-1.3**
	baz=271						
IGRF	**Grimsfjall**	**0.30**	**164**	P	**Pg**	**19 00 57.5**	**-1.3**
	baz=158						
THOR	**Thorvaldshraun**	**0.41**	**55**	P	**Pb**	**19 01 00.1**	**-2.0**
	baz=54						
THOR				S	**Sb**	**19 01 07.2**	**-1.2**
	baz=54						
IHUS	**Husbondi**	**0.41**	**192**	P	**Pg**	**19 00 59.1**	**-1.7**
	baz=189						
ISKR	**Skrokkalda**	**0.42**	**251**	P	**Pg**	**19 00 59.3**	**-1.6**
	baz=254						
IVOT	**Vottur**	**0.45**	**164**	P	**Pg**	**19 01 00.1**	**-1.3**
	baz=160						
IJOK	**Jokulheimar**	**0.51**	**221**	P	**Pg**	**19 01 00.7**	**-1.8**
	baz=221						
IMKO	**Mokollar**	**0.56**	**59**	P	**Pb**	**19 01 02.5**	**-2.0**
	baz=58						
ISVA	**Svartarkot**	**0.65**	**8**	P	**Pb**	**19 01 04.1**	**-1.9**
	baz=9.4						
ISVA				S	**Sb**	**19 01 13.9**	**-1.3**
	baz=9.4						
IKSK	**Karasker**	**0.69**	**141**	P	**Pg**	**19 01 03.9**	**-2.1**
	baz=138						
IVSH	**V-Sauoahnukur**	**0.75**	**81**	P	**Pg**	**19 01 05.4**	**-1.7**
	baz=79						
IVSH				S	**Sb**	**19 01 16.3**	**-1.9**
	baz=79						
IHVE	**Hveravellir**	**0.92**	**282**	P	**Pg**	**19 01 08.0**	**-2.3**
	baz=284						
IMEL	**Melhnausar**	**0.94**	**21**	P	**Pb**	**19 01 09.0**	**-2.0**
	baz=22						
IREN	**Reynihlio**	**0.98**	**14**	P	**Pb**	**19 01 09.7**	**-2.0**
	baz=14						
IKVO	**Krokottuvotn**	**1.05**	**13**	P	**Pg**	**19 01 10.7**	**-2.1**
	baz=14						
IGRS	**Grimsstaoir**	**1.10**	**30**	P	**Pg**	**19 01 11.7**	**-2.1**
	baz=31						
ISKI	**Skildingahlsh**	**1.19**	**9**	P	**Pb**	**19 01 13.1**	**-2.2**
	baz=9.5						
IGHA	**Grjothals**	**1.20**	**16**	P	**Pb**	**19 01 13.2**	**-2.2**
	baz=17						
BORG	**Borgarnes**	**1.66**	**273**	Pg	**Pn**	**19 01 20.2**	**-1.5**
	38nm,0.3s,baz=90,slow=7.5,SNR=18						
BORG				Lg	Lg	19 01 44.7	
	14nm,0.3s,baz=62,slow=18,SNR=8.3						
SCO	**Scoresbysund**	**6.06**	**346**	*e*	**Pn**	**19 02 20.9**	**-1.2**
	baz=173,slow=7.9						
SCO				*i* P	**Pn**	**19 02 23.2**	**+1.1**
SCO				*e*S	**Sn**	**19 03 36.5**	**+5.2**
SCO				IAML		19 03 45.9	
	comp=Z,1.8nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.77**	**136**	Pn	**Pn**	**19 03 41.3**	**+0.9**
	baz=323,slow=13,SNR=12						
KHC	**Kasperske Hory**	**22.68**	**119**	*e*P	**P**	**19 05 55.0**	**+1.1**
GERES	**GERESS Array B**	**22.96**	**119**	P	**P**	**19 05 59.5**	**+2.6**
	comp=Z,0.4nm,0.7s,baz=320,slow=9.3,SNR=3.9						
ESDC	**Sonseca Array**	**26.28**	**156**	P	**P**	**19 06 29.3**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=344,slow=9.1,SNR=6.2						
ESDC				LR	LR	19 15 57.5	
	comp=Z,30nm,18.5s,baz=145,slow=34						
ILAR	**Eielson Array**	**45.66**	**332**	P	P	19 09 16.8	+4.0
	comp=Z,0.9nm,1.1s,baz=24,slow=8.9,SNR=5.1						
MKAR	**Makanchi Array**	**52.70**	**58**	P	**P**	**19 10 07.5**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=319,slow=6.1,SNR=3.3						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**19 10 12.2**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=60,slow=8.8,SNR=5.9						

*IDC **08** 19:01:36.8±2.2, 7°93N×122°64E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/43, mbtmp3.5/4, Error ellipse: s-maj=120.0km s-min=23.4km az=55.0*

*NEIC **08** 19:01:53.0±1.4, 3°48N±0°07×117°69E±0°06, h10km±1km, mb4.2/7, Error ellipse: s-maj=11.5km s-min=9.5km az=149.0*

*DJA **08** 19:01:54.5±0.3, 4°N±3°×11°8E±°, h10km, M4.3/8, mB4.7/2, mb4.3/7, MLv4.3/8, Mw(mB)3.9/2*

ISC 08 19:01:56.3±0.9, 3°58N±0°09×117°79E±0°09, h35km, n21, σ1§63/21, mb4.0/8, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**1.74**	**24**		**Pn**	**19 02 25.7**	**+1.6**
KKM	**Kota Kinabalu**	**2.91**	**327**	Pn	**Pn**	**19 02 40.2**	**0.0**
MPSI	**Mapaga**	**3.85**	**147**	P	**Pn**	**19 02 52.5**	**-0.6**
SBUM	**Sibu**	**5.67**	**259**	Pn	**Pn**	**19 03 17.4**	**-0.7**
LUWI	**Luwuk**	**6.78**	**133**	Pn	**Pn**	**19 03 29.8**	**-3.5**
TTSI	**Tana Toraja**	**6.89**	**163**	P	**Pn**	**19 03 36.5**	**+1.6**
	0.2nm660nm47nm,0.7s						
SPSI	**Sidrap Palu**	**7.75**	**165**	P	**Pn**	**19 03 48.0**	**+1.3**
	0.1nm21nm,0.8s						
KSM	**Kuching**	**7.76**	**255**	Pn	**Pn**	**19 03 45.0**	**-1.8**
BNSI	**Bone**	**8.26**	**164**	P	**Pn**	**19 03 55.5**	**+1.8**
	13nm,0.7s						
KAPI	**Kappang**	**8.76**	**167**	Pn	**Pn**	**19 03 58.8**	**-1.8**
BKSI	**Bulukumba**	**9.15**	**165**	P	**Pn**	**19 04 08.7**	**+2.8**
GSI	**Gunungsitoli**	**20.32**	**264**	P	**P**	**19 06 28.1**	**-1.5**
KNRA	**Kununurra**	**22.00**	**151**	P	**P**	**19 06 49.1**	**+1.4**
KNRA				IAmb	IAmb	19 06 51.6	
	comp=Z,17nm,1.2s						
FITZ	**Fitzroy Crossi**	**22.89**	**160**	P	**P**	**19 06 56.0**	**-1.1**
FITZ				IAmb	IAmb	19 07 02.3	
	comp=Z,7.2nm,1.4s						
CMAR	**Chiang Mai Arr**	**23.64**	**310**	P	**P**	**19 07 06.0**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=133,slow=7.9,SNR=4.3						
WB0	**Warramunga Arr**	**28.37**	**145**	P	**P**	**19 07 47.0**	**-0.4**
WB0				IAmb	IAmb	19 07 56.3	
	comp=Z,3.4nm,1.1s						
WRAB	**Tennant Creek**	**28.48**	**146**	P	**P**	**19 07 48.4**	**0.0**
WRAB				IAmb	IAmb	19 07 48.7	
	comp=Z,10nm,1.5s						
WRA	**Warramunga Arr**	**28.48**	**146**	P	**P**	**19 07 48.5**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=336,slow=9.7,SNR=10						
WR0	**Warramunga Arr**	**28.61**	**146**	P	**P**	**19 07 49.0**	**-0.5**
WR0				IAmb	IAmb	19 07 52.8	
	comp=Z,4.2nm,1.2s						
ASAR	**Alice Springs**	**31.31**	**151**	P	**P**	**19 08 14.9**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=332,slow=8.8,SNR=5.0						
STKA	**Stephens Creek**	**41.91**	**149**	P	**P**	**19 09 44.1**	**+0.5**

*SKHL **08** 19:11:06.9±0.5, 42°97N×145°83E, h40km±5km, mb4.3/2*

*JMA **08** 19:11:06.6±0.1, 42°97N×145°47E, h46km±1km, M3.0*

ISC 08 19:11:05.8±2.7, 43°0N±0°1×145°54E±0°09, h46km±16km, n13, σ0§51/22, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKHN	**Kushirohamanak**	**0.31**	**296**	P	**Pn**	**19 11 15.0**	**+0.3**
NEM2	**Nemuro 2**	**0.44**	**20**	P	**Pn**	**19 11 16.7**	**+0.6**
NEM2				*e*S	**Sn**	**19 11 23.9**	**+0.4**
NMR	**Nemuro--Hokkai**	**0.44**	**18**	*i* P	**Pn**	**19 11 16.0**	**-0.1**
NMR				*i* S	**Sn**	**19 11 23.0**	**-0.5**
JAK	**Akkeshi**	**0.62**	**274**	P	**Pn**	**19 11 18.4**	**0.0**
JAK				*e*S	**Sn**	**19 11 27.0**	**-0.3**
GLVR	**Golovnino**	**0.79**	**359**	*e*P	**Pn**	**19 11 21.0**	**+0.4**
GLVR				*i* S	**Sn**	**19 11 31.0**	**-0.3**
GLVR				A	A	19 11 32.0	
	498nm,0.3s						
GLVR				A	A	19 11 32.0	
	511nm,0.3s						
JNK	**Nakash**	**0.87**	**317**	P	**Pn**	**19 11 21.7**	**0.0**

GRPR				*i* S		**Sb**	**19 29 47.1**	**-2.0**	
GRPR				pmax		pmax			
	comp=N,138nm,0.1s								
GRPR				pmax		pmax			
	comp=Z,243nm,0.1s								
GRPR				smax		smax			
	comp=E,2µm,0.3s								
GRPR				smax		smax			
	comp=N,3µm,0.2s								
KUR	**Kuril'sk**	**1.33**	**13**	*i* P		**Pb**	**19 29 35.0**	**-0.8**	
KUR				AMB		AMB	19 29 37.0		
	comp=N,36nm,0.2s								
KUR				*i* S		**Sb**	**19 29 51.0**	**-1.4**	
KUR				A		A	19 29 53.0		
	comp=N,368nm,0.3s								
KUR				A		A	19 29 53.0		
	comp=N,650nm,0.3s								
KUR	**Kuril'sk**	**1.33**	**13**	*d i* PN		**Pb**	**19 29 35.0**	**-0.8**	
KUR				*i* S		**Sb**	**19 29 51.7**	**-0.7**	
KUR				pmax		pmax			
	comp=Z,356nm,0.3s								
KUR				smax		smax			
	comp=E,650nm,0.4s								
KUR				smax		smax			
	comp=N,368nm,0.3s								
NEM2	**Nemuro 2**	**1.36**	**246**	P		**Pb**	**19 29 34.6**	**-1.8**	
NEM2				*e*S		**Sn**	**19 29 50.1**	**-1.2**	
NMR	**Nemuro--Hokkai**	**1.37**	**246**	*e*P		**Pn**	**19 29 34.0**	**-0.4**	
NMR				*i* S		**Sn**	**19 29 50.0**	**-1.5**	
NMR	**Nemuro--Hokkai**	**1.37**	**246**	*e*PN		**Pb**	**19 29 34.6**	**-1.9**	
NMR				*i* S		**Sn**	**19 29 50.2**	**-1.3**	
GLVR	**Golovnino**	**1.41**	**262**	*e*P		**Pb**	**19 29 36.0**	**-1.1**	
GLVR				AMB		AMB	19 29 38.0		
	comp=N,57nm,0.4s								
GLVR				*i* S		**Sb**	**19 29 53.0**	**-1.7**	
GLVR				A		A	19 29 55.0		
	comp=N,526nm,0.3s								
GLVR				A		A	19 29 55.0		
	comp=N,253nm,0.3s								
GLVR	**Golovnino**	**1.41**	**262**	*e*PN		**Pb**	**19 29 36.1**	**-1.1**	
GLVR				*i* S		**Sb**	**19 29 53.1**	**-1.7**	
GLVR				pmax		pmax			
	comp=N,283nm,0.4s								
GLVR				pmax		pmax			
	comp=Z,568nm,0.4s								
GLVR				pmax		pmax			
	comp=E,208nm,0.2s								
GLVR				smax		smax			
	comp=N,5µm,0.3s								
GLVR				smax		smax			
	comp=E,3µm,0.4s								
RUSJ	**Misakicho**	**1.60**	**277**	*e*PN		**Pb**	**19 29 39.4**	**-0.9**	
RUSJ				*i* S		**Sb**	**19 29 59.0**	**-1.1**	
JRA	**Rausu**	**1.68**	**271**	P		**Pb**	**19 29 40.3**	**-1.4**	
JRA				*e*S		**Sb**	**19 30 00.9**	**-1.6**	
JNSB	**Nemuroshibetsu**	**1.77**	**266**	P		**Pb**	**19 29 41.6**	**-1.7**	
JNSB				*e*S		**Sb**	**19 30 02.6**	**-2.6**	
JKHN	**Kushirohamanak**	**1.87**	**244**	P		**Pn**	**19 29 42.0**	**+0.7**	
JNK	**Nakash**	**2.01**	**261**	P		**Pb**	**19 29 44.5**	**-2.8**	
JNK				*e*S		**Sn**	**19 30 07.7**	**+0.5**	
JAK	**Akkeshi**	**2.21**	**246**	P		**Pn**	**19 29 46.7**	**+0.7**	
JTKR	**Abashiri--Toko**	**2.56**	**272**	P		**Pb**	**19 29 52.9**	**-3.7**	
JAR	**Ashorobuto**	**2.75**	**258**	P		**Pn**	**19 29 55.2**	**+1.8**	
JAR				*e*S		**Sn**	**19 30 27.1**	**+1.6**	
JCH	**Churui**	**3.27**	**247**	P		**Pn**	**19 30 01.5**	**+1.0**	
JTHR	**Tokachihiroo**	**3.46**	**243**	P		**Pn**	**19 30 05.0**	**+1.9**	
JKA	**Kamikawa-asahi**	**3.50**	**275**	*e*P		Pb	19 30 07.4	-5.3	
JKA	**Kamikawa-asahi**	**3.50**	**275**			Pb	19 30 07.4	-5.3	
ASAJ	**Asahikawa**	**3.50**	**275**	P		**Pn**	**19 30 07.0**	**+3.3**	
	comp=E,3.6nm,0.3s,baz=108,slow=7.8,SNR=23								
ASAJ				S		**Sb**	**19 30 54.5**	**-0.4**	
	comp=E,3.3nm,0.3s,baz=310,slow=19,SNR=2.2								
ASAJ				LR		LR	19 31 42.6		
	comp=E,106nm,18.4s,baz=96,slow=44								
ASAJ	**Asahikawa**	**3.50**	**275**	PN		Pb	19 30 07.4	-5.3	
JEM	**Erimo**	**3.69**	**240**	Pn		**Pn**	**19 30 09.7**	**+3.4**	
JEM				Sn		**Sn**	**19 30 52.1**	**+3.4**	
ERM	**Erimo**	**3.69**	**240**	*e*PN		Pb	19 30 10.6	-5.3	
ERM	**Erimo**	**3.69**	**240**	Pn		Pb	19 30 10.1	-5.8	
ERM				Sn		**Sn**	**19 30 51.2**	**+2.5**	
YSS	**Yuzh-Sakhalins**	**4.47**	**314**	*e*P		**Pn**	**19 30 20.0**	**+3.0**	
YSS				*e*S		**Sn**	**19 31 07.7**	**-0.2**	
YSS				A		A	19 31 15.8		
	comp=E,20nm,0.9s								
YSS	**Yuzh-Sakhalins**	**4.47**	**314**	*e*PN		**Pn**	**19 30 20.0**	**+3.0**	
YSS				*e*S		**Sn**	**19 31 07.7**	**-0.2**	
YSS				smax		smax			
	comp=E,20nm,0.9s								
YSS	**Yuzh-Sakhalins**	**4.47**	**314**	Pn		**Pn**	**19 30 19.0**	**+2.0**	
JEW	**Eniwo**	**4.51**	**258**	Pn		Pn	19 30 22.0	+4.5	
JEW				Sn		**Sn**	**19 31 12.4**	**+3.6**	
JTM	**Tenmabayashi**	**5.68**	**238**			**Pn**	**19 30 35.5**	**+1.8**	
JMM	**Marumori**	**7.88**	**222**	Pn		**Pn**	**19 31 03.5**	**-0.4**	
JSD	**Sado**	**9.11**	**233**	Pn		**Pn**	**19 31 21.3**	**+0.6**	
JYT	**Yasato**	**9.49**	**218**	Pn		**Pn**	**19 31 25.4**	**-0.5**	
MAJO	**Matsushiro**	**10.22**	**227**	PN		**Pn**	**19 31 36.0**	**+0.1**	
MAJO	**Matsushiro**	**10.22**	**227**	Pn		**Pn**	**19 31 36.0**	**+0.1**	
MJAR	**Matsushiro Arr**	**10.22**	**227**	P		**Pn**	**19 31 36.5**	**+0.5**	
	comp=E,0.1nm,0.3s,baz=28,slow=14,SNR=18								
MJAR	**Matsushiro Arr**	**10.22**	**227**			**Pn**	**19 31 35.7**	**-0.2**	
PEA0B	**Petropavlovsk-**	**11.40**	**33**	PN		**Pn**	**19 31 54.0**	**+1.9**	
PEA0B	**Petropavlovsk-**	**11.40**	**33**	Pn		**Pn**	**19 31 54.0**	**+1.9**	
PETK	**Petropavlovsk-**	**11.40**	**33**	P		**Pn**	**19 31 52.9**	**+0.8**	
	comp=E,1.3nm,0.3s,baz=195,slow=10,SNR=22								
PETK	**Petropavlovsk-**	**11.40**	**33**	PN		**Pn**	**19 31 53.4**	**+1.3**	
PETK	**Petropavlovsk-**	**11.40**	**33**			**Pn**	**19 31 53.4**	**+1.3**	
INU	**Inuyama**	**11.75**	**227**	Pn		**Pn**	**19 31 57.4**	**+0.5**	
KSRS	**Korea Array**	**16.15**	**253**	LR		LR	19 38 36.2		
	comp=E,37nm,18.9s,baz=50,slow=35								
H11N2	**WAKE ISLAND Hy**	**29.11**	**140**	T		T	20 05 47.0		
	baz=331,slow=76,SNR=47								
H11N1	**WAKE ISLAND Hy**	**29.12**	**140**	T		T	20 05 51.9		
	baz=331,slow=76,SNR=50								
H11N3	**WAKE ISLAND Hy**	**29.12**	**140**	T		T	20 05 47.0		
	baz=331,slow=76,SNR=56								
H11S1	**WAKE ISLAND Hy**	**30.08**	**141**	T		T	20 07 03.4		
	baz=332,slow=76,SNR=150								
H11S3	**WAKE ISLAND Hy**	**30.08**	**141**	T		T	20 07 04.5		
	baz=332,slow=76,SNR=140								
H11S2	**WAKE ISLAND Hy**	**30.10**	**141**	T		T	20 07 08.1		
	baz=332,slow=76,SNR=101								
IMAR	**Indian Mountai**	**38.37**	**34**	P		**P**	**19 36 28.9**	**-0.4**	
KTH	**Kantishna Hill**	**39.47**	**38**	P		**P**	**19 36 38.2**	**-0.4**	
KTH				IAmb		IAmb	19 36 40.4		
	comp=Z,9.0nm,1.1s								
TRF	**Thorofare Moun**	**39.75**	**38**	P		**P**	**19 36 41.3**	**+0.3**	
COLD	**Coldfoot**	**39.88**	**33**	P		**P**	**19 36 41.7**	**-0.2**	
TOLK	**Toolik Lake Re**	**40.21**	**30**	P		**P**	**19 36 43.6**	**-1.1**	
TOLK				IAmb		IAmb	19 36 50.3		
	comp=Z,11nm,1.5s								
KNK	**Knik Glacier**	**40.71**	**42**	P		**P**	**19 36 48.8**	**-0.1**	
IL31		**41.21**	**36**	P		**P**	**19 36 52.6**	**-0.2**	
IL31				IAmb		IAmb	19 36 56.9		
	comp=Z,8.0nm,1.5s								
ILAR	**Eielson Array**	**41.21**	**36**	P		**P**	**19 36 52.5**	**-0.4**	
	comp=Z,0.7nm,0.6s,baz=275,slow=8.8,SNR=15								
BCAR	**Beaver Creek A**	**43.62**	**39**	P		**P**	**19 37 13.3**	**+0.7**	
MKAR	**Makanchi Array**	**44.69**	**298**	P		**P**	**19 37 20.3**	**-1.0**	
	comp=Z,0.9nm,0.9s,baz=80,slow=6.4,SNR=2.7								
KURK	**Kurchatov**	**45.60**	**304**	*e*P		**P**	**19 37 27.3**	**-1.1**	
KURK	**Kurchatov**	**45.60**	**304**	*i* P		**P**	**19 37 27.3**	**-1.1**	
KURK				pmax		pmax			
	comp=Z,1.0nm,1.3s								
HYT	**Haines Junctio**	**46.04**	**41**	P		**P**	**19 37 33.3**	**+1.3**	
INK	**Inuvik**	**46.13**	**30**	P		**P**	**19 37 32.0**	**-0.3**	
	comp=Z,1.8nm,0.8s,baz=319,slow=7.1,SNR=5.1								
INK	**Inuvik**	**46.13**	**30**	P		**P**	**19 37 32.3**	**0.0**	
INK				pmax		pmax			
	comp=Z,4.0nm,1.2s								
INK	**Inuvik**	**46.13**	**30**	P		**P**	**19 37 32.3**	**0.0**	
INK				IAmb		IAmb	19 37 36.9		
	comp=Z,4.0nm,1.1s								
YKA	**Yellowknife Ar**	**55.52**	**34**	P		**P**	**19 38 42.9**	**-0.2**	
	comp=Z,1.1nm,0.8s,baz=306,slow=7.4,SNR=3.6								
ARCES	**ARCESS Array B**	**59.14**	**340**	P		**P**	**19 39 07.6**	**-1.0**	
	comp=Z,2.7nm,0.9s,baz=55,slow=6.9,SNR=1.5								
WRA	**Warramunga Arr**	**64.69**	**194**	P		**P**	**19 39 46.2**	**-0.2**	
	comp=Z,0.8nm,0.9s,baz=11,slow=6.8,SNR=3.5								
WRA				pP		**sP**	**19 39 59.9**	**+0.3**	
	comp=Z,2.3nm,1.1s,baz=8.4,slow=6.6,SNR=7.9								
FINES	**FINESS Array B**	**64.80**	**333**	P		**P**	**19 39 44.6**	**-2.1**	
	comp=Z,2.3nm,0.9s,baz=52,slow=7.4,SNR=6.6								
FINES	**FINESS Array B**	**64.80**	**333**	*i* P		**P**	**19 39 45.4**	**-1.2**	
FINES				pmax		pmax			
	comp=Z,2.0nm,0.9s								
NVAR	**Mina Array Bea**	**67.30**	**58**	P		**P**	**19 40 03.7**	**+0.3**	
	comp=Z,1.0nm,0.7s,baz=292,slow=6.9,SNR=10.0								
NVAR	**Mina Array Bea**	**67.30**	**58**	P		**P**	**19 40 03.4**	**0.0**	
ASAR	**Alice Springs**	**68.41**	**193**	P		**P**	**19 40 10.6**	**+0.5**	
	comp=Z,0.4nm,0.8s,baz=358,slow=5.9,SNR=2.6								
ASAR				pP		**sP**	**19 40 24.1**	**+0.8**	
	comp=Z,1.0nm,1.0s,baz=10,slow=5.3,SNR=7.5								
ASAR	**Alice Springs**	**68.41**	**193**	P		**P**	**19 40 10.3**	**+0.2**	
NB2	**NORSAR Subarra**	**69.50**	**339**	P		**P**	**19 40 14.6**	**-1.9**	
	comp=Z,1.4nm,0.7s,baz=32,slow=6.5								
NOA	**NORSAR Array B**	**69.50**	**339**	P		**P**	**19 40 14.8**	**-1.7**	
	comp=Z,0.6nm,0.4s,baz=32,slow=6.6,SNR=6.5								
PDAR	**Pinedale Array**	**69.62**	**50**	P		**P**	**19 40 17.6**	**-0.2**	
	comp=Z,0.7nm,0.8s,baz=319,slow=4.0,SNR=5.8								
KBZ	**Khabaz**	**69.83**	**312**	P		**P**	**19 40 18.8**	**0.0**	
	comp=Z,2.2nm,0.8s,baz=146,slow=4.1								
AKASG	**Malin Array Be**	**71.55**	**324**	P		**P**	**19 40 27.6**	**-1.6**	
	comp=Z,0.3nm,0.4s,baz=38,slow=5.6,SNR=4.8								
AKASG	**Malin Array Be**	**71.55**	**324**	*i* P		**P**	**19 40 28.6**	**-0.5**	
CLL	**Collm**	**77.25**	**333**	*e*P		**P**	**19 41 01.0**	**-1.2**	
KHC	**Kasperske Hory**	**78.90**	**331**	*e*P		**P**	**19 41 10.5**	**-1.0**	
KHC	**Kasperske Hory**	**78.90**	**331**	*e*P		**P**	**19 41 10.5**	**-1.0**	
GERES	**GERESS Array B**	**79.10**	**331**	P		**P**	**19 41 11.6**	**-1.1**	
	comp=Z,0.4nm,0.4s,baz=53,slow=5.5,SNR=2.8								
TX31	**Lajitas Ar. Si**	**82.36**	**56**	P		**P**	**19 41 30.3**	**-0.2**	
TX31				IAmb		IAmb	19 41 38.4		
	comp=Z,8.8nm,1.4s								
TXAR	**Lajitas Array**	**82.36**	**56**	P		**P**	**19 41 30.5**	**0.0**	
	comp=Z,0.9nm,0.7s,baz=302,slow=3.7,SNR=8.6								
TXAR	**Lajitas Array**	**82.36**	**56**	P		**P**	**19 41 30.3**	**-0.2**	

*SNET **08** 19:47:54.6≈1.3, 13.57N×90.77W, h31km≈5km, ML4.4*
*NEIC **08** 19:47:54.9≈1.5, 13.52N≈0.08×90.79W≈0.05, h53km≈14km, mb4.2/2/1, Md4.4(SNET), Error ellipse: s-maj=12.9km s-min=6.4km az=199.0*
*UCR **08** 19:47:55.0≈1.4, 13.60N×90.76W, h31km≈5km, ML4.3, mb4.2(NEIC)*
*IDC **08** 19:47:56.1≈2.1, 13.81N×90.60W, h58km±20km, mb3.6/2, mb1 4.0/5, mb1mx3.5/36, mbtmp3.9/5, ML4.2/3, MS3.2/6, Ms1 3.2/6, ms1mx2.9/28, Error ellipse: s-maj=49.4km s-min=13.1km az=36.0*
*INET **08** 19:47:56.6, 13.51N×90.66W, h32km, ML3.4, MW3.3*
*GCG **08** 19:48:02.9±0.9, 14.73N×90.96W, h36km±31km, MD4.2*

ISC 08 19:47:54.9±1.3, 13.54N±0.07×90.80W±0.04, h49km±13km, n105, σ1§01/117, mb4.2/11, MS3.2/6, 14C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.87**	**12**	*e*P	**Pn**	**19 48 11.3**	**+0.1**
FUG	**Fuego 3**	**0.91**	**357**	*e*P	**Pn**	**19 48 11.4**	**-0.1**
NUBE	**Las Nubes**	**1.05**	**70**	⇑*i*P	**Pn**	**19 48 12.7**	**-0.9**
NUBE	**Las Nubes**	**1.05**	**70**	⇑*i*P	**Pn**	**19 48 12.7**	**-0.9**
NBG	**Las Nubes**	**1.13**	**23**	*i* P	**Pn**	**19 48 15.9**	**+1.2**
ERG	**Entre ros, C**	**1.17**	**320**	*i* P	**Pn**	**19 48 15.4**	**+0.5**
SBLS	**San Blas**	**1.18**	**75**	⇑*i*P	**Pn**	**19 48 14.7**	**-0.6**
SBLS	**San Blas**	**1.18**	**75**	⇑*i*P	**Pn**	**19 48 14.7**	**-0.6**
SNJE	**San Jose**	**1.21**	**74**	⇑*i*P	**Pn**	**19 48 15.2**	**-0.4**
SNJE	**San Jose**	**1.21**	**74**	⇑*i*P	**Pn**	**19 48 15.2**	**-0.4**
RTAL	**Retalhuleu**	**1.31**	**319**	⇓*i*P	**Pn**	**19 48 16.2**	**-0.7**
RTAL				*e*S	**Sn**	**19 48 32.8**	**-0.5**
RTAL	**Retalhuleu**	**1.31**	**319**		**Pn**	**19 48 16.2**	**-0.7**
RTAL				Sn	**Sn**	**19 48 32.6**	**-0.7**
STG3	**Santiaguito 3,**	**1.39**	**327**	*e*P	**Pn**	**19 48 17.9**	**-0.1**
CEDA	**San Andres**	**1.39**	**79**	*i* P	**Pn**	**19 48 17.1**	**-0.8**
CEDA				*e*S	**Sn**	**19 48 34.6**	**-0.6**
CEDA	**San Andres**	**1.39**	**79**	*i* P	**Pn**	**19 48 17.1**	**-0.8**
CEDA				*e*S	**Sn**	**19 48 34.6**	**-0.6**
TACO	**Tacachico**	**1.47**	**73**	⇑*i*P	**Pn**	**19 48 18.6**	**-0.4**
TACO				IAML		19 48 19.7	
	comp=Z,3µm,0.3s						
TACO				*e*S	**Sn**	**19 48 37.6**	**+0.4**
TACO	**Tacachico**	**1.47**	**73**	⇑*i*P	**Pn**	**19 48 18.6**	**-0.4**
TACO				IAML		19 48 19.7	
	comp=Z,3µm,0.3s						
TACO				*e*S	**Sn**	**19 48 37.6**	**+0.4**
BOQS	**Boqueron**	**1.49**	**82**	⇓*i*P	**Pn**	**19 48 19.4**	**-0.1**
BOQS	**Boqueron**	**1.49**	**82**	⇓*i*P	**Pn**	**19 48 19.4**	**-0.1**
UEES	**Universidad Ev**	**1.53**	**83**	*e*P	**Pn**	**19 48 19.9**	**+0.1**
UEES				*e*S	**Sn**	**19 48 39.0**	**+0.3**
UEES	**Universidad Ev**	**1.53**	**83**	*e*P	**Pn**	**19 48 19.9**	**+0.1**
UEES				*e*S	**Sn**	**19 48 39.0**	**+0.3**
UEES				*e*		19 48 39.0	
SNET	**Serv Nac Est T**	**1.53**	**84**	*e*P	**Pn**	**19 48 19.7**	**-0.3**
SNET				IAML		19 48 40.2	
	comp=Z,7µm,0.3s						
SNET	**Serv Nac Est T**	**1.53**	**84**	*e*P	**Pn**	**19 48 19.7**	**-0.3**
SNET				IAML		19 48 40.2	
	comp=Z,7µm,0.3s						
SNET	**Serv Nac Est T**	**1.53**	**84**	Pn	**Pn**	**19 48 19.5**	**-0.4**
OPAM	**Oficina de Pla**	**1.57**	**83**	⇓*i*P	**Pn**	**19 48 20.8**	**+0.4**
OPAM				IAML		19 48 21.1	
	comp=Z,6µm,0.2s						
OPAM				*e*S	**Sn**	**19 48 40.3**	**+0.7**
OPAM	**Oficina de Pla**	**1.57**	**83**	⇓*i*P	**Pn**	**19 48 20.8**	**+0.4**
OPAM				IAML		19 48 21.1	
	comp=Z,6µm,0.2s						
OPAM				*e*S	**Sn**	**19 48 40.3**	**+0.7**
MTO3	**Montecristo**	**1.64**	**58**	⇑*i*P	**Pn**	**19 48 21.1**	**-0.4**
MTO3	**Montecristo**	**1.64**	**58**	⇑*i*P	**Pn**	**19 48 21.1**	**-0.4**
MTO3	**Montecristo**	**1.64**	**58**	Pn	**Pn**	**19 48 21.0**	**-0.5**
LFU	**La Fuente**	**1.65**	**82**	*e*P	**Pn**	**19 48 21.6**	**+0.1**
LFU	**La Fuente**	**1.65**	**82**	*e*P	**Pn**	**19 48 21.6**	**+0.1**
LFRS	**El Faro**	**1.69**	**87**	*e*P	**Pn**	**19 48 21.9**	**-0.2**
LFRS	**El Faro**	**1.69**	**87**	*e*P	**Pn**	**19 48 21.9**	**-0.2**
LBRS	**Las Brisas**	**1.72**	**83**	*e*P	**Pn**	**19 48 22.4**	**-0.1**
LBRS	**Las Brisas**	**1.72**	**83**	*e*P	**Pn**	**19 48 22.4**	**-0.1**
ESQI	**Esquipulas**	**1.74**	**54**	⇑*i*P	**Pn**	**19 48 22.7**	**-0.1**
ESQI				*e*S	**Sn**	**19 48 44.8**	**+0.9**
ESQI	**Esquipulas**	**1.74**	**54**	Pn	**Pn**	**19 48 22.7**	**-0.1**
ESQI				Sn	**Sn**	**19 48 46.2**	**+2.2**
PAVA	**Las Pavas**	**1.82**	**84**	⇑*i*P	**Pn**	**19 48 23.9**	**0.0**
PAVA	**Las Pavas**	**1.82**	**84**	⇑*i*P	**Pn**	**19 48 23.9**	**0.0**
COEG	**Centro de Oper**	**1.87**	**87**	*e*P	**Pn**	**19 48 24.6**	**0.0**
COEG	**Centro de Oper**	**1.87**	**87**	*e*P	**Pn**	**19 48 24.6**	**0.0**
MRL	**Marmol**	**1.88**	**35**	*i* P	**Pn**	**19 48 25.6**	**+0.8**
MRL				*e*S	**Sn**	**19 48 42.0**	**-5.4**
HUEH	**Huehuetenango**	**1.90**	**339**	*e*P	**Pn**	**19 48 26.6**	**+1.5**
HUEH	**Huehuetenango**	**1.90**	**339**	Pn	**Pn**	**19 48 26.0**	**+0.9**
ALJI	**Alcalda de J**	**2.18**	**95**	*e*P	**Pn**	**19 48 28.5**	**-0.2**
ALJI				*e*S	**Sn**	**19 48 54.9**	**+0.4**
ALJI	**Alcalda de J**	**2.18**	**95**	*e*P	**Pn**	**19 48 28.5**	**-0.2**
ALJI				*e*S	**Sn**	**19 48 54.9**	**+0.4**
COEB	**Comit de Eme**	**2.21**	**91**	*i* P	**Pn**	**19 48 29.2**	**0.0**
COEB				*e*S	**Sn**	**19 48 55.7**	**+0.3**
COEB	**Comit de Eme**	**2.21**	**91**	*i* P	**Pn**	**19 48 29.2**	**0.0**
COEB				*e*S	**Sn**	**19 48 55.7**	**+0.3**
TECA	**Tecapa**	**2.23**	**91**	*e*P	**Pn**	**19 48 29.6**	**0.0**
TECA	**Tecapa**	**2.23**	**91**	*e*P	**Pn**	**19 48 29.6**	**0.0**
PACA	**Pacayal**	**2.41**	**91**	*e*P	**Pn**	**19 48 33.2**	**+1.2**
PACA	**Pacayal**	**2.41**	**91**	*e*P	**Pn**	**19 48 33.2**	**+1.2**
JUCU	**Jucuarįn**	**2.50**	**96**	*e*P	**Pn**	**19 48 32.7**	**-0.5**
JUCU	**Jucuarįn**	**2.50**	**96**	*e*P	**Pn**	**19 48 32.7**	**-0.5**
LCND	**La Caada**	**2.84**	**94**	*e*P	**Pn**	**19 48 38.0**	**+0.2**
LCND	**La Caada**	**2.84**	**94**	*e*P	**Pn**	**19 48 38.0**	**+0.2**
CCIG	**Comitan**	**3.02**	**335**	Pn	**Pn**	**19 48 42.2**	**+1.8**
CSGN	**Cosiguina Volc**	**3.20**	**100**	Pn	**Pn**	**19 48 42.8**	**-0.1**
TGUH	**Tegucigalpa,Un**	**3.46**	**81**		**Pn**	**19 48 46.3**	**-0.2**
PETF	**Flores**	**3.48**	**15**	⇑*i*P	**Pn**	**19 48 47.4**	**+0.8**
PETF	**Flores**	**3.48**	**15**	Pn	**Pn**	**19 48 47.5**	**+0.8**
CRIN	**San Cristobal**	**3.75**	**102**	Pn	**Pn**	**19 48 50.3**	**0.0**
MATN	**Matagalpa**	**4.78**	**97**		**Pn**	**19 49 03.8**	**-0.8**
CMIG	**Matias Romero**	**5.29**	**312**	P	**Pn**	**19 49 11.6**	**+0.1**
	comp=Z,3.7nm,0.3s,baz=130,slow=11,SNR=24						
CMIG				S	**Sn**	**19 50 10.8**	**-0.4**
	comp=Z,7.0nm,0.3s,baz=263,slow=15,SNR=7.1						
ACON	**Acoyapa**	**5.71**	**105**		**Pn**	**19 49 16.5**	**-0.6**
ESPN	**Las Esperanzas**	**6.48**	**101**		**Pn**	**19 49 27.1**	**-0.6**
JTS	**Las Juntas de**	**6.57**	**119**	P	**Pn**	**19 49 30.9**	**+1.9**
	comp=Z,6.7nm,0.3s,baz=17,slow=18,SNR=17						
JTS				S	**Sn**	**19 50 43.5**	**+0.8**
	comp=Z,2.3nm,0.3s,baz=230,slow=23,SNR=1.2						
JTS	**Las Juntas de**	**6.57**	**119**		**Pn**	**19 49 30.6**	**+1.6**
TEIG	**Tepich**	**7.08**	**20**		**Pn**	**19 49 36.5**	**+0.5**
553A	**Crawfordville**	**17.59**	**19**	P	**P**	**19 51 58.3**	**+1.3**
Z47A	**Carrollton**	**19.73**	**7**	P	**P**	**19 52 20.8**	**+0.3**
TXAR	**Lajitas Array**	**19.73**	**325**	P	**Pn**	**19 52 21.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=146,slow=12,SNR=11						
TXAR	**Lajitas Array**	**19.73**	**325**	P	**Pn**	**19 52 21.6**	**-1.0**
TX31	**Lajitas Ar. Si**	**19.73**	**325**		**Pn**	**19 52 21.9**	**-0.6**
152A	**Waverly Hall**	**19.84**	**15**	P	**P**	**19 52 22.0**	**+0.2**
Y49A	**Blount Mountai**	**20.62**	**10**	P	**P**	**19 52 30.0**	**-0.2**
Y49A				IAmb	IAmb	19 52 32.3	
	comp=Z,10.0nm,0.8s						
GOGA	**Godfrey**	**20.88**	**17**	P	**P**	**19 52 32.6**	**-0.4**
GOGA				IAmb	IAmb	19 52 49.2	
	comp=Z,14nm,1.2s						
X48A	**Hartselle**	**21.10**	**9**	P	**P**	**19 52 35.1**	**-0.2**
Y52A	**Lilburn**	**21.14**	**16**	P	**P**	**19 52 35.6**	**-0.2**
Y52A				IAmb	IAmb	19 52 51.6	
	comp=Z,18nm,1.1s						
FPAL	**Fort Paine**	**21.43**	**12**	P	**P**	**19 52 38.2**	**-0.8**
FPAL				IAmb	IAmb	19 52 40.5	
	comp=Z,11nm,0.8s						
SWET	**Sewanee**	**22.03**	**11**	P	**P**	**19 52 44.8**	**-0.5**
SWET				IAmb	IAmb	19 52 60.0	
	comp=Z,5.5nm,0.7s						
W50A	**Signal Mountai**	**22.13**	**12**	P	**P**	**19 52 45.1**	**-1.3**
W50A				IAmb	IAmb	19 53 04.0	
	comp=Z,7.0nm,0.7s						
CPCT	**Cooper Cave**	**22.54**	**13**	P	**P**	**19 52 51.0**	**+0.2**
TKL	**Tuckaleechee C**	**22.92**	**15**	P	**P**	**19 52 51.1**	**-3.7**
	comp=Z,3.1nm,0.7s,baz=195,slow=12,SNR=3.9						
TKL				LR	LR	20 02 37.3	
	comp=Z,64nm,18.7s,baz=222,slow=39						
TKL	**Tuckaleechee C**	**22.92**	**15**	P	**P**	**19 52 52.3**	**-2.4**
U38A	**Gravette**	**23.03**	**353**	P	**P**	**19 52 55.7**	**-0.2**
U38A				IAmb	IAmb	19 53 09.9	
	comp=Z,8.8nm,0.9s						
V53A	**Saluda**	**23.18**	**17**	P	**P**	**19 52 57.2**	**-0.3**
V53A				IAmb	IAmb	19 53 12.9	
	comp=Z,12nm,1.2s						
U49A	**Red Boiling Sp**	**23.32**	**10**	P	**P**	**19 52 56.8**	**-1.9**
U49A				IAmb	IAmb	19 53 13.6	
	comp=Z,12nm,1.1s						
T47A	**Sharon Grove**	**23.59**	**7**	P	**P**	**19 53 00.2**	**-1.1**
SJG	**San Juan**	**24.14**	**76**	LR	LR	20 01 44.9	
	comp=Z,31nm,19.6s,baz=93,slow=35						
S39A	**Bolivar**	**24.16**	**355**	P	**P**	**19 53 04.7**	**-1.8**
NNA	**Nana**	**28.89**	**151**	LR	LR	20 03 05.9	
	comp=Z,34nm,19.4s,baz=244,slow=31						
PHWY	**Pilot Hill**	**30.47**	**338**	P	**P**	**19 54 06.2**	**+2.8**
NV11	**Mina Array Sit**	**34.67**	**321

WRA	**Warramunga Arr**	**28.59**	**146**	P	**P**	**20 12 59.9**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=335,slow=9.6,SNR=18						
WB2	**Warramunga Ar**	**28.60**	**146**	P	**P**	**20 12 59.9**	**-1.0**
WB2				IAmb	IAmb	20 13 01.2	
	comp=Z,16nm,1.4s						
GUMO	**Guam**	**28.69**	**68**	LR	LR	20 23 25.4	
	comp=Z,36nm,21.9s,baz=152,slow=34						
ASAR	**Alice Springs**	**31.41**	**150**	P	**P**	**20 13 25.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=324,slow=8.1,SNR=19						
ASAR	**Alice Springs**	**31.41**	**150**	P	**P**	**20 13 25.2**	**-0.6**
JNU	**Nakatsue**	**31.89**	**21**	LR	LR	20 27 38.4	
	comp=Z,111nm,19.4s,baz=288,slow=39						
KSRS	**Korea Array**	**35.00**	**14**	LR	LR	20 29 58.6	
	comp=Z,51nm,18.6s,baz=187,slow=39						
JHJ	**Hachijo jima 2**	**35.95**	**33**	LR	LR	20 29 08.0	
	comp=Z,56nm,18.6s,baz=270,slow=37						
HHC	**Hu-ho-hao-te**	**37.49**	**352**	*e*P	**P**	**20 14 19.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
MJAR	**Matsushiro Arr**	**37.88**	**27**	LR	LR	20 30 44.0	
	comp=Z,58nm,19.2s,baz=75,slow=38						
GTA	**Gaotai**	**39.14**	**338**	*e*P	**P**	**20 14 34.1**	**+1.8**
GTA				PcP	**PcP**	**20 16 41.0**	**-0.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,66nm,8.2s						
GTA				LR	LR		
	comp=N,97nm,16.7s						
GTA				LR	LR		
	comp=E,140nm,16.4s						
GTA				LR	LR		
	comp=Z,160nm,17.1s						
BBOO	**Buckleboo**	**40.21**	**156**	P	**P**	**20 14 41.1**	**0.0**
BBOO				IAmb	IAmb	20 14 59.3	
	comp=Z,14nm,1.2s						
SONM	**Songino Array**	**45.12**	**349**	P	**P**	**20 15 20.8**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=171,slow=9.3,SNR=2.6						
SONM	**Songino Array**	**45.12**	**349**	P	**P**	**20 15 20.9**	**-0.1**
WMQ	**Urumqi**	**48.00**	**331**	*e*P	**P**	**20 15 44.5**	**+1.0**
MK31	**Makanchi Array**	**52.79**	**330**	P	**P**	**20 16 19.1**	**-0.6**
MKAR	**Makanchi Array**	**52.79**	**330**	P	**P**	**20 16 19.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=145,slow=6.9,SNR=10						
MKAR				PcP	**PcP**	**20 17 29.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=173,slow=2.9,SNR=4.9						
MKAR	**Makanchi Array**	**52.79**	**330**	P	**P**	**20 16 19.5**	**-0.2**
DZM	**Mont Dzumac**	**54.12**	**120**	P	**P**	**20 16 30.0**	**0.0**
GAR	**Garm**	**55.49**	**316**	P	**P**	**20 16 38.9**	**-0.8**
GAR				IAmb	IAmb	20 16 43.6	
	comp=Z,4.7nm,0.7s						
ZALV	**Zalesovo Beam**	**56.89**	**338**	P	**P**	**20 16 51.5**	**+2.3**
	comp=Z,1.9nm,0.8s,baz=131,slow=5.9,SNR=8.1						
ZALV	**Zalesovo Beam**	**56.89**	**338**	P	**P**	**20 16 48.5**	**-0.7**
KURK	**Kurchatov**	**57.23**	**332**	P	**P**	**20 16 50.8**	**-1.0**
KURK				IAmb	IAmb	20 16 56.3	
	comp=Z,4.3nm,1.1s						
KKAR	**Karatay Array**	**57.31**	**320**	P	**P**	**20 16 51.4**	**-1.1**
ABKAR	**Akbulak array**	**66.62**	**323**	P	**P**	**20 17 53.4**	**-1.5**
ABKAR				IAmb	IAmb	20 18 01.4	
	comp=Z,4.5nm,1.5s						
RPZ	**Rata Peaks**	**67.16**	**141**	P	**P**	**20 17 57.6**	**-1.0**
BKZ	**Black Stump Fm**	**68.79**	**134**	P	**P**	**20 18 09.2**	**+0.3**
BRTR	**Keskin Array B**	**83.08**	**309**	P	**P**	**20 19 33.1**	**+2.4**
	comp=Z,0.9nm,0.6s,baz=145,slow=6.9,SNR=2.6						
VNDA	**Vanda**	**84.56**	**171**	P	**P**	**20 19 35.9**	**-1.3**
IMAR	**Indian Mountai**	**86.19**	**24**	P	**P**	**20 19 45.4**	**-0.2**
AKASG	**Malin Array Be**	**86.22**	**320**	P	**P**	**20 19 47.2**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=70,slow=4.6,SNR=7.4						
QSPA	**South Pole Qui**	**93.51**	**180**	P	**P**	**20 20 18.8**	**-1.3**

*IDC **08** 20:08:35.0±1.1,3°.43N×117°.71E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.6/38, mbtmp3.8/7, ML4.1/1, MS3.4/2, Ms1 3.4/2, ms1mx2.8/42, Error ellipse: s-maj=81.5km s-min=18.0km az=61.0*

*NEIC **08** 20:08:36.6±1.4, 3°.24N±0°.06×117°.63E±0°.08, h10km±2km, mb4.2/7, Error ellipse: s-maj=16.8km s-min=3.3km az=126.0*

ISC 08 20:08:36.3±0.7, 3°.33N±0°.07×117°.7E±0°.1, h10km, n20, σ0$89/20, mb4.0/11, Borneo

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYLDM	**Lahad Datu**	**2.02**	**24**	Pn	**Pb**	**20 09 11.9**	**-1.2**
KKM	**Kota Kinabalu**	**3.06**	**332**	Pn	**Pn**	**20 09 26.3**	**+1.3**
SBUM	**Sibu**	**5.51**	**261**	Pn	**Pn**	**20 09 58.2**	**-0.4**
KSM	**Kuching**	**7.58**	**256**	Pn	**Pn**	**20 10 26.0**	**-1.0**
KAPI	**Kappang**	**8.54**	**166**	Pn	**Pn**	**20 10 39.7**	**-0.5**
	2.3nm,0.3s,baz=146,slow=21,SNR=5.6						
GSI	**Gunungsitoli**	**20.18**	**265**	P	**P**	**20 13 12.7**	**+1.4**
KNRA	**Kununurra**	**21.84**	**150**	P	**P**	**20 13 30.2**	**+1.1**
KNRA				IAmb	IAmb	20 13 47.2	
	comp=Z,14nm,1.1s						
CMAR	**Chiang Mai Arr**	**23.71**	**311**	P	**P**	**20 13 48.7**	**0.0**
	comp=Z,0.6nm,0.6s,baz=139,slow=8.1,SNR=6.4						
WB0	**Warramunga Arr**	**28.23**	**145**	P	**P**	**20 14 30.0**	**+0.3**
WB0				IAmb	IAmb	20 14 31.0	
	comp=Z,3.0nm,0.7s						
WRA	**Warramunga Arr**	**28.34**	**145**	P	**P**	**20 14 31.2**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=332,slow=9.7,SNR=9.4						
WRA				LR	LR	20 26 43.4	
	comp=Z,76nm,19.9s,baz=340,slow=38						
WB2	**Warramunga Arr**	**28.34**	**145**	P	**P**	**20 14 30.1**	**-0.6**
WB2				IAmb	IAmb	20 14 32.6	
	comp=Z,3.9nm,0.8s						
WR0	**Warramunga Arr**	**28.46**	**145**	P	**P**	**20 14 31.5**	**-0.3**
WR0				IAmb	IAmb	20 14 33.1	
	comp=Z,3.1nm,0.8s						
ASAR	**Alice Springs**	**31.15**	**150**	P	**P**	**20 14 57.2**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=340,slow=9.8,SNR=4.8						
ASAR	**Alice Springs**	**31.15**	**150**	P	**P**	**20 14 55.9**	**+0.3**
BBOO	**Buckleboo**	**39.94**	**156**	P	**P**	**20 16 10.7**	**-0.2**
SONM	**Songino Array**	**45.39**	**349**	P	**P**	**20 16 54.3**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=171,slow=8.4,SNR=2.0						
SONM				LR	LR	20 36 30.8	
	comp=Z,35nm,19.3s,baz=104,slow=37						
MKAR	**Makanchi Array**	**53.05**	**330**	P	**P**	**20 17 53.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=132,slow=6.5,SNR=1.6						
ZALV	**Zalesovo Beam**	**57.16**	**338**	P	**P**	**20 18 22.4**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=124,slow=7.2,SNR=1.6						
KURK	**Kurchatov**	**57.49**	**332**	P	**P**	**20 18 25.9**	**+0.2**
KURK				IAmb	IAmb	20 18 26.7	
	comp=Z,3.3nm,1.1s						
KKAR	**Karatay Array**	**57.56**	**320**	P	**P**	**20 18 26.9**	**+0.6**

*IDC **08** 20:12:59.5±2.9, 36°.97N×142°.43E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.3/41, mbtmp3.5/5, ML3.2/2, Error ellipse: s-maj=61.8km s-min=32.8km az=56.0*

*JMA **08** 20:13:03.0±0.3, 36°.98N×142°.12E, h25km±4km, M3.5*

*NIED **08** 20:13:03.0, 36°.98N×142°.12E, h25km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr1.16; Mθθ0.05; Mφφ-1.21; Mrθ-0.47; Mθφ0.28; Mφr-1.77; Fault plane solution: M₀2.19000×10¹⁴ NP1: φs190.00000°, δ74.00000°, λ103.00000°. NP2: φs329.00000°, δ20.00000°, λ51.00000°.*

ISC 08 20:13:01.7±3.8, 36°.95N±0°.05×142°.14E±0°.08, h13km±24km, n24, σ1$29/26, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.08**	**278**	P	**Pn**	**20 13 22.2**	**-0.5**
JFK	**Kawauchi**	**1.09**	**293**	P	**Pn**	**20 13 22.3**	**-0.5**
JFK				*e*S	**Sb**	**20 13 35.9**	**-0.8**
JMST	**Minamisoumatoc**	**1.26**	**308**	P	**Pn**	**20 13 24.6**	**-0.5**
JMST				*e*S	**Sn**	**20 13 40.3**	**-1.6**
JFFD	**Fukushimafurud**	**1.27**	**277**	P	**Pn**	**20 13 24.9**	**-0.3**
JHO	**Hitachi**	**1.30**	**256**	P	**Pn**	**20 13 25.6**	**-0.1**
JHO				*e*S	**Sn**	**20 13 42.0**	**-1.0**
JMM	**Marumori**	**1.41**	**311**	P	**Pn**	**20 13 26.9**	**-0.2**
JFT	**Otama**	**1.55**	**292**	P	**Pn**	**20 13 29.9**	**+0.9**
JFT				*e*S	**Sn**	**20 13 48.5**	**-0.5**
JIO	**Ouri**	**1.63**	**338**	P	**Pn**	**20 13 29.4**	**-0.7**
JOU	**Okura**	**1.84**	**321**	P	**Pn**	**20 13 33.9**	**+0.9**
JFY	**Yanaizu**	**2.00**	**284**	P	**Pb**	**20 13 37.1**	**-0.8**
JMK	**Ichinoseki**	**2.13**	**340**	P	**Pn**	**20 13 37.8**	**+0.8**
JMK				*e*S	**Sn**	**20 14 03.5**	**+0.2**
JAG	**Ashikaga**	**2.22**	**257**	P	**Pn**	**20 13 39.5**	**+1.2**
JAG				*e*S	**Sn**	**20 14 06.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.18**	**264**	Pn	**Pn**	**20 13 54.2**	**+2.7**
	1.0nm,0.3s,baz=88,slow=15,SNR=62						
MAT	**Matsushiro**	**3.19**	**264**	P	**Pn**	**20 13 54.3**	**+2.8**
MAT				S	**Sn**	**20 14 29.0**	**-0.4**
JHJ	**Hachijo jima 2**	**4.28**	**208**	Pn	**Pn**	**20 14 06.9**	**+0.3**
	8.1nm,0.3s,baz=45,slow=22,SNR=1.9						
JHJ				Sn	**Sn**	**20 14 53.4**	**-3.0**
	7.5nm,0.3s,baz=45,slow=21,SNR=1.5						
H11N2	**WAKE ISLAND Hy**	**27.61**	**122**	T	T	20 47 48.8	
	baz=313,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.61**	**122**	T	T	20 48 14.9	
	baz=313						
H11N3	**WAKE ISLAND Hy**	**27.62**	**122**	T	T	20 48 22.0	
	baz=313,slow=75						
SONM	**Songino Array**	**28.32**	**304**	P	**P**	**20 18 56.2**	**+1.0**
	0.4nm,0.7s,baz=115,slow=11,SNR=2.6						
H11S1	**WAKE ISLAND Hy**	**28.33**	**124**	T	T	20 48 48.2	
	baz=322,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.33**	**124**	T	T	20 48 48.3	
	baz=322,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.34**	**124**	T	T	20 49 08.7	
	baz=322						
WRA	**Warramunga Arr**	**57.06**	**189**	P	**P**	**20 22 47.3**	**-0.2**
	0.2nm,0.5s,baz=7.0,slow=7.5,SNR=1.4						
ASAR	**Alice Springs**	**60.79**	**189**	P	**P**	**20 23 14.2**	**+0.7**
	0.2nm,0.5s,baz=14,slow=8.6,SNR=1.7						

*IDC **08** 20:29:23.5±1.0, 20°.06S×67°.25E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.7/40, mbtmp3.7/10, MS3.5/5, Ms1 3.5/5, ms1mx3.1/45, Error ellipse: s-maj=31.3km s-min=25.3km az=59.0*

*NEIC **08** 20:29:25.6±0.8, 20°.15S±0°.1×67°.3E±0°.1, h10km±1km, mb4.5/13, Error ellipse: s-maj=20.7km s-min=17.9km az=155.0*

ISC 08 20:29:25.5±0.6, 20°.15S±0°.1×67°.2E±0°.1, h10km, n40, σ1$03/30, mb3.8/14, MS3.5/5, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**10.81**	**262**	Pn	**Pn**	**20 32 01.0**	**+0.6**
H08S1	**Diego Cargia H**	**13.38**	**23**	T	T	20 46 04.0	
	baz=201						
H08S2	**Diego Garcia H**	**13.38**	**23**	T	T	20 46 18.9	
	baz=201,slow=74						
H08S3	**Diego Garcia H**	**13.39**	**23**	T	T	20 46 09.9	
	baz=201,slow=74						
LBTB	**Lobatse**	**38.65**	**255**	P	**P**	**20 36 48.3**	**-1.2**
LBTB				IAmb	IAmb	20 36 56.7	
	comp=Z,18nm,1.7s						
BOSA	**Boshof**	**39.01**	**249**	LR	LR	20 49 47.8	
	comp=Z,46nm,19.5s,baz=150,slow=31						
H01W2	**Cape Leeuwin H**	**43.76**	**120**	T	T	21 24 03.8	
	baz=273						
H01W3	**Cape Leeuwin H**	**43.76**	**120**	T	T	21 23 56.6	
	baz=273						
H01W1	**Cape Leeuwin H**	**43.77**	**120**	T	T	21 23 58.7	
	baz=273						
NWAO	**Narrogin (SRO)**	**46.15**	**117**	LR	LR	20 52 39.8	
	comp=Z,60nm,20.9s,baz=279,slow=30						
MAW	**Mawson**	**47.58**	**182**	P	**P**	**20 38 02.1**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=53,slow=18,SNR=2.9						
MAW	**Mawson**	**47.58**	**182**	P	**P**	**20 38 00.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**49.35**	**41**	P	**P**	**20 38 16.1**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=232,slow=8.1,SNR=8.8						
CMAR				LR	LR	20 57 57.2	
	comp=Z,52nm,18.4s,baz=260,slow=35						
CMAR	**Chiang Mai Arr**	**49.35**	**41**	P	**P**	**20 38 15.3**	**0.0**
SHL	**Shillong**	**51.32**	**29**	P	**P**	**20 38 30.4**	**+0.1**
SHL				IAmb	IAmb	20 38 40.2	
	comp=Z,7.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**54.99**	**98**	P	**P**	**20 38 56.5**	**-0.9**
FITZ				IAmb	IAmb	20 39 04.0	
	comp=Z,4.2nm,1.2s						
GEYT	**Alibeck**	**58.34**	**352**	LR	LR	21 00 11.6	
	comp=Z,48nm,21.4s,baz=335,slow=32						
GEYT	**Alibeck**	**58.34**	**352**	P	**P**	**20 39 21.2**	**+0.4**
ASAR	**Alice Springs**	**61.48**	**107**	P	**P**	**20 39 41.8**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=268,slow=5.9,SNR=11						
ASAR	**Alice Springs**	**61.48**	**107**	P	**P**	**20 39 43.0**	**+0.2**
WRA	**Warramunga Arr**	**62.63**	**103**	P	**P**	**20 39 48.8**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=256,slow=6.2,SNR=3.5						
WRAB	**Tennant Creek**	**62.64**	**103**	P	**P**	**20 39 49.6**	**-1.0**
KKAR	**Karatay Array**	**62.95**	**3**	P	**P**	**20 39 52.5**	**+0.4**
SNAA	**Sanae**	**64.83**	**199**	LR	LR	21 02 30.7	
	comp=Z,36nm,21.7s,baz=31,slow=31						
SNAA	**Sanae**	**64.83**	**199**	P	**P**	**20 40 04.6**	**+0.3**
MKAR	**Makanchi Array**	**67.95**	**11**	P	**P**	**20 40 24.8**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=193,slow=5.9,SNR=2.7						
MKAR	**Makanchi Array**	**67.95**	**11**	P	**P**	**20 40 25.8**	**+1.4**
ABKAR	**Akbulak array**	**69.34**	**355**	P	**P**	**20 40 33.6**	**+0.7**
ABKAR				IAmb	IAmb	20 40 42.9	
	comp=Z,3.6nm,0.9s						
ABKAR	**Akbulak array**	**69.34**	**355**	P	**P**	**20 40 33.7**	**+0.7**
QSPA	**South Pole Qui**	**70.02**	**180**	P	**P**	**20 40 38.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**72.42**	**292**	P	**P**	**20 40 52.9**	**+0.3**
	comp=Z,0.9nm,1.1s,baz=90,slow=8.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**72.42**	**292**	P	**P**	**20 40 51.4**	**-1.1**
ZAA0	**Zalesovo Array**	**75.28**	**11**	P	**P**	**20 41 08.9**	**+0.5**
ZALV	**Zalesovo Beam**	**75.28**	**11**	P	**P**	**20 41 06.0**	**-2.4**
	comp=Z,0.4nm,0.4s,baz=242,slow=3.2,SNR=3.5						
ZALV	**Zalesovo Beam**	**75.28**	**11**	P	**P**	**20 41 08.2**	**-0.1**
SONM	**Songino Array**	**76.19**	**26**	P	**P**	**20 41 14.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=234,slow=5.0,SNR=5.4						
SONM	**Songino Array**	**76.19**	**26**	P	**P**	**20 41 14.1**	**+0.2**
AKASG	**Malin Array Be**	**78.03**	**336**	P	**P**	**20 41 21.6**	**-2.4**
	comp=Z,0.3nm,0.4s,baz=130,slow=4.3,SNR=4.0						
AKASG	**Malin Array Be**	**78.03**	**336**	P	**P**	**20 41 23.1**	**-0.9**
MJAR	**Matsushiro Arr**	**87.46**	**50**	P	**P**	**20 42 13.8**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=214,slow=4.2,SNR=4.0						

*IDC **08** 20:40:45.1±2.4, 25°.05S×177°.19W, h76km±21km, mb3.9/18, mb1 4.1/21, mb1mx4.0/46, mbtmp4.3/21, MS2.9/3, Ms1 2.9/3, ms1mx2.6/30, Error ellipse: s-maj=16.5km s-min=14.0km az=125.0*

*NEIC **08** 20:40:48.5±2.6, 25°.16S±0°.07×177°.0W±0°.1, h110km±5km, mb4.5/21, Error ellipse: s-maj=14.9km s-min=10.0km az=99.0*

ISC 08 20:40:47.5±0.4, 25°.20S±0°.06×177°.04W±0°.08, h100km, n107, σ1$22/101, mb4.3/25, 8C-4D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.12**	**191**	P	**Pn**	**20 41 48.0**	**-0.2**
	35nm,0.3s,baz=116,slow=24,SNR=1.6						
RAO				S	**Sn**	**20 42 35.8**	**+0.5**
	302nm,0.3s,baz=110,slow=23,SNR=7.1						
RAO	**Raoul Island**	**4.12**	**191**		**Pn**	**20 41 49.7**	**+1.4**
RAO				Sn	**Sn**	**20 42 35.6**	**+0.2**
MSVF	**Nonsavu**	**8.72**	**327**	Pn	**Pn**	**20 42 53.8**	**+2.9**
NIUE	**Niue**	**8.97**	**49**	Pn	**Pn**	**20 42 52.0**	**-2.3**
AFI	**Afiamalu**	**12.27**	**25**	P	Pn	20 43 34.1	-4.8
	5.7nm,0.3s,baz=7.9,slow=9.0,SNR=8.1						
AFI				S	Sn	20 45 40.3	-14
	6.2nm,0.3s,baz=193,slow=23,SNR=8.4						
AFI	**Afiamalu**	**12.27**	**25**		Pn	20 43 33.6	-5.3
MXZ	**Matakaoa Point**	**12.95**	**197**	Pn	**Pn**	**20 43 48.2**	**+0.5**
MWZ	**Matawai**	**13.89**	**198**	P	**Pn**	**20 43 58.0**	**-2.0**
URZ	**Urewera**	**13.94**	**199**	P	**Pn**	**20 44 00.8**	**+0.2**
	2.0nm,0.3s,baz=35,slow=1.1,SNR=13						
URZ				S	Sn	20 46 19.1	-15
	1.8nm,0.3s,baz=334,slow=20,SNR=12						
URZ	**Urewera**	**13.94**	**199**	P	**Pn**	**20 44 02.2**	**+1.6**
URZ	**Urewera**	**13.94**	**199**		**Pn**	**20 44 01.7**	**+1.1**
KMRZ	**Kaimai**	**13.95**	**204**	P	P	20 44 11.8	+6.2
HIZ	**Hauiti**	**14.95**	**205**	Pn	**P**	**20 44 15.4**	**-1.2**
BKZ	**Black Stump Fm**	**14.96**	**200**	P	**Pn**	**20 44 14.1**	**+0.3**
OTVZ	**Oturere**	**15.23**	**202**	P	**Pn**	**20 44 16.2**	**-1.0**
BHHZ	**Black Hill Sta**	**15.39**	**201**	P	**Pn**	**20 44 17.0**	**-2.2**
WNVZ	**Wahianoa**	**15.40**	**202**	P	**Pn**	**20 44 16.9**	**-2.4**
PKVZ	**Pokaka**	**15.45**	**203**	P	**Pn**	**20 44 19.3**	**-0.6**
DZM	**Mont Dzumac**	**15.45**	**278**	LR	LR	20 48 20.0	
	comp=Z,20nm,20.2s,baz=67,slow=30						
DZM	**Mont Dzumac**	**15.45**	**278**	P	**P**	**20 44 23.4**	**+1.0**
DZM				IAmb	IAmb	20 44 30.6	
	comp=Z,46nm,1.1s						
PXZ	**Pawanui**	**15.65**	**198**	P	**Pn**	**20 44 20.6**	**-1.7**
BFZ	**Birch Farm**	**16.43**	**198**	P	**Pn**	**20 44 27.7**	**-4.4**
MRZ	**Mangatainoka R**	**16.61**	**200**	P	**Pn**	**20 44 30.6**	**-3.7**
SANVU	**Saraoutou**	**17.66**	**300**	P	**Pn**	**20 44 47.7**	**+0.4**
KNTN	**Kanton**	**22.87**	**14**	P	**P**	**20 45 42.1**	**-0.6**
PPT	**Papeete**	**26.64**	**79**	LR	LR	20 54 37.2	
	comp=Z,24nm,19.2s,baz=239,slow=31						
EIDS	**Eidsvold**	**28.79**	**263**	P	**P**	**20 46 36.8**	**+0.6**
EIDS				IAmb	IAmb	20 46 38.4	
	comp=Z,7.7nm,0.9s						
CTA	**Charters Tower**	**34.19**	**271**	P	**P**	**20 47 23.1**	**-0.5**
	comp=Z,4.2nm,0.6s,baz=99,slow=10.0,SNR=13						
CTAO	**Charters Tower**	**34.19**	**271**	P	**P**	**20 47 23.0**	**-0.6**
STKA	**Stephens Creek**	**36.78**	**250**	P	**P**	**20 47 45.0**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=102,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**36.78**	**250**	P	**P**	**20 47 44.8**	**-0.9**
BBOO	**Buckleboo**	**41.45**	**248**	P	**P**	**20 48 22.6**	**-1.9**
BBOO				IAmb	IAmb	20 48 35.6	
	comp=Z,12nm,1.4s						
ASAR	**Alice Springs**	**44.49**	**261**	P	**P**	**20 48 47.6**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=96,slow=7.9,SNR=14						
ASAR	**Alice Springs**	**44.49**	**261**	P	**P**	**20 48 48.2**	**-1.1**
WB0	**Warramunga Arr**	**45.02**	**267**	P	**P**	**20 48 51.3**	**-2.1**
WRA	**Warramunga Arr**	**45.02**	**266**	P	**P**	**20 48 51.2**	**-2.2**
	comp=Z,2.6nm,0.7s,baz=97,slow=8.2,SNR=25						
WRA	**Warramunga Arr**	**45.02**	**266**	P	**P**	**20 48 51.6**	**-1.8**
VNDA	**Vanda**	**53.34**	**186**	P	**P**	**20 49 57.8**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=24,slow=4.1,SNR=5.6						
VNDA	**Vanda**	**53.34**	**186**	P	**P**	**20 49 57.9**	**+1.9**
FITZ	**Fitzroy Crossi**	**53.42**	**266**	P	**P**	**20 49 57.8**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=111,slow=5.6,SNR=7.5						
FITZ	**Fitzroy Crossi**	**53.42**	**266**	P	**P**	**20 49 56.9**	**-0.5**
FITZ				IAmb	IAmb	20 49 58.5	
	comp=Z,6.7nm,1.2s						
QSPA	**South Pole Qui**	**64.90**	**180**	P	**P**	**20 51 16.4**	**+0.3**
QSPA				IAmb	IAmb	20 51 19.2	
	comp=Z,7.4nm,1.0s						
MAW	**Mawson**	**77.47**	**200**	P	**P**	**20 52 32.6**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=146,slow=10,SNR=5.4						
MAW				LR	LR	21 24 01.2	
	comp=Z,15nm,20.8s,baz=22,slow=34						
MAW	**Mawson**	**77.47**	**200**	P	**P**	**20 52 32.3**	**+0.8**
KSRS	**Korea Array**	**80.98**	**319**	P	**P**	**20 52 50.7**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=128,slow=7.9,SNR=2.1						
PEA0B	**Petropavlovsk-**	**81.02**	**345**	P	**P**	**20 52 50.3**	**-0.6**
PETK	**Petropavlovsk-**	**81.02**	**345**	P	**P**	**20 52 51.1**	**+0.3**
	comp=Z,9.3nm,0.7s,baz=124,slow=7.2,SNR=6.8						
PETK	**Petropavlovsk-**	**81.02**	**345**	P	**P**	**20 52 50.7**	**-0.2**
H03S2	**Juan Fernandez**	**82.63**	**124**	T	T	22 24 05.7	
	baz=243,slow=74,SNR=23						
H03S1	**Juan Fernandez**	**82.64**	**124**	T	T	22 24 06.8	
	baz=243,slow=74,SNR=22						
H03S3	**Juan Fernandez**	**82.65**	**124**	T	T	22 24 05.5	
	baz=243,slow=74,SNR=25						
H03N2	**Juan Fernandez**	**82.80**	**123**	T	T	22 24 07.5	
	baz=250,slow=73,SNR=9.8						
H03N3	**Juan Fernandez**	**82.80**	**123**	T	T	22 24 09.4	
	baz=250,slow=73,SNR=9.8						
H03N1	**Juan Fernandez**	**82.81**	**123**	T	T	22 24 10.0	
	baz=250,slow=73,SNR=9.4						
SNAA	**Sanae**	**83.31**	**178**	P	**P**	**20 53 02.5**	**-0.4**
SNAA	**Sanae**	**83.31**	**178**	P	**P**	**20 53 02.3**	**-0.6**
	comp=Z,2.8nm,1.1s						
SNAA	**Sanae**	**83.31**	**178**	P	**P**	**20 53 02.6**	**-0.4**
YBH	**Yreka Blue Hor**	**83.41**	**38**	P	**P**	**20 53 04.1**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=84,slow=2.4,SNR=3.7						
VNA3	**Neumayer Olymp**	**83.42**	**176**	P	**P**	**20 53 02.9**	**-0.5**
PNTR	**Pine Nut**	**83.48**	**41**	P	**P**	**20 53 05.0**	**+0.7**
PNTR				IAmb	IAmb	20 53 07.0	
	comp=Z,5.1nm,0.8s						
NVAR	**Mina Array Bea**	**83.84**	**42**	P	**P**	**20 53 07.4**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=223,slow=7.7,SNR=12						
NVAR	**Mina Array Bea**	**83.84**	**42**	P	**P**	**20 53 07.1**	**+0.8**
VNA2	**Neumayer--Watz**	**83.87**	**177**	P	**P**	**20 53 05.6**	**-0.1**
	baz=176,slow=4.7						
VNA1	**Neumayer--Stat**	**84.09**	**176**	P	**P**	**20 53 07.2**	**+0.4**
**Y

RABL	Rabaul	5.42	73	Pn		Pn	20 47 39.1	-1.0
CTAO	Charters Tower	14.25	183	Pn		Pn	20 49 37.7	+1.6
MTN	Manton Dam	17.11	245	P		P	20 50 10.2	-0.5
MTN				IAmb		IAmb	20 50 20.1	
	comp=Z,6.8nm,0.7s							
WB0	Warramunga Arr	18.52	220	P		P	20 50 27.1	+1.1
WB0				IAmb		IAmb	20 50 29.6	
	comp=Z,16nm,0.6s							
WB2	Warramunga Arr	18.67	220	P		P	20 50 28.8	+1.0
WRA	Warramunga Arr	18.68	220	P		P	20 50 28.7	+0.9
	comp=Z,4.4nm,0.3s,baz=40,slow=11,SNR=122							
WRA				S		S	20 53 55.3	+2.5
	comp=Z,0.1nm,0.3s,baz=45,slow=20,SNR=3.5							
KNRA	Kununurra	20.39	240	P		P	20 50 45.6	-0.7
KNRA				IAmb		IAmb	20 50 50.6	
	comp=Z,9.9nm,0.8s							
AS31	Alice Springs	21.78	214	P		P	20 51 02.1	+1.0
ASAR	Alice Springs	21.78	214	P		P	20 51 02.1	+1.0
	comp=Z,9.6nm,0.6s,baz=49,slow=8.5,SNR=107							
ASAR				S		S	20 54 54.1	+1.9
	comp=Z,1.2nm,0.9s,baz=32,slow=21,SNR=7.5							
ASAR	Alice Springs	21.78	214	P		P	20 51 01.8	+0.7
SOEI	Soe	22.82	259	P		P	20 51 11.7	+0.2
SOEI				IAmb		IAmb	20 51 25.0	
	comp=Z,16nm,1.0s							
FITZ	Fitzroy Crossi	24.15	238	P		P	20 51 24.1	+0.8
	comp=Z,14nm,0.6s,baz=64,slow=9.6,SNR=65							
DZM	Mont Dzumac	24.85	133	P		P	20 51 30.0	+0.2
DZM				IAmb		IAmb	20 51 31.0	
	comp=Z,11nm,1.0s							
ARMA	Armidale	24.91	170	P		P	20 51 31.2	+0.9
STKA	Stephens Creek	26.45	190	P		P	20 51 46.8	+2.7
PSA00	Pilbara Seismi	30.58	236	P		P	20 52 21.3	+0.5
JAGI	Jajag, Banyuwa	32.66	263	P		P	20 52 36.4	-2.7
URZ	Urewera	42.36	144	P		P	20 54 01.5	+1.1
URZ				IAmb		IAmb	20 54 14.6	
	comp=Z,9.9nm,1.0s							
NNZ	Nelson	42.46	150	P		P	20 54 01.9	+0.7
BKZ	Black Stump Fm	42.62	146	P		P	20 54 03.5	+0.9
BKZ				IAmb		IAmb	20 54 11.9	
	comp=Z,5.1nm,1.1s							
RPZ	Rata Peaks	43.33	154	P		P	20 54 10.0	+1.8
RPZ				IAmb		IAmb	20 54 21.8	
	comp=Z,9.7nm,1.2s							
VNDA	Vanda	72.14	177	P		P	20 57 29.4	+0.7
QSPA	South Pole Qui	84.19	180	P		P	20 58 35.8	+0.4
ILAR	Eielson Array	85.29	23	P		P	20 58 39.0	-1.7
	comp=Z,0.9nm,0.6s,baz=254,slow=5.0,SNR=14							
ILAR	Eielson Array	85.29	23	P		P	20 58 38.9	-1.7
CTGM	Chitina Glacie	86.27	28	P		P	20 58 45.9	+0.1

*IDC **08** 20:47:33.6±22.0, 56.09N×162.56W, h117km±138km, mb3.6/3, mb1 3.6/6, mb1mx3.1/57, mbtmp3.8/6, ML3.8/3, Error ellipse: s-maj=190.2km s-min=47.2km az=24.0*
*NEIC **08** 20:47:43.2±1.2, 56.08N±0.10×161.5W±0.1, h227km±9km, Error ellipse: s-maj=16.1km s-min=5.6km az=150.0*
*AEIC **08** 20:47:44±1.3, 56.0N±0.1×161.5W±0.1, h225km±6km, ML4.3, Error ellipse: s-maj=16.1km s-min=8.3km az=155.0*

ISC 08 20:47:43.8±0.7, 56°25N±0.08×161°64W±0.06, h200km, n96, σ1§17/103, mb3.8/3, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PN6	Pavlof North-6	0.81	191		Pn	20 48 14.0	+1.5
PS1A	Pavlof South-1	0.83	184		Pn	20 48 13.7	+1.2
PS1A					Sn	20 48 38.2	+3.5
PN7A	Pavlof North-7	0.84	194		Pn	20 48 14.1	+1.4
PVV	Pavlof Volcano	0.88	186		Pn	20 48 13.9	+1.1
PS4A	Pavlof South-4	0.91	188		Pn	20 48 14.3	+1.3
HAG	Hague Volcano	0.94	189		Pn	20 48 14.4	+1.1
SDPT	Sand Point	1.11	143		Pn	20 48 15.2	+0.8
SDPT					Sn	20 48 38.7	+0.7
VNWF	Veniaminof 8	1.17	94		Pn	20 48 16.7	+1.8
DT1	Dutton Round H	1.20	198		Pn	20 48 15.8	+0.8
VNSS	Veniaminof 3	1.22	90		Pn	20 48 17.2	+1.8
VNSG	Veniaminof 6	1.43	94		Pn	20 48 18.4	+1.5
FALS	False Pass	1.72	217		Pn	20 48 20.0	+0.5
FALS					Sn	20 48 49.4	+2.2
CHGN	Chignik	1.80	87	Pn	Pn	20 48 21.4	+1.1
CHGN				S	Sn	20 48 49.6	+1.0
CNBA	Chernabura Isl	1.84	140		Pn	20 48 20.4	-0.3
SSLN	Shishaldin Nor	1.96	224		Pn	20 48 22.9	+0.8
BRPK	Brown Peak	2.00	218		Pn	20 48 22.8	+0.4
SSLS	Shishaldin Sou	2.04	222		Pn	20 48 23.4	+0.5
SSLW	Shishaldin Wes	2.04	225		Pn	20 48 23.2	+0.4
SSBA	Shishaldin	2.04	225		Pn	20 48 23.1	+0.3
WEBT	Westdahl Beart	2.43	228		Pn	20 48 27.5	+0.6
WESP	Westdahl Peak	2.49	226		Pn	20 48 28.4	+0.8
AKSA	Akutan Strait	3.14	229		Pn	20 48 36.0	+0.9
AKSA	Akutan Strait	3.14	229		Pn	20 48 36.0	+0.9
AKUT	Akutan	3.17	230		Pn	20 48 36.2	+0.7
AHB	Akutan Harbor	3.21	230		Pn	20 48 36.4	+0.5
AKLV	Akutan Long Va	3.24	232		Pn	20 48 36.6	+0.3
AKBBA	Akutan Broad B	3.27	231		Pn	20 48 37.6	+1.0
AKMO	Akutan Morgan	3.31	231		Pn	20 48 38.0	+0.9
CHIR	Chirikof Islan	3.40	95		Pn	20 48 38.7	+0.5
CHIR					Sn	20 49 16.6	-1.2
UNV	Unalaska Valle	3.69	231		Pn	20 48 41.7	-0.1
UNV					Sn	20 49 26.0	-1.0
MNAT	Makushin Natee	3.74	233		Pn	20 48 42.4	0.0
MNAT					Sn	20 49 28.3	0.0
MSW	Makushin Switc	3.77	234		Pn	20 48 42.6	-0.1
MREP	Makushin Rep't	3.82	232		Pn	20 48 43.4	0.0
ANCK	Angle Creek	3.87	57		Pn	20 48 46.3	+2.3
KELA	Mount Kelaz	3.88	53		Pn	20 48 45.9	+1.8
MGOD	Makushin Gods	3.89	233		Pn	20 48 44.2	0.0
MAPS	Pakushin South	3.91	234		Pn	20 48 44.5	+0.1
KAKN	Katmai Knife C	4.12	57		Pn	20 48 48.9	+1.8
SII	Sitkinak Islan	4.16	83		Pn	20 48 47.4	0.0
KAHC	Katmai Hardscr	4.32	53		Pn	20 48 51.9	+2.4
OKTU	Okmok Mt. Tuli	4.68	235		Pn	20 48 53.9	-0.2
OHAK	Old Harbor	4.70	75		Pn	20 48 54.4	0.0
SPIA	Saint Paul Isl	4.83	285	Pn	Pn	20 48 56.7	+0.8
KDAK	Kodiak Island	5.18	69		Pn	20 49 00.8	+0.4
NIKH	Nikolski High	5.32	235		Pn	20 49 01.7	-0.6
SVW2	Sparrevohn	5.80	30		Pn	20 49 10.3	+1.9
RSO	Redoubt South	6.30	44	Pn	Pn	20 49 16.3	+1.3
RDJH	Redoubt Jeurge	6.36	43		Pn	20 49 17.1	+1.3
DFR	Drift River	6.41	43		Pn	20 49 18.0	+1.7
CNPM	China Poot	6.45	55		Pn	20 49 16.9	+0.1
BRLK	Bradley Lake	6.71	54		Pn	20 49 20.1	-0.1
BRSE	Bradley Lake S	6.77	54		Pn	20 49 20.8	-0.1
TT01	Tatalina	7.26	21		Pn	20 49 29.2	+2.0
TTA	Tatalina	7.29	21	Pn	Pn	20 49 29.6	+2.0
STLK	Strandline Lak	7.32	40		Pn	20 49 30.7	+2.7
SLKM	Skilak Lake	7.37	50		Pn	20 49 29.1	+0.4
SEW	Seward	7.51	54		Pn	20 49 30.6	0.0
O22K	Cooper Landing	7.56	51		Pn	20 49 31.9	+0.7
SUA	Susitna One	7.69	43	Pn	Pn	20 49 34.2	+1.2
SKT	Skwentna	7.75	38	Pn	Pn	20 49 35.2	+1.6
RC01	Rabbit Creek A	7.87	47		Pn	20 49 35.3	+0.1
PWL	Port Wells	8.35	51		Pn	20 49 40.6	-0.8
KNK	Knik Glacier	8.57	47		Pn	20 49 43.9	-0.4
GHO	Glory Hole Cre	8.58	45	Pn	Pn	20 49 44.5	0.0
GLI	Glacier Island	8.90	53		Pn	20 49 47.0	-1.6
KTH	Kantishna Hill	9.08	32	Pn	Pn	20 49 52.2	+1.2
FID	Port Fidalgo	9.12	54		Pn	20 49 50.1	-1.3
JPK	Jack Peak	9.19	52		Pn	20 49 51.6	-0.8
SCM	Sheep Creek Mo	9.25	47		Pn	20 49 52.6	-0.6
EYAK	Cordova Ski Ar	9.38	56	Pn	Pn	20 49 54.0	-0.8
BPAW	Bear Paw Mtn.	9.48	30	Pn	Pn	20 49 57.8	+1.6
DIV	Divide	9.59	53		Pn	20 49 57.6	0.0
KLU	Klutina	9.68	51		Pn	20 49 58.0	-0.7
M24K	Tolsona, Glenn	9.86	47		Pn	20 50 00.8	-0.3
DHY	Denali Highway	9.93	41	Pn	Pn	20 50 01.5	-0.5
N25K	Chitina, Valde	10.30	52	Pn	Pn	20 50 06.3	-0.5
CRQM	Cirque	10.67	57	Pn	Pn	20 50 11.8	+0.2
ISLE	Juniper Island	11.00	59	Pn	Pn	20 50 16.6	+0.7
MESA	MESA	11.09	61	Pn	Pn	20 50 18.0	+0.9
IL31		11.19	34		Pn	20 50 16.5	-1.6
ILAR	Eielson Array	11.19	34	P	Pn	20 50 15.7	-2.4
	0.1nm,0.3s,baz=222,slow=13,SNR=3.0						
ILAR	Eielson Array	11.19	34		Pn	20 50 16.4	-1.7
CTGM	Chitina Glacie	11.57	58		Pn	20 50 24.0	+0.8
BCAR	Beaver Creek A	12.11	48		Pn	20 50 28.9	-0.9
COLD	Coldfoot	12.25	21		P	20 50 34.2	-1.6
EGAK	Eagle	13.16	41		Pn	20 50 44.2	+1.2
DAWY	Dawson	13.50	45		Pn	20 50 47.9	+0.6
TOLK	Toolik Lake Re	13.59	19		P	20 50 50.2	-0.6
BMAR	Burnt Mountain	13.74	28		P	20 50 51.4	-1.1
WHY	Whitehorse	14.63	61	P	Pn	20 51 01.6	+0.3
EPYK	Eagle Plains	15.56	39	P	P	20 51 12.5	0.0
DLBC	Dease Lake	17.12	69	P	Pn	20 51 31.6	+0.4
	0.3nm,0.3s,baz=285,slow=12,SNR=4.0						
INK	Inuvik	17.59	35	P	P	20 51 33.5	-1.2
	0.3nm,0.3s,baz=241,slow=10.0,SNR=5.3						
YKA	Yellowknife Ar	24.29	56	P	P	20 52 44.7	+2.3
	1.2nm,0.5s,baz=278,slow=9.0,SNR=8.1						
FINES	FINESS Array B	62.49	356	P	P	20 57 44.5	-0.8
	1.7nm,0.9s,baz=10,slow=8.6,SNR=5.6						
AKASG	Malin Array Be	73.04	353	P	P	20 58 50.8	-0.6
	0.5nm,0.4s,baz=12,slow=6.4,SNR=2.3						

*IDC **08** 20:49:45.5±1.2, 40.25S×78.57E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.8/41, mbtmp4.0/9, MS4.2/18, Ms1 4.2/18, ms1mx4.0/32, Error ellipse: s-maj=40.7km s-min=19.3km az=118.0*
*NEIC **08** 20:49:45.8±0.9, 40.24S±0.10×78.6E±0.2, h10km±1km, mb4.6/13, Error ellipse: s-maj=27.3km s-min=16.5km az=259.0*
*GCMT **08** 20:49:46.8±0.2, 40.15S±0.01×78.35E±0.02, h17km±1km, MW5.0/92, Moment Tensor Solution. s31,c36; s92,c134; Duration: 0 Moment tensor: Scale 10^16Nm; Mr0.41±.11; Mθθ-2.35±.11; Mφφ 1.93±.10; Mrθ 0.99±.27; Mrφ-2.22±.09; Mθφ-0.89±.28; Best double couple: Mo3.31900×10^16 NP1:φ247.00000°, δ70.00000°, λ-5.00000°. NP2: φ338.00000°, δ86.00000°, λ-160.00000°. Principal axes: T 2.9550, Plg11.0000°, Azm111.0000°; N 0.7230, Plg70.0000°, Azm350.0000°; P -3.6830, Plg17.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 20:49:46.3±0.6, 40°20S±0.09×78°5E±0.1, h10km, n50, σ0§97/30, mb4.2/13, MS4.2/22, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	Amsterdam Isla	2.50	343	Pn	Pn	20 50 27.2	+0.2
H01W2	Cape Leeuwin H	28.63	91	T	T	21 25 35.4	
	baz=249,slow=74,SNR=137						
H01W3	Cape Leeuwin H	28.64	91	T	T	21 25 37.4	
	baz=249,slow=74,SNR=132						
H01W1	Cape Leeuwin H	28.65	91	T	T	21 25 42.3	
	baz=249,slow=74,SNR=125						
MAW	Mawson	28.77	192	P	P	20 55 42.9	-0.8
	1.6nm,0.8s,baz=30,slow=14,SNR=4.3						
MAW				LR	LR	21 05 21.0	
	comp=Z,856nm,18.1s,baz=52,slow=32						
MAW	Mawson	28.77	192	P	P	20 55 43.1	-0.6
H08S2	Diego Garcia H	32.86	349	T	T	21 30 37.3	
	baz=165,slow=74						
H08S1	Diego Garcia H	32.86	349	T	T	21 30 33.0	
	baz=165						
H08S3	Diego Garcia H	32.88	349	T	T	21 30 38.8	
	baz=165,slow=74						
LEM	Lembang	42.25	46	P	P	20 57 42.0	+2.0
	7.6nm,0.5s,baz=314,slow=19,SNR=1.5						
BOSA	Boshof	44.81	268	LR	LR	21 13 41.7	
	comp=Z,427nm,18.0s,baz=174,slow=32						
FITZ	Fitzroy Crossi	46.06	76	LR	LR	21 13 55.8	
	comp=Z,131nm,19.1s,baz=282,slow=32						
ASAR	Alice Springs	49.07	88	P	P	20 58 33.7	-0.1
	0.7nm,0.8s,baz=244,slow=6.7,SNR=5.5						
ASAR				PcP	PcP	20 59 58.8	+1.3
	0.6nm,0.9s,baz=247,slow=1.9,SNR=2.4						
ASAR				LR	LR	21 17 14.4	
	comp=Z,481nm,18.2s,baz=238,slow=34						
ASAR	Alice Springs	49.07	88	P	P	20 58 31.4	-2.4
VNDA	Vanda	49.70	164	P	P	20 58 38.5	+0.7
	1.0nm,0.8s,baz=258,slow=7.7,SNR=5.7						
VNDA				LR	LR	21 18 20.5	
	comp=Z,182nm,18.1s,baz=270,slow=34						
VNDA	Vanda	49.70	164		P	20 58 37.7	-0.2
VNDA				IAmb	IAmb	20 58 55.7	
	comp=Z,5.4nm,1.1s						
SNAA	Sanae	49.72	204	P	P	20 58 38.9	+0.7
	comp=Z,1.1nm,0.9s,baz=11,slow=14,SNR=3.7						
KNRA	Kununurra	49.90	76	P	P	20 58 39.6	-0.5
QSPA	South Pole Qui	49.96	180	P	P	20 58 41.1	+0.9
	comp=Z,4.3nm,1.0s,baz=315,slow=3.4,SNR=7.8						
QSPA	South Pole Qui	49.96	180	P	P	20 58 39.1	-1.0
QSPA				IAmb	IAmb	20 58 52.9	
	comp=Z,7.3nm,1.0s						
STKA	Stephens Creek	50.76	102	P	P	20 58 46.2	-0.3
	comp=Z,2.4nm,0.7s,baz=216,slow=12,SNR=3.6						
STKA				LR	LR	21 15 51.5	
	comp=Z,217nm,21.8s,baz=218,slow=31						
STKA	Stephens Creek	50.76	102	P	P	20 58 46.1	-0.4
KAPI	Kappang	51.00	58	LR	LR	21 16 57.9	
	comp=Z,121nm,19.9s,baz=194,slow=32						
VNA2	Neumayer--Watz	51.29	205	P	P	20 58 50.6	+0.6
	baz=94,slow=9.0						
WRA	Warramunga Arr	51.51	84	P	P	20 58 51.8	-0.5
	comp=Z,0.9nm,0.8s,baz=232,slow=7.5,SNR=8.4						
WRA				PcP	PcP	21 00 08.3	+1.9
	comp=Z,0.3nm,0.6s,baz=237,slow=3.0,SNR=0.6						
WRA				LR	LR	21 18 28.9	
	comp=Z,240nm,19.3s,baz=305,slow=34						
WRA	Warramunga Arr	51.51	84	P	P	20 58 51.4	-0.9
WB0	Warramunga Arr	51.65	84	P	P	20 58 53.1	-0.2
WB0				IAmb	IAmb	20 59 00.5	
	comp=Z,19nm,1.8s						
VNA3	Neumayer Olymp	51.95	204	P	P	20 58 55.7	+0.8
KMBO	Kilima Mbogo	53.95	305	LR	LR	21 16 47.2	
	comp=Z,167nm,18.5s,baz=92,slow=30						
CMAR	Chiang Mai Arr	61.39	22	P	P	21 00 02.0	-0.6
	comp=Z,0.7nm,1.0s,baz=193,slow=3.7,SNR=4.8						
CMAR				LR	LR	21 22 02.4	
	comp=Z,72nm,21.8s,baz=250,slow=32						
CMAR	Chiang Mai Arr	61.39	22	P	P	21 00 01.3	-1.2
DAV	Davao City (W)	63.97	54	LR	LR	21 28 59.8	
	comp=Z,72nm,18.3s,baz=222,slow=37						
LSA	Lhasa	70.54	12	P	P	21 01 01.1	-0.7
LSA				IAmb	IAmb	21 01 08.5	
	comp=Z,5.8nm,1.4s						
DZM	Mont Dzumac	74.61	106	eLR	LR	21 24 11.4	
	comp=Z,153nm,25.7s						
KRVT	Keravat (AS076	74.67	83	LR	LR	21 31 49.8	
	comp=Z,79nm,18.4s,baz=232,slow=34						
KBL	Kabul	74.88	352	P	P	21 01 26.4	-0.8
KBL				IAmb	IAmb	21 01 35.3	
	comp=Z,13nm,1.2s						
GEYT	Alibeck	79.97	344	LR	LR	21 32 29.5	
	comp=Z,63nm,19.6s,baz=200,slow=32						
GEYT	Alibeck	79.97	344	P	P	21 01 55.2	-0.1
GYA0B	ALIBECK ARRAY	79.97	344	P	P	21 01 54.9	-0.5
GYA0B				IAmb	IAmb	21 02 11.9	
	comp=Z,4.6nm,0.8s						
BTK	Batken	80.19	354	P	P	21 01 56.5	0.0
MKAR	Makanchi Array	86.68	3	LR	LR	21 38 41.3	
	comp=Z,157nm,20.0s,baz=190,slow=34						
MKAR	Makanchi Array	86.68	3	P	P	21 02 30.4	+0.6
TORD	Torodi Ar. Bea	88.56	288	LR	LR	21 40 23.0	
	comp=Z,327nm,19.4s,baz=130,slow=34						
DBIC	Dimbokro	89.19	279	LR	LR	21 38 12.6	
	comp=Z,144nm,18.9s,baz=114,slow=33						
SONM	Songino Array	91.10	18	LR	LR	21 42 08.9	
	comp=Z,106nm,20.5s,baz=192,slow=34						
KEST	Kesra	98.74	310	LR	LR	21 47 50.1	
	comp=Z,114nm,18.2s,baz=240,slow=35						
TBI	Tubuai	102.60	136	eLR	LR	21 37 19.8	
	comp=Z,114nm,24.5s						
PPT2	Papeete2	107.17	132	eLR	LR	21 39 21.5	
	comp=Z,134nm,22.2s						
TAOE	Nuku Hiva Isla	119.53	135	eLR	LR	21 45 09.6	
	comp=Z,143nm,24.3s						
INK	Inuvik	146.96	21	PKPbc	PKPab	21 09 28.7	-0.7
	comp=Z,3.8nm,0.9s,baz=339,slow=1.8,SNR=4.6						

*BGR **08** 21:14:19.7±0.0, 64.91N×19.82W, h33km, mb4.3*
*REY **08** 21:14:24.3, 64.67N×17.39W, h0km*
*IDC **08** 21:14:26.1±0.6, 64.56N×17.52W, h0km, mb3.8/17, mb1 4.0/19, mb1mx3.9/41, mbtmp3.8/19, ML3.5/2, MS3.4/13, Ms1 3.5/13, ms1mx3.3/43, Error ellipse: s-maj=20.1km s-min=9.1km az=16.0*
*NEIC **08** 21:14:27.7±1.6, 64.65N±0.08×17.3W±0.1, h8km±4km, mb4.6/70, Error ellipse: s-maj=12.1km s-min=8.1km az=188.0*

ISC 08 21:14:27.8±0.4, 64°61N±0.04×17°38W±0.04, h10km, n169, σ1§55/156, mb4.4/56, MS3.4/7, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	Vonarskard	0.17	291	P	Pg	21 14 27.9	-3.6
	baz=272						
IDYN	Dyngjuhals	0.18	2	P	Pg	21 14 27.4	-4.3
	baz=4.1						
IGRF	Grimsfjall	0.21	166	P	Pg	21 14 30.0	-2.2
	baz=169						
IHUS	Husbondi	0.34	201	P	Pg	21 14 32.5	-2.0
	baz=198						
ISKR	Skrokkalda	0.43	264	P	Pg	21 14 33.2	-3.1
	baz=256						
THOR	Thorvaldshraun	0.44	43	P	Pg	21 14 32.5	-4.0
	baz=48						
IJOK	Jokulheimar	0.47	231	P	Pg	21 14 34.1	-2.8
	baz=226						
IMKO	Mokollar	0.58	50	P	Pg	21 14 34.7	-4.3
	baz=55						
IKSK	Karasker	0.60	138	P	Pg	21 14 36.1	-3.4
	baz=142						
IIEY	Innrieyrar	0.61	212	P	Pg	21 14 36.5	-3.1
	baz=210						
IKAL	Kalfafell	0.68	191	P	Pg	21 14 38.0	-2.9
	baz=190						
IKAL				S	Sb	21 14 48.2	-2.9
	baz=190						
ISVA	Svartarkot	0.73	4	P	Pg	21 14 36.7	-5.2
	baz=4.7						
ISVA				S	Sg	21 14 46.9	-4.6
	baz=4.7						
IVSH	V-Sauoahnukur	0.74	74	P	Pg	21 14 37.5	-4.5
	baz=78						
IVAT	Vatnsfell	0.79	238	P	Pg	21 14 39.5	-3.5
	baz=235						
IHVE	Hveravellir	0.97	286	P	Pg	21 14 41.4	-5.1
	baz=283						
IMEL	Melhnausar	1.01	17	P	Pb	21 14 41.6	-5.7
	baz=18						
ISNB	Snabyli	1.03	212	P	Pg	21 14 43.8	-3.9
	baz=211						
IREN	Reynihlio	1.06	11	P	Pb	21 14 42.5	-5.6
	baz=12						
IKVO	Krokottuvotn	1.13	11	P	Pn	21 14 43.6	-6.1
	baz=11						
IGRS	Grimsstaoir	1.16	27	P	Pn	21 14 44.2	-5.9
	baz=28						
IGHA	Grjothals	1.27	13	P	Pn	21 14 45.8	-5.9
	baz=14						
BORG	Borgarnes	1.70	276	Pg	Pn	21 14 54.1	-3.3
	21nm,0.3s,baz=102,slow=7.7,SNR=78						
BORG				Lg	Lg	21 15 19.4	
	20nm,0.3s,baz=237,slow=21,SNR=16						
SCO	Scoresbysund	6.15	346	Pn	Pn	21 15 56.4	-2.2
SCO	Scoresbysund	6.15	346	*e*	Pn	21 15 55.4	-3.2
	baz=161,slow=8.6						
SCO				*i* P	Pn	21 15 58.0	-0.5
SCO				*i* S	Sn	21 17 13.1	+4.3
SCO				IAML		21 17 22.9	
	comp=Z,1.9nm,0.4s						
ANGG	Ammassalik, Gr	8.59	286	Pn	Pn	21 16 32.6	+0.7
SUMG	Summit	11.02	325	Pn	Pn	21 17 05.2	-0.3
SUMG	Summit	11.02	325	*e*	Pn	21 17 11.1	+5.6
EKA	Eskdalemuir Ar	11.69	136	Pn	Pn	21 17 13.3	-1.0
	baz=321,slow=14,SNR=13						
ESK	Eskdalemuir	11.69	136	Pn	Pn	21 17 14.3	0.0
EKR7	Eskdalemuir Ar	11.71	136	Pn	Pn	21 17 14.2	-0.6
NC204	NORSAR Array S	13.18	92	Pn	Pn	21 17 32.0	-2.8
NOA	NORSAR Array B	13.48	92	Pn	Pn	21 17 35.7	-3.2
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.8						
NOA				LR	LR	21 22 16.5	
	comp=Z,89nm,20.8s,baz=300,slow=35						
SFJD	Kangerlussuaq	13.73	295	LR	LR	21 22 46.5	
	comp=Z,170nm,19.7s,baz=91,slow=36						
HFS	Hagfors	14.99	93	LR	LR	21 23 03.0	
	comp=Z,82nm,20.1s,baz=308,slow=34						
SPITS	Spitsbergen Ar	16.90	23	LR	LR	21 23 21.0	
	comp=Z,117nm,20.4s,baz=205,slow=32						
ARCES	ARCESS Array B	17.11	54	LR	LR	21 23 50.0	
	comp=Z,137nm,20.6s,baz=285,slow=33						
FIA1	FINESS Array S	19.67	79	P	P	21 18 54.7	-1.8
FIA1				IAmb	IAmb	21 18 55.8	
	comp=Z,34nm,1.5s						
FINES	FINESS Array B	19.67	79	P	P	21 18 57.1	+0.7
	comp=Z,0.1nm,0.3s,baz=318,slow=10,SNR=3.3						
FINES				LR	LR	21 25 46.5	
	comp=Z,120nm,19.7s,baz=303,slow=34						
FINES	FINESS Array B	19.67	79	P	P	21 18 55.6	-0.9
TULEG	Thule	19.92	327		Pn	21 19 01.0	+0.2
TULEG				IAmb	IAmb	21 19 08.7	
	comp=Z,28nm,1.4s						
CLL	Collm	20.64	116	*e*P	P	21 19 07.0	-0.1
	comp=Z,8.0nm,1.2s						
CLL	Collm	20.64	116	P	P	21 19 07.4	+0.4
ECH	Echery	21.08	129	P	P	21 19 11.6	-0.4
ECH				IAmb	IAmb	21 19 16.7	
	comp=Z,26nm,1.4s						
GRF	Grafenberg Arr	21.26	121	*e*P	P	21 19 14.0	+0.2
	comp=Z,15nm,1.2s,baz=324,slow=10						
NKC	Novy K

CRVS	**Cervenica-Dubn**	**25.90**	**109**	*eP*	**P**	**21 19 58.9**	**-0.7**
PSZ	**Piszkesteto**	**26.05**	**112**	P	**P**	**21 20 01.2**	**+0.2**
PSZ				IAmb	IAmb	21 20 04.5	
	comp=Z,14nm,1.3s						
SCHQ	**Schefferville**	**26.09**	**272**	P	**P**	**21 20 00.5**	**-0.7**
	comp=Z,9.2nm,0.9s,baz=78,slow=14,SNR=1.8						
ESDC	**Sonseca Array**	**26.18**	**156**	P	**P**	**21 20 01.5**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=341,slow=9.7,SNR=5.6						
ESDC				LR	LR	21 30 04.5	
	comp=Z,95nm,18.0s,baz=350,slow=36						
ESDC	**Sonseca Array**	**26.18**	**156**	*eP*	**P**	**21 20 01.7**	**-0.5**
KOLS	**Kolonicke sedl**	**26.21**	**108**	*eP*	**P**	**21 20 04.3**	**+1.9**
AKASG	**Malin Array Be**	**27.79**	**98**	P	**P**	**21 20 16.0**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=323,slow=9.6,SNR=2.2						
AKASG				LR	LR	21 30 50.4	
	comp=Z,67nm,21.9s,baz=0.0,slow=35						
AKASG	**Malin Array Be**	**27.79**	**98**	P	**P**	**21 20 16.3**	**-0.2**
BRTR	**Keskin Array B**	**38.42**	**105**	P	**P**	**21 21 51.2**	**+1.9**
	comp=Z,1.6nm,0.9s,baz=300,slow=11,SNR=3.4						
BRTR	**Keskin Array B**	**38.42**	**105**	P	**P**	**21 21 49.0**	**-0.3**
KIV	**Kislovodsk**	**38.79**	**92**	P	**P**	**21 21 52.5**	**+0.2**
KBZ	**Khabaz**	**39.06**	**92**	P	**P**	**21 21 55.4**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=326,slow=8.9						
INK	**Inuvik**	**39.91**	**329**	P	**P**	**21 22 01.7**	**+0.5**
	comp=Z,2.8nm,1.1s,baz=28,slow=9.6,SNR=3.8						
KOPT	**Kop Dagi**	**41.07**	**98**	P	**P**	**21 22 12.1**	**+0.6**
KOPT				IAmb	IAmb	21 22 19.0	
	comp=Z,16nm,1.3s						
AKH	**Akhalkalaki**	**41.20**	**94**	P	**P**	**21 22 12.7**	**+0.2**
AKH				IAmb	IAmb	21 22 16.6	
	comp=Z,20nm,1.2s						
A21K	**Barrow**	**41.50**	**341**	P	**P**	**21 22 14.6**	**+0.4**
ABKAR	**Akbulak array**	**41.96**	**73**	P	**P**	**21 22 17.8**	**-0.6**
ABKAR	**Akbulak array**	**41.96**	**73**	P	**P**	**21 22 18.1**	**-0.2**
ABKAR				IAmb	IAmb	21 22 34.3	
	comp=Z,7.3nm,1.4s						
TIXI	**Tiksi**	**42.07**	**15**	P	**P**	**21 22 19.6**	**+0.7**
GNI	**Garni**	**42.78**	**94**	P	**P**	**21 22 24.1**	**-1.2**
GNI				IAmb	IAmb	21 22 38.2	
	comp=Z,13nm,1.4s						
TOLK	**Toolik Lake Re**	**42.82**	**336**	P	**P**	**21 22 25.5**	**+0.3**
TOLK				IAmb	IAmb	21 22 31.3	
	comp=Z,14nm,1.1s						
BMAR	**Burnt Mountain**	**42.97**	**333**	P	**P**	**21 22 25.9**	**-0.5**
MARD	**Mardin**	**43.45**	**100**	P	**P**	**21 22 30.3**	**-0.5**
MARD				IAmb	IAmb	21 22 43.4	
	comp=Z,12nm,1.2s						
FYU	**Fort Yukon**	**43.85**	**333**	P	**P**	**21 22 34.5**	**+1.1**
PRP	**Porcupine Dome**	**44.83**	**332**	P	**P**	**21 22 42.8**	**+1.3**
PRP				IAmb	IAmb	21 22 55.6	
	comp=Z,12nm,1.4s						
IL31		**45.76**	**333**	P	**P**	**21 22 50.1**	**+1.5**
IL31				IAmb	IAmb	21 22 52.2	
	comp=Z,6.6nm,1.2s						
ILAR	**Eielson Array**	**45.76**	**333**	P	**P**	**21 22 49.3**	**+0.7**
	comp=Z,1.8nm,1.0s,baz=23,slow=7.4,SNR=12						
ILAR				PcP	**PcP**	**21 24 26.0**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=327,slow=2.1,SNR=6.2						
ILAR				LR	LR	21 44 25.0	
	comp=Z,120nm,18.1s,baz=334,slow=39						
ILAR	**Eielson Array**	**45.76**	**333**	P	**P**	**21 22 49.6**	**+0.9**
COLA	**College**	**45.86**	**333**	P	**P**	**21 22 49.9**	**+0.5**
IMAR	**Indian Mountai**	**45.93**	**337**	P	**P**	**21 22 50.0**	**0.0**
BCAR	**Beaver Creek A**	**46.18**	**329**	P	**P**	**21 22 52.8**	**+0.7**
ZAA0	**Zalesovo Array**	**47.63**	**51**	P	**P**	**21 23 03.3**	**-0.1**
ZALV	**Zalesovo Beam**	**47.63**	**51**	P	**P**	**21 23 02.9**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=349,slow=6.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**47.63**	**51**	P	**P**	**21 23 03.6**	**+0.2**
KURK	**Kurchatov**	**48.10**	**58**	P	**P**	**21 23 06.9**	**-0.2**
KURK				IAmb	IAmb	21 23 09.3	
	comp=Z,4.8nm,0.9s						
T47A	**Sharon Grove**	**48.69**	**271**	P	**P**	**21 23 13.0**	**+1.2**
HODGE	**Hodges**	**48.94**	**264**	P	**P**	**21 23 15.4**	**+1.6**
W50A	**Signal Mountai**	**49.42**	**268**	P	**P**	**21 23 19.1**	**+1.6**
W50A				IAmb	IAmb	21 23 22.7	
	comp=Z,9.3nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**50.38**	**84**	P	**P**	**21 23 25.9**	**+1.1**
GYA0B				IAmb	IAmb	21 23 43.9	
	comp=Z,4.4nm,0.9s						
RLMT	**Red Lodge**	**51.16**	**295**	P	**P**	**21 23 31.9**	**+1.1**
RLMT				IAmb	IAmb	21 23 36.1	
	comp=Z,17nm,1.5s						
KKAR	**Karatay Array**	**51.25**	**70**	P	**P**	**21 23 31.6**	**+0.3**
BOZ	**Bozeman (W)**	**51.68**	**297**	P	**P**	**21 23 35.5**	**+0.9**
BOZ				IAmb	IAmb	21 23 49.2	
	comp=Z,9.6nm,1.3s						
YMP	**Mirror Lake Pl**	**51.82**	**295**	P	**P**	**21 23 36.1**	**+0.3**
YPP	**Pitchstone Pla**	**52.47**	**295**	P	**P**	**21 23 41.0**	**+0.4**
MK31	**Makanchi Array**	**52.71**	**58**	P	**P**	**21 23 41.6**	**-0.5**
MK31				IAmb	IAmb	21 23 42.6	
	comp=Z,7.3nm,1.4s						
MKAR	**Makanchi Array**	**52.71**	**58**	P	**P**	**21 23 41.3**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=306,slow=5.2,SNR=3.8						
MCMT	**McKenzie Canyo**	**52.79**	**297**	P	**P**	**21 23 42.9**	**-0.1**
IMW	**Indian Meadow**	**52.84**	**295**	P	**P**	**21 23 44.3**	**+0.9**
TOA0	**Torodi Ar. Sit**	**53.07**	**157**	P	**P**	**21 23 44.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**53.07**	**157**	P	**P**	**21 23 44.2**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=342,slow=7.9,SNR=6.8						
TORD	**Torodi Ar. Bea**	**53.07**	**157**	P	**P**	**21 23 45.2**	**+0.2**
PD31	**Pinedale Array**	**53.24**	**293**	P	**P**	**21 23 46.4**	**0.0**
PD31				IAmb	IAmb	21 23 50.5	
	comp=Z,11nm,1.4s						
PDAR	**Pinedale Array**	**53.24**	**293**	P	**P**	**21 23 45.5**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=56,slow=5.9,SNR=17						
PDAR	**Pinedale Array**	**53.24**	**293**	P	**P**	**21 23 45.8**	**-0.6**
REDW	**Red Top Meadow**	**53.25**	**295**	P	**P**	**21 23 46.8**	**+0.5**
REDW				IAmb	IAmb	21 23 53.0	
	comp=Z,7.3nm,1.2s						
BCYI	**Bear Canyon**	**53.44**	**297**	P	**P**	**21 23 48.0**	**+0.2**
OK030	**Cody Creek RV**	**53.74**	**278**	P	**P**	**21 23 50.1**	**+0.3**
AHID	**Auburn Hatcher**	**53.85**	**294**	P	**P**	**21 23 50.2**	**-0.5**
BTK	**Batken**	**53.93**	**72**	P	**P**	**21 23 51.5**	**+0.3**
BTK				IAmb	IAmb	21 23 55.1	
	comp=Z,8.2nm,1.2s						
OK029	**Liberty Lake**	**54.14**	**279**	P	**P**	**21 23 53.3**	**+0.6**
OK029				IAmb	IAmb	21 23 55.8	
	comp=Z,9.3nm,1.1s						
CHGR	**Chuyangaron**	**54.43**	**74**	P	**P**	**21 23 55.5**	**+0.6**
GAR	**Garm**	**54.62**	**73**	P	**P**	**21 23 55.9**	**-0.4**
HWUT	**Hardware Ranch**	**55.02**	**294**	P	**P**	**21 23 59.8**	**+0.5**
HWUT				IAmb	IAmb	21 24 04.2	
	comp=Z,12nm,1.3s						
RDMU	**Red Mountain**	**55.11**	**292**	P	**P**	**21 23 59.6**	**-0.3**
HRA	**Herat**	**55.15**	**82**	P	**P**	**21 23 59.5**	**-0.8**
TCUT	**Toone Canyon**	**55.37**	**294**	P	**P**	**21 24 02.8**	**+0.9**
PV04	**Paradox Valley**	**56.70**	**290**	P	**P**	**21 24 13.5**	**+2.2**
PV04				IAmb	IAmb	21 24 22.2	
	comp=Z,10.0nm,1.2s						
DUG	**Dugway, Tooele**	**56.72**	**294**	P	**P**	**21 24 12.6**	**+1.2**
DUG				IAmb	IAmb	21 24 20.9	
	comp=Z,7.6nm,1.5s						
WMQ	**Urumqi**	**57.22**	**56**	*eP*	**P**	**21 24 18.7**	**+3.9**
PKCU	**Pink Cliffs**	**58.88**	**292**	P	**P**	**21 24 28.6**	**+1.8**
R11A	**Troy Canyon, C**	**59.39**	**295**	P	**P**	**21 24 32.2**	**+2.1**
BNM	**Barren Site**	**59.41**	**286**	P	**P**	**21 24 31.7**	**+1.3**
SONM	**Songino Array**	**59.65**	**40**	P	**P**	**21 24 31.7**	**-0.1**
	comp=Z,1.0nm,1.0s,baz=330,slow=5.6,SNR=4.4						
SONM	**Songino Array**	**59.65**	**40**	P	**P**	**21 24 31.1**	**-0.6**
JCT	**Junction City**	**59.70**	**278**	P	**P**	**21 24 33.1**	**+0.8**
WUAZ	**Wupatki**	**60.17**	**290**	P	**P**	**21 24 36.4**	**+0.8**
NVAR	**Mina Array Bea**	**60.37**	**297**	P	**P**	**21 24 37.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=1.9,slow=2.7,SNR=3.8						
NIL	**Nilore**	**60.42**	**74**	P	**P**	**21 24 37.3**	**+0.2**
HIA	**Hailar**	**61.65**	**30**	P	**P**	**21 24 45.9**	**+0.6**
HIA				IAmb	IAmb	21 24 48.3	
	comp=Z,7.3nm,1.3s						
GTA	**Gaotai**	**65.30**	**49**	*eP*	**P**	**21 25 09.9**	**+0.3**
GTA				pP	sP	21 25 14.7	-0.1
GTA				sP	pP	21 25 16.9	+3.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HSIG		**65.67**	**286**	P	**P**	**21 25 13.0**	**+1.0**
HSIG				IAmb	IAmb	21 25 18.5	
	comp=Z,7.3nm,1.1s						
HHC	**Hu-ho-hao-te**	**67.52**	**40**	*eP*	**P**	**21 25 25.8**	**+2.0**
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,150nm,6.3s						
LZH	**Lanzhou**	**69.63**	**48**	*eP*	P	21 25 42.0	+4.9
LZH				pP	sP	21 25 47.2	+4.8
LZH				sP	pP	21 25 49.3	+8.4
LZH				pmax	pmax		
	comp=Z,33nm,1.1s						
JTS	**Las Juntas de**	**71.21**	**254**	P	**P**	**21 25 48.5**	**+1.6**
MBAR	**Mbarara**	**73.84**	**129**	LR	LR	22 01 37.4	
	comp=Z,24nm,18.8s,baz=336,slow=38						
CMAR	**Chiang Mai Arr**	**84.12**	**59**	P	**P**	**21 26 58.9**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=311,slow=5.9,SNR=8.0						
CMAR	**Chiang Mai Arr**	**84.12**	**59**	P	**P**	**21 26 58.6**	**-0.1**

*IDC **08** 21:23:19.1±0.7,8.°99S×119.°46E, h0km, mb4.2/10, mb1 4.4/15,mb1mx4.1/41,mbtmp4.3/15,ML4.3/5,MS3.3/8, Ms1 3.3/8,ms1mx3.0/41,Error ellipse: s-maj=27.2km s-min=12.7km az=54.0*

*DJA **08** 21:23:23.9±0.5,9.°S×3.°×12.°0E±.°, h12km±4km, M4.8/24, mB5.2/12,mb5.2/22,MLv4.9/24,Mw(mB)4.6/12*

*NEIC **08** 21:23:24.7±2.0,8.°99S±0.°05×119.°56E±0.°06, h37km±7km, mb4.5/26,Error ellipse: s-maj=9.7km s-min=5.9km az=54.0*

ISC 08 21:23:24.5±0.4,9.°05S±0.°04×119.°60E±0.°05,h35km,n100, σ1§93/96,mb4.4/18,MS3.3/3,Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.62**	**199**	P	**Pn**	**21 23 36.2**	**-0.8**
WSI	**Waingapu**	**0.93**	**132**	P	**Pn**	**21 23 40.2**	**-0.8**
BASI	**Baing, Sumba**	**1.51**	**140**	P	**Pn**	**21 23 48.9**	**-0.2**
PLAI	**Plampang**	**1.81**	**277**	P	**Pn**	**21 23 54.0**	**+0.8**
EDFI	**Ende, Flores**	**2.09**	**82**	P	**Pn**	**21 23 56.7**	**-0.4**
MMRI	**Maumere**	**2.64**	**81**	P	**Pn**	**21 24 05.3**	**+0.7**
MMRI	**Maumere**	**2.64**	**81**		**Pn**	**21 24 05.2**	**+0.5**
MMRI				Sn	**Sn**	**21 24 36.8**	**+1.3**
TWSI	**Taliwang, Sumb**	**2.70**	**276**	P	**Pn**	**21 24 07.1**	**+1.6**
BSSI	**Bau Bau, Buton**	**3.02**	**17**	P	**Pn**	**21 24 08.6**	**-1.3**
BKSI	**Bulukumba**	**3.74**	**8**	P	**Pn**	**21 24 18.8**	**-0.9**
KAPI	**Kappang**	**4.01**	**2**	Pn	**Pn**	**21 24 23.0**	**-0.5**
	13nm,0.3s,baz=177,slow=4.2,SNR=43						
KAPI				Sn	**Sn**	**21 25 06.1**	**-3.2**
	35nm,0.3s,baz=207,slow=22,SNR=8.9						
KAPI				LR	LR	21 25 49.3	
	comp=Z,199nm,18.3s,baz=154,slow=38						
KAPI	**Kappang**	**4.01**	**2**		**Pn**	**21 24 22.9**	**-0.6**
KAPI				Sn	**Sn**	**21 25 06.0**	**-3.3**
BATI	**Baumata**	**4.17**	**106**	Pn	**Pn**	**21 24 26.6**	**+0.8**
	24nm,0.3s,baz=282,slow=4.2,SNR=16						
BATI				Sn	**Sn**	**21 25 17.4**	**+4.1**
	34nm,0.3s,baz=255,slow=21,SNR=6.6						
BATI				LR	LR	21 26 15.8	
	comp=Z,541nm,19.2s,baz=326,slow=41						
BATI	**Baumata**	**4.17**	**106**	P	**Pn**	**21 24 28.6**	**+2.9**
DNP	**Denpasar**	**4.35**	**275**	P	**Pn**	**21 24 31.5**	**+3.3**
SRBI	**Singaraja**	**4.44**	**282**	P	**Pn**	**21 24 32.1**	**+2.7**
BNSI	**Bone**	**4.64**	**6**	P	**Pn**	**21 24 35.3**	**+3.1**
SOEI	**Soe**	**4.66**	**99**	P	**Pn**	**21 24 36.3**	**+3.7**
SOEI	**Soe**	**4.66**	**99**		**Pn**	**21 24 34.0**	**+1.5**
SPSI	**Sidrap Palu**	**5.05**	**2**	P	Pn	21 24 42.6	+4.8
	0.3nm775nm75nm,0.6s						
JAGI	**Jajag, Banyuwa**	**5.41**	**276**	P	**Pn**	**21 24 43.7**	**+0.9**
	6.6nm19μm2μm,0.5s						
JAGI	**Jajag, Banyuwa**	**5.41**	**276**		**Pn**	**21 24 43.0**	**+0.2**
ABJI	**Asem Bagus**	**5.45**	**283**	P	Pn	21 24 48.4	+5.1
	0.8nm2μm221nm,0.5s						
TTSI	**Tana Toraja**	**5.97**	**2**	P	**Pn**	**21 24 52.3**	**+1.9**
	0.3nm880nm68nm,0.6s						
BLJI	**Banyuglugur**	**6.08**	**282**	P	**Pn**	**21 24 54.6**	**+2.7**
	1.8nm5μm480nm,0.5s						
GMJI	**Gumukmas**	**6.13**	**277**	P	**Pn**	**21 24 54.9**	**+2.2**
	1.2nm4μm347nm,0.6s						
KBKI	**Kotabaru**	**6.65**	**329**	P	**Pn**	**21 25 00.7**	**+0.9**
	0.1nm203nm13nm,0.6s						
BBKI	**Banjar Baru**	**7.29**	**319**	P	Pn	21 25 15.5	+6.9
GRJI	**Gresik**	**7.36**	**286**	P	Pn	21 25 14.8	+5.2
	1.0nm2μm283nm,0.6s						
PWJI	**Pagerwojo**	**7.78**	**277**	P	Pn	21 25 19.5	+4.3
	0.4nm106nm,0.6s						
LUWI	**Luwuk**	**8.56**	**22**	Pn	**Pn**	**21 25 28.4**	**+2.4**
UGM	**Wanagama**	**9.05**	**276**	P	**Pn**	**21 25 34.3**	**+1.6**
	173nm,1.8s						
UGM	**Wanagama**	**9.05**	**276**		**Pn**	**21 25 33.8**	**+1.1**
SANI	**Sanana**	**9.42**	**43**	P	Pn	21 25 49.3	+11
KPJI	**Karang Pucung**	**10.70**	**278**	P	Pn	21 26 00.2	+4.9
	34nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.74**	**148**	Pn	**Pn**	**21 25 54.4**	**-1.5**
	1.7nm,0.3s,baz=335,slow=7.2,SNR=52						
FITZ				Sn	**Sn**	**21 27 50.5**	**-4.5**
	3.3nm,0.3s,baz=182,slow=23,SNR=5.7						
FITZ				LR	LR	21 31 06.9	
	comp=Z,97nm,20.1s,baz=326,slow=43						
KNRA	**Kununurra**	**11.11**	**127**		**Pn**	**21 25 59.7**	**-1.3**
SAUI	**Saumlaki**	**11.62**	**86**	P	**Pn**	**21 26 10.8**	**+2.8**
	9μm249nm,0.5s						
SAUI	**Saumlaki**	**11.62**	**86**		**Pn**	**21 26 07.4**	**-0.6**
CISI	**Cisompet, Garu**	**11.75**	**276**	P	**Pn**	**21 26 08.9**	**-1.0**
	63nm,0.6s						
CISI	**Cisompet, Garu**	**11.75**	**276**		**Pn**	**21 26 08.3**	**-1.5**
MTN	**Manton Dam**	**11.94**	**109**		**Pn**	**21 26 10.2**	**-2.1**
LEM	**Lembang**	**12.07**	**280**	LR	LR	21 31 50.9	
	comp=Z,165nm,19.1s,baz=72,slow=43						
PSA00	**Pilbara Seismi**	**12.46**	**179**	Pn	**Pn**	**21 26 17.4**	**-2.0**
CBJI	**Citeko**	**12.90**	**281**	P	**Pn**	**21 26 37.4**	**+1.7**
XMIS	**Christmas Isla**	**13.82**	**263**	Pn	**Pn**	**21 26 34.8**	**-3.3**
FAKI	**Fak Fak**	**13.97**	**65**		**Pn**	**21 26 40.3**	**+0.1**
CGJI	**Cibinong**	**13.99**	**279**	P	**P**	**21 26 50.4**	**+2.6**
SIJI	**Sorong**	**14.18**	**56**	Pn	**Pn**	**21 26 43.4**	**+0.4**
	1.0nm,0.3s,baz=173,slow=23,SNR=2.8						
GIRL	**Giralia**	**14.47**	**200**	Pn	**Pn**	**21 26 47.1**	**+0.3**
KKM	**Kota Kinabalu**	**15.37**	**347**	Pn	**Pn**	**21 26 59.0**	**0.0**
MNAI	**Manna**	**17.17**	**285**	Pn	**Pn**	**21 27 20.8**	**-1.0**
KSI	**Kapahiang**	**17.73**	**287**	P	**P**	**21 27 35.3**	**+5.9**
WRA	**Warramunga Arr**	**17.90**	**129**	P	**Pn**	**21 27 29.6**	**-1.3**
	1.1nm,0.3s,baz=304,slow=13,SNR=46						
WRA				S	Sn	21 30 38.0	-12
	0.3nm,0.3s,baz=314,slow=23,SNR=5.5						
WRA	**Warramunga Arr**	**17.90**	**129**		**Pn**	**21 27 29.1**	**-1.8**
WR0	**Warramunga Arr**	**18.07**	**129**		**Pn**	**21 27 31.1**	**-1.8**
WR0				IAmb	IAmb	21 27 44.1	
	comp=Z,24nm,0.8s						
AS31	**Alice Springs**	**19.96**	**138**	P	**P**	**21 27 54.7**	**+0.8**
ASAR	**Alice Springs**	**19.96**	**138**	P	**P**	**21 27 55.1**	**+1.2**
	comp=Z,7.0nm,0.5s,baz=310,slow=9.5,SNR=82						
ASAR				S	**S**	**21 31 31.2**	**-5.6**
	comp=Z,1.8nm,0.7s,baz=314,slow=24,SNR=4.0						
ASAR				LR	LR	21 37 07.7	
	comp=Z,48nm,19.1s,baz=306,slow=41						
ASAR	**Alice Springs**	**19.96**	**138**	P	**P**	**21 27 54.7**	**+0.8**
MORW	**Morawa**	**20.20**	**189**	P	**P**	**21 27 57.5**	**+1.2**
MORW				IAmb	IAmb	21 28 13.7	
	comp=Z,18nm,1.0s						
FORT	**Forrest**	**23.02**	**161**	P	**P**	**21 28 28.8**	**+2.3**
FORT				IAmb	IAmb	21 28 34.3	
	comp=Z,15nm,0.8s						
RPSI	**Rantau Prapat**	**23.68**	**299**	P	**P**	**21 28 31.5**	**-1.7**
PSI	**Prapat**	**23.73**	**299**	P	**P**	**21 28 31.5**	**-2.3**
	comp=Z,4.0nm,0.5s,baz=178,slow=8.3,SNR=4.1						
NWAO	**Narrogin (SRO)**	**23.86**	**185**	P	**P**	**21 28 34.6**	**-0.2**
	comp=Z,6.2nm,0.8s,baz=88,slow=9.1,SNR=2.4						
NWAO	**Narrogin (SRO)**	**23.86**	**185**	P	**P**	**21 28 35.6**	**+0.9**
NWAO				IAmb	IAmb	21 28 37.5	
	comp=Z,31nm,1.5s						
CTA	**Charters Tower**	**27.99**	**116**	P	**P**	**21 29 13.5**	**+1.2**
	comp=Z,4.3nm,0.9s,baz=3.9,slow=5.7,SNR=2.5						
CTAO	**Charters Tower**	**27.99**	**116**	P	**P**	**21 29 13.5**	**+1.2**
CTAO				IAmb	IAmb	21 29 20.0	
	comp=Z,7.5nm,0.8s						
BBOO	**Buckleboo**	**28.12**	**150**	P	**P**	**21 29 14.0**	**+0.7**
BBOO				IAmb	IAmb	21 29 14.4	
	comp=Z,12nm,1.0s						
STKA	**Stephens Creek**	**30.54**	**141**	P	**P**	**21 29 35.9**	**+1.1**
	comp=Z,2.5nm,0.5s,baz=319,slow=11,SNR=7.6						
STKA	**Stephens Creek**	**30.54**	**141**	P	**P**	**21 29 35.8**	**+1.0**
KRVT	**Keravat (AS076**	**32.54**	**84**	LR	LR	21 44 03.0	
	comp=Z,59nm,19.6s,baz=310,slow=38						
CMAR	**Chiang Mai Arr**	**34.09**	**323**	P	**P**	**21 30 06.0**	**0.0**
	comp=Z,0.5nm,0.5s,baz=155,slow=7.1,SNR=7.0						
CMAR				LR	LR	21 43 34.4	
	comp=Z,32nm,21.4s,baz=204,slow=36						
CMAR	**Chiang Mai Arr**	**34.09**	**323**	P	**P**	**21 30 06.0**	**0.0**
ARMA	**Armidale**	**36.68**	**130**	P	**P**	**21 30 28.9**	**+0.6**
SHL	**Shillong**	**43.72**	**323**	P	**P**	**21 31 26.3**	**-0.5**
JSD	**Sado**	**49.98**	**19**	P	**P**	**21 32 16.0**	**+0.7**
HHC	**Hu-ho-hao-te**	**50.20**	**352**	*eP*	**P**	**21 32 20.8**	**+3.8**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,87nm,6.4s						
SONM	**Songino Array**	**57.83**	**350**	P	**P**	**21 33 11.8**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=168,slow=8.6,SNR=13						
SONM	**Songino Array**	**57.83**	**350**	P	**P**	**21 33 11.8**	**-0.8**
BKZ	**Black Stump Fm**	**58.83**	**130**	P	**P**	**21 33 20.5**	**+0.8**
KBL	**Kabul**	**64.54**	**315**	P	**P**	**21 33 58.7**	**+0.2**
KBL				IAmb	IAmb	21 34 03.3	
	comp=Z,3.4nm,0.6s						
MK31	**Makanchi Array**	**64.77**	**333**	P	**P**	**21 33 58.1**	**-1.4**
MK31				IAmb	IAmb	21 34 06.4	
	comp=Z,4.2nm,0.8s						
MKAR	**Makanchi Array**	**64.77**	**333**	P	**P**	**21 33 57.9**	**-1.6**
	comp=Z,2.9nm,0.6s,baz=142,slow=7.7,SNR=20						
MKAR	**Makanchi Array**	**64.77**	**333**		**P**	**21 33 58.1**	**-1.4**
AAK	**Ala-Archa**	**65.86**	**325**	P	**P**	**21 34 06.0**	**-0.8**
AAK				IAmb	IAmb	21 34 15.2	
	comp=Z,3.2nm,0.9s						
GAR	**Garm**	**66.16**	**320**	P	**P**	**21 34 08.9**	**+0.1**
KKAR	**Karatay Array**	**68.44**	**323**	P	**P**	**21 34 21.2**	**-1.8**
ZAA0	**Zalesovo Array**	**69.30**	**339**	P	**P**	**21 34 26.1**	**-2.0**
ZALV	**Zalesovo Beam**	**69.30**	**339**	P	**P**	**21 34 26.3**	**-1.8**
	comp=Z,3.3nm,0.4s,baz=141,slow=4.8,SNR=19						
ZALV	**Zalesovo Beam**	**69.30**	**339**	P	**P**	**21 34 25.9**	**-2.1**
KURK	**Kurchatov**	**69.30**	**334**	P	**P**	**21 34 27.1**	**-1.0**
KURK				IAmb	IAmb	21 34 41.5	
	comp=Z,3.9nm,1.1s						
VNDA	**Vanda**	**71.85**	**171**	P	**P**	**21 34 44.8**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=298,slow=8.8,SNR=2.6						
VNDA	**Vanda**	**71.85**	**171**	P	**P**	**21 34 44.3**	**+1.0**
ABKAR	**Akbulak array**	**77.94**	**325**	P	**P**	**21 35 17.2**	**-1.7**
ABKAR	**Akbulak array**	**77.94**	**325**	P	**P**	**21 35 17.5**	**-1.4**
ABKAR				IAmb	IAmb	21 35 23.6	
	comp=Z,2.4nm,0.8s						
QSPA	**South Pole Qui**	**80.95**	**180**	P	**P**	**21 35 37.2**	**+2.0**
QSPA				IAmb	IAmb	21 35 51.8	
	comp=Z,6.4nm,1.5s						
KMBO	**Kilima Mbogo**	**82.27**	**270**	LR	LR	22 10 18.8	
	comp=Z,29nm,18.7s,baz=92,slow=34						
TORD	**Torodi Ar. Bea**	**119.05**	**280**	PKP	**PKPdf**	**21 42 10.6**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=116,slow=0.6,SNR=1.2						
CPUP	**Villa Florida**	**144.71**	**185**	PKP	**PKPdf**	**21 42 59.0**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=54,slow=3.8,SNR=4.1						
CPUP	**Villa Florida**	**144.71**	**185**		**PKPdf**	**21 42 58.7**	**+0.3**

*NEIC **08** 21:26:19.4±3.0, 16.°56S±0.°05×171.°97W±0.°09, h30km±4km, mb4.7/23,Error ellipse: s-maj=13.3km s-min=7.4km az=75.0*

*IDC **08** 21:26:21.2±0.6, 17.°07S×172.°66W, h0km, mb4.3/16, mb1 4.5/16,mb1mx4.4/34,mbtmp4.3/16,MS3.7/15, Ms1 3.7/15,ms1mx3.6/32,Error ellipse: s-maj=21.9km s-min=16.9km az=126.0*

ISC 08 21:26:26.4±0.5, 17.°08S±0.°1×172.°8W±0.°1, h35km, n91, σ1§14/69, mb4.6/26, MS3.8/17, 7C-4D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.26**	**17**	Pn	Pn	21 27 06.7	-8.4
	11nm,0.3s,baz=245,slow=4.0,SNR=14						
AFI				Sn	Sn	21 27 40.6	-12
	29nm,0.3s,baz=

PDAR	**Pinedale Array**	**83.08**	**41**	P		**P**	**21 38 47.6**	**-1.1**	
	comp=Z,0.8nm,0.8s,baz=234,slow=5.0,SNR=5.3								
ILAR	**Eielson Array**	**83.93**	**11**	P		**P**	**21 38 51.4**	**-0.9**	
	comp=Z,0.8nm,1.0s,baz=227,slow=7.2,SNR=5.5								
MAW	**Mawson**	**86.44**	**198**	P		**P**	**21 39 05.9**	**+0.9**	
	comp=Z,3.6nm,0.7s,baz=149,slow=8.6,SNR=9.0								
MAW	**Mawson**	**86.44**	**198**	P		**P**	**21 39 05.7**	**+0.7**	
BJT	**Baijiatuan**	**87.03**	**313**	P		P	21 39 03.5	-4.8	
BJT				IAmb		IAmb	21 39 18.4		
	comp=Z,11nm,1.4s								
PLCA	**Paso Flores**	**87.97**	**132**	P		**P**	**21 39 12.3**	**-0.9**	
	comp=Z,1.6nm,0.9s,baz=204,slow=10,SNR=1.8								
PLCA				LR		LR	22 10 49.6		
	comp=Z,54nm,18.4s,baz=327,slow=30								
SYO	**Syowa Base**	**91.12**	**191**	*e*PcP		**P**	**21 39 26.6**	**-0.5**	
VNA3	**Neumayer Olymp**	**91.17**	**175**	P		**P**	**21 39 27.8**	**+0.4**	
SNAA	**Sanae**	**91.24**	**177**	P		**P**	**21 39 28.0**	**+0.2**	
VNA2	**Neumayer--Watz**	**91.68**	**175**	P		**P**	**21 39 30.6**	**+0.8**	
	baz=165,slow=4.3								
CMAR	**Chiang Mai Arr**	**93.70**	**288**	P		**P**	**21 39 42.6**	**+2.5**	
	comp=Z,1.6nm,0.9s,baz=94,slow=2.5,SNR=13								
CMAR				LR		LR	22 16 43.5		
	comp=Z,20nm,21.7s,baz=90,slow=32								
CMAR	**Chiang Mai Arr**	**93.70**	**288**	P		**P**	**21 39 37.0**	**-3.1**	
SONM	**Songino Array**	**96.47**	**318**	LR		LR	22 17 29.3		
	comp=Z,29nm,20.0s,baz=52,slow=32								
CLL	**Collm**	**145.50**	**354**	*e*PKiKP		**PKPdf**	**21 45 59.0**	**-1.7**	
DPC	**Dobruska-Polom**	**145.98**	**350**	*e*PKP		**PKPab**	**21 46 03.1**	**+0.2**	
KRLC	**Kraliky**	**146.16**	**349**	*e*PKP		**PKPab**	**21 46 05.1**	**+1.5**	
BIZ	**Bicaz**	**146.35**	**336**	⇑P		**PKiKP**	**21 46 06.9**	**+0.3**	
TESR	**Tescani**	**146.49**	**335**	⇑P		**PKPab**	**21 46 05.6**	**+0.6**	
VRI	**Vrincioaia**	**146.98**	**335**	⇑P		**PKiKP**	**21 46 08.1**	**+0.1**	
HARR	**Harsova**	**147.40**	**332**	⇑P		**PKPbc**	**21 46 06.1**	**-0.5**	
DOPR	**Dopca**	**147.43**	**336**	⇓p		**PKiKP**	**21 46 10.9**	**+2.0**	
KHC	**Kasperske Hory**	**147.58**	**352**	*e*PKP		**PKPbc**	**21 46 06.2**	**-0.8**	
MLR	**Muntele Rosu**	**147.60**	**335**	⇓P		**PKPab**	**21 46 10.1**	**+0.6**	
BRTR	**Keskin Array B**	**147.80**	**320**	PKPbc		**PKiKP**	**21 46 09.3**	**-0.7**	
	comp=Z,3.1nm,0.8s,baz=174,slow=1.6,SNR=9.5								
GERES	**GERESS Array B**	**147.84**	**352**	PKPbc		**PKPbc**	**21 46 08.7**	**+0.8**	
	comp=Z,0.7nm,0.8s,baz=31,slow=5.9,SNR=5.5								
GERES	**GERESS Array B**	**147.84**	**352**			PKPdf	21 45 57.2	-7.7	
VOIR		**148.00**	**336**	⇓P		**PKiKP**	**21 46 10.0**	**-0.2**	
ARR	**Arges**	**148.22**	**336**	⇓P		**PKiKP**	**21 46 10.9**	**+0.3**	
CONA	**Conrad Observa**	**148.39**	**349**	P		**PKPab**	**21 46 12.0**	**-0.5**	
	comp=Z,12nm,1.8s								
SIRR	**Siria**	**148.48**	**341**	⇑P		**PKPdf**	**21 46 05.9**	**0.0**	
BZS	**Buzias**	**149.08**	**340**	⇑P		**PKPab**	**21 46 15.7**	**+0.5**	
WATA	**Walderalm**	**149.58**	**354**	*e*P		**PKiKP**	**21 46 15.5**	**+2.0**	
	comp=Z,6.2nm,1.4s								
KBA	**Koelnbreinsper**	**149.62**	**352**	*e*P		**PKPab**	**21 46 16.1**	**-1.5**	
	comp=Z,5.5nm,1.4s								
WTTA	**Wattenberg**	**149.64**	**354**	*i* P		**PKiKP**	**21 46 14.8**	**+1.1**	
	comp=Z,3.2nm,0.6s								
SQTA	**Sankt Quirin**	**149.73**	**355**	*e*P		**PKiKP**	**21 46 15.7**	**+1.9**	
	comp=Z,5.9nm,1.1s								
SOKA	**Soboth**	**149.75**	**349**	*e*P		**PKiKP**	**21 46 15.4**	**+1.6**	
	comp=Z,6.5nm,1.4s								
DAVA	**Damuels**	**149.76**	**356**	*i* P		**PKiKP**	**21 46 14.9**	**+1.1**	
	comp=Z,5.1nm,0.9s								
FETA	**Feichten**	**149.97**	**355**	*e*P		**PKiKP**	**21 46 14.7**	**+0.4**	
	comp=Z,8.1nm,1.5s								
ABTA	**Abfaltersbach**	**150.06**	**353**	*e*P		**PKPbc**	**21 46 14.1**	**+0.6**	
	comp=Z,4.4nm,0.9s								
TORD	**Torodi Ar. Bea**	**173.40**	**125**	PKPab		**PKPab**	**21 48 00.6**	**-1.0**	
	comp=Z,1.0nm,0.7s,baz=253,slow=2.9,SNR=4.6								

GCMT ***08*** *21:39:36.0±0.3, 35.4°S±0.02°×105.04°W±0.02°, h26km±1km, MW5.0/87, Moment Tensor Solution. s27,c30; s87,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.40±.17; $M_{\theta\theta}$-0.27±.14; $M_{\phi\phi}$0.67±.14; $M_{r\theta}$0.56±.24; $M_{r\phi}$-2.74±.10; $M_{\theta\phi}$-2.20±.30; Best double couple: M≥3.52200×10^{16} NP1:ϕ_{s1}92.00000°,δ52.00000°,λ-180.00000°. NP2: ϕ_{s2}2.00000°,δ90.00000°,λ-38.00000°. Principal axes: T 3.9700, Plg26.0000°, Azm54.0000°; N -0.8970, Plg52.0000°, Azm182.0000°; P -3.0740, Plg26.0000°, Azm310.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 08 21:39:29.1±8.0, 35.58S×104.21W, h0km, mb3.5/3, mb1 4.0/3, mb1mx3.7/25, mbtmp3.5/3, MS3.6/7, Ms1 3.7/7, ms1mx3.5/16 Error ellipse: s-maj=492.7km s-min=94.4km az=106.0, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**20.84**	**93**	T	T	22 06 54.9	
	baz=242,slow=75,SNR=9.1						
H03S1	**Juan Fernandez**	**20.86**	**93**	T	T	22 06 56.0	
	baz=242,slow=75,SNR=7.6						
H03S3	**Juan Fernandez**	**20.86**	**93**	T	T	22 06 54.7	
	baz=242,slow=75,SNR=7.6						
H03N2	**Juan Fernandez**	**20.93**	**91**	T	T	22 07 01.7	
	baz=248,slow=72,SNR=4.8						
H03N3	**Juan Fernandez**	**20.93**	**92**	T	T	22 06 59.1	
	baz=248,slow=72,SNR=4.0						
H03N1	**Juan Fernandez**	**20.94**	**91**	T	T	22 07 01.3	
	baz=248,slow=72,SNR=5.0						
LPAZ	**La Paz**	**37.43**	**69**	LR	LR	21 59 21.8	
	comp=Z,57nm,19.4s,baz=214,slow=32						
TBI	**Tubuai**	**40.91**	**275**	*e*LQ	LQ	21 55 45.7	
	494nm,33.2s						
TBI				*e*LR	LR	21 57 25.6	
	comp=Z,135nm,25.0s						
CPUP	**Villa Florida**	**40.92**	**90**	LR	LR	22 01 45.1	
	comp=Z,49nm,20.4s,baz=245,slow=33						
TAOE	**Nuku Hiva Isla**	**42.20**	**300**	*e*LR	LR	21 58 15.0	
	comp=Z,167nm,25.8s						
SIV	**San Ignacio**	**43.06**	**74**	LR	LR	22 01 38.8	
	comp=Z,97nm,21.7s,baz=290,slow=31						
PPT2	**Papeete2**	**43.93**	**282**	*e*LQ	LQ	21 57 03.1	
	478nm,28.0s						
PPT2				*e*LR	LR	21 58 04.2	
	comp=Z,86nm,24.2s						
ROSC	**El Rosal**	**49.03**	**41**	LR	LR	22 05 31.2	
	comp=Z,204nm,19.0s,baz=230,slow=32						
RAR	**Rarotonga**	**50.32**	**271**	LR	LR	22 02 46.6	
	comp=Z,69nm,19.7s,baz=348,slow=28						
VNDA	**Vanda**	**56.41**	**195**	LR	LR	22 09 01.2	
	comp=Z,47nm,18.8s,baz=82,slow=31						
SNAA	**Sanae**	**60.09**	**159**	LR	LR	22 12 06.6	
	comp=Z,55nm,21.4s,baz=232,slow=33						
TXAR	**Lajitas Array**	**64.57**	**1**	P	P	21 50 07.8	-0.4
	0.2nm,0.6s,baz=177,slow=5.1,SNR=1.9						
NVAR	**Mina Array Bea**	**74.79**	**349**	P	P	21 51 11.2	0.0
	0.6nm,0.8s,baz=182,slow=7.0,SNR=4.0						
DZM	**Mont Dzumac**	**76.99**	**252**	*e*LR	LR	22 14 09.4	
	comp=Z,150nm,27.5s						
PDAR	**Pinedale Array**	**78.13**	**356**	P	P	21 51 30.5	+0.5
	0.6nm,0.9s,baz=153,slow=6.1,SNR=2.6						
H01W1	**Cape Leeuwin H**	**101.27**	**211**	T	T	23 46 39.3	
	baz=146,slow=76,SNR=4.7						
H01W2	**Cape Leeuwin H**	**101.28**	**211**	T	T	23 46 40.8	
	baz=146,slow=76,SNR=4.3						
H01W3	**Cape Leeuwin H**	**101.29**	**211**	T	T	23 46 39.8	
	baz=146,slow=76,SNR=13						
SONM	**Songino Array**	**154.26**	**308**	PKPbc	PKPbc	21 59 30.9	-0.1
	0.3nm,0.6s,baz=73,slow=1.9,SNR=2.3						

IDC 08 21:48:57.1±2.4, 29.65S×176.55W, h0km, mb3.5/2, mb1 3.7/2, mb1mx3.4/29, mbtmp3.5/2, MS3.2/1, Ms1 3.2/1, ms1mx2.6/13, Error ellipse: s-maj=95.6km s-min=33.4km az=17.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.26**	**288**	Pn	Pn	21 49 23.0	+1.1
	260nm,0.3s,baz=80,slow=7.5,SNR=13						
RAO				Sn	Sn	21 49 39.4	-0.3
	801nm,0.3s,baz=38,slow=23,SNR=12						
DZM	**Mont Dzumac**	**17.06**	**292**	LR	LR	21 58 09.0	
	comp=Z,75nm,20.4s,baz=256,slow=32						
ASAR	**Alice Springs**	**44.42**	**266**	P	P	21 57 09.8	0.0
	0.3nm,0.4s,baz=105,slow=7.0,SNR=7.7						
WRA	**Warramunga Arr**	**45.34**	**271**	P	P	21 57 16.4	-0.9
	0.3nm,0.4s,baz=108,slow=8.1,SNR=6.2						
AKASG	**Malin Array Be**	**151.45**	**325**	PKPbc	PKPbc	22 08 52.5	-0.1
	0.8nm,0.5s,baz=55,slow=2.9,SNR=2.1						

ISK ***08*** *22:04:00.9, 37.06N×30.63E, h5km, ML2.6/9*
DDA ***08*** *22:04:03.1, 37.09N×30.52E, h7km±3km, ML2.0*
ISC 08 22:04:02.6±1.2, 37.07N±0.03×30.62E±0.04, h5km±12km, n20, σ1§01/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KORT	**Korkueli**	**0.22**	**252**	PG	**Pg**	**22 04 06.2**	**-0.9**
KORT				SG	**Sg**	**22 04 10.8**	**+0.8**
KORT	**Korkueli**	**0.22**	**252**	*i* P	**Pg**	**22 04 06.5**	**-0.5**
KORT				*i* S	**Sg**	**22 04 09.6**	**-0.4**
KORT				IAML		22 04 11.0	
	comp=E,523nm,0.2s						
KORT				IAML		22 04 11.0	
	comp=N,432nm,0.2s						
BCK	**Bucak**	**0.39**	**357**	PG	**Pg**	**22 04 09.4**	**-0.8**
KEMT	**Kemer-ANTALYA**	**0.47**	**186**	PG	**Pg**	**22 04 11.1**	**-0.6**
ELL	**Elmali**	**0.65**	**241**	PG	**Pg**	**22 04 14.9**	**-0.3**
ISP	**Isparta**	**0.75**	**354**	PG	**Pg**	**22 04 17.4**	**+0.3**
ISP				SG	**Sg**	**22 04 28.4**	**+1.5**
BRDR	**BURDUR-Merkez**	**0.76**	**325**	*i* P	**Pg**	**22 04 16.1**	**-1.2**
BRDR				*i* S	**Sg**	**22 04 27.1**	**-0.2**
BRDR				IAML		22 04 30.0	
	comp=E,38nm,1.0s						
AKUM	**Antalya-Kumluc**	**0.78**	**196**	*i* P	**Pg**	**22 04 18.5**	**+0.9**
GOLH	**Golhisar**	**0.86**	**281**	*i* P	**Pg**	**22 04 18.8**	**-0.3**
BAGO	**Egridir - ISPA**	**0.93**	**8**	*i* P	**Pg**	**22 04 20.8**	**+0.4**
BAGO				*i* S	**Sg**	**22 04 34.4**	**+1.9**
BASM	**Basmaki-Afyon**	**0.96**	**332**	PG	**Pg**	**22 04 21.1**	**0.0**
BASM				SG	**Sg**	**22 04 35.5**	**+2.0**
SEYD	**Seydisehir-KON**	**1.03**	**71**	PG	**Pb**	**22 04 21.9**	**-1.2**
CAME	**Cameli-Denizli**	**1.06**	**263**	PG	**Pb**	**22 04 21.9**	**-1.7**
CAME				SG	**Sg**	**22 04 38.3**	**+1.6**
AKAS	**Kas**	**1.17**	**224**	PN	**Pb**	**22 04 25.1**	**-0.3**
KZIL	**AFYON_Kizioren**	**1.24**	**342**	*i* P	**Pn**	**22 04 26.1**	**-0.7**
FETY	**Fethiye**	**1.30**	**251**	PN	**Pn**	**22 04 27.1**	**-0.5**
FETY	**Fethiye**	**1.30**	**251**	*i* P	**Pb**	**22 04 28.6**	**+1.0**
DOGA	**KONYA_Doganhis**	**1.33**	**39**	*i* P	**Pn**	**22 04 27.6**	**-0.4**
TAVA	**DENIZLI_Tavas**	**1.41**	**287**	*i* P	**Pn**	**22 04 28.6**	**-0.6**
TAVA				*i* S	**Sb**	**22 04 49.0**	**+1.0**
TAVA				IAML		22 04 50.0	
	comp=E,56nm,3.2s						
TAVA				IAML		22 04 54.0	
	comp=N,65nm,3.5s						
DALY	**Dalyan (Mula)**	**1.59**	**261**	PN	**Pn**	**22 04 31.7**	**+0.2**
DALY				SN	**Sb**	**22 04 53.4**	**+0.4**

IDC 08 22:07:18.2±7.1, 24.72S×63.88W, h0km, mb3.6/1, mb1 3.5/2, mb1mx3.4/17, mbtmp3.4/2, ML3.3/1, MS2.7/1, Ms1 2.8/1, ms1mx2.4/24, Error ellipse: s-maj=276.2km s-min=32.8km az=25.0, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**6.13**	**107**	Pn	Pn	22 08 48.9	-1.2
	0.2nm,0.3s,baz=267,slow=9.1,SNR=2.0						
CPUP				Lg	Lg	22 10 34.5	
	1.8nm,0.3s,baz=339,slow=16,SNR=2.1						
LPAZ	**La Paz**	**9.29**	**334**	LR	LR	22 14 10.4	
	comp=Z,42nm,20.1s,baz=223,slow=44						
TORD	**Torodi Ar. Bea**	**74.20**	**67**	P	P	22 18 56.9	-0.4
	0.3nm,0.5s,baz=230,slow=6.8,SNR=4.1						
MKAR	**Makanchi Array**	**145.21**	**42**	PKPbc	PKPbc	22 26 57.2	-0.2
	0.5nm,0.6s,baz=300,slow=4.4,SNR=6.2						

IDC ***08*** *22:12:59.3±2.5, 27.78N×54.17E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/28, mbtmp3.6/7, MS3.7/2, Ms1 3.7/2, ms1mx2.8/37, Error ellipse: s-maj=62.4km s-min=26.3km az=159.0*
TEH ***08*** *22:13:00.8, 27.79N×54.23E, h5km, ML3.7*
OMAN ***08*** *22:13:02.1±12.0, 28.05N×54.27E, h115km±87km, ml3.7/4, Error ellipse: s-maj=129.3km s-min=22.5km az=276.0*
THR ***08*** *22:13:04.2±0.4, 27.85N×54.25E, h14km±9km, ML3.9*
ISC 08 22:13:01.7±0.7, 27.76N±0.05×54.12E±0.04, h10km, n56, σ1§45/57, mb3.6/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.25**	**111**	*e*Pg	**Pg**	**22 13 05.0**	**-1.8**
JHRM	**Jahrom**	**0.88**	**328**	*e*Pg	**Pg**	**22 13 18.9**	**+0.2**
JHRM				*e*		22 13 43.0	
LMD1	**Lamerd**	**0.94**	**244**	*e*Pg	**Pn**	**22 13 22.3**	**+1.3**
LMD1				*e*		22 13 43.8	
GHIR	**Ghir-Karzin**	**1.13**	**298**	*e*Pg	**Pn**	**22 13 26.4**	**+2.8**
GHIR				IAML		22 13 56.8	
	comp=E,1μm,0.6s						
GHIR	**Ghir-Karzin**	**1.13**	**298**	*e*Pg	**Pn**	**22 13 26.4**	**+2.8**
GENO	**Geno**	**1.86**	**101**	*e*Pn	**Pn**	**22 13 33.2**	**-0.6**
SHI	**Shiraz**	**2.35**	**324**	*e*Pn	**Pn**	**22 13 42.4**	**+1.9**
BANOM	**Banah**	**2.67**	**133**	P	**Pn**	**22 13 45.4**	**+0.5**
AHBU	**AHRAM**	**2.72**	**295**	*e*Pn	**Pb**	**22 13 50.6**	**+0.2**
NGRK	**Negar Kerman**	**2.97**	**50**	*e*Pn	**Pn**	**22 13 49.1**	**-0.1**
NGRK				*e*		22 14 42.8	
KHNJ	**Kahnooj**	**3.19**	**86**	*e*Pn	**Pn**	**22 13 52.4**	**+0.5**
KRBR	**Kerman**	**3.21**	**46**	*e*Pn	**Pn**	**22 13 54.3**	**+1.9**
KRBR				*e*Sg	**Sb**	**22 14 39.8**	**+1.6**
KRBR	**Kerman**	**3.21**	**46**	*e*Pn	**Pn**	**22 13 54.3**	**+1.9**
TVBK	**TV Kerman**	**3.21**	**46**	*e*Pn	**Pn**	**22 13 53.0**	**+0.5**
TVBK				*e*		22 14 47.2	
ASUD	**Al Ashush, Dub**	**3.30**	**160**	P	**Pn**	**22 13 56.2**	**+2.7**
	SNR=11						
KHGB	**Koh Gabri**	**3.33**	**38**	*e*Pn	**Pn**	**22 13 55.2**	**+1.2**
KHGB				*e*		22 14 52.6	
UOSS	**Minazif**	**3.37**	**146**	P	**Pn**	**22 13 55.8**	**+1.4**
UOSS				S	**Sn**	**22 14 37.1**	**+2.6**
ASHO	**Ashiyiah**	**3.52**	**150**	P	**Pn**	**22 13 57.6**	**+1.1**
	SNR=10						
ASHO				S	**Sn**	**22 14 42.5**	**+4.2**
IMEH	**Mehriz**	**3.65**	**7**	*e*Pn	**Pn**	**22 14 00.2**	**+1.8**
CHMN	**Cheshme madani**	**3.66**	**54**	*e*Pn	**Pn**	**22 13 59.6**	**+0.8**
CHMN				*e*		22 15 14.3	
KLNJ	**Kolanjah**	**3.92**	**326**	*e*Pn	**Pn**	**22 14 02.3**	**+0.1**
KBAM	**BAM**	**4.06**	**69**	*e*Pn	**Pn**	**22 14 05.3**	**+1.3**
ISAD	**Sadrabad**	**4.16**	**355**	*e*Pn	**Pn**	**22 14 07.7**	**+2.2**
SOHO	**SOHO**	**4.21**	**148**	P	**Pn**	**22 14 07.1**	**+1.1**
SOHO				S	**Sn**	**22 14 55.8**	**+0.6**
IRAM	**Ramesheh**	**4.31**	**340**	*e*Pn	**Pn**	**22 14 09.2**	**+1.7**
ICHK	**Chekchek**	**4.48**	**3**	*e*Pn	**Pn**	**22 14 11.4**	**+1.5**
IGAR	**Ghameh**	**4.97**	**339**	*e*Pn	**Pn**	**22 14 18.3**	**+1.7**
IZEF	**Zefreh**	**5.35**	**344**	*e*Pn	**Pn**	**22 14 22.4**	**+0.6**
ANAR	**Anarak**	**5.42**	**357**	*e*Pn	**Pn**	**22 14 23.6**	**+0.8**
IPIR	**Pirpir**	**5.65**	**331**	*e*Pn	**Pn**	**22 14 26.0**	**0.0**
TPRV	**Parvadeh(Tabas**	**5.70**	**22**	*e*Pn	**Pn**	**22 14 27.9**	**+1.3**
IKLH	**Kolahrood**	**5.96**	**339**	*e*Pn	**Pn**	**22 14 31.1**	**+0.9**
WSAR	**Wadi Sarin**	**6.07**	**137**	P	**Pn**	**22 14 32.0**	**+0.4**
	SNR=10						
NHDN	**Nehbandan**	**6.31**	**54**	*e*Pn	**Pn**	**22 14 36.1**	**+1.1**
QAM	**Ghamsar**	**6.41**	**340**	*e*Pn	**Pn**	**22 14 36.9**	**+0.5**
KRSH	**Karshahi**	**6.42**	**345**	*e*Pn	**Pn**	**22 14 36.8**	**+0.3**
TNSJ	**Nastanj**	**6.55**	**18**	*e*Pn	**Pn**	**22 14 40.0**	**+1.8**
WBK	**Wadi Bani Khal**	**6.75**	**138**	P	**Pn**	**22 14 40.3**	**-0.6**
	SNR=8.8						
KHMZ	**Khmeyn**	**6.95**	**330**	IAML		22 16 04.8	
	comp=E,23nm,0.4s						
BMDN	**Meydan**	**7.45**	**324**	*e*Pn	**Pn**	**22 14 49.9**	**-0.7**
HSAM	**Samen**	**7.98**	**325**	*e*Pn	**Pn**	**22 14 57.9**	**-0.1**
IALA	**Alasht**	**8.37**	**353**	*e*Pn	**Pn**	**22 15 05.5**	**+2.1**
IKOM	**Komasi**	**8.54**	**320**	*e*Pn	**Pn**	**22 15 05.4**	**-0.2**
IALM	**Almabolaq**	**8.72**	**326**	*e*Pn	**Pn**	**22 15 09.1**	**+1.0**
HSRG	**Sareghieh**	**8.97**	**328**	*e*Pn	**Pn**	**22 15 12.3**	**+0.7**
QALM	**Alamut, Qazvin**	**9.13**	**342**	*e*Pn	**Pn**	**22 15 13.8**	**0.0**
IDHR	**Dehrash**	**9.57**	**318**	*e*Pn	**Pn**	**22 15 19.1**	**-0.6**
BRTR	**Keskin Array B**	**20.74**	**310**	P	**P**	**22 17 41.8**	**-0.9**
	comp=E,1.1nm,0.6s,baz=122,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**29.15**	**42**	P	**P**	**22 19 02.1**	**-0.8**
	comp=E,0.3nm,0.6s,baz=237,slow=11,SNR=1.9						
ZALV	**Zalesovo Beam**	**34.50**	**32**	P	**P**	**22 19 47.7**	**-2.1**
	comp=E,1.1nm,0.5s,baz=245,slow=9.8,SNR=6.8						
FINES	**FINESS Array B**	**38.54**	**339**	P	**P**	**22 20 23.4**	**-0.7**
	comp=E,0.5nm,0.4s,baz=140,slow=12,SNR=5.8						
NOA	**NORSAR Array B**	**43.89**	**331**	LR	LR	22 41 23.5	
	comp=E,18nm,18.6s,baz=15,slow=39						
ESDC	**Sonseca Array**	**48.98**	**300**	P	**P**	**22 21 48.0**	**-0.6**
	comp=E,1.1nm,1.2s,baz=80,slow=8.2,SNR=1.5						
TORD	**Torodi Ar. Bea**	**50.86**	**264**	P	**P**	**22 22 02.3**	**-0.8**
	comp=E,0.7nm,0.7s,baz=66,slow=8.1,SNR=5.5						
RES	**Resolute Bay**	**75.83**	**352**	LR	LR	23 01 12.2	
	comp=E,234nm,21.6s,baz=170,slow=38						
ILAR	**Eielson Array**	**86.33**	**9**	P	**P**	**22 25 43.7**	**+0.1**
	comp=E,0.2nm,0.6s,baz=317,slow=5.9,SNR=2.1						

IDC 08 22:17:23.2±2.3, 41.88S×84.74E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/20, mbtmp3.7/4, MS3.5/5, Ms1 3.4/5, ms1mx3.2/21, Error ellipse: s-maj=58.6km s-min=34.1km az=95.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**23.99**	**83**	T	T	22 47 19.7	
	baz=244,slow=74,SNR=102						
H01W3	**Cape Leeuwin H**	**24.00**	**83**	T	T	22 47 20.5	
	baz=244,slow=74,SNR=110						
H01W1	**Cape Leeuwin H**	**24.01**	**83**	T	T	22 47 21.1	
	baz=244,slow=74,SNR=96						
MAW	**Mawson**	**28.38**	**197**	LR	LR	22 31 47.0	
	comp=Z,78nm,20.5s,baz=63,slow=30						
H08S2	**Diego Garcia H**	**35.78**	**339**	T	T	23 01 57.2	
	baz=165,slow=75						
H08S1	**Diego Garcia H**	**35.78**	**339**	T	T	23 01 58.0	
	baz=165						
H08S3	**Diego Garcia H**	**35.80**	**339**	T	T	23 01 58.9	
	baz=165,slow=75						
ASAR	**Alice Springs**	**44.50**	**82**	P	P	22 25 36.5	-0.1
	0.9nm,0.8s,baz=230,slow=8.2,SNR=11						
STKA	**Stephens Creek**	**45.82**	**97**	LR	LR	22 41 10.0	
	comp=Z,40nm,18.4s,baz=245,slow=31						
VNDA	**Vanda**	**46.74**	**163**	P	P	22 25 53.3	-0.1
	0.4nm,0.6s,baz=276,slow=7.9,SNR=6.0						
VNDA				LR	LR	22 43 35.2	
	comp=Z,48nm,19.4s,baz=280,slow=34						
WRA	**Warramunga Arr**	**47.09**	**78**	P	P	22 25 56.7	-0.2
	1.8nm,0.9s,baz=231,slow=7.5,SNR=9.6						
BOSA	**Boshof**	**49.44**	**266**	LR	LR	22 43 05.1	
	comp=Z,40nm,19.9s,baz=175,slow=31						
KMBO	**Kilima Mbogo**	**58.83**	**301**	LR	LR	22 46 13.3	
	comp=Z,53nm,21.0s,baz=94,slow=29						
CMAR	**Chiang Mai Arr**	**61.45**	**15**	P	P	22 27 41.5	0.0
	0.6nm,0.7s,baz=203,slow=8.0,SNR=4.5						

JMA ***08*** *22:20:45.4±0.1, 23.63N×121.55E, h0km, M2.5*
TAP ***08*** *22:20:47.0, 23.69N×121.40E, h16km, ML3.0, C*
ISC 08 22:20:46.9±0.8, 23.68N±0.01×121.45E±0.02, h16km±4km, n86, σ0§69/155, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.02**	**235**	*i* P	**Pg**	**22 20 49.9**	**+0.2**
	baz=126						
EGFH				*i* S	**Sg**	**22 20 51.8**	**+0.3**
	baz=126						
ESL	**Shilin**	**0.13**	**355**	P	**Pg**	**22 20 50.8**	**+0.1**
	baz=17						
ESL				S	**Sg**	**22 20 53.3**	**+0.1**
	baz=17						
HGSD	**Ruisui**	**0.19**	**186**	*i* P	**Pg**	**22 20 52.1**	**+0.6**
	baz=178						
HGSD				*e*S	**Sb**	**22 20 56.0**	**+0.5**
	baz=178						
EHY	**Hungye**	**0.21**	**213**	*i* P	**Pg**	**22 20 51.4**	**-0.4**
	baz=199						
EHY				S	**Sg**	**22 20 54.6**	**-0.4**
	baz=199						
VWDT	**VWDT**	**0.29**	**285**	⇑*i* P	**Pg**	**22 20 52.9**	**-0.2**
	baz=286						
VWDT				S	**Sg**	**22 20 56.3**	**-0.9**
	baz=286						
YULB	**Yu-li**	**0.32**	**205**	*i* P	**Pg**	**22 20 53.0**	**-0.6**
	baz=193						
YULB				S	**Sg**	**22 20 58.1**	**-0.1**
	baz=193						
HWA	**Hwalien**	**0.33**	**26**	*e*P	**Pb**	**22 20 54.9**	**+0.5**
	baz=27						
HWA				*e*S	**Sb**	**22 21 00.3**	**+0.8**
	baz=27						
EYUL	**Yuli**	**0.35**	**199**	*i* P	**Pg**	**

STYT	**Tauyuan**	**0.82**	**231**	*eP*	**Pg**	**22 21 02.3**	**-0.6**
	baz=227							
STYT				*eS*	**Sg**	**22 21 13.1**	**-0.5**
	baz=227							
LONT	**Longtian**	**0.82**	**201**	*eP*	**Pg**	**22 21 03.2**	**+0.2**
	baz=197							
LONT				S	**Sg**	**22 21 14.6**	**+0.8**
	baz=197							
WDLH	**Douliu**	**0.83**	**271**	*eP*	**Pg**	**22 21 03.0**	**-0.1**
	baz=271							
WDLH				*eS*	**Sg**	**22 21 14.8**	**+0.7**
	baz=271							
ENAH	**Nanao**	**0.83**	**23**	*eP*	**Pg**	**22 21 02.9**	**-0.3**
	baz=28							
TPUB	**Ta-pu**	**0.84**	**243**	*eP*	**Pg**	**22 21 02.7**	**-0.5**
	baz=241							
TPUB				*eS*	**Sg**	**22 21 13.7**	**-0.6**
	baz=241							
TCU	**Taichung**	**0.84**	**304**	*eP*	**Pg**	**22 21 03.7**	**+0.3**
	baz=310							
TCU				*eS*	**Sn**	**22 21 16.1**	**-0.2**
	baz=310							
CHN4	**Tsaushan**	**0.85**	**247**	*eP*	**Pg**	**22 21 03.6**	**+0.2**
	baz=246							
CHN4				*eS*	**Sg**	**22 21 14.1**	**-0.5**
	baz=246							
WTP	**Ta-pu**	**0.88**	**241**	*eP*	**Pg**	**22 21 04.0**	**0.0**
	baz=238							
WTP				*eS*	**Sg**	**22 21 15.3**	**-0.2**
	baz=238							
CHN2	**Minshiung**	**0.90**	**261**	*eP*	**Pb**	**22 21 04.4**	**+0.2**
	baz=260							
CHN2				*eS*	**Sb**	**22 21 17.5**	**+1.4**
	baz=260							
WCHH	**Zhanghua**	**0.90**	**296**	*eP*	**Pb**	**22 21 04.4**	**+0.1**
	baz=298							
WCHH				*eS*	**Sb**	**22 21 17.3**	**+1.2**
	baz=298							
TWQ1	**Liyutan**	**0.91**	**317**	*eP*	**Pg**	**22 21 05.0**	**+0.5**
	baz=327							
TWQ1				*eS*	**Sn**	**22 21 18.8**	**+1.0**
	baz=327							
NDT	**Datong Townshi**	**0.92**	**4**	*eP*	**Pb**	**22 21 04.1**	**-0.5**
	baz=15							
NDT				*eS*	**Sb**	**22 21 16.6**	**0.0**
	baz=15							
TWG	**Pinlang**	**0.92**	**202**	*eP*	**Pb**	**22 21 04.0**	**-0.6**
	baz=183							
TWG				*eS*	**Sb**	**22 21 16.2**	**-0.4**
	baz=183							
TWGBT	**Beinan**	**0.92**	**201**	*eP*	**Pb**	**22 21 03.0**	**-1.5**
	baz=183							
TWGBT				*eS*	**Sb**	**22 21 16.4**	**-0.3**
	baz=183							
CHY	**Chiayi**	**0.95**	**259**	*eP*	**Pb**	**22 21 05.1**	**0.0**
	baz=258							
CHY				*eS*	**Sb**	**22 21 18.2**	**+0.6**
	baz=258							
ENTT	**Nioudou**	**0.96**	**7**	*eP*	**Pg**	**22 21 05.6**	**0.0**
	baz=10.0							
ENTT				*eS*	**Sg**	**22 21 17.9**	**-0.3**
	baz=10.0							
NSY	**Sanyi**	**0.96**	**320**	*eP*	**Pn**	**22 21 06.2**	**+0.4**
	baz=329							
NSY				*eS*	**Sn**	**22 21 20.7**	**+1.4**
	baz=329							
TWK	**Hsinying**	**0.97**	**245**	*eP*	**Pb**	**22 21 05.4**	**0.0**
	baz=243							
TWK				*eS*	**Sb**	**22 21 18.6**	**+0.5**
	baz=243							
CHN1	**Nanshi**	**0.98**	**240**	*eP*	**Pb**	**22 21 05.9**	**+0.4**
	baz=238							
CHN1				*eS*	**Sb**	**22 21 18.3**	**+0.1**
	baz=238							
SNST	**Tainan City**	**0.98**	**242**	*eP*	**Pb**	**22 21 06.1**	**+0.5**
	baz=240							
SNST				*eS*	**Sb**	**22 21 18.5**	**0.0**
	baz=240							
YHNB	**Yeheng**	**0.99**	**356**	*eP*	**Pb**	**22 21 05.5**	**-0.2**
	baz=359							
YHNB				*eS*	**Sb**	**22 21 18.1**	**-0.4**
	baz=359							
SGST	**Jiashian**	**0.99**	**233**	*eP*	**Pb**	**22 21 04.9**	**-0.8**
	baz=230							
SGST				*eS*	**Sb**	**22 21 19.1**	**+0.5**
	baz=230							
WDJ	**Dajia District**	**0.99**	**312**	*eP*	**Pg**	**22 21 06.3**	**+0.2**
	baz=327							
WDJ				*eS*	**Sn**	**22 21 21.0**	**+1.0**
	baz=327							
NSK	**Sanguang**	**0.99**	**355**	P	**Pb**	**22 21 06.1**	**+0.2**
	baz=359							
NSK				*eS*	**Sb**	**22 21 18.3**	**-0.5**
	baz=359							
TWC	**Suao**	**0.99**	**22**	*eP*	**Pn**	**22 21 07.0**	**+0.7**
	baz=18							
TWC				*eS*	**Sn**	**22 21 19.9**	**-0.1**
	baz=18							
SLGT	**Liugui**	**1.00**	**227**	*eP*	**Pb**	**22 21 05.8**	**-0.1**
	baz=215							
SLGT				*eS*	**Sb**	**22 21 20.0**	**+1.0**
	baz=215							
RLNB	**Erlin**	**1.02**	**282**	*eP*	**Pb**	**22 21 06.4**	**+0.2**
	baz=283							
RLNB				*eS*	**Sg**	**22 21 21.0**	**+1.1**
	baz=283							
NSTT	**Nanjuang**	**1.03**	**337**	*eP*	**Pb**	**22 21 06.7**	**+0.3**
	baz=340							
NSTT				*eS*	**Sb**	**22 21 19.6**	**-0.1**
	baz=340							
LIOB	**Emei**	**1.04**	**338**	*eP*	**Pb**	**22 21 07.0**	**+0.4**
	baz=341							
LIOB				*eS*	**Sg**	**22 21 20.8**	**+0.1**
	baz=341							
NMLH	**Miaoli**	**1.04**	**325**	*eP*	**Pn**	**22 21 07.8**	**+0.8**
	baz=328							
NMLH				*eS*	**Sn**	**22 21 22.7**	**+1.5**
	baz=328							
TWE	**Neicheng**	**1.05**	**11**	*eP*	**Pb**	**22 21 06.4**	**-0.5**
	baz=23							
TWE				*eS*	**Sn**	**22 21 21.3**	**-0.2**
	baz=23							
NWLT	**Wulai**	**1.09**	**3**	*eP*	**Pb**	**22 21 07.6**	**+0.1**
	baz=15							
NWLT				*eS*	**Sb**	**22 21 21.4**	**-0.2**
	baz=15							
ECL	**Taimali**	**1.17**	**203**	*eP*	**Pn**	**22 21 07.0**	**-1.7**
	baz=189							
ECL				*eS*	**Sb**	**22 21 22.6**	**-1.1**
	baz=189							
SSD	**Sandimen**	**1.19**	**219**	*eP*	**Pn**	**22 21 08.3**	**-0.7**
	baz=207							
TSMG	**Majia**	**1.22**	**217**	*eP*	**Pn**	**22 21 09.2**	**-0.2**
	baz=208							
TSMG				*eS*	**Sg**	**22 21 27.6**	**+1.2**
	baz=208							
MASBT	**Mashibuluo**	**1.30**	**215**	*eP*	**Pn**	**22 21 09.9**	**-0.5**
	baz=208							
MASBT				*eS*	**Sb**	**22 21 27.6**	**+0.1**
	baz=208							
TIPB	**Shuangxi**	**1.33**	**15**	*eP*	**Pn**	**22 21 10.6**	**-0.3**
	baz=17							
TIPB				*eS*	**Sn**	**22 21 28.9**	**+0.5**
	baz=17							
EAST	**Anshuo**	**1.40**	**203**	*eP*	**Pn**	**22 21 13.0**	**+1.1**
	baz=183							
TWS1	**Kuangyinshan**	**1.41**	**359**	*eP*	**Pg**	**22 21 14.2**	**0.0**
	baz=28							
NWF	**Wu-fen Shan**	**1.42**	**12**	*eP*	**Pb**	**22 21 13.1**	**0.0**
	baz=30							
WFSB	**Wu-fen Shan**	**1.42**	**12**	*eP*	**Pb**	**22 21 12.8**	**-0.3**
	baz=30							
YM01	**YM01**	**1.46**	**4**	*eP*	**Pg**	**22 21 15.1**	**-0.1**
	baz=31							
YM04	**YM04**	**1.47**	**3**	*eP*	**Pb**	**22 21 14.6**	**+0.6**
	baz=30							
YM10	**YM10**	**1.47**	**4**	*eP*	**Pg**	**22 21 15.3**	**0.0**
	baz=31							
PHUB	**P'eng-hu**	**1.73**	**265**	*eP*	**Pn**	**22 21 15.7**	**-0.7**
	baz=262							
PNG	**Penghu**	**1.74**	**267**	*eP*	**Pn**	**22 21 16.4**	**-0.1**
	baz=264							
IRIF	**Iriomote-Funau**	**2.19**	**72**	P	**Pn**	**22 21 23.0**	**+0.3**
IRIF				*eS*	**Sn**	**22 21 50.4**	**+0.9**
HATJ	**Hateruma jima**	**2.19**	**80**	*eS*	**Sn**	**22 21 49.7**	**+0.1**
JKRS	**Kuro-shima**	**2.41**	**76**	P	**Pn**	**22 21 26.1**	**+0.4**
JKRS				*eS*	**Sn**	**22 21 55.9**	**+1.0**
JIJ	**Ishigaki jima**	**2.56**	**74**	P	**Pn**	**22 21 27.6**	**-0.2**
JIJ				*eS*	**Sn**	**22 21 57.0**	**-1.6**
JISG	**Ishigakijimahi**	**2.77**	**70**	*eS*	**Sn**	**22 22 02.4**	**-1.4**
MATB	**Ma-tsu**	**2.81**	**331**	*eP*	**Pn**	**22 21 30.6**	**-0.6**
	baz=334							
KNMB	**Chin-men Tao**	**2.90**	**286**	*eP*	**Pn**	**22 21 32.0**	**-0.5**
	baz=288							
JTJ	**Tarama**	**3.12**	**72**	P	**Pn**	**22 21 36.0**	**+0.4**
JTJ				*eS*	**Sn**	**22 22 13.7**	**+1.1**

KRSC 08 22:35:06.2±2.5, 49°.34N×156°.69E, h6^{km}±38^{km}, ML4.2, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.40**	**345**	*eP*			Pn	22 35 30.6	-1.6
SKR				*eS*			Sb	22 35 48.4	-2.3
PAU	**Pauzhetka**	**2.13**	**2**	*eP*			Pb	22 35 44.4	-0.8
PAU				*eS*			Sb	22 36 12.2	+0.3
KDTR	**Khodutka, Kamc**	**2.63**	**19**	*eP*			Pb	22 35 51.6	-2.0
KDTR				*eS*			Sb	22 36 25.0	-1.1
RUS	**Russkaya**	**3.31**	**20**	*eP*			Pb	22 36 01.9	-3.3
GRL	**Gorelyy**	**3.33**	**15**	*eP*			Pb	22 36 03.3	-2.5
GRL				*eS*			Sb	22 36 44.8	-1.8
DALK	**Dalny**	**3.92**	**19**	*eP*			Pn	22 36 10.4	+3.6
DALK				*eS*			Sn	22 36 58.1	+5.0
SMAR	**Somma**	**4.15**	**18**	*eP*			Pb	22 36 15.9	-3.8
KRX	**Arik**	**4.21**	**16**	*eP*			Pn	22 36 15.5	+4.5
MKZ	**Mys Kozlova**	**6.08**	**29**	*eP*			Pn	22 36 39.5	+3.0

*IDC **08** 23:14:02.2±0.6, 13°.49N×90°.63W, h0^{km}, mb4.6/30, mb1 4.7/33, mb1mx4.6/52, mbtmp4.6/33, ML4.1/3, MS4.4/28, Ms1 4.4/28, ms1mx4.3/37, Error ellipse: s-maj=21.8km s-min=9.3km az=46.0*

*INET **08** 23:14:03.2, 12°.97N×91°.23W, h15^{km}, MW4.3*

*GCMT **08** 23:14:05.8±0.2, 13°.04N±0°.01×91°.32W±0°.02, h12^{km}, MW5.1/122, Moment Tensor Solution. s73,c98; s122,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.56±.07; M$_{\theta\theta}$-3.73±.07; M$_{\phi\phi}$-0.83±.08; M$_{r\theta}$3.79±.25; M$_{\theta\phi}$1.27±.06; M$_{\phi r}$-1.70±.30; Best double couple: M$_o$6.03900×10^{16} NP1:ϕ_s289.00000°, δ23.00000°, λ86.00000°. NP2:ϕ_s113.00000°, δ67.00000°, λ92.00000°. Principal axes: T 6.2180, Plg68.0000°, Azm26.0000°; N -0.3640, Plg2.0000°, Azm292.0000°; P -5.8600, Plg22.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **08** 23:14:06.8±1.8, 13°.20N±0°.02×90°.99W±0°.06, h35^{km}±1^{km}, mb4.9/229, Md4.6(SNET) Error ellipse: s-maj=9.7km s-min=4.2km az=262.0*

*SNET **08** 23:14:07.1±1.0, 13°.19N×90°.92W, h23^{km}±5^{km}, ML4.5*

*UCR **08** 23:14:07.2±1.1, 13°.20N×90°.92W, h23^{km}±6^{km}, ML4.3, MW4.1, mb4.9(NEIC)*

*GCG **08** 23:14:14.6±0.3, 13°.72N×90°.95W, h27^{km}, MD4.6*

ISC 08 23:14:03.3±1.4, 13°.20N±0°.04×90°.99W±0°.04, h10^{km}±7^{km}, n680, σ1^{s}31/673, mb4.9/115, MS4.5/32, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.24**	**17**	*eP*			**Pg**	**23 14 29.3**	**+2.1**
FUG	**Fuego 3**	**1.25**	**6**	*eP*			**Pg**	**23 14 28.9**	**+1.5**
NUBE	**Las Nubes**	**1.36**	**59**	*eP*			**Pb**	**23 14 30.0**	**+1.0**
NUBE				*eS*			**Sg**	**23 14 47.6**	**+0.3**
NUBE	**Las Nubes**	**1.36**	**59**	*eP*			**Pb**	**23 14 30.0**	**+1.0**
NUBE				*eS*			**Sg**	**23 14 47.6**	**+0.3**
RTAL	**Retalhuleu**	**1.49**	**332**				**Pn**	**23 14 28.9**	**-1.2**
RTAL						Sn	**Sn**	**23 14 47.7**	**-1.9**
NBG	**Las Nubes**	**1.51**	**24**	*eP*			**Pg**	**23 14 34.3**	**+1.9**
CEDA	**San Andres**	**1.66**	**69**	*eP*			**Pb**	**23 14 34.5**	**+0.5**
CEDA					IAML			23 15 15.3	
	comp=Z,12μm,0.5s								
CEDA	**San Andres**	**1.66**	**69**	*eP*			**Pb**	**23 14 34.5**	**+0.5**
CEDA					IAML			23 15 15.3	
	comp=Z,12μm,0.5s								
BOQS	**Boqueron**	**1.74**	**72**	*eP*			**Pb**	**23 14 35.8**	**+0.3**
BOQS	**Boqueron**	**1.74**	**72**	*eP*			**Pb**	**23 14 35.8**	**+0.3**
TACO	**Tacachico**	**1.76**	**64**	*eP*			**Pb**	**23 14 35.7**	**0.0**
TACO				*eS*			**Sb**	**23 14 58.2**	**+0.2**
TACO	**Tacachico**	**1.76**	**64**	*eP*			**Pb**	**23 14 35.7**	**0.0**
TACO				*eS*			**Sb**	**23 14 58.2**	**+0.2**
SNET	**Serv Nac Est T**	**1.77**	**74**				**Pb**	**23 14 35.6**	**-0.4**
LFRS	**El Faro**	**1.92**	**77**	*eP*			**Pb**	**23 14 38.2**	**-0.2**
LFRS	**El Faro**	**1.92**	**77**	*eP*			**Pb**	**23 14 38.2**	**-0.2**
LBRS	**Las Brisas**	**1.96**	**74**	*eP*			**Pn**	**23 14 37.9**	**+1.2**
LBRS	**Las Brisas**	**1.96**	**74**	*eP*			**Pn**	**23 14 37.9**	**+1.2**
MTO3	**Montecristo**	**1.98**	**53**	*eP*			**Pb**	**23 14 39.8**	**+0.2**
MTO3	**Montecristo**	**1.98**	**53**	*eP*			**Pb**	**23 14 39.8**	**+0.2**
MTO3	**Montecristo**	**1.98**	**53**				**Pb**	**23 14 39.6**	**0.0**
PAVA	**Las Pavas**	**2.06**	**75**	*eP*			**Pb**	**23 14 40.1**	**-0.7**
PAVA	**Las Pavas**	**2.06**	**75**	*eP*			**Pb**	**23 14 40.1**	**-0.7**
COEG	**Centro de Oper**	**2.09**	**78**	*eP*			**Pn**	**23 14 40.1**	**+1.7**
COEG					IAML			23 15 28.3	
	comp=Z,2μm,0.4s								
COEG	**Centro de Oper**	**2.09**	**78**	*eP*			**Pn**	**23 14 40.1**	**+1.7**
COEG					IAML			23 15 28.3	
	comp=Z,2μm,0.4s								
ESQI	**Esquipulas**	**2.09**	**50**				**Pb**	**23 14 41.7**	**+0.3**
HUEH	**Huehuetenango**	**2.17**	**347**	*eP*			**Pb**	**23 14 42.9**	**+0.1**
HUEH				*eS*			**Sb**	**23 15 10.4**	**+0.6**
HUEH	**Huehuetenango**	**2.17**	**347**				**Pn**	**23 14 41.4**	**+1.8**
MRL	**Marmol**	**2.26**	**34**	*eP*			**Pb**	**23 14 45.0**	**+0.6**
ALJI	**Alcalda de J**	**2.36**	**87**	*eP*			**Pn**	**23 14 42.7**	**+0.6**
ALJI	**Alcalda de J**	**2.36**	**87**	*eP*			**Pn**	**23 14 42.7**	**+0.6**
COEB	**Comit de Eme**	**2.41**	**83**	*eP*			**Pn**	**23 14 44.6**	**+1.8**
COEB	**Comit de Eme**	**2.41**	**83**	*eP*			**Pn**	**23 14 44.6**	**+1.8**
PACA	**Pacayal**	**2.61**	**84**	*eP*			**Pn**	**23 14 48.0**	**+2.4**
PACA	**Pacayal**	**2.61**	**84**	*eP*			**Pn**	**23 14 48.0**	**+2.4**
JUCU	**Jucuarįn**	**2.67**	**89**	*eP*			**Pn**	**23 14 48.0**	**+1.6**
JUCU	**Jucuarįn**	**2.67**	**89**	*eP*			**Pn**	**23 14 48.0**	**+1.6**
LCND	**La Caada**	**3.02**	**88**	*eP*			**Pn**	**23 14 52.1**	**+0.9**
LCND					IAML			23 15 01.6	
	comp=Z,978nm,0.5s								
LCND				*eS*			**Sn**	**23 15 27.9**	**+0.5**
LCND	**La Caada**	**3.02**	**88**	*eP*			**Pn**	**23 14 52.1**	**+0.9**
LCND					IAML			23 15 01.6	
	comp=Z,978nm,0.5s								
LCND				*eS*			**Sn**	**23 15 27.9**	**+0.5**
CCIG	**Comitan**	**3.26**	**340**				**Pn**	**23 14 57.1**	**+2.4**
CSGN	**Cosiguina Volc**	**3.35**	**93**	*Pn*			**Pn**	**23 14 58.0**	**+2.2**
TGUH	**Tegucigalpa,Un**	**3.71**	**76**	*Pn*			**Pn**	**23 15 02.8**	**+2.0**
PETF	**Flores**	**3.85**	**16**				**Pn**	**23 15 05.2**	**+2.5**
CRIN	**San Cristobal**	**3.87**	**97**	*Pn*			**Pn**	**23 15 04.3**	**+1.3**
MATN	**Matagalpa**	**4.94**	**93**	*eP*			**Pn**	**23 15 18.4**	**+0.7**
MATN	**Matagalpa**	**4.94**	**93**				**Pn**	**23 15 18.2**	**+0.5**
CMIG	**Matias Romero**	**5.40**	**316**	*Pn*			**Pn**	**23 15 22.9**	**-1.0**
	comp=Z,1.9nm,0.3s,baz=118,slow=9.8,SNR=40								
CMIG						Sn	**Sn**	**23 16 27.5**	**+1.4**
	comp=Z,6.2nm,0.3s,baz=148,slow=19,SNR=3.6								
CMIG						LR	LR	23 17 36.6	
	comp=Z,4μm,20.4s,baz=154,slow=39								
ACON	**Acoyapa**	**5.80**	**102**				**Pn**	**23 15 29.8**	**+0.3**
HZTE	**Horizontes, Gu**	**5.83**	**115**	*eP*			**Pn**	**23 15 32.6**	**+2.8**
BUEV	**Buena Vista**	**5.96**	**113**	*eP*			**Pn**	**23 15 35.0**	**+3.3**
ORTG	**Ortega, Santa**	**6.10**	**117**	*eP*			**Pn**	**23 15 35.4**	**+1.7**
CUI	**Cuipilapa**	**6.23**	**113**	*eP*			**Pn**	**23 15 37.7**	**+2.3**
JTS	**Las Juntas de**	**6.58**	**115**	*Pn*			**Pn**	**23 15 39.4**	**-0.7**
	comp=Z,2.1nm,0.3s,baz=348,slow=6.0,SNR=10								
JTS						Sn	**Sn**	**23 16 50.8**	**-4.5**
	baz=45,slow=21,SNR=0.7								
JTS						Lg	Lg	23 17 27.8	
	baz=346,slow=19,SNR=2.0								
JTS	**Las Juntas de**	**6.58**	**115**	*eP*			Pn	23 15 44.9	+4.7
JTS	**Las Juntas de**	**6.58**	**115**	*Pn*			**Pn**	**23 15 42.9**	**+2.7**
ESPN	**Las Esperanzas**	**6.60**	**98**	*eP*			**Pn**	**23 15 42.2**	**+1.8**
ARE1	**Arenal 1**	**6.71**	**113**	*eP*			**Pn**	**23 15 44.4**	**+2.4**
CEDE	**Laguna Cedeo**	**6.71**	**113**	*eP*			**Pn**	**23 15 44.7**	**+2.6**
LAFE	**Finca La Fe, P**	**6.84**	**119**	*eP*			**Pn**	**23 15 45.4**	**+1.6**
HDC	**Heredia**	**7.45**	**115**	*Pn*			**Pn**	**23 15 55.6**	**+3.4**
TEIG	**Tepich**	**7.45**	**20**	*Pn*			**Pn**	**23 15 55.6**	**+3.5**
TLIG	**Tlapa**	**8.50**	**302**	*Pn*			**Pn**	**23 16 07.2**	**+0.6**
PRVC	**Isla de Provid**	**9.37**	**88**	*eP*			Pn	23 16 12.3	-6.2
MOIG	**Morelia**	**11.71**	**305**	*Pn*			**Pn**	**23 16 52.9**	**+2.0**
PAYG	**Puerto Ayora**	**13.80**	**177**	*Pn*			**Pn**	**23 17 19.4**	**+0.2**
CAPC	**Capurgana**	**14.13**	**107**	*eP*			**Pn**	**23 17 21.2**	**-2.6**
ZAIG	**Zacatecas**	**14.55**	**312**	*Pn*			**Pn**	**23 17 30.4**	**+0.7**
LCBC	**Los crdobas,**	**14.98**	**105**	*eP*			**Pn**	**23 17 38.0**	**+2.7**
MOTC	**Monteria, Cord**	**15.67**	**105**	*eP*			**Pn**	**23 17 44.0**	**-0.3**
DBBC	**Dabeiba**	**15.79**	**111**	*eP*			**P**	**23 17 52.2**	**+2.4**
SJCC	**San Jacinto, C**	**15.83**	**100**	*eP*			**Pn**	**23 17 44.4**	**-2.1**
UREC	**San Jos de Ur**	**16.13**	**108**	*eP*			**Pn**	**23 17 50.3**	**0.0**
CBOC	**Ciudad Bolivar**	**16.46**	**115**	*eP*			**P**	**23 18 00.9**	**+3.5**
SMRC	**Santa Marta, M**	**16.51**	**95**	*eP*			**Pn**	**23 17 48.6**	**-6.6**
GTBY	**Guantanamo Bay**	**16.62**	**64**	P			**P**	**23 17 58.1**	**-0.9**
ARGC	**Ariguani, Magd**	**16.73**	**100**	*eP*			**Pn**	**23 17 57.7**	**-0.3**
833A	**Chaparral WMA,**	**16.97**	**334**	P			**P**	**23 18 02.9**	**+0.2**
	baz=151								
833A	**Chaparral WMA,**	**16.97**	**334**				**Pn**	**23 18 01.6**	**+0.7**
060A	**Indiantown**	**16.98**	**34**	P			**P**	**23 18 02.6**	**-0.4**
YOTC	**Yotoco, Valle**	**17.12**	**121**	*eP*			**Pn**	**23 18 02.9**	**-0.1**
HKT	**Hockley**	**17.26**	**346**				**P**	**23 18 06.1**	**+0.2**
GUY2C	**Guyana, Caldas**	**17.33**	**116**	*eP*			**P**	**23 18 08.3**	**+1.0**
PTBC	**PUERTO BERRIO,**	**17.57**	**111**	*eP*			**Pn**	**23 18 06.6**	**-1.9**
441A	**DeRidder**	**17.58**	**354**				**P**	**23 18 10.5**	**+1.0**
441A						IAmb	IAmb	23 18 15.4	
	comp=Z,67nm,0.8s								
NORC	**Norcasia**	**17.61**	**114**	*eP*			**P**	**23 18 11.1**	**+1.1**
PAC1	**Pacto, Paraso**	**17.64**	**136**	*eP*			**Pn**	**23 18 09.3**	**-0.2**
ANIL	**Santa Ana**	**17.65**	**118**	*eP*			**P**	**23 18 11.8**	**+1.1**
TOLC	**Tolima**	**17.68**	**118**	*eP*			**P**	**23 18 14.8**	**+3.8**
POPC	**Popayan, Colom**	**17.68**	**126**	*eP*			**P**	**23 18 13.4**	**+2.4**
CUSE	**Cuicocha Este**	**17.88**	**135**	*eP*			**P**	**23 18 17.4**	**+4.0**
553A	**Crawfordville**	**17.96**	**19**				**P**	**23 18 15.7**	**+1.9**
553A						IAmb	IAmb	23 18 25.8	
	comp=Z,63nm,0.8s								
451A	**Vernon**	**18.00**	**15**				**P**	**23 18 16.1**	**+2.0**
GCUF	**Volcan Galeras**	**18.00**	**130**	*eP*			**P**	**23 18 17.8**	**+3.0**
PCON	**Cinco Dias**	**18.03**	**126**	*eP*			**P**	**23 18 17.4**	**+2.2**
BRRC	**Barranca, Sant**	**18.04**	**108**	*eP*			**P**	**23 18 14.8**	**0.0**
MARP	**Paez Belalcaza**	**18.08**	**123**	*eP*			**P**	**23 18 17.1**	**+1.6**
ORTC	**Ortega, Tolima**	**18.08**	**119**	*eP*			**P**	**23 18 15.8**	**+0.5**
342A	**Flagon Creek P**	**18.13**	**356**	P			**P**	**23 18 16.9**	**+1.3**
342A						IAmb	IAmb	23 18 20.1	
	comp=Z,83nm,0.8s								
346A	**Big Creek Wild**	**18.16**	**4**	P			**P**	**23 18 17.8**	**+2.0**
346A						IAmb	IAmb	23 18 34.0	
	comp=Z,115nm,1.0s								
344A	**Westbrook Farm**	**18.17**	**1**				**P**	**23 18 18.6**	**+2.6**
344A						IAmb	IAmb	23 18 35.8	
	comp=Z,111nm,1.1s								
BRAL	**Brewton**	**18.25**	**11**	P			**P**	**23 18 19.7**	**+2.8**
BRAL						IAmb	IAmb	23 18 29.3	
	comp=Z,164nm,1.1s								
SPBC	**San Pablo de B**	**18.28**	**113**	*eP*			**P**	**23 18 19.2**	**+1.6**
ROSC	**El Rosal**	**18.43**	**115**	P			**Pn**	**23 18 21.0**	**+1.6**
	comp=Z,1.3nm,0.3s,baz=305,slow=13,SNR=9.6								
ROSC	**El Rosal**	**18.43**	**115**	*eP*			**Pn**	**23 18 19.8**	**+0.4**
ROSC	**El Rosal**	**18.43**	**115**				**Pn**	**23 18 21.6**	**+2.2**
ROSC						IAmb	IAmb	23 18 32.5	
	comp=Z,109nm,1.2s								
LGNH	**Logne**	**18.45**	**71**	P			**Pn**	**23 18 20.5**	**+1.2**
PRAC	**Prado**	**18.49**	**119**	*eP*			**Pn**	**23 18 20.8**	**+0.9**
435B	**Jarrell**	**18.53**	**342**	P			**Pn**	**23 18 21.5**	**+1.3**
	baz=160								
435B	**Jarrell**	**18.53**	**342**	P			**P**	**23 18 20.3**	**+0.3**
BETC	**Betania**	**18.59**	**123**	*eP*			**Pn**	**23 18 23.9**	**+2.8**
URIC	**Uribia, Colomb**	**18.61**	**92**	*eP*			**P**	**23 18 17.4**	**-3.6**
BARC	**Barichara**	**18.72**	**109**	*eP*			**Pn**	**23 18 27.7**	**+4.9**
GARC	**Garzon, Huila**	**18.84**	**124**	*eP*			**Pn**	**23 18 25.2**	**+1.0**
PAMC	**Pamplona, Colo**	**18.91**	**106**	*eP*			**Pn**	**23 18 25.3**	**0.0**
VBMS	**Vicksburg**	**18.94**	**1**	P			**Pn**	**23 18 25.4**	**+0.3**
PUAC	**Puerto Asis, P**	**19.03**	**130**	*eP*			**Pn**	**23 18 27.6**	**+1.2**
352A	**Blakely**	**19.03**	**16**	P			**P**	**23 18 25.5**	**0.0**
352A						IAmb	IAmb	23 18 37.5	
	comp=Z,106nm,0.9s								
JCT	**Junction City**	**19.03**	**336**	P			**Pn**	**23 18 27.4**	**+1.1**
	baz=153								
JCT	**Junction City**	**19.03**	**336**	P			**P**	**23 18 26.2**	**+0.6**
CHIC	**Chingaza**

baz=184,SNR=14
OXF Oxford 21.27 4 P P 23 18 50.7 +0.9
OXF IAmb IAmb 23 19 04.0
comp=Z,79nm,1.0s
MIAR Mount Ida 21.38 354 P P 23 18 51.0 -0.1
baz=173,SNR=23
MIAR Mount Ida 21.38 354 P P 23 18 51.0 -0.1
MIAR IAmb IAmb 23 18 53.8
comp=Z,39nm,0.8s
Y52A Lilburn 21.52 16 P P 23 18 53.3 +0.8
Y52A IAmb IAmb 23 19 09.8
comp=Z,26nm,0.8s
PLAL Pickwick Lake 21.85 6 P P 23 18 56.5 +0.5
PLAL IAmb IAmb 23 19 11.2
comp=Z,62nm,1.1s
Z56A Williston 21.87 22 P P 23 18 56.1 -0.2
Z56A IAmb IAmb 23 19 15.8
comp=Z,39nm,1.0s
W41B Gary Mavity, V 21.91 357 P P 23 18 56.6 -0.1
baz=177,SNR=19
W41B Gary Mavity, V 21.91 357 P P 23 18 56.3 -0.4
W41B IAmb IAmb 23 19 00.1
comp=Z,45nm,1.1s
W45A Hickory Valley 21.92 4 P P 23 18 57.6 +0.7
W45A IAmb IAmb 23 19 00.4
comp=Z,50nm,0.8s
WHAR Wooly Hollow 22.03 357 P P 23 18 57.4 -0.6
WHAR IAmb IAmb 23 18 59.1
comp=Z,45nm,0.9s
W39A Magazine 22.05 354 P P 23 18 58.8 +0.6
baz=173,SNR=15
Z57A Bowman 22.10 23 P P 23 19 01.5 +2.7
baz=208
NHSC New Hope 22.14 25 P P 23 19 03.2 +4.0
baz=209
NHSC New Hope 22.14 25 P 23 19 00.1 +0.9
LPAR Lepanto 22.31 1 P P 23 19 01.0 0.0
CLNB Carlsbad 22.35 330 P P 23 19 01.9 +0.3
HODGE Hodges 22.39 19 P P 23 19 02.2 +0.3
SWET Sewanee 22.39 11 P P 23 19 02.4 +0.5
SWET IAmb IAmb 23 19 04.1
comp=Z,27nm,0.9s
Z58A St. Stephen 22.49 25 P P 23 19 04.0 +1.1
baz=210
WMOK Wichita Mounta 22.58 343 P P 23 19 02.1 -1.8
baz=160,SNR=9.3
WMOK Wichita Mounta 22.58 343 P P 23 19 01.9 -2.1
FCAR Ozark Folk Cen 22.62 358 P P 23 19 03.1 -1.2
FCAR IAmb IAmb 23 19 04.9
comp=Z,46nm,0.8s
X54A Belton 22.64 19 P P 23 19 04.9 +0.3
baz=202,SNR=7.8
MNTX Cornudas Mount 22.67 327 P P 23 19 05.4 +0.4
baz=141,SNR=70
MNTX Cornudas Mount 22.67 327 P P 23 19 04.6 -0.3
MNTX IAmb IAmb 23 19 07.8
comp=Z,35nm,0.8s
GNAR Gosnell 22.68 2 P P 23 19 05.3 +0.3
V48A Smith Brothers 22.75 9 P P 23 19 05.9 +0.2
V48A IAmb IAmb 23 19 07.3
comp=Z,44nm,0.8s
JSC Jenkinsville 22.77 21 P P 23 19 05.9 0.0
LCAR Lake Charles 22.77 360 P P 23 19 04.6 -1.3
LCAR IAmb IAmb 23 19 06.1
comp=Z,28nm,0.7s
X55A Gracelyn & Ava 22.81 20 P P 23 19 06.7 +0.3
baz=204
LNXT Lenox 22.84 3 P P 23 19 06.8 +0.1
Y57A Sumter 22.85 23 P P 23 19 07.1 +0.3
baz=207
CPCT Cooper Cave 22.91 14 P P 23 19 07.9 +0.5
CPCT IAmb IAmb 23 19 10.7
comp=Z,44nm,1.0s
WVT Waverly 23.01 7 P P 23 19 08.1 -0.3
baz=188
WVT Waverly 23.01 7 P P 23 19 08.0 -0.3
WVT IAmb IAmb 23 19 24.4
comp=Z,50nm,1.1s
GLAT Glass 23.02 4 P P 23 19 08.1 -0.4
TUL1 Leonard 23.02 350 P P 23 19 07.0 -1.6
baz=168
TUL1 Leonard 23.02 350 P P 23 19 07.1 -1.5
TUL1 IAmb IAmb 23 19 26.4
comp=Z,27nm,0.9s
X56A White Oak 23.04 21 P P 23 19 09.0 +0.3
baz=205
U40A Yellville 23.12 356 P P 23 19 08.5 -1.0
baz=175,SNR=30
U40A Yellville 23.12 356 P P 23 19 08.9 -0.7
U40A IAmb IAmb 23 19 10.2
comp=Z,40nm,0.8s
UTMT University of 23.12 4 P P 23 19 09.2 -0.4
CLTN Cedars of Leba 23.18 10 P P 23 19 09.6 -0.5
CLTN IAmb IAmb 23 19 12.1
comp=Z,58nm,0.9s
W54A Cherokee Point 23.20 19 P P 23 19 11.0 +0.6
baz=202,SNR=11
V51A Loudon 23.29 14 P P 23 19 11.6 +0.3
V51A IAmb IAmb 23 19 30.1
comp=Z,78nm,1.3s
TKL Tuckaleechee C 23.29 15 P P 23 19 08.5 -2.8
comp=Z,27nm,0.8s,baz=183,slow=10.0,SNR=33
TKL LR LR 23 28 53.4
comp=Z,3µm,21.1s,baz=199,slow=39
TKL Tuckaleechee C 23.29 15 P P 23 19 11.5 +0.2
TKL IAmb IAmb 23 19 20.4
comp=Z,62nm,1.1s
MSTX Muleshoe 23.29 335 P P 23 19 10.9 -0.6
baz=150,SNR=14
MSTX Muleshoe 23.29 335 P P 23 19 10.9 -0.6
MSTX IAmb IAmb 23 19 12.3
comp=Z,27nm,0.7s
U38A Gravette 23.34 353 P P 23 19 10.8 -1.0
U38A IAmb IAmb 23 19 12.7
comp=Z,37nm,1.1s
PARMO Parma 23.39 2 P P 23 19 11.9 -0.4
HENM Henderson Moun 23.46 3 P P 23 19 13.8 +0.9
PBMO Poplar Bluff 23.48 1 P P 23 19 12.3 -0.9
PBMO IAmb IAmb 23 19 31.0
comp=Z,41nm,1.2s
V52A Sevierville 23.51 15 P P 23 19 13.7 +0.2
V52A IAmb IAmb 23 19 15.5
comp=Z,36nm,1.0s
KMSC Kings Mountain 23.53 20 P P 23 19 13.4 -0.2
baz=204
AMTX Amarillo 23.66 338 P P 23 19 14.2 -0.9
baz=153
AMTX Amarillo 23.66 338 P P 23 19 14.0 -1.1
AMTX IAmb IAmb 23 19 16.9
comp=Z,44nm,0.7s
U49A Red Boiling Sp 23.68 10 P P 23 19 14.8 -0.4
U49A IAmb IAmb 23 19 15.8
comp=Z,42nm,0.8s
Y60A Bolivia 23.74 27 P P 23 19 16.5 +0.7
baz=212
ATAH Atahualpa 23.76 148 P P 23 19 18.2 +1.6
comp=Z,13nm,0.7s,baz=9.1,slow=6.9,SNR=7.9
W56A Indian Trail 23.78 22 P P 23 19 15.6 -0.5
baz=206
T45A Paducah 23.81 5 P P 23 19 15.9 -0.5
V54A Nebo 23.91 18 P P 23 19 17.1 -0.3
baz=202,SNR=12
T47A Sharon Grove 23.94 8 P P 23 19 17.2 -0.4
W57A Gilead 24.01 23 P P 23 19 18.0 -0.3
baz=207
W57A Gilead 24.01 23 P P 23 19 18.0 -0.3
X59A McDuffie Farm, 24.06 26 P P 23 19 19.4 +0.6
baz=211
T35A Sooner Cattle 24.13 349 P P 23 19 18.4 -1.1
T35A IAmb IAmb 23 19 19.4
comp=Z,27nm,1.1s
TZTN Tazewell 24.19 15 P P 23 19 19.6 -0.4
baz=198,SNR=9.1
W58A Raeford 24.19 24 P P 23 19 19.2 -0.8
baz=209
V55A Taylorsville 24.21 20 P P 23 19 19.7 -0.5
baz=204,SNR=10
V55A Taylorsville 24.21 20 P P 23 19 19.7 -0.5
HSIG 24.32 313 P P 23 19 22.5 +1.2
X60A Albert Glenn T 24.33 27 P P 23 19 21.4 +0.1
baz=212,SNR=7.3
V56A Mocksville 24.42 21 P P 23 19 21.4 -0.7
baz=205,SNR=6.5
S44A Carbondale 24.44 3 P P 23 19 21.6 -0.7
S39A Bolivar 24.48 356 P P 23 19 22.3 -0.4
121A Cookes Peak, D 24.63 324 P P 23 19 26.6 +2.3
baz=138,SNR=9.7
121A Cookes Peak, D 24.63 324 P P 23 19 24.7 +0.4
121A IAmb IAmb 23 19 29.3
comp=Z,62nm,1.1s
U54A Nelsons Funny 24.64 18 P P 23 19 23.9 -0.3
baz=202,SNR=7.0
FVM French Village 24.69 1 P P 23 19 23.6 -0.9
319A Douglas 24.71 320 P P 23 19 25.7 +0.8
319A IAmb IAmb 23 19 36.9
comp=Z,45nm,1.1s
V57A Coltrane Farms 24.74 22 P P 23 19 24.3 -0.7
baz=207,SNR=5.6
CCM Cathedral Cave 24.76 360 P P 23 19 24.1 -1.0
baz=179
CCM Cathedral Cave 24.76 360 P P 23 19 23.9 -1.2
W60A Pink Hill 24.85 27 P P 23 19 27.3 +1.3
baz=212
T53A Wise 24.86 16 P P 23 19 26.1 -0.1
baz=200,SNR=6.3
V58A Windy Hill, Pi 24.91 23 P P 23 19 25.7 -0.8
baz=208,SNR=5.3
U56A King 24.94 21 P P 23 19 27.4 +0.6
U56A IAmb IAmb 23 19 36.2
comp=Z,23nm,1.1s
MTP Monte Pirata 24.96 75 P P 23 19 25.8 -1.3
MTP IAmb IAmb 23 19 27.0
comp=Z,39nm,1.1s
R40A Maddies Statio 25.02 358 P P 23 19 26.2 -1.3
R40A IAmb IAmb 23 19 29.4
comp=Z,35nm,0.9s
T54A Tazewell 25.21 18 P P 23 19 28.7 -0.6
baz=202,SNR=7.7
S51A Beattyville 25.22 14 P P 23 19 28.9 -0.4
S51A IAmb IAmb 23 19 41.4
comp=Z,33nm,0.9s
V59A Middlesex 25.23 25 P P 23 19 28.5 -1.0
baz=210
WCI Wyandotte Cave 25.27 9 P P 23 19 29.3 -0.5
baz=191
WCI Wyandotte Cave 25.27 9 P P 23 19 28.8 -1.0
Y22D IRIS PASSCAL I 25.33 328 P P 23 19 32.8 +2.3
baz=142
SLM Saint Louis 25.34 1 P P 23 19 29.9 -0.5
U57A Blanch 25.39 22 P P 23 19 30.4 -0.5
baz=207,SNR=9.0
T55A Pulaski 25.51 19 P P 23 19 31.6 -0.4
baz=204
S53A Williamson 25.63 16 P P 23 19 33.1 0.0
baz=200
U58A Oxford 25.66 24 P P 23 19 32.5 -0.8
baz=209
Q44A Meyer Farm, Va 25.66 4 P P 23 19 32.9 -0.4
Q44A IAmb IAmb 23 19 35.1
comp=Z,28nm,0.9s
T56A Rocky Mt 25.68 21 P P 23 19 34.2 +0.7
baz=205
ANMO Albuquerque 25.78 330 P P 23 19 35.4 +0.7
comp=Z,7.6nm,0.8s,baz=144,slow=12,SNR=24
ANMO LR LR 23 31 24.7
comp=Z,351nm,18.6s,baz=146,slow=41
ANMO Albuquerque 25.78 330 P P 23 19 35.8 +1.1
baz=144
ANMO Albuquerque 25.78 330 P P 23 19 35.1 +0.4
U59A Littleton 25.92 25 P P 23 19 34.7 -1.0
baz=210
V61A Roper 25.97 28 P P 23 19 36.3 +0.2
baz=214
V61A Roper 25.97 28 P P 23 19 36.2 0.0
S54A Dingess, Beckl 25.97 18 P P 23 19 35.6 -0.6
baz=202
R32A Long Quarter, 26.04 346 P P 23 19 35.3 -1.5
R32A IAmb IAmb 23 19 38.0
comp=Z,21nm,0.8s
T58A Grand View Acr 26.14 23 P P 23 19 36.6 -1.1
baz=208
S55A Lewisburg 26.20 19 P P 23 19 38.4 +0.2
baz=204
KSU1 Kansas State U 26.27 350 P P 23 19 38.4 -0.5
baz=168,SNR=6.8
TUC Tucson 26.28 320 P P 23 19 40.6 +1.5
baz=132
TUC Tucson 26.28 320 P P 23 19 39.8 +0.7
R53A Hurricane 26.29 16 P P 23 19 38.8 -0.2
baz=200
RCRC Randolf Colleg 26.30 21 P P 23 19 39.1 -0.1
P38A Dawn 26.42 356 P P 23 19 40.0 -0.1
P38A IAmb IAmb 23 19 50.8
comp=Z,25nm,1.1s
S56A Natural Bridge 26.42 21 P P 23 19 40.7 +0.5
baz=206
R54A Victor 26.42 18 P P 23 19 39.9 -0.3
baz=202
P46A Rosedale 26.52 7 P P 23 19 40.0 -1.1
P46A IAmb IAmb 23 19 41.2
comp=Z,42nm,0.8s
T59A Double "B" Far 26.55 25 P P 23 19 39.7 -1.7
baz=210
T59A Double "B" Far 26.55 25 P P 23 19 40.3 -1.1
T25A Trinidad 26.69 336 P P 23 19 44.4 +1.4
baz=150,SNR=5.7
T25A Trinidad 26.69 336 P P 23 19 43.3 +0.3
R55A Marlinton 26.79 19 P P 23 19 44.2 +0.6
baz=204,SNR=6.2
Q52A Bidwell 26.80 15 P P 23 19 43.6 0.0
baz=199,SNR=10
Q53A Leroy 26.90 16 P P 23 19 44.6 +0.1
baz=201
S58A Poland Farm, P 26.91 23 P P 23 19 45.0 +0.4
baz=209
Q44A Mansfield 26.94 4 P P 23 19 43.9 -1.0
JSRW J. Sargeant Re 27.05 23 P P 23 19 45.1 -0.8
P51A Williamsport 27.10 14 P P 23 19 45.9 -0.3
baz=197
R56A Bull Pasture M 27.13 20 P P 23 19 47.0 +0.3
baz=205
Q54A Coxs Mills 27.21 17 P P 23 19 46.9 -0.4
baz=202,SNR=12
Q54A Coxs Mills 27.21 17 P P 23 19 46.8 -0.4
R58B Mineral 27.29 23 P P 23 19 48.0 0.0
baz=209
R58B Mineral 27.29 23 P P 23 19 46.8 -1.2
SFIN Lafayette 27.29 6 P P 23 19 46.8 -1.2
baz=188,SNR=5.2
HDIL Hopedale 27.29 3 P P 23 19 47.1 -0.9
baz=184
S59A Mechanicsville 27.34 24 P P 23 19 48.5 0.0
baz=210
R57A Stanardsville 27.34 22 P P 23 19 48.9 +0.4
baz=207
214A Organ Pipe Nat 27.37 317 P P 23 19 50.4 +1.5
baz=128,SNR=6.1
214A Organ Pipe Nat 27.37 317 P P 23 19 49.2 +0.3
Q55A Buckhannon 27.45 19 P P 23 19 49.6 +0.1
baz=204
P52A Corning 27.46 15 P P 23 19 48.9 -0.7
baz=199
P53A Whipple 27.52 16 P P 23 19 50.4 +0.3
baz=200,SNR=7.6
R58A Rapidan 27.53 22 P P 23 19 50.8 +0.6
baz=208
N38A Joes South For 27.56 356 P P 23 19 49.4 -1.0
N38A IAmb IAmb 23 19 53.0
comp=Z,26nm,0.8s
PIX Pinacate 27.57 315 P P 23 19 50.8 +0.2
SDCO Great Sand Dun 27.66 335 P P 23 19 52.2 +0.5
baz=148
SDCO Great Sand Dun 27.66 335 P P 23 19 50.8 -0.9
CBN Corbin Frederi 27.69 24 P P 23 19 52.5 +0.9
baz=210
CBN Corbin Frederi 27.69 24 P P 23 19 52.0 +0.3
CBN IAmb IAmb 23 19 54.1
comp=Z,52nm,1.4s
KSCO Kaye Shedlock' 27.70 340 P P 23 19 50.9 -1.0
KSCO IAmb IAmb 23 19 52.0
comp=Z,13nm,0.7s
Q56A Snyder Ridge, 27.78 20 P P 23 19 53.5 +1.1
baz=205,SNR=6.5
R59A King George, V 27.79 24 P P 23 19 53.8 +1.3
baz=210
ACSO Alum Creek Sta 27.83 13 P P 23 19 52.6 -0.3
baz=197,SNR=13
O51A Pataskala 27.84 14 P P 23 19 52.5 -0.4
baz=198,SNR=7.6
P54A Burton 27.89 18 P P 23 19 53.2 -0.1
baz=202,SNR=8.9
O52A Adamsville 28.00 15 P P 23 19 53.9 -0.5
baz=199,SNR=13
O52A Adamsville 28.00 15 P P 23 19 53.9 -0.5
P55A Reedsville 28.00 19 P P 23 19 54.3 -0.1
baz=204
Q57A Strasburg 28.04 21 P P 23 19 54.5 -0.2
baz=207
S22A 4UR Ranch, Cre 28.23 333 P P 23 19 58.2 +1.4
baz=146
S22A 4UR Ranch, Cre 28.23 333 P P 23 19 57.2 +0.3
O53A New Philadelph 28.28 16 P P 23 19 56.1 -0.8
baz=200
P56A Dayton Farm, R 28.31 20 P P 23 19 57.2 0.0
baz=206,SNR=5.2
O54A Avella 28.45 17 P P 23 19 58.2 -0.2
baz=202,SNR=7.6
O54A Avella 28.45 17 P P 23 19 58.2 -0.2
O54A IAmb IAmb 23 19 58.7
comp=Z,26nm,0.7s
113A Mohawk Valley, 28.51 317 P P 23 19 59.4 +0.4
P57A Homestead Farm 28.58 21 P P 23 20 00.8 +1.2
baz=207
MVCO Mesa Verde 28.58 330 P P 23 20 01.1 +1.3
baz=142,SNR=9.1
MVCO Mesa Verde 28.58 330 P P 23 20 00.4 +0.5
N51A Ashland 28.62 14 P P 23 19 59.1 -0.8
N51A IAmb IAmb 23 20 00.4
comp=Z,42nm,1.1s
NNA Nana 28.69 150 LR LR 23 29 23.4
comp=Z,321nm,20.6s,baz=315,slow=32
SPX San Pedro Mart 28.69 312 P P 23 20 00.9 -0.1
Y14A Wickenburg 28.75 320 P P 23 20 00.8 -0.4
O55A Ligonier 28.80 19 P P 23 20 00.8 -0.7
baz=204
WUAZ Wupatki 28.84 324 P P 23 20 04.2 +2.0
baz=136,SNR=19
WUAZ Wupatki 28.84 324 P P 23 20 02.7 +0.5
WUAZ IAmb IAmb 23 20 05.7
comp=Z,24nm,0.9s
SDMD Soldier's Deli 28.94 23 P P 23 20 02.1 -0.7
O56A Blue Knob Stat 29.09 20 P P 23 20 04.0 -0.2
baz=206
O56A Blue Knob Stat 29.09 20 P P 23 20 03.6 -0.5
O56A IAmb IAmb 23 20 05.4
comp=Z,20nm,0.9s
L48A N Adams 29.20 10 P P 23 20 03.7 -1.4
N54A Moraine State 29.29 17 P P 23 20 05.4 -0.4
baz=202,SNR=8.6
O57A Amberson 29.36 21 P P 23 20 06.8 +0.4
baz=207
GLA Glamis 29.39 316 P P 23 20 07.2 +0.3
ISCO Idaho Springs 29.47 337 P P 23 20 08.8 +0.9
baz=150
ISCO Idaho Springs 29.47 337 P P 23 20 07.6 -0.2
PV15 Paradox Valley 29.47 331 P P 23 20 06.9 -1.0
M53A WI Miller and 29.54 16 P P 23 20 07.7 -0.3
baz=201
ESJX Sierra Juarez 29.56 313 P P 23 20 08.8 +0.2
JFWS Jewell Farm 29.61 1 P P 23 20 07.5 -1.2
baz=182
SSPA Standing Stone 29.65 20 P P 23 20 07.8 -1.2
SSPA IAmb IAmb 23 20 09.7
comp=Z,15nm,0.8s
PDMCI Parker Dam,Lak 29.71 319 P P 23 20 11.1 +1.5
baz=130
N56A West Decatur 29.77 20 P P 23 20 09.2 -0.9
baz=206,SNR=8.3
N57A Milroy 29.87 21 P P 23 20 11.0 0.0
baz=207
RMX La Rumorosa 29.99 314 P P 23 20 11.7 -0.7
SWSC Sam W. Stewart 29.99 315 P P 23 20 13.4 +1.3
baz=125
U15A North Rim 30.01 324 P P 23 20 12.3 -0.3
U15A IAmb IAmb 23 20 31.7
comp=Z,21nm,1.1s
IKP In-Ko-Pah, Jac 30.04 314 P P 23 20 14.1 +1.5
baz=124
BC3 Big Chuckawall 30.17 317 P P 23 20 15.5 +1.6
baz=127,SNR=8.9
CBX Cerro Bola 30.24 313 P P 23 20 14.9 +0.4
IRM Iron Mountain 30.27 318 P P 23 20 16.2 +1.5
baz=128,SNR=5.4
M56A Emporium 30.31 19 P P 23 20 13.8 -1.1
baz=205
M56A Emporium 30.31 19 P P 23 20 14.2 -0.7
M56A IAmb IAmb 23 20 15.2
comp=Z,21nm,0.8s
TKX Tecate 30.34 314 P P 23 20 14.9 -0.4
M57A Sunshine Farm, 30.53 21 P P 23 20 17.1 +0.3
baz=207,SNR=5.9
M57A Sunshine Farm, 30.53 21 P P 23 20 16.2 -0.7
M57A IAmb IAmb 23 20 17.6
comp=Z,28nm,1.1s
N59A State Game Lan 30.66 23 P P 23 20 17.7 -0.3
baz=210
BELC Belle Mtn. Jos 30.74 317 P P 23 20 20.6 +1.6
baz=126
M58A Price's Panora 30.80 22 P P 23 20 20.8 +1.6
baz=208
TPFO Pinon Flats 30.82 316 P P 23 20 21.2 +1.6
baz=125
PFO Pinyon Flats O 30.82 316 P P 23 20 20.6 +0.9
comp=Z,1.4nm,0.7s,baz=107,slow=12,SNR=4.2
PFO Pinyon Flats O 30.82 316 P P 23 20 19.8 +0.1
O20A White River Ci 30.82 334 P P 23 20 20.8 +1.1
baz=146
109C Camp Elliot, M 30.86 314 P P 23 20 20.0 +0.1
109C IAmb IAmb 23 20 29.9
comp=Z,20nm,1.3s
N60A Cedar Hill Far 30.88 24 P P 23 20 19.2 -0.7
baz=211
GMRC Granite Mounta 30.99 318 P P 23 20 22.6 +1.5
baz=128,SNR=5.5
SRU San Rafael Swe 31.06 330 P P 23 20 21.6 -0.1
L56A Greenwood 31.10 20 P P 23 20 21.1 -0.8
baz=206
L56A Greenwood 31.10 20 P P 23 20 21.3 -0.6
MTPU Mount Pierson 31.11 326 P P 23 20 23.1 +0.6
L57A Andrews Acres 31.22 21 P P 23 20 22.8 -0.2
baz=207
P17A Butcher Ranch, 31.45 330 P P 23 20 25.3 +0.2
M60A Port Jervis 31.45 24 P P 23 20 24.1 -0.9
baz=212
HEC Hector,Ludlow 31.45 318 P P 23 20 27.3 +2.1
baz=127
PAL Palisades 31.47 25 P P 23 20 24.6 -0.6
baz=213
TUQ Turquoise Moun 31.56 319 P P 23 20 28.2 +2.1
baz=128
L58A Harry Jones Me 31.61 22 P P 23 20 25.2 -1.2
baz=209
TCRU Three Creeks R 31.67 327 P P 23 20 28.4 +1.2
K56A Middlesex 31.68 19 P P 23 20 26.3 -0.7
baz=206,SNR=6.2
BINY Binghamton 31.70 21 P P 23 20 27.1 -0.1
baz=209
SHPR Sheep Range 31.76 321 P P 23 20 28.6 +0.6
SHPR IAmb IAmb 23 20 31.9
comp=Z,15nm,1.2s
M61A Granite Spring 31.79 25 P P 23 20 27.4 -0.4
baz=213
SPMN Marine on St. 31.95 358 P P 23 20 28.0 -1.3
baz=177,SNR=23
SPMN Marine on St. 31.95 358 P P 23 20 28.1 -1.3
K57A Scipio Center 31.98 20 P P 23 20 28.2 -1.4
baz=207
L59A Walton 32.03 23 P P 23 20 29.1 -1.0
baz=210
GSC Goldstone, Bar 32.05 318 P P 23 20 33.7 +3.3
baz=127
GSC Goldstone, Bar 32.05 318 P P 23 20 30.5 +0.1
L60A Shokan 32.17 24 P P 23 20 30.6 -0.7
baz=212
MWC Mount Wilson 32.26 315 P P 23 20 31.9 -0.6
MWC IAmb IAmb 23 20 46.5
comp=Z,17nm,1.4s
K22A Casper 32.28 338 P P 23 20 32.0 -0.4
baz=151
K22A Casper 32.28 338 P P 23 20 31.7 -0.8
K22A IAmb IAmb 23 20 33.8
comp=Z,14nm,1.0s
PRN Pahroc Range 32.29 323 P P 23 20 32.7 +0.1
K58A Earlville 32.31 21 P P 23 20 31.5 -1.0
baz=209
J56A Wolcott 32.35 19 P P 23 20 32.4 -0.4
baz=206,SNR=6.1
F36A Milaca 32.63 357 P P 23 20 33.5 -1.7
F36A IAmb IAmb 23 20 38.7

comp=Z,10nm,0.8s
TPNV Topopah Spring 32.71 321 P P 23 20 38.3 +2.0
baz=130,SNR=8.8
TPNV Topopah Spring 32.71 321 P P 23 20 35.7 -0.6
TPNV IAmb IAmb 23 20 51.0
comp=Z,28nm,1.4s
LRMC Laurel Mtn Rad 32.73 317 P P 23 20 38.3 +1.9
baz=126
J57A Williamstown 32.76 20 P P 23 20 34.7 -1.7
baz=208
RSSD Black Hills 32.78 343 P P 23 20 36.5 -0.4
baz=156
FURC Furnace Creek, 32.79 319 P P 23 20 38.9 +2.2
baz=128
MPMC Manual Prospec 32.94 318 P P 23 20 39.7 +1.3
baz=127,SNR=12
J58A Remsen 32.96 21 P P 23 20 37.3 -0.9
baz=209
H53A Bobcaygeon 33.02 16 P P 23 20 37.9 -0.8
baz=202,SNR=9.1
DUG Dugway, Tooele 33.03 328 P P 23 20 40.5 +1.4
baz=138,SNR=5.7
DUG Dugway, Tooele 33.03 328 P P 23 20 38.5 -0.5
DUG IAmb IAmb 23 20 57.4
comp=Z,14nm,1.1s
SADO Sadowa 33.05 16 P P 23 20 36.5 -2.4
comp=Z,39nm,0.8s,baz=224,slow=8.8,SNR=20
R11A Troy Canyon, C 33.23 323 P P 23 20 42.6 +1.8
baz=132,SNR=22
R11A Troy Canyon, C 33.23 323 P P 23 20 42.2 +1.3
R11A IAmb IAmb 23 20 44.9
comp=Z,14nm,1.1s
E38A The Farm, Brul 33.30 359 P P 23 20 38.8 -2.3
I58A Old Forge 33.36 21 P P 23 20 40.5 -1.2
baz=209
ISA Isabella, Lake 33.36 317 P P 23 20 44.1 +2.3
baz=125
ISA Isabella, Lake 33.36 317 P P 23 20 42.4 +0.5
GRAC Grapevine Rang 33.44 320 P P 23 20 44.9 +2.4
baz=128,SNR=15
CWC Cottonwood Cre 33.55 318 P P 23 20 44.7 +1.0
baz=127
BW06 Boulder Array 33.56 335 P P 23 20 44.9 +1.2
baz=146
BW06 Boulder Array 33.56 335 P P 23 20 43.5 -0.1
PDAR Pinedale Array 33.56 335 P P 23 20 43.3 -0.4
comp=Z,2.8nm,1.0s,baz=136,slow=8.5,SNR=11
PDAR PcP **PcP 23 23 25.3 +1.0**
comp=Z,0.2nm,0.3s,baz=117,slow=3.1,SNR=3.0
PDAR ScP **ScP 23 27 14.9 +5.9**
comp=Z,1.0nm,1.0s,baz=134,slow=4.3,SNR=4.2
PDAR Pinedale Array 33.56 335 P P 23 20 42.7 -1.0
ETMB Extrema 33.58 132 eP P 23 20 43.4 -0.5
H57A Richville 33.89 20 P P 23 20 45.6 -0.7
baz=208
G54A Lake Saint Pet 33.91 16 P P 23 20 45.2 -1.3
baz=203,SNR=8.0
TPH Tonopah 34.03 321 P P 23 20 48.4 +0.6
I60A Shoreham 34.11 23 P P 23 20 47.8 -0.4
baz=212
MACA Manacapuru-AM 34.19 116 eP P 23 20 49.1 -0.2
HVU Hansel Valley 34.21 330 P P 23 20 49.7 +0.4
AHID Auburn Hatcher 34.21 333 P P 23 20 49.0 -0.3
AHID IAmb IAmb 23 20 59.0
comp=Z,10nm,0.8s
H58A Gabriels 34.27 22 P P 23 20 48.4 -1.3
baz=210
LONY Lake Ozonia 34.31 21 P P 23 20 48.9 -1.0
baz=209
ALGO Algonquin Park 34.44 16 P P 23 20 49.9 -1.1
baz=203
G57A Newington 34.59 20 P P 23 20 50.6 -1.7
baz=208
PAGB Antelope Grade 34.59 316 P P 23 20 53.4 +0.8
PAGB IAmb IAmb 23 21 11.8
comp=Z,21nm,1.1s
SNOW Snow King Moun 34.63 334 P P 23 20 52.9 -0.1
EYMN Ely 34.64 359 P P 23 20 50.9 -1.9
baz=179,SNR=7.3
ELK Elko 34.70 327 P P 23 20 53.8 +0.2
comp=Z,7.2nm,0.8s,baz=135,slow=5.3,SNR=22
ELK Elko 34.70 327 P P 23 20 53.8 +0.2
ELK IAmb IAmb 23 21 08.8
comp=Z,17nm,1.2s
NV11 Mina Array Sit 34.82 321 P P 23 20 55.8 +1.2
OMMB Old Mammoth Mi 34.85 319 P P 23 20 55.6 +0.6
OMMB IAmb IAmb 23 21 07.1
comp=Z,11nm,1.1s
MDPB Devils Postpil 34.91 319 P P 23 20 56.4 +0.9
MDPB IAmb IAmb 23 21 09.9
comp=Z,17nm,1.0s
NVAR Mina Array Bea 34.91 321 P P 23 20 56.9 +1.4
comp=Z,47nm,0.9s,baz=135,slow=7.2,SNR=189
NVAR PcP **PcP 23 23 28.8 +0.5**
comp=Z,1.3nm,0.8s,baz=70,slow=9.6,SNR=4.9
NVAR ScP **ScP 23 27 20.9 +6.9**
comp=Z,0.9nm,0.8s,baz=135,slow=4.3,SNR=4.5
NVAR LR LR 23 37 23.5
comp=Z,477nm,18.0s,baz=132,slow=40
NVAR Mina Array Bea 34.91 321 P P 23 20 56.8 +1.3
I62A Tamworth 34.91 25 P P 23 20 55.0 -0.1
baz=215
LHV Little Huntoon 34.92 321 P P 23 20 56.9 +1.6
RYN Ryan 35.17 321 P P 23 20 58.2 +0.6
RYN IAmb IAmb 23 21 01.6
comp=Z,16nm,1.0s
AGMN Agassiz Nation 35.23 354 P P 23 20 56.3 -1.4
baz=172
PMPB Monarch Peak 35.23 316 P P 23 20 58.3 +0.2
PMPB IAmb IAmb 23 21 11.8
comp=Z,28nm,1.2s
SAML Samuel 35.31 127 P P 23 20 57.4 -1.5
SAML IAmb IAmb 23 21 09.7
comp=Z,12nm,1.1s
RLMT Red Lodge 35.42 337 P P 23 20 59.5 -0.2
baz=148
WAKR Walker 35.66 320 P P 23 21 02.9 +1.0
WAKR IAmb IAmb 23 21 04.7
comp=Z,16nm,1.1s
YHH Holmes Hill 35.75 336 P P 23 21 02.5 -0.2
E56A St. Veronique 35.85 19 P P 23 21 03.3 +0.1
baz=207,SNR=7.6
CMB Columbia Colle 35.98 319 P P 23 21 04.9 +0.4
CMB IAmb IAmb 23 21 14.6
comp=Z,11nm,1.0s
E57A Chemin Saint G 36.02 20 P P 23 21 04.6 -0.1
baz=209
QLMT Earthquake Lak 36.02 335 P P 23 21 06.1 +1.2
PNTR Pine Nut 36.11 321 P P 23 21 05.8 0.0
PNTR IAmb IAmb 23 21 09.0
comp=Z,22nm,0.8s
D55A Sainte-Anne-du 36.14 18 P P 23 21 04.9 -0.8
baz=206,SNR=11
HLID Hailey 36.35 331 P P 23 21 08.8 +1.1
baz=139,SNR=11
HLID Hailey 36.35 331 P P 23 21 08.0 +0.3
D56A ZEC Mazanza, M 36.39 19 P P 23 21 06.8 -1.0
baz=207
F60A Warwick 36.42 23 P P 23 21 06.8 -1.2
baz=212
VLDQ Val d'Or 36.59 15 P P 23 21 08.3 -1.1
BOZ Bozeman (W) 36.73 336 P P 23 21 11.6 +0.7
baz=145
AFDM Forest Hills D 36.88 320 P P 23 21 12.4 +0.2
MFID Camas Ranch 36.93 329 P P 23 21 12.5 -0.1
MFID IAmb IAmb 23 21 28.6
comp=Z,18nm,1.1s
LPAZ La Paz 37.00 142 P P 23 21 14.7 +0.7
comp=Z,2.1nm,0.9s,baz=343,slow=9.8,SNR=4.8
LPAZ LR LR 23 37 16.3
comp=Z,312nm,19.2s,baz=324,slow=38
LPAZ La Paz 37.00 142 P P 23 21 14.5 +0.5
LPAZ La Paz 37.00 142 eP P 23 21 15.2 +1.2
ULM Lac du Bonnet 37.16 355 P P 23 21 12.1 -2.2
comp=Z,34nm,0.8s,baz=178,slow=8.8,SNR=23
ULM LR LR 23 39 49.9
comp=Z,852nm,18.3s,baz=172,slow=42
LRM Limekiln Ridge 37.25 335 P P 23 21 15.7 +0.3
ORV Oroville 37.57 320 P P 23 21 19.2 +1.2
LSQQ Lebel-sur-Quev 37.58 15 P P 23 21 16.6 -1.3
baz=203
PB16 IPOC Station P 37.82 145 P P 23 21 20.7 -0.2
EGMT Eagleton 38.08 339 P P 23 21 22.3 +0.1
baz=150,SNR=5.4
O03E Paynes Creek 38.20 321 P P 23 21 24.3 +0.9
baz=126,SNR=8.8

J08A Circle Bar Ran 38.24 327 P P 23 21 24.3 +0.5
MOD Modoc Plateau 38.29 324 P P 23 21 24.1 -0.1
MOD IAmb IAmb 23 21 31.6
comp=Z,13nm,1.1s
MNMC Minye Minye 38.42 146 P P 23 21 26.1 +0.5
MNMC IAmb IAmb 23 21 42.1
comp=Z,28nm,1.1s
D62A Allapoint, All 38.46 24 P P 23 21 24.3 -1.0
baz=216
D62A Allapoint, All 38.46 24 P P 23 21 24.4 -1.0
D62A IAmb IAmb 23 21 26.2
comp=Z,16nm,1.0s
MDP Montagnes des 38.66 98 P P 23 21 25.0 -2.4
comp=Z,8.7nm,1.1s,baz=341,slow=10,SNR=2.0
MSO Missoula 38.67 335 P P 23 21 27.8 +0.5
baz=143
CHGQ Chibougamau 39.06 17 P P 23 21 28.9 -1.5
baz=206,SNR=7.7
M04C Macdoel 39.11 323 P P 23 21 32.3 +1.2
baz=128,SNR=10
ITTB Itaituba 39.12 114 eP P 23 21 31.2 -0.1
N02D Trinity Center 39.15 321 P P 23 21 30.6 -0.7
baz=126
I07A Izee 39.28 327 P P 23 21 32.4 0.0
MALB Monte Alegre 39.38 110 eP P 23 21 35.0 +1.6
M02C Callahan 39.48 321 P P 23 21 33.9 -0.3
baz=126
K04D Chiloquin, OR 39.58 324 P P 23 21 36.0 +1.1
baz=129
YBH Yreka Blue Hor 39.60 322 P P 23 21 34.1 -0.9
comp=Z,4.1nm,0.7s,baz=122,slow=3.3,SNR=12
L04D Klamath Falls 39.65 323 P P 23 21 35.9 +0.4
baz=128,SNR=14
J05D Fort Rock, OR 39.70 325 P P 23 21 37.1 +1.1
baz=130
PINE Pine Mountain 39.87 326 P P 23 21 36.7 -0.7
PINE IAmb IAmb 23 21 48.8
comp=Z,14nm,0.9s
JCC Jacoby Creek, 39.88 320 P P 23 21 37.1 -0.2
VILB Vilhena 40.08 129 eP P 23 21 40.1 +0.8
J04D Umpqua Nationa 40.17 324 P P 23 21 41.3 +1.4
baz=129,SNR=19
HUMO Hull Mountain 40.27 323 P P 23 21 40.1 -0.4
L02E Cave Junction 40.39 322 P P 23 21 41.9 +0.4
baz=126
I05D Terrebonne, OR 40.44 326 P P 23 21 43.8 +1.8
baz=131
I04A Tendick Farm, 40.69 325 P P 23 21 44.4 +0.4
baz=129,SNR=7.0
NPGB Novo Progresso 40.71 118 eP P 23 21 43.4 -1.2
K02D Willamette Mer 40.74 322 P P 23 21 45.0 +0.5
baz=126
MCPB Macapa, AP 40.87 106 eP P 23 21 45.6 -0.3
G05D Wamic, OR 41.02 327 P P 23 21 48.8 +2.1
baz=132
H04A Detroit Lake 41.12 326 P P 23 21 47.8 +0.1
H04A IAmb IAmb 23 22 06.0
comp=Z,40nm,1.1s
NEW Newport 41.15 333 P P 23 21 47.1 -0.6
comp=Z,5.0nm,0.6s,baz=121,slow=8.2,SNR=13
NEW Newport 41.15 333 P P 23 21 47.7 0.0
baz=139,SNR=7.6
I03D Drain, OR 41.16 324 P P 23 21 48.8 +0.9
baz=128,SNR=8.4
J01E Myrtle Point 41.18 323 P P 23 21 49.7 +1.8
baz=127,SNR=16
H04D Lebanon 41.33 325 P P 23 21 49.3 +0.1
baz=129,SNR=6.4
SIV San Ignacio 41.43 134 P P 23 21 50.1 -0.3
comp=Z,12nm,0.8s,baz=310,slow=8.5,SNR=40
F05D White Salmon 41.52 328 P P 23 21 52.7 +1.9
baz=132,SNR=5.6
LVC Limon Verde 41.65 148 LR LR 23 37 21.8
comp=Z,166nm,21.3s,baz=319,slow=34
LVC Limon Verde 41.65 148 P P 23 21 51.7 -0.8
COR Corvallis 41.68 325 P P 23 21 52.0 -0.1
I02D Swisshome 41.69 324 P P 23 21 53.7 +1.5
baz=128
G03D McMinnville, O 42.05 326 P P 23 21 56.1 +1.0
baz=129
FFC Flin Flon 42.32 351 P P 23 21 56.3 -0.9
FFC IAmb IAmb 23 21 56.9
comp=Z,15nm,0.8s
CLDB Colider 42.33 123 eP P 23 21 56.9 -0.9
PTLB Pontes e Lacer 42.46 131 eP P 23 21 58.9 +0.1
D04E Lakebay 43.06 328 P P 23 22 03.9 +0.7
baz=131
B05A Bryant 43.45 330 P P 23 22 06.1 -0.3
baz=133,SNR=5.9
D03D Eldon 43.46 328 P P 23 22 06.9 +0.4
baz=131
NLWA Neilton Lookou 43.77 328 P P 23 22 09.3 +0.2
NLWA IAmb IAmb 23 22 10.8
comp=Z,45nm,1.4s
A04D Lummi Island 44.06 330 P P 23 22 12.0 +0.7
baz=133,SNR=15
PRPB Parauapebas 45.20 113 eP P 23 22 21.2 +0.3
TMAB Tom-Au,PA,Br 45.28 107 eP P 23 22 22.4 +0.8
SCHQ Schefferville 45.64 19 P P 23 22 21.9 -1.9
comp=Z,73nm,1.0s,baz=220,slow=7.4,SNR=25
SCHQ LR LR 23 42 33.8
comp=Z,2µm,18.7s,baz=214,slow=38
SCHQ Schefferville 45.64 19 P P 23 22 22.1 -1.8
SMTB Santa Maria do 48.35 115 eP P 23 22 47.5 +1.8
ROSB Rosrio 49.18 106 eP P 23 22 53.3 +1.3
PEXB Peixe 49.24 119 eP P 23 22 52.7 +0.3
CPUP Villa Florida 51.14 140 P P 23 23 04.9 -1.8
comp=Z,2.4nm,0.9s,baz=326,slow=11,SNR=5.2
CPUP LR LR 23 45 47.2
comp=Z,254nm,18.5s,baz=318,slow=37
CPUP Villa Florida 51.14 140 P P 23 23 05.6 -1.1
CPUP IAmb IAmb 23 23 18.6
comp=Z,16nm,1.4s
CPUP Villa Florida 51.14 140 eP P 23 23 07.1 +0.5
BDFB Brasilia 51.26 123 P P 23 23 07.1 -0.8
comp=Z,0.8nm,0.4s,baz=288,slow=9.6,SNR=1.6
YKA Yellowknife Ar 52.03 346 P P 23 23 11.8 -0.9
comp=Z,12nm,0.9s,baz=144,slow=7.6,SNR=27
YKA PcP **PcP 23 24 25.0 +0.1**
comp=Z,6.3nm,0.9s,baz=140,slow=4.0,SNR=8.3
YKA LR LR 23 47 57.8
comp=Z,293nm,20.3s,baz=0.0,slow=39
SDBA SAO DESIDERIO 52.30 117 eP P 23 23 18.0 +2.4
FRB Frobisher Bay 52.88 12 P P 23 23 16.6 -2.4
comp=Z,11nm,0.8s,baz=229,slow=8.1,SNR=4.7
TAOE Nuku Hiva Isla 53.51 248 eLR LR 23 38 35.7
comp=Z,490nm,25.7s
DLBC Dease Lake 53.78 336 P P 23 23 25.6 -0.3
comp=Z,15nm,0.7s,baz=152,slow=5.3,SNR=24
DLBC Dease Lake 53.78 336 P P 23 23 26.6 +0.6
DLBC IAmb IAmb 23 23 27.9
comp=Z,19nm,0.9s
ITQB Itaqui 53.99 143 eP P 23 23 28.6 +0.9
ITAB Concordia 55.11 137 eP P 23 23 36.5 +0.6
VAO Valinhos 56.14 130 eP P 23 23 44.8 +1.2
RKT Rikitea 56.18 230 eS S 23 31 33.3 -0.1
comp=Z,410nm,36.2s
RKT eLR LR 23 40 15.8
comp=Z,400nm,27.5s
PLCA Paso Flores 56.90 162 LR LR 23 43 33.2
comp=Z,275nm,18.2s,baz=339,slow=31
GDU01 Guandu, BA 57.53 116 eP P 23 23 56.1 +2.7
RCBR Riachuelo 57.88 106 P P 23 23 55.2 -0.8
LL01 San Ignacio de 57.88 164 P P 23 23 54.9 -0.4
LL01 IAmb IAmb 23 24 07.0
comp=Z,18nm,1.4s
BSFB Barra de Sao F 58.77 122 eP P 23 24 02.6 +0.6
NAN01 Guarapari, ES 58.91 120 eP P 23 24 04.0 +1.0
RIB01 Linhares ES 59.38 122 eP P 23 24 07.9 +1.6
SFJD Kangerlussuaq 59.98 17 LR LR 23 51 21.1
comp=Z,1µm,18.0s,baz=224,slow=38
TGL Tana Glacier 60.45 334 P P 23 24 13.7 +0.5
BCAR Beaver Creek A 61.16 336 P P 23 24 17.9 0.0
GLB Gilahina Butte 61.20 334 P P 23 24 18.9 +0.7
INK Inuvik 61.48 343 P P 23 24 19.0 -0.8
comp=Z,10nm,0.8s,baz=115,slow=8.5,SNR=23
N25K Chitina, Valde 61.61 334 P P 23 24 22.1 +1.2
baz=117,SNR=6.2
N25K Chitina, Valde 61.61 334 P P 23 24 21.0 0.0
K27K Chicken 61.77 337 P P 23 24 22.4 +0.5
baz=121
EGAK Eagle 61.82 338 P P 23 24 21.1 -1.0
EGAK IAmb IAmb 23 24 24.8
comp=Z,8.2nm,1.0s
KLU Klutina 62.13 334 P P 23 24 24.7 +0.3
SCRK Sand Creek 62.47 337 P P 23 24 27.0 +0.3

baz=119
SCM Sheep Creek Mo 62.88 334 P P 23 24 29.4 0.0
SEW Seward 63.16 331 P P 23 24 31.6 +0.4
O22K Cooper Landing 63.42 332 P P 23 24 32.9 -0.1
GHO Glory Hole Cre 63.55 333 P P 23 24 33.6 -0.3
PMR Palmer 63.57 333 P P 23 24 33.7 -0.2
RC01 Rabbit Creek A 63.65 332 P P 23 24 34.7 +0.2
baz=112
PRP Porcupine Dome 63.79 338 P P 23 24 35.4 -0.1
PRP IAmb IAmb 23 24 37.2
comp=Z,12nm,1.0s
HDA Harding Lake 63.82 336 P P 23 24 35.3 -0.3
baz=116
HDA Harding Lake 63.82 336 P P 23 24 35.3 -0.3
HDA IAmb IAmb 23 24 39.0
comp=Z,6.5nm,0.8s
IL31 63.96 337 P P 23 24 36.0 -0.4
IL31 IAmb IAmb 23 24 36.7
comp=Z,20nm,1.4s
ILAR Eielson Array 63.96 337 P P 23 24 35.9 -0.6
comp=Z,5.9nm,0.9s,baz=121,slow=5.2,SNR=29
RND Reindeer 64.17 335 P P 23 24 37.7 -0.2
MCK McKinley 64.33 335 P P 23 24 39.0 0.0
baz=114
CUT Chulitna 64.38 334 P P 23 24 39.5 +0.3
baz=112
BMAR Burnt Mountain 64.38 340 P P 23 24 39.1 -0.1
MDM Murphy Dome 64.56 337 P P 23 24 40.1 -0.4
BWN Browne 64.72 336 P P 23 24 41.1 -0.4
RSO Redoubt South 64.83 331 P P 23 24 42.4 -0.1
I23K Minto, Yukon-K 65.07 337 P P 23 24 43.6 -0.1
baz=114,SNR=5.6
I23K Minto, Yukon-K 65.07 337 P P 23 24 43.0 -0.7
I23K IAmb IAmb 23 24 44.4
comp=Z,10nm,0.9s
KTH Kantishna Hill 65.08 335 P P 23 24 43.5 -0.4
PPLA Purkeypile 65.38 334 P P 23 24 45.4 -0.5
PPT Papeete 65.41 244 LR LR 23 46 30.8
comp=Z,219nm,18.8s,baz=7.5,slow=30
PPT2 Papeete2 65.42 244 eS S 23 33 31.5 -0.2
comp=Z,131nm,24.5s
PPT2 Papeete2 65.42 244 eLR LR 23 44 10.5
comp=Z,564nm,25.5s,baz=63
MLY Manley 65.56 336 P P 23 24 46.9 -0.1
baz=112,SNR=7.5
COLD Coldfoot 66.23 339 P P 23 24 51.7 +0.5
baz=114
SVW2 Sparrevohn 66.34 331 P P 23 24 51.0 -1.0
TOLK Toolik Lake Re 66.60 340 P P 23 24 53.5 -0.1
baz=115,SNR=7.8
TBI Tubuai 67.75 238 eS S 23 34 00.3 +0.6
comp=Z,162nm,30.5s
TBI Tubuai 67.75 238 eLR LR 23 45 15.1
comp=Z,427nm,29.8s,baz=62
EKA Eskdalemuir Ar 78.03 36 P P 23 25 59.2 -2.8
comp=Z,1.8nm,0.8s,baz=263,slow=5.0,SNR=3.7
ESDC Sonseca Array 79.44 52 P P 23 26 06.7 -3.5
comp=Z,3.9nm,0.9s,baz=287,slow=4.8,SNR=12
ESDC LR LR 23 58 52.8
comp=Z,187nm,18.3s,baz=290,slow=34
ESBB Sonseca Array 79.44 52 P P 23 26 07.4 -2.8
ESBB IAmb IAmb 23 26 17.5
comp=Z,15nm,1.2s
SPITS Spitsbergen Ar 80.67 12 LR LR 00 03 48.5
comp=Z,853nm,19.6s,baz=250,slow=37
KOWA Kowa 83.90 77 P P 23 26 33.2 -0.9
comp=Z,14nm,0.9s,baz=284,slow=5.8,SNR=13
KOWA Kowa 83.90 77 P P 23 26 32.9 -1.2
NOA NORSAR Array B 84.37 29 P P 23 26 34.9 -0.8
comp=Z,0.9nm,0.8s,baz=304,slow=7.9,SNR=2.3
NOA LR LR 00 01 43.8
comp=Z,221nm,21.7s,baz=280,slow=34
TIC Toumodi 84.60 84 eP P 23 26 37.4 -0.3
LIC Lamto 84.68 85 eP P 23 26 37.9 -0.2
comp=Z,48nm,0.7s
DBIC Dimbokro 84.75 84 P P 23 26 37.5 -0.9
comp=Z,11nm,0.8s,baz=259,slow=4.5,SNR=7.5
DBIC LR LR 23 59 24.8
comp=Z,209nm,19.2s,baz=340,slow=32
DBIC Dimbokro 84.75 84 P P 23 26 37.6 -0.9
KIC Kosan Boka 84.93 85 eP P 23 26 39.2 -0.2
comp=Z,39nm,0.9s
HFS Hagfors 85.82 29 P P 23 26 40.4 -2.5
comp=Z,5.2nm,0.8s,baz=50,slow=2.3,SNR=2.2
HFS LR LR 00 07 26.3
comp=Z,178nm,18.1s,baz=285,slow=38
ARCES ARCESS Array B 86.58 18 P P 23 26 43.7 -2.8
comp=Z,3.2nm,0.7s,baz=292,slow=4.8,SNR=2.4
ARCES LR LR 00 05 51.1
comp=Z,339nm,19.9s,baz=280,slow=36
FUORN Ofenpass-Fuorn 88.08 43 P P 23 26 53.0 -1.6
FUORN IAmb IAmb 23 27 04.9
comp=Z,7.3nm,1.0s
CLL Collm 88.35 38 eP P 23 26 54.0 -1.4
KHC Kasperske Hory 89.42 39 eP P 23 26 58.9 -1.6
GERES GERESS Array B 89.59 40 P P 23 26 59.4 -2.0
comp=Z,1.2nm,0.8s,baz=306,slow=3.1,SNR=5.2
GERES LR LR 00 02 25.4
comp=Z,162nm,19.4s,baz=260,slow=33
GERES GERESS Array B 89.59 40 P P 23 26 59.0 -2.4
TOA0 Torodi Ar. Sit 89.60 77 P P 23 27 00.1 -1.9
TOA0 IAmb IAmb 23 27 01.4
comp=Z,7.4nm,1.4s
TORD Torodi Ar. Bea 89.60 77 P P 23 26 59.7 -2.3
comp=Z,1.1nm,0.7s,baz=293,slow=5.4,SNR=5.4
TORD LR LR 00 04 30.9
comp=Z,159nm,19.5s,baz=40,slow=34
TORD Torodi Ar. Bea 89.60 77 P P 23 27 00.1 -1.9
OSTC Ostas 90.51 38 eP P 23 27 04.5 -1.1
KEST Kesra 90.58 53 LR LR 00 01 21.8
comp=Z,92nm,19.2s,baz=257,slow=32
DPC Dobruska-Polom 90.65 38 eP P 23 27 05.1 -1.2
FINES FINESS Array B 90.80 25 LR LR 00 08 26.6
comp=Z,298nm,18.7s,baz=297,slow=36
VYHS Vyhne 92.88 39 eP P 23 27 15.2 -1.4
NRIK Noril'sk 97.67 1 LR LR 00 14 53.1
comp=Z,554nm,20.1s,baz=21,slow=38
AKASG Malin Array Be 97.85 34 LR LR 00 14 46.0
comp=Z,134nm,18.0s,baz=270,slow=37
DZM Mont Dzumac 106.34 251 eLR LR 00 03 26.2
comp=Z,178nm,28.4s
BOSA Boshof 119.12 115 PKP PKiKP 23 32 54.2 +0.8
comp=Z,7.3nm,0.9s,baz=332,slow=2.1,SNR=8.5
MKAR Makanchi Array 119.98 5 PKP PKPdf 23 32 53.3 -1.1
comp=Z,0.6nm,0.8s,baz=46,slow=3.5,SNR=2.0
HHC Hu-ho-hao-te 122.31 340 ePKP PKiKP 23 32 59.6 +0.2
WMQ Urumqi 123.24 1 ePKP PKPdf 23 33 00.1 -0.7
WMQ LR LR
comp=Z,670nm,29.0s
GTA Gaotai 126.70 350 ePKP PKPdf 23 33 07.0 -0.7
LZH Lanzhou 129.02 345 ePKP PKiKP 23 33 15.3 +2.4
LZH sPKP 23 33 27.4
WRA Warramunga Arr 136.15 255 PKP PKPdf 23 33 24.4 -1.4
comp=Z,1.2nm,0.7s,baz=92,slow=2.5,SNR=7.1
WRA Warramunga Arr 136.15 255 PKPdf 23 33 25.1 -0.7
ASAR Alice Springs 136.32 250 PKP PKPdf 23 33 26.9 +0.9
comp=Z,1.0nm,0.8s,baz=99,slow=2.0,SNR=9.9
ASAR Alice Springs 136.32 250 PKPdf 23 33 24.2 -1.9
FITZ Fitzroy Crossi 144.44 257 PKP PKPbc 23 33 39.9 +0.6
comp=Z,1.5nm,0.8s,baz=116,slow=4.1,SNR=2.2
CM34 Chiang Mai Arr 146.62 342 P PKPbc 23 33 46.0 -0.1
CMMT Chiang Mai 146.72 343 P PKPbc 23 33 46.5 +0.1
comp=Z,378nmcomp=Z,15nm,1.9s
LAMP Lampang 146.78 341 P PKPab 23 33 48.4 +0.6
comp=Z,666nmcomp=Z,36nm,0.9s
CM32 Chiang Mai Arr 146.90 343 P PKPab 23 33 48.0 -0.2
CM09 Chiang Mai Arr 147.05 342 P PKPab 23 33 48.5 -0.2
comp=Z,209nmcomp=Z,26nm,0.9s
CM31 Chiang Mai Arr 147.05 342 P PKPab 23 33 49.0 +0.2
CMAR Chiang Mai Arr 147.05 342 PKPbc PKPbc 23 33 47.2 -0.2
comp=Z,2.2nm,0.3s,baz=342,slow=3.8,SNR=8.3
CMAR Chiang Mai Arr 147.05 342 PKPdf 23 33 45.6 +0.3
CM15 Chiang Mai Arr 147.06 343 P PKPab 23 33 48.9 +0.1
comp=Z,20nm,0.5s
CM02 Chiang Mai Arr 147.07 342 P PKPab 23 33 48.4 -0.5
comp=Z,181nmcomp=Z,22nm,0.9s
CM01 Chiang Mai Arr 147.09 342 P PKPab 23 33 49.0 +0.1
comp=Z,160nmcomp=Z,18nm,0.9s
CM04 Chiang Mai Arr 147.10 342 P PKPab 23 33 48.5 -0.4
comp=Z,201nmcomp=Z,24nm,1.0s
CM13 Chiang Mai Arr 147.10 343 P PKPbc 23 33 48.0 +0.5
comp=Z,188nmcomp=Z,16nm,0.8s
CM05 Chiang Mai Arr 147.11 342 P PKPbc 23 33 48.2 +0.8
comp=Z,176nmcomp=Z,18nm,1.1s
UTTA Uttaradit 147.21 339 P PKPab 23 33 48.9 -0.4
comp=Z,312nmcomp=Z,43nm,1.0s

UBPT	**Khong Chiam** comp=Z,18nm,1.4s	**147.35**	330	P	**PKiKP**	**23 33 56.0**	**+5.5**
MHMT	**Maesarieng** comp=Z,720nmcomp=Z,34nm,1.0s	**147.60**	344	P	**PKiKP**	**23 33 55.0**	**+4.0**
KHON	**Khomkaen** comp=Z,52nm,0.4s	**147.63**	335	P	**PKiKP**	**23 33 51.3**	**+0.2**
SUKH	**Sukhothai** comp=Z,45nm,0.9s	**147.76**	341	P	**PKiKP**	**23 33 50.8**	**-0.5**
PHIT	**Phitsamulok** comp=Z,197nm,0.9s	**147.77**	339	P	**PKiKP**	**23 33 51.0**	**-0.4**
HYB	**Hyderabad**	**147.87**	19	*i* PKP	**PKPdf**	**23 33 48.0**	**+1.2**
CHAI	**Chaiyaphum** comp=Z,21nm,1.0s	**148.37**	336	P	**PKPab**	**23 33 59.6**	**+5.6**

*BGR **08** 23:15:34.4±0.8, 37.76N×21.49E, h10km, Ms4.1, Error ellipse: s-maj=41.1km s-min=11.1km az=56.0*
*BJI **08** 23:15:38.2±0.0, 38.13N×20.36E, h5km, mB5.2/49, mb5.0/65, Ms5.2/48, Ms7 4.8/44*
*TIR **08** 23:15:40.0, 38.07N×20.21E, h12km±2km, Md5.1*
*HLW **08** 23:15:41.1, 38.13N×21.14E, h10km±30km, Md5.5, Ml5.4*
*MOS **08** 23:15:42.7±1.1, 38.20N×20.38E, h27km, mb5.2/34, MS4.6/32, Error ellipse: s-maj=4.3km s-min=2.6km az=84.6*
*MED_RC **08** 23:15:42.0±0.5, 37.99N×20.44E, h10km, MW5.1/13, Moment Tensor Solution. Body waves: s4,c4;Mantle waves: s13,c16; Duration: 1s4 Moment tensor: Scale 10^16Nm; Mrr2.11±.24; Mθθ-0.57±.23; Mφφ-1.54±.26; Mrθ1.19±1.12; Mθφ5.23±.16; Mφr0.36±.79; Best double couple: Mo5.52000×10^16 NP1:φs1.00000°, δ71.00000°, λ165.00000°. NP2:φs95.00000°, δ76.00000°, λ20.00000°. Principal axes: T 4.6900, Plg24.0000°, Azm319.0000°; N 1.6500, Plg66.0000°, Azm129.0000°; P -6.3400, Plg4.0000°, Azm227.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*
*BEO **08** 23:15:42.0±0.6, 38.02N×20.26E, h15km±3km, ML5.2/18*
*PDG **08** 23:15:42.3±0.6, 38.17N×20.36E, h13km±1km, MD5.6/10, ML5.2/12, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
*THE **08** 23:15:42.0, 38.09N×20.36E, h0km±1km, ML5.1/20, Error ellipse: s-maj=1.9km s-min=0.7km az=254.0*
*ATH **08** 23:15:42.3, 38.10N×20.44E, h18km, ML5.0/14, Error ellipse: s-maj=1.7km s-min=0.8km az=55.0*
*IDC **08** 23:15:43.2±2.4, 38.21N×20.42E, h20km±15km, mb4.6/43, mb1 4.7/54, mb1mx4.6/64, mbtmp4.7/54, ML4.5/11, MS4.6/39, Ms1 4.6/39, ms1mx4.5/55, Error ellipse: s-maj=8.6km s-min=7.5km az=89.0*
*NEIC **08** 23:15:43.8±1.9, 38.13N±0.05×20.37E±0.05, h21km±3km, Error ellipse: s-maj=7.9km s-min=5.6km az=197.0*
*GCMT **08** 23:15:44.2±0.2, 38.01N±0.01×20.31E±0.01, h16km, MW5.1/135, Moment Tensor Solution. s66,c86; s135,c240; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.24±.12; Mθθ-2.44±.11; Mφφ0.19±.10; Mrθ0.86±.29; Mθφ5.28±.09; Mφr2.25±.31; Best double couple: Mo6.22000×10^16 NP1:φs88.00000°, δ64.00000°, λ21.00000°. NP2:φs348.00000°, δ71.00000°, λ152.00000°. Principal axes: T 5.8160, Plg33.0000°, Azm306.0000°; N 0.8030, Plg57.0000°, Azm136.0000°; P -6.6240, Plg5.0000°, Azm39.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **08** 23:15:46, 38.03N×20.39E, h22km, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr2.60; Mθθ-3.06; Mφφ0.45; Mrθ1.02; Mθφ5.41; Mφr1.41; Fault plane solution: Mo6.36000×10^16 NP1:φs85.00000°, δ68.00000°, λ23.00000°. NP2:φs346.00000°, δ68.00000°, λ157.00000°. Principal axes: T 5.4514, Plg31.0000°, Azm306.0000°; N 1.5333, Plg59.0000°, Azm126.0000°; P -6.9847, Plg0.0000°, Azm36.0000°;*
*GII **08** 23:15:51.6±0.0, 37.39N×21.48E, h1km, mb5.0/2, MD5.1/2*
ISC 08 23:15:42.9±0.4, **38.12N**±0.02×**20.43E**±0.02, **h18**km±2km, **h18**km:**pP-P, n1229,** σ1**88**/1406, **mb5.1**/199, **MS4.7**/53, **86C-34D, Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DMLN	**Damoulianata-K**	**0.12**	**339**	P		**Pg**		**23 15 46.8**	**0.0**
DMLN				S		**Sg**		**23 15 50.0**	**+0.6**
KEF4	**Livadi, Kephal**	**0.13**	**358**	P		**Pg**		**23 15 47.1**	**+0.3**
KEF4				S		**Sb**		**23 15 49.7**	**+0.3**
VLS	**Valsamata**	**0.14**	**67**	P		**Pg**		**23 15 46.4**	**-0.6**
VLS	**Valsamata**	**0.14**	**67**	P		**Pg**		**23 15 46.5**	**-0.4**
VLS				S		**Sg**		**23 15 49.6**	**-0.1**
VLS	**Valsamata**	**0.14**	**67**	P		**Pg**		**23 15 46.5**	**-0.4**
VLS				S		**Sg**		**23 15 49.6**	**-0.1**
	851μm,0.7s								
KEF5	**Kardakata, Kep**	**0.16**	**11**	P		**Pg**		**23 15 47.1**	**-0.1**
KEF5				S		**Sg**		**23 15 50.3**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.31**	**143**	P		**Pg**		**23 15 48.6**	**-1.0**
VLMS				S		**Sg**		**23 15 53.5**	**-0.6**
VLMS					AML	AML		23 15 54.6	
VLMS					AML	AML		23 15 59.5	
VLMS	**Volimes, Zakyn**	**0.31**	**143**	P		**Pg**		**23 15 48.7**	**-0.8**
VLMS				S		**Sg**		**23 15 53.6**	**-0.5**
ZAK2	**Zakynthos**	**0.50**	**132**	P		**Pg**		**23 15 51.5**	**-1.4**
ZAK2				S		**Sg**		**23 15 59.0**	**-0.7**
EVGI	**Lefkada island**	**0.53**	**20**	P		**Pg**		**23 15 52.8**	**-0.7**
EVGI	**Lefkada island**	**0.53**	**20**	P		**Pg**		**23 15 53.2**	**-0.3**
EVGI				S		**Sb**		**23 16 02.1**	**+1.1**
KRI1	**kERI**	**0.55**	**146**	P		**Pg**		**23 15 52.8**	**-1.1**
KRI1				S		**Sb**		**23 16 01.6**	**-0.1**
MGNA	**Meganis**	**0.60**	**28**	P		**Pg**		**23 15 54.4**	**-0.5**
MGNA				S		**Sb**		**23 16 03.6**	**+0.5**
MGNA					AML	AML		23 16 08.2	
MGNA					AML	AML		23 16 08.3	
NYDR	**Nydri-Lefkada**	**0.62**	**20**	P		**Pg**		**23 15 54.7**	**-0.5**
NYDR	**Nydri-Lefkada**	**0.62**	**20**	P		**Pg**		**23 15 54.8**	**-0.5**
LKD2	**Lefkada island**	**0.69**	**15**	P		**Pb**		**23 15 55.6**	**-0.8**
LKD2				S		**Sb**		**23 16 06.7**	**+1.2**
LKD2					AML	AML		23 16 16.1	
LKD2					AML	AML		23 16 16.3	
LKD2	**Lefkada island**	**0.69**	**15**	P		**Pb**		**23 15 55.9**	**-0.6**
	baz=25								
LKD2				S		**Sn**		**23 16 08.4**	**+0.3**
	baz=25								
LKD2	**Lefkada island**	**0.69**	**15**	P		**Pb**		**23 15 55.8**	**-0.6**
LKD2				S		**Sb**		**23 16 06.8**	**+1.2**
	133μm,0.8s								
TSLK	**Tsoukalades, L**	**0.72**	**14**	P		**Pb**		**23 15 56.4**	**-0.5**
TSLK	**Tsoukalades, L**	**0.72**	**14**	P		**Pb**		**23 15 56.5**	**-0.5**
PDO	**Prodromos**	**0.76**	**51**	P		**Pb**		**23 15 57.0**	**-0.6**
PDO					AML	AML		23 16 17.3	
PDO					AML	AML		23 16 18.5	
PDO	**Prodromos**	**0.76**	**51**	P		**Pb**		**23 15 57.0**	**-0.6**
PDO				S		**Sn**		**23 16 09.9**	**+0.1**
	312μm,0.6s								
RLS	**Riolos of Patr**	**0.82**	**94**	P		**Pb**		**23 15 57.7**	**-1.0**
RLS				S		**Sg**		**23 16 10.1**	**+0.4**
RLS					AML	AML		23 16 21.1	
RLS					AML	AML		23 16 22.2	
RLS	**Riolos of Patr**	**0.82**	**94**	P		**Pb**		**23 15 57.9**	**-0.7**
RLS				S		**Sg**		**23 16 10.4**	**+0.6**
	64μm,0.7s								
DRO	**Drossia**	**1.03**	**99**	P		**Pb**		**23 16 01.6**	**-0.6**
DRO				S		**Sb**		**23 16 15.8**	**+0.4**
DRO					AML	AML		23 16 24.6	
DRO					AML	AML		23 16 26.1	
DRO	**Drossia**	**1.03**	**99**	P		**Pb**		**23 16 01.6**	**-0.6**
DRO				S		**Sn**		**23 16 18.2**	**+1.8**
	127μm,0.9s								
AMT	**Artemida-Makis**	**1.17**	**120**	P		**Pn**		**23 16 04.3**	**-0.2**
AMT					AML	AML		23 16 34.2	
AMT					AML	AML		23 16 34.6	
AMT	**Artemida-Makis**	**1.17**	**120**	P		**Pn**		**23 16 04.2**	**-0.2**
AMT				S		**Sg**		**23 16 22.7**	**+1.8**
	120μm,0.7s								
EFP	**Efpalio**	**1.20**	**75**	P		**Pn**		**23 16 04.7**	**-0.1**
EFP				S		**Sn**		**23 16 21.2**	**+0.5**
EFP					AML	AML		23 16 30.7	
EFP					AML	AML		23 16 32.8	
EFP	**Efpalio**	**1.20**	**75**	P		**Pn**		**23 16 04.5**	**-0.3**
EFP				S		**Sg**		**23 16 24.8**	**+3.0**
	85μm,1.0s								
LAKA	**Lakka**	**1.23**	**84**	P		**Pn**		**23 16 05.5**	**+0.3**
TRIZ	**Trizonia**	**1.32**	**79**	P		**Pn**		**23 16 06.2**	**-0.2**
TRIZ	**Trizonia**	**1.32**	**79**	P		**Pn**		**23 16 06.4**	**0.0**
TRIZ				S		**Sg**		**23 16 27.3**	**+1.8**
	61μm,0.9s								
ALIK	**Aliki, Aigiali**	**1.33**	**84**	P		**Pb**		**23 16 07.4**	**+0.1**
ALIK				S		**Sg**		**23 16 29.1**	**+3.1**
EVR	**Evrytania**	**1.34**	**53**	P		**Pn**		**23 16 07.1**	**+0.2**
EVR					AML	AML		23 16 32.2	
EVR					AML	AML		23 16 37.3	
EVR	**Evrytania**	**1.34**	**53**	P		**Pg**		**23 16 08.6**	**-0.2**
EVR				S		**Sg**		**23 16 29.5**	**+3.2**
	59μm,1.0s								
KLV	**Kalavryta, Ach**	**1.36**	**93**	P		**Pb**		**23 16 08.1**	**+0.2**
KLV					AML	AML		23 16 35.1	
	comp=E,60954μm,1.2s								
KLV					AML	AML		23 16 44.1	
	comp=N,69060μm,0.9s								
KLV	**Kalavryta, Ach**	**1.36**	**93**	P		**Pb**		**23 16 07.8**	**-0.1**
KLV				S		**Sg**		**23 16 27.6**	**+0.7**
KALE	**Kalithea**	**1.37**	**78**	P		**Pn**		**23 16 07.3**	**+0.1**
KALE	**Kalithea**	**1.37**	**78**	P		**Pn**		**23 16 07.3**	**+0.1**
KALE				S		**Sg**		**23 16 30.0**	**+2.7**
	comp=N,37μm,0.7s								
IGT	**Igoumenitsa**	**1.41**	**357**	*e*Pg		**Pb**		**23 16 09.3**	**+0.6**
IGT				*e*Sg		**Sg**		**23 16 29.8**	**+1.4**
IGT	**Igoumenitsa**	**1.41**	**357**	P		**Pb**		**23 16 08.5**	**-0.2**
IGT	**Igoumenitsa**	**1.41**	**357**	P		**Pb**		**23 16 08.7**	**+0.1**
IGT				S		**Sg**		**23 16 28.2**	**-0.2**
IGT	**Igoumenitsa**	**1.41**	**357**	P		**Pb**		**23 16 08.7**	**+0.1**
	baz=3.0								
IGT				S		**Sg**		**23 16 28.2**	**-0.2**
	baz=3.0								
IGT	**Igoumenitsa**	**1.41**	**357**	P		**Pb**		**23 16 08.8**	**+0.1**
IGT				S		**Sg**		**23 16 28.3**	**-0.2**
	comp=N,42μm,1.2s								
ITM	**Ithomi**	**1.52**	**128**	P		**Pb**		**23 16 09.9**	**-0.6**
ITM					AML	AML		23 16 40.3	
	comp=N,43499μm,0.5s								
ITM					AML	AML		23 16 41.0	
	comp=E,66121μm,0.6s								
ITM	**Ithomi**	**1.52**	**128**	Pn		**Pn**		**23 16 09.6**	**+0.4**
ITM						**Sg**		**23 16 31.0**	**-0.9**
ITM	**Ithomi**	**1.52**	**128**	P		**Pb**		**23 16 10.4**	**-0.1**
ITM				S		**Sg**		**23 16 33.0**	**+1.1**
	comp=E,30μm,0.9s								
GUR	**Goura**	**1.52**	**96**	P		**Pb**		**23 16 10.3**	**-0.3**
GUR	**Goura**	**1.52**	**96**	P		**Pb**		**23 16 10.4**	**-0.3**
GUR				S		**Sg**		**23 16 31.8**	**-0.3**
	comp=E,56μm,0.7s								
JAN	**Janina**	**1.57**	**12**	P		**Pb**		**23 16 12.0**	**+0.7**
JAN					AML	AML		23 16 45.5	
JAN					AML	AML		23 16 46.5	
JAN	**Janina**	**1.57**	**12**	P		**Pb**		**23 16 11.7**	**+0.3**
TRIP	**Tripoli**	**1.57**	**112**	P		**Pb**		**23 16 11.7**	**+0.2**
TRIP	**Tripoli**	**1.57**	**112**	P		**Pb**		**23 16 11.4**	**-0.1**
TRIP				S		**Sg**		**23 16 34.0**	**+0.3**
	comp=E,33μm,1.4s								
MAKR	**Makrakomi, Fth**	**1.60**	**56**	P		**Pb**		**23 16 12.4**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.60**	**56**	P		**Pb**		**23 16 11.5**	**-0.5**
MAKR				S		**Sg**		**23 16 35.9**	**+1.3**
	comp=E,87μm,1.1s								
PYL	**PYLOS**	**1.61**	**139**	P		**Pn**		**23 16 10.4**	**0.0**
PYL	**PYLOS**	**1.61**	**139**	P		**Pn**		**23 16 10.6**	**+0.1**
PYL				S		**Sg**		**23 16 34.4**	**-0.4**
KEK	**Kerkira**	**1.66**	**343**	P		**Pb**		**23 16 12.3**	**-0.7**
KEK					AML	AML		23 16 47.0	
	comp=E,79695μm,0.8s								
KEK					AML	AML		23 16 51.4	
	comp=N,51615μm,0.9s								
KEK	**Kerkira**	**1.66**	**343**	P		**Pb**		**23 16 12.1**	**-0.9**
KEK				S		**Sg**		**23 16 41.3**	**+4.8**
	comp=N,34μm,1.1s								
DLFA	**Delphi**	**1.66**	**77**	P		**Pn**		**23 16 12.2**	**+1.0**
KASA	**Kassiopi**	**1.67**	**347**	P		**Pb**		**23 16 12.7**	**-0.4**
VLX	**Vlachokerasia**	**1.72**	**115**	P		**Pb**		**23 16 13.8**	**-0.2**
AGG	**Agios Georgios**	**1.74**	**58**	P		**Pb**		**23 16 14.2**	**-0.2**
AGG					AML	AML		23 16 50.8	
	comp=N,62775μm,0.7s								
AGG					AML	AML		23 16 50.9	
AGG	**Agios Georgios**	**1.74**	**58**	P		**Pb**		**23 16 14.1**	**-0.2**
AGG				S		**Sg**		**23 16 38.6**	**-0.4**
AGG	**Agios Georgios**	**1.74**	**58**			**Pb**		**23 16 14.2**	**-0.2**
AGG	**Agios Georgios**	**1.74**	**58**	P		**Pb**		**23 16 14.1**	**-0.2**
AGG				S		**Sg**		**23 16 38.6**	**-0.4**
	comp=N,44μm,1.0s								
THAL	**Thalero**	**1.77**	**92**	P		**Pb**		**23 16 14.4**	**-0.3**
THAL	**Thalero**	**1.77**	**92**	P		**Pb**		**23 16 15.0**	**+0.3**
THAL				S		**Sb**		**23 16 38.4**	**+1.8**
	comp=N,72μm,0.9s								
AXAR	**Agios Charalam**	**1.86**	**69**	P		**Pb**		**23 16 15.6**	**-0.8**
AXAR	**Agios Charalam**	**1.86**	**69**	P		**Pb**		**23 16 15.7**	**-0.8**
AXAR				S		**Sg**		**23 16 42.0**	**-1.0**
	comp=N,72μm,0.6s								
THL	**Klokotos Trika**	**1.90**	**40**	P		**Pb**		**23 16 17.2**	**+0.2**
LTK	**Loutraki**	**2.00**	**92**	P		**Pb**		**23 16 17.7**	**-1.2**
LOUT	**Loutraki**	**2.01**	**93**	P		**Pb**		**23 16 17.8**	**-1.2**
LOUT	**Loutraki**	**2.01**	**93**	P		**Pb**		**23 16 17.8**	**-1.2**
LSK	**Leskovik**	**2.03**	**4**	P		**Pb**		**23 16 18.1**	**-1.2**
	baz=8.0								
LSK				S		**Sg**		**23 16 46.8**	**-1.4**
	baz=8.0								
LKR	**Lokris**	**2.09**	**75**	P		**Pb**		**23 16 19.1**	**-1.1**
LKR	**Lokris**	**2.09**	**75**	P		**Pn**		**23 16 18.7**	**+1.7**
ATAL	**Atalanti**	**2.11**	**74**	P		**Pb**		**23 16 19.4**	**-1.3**
PENT	**Pentalofos**	**2.14**	**15**	P		**Pb**		**23 16 20.8**	**-0.4**
EPID	**Epidavros**	**2.19**	**103**	P		**Pn**		**23 16 19.8**	**+1.4**
EPID	**Epidavros**	**2.19**	**103**	P		**Pb**		**23 16 20.8**	**-1.2**
VIL2	**Platees**	**2.24**	**87**	P		**Pn**		**23 16 21.1**	**+1.9**
VILL	**Villia**	**2.27**	**88**	P		**Pn**		**23 16 21.4**	**+1.8**
VILL				S		**Sb**		**23 16 51.2**	**-0.1**
	comp=N,21μm,1.1s								
KRND	**KRANIDI**	**2.28**	**108**	P		**Pn**		**23 16 21.0**	**+1.4**
KZN	**Kozani**	**2.42**	**25**	P		**Pb**		**23 16 24.2**	**-1.7**
VLI	**Velia**	**2.44**	**124**	P		**Pb**		**23 16 24.2**	**-2.2**
VLO	**Vlora**	**2.45**	**343**	P		**Pn**		**23 16 23.4**	**+1.4**
	baz=348								
VLO				S		**Sb**		**23 16 55.6**	**-0.7**
	baz=348								
SCTE	**Santa Cesarea**	**2.47**	**322**	Pn		**Pn**		**23 16 22.6**	**+0.3**
SCTE	**Santa Cesarea**	**2.47**	**322**	P		**Pn**		**23 16 22.8**	**+0.5**
	baz=327								
NEO	**Neokhori**	**2.48**	**61**	P		**Pn**		**23 16 24.7**	**+2.2**
LIT	**Litokhoron**	**2.54**	**38**	P		**Pn**		**23 16 25.6**	**+2.3**
LIT	**Litokhoron**	**2.54**	**38**	P		**Pn**		**23 16 25.2**	**+1.9**
LIT	**Litokhoron**	**2.54**	**38**			**Pn**		**23 16 25.2**	**+1.9**
ATH	**Athens Observa**	**2.60**	**92**	P		**Pn**		**23 16 25.6**	**+1.8**
ATH	**Athens Observa**	**2.60**	**92**	P		**Pn**		**23 16 26.2**	**+2.2**
ATHU	**Athens Univers**	**2.65**	**92**	P		**Pn**		**23 16 26.3**	**+1.5**
PTL	**Penteli**	**2.71**	**91**	P		**Pn**		**23 16 26.8**	**+1.2**
DION	**Dionisos Attik**	**2.77**	**90**	P		**Pn**		**23 16 27.8**	**+1.5**
KTHA	**Kythira Island**	**2.81**	**131**	P		**Pn**		**23 16 29.5**	**+2.5**
KYMI	**Kymi, Euboea I**	**2.93**	**79**	P		**Pn**		**23 16 30.2**	**+1.6**
OHR	**Ohrid**	**3.00**	**5**	*i* Pn		**Pn**		**23 16 32.2**	**+2.7**
TIP	**Timpagrande**	**3.06**	**291**	⇓P		**Pn**		**23 16 31.5**	**+1.0**
TIP	**Timpagrande**	**3.06**	**291**	Pn		**Pn**		**23 16 30.8**	**+0.3**
KARY	**Karystos**	**3.16**	**90**	P		**Pn**		**23 16 33.1**	**+1.3**
PLG	**Polygyros**	**3.25**	**45**	P		**Pn**		**23 16 34.2**	**+1.3**
TIR	**Tirane**	**3.25**	**352**	P		**Pn**		**23 16 34.6**	**+1.6**
TIR	**Tirane**	**3.25**	**352**	P		**Pn**		**23 16 34.4**	**+1.4**
TIR	**Tirane**	**3.25**	**352**			**Pn**		**23 16 34.4**	**+1.4**
TIR	**Tirane**	**3.25**	**352**	P		**Pn**		**23 16 34.5**	**+1.4**
	baz=356								
TIR				S		**Sb**		**23 17 16.8**	**-2.5**
	baz=356								
TAR1	**Taranto**	**3.42**	**316**	⇑*i*Pn		**Pn**		**23 16 35.4**	**+0.1**
PHP	**Peshkopia**	**3.56**	**0**	P		**Pn**		**23 16 39.1**	**+1.8**
	baz=2.0								
CEL	**Celeste**	**3.58**	**274**			**Pn**		**23 16 37.6**	**+0.1**
STIP	**Stip**	**3.81**	**20**	*i* Pn		**Pn**		**23 16 44.0**	**+3.2**
SRS	**Serrai**	**3.86**	**38**	*e*Pn		**Pn**		**23 16 43.1**	**+1.7**
SRS				*e*Sn		**Sn**		**23 17 28.9**	**+2.6**
SKO	**Skopje**	**3.92**	**11**	*i* Pn		**Pn**		**23 16 43.9**	**+1.6**
PUK	**Puka**	**3.94**	**354**	P		**Pn**		**23 16 43.5**	**+1.0**
	baz=357								
PUK				S		**Sn**		**23 17 30.9**	**+2.6**
	baz=357								
ULC	**Ulcinj**	**3.94**	**347**	*e*Pn		**Pn**		**23 16 42.6**	**+0.1**
ULC				*i* Sn		**Sn**		**23 17 28.6**	**+0.3**
SG1	**Sgolgore (BA)**	**3.97**	**314**	*e*Pn		**Pn**		**23 16 43.7**	**+0.7**
BAI	**Bari**	**4.05**	**318**	⇑*i*Pn		**Pn**		**23 16 44.2**	**+0.3**
DRME	**Dracevica, Mon**	**4.17**	**347**	*e*Pn		**Pn**		**23 16 46.2**	**+0.6**
DRME				*i* Sn		**Sn**		**23 17 34.2**	**+0.3**
DRME	**Dracevica, Mon**	**4.17**	**347**	⇑*i*Pn		**Pn**		**23 16 45.9**	**+0.3**
APE	**Apeiranthos**	**4.19**	**103**	⇓P		**Pn**		**23 16 47.1**	**+1.1**
APE	**Apeiranthos**	**4.19**	**103**	*e*P		**Pn**		**23 16 46.7**	**+0.8**
BCI	**Bajram Curri** baz=359	**4.25**	**356**	P		**Pn**		**23 16 48.2**	**+1.5**
BCI				S		**Sn**		**23 17 39.8**	**+3.9**
	baz=359								
BUM	**Brajici-Budva**	**4.33**	**345**	*e*Pn		**Pn**		**23 16 48.1**	**+0.1**
BUM				*i* Sn		**Sn**		**23 17 38.1**	**0.0**
PDG	**Podgorica**	**4.39**	**349**	⇓P		**Pn**		**23 16 49.4**	**+0.7**
PDG	**Podgorica**	**4.39**	**349**	⇑*i*Pn		**Pn**		**23 16 48.9**	**+0.2**
PDG	**Podgorica**	**4.39**	**349**	Pn		**Pn**		**23 16 48.8**	**+0.2**
TTG	**Podgorica**	**4.39**	**349**	*e*Pn		**Pn**		**23 16 49.2**	**+0.5**
TTG	**Podgorica**	**4.39**	**349**	*e*Pn		**Pn**		**23 16 49.4**	**+0.7**
TTG				*i* Sn		**Sn**		**23 17 39.4**	**0.0**
PVY	**Plav**	**4.48**	**356**	*e*Pn		**Pn**		**23 16 50.9**	**+0.9**
PVY				*i* Sn		**Sn**		**23 17 42.0**	**+0.2**
PRVS	**Prvonek**	**4.56**	**16**	*e*Pn		**Pn**		**23 16 52.5**	**+1.5**
PRVS				*e*Sn		**Sn**		**23 17 44.7**	**+1.2**
HCY	**Herceg Novi**	**4.56**	**342**	⇑*i*Pn		**Pn**		**23 16 50.5**	**-0.6**
HCY				*i* Sn		**Sn**		**23 17 43.7**	**0.0**
HCY	**Herceg Novi**	**4.56**	**342**	⇑*i*Pn		**Pn**		**23 16 50.3**	**-0.8**
CEME	**Cevo**	**4.57**	**346**	⇑*i*Pn		**Pn**		**23 16 50.9**	**-0.3**
CEME				*i* Sn		**Sn**		**23 17 43.7**	**-0.1**
IDI	**Anoyia** comp=N,6.4nm,0.3s,baz=268,slow=8.3,SNR=43	**4.57**	**127**	Pn		**Pn**		**23 16 50.6**	**-0.6**
IDI				Sn		**Sn**		**23 17 46.1**	**+2.3**
	comp=N,94nm,0.3s,baz=299,slow=22,SNR=21								
IDI	**Anoyia**	**4.57**	**127**	⇓P		**Pn**		**23 16 50.4**	**-0.7**
IDI	**Anoyia**	**4.57**	**127**	Pn		**Pn**		**23 16 52.1**	**+1.0**
BOSS	**Bosilegrad**	**4.64**	**19**	*e*Pn		**Pn**		**23 16 53.8**	**+1.7**
BOSS				*e*Sn		**Sn**		**23 17 46.8**	**+1.3**
BOZC	**Bozcaada**	**4.71**	**67**	P		**Pn**		**23 16 55.3**	**+2.3**
GADA	**Gvkgeada**	**4.73**	**62**	P		**Pn**		**23 16 54.5**	**+1.2**
IVA	**Berane**	**4.76**	**355**	*e*Pn		**Pn**		**23 16 55.5**	**+1.7**
IVA	**Berane**	**4.76**	**355**	⇑*i*Pn		**Pn**		**23 16 55.5**	**+1.7**
IVA				*i* Sn		**Sn**		**23 17 49.3**	**+0.7**
KOME	**Kolasin**	**4.77**	**352**	⇑*i*Pn		**Pn**		**23 16 55.2**	**+1.2**
KOME				*i* Sn		**Sn**		**23 17 48.8**	**-0.1**
NKME	**Niksic**	**4.77**	**347**	*e*Pn		**Pn**		**23 16 53.6**	**-0.4**
NKME				*i* Sn		**Sn**		**23 17 48.7**	**-0.2**
VAE	**Valguarnera** comp=N,26nm,0.3s,baz=27,slow=14,SNR=42	**4.81**	**264**	Pn		**Pn**		**23 16 54.0**	**-0.5**
VAE				Sn		**Sn**		**23 17 48.9**	**-0.9**
	comp=N,14nm,0.3s,baz=118,slow=22,SNR=6.5								
NKY	**Niksic**	**4.81**	**347**	*e*Pn		**Pn**		**23 16 54.7**	**+0.2**
NKY				*i* Sn		**Sn**		**23 17 48.8**	**-1.1**
TREB	**Trebinje**	**4.85**	**342**	⇑*i*Pn		**Pn**		**23 16 54.3**	**-0.8**
URLA	**Izmir**	**4.86**	**85**	P		**Pn**		**23 16 56.5**	**+1.3**
EZN	**Ezine**	**4.90**	**68**	P		**Pn**		**23 16 59.1**	**+3.5**
BRY	**Bratogost**	**4.99**	**344**	⇑*i*Pn		**Pn**		**23 16 56.6**	**-0.4**
BRY				*i* Sn		**Sn**		**23 17 53.0**	**-1.2**
BRY	**Bratogost**	**4.99**	**344**	⇑*i*Pn		**Pn**		**23 16 56.2**	**-0.8**
SGRT	**San Giovanni R**	**5.11**	**317**	Pn		**Pn**		**23 16 58.4**	**-0.3**
SELS	**Selova**	**5.12**	**6**	*e*Pn		**Pn**		**23 16 58.8**	**+0.1**
SELS				*e*Sn		**Sn**		**23 17 57.2**	**-0.1**
ENEZ	**Enez**	**5.14**	**58**	P		**Pn**		**23 17 01.3**	**+2.3**
SJES	**Sjenica**	**5.14**	**356**	*e*Pn		**Pn**		**23 17 00.2**	**+1.1**
SJES				*e*Sn		**Sn**		**23 17 59.2**	**+0.9**
SJES	**Sjenica**	**5.14**	**356**	⇑*i*Pn		**Pn**		**23 17 00.2**	**+1.1**
ALN	**Alexandroupoli**	**5.15**	**56**	P		**Pn**		**23 17 00.0**	**+0.9**
ALN	**Alexandroupoli**	**5.15**	**56**	Pn		**Pn**		**23 17 00.0**	**+0.9**
DKL	**Dikili**	**5.16**	**77**	P		**Pn**		**23 17 01.1**	**+1.9**
STON	**Ston**	**5.18**	**337**	⇑*i*Pn		**

AKAS Kas 7.56 102 Pn 23 17 34.6 +2.2
ADVT Abdulvahap 7.58 69 P Pn 23 17 35.3 +2.8
CAVI Cavuskoy 7.60 71 P Pn 23 17 36.7 +3.9
HRT Hereke 7.64 66 P Pn 23 17 36.1 +2.8
ELL Elmali 7.67 97 P Pn 23 17 38.1 +4.3
NVLJ Novalja 7.67 329 *i* Pn **Pn 23 17 33.7 0.0**
SLUM Salum 7.70 148 S Sn 23 18 50.2 -11
baz=152
SLUM AMP 23 18 00.0
baz=152
SILT Sile 7.73 64 P **Pn 23 17 37.3 +2.8**
LOT Lotru 7.73 18 ⇓P **Pn 23 17 35.6 +0.9**
ARR Arges 7.89 22 ⇑P **Pn 23 17 38.5 +1.7**
MTUR Matau 7.90 25 ⇑P **Pn 23 17 38.7 +1.8**
MURB Monte Urbino 7.90 313 Pn 23 17 38.0 +1.2
KORT Korkueli 7.96 95 P **Pn 23 17 42.1 +4.3**
LEHL Lehliu 7.96 35 ⇑P **Pn 23 17 40.0 +2.4**
LATE Laterza 7.96 307 Pn **Pn 23 17 39.0 +1.2**
SHUT Suhut-Afyon 7.97 84 P **Pn 23 17 41.9 +4.0**
DEV Deva 7.97 13 ⇑P **Pn 23 17 39.8 +2.0**
MOSL Moslavina 7.97 341 *i* Pn **Pn 23 17 36.8 -1.1**
PLAR PLOIESTI 7.98 30 ⇓P **Pn 23 17 39.7 +1.9**
SPNC Sapanca-Adapaz 8.06 68 P **Pn 23 17 42.3 +3.2**
BCK Bucak 8.07 92 P **Pn 23 17 42.1 +2.8**
VOIR 8.08 24 ⇓P **Pn 23 17 40.3 +0.9**
VOIR 8.08 24 P **Pn 23 17 41.3 +1.9**
SAUV Serdivan-Sakar 8.09 68 P **Pn 23 17 43.1 +3.6**
SECR 8.09 30 ⇓P **Pn 23 17 43.0 +3.5**
GULT Gulveren 8.15 70 P **Pn 23 17 44.3 +3.9**
SRCK Saricakaya, Es 8.16 73 P **Pn 23 17 43.3 +2.9**
SIRR Siria 8.19 6 ⇓P **Pn 23 17 40.5 -0.4**
MORH Mrgy, Hungar 8.19 351 ⇑*i* Pn **Pn 23 17 39.3 -1.5**
BOJS Bojanci 8.32 334 *e*Pn **Pn 23 17 42.6 -0.1**
BOJS *e*Sn **Sn 23 19 11.9 -4.3**
OZLJ Ozalj 8.35 335 *e*Pn **Pn 23 17 43.3 +0.4**
ISR Istrita 8.35 31 ⇑P **Pn 23 17 46.0 +2.9**
ZAG Zagreb 8.38 338 ⇑*i* Pn **Pn 23 17 42.7 -0.7**
ZAG Zagreb 8.38 338 *i* Pn **Pn 23 17 43.2 -0.2**
MLR Muntele Rosu 8.43 27 Pn **Pn 23 17 46.0 +1.8**
comp=N,1.5nm,0.3s,baz=224,slow=6.1,SNR=76
MLR LR LR 23 21 43.0
comp=N,4µm,19.4s,baz=200,slow=43
MLR Muntele Rosu 8.43 27 ⇓P **Pn 23 17 47.5 +3.2**
MLR Muntele Rosu 8.43 27 P **Pn 23 17 46.2 +1.9**
MLR Muntele Rosu 8.43 27 Pn **Pn 23 17 46.2 +1.9**
PTJ Puntijarka 8.46 338 *i* Pn **Pn 23 17 43.5 -1.0**
RIY Rijeka 8.46 330 ⇑*i* Pn **Pn 23 17 44.1 -0.3**
RIY Rijeka 8.46 330 *i* Pn **Pn 23 17 45.0 +0.6**
GBRS Gornja Briga 8.51 332 *e*Pn **Pn 23 17 45.5 +0.3**
GBRS *e*Sn **Sn 23 19 15.0 -5.7**
NEHR Nehoiu 8.51 29 ⇑P **Pn 23 17 48.3 +3.1**
GCIS Gornji Cirnik 8.52 337 *e*Pn **Pn 23 17 44.6 -0.8**
KALN Kalnik 8.53 341 *e*Pn **Pn 23 17 44.2 -1.3**
CRES Cresnjev 8.54 336 ⇑*i* Pn **Pn 23 17 45.1 -0.5**
CRES *e*Sn **Sn 23 19 15.1 -6.4**
CRES Cresnjev 8.54 336 ⇑*i* Pn **Pn 23 17 45.0 -0.6**
HARR Harsova 8.65 38 ⇓P **Pn 23 17 49.1 +2.0**
CASP Castiglione de 8.65 306 Pn **Pn 23 17 48.0 +0.9**
DOPR Dopca 8.66 24 ⇑P **Pn 23 17 49.7 +2.4**
MDUB Mudurnu 8.67 71 Pn 23 17 50.0 +2.5
TIRR Tirgusor 8.72 41 ⇓P **Pn 23 17 50.3 +2.1**
TIRR Tirgusor 8.72 41 ⇓P **Pn 23 17 50.3 +2.1**
TIRR Tirgusor 8.72 41 P **Pn 23 17 49.5 +1.4**
TIRR Tirgusor 8.72 41 Pn **Pn 23 17 49.5 +1.4**
VSL Villasalto 8.74 282 Pn 23 17 48.2 -0.2
GRER 8.74 32 ⇓P **Pn 23 17 52.2 +3.8**
BEHE Becsehely 8.77 343 ⇑*i* Pn **Pn 23 17 50.3 +1.6**
BISRR Bisoca 8.77 30 ⇓P **Pn 23 17 51.5 +2.6**
MATC Matruh 8.78 138 P **Pn 23 17 47.6 -1.3**
baz=141
OSSC Osservatorio P 8.80 311 Pn 23 17 50.3 +1.0
CEY Cerknica 8.82 331 ⇑*i* Pn **Pn 23 17 49.2 -0.3**
CJR Cluj-Napoca 8.90 14 ⇓P **Pn 23 17 51.5 +0.9**
PDKS Podkum 8.90 335 ⇑*i* Pn **Pn 23 17 50.1 -0.5**
PDKS *e*Sn **Sn 23 19 25.3 -5.1**
OZUR 8.90 25 ⇑P **Pn 23 17 52.7 +2.0**
PLOR Plostina 9.00 29 ⇑P **Pn 23 17 54.9 +2.9**
TPGR Topolog 9.01 39 ⇑P **Pn 23 17 53.8 +1.8**
VRI Vrincioaia 9.04 29 ⇓P **Pn 23 17 55.1 +2.6**
LJU Ljubljana 9.05 333 ⇑*i* Pn **Pn 23 17 52.2 -0.3**
LJU *e*Sn **Sn 23 19 29.9 -4.1**
comp=Z,1µm,1.3s
LJU Ljubljana 9.05 333 ⇑*i* Pn **Pn 23 17 52.0 -0.6**
ODBI Odobesti 9.09 31 ⇓P **Pn 23 17 56.7 +3.6**
CFR Carcaliu 9.10 37 ⇑P **Pn 23 17 55.0 +1.7**
JURR Jurilovca 9.18 41 ⇑P **Pn 23 17 56.0 +1.7**
KEST Kesra 9.19 258 Pn **Pn 23 17 54.7 0.0**
comp=Z,3.5nm,0.3s,baz=52,slow=6.3,SNR=73
KEST Sn **Sn 23 19 35.5 -2.2**
comp=Z,1.7nm,0.3s,baz=17,slow=20,SNR=1.2
KEST LR LR 23 22 57.2
comp=Z,3µm,18.2s,baz=16,slow=47
KEST Kesra 9.19 258 Pn **Pn 23 17 55.0 +0.3**
SOKA Soboth 9.43 337 *i* Pn **Pn 23 17 57.1 -0.9**
comp=Z,148nm,0.3s,SNR=146
SOKA *e*Sn **Sn 23 19 37.8 -5.7**
comp=Z,122nm,0.6s
TLCR 9.44 39 ⇑P **Pn 23 17 59.9 +2.0**
OBKA Obir 9.44 334 *i* Pn **Pn 23 17 58.2 +0.2**
comp=Z,98nm,0.3s,SNR=42
OBKA *e*Sn **Sn 23 19 40.0 -3.8**
comp=Z,346nm,0.8s
OBKA Obir 9.44 334 *e*Pn **Pn 23 17 56.9 -1.2**
OBKA *e*Sn **Sn 23 19 40.8 -2.9**
ZCCA Zocca 9.45 314 Pn 23 17 59.3 +1.2
CADS Cadrg 9.50 331 ⇑*i* Pn **Pn 23 17 58.0 -0.7**
VARL Varlezi 9.53 33 ⇑P **Pn 23 18 02.5 +3.3**
TESR Tescani 9.56 27 ⇓P **Pn 23 18 02.4 +2.8**
VLC Villacollemand 9.68 312 Pn 23 18 03.0 +1.7
BIR Birlad 9.73 31 ⇓P **Pn 23 18 05.2 +3.3**
PRED Cave del Predi 9.74 331 Pn **Pn 23 18 01.5 -0.6**
TEOL Teolo 9.75 321 Pn 23 18 01.4 -0.7
BIZ Bicaz 9.75 24 ⇑P **Pn 23 18 05.0 +2.8**
SWA2 9.79 153 P **Pn 23 18 00.3 -2.5**
baz=156
SWA2 AMP 23 19 00.0
baz=156
SWA2 S Sn 23 19 41.8 -11
baz=156
PSZ Piszkesteto 9.80 358 ⇓P **Pn 23 18 03.1 +0.1**
PSZ Piszkesteto 9.80 358 P **Pn 23 18 01.9 -1.0**
PSZ Piszkesteto 9.80 358 Pn **Pn 23 18 01.9 -1.0**
BMR Baia Mare 9.80 12 ⇑P **Pn 23 18 04.8 +1.9**
ARSA Arzberg 9.81 340 *e*Pn **Pn 23 18 01.8 -1.3**
comp=Z,60nm,0.3s,SNR=63
ARSA *e*Sn **Sn 23 19 48.1 -4.6**
comp=Z,41nm,0.6s
ARSA Arzberg 9.81 340 *e*Pn **Pn 23 18 01.7 -1.3**
SRO Srobarova 9.81 352 *e*P **Pn 23 18 03.8 +0.8**
SRO *e* 23 19 49.1
SRO Srobarova 9.81 352 *e*PN **Pn 23 18 03.8 +0.8**
SRO *e*SN **Sn 23 19 49.1 -3.5**
MYKA Terra Mystica 9.87 332 *e*Pn **Pn 23 18 03.4 -0.5**
comp=Z,51nm,0.4s,SNR=30
MYKA *e*Sn **Sn 23 19 50.0 -4.3**
comp=Z,43nm,0.4s
STAL STALIGIAL 9.94 327 Pn 23 18 04.0 -0.8
ZOU Zoufplan 10.07 329 Pn 23 18 06.1 -0.6
PRMA PARMA 10.08 314 Pn **Pn 23 18 07.9 +1.2**
CIMO Cimolais 10.10 327 Pn 23 18 05.8 -1.1
VASR Vaslui 10.10 30 ⇓P **Pn 23 18 09.1 +2.1**
BURAR Bucovina Array 10.11 19 ⇓P **Pn 23 18 09.8 +2.6**
BURAR Bucovina Array 10.11 19 P **Pn 23 18 08.8 +1.5**
BURAR Bucovina Array 10.11 19 Pn **Pn 23 18 08.3 +1.1**
BUR08 Bucovina Ar. S 10.14 19 Pn **Pn 23 18 08.6 +1.0**
PRAR RASCA 10.17 23 ⇓P **Pn 23 18 10.9 +3.0**
CTI Castel Tesino 10.25 323 P **Pn 23 18 08.1 -1.1**
CTI Castel Tesino 10.25 323 Pn **Pn 23 18 08.1 -1.1**
MSSA Maissana 10.28 310 Pn 23 18 09.6 0.0
CONA Conrad Observa 10.35 343 *i* Pn **Pn 23 18 08.9 -1.6**
comp=Z,8.5nm,0.3s,SNR=15
CONA Sn **Sn 23 20 01.0 -5.1**
comp=Z,36nm,0.6s
KECS Kecovo 10.36 0 *e*P **Pn 23 18 11.3 +0.8**
KECS *e* 23 20 00.4
KECS Kecovo 10.36 0 *e*PN **Pn 23 18 11.3 +0.8**
KECS *e*SN **Sn 23 20 00.4 -5.6**
KBA Koelnbreinsper 10.36 332 *e*Pn **Pn 23 18 10.5 -0.2**
comp=Z,53nm,0.3s,SNR=62
KBA *e*Sn **Sn 23 20 02.2 -4.1**
comp=Z,152nm,0.8s
KBA Koelnbreinsper 10.36 332 *e*Pn **Pn 23 18 09.6 -1.1**
KBA *e*Sn **Sn 23 20 01.9 -4.5**
ABTA Abfaltersbach 10.41 328 *e*Pn **Pn 23 18 10.9 -0.4**
comp=Z,55nm,0.5s,SNR=46
ABTA *e*Sn **Sn 23 20 03.3 -4.3**
comp=Z,250nm,0.7s
BR131 Keskin Array S 10.42 77 PnPn Pn 23 18 20.7 +9.2
SNR=13
BR131 Keskin Array S 10.42 77 *i* P **Pn 23 18 13.5 +2.0**
BR131 Keskin Array S 10.42 77 Pn **Pn 23 18 13.8 +2.3**
BRTR Keskin Array B 10.42 77 Pn **Pn 23 18 14.8 +3.3**
comp=Z,1.6nm,0.3s,baz=261,slow=14,SNR=18
BRTR LR LR 23 22 16.4
comp=Z,3µm,18.2s,baz=267,slow=38
BRTR Keskin Array B 10.42 77 Pn 23 18 13.6 +2.0
VYHS Vyhne 10.43 354 *e*P **Pn 23 18 11.5 0.0**
VYHS *e* 23 20 02.4
VYHS MLR MLR
comp=Z,4µm,19.0s
VYHS Vyhne 10.43 354 *e*PN **Pn 23 18 11.5 0.0**
VYHS *e*SN **Sn 23 20 02.4 -5.5**
VYHS *e*L L 23 23 07.4
LEF Lefka 10.45 103 ⇑P **Pn 23 18 10.1 -1.8**
CMAH Djebel Manchou 10.46 266 P **Pn 23 18 15.4 +3.3**
MODS Modra-Piesok 10.50 348 *e*P **Pn 23 18 11.4 -1.1**
MODS *e* 23 20 03.1
MODS MLR MLR
comp=Z,6µm,19.5s
MODS Modra-Piesok 10.50 348 *e*PN **Pn 23 18 11.4 -1.1**
MODS *e*SN **Sn 23 20 03.1 -6.5**
MODS *e*L L 23 22 31.0
UZH Uzhgorod 10.59 7 *e*P **Pn 23 18 14.4 +0.7**
UZH *e*S **Sn 23 20 13.7 +1.9**
UZH MLR MLR
comp=N,850nm,12.0s
UZH MLR MLR
comp=E,1µm,12.0s
UZH MLR MLR
comp=Z,830nm,12.0s
SMOL Smolenice 10.61 349 *e*P **Pn 23 18 13.9 -0.1**
SMOL *e* 23 20 04.7
SMOL Smolenice 10.61 349 *e*PN **Pn 23 18 13.9 -0.1**
SMOL *e*SN **Sn 23 20 04.7 -7.6**
ILGA Ilgaz 10.66 70 Pn 23 18 17.9 +3.0
MOA Molln 10.71 337 *e*Pn **Pn 23 18 15.0 -0.4**
comp=Z,69nm,0.3s,SNR=88
MOA *e*Sn **Sn 23 20 10.5 -4.4**
comp=Z,64nm,0.4s
MOA Molln 10.71 337 *e*Pn **Pn 23 18 15.0 -0.4**
MOA *e*Sn **Sn 23 20 11.1 -3.8**
CRVS Cervenica-Dubn 10.80 4 *e*P **Pn 23 18 17.1 +0.5**
CRVS MLR MLR
comp=Z,6µm,15.5s
CRVS Cervenica-Dubn 10.80 4 *e*PN **Pn 23 18 17.1 +0.5**
CRVS *e*L L 23 23 07.0
KIS Kishinev 10.81 32 *e*P **Pn 23 18 20.0 +3.4**
KIS Kishinev 10.81 32 *e*PP Pn 23 18 29.0 +12
KIS *e*S **Sn 23 20 17.0 -0.1**
KIS *e*LR LR 23 22 39.0
comp=Z,3µm,13.0s
KIS Kishinev 10.81 32 *e*P **Pn 23 18 20.0 +3.4**
KIS *e*S **Sn 23 20 17.0 -0.1**
KIS MLR MLR
comp=N,2µm,13.0s
KIS MLR MLR
comp=Z,3µm,13.0s
CSS Mathiatis 10.85 103 Pn 23 18 18.4 +1.1
KOLS Kolonicke sedl 10.89 6 *e*P **Pn 23 18 17.8 0.0**
KOLS MLR MLR
comp=Z,4µm,15.2s
KOLS Kolonicke sedl 10.89 6 *e*PN **Pn 23 18 17.8 0.0**
KOLS *e*L L 23 23 06.3
JAVC Velka Javorina 10.91 350 *e*PN **Pn 23 18 18.1 -0.1**
JAVC *e*SN **Sn 23 20 15.9 -4.0**
PURM Purcari 10.92 37 ⇑P **Pn 23 18 21.8 +3.6**
LANS Liptovska Anna 11.04 357 *e*P **Pn 23 18 20.9 +0.9**
LANS Liptovska Anna 11.04 357 *e*PN **Pn 23 18 20.8 +0.8**
CKFL Kef-Lekhel 11.06 265 P **Pn 23 18 23.5 +3.2**
WTTA Wattenberg 11.19 328 *e*Pn **Pn 23 18 22.0 -0.1**
comp=Z,58nm,0.4s,SNR=46
WTTA Sg **Sn 23 20 23.5 -3.2**
comp=Z,416nm,1.0s
WTTA Wattenberg 11.19 328 *e*Pn **Pn 23 18 21.7 -0.3**
WTTA *e*Sn **Sn 23 20 22.4 -4.3**
WATA Walderalm 11.27 328 *e*Pn **Pn 23 18 23.3 +0.2**
comp=Z,87nm,0.5s,SNR=89
WATA *e*Sn **Sn 23 20 25.5 -3.1**
comp=Z,396nm,0.9s
CASM Ain Smara 11.28 265 P **Pn 23 18 26.8 +3.6**
NIE Niedzica 11.29 360 *e*P **Pn 23 18 25.0 +1.6**
KRUC Moravsky 11.32 346 *e*PN **Pn 23 18 23.9 +0.3**
KRUC Moravsky 11.32 346 *e*SN **Sn 23 20 24.5 -5.1**
FUORN Ofenpass-Fuorn 11.33 322 Pn **Pn 23 18 24.1 0.0**
SQTA Sankt Quirin 11.34 326 *e*Pn **Pn 23 18 24.9 +0.9**
comp=Z,42nm,0.5s,SNR=33
SQTA *e*Sn **Sn 23 20 27.9 -2.4**
comp=Z,143nm,0.7s
FETA Feichten 11.40 324 *e*Pn **Pn 23 18 25.3 +0.4**
comp=Z,17nm,0.4s,SNR=11
FETA *e*Sn **Sn 23 20 28.2 -3.7**
comp=Z,59nm,0.7s
MOTA Moosalm 11.48 326 *e*Pn **Pn 23 18 26.7 +0.8**
comp=Z,62nm,0.5s,SNR=44
MOTA *e*Sn **Sn 23 20 31.9 -1.8**
comp=Z,237nm,1.0s
KW1 Garching a.d. 11.51 333 *e*Pn **Pn 23 18 25.2 -1.1**
VRAC Vranov 11.52 347 Pn **Pn 23 18 26.6 +0.2**
comp=Z,1.0nm,0.3s,baz=174,slow=13,SNR=17
VRAC Sn **Sn 23 20 29.4 -5.1**
comp=Z,1.7nm,0.3s,baz=110,slow=15,SNR=4.2
VRAC LR LR 23 23 04.5
comp=Z,2µm,21.0s,baz=170,slow=39
VRAC Vranov 11.52 347 ⇑P **Pn 23 18 26.5 +0.2**
VRAC Vranov 11.52 347 *e*PN **Pn 23 18 26.1 -0.3**
VRAC Vranov 11.52 347 *e*SN **Sn 23 20 29.8 -4.7**
SORM Soroca 11.55 27 ⇓P **Pn 23 18 27.9 +1.1**
ZUGS Zugspitze, Sch 11.59 326 *e*Pn **Pn 23 18 28.7 +1.0**
ZUGS *e*Sn **Sn 23 20 33.9 -2.7**
PART Garmisch-Parte 11.59 327 *e*Pn **Pn 23 18 27.3 -0.2**
KWP Kalwaria Pacla 11.62 7 *e*P **Pn 23 18 30.2 +2.4**
KWP Kalwaria Pacla 11.62 7 P **Pn 23 18 29.0 +1.2**
KWP Kalwaria Pacla 11.62 7 Pn **Pn 23 18 29.0 +1.2**
DAVOX Davos/Dischmat 11.63 321 Pn **Pn 23 18 27.1 -1.0**
comp=Z,3.2nm,0.3s,baz=127,slow=16,SNR=60
DAVOX Sn **Sn 23 20 33.0 -4.7**
comp=Z,3.6nm,0.3s,baz=90,slow=20,SNR=4.3
TUE Stuetta 11.69 319 Pn **Pn 23 18 28.6 -0.3**
DFRA Djebel Bou Aff 11.69 267 P **Pn 23 18 31.8 +2.8**
TREC Trest 11.72 344 *e*P **Pn 23 18 29.4 +0.2**
TREC *e*S **Sn 23 20 34.4 -5.1**
TREC MLR MLR
comp=Z,4µm,11.5s
TREC Trest 11.72 344 *e*P **Pn 23 18 29.4 +0.2**
TREC *e*x x 23 18 35.5
TREC *e*S **Sn 23 20 34.4 -5.1**
TREC AMS AMS 23 23 30.0
comp=Z,4µm,11.5s
RETA Reutte 11.74 326 *e*Pn **Pn 23 18 30.3 +0.9**
comp=Z,16nm,0.3s,SNR=9.0
RETA *e*Sn **Sn 23 20 37.4 -2.6**
comp=Z,128nm,0.7s
GEC2 GERESS Array S 11.77 338 *e*Pn **Pn 23 18 27.9 -2.0**
GEC2 *e*L L 23 24 17.8
comp=Z,2µm,19.0s
GEC2 GERESS Array S 11.77 338 Pn **Pn 23 18 28.8 -1.1**
GERES GERESS Array B 11.77 338 Pn **Pn 23 18 28.5 -1.5**
comp=Z,8.6nm,0.3s,baz=157,slow=13,SNR=198
GERES Sn **Sn 23 20 35.2 -5.7**
comp=Z,4.1nm,0.3s,baz=151,slow=24,SNR=6.9
GERES LR LR 23 24 27.9
comp=Z,2µm,19.1s,baz=142,slow=45
OKC Ostrava-Krasne 11.82 353 *e*P **Pn 23 18 30.9 +0.3**
OKC *e*S **Sn 23 20 36.7 -5.3**
OKC MLR MLR
comp=Z,4µm,14.6s
OKC Ostrava-Krasne 11.82 353 *e*P **Pn 23 18 30.9 +0.3**
OKC *e*x x 23 18 36.9
OKC *e*S **Sn 23 20 36.7 -5.3**
OKC AMS AMS 23 24 10.0
comp=Z,4µm,14.6s
MORC Moravsky Berou 11.83 351 ⇑P **Pn 23 18 30.6 -0.1**
MORC Moravsky Berou 11.83 351 *e*PN **Pn 23 18 30.1 -0.7**
MORC Moravsky Berou 11.83 351 *e*SN **Sn 23 20 36.9 -5.4**
MORC Moravsky Berou 11.83 351 P **Pn 23 18 30.0 -0.7**
MORC Moravsky Berou 11.83 351 Pn **Pn 23 18 30.0 -0.7**
BE1 Monatshausen 11.87 328 *e*Pn **Pn 23 18 29.6 -1.6**
HMYD Mayadein 11.96 131 P **Pn 23 18 29.0 -3.5**
baz=133
HNAT Natroun 11.97 132 P **Pn 23 18 29.6 -3.0**
baz=134
LVV L'vov 11.97 11 *e*P **Pn 23 18 34.4 +1.8**
LVV *e*S **Sn 23 20 48.3 +2.6**
LVV MLR MLR
comp=E,5µm,12.0s
LVV MLR MLR
comp=N,2µm,10.0s
LVV MLR MLR
comp=Z,2µm,11.0s
DAVA Damuels 11.99 323 *e*Pn **Pn 23 18 33.0 0.0**
comp=Z,19nm,0.3s,SNR=20
DAVA *e*Sn **Sn 23 20 41.9 -4.4**
comp=Z,98nm,0.5s
FUR Furstenfeldbru 12.05 329 *e*Pn **Pn 23 18 31.6 -2.1**
KHC Kasperske Hory 12.06 338 *e*P **Pn 23 18 32.5 -1.4**
KHC *e*S **Sn 23 20 41.8 -6.1**
KHC MLR MLR
comp=Z,4µm,12.3s
KHC Kasperske Hory 12.06 338 *e*P **Pn 23 18 32.5 -1.4**
KHC *e*S **Sn 23 20 41.8 -6.1**
KHC AMS AMS 23 24 00.0
comp=Z,4µm,12.3s
OJC Ojcow 12.10 358 *e*P **Pn 23 18 34.4 +0.1**
OJC Ojcow 12.10 358 P **Pn 23 18 34.5 +0.1**
OJC Ojcow 12.10 358 Pn **Pn 23 18 34.5 +0.1**
UBR Ueberruh 12.17 325 *e*L L 23 26 08.2
comp=Z,1µm,20.3s
KRLC Kraliky 12.23 349 *e*P **Pn 23 18 35.7 -0.5**
KRLC *e*S **Sn 23 20 47.4 -4.6**
KRLC MLR MLR
comp=Z,3µm,13.0s
KRLC Kraliky 12.23 349 *e*P **Pn 23 18 35.7 -0.5**
KRLC *e*S **Sn 23 20 47.4 -4.6**
KRLC AMS AMS 23 23 50.0
comp=Z,3µm,13.0s
WET Wettzell 12.29 336 *e*Pn **Pn 23 18 34.8 -2.1**
BNI Bardonecchia 12.40 308 P **Pn 23 18 38.3 -0.2**
BNI Bardonecchia 12.40 308 Pn **Pn 23 18 38.3 -0.2**
PBCC Pribram 12.45 340 *e*P **Pn 23 18 38.4 -0.7**
PBCC *e*S **Sn 23 20 51.2 -6.1**
KOT Kottamia 12.49 128 P **Pn 23 18 35.6 -4.2**
baz=129
HSAF As Saff 12.54 129 P **Pn 23 18 36.7 -3.7**
baz=131
DPC Dobruska-Polom 12.57 348 *e*P **Pn 23 18 40.9 +0.1**
DPC MLR MLR
comp=E,6µm,11.3s
DPC Dobruska-Polom 12.57 348 *e*P **Pn 23 18 40.9 +0.1**
DPC AMS AMS 23 24 20.0
comp=E,6µm,11.3s
PRU Pruhonice 12.59 342 *e*P **Pn 23 18 40.5 -0.5**
PRU MLR MLR
comp=Z,4µm,10.8s
PRU Pruhonice 12.59 342 *e*P **Pn 23 18 40.5 -0.5**
PRU *e*x x 23 18 48.2
PRU AMS AMS 23 25 20.0
comp=Z,4µm,10.8s
HHAG Hagoal 12.64 127 P **Pn 23 18 38.4 -3.5**
baz=128
HHAG AMP 23 21 17.7
baz=128
GLL Jalalah 12.66 129 P **Pn 23 18 38.9 -3.3**
baz=131
PRA Prague 12.69 342 *e*P **Pn 23 18 42.2 -0.2**
PRA MLR MLR
comp=Z,2µm,11.2s
PRA Prague 12.69 342 *e*P **Pn 23 18 42.2 -0.2**
PRA AMS AMS 23 25 20.0
comp=Z,2µm,11.2s
MAHO Mahon 12.70 283 *e*S **Sn 23 20 56.5 -6.9**
SENIN Lac Senin/Sane 12.73 314 Pn **Pn 23 18 42.9 -0.3**
NORI Noordlinger Ri 12.75 329 *e*Pn **Pn 23 18 40.8 -2.5**
UPC Upice 12.78 347 *e*P **Pn 23 18 44.6 +1.0**
UPC MLR MLR
comp=E,6µm,10.8s
UPC Upice 12.78 347 *e*P **Pn 23 18 44.6 +1.0**
UPC AMS AMS 23 24 40.0
comp=E,6µm,10.8s
OSTC Ostas 12.79 348 *e*P **Pn 23 18 43.4 -0.3**
OSTC *e*x x 23 18 50.4
OSTC AMS AMS 23 24 30.0
comp=Z,5µm,11.6s
HFRF Wahat Farafira 12.79 147 P **Pn 23 18 40.0 -3.9**
baz=149
CHVC Chvalec 12.85 347 *e*P **Pn 23 18 45.1 +0.6**
CHVC AMS AMS 23 24 40.0
comp=Z,5µm,14.9s
ROTZ Rotzenmuhle 13.05 336 *e*Pn **Pn 23 18 44.5 -2.9**
ROTZ *e*L L 23 25 08.7
comp=Z,3µm,18.5s
KSP Ksiaz 13.05 348 *e*P **Pn 23 18 46.3 -1.0**
PVCC Panska Ves 13.09 343 *e*P **Pn 23 18 46.9 -0.9**
PVCC MLR MLR
comp=Z,4µm,14.1s
PVCC Panska Ves 13.09 343 *e*P **Pn 23 18 46.9 -0.9**
PVCC AMS AMS 23 25 10.0
comp=Z,4µm,14.1s
NBNS Bani Suef 13.11 133 P **Pn 23 18 44.2 -4.1**
baz=135
BLGI Bet Lehem HaGe 13.18 110 Pn **Pn 23 18 46.1 -3.1**
SUZ Suez 13.19 125 P **Pn 23 18 45.5 -3.8**
baz=127
QRWL Qaraoun 13.19 106 *e*P **Pn 23 18 46.9 -2.4**
MMA0B Mount Meron ar 13.21 108 Pn **Pn 23 18 46.9 -2.7**
MMAI Mount Meron Ar 13.21 108 Pn **Pn 23 18 46.2 -3.4**
comp=Z,6.6nm,0.3s,baz=292,slow=12,SNR=29
MMAI Sn **Sn 23 21 05.4 -11**
comp=Z,18nm,0.3s,baz=307,slow=19,SNR=10
MANZ Manzenberg 13.27 336 *e*Pn **Pn 23 18 47.1 -3.3**
SLTI Sal'it 13.31 112 Pn **Pn 23 18 47.7 -3.2**
GEM Giv'at Ha'Em 13.32 107 Pn **Pn 23 18 47.7 -3.4**
GEM Sn Sn 23 21 07.5 -11
GRA1 Grafenberg Arr 13.32 333 Pn **Pn 23 18 49.5 -1.5**
GRF Grafenberg Arr 13.32 333 P **Pn 23 18 49.5 -1.5**
GRF Grafenberg Arr 13.32 333 *e*Pn **Pn 23 18 48.6 -2.4**
RCY Rachaya 13.33 106 *e*P **Pn 23 18 48.2 -3.1**
GAZ Gaziantep 13.34 89 P **Pn 23 18 53.2 +1.8**
NATI Neve Ativ 13.35 107 Pn **Pn 23 18 48.1 -3.4**
NKC Novy Kostel 13.38 337 *e*P **Pn 23 18 51.7 -0.1**
NKC MLR MLR
comp=Z,4µm,10.0s
NKC Novy Kostel 13.38 337 *e*P **Pn 23 18 51.7 -0.1**
NKC AMS AMS 23 24 50.0
comp=Z,4µm,10.0s
ZAF Zafarana 13.39 128 P **Pn 23 18 48.3 -3.8**
baz=129
STU Stuttgart 13.39 326 P **Pn 23 18 51.3 -0.7**
STU Stuttgart 13.39 326 *e*Pn **Pn 23 18 51.2 -0.7**
STU *e*Sn **Sn 23 21 14.0 -6.4**
STU Stuttgart 13.39 326 Pn **Pn 23 18 51.3 -0.7**
BFO Black Forest 13.47 323 P **Pn 23 18 52.2 -0.9**
BFO Black Forest 13.47 323 Pn **Pn 23 18 52.2 -0.9**
MMLI Mount Malkishu 13.49 110 Pn **Pn 23 18 50.2 -3.3**
BRG Berggiesshubel 13.55 342 *i* P **Pn 23 18 52.7 -1.5**
comp=Z,45nm,1.4s
comp=N,3µm,10.1s
comp=E,3µm,8.8s
comp=Z,5µm,9.8s
BRG Berggiesshubel 13.55 342 *i* P **Pn 23 18 52.7 -1.5**
BRG pmax pmax
comp=Z,45nm,1.4s
BRG MLR MLR
comp=N,3µm,10.1s
BRG MLR MLR
comp=E,3µm,8.8s
BRG MLR MLR
comp=Z,5µm,9.9s
TAMRE El Minia 13.63 137 P **Pn 23 18 51.1 -4.2**
baz=139
HMDT Nahal Hemdat 13.66 111 Pn **Pn 23 18 52.5 -3.2**
BEL Belsk 13.71 1 *e*P **P 23 19 04.1 -0.8**
SSB Saint Sauveur 13.84 306 P **Pn 23 18 57.0 -1.2**
SSB Saint Sauveur 13.84 306 Pn 23 18 57.0 -1.2
ECH Echery 13.96 320 P **Pn 23 18 59.0 -0.8**
ECH Echery 13.96 320 Pn **Pn 23 18 59.0 -0.8**
MOX Moxa 14.00 336 *e*Pn **Pn 23 18 57.5 -2.8**
AKASG Malin Array Be 14.04 24 Pn **Pn 23 18 59.8 -1.1**
comp=Z,2.3nm,0.3s,baz=215,slow=12,SNR=38
AKASG LR LR 23 25 46.0
comp=Z,4µm,18.1s,baz=200,slow=43
AKASG Malin Array Be 14.04 24 *i* P **Pn 23 19 00.6 -0.2**

AKASG pmax pmax
comp=Z,8.0nm,0.6s
AKASG Malin Array Be 14.04 24 Pn 23 18 59.1 -1.7
AKBB Malin Array Si 14.04 24 *ce*P **Pn 23 18 59.8 -1.0**
AKBB Malin Array Si 14.04 24 Pn **Pn 23 18 59.8 -1.0**
MALT Malatya 14.16 84 P **P 23 19 07.4 -2.7**
CLL Collm 14.19 341 *e*P **Pn 23 19 02.0 -0.9**
CLL *i* PP **PnPn 23 19 10.9 +0.1**
comp=Z,184nm,1.6s
CLL *e* 23 19 47.0
CLL *e*S **Sn 23 21 36.0 -3.7**
CLL *e* 23 22 02.0
CLL Lmax 23 25 00.0
CLL Collm 14.19 341 *e*P **Pn 23 19 02.0 -0.9**
CLL Collm 14.19 341 Pn **Pn 23 19 01.9 -0.9**
HRDS Abu Rudays 14.26 127 P Pn 23 18 59.0 -4.9
baz=129
KRMI Paran Flat 14.27 120 Pn **Pn 23 19 00.1 -4.0**
PRNI Paran 14.32 118 Pn **Pn 23 19 02.3 -2.5**
ZFRI Zfri 14.32 117 Pn **Pn 23 19 01.2 -3.6**
ZFRI Sn Sn 23 21 29.4 -14
KARJ KARJ 14.34 115 Pn Pn 23 18 54.4 -11
ANN Anapa 14.38 57 *e*P **P 23 19 09.7 -2.6**
ANN pmax pmax
comp=Z,68nm,1.0s
ANN MLR MLR
comp=E,4μm,17.0s
ANN MLR MLR
comp=N,2μm,13.0s
ANN MLR MLR
comp=Z,2μm,13.0s
MBRI Mt Berech 14.60 120 Pn **Pn 23 19 04.8 -3.9**
MBRI Sn Sn 23 21 35.5 -15
HDK1 Dakhla 14.67 146 P **Pn 23 19 05.7 -3.9**
baz=148
EIL Elat 14.70 121 Pn **Pn 23 19 05.8 -4.2**
comp=Z,1.4nm,0.3s,baz=328,slow=6.2,SNR=24
EIL Sn Sn 23 21 41.0 -12
comp=Z,8.4nm,0.3s,baz=336,slow=20,SNR=9.7
EIL LR LR 23 26 35.1
comp=Z,812nm,19.5s,baz=311,slow=44
EIL Elat 14.70 121 Pn **Pn 23 19 05.8 -4.2**
ASF Jabal al Asfar 14.72 109 Pn **Pn 23 19 09.6 -0.7**
comp=Z,0.4nm,0.3s,baz=278,slow=7.1,SNR=11
ASF Sn **Sn 23 21 45.7 -7.3**
comp=Z,0.4nm,0.3s,baz=3.4,slow=19,SNR=1.6
AQBJ Aqaba 14.73 120 Pn **Pn 23 19 06.7 -3.7**
HBST Basata 14.84 123 P **Pn 23 19 08.1 -3.8**
baz=124
RUE Ruedersdorf 15.09 344 *e*P **P 23 19 21.2 +1.1**
TR1 Tor 1 15.16 128 P **Pn 23 19 11.9 -4.2**
baz=129
EBNR Beni Rached 15.17 269 P **P 23 19 23.4 +2.1**
AKRG Al Kharijah 15.20 143 P **Pn 23 19 12.7 -4.0**
baz=145
GTR Jabal at Tayr 15.23 143 P **Pn 23 19 13.1 -4.0**
baz=145
GKP Gorka Klasztor 15.31 353 *e*P **P 23 19 20.4 -2.2**
GKP *e*S **S 23 22 24.0 +0.7**
ECHA Ech Chlef 15.33 268 P **P 23 19 22.0 -1.0**
WLF Walferdange 15.43 323 ⇑P **P 23 19 24.3 +0.3**
WLF Walferdange 15.43 323 PnPn **P 23 19 27.3 +3.3**
HHRG Al Ghardaqah 15.49 131 P **Pn 23 19 17.5 -3.0**
baz=133
SOC Sochi 15.57 63 *e*P **P 23 19 24.9 -0.7**
SOC *e* 23 22 23.2
SOC pmax pmax
comp=Z,74nm,0.8s
SOC MLR MLR
comp=Z,970nm,14.0s
EANR 'Ain N'Sour 15.59 268 P **Pn 23 19 21.6 -0.2**
SUW Suwalki 16.00 6 *e*P **Pn 23 19 27.0 0.0**
SUW *e*S **S 23 22 31.8 -5.7**
SUW Suwalki 16.00 6 P **Pn 23 19 27.4 +0.4**
SUW pmax pmax
comp=Z,316nm,0.8s
SUW Suwalki 16.00 6 **Pn 23 19 27.4 +0.4**
BTNL Ternell 16.08 325 P **P 23 19 31.3 0.0**
BTNL x x 23 19 33.9
BTNL PbPb PbPb 23 20 20.5 -1.2
MARD Mardin 16.13 87 **Pn 23 19 30.0 +1.2**
MEM Membach 16.15 325 Pn **Pn 23 19 30.1 +1.3**
MEM Membach 16.15 325 P **P 23 19 31.9 -0.1**
MEM sPn **pP 23 19 36.8 -0.2**
MEM sP **sP 23 19 38.8 -0.4**
RCHB Rochefort 16.20 323 ⇑P **P 23 19 33.7 +1.2**
BSTI Sart Tilman 16.34 324 x **P 23 19 37.3 +3.2**
BCLA Clavier 16.34 324 ⇑P **P 23 19 34.0 -0.1**
BCLA x x 23 19 43.8
BGES Gesves 16.42 323 PnPn **PnPn 23 19 42.4 +1.0**
DOU Dourbes 16.47 322 ⇑P **P 23 19 35.3 -0.2**
DOU x x 23 19 45.8
BMRD Maredsous 16.52 322 ⇑P **P 23 19 37.7 +1.6**
BMRD PnPn **sP 23 19 43.0 -0.2**
CLF Chambon-Foret 16.52 313 P **Pn 23 19 34.3 +0.8**
SNF Seneffe 16.89 322 P **P 23 19 39.4 -0.8**
SNF PnPn **PnPn 23 19 49.4 +1.6**
CART Cartagena 16.93 275 *e*S **Sn 23 22 42.0 -4.6**
CART Cartagena 16.93 275 **Pn 23 19 38.9 +0.1**
UCC Uccle 17.04 323 P **P 23 19 41.2 -0.7**
UCC pmax pmax
comp=Z,51nm,0.9s
UCC Uccle 17.04 323 P **P 23 19 41.2 -0.7**
MICGM Minsk 17.16 15⇑ *e*P **Pn 23 19 38.0 -3.5**
MICGM PM 23 19 43.0
comp=Z,0.3nm,1.2s
MICGM *e*PP **pP 23 19 46.0 -2.0**
MICGM *e*PPP PPP 23 19 56.0
MICGM *e*S **Sn 23 22 45.0 -6.7**
MICGM *e*SS **S 23 22 54.0 -6.9**
MICGM *e*SSS SSS 23 23 10.0
MICGM *e*LQ LQ 23 24 48.0
MICGM *e*LR LR 23 26 20.0
MICGM LRM MLR 23 27 18.0
comp=Z,3.4nm,10.0s
MNK Minsk 17.16 15⇑ *e*P **Pn 23 19 38.0 -3.5**
MNK *e*S **Sn 23 22 45.0 -6.7**
MNK pmax pmax
comp=Z,340nm,1.2s
MNK MLR MLR
comp=Z,3μm,10.0s
NACGM Naroch 17.33 12 *e*P **Pn 23 19 43.0 -0.7**
NACGM *e*S **Sn 23 22 56.0 0.0**
NACGM *e*SS **S 23 23 04.0 -0.5**
NACGM *e*LQ LQ 23 25 15.0
NACGM *e*LR LR 23 25 48.0
BSD Bornholm Skovb 17.40 349 *i* P **P 23 19 47.8 +2.0**
BSD Bornholm Skovb 17.40 349 *i* P **P 23 19 47.8 +2.0**
BSD Bornholm Skovb 17.40 349 *i* P **P 23 19 47.8 +2.0**
PABE Paberze 17.55 7 *e*P **Pn 23 19 45.6 -0.8**
IIGN Ignalina 17.67 11 *e*P **Pn 23 19 48.4 +0.4**
IDID Didziasalis 17.72 12 *e*P **Pn 23 19 48.9 +0.3**
KIV Kislovodsk 17.75 64 *i* P **P 23 19 51.4 +1.5**
SNR=40
KIV Kislovodsk 17.75 64 *e*P **P 23 19 50.8 +0.9**
KIV *e*S **Sn 23 23 09.0 +2.5**
KIV pmax pmax
comp=Z,300nm,1.0s
KIV MLR MLR
comp=Z,2μm,13.0s
KIV Kislovodsk 17.75 64 P **P 23 19 50.5 +0.7**
GEVA Gevas 17.78 82 **P 23 19 51.8 +1.5**
GEVA IAmb IAmb 23 20 10.5
comp=Z,143nm,1.1s
KBZ Khabaz 17.86 65 *ce*P **P 23 19 51.8 +0.9**
ISAL Salakas 17.87 11 *e*P **Pn 23 19 49.8 -0.6**
ISAL IAmb IAmb 23 19 56.4
comp=Z,31nm,0.9s
PBUR Paburge 17.94 3 *e*P **P 23 19 51.5 -0.2**
PBUR IAmb IAmb 23 19 55.9
comp=Z,116nm,0.9s
AKH Akhalkalaki 18.02 72 ⇑P **P 23 19 55.4 +2.4**
AKH Akhalkalaki 18.02 72 P **P 23 19 54.1 +1.1**
AKH pmax pmax
comp=Z,73nm,1.0s
AKH Akhalkalaki 18.02 72 P **P 23 19 54.1 +1.1**
IZAR Zarasai 18.06 11 *e*P **Pn 23 19 52.1 -0.6**
GOF Gofitskoye 18.25 61⇑ *i*P **P 23 19 56.7 +1.5**
GOF pmax pmax
comp=Z,71nm,0.8s
ZEI Tsey 18.44 68 *e*P **P 23 19 57.3 -0.3**
ZEI pmax pmax
comp=Z,82nm,1.3s

VORD Divnogorie 18.52 40 *e*P **P 23 19 57.7 -0.5**
VORD pmax pmax
comp=Z,40nm,1.1s
VSR Storozhevoye 18.61 39 *e*P **P 23 19 58.8 -0.3**
VSR *e*S **Sn 23 23 23.0 -3.9**
VSR pmax pmax
comp=Z,40nm,0.7s
VSR smax smax
comp=N,150nm,5.2s
VSR MLR MLR
comp=Z,3μm,13.0s
VORR Voronezh 18.91 38 *e*P **P 23 20 02.0 -0.4**
VORR pmax pmax
comp=Z,250nm,1.6s
JBK JBK 18.92 265 P **Pn 23 20 04.4 +0.8**
SNR=9.3
MELI Melilla 18.94 269 *e*P **Pn 23 20 06.3 +2.8**
MELI *e*S S 23 23 49.8 +12
GNI Garni 18.96 76 P **Pn 23 20 05.3 +1.3**
GNI Garni 18.96 76 *ce*P **P 23 20 03.2 -0.1**
GNI pmax pmax
comp=Z,171nm,1.3s
GNI Garni 18.96 76 P **Pn 23 20 04.9 +0.9**
GNI IAmb IAmb 23 20 07.3
comp=Z,104nm,0.9s
ESBB Sonseca Array 19.04 282 P **P 23 20 04.1 +0.1**
ESDC Sonseca Array 19.04 282 P **P 23 20 02.8 -1.2**
comp=Z,0.3nm,0.3s,baz=77,slow=10,SNR=29
ESDC LR LR 23 27 41.3
comp=Z,610nm,18.7s,baz=85,slow=38
ESDC Sonseca Array 19.04 282 P **P 23 20 03.0 -1.0**
PAB San Pablo 19.34 282 P **P 23 20 07.6 +0.2**
PAB pmax pmax
comp=Z,57nm,1.2s
PAB San Pablo 19.34 282 P **P 23 20 07.6 +0.2**
LPSR Galich'ya Gora 19.37 36 *e*P **P 23 20 07.9 +0.4**
LPSR *e*S **Sn 23 23 39.1 -6.2**
LPSR pmax pmax
comp=Z,180nm,1.0s
LPSR smax smax
comp=E,1μm,6.2s
LPSR MLR MLR
comp=Z,3μm,15.0s
SLIT Slitere, Latvi 19.56 3 *e*P **P 23 20 10.0 +0.6**
SLIT IAmb IAmb 23 20 14.3
comp=Z,362nm,1.0s
EMAL Malaga-Limoner 19.77 274 *e*P **P 23 20 09.1 -2.9**
EMAL *e*S Sn 23 24 22.2 +27
MUD Monsted U'grnd 19.82 341 *i* P **Pn 23 20 13.5 -0.4**
MUD pmax pmax
comp=Z,66nm,1.2s
MUD Monsted U'grnd 19.82 341 *i* P **Pn 23 20 13.5 -0.4**
comp=Z,66nm,1.2s
MUD Monsted U'grnd 19.82 341 *i* P **P 23 20 13.0 +0.7**
MUD *i* P **Pn 23 20 13.5 -0.4**
MUD IAmb IAmb 23 20 14.6
comp=Z,66nm,1.2s
GROC Groznyy 19.87 67 *e*P **P 23 20 13.1 +0.1**
GROC pmax pmax
comp=Z,116nm,0.9s
VRH Novokhopyorsk 19.91 42 *e*P **Pn 23 20 15.1 0.0**
VRH *e*S **S 23 23 49.6 -7.1**
VRH pmax pmax
comp=Z,320nm,1.4s
VRH smax smax
comp=N,520nm,7.9s
VRH MLR MLR
comp=Z,3μm,19.0s
TAM Tamanrasset 19.92 224 P **Pn 23 20 14.7 -0.9**
TAM pmax pmax
comp=Z,43nm,1.4s
TAM Tamanrasset 19.92 224 P **Pn 23 20 14.7 -0.9**
PVLZ Peæn de 20.05 269 *e*P **P 23 20 10.7 -4.3**
PVLZ *e*S **S 23 23 60.0 +0.4**
OBN Obninsk 20.20 28 *e*P **P 23 20 15.8 -0.7**
OBN *e* 23 20 32.5
OBN *e*S **S 23 23 59.7 -2.7**
OBN *e*SS **SnSn 23 24 19.9 +0.1**
OBN *e* 23 24 30.7
OBN pmax pmax
comp=Z,196nm,1.7s
OBN MLR MLR
comp=Z,2μm,14.0s
OBN Obninsk 20.20 28 P **P 23 20 16.3 -0.2**
SWN1 Swindon 20.58 318 *e*P **P 23 20 21.2 +0.6**
CEU Ceuta 20.71 272 *e*P **P** 23 20 13.5 -8.7
CEU *e*S **S 23 24 05.8 -6.8**
VSU Vasula 20.76 9 *e*P **P 23 20 23.3 +0.7**
VSU Vasula 20.76 9 *c i*P **P 23 20 22.9 +0.4**
STRD Stroud 20.91 318 *e*P **P 23 20 25.0 +0.8**
STRD IAmb IAmb 23 20 30.1
comp=Z,254nm,1.3s
CWF Charnwood Fore 21.01 321 *e*P **P 23 20 25.4 +0.1**
MDT Midelt 21.04 263 P **P 23 20 25.8 -0.2**
comp=Z,8.9nm,0.9s,baz=74,slow=9.9,SNR=11
MDT LR LR 23 30 06.7
comp=Z,481nm,19.5s,baz=80,slow=41
MDT Midelt 21.04 263 P **P 23 20 26.7 +0.7**
SNR=8.4
MOS Moscow 21.07 28 *e*P **P 23 20 24.8 -1.1**
MOS *e* 23 20 48.2
MOS *e*S **S 23 24 16.5 -3.1**
MOS *e* 23 24 50.3
MOS pmax pmax
comp=Z,170nm,1.4s
MOS pmax pmax
comp=Z,300nm,1.7s
MOS MLR MLR
comp=Z,2μm,15.0s
MOS MLR MLR
comp=N,2μm,16.0s
MOS MLR MLR
comp=E,900nm,14.0s
MAK Makhachkala 21.09 68 *e*P **P 23 20 23.1 -3.2**
MAK *e*S **S 23 24 16.6 -3.7**
MAK *e*SS **SnSn 23 24 40.0 -1.8**
MAK pmax pmax
comp=Z,782nm,1.2s
MAK MLR MLR
comp=Z,1μm,19.0s
PBRG Braganca 21.11 289 *e*P **P 23 20 27.1 +0.5**
comp=Z,111nm,1.7s
IFR Ifrane 21.20 265 *e*P **P 23 20 21.6 -6.1**
IFR *e*S Sn 23 24 59.4 +29
ARF Arif 21.28 259 P **P 23 20 30.1 +1.6**
SNR=31
ARF P **P 23 20 30.1 +1.6**
SNR=31
MVO Moncorvo 21.33 287 *e*P **P 23 20 29.0 +0.1**
comp=Z,144nm,1.5s
MVO *e*S Sn 23 24 31.7 -1.1
MCH1 Michaelchurch 21.47 318 *e*P **P 23 20 29.7 -0.6**
MCH1 IAmb IAmb 23 20 31.9
comp=Z,269nm,1.4s
HOMB Homborsund 21.61 343 *e*P **P 23 20 32.6 +1.0**
STNC Stoke 21.66 321 *e*P **P 23 20 33.6 +1.4**
HLM1 Long Mynd 21.68 319 *e*P **P 23 20 32.4 -0.1**
HLM1 IAmb IAmb 23 20 36.0
comp=Z,142nm,1.2s
PMRV Marv??o 21.70 282 *e*P **P 23 20 32.5 -0.4**
comp=Z,80nm,1.7s
PMRV *e*S Sn 23 24 41.2 -0.4
PMRV *e*LQ LQ 23 34 15.0
PCBR Castelo Branco 21.73 283 *e*P **P 23 20 33.2 0.0**
comp=Z,114nm,1.3s
GOLM Goulmima 21.74 261 P **P 23 20 36.0 +2.5**
SNR=12
GOLM P **P 23 20 36.0 +2.5**
SNR=12
MTE Manteigas 21.75 285 *e*P **P 23 20 33.2 -0.2**
comp=Z,128nm,1.5s
MTE *e*S **S 23 24 37.2 +3.9**
MTE Manteigas 21.75 285 P **P 23 20 32.7 -0.7**
MTE IAmb IAmb 23 20 34.2
comp=Z,102nm,1.2s
PVRL Vila Real 21.84 287 *e*P **P 23 20 36.3 +1.9**
comp=Z,89nm,1.6s
SNART Snartemo 21.98 341 *e*P **P 23 20 37.0 +1.3**
SNART Snartemo 21.98 341 *i* P **P 23 20 39.5 +3.8**
FOEL Foel Wylfa 22.04 320 *e*P **P 23 20 36.6 +0.1**
FOEL IAmb IAmb 23 20 40.0
comp=Z,155nm,1.1s
PVAQ Vaqueiros 22.23 277 *e*P **P 23 20 41.5 +2.9**
PVAQ *e*S **S 23 24 46.9 +4.3**
PVAQ Vaqueiros 22.23 277 P **P 23 20 39.1 +0.5**

PBEJ Beja 22.25 279 *e*P **P 23 20 39.7 +1.0**
comp=Z,59nm,2.1s
PGAV Gavieira, Arco 22.26 289 *e*S **S 23 24 46.7 +3.6**
EVO Evora 22.28 280 *e*P **P 23 20 38.7 -0.4**
comp=Z,72nm,1.4s
PMTG Montargil 22.38 281 *e*P **P 23 20 39.1 -1.1**
comp=Z,83nm,1.4s
COI Coimbra 22.42 284 P **P 23 20 39.6 -1.0**
COI pmax pmax
comp=Z,114nm,1.1s
COI Coimbra 22.42 284 *e*P **P 23 20 40.5 -0.1**
comp=Z,188nm,1.3s
COI Coimbra 22.42 284 P **P 23 20 39.6 -1.0**
COI IAmb IAmb 23 20 51.0
comp=Z,114nm,1.1s
PBDV Barranco-do-Ve 22.43 277 *e*P **P 23 20 41.4 +0.7**
comp=Z,93nm,1.4s
HFS Hagfors 22.44 351 P **P 23 20 39.7 -1.0**
comp=Z,37nm,0.4s,baz=158,slow=9.6,SNR=156
HFS S **S 23 24 45.0 -1.0**
comp=Z,31nm,1.1s,baz=167,slow=14,SNR=6.7
HFS LR LR 23 29 49.2
comp=Z,2μm,20.6s,baz=170,slow=38
PCVE Castro Verde 22.45 278 *e*P **P 23 20 40.4 -0.5**
comp=Z,69nm,1.9s
PUL Pulkovo 22.57 13 *e*P **P 23 20 42.5 +0.6**
PUL Pulkovo 22.57 13 *ce*P **P 23 20 41.7 -0.3**
PUL pmax pmax
comp=Z,384nm,1.7s
EDMD Edmundbyers 22.58 325 *e*P **P 23 20 41.8 -0.3**
EDMD IAmb IAmb 23 20 48.6
comp=Z,127nm,1.1s
TZRR Tazzarine 22.61 259 P **P 23 20 44.0 +1.2**
SNR=10
TZRR P **P 23 20 44.0 +1.2**
SNR=10
KONO Kongsberg 22.63 346 *ce*P **P 23 20 43.5 +0.9**
KONO pmax pmax
comp=Z,114nm,1.3s
KONO Kongsberg 22.63 346 P **P 23 20 42.7 +0.1**
KONO IAmb IAmb 23 20 44.7
comp=Z,135nm,1.4s
KONO Kongsberg 22.63 346 *e*P **P 23 20 42.4 -0.2**
YLL Llanberis 22.67 319 *e*P **P 23 20 43.2 +0.1**
OSL Oslo 22.69 347 *e*P **P 23 20 42.9 -0.3**
PNCL Nicolau / Gran 22.75 279 *e*P **P 23 20 44.5 +0.4**
PSBE So Bento 22.77 283 *e*P **P 23 20 48.4 +4.0**
comp=Z,171nm,2.0s
KESW Keswick, Cumbr 22.96 323 *e*P **P 23 20 45.6 -0.5**
KESW IAmb IAmb 23 20 47.7
comp=Z,195nm,1.1s
BLS5 Blasjo 23.12 342 *e*P **P 23 20 48.2 +0.4**
NC602 NORSAR Array S 23.32 349 P **P 23 20 49.2 -0.5**
NC602 NORSAR Array S 23.32 349 *e*P **P 23 20 49.8 +0.1**
EKA Eskdalemuir Ar 23.43 325 P **P 23 20 48.9 -1.9**
comp=Z,68nm,1.0s,baz=127,slow=10,SNR=37
ESK Eskdalemuir 23.44 325 *e*P **P 23 20 50.1 -0.9**
ESK IAmb IAmb 23 20 53.4
comp=Z,86nm,1.1s
ESK Eskdalemuir 23.44 325 P **P 23 20 50.8 -0.2**
ESK pmax pmax
comp=Z,115nm,1.1s
ESK Eskdalemuir 23.44 325 P **P 23 20 50.8 -0.2**
OUZM OUZ 23.48 260 P **P 23 20 54.0 +2.2**
SNR=17
OUZM P **P 23 20 54.0 +2.2**
SNR=17
ODD1 Odda 23.51 342 *e*P **P 23 20 54.6 +2.9**
FINES FINESS Array B 23.61 7 P **P 23 20 50.8 -1.8**
comp=Z,16nm,0.5s,baz=174,slow=7.9,SNR=97
FINES S **S 23 25 03.5 -2.4**
comp=Z,7.2nm,0.7s,baz=187,slow=11,SNR=5.0
FINES LR LR 23 31 12.6
comp=Z,2μm,19.1s,baz=192,slow=40
FINES FINESS Array B 23.61 7 *i* P **P 23 20 51.5 -1.0**
FINES pmax pmax
comp=Z,16nm,0.5s
FINES FINESS Array B 23.61 7 P **P 23 20 51.7 -0.9**
FIA1 FINESS Array S 23.61 7 P **P 23 20 52.5 -0.1**
EBL Broad Law 23.65 326 *e*P **P 23 20 53.7 +0.7**
NB2 NORSAR Subarra 23.66 349 P **P 23 20 52.7 -0.4**
comp=Z,276nm,1.7s,baz=162,slow=9.3
NB2 NORSAR Subarra 23.66 349 P **P 23 20 52.7 -0.4**
baz=162,slow=9.3
NOA NORSAR Array B 23.66 349 P **P 23 20 52.2 -0.9**
comp=Z,20nm,0.9s,baz=154,slow=9.4,SNR=44
NOA LR LR 23 30 57.6
comp=Z,1μm,19.0s,baz=175,slow=39
NEWG New Galloway 23.80 324 *e*P **P 23 20 55.1 +0.7**
EDI Edinburgh 23.81 326 *e*P **P 23 20 54.3 -0.2**
EDI IAmb IAmb 23 20 57.0
comp=Z,76nm,1.1s
SKAR Skarsliа 23.84 345 *e*P **P 23 20 56.0 +1.2**
EAB Aberfoyle 24.48 326 *e*P **P 23 21 00.9 +0.1**
INVG Invergeldie, C 24.50 326 *e*P **P 23 21 00.9 0.0**
INVG IAmb IAmb 23 21 02.6
comp=Z,154nm,1.6s
HYA Hoyanger 24.73 343 *e*P **P 23 21 03.5 +0.5**
DOMB Dombas 24.95 347 *e*P **P 23 21 06.3 +1.3**
SUE Sulen 24.97 342 *e*P **P 23 21 06.4 +1.3**
AKN Aaknes 25.47 345 *e*P **P 23 21 10.8 +1.2**
KAC Achnashellach 25.70 327 *e*P **P 23 21 12.5 +0.7**
KLMR Klimovskoe 25.72 22 *e*P **P 23 21 10.3 -1.6**
KLMR *e*S **S 23 25 39.6 -0.1**
KLMR pmax pmax
comp=Z,126nm,1.2s
KLMR Klimovskoe 25.72 22 *e*P **P 23 21 10.4 -1.5**
KLMR AMP 23 21 15.3
comp=Z,126nm,1.2s
KLMR *e*S **S 23 25 39.7 +0.1**
KLMR *e*S **S 23 25 39.7 +0.1**
KLMR LQ LQ 23 29 15.4
KLMR LQ LQ 23 29 15.4
KLMR LR LR 23 31 16.3
MOL Molde 25.72 346 *e*P **P 23 21 11.6 -0.3**
KPL Plockton 25.75 327 *e*P **P 23 21 11.7 -0.5**
RAYN Ar Rayn 25.88 117 P **P 23 21 13.9 +0.1**
RAYN pmax pmax
comp=Z,68nm,1.3s
RAYN Ar Rayn 25.88 117 P **P 23 21 13.9 +0.1**
RAYN IAmb IAmb 23 21 22.5
comp=Z,68nm,1.3s
TBLU Trondheim 25.91 349 *e*P **P 23 21 15.0 +1.4**
NSS Namsos 26.92 352 *e*P **P 23 21 23.1 +0.5**
KIRV Kirov 27.74 33 *ce*P **P 23 21 30.7 +0.6**
TMCR Tamitsa 28.11 16 *e*P **P 23 21 33.8 +0.4**
MOR8 Moi Rana 28.30 355 *e*P **P 23 21 37.2 +2.0**
KONS Konsvik 28.73 354 *e*P **P 23 21 40.5 +1.7**
AKTO Aktyubinsk 29.27 53 P **P 23 21 43.0 -0.9**
comp=Z,5.7nm,0.7s,baz=269,slow=7.7,SNR=16
AKTO S **S 23 26 32.9 -3.1**
comp=Z,3.5nm,1.0s,baz=216,slow=19,SNR=2.2
AKTO LR LR 23 35 45.6
comp=Z,1μm,18.9s,baz=268,slow=41
FAUS Fauske 29.45 356 *e*P **P 23 21 45.4 +0.2**
GEYT Alibeck 29.56 79 P **P 23 21 46.4 -0.2**
comp=Z,8.0nm,0.6s,baz=274,slow=8.3,SNR=18
GEYT PcP **PcP 23 24 50.2 -1.2**
comp=Z,1.5nm,0.6s,baz=329,slow=5.4,SNR=1.5
GEYT LR LR 23 35 44.4
comp=Z,723nm,18.1s,baz=265,slow=41
GEYT Alibeck 29.56 79 P **P 23 21 46.7 +0.1**
GYA0B ALIBECK ARRAY 29.56 79 P **P 23 21 46.3 -0.3**
ASHT Ashkhabad 29.76 78 P **P 23 21 49.2 +0.9**
ASHT pmax pmax
comp=Z,79nm,0.5s
ASHT Ashkhabad 29.76 78 P **P 23 21 49.2 +0.9**
TOA0 Torodi Ar. Sit 29.94 219 P **P 23 21 49.8 -0.3**
TORD Torodi Ar. Bea 29.94 219 P **P 23 21 49.9 -0.2**
comp=Z,10nm,0.8s,baz=29,slow=8.3,SNR=40
TORD LR LR 23 35 07.1
comp=Z,1μm,18.2s,baz=10.0,slow=39
TORD Torodi Ar. Bea 29.94 219 P **P 23 21 49.9 -0.2**
STEI Steigen 30.00 356 *e*P **P 23 21 51.4 +1.3**
ABKAR Akbulak array 30.33 56 P **P 23 21 53.1 -0.2**
ABKAR Akbulak array 30.33 56 P **P 23 21 52.8 -0.5**
APA Apatity 30.38 10 ⇓ *i*P P 23 21 59.5 +6.0
APA pmax pmax
comp=Z,9.0nm,0.8s
APA MLR MLR
comp=Z,2μm,16.0s
KTK1 Kautokeino 30.98 2 *e*P **P 23 22 00.1 +1.2**
ARU Arti 31.15 42 *d i*P **P 23 22 01.4 +1.0**
ARU 23 23 03.3
ARU S **S 23 27 10.7 +5.5**

ARU SS **SnSn** **23 28 51.8 +4.7**
ARU pmax pmax
comp=Z,50nm,1.3s
ARU MLR MLR
comp=Z,2µm,14.0s
ARU Arti 31.15 42 P **P** **23 21 59.4 -1.0**
ARU IAmb IAmb 23 22 05.8
comp=Z,45nm,1.2s
TRO Tromso 31.58 359 *e*P **P** **23 22 04.2 +0.2**
ARA0 ARCESS Array S 31.59 3 P **P** **23 22 04.3 +0.1**
ARA0 IAmb IAmb 23 22 07.8
comp=Z,32nm,1.2s
ARA0 ARCESS Array S 31.59 3 *e*P **P** **23 22 05.8 +1.6**
ARCES ARCESS Array B 31.59 3 P **P** **23 22 02.0 -2.2**
comp=Z,3.0nm,0.4s,baz=186,slow=10,SNR=33
ARCES LR LR 23 35 19.1
comp=Z,608nm,21.0s,baz=185,slow=37
DAMY Dhamar 31.62 131 P **P** **23 22 05.6 +0.3**
KEV Kevo 31.89 4 P **P** **23 22 07.3 +0.5**
KEV pmax pmax
comp=Z,31nm,1.0s
KEV Kevo 31.89 4 P **P** **23 22 07.3 +0.5**
KEV IAmb IAmb 23 22 23.6
comp=Z,31nm,1.0s
KOWA Kowa 31.97 229 P **P** **23 22 08.0 0.0**
comp=Z,3.8nm,0.5s,baz=21,slow=11,SNR=16
KOWA Kowa 31.97 229 P **P** **23 22 07.8 -0.2**
AJN Ajban 32.27 105 P **P** **23 22 11.7 +1.2**
SVE Sverdlovsk 32.36 42 *e*P **P** **23 22 11.4 +0.3**
SVE *e*S **S** **23 27 20.4 -3.7**
SVE pmax pmax
comp=Z,86nm,1.1s
SVE MLR MLR
comp=Z,3µm,13.0s
SHME Shamm 32.37 101 P **P** **23 22 11.4 -0.1**
ASUD Al Ashush, Dub 32.49 104 P **P** **23 22 12.9 +0.4**
NAZ Nazwa, Dubai 32.55 103 *i* P **P** **23 22 13.5 +0.4**
SNR=7.6
BANOM Banah 32.56 101 *i* P **P** **23 22 13.1 -0.1**
SNR=8.2
FAQ Al Faqa, Dubai 32.63 104 P **P** **23 22 13.8 0.0**
MSFE Esma-Masafi 32.74 102 P **P** **23 22 14.0 -0.7**
MDH Madha 32.88 102 P **P** **23 22 15.5 -0.4**
UOSS Minazif 32.99 103 P **P** **23 22 16.5 -0.4**
UOSS Minazif 32.99 103 P **P** **23 22 16.3 -0.7**
UOSS IAmb IAmb 23 22 24.8
comp=Z,27nm,0.8s
HATD Hatta, Dubai 33.00 103 *i* P **P** **23 22 17.0 0.0**
SNR=6.8
ALNE Al Ain 33.13 105 *i* P **P** **23 22 18.1 0.0**
SNR=14
ATD Arta Tunnel 33.21 137 P **P** **23 22 19.3 +0.3**
comp=Z,4.8nm,0.7s,baz=308,slow=12,SNR=2.1
ATD Arta Tunnel 33.21 137 P **P** **23 22 20.1 +1.2**
ATD IAmb IAmb 23 22 26.4
comp=Z,48nm,1.5s
FURI Furi 33.43 146 P **P** **23 22 22.8 +1.7**
SOHO SOHO 33.68 104 *i* P **P** **23 22 23.0 +0.1**
SNR=19
HRA Herat 33.72 83 P **P** **23 22 23.1 -0.3**
WHFO Wadi Hawf 35.38 115 P **P** **23 22 39.0 +1.2**
SNR=6.5
ABTO Aybut 35.42 117 P **P** **23 22 40.0 +1.9**
SNR=11
WSAR Wadi Sarin 35.78 103 LR LR 23 41 53.4
comp=Z,649nm,19.0s,baz=328,slow=44
RBK Rabkut 35.96 115 P **P** **23 22 44.0 +1.2**
SNR=11
DMTO DMTO 36.36 114 P **P** **23 22 47.0 +0.9**
SNR=6.4
BRVK Borovoye 37.15 50 *i* P **P** **23 22 52.2 -0.2**
BRVK pmax pmax
comp=Z,43nm,1.3s
BRVK Borovoye 37.15 50 P **P** **23 22 52.4 0.0**
BRVK IAmb IAmb 23 23 03.5
comp=Z,49nm,1.3s
TAS Tashkent 37.33 69 P **P** **23 22 54.3 +0.1**
TAS pmax pmax
comp=Z,31nm,0.8s
TAS Tashkent 37.33 69 P **P** **23 22 54.3 +0.1**
TAS IAmb IAmb 23 23 03.2
comp=Z,31nm,0.8s
IUG luznay 37.71 68 *e*P **P** **23 22 57.3 -0.2**
comp=Z,8.9nm,0.8s,baz=68
IUG LR LR 23 42 01.6
comp=Z,166nm,13.5s,baz=68
IUG luznay 37.71 68 *e*P **P** **23 22 57.2 -0.2**
IUG pmax pmax
comp=Z,9.0nm,0.8s
CHGR Chuyangaron 37.84 74 P **P** **23 22 58.6 0.0**
KK31 Karatay Array 37.88 66 P **P** **23 22 58.3 -0.6**
KK31 pmax pmax
comp=Z,39nm,0.8s
KK31 Karatay Array 37.88 66 P **P** **23 22 58.3 -0.6**
KK31 IAmb IAmb 23 23 06.3
comp=Z,39nm,0.8s
KKAR Karatay Array 37.88 66 P **P** **23 22 58.9 +0.1**
KKAR pmax pmax
comp=Z,39nm,0.8s
KKAR Karatay Array 37.88 66 P **P** **23 22 58.9 +0.1**
KKAR IAmb IAmb 23 23 06.3
comp=Z,39nm,0.8s
KKAR Karatay Array 37.88 66 P **P** **23 22 58.7 -0.2**
DZA Taraz 38.51 66 *e*P **P** **23 23 03.6 -0.5**
baz=66
DZA LR LR 23 41 50.2
comp=Z,184nm,15.0s,baz=66
DZA Taraz 38.51 66 *e*P **P** **23 23 03.6 -0.5**
DZA MLR MLR
comp=Z,184nm,15.0s
GAR Garm 38.62 73 P **P** **23 23 05.1 -0.1**
GAR IAmb IAmb 23 23 13.7
comp=Z,42nm,0.7s
BRZS Berezniki 38.63 55 *e*P **P** **23 23 04.1 -0.9**
comp=Z,5.5nm,1.2s,baz=55
BRZS *e*S **S** **23 29 00.6 +0.1**
baz=55
BRZS Berezniki 38.63 55 *e*P **P** **23 23 04.1 -0.9**
BRZS *e*S **S** **23 29 00.5 +0.1**
BRZS pmax pmax
comp=Z,5.0nm,1.2s
BTK Batken 38.73 71 P **P** **23 23 06.1 0.0**
BTK pmax pmax
comp=Z,16nm,0.8s
BTK Batken 38.73 71 P **P** **23 23 06.1 0.0**
DBIC Dimbokro 38.80 223 P **P** **23 23 05.9 -0.8**
comp=Z,29nm,1.2s,baz=16,slow=7.7,SNR=27
DBIC LR LR 23 39 44.8
comp=Z,1µm,20.3s,baz=10,slow=37
DBIC Dimbokro 38.80 223 P **P** **23 23 06.1 -0.7**
DBIC pmax pmax
comp=Z,20nm,1.0s
DBIC Dimbokro 38.80 223 P **P** **23 23 06.1 -0.7**
TIC Toumodi 38.91 223 *e*P **P** **23 23 07.5 -0.2**
KBL Kabul 38.97 80 P **P** **23 23 09.5 +1.2**
SNR=5.5
KBL Kabul 38.97 80 P **P** **23 23 07.8 -0.5**
KBL pmax pmax
comp=Z,12nm,1.0s
KBL Kabul 38.97 80 P **P** **23 23 07.8 -0.5**
KIC Kosan Boka 39.00 222 *e*P **P** **23 23 08.4 0.0**
comp=Z,13nm,0.6s
SCO Scoresbysund 39.21 339 P **P** **23 23 11.0 +1.4**
SCO pmax pmax
comp=Z,53nm,1.2s
SCO Scoresbysund 39.21 339 P **P** **23 23 10.9 +1.4**
SCO IAmb IAmb 23 23 13.0
comp=Z,53nm,1.2s
SCO Scoresbysund 39.21 339 *i* P **P** **23 23 11.0 +1.4**
comp=Z,77nm,1.4s
SCO Scoresbysund 39.21 339 *i* P **P** **23 23 11.8 +2.2**
SCO Scoresbysund 39.21 339 *i* P **P** **23 23 11.0 +1.4**
SCO IAmb IAmb 23 23 13.4
comp=Z,77nm,1.4s
SCO Scoresbysund 39.21 339 *i* P **P** **23 23 11.8 +2.2**
LIC Lamto 39.27 222 *e*P **P** **23 23 10.7 0.0**
comp=Z,50nm,0.6s
SOCY Socotra 39.51 122 P **P** **23 23 11.0 -1.7**
MBAR Mbarara 39.69 164 P **P** **23 23 15.8 +1.5**
comp=Z,2.6nm,0.2s,baz=14,slow=7.3,SNR=8.6
MBAR LR LR 23 43 15.6
comp=Z,551nm,18.2s,baz=324,slow=42
MBAR Mbarara 39.69 164*ce*P **P** **23 23 16.8 +2.4**
MBAR pmax pmax
comp=Z,16nm,1.7s

MBAR Mbarara 39.69 164 P **P** **23 23 14.9 +0.6**
BTLS Baital 40.07 62 *e*P **P** **23 23 16.7 -0.4**
comp=Z,7.0nm,0.8s,baz=63
BTLS Baital 40.07 62 *e*P **P** **23 23 16.7 -0.4**
BTLS pmax pmax
comp=Z,7.0nm,0.8s
SPA0 Spitsbergen Ar 40.20 359 P **P** **23 23 18.6 +0.9**
SPA0 IAmb IAmb 23 23 21.5
comp=Z,68nm,1.2s
SPA0 Spitsbergen Ar 40.20 359 *e*P **P** **23 23 20.4 +2.7**
SPITS Spitsbergen Ar 40.20 359 P **P** **23 23 17.9 +0.1**
comp=Z,27nm,1.1s,baz=149,slow=12,SNR=9.1
SPITS PcP **PcP** **23 25 22.9 +1.4**
comp=Z,9.6nm,0.7s,baz=140,slow=5.3,SNR=6.2
SPITS LR LR 23 40 44.4
comp=Z,2µm,21.4s,baz=195,slow=37
SGDS Sogindy 40.77 65 *e*P **P** **23 23 22.4 -0.6**
baz=65
SGDS Sogindy 40.77 65 *e*P **P** **23 23 22.4 -0.6**
AAK Ala-Archa 40.85 66 *i* P **P** **23 23 26.7 +3.0**
AAK pmax pmax
comp=Z,20nm,1.0s
AAK Ala-Archa 40.85 66 P **P** **23 23 24.0 +0.2**
KUU Kurty 41.90 64 *e*P **P** **23 23 31.9 -0.3**
comp=Z,30nm,1.1s,baz=64
KUU *e*S **S** **23 29 50.1 +0.6**
baz=64
KUU Kurty 41.90 64 *e*P **P** **23 23 31.8 -0.3**
KUU *e*S **S** **23 29 50.1 +0.6**
KUU pmax pmax
comp=Z,30nm,1.1s
BOOM Boomskoye usch 41.92 66 P **P** **23 23 33.2 +0.6**
BOOM pmax pmax
comp=Z,25nm,1.0s
BOOM Boomskoye usch 41.92 66 P **P** **23 23 33.2 +0.6**
KMBO Kilima Mbogo 42.03 154 P **P** **23 23 34.4 +0.7**
comp=Z,2.5nm,0.5s,baz=345,slow=8.2,SNR=14
KMBO LR LR 23 44 35.7
comp=Z,555nm,18.6s,baz=48,slow=41
KMBO Kilima Mbogo 42.03 154 *i* P **P** **23 23 36.3 +2.6**
SNR=9.9
KMBO Kilima Mbogo 42.03 154 P **P** **23 23 34.5 +0.7**
KMBO pmax pmax
comp=Z,14nm,1.3s
KMBO Kilima Mbogo 42.03 154 P **P** **23 23 34.5 +0.8**
KURBB Kurchatov Arra 42.32 53 P **P** **23 23 34.8 -0.7**
comp=Z,12nm,0.8s,baz=281,slow=8.8,SNR=23
KURBB PP **PP** **23 25 15.5 +2.1**
comp=Z,8.7nm,1.0s,baz=272,slow=10,SNR=2.9
DAG Danmarks Havn 42.33 348 *i* P **P** **23 23 36.5 +1.3**
DAG Danmarks Havn 42.33 348 *i* P **P** **23 23 36.5 +1.3**
DAG Danmarks Havn 42.33 348 *i* P **P** **23 23 36.6 +1.3**
KURK Kurchatov 42.37 53 *ce*P **P** **23 23 35.9 0.0**
KURK pmax pmax
comp=Z,28nm,1.0s
KURK Kurchatov 42.37 53 P **P** **23 23 35.7 -0.2**
AAA Alma-Ata 42.45 65 *e*P **P** **23 23 36.0 -0.9**
baz=65
AAA Alma-Ata 42.45 65 *e*P **P** **23 23 35.9 -0.9**
NIL Nilore 42.55 79 P **P** **23 23 37.8 +0.1**
NIL pmax pmax
comp=Z,64nm,1.1s
NIL Nilore 42.55 79 P **P** **23 23 37.8 +0.1**
NIL IAmb IAmb 23 23 46.9
comp=Z,64nm,1.1s
MDOK Medeo 42.56 65 *e*P **P** **23 23 37.4 -0.3**
baz=65
MDOK Medeo 42.56 65 *e*P **P** **23 23 37.4 -0.3**
KSH Kashi 42.71 70 P **P** **23 23 38.4 -0.6**
KSH S **S** **23 29 59.1 -2.7**
KSH SS **SS** **23 33 05.7 -6.5**
KSH pmax pmax
comp=Z,9.0nm,0.6s
KSH pmax pmax
comp=Z,610nm,4.6s
KSH LR LR
comp=Z,660nm,11.4s
KSH LR LR
comp=Z,620nm,5.9s
KSH LR LR
comp=Z,470nm,7.7s
TDK Taldyqorghan 43.12 62 *e*P **P** **23 23 41.9 -0.2**
comp=Z,16nm,1.0s,baz=62
TDK Taldyqorghan 43.12 62 *e*P **P** **23 23 41.8 -0.2**
TDK pmax pmax
comp=Z,16nm,1.0s
KIBK Kibwezi 43.44 154 P **P** **23 23 47.5 +2.5**
SNR=5.2
SATY Saty 43.55 64 *e*P **P** **23 23 45.8 0.0**
comp=Z,23nm,1.6s,baz=65
SATY Saty 43.55 64 *e*P **P** **23 23 45.7 0.0**
SATY pmax pmax
comp=Z,23nm,1.6s
KPKS Kokpek 43.65 64 *e*P **P** **23 23 47.1 +0.5**
baz=64
KPKS Kokpek 43.65 64 *e*P **P** **23 23 47.0 +0.5**
PDGK Podgornoye 44.25 64 P **P** **23 23 49.0 -2.4**
SHLS Shalkode 44.28 64 *e*P **P** **23 23 54.4 +2.8**
comp=Z,5.0nm,0.8s,baz=64
SHLS Shalkode 44.28 64 *e*P **P** **23 23 54.3 +2.8**
SHLS pmax pmax
comp=Z,5.0nm,0.8s
ICESG Greenland Ices 44.35 334 *i* P **P** **23 23 53.0 +1.0**
SUMG Summit 44.84 339 P **P** **23 23 57.2 +1.2**
SUMG pmax pmax
comp=Z,32nm,0.9s
SUMG Summit 44.84 339 P **P** **23 23 57.2 +1.2**
SUMG IAmb IAmb 23 24 03.4
comp=Z,32nm,0.9s
SUMG Summit 44.84 339 *i* P **P** **23 23 57.1 +1.1**
comp=Z,96nm,1.0s
SUMG Summit 44.84 339 *i* P **P** **23 23 57.4 +1.3**
SUMG IAmb IAmb 23 24 04.1
comp=Z,84nm,1.0s
SUMG Summit 44.84 339 *i* P **P** **23 23 57.1 +1.1**
SUMG IAmb IAmb 23 24 03.2
comp=Z,96nm,1.0s
MAKZ Makanchi 45.18 58 P **P** **23 23 57.9 -0.7**
MAKZ pmax pmax
comp=Z,20nm,1.0s
MAKZ Makanchi 45.18 58 P **P** **23 23 57.9 -0.7**
MAKZ IAmb IAmb 23 24 03.1
comp=Z,20nm,1.0s
MK31 Makanchi Array 45.39 58 *i* P **P** **23 23 59.4 -0.9**
MK31 pmax pmax
comp=Z,9.0nm,0.4s
MK31 Makanchi Array 45.39 58 P **P** **23 23 59.4 -0.9**
MK31 IAmb IAmb 23 24 05.9
comp=Z,19nm,0.5s
MKAR Makanchi Array 45.39 58 P **P** **23 23 59.1 -1.2**
comp=Z,12nm,0.4s,baz=276,slow=7.2,SNR=208
MKAR LR LR 23 46 28.8
comp=Z,525nm,19.1s,baz=270,slow=41
MKAR Makanchi Array 45.39 58*ce*P **P** **23 23 59.5 -0.8**
MKAR pmax pmax
comp=Z,12nm,0.4s
MKAR Makanchi Array 45.39 58 P **P** **23 23 59.4 -0.8**
ZAA0 Zalesovo Array 45.78 48 P **P** **23 24 02.2 -1.0**
ZALV Zalesovo Beam 45.78 48 P **P** **23 24 02.1 -1.1**
comp=Z,31nm,0.5s,baz=275,slow=8.3,SNR=100
ZALV PP **PP** **23 25 54.0 +3.8**
comp=Z,9.6nm,0.7s,baz=277,slow=8.2,SNR=2.9
ZALV S **S** **23 30 43.9 -1.9**
comp=Z,0.4nm,0.4s,baz=285,slow=13,SNR=2.4
ZALV LR LR 23 46 24.7
comp=Z,801nm,18.1s,baz=281,slow=40
ZALV Zalesovo Beam 45.78 48 P **P** **23 24 01.7 -1.5**
NRIK Noril'sk 46.88 27 P **P** **23 24 11.1 -0.5**
comp=Z,7.7nm,0.8s,baz=259,slow=5.3,SNR=9.0
NRIK LR LR 23 46 11.5
comp=Z,685nm,20.1s,baz=265,slow=39
NRIK Noril'sk 46.88 27*ce*P **P** **23 24 13.6 +2.0**
NRIK pmax pmax
comp=Z,13nm,0.9s
ZSN Zaisan 46.96 57 *e*P **P** **23 24 12.4 -0.2**
comp=Z,10nm,1.1s,baz=57
ZSN Zaisan 46.96 57 *e*P **P** **23 24 12.4 -0.2**
ZSN pmax pmax
comp=Z,10.0nm,1.1s
SFJD Kangerlussuaq 48.24 330 P **P** **23 24 21.9 -0.3**
comp=Z,8.3nm,0.8s,baz=190,slow=7.9,SNR=2.8
SFJD Kangerlussuaq 48.24 330 P **P** **23 24 21.9 -0.3**
SFJD pmax pmax
comp=Z,20nm,1.0s
SFJD Kangerlussuaq 48.24 330 P **P** **23 24 21.9 -0.3**
SFJD IAmb IAmb 23 24 28.3

comp=Z,20nm,1.0s
WMQ Urumqi 49.85 61 *e*P **P** **23 24 34.7 -0.3**
WMQ pP pP 23 24 38.9 -1.7
WMQ sP sP 23 24 42.6 -0.1
WMQ S **S** **23 31 47.1 +3.1**
WMQ pmax pmax
comp=Z,23nm,1.1s
WMQ pmax pmax
comp=Z,230nm,3.7s
WMQ LR LR
comp=Z,2µm,27.3s
WMQ LR LR
comp=Z,3µm,27.3s
WMQ LR LR
comp=Z,990nm,28.9s
WMQ Urumqi 49.85 61 P **P** **23 24 34.4 -0.6**
WMQ pmax pmax
comp=Z,38nm,1.3s
WMQ Urumqi 49.85 61 P **P** **23 24 34.4 -0.6**
WMQ IAmb IAmb 23 24 46.0
comp=Z,38nm,1.3s
PYUN Piuthan 52.47 81 *e*P **P** **23 24 54.4 -0.7**
comp=Z,75nm,0.6s
DANN Dangsing 52.96 81 *e*P **P** **23 24 58.3 -0.4**
comp=Z,53nm,0.6s
KOLN Koldanda 53.10 81 *e*P **P** **23 24 58.9 -0.8**
comp=Z,30nm,0.8s
TULEG Thule 53.12 343 P **P** **23 24 59.0 +0.1**
TULEG IAmb IAmb 23 25 16.2
comp=Z,32nm,1.2s
LSZ Lusaka 53.61 171 P **P** **23 25 03.2 -0.1**
LSZ pmax pmax
comp=Z,14nm,0.9s
LSZ Lusaka 53.61 171 P **P** **23 25 03.2 -0.1**
LSZ IAmb IAmb 23 25 05.8
comp=Z,14nm,0.8s
GKN Gorkha 53.80 81 *e*P **P** **23 25 03.7 -1.1**
comp=Z,40nm,0.7s
DMN Daman 54.35 81 *e*P **P** **23 25 08.2 -0.8**
comp=Z,34nm,0.7s
HYB Hyderabad 54.51 95 *i* P **P** **23 25 08.0 -1.9**
PKIN Phulchoki 54.60 81 *e*P **P** **23 25 09.9 -0.8**
comp=Z,18nm,0.6s
PKI Pulchoki 54.61 81 *e*P **P** **23 25 10.0 -0.9**
GUN Gumba 54.81 80 *e*P **P** **23 25 12.0 -0.4**
comp=Z,28nm,0.7s
DRLN Deer Lake 55.08 309 P **P** **23 25 12.5 -1.0**
RAMN Ramite 55.84 81 *e*P **P** **23 25 18.9 -0.8**
comp=Z,38nm,0.8s
MOY Mondy 55.84 48 *e*P **P** **23 25 20.9 +1.7**
MOY pmax pmax
comp=Z,25nm,1.5s
FRB Frobisher Bay 56.16 328 P **P** **23 25 19.8 -1.2**
comp=Z,8.9nm,0.9s,baz=0.2,slow=7.6,SNR=2.0
ODAN Odare 56.49 80 *e*P **P** **23 25 23.5 -0.9**
comp=Z,7.4nm,0.3s
TAPN Taplejung 56.50 80 *e*P **P** **23 25 23.1 -1.4**
comp=Z,19nm,0.6s
TSUM Tsumeb 57.08 183 P **P** **23 25 28.2 -0.1**
TLY Talaya 57.38 47 *e*P **P** **23 25 31.7 +1.7**
TLY pmax pmax
comp=Z,92nm,1.3s
TLY MLR MLR
comp=Z,2µm,17.0s
TLY Talaya 57.38 47 P **P** **23 25 30.4 +0.4**
IRK Irkutsk 57.53 46 *e*P **P** **23 25 30.6 -0.4**
IRK pmax pmax
comp=Z,61nm,2.0s
ZAK Zakamensk 57.65 49 *e*P **P** **23 25 32.2 +0.2**
ZAK pmax pmax
comp=Z,14nm,1.1s
LSA Lhasa 58.02 76 P **P** **23 25 35.2 -0.2**
LSA pmax pmax
comp=Z,46nm,0.6s
LSA Lhasa 58.02 76 P **P** **23 25 35.1 -0.3**
LSA Lhasa 58.02 76 P **P** **23 25 34.6 -0.8**
LSA pmax pmax
comp=Z,10.0nm,0.8s
LSA Lhasa 58.02 76 P **P** **23 25 34.6 -0.8**
SCHQ Schefferville 58.45 317 P **P** **23 25 37.8 +0.3**
comp=Z,5.4nm,0.5s,baz=64,slow=9.7,SNR=6.6
SCHQ Schefferville 58.45 317 P **P** **23 25 37.4 -0.1**
SCHQ IAmb IAmb 23 25 50.3
comp=Z,37nm,1.2s
TIXI Tiksi 59.73 20 *ce*P **P** **23 25 48.4 +2.4**
TIXI Tiksi 59.73 20 P **P** **23 25 46.6 +0.6**
TIXI IAmb IAmb 23 25 54.0
comp=Z,17nm,1.1s
GTA Gaotai 59.91 62 *e*P **P** **23 25 47.8 -0.2**
GTA pP pP 23 25 54.2 +0.6
GTA sP sP 23 25 57.3 +1.5
GTA S **S** **23 33 58.4 -0.9**
GTA SS **SS** **23 37 56.3 +1.0**
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,150nm,7.6s
GTA LR LR
comp=Z,500nm,18.5s
GTA LR LR
comp=Z,450nm,18.9s
GTA LR LR
comp=Z,450nm,20.4s
BOD Bodaibo 60.46 38 *e*P **P** **23 25 50.5 -0.7**
BOD pmax pmax
comp=Z,29nm,1.3s
SONM Songino Array 60.55 51 P **P** **23 25 50.9 -1.3**
comp=Z,23nm,1.1s,baz=282,slow=8.2,SNR=40
SONM LR LR 23 54 06.5
comp=Z,547nm,19.1s,baz=302,slow=38
SONM Songino Array 60.55 51 P **P** **23 25 52.3 +0.1**
SONM pmax pmax
comp=Z,22nm,1.1s
SONM Songino Array 60.55 51 P **P** **23 25 52.3 +0.1**
SHL Shillong 60.63 79 P **P** **23 25 52.8 -0.4**
SNR=5.2
SHL Shillong 60.63 79 P **P** **23 25 52.2 -0.9**
SHL pmax pmax
comp=Z,35nm,1.3s
SHL Shillong 60.63 79 P **P** **23 25 52.2 -0.9**
SHL IAmb IAmb 23 26 00.8
comp=Z,35nm,1.3s
ULN Ulaanbaatar 60.93 50 *ce*P **P** **23 25 55.1 +0.2**
ULN pmax pmax
comp=Z,21nm,1.3s
ULN Ulaanbaatar 60.93 50 P **P** **23 25 54.8 -0.1**
ULN IAmb IAmb 23 26 05.3
comp=Z,11nm,0.8s
ABPO Ambohimpanom 62.17 151 P **P** **23 26 03.7 +0.3**
ABPO pmax pmax
comp=Z,20nm,1.3s
ABPO Ambohimpanom 62.17 151 P **P** **23 26 03.7 +0.3**
ABPO IAmb IAmb 23 26 11.8
comp=Z,20nm,1.2s
PALK Pallekele 62.27 103 P **P** **23 26 04.6 +0.5**
PALK pmax pmax
comp=Z,35nm,1.3s
PALK Pallekele 62.27 103 P **P** **23 26 04.6 +0.5**
LBTB Lobatse 62.99 175 P **P** **23 26 09.7 +1.0**
LBTB pmax pmax
comp=Z,27nm,1.2s
LBTB Lobatse 62.99 175 P **P** **23 26 09.7 +1.0**
LBTB IAmb IAmb 23 26 11.1
comp=Z,26nm,1.2s
D62A Allapoint, All 63.02 310 P **P** **23 26 10.2 +1.6**
baz=62
E62A Clayton Lake 63.52 310 P **P** **23 26 13.3 +1.3**
baz=62
LZH Lanzhou 64.29 63 *e*P **P** **23 26 18.2 +0.7**
LZH pP pP 23 26 23.2 +0.1
LZH sP sP 23 26 25.9 +0.6
LZH pmax pmax
comp=Z,28nm,1.2s
LZH pmax pmax
comp=Z,98nm,4.8s
LZH LR LR
comp=Z,440nm,12.2s
LZH LR LR
comp=Z,620nm,14.6s
LZH LR LR
comp=Z,700nm,15.7s
LATQ La Tuque 65.10 312 P **P** **23 26 23.6 +1.3**
baz=60
YAK Yakutsk 65.19 29 *e*P **P** **23 26 23.4 +0.8**
YAK *e**PP **pP** **23 26 27.3 -1.1**
YAK *e* 23 26 51.2

YAK *e* 23 28 54.0
YAK *eS* **S** **23 35 04.4 -0.2**
YAK *e**SS sS 23 35 22.7 +8.8
YAK *e* 23 36 12.8
YAK pmax pmax
comp=Z,27nm,0.8s
YAK pmax pmax
comp=E,17nm,1.1s
YAK pmax pmax
comp=Z,150nm,3.3s
YAK pmax pmax
comp=N,214nm,3.3s
YAK pmax pmax
comp=E,215nm,3.4s
YAK smax smax
comp=N,252nm,2.8s
YAK smax smax
comp=E,65nm,2.5s
YAK Yakutsk 65.19 29 P **P** **23 26 23.0 +0.4**
F60A Warwick 65.31 310 P **P** **23 26 25.0 +1.3**
baz=60
BTO Baotou 66.24 56 *eP* **P** **23 26 26.9 -3.1**
BOSA Boshof 66.54 175 P **P** **23 26 32.6 +0.8**
comp=E,6.1nm,0.4s,baz=12,slow=7.1,SNR=46
BOSA LR LR 23 57 54.9
comp=E,1µm,18.7s,baz=2.5,slow=38
BOSA Boshof 66.54 175 P **P** **23 26 32.6 +0.8**
BOSA pmax pmax
comp=Z,28nm,1.3s
BOSA Boshof 66.54 175 P **P** **23 26 32.6 +0.8**
BOSA IAmb IAmb 23 26 33.7
comp=Z,28nm,1.2s
LSQQ Lebel-sur-Quev 66.66 315 P **P** **23 26 33.4 +1.1**
baz=58
CD2 Chengdu 66.86 68 P **P** **23 26 34.1 +0.1**
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 pmax pmax
comp=Z,140nm,6.1s
CD2 LR LR
comp=Z,330nm,15.4s
CD2 LR LR
comp=Z,360nm,9.8s
CD2 LR LR
comp=Z,400nm,17.2s
D55A Sainte-Anne-du 66.87 312 P **P** **23 26 35.8 +2.1**
baz=58
HHC Hu-ho-hao-te 67.12 55 *eP* **P** **23 26 37.8 +2.2**
HHC sP sP 23 26 44.2 +0.8
HHC S **S** **23 35 28.1 -1.0**
HHC pmax pmax
comp=Z,17nm,1.1s
HHC pmax pmax
comp=Z,160nm,6.0s
HHC LR LR
comp=Z,440nm,13.6s
HHC LR LR
comp=Z,510nm,14.9s
HHC LR LR
comp=Z,580nm,17.0s
HIA Hailar 67.61 44 P **P** **23 26 38.6 +0.1**
HIA pmax pmax
comp=Z,17nm,0.8s
HIA Hailar 67.61 44 P **P** **23 26 38.5 +0.1**
HIA IAmb IAmb 23 26 49.6
comp=Z,16nm,0.8s
RER Riviere de l'E 67.66 144 P **P** **23 26 40.0 +1.0**
I57A Carthage 68.61 310 P **P** **23 26 46.5 +1.8**
baz=57
PLVO Plevna 68.87 311 P **P** **23 26 46.5 +0.1**
XAN Xi'an 68.91 63 P **P** **23 26 47.5 +0.6**
XAN pP pP 23 26 52.4 -0.2
XAN PP **PP** **23 29 20.1 +1.3**
XAN S **S** **23 35 59.4 +8.9**
XAN pmax pmax
comp=Z,15nm,1.3s
XAN pmax pmax
comp=Z,190nm,6.4s
XAN LR LR
comp=Z,470nm,15.5s
XAN LR LR
comp=Z,440nm,17.8s
XAN LR LR
comp=Z,470nm,15.6s
XAN Xi'an 68.91 63 P **P** **23 26 46.4 -0.5**
XAN pmax pmax
comp=Z,24nm,1.1s
XAN Xi'an 68.91 63 P **P** **23 26 46.4 -0.5**
XAN IAmb IAmb 23 26 53.1
comp=Z,24nm,1.1s
ZEA Zeya 68.96 38 *eP* **P** **23 26 48.7 +1.9**
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=Z,600nm,18.0s
PBA Port Blair 69.01 92 P P 23 26 47.9 +0.3
KMI Kunming 69.19 74‖ *eP* **P** **23 26 50.5 +1.5**
KMI pP pP 23 26 52.3 -2.3
KMI sP sP 23 26 55.0 -1.8
KMI pmax pmax
comp=Z,6.0nm,0.8s
KMI pmax pmax
comp=Z,97nm,4.0s
KMI LR LR
comp=Z,180nm,21.1s
KMI LR LR
comp=Z,250nm,23.5s
G54A Lake Saint Pet 69.27 312 P **P** **23 26 50.7 +1.9**
baz=56
C36M Paulatuk 69.69 347 P **P** **23 26 52.3 +1.3**
baz=29
C36M Paulatuk 69.69 347 P **P** **23 26 51.1 +0.1**
C36M IAmb IAmb 23 26 55.3
comp=Z,27nm,1.4s
CHTO Chiang Mai 69.77 82 P **P** **23 26 51.6 -0.7**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 69.77 82 P **P** **23 26 51.6 -0.7**
M59A Waymart 69.78 307 P **P** **23 26 53.6 +1.5**
baz=57
CM31 Chiang Mai Arr 69.97 82 P **P** **23 26 53.1 -0.4**
CM31 IAmb IAmb 23 26 54.9
comp=Z,12nm,0.9s
CMAR Chiang Mai Arr 69.97 82 P **P** **23 26 53.2 -0.4**
comp=Z,7.6nm,0.7s,baz=302,slow=7.3,SNR=44
CMAR LR LR 00 02 51.4
comp=Z,148nm,19.1s,baz=324,slow=40
CMAR Chiang Mai Arr 69.97 82 P **P** **23 26 53.1 -0.5**
SUR Sutherland 70.14 180 P **P** **23 26 55.4 +1.0**
SUR IAmb IAmb 23 27 13.5
comp=Z,31nm,1.5s
SADO Sadowa 70.24 312 P **P** **23 26 55.1 +0.3**
comp=Z,5.0nm,0.5s,baz=72,slow=2.9,SNR=6.8
SADO Sadowa 70.24 312 P **P** **23 26 54.9 +0.1**
SADO IAmb IAmb 23 27 09.6
comp=Z,23nm,1.1s
N59A State Game Lan 70.33 307 P **P** **23 26 57.4 +1.9**
baz=56
L57A Andrews Acres 70.40 308 P **P** **23 26 58.0 +2.1**
baz=56
O60A Telford 70.43 306 P **P** **23 26 57.9 +1.8**
baz=56
BJI Beijing 70.53 54 P **P** **23 26 57.7 +1.1**
BJI S **S** **23 36 09.9 +0.7**
BJI pmax pmax
comp=Z,8.0nm,1.2s
BJI LR LR
comp=Z,470nm,16.8s
BJI LR LR
comp=Z,450nm,15.4s
BJI LR LR
comp=Z,350nm,17.7s
BJT Baijiatuau 70.54 54 P **P** **23 26 57.4 +0.7**
BJT pmax pmax
comp=Z,12nm,1.0s
BJT Baijiatuau 70.54 54 P **P** **23 26 57.4 +0.7**
BJT IAmb IAmb 23 27 02.4
comp=Z,12nm,1.0s
L56A Greenwood 70.77 309 P **P** **23 26 59.2 +1.0**
baz=56
L56A Greenwood 70.77 309 P **P** **23 26 59.4 +1.2**
WUPA West Chester U 70.77 306 P **P** **23 26 58.3 +0.2**
A21K Barrow 70.84 359 P **P** **23 26 59.9 +2.0**
baz=2.5
A21K Barrow 70.84 359 P **P** **23 26 58.8 +0.8**
M57A Sunshine Farm, 70.95 308 P **P** **23 27 00.3 +1.1**
N58A Sunbury 70.97 307 P **P** **23 27 00.7 +1.3**
baz=56
N58A Sunbury 70.97 307 P **P** **23 27 00.1 +0.8**
N58A IAmb IAmb 23 27 01.4
comp=Z,35nm,1.4s
BILL Bilibino 71.08 13 *i* P **P** **23 27 00.1 +0.5**
BILL pmax pmax
comp=Z,46nm,1.4s
ENH Enshi 71.36 66 P **P** **23 27 02.3 +0.3**
ENH IAmb IAmb 23 27 04.7
comp=Z,23nm,1.0s
GYA Guiyang 71.41 71 ⇑P **P** **23 27 02.2 -0.2**
GYA PP **PP** **23 29 39.7 -0.9**
GYA S **S** **23 36 13.4 -6.6**
GYA pmax pmax
comp=Z,9.0nm,1.5s
GYA pmax pmax
comp=Z,100nm,4.4s
GYA LR LR
comp=Z,150nm,5.5s
GYA LR LR
comp=Z,77nm,5.7s
GYA LR LR
comp=Z,99nm,4.0s
M56A Emporium 71.52 308 P **P** **23 27 04.4 +1.7**
baz=55
SSPA Standing Stone 71.82 308 P **P** **23 27 04.2 -0.3**
SSPA IAmb IAmb 23 27 23.9
comp=Z,32nm,1.4s
N56A West Decatur 71.91 308 P **P** **23 27 06.8 +1.7**
baz=55
ROSB Rosrio 72.09 251 *eP* **P** **23 27 07.5 +1.1**
P58A Pank, Wackersv 72.10 306 P **P** **23 27 07.8 +1.6**
baz=55
INK Inuvik 72.11 350 P **P** **23 27 05.8 +0.2**
comp=Z,4.8nm,0.8s,baz=38,slow=8.2,SNR=6.0
INK Inuvik 72.11 350 P **P** **23 27 05.9 +0.2**
INK pmax pmax
comp=Z,25nm,1.5s
INK Inuvik 72.11 350 P **P** **23 27 05.9 +0.3**
INK IAmb IAmb 23 27 20.3
comp=Z,25nm,1.5s
P57A Homestead Farm 72.56 307 P **P** **23 27 10.4 +1.5**
baz=55
P57A Homestead Farm 72.56 307 P **P** **23 27 09.8 +0.9**
P57A IAmb IAmb 23 27 11.0
comp=Z,34nm,1.4s
Q58A Fox Den Farm, 72.66 306 P **P** **23 27 10.9 +1.3**
baz=55
N54A Moraine State 72.93 309 P **P** **23 27 12.8 +1.7**
baz=54
O55A Ligonier 72.95 308 P **P** **23 27 12.7 +1.4**
baz=54
T60A Surry 73.08 304 P **P** **23 27 13.9 +1.8**
baz=55
T60A Surry 73.08 304 P **P** **23 27 12.8 +0.8**
S59A Mechanicsville 73.09 305 P **P** **23 27 13.7 +1.6**
baz=55
TOLK Toolik Lake Re 73.29 356 P **P** **23 27 14.9 +2.1**
baz=8.2
TOLK Toolik Lake Re 73.29 356 P **P** **23 27 14.0 +1.2**
TOLK IAmb IAmb 23 27 26.0
comp=Z,16nm,1.1s
TIA Tai'an 73.31 57 P **P** **23 27 13.2 -0.2**
TIA pmax pmax
comp=Z,17nm,1.1s
YKA Yellowknife Ar 73.42 340 P **P** **23 27 13.8 +0.2**
comp=Z,7.2nm,1.0s,baz=43,slow=5.9,SNR=11
YKA Yellowknife Ar 73.42 340 *ce*P **P** **23 27 14.5 +0.9**
YKA pmax pmax
comp=Z,7.0nm,1.0s
Q56A Snyder Ridge, 73.56 307 P **P** **23 27 16.3 +1.5**
baz=54
Q56A Snyder Ridge, 73.56 307 P **P** **23 27 15.6 +0.7**
Q56A IAmb IAmb 23 27 25.8
comp=Z,22nm,1.0s
MDP Montagnes des 73.56 263 P **P** **23 27 14.5 -0.6**
comp=Z,9.0nm,1.0s,baz=53,slow=10,SNR=2.5
MCWV Mont Chateau 73.61 308 P **P** **23 27 16.8 +1.7**
baz=54
S58A Poland Farm, P 73.66 305 P **P** **23 27 16.3 +0.8**
KLR Kul'dur 73.96 39 *ce*P **P** **23 27 16.7 -0.3**
KLR pmax pmax
comp=Z,22nm,1.0s
CN2 Changchun 73.97 47 *eP* **P** **23 27 17.4 +0.2**
CN2 *eS* **S** **23 36 48.2 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=Z,480nm,13.0s
CN2 LR LR
comp=Z,590nm,13.0s
CN2 LR LR
comp=Z,690nm,15.0s
P54A Burton 74.04 308 P **P** **23 27 19.7 +2.0**
baz=54
R56A Bull Pasture M 74.06 306 P **P** **23 27 19.2 +1.2**
baz=54
BMAR Burnt Mountain 74.15 354 P **P** **23 27 18.9 +1.0**
U59A Littleton 74.23 304 P **P** **23 27 20.2 +1.4**
baz=54
U59A Littleton 74.23 304 P **P** **23 27 19.6 +0.8**
U59A IAmb IAmb 23 27 33.5
comp=Z,18nm,1.2s
MA2 Magadan 74.37 24 *i* P **P** **23 27 20.3 +1.1**
MA2 pmax pmax
comp=Z,36nm,0.9s
R55A Marlinton 74.59 307 P **P** **23 27 22.6 +1.6**
baz=53
Q54A Coxs Mills 74.62 308 P **P** **23 27 22.3 +1.3**
baz=53
P53A Whipple 74.67 308 P **P** **23 27 22.2 +0.9**
baz=53
WHN Wuhan 74.67 63 P **P** **23 27 20.4 -1.1**
COLD Coldfoot 74.73 356 P **P** **23 27 22.4 +1.2**
baz=7.7
COLD Coldfoot 74.73 356 P **P** **23 27 21.8 +0.6**
O51A Pataskala 75.02 309 P **P** **23 27 24.7 +1.3**
baz=53
FYU Fort Yukon 75.06 354 P **P** **23 27 24.6 +1.5**
COWI Conover 75.06 317 P **P** **23 27 23.7 +0.2**
EYMN Ely 75.10 320 P **P** **23 27 24.6 +0.9**
baz=49
EYMN Ely 75.10 320 P **P** **23 27 23.8 +0.1**
EYMN IAmb IAmb 23 27 26.6
comp=Z,13nm,0.8s
Q53A Leroy 75.13 308 P **P** **23 27 25.0 +1.0**
baz=53
S55A Lewisburg 75.14 306 P **P** **23 27 25.6 +1.5**
baz=53
GRNR Gornyy 75.20 36⇑ *i*P **P** **23 27 24.7 +0.5**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=Z,730nm,14.0s
GRNR MLR MLR
comp=E,400nm,15.0s
GRNR MLR MLR
comp=N,540nm,13.0s
ULM Lac du Bonnet 75.70 324 P **P** **23 27 27.3 +0.2**
comp=N,17nm,1.0s,baz=57,slow=6.3,SNR=9.0
ULM LR LR 00 01 26.8
comp=N,248nm,18.4s,baz=68,slow=36
ULM Lac du Bonnet 75.70 324 P **P** **23 27 27.5 +0.5**
ULM pmax pmax
comp=Z,23nm,1.0s
ULM Lac du Bonnet 75.70 324 P **P** **23 27 27.5 +0.5**
ULM IAmb IAmb 23 27 29.0
comp=Z,23nm,1.0s
T55A Pulaski 75.71 306 P **P** **23 27 28.6 +1.2**
baz=53
R53A Hurricane 75.72 308 P **P** **23 27 28.9 +1.6**
baz=52
MTP Monte Pirata 75.97 282 P **P** **23 27 29.2 +0.1**
PRP Porcupine Dome 76.11 354 P **P** **23 27 30.1 +0.8**
PRP IAmb IAmb 23 27 42.6
comp=Z,20nm,1.3s
Q51A Peebles 76.16 309 P **P** **23 27 29.9 0.0**
S53A Williamson 76.22 307 P **P** **23 27 31.6 +1.3**
baz=52
T54A Tazewell 76.25 306 P **P** **23 27 31.1 +0.6**
baz=52
GCPR Guaynabo City 76.26 283 P **P** **23 27 30.7 0.0**
GCPR IAmb IAmb 23 27 50.2
comp=Z,28nm,1.4s
MCPB Macapa, AP 76.50 259 *eP* **P** **23 27 33.9 +1.7**
POKR Poker Plat Res 76.65 355 P **P** **23 27 33.8 +1.5**
baz=9.8
POKR Poker Plat Res 76.65 355 P **P** **23 27 33.2 +1.0**
POKR IAmb IAmb 23 27 39.4
comp=Z,16nm,0.9s
U54A Nelsons Funny 76.73 306 P **P** **23 27 34.9 +1.6**
baz=52
I23K Minto, Yukon-K 76.75 356 P **P** **23 27 35.1 +2.4**
baz=8.3
MDM Murphy Dome 76.87 355 P **P** **23 27 34.0 +0.5**
MDM IAmb IAmb 23 27 40.3
comp=Z,22nm,1.1s
DAWY Dawson 76.90 351 P **P** **23 27 34.8 +1.1**
DAWY IAmb IAmb 23 27 41.3
comp=Z,40nm,1.4s
NJ2 Nanjing 76.91 60 *eP* **P** **23 27 35.8 +1.6**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
MLY Manley 76.95 356 P **P** **23 27 35.2 +1.2**
baz=7.2
IL31 76.95 354 P **P** **23 27 35.1 +1.2**
IL31 IAmb IAmb 23 27 40.6
comp=Z,21nm,1.5s
ILAR Eielson Array 76.95 354 P **P** **23 27 33.9 -0.1**
comp=Z,2.9nm,1.0s,baz=357,slow=5.0,SNR=10
ILAR PP **PP** **23 30 20.7 -5.7**
comp=Z,0.3nm,0.5s,baz=32,slow=3.5,SNR=1.8
ILAR Eielson Array 76.95 354 P **P** **23 27 34.7 +0.8**
ILAR Eielson Array 76.95 354 P **P** **23 27 34.7 +0.8**
K27K Chicken 77.24 352 P **P** **23 27 37.5 +2.0**
baz=14
K27K Chicken 77.24 352 P **P** **23 27 36.3 +0.8**
K27K IAmb IAmb 23 27 43.7
comp=Z,42nm,1.4s
V54A Nebo 77.27 305 P **P** **23 27 38.0 +1.8**
baz=52
NEA2 Nenana 77.28 355 P **P** **23 27 37.1 +1.3**
baz=8.5
HDA Harding Lake 77.32 354 P **P** **23 27 36.1 +0.1**
baz=10
HDA Harding Lake 77.32 354 P **P** **23 27 36.1 +0.1**
HDA IAmb IAmb 23 27 42.9
comp=Z,45nm,1.5s
USA0B Ussuriysk Arra 77.37 43 P **P** **23 27 36.5 -0.1**
USA0B pmax pmax
comp=Z,18nm,1.0s
USA0B Ussuriysk Arra 77.37 43 P **P** **23 27 36.5 -0.1**
USA0B IAmb IAmb 23 27 42.7
comp=Z,18nm,1.0s
USRK Ussuriysk Ar. 77.37 43 P **P** **23 27 36.3 -0.3**
comp=Z,8.2nm,0.9s,baz=309,slow=3.7,SNR=15
USRK LR LR 00 05 23.6
comp=Z,645nm,18.0s,baz=315,slow=39
SCRK Sand Creek 77.49 353 P **P** **23 27 38.7 +1.6**
baz=13
SPMN Marine on St. 77.58 318 P **P** **23 27 39.1 +1.3**
baz=48
QIZ Qiongzhong 78.06 75 P **P** **23 27 41.5 +0.6**
QIZ S **S** **23 37 35.6 +1.3**
QIZ LR LR
comp=Z,86nm,4.3s
QIZ Qiongzhong 78.06 75 P **P** **23 27 40.5 -0.4**
QIZ IAmb IAmb 23 27 58.6
comp=Z,27nm,1.0s
MCK McKinley 78.13 355 P **P** **23 27 42.0 +1.5**
baz=8.6
BCAR Beaver Creek A 78.15 352 P **P** **23 27 41.8 +1.1**
X54A Belton 78.30 305 P **P** **23 27 43.4 +1.4**
baz=52
L26K Log Cabin Wild 78.36 353 P **P** **23 27 43.6 +1.8**
baz=13
WCI Wyandotte Cave 78.45 310 P **P** **23 27 43.2 +0.4**
WCI pmax pmax
comp=Z,22nm,1.1s
WCI Wyandotte Cave 78.45 310 P **P** **23 27 44.0 +1.3**
baz=50
WCI Wyandotte Cave 78.45 310 P **P** **23 27 43.2 +0.4**
WCI IAmb IAmb 23 27 53.4
comp=Z,22nm,1.1s
PRPB Parauapebas 78.50 253 *eP* **P** **23 27 45.3 +2.0**
TKL Tuckaleechee C 78.51 306 P **P** **23 27 43.5 +0.4**
comp=Z,3.0nm,0.8s,baz=122,slow=7.9,SNR=2.6
SMTB Santa Maria do 78.60 249 *eP* **P** **23 27 45.3 +1.4**
DHY Denali Highway 78.67 354 P **P** **23 27 44.7 +1.0**
DHY IAmb IAmb 23 27 50.2
comp=Z,27nm,1.1s
SDBA SAO DESIDERIO 79.03 245 *eP* **P** **23 27 47.9 +1.7**
KULM Kulim 79.06 92 P **P** **23 27 45.8 -0.7**
KULM IAmb IAmb 23 27 50.5
comp=Z,33nm,1.2s
GSI Gunungsitoli 79.09 97 P **P** **23 27 46.6 0.0**
GSI IAmb IAmb 23 27 48.8
comp=Z,18nm,0.7s
MALB Monte Alegre 79.14 259 *eP* **P** **23 27 48.2 +1.4**
PSI Prapat 79.22 95 P **P** **23 27 46.9 -0.6**
PSI pmax pmax
comp=Z,10.0nm,0.8s
U49A Red Boiling Sp 79.23 308 P **P** **23 27 47.8 +0.7**
U49A IAmb IAmb 23 27 49.3
comp=Z,37nm,1.4s
RPSI Rantau Prapat 79.29 95 P **P** **23 27 46.9 -0.7**
KS19 Wonju Array Si 79.35 51 P **P** **23 27 47.8 0.0**
KS19 IAmb IAmb 23 27 53.0
comp=Z,26nm,1.0s
KSAR Wonju Array Be 79.40 51 P **P** **23 27 47.9 -0.1**
KSAR Wonju Array Be 79.40 51 P **P** **23 27 47.9 -0.1**
KSRS Korea Array 79.42 51 P **P** **23 27 48.2 +0.2**
comp=Z,12nm,1.0s,baz=308,slow=4.6,SNR=22
KSRS LR LR 00 07 34.0
comp=Z,343nm,18.8s,baz=320,slow=39
SKT Skwentna 80.03 356 P **P** **23 27 50.8 -0.2**
SKT IAmb IAmb 23 27 57.3
comp=Z,45nm,1.5s
JANB Januaria 80.42 242 *eP* **P** **23 27 55.7 +1.9**
ECSD EROS Data Cent 80.58 319 P **P** **23 27 55.2 +0.9**
baz=45
ECSD EROS Data Cent 80.58 319 P **P** **23 27 54.9 +0.6**
ECSD IAmb IAmb 23 27 55.9
comp=Z,15nm,1.0s
S44A Carbondale 80.58 311 P **P** **23 27 54.9 +0.6**
S44A IAmb IAmb 23 27 56.1
comp=Z,22nm,1.1s
DLBC Dease Lake 80.68 345 P **P** **23 27 53.2 -1.3**
comp=Z,1.9nm,0.7s,baz=297,slow=4.5,SNR=2.7
WVT Waverly 80.74 309 P **P** **23 27 55.0 -0.2**
WVT pmax pmax
comp=Z,9.0nm,1.1s
WVT Waverly 80.74 309 P **P** **23 27 55.8 +0.5**
baz=49
WVT Waverly 80.74 309 P **P** **23 27 55.0 -0.2**
YSS Yuzh-Sakhalins 80.85 36 *eP* **P** **23 27 55.7 +0.1**
YSS *eS* **S** **23 38 01.2 -1.8**
YSS pmax pmax
comp=Z,80nm,1.1s
YSS Yuzh-Sakhalins 80.85 36 P **P** **23 27 56.1 +0.6**
MNSI Mandailing Nat 80.97 96 P **P** **23 28 00.4 +3.7**
comp=Z,27nm,0.8s
SVW2 Sparrevohn 81.08 358 P **P** **23 27 57.6 +1.1**
FVM French Village 81.09 312 P **P** **23 27 56.9 -0.2**
FVM pmax pmax
comp=Z,20nm,1.1s
FVM French Village 81.09 312 P **P** **23 27 56.9 -0.2**
FVM IAmb IAmb 23 27 59.2
comp=Z,20nm,1.1s
SUSD Miller 81.27 321 P **P** **23 27 58.4 +0.5**
PEXB Peixe 81.27 247 *eP* **P** **23 27 59.4 +1.1**
X48A Hartselle 81.34 307 P **P** **23 27 58.8 +0.4**
X48A IAmb IAmb 23 28 00.5
comp=Z,29nm,1.4s
CCM Cathedral Cave 81.52 312 P **P** **23 27 59.7 +0.3**
CCM pmax pmax
comp=Z,12nm,0.9s
CCM Cathedral Cave 81.52 312 P **P** **23 28 00.6 +1.2**
baz=48
CCM Cathedral Cave 81.52 312 P **P** **23 27 59.6 +0.3**
P38A Dawn 81.77 315 P **P** **23 28 01.7 +1.0**
P38A IAmb IAmb 23 28 02.8
comp=Z,34nm,1.2s
ITTB Itaituba 81.86 258 *eP* **P** **23 28 02.3 +0.8**
PBMO Poplar Bluff 81.89 311 P **P** **23 28 01.3 0.0**
PBMO IAmb IAmb 23 28 13.6
comp=Z,24nm,1.3s
R40A Maddies Statio 81.96 313 P **P** **23 28 02.5 +0.8**

R40A IAmb IAmb 23 28 03.9
comp=Z,21nm,1.1s
LRAL Lakeview Retre 82.23 306 P **P** **23 28 04.3 +1.2**
baz=49
MGMO Mountain Grove 82.73 312 P **P** **23 28 06.9 +1.2**
MGMO IAmb IAmb 23 28 08.4
comp=Z,29nm,1.2s
ASAJ Asahikawa 82.87 38 LR LR 00 08 33.5
comp=Z,310nm,20.3s,baz=44,slow=38
ASAJ Asahikawa 82.87 38 P **P** **23 28 06.8 +0.5**
ASAJ pmax pmax
comp=Z,78nm,1.3s
JKA Kamikawa-asahi 82.88 38 P **P** **23 28 06.8 +0.4**
LAO LASA Array 83.00 326 P **P** **23 28 09.2 +2.1**
baz=40
LAO LASA Array 83.00 326 P **P** **23 28 08.0 +0.9**
NPGB Novo Progresso 83.26 256 *eP* **P** **23 28 09.6 +0.8**
SNDB Serra Nova Dou 83.38 249 *eP* **P** **23 28 11.7 +2.4**
BDFB Brasilia 83.43 244 P **P** **23 28 09.1 -0.5**
comp=Z,3.8nm,1.0s,baz=28,slow=8.4,SNR=2.2
BDFB LR LR 00 06 39.9
comp=Z,1µm,18.7s,baz=67,slow=37
BDFB Brasilia 83.43 244 P **P** **23 28 10.0 +0.4**
BDFB pmax pmax
comp=Z,6.0nm,1.1s
BDFB Brasilia 83.43 244 P **P** **23 28 10.0 +0.4**
EGMT Eagleton 83.45 329 P **P** **23 28 10.9 +1.5**
baz=37
U40A Yellville 83.61 312 P **P** **23 28 11.2 +0.9**
baz=47
U40A Yellville 83.61 312 P **P** **23 28 10.9 +0.6**
U40A IAmb IAmb 23 28 22.7
comp=Z,17nm,1.1s
KSU1 Kansas State U 83.85 316 P **P** **23 28 12.9 +1.5**
baz=45
KSU1 Kansas State U 83.85 316 P **P** **23 28 11.7 +0.2**
RSSD Black Hills 83.97 323 P **P** **23 28 12.6 +0.3**
RSSD pmax pmax
comp=Z,12nm,0.9s
RSSD Black Hills 83.97 323 P **P** **23 28 13.6 +1.3**
baz=41
RSSD Black Hills 83.97 323 P **P** **23 28 12.6 +0.3**
RSSD IAmb IAmb 23 28 23.3
comp=Z,12nm,0.9s
W41B Gary Mavity, V 84.06 311 P **P** **23 28 13.6 +1.0**
baz=47
KRJI Kerinci 84.23 97 P P 23 28 19.8 +6.0
comp=Z,5µmcomp=Z,139nm,0.7s
WALA Waterton Lakes 84.23 332 P **P** **23 28 14.0 +0.6**
JTM Tenmabayashi 84.56 41 P **P** **23 28 14.7 -0.3**
BSCB Bom Sucesso 84.83 238 *eP* **P** **23 28 17.8 +1.2**
X40A Basin Creek Fa 84.88 310 P **P** **23 28 17.7 +1.0**
baz=47
MACA Manacapuru-AM 84.95 262 *eP* **P** **23 28 19.3 +1.9**
W39A Magazine 84.96 311 P **P** **23 28 18.9 +1.8**
baz=46
MIAR Mount Ida 85.29 311 P **P** **23 28 20.5 +1.7**
baz=46
T35A Sooner Cattle 85.34 314 P **P** **23 28 19.9 +0.9**
HRY Holter Researc 85.35 329 P **P** **23 28 20.0 +1.0**
SDV Santo Domingo 85.42 278 P **P** **23 28 20.4 +0.4**
comp=Z,20nm,0.8s,baz=42,slow=3.5,SNR=15
SDV Santo Domingo 85.42 278 P **P** **23 28 20.1 +0.1**
SDV Santo Domingo 85.42 278 *eP* **P** **23 28 21.6 +1.6**
R32A Long Quarter, 85.48 317 P **P** **23 28 20.0 +0.3**
RLMT Red Lodge 85.55 327 P **P** **23 28 21.9 +1.7**
baz=37
TUL1 Leonard 85.64 313 P **P** **23 28 22.0 +1.5**
baz=45
Z41A Richland Creek 85.70 309 P **P** **23 28 22.7 +1.8**
baz=46
CBKS Cedar Bluff 85.75 317 P **P** **23 28 22.0 +0.9**
CBKS pmax pmax
comp=Z,21nm,0.8s
CBKS Cedar Bluff 85.75 317 P **P** **23 28 22.7 +1.6**
baz=43
CBKS Cedar Bluff 85.75 317 P **P** **23 28 22.0 +0.9**
KAN05 Bluff City Nor 85.96 315 P **P** **23 28 23.2 +1.1**
CLDB Colider 86.03 253 *eP* **P** **23 28 23.1 +0.4**
NEW Newport 86.07 333 P **P** **23 28 22.5 0.0**
NEW pmax pmax
comp=Z,16nm,1.0s
NEW Newport 86.07 333 P **P** **23 28 24.3 +1.7**
baz=32
NEW Newport 86.07 333 P **P** **23 28 22.5 0.0**
NEW IAmb IAmb 23 28 31.1
comp=Z,16nm,0.9s
MJAR Matsushiro Arr 86.08 46 P **P** **23 28 22.9 +0.2**
comp=Z,7.8nm,1.0s,baz=313,slow=4.6,SNR=15
MJAR LR LR 00 10 01.7
comp=Z,198nm,18.4s,baz=65,slow=38
MJAR Matsushiro Arr 86.08 46 P **P** **23 28 22.8 +0.1**
MJAR pmax pmax
comp=Z,6.0nm,1.0s
MJAR Matsushiro Arr 86.08 46 P **P** **23 28 22.8 +0.1**
MSO Missoula 86.08 331 P **P** **23 28 23.8 +1.1**
baz=34
BOZ Bozeman (W) 86.17 329 P **P** **23 28 24.5 +1.3**
BOZ pmax pmax
comp=Z,20nm,1.2s
BOZ Bozeman (W) 86.17 329 P **P** **23 28 25.0 +1.8**
baz=36
BOZ Bozeman (W) 86.17 329 P **P** **23 28 24.5 +1.3**
BOZ IAmb IAmb 23 28 31.1
comp=Z,20nm,1.1s
ARAG Araguaiana, MT 86.20 247 *eP* **P** **23 28 26.2 +2.7**
K22A Casper 86.26 324 P **P** **23 28 24.3 +0.6**
baz=39
LRM Limekiln Ridge 86.32 329 P **P** **23 28 25.1 +1.0**
H17A Grant Village 86.69 327 P **P** **23 28 29.7 +3.8**
baz=36
C09A Chrisman Ranch 86.87 334 P **P** **23 28 27.4 +1.0**
YPP Pitchstone Pla 86.89 327 P **P** **23 28 28.9 +1.9**
IMW Indian Meadow 87.25 327 P **P** **23 28 30.2 +1.6**
IMW IAmb IAmb 23 28 40.4
comp=Z,12nm,1.1s
MCMT McKenzie Canyo 87.29 329 P **P** **23 28 29.9 +1.1**
N23A Red Feather La 87.34 322 P **P** **23 28 30.0 +0.9**
baz=39
PD31 Pinedale Array 87.55 326 P **P** **23 28 30.3 +0.2**
PDAR Pinedale Array 87.55 326 P **P** **23 28 29.6 -0.4**
comp=Z,1.4nm,0.9s,baz=66,slow=4.0,SNR=7.3
PDAR LR LR 00 09 24.6
comp=Z,340nm,18.6s,baz=32,slow=37
PDAR Pinedale Array 87.55 326 P **P** **23 28 30.0 -0.1**
BW06 Boulder Array 87.55 326 P **P** **23 28 30.4 +0.3**
baz=37
REDW Red Top Meadow 87.64 327 P **P** **23 28 31.2 +0.6**
REDW IAmb IAmb 23 28 41.5
comp=Z,16nm,1.2s
D08A Wollman Farm, 87.73 334 P **P** **23 28 31.6 +1.0**
D08A IAmb IAmb 23 28 45.3
comp=Z,20nm,1.2s
B05A Bryant 87.75 336 P **P** **23 28 31.2 +0.6**
baz=29
MDSI Maura Dua 87.83 97 P **P** **23 28 31.4 -0.1**
comp=Z,832nmcomp=Z,12nm,0.9s
BCYI Bear Canyon 87.94 329 P **P** **23 28 32.6 +0.7**
ISCO Idaho Springs 88.03 321 P **P** **23 28 33.5 +1.0**
baz=40
WMOK Wichita Mounta 88.18 314 P **P** **23 28 33.4 +0.4**
WMOK pmax pmax
comp=Z,31nm,1.5s
WMOK Wichita Mounta 88.18 314 P **P** **23 28 34.4 +1.4**
baz=43
WMOK Wichita Mounta 88.18 314 P **P** **23 28 33.4 +0.4**
KLSI 88.39 97 P **P** **23 28 35.5 +1.3**
comp=Z,4.2nm,1.2s
HAWA Hanford 88.52 334 P **P** **23 28 35.4 +1.1**
D03D Eldon 88.71 336 P **P** **23 28 37.6 +2.4**
baz=28
KSM Kuching 89.00 89 P **P** **23 28 37.9 +0.8**
BMO Blue Mountains 89.03 331 P **P** **23 28 36.8 -0.1**
BMO pmax pmax
comp=Z,9.0nm,0.8s
BMO Blue Mountains 89.03 331 P **P** **23 28 36.8 -0.1**
BMO IAmb IAmb 23 28 42.7
comp=Z,9.0nm,0.8s
O20A White River Ci 89.03 323 P **P** **23 28 37.8 +0.7**
baz=38
HWUT Hardware Ranch 89.37 326 P **P** **23 28 38.8 +0.2**
SDCO Great Sand Dun 89.55 320 P **P** **23 28 40.4 +0.7**
baz=40
SDCO Great Sand Dun 89.55 320 P **P** **23 28 39.8 +0.1**
HKT Hockley 89.86 309 P **P** **23 28 40.7 -0.1**
HKT pmax pmax
comp=Z,9.0nm,1.1s
HKT Hockley 89.86 309 P **P** **23 28 40.7 -0.1**
ABTX Abilene, Hawle 90.21 313 P **P** **23 28 44.0 +1.5**
baz=43
ABTX Abilene, Hawle 90.21 313 P **P** **23 28 43.2 +0.7**
ABTX IAmb IAmb 23 28 45.3
comp=Z,18nm,1.1s
S22A 4UR Ranch, Cre 90.21 321 P **P** **23 28 44.1 +1.3**
baz=39
SAML Samuel 90.48 259 *eP* **P** **23 28 45.1 +1.2**
BGU Big Grassy Mou 90.56 327 P **P** **23 28 44.6 +0.4**
VILB Vilhena 90.67 254 *eP* **P** **23 28 46.4 +1.6**
ROSC El Rosal 90.78 277 LR LR 00 10 18.1
comp=Z,84nm,18.1s,baz=55,slow=36
SRU San Rafael Swe 90.91 324 P **P** **23 28 46.1 +0.2**
SRU pmax pmax
comp=Z,17nm,0.9s
SRU San Rafael Swe 90.91 324 P **P** **23 28 46.1 +0.2**
I05D Terrebonne, OR 90.94 334 P **P** **23 28 48.1 +2.4**
baz=29
MSTX Muleshoe 90.97 316 P **P** **23 28 47.2 +1.0**
baz=41
DUG Dugway, Tooele 91.07 326 P **P** **23 28 48.1 +1.5**
baz=35
H04D Lebanon 91.26 335 P **P** **23 28 49.0 +1.8**
baz=28
PINE Pine Mountain 91.27 333 P **P** **23 28 48.5 +1.0**
PINE IAmb IAmb 23 28 51.1
comp=Z,22nm,1.4s
PTLB Pontes e Lacer 91.43 252 *eP* **P** **23 28 49.9 +1.6**
MVCO Mesa Verde 91.46 322 P **P** **23 28 49.5 +1.0**
baz=38
ELK Elko 91.66 328 P **P** **23 28 49.9 +0.5**
ELK pmax pmax
comp=Z,8.0nm,1.1s
ELK Elko 91.66 328 P **P** **23 28 49.9 +0.5**
ELK IAmb IAmb 23 29 00.5
comp=Z,8.1nm,1.1s
I04A Tendick Farm, 91.79 334 P **P** **23 28 50.6 +0.9**
baz=28
J05D Fort Rock, OR 91.82 333 P **P** **23 28 52.4 +2.4**
baz=29
JCT Junction City 91.86 312 P **P** **23 28 52.2 +2.0**
baz=43
MVU Marysvale 92.18 325 P **P** **23 28 51.8 -0.1**
I03D Drain, OR 92.19 335 P **P** **23 28 53.4 +1.9**
baz=28
ANMO Albuquerque 92.20 319 P **P** **23 28 50.8 -1.2**
comp=Z,0.5nm,0.4s,baz=42,slow=1.6,SNR=2.7
ANMO Albuquerque 92.20 319 *ceP* **P** **23 28 53.9 +2.0**
ANMO pmax pmax
comp=Z,6.0nm,1.7s
SIV San Ignacio 93.22 252 P **P** **23 28 56.8 +0.2**
comp=Z,1.5nm,1.0s,baz=73,slow=10,SNR=3.6
M04C Macdoel 93.35 333 P **P** **23 28 58.7 +1.7**
baz=29
R11A Troy Canyon, C 93.80 327 P **P** **23 29 00.4 +1.2**
baz=33
R11A Troy Canyon, C 93.80 327 P **P** **23 29 00.4 +1.2**
MNTX Cornudas Mount 94.12 316 P **P** **23 29 01.3 +0.6**
baz=40
WUAZ Wupatki 94.20 322 P **P** **23 29 02.7 +1.6**
baz=36
WUAZ Wupatki 94.20 322 P **P** **23 29 01.9 +0.8**
BEKR Beckworth 94.46 331 P **P** **23 29 02.3 0.0**
BEKR IAmb IAmb 23 29 10.6
comp=Z,8.6nm,1.3s
NVAR Mina Array Bea 94.88 329 P **P** **23 29 04.8 +0.6**
comp=Z,1.8nm,0.9s,baz=47,slow=4.3,SNR=2.8
NVAR LR LR 00 13 23.4
comp=Z,260nm,20.0s,baz=27,slow=36
NVAR Mina Array Bea 94.88 329 P **P** **23 29 04.5 +0.3**
TX32 Lajitas Array 94.96 313 P **P** **23 29 04.3 -0.3**
TXAR Lajitas Array 94.96 313 P **P** **23 29 04.3 -0.3**
comp=Z,1.4nm,0.9s,baz=80,slow=5.0,SNR=9.0
TXAR LR LR 00 11 29.5
comp=Z,99nm,19.1s,baz=0.0,slow=35
TXAR Lajitas Array 94.96 313 P **P** **23 29 04.0 -0.6**
X16A Lo Mia Camp, P 95.12 322 P **P** **23 29 04.8 -0.6**
ORV Oroville 95.17 331 P **P** **23 29 04.9 -0.3**
ORV pmax pmax
comp=Z,7.0nm,1.2s
ORV Oroville 95.17 331 P **P** **23 29 04.9 -0.3**
ORV IAmb IAmb 23 29 15.9
comp=Z,7.2nm,1.1s
CPUP Villa Florida 96.96 242 LR LR 00 15 01.9
comp=Z,916nm,18.2s,baz=50,slow=37
PCI Palu 97.96 85 P Pdif 23 29 22.2 +3.8
comp=Z,67nm,0.9s
LPAZ La Paz 98.76 256 LR LR 00 15 02.4
comp=Z,148nm,20.9s,baz=49,slow=36
WSI Waingapu 103.64 92 P **Pdif** **23 29 54.1 +11**
SYO Syowa Base 107.76 173⇑ *eX* **Pdif** **23 30 12.0 +12**
SYO Syowa Base 107.76 173⇑ *eX* **PKiKP** **23 34 05.6 -2.2**
BELA Belgrano 2 120.36 192 **PKiKP** **23 34 32.5 +0.7**
WRA Warramunga Arr 120.61 92 PKP **PKPdf** **23 34 33.1 -0.8**
comp=Z,0.9nm,0.6s,baz=312,slow=1.5,SNR=13
WRA PP **PP** **23 36 05.3 +3.6**
comp=Z,3.0nm,1.1s,baz=318,slow=6.7,SNR=5.4
WRA Warramunga Arr 120.61 92 PKIKP **PKPdf** **23 34 33.9 -0.1**
WRA Warramunga Arr 120.61 92 **PKPdf** **23 34 33.9 -0.1**
ASAR Alice Springs 122.24 96 PKP **PKiKP** **23 34 37.3 +0.1**
comp=Z,1.4nm,0.6s,baz=322,slow=1.5,SNR=13
ASAR PP **PP** **23 36 12.9 +0.1**
comp=Z,1.2nm,1.1s,baz=301,slow=6.3,SNR=4.1
ASAR Alice Springs 122.24 96 **PKPdf** **23 34 36.8 -0.2**
STKA Stephens Creek 132.09 101 PKP **PKPdf** **23 34 56.0 +0.5**
comp=Z,0.5nm,0.3s,baz=275,slow=7.0,SNR=3.8
TAOE Nuku Hiva Isla 146.00 324 *e*LR LR 00 23 28.9
comp=Z,170nm,23.1s
PPT2 Papeete2 157.75 334 *e*LR LR 00 28 56.0
comp=Z,158nm,23.5s
URZ Urewera 161.67 98 **PKPab** **23 36 27.1 -0.8**
TBI Tubuai 162.92 327 *e*LR LR 00 31 08.3
comp=Z,279nm,29.8s

*KOLA **08** 23:31:54.5, 67°.74N×19°.92E, h0km*
*HEL **08** 23:31:55.9±0.1, 67°.83N×20°.22E, h0km, ML2.3, ML2.4(UPP), Explosion*
*UPP **08** 23:31:55.4±0.0, 67°.82N×20°.21E, h0km, ML2.4, Explosion*
*IDC **08** 23:31:56.3±0.9, 67°.78N×20°.70E, h0km, mb1 3.3/5, mb1mx3.1/54, mbtmp3.3/5, ML2.3/5, Error ellipse: s-maj=15.0km s-min=6.3km az=117.0*
*NAO **08** 23:31:56.3±0.9, 67°.82N×20°.71E, ML2.6*
*BER **08** 23:31:57.2±3.9, 67°.82N×20°.45E, h0km, ML2.1, ML2.6(NAO), Suspected explosion*

ISC 08 23:31:54.9±0.7, **67°.80N**±0°.02×**20°.23E**±0°.02, **h0km, n59,** σ1§**44**/92, **1C, Sweden**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
KUA	**Kurravaara**	**0.16**	**14**	P	P	**Pg**	**23 31 58.3**	**+0.5**
KUA				S	S	**Sg**	**23 32 00.3**	**+0.3**
KUA	**Kurravaara**	**0.16**	**14**	*i* P	P	**Pg**	**23 31 58.3**	**+0.5**
KUA				*i* S	S	**Sg**	**23 32 00.3**	**+0.3**
RATU	**Laukkuluspa**	**0.24**	**276**	P	P	**Pg**	**23 32 00.1**	**+0.5**
RATU	**Laukkuluspa**	**0.24**	**276**	*i* P	P	**Pg**	**23 32 00.1**	**+0.5**
KOVU	**Salmi**	**0.42**	**356**	P	P	**Pg**	**23 32 03.1**	**+0.1**
KOVU	**Salmi**	**0.42**	**356**	*i* P	P	**Pg**	**23 32 03.1**	**+0.1**
DUNU	**Dundret**	**0.69**	**169**	P	P	**Pg**	**23 32 08.8**	**+0.7**
DUNU				S	S	**Sg**	**23 32 18.9**	**+1.8**
DUNU	**Dundret**	**0.69**	**169**	*i* P	P	**Pg**	**23 32 08.8**	**+0.7**
DUNU				*i* S	S	**Sg**	**23 32 18.9**	**+1.8**
LANU	**Lannavaara**	**0.71**	**69**	P	P	**Pg**	**23 32 08.8**	**+0.3**
LANU	**Lannavaara**	**0.71**	**69**	*e*P	P	**Pg**	**23 32 08.5**	**+0.1**
LANU				*e*S	S	**Sg**	**23 32 17.8**	**+0.2**
MASU	**Masugnsbyn**	**0.76**	**116**	P	P	**Pg**	**23 32 10.1**	**+0.7**
MASU				S	S	**Sg**	**23 32 21.0**	**+1.8**
MASU	**Masugnsbyn**	**0.76**	**116**	*i* P	P	**Pg**	**23 32 10.1**	**+0.7**
MASU				*i* S	S	**Sg**	**23 32 21.0**	**+1.8**
SALU	**Saltoluokta**	**0.79**	**238**	P	P	**Pg**	**23 32 10.3**	**+0.4**
SALU	**Saltoluokta**	**0.79**	**238**	*i* P	P	**Pg**	**23 32 10.3**	**+0.4**
KIF	**Kilpisjarvi**	**1.23**	**10**	Pg	Pg	**Pg**	**23 32 18.0**	**-0.4**
KIF				Lg	Lg		23 32 34.5	
KIF	**Kilpisjarvi**	**1.23**	**10**	*e*P	P	**Pg**	**23 32 17.9**	**-0.4**
KIF				MSG			23 32 33.5	
	comp=Z,28nm,0.2s							
KIF				*e*S	S	**Sg**	**23 32 34.3**	**0.0**
KIF	**Kilpisjarvi**	**1.23**	**10**	*e*P	P	**Pg**	**23 32 18.7**	**+0.4**
KIF				*e*S	S	**Sg**	**23 32 34.2**	**0.0**
PAJU	**Pajala**	**1.36**	**124**	P	P	**Pg**	**23 32 20.6**	**-0.2**
PAJU				S	S	**Sg**	**23 32 38.8**	**+0.4**
PAJU	**Pajala**	**1.36**	**124**	*e*P	P	**Pg**	**23 32 20.6**	**-0.2**
PAJU				*e*S	S	**Sg**	**23 32 38.8**	**+0.4**
ERTU	**Ertsjaerv**	**1.47**	**148**	P	P	**Pn**	**23 32 22.5**	**0.0**
ERTU	**Ertsjaerv**	**1.47**	**148**	*e*P	P	**Pn**	**23 32 22.4**	**-0.1**
baz=323								
ERTU				*e*SN	S	**Sb**	**23 32 43.1**	**+1.0**
KTK1	**Kautokeino**	**1.65**	**41**	*e*P	P	**Pn**	**23 32 25.3**	**+0.2**
KTK1				*e*S	S	**Sn**	**23 32 46.4**	**-0.5**
KTK1				IAML			23 32 50.5	
comp=Z,17nm,0.3s								
STEI	**Steigen**	**1.90**	**276**⇑	*i*P	P	**Pb**	**23 32 29.9**	**-0.4**
STEI				*e*S	S	**Sn**	**23 32 51.9**	**-1.1**
STEI				IAML			23 32 58.3	
comp=Z,32nm,0.4s								
TRO	**Tromso**	**1.90**	**346**	*e*P	P	**Pn**	**23 32 29.5**	**+1.1**
TRO				IAML			23 32 56.9	
comp=Z,30nm,0.3s								
FAUS	**Fauske**	**1.94**	**260**	*e*P	P	**Pb**	**23 32 30.6**	**-0.4**
FAUS				*e*S	S	**Sn**	**23 32 54.3**	**+0.3**
FAUS				IAML			23 33 00.9	
comp=Z,30nm,0.4s								
KALU	**Kalix**	**2.31**	**146**	*e*P	P	**Pn**	**23 32 34.6**	**+0.6**
baz=328								
KALU				*e*S	S	**Sn**	**23 33 05.1**	**+2.0**
TOF	**Tornio**	**2.36**	**135**	*e*PB	P	**Pn**	**23 32 36.8**	**+2.0**
TOF				MSG			23 33 05.1	
comp=Z,19nm,0.2s								
TOF				*e*SB	S	**Sb**	**23 33 07.8**	**-0.1**
SGF	**Sodankyl**	**2.44**	**96**	*e*P	P	**Pn**	**23 32 37.2**	**+1.4**
SGF				*e*SB	S	**Sb**	**23 33 08.9**	**-1.0**
RNF	**Rovaniemi**	**2.55**	**115**	*e*PB	P	**Pn**	**23 32 39.6**	**+2.2**
RNF				*e*SB	S	**Sb**	**23 33 13.4**	**+0.2**
ARA0	**ARCESS Array S**	**2.60**	**45**	Pn	Pn	**Pn**	**23 32 38.8**	**+0.7**
baz=227,slow=14								
ARA0				Lg	Lg		23 33 13.5	
baz=230,slow=22								
ARA0	**ARCESS Array S**	**2.60**	**45**	*e*P	Pn	**Pn**	**23 32 38.9**	**+0.8**
baz=228								
ARA0				*e*SG	S	**Sb**	**23 33 15.9**	**+1.2**
ARA0	**ARCESS Array S**	**2.60**	**45**	Pn	Pn	**Pn**	**23 32 38.8**	**+0.7**
baz=227,slow=14								
ARA0				Sg	Sb	**Sb**	**23 33 13.5**	**-1.2**
baz=230,slow=22								
ARCES	**ARCESS Array B**	**2.60**	**45**	Pn	Pn	**Pn**	**23 32 38.6**	**+0.5**
baz=227,slow=14,SNR=110								
ARCES				Lg	Lg		23 33 13.3	
baz=227,slow=26,SNR=16								
MOR8	**Moi Rana**	**2.80**	**237**	*e*P	Pn	**Pn**	**23 32 41.2**	**+0.3**
MOR8				IAML			23 33 20.6	
comp=Z,21nm,0.4s								
HAMF	**Hammerfest**	**3.11**	**22**	*e*P	P	**Pn**	**23 32 46.8**	**+1.7**
HAMF				*e*S	S	**Sn**	**23 33 21.5**	**-1.3**
HAMF				IAML			23 33 40.0	
comp=Z,14nm,0.5s								
BURU	**Burvik**	**3.27**	**171**	*e*P	P	**Pn**	**23 32 49.3**	**+2.1**
BURU				*e*SB	S	**Sb**	**23 33 31.4**	**-2.4**
OUL	**Oulu**	**3.55**	**138**	*e*P	P	**Pn**	**23 32 53.7**	**+2.6**
VRF	**Varrio**	**3.56**	**87**	*e*P	P	**Pn**	**23 32 52.1**	**+0.8**
baz=270								
OUF	**Merijarvi**	**3.90**	**150**	*e*P	P	**Pn**	**23 32 57.9**	**+1.9**
baz=337								
UMAU	**Umeaa**	**3.94**	**177**	*e*P	P	**Pn**	**23 32 58.6**	**+2.1**
baz=354								
MSF	**Maaselka**	**3.96**	**115**	*e*P	P	**Pn**	**23 32 58.5**	**+1.7**
baz=304								
KU6	**Riekki**	**4.20**	**111**	*e*P	P	**Pn**	**23 33 01.4**	**+1.4**
KU6				*e*SG	S	**Sg**	**23 34 07.5**	**-2.1**
NSS	**Namsos**	**4.69**	**229**	*e*P	P	**Pn**	**23 33 08.7**	**+1.9**
NSS				IAML			23 34 25.1	
comp=Z,12nm,0.4s								
APA0	**Apatity Array**	**4.87**	**86**	Pn	Pn	**Pn**	**23 33 08.9**	**-0.2**
baz=296,slow=12								
APA0				Sn	Sn	**Sn**	**23 34 03.1**	**-3.0**
baz=275,slow=28								
APA0				Lg	Lg		23 34 22.1	
baz=276,slow=22								
APA0	**Apatity Array**	**4.87**	**86**	P	Pn	**Pn**	**23 33 09.2**	**+0.1**
APA0				S	Sn	**Sn**	**23 34 05.5**	**-0.6**
APA0	**Apatity Array**	**4.87**	**86**	Pn	Pn	**Pn**	**23 33 08.9**	**-0.2**
baz=296,slow=12								
APA0				Sn	Sn	**Sn**	**23 34 03.1**	**-3.0**
baz=275,slow=28								
APA0				Sg	Sb	**Sb**	**23 34 22.1**	**+2.3**
baz=276,slow=22								
NOD	**Norderasen**	**4.91**	**209**	*e*P	Pn	**Pn**	**23 33 10.4**	**+0.6**
FIA0	**FINESS Array S**	**6.86**	**156**	Pn	Pn	**Pn**	**23 33 38.0**	**+1.6**
baz=341,slow=11								
FIA0				Sn	Sn	**Sn**	**23 34 53.5**	**-1.6**
baz=345,slow=28								
FIA0				Lg	Lg		23 35 28.1	
baz=342,slow=37								
FIA0	**FINESS Array S**	**6.86**	**156**	Pn	Pn	**Pn**	**23 33 38.0**	**+1.6**
baz=341,slow=11								
FIA0				Sn	Sn	**Sn**	**23 34 53.5**	**-1.6**
baz=345,slow=28								
FIA0				Sg	Sg	**Sg**	**23 35 28.1**	**-6.7**
baz=342,slow=37								
FINES	**FINESS Array B**	**6.86**	**156**	Pn	Pn	**Pn**	**23 33 38.1**	**+1.6**
comp=Z,0.1nm,0.3s,baz=343,slow=10,SNR=8.6								
FINES				Sn	Sn	**Sn**	**23 34 53.9**	**-1.2**
comp=Z,0.2nm,0.3s,baz=340,slow=15,SNR=2.0								
FINES				Lg	Lg		23 35 28.6	
comp=Z,0.6nm,0.3s,baz=338,slow=27,SNR=8.9								
NB2	**NORSAR Subarra**	**7.82**	**214**	Pn	Pn	**Pn**	**23 33 50.8**	**+1.0**
baz=25,slow=12								
NB2	**NORSAR Subarra**	**7.82**	**214**	Pn	Pn	**Pn**	**23 33 50.8**	**+1.0**
baz=25,slow=12								
NOA	**NORSAR Array B**	**7.82**	**214**	Pn	Pn	**Pn**	**23 33 50.7**	**+1.0**
comp=Z,0.0nm,0.3s,baz=21,slow=11,SNR=4.8								
NOA				Lg	Lg		23 36 02.0	
comp=Z,0.0nm,0.3s,baz=33,slow=21,SNR=4.9								
HFS	**Hagfors**	**8.21**	**204**	Pn	Pn	**Pn**	**23 33 55.7**	**+0.6**
baz=6.1,slow=10								
HFS	**Hagfors**	**8.21**	**204**	Pn	Pn	**Pn**	**23 33 55.3**	**+0.2**
comp=Z,0.1nm,0.3s,baz=15,slow=12,SNR=3.2								
HFS				Sn	Sn	**Sn**	**23 35 25.6**	**-2.8**
comp=Z,0.2nm,0.3s,baz=33,slow=20,SNR=5.1								
HFS				Lg	Lg		23 36 12.0	
comp=Z,0.3nm,0.3s,baz=26,slow=24,SNR=4.7								
HFS	**Hagfors**	**8.21**	**204**	Pn	Pn	**Pn**	**23 33 55.7**	**+0.6**
baz=6.1,slow=10								
SPA0	**Spitsbergen Ar**	**10.49**	**356**	Pn	Pn	**Pn**	**23 34 27.4**	**+1.2**
baz=152,slow=14								
SPA0	**Spitsbergen Ar**	**10.49**	**356**	Pn	Pn	**Pn**	**23 34 27.4**	**+1.2**
baz=152,slow=14								
SPITS	**Spitsbergen Ar**	**10.49**	**356**	Pn	Pn	**Pn**	**23 34 27.2**	**+1.0**
baz=148,slow=16,SNR=2.0								

*IDC **08** 23:39:31.7±0.6, 44°.02N×83°.72E, h0km, mb4.0/20, mb1 4.2/25, mb1mx4.0/48, mbtmp4.0/25, ML3.6/6, Error ellipse: s-maj=15.6km s-min=9.1km az=63.0*
*BJI **08** 23:39:34.8±0.0, 44°.00N×83°.41E, h8km, mb4.1/14, ML4.2/10*
*MOS **08** 23:39:35.7±1.0, 44°.19N×83°.40E, h21km, mb4.5/8, Error ellipse: s-maj=7.1km s-min=5.7km az=128.4*
*SOME **08** 23:39:37.8, 44°.03N×83°.28E, h20km, MS3.6*
*NEIC **08** 23:39:37.9±1.9, 44°.12N±0°.06×83°.47E±0°.07, h27km±5km, mb4.4/31, Error ellipse: s-maj=9.0km s-min=7.3km az=186.0*
*NNC **08** 23:39:39.9±1.3, 44°.20N×83°.08E, h0km, mb4.8, mpv4.5, Error ellipse: s-maj=13.1km s-min=4.7km az=128.0*

ISC 08 23:39:35.3±0.4, **44°.19N**±0°.03×**83°.47E**±0°.02, **h10km, n235,** σ2§**28**/269, **mb4.4**/47, **24C-20D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
KTMS	**Ketmen**	**2.37**	**253**	*e*P	P	**Pn**	**23 40 17.3**	**+2.9**
222nm,0.2s								
KTMS				*e*S	S	**Sn**	**23 40 46.2**	**+2.6**
1µm,0.4s								
KTMS	**Ketmen**	**2.37**	**253**	Pg	Pn	**Pn**	**23 40 17.3**	**+2.9**
222nm,0.2s								
KTMS				Lg	Lg		23 40 46.0	
1µm,0.4s								
KTMS	**Ketmen**	**2.37**	**253**	*e*P	Pn	**Pn**	**23 40 17.3**	**+2.9**
KTMS				*e*S	Sn	**Sn**	**23 40 46.2**	**+2.6**
MK31	**Makanchi Array**	**2.73**	**343**	⇑Pn	Pn	**Pb**	**23 40 23.0**	**-1.3**
1.5nm,0.2s,baz=160,slow=15,SNR=2965								
MK31				⇑Pg		**Pg**	**23 40 29.1**	**+1.5**
43nm,0.3s,baz=160,slow=17,SNR=66								
MK31				⇑Lg	Lg		23 41 04.4	
70nm,0.3s,baz=157,slow=26,SNR=8.3								

MK31 Makanchi Array 2.73 343 *i* P **Pb** **23 40 23.0 -1.3**
MK31 pmax pmax
comp=Z,2.0nm,0.2s
MK31 Makanchi Array 2.73 343 Pn **Pb** **23 40 23.0 -1.3**
MK31 Sn **Sb** **23 40 56.1 -1.7**
MKAR Makanchi Array 2.73 343 Pn **Pb** **23 40 23.1 -1.2**
comp=Z,7.2nm,0.3s,baz=162,slow=13,SNR=133
MKAR Sn **Sb** **23 40 59.0 +1.1**
comp=Z,64nm,0.3s,baz=241,slow=23,SNR=5.3
MKAR Lg Lg 23 41 04.7
comp=Z,149nm,0.3s,baz=169,slow=27,SNR=6.1
MKAR Makanchi Array 2.73 343 P **Pb** **23 40 22.1 -2.1**
MKAR Makanchi Array 2.73 343 Pn **Pb** **23 40 22.1 -2.1**
MAKZ Makanchi 2.82 339 ⇑Pn **Pb** **23 40 25.0 -0.8**
comp=Z,15nm,0.5s
MAKZ ⇑Pg **Pg** **23 40 29.9 +0.6**
comp=Z,68nm,0.4s
MAKZ ⇑Lg Lg 23 41 05.9
comp=Z,777nm,1.2s
MAKZ Makanchi 2.82 339 P **Pb** **23 40 23.2 -2.5**
MAKZ 23 40 56.3
MAKZ Makanchi 2.82 339 Pn **Pb** **23 40 23.2 -2.5**
MAKZ Sn **Sn** **23 40 56.3 +1.8**
PDGK Podgornoye 3.01 255 ⇑Pn **Pn** **23 40 23.7 +0.6**
comp=Z,28nm,0.6s
PDGK ⇑Pg **Pb** **23 40 31.1 +2.1**
comp=Z,386nm,1.4s
PDGK ⇓Lg Lg 23 41 05.0
comp=Z,347nm,0.5s
PDGK Podgornoye 3.01 255 P **Pn** **23 40 23.7 +0.6**
PDGK LG Lg 23 41 05.1
WMQ Urumqi 3.07 95 *e*Pg **Pg** **23 40 32.0 -2.2**
WMQ Sg **Sg** **23 41 11.9 -2.1**
WMQ smax smax
comp=Z,520nm,0.9s
WMQ smax smax
comp=Z,540nm,1.1s
WMQ Urumqi 3.07 95 P **Pn** **23 40 25.7 +1.7**
WMQ Urumqi 3.07 95 **Pn** **23 40 25.7 +1.7**
SHLS Shalkode 3.08 252 *e*P **Pn** **23 40 24.9 +0.8**
comp=Z,684nm,0.6s
SHLS *e*S **Sn** **23 40 59.5 -1.6**
comp=Z,2μm,0.5s
SHLS Shalkode 3.08 252 Pg **Pn** **23 40 25.2 +1.1**
comp=Z,684nm,0.6s
SHLS Lg Lg 23 40 59.4
comp=Z,2μm,0.5s
SHLS Shalkode 3.08 252 *e*P **Pn** **23 40 25.0 +0.8**
SHLS *e*S **Sn** **23 40 59.5 -1.6**
UZB Uzynbulak 3.39 254 *e*P **Pb** **23 40 35.0 -0.5**
comp=Z,51nm,0.3s
UZB *e*S **Sb** **23 41 16.7 -0.1**
comp=Z,199nm,0.4s
UZB Uzynbulak 3.39 254 Pg **Pb** **23 40 36.6 +1.1**
comp=Z,51nm,0.3s
UZB Lg Lg 23 41 17.3
comp=Z,199nm,0.4s
UZB Uzynbulak 3.39 254 *e*P **Pb** **23 40 35.0 -0.5**
UZB *e*S **Sb** **23 41 16.7 -0.1**
ZSN Zaisan 3.41 16 *e*P **Pg** **23 40 42.7 +2.2**
comp=Z,484nm,0.3s
ZSN *e*S **Sg** **23 41 29.4 +4.8**
comp=Z,734nm,0.5s
ZSN Zaisan 3.41 16 Pg **Pg** **23 40 42.9 +2.4**
comp=Z,484nm,0.3s
ZSN Lg Lg 23 41 29.8
comp=Z,734nm,0.5s
KPKS Kokpek 3.54 260 *e*P **Pb** **23 40 37.5 -0.5**
comp=Z,196nm,0.4s
KPKS *e*S **Sb** **23 41 20.6 -0.3**
comp=Z,680nm,0.4s
KPKS Kokpek 3.54 260 *e*P **Pb** **23 40 37.5 -0.5**
KPKS *e*S **Sb** **23 41 20.7 -0.3**
MNBS Baschi 3.65 270 *e*P **Pb** **23 40 40.7 +0.8**
comp=Z,122nm,0.4s
MNBS *e*S **Sb** **23 41 26.7 +2.5**
comp=Z,839nm,0.4s
MNBS Baschi 3.65 270 Pg **Pb** **23 40 41.9 +2.0**
comp=Z,122nm,0.4s
MNBS Lg Lg 23 41 26.7
comp=Z,839nm,0.4s
MNBS Baschi 3.65 270 *e*P **Pb** **23 40 40.7 +0.8**
TDK Taldyqorghan 3.70 284 *e*P **Pg** **23 40 44.5 -1.7**
comp=Z,425nm,0.3s
TDK *e*S **Sg** **23 41 32.6 -1.6**
comp=Z,1μm,0.4s
TDK Taldyqorghan 3.70 284 Pg **Pg** **23 40 44.8 -1.5**
comp=Z,425nm,0.3s
TDK Lg Lg 23 41 31.6
comp=Z,1μm,0.4s
SATY Saty 3.84 255 *e*P **Pb** **23 40 44.1 +0.8**
comp=Z,99nm,0.9s
SATY *e*S **Sb** **23 41 32.6 +2.7**
comp=Z,256nm,0.4s
SATY Saty 3.84 255 Pg **Pb** **23 40 45.9 +2.6**
comp=Z,99nm,0.9s
SATY Lg Lg 23 41 33.8
comp=Z,256nm,0.4s
SATY Saty 3.84 255 *e*P **Pb** **23 40 44.1 +0.8**
KURS Kuram 3.90 261 *e*P **Pb** **23 40 45.0 +0.9**
comp=Z,51nm,0.5s
KURS *e*S **Sb** **23 41 34.1 +2.9**
comp=Z,419nm,0.9s
KURS Kuram 3.90 261 Pg **Pb** **23 40 47.1 +3.0**
comp=Z,51nm,0.5s
KURS Lg Lg 23 41 35.8
comp=Z,419nm,0.9s
KURS Kuram 3.90 261 *e*P **Pb** **23 40 45.0 +0.9**
ARXS Arharly 4.05 272 *e*P **Pb** **23 40 49.3 +2.5**
comp=Z,143nm,0.3s
ARXS *e*S **Sb** **23 41 40.8 +4.9**
comp=Z,427nm,0.5s
ARXS Arharly 4.05 272 Pg **Pb** **23 40 48.7 +1.9**
comp=Z,143nm,0.3s
ARXS Lg Lg 23 41 38.9
comp=Z,427nm,0.5s
PRZ Przheval'sk 4.07 247 P **Pn** **23 40 39.3 +1.5**
PRZ Przheval'sk 4.07 247 Pn **Pn** **23 40 39.3 +1.5**
KOTS Kotyrbulak 4.70 260 *e*P **Pb** **23 41 00.4 +2.5**
comp=Z,140nm,0.5s
KOTS *e*S **Sb** **23 42 00.7 +6.1**
comp=Z,648nm,0.4s
KOTS Kotyrbulak 4.70 260 Pg **Pb** **23 41 01.3 +3.4**
comp=Z,140nm,0.5s
KOTS Lg Lg 23 42 00.4
comp=Z,648nm,0.4s
MDOK Medeo 4.77 260 *e*P **Pb** **23 41 01.4 +2.4**
comp=Z,67nm,0.6s
MDOK *e*S **Sb** **23 42 02.3 +5.8**
comp=Z,211nm,1.0s
MDOK Medeo 4.77 260 Pg **Pg** **23 41 04.7 -1.9**
comp=Z,67nm,0.6s
MDOK Lg Lg 23 42 03.5
comp=Z,211nm,1.0s
KNDC Almaty 4.81 261 ⇓Pn **Pn** **23 40 49.5 +1.7**
comp=Z,225nm,0.5s
KNDC ⇑Pg **Pg** **23 41 07.2 -0.2**
comp=Z,184nm,0.7s
KNDC ⇑Lg Lg 23 42 03.1
comp=Z,305nm,0.7s
AAA Alma-Ata 4.85 261 *e*P **Pb** **23 41 04.0 +3.6**
comp=Z,105nm,0.4s
AAA *e*S **Sb** **23 42 05.9 +7.1**
AAA Alma-Ata 4.85 261 Pg **Pg** **23 41 06.1 -2.1**
comp=Z,105nm,0.4s
AAA Lg Lg 23 42 06.6
TNSS Tian-Shan 4.87 259 *e*P **Pb** **23 41 02.6 +1.7**
comp=Z,30nm,0.5s
TNSS *e*S **Sb** **23 42 04.3 +4.6**
comp=Z,59nm,0.4s
TNSS Tian-Shan 4.87 259 Pg **Pb** **23 41 04.3 +3.3**
comp=Z,30nm,0.5s
TNSS Lg Lg 23 42 05.3
comp=Z,59nm,0.4s
KTBS Karatobe 4.92 267 *e*P **Pb** **23 41 03.2 +1.7**
comp=Z,40nm,0.5s
KTBS *e*S **Sb** **23 42 04.8 +4.0**
comp=Z,391nm,0.7s
KTBS Karatobe 4.92 267 Pg Pb 23 41 06.3 +4.8
comp=Z,40nm,0.5s
KTBS Lg Lg 23 42 08.8
comp=Z,391nm,0.7s
KDJ Kajisay 5.04 248 P **Pn** **23 40 52.3 +1.3**
KDJ Kajisay 5.04 248 Pn **Pn** **23 40 52.3 +1.3**
IZV Izvestkoviy 5.11 259 *e*P **Pb** **23 41 08.3 +3.5**
comp=Z,67nm,0.7s
IZV *e*S **Sb** **23 42 14.2 +7.9**
comp=Z,208nm,1.1s
IZV Izvestkoviy 5.11 259 Pg Pb 23 41 09.5 +4.7
comp=Z,67nm,0.7s
IZV Lg Lg 23 42 14.1
comp=Z,208nm,1.1s
KUU Kurty 5.15 269 *e*P **Pb** **23 41 09.6 +4.3**
comp=Z,36nm,0.9s
KUU *e*S **Sg** **23 42 15.6 -4.8**
comp=Z,185nm,0.4s
MTBS Maitube 5.21 261 *e*P **Pb** **23 41 10.2 +3.7**
comp=Z,42nm,0.4s
MTBS *e*S **Sb** **23 42 16.9 +7.6**
comp=Z,157nm,0.4s
MTBS Maitube 5.21 261 Pg **Pb** **23 41 10.5 +4.0**
comp=Z,42nm,0.4s
MTBS Lg Lg 23 42 16.6
comp=Z,157nm,0.4s
KST Kastek 5.57 261 *e*P **Pb** **23 41 16.6 +4.0**
comp=Z,105nm,1.0s
KST *e*S **Sb** **23 42 27.8 +8.4**
comp=Z,168nm,0.9s
KST Kastek 5.57 261 Pg **Pg** **23 41 19.6 -2.3**
comp=Z,105nm,1.0s
KST Lg Lg 23 42 30.8
comp=Z,168nm,0.9s
KRBS Karabastau 5.65 268 *e*P Pb 23 41 18.9 +4.9
comp=Z,42nm,0.8s
KRBS *e*S **Sg** **23 42 31.6 -4.9**
comp=Z,63nm,0.5s
KRBS Karabastau 5.65 268 Pg **Pb** **23 41 18.1 +4.2**
comp=Z,42nm,0.8s
KRBS Lg Lg 23 42 28.1
comp=Z,63nm,0.5s
DGS Degeres 5.66 263 *e*P **Pb** **23 41 18.3 +4.2**
comp=Z,58nm,0.4s
DGS *e*S **Sb** **23 42 30.6 +8.6**
comp=Z,184nm,0.5s
DGS Degeres 5.66 263 Pg Pb 23 41 19.3 +5.2
comp=Z,58nm,0.4s
DGS Lg Lg 23 42 30.7
comp=Z,184nm,0.5s
BOOM Boomskoye usch 5.75 255 P **Pn** **23 41 02.2 +1.4**
BOOM Boomskoye usch 5.75 255 Pn **Pn** **23 41 02.2 +1.4**
TKM2 Tokmak 2 5.86 260 ⇑Pn **Pn** **23 41 03.3 +0.9**
comp=Z,12nm,0.6s
TKM2 ⇑Pg **Pg** **23 41 28.2 +0.8**
comp=Z,40nm,0.8s
TKM2 ⇓Lg Lg 23 42 35.4
comp=Z,194nm,1.1s
TKM2 Tokmak 2 5.86 260 *i* P **Pn** **23 41 03.2 +0.9**
TKM2 pmax pmax
comp=Z,12nm,0.6s
SGDS Sogindy 6.43 266 Pg Pb 23 41 33.7 +6.3
comp=Z,17nm,0.5s
SGDS Lg Lg 23 42 54.9
comp=Z,59nm,0.9s
FRU1 Bishkek 6.57 261 P **Pn** **23 41 13.0 +1.0**
FRU1 Bishkek 6.57 261 Pn **Pn** **23 41 13.0 +1.0**
AAK Ala-Archa 6.71 260 ⇓Pn **Pn** **23 41 15.8 +1.7**
comp=Z,4.7nm,0.5s
AAK ⇑Pg Pb 23 41 37.0 +4.9
comp=Z,25nm,0.7s
AAK ⇑Lg Lg 23 43 06.4
comp=Z,138nm,1.1s
AAK Ala-Archa 6.71 260 *i* P **Pn** **23 41 15.8 +1.7**
AAK pmax pmax
comp=Z,5.0nm,0.4s
AAK Ala-Archa 6.71 260 Pn **Pn** **23 41 15.7 +1.6**
BTLS Baital 6.78 280 Pg **Pg** **23 41 41.9 -3.1**
comp=Z,14nm,0.5s
BTLS Lg Lg 23 43 09.9
comp=Z,32nm,1.2s
KURBB Kurchatov Arra 7.25 334 Pn **Pn** **23 41 23.0 +1.8**
comp=Z,0.4nm,0.3s,baz=147,slow=13,SNR=11
KURBB Sn **Sn** **23 42 46.1 +2.5**
comp=Z,2.5nm,0.3s,baz=138,slow=25,SNR=23
KURBB Lg Lg 23 43 29.6
comp=Z,2.3nm,0.3s,baz=149,slow=30,SNR=8.7
KURBB Kurchatov Arra 7.25 334 ⇓Pn **Pn** **23 41 23.3 +2.1**
comp=Z,4.3nm,0.5s
KURBB ⇑Sn **Sn** **23 42 45.5 +1.9**
comp=Z,108nm,1.1s
KURBB ⇓Lg Lg 23 43 29.3
comp=Z,424nm,1.2s
KSH Kashi 7.28 233 Pn Pn 23 41 30.3 +8.5
KSH Sn Sb 23 42 59.9 -8.9
KURK Kurchatov 7.31 335 P **Pn** **23 41 23.0 +1.0**
KURK 23 42 46.2
KURK Kurchatov 7.31 335 Pn **Pn** **23 41 23.9 +1.9**
BRZS Berezniki 9.36 312 Pg Pn 23 42 29.9 +40
comp=Z,4.1nm,0.5s
KK31 Karatay Array 9.46 268 Pn **Pn** **23 41 53.5 +2.0**
comp=Z,2.1nm,0.8s,baz=78,slow=13,SNR=14
KK31 ⇓Pg 23 42 31.2
comp=Z,1.4nm,0.4s,baz=61,slow=15,SNR=4.1
KK31 ⇓Lg Lg 23 44 32.7
comp=Z,18nm,0.6s,baz=75,slow=28,SNR=7.8
KK31 Karatay Array 9.46 268 P **Pn** **23 41 52.7 +1.2**
KK31 Karatay Array 9.46 268 **Pn** **23 41 52.7 +1.2**
KKAR Karatay Array 9.46 268 P **Pn** **23 41 52.5 +1.0**
KKAR Karatay Array 9.46 268 **Pn** **23 41 52.5 +1.0**
KKAR Karatay Array 9.46 268 Pn **Pn** **23 41 53.5 +2.0**
ZAA0 Zalesovo Array 9.81 5 Pn **Pn** **23 41 57.7 +1.5**
ZALV Zalesovo Beam 9.81 5 Pn **Pn** **23 41 56.7 +0.4**
comp=Z,1.4nm,0.3s,baz=186,slow=14,SNR=21
ZALV Sn **Sn** **23 43 45.2 -1.2**
comp=Z,8.3nm,0.3s,baz=177,slow=24,SNR=19
ZALV Zalesovo Beam 9.81 5 *i* P **Pn** **23 41 57.9 +1.7**
ZALV pmax pmax
comp=Z,4.0nm,0.3s
ZALV Zalesovo Beam 9.81 5 **Pn** **23 41 57.7 +1.5**
BTK Batken 10.26 251 P **Pn** **23 42 02.2 -0.4**
BTK Batken 10.26 251 Pn **Pn** **23 42 02.2 -0.4**
GAR Garm 11.12 247 **Pn** **23 42 14.8 +0.4**
CHGR Chuyangaron 12.07 248 Pn **Pn** **23 42 26.7 -0.7**
BVAR Borovoye Array 12.35 320 Pn **Pn** **23 42 30.8 -0.3**
comp=Z,1.0nm,0.3s,baz=167,slow=16,SNR=22
BRVK Borovoye 12.42 320 ⇑Pn **Pn** **23 42 32.9 +0.9**
comp=Z,4.3nm,0.8s
BRVK ⇑Sn **Sn** **23 44 46.5 -3.9**
comp=Z,11nm,1.0s
BRVK ⇓Lg Lg 23 46 04.1
comp=Z,83nm,1.3s
BRVK Borovoye 12.42 320 P **Pn** **23 42 32.9 +0.9**
BRVK SN **Sn** **23 44 46.5 -3.9**
BRVK Borovoye 12.42 320 Pn **Pn** **23 42 33.1 +1.1**
GTA Gaotai 13.10 106 *e*P **P** **23 42 48.3 -3.5**
GTA pP Pn 23 42 53.1 +12
GTA sP 23 42 55.5
GTA pmax pmax
comp=Z,3.0nm,1.0s
NIL Nilore 13.18 220 P **Pn** **23 42 42.4 -0.1**
NIL Nilore 13.18 220 Pn **Pn** **23 42 42.4 -0.1**
CEP Cherat 13.69 225 P **Pn** **23 42 47.6 -2.0**
CEP S **Sn** **23 45 20.0 -1.8**
THW Thamme Wali 14.60 223 P **Pn** **23 42 58.7 -3.2**
KBL Kabul 14.72 234 P **Pn** **23 43 03.5 -0.2**
KBL Kabul 14.72 234 Pn **Pn** **23 43 03.5 -0.2**
ZAK Zakamensk 14.79 58 *e*P P 23 43 15.3 +4.9
ZAK pmax pmax
comp=Z,4.0nm,1.4s
LSA Lhasa 15.70 155 P **Pn** **23 43 17.9 +0.9**
LSA pmax pmax
comp=Z,6.0nm,0.9s
LSA Lhasa 15.70 155 Pn **Pn** **23 43 17.9 +0.9**
SONM Songino Array 16.33 69 Pn **Pn** **23 43 21.5 -3.1**
comp=Z,0.2nm,0.3s,baz=258,slow=12,SNR=2.6
SONM Songino Array 16.33 69 P **P** **23 43 26.4 -1.2**
SONM pmax pmax
comp=Z,6.0nm,1.2s
SONM Songino Array 16.33 69 **P** **23 43 26.4 -1.2**
ULN Ulaanbaatar 16.77 69 *i* P **P** **23 43 35.9 +3.4**
ULN pmax pmax
comp=Z,2.0nm,1.1s
ULN Ulaanbaatar 16.77 69 **P** **23 43 32.2 -0.3**
AB31 Akbulak array 16.88 296 ⇑P **Pn** **23 43 29.2 -2.2**
comp=Z,3.7nm,0.7s,baz=99,slow=9.2,SNR=46
ABKAR Akbulak array 16.88 296 **Pn** **23 43 29.9 -1.5**
ABKAR Akbulak array 16.88 296 **Pn** **23 43 29.8 -1.7**
LZH Lanzhou 17.53 111 *e*P **Pn** **23 43 38.2 -1.6**
LZH pP pP 23 43 44.7 -0.1
LZH sP sP 23 43 49.2 +2.6
LZH pmax pmax
comp=Z,13nm,1.1s
AKTO Aktyubinsk 18.30 299 P **Pn** **23 43 49.1 +0.1**
comp=Z,0.8nm,0.3s,baz=101,slow=8.5,SNR=11
AKTO S **Sn** **23 47 05.8 -7.5**
comp=Z,0.2nm,0.3s,baz=89,slow=23,SNR=1.6
AKTO Lg Lg 23 49 19.0
comp=Z,0.1nm,0.3s,baz=359,slow=20,SNR=2.6
AKTO Aktyubinsk 18.30 299 ⇓P **Pn** **23 43 49.2 +0.1**
comp=Z,3.9nm,0.6s
HRA Herat 19.07 246 P **P** **23 43 57.4 -0.7**
SVE Sverdlovsk 19.14 319 *e*P **Pn** **23 44 00.9 +1.7**
SVE pmax pmax
comp=Z,23nm,1.1s
SHL Shillong 19.80 157 P **Pn** **23 44 07.8 +0.3**
SHL pmax pmax
comp=Z,13nm,1.2s
SHL Shillong 19.80 157 P **Pn** **23 44 07.8 +0.3**
ARU Arti 19.94 317 *c i* P **Pn** **23 44 09.3 +0.5**
ARU S **Sn** **23 47 55.4 +2.6**
ARU pmax pmax
comp=Z,11nm,1.1s
ARU Arti 19.94 317 P **Pn** **23 44 08.6 -0.1**
ARU lAmb lAmb 23 44 14.4
comp=Z,11nm,1.1s
GEYT Alibeck 20.07 261 P **P** **23 44 07.3 -1.4**
comp=Z,1.7nm,0.5s,baz=53,slow=31,SNR=2.3
GEYT Alibeck 20.07 261 P **P** **23 44 09.3 +0.6**
HHC Hu-ho-hao-te 20.93 89 *e*P Pn 23 44 21.6 +0.9
HHC S **S** **23 48 06.8 -4.7**
HHC pmax pmax
comp=Z,17nm,0.9s
XAN Xi'an 22.12 109 P **P** **23 44 33.4 +2.5**
XAN pmax pmax
comp=Z,9.0nm,1.1s
XAN Xi'an 22.12 109 P **P** **23 44 33.4 +2.5**
XAN lAmb lAmb 23 44 40.4
comp=Z,8.9nm,1.1s
NRIK Noril'sk 25.30 3 P **P** **23 44 60.0 -1.6**
comp=Z,3.8nm,0.3s,baz=182,slow=4.9,SNR=12
NRIK Noril'sk 25.30 3 *c e* P **P** **23 45 02.4 +0.8**
NRIK pmax pmax
comp=Z,4.0nm,0.4s
KIRV Kirov 25.32 317 *c e* P **P** **23 45 02.3 +0.5**
GYA Guiyang 25.77 126 *e*P **P** **23 45 13.4 +7.1**
GYA pmax pmax
comp=Z,7.0nm,1.3s
CMAR Chiang Mai Arr 28.76 148 P P 23 45 27.2 -5.8
comp=Z,0.8nm,0.3s,baz=262,slow=11,SNR=1.7
KLMR Klimovskoe 30.77 318 *e*P **P** **23 45 50.7 +0.3**
KLMR pmax pmax
comp=Z,12nm,0.9s
KLMR Klimovskoe 30.77 318 *e*P **P** **23 45 50.8 +0.3**
KLMR AMP 23 46 04.1
comp=Z,12nm,0.9s
OBN Obninsk 31.68 307 *e*P **P** **23 45 57.9 -0.7**
OBN *e* 23 47 06.2
OBN pmax pmax
comp=Z,7.0nm,1.0s
MARD Mardin 32.77 273 P **P** **23 46 09.4 +0.9**
KLR Kul'dur 33.03 64 *i* P **P** **23 46 11.3 +0.8**
KLR pmax pmax
comp=Z,1.0nm,0.5s
KSRS Korea Array 33.98 86 P P 23 46 13.5 -5.3
comp=Z,0.5nm,0.3s,baz=275,slow=7.2,SNR=2.4
AKASG Malin Array Be 36.54 300 P **P** **23 46 40.6 -0.2**
comp=Z,1.5nm,0.5s,baz=65,slow=9.0,SNR=5.0
AKASG Malin Array Be 36.54 300 *c e* P **P** **23 46 40.7 -0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKBB Malin Array Si 36.54 300 *c e* P **P** **23 46 41.9 +1.1**
BR131 Keskin Array S 36.86 281 P **P** **23 46 44.8 +1.0**
BR131 pmax pmax
comp=Z,6.0nm,1.1s
BR131 Keskin Array S 36.86 281 P **P** **23 46 44.8 +1.0**
BR131 lAmb lAmb 23 46 46.2
comp=Z,6.4nm,1.1s
BRTR Keskin Array B 36.86 281 P **P** **23 46 43.0 -0.9**
comp=Z,3.6nm,1.0s,baz=79,slow=7.5,SNR=7.4
BRTR Keskin Array B 36.86 281 *c e* P **P** **23 46 45.4 +1.5**
BRTR pmax pmax
comp=Z,1.0nm,0.4s
BRTR Keskin Array B 36.86 281 P **P** **23 46 44.3 +0.5**
RAYN Ar Rayn 37.23 249 P **P** **23 46 46.0 -1.0**
RAYN pmax pmax
comp=Z,3.0nm,0.9s
RAYN Ar Rayn 37.23 249 P **P** **23 46 46.0 -1.0**
RAYN lAmb lAmb 23 46 46.6
comp=Z,3.0nm,0.8s
FIA1 FINESS Array S 37.30 318 P **P** **23 46 47.5 +0.4**
FIA1 lAmb lAmb 23 46 53.4
comp=Z,16nm,1.3s
FINES FINESS Array B 37.30 318 P **P** **23 46 47.0 -0.1**
comp=Z,0.8nm,0.3s,baz=97,slow=10,SNR=19
FINES PcP **PcP** **23 49 05.5 -0.7**
comp=Z,2.1nm,0.9s,baz=84,slow=3.8,SNR=5.8
FINES FINESS Array B 37.30 318 P **P** **23 46 47.6 +0.5**
ARCES ARCESS Array B 38.33 331 P **P** **23 46 56.2 +0.5**
comp=Z,26nm,1.3s,baz=81,slow=7.0,SNR=15
MMAI Mount Meron Ar 38.68 270 P **P** **23 46 58.9 -0.3**
comp=Z,2.1nm,0.8s,baz=26,slow=6.9,SNR=1.8
BIZ Bicaz 39.49 295 ⇓P **P** **23 47 04.7 -1.0**
NEHR Nehoiu 39.84 293 ⇓P **P** **23 47 07.3 -1.5**
BURAR Bucovina Array 39.86 296 ⇓P **P** **23 47 07.9 -1.1**
BURAR Bucovina Array 39.86 296 ⇓P **P** **23 47 07.9 -1.1**
BURAR Bucovina Array 39.86 296 P **P** **23 47 09.0 +0.1**
BUR08 Bucovina Ar. S 39.86 296 P **P** **23 47 09.3 +0.4**
MLR Muntele Rosu 40.05 293 P **P** **23 47 11.1 +0.5**
comp=Z,1.5nm,0.6s,baz=59,slow=19,SNR=2.2
MLR Muntele Rosu 40.05 293 ⇓P **P** **23 47 08.6 -2.0**
MLR Muntele Rosu 40.05 293 P **P** **23 47 11.5 +0.9**
MLR pmax pmax
comp=Z,5.0nm,1.3s
MLR Muntele Rosu 40.05 293 P **P** **23 47 11.5 +0.9**
DOPR Dopca 40.26 294 ⇓P **P** **23 47 11.7 -0.5**
ARCR ARCALIA 40.58 296 ⇓P **P** **23 47 14.2 -0.6**
KWP Kalwaria Pacla 40.87 300 P **P** **23 47 18.4 +1.3**
KWP pmax pmax
comp=Z,10.0nm,0.7s
KWP Kalwaria Pacla 40.87 300 P **P** **23 47 18.4 +1.3**
KWP lAmb lAmb 23 47 19.8
comp=Z,9.8nm,0.7s
ARR Arges 40.96 293 ⇓P **P** **23 47 17.6 -0.4**
OJC Ojcow 42.49 302 P **P** **23 47 31.2 +0.7**
OJC pmax pmax
comp=Z,12nm,1.1s
OJC Ojcow 42.49 302 P **P** **23 47 31.2 +0.7**
OJC lAmb lAmb 23 47 32.5
comp=Z,12nm,1.1s
BZS Buzias 42.86 295 ⇓P **P** **23 47 29.5 -4.0**
BZS Buzias 42.86 295 ⇓P **P** **23 47 29.5 -4.0**
MORC Moravsky Berou 44.02 302 P **P** **23 47 43.1 +0.3**
MORC pmax pmax
comp=Z,9.0nm,1.3s
MORC Moravsky Berou 44.02 302 P **P** **23 47 43.1 +0.3**
MORC lAmb lAmb 23 47 44.9
comp=Z,8.6nm,1.3s
KRLC Kraliky 44.38 302 *e*P **P** **23 47 46.6 +0.9**
KRLC Kraliky 44.38 302 *e*P **P** **23 47 46.6 +0.9**
NB2 NORSAR Subarra 44.48 319 P **P** **23 47 46.4 +0.1**
comp=Z,5.7nm,1.0s,baz=79,slow=7.9
NOA NORSAR Array B 44.48 319 P **P** **23 47 46.7 +0.3**
comp=Z,3.4nm,1.1s,baz=77,slow=7.6,SNR=11
DPC Dobruska-Polom 44.57 303 *e*P **P** **23 47 48.7 +1.5**
DPC Dobruska-Polom 44.57 303 *e*P **P** **23 47 48.7 +1.5**
UPC Upice 44.71 303 *e*P **P** **23 47 49.6 +1.3**
UPC Upice 44.71 303 *e*P **P** **23 47 49.6 +1.3**
IDI Anoyia 45.06 280 P **P** **23 47 51.0 -0.4**
CONA Conrad Observa 45.70 300 *e*P **P** **23 47 57.8 +1.5**
comp=Z,5.0nm,1.2s
PRU Pruhonice 45.77 303 *e*P **P** **23 47 56.8 +0.1**
PRU Pruhonice 45.77 303 *e*P **P** **23 47 56.8 +0.1**
CLL Collm 46.23 305 *e*P **P** **23 48 01.0 +0.7**
comp=Z,4.0nm,0.5s
CLL *e*sP **sP** **23 48 11.0 +4.9**
CLL Collm 46.23 305 *e*P **P** **23 48 01.0 +0.7**
CLL *e* 23 48 11.0
CLL pmax pmax
comp=Z,4.0nm,0.5s
CLL Collm 46.23 305 P **P** **23 48 00.9 +0.6**
CLL lAmb lAmb 23 48 02.0
comp=Z,8.2nm,1.2s
KHC Kasperske Hory 46.67 302 *e*P **P** **23 48 04.4 +0.6**
KHC Kasperske Hory 46.67 302 *e*P **P** **23 48 04.4 +0.6**
GEC2 GERESS Array S 46.70 302 P **P** **23 48 04.4 +0.2**
GEC2 lAmb lAmb 23 48 13.1
comp=Z,2.5nm,1.0s
GERES GERESS Array B 46.70 302 P **P** **23 48 04.3 +0.2**
comp=Z,0.4nm,0.3s,baz=61,slow=8.5,SNR=7.9

GERES	**GERESS Array B**	**46.70**	**302**	P		**P**	**23 48 04.2**	**0.0**
SOKA	**Soboth**	**46.70**	**298**	*e*P		**P**	**23 48 04.8**	**+0.6**
	comp=Z,5.1nm,0.9s							
BILL	**Bilibino**	**47.35**	**30**	*e*P		**P**	**23 48 13.3**	**+4.4**
BILL				*e*			23 50 04.8	
BILL				pmax	pmax			
	comp=Z,3.0nm,1.2s							
KBA	**Koelnbreinsper**	**47.60**	**300**	*e*P		**P**	**23 48 11.7**	**+0.4**
	comp=Z,2.6nm,0.5s							
WTTA	**Wattenberg**	**48.59**	**300**	*e*P		**P**	**23 48 19.8**	**+0.9**
	comp=Z,6.5nm,0.4s							
WATA	**Walderalm**	**48.60**	**300**	*e*P		**P**	**23 48 19.6**	**+0.6**
	comp=Z,3.6nm,0.6s							
SQTA	**Sankt Quirin**	**48.88**	**300**	*e*P		**P**	**23 48 21.7**	**+0.6**
	comp=Z,3.8nm,0.4s,SNR=14							
MOTA	**Moosalm**	**48.89**	**301**	*e*P		**P**	**23 48 21.7**	**+0.5**
	comp=Z,8.1nm,1.1s,SNR=4.4							
RETA	**Reutte**	**49.04**	**301**	*e*P		**P**	**23 48 23.1**	**+0.8**
	comp=Z,1.4nm,0.4s							
FETA	**Feichten**	**49.26**	**300**	*e*P		**P**	**23 48 24.6**	**+0.5**
	comp=Z,5.1nm,0.9s							
DAVA	**Damuels**	**49.67**	**301**	*e*P		**P**	**23 48 28.5**	**+1.3**
	comp=Z,2.8nm,0.6s							
TUE	**Stuetta**	**50.35**	**300**	P		**P**	**23 48 32.5**	**0.0**
KEST	**Kesra**	**55.67**	**289**	P		**P**	**23 49 11.1**	**-0.5**
	comp=Z,6.2nm,1.1s,baz=34,slow=7.3,SNR=2.8							
IMAR	**Indian Mountai**	**61.68**	**23**	P		**P**	**23 49 53.6**	**+0.7**
ESBB	**Sonseca Array**	**62.18**	**299**	P		**P**	**23 49 56.9**	**+0.1**
ESBB				IAmb	IAmb		23 50 04.0	
	comp=Z,7.0nm,1.1s							
ESDC	**Sonseca Array**	**62.19**	**299**	P		**P**	**23 49 56.8**	**0.0**
	comp=Z,1.6nm,0.6s,baz=52,slow=6.4,SNR=27							
PAB	**San Pablo**	**62.50**	**299**	P		**P**	**23 49 59.2**	**+0.2**
PAB				pmax	pmax			
	comp=Z,12nm,1.2s							
PAB	**San Pablo**	**62.50**	**299**	P		**P**	**23 49 59.2**	**+0.2**
ILAR	**Eielson Array**	**64.48**	**21**	P		**P**	**23 50 10.6**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=315,slow=5.5,SNR=13							
ILAR	**Eielson Array**	**64.48**	**21**	P		**P**	**23 50 11.2**	**-0.4**
ILAR	**Eielson Array**	**64.48**	**21**	P		**P**	**23 50 11.2**	**-0.4**
C36M	**Paulatuk**	**64.97**	**10**	P		**P**	**23 50 14.9**	**+0.3**
SCM	**Sheep Creek Mo**	**66.69**	**24**	P		**P**	**23 50 26.6**	**+0.6**
SCM				pmax	pmax			
	comp=Z,18nm,1.4s							
SCM	**Sheep Creek Mo**	**66.69**	**24**	P		**P**	**23 50 26.6**	**+0.6**
BCAR	**Beaver Creek A**	**67.18**	**21**	P		**P**	**23 50 30.0**	**+1.0**
YKA	**Yellowknife Ar**	**72.68**	**9**	P		**P**	**23 51 01.7**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=335,slow=6.8,SNR=4.5							
TOA0	**Torodi Ar. Sit**	**75.09**	**274**	P		**P**	**23 51 16.4**	**-1.2**
TOA0				IAmb	IAmb		23 51 17.5	
	comp=Z,3.9nm,1.0s							
TORD	**Torodi Ar. Bea**	**75.09**	**274**	P		**P**	**23 51 16.4**	**-1.2**
	comp=Z,3.2nm,0.8s,baz=40,slow=5.2,SNR=30							
TORD	**Torodi Ar. Bea**	**75.09**	**274**	P		**P**	**23 51 16.4**	**-1.2**
KOWA	**Kowa**	**78.26**	**279**	P		**P**	**23 51 35.1**	**-0.5**
KOWA				IAmb	IAmb		23 51 35.4	
	comp=Z,3.7nm,0.6s							
WRA	**Warramunga Arr**	**78.96**	**132**	P		**P**	**23 51 36.9**	**-2.3**
	comp=Z,0.7nm,0.9s,baz=339,slow=5.8,SNR=9.5							
WB2	**Warramunga Arr**	**78.96**	**132**	P		**P**	**23 51 37.5**	**-1.7**
WB2				IAmb	IAmb		23 51 41.0	
	comp=Z,9.3nm,1.4s							
ASAR	**Alice Springs**	**81.79**	**134**	P		**P**	**23 51 50.8**	**-3.6**
	comp=Z,0.3nm,0.3s,baz=2.2,slow=4.8,SNR=3.6							
DBIC	**Dimbokro**	**84.20**	**274**	P		**P**	**23 52 05.7**	**-1.3**
	comp=Z,1.4nm,0.5s,baz=1.0,slow=5.6,SNR=6.0							
DBIC	**Dimbokro**	**84.20**	**274**	P		**P**	**23 52 05.8**	**-1.3**
DBIC				pmax	pmax			
	comp=Z,12nm,1.4s							
DBIC	**Dimbokro**	**84.20**	**274**	P		**P**	**23 52 05.8**	**-1.3**

IDC 09 00:02:39.1±2.5, 64°.35N×18°.18W, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.3/41, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=86.1km s-min=18.2km az=34.0, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.42**	**288**	Pn	Pn	00 03 04.7	-1.3
	11nm,0.3s,baz=102,slow=8.0,SNR=31						
BORG				Sn	Sn	00 03 27.4	+2.1
	5.2nm,0.3s,baz=223,slow=22,SNR=6.5						
EKA	**Eskdalemuir Ar**	**11.74**	**133**	Pn	Pn	00 05 25.8	-1.9
	baz=321,slow=13,SNR=5.8						
ESDC	**Sonseca Array**	**26.09**	**154**	P	P	00 08 14.8	+0.6
	0.9nm,1.0s,baz=351,slow=9.5,SNR=2.7						
TORD	**Torodi Ar. Bea**	**52.97**	**155**	P	P	00 11 57.2	0.0
	0.3nm,0.7s,baz=343,slow=7.6,SNR=1.9						
PDAR	**Pinedale Array**	**53.03**	**293**	P	P	00 11 58.5	+0.8
	0.2nm,0.6s,baz=44,slow=8.2,SNR=2.5						

*HEL **09** 00:34:57.1, 67°.83N×20°.33E, h0km, ML1.8, Explosion*
UPP 09 00:34:56.5±0.5, 67°.82N×20°.20E, h1km±5km, ML2.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	00 34 59.3	+0.1
KUA				S	Sg	00 35 01.4	+0.3
KUA	**Kurravaara**	**0.14**	**22**	*i* P	Pg	00 34 59.3	+0.1
KUA				*i* S	Sg	00 35 01.4	+0.3
RATU	**Laukkuluspa**	**0.23**	**270**	P	Pg	00 35 00.9	0.0
RATU	**Laukkuluspa**	**0.23**	**270**	*i* P	Pg	00 35 00.9	0.0
KOVU	**Salmi**	**0.40**	**358**	P	Pg	00 35 04.1	-0.1
KOVU	**Salmi**	**0.40**	**358**	*i* P	Pg	00 35 04.1	-0.1
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 35 09.8	-0.4
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	00 35 09.7	-0.5
LANU				*e*S	Sg	00 35 17.8	-1.5
DUNU	**Dundret**	**0.72**	**168**	P	Pg	00 35 09.8	-0.4
DUNU	**Dundret**	**0.72**	**168**	*i* P	Pg	00 35 09.8	-0.4
MASU	**Masugnsbyn**	**0.78**	**117**	P	Pg	00 35 11.1	-0.3
MASU	**Masugnsbyn**	**0.78**	**117**	*i* P	Pg	00 35 11.1	-0.3
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 35 11.3	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	00 35 11.3	-0.2
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*PB	Pg	00 35 19.6	0.0
	baz=192						
KIF				MSG		00 35 34.4	
	comp=Z,8.7nm,0.2s						
KIF				*e*SB	Sg	00 35 35.5	+0.3
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pg	00 35 19.7	+0.1
PAJU	**Pajala**	**1.38**	**124**	P	Pn	00 35 21.6	-1.4
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pn	00 35 21.6	-1.4
ERTU	**Ertsjaerv**	**1.49**	**148**	P	Pn	00 35 23.6	-0.8
ERTU	**Ertsjaerv**	**1.49**	**148**	*e*PG	Pn	00 35 23.8	-0.6
ERTU				*e*SN	Sg	00 35 44.2	-0.2
KALU	**Kalix**	**2.33**	**146**	*e*P	Pn	00 35 35.8	-0.1
	baz=331						
KALU				*e*SB	Sb	00 36 07.6	-0.9
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	00 35 38.0	+1.3
TOF				MSG		00 36 06.8	
	comp=Z,3.7nm,0.2s						
TOF				*e*SG	Sb	00 36 09.6	-0.5
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pb	00 35 39.5	-1.8
	baz=281						
SGF				*e*SG	Sb	00 36 12.0	+0.1
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pn	00 35 41.1	+1.9
RNF				*e*SB	Sb	00 36 14.5	-0.9
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*PB	Pn	00 35 41.3	+1.8
ARA0				*e*SG	Sb	00 36 15.8	-0.2
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*P	Pn	00 35 40.8	+1.2

UPP 09 00:35:03.7±0.1, 67°.82N×20°.22E, h0km, ML2.5, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**19**	P	Pg	00 35 06.7	+0.2
KUA				S	Sg	00 35 08.8	+0.5
RATU	**Laukkuluspa**	**0.24**	**272**	P	Pg	00 35 08.4	+0.2
KOVU	**Salmi**	**0.41**	**357**	P	Pg	00 35 11.5	0.0
KOVU				S	Sg	00 35 17.0	+0.3
PAJU	**Pajala**	**1.37**	**124**	P	Pg	00 35 29.0	-1.0

*NEIC **09** 00:35:15.4±1.1, 36°.32N±0°.01×97°.54W±0°.06, h4km±10km, Error ellipse: s-maj=7.0km s-min=0.4km az=72.0*
*TUL **09** 00:35:15.5±1.9, 36°.33N±0°.02×97°.53W±0°.05, h11km±7km, ML3.7, Mwr3.3/12(NEIC), Error ellipse: s-maj=6.1km s-min=0.6km az=68.0*
*ANF **09** 00:35:15.5±0.3, 36°.28N×97°.48W, h2km, ML4.4/17, Error ellipse: s-maj=3.6km s-min=2.7km az=5.0*

*NEIC **09** 00:35:15.5, 36°.33N×97°.53W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.31; $M_{\theta\theta}$=0.76; $M_{\phi\phi}$=0.45; $M_{r\theta}$=0.33; $M_{r\phi}$=-1.01; $M_{\theta r}$=0.39; Fault plane solution: M_0=1.31000×10^{14} NP1:ϕ_s=341.40000°, δ=68.59000°, λ=-17.65000°. NP2:ϕ_s=78.03000°, δ=73.60000°, λ=-157.64000°. Principal axes: T 1.3400, Plg3.0000°, Azm209.0000°; N -0.0575, Plg63.0000°, Azm112.0000°; P -1.2825, Plg27.0000°, Azm301.0000°;*
*IDC **09** 00:35:17.3±1.1, 36°.50N×97°.87W, h0km, mb3.5/1, mb1 3.8/5, mb1mx3.6/40, mbtmp3.5/5, ML3.3/4 Error ellipse: s-maj=15.5km s-min=12.9km az=120.0*
ISC 09 00:35:15.2±1.0, 36°.35N±0°.02×97°.52W±0°.02, h8km±8km, n131, σ1§87/157, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.41**	**292**		**Pg**	**00 35 23.5**	**+0.3**
CROK				Sg	**Sg**	00 35 29.3	+0.6
OK029	**Liberty Lake**	**0.55**	**175**		**Pg**	**00 35 25.8**	**-0.2**
OK029				Sg	**Sg**	**00 35 33.1**	**-0.1**
GC02	**Grant County #**	**0.57**	**331**	Pg	**Pg**	**00 35 26.8**	**+0.4**
GC02				Sg	**Sg**	**00 35 34.9**	**+1.0**
KAN13	**South Haven SW**	**0.66**	**3**		**Pg**	**00 35 28.6**	**+0.5**
OK031	**S. Brethren Rd**	**0.67**	**126**		**Pg**	**00 35 28.4**	**+0.1**
BCOK	**Bluff Creek, N**	**0.69**	**186**		**Pg**	**00 35 28.3**	**-0.3**
BCOK				Sg	**Sg**	**00 35 37.5**	**-0.2**
KAN14	**Manchester OK**	**0.71**	**329**		**Pg**	**00 35 29.1**	**+0.2**
OK030	**Cody Creek RV**	**0.73**	**125**		**Pg**	**00 35 29.3**	**+0.1**
OK025	**Westminster Rd**	**0.78**	**169**		**Pg**	**00 35 30.0**	**-0.3**
KAN09	**Caldwell North**	**0.79**	**354**		**Pg**	**00 35 30.8**	**+0.3**
KAN05	**Bluff City Nor**	**0.81**	**339**		**Pg**	**00 35 31.2**	**+0.3**
KAN10	**Anthony SW Sta**	**0.90**	**329**		**Pg**	**00 35 32.7**	**+0.1**
OKCFA	**Oklahoma City**	**0.93**	**177**		**Pg**	**00 35 32.6**	**-0.6**
OKCSW	**OKLAHOMA CITY**	**0.94**	**176**		**Pg**	**00 35 32.8**	**-0.6**
KAN08	**Anthony NE Sta**	**0.95**	**337**		**Pg**	**00 35 33.7**	**+0.2**
T35A	**Sooner Cattle**	**0.98**	**55**	Pg	**Pg**	**00 35 34.3**	**+0.1**
FNO	**Franklin**	**1.09**	**175**		**Pg**	**00 35 35.6**	**-0.7**
U32A	**Winter Ranch,**	**1.20**	**272**	Pn	**Pg**	**00 35 37.4**	**-0.9**
W35A	**Tecumseh**	**1.30**	**156**	Pn	**Pg**	**00 35 38.9**	**-1.3**
TUL1	**Leonard**	**1.46**	**107**	P	**Pn**	**00 35 41.8**	**-0.1**
	baz=287,SNR=170						
TUL1				S	**Sb**	**00 36 01.3**	**0.0**
	baz=287						
TUL1	**Leonard**	**1.46**	**107**	Pn	**Pn**	**00 35 41.8**	**-0.1**
WMOK	**Wichita Mounta**	**1.91**	**213**	P	**Pn**	**00 35 48.5**	**+0.4**
	baz=32,SNR=137						
WMOK				S	**Sb**	**00 36 14.1**	**-0.3**
	baz=32						
WMOK	**Wichita Mounta**	**1.91**	**213**		**Pn**	**00 35 48.4**	**+0.4**
R32A	**Long Quarter,**	**2.28**	**336**		**Pn**	**00 35 54.1**	**+1.0**
X37A	**Clayton**	**2.48**	**134**		**Pn**	**00 35 57.1**	**+1.2**
U38A	**Gravette**	**2.53**	**87**		**Pn**	**00 35 58.0**	**+1.5**
KSU1	**Kansas State U**	**2.84**	**14**	P	**Pn**	**00 36 02.2**	**+1.3**
	baz=196,SNR=53						
KSU1	**Kansas State U**	**2.84**	**14**	Pn	**Pn**	**00 36 02.1**	**+1.3**
HHAR	**Hobbs**	**2.89**	**90**		**Pn**	**00 36 02.7**	**+1.2**
Z35A	**Perchaven, San**	**3.02**	**176**		**Pn**	**00 36 04.1**	**+0.8**
CBKS	**Cedar Bluff**	**3.03**	**325**	P	**Pn**	**00 36 04.8**	**+1.3**
	baz=144,SNR=10						
CBKS				Sb	**Sg**	**00 36 50.9**	**-1.7**
	baz=144						
CBKS	**Cedar Bluff**	**3.03**	**325**		**Pn**	**00 36 04.7**	**+1.3**
W39A	**Magazine**	**3.24**	**110**	P	**Pn**	**00 36 07.4**	**+1.0**
	baz=292,SNR=26						
W39A	**Magazine**	**3.24**	**110**		**Pn**	**00 36 07.8**	**+1.4**
S39A	**Bolivar**	**3.61**	**67**	Pn	**Pn**	**00 36 12.0**	**+0.5**
MIAR	**Mount Ida**	**3.68**	**118**	P	**Pn**	**00 36 13.6**	**+1.1**
	baz=300,SNR=35						
MIAR				S	**Sn**	**00 36 56.8**	**+0.7**
	baz=300						
MIAR	**Mount Ida**	**3.68**	**118**	Pn	**Pn**	**00 36 13.6**	**+1.1**
AMTX	**Amarillo**	**3.70**	**248**	Sn	**Sn**	**00 36 59.7**	**+3.2**
	baz=65						
AMTX				Sb	**Sg**	**00 37 10.3**	**-3.7**
	baz=65						
AMTX	**Amarillo**	**3.70**	**248**		**Pn**	**00 36 14.0**	**+1.3**
Z38A	**Mt. Pleasant**	**3.72**	**145**		**Pn**	**00 36 14.4**	**+1.5**
U40A	**Yellville**	**3.76**	**89**	P	**Pn**	**00 36 14.9**	**+1.3**
	baz=271,SNR=16						
U40A				Sb	**Sb**	**00 37 12.4**	**+4.8**
	baz=271						
U40A	**Yellville**	**3.76**	**89**		**Pn**	**00 36 14.6**	**+1.0**
ABTX	**Abilene, Hawle**	**4.11**	**206**	Pn	**Pn**	**00 36 19.2**	**+0.8**
	baz=24,SNR=35						
ABTX				Pb	**Pb**	**00 36 28.6**	**+0.8**
	baz=24						
ABTX	**Abilene, Hawle**	**4.11**	**206**		**Pn**	**00 36 18.7**	**+0.3**
X40A	**Basin Creek Fa**	**4.25**	**115**	P	**Pn**	**00 36 21.6**	**+1.4**
	baz=297,SNR=9.0						
X40A	**Basin Creek Fa**	**4.25**	**115**		**Pn**	**00 36 21.5**	**+1.2**
MGMO	**Mountain Grove**	**4.29**	**78**		**Pn**	**00 36 22.0**	**+1.2**
WHTX	**Lake Whitney,**	**4.35**	**179**	P	**Pn**	**00 36 21.8**	**+0.3**
	baz=359						
WHTX				Sn	**Sn**	**00 37 11.9**	**-0.5**
	baz=359						
WHTX				Sb	**Sb**	**00 37 28.6**	**+4.2**
	baz=359						
WHTX	**Lake Whitney,**	**4.35**	**179**	Pn	**Pn**	**00 36 21.1**	**-0.4**
WHAR	**Wooly Hollow**	**4.38**	**102**		**Pn**	**00 36 23.1**	**+1.1**
N33A	**J Bar K, Exete**	**4.38**	**1**		**Pn**	**00 36 20.9**	**-1.1**
FCAR	**Ozark Folk Cen**	**4.39**	**94**		**Pn**	**00 36 23.4**	**+1.3**
W41B	**Gary Mavity, V**	**4.44**	**104**	P	**Pn**	**00 36 24.0**	**+1.2**
	baz=287						
W41B				S	**Sn**	**00 37 14.5**	**-0.2**
	baz=287						
W41B	**Gary Mavity, V**	**4.44**	**104**	Pn	**Pn**	**00 36 23.8**	**+1.0**
WLAR	**White Oak Lake**	**4.48**	**125**	Pn	**Pn**	**00 36 24.0**	**+0.6**
P38A	**Dawn**	**4.54**	**43**		**Pn**	**00 36 24.1**	**0.0**
237A	**Washetta, Mont**	**4.56**	**161**	Pn	**Pn**	**00 36 23.9**	**-0.6**
R40A	**Maddies Statio**	**4.61**	**64**		**Pn**	**00 36 25.8**	**+0.6**
N35A	**Tabor**	**4.74**	**17**		**Pn**	**00 36 27.5**	**+0.6**
KSCO	**Kaye Shedlock'**	**4.85**	**305**	Pn	**Pn**	**00 36 30.1**	**+1.5**
	baz=122						
KSCO				Pb	**Pb**	**00 36 42.9**	**+2.4**
	baz=122						
KSCO				Sb	**Sg**	**00 37 46.3**	**-4.6**
	baz=122						
KSCO	**Kaye Shedlock'**	**4.85**	**305**		**Pn**	**00 36 29.2**	**+0.7**
MSTX	**Muleshoe**	**4.92**	**243**	P	**Pn**	**00 36 31.9**	**+2.3**
	baz=60,SNR=5.1						
MSTX				Sn	**Sn**	**00 37 26.3**	**-0.3**
	baz=60						
MSTX				Sb	**Sb**	**00 37 45.9**	**+4.9**
	baz=60						
MSTX	**Muleshoe**	**4.92**	**243**		**Pn**	**00 36 31.0**	**+1.5**
Z41A	**Richland Creek**	**4.95**	**127**	P	**Pn**	**00 36 30.6**	**+0.7**
	baz=310,SNR=7.4						
Z41A				S	**Sn**	**00 37 26.4**	**-0.9**
	baz=310						
Z41A	**Richland Creek**	**4.95**	**127**		**Pn**	**00 36 30.1**	**+0.3**
BGNE	**Belgrade**	**5.08**	**355**	P	**Pn**	**00 36 32.9**	**+1.2**
	baz=175						
BGNE				Sb	**Sg**	**00 37 53.0**	**-5.2**
	baz=175						
BGNE	**Belgrade**	**5.08**	**355**		**Pn**	**00 36 32.2**	**+0.6**
LCAR	**Lake Charles**	**5.15**	**91**	Pn	**Pn**	**00 36 33.4**	**+0.8**
T42A	**Van Buren**	**5.21**	**81**		**Pn**	**00 36 34.4**	**+1.1**
CCM	**Cathedral Cave**	**5.29**	**69**	P	**Pn**	**00 36 26.2**	**+1.8**
	baz=253						
CCM	**Cathedral Cave**	**5.29**	**69**	Pn	**Pn**	**00 36 36.3**	**+1.8**
CCAR	**Cane Creek**	**5.29**	**116**	Pn	**Pn**	**00 36 35.8**	**+1.2**
P40A	**Paris**	**5.36**	**52**	Pn	**Pn**	**00 36 36.1**	**+0.6**
435B	**Jarrell**	**5.55**	**181**	P	**Pn**	**00 36 38.3**	**+0.1**
	baz=0.2						
435B				S	**Sn**	**00 37 40.5**	**-1.6**
	baz=0.2						
435B	**Jarrell**	**5.55**	**181**		**Pn**	**00 36 37.7**	**-0.4**
T25A	**Trinidad**	**5.59**	**280**	Pb	**Pb**	**00 36 57.1**	**+3.8**
	baz=96,SNR=11						
T25A				Sb	**Sg**	**00 38 09.4**	**-5.5**
	baz=96						
T25A	**Trinidad**	**5.59**	**280**		**Pn**	**00 36 39.4**	**+0.5**
L34A	**Svendsen Farm,**	**5.68**	**9**		**Pn**	**00 36 41.0**	**+1.1**
X43A	**Marvell**	**5.71**	**107**	Sb	**Sg**	**00 38 12.9**	**-5.9**
	baz=290						
FVM	**French Village**	**5.89**	**72**	Pn	**Pn**	**00 36 44.8**	**+2.0**
JCT	**Junction City**	**6.16**	**199**		**Pn**	**00 36 46.5**	**0.0**
CPRX	**Cap Rock**	**6.19**	**240**	Pn	**Pn**	**00 36 47.8**	**+0.7**
143A	**Socs Landing,**	**6.22**	**124**	Pn	**Pn**	**00 36 48.0**	**+0.8**
SCIA	**State Center**	**6.48**	**30**	P	**Pn**	**00 36 52.3**	**+1.4**
	baz=213,SNR=9.9						
SCIA				S	**Sn**	**00 38 04.3**	**-0.6**
	baz=213						
SCIA	**State Center**	**6.48**	**30**	Pn	**Pn**	**00 36 51.7**	**+0.9**
HKT	**Hockley**	**6.54**	**167**	Pn	**Pn**	**00 36 51.4**	**-0.2**
SDCO	**Great Sand Dun**	**6.54**	**285**	P	**Pn**	**00 36 53.8**	**+1.9**
	baz=100,SNR=7.1						
SDCO				Sb	**Sg**	**00 38 39.0**	**-6.1**
	baz=100						
SDCO	**Great Sand Dun**	**6.54**	**285**	Pn	**Pn**	**00 36 53.1**	**+1.2**
Q24A	**Divide**	**6.59**	**296**	P	**Pn**	**00 36 52.9**	**+0.1**
	baz=111						
Q24A	**Divide**	**6.59**	**296**	Pn	**Pn**	**00 36 52.4**	**-0.3**
HICK	**Hickman**	**6.68**	**86**	Pn	**Pn**	**00 36 54.9**	**+1.3**
S44A	**Carbondale**	**6.74**	**76**	Pn	**Pn**	**00 36 55.3**	**+0.8**
N41A	**Harden Midland**	**6.79**	**48**		**Pn**	**00 36 56.3**	**+1.2**
OXF	**Oxford**	**6.87**	**103**	P	**Pn**	**00 36 57.0**	**+0.9**
	baz=288						
OXF	**Oxford**	**6.87**	**103**	Pn	**Pn**	**00 36 57.4**	**+1.2**
W45A	**Hickory Valley**	**6.88**	**98**	Pn	**Pn**	**00 36 57.0**	**+0.7**
Y45A	**Yeager Farm, C**	**6.99**	**108**		**Pn**	**00 36 58.4**	**+0.5**
P43A	**Skaggs, Pawnee**	**7.12**	**60**	Pn	**Pn**	**00 37 01.0**	**+1.4**
ISCO	**Idaho Springs**	**7.26**	**301**	Pn	**Pn**	**00 37 03.2**	**+1.4**
	baz=116,SNR=7.6						
ISCO				Pb	Pb	00 37 27.5	+5.9
	baz=116						
ISCO				Sb	**Sg**	**00 39 01.4**	**-6.8**
	baz=116						
ISCO	**Idaho Springs**	**7.26**	**301**	Pn	**Pn**	**00 37 02.1**	**+0.3**
K38A	**Parkersburg**	**7.28**	**29**	Pn	**Pn**	**00 37 03.5**	**+1.6**
ECSD	**EROS Data Cent**	**7.41**	**5**	P	**Pn**	**00 37 03.4**	**-0.3**
	baz=186						
ECSD				S	**Sn**	**00 38 24.5**	**-3.3**
	baz=186						
ECSD	**EROS Data Cent**	**7.41**	**5**	Pn	**Pn**	**00 37 03.5**	**-0.1**
ANMO	**Albuquerque**	**7.41**	**262**	Pg	**Pb**	**00 37 28.4**	**+4.2**
	0.2nm,0.3s,baz=78,slow=16,SNR=2.7						
ANMO				Lg	Lg	00 39 03.7	
	2.3nm,0.3s,baz=248,slow=19,SNR=6.7						
L40A	**Anamosa**	**7.51**	**39**	Pn	**Pn**	**00 37 04.7**	**-0.3**
S22A	**4UR Ranch, Cre**	**7.58**	**283**		**Pn**	**00 37 07.8**	**+1.6**
HDIL	**Hopedale**	**7.70**	**54**	P	**Pn**	**00 37 08.3**	**+0.8**
	baz=240						
HDIL				S	**Sn**	**00 38 31.2**	**-3.7**
	baz=240						
HDIL	**Hopedale**	**7.70**	**54**	Pn	**Pn**	**00 37 08.3**	**+0.8**
PLAL	**Pickwick Lake**	**7.80**	**97**	Pn	**Pn**	**00 37 09.9**	**+0.9**
WVT	**Waverly**	**7.83**	**89**	Pn	**Pn**	**00 37 10.2**	**+0.8**
PHWY	**Pilot Hill**	**7.93**	**311**		**Pn**	**00 37 10.7**	**-0.3**
N23A	**Red Feather La**	**8.01**	**307**	Pn	**Pn**	**00 37 13.3**	**+1.2**
	baz=122,SNR=8.7						
N23A				Pb	Pg	00 37 42.6	-5.9
	baz=122						
N23A				Sb	**Sg**	**00 39 25.7**	**-6.5**
	baz=122						
N23A	**Red Feather La**	**8.01**	**307**	Pn	**Pn**	**00 37 13.2**	**+1.1**
MNTX	**Cornudas Mount**	**8.01**	**237**	S	**Sn**	**00 38 39.1**	**-3.5**
	baz=52						
MNTX	**Cornudas Mount**	**8.01**	**237**	Pn	**Pn**	**00 37 12.7**	**+0.8**
L42A	**Oliver, Polo**	**8.31**	**45**	Pn	**Pn**	**00 37 15.6**	**-0.3**
T47A	**Sharon Grove**	**8.39**	**83**	Pn	**Pn**	**00 37 17.9**	**+0.8**
JFWS	**Jewell Farm**	**8.62**	**38**	P	**Pn**	**00 37 20.3**	**+0.1**
	baz=223						
JFWS	**Jewell Farm**	**8.62**	**38**	Pn	**Pn**	**00 37 20.4**	**+0.2**
TX32	**Lajitas Array**	**8.70**	**218**		**Pn**	**00 37 20.6**	**-0.8**
TXAR	**Lajitas Array**	**8.70**	**218**	Pn	**Pn**	**00 37 22.0**	**+0.5**
	0.3nm,0.3s,baz=44,slow=12,SNR=20						
TXAR				Lg	Lg	00 39 45.0	
	0.8nm,0.3s,baz=43,slow=19,SNR=3.8						
TXAR	**Lajitas Array**	**8.70**	**218**	Pn	**Pn**	**00 37 20.6**	**-0.8**
P46A	**Rosedale**	**8.77**	**65**	Pn	**Pn**	**00 37 23.2**	**+1.0**
M44A	**Midewin, Midew**	**8.94**	**53**	Pn	**Pn**	**00 37 26.1**	**+1.6**
WCI	**Wyandotte Cave**	**9.14**	**75**	S	**Sn**	**00 39 07.3**	**-3.0**
	baz=262						
BLO	**Bloomington**	**9.15**	**69**	Pn	**Pn**	**

FINES	**FINESS Array B**	**129.03**	**338**	PKP	**PKPdf**	**01 17 20.6**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=27,slow=0.9,SNR=5.1						
CLL	**Collm**	**141.35**	**335**	*e*PKPdf	**PKiKP**	**01 17 47.0**	**-0.4**
GERES	**GERESS Array B**	**142.92**	**332**	PKP	**PKPdf**	**01 17 44.4**	**-3.3**
	comp=Z,0.4nm,0.6s,baz=10,slow=1.5,SNR=4.6						
WATA	**Walderalm**	**145.00**	**332**	*i* P	**PKPbc**	**01 17 50.9**	**0.0**
	comp=Z,1.8nm,0.5s						
ABTA	**Abfaltersbach**	**145.01**	**331**	*e*P	**PKPbc**	**01 17 50.6**	**-0.3**
	comp=Z,5.8nm,0.6s						
WTTA	**Wattenberg**	**145.03**	**332**	*e*P	**PKPab**	**01 17 51.3**	**+0.2**
	comp=Z,2.7nm,0.6s						
MOTA	**Moosalm**	**145.20**	**333**	*e*P	**PKPbc**	**01 17 51.5**	**0.0**
	comp=Z,6.4nm,0.8s,SNR=7.7						
RETA	**Reutte**	**145.24**	**333**	*i* P	**PKPab**	**01 17 52.0**	**+0.2**
	comp=Z,2.5nm,0.7s						
SQTA	**Sankt Quirin**	**145.25**	**332**	*e*P	**PKPbc**	**01 17 51.8**	**+0.1**
	comp=Z,7.5nm,0.6s,SNR=8.6						
FETA	**Feichten**	**145.61**	**333**	*i* P	**PKPab**	**01 17 53.4**	**+0.2**
	comp=Z,5.2nm,1.0s						
DAVA	**Damuels**	**145.77**	**334**	*e*P	**PKPab**	**01 17 53.9**	**+0.1**
	comp=Z,2.0nm,0.6s						
ESDC	**Sonseca Array**	**157.28**	**345**	PKPab	**PKPab**	**01 18 41.7**	**+0.2**
	comp=Z,0.9nm,1.0s,baz=22,slow=3.5,SNR=4.6						
TORD	**Torodi Ar. Bea**	**166.40**	**252**	PKP	**PKPdf**	**01 18 19.4**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=202,slow=0.8,SNR=2.0						

*IDC **09** 01:05:57.8±2.2, 18°.80S×177°.54W, h575km±39km, mb3.4/4, mb1 3.6/6, mb1mx3.0/44, mbtmp4.4/6, Error ellipse: s-maj=99.8km s-min=32.4km az=147.0*

ISC 09 01:05:57.8±2.3, 18°.8S±0°.9×177°.6W±0°.5, h570km, n6, σ0s81/8, mb4.1/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.39**	**50**	P	**P**	**01 07 51.1**	**+0.7**
	6.0nm,0.3s,baz=253,slow=11,SNR=14						
AFI				S	**S**	**01 09 21.7**	**-0.8**
	1.2nm,0.3s,baz=265,slow=22,SNR=1.4						
DZM	**Mont Dzumac**	**15.34**	**255**	P	**P**	**01 09 11.4**	**+1.1**
	0.4nm,0.3s,baz=96,slow=19,SNR=2.3						
STKA	**Stephens Creek**	**38.91**	**242**	P	**P**	**01 12 35.1**	**-0.3**
	3.0nm,0.4s,baz=89,slow=11,SNR=12						
WRA	**Warramunga Arr**	**45.27**	**260**	P	**P**	**01 13 24.8**	**-0.6**
	2.0nm,0.4s,baz=97,slow=8.1,SNR=42						
WRA				PcP	**PcP**	**01 14 53.0**	**-0.2**
	0.2nm,0.5s,baz=108,slow=3.6,SNR=1.9						
ASAR	**Alice Springs**	**45.33**	**255**	P	**P**	**01 13 25.4**	**-0.5**
	3.9nm,0.4s,baz=87,slow=8.0,SNR=72						
FITZ	**Fitzroy Crossi**	**53.68**	**261**	P	**P**	**01 14 27.1**	**-0.1**
	1.3nm,0.4s,baz=129,slow=4.2,SNR=24						

*DJA **09** 01:06:40.6±1.9, 7°.5S×107°.5E±°, h20km±18km, M4.0/11, MLv4.0/11*

*IDC **09** 01:06:44.3±8.9, 5°.98S×105°.22E, h72km±61km, mb3.6/5, mb1 3.7/6, mb1mx3.2/44, mbtmp3.8/6, ML3.6/1, Error ellipse: s-maj=172.2km s-min=22.6km az=53.0*

ISC 09 01:06:33.3±1.1, 6°.7S±0°.1×104°.14E±0°.09, h10km, n27, σ2s38/21, mb3.9/5, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGJI	**Cibinong**	**1.55**	**85**	P	**Pn**	**01 06 57.5**	**-3.5**
SBJI	**Serang**	**2.08**	**73**	P	**Pg**	**01 07 15.7**	**+2.6**
KLSI		**2.12**	**16**	P	**Pb**	**01 07 11.6**	**-0.3**
SKJI	**Sukabumi**	**2.42**	**96**	P	**Pn**	**01 07 10.7**	**-2.2**
TNG	**Tangerang**	**2.56**	**77**	P	**Pn**	**01 07 11.9**	**-2.9**
DBJI	**Dramaga**	**2.60**	**86**	P	**Pn**	**01 07 12.2**	**-3.3**
MNAI	**Manna**	**2.64**	**334**	P	**Pg**	**01 07 26.3**	**+2.3**
CBJI	**Citeko**	**2.71**	**83**	P	**Pn**	**01 07 15.8**	**-1.2**
CNJI	**Cibinong**	**3.02**	**101**	P	**Pn**	**01 07 18.7**	**-2.5**
KSI	**Kapahiang**	**3.43**	**333**	P	**Pn**	**01 07 26.3**	**-0.7**
LEM	**Lembang**	**3.46**	**92**	P	**Pn**	**01 07 23.5**	**-3.9**
	11nm,0.3s,baz=330,slow=20,SNR=7.0						
LEM	**Lembang**	**3.46**	**92**	P	**Pn**	**01 07 23.9**	**-3.5**
CISI	**Cisompet, Garu**	**3.74**	**103**	P	**Pn**	**01 07 29.5**	**-1.7**
CMJI	**Cimerak**	**4.40**	**104**	P	**Pn**	**01 07 38.0**	**-2.2**
ABJI	**Asem Bagus**	**10.07**	**97**	P	**Pn**	**01 09 00.5**	**+2.4**
FITZ	**Fitzroy Crossi**	**23.81**	**120**	P	**P**	**01 11 45.6**	**-1.0**
	0.5nm,0.4s,baz=310,slow=7.0,SNR=7.8						
H01W3	**Cape Leeuwin H**	**29.48**	**163**	T	T	01 43 33.2	
	baz=342,slow=74						
H01W2	**Cape Leeuwin H**	**29.50**	**163**	T	T	01 43 34.6	
	baz=342,slow=74						
H01W1	**Cape Leeuwin H**	**29.50**	**163**	T	T	01 43 25.5	
	baz=342						
H08S2	**Diego Garcia H**	**31.40**	**266**	T	T	01 47 11.9	
	baz=89						
H08S3	**Diego Garcia H**	**31.41**	**266**	T	T	01 46 57.8	
	baz=89						
H08S1	**Diego Carcia H**	**31.42**	**266**	T	T	01 46 58.3	
	baz=89						
WRA	**Warramunga Arr**	**32.11**	**117**	P	**P**	**01 12 59.5**	**-1.5**
	1.0nm,0.7s,baz=294,slow=8.8,SNR=38						
ASAR	**Alice Springs**	**33.17**	**124**	P	**P**	**01 13 10.2**	**-0.2**
	0.6nm,0.3s,baz=298,slow=8.0,SNR=14						
STKA	**Stephens Creek**	**42.94**	**131**	P	**P**	**01 14 34.0**	**+1.3**
	2.1nm,0.4s,baz=307,slow=6.3,SNR=5.2						
MKAR	**Makanchi Array**	**56.73**	**342**	P	**P**	**01 16 17.7**	**+0.5**
	0.4nm,0.4s,baz=149,slow=8.0,SNR=8.5						
TXAR	**Lajitas Array**	**145.48**	**46**	PKP	**PKPab**	**01 26 13.1**	**+0.3**
	0.3nm,0.6s,baz=286,slow=0.7,SNR=1.3						

*JMA **09** 01:07:28.4±0.2, 39°.64N×143°.35E, h13km±3km, M3.7*

*IDC **09** 01:07:35.9±3.3, 39°.50N×143°.08E, h62km±30km, mb3.3/6, mb1 3.4/8, mb1mx3.1/57, mbtmp3.5/8, ML2.9/2, Error ellipse: s-maj=33.3km s-min=24.4km az=103.0*

ISC 09 01:07:28.9±1.0, 39°.75N±0°.06×143°.31E±0°.07, h10km, n30, σ1s29/29, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.12**	**280**	P	**Pn**	**01 07 50.5**	**-0.2**
JTH				*e*S	**Sn**	**01 08 06.4**	**+0.2**
MIYJ	**Miyakonagasawa**	**1.16**	**262**	P	**Pb**	**01 07 50.0**	**-1.0**
MIYJ				*e*S	**Sb**	**01 08 05.6**	**-0.5**
JKEN	**Kujiedanarisaw**	**1.31**	**291**	P	**Pb**	**01 07 52.8**	**-0.7**
OFUJ	**Ofunato**	**1.44**	**243**	P	**Pn**	**01 07 54.1**	**-0.8**
JANG	**Nango**	**1.51**	**295**	P	**Pb**	**01 07 56.2**	**-0.7**
JOM	**Ohasama**	**1.58**	**260**	P	**Pn**	**01 07 56.9**	**0.0**
JOM				*e*S	**Sn**	**01 08 17.4**	**0.0**
JMK	**Ichinoseki**	**1.80**	**244**	P	**Pn**	**01 07 59.5**	**-0.5**
JTM	**Tenmabayashi**	**2.00**	**302**	P	**Pb**	**01 08 04.2**	**-1.1**
JTM				*e*S	**Sb**	**01 08 30.3**	**+0.1**
JIO	**Ouri**	**2.00**	**230**	P	**Pn**	**01 08 01.5**	**-1.2**
JRG	**Rokugo**	**2.10**	**261**	P	**Pn**	**01 08 04.8**	**+0.8**
JAH	**Hinai**	**2.10**	**283**	P	**Pb**	**01 08 05.2**	**-1.8**
JEM	**Erimo**	**2.26**	**357**	P	**Pb**	**01 08 08.4**	**-1.4**
JOT	**Ohata**	**2.37**	**314**	P	**Pb**	**01 08 09.4**	**-2.2**
JYK	**Kaneyama**	**2.43**	**251**	P	**Pn**	**01 08 09.0**	**+0.3**
JOU	**Okura**	**2.48**	**237**	P	**Pn**	**01 08 09.2**	**-0.1**
ASAJ	**Asahikawa**	**4.39**	**353**	P	**Pb**	**01 08 43.0**	**-3.1**
	0.6nm,0.3s,baz=241,slow=19,SNR=1.6						
MJAR	**Matsushiro Arr**	**5.14**	**233**	P	**Pn**	**01 08 46.5**	**+0.6**
	0.2nm,0.3s,baz=41,slow=12,SNR=22						
MAT	**Matsushiro**	**5.14**	**233**	P	**Pn**	**01 08 45.8**	**-0.1**
MAT				*e*S	**Sn**	**01 09 45.1**	**-0.2**
SONM	**Songino Array**	**27.63**	**299**	P	**P**	**01 13 17.5**	**+0.8**
	0.5nm,0.5s,baz=92,slow=10.0,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**28.45**	**128**	T	T	01 43 15.2	
	baz=319,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.46**	**128**	T	T	01 43 16.7	
	baz=319,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.46**	**128**	T	T	01 43 21.9	
	baz=319						
H11S1	**WAKE ISLAND Hy**	**29.27**	**130**	T	T	01 44 25.6	
	baz=319,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.27**	**130**	T	T	01 44 23.8	
	baz=319						
H11S2	**WAKE ISLAND Hy**	**29.28**	**130**	T	T	01 44 23.5	
	baz=319,slow=74						
ZALV	**Zalesovo Beam**	**41.24**	**310**	P	**P**	**01 15 14.8**	**+1.0**
	0.5nm,0.5s,baz=90,slow=8.7,SNR=4.0						
MKAR	**Makanchi Array**	**43.99**	**300**	P	**P**	**01 15 36.9**	**+0.6**
	0.3nm,0.5s,baz=80,slow=8.7,SNR=4.2						
KURBB	**Kurchatov Arra**	**45.55**	**306**	P	**P**	**01 15 49.1**	**+0.5**
	1.1nm,0.7s,baz=81,slow=8.3,SNR=7.8						
ILAR	**Eielson Array**	**46.41**	**34**	P	**P**	**01 15 58.5**	**+3.3**
	0.8nm,1.2s,baz=272,slow=7.8,SNR=1.1						
WRA	**Warramunga Arr**	**59.97**	**190**	P	**P**	**01 17 33.7**	**-1.7**
	0.4nm,1.0s,baz=6.1,slow=7.2,SNR=2.2						

*IDC **09** 01:30:01.8±3.7, 21°.41N×178°.47W, h574km±36km, mb3.0/4, mb1 3.2/5, mb1mx2.9/25, mbtmp4.0/5, Error ellipse: s-maj=40.2km s-min=34.5km az=158.0*

ISC 09 01:29:59.3±1.4, 21°.4S±0°.2×178°.4W±0°.3, h550km, n6, σ1s74/8, mb3.8/4, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**17.28**	**192**	P	**P**	**01 33 30.8**	**+0.4**
	0.3nm,0.3s,baz=326,slow=16,SNR=1.1						
CTA	**Charters Tower**	**33.05**	**266**	P	**P**	**01 35 50.6**	**+0.6**
	1.7nm,0.4s,baz=98,slow=11,SNR=2.1						
ASAR	**Alice Springs**	**43.97**	**258**	P	**P**	**01 37 18.9**	**+0.5**
	1.6nm,0.5s,baz=95,slow=7.6,SNR=41						
ASAR				PcP	**PcP**	**01 38 52.7**	**+0.7**
	0.4nm,0.7s,baz=97,slow=5.0,SNR=4.3						
ASAR				ScP	**ScP**	**01 41 48.7**	**-3.0**
	0.1nm,0.5s,baz=104,slow=3.9,SNR=1.6						
WRA	**Warramunga Arr**	**44.13**	**263**	P	**P**	**01 37 19.2**	**-0.4**
	0.8nm,0.3s,baz=97,slow=7.6,SNR=35						
ILAR	**Eielson Array**	**89.23**	**13**	P	**P**	**01 41 57.4**	**+1.1**
	0.1nm,0.4s,baz=204,slow=6.5,SNR=1.2						
AKASG	**Malin Array Be**	**143.59**	**330**	PKP	**PKPdf**	**01 48 29.6**	**-1.9**
	1.3nm,0.4s,baz=36,slow=3.8,SNR=7.6						

*IDC **09** 01:30:12.0±3.0, 38°.25N×20°.47E, h0km, mb3.4/5, mb1 3.5/8, mb1mx3.4/44, mbtmp3.4/8, ML3.1/3, Error ellipse: s-maj=53.7km s-min=23.4km az=45.0*

*ATH **09** 01:30:13.2, 38°.11N×20°.46E, h19km, ML3.1/22, Error ellipse: s-maj=1.8km s-min=0.9km az=244.0*

*BEO **09** 01:30:14.1±0.7, 38°.06N×20°.26E, h30km±4km, ML3.4/12*

*THE **09** 01:30:14.1, 38°.12N×20°.46E, h12km, ML3.2/11, Error ellipse: s-maj=1.2km s-min=0.6km az=238.0*

ISC 09 01:30:12.9±0.8, 38°.11N±0°.02×20°.35E±0°.03, h19km±2km, n115, σ1s28/153, mb3.6/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMLN	**Damoulianata-K**	**0.13**	**7**	P	**Pg**	**01 30 17.5**	**+0.5**
DMLN				S	**Sg**	**01 30 20.7**	**+0.8**
DMLN	**Damoulianata-K**	**0.13**	**7**	P	**Pg**	**01 30 17.5**	**+0.5**
DMLN				S	**Sg**	**01 30 20.2**	**+0.3**
	75μm,0.3s						
VLS	**Valsamata**	**0.20**	**70**	P	**Pb**	**01 30 17.3**	**0.0**
VLS				S	**Sg**	**01 30 20.1**	**-1.3**
VLS	**Valsamata**	**0.20**	**70**	P	**Pb**	**01 30 17.3**	**0.0**
VLS				S	**Sg**	**01 30 20.1**	**-1.3**
VLMS	**Volimes, Zakyn**	**0.34**	**133**	P	**Pg**	**01 30 19.7**	**-0.5**
VLMS				S	**Sg**	**01 30 24.3**	**-0.7**
VLMS	**Volimes, Zakyn**	**0.34**	**133**	P	**Pg**	**01 30 19.6**	**-0.5**
VLMS				S	**Sg**	**01 30 24.5**	**-0.5**
FSK	**Fiskardo**	**0.39**	**25**	P	**Pg**	**01 30 20.7**	**-0.3**
FSK				S	**Sg**	**01 30 26.4**	**0.0**
FSK				AML	AML	01 30 30.8	
	comp=E,8798μm,0.2s						
FSK				AML	AML	01 30 32.4	
	comp=N,5747μm,0.4s						
FSK	**Fiskardo**	**0.39**	**25**	P	**Pg**	**01 30 20.7**	**-0.3**
FSK				S	**Sg**	**01 30 26.2**	**-0.3**
	comp=N,3μm,0.3s						
EVGI	**Lefkada island**	**0.56**	**25**	P	**Pb**	**01 30 23.7**	**-0.4**
EVGI				S	**Sb**	**01 30 31.6**	**-0.1**
EVGI	**Lefkada island**	**0.56**	**25**	P	**Pb**	**01 30 23.7**	**-0.4**
EVGI				S	**Sg**	**01 30 32.0**	**+0.2**
NYDR	**Nydri-Lefkada**	**0.66**	**24**	P	**Pb**	**01 30 25.4**	**-0.3**
NYDR	**Nydri-Lefkada**	**0.66**	**24**	P	**Pb**	**01 30 25.4**	**-0.3**
NYDR				S	**Sg**	**01 30 35.2**	**+0.3**
	comp=N,2μm,0.4s						
LKD2	**Lefkada island**	**0.72**	**19**	P	**Pb**	**01 30 26.5**	**-0.3**
LKD2	**Lefkada island**	**0.72**	**19**	P	**Pb**	**01 30 26.6**	**-0.3**
TSLK	**Tsoukalades, L**	**0.75**	**18**	P	**Pb**	**01 30 27.6**	**+0.2**
TSLK				AML	AML	01 30 44.6	
	comp=E,5794μm,0.3s						
TSLK				AML	AML	01 30 47.5	
	comp=N,4124μm,0.4s						
TSLK	**Tsoukalades, L**	**0.75**	**18**	P	**Pb**	**01 30 27.2**	**-0.2**
PDO	**Prodromos**	**0.82**	**53**	P	**Pb**	**01 30 28.0**	**-0.5**
PDO				AML	AML	01 30 45.4	
	comp=N,9840μm,0.4s						
PDO				AML	AML	01 30 46.8	
	comp=E,7171μm,0.5s						
PDO	**Prodromos**	**0.82**	**53**	P	**Pb**	**01 30 27.9**	**-0.5**
PDO				S	**Sg**	**01 30 39.5**	**-0.2**
	comp=E,6μm,0.4s						
RLS	**Riolos of Patr**	**0.88**	**93**	P	**Pb**	**01 30 28.6**	**-0.9**
RLS				AML	AML	01 30 46.1	
	comp=N,1914μm,0.6s						
RLS				AML	AML	01 30 49.5	
	comp=E,1786μm,0.5s						
RLS	**Riolos of Patr**	**0.88**	**93**	P	**Pb**	**01 30 28.5**	**-1.0**
RLS				S	**Sg**	**01 30 41.5**	**-0.2**
	comp=E,925nm,0.5s						
DRO	**Drossia**	**1.08**	**98**	P	**Pb**	**01 30 32.4**	**-0.6**
DRO				AML	AML	01 30 57.1	
	comp=N,3245μm,0.4s						
DRO				AML	AML	01 31 10.7	
	comp=E,2146μm,0.4s						
DRO	**Drossia**	**1.08**	**98**	P	**Pb**	**01 30 32.4**	**-0.6**
DRO				S	**Sn**	**01 30 47.1**	**-0.5**
	comp=E,1μm,0.5s						
AMT	**Artemida-Makis**	**1.22**	**118**	P	**Pb**	**01 30 35.4**	**+0.1**
AMT				AML	AML	01 30 58.0	
	comp=E,3350μm,0.5s						
AMT				AML	AML	01 31 00.1	
	comp=N,2511μm,0.4s						
AMT	**Artemida-Makis**	**1.22**	**118**	P	**Pg**	**01 30 36.2**	**-0.2**
AMT				S	**Sg**	**01 30 54.4**	**+2.0**
	comp=N,2μm,0.6s						
EFP	**Efpalio**	**1.26**	**75**	P	**Pn**	**01 30 35.1**	**-0.4**
EFP				AML	AML	01 30 58.8	
	comp=E,1889μm,0.4s						
EFP				AML	AML	01 31 02.2	
	comp=N,1927μm,0.7s						
EFP	**Efpalio**	**1.26**	**75**	P	**Pn**	**01 30 35.1**	**-0.4**
EFP				S	**Sg**	**01 30 55.8**	**+2.0**
	comp=N,1μm,0.6s						
ANX	**Ano Chora**	**1.32**	**68**	P	**Pn**	**01 30 36.4**	**0.0**
ANX				AML	AML	01 31 00.2	
	comp=N,3459μm,0.6s						
ANX				AML	AML	01 31 01.9	
	comp=E,4005μm,0.7s						
ANX	**Ano Chora**	**1.32**	**68**	P	**Pb**	**01 30 36.8**	**-0.4**
TRIZ	**Trizonia**	**1.38**	**79**	P	**Pn**	**01 30 37.1**	**0.0**
TRIZ	**Trizonia**	**1.38**	**79**	P	**Pn**	**01 30 37.1**	**0.0**
ALIK	**Aliki, Aigiali**	**1.40**	**83**	P	**Pn**	**01 30 36.9**	**-0.4**
EVR	**Evrytania**	**1.40**	**54**	P	**Pb**	**01 30 38.2**	**-0.2**
EVR				AML	AML	01 31 04.0	
	comp=N,969μm,1.0s						
EVR				AML	AML	01 31 10.5	
	comp=E,1062μm,1.5s						
EVR	**Evrytania**	**1.40**	**54**	P	**Pb**	**01 30 38.2**	**-0.2**
EVR				S	**Sg**	**01 30 58.9**	**+0.7**
	comp=E,532nm,1.0s						
KLV	**Kalavryta, Ach**	**1.42**	**92**	P	**Pn**	**01 30 37.9**	**+0.1**
KLV				AML	AML	01 31 03.5	
	comp=N,793μm,0.4s						
KLV				AML	AML	01 31 11.3	
	comp=E,880μm,1.2s						
KLV	**Kalavryta, Ach**	**1.42**	**92**	P	**Pn**	**01 30 38.1**	**+0.4**
KLV				S	**Sb**	**01 30 56.3**	**-0.2**
IGT	**Igoumenitsa**	**1.42**	**359**	*e*Pg	**Pb**	**01 30 39.9**	**+1.1**
IGT				*e*Sg	**Sg**	**01 31 01.9**	**+3.0**
IGT	**Igoumenitsa**	**1.42**	**359**	P	**Pb**	**01 30 39.1**	**+0.4**
IGT				AML	AML	01 31 03.7	
	comp=E,1011μm,0.5s						
IGT				AML	AML	01 31 08.2	
	comp=N,685μm,0.3s						
IGT	**Igoumenitsa**	**1.42**	**359**	P	**Pb**	**01 30 39.3**	**+0.5**
IGT				S	**Sg**	**01 30 58.5**	**-0.4**
	comp=N,425nm,0.4s						
KALE	**Kalithea**	**1.44**	**78**	P	**Pn**	**01 30 38.0**	**+0.1**
KALE				AML	AML	01 31 04.0	
	comp=N,999μm,0.4s						
KALE				AML	AML	01 31 09.7	
	comp=E,965μm,0.8s						
KALE	**Kalithea**	**1.44**	**78**	P	**Pn**	**01 30 38.0**	**+0.1**
ITM	**Ithomi**	**1.56**	**126**	P	**Pb**	**01 30 40.7**	**-0.3**
ITM				AML	AML	01 31 11.7	
	comp=E,736μm,0.5s						
ITM				AML	AML	01 31 13.5	
	comp=N,1018μm,0.7s						
ITM	**Ithomi**	**1.56**	**126**	P	**Pb**	**01 30 40.8**	**-0.3**

GUR	**Goura**	**1.58**	**96**	P	**Pn**	**01 30 40.4**	**+0.4**
GUR				AML	AML	01 31 10.2	
	comp=N,1480μm,0.5s						
GUR				AML	AML	01 31 14.9	
	comp=E,1391μm,0.7s						
GUR	**Goura**	**1.58**	**96**	P	**Pn**	**01 30 40.6**	**+0.6**
GUR				S	**Sg**	**01 31 04.8**	**+0.8**
	comp=E,725nm,0.6s						
JAN	**Janina**	**1.59**	**14**	P	**Pg**	**01 30 42.9**	**-0.7**
JAN				AML	AML	01 31 15.4	
	comp=E,799μm,0.4s						
JAN				AML	AML	01 31 16.6	
	comp=N,819μm,0.5s						
TRIP	**Tripoli**	**1.63**	**110**	P	**Pb**	**01 30 42.4**	**+0.1**
TRIP				AML	AML	01 31 15.6	
	comp=N,697μm,0.7s						
TRIP				AML	AML	01 31 19.8	
	comp=E,737μm,0.7s						
PYL	**PYLOS**	**1.64**	**137**	P	**Pb**	**01 30 41.7**	**-0.8**
KEK	**Kerkira**	**1.66**	**345**	P	**Pb**	**01 30 43.0**	**+0.2**
KEK				AML	AML	01 31 15.4	
	comp=N,572μm,0.5s						
KEK				AML	AML	01 31 19.9	
	comp=E,809μm,0.4s						
VLX	**Vlachokerasia**	**1.77**	**114**	P	**Pb**	**01 30 44.6**	**-0.1**
VLX				AML	AML	01 31 13.9	
	comp=E,1052μm,0.6s						
VLX				AML	AML	01 31 27.5	
	comp=N,1046μm,0.6s						
AGG	**Agios Georgios**	**1.80**	**59**	P	**Pb**	**01 30 45.3**	**0.0**
AGG				AML	AML	01 31 19.8	
	comp=E,826μm,0.7s						
AGG				AML	AML	01 31 24.8	
	comp=N,692μm,0.6s						
THAL	**Thalero**	**1.82**	**92**	P	**Pb**	**01 30 45.2**	**-0.4**
THL	**Klokotos Trika**	**1.95**	**41**	P	**Pb**	**01 30 47.5**	**-0.3**
THL				AML	AML	01 31 22.1	
	comp=N,455μm,0.7s						
THL				AML	AML	01 31 23.0	
	comp=E,534μm,1.1s						
PENT	**Pentalofos**	**2.17**	**16**	P	**Pb**	**01 30 51.5**	**-0.2**
ATAL	**Atalanti**	**2.18**	**74**	P	**Pb**	**01 30 50.1**	**-1.6**
ATAL				AML	AML	01 31 32.6	
	comp=N,357μm,1.1s						
ATAL				AML	AML	01 31 38.6	
	comp=E,190μm,0.5s						
EPID	**Epidavros**	**2.25**	**102**	P	**Pn**	**01 30 50.7**	**+1.7**
VIL2	**Platees**	**2.30**	**87**	P	**Pn**	**01 30 51.6**	**+1.8**
VIL2				AML	AML	01 31 40.1	
	comp=E,496μm,0.6s						
VIL2				AML	AML	01 31 45.2	
	comp=N,242μm,0.4s						
NEO	**Neokhori**	**2.54**	**61**	P	**Pn**	**01 30 55.3**	**+2.1**
PTL	**Penteli**	**2.77**	**90**	P	**Pn**	**01 30 57.6**	**+1.3**
DION	**Dionisos Attik**	**2.83**	**90**	P	**Pn**	**01 30 58.5**	**+1.5**
OHR	**Ohrid**	**3.02**	**6**	*i* Pn	**Pn**	**01 31 03.0**	**+3.3**
STIP	**Stip**	**3.85**	**21**	*i* Pn	**Pn**	**01 31 15.3**	**+4.2**
SRS	**Serrai**	**3.91**	**39**	*e*Pn	**Pn**	**01 31 13.4**	**+1.5**
SRS				*e*Sn	**Sn**	**01 31 58.3**	**+1.0**
DRME	**Dracevica, Mon**	**4.17**	**348**	*e*Pn	**Pn**	**01 31 16.8**	**+1.3**
PDG	**Podgorica**	**4.40**	**349**	*e*Pn	**Pn**	**01 31 19.8**	**+1.2**
PDG				*e*Sn	**Sn**	**01 32 07.7**	**-1.6**
PDG	**Podgorica**	**4.40**	**349**	*e*Pn	**Pn**	**01 31 19.8**	**+1.2**
HCY	**Herceg Novi**	**4.56**	**342**	*e*Pn	**Pn**	**01 31 21.2**	**+0.4**
PRVS	**Prvonek**	**4.59**	**16**	*e*Sn	**Sn**	**01 32 13.5**	**-0.5**
IDI	**Anoyia**	**4.61**	**126**	Pn	**Pn**	**01 31 23.5**	**+2.0**
	comp=N,0.3nm,0.3s,baz=318,slow=16,SNR=1.2						
IDI				Sn	**Sn**	**01 32 12.1**	**-2.4**
	comp=N,1.1nm,0.3s,baz=35,slow=10.0,SNR=3.2						
BOSS	**Bosilegrad**	**4.67**	**20**	*e*Pn	**Pn**	**01 31 23.5**	**+1.1**
BOSS				*e*Sn	**Sn**	**01 32 15.6**	**-0.6**
VAE	**Valguarnera**	**4.75**	**264**	Sn	**Sn**	**01 32 18.5**	**+0.5**
	comp=N,0.5nm,0.3s,baz=7.4,slow=7.2,SNR=1.7						
TREB	**Trebinje**	**4.85**	**342**	*e*Pn	**Pn**	**01 31 25.3**	**+0.5**
TREB				*e*Sn	**Sn**	**01 32 19.6**	**-0.9**
TREB	**Trebinje**	**4.85**	**342**	*e*Pn	**Pn**	**01 31 25.1**	**+0.3**
BRY	**Bratogost**	**4.98**	**344**	*e*Pn	**Pn**	**01 31 26.4**	**-0.4**
SELS	**Selova**	**5.14**	**6**	*e*Sn	**Pn**	**01 31 29.2**	**+0.4**
SELS	**Selova**	**5.14**	**6**	*e*Pn	**Sn**	**01 32 27.4**	**-0.2**
SJES	**Sjenica**	**5.16**	**357**	*e*Pn	**Pn**	**01 31 30.9**	**+1.8**
SJES				*e*Sn	**Sn**	**01 32 26.0**	**-2.1**
STON	**Ston**	**5.17**	**338**	*e*Pn	**Pn**	**01 31 28.6**	**-0.6**
STON	**Ston**	**5.17**	**338**	*e*Pn	**Pn**	**01 31 29.8**	**+0.6**
STON				Sn	**Sn**	**01 32 25.2**	**-3.1**
LSTV	**Lastovo**	**5.35**	**332**	*e*Pn	**Pn**	**01 31 32.7**	**+1.1**
LSTV				Sn	**Sn**	**01 32 29.9**	**-2.9**
ZAPS

Plg25.0000°, Azm179.0000°; P -1.6500, Plg65.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 09 01:35:01.2±0.5, 17°04N±0°10×46°42W±0°08, h10km, n64, σ0.87/46, mb4.2/21, MS3.9/20, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**13.34**	**208**	Pn	**Pn**	**01 38 10.3**	**-0.4**
	0.4nm,0.3s,baz=10,slow=13,SNR=16						
MDP				Sn	Sn	01 40 25.1	-14
	0.1nm,0.3s,baz=78,slow=20,SNR=2.0						
MDP				LR	LR	01 42 21.3	
	comp=Z,293nm,19.8s,baz=56,slow=33						
H05S1	**Guadeloupe/Mar**	**14.12**	**261**	T	T	01 52 36.5	
	SNR=15						
DLPL	**La Plaine**	**14.34**	**265**	Pn	**Pn**	**01 38 22.7**	**-1.7**
CDVI	**St. Croix**	**17.52**	**275**	Pn	**Pn**	**01 39 04.4**	**-1.4**
SJG	**San Juan**	**18.84**	**276**	LR	LR	01 45 07.6	
	comp=Z,505nm,22.0s,baz=94,slow=32						
DR12	**Loma Pena Alta**	**21.91**	**278**	P	**P**	**01 39 55.0**	**+0.2**
SDV	**Santo Domingo**	**24.92**	**254**	P	**P**	**01 40 25.2**	**+0.2**
	2.9nm,0.2s,baz=230,slow=4.3,SNR=3.0						
SDV				LR	LR	01 49 45.1	
	comp=Z,111nm,20.8s,baz=80,slow=36						
SDV	**Santo Domingo**	**24.92**	**254**	P	**P**	**01 40 24.6**	**-0.4**
SDV				IAmb	IAmb	01 40 44.4	
	comp=Z,6.4nm,0.8s						
RCBR	**Riachuelo**	**24.99**	**155**	LR	LR	01 47 35.8	
	comp=Z,347nm,21.0s,baz=334,slow=30						
ROSC	**El Rosal**	**29.90**	**249**	LR	LR	01 55 14.4	
	comp=Z,154nm,18.5s,baz=78,slow=41						
SAML	**Samuel**	**30.68**	**214**	P	**P**	**01 41 16.2**	**-0.1**
SAML				IAmb	IAmb	01 41 24.6	
	comp=Z,15nm,1.9s						
P51A	**Williamsport**	**38.87**	**313**	Sb	**P**	**01 42 26.6**	**-0.2**
	baz=173						
P51A	**Williamsport**	**38.87**	**313**	P	**P**	**01 42 26.5**	**-0.2**
LPAZ	**La Paz**	**39.43**	**214**	P	**P**	**01 42 32.8**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=22,slow=8.2,SNR=12						
LPAZ				LR	LR	01 58 11.7	
	comp=Z,122nm,20.7s,baz=18,slow=35						
LPAZ	**La Paz**	**39.43**	**214**	P	**P**	**01 42 34.0**	**+1.7**
H10N3	**ASCENSION HYDR**	**40.09**	**126**	T	T	02 25 21.4	
	baz=308,slow=75,SNR=174						
H10N2	**ASCENSION HYDR**	**40.10**	**126**	T	T	02 25 30.3	
	baz=308,slow=75,SNR=147						
H10N1	**ASCENSION HYDR**	**40.11**	**126**	T	T	02 25 18.9	
	baz=308,slow=75,SNR=147						
H10S3	**ASCENSION HYDR**	**40.66**	**127**	T	T	02 26 00.3	
	baz=307,slow=74,SNR=40						
H10S2	**ASCENSION HYDR**	**40.68**	**127**	T	T	02 26 21.6	
	baz=273,slow=74,SNR=15						
KOWA	**Kowa**	**40.83**	**87**	P	**P**	**01 42 42.1**	**-1.4**
	comp=Z,1.6nm,0.8s,baz=259,slow=5.2,SNR=2.5						
DBIC	**Dimbokro**	**41.88**	**99**	P	**P**	**01 42 51.0**	**-1.0**
	comp=Z,5.0nm,1.1s,baz=270,slow=12,SNR=2.3						
DBIC				LR	LR	01 57 01.1	
	comp=Z,262nm,20.7s,baz=268,slow=32						
ESDC	**Sonseca Array**	**43.12**	**50**	LR	LR	01 56 34.6	
	comp=Z,159nm,21.9s,baz=270,slow=30						
CCIG	**Comitan**	**43.72**	**276**	P	**P**	**01 43 08.9**	**+1.7**
CCIG				IAmb	IAmb	01 43 12.1	
	comp=Z,11nm,1.0s						
CPUP	**Villa Florida**	**44.40**	**194**	P	**P**	**01 43 13.0**	**+0.9**
	comp=Z,3.5nm,1.0s,baz=18,slow=10,SNR=5.9						
CPUP				LR	LR	02 02 46.4	
	comp=Z,62nm,18.3s,baz=33,slow=38						
LVC	**Limon Verde**	**45.14**	**210**	P	**P**	**01 43 19.2**	**+0.7**
TORD	**Torodi Ar. Bea**	**46.53**	**88**	P	**P**	**01 43 28.4**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=282,slow=6.8,SNR=4.7						
TORD				LR	LR	02 01 03.7	
	comp=Z,310nm,18.8s,baz=285,slow=34						
TORD	**Torodi Ar. Bea**	**46.53**	**88**		**P**	**01 43 28.8**	**-0.6**
ULM	**Lac du Bonnet**	**51.49**	**321**	LR	LR	02 02 54.6	
	comp=Z,116nm,20.5s,baz=122,slow=32						
KEST	**Kesra**	**52.61**	**58**	LR	LR	02 06 31.3	
	comp=Z,125nm,18.1s,baz=232,slow=36						
TXAR	**Lajitas Array**	**53.56**	**294**	P	**P**	**01 44 22.5**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=103,slow=7.8,SNR=5.8						
TXAR				LR	LR	02 08 36.9	
	comp=Z,76nm,18.6s,baz=0.0,slow=38						
DAVOX	**Davos/Dischmat**	**54.81**	**44**	P	**P**	**01 44 32.0**	**+0.3**
	comp=Z,2.7nm,1.0s,baz=316,slow=11,SNR=4.6						
MNTX	**Cornudas Mount**	**55.05**	**297**	P	**P**	**01 44 33.1**	**-0.3**
HPIG		**55.39**	**291**	P	**P**	**01 44 36.2**	**0.0**
PRED	**Cave del Predi**	**57.23**	**45**	P	**P**	**01 44 48.6**	**-0.2**
CLL	**Collm**	**57.85**	**40**	*eP*	**P**	**01 44 54.0**	**+1.0**
PD31	**Pinedale Array**	**58.98**	**310**	P	**P**	**01 45 01.4**	**+0.1**
PD31				IAmb	IAmb	01 45 06.9	
	comp=Z,8.1nm,1.6s						
PDAR	**Pinedale Array**	**58.98**	**310**	P	**P**	**01 44 59.3**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=106,slow=6.7,SNR=3.6						
PDAR				LR	LR	02 07 59.3	
	comp=Z,91nm,21.6s,baz=122,slow=34						
PDAR	**Pinedale Array**	**58.98**	**310**	P	**P**	**01 45 00.0**	**-1.3**
NOA	**NORSAR Array B**	**59.76**	**28**	LR	LR	02 06 26.6	
	comp=Z,37nm,18.7s,baz=270,slow=32						
IMW	**Indian Meadow**	**60.08**	**311**	P	**P**	**01 45 08.7**	**-0.3**
HWUT	**Hardware Ranch**	**60.38**	**308**	P	**P**	**01 45 11.6**	**+0.6**
HWUT				IAmb	IAmb	01 45 17.5	
	comp=Z,4.5nm,0.9s						
U15A	**North Rim**	**60.81**	**303**	P	**P**	**01 45 14.4**	**+0.3**
SPUT	**South Promonto**	**61.03**	**308**	P	**P**	**01 45 15.1**	**-0.3**
BGU	**Big Grassy Mou**	**61.45**	**308**	P	**P**	**01 45 18.4**	**+0.1**
H09W1	**TRISTAN DA CUN**	**62.71**	**150**	T	T	02 53 38.6	
ELK	**Elko**	**63.12**	**307**	P	**P**	**01 45 29.2**	**-0.4**
ELK				IAmb	IAmb	01 45 36.3	
	comp=Z,3.2nm,0.8s						
YKA	**Yellowknife Ar**	**64.97**	**332**	LR	LR	02 10 24.5	
	comp=Z,105nm,21.6s,baz=0.0,slow=33						
NVAR	**Mina Array Bea**	**65.35**	**305**	P	**P**	**01 45 47.3**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=98,slow=6.5,SNR=2.9						
NVAR				LR	LR	02 15 12.4	
	comp=Z,80nm,18.1s,baz=88,slow=37						
OMMB	**Old Mammoth Mi**	**66.14**	**304**	P	**P**	**01 45 49.7**	**+0.2**
OMMB				IAmb	IAmb	01 45 57.1	
	comp=Z,4.7nm,1.2s						
FINES	**FINESS Array B**	**66.82**	**30**	P	**P**	**01 45 53.2**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=245,slow=6.9,SNR=3.2						
FINES				LR	LR	02 10 22.6	
	comp=Z,57nm,19.6s,baz=302,slow=32						
ARCES	**ARCESS Array B**	**67.85**	**21**	LR	LR	02 09 53.0	
	comp=Z,75nm,20.1s,baz=285,slow=31						
AKASG	**Malin Array Be**	**67.94**	**42**	P	**P**	**01 45 58.9**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=263,slow=6.7,SNR=1.5						
AKBB	**Malin Array Si**	**67.94**	**42**	P	**P**	**01 45 59.9**	**-0.3**
BRTR	**Keskin Array B**	**71.78**	**53**	P	**P**	**01 46 24.3**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=259,slow=5.5,SNR=3.7						
KBZ	**Khabaz**	**77.94**	**48**	P	**P**	**01 47 00.8**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=325,slow=11						
KBZ				LR	LR	02 22 08.5	
	comp=Z,24nm,18.0s,baz=103,slow=36						
IL31		**79.12**	**335**	P	**P**	**01 47 06.5**	**+0.8**
ILAR	**Eielson Array**	**79.12**	**335**	P	**P**	**01 47 05.2**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=72,slow=4.9,SNR=20						
IMAR	**Indian Mountai**	**81.42**	**337**	P	**P**	**01 47 18.7**	**+0.6**
BOSA	**Boshof**	**82.78**	**123**	LR	LR	02 17 49.1	
	comp=Z,39nm,18.3s,baz=355,slow=31						
KMBO	**Kilima Mbogo**	**84.28**	**93**	LR	LR	02 23 58.7	
	comp=Z,167nm,19.0s,baz=94,slow=35						
AKTO	**Aktyubinsk**	**85.91**	**38**	P	**P**	**01 47 41.8**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=303,slow=4.2,SNR=4.7						
ABKAR	**Akbulak array**	**87.51**	**39**	P	**P**	**01 47 49.5**	**+0.1**
ASAR	**Alice Springs**	**173.40**	**183**	PKPab	**PKPab**	**01 56 39.8**	**0.0**
	comp=Z,0.3nm,0.9s,baz=158,slow=5.9,SNR=1.7						

*ANF **09** 01:40:37.2±0.2, 35°.95N×82°.49W, h5km, ML2.7/31, Error ellipse: s-maj=2.1km s-min=1.4km az=74.0*
*CERI **09** 01:40:38.0, 35°.93N×82°.51W, h6km*
*SLM **09** 01:40:38.2±1.7, 35°.93N±0°.04×82°.51W±0°.01, h6km±6km, Md2.4/10, Error ellipse: s-maj=5.7km s-min=0.9km az=169.0*
*NEIC **09** 01:40:38.2±1.6, 35°.90N±0°.03×82°.51W±0°.02, h7km±6km, Error ellipse: s-maj=5.3km s-min=1.0km az=155.0*

ISC 09 01:40:37.5±1.2, 35°.93N±0°.02×82°.51W±0°.02, h1km±10km, n77, σ0.94/95, North Carolina

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
V53A	**Saluda**	**0.35**	**224**	Pg	**Pg**	**01 40 44.7**	**+0.5**
V53A				Sg	**Sg**	**01 40 49.1**	**+0.2**
V54A	**Nebo**	**0.48**	**108**	P	**Pg**	**01 40 47.3**	**+0.6**
	baz=289,SNR=49						
U54A	**Nelsons Funny**	**0.82**	**43**	P	**Pg**	**01 40 52.9**	**-0.3**
	baz=224,SNR=17						
U54A	**Nelsons Funny**	**0.82**	**43**	Pg	**Pg**	**01 40 53.3**	**+0.1**
W54A	**Cherokee Point**	**0.88**	**162**	P	**Pg**	**01 40 54.5**	**+0.1**
	baz=343,SNR=32						
V52A	**Sevierville**	**0.88**	**265**	Pg	**Pg**	**01 40 54.5**	**0.0**
BG3	**Lake Jocassee**	**0.99**	**200**	Pg	**Pg**	**01 40 56.6**	**+0.1**
TZTN	**Tazewell**	**1.04**	**307**	P	**Pg**	**01 40 57.2**	**-0.3**
	baz=126						
TZTN	**Tazewell**	**1.04**	**307**	Pg	**Pg**	**01 40 57.3**	**-0.2**
T53A	**Wise**	**1.06**	**359**	P	**Pg**	**01 40 57.2**	**-0.5**
	baz=179,SNR=12						
T53A				S	**Sg**	**01 41 11.4**	**-0.1**
	baz=179						
V55A	**Taylorsville**	**1.06**	**94**	P	**Pg**	**01 40 57.5**	**-0.2**
	baz=275,SNR=21						
V55A	**Taylorsville**	**1.06**	**94**	Pg	**Pg**	**01 40 57.5**	**-0.2**
TKL	**Tuscaleechee C**	**1.06**	**256**	Pg	**Pg**	**01 40 57.8**	**-0.1**
KMSC	**Kings Mountain**	**1.24**	**129**	P	**Pb**	**01 41 00.9**	**-0.8**
	baz=310						
KMSC				S	**Sb**	**01 41 17.7**	**-0.5**
	baz=310						
KMSC	**Kings Mountain**	**1.24**	**129**		**Pb**	**01 41 00.9**	**-0.8**
PAULI	**Pauline**	**1.24**	**152**		**Pb**	**01 41 01.3**	**-0.4**
T54A	**Tazewell**	**1.36**	**33**	P	**Pn**	**01 41 02.5**	**-1.2**
	baz=214,SNR=20						
T54A				S	**Sb**	**01 41 21.1**	**-0.7**
	baz=214						
X54A	**Belton**	**1.38**	**175**	P	**Pn**	**01 41 03.3**	**-0.6**
	baz=355,SNR=14						
X54A				S	**Sg**	**01 41 21.5**	**-0.3**
	baz=355						
W52A	**Murphy**	**1.42**	**235**	Pn	**Pn**	**01 41 03.7**	**-0.8**
V51A	**Loudon**	**1.50**	**266**	Pn	**Pn**	**01 41 05.0**	**-0.5**
V51A					**Sn**	**01 41 25.1**	**-0.7**
X55A	**Gracelyn & Ava**	**1.62**	**153**	Pb	**Pb**	**01 41 07.6**	**-0.5**
	baz=334,SNR=47						
V56A	**Mocksville**	**1.64**	**93**	Pb	**Pb**	**01 41 08.1**	**-0.5**
	baz=275,SNR=20						
V56A				Sb	**Sb**	**01 41 29.6**	**-0.2**
	baz=275						
HODGE	**Hodges**	**1.70**	**173**	Pn	**Pb**	**01 41 08.9**	**-0.7**
CPCT	**Cooper Cave**	**1.70**	**254**	Pn	**Pn**	**01 41 08.3**	**-0.1**
W56A	**Indian Trail**	**1.76**	**116**	Pb	**Pn**	**01 41 09.3**	**+0.2**
	baz=298,SNR=14						
W56A				S	**Sn**	**01 41 31.7**	**-0.5**
	baz=298						
U56A	**King**	**1.77**	**76**	Pb	**Pn**	**01 41 09.9**	**+0.6**
	baz=257,SNR=12						
U56A				Sb	**Sb**	**01 41 33.8**	**+0.1**
	baz=257						
U56A	**King**	**1.77**	**76**	Pn	**Pn**	**01 41 09.5**	**+0.1**
S53A	**Williamson**	**1.78**	**10**	Pg	**Pb**	**01 41 11.2**	**+0.2**
	baz=190						
S53A				Sb	**Sn**	**01 41 33.4**	**+0.7**
	baz=190						
T55A	**Pulaski**	**1.83**	**49**	Pb	**Pn**	**01 41 10.2**	**0.0**
	baz=230,SNR=17						
T55A				Sb	**Sb**	**01 41 35.4**	**+0.1**
	baz=230						
X56A	**White Oak**	**1.87**	**139**	Pb	**Pb**	**01 41 12.1**	**-0.5**
	baz=320						
S51A	**Beattyville**	**1.92**	**333**	Pn	**Pn**	**01 41 11.9**	**+0.6**
JSC	**Jenkinsville**	**1.93**	**148**		**Pn**	**01 41 12.2**	**+0.7**
S54A	**Dingess, Beckl**	**2.10**	**27**	Pb	**Pn**	**01 41 15.6**	**+1.7**
	baz=208						
S54A				Sb	**Sb**	**01 41 43.4**	**+0.2**
	baz=208						
BIRD	**Birdtown, Kers**	**2.11**	**127**		**Pn**	**01 41 14.4**	**+0.5**
BLA	**Blacksburg**	**2.12**	**52**	Pb	**Pn**	**01 41 15.5**	**+1.4**
	baz=233						
BLA				Sb	**Sb**	**01 41 43.5**	**0.0**
	baz=233						
BLA	**Blacksburg**	**2.12**	**52**	Pn	**Pn**	**01 41 15.1**	**+0.9**
T50A	**Nancy**	**2.17**	**301**	Pn	**Pn**	**01 41 15.3**	**+0.5**
W57A	**Gilead**	**2.19**	**110**	Pb	**Pb**	**01 41 17.3**	**-0.7**
	baz=292						
W57A				Sb	**Sb**	**01 41 45.6**	**-0.1**
	baz=292						
W57A	**Gilead**	**2.19**	**110**		**Pb**	**01 41 16.6**	**-1.4**
V57A	**Coltrane Farms**	**2.22**	**90**	Pb	**Pb**	**01 41 17.6**	**-0.9**
	baz=272,SNR=8.7						
V57A				Sb	**Sb**	**01 41 46.3**	**-0.2**
	baz=272						
T56A	**Rocky Mt**	**2.28**	**60**	Pb	**Pb**	**01 41 18.2**	**-1.3**
	baz=242						
T56A				Sb	**Sb**	**01 41 48.7**	**+0.5**
	baz=242						
Y56A	**Pelion**	**2.35**	**155**	S	**Sn**	**01 41 46.8**	**+0.2**
	baz=336						
R53A	**Hurricane**	**2.44**	**10**	Pb	**Pb**	**01 41 22.1**	**-0.2**
	baz=191						
R53A				S	**Sn**	**01 41 49.8**	**+0.7**
	baz=191						
S55A	**Lewisburg**	**2.45**	**41**	Pb	**Pn**	**01 41 19.6**	**+0.9**
	baz=222,SNR=8.2						
U57A	**Blanch**	**2.62**	**78**	Sb	**Sb**	**01 41 58.0**	**+0.1**
	baz=260						
GOGA	**Godfrey**	**2.63**	**198**	Pb	**Pb**	**01 41 24.8**	**-0.6**
	baz=17						
U49A	**Red Boiling Sp**	**2.71**	**283**	Pn	**Pn**	**01 41 22.5**	**+0.3**
V58A	**Windy Hill, Pi**	**2.76**	**92**	Pn	**Pn**	**01 41 24.1**	**+1.2**
W58A	**Raeford**	**2.82**	**108**	Sb	**Sb**	**01 42 05.1**	**+1.4**
	baz=290						
T57A	**Hurt**	**2.84**	**67**	Pn	**Pn**	**01 41 24.1**	**+0.2**
S56A	**Natural Bridge**	**2.94**	**53**	Sb	**Sb**	**01 42 07.8**	**+0.6**
	baz=234						
Z57A	**Bowman**	**3.02**	**150**	S	**Sn**	**01 42 02.2**	**-1.0**
	baz=331						
Q53A	**Leroy**	**3.03**	**15**	Sn	**Sn**	**01 42 03.1**	**-0.5**
	baz=195						
Q53A				Sb	**Sb**	**01 42 11.1**	**+1.3**
	baz=195						
R55A	**Marlinton**	**3.03**	**38**	P	**Pn**	**01 41 27.5**	**+0.8**
	baz=220,SNR=12						
R55A	**Marlinton**	**3.03**	**38**	Pn	**Pn**	**01 41 27.4**	**+0.6**
Q52A	**Bidwell**	**3.04**	**4**	Sb	**Sb**	**01 42 10.4**	**+0.4**
	baz=184						
Y58A	**Scranton**	**3.09**	**130**	S	**Sn**	**01 42 04.1**	**-0.8**
	baz=312						
Q51A	**Peebles**	**3.17**	**348**	Pn	**Pn**	**01 41 27.8**	**-0.7**
U58A	**Oxford**	**3.24**	**81**	Sb	**Sb**	**01 42 16.3**	**+0.5**
	baz=263						
T58A	**Grand View Acr**	**3.37**	**71**	Sb	**Sb**	**01 42 19.3**	**-0.1**
	baz=254						
S57A	**Dark Hollow, R**	**3.39**	**56**	Sb	**Sb**	**01 42 20.9**	**+0.7**
	baz=238						
S57A	**Dark Hollow, R**	**3.39**	**56**	Pn	**Pn**	**01 41 31.3**	**-0.3**
Z51A	**Franklin**	**3.40**	**221**	Pn	**Pn**	**01 41 32.1**	**+0.4**
Q55A	**Buckhannon**	**3.62**	**32**	S	**Sn**	**01 42 17.8**	**-0.4**
	baz=213						
P53A	**Whipple**	**3.67**	**14**	S	**Sn**	**01 42 17.9**	**-1.3**
	baz=194						
P52A	**Corning**	**3.71**	**5**	S	**Sn**	**01 42 19.6**	**-0.8**
	baz=185						
P52A	**Corning**	**3.71**	**5**	Pn	**Pn**	**01 41 36.2**	**+0.2**
Z59A	**Georgetown, SC**	**3.78**	**134**	Sb	**Sb**	**01 42 34.3**	**+3.0**
	baz=316						
WCI	**Wyandotte Cave**	**3.80**	**308**	Sb	**Sb**	**01 42 34.0**	**+2.1**
	baz=126						
U59A	**Littleton**	**3.84**	**82**	Sb	**Sb**	**01 42 35.3**	**+2.1**
	baz=265						
U59A	**Littleton**	**3.84**	**82**	Pn	**Pn**	**01 41 38.9**	**+1.1**
S58A	**Poland Farm, P**	**3.96**	**63**	Sb	**Sb**	**01 42 38.0**	**+1.6**
	baz=246						
S58A	**Poland Farm, P**	**3.96**	**63**	Pn	**Pn**	**01 41 39.1**	**-0.2**
P54A	**Burton**	**4.01**	**23**	S	**Sn**	**01 42 26.0**	**-1.7**
	baz=204						
P55A	**Reedsville**	**4.16**	**30**	S	**Sn**	**01 42 30.3**	**-1.2**
	baz=212						
S59A	**Mechanicsville**	**4.57**	**65**	Sb	**Sb**	**01 42 55.9**	**+1.9**
	baz=248						
Q58A	**Fox Den Farm,**	**4.88**	**50**	Sb	**Sb**	**01 43 06.9**	**+3.8**
	baz=233						

WEL 09 01:42:16.0, 38°.5S±0°.7×177°.6E±1°.0, h55km±1km, M3.4/36, ML3.7/36, MLv3.4/36, Error ellipse: s-maj=0.0km s-min=0.0km az=91.1, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAGZ	**Rawiri**	**0.18**	**284**	P	Pn	01 42 24.8	-0.1
RAGZ				S	Sn	01 42 31.4	+0.1
RIGZ	**Rimuhau**	**0.19**	**149**	P	Pn	01 42 25.2	+0.3
RIGZ				S	Sn	01 42 32.1	+0.7
TKGZ	**Te Karaka**	**0.20**	**59**	P	Pn	01 42 25.2	+0.3
TKGZ				S	Sn	01 42 32.3	+1.0
MWZ	**Matawai**	**0.22**	**338**	P	Pn	01 42 24.9	-0.3
MWZ				S	Sn	01 42 31.3	-0.4
SNGZ	**Shannon Statio**	**0.33**	**223**	P	Pn	01 42 26.2	+0.3
SNGZ				S	Sn	01 42 33.7	+0.5
PRGZ	**Paritu Road**	**0.43**	**153**	P	Pn	01 42 27.0	+0.1
CNGZ	**Carnagh Statio**	**0.45**	**83**	P	Pn	01 42 28.1	+1.0
CNGZ				S	Sn	01 42 38.0	+2.9
TWGZ	**Tauwhareparae**	**0.45**	**37**	P	Pn	01 42 27.7	+0.6
TWGZ				S	Sn	01 42 36.8	+1.6
KNZ	**Kokohu**	**0.48**	**176**	P	Pn	01 42 27.6	+0.2
URZ	**Urewera**	**0.50**	**304**	P	Pn	01 42 27.8	+0.2
URZ				S	Sn	01 42 36.6	+0.7
RTZ	**Ruatahuna**	**0.52**	**261**	P	Pn	01 42 28.1	+0.2
RTZ				S	Sn	01 42 37.2	+0.7
RAHZ	**Arahi**	**0.57**	**229**	P	Pn	01 42 28.9	+0.5
RAHZ				S	Sn	01 42 38.6	+1.2
RUGZ	**Raukumara Rang**	**0.57**	**3**	P	Pn	01 42 28.7	+0.1
RUGZ				S	Sn	01 42 37.9	+0.2
WHHZ	**Waihua**	**0.62**	**210**	P	Pn	01 42 29.7	+0.7
WHHZ				S	Sn	01 42 40.5	+1.9
MHGZ	**Mahia Peninsul**	**0.65**	**161**	P	Pn	01 42 29.9	+0.5
PUZ	**Puketiti**	**0.68**	**47**	P	Pn	01 42 30.1	+0.4
MUGZ	**Murupara**	**0.68**	**275**	P	Pn	01 42 29.8	0.0
MTHZ	**Maungataniwha**	**0.69**	**243**	P	Pn	01 42 30.5	+0.5
PKGZ	**Pakihiroa**	**0.74**	**28**	P	Pn	01 42 31.1	+0.6
HAZ	**Te Kaha**	**0.79**	**9**	P	Pn	01 42 31.7	+0.6
EDRZ	**Edgecumbe**	**0.83**	**301**	P	Pn	01 42 31.8	+0.1
NMHZ	**Naumai**	**0.85**	**229**	P	Pn	01 42 32.8	+0.8
WHRZ	**Whale Island**	**0.86**	**323**	P	Pn	01 42 32.2	+0.1
ARHZ	**Arohipaonui**	**0.88**	**214**	P	Pn	01 42 33.1	+0.8
RRRZ	**Republican Roa**	**0.90**	**282**	P	Pn	01 42 32.9	+0.3
MARZ	**Manawahe**	**0.94**	**306**	P	Pn	01 42 33.1	+0.1
TARZ	**Mount Tarawera**	**0.94**	**289**	P	Pn	01 42 33.6	+0.4
WMGZ	**Waiomatatini S**	**0.95**	**41**	P	Pn	01 42 33.7	+0.5
PRRZ	**Plateau Road**	**0.97**	**272**	P	Pn	01 42 33.6	+0.1
MRHZ	**Matea Rd**	**1.00**	**252**	P	Pn	01 42 34.2	+0.3
MKRZ	**Makatiti**	**1.00**	**293**	P	Pn	01 42 35.4	+1.4
ALRZ	**Allen Road**	**1.01**	**268**	P	Pn	01 42 34.2	+0.1
HLRZ	**Highlands Stat**	**1.05**	**285**	P	Pn	01 42 35.9	+1.4
HRRZ	**Handcock Road**	**1.07**	**278**	P	Pn	01 42 35.5	+0.7
WIZ	**White Island**	**1.07**	**341**	P	Pn	01 42 35.1	+0.3
OMRZ	**Omania**	**1.08**	**293**	P	Pn	01 42 35.2	+0.2
BKZ	**Black Stump Fm**	**1.09**	**235**	P	Pn	01 42 35.7	+0.6
OPRZ	**Ohinepanea**	**1.10**	**309**	P	Pn	01 42 34.7	-0.4
MXZ	**Matakaoa Point**	**1.11**	**29**	P	Pn	01 42 36.0	+0.6
HSRZ	**Hossack Road**	**1.11**	**281**	P	Pn	01 42 35.7	+0.3
MCHZ	**McNeill Hill**	**1.16**	**219**	P	Pn	01 42 36.6	+0.5
CKHZ	**Cape Kidnapper**	**1.20**	**201**	P	Pn	01 42 36.4	-0.1
KARZ	**Kaharoa**	**1.21**	**295**	P	Pn	01 42 36.3	-0.4
GRRZ	**Galatos Road**	**1.21**	**279**	P	Pn	01 42 37.2	+0.5
NGRZ	**Ngongotaha**	**1.22**	**291**	P	Pn	01 42 37.5	+0.6
HATZ	**Hinemaiaia**	**1.26**	**253**	P	Pn	01 42 37.3	0.0
KWHZ	**Kaweka Forest**	**1.29**	**227**	P	Pn	01 42 38.0	+0.2
TGRZ	**Tauranga**	**1.35**	**306**	P	Pn	01 42 38.6	0.0
KAHZ	**Kahuranaki**	**1.39**	**205**	P	Pn	01 42 38.9	-0.1
KUTZ	**Kaahu Road**	**1.42**	**271**	P	Pn	01 42 39.7	+0.2
RITZ	**Rihia Road**	**1.46**	**252**	P	Pn	01 42 40.4	+0.4
KRHZ	**Kereru**	**1.48**	**221**	P	Pn	01 42 39.9	-0.4
RATZ	**Rangitukua**	**1.49**	**257**	P	Pn	01 42 40.9	+0.3
WATZ	**Wairara**	**1.50**	**263**	P	Pn	01 42 40.8	+0.3
BHHZ	**Black Hill Sta**	**1.55**	**232**	P	Pn	01 42 41.5	+0.2
KATZ	**Kakaramea**	**1.58**	**253**	P	Pn	01 42 42.1	+0.3
PXZ	**Pawanui**	**1.60**	**202**	P	Pn	01 42 40.9	-1.1
TMZ	**Te Maari**	**1.61**	**248**	P	Pn	01 42 42.3	0.0
ETVZ	**East Tongariro**	**1.62**	**248**	P	Pn	01 42 42.3	0.0
KRVZ	**Karewarewa**	**1.65**	**250**	P	Pn	01 42 42.8	+0.1
OTVZ	**Oturere**	**1.66**	**247**	P	Pn	01 42 43.0	+0.1
MYRZ	**Mayor Island**	**1.67**	**318**	P	Pn	01 42 42.4	-0.5
WTVZ	**West Tongariro**	**1.70**	**250**	P	Pn	01 42 43.5	+0.1
MOVZ	**Moawhango**	**1.70**	**239**	P	Pn	01 42 43.3	-0.1
TUVZ	**Tukino**	**1.71**	**244**	P	Pn	01 42

comp=Z,3.8nm,1.8s
ASAR Alice Springs 48.94 253 P **P** **02 41 41.6 +0.1**
comp=Z,2.7nm,0.5s,baz=88,slow=8.3,SNR=44
ASAR PcP **PcP** **02 43 06.6 +1.1**
comp=Z,0.4nm,0.7s,baz=97,slow=3.1,SNR=2.2
ASAR Alice Springs 48.94 253 P **P** **02 41 41.0 -0.6**
BATI Baumata 60.68 268 LR LR 03 07 07.2
comp=Z,84nm,19.4s,baz=319,slow=34
NVAR Mina Array Bea 76.14 42 P **P** **02 44 44.2 +1.1**
comp=Z,0.4nm,0.7s,baz=234,slow=7.7,SNR=3.8
PDAR Pinedale Array 84.08 42 P **P** **02 45 26.4 +0.5**
comp=Z,0.3nm,0.6s,baz=203,slow=5.7,SNR=2.3
H03S2 Juan Fernandez 84.71 124 T T 04 18 27.2
baz=250,slow=75,SNR=4.8
H03S1 Juan Fernandez 84.72 124 T T 04 18 14.3
baz=250,slow=75,SNR=5.1
H03S3 Juan Fernandez 84.73 124 T T 04 18 19.1
baz=250,slow=75,SNR=4.5
CLL Collm 145.58 352 *e*PKPbc **PKPdf** **02 52 32.0 -0.8**
GERES GERESS Array B 147.88 350 PKPbc **PKiKP** **02 52 42.2 +0.4**
comp=Z,0.4nm,0.7s,baz=38,slow=1.7,SNR=4.3

*NORS **09** 02:45:51.8±0.0, 42°.46N×42°.64E, h13km, MPVA3.3*
*TIF **09** 02:45:51.7, 42°.47N×42°.65E, h20km*
*MOS **09** 02:45:52.1±0.0, 42°.46N×42°.66E, h12km, MPVA3.3*
*DDA **09** 02:45:52.4, 42°.33N×42°.67E, h7km±2km, ML2.3*
ISC 09 02:45:51.8±1.1, 42°.45N±0°.02×42°.64E±0°.02, h10km±9km, n33, σ0s51/66, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKB	**Tkibuli**	**0.28**	**111**	P	**Pb**	**02 45 58.6**	**-0.2**
TKB				S	**Sb**	**02 46 03.0**	**-0.6**
TKB	**Tkibuli**	**0.28**	**111**	*e*Pg	**Pb**	**02 45 58.6**	**-0.2**
TKB				*e*Sg	**Sb**	**02 46 03.0**	**-0.6**
CHVG	**Ch'k'valeri**	**0.49**	**303**	P	**Pg**	**02 46 02.0**	**+0.5**
CHVG				S	**Sb**	**02 46 09.6**	**-0.2**
CHVG	**Ch'k'valeri**	**0.49**	**303**	*e*Pg	**Pg**	**02 46 02.0**	**+0.5**
CHVG				*e*Sg	**Sb**	**02 46 09.6**	**-0.2**
ONI	**Oni**	**0.61**	**76**	P	**Pg**	**02 46 04.0**	**+0.3**
ONI				S	**Sb**	**02 46 12.7**	**-0.6**
ONI	**Oni**	**0.61**	**76**	*e*Pg	**Pg**	**02 46 04.0**	**+0.3**
ONI				*e*Sg	**Sb**	**02 46 12.7**	**-0.6**
DIGR	**Digorskoe uzhe**	**0.82**	**57**	*e*Pg	**Pg**	**02 46 07.1**	**-0.6**
DIGR				*e*Sg	**Sg**	**02 46 18.2**	**-0.3**
BKRG	**Bakuriani**	**0.95**	**136**	P	**Pg**	**02 46 10.1**	**+0.1**
BKRG				S	**Sb**	**02 46 23.7**	**+0.6**
BKRG	**Bakuriani**	**0.95**	**136**	*e*Pg	**Pg**	**02 46 10.1**	**+0.1**
BKRG				*e*Sg	**Sb**	**02 46 23.7**	**+0.6**
ZEI	**Tsey**	**0.99**	**70**	*i* Pg	**Pg**	**02 46 10.8**	**0.0**
ZEI				*e*Sg	**Sb**	**02 46 24.2**	**0.0**
LSNR	**Lesken**	**1.20**	**46**	*e*Pg	**Pg**	**02 46 14.9**	**0.0**
LSNR				*e*Sg	**Sn**	**02 46 31.1**	**+0.1**
AKH	**Akhalkalaki**	**1.22**	**148**	P	**Pb**	**02 46 15.1**	**+0.2**
AKH				S	**Sn**	**02 46 31.8**	**+0.3**
KORR	**Kora**	**1.23**	**58**	*e*Pg	**Pg**	**02 46 15.3**	**-0.1**
KORR				*e*Sg	**Sn**	**02 46 32.9**	**+1.3**
KBZ	**Khabaz**	**1.29**	**8**	*e*Pg	**Pb**	**02 46 16.4**	**+0.3**
KBZ				*e*Sg	**Sn**	**02 46 33.1**	**0.0**
DBOC	**Borcka**	**1.32**	**214**	*i* P	**Pn**	**02 46 15.7**	**-0.6**
DBOC				*i* S	**Sb**	**02 46 32.7**	**-1.0**
DBOC				IAML		02 46 35.0	
	comp=E,76nm,0.4s						
GUDG	**Gudauri**	**1.36**	**89**	P	**Pb**	**02 46 17.4**	**+0.1**
GUDG				S	**Sg**	**02 46 35.3**	**-0.2**
GUDG	**Gudauri**	**1.36**	**89**	*e*Pg	**Pb**	**02 46 17.4**	**+0.1**
GUDG				*e*Sg	**Sg**	**02 46 35.3**	**-0.2**
BGD	**Bogdanovka**	**1.38**	**149**	P	**Pn**	**02 46 17.4**	**+0.2**
BGD				S	**Sg**	**02 46 36.6**	**+0.4**
BGD	**Bogdanovka**	**1.38**	**149**	*e*Pg	**Pn**	**02 46 17.4**	**+0.2**
BGD				*e*Sg	**Sg**	**02 46 36.6**	**+0.4**
TRLG	**Trialeti**	**1.42**	**129**	P	**Pb**	**02 46 18.7**	**+0.4**
TRLG				S	**Sg**	**02 46 37.5**	**+0.1**
TRLG	**Trialeti**	**1.42**	**129**	*e*Pg	**Pb**	**02 46 18.7**	**+0.4**
TRLG				*e*Sg	**Sg**	**02 46 37.5**	**+0.1**
PNSH	**Pansheti**	**1.47**	**82**	P	**Pn**	**02 46 18.2**	**-0.2**
PNSH				S	**Sg**	**02 46 38.7**	**-0.4**
PNSH	**Pansheti**	**1.47**	**82**	*e*Pg	**Pn**	**02 46 18.2**	**-0.2**
PNSH				*e*Sg	**Sg**	**02 46 38.7**	**-0.4**
DAGI	**Agillar**	**1.48**	**202**	*i* P	**Pn**	**02 46 18.9**	**+0.4**
DAGI				*i* S	**Sb**	**02 46 38.5**	**+0.3**
KIV0	**Kislovodsk Arr**	**1.51**	**1**	*e*Pg	**Pb**	**02 46 20.1**	**+0.3**
KIV0				*e*Sg	**Sg**	**02 46 40.5**	**+0.3**
BEYR	**Belyy Ugol+**	**1.57**	**5**	*e*Pg	**Pb**	**02 46 20.3**	**-0.5**
BEYR				*e*Sg	**Sg**	**02 46 41.8**	**-0.4**
DMNI	**Dmanisi**	**1.61**	**134**	P	**Pb**	**02 46 21.4**	**-0.2**
DMNI				S	**Sb**	**02 46 42.3**	**+0.3**
DMNI	**Dmanisi**	**1.61**	**134**	*e*Pg	**Pb**	**02 46 21.4**	**-0.2**
DMNI				*e*Sg	**Sb**	**02 46 42.3**	**+0.3**
DDEM	**Demirkent**	**1.69**	**204**	*i* P	**Pb**	**02 46 22.6**	**-0.5**
DDEM				*i* S	**Sn**	**02 46 42.0**	**-1.2**
DDEM				IAML		02 46 48.0	
	comp=N,66nm,0.2s						
DDEM				IAML		02 46 53.0	
	comp=E,31nm,0.4s						
SEAG	**Tbilisi Sea**	**1.75**	**112**	P	**Pn**	**02 46 22.9**	**+0.7**
SEAG				S	**Sg**	**02 46 46.9**	**-1.0**
SEAG	**Tbilisi Sea**	**1.75**	**112**	*e*Pg	**Pn**	**02 46 22.9**	**+0.7**
SEAG				*e*Sg	**Sg**	**02 46 46.9**	**-1.0**
BTNK	**Botanikuri**	**1.78**	**115**	P	**Pb**	**02 46 23.7**	**-0.8**
BTNK				S	**Sb**	**02 46 47.5**	**+0.8**
BTNK	**Botanikuri**	**1.78**	**115**	*e*Pg	**Pb**	**02 46 23.7**	**-0.8**
BTNK				*e*Sg	**Sb**	**02 46 47.5**	**+0.8**

WEL 09 03:38:11.8, 43°S±1°×17°3E±°, h5km±2km, M2.0/7, ML2.1/6, MLv2.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=81.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.25**	**202**	P	Pb	03 38 18.6	-0.2
AMCZ	**Amberley**	**0.31**	**342**	P	Pb	03 38 20.6	+0.8
OKCZ	**Okains Bay**	**0.32**	**142**	P	Pb	03 38 19.8	-0.3
RACZ	**Rakaia**	**0.53**	**241**	P	Pb	03 38 24.8	+1.2
GVZ	**Greta Valley S**	**0.54**	**20**	P	Pb	03 38 24.2	+0.5
OXZ	**Oxford**	**0.56**	**285**	P	Pb	03 38 25.0	+0.9
LTZ	**Lake Taylor**	**0.79**	**331**	P	Pn	03 38 29.2	-0.3
WACZ	**Wakanui South**	**0.83**	**235**	P	Pn	03 38 30.3	+0.2
MHCZ	**Mount Hutt**	**0.89**	**266**	P	Pn	03 38 31.4	+0.4
KHZ	**Kahutara**	**1.19**	**29**	P	Pg	03 38 34.7	+0.1
INZ	**Inchbonnie**	**1.23**	**307**	P	Pn	03 38 37.3	+1.7
ARCZ	**Arundel**	**1.26**	**247**	P	Pn	03 38 38.3	+2.3
RPZ	**Rata Peaks**	**1.28**	**259**	P	Pb	03 38 38.4	+2.1
ODZ	**Otahua Downs**	**2.20**	**224**	P	Pg	03 38 55.4	+1.5
MTHZ	**Maungataniwha**	**5.54**	**35**	P	Pn	03 39 33.2	-1.7

*KRSC **09** 03:43:04.7±1.6, 61°.16N×168°.01E, h15km±16km, ML4.3*
*IDC **09** 03:43:05.2±1.0, 61°.16N×167°.26E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.7/33, mbtmp3.7/10, Error ellipse: s-maj=30.9km s-min=22.1km az=171.0*
*NEIC **09** 03:43:06.9±2.2, 61°.1N±0°.2×167°.5E±0°.2, h10km±2km, mb4.0/5, Error ellipse: s-maj=39.1km s-min=17.9km az=184.0*
ISC 09 03:43:06.9±0.7, 61°.18N±0°.05×167°.33E±0°.08, h10km, n23, σ0s93/25, mb3.9/10, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TILK	**Tilichiki**	**0.94**	**219**	*e*P	**Pn**	**03 43 26.0**	**-0.1**
TILK				*e*S	**Sn**	**03 43 40.8**	**+1.2**
KMSK	**Kamenskaya**	**1.40**	**338**	*e*P	**Pn**	**03 43 32.8**	**+0.5**
KMSK				*e*S	**Sg**	**03 43 52.1**	**+0.4**
OSSR	**Ossora**	**2.88**	**230**	*e*P	**Pb**	**03 43 56.3**	**-2.0**
OSSR				*e*S	**Sb**	**03 44 34.0**	**+0.5**
KBTR	**Krutoberegovo**	**5.52**	**207**	*e*P	**Pn**	**03 44 30.7**	**+1.8**
SRKR	**Sorokina**	**5.55**	**218**	*e*P	Pn	03 44 35.7	+6.2
MA2	**Magadan**	**8.36**	**266**	Pn	**Pn**	**03 45 09.0**	**+1.1**
RSO	**Redoubt South**	**19.27**	**74**	P	**P**	**03 47 30.7**	**-0.7**
TOLK	**Toolik Lake Re**	**19.34**	**49**	P	**P**	**03 47 31.8**	**-0.2**
TOLK				IAmb	IAmb	03 47 40.8	
	comp=Z,7.1nm,1.2s						
IL31		**20.74**	**60**	P	**P**	**03 47 48.5**	**+1.3**
ILAR	**Eielson Array**	**20.74**	**60**	P	**P**	**03 47 47.8**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=274,slow=11,SNR=20						
BMAR	**Burnt Mountain**	**21.26**	**52**	P	**P**	**03 47 54.6**	**+1.7**
INK	**Inuvik**	**25.25**	**48**	P	**P**	**03 48 33.6**	**+1.1**
	comp=Z,4.9nm,0.9s,baz=288,slow=11,SNR=3.5						
INK	**Inuvik**	**25.25**	**48**	P	**P**	**03 48 33.2**	**+0.7**
INK				IAmb	IAmb	03 48 39.3	
	comp=Z,8.9nm,1.1s						
KURK	**Kurchatov**	**46.98**	**300**	P	**P**	**03 51 37.0**	**-0.5**
MKAR	**Makanchi Array**	**48.36**	**294**	P	**P**	**03 51 48.0**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=46,slow=6.8,SNR=4.4						
NVAR	**Mina Array Bea**	**49.91**	**81**	P	**P**	**03 52 00.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=316,slow=7.7,SNR=5.2						
PDAR	**Pinedale Array**	**50.61**	**71**	P	**P**	**03 52 05.4**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=322,slow=3.8,SNR=2.6						
FINES	**FINESS Array B**	**54.15**	**338**	P	**P**	**03 52 31.2**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=26,slow=6.7,SNR=3.7						
ABKAR	**Akbulak array**	**55.53**	**311**	P	**P**	**03 52 42.0**	**+0.4**
ABKAR				IAmb	IAmb	03 53 10.2	
	comp=Z,2.0nm,1.2s						
NOA	**NORSAR Array B**	**56.73**	**346**	P	**P**	**03 52 49.9**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=14,slow=7.3,SNR=1.8						
AKASG	**Malin Array Be**	**63.53**	**332**	P	**P**	**03 53 36.7**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=18,slow=5.2,SNR=2.1						
WRA	**Warramunga Arr**	**85.08**	**211**	P	**P**	**03 55 42.1**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=19,slow=5.6,SNR=3.6						
ASAR	**Alice Springs**	**88.76**	**210**	P	**P**	**03 56 00.8**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=10,slow=5.8,SNR=2.1						

IDC 09 03:45:53.8±2.1, 2°.17N×127°.25E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/25, mbtmp3.3/3, Error ellipse: s-maj=143.8km s-min=26.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.05**	**163**	P	P	03 51 01.3	+0.4
	0.2nm,0.3s,baz=342,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.48**	**166**	P	P	03 51 32.2	-0.8
	0.3nm,0.8s,baz=359,slow=7.8,SNR=4.4						
MKAR	**Makanchi Array**	**59.13**	**326**	P	P	03 55 56.5	+0.2
	0.2nm,0.4s,baz=112,slow=7.7,SNR=4.3						

*IDC **09** 03:53:38.5±3.1, 28°.13S×69°.00W, h87km±26km, mb3.6/7, mb1 3.7/11, mb1mx3.6/25, mbtmp3.9/11, Error ellipse: s-maj=27.3km s-min=20.5km az=56.0*
*GUC **09** 03:53:40.6±0.8, 28°.06S×69°.23W, h108km±8km, ML3.9*
ISC 09 03:53:40.1±0.8, 28°.07S±0°.05×69°.07W±0°.08, h106km±8km, n24, σ1s32/31, mb4.0/7, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**1.14**	**295**	*e*P	**Pn**	**03 54 02.8**	**+0.2**
GO03				*i* S	**Sn**	**03 54 19.4**	**-0.1**
GO03				IAML		03 54 21.2	
	comp=N,8μm,0.4s						
AC02	**Maricunga**	**1.23**	**357** ↓	*i* P	**Pn**	**03 54 06.4**	**+2.3**
AC02				*i* S	**Sn**	**03 54 25.2**	**+3.0**
AC02				IAML		03 54 28.2	
	comp=E,2μm,0.2s						
AC05	**El Transito**	**1.30**	**234** ↑	*i* P	**Pn**	**03 54 05.1**	**+0.6**
AC05				*i* S	**Sn**	**03 54 23.4**	**+0.4**
AC05				IAML		03 54 24.3	
	comp=E,3μm,0.1s						
AC04	**Llanos de Chal**	**1.78**	**265** ↑	*i* P	**Pn**	**03 54 09.8**	**-0.3**
AC04				*i* S	**Sn**	**03 54 31.6**	**-1.3**
AC04				IAML		03 54 32.5	
	comp=N,1μm,0.3s						
CO01	**Juntas del Tor**	**2.10**	**205** ↑	*i* P	**Pn**	**03 54 15.5**	**+1.1**
CO01				*i* S	**Sn**	**03 54 42.6**	**+1.9**
AC01	**Pan de Azucar**	**2.35**	**324**	*e*P	**Pn**	**03 54 17.9**	**+0.4**
GO04	**Tololo Observa**	**2.58**	**215** ↑	*i* P	**Pn**	**03 54 20.2**	**-0.6**
GO04				*i* S	**Sn**	**03 54 51.1**	**-0.8**
LVC	**Limon Verde**	**5.44**	**2**	P	**Pn**	**03 54 59.3**	**+0.1**
	comp=N,8.0nm,0.3s,baz=182,slow=8.8,SNR=78						
LVC				S	**Sn**	**03 55 58.1**	**-2.8**
	comp=N,13nm,0.3s,baz=18,slow=20,SNR=12						
CPUP	**Villa Florida**	**10.59**	**83**	P	**Pn**	**03 56 06.5**	**-2.4**
	comp=N,0.5nm,0.3s,baz=264,slow=8.9,SNR=11						
LPAZ	**La Paz**	**11.76**	**4**	P	**Pn**	**03 56 23.5**	**-1.6**
	comp=N,0.5nm,0.3s,baz=174,slow=6.5,SNR=18						
SIV	**San Ignacio**	**14.12**	**33**	P	**Pn**	**03 56 53.7**	**-1.8**
	comp=N,0.5nm,0.3s,baz=239,slow=9.5,SNR=8.2						
BDFB	**Brasilia**	**23.08**	**62**	P	**P**	**03 58 36.1**	**-0.8**
	comp=N,2.6nm,0.9s,baz=258,slow=8.2,SNR=3.4						
SNAA	**Sanae**	**56.17**	**160**	P	**P**	**04 03 08.5**	**0.0**
	comp=N,1.1nm,0.6s,baz=281,slow=10,SNR=14						
TXAR	**Lajitas Array**	**65.99**	**327**	P	**P**	**04 04 16.4**	**+1.1**
	comp=N,0.2nm,0.6s,baz=155,slow=9.6,SNR=4.2						
DBIC	**Dimbokro**	**70.86**	**71**	P	**P**	**04 04 46.5**	**+0.5**
	comp=N,2.2nm,0.7s,baz=187,slow=5.8,SNR=4.0						
PDAR	**Pinedale Array**	**79.74**	**331**	P	**P**	**04 05 37.6**	**+1.2**
	comp=N,0.2nm,0.6s,baz=141,slow=5.8,SNR=2.3						
TORD	**Torodi Ar. Bea**	**79.76**	**69**	P	**P**	**04 05 37.7**	**+0.8**
	comp=N,1.7nm,0.4s,baz=274,slow=5.8,SNR=19						
BOSA	**Boshof**	**80.53**	**117**	P	**P**	**04 05 41.2**	**+0.1**
	comp=N,3.7nm,1.0s,baz=227,slow=4.6,SNR=3.8						
ASAR	**Alice Springs**	**123.99**	**206**	PKP	**PKPdf**	**04 12 26.1**	**-0.5**
	comp=N,1.5nm,0.4s,baz=133,slow=1.8,SNR=7.9						
WRA	**Warramunga Arr**	**127.17**	**208**	PKP	**PKPdf**	**04 12 32.5**	**-0.2**
	comp=N,0.8nm,0.4s,baz=158,slow=1.7,SNR=11						
FITZ	**Fitzroy Crossi**	**131.94**	**199**	PKP	**PKPdf**	**04 12 42.1**	**+0.4**
	comp=N,0.8nm,0.7s,baz=172,slow=7.1,SNR=1.8						
KAPI	**Kappang**	**146.02**	**196**	PKPbc	**PKPbc**	**04 13 08.9**	**+0.6**
	comp=N,7.4nm,0.3s,baz=130,slow=16,SNR=4.5						
ZALV	**Zalesovo Beam**	**147.85**	**29**	PKPbc	**PKPbc**	**04 13 12.3**	**0.0**
	comp=N,1.0nm,0.5s,baz=309,slow=3.3,SNR=5.1						
MKAR	**Makanchi Array**	**150.81**	**42**	PKPbc	**PKPbc**	**04 13 20.5**	**+0.5**
	comp=N,1.8nm,0.7s,baz=328,slow=2.1,SNR=11						

*LDG **09** 03:55:32.0±0.2, 44°.41N×7°.02E, h2km, Md1.3/2, Ml1.3/6, Error ellipse: s-maj=5.4km s-min=2.7km az=74.0*
STR 09 03:55:32.3±1.6, 44°N±8°×°, h10km, MLv0.9/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISO	**Isola**	**0.22**	**159**	Pg	Pg	03 55 37.1	+0.2
ISO				Sg	Sg	03 55 40.2	+0.1
ISO	**Isola**	**0.22**	**159**	Pg	Pg	03 55 37.1	+0.2
ISO				Sg	Sg	03 55 40.2	+0.1
MBDF	**Montbardon**	**0.35**	**341**	*e*Pg	Pg	03 55 38.7	-0.7
MBDF				*e*Sg	Sg	03 55 43.5	-0.6
	1.5nm,0.2s						
MBDF	**Montbardon**	**0.35**	**341**	*e*Pg	Pg	03 55 40.0	+0.6
MBDF				*e*Sg	Sg	03 55 44.0	-0.1
	2.1nm,0.2s						
TURF	**col de Turini**	**0.53**	**142**	Sg	Sg	03 55 42.5	-7.1
TURF				Sg	Sb	03 55 49.5	-2.0
TURF	**col de Turini**	**0.53**	**142**	Sg	Sg	03 55 42.5	-7.1
TURF				Sg	Sb	03 55 49.5	-2.0
SAOF	**Saorge**	**0.60**	**132**	Pg	Pg	03 55 43.7	-0.2
SAOF				Sg	Pg	03 55 52.2	+0.4
SAOF	**Saorge**	**0.60**	**132**	Pg	Pg	03 55 43.7	-0.2
SAOF				Sg	Sg	03 55 52.2	+0.4
SBF	**Sospel**	**0.64**	**146**	*e*Pg	Pg	03 55 44.3	-0.3
SBF				*e*Sg	Sg	03 55 52.6	-0.4
	0.3nm,0.1s						
SBF	**Sospel**	**0.64**	**146**	*e*Pg	Pg	03 55 43.4	-1.2
SBF				*e*Sg	Sg	03 55 51.9	-1.1
	1.9nm,0.3s						
FRF	**La Foret Royal**	**0.86**	**194**	*e*Pg	Pb	03 55 49.2	0.0
FRF				*e*Sg	Sb	03 56 01.4	+0.6
	0.7nm,0.1s						
FRF	**La Foret Royal**	**0.86**	**194**	*e*Pg	Pg	03 55 48.9	+0.1
FRF				*e*Sg	Sb	03 56 00.6	-0.2
	0.5nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.92**	**305**	*e*Pg	Pg	03 55 49.6	-0.4
ORIF				*e*Sg	Sg	03 56 02.2	+0.2
	0.8nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.92**	**305**	*e*Pg	Pg	03 55 49.6	-0.4
ORIF				*e*Sg	Sg	03 56 02.2	+0.2
	0.9nm,0.2s						
SMRF	**Simiane la Rot**	**1.06**	**247**	*e*Pg	Pb	03 55 52.8	0.0
SMRF	**Simiane la Rot**	**1.06**	**247**	*e*P	Pn	03 55 54.7	+1.4
SMRF				*e*Sg	Sn	03 56 07.8	-0.4
	0.8nm,0.3s						
SMRF	**Simiane la Rot**	**1.06**	**247**	*e*Pg	Pb	03 55 53.0	+0.2
SMRF	**Simiane la Rot**	**1.06**	**247**	*e*P	Pn	03 55 55.0	+1.7
SMRF				*e*Sg	Sn	03 56 08.1	-0.1
	1.3nm,0.4s						
LMR	**La Mourre**	**1.10**	**196**	*e*Pg	Pn	03 55 54.1	+0.4
LMR				*e*Sg	Sn	03 56 08.6	-0.4
	0.8nm,0.2s						
LMR	**La Mourre**	**1.10**	**196**	*e*Pg	Pn	03 55 54.0	+0.3
LMR				*e*Sg	Sg	03 56 06.4	-1.3
	2.5nm,0.4s						
LPG	**La Plagne**	**1.11**	**353**	*e*Pg	Pg	03 55 52.4	-1.3
LPG				*e*Sg	Sg	03 56 05.6	-2.6
	1.1nm,0.3s						
LPL	**La Plagne**	**1.13**	**353**	*e*Pg	Pg	03 55 52.7	-1.4
LPL				*e*Sg	Sg	03 56 06.2	-2.6
	0.8nm,0.5s						
LPL	**La Plagne**	**1.13**	**353**	*e*Pg	Pg	03 55 53.3	-0.8
LPL				*e*Sg	Sg	03 56 08.2	-0.6
	0.6nm,0.4s						

WEL 09 04:04:11.0, 39°S±4°×17°E±°, h257km±8km, M2.6/44, MLv2.6/44, Error ellipse: s-maj=0.0km s-min=0.0km az=114.4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HIZ	**Hauiti**	**0.35**	**306**	P	Pn	04 04 44.0	-0.3
TWVZ	**Taurewa**	**0.39**	**154**	P	Pn	04 04 43.9	-0.6
WTVZ	**West Tongariro**	**0.49**	**144**	P	Pn	04 04 44.4	-0.4
KRVZ	**Karewarewa**	**0.50**	**139**	P	Pn	04 04 44.4	-0.3
NGZ	**Ngauruhoe**	**0.54**	**147**	P	Pn	04 04 44.7	-0.3
TMVZ	**Te Maari**	**0.55**	**136**	P	Pn	04 04 44.8	-0.1
OTVZ	**Oturere**	**0.56**	**142**	P	Pn	04 04 45.1	0.0
ETVZ	**East Tongariro**	**0.57**	**137**	P	Pn	04 04 44.8	-0.2
PKVZ	**Pokaka**	**0.58**	**170**	P	Pn	04 04 44.6	-0.4
FWVZ	**Far West T-bar**	**0.59**	**154**	P	Pn	04 04 44.9	-0.4
WHVZ	**Whangaehu Hut**	**0.63**	**153**	P	Pn	04 04 45.1	-0.3
WNVZ	**Wahianoa**	**0.67**	**154**	P	Pn	04 04 45.1	-0.3
MTVZ	**Mangateitei**	**0.69**	**164**	P	Pn	04 04 45.1	-0.2
MOVZ	**Moawhango**	**0.80**	**149**	P	Pn	04 04 45.3	-0.6
BHHZ	**Black Hill Sta**	**1.01**	**140**	P	Pn	04 04 46.4	-0.4
NEZ	**North Egmont**	**1.03**	**238**	P	Pn	04 04 47.3	+0.3
PREZ	**Palmer Road**	**1.03**	**233**	P	Pn	04 04 47.4	+0.4
WAZ	**Wanganui**	**1.05**	**190**	P	Pn	04 04 47.2	+0.2
PKE	**Pukeiti**	**1.07**	**243**	P	Pn	04 04 47.8	+0.7
BKZ	**Black Stump Fm**	**1.09**	**114**	P	Pn	04 04 46.9	-0.4
KHEZ	**Kahui Hut**	**1.10**	**238**	P	Pn	04 04 47.7	+0.3
KWHZ	**Kaweka Forest**	**1.17**	**127**	P	Pn	04 04 48.0	+0.2
MTHZ	**Maungataniwha**	**1.28**	**96**	P	Pn	04 04 48.3	-0.1
KRHZ	**Kereru**	**1.28**	**136**	P	Pn	04 04 48.6	+0.1
NMHZ	**Naumai**	**1.30**	**107**	P	Pn	04 04 49.3	+0.7
MCHZ	**McNeill Hill**	**1.36**	**123**	P	Pn	04 04 49.8	+0.8
RTZ	**Ruatahuna**	**1.38**	**86**	P	Pn	04 04 49.0	-0.3
PNHZ	**Pukenui**	**1.41**	**148**	P	Pn	04 04 47.2	-2.1
TSZ	**Takapari Road**	**1.46**	**157**	P	Pn	04 04 49.9	+0.3
ARHZ	**Aropaoanui**	**1.49**	**112**	P	Pn	04 04 50.5	+0.7
URZ	**Urewera**	**1.56**	**73**	P	Pn	04 04 49.7	-0.7
WPHZ	**Waipukurau**	**1.64**	**145**	P	Pn	04 04 51.4	+0.4
KAHZ	**Kahuranaki**	**1.68**	**130**	P	Pn	04 04 52.1	+0.7
DVHZ	**Dannevirke**	**1.74**	**155**	P	Pn	04 04 51.9	+0.1
PXZ	**Pawanui**	**1.83**	**136**	P	Pn	04 04 53.0	+0.5
MWZ	**Matawai**	**1.85**	**79**	P	Pn	04 04 52.6	-0.2
PRHZ	**Porangahau**	**1.89**	**145**	P	Pn	04 04 53.6	+0.5
PRWZ	**Pori Road**	**1.92**	**163**	P	Pn	04 04 53.8	+0.6
MRZ	**Mangatainoka R**	**1.96**	**172**	P	Pn	04 04 53.7	+0.1
RIGZ	**Rimuhau**	**1.99**	**90**	P	Pn	04 04 54.4	+0.4
RUGZ	**Raukumara Rang**	**2.08**	**69**	P	Pn	04 04 54.0	-0.9
OGWZ	**Otaki Gorge**	**2.09**	**181**	P	Pn	04 04 55.3	+0.5
BFZ	**Birch Farm**	**2.11**	**158**	P	Pn	04 04 55.2	+0.2
MHGZ	**Mahia Peninsul**	**2.14**	**102**	P	Pn	04 04 56.2	+0.9
KIW	**Kapiti Island**	**2.15**	**186**	P	Pn	04 04 55.5	+0.1
HOWZ	**Holdsworth Sta**	**2.19**	**174**	P	Pn	04 04 55.7	+0.1
HAZ	**Te Kaha**	**2.24**	**65**	P	Pn	04 04 54.5	-1.7
DUWZ	**D'Urville Isla**	**2.31**	**205**	P	Pn	04 04 57.1	+0.3
CAW	**Cannon Point**	**2.39**	**183**	P	Pn	04 04 57.9	+0.4
**PKGZ

YAL	**Yalta**	**2.25**	**248**	*e*Pn		**Pn**	**04 08 50.1**	**+0.4**
	baz=245							
YAL				*e*Sn		**Sn**	**04 09 16.5**	**+0.3**
	baz=245							
YAL	**Yalta**	**2.25**	**248**	*e*Pn		**Pn**	**04 08 50.1**	**+0.4**
YAL				*e*Sn		**Sn**	**04 09 16.5**	**+0.3**
ERBR	**Yeremizino-Bor**	**2.42**	**81**	*i* Pn		**Pn**	**04 08 52.1**	**+0.1**
ERBR				*e*Sn		**Sn**	**04 09 18.6**	**-1.9**
SEV	**Sevastopol'**	**2.55**	**252**	*e*Pn		**Pn**	**04 08 54.4**	**+0.6**
	baz=249							
SEV				Pnm			04 08 54.7	
	baz=249							
SEV				*e*Sn		**Sn**	**04 09 23.7**	**+0.1**
	baz=249							
SEV				Snm			04 09 24.4	
	baz=249							
SEV				Snm			04 09 24.4	
	baz=249							
SEV	**Sevastopol'**	**2.55**	**252**	*e*Pn		**Pn**	**04 08 54.4**	**+0.6**
SEV				*e*Sn		**Sn**	**04 09 23.7**	**+0.1**
GUZR	**Guzeripl'**	**2.57**	**121**	*i* Pn		**Pn**	**04 08 54.6**	**+0.5**
GUZR				*i* Sn		**Sn**	**04 09 23.8**	**-0.4**
SOC	**Sochi**	**2.60**	**132**	*e*Pn		**Pn**	**04 08 56.1**	**+1.6**
	baz=135							
SOC	**Sochi**	**2.60**	**132**	*e*Pn		**Pn**	**04 08 55.1**	**+0.6**
SOC				*i* Sn		**Sn**	**04 09 24.7**	**-0.1**
RPOR	**Krasnaya Polya**	**2.83**	**125**	*e*Pn		**Pn**	**04 08 58.3**	**+0.6**
	baz=127							
RPOR	**Krasnaya Polya**	**2.83**	**125**	*i* Pn		**Pn**	**04 08 58.2**	**+0.6**
RPOR				*e*Sn		**Sn**	**04 09 30.0**	**-0.5**
ARXR	**Arkhyz**	**3.51**	**119**	*i* Pn		**Pn**	**04 09 08.1**	**+1.0**
ARXR				*e*Sn		**Sn**	**04 09 46.5**	**-0.9**
DIKM	**Dikmen**	**3.94**	**200**	⇑P		**Pn**	**04 09 15.2**	**+2.3**
DIKM				⇑S		**Sn**	**04 09 57.0**	**-0.9**
BZK	**Bozkurt**	**4.07**	**214**	⇑P		**Pn**	**04 09 16.0**	**+1.5**
BZK				⇓S		**Sn**	**04 09 59.6**	**-1.3**
TLCR		**5.83**	**271**	⇑P		**Pn**	**04 09 39.4**	**+0.6**
TLCR				⇑S		**Sn**	**04 10 39.8**	**-4.4**
TPGR	**Topolog**	**6.14**	**268**	⇓P		**Pn**	**04 09 42.6**	**-0.5**
TPGR				⇓S		**Sn**	**04 10 48.7**	**-3.3**
TIRR	**Tirgusor**	**6.22**	**265**	⇑P		**Pn**	**04 09 44.3**	**+0.3**
TIRR				⇑S		**Sn**	**04 10 48.9**	**-4.8**
CFR	**Carcaliu**	**6.31**	**271**	⇑P		**Pn**	**04 09 45.8**	**+0.5**
TLBR	**Topalu**	**6.46**	**266**	⇑P		**Pn**	**04 09 46.8**	**-0.6**
HARR	**Harsova**	**6.51**	**267**	⇑P		**Pn**	**04 09 48.0**	**-0.1**
SORM	**Soroca**	**6.60**	**298**	⇓P		**Pn**	**04 09 50.5**	**+1.2**
SORM				⇓S		**Sn**	**04 11 02.4**	**-0.7**
ICOR	**Ion Corvin**	**6.72**	**263**	⇑P		**Pn**	**04 09 50.3**	**-0.7**
VRI	**Vrincioaia**	**7.27**	**278**	⇓P		**Pn**	**04 09 58.2**	**-0.3**
VRI				⇓S		**Sn**	**04 11 17.0**	**-2.7**
TESR	**Tescani**	**7.36**	**283**	⇑P		**Pn**	**04 10 00.5**	**+0.8**
MLR	**Muntele Rosu**	**7.83**	**275**	⇑P		**Pn**	**04 10 06.2**	**-0.1**
MLR				⇓S		**Sn**	**04 11 29.5**	**-4.1**
VOIR		**8.46**	**275**	⇑P		**Pn**	**04 10 14.1**	**-0.9**

*IDC **09** 04:14:01.1±0.8, 11°.44S×66°.48E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.8/57, mbtmp4.0/8, MS3.5/8, Ms1 3.4/8, ms1mx3.1/38, Error ellipse: s-maj=28.2km s-min=22.8km az=132.0*
*NEIC **09** 04:14:02.4±1.5, 11°.36S±0°.05×66°.6E±0°.1, h10km±1km, mb4.4/12, Error ellipse: s-maj=18.9km s-min=5.9km az=249.0*

ISC 09 04:14:02.5±0.7, **11°.4S**±0°.1×**66°.6E**±0°.1, **h10**km, **n31**, σ**0**s**75**/**18**, **mb4.2**/10, **MS3.5**/8, **Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**6.92**	**58**	T		T	T	04 22 58.2	
	baz=236,slow=75,SNR=8.0								
H08S2	**Diego Garcia H**	**6.94**	**58**	T		T	T	04 22 59.0	
	baz=236,slow=75,SNR=22								
H08S3	**Diego Garcia H**	**6.94**	**58**	Pn		**Pn**	**04 15 43.0**	**-1.1**
	SNR=14								
H08S3						T	T	04 22 55.8	
	baz=236,slow=75,SNR=88								
KMBO	**Kilima Mbogo**	**30.82**	**287**	LR		LR	LR	04 30 02.5	
	comp=Z,69nm,21.7s,baz=94,slow=31								
LSZ	**Lusaka**	**37.50**	**260**	P		**P**	**P**	**04 21 17.2**	**+0.1**
	3.9nm,1.0s,baz=95,slow=7.2,SNR=5.2								
LSZ	**Lusaka**	**37.50**	**260**	P		**P**	**P**	**04 21 17.3**	**+0.3**
LEM	**Lembang**	**40.77**	**87**	LR		LR	LR	04 37 00.8	
	comp=Z,78nm,18.5s,baz=188,slow=34								
BOSA	**Boshof**	**42.17**	**240**	LR		LR	LR	04 37 11.4	
	comp=Z,71nm,18.4s,baz=360,slow=33								
CMAR	**Chiang Mai Arr**	**43.60**	**48**	P		**P**	**P**	**04 22 09.0**	**+1.8**
	1.0nm,0.3s,baz=231,slow=8.0,SNR=4.9								
CMAR						LR	LR	04 38 35.4	
	comp=Z,37nm,18.5s,baz=184,slow=34								
SHL	**Shillong**	**44.25**	**34**	P		**P**	**P**	**04 22 12.5**	**-0.1**
NIL	**Nilore**	**45.24**	**8**	P		**P**	**P**	**04 22 20.5**	**+0.3**
KBL	**Kabul**	**45.74**	**3**	P		**P**	**P**	**04 22 23.9**	**-0.4**
H01W3	**Cape Leeuwin H**	**49.04**	**127**	T		T	T	05 15 20.7	
	baz=286,slow=75,SNR=93								
H01W2	**Cape Leeuwin H**	**49.05**	**127**	T		T	T	05 15 21.2	
	baz=286,slow=75,SNR=100								
H01W1	**Cape Leeuwin H**	**49.06**	**127**	T		T	T	05 15 21.3	
	baz=286,slow=75,SNR=110								
MAW	**Mawson**	**56.21**	**182**	LR		LR	LR	04 41 41.3	
	comp=Z,36nm,21.3s,baz=91,slow=30								
ABKAR	**Akbulak array**	**60.66**	**355**	P		**P**	**P**	**04 24 13.3**	**-0.4**
ABKAR						IAmb	IAmb	04 24 15.7	
	comp=Z,2.5nm,0.9s								
AKTO	**Aktyubinsk**	**62.01**	**354**	LR		LR	LR	04 52 35.2	
	comp=Z,27nm,18.5s,baz=50,slow=37								
ASAR	**Alice Springs**	**64.88**	**111**	P		**P**	**P**	**04 24 43.2**	**+0.6**
	comp=Z,2.3nm,1.0s,baz=265,slow=6.2,SNR=11								
WRA	**Warramunga Arr**	**65.46**	**107**	P		**P**	**P**	**04 24 47.0**	**+0.7**
	comp=Z,2.0nm,1.0s,baz=281,slow=5.5,SNR=6.8								
WRA						LR	LR	04 52 39.4	
	comp=Z,27nm,18.5s,baz=270,slow=35								
WRAB	**Tennant Creek**	**65.47**	**107**	P		**P**	**P**	**04 24 46.5**	**0.0**
WR0	**Warramunga Arr**	**65.65**	**107**	P		**P**	**P**	**04 24 46.8**	**-0.8**
ZAA0	**Zalesovo Array**	**66.91**	**12**	P		**P**	**P**	**04 24 54.5**	**-0.4**
ZAA0						IAmb	IAmb	04 26 36.8	
	comp=Z,2.8nm,1.1s								
ZALV	**Zalesovo Beam**	**66.91**	**12**	P		**P**	**P**	**04 24 54.1**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=212,slow=5.1,SNR=3.7								
SONM	**Songino Array**	**68.76**	**28**	P		**P**	**P**	**04 25 07.8**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=212,slow=6.8,SNR=7.2								
SONM	**Songino Array**	**68.76**	**28**	IAmb		IAmb	IAmb	04 25 10.3	
	comp=Z,1.0nm,0.7s								
TORD	**Torodi Ar. Bea**	**68.81**	**289**	LR		LR	LR	04 53 45.9	
	comp=Z,27nm,18.6s,baz=305,slow=35								
SNAA	**Sanae**	**72.82**	**198**	P		**P**	**P**	**04 25 30.7**	**-0.5**
	comp=Z,1.3nm,1.0s,baz=77,slow=4.7,SNR=3.6								
QSPA	**South Pole Qui**	**78.67**	**180**	P		**P**	**P**	**04 26 04.6**	**-0.2**
	comp=Z,2.7nm,1.0s,baz=57,slow=3.4,SNR=5.6								
QSPA	**South Pole Qui**	**78.67**	**180**	IAmb		IAmb	IAmb	04 26 05.5	
	comp=Z,6.5nm,1.2s								
PDAR	**Pinedale Array**	**148.56**	**355**	PKPbc		**PKPbc**	**PKPbc**	**04 33 50.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=28,slow=2.1,SNR=4.0								

*IDC **09** 04:22:03.6±0.7, 64°.55N×17°.62W, h0km, mb3.9/12, mb1 4.1/15, mb1mx3.9/44, mbtmp3.9/15, ML2.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/42, Error ellipse: s-maj=20.8km s-min=12.9km az=18.0*
*MOS **09** 04:22:03.4±1.3, 64°.62N×17°.49W, h10km, mb4.7/23, Error ellipse: s-maj=14.0km s-min=8.0km az=113.8*
*REY **09** 04:22:03.4, 64°.68N×17°.48W, h8km*
*NEIC **09** 04:22:04.3±1.9, 64°.54N±0°.09×17°.6W±0°.1, h8km±1km, mb4.4/31, Error ellipse: s-maj=13.4km s-min=7.3km az=197.0*

ISC 09 04:22:04.5±0.4, **64°.66N**±0°.02×**17°.52W**±0°.02, **h10**km, **n166**, σ**1**s**81**/178, **mb4.4**/46, **6C**, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.10**	**280**	P		**Pg**	**Pg**	**04 22 06.2**	**-1.1**
	baz=266								
IDYN	**Dyngjuhals**	**0.15**	**25**	P		**Pg**	**Pg**	**04 22 06.3**	**-1.7**
	baz=23								
IHUS	**Husbondi**	**0.37**	**190**	P		**Pg**	**Pg**	**04 22 11.0**	**-0.8**
	baz=192								
IHUS						S	**Sb**	**04 22 16.9**	**-2.1**
	baz=192								
ISKR	**Skrokkalda**	**0.39**	**256**	P		**Pb**	**Pb**	**04 22 11.2**	**-2.3**
	baz=253								
ISKR						S	**Sb**	**04 22 17.2**	**-2.4**
	baz=253								
THOR	**Thorvaldshraun**	**0.46**	**52**	P		**Pg**	**Pg**	**04 22 11.4**	**-2.1**
	baz=53								
THOR							S	**Sg**	**04 22 17.6**	**-1.8**
	baz=53									
IJOK	**Jokulheimar**	**0.46**	**222**	P		**Pb**	**Pb**	**04 22 12.4**	**-2.4**
	baz=222									
IMKO	**Mokollar**	**0.60**	**57**	P		**Pg**	**Pg**	**04 22 13.8**	**-2.4**
	baz=58									
IMKO							S	**Sg**	**04 22 21.9**	**-2.1**
	baz=58									
IIEY	**Innrieyrar**	**0.62**	**205**	P		**Pg**	**Pg**	**04 22 15.2**	**-1.3**
	baz=206									
IIEY							S	**Sb**	**04 22 24.2**	**-2.1**
	baz=206									
IKSK	**Karasker**	**0.67**	**137**	P		**Pg**	**Pg**	**04 22 14.7**	**-2.8**
	baz=140									
ISVA	**Svartarkot**	**0.69**	**9**	P		**Pg**	**Pg**	**04 22 15.5**	**-2.5**
	baz=8.0									
ISVA							S	**Sg**	**04 22 24.7**	**-2.4**
	baz=8.0									
IKAL	**Kalfafell**	**0.71**	**186**	P		**Pg**	**Pg**	**04 22 16.6**	**-1.6**
	baz=187									
IVAT	**Vatnsfell**	**0.77**	**233**	P		**Pb**	**Pb**	**04 22 17.9**	**-2.1**
	baz=232									
IVSH	**V-Sauoahnukur**	**0.78**	**78**	P		Pg	Pg	04 22 16.6	-3.0	
	baz=80									
IVSH							S	**Sg**	**04 22 27.1**	**-2.8**
	baz=80									
IHVE	**Hveravellir**	**0.91**	**285**	P		**Pg**	**Pg**	**04 22 19.4**	**-2.5**
	baz=283									
IHVE							S	**Sb**	**04 22 32.1**	**-2.3**
	baz=283									
IMEL	**Melhnausar**	**0.99**	**21**	P		Pg	Pg	04 22 20.2	-3.3	
	baz=21									
IMEL							S	**Sg**	**04 22 32.9**	**-3.5**
	baz=21									
IREN	**Reynihlio**	**1.03**	**14**	P		Pb	Pb	04 22 21.0	-3.4	
	baz=14									
ISNB	**Snabyli**	**1.04**	**208**	P		**Pg**	**Pg**	**04 22 22.3**	**-2.2**
	baz=209									
ISNB							S	**Sn**	**04 22 37.1**	**-2.6**
	baz=209									
ISLY	**Slysaalda**	**1.09**	**221**	P		**Pg**	**Pg**	**04 22 23.2**	**-2.2**
	baz=220									
IKVO	**Krokottuvotn**	**1.10**	**14**	P		Pb	Pb	04 22 22.0	-3.6	
	baz=13									
IFED	**Fedgar**	**1.14**	**237**	P		**Pg**	**Pg**	**04 22 24.2**	**-2.2**
	baz=237									
IGRS	**Grimsstaoir**	**1.15**	**30**	P		Pn	Pn	04 22 22.9	-3.8	
	baz=30									
IRJU	**Rjupnafell**	**1.16**	**206**	P		**Pg**	**Pg**	**04 22 24.3**	**-2.4**
	baz=207									
IMJO	**Mjoaskard**	**1.19**	**233**	P		**Pg**	**Pg**	**04 22 25.1**	**-2.2**
	baz=233									
IGYG	**Gygjarholskot**	**1.23**	**253**	P		**Pb**	**Pb**	**04 22 25.1**	**-2.7**
	baz=252									
ISKI	**Skildingahlsh**	**1.24**	**9**	P		**Pn**	**Pn**	**04 22 24.5**	**-3.4**
	baz=8.8									
ISKI							S	**Sb**	**04 22 41.3**	**-2.7**
	baz=8.8									
IGHA	**Grjothals**	**1.25**	**16**	P		Pn	Pn	04 22 24.4	-3.6	
	baz=16									
IGRA	**Granastaoir**	**1.27**	**359**	P		**Pn**	**Pn**	**04 22 24.9**	**-3.4**
	baz=358									
IGRA							S	**Sb**	**04 22 42.2**	**-2.6**
	baz=358									
IHVO	**Lagu-Hvolar**	**1.27**	**208**	P		**Pb**	**Pb**	**04 22 26.4**	**-2.2**
	baz=208									
IDIM	**Dimmadalss**	**1.33**	**10**	P		**Pn**	**Pn**	**04 22 25.9**	**-3.3**
	baz=9.8									
IALF	**Alftagrof**	**1.38**	**213**	P		**Pn**	**Pn**	**04 22 28.0**	**-1.8**
	baz=213									
IESK	**Eystri-Skogar**	**1.42**	**218**	P		**Pn**	**Pn**	**04 22 28.5**	**-1.8**
	baz=218									
ISAU	**Saurbar**	**1.43**	**243**	P		**Pn**	**Pn**	**04 22 28.3**	**-2.2**
	baz=243									
IHED	**Heoinshofoi**	**1.44**	**3**	P		**Pn**	**Pn**	**04 22 27.4**	**-3.2**
	baz=2.7									
IMID	**Miomork**	**1.44**	**227**	P		**Pn**	**Pn**	**04 22 29.3**	**-1.4**
	baz=227									
IBRE	**Brettingsstaoi**	**1.48**	**354**	P		**Pn**	**Pn**	**04 22 28.4**	**-2.8**
	baz=353									
IGIL	**Gilhagi**	**1.51**	**18**	P		**Pn**	**Pn**	**04 22 28.3**	**-3.3**
	baz=18									
IASM	**Asmuli**	**1.58**	**240**	P		**Pn**	**Pn**	**04 22 31.1**	**-1.5**
	baz=240									
ISIG	**Siglufjorour**	**1.59**	**339**	P		**Pn**	**Pn**	**04 22 30.2**	**-2.5**
	baz=338									
BORG	**Borgarnes**	**1.64**	**275**	Pn		**Pn**	**Pn**	**04 22 31.4**	**-2.0**
	29nm,0.3s,baz=100,slow=11,SNR=37									
BORG							Sn	**Sg**	**04 22 55.3**	**-1.9**
	10.0nm,0.3s,baz=24,slow=24,SNR=9.5									
BORG	**Borgarnes**	**1.64**	**275**	Pn		**Pn**	**Pn**	**04 22 31.6**	**-1.7**
IKRO	**Krokur**	**1.66**	**252**	P		**Pn**	**Pn**	**04 22 31.7**	**-2.0**
	baz=251									
ISOL	**Solvholt**	**1.66**	**246**	P		**Pn**	**Pn**	**04 22 31.9**	**-1.7**
	baz=245									
IHEI	**Heioarbar**	**1.68**	**256**	P		**Pn**	**Pn**	**04 22 32.3**	**-1.6**
	baz=255									
IVME	**Vestmannaeyjar**	**1.74**	**226**	P		**Pb**	**Pb**	**04 22 34.0**	**-2.5**
	baz=226									
IBJA	**Bjarnastaoir**	**1.80**	**248**	P		**Pn**	**Pn**	**04 22 34.2**	**-1.3**
	baz=248									
IHRN	**Hraun**	**1.82**	**324**	P		**Pn**	**Pn**	**04 22 33.8**	**-2.1**
	baz=324									
ISAN	**Sandskeio**	**1.86**	**253**	P		**Pn**	**Pn**	**04 22 35.0**	**-1.4**
	baz=252									
SCO	**Scoresbysund**	**6.09**	**346**	*e*			**Pn**	**04 23 33.1**	**-1.4**
	baz=182,slow=8.6									
SCO						*i*	P	**Pn**	**04 23 35.2**	**+0.7**
SCO						*i*	S	**Sn**	**04 24 47.4**	**+3.2**
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn			Pn	**Pn**	**04 24 51.7**	**-0.3**
	baz=323,slow=13,SNR=10									
NOA	**NORSAR Array B**	**13.54**	**92**	Pn			**Pn**	**Pn**	**04 25 14.4**	**-2.0**
	0.0nm,0.3s,baz=303,slow=12,SNR=2.8									
FINES	**FINESS Array B**	**19.71**	**79**	P			**P**	**P**	**04 26 35.4**	**+1.7**
	0.1nm,0.3s,baz=323,slow=8.7,SNR=1.9									
MOX	**Moxa**	**20.70**	**119**	P			**P**	**P**	**04 26 46.2**	**+1.6**
CLL	**Collm**	**20.71**	**116**	*i* P			**P**	**P**	**04 26 46.1**	**+1.5**
	comp=Z,14nm,1.3s									
CLL	**Collm**	**20.71**	**116**	*i* P			**P**	**P**	**04 26 46.1**	**+1.5**
CLL							pmax	pmax		
	comp=Z,14nm,1.3s									
CLL	**Collm**	**20.71**	**116**	P			**P**	**P**	**04 26 46.1**	**+1.5**
GRA1	**Grafenberg Arr**	**21.33**	**121**	P			**P**	**P**	**04 26 53.0**	**+1.6**
GRA1							IAmb	IAmb	04 27 05.5	
	comp=Z,44nm,1.5s									
GRF	**Grafenberg Arr**	**21.33**	**121**	P			**P**	**P**	**04 26 53.0**	**+1.6**
GRF							pmax	pmax		
	comp=Z,44nm,1.5s									
GRF	**Grafenberg Arr**	**21.33**	**121**	*e*P			**P**	**P**	**04 26 52.5**	**+1.1**
	comp=Z,9.5nm,1.2s,baz=324,slow=9.2									
NKC	**Novy Kostel**	**21.35**	**118**	*e*P			**P**	**P**	**04 26 54.1**	**+2.5**
NKC	**Novy Kostel**	**21.35**	**118**	*e*P			**P**	**P**	**04 26 54.1**	**+2.5**
STU	**Stuttgart**	**21.37**	**125**	P			**P**	**P**	**04 26 51.2**	**-0.6**
STU							pmax	pmax		
	comp=Z,12nm,0.8s									
STU	**Stuttgart**	**21.37**	**125**	P			**P**	**P**	**04 26 51.2**	**-0.6**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P			**P**	**P**	**04 26 52.6**	**+0.5**
	comp=Z,47nm,2.0s									
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P			**P**	**P**	**04 26 52.7**	**+0.5**
BRG							pmax	pmax		
	comp=Z,47nm,2.0s									
BFO	**Black Forest**	**21.45**	**127**	P			**P**	**P**	**04 26 51.7**	**-0.9**
BFO							pmax	pmax		
	comp=Z,28nm,1.5s									
BFO	**Black Forest**	**21.45**	**127**	P			**P**	**P**	**04 26 51.7**	**-0.9**
BFO							IAmb	IAmb	04 26 57.3	
	comp=Z,28nm,1.5s									
VSU	**Vasula**	**21.57**	**86**	*i* P			**P**	**P**	**04 26 54.5**	**+0.6**
VSU							pmax	pmax		
	comp=Z,37nm,1.0s									
LFF	**La Frestale**	**22.22**	**144**	*e*P			**P**	**P**	**04 27 01.4**	**+0.5**
PRU	**Pruhonice**	**22.35**	**116**	*e*P			**P**	**P**	**04 27 04.9**	**+2.6**
PRU	**Pruhonice**	**22.35**	**116**	*e*P			**P**	**P**	**04 27 04.9**	**+2.6**
CHVC	**Chvalec**	**22.47**	**113**	*e*P			**P**	**P**	**04 27 06.0**	**+2.4**
UPC	**Upice**	**22.52**	**113**	*e*P			**P**	**P**	**04 27 06.4**	**+2.3**
UPC	**Upice**	**22.52**	**113**	*e*P			**P**	**P**	**04 27 06.4**	**+2.3**
CAF	**Calviac**	**22.58**	**142**	*e*P			**P**	**P**	**04 27 05.1**	**+0.3**
CAF							pmax	pmax		
	comp=Z,32nm,1.7s									
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P			**P**	**P**	**04 27 05.6**	**-0.2**
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P			**P**	**P**	**04 27 05.6**	**-0.2**
KHC							*ex*	x	04 27 16.9	
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P			**P**	**P**	**04 27 07.8**	**+1.1**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P			**P**	**P**	**04 27 07.8**	**+1.1**
DAVA	**Damuels**	**22.88**	**126**	*e*P			**P**	**P**	**04 27 12.6**	**+4.5**
	comp=Z,6.7nm,1.1s									
GEC2	**GERESS Array S**	**22.96**	**119**	P			**P**	**P**	**04 27 08.3**	**-0.5**
GERES	**GERESS Array B**	**22.96**	**119**	P			**P**	**P**	**04 27 09.8**	**+1.0**
	comp=Z,1.7nm,1.0s,baz=337,slow=6.4,SNR=8.2									
GERES							LR	LR	04 37 47.5	
	comp=Z,37nm,19.2s,baz=306,slow=41									
GERES	**GERESS Array B**	**22.96**	**119**	P			**P**	**P**	**04 27 10.2**	**+1.4**
GERES	**GERESS Array B**	**22.96**	**119**	P			**P**	**P**	**04 27 10.2**	**+1.4**
RETA	**Reutte**	**23.02**	**125**	*e*P			**P**	**P**	**04 27 14.1**	**+4.7**
	comp=Z,4.1nm,1.0s									
KRLC	**Kraliky**	**23.16**	**113**	*e*P			**P**	**P**	**04 27 11.3**	**+0.5**
KRLC	**Kraliky**	**23.16**	**113**	*e*P			**P**	**P**	**04 27 11.3**	**+0.5**
MOTA	**Moosalm**	**23.26**	**124**	*e*P			**P**	**P**	**04 27 14.7**	**+2.7**
	comp=Z,5.8nm,1.1s									
TMCR	**Tamitsa**	**23.36**	**66**	*e*P			**P**	**P**	**04 27 12.5**	**-0.1**
TMCR							pmax	pmax		
	comp=Z,16nm,0.9s									
SQTA	**Sankt Quirin**	**23.40**	**124**	*e*P			**P**	**P**	**04 27 14.0**	**+0.6**
	comp=Z,6.0nm,1.2s									
WATA	**Walderalm**	**23.44**	**124**	*e*P			**P**	**P**	**04 27 14.6**	**+0.8**
	comp=Z,3.1nm,0.8s									
MORC	**Moravsky Berou**	**23.70**	**112**	P			**P**	**P**	**04 27 15.6**	**-0.6**
MORC							pmax	pmax		
	comp=Z,23nm,2.0s									
MORC	**Moravsky Berou**	**23.70**	**112**	P			**P**	**P**	**04 27 15.6**	**-0.6**
MORC							IAmb	IAmb	04 27 45.5	
	comp=Z,23nm,2.0s									
CONA	**Conrad Observa**	**24.53**	**117**	*e*P			**P**	**P**	**04 27 26.0**	**+2.0**
	comp=Z,5.6nm,1.0s									
CTI	**Castel Tesino**	**24.57**	**125**	P			**P**	**P**	**04 27 22.7**	**-1.7**
CTI							pmax	pmax		
	comp=Z,13nm,1.5s									
CTI	**Castel Tesino**	**24.57**	**125**	P			**P**	**P**	**04 27 22.7**	**-1.7**
CTI							IAmb	IAmb	04 27 31.1	
	comp=Z,13nm,1.5s									
ARSA	**Arzberg**	**24.96**	**118**	*e*P			**P**	**P**	**04 27 29.3**	**+1.5**
	comp=Z,4.1nm,1.2s									
VYHS	**Vyhne**	**25.24**	**112**	*e*P			**P**	**P**	**04 27 30.4**	**+0.1**
VYHS	**Vyhne**	**25.24**	**112**	*e*P			**P**	**P**	**04 27 30.4**	**+0.1**
KLMR	**Klimovskoe**	**25.61**	**72**	*e*P			**P**	**P**	**04 27 32.8**	**-0.8**
KLMR							pmax	pmax		
	comp=Z,15nm,1.5s									
KLMR	**Klimovskoe**	**25.61**	**72**	*e*P			**P**	**P**	**04 27 32.9**	**-0.7**
KLMR							AMP		04 27 35.1	
	comp=Z,15nm,1.5s									
KWP	**Kalwaria Pacla**	**25.91**	**106**	P			**P**	**P**	**04 27 34.4**	**-2.0**
KWP							pmax	pmax		
	comp=Z,18nm,1.2s									
KWP	**Kalwaria Pacla**	**25.91**	**106**	P			**P**	**P**	**04 27 34.4**	**-2.0**
ESDC	**Sonseca Array**	**26.25**	**156**	P			**P**	**P**	**04 27 39.2**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=343,slow=9.3,SNR=7.1									
KOLS	**Kolonicke sedl**	**26.28**	**108**	*e*P			**P**	**P**	**04 27 39.8**	**+0.1**
KOLS	**Kolonicke sedl**	**26.28**	**108**	*e*P			**P**	**P**	**04 27 39.8**	**+0.1**
UZH	**Uzhgorod**	**26.52**	**108**	*e*P			**P**	**P**	**04 27 43.4**	**+1.5**
UZH				*i*					04 27 47.8	
UZH				*e*					04 28 32.6	
UZH				*e*S			**S**		**04 32 15.4**	**-0.4**
UZH							MLR	MLR		
	comp=N,300nm,18.0s									
UZH							MLR	MLR		
	comp=E,100nm,18.0s									
UZH							MLR	MLR		
	comp=Z,40nm,18.0s									
OBN	**Obninsk**	**27.89**	**84**	*i* P			**P**	**P**	**04 27 53.2**	**-0.9**
OBN				*i*					04 28 38.7	
OBN				*i*	

comp=Z,10.0nm,1.0s

NIL	**Nilore**	**60.46**	**73**	P	**P**	**04 32 15.1**	**+1.0**
X16A	**Lo Mia Camp, P**	**61.09**	**290**	P	**P**	**04 32 19.9**	**+1.4**
TXAR	**Lajitas Array**	**62.28**	**280**	P	**P**	**04 32 28.1**	**+1.5**

comp=Z,0.9nm,1.0s,baz=39,slow=4.8,SNR=5.8

PET	**Petropavlovsk**	**62.62**	**3**	P	**P**	**04 32 28.7**	**+0.4**
PET	**Petropavlovsk**	**62.62**	**3**	P	**P**	**04 32 28.7**	**+0.4**
HHC	**Hu-ho-hao-te**	**67.53**	**40**	*e*P	**P**	**04 33 03.0**	**+2.4**
HHC				pmax	pmax		

comp=Z,14nm,1.0s

HHC				pmax	pmax		

comp=Z,49nm,5.3s

LZH	**Lanzhou**	**69.64**	**48**	*e*P	**P**	**04 33 11.9**	**-2.0**
LZH				pP	pP	04 33 15.4	-2.2
LZH				sP	sP	04 33 17.5	-1.5
LZH				pmax	pmax		

comp=Z,18nm,1.5s

CMAR	**Chiang Mai Arr**	**84.14**	**59**	P	**P**	**04 34 36.8**	**+1.1**

comp=Z,1.0nm,0.3s,baz=313,slow=5.1,SNR=5.5

ASAR	**Alice Springs**	**134.98**	**38**	PKP	**PKPdf**	**04 41 24.2**	**+0.8**

comp=Z,0.6nm,1.0s,baz=278,slow=1.9,SNR=4.7

MAN 09 04:25:44.2, 6.84N×125.00E, h8km, mb4.4, ML3.2, MS3.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.19**	**28**	⇑*i*P	Pg	04 25 49.0	+0.9
KCP				*i* S	Sg	04 25 51.3	+0.6
DDMP	**Don Marcelino,**	**1.02**	**136**	*e*P	Pg	04 26 03.7	-0.1
DDMP				*e*S	Sn	04 26 19.3	-0.1
BUKP	**Musuan**	**1.03**	**3**	*e*P	Pg	04 26 03.2	-0.8
BUKP				*e*S	Sn	04 26 20.0	+0.3

*LDG **09** 04:33:49.2±0.1, 44.2°N×6.98E, h3km, Md1.6/2, Ml1.7/9, Error ellipse: s-maj=1.3km s-min=0.8km az=63.0*

STR 09 04:33:48.9±0.8, 44°N±4°×°±°, h0km±9km, MLv1.4/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SURF	**Saint Ours**	**0.16**	**286**	Pg	Pg	04 33 52.4	+0.3
SURF				Sg	Sg	04 33 54.3	+0.1
ISO	**Isola**	**0.25**	**177**	Pg	Pg	04 33 54.1	+0.4
ISO				Sg	Sg	04 33 57.2	+0.3
MBDF	**Montbardon**	**0.35**	**328**	*e*Pg	Pg	04 33 55.7	+0.2
MBDF				*e*Sg	Sg	04 34 00.9	+0.9

7.7nm,0.2s

TURF	**col de Turini**	**0.53**	**150**	Pg	Pg	04 33 59.5	+0.5
TURF				Sg	Sg	04 34 06.4	+0.5
SAOF	**Saorge**	**0.59**	**140**	Pg	Pg	04 34 00.7	+0.5
SAOF				Sg	Sg	04 34 08.5	+0.8
OGDI	**Digne**	**0.62**	**238**	Pg	Pb	04 34 02.6	0.0
SBF	**Sospel**	**0.64**	**153**	*e*Pg	Pg	04 34 01.5	+0.3
ESCA	**l'Escarene**	**0.65**	**158**	Pg	Pg	04 34 01.3	0.0
ESCA				Sg	Sg	04 34 10.4	+0.6
CALF	**Calern**	**0.69**	**187**	Pg	Pg	04 34 02.3	+0.3
CALF				Sg	Sg	04 34 11.7	+0.8
BLAF	**les Blancs**	**0.86**	**236**	Pg	Pg	04 34 05.2	-0.1
BLAF				Sg	Sg	04 34 17.2	+0.8
FRF	**La Foret Royal**	**0.92**	**198**	*e*Pg	Pg	04 34 06.2	-0.2
FRF				*e*Sg	Sg	04 34 17.5	-0.8

2.8nm,0.3s

ORIF	**Oris-en-Rattie**	**0.95**	**301**	Pg	Pg	04 34 06.9	-0.2
ORIF				Sg	Sg	04 34 18.3	-1.2
ORIF	**Oris-en-Rattie**	**0.95**	**301**	*e*Pg	Pg	04 34 06.8	-0.3
ORIF				*e*Sg	Sg	04 34 18.9	-0.6

2.0nm,0.3s

LPG	**La Plagne**	**1.08**	**350**	*e*Pg	Pg	04 34 09.6	0.0
LPG				*e*Sg	Sg	04 34 23.7	+0.1

0.6nm,0.3s

LPL	**La Plagne**	**1.10**	**349**	*e*Pg	Pb	04 34 10.5	-0.4
LPL				*e*Sg	Sg	04 34 23.9	-0.4

1.1nm,0.4s

SMRF	**Simiane la Rot**	**1.14**	**247**	*e*Pg	Pg	04 34 09.5	-1.3
SMRF				*e*Sg	Sg	04 34 24.5	-1.1

0.8nm,0.2s

LMR	**La Mourre**	**1.16**	**199**	*e*Pg	Pg	04 34 11.1	-0.1
LMR				*e*Sg	Sg	04 34 24.8	-1.4

3.3nm,0.2s

RUSF	**Rustrel**	**1.22**	**247**	Pg	Pb	04 34 12.8	0.0
PGF	**Pioggiola**	**2.37**	**142**	*e*Pn	Pn	04 34 27.7	-1.4
PGF				*e*Sn	Sn	04 34 55.4	-3.4

0.3nm,0.1s

*IDC **09** 04:42:38.5±0.5, 76.74N×97.22W, h0km, mb4.2/21, mb1 4.4/25, mb1mx4.2/59, mbtmp4.2/25, ML4.4/4, MS4.0/38, Ms1 4.0/38, ms1mx4.0/44, Error ellipse: s-maj=16.2km s-min=10.1km az=111.0*

*GCMT **09** 04:42:39.2±0.4, 76.70N±0.02×97.0W±0.1, h16km±1km, MW4.7/89, Moment Tensor Solution. s10,c10; s89,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.38±.09; $M_{\theta\theta}$0.67±.07; $M_{\phi\phi}$-1.05±.09; $M_{r\theta}$-0.06±.24; $M_{r\phi}$1.03±.06; $M_{\theta\phi}$-0.29±.21; Best double couple: M_o1.37400×10^{16} NP1:ϕs290.00000°, δ86.00000°, λ4.00000°. NP2: ϕs199.00000°, δ86.00000°, λ166.00000°. Principal axes: T 1.1870, Plg13.0000°, Azm154.0000°; N 0.3720, Plg76.0000°, Azm4.0000°; P -1.5610, Plg7.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*OTT **09** 04:42:40.4±1.3, 76.51N×97.12W, h18km, MN4.7/3, 125km northeast from Polaris, Nu Boothia Ungava Seismic Zone.*

*NEIC **09** 04:42:40.0±1.4, 76.66N±0.06×97.3W±0.3, h10km±1km, mb4.7/214, mb_Lg4.7(OTT), Error ellipse: s-maj=12.6km s-min=10.9km az=277.0*

ISC 09 04:42:39.5±0.3, 76.65N±0.04×97.64W±0.05, h10km, n334, ⌀2s903/251, mb4.6/94, MS4.0/36, 1C, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**2.09**	**160**	Pn	**Pn**	**04 43 13.8**	**-0.6**

50nm,0.3s,baz=343,slow=14,SNR=340

RES				Sn	**Sn**	**04 43 42.0**	**+1.6**

189nm,0.3s,baz=23,slow=4.9,SNR=9.7

RES				LR	LR	04 44 08.0	

comp=Z,3μm,18.0s,baz=343,slow=42

RES	**Resolute Bay**	**2.09**	**160**	⇑PN	**Pn**	**04 43 13.5**	**-0.9**
RES				SG	**Sn**	**04 43 41.4**	**+1.0**
RES				Trac		04 43 55.2	

comp=Z,3μm,0.4s

RES	**Resolute Bay**	**2.09**	**160**		**Pn**	**04 43 14.0**	**-0.5**
TULEG	**Thule**	**6.66**	**77**	Pn	**Pn**	**04 44 13.7**	**-3.4**
TULEG	**Thule**	**6.66**	**77**	*e*	Pn	04 44 12.1	-5.1

baz=290,slow=14

TULEG				*i* P	**Pn**	**04 44 14.2**	**-2.9**
TULEG				*i* S	**Sn**	**04 45 25.3**	**-7.5**
TULEG				IAML		04 46 11.2	

comp=Z,55nm,0.4s

CLRN	**Clyde River**	**10.16**	**112**	SN	Sn	04 46 50.5	-8.4
CLRN				Trac		04 48 18.1	

comp=Z,633nm,1.3s

KUKN	**Kugluktuk,NWT**	**10.27**	**220**	PN	**Pn**	**04 45 04.9**	**-1.7**
KUKN				SN	**Sn**	**04 46 54.3**	**-7.3**
KUKN				LG	Lg	04 47 59.4	
KUKN	**Kugluktuk,NWT**	**10.27**	**220**	Pn	**Pn**	**04 45 04.9**	**-1.7**
KUKN				Sn	**Sn**	**04 46 54.3**	**-7.3**
C36M	**Paulatuk**	**10.52**	**240**	PN	**Pn**	**04 45 07.9**	**-2.1**
C36M				SN	**Sn**	**04 47 04.1**	**-3.6**
C36M	**Paulatuk**	**10.52**	**240**	P	**Pn**	**04 45 09.0**	**-1.0**

baz=36,SNR=12

C36M	**Paulatuk**	**10.52**	**240**	Pn	**Pn**	**04 45 09.4**	**-0.6**
UPNV	**Upernavik**	**11.38**	**89**	*i* P	Pn	04 45 18.1	-3.7
UPNV				IAML		04 47 21.5	

comp=Z,19nm,0.4s

UPNV				*e*		04 47 21.6	
DHRN	**Dharma Camp**	**11.70**	**226**	PN	**Pn**	**04 45 24.8**	**-1.3**
DHRN				SN	Sn	04 47 27.6	-8.9
DHRN				Trac		04 49 00.9	

comp=Z,710nm,1.1s

DHRN	**Dharma Camp**	**11.70**	**226**	Pn	**Pn**	**04 45 24.8**	**-1.3**
INK	**Inuvik**	**13.37**	**250**	Pn	**Pn**	**04 45 47.1**	**-1.8**

comp=Z,2.5nm,0.3s,baz=19,slow=17,SNR=38

INK				Sn	**Sn**	**04 48 10.0**	**-7.3**

comp=Z,4.5nm,0.3s,baz=339,slow=1.2,SNR=6.0

INK				LR	LR	04 51 16.0	

comp=Z,567nm,18.9s,baz=24,slow=38

INK	**Inuvik**	**13.37**	**250**	PN	**Pn**	**04 45 46.8**	**-2.1**
INK				SN	**Sn**	**04 48 12.3**	**-5.0**
INK	**Inuvik**	**13.37**	**250**	Pn	**Pn**	**04 45 47.5**	**-1.4**
NOWN	**Norman Wells,**	**14.55**	**234**	PN	**Pn**	**04 46 02.2**	**-2.9**
NOWN				SN	Sn	04 48 37.5	-8.7
NOWN				Trac		04 51 05.0	

comp=Z,2μm,2.4s

NOWN	**Norman Wells,**	**14.55**	**234**	Pn	**Pn**	**04 46 02.2**	**-2.9**
YKW3	**Yellowknife Ar**	**15.22**	**211**	SN	Sn	04 48 48.5	-14
YKW3				LG	Lg	04 50 28.4	
YKA	**Yellowknife Ar**	**15.28**	**211**	Pn	**Pn**	**04 46 09.9**	**-5.0**

comp=Z,1.8nm,0.3s,baz=14,slow=16,SNR=25

YKA				Sn	Sn	04 48 48.8	-15

comp=Z,6.0nm,0.3s,baz=10.0,slow=22,SNR=9.3

YKA				Lg	Lg	04 50 26.1	

comp=Z,2.6nm,0.3s,baz=17,slow=29,SNR=4.0

YKA				LR	LR	04 52 22.4	

comp=Z,510nm,18.6s,baz=0.0,slow=38

SUMG	**Summit**	**15.57**	**75**	Pn	Pn	04 46 12.0	-7.0
SUMG				IAmb	IAmb	04 46 18.7	

comp=Z,61nm,1.3s

SUMG	**Summit**	**15.57**	**75**	*i* P	Pn	04 46 11.6	-7.4
SUMG				*e*		04 48 51.9	
SUMG	**Summit**	**15.57**	**75**	*i* P	Pn	04 46 11.7	-7.4
SUMG				*e*		04 48 52.0	
SUMG				IAML		04 48 59.4	

comp=Z,16nm,0.4s

EPYK	**Eagle Plains**	**15.67**	**250**	P	**Pn**	**04 46 17.2**	**-2.9**

baz=33,SNR=27

EPYK	**Eagle Plains**	**15.67**	**250**		**Pn**	**04 46 16.1**	**-4.0**
EPYK				IAmb	IAmb	04 46 29.0	

comp=Z,54nm,0.7s

FRB	**Frobisher Bay**	**15.96**	**128**	Pn	Pn	04 46 15.4	-8.2

comp=Z,0.6nm,0.3s,baz=332,slow=16,SNR=3.4

FRB				Sn	Sn	04 49 03.5	-17

comp=Z,3.5nm,0.3s,baz=66,slow=20,SNR=4.2

FRB				Lg	Lg	04 50 49.9	

comp=Z,5.7nm,0.3s,baz=63,slow=20,SNR=9.1

FRB				LR	LR	04 52 07.4	

comp=Z,437nm,18.4s,baz=334,slow=36

FRB	**Frobisher Bay**	**15.96**	**128**	PN	Pn	04 46 16.8	-6.9
FRB				SN	Sn	04 49 03.9	-16
FRB				Trac		04 51 01.9	

comp=Z,1μm,2.1s

FRB	**Frobisher Bay**	**15.96**	**128**	Pn	Pn	04 46 16.8	-6.9
A21K	**Barrow**	**16.39**	**282**	P	**Pn**	**04 46 29.3**	**+0.1**

baz=45,SNR=6.6

A21K	**Barrow**	**16.39**	**282**		**Pn**	**04 46 30.1**	**+0.9**
A21K				IAmb	IAmb	04 47 03.2	

comp=Z,23nm,0.7s

BMAR	**Burnt Mountain**	**16.57**	**262**	Pn	**Pn**	**04 46 29.9**	**-1.7**
TOLK	**Toolik Lake Re**	**16.77**	**269**	P	**Pn**	**04 46 33.0**	**-1.0**

baz=40,SNR=11

TOLK	**Toolik Lake Re**	**16.77**	**269**	Pn	**Pn**	**04 46 32.1**	**-1.9**
DAG	**Danmarks Havn**	**16.92**	**51**	*i* P	Pn	04 46 28.0	-7.9
DAG				*e*S	Sn	04 49 25.2	-18
DAG	**Danmarks Havn**	**16.92**	**51**	*i* P	Pn	04 46 28.0	-7.9
DAG				*e*S	Sn	04 49 25.2	-18
DAG				IAML		04 49 30.4	

comp=Z,13nm,0.4s

SFJD	**Kangerlussuaq**	**16.94**	**99**	LR	LR	04 53 16.6	

comp=Z,306nm,18.5s,baz=330,slow=38

KNGQ	**Kangiqsujuaq**	**17.39**	**136**	PN	Pn	04 46 35.4	-6.3
KNGQ				SN	Sn	04 49 35.8	-19
FYU	**Fort Yukon**	**17.42**	**261**	Pn	**Pn**	**04 46 40.7**	**-1.5**
FYU				IAmb	IAmb	04 47 39.7	

comp=Z,68nm,1.2s

EGAK	**Eagle**	**18.01**	**253**	Pn	**Pn**	**04 46 48.0**	**-1.4**
EGAK				IAmb	IAmb	04 46 51.6	

comp=Z,74nm,1.3s

FCC	**Fort Churchill**	**18.01**	**174**	PN	**Pn**	**04 46 44.5**	**-5.0**
FCC				SN	Sn	04 49 56.8	-13
FCC	**Fort Churchill**	**18.01**	**174**	Pn	**Pn**	**04 46 45.6**	**-3.9**
COLD	**Coldfoot**	**18.03**	**267**	P	**P**	**04 46 51.4**	**+1.2**

baz=37

COLD	**Coldfoot**	**18.03**	**267**	Pn	**Pn**	**04 46 48.6**	**-1.1**
DAWY	**Dawson**	**18.23**	**249**	Pn	**Pn**	**04 46 50.6**	**-1.7**
DBG	**Daneborg**	**18.25**	**58**	*i* P	Pn	04 46 45.4	-6.9
DBG				*e*		04 49 58.4	
DBG				IAML		04 50 20.6	

comp=Z,4.4nm,0.5s

PRP	**Porcupine Dome**	**18.36**	**259**	P	**P**	**04 46 54.4**	**+0.5**
K27K	**Chicken**	**18.86**	**253**	P	**P**	**04 46 58.4**	**-0.8**

baz=31

K27K	**Chicken**	**18.86**	**253**	P	**P**	**04 46 59.1**	**-0.1**
K27K				IAmb	IAmb	04 47 02.7	

comp=Z,29nm,0.8s

POKR	**Poker Plat Res**	**19.14**	**260**	P	**Pn**	**04 47 04.1**	**+0.9**

baz=33,SNR=9.1

POKR	**Poker Plat Res**	**19.14**	**260**	P	**Pn**	**04 47 03.4**	**+0.2**
POKR				IAmb	IAmb	04 47 37.4	

comp=Z,30nm,1.1s

IL18	**Eielson Array**	**19.29**	**259**	P	**Pn**	**04 47 05.6**	**+0.6**
IL31		**19.30**	**259**	P	**Pn**	**04 47 05.5**	**+0.4**
IL31				IAmb	IAmb	04 47 07.5	

comp=Z,31nm,1.1s

ILAR	**Eielson Array**	**19.30**	**259**	P	**Pn**	**04 47 05.5**	**+0.3**

comp=Z,0.5nm,0.3s,baz=30,slow=10,SNR=121

ILAR				LR	LR	04 57 03.8	

comp=Z,285nm,20.8s,baz=28,slow=45

ILAR	**Eielson Array**	**19.30**	**259**	P	**Pn**	**04 47 05.2**	**+0.1**
SCRK	**Sand Creek**	**19.33**	**255**	P	**Pn**	**04 47 06.5**	**+0.9**

baz=31,SNR=10

COLA	**College**	**19.44**	**260**	P	**Pn**	**04 47 06.7**	**0.0**
TCOL	**CIGO, UAF Yank**	**19.44**	**260**	P	**Pn**	**04 47 07.8**	**+1.0**

baz=33

TCOL	**CIGO, UAF Yank**	**19.44**	**260**	P	**Pn**	**04 47 06.7**	**-0.1**
MDM	**Murphy Dome**	**19.45**	**261**	P	**Pn**	**04 47 07.3**	**+0.3**
I23K	**Minto, Yukon-K**	**19.55**	**262**	P	**Pn**	**04 47 09.0**	**+0.9**

baz=34,SNR=6.7

I23K	**Minto, Yukon-K**	**19.55**	**262**	P	**Pn**	**04 47 08.2**	**+0.1**
CCB	**Clear Creek Bu**	**19.62**	**260**	P	**Pn**	**04 47 09.4**	**+0.5**
HDA	**Harding Lake**	**19.63**	**259**	P	**Pn**	**04 47 09.9**	**+0.9**

baz=32,SNR=13

HDA	**Harding Lake**	**19.63**	**259**	P	**Pn**	**04 47 09.4**	**+0.4**
HDA				IAmb	IAmb	04 47 13.2	

comp=Z,21nm,0.8s

DOT	**Dot Lake**	**19.63**	**254**	IAmb	IAmb	04 47 13.9	

comp=Z,20nm,0.8s

BCAR	**Beaver Creek A**	**19.63**	**251**	P	**P**	**04 47 08.2**	**+0.4**
WRH	**Wood River Hil**	**19.83**	**260**	IAmb	IAmb	04 47 23.9	

comp=Z,32nm,1.2s

IMAR	**Indian Mountai**	**19.87**	**268**	P	**P**	**04 47 10.1**	**-0.2**
NEA2	**Nenana**	**19.95**	**261**	P	**Pn**	**04 47 13.4**	**+0.5**

baz=33

MLY	**Manley**	**19.97**	**264**	P	**Pn**	**04 47 13.8**	**+0.7**

baz=33,SNR=10

L26K	**Log Cabin Wild**	**20.01**	**253**	P	**Pn**	**04 47 14.2**	**+0.5**

baz=30,SNR=7.0

KBS	**Kingsbay**	**20.08**	**32**	P	**P**	**04 47 12.6**	**+0.1**
MENT	**Mentasta**	**20.17**	**253**	IAmb	IAmb	04 47 20.7	

comp=Z,34nm,0.9s

RDOG	**Red Dog Mine**	**20.31**	**280**	P	Pn	04 47 17.3	+0.3
WHY	**Whitehorse**	**20.35**	**239**	P	**P**	**04 47 17.1**	**+1.5**
PAX	**Paxson**	**20.54**	**255**	IAmb	IAmb	04 47 31.1	

comp=Z,27nm,1.0s

MCK	**McKinley**	**20.66**	**260**	P	Pn	04 47 21.1	-0.1

baz=31,SNR=9.8

HYT	**Haines Junctio**	**20.73**	**243**		**P**	**04 47 20.3**	**+0.5**
BPAW	**Bear Paw Mtn.**	**20.82**	**263**	IAmb	IAmb	04 47 26.4	

comp=Z,24nm,0.9s

DHY	**Denali Highway**	**20.87**	**257**	IAmb	IAmb	04 47 42.7	

comp=Z,19nm,0.9s

TRF	**Thorofare Moun**	**21.21**	**261**		**P**	**04 47 27.0**	**+2.0**
TRF				IAmb	IAmb	04 47 57.9	

comp=Z,31nm,1.0s

SPITS	**Spitsbergen Ar**	**21.22**	**31**	P	**P**	**04 47 25.0**	**+0.2**

comp=Z,15nm,1.0s,baz=64,slow=2.9,SNR=4.8

SPITS				LR	LR	04 55 25.2	

comp=Z,614nm,19.0s,baz=305,slow=36

KTH	**Kantishna Hill**	**21.27**	**262**	IAmb	IAmb	04 47 28.7	

comp=Z,45nm,1.0s

BARN	**Barnard Glacie**	**21.39**	**248**	IAmb	IAmb	04 47 45.9	

comp=Z,28nm,0.8s

MCARA	**McCarthy VSAT**	**21.40**	**250**	IAmb	IAmb	04 47 40.2	

comp=Z,72nm,1.4s

CTGM	**Chitina Glacie**	**21.41**	**247**	IAmb	IAmb	04 47 37.9	

comp=Z,38nm,0.8s

M24K	**Tolsona, Glenn**	**21.45**	**254**	P	**P**	**04 47 30.6**	**+3.1**

baz=29

DLBC	**Dease Lake**	**21.50**	**230**	P	**P**	**04 47 31.3**	**+3.2**

comp=Z,24nm,1.0s,baz=20,slow=8.1,SNR=28

DLBC				LR	LR	04 56 33.4	

comp=Z,889nm,19.4s,baz=24,slow=39

DLBC	**Dease Lake**	**21.50**	**230**		**P**	**04 47 28.1**	**+0.1**
DLBC				IAmb	IAmb	04 47 32.3	

comp=Z,37nm,1.1s

GLB	**Gilahina Butte**	**21.52**	**251**	IAmb	IAmb	04 47 42.6	

comp=Z,42nm,1.2s

SKAG	**Skagway**	**21.54**	**238**	P	**P**	**04 47 29.9**	**+1.6**
N25K	**Chitina, Valde**	**21.55**	**252**	P	**P**	**04 47 31.8**	**+3.3**

baz=28

N25K	**Chitina, Valde**	**21.55**	**252**	IAmb	IAmb	04 48 08.2	

comp=Z,56nm,1.7s

KLU	**Klutina**	**21.94**	**253**	IAmb	IAmb	04 47 54.6	

comp=Z,32nm,1.0s

FFC	**Flin Flon**	**22.08**	**187**	P	**P**	**04 47 34.5**	**+0.3**
CUT	**Chulitna**	**22.12**	**259**	P	**P**	**04 47 34.5**	**0.0**

baz=30

BESE	**Bessie Mountai**	**22.27**	**237**	IAmb	IAmb	04 47 39.9	

comp=Z,33nm,1.0s

GHO	**Glory Hole Cre**	**22.37**	**257**	IAmb	IAmb	04 47 44.7	

comp=Z,30nm,1.0s

KNK	**Knik Glacier**	**22.58**	**256**	IAmb	IAmb	04 48 18.5	

comp=Z,33nm,1.0s

SKT	**Skwentna**	**22.78**	**260**	IAmb	IAmb	04 47 43.8	

comp=Z,62nm,1.6s

TTA	**Tatalina**	**22.98**	**266**	P	**P**	**04 47 45.7**	**+1.9**
JMIC	**Jan Mayen**	**23.07**	**57**	LR	LR	04 56 56.0	

comp=Z,512nm,19.0s,baz=52,slow=37

RC01	**Rabbit Creek A**	**23.16**	**257**	P	**P**	**04 47 48.4**	**+2.9**

baz=28

SCHQ	**Schefferville**	**24.66**	**135**	P	**P**	**04 47 58.5**	**-1.4**

comp=Z,8.9nm,0.9s,baz=318,slow=4.6,SNR=3.6

SCHQ				LR	LR	04 57 40.8	

comp=Z,725nm,18.8s,baz=360,slow=37

ULM	**Lac du Bonnet**	**26.51**	**177**	P	**P**	**04 48 17.8**	**+1.2**

comp=Z,5.3nm,0.6s,baz=360,slow=11,SNR=9.5

ULM				LR	LR	04 58 55.4	

comp=Z,427nm,18.6s,baz=349,slow=37

ULM	**Lac du Bonnet**	**26.51**	**177**	P	**P**	**04 48 16.9**	**+0.2**
BBB	**Bella Bella**	**27.16**	**223**	LR	LR	05 00 30.8	

comp=Z,317nm,18.7s,baz=18,slow=39

DGMT	**Dagmar**	**28.40**	**189**	P	**P**	**04 48 35.2**	**+1.5**

baz=3.5

AGMN	**Agassiz Nation**	**28.46**	**178**	P	**P**	**04 48 35.2**	**+1.0**

baz=359,SNR=6.5

AGMN	**Agassiz Nation**	**28.46**	**178**	P	**P**	**04 48 34.1**	**-0.1**
EYMN	**Ely**	**28.91**	**171**	P	**P**	**04 48 38.5**	**+0.3**

baz=357

EYMN	**Ely**	**28.91**	**171**	P	**P**	**04 48 39.0**	**+0.8**
NEW	**Newport**	**29.54**	**207**	P	**P**	**04 48 47.3**	**+3.6**

comp=Z,2.5nm,0.9s,baz=5.9,slow=7

comp=Z,348nm,18.4s,baz=351,slow=37
SMCO Snowmass 37.80 192 IAmb IAmb 04 49 59.4
comp=Z,13nm,0.9s
P51A Williamsport 37.81 161 P **P** **04 49 57.0 +1.4**
baz=355,SNR=5.7
MCWV Mont Chateau 37.90 157 P **P** **04 49 57.9 +1.6**
baz=354
P54A Burton 37.90 158 P **P** **04 49 57.7 +1.4**
baz=354
Q24A Divide 37.93 190 P **P** **04 49 58.9 +2.0**
baz=3.0
O03E Paynes Creek 37.93 211 P **P** **04 49 59.2 +2.5**
baz=9.2,SNR=7.1
P53A Whipple 37.94 159 P **P** **04 49 58.1 +1.4**
baz=354
P53A Whipple 37.94 159 P **P** **04 49 56.8 +0.2**
P53A IAmb IAmb 04 50 41.1
comp=Z,27nm,1.4s
EKA Eskdalemuir Ar 38.02 68 P **P** **04 49 56.8 -0.3**
comp=Z,1.4nm,0.6s,baz=334,slow=7.9,SNR=9.7
P55A Reedsville 38.05 157 P **P** **04 49 58.7 +1.1**
baz=354
P56A Dayton Farm, R 38.14 156 P **P** **04 49 59.2 +0.8**
baz=353
PAHR Pah Rah Range 38.24 208 IAmb IAmb 04 50 05.1
comp=Z,7.7nm,0.9s
R32A Long Quarter, 38.33 181 IAmb IAmb 04 50 01.8
comp=Z,16nm,0.8s
Q52A Bidwell 38.39 161 P **P** **04 50 01.5 +1.0**
baz=354
Q54A Coxs Mills 38.48 159 P **P** **04 50 02.9 +1.7**
baz=354
Q54A Coxs Mills 38.48 159 P **P** **04 50 01.6 +0.4**
R40A Maddies Statio 38.53 173 IAmb IAmb 04 50 02.8
comp=Z,13nm,0.9s
Q55A Buckhannon 38.54 158 P **P** **04 50 03.6 +1.8**
baz=354
Q53A Leroy 38.55 160 P **P** **04 50 03.5 +1.7**
baz=354,SNR=5.0
Q56A Snyder Ridge, 38.57 157 P **P** **04 50 03.8 +1.8**
baz=353
Q56A Snyder Ridge, 38.57 157 P **P** **04 50 02.5 +0.5**
Q56A IAmb IAmb 04 50 04.5
comp=Z,16nm,0.8s
KVN Kaiserville 38.76 206 IAmb IAmb 04 50 09.3
comp=Z,11nm,0.9s
CCM Cathedral Cave 38.80 172 P **P** **04 50 04.1 +0.2**
baz=358
CCM Cathedral Cave 38.80 172 P **P** **04 50 04.4 +0.5**
CCM IAmb IAmb 04 50 05.6
comp=Z,9.7nm,0.8s
Q58A Fox Den Farm, 38.81 155 P **P** **04 50 05.4 +1.4**
baz=353
WCI Wyandotte Cave 38.85 166 P **P** **04 50 05.0 +0.7**
baz=356
S39A Bolivar 39.10 175 IAmb IAmb 04 50 07.8
comp=Z,13nm,1.1s
SDCO Great Sand Dun 39.16 190 P **P** **04 50 09.2 +2.0**
baz=3.1,SNR=8.1
R11A Troy Canyon, C 39.21 203 P **P** **04 50 09.7 +2.2**
baz=6.7
S22A 4UR Ranch, Cre 39.22 192 P **P** **04 50 10.8 +3.1**
baz=3.6,SNR=8.7
R55A Marlinton 39.24 158 P **P** **04 50 09.8 +2.1**
baz=354
R54A Victor 39.27 159 P **P** **04 50 09.4 +1.5**
baz=354,SNR=5.2
NVAR Mina Array Bea 39.39 206 P **P** **04 50 11.8 +2.6**
comp=Z,1.6nm,0.7s,baz=14,slow=6.6,SNR=12
NVAR LR LR 05 07 10.0
comp=Z,337nm,18.2s,baz=357,slow=37
NVAR Mina Array Bea 39.39 206 P **P** **04 50 10.8 +1.7**
S55A Lewisburg 39.71 159 P **P** **04 50 13.3 +1.7**
baz=354
T35A Sooner Cattle 39.83 179 IAmb IAmb 04 50 14.0
comp=Z,11nm,0.8s
MVCO Mesa Verde 39.83 194 P **P** **04 50 15.7 +2.8**
baz=4.1
PBMO Poplar Bluff 40.10 171 P **P** **04 50 15.0 +0.2**
PBMO IAmb IAmb 04 51 40.5
comp=Z,46nm,1.8s
PRN Pahroc Range 40.10 202 IAmb IAmb 04 50 19.3
comp=Z,13nm,1.1s
KLMR Klimovskoe 40.12 31 *eP* **P** **04 50 15.3 +0.7**
KLMR AMP 04 50 20.0
comp=Z,21nm,1.5s
KLMR LQ LQ 05 03 01.3
KLMR LQ LQ 05 03 01.3
KLMR LR LR 05 06 17.0
T54A Tazewell 40.33 160 P **P** **04 50 17.1 +0.3**
baz=354
T53A Wise 40.34 161 P **P** **04 50 18.4 +1.6**
baz=355
U40A Yellville 40.45 174 P **P** **04 50 17.7 +0.1**
baz=358
U40A Yellville 40.45 174 IAmb IAmb 04 50 42.1
comp=Z,12nm,1.1s
T56A Rocky Mt 40.49 158 P **P** **04 50 18.8 +0.8**
baz=354
TPNV Topopah Spring 40.66 203 P **P** **04 50 21.4 +1.8**
baz=6.8,SNR=12
TPNV Topopah Spring 40.66 203 P **P** **04 50 20.5 +0.9**
GRAC Grapevine Rang 40.72 204 P **P** **04 50 22.2 +2.3**
baz=7.1
LCAR Lake Charles 40.78 172 IAmb IAmb 04 50 21.4
comp=Z,7.6nm,0.8s
OK031 S. Brethren Rd 40.79 179 IAmb IAmb 04 50 22.0
comp=Z,13nm,0.8s
OK030 Cody Creek RV 40.82 179 IAmb IAmb 04 50 22.3
comp=Z,20nm,1.1s
TUL1 Leonard 40.84 178 P **P** **04 50 21.5 +0.6**
baz=360
TUL1 Leonard 40.84 178 IAmb IAmb 04 50 22.3
comp=Z,12nm,0.9s
U54A Nelsons Funny 40.85 160 P **P** **04 50 22.6 +1.5**
baz=355
FCAR Ozark Folk Cen 40.93 173 IAmb IAmb 04 50 24.8
comp=Z,9.3nm,0.8s
CLTN Cedars of Leba 40.97 166 IAmb IAmb 04 50 25.7
comp=Z,38nm,1.7s
CWC Cottonwood Cre 41.34 205 P **P** **04 50 28.4 +3.2**
baz=7.3
V54A Nebo 41.58 161 P **P** **04 50 28.1 +1.2**
baz=355
W39A Magazine 41.58 175 P **P** **04 50 27.2 +0.2**
baz=359,SNR=5.9
W39A Magazine 41.58 175 IAmb IAmb 04 50 28.1
comp=Z,16nm,0.9s
W41B Gary Mavity, V 41.64 173 P **P** **04 50 27.4 -0.1**
baz=358
MPMC Manual Prospec 41.66 204 P **P** **04 50 29.9 +2.0**
baz=7.0
WUAZ Wupatki 41.70 197 P **P** **04 50 30.9 +2.8**
baz=5.0,SNR=12
WUAZ Wupatki 41.70 197 P **P** **04 50 29.1 +1.0**
WUAZ IAmb IAmb 04 50 31.9
comp=Z,13nm,0.9s
SHOC Shoshone, Teco 41.70 203 P **P** **04 50 29.5 +1.5**
baz=6.6
PLAL Pickwick Lake 41.99 168 IAmb IAmb 04 50 31.8
comp=Z,22nm,1.6s
W18A Petrified Fore 41.99 195 P **P** **04 50 32.4 +1.8**
baz=4.4
ANMO Albuquerque 41.99 191 P **P** **04 50 33.3 +2.7**
baz=3.3
ANMO Albuquerque 41.99 191 P **P** **04 50 31.8 +1.3**
WMOK Wichita Mounta 42.01 181 P **P** **04 50 30.9 +0.4**
baz=0.6,SNR=8.2
WMOK Wichita Mounta 42.01 181 P **P** **04 50 30.9 +0.4**
VES Vestal, Richgr 42.03 206 P **P** **04 50 32.3 +1.6**
baz=7.5
ISA Isabella, Lake 42.15 206 P **P** **04 50 35.0 +3.3**
baz=7.3,SNR=6.4
ISA Isabella, Lake 42.15 206 P **P** **04 50 33.5 +1.8**
X37A Clayton 42.16 177 IAmb IAmb 04 51 24.2
comp=Z,14nm,1.4s
PETK Petropavlovsk- 42.23 300 LR LR 05 09 12.8
comp=Z,116nm,20.6s,baz=14,slow=38
MIAR Mount Ida 42.24 175 P **P** **04 50 32.7 +0.3**
baz=359,SNR=8.3
MIAR Mount Ida 42.24 175 P **P** **04 50 32.9 +0.5**
MIAR IAmb IAmb 04 50 33.6
comp=Z,12nm,0.9s
W54A Cherokee Point 42.25 161 P **P** **04 50 33.9 +1.5**
baz=355
LRMC Laurel Mtn Rad 42.25 205 P **P** **04 50 35.6 +2.9**
baz=7.0
X40A Basin Creek Fa 42.31 174 P **P** **04 50 33.1 +0.1**
baz=358,SNR=5.6
OXF Oxford 42.40 170 P **P** **04 50 34.0 +0.4**
PAULI Pauline 42.54 161 P **P** **04 50 35.7 +0.9**
PAULI IAmb IAmb 04 50 36.9
comp=Z,9.6nm,0.8s
SMMC Simmler 42.65 207 P **P** **04 50 38.8 +3.0**
baz=7.7
GMRC Granite Mounta 42.76 202 P **P** **04 50 38.9 +2.2**
baz=6.3
EDW2 Edwards Air Fo 42.88 205 P **P** **04 50 40.6 +3.0**
baz=7.0
WLAR White Oak Lake 43.10 174 P **P** **04 50 40.5 +1.1**
WLAR IAmb IAmb 04 50 41.9
comp=Z,16nm,1.0s
PDMCI Parker Dam,Lak 43.10 200 P **P** **04 50 41.9 +2.5**
baz=5.8
IRM Iron Mountain 43.33 201 P **P** **04 50 43.7 +2.5**
baz=6.1,SNR=6.1
BFSC Mount Baldy Ra 43.48 204 P **P** **04 50 46.1 +3.6**
baz=6.8
Z47A Carrollton 43.76 168 IAmb IAmb 04 50 46.9
comp=Z,13nm,1.0s
GOGA Godfrey 43.82 163 P **P** **04 50 46.0 +0.9**
baz=355
BC3 Big Chuckawall 43.86 202 P **P** **04 50 48.2 +2.6**
baz=6.1
LRAL Lakeview Retre 43.98 167 P **P** **04 50 46.8 +0.4**
baz=357
PFO Pinyon Flats O 43.99 203 P **P** **04 50 49.4 +2.7**
baz=6.4
TPFO Pinon Flats 43.99 203 P **P** **04 50 48.8 +2.1**
baz=354
ABTX Abilene, Hawle 44.12 182 P **P** **04 50 48.7 +1.0**
baz=0.8
ABTX Abilene, Hawle 44.12 182 IAmb IAmb 04 50 50.2
comp=Z,13nm,1.1s
TUC Tucson 44.84 196 P **P** **04 50 56.0 +2.6**
baz=4.5
IKP In-Ko-Pah, Jac 44.91 202 P **P** **04 50 57.3 +3.3**
baz=6.2
CLL Collm 45.11 56 *eP* **P** **04 50 56.0 +0.7**
JCT Junction City 46.26 183 P **P** **04 51 05.6 +0.9**
baz=0.9
JCT Junction City 46.26 183 IAmb IAmb 04 51 06.6
comp=Z,9.6nm,1.1s
ARU Arti 46.32 18 P **P** **04 51 05.9 +1.1**
ARU IAmb IAmb 04 51 57.1
comp=Z,22nm,1.8s
TXAR Lajitas Array 47.48 187 P **P** **04 51 15.4 +1.2**
comp=Z,0.4nm,0.3s,baz=10,slow=5.5,SNR=44
TXAR LR LR 05 10 54.4
comp=Z,300nm,18.4s,baz=0.0,slow=36
TXAR Lajitas Array 47.48 187 P **P** **04 51 15.2 +0.9**
GERES GERESS Array B 47.60 56 P **P** **04 51 15.8 +0.8**
comp=Z,1.3nm,0.8s,baz=350,slow=6.8,SNR=8.5
GERES LR LR 05 11 20.6
comp=Z,123nm,19.1s,baz=342,slow=36
HSIG 48.13 196 P **P** **04 51 19.3 +0.1**
AKASG Malin Array Be 48.55 43 P **P** **04 51 22.1 -0.1**
comp=Z,0.4nm,0.4s,baz=345,slow=8.5,SNR=4.1
AKASG LR LR 05 11 57.0
comp=Z,346nm,19.5s,baz=325,slow=36
SENIN Lac Senin/Sane 48.69 63 P **P** **04 51 24.7 +1.2**
VYHS Vyhne 48.91 52 *eP* **P** **04 51 25.0 0.0**
ZAA0 Zalesovo Array 49.66 358 P **P** **04 51 31.9 +1.3**
ZALV Zalesovo Beam 49.66 358 P **P** **04 51 29.6 -1.0**
comp=Z,0.9nm,0.4s,baz=5.0,slow=9.2,SNR=4.4
ZALV LR LR 05 13 35.1
comp=Z,128nm,19.6s,baz=6.5,slow=37
HPIG 49.93 189 P **P** **04 51 34.5 +1.2**
HPIG IAmb IAmb 04 51 36.3
comp=Z,6.1nm,1.0s
BRVK Borovoye 50.34 9 P **P** **04 51 36.6 +0.9**
BUR08 Bucovina Ar. S 50.85 47 P **P** **04 51 40.3 +0.4**
BUR08 IAmb IAmb 04 52 48.1
comp=Z,7.6nm,1.4s
BURAR Bucovina Array 50.88 47 P **P** **04 51 42.0 +1.9**
ESDC Sonseca Array 52.63 76 LR LR 05 13 43.1
comp=Z,97nm,18.8s,baz=325,slow=36
KURK Kurchatov 52.89 3 P **P** **04 51 54.9 0.0**
KURK Kurchatov 52.89 3 IAmb IAmb 04 52 39.0
comp=Z,15nm,1.8s
KURBB Kurchatov Arra 52.98 3 P **P** **04 51 54.9 -0.6**
comp=Z,2.0nm,0.8s,baz=358,slow=7.3,SNR=12
ABKAR Akbulak array 53.56 18 P **P** **04 52 00.9 +1.1**
AQU L'Aquila 53.77 59 P **P** **04 51 01.9 +0.3**
AQU IAmb IAmb 04 53 24.6
comp=Z,17nm,1.4s
ZAIG Zacatecas 53.98 186 P **P** **04 52 03.6 +0.1**
ZAIG IAmb IAmb 04 52 06.3
comp=Z,5.3nm,1.0s
ULN Ulaanbaatar 54.77 340 P **P** **04 52 09.6 +0.7**
ULN IAmb IAmb 04 52 14.1
comp=Z,4.9nm,1.1s
SONM Songino Array 54.85 340 P **P** **04 52 09.9 +0.5**
comp=Z,3.2nm,0.8s,baz=360,slow=6.0,SNR=13
SONM LR LR 05 17 22.5
comp=Z,84nm,18.2s,baz=14,slow=38
SONM Songino Array 54.85 340 P **P** **04 52 10.0 +0.5**
USRK Usuriysk Ar. 55.43 318 P **P** **04 52 13.3 -0.1**
comp=Z,3.6nm,0.8s,baz=22,slow=11,SNR=7.2
USRK LR LR 05 18 51.3
comp=Z,76nm,18.7s,baz=6.9,slow=39
MK31 Makanchi Array 56.84 0 P **P** **04 52 25.1 +1.5**
MK31 IAmb IAmb 04 52 26.4
comp=Z,13nm,1.9s
MKAR Makanchi Array 56.84 0 P **P** **04 52 23.6 +0.1**
comp=Z,1.1nm,0.8s,baz=28,slow=5.5,SNR=7.7
MKAR LR LR 05 20 40.0
comp=Z,106nm,18.0s,baz=354,slow=40
MKAR Makanchi Array 56.84 0 P **P** **04 52 23.9 +0.3**
KBZ Khabaz 57.32 33 LR LR 05 17 46.3
comp=Z,174nm,18.5s,baz=104,slow=37
KEST Kesra 59.32 65 LR LR 05 17 53.5
comp=Z,234nm,20.4s,baz=284,slow=36
WMQ Urumqi 59.76 356 *eP* **P** **04 52 48.8 +4.7**
WMQ pmax pmax
comp=Z,33nm,0.7s
WMQ pmax pmax
comp=Z,250nm,4.7s
BRTR Keskin Array B 59.94 42 P **P** **04 52 45.3 -0.2**
comp=Z,0.8nm,0.7s,baz=327,slow=4.5,SNR=2.7
BRTR LR LR 05 19 58.4
comp=Z,49nm,20.3s,baz=11,slow=38
HHC Hu-ho-hao-te 61.33 335 *eP* **P** **04 52 58.9 +4.1**
HHC pmax pmax
comp=Z,18nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.3s
MJAR Matsushiro Arr 61.87 311 LR LR 05 23 10.6
comp=Z,65nm,19.3s,baz=20,slow=39
MTO3 Montecristo 62.41 171 P **P** **04 53 03.1 +0.6**
KSRS Korea Array 62.65 320 LR LR 05 23 03.5
comp=Z,132nm,18.4s,baz=20,slow=39
GTA Gaotai 63.69 345 *eP* **P** **04 53 09.1 -1.6**
GTA pP pP 04 53 14.4 +0.6
GTA sP sP 04 53 17.6 +2.6
GTA pmax pmax
comp=Z,3.0nm,1.1s
MATN Matagalpa 64.02 167 P **P** **04 53 13.7 +0.8**
GEYT Alibek 64.67 21 LR LR 05 25 04.3
comp=Z,75nm,19.4s,baz=205,slow=39
LZH Lanzhou 66.72 341 *eP* **P** **04 53 27.0 -3.4**
LZH pP pP 04 53 31.2 -2.4
LZH sP sP 04 53 34.2 -0.6
LZH pmax pmax
comp=Z,13nm,1.2s
HRA Herat 68.51 18 P **P** **04 53 43.8 +2.0**
HRA IAmb IAmb 04 56 09.4
comp=Z,7.5nm,1.4s
NJ2 Nanjing 69.21 327 *eP* **P** **04 53 46.6 +0.8**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
SDV Santo Domingo 69.28 151 P **P** **04 53 47.0 +0.3**
ROSC El Rosal 72.89 156 LR LR 05 29 19.2
comp=Z,82nm,18.0s,baz=355,slow=38
ROSC El Rosal 72.89 156 P **P** **04 54 08.7 -0.1**
KOWA Kowa 76.84 83 P **P** **04 54 30.9 -0.3**
comp=Z,1.5nm,0.7s,baz=12,slow=3.6,SNR=4.6
TORD Torodi Ar. Bea 79.45 78 LR LR 05 30 27.5
comp=Z,50nm,18.4s,baz=350,slow=36
DBIC Dimbokro 84.20 86 LR LR 05 29 03.2
comp=Z,89nm,20.8s,baz=330,slow=33
CMAR Chiang Mai Arr 84.57 344 P **P** **04 55 11.6 -1.0**
comp=Z,1.5nm,0.3s,baz=351,slow=5.3,SNR=5.7
CMAR LR LR 05 38 46.2
comp=Z,39nm,18.2s,baz=17,slow=40
SAML Samuel 87.76 146 P **P** **04 55 28.8 +0.6**
SAML IAmb IAmb 04 55 29.5
comp=Z,6.1nm,0.9s
TAOE Nuku Hiva Isla 88.82 222 *e*LR LR 05 23 43.6
comp=Z,152nm,30.5s
LPAZ La Paz 94.41 152 LR LR 05 41 37.6
comp=Z,41nm,18.1s,baz=356,slow=38
PPT Papeete 98.92 229 LR LR 05 35 05.4
comp=Z,136nm,19.3s,baz=359,slow=32
PPT2 Papeete2 98.94 229 *e*LR LR 05 28 30.7
comp=Z,160nm,21.8s
AFI Afiamalu 99.83 251 LR LR 05 37 22.0
comp=Z,47nm,18.3s,baz=12,slow=33
TBI Tubuai 104.55 228 *e*LR LR 05 31 03.4
comp=Z,137nm,35.0s
DZM Mont Dzumac 112.68 270 *e*LR LR 05 34 53.2
comp=Z,123nm,23.6s
ASAR Alice Springs 121.38 303 PKP **PKPdf** **05 01 30.3 -1.9**
comp=Z,0.1nm,0.3s,baz=3.8,slow=2.8,SNR=2.2

IDC 09 05:13:15.8±4.2, 2°95S×140°66E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.4/29, mbtmpg3.5/3, ML3.4/1, Error ellipse: s-maj=152.8km s-min=31.8km az=90.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.98**	**200**	P	Pn	05 17 27.1	-0.3
	0.1nm,0.3s,baz=16,slow=12,SNR=6.8						
ASAR	**Alice Springs**	**21.60**	**197**	P	P	05 18 07.3	-0.2
	0.9nm,0.7s,baz=28,slow=11,SNR=13						
H11S3	**WAKE ISLAND Hy 33.34**	**49**		T	T	05 54 55.7	
	baz=232,slow=75,SNR=12						
H11S2	**WAKE ISLAND Hy 33.35**	**49**		T	T	05 54 57.8	
	baz=232,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy 33.35**	**49**		T	T	05 54 57.0	
	baz=232,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy 34.23**	**48**		T	T	05 56 00.3	
	baz=233,slow=76,SNR=9.1						
H11N2	**WAKE ISLAND Hy 34.24**	**48**		T	T	05 56 10.2	
	baz=233,slow=76,SNR=9.8						
H11N3	**WAKE ISLAND Hy 34.25**	**48**		T	T	05 56 02.0	
	baz=233,slow=76,SNR=5.7						
MKAR	**Makanchi Array**	**71.17**	**322**	P	P	05 24 36.9	+0.3
	0.4nm,0.7s,baz=118,slow=8.5,SNR=1.5						

WEL 09 05:34:29.1±0.7, 40°S±3°×177°4E±°, h163km±5km, M2.9/30, MLv2.9/30, Error ellipse: s-maj=0.0km s-min=0.0km az=95.5, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.47**	**146**	P	Pn	05 34 52.8	+1.0
DUWZ				S	Sn	05 35 10.8	+1.4
NNZ	**Nelson**	**0.82**	**190**	P	Pn	05 34 54.3	+0.6
NNZ				S	Sn	05 35 14.1	+1.4
QRZ	**Quartz Range**	**0.90**	**242**	P	Pn	05 34 54.3	0.0
QRZ				S	Sn	05 35 13.7	0.0
TCW	**Tory Channel**	**0.96**	**147**	P	Pn	05 34 56.0	+1.2
TCW				S	Sn	05 35 15.6	+1.0
NMEZ	**Namu Road**	**1.02**	**13**	P	Pn	05 34 55.4	+0.1
NMEZ				S	Sn	05 35 16.4	+1.0
TUWZ	**Tuamarina**	**1.05**	**165**	P	Pn	05 34 56.4	+0.9
KIW	**Kapiti Island**	**1.11**	**114**	P	Pn	05 34 56.8	+0.8
KIW				S	Sn	05 35 16.7	0.0
LREZ	**Lake Rotokare**	**1.14**	**34**	P	Pn	05 34 56.6	+0.3
LREZ				S	Sn	05 35 18.2	+1.1
PREZ	**Palmer Road**	**1.16**	**23**	P	Pn	05 34 56.6	0.0
PREZ				S	Sn	05 35 18.4	+0.9
NEZ	**North Egmont**	**1.21**	**19**	P	Pn	05 34 56.8	-0.3
PKE	**Pukeiti**	**1.26**	**15**	P	Pn	05 34 57.2	-0.2
PKE				S	Sn	05 35 20.3	+1.2
WAZ	**Wanganui**	**1.27**	**59**	P	Pn	05 34 58.4	+1.0
WAZ				S	Sn	05 35 21.3	+2.1
OGWZ	**Otaki Gorge**	**1.28**	**109**	P	Pn	05 34 58.4	+0.9
OGWZ				S	Sn	05 35 19.7	+0.3
DREZ	**Durham Road**	**1.31**	**22**	P	Pn	05 34 57.9	+0.1
DREZ				S	Sn	05 35 20.1	+0.2
BSWZ	**Blackbirch Sta**	**1.32**	**170**	P	Pn	05 34 58.7	+0.8
BSWZ				S	Sn	05 35 20.9	+0.7
CAW	**Cannon Point**	**1.33**	**122**	P	Pn	05 34 58.8	+0.8
CAW				S	Sn	05 35 20.9	+0.6
BHW	**Baring Head**	**1.40**	**136**	P	Pn	05 34 59.2	+0.6
BHW				S	Sn	05 35 21.2	-0.2
THZ	**Tophouse**	**1.44**	**200**	P	Pn	05 34 59.2	+0.1
THZ				S	Sn	05 35 22.0	-0.4
MHZ	**Mangahewa**	**1.45**	**24**	P	Pn	05 34 59.4	+0.1
MRZ	**Mangatainoka R**	**1.55**	**100**	P	Pn	05 35 00.7	+0.6
MRZ				S	Sn	05 35 23.9	0.0
HOWZ	**Holdsworth Sta**	**1.55**	**109**	P	Pn	05 35 00.8	+0.6
HOWZ				S	Sn	05 35 24.0	-0.2
VRZ	**Vera Road**	**1.58**	**36**	P	Pn	05 34 59.9	-0.5
VRZ				S	Sn	05 35 23.9	-0.7
MSWZ	**Moikau Station**	**1.62**	**129**	P	Pn	05 35 01.3	+0.5
MSWZ				S	Sn	05 35 25.5	+0.1
MTW	**Mount Morrison**	**1.64**	**118**	P	Pn	05 35 01.6	+0.5
PAWZ	**Paruwai Farm**	**1.71**	**125**	P	Pn	05 35 02.3	+0.5
PLWZ	**Palliser**	**1.72**	**133**	P	Pn	05 35 02.3	+0.3
PKVZ	**Pokaka**	**1.77**	**51**	P	Pn	05 35 02.1	-0.4
MTVZ	**Mangateitei**	**1.78**	**55**	P	Pn	05 35 01.5	-1.2
TIWZ	**Tintock**	**1.80**	**102**	P	Pn	05 35 03.4	+0.6
TSZ	**Takapari Road**	**1.86**	**80**	P	Pn	05 35 03.6	+0.2
TRWZ	**Traveller**	**1.88**	**122**	P	Pn	05 35 04.1	+0.5
DSZ	**Dunniston Nort**	**1.89**	**225**	P	Pn	05 35 03.2	-0.6
TMWZ	**Te Maipa**	**1.89**	**112**	P	Pn	05 35 02.1	-1.7
WNVZ	**Wahianoa**	**1.90**	**56**	P	Pn	05 35 03.6	-0.4
FWVZ	**Far West T-bar**	**1.91**	**53**	P	Pn	05 35 03.7	-0.6
WHVZ	**Whangaehu Hut**	**1.92**	**55**	P	Pn	05 35 04.0	-0.3
MOVZ	**Moawhango**	**1.95**	**60**	P	Pn	05 35 04.0	-0.6
TWVZ	**Taurewa**	**1.96**	**48**	P	Pn	05 35 03.9	-0.9
TUVZ	**Tukino**	**1.97**	**55**	P	Pn	05 35 04.5	-0.3
DVHZ	**Dannevirke**	**1.98**	**88**	P	Pn	05 35 04.9	+0.1
NGZ	**Ngauruhoe**	**1.99**	**52**	P	Pn	05 35 04.4	-0.7
KHZ	**Kahutara**	**2.00**	**181**	P	Pn	05 35 04.9	-0.1
WTVZ	**West Tongariro**	**2.02**	**51**	P	Pn	05 35 04.6	-0.8
OTVZ	**Oturere**	**2.04**	**53**	P	Pn	05 35 05.3	-0.3
BFZ	**Birch Farm**	**2.05**	**98**	P	Pn	05 35 05.9	+0.3
KRVZ	**Karewarewa**	**2.06**	**51**	P	Pn	05 35 05.2	-0.7
PNHZ	**Pukenui**	**2.07**	**77**	P	Pn	05 35 05.8	-0.1
ETVZ	**East Tongariro**	**2.08**	**53**	P	Pn	05 35 05.6	-0.5
TMVZ	**Te Maari**	**2.09**	**52**	P	Pn	05 35 05.9	-0.3
HZ	**Hauiti**	**2.14**	**28**	P	Pn	05 35 05.5	-1.2
WPHZ	**Waipukurau**	**2.22**	**82**	P	Pn	05 35 07.7	+0.1
RITZ	**Rihia Road**	**2.27**	**52**	P	Pn	05 35 06.4	-1.8
KRHZ	**Kereru**	**2.28**	**71**	P	Pn	05 35 07.7	-0.5
RATZ	**Rangitukua**	**2.29**	**48**	P	Pn	05 35 08.1	-0.4
PRHZ	**Porangahau**	**2.34**	**87**	P	Pn	05 35 09.3	+0.4
KWHZ	**Kaweka Forest**	**2.40**	**67**	P	Pn	05 35 09.4	-0.4
BKZ	**Black Stump Fm**	**2.57**	**62**	P	Pn	05 35 10.6	-1.2
GVZ	**Greta Valley S**	**2.59**	**189**	P	Pn	05 35 11.0	-0.9
MCHZ	**McNeill Hill**	**2.59**	**69**	P	Pn	05 35 11.5	-0.4
KAHZ	**Kahuranaki**	**2.60**	**77**	P	Pn	05 35 12.1	0.0
INZ	**Inchbonnie**	**2.81**	**214**	P	Pn	05 35 13.3	-1.3
NMHZ	**Naumai**	**2.81**	**63**	P	Pn	05 35 14.4	-0.4
MTHZ	**Maungataniwha**	**2.96**	**59**	P	Pn	05 35 15.0	-1.6
RTZ	**Ruatahuna**	**3.19**	**57**	P	Pn	05 35 16.4	-3.0
OKCZ	**Okains Bay**	**3.33**	**186**	P	Pn	05 35 19.9	-1.3
MQZ	**McQueen's Vall**	**3.36**	**191**	P	Pn	05 35 19.6	-1.8
MHCZ	**Mount Hutt**	**3.46**	**205**	P	Pn	05 35 21.1	-1.6
RACZ	**Rakaia**	**3.48**	**197**	P	Pn	05 35 20.7	-2.3
URZ	**Urewera**	**3.48**	**53**	P	Pn	05 35 20.7	-2.4
PRGZ	**Paritu Road**	**3.64**	**67**	P	Pn	05 35 23.5	-1.6
RIGZ	**Rimuhau**	**3.66**	**64**	P	Pn	05 35 23.7	-1.6
MWZ	**Matawai**	**3.70**	**57**	P	Pn	05 35 23.4	-2.4
RUGZ	**Raukumara Rang**	**4.01**	**54**	P	Pn	05 35 26.9	-3.1
PKGZ	**Pakihiroa**	**4.31**	**56**	P	Pn	05 35 31.4	-2.4
MXZ	**Matakaoa Point**	**4.66**	**54**	P	Pn	05 35 35.9	-2.4
JCZ	**Jackson Bay**	**5.10**	**223**	P	Pn	05 35 41.2	-2.9

*ATA **09** 05:53:19.5±1.0, 40°14N×41°03E, h0km±4km, ML2.5, MW3.5*
*DDA **09** 05:53:20.7, 40°15N×41°07E, h7km±3km, ML2.4*
*ISK **09** 05:53:20.6, 40°16N×41°04E, h7km, ML2.5/11*
ISC 09 05:53:20.6±0.9, 40°17N±0°02×41°09E±0°02, h10km±7km, n32, σ0°877/47, Turkey

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

EMRE	**Erzurum,Aziziy**	**0.17**	**212**	*e*P	**Pg**	**05 53 22.9**	**-1.4**
EMRE				IAML		05 53 28.0	
	comp=Z,4µm,0.3s						
KRIK	**Erzurum-spir**	**0.21**	**322**	*e*P	**Pg**	**05 53 25.0**	**0.0**
KRIK				*e*S	**Sg**	**05 53 29.1**	**+1.0**
KRIK				IAML		05 53 30.2	
	comp=Z,52µm,0.1s						
KRIK	**Erzurum-spir**	**0.21**	**322**	*i* P	**Pg**	**05 53 25.4**	**+0.4**
KRIK				*i* S	**Sg**	**05 53 28.9**	**+0.7**
KRIK				IAML		05 53 29.0	
	comp=N,482nm,0.6s						
KRIK				IAML		05 53 29.0	
	comp=E,576nm,0.7s						
KOPT	**Kop Dagi**	**0.48**	**251**	*e*P	**Pg**	**05 53 29.7**	**-0.4**
KOPT				IAML		05 53 48.4	
	comp=Z,268nm,0.6s						
KOPT	**Kop Dagi**	**0.48**	**251**	*i* P	**Pg**	**05 53 30.5**	**+0.4**
KOPT				*i* S	**Sb**	**05 53 39.4**	**+0.7**
KOPT				IAML		05 53 42.0	
	comp=E,486nm,0.7s						
KOPT				IAML		05 53 44.0	
	comp=N,577nm,0.6s						
KOPR	**Koprukoy-ERZUR**	**0.61**	**107**	PG	**Pb**	**05 53 33.3**	**-0.2**
HOMI	**Horasan**	**0.64**	**101**	*e*P	**Pb**	**05 53 33.8**	**-0.2**
HOMI				*e*S	**Sn**	**05 53 46.0**	**-0.3**
HOMI				IAML		05 53 54.0	
	comp=Z,90nm,0.6s						
HOMI	**Horasan**	**0.64**	**101**	*i* P	**Pb**	**05 53 33.1**	**-0.9**
HOMI				*i* S	**Sn**	**05 53 45.0**	**-1.3**
HOMI				IAML		05 53 48.0	
	comp=E,284nm,0.7s						
BAYT	**Aydintepe-Bayb**	**0.76**	**287**	PG	**Pg**	**05 53 34.9**	**-0.4**
BAYT				SG	**Sg**	**05 53 45.8**	**+0.5**
YEDI	**Yedisu-Bingol**	**0.85**	**210**	PG	**Pg**	**05 53 36.3**	**-0.7**
YEDI				SG	**Sg**	**05 53 48.7**	**+0.7**
KARO	**Karliova-Bingo**	**0.86**	**182**	PG	**Pg**	**05 53 37.5**	**+0.2**
DDEM	**Demirkent**	**0.88**	**35**	*i* P	**Pb**	**05 53 37.0**	**-1.0**
DDEM				*i* S	**Sn**	**05 53 51.9**	**-0.2**
DDEM				IAML		05 53 55.0	
	comp=E,158nm,0.3s						
CHOM	**Cayeli-Rize**	**0.96**	**345**	PG	**Pn**	**05 53 39.5**	**-0.7**
CHOM				SG	**Sn**	**05 53 53.1**	**-0.8**
SENK	**Senkaya-Erzuru**	**1.04**	**68**	PG	**Pn**	**05 53 41.0**	**-0.5**
SENK				SG	**Sn**	**05 53 57.3**	**+1.1**
VRTB	**Varto-Mus**	**1.05**	**164**	PG	**Pn**	**05 53 41.5**	**-0.1**
VRTB				SG	**Sn**	**05 53 56.1**	**-0.3**
DAGI	**Agillar**	**1.10**	**34**	*i* P	**Pn**	**05 53 42.5**	**+0.3**
DAGI				*i* S	**Sn**	**05 53 59.4**	**+1.9**
EATA	**Eleskirt**	**1.12**	**106**	*e*P	**Pn**	**05 53 42.4**	**-0.3**
EATA				IAML		05 54 10.4	
	comp=Z,7.9nm,0.7s						
EATA	**Eleskirt**	**1.12**	**106**	*i* P	**Pn**	**05 53 42.1**	**-0.6**
EUZM	**Uzumlu**	**1.17**	**247**	*e*P	**Pb**	**05 53 42.0**	**-1.0**
ERZN	**Erzincan**	**1.21**	**241**	PN	**Pn**	**05 53 43.7**	**0.0**
BNGB	**Bingl**	**1.22**	**195**	PN	**Pn**	**05 53 43.7**	**-0.2**
DBOC	**Borcka**	**1.25**	**20**	*i* P	**Pg**	**05 53 44.2**	**-0.5**
MACK	**Trabzon**	**1.27**	**308**	*i* P	**Pg**	**05 53 44.5**	**-0.5**
KTUT	**Trabzon**	**1.30**	**309**	PN	**Pg**	**05 53 45.2**	**-0.3**
KELT	**Kelkit**	**1.41**	**270**	*e*P	**Pn**	**05 53 46.2**	**-0.3**
KELT				*e*S	**Sg**	**05 54 08.0**	**+2.0**
KELT				IAML		05 54 12.7	
	comp=Z,30nm,0.8s						
KELT	**Kelkit**	**1.41**	**270**	*i* P	**Pn**	**05 53 46.5**	**-0.1**
KELT				*i* S	**Sb**	**05 54 05.7**	**+0.4**
KELT				IAML		05 54 11.0	
	comp=N,49nm,0.8s						
KELT				IAML		05 54 15.0	
	comp=E,44nm,0.5s						
MUSM	**Mu-Merkez**	**1.48**	**167**	*i* P	**Pb**	**05 53 48.0**	**-0.4**
MUSM				*i* S	**Sb**	**05 54 07.9**	**+0.5**
TNCL	**Tunceli-Merkez**	**1.60**	**229**	*e*P	**Pn**	**05 53 49.0**	**-0.1**
TNCL				IAML		05 54 19.4	
	comp=Z,20nm,0.6s						
TNCL	**Tunceli-Merkez**	**1.60**	**229**	*i* P	**Pb**	**05 53 50.8**	**+0.5**
DIGO	**Kars**	**1.76**	**81**	*e*P	**Pg**	**05 53 54.8**	**+0.4**
DIGO				IAML		05 54 02.6	
	comp=Z,5.4nm,0.4s						
PTK	**Pertek**	**1.83**	**226**	PN	**Pn**	**05 53 52.9**	**+0.5**
ESPY	**Espiye-Giresun**	**1.95**	**293**	PN	**Pb**	**05 53 54.8**	**-1.5**

OTT 09 05:55:39.8±0.5, 58.78N×60.97W, h18km, ML3.9/1, 156km northeast from Nutak, NI LAIbertaRADOR Sea Seismic Zone., Labrador Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NANL	**Nain**	**2.28**	**190**	PN	Pn	05 56 17.0	+0.5
NANL				SN	Sn	05 56 43.4	-0.7
NANL				Trac		05 56 48.5	
	comp=Z,2.7nm,0.0s						
KAJQ	**Kangiqsualujju**	**2.59**	**270**	PN	Pn	05 56 20.2	-0.4
KAJQ				SN	Sn	05 56 52.2	+0.6
KAJQ				Trac		05 56 56.9	
	comp=Z,1.0nm,0.1s						
SCHQ	**Schefferville**	**5.10**	**222**	PN	Pn	05 56 54.8	-0.4
SCHQ				SN	Sn	05 57 50.1	-3.5
SCHQ				Trac		05 57 57.2	
	comp=Z,102nm,1.2s						
KNGQ	**Kangiqsujuaq**	**6.16**	**302**	PN	Pn	05 57 09.2	-0.4
KNGQ				SN	Sn	05 58 14.5	-5.0

*REY **09** 06:27:12.1, 64.66N×17.52W, h6km*
*IDC **09** 06:27:12.3±0.9, 64.48N×17.80W, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/42, mbtmp3.7/10, ML2.3/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/47, Error ellipse: s-maj=27.4km s-min=15.0km az=21.0*
*NEIC **09** 06:27:13.1±2.5, 64.5N±0.1×17.7W±0.1, h7km±5km, mb4.0/5, Error ellipse: s-maj=15.4km s-min=6.6km az=192.0*

ISC 09 06:27:12.6±0.6, 64.68N±0.02×17.58W±0.03, h10km, n80, σ2s09/80, mb3.8/11, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard** baz=275	**0.08**	**262**	P	**Pg**	**06 27 14.4**	**-0.6**
IDYN	**Dyngjuhals** baz=28	**0.14**	**41**	P	**Pg**	**06 27 15.2**	**-0.7**
IGRF	**Grimsfjall** baz=157	**0.31**	**154**	P	**Pg**	**06 27 17.4**	**-1.4**
ISKR	**Skrokkalda** baz=255	**0.37**	**251**	P	**Pb**	**06 27 19.3**	**-1.9**
IHUS	**Husbondi** baz=189	**0.39**	**185**	P	**Pg**	**06 27 19.1**	**-1.2**
IHUS				S	**Sg**	**06 27 24.6**	**-0.9**
	baz=189						
IVOT	**Vottur** baz=159	**0.45**	**157**	P	**Pg**	**06 27 20.1**	**-1.3**
IJOK	**Jokulheimar** baz=221	**0.46**	**217**	P	**Pg**	**06 27 20.4**	**-1.3**
IMKO	**Mokollar** baz=58	**0.61**	**60**	P	**Pg**	**06 27 22.6**	**-1.7**
IMKO				S	**Sg**	**06 27 30.9**	**-1.4**
	baz=58						
IIEY	**Innrieyrar** baz=205	**0.64**	**202**	P	**Pg**	**06 27 23.3**	**-1.6**
IIEY				S	**Sg**	**06 27 32.0**	**-1.2**
	baz=205						
ISVA	**Svartarkot** baz=9.4	**0.67**	**12**	P	**Pb**	**06 27 24.2**	**-2.1**
IKSK	**Karasker** baz=138	**0.71**	**137**	P	**Pg**	**06 27 23.9**	**-2.4**
IKAL	**Kalfafell** baz=186	**0.74**	**184**	P	**Pg**	**06 27 24.7**	**-2.1**
IKAL				S	**Sg**	**06 27 34.9**	**-1.5**
	baz=186						
IVAT	**Vatnsfell** baz=232	**0.77**	**230**	P	**Pb**	**06 27 25.7**	**-2.2**
IVSH	**V-Sauoahnukur** baz=79	**0.81**	**80**	P	**Pg**	**06 27 25.5**	**-2.6**
IVSH				S	**Sg**	**06 27 36.2**	**-2.4**
	baz=79						
IHVE	**Hveravellir** baz=284	**0.87**	**283**	P	**Pb**	**06 27 27.6**	**-2.2**
IMEL	**Melhnausar** baz=22	**0.97**	**23**	P	**Pg**	**06 27 29.0**	**-2.3**
IREN	**Reynihlio** baz=14	**1.01**	**16**	P	**Pb**	**06 27 29.7**	**-2.4**
ISNB	**Snabyli** baz=208	**1.06**	**206**	P	**Pg**	**06 27 30.3**	**-2.6**
IKVO	**Krokottuvotn** baz=14	**1.08**	**16**	P	**Pg**	**06 27 30.8**	**-2.4**
ISLY	**Slysaalda** baz=220	**1.09**	**219**	P	**Pb**	**06 27 31.2**	**-2.4**
IFED	**Fedgar** baz=237	**1.13**	**235**	P	**Pb**	**06 27 32.1**	**-2.1**
IGRS	**Grimsstaoir** baz=30	**1.14**	**32**	P	**Pb**	**06 27 31.7**	**-2.6**
IRJU	**Rjupnafell** baz=206	**1.17**	**205**	P	**Pb**	**06 27 32.4**	**-2.5**
IMJO	**Mjoaskard** baz=233	**1.18**	**231**	P	**Pb**	**06 27 33.1**	**-2.0**
IGYG	**Gygjarholskot** baz=253	**1.21**	**252**	P	**Pb**	**06 27 33.2**	**-2.4**
ISKI	**Skildingahlsh** baz=9.5	**1.21**	**11**	P	**Pb**	**06 27 33.1**	**-2.5**
IGHA	**Grjothals** baz=17	**1.23**	**18**	P	**Pb**	**06 27 33.1**	**-2.7**
IGRA	**Granastaoir** baz=359	**1.24**	**0**	P	**Pb**	**06 27 33.4**	**-2.6**
IHAU	**Haukadalur** baz=238	**1.26**	**236**	P	**Pb**	**06 27 34.3**	**-2.1**
IHVO	**Lagu-Hvolar** baz=208	**1.29**	**206**	P	**Pn**	**06 27 34.4**	**-2.2**
IHLA	**Hella** baz=345	**1.31**	**345**	P	**Pg**	**06 27 35.0**	**-2.6**
IDIM	**Dimmadalss** baz=10	**1.31**	**12**	P	**Pn**	**06 27 34.6**	**-2.3**
IALF	**Alftagrof** baz=212	**1.39**	**211**	P	**Pn**	**06 27 36.3**	**-1.7**
IHED	**Heoinshofoi** baz=3.5	**1.41**	**5**	P	**Pb**	**06 27 36.2**	**-2.7**
ISAU	**Saurbar** baz=243	**1.42**	**242**	P	**Pn**	**06 27 36.4**	**-1.9**
IESK	**Eystri-Skogar** baz=217	**1.42**	**216**	P	**Pn**	**06 27 36.7**	**-1.7**
IMID	**Miomork** baz=222	**1.44**	**225**	P	**Pb**	**06 27 37.5**	**-2.0**
IBRE	**Brettingsstaoi** baz=354	**1.45**	**355**	P	**Pb**	**06 27 37.0**	**-2.7**
IGIL	**Gilhagi** baz=18	**1.49**	**20**	P	**Pn**	**06 27 37.0**	**-2.3**
ISIG	**Siglufjorour** baz=339	**1.56**	**340**	P	**Pb**	**06 27 38.8**	**-2.7**
IASM	**Asmuli** baz=240	**1.58**	**239**	P	**Pb**	**06 27 39.4**	**-2.3**
BORG	**Borgarnes** 69nm,0.3s,baz=100,slow=7.6,SNR=32	**1.61**	**274**	Pn	**Pb**	**06 27 39.6**	**-2.8**
BORG				Sn	**Sg**	**06 28 02.3**	**-2.0**
	38nm,0.3s,baz=244,slow=19,SNR=3.9						
BORG	**Borgarnes**	**1.61**	**274**	Pn	**Pb**	**06 27 40.2**	**-2.1**
BORG				Sn	**Sg**	**06 28 02.0**	**-2.2**
IKRO	**Krokur** baz=252	**1.65**	**251**	P	**Pb**	**06 27 40.1**	**-2.8**
ISOL	**Solvholt** baz=245	**1.65**	**244**	P	**Pb**	**06 27 40.2**	**-2.8**
IHEI	**Heioarbar** baz=256	**1.66**	**255**	P	**Pb**	**06 27 40.5**	**-2.6**
IVME	**Vestmannaeyjar** baz=226	**1.74**	**225**	P	**Pb**	**06 27 42.5**	**-2.0**
IBJA	**Bjarnastaoir** baz=248	**1.78**	**247**	P	**Pb**	**06 27 42.3**	**-3.0**
IHRN	**Hraun** baz=324	**1.78**	**325**	P	**Pb**	**06 27 42.3**	**-3.0**
SCO	**Scoresbysund**	**6.06**	**346**		**Pn**	**06 28 43.7**	**+1.7**
SCO	**Scoresbysund** baz=180,slow=7.4	**6.06**	**346**	*e*	**Pn**	**06 28 42.1**	**+0.1**
SCO				*i* P	**Pn**	**06 28 44.2**	**+2.2**
SCO				*i* S	Sn	06 29 57.3	+6.0
EKA	**Eskdalemuir Ar**	**11.80**	**136**	Pn	**Pn**	**06 30 01.3**	**+0.6**
	baz=321,slow=13,SNR=18						
NC204	**NORSAR Array S**	**13.27**	**92**	Pn	**Pn**	**06 30 21.1**	**+0.4**
NOA	**NORSAR Array B** 0.0nm,0.3s,baz=296,slow=14,SNR=2.4	**13.57**	**92**	Pn	**Pn**	**06 30 24.0**	**-0.8**
NOA				LR	LR	06 35 59.8	
	comp=Z,54nm,18.4s,baz=290,slow=39						
HFS	**Hagfors**	**15.09**	**93**	LR	LR	06 36 16.2	
	comp=Z,85nm,18.1s,baz=262,slow=36						
FINES	**FINESS Array B**	**19.74**	**79**	LR	LR	06 38 42.1	
	comp=Z,25nm,20.0s,baz=310,slow=35						
CLL	**Collm**	**20.74**	**116**	*e*P	Pn	06 31 54.0	-1.4
	comp=Z,32nm,1.8s						
GRF	**Grafenberg Arr**	**21.37**	**121**	*e*P	**P**	**06 32 03.1**	**+3.3**
	comp=Z,40nm,2.2s,baz=327,slow=9.1						
BRG	**Berggiesshubel** comp=Z,2.8nm,1.4s	**21.45**	**115**	*e*P	**P**	**06 32 03.2**	**+2.5**
BRG				*e*		06 32 06.2	
	comp=Z,8.8nm,1.4s						
GEC2	**GERESS Array S**	**23.00**	**119**	P	**P**	**06 32 18.6**	**+1.4**
GEC2				IAmb	IAmb	06 32 42.3	
	comp=Z,11nm,1.4s						
GERES	**GERESS Array B**	**23.00**	**119**	P	**P**	**06 32 18.5**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=334,slow=8.9,SNR=5.0						
GERES	**GERESS Array B**	**23.00**	**119**	P	**P**	**06 32 17.7**	**+0.4**
MORC	**Moravsky Berou**	**23.74**	**112**	P	**P**	**06 32 25.6**	**+1.0**
MORC				IAmb	IAmb	06 32 49.8	
	comp=Z,4.5nm,1.5s						
ESDC	**Sonseca Array**	**26.28**	**156**	LR	LR	06 42 03.0	
	comp=Z,46nm,19.7s,baz=325,slow=34						
MDT	**Midelt**	**32.88**	**160**	LR	LR	06 46 18.2	
	comp=Z,44nm,20.9s,baz=350,slow=35						
INK	**Inuvik**	**39.81**	**329**	P	P	06 34 48.5	+3.4
	comp=Z,2.0nm,1.1s,baz=38,slow=4.8,SNR=3.9						
INK	**Inuvik**	**39.81**	**329**	P	**P**	**06 34 47.4**	**+2.2**
ABKAR	**Akbulak array**	**42.02**	**73**	P	**P**	**06 35 04.1**	**+0.5**
ABKAR	**Akbulak array**	**42.02**	**73**	P	**P**	**06 35 03.9**	**+0.2**
ILAR	**Eielson Array** comp=Z,3.2nm,1.2s,baz=22,slow=6.0,SNR=7.3	**45.65**	**332**	P	P	06 35 35.6	+2.9
IMAR	**Indian Mountai**	**45.83**	**337**	P	**P**	**06 35 36.1**	**+2.1**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.5s,baz=344,slow=9.0,SNR=2.2	**47.65**	**51**	P	**P**	**06 35 50.8**	**+2.4**
ZALV	**Zalesovo Beam**	**47.65**	**51**	P	**P**	**06 35 51.1**	**+2.7**
MKAR	**Makanchi Array** comp=Z,1.0nm,0.9s,baz=294,slow=9.1,SNR=4.5	**52.74**	**58**	P	**P**	**06 36 28.8**	**+1.7**
MKAR	**Makanchi Array**	**52.74**	**58**	P	**P**	**06 36 29.0**	**+1.8**
PDAR	**Pinedale Array** comp=Z,0.8nm,0.7s,baz=46,slow=4.3,SNR=6.8	**53.14**	**293**	P	**P**	**06 36 31.7**	**+1.4**
PDAR	**Pinedale Array**	**53.14**	**293**		**P**	**06 36 32.4**	**+2.1**
TORD	**Torodi Ar. Bea**	**53.17**	**156**	P	**P**	**06 36 30.9**	**+0.4**
TORD	**Torodi Ar. Bea** comp=Z,1.0nm,0.7s,baz=338,slow=8.7,SNR=5.4	**53.17**	**156**	P	**P**	**06 36 30.1**	**-0.4**
SONM	**Songino Array** comp=Z,0.5nm,0.6s,baz=337,slow=6.7,SNR=2.9	**59.65**	**40**	P	P	06 37 19.6	+3.0

*NEIC **09** 06:32:43.5±5.5, 76.75N±0.05×97.5W±0.2, h10km±1km, Error ellipse: s-maj=11.8km s-min=5.7km az=314.0*
*IDC **09** 06:32:43.9±0.7, 76.65N×97.26W, h0km, mb3.9/11, mb1 4.2/16, mb1mx3.9/48, mbtmp4.0/16, ML3.9/5, MS3.6/30, Ms1 3.6/30, ms1mx3.5/49, Error ellipse: s-maj=16.8km s-min=13.5km az=110.0*
*OTT **09** 06:32:44.9±1.3, 76.62N×96.88W, h18km, MN4.1/1, 137km northeast from Polaris, Nu Boothia Ungava Seismic Zone.*
*DNK **09** 06:32:54.8±4.8, 77.17N×94.46W, h139km±91km, ML3.7*

ISC 09 06:32:42.6±0.5, 76.66N±0.05×96.80W±0.04, h10km, n98, σ2s87/87, mb4.2/21, MS3.6/25, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay** 17nm,0.3s,baz=336,slow=13,SNR=229	**2.04**	**166**	Pn	**Pn**	**06 33 18.3**	**+1.5**
RES				Sn	**Sb**	**06 33 46.5**	**+1.6**
	94nm,0.3s,baz=38,slow=22,SNR=11						
RES				LR	LR	06 34 13.0	
	comp=Z,1µm,19.3s,baz=342,slow=43						
RES	**Resolute Bay**	**2.04**	**166**	PN	**Pn**	**06 33 18.3**	**+1.5**
RES				SG	**Sb**	**06 33 46.5**	**+1.6**
RES				Trac		06 34 00.1	
	comp=Z,550nm,0.3s						
RES	**Resolute Bay**	**2.04**	**166**		**Pn**	**06 33 19.1**	**+2.3**
RES					**Sn**	**06 33 44.8**	**+2.5**
TULEG	**Thule**	**6.47**	**77**	Pn	**Pn**	**06 34 18.7**	**+1.1**
TULEG				Sn	**Sn**	**06 35 30.8**	**-0.4**
TULEG	**Thule**	**6.47**	**77**	*i* P	**Pn**	**06 34 18.5**	**+0.9**
TULEG				*i* S	**Sn**	**06 35 29.3**	**-1.9**
TULEG				IAML		06 35 35.6	
	comp=Z,76nm,0.4s						
CLRN	**Clyde River**	**9.99**	**114**	PN	**Pn**	**06 35 07.3**	**+1.5**
CLRN				SN	**Sn**	**06 36 55.7**	**-2.0**
KUKN	**Kugluktuk,NWT**	**10.41**	**221**	PN	**Pn**	**06 35 10.8**	**-0.8**
KUKN				SN	Sn	06 36 58.5	-9.5
KUKN				Trac		06 38 14.3	
	comp=Z,319nm,1.8s						
C36M	**Paulatuk**	**10.70**	**241**	PN	**Pn**	**06 35 15.2**	**-0.3**
C36M				SN	**Sn**	**06 37 09.7**	**-5.4**
C36M	**Paulatuk**	**10.70**	**241**	Pn	**Pn**	**06 35 13.1**	**-2.4**
UPNV	**Upernavik**	**11.19**	**89**	*i* P	**Pn**	**06 35 23.1**	**+0.8**
UPNV				*i* S	**Sn**	**06 37 20.9**	**-6.2**
UPNV				IAML		06 37 26.8	
	comp=Z,11nm,0.4s						
DHRN	**Dharma Camp**	**11.84**	**228**	PN	**Pn**	**06 35 29.8**	**-1.4**
DHRN				SN	**Sn**	**06 37 36.7**	**-6.5**
DHRN				Trac		06 39 21.4	
	comp=Z,653nm,3.5s						
INK	**Inuvik**	**13.55**	**252**	Pn	**Pn**	**06 35 51.5**	**-3.0**
	comp=Z,0.8nm,0.3s,baz=34,slow=16,SNR=34						
INK				Sn	Sn	06 38 15.6	-9.3
	comp=Z,0.8nm,0.3s,baz=338,slow=5.4,SNR=3.8						
INK				LR	LR	06 42 11.9	
	comp=Z,45nm,21.1s,baz=50,slow=42						
INK	**Inuvik**	**13.55**	**252**	PN	**Pn**	**06 35 51.0**	**-3.6**
INK				SN	Sn	06 38 14.0	-11
INK	**Inuvik**	**13.55**	**252**	Pn	**Pn**	**06 35 50.9**	**-3.6**
SUMG	**Summit**	**15.38**	**75**	Pn	**Pn**	**06 36 15.7**	**-3.9**
SUMG				Sn	**Sn**	**06 39 02.7**	**-7.2**
SUMG	**Summit**	**15.38**	**75**	*i* P	**Pn**	**06 36 16.0**	**-3.6**
SUMG	**Summit**	**15.38**	**75**	*i* P	**Pn**	**06 36 16.0**	**-3.6**
YKA	**Yellowknife Ar**	**15.39**	**212**	Pn	**Pn**	**06 36 15.8**	**-3.6**
	comp=Z,0.8nm,0.3s,baz=16,slow=12,SNR=15						
YKA				Sn	Sn	06 38 55.8	-14
	comp=Z,1.2nm,0.3s,baz=13,slow=20,SNR=6.0						
YKA				Lg	Lg	06 40 37.8	
	comp=Z,0.8nm,0.3s,baz=12,slow=29,SNR=4.1						
FRB	**Frobisher Bay**	**15.81**	**129**	Pn	**Pn**	**06 36 21.4**	**-3.5**
	comp=Z,0.8nm,0.3s,baz=324,slow=12,SNR=8.6						
FRB				Sn	Sn	06 39 08.7	-11
	comp=Z,1.6nm,0.3s,baz=58,slow=15,SNR=5.6						
FRB				Lg	Lg	06 40 53.7	
	comp=Z,0.5nm,0.3s,baz=60,slow=20,SNR=6.4						
FRB				LR	LR	06 42 10.2	
	comp=Z,176nm,20.3s,baz=355,slow=36						
FRB	**Frobisher Bay**	**15.81**	**129**	PN	**Pn**	**06 36 23.1**	**-1.8**
FRB				SN	Sn	06 39 09.4	-10
EPYK	**Eagle Plains**	**15.86**	**251**		**Pn**	**06 36 22.0**	**-3.5**
EPYK				IAmb	IAmb	06 36 32.9	
	comp=Z,16nm,0.7s						
A21K	**Barrow**	**16.58**	**283**	Pn	**Pn**	**06 36 35.0**	**+0.4**
A21K				IAmb	IAmb	06 36 47.7	
	comp=Z,20nm,1.4s						
SFJD	**Kangerlussuaq** comp=Z,118nm,18.5s,baz=344,slow=38	**16.75**	**100**	LR	LR	06 43 21.5	
BMAR	**Burnt Mountain**	**16.76**	**262**		**Pn**	**06 36 35.7**	**-1.4**
DAG	**Danmarks Havn** baz=307,slow=11	**16.77**	**51**	*e*	**Pn**	**06 36 30.5**	**-6.5**
DAG				*i* P	**P**	**06 36 33.0**	**-6.2**
DAG				*i* S	Sn	06 39 29.6	-13
DAG				IAML		06 39 32.8	
	comp=Z,14nm,0.5s						
TOLK	**Toolik Lake Re**	**16.96**	**270**		**Pn**	**06 36 38.0**	**-1.5**
TOLK				Sn	**Sn**	**06 39 39.1**	**-8.6**
FYU	**Fort Yukon**	**17.61**	**261**	P	**P**	**06 36 48.2**	**-0.4**
DBG	**Daneborg**	**18.08**	**59**	*i* P	**Pn**	**06 36 49.4**	**-4.0**
DBG				IAML		06 40 21.1	
	comp=Z,6.9nm,0.4s						
EGAK	**Eagle**	**18.20**	**254**		**Pn**	**06 36 53.0**	**-1.9**
COLD	**Coldfoot**	**18.23**	**268**		**Pn**	**06 36 54.2**	**-1.0**
DAWY	**Dawson**	**18.42**	**250**	P	**P**	**06 36 55.2**	**-2.4**
PRP	**Porcupine Dome**	**18.55**	**260**	P	**P**	**06 36 57.9**	**-1.2**
K27K	**Chicken**	**19.05**	**253**	P	**P**	**06 37 03.1**	**-1.2**
K27K				IAmb	IAmb	06 37 22.3	
	comp=Z,13nm,1.1s						
IL18	**Eielson Array**	**19.48**	**260**	P	**Pn**	**06 37 11.0**	**+0.6**
IL31	**Eielson Array**	**19.50**	**260**	P	**Pn**	**06 37 09.7**	**-0.8**
ILAR	**Eielson Array** comp=Z,0.2nm,0.3s,baz=31,slow=10,SNR=32	**19.50**	**260**	P	**Pn**	**06 37 10.8**	**+0.3**
ILAR				LR	LR	06 47 09.7	
	comp=Z,124nm,20.7s,baz=38,slow=45						
ILAR	**Eielson Array**	**19.50**	**260**	P	**Pn**	**06 37 11.1**	**+0.6**
MDM	**Murphy Dome**	**19.64**	**262**	P	**Pn**	**06 37 12.7**	**+0.4**
CCB	**Clear Creek Bu**	**19.81**	**261**	P	**Pn**	**06 37 14.6**	**+0.3**
CCB				IAmb	IAmb	06 37 20.4	
	comp=Z,12nm,1.3s						
HDA	**Harding Lake**	**19.82**	**260**	P	**Pn**	**06 37 14.8**	**+0.4**
HDA				IAmb	IAmb	06 37 22.4	
	comp=Z,11nm,1.1s						
DOT	**Dot Lake**	**19.82**	**255**	P	**Pn**	**06 37 14.5**	**+0.1**
BCAR	**Beaver Creek A**	**19.82**	**252**	P	**Pn**	**06 37 14.2**	**-0.3**
IMAR	**Indian Mountai**	**20.07**	**269**	P	**P**	**06 37 14.7**	**-0.9**
MENT	**Mentasta**	**20.36**	**254**	P	Pn	06 37 21.6	+0.8
MENT				IAmb	IAmb	06 37 30.6	
	comp=Z,24nm,1.4s						
SCO	**Scoresbysund**	**20.53**	**68**	P	Pn	06 37 21.9	-0.8
HYT	**Haines Junctio**	**20.91**	**244**	P	**P**	**06 37 24.6**	**-0.2**
HYT				IAmb	IAmb	06 37 36.4	
	comp=Z,11nm,1.1s						
BPAW	**Bear Paw Mtn.**	**21.01**	**263**	P	**P**	**06 37 27.7**	**+1.9**
BPAW				IAmb	IAmb	06 37 38.1	
	comp=Z,12nm,1.0s						
DHY	**Denali Highway**	**21.07**	**258**	P	**P**	**06 37 28.2**	**+1.6**
DHY				IAmb	IAmb	06 37 31.5	
	comp=Z,22nm,1.5s						
SPITS	**Spitsbergen Ar** comp=Z,217nm,19.2s,baz=295,slow=36	**21.11**	**32**	LR	LR	06 45 28.7	
KTH	**Kantishna Hill**	**21.46**	**263**	P	**P**	**06 37 32.3**	**+1.6**
M24K	**Tolsona, Glenn**	**21.64**	**255**	P	**P**	**06 37 34.7**	**+2.0**
DLBC	**Dease Lake** comp=Z,5.2nm,0.9s,baz=23,slow=11,SNR=7.0	**21.65**	**231**	P	**P**	**06 37 36.0**	**+3.2**
DLBC				LR	LR	06 46 19.8	
	comp=Z,312nm,21.9s,baz=25,slow=38						
DLBC	**Dease Lake**	**21.65**	**231**	P	**P**	**06 37 35.2**	**+2.4**
DLBC				IAmb	IAmb	06 37 36.8	
	comp=Z,13nm,1.1s						
GLB	**Gilahina Butte**	**21.70**	**252**	P	**P**	**06 37 35.5**	**+2.2**
N25K	**Chitina, Valde**	**21.73**	**253**	P	**P**	**06 37 35.9**	**+2.3**
N25K				IAmb	IAmb	06 37 36.9	
	comp=Z,15nm,1.4s						
BALM	**Baldy**	**21.75**	**250**	P	**P**	**06 37 36.7**	**+2.9**
FFC	**Flin Flon**	**22.11**	**188**	P	**P**	**06 37 41.8**	**+4.2**
FFC				IAmb	IAmb	06 38 00.3	
	comp=Z,7.3nm

ZALV	**Zalesovo Beam**	**49.66**	**359**	P		**P**		**06 41 36.0**	**+2.3**
	comp=Z,0.5nm,0.4s,baz=345,slow=11,SNR=4.2								
ZALV				LR		LR		07 03 38.8	
	comp=Z,47nm,19.9s,baz=16,slow=37								
ESDC	**Sonseca Array**	**52.44**	**77**	P		P		06 41 59.2	+4.4
	comp=Z,2.0nm,1.1s,baz=345,slow=8.4,SNR=4.9								
MLR	**Muntele Rosu**	**52.92**	**48**	LR		LR		07 05 10.5	
	comp=Z,135nm,19.4s,baz=333,slow=37								
NRCA	**Norcia**	**53.08**	**60**	P		**P**		**06 42 00.5**	**+1.0**
ABKAR	**Akbulak array**	**53.49**	**19**	P		**P**		**06 42 04.7**	**+2.3**
ABKAR				IAmb		IAmb		06 42 05.9	
	comp=Z,2.4nm,1.3s								
ULN	**Ulaanbaatar**	**54.83**	**341**	P		**P**		**06 42 14.9**	**+2.6**
ULN				IAmb		IAmb		06 42 16.2	
	comp=Z,4.5nm,1.0s								
SONM	**Songino Array**	**54.91**	**341**	P		**P**		**06 42 16.2**	**+3.3**
	comp=Z,3.6nm,1.0s,baz=356,slow=5.0,SNR=10								
SONM				LR		LR		07 08 24.0	
	comp=Z,50nm,18.4s,baz=33,slow=39								
SONM	**Songino Array**	**54.91**	**341**	P		**P**		**06 42 16.1**	**+3.2**
USRK	**Ussuriysk Ar.**	**55.55**	**319**	P		**P**		**06 42 19.7**	**+2.3**
	comp=Z,3.3nm,0.8s,baz=349,slow=7.8,SNR=5.7								
USRK				LR		LR		07 07 29.6	
	comp=Z,52nm,20.3s,baz=9.9,slow=38								
MKAR	**Makanchi Array**	**56.83**	**1**	P		**P**		**06 42 28.6**	**+2.1**
	comp=Z,1.4nm,0.8s,baz=1.4,slow=5.0,SNR=7.5								
MKAR				LR		LR		07 10 33.6	
	comp=Z,55nm,18.5s,baz=8.0,slow=40								
MKAR	**Makanchi Array**	**56.83**	**1**	P		**P**		**06 42 29.2**	**+2.7**
KBZ	**Khabaz**	**57.21**	**34**	LR		LR		07 07 58.4	
	comp=Z,49nm,20.1s,baz=135,slow=37								
KEST	**Kesra**	**59.14**	**66**	LR		LR		07 07 56.8	
	comp=Z,80nm,19.5s,baz=278,slow=36								
BRTR	**Keskin Array B**	**59.80**	**43**	LR		LR		07 10 00.7	
	comp=Z,23nm,18.1s,baz=352,slow=37								
MJAR	**Matsushiro Arr**	**62.01**	**312**	LR		LR		07 13 42.8	
	comp=Z,44nm,18.1s,baz=130,slow=40								
TORD	**Torodi Ar. Bea**	**79.26**	**79**	LR		LR		07 20 44.4	
	comp=Z,27nm,18.2s,baz=220,slow=36								
CMAR	**Chiang Mai Arr**	**84.61**	**345**	P		**P**		**06 45 16.9**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=343,slow=5.8,SNR=4.5								
CMAR	**Chiang Mai Arr**	**84.61**	**345**	P		**P**		**06 45 17.0**	**+1.1**

*GCG **09** 06:45:34.4±0.9, 13°.19N×91°.14W, h0km±37km, MD3.9*
*SNET **09** 06:45:35.8±1.2, 13°.17N×91°.02W, h14km±8km, ML3.2*
ISC 09 06:45:33.9±2.5, 13°.1N±0°.1×91°.09W±0°.09, h10km, n18, σ0§81/22, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FUG	**Fuego 3**	**1.40**	**10**	*eP*		**Pn**	**06 45 58.9**	**-0.7**
FUG				*eS*		**Sn**	**06 46 17.7**	**-0.5**
PCG	**Pacaya**	**1.40**	**20**	*eP*		**Pg**	**06 46 02.2**	**+1.4**
ERG	**Entre ros, C**	**1.44**	**341**	*eP*		**Pn**	**06 45 59.2**	**-0.9**
NUBE	**Las Nubes**	**1.52**	**57**	*eP*		**Pn**	**06 45 59.9**	**-1.5**
NUBE				*eS*		**Sn**	**06 46 19.8**	**-1.6**
NBG	**Las Nubes**	**1.68**	**26**	*eP*		**Pn**	**06 46 04.0**	**+0.4**
NBG				*eS*		**Sg**	**06 46 28.1**	**+0.2**
CEDA	**San Andres**	**1.81**	**66**	*eP*		**Pn**	**06 46 05.7**	**+0.5**
CEDA				*eS*		**Sn**	**06 46 26.9**	**-1.4**
CEDA				IAML			06 46 45.2	
	comp=Z,377nm,0.5s							
TACO	**Tacachico**	**1.92**	**62**	*eP*		**Pn**	**06 46 06.3**	**-0.3**
LFRS	**El Faro**	**2.06**	**74**	*eP*		**Pn**	**06 46 09.2**	**+0.6**
MTO3	**Montecristo**	**2.14**	**52**	*eP*		**Pn**	**06 46 09.6**	**-0.4**
PAVA	**Las Pavas**	**2.20**	**73**	*eP*		**Pn**	**06 46 11.0**	**+0.4**
COEG	**Centro de Oper**	**2.22**	**75**	*eP*		**Pn**	**06 46 10.7**	**-0.2**
COEG				IAML			06 46 23.6	
	comp=Z,157nm,0.4s							
ESQI	**Esquipulas**	**2.26**	**49**	*eP*		**Pn**	**06 46 11.8**	**+0.3**
HUEH	**Huehuetenango**	**2.27**	**350**	*eP*		**Pn**	**06 46 11.9**	**+0.1**
ALJI	**Alcalda de J**	**2.47**	**84**	*eP*		**Pn**	**06 46 13.9**	**-0.4**
COEB	**Comit de Eme**	**2.53**	**80**	*eP*		**Pn**	**06 46 14.8**	**-0.4**
COEB				IAML			06 46 37.8	
	comp=Z,71nm,0.4s							
PACA	**Pacayal**	**2.73**	**81**	*eP*		**Pn**	**06 46 18.2**	**+0.3**
LCND	**La Caada**	**3.13**	**85**	*eP*		**Pn**	**06 46 22.9**	**-0.5**
LCND				IAML			06 46 32.0	
	comp=Z,66nm,0.5s							
CSGN	**Cosiguina Volc**	**3.45**	**91**	*eP*		**Pn**	**06 46 28.1**	**+0.3**

*UCR **09** 07:03:48.5±0.8, 13°.10N×89°.09W, h47km±8km, ML3.7*
*INET **09** 07:03:48.9, 13°.16N×88°.99W, h15km, ML3.1*
*SNET **09** 07:03:48.4±0.9, 13°.10N×89°.09W, h46km±10km, ML3.6*
*GCG **09** 07:03:58.8±0.4, 14°.11N×89°.09W, h64km±28km, MD3.9*
ISC 09 07:03:49.1±5.6, 13°.08N±0°.07×89°.08W±0°.04, h39km±11km, n65, σ0§61/101, 2C-18D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LFRS	**El Faro**	**0.55**	**2**	*eP*		**Pn**	**07 03 60.0**	**-0.6**
LFRS				*eS*		**Sn**	**07 04 08.6**	**+0.1**
LFRS	**El Faro**	**0.55**	**2**	*eP*		**Pn**	**07 03 60.0**	**-0.6**
LFRS				*eS*		**Sn**	**07 04 08.6**	**+0.1**
ALJI	**Alcalda de J**	**0.56**	**63**	*eP*		**Pn**	**07 04 00.5**	**-0.1**
ALJI				*eS*		**Sn**	**07 04 09.3**	**+0.6**
ALJI				IAML			07 04 09.6	
	comp=Z,4μm,0.1s							
ALJI	**Alcalda de J**	**0.56**	**63**	*eP*		**Pn**	**07 04 00.5**	**-0.1**
ALJI				*eS*		**Sn**	**07 04 09.3**	**+0.6**
ALJI				IAML			07 04 09.6	
	comp=Z,4μm,0.1s							
COEG	**Centro de Oper**	**0.58**	**20**	*iP*		**Pn**	**07 04 00.3**	**-0.7**
COEG				*eS*		**Sn**	**07 04 10.0**	**+0.8**
COEG	**Centro de Oper**	**0.58**	**20**	*iP*		**Pn**	**07 04 00.3**	**-0.7**
COEG				*eS*		**Sn**	**07 04 10.0**	**+0.8**
AEIL	**Aeropuerto Ilo**	**0.62**	**357**	*eP*		**Pn**	**07 04 01.1**	**-0.4**
AEIL				*eS*		**Sn**	**07 04 11.0**	**+0.7**
AEIL				IAML			07 04 14.5	
	comp=Z,3μm,0.2s							
AEIL	**Aeropuerto Ilo**	**0.62**	**357**	*eP*		**Pn**	**07 04 01.1**	**-0.4**
AEIL				*eS*		**Sn**	**07 04 11.0**	**+0.7**
AEIL				IAML			07 04 14.5	
	comp=Z,3μm,0.2s							
SNET	**Serv Nac Est T**	**0.62**	**347**	*eP*		**Pn**	**07 04 00.8**	**-0.8**
SNET				*eS*		**Sn**	**07 04 10.6**	**+0.1**
SNET				IAML			07 04 11.4	
	comp=Z,2μm,0.1s							
SNET	**Serv Nac Est T**	**0.62**	**347**	*eP*		**Pn**	**07 04 00.8**	**-0.8**
SNET				*eS*		**Sn**	**07 04 10.6**	**+0.1**
SNET				IAML			07 04 11.4	
	comp=Z,2μm,0.1s							
UTEC	**Universidad Te**	**0.63**	**349**	*eP*		**Pn**	**07 04 01.0**	**-0.8**
UTEC				*eS*		**Sn**	**07 04 10.9**	**+0.3**
UTEC				IAML			07 04 13.1	
	comp=Z,2μm,0.1s							
UTEC	**Universidad Te**	**0.63**	**349**	*eP*		**Pn**	**07 04 01.0**	**-0.8**
UTEC				*eS*		**Sn**	**07 04 10.9**	**+0.3**
UTEC				IAML			07 04 13.1	
	comp=Z,2μm,0.1s							
UDBS	**Universidad Do**	**0.64**	**354**	*eP*		**Pn**	**07 04 01.3**	**-0.5**
UDBS				*eS*		**Sn**	**07 04 10.7**	**-0.1**
UDBS	**Universidad Do**	**0.64**	**354**	*eP*		**Pn**	**07 04 01.3**	**-0.5**
UDBS				*eS*		**Sn**	**07 04 10.7**	**-0.1**
OPAM	**Oficina de Pla**	**0.64**	**350**	*eP*		**Pn**	**07 04 01.2**	**-0.6**
OPAM				IAML			07 04 12.9	
	comp=Z,4μm,0.1s							
OPAM	**Oficina de Pla**	**0.64**	**350**	*eP*		**Pn**	**07 04 01.2**	**-0.6**
OPAM				IAML			07 04 12.9	
	comp=Z,4μm,0.1s							
PAVA	**Las Pavas**	**0.65**	**13**	*iP*		**Pn**	**07 04 01.6**	**-0.4**
PAVA				*eS*		**Sn**	**07 04 11.8**	**+0.7**
PAVA				IAML			07 04 13.8	
	comp=Z,2μm,0.1s							
PAVA	**Las Pavas**	**0.65**	**13**	*iP*		**Pn**	**07 04 01.6**	**-0.4**
PAVA				*eS*		**Sn**	**07 04 11.8**	**+0.7**
PAVA				IAML			07 04 13.8	
	comp=Z,2μm,0.1s							
UESS	**Universidad de**	**0.65**	**350**	*eP*		**Pn**	**07 04 01.4**	**-0.5**
UESS				IAML			07 04 14.1	
	comp=Z,3μm,0.2s							
UESS	**Universidad de**	**0.65**	**350**	*eP*		**Pn**	**07 04 01.4**	**-0.5**
UESS				IAML			07 04 14.1	
	comp=Z,3μm,0.2s							
UEES	**Universidad Ev**	**0.66**	**347**	*eP*		**Pn**	**07 04 01.4**	**-0.6**
UEES				*eS*		**Sn**	**07 04 11.7**	**+0.5**
UEES	**Universidad Ev**	**0.66**	**347**	*eP*		**Pn**	**07 04 01.4**	**-0.6**
UEES				*eS*		**Sn**	**07 04 11.7**	**+0.5**
LBRS	**Las Brisas**	**0.66**	**3**	*eP*		**Pn**	**07 04 01.8**	**-0.3**
LBRS				*eS*		**Sn**	**07 04 10.7**	**-0.6**
LBRS	**Las Brisas**	**0.66**	**3**	*eP*		**Pn**	**07 04 01.8**	**-0.3**
LBRS				*eS*		**Sn**	**07 04 10.7**	**-0.6**
LFU	**La Fuente**	**0.67**	**357**	*eP*		**Pn**	**07 04 01.9**	**-0.4**
LFU				*eS*		**Sn**	**07 04 11.1**	**-0.4**
LFU	**La Fuente**	**0.67**	**357**	*eP*		**Pn**	**07 04 01.9**	**-0.4**
LFU				*eS*		**Sn**	**07 04 11.1**	**-0.4**
COEB	**Comit de Eme**	**0.68**	**52**	*iP*		**Pn**	**07 04 02.0**	**-0.4**
COEB				*eS*		**Sn**	**07 04 12.7**	**+0.9**
COEB	**Comit de Eme**	**0.68**	**52**	*iP*		**Pn**	**07 04 02.0**	**-0.4**
COEB				*eS*		**Sn**	**07 04 12.7**	**+0.9**
BOQS	**Boqueron**	**0.68**	**344**	*eP*		**Pn**	**07 04 02.0**	**-0.5**
BOQS				*eS*		**Sn**	**07 04 12.4**	**+0.4**
BOQS	**Boqueron**	**0.68**	**344**	*eP*		**Pn**	**07 04 02.0**	**-0.5**
BOQS				*eS*		**Sn**	**07 04 12.4**	**+0.4**
TECA	**Tecapa**	**0.70**	**54**	*eP*		**Pn**	**07 04 02.2**	**-0.5**
TECA				*eS*		**Sn**	**07 04 13.1**	**+0.7**
TECA	**Tecapa**	**0.70**	**54**	*eP*		**Pn**	**07 04 02.2**	**-0.5**
TECA				*eS*		**Sn**	**07 04 13.1**	**+0.7**
CEDA	**San Andres**	**0.78**	**337**	*eP*		**Pn**	**07 04 03.1**	**-0.6**
CEDA				IAML			07 04 17.7	
	comp=Z,2μm,0.3s							
CEDA	**San Andres**	**0.78**	**337**	*eP*		**Pn**	**07 04 03.1**	**-0.6**
CEDA				IAML			07 04 17.7	
	comp=Z,2μm,0.3s							
PACA	**Pacayal**	**0.84**	**62**	*eP*		**Pn**	**07 04 04.3**	**-0.1**
PACA	**Pacayal**	**0.84**	**62**	*eP*		**Pn**	**07 04 04.3**	**-0.1**
LCY	**Lacayo**	**0.84**	**66**	*eP*		**Pn**	**07 04 04.1**	**-0.4**
LCY	**Lacayo**	**0.84**	**66**	*eP*		**Pn**	**07 04 04.1**	**-0.4**
VSM	**San Miguel**	**0.86**	**66**	*eP*		**Pn**	**07 04 04.6**	**-0.4**
VSM	**San Miguel**	**0.86**	**66**	*eP*		**Pn**	**07 04 04.6**	**-0.4**
SBLS	**San Blas**	**0.92**	**325**	*eP*		**Pn**	**07 04 05.2**	**-0.6**
SBLS				*eS*		**Sn**	**07 04 18.1**	**+0.1**
SBLS	**San Blas**	**0.92**	**325**	*eP*		**Pn**	**07 04 05.2**	**-0.6**
SBLS				*eS*		**Sn**	**07 04 18.1**	**+0.1**
TACO	**Tacachico**	**0.93**	**344**	*iP*		**Pn**	**07 04 05.0**	**-0.7**
TACO				*eS*		**Sn**	**07 04 18.0**	**+0.2**
TACO	**Tacachico**	**0.93**	**344**	*iP*		**Pn**	**07 04 05.0**	**-0.7**
TACO				*eS*		**Sn**	**07 04 18.0**	**+0.2**
SNJE	**San Jose**	**0.94**	**327**	*eP*		**Pn**	**07 04 05.3**	**-0.7**
SNJE	**San Jose**	**0.94**	**327**	*eP*		**Pn**	**07 04 05.3**	**-0.7**
RTR	**El Retiro**	**0.98**	**326**	*eP*		**Pn**	**07 04 06.1**	**-0.5**
RTR	**El Retiro**	**0.98**	**326**	*eP*		**Pn**	**07 04 06.1**	**-0.5**
UNIC	**Universidad Ca**	**1.01**	**333**	*eP*		**Pn**	**07 04 06.4**	**-0.4**
UNIC				*eS*		**Sn**	**07 04 19.8**	**0.0**
UNIC	**Universidad Ca**	**1.01**	**333**	*eP*		**Pn**	**07 04 06.4**	**-0.4**
UNIC				*eS*		**Sn**	**07 04 19.8**	**0.0**
NUBE	**Las Nubes**	**1.06**	**321**	*eP*		**Pn**	**07 04 06.8**	**-0.9**
NUBE				*eS*		**Sn**	**07 04 20.6**	**-0.7**
NUBE				IAML			07 04 22.7	
	comp=Z,1μm,0.2s							
NUBE	**Las Nubes**	**1.06**	**321**	*eP*		**Pn**	**07 04 06.8**	**-0.9**
NUBE				*eS*		**Sn**	**07 04 20.6**	**-0.7**
NUBE				IAML			07 04 22.7	
	comp=Z,1μm,0.2s							
LCND	**La Caada**	**1.18**	**79**	*eP*		**Pn**	**07 04 08.6**	**-0.6**
LCND				IAML			07 04 26.2	
	comp=Z,2μm,0.3s							
LCND	**La Caada**	**1.18**	**79**	*eP*		**Pn**	**07 04 08.6**	**-0.6**
LCND				IAML			07 04 26.2	
	comp=Z,2μm,0.3s							
MTO3	**Montecristo**	**1.34**	**348**	*eP*		**Pn**	**07 04 11.0**	**-0.5**
MTO3	**Montecristo**	**1.34**	**348**	*eP*		**Pn**	**07 04 11.0**	**-0.5**
CSGN	**Cosiguina Volc**	**1.49**	**94**	*eP*		**Pn**	**07 04 12.5**	**-0.9**
CSGN	**Cosiguina Volc**	**1.49**	**94**	*eP*		**Pn**	**07 04 12.5**	**-0.9**
ESQI	**Esquipulas**	**1.50**	**350**	*eP*		**Pn**	**07 04 13.3**	**-0.2**
NBG	**Las Nubes**	**1.94**	**321**	*eP*		**Pn**	**07 04 22.2**	**+2.4**
TGUH	**Tegucigalpa,Un**	**2.01**	**61**	*eP*		**Pn**	**07 04 20.0**	**-0.6**
TGUH	**Tegucigalpa,Un**	**2.01**	**61**	*eP*		**Pn**	**07 04 20.0**	**-0.6**
MRL	**Marmol**	**2.08**	**344**	*eP*		**Pn**	**07 04 22.5**	**+0.9**
MRL				*eS*		Sn	07 04 35.6	-11
FUG	**Fuego 3**	**2.19**	**309**	*eP*		Pn	07 04 27.3	+4.3
FUG				*eS*		**Sn**	**07 04 49.7**	**+0.7**
STG3	**Santiaguito 3,**	**2.91**	**304**	*eS*		**Sn**	**07 05 08.2**	**+1.2**

*BJI **09** 07:12:01.8±0.0, 52°.06S×139°.53E, h10km, mB5.5/17, mb5.1/25, Ms5.2/16, Ms7 4.9/15*
*IDC **09** 07:12:03.3±0.5, 51°.55S×139°.74E, h0km, mb4.6/14, mb1 4.7/15, mb1mx4.7/18, mbtmp4.6/15, ML5.1/1, MS4.8/25, Ms1 4.8/25, ms1mx4.8/28, Error ellipse: s-maj=19.9km s-min=14.2km az=87.0*
*NEIC **09** 07:12:05.0±1.8, 51°.59S±0°.08×139°.7E±0°.2, h10km±1km, mb5.1/22, Ms_20 5.0/161, Error ellipse: s-maj=16.5km s-min=13.7km az=90.0*
*GCMT **09** 07:12:05.9±0.1, 51°.59S±0°.01×139°.59E±0°.01, h12km, MW5.4/138, Moment Tensor Solution. s109,c183; s138,c253; Duration: 1§2 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.13±.02; $M_{\theta\theta}$=0.22±.02; $M_{\phi\phi}$=-0.08±.02; $M_{r\theta}$=-0.08±.04; $M_{r\phi}$=-1.37±.01; $M_{\theta\phi}$=-0.02±.04; Best double couple: $M_0$1.38100×10^{17} NP1:ϕ_s357.00000°, δ87.00000°, λ=-1.00000°. NP2:ϕ_s87.00000°, δ89.00000°, λ=-177.00000°. Principal axes: T 1.4440, Plg2.0000°, Azm222.0000°; N -0.1250, Plg86.0000°, Azm107.0000°; P -1.3180, Plg3.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **09** 07:12:05.3±1.1, 51°.25S×139°.44E, h10km, mb5.0/13, MS5.1/6 Error ellipse: s-maj=24.4km s-min=8.5km az=87.0*
ISC 09 07:12:04.9±0.3, 51°.62S±0°.05×139°.63E±0°.06, h10km, n512, σ1§13/424, mb5.0/38, MS5.0/107, 1C-3D, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TAU	**Tasmania Unive**	**10.15**	**34**	P		**Pn**	**07 14 30.9**	**+0.3**
TAU	**Tasmania Unive**	**10.15**	**34**	Pn		**Pn**	**07 14 30.9**	**+0.3**
MOO	**Moorlands**	**10.52**	**32**	P		**Pn**	**07 14 36.8**	**+1.1**
	baz=10,SNR=5.9							
MCQ	**Macquarie Isla**	**11.97**	**112**	P		**Pn**	**07 14 56.9**	**+1.5**
MCQ	**Macquarie Isla**	**11.97**	**112**	Pn		**Pn**	**07 14 54.5**	**-0.9**
TOO	**Toolangi**	**14.64**	**19**	P		**Pn**	**07 15 31.9**	**-0.1**
	baz=15,SNR=8.5							
TOO	**Toolangi**	**14.64**	**19**	P		**Pn**	**07 15 32.0**	**-0.1**
TOO	**Toolangi**	**14.64**	**19**	Pn		**Pn**	**07 15 32.0**	**-0.1**
CAN	**Canberra**	**17.63**	**26**	P		**Pn**	**07 16 08.5**	**-2.0**
CAN	**Canberra**	**17.63**	**26**	Pn		**Pn**	**07 16 08.5**	**-2.0**
CNB	**Canberra Magne**	**17.73**	**27**	P		**P**	**07 16 13.8**	**+1.1**
	baz=18,SNR=4.4							
HTT	**Hallett**	**18.18**	**358**	P		**P**	**07 16 17.8**	**+0.1**
	baz=18,SNR=5.6							
YNG	**Young**	**18.44**	**24**	P		**Pn**	**07 16 20.7**	**+0.3**
	baz=18,SNR=9.6							
PYZ	**Puysegur Point**	**18.55**	**84**	P		**P**	**07 16 19.5**	**-2.0**
BBOO	**Buckleboo**	**18.98**	**351**	P		**Pn**	**07 16 26.8**	**-0.1**
	baz=19,SNR=7.4							
BBOO	**Buckleboo**	**18.98**	**351**	P		**P**	**07 16 26.2**	**-0.1**
WHZ	**Wether Hill Ro**	**19.46**	**84**	P		**P**	**07 16 31.5**	**0.0**
STKA	**Stephens Creek**	**19.78**	**5**	P		**P**	**07 16 35.0**	**-0.1**
	3.0nm,0.3s,baz=167,slow=11,SNR=71							
STKA				LR		LR	07 22 59.0	
	comp=Z,3μm,20.1s,baz=182,slow=33							
STKA	**Stephens Creek**	**19.78**	**5**	P		**P**	**07 16 35.0**	**-0.1**
	baz=20,SNR=33							
STKA	**Stephens Creek**	**19.78**	**5**	P		**P**	**07 16 34.8**	**-0.3**
MLZ	**Mavora Lakes**	**19.81**	**83**	P		**P**	**07 16 34.0**	**-1.4**
CMSA	**Cobar Meteorol**	**20.56**	**15**	P		**P**	**07 16 43.8**	**+0.3**
	baz=20,SNR=30							
WKZ	**Wanaka**	**20.63**	**82**	P		**P**	**07 16 42.8**	**-1.5**
CASY	**Casey**	**20.70**	**214**	P		**P**	**07 16 44.0**	**-0.9**
CASY	**Casey**	**20.70**	**214**	IAMs_20		IAMs_20	07 22 52.6	
	comp=Z,7μm,20.0s							
ODZ	**Otahua Downs**	**21.53**	**84**	P		**P**	**07 16 53.8**	**-0.1**
ODZ				IAMs_20		IAMs_20	07 23 45.9	
	comp=Z,4μm,18.0s							
LBZ	**Lake Benmore**	**21.57**	**82**	P		**P**	**07 16 54.5**	**+0.1**
LBZ				IAmb		IAmb	07 17 03.6	
	comp=Z,139nm,1.4s							
LBZ				IAMs_20		IAMs_20	07 23 03.0	
	comp=Z,4μm,19.0s							
RPZ	**Rata Peaks**	**22.45**	**82**	P		**P**	**07 17 03.2**	**-0.7**
	comp=Z,77nm,1.1s,baz=193,slow=2.7,SNR=11							
RPZ				LR		LR	07 23 51.2	
	comp=Z,4μm,20.1s,baz=242,slow=32							
RPZ	**Rata Peaks**	**22.45**	**82**	P		**P**	**07 17 03.5**	**-0.4**
RPZ				IAMs_20		IAMs_20	07 23 30.4	
	comp=Z,4μm,20.0s							
FORT	**Forrest**	**22.51**	**333**	P		**P**	**07 17 04.4**	**-0.1**
	baz=22,SNR=21							
FORT	**Forrest**	**22.51**	**333**	P		**P**	**07 17 02.9**	**-1.6**
FORT				IAMs_20		IAMs_20	07 23 41.0	
	comp=Z,4μm,22.0s							
ARMA	**Armidale**	**22.97**	**27**	P		**P**	**07 17 09.6**	**+0.1**
	baz=23,SNR=13							
ARMA	**Armidale**	**22.97**	**27**	P		**P**	**07 17 09.1**	**-0.5**
MQZ	**McQueen's Vall**	**23.45**	**83**	P		**P**	**07 17 13.9**	**-0.2**
MQZ				IAmb		IAmb	07 17 17.6	
	comp=Z,76nm,1.4s							
MQZ				IAMs_20		IAMs_20	07 24 09.7	
	comp=Z,4μm,21.0s							
LTZ	**Lake Taylor**	**23.70**	**81**	P		**P**	**07 17 15.2**	**-1.6**
LHI	**Lord Howe Isla**	**24.65**	**43**	P		**P**	**07 17 24.9**	**-0.6**
	baz=25							
THZ	**Tophouse**	**24.66**	**80**	P		**P**	**07 17 26.0**	**+0.3**
KHZ	**Kahutara**	**24.69**	**82**	P		**P**	**07 17 25.5**	**-0.2**
H01W1	**Cape Leeuwin H**	**24.78**	**302**	T		T	07 43 14.8	
	baz=139,slow=75,SNR=2066							
H01W2	**Cape Leeuwin H**	**24.79**	**302**	T		T	07 43 15.5	
	baz=139,slow=75,SNR=2099							
H01W3	**Cape Leeuwin H**	**24.80**	**302**	T		T	07 43 16.0	
	baz=139,slow=75,SNR=2172							
NWAO	**Narrogin (SRO)**	**24.80**	**310**	P		**P**	**07 17 26.0**	**-0.9**
	comp=Z,32nm,1.2s,baz=147,slow=13,SNR=3.8							
NWAO				LR		LR	07 24 51.3	
	comp=Z,5μm,20.9s,baz=126,slow=31							
NWAO	**Narrogin (SRO)**	**24.80**	**310**	P		**P**	**07 17 25.5**	**-1.4**
NWAO				pmax		pmax		
	comp=Z,56nm,1.3s							
NWAO	**Narrogin (SRO)**	**24.80**	**310**	P		**P**	**07 17 25.4**	**-1.4**
NWAO				IAmb		IAmb	07 17 31.5	
	comp=Z,56nm,1.2s							
NWAO	**Narrogin (SRO)**	**24.80**	**310**	IAMs_20		IAMs_20	07 24 29.0	
	comp=Z,4μm,21.0s							
QRZ	**Quartz Range**	**24.98**	**77**	P		**P**	**07 17 28.6**	**+0.1**
QLP	**Quilpie**	**25.25**	**10**	P		**P**	**07 17 31.2**	**+0.3**
	baz=25,SNR=4.6							
NNZ	**Nelson**	**25.27**	**79**	P		**P**	**07 17 30.9**	**-0.2**
BSWZ	**Blackbirch Sta**	**25.29**	**80**	P		**P**	**07 17 30.5**	**-0.7**
KLBR	**Kellerberrin**	**25.67**	**313**	P		**P**	**07 17 34.1**	**-0.7**
	baz=26,SNR=5.4							
RMQ	**Roma**	**26.04**	**19**	P		**P**	**07 17 38.1**	**0.0**
	baz=26,SNR=16							
MUN	**Mundaring**	**26.07**	**310**	P		**P**	**07 17 37.8**	**-0.6**
	baz=26,SNR=3.5							
VNDA	**Vanda**	**27.29**	**170**	P		**P**	**07 17 48.7**	**-0.4**
	comp=Z,5.1nm,1.0s,baz=328,slow=10,SNR=19							
VNDA				LR		LR	07 26 49.1	
	comp=Z,2μm,18.0s,baz=337,slow=32							
EIDS	**Eidsvold**	**27.63**	**23**	P		**P**	**07 17 52.4**	**-0.1**
	baz=28,SNR=5.7							
EIDS	**Eidsvold**	**27.63**	**23**	P		**P**	**07 17 51.7**	**-0.8**
WRKA	**Warakurna**	**27.92**	**338**	P		**P**	**07 17 53.9**	**-1.3**
	baz=28,SNR=12							
ASAR	**Alice Springs**	**28.25**	**349**	P		**P**	**07 17 56.3**	**-1.8**
	comp=Z,5.2nm,0.8s,baz=166,slow=9.9,SNR=33							
ASAR				PcP		**PcP**	**07 21 09.7**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=173,slow=2.4,SNR=4.9							
ASAR				LR		LR	07 28 20.4	
	comp=Z,1μm,18.4s,baz=169,slow=35							
ASAR	**Alice Springs**	**28.25**	**349**	P		**P**	**07 17 56.7**	**-1.4**
AS31	**Alice Springs**	**28.25**	**349**	P		**P**	**07 17 56.7**	**-1.5**
BKZ	**Black Stump Fm**	**28.41**	**79**	IAMs_20		IAMs_20	07 27 06.0	
	comp=Z,3μm,19.0s							
MORW	**Morawa**	**28.59**	**313**	IAMs_20		IAMs_20	07 27 02.2	
	comp=Z,4μm,20.0s							

comp=Z,33nm,1.0s
PMG MLR MLR
comp=Z,3µm,19.0s
PMG Port Moresby 42.54 11 P **P** **07 19 58.4 -2.2**
BATI Baumata 43.31 337 LR LR 07 38 30.6
comp=Z,2µm,18.6s,baz=192,slow=37
BATI Baumata 43.31 337 P **P** **07 20 08.0 +1.1**
comp=Z,25nm,0.9s
SOEI Soe 43.60 338 P **P** **07 20 11.3 +2.0**
comp=Z,1µmcomp=Z,43nm,1.4s
SOEI Soe 43.60 338 P **P** **07 20 07.8 -1.5**
SOEI IAmb IAmb 07 20 33.5
comp=Z,55nm,1.1s
MMRI Maumere 45.18 335 IAMs_20 IAMs_20 07 37 39.0
comp=Z,1µm,19.0s
EDFI Ende, Flores 45.21 335 P **P** **07 20 23.4 +1.2**
comp=Z,10nm,1.4s
MSVF Nonsavu 45.39 56 IAMs_20 IAMs_20 07 35 45.9
comp=Z,2µm,19.0s
SYO Syowa Base 46.36 209⇑ *i*P **P** **07 20 28.6 -1.9**
SYO Syowa Base 46.36 209⇓ *e*P **P** **07 20 32.1 +1.6**
BKSI Bulukumba 48.91 334 P **P** **07 20 53.8 +2.8**
comp=Z,22nm,0.5s
KAPI Kappang 49.31 333 P **P** **07 20 53.4 -0.6**
KAPI Kappang 49.31 333 P **P** **07 20 53.4 -0.6**
KAPI Kappang 49.31 333 IAMs_20 IAMs_20 07 40 46.5
comp=Z,1µm,20.0s
MANU Manus Island 49.83 10 IAMs_20 IAMs_20 07 40 39.5
comp=Z,1µm,20.0s
SPSI Sidrap Palu 50.31 334 P **P** **07 21 03.2 +1.6**
comp=Z,30nm,1.4s
BELA Belgrano 2 50.73 182 P **P** **07 21 03.8 -0.3**
TTSI Tana Toraja 51.17 334 P P 07 21 13.6 +5.5
BBKI Banjar Baru 52.27 328 P P 07 21 22.7 +6.3
NVL N'lazarevskaya 52.34 199 *e*P **P** **07 21 16.7 +0.5**
NVL *e*S **S** **07 28 38.7 -2.4**
NVL pmax pmax
comp=Z,14nm,1.0s
NVL MLR MLR
comp=Z,3µm,13.0s
LUWI Luwuk 52.36 339 P **P** **07 21 16.1 -0.9**
LUWI IAMs_20 IAMs_20 07 42 58.3
comp=Z,1µm,19.0s
BKB Balikpapan 53.70 331 IAMs_20 IAMs_20 07 43 17.8
comp=Z,1µm,18.0s
SNAA Sanae 54.18 194 *i* P **P** **07 21 29.9 +0.1**
SNAA pmax pmax
comp=Z,13nm,1.1s
SNAA Sanae 54.18 194 P **P** **07 21 29.9 +0.1**
MPSI Mapaga 54.39 335 P **P** **07 21 32.7 +0.8**
comp=Z,3µmcomp=Z,14nm,0.9s
CRZF Crozet Islands 54.45 238 IAMs_20 IAMs_20 07 41 14.4
comp=Z,1µm,18.0s
PMBI Palembang 56.59 317 IAMs_20 IAMs_20 07 41 47.3
comp=Z,1µm,21.0s
STKI Sintang 56.72 326 P **P** **07 21 50.4 +1.8**
SBUM Sibu 58.68 327 P **P** **07 22 02.3 -0.2**
SBUM Sibu 58.68 327 P **P** **07 22 04.0 +1.5**
MYLDM Lahad Datu 59.40 335 P **P** **07 22 06.9 -0.5**
MYLDM IAmb IAmb 07 22 33.2
comp=Z,27nm,1.3s
TBI Tubuai 60.30 91 *e*S **S** **07 30 30.7 +2.9**
comp=Z,129nm,26.8s
TBI *e*LQ LQ 07 37 26.2
comp=Z,1µm,28.2s
TBI *e*LR LR 07 39 59.8
comp=Z,517nm,35.0s,baz=214
KKM Kota Kinabalu 60.84 333 IAMs_20 IAMs_20 07 48 23.6
comp=Z,919nm,22.0s
BKNI Bangkinang 61.13 315 IAMs_20 IAMs_20 07 45 38.4
comp=Z,800nm,21.0s
MYKOM Kota Tinggi 61.23 318 IAMs_20 IAMs_20 07 47 01.3
comp=Z,1µm,20.0s
RPSI Rantau Prapat 64.18 314 IAMs_20 IAMs_20 07 46 45.3
comp=Z,965nm,20.0s
PPT2 Papeete2 64.50 86 *e*S **S** **07 31 20.8 -0.3**
comp=Z,478nm,28.8s
PPT2 *e*LQ LQ 07 38 57.0
comp=Z,3µm,31.5s
PPT2 *e*LR LR 07 41 55.2
comp=Z,788nm,25.2s,baz=219
PPT Papeete 64.52 86 LR LR 07 44 06.1
comp=Z,242nm,21.5s,baz=232,slow=30
IPM Ipoh 64.84 317 P **P** **07 22 43.6 -0.5**
IPM IAMs_20 IAMs_20 07 48 26.0
comp=Z,655nm,20.0s
IPM Ipoh 64.84 317 P **P** **07 22 44.0 0.0**
KCSI Kotacane, Aceh 65.43 313 P P 07 22 54.2 +6.4
KULM Kulim 65.73 317 P **P** **07 22 48.8 -1.0**
KULM IAMs_20 IAMs_20 07 48 24.5
comp=Z,800nm,20.0s
KULM Kulim 65.73 317 P **P** **07 22 49.0 -0.7**
TGY Tagaytay City 67.44 340 LR LR 07 52 42.2
comp=Z,314nm,21.3s,baz=305,slow=36
RKT Rikitea 69.43 101 *e*S **S** **07 32 21.4 +1.1**
comp=Z,188nm,36.0s
RKT *e*LQ LQ 07 41 04.5
comp=Z,2µm,30.5s
RKT *e*LR LR 07 44 15.8
comp=Z,610nm,28.0s
H08S2 Diego Garcia H 69.91 283 T T 08 39 35.8
baz=142,slow=76,SNR=44
H08S1 Diego Carcia H 69.92 283 T T 08 39 37.8
baz=142,slow=76,SNR=24
H08S3 Diego Garcia H 69.93 283 T T 08 39 35.1
baz=142,slow=76,SNR=179
UBPT Khong Chiam 72.95 325 IAMs_20 IAMs_20 07 54 04.7
comp=Z,684nm,20.0s
QIZ Qiongzhong 75.02 331 P **P** **07 23 46.4 0.0**
QIZ sP **pwP** **07 23 52.7 0.0**
QIZ S **S** **07 33 27.9 +3.8**
QIZ sS **sS** **07 33 32.8 +4.5**
QIZ SS **SS** **07 38 15.9 +2.4**
QIZ LR LR
comp=Z,290nm,10.0s
QIZ LR LR
comp=Z,450nm,11.2s
QIZ LR LR
comp=Z,460nm,18.8s
ABPO Ambohimpanom 76.79 256 IAMs_20 IAMs_20 07 50 14.7
comp=Z,898nm,19.0s
TAOE Nuku Hiva Isla 77.04 88 *e*LR LR 07 47 44.8
comp=Z,587nm,25.4s
CMAR Chiang Mai Arr 78.31 321 P **P** **07 24 05.7 +0.7**
comp=Z,1.5nm,0.3s,baz=176,slow=4.9,SNR=8.9
CMAR LR LR 07 58 06.5
comp=Z,640nm,20.0s,baz=207,slow=35
CMAR Chiang Mai Arr 78.31 321 *e*P **P** **07 24 06.5 +1.5**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR Chiang Mai Arr 78.31 321 P **P** **07 24 05.0 0.0**
CHTO Chiang Mai 78.63 321 P **P** **07 24 06.3 -0.5**
CHTO pmax pmax
comp=Z,29nm,1.5s
CHTO MLR MLR
comp=Z,600nm,20.0s
CHTO Chiang Mai 78.63 321 P **P** **07 24 06.3 -0.5**
CHTO IAmb IAmb 07 24 20.4
comp=Z,29nm,1.4s
CHTO Chiang Mai 78.63 321 IAMs_20 IAMs_20 07 58 15.2
comp=Z,610nm,20.0s
SLVN Son La 79.10 326 IAMs_20 IAMs_20 07 57 54.4
comp=Z,782nm,20.0s
BOSA Boshof 81.59 234 P **P** **07 24 24.3 +1.3**
comp=Z,5.3nm,0.9s,baz=164,slow=7.3,SNR=6.5
BOSA LR LR 07 53 09.1
comp=Z,1µm,21.2s,baz=144,slow=30
BOSA Boshof 81.59 234 IAmb IAmb 07 24 24.7
comp=Z,8.9nm,0.9s
LL01 San Ignacio de 82.33 157 P **P** **07 24 26.1 -0.4**
KMI Kunming 83.00 327⇓ *e*P **P** **07 24 27.6 -2.7**
KMI pP sP 07 24 33.4 0.0
KMI sP pwP 07 24 36.1 -0.5
KMI S **S** **07 34 41.0 -8.4**
KMI pmax pmax
comp=Z,14nm,0.5s
KMI pmax pmax
comp=Z,140nm,3.5s
KMI LR LR
comp=Z,410nm,18.1s
KMI LR LR
comp=Z,300nm,19.2s
KMI LR LR
comp=Z,610nm,19.5s
KMI Kunming 83.00 327 IAMs_20 IAMs_20 08 01 23.9
comp=Z,640nm,19.0s

PLCA Paso Flores 84.34 157 P **P** **07 24 37.0 0.0**
comp=Z,1.7nm,1.0s,baz=219,slow=12,SNR=3.4
PLCA LR LR 07 54 55.9
comp=Z,378nm,21.3s,baz=196,slow=30
PLCA Paso Flores 84.34 157 *e*P **P** **07 24 37.9 +0.9**
PLCA pmax pmax
comp=Z,2.0nm,0.9s
PLCA Paso Flores 84.34 157 IAmb IAmb 07 24 43.3
comp=Z,17nm,1.5s
LBTB Lobatse 84.35 236 P **P** **07 24 38.3 +1.0**
LBTB Lobatse 84.35 236 P **P** **07 24 38.3 +1.0**
JHJ Hachijo jima 2 84.37 0 LR LR 07 59 20.8
comp=Z,599nm,21.9s,baz=289,slow=34
JNU Nakatsue 84.73 353 LR LR 08 03 10.3
comp=Z,175nm,19.2s,baz=155,slow=36
WHN Wuhan 84.78 338⇓ P P 07 24 48.8 +10
NJ2 Nanjing 85.29 342 *e*P **P** **07 24 43.4 +1.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
ENH Enshi 85.74 334 P **P** **07 24 46.5 +2.7**
ENH IAmb IAmb 07 24 50.6
comp=Z,25nm,1.3s
LC01 Cunco 85.75 156 P **P** **07 24 45.3 +1.3**
JGF Kuroka 86.87 358 IAMs_20 IAMs_20 07 59 37.7
comp=Z,566nm,21.0s
SHL Shillong 87.53 318 P **P** **07 24 52.5 -0.4**
SHL Shillong 87.53 318 P **P** **07 24 52.5 -0.4**
SHL IAMs_20 IAMs_20 08 00 33.4
comp=Z,611nm,22.0s
MJAR Matsushiro Arr 87.80 359 P **P** **07 24 54.1 +0.4**
comp=Z,2.8nm,1.0s,baz=198,slow=5.8,SNR=4.4
MJAR LR LR 08 04 28.5
comp=Z,172nm,18.7s,baz=160,slow=36
MJAR Matsushiro Arr 87.80 359 P **P** **07 24 53.6 -0.1**
MJAR pmax pmax
comp=Z,11nm,1.3s
MJAR Matsushiro Arr 87.80 359 P **P** **07 24 53.5 -0.1**
MAJO Matsushiro 87.80 359 *i* P **P** **07 24 54.8 +1.1**
MAJO pmax pmax
comp=Z,11nm,1.1s
MAJO Matsushiro 87.80 359 P **P** **07 24 53.0 -0.7**
MAT Matsushiro 87.80 359 P **P** **07 24 52.6 -1.1**
MAT S **S** **07 35 38.6 +2.7**
MJB9 Matsu-Tunnel 87.80 359 IAMs_20 IAMs_20 07 56 50.1
comp=Z,322nm,19.0s
CD2 Chengdu 88.02 330 *e*P **P** **07 24 56.4 +1.5**
CD2 S **S** **07 35 42.5 +4.2**
CD2 pmax pmax
comp=Z,30nm,2.0s
CD2 pmax pmax
comp=Z,140nm,5.0s
CD2 LR LR
comp=Z,460nm,18.0s
CD2 LR LR
comp=Z,360nm,11.6s
CD2 LR LR
comp=Z,500nm,20.1s
H03S1 Juan Fernandez 88.42 149 T T 09 03 35.7
baz=201,slow=74,SNR=206
H03S2 Juan Fernandez 88.42 149 T T 09 03 34.4
baz=201,slow=74,SNR=212
H03S3 Juan Fernandez 88.44 149 T T 09 03 34.8
baz=201,slow=74,SNR=272
KSAR Wonju Array Be 89.28 351 P **P** **07 24 58.4 -2.2**
KSAR Wonju Array Be 89.28 351 P **P** **07 24 58.4 -2.2**
JSD Sado 89.29 359 P **P** **07 25 00.2 -0.4**
KSRS Korea Array 89.29 351 P **P** **07 25 00.8 +0.2**
comp=Z,1.7nm,0.8s,baz=176,slow=5.8,SNR=4.9
KSRS LR LR 08 04 27.3
comp=Z,274nm,21.6s,baz=154,slow=35
KSRS Korea Array 89.29 351 *e*P **P** **07 25 00.5 -0.1**
KSRS pmax pmax
comp=Z,2.0nm,0.8s
KS19 Wonju Array Si 89.34 351 P **P** **07 25 00.2 -0.8**
XAN Xi'an 89.46 335 P **P** **07 25 03.7 +2.1**
XAN pP pwP 07 25 11.4 +3.5
XAN pmax pmax
comp=Z,14nm,1.8s
XAN Xi'an 89.46 335 P **P** **07 25 00.4 -1.2**
XAN pmax pmax
comp=Z,28nm,1.4s
XAN Xi'an 89.46 335 P **P** **07 25 00.4 -1.2**
XAN Xi'an 89.46 335 IAMs_20 IAMs_20 08 09 59.4
comp=Z,392nm,18.0s
LSZ Lusaka 90.87 244 P **P** **07 25 09.6 +0.6**
LSZ Lusaka 90.87 244 P **P** **07 25 09.6 +0.6**
LZH Lanzhou 92.80 332 *e*P **P** **07 25 21.6 +4.3**
LZH pP pwP 07 25 25.2 +1.6
LZH sP sP 07 25 27.7 +7.3
LZH pmax pmax
comp=Z,27nm,1.2s
BJI Beijing 93.55 342 P **P** **07 25 23.0 +2.6**
BJI pmax pmax
comp=Z,4.0nm,1.2s
HHC Hu-ho-hao-te 95.28 339 *e*P **P** **07 25 28.2 -0.3**
HHC pmax pmax
comp=Z,24nm,1.0s
HHC pmax pmax
comp=Z,110nm,5.1s
USRK Ussuriysk Ar. 95.67 354 P **P** **07 25 31.4 +1.4**
comp=Z,0.8nm,0.6s,baz=193,slow=5.9,SNR=2.6
USRK LR LR 08 06 49.6
comp=Z,158nm,20.9s,baz=148,slow=34
MDJ Mudanjiang 96.25 353 P **P** **07 25 33.7 +1.1**
MDJ pmax pmax
comp=Z,3.0nm,0.7s
MDJ pmax pmax
comp=Z,110nm,3.6s
KMBO Kilima Mbogo 96.80 260 LR LR 08 01 32.7
comp=Z,466nm,20.2s,baz=100,slow=31
KMBO Kilima Mbogo 96.80 260 IAMs_20 IAMs_20 08 01 18.5
comp=Z,503nm,20.0s
HIA Hailar 101.93 347 IAMs_20 IAMs_20 08 14 51.4
comp=Z,316nm,19.0s
NIL Nilore 102.88 308 IAMs_20 IAMs_20 08 09 05.5
comp=Z,400nm,20.0s
ULN Ulaanbaatar 102.96 338 IAMs_20 IAMs_20 08 17 37.0
comp=Z,384nm,21.0s
ATD Arta Tunnel 103.15 272 IAMs_20 IAMs_20 08 05 38.0
comp=Z,379nm,18.0s
DAMY Dhamar 104.51 275 IAMs_20 IAMs_20 08 04 45.1
comp=Z,324nm,20.0s
UOSS Minazif 105.26 291 IAMs_20 IAMs_20 08 04 03.0
comp=Z,381nm,22.0s
KBL Kabul 105.68 306 IAMs_20 IAMs_20 08 07 43.9
comp=Z,401nm,21.0s
MAKZ Makanchi 109.82 322 IAMs_20 IAMs_20 08 19 33.1
comp=Z,252nm,20.0s
RAYN Ar Rayn 110.58 282 IAMs_20 IAMs_20 08 09 50.1
comp=Z,428nm,20.0s
BDFB Brasilia 112.70 172 IAMs_20 IAMs_20 08 16 37.4
comp=Z,498nm,20.0s
ZAA0 Zalesovo Array 114.73 328 IAMs_20 IAMs_20 08 17 54.5
comp=Z,249nm,21.0s
BRVK Borovoye 119.38 320 IAMs_20 IAMs_20 08 23 37.1
comp=Z,386nm,21.0s
BILL Bilibino 120.99 11 *i* PKIKP **PKiKP** **07 30 57.1 +1.0**
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL MLR MLR
comp=Z,239nm,16.0s
GEVA Gevas 122.61 292 IAMs_20 IAMs_20 08 20 55.4
comp=Z,419nm,20.0s
TJX Tijuana 122.65 78 IAMs_20 IAMs_20 08 32 45.7
comp=Z,251nm,19.0s
GNI Garni 122.88 295 IAMs_20 IAMs_20 08 17 32.6
comp=Z,291nm,21.0s
TIXI Tiksi 123.20 356 *i* PKIKP **PKiKP** **07 31 00.6 +0.3**
RMX La Rumorosa 123.31 78 IAMs_20 IAMs_20 08 08 44.1
comp=Z,357nm,21.0s
UABX UABC, Campus M 123.72 79 IAMs_20 IAMs_20 08 06 49.0
comp=Z,305nm,20.0s
ISA Isabella, Lake 123.95 74 PKIKP **PKPdf** **07 31 02.5 -0.3**
ISA Isabella, Lake 123.95 74 **PKPdf** **07 31 02.5 -0.3**
CWC Cottonwood Cre 124.71 73 P **PKiKP** **07 31 05.0 +0.3**
baz=229
MPMC Manual Prospec 124.81 74 P **PKiKP** **07 31 06.2 +1.3**
baz=228
FURC Furnace Creek, 125.45 74 P **PKiKP** **07 31 06.5 +0.6**
baz=228
GRAC Grapevine Rang 125.50 73 P **PKiKP** **07 31 06.6 +0.5**
baz=228
LHV Little Huntoon 125.66 71 **PKiKP** **07 31 06.4 +0.2**
VCNR Virginia City 125.67 70 **PKPdf** **07 31 05.6 -0.6**
NVAR Mina Array Bea 125.90 71 PKP **PKPdf** **07 31 06.5 -0.2**
comp=Z,2.4nm,0.9s,baz=223,slow=4.3,SNR=14

NVAR Mina Array Bea 125.90 71 **PKPdf** **07 31 06.3 -0.4**
RYN Ryan 125.90 71 **PKiKP** **07 31 09.4 +2.5**
HUMO Hull Mountain 125.93 65 **PKiKP** **07 31 07.3 +0.6**
NV11 Mina Array Sit 125.98 72 **PKiKP** **07 31 07.0 -0.2**
PAHR Pah Rah Range 126.10 70 **PKiKP** **07 31 07.5 +0.2**
CSS Mathiatis 126.14 283 IAMs_20 IAMs_20 08 20 26.1
comp=Z,286nm,20.0s
TPNV Topopah Spring 126.14 74 PKIKP **PKiKP** **07 31 07.9 +0.4**
TPNV Topopah Spring 126.14 74 P **PKiKP** **07 31 08.2 +0.6**
baz=228
TPNV Topopah Spring 126.14 74 **PKiKP** **07 31 07.9 +0.4**
KBZ Khabaz 126.27 297 *i* PKIKP **PKPdf** **07 31 06.8 0.0**
KBZ pmax pmax
comp=Z,3.0nm,1.2s
TPH Tonopah 126.30 72 PKIKP **PKiKP** **07 31 08.1 +0.2**
TPH Tonopah 126.30 72 **PKiKP** **07 31 08.1 +0.2**
W13A Hualapai Mount 126.34 77 **PKiKP** **07 31 08.3 +0.2**
KVN Kaiserville 126.42 71 PKIKP **PKiKP** **07 31 07.9 -0.2**
KVN Kaiserville 126.42 71 **PKiKP** **07 31 07.9 -0.2**
NRIK Noril'sk 126.51 340 *i* PKIKP **PKiKP** **07 31 09.1 +2.1**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 126.53 297 *i* PKIKP **PKiKP** **07 31 07.9 -0.1**
KIV pmax pmax
comp=Z,19nm,1.1s
KIV MLR MLR
comp=Z,392nm,23.0s
KIV Kislovodsk 126.53 297 IAMs_20 IAMs_20 08 19 03.2
comp=Z,260nm,21.0s
ARU Arti 126.61 317 *i* PKIKP **PKiKP** **07 31 08.4 +0.8**
ARU 07 33 01.8
ARU 07 38 19.7
PRN Pahroc Range 127.16 75 **PKiKP** **07 31 11.5 +2.0**
X16A Lo Mia Camp, P 127.38 80 **PKiKP** **07 31 10.8 +0.7**
R11A Troy Canyon, C 127.46 73 P **PKiKP** **07 31 11.4 +1.3**
baz=229
R11A Troy Canyon, C 127.46 73 **PKiKP** **07 31 11.4 +1.3**
TOKA Tokat 127.77 290 IAMs_20 IAMs_20 08 25 28.1
comp=Z,315nm,20.0s
PINE Pine Mountain 127.82 65 **PKiKP** **07 31 13.0 +2.3**
CCUT Cedar City 128.27 75 **PKPdf** **07 31 11.0 -0.2**
SZCU Shurtz Canyon 128.47 76 **PKPdf** **07 31 11.3 -0.3**
PSUT Pine Spring 128.61 74 **PKPdf** **07 31 11.5 -0.3**
TX31 Lajitas Ar. Si 128.73 90 **PKPdf** **07 31 12.1 -0.1**
TX32 Lajitas Array 128.73 90 **PKPdf** **07 31 12.3 +0.1**
TXAR Lajitas Array 128.73 90 PKP **PKiKP** **07 31 12.8 -0.1**
comp=Z,1.4nm,0.9s,baz=208,slow=2.4,SNR=8.6
TXAR Lajitas Array 128.73 90 **PKPdf** **07 31 12.3 +0.1**
TOC4 Torodi Ar. Sit 128.85 237 IAMs_20 IAMs_20 08 23 16.1
comp=Z,378nm,21.0s
TOC3 Torodi Ar. Sit 128.85 237 IAMs_20 IAMs_20 08 20 32.1
comp=Z,363nm,20.0s
TOB3 Torodi Ar. Sit 128.86 237 IAMs_20 IAMs_20 08 20 42.4
comp=Z,368nm,21.0s
TOC2 Torodi Ar. Sit 128.87 237 IAMs_20 IAMs_20 08 20 31.6
comp=Z,379nm,20.0s
TOB4 Torodi Ar. Sit 128.87 237 IAMs_20 IAMs_20 08 20 52.7
comp=Z,360nm,21.0s
TOA0 Torodi Ar. Sit 128.87 237 IAMs_20 IAMs_20 08 20 52.7
comp=Z,364nm,21.0s
TORD Torodi Ar. Bea 128.87 237 PKP **PKPdf** **07 31 12.8 +0.1**
comp=Z,2.8nm,1.1s,baz=195,slow=0.5,SNR=7.7
TORD Torodi Ar. Bea 128.87 237 **PKPdf** **07 31 10.4 -2.4**
TOB1 Torodi Ar. Sit 128.88 237 IAMs_20 IAMs_20 08 20 43.1
comp=Z,367nm,21.0s
TOB5 Torodi Ar. Sit 128.88 237 IAMs_20 IAMs_20 08 23 16.1
comp=Z,386nm,21.0s
ILAR Eielson Array 129.08 32 PKP **PKPdf** **07 31 11.3 -0.3**
comp=Z,0.8nm,0.8s,baz=280,slow=2.8,SNR=5.6
MNTX Cornudas Mount 129.29 87 P **PKiKP** **07 31 14.4 +0.6**
baz=227
MNTX Cornudas Mount 129.29 87 **PKPdf** **07 31 13.1 0.0**
MTPU Mount Pierson 129.30 76 **PKiKP** **07 31 13.8 -0.3**
MVU Marysvale 129.58 75 **PKiKP** **07 31 16.3 +1.8**
MSU Marysvale 129.61 75 PKIKP **PKiKP** **07 31 16.4 +1.9**
MSU Marysvale 129.61 75 **PKiKP** **07 31 16.4 +1.9**
DUG Dugway, Tooele 130.29 73 P **PKiKP** **07 31 17.5 +1.8**
baz=231
DUG Dugway, Tooele 130.29 73 IAMs_20 IAMs_20 08 16 25.0
comp=Z,300nm,21.0s
MFID Camas Ranch 130.50 68 **PKPdf** **07 31 15.1 0.0**
SDV Santo Domingo 130.70 139 IAMs_20 IAMs_20 08 18 32.0
comp=Z,400nm,20.0s
ANMO Albuquerque 130.80 83 *i* PKIKP **PKPdf** **07 31 16.3 +0.2**
SRU San Rafael Swe 130.99 76 PKIKP **PKiKP** **07 31 17.5 +0.3**
SRU San Rafael Swe 130.99 76 **PKiKP** **07 31 17.5 +0.3**
MVCO Mesa Verde 131.01 79 P **PKiKP** **07 31 18.3 +0.9**
baz=230
MVCO Mesa Verde 131.01 79 **PKPdf** **07 31 16.4 -0.1**
MSTX Muleshoe 132.44 86 **PKPdf** **07 31 18.1 -1.0**
EPYK Eagle Plains 133.45 33 P **PKPdf** **07 31 19.9 0.0**
baz=239
PDAR Pinedale Array 133.79 72 PKP **PKPdf** **07 31 21.4 -0.1**
comp=Z,0.7nm,0.8s,baz=225,slow=4.0,SNR=5.0
WMOK Wichita Mounta 135.43 89 PKIKP **PKPdf** **07 31 24.9 +0.3**
WMOK Wichita Mounta 135.43 89 **PKPdf** **07 31 24.9 +0.3**
OBN Obninsk 136.13 306 *i* PKIKP **PKiKP** **07 31 26.7 -0.1**
OBN pmax pmax
comp=Z,9.0nm,1.1s
YKA Yellowknife Ar 140.45 45 PKP **PKPdf** **07 31 33.5 +0.7**
comp=Z,1.0nm,0.7s,baz=256,slow=2.8,SNR=4.9
YKA Yellowknife Ar 140.45 45 *e*PKIKP **PKiKP** **07 31 35.8 +0.4**
YKA pmax pmax
comp=Z,1.0nm,0.7s
S39A Bolivar 140.71 89 **PKPdf** **07 31 33.3 -0.8**
KOLS Kolonicke sedl 140.96 292 *e*PKIKP **PKPdf** **07 31 34.2 0.0**
KOLS Kolonicke sedl 140.96 292 *e*PKP **PKPdf** **07 31 34.2 0.0**
KWP Kalwaria Pacla 141.04 293 *e*PKPdf **PKiKP** **07 31 35.8 -1.3**
P38A Dawn 141.75 87 **PKPdf** **07 31 35.2 -0.8**
ECSD EROS Data Cent 142.16 79 PKPdf **PKPdf** **07 31 35.9 -0.7**
PLAL Pickwick Lake 142.25 97 **PKPdf** **07 31 36.5 -0.5**
X48A Hartselle 142.54 99 **PKPdf** **07 31 36.9 -0.6**
VYHS Vyhne 142.76 289 *e*PKIKP **PKPdf** **07 31 38.7 +1.2**
VYHS Vyhne 142.76 289 *e*PKP **PKPdf** **07 31 38.7 +1.2**
WVT Waverly 143.15 96 PKIKP **PKPdf** **07 31 37.8 -0.7**
WVT Waverly 143.15 96 **PKPdf** **07 31 37.8 -0.7**
F33A 5 Mile Ranch, 143.44 76 **PKPdf** **07 31 40.4 +1.6**
FPAL Fort Paine 143.48 100 **PKPdf** **07 31 38.2 -1.1**
V48A Smith Brothers 143.52 97 **PKPdf** **07 31 39.2 -0.1**
JAVC Velka Javorina 143.61 289 *e*PKP **PKiKP** **07 31 41.6 -0.8**
FINES FINESS Array B 143.65 312 PKIKP **PKPdf** **07 31 37.5 -1.0**
comp=Z,2.6nm,0.8s,baz=327,slow=3.2,SNR=9.7
FINES FINESS Array B 143.65 312 PKIKP **PKPdf** **07 31 38.8 +0.2**
FINES FINESS Array B 143.65 312 **PKPdf** **07 31 38.8 +0.2**
SWET Sewanee 143.73 99 **PKPdf** **07 31 39.7 0.0**
K38A Parkersburg 143.94 83 **PKPdf** **07 31 41.4 +1.6**
MURB Monte Urbino 143.97 278 **PKPdf** **07 31 40.7 +0.9**
Y52A Lilburn 143.97 102 PKPbc 07 31 38.1 +0.1
GOGA Godfrey 144.03 103 P **PKPab** **07 31 37.8 +0.2**
baz=226
GOGA Godfrey 144.03 103 **PKPab** **07 31 37.9 +0.2**
N41A Harden Midland 144.05 87 PKPbc 07 31 38.5 +0.5
CLTN Cedars of Leba 144.05 97 **PKPdf** **07 31 39.6 -0.6**
MORC Moravsky Berou 144.10 291 *e*PKP **PKiKP** **07 31 42.1 -1.3**
W50A Signal Mountai 144.10 99 **PKPab** **07 31 37.9 -0.1**
Q44A Meyer Farm, Va 144.14 91 **PKPab** **07 31 37.5 -0.4**
T47A Sharon Grove 144.15 95 **PKPab** **07 31 38.0 0.0**
ARSA Arzberg 144.15 286 *e*P PKPbc 07 31 38.9 +0.8
comp=Z,7.4nm,0.9s
SOKA Soboth 144.17 284 *e*P PKPbc 07 31 39.2 +0.9
comp=Z,8.6nm,1.1s
P43A Skaggs, Pawnee 144.26 90 PKPbc 07 31 38.8 +0.1
CONA Conrad Observa 144.26 287 *e*P **PKPdf** **07 31 39.7 -0.6**
comp=Z,12nm,2.0s
I37A Lemond, Waseca 144.28 81 **PKPdf** **07 31 40.1 -0.2**
USIN University of 144.41 94 PKPbc 07 31 39.9 +0.7
VRAC Vranov 144.45 289 *e*PKP **PKPdf** **07 31 41.3 +0.9**
KRUC Moravsky 144.46 289 *e*PKP **PKPdf** **07 31 41.7 +1.3**
L40A Anamosa 144.58 85 PKPbc 07 31 40.0 +0.4
OLIL Olney 144.61 92 PKPbc 07 31 39.8 0.0
U49A Red Boiling Sp 144.67 97 **PKPab** **07 31 39.7 -0.3**
KRLC Kraliky 144.67 291 *e*PKIKP PKPbc 07 31 39.7 0.0
KRLC Kraliky 144.67 291 *e*PKP PKPbc 07 31 39.7 0.0
CASP Castiglione de 144.74 276 **PKPab** **07 31 40.1 +0.1**
AGMN Agassiz Nation 144.87 73 P **PKPab** **07 31 39.4 -0.9**
baz=243
AGMN Agassiz Nation 144.87 73 **PKPdf** **07 31 42.9 +1.8**
W52A Murphy 144.88 101 PKPbc 07 31 41.0 +0.2
PRED Cave del Predi 144.94 283 **PKPdf** **07 31 42.1 +0.7**
MYKA Terra Mystica 144.99 284 *e*P PKPbc 07 31 40.1 -0.8
comp=Z,11nm,0.8s
DPC Dobruska-Polom 145.05 291 *e*PKIKP **PKPbc** **07 31 40.2 -0.7**
DPC *e* 07 31 45.3

DPC	Dobruska-Polom	145.05	291		*e*PKP		PKPbc	07 31 40.2	-0.7
DPC					*ep*PKP		PKiKP	07 31 45.3	0.0
V51A	Loudon	145.09	99				PKPbc	07 31 41.1	-0.3
F36A	Milaca	145.14	78				PKPdf	07 31 41.7	0.0
MOA	Molln	145.18	286		*e*P		PKPbc	07 31 40.3	-1.1
	comp=Z,8.7nm,1.0s								
OSTC	Ostas	145.20	291		*e*PKP		PKPbc	07 31 41.0	-0.4
OSTC					*ex*		x	07 31 46.5	
ARCES	ARCESS Array B	145.24	326		PKPbc		PKPab	07 31 41.0	0.0
	comp=Z,7.8nm,0.7s,baz=94,slow=5.2,SNR=26								
KSP	Ksiaz	145.27	292		*e*PKPdf		PKPdf	07 31 42.5	+0.7
UPC	Upice	145.30	291		*e*PKIKP		PKPdf	07 31 42.3	+0.5
UPC	Upice	145.30	291		*e*PKP		PKPdf	07 31 42.3	+0.5
CHVC	Chvalec	145.31	291		*e*PKP		PKPbc	07 31 41.7	0.0
CHVC					*ex*		x	07 31 47.1	
TKL	Tuckaleechee C	145.35	100		PKP2		PKPbc	07 31 42.3	0.0
TKL	Tuckaleechee C	145.35	100				PKPbc	07 31 42.3	0.0
ZOU	Zoufplan	145.36	283				PKPab	07 31 42.6	+0.2
STAL	STALIGIAL	145.38	283				PKPab	07 31 42.8	+0.5
KBA	Koelnbreinsper	145.38	284		*e*P		PKPbc	07 31 41.1	-1.1
	comp=Z,18nm,0.9s								
WCI	Wyandotte Cave	145.42	94		PKP2		PKPbc	07 31 42.3	-0.1
WCI	Wyandotte Cave	145.42	94		P		PKPbc	07 31 41.6	-0.8
	baz=232								
WCI	Wyandotte Cave	145.42	94				PKPbc	07 31 42.3	-0.1
BG3	Lake Jocassee	145.42	102				PKPbc	07 31 41.8	-0.8
X54A	Belton	145.46	103		P		PKPab	07 31 43.3	+0.4
	baz=227								
ZCCA	Zocca	145.49	279				PKPab	07 31 43.7	+0.9
L42A	Oliver, Polo	145.52	86				PKPab	07 31 42.8	-0.1
CIMO	Cimolais	145.56	282				PKPab	07 31 43.1	+0.1
T50A	Nancy	145.57	97				PKPdf	07 31 42.5	-0.3
TEOL	Teolo	145.57	281				PKPbc	07 31 42.7	0.0
V52A	Sevierville	145.58	100				PKPbc	07 31 43.0	-0.1
JFWS	Jewell Farm	145.65	85		PKIKP		PKPbc	07 31 43.1	+0.1
JFWS	Jewell Farm	145.65	85		P		PKPdf	07 31 42.4	-0.3
	baz=238								
JFWS	Jewell Farm	145.65	85				PKPbc	07 31 43.1	+0.1
ULM	Lac du Bonnet	145.70	70		*e*PKP2		PKiKP	07 31 45.1	-1.5
ULM					pmax		pmax		
	comp=Z,6.0nm,0.7s								
ABTA	Abfaltersbach	145.73	283		*e*P		PKPdf	07 31 43.0	+0.2
	comp=Z,18nm,1.0s,SNR=6.0								
CTI	Castel Tesino	145.92	282		PKP2		PKPab	07 31 45.0	+0.6
CTI	Castel Tesino	145.92	282				PKPab	07 31 45.0	+0.6
I40A	Norwalk	145.93	83				PKPdf	07 31 43.0	-0.1
PRU	Pruhonice	145.94	289		*e*PKP2		PKPab	07 31 44.1	-0.1
PRU	Pruhonice	145.94	289		*e*PKP		PKPab	07 31 44.1	-0.1
V53A	Saluda	145.94	101				PKPdf	07 31 43.5	0.0
GEC2	GERESS Array S	145.96	287				PKPdf	07 31 43.4	+0.3
GERES	GERESS Array B	145.96	287		PKPbc		PKPdf	07 31 43.2	+0.1
	comp=Z,10.0nm,1.0s,baz=116,slow=3.1,SNR=33								
GERES	GERESS Array B	145.96	287		*e*PKP2		PKPbc	07 31 43.7	-0.2
GERES					pmax		pmax		
	comp=Z,10.0nm,1.0s								
TZTN	Tazewell	146.06	99		P		PKPab	07 31 45.8	+0.7
	baz=230								
TZTN	Tazewell	146.06	99				PKPab	07 31 45.2	+0.1
PBCC	Pribram	146.14	289		*e*PKP		PKPab	07 31 45.0	0.0
KHC	Kasperske Hory	146.16	288		*e*PKP2		PKPbc	07 31 44.1	-0.3
KHC	Kasperske Hory	146.16	288		*e*PKP		PKPbc	07 31 44.1	-0.3
KHC					*ep*PKP		pPKPab	07 31 47.8	+0.3
R49A	Shelbyville	146.16	95				PKPdf	07 31 44.0	+0.3
KMSC	Kings Mountain	146.50	103		P		PKPbc	07 31 46.0	+0.1
	baz=228								
KMSC	Kings Mountain	146.50	103				PKPbc	07 31 45.3	-0.6
WTTA	Wattenberg	146.50	283		*e*P		PKPbc	07 31 45.2	-0.5
	comp=Z,29nm,1.2s,SNR=7.1								
V54A	Nebo	146.54	102		P		PKPbc	07 31 46.1	+0.1
	baz=229								
WATA	Walderalm	146.57	284		*e*P		PKPdf	07 31 45.1	+0.8
	comp=Z,20nm,1.2s								
BRG	Berggiesshubel	146.65	291		*e*PKP		PKPbc	07 31 45.7	-0.1
	comp=Z,10nm,1.0s								
BRG	Berggiesshubel	146.65	291		*e*PKP2		PKPbc	07 31 45.7	-0.1
BRG					pmax		pmax		
	comp=Z,10.0nm,1.0s								
R50A	Paris	146.68	96				PKPdf	07 31 45.1	+0.6
S51A	Beattyville	146.73	98				PKPdf	07 31 44.7	0.0
SQTA	Sankt Quirin	146.74	283		*e*P		PKPdf	07 31 45.4	+0.9
	comp=Z,18nm,1.1s,SNR=11								
MOTA	Moosalm	146.86	283		*e*P		PKPbc	07 31 46.3	-0.4
	comp=Z,26nm,1.1s,SNR=11								
FETA	Feichten	146.94	283		*e*P		PKPbc	07 31 46.5	-0.5
	comp=Z,23nm,1.0s,SNR=9.1								
FUORN	Ofenpass-Fuorn	147.04	282				PKPdf	07 31 45.4	+0.2
V55A	Taylorsville	147.04	102				PKPdf	07 31 45.8	+0.5
U54A	Nelsons Funny	147.11	101		P		PKPbc	07 31 47.3	-0.4
	baz=229								
U54A	Nelsons Funny	147.11	101				PKPdf	07 31 46.0	+0.6
RETA	Reutte	147.13	283		*e*P		PKPdf	07 31 46.2	+1.0
	comp=Z,9.6nm,1.0s								
P49A	Miami Univ. Ec	147.19	94		P		PKPbc	07 31 47.2	-0.5
	baz=234								
NKC	Novy Kostel	147.28	289		*e*PKP2		PKiKP	07 31 52.9	+3.0
NKC	Novy Kostel	147.28	289		*e*PKP		PKiKP	07 31 52.9	+3.0
NKC					*ex*		x	07 31 57.3	
W57A	Gilead	147.31	105		P		PKPbc	07 31 48.2	0.0
	baz=227								
W57A	Gilead	147.31	105				PKPdf	07 31 46.4	+0.6
EYMN	Ely	147.34	76				PKPbc	07 31 46.9	-0.9
CLL	Collm	147.37	291		*e*PKPbc		PKPbc	07 31 47.0	-0.8
CLL					*e*			07 31 56.0	
	comp=Z,42nm,1.5s								
CLL					*e*SSS		SSS	07 59 48.0	
CLL					LmV			08 52 00.0	
	comp=Z,200nm,19.5s								
CLL	Collm	147.37	291		*e*PKP2		PKPbc	07 31 47.0	-0.8
TUE	Stuetta	147.53	281				PKPdf	07 31 47.2	+1.2
TUE					PKPbc		sPKPdf	07 31 49.5	+0.2
BSD	Bornholm Skovb	147.56	298		*e*PKIKP		PKPdf	07 31 45.8	+0.4
BSD	Bornholm Skovb	147.56	298		*i* P		PKPdf	07 31 45.8	+0.4
BSD	Bornholm Skovb	147.56	298		*e*P		PKPdf	07 31 45.9	+0.4
DAVA	Damuels	147.58	283		*e*P		PKPbc	07 31 48.2	-0.5
	comp=Z,22nm,1.1s								
W58A	Raeford	147.68	106		P		PKPbc	07 31 49.0	-0.2
	baz=227								
Q51A	Peebles	147.74	96				PKPbc	07 31 48.6	-0.6
GRA1	Grafenberg Arr	147.79	287				PKPdf	07 31 46.2	+0.1
GRF	Grafenberg Arr	147.79	287		PKIKP		PKPdf	07 31 46.2	+0.1
GRF	Grafenberg Arr	147.79	287		*e*PKP		PKPbc	07 31 49.0	0.0
	baz=114,slow=3.3								
GRF					*eX*			07 46 32.5	
	baz=118,slow=3.7								
GRF					*eL*		L	08 41 56.4	
	comp=Z,436nm,21.0s								
U56A	King	147.87	103				PKPdf	07 31 48.1	+1.5
COWI	Conover	147.94	80				PKPbc	07 31 49.3	-0.2
V57A	Coltrane Farms	147.94	104		P		PKPbc	07 31 48.9	-0.9
	baz=228								
T55A	Pulaski	148.13	101		P		PKPbc	07 31 49.7	-0.7
	baz=230								
R53A	Hurricane	148.18	98		PKPdf		PKPdf	07 31 47.1	0.0
R53A							PKiKP	07 31 52.2	+0.1
RES	Resolute Bay	148.20	24		PKIKP		PKPbc	07 31 47.9	-1.4
RES	Resolute Bay	148.20	24				PKPbc	07 31 47.9	-1.4
S54A	Dingess, Beckl	148.24	100		P		PKPbc	07 31 50.4	-0.3
	baz=231								
S54A	Dingess, Beckl	148.24	100				PKPbc	07 31 50.3	-0.3
V58A	Windy Hill, Pi	148.28	105		P		PKPbc	07 31 50.8	+0.1
	baz=228								
N49A	Columbus Grove	148.33	92				PKPbc	07 31 50.9	+0.2
Q52A	Bidwell	148.37	97		P		PKPbc	07 31 50.3	-0.6
	baz=232								
BLA	Blacksburg	148.41	101		PKP2		PKPbc	07 31 51.6	+0.5
BLA	Blacksburg	148.41	101		P		PKPbc	07 31 51.6	+0.5
	baz=230								
BLA	Blacksburg	148.41	101				PKPbc	07 31 51.5	+0.5
BNI	Bardonecchia	148.50	277		PKP2		PKPbc	07 31 51.2	0.0
BNI	Bardonecchia	148.50	277				PKPbc	07 31 51.2	0.0
T56A	Rocky Mt	148.53	102		P		PKPbc	07 31 51.8	+0.4
	baz=230								
U57A	Blanch	148.56	103		P		PKPbc	07 31 51.3	-0.2
	baz=229								
ACSO	Alum Creek Sta	148.68	94				PKPdf	07 31 48.5	+0.6
SENIN	Lac Senin/Sane	148.74	279				PKPbc	07 31 52.5	+0.6
V59A	Middlesex	148.78	106		P		PKPbc	07 31 51.9	-0.1
	baz=228								
P52A	Corning	148.85	96		P		PKPbc	07 31 51.1	-1.0
	baz=233								
P52A	Corning	148.85	96				PKPbc	07 31 51.4	-0.7
BFO	Black Forest	148.97	283		PKP2		PKPbc	07 31 52.2	0.0
BFO	Black Forest	148.97	283				PKPbc	07 31 52.2	0.0
T57A	Hurt	148.99	103		P		PKPbc	07 31 52.5	+0.1
	baz=229								
T57A	Hurt	148.99	103				PKPbc	07 31 52.6	+0.1
U58A	Oxford	149.02	104		P		PKPbc	07 31 52.9	+0.3
	baz=228								
P53A	Whipple	149.23	97		P		PKPbc	07 31 52.9	-0.2
	baz=233								
P53A	Whipple	149.23	97				PKPbc	07 31 53.0	0.0
Q54A	Coxs Mills	149.27	98		P		PKPbc	07 31 52.4	-0.7
	baz=232								
Q54A	Coxs Mills	149.27	98				PKPdf	07 31 49.8	+1.0
T58A	Grand View Acr	149.39	104		P		PKPbc	07 31 53.3	-0.2
	baz=229								
U59A	Littleton	149.44	105				PKiKP	07 31 55.1	+0.3
ECH	Echery	149.63	283		PKP2		PKPbc	07 31 53.6	-0.2
ECH	Echery	149.63	283				PKPbc	07 31 53.6	-0.2
S57A	Dark Hollow, R	149.66	102		P		PKPbc	07 31 54.5	+0.3
	baz=230								
Q55A	Buckhannon	149.74	99		P		PKPbc	07 31 54.1	-0.2
	baz=232								
O53A	New Philadelph	149.79	96		P		PKPbc	07 31 54.6	+0.2
	baz=234								
O53A	New Philadelph	149.79	96				PKPbc	07 31 54.3	-0.1
P54A	Burton	149.86	98		P		PKPbc	07 31 53.4	-1.2
	baz=233								
U60A	Pendleton	149.90	106		P		PKPbc	07 31 54.7	-0.1
	baz=228								
T59A	Double "B" Far	150.00	105				PKPbc	07 31 55.4	+0.4
S58A	Poland Farm, P	150.11	103		P		PKPbc	07 31 55.1	-0.1
	baz=230								
S58A	Poland Farm, P	150.11	103				PKPbc	07 31 55.3	+0.1
O54A	Avella	150.27	97		P		PKPbc	07 31 55.5	0.0
	baz=234								
O54A	Avella	150.27	97				PKPbc	07 31 55.8	+0.3
Q56A	Snyder Ridge,	150.32	100		P		PKPbc	07 31 55.4	-0.3
	baz=232								
Q56A	Snyder Ridge,	150.32	100				PKPbc	07 31 55.5	-0.2
N53A	Lisbon	150.34	95				PKiKP	07 31 57.0	+0.5
R58B	Mineral	150.44	103		P		PKPbc	07 31 55.3	-0.7
	baz=230								
R58B	Mineral	150.44	103				PKPbc	07 31 56.1	+0.1
NB2	NORSAR Subarra	150.64	309		PKP		PKPbc	07 31 55.4	-0.4
	comp=Z,90nm,2.0s,baz=77,slow=3.8								
NB2	NORSAR Subarra	150.64	309		PKP		PKPbc	07 31 55.4	-0.4
	baz=77,slow=3.8								
NOA	NORSAR Array B	150.64	309		PKPbc		PKPbc	07 31 55.6	-0.2
	comp=Z,2.7nm,1.0s,baz=91,slow=4.0,SNR=4.7								
S59A	Mechanicsville	150.67	104		P		PKiKP	07 31 57.6	+0.4
	baz=230								
M53A	WI Miller and	150.81	94		P		PKPbc	07 31 57.0	+0.2
	baz=236								
P56A	Dayton Farm, R	150.81	99		P		PKPbc	07 31 56.8	-0.1
	baz=233								
O55A	Ligonier	150.95	98		P		PKPbc	07 31 56.7	-0.5
	baz=234								
N54A	Moraine State	150.96	96		P		PKPbc	07 31 56.6	-0.6
	baz=235								
N54A	Moraine State	150.96	96				PKPbc	07 31 57.1	0.0
P57A	Homestead Farm	151.31	100		P		PKPbc	07 31 57.9	-0.1
	baz=232								
O56A	Blue Knob Stat	151.44	98		P		PKPbc	07 31 58.6	+0.2
	baz=234								
O56A	Blue Knob Stat	151.44	98				PKPbc	07 31 58.6	+0.2
BCLA	Clavier	151.60	286		PKPdf		PKPdf	07 31 51.6	-0.5
BCLA					PKiKP		pPKPbc	07 31 59.9	-0.9
BGES	Gesves	151.72	286		PKPab		PKPab	07 32 06.9	-0.6
DOU	Dourbes	151.91	285		PKiKP		PKPbc	07 31 58.8	-0.2
N56A	West Decatur	151.98	97		P		PKPbc	07 31 59.4	-0.2
	baz=235								
ESDC	Sonseca Array	152.18	259		PKPbc		PKPbc	07 31 59.9	-0.2
	comp=Z,4.9nm,0.9s,baz=86,slow=1.0,SNR=18								
ESDC	Sonseca Array	152.18	259		PKPdf		PKPdf	07 31 54.2	+0.8
ESDC							PKPbc	07 32 00.1	0.0
M56A	Emporium	152.38	97		P		PKPbc	07 32 00.3	-0.1
	baz=236								

*IDC **09** 07:23:17.7±0.6,51.˚50S×139.˚66E,h0km,mb4.2/9, mb1 4.4/10,mb1mx4.2/27,mbtmp4.3/10,ML4.4/1,MS4.4/7, Ms1 4.4/7,ms1mx4.0/28,Error ellipse: s-maj=29.1km s-min=15.5km az=88.0*

*NEIC **09** 07:23:18.8±1.5,51.˚52S±0.˚09×139.˚7E±0.˚2,h10km±1km, mb4.7/26,Error ellipse: s-maj=19.9km s-min=13.8km az=123.0*

*GCMT **09** 07:23:19.8±0.3,51.˚55S±0.˚01×139.˚56E±0.˚03,h12km, MW5.0/90,Moment Tensor Solution. s6,c6; s90,c122; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=1.28±.14; Mθθ 1.65±.12; Mϕϕ -0.37±.13; Mrθ 0.12±.38; Mθϕ -3.01±.09; Mϕr 1.00±.41; Best double couple: Mo3.43000×10^16^ NP1:ϕs264.00000°,δ67.00000°,λ-164.00000°. NP2: ϕs167.00000°,δ75.00000°,λ-24.00000°. Principal axes: T 3.8600, Plg5.0000°, Azm216.0000°; N -0.8630, Plg62.0000°, Azm317.0000°; P -3.0000, Plg28.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 07:23:19.0±0.4,51.˚57S±0.˚07×139.˚72E±0.˚10,h10km,n90, σ1s00/73,mb4.6/17,MS4.4/8,2C,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TAU	Tasmania Unive	10.08	34	Pn		Pn	07 25 43.0	-0.7
TOO	Toolangi	14.57	19	Pn		Pn	07 26 47.4	+2.2
CAN	Canberra	17.55	26	P		Pn	07 27 21.2	-2.5
BBOO	Buckleboo	18.93	350	P		P	07 27 39.6	-0.3
BBOO				IAmb		IAmb	07 27 49.5	
	comp=Z,34nm,1.2s							
STKA	Stephens Creek	19.72	5	P		P	07 27 48.9	+0.4
	comp=Z,0.6nm,0.3s,baz=167,slow=10,SNR=23							
STKA				LR		LR	07 34 11.7	
	comp=Z,1μm,19.6s,baz=180,slow=33							
STKA	Stephens Creek	19.72	5	P		P	07 27 47.7	-0.9
CASY	Casey	20.78	214	P		P	07 27 59.3	-0.5
CASY				IAmb		IAmb	07 28 21.5	
	comp=Z,42nm,1.1s							
RPZ	Rata Peaks	22.39	82	P		P	07 28 17.7	+0.4
	comp=Z,28nm,1.1s,baz=190,slow=9.1,SNR=3.6							
RPZ				LR		LR	07 34 43.0	
	comp=Z,762nm,21.7s,baz=244,slow=31							
RPZ	Rata Peaks	22.39	82	P		P	07 28 18.0	+0.6
RPZ				IAmb		IAmb	07 28 27.9	
	comp=Z,26nm,1.1s							
FORT	Forrest	22.49	333	P		P	07 28 17.2	-1.3
ARMA	Armidale	22.90	27	P		P	07 28 22.2	-0.7
H01W1	Cape Leeuwin H	24.80	302	T		T	07 54 17.1	
	baz=139,slow=75,SNR=251							
H01W2	Cape Leeuwin H	24.81	302	T		T	07 54 17.6	
	baz=139,slow=75,SNR=264							
NWAO	Narrogin (SRO)	24.81	310	LR		LR	07 36 03.8	
	comp=Z,929nm,20.4s,baz=128,slow=31							
H01W3	Cape Leeuwin H	24.82	302	T		T	07 54 18.4	
	baz=139,slow=75,SNR=178							
MSWZ	Moikau Station	26.24	81	P		P	07 28 54.5	+0.5
VNDA	Vanda	27.33	170	P		P	07 29 03.8	+0.3
	comp=Z,1.0nm,0.8s,baz=329,slow=12,SNR=6.0							
VNDA	Vanda	27.33	170	P		P	07 29 02.4	-1.1
ASAR	Alice Springs	28.21	349	P		P	07 29 11.1	-0.8
	comp=Z,2.0nm,0.9s,baz=173,slow=8.9,SNR=13							
ASAR				PcP		PcP	07 32 24.8	-0.5
	comp=Z,0.8nm,0.7s,baz=160,slow=2.6,SNR=5.8							
ASAR	Alice Springs	28.21	349	P		P	07 29 12.2	+0.3
AS31	Alice Springs	28.21	349	P		P	07 29 11.5	-0.4
MORW	Morawa	28.59	313	P		P	07 29 15.0	-0.1
URZ	Urewera	29.29	78	LR		LR	07 39 59.9	
	comp=Z,349nm,19.4s,baz=211,slow=34							
WR0	Warramunga Arr	31.80	351	P		P	07 29 43.5	-0.1
WR0				IAmb		IAmb	07 29 49.1	
	comp=Z,12nm,1.2s							
WC3	Warramunga Arr	31.82	350	P		P	07 29 43.3	-0.5
WC3				IAmb		IAmb	07 29 44.4	
	comp=Z,14nm,1.1s							
CTA	Charters Tower	31.83	12	LR		LR	07 42 04.1	
	comp=Z,949nm,20.1s,baz=189,slow=35							
CTAO	Charters Tower	31.83	12	P		P	07 29 43.8	-0.1
CTAO				IAmb		IAmb	07 30 08.2	
	comp=Z,18nm,1.4s							
WB2	Warramunga Arr	31.84	350	P		P	07 29 42.5	-1.4
WRA	Warramunga Arr	31.84	350	P		P	07 29 42.4	-1.5
	comp=Z,6.9nm,0.9s,baz=174,slow=7.7,SNR=38							
WRA	Warramunga Arr	31.84	350	P		P	07 29 42.5	-1.5
WRAB	Tennant Creek	31.85	350	P		P	07 29 44.0	0.0
WB0	Warramunga Arr	32.01	351	P		P	07 29 44.6	-0.8
WB0				IAmb		IAmb	07 29 46.5	
FITZ	Fitzroy Crossi	35.21	336	P		P	07 30 13.0	-0.3
	comp=Z,1nm,1.1s							
FITZ	Fitzroy Crossi	35.21	336	P		P	07 30 11.6	-1.7
FITZ				IAmb		IAmb	07 30 24.4	
	comp=Z,13nm,1.5s							
DZM	Mont Dzumac	36.00	45	*e*LR		LR	07 39 58.3	
	comp=Z,1μm,25.9s							
QSPA	South Pole Qui	38.55	180	P		P	07 30 42.1	+0.6
	comp=Z,3.7nm,0.8s,baz=328,slow=2.9,SNR=15							
QSPA	South Pole Qui	38.55	180	P		P	07 30 42.0	+0.5
QSPA				IAmb		IAmb	07 30 55.1	
	comp=Z,12nm,1.1s							
MAW	Mawson	39.10	216	P		P	07 30 46.7	+0.9
	comp=Z,2.0nm,0.8s,baz=103,slow=11,SNR=5.7							
MAW				LR		LR	07 44 37.7	
	comp=Z,1μm,20.7s,baz=80,slow=33							
MAW	Mawson	39.10	216	P		P	07 30 45.3	-0.5
MTN	Manton Dam	39.24	347	P		P	07 30 45.5	-2.0
MTN				IAmb		IAmb	07 30 55.6	
	comp=Z,28nm,1.4s							
SANVU	Saraoutou	42.20	41	P		P	07 31 10.9	-1.1
SANVU				IAmb		IAmb	07 31 13.7	
	comp=Z,16nm,0.8s							
SYO	Syowa Base	46.43	209	*e*P		P	07 31 43.8	-1.4
SYO	Syowa Base	46.43	209	*ep*P		pP	07 31 48.6	+1.2
KAPI	Kappang	49.29	333	P		P	07 32 07.8	-0.1
BELA	Belgrano 2	50.78	182	P		P	07 32 18.5	-0.1
SNAA	Sanae	54.24	194	P		P	07 32 44.1	-0.3
TBI	Tubuai	60.24	91	*e*LQ		LQ	07 48 43.2	
	comp=Z,331nm,26.8s							
TBI				*e*LR		LR	07 51 11.7	
	comp=Z,114nm,23.0s							
PPT2	Papeete2	64.44	86	*e*LQ		LQ	07 50 12.3	
	comp=Z,560nm,28.8s							
RKT	Rikitea	69.39	101	*e*S		S	07 43 34.8	+0.9
	comp=Z,610nm,28.0s							
RKT				*e*LQ		LQ	07 52 16.9	
	comp=Z,244nm,32.0s							
H08S2	Diego Garcia H	69.96	283	T		T	08 50 39.8	
	baz=142,slow=76,SNR=14							
H08S1	Diego Carcia H	69.97	283	T		T	08 50 41.8	
	baz=142,slow=76,SNR=5.8							
H08S3	Diego Garcia H	69.98	283	T		T	08 50 56.4	
	baz=142,slow=76,SNR=30							
PALK	Pallekele	77.26	299	LR		LR	08 02 46.2	
	comp=Z,285nm,18.8s,baz=246,slow=31							
CMAR	Chiang Mai Arr	78.30	321	P		P	07 35 20.1	+1.0
	comp=Z,0.5nm,0.3s,baz=182,slow=7.5,SNR=5.2							
CMAR	Chiang Mai Arr	78.30	321	P		P	07 35 19.2	+0.1
BOSA	Boshof	81.67	234	P		P	07 35 37.6	+0.1
	comp=Z,1.1nm,0.6s,baz=111,slow=8.6,SNR=3.9							
BOSA	Boshof	81.67	234	IAmb		IAmb	07 35 43.5	
	comp=Z,4.7nm,1.1s							
NJ2	Nanjing	85.26	342	*e*P		P	07 35 56.8	+1.4
NJ2				pmax		pmax		
	comp=Z,14nm,0.5s							
H03S1	Juan Fernandez	88.44	149	T		T	09 14 51.6	
	baz=201,slow=74,SNR=44							
H03S2	Juan Fernandez	88.44	149	T		T	09 14 50.4	
	baz=201,slow=74,SNR=35							
H03S3	Juan Fernandez	88.45	149	T		T	09 14 51.1	
	baz=201,slow=74,SNR=54							
LZH	Lanzhou	92.78	332	*e*P		P	07 36 35.2	+3.9
LZH				pP		pwP	07 36 41.0	+3.7
LZH				sP		sP	07 36 44.5	+10
LZH				pmax		pmax		
	comp=Z,13nm,1.2s							
HHC	Hu-ho-hao-te	95.25	339	*e*P		P	07 36 43.2	+0.7
NVAR	Mina Array Bea	125.83	71	PKP		PKiKP	07 42 21.3	+0.3
	comp=Z,0.8nm,0.9s,baz=218,slow=4.2,SNR=4.2							
TXAR	Lajitas Array	128.68	90	PKP		PKiKP	07 42 27.3	+0.4
	comp=Z,0.5nm,0.9s,baz=157,slow=4.9,SNR=3.6							
FINES	FINESS Array B	143.66	312	PKP		PKPbc	07 42 50.8	+0.6
	comp=Z,1.5nm,0.7s,baz=123,slow=7.0,SNR=5.9							
FINES	FINESS Array B	143.66	312			PKPab	07 42 49.4	0.0
ARSA	Arzberg	144.19	286	*e*P		PKPdf	07 42 53.1

WB2				IAmb	IAmb	07 33 17.3	
	comp=Z,6.2nm,0.8s						
WRA	**Warramunga Arr**	**31.75 350**		P	**P**	**07 33 12.4**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=180,slow=7.5,SNR=8.2						
WRA	**Warramunga Arr**	**31.75 350**		P	**P**	**07 33 12.0**	**-0.9**
WRAB	**Tennant Creek**	**31.76 350**		P	**P**	**07 33 11.7**	**-1.1**
WRAB				IAmb	IAmb	07 33 21.9	
	comp=Z,14nm,1.2s						
WB0	**Warramunga Arr**	**31.92 350**		P	**P**	**07 33 13.8**	**-0.4**
WB0				IAmb	IAmb	07 33 15.1	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**35.13 336**		P	**P**	**07 33 42.1**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=157,slow=4.3,SNR=3.0						
QSPA	**South Pole Qui**	**38.65 180**		P	**P**	**07 34 12.3**	**+0.4**
	comp=Z,3.7nm,0.8s,baz=278,slow=1.4,SNR=7.2						
QSPA	**South Pole Qui**	**38.65 180**		P	**P**	**07 34 11.9**	**0.0**
QSPA				IAmb	IAmb	07 34 13.4	
	comp=Z,23nm,1.4s						
MAW	**Mawson**	**39.19 216**		P	**P**	**07 34 16.3**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=89,slow=6.8,SNR=3.6						
MAW	**Mawson**	**39.19 216**		P	**P**	**07 34 16.1**	**0.0**
KAPI	**Kappang**	**49.21 333**		P	**P**	**07 35 37.6**	**+0.6**
BELA	**Belgrano 2**	**50.87 182**		P	**P**	**07 35 48.9**	**-0.1**
SNAA	**Sanae**	**54.34 194**		P	**P**	**07 36 14.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**78.24 321**		P	**P**	**07 38 49.2**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=145,slow=2.9,SNR=4.8						
CMAR	**Chiang Mai Arr**	**78.24 321**		P	**P**	**07 38 48.2**	**-0.2**
SHL	**Shillong**	**87.47 318**		P	**P**	**07 39 36.8**	**+0.4**
H03S1	**Juan Fernandez**	**88.51 149**		T	T	09 18 38.9	
	baz=202						
H03S2	**Juan Fernandez**	**88.51 149**		T	T	09 18 44.2	
	baz=202						
H03S3	**Juan Fernandez**	**88.53 149**		T	T	09 18 31.4	
	baz=202,SNR=6.3						
DPC	**Dobruska-Polom**	**145.07 291**	*e*	PKP	**PKPbc**	**07 46 24.5**	**-0.3**
ARCES	**ARCESS Array B**	**145.16 326**		PKPbc	**PKPbc**	**07 46 24.3**	**-0.2**
	comp=Z,6.0nm,0.9s,baz=62,slow=2.9,SNR=4.3						
OSTC	**Ostas**	**145.21 291**	*e*	PKP	**PKPdf**	**07 46 25.4**	**-0.1**
UPC	**Upice**	**145.31 291**	*e*	PKP	**PKPbc**	**07 46 25.4**	**-0.1**
CHVC	**Chvalec**	**145.32 291**	*e*	PKP	**PKPbc**	**07 46 24.4**	**-1.2**
PRU	**Pruhonice**	**145.96 290**	*e*	PKP	**PKPab**	**07 46 28.2**	**+0.1**
GERES	**GERESS Array B**	**145.98 287**		PKPbc	**PKPdf**	**07 46 27.1**	**+0.1**
	comp=Z,3.5nm,1.0s,baz=128,slow=3.7,SNR=7.8						
GERES	**GERESS Array B**	**145.98 287**			**PKPdf**	**07 46 26.9**	**-0.1**
PBCC	**Pribram**	**146.16 289**	*e*	PKP	**PKPab**	**07 46 28.8**	**-0.1**
KHC	**Kasperske Hory**	**146.18 288**	*e*	PKP	**PKPdf**	**07 46 27.1**	**-0.1**
CLL	**Collm**	**147.38 291**	*e*	PKPbc	**PKPdf**	**07 46 30.0**	**+0.9**
ESDC	**Sonseca Array**	**152.28 259**		PKPbc	**PKiKP**	**07 46 44.4**	**0.0**
	comp=Z,0.6nm,0.8s,baz=14,slow=38,SNR=2.9						

IDC 09 07:29:26.9±2.7, 51.46S×139.73E, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.6/31, mbtmp3.9/2, Error ellipse: s-maj=173.2km s-min=43.3km az=92.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**28.10**	**349**	P		P	07 35 20.2	-0.1
	0.6nm,0.6s,baz=166,slow=9.8,SNR=5.7							
ASAR				PcP		PcP	07 38 34.0	-0.7
	0.3nm,0.6s,baz=166,slow=3.0,SNR=4.5							
WRA	**Warramunga Arr**	**31.73**	**350**	P		P	07 35 52.5	0.0
	2.0nm,0.6s,baz=175,slow=7.7,SNR=11							
ARCES	**ARCESS Array B**	**145.14**	**326**	PKPbc		PKPbc	07 49 04.0	-0.3
	1.6nm,0.6s,baz=103,slow=5.9,SNR=5.9							
ESDC	**Sonseca Array**	**152.27**	**259**	PKPbc		PKPbc	07 49 23.9	-0.2
	0.6nm,0.7s,baz=67,slow=1.2,SNR=5.1							

*NNC **09** 07:30:49.8±0.9, 50.05N×78.93E, h0km, mb3.3, mpv3.1, Error ellipse: s-maj=24.4km s-min=4.4km az=65.0, Suspected Mining explosion.*
*IDC **09** 07:30:51.3±1.1, 50.08N×78.74E, h0km, mb1 3.2/2, mb1mx3.0/41, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=18.1km s-min=6.4km az=67.0*
ISC 09 07:30:47.6±4.0, 50.00N±0.05×78.1E±0.4, h0km, n8, σ1s01/11, 6C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.67**	**22**	**Pg**		**Pb**	**07 31 01.9**	**-0.3**
	6.5nm,0.3s,baz=166,slow=19,SNR=250							
KURBB				Lg		Lg	07 31 10.7	
	8.3nm,0.3s,baz=144,slow=45,SNR=21							
KURBB	**Kurchatov Arra**	**0.67**	**22**	**↑P**		**Pb**	**07 31 01.8**	**-0.4**
	34nm,0.3s							
KURBB				↑S		Sb	07 31 11.0	-1.1
	96nm,0.5s							
KURK	**Kurchatov**	**0.78**	**23**	**↓P**		**Pb**	**07 31 03.2**	**-0.8**
	18nm,0.4s							
KURK				↑S		Sg	07 31 13.0	+0.4
	24nm,0.4s							
MAKZ	**Makanchi**	**4.09**	**140**	**↓Pg**		**Pb**	**07 31 58.8**	**-1.8**
	2.3nm,0.6s							
MAKZ				↑Lg		Lg	07 32 47.9	
	10nm,0.6s							
MK31	**Makanchi Array**	**4.24**	**138**	**↓Pn**		**Pn**	**07 31 54.2**	**+0.8**
	0.3nm,0.2s,baz=277,slow=6.6,SNR=55							
MK31				↑Pg		Pb	07 32 02.6	-0.4
	3.4nm,0.5s,baz=324,slow=13,SNR=20							
MK31				↑Lg		Lg	07 32 55.8	
	8.4nm,0.5s,baz=323,slow=27,SNR=17							
MKAR	**Makanchi Array**	**4.24**	**138**	Pn		**Pn**	**07 31 54.3**	**+0.9**
	0.6nm,0.3s,baz=321,slow=10.0,SNR=75							
MKAR				Pg		Pb	07 32 03.2	+0.2
	1.7nm,0.3s,baz=324,slow=16,SNR=14							
MKAR				Lg		Lg	07 32 56.1	
	2.8nm,0.3s,baz=322,slow=27,SNR=13							
ZALV	**Zalesovo Beam**	**5.71**	**44**	Pn		**Pn**	**07 32 14.7**	**+1.1**
	1.6nm,0.3s,baz=231,slow=14,SNR=14							
ZALV				Lg		Lg	07 33 40.1	
	0.5nm,0.3s,baz=224,slow=20,SNR=1.7							
I46RU	**ZALESOVO INFRA**	**5.72**	**44**	*i*			08 01 40.0	
	baz=220,slow=326,SNR=3.1							

*JMA **09** 07:34:13.2±0.2, 23.32N×122.86E, h51km, M2.4*
*TAP **09** 07:34:15.0, 23.42N×122.81E, h53km±1km, ML2.7, C*
ISC 09 07:34:14.4±1.3, 23.37N±0.05×122.85E±0.03, h35km, n40, σ0s93/68, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**1.08**	**5**	P		**Pn**	**07 34 33.2**	**+0.2**
JYNG				*e*S		**Sn**	**07 34 47.3**	**+0.6**
YOJ	**Yonaguni jima**	**1.09**	**8**	*e*P		**Pn**	**07 34 34.0**	**+0.8**
	baz=9.0							
YOJ				S		**Sn**	**07 34 48.0**	**+0.9**
	baz=9.0							
HATJ	**Hateruma jima**	**1.11**	**52**	P		**Pn**	**07 34 32.9**	**-0.6**
HATJ				S		**Sn**	**07 34 47.1**	**-0.5**
IRIF	**Iriomote-Funau**	**1.25**	**40**	P		**Pn**	**07 34 35.7**	**+0.3**
IRIF				*e*S		**Sn**	**07 34 51.3**	**+0.2**
HGSD	**Ruisui**	**1.31**	**275**	P		**Pn**	**07 34 35.6**	**-0.6**
	baz=273							
HGSD				S		**Sn**	**07 34 50.5**	**-2.0**
	baz=273							
EGFH	**Guangfu**	**1.33**	**283**	S		**Sn**	**07 34 51.4**	**-1.6**
	baz=280							
TWD	**Chiawan**	**1.34**	**302**	*i* P		**Pn**	**07 34 36.2**	**-0.4**
	baz=291							
TWD				*i* S		**Sn**	**07 34 51.8**	**-1.5**
	baz=291							
JKRS	**Kuro-shima**	**1.37**	**51**	P		**Pn**	**07 34 37.3**	**+0.3**
JKRS				S		**Sn**	**07 34 53.5**	**-0.4**
NACB	**Ninganchiao**	**1.40**	**305**	P		**Pn**	**07 34 36.8**	**-0.6**
	baz=296							
NACB				S		**Sn**	**07 34 52.7**	**-1.9**
	baz=296							
EHY	**Hungye**	**1.41**	**276**	*i* P		**Pn**	**07 34 37.3**	**-0.3**
	baz=273							
EHY				S		**Sn**	**07 34 53.5**	**-1.3**
	baz=273							
YULB	**Yu-li**	**1.42**	**271**	*e*P		**Pn**	**07 34 36.8**	**-0.9**
	baz=268							
YULB				S		**Sn**	**07 34 53.9**	**-1.4**
	baz=268							
TWF1	**Yuli**	**1.42**	**269**	*i* P		**Pn**	**07 34 37.2**	**-0.5**
	baz=261							
TWF1				*i* S		**Sn**	**07 34 54.1**	**-1.2**
	baz=261							
ETLH	**Xiulin Townshi**	**1.50**	**304**	P		**Pn**	**07 34 38.6**	**-0.3**
	baz=298							
ETLH				S		**Sn**	**07 34 55.9**	**-1.4**
	baz=298							
JIJ	**Ishigaki jima**	**1.54**	**50**	P		**Pn**	**07 34 39.2**	**-0.2**
JIJ				*e*S		**Sn**	**07 34 57.4**	**-0.8**
WHF	**Hehuan Shan**	**1.64**	**298**	*i* P		**Pn**	**07 34 40.8**	**-0.3**
	baz=297							
CHGB	**Renai**	**1.68**	**294**	P		**Pn**	**07 34 41.9**	**+0.4**
	baz=293							
NNS	**Nan Shan**	**1.71**	**309**	S		**Sn**	**07 35 01.8**	**-0.9**
	baz=307							
ENTT	**Nioudou**	**1.72**	**317**	P		**Pn**	**07 34 42.9**	**+1.0**
	baz=316							
ENTT				*e*S		**Sn**	**07 35 03.2**	**+0.6**
	baz=316							
NDT	**Datong Townshi**	**1.73**	**315**	*e*P		**Pn**	**07 34 43.0**	**+1.0**
	baz=323							
NDT				S		**Sn**	**07 35 02.7**	**-0.1**
	baz=323							
TWT	**Tachien**	**1.76**	**300**	*i* P		**Pn**	**07 34 43.1**	**+0.5**
	baz=297							
TWT				*i* S		**Sn**	**07 35 03.2**	**-0.7**
	baz=297							
TDCB	**Techi**	**1.78**	**300**	P		**Pn**	**07 34 43.3**	**+0.6**
	baz=298							
TDCB				S		**Sn**	**07 35 02.9**	**-1.3**
	baz=298							
SSLB	**Suanglung**	**1.78**	**284**	P		**Pn**	**07 34 42.8**	**0.0**
	baz=281							
SSLB				S		**Sn**	**07 35 02.9**	**-1.3**
	baz=281							
JISG	**Ishigakijimahi**	**1.80**	**48**	P		**Pn**	**07 34 42.6**	**-0.4**
JISG				S		**Sn**	**07 35 03.9**	**-0.8**
TIPB	**Shuangxi**	**1.84**	**330**	S		**Sn**	**07 35 05.4**	**-0.3**
	baz=329							
SMLT	**Sun Moon Lake**	**1.85**	**286**	*e*P		**Pn**	**07 34 44.2**	**+0.4**
	baz=279							
NWLT	**Wulai**	**1.86**	**319**	P		**Pn**	**07 34 44.9**	**+1.1**
	baz=317							
NWLT				S		**Sn**	**07 35 06.1**	**0.0**
	baz=317							
YHNB	**Yeheng**	**1.86**	**314**	P		**Pn**	**07 34 44.0**	**+0.1**
	baz=312							
YHNB				S		**Sn**	**07 35 06.0**	**-0.2**
	baz=312							
ALS	**Alishan**	**1.88**	**275**	*e*S		**Sn**	**07 35 06.3**	**-0.7**
	baz=279							
NSK	**Sanguang**	**1.88**	**314**	P		**Pn**	**07 34 44.4**	**+0.3**
	baz=312							
NSK				S		**Sn**	**07 35 06.3**	**-0.3**
	baz=312							
TYC	**Yuchr**	**1.90**	**287**	*e*P		**Pn**	**07 34 45.4**	**+1.1**
	baz=285							
CHN5	**Tsauling**	**2.00**	**277**	P		**Pn**	**07 34 47.2**	**+1.4**
	baz=274							
CHN5				S		**Sn**	**07 35 09.6**	**-0.1**
	baz=274							
TPUB	**Ta-pu**	**2.04**	**268**	S		**Sn**	**07 35 10.9**	**+0.4**
	baz=271							
CHN4	**Tsaushan**	**2.07**	**270**	*i* P		**Pn**	**07 34 49.0**	**+2.4**
	baz=271							
CHN4				S		**Sn**	**07 35 12.5**	**+1.3**
	baz=271							
EAST	**Anshuo**	**2.09**	**242**	S		**Sn**	**07 35 11.8**	**0.0**
	baz=249							
LIOB	**Emei**	**2.10**	**307**	P		**Pn**	**07 34 48.0**	**+0.9**
	baz=298							
LIOB				*e*S		**Sn**	**07 35 11.4**	**-0.6**
	baz=298							
NSTT	**Nanjuang**	**2.10**	**307**	S		**Sn**	**07 35 11.6**	**-0.4**
	baz=305							
JTJ	**Tarama**	**2.12**	**53**	P		**Pn**	**07 34 47.5**	**+0.2**
JTJ				*e*S		**Sn**	**07 35 12.2**	**-0.1**
CHN1	**Nanshi**	**2.14**	**265**	*e*P		**Pn**	**07 34 49.1**	**+1.5**
	baz=260							
CHN1				S		**Sn**	**07 35 14.7**	**+1.7**
	baz=260							
TWK	**Hsinying**	**2.17**	**268**	P		**Pn**	**07 34 49.2**	**+1.1**
	baz=271							
TWK				*e*S		**Sn**	**07 35 15.2**	**+1.4**
	baz=271							
MASBT	**Mashibuluo**	**2.17**	**250**	*e*P		**Pn**	**07 34 48.2**	**+0.1**
	baz=249							

*BJI **09** 07:36:46.7±0.0, 17.65N×146.15E, h211km, mB4.7/15, mb4.5/22*
*NEIC **09** 07:36:54.1±1.4, 17.97N±0.06×145.6E±0.1, h220km±6km, mb4.7/205, Error ellipse: s-maj=15.9km s-min=9.5km az=88.0*
*IDC **09** 07:36:54.9±1.3, 17.97N×145.62E, h234km±13km, mb4.1/24, mb1 4.2/26, mb1mx4.0/45, mbtmp4.6/26, Error ellipse: s-maj=12.3km s-min=6.2km az=91.0*
ISC 09 07:36:51.9±0.3, 17.99N±0.04×145.63E±0.07, h200km, n363, σ1s09/369, mb4.7/127, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.43**	**190**	P		**Pn**	**07 38 01.7**	**+2.5**
	88nm,0.3s,baz=10,slow=2.6,SNR=31							
GUMO				S		**Sn**	**07 38 52.9**	**+0.9**
	263nm,0.3s,baz=18,slow=22,SNR=13							
GUMO	**Guam**	**4.43**	**190**	Pn		**Pn**	**07 38 01.7**	**+2.5**
GUMO				S		**Sn**	**07 38 54.5**	**+2.5**
JCJ	**Chichijima**	**9.61**	**341**	Pn		**Pn**	**07 39 09.3**	**+3.3**
JCJ				S		**Sn**	**07 40 54.1**	**+0.6**
JYT	**Yasato**	**18.80**	**346**	P		**P**	**07 40 57.8**	**+1.6**
INU	**Inuyama**	**18.91**	**338**	P		**P**	**07 40 56.2**	**-1.3**
INU				IAmb		IAmb	07 41 11.6	
	comp=Z,12nm,0.7s							
JGF	**Kuroka**	**19.02**	**339**	P		**P**	**07 40 60.0**	**+1.2**
JGF				IAmb		IAmb	07 41 23.3	
	comp=Z,17nm,0.8s							
MJAR	**Matsushiro Arr**	**19.61**	**342**	P		**P**	**07 41 05.3**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=166,slow=8.9,SNR=23							
MJAR	**Matsushiro Arr**	**19.61**	**342**	P		**P**	**07 41 04.5**	**-0.6**
MAJO	**Matsushiro**	**19.61**	**342**	P		**P**	**07 41 06.0**	**+1.0**
MAJO				IAmb		IAmb	07 41 07.5	
	comp=Z,14nm,0.7s							
MAT	**Matsushiro**	**19.61**	**342**	P		**P**	**07 41 05.4**	**+0.3**
MAT				S		**S**	**07 44 33.7**	**-1.8**
MJB9	**Matsu-Tunnel**	**19.62**	**342**	P		**P**	**07 40 59.8**	**-5.4**
MANU	**Manus Island**	**19.98**	**175**	P		**P**	**07 41 09.9**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**20.00**	**85**	T		T	08 02 35.8	
	baz=273,slow=74,SNR=5.5							
H11S1	**WAKE ISLAND Hy**	**20.02**	**85**	T		T	08 02 29.5	
	baz=273,slow=74,SNR=9.8							
H11S2	**WAKE ISLAND Hy**	**20.02**	**85**	T		T	08 02 28.6	
	baz=273,slow=74,SNR=9.9							
JNU	**Nakatsue**	**20.07**	**321**	P		**P**	**07 41 11.8**	**+1.8**
	comp=Z,5.5nm,0.6s,baz=221,slow=2.7,SNR=5.0							
JNU	**Nakatsue**	**20.07**	**321**	P		**P**	**07 41 11.5**	**+1.4**
JNU				IAmb		IAmb	07 41 28.9	
	comp=Z,25nm,1.3s							
H11N1	**WAKE ISLAND Hy**	**20.19**	**82**	T		T	08 02 55.4	
	baz=264,slow=74,SNR=16							
H11N2	**WAKE ISLAND Hy**	**20.20**	**82**	T		T	08 02 47.1	
	baz=264,slow=74,SNR=11							
H11N3	**WAKE ISLAND Hy**	**20.21**	**82**	T		T	08 02 58.2	
	baz=264,slow=74,SNR=11							
JMM	**Marumori**	**20.26**	**349**	P		**P**	**07 41 13.0**	**+1.1**
JHS	**Saijyo**	**20.28**	**329**	P		**P**	**07 41 13.9**	**+1.7**
JHS				IAmb		IAmb	07 41 14.2	
	comp=Z,21nm,1.2s							
JSD	**Sado**	**21.00**	**344**			**P**	**07 41 20.1**	**+0.4**
GENI	**Genyem**	**21.14**	**195**	P		**P**	**07 41 21.8**	**+0.3**
	comp=Z,140nm,0.7s							
WAMI	**Wamena**	**22.78**	**198**	P		**P**	**07 41 40.3**	**+3.0**
	comp=Z,111nm,0.8s							
JTM	**Tenmabayashi**	**23.06**	**351**	P		**P**	**07 41 40.5**	**+0.8**
SIJI	**Sorong**	**23.47**	**219**	P		**P**	**07 41 44.5**	**+0.8**
	comp=Z,33nm,0.8s,baz=16,slow=11,SNR=16							
ERM	**Erimo**	**24.05**	**355**	P		**P**	**07 41 50.9**	**+2.3**
FAKI	**Fak Fak**	**24.61**	**214**	P		**P**	**07 41 54.3**	**+0.3**
	comp=Z,88nm,0.9s							
FAKI	**Fak Fak**	**24.61**	**214**	P		**P**	**07 41 55.1**	**+1.2**
KSRS	**Korea Array**	**24.86**	**325**	P		**P**	**07 41 55.3**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=145,slow=8.7,SNR=10							
KSAR	**Wonju Array Be**	**24.87**	**325**	P		**P**	**07 41 56.0**	**-0.1**
KS19	**Wonju Array Si**	**24.92**	**325**	P		**P**	**07 41 56.1**	**-0.5**
KS19				IAmb		IAmb	07 42 16.0	
	comp=Z,19nm,1.3s							
JKA	**Kamikawa-asahi**	**26.18**	**355**	P		**P**	**07 42 08.9**	**+1.1**
JKA				IAmb		IAmb	07 42 16.9	
	comp=Z,37nm,1.2s							
ASAJ	**Asahikawa**	**26.18**	**355**	P		**P**	**07 42 08.5**	**+0.7**
	comp=Z,8.9nm,0.6s,baz=163,slow=10,SNR=8.8							
PMG	**Port Moresby**	**27.26**	**177**	P		**P**	**07 42 16.7**	**-1.0**
	comp=Z,13nm,0.5s,baz=42,slow=2.6,SNR=5.6							
PMG	**Port Moresby**	**27.26**	**177**	P		**P**	**07 42 17.3**	**-0.5**
NJ2	**Nanjing**	**27.92**	**305**	*e*P		**P**	**07 42 23.9**	**+0.4**
NJ2				pmax		pmax		
	comp=Z,12nm,0.5s							
GTOI	**Gorontalo**	**28.13**	**235**	P		**P**	**07 42 26.4**	**+0.8**
	comp=Z,5.0nm,1.1s							
LUWI	**Luwuk**	**29.39**	**232**	P		**P**	**07 42 36.6**	**-0.1**
APSI	**Ampana**	**30.16**	**234**	P		**P**	**07 42 43.1**	**-0.4**
	comp=Z,23nm,1.0s							
MPSI	**Mapaga**	**30.78**	**238**	P		**P**	**07 42 47.7**	**-1.2**
	comp=Z,2μmcomp=Z,13nm,0.8s							
KKM	**Kota Kinabalu**	**31.07**	**251**	P		**P**	**07 42 52.7**	**+1.1**
TTSI	**Tana Toraja**	**32.92**	**233**	P		**P**	**07 43 08.1**	**+0.5**
	comp=Z,100nm,0.8s							
SPSI	**Sidrap Palu**	**33.56**	**232**	P		**P**	**07 43 13.4**	**+0.3**
	comp=Z,51nm,0.9s							
BNSI	**Bone**	**33.60**	**231**	P		**P**	**07 43 14.0**	**+0.5**
	comp=Z,844nmcomp=Z,70nm,1.0s							
MTN	**Manton Dam**	**33.81**	**206**	P		**P**	**07 43 15.7**	**+0.5**
QIZ	**Qiongzhong**	**33.92**	**278**	P		**P**	**07 43 15.8**	**-0.5**
QIZ				S		**S**	**07 48 24.4**	**-1.8**
BKSI	**Bulukumba**	**34.20**	**230**	P		**P**	**07 43 18.2**	**-0.5**
	comp=Z,35nm,0.6s							
KAPI	**Kappang**	**34.27**	**231**	P		**P**	**07 43 20.3**	**+1.0**
KAPI				IAmb		IAmb	07 43 20.8	
	comp=Z,25nm,0.7s							
BSSI	**Bau Bau, Buton**	**34.51**	**228**	P		**P**	**07 43 23.0**	**+1.7**
	comp=Z,72nm,0.7s							
SOEI	**Soe**	**34.71**	**219**	P		**P**	**07 43 23.5**	**+0.3**
	comp=Z,71nm,0.8s							
SOEI	**Soe**	**34.71**	**219**	P		**P**	**07 43 22.5**	**-0.7**
BATI	**Baumata**	**35.43**	**219**	P		**P**	**07 43 28.9**	**-0.3**
	comp=Z,49nm,0.8s							
EDFI	**Ende, Flores**	**35.56**	**224**	P		**P**	**07 43 30.3**	**-0.1**
	comp=Z,8.9nm,0.8s							
SBUM	**Sibu**	**36.22**	**249**	P		**P**	**07 43 37.2**	**+1.3**
SBUM				IAmb		IAmb	07 43 37.7	
	comp=Z,21nm,0.6s							
SBUM	**Sibu**	**36.22**	**249**	P		**P**	**07 43 37.0**	**+1.1**
PEA0B	**Petropavlovsk-**	**36.30**	**12**	P		**P**	**07 43 37.3**	**+1.2**
PETK	**Petropavlovsk-**	**36.30**	**12**	P		**P**	**07 43 37.1**	**+1.0**
	comp=Z,6.4nm,0.7s,baz=172,slow=5.8,SNR=8.3							
HHC	**Hu-ho-hao-te**	**37.06**	**315**	*e*P		**P**	**07 43 45.3**	**+2.5**
HHC				pmax		pmax		
	comp=Z,13nm,1.0s							
HHC				pmax		pmax		
	comp=Z,48nm,5.3s							
KNRA	**Kununurra**	**37.35**	**207**	P		**P**	**07 43 46.1**	**+0.7**
CTA	**Charters Tower**	**37.84**	**179**	P		**P**	**07 43 49.4**	**0.0**
	comp=Z,11nm,0.6s,baz=1.5,slow=8.9,SNR=25							
CTAO	**Charters Tower**	**37.84**	**179**	P		**P**	**07 43 50.0**	**+0.6**
CTAO				IAmb		IAmb	07 43 52.0	
	comp=Z,14nm,0.6s							
PLAI	**Plampang**	**38.30**	**228**	P		**P**	**07 43 54.0**	**+0.7**
	comp=Z,50nm,1.1s							
KSM	**Kuching**	**38.36**	**249**	P		**P**	**07 43 54.6**	**+0.7**
KSM				IAmb		IAmb	07 43 55.0	
	comp=Z,26nm,0.7s							
KSM	**Kuching**	**38.36**	**249**	P		**P**	**07 43 54.0**	**+0.1**
TWSI	**Taliwang, Sumb**	**38.87**	**229**	P		**P**	**07 43 58.5**	**+0.4**
	comp=Z,41nm,0.7s							
WB0	**Warramunga Arr**	**39.11**	**197**	P		**P**	**07 43 60.0**	**0.0**
WR0	**Warramunga Arr**	**39.25**	**197**	P		**P**	**07 44 01.3**	**+0.1**
WRAB	**Tennant Creek**	**39.28**	**197**	P		**P**	**07 44 01.6**	**+0.2**
WB2	**Warramunga Arr**	**39.28**	**197**	P		**P**	**07 44 01.6**	**+0.1**
WRA	**Warramunga Arr**	**39.29**	**197**	P		**P**	**07 44 01.2**	**-0.2**
	comp=Z,56nm,0.8s,baz=18,slow=8.9,SNR=286							
WRA				ScP		**ScP**	**07 49 31.1**	**-4.7**
	comp=Z,1.3nm,0.7s,baz=10.0,slow=3.7,SNR=6.4							
WRA	**Warramunga Arr**	**39.29**	**197**	P		**P**	**07 44 01.1**	**-0.4**
SLVN	**Son La**	**39.36**	**282**	P		**P**	**07 44 01.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**40.89**	**210**	P		**P**	**07 44 15.1**	**+0.4**
LZH	**Lanzhou**	**40.99**	**305**	*e*P		**P**	**07 44 17.2**	**+1.6**
LZH				pP		pwP	07 44 59.7	-2.2
LZH				sP		sP	07 45 25.3	+6.2
LZH				pmax		pmax		
	comp=Z,16nm,1.1s							
PWJI	**Pagerwojo**	**42.23**	**235**	P		**P**	**07 44 23.4**	**-2.2**
	comp=Z,108nm,0.7s							
AS31	**Alice Springs**	**42.95**	**196**	P		**P**	**07 44 31.1**	**-0.2**
AS31				IAmb		IAmb	07 44 33.2	
	comp=Z,11nm,0.5s							
ASAR	**Alice Springs**	**42.95**	**196**	P		**P**	**07 44 30.9**	**-0.5**
	comp=Z,12nm,0.5s,baz=18,slow=8.0,SNR=156							
ASAR				ScP		**ScP**	**07 49 44.7**	**-5.6**
	comp=Z,0.5nm,0.8s,baz=24,slow=3.6,SNR=4.0							
ASAR				S		**S**	**07 50 37.8**	**-3.5**
	comp=Z,2.6nm,1.0s,baz=20,slow=20,SNR=13							
ASAR	**Alice Springs**	**42.95**	**196**	P		**P**	**07 44 30.6**	**-0.7**
SONM	**Songino Array**	**43.66**	**322**	P		**P**	**07 44 36.4**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=138,slow=8.6,SNR=5.8							
**SONM

OUZ Omahuta 59.20 153 P P 07 46 33.6 +1.6
OUZ IAmb IAmb 07 46 34.5
comp=Z,24nm,1.4s
OHAK Old Harbor 59.48 34 P P 07 46 34.6 +1.0
OHAK IAmb IAmb 07 46 56.5
comp=Z,35nm,1.2s
SVW2 Sparrevohn 59.48 29 P P 07 46 34.5 +0.9
SVW2 IAmb IAmb 07 46 35.2
comp=Z,25nm,1.3s
TAU Tasmania Unive 60.61 179 P P 07 46 40.8 -0.6
CNPM China Poot 61.10 31 P P 07 46 44.5 -0.2
CNPM IAmb IAmb 07 46 44.9
comp=Z,32nm,1.0s
BRLK Bradley Lake 61.33 31 P P 07 46 45.5 -0.7
BRLK IAmb IAmb 07 46 46.1
comp=Z,22nm,0.9s
PPLA Purkeypile 61.56 27 P P 07 46 48.1 +0.3
PPLA IAmb IAmb 07 46 51.5
comp=Z,21nm,1.2s
SKT Skwentna 61.59 29 P P 07 46 47.5 -0.4
SKT IAmb IAmb 07 46 47.9
comp=Z,15nm,1.1s
KURK Kurchatov 61.76 318 P P 07 46 48.5 -0.7
IMAR Indian Mountai 61.89 24 P P 07 46 49.7 -0.1
O22K Cooper Landing 62.06 30 P P 07 46 51.0 0.0
baz=257
O22K Cooper Landing 62.06 30 P P 07 46 51.0 0.0
SEW Seward 62.11 31 P P 07 46 51.4 +0.1
RC01 Rabbit Creek A 62.20 30 P P 07 46 52.0 +0.1
baz=256
NRIK Noril'sk 62.26 340 P P 07 46 50.6 -1.5
comp=Z,3.1nm,0.6s,baz=117,slow=7.5,SNR=9.0
KTH Kantishna Hill 62.30 27 P P 07 46 53.0 +0.4
KTH IAmb IAmb 07 46 53.4
comp=Z,20nm,1.1s
BPAW Bear Paw Mtn. 62.42 26 P P 07 46 53.7 +0.3
BPAW IAmb IAmb 07 46 54.3
comp=Z,24nm,1.2s
GHO Glory Hole Cre 62.74 29 P P 07 46 55.4 -0.2
MLY Manley 62.79 25 P P 07 46 56.0 +0.2
baz=254
KNK Knik Glacier 62.88 30 P P 07 46 56.5 +0.1
A21K Barrow 62.99 18 P P 07 46 56.6 -0.3
baz=245
A21K Barrow 62.99 18 P P 07 46 57.4 +0.5
A21K IAmb IAmb 07 46 58.0
comp=Z,13nm,0.8s
SML Sawmill 63.02 29 P P 07 46 57.5 +0.1
MCK McKinley 63.20 27 P P 07 46 58.8 +0.3
baz=256
KSH Kashi 63.23 306 eP P 07 47 03.4 +4.1
KSH pmax pmax
comp=Z,320nm,4.4s
URZ Urewera 63.27 153 P P 07 46 57.5 -1.8
comp=Z,2.7nm,0.3s,baz=310,slow=15,SNR=15
URZ Urewera 63.27 153 IAmb IAmb 07 47 03.6
comp=Z,13nm,1.1s
NEA2 Nenana 63.36 26 P P 07 46 59.9 +0.4
baz=255
I23K Minto, Yukon-K 63.38 25 P P 07 46 60.0 +0.4
baz=255
I23K Minto, Yukon-K 63.38 25 P P 07 47 00.1 +0.4
I23K IAmb IAmb 07 47 06.0
comp=Z,15nm,0.7s
SCM Sheep Creek Mo 63.49 29 P P 07 47 00.5 -0.1
COLD Coldfoot 63.63 23 P P 07 47 01.7 +0.5
baz=253
COLD Coldfoot 63.63 23 P P 07 47 01.8 +0.5
COLD IAmb IAmb 07 47 02.7
comp=Z,13nm,1.3s
MDM Murphy Dome 63.80 26 P P 07 47 02.8 +0.4
MDM IAmb IAmb 07 47 03.4
comp=Z,8.2nm,0.7s
EYAK Cordova Ski Ar 64.01 31 P P 07 47 04.5 +0.7
POKR Poker Plat Res 64.16 26 P P 07 47 04.6 -0.1
baz=257
HDA Harding Lake 64.20 26 P P 07 47 03.5 -1.5
baz=257
HDA Harding Lake 64.20 26 P P 07 47 04.3 -0.7
TOLK Toolik Lake Re 64.28 22 P P 07 47 05.9 +0.4
baz=253
TOLK Toolik Lake Re 64.28 22 P P 07 47 06.3 +0.8
TOLK IAmb IAmb 07 47 06.4
comp=Z,6.5nm,0.7s
IL31 64.31 26 P P 07 47 04.4 -1.2
IL31 IAmb IAmb 07 47 05.2
comp=Z,9.7nm,1.1s
ILAR Eielson Array 64.31 26 P P 07 47 04.0 -1.7
comp=Z,5.3nm,0.6s,baz=249,slow=6.0,SNR=103
ILAR pP pP 07 47 51.9 +1.0
comp=Z,1.5nm,0.8s,baz=246,slow=5.0,SNR=2.6
ILAR Eielson Array 64.31 26 P P 07 47 04.4 -1.3
THZ Tophouse 64.58 158 P P 07 47 07.6 -0.2
THZ IAmb IAmb 07 47 21.5
comp=Z,21nm,1.3s
N25K Chitina, Valde 64.73 30 P P 07 47 07.9 -0.6
baz=261
N25K Chitina, Valde 64.73 30 P P 07 47 09.3 +0.7
N25K IAmb IAmb 07 47 20.4
comp=Z,9.1nm,1.0s
GLB Gilahina Butte 65.08 30 P P 07 47 10.9 +0.1
GLB IAmb IAmb 07 47 12.5
comp=Z,31nm,1.2s
DOT Dot Lake 65.31 28 P P 07 47 12.2 0.0
DOT IAmb IAmb 07 47 12.2
comp=Z,9.1nm,0.7s
CRQM Cirque 65.31 31 P P 07 47 13.0 +0.6
SCRK Sand Creek 65.39 27 P P 07 47 12.3 -0.5
baz=260
MCARA McCarthy VSAT 65.44 30 P P 07 47 13.5 +0.4
MCARA IAmb IAmb 07 47 14.2
comp=Z,18nm,0.8s
L26K Log Cabin Wild 65.53 28 P P 07 47 13.6 0.0
baz=261
BMAR Burnt Mountain 65.79 23 P P 07 47 15.3 0.0
K27K Chicken 66.23 27 P P 07 47 18.2 +0.1
baz=262
EGAK Eagle 66.73 27 P P 07 47 21.6 +0.4
KK31 Karatay Array 67.17 310 P P 07 47 23.7 -0.8
KKAR Karatay Array 67.17 310 P P 07 47 23.7 -0.8
KKAR Karatay Array 67.17 310 P P 07 47 24.1 -0.4
DAWY Dawson 67.41 27 P P 07 47 26.0 +0.5
HYT Haines Junctio 68.07 31 P P 07 47 31.0 +1.2
HYT IAmb IAmb 07 47 31.6
comp=Z,24nm,0.9s
CHGR Chuyangaron 68.58 305 P P 07 47 34.0 +0.6
CHGR IAmb IAmb 07 47 34.1
comp=Z,9.3nm,0.7s
EPYK Eagle Plains 68.72 25 P P 07 47 33.3 -0.4
baz=266
EPYK Eagle Plains 68.72 25 P P 07 47 33.5 -0.1
SKAG Skagway 69.13 32 P P 07 47 37.2 +1.0
SKAG IAmb IAmb 07 47 37.8
comp=Z,16nm,1.0s
INK Inuvik 70.05 23 P P 07 47 41.1 -0.6
comp=Z,8.3nm,0.7s,baz=287,slow=6.8,SNR=38
INK Inuvik 70.05 23 P P 07 47 41.2 -0.5
INK IAmb IAmb 07 47 42.0
comp=Z,10nm,0.8s
DLBC Dease Lake 71.92 33 P P 07 47 54.1 +0.9
comp=Z,5.8nm,0.6s,baz=268,slow=4.9,SNR=19
DLBC Dease Lake 71.92 33 P P 07 47 54.3 +1.1
DLBC IAmb IAmb 07 47 54.9
comp=Z,33nm,1.4s
C36M Paulatuk 73.43 22 P P 07 48 01.1 -0.7
baz=277
C36M Paulatuk 73.43 22 P P 07 48 01.1 -0.7
C36M IAmb IAmb 07 48 01.8
comp=Z,22nm,1.1s
ABKAR Akbulak array 73.82 317 P P 07 48 02.9 -1.5
ABKAR Akbulak array 73.82 317 P P 07 48 02.5 -1.9
NLWA Neilton Lookou 77.32 44 P P 07 48 25.8 +1.3
NLWA IAmb IAmb 07 48 26.4
comp=Z,35nm,1.4s
E03A Lebam 77.71 45 P P 07 48 27.4 +0.8
E03A IAmb IAmb 07 48 28.6
comp=Z,18nm,1.0s
D03D Eldon 77.80 44 P P 07 48 28.0 +1.0
baz=283
I02D Swisshome 78.08 47 P P 07 48 29.6 +1.0
baz=284,SNR=6.2
G03D McMinnville, O 78.22 46 P P 07 48 30.1 +0.7
baz=284
J01E Myrtle Point 78.24 48 P P 07 48 30.2 +0.7
baz=284

B05A Bryant 78.28 43 P P 07 48 30.1 +0.5
baz=284
E04D Cinebar 78.38 45 P P 07 48 30.5 +0.3
baz=284
I03D Drain, OR 78.52 48 P P 07 48 31.1 +0.1
baz=284
D05A Enumclaw 78.61 44 P P 07 48 32.8 +1.3
D05A IAmb IAmb 07 48 33.2
comp=Z,24nm,1.0s
F04A Amboy 78.63 45 P P 07 48 32.4 +0.8
F04A IAmb IAmb 07 48 32.9
comp=Z,16nm,0.7s
YKA Yellowknife Ar 78.64 28 P P 07 48 30.9 -0.4
comp=Z,4.7nm,0.7s,baz=290,slow=5.3,SNR=14
YKA pP pP 07 49 19.1 +0.7
comp=Z,2.9nm,0.7s,baz=288,slow=4.6,SNR=6.3
L02E Cave Junction 78.71 49 P P 07 48 32.0 -0.2
baz=284
H04D Lebanon 78.75 47 P P 07 48 33.2 +0.9
baz=284
LON Longmire 78.84 44 P P 07 48 32.8 0.0
HUMO Hull Mountain 79.06 49 P P 07 48 34.9 +0.8
H04A Detroit Lake 79.09 47 P P 07 48 35.1 +0.8
H04A IAmb IAmb 07 48 35.3
comp=Z,19nm,1.1s
I04A Tendick Farm, 79.16 47 P P 07 48 34.7 +0.1
baz=284,SNR=6.0
M02C Callahan 79.44 50 P P 07 48 36.3 +0.1
baz=285,SNR=5.2
YBH Yreka Blue Hor 79.46 50 P P 07 48 37.3 +0.9
LTY Liberty 79.46 44 P P 07 48 36.0 -0.2
LTY IAmb IAmb 07 48 37.0
comp=Z,9.1nm,0.8s
J04D Umpqua Nationa 79.51 48 P P 07 48 37.1 +0.3
baz=285
G05D Wamic, OR 79.55 46 P P 07 48 36.8 +0.1
baz=285
L04D Klamath Falls 79.63 49 P P 07 48 37.6 +0.2
baz=285
N02D Trinity Center 79.66 50 P P 07 48 38.1 +0.7
baz=285
I05D Terrebonne, OR 79.77 47 P P 07 48 38.2 +0.3
baz=285
WDC Whiskeytown Da 79.88 51 P P 07 48 39.1 +0.6
B08A Colville Reser 80.04 42 P P 07 48 39.2 0.0
B08A IAmb IAmb 07 48 40.1
comp=Z,11nm,0.9s
M04C Macdoel 80.08 49 P P 07 48 40.2 +0.4
baz=285,SNR=10.0
J05D Fort Rock, OR 80.11 48 P P 07 48 40.5 +0.6
baz=285,SNR=6.3
E07A Sunnyside 80.19 44 P P 07 48 40.7 +0.7
E07A IAmb IAmb 07 48 41.4
comp=Z,11nm,1.0s
PINE Pine Mountain 80.19 47 P P 07 48 41.0 +0.7
HAWA Hanford 80.44 44 P P 07 48 42.0 +0.5
HAWA IAmb IAmb 07 48 42.6
comp=Z,11nm,1.1s
O03E Paynes Creek 80.50 51 P P 07 48 41.8 -0.1
baz=286
K05A Summer Lake 80.50 48 P P 07 48 42.6 +0.5
K05A IAmb IAmb 07 48 43.5
comp=Z,22nm,0.9s
D08A Wollman Farm, 80.67 44 P P 07 48 43.0 +0.4
C09A Chrisman Ranch 80.88 43 P P 07 48 43.9 +0.2
ORV Oroville 80.92 51 P P 07 48 43.6 -0.5
ORV IAmb IAmb 07 48 44.8
comp=Z,15nm,1.2s
I07A Izee 81.11 47 P P 07 48 45.5 +0.3
G08A Pilot Rock 81.14 45 P P 07 48 45.5 +0.2
MOD Modoc Plateau 81.15 49 P P 07 48 45.5 0.0
MOD IAmb IAmb 07 48 46.4
comp=Z,12nm,1.1s
E09A Wood Farm, Sta 81.33 44 P P 07 48 46.6 +0.5
E09A IAmb IAmb 07 48 47.1
comp=Z,9.7nm,0.9s
AFDM Forest Hills D 81.48 52 P P 07 48 47.4 +0.4
NEW Newport 81.48 42 P P 07 48 46.8 -0.2
baz=287
NEW Newport 81.48 42 P P 07 48 47.1 +0.2
BEKR Beckworth 81.68 51 P P 07 48 48.2 -0.1
BEKR IAmb IAmb 07 48 49.1
comp=Z,12nm,0.7s
J08A Circle Bar Ran 82.03 47 P P 07 48 50.4 +0.4
CMB Columbia Colle 82.18 53 P P 07 48 50.8 0.0
CMB IAmb IAmb 07 48 51.7
comp=Z,18nm,1.5s
VCNR Virginia City 82.37 51 P P 07 48 52.5 +0.6
BMO Blue Mountains 82.39 45 P P 07 48 52.0 +0.2
PAHR Pah Rah Range 82.44 51 P P 07 48 52.2 -0.1
PNTR Pine Nut 82.46 51 P P 07 48 53.2 +0.7
PNTR IAmb IAmb 07 48 53.7
comp=Z,13nm,0.8s
WAKR Walker 82.76 52 P P 07 48 54.7 +0.8
ARCES ARCESS Array B 83.15 342 P P 07 48 52.8 -2.3
comp=Z,8.8nm,0.7s,baz=76,slow=7.9,SNR=9.6
PLID Pearl Lake 83.19 45 P P 07 48 55.5 -0.6
OMMB Old Mammoth Mi 83.35 53 P P 07 48 57.9 +0.8
RYN Ryan 83.40 52 P P 07 48 57.5 +0.3
MLAC Mammoth, Mammo 83.47 53 P P 07 48 58.1 +0.4
baz=288
LHV Little Huntoon 83.53 52 P P 07 48 58.3 +0.7
LHV IAmb IAmb 07 48 59.3
comp=Z,13nm,1.3s
PKM Mcpherson Peak 83.53 56 P P 07 48 58.0 0.0
baz=287
KVN Kaiserville 83.59 51 P P 07 48 58.3 +0.2
KVN IAmb IAmb 07 48 59.1
comp=Z,9.2nm,0.7s
NVAR Mina Array Bea 83.63 52 P P 07 48 58.6 +0.2
comp=Z,8.1nm,0.7s,baz=266,slow=6.1,SNR=76
NVAR pP pwP 07 49 49.7 -1.1
comp=Z,2.0nm,0.7s,baz=265,slow=6.7,SNR=3.6
NVAR Mina Array Bea 83.63 52 P P 07 48 58.4 -0.1
NV11 Mina Array Sit 83.74 52 P P 07 48 59.0 +0.1
SBC Santa Barbara 83.75 56 P P 07 48 59.2 +0.4
baz=288
VES Vestal, Richgr 83.82 54 P P 07 49 00.4 +1.3
baz=288
MFID Camas Ranch 83.85 46 P P 07 48 59.7 +0.4
MFID IAmb IAmb 07 49 00.3
comp=Z,8.9nm,0.8s
CWC Cottonwood Cre 84.41 54 P P 07 49 01.9 -0.5
baz=288
TPH Tonopah 84.55 52 P P 07 49 03.0 0.0
HLID Hailey 84.77 46 P P 07 49 03.9 -0.1
baz=290
HLID Hailey 84.77 46 P P 07 49 04.3 +0.3
GRAC Grapevine Rang 84.78 53 P P 07 49 04.1 +0.1
baz=288
EDW2 Edwards Air Fo 84.96 55 P P 07 49 04.1 -0.9
baz=288
MPMC Manual Prospec 84.98 54 P P 07 49 04.8 -0.4
baz=288
LRMC Laurel Mtn Rad 85.02 54 P P 07 49 05.1 -0.3
baz=288
ELK Elko 85.14 49 P P 07 49 06.1 +0.1
ELK IAmb IAmb 07 49 07.0
comp=Z,11nm,0.9s
BCYI Bear Canyon 85.20 45 P P 07 49 06.3 +0.1
LRM Limekiln Ridge 85.30 43 P P 07 49 06.7 0.0
FURC Furnace Creek, 85.33 53 P P 07 49 06.9 +0.2
baz=289
HRY Holter Researc 85.38 42 P P 07 49 07.1 +0.2
MCMT McKenzie Canyo 85.39 44 P P 07 49 07.1 0.0
TPNV Topopah Spring 85.64 53 P P 07 49 08.2 -0.2
baz=289
TPNV Topopah Spring 85.64 53 P P 07 49 08.3 -0.2
TPNV IAmb IAmb 07 49 09.3
comp=Z,7.4nm,0.8s
R11A Troy Canyon, C 85.68 51 P P 07 49 08.7 +0.1
baz=290
R11A Troy Canyon, C 85.68 51 P P 07 49 09.0 +0.4
GSC Goldstone, Bar 85.75 54 P P 07 49 08.6 -0.4
baz=289
GSC Goldstone, Bar 85.75 54 P P 07 49 09.1 +0.2
BOZ Bozeman (W) 85.92 43 P P 07 49 09.2 -0.4
baz=292
QLMT Earthquake Lak 86.33 44 P P 07 49 12.4 +0.7
TUQ Turquoise Moun 86.39 54 P P 07 49 11.8 -0.3
baz=290
PRN Pahroc Range 86.39 52 P P 07 49 12.7 +0.6
PRN IAmb IAmb 07 49 13.3
comp=Z,7.7nm,1.0s
YHL Hebgen Lake 86.49 44 P P 07 49 13.4 +0.8

YHB Horse Butte 86.52 44 P P 07 49 12.4 -0.2
PFO Pinyon Flats O 86.57 56 P P 07 49 12.5 -0.5
baz=289
TPFO Pinon Flats 86.58 56 P P 07 49 13.2 +0.2
baz=289
SHPR Sheep Range 86.61 53 P P 07 49 13.9 +0.7
BGU Big Grassy Mou 86.65 48 P P 07 49 13.4 +0.1
YMR Madison River 86.70 44 P P 07 49 14.7 +1.1
YHH Holmes Hill 86.73 44 P P 07 49 14.9 +1.2
BELC Belle Mtn. Jos 86.81 55 P P 07 49 13.8 -0.4
baz=290
GMRC Granite Mounta 86.81 55 P P 07 49 14.0 -0.2
baz=290
MONP2 Monument Peak 86.84 57 P P 07 49 14.1 -0.3
baz=289
YNR Norris Junctio 86.87 44 P P 07 49 16.7 +2.3
PSUT Pine Spring 86.89 51 P P 07 49 14.6 0.0
SPUT South Promonto 86.92 48 P P 07 49 14.9 +0.3
IMW Indian Meadow 87.00 45 P P 07 49 15.8 +0.6
H17A Grant Village 87.06 44 P P 07 49 18.0 +2.6
DUG Dugway, Tooele 87.06 49 P P 07 49 15.4 0.0
baz=291
DUG Dugway, Tooele 87.06 49 P P 07 49 15.3 0.0
DUG IAmb IAmb 07 49 16.1
comp=Z,8.4nm,0.8s
BC3 Big Chuckawall 87.35 56 P P 07 49 16.6 -0.1
baz=290
IRM Iron Mountain 87.42 55 P P 07 49 16.6 -0.4
baz=290
HWUT Hardware Ranch 87.43 47 P P 07 49 17.2 +0.1
HWUT IAmb IAmb 07 49 17.8
comp=Z,8.1nm,0.9s
FINES FINESS Array B 87.50 335 P P 07 49 13.6 -3.1
comp=Z,1.1nm,0.4s,baz=68,slow=4.5,SNR=9.8
FINES pP pP 07 50 06.5 +1.7
comp=Z,0.9nm,0.5s,baz=64,slow=4.2,SNR=1.8
CCUT Cedar City 87.60 51 P P 07 49 18.4 +0.4
TCUT Toone Canyon 87.72 47 P P 07 49 18.6 +0.1
SZCU Shurtz Canyon 87.79 51 P P 07 49 19.4 +0.5
LCMT Little Creek M 87.88 52 P P 07 49 19.9 +0.6
JLU Jordanelle 87.88 48 P P 07 49 19.6 +0.3
TCRU Three Creeks R 87.90 50 P P 07 49 20.0 +0.6
MPU Maple Canyon 87.97 49 P P 07 49 19.8 +0.2
MVU Marysvale 88.11 50 P P 07 49 21.1 +0.7
MSU Marysvale 88.13 50 P P 07 49 21.2 +0.7
PDMCI Parker Dam,Lak 88.15 55 P P 07 49 20.3 0.0
baz=290
KNB Kanab 88.19 52 P P 07 49 21.7 +0.9
MTPU Mount Pierson 88.30 51 P P 07 49 22.2 +0.7
PDAR Pinedale Array 88.37 45 P P 07 49 20.6 -0.9
comp=Z,0.4nm,0.4s,baz=128,slow=1.4,SNR=7.6
PKCU Pink Cliffs 88.42 51 P P 07 49 23.6 +1.6
TMUT Trail Mountain 88.54 49 P P 07 49 22.4 -0.1
Q16A Castle Valley 88.71 49 P P 07 49 22.9 -0.3
U15A North Rim 88.81 52 P P 07 49 22.8 -1.0
U15A IAmb IAmb 07 49 25.1
comp=Z,6.5nm,0.8s
P17A Butcher Ranch, 88.81 49 P P 07 49 23.7 +0.1
113A Mohawk Valley, 88.98 56 P P 07 49 23.9 -0.4
SRU San Rafael Swe 89.10 49 P P 07 49 24.2 -0.7
Y14A Wickenburg 89.16 55 P P 07 49 24.8 -0.4
Y14A IAmb IAmb 07 49 26.3
comp=Z,6.1nm,0.6s
RDMU Red Mountain 89.22 47 P P 07 49 25.1 -0.5
WUAZ Wupatki 89.83 53 P P 07 49 29.1 +0.7
baz=292
WUAZ Wupatki 89.83 53 P P 07 49 28.4 0.0
WUAZ IAmb IAmb 07 49 29.9
comp=Z,7.6nm,0.9s
214A Organ Pipe Nat 90.02 56 P P 07 49 29.8 +0.6
baz=291
214A Organ Pipe Nat 90.02 56 P P 07 49 28.8 -0.4
214A IAmb IAmb 07 49 30.5
comp=Z,6.8nm,0.8s
O20A White River Ci 90.32 47 P P 07 49 30.4 -0.3
baz=294
PV23 Carpenter Ridg 90.45 49 P P 07 49 30.8 -0.6
PV14 Lion Creek, Pa 90.47 49 P P 07 49 31.3 -0.2
PV20 West Nyswonger 90.52 49 P P 07 49 30.8 -0.8
PV20 IAmb IAmb 07 49 32.3
comp=Z,12nm,0.8s
PV19 Morning Glory 90.53 49 P P 07 49 31.1 -0.6
PV04 Paradox Valley 90.55 49 P P 07 49 30.9 -0.8
PV04 IAmb IAmb 07 49 32.5
comp=Z,9.3nm,0.9s
PV17 East Wray Mesa 90.55 49 P P 07 49 31.1 -0.7
PV17 IAmb IAmb 07 49 32.4
comp=Z,12nm,0.8s
PV16 Nyswonger Mesa 90.57 49 P P 07 49 31.1 -0.8
PV16 IAmb IAmb 07 49 32.5
comp=Z,10nm,0.7s
PV18 Skein Mesa, Pa 90.60 49 P P 07 49 30.9 -1.1
PV18 IAmb IAmb 07 49 32.5
comp=Z,8.5nm,0.7s
PV11 David Mesa, Pa 90.61 49 P P 07 49 31.7 -0.4
PV03 Paradox Valley 90.64 49 P P 07 49 32.1 -0.2
PV03 IAmb IAmb 07 49 32.7
comp=Z,7.8nm,0.8s
PV12 Saucer Basin, 90.65 49 P P 07 49 31.7 -0.6
PV12 IAmb IAmb 07 49 33.0
comp=Z,12nm,0.9s
PV13 Radium Mtn., P 90.70 49 P P 07 49 31.9 -0.6
PV13 IAmb IAmb 07 49 33.0
comp=Z,8.0nm,0.7s
PV02 Paradox Valley 90.74 49 P P 07 49 31.4 -1.3
PV02 IAmb IAmb 07 49 33.2
comp=Z,9.2nm,0.7s
PV01 Paradox Valley 90.89 49 P P 07 49 33.0 -0.5
PV01 IAmb IAmb 07 49 33.8
comp=Z,7.8nm,0.7s
MVCO Mesa Verde 91.32 50 P P 07 49 35.0 -0.4
baz=294
TUC Tucson 91.49 55 P P 07 49 36.8 +0.7
baz=292
TUC Tucson 91.49 55 P P 07 49 35.3 -0.8
SMCO Snowmass 91.61 48 P P 07 49 36.8 -0.1
SMCO IAmb IAmb 07 49 37.7
comp=Z,6.2nm,0.9s
ISCO Idaho Springs 92.30 47 P P 07 49 39.9 0.0
baz=296
S22A 4UR Ranch, Cre 92.31 49 P P 07 49 40.1 +0.1
baz=295
S22A 4UR Ranch, Cre 92.31 49 P P 07 49 40.6 +0.6
S22A IAmb IAmb 07 49 41.0
comp=Z,5.1nm,1.0s
MNTX Cornudas Mount 95.94 54 P P 07 49 56.7 +0.2
baz=295
VYHS Vyhne 98.63 327 ePDIFF P 07 50 06.7 -1.5
CLL Collm 99.54 332 ePdif Pdif 07 50 10.0 -2.1
TORD Torodi Ar. Bea 132.85 309 SKPbc SKPbc 07 58 46.2 -6.7
comp=Z,1.4nm,0.8s,baz=18,slow=3.4,SNR=5.3
PLCA Paso Flores 141.56 134 SKPbc SKPbc 07 59 13.7 -4.1
comp=Z,2.2nm,0.8s,baz=248,slow=3.4,SNR=5.2
LPAZ La Paz 147.72 92 PKPbc PKPbc 07 56 14.4 -0.1
comp=Z,2.8nm,0.7s,baz=330,slow=3.4,SNR=14
LPAZ La Paz 147.72 92 PKPbc 07 56 14.1 -0.5

IDC ***09*** *07:58:04.2*±*1.3,27.°79N*×*54.°13E,h0km,mb3.9/11, mb1 4.0/13,mb1mx3.8/59,mbtmp3.9/13,ML3.7/2,MS4.1/2, Ms1 4.1/2,ms1mx3.0/45,Error ellipse: s-maj=27.2km s-min=21.7km az=170.0*
TEH ***09*** *07:58:05.9,27.°77N*×*54.°27E,h12km,ML4.0*
NEIC ***09*** *07:58:05.6*±*1.7,27.°72N*±*0.°06*×*54.°21E*±*0.°04,h10km*±*1km, Error ellipse: s-maj=10.1km s-min=5.7km az=189.0*
THR ***09*** *07:58:06.2*±*0.5,27.°64N*×*54.°25E,h14km*±*4km,ML4.1*
OMAN ***09*** *07:58:07.9*±*0.2,27.°78N*×*54.°07E,h117km*±*1km,mb5.2/3, ml4.0/6,Error ellipse: s-maj=4.1km s-min=1.4km az=5.0*
ISC 09 07:58:05.9±0.5,**27.73N**±0.°04×**54.15E**±0.°03,**h10km,n114,**
σ1°**54**/119,**mb3.9**/12,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	LAR	0.21	107	ePg	Pg	07 58 09.3	-1.0
LAR1	LAR	0.21	107	Pg	Pg	07 58 09.3	-1.0
LAR1				Sg	Sg	07 58 11.5	-1.8
JHRM	Jahrom	0.92	327	ePg	Pg	07 58 23.0	-0.8
JHRM				e		07 58 49.8	
JHRM	Jahrom	0.92	327	Pg	Pb	07 58 24.2	+0.1
LMD1	Lamerd	0.96	246	ePg	Pn	07 58 26.4	+0.9
LMD1				e		07 59 01.4	
LMD1	Lamerd	0.96	246	Pg	Pb	07 58 26.2	+1.5
GHIR	Ghir-Karzin	1.17	299	ePg	Pn	07 58 30.4	+1.9

GHIR				*e*Sg	**Sn**	07 58 47.5	**+2.9**
GHIR				IAML		07 58 50.7	
	comp=E,3µm,0.5s						
GHIR	**Ghir-Karzin**	**1.17**	**299**	*e*Pg	**Pn**	**07 58 30.4**	**+1.9**
BNDS	**Bandar-Abbas**	**1.82**	**100**	*e*Pg	**Pn**	**07 58 37.4**	**-0.1**
BNDS				*e*Sg	**Sn**	**07 59 01.0**	**+0.2**
BNDS	**Bandar-Abbas**	**1.82**	**100**	*e*Pg	**Pn**	**07 58 37.4**	**-0.1**
GENO	**Geno**	**1.82**	**100**	*e*Pn	**Pn**	**07 58 37.3**	**-0.3**
GENO				*e*		07 59 14.5	
GENO	**Geno**	**1.82**	**100**	Pn	**Pn**	**07 58 37.1**	**-0.5**
SHI	**Shiraz**	**2.39**	**323**	*e*Pn	**Pn**	**07 58 46.6**	**+1.3**
SHI				*e*		07 59 36.1	
SHI	**Shiraz**	**2.39**	**323**	*e*Pn	**Pb**	**07 58 48.4**	**-0.7**
SHME	**Shamm**	**2.44**	**133**	*e*Pn	**Pn**	**07 58 46.4**	**+0.5**
UMQ	**Umm Al-Quwin**	**2.58**	**148**	*e*Pn	**Pn**	**07 58 50.2**	**+2.4**
BANOM	**Banah**	**2.63**	**133**	P	**Pn**	**07 58 48.8**	**+0.3**
BANOM				S	**Sn**	**07 59 23.6**	**+3.0**
BANOM	**Banah**	**2.63**	**133**	*e*Pn	**Pn**	**07 58 49.4**	**+0.9**
AHBU	**AHRAM**	**2.76**	**295**	*e*Pn	**Pb**	**07 58 53.6**	**-1.8**
NGRK	**Negar Kerman**	**2.96**	**49**	*e*Pn	**Pn**	**07 58 52.9**	**-0.5**
NGRK				*e*		07 59 38.8	
NGRK	**Negar Kerman**	**2.96**	**49**	Pn	**Pn**	**07 58 53.9**	**+0.5**
MSFE	**Esma-Masafi**	**2.97**	**142**	*e*Pn	**Pn**	**07 58 56.2**	**+3.0**
NAZ	**Nazwa, Dubai**	**3.05**	**153**	*e*Pn	**Pn**	**07 58 56.1**	**+1.9**
MDH	**Madha**	**3.09**	**141**	P	**Pn**	**07 58 55.7**	**+0.9**
MDH				S	**Sn**	**07 59 33.5**	**+1.6**
MDH	**Madha**	**3.09**	**141**	*e*Pn	**Pn**	**07 58 56.1**	**+1.3**
KRBR	**Kerman**	**3.21**	**45**	*e*Pn	**Pn**	**07 58 58.4**	**+1.7**
KRBR	**Kerman**	**3.21**	**45**	*e*Pn	**Pn**	**07 58 58.4**	**+1.7**
TVBK	**TV Kerman**	**3.21**	**45**	*e*Pn	**Pn**	**07 58 57.8**	**+1.0**
TVBK				*e*		07 59 52.9	
TVBK	**TV Kerman**	**3.21**	**45**	Pn	**Pn**	**07 58 57.7**	**+1.0**
AJN	**Ajban**	**3.24**	**166**	*e*Pn	**Pn**	**07 58 58.2**	**+1.3**
FAQ	**Al Faqa, Dubai**	**3.24**	**156**	*e*Pn	**Pn**	**07 58 56.5**	**-0.4**
ASUD	**Al Ashush, Dub**	**3.27**	**161**	P	**Pn**	**07 58 59.7**	**+2.4**
ASUD	**Al Ashush, Dub**	**3.27**	**161**	*e*Pn	**Pn**	**07 58 59.6**	**+2.4**
UOSS	**Minazif**	**3.33**	**146**	P	**Pn**	**07 58 58.8**	**+0.7**
UOSS	**Minazif**	**3.33**	**146**	*e*Pn	**Pn**	**07 58 59.6**	**+1.5**
UOSS	**Minazif**	**3.33**	**146**		**Pn**	**07 58 59.3**	**+1.2**
KHGB	**Koh Gabri**	**3.33**	**37**	*e*Pn	**Pn**	**07 58 58.3**	**0.0**
KHGB				*e*		08 00 12.7	
HATD	**Hatta, Dubai**	**3.40**	**148**	*e*Pn	**Pn**	**07 59 01.2**	**+2.2**
ASHO	**Ashiyiah** SNR=7.5	**3.48**	**150**	P	**Pn**	**07 59 01.7**	**+1.4**
ASHO				S	**Sn**	**07 59 43.2**	**+1.6**
ASHO	**Ashiyiah**	**3.48**	**150**	*e*Pn	**Pn**	**07 59 01.4**	**+1.1**
CHMN	**Cheshme madani**	**3.65**	**54**	*e*	**Sb**	**08 00 02.9**	**+7.5**
IMEH	**Mehriz**	**3.67**	**6**	*e*Pn	**Pn**	**07 59 03.9**	**+0.9**
ALNE	**Al Ain**	**3.93**	**158**	*e*Pn	**Pn**	**07 59 07.4**	**+1.0**
KLNJ	**Kolanjah**	**3.96**	**326**	*e*Pn	**Pn**	**07 59 07.3**	**+0.2**
KLNJ				*e*		08 00 53.3	
KBAM	**BAM**	**4.04**	**69**	*e*Pn	**Pn**	**07 59 09.1**	**+1.2**
IBAF	**Bafgh**	**4.04**	**17**	*e*Pn	**Pn**	**07 59 08.9**	**+0.9**
SOHO	**SOHO**	**4.17**	**149**	P	**Pn**	**07 59 11.5**	**+1.8**
SOHO	**SOHO**	**4.17**	**149**	*e*Pn	**Pn**	**07 59 12.8**	**+3.1**
ISAD	**Sadrabad**	**4.19**	**355**	*e*Pn	**Pn**	**07 59 12.0**	**+1.8**
IRAM	**Ramesheh**	**4.35**	**340**	*e*Pn	**Pn**	**07 59 13.4**	**+1.1**
ICHK	**Chekchek**	**4.50**	**3**	*e*Pn	**Pn**	**07 59 14.8**	**+0.3**
ARQ	**Araqi** SNR=14	**4.87**	**153**	P	**Pn**	**07 59 20.5**	**+1.2**
IGAR	**Gharneh**	**5.00**	**339**	*e*Pn	**Pn**	**07 59 22.3**	**+1.0**
UMZA	**Um Al Zommool**	**5.08**	**169**	*e*Pn	**Pn**	**07 59 23.2**	**+1.1**
IZEF	**Zefreh**	**5.38**	**343**	*e*Pn	**Pn**	**07 59 26.3**	**-0.3**
ANAR	**Anarak**	**5.45**	**356**	*e*Pn	**Pn**	**07 59 27.8**	**+0.4**
IPIR	**Pirpir**	**5.69**	**331**	*e*Pn	**Pn**	**07 59 30.3**	**-0.5**
TPRV	**Parvadeh(Tabas**	**5.72**	**22**	*e*Pn	**Pn**	**07 59 31.5**	**+0.5**
SMDO	**Samad** SNR=7.4	**5.84**	**142**	S	**Sn**	**08 00 41.1**	**+1.3**
IKLH	**Kolahrood**	**6.00**	**339**	*e*Pn	**Pn**	**07 59 35.5**	**+0.5**
WSAR	**Wadi Sarin**	**6.03**	**137**	Pn	**Pn**	**07 59 36.4**	**+1.1**
	comp=E,2.6nm,0.3s,baz=310,slow=11,SNR=15						
WSAR				Sn	**Sn**	**08 00 42.0**	**-2.5**
	comp=E,2.2nm,0.3s,baz=291,slow=7.8,SNR=2.7						
WSAR	**Wadi Sarin** SNR=12	**6.03**	**137**	P	**Pn**	**07 59 36.2**	**+1.0**
BSRN	**Basiran**	**6.04**	**44**	*e*Pn	**Pn**	**07 59 37.5**	**+2.0**
TKDS	**Koohdasht(Taba**	**6.40**	**23**	*e*Pn	**Pn**	**07 59 41.0**	**+0.6**
TABS	**Tabas**	**6.43**	**23**	*e*Pn	**Pn**	**07 59 43.3**	**+2.5**
TABS	**Tabas**	**6.43**	**23**	*e*Pn	**Pn**	**07 59 43.3**	**+2.5**
KRSH	**Karshahi**	**6.46**	**345**	*e*Pn	**Pn**	**07 59 41.3**	**+0.1**
TNSJ	**Nastanj**	**6.56**	**18**	*e*Pn	**Pn**	**07 59 41.4**	**-1.2**
WBK	**Wadi Bani Khal** SNR=11	**6.71**	**138**	P	**Pn**	**07 59 44.7**	**+0.1**
AFRZ	**Afriz**	**7.06**	**35**	*e*Pn	**Pn**	**07 59 51.1**	**+1.6**
IVRN	**Varamin**	**7.53**	**345**	*e*Pn	**Pn**	**07 59 55.5**	**-0.4**
MHTO	**MHTO** SNR=10	**7.56**	**152**	P	**Pn**	**07 59 56.5**	**+0.2**
IANJ	**Anjilo**	**7.72**	**359**	*e*Pn	**Pn**	**07 59 58.9**	**+0.3**
HSAM	**Samen**	**8.03**	**325**	*e*Pn	**Pn**	**08 00 02.0**	**-0.9**
ISHM	**Shahmirzad**	**8.09**	**355**	*e*Pn	**Pn**	**08 00 05.1**	**+1.4**
RAYN	**Ar Rayn**	**8.86**	**244**	Pn	**Pn**	**08 00 14.2**	**+0.1**
HSRG	**Sareghieh**	**9.01**	**328**	*e*Pn	**Pn**	**08 00 16.1**	**-0.3**
IDHR	**Dehrash**	**9.61**	**318**	*e*Pn	**Pn**	**08 00 25.1**	**+0.5**
WHFO	**Wadi Hawf** SNR=19	**9.77**	**182**	P	**Pn**	**08 00 26.3**	**-0.3**
GAZ	**Gaziantep**	**17.10**	**308**	P	**Pn**	**08 02 05.6**	**+0.5**
GAZ				IAmb	IAmb	08 02 19.3	
	comp=Z,7.9nm,0.7s						
NIL	**Nilore**	**17.45**	**66**	P	**Pn**	**08 02 08.7**	**-0.8**
NIL				IAmb	IAmb	08 02 12.1	
	comp=Z,8.7nm,0.8s						
KBZ	**Khabaz**	**18.36**	**333**	P	**P**	**08 02 21.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=56,slow=24,SNR=4.1						
BTK	**Batken**	**18.47**	**44**	P	**P**	**08 02 20.2**	**-1.9**
KIV	**Kislovodsk**	**18.64**	**333**	P	**P**	**08 02 22.8**	**-1.1**
KIV				IAmb	IAmb	08 02 34.6	
	comp=Z,11nm,0.9s						
ATD	**Arta Tunnel**	**19.29**	**216**	P	**P**	**08 02 31.1**	**0.0**
ATD				IAmb	IAmb	08 02 43.1	
	comp=Z,34nm,1.5s						
KK31	**Karatay Array**	**20.27**	**37**	P	**P**	**08 02 41.0**	**-0.6**
KKAR	**Karatay Array**	**20.27**	**37**	P	**P**	**08 02 41.0**	**-0.6**
BR131	**Keskin Array S**	**20.78**	**310**	P	**P**	**08 02 47.5**	**+0.1**
BR131				IAmb	IAmb	08 02 57.2	
	comp=Z,9.7nm,0.8s						
BRTR	**Keskin Array B**	**20.78**	**310**	P	**P**	**08 02 47.5**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=134,slow=12,SNR=7.5						
BRTR	**Keskin Array B**	**20.78**	**310**	P	**P**	**08 02 47.7**	**+0.3**
ABKAR	**Akbulak array**	**21.95**	**10**	P	**P**	**08 02 59.2**	**-0.4**
AKTO	**Aktyubinsk**	**22.86**	**6**	P	**P**	**08 03 09.3**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=180,slow=15,SNR=5.4						
IDI	**Anoyia**	**25.99**	**294**	P	**P**	**08 03 37.0**	**-2.1**
MLR	**Muntele Rosu**	**28.54**	**316**	LR	LR	08 16 23.5	
	comp=Z,77nm,18.9s,baz=138,slow=39						
MLR	**Muntele Rosu**	**28.54**	**316**	P	**P**	**08 04 01.0**	**-1.0**
MKAR	**Makanchi Array**	**29.15**	**42**	P	**P**	**08 04 06.8**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=220,slow=7.3,SNR=4.8						
MKAR	**Makanchi Array**	**29.15**	**42**	P	**P**	**08 04 06.1**	**-1.1**
KURBB	**Kurchatov Arra**	**29.41**	**32**	P	**P**	**08 04 09.4**	**0.0**
	comp=Z,0.3nm,0.3s,baz=233,slow=8.5,SNR=4.5						
BURAR	**Bucovina Array**	**30.04**	**319**	P	**P**	**08 04 14.6**	**-0.5**
ZAA0	**Zalesovo Array**	**34.51**	**32**	P	**P**	**08 04 51.7**	**-2.5**
ZAA0				IAmb	IAmb	08 05 00.7	
	comp=Z,4.3nm,1.1s						
ZALV	**Zalesovo Beam**	**34.51**	**32**	P	**P**	**08 04 52.9**	**-1.2**
	comp=Z,1.5nm,0.4s,baz=245,slow=9.0,SNR=6.6						
ZALV	**Zalesovo Beam**	**34.51**	**32**	P	**P**	**08 04 53.2**	**-0.9**
KHC	**Kasperske Hory**	**37.70**	**316**	*e*P	**P**	**08 05 25.6**	**+4.1**
FIA1	**FINESS Array S**	**38.58**	**339**	P	**P**	**08 05 27.8**	**-0.9**
FINES	**FINESS Array B**	**38.58**	**339**	P	**P**	**08 05 27.5**	**-1.3**
	comp=Z,2.7nm,0.9s,baz=131,slow=9.5,SNR=7.5						
FINES	**FINESS Array B**	**38.58**	**339**	P	**P**	**08 05 27.8**	**-0.9**
GTA	**Gaotai**	**39.41**	**61**	*e*P	**P**	**08 05 39.5**	**+3.3**
GTA				pP	sP	08 05 46.2	+5.2
GTA				sP	pP	08 05 48.6	+9.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NOA	**NORSAR Array B**	**43.93**	**331**	P	**P**	**08 06 11.4**	**-1.4**
	comp=Z,1.4nm,0.8s,baz=122,slow=7.8,SNR=2.3						
ARCES	**ARCESS Array B**	**45.02**	**346**	P	**P**	**08 06 20.1**	**-1.3**
	comp=Z,2.1nm,0.9s,baz=134,slow=10,SNR=5.0						
ESDC	**Sonseca Array**	**49.03**	**300**	P	**P**	**08 06 52.4**	**-0.7**
	comp=Z,1.1nm,1.0s,baz=73,slow=7.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**50.89**	**264**	P	**P**	**08 07 07.2**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=62,slow=8.3,SNR=11						
TORD	**Torodi Ar. Bea**	**50.89**	**264**	P	**P**	**08 07 06.5**	**-1.1**
JNU	**Nakatsue**	**65.01**	**64**	LR	LR	08 38 23.8	
	comp=Z,584nm,21.1s,baz=114,slow=37						
ILAR	**Eielson Array**	**86.35**	**9**	P	**P**	**08 10 47.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=325,slow=4.5,SNR=5.1						

IDC 09 08:01:58.1±2.0, 17.74S×176.14E, h0km, mb3.9/5, mb1 4.3/5, mb1mx3.8/34, mbtmp3.9/5, MS3.5/11, Ms1 3.5/11, ms1mx3.3/32, Error ellipse: s-maj=81.4km s-min=26.7km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.23**	**74**	LR	LR	08 08 45.3	
	comp=Z,196nm,21.0s,baz=249,slow=33						
HNR	**Honiara**	**17.77**	**296**	LR	LR	08 12 00.8	
	comp=Z,124nm,20.2s,baz=136,slow=34						
RAR	**Rarotonga**	**22.96**	**103**	LR	LR	08 13 11.4	
	comp=Z,134nm,21.1s,baz=274,slow=29						
KRVT	**Keravat (AS076**	**27.12**	**297**	LR	LR	08 17 40.7	
	comp=Z,176nm,20.1s,baz=87,slow=35						
PMG	**Port Moresby**	**29.33**	**283**	LR	LR	08 17 50.5	
	comp=Z,157nm,18.6s,baz=288,slow=32						
PPT	**Papeete**	**32.64**	**95**	LR	LR	08 18 19.7	
	comp=Z,80nm,21.8s,baz=257,slow=30						
STKA	**Stephens Creek**	**34.21**	**239**	LR	LR	08 21 21.9	
	comp=Z,90nm,18.8s,baz=27,slow=34						
WRA	**Warramunga Arr**	**39.55**	**260**	P	P	08 09 30.7	-0.6
	1.6nm,1.1s,baz=93,slow=9.2,SNR=5.1						
WRA				LR	LR	08 24 22.6	
	comp=Z,78nm,19.4s,baz=225,slow=34						
ASAR	**Alice Springs**	**39.84**	**254**	P	P	08 09 33.6	0.0
	3.3nm,1.1s,baz=86,slow=8.7,SNR=14						
MJAR	**Matsushiro Arr**	**64.80**	**327**	P	P	08 12 39.0	+0.3
	3.0nm,1.1s,baz=158,slow=8.2,SNR=4.5						
MJAR				LR	LR	08 35 51.4	
	comp=Z,19nm,21.8s,baz=255,slow=31						
KSRS	**Korea Array**	**71.22**	**321**	LR	LR	08 43 50.8	
	comp=Z,11nm,18.6s,baz=225,slow=35						
NVAR	**Mina Array Bea**	**82.98**	**46**	P	P	08 14 26.1	+0.6
	1.0nm,0.9s,baz=233,slow=8.8,SNR=6.8						
CMAR	**Chiang Mai Arr**	**83.97**	**291**	LR	LR	08 48 36.8	
	comp=Z,15nm,21.9s,baz=285,slow=33						
ILAR	**Eielson Array**	**86.98**	**15**	P	P	08 14 43.2	-1.5
	0.9nm,0.9s,baz=243,slow=5.0,SNR=7.5						
GERES	**GERESS Array B**	**145.85**	**339**	PKPbc	PKPbc	08 21 39.5	0.0
	0.5nm,0.8s,baz=20,slow=4.4,SNR=5.8						

*HLW **09** 08:04:24.6, 34.84N×33.31E, h10km±14km, Md3.5, MI3.4*
*ISK **09** 08:04:26.9, 34.64N×33.59E, h4km, ML3.2/17*
*GII **09** 08:04:27.6±0.0, 34.46N×33.82E, h1km, MD1.9/3*
*NIC **09** 08:04:28.9±0.0, 34.68N×33.45E, h18km±3km, MI3.0/7*
*DDA **09** 08:04:29.2, 34.64N×33.46E, h8km±1km, ML2.6*

ISC 09 08:04:26.5±1.2, 34.54N±0.02×33.57E±0.03, h5km±10km, n54, σ1s90/82, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASGA	**Asgata**	**0.36**	**313**	P	**Pg**	**08 04 33.4**	**-0.1**
ASGA				S	**Sg**	**08 04 37.8**	**-0.5**
ASGA				AML	AML	08 04 40.0	
	11nm,0.4s						
ASGA				AML	AML	08 04 40.0	
	11nm,0.4s						
ASGA				AML	AML	08 04 40.2	
	11nm,0.3s						
ASGA				AML	AML	08 04 40.2	
	11nm,0.3s						
CSS	**Mathiatis**	**0.47**	**335**	PG	**Pg**	**08 04 35.0**	**-0.5**
CSS	**Mathiatis**	**0.47**	**335**	Pg	**Pg**	**08 04 34.6**	**-0.9**
CSS	**Mathiatis**	**0.47**	**335**	P	**Pg**	**08 04 34.9**	**-0.6**
CSS				S	**Sg**	**08 04 40.5**	**-1.1**
CSS				AML	AML	08 04 42.0	
	1.8nm,0.4s						
CSS				AML	AML	08 04 42.0	
	1.8nm,0.4s						
CSS				AML	AML	08 04 42.2	
	2.3nm,0.6s						
CSS				AML	AML	08 04 42.2	
	2.3nm,0.6s						
MVOU	**Mavrovouni**	**0.48**	**6**	P	**Pg**	**08 04 35.7**	**0.0**
MVOU				S	**Sg**	**08 04 42.8**	**+0.9**
MVOU				AML	AML	08 04 47.5	
	2.4nm,0.4s						
MVOU				AML	AML	08 04 47.5	
	2.4nm,0.4s						
MVOU				AML	AML	08 04 48.2	
	3.0nm,0.3s						
MVOU				AML	AML	08 04 48.2	
	3.0nm,0.3s						
AKIN	**Akıncılar- Kıb**	**0.48**	**350**	PG	**Pg**	**08 04 35.1**	**-0.7**
PARAL	**Paralimni**	**0.59**	**40**	P	**Pb**	**08 04 40.7**	**+1.4**
PARAL				S	**Sb**	**08 04 48.9**	**+0.8**
PARAL				AML	AML	08 04 52.5	
	3.6nm,0.8s						
PARAL				AML	AML	08 04 52.5	
	3.6nm,0.8s						
PARAL				AML	AML	08 04 53.5	
	6.4nm,0.9s						
PARAL				AML	AML	08 04 53.5	
	6.4nm,0.9s						
SZAC	**Souni**	**0.61**	**291**	P	**Pg**	**08 04 38.5**	**+0.3**
SZAC				S	**Sg**	**08 04 46.9**	**+0.8**
SZAC				AML	AML	08 04 49.2	
	4.1nm,0.2s						
SZAC				AML	AML	08 04 49.2	
	4.1nm,0.2s						
ATHAL	**Athalassa**	**0.62**	**346**	P	**Pg**	**08 04 37.6**	**-0.8**
LEF	**Lefka**	**0.81**	**316**	PG	**Pg**	**08 04 42.6**	**+0.6**
LEF	**Lefka**	**0.81**	**316**	*i* P	**Pg**	**08 04 42.1**	**+0.2**
LEF				*i* S	**Sg**	**08 04 51.4**	**-1.0**
LEF				IAML		08 04 57.0	
	comp=N,228nm,0.5s						
LEF				IAML		08 04 58.0	
	comp=E,242nm,0.6s						
NATA	**Nata**	**0.86**	**286**	P	**Pg**	**08 04 43.5**	**+0.5**
NATA				S	**Sn**	**08 04 57.6**	**-0.5**
NATA				AML	AML	08 04 59.6	
	comp=E,3.5nm,0.5s						
NATA				AML	AML	08 04 59.6	
	comp=E,3.5nm,0.5s						
AKDN	**Akdeniz- Kıbrı**	**0.91**	**327**	PG	**Pg**	**08 04 43.6**	**-0.3**
ALFC	**Alefka**	**1.01**	**308**	P	**Pb**	**08 04 45.6**	**-0.9**
ALFC				AML	AML	08 05 01.4	
	comp=E,3.6nm,0.5s						
ALFC				AML	AML	08 05 02.3	
	comp=E,2.2nm,0.5s						
AKMS	**Akamas**	**1.12**	**295**	P	**Pb**	**08 04 47.5**	**-0.8**
AKK2	**Akkuyu-Mersin**	**1.59**	**359**	PN	**Pn**	**08 04 54.9**	**-0.4**
AKK1	**Akkuyu-Mersin**	**1.60**	**359**	PN	**Pn**	**08 04 55.3**	**-0.1**
AKKU	**Akkuyu-Mersin**	**1.61**	**359**	PN	**Pn**	**08 04 55.4**	**-0.2**
AKKU				SN	**Sn**	**08 05 16.5**	**-0.3**
TISA	**Tisan-Mersin**	**1.62**	**3**	PN	**Pn**	**08 04 55.9**	**+0.2**
TISA				SN	**Sn**	**08 05 16.3**	**-0.6**
GULN	**MERSIN_Gulnar**	**1.64**	**359**	*i* P	**Pn**	**08 04 55.7**	**-0.2**
GULN				*i* S	**Sn**	**08 05 16.6**	**-0.8**
GULN				IAML		08 05 17.0	
	comp=E,74nm,0.8s						
GULN				IAML		08 05 20.0	
	comp=N,60nm,0.4s						
TEKE	**Tekeli-Mersin**	**1.64**	**347**	PN	**Pn**	**08 04 55.8**	**-0.2**
YESI	**Yesilovacik-Me**	**1.65**	**2**	PN	**Pn**	**08 04 55.7**	**-0.4**
YESI				SN	**Sn**	**08 05 17.2**	**-0.5**
IKL	**Isikli**	**1.70**	**3**	PN	**Pn**	**08 04 56.7**	**0.0**
IKL				SN	**Sn**	**08 05 18.5**	**-0.3**
OSC2	**CSNet OBS 4**	**1.82**	**217**	P	**Pn**	**08 04 60.0**	**+1.6**
OSC2				S	**Sg**	**08 05 26.6**	**+1.6**
BERE	**Bereket-Mersin**	**1.83**	**351**	PN	**Pn**	**08 04 58.6**	**0.0**
SILI	**Silifke-Mersin**	**1.85**	**9**	PN	**Pn**	**08 04 58.7**	**-0.1**
TEVE	**Tevekalti-Mers**	**1.90**	**357**	PN	**Pn**	**08 04 59.6**	**+0.1**
TEVE				SN	**Sn**	**08 05 23.5**	**-0.3**
KEBE	**Keben-Mersin**	**1.91**	**3**	PN	**Pn**	**08 05 00.0**	**+0.3**
KEBE				SN	**Sn**	**08 05 23.7**	**-0.4**
GAZI	**Gazipasa**	**1.98**	**329**	PN	**Pn**	**08 05 00.3**	**-0.3**
GAZI	**Gazipasa**	**1.98**	**329**	*i* P	**Pn**	**08 05 00.2**	**-0.3**
GAZI				*i* S	**Sn**	**08 05 23.6**	**-2.2**
GAZI				IAML		08 05 25.0	
	comp=E,71nm,0.3s						
GAZI				IAML		08 05 26.0	
	comp=N,74nm,0.8s						
MMA0B	**Mount Meron ar**	**2.15**	**134**	Pn	**Pn**	**08 05 02.5**	**-0.6**
MMA0B				Sn	**Sn**	**08 05 29.1**	**-1.1**
OSC1	**CSNet OBS 1**	**2.17**	**242**	P	**Pn**	**08 05 02.2**	**-1.0**
GEM	**Giv'at Ha'Em**	**2.19**	**127**	Pn	**Pn**	**08 05 02.2**	**-1.3**
GEM				Sn	**Sn**	**08 05 28.5**	**-2.4**
NATI	**Neve Ativ**	**2.21**	**125**	Pn	**Pn**	**08 05 02.7**	**-1.0**
NATI				Sn	**Sn**	**08 05 29.8**	**-1.5**
OFRI	**`Ofer**	**2.25**	**148**	Sn	**Sn**	**08 05 31.6**	**-0.8**
MERS	**Mersin**	**2.45**	**18**	PN	**Pn**	**08 05 07.5**	**+0.4**
SHMJ	**Saham**	**2.57**	**134**	Pn	**Pn**	**08 05 08.2**	**-0.6**
MMLI	**Mount Malkishu**	**2.60**	**143**	Pn	**Pn**	**08 05 08.4**	**-0.8**
MMLI				Sn	**Sn**	**08 05 41.1**	**-0.1**
KRMN	**Karaman**	**2.64**	**355**	PN	**Pn**	**08 05 10.4**	**+0.6**
HMDT	**Nahal Hemdat**	**2.81**	**144**	Pn	**Pn**	**08 05 11.8**	**-0.2**
HMDT				Sn	**Sn**	**08 05 45.6**	**-0.5**
KEPZ	**Antalya-Kepez**	**2.85**	**326**	*i* P	**Pn**	**08 05 13.8**	**+1.2**
KEPZ				*i* S	**Sn**	**08 05 49.0**	**+1.7**
KEPZ				IAML		08 05 50.0	
	comp=E,24nm,1.0s						
KEPZ				IAML		08 05 51.0	
	comp=N,22nm,0.7s						
KERG	**Konya-Eregli**	**2.90**	**9**	*i* P	**Pn**	**08 05 15.7**	**+2.2**
KERG				*i* S	**Sn**	**08 05 52.0**	**+3.2**
KERG				IAML		08 05 55.0	
	comp=E,33nm,0.5s						
KERG				IAML		08 05 56.0	
	comp=N,38nm,0.5s						
GULE	**Gulek**	**2.91**	**19**	*i* P	**Pn**	**08 05 15.0**	**+1.5**
GULE				*i* S	**Sb**	**08 05 54.2**	**-0.6**
GULE				IAML		08 05 58.0	
	comp=N,23nm,0.5s						
GULE				IAML		08 06 06.0	
	comp=E,32nm,0.6s						
SEYD	**Seydisehir-KON**	**3.19**	**334**	PN	**Pn**	**08 05 18.1**	**+0.8**
YESY	**Yesilyurt**	**3.24**	**2**	PN	**Pn**	**08 05 18.9**	**+0.9**
YTIR	**Yattir**	**3.42**	**157**	Pn	**Pn**	**08 05 21.0**	**+0.5**
PRNI	**Paran**	**4.35**	**163**	Pn	**Pn**	**08 05 33.5**	**+0.3**
PRNI				Sn	**Sn**	**08 06 25.4**	**+1.2**
SUZ	**Suez** baz=185	**4.73**	**188**	P	**Pn**	**08 05 39.3**	**+0.9**
KOT	**Kottamia** baz=195	**4.83**	**198**	P	**Pn**	**08 05 40.4**	**+0.6**
KOT				AMP		08 06 00.0	
	baz=195						
KOT				S	**Sn**	**08 06 35.7**	**-0.5**
	baz=195						
MBRI	**Mt Berech**	**4.87**	**166**	Pn	**Pn**	**08 05 41.3**	**+0.9**
MBRI				Sn	**Sn**	**08 06 37.4**	**+0.3**
EIL	**Elat**	**5.00**	**166**	Pn	**Pn**	**08 05 42.7**	**+0.6**
GLL	**Jalalah** baz=195	**5.20**	**198**	P	**Pn**	**08 05 45.1**	**+0.3**
RYAN	**Fayoum** baz=205	**6.12**	**208**	P	**Pn**	**08 05 57.7**	**+0.2**
RYAN				AMP		08 07 00.0	
	baz=205						
RYAN				S	**Sn**	**08 07 05.1**	**-2.8**
	baz=205						
GRB	**Gharib** baz=185	**6.29**	**186**	P	**Pn**	**08 06 01.4**	**+1.5**

IDC 09 08:37:57.7±2.1, 2.11N×125.59E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/37, mbtmp3.5/3, Error ellipse: s-maj=169.7km s-min=27.3km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.54**	**159**	P	P	08 43 09.6	-0.3
	0.6nm,0.3s,baz=338,slow=10,SNR=20						
ASAR	**Alice Springs**	**26.87**	**163**	P	P	08 43 40.7	+0.3
	0.4nm,0.5s,baz=342,slow=7.8,SNR=15						
MKAR	**Makanchi Array**	**58.24**	**326**	P	P	08 47 53.9	-0.1
	0.2nm,0.3s,baz=128,slow=9.2,SNR=1.8						

*IDC **09** 08:56:06.5±1.5, 64.28N×17.62W, h0km, mb3.4/4, mb1 3.9/4, mb1mx3.4/40, mbtmp3.4/4, Error ellipse: s-maj=60.1km s-min=21.7km az=22.0*
*REY **09** 08:56:07.6, 64.68N×17.46W, h8km*

ISC 09 08:56:06.3±1.0, 64.66N±0.02×17.30W±0.03, h12km±7km, n47, σ1s23/53, mb3.6/4, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals** baz=20	**0.14**	**347**	P	**Pb**	**

baz=338
IASM Asmuli 1.67 242 P **Pn 08 56 35.3 0.0**
baz=240
BORG Borgarnes 1.73 275 Pn **Pn 08 56 35.5 -0.7**
13nm,0.3s,baz=100,slow=12,SNR=34
BORG Sn **Sb 08 56 59.5 -0.2**
5.7nm,0.3s,baz=198,slow=23,SNR=7.3
KHC Kasperske Hory 22.59 119 eP P 09 01 12.5 +6.1
DPC Dobruska-Polom 22.68 113 eP P 09 01 12.8 +5.5
GERES GERESS Array B 22.88 119 P **P 09 01 10.1 +0.7**
0.6nm,0.8s,baz=324,slow=15,SNR=4.8
ILAR Eielson Array 45.73 333 P P 09 04 30.8 +4.1
0.9nm,1.0s,baz=32,slow=8.6,SNR=5.3
PDAR Pinedale Array 53.26 293 P **P 09 05 27.4 +2.7**
0.7nm,0.8s,baz=64,slow=6.9,SNR=4.9
TXAR Lajitas Array 62.37 280 P **P 09 06 31.0 +2.4**
0.4nm,0.9s,baz=47,slow=4.2,SNR=4.2

*REY **09** 09:06:29.4, 64°.68N×17°.42W, h9km*
*IDC **09** 09:06:30.3±0.9, 64°.53N×17°.58W, h0km, mb3.5/7, mb1 3.8/10, mb1mx3.5/40, mbtmp3.5/10, ML3.0/3, Error ellipse: s-maj=28.1km s-min=11.1km az=16.0*
ISC 09 09:06:30.0±0.6, 64°.70N±0°.03×17°.41W±0°.03, h10km, n31, σ1§67/35, mb3.6/7, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.10**	**11**	P	**Pg**	**09 06 32.2**	**-0.5**
baz=11							
IVON	**Vonarskard**	**0.15**	**261**	P	**Pg**	**09 06 32.4**	**-1.1**
baz=268							
IGRF	**Grimsfjall**	**0.30**	**168**	P	**Pg**	**09 06 34.9**	**-1.2**
baz=166							
IHUS	**Husbondi**	**0.42**	**195**	P	**Pg**	**09 06 36.8**	**-1.4**
baz=195							
IVOT	**Vottur**	**0.44**	**167**	P	**Pg**	**09 06 37.2**	**-1.4**
baz=166							
ISKR	**Skrokkalda**	**0.44**	**252**	P	**Pg**	**09 06 37.7**	**-1.0**
baz=255							
IJOK	**Jokulheimar**	**0.52**	**223**	P	**Pg**	**09 06 38.6**	**-1.6**
baz=224							
IMKO	**Mokollar**	**0.54**	**58**	P	**Pg**	**09 06 39.4**	**-1.0**
baz=56							
ISVA	**Svartarkot**	**0.65**	**6**	P	**Pg**	**09 06 41.3**	**-1.2**
baz=6.0							
ISVA				S	**Sb**	**09 06 50.6**	**-1.9**
baz=6.0							
IKSK	**Karasker**	**0.67**	**143**	P	**Pg**	**09 06 40.6**	**-2.4**
baz=141							
IIEY	**Innrieyrar**	**0.68**	**207**	P	**Pg**	**09 06 41.1**	**-2.0**
baz=208							
IIEY				S	**Sg**	**09 06 50.3**	**-1.7**
baz=208							
IVSH	**V-Sauoahnukur**	**0.73**	**80**	P	**Pg**	**09 06 42.3**	**-1.8**
baz=79							
IVSH				S	**Sg**	**09 06 52.7**	**-0.9**
baz=79							
IKAL	**Kalfafell**	**0.76**	**189**	P	**Pg**	**09 06 42.6**	**-2.1**
baz=189							
IKAL				S	**Sg**	**09 06 53.1**	**-1.5**
baz=189							
IVAT	**Vatnsfell**	**0.83**	**233**	P	**Pg**	**09 06 44.3**	**-1.7**
baz=234							
IVAT				S	**Sg**	**09 06 55.0**	**-1.8**
baz=234							
IMEL	**Melhnausar**	**0.93**	**20**	P	**Pg**	**09 06 46.0**	**-1.9**
baz=19							
IHVE	**Hveravellir**	**0.94**	**282**	P	**Pg**	**09 06 46.7**	**-1.4**
baz=283							
IREN	**Reynihlio**	**0.98**	**12**	P	**Pg**	**09 06 46.8**	**-2.0**
baz=12							
IKVO	**Krokottuvotn**	**1.04**	**12**	P	**Pg**	**09 06 47.9**	**-2.2**
baz=12							
IGRS	**Grimsstaoir**	**1.09**	**29**	P	**Pg**	**09 06 48.7**	**-2.2**
baz=29							
ISKI	**Skildingahlsh**	**1.19**	**8**	P	**Pb**	**09 06 50.3**	**-2.3**
baz=7.7							
BORG	**Borgarnes**	**1.68**	**273**	Pg	**Pn**	**09 06 58.8**	**-0.6**
5.1nm,0.3s,baz=95,slow=9.7,SNR=34							
BORG				Lg	Lg	09 07 22.1	
11nm,0.3s,baz=224,slow=20,SNR=12							
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**09 09 18.4**	**+0.9**
baz=324,slow=13,SNR=6.4							
NOA	**NORSAR Array B**	**13.50**	**93**	Pn	**Pn**	**09 09 40.4**	**-0.9**
0.0nm,0.3s,baz=296,slow=14,SNR=1.5							
FINES	**FINESS Array B**	**19.66**	**79**	P	**Pn**	**09 11 01.2**	**+1.2**
0.1nm,0.3s,baz=312,slow=9.1,SNR=1.8							
FRB	**Frobisher Bay**	**21.77**	**291**	P	**P**	**09 11 21.9**	**+0.5**
7.7nm,0.9s,baz=51,slow=14,SNR=6.4							
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**09 11 35.9**	**+1.9**
0.9nm,1.1s,baz=330,slow=9.5,SNR=2.2							
ESDC	**Sonseca Array**	**26.27**	**156**	P	**P**	**09 12 06.1**	**+0.9**
0.8nm,0.8s,baz=0.4,slow=8.8,SNR=2.6							
ILAR	**Eielson Array**	**45.67**	**332**	P	P	09 14 54.0	+3.7
1.3nm,1.1s,baz=17,slow=5.5,SNR=6.5							
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**09 15 46.4**	**+2.3**
0.5nm,0.8s,baz=343,slow=7.5,SNR=3.8							
TORD	**Torodi Ar. Bea**	**53.16**	**157**	P	**P**	**09 15 48.9**	**+1.0**
0.6nm,0.8s,baz=336,slow=8.9,SNR=2.5							
PDAR	**Pinedale Array**	**53.20**	**293**	P	**P**	**09 15 50.3**	**+2.1**
0.9nm,0.8s,baz=59,slow=7.2,SNR=4.0							

*TAP **09** 09:11:48.3, 22°.66N×121°.27E, h34km, ML3.5, B*
*JMA **09** 09:11:48.1±0.1, 22°.75N×121°.40E, h28km±4km, M3.3*
ISC 09 09:11:47.5±0.9, 22°.66N±0°.02×121°.35E±0°.02, h33km±3km, n105, σ1§26/204, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.11**	**80**	P	**Pb**	**09 11 54.9**	**+1.5**
baz=86							
LDUT				S	**Sb**	**09 11 59.8**	**+2.3**
baz=86							
TTN	**Taitung**	**0.21**	**298**	eP	**Pn**	**09 11 55.5**	**+1.9**
baz=298							
TTN				*i* S	**Sn**	**09 12 01.3**	**+5.3**
baz=298							
TWGBT	**Beinan**	**0.30**	**303**	P	**Pb**	**09 11 55.1**	**-0.2**
baz=312							
TWGBT				S	**Sb**	**09 12 00.1**	**-0.6**
baz=312							
TWG	**Pinlang**	**0.31**	**303**	*i* P	**Pb**	**09 11 55.3**	**-0.2**
baz=312							
TWG				*i* S	**Sb**	**09 12 00.2**	**-0.6**
baz=312							
EDH	**Donghe**	**0.32**	**352**	P	**Pn**	**09 11 56.3**	**+0.5**
baz=359							
EDH				eS	**Sn**	**09 12 02.8**	**+1.9**
baz=359							
LONT	**Longtian**	**0.32**	**321**	*i* P	**Pb**	**09 11 55.8**	**+0.1**
baz=321							
ECL	**Taimali**	**0.37**	**261**	P	**Pb**	**09 11 55.6**	**-0.7**
baz=260							
ECL				S	**Sb**	**09 12 00.8**	**-1.4**
baz=260							
CHKT	**Chengkung**	**0.44**	**2**	P	**Pn**	**09 11 57.9**	**+0.3**
baz=13							
CHKT				S	**Sn**	**09 12 05.0**	**+0.6**
baz=13							
TAW	**Tawu**	**0.52**	**235**	*i* P	**Pb**	**09 11 57.6**	**-0.7**
baz=230							
TAW				*i* S	**Sb**	**09 12 04.5**	**-1.4**
baz=230							
EAST	**Anshuo**	**0.54**	**240**	P	**Pb**	**09 11 58.1**	**-0.7**
baz=233							
EAST				S	**Sb**	**09 12 04.9**	**-1.6**
baz=233							
ELDTW	**Lidau**	**0.61**	**330**	eP	**Pb**	**09 11 59.4**	**-0.7**
baz=339							
ELDTW				eS	**Sb**	**09 12 06.8**	**-1.8**
baz=339							
LAY	**Lan-yu**	**0.64**	**163**	P	**Pb**	**09 12 00.4**	**0.0**
baz=157							
LAY				eS	**Sn**	**09 12 10.4**	**+1.1**
baz=157							
TSMG	**Majia**	**0.66**	**275**	P	**Pb**	**09 11 60.0**	**-0.7**
baz=273							
TSMG				eS	**Sb**	**09 12 09.9**	**+0.2**
baz=273							
MASBT	**Mashibuluo**	**0.67**	**266**	P	**Pn**	**09 12 00.2**	**-0.4**
baz=264							
MASBT				S	**Sb**	**09 12 08.6**	**-1.4**
baz=264							
SSD	**Sandimen**	**0.67**	**278**	*i* P	**Pn**	**09 12 00.2**	**-0.4**
baz=277							
SSD				S	**Sb**	**09 12 08.1**	**-2.0**
baz=277							
SLIU	**Shizi**	**0.67**	**230**	P	**Pn**	**09 11 59.9**	**-0.8**
baz=215							
SLIU				eS	**Sb**	**09 12 09.7**	**-0.4**
baz=215							
EYUL	**Yuli**	**0.69**	**358**	eP	**Pn**	**09 12 01.3**	**+0.4**
baz=356							
EYUL				eS	**Sn**	**09 12 10.9**	**+0.4**
baz=356							
TWF1	**Yuli**	**0.70**	**356**	P	**Pn**	**09 12 00.4**	**-0.7**
baz=355							
TWF1				S	**Sb**	**09 12 09.1**	**-1.7**
baz=355							
SCZT	**Fangliau**	**0.73**	**248**	eP	**Pn**	**09 12 01.5**	**0.0**
baz=243							
SCZT				S	**Sb**	**09 12 10.7**	**-1.1**
baz=243							
SLGT	**Liugui**	**0.73**	**298**	P	**Pn**	**09 12 01.5**	**-0.1**
baz=299							
SLGT				eS	**Sb**	**09 12 11.1**	**-0.7**
baz=299							
YULB	**Yu-li**	**0.74**	**356**	eP	**Pn**	**09 12 00.8**	**-0.8**
baz=356							
YULB				eS	**Sb**	**09 12 09.7**	**-2.2**
baz=356							
SSPT	**Xinbi**	**0.74**	**257**	P	**Pn**	**09 12 02.2**	**+0.5**
baz=254							
SSPT				S	**Sn**	**09 12 12.7**	**+0.9**
baz=254							
STYT	**Tauyuan**	**0.75**	**313**	*i* P	**Pn**	**09 12 01.9**	**+0.2**
baz=321							
STYT				S	**Sb**	**09 12 11.5**	**-0.7**
baz=321							
SGLT	**Jiouru**	**0.80**	**275**	eP	**Pb**	**09 12 03.7**	**+0.7**
baz=268							
SGLT				eS	**Sn**	**09 12 13.7**	**+0.5**
baz=268							
SCST	**Cishan**	**0.82**	**286**	eP	**Pn**	**09 12 01.9**	**-0.9**
baz=286							
SCST				eS	**Sb**	**09 12 15.9**	**+1.6**
baz=286							
SGST	**Jiashian**	**0.83**	**301**	P	**Pn**	**09 12 03.1**	**+0.3**
baz=309							
SGST				eS	**Sn**	**09 12 14.2**	**+0.3**
baz=309							
HGSD	**Ruisui**	**0.84**	**5**	*i* P	**Pn**	**09 12 03.5**	**+0.6**
baz=11							
HGSD				eS	**Sb**	**09 12 15.2**	**+0.5**
baz=11							
EHY	**Hungye**	**0.85**	**358**	*i* P	**Pn**	**09 12 02.4**	**-0.7**
baz=355							
EHY				*i* S	**Sn**	**09 12 12.9**	**-1.5**
baz=355							
HEN	**Hengchun**	**0.86**	**221**	P	**Pn**	**09 12 03.6**	**+0.3**
baz=206							
HEN				eS	**Sn**	**09 12 14.9**	**+0.2**
baz=206							
TSEB	**Hengchuen, Pin**	**0.86**	**209**	P	**Pn**	**09 12 03.3**	**0.0**
baz=198							
TSEB				S	**Sn**	**09 12 15.3**	**+0.7**
baz=198							
TWKBT	**Hengchun**	**0.87**	**215**	*i* P	**Pn**	**09 12 03.1**	**-0.3**
baz=200							
TWKBT				S	**Sn**	**09 12 14.7**	**-0.2**
baz=200							
TWK1	**Hengchun**	**0.87**	**216**	*i* P	**Pn**	**09 12 03.2**	**-0.2**
baz=200							
TWK1				eS	**Sn**	**09 12 14.4**	**-0.5**
baz=200							
TWM1	**Shoushan**	**0.87**	**281**	P	**Pb**	**09 12 05.7**	**+1.4**
baz=280							
TWM1				eS	**Sb**	**09 12 17.0**	**+1.2**
baz=280							
WTP	**Ta-pu**	**0.90**	**311**	*i* P	**Pb**	**09 12 04.8**	**0.0**
baz=313							
WTP				S	**Sb**	**09 12 17.9**	**+1.4**
baz=313							
CHN1	**Nanshi**	**0.93**	**305**	P	**Pb**	**09 12 05.9**	**+0.7**
baz=306							
CHN1				S	**Sb**	**09 12 19.1**	**+1.9**
baz=306							
TPUB	**Ta-pu**	**0.93**	**314**	eP	**Pb**	**09 12 05.2**	**+0.1**
baz=316							
TPUB				eS	**Sb**	**09 12 18.5**	**+1.3**
baz=316							
SNJT	**Kaohsiung City**	**0.94**	**276**	eP	**Pb**	**09 12 07.5**	**+2.0**
baz=274							
SNJT				eS	**Sb**	**09 12 21.8**	**+4.1**
baz=274							
WLCH	**Liuqiu**	**0.95**	**252**	eP	**Pb**	**09 12 07.2**	**+1.6**
baz=235							
WLCH				eS	**Sb**	**09 12 20.3**	**+2.5**
baz=235							
SNST	**Tainan City**	**0.97**	**306**	eP	**Pb**	**09 12 06.3**	**+0.5**
baz=306							
SNST				eS	**Sb**	**09 12 19.6**	**+1.2**
baz=306							
CHN4	**Tsaushan**	**0.98**	**315**	P	**Pb**	**09 12 06.7**	**+0.5**
baz=317							
CHN4				eS	**Sb**	**09 12 21.1**	**+2.2**
baz=317							
ALS	**Alishan**	**0.99**	**330**	eP	**Pb**	**09 12 06.3**	**-0.2**
baz=339							
ALS				S	**Sn**	**09 12 18.8**	**+0.4**
baz=339							
CHN3	**Shinhua**	**1.00**	**295**	eP	**Pb**	**09 12 07.0**	**+0.6**
baz=294							
CHN3				eS	**Sb**	**09 12 21.4**	**+2.0**
baz=294							
TWK	**Hsinying**	**1.00**	**308**	eP	**Pb**	**09 12 06.8**	**+0.3**
baz=309							
TWK				eS	**Sb**	**09 12 20.8**	**+1.3**
baz=309							
EGFH	**Guangfu**	**1.01**	**4**	eP	**Pn**	**09 12 05.4**	**0.0**
baz=10.0							
EGFH				eS	**Sb**	**09 12 19.2**	**-0.4**
baz=10.0							
CHN5	**Tsauling**	**1.12**	**327**	eP	**Pb**	**09 12 08.8**	**+0.2**
baz=329							
CHN5				eS	**Sb**	**09 12 24.2**	**+1.2**
baz=329							
WHYT	**Xinyi Township**	**1.13**	**336**	eP	**Pb**	**09 12 09.1**	**+0.4**
baz=350							
WHYT				eS	**Sb**	**09 12 22.7**	**-0.5**
baz=350							
ESL	**Shilin**	**1.16**	**4**	eP	**Pn**	**09 12 06.8**	**-0.6**
baz=10.0							
ESL				S	**Sn**	**09 12 20.1**	**-2.0**
baz=10.0							
SSLB	**Suanglung**	**1.19**	**342**	eP	**Pn**	**09 12 08.6**	**+0.8**
baz=345							
SSLB				eS	**Sn**	**09 12 23.6**	**+0.8**
baz=345							
SCLT	**Jiali**	**1.19**	**296**	S	**Sb**	**09 12 24.8**	**+0.2**
baz=295							
CHN2	**Minshiung**	**1.19**	**317**	eP	**Pb**	**09 12 10.2**	**+0.6**
baz=318							
CHN2				eS	**Sb**	**09 12 26.8**	**+2.1**
baz=318							
CHY	**Chiayi**	**1.20**	**315**	eP	**Pb**	**09 12 10.1**	**+0.3**
baz=315							
CHY				S	**Sb**	**09 12 26.2**	**+1.3**
baz=315							
ICHU	**Yijhu**	**1.21**	**306**	eP	**Pn**	**09 12 08.4**	**+0.3**
baz=305							
ICHU				S	**Sb**	**09 12 24.9**	**-0.4**
baz=305							
CHN8	**Yiju**	**1.26**	**303**	eP	**Pb**	**09 12 10.2**	**-0.5**
baz=303							
CHN8				S	**Sb**	**09 12 26.8**	**+0.2**
baz=303							
WGK	**Gukeng**	**1.26**	**325**	eS	**Sb**	**09 12 26.9**	**+0.3**
baz=326							
WLGB	**Puzi**	**1.27**	**310**	eP	**Pn**	**09 12 08.7**	**-0.2**
baz=310							
WLGB				eS	**Sn**	**09 12 26.0**	**+1.2**
baz=310							
WDLH	**Douliu**	**1.27**	**324**	eP	**Pb**	**09 12 10.6**	**-0.4**
baz=325							
WDLH				S	**Sb**	**09 12 27.2**	**+0.2**
baz=325							
SMLT	**Sun Moon Lake**	**1.29**	**341**	eP	**Pb**	**09 12 11.3**	**-0.1**
baz=344							
SMLT				eS	**Sb**	**09 12 28.0**	**+0.2**
baz=344							
WJS	**Zhushan**	**1.30**	**334**	eP	**Pb**	**09 12 11.1**	**-0.3**
baz=335							
WJS				eS	**Sb**	**09 12 28.9**	**+1.1**
baz=335							
TYC	**Yuchr**	**1.32**	**340**	eP	**Pb**	**09 12 12.0**	**+0.2**
baz=343							
TYC				eS	**Sb**	**09 12 29.0**	**+0.5**
baz=343							
WTK	**Tuku**	**1.36**	**319**	P	**Pn**	**09 12 11.4**	**+1.3**
baz=319							
WTK				eS	**Sn**	**09 12 28.0**	**+1.0**
baz=319							
WNT	**Mingjian**	**1.36**	**333**	eP	**Pb**	**09 12 12.5**	**-0.1**
baz=334							
WNT				S	**Sb**	**09 12 31.3**	**+1.6**
baz=334							
CHGB	**Renai**	**1.41**	**353**	eP	**Pn**	**09 12 11.8**	**+0.7**
baz=6.0							
CHGB				eS	**Sn**	**09 12 29.2**	**+0.6**
baz=6.0							
DPDB	**Guoxing**	**1.43**	**344**	eP	**Pb**	**09 12 13.3**	**-0.4**
baz=346							
DPDB				eS	**Sb**	**09 12 30.9**	**-0.7**
baz=346							
WSF	**Szhu**	**1.43**	**313**	eP	**Pn**	**09 12 12.2**	**+1.1**
baz=313							
WSF				eS	**Sb**	**09 12 30.5**	**-0.9**
baz=313							
TWD	**Chiawan**	**1.44**	**9**	P	**Pn**	**09 12 11.6**	**+0.3**
baz=5.0							
TWD				eS	**Sb**	**09 12 30.5**	**-1.2**
baz=5.0							
WHF	**Hehuan Shan**	**1.48**	**357**	P	**Pn**	**09 12 12.9**	**+0.6**
baz=12							
WHF				eS	**Sn**	**09 12 30.8**	**+0.1**
baz=12							
NACB	**Ninganchiao**	**1.53**	**8**	eP	**Pn**	**09 12 12.0**	**-0.5**
baz=14							
NACB				eS	**Sn**	**09 12 32.0**	**+0.8**
baz=14							
RLNB	**Erlin**	**1.53**	**324**	eP	**Pn**	**09 12 12.9**	**+0.4**
baz=323							
RLNB				S	**Sb**	**09 12 33.5**	**-0.9**
baz=323							
ETLH	**Xiulin Townshi**	**1.55**	**4**	eP	**Pn**	**09 12 12.0**	**-0.9**
baz=19							
ETLH				eS	**Sb**	**09 12 33.7**	**-1.4**
baz=19							
FUSS	**Fushou**	**1.59**	**356**	P	**Pn**	**09 12 14.6**	**+1.1**
baz=11							
FUSS				eS	**Sn**	**09 12 34.8**	**+1.7**
baz=11							
WCHH	**Zhanghua**	**1.59**	**333**	eP	**Pb**	**09 12 15.2**	**-1.2**
baz=320							
WCHH				eS	**Sb**	**09 12 36.7**	**+0.5**
baz=320							
TDCB	**Techi**	**1.60**	**354**	eP	**Pn**	**09 12 14.6**	**+0.9**
baz=6.0							
TDCB				eS	**Sb**	**09 12 35.5**	**-1.1**
baz=6.0							
TCU	**Taichung**	**1.61**	**337**	eP	**Pb**	**09 12 16.4**	**-0.3**
baz=338							
TCU				eS	**Sb**	**09 12 37.6**	**+0.9**
baz=338							
WHP	**Taichung City**	**1.66**	**347**	eP	**Pb**	**09 12 17.1**	**-0.4**
baz=349							
WHP				eS	**Sb**	**09 12 39.2**	**+1.1**
baz=349							
WDGT	**Dungji**	**1.67**	**291**	eP	**Pn**	**09 12 14.4**	**0.0**
baz=289							
WDGT				S	**Sn**	**09 12 32.9**	**-1.8**
baz=289							
TWQ1	**Liyutan**	**1.77**	**343**	eP	**Pb**	**09 12 18.3**	**-1.0**
baz=343							
TWQ1				eS	**Sb**	**09 12 42.0**	**+0.8**
baz=343							
NNS	**Nan Shan**	**1.78**	**1**	eP	**Pn**	**09 12 18.0**	**+2.0**
baz=15							
NNS				eS	**Sn**	**09 12 39.4**	**+1.8**
baz=15							
WDJ	**Dajia District**	**1.81**	**339**	eP	**Pb**	**09 12 18.8**	**-1.2**
baz=339							
WDJ				eS	**Sb**	**09 12 42.0**	**-0.4**
baz=339							
ENAH	**Nanao**	**1.83**	**13**	eP	**Pn**	**09 12 18.6**	**+1.9**
baz=7.0							
ENAH				eS	**Sn**	**09 12 40.8**	**+2.0**
baz=7.0							
NSY	**Sanyi**	**1.83**	**343**	eP	**Pb**	**09 12 19.7**	**-0.8**
baz=344							
NSY				eS	**Sb**	**09 12 43.9**	**+0.8**
baz=344							
PHUB	**P'eng-hu**	**1.85**	**298**	P	**Pn**	**09 12 16.8**	**-0.1**
baz=295							
PHUB				S	**Sn**	**09 12 38.2**	**-0.9**
baz=295							
VCHM	**Qimei**	**1.86**	**288**	eP	**Pn**	**09 12 17.3**	**+0.3**
baz=285							
VCHM				eS	**Sn**	**09 12 38.5**	**-0.8**
baz=285							
PNG	**Penghu**	**1.89**	**299**	eP	**Pn**	**09 12 18.0**	**+0.6**
baz=297							
PNG				S	**Sn**	**09 12 38.2**	**-1.8**
baz=297							
NMLH	**Miaoli**	**1.94**	**345**	eP	**Pb**	**09 12 20.9**	**-1.4**
baz=345							
NMLH				eS	**Sb**	**09 12 44.2**	**-2.0**
baz=345							
NDT	**Datong Townshi**	**1.94**	**4**	eP	**Pn**	**09 12 20.0**	**+1.7**
baz=20							
NDT				eS	**Sn**	**09 12 42.7**	**+1.2**
baz=20							
ENTT	**Nioudou**	**1.99**	**6**	P	**Pn**	**09 12 19.7**	**+0.8**
baz=20							
ENTT				eS	**Sn**	**09 12 43.3**	**+0.8**
baz=20							
NSTT	**Nanjuang**	**1.99**	**351**	eP	**Pn**	**09 12 21.1**	**+2.1**
baz=337							
NSTT				eS	**Sb**	**09 12 47.2**	**-0.4**
baz=337							
TWC	**Suao**	**2.00**	**13**	eP	**Pn**	**09 12 20.3**	**+1.3**
baz=8.0							
TWC				S	**Sn**	**09 12 44.8**	**+2.0**
baz=8.0							
LIOB	**Emei**	**2.01**	**351**	eP	**Pn**	**09 12 20.4**	**+1.3**
baz=351							
LIOB				eS	**Sb**	**09 12 47.1**	**-0.9**
baz=351							
YHNB	**Yeheng**	**2.01**	**1**	P	**Pn**	**09 12 20.9**	**+1.8**
baz=20							
YHNB				eS	**Sn**	**09 12 44.1**	**+0.9**
baz=20							
NSK	**Sanguang**	**2.01**	**0**	P	**Pn**	**09 12 21.1**	**+1.8**
baz=13							
NSK				eS	**Sn**	**09 12 44.6**	**+1.3**
baz=13							
TWE	**Neicheng**	**2.08**	**8**	eP	**Pn**	**09 12 21.0**	**+1.0**
baz=14							
TWE				eS	**Sn**	**09 12 46.0**	**+1.3**
baz=14							
NWLT	**Wulai**	**2.12**	**4**	eP	**Pn**	**09 12 21.8**	**+1.2**
baz=17							
NWLT				eS	**Sn**	**09 12 46.2**	**+0.4**
baz=17							
NTC	**Toucheng**	**2.23**	**11**	eP	**Pb**	**09 12 25.1**	**-2.1**
baz=18							
NTC				eS	**Sb**	**09 12 52.5**	**-2.0**
baz=18							
JYNG	**Yonagunijimaku**	**2.31**	**39**	S	**Sn**	**09 12 52.2**	**+1.7**
TIPB	**Shuangxi**	**2.35**	**11**	eP	**Pn**	**09 12 24.7**	**+0.9**
baz=17							
TIPB				eS	**Sn**	**09 12 54.8**	**+3.3**
baz=17							
TWB1	**Santiao Chiao**	**2.41**	**14**	eP	**Pn**	**09 12 26.8**	**+2.1**
baz=10.0							
TWB1				eS	**Sb**	**09 12 56.7**	**-3.0**
baz=10.0							
TWS1	**Kuangyinshan**	**2.44**	**1**	eS	**Sb**	**09 12 57.3**	**-3.0**
baz=22							
YM04	**YM04**	**2.49**	**4**	eP	**Pn**	**09 12 26.8**	**+1.0**
baz=23							
YM04				eS	**Sn**	**09 12 56.0**	**+0.9**
baz=23							
HATJ	**Hateruma jima**	**2.65**	**58**	P	**Pn**	**09 12 29.5**	**+1.6**
HATJ					eS	**Sn**	**09 13 00.0**	**+1.1**
IRIF	**Iriomote-Funau**	**2.75**	**52**	P	**Pn**	**09 12 31.8**	**+2.5**
IRIF					eS	**Sn**	**09 13 02.4**	**+1.0**
JKRS	**Kuro-shima**	**2.91**	**57**	eS	**Sn**	**09 13 05.9**	**+0.7**
JIJ	**Ishigaki jima**	**3.08**	**56**	P	**Pn**	**09 12 35.5**	**+1.7**
JIJ					eS	**Sn**	**09 13 10.1**	**+0.7**
JISG	**Ishigakijimahi**	**3.33**	**54**	P	**Pn**	**09 12 38.5**	**+1.3**
JISG					S	**Sn**	**09 13 16.1**	**+0.5**

JTJ	**Tarama**	**3.65**	**57**	P	**Pn**	**09 12 43.5**	**+1.8**
JTJ				*eS*	**Sn**	**09 13 24.6**	**+0.9**

*NNC **09** 09:15:01.4±3.8,41.°07N×71.°79E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=31.5km s-min=13.1km az=7.0*
*KRNET **09** 09:15:02.0±0.1,40.°98N×71.°69E, h21km, mb2.4*
ISC 09 09:15:00.9±1.4**, 41.°03N**±0.°04×**71.°69E**±0.°04**, h18**km±7km**, n12,σ0≤86/22, 20C-4D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.97**	**121**	⇑*iP*	**Pn**	**09 15 19.8**	**0.0**
	baz=18						
OHH				⇑*iS*	**Sg**	**09 15 33.0**	**+0.3**
	baz=18						
ARSB	**Arslanbob**	**1.02**	**73**	⇑*iP*	**Pg**	**09 15 20.9**	**+0.2**
	baz=70						
ARSB				⇑*iS*	**Sn**	**09 15 35.2**	**+0.8**
	baz=70						
BTK	**Batken**	**1.18**	**215**	⇑*iP*	**Pb**	**09 15 22.8**	**0.0**
	baz=16						
BTK				⇑*iS*	**Sn**	**09 15 38.2**	**-0.1**
	baz=16						
MNAS	**Manas**	**1.58**	**22**	⇑*iP*	**Pg**	**09 15 31.9**	**+0.6**
	baz=22						
MNAS				⇑*iS*	**Sg**	**09 15 52.8**	**+1.0**
	baz=22						
AML	**Almayashu**	**1.86**	**53**	⇑*iP*	**Pg**	**09 15 36.0**	**-0.7**
	baz=52						
AML				⇑*iS*	**Sg**	**09 15 59.6**	**-1.4**
	baz=52						
ARLS	**Aral**	**2.15**	**66**	⇑*iP*	**Pb**	**09 15 39.6**	**+0.3**
	baz=65						
ARLS				⇑*iS*	**Sb**	**09 16 06.5**	**+0.8**
	baz=65						
KK31	**Karatay Array**	**2.25**	**337**	⇓Pn	**Pb**	**09 15 40.0**	**-1.0**
	0.6nm,0.3s,baz=148,slow=15,SNR=20						
KK31				⇑Sn	**Sb**	**09 16 09.2**	**+0.6**
	5.1nm,0.7s,baz=157,slow=29,SNR=6.8						
EKS2	**Erkin-Say**	**2.25**	**43**	⇑*iP*	**Pb**	**09 15 41.9**	**+0.7**
	baz=42						
EKS2				⇑*iS*	**Sb**	**09 16 09.6**	**+0.8**
	baz=42						
UCH	**Uchtor**	**2.43**	**60**	⇑*iP*	**Pb**	**09 15 43.7**	**-0.7**
	baz=59						
UCH				⇑*iS*	**Sb**	**09 16 13.2**	**-1.0**
	baz=59						
AAK	**Ala-Archa**	**2.64**	**52**	⇓*eP*	**Pb**	**09 15 46.8**	**-1.0**
	baz=51						
AAK				⇓*iS*	**Sb**	**09 16 18.3**	**-1.6**
	baz=51						
AAK	**Ala-Archa**	**2.64**	**52**	⇑Pg	**Pb**	**09 15 48.6**	**+0.8**
	5.5nm,1.1s						
AAK				⇓Lg	Lg	09 16 22.4	
	12nm,1.4s						
TKM2	**Tokmak 2**	**3.47**	**56**	⇑Pg	**Pb**	**09 16 02.0**	**0.0**
	5.3nm,1.4s						
TKM2				⇑Lg	Lg	09 16 49.5	
	9.9nm,1.4s						

*NEIC **09** 09:38:47.9±1.2,63.°21S±0.°09×171.°9E±0.°3,h10km±1km, mb4.6/27, Error ellipse: s-maj=25.4km s-min=14.0km az=75.0*
*IDC **09** 09:38:48.7±0.9,63.°39S×171.°30E,h0km,mb4.3/7, mb1 4.5/8,mb1mx4.2/29,mbtmp4.4/8,ML4.5/1,MS4.5/20, Ms1 4.5/20,ms1mx4.4/33, Error ellipse: s-maj=37.5km s-min=21.6km az=65.0*
*GCMT **09** 09:38:50.8±0.1,63.°37S±0.°01×171.°46E±0.°02,h12km, MW5.3/119, Moment Tensor Solution. s75,c97; s119,c200; Duration: 1≒0 Moment tensor: Scale 10^17 Nm; Mrr=0.07±.01; Mθθ=0.83±.01; Mϕϕ=-0.75±.01; Mrθ=-0.70±.04; Mrϕ=-0.09±.01; Mθϕ=0.01±.04; Best double couple: M=0.99400×10^17 NP1:ϕs=323.00000°,δ67.00000°, λ18.00000°. NP2:ϕs=226.00000°,δ73.00000°,λ156.00000°. Principal axes: T 1.2210, Plg28.0000°, Azm183.0000°; N -0.4550, Plg61.0000°, Azm12.0000°; P -0.7660, Plg4.0000°, Azm275.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 09 09:38:49.1±0.4**, 63.°32S**±0.°06×**171.°2E**±0.°1**, h10**km**, n88,**
σ1≦94/53, mb4.5/13, MS4.5/22, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**10.86**	**319**	Pn	**Pn**	**09 41 25.5**	**+1.1**
VNDA	**Vanda**	**14.57**	**188**	Pn	**Pn**	**09 42 15.1**	**+0.1**
	2.0nm,0.3s,baz=30,slow=17,SNR=467						
VNDA				LR	LR	09 46 35.4	
	comp=Z,4μm,21.1s,baz=20,slow=32						
VNDA	**Vanda**	**14.57**	**188**		**Pn**	**09 42 15.3**	**+0.4**
PYZ	**Puysegur Point**	**17.38**	**349**		**P**	**09 42 52.2**	**-0.6**
PYZ				IAmb	IAmb	09 43 09.6	
	comp=Z,154nm,1.4s						
WHZ	**Wether Hill Ro**	**17.56**	**352**		**Pn**	**09 42 50.3**	**-3.5**
DCZ	**Deep Cove**	**18.04**	**351**	P	**Pn**	**09 42 57.8**	**-1.8**
DCZ				IAmb	IAmb	09 43 13.8	
	comp=Z,40nm,1.2s						
MLZ	**Mavora Lakes**	**18.08**	**353**	P	**Pn**	**09 42 58.2**	**-1.9**
ODZ	**Otahua Downs**	**18.32**	**359**	P	**Pn**	**09 43 01.5**	**-1.6**
ODZ				IAmb	IAmb	09 43 18.4	
	comp=Z,44nm,1.4s						
WKZ	**Wanaka**	**18.57**	**355**	P	**P**	**09 43 03.3**	**-2.7**
WKZ				IAmb	IAmb	09 43 21.6	
	comp=Z,19nm,0.8s						
RPZ	**Rata Peaks**	**19.64**	**360**	P	**Pn**	**09 43 22.1**	**+3.1**
	comp=Z,1.9nm,0.3s,baz=185,slow=3.1,SNR=11						
RPZ				LR	LR	09 49 36.4	
	comp=Z,3μm,20.6s,baz=202,slow=33						
RPZ	**Rata Peaks**	**19.64**	**360**	P	**P**	**09 43 16.1**	**-1.6**
MQZ	**McQueen's Vall**	**19.67**	**3**	P	**P**	**09 43 15.0**	**-3.0**
MQZ				IAmb	IAmb	09 43 17.5	
	comp=Z,40nm,1.3s						
OXZ	**Oxford**	**20.04**	**2**	P	**P**	**09 43 19.4**	**-2.5**
OXZ				IAmb	IAmb	09 43 39.8	
	comp=Z,14nm,0.8s						
LTZ	**Lake Taylor**	**20.59**	**2**	P	**P**	**09 43 25.5**	**-2.5**
TUWZ	**Tuamarina**	**21.99**	**5**	P	**P**	**09 43 40.2**	**-2.7**
BHW	**Baring Head**	**22.05**	**7**	P	**P**	**09 43 40.9**	**-2.8**
URZ	**Urewera**	**25.35**	**11**	LR	LR	09 52 32.3	
	comp=Z,2μm,21.8s,baz=211,slow=32						
QSPA	**South Pole Qui**	**26.77**	**180**	P	**P**	**09 44 29.3**	**+0.5**
	comp=Z,11nm,1.0s,baz=29,slow=3.1,SNR=26						
QSPA				LR	LR	09 53 20.1	
	comp=Z,2μm,20.9s,baz=28,slow=33						
QSPA	**South Pole Qui**	**26.77**	**180**	P	**P**	**09 44 28.9**	**+0.2**
STKA	**Stephens Creek**	**36.60**	**315**	LR	LR	09 58 53.1	
	comp=Z,692nm,18.2s,baz=152,slow=33						
BELA	**Belgrano 2**	**38.16**	**171**	P	**P**	**09 46 07.3**	**-0.5**
MAW	**Mawson**	**39.67**	**215**	P	**P**	**09 46 21.5**	**+1.0**
	comp=Z,2.2nm,1.0s,baz=135,slow=10,SNR=5.0						
MAW				LR	LR	10 02 33.6	
	comp=Z,2μm,19.3s,baz=138,slow=36						
MAW	**Mawson**	**39.67**	**215**	P	**P**	**09 46 20.4**	**-0.2**
EIDS	**Eidsvold**	**40.22**	**331**	P	**P**	**09 46 25.5**	**-0.1**
EIDS				IAmb	IAmb	09 46 35.9	
	comp=Z,13nm,1.3s						
DZM	**Mont Dzumac**	**41.35**	**353**	*eS*	**S**	**09 52 53.0**	**+3.5**
	comp=Z,308nm,23.7s						
DZM				*eLR*	LR	09 57 59.5	
	comp=Z,1μm,22.6s						
H01W1	**Cape Leeuwin H**	**44.77**	**282**	T	T	10 35 25.2	
	baz=147,slow=76,SNR=951						
H01W2	**Cape Leeuwin H**	**44.78**	**282**	T	T	10 35 25.4	
	baz=147,slow=76,SNR=698						
H01W3	**Cape Leeuwin H**	**44.79**	**282**	T	T	10 35 26.3	
	baz=147,slow=76,SNR=736						
SNAA	**Sanae**	**45.22**	**183**	P	**P**	**09 47 05.4**	**-0.3**
SNAA				IAmb	IAmb	09 47 13.8	
	comp=Z,8.5nm,1.0s						
MSVF	**Nonsavu**	**45.79**	**9**	P	**P**	**09 47 08.0**	**-2.8**
ASAR	**Alice Springs**	**46.74**	**310**	P	**P**	**09 47 19.6**	**+1.4**
	comp=Z,3.9nm,1.1s,baz=154,slow=7.5,SNR=12						
AS31	**Alice Springs**	**46.74**	**310**	P	**P**	**09 47 18.6**	**+0.4**
TBI	**Tubuai**	**47.73**	**52**	*eS*	**S**	**09 54 26.6**	**+4.7**
	comp=Z,260nm,28.8s						
TBI				*eLQ*	LQ	09 58 30.0	
	comp=Z,777nm,26.8s						
TBI				*eLR*	LR	10 00 52.0	
	comp=Z,975nm,25.8s,baz=208						
TBI	**Tubuai**	**47.73**	**52**	*eT*	T	10 38 26.6	
	comp=Z,12nm,0.3s						
WRA	**Warramunga Arr**	**50.04**	**313**	P	**P**	**09 47 44.9**	**+1.2**
	comp=Z,2.0nm,1.1s,baz=162,slow=7.0,SNR=5.0						
WRA				LR	LR	10 06 02.8	
	comp=Z,350nm,19.4s,baz=130,slow=33						
WRA	**Warramunga Arr**	**50.04**	**313**	P	**P**	**09 47 43.8**	**+0.2**
PAE	**Paea**	**52.94**	**49**	*eT*	T	10 44 57.0	
	comp=Z,3.1nm,0.3s						
TVO	**Taravao**	**52.94**	**49**	*eT*	T	10 44 57.3	
	comp=Z,2.0nm,0.3s						
PPT2	**Papeete2**	**53.01**	**49**	*eS*	**S**	**09 55 40.8**	**+5.2**
	comp=Z,262nm,25.5s						
PPT2				*eLQ*	LQ	10 00 41.5	
	comp=Z,1μm,24.0s						
PPT2				*eLR*	LR	10 03 13.5	
	comp=Z,974nm,25.8s,baz=201						
PPT2	**Papeete2**	**53.01**	**49**	*eT*	T	10 45 02.5	
	comp=Z,7.9nm,0.3s						
PPT	**Papeete**	**53.03**	**49**	LR	LR	10 05 31.6	
	comp=Z,278nm,18.1s,baz=206,slow=30						
MEH	**Mehetia**	**53.27**	**51**	*eT*	T	10 45 21.5	
	comp=Z,45nm,0.3s						
RKT	**Rikitea**	**53.58**	**67**	*eS*	S	09 55 50.0	+7.0
	comp=Z,448nm,34.0s						
RKT				*eLR*	LR	10 03 54.2	
	comp=Z,300nm,23.0s						
FITZ	**Fitzroy Crossi**	**54.83**	**304**	LR	LR	10 08 42.0	
	comp=Z,252nm,19.8s,baz=172,slow=33						
FITZ	**Fitzroy Crossi**	**54.83**	**304**	P	**P**	**09 48 19.5**	**+0.4**
FITZ				IAmb	IAmb	09 48 47.7	
	comp=Z,5.8nm,1.2s						
VAH	**Vaihoa**	**55.87**	**50**	*eT*	T	10 48 35.4	
	comp=Z,120nm,0.3s						
KNRA	**Kununurra**	**55.91**	**308**	P	**P**	**09 48 26.3**	**-0.7**
MTN	**Manton Dam**	**57.73**	**312**	P	**P**	**09 48 38.9**	**-1.0**
MTN				IAmb	IAmb	09 48 39.6	
	comp=Z,13nm,1.2s						
MANU	**Manus Island**	**63.63**	**333**	P	**P**	**09 49 19.9**	**-0.1**
TAOE	**Nuku Hiva Isla**	**64.45**	**55**	*eLR*	LR	10 08 37.0	
	comp=Z,539nm,24.6s,baz=221						
LC01	**Cunco**	**66.51**	**131**	P	**P**	**09 49 38.4**	**-0.2**
LC01				IAmb	IAmb	09 49 48.0	
	comp=Z,5.3nm,1.1s						
H03S2	**Juan Fernandez**	**68.47**	**123**	T	T	11 05 10.2	
	baz=205,slow=74,SNR=195						
H03S1	**Juan Fernandez**	**68.47**	**123**	T	T	11 05 11.5	
	baz=205,slow=74,SNR=180						
H03S3	**Juan Fernandez**	**68.49**	**123**	T	T	11 05 12.6	
	baz=205,slow=74,SNR=194						
H03N3	**Juan Fernandez**	**68.81**	**123**	T	T	11 05 26.0	
	baz=204,slow=74,SNR=13						
H03N2	**Juan Fernandez**	**68.82**	**122**	T	T	11 05 24.3	
	baz=204,slow=74,SNR=37						
H03N1	**Juan Fernandez**	**68.83**	**123**	T	T	11 05 29.5	
	baz=204,slow=74,SNR=13						
LEM	**Lembang**	**72.26**	**291**	LR	LR	10 17 37.6	
	comp=Z,380nm,21.0s,baz=181,slow=32						
CO03	**El Pedregal**	**74.20**	**128**	P	**P**	**09 50 23.8**	**-2.0**
CO03				IAmb	IAmb	09 50 40.1	
	comp=Z,16nm,1.3s						
AC04	**Llanos de Chal**	**76.45**	**127**	P	**P**	**09 50 36.6**	**-2.1**
LVC	**Limon Verde**	**82.34**	**126**	LR	LR	10 20 56.7	
	comp=Z,78nm,18.6s,baz=193,slow=31						
CPUP	**Villa Florida**	**82.79**	**137**	P	**P**	**09 51 13.5**	**+0.4**
	comp=Z,3.0nm,1.1s,baz=148,slow=5.9,SNR=3.9						
BOSA	**Boshof**	**84.48**	**210**	P	**P**		
	comp=Z,14nm,1.4s,baz=149,slow=5.9,SNR=3.6						
BOSA				LR	LR	10 26 15.5	
	comp=Z,502nm,20.8s,baz=165,slow=34						
BOSA	**Boshof**	**84.48**	**210**	P	**P**	**09 51 21.5**	**-0.4**
H08S2	**Diego Garcia H**	**87.13**	**259**	T	T	11 28 28.4	
	baz=153,slow=76,SNR=187						
H08S1	**Diego Garcia H**	**87.14**	**259**	T	T	11 28 34.6	
	baz=153,slow=76,SNR=163						
H08S3	**Diego Garcia H**	**87.15**	**259**	T	T	11 28 25.1	
	baz=153,slow=76,SNR=485						
LPAZ	**La Paz**	**88.41**	**124**	P	**P**	**09 51 43.2**	**+1.2**
	comp=Z,2.6nm,1.1s,baz=312,slow=1.6,SNR=5.4						
LPAZ				LR	LR	10 24 05.8	
	comp=Z,63nm,19.2s,baz=210,slow=31						
LPAZ	**La Paz**	**88.41**	**124**	P	**P**	**09 51 40.3**	**-1.7**
LPAZ				IAmb	IAmb	09 51 50.1	
	comp=Z,5.1nm,1.0s						
NNA	**Nana**	**88.91**	**115**	LR	LR	10 22 02.1	
	comp=Z,187nm,21.7s,baz=201,slow=29						
ATAH	**Atahualpa**	**92.63**	**111**	LR	LR	10 25 00.7	
	comp=Z,377nm,18.2s,baz=220,slow=30						
TSUM	**Tsumeb**	**95.19**	**205**	LR	LR	10 34 30.4	
	comp=Z,800nm,18.0s,baz=150,slow=35						
BDFB	**Brasilia**	**95.61**	**142**	LR	LR	10 34 00.6	
	comp=Z,150nm,18.5s,baz=125,slow=35						
CMAR	**Chiang Mai Arr**	**98.65**	**294**	LR	LR	10 34 25.4	
	comp=Z,109nm,20.5s,baz=196,slow=34						
JHJ	**Hachijo jima 2**	**99.33**	**334**	LR	LR	10 31 54.0	
	comp=Z,57nm,21.3s,baz=97,slow=32						
H06S1	**SOCORRO T**	**101.22**	**71**	T	T	11 45 40.4	
	SNR=8.3						
H06E1	**SOCORRO T-PHASE**	**101.28**	**71**	T	T	11 45 43.3	
	SNR=8.1						
H02S1	**DAWSON INLET T**	**124.21**	**37**	T	T	12 14 21.8	
TORD	**Torodi Ar. Bea**	**129.35**	**193**	PKP	**PKiKP**	**09 57 58.2**	**0.0**
	comp=Z,0.3nm,0.6s,baz=190,slow=1.1,SNR=2.3						
TORD	**Torodi Ar. Bea**	**129.35**	**193**		**PKiKP**	**09 57 58.0**	**-0.2**
ILAR	**Eielson Array**	**131.47**	**22**	PKP	**PKiKP**	**09 58 01.6**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=228,slow=3.4,SNR=7.1						
ILAR	**Eielson Array**	**131.47**	**22**		**PKPdf**	**09 57 58.0**	**-2.0**
NRIK	**Noril'sk**	**144.74**	**322**	PKP	**PKPdf**	**09 58 25.1**	**+0.9**
	comp=Z,4.6nm,0.8s,baz=98,slow=3.2,SNR=9.4						
KBZ	**Khabaz**	**144.84**	**261**	PKP	**PKPdf**	**09 58 26.1**	**+1.1**
	comp=Z,5.1nm,0.9s,baz=56,slow=24,SNR=8.7						
BRTR	**Keskin Array B**	**145.59**	**247**	PKPbc	**PKPab**	**09 58 27.9**	**+0.6**
	comp=Z,2.8nm,1.0s,baz=151,slow=3.3,SNR=6.9						
BRTR	**Keskin Array B**	**145.59**	**247**		**PKiKP**	**09 58 30.5**	**-0.3**
AKASG	**Malin Array Be**	**156.18**	**256**	PKPab	**PKPab**	**09 59 12.2**	**+1.8**
	comp=Z,1.2nm,0.6s,baz=125,slow=3.5,SNR=6.0						
AKASG	**Malin Array Be**	**156.18**	**256**		**PKPab**	**09 59 13.5**	**+3.1**

*BJI **09** 10:05:35.7±0.0,8.°09S×128.°79E,h159km,mB4.9/40, mb4.9/64*
*KLM **09** 10:05:40.0,7.°76S×128.°55E,h136km,mb5.0*
*NEIC **09** 10:05:41.3±2.1,7.°61S±0.°05×128.°36E±0.°04,h152km±5km, mb4.8/53, Error ellipse: s-maj=8.6km s-min=2.1km az=214.0*
*IDC **09** 10:05:42.0±1.5,7.°47S×128.°28E,h146km±14km,mb4.3/19, mb1 4.3/22,mb1mx4.2/33,mbtmp4.8/22, Error ellipse: s-maj=12.8km s-min=8.5km az=85.0*
*DJA **09** 10:05:42.3±0.2,8.°3S±2.°×12.°8E±.°,h146km±2km, M4.8/54, mb4.9/54,mB5.2/23,MLv5.3/13,Mw(mB)4.6/23*
*GCMT **09** 10:05:43.3±0.4,7.°41S±0.°03×128.°18E±0.°03,h169km±6km, MW5.0/73,Moment Tensor Solution. s10,c12; s73,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.47±.20; Mθθ=-1.47±.28; Mϕϕ=0.00±.25; Mrθ=2.40±.18; Mrϕ=3.69±.23; Mθϕ=0.38±.16; Best double couple: M=0=4.62600×10^16 NP1:ϕs=351.00000°,δ54.00000°,λ164.00000°. NP2: ϕs=90.00000°,δ77.00000°,λ37.00000°. Principal axes: T 4.3170, Plg35.0000°, Azm317.0000°; N 0.6130, Plg51.0000°, Azm107.0000°; P -4.9340, Plg15.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 09 10:05:41.4±0.3**, 7.°68S**±0.°04×**128.°37E**±0.°04**, h150**km**, n231,**
σ1≦81/249, mb4.8/75, 2C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.92**	**96**	P	**Pn**	**10 06 29.8**	**+2.1**
SAUI				S	**Sn**	**10 07 05.2**	**+1.7**
SAUI	**Saumlaki**	**2.92**	**96**	Pn	**Pn**	**10 06 29.1**	**+1.4**
SAUI				Sn	**Sn**	**10 07 01.9**	**-1.6**
BNDI	**Bandanaira**	**3.49**	**26**	P	**Pn**	**10 06 35.5**	**+0.5**
SOEI	**Soe**	**4.55**	**243**	P	**Pn**	**10 06 50.4**	**+1.3**
SOEI				S	**Sn**	**10 07 42.3**	**+0.6**
SOEI	**Soe**	**4.55**	**243**	Pn	**Pn**	**10 06 49.7**	**+0.6**
SOEI				Sn	**Sn**	**10 07 41.2**	**-0.5**
BATI	**Baumata**	**5.29**	**241**	P	**Pn**	**10 06 59.5**	**+0.8**
	269nm,0.3s,baz=137,slow=3.6,SNR=102						
BATI				S	**Sn**	**10 07 56.6**	**-2.4**
	451nm,0.3s,baz=250,slow=23,SNR=14						
BATI	**Baumata**	**5.29**	**241**	P	**Pn**	**10 06 59.7**	**+1.0**
	5.0nm9μm1μm,0.7s						
MTN	**Manton Dam**	**5.81**	**152**	P	**Pn**	**10 07 06.6**	**+1.0**
	baz=6.0,SNR=512						
MTN				S	**Sn**	**10 08 11.3**	**-0.1**
	baz=6.0						
MTN	**Manton Dam**	**5.81**	**152**	Pn	**Pn**	**10 07 06.9**	**+1.3**
MTN				Sn	**Sn**	**10 08 11.3**	**-0.1**
SANI	**Sanana**	**6.08**	**337**	P	**Pn**	**10 07 10.4**	**+1.2**
	0.3nm1μm93nm,0.9s						
FAKI	**Fak Fak**	**6.10**	**39**	P	**Pn**	**10 07 07.8**	**-1.7**
	1.1nm2μm139nm,0.7s						
FAKI	**Fak Fak**	**6.10**	**39**	Pn	**Pn**	**10 07 08.0**	**-1.5**
FAKI				Sn	**Sn**	**10 08 16.4**	**-2.1**
MMRI	**Maumere**	**6.15**	**261**	P	**Pn**	**10 07 11.1**	**+1.0**
	1.5nm3μm169nm,0.8s						
MMRI	**Maumere**	**6.15**	**261**	Pn	**Pn**	**10 07 10.7**	**+0.6**
KDU	**Kakadu**	**6.41**	**141**	P	**Pn**	**10 07 14.8**	**+1.3**
	baz=6.6,SNR=651						
KDU				S	**Sn**	**10 08 22.3**	**-3.4**
	baz=6.6						
EDFI	**Ende, Flores**	**6.70**	**260**	P	**Pn**	**10 07 18.3**	**+0.7**
	0.3nm683nm50nm,0.7s						
SIJI	**Sorong**	**7.35**	**23**	P	**Pn**	**10 07 25.8**	**-0.5**
	35nm,0.3s,baz=234,slow=22,SNR=64						
SIJI				S	**Sn**	**10 08 45.4**	**-3.1**
	14nm,0.3s,baz=254,slow=23,SNR=10.0						
KNRA	**Kununurra**	**7.96**	**177**	S	**Sn**	**10 08 56.7**	**-6.3**
	baz=8.2						
KNRA	**Kununurra**	**7.96**	**177**	Pn	**Pn**	**10 07 34.8**	**+0.5**
TNTI	**Ternate**	**8.46**	**353**	P	**Pn**	**10 07 41.9**	**+1.0**
	46nm,0.9s						
TNTI	**Ternate**	**8.46**	**353**	Pn	**Pn**	**10 07 41.4**	**+0.4**
BKSI	**Bulukumba**	**8.53**	**285**	P	**Pn**	**10 07 42.7**	**+0.8**
	34nm,0.7s						
BNSI	**Bone**	**8.84**	**291**	P	**Pn**	**10 07 44.8**	**-1.3**
	614nm47nm,0.8s						
KAPI	**Kappang**	**8.97**	**287**	P	**Pn**	**10 07 46.7**	**-1.1**
	0.4nm,0.3s,baz=141,slow=9.5,SNR=5.9						
KAPI	**Kappang**	**8.97**	**287**	Pn	**Pn**	**10 07 49.6**	**+1.8**
WBSI	**Waikabubak, Su**	**9.09**	**257**	P	**Pn**	**10 07 48.9**	**-0.6**
	2μm151nm,0.8s						
SPSI	**Sidrap Palu**	**9.32**	**293**	P	**Pn**	**10 07 52.6**	**+0.1**
	35nm,0.8s						
APSI	**Ampana**	**9.49**	**315**	P	**Pn**	**10 07 56.6**	**+1.8**
	479nm58nm,0.9s						
TTSI	**Tana Toraja**	**9.68**	**298**	P	**Pn**	**10 07 59.3**	**+2.1**
	2μm33nm,1.0s						
BAKI	**Biak**	**10.05**	**50**	P	**Pn**	**10 08 02.8**	**+0.7**
	161nm,0.9s						
PLAI	**Plampang**	**10.55**	**263**	P	**Pn**	**10 08 07.6**	**-1.2**
	57nm,0.6s						
FITZ	**Fitzroy Crossi**	**10.69**	**194**	P	**Pn**	**10 08 08.9**	**-1.7**
	15nm,0.3s,baz=26,slow=10,SNR=290						
FITZ				S	Sn	10 10 01.4	-7.5
	32nm,0.3s,baz=84,slow=14,SNR=14						
FITZ	**Fitzroy Crossi**	**10.69**	**194**	S	**Sn**	**10 10 04.8**	**-4.2**
	baz=11						
FITZ	**Fitzroy Crossi**	**10.69**	**194**		**Pn**	**10 08 09.6**	**-1.0**
TWSI	**Taliwang, Sumb**	**11.42**	**264**	P	**Pn**	**10 08 21.9**	**+1.7**
	16nm,0.7s						
MPSI	**Mapaga**	**11.61**	**313**	P	**Pn**	**10 08 24.8**	**+2.1**
	672nm24nm,1.4s						
SGSI	**Sangihe**	**11.64**	**346**	P	**P**	**10 08 31.4**	**+1.0**
BKB	**Balikpapan**	**13.09**	**299**	P	**P**	**10 08 51.5**	**+5.0**
BKB	**Balikpapan**	**13.09**	**299**	P	**P**	**10 08 44.6**	**-1.9**
SMKI	**Samarinda**	**13.25**	**302**	P	**P**	**10 08 52.6**	**+4.3**
WB0	**Warramunga Arr**	**13.36**	**155**		**Pn**	**10 08 44.1**	**-1.1**
WRAB	**Tennant Creek**	**13.49**	**155**	P	**Pn**	**10 08 46.0**	**-1.0**
WRA	**Warramunga Arr**	**13.49**	**155**	P	**Pn**	**10 08 45.7**	**-1.3**
	5.4nm,0.3s,baz=347,slow=13,SNR=272						
WRA				S	Sn	10 11 06.3	-10
	29nm,0.3s,baz=327,slow=23,SNR=19						
WRA	**Warramunga Arr**	**13.49**	**155**		**Pn**	**10 08 44.3**	**-2.7**
WB2	**Warramunga Arr**	**13.50**	**155**	P	**Pn**	**10 08 45.8**	**-1.3**
WR0	**Warramunga Arr**	**13.59**	**155**		**Pn**	**10 08 46.9**	**-1.4**
BBKI	**Banjar Baru**	**14.10**	**287**	P	**Pn**	**10 08 55.3**	**+0.6**
	92nm,1.1s						
JAGI	**Jajag, Banyuwa**	**14.10**	**266**	P	**Pn**	**10 08 56.0**	**+1.3**
	30nm,0.6s						
MTKI	**Muara Teweh, K**	**15.01**	**296**	P	**P**	**10 09 09.6**	**+1.8**
	5μm97nm,0.8s						
PSA00	**Pilbara Seismi**	**16.08**	**210**	P	**Pn**	**10 09 19.6**	**+0.4**
MYLDM	**Lahad Datu**	**16.13**	**322**	P	**P**	**10 09 21.1**	**+0.9**
MYLDM				IAmb	IAmb	10 09 42.8	
	comp=Z,70nm,1.0s						
PWJI	**Pagerwojo**	**16.42**	**268**	P	P	10 09 34.7	+11
AS31	**Alice Springs**	**16.76**	**162**		**P**	**10 09 27.7**	**+0.6**
AS31				IAmb	IAmb	10 09 31.8	
	comp=Z,36nm,0.6s						
ASAR	**Alice Springs**	**16.76**	**162**	P	**Pn**	**10 09 29.2**	**+1.7**
	comp=Z,7.9nm,0.3s,baz=336,slow=8.9,SNR=170						
ASAR				S	**S**	**10 12 27.0**	**-6.9**
	comp=Z,6.4nm,0.3s,baz=343,slow=22,SNR=6.3						
ASAR	**Alice Springs**	**16.76**	**162**	P	**P**	**10 09 27.9**	**+0.7**
QIS	**Mount Isa**	**16.79**	**141**	P	**Pn**	**10 09 29.9**	**+2.0**
	baz=17,SNR=42						
QIS				S	**S**	**10 12 28.1**	**-6.7**
	baz=17						
WRKA	**Warakurna**	**17.26**	**180**	P	**Pn**	**10 09 34.2**	**+0.7**
	baz=18,SNR=486						
WRKA				S	**S**	**10 12 37.6**	**-7.4**
	baz=18					

IPM	**Ipoh**	**29.84**	**293**	P	**P**	**10 11 34.8**	**0.0**
IPM				IAmb	IAmb	10 11 36.0	
	comp=Z,20nm,0.9s						
IPM	**Ipoh**	**29.84**	**293**	P	**P**	**10 11 35.0**	**+0.2**
MNSI	**Mandailing Nat**	**29.92**	**285**	P	**P**	**10 11 34.9**	**-0.6**
	comp=Z,946nmcomp=Z,21nm,0.7s						
KULM	**Kulim**	**30.51**	**294**	P	**P**	**10 11 41.0**	**+0.3**
KULM				IAmb	IAmb	10 11 41.3	
	comp=Z,14nm,0.7s						
KULM	**Kulim**	**30.51**	**294**	P	**P**	**10 11 41.0**	**+0.3**
RPSI	**Rantau Prapat**	**31.14**	**288**	P	**P**	**10 11 46.4**	**+0.2**
RPSI	**Rantau Prapat**	**31.14**	**288**	P	**P**	**10 11 45.7**	**-0.5**
PSI	**Prapat**	**31.17**	**288**	P	**P**	**10 11 45.7**	**-1.0**
	comp=Z,33nm,0.7s,baz=14,slow=1.0,SNR=18						
TPUB	**Ta-pu**	**31.71**	**346**	P	**P**	**10 11 49.4**	**-1.7**
YNG	**Young**	**32.28**	**148**	P	**P**	**10 12 00.2**	**+4.1**
	baz=33,SNR=8.7						
TRTT	**Trang**	**32.48**	**298**	P	**P**	**10 11 59.4**	**+1.4**
	comp=Z,40nm,1.0s						
CAN	**Canberra**	**33.39**	**148**	P	**P**	**10 12 10.0**	**+4.3**
CAN				IAmb	IAmb	10 12 30.5	
	comp=Z,34nm,1.5s						
TOO	**Toolangi**	**33.57**	**155**	P	P	10 12 12.3	+5.1
SRAK	**Srakaew**	**33.87**	**309**	P	**P**	**10 12 07.3**	**-2.7**
	comp=Z,150nm,0.8s						
NONG	**Nongkai**	**35.70**	**316**	P	**P**	**10 12 26.1**	**+0.4**
	comp=Z,27nm,0.9s						
UTHA	**Uthaitani**	**36.80**	**309**	P	**P**	**10 12 35.0**	**-0.1**
UTTA	**Uttaradit**	**37.33**	**313**	P	**P**	**10 12 40.3**	**+0.8**
	comp=Z,229nmcomp=Z,29nm,0.8s						
SLVN	**Son La**	**37.53**	**321**	P	**P**	**10 12 39.4**	**-1.9**
SLVN				IAmb	IAmb	10 12 42.8	
	comp=Z,22nm,1.0s						
SUKH	**Sukhothai**	**37.84**	**312**	P	**P**	**10 12 45.0**	**+1.2**
	comp=Z,270nmcomp=Z,25nm,0.8s						
LAMP	**Lampang**	**38.49**	**313**	P	**P**	**10 12 52.4**	**+3.2**
	comp=Z,20nm,0.8s						
PAYA	**Payao**	**38.87**	**314**	P	**P**	**10 12 53.0**	**+0.6**
	comp=Z,17µmcomp=Z,147nm,1.2s						
CM04	**Chiang Mai Arr**	**38.90**	**312**	P	**P**	**10 12 54.1**	**+1.5**
	comp=Z,12nm,0.8s						
CM09	**Chiang Mai Arr**	**38.91**	**312**	P	**P**	**10 12 54.0**	**+1.2**
	comp=Z,98nmcomp=Z,12nm,1.0s						
CM05	**Chiang Mai Arr**	**38.92**	**312**	P	**P**	**10 12 54.0**	**+1.1**
	comp=Z,8.9nm,0.8s						
CM01	**Chiang Mai Arr**	**38.92**	**312**	P	**P**	**10 12 54.5**	**+1.6**
	comp=Z,12nm,1.2s						
CM02	**Chiang Mai Arr**	**38.94**	**312**	P	**P**	**10 12 54.5**	**+1.4**
	comp=Z,103nmcomp=Z,12nm,0.8s						
CM31	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	**10 12 55.0**	**+1.9**
	comp=Z,348nm,0.7s						
CM31	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	**10 12 53.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	**10 12 52.9**	**-0.3**
	comp=Z,6.3nm,0.7s,baz=142,slow=7.3,SNR=34						
CMAR				PcP	**PcP**	**10 15 01.1**	**+0.4**
	comp=Z,1.5nm,0.4s,baz=165,slow=3.1,SNR=5.1						
CMAR	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	**10 12 52.4**	**-0.7**
CM13	**Chiang Mai Arr**	**38.96**	**312**	P	**P**	**10 12 54.2**	**+1.1**
	comp=Z,69nmcomp=Z,10.0nm,0.8s						
CM15	**Chiang Mai Arr**	**38.97**	**312**	P	**P**	**10 12 54.0**	**+0.8**
CMMT	**Chiang Mai**	**39.18**	**313**	P	**P**	**10 12 56.0**	**+1.0**
CHTO	**Chiang Mai**	**39.18**	**313**	P	**P**	**10 12 54.5**	**-0.5**
CHTO				IAmb	IAmb	10 12 56.8	
	comp=Z,14nm,0.9s						
GYA	**Guiyang**	**39.95**	**329**	⇓P	**P**	**10 13 01.1**	**-0.2**
GYA				PcP	**PcP**	**10 15 04.8**	**+0.9**
GYA				S	**S**	**10 19 02.7**	**+7.1**
GYA				SS	**SS**	**10 22 00.6**	**+1.8**
GYA				pmax	pmax		
	comp=Z,19nm,1.2s						
GYA				pmax	pmax		
	comp=Z,100nm,4.6s						
GYA				LR	LR		
	comp=Z,100nm,4.6s						
GYA				LR	LR		
	comp=Z,140nm,4.5s						
GYA				LR	LR		
	comp=Z,75nm,4.6s						
WHN	**Wuhan**	**40.32**	**341**	⇑P	**P**	**10 13 04.1**	**-0.1**
WHN				pmax	pmax		
	comp=Z,130nm,1.0s						
NJ2	**Nanjing**	**40.54**	**348**	*e*P	**P**	**10 13 07.2**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
KMI	**Kunming**	**41.06**	**323**	*e*P	**P**	**10 13 12.0**	**+1.3**
KMI				pmax	pmax		
	comp=Z,22nm,1.1s						
KMI				pmax	pmax		
	comp=Z,150nm,3.8s						
ENH	**Enshi**	**41.87**	**335**	P	**P**	**10 13 15.5**	**-1.4**
ENH				IAmb	IAmb	10 13 16.9	
	comp=Z,19nm,0.9s						
JWT	**Wachi**	**43.24**	**8**	P	**P**	**10 13 27.3**	**-0.6**
JWT				IAmb	IAmb	10 13 28.9	
	comp=Z,16nm,0.6s						
KSAR	**Wonju Array Be**	**44.89**	**359**	P	**P**	**10 13 40.1**	**-0.8**
KSRS	**Korea Array**	**44.90**	**359**	P	**P**	**10 13 40.3**	**-0.7**
	comp=Z,7.0nm,0.7s,baz=177,slow=9.3,SNR=28						
TIA	**Tai'an**	**44.92**	**347**	P	**P**	**10 13 40.0**	**-1.3**
TIA				pmax	pmax		
	comp=Z,18nm,0.9s						
MAJO	**Matsushiro**	**44.95**	**11**	P	**P**	**10 13 39.7**	**-1.7**
MAJO				IAmb	IAmb	10 13 41.6	
	comp=Z,16nm,0.8s						
MAT	**Matsushiro**	**44.95**	**11**	P	**P**	**10 13 39.0**	**-2.5**
MJAR	**Matsushiro Arr**	**44.95**	**11**	P	**P**	**10 13 39.4**	**-2.0**
	comp=Z,11nm,0.8s,baz=187,slow=9.3,SNR=27						
MJAR	**Matsushiro Arr**	**44.95**	**11**	P	**P**	**10 13 39.6**	**-1.9**
KS19	**Wonju Array Si**	**44.95**	**359**	P	**P**	**10 13 40.4**	**-1.0**
KS19				IAmb	IAmb	10 13 55.6	
	comp=Z,23nm,1.2s						
CD2	**Chengdu**	**45.04**	**330**	P	**P**	**10 13 41.2**	**-1.2**
CD2				pmax	pmax		
	comp=Z,30nm,0.8s						
XAN	**Xi'an**	**45.40**	**337**	P	**P**	**10 13 43.4**	**-1.8**
XAN				pmax	pmax		
	comp=Z,31nm,0.9s						
XAN	**Xi'an**	**45.40**	**337**	P	**P**	**10 13 43.4**	**-1.8**
XAN				IAmb	IAmb	10 13 44.5	
	comp=Z,28nm,0.9s						
TIY	**Taiyuan**	**47.55**	**343**	*e*P	**P**	**10 14 01.0**	**-0.8**
SHL	**Shillong**	**48.49**	**314**	P	**P**	**10 14 08.1**	**-1.3**
SHL				IAmb	IAmb	10 14 09.8	
	comp=Z,20nm,0.8s						
BJT	**Baijiatuau**	**48.78**	**348**	P	**P**	**10 14 09.8**	**-1.3**
BJT				IAmb	IAmb	10 14 11.3	
	comp=Z,26nm,0.9s						
BJI	**Beijing**	**48.80**	**348**	P	**P**	**10 14 10.2**	**-1.1**
BJI				pmax	pmax		
	comp=Z,30nm,0.9s						
LZH	**Lanzhou**	**49.27**	**334**	*e*P	**P**	**10 14 15.1**	**-0.1**
LZH				pP	pwP	10 14 50.8	-3.0
LZH				sP	sP	10 15 05.4	+1.4
LZH				PcP	**PcP**	**10 15 32.4**	**-3.4**
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC	**Hu-ho-hao-te**	**50.71**	**344**	*e*P	**P**	**10 14 26.3**	**+0.4**
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
LSA	**Lhasa**	**51.59**	**318**	P	**P**	**10 14 33.4**	**+0.3**
LSA				IAmb	IAmb	10 14 34.8	
	comp=Z,12nm,0.7s						
USA0B	**Ussuriysk Arra**	**51.74**	**3**	P	**P**	**10 14 32.9**	**-0.4**
USRK	**Ussuriysk Ar.**	**51.74**	**3**	P	**P**	**10 14 32.8**	**-0.5**
	comp=Z,7.9nm,0.6s,baz=185,slow=7.3,SNR=32						
USRK	**Ussuriysk Ar.**	**51.74**	**3**	P	**P**	**10 14 31.7**	**-1.6**
ODAN	**Odare**	**52.50**	**312**	*e*P	**P**	**10 14 39.1**	**-0.5**
	comp=Z,49nm,0.6s						
TAPN	**Taplejung**	**52.55**	**313**	*e*P	**P**	**10 14 39.3**	**-0.7**
	comp=Z,80nm,1.1s						
RAMN	**Ramite**	**53.13**	**312**	*e*P	**P**	**10 14 44.2**	**0.0**
	comp=Z,117nm,0.7s						
ASAJ	**Asahikawa**	**53.14**	**13**	P	**P**	**10 14 43.2**	**-0.4**
	comp=Z,9.3nm,0.8s,baz=215,slow=19						
GTA	**Gaotai**	**53.81**	**333**	P	**P**	**10 14 48.4**	**-0.4**
GTA				pP	pP	10 15 22.2	+0.4
GTA				sP	sP	10 15 39.6	+1.9
GTA				S	**S**	**10 22 09.3**	**-2.8**
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA				pmax	pmax		
	comp=Z,94nm,7.5s						
GTA				LR	LR		
	comp=Z,140nm,20.4s						
GTA				LR	LR		
	comp=Z,140nm,19.6s						
GTA				LR	LR		
	comp=Z,190nm,18.5s						
GUN	**Gumba**	**54.20**	**313**	*e*P	**P**	**10 14 51.5**	**-0.6**
	comp=Z,89nm,0.7s						
PKI	**Pulchoki**	**54.36**	**312**	*e*P	**P**	**10 14 52.3**	**-0.9**
	comp=Z,35nm,0.6s						
PKIN	**Phulchoki**	**54.37**	**312**	*e*P	**P**	**10 14 52.5**	**-0.8**
	comp=Z,40nm,0.6s						
KKN	**Kakani**	**54.57**	**312**	*e*P	**P**	**10 14 54.1**	**-0.6**
	comp=Z,29nm,0.6s						
GKN	**Gorkha**	**55.16**	**312**	*e*P	**P**	**10 14 57.9**	**-1.0**
	comp=Z,48nm,0.5s						
KOLN	**Koldanda**	**55.81**	**311**	*e*P	**P**	**10 15 02.7**	**-0.8**
	comp=Z,80nm,0.8s						
DANN	**Dangsing**	**56.00**	**312**	*e*P	**P**	**10 15 04.1**	**-0.9**
	comp=Z,44nm,0.7s						
PYUN	**Piuthan**	**56.44**	**311**	*e*P	**P**	**10 15 07.6**	**-0.4**
	comp=Z,78nm,0.7s						
ULN	**Ulaanbaatar**	**58.43**	**343**	P	**P**	**10 15 21.6**	**+0.2**
SONM	**Songino Array**	**58.59**	**343**	P	**P**	**10 15 22.3**	**-0.3**
	comp=Z,8.3nm,0.7s,baz=170,slow=7.2,SNR=35						
SONM	**Songino Array**	**58.59**	**343**	P	**P**	**10 15 22.0**	**-0.6**
WMQ	**Urumqi**	**63.10**	**328**	*e*P	**P**	**10 15 53.1**	**+0.1**
WMQ				pP	pwP	10 16 33.9	0.0
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,270nm,4.9s						
PETK	**Petropavlovsk-**	**65.48**	**19**	P	**P**	**10 16 08.4**	**+0.1**
	comp=Z,19nm,0.8s,baz=177,slow=4.1,SNR=14						
PETK	**Petropavlovsk-**	**65.48**	**19**	P	**P**	**10 16 08.2**	**-0.1**
NIL	**Nilore**	**66.45**	**312**	P	**P**	**10 16 13.6**	**-1.4**
NIL				IAmb	IAmb	10 16 14.8	
	comp=Z,13nm,0.7s						
KSH	**Kashi**	**67.44**	**318**	*e*P	**P**	**10 16 21.1**	**-0.1**
KSH				pmax	pmax		
	comp=Z,23nm,0.7s						
KSH				pmax	pmax		
	comp=Z,240nm,3.9s						
MK31	**Makanchi Array**	**67.92**	**328**	P	**P**	**10 16 23.3**	**-0.6**
MK31				IAmb	IAmb	10 16 24.9	
	comp=Z,22nm,1.4s						
MKAR	**Makanchi Array**	**67.92**	**328**	P	**P**	**10 16 23.5**	**-0.4**
	comp=Z,7.3nm,0.5s,baz=122,slow=7.9,SNR=72						
MKAR	**Makanchi Array**	**67.92**	**328**	P	**P**	**10 16 23.3**	**-0.6**
MAKZ	**Makanchi**	**68.10**	**328**	P	**P**	**10 16 24.7**	**-0.3**
MAKZ				IAmb	IAmb	10 16 25.9	
	comp=Z,20nm,1.3s						
YAK	**Yakutsk**	**69.51**	**1**	P	**P**	**10 16 32.4**	**-1.0**
KBL	**Kabul**	**69.97**	**311**	P	**P**	**10 16 36.1**	**-1.0**
GAR	**Garm**	**71.01**	**316**	P	**P**	**10 16 42.2**	**-1.0**
GAR				IAmb	IAmb	10 16 44.7	
	comp=Z,26nm,1.2s						
ZAA0	**Zalesovo Array**	**71.49**	**335**	P	**P**	**10 16 43.9**	**-1.6**
ZAA0				IAmb	IAmb	10 16 45.5	
	comp=Z,24nm,0.9s						
ZALV	**Zalesovo Beam**	**71.49**	**335**	P	**P**	**10 16 44.3**	**-1.2**
	comp=Z,11nm,0.5s,baz=123,slow=4.6,SNR=51						
ZALV	**Zalesovo Beam**	**71.49**	**335**	P	**P**	**10 16 44.0**	**-1.5**
CHGR	**Chuyangaron**	**71.66**	**315**	P	**P**	**10 16 46.1**	**-1.0**
CHGR				IAmb	IAmb	10 16 48.0	
	comp=Z,10nm,0.7s						
VNDA	**Vanda**	**71.98**	**173**	P	**P**	**10 16 50.5**	**+2.3**
	comp=Z,0.6nm,0.4s,baz=317,slow=9.2,SNR=10.0						
KURK	**Kurchatov**	**72.27**	**329**	P	**P**	**10 16 49.7**	**-0.5**
KK31	**Karatay Array**	**72.80**	**320**	P	**P**	**10 16 52.8**	**-0.8**
KKAR	**Karatay Array**	**72.80**	**320**	P	**P**	**10 16 52.7**	**-0.9**
KKAR	**Karatay Array**	**72.80**	**320**	P	**P**	**10 16 52.8**	**-0.9**
HRA	**Herat**	**75.10**	**309**	P	**P**	**10 17 06.6**	**-0.9**
BRVK	**Borovoye**	**77.86**	**328**	P	**P**	**10 17 21.6**	**-0.7**
BRVK				IAmb	IAmb	10 17 22.9	
	comp=Z,24nm,0.9s						
TIXI	**Tiksi**	**79.16**	**0**	P	**P**	**10 17 27.4**	**-1.7**
TIXI				IAmb	IAmb	10 17 30.3	
	comp=Z,15nm,0.7s						
OPO	**Ambohidratompo**	**79.28**	**253**	P	**P**	**10 17 32.0**	**+1.0**
	comp=Z,3.3nm,0.7s,baz=107,slow=8.6,SNR=5.0						
GEYT	**Alibeck**	**79.43**	**311**	P	**P**	**10 17 30.9**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=72,slow=1.8,SNR=4.3						
GEYT	**Alibeck**	**79.43**	**311**	P	**P**	**10 17 29.7**	**-1.6**
NRIK	**Noril'sk**	**81.83**	**346**	P	**P**	**10 17 43.2**	**-0.1**
	comp=Z,16nm,0.9s,baz=134,slow=5.7,SNR=20						
ABKAR	**Akbulak array**	**82.04**	**322**	P	**P**	**10 17 44.0**	**-0.8**
ABKAR	**Akbulak array**	**82.04**	**322**	P	**P**	**10 17 43.8**	**-1.0**
QSPA	**South Pole Qui**	**82.30**	**180**	P	**P**	**10 17 48.1**	**+2.0**
	comp=Z,2.0nm,0.8s,baz=326,slow=2.1,SNR=11						
QSPA	**South Pole Qui**	**82.30**	**180**	P	**P**	**10 17 47.4**	**+1.3**
SYO	**Syowa Base**	**82.45**	**201**	⇑*e*P	**P**	**10 17 47.0**	**+0.4**
SYO	**Syowa Base**	**82.45**	**201**	⇓*e*PcP	**PcP**	**10 17 52.2**	**+0.8**
ARU	**Arti**	**85.43**	**328**	P	**P**	**10 18 00.6**	**-1.3**
ARU				IAmb	IAmb	10 18 02.2	
	comp=Z,21nm,0.7s						
RND	**Reindeer**	**93.58**	**27**	P	**P**	**10 18 38.2**	**-2.0**
ILAR	**Eielson Array**	**94.65**	**25**	P	**P**	**10 18 43.0**	**-2.0**
	comp=Z,1.6nm,0.9s,baz=262,slow=3.8,SNR=9.5						
ILAR				PKKP	**PKKPdf**	**10 35 43.5**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=48,slow=1.3,SNR=4.6						
ILAR	**Eielson Array**	**94.65**	**25**	P	**P**	**10 18 42.5**	**-2.6**
BMAR	**Burnt Mountain**	**95.90**	**23**	P	**P**	**10 18 50.4**	**-0.3**
BCAR	**Beaver Creek A**	**96.72**	**27**	P	**P**	**10 18 54.9**	**+0.3**
ARCES	**ARCESS Array B**	**101.65**	**340**	P	**Pdif**	**10 19 14.5**	**-1.9**
	comp=Z,2.3nm,0.7s,baz=63,slow=5.6,SNR=3.8						
YKA	**Yellowknife Ar**	**109.06**	**26**	PKiKP	**PKiKP**	**10 23 53.2**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=327,slow=1.0,SNR=4.4						
GERES	**GERESS Array B**	**111.90**	**320**	PKiKP	**PKiKP**	**10 23 59.0**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=58,slow=1.4,SNR=12						
GERES	**GERESS Array B**	**111.90**	**320**		**PKiKP**	**10 23 58.4**	**-0.4**
NVAR	**Mina Array Bea**	**112.98**	**52**	PKiKP	**PKiKP**	**10 24 03.1**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=254,slow=1.5,SNR=4.0						
PDAR	**Pinedale Array**	**118.51**	**45**	PKP	**PKiKP**	**10 24 12.5**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=229,slow=0.4,SNR=12						
PDAR				PKKPbc	**PKKPbc**	**10 34 31.0**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=107,slow=5.1,SNR=4.6						
ULM	**Lac du Bonnet**	**123.89**	**33**	PKP	**PKiKP**	**10 24 21.9**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=283,slow=1.0,SNR=2.5						
TXAR	**Lajitas Array**	**126.66**	**59**	PKP	**PKiKP**	**10 24 28.5**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=266,slow=1.2,SNR=7.6						
TXAR	**Lajitas Array**	**126.66**	**59**		**PKiKP**	**10 24 28.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**127.35**	**281**	PKP	**PKiKP**	**10 24 29.7**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=68,slow=1.9,SNR=14						
TORD	**Torodi Ar. Bea**	**127.35**	**281**		**PKPdf**	**10 24 29.4**	**0.0**
SCHQ	**Schefferville**	**131.43**	**12**	PKP	**PKiKP**	**10 24 36.6**	**-0.3**
	comp=Z,5.7nm,0.9s,baz=238,slow=14,SNR=2.1						
DBIC	**Dimbokro**	**133.60**	**272**	PKP	**PKiKP**	**10 24 42.0**	**-0.5**
	comp=Z,2.0nm,0.6s,baz=303,slow=3.4,SNR=4.3						
DBIC	**Dimbokro**	**133.60**	**272**		**PKPdf**	**10 24 40.8**	**-0.4**
CPUP	**Villa Florida**	**145.74**	**171**	PKPbc	**PKPab**	**10 25 04.7**	**+0.6**
	comp=Z,4.1nm,0.7s,baz=192,slow=2.1,SNR=12						
NNA	**Nana**	**148.21**	**128**	PKPbc	**PKPbc**	**10 25 10.8**	**0.0**
	comp=Z,7.8nm,0.8s,baz=235,slow=7.3,SNR=4.3						
ATAH	**Atahualpa**	**149.52**	**118**	PKPbc	**PKiKP**	**10 25 16.7**	**+1.1**
	comp=Z,13nm,0.9s,baz=292,slow=2.7,SNR=6.3						
LPAZ	**La Paz**	**151.12**	**146**	PKPbc	**PKiKP**	**10 25 20.7**	**+1.6**
	comp=Z,7.4nm,0.9s,baz=75,slow=2.8,SNR=9.9						
LPAZ	**La Paz**	**151.12**	**146**	PKPdf	**PKPdf**	**10 25 09.5**	**-3.2**
LPAZ				PKPbc	**PKPbc**	**10 25 15.7**	**-3.0**
LPAZ				PKPab	**PKiKP**	**10 25 21.3**	**+2.1**
SIV	**San Ignacio**	**154.69**	**158**	PKP	**PKPdf**	**10 25 18.6**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=153,slow=2.3,SNR=2.5						
SIV				PKPbc	**PKiKP**	**10 25 27.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=262,slow=3.5,SNR=3.9						
SIV				PKPab	**PKPab**	**10 25 43.4**	**+2.5**
	comp=Z,1.0nm,0.6s,baz=236,slow=6.1,SNR=4.2						

*NNC **09** 10:28:47.6±0.3,45°.85N×81°.00E, h0km, mb3.6, mpv3.4,*
Error ellipse: s-maj=9.7km s-min=1.9km az=127.0
*SOME **09** 10:28:50.7,45°.85N×80°.93E, h30km*
ISC 09 10:28:48.5±0.8, 45.73N±0°.04×81°.38E±0°.05, h10km, n42, σ1°14/62, 17C-6D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MAKZ	**Makanchi**	**1.16**	**21**	⇑P		**Pn**		**10 29 10.1**	**-0.7**
	5.8nm,0.2s								
MAKZ				⇑S		**Sn**		**10 29 25.7**	**-1.0**
	49nm,0.5s								
MK31	**Makanchi Array**	**1.24**	**30**	⇑P		**Pg**		**10 29 12.5**	**+0.2**
	2.7nm,0.2s,baz=218,slow=17,SNR=186								
MK31				⇑S		**Sn**		**10 29 29.6**	**+0.9**
	6.9nm,0.3s,baz=219,slow=30,SNR=39								
DJR	**Jarkent**	**1.79**	**220**	⇑*i*P		**Pb**		**10 29 21.0**	**-0.5**
	33nm,0.2s								
DJR				⇑*i*S		**Sn**		**10 29 42.8**	**+0.4**
	71nm,0.3s								
KTMS	**Ketmen**	**2.39**	**198**	*e*P		**Pg**		**10 29 33.4**	**-1.0**
	19nm,0.2s								
KTMS				⇓*i*S		**Sg**		**10 30 04.2**	**-1.2**
	68nm,0.2s								
KTMS	**Ketmen**	**2.39**	**198**	Pg		**Pg**		**10 29 33.8**	**-0.6**
	19nm,0.2s								
KTMS				Lg		Lg		10 30 04.1	
	68nm,0.2s								
MNBS	**Baschi**	**2.68**	**233**	*e*P		**Pb**		**10 29 34.9**	**-1.7**
	6.3nm,0.2s								
MNBS				⇓*i*S		**Sn**		**10 30 06.8**	**+2.4**
	72nm,0.2s								
MNBS	**Baschi**	**2.68**	**233**	Pg		**Pb**		**10 29 35.2**	**-1.4**
	7.1nm,0.2s								
MNBS				Lg		Lg		10 30 06.6	
	49nm,0.3s								
PDGK	**Podgornoye**	**2.75**	**210**	⇑Pg		**Pb**		**10 29 35.7**	**-2.1**
	5.3nm,0.7s								
PDGK				⇑Lg		Lg		10 30 12.8	
	36nm,0.6s								
SHLS	**Shalkode**	**2.91**	**209**	*e*P		**Pb**		**10 29 39.7**	**-0.9**
	10nm,0.3s								
SHLS				⇓*i*S		**Sb**		**10 30 15.0**	**-1.3**
	51nm,0.3s								
SHLS	**Shalkode**	**2.91**	**209**	Pg		**Pg**		**10 29 39.9**	**-0.6**
	10nm,0.3s								
SHLS				Lg		Lg		10 30 14.6	
	51nm,0.3s								
ARXS	**Arharly**	**2.94**	**240**	*e*P		**Pb**		**10 29 39.1**	**-1.9**
	6.9nm,0.2s								
ARXS				*e*S		**Sn**		**10 30 14.0**	**+3.3**
	30nm,0.3s								
ARXS	**Arharly**	**2.94**	**240**	Pg		**Pb**		**10 29 38.9**	**-2.1**
	6.9nm,0.2s								
ARXS				Lg		Lg		10 30 13.4	
	30nm,0.3s								
ZSN	**Zaisan**	**2.96**	**53**	*e*P		**Pb**		**10 29 41.8**	**+0.5**
	4.6nm,0.3s								
ZSN				*e*S		**Sb**		**10 30 18.6**	**+1.1**
	11nm,0.3s								
ZSN	**Zaisan**	**2.96**	**53**	Pg		Pg		10 29 48.8	+3.6
	4.6nm,0.3s								
ZSN				Lg		Lg		10 30 29.7	
	12nm,0.3s								
KPKS	**Kokpek**	**2.97**	**221**	⇑*i*P		**Pb**		**10 29 41.5**	**0.0**
	13nm,0.2s								
KPKS				⇑*i*S		**Sb**		**10 30 17.7**	**-0.1**
	102nm,0.3s								
UZB	**Uzynbulak**	**3.08**	**214**	*e*P		**Pb**		**10 29 43.9**	**+0.4**
	4.7nm,0.2s								
UZB				*e*S		**Sb**		**10 30 22.3**	**+1.2**
	86nm,0.3s								
UZB	**Uzynbulak**	**3.08**	**214**	Pg		**Pb**		**10 29 44.4**	**+1.0**
	4.7nm,0.2s								
UZB				Lg		Lg		10 30 22.3	
	86nm,0.3s								
KURS	**Kuram**	**3.20**	**227**	*e*P		**Pb**		**10 29 45.3**	**-0.2**
	5.0nm,0.6s								
KURS				*e*S		**Sb**		**10 30 24.2**	**-0.4**
	16nm,0.5s								
KURS	**Kuram**	**3.20**	**227**	Pg		**Pb**		**10 29 45.6**	**+0.1**
	5.0nm,0.6s								
KURS				Lg		Lg		10 30 24.2	
	9.9nm,0.4s								
ZHN	**Zhinishke**	**3.31**	**221**	*e*P		**Pb**		**10 29 47.2**	**-0.2**
	5.9nm,0.1s								
ZHN				*e*S		**Sb**		**10 30 28.1**	**+0.3**
	17nm,0.2s								
ZHN	**Zhinishke**	**3.31**	**221**	Pg		**Pb**		**10 29 47.9**	**+0.5**
	42nm,0.4s								
ZHN				Lg		Lg		10 30 28.3	
	22nm,0.2s								
SATY	**Saty**	**3.41**	**220**	*e*P		**Pb**		**10 29 49.4**	**+0.4**
	2.6nm,0.2s								
SATY				⇑*i*S		**Sb**		**10 30 31.8**	**+1.1**
	37nm,0.2s								
SATY	**Saty**	**3.41**	**220**	Pg		**Pb**		**10 29 49.7**	**+0.6**
	2.3nm,0.2s								
SATY				Lg		Lg		10 30 31.4	
	37nm,0.3s								
KTBS	**Karatobe**	**3.91**	**241**	*e*P		**Pb**		**10 29 56.7**	**-0.8**
	4.3nm,0

	18nm,0.3s,baz=11,slow=14,SNR=29							
PMG					Sn	**Sn**	**10 30 21.3**	**-0.3**
	45nm,0.3s,baz=358,slow=23,SNR=10							
WRA	**Warramunga Arr**	**18.35**	**222**	P		**Pn**	**10 33 16.2**	**-0.2**
	0.1nm,0.3s,baz=48,slow=11,SNR=12							
ASAR	**Alice Springs**	**21.37**	**216**	P		**P**	**10 33 48.7**	**-0.7**
	0.6nm,0.4s,baz=48,slow=9.3,SNR=16							
FITZ	**Fitzroy Crossi**	**24.07**	**240**	P		**P**	**10 34 18.2**	**+0.8**
	1.3nm,0.4s,baz=70,slow=12,SNR=14							
STKA	**Stephens Creek**	**25.77**	**191**	P		**P**	**10 34 33.0**	**+0.3**
	0.9nm,0.6s,baz=24,slow=10.0,SNR=2.3							
TORD	**Torodi Ar. Bea**	**145.54**	**284**	PKPbc		**PKPdf**	**10 48 40.7**	**-0.5**
	0.3nm,0.5s,baz=67,slow=3.1,SNR=2.0							

*IDC **09** 10:39:19.4±2.1,6˙45S×130˙17E,h136km±21km,mb3.5/3, mb1 3.8/8,mb1mx3.4/37,mbtmp4.1/8, Error ellipse: s-maj=30.6km s-min=16.3km az=76.0*

*DJA **09** 10:39:19.5±0.4,6˚S±3˚×13˚0E± ˚,h199km±7km,M4.3/10, mb4.1/10,mB4.8/7,MLv4.6/9,Mw(mB)4.0/7*

ISC 09 10:39:19.9±0.8,6˚65S±0˙05×130˙20E±0˙08,h150km,n19, σ2s74/22,mb3.7/3,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SAUI	**Saumlaki**	**1.72**	**141**	P		**Pn**	**10 39 54.8**	**+2.9**
BNDI	**Bandanaira**	**2.13**	**352**	P		**Pn**	**10 39 59.0**	**+2.4**
BNDI				S		**Sn**	**10 40 27.4**	**+2.5**
FAKI	**Fak Fak**	**4.23**	**29**	P		**Pn**	**10 40 20.3**	**-2.9**
SIJI	**Sorong**	**5.83**	**11**	P		**Pn**	**10 40 41.6**	**-2.9**
	5.2nm,0.3s,baz=188,slow=23,SNR=27							
SIJI				S		Sn	10 41 39.1	-12
	27nm,0.3s,baz=13,slow=22,SNR=14							
SANI	**Sanana**	**6.21**	**317**	P		**Pn**	**10 40 50.1**	**+0.7**
	0.1nm17nm,0.9s							
SOEI	**Soe**	**6.64**	**242**	P		Pn	10 40 59.9	+4.6
	0.7nm749nm53nm,0.9s							
BATI	**Baumata**	**7.37**	**241**	P		**Pn**	**10 41 07.1**	**+2.1**
	11nm,0.3s,baz=280,slow=1.8,SNR=10							
BATI				S		**Sn**	**10 42 26.7**	**-0.8**
	16nm,0.3s,baz=183,slow=23,SNR=9.7							
BATI	**Baumata**	**7.37**	**241**	P		**Pn**	**10 41 08.9**	**+3.9**
	0.2nm37nm,0.9s							
EDFI	**Ende, Flores**	**8.69**	**256**	P		**Pn**	**10 41 26.0**	**+3.3**
	8.7nm,0.9s							
WBSI	**Waikabubak, Su**	**11.11**	**254**	P		**Pn**	**10 41 56.1**	**+1.4**
	27nm,1.0s							
FITZ	**Fitzroy Crossi**	**12.22**	**201**	P		**Pn**	**10 42 09.8**	**+0.7**
	1.7nm,0.3s,baz=29,slow=9.1,SNR=30							
FITZ				S		**Sn**	**10 44 17.8**	**-6.5**
	2.9nm,0.3s,baz=44,slow=12,SNR=4.6							
PLAI	**Plampang**	**12.50**	**259**	P		**Pn**	**10 42 13.7**	**+0.9**
	24nm,0.7s							
TWSI	**Taliwang, Sumb**	**13.36**	**260**	P		**Pn**	**10 42 25.4**	**+1.5**
	1µm11nm,1.0s							
WRA	**Warramunga Arr**	**13.81**	**163**	P		**Pn**	**10 42 30.3**	**+0.7**
	0.9nm,0.3s,baz=355,slow=13,SNR=18							
WRA				S		Sn	10 44 53.1	-10
	1.5nm,0.3s,baz=342,slow=26,SNR=3.8							
ASAR	**Alice Springs**	**17.29**	**169**	P		**Pn**	**10 43 16.0**	**+3.5**
	0.4nm,0.3s,baz=348,slow=8.9,SNR=23							
ASAR				S		**S**	**10 46 21.9**	**-2.3**
	0.7nm,0.3s,baz=351,slow=26,SNR=8.7							
STKA	**Stephens Creek**	**27.27**	**158**	P		**P**	**10 44 52.0**	**+1.8**
	0.7nm,0.4s,baz=353,slow=7.8,SNR=3.8							
CMAR	**Chiang Mai Arr**	**39.66**	**309**	P		**P**	**10 46 36.3**	**-1.3**
	0.6nm,0.4s,baz=129,slow=7.5,SNR=5.4							
MKAR	**Makanchi Array**	**68.04**	**327**	P		**P**	**10 50 03.1**	**-0.1**
	0.9nm,0.4s,baz=114,slow=8.8,SNR=10							
LPAZ	**La Paz**	**150.87**	**142**	PKPbc		**PKiKP**	**10 58 58.8**	**+1.7**
	0.7nm,0.4s,baz=43,slow=6.0,SNR=6.0							

IDC 09 10:52:16.4±55.0,23˚17S×179˚42W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.7/25,mbtmp4.0/3,Error ellipse: s-maj=991.3km s-min=154.9km az=86.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STKA	**Stephens Creek**	**35.49**	**247**	P		P	10 59 14.2	-0.8
	0.6nm,0.4s,baz=74,slow=7.4,SNR=3.2							
ASAR	**Alice Springs**	**42.69**	**260**	P		P	11 00 15.1	-0.3
	0.7nm,0.4s,baz=95,slow=8.4,SNR=35							
WRA	**Warramunga Arr**	**43.00**	**265**	P		P	11 00 18.3	+0.4
	0.9nm,0.3s,baz=101,slow=8.5,SNR=40							

*NNC **09** 11:06:21.6±3.0,37˙00N×75˙98E,h0km,mb4.3,mpv4.0, Error ellipse: s-maj=24.4km s-min=21.9km az=15.0*

*MOS **09** 11:06:27.0±0.9,37˙10N×76˙09E,h99km,mb4.0/9,Error ellipse: s-maj=10.0km s-min=4.3km az=85.1*

*NEIC **09** 11:06:27.5±2.0,37˙00N±0˙07×76˙3E±0˙1,h96km±3km, mb4.0/11,Error ellipse: s-maj=12.5km s-min=9.3km az=102.0*

*IDC **09** 11:06:28.1±4.8,37˙05N×76˙19E,h98km±41km,mb3.6/13, mb1 3.7/17,mb1mx3.6/44,mbtmp4.0/17,MS3.9/1, Ms1 3.9/1,ms1mx2.7/40,Error ellipse: s-maj=29.9km s-min=14.8km az=30.0*

*BJI **09** 11:06:31.3±0.0,37˙20N×76˙55E,h90km,mb4.0/5,Ms3.6/2*

ISC 09 11:06:27.2±0.5,36˚96N±0˙04×76˚18E±0˙05,h100km,n129, σ2s02/140,mb3.9/26,12C-9D,Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSH	**Kashi**	**2.56**	**356**	P		**Pn**	**11 07 08.1**	**+0.9**
KSH				S		**Sn**	**11 07 32.2**	**-5.7**
KSH				smax		smax		
	comp=N,750nm,0.4s							
KSH				smax		smax		
	comp=E,980nm,0.8s							
NIL	**Nilore**	**4.08**	**217**	P		**Pn**	**11 07 30.1**	**+2.6**
NIL							11 08 15.7	
NIL	**Nilore**	**4.08**	**217**			**Pn**	**11 07 30.1**	**+2.6**
NIL				Sn		**Sn**	**11 08 15.7**	**+1.5**
CEP	**Cherat**	**4.69**	**229**	P		**Pn**	**11 07 36.8**	**+1.0**
DHRM	**DHARAMSHALA**	**4.70**	**179**	*e*P		**Pn**	**11 07 35.3**	**-0.8**
DHRM				*i* x		x	11 07 38.6	
DHRM				*e*S		**Sn**	**11 08 28.1**	**-1.5**
DHRM				IAML			11 08 31.8	
	comp=E,286nm,0.3s							
DHRM				IAML			11 08 31.8	
	comp=N,359nm,0.2s							
BTK	**Batken**	**5.22**	**308**	P		**Pn**	**11 07 42.7**	**-0.3**
BTK							11 08 43.4	
BTK	**Batken**	**5.22**	**308**	Pn		**Pn**	**11 07 42.7**	**-0.3**
BTK				Sn		**Sn**	**11 08 43.4**	**+1.5**
KDJ	**Kajisay**	**5.22**	**8**	P		**Pn**	**11 07 44.1**	**+1.0**
KDJ	**Kajisay**	**5.22**	**8**	Pn		**Pn**	**11 07 44.1**	**+1.0**
BOOM	**Boomskoye usch**	**5.53**	**358**	P		**Pn**	**11 07 48.5**	**+1.3**
BOOM	**Boomskoye usch**	**5.53**	**358**	Pn		**Pn**	**11 07 48.5**	**+1.3**
THW	**Thamme Wali**	**5.53**	**223**	P		**Pn**	**11 07 48.4**	**+1.3**
PRZ	**Przheval'sk**	**5.78**	**17**	P		**Pn**	**11 07 49.3**	**-1.3**
PRZ	**Przheval'sk**	**5.78**	**17**	Pn		**Pn**	**11 07 49.3**	**-1.3**
AAK	**Ala-Archa**	**5.82**	**348**	Pn		**Pn**	**11 07 50.4**	**-0.8**
	comp=N,7.6nm,0.7s							
AAK				⇑Sn		**Sn**	**11 08 56.8**	**+0.2**
	comp=N,38nm,1.1s							
AAK				Lg		Lg	11 09 24.7	
	comp=N,25nm,0.7s							
AAK	**Ala-Archa**	**5.82**	**348**	P		**Pn**	**11 07 50.4**	**-0.8**
AAK				SN		**Sn**	**11 08 56.8**	**+0.2**
AAK	**Ala-Archa**	**5.82**	**348**	Pn		**Pn**	**11 07 51.9**	**+0.8**
SMLA	**Simla**	**5.87**	**172**	*e*S		**Sn**	**11 08 52.7**	**-5.1**
SMLA				IAML			11 08 59.9	
	comp=E,191nm,0.1s							
SMLA				IAML			11 09 00.1	
	comp=N,202nm,0.3s							
TKM2	**Tokmak 2**	**5.97**	**356**	⇑Pn		**Pn**	**11 07 52.7**	**-0.6**
TKM2	comp=N,4.2nm,0.3s			⇓Sn		**Sn**	**11 09 02.1**	**+1.7**
	comp=N,23nm,0.7s							
TKM2				⇓Lg		Lg	11 09 32.0	
	comp=N,36nm,0.7s							
TKM2	**Tokmak 2**	**5.97**	**356**	P		**Pn**	**11 07 52.7**	**-0.6**
TKM2				SN		**Sn**	**11 09 02.5**	**+2.1**
TNSS	**Tian-Shan**	**6.10**	**5**	*e*P		**Pn**	**11 07 53.8**	**-1.5**
	baz=7.6							
TNSS	**Tian-Shan**	**6.10**	**5**	*e*P		**Pn**	**11 07 53.7**	**-1.5**
AAA	**Alma-Ata**	**6.27**	**5**	*e*P		**Pn**	**11 07 56.9**	**-0.3**
	baz=7.2							
AAA				*i* S		Sn	11 09 17.3	+10
	baz=7.2							
AAA	**Alma-Ata**	**6.27**	**5**	*e*P		**Pn**	**11 07 56.9**	**-0.3**
KBL	**Kabul**	**6.28**	**250**	P		**Pn**	**11 07 58.3**	**+0.7**
KBL							11 09 09.9	
KBL	**Kabul**	**6.28**	**250**	Pn		**Pn**	**11 07 58.3**	**+0.7**
KBL				Sn		**Sn**	**11 09 09.8**	**+1.8**
SATY	**Saty**	**6.33**	**15**	*e*P		**Pn**	**11 07 58.1**	**+0.1**
	comp=N,10nm,0.8s,baz=16							
SATY	**Saty**	**6.33**	**15**	*e*P		**Pn**	**11 07 58.1**	**+0.1**
SATY				pmax		pmax		
	comp=Z,10.0nm,0.8s							
SGDS	**Sogindy**	**6.59**	**350**	*e*P		**Pn**	**11 07 59.7**	**-1.9**
	comp=Z,1.8nm,1.0s,baz=354							
SGDS	**Sogindy**	**6.59**	**350**	*e*P		**Pn**	**11 07 59.7**	**-1.9**
SGDS				pmax		pmax		
	comp=Z,2.0nm,1.0s							
KPKS	**Kokpek**	**6.78**	**16**	*e*P		**Pn**	**11 08 04.1**	**0.0**
	comp=Z,12nm,0.7s,baz=16							
KPKS	**Kokpek**	**6.78**	**16**	*e*P		**Pn**	**11 08 04.1**	**0.0**
KPKS				pmax		pmax		
	comp=Z,12nm,0.7s							
PDGK	**Podgornoye**	**6.85**	**21**	⇓Pn		**Sn**	**11 08 04.4**	**-0.7**
	comp=Z,23nm,0.6s							
PDGK				⇓Sn		**Sn**	**11 09 21.1**	**-0.5**
	comp=Z,106nm,1.1s							
PDGK	**Podgornoye**	**6.85**	**21**	P		**Pn**	**11 08 04.4**	**-0.7**
PDGK				SN		**Sn**	**11 09 21.8**	**+0.2**
KUU	**Kurty**	**6.93**	**1**	*e*P		**Pn**	**11 08 04.6**	**-1.6**
	baz=3.4							
KUU	**Kurty**	**6.93**	**1**	*e*P		**Pn**	**11 08 04.5**	**-1.6**
DZA	**Taraz**	**7.00**	**329**	*e*P		**Pn**	**11 08 02.3**	**-4.8**
	baz=335							
DZA	**Taraz**	**7.00**	**329**	*e*P		**Pn**	**11 08 02.3**	**-4.8**
IUG	**Iuzhnay**	**7.03**	**319**	*e*P		Pn	11 08 01.1	-6.5
	baz=326							
IUG	**Iuzhnay**	**7.03**	**319**	*e*P		Pn	11 08 01.0	-6.5
KK31	**Karatay Array**	**7.52**	**326**	⇑Pn		**Pn**	**11 08 13.6**	**-0.5**
	comp=Z,2.2nm,0.5s,baz=132,slow=11,SNR=32							
KK31				⇓Sn		**Sn**	**11 09 34.2**	**-3.5**
	comp=Z,8.1nm,0.4s,baz=142,slow=23,SNR=5.4							
KK31	**Karatay Array**	**7.52**	**326**	P		**Pn**	**11 08 13.6**	**-0.5**
KK31				SN		**Sn**	**11 09 34.2**	**-3.5**
KK31	**Karatay Array**	**7.52**	**326**	Pn		**Pn**	**11 08 13.7**	**-0.5**
KK31				Sn		**Sn**	**11 09 34.6**	**-3.1**
KKAR	**Karatay Array**	**7.52**	**326**	P		**Pn**	**11 08 13.7**	**-0.4**
KKAR							11 09 35.3	
KKAR	**Karatay Array**	**7.52**	**326**			**Pn**	**11 08 13.7**	**-0.4**
KKAR				Sn		**Sn**	**11 09 34.8**	**-3.0**
KKAR	**Karatay Array**	**7.52**	**326**	Pn		**Pn**	**11 08 13.7**	**-0.4**
KKAR				Sn		**Sn**	**11 09 35.3**	**-2.4**
SONA	**Sohna**	**8.72**	**175**	*e*P		**Pn**	**11 08 30.8**	**+0.3**
SONA				*e*S		Sn	11 09 59.1	-7.9
KUDL	**Kundal**	**8.79**	**178**	*e*P		**Pn**	**11 08 31.1**	**-0.4**
KUDL				*e*Sn		Sn	11 10 00.2	-8.6
PYUN	**Piuthan**	**10.54**	**145**	*e*P		**Pn**	**11 08 52.4**	**-3.0**
	comp=Z,133nm,0.3s							
PYUN				*e*S		Sn	11 10 42.5	-9.1
DANN	**Dangsing**	**10.70**	**141**	*e*P		Pn	11 08 53.8	-3.9
	comp=Z,37nm,0.4s							
MAKZ	**Makanchi**	**10.74**	**22**	⇑P		**Pn**	**11 08 56.7**	**-1.3**
	comp=Z,5.4nm,0.8s							
MAKZ	**Makanchi**	**10.74**	**22**	P		**Pn**	**11 08 57.7**	**-0.2**
MAKZ	**Makanchi**	**10.74**	**22**	Pn		**Pn**	**11 08 57.7**	**-0.2**
MK31	**Makanchi Array**	**10.83**	**23**	P		**Pn**	**11 08 58.1**	**-1.0**
	comp=Z,7.3nm,0.7s,baz=202,slow=12,SNR=77							
MK31	**Makanchi Array**	**10.83**	**23**	P		**Pn**	**11 08 58.6**	**-0.5**
MK31	**Makanchi Array**	**10.83**	**23**	Pn		**Pn**	**11 08 58.6**	**-0.5**
MKAR	**Makanchi Array**	**10.83**	**23**	P		**Pn**	**11 08 58.4**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=202,slow=13,SNR=84							
MKAR				S		**Sn**	**11 10 51.8**	**-6.4**
	comp=Z,0.7nm,0.3s,baz=195,slow=19,SNR=6.3							
KOLN	**Koldanda**	**11.10**	**144**	*e*P		**Pn**	**11 08 59.7**	**-3.4**
	comp=Z,29nm,0.4s							
WMQ	**Urumqi**	**11.13**	**48**	*e*P		**Pn**	**11 09 00.4**	**-2.9**
WMQ				S		**Sn**	**11 10 58.6**	**-7.1**
WMQ	**Urumqi**	**11.13**	**48**	P		**Pn**	**11 09 01.8**	**-1.5**
WMQ	**Urumqi**	**11.13**	**48**			**Pn**	**11 09 01.8**	**-1.5**
GKN	**Gorkha**	**11.43**	**139**	*e*P		Pn	11 09 02.9	-4.5
	comp=Z,21nm,0.3s							
PKIN	**Phulchoki**	**12.17**	**138**	*e*P		Pn	11 09 13.2	-4.3
	comp=Z,13nm,0.4s							
GUN	**Gumba**	**12.18**	**135**	*e*P		Pn	11 09 12.8	-4.8
	comp=Z,12nm,0.4s							
PKI	**Pulchoki**	**12.18**	**138**	*e*P		Pn	11 09 13.1	-4.6
	comp=Z,11nm,0.4s							
BRZS	**Berezniki**	**13.26**	**350**	*e*P		**Pn**	**11 09 29.7**	**-1.7**
	baz=352							
BRZS	**Berezniki**	**13.26**	**350**	*e*P		**Pn**	**11 09 29.7**	**-1.7**
RAMN	**Ramite**	**13.32**	**136**	*e*P		Pn	11 09 28.5	-4.1
	comp=Z,6.8nm,0.3s							
BHPL	**Bhopal**	**13.71**	**175**	*e*P		**Pn**	**11 09 34.2**	**-3.3**
BHPL				*e*S		Sn	11 11 55.8	-13
KURBB	**Kurchatov Arra**	**13.76**	**6**	P		**Pn**	**11 09 36.6**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=19							
KURBB	**Kurchatov Arra**	**13.76**	**6**	⇓P		**Pn**	**11 09 35.5**	**-2.4**
	comp=Z,7.3nm,0.7s							
KURK	**Kurchatov**	**13.86**	**6**	⇑P		**Pn**	**11 09 37.2**	**-2.0**
	comp=Z,12nm,0.8s							
KURK	**Kurchatov**	**13.86**	**6**	P		**Pn**	**11 09 38.1**	**-1.1**
KURK	**Kurchatov**	**13.86**	**6**	Pn		**Pn**	**11 09 38.1**	**-1.1**
BRVK	**Borovoye**	**16.62**	**347**	⇑P		**Pn**	**11 10 12.2**	**-1.7**
	comp=Z,23nm,0.7s							
BRVK	**Borovoye**	**16.62**	**347**	P		**Pn**	**11 10 12.2**	**-1.7**
BRVK	**Borovoye**	**16.62**	**347**	P		**P**	**11 10 19.0**	**+4.3**
AB31	**Akbulak array**	**17.03**	**321**	⇓Pn		**Pn**	**11 10 16.7**	**-2.3**
	comp=Z,1.6nm,0.8s,baz=128,slow=13,SNR=14							
AB31				⇑Sn		**Sn**	**11 13 25.3**	**-2.8**
	comp=Z,0.8nm,0.6s							
AB31	**Akbulak array**	**17.03**	**321**	P		**Pn**	**11 10 16.7**	**-2.3**
AB31				SN		**Sn**	**11 13 25.3**	**-2.8**
ABKAR	**Akbulak array**	**17.03**	**321**	P		**P**	**11 10 21.4**	**+2.2**
ABKAR	**Akbulak array**	**17.03**	**321**	P		**P**	**11 10 22.1**	**+2.9**
ZAA0	**Zalesovo Array**	**18.01**	**17**	⇓P		**Pn**	**11 10 31.1**	**+0.2**
	comp=Z,0.8nm,0.8s							
ZAA0	**Zalesovo Array**	**18.01**	**17**	P		**Pn**	**11 10 31.1**	**+0.2**
ZAA0				IAmb		IAmb	11 10 36.1	
	comp=Z,3.7nm,0.8s							
ZALV	**Zalesovo Beam**	**18.01**	**17**	P		**P**	**11 10 29.6**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=210,slow=12,SNR=10							
ZALV	**Zalesovo Beam**	**18.01**	**17**	*i* P		**Pn**	**11 10 31.2**	**+0.3**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.5s							
ZALV	**Zalesovo Beam**	**18.01**	**17**	P		**P**	**11 10 29.8**	**-0.2**
GTA	**Gaotai**	**18.73**	**75**	P		**Pn**	**11 10 41.5**	**+1.8**
GTA				pmax		pmax		
	comp=Z,9.0nm,0.8s							
GTA				LR		LR		
	comp=Z,98nm,18.5s							
GTA				LR		LR		
	comp=Z,99nm,18.5s							
AKTO	**Aktyubinsk**	**18.74**	**322**	P		**Pn**	**11 10 39.1**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=116,slow=11,SNR=17							
AKTO	**Aktyubinsk**	**18.74**	**322**	⇓Pn		**Pn**	**11 10 39.6**	**-0.1**
	comp=Z,1.9nm,0.5s							
ARU	**Arti**	**22.79**	**334**	*c i* P		**P**	**11 11 20.3**	**-0.9**
ARU							11 11 44.3	
ARU				SS		Sn	11 16 09.6	+24
ARU				pmax		pmax		
	comp=Z,5.0nm,0.7s							
ARU	**Arti**	**22.79**	**334**	P		**P**	**11 11 23.9**	**+2.6**
ARU				IAmb		IAmb	11 11 24.1	
	comp=Z,4.9nm,0.6s							
ZAK	**Zakamensk**	**23.60**	**47**	*e*P		**P**	**11 11 30.4**	**+1.4**
ZAK				pmax		pmax		
	comp=Z,3.0nm,0.8s							
TLY	**Talaya**	**24.36**	**44**	*i* P		**P**	**11 11 37.5**	**+1.8**
TLY				pmax		pmax		
	comp=Z,4.0nm,0.7s							
SONM	**Songino Array**	**24.67**	**54**	P		**P**	**11 11 39.8**	**+1.1**
	comp=Z,3.0nm,0.5s,baz=250,slow=9.4,SNR=25							
SONM	**Songino Array**	**24.67**	**54**	P		**P**	**11 11 41.0**	**+2.3**
SONM				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SONM	**Songino Array**	**24.67**	**54**	P		**P**	**11 11 41.0**	**+2.3**
ULN	**Ulaanbaatar**	**25.11**	**55**	*c e*P		**P**	**11 11 44.3**	**+1.6**
ULN				pmax		pmax		
	comp=Z,9.0nm,1.7s							
KBZ	**Khabaz**	**26.13**	**295**	*i* P		**P**	**11 11 45.4**	**-6.4**
KBZ				pmax		pmax		
	comp=Z,1.0nm,0.9s							
OBN	**Obninsk**	**32.38**	**317**	*i* P		**P**	**11 12 44.1**	**-2.9**
OBN				pmax		pmax		
	comp=Z,3.0nm,0.9s							
NRIK	**Noril'sk**	**33.03**	**7**	P		**P**	**11 12 52.7**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=162,slow=3.2,SNR=2.1							
NRIK	**Noril'sk**	**33.03**	**7**	*c e*P		**P**	**11 12 53.3**	**+0.8**
NRIK				pmax		pmax		
	comp=Z,3.0nm,1.0s							
FINES	**FINESS Array B**	**39.48**	**325**	P		**P**	**11 13 48.0**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=118,slow=8.9,SNR=12							
FINES	**FINESS Array B**	**39.48**	**325**	P		**P**	**11 13 48.9**	**+1.4**
FINES	**FINESS Array B**	**39.48**	**325**	P		**P**	**11 13 48.9**	**+1.4**
KSRS	**Korea Array**	**40.78**	**73**	P		**P**	**11 13 59.7**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=288,slow=9.5,SNR=4.7							
YAK	**Yakutsk**	**41.19**	**35**	*c e*P		**P**	**11 14 03.4**	**+1.9**
YAK				pmax		pmax		
	comp=Z,5.0nm,0.7s							
KLR	**Kul'dur**	**41.50**	**55**	*i* P		**P**	**11 14 04.7**	**+0.4**
KLR				pmax		pmax		
	comp=Z,2.0nm,1.5s							
ARCES	**ARCESS Array B**	**42.36**	**336**	P		**P**	**11 14 12.2**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=104,slow=9.3,SNR=9.6							
TIXI	**Tiksi**	**43.81**	**21**	*c e*P		**P**	**11 14 23.8**	**+1.1**
TIXI				pmax		pmax		
	comp=Z,35nm,2.5s							
GERES	**GERESS Array B**	**46.06**	**306**	P		**P**	**11 14 41.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=32,slow=9.3,SNR=5.8							
NB2	**NORSAR Subarra**	**46.53**	**323**	P		**P**	**11 14 45.4**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=92,slow=7.9							
NOA	**NORSAR Array B**	**46.53**	**323**	P		**P**	**11 14 44.3**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=91,slow=7.7,SNR=5.5							
MJAR	**Matsushiro Arr**	**48.90**	**71**	P		**P**	**11 15 03.9**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=290,slow=9.4,SNR=3.3							
BILL	**Bilibino**	**56.34**	**27**	*i* P		**P**	**11 15 59.7**	**+2.3**
BILL				pmax		pmax		
	comp=Z,4.0nm,1.3s							
KAPI	**Kappang**	**58.25**	**126**	LR		LR	11 46 21.1	
	comp=Z,89nm,19.0s,baz=340,slow=41							
TOLK	**Toolik Lake Re**	**69.37**	**16**	P		**P**	**11 17 25.5**	**+1.8**
COLD	**Coldfoot**	**70.35**	**17**	P		**P**	**11 17 31.1**	**+1.4**
IMAR	**Indian Mountai**	**70.42**	**19**	P		**P**	**11 17 31.0**	**+0.9**
FITZ	**Fitzroy Crossi**	**71.92**	**131**	P		**P**	**11 17 41.0**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=323,slow=5.1,SNR=2.8							
BPAW	**Bear Paw Mtn.**	**72.62**	**20**	P		**P**	**11 17 43.8**	**+0.4**
BPAW				IAmb		IAmb	11 17 45.3	
	comp=Z,6.0nm,1.1s							
ILAR	**Eielson Array**	**73.14**	**18**	P		**P**	**11 17 46.8**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=317,slow=4.6,SNR=8.9							
DHY	**Denali Highway**	**74.41**	**19**	P		**P**	**11 17 54.1**	**0.0**
DHY				IAmb		IAmb	11 17 57.2	
	comp=Z,2.6nm,0.8s							
DAWY	**Dawson**	**75.45**	**15**	P		**P**	**11 17 59.9**	**-0.1**
DAWY				IAmb		IAmb	11 18 01.8	
	comp=Z,2.1nm,0.8s							
BCAR	**Beaver Creek A**	**75.80**	**17**	P		**P**	**11 18 03.5**	**+1.6**
WRA	**Warramunga Arr**	**78.78**	**125**	P		**P**	**11 18 20.4**	**+1.3**
	comp=Z,0.7nm,1.0s,baz=324,slow=5.0,SNR=10.0							
WRA	**Warramunga Arr**	**78.78**	**125**	P		**P**	**11 18 19.1**	**0.0**
YKA	**Yellowknife Ar**	**80.51**	**5**	P		**P**	**11 18 27.8**	**0.0**
	comp=Z,0.6nm,0.4s,baz=358,slow=5.3,SNR=6.9							
ASAR	**Alice Springs**	**81.19**	**128**	P		**P**	**11 18 33.5**	**+1.4**
	comp=Z,0.5nm,0.9s,baz=319,slow=5.1,SNR=6.8							
ASAR	**Alice Springs**	**81.19**	**128**	P		**P**	**11 18 32.9**	**+0.9**

TAP 09 11:23:01.5,23˚13N×120˙63E,h13km,ML1.1,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SGST	**Jiashian**	**0.07**	**224**	*e*P		Pg	11 23 04.3	+0.2
	baz=218							
SGST				S		Sg	11 23 07.0	+0.9
	baz=218							
CHN1	**Nanshi**	**0.11**	**300**	P		Pb	11 23 05.2	-0.3
	baz=301							
CHN1				S		Sb	11 23 08.2	0.0
	baz=301							
WTP	**Ta-pu**	**0.12**	**351**	P		Pb	11 23 05.4	-0.3
	baz=356							

SLVN Son La 16.91 33 P P 11 47 13.8 +2.0
KSM Kuching 17.08 109 P Pn 11 47 11.5 -0.4
SHL Shillong 18.38 353 *eP* **Pn 11 47 30.1 +1.9**
SHL IAmb IAmb 11 47 34.6
comp=Z,5.8nm,0.9s
SHL Shillong 18.38 353 P P 11 47 24.4 -3.8
SBUM Sibu 18.61 104 P P 11 47 30.1 -0.5
LEM Lembang 19.36 136 LR LR 11 56 20.6
comp=Z,545nm,18.6s,baz=296,slow=40
RAMN Ramite 20.90 341 *eP* **P 11 47 55.8 0.0**
comp=Z,46nm,0.7s
TAPN Taplejung 20.94 344 *eP* **P 11 47 54.8 -1.5**
PKI Pulchoki 21.88 339 *eP* **P 11 48 07.2 +0.8**
comp=Z,20nm,0.6s
PKIN Phulchoki 21.89 339 *eP* **P 11 48 07.3 +0.8**
comp=Z,23nm,0.7s
DMN Daman 22.03 338 *eP* **P 11 48 08.6 +0.7**
comp=Z,60nm,1.0s
GUN Gumba 22.03 340 *eP* **P 11 48 08.5 +0.5**
comp=Z,105nm,1.2s
LSA Lhasa 22.55 353 P P 11 48 14.5 +0.8
LSA IAmb IAmb 11 48 26.4
comp=Z,12nm,0.7s
BHPL Bhopal 22.64 317 *eP* **P 11 48 13.4 -0.9**
BHPL IAmb IAmb 11 48 21.9
comp=Z,19nm,1.2s
KOLN Koldanda 22.76 335 *eP* **P 11 48 17.3 +1.6**
comp=Z,38nm,0.9s
DANN Dangsing 23.21 336 *eP* **P 11 48 21.3 +0.9**
comp=Z,52nm,1.0s
PYUN Piuthan 23.31 334 *eP* **P 11 48 22.7 +1.3**
MYLDM Lahad Datu 24.29 93 P P 11 48 29.6 -1.0
MYLDM IAmb IAmb 11 48 49.4
comp=Z,18nm,1.0s
H08S3 Diego Garcia H 26.16 236 T T 12 15 33.9
baz=54,slow=75,SNR=146
H08S2 Diego Garcia H 26.16 236 T T 12 15 38.0
baz=54,slow=75,SNR=22
H08S1 Diego Carcia H 26.18 236 T T 12 15 41.5
baz=54,slow=75,SNR=18
MPSI Mapaga 26.57 104 P P 11 48 56.8 +5.5
TGY Tagaytay City 27.18 73 LR LR 11 59 27.0
comp=Z,197nm,18.1s,baz=78,slow=36
KAPI Kappang 28.28 115 LR LR 12 00 21.3
comp=Z,218nm,21.8s,baz=288,slow=36
KNMB Chin-men Tao 28.86 51 P P 11 49 08.7 -3.0
GTOI Gorontalo 29.50 102 P P 11 49 21.4 +3.8
SSLB Suanglung 30.54 54 P P 11 49 25.7 -1.0
YHNB Yeheng 31.30 53 P P 11 49 31.4 -2.0
NIL Nilore 32.65 327 P P 11 49 43.5 -1.7
BATI Baumata 34.10 120 LR LR 12 04 20.4
comp=Z,418nm,21.5s,baz=304,slow=37
SIJI Sorong 37.88 101 LR LR 12 08 19.3
comp=Z,51nm,18.0s,baz=126,slow=40
BTK Batken 38.82 331 P P 11 50 38.0 -0.1
BTK IAmb IAmb 11 50 47.9
comp=Z,18nm,1.3s
AAK Ala-Archa 39.32 337 P P 11 50 42.8 +0.4
AAK IAmb IAmb 11 50 50.2
comp=Z,10nm,1.2s
FITZ Fitzroy Crossi 39.98 129 LR LR 12 08 52.8
comp=Z,126nm,20.2s,baz=300,slow=38
UOSS Minazif 40.31 300 P P 11 50 48.6 -2.1
MK31 Makanchi Array 40.73 347 P P 11 50 53.9 0.0
MKAR Makanchi Array 40.73 347 P P 11 50 52.5 -1.4
comp=Z,2.4nm,0.8s,baz=161,slow=7.7,SNR=16
MKAR LR LR 12 11 08.7
comp=Z,88nm,18.6s,baz=164,slow=41
MKAR Makanchi Array 40.73 347 P P 11 50 52.4 -1.5
MAKZ Makanchi 40.82 347 P P 11 50 53.5 -1.1
MAKZ IAmb IAmb 11 50 59.3
comp=Z,4.4nm,0.6s
KK06 Karatay Array 41.34 334 P P 11 50 58.1 -0.9
KK07 Karatay Array 41.35 334 P P 11 50 58.8 -0.2
KK02 Karatay Array 41.36 334 P P 11 50 59.1 0.0
KK31 Karatay Array 41.36 334 P P 11 50 58.9 -0.2
KKAR Karatay Array 41.36 334 P P 11 50 58.9 -0.2
KKAR Karatay Array 41.36 334 P P 11 50 59.1 0.0
SONM Songino Array 41.80 12 P P 11 51 01.1 -1.7
comp=Z,0.4nm,0.4s,baz=193,slow=7.6,SNR=4.0
SONM PcP PcP 11 52 59.5 +0.7
comp=Z,0.3nm,0.4s,baz=194,slow=5.4,SNR=2.1
SONM LR LR 12 09 34.9
comp=Z,151nm,18.4s,baz=180,slow=38
SONM Songino Array 41.80 12 P P 11 51 02.9 +0.1
KS19 Wonju Array Si 42.95 40 P P 11 51 16.0 +3.9
KS19 IAmb IAmb 11 51 26.4
comp=Z,21nm,1.4s
KSRS Korea Array 42.95 40 LR LR 12 10 41.1
comp=Z,182nm,18.8s,baz=234,slow=39
GYB1 ALIBECK ARRAY 44.69 319 P P 11 51 25.9 -0.3
GYB1 IAmb IAmb 11 51 34.3
comp=Z,4.7nm,0.7s
GYA1 ALIBECK ARRAY 44.70 319 P P 11 51 25.9 -0.3
GYA1 IAmb IAmb 11 51 35.1
comp=Z,5.6nm,0.6s
GEYT Alibeck 44.70 319 P P 11 51 25.8 -0.5
comp=Z,3.7nm,0.6s,baz=149,slow=9.4,SNR=6.9
GEYT LR LR 12 13 12.2
comp=Z,165nm,18.3s,baz=180,slow=40
GEYT Alibeck 44.70 319 P P 11 51 25.9 -0.4
KURK Kurchatov 45.25 346 P P 11 51 31.5 +1.1
H01W3 Cape Leeuwin H 45.92 157 T T 12 41 19.8
baz=331
H01W2 Cape Leeuwin H 45.94 157 T T 12 41 23.9
baz=331
H01W1 Cape Leeuwin H 45.94 157 T T 12 41 22.7
baz=331
ZAA0 Zalesovo Array 47.21 352 P P 11 51 46.0 +0.3
ZALV Zalesovo Beam 47.21 352 P P 11 51 42.9 -2.9
comp=Z,1.7nm,0.4s,baz=180,slow=7.0,SNR=8.9
ZALV LR LR 12 15 59.7
comp=Z,128nm,18.3s,baz=192,slow=42
ZALV Zalesovo Beam 47.21 352 P P 11 51 45.3 -0.4
WB0 Warramunga Arr 47.83 125 P P 11 51 51.5 +0.4
WB0 IAmb IAmb 11 52 13.0
comp=Z,5.0nm,1.1s
WRA Warramunga Arr 47.87 125 P P 11 51 51.5 +0.1
comp=Z,1.1nm,0.8s,baz=306,slow=8.6,SNR=7.7
WRA LR LR 12 13 38.3
comp=Z,172nm,20.7s,baz=325,slow=38
WRA Warramunga Arr 47.87 125 P P 11 51 52.0 +0.5
WRAB Tennant Creek 47.87 125 P P 11 51 51.2 -0.3
WRAB IAmb IAmb 11 52 02.3
comp=Z,3.8nm,1.0s
WB2 Warramunga Arr 47.88 125 P P 11 51 52.9 +1.4
WB2 IAmb IAmb 11 52 07.3
comp=Z,3.1nm,0.8s
WC3 Warramunga Arr 47.90 125 P P 11 51 51.1 -0.5
WC3 IAmb IAmb 11 52 07.6
comp=Z,2.9nm,0.8s
WR0 Warramunga Arr 48.04 125 P P 11 51 52.7 -0.1
WR0 IAmb IAmb 11 52 02.2
comp=Z,5.3nm,1.1s
JHJ Hachijo jima 2 49.45 52 LR LR 12 11 57.4
comp=Z,124nm,21.7s,baz=268,slow=35
ASAR Alice Springs 49.48 130 P P 11 52 04.8 +1.0
comp=Z,1.0nm,0.8s,baz=301,slow=7.9,SNR=11
ASAR PcP PcP 11 53 26.6 +0.7
comp=Z,0.9nm,0.8s,baz=306,slow=3.6,SNR=5.3
ASAR LR LR 12 14 59.3
comp=Z,117nm,20.3s,baz=303,slow=38
MJAR Matsushiro Arr 49.60 47 LR LR 12 15 30.3
comp=Z,113nm,19.4s,baz=225,slow=39
BRVK Borovoye 49.68 341 P P 11 52 04.8 -0.1
BRVK IAmb IAmb 11 52 10.8
comp=Z,3.6nm,0.8s
GUMO Guam 50.21 78 LR LR 12 12 50.2
comp=Z,44nm,20.2s,baz=246,slow=36
ABKAR Akbulak array 50.82 332 P P 11 52 13.4 0.0
ABKAR Akbulak array 50.82 332 P P 11 52 13.6 +0.1
AB02 Akbulak array 50.82 332 P P 11 52 13.6 +0.1
AB04 Akbulak array 50.82 332 P P 11 52 13.6 +0.1
AB05 Akbulak array 50.83 332 P P 11 52 13.2 -0.4
AB09 Akbulak array 50.83 332 P P 11 52 13.4 -0.2
PMG Port Moresby 55.33 107 LR LR 12 20 48.3
comp=Z,73nm,18.7s,baz=228,slow=41
ARU Arti 56.50 337 P P 11 52 55.6 +0.5
KMBO Kilima Mbogo 57.37 264 LR LR 12 15 41.2
comp=Z,121nm,18.5s,baz=98,slow=34
KBZ Khabaz 57.59 318 LR LR 12 20 59.4
comp=Z,54nm,18.3s,baz=108,slow=40
KRVT Keravat (AS076 58.88 99 LR LR 12 20 24.1
comp=Z,38nm,18.5s,baz=295,slow=38
STKA Stephens Creek 59.64 133 LR LR 12 23 48.7
comp=Z,83nm,18.3s,baz=314,slow=41

NRIK Noril'sk 62.20 357 P P 11 53 33.5 -0.7
comp=Z,1.2nm,0.5s,baz=192,slow=5.7,SNR=1.8
NRIK LR LR 12 23 43.2
comp=Z,107nm,19.1s,baz=197,slow=39
BRTR Keskin Array B 62.87 311 LR LR 12 23 42.5
comp=Z,36nm,19.6s,baz=120,slow=39
TIXI Tiksi 67.88 11 P P 11 54 09.9 -1.2
FINES FINESS Array B 73.30 332 P P 11 54 43.7 -0.6
comp=Z,2.3nm,0.8s,baz=101,slow=5.1,SNR=9.8
FINES LR LR 12 28 49.2
comp=Z,71nm,18.8s,baz=116,slow=37
FINES FINESS Array B 73.30 332 P P 11 54 43.4 -0.9
LBTB Lobatse 73.94 241 P P 11 54 49.2 +0.3
LBTB IAmb IAmb 11 55 02.2
comp=Z,9.0nm,1.3s
BOSA Boshof 75.25 238 LR LR 12 24 16.1
comp=Z,56nm,18.6s,baz=46,slow=33
ARCES ARCESS Array B 75.89 340 P P 11 54 59.0 -0.3
comp=Z,3.2nm,1.0s,baz=99,slow=5.6,SNR=1.4
ARCES LR LR 12 31 16.8
comp=Z,101nm,19.0s,baz=285,slow=38
DZM Mont Dzumac 76.50 115 LR LR 12 31 43.0
comp=Z,206nm,20.0s,baz=155,slow=38
MAW Mawson 77.89 192 LR LR 12 25 16.2
comp=Z,58nm,18.1s,baz=56,slow=32
GEC2 GERESS Array S 78.33 318 P P 11 55 14.1 +0.6
GERES GERESS Array B 78.33 318 P P 11 55 13.0 -0.5
comp=Z,0.8nm,0.7s,baz=108,slow=5.3,SNR=4.7
GERES GERESS Array B 78.33 318 P P 11 55 13.1 -0.5
NB2 NORSAR Subarra 80.31 331 P P 11 55 27.3 +3.3
comp=Z,14nm,1.4s,baz=92,slow=5.6
NOA NORSAR Array B 80.31 331 P P 11 55 23.8 -0.2
comp=Z,1.6nm,0.8s,baz=95,slow=5.3,SNR=3.0
NOA LR LR 12 33 17.1
comp=Z,49nm,20.4s,baz=290,slow=38
KEST Kesra 81.63 305 LR LR 12 38 28.8
comp=Z,45nm,18.0s,baz=212,slow=41
TORD Torodi Ar. Bea 90.76 283 P P 11 56 18.1 +1.1
comp=Z,0.7nm,1.0s,baz=98,slow=4.4,SNR=2.6
TORD LR LR 12 37 22.0
comp=Z,66nm,18.3s,baz=315,slow=36
ESDC Sonseca Array 91.65 310 P P 11 56 20.7 -0.1
comp=Z,0.5nm,0.8s,baz=58,slow=4.4,SNR=2.0
IMAR Indian Mountai 92.23 22 P P 11 56 22.9 +0.1
VNDA Vanda 92.28 168 LR LR 12 33 09.4
comp=Z,40nm,18.6s,baz=298,slow=32
I23K Minto, Yukon-K 94.24 22 P P 11 56 33.8 +1.8
MDM Murphy Dome 94.75 22 P P 11 56 36.2 +1.7
ILAR Eielson Array 95.35 22 P P 11 56 35.9 -1.2
comp=Z,0.2nm,0.6s,baz=308,slow=4.4,SNR=1.7
DBIC Dimbokro 98.05 278 LR LR 12 41 30.6
comp=Z,78nm,18.4s,baz=59,slow=36
NVAR Mina Array Bea 125.47 31 PKP **PKPdf 12 02 14.9 -0.2**
comp=Z,0.1nm,0.6s,baz=260,slow=2.7,SNR=1.5
TXAR Lajitas Array 139.82 24 PKP **PKPdf 12 02 41.8 -0.3**
comp=Z,0.1nm,0.4s,baz=5.0,slow=2.1,SNR=1.3
CPUP Villa Florida 146.87 232 PKPbc **PKPab 12 02 56.7 -0.9**
comp=Z,0.4nm,0.3s,baz=135,slow=5.7,SNR=1.3

*JMA **09** 11:55:15.2± 0.3, 27.33N× 140.91E, h419km± 4km, M3.9*
*MOS **09** 11:55:15.7± 0.9, 27.26N× 140.25E, h409km, mb4.2/12,*
Error ellipse: s-maj=17.8km s-min=8.0km az=108.3
*IDC **09** 11:55:16.8± 1.4, 27.28N× 140.16E, h399km± 14km,*
mb3.3/20, mb1 3.5/24, mb1mx3.4/39, mbtmp4.1/24, Error
ellipse: s-maj=15.1km s-min=9.4km az=96.0
ISC 09 11:55:16.4± 0.5, 27.33N± 0.06× 140.43E± 0.08, h400km, n75,
σ 1s 49/91, mb 3.8/37, 8C-1D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.58**	**98**	P		**Pn**	**11 56 08.8**	**-1.2**
JHH2	**Haha-jima-NKT2**	**1.71**	**114**	P		**Pn**	**11 56 09.9**	**-0.8**
JHH2				S		**S**	**11 56 52.3**	**-2.2**
JHCJ	**Hachijojimakas**	**5.75**	**355**	P		**Pn**	**11 56 48.1**	**+1.9**
JHJ2	**Mitsune**	**5.79**	**355**	P		**Pn**	**11 56 47.8**	**+1.2**
JHJ2				*e*S		**S**	**11 58 00.2**	**+0.1**
JHJ	**Hachijo jima 2**	**5.79**	**355**	P		**Pn**	**11 56 47.1**	**+0.4**
	45nm,0.3s,baz=3.8,slow=23,SNR=17							
JHJ				S		**S**	**11 57 56.9**	**-3.4**
	35nm,0.3s,baz=68,slow=23,SNR=3.0							
JMKN	**Mikurajimanish**	**6.58**	**354**	P		**P**	**11 56 56.1**	**+0.2**
BSO1	**Boso 1**	**7.31**	**4**	P		**P**	**11 57 04.0**	**+0.5**
BSO3	**Boso 3**	**7.45**	**1**	P		**P**	**11 57 05.5**	**+0.3**
BSO3				*e*S		**S**	**11 58 32.0**	**-1.4**
JIE	**Ise**	**7.73**	**336**	P		**P**	**11 57 10.6**	**+1.9**
HMMJ	**Hamamatsu 2**	**7.85**	**343**	P		**P**	**11 57 11.1**	**+1.1**
JOD2	**Odawara 2**	**7.99**	**352**	P		**P**	**11 57 12.2**	**+0.6**
JOD2				S		**S**	**11 58 42.9**	**-2.3**
JAO	**Obara**	**8.36**	**342**	P		**P**	**11 57 17.0**	**+1.2**
JHU	**Hanno**	**8.55**	**354**	P		**Pn**	**11 57 11.1**	**-0.5**
JHU				*e*S		**S**	**11 58 50.0**	**-7.0**
JRY	**Ryogami san**	**8.76**	**352**	P		**Pn**	**11 57 20.1**	**+0.1**
JYT	**Yasato**	**8.87**	**359**	P		**Pn**	**11 57 21.2**	**0.0**
JYT				*e*S		**S**	**11 59 00.9**	**-2.9**
JAG	**Ashikaga**	**9.10**	**355**	P		**P**	**11 57 23.0**	**-0.9**
JHO	**Hitachi**	**9.25**	**1**	P		**P**	**11 57 26.0**	**+0.4**
JHO				*e*S		**S**	**11 59 08.9**	**-2.9**
MJAR	**Matsushiro Arr**	**9.37**	**349**	P		**P**	**11 57 26.8**	**-0.2**
	0.3nm,0.3s,baz=166,slow=10.0,SNR=9.3							
MJAR				S		**S**	**11 59 10.2**	**-4.2**
	0.1nm,0.3s,baz=175,slow=15,SNR=3.4							
MAJO	**Matsushiro**	**9.38**	**349**	*i* P		**Pn**	**11 57 27.9**	**+0.8**
MAT	**Matsushiro**	**9.38**	**349**	P		**P**	**11 57 26.5**	**-0.5**
MAT				S		**S**	**11 59 11.7**	**-2.7**
JNU	**Nakatsue**	**10.07**	**307**	P		**Pn**	**11 57 36.6**	**+1.4**
	0.9nm,0.3s,baz=357,slow=6.1,SNR=8.9							
KSRS	**Korea Array**	**14.60**	**317**	P		**P**	**11 58 24.2**	**-0.2**
	0.2nm,0.3s,baz=124,slow=10,SNR=4.3							
USRK	**Ussuriysk Ar.**	**18.15**	**340**	P		**P**	**11 59 03.4**	**+1.0**
	baz=164,slow=9.6,SNR=22							
KLR	**Kul'dur**	**22.87**	**345**	*ce*P		**P**	**11 59 48.7**	**+2.0**
KLR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
HHC	**Hu-ho-hao-te**	**27.30**	**307**	*e*P		**P**	**12 00 28.1**	**+1.6**
HHC				pmax		pmax		
	comp=Z,15nm,1.1s							
HHC				pmax		pmax		
	comp=Z,61nm,5.2s							
XAN	**Xi'an**	**27.84**	**292**	P		**P**	**12 00 31.1**	**-0.2**
XAN				pmax		pmax		
	comp=Z,10.0nm,0.8s							
ZEA	**Zeya**	**28.12**	**343**	*e*P		**P**	**12 00 35.3**	**+1.9**
ZEA				pmax		pmax		
	comp=Z,10.0nm,0.7s							
GYA	**Guiyang**	**30.08**	**276**	*e*P		P	12 00 45.5	-5.6
GYA				pP		pP	12 02 03.9	+1.5
GYA				pmax		pmax		
	comp=Z,140nm,8.4s							
LZH	**Lanzhou**	**32.17**	**295**	*e*P		**P**	**12 01 09.1**	**-0.1**
LZH				pP		pwP	12 02 28.6	+1.3
LZH				sP		sP	12 03 18.2	+11
LZH				pmax		pmax		
	comp=Z,27nm,1.3s							
ULN	**Ulaanbaatar**	**33.08**	**317**	*ce*P		**P**	**12 01 16.6**	**-0.2**
ULN				pmax		pmax		
	comp=Z,2.0nm,1.3s							
SONM	**Songino Array**	**33.47**	**317**	P		**P**	**12 01 18.1**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=124,slow=8.0,SNR=3.9							
YAK	**Yakutsk**	**35.43**	**351**	*i* P		**P**	**12 01 37.1**	**+0.9**
YAK				pmax		pmax		
	comp=Z,12nm,1.1s							
GTA	**Gaotai**	**35.71**	**300**	*e*P		**P**	**12 01 39.1**	**-0.1**
GTA				pP		pP	12 02 55.4	+2.9
GTA				sP		sP	12 03 38.3	-0.1
GTA				pmax		pmax		
	comp=Z,3.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**39.08**	**266**	P		**P**	**12 02 06.5**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=60,slow=8.9,SNR=6.8							
CMAR	**Chiang Mai Arr**	**39.08**	**266**	*i* P		**P**	**12 02 06.9**	**-0.3**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
BATI	**Baumata**	**40.70**	**206**	P		**P**	**12 02 19.5**	**-0.9**
	comp=Z,17nm,0.4s,baz=74,slow=2.6,SNR=3.6							
BILL	**Bilibino**	**43.59**	**14**	*i* P		**P**	**12 02 41.7**	**-0.9**
BILL				pmax		pmax		
	comp=Z,4.0nm,1.0s							
TIXI	**Tiksi**	**44.83**	**355**	*ce*P		**P**	**12 02 53.1**	**+0.9**
TIXI				pmax		pmax		
	comp=Z,48nm,2.5s							
WMQ	**Urumqi**	**45.17**	**306**	*e*P		**P**	**12 02 57.2**	**+1.8**
TAPN	**Taplejung**	**46.53**	**283**	*e*P		**P**	**12 03 06.5**	**+0.1**
	comp=Z,5.9nm,0.4s							
PSI	**Prapat**	**46.56**	**246**	P		**P**	**12 03 05.7**	**-0.9**
	comp=Z,4.1nm,0.5s,baz=179,slow=7.9,SNR=5.5							

ODAN Odare 46.92 282 *e*P **P 12 03 09.3 0.0**
comp=Z,27nm,0.4s
WRA Warramunga Arr 47.36 188 P P 12 03 11.7 -0.7
comp=Z,1.5nm,0.5s,baz=4.7,slow=7.8,SNR=26
WRA ScP ScP 12 07 49.8 -1.0
comp=Z,0.4nm,0.9s,baz=3.8,slow=4.6,SNR=2.6
FITZ Fitzroy Crossi 47.38 199 P P 12 03 11.9 -0.6
comp=Z,2.4nm,0.8s,baz=35,slow=8.6,SNR=6.3
RAMN Ramite 47.58 283 *e*P **P 12 03 14.3 -0.1**
comp=Z,10nm,0.6s
GUN Gumba 47.99 284 *e*P **P 12 03 17.7 +0.1**
comp=Z,17nm,0.3s
ZALV Zalesovo Beam 48.29 319 P P 12 03 17.9 -1.1
comp=Z,0.5nm,0.3s,baz=94,slow=10,SNR=2.1
ZALV PcP pP 12 04 38.1 +0.6
comp=Z,0.8nm,0.3s,baz=127,slow=3.9,SNR=4.1
MK31 Makanchi Array 49.12 309 *ce*P **P 12 03 26.1 +0.7**
MKAR Makanchi Array 49.12 309 P P 12 03 25.1 -0.3
comp=Z,0.9nm,0.4s,baz=88,slow=10,SNR=21
MKAR PcP PcP 12 04 42.5 +0.6
comp=Z,0.6nm,0.7s,baz=79,slow=5.4,SNR=4.4
MKAR ScP ScP 12 07 58.0 -0.1
comp=Z,0.2nm,0.5s,baz=81,slow=5.1,SNR=2.7
DANN Dangsing 49.72 285 *e*P **P 12 03 30.9 +0.5**
KOLN Koldanda 49.99 284 *e*P **P 12 03 32.5 +0.1**
comp=Z,24nm,0.8s
PYUN Piuthan 50.44 285 *e*P **P 12 03 36.0 +0.3**
comp=Z,40nm,0.3s
ASAR Alice Springs 51.09 188 P P 12 03 39.5 -0.7
comp=Z,0.6nm,0.7s,baz=358,slow=4.5,SNR=13
KURK Kurchatov 51.71 314 *ce*P **P 12 03 44.9 +0.6**
KURK pmax pmax
comp=Z,3.0nm,0.6s
NRIK Noril'sk 51.86 339 P P 12 03 44.5 -0.7
comp=Z,1.4nm,0.3s,baz=110,slow=14,SNR=3.5
NRIK Noril'sk 51.86 339 *ce*P **P 12 03 44.9 -0.3**
NRIK pmax pmax
comp=Z,6.0nm,1.3s
BRVK Borovoye 56.87 317 *ce*P **P 12 04 20.6 -0.5**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
ILAR Eielson Array 58.26 29 P P 12 04 32.0 +1.7
comp=Z,1.1nm,0.9s,baz=245,slow=6.3,SNR=7.5
ARU Arti 63.28 322 *d i* P *eP 12 05 03.6 -0.3
ARU *PP pP 12 06 27.7 -0.7
ARU 12 07 26.8
ARU S S 12 13 04.4 +1.1
ARU SS SS 12 17 19.3 +1.5
ARU pmax pmax
comp=Z,13nm,2.0s
INK Inuvik 63.46 24 P P 12 05 05.5 +0.6
comp=Z,0.8nm,0.6s,baz=270,slow=2.0,SNR=1.6
YKA Yellowknife Ar 72.67 28 P P 12 06 02.6 +1.0
comp=Z,1.4nm,0.5s,baz=302,slow=5.1,SNR=6.4
ARCES ARCESS Array B 72.80 340 P P 12 06 02.1 -0.2
comp=Z,2.5nm,0.6s,baz=66,slow=7.0,SNR=15
OBN Obninsk 75.44 325 *i* P P 12 06 14.4 -3.1
OBN pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 76.70 312 *i* P P 12 06 24.5 -0.2
KBZ pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 77.04 333 P P 12 06 26.7 +0.4
comp=Z,3.6nm,0.3s,baz=67,slow=4.9,SNR=61
AKASG Malin Array Be 81.50 323 P P 12 06 49.6 -0.7
comp=Z,0.3nm,0.4s,baz=53,slow=5.8,SNR=2.1
NVAR Mina Array Bea 81.59 51 P P 12 06 53.9 +2.5
comp=Z,0.8nm,0.6s,baz=294,slow=5.5,SNR=14
NB2 NORSAR Subarra 82.81 338 P P 12 06 56.6 -0.3
comp=Z,1.3nm,0.5s,baz=45,slow=5.1
NOA NORSAR Array B 82.81 338 P P 12 06 56.5 -0.4
comp=Z,0.9nm,0.5s,baz=54,slow=6.7,SNR=7.5
KONO Kongsberg 84.37 337 *ce*P **P 12 07 03.5 -1.2**
KONO pmax pmax
comp=Z,28nm,1.2s
BRTR Keskin Array B 84.69 312 P P 12 07 06.6 -0.3
comp=Z,0.8nm,0.5s,baz=72,slow=4.7,SNR=2.5
PDAR Pinedale Array 85.14 44 P P 12 07 11.6 +2.5
comp=Z,0.1nm,0.4s,baz=316,slow=5.0,SNR=1.4
TXAR Lajitas Array 96.70 52 P P 12 08 03.9 +1.0
comp=Z,0.2nm,0.6s,baz=316,slow=2.5,SNR=2.6
TORD Torodi Ar. Bea 123.24 310 PKP **PKPdf 12 13 26.5 -0.8**
comp=Z,0.2nm,0.4s,baz=9.4,slow=2.3,SNR=4.4
PLCA Paso Flores 151.22 126 PKPbc **PKiKP 12 14 24.3 +0.6**
comp=Z,2.1nm,0.6s,baz=241,slow=3.3,SNR=10

IDC 09 11:57:15.5± 1.4, 64.60N× 17.66W, h0km, mb3.4/4,
mb1 3.7/5, mb1mx3.4/37, mbtmp3.5/5, ML2.7/1, MS3.2/1,
Ms1 3.2/1, ms1mx2.5/37, Error ellipse: s-maj=44.1km
s-min=27.6km az=18.0, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FINES	**FINESS Array B**	**19.79**	**79**	P		P	12 01 47.5	+0.6
	0.1nm,0.3s,baz=311,slow=11,SNR=1.5							
GERES	**GERESS Array B**	**22.98**	**118**	P		P	12 02 21.8	+0.4
	0.2nm,0.5s,baz=334,slow=10,SNR=2.0							
AKTO	**Aktyubinsk**	**40.37**	**73**	LR		LR	12 19 51.8	
	comp=Z,38nm,21.9s,baz=144,slow=34							
MKAR	**Makanchi Array**	**52.82**	**58**	P		P	12 06 31.6	-0.6
	0.2nm,0.6s,baz=341,slow=8.1,SNR=2.0							
TORD	**Torodi Ar. Bea**	**53.11**	**156**	P		P	12 06 34.1	-0.4
	0.6nm,0.7s,baz=339,slow=7.7,SNR=3.1							
PDAR	**Pinedale Array**	**53.14**	**293**	P		P	12 06 34.9	+0.1
	0.7nm,0.8s,baz=48,slow=7.5,SNR=5.5							

*IDC **09** 12:08:20.0± 1.2, 7.86N× 127.35E, h0km, mb3.6/5,*
mb1 3.7/5, mb1mx3.4/47, mbtmp3.6/5, Error ellipse:
s-maj=32.1km s-min=21.2km az=70.0
ISC 09 12:08:19.6± 3.1, 7.83N± 0.05× 127.31E± 0.08, h2km± 19km,
n13, σ 1s 53/20, mb 3.8/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BIP	**Bislig**	**1.12**	**291**	*i* P		**Pn**	**12 08 41.1**	**-1.1**
BIP				*i* S		**Sb**	**12 08 55.4**	**-1.3**
MATI	**Mati**	**1.36**	**230**	*e*P		**Pn**	**12 08 43.1**	**-2.4**
MATI				*e*S		**Sn**	**12 09 03.9**	**-0.3**
DAV	**Davao City (W)**	**1.87**	**246**	Pn		**Pb**	**12 08 53.9**	**-0.5**
	77nm,0.3s,baz=66,slow=10.0,SNR=2.8							
DAV				Sn		**Sg**	**12 09 21.7**	**+2.0**
	57nm,0.3s,baz=206,slow=19,SNR=2.0							
DAV				LR		LR	12 09 38.8	
	comp=Z,168nm,18.2s,baz=169,slow=41							
BUKP	**Musuan**	**2.22**	**272**	*e*P		**Pn**	**12 08 58.1**	**+0.6**
BUKP				*e*S		**Sb**	**12 09 28.1**	**-0.4**
GLSP	**General Luna,**	**2.27**	**329**	*e*P		**Pb**	**12 08 59.3**	**-1.9**
GLSP				*e*S		**Sb**	**12 09 27.9**	**-1.9**
DDMP	**Don Marcelino,**	**2.33**	**223**	*e*P		**Pn**	**12 08 57.7**	**-1.2**
DDMP				*e*S		**Sn**	**12 09 27.2**	**-1.0**
MSLP	**Maasin**	**3.33**	**314**	*e*P		**Pn**	**12 09 13.9**	**+1.2**
PAGZ	**Pagadian**	**3.89**	**271**	*e*P		**Pn**	**12 09 22.4**	**+2.0**
FITZ	**Fitzroy Crossi**	**25.81**	**184**	P		**P**	**12 13 51.5**	**-0.8**
	1.9nm,1.0s,baz=4.1,slow=14,SNR=2.3							
WRA	**Warramunga Arr**	**28.45**	**166**	P		**P**	**12 14 18.3**	**+2.2**
	0.3nm,0.7s,baz=346,slow=11,SNR=4.7							
ASAR	**Alice Springs**	**31.96**	**169**	P		**P**	**12 14 48.0**	**+0.9**
	0.4nm,1.0s,baz=355,slow=9.5,SNR=2.5							
ASAR				PcP		**PcP**	**12 17 38.6**	**+1.1**
	0.2nm,0.6s,baz=349,slow=1.9,SNR=1.8							
MKAR	**Makanchi Array**	**54.58**	**323**	P		**P**	**12 17 50.2**	**+0.7**
	0.6nm,0.5s,baz=122,slow=8.7,SNR=10							
KURBB	**Kurchatov Arra**	**58.65**	**326**	P		**P**	**12 18 18.9**	**+0.6**
	0.5nm,0.5s,baz=124,slow=7.3,SNR=4.4							

*IDC **09** 12:17:19.7± 5.3, 36.36N× 140.46E, h0km, mb3.2/2,*
mb1 3.4/3, mb1mx3.2/57, mbtmp3.4/3, ML3.6/1, Error
ellipse: s-maj=98.5km s-min=26.0km az=31.0
*JMA **09** 12:17:29.5± 0.1, 36.06N× 139.89E, h44km± 1km, M3.1*
JMA Felt I J1
ISC 09 12:17:28.7± 1.2, 36.07N± 0.06× 139.90E± 0.06, h52km± 11km,
n11, σ 0s 99/17, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.29**	**56**	P		**Pn**	**12 17 38.1**	**+0.2**
JYT				S		**Sn**	**12 17 44.1**	**-0.4**
JAG	**Ashikaga**	**0.51**	**315**	P		**

JKT eS Sn 12 17 57.2 +0.4
JOD2 Odawara 2 1.04 220 P Pn 12 17 48.0 +1.0
JYN Shimod 1.24 243 P Pn 12 17 51.1 +1.3
MJAR Matsushiro Arr 1.45 290 Pg Pn 12 17 52.8 +0.2
1.7nm,0.3s,baz=108,slow=14,SNR=152
MJAR Lg Lg 12 18 07.3
1.1nm,0.3s,baz=109,slow=18,SNR=4.8
MAT Matsushiro 1.45 290 P Pn 12 17 52.7 +0.1
MAT eS Sn 12 18 08.0 -2.5
JHJ Hachijo jima 2 2.94 182 Pn Pn 12 18 13.2 +0.2
15nm,0.3s,baz=323,slow=20,SNR=16
JHJ Sn Sn 12 18 45.4 -1.7
11nm,0.3s,baz=166,slow=23,SNR=7.2
WRA Warramunga Arr 55.95 186 P P 12 27 01.7 +0.1
0.3nm,0.9s,baz=0.3,slow=7.5,SNR=5.3
ASAR Alice Springs 59.68 186 P P 12 27 28.2 +0.5
0.1nm,0.7s,baz=10.0,slow=12,SNR=1.6

*BJI **09** 12:19:57.2±0.0,36°.39N×71°.32E,h120km,mB4.7/18, mb4.4/25*
*MOS **09** 12:19:57.4±0.9,36°.33N×71°.32E,h128km,mb4.5/26,Error ellipse: s-maj=7.7km s-min=4.2km az=88.4*
*NEIC **09** 12:19:58.9±1.7,36°.37N±0°.05×71°.24E±0°.08,h126km±5km, mb4.6/50,Error ellipse: s-maj=9.1km s-min=7.0km az=76.0*
*IDC **09** 12:19:59.1±0.7,36°.21N×71°.24E,h132km±6km,mb3.9/26, mb1 4.0/29,mb1mx3.9/50,mbtmp4.3/29,Error ellipse: s-maj=12.1km s-min=9.8km az=21.0*
*NNC **09** 12:20:00.0±2.3,36°.61N×70°.96E,h125km±25km,mb4.0, mpv4.9,Error ellipse: s-maj=21.1km s-min=10.7km az=162.0*
ISC 09 12:19:57.6±0.5,**36°.33N**±0°.04×**71°.24E**±0°.04,**h118**km±4km, **h118**km:**pP-P,n247,**σ2≥**03**/272,**mb4.5**/64,**17C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.53**	**226**	PN		**Pn**	**12 20 39.7**	**+1.8**
KBL							12 21 11.1	
KBL	**Kabul**	**2.53**	**226**	Pn		**Pn**	**12 20 39.7**	**+1.8**
KBL				Sn		**Sn**	**12 21 11.1**	**+2.3**
CEP	**Cherat**	**2.55**	**167**	P		**Pn**	**12 20 40.0**	**+1.8**
CEP				S		**Sn**	**12 21 11.0**	**+1.7**
NIL	**Nilore**	**3.14**	**148**	PN		**Pn**	**12 20 47.5**	**+1.8**
NIL							12 21 25.8	
NIL	**Nilore**	**3.14**	**148**			**Pn**	**12 20 47.5**	**+1.8**
NIL				Sn		**Sn**	**12 21 25.8**	**+3.1**
THW	**Thamme Wali**	**3.55**	**173**	P		**Pn**	**12 20 52.3**	**+1.2**
BTK	**Batken**	**3.74**	**355**	PN		**Pn**	**12 20 55.9**	**+2.2**
BTK							12 21 37.9	
BTK	**Batken**	**3.74**	**355**	Pn		**Pn**	**12 20 55.9**	**+2.2**
BTK				Sn		**Sn**	**12 21 37.9**	**+0.7**
SARP	**Sargodha**	**4.55**	**164**	P		**Pn**	**12 21 04.5**	**0.0**
KSH	**Kashi**	**4.91**	**48**	P		**Pn**	**12 21 06.3**	**-3.1**
KSH				S		Sn	12 21 54.7	-11
KSH				smax		smax		
	comp=N,610nm,0.4s							
KSH				smax		smax		
	comp=E,230nm,0.4s							
TAS	**Tashkent**	**5.22**	**344**	PN		**Pn**	**12 21 13.5**	**+0.1**
TAS	**Tashkent**	**5.22**	**344**			**Pn**	**12 21 13.5**	**+0.1**
TAS				Sn		**Sn**	**12 22 11.3**	**-1.2**
DHRM	**DHARAMSHALA**	**5.83**	**133**	*eP*		**Pn**	**12 21 21.6**	**-0.4**
DHRM				*eS*		**Sn**	**12 22 24.0**	**-3.8**
DHRM				IAML			12 22 27.8	
	comp=N,1μm,0.1s							
DHRM				IAML			12 22 29.8	
	comp=E,1μm,0.6s							
IUG	**Iuzhnay**	**5.89**	**351**	*e*P		**Pn**	**12 21 23.6**	**+1.1**
	comp=E,25nm,0.7s,baz=350							
IUG	**Iuzhnay**	**5.89**	**351**	*e*PN		**Pn**	**12 21 23.6**	**+1.1**
IUG				pmax		pmax		
	comp=Z,25nm,0.7s							
AML	**Almayashu**	**6.10**	**17**	P		**Pn**	**12 21 26.2**	**+0.5**
	SNR=513							
UCH	**Uchtor**	**6.42**	**22**	P		**Pn**	**12 21 30.6**	**+0.7**
	SNR=36							
DZA	**Taraz**	**6.56**	**1**	*e*P		**Pn**	**12 21 32.1**	**+0.5**
	comp=Z,104nm,0.6s,baz=360							
DZA	**Taraz**	**6.56**	**1**	*e*PN		**Pn**	**12 21 32.0**	**+0.5**
DZA				pmax		pmax		
	comp=Z,103nm,0.6s							
EKS2	**Erkin-Say**	**6.62**	**16**	P		**Pn**	**12 21 33.2**	**+0.7**
	SNR=21							
AAK	**Ala-Archa**	**6.79**	**21**	P		**Pn**	**12 21 35.6**	**+0.8**
	SNR=48							
AAK	**Ala-Archa**	**6.79**	**21**	⇓P		**Pn**	**12 21 35.6**	**+0.8**
	comp=Z,33nm,0.5s							
AAK				⇓S		**Sn**	**12 22 50.0**	**-0.6**
	comp=Z,73nm,0.8s							
AAK	**Ala-Archa**	**6.79**	**21**	PN		**Pn**	**12 21 35.6**	**+0.8**
AAK	**Ala-Archa**	**6.79**	**21**	Pn		**Pn**	**12 21 35.5**	**+0.8**
AAK				Sn		**Sn**	**12 22 49.2**	**-1.4**
KK31	**Karatay Array**	**6.79**	**355**	⇑P		**Pn**	**12 21 34.9**	**+0.3**
	comp=Z,67nm,0.3s,baz=182,slow=13,SNR=1243							
KK31				⇑S		**Sn**	**12 22 45.6**	**-5.0**
	comp=Z,65nm,0.5s,baz=174,slow=19,SNR=7.6							
KK31	**Karatay Array**	**6.79**	**355**	*e*PN		**Pn**	**12 21 35.1**	**+0.4**
KK31	**Karatay Array**	**6.79**	**355**	Pn		**Pn**	**12 21 35.1**	**+0.4**
KK31				Sn		**Sn**	**12 22 48.0**	**-2.6**
KKAR	**Karatay Array**	**6.79**	**355**	PN		**Pn**	**12 21 35.0**	**+0.3**
KKAR	**Karatay Array**	**6.79**	**355**			**Pn**	**12 21 35.0**	**+0.3**
KKAR	**Karatay Array**	**6.79**	**355**	Pn		**Pn**	**12 21 34.8**	**+0.1**
KBK	**Karagaybulak**	**6.94**	**23**	P		**Pn**	**12 21 37.7**	**+0.9**
	SNR=15							
FRU1	**Bishkek**	**6.98**	**21**	PN		**Pn**	**12 21 37.4**	**+0.1**
FRU1	**Bishkek**	**6.98**	**21**			**Pn**	**12 21 37.4**	**+0.1**
FRU1				Sn		**Sn**	**12 22 56.0**	**+0.8**
SMLA	**Simla**	**7.16**	**135**	*e*P		**Pn**	**12 21 38.9**	**-0.7**
SMLA				*e*S		Sn	12 22 51.1	-8.3
SMLA				IAML			12 22 58.1	
	comp=E,456nm,0.3s							
CHMS	**Chumysh**	**7.19**	**21**	P		**Pn**	**12 21 41.2**	**+1.2**
	SNR=36							
USP	**Ospenovka**	**7.37**	**19**	P		**Pn**	**12 21 43.1**	**+0.6**
	SNR=23							
TKM2	**Tokmak 2**	**7.39**	**26**	P		**Pn**	**12 21 43.5**	**+0.5**
	SNR=13							
TKM2	**Tokmak 2**	**7.39**	**26**	⇑P		**Pn**	**12 21 43.2**	**+0.2**
	comp=E,44nm,0.6s							
TKM2				⇓S		**Sn**	**12 23 04.5**	**-0.9**
	comp=E,23nm,0.7s							
TKM2	**Tokmak 2**	**7.39**	**26**	PN		**Pn**	**12 21 43.2**	**+0.2**
HRA	**Herat**	**7.60**	**258**	Pn		**Pn**	**12 21 48.4**	**+2.5**
TNSS	**Tian-Shan**	**8.02**	**32**	*e*P		**Pn**	**12 21 52.1**	**+0.5**
	baz=32							
TNSS	**Tian-Shan**	**8.02**	**32**	*e*PN		**Pn**	**12 21 52.0**	**+0.5**
AAA	**Alma-Ata**	**8.14**	**31**	*e*P		**Pn**	**12 21 53.6**	**+0.6**
	comp=E,13nm,0.7s,baz=31							
AAA	**Alma-Ata**	**8.14**	**31**	*e*PN		**Pn**	**12 21 53.5**	**+0.6**
AAA				pmax		pmax		
	comp=Z,13nm,0.7s							
MDOK	**Medeo**	**8.16**	**31**	*e*P		**Pn**	**12 21 53.9**	**+0.5**
	baz=32							
MDOK	**Medeo**	**8.16**	**31**	*e*PN		**Pn**	**12 21 53.8**	**+0.5**
DDI	**Dehra Dun**	**8.26**	**134**	*e*P		**Pn**	**12 21 51.6**	**-3.1**
DDI				*e*S		Sn	12 23 18.4	-8.0
DDI				AMP			12 23 27.7	
	comp=N,1μm,1.5s							
KPKS	**Kokpek**	**9.14**	**36**	*e*P		**Pn**	**12 22 06.6**	**+0.2**
	comp=N,6.8nm,0.9s,baz=37							
KPKS	**Kokpek**	**9.14**	**36**	*e*P		**Pn**	**12 22 06.6**	**+0.2**
KPKS				pmax		pmax		
	comp=Z,7.0nm,0.9s							
KUDL	**Kundal**	**9.29**	**150**	*e*P		**Pn**	**12 22 05.9**	**-2.5**
KUDL				*e*S		Sn	12 23 40.3	-11
KUDL				AMP			12 23 47.7	
	comp=N,434nm,0.2s							
JASL	**Jaisalmer**	**9.38**	**182**	*e*P		**Pn**	**12 22 08.3**	**-1.4**
PDGK	**Podgornoye**	**9.44**	**40**	⇓P		**Pn**	**12 22 10.1**	**-0.4**
	comp=N,12nm,1.1s							
PDGK	**Podgornoye**	**9.44**	**40**	P		**Pn**	**12 22 10.1**	**-0.4**
SONA	**Sohna**	**9.44**	**147**	*e*P		**Pn**	**12 22 09.1**	**-1.5**
SONA				*e*S		Sn	12 23 47.1	-7.8
GEYT	**Alibeck**	**10.60**	**283**	P		**Pn**	**12 22 24.3**	**-1.9**
	comp=N,4.0nm,0.3s,baz=110,slow=11,SNR=39							
GEYT				S		**Sn**	**12 24 16.8**	**-6.2**
	comp=N,5.2nm,0.3s,baz=137,slow=15,SNR=3.7							
GEYT	**Alibeck**	**10.60**	**283**			**Pn**	**12 22 25.0**	**-1.2**
GYA0	**ALIBECK ARRAY**	**10.60**	**283**	P		**Pn**	**12 22 24.6**	**-1.6**
GYA0				S		**Sn**	**12 24 17.9**	**-5.1**
GYA0B	**ALIBECK ARRAY**	**10.60**	**283**	⇑P		**Pn**	**12 22 24.6**	**-1.6**
GYA0B				⇑S		**Sn**	**12 24 17.9**	**-5.1**
GYA0B	**ALIBECK ARRAY**	**10.60**	**283**	Pn		**Pn**	**12 22 25.2**	**-1.0**
PYUN	**Piuthan**	**12.88**	**126**	*e*P		Pn	12 22 52.9	-3.6
	comp=N,180nm,0.4s							
MAKZ	**Makanchi**	**13.19**	**34**	⇑P		**Pn**	**12 22 58.3**	**-1.9**
	comp=N,7.2nm,1.1s							
MAKZ	**Makanchi**	**13.19**	**34**	P		**Pn**	**12 22 59.3**	**-0.9**
MAKZ	**Makanchi**	**13.19**	**34**	Pn		**Pn**	**12 22 59.3**	**-0.9**
DANN	**Dangsing**	**13.23**	**123**	*e*P		**Pn**	**12 22 57.9**	**-3.2**
	comp=N,105nm,0.4s							
MK31	**Makanchi Array**	**13.32**	**35**	P		**Pn**	**12 23 01.5**	**-0.4**
	comp=N,3.1nm,0.8s,baz=229,slow=6.9,SNR=24							
MK31	**Makanchi Array**	**13.32**	**35**	*ce*P		**Pn**	**12 23 02.3**	**+0.4**
MK31	**Makanchi Array**	**13.32**	**35**	Pn		**Pn**	**12 23 03.4**	**+1.5**
MKAR	**Makanchi Array**	**13.32**	**35**	P		**Pn**	**12 23 02.4**	**+0.5**
	comp=N,0.2nm,0.3s,baz=220,slow=12,SNR=15							
MKAR				S		**Sn**	**12 25 23.8**	**-4.8**
	baz=20,slow=12,SNR=1.4							
MKAR	**Makanchi Array**	**13.32**	**35**	Pn		**Pn**	**12 23 01.5**	**-0.4**
KOLN	**Koldanda**	**13.50**	**126**	*e*P		Pn	12 23 00.9	-3.7
	comp=N,66nm,0.4s							
GKN	**Gorkha**	**14.04**	**122**	*e*P		**Pn**	**12 23 08.0**	**-3.5**
	comp=N,96nm,0.3s							
DMN	**Daman**	**14.61**	**123**	*e*P		Pn	12 23 15.2	-3.7
	comp=N,49nm,0.4s							
KKN	**Kakani**	**14.62**	**122**	*e*P		Pn	12 23 15.0	-3.9
	comp=N,89nm,0.5s							
WMQ	**Urumqi**	**14.64**	**54**	*e*P		**Pn**	**12 23 19.6**	**+0.7**
WMQ				pmax		pmax		
	comp=N,20nm,0.6s							
WMQ				pmax		pmax		
	comp=N,180nm,4.5s							
PKIN	**Phulchoki**	**14.83**	**122**	*e*P		Pn	12 23 17.8	-3.8
	comp=N,62nm,0.4s							
PKI	**Pulchoki**	**14.85**	**122**	*e*P		Pn	12 23 18.1	-3.8
	comp=N,42nm,0.3s							
GUN	**Gumba**	**14.96**	**120**	*e*P		**Pn**	**12 23 20.0**	**-3.3**
	comp=N,42nm,0.3s							
KURBB	**Kurchatov Arra**	**15.23**	**18**	P		**Pn**	**12 23 23.4**	**-2.7**
	comp=N,0.3nm,0.3s,baz=205,slow=11,SNR=23							
KURBB	**Kurchatov Arra**	**15.23**	**18**	⇑P		**Pn**	**12 23 26.4**	**+0.3**
	comp=N,7.0nm,0.6s							
AB31	**Akbulak array**	**15.33**	**331**	⇑P		**Pn**	**12 23 26.7**	**-0.8**
	comp=N,7.9nm,0.4s,baz=142,slow=12,SNR=383							
AB31				⇑S		**Sn**	**12 26 09.0**	**-8.0**
	comp=N,23nm,0.8s,baz=146,slow=23,SNR=12							
AB31	**Akbulak array**	**15.33**	**331**	P		**Pn**	**12 23 26.7**	**-0.8**
AB31				S		**Sn**	**12 26 09.2**	**-7.8**
ABKAR	**Akbulak array**	**15.33**	**331**	P		Pn	**12 23 27.5**	**0.0**
ABKAR				IAmb		IAmb	12 23 28.3	
	comp=Z,17nm,0.6s							
ABKAR	**Akbulak array**	**15.33**	**331**	P		**Pn**	**12 23 27.2**	**-0.2**
KURK	**Kurchatov**	**15.34**	**18**	⇓P		**Pn**	**12 23 27.0**	**-0.5**
	comp=Z,8.8nm,1.2s							
KURK	**Kurchatov**	**15.34**	**18**	*ce*P		**P**	**12 23 28.9**	**-0.6**
KURK				pmax		pmax		
	comp=Z,8.0nm,1.0s							
KURK	**Kurchatov**	**15.34**	**18**	Pn		**Pn**	**12 23 27.9**	**+0.4**
RAMN	**Ramite**	**16.06**	**121**	*e*P		**Pn**	**12 23 33.1**	**-3.8**
	comp=Z,105nm,0.6s							
NGP	**Nagpur**	**16.59**	**154**	*ex*		**Pn**	**12 23 41.8**	**-1.4**
NGP				IAmb		IAmb	12 23 43.2	
	comp=Z,11nm,0.5s							
NGP				*ex*		Sn	12 26 34.3	-13
TAPN	**Taplejung**	**16.59**	**118**	*e*P		**Pn**	**12 23 40.7**	**-2.8**
	comp=Z,282nm,0.7s							
ODAN	**Odare**	**16.66**	**120**	*e*P		**Pn**	**12 23 41.2**	**-3.1**
	comp=Z,74nm,0.5s							
BVAR	**Borovoye Array**	**16.71**	**358**	P		**P**	**12 23 45.3**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=138,slow=11,SNR=28							
BRVK	**Borovoye**	**16.75**	**358**	⇓P		**Pn**	**12 23 45.2**	**+0.3**
	comp=Z,10.0nm,0.6s							
BRVK	**Borovoye**	**16.75**	**358**	*ce*P		**P**	**12 23 45.5**	**+0.4**
BRVK				pmax		pmax		
	comp=Z,18nm,1.0s							
BRVK	**Borovoye**	**16.75**	**358**			**P**	**12 23 45.6**	**+0.4**
AKTO	**Aktyubinsk**	**17.03**	**330**	P		**Pn**	**12 23 49.3**	**+0.9**
	comp=Z,4.1nm,0.3s,baz=137,slow=10,SNR=120							
AKTO				S		**Sn**	**12 26 48.9**	**-9.0**
	comp=Z,0.7nm,0.3s,baz=65,slow=20,SNR=6.3							
AKTO	**Aktyubinsk**	**17.03**	**330**	⇑P		**Pn**	**12 23 49.4**	**+1.1**
	comp=Z,44nm,0.8s							
AKTO				⇓S		**Sn**	**12 26 49.5**	**-8.4**
	comp=Z,21nm,0.8s							
AKTO	**Aktyubinsk**	**17.03**	**330**	P		**Pn**	**12 23 49.4**	**+1.1**
AKTO				S		**Sn**	**12 26 49.5**	**-8.4**
GTK	**Tadong**	**17.25**	**116**	*e*P		**P**	**12 23 51.9**	**+0.8**
GTK				IAmb		IAmb	12 23 54.1	
	comp=Z,23nm,0.5s							
BOK	**Bokaro**	**17.77**	**131**	*ex*		**P**	**12 23 56.2**	**-0.3**
LSA	**Lhasa**	**17.94**	**106**	P		**P**	**12 24 00.1**	**+1.1**
LSA				pmax		pmax		
	comp=Z,87nm,0.9s							
LSA	**Lhasa**	**17.94**	**106**	P		**P**	**12 23 59.5**	**+0.5**
LSA				pmax		pmax		
	comp=Z,25nm,1.1s							
LSA	**Lhasa**	**17.94**	**106**			**P**	**12 23 59.5**	**+0.5**
LSA				IAmb		IAmb	12 24 01.6	
	comp=Z,25nm,1.1s							
HYB	**Hyderabad**	**19.92**	**159**	*i* P		**P**	**12 24 18.0**	**-2.1**
ZAA0	**Zalesovo Array**	**19.99**	**24**	⇓P		**P**	**12 24 20.4**	**-0.1**
	comp=Z,2.1nm,0.5s							
ZAA0	**Zalesovo Array**	**19.99**	**24**	P		**P**	**12 24 20.8**	**+0.2**
ZALV	**Zalesovo Beam**	**19.99**	**24**	P		**P**	**12 24 21.1**	**+0.5**
	comp=Z,21nm,0.4s,baz=211,slow=10,SNR=106							
ZALV	**Zalesovo Beam**	**19.99**	**24**	P		**P**	**12 24 19.6**	**-0.9**
SHL	**Shillong**	**20.66**	**116**	*ex*		**P**	**12 24 28.4**	**+0.2**
SHL				IAmb		IAmb	12 24 32.7	
	comp=Z,111nm,0.7s							
SHL	**Shillong**	**20.66**	**116**	P		**P**	**12 24 27.6**	**-0.5**
SHL				pmax		pmax		
	comp=Z,36nm,1.0s							
SHL	**Shillong**	**20.66**	**116**	P		**P**	**12 24 27.6**	**-0.5**
SHL				IAmb		IAmb	12 24 32.1	
	comp=Z,36nm,1.0s							
TEZP	**TEZPUR**	**20.74**	**112**	*ex*		**P**	**12 24 27.0**	**-1.8**
GNI	**Garni**	**21.14**	**288**	*ce*P		**P**	**12 24 35.0**	**+1.9**
GNI				pmax		pmax		
	comp=Z,33nm,1.7s							
GNI	**Garni**	**21.14**	**288**	P		**P**	**12 24 36.6**	**+3.5**
GNI				IAmb		IAmb	12 24 46.2	
	comp=Z,21nm,0.6s							
SVE	**Sverdlovsk**	**21.72**	**344**	*e*P		**P**	**12 24 40.7**	**+1.7**
SVE				pmax		pmax		
	comp=Z,19nm,1.4s							
ARU	**Arti**	**21.86**	**341**	*c i*P		**P**	**12 24 41.8**	**+1.3**
ARU							12 25 12.1	
ARU				S		**S**	**12 28 36.9**	**+2.4**
ARU				SS		**SnSn**	**12 29 22.9**	**+11**
ARU				pmax		pmax		
	comp=Z,45nm,1.7s							
ARU	**Arti**	**21.86**	**341**	P		**P**	**12 24 41.0**	**+0.5**
ARU				IAmb		IAmb	12 24 46.0	
	comp=Z,17nm,0.9s							
ZEI	**Tsey**	**21.99**	**295**	*e*P		**P**	**12 24 43.8**	**+1.5**
ZEI				pmax		pmax		
	comp=Z,4.0nm,0.7s							
AKH	**Akhalkalaki**	**22.15**	**292**	P		**P**	**12 24 46.7**	**+2.8**
AKH				pmax		pmax		
	comp=Z,31nm,1.0s							
AKH	**Akhalkalaki**	**22.15**	**292**	P		**P**	**12 24 46.6**	**+2.8**
AKH				IAmb		IAmb	12 24 49.3	
	comp=Z,31nm,1.0s							
GTA	**Gaotai**	**22.73**	**74**	*e*P		**P**	**12 24 51.6**	**+2.0**
GTA				pP		pP	12 25 17.6	+4.1
GTA				sP		sP	12 25 31.9	+3.3
GTA				pmax		pmax		
	comp=Z,7.0nm,0.7s							
GTA				pmax		pmax		
	comp=Z,120nm,6.4s							
GTA				LR		LR		
	comp=Z,96nm,15.3s							
GTA				LR		LR		
	comp=Z,120nm,17.1s							
GTA				LR		LR		
	comp=Z,79nm,16.0s							
KBZ	**Khabaz**	**22.86**	**298**	P		**P**	**12 24 51.6**	**+1.0**
	comp=Z,1.1nm,0.3s							
KBZ	**Khabaz**	**22.86**	**298**	*i* P		**P**	**12 24 52.0**	**+1.4**
KBZ				pmax		pmax		
	comp=Z,4.0nm,1.0s							
KIV	**Kislovodsk**	**23.04**	**298**	*e*P		**P**	**12 24 53.0**	**+0.4**
KIV				*e*S		**S**	**12 28 55.9**	**+1.7**
KIV				pmax		pmax		
	comp=Z,22nm,1.0s							
VRH	**Novokhopyorsk**	**25.77**	**315**	*e*P		**P**	**12 25 17.8**	**+0.7**
VRH				pmax		pmax		
	comp=Z,10.0nm,0.5s							
LZH	**Lanzhou**	**26.24**	**81**	*e*P		**P**	**12 25 19.2**	**-2.6**
LZH				pP		pP	12 25 44.6	-3.8
LZH				sP		sP	12 26 00.8	-1.9
LZH				pmax		pmax		
	comp=Z,10.0nm,1.3s							
VSR	**Storozhevoye**	**27.27**	**313**	*e*P		**P**	**12 25 29.5**	**-1.0**
VSR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
SONM	**Songino Array**	**28.27**	**55**	P		**P**	**12 25 41.3**	**+1.6**
	comp=Z,2.0nm,0.6s,baz=263,slow=8.8,SNR=14							
SONM	**Songino Array**	**28.27**	**55**	P		**P**	**12 25 40.8**	**+1.0**
SONM				pmax		pmax		
	comp=Z,1.0nm,0.8s							
SONM	**Songino Array**	**28.27**	**55**	P		**P**	**12 25 40.8**	**+1.0**
ULN	**Ulaanbaatar**	**28.71**	**55**	*i* P		**P**	**12 25 44.3**	**+0.6**
ULN				pmax		pmax		
	comp=Z,9.0nm,2.6s							
BRTR	**Keskin Array B**	**29.67**	**288**	P		**P**	**12 25 53.2**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=57,slow=12,SNR=2.1							
OBN	**Obninsk**	**30.20**	**319**	*i* P		**P**	**12 25 57.8**	**+1.3**
OBN				*i* *PP		**pP**	**12 26 21.1**	**-1.9**
OBN				pmax		pmax		
	comp=Z,11nm,1.3s							
CMAR	**Chiang Mai Arr**	**30.20**	**119**	P		**P**	**12 25 56.2**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=312,slow=8.3,SNR=2.2							
HHC	**Hu-ho-hao-te**	**31.64**	**69**	*e*P		**P**	**12 26 11.0**	**+1.5**
HHC				pmax		pmax		
	comp=Z,22nm,1.0s							
HHC				pmax		pmax		
	comp=Z,77nm,5.4s							
KLMR	**Klimovskoe**	**31.73**	**331**	*e*P		**P**	**12 26 08.7**	**-1.2**
KLMR				pmax		pmax		
	comp=Z,8.0nm,0.8s							
KLMR	**Klimovskoe**	**31.73**	**331**	*e*P		**P**	**12 26 08.7**	**-1.2**
KLMR				AMP			12 26 12.2	
	comp=Z,8.0nm,0.8s							
AKASG	**Malin Array Be**	**33.21**	**309**	P		**P**	**12 26 24.4**	**+1.5**
	comp=Z,3.1nm,0.5s,baz=80,slow=7.1,SNR=17							
AKASG				pP		**pP**	**12 26 51.7**	**+1.9**
	comp=Z,1.0nm,0.5s,baz=82,slow=7.0,SNR=2.5							
AKASG	**Malin Array Be**	**33.21**	**309**	P		**P**	**12 26 23.2**	**+0.3**
AKBB	**Malin Array Si**	**33.21**	**309**	P		**P**	**12 26 24.1**	**+1.2**
AKBB				pmax		pmax		
	comp=Z,5.0nm,0.6s							
AKBB	**Malin Array Si**	**33.21**	**309**	P		**P**	**12 26 24.1**	**+1.2**
AKBB				IAmb		IAmb	12 26 24.9	
	comp=Z,4.6nm,0.6s							
NRIK	**Noril'sk**	**34.26**	**10**	P		**P**	**12 26 33.8**	**+1.9**
	comp=Z,3.0nm,0.5s,baz=203,slow=6.0,SNR=6.1							
NRIK	**Noril'sk**	**34.26**	**10**	*ce*P		**P**	**12 26 32.9**	**+1.1**
NRIK				pmax		pmax		
	comp=Z,11nm,1.5s							
BURAR	**Bucovina Array**	**35.55**	**303**	P		**P**	**12 26 43.0**	**-0.2**
BUR08	**Bucovina Ar. S**	**35.56**	**303**	P		**P**	**12 26 44.6**	**+1.2**
LVZ	**Lovozero**	**37.69**	**338**	P		**P**	**12 27 01.6**	**+0.5**
LVZ				pmax		pmax		
	comp=Z,44nm,1.5s							
LVZ	**Lovozero**	**37.69**	**338**	P		**P**	**12 27 01.6**	**+0.5**
FIA1	**FINESS Array S**	**37.74**	**326**	P		**P**	**12 27 02.7**	**+1.2**
FIA1				IAmb		IAmb	12 27 16.6	
	comp=Z,22nm,1.4s							
FINES	**FINESS Array B**	**37.74**	**326**	P		**P**	**12 27 03.0**	**+1.5**
	comp=Z,2.6nm,0.3s,baz=122,slow=8.6,SNR=41							
FINES				pP		**pP**	**12 27 30.2**	**+1.4**
	comp=Z,1.7nm,0.7s,baz=113,slow=11,SNR=1.8							
FINES	**FINESS Array B**	**37.74**	**326**	P		**P**	**12 27 02.0**	**+0.5**
NJ2	**Nanjing**	**39.30**	**82**	*e*P		**P**	**12 27 15.3**	**+0.3**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
ARC4	**ARCESS Array S**	**41.38**	**338**	P		**P**	**12 27 32.8**	**+1.2**
ARC2	**ARCESS Array S**	**41.38**	**338**	P		**P**	**12 27 32.6**	**+1.0**
ARA0	**ARCESS Array S**	**41.38**	**338**	*e*P		**P**	**12 27 33.5**	**+1.9**
ARCES	**ARCESS Array B**	**41.38**	**338**	P		**P**	**12 27 33.5**	**+1.9**
	comp=Z,6.7nm,0.5s,baz=114,slow=8.3,SNR=60							
KTK1	**Kautokeino**	**41.85**	**336**	*e*P		**P**	**12 27 36.7**	**+1.2**
HAMF	**Hammerfest**	**42.46**	**339**	*e*P		**P**	**12 27 42.4**	**+2.0**
BRG	**Berggiesshubel**	**42.89**	**308**	*e*P		**P**	**12 27 46.1**	**+2.0**
	comp=Z,13nm,1.4s							
BRG	**Berggiesshubel**	**42.89**	**308**	*e*P		**P**	**12 27 46.1**	**+2.0**
BRG				pmax		pmax		
	comp=Z,13nm,1.5s							
GERES	**GERESS Array B**	**43.19**	**305**	P		**P**	**12 27 47.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=91,slow=7.9,SNR=1.9							
GERES				PcP		**PcP**	**12 29 32.7**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=93,slow=2.7

WSI	**Waingapu**	**64.95**	**125**	P	P	12 30 32.7	+7.9		
LSZ	**Lusaka**	**65.48**	**226**	P	**P**	**12 30 29.0**	**+0.7**		
LSZ				pmax	pmax				
	comp=Z,5.0nm,0.7s								
LSZ	**Lusaka**	**65.48**	**226**	P	**P**	**12 30 29.0**	**+0.7**		
LSZ				IAmb	IAmb	12 30 30.5			
	comp=Z,5.2nm,0.7s								
TOA0	**Torodi Ar. Sit**	**65.91**	**269**	P	**P**	**12 30 29.7**	**-1.4**		
TOA0				IAmb	IAmb	12 30 31.7			
	comp=Z,5.0nm,0.5s								
TORD	**Torodi Ar. Bea**	**65.91**	**269**	P	**P**	**12 30 30.2**	**-0.9**		
	comp=Z,3.4nm,0.4s,baz=49,slow=5.9,SNR=70								
A21K	**Barrow**	**67.43**	**15**	P	**P**	**12 30 39.8**	**-0.1**		
A21K				IAmb	IAmb	12 30 43.7			
	comp=Z,5.9nm,1.0s								
RES	**Resolute Bay**	**68.89**	**356**	P	**P**	**12 30 49.9**	**+1.0**		
	comp=Z,1.6nm,0.8s,baz=23,slow=7.7,SNR=1.5								
TOLK	**Toolik Lake Re**	**71.04**	**15**	P	**P**	**12 31 02.8**	**+0.5**		
TOLK				IAmb	IAmb	12 31 03.7			
	comp=Z,7.5nm,0.8s								
BMAR	**Burnt Mountain**	**73.06**	**14**	P	**P**	**12 31 15.3**	**+0.9**		
C36M	**Paulatuk**	**74.03**	**6**	P	**P**	**12 31 19.8**	**-0.1**		
INK	**Inuvik**	**74.05**	**9**	P	**P**	**12 31 21.0**	**+1.1**		
	comp=Z,3.0nm,0.4s,baz=327,slow=4.8,SNR=29								
INK	**Inuvik**	**74.05**	**9**	P	**P**	**12 31 20.5**	**+0.5**		
INK				pmax	pmax				
	comp=Z,9.0nm,1.3s								
INK	**Inuvik**	**74.05**	**9**	P	**P**	**12 31 20.5**	**+0.5**		
INK				IAmb	IAmb	12 31 21.8			
	comp=Z,9.5nm,1.2s								
MDM	**Murphy Dome**	**74.43**	**16**	P	**P**	**12 31 22.3**	**0.0**		
LBTB	**Lobatse**	**74.68**	**222**	P	**P**	**12 31 25.4**	**+1.1**		
LBTB				pmax	pmax				
	comp=Z,21nm,1.3s								
LBTB	**Lobatse**	**74.68**	**222**	P	**P**	**12 31 25.4**	**+1.1**		
LBTB				IAmb	IAmb	12 31 26.7			
	comp=Z,21nm,1.2s								
DBIC	**Dimbokro**	**74.89**	**267**	P	**P**	**12 31 25.1**	**-0.6**		
	comp=Z,2.8nm,0.7s,baz=42,slow=7.8,SNR=4.8								
ILAR	**Eielson Array**	**74.89**	**16**	P	**P**	**12 31 24.4**	**-0.5**		
	comp=Z,1.4nm,0.8s,baz=301,slow=4.7,SNR=12								
ILAR	**Eielson Array**	**74.89**	**16**	P	**P**	**12 31 23.6**	**-1.3**		
PPLA	**Purkeypile**	**75.19**	**19**	P	**P**	**12 31 25.9**	**-0.9**		
PPLA				IAmb	IAmb	12 31 32.4			
	comp=Z,25nm,1.4s								
DHY	**Denali Highway**	**76.24**	**17**	P	**P**	**12 31 31.9**	**-0.9**		
DHY				IAmb	IAmb	12 31 44.6			
	comp=Z,17nm,1.4s								
K27K	**Chicken**	**76.56**	**14**	P	**P**	**12 31 35.2**	**+0.7**		
DAWY	**Dawson**	**77.05**	**13**	P	**P**	**12 31 37.4**	**+0.2**		
BCAR	**Beaver Creek A**	**77.48**	**15**	P	**P**	**12 31 40.1**	**+0.4**		
BOSA	**Boshof**	**77.74**	**220**	P	**P**	**12 31 42.4**	**+0.8**		
	comp=Z,7.0nm,0.8s,baz=46,slow=7.1,SNR=8.9								
BOSA	**Boshof**	**77.74**	**220**	P	**P**	**12 31 43.0**	**+1.4**		
BOSA				pmax	pmax				
	comp=Z,9.0nm,1.0s								
BOSA	**Boshof**	**77.74**	**220**	P	**P**	**12 31 43.0**	**+1.4**		
BOSA				IAmb	IAmb	12 31 43.7			
	comp=Z,9.3nm,0.9s								
VRDI	**Verde Repeater**	**78.76**	**16**	P	**P**	**12 31 44.5**	**-2.4**		
VRDI				IAmb	IAmb	12 31 47.6			
	comp=Z,10nm,1.2s								
BALM	**Baldy**	**79.18**	**16**	P	**P**	**12 31 49.2**	**0.0**		
BALM				IAmb	IAmb	12 31 50.4			
	comp=Z,5.1nm,0.7s								
CTGM	**Chitina Glacie**	**79.46**	**15**	P	**P**	**12 31 51.0**	**+0.2**		
CTGM				IAmb	IAmb	12 31 55.9			
	comp=Z,16nm,1.3s								
HYT	**Haines Junctio**	**80.37**	**14**	P	**P**	**12 31 56.6**	**+1.0**		
WHY	**Whitehorse**	**81.01**	**13**	P	**P**	**12 31 57.1**	**-1.9**		
YKA	**Yellowknife Ar**	**81.41**	**3**	P	**P**	**12 32 01.4**	**+0.6**		
	comp=Z,3.5nm,0.6s,baz=2.1,slow=5.1,SNR=21								
WRA	**Warramunga Arr**	**81.73**	**122**	P	**P**	**12 32 02.7**	**-0.5**		
	comp=Z,0.7nm,0.7s,baz=324,slow=4.9,SNR=16								
WRA				pP	**pP**	**12 32 36.9**	**+2.3**		
	comp=Z,0.9nm,0.5s,baz=326,slow=4.9,SNR=4.4								
WRA	**Warramunga Arr**	**81.73**	**122**	P	**P**	**12 32 02.1**	**-1.1**		
WRAB	**Tennant Creek**	**81.73**	**122**	P	**P**	**12 32 00.3**	**-2.9**		
WRAB				pmax	pmax				
	comp=Z,2.0nm,1.0s								
WRAB	**Tennant Creek**	**81.73**	**122**	P	**P**	**12 32 00.3**	**-2.9**		
WB2	**Warramunga Arr**	**81.74**	**122**	P	**P**	**12 32 01.8**	**-1.5**		
WC3	**Warramunga Arr**	**81.77**	**122**	P	**P**	**12 32 02.5**	**-0.9**		
DLBC	**Dease Lake**	**83.93**	**11**	P	**P**	**12 32 15.5**	**+1.4**		
	comp=Z,2.1nm,1.0s,baz=106,slow=1.9,SNR=4.7								
DLBC	**Dease Lake**	**83.93**	**11**	P	**P**	**12 32 14.8**	**+0.6**		
ASAR	**Alice Springs**	**83.99**	**125**	P	**P**	**12 32 14.4**	**-0.4**		
	comp=Z,0.6nm,0.6s,baz=313,slow=4.7,SNR=18								
ASAR				pP	**pP**	**12 32 48.6**	**+2.3**		
	comp=Z,0.9nm,0.7s,baz=306,slow=4.9,SNR=5.3								
ASAR	**Alice Springs**	**83.99**	**125**	P	**P**	**12 32 12.8**	**-2.0**		
CTA	**Charters Tower**	**90.29**	**115**	P	**P**	**12 32 44.8**	**-0.5**		
	comp=Z,1.5nm,0.5s,baz=54,slow=8.7,SNR=1.6								
NEW	**Newport**	**95.45**	**6**	P	**P**	**12 33 09.5**	**+0.7**		
	comp=Z,0.8nm,0.7s,baz=295,slow=22,SNR=2.2								
PLCA	**Paso Flores**	**149.95**	**250**	PKPbc	**PKPbc**	**12 39 34.3**	**+0.4**		
	comp=Z,3.7nm,1.0s,baz=126,slow=4.7,SNR=5.3								
PLCA	**Paso Flores**	**149.95**	**250**	PKIKP	**PKPdf**	**12 39 31.4**	**+2.5**		
PLCA	**Paso Flores**	**149.95**	**250**		**PKPdf**	**12 39 31.4**	**+2.5**		

*GCMT **09** 12:24:11.8±0.4,44.20N±0.02×129.98W±0.03,h20km±2km, MW4.8/81,Moment Tensor Solution. s8,c9; s81,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_rr0.15±.13; $M_{\theta\theta}$-1.37±.10; $M_{\phi\phi}$1.22±.08; $M_r\theta$0.08±.20; $M_{\theta\phi}$-1.16±.08; $M_r\phi$0.60±.18; Best double couple: M_o1.84600×10^{16} NP1:ϕs293.00000°,δ71.00000°,λ173.00000°. NP2: ϕs25.00000°,δ84.00000°,λ19.00000°. Principal axes: T 1.8360, Plg18.0000°, Azm251.0000°; N 0.0200, Plg70.0000°, Azm43.0000°; P -1.8570, Plg9.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*IDC **09** 12:24:11.1±1.4,44.38N×129.67W,h0km,mb3.9/11, mb1 4.1/17,mb1mx4.0/42,mbtmp3.9/17,ML3.5/6,MS3.7/20, Ms1 3.7/20,ms1mx3.5/50 Error ellipse: s-maj=29.8km s-min=12.1km az=43.0*

*ANF **09** 12:24:12.2±1.0,44.20N×129.51W,h0km,ML3.8/5,Error ellipse: s-maj=13.0km s-min=7.3km az=31.0*

*NEIC **09** 12:24:13.8±2.7,44.53N±0.08×129.7W±0.1,h10km±2km, mb4.4/5,Error ellipse: s-maj=17.4km s-min=13.9km az=253.0*

ISC 09 12:24:13.7±0.8,**44.50N**±0.0°07×**129.57W**±0.08,**h10**km, **n225**,σ1§**63**/211,**mb3.8**/9,**MS3.6**/16,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	h m s	ISC	Res
				Op			Time		
I02D	**Swisshome**	**4.13**	**93**	P		**Pn**	**12 25 15.6**		**-1.1**
	baz=279								
I02D				S		**Sn**	**12 26 04.5**		**-0.5**
	baz=279								
KEBM	**Edson Butte**	**4.13**	**111**	Pn		**Pn**	**12 25 17.3**		**+0.4**
KEBM				Sn		**Sn**	**12 26 03.9**		**-1.4**
J01E	**Myrtle Point**	**4.29**	**106**	P		**Pn**	**12 25 17.1**		**-1.9**
	baz=291								
J01E				S		**Sn**	**12 26 07.2**		**-2.0**
	baz=291								
COR	**Corvallis**	**4.48**	**87**	Pn		**Pn**	**12 25 21.5**		**-0.1**
COR				Sn		**Sn**	**12 26 11.6**		**-2.1**
KBO	**Bosley Butte**	**4.52**	**119**	Pn		**Pn**	**12 25 21.3**		**-0.9**
G03D	**McMinnville, O**	**4.54**	**79**	P		**Pn**	**12 25 22.1**		**-0.3**
	baz=264								
I03D	**Drain, OR**	**4.55**	**98**	P		**Pn**	**12 25 21.2**		**-1.4**
	baz=283								
I03D				S		**Sn**	**12 26 15.3**		**-0.2**
	baz=283								
K02D	**Willamette Mer**	**4.65**	**111**	P		**Pn**	**12 25 21.6**		**-2.5**
	baz=296								
K02D				S		**Sn**	**12 26 16.2**		**-1.9**
	baz=296								
E03A	**Lebam**	**4.69**	**62**	Pn		**Pn**	**12 25 24.3**		**-0.2**
H04D	**Lebanon**	**4.89**	**87**	P		**Pn**	**12 25 26.9**		**-0.3**
	baz=273								
H04D				S		**Sn**	**12 26 25.3**		**+1.5**
	baz=273								
F04D	**Rainier, OR**	**4.89**	**69**	P		**Pn**	**12 25 27.7**		**+0.5**
	baz=254								
NLWA	**Neilton Lookou**	**4.92**	**52**			**Pn**	**12 25 27.8**		**+0.2**
NLWA				Sn		**Sn**	**12 26 20.2**		**-4.4**
L02E	**Cave Junction**	**4.94**	**116**	P		**Pn**	**12 25 27.3**		**-0.7**
	baz=301								
L02E				S		**Sn**	**12 26 22.8**		**-2.3**
	baz=301								
KRMB	**Red Mountain**	**5.11**	**124**	Pn		**Pn**	**12 25 32.4**		**+2.0**
HUMO	**Hull Mountain**	**5.17**	**109**	Pn		**Pn**	**12 25 30.2**		**-0.8**
HUMO				Sn		**Sn**	**12 26 29.7**		**-1.0**
I04A	**Tendick Farm,**	**5.20**	**95**	P		**Pn**	**12 25 31.3**		**-0.2**
	baz=281								
F04A	**Amboy**	**5.25**	**72**			**Pn**	**12 25 32.2**		**+0.1**
H04A	**Detroit Lake**	**5.28**	**85**	Pn		**Pn**	**12 25 32.3**		**-0.2**
H04A				Sn		**Sn**	**12 26 34.0**		**+0.6**
E04D	**Cinebar**	**5.33**	**65**	P		**Pn**	**12 25 33.6**		**+0.3**
	baz=251								
D03D	**Eldon**	**5.44**	**54**	P		**Pn**	**12 25 35.2**		**+0.5**
	baz=239								
D04E	**Lakebay**	**5.45**	**58**	P		**Pn**	**12 25 36.1**		**+1.2**
	baz=244								
J04D	**Umppqua Nationa**	**5.54**	**101**	P		**Pn**	**12 25 37.0**		**+0.6**
	baz=287								
YBH	**Yreka Blue Hor**	**5.73**	**116**	Pn		**Pn**	**12 25 37.6**		**-1.3**
	0.1nm,0.3s,baz=307,slow=12,SNR=6.1								
YBH				Sn		**Sn**	**12 26 43.5**		**-1.3**
	0.1nm,0.3s,baz=343,slow=9.5,SNR=1.3								
YBH	**Yreka Blue Hor**	**5.73**	**116**	Pn		**Pn**	**12 25 39.8**		**+1.0**
L04D	**Klamath Falls**	**5.77**	**111**	P		**Pn**	**12 25 39.6**		**+0.2**
	baz=297								
L04D				S		**Sn**	**12 26 46.2**		**+0.6**
	baz=297								
LON	**Longmire**	**5.89**	**65**			**Pn**	**12 25 41.1**		**+0.1**
I05D	**Terrebonne, OR**	**5.90**	**89**	P		**Pn**	**12 25 40.4**		**-0.7**
	baz=275								
G05D	**Wamic, OR**	**5.91**	**80**	P		**Pn**	**12 25 42.2**		**+1.0**
	baz=266								
PGC	**Sidney**	**5.92**	**43**			**Pn**	**12 25 41.2**		**0.0**
D05A	**Enumclaw**	**5.94**	**60**			**Pn**	**12 25 43.0**		**+1.4**
KMRM	**Mail Ridge**	**6.09**	**133**	Pn		**Pn**	**12 25 45.9**		**+2.1**
J05D	**Fort Rock, OR**	**6.14**	**99**	P		**Pn**	**12 25 44.2**		**-0.4**
	baz=285								
PINE	**Pine Mountain**	**6.25**	**94**	Pn		**Pn**	**12 25 45.5**		**-0.6**
A04D	**Lummi Island**	**6.34**	**46**	P		**Pn**	**12 25 48.0**		**+0.9**
	baz=231								
B05A	**Bryant**	**6.39**	**51**	P		**Pn**	**12 25 49.3**		**+1.4**
	baz=297								
WDC	**Whiskeytown Da**	**6.50**	**125**				**12 25 51.3**		**+1.9**
K05A	**Summer Lake**	**6.54**	**103**	Pn		**Pn**	**12 25 51.5**		**+1.4**
LTY	**Liberty**	**6.79**	**63**			**Pn**	**12 25 54.1**		**+0.6**
B06A	**Marblemount**	**6.87**	**51**	Pn		**Pn**	**12 25 55.0**		**+0.6**
C06D	**Leavenworth**	**6.92**	**57**	P		**Pn**	**12 25 56.8**		**+1.7**
	baz=244								
F07A	**Phinny Hill Vi**	**6.95**	**75**			**Pn**	**12 25 56.5**		**+0.9**
E07A	**Sunnyside**	**7.13**	**70**	Pn		**Pn**	**12 25 58.8**		**+0.8**
I07A	**Izee**	**7.24**	**90**	Pn		**Pn**	**12 26 00.8**		**+1.3**
MOD	**Modoc Plateau**	**7.25**	**108**			**Pn**	**12 26 02.9**		**+3.1**
HAWA	**Hanford**	**7.31**	**71**			**Pn**	**12 26 01.1**		**+0.7**
HOPS	**Hopland Field**	**7.34**	**136**			**Pn**	**12 25 58.8**		**-2.0**
G08A	**Pilot Rock**	**7.58**	**80**	Pn		**Pn**	**12 26 03.9**		**-0.3**
G2DX	**Geysers**	**7.62**	**136**			**Pn**	**12 26 04.7**		**-0.1**
E08A	**Dizer Farm, El**	**7.65**	**71**			**Pn**	**12 26 05.9**		**+0.8**
BBB	**Bella Bella**	**7.75**	**7**	Pn		**Pn**	**12 26 07.3**		**+0.9**
	0.4nm,0.3s,baz=180,slow=13,SNR=2.2								
BBB				LR		LR	12 28 46.8		
	comp=Z,409nm,18.2s,baz=181,slow=35								
ORV	**Oroville**	**7.78**	**127**	Pn		**Pn**	**12 26 08.2**		**+1.4**
D08A	**Wollman Farm,**	**7.87**	**67**	Pn		**Pn**	**12 26 08.2**		**+0.1**
B08A	**Colville Reser**	**8.05**	**58**	Pn		**Pn**	**12 26 10.4**		**-0.3**
J08A	**Circle Bar Ran**	**8.09**	**94**			**Pn**	**12 26 13.6**		**+2.3**
BEKR	**Beckworth**	**8.26**	**121**			**Pn**	**12 26 16.1**		**+2.5**
E09A	**Wood Farm, Sta**	**8.27**	**72**			**Pn**	**12 26 14.6**		**+0.9**
AFDM	**Forest Hills D**	**8.49**	**128**	Pn		**Pn**	**12 26 17.5**		**+0.8**
C09A	**Chrisman Ranch**	**8.51**	**63**	Pn		**Pn**	**12 26 16.4**		**-0.4**
BMO	**Blue Mountains**	**8.75**	**83**			**Pn**	**12 26 20.5**		**+0.3**
F10A	**Beach Ranch, E**	**8.83**	**76**			**Pn**	**12 26 21.3**		**-0.1**
RUBR	**Rubicon Trail**	**8.89**	**125**			**Pn**	**12 26 24.1**		**+1.8**
PAHR	**Pah Rah Range**	**8.96**	**119**	Pn		**Pn**	**12 26 25.6**		**+2.4**
VCNR	**Virginia City**	**9.04**	**122**			**Pn**	**12 26 27.3**		**+2.9**
PNTR	**Pine Nut**	**9.20**	**123**	Pn		**Pn**	**12 26 29.0**		**+2.5**
NEW	**Newport**	**9.39**	**62**	Pn		**Pn**	**12 26 28.9**		**-0.2**
	0.8nm,0.3s,baz=241,slow=9.3,SNR=11								
NEW				LR		LR	12 30 01.9		
	comp=Z,647nm,21.1s,baz=246,slow=37								
NEW	**Newport**	**9.39**	**62**	P		**Pn**	**12 26 28.8**		**-0.2**
	baz=251,SNR=6.8								
NEW	**Newport**	**9.39**	**62**			**Pn**	**12 26 29.4**		**+0.5**
CMB	**Columbia Colle**	**9.46**	**130**	Pn		**Pn**	**12 26 30.8**		**+0.8**
PLID	**Pearl Lake**	**9.67**	**82**			**Pn**	**12 26 33.6**		**+0.6**
WAKR	**Walker**	**9.67**	**125**			**Pn**	**12 26 31.3**		**-1.8**
MFID	**Camas Ranch**	**9.97**	**91**			**Pn**	**12 26 39.1**		**+2.1**
KVN	**Kaiserville**	**10.15**	**118**	Pn		**Pn**	**12 26 42.2**		**+2.7**
LHV	**Little Huntoon**	**10.39**	**123**			**Pn**	**12 26 46.6**		**+3.9**
NVAR	**Mina Array Bea**	**10.40**	**122**	Pn		**Pn**	**12 26 44.6**		**+1.6**
	0.1nm,0.3s,baz=292,slow=14,SNR=8.6								
NVAR				LR		LR	12 30 25.8		
	comp=Z,367nm,20.6s,baz=308,slow=36								
NVAR	**Mina Array Bea**	**10.40**	**122**			**Pn**	**12 26 45.5**		**+2.5**
MDPB	**Devils Postpil**	**10.47**	**127**	Pn		**Pn**	**12 26 46.1**		**+2.0**
OMMB	**Old Mammoth Mi**	**10.53**	**127**	Pn		**Pn**	**12 26 43.8**		**-1.1**
HLID	**Hailey**	**10.96**	**90**	P		**Pn**	**12 26 53.6**		**+3.0**
	baz=281,SNR=14								
HLID	**Hailey**	**10.96**	**90**			**Pn**	**12 26 53.0**		**+2.4**
JTMT	**Jette**	**11.10**	**68**	Pn		**Pn**	**12 26 53.9**		**+1.4**
MSO	**Missoula**	**11.18**	**72**	P		**Pn**	**12 26 54.2**		**+0.6**
	baz=264,SNR=15								
MSO	**Missoula**	**11.18**	**72**	Pn		**Pn**	**12 26 54.2**		**+0.6**
ELK	**Elko**	**11.21**	**105**	Pn		**Pn**	**12 26 55.8**		**+1.8**
	0.1nm,0.3s,baz=272,slow=8.0,SNR=14								
ELK				LR		LR	12 31 14.7		
	comp=Z,152nm,18.3s,baz=290,slow=38								
ELK	**Elko**	**11.21**	**105**				**12 26 56.7**		**+2.6**
BCYI	**Bear Canyon**	**11.57**	**85**	Pn		**Pn**	**12 27 01.1**		**+2.1**
WALA	**Waterton Lakes**	**11.66**	**61**	Pn		**Pn**	**12 26 58.6**		**-1.5**
VES	**Vestal, Richgr**	**11.79**	**134**	P		**Pn**	**12 27 00.6**		**-1.2**
	baz=321								
CWC	**Cottonwood Cre**	**11.88**	**129**	P		**Pn**	**12 27 04.7**		**+1.4**
	baz=317								
MCMT	**McKenzie Canyo**	**11.91**	**83**	Pn		**Pn**	**12 27 05.8**		**+2.0**
DLMT	**Dillon**	**12.06**	**80**	Pn		**Pn**	**12 27 05.4**		**-0.3**
R11A	**Troy Canyon, C**	**12.16**	**116**	P		**Pn**	**12 27 10.0**		**+3.0**
	baz=305								
R11A	**Troy Canyon, C**	**12.16**	**116**	Pn		**Pn**	**12 27 08.0**		**+1.0**
LRM	**Limekiln Ridge**	**12.16**	**78**	Pn		**Pn**	**12 27 08.3**		**+1.2**
ISA	**Isabella, Lake**	**12.24**	**132**	P		**Pn**	**12 27 09.0**		**+0.9**
	baz=320								
ISA	**Isabella, Lake**	**12.24**	**132**	Pn		**Pn**	**12 27 08.2**		**+0.1**
ARVC	**Arvin**	**12.47**	**135**	P		**Pn**	**12 27 11.3**		**+0.1**
	baz=322								
FURC	**Furnace Creek,**	**12.56**	**125**	P		**Pn**	**12 27 15.4**		**+3.1**
	baz=314,SNR=7.6								
HVU	**Hansel Valley**	**12.57**	**97**	Pn		**Pn**	**12 27 14.2**		**+1.6**
TPNV	**Topopah Spring**	**12.60**	**122**	P		Pn	**12 27 18.1**		**+5.1**
	baz=311								
TPNV	**Topopah Spring**	**12.60**	**122**	Pn		**Pn**	**12 27 17.0**		**+3.9**
HRY	**Holter Researc**	**12.62**	**74**	Pn		**Pn**	**12 27 11.4**		**-1.8**
SPR3	**Spring Creek 3**	**12.63**	**111**	Pn		**Pn**	**12 27 15.6**		**+1.9**
BGU	**Big Grassy Mou**	**12.68**	**101**	Pn		**Pn**	**12 27 15.1**		**+1.0**
BOZ	**Bozeman (W)**	**12.74**	**79**	P		**Pn**	**12 27 16.9**		**+2.0**
	baz=272,SNR=8.9								
BOZ	**Bozeman (W)**	**12.74**	**79**	Pn		**Pn**	**12 27 16.5**		**+1.6**
QLMT	**Earthquake Lak**	**12.92**	**82**	Pn		**Pn**	**12 27 19.1**		**+1.6**
PRN	**Pahroc Range**	**13.05**	**118**	Pn		**Pn**	**12 27 21.2**		**+2.0**
YHB	**Horse Butte**	**13.10**	**82**	Pn		**Pn**	**12 27 23.1**		**+3.3**
YHL	**Hebgen Lake**	**13.10**	**82**	Pn		**Pn**	**12 27 21.9**		**+2.0**
DUG	**Dugway, Tooele**	**13.12**	**103**	P		**Pn**	**12 27 20.5**		**+0.4**
	baz=295								
PSUT	**Pine Spring**	**13.19**	**111**	Pn		**Pn**	**12 27 21.8**		**+0.6**
ECR	**Eagle Creek**	**13.23**	**90**	Pn		**Pn**	**12 27 25.6**		**+3.9**
YMR	**Madison River**	**13.27**	**83**	Pn		**Pn**	**12 27 26.2**		**+4.0**
SHOC	**Shoshone, Teco**	**13.29**	**126**	P		**Pn**	**12 27 25.1**		**+2.7**
	baz=315,SNR=7.7								
YHH	**Holmes Hill**	**13.34**	**82**	Pn		**Pn**	**12 27 25.7**		**+2.5**
IMW	**Indian Meadow**	**13.38**	**86**	Pn		**Pn**	**12 27 27.6**		**+3.8**
GSC	**Goldstone, Bar**	**13.42**	**129**	P		**Pn**	**12 27 25.9**		**+1.8**
	baz=318								
GSC	**Goldstone, Bar**	**13.42**	**129**	Pn		**Pn**	**12 27 25.4**		**+1.2**
TPAW	**Teton Pass**	**13.45**	**88**	Pn		**Pn**	**12 27 27.8**		**+3.1**
YNR	**Norris Junctio**	**13.46**	**82**	Pn		**Pn**	**12 27 28.6**		**+3.7**
HWUT	**Hardware Ranch**	**13.48**	**96**	Pn		**Pn**	**12 27 27.2**		**+2.1**
AHID	**Auburn Hatcher**	**13.49**	**91**	Pn		**Pn**	**12 27 25.8**		**+0.6**
FLWY	**Flagg Ranch**	**13.53**	**85**	Pn		**Pn**	**12 27 26.2**		**+0.5**
REDW	**Red Top Meadow**	**13.54**	**88**	Pn		**Pn**	**12 27 28.6**		**+2.7**
SHPR	**Sheep Range**	**13.55**	**121**	Pn		**Pn**	**12 27 29.8**		**+3.7**
H17A	**Grant Village**	**13.57**	**84**	P		Pn	**12 27 31.4**		**+5.0**
	baz=278								
H17A	**Grant Village**	**13.57**	**84**	Pn		**Pn**	**12 27 29.0**		**+2.6**
TUQ	**Turquoise Moun**	**13.82**	**126**	P		**Pn**	**12 27 32.2**		**+2.5**
	baz=316								
DLBC	**Dease Lake**	**13.96**	**359**	Pn		**Pn**	**12 27 34.6**		**+3.1**
	0.1nm,0.3s,baz=179,slow=12,SNR=3.2								
TCRU	**Three Creeks R**	**14.10**	**109**	Pn		**Pn**	**12 27 36.1**		**+2.5**
EGMT	**Eagleton**	**14.15**	**69**	P		**Pn**	**12 27 35.9**		**+1.8**
	baz=263,SNR=5.5								
SZCU	**Shurtz Canyon**	**14.21**	**113**	Pn		**Pn**	**12 27 37.7**		**+2.6**
MVU	**Marysvale**	**14.31**	**109**	Pn		**Pn**	**12 27 39.0**		**+2.5**
MSU	**Marysvale**	**14.33**	**109**	Pn		**Pn**	**12 27 38.5**		**+1.7**
RLMT	**Red Lodge**	**14.43**	**80**	P		**P**	**12 27 42.4**		**-2.6**
	baz=275								
BW06	**Boulder Array**	**14.60**	**90**	P		**P**	**12 27 46.0**		**-0.9**
	baz=284								
PDAR	**Pinedale Array**	**14.60**	**90**	Pn		**P**	**12 27 44.6**		**-2.3**
	0.1nm,0.3s,baz=284,slow=12,SNR=8.8								
PDAR				LR		LR	12 33 25.3		
	comp=Z,439nm,19.4s,baz=286,slow=38								
PDAR	**Pinedale Array**	**14.60**	**90**	Pn		**Pn**	**12 27 39.7**		**-0.6**
BELC	**Belle Mtn. Jos**	**14.83**	**130**	P		**P**	**12 27 48.6**		**-0.8**
	baz=319								
PFO	**Pinyon Flats O**	**14.88**	**133**	Pn		**P**	**12 27 48.0**		**-1.9**
	0.1nm,0.3s,baz=321,slow=12,SNR=4.7								
PFO				LR		LR	12 32 37.3		
	comp=Z,280nm,21.7s,baz=306,slow=34								
PFO	**Pinyon Flats O**	**14.88**	**133**	P		**P**	**12 27 50.8**		**+0.9**
	baz=321								
109C	**Camp Elliot, M**	**15.12**	**136**	P		**P**	**12 27 51.4**		**-1.0**
	baz=324								
IRM	**Iron Mountain**	**15.19**	**128**	P		**P**	**12 27 51.6**		**-1.6**
	baz=318,SNR=11								
MONP2	**Monument Peak**	**15.46**	**134**	P		**Pn**	**12 27 50.5**		**-1.5**
	baz=323								
PDMCI	**Parker Dam,Lak**	**15.66**	**125**	P		**P**	**12 27 59.2**		**+0.8**
	baz=316,SNR=5.5								
SWSC	**Sam W. Stewart**	**15.74**	**132**	P		**P**	**12 27 59.7**		**+0.4**
	baz=322,SNR=5.1								
IKP	**In-Ko-Pah, Jac**	**15.81**	**134**	P		**P**	**12 28 01.1**		**+0.8**
	baz=323,SNR=5.5								
O20A	**White River Ci**	**16.36**	**98**	P		**P**	**12 28 06.5**		**+0.1**
	baz=293								
LAO	**LASA Array**	**16.48**	**74**	P		**P**	**12 28 07.0**		**-0.5**
	baz=271								
WUAZ	**Wupatki**	**16.55**	**117**	P		**Pn**	**12 28 07.6**		**+1.7**
	baz=309								
MVCO	**Mesa Verde**	**17.50**	**107**	P		**P**	**12 28 22.1**		**+3.0**
	baz=302								

	comp=Z,359nm,30.0s								
PPT2					*e*LR	LR	12 53 58.9		
	comp=Z,60nm,24.5s								
PPT2	**Papeete2**	**64.43**	**201**		*e*T	T	13 44 24.0		
	comp=Z,5.9nm,0.3s								
PAE	**Paea**	**64.50**	**201**		*e*T	T	13 44 23.8		
	comp=Z,1.6nm,0.2s								
TVO	**Taravao**	**64.54**	**201**		*e*T	T	13 44 28.5		
	comp=Z,8.2nm,0.2s								
USRK	**Ussuriysk Ar.**	**65.81**	**309**		LR	LR	13 02 04.1		
	comp=Z,32nm,18.8s,baz=151,slow=34								
TBI	**Tubuai**	**69.93**	**199**		*e*T	T	13 51 15.7		
	comp=Z,15nm,0.3s								
NOA	**NORSAR Array B**	**70.10**	**19**		LR	LR	13 04 04.2		
	comp=Z,24nm,18.1s,baz=325,slow=34								
FINES	**FINESS Array B**	**72.58**	**12**		LR	LR	13 06 06.7		
	comp=Z,32nm,18.7s,baz=330,slow=35								
SONM	**Songino Array**	**75.74**	**325**		P	**P**	**12 35 57.7**	**-1.7**	
	comp=Z,0.8nm,0.8s,baz=33,slow=3.4,SNR=4.3								
SONM					LR	LR	13 09 43.7		
	comp=Z,79nm,18.5s,baz=44,slow=36								
GUMO	**Guam**	**77.47**	**277**		LR	LR	13 01 44.0		
	comp=Z,76nm,21.9s,baz=348,slow=29								
ZALV	**Zalesovo Beam**	**77.62**	**340**		P	**P**	**12 36 08.8**	**-1.0**	
	comp=Z,0.4nm,0.5s,baz=1.4,slow=5.8,SNR=2.0								
ZALV					LR	LR	13 13 40.4		
	comp=Z,28nm,20.9s,baz=24,slow=38								
GERES	**GERESS Array B**	**81.63**	**24**		P	**P**	**12 36 31.4**	**-0.4**	
	comp=Z,0.3nm,0.5s,baz=347,slow=3.0,SNR=3.1								
AKASG	**Malin Array Be**	**83.40**	**13**		P	**P**	**12 36 40.5**	**-0.3**	
	comp=Z,0.2nm,0.3s,baz=352,slow=4.7,SNR=2.0								
MKAR	**Makanchi Array**	**84.84**	**339**		LR	LR	13 17 11.2		
	comp=Z,62nm,18.2s,baz=22,slow=37								
DZM	**Mont Dzumac**	**88.27**	**237**		*e*LR	LR	13 04 58.5		
	comp=Z,98nm,22.7s								
GEYT	**Alibeck**	**97.65**	**354**		LR	LR	13 26 37.1		
	comp=Z,31nm,18.7s,baz=25,slow=38								

*VAO **09** 12:46:21.8±1.3, 12°.88N×72°.90W, h10km, mb4.7*
*IDC **09** 12:46:23.4±0.5, 12°.61N×72°.91W, h0km, mb4.0/16, mb1 4.3/19, mb1mx4.2/33, mbtmp4.1/19, ML4.0/3, MS3.6/10, Ms1 3.6/10, ms1mx3.2/35, Error ellipse: s-maj=17.5km s-min=12.4km az=55.0*
*NEIC **09** 12:46:26.9±2.4, 12°.89N±0°.06×72°.59W±0°.07, h37km±6km, mb4.4/41, Error ellipse: s-maj=9.9km s-min=8.5km az=72.0*
*RSNC **09** 12:46:26.7±0.9, 12°.77N×72°.76W, h32km±18km, ML4.3, Mw4.3*

ISC 09 12:46:26.5±0.3, **12°.86N**±0°.02×**72°.61W**±0°.03, **h35**km, **n152, s218/168, mb4.3/34, MS3.5/8, 1C, Near north coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URIC	**Uribia, Colomb**	**1.30**	**152**	*e*P		**Pn**	**12 46 46.9**	**-1.2**
URIC				*e*S		**Sn**	**12 47 04.3**	**+0.1**
URIC				*i*			12 47 07.6	
	comp=Z,4µm,0.6s							
SMRC	**Santa Marta, M**	**2.31**	**223**	*i*P		**Pn**	**12 46 59.4**	**-2.7**
SMRC				*e*S		**Sn**	**12 47 24.8**	**-4.5**
SMRC				*i*			12 47 27.0	
	comp=Z,2µm,0.5s							
CVALL	**Valledupar, Ce**	**2.42**	**195**	*e*P		**Pn**	**12 47 02.6**	**-1.0**
CVALL				*e*S		**Sn**	**12 47 28.5**	**-3.6**
CVALL				*i*			12 47 35.1	
	comp=Z,3µm,0.5s							
ARGC	**Ariguani, Magd**	**3.39**	**209**	*e*P		**Pn**	**12 47 14.2**	**-2.7**
ARGC				*e*S		**Sn**	**12 47 54.0**	**-2.0**
ARGC				*i*			12 47 59.4	
	comp=Z,406nm,0.4s							
SJCC	**San Jacinto, C**	**3.88**	**221**	*e*P		**Pn**	**12 47 20.9**	**-2.8**
SDV	**Santo Domingo**	**4.40**	**154**	Pn		**Pn**	**12 47 32.4**	**+1.4**
	comp=Z,62nm,0.3s,baz=333,slow=7.4,SNR=59							
SDV				Sn		**Sn**	**12 48 24.3**	**+3.3**
	comp=Z,58nm,0.3s,baz=72,slow=21,SNR=3.8							
SDV	**Santo Domingo**	**4.40**	**154**	*e*P		**Pn**	**12 47 32.1**	**+1.2**
SDV	**Santo Domingo**	**4.40**	**154**	*e*P		**Pn**	**12 47 32.1**	**+1.2**
OCAC	**Ocana**	**4.64**	**189**	*e*P		**Pn**	**12 47 33.8**	**-0.6**
MOTC	**Monteria, Cord**	**5.05**	**217**	*e*P		**Pn**	**12 47 39.9**	**+0.2**
PAMC	**Pamplona, Colo**	**5.49**	**181**	*e*P		**Pn**	**12 47 45.8**	**-0.4**
LGNH	**Logne**	**5.62**	**360**	Pn		**Pn**	**12 47 49.7**	**+2.2**
LGNH						**Sn**	**12 48 52.8**	**+1.9**
BRRC	**Barranca, Sant**	**5.82**	**191**	*e*P		**Pn**	**12 47 49.0**	**-1.3**
BRRC				*e*S		**Sn**	**12 48 56.0**	**+0.1**
BRRC				*i*			12 49 13.4	
	comp=Z,131nm,0.5s							
UREC	**San Jos de Ur**	**5.83**	**210**	*e*P		**Pn**	**12 47 51.5**	**+0.9**
UREC				*e*S		**Sn**	**12 48 51.8**	**-4.5**
UREC				*i*			12 48 59.5	
	comp=Z,170nm,0.4s							
BANI	**BANI**	**5.91**	**21**			**Pn**	**12 47 51.0**	**-0.7**
SDDR	**Presa de Saban**	**6.22**	**12**	Pn		**Pn**	**12 47 57.0**	**+1.1**
SDDR				Sn		**Sn**	**12 49 09.2**	**+3.5**
CAPC	**Capurgana**	**6.27**	**228**	*e*P		**Pn**	**12 47 52.5**	**-4.1**
CAPC				*e*S		Sn	**12 48 58.3**	**-8.8**
CAPC				*i*			12 49 05.5	
	comp=Z,119nm,0.3s							
CMJ	**Castle Mountai**	**6.38**	**326**	*i*P		**Pn**	**12 47 59.1**	**+1.0**
CMJ				*i*S		**Sn**	**12 49 07.2**	**-2.5**
TAMC	**Tame, Arauca**	**6.43**	**173**	*e*P		**Pn**	**12 47 59.7**	**+0.9**
TAMC				*e*S		**Sn**	**12 49 11.5**	**+0.4**
TAMC				*i*			12 49 22.7	
	comp=Z,131nm,0.5s							
PTBC	**PUERTO BERRIO,**	**6.54**	**196**	*e*P		**Pn**	**12 47 58.7**	**-1.6**
PCJ	**Portland Cotta**	**6.55**	**318**	*i*P		**Pn**	**12 48 00.9**	**+0.6**
STH	**Stony Hill**	**6.58**	**323**	*i*P		**Pn**	**12 48 01.5**	**+0.6**
STH				*i*S		**Sn**	**12 49 10.9**	**-3.8**
DR12	**Loma Pena Alta**	**6.66**	**27**			**Pn**	**12 48 00.1**	**-1.8**
DR12				Sn		**Sn**	**12 49 15.9**	**-0.8**
BNJ	**Bonny Gate**	**6.86**	**323**	*i*P		**Pn**	**12 48 04.1**	**-0.6**
RUSC	**La Rusia**	**6.94**	**184**	*e*P		**Pn**	**12 48 05.8**	**-0.4**
BBJ	**Bamboo Saint A**	**7.09**	**321**	*i*P		**Pn**	**12 48 09.2**	**+1.3**
MTDJ	**Mount Denham**	**7.14**	**319**	Pn		**Pn**	**12 48 09.2**	**+0.6**
HELC	**Santa Helena**	**7.22**	**204**	*e*P		**Pn**	**12 48 11.2**	**+1.2**
SPBC	**San Pablo de B**	**7.30**	**192**	*e*P		**Pn**	**12 48 10.5**	**-0.4**
MLPR	**Magueyes Islan**	**7.39**	**46**	Pn		**Pn**	**12 48 08.5**	**-3.4**
MLPR				Sn		**Sn**	**12 49 31.7**	**-2.8**
GTBY	**Guantanamo Bay**	**7.43**	**341**	Pn		**Pn**	**12 48 13.1**	**+0.7**
GTBY				Sn		**Sn**	**12 49 33.3**	**-2.2**
MPR	**Mayaguez**	**7.49**	**44**			**Pn**	**12 48 09.9**	**-3.3**
ICMP	**Isla Caja de M**	**7.70**	**49**	Pn		**Pn**	**12 48 13.9**	**-2.3**
OBIP	**Obispado Ponce**	**7.75**	**48**	Pn		**Pn**	**12 48 13.2**	**-3.6**
AOPR	**Arecibo Observ**	**7.84**	**45**			**Pn**	**12 48 14.9**	**-3.2**
GUY2C	**Guyana, Caldas**	**8.06**	**200**	*e*P		**Pn**	**12 48 22.2**	**+0.6**
EMPR	**Esperanza - Ma**	**8.09**	**46**	Pn		**Pn**	**12 48 18.3**	**-3.2**
SJG	**San Juan**	**8.12**	**49**	Pn		Pn	12 48 17.8	-4.1
	comp=Z,4.5nm,0.3s,baz=210,slow=13,SNR=8.9							
SJG				Sn		**Sn**	**12 49 48.8**	**-3.8**
	comp=Z,7.4nm,0.3s,baz=63,slow=21,SNR=16							
SJG				LR		LR	12 51 50.0	
	comp=Z,192nm,18.5s,baz=251,slow=38							
SJG	**San Juan**	**8.12**	**49**			Pn	12 48 18.1	-3.8
SJG						**Sn**	**12 49 47.6**	**-5.0**
ROSC	**El Rosal**	**8.14**	**192**	Pn		**Pn**	**12 48 22.7**	**+0.1**
	comp=Z,6.8nm,0.3s,baz=48,slow=5.7,SNR=38							
ROSC				Sn		**Sn**	**12 49 59.9**	**+6.2**
	comp=Z,11nm,0.3s,baz=195,slow=23,SNR=1.8							
ROSC	**El Rosal**	**8.14**	**192**	*e*P		**Pn**	**12 48 24.1**	**+1.5**
ROSC	**El Rosal**	**8.14**	**192**	Pn		**Pn**	**12 48 23.0**	**+0.4**
PDPR	**Patillas Dam,**	**8.16**	**50**			Pn	12 48 18.3	-4.1
PCRV	**Puerto La Cruz**	**8.25**	**108**	Pn		**Pn**	**12 48 27.1**	**+3.3**
	comp=Z,3.8nm,0.3s,baz=304,slow=2.6,SNR=12							
PCRV				Sn		**Sn**	**12 49 55.8**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=20,slow=20,SNR=6.9							
PLCV	**Puerto La Cruz**	**8.30**	**108**			**Pn**	**12 48 27.1**	**+2.7**
PLCV						**Sn**	**12 49 55.8**	**-1.2**
HUMP	**Col San Antoni**	**8.37**	**50**			Pn	12 48 21.2	-4.1
HUMP						**Sn**	**12 49 54.9**	**-3.6**
CBYP	**Canovanas**	**8.44**	**50**			Pn	12 48 22.3	-4.0
MTP	**Monte Pirata**	**8.56**	**52**			Pn	12 48 23.8	-4.2
TOLC	**Tolima**	**8.65**	**198**	*e*P		**Pn**	**12 48 31.8**	**+2.3**
CUPR	**Culebra, Puert**	**8.89**	**52**	Pn		Pn	12 48 28.1	-4.5
YOTC	**Yotoco, Valle**	**9.56**	**203**	*e*P		**Pn**	**12 48 43.6**	**+1.7**
CBCY	**The Bluff, Cay**	**9.69**	**316**			**Pn**	**12 48 42.5**	**-1.0**
LCCY	**Blossom Villag**	**9.87**	**314**	Pn		**Pn**	**12 48 46.3**	**+0.5**
FSCY	**Frank Sound, G**	**10.45**	**309**	Pn		**Pn**	**12 48 52.9**	**-0.9**
SKI	**Saint Kitts**	**10.51**	**64**	Pn		Pn	12 48 50.2	-4.5
FLOC	**Florencia**	**11.60**	**195**	*e*P		**Pn**	**12 49 09.7**	**0.0**
JTS	**Las Juntas de**	**12.36**	**259**	Pn		Pn	12 49 15.4	-4.7
	comp=Z,0.6nm,0.3s,baz=277,slow=9.3,SNR=1.8							
JTS				Sn		Sn	12 51 26.4	-10
	comp=Z,0.3nm,0.3s,baz=66,slow=22,SNR=1.6							
JTS				LR		LR	12 54 12.4	
	comp=Z,170nm,20.4s,baz=98,slow=39							
JTS	**Las Juntas de**	**12.36**	**259**	Pn		**Pn**	**12 49 15.6**	**-4.5**
MTO3	**Montecristo**	**16.36**	**277**	P		**P**	**12 50 19.5**	**+3.1**
MACA	**Manacapuru-AM**	**19.84**	**143**	*e*P		**P**	**12 50 54.7**	**+0.3**
CZSB	**Cruzeiro do Su**	**20.45**	**180**	*e*P		**P**	**12 50 59.4**	**-1.8**
ATAH	**Atahualpa**	**20.68**	**196**	P		**P**	**12 51 03.8**	**-0.2**
	comp=Z,3.6nm,0.5s,baz=32,slow=12,SNR=1.7							
ATAH				S		**S**	**12 54 47.4**	**-6.2**
	comp=Z,2.3nm,0.6s,baz=330,slow=16,SNR=2.0							
ATAH				LR		LR	13 00 54.7	
	comp=Z,159nm,18.7s,baz=14,slow=43							
MDP	**Montagnes des**	**21.16**	**110**	P		**P**	**12 51 11.0**	**+2.2**
	comp=Z,7.3nm,0.6s,baz=305,slow=8.3,SNR=9.8							
CMIG	**Matias Romero**	**21.92**	**284**	P		**P**	**12 51 16.8**	**-0.2**
	comp=Z,3.8nm,0.8s,baz=86,slow=9.8,SNR=4.4							
CMIG				LR		LR	13 00 51.9	
	comp=Z,127nm,19.1s,baz=64,slow=40							
152A	**Waverly Hall**	**22.62**	**333**	P		**P**	**12 51 24.2**	**-0.2**
BIRD	**Birdtown, Kers**	**22.83**	**343**	P		**P**	**12 51 26.3**	**-0.2**
BIRD				IAmb		IAmb	12 51 32.8	
	comp=Z,22nm,1.3s							
V61A	**Roper**	**23.11**	**352**	P		**P**	**12 51 27.3**	**-2.1**
MALB	**Monte Alegre**	**23.35**	**127**	*e*P		**P**	**12 51 32.1**	**+0.2**
SAML	**Samuel**	**23.60**	**156**	P		**P**	**12 51 33.2**	**-1.1**
SAML				IAmb		IAmb	12 51 35.0	
	comp=Z,11nm,0.8s							
ITTB	**Itaituba**	**23.95**	**135**	*e*P		**P**	**12 51 37.8**	**+0.1**
MCPB	**Macapa, AP**	**24.25**	**121**	*e*P		**P**	**12 51 41.7**	**+1.3**
NNA	**Nana**	**25.04**	**190**	P		**P**	**12 51 47.1**	**-0.5**
	comp=Z,14nm,0.7s,baz=15,slow=8.1,SNR=7.7							
NNA	**Nana**	**25.04**	**190**	P		**P**	**12 51 48.0**	**+0.4**
NPGB	**Novo Progresso**	**26.17**	**138**	*e*P		**P**	**12 51 57.8**	**0.0**
CLDB	**Colider**	**28.89**	**144**	*e*P		**P**	**12 52 21.3**	**-0.9**
LPAZ	**La Paz**	**29.30**	**171**	P		**P**	**12 52 27.9**	**+1.4**
	comp=Z,1.1nm,0.5s,baz=340,slow=8.7,SNR=4.7							
LPAZ	**La Paz**	**29.30**	**171**	P		**P**	**12 52 27.1**	**+0.6**
LPAZ	**La Paz**	**29.30**	**171**	*e*P		**P**	**12 52 25.5**	**-0.9**
SIV	**San Ignacio**	**30.85**	**158**	LR		LR	13 07 00.6	
	comp=Z,99nm,18.4s,baz=352,slow=40							
PTLB	**Pontes e Lacer**	**31.12**	**154**	*e*P		**P**	**12 52 40.3**	**-1.6**
ROSB	**Rosario**	**32.32**	**117**	*e*P		**P**	**12 52 54.8**	**+2.2**
SNDB	**Serra Nova Dou**	**32.49**	**139**	*e*P		**P**	**12 52 54.9**	**+0.9**
PB11	**IPOC Station P**	**32.54**	**175**	P		**P**	**12 52 54.1**	**-0.4**
SMTB	**Santa Maria do**	**32.91**	**130**	*e*P		**P**	**12 52 59.8**	**+2.0**
TXAR	**Lajitas Array**	**33.15**	**305**	P		**P**	**12 53 02.3**	**+2.5**
	comp=Z,0.4nm,0.5s,baz=123,slow=8.6,SNR=19							
TXAR				PcP		**PcP**	**12 55 45.2**	**+2.8**
	comp=Z,0.4nm,0.5s,baz=131,slow=3.7,SNR=9.4							
TXAR	**Lajitas Array**	**33.15**	**305**	P		**P**	**12 53 00.9**	**+1.1**
TX31	**Lajitas Ar. Si**	**33.15**	**305**	P		**P**	**12 52 59.9**	**+0.1**
ARAG	**Araguaiana, MT**	**35.05**	**143**	*e*P		**P**	**12 53 15.2**	**-1.1**
LVC	**Limon Verde**	**35.44**	**174**	*e*P		**P**	**12 53 18.9**	**-0.9**
MNTX	**Cornudas Mount**	**35.45**	**307**	P		**P**	**12 53 22.6**	**+2.9**
MNTX				IAmb		IAmb	12 53 23.2	
	comp=Z,2.5nm,0.8s							
SLBS	**Sierra La Lagu**	**36.95**	**292**	P		**P**	**12 53 36.4**	**+3.8**
SLBS				IAmb		IAmb	12 53 59.2	
	comp=Z,13nm,1.4s							
SDBA	**SAO DESIDERIO**	**37.22**	**131**	*e*P		**P**	**12 53 35.9**	**+1.0**
PB14	**IPOC Station P**	**37.32**	**177**	P		**P**	**12 53 36.0**	**+0.2**
BDFB	**Brasilia**	**37.33**	**139**	P		**P**	**12 53 37.9**	**+2.0**
	comp=Z,2.6nm,0.7s,baz=345,slow=14,SNR=5.4							
EYMN	**Ely**	**38.37**	**339**	P		P	12 53 49.6	+5.4
EYMN				IAmb		IAmb	12 54 17.5	
	comp=Z,10nm,1.1s							
SDCO	**Great Sand Dun**	**38.38**	**316**	P		**P**	**12 53 48.1**	**+3.3**
SDCO				IAmb		IAmb	12 53 56.4	
	comp=Z,4.3nm,1.2s							
IPMB	**Ipameri, GO**	**38.97**	**141**	*e*P		**P**	**12 53 50.6**	**+0.9**
JANB	**Januaria**	**39.42**	**134**	*e*P		**P**	**12 53 54.3**	**+0.9**
AC02	**Maricunga**	**39.60**	**175**	P		**P**	**12 53 54.2**	**-1.1**
AC02				IAmb		IAmb	12 53 58.5	
	comp=Z,8.0nm,1.1s							
TUC	**Tucson**	**39.93**	**305**	P		**P**	**12 54 01.1**	**+3.5**
SMCO	**Snowmass**	**40.11**	**317**	P		**P**	**12 54 02.4**	**+3.0**
PCMB	**Pacaembu**	**40.15**	**148**	*e*P		**P**	**12 53 59.1**	**-0.3**
PV02	**Paradox Valley**	**40.82**	**315**	P		**P**	**12 54 09.3**	**+4.2**
PV02				IAmb		IAmb	12 54 16.2	
	comp=Z,4.7nm,0.9s							
PV13	**Radium Mtn., P**	**40.86**	**315**	P		**P**	**12 54 09.2**	**+3.8**
PV13				IAmb		IAmb	12 54 17.6	
	comp=Z,8.5nm,1.1s							
PV12	**Saucer Basin,**	**40.92**	**315**	P		**P**	**12 54 09.3**	**+3.5**
PV12				IAmb		IAmb	12 54 19.2	
	comp=Z,5.6nm,0.8s							
PV03	**Paradox Valley**	**40.92**	**315**	P		**P**	**12 54 09.2**	**+3.4**
PV03				IAmb		IAmb	12 54 18.1	
	comp=Z,13nm,1.4s							
PV11	**David Mesa, Pa**	**40.96**	**315**	P		**P**	**12 54 09.1**	**+2.9**
PV11				IAmb		IAmb	12 54 21.6	
	comp=Z,5.2nm,0.7s							
214A	**Organ Pipe Nat**	**41.44**	**304**	P		**P**	**12 54 13.7**	**+3.7**
CPUP	**Villa Florida**	**41.69**	**159**	P		**P**	**12 54 09.6**	**-2.3**
	comp=Z,1.0nm,0.7s,baz=315,slow=5.7,SNR=3.3							
CPUP				LR		LR	13 13 02.6	
	comp=Z,94nm,18.8s,baz=15,slow=38							
CPUP	**Villa Florida**	**41.69**	**159**	IAmb		IAmb	12 54 36.8	
	comp=Z,8.5nm,1.4s							
GDU01	**Guandu, BA**	**42.06**	**128**	*e*P		**P**	**12 54 15.9**	**+0.7**
SCHQ	**Schefferville**	**42.12**	**5**	P		**P**	**12 54 18.4**	**+3.3**
	comp=Z,7.8nm,1.0s,baz=253,slow=5.0,SNR=2.7							
SRU	**San Rafael Swe**	**42.48**	**315**	P		**P**	**12 54 20.4**	**+1.8**
U15A	**North Rim**	**42.61**	**310**	P		**P**	**12 54 22.0**	**+2.3**
MTPU	**Mount Pierson**	**43.18**	**313**	P		**P**	**12 54 27.9**	**+3.4**
PDAR	**Pinedale Array**	**43.66**	**320**	P		**P**	**12 54 29.1**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=115,slow=10.0,SNR=4.2							
PDAR				PcP		**PcP**	**12 56 16.9**	**+1.9**
	comp=Z,1.3nm,0.6s,baz=127,slow=5.3,SNR=10							
PDAR	**Pinedale Array**	**43.66**	**320**	P		**P**	**12 54 28.8**	**+0.7**
PSUT	**Pine Spring**	**44.58**	**313**	P		**P**	**12 54 38.9**	**+3.3**
CBX	**Cerro Bola**	**44.68**	**303**	P		**P**	**12 54 37.9**	**+1.6**
REDW	**Red Top Meadow**	**44.77**	**320**	P		**P**	**12 54 40.0**	**+2.9**
REDW				IAmb		IAmb	12 54 48.7	
	comp=Z,7.6nm,1.1s							
GCMT	**Greycliff**	**45.37**	**324**	P		**P**	**12 54 43.3**	**+1.7**
TPNV	**Topopah Spring**	**45.76**	**309**	P		**P**	**12 54 46.9**	**+2.0**
TPNV				IAmb		IAmb	12 54 49.6	
	comp=Z,4.7nm,1.1s							
MCMT	**McKenzie Canyo**	**46.76**	**321**	P		**P**	**12 54 56.5**	**+3.8**
TPH	**Tonopah**	**46.87**	**311**	P		**P**	**12 54 55.8**	**+2.1**
BO02	**Sierra Bellavi**	**47.42**	**178**	P		**P**	**12 54 58.0**	**+0.3**
NV11	**Mina Array Sit**	**47.68**	**311**	P		**P**	**12 55 00.8**	**+0.9**
NV11				IAmb		IAmb	12 55 12.9	
	comp=Z,4.1nm,1.4s							
NVAR	**Mina Array Bea**	**47.79**	**311**	P		**P**	**12 55 03.7**	**+2.9**
	comp=Z,1.1nm,0.7s,baz=120,slow=7.8,SNR=12							
NVAR				PcP		**PcP**	**12 56 31.9**	**+2.4**
	comp=Z,0.6nm,0.6s,baz=124,slow=4.3,SNR=5.0							
NVAR	**Mina Array Bea**	**47.79**	**311**	P		**P**	**12 55 01.9**	**+1.0**
PNTR	**Pine Nut**	**48.96**	**311**	P		**P**	**12 55 12.9**	**+3.0**
PNTR				IAmb		IAmb	12 55 14.1	
	comp=Z,4.6nm,0.8s							
BI02	**San Fabin de**	**49.27**	**179**	P		**P**	**12 55 11.8**	**-0.1**
NEW	**Newport**	**51.01**	**323**	P		**P**	**12 55 25.7**	**+0.7**
NEW				IAmb		IAmb	12 55 37.2	
	comp=Z,6.2nm,1.4s							
LC01	**Cunco**	**51.49**	**179**	P		**P**	**12 55 28.3**	**-0.3**
HUMO	**Hull Mountain**	**52.51**	**314**	P		**P**	**12 55 35.2**	**-1.1**
HUMO				IAmb		IAmb	12 55 53.1	
	comp=Z,6.4nm,1.4s							
PLCA	**Paso Flores**	**53.35**	**178**	P		**P**	**12 55 42.6**	**+0.2**
	comp=Z,15nm,0.8s,baz=353,slow=9.1,SNR=48							
PLCA	**Paso Flores**	**53.35**	**178**	P		**P**	**12 55 42.6**	**+0.2**
PLCA	**Paso Flores**	**53.35**	**178**	*e*P		**P**	**12 55 42.6**	**+0.2**
YKA	**Yellowknife Ar**	**57.84**	**338**	P		**P**	**12 56 16.3**	**+2.0**
	comp=Z,1.4nm,0.7s,baz=125,slow=8.4,SNR=4.8							
ESDC	**Sonseca Array**	**65.50**	**52**	P		P	12 57 12.2	+5.7
	comp=Z,1.0nm,1.0s,baz=34,slow=38,SNR=3.0							
ESDC				LR		LR	13 21 06.5	
	comp=Z,27nm,21.0s,baz=290,slow=32							
DBIC	**Dimbokro**	**66.90**	**88**	LR		LR	13 27 29.9	
	comp=Z,61nm,18.1s,baz=302,slow=37							
BCAR	**Beaver Creek A**	**69.22**	**333**	P		**P**	**12 57 27.9**	**-1.7**
ILAR	**Eielson Array**	**71.76**	**334**	P		**P**	**12 57 49.2**	**+4.2**
	comp=Z,0.2nm,0.6s,baz=100,slow=15,SNR=2.5							
TORD	**Torodi Ar. Bea**	**72.12**	**80**	P		P	12 57 52.7	+4.6
	comp=Z,1.4nm,0.9s,baz=287,slow=4.6,SNR=3.5							
TORD	**Torodi Ar. Bea**	**72.12**	**80**	P		**P**	**12 57 48.4**	**+0.4**
GERES	**GERESS Array B**	**78.02**	**42**	P		P	12 58 27.1	+5.5
	comp=Z,0.6nm,0.8s,baz=292,slow=7.1,SNR=6.1							
ARCES	**ARCESS Array B**	**80.87**	**21**	LR		LR	13 29 44.2	
	comp=Z,27nm,20.0s,baz=295,slow=32							
NRIK	**Noril'sk**	**96.83**	**7**	LR		LR	13 44 58.3	
	comp=Z,44nm,19.8s,baz=19,slow=36							
STKA	**Stephens Creek**	**143.36**	**233**	PKP		**PKPdf**	**13 05 58.6**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=290,slow=13,SNR=2.0							
CMAR	**Chiang Mai Arr**	**147.78**	**15**	PKP		**PKPbc**	**13 06 08.7**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=334,slow=3.8,SNR=11							
CMAR				PKPbc		**PKPab**	**13 06 11.0**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=331,slow=2.4,SNR=4.9							
ASAR	**Alice Springs**	**152.68**	**243**	PKP		**PKPdf**	**13 06 15.0**	**+1.7**
	comp=Z,0.3nm,0.7s,baz=114,slow=0.9,SNR=5.3							
ASAR				PKPbc		**PKiKP**	**13 06 21.5**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=111,slow=2.4,SNR=58							
ASAR				PKPab		**PKPab**	**13 06 29.6**	**-1.4**
	comp=Z,2.8nm,0.7s,baz=115,slow=2.1,SNR=12							
ASAR	**Alice Springs**	**152.68**	**243**			**PKPdf**	**13 06 13.8**	**+0.5**
ASAR						**PKiKP**	**13 06 20.7**	**+0.1**
ASAR						**PKPab**	**13 06 29.9**	**-1.2**
WRA	**Warramunga Arr**	**153.23**	**251**	PKP		**PKPdf**	**13 06 15.9**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=90,slow=1.9,SNR=6.2							
WRA				PKPbc		**PKiKP**	**13 06 22.9**	**+1.1**
	comp=Z,2.7nm,0.6s,baz=97,slow=2.9,SNR=44							
WRA				PKPab		**pPKPbc**	**13 06 31.8**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=99,slow=2.9,SNR=5.9							
WRA	**Warramunga Arr**	**153.23**	**251**			**PKPdf**	**13 06 14.4**	**+0.3**
WRA						**PKiKP**	**13 06 22.7**	**+0.9**
WRA						**pPKPbc**	**13 06 31.8**	**-0.5**

*NEIC **09** 12:50:04.6±1.7, 17°.85N±0°.1×178°.24W±0°.1, h514km±8km, mb4.4/28, Error ellipse: s-maj=20.1km s-min=10.6km az=139.0*
*IDC **09** 12:50:05.6±1.5, 17°.64S×178°.41W, h501km±19km, mb3.3/8, mb1 3.5/9, mb1mx3.2/33, mbtmp4.2/9, Error ellipse: s-maj=28.4km s-min=13.8km az=140.0*

ISC 09 12:50:04.8±0.5, **17°.81S**±0°.09×**178°.30W**±0°.09, **h500**km, **n48, s124/51, mb4.1/19, 1C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**3.48**	**271**	P		**P**	**12 51 23.3**	**+4.0**
AFI	**Afiamalu**	**7.38**	**59**	P		**P**

T35A				Sg	Sg	12 56 12.9	-0.3	
OKCFA	**Oklahoma City**	**0.88**	**190**		**Pg**	**12 56 01.1**	**-0.7**	
OKCFA				Sg	Sg	12 56 13.1	-0.1	
KAN14	**Manchester OK**	**0.88**	**320**		**Pg**	**12 56 01.3**	**-0.6**	
OKCSW	**OKLAHOMA CITY**	**0.89**	**189**		**Pg**	**12 56 01.3**	**-0.7**	
OKCSW				Sg	Sg	12 56 13.4	0.0	
KAN09	**Caldwell North**	**0.90**	**342**		**Pg**	**12 56 01.8**	**-0.6**	
KAN09				Sg	Sg	12 56 14.0	0.0	
KAN05	**Bluff City Nor**	**0.96**	**330**		Pg	**12 56 02.9**	**-0.6**	
FNO	**Franklin**	**1.03**	**186**		**Pg**	**12 56 03.9**	**-0.8**	
FNO				Sg	Sg	12 56 17.9	-0.1	
KAN10	**Anthony SW Sta**	**1.07**	**322**		**Pg**	**12 56 04.9**	**-0.8**	
KAN08	**Anthony NE Sta**	**1.10**	**329**	Pg	Pg	**12 56 05.3**	**-0.9**	
W35A	**Tecumseh**	**1.17**	**164**	Pg	**Pg**	**12 56 05.6**	**-1.8**	
TUL1	**Leonard**	**1.25**	**107**	P	**Pg**	**12 56 07.5**	**-1.5**	
	baz=288							
TUL1				S	**Sg**	**12 56 24.4**	**-0.7**	
	baz=288							
TUL1	**Leonard**	**1.25**	**107**		**Pg**	**12 56 07.5**	**-1.5**	
U32A	**Winter Ranch,**	**1.41**	**275**	Pn	**Pn**	**12 56 10.3**	**-1.0**	
WMOK	**Wichita Mounta**	**1.98**	**219**	P	**Pn**	**12 56 19.3**	**+0.2**	
	baz=38							
WMOK				S	**Sb**	**12 56 45.8**	**-0.6**	
	baz=38							
WMOK	**Wichita Mounta**	**1.98**	**219**		**Pn**	**12 56 19.2**	**+0.1**	
X37A	**Clayton**	**2.29**	**137**		**Pn**	**12 56 24.1**	**+0.7**	
R32A	**Long Quarter,**	**2.43**	**332**	Pn	**Pn**	**12 56 24.7**	**-0.7**	
HHAR	**Hobbs**	**2.68**	**89**	Pn	**Pn**	**12 56 28.9**	**+0.1**	
KSU1	**Kansas State U**	**2.86**	**10**	Pb	**Pb**	**12 56 38.0**	**+1.5**	
	baz=191							
KSU1	**Kansas State U**	**2.86**	**10**	Pn	**Pn**	**12 56 31.0**	**-0.2**	
Z35A	**Perchaven, San**	**2.94**	**180**	Pn	**Pn**	**12 56 32.6**	**+0.3**	
W39A	**Magazine**	**3.03**	**110**	Pn	**Pn**	**12 56 34.4**	**+0.9**	
CBKS	**Cedar Bluff**	**3.20**	**323**	Pb	**Pb**	**12 56 44.0**	**+1.6**	
	baz=142							
CBKS				Sb	**Sg**	**12 57 26.7**	**-1.3**	
	baz=142							
CBKS	**Cedar Bluff**	**3.20**	**323**	Pn	**Pn**	**12 56 36.6**	**+0.5**	
S39A	**Bolivar**	**3.45**	**65**	Pn	**Pn**	**12 56 39.9**	**+0.5**	
MIAR	**Mount Ida**	**3.47**	**119**	P	**Pn**	**12 56 40.3**	**+0.6**	
	baz=301							
MIAR	**Mount Ida**	**3.47**	**119**	Pn	**Pn**	**12 56 40.3**	**+0.6**	
U40A	**Yellville**	**3.56**	**87**	Pn	**Pn**	**12 56 41.5**	**+0.6**	
AMTX	**Amarillo**	**3.86**	**250**	Pn	**Pn**	**12 56 45.1**	**0.0**	
X40A	**Basin Creek Fa**	**4.04**	**115**	Pn	**Pn**	**12 56 48.4**	**+1.0**	
MGMO	**Mountain Grove**	**4.11**	**76**	Pn	**Pn**	**12 56 48.7**	**+0.3**	
ABTX	**Abilene, Hawle**	**4.14**	**209**	Pn	**Pn**	**12 56 50.0**	**+1.1**	
WHAR	**Wooly Hollow**	**4.16**	**102**	Pn	**Pn**	**12 56 50.3**	**+1.2**	
W41B	**Gary Mavity, V**	**4.23**	**104**	S	**Sn**	**12 57 39.2**	**-0.5**	
	baz=287							
W41B	**Gary Mavity, V**	**4.23**	**104**	Pn	**Pn**	**12 56 49.8**	**-0.2**	
WLAR	**White Oak Lake**	**4.28**	**126**	Pn	**Pn**	**12 56 50.0**	**-0.7**	
WHTX	**Lake Whitney,**	**4.28**	**182**	P	**Pn**	**12 56 51.4**	**+0.6**	
	baz=2.1							
WHTX	**Lake Whitney,**	**4.28**	**182**	Pn	**Pn**	**12 56 50.5**	**-0.3**	
237A	**Washetta, Mont**	**4.43**	**164**	Pn	**Pn**	**12 56 52.4**	**-0.5**	
R40A	**Maddies Statio**	**4.46**	**62**	Pn	**Pn**	**12 56 53.0**	**-0.2**	
Z41A	**Richland Creek**	**4.75**	**128**	S	**Sn**	**12 57 52.1**	**-0.5**	
	baz=311							
LCAR	**Lake Charles**	**4.95**	**91**	Pn	**Pn**	**12 57 00.2**	**+0.3**	
T42A	**Van Buren**	**5.02**	**80**	Pn	**Pn**	**12 57 00.8**	**-0.1**	
KSCO	**Kaye Shedlock'**	**5.05**	**304**	Pn	**Pn**	**12 57 03.3**	**+1.8**	
CCM	**Cathedral Cave**	**5.12**	**68**	Pn	**Pn**	**12 57 02.4**	**0.0**	
BGNE	**Belgrade**	**5.17**	**353**	P	**Pn**	**12 57 02.3**	**-0.6**	
	baz=172							
BGNE	**Belgrade**	**5.17**	**353**	Pn	**Pn**	**12 57 02.6**	**-0.4**	
FVM	**French Village**	**5.72**	**71**	Pn	**Pn**	**12 57 09.7**	**-0.8**	
L34A	**Svendsen Farm,**	**5.72**	**7**	Pn	**Pn**	**12 57 09.7**	**-0.9**	

*IDC **09** 13:26:40.0±0.5,5.˚43S×78.˚50W, h0^{km}, mb4.4/20, mb1 4.5/26,mb1mx4.5/33,mbtmp4.4/26,ML3.7/6,MS4.1/15, Ms1 4.1/15,ms1mx3.8/41,Error ellipse: s-maj=16.3km s-min=8.5km az=79.0*

*IGQ **09** 13:26:40.5±1.1,6˚S±9˚×7˚W±˚, h10^{km},M5.3*

*ARE **09** 13:26:41±2.0,5.˚46S±0.˚06×78.˚6W±0.˚1, h33^{km}±3^{km},Error ellipse: s-maj=14.1km s-min=8.1km az=88.0*

*GCMT **09** 13:26:43.4±0.3,5.˚57S±0.˚02×78.˚42W±0.˚03, h20^{km}±1^{km}, MW4.8/69,Moment Tensor Solution. s20,c23; s69,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.55±.17; M$_{\theta\theta}$-0.81±.10; M$_{\phi\phi}$-0.73±.12; M$_{r\theta}$0.47±.18; M$_{\theta\phi}$-1.63±.07; M$_{\phi r}$0.02±.21; Best double couple: M$_o$2.06600×10^{16} NP1:ϕ_s205.00000°,δ44.00000°,λ60.00000°. NP2: ϕ_s64.00000°,δ53.00000°,λ116.00000°. Principal axes: T 1.6970, Plg69.0000°, Azm33.0000°; N 0.7420, Plg20.0000°, Azm228.0000°; P -2.4340, Plg5.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **09** 13:26:43.6±0.4,5.˚47S×78.˚20W, h10^{km},mb5.0*

*NEIC **09** 13:26:45.4±1.5,5.˚49S±0.˚06×78.˚4W±0.˚1, h39^{km}±5^{km}, mb4.8/230,ML5.1(ARE),Error ellipse: s-maj=15.1km s-min=8.8km az=79.0*

*BJI **09** 13:26:46.0±0.0,5.˚50S×78.˚50W, h30^{km}, Ms5.1/1, Ms7 4.9/1*

ISC 09 13:26:45.1±0.3,5.˚51S±0.˚04×78.˚40W±0.˚06,h35^{km},n424, σ1§24/421,mb4.8/118,MS3.9/12,1C-1D,Northern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GONZ	**Gonzanam**	**1.61**	**322**	P	**Pn**	**13 27 08.6**	**-2.8**
GONZ				S	**Sn**	**13 27 30.1**	**-1.0**
ATAH	**Atahualpa**	**1.61**	**180**	Pg	**Pn**	**13 27 11.3**	**-0.1**
	197nm,0.3s,baz=16,slow=10,SNR=936						
ATAH				Lg	Lg	13 27 32.9	
	350nm,0.3s,baz=273,slow=21,SNR=9.9						
MCRA	**Macar, Loja**	**1.92**	**306**	P	**Pn**	**13 27 12.9**	**-2.4**
MCRA				S	**Sn**	**13 27 37.6**	**-0.6**
BOSC	**San Juan Bosco**	**2.35**	**358**	P	**Pn**	**13 27 20.3**	**-1.1**
BOSC				S	**Sn**	**13 27 50.4**	**+1.3**
ARNL	**Arenillas**	**2.56**	**320**	P	**Pn**	**13 27 23.4**	**-0.7**
ARNL				S	**Sn**	**13 27 57.3**	**+3.3**
ISPG	**Isla Puna-Puer**	**3.08**	**325**	P	**Pn**	**13 27 34.6**	**+3.3**
ISPG				S	Sn	13 28 18.1	+11
COHC	**Cochancay**	**3.14**	**344**	P	**Pn**	**13 27 32.8**	**+0.7**
COHC				S	**Sn**	**13 28 14.7**	**+6.3**
MILO	**Milagro-Astudi**	**3.41**	**340**	P	**Pn**	**13 27 38.2**	**+2.4**
SANGA	**Volcan Sangay**	**3.44**	**1**	P	**Pn**	**13 27 38.3**	**+1.7**
MORR	**Playas El Morr**	**3.44**	**326**	P	**Pn**	**13 27 37.9**	**+1.6**
PKYU	**Pakayacu**	**3.92**	**12**	P	**Pn**	**13 27 42.8**	**-0.1**
BPAT	**Tungurahua Vol**	**3.98**	**360**	P	**Pn**	**13 27 43.4**	**-0.7**
BMAS	**Trigal station**	**3.98**	**359**	P	**Pn**	**13 27 46.6**	**+2.6**
PUYO	**Puyo, Santa Ro**	**4.01**	**5**	P	**Pn**	**13 27 45.4**	**+1.2**
BBIL	**Ulba Tungurahu**	**4.04**	**359**	P	**Pn**	**13 27 47.6**	**+2.9**
BULB	**Ulba Tungurahu**	**4.05**	**360**	P	**Pn**	**13 27 46.9**	**+2.0**
BRUN	**Tungurahua Vol**	**4.07**	**360**	P	**Pn**	**13 27 47.7**	**+2.5**
SALI	**Salinas**	**4.19**	**322**	P	Pn	13 27 53.1	+6.5
SAGO	**Sagoatoa**	**4.34**	**357**	P	**Pn**	**13 27 51.3**	**+2.3**
PIS1	**Pisayambo**	**4.42**	**0**	P	**Pn**	**13 27 52.9**	**+2.7**
PIAT	**Ana Tenorio**	**4.49**	**2**	P	**Pn**	**13 27 53.2**	**+2.2**
ARDO	**Archidona, Ten**	**4.53**	**8**	P	**Pn**	**13 27 51.4**	**+0.1**
PPLP	**Puerto Lpez**	**4.60**	**329**	P	**Pn**	**13 27 52.3**	**+0.2**
VCES	**Cotopaxi**	**4.68**	**0**	P	**Pn**	**13 27 56.8**	**+3.0**
BMOR	**Cotopaxi Volca**	**4.75**	**359**	P	**Pn**	**13 27 57.4**	**+2.7**
ILLI	**Illinizas Sur**	**4.78**	**356**	P	**Pn**	**13 27 57.2**	**+2.1**
BTAM	**Cotopaxi Volca**	**4.81**	**0**	P	**Pn**	**13 27 57.9**	**+2.4**
BNAS	**Cotopaxi Volca**	**4.81**	**359**	P	**Pn**	**13 27 58.3**	**+2.7**
BREF	**Cotopaxi Volca**	**4.81**	**360**	P	**Pn**	**13 27 58.2**	**+2.5**
ANTM	**Antisana-La Mi**	**4.95**	**2**	P	**Pn**	**13 27 59.6**	**+2.2**
ANTG	**Antisana-Guama**	**4.98**	**2**	P	**Pn**	**13 28 00.1**	**+2.2**
ANTS	**Antisana-Sarah**	**4.99**	**3**	P	**Pn**	**13 27 59.9**	**+1.8**
GGPC	**Guagua Pichinc**	**5.30**	**358**	P	**Pn**	**13 28 04.6**	**+2.3**
REVS	**Reventador Sur**	**5.43**	**8**	P	**Pn**	**13 28 04.5**	**+0.7**
PULU	**Pululahua**	**5.50**	**359**	P	**Pn**	**13 28 06.9**	**+2.0**
PAC1	**Pacto, Paraso**	**5.75**	**356**	eP	**Pn**	**13 28 09.5**	**+1.3**
PAC1	**Pacto, Paraso**	**5.75**	**356**	P	**Pn**	**13 28 10.1**	**+1.9**
IMBA	**Imbabura, San**	**5.75**	**2**	P	**Pn**	**13 28 11.1**	**+2.7**
CUIC	**Cuicocha-Domo**	**5.78**	**0**	P	**Pn**	**13 28 11.2**	**+2.5**
CUSE	**Cuicocha Este**	**5.78**	**0**	eP	**Pn**	**13 28 11.9**	**+3.1**
CUSE	**Cuicocha Este**	**5.78**	**0**	P	**Pn**	**13 28 11.9**	**+3.1**
URCU	**Urcuqui**	**5.91**	**1**	P	**Pn**	**13 28 12.8**	**+2.2**
CZSB	**Cruzeiro do Su**	**6.07**	**112**	eP	**Pn**	**13 28 11.0**	**-1.4**
TULM	**Tulcn-Chalpat**	**6.22**	**6**	P	**Pn**	**13 28 17.9**	**+3.0**
LNGL	**El Angel-Carch**	**6.22**	**4**	P	**Pn**	**13 28 17.9**	**+2.9**
CHL1	**Volcn Chiles**	**6.28**	**4**	P	Pn	13 28 08.8	-7.0
PUAC	**Puerto Asis, P**	**6.29**	**17**	eP	**Pn**	**13 28 15.7**	**+0.2**
NNA	**Nana**	**6.62**	**167**	Pn	**Pn**	**13 28 21.1**	**+1.2**
	9.8nm,0.3s,baz=327,slow=14,SNR=25						
NNA				Sn	**Sn**	**13 29 36.6**	**+2.5**
	10.0nm,0.3s,baz=193,slow=22,SNR=1.5						
NNA				Lg	Lg	13 30 16.7	
	18nm,0.3s,baz=70,slow=21,SNR=8.7						
NNA				LR	LR	13 30 37.2	
	comp=Z,2μm,18.3s,baz=326,slow=35						
NNA	**Nana**	**6.62**	**167**	Pn	**Pn**	**13 28 20.3**	**+0.4**
PTLC	**Puerto Leguiza**	**6.70**	**33**	eP	Pn	13 28 16.8	-4.2
GCUF	**Volcan Galeras**	**6.78**	**9**	eP	**Pn**	**13 28 25.3**	**+2.7**
CRUC	**La Cruz**	**7.18**	**12**	eP	**Pn**	**13 28 28.1**	**+0.1**
FLOC	**Florencia**	**7.56**	**21**	eP	**Pn**	**13 28 32.3**	**-0.6**
SOTA	**Rioblanco**	**7.81**	**13**	eP	**Pn**	**13 28 39.8**	**+3.1**
PCON	**Cinco Dias**	**8.04**	**14**	eP	**Pn**	**13 28 42.4**	**+2.4**
GARC	**Garzon, Huila**	**8.18**	**21**	eP	**Pn**	**13 28 41.1**	**-0.5**
POPC	**Popayan, Colom**	**8.18**	**12**	eP	**Pn**	**13 28 42.9**	**+1.2**
MARP	**Paez Belalcaza**	**8.65**	**16**	eP	**Pn**	**13 28 50.5**	**+2.4**
BETC	**Betania**	**8.66**	**20**	eP	**Pn**	**13 28 48.2**	**+0.2**
MACC	**Macarena, Meta**	**8.87**	**31**	eP	**Pn**	**13 28 49.5**	**-1.3**
YOTC	**Yotoco, Valle**	**9.65**	**12**	eP	**Pn**	**13 29 00.4**	**-1.3**
PRAC	**Prado**	**9.82**	**21**	eP	**Pn**	**13 29 03.9**	**0.0**
ORTC	**Ortega, Tolima**	**9.88**	**19**	eP	**Pn**	**13 29 05.3**	**+0.6**
ANIL	**Santa Ana**	**10.38**	**17**	eP	**Pn**	**13 29 12.7**	**+0.9**
TOLC	**Tolima**	**10.49**	**17**	eP	**Pn**	**13 29 14.2**	**+0.8**
ROSC	**El Rosal**	**11.06**	**22**	Pn	**Pn**	**13 29 19.7**	**-1.5**
	1.1nm,0.3s,baz=202,slow=19,SNR=1.7						
ROSC				LR	LR	13 34 50.6	
	comp=Z,2μm,19.5s,baz=308,slow=44						
ROSC	**El Rosal**	**11.06**	**22**	eP	**Pn**	**13 29 24.6**	**+3.4**
ROSC	**El Rosal**	**11.06**	**22**		**Pn**	**13 29 20.6**	**-0.7**
GUY2C	**Guyana, Caldas**	**11.09**	**16**	eP	**Pn**	**13 29 20.3**	**-1.4**
CHIC	**Chingaza**	**11.10**	**25**	eP	**Pn**	**13 29 21.4**	**-0.5**
PTGC	**Puerto Gaitan,**	**11.50**	**33**	eP	**Pn**	**13 29 26.2**	**-0.7**
CBOC	**Ciudad Bolivar**	**11.55**	**12**	eP	**Pn**	**13 29 27.0**	**-0.7**
NORC	**Norcasia**	**11.55**	**18**	eP	**Pn**	**13 29 26.5**	**-1.2**
SOLC	**Bahia Solano**	**11.70**	**5**	eP	**Pn**	**13 29 29.4**	**-0.3**
SPBC	**San Pablo de B**	**11.90**	**21**	eP	**Pn**	**13 29 34.9**	**+2.4**
RUSC	**La Rusia**	**12.51**	**25**	eP	**Pn**	**13 29 41.0**	**-0.2**
PTAC	**Punta Ardita,**	**12.59**	**3**	eP	**Pn**	**13 29 39.5**	**-2.3**
PTBC	**PUERTO BERRIO,**	**12.60**	**18**	eP	**Pn**	**13 29 39.8**	**-2.2**
ETMB	**Extrema**	**12.81**	**110**	eS	**Sn**	**13 32 04.5**	**-1.9**
URIC	**San Jos de Ur**	**13.48**	**12**	eP	**Pn**	**13 29 53.8**	**-0.3**
TAMC	**Tame, Arauca**	**13.58**	**29**	eP	**Pn**	**13 29 56.2**	**+0.8**
PAMC	**Pamplona, Colo**	**13.98**	**24**	eP	**Pn**	**13 30 01.5**	**+0.2**
MOTC	**Monteria, Cord**	**14.46**	**11**	eP	**Pn**	**13 30 06.2**	**-1.1**
OCAC	**Ocana**	**14.57**	**20**	eP	**Pn**	**13 30 11.8**	**+2.8**
LPAZ	**La Paz**	**14.70**	**138**	Pn	**Pn**	**13 30 12.6**	**+1.4**
	0.2nm,0.3s,baz=322,slow=10,SNR=10.0						
LPAZ				LR	LR	13 36 58.3	
	comp=Z,2μm,20.9s,baz=310,slow=42						
LPAZ	**La Paz**	**14.70**	**138**		**Pn**	**13 30 12.3**	**+1.1**
LPAZ	**La Paz**	**14.70**	**138**	eP	**Pn**	**13 30 12.6**	**+1.4**
PB16	**IPOC Station P**	**15.42**	**146**		**Pn**	**13 30 20.8**	**+0.1**
PB16				IAmb	IAmb	13 30 37.7	
	comp=Z,55nm,1.0s						
SAML	**Samuel**	**15.48**	**104**	Pn	**Pn**	**13 30 18.4**	**-2.5**
SAML				IAmb	IAmb	13 30 38.8	
	comp=Z,32nm,0.8s						
SJCC	**San Jacinto, C**	**15.64**	**12**	eP	**Pn**	**13 30 21.4**	**-1.7**
MNMC	**Minye Minye**	**16.03**	**148**	P	**P**	**13 30 31.1**	**-0.2**
MNMC				IAmb	IAmb	13 30 40.5	
	comp=Z,45nm,0.9s						
PSGCX	**Pisagua**	**16.16**	**151**	P	**P**	**13 30 32.7**	**+0.1**
SDV	**Santo Domingo**	**16.27**	**28**	Pn	**Pn**	**13 30 29.9**	**-1.3**
	comp=Z,5.1nm,0.3s,baz=239,slow=9.5,SNR=10						
SDV				LR	LR	13 37 18.6	
	comp=Z,957nm,18.3s,baz=238,slow=39						
SDV	**Santo Domingo**	**16.27**	**28**	eP	**Pn**	**13 30 30.3**	**-0.9**
SDV	**Santo Domingo**	**16.27**	**28**	eP	**Pn**	**13 30 30.1**	**-1.1**
PB11	**IPOC Station P**	**16.52**	**150**	P	**P**	**13 30 36.5**	**-0.3**
TA01	**Diego Aracena**	**16.96**	**153**	P	**P**	**13 30 41.5**	**+0.1**
TA01				IAmb	IAmb	13 30 46.7	
	comp=Z,51nm,0.9s						
JTS	**Las Juntas de**	**17.00**	**337**	Pn	**Pn**	**13 30 38.2**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=139,slow=19,SNR=1.1						
JTS				LR	LR	13 35 23.3	
	comp=Z,202nm,21.1s,baz=208,slow=31						
JTS	**Las Juntas de**	**17.00**	**337**	P	**P**	**13 30 43.8**	**+1.9**
PB08	**IPOC Station P**	**17.10**	**149**	P	**P**	**13 30 43.5**	**+0.2**
PB01	**IPOC Station P**	**17.70**	**152**	P	**P**	**13 30 49.5**	**-0.1**
MACA	**Manacapuru-AM**	**17.82**	**83**	eP	**Pn**	**13 30 49.9**	**-0.6**
PB07	**IPOC Station P**	**18.11**	**154**	P	**Pn**	**13 30 53.6**	**-0.5**
PB07				IAmb	IAmb	13 31 07.7	
	comp=Z,54nm,1.0s						
URIC	**Uribia, Colomb**	**18.25**	**20**	eP	**P**	**13 30 51.3**	**-4.3**
PB09	**IPOC Station P**	**18.46**	**152**	P	**P**	**13 30 58.0**	**-0.1**
LVC	**Limon Verde**	**19.31**	**153**	P	**Pn**	**13 31 09.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=293,slow=9.1,SNR=9.7						
LVC				LR	LR	13 39 25.9	
	comp=Z,739nm,20.1s,baz=327,slow=39						
LVC	**Limon Verde**	**19.31**	**153**	P	**P**	**13 31 06.9**	**-0.8**
LVC	**Limon Verde**	**19.31**	**153**	eP	**Pn**	**13 31 09.0**	**+0.1**
VILB	**Vilhena**	**19.42**	**114**	eP	**P**	**13 31 08.4**	**-0.2**
MATN	**Matagalpa**	**19.79**	**338**	P	**Pn**	**13 31 13.6**	**-0.7**
MATN				IAmb	IAmb	13 31 33.5	
	comp=Z,63nm,1.5s						
SIV	**San Ignacio**	**19.94**	**123**	P	**P**	**13 31 15.5**	**+1.2**
	comp=Z,11nm,0.7s,baz=298,slow=9.3,SNR=18						
CRIN	**San Cristobal**	**20.03**	**335**	P	Pn	13 31 16.3	-0.9
CRIN				IAmb	IAmb	13 31 33.8	
	comp=Z,70nm,1.0s						
PCRV	**Puerto La Cruz**	**20.76**	**41**	P	**P**	**13 31 24.5**	**+1.3**
	comp=Z,84nm,0.8s,baz=196,slow=6.5,SNR=27						
PLCV	**Puerto La Cruz**	**20.78**	**41**	P	**P**	**13 31 24.5**	**+1.1**
GO02	**Mina Guanaco**	**21.29**	**158**	P	**P**	**13 31 28.6**	**-0.4**
GO02				IAmb	IAmb	13 31 37.3	
	comp=Z,38nm,1.1s						
PTLB	**Pontes e Lacer**	**21.34**	**119**	eP	**P**	**13 31 30.1**	**+0.7**
MTO3	**Montecristo**	**22.57**	**331**	P	**P**	**13 31 43.2**	**+0.5**
ITTB	**Itaituba**	**22.61**	**88**	eP	**P**	**13 31 42.7**	**-0.4**
NPGB	**Novo Progresso**	**22.96**	**95**	eP	**P**	**13 31 45.7**	**-1.0**
AC02	**Maricunga**	**22.98**	**158**	P	**P**	**13 31 48.1**	**+0.8**
AC02				IAmb	IAmb	13 32 15.4	
	comp=Z,30nm,1.4s						
CLDB	**Colider**	**22.99**	**105**	eP	**P**	**13 31 45.6**	**-1.4**
MTDJ	**Mount Denham**	**23.60**	**2**	P	**P**	**13 31 54.8**	**+1.8**
GRGR	**Grenville**	**24.18**	**43**	P	**P**	**13 31 57.8**	**-0.6**
MALB	**Monte Alegre**	**24.36**	**82**	eP	**P**	**13 32 00.9**	**+0.9**
FSCY	**Frank Sound, G**	**24.82**	**354**	P	**P**	**13 32 04.9**	**+0.8**
CBCY	**The Bluff, Cay**	**25.13**	**357**	P	**P**	**13 32 07.5**	**+0.6**
SDDR	**Presa de Saban**	**25.33**	**16**	P	**P**	**13 32 10.8**	**+1.9**
GTBY	**Guantanamo Bay**	**25.49**	**7**	P	**P**	**13 32 11.7**	**+1.5**
DR12	**Loma Pena Alta**	**25.73**	**20**	P	**P**	**13 32 13.7**	**+1.2**
MCLT	**Moule a Chique**	**25.79**	**42**	P	**P**	**13 32 13.1**	**+0.1**
MLPR	**Magueyes Islan**	**25.89**	**25**	P	**P**	**13 32 14.4**	**+0.6**
MLPR				IAmb	IAmb	13 32 20.5	
	comp=Z,38nm,1.0s						
ICMP	**Isla Caja de M**	**26.04**	**27**	P	**P**	**13 32 15.5**	**+0.3**
MPR	**Mayaguez**	**26.06**	**25**	P	**P**	**13 32 15.5**	**+0.1**
OBIP	**Obispado Ponce**	**26.14**	**26**	P	**P**	**13 32 16.4**	**+0.3**
AOPR	**Arecibo Observ**	**26.35**	**26**	P	**P**	**13 32 18.2**	**+0.2**
PDPR	**Patillas Dam,**	**26.38**	**27**	P	**P**	**13 32 18.2**	**-0.1**
SJG	**San Juan**	**26.41**	**27**	P	**P**	**13 32 18.8**	**+0.3**
	comp=Z,100nm,0.7s,baz=219,slow=6.3,SNR=24						
HUMP	**Col San Antoni**	**26.57**	**28**	P	**P**	**13 32 20.5**	**+0.5**
MTP	**Monte Pirata**	**26.67**	**28**	P	**P**	**13 32 21.2**	**+0.3**
CBYP	**Canovanas**	**26.68**	**27**	P	**P**	**13 32 18.9**	**-2.1**
CDVI	**St. Croix**	**26.75**	**30**	P	**P**	**13 32 20.6**	**-1.1**
MCPB	**Macapa, AP**	**26.80**	**80**	eP	**P**	**13 32 23.3**	**+1.1**
SNDB	**Serra Nova Dou**	**27.54**	**105**	eP	**P**	**13 32 29.3**	**+0.5**
CMIG	**Matias Romero**	**27.74**	**324**	LR	LR	13 41 41.3	
	comp=Z,538nm,21.8s,baz=160,slow=33						
MDP	**Montagnes des**	**27.80**	**68**	P	**P**	**13 32 31.7**	**+0.5**
	comp=Z,15nm,0.8s,baz=283,slow=7.1,SNR=7.6						
ARAG	**Araguaiana, MT**	**27.99**	**113**	eP	**P**	**13 32 34.5**	**+1.6**
PRPB	**Parauapebas**	**28.45**	**93**	eP	**P**	**13 32 36.6**	**-0.4**
CPUP	**Villa Florida**	**28.87**	**138**	P	**P**	**13 32 42.1**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=46,slow=15,SNR=2.4						
CPUP	**Villa Florida**	**28.87**	**138**	P	**P**	**13 32 42.1**	**+1.5**
CPUP	**Villa Florida**	**28.87**	**138**	eP	**P**	**13 32 41.5**	**+0.9**
TRCB	**Terra Rica**	**30.23**	**127**	eP	**P**	**13 32 53.9**	**+1.2**
PEXB	**Peixe**	**30.44**	**104**	eP	**P**	**13 32 55.4**	**+0.8**
ITRB	**Iturama**	**30.71**	**120**	eP	**P**	**13 32 57.2**	**+0.2**
SMTB	**Santa Maria do**	**30.75**	**98**	eP	**P**	**13 32 58.2**	**+0.8**
PCMB	**Pacaembu**	**30.77**	**124**	eP	**P**	**13 32 58.2**	**+0.7**
BDFB	**Brasilia**	**31.48**	**111**	P	**P**	**13 33 04.3**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=258,slow=11,SNR=7.8						
BDFB				LR	LR	13 47 52.6	
	comp=Z,394nm,19.1s,baz=295,slow=40						
BDFB	**Brasilia**	**31.48**	**111**	P	**P**	**13 33 03.9**	**0.0**
BDFB				IAmb	IAmb	13 33 08.2	
	comp=Z,14nm,1.1s						
ITQB	**Itaqui**	**31.63**	**142**	eP	**P**	**13 33 06.8**	**+1.9**
PTGB	**Pitanga**	**31.68**	**130**	eP	**P**	**13 33 05.2**	**-0.4**
IPMB	**Ipameri, GO**	**31.99**	**115**	eP	**P**	**13 33 08.2**	**-0.1**

BB19B	**Bebedouro**	**32.83**	**121**	eP	**P**	**13 33 16.6**	**+1.0**	
LC01	**Cunco**	**33.76**	**171**	P	**P**	**13 33 23.1**	**-0.3**	
SDBA	**SAO DESIDERIO**	**33.77**	**104**	eP	**P**	**13 33 23.8**	**-0.1**	
CPSB	**Cacapava Do Su**	**34.14**	**139**	eP	**P**	**13 33 27.7**	**+0.8**	
RCLB	**Rio Claro- Sao**	**34.23**	**122**	eP	**P**	**13 33 28.1**	**+0.3**	
ROSB	**Rosrio**	**34.28**	**87**	eP	**P**	**13 33 28.7**	**+0.4**	
JANB	**Januaria**	**34.81**	**108**	eP	**P**	**13 33 33.3**	**+0.3**	
SPB	**Sao Paulo**	**34.82**	**124**	P	**P**	**13 33 31.2**	**-1.6**	
SPB	**Sao Paulo**	**34.82**	**124**	eP	**P**	**13 33 32.6**	**-0.2**	
VAO	**Valinhos**	**34.95**	**123**	eP	**P**	**13 33 34.6**	**+0.5**	
PET01	**Itanhaem-SP**	**35.26**	**125**	eP	**P**	**13 33 36.6**	**0.0**	
PLCA	**Paso Flores**	**35.77**	**170**	P	**P**	**13 33 41.3**	**+0.4**	
	comp=Z,7.0nm,1.0s,baz=350,slow=8.6,SNR=8.4							
PLCA				PcP	**PcP**	**13 36 09.1**	**+0.8**	
	comp=Z,4.3nm,1.1s,baz=320,slow=4.8,SNR=3.4							
PLCA	**Paso Flores**	**35.77**	**170**	P	**P**	**13 33 41.1**	**+0.2**	
PLCA				IAmb	IAmb	13 33 58.3		
	comp=Z,20nm,1.3s							
PLCA	**Paso Flores**	**35.77**	**170**	eP	**P**	**13 33 42.3**	**+1.4**	
PARB	**Paraibuna**	**36.21**	**123**	eP	**P**	**13 33 46.1**	**+1.1**	
SJMB	**Sao Joao De Ma**	**38.58**	**113**	eP	**P**	**13 34 06.4**	**+1

ANMO **Albuquerque** **48.15 329** P **P** **13 35 21.3 -0.8**
ANMO IAmb IAmb 13 35 31.5
comp=Z,6.1nm,0.9s
TUC **Tucson** **48.62 323** P **P** **13 35 25.0 -0.7**
J58A **Remsen** **48.73 3** P **P** **13 35 25.2 -1.0**
J58A IAmb IAmb 13 35 46.4
comp=Z,19nm,1.3s
ACCN **Adirondack Com** **48.86 5** P **P** **13 35 27.0 -0.2**
J47A **Sunmer** **48.87 354** P **P** **13 35 25.5 -1.8**
J59A **Piesco** **48.88 4** P **P** **13 35 27.4 0.0**
J59A IAmb IAmb 13 35 36.5
comp=Z,15nm,1.1s
T25A **Trinidad** **48.89 332** P **P** **13 35 27.7 -0.2**
T25A IAmb IAmb 13 35 38.0
comp=Z,16nm,1.5s
N33A **J Bar K, Exete** **49.24 341** P **P** **13 35 30.0 -0.2**
214A **Organ Pipe Nat** **49.62 321** P **P** **13 35 34.2 +0.9**
214A IAmb IAmb 13 35 47.9
comp=Z,15nm,1.4s
DELO **Deloro Mine** **49.81 1** P **P** **13 35 33.1 -1.3**
DELO IAmb IAmb 13 35 35.3
comp=Z,20nm,1.3s
SDCO **Great Sand Dun** **49.89 332** P **P** **13 35 35.1 -0.4**
SDCO IAmb IAmb 13 35 44.9
comp=Z,6.8nm,1.1s
LONY **Lake Ozonia** **50.02 4** P **P** **13 35 35.1 -0.9**
LONY IAmb IAmb 13 35 56.7
comp=Z,15nm,1.5s
SADO **Sadowa** **50.06 359** LR LR 13 57 55.2
comp=Z,164nm,20.6s,baz=162,slow=38
I42A **Draeger Farm,** **50.08 350** P **P** **13 35 35.1 -1.4**
FRNY **Flat Rock** **50.30 4** P **P** **13 35 38.3 +0.1**
PLVO **Plevna** **50.34 1** P **P** **13 35 37.6 -0.9**
PLVO IAmb IAmb 13 35 47.1
comp=Z,12nm,1.0s
X16A **Lo Mia Camp, P** **50.49 324** P **P** **13 35 40.1 +0.1**
X16A IAmb IAmb 13 35 54.6
comp=Z,9.0nm,1.2s
S22A **4UR Ranch, Cre** **50.52 331** P **P** **13 35 40.7 +0.3**
SPX **San Pedro Mart** **50.74 318** P **P** **13 35 42.6 +0.4**
113A **Mohawk Valley,** **50.76 321** P **P** **13 35 41.4 -0.5**
MVCO **Mesa Verde** **50.94 329** P **P** **13 35 42.8 -0.7**
EMMW **East Machias** **50.95 10** P **P** **13 35 43.4 +0.4**
G62A **West of Eustis** **50.99 7** P **P** **13 35 44.4 +1.0**
PKME **Peaks-Kenny Pk** **51.20 8** P **P** **13 35 45.5 +0.6**
PKME IAmb IAmb 13 35 46.3
comp=Z,12nm,0.8s
WUAZ **Wupatki** **51.24 325** P **P** **13 35 45.6 0.0**
WUAZ IAmb IAmb 13 36 01.0
comp=Z,18nm,1.1s
G65A **Princeton** **51.41 10** P **P** **13 35 47.3 +0.8**
GGN **Saint George** **51.46 10** P **P** **13 35 47.9 +1.0**
ISCO **Idaho Springs** **51.60 333** P **P** **13 35 48.6 +0.2**
F63A **Nahmakanta, Br** **51.66 8** P **P** **13 35 49.1 +0.7**
F63A IAmb IAmb 13 35 50.6
comp=Z,22nm,1.2s
ESJX **Sierra Juarez** **51.67 319** P **P** **13 35 48.1 -0.8**
HAL **Halifax** **51.67 13** P **P** **13 35 49.1 +0.7**
PV01 **Paradox Valley** **51.69 330** P **P** **13 35 49.3 +0.3**
PV01 IAmb IAmb 13 35 59.5
comp=Z,9.3nm,1.3s
ECSD **EROS Data Cent** **51.71 343** P **P** **13 35 47.3 -1.5**
ECSD IAmb IAmb 13 35 56.7
comp=Z,20nm,1.3s
PV15 **Paradox Valley** **51.80 330** P **P** **13 35 49.1 -0.8**
PV15 IAmb IAmb 13 36 06.5
comp=Z,13nm,1.1s
PV02 **Paradox Valley** **51.83 330** P **P** **13 35 49.6 -0.5**
PV02 IAmb IAmb 13 36 09.4
comp=Z,8.0nm,1.0s
PV13 **Radium Mtn., P** **51.83 329** P **P** **13 35 49.5 -0.6**
PV13 IAmb IAmb 13 35 59.8
comp=Z,10nm,1.0s
PV03 **Paradox Valley** **51.92 330** P **P** **13 35 50.2 -0.5**
PV03 IAmb IAmb 13 35 59.8
comp=Z,11nm,1.3s
F64A **Sherman** **51.93 9** P **P** **13 35 49.4 -1.0**
PV18 **Skein Mesa, Pa** **51.94 329** P **P** **13 35 51.1 +0.2**
PV18 IAmb IAmb 13 36 05.0
comp=Z,9.9nm,1.1s
PV12 **Saucer Basin,** **51.94 330** P **P** **13 35 50.9 -0.1**
PV12 IAmb IAmb 13 36 07.7
comp=Z,19nm,1.2s
PV11 **David Mesa, Pa** **51.96 330** P **P** **13 35 51.2 +0.2**
PV11 IAmb IAmb 13 36 05.9
comp=Z,24nm,1.4s
PV17 **East Wray Mesa** **51.99 329** P **P** **13 35 51.1 -0.2**
PV17 IAmb IAmb 13 36 00.1
comp=Z,15nm,1.5s
PV04 **Paradox Valley** **52.05 330** P **P** **13 35 52.0 +0.3**
SPMN **Marine on St.** **52.13 347** P **P** **13 35 50.9 -1.0**
SPMN IAmb IAmb 13 35 58.5
comp=Z,8.0nm,0.8s
E43A **Lone Tree Farm** **52.22 352** P **P** **13 35 51.1 -1.4**
COWI **Conover** **52.27 351** P **P** **13 35 51.9 -1.0**
COWI IAmb IAmb 13 36 07.6
comp=Z,22nm,1.4s
W13A **Hualapai Mount** **52.41 323** P **P** **13 35 54.8 +0.3**
U15A **North Rim** **52.41 325** P **P** **13 35 54.7 +0.2**
E63A **Oxbow** **52.46 9** P **P** **13 35 54.9 +0.5**
E63A IAmb IAmb 13 35 59.1
comp=Z,15nm,0.9s
E62A **Clayton Lake** **52.50 8** P **P** **13 35 55.2 +0.6**
LMN **Caledonia Moun** **52.56 12** P **P** **13 35 55.0 0.0**
PQI **Presque Isle** **52.77 9** P **P** **13 35 56.7 +0.1**
PQI IAmb IAmb 13 36 03.4
comp=Z,8.7nm,1.2s
F36A **Milaca** **52.90 347** P **P** **13 35 56.7 -0.8**
F36A IAmb IAmb 13 36 14.9
comp=Z,12nm,1.4s
GBN **Guysborough** **52.90 15** P **P** **13 35 58.3 +0.7**
LATQ **La Tuque** **52.90 5** P **P** **13 35 57.7 +0.1**
LATQ IAmb IAmb 13 35 58.4
comp=Z,7.7nm,0.9s
PFO **Pinyon Flats O** **53.02 320** LR LR 13 56 35.3
comp=Z,119nm,21.0s,baz=128,slow=34
LCMT **Little Creek M** **53.36 325** P **P** **13 36 00.5 -0.8**
MTPU **Mount Pierson** **53.51 327** P **P** **13 36 02.7 +0.1**
BATG **Bathurst New B** **53.68 10** P **P** **13 36 03.9 +0.6**
P17A **Butcher Ranch,** **53.80 329** P **P** **13 36 03.9 -0.6**
CCUT **Cedar City** **53.81 326** P **P** **13 36 04.1 -0.6**
MSU **Marysvale** **53.85 327** P **P** **13 36 04.2 -0.7**
MVU **Marysvale** **53.86 327** P **P** **13 36 05.0 -0.1**
SHPR **Sheep Range** **54.12 323** P **P** **13 36 06.9 -0.1**
SHPR IAmb IAmb 13 36 21.6
comp=Z,15nm,1.4s
GSC **Goldstone, Bar** **54.33 321** P **P** **13 36 08.0 -0.3**
GSC IAmb IAmb 13 36 23.0
comp=Z,15nm,1.3s
EYMN **Ely** **54.47 349** P **P** **13 36 07.4 -1.6**
EYMN IAmb IAmb 13 36 12.2
comp=Z,15nm,1.1s
RSSD **Black Hills** **54.54 338** P **P** **13 36 07.8 -2.2**
PSUT **Pine Spring** **54.78 326** P **P** **13 36 11.6 -0.1**
TPNV **Topopah Spring** **55.07 323** P **P** **13 36 14.2 +0.4**
B35A **Bob, Littlefor** **55.31 348** P **P** **13 36 13.8 -1.3**
TCUT **Toone Canyon** **55.38 330** P **P** **13 36 15.5 -0.6**
DUG **Dugway, Tooele** **55.41 328** P **P** **13 36 15.7 -0.5**
DUG IAmb IAmb 13 36 30.7
comp=Z,7.4nm,1.1s
ISA **Isabella, Lake** **55.60 321** P **P** **13 36 17.9 +0.3**
R11A **Troy Canyon, C** **55.62 325** P **P** **13 36 16.8 -1.1**
AGMN **Agassiz Nation** **55.73 346** P **P** **13 36 17.3 -0.9**
PDAR **Pinedale Array** **55.75 330** P **P** **13 36 17.9 -0.8**
comp=Z,0.5nm,0.5s,baz=131,slow=9.1,SNR=6.2
PDAR PcP **PcP** **13 37 17.0 -0.7**
comp=Z,1.1nm,0.7s,baz=130,slow=6.0,SNR=6.6
PDAR LR LR 14 01 17.0
comp=Z,92nm,18.8s,baz=142,slow=37
PDAR **Pinedale Array** **55.75 333** P **P** **13 36 17.8 -1.0**
TPH **Tonopah** **56.39 324** P **P** **13 36 23.8 +0.4**
REDW **Red Top Meadow** **56.81 332** P **P** **13 36 25.9 -0.3**
ECR **Eagle Creek** **56.82 332** P **P** **13 36 26.1 -0.2**
SNOW **Snow King Moun** **56.85 332** P **P** **13 36 26.4 -0.1**
ELK **Elko** **57.09 327** P **P** **13 36 27.8 -0.5**
OMMB **Old Mammoth Mi** **57.16 322** P **P** **13 36 28.8 -0.1**
OMMB IAmb IAmb 13 36 44.0
comp=Z,12nm,1.2s
NV11 **Mina Array Sit** **57.18 323** P **P** **13 36 29.0 +0.1**
NV11 IAmb IAmb 13 36 43.4
comp=Z,10nm,1.4s
MDPB **Devils Postpil** **57.23 322** P **P** **13 36 29.4 0.0**
NVAR **Mina Array Bea** **57.27 323** P **P** **13 36 29.9 +0.4**
comp=Z,1.7nm,0.7s,baz=131,slow=7.2,SNR=17

NVAR LR LR 13 58 30.3
comp=Z,112nm,20.9s,baz=114,slow=34
NVAR **Mina Array Bea** **57.27 323** P **P** **13 36 29.2 -0.4**
LHV **Little Huntoon** **57.27 323** P **P** **13 36 29.2 0.0**
LHV IAmb IAmb 13 36 51.2
comp=Z,11nm,1.1s
FLWY **Flagg Ranch** **57.30 333** P **P** **13 36 29.1 -0.6**
FLWY IAmb IAmb 13 36 50.6
comp=Z,13nm,1.5s
DRLN **Deer Lake** **57.51 16** P **P** **13 36 31.0 +0.2**
KVN **Kaiserville** **57.55 324** P **P** **13 36 31.4 -0.2**
ULM **Lac du Bonnet** **57.56 347** P **P** **13 36 29.6 -1.4**
comp=Z,9.0nm,0.8s,baz=159,slow=7.6,SNR=9.0
ULM **Lac du Bonnet** **57.56 347** P **P** **13 36 29.7 -1.4**
ULM IAmb IAmb 13 36 38.4
comp=Z,16nm,1.1s
YMR **Madison River** **57.87 333** P **P** **13 36 34.2 +0.4**
WAKR **Walker** **58.00 323** P **P** **13 36 34.8 +0.1**
WAKR IAmb IAmb 13 36 53.3
comp=Z,12nm,1.4s
YHB **Horse Butte** **58.04 333** P **P** **13 36 34.7 -0.2**
YHL **Hebgen Lake** **58.11 333** P **P** **13 36 35.4 -0.1**
GCMT **Greyciiff** **58.19 335** P **P** **13 36 35.4 -0.4**
VCNR **Virginia City** **58.63 323** P **P** **13 36 38.4 -0.7**
VCNR IAmb IAmb 13 36 53.6
comp=Z,14nm,1.4s
HLID **Hailey** **58.68 330** P **P** **13 36 38.9 -0.4**
BCYI **Bear Canyon** **58.74 331** P **P** **13 36 40.5 +0.7**
AFDM **Forest Hills D** **59.21 322** P **P** **13 36 41.9 -1.0**
AFDM IAmb IAmb 13 36 56.2
comp=Z,7.9nm,1.2s
MFID **Camas Ranch** **59.29 329** P **P** **13 36 43.3 -0.2**
MFID IAmb IAmb 13 36 55.9
comp=Z,7.6nm,1.1s
BEKR **Beckworth** **59.41 323** P **P** **13 36 44.3 -0.2**
BEKR IAmb IAmb 13 36 54.1
comp=Z,5.9nm,1.0s
HRY **Holter Researc** **59.84 334** P **P** **13 36 46.4 -0.8**
ORV **Oroville** **59.91 322** P **P** **13 36 47.8 +0.1**
EGMT **Eagleton** **60.00 336** P **P** **13 36 47.8 -0.4**
EGMT IAmb IAmb 13 37 11.2
comp=Z,19nm,1.4s
PLID **Pearl Lake** **60.57 330** P **P** **13 36 51.4 -1.0**
J08A **Circle Bar Ran** **60.64 327** P **P** **13 36 52.4 -0.4**
MSO **Missoula** **60.87 333** P **P** **13 36 53.8 -0.4**
MSO IAmb IAmb 13 37 05.9
comp=Z,6.9nm,1.1s
SCHQ **Schefferville** **60.90 8** P **P** **13 36 53.9 -0.3**
comp=Z,3.1nm,0.9s,baz=84,slow=14,SNR=1.2
SCHQ **Schefferville** **60.90 8** P **P** **13 36 54.0 -0.1**
K05A **Summer Lake** **61.55 326** P **P** **13 36 59.4 +0.3**
K05A IAmb IAmb 13 37 16.3
comp=Z,7.8nm,1.0s
I07A **Izee** **61.68 327** P **P** **13 37 00.1 +0.3**
F10A **Beach Ranch, E** **61.81 330** P **P** **13 37 00.5 0.0**
F10A IAmb IAmb 13 37 12.4
comp=Z,14nm,1.4s
YBH **Yreka Blue Hor** **61.97 324** P **P** **13 37 00.6 -1.2**
G08A **Pilot Rock** **62.21 329** P **P** **13 37 02.3 -1.1**
PINE **Pine Mountain** **62.27 326** P **P** **13 37 04.0 +0.1**
PINE IAmb IAmb 13 37 09.5
comp=Z,9.2nm,1.4s
WALA **Waterton Lakes** **62.54 334** P **P** **13 37 05.3 -0.2**
WALA IAmb IAmb 13 37 10.1
comp=Z,8.1nm,1.1s
KRMB **Red Mountain** **62.56 323** P **P** **13 37 05.4 -0.4**
NEW **Newport** **63.39 332** P **P** **13 37 10.4 -0.6**
B08A **Colville Reser** **64.50 331** P **P** **13 37 17.5 -0.8**
PPT2 **Papeete2** **70.42 253** *e*LR LR 13 59 13.9
comp=Z,67nm,25.0s
TBI **Tubuai** **70.45 247** *e*LQ LQ 13 56 17.0
comp=Z,655nm,39.2s
TBI *e*LR LR 13 59 15.5
comp=Z,61nm,28.2s
YKA **Yellowknife Ar** **73.24 343** P **P** **13 38 11.5 -0.8**
comp=Z,1.3nm,0.5s,baz=135,slow=6.8,SNR=14
LIC **Lamto** **74.17 82** *e*P **P** **13 38 19.4 +0.6**
comp=Z,50nm,1.4s
TIC **Toumodi** **74.23 82** *e*P **P** **13 38 19.8 +0.6**
DBIC **Dimbokro** **74.39 82** P **P** **13 38 20.2 +0.1**
comp=Z,12nm,0.7s,baz=240,slow=6.3,SNR=12
DBIC **Dimbokro** **74.39 82** P **P** **13 38 18.3 -1.8**
DBIC IAmb IAmb 13 38 24.6
comp=Z,15nm,0.8s
KIC **Kosan Boka** **74.47 82** *e*P **P** **13 38 21.0 +0.4**
comp=Z,72nm,1.2s
DLBC **Dease Lake** **75.88 335** P **P** **13 38 28.4 +0.5**
DLBC IAmb IAmb 13 38 43.8
comp=Z,20nm,1.4s
KOWA **Kowa** **76.36 74** P **P** **13 38 31.5 +0.1**
MDT **Midelt** **79.49 55** P **P** **13 38 49.7 +1.1**
comp=Z,4.6nm,1.0s,baz=268,slow=8.3,SNR=3.8
SNAA **Sanae** **80.27 162** P **P** **13 38 51.9 -0.1**
ESDC **Sonseca Array** **81.64 49** P **P** **13 39 00.8 +0.8**
comp=Z,4.9nm,0.9s,baz=266,slow=5.3,SNR=14
ESDC **Sonseca Array** **81.64 49** P **P** **13 39 00.7 +0.8**
TOA0 **Torodi Ar. Sit** **81.65 76** P **P** **13 39 00.5 +0.1**
TORD **Torodi Ar. Bea** **81.65 76** P **P** **13 39 00.8 +0.4**
comp=Z,9.5nm,0.9s,baz=289,slow=6.3,SNR=41
TORD **Torodi Ar. Bea** **81.65 76** P **P** **13 39 00.2 -0.2**
SUMG **Summit** **82.02 11** P **P** **13 39 01.5 -0.1**
SUMG IAmb IAmb 13 39 02.9
comp=Z,14nm,0.9s
SUMG **Summit** **82.02 11** *i* P **P** **13 39 02.0 +0.4**
comp=Z,41nm,0.9s
SUMG **Summit** **82.02 11** *i* P **P** **13 39 02.0 +0.4**
SUMG IAmb IAmb 13 39 03.1
comp=Z,41nm,0.9s
DAWY **Dawson** **82.73 337** P **P** **13 39 04.4 -0.7**
DAWY IAmb IAmb 13 39 31.6
comp=Z,8.4nm,1.2s
EPYK **Eagle Plains** **82.91 340** P **P** **13 39 05.5 -0.5**
EPYK IAmb IAmb 13 39 10.3
comp=Z,8.0nm,0.9s
INK **Inuvik** **82.93 342** P **P** **13 39 05.7 -0.2**
INK IAmb IAmb 13 39 11.0
comp=Z,15nm,1.2s
EGAK **Eagle** **83.74 337** P **P** **13 39 09.7 -0.5**
EGAK IAmb IAmb 13 39 15.2
comp=Z,14nm,1.0s
DOT **Dot Lake** **84.39 336** P **P** **13 39 13.7 +0.1**
DOT IAmb IAmb 13 39 20.4
comp=Z,8.5nm,0.9s
QSPA **South Pole Qui** **84.58 180** P **P** **13 39 14.8 +0.2**
IL31 **85.97 336** P **P** **13 39 20.6 -0.7**
IL31 IAmb IAmb 13 39 44.8
comp=Z,6.6nm,1.4s
ILAR **Eielson Array** **85.97 336** P **P** **13 39 20.8 -0.6**
comp=Z,2.0nm,0.9s,baz=170,slow=4.8,SNR=20
ILAR **Eielson Array** **85.97 336** P **P** **13 39 20.2 -1.3**
RND **Reindeer** **86.29 335** P **P** **13 39 21.8 -1.3**
MDM **Murphy Dome** **86.58 336** P **P** **13 39 23.6 -0.8**
BPAW **Bear Paw Mtn.** **87.41 335** P **P** **13 39 27.9 -0.6**
BPAW IAmb IAmb 13 39 45.8
comp=Z,10.0nm,1.1s
COLD **Coldfoot** **88.10 338** P **P** **13 39 32.2 +0.5**
COLD IAmb IAmb 13 39 39.5
comp=Z,6.4nm,0.8s
DAG **Danmarks Havn** **88.70 11** *i* P **P** **13 39 34.0 -0.4**
comp=Z,7.0nm,0.9s
DAG **Danmarks Havn** **88.70 11** *i* P **P** **13 39 34.0 -0.4**
DAG IAmb IAmb 13 39 35.6
comp=Z,7.0nm,0.9s
IMAR **Indian Mountai** **89.08 337** P **P** **13 39 35.5 -0.8**
VNDA **Vanda** **90.82 191** P **P** **13 39 44.9 +0.5**
comp=Z,0.6nm,0.8s,baz=168,slow=4.1,SNR=3.7
TSUM **Tsumeb** **93.84 110** P **P** **13 40 00.7 +1.0**
comp=Z,1.5nm,0.6s,baz=232,slow=16,SNR=2.7
SYO **Syowa Base** **94.55 161** *j* PP **PP** **13 43 44.6 -4.7**
GERES **GERESS Array B** **95.50 42** P **P** **13 40 06.7 +0.1**
comp=Z,0.7nm,0.8s,baz=270,slow=2.7,SNR=4.5
VYHS **Vyhne** **98.90 42** *e*PDIFF **Pdif** **13 40 24.2 +2.4**
BOSA **Boshof** **99.28 120** LR LR 14 23 24.4
comp=Z,112nm,19.4s,baz=234,slow=34
ZALV **Zalesovo Beam** **129.82 13** PKP **PKPdf** **13 45 50.7 0.0**
comp=Z,3.2nm,0.9s,baz=315,slow=1.0,SNR=7.2
ZALV **Zalesovo Beam** **129.82 13** PKP **PKPdf** **13 45 49.5 -1.3**
MKAR **Makanchi Array** **135.63 19** PKP **PKPdf** **13 46 01.6 -0.4**
comp=Z,1.3nm,0.9s,baz=318,slow=1.6,SNR=7.8
ASAR **Alice Springs** **137.16 226** PKP **PKiKP** **13 46 07.5 +0.1**
comp=Z,1.3nm,0.7s,baz=130,slow=3.7,SNR=1.9
SONM **Songino Array** **137.63 355** PKP **PKPdf** **13 46 05.2 -0.6**
comp=Z,1.4nm,0.9s,baz=357,slow=3.0,SNR=4.1
WRA **Warramunga Arr** **139.05 231** PKP **PKiKP** **13 46 10.7 -0.6**
comp=Z,2.7nm,0.7s,baz=123,slow=2.0,SNR=5.8

WMQ **Urumqi** **139.93 16** *e*PKP **PKPdf** **13 46 09.0 -1.1**
HHC **Hu-ho-hao-te** **143.70 347** *e*PKP **PKPdf** **13 46 18.3 +1.4**
GTA **Gaotai** **146.22 2** ⇑PKPbc **PKPbc** **13 46 21.8 -0.6**
GTA pPKP pPKPdf 13 46 32.6 -0.9
GTA sPKP 13 46 36.5
GTA LR LR
comp=Z,100nm,18.5s
GTA LR LR
comp=Z,110nm,17.1s
GTA LR LR
comp=Z,140nm,16.7s
FITZ **Fitzroy Crossi** **146.63 225** PKPbc **PKPab** **13 46 24.3 -0.8**
comp=Z,11nm,1.0s,baz=167,slow=7.3,SNR=4.3
FITZ **Fitzroy Crossi** **146.63 225** **PKPbc** **13 46 22.8 -1.2**
NJ2 **Nanjing** **149.05 331** *e*PKPbc **PKPdf** **13 46 25.4 -0.7**
LZH **Lanzhou** **149.50 356** *e*PKPbc **PKPbc** **13 46 31.6 +0.2**
LZH pPKP sPKPdf 13 46 40.7 -2.5
LZH sPKP 13 46 44.7
XAN **Xi'an** **150.81 347** PKPbc **PKPbc** **13 46 34.3 -0.2**
XAN pPKP PKPab 13 46 42.3 +0.8
CMAR **Chiang Mai Arr** **166.88 11** PKP **PKPdf** **13 46 47.8 -0.2**
comp=Z,0.6nm,0.9s,baz=300,slow=1.8,SNR=2.0
CMAR PKPab **PKPab** **13 47 50.5 -0.6**
comp=Z,0.8nm,0.5s,baz=340,slow=5.0,SNR=2.5

*IDC **09** 13:36:43.9±2.2, 7.°02S×129.°85E, h98km±21km, mb3.6/5, mb1 4.1/10, mb1mx3.7/32, mbtmp4.3/10, Error ellipse: s-maj=32.0km s-min=16.1km az=77.0*
*NEIC **09** 13:36:46.5±2.0, 6.°97S±0.°07×129.°68E±0.°10, h121km±9km, mb4.1/4, Error ellipse: s-maj=13.9km s-min=9.7km az=100.0*
*DJA **09** 13:36:47.0±0.2, 7.°S±2.°×13.°0E±.°, h137km±6km, M4.5/14, mb4.5/14, mB5.0/7, MLv4.6/11, Mw(mB)4.4/7*
ISC 09 13:36:48.0±0.6, 7.°36S±0.°06×129.°80E±0.°06, h150km, n41, σ2°24/42, mb3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.61**	**113**	P	**Pn**	**13 37 19.3**	**+0.5**
SAUI				S	**Sn**	**13 37 40.8**	**-1.6**
SAUI	**Saumlaki**	**1.61**	**113**	Pn	**Pn**	**13 37 19.4**	**+0.6**
SAUI				Sn	**Sn**	**13 37 41.1**	**-1.3**
BNDI	**Bandanaira**	**2.82**	**2**	P	**Pn**	**13 37 29.3**	**-3.8**
FAKI	**Fak Fak**	**5.04**	**29**	P	Pn	13 37 56.0	-6.0
FAKI				S	Sn	13 38 47.6	-12
FAKI	**Fak Fak**	**5.04**	**29**	Pn	Pn	13 37 56.2	-5.8
MTN	**Manton Dam**	**5.61**	**167**	Pn	**Pn**	**13 38 11.2**	**+1.6**
SOEI	**Soe**	**5.97**	**246**	P	**Pn**	**13 38 15.3**	**+0.9**
	1.2nm2μm155nm,0.8s						
SOEI	**Soe**	**5.97**	**246**	Pn	**Pn**	**13 38 14.0**	**-0.5**
SANI	**Sanana**	**6.50**	**324**	P	**Pn**	**13 38 18.9**	**-2.5**
	0.1nm23nm,1.0s						
SIJI	**Sorong**	**6.61**	**13**	P	Pn	13 38 14.8	-8.1
	5.5nm,0.3s,baz=220,slow=23,SNR=52						
SIJI				S	Sn	13 39 22.5	-15
	7.0nm,0.3s,baz=76,slow=23,SNR=5.6						
BATI	**Baumata**	**6.69**	**245**	P	**Pn**	**13 38 24.1**	**+0.1**
	34nm,0.3s,baz=120,slow=2.8,SNR=23						
BATI				S	**Sn**	**13 39 37.3**	**-2.0**
	33nm,0.3s,baz=81,slow=24,SNR=13						
BATI	**Baumata**	**6.69**	**245**	P	**Pn**	**13 38 24.1**	**+0.1**
	0.4nm929nm63nm,0.9s						
EDFI	**Ende, Flores**	**8.15**	**260**	P	**Pn**	**13 38 44.3**	**+0.8**
	5.5nm,0.8s						
KNRA	**Kununurra**	**8.33**	**187**	Pn	**Pn**	**13 38 46.6**	**+0.8**
WAMI	**Wamena**	**9.52**	**69**	P	**Pn**	**13 39 02.6**	**+0.9**
	73nm,0.7s						
BKSI	**Bulukumba**	**9.83**	**281**	P	**Pn**	**13 39 05.3**	**-0.5**
	18nm,1.0s						
WBSI	**Waikabubak, Su**	**10.54**	**257**	P	**Pn**	**13 39 15.6**	**+0.3**
	59nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.42**	**200**	P	**Pn**	**13 39 26.5**	**-0.3**
	5.7nm,0.3s,baz=29,slow=7.9,SNR=114						
FITZ				S	**Sn**	**13 41 27.7**	**-5.3**
	3.9nm,0.3s,baz=62,slow=20,SNR=7.0						
FITZ	**Fitzroy Crossi**	**11.42**	**200**	Pn	**Pn**	**13 39 26.1**	**-0.7**
WB0	**Warramunga Arr**	**13.12**	**161**	Pn	**Pn**	**13 39 48.2**	**-0.6**
WRAB	**Tennant Creek**	**13.26**	**161**		**Pn**	**13 39 49.9**	**-0.7**
WRA	**Warramunga Arr**	**13.26**	**161**	P	**Pn**	**13 39 50.4**	**-0.3**
	5.2nm,0.3s,baz=338,slow=13,SNR=121						
WRA				S	**Sn**	**13 42 11.3**	**-6.2**
	5.2nm,0.3s,baz=333,slow=22,SNR=14						
WRA	**Warramunga Arr**	**13.26**	**161**	Pn	**Pn**	**13 39 48.9**	**-1.7**
WB2	**Warramunga Arr**	**13.27**	**161**		**Pn**	**13 39 50.0**	**-0.7**
WR0	**Warramunga Arr**	**13.35**	**160**	Pn	**Pn**	**13 39 50.9**	**-0.8**
BBKI	**Banjar Baru**	**15.38**	**284**	P	**P**	**13 40 19.7**	**+1.1**
	41nm,1.1s						
MTKI	**Muara Teweh, K**	**16.16**	**293**	P	**P**	**13 40 27.4**	**+0.1**
	21nm,0.9s						
AS31	**Alice Springs**	**16.69**	**167**		**P**	**13 40 30.8**	**-2.2**
AS31				IAmb	IAmb	13 40 40.0	
	comp=Z,4.4nm,0.4s						
ASAR	**Alice Springs**	**16.69**	**167**	P	**Pn**	**13 40 35.3**	**+2.0**
	comp=Z,2.0nm,0.3s,baz=334,slow=9.6,SNR=249						
ASAR				S	**S**	**13 43 37.6**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=344,slow=7.6,SNR=7.0						
ASAR				ScP	**ScP**	**13 48 37.3**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=6.5,slow=1.8,SNR=6.6						
CISI	**Cisompet, Garu**	**21.80**	**268**	P	**P**	**13 41 25.9**	**-2.5**
FORT	**Forrest**	**23.36**	**184**	P	**P**	**13 41 48.2**	**+5.2**
FORT				IAmb	IAmb	13 41 48.7	
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**26.76**	**157**	P	**P**	**13 42 17.5**	**+3.7**
	comp=Z,1.0nm,0.4s,baz=333,slow=7.2,SNR=3.6						
STKA	**Stephens Creek**	**26.76**	**157**	IAmb	IAmb	13 42 35.2	
	comp=Z,2.5nm,1.4s						
CMAR	**Chiang Mai Arr**	**39.81**	**311**	P	**P**	**13 44 05.9**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=135,slow=7.0,SNR=6.1						
HHC	**Hu-ho-hao-te**	**50.82**	**342**	*e*P	P	13 45 26.3	-7.0
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
WMQ	**Urumqi**	**63.58**	**327**	*e*P	P	13 46 57.1	-5.7
MKAR	**Makanchi Array**	**68.41**	**327**	P	**P**	**13 47 33.5**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=120,slow=7.7,SNR=32						
ZALV	**Zalesovo Beam**	**71.81**	**334**	P	**P**	**13 47 53.4**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=140,slow=5.3,SNR=3.2						
MAW	**Mawson**	**74.55**	**201**	P	**P**	**13 48 14.2**	**+4.2**
	comp=Z,0.5nm,0.6s,baz=78,slow=17,SNR=1.5						
TORD	**Torodi Ar. Bea**	**128.68**	**281**	PKP	**PKiKP**	**13 55 40.2**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=85,slow=2.8,SNR=2.1						
CPUP	**Villa Florida**	**145.81**	**169**	PKPbc	**PKiKP**	**13 56 13.8**	**0.0**
	comp=Z,1.0nm,0.6s,baz=159,slow=3.3,SNR=3.4						

*ANF **09** 13:40:46.0±0.5, 41.°78N×119.°58W, h1km, ML3.3/15, Error ellipse: s-maj=4.3km s-min=4.2km az=48.0*
*REN **09** 13:40:47.4±2.4, 41.°87N±0.°04×119.°61W±0.°05, h0km±1km, ML3.6/2, Error ellipse: s-maj=6.3km s-min=5.3km az=176.0*
*NEIC **09** 13:40:49.1±1.9, 41.°88N±0.°04×119.°71W±0.°05, h13km±7km, Error ellipse: s-maj=6.2km s-min=5.2km az=194.0*
ISC 09 13:40:48.3±0.8, 41.°86N±0.°03×119.°67W±0.°03, h10km, n52, σ1°25/65, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.47**	**275**	Pg	**Pg**	**13 40 57.5**	**-0.1**
MOD				Sg	**Sg**	**13 41 03.9**	**0.0**
K05A	**Summer Lake**	**1.25**	**314**		**Pn**	**13 41 11.4**	**-0.7**
M04C	**Macdoel**	**1.62**	**268**	P	**Pn**	**13 41 16.6**	**-0.5**
	baz=86,SNR=176						
M04C				S	**Sg**	**13 41 40.3**	**-0.2**
	baz=86						
K04D	**Chiloquin, OR**	**1.72**	**297**	P	**Pn**	**13 41 18.2**	**-0.3**
	baz=115,SNR=52						
K04D				S	**Sg**	**13 41 44.1**	**+0.4**
	baz=115						
J08A	**Circle Bar Ran**	**1.74**	**30**	Pn	**Pn**	**13 41 17.5**	**-1.2**
J05D	**Fort Rock, OR**	**1.83**	**321**	P	**Pb**	**13 41 21.3**	**-0.7**
	baz=139,SNR=224						
J05D				S	**Sg**	**13 41 47.3**	**+0.1**
	baz=139						
L04D	**Klamath Falls**	**1.99**	**281**	P	**Pn**	**13 41 21.5**	**-0.7**
	baz=99,SNR=144						
L04D				Sb	**Sg**	**13 41 51.4**	**-1.0**
	baz=99						
BEKR	**Beckworth**	**2.06**	**195**		**Pb**	**13 41 25.1**	**-0.9**
PINE	**Pine Mountain**	**2.14**	**335**	Pn	**Pn**	**13 41 25.6**	**+1.3**
PAHR	**Pah Rah Range**	**2.16**	**174**		**Pn**	**13 41 24.5**	**-0.1**
I07A	**Izee**	**2.22**	**3**	Pn	**Pn**	**13 41 26.0**	**+0.7**
O03E	**Paynes Creek**	**2.25**	**227**	P	**Pn**	**13 41 25.5**	**-0.1**

	baz=46,SNR=39							
O03E				Sb	**Sb**	**13 41 58.5**	**+1.7**	
	baz=46							
J04D	**Umpqua Nationa**	**2.27**	**308**	Pb	**Pb**	**13 41 29.1**	**-0.4**	
	baz=126,SNR=36							
YBH	**Yreka Blue Hor**	**2.28**	**268**	Pn	**Pn**	**13 41 25.1**	**-1.0**	
M02C	**Callahan**	**2.43**	**260**	P	**Pn**	**13 41 27.0**	**-1.2**	
	baz=78,SNR=27							
M02C				Sb	**Sg**	**13 42 05.3**	**-1.1**	
	baz=78							
N02D	**Trinity Center**	**2.45**	**250**	P	**Pn**	**13 41 27.3**	**-1.1**	
	baz=68,SNR=38							
N02D				Sb	**Sg**	**13 42 05.2**	**-1.7**	
	baz=68							
WDC	**Whiskeytown Da**	**2.52**	**240**	Pn	**Pn**	**13 41 28.4**	**-0.8**	
HUMO	**Hull Mountain**	**2.55**	**288**	Pn	**Pn**	**13 41 28.5**	**-1.3**	
VCNR	**Virginia City**	**2.56**	**180**		**Pn**	**13 41 28.8**	**-1.3**	
ORV	**Oroville**	**2.69**	**212**		**Pn**	**13 41 32.4**	**+0.8**	
I05D	**Terrebonne, OR**	**2.76**	**334**	Pb	**Pb**	**13 41 37.6**	**-0.1**	
	baz=152,SNR=18							
I05D				Sb	**Sg**	**13 42 15.1**	**-1.8**	
	baz=152							
I04A	**Tendick Farm,**	**2.79**	**315**	Pb	**Pb**	**13 41 38.3**	**0.0**	
	baz=132,SNR=12							
I04A				Sb	**Sg**	**13 42 16.3**	**-1.7**	
	baz=132							
RUBR	**Rubicon Trail**	**2.83**	**188**		**Pb**	**13 41 40.4**	**+1.4**	
L02E	**Cave Junction**	**2.94**	**277**	P	**Pn**	**13 41 35.4**	**+0.3**	
	baz=94,SNR=38							
L02E				Sb	**Sb**	**13 42 19.0**	**+2.1**	
	baz=94							
KVN	**Kaiserville**	**3.05**	**156**		**Pn**	**13 41 37.9**	**+1.1**	
AFDM	**Forest Hills D**	**3.08**	**199**	Pn	**Pn**	**13 41 38.2**	**+1.2**	
K02D	**Willamette Mer**	**3.08**	**287**	P	**Pn**	**13 41 37.4**	**+0.4**	
	baz=104,SNR=149							
K02D				Sb	**Sg**	**13 42 24.2**	**-3.0**	
	baz=104							
KRMB	**Red Mountain**	**3.19**	**265**	Pn	**Pn**	**13 41 39.1**	**+0.5**	
MFID	**Camas Ranch**	**3.23**	**60**	Pn	**Pn**	**13 41 38.6**	**-0.6**	
I03D	**Drain, OR**	**3.27**	**305**	Pb	**Pb**	**13 41 47.5**	**+1.1**	
	baz=122							
RYN	**Ryan**	**3.35**	**164**	Pn	**Pn**	**13 41 41.8**	**+1.0**	
WAKR	**Walker**	**3.36**	**177**	Pn	**Pn**	**13 41 42.1**	**+1.1**	
KBO	**Bosley Butte**	**3.41**	**277**	Pn	**Pn**	**13 41 41.5**	**-0.1**	
JCC	**Jacoby Creek,**	**3.44**	**254**	Pn	**Pn**	**13 41 42.1**	**+0.1**	
BMO	**Blue Mountains**	**3.45**	**29**	Pn	**Pn**	**13 41 42.9**	**+0.7**	
ELK	**Elko**	**3.52**	**107**	Pn	**Pn**	**13 41 44.1**	**+0.8**	
NVAR	**Mina Array Bea**	**3.58**	**163**		**Pn**	**13 41 46.0**	**+1.9**	
KEBM	**Edson Butte**	**3.60**	**288**	Pn	**Pn**	**13 41 44.9**	**+0.7**	
LHV	**Little Huntoon**	**3.72**	**166**	Pn	**Pn**	**13 41 47.4**	**+1.7**	
HOPS	**Hopland Field**	**3.87**	**223**	Pn	**Pn**	**13 41 49.2**	**+1.4**	
PLID	**Pearl Lake**	**4.19**	**38**	Pn	**Pn**	**13 41 52.7**	**+0.3**	
HLID	**Hailey**	**4.23**	**65**	P	**Pn**	**13 41 53.1**	**+0.1**	
	baz=248							
HLID				Sb	**Sb**	**13 42 56.6**	**+2.5**	
	baz=248							
HLID	**Hailey**	**4.23**	**65**	Pn	**Pn**	**13 41 52.9**	**-0.1**	
R11A	**Troy Canyon, C**	**4.70**	**137**	Sg	**Sg**	**13 43 15.2**	**-4.1**	
	baz=320							
R11A	**Troy Canyon, C**	**4.70**	**137**	Pn	**Pn**	**13 42 00.2**	**+0.7**	
BGU	**Big Grassy Mou**	**5.08**	**98**	Pn	**Pn**	**13 42 05.9**	**+1.3**	
DUG	**Dugway, Tooele**	**5.45**	**106**	Pn	**Pn**	**13 42 09.4**	**-0.2**	
TPNV	**Topopah Spring**	**5.58**	**151**	Sg	**Sg**	**13 43 44.6**	**-2.7**	
	baz=333							
D05A	**Enumclaw**	**5.58**	**344**	Pn	**Pn**	**13 42 10.3**	**-1.0**	
PRN	**Pahroc Range**	**5.70**	**140**		**Pn**	**13 42 13.0**	**-0.2**	
MCMT	**McKenzie Canyo**	**5.79**	**57**	Pn	**Pn**	**13 42 13.2**	**-1.3**	
JLU	**Jordanelle**	**6.32**	**99**	Pn	**Pn**	**13 42 20.9**	**-0.9**	

JMA 09 13:45:05.3±0.3,25°.05N×123°.61E,h30km,M1.6,
Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.72**	**171**	P	Pb	13 45 18.9	-0.5
JISG	**Ishigakijimahi**	**0.79**	**126**	P	Pn	13 45 19.9	-0.4
JIJ	**Ishigaki jima**	**0.84**	**145**	P	Pn	13 45 20.4	-0.7
JKRS	**Kuro-shima**	**0.89**	**156**	P	Pn	13 45 21.7	0.0
JKRS				*e*S	Sn	13 45 32.3	-1.3

TAP 09 13:45:59.8,24°.83N×121°.98E,h6km,ML1.9,1C-2D,D,
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NTC	**Toucheng**	**0.14**	**279**	*e*P	Pg	13 46 03.7	+1.0
	baz=278						
NTC				*e*S	Sg	13 46 06.4	+1.7
	baz=278						
TWB1	**Santiao Chiao**	**0.17**	**1**	⇓*i*P	Pg	13 46 04.2	+0.9
	baz=3.0						
TWB1				*i* S	Sg	13 46 07.4	+1.8
	baz=3.0						
TIPB	**Shuangxi**	**0.20**	**314**	⇑*i*P	Pg	13 46 04.9	+1.1
	baz=313						
TIPB				*i* S	Sg	13 46 08.2	+1.7
	baz=313						
ILA	**Ilan**	**0.23**	**253**	*e*P	Pg	13 46 04.9	+0.7
	baz=251						
ILA				S	Sg	13 46 09.0	+1.8
	baz=251						
TWC	**Suao**	**0.25**	**209**	⇓*i*P	Pg	13 46 05.7	+0.9
	baz=206						
TWC				*i* S	Sb	13 46 10.1	-1.2
	baz=206						
TWE	**Neicheng**	**0.31**	**249**	*i* P	Pb	13 46 06.7	-0.9
	baz=247						
TWE				S	Sb	13 46 12.9	0.0
	baz=247						
TWA	**Mucha**	**0.39**	**292**	P	Pb	13 46 08.3	-0.8
	baz=291						
TWA				S	Sb	13 46 15.0	-0.4
	baz=291						
ENAH	**Nanao**	**0.41**	**203**	S	Sb	13 46 16.1	+0.2
	baz=202						
NWLT	**Wulai**	**0.44**	**263**	*e*P	Pb	13 46 09.8	-0.1
	baz=262						
NWLT				S	Sb	13 46 16.4	-0.4
	baz=262						
NDT	**Datong Townshi**	**0.49**	**242**	P	Pb	13 46 10.1	-0.6
	baz=241						
NDT				S	Sb	13 46 18.5	+0.5
	baz=241						
YM01	**YM01**	**0.49**	**310**	*e*P	Pb	13 46 10.1	-0.7
	baz=309						
YM01				S	Sb	13 46 17.5	-0.7
	baz=309						
YM11	**YM11**	**0.50**	**312**	*e*P	Pb	13 46 10.4	-0.5
	baz=311						
YM08	**YM08**	**0.50**	**315**	P	Pb	13 46 11.0	0.0
	baz=314						
YM04	**YM04**	**0.52**	**308**	*e*P	Pb	13 46 11.5	+0.3
	baz=308						
YHNB	**Yeheng**	**0.58**	**254**	P	Pg	13 46 11.3	+0.4
	baz=253						
YHNB				S	Sb	13 46 21.9	+1.1
	baz=253						
NSK	**Sanguang**	**0.59**	**255**	*i* P	Pb	13 46 12.4	-0.1
	baz=254						
NSK				S	Sb	13 46 21.4	+0.2
	baz=254						
NNS	**Nan Shan**	**0.68**	**235**	P	Pb	13 46 14.3	+0.2
	baz=234						
NNS				*e*S	Sb	13 46 25.1	+1.3
	baz=234						
NACB	**Ninganchiao**	**0.75**	**208**	*e*P	Pb	13 46 15.2	+0.1
	baz=208						
NACB				*e*S	Sb	13 46 26.1	+0.6
	baz=208						
ETLH	**Xiulin Townshi**	**0.77**	**216**	*e*P	Pb	13 46 15.7	+0.1
	baz=216						
ETLH				S	Sb	13 46 26.6	+0.2
	baz=216						
NSTT	**Nanjuang**	**0.92**	**258**	*e*S	Sb	13 46 31.4	+0.9
	baz=257						
WHF	**Hehuan Shan**	**0.95**	**224**	P	Pg	13 46 18.4	+0.4
	baz=223						
WHF				S	Sb	13 46 32.6	+0.9
	baz=223						
WHP	**Taichung City**	**1.09**	**240**	*e*P	Pb	13 46 21.2	0.0
	baz=239						
EGFH	**Guangfu**	**1.27**	**204**	*e*S	Sn	13 46 41.4	+0.2
	baz=203						

*UCR **09** 13:53:14.5±1.7,6°.24N×82°.60W,h8km±36km,MW5.0, mb4.5(NEIC)*
*UPA **09** 13:53:16.0±2.7,6°.37N×82°.61W,h10km±19km,MW4.8*
*NEIC **09** 13:53:17.2±1.6,6°.39N±0°.04×82°.63W±0°.08,h10km±1km, mb4.5/152,Error ellipse: s-maj=12.6km s-min=7.0km az=92.0*
*IDC **09** 13:53:20.2±3.7,6°.37N×82°.65W,h33km±28km,mb4.0/21, mb1 4.2/28,mb1mx4.1/43,mbtmp4.3/28,ML3.8/7,MS3.9/30, Ms1 3.9/30,ms1mx3.9/38,Error ellipse: s-maj=21.4km s-min=10.5km az=49.0*
*GCMT **09** 13:53:21.2±0.2,6°.25N±0°.01×82°.53W±0°.01,h22km±1km, MW5.0/121,Moment Tensor Solution. s48,c61; s121,c186; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}0.16±.11; $M_{\theta\theta}$-0.79±.08; $M_{\phi\phi}$0.63±.10; $M_{r\theta}$0.41±.14; $M_{\theta\phi}$3.81±.09; $M_{r\phi}$0.16±.15; Best double couple: M_o3.90200×10¹⁶ NP1:ϕ_s355.00000°,δ84.00000°, λ178.00000°. NP2:ϕ_s85.00000°,δ88.00000°,λ6.00000°. Principal axes: T 3.8380, Plg6.0000°, Azm310.0000°; N 0.1300, Plg83.0000°, Azm103.0000°; P -3.9670, Plg3.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 13:53:16.5±0.4,**6°.34N**±0°.05×**82°.58W**±0°.04,**h10**km,**n411,**
σ1**38**/422,**mb4.5**/76,**MS4.0**/25,**5C-2D,South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	**1.94**	**43**	⇓*i*P	**Pn**	**13 53 48.3**	**-1.3**
GMAL				*e*S	**Sn**	**13 54 09.6**	**-4.5**
PVID3	**Puerto Vidal,**	**1.95**	**30**	*e*P	**Pn**	**13 53 48.3**	**-1.4**
CACAO	**El Cacao, Vera**	**1.98**	**60**	*e*P	**Pn**	**13 53 48.2**	**-1.8**
CACAO				*e*S	**Sn**	**13 54 09.9**	**-5.0**
REME3	**Remedios, Chir**	**2.01**	**22**	*e*P	**Pn**	**13 53 49.7**	**-0.9**
MARI3	**Mariato, Verag**	**2.04**	**50**	*e*P	**Pn**	**13 53 49.0**	**-1.9**
MARI3				*e*S	**Sn**	**13 54 15.7**	**-0.8**
LESP3	**La Esperanza,**	**2.06**	**354**	*e*P	**Pn**	**13 53 48.1**	**-3.1**
LESP3				*e*S	**Sn**	**13 54 12.5**	**-4.5**
LOCO3	**Loma Colorada,**	**2.06**	**4**	*e*P	**Pn**	**13 53 49.3**	**-1.9**
RSUS3	**Rio de Jesus,**	**2.15**	**41**	*e*P	**Pn**	**13 53 51.9**	**-0.7**
RSUS3				*e*S	**Sn**	**13 54 18.4**	**-0.9**
PONU3	**Ponuga, Veragu**	**2.21**	**46**	*e*P	**Pn**	**13 53 52.8**	**-0.4**
PONU3				*e*S	**Sn**	**13 54 19.6**	**-1.1**
CDITO	**Canoas**	**2.23**	**353**	⇑*i*P	**Pn**	**13 53 52.1**	**-1.6**
CDITO				*e*S	**Sn**	**13 54 17.1**	**-4.3**
CDITO	**Canoas**	**2.23**	**353**	⇑*e*P	**Pn**	**13 53 52.0**	**-1.6**
PTJ1	**Puerto Jimnez**	**2.29**	**342**	*e*P	**Pn**	**13 53 52.5**	**-1.9**
PTJ1				*e*S	**Sn**	**13 54 20.1**	**-2.6**
PTJ1	**Puerto Jimnez**	**2.29**	**342**	*e*P	**Pn**	**13 53 53.4**	**-1.0**
PTAR3	**Potrerillos Ar**	**2.34**	**2**	*e*P	**Pn**	**13 53 54.8**	**-0.3**
PTAR3				*e*S	**Sn**	**13 54 18.4**	**-5.6**
PSOM3	**Paja de Sombre**	**2.34**	**6**	*e*P	**Pn**	**13 53 53.7**	**-1.4**
PSOM3				*e*S	**Sn**	**13 54 21.9**	**-2.1**
BCO2	**Palmira**	**2.36**	**1**	⇑*i*P	**Pn**	**13 53 54.3**	**-1.2**
BCO2				*e*S	**Sn**	**13 54 24.2**	**-0.4**
STIA3	**Santiago, Vera**	**2.36**	**42**	*e*P	**Pn**	**13 53 55.5**	**+0.1**
STIA3				*e*S	**Sn**	**13 54 24.8**	**+0.3**
TOSI3	**Tonosi**	**2.37**	**63**	*e*P	**Pn**	**13 53 54.3**	**-1.2**
BRU2	**Volcan**	**2.44**	**357**	⇓*e*P	**Pn**	**13 53 54.9**	**-1.7**
BRU2				*e*S	**Sn**	**13 54 26.3**	**-0.2**
BRU2	**Volcan**	**2.44**	**357**	*e*P	**Pn**	**13 53 55.5**	**-1.0**
MLIR3	**Monte Lirio, C**	**2.45**	**354**	*e*P	**Pn**	**13 53 56.0**	**-0.6**
MLIR3				*e*S	**Sn**	**13 54 25.1**	**-1.5**
EDSV	**San Vito**	**2.49**	**351**	*e*P	**Pn**	**13 53 56.8**	**-0.5**
MAPC	**Malpelo**	**2.52**	**157**	*e*P	Pn	13 53 49.8	-7.7
MAPC				*e*S	Sn	13 54 12.8	-16
MAPC				*i*		13 54 20.1	
	comp=Z,193nm,0.3s						
RIOS	**Rincon, Osa**	**2.52**	**338**	*e*P	**Pn**	**13 53 54.3**	**-3.2**
RIOS				*e*S	**Sn**	**13 54 25.1**	**-3.2**
RIOS	**Rincon, Osa**	**2.52**	**338**	*e*P	**Pn**	**13 53 55.3**	**-2.2**
CHGR2	**Aguacate**	**2.61**	**9**	*e*P	**Pn**	**13 53 58.5**	**-0.4**
CHGR2				*e*S	**Sn**	**13 54 30.9**	**+0.2**
AZU	**Azuero**	**2.70**	**58**	*e*P	**Pn**	**13 53 58.9**	**-1.1**
AZU				*e*S	**Sn**	**13 54 31.6**	**-1.3**
AZU	**Azuero**	**2.70**	**58**	*e*P	**Pn**	**13 53 58.7**	**-1.3**
EDPN	**Palmar Norte**	**2.74**	**342**	*e*P	**Pn**	**13 53 59.4**	**-1.2**
EDPN				*e*S	**Sn**	**13 54 33.2**	**-0.6**
PCRI3	**Pocri, Los San**	**2.77**	**62**	*e*P	**Pn**	**13 53 59.6**	**-1.4**
PCRI3				*e*S	**Sn**	**13 54 28.4**	**-6.2**
PEDA3	**Pedasi**	**2.80**	**65**	*e*P	**Pn**	**13 53 59.0**	**-2.3**
PEDA3				*e*S	**Sn**	**13 54 32.5**	**-2.7**
EDBA	**Buenos Aires**	**2.88**	**346**	*e*P	**Pn**	**13 54 02.3**	**-0.3**
DRK0	**Durika**	**2.98**	**347**	*e*P	**Pn**	**13 54 03.2**	**-0.8**
EDLM	**Las Mercedes**	**3.08**	**341**	*e*P	**Pn**	**13 54 04.7**	**-0.7**
PNME	**Penonome**	**3.09**	**46**	*e*P	**Pn**	**13 54 04.3**	**-1.0**
EDDO	**Dominical**	**3.16**	**336**	*e*P	**Pn**	**13 54 04.8**	**-1.6**
PEZE	**Perez Zeledon,**	**3.21**	**340**	*e*P	**Pn**	**13 54 05.9**	**-1.2**
VTON	**El Valle, Cocl**	**3.33**	**47**	*e*P	**Pn**	**13 54 08.4**	**-0.3**
VTON				*e*S	**Sn**	**13 54 49.5**	**+1.2**
CDM	**Cerro de Muert**	**3.40**	**340**	*e*P	**Pn**	**13 54 08.9**	**-1.2**
RIMA	**Rio Macho**	**3.63**	**340**	*e*P	**Pn**	**13 54 11.9**	**-1.2**
LCR2	**La Lucha 2**	**3.66**	**337**	*e*P	**Pn**	**13 54 12.2**	**-1.3**
BATAN	**Batan**	**3.81**	**348**	⇑*i*P	**Pn**	**13 54 15.7**	**+0.4**
BATAN				*e*S	**Sn**	**13 55 04.2**	**+3.9**
CVTR	**Volcan Turrial**	**3.83**	**342**	*e*P	**Pn**	**13 54 15.6**	**-0.5**
SJS	**Escuela Geolog**	**3.86**	**338**	*e*P	**Pn**	**13 54 15.9**	**-0.2**
HDC	**Heredia**	**3.94**	**337**	⇑*i*P	**Pn**	**13 54 16.5**	**-0.7**
HDC				*e*S	**Sn**	**13 55 01.8**	**-1.8**
HDC	**Heredia**	**3.94**	**337**	*e*P	**Pn**	**13 54 16.5**	**-0.7**
HDC	**Heredia**	**3.94**	**337**		**Pn**	**13 54 16.3**	**-0.9**
UPA	**Univ. de Panam**	**4.00**	**49**	*e*P	**Pn**	**13 54 17.3**	**-0.6**
UPA				*e*S	**Sn**	**13 55 03.3**	**-1.5**
LAFE	**Finca La Fe, P**	**4.14**	**326**	*e*P	**Pn**	**13 54 18.2**	**-1.7**
SRA1	**San Ramn**	**4.17**	**333**	*e*P	**Pn**	**13 54 19.3**	**-1.0**
JTS	**Las Juntas de**	**4.57**	**329**	Pn	**Pn**	**13 54 24.5**	**-1.3**
	comp=Z,120nm,0.3s,baz=148,slow=7.0,SNR=238						
JTS				Sn	**Sn**	**13 55 16.3**	**-2.7**
	comp=Z,25nm,0.3s,baz=346,slow=20,SNR=1.6						
JTS	**Las Juntas de**	**4.57**	**329**	*e*P	**Pn**	**13 54 24.9**	**-0.9**
JTS				*e*S	**Sn**	**13 55 19.7**	**+0.7**
JTS	**Las Juntas de**	**4.57**	**329**	*e*P	**Pn**	**13 54 24.5**	**-1.3**
JTS	**Las Juntas de**	**4.57**	**329**	Pn	**Pn**	**13 54 23.9**	**-1.9**
CASO	**Castillo**	**4.59**	**332**	*e*P	**Pn**	**13 54 26.2**	**+0.1**
FORC	**Fortuna**	**4.59**	**333**	*e*P	**Pn**	**13 54 26.4**	**+0.3**
ARE1	**Arenal 1**	**4.61**	**333**	*e*P	**Pn**	**13 54 25.9**	**-0.4**
CEDE	**Laguna Cedeo**	**4.62**	**333**	*e*P	**Pn**	**13 54 25.9**	**-0.6**
DUNO	**Dulce Nombre,**	**4.70**	**322**	*e*P	**Pn**	**13 54 25.0**	**-2.6**
COVE	**Coope Vega, Sa**	**4.71**	**338**	*e*P	**Pn**	**13 54 26.8**	**-0.8**
GUAI	**GUAI**	**4.86**	**324**	*e*P	**Pn**	**13 54 28.1**	**-1.7**
ORTG	**Ortega, Santa**	**4.91**	**325**	*e*P	**Pn**	**13 54 29.3**	**-1.2**
ACAL	**Aguas Claras**	**4.91**	**331**	*e*P	**Pn**	**13 54 30.0**	**-0.5**
CUI	**Cuipilapa**	**4.99**	**329**	*e*P	**Pn**	**13 54 30.7**	**-0.9**
COLC	**Colonia**	**5.02**	**329**	*e*P	**Pn**	**13 54 31.8**	**-0.1**
UPD2	**Meteti**	**5.03**	**64**	*e*P	**Pn**	**13 54 34.5**	**+2.5**
HORNC	**Hornillas**	**5.04**	**330**	*e*P	**Pn**	**13 54 32.0**	**-0.4**
LIM1	**Limonal**	**5.07**	**329**	*e*P	**Pn**	**13 54 32.5**	**-0.2**
SOLC	**Bahia Solano**	**5.14**	**91**	*e*P	**Pn**	**13 54 33.1**	**-0.5**
GPS2	**Hotel Rincn d**	**5.17**	**328**	*e*P	**Pn**	**13 54 34.1**	**0.0**
GPS3	**Bodega del ICE**	**5.18**	**328**	*e*P	**Pn**	**13 54 34.4**	**+0.3**
GPS1	**Guardaparques**	**5.19**	**328**	*e*P	**Pn**	**13 54 34.8**	**+0.4**
LAPC	**Finca la Perla**	**5.22**	**328**	*e*P	**Pn**	**13 54 34.4**	**-0.4**
BUEV	**Buena Vista**	**5.24**	**328**	*e*P	**Pn**	**13 54 34.9**	**-0.1**
GBS3	**Finca Las Img**	**5.25**	**327**	*e*P	**Pn**	**13 54 34.8**	**-0.3**
GB1A	**Borinquen Arri**	**5.25**	**328**	*e*P	**Pn**	**13 54 35.3**	**+0.1**
HZTE	**Horizontes, Gu**	**5.27**	**326**	*e*P	**Pn**	**13 54 35.4**	**0.0**
CAP2	**Capurgana**	**5.66**	**66**	*e*P	**Pn**	**13 54 42.5**	**+1.8**
CAPC	**Capurgana**	**5.66**	**66**	*e*P	**Pn**	**13 54 43.2**	**+2.5**
MALC	**Bahia Malaga**	**5.71**	**114**	*e*P	**Pn**	**13 54 40.2**	**-1.3**
ESPN	**Las Esperanzas**	**6.06**	**344**	Pn	**Pn**	**13 54 44.7**	**-1.5**
ACON	**Acoyapa**	**6.15**	**336**	*e*P	**Pn**	**13 54 46.4**	**-1.1**
ACON	**Acoyapa**	**6.15**	**336**		**Pn**	**13 54 46.6**	**-0.8**
DBIB	**Dabeiba**	**6.36**	**84**	*e*P	**Pn**	**13 54 51.6**	**+1.1**
CBOC	**Ciudad Bolivar**	**6.55**	**94**	*e*P	**Pn**	**13 54 50.9**	**-2.2**
YOTC	**Yotoco, Valle**	**6.64**	**110**	*e*P	**Pn**	**13 54 53.1**	**-1.2**
LCBC	**Los crdobas,**	**6.64**	**68**	*e*P	**Pn**	**13 54 58.6**	**+4.3**
POPC	**Popayan, Colom**	**6.99**	**122**	*e*P	**Pn**	**13 54 56.8**	**-2.5**
HELC	**Santa Helena**	**7.01**	**91**	*e*P	**Pn**	**13 55 00.7**	**+1.0**
HELC	**Santa Helena**	**7.01**	**91**	*e*P	**Pn**	**13 54 59.5**	**-0.2**
UREC	**San Jos de Ur**	**7.13**	**78**	*e*P	**Pn**	**13 55 01.8**	**+0.8**
GUY2C	**Guyana, Caldas**	**7.26**	**98**	*e*P	**Pn**	**13 55 05.8**	**+2.6**
MOTC	**Monteria, Cord**	**7.27**	**70**	*e*P	**Pn**	**13 55 05.9**	**+3.1**
MONA	**Monteria**	**7.27**	**70**	*e*P	**Pn**	**13 55 05.7**	**+2.8**
SOTA	**Rioblanco**	**7.28**	**125**	*e*P	**Pn**	**13 55 04.1**	**+0.7**
CCUFI	**Cufio, Nario**	**7.29**	**134**	*e*P	**Pn**	**13 55 03.6**	**+0.1**
GCUF	**Volcan Galeras**	**7.29**	**134**	*e*P	**Pn**	**13 55 02.4**	**-1.2**
CPAS1	**Pasto**	**7.33**	**134**	*e*P	**Pn**	**13 55 03.2**	**-0.8**
MATN	**Matagalpa**	**7.33**	**334**	Pn	**Pn**	**13 55 02.7**	**-1.1**
PCON	**Cinco Dias**	**7.34**	**123**	*e*P	**Pn**	**13 55 04.0**	**-0.3**
CRUC	**La Cruz**	**7.35**	**130**	*e*P	**Pn**	**13 55 03.1**	**-1.2**
ANIL	**Santa Ana**	**7.38**	**104**	*e*P	**Pn**	**13 55 05.9**	**+1.3**
TOLC	**Tolima**	**7.43**	**103**	*e*P	**Pn**	**13 55 06.9**	**+1.4**
MARP	**Paez Belalcaza**	**7.46**	**117**	*e*P	**Pn**	**13 55 06.6**	**+0.8**
ORTC	**Ortega, Tolima**	**7.69**	**108**	*e*P	**Pn**	**13 55 09.3**	**+0.6**
CRIN	**San Cristobal**	**7.70**	**325**	*i* P	**Pn**	**13 55 09.8**	**+0.9**
CRIN	**San Cristobal**	**7.70**	**325**	Pn	**Pn**	**13 55 07.8**	**-1.1**
NORC	**Norcasia**	**7.71**	**95**	*e*P	**Pn**	**13 55 11.6**	**+2.6**
BETC	**Betania**	**7.99**	**117**	*e*P	**Pn**	**13 55 13.9**	**+1.1**
PTBC	**PUERTO BERRIO,**	**8.07**	**88**	*e*P	**Pn**	**13 55 17.0**	**+3.0**
PRAC	**Prado**	**8.10**	**108**	*e*P	**Pn**	**13 55 15.4**	**+1.1**
SJCC	**San Jacinto, C**	**8.13**	**64**	*e*P	**Pn**	**13 55 16.8**	**+2.0**
GARC	**Garzon, Huila**	**8.18**	**120**	*e*P	**Pn**	**13 55 16.5**	**+0.9**
CSGN	**Cosiguina Volc**	**8.22**	**324**	Pn	**Pn**	**13 55 17.5**	**+1.6**
PUAC	**Puerto Asis, P**	**8.31**	**134**	*e*P	**Pn**	**13 55 15.3**	**-1.9**
ROSC	**El Rosal**	**8.36**	**100**	Pn	**Pn**	**13 55 22.0**	**+3.8**
	comp=Z,10nm,0.3s,baz=254,slow=15,SNR=12						
ROSC				LR	LR	13 58 18.0	
	comp=Z,678nm,21.8s,baz=290,slow=35						
ROSC	**El Rosal**	**8.36**	**100**	*e*P	Pn	13 55 23.6	+5.4
ROSC	**El Rosal**	**8.36**	**100**	Pn	**Pn**	**13 55 21.1**	**+2.9**
FLOC	**Florencia**	**8.37**	**124**	*e*P	**Pn**	**13 55 18.3**	**+0.3**
TGUH	**Tegucigalpa,Un**	**8.95**	**329**	Pn	**Pn**	**13 55 27.0**	**+0.9**
ARGC	**Ariguani, Magd**	**8.96**	**67**	*e*P	**Pn**	**13 55 29.2**	**+3.1**
CHIC	**Chingaza**	**8.97**	**100**	*e*P	**Pn**	**13 55 29.7**	**+3.1**
OCAC	**Ocana**	**9.38**	**78**	*e*P	**Pn**	**13 55 34.4**	**+2.4**
RUSC	**La Rusia**	**9.45**	**92**	*e*P	**Pn**	**13 55 35.9**	**+2.6**
MACC	**Macarena, Meta**	**9.65**	**115**	*e*P	**Pn**	**13 55 36.2**	**+0.6**
SNET	**Serv Nac Est T**	**9.80**	**319**		**Pn**	**13 55 38.8**	**+1.0**
PAMC	**Pamplona, Colo**	**9.86**	**84**	*e*P	**Pn**	**13 55 42.1**	**+3.3**
PTLC	**Puerto Leguiza**	**9.89**	**128**	*e*P	**Pn**	**13 55 41.5**	**+2.5**
MTO3	**Montecristo**	**10.42**	**321**		**Pn**	**13 55 46.9**	**+0.6**
ESQI	**Esquipulas**	**10.53**	**321**		**Pn**	**13 55 49.6**	**+1.9**
URIC	**Uribia, Colomb**	**11.73**	**62**	*e*P	**Pn**	**13 56 05.9**	**+1.8**
RTAL	**Retalhuleu**	**12.10**	**313**	Pn	**Pn**	**13 56 09.5**	**+0.4**
SDV	**Santo Domingo**	**12.11**	**77**	Pn	**Pn**	**13 56 12.0**	**+2.6**
	comp=Z,0.9nm,0.3s,baz=248,slow=9.5,SNR=16						
SDV				Sn	**Sn**	**13 58 21.3**	**-3.5**
	comp=Z,0.9nm,0.3s,baz=314,slow=17,SNR=1.6						
SDV				LR	LR	14 00 58.0	
	comp=Z,578nm,21.2s,baz=254,slow=38						
SDV	**Santo Domingo**	**12.11**	**77**	Pn	**Pn**	**13 56 11.1**	**+1.7**
MTDJ	**Mount Denham**	**12.79**	**22**	Pn	**Pn**	**13 56 18.5**	**-0.2**
CBCY	**The Bluff, Cay**	**13.59**	**11**	Pn	**Pn**	**13 56 30.2**	**+0.7**
CCIG	**Comitan**	**13.61**	**317**		**Pn**	**13 56 28.8**	**-1.1**
ATAH	**Atahualpa**	**14.03**	**163**	Pn	**Pn**	**13 56 38.0**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=338,slow=16,SNR=1.8						
ATAH				LR	LR	14 01 30.2	
	comp=Z,2μm,18.0s,baz=338,slow

comp=Z,496nm,20.3s,baz=304,slow=36
SLBS Sierra La Lagu 31.45 306 P P 13 59 39.6 +1.1
R49A Shelbyville 31.89 356 P P 13 59 40.6 -1.4
R49A IAmb IAmb 13 59 59.5
comp=Z,13nm,1.3s
MGMO Mountain Grove 31.92 345 P P 13 59 41.0 -1.3
MGMO IAmb IAmb 13 59 42.1
comp=Z,5.6nm,0.8s
Q53A Leroy 32.38 2 P P 13 59 47.0 +0.6
baz=182
CCM Cathedral Cave 32.53 347 P P 13 59 46.7 -1.0
baz=164
Q51A Peebles 32.54 359 P P 13 59 48.3 +0.5
Q55A Buckhannon 32.59 4 P P 13 59 49.7 +1.5
baz=185
MNTX Cornudas Mount 33.03 323 P P 13 59 52.9 +0.8
baz=135
MNTX Cornudas Mount 33.03 323 P P 13 59 52.2 0.0
MNTX IAmb IAmb 13 59 53.8
comp=Z,12nm,1.3s
P56A Dayton Farm, R 33.19 5 P P 13 59 54.5 +1.1
baz=187
MSTX Muleshoe 33.25 328 P P 13 59 54.1 -0.1
baz=141
MSTX Muleshoe 33.25 328 P P 13 59 53.8 -0.4
MSTX IAmb IAmb 13 59 55.3
comp=Z,7.7nm,1.1s
ACSO Alum Creek Sta 33.74 359 P P 13 59 59.2 +1.0
baz=179
ACSO Alum Creek Sta 33.74 359 P P 13 59 58.5 +0.2
O54A Avella 33.75 3 P P 13 59 59.1 +0.7
baz=184
P61A Hammonton 33.92 11 P P 13 59 59.5 -0.2
O56A Blue Knob Stat 33.97 6 P P 14 00 01.0 +0.7
baz=187
O56A Blue Knob Stat 33.97 6 P P 14 00 00.3 0.0
121A Cookes Peak, D 35.07 321 P P 14 00 12.3 +2.2
baz=133,SNR=15
121A Cookes Peak, D 35.07 321 P P 14 00 11.1 +0.9
M57A Sunshine Farm, 35.18 7 P P 14 00 11.6 +0.9
baz=190
M57A Sunshine Farm, 35.18 7 P P 14 00 11.3 +0.5
M56A Emporium 35.21 6 P P 14 00 11.6 +0.7
baz=188
M56A Emporium 35.21 6 P P 14 00 11.7 +0.7
AC02 Maricunga 35.46 159 P P 14 00 13.4 -0.4
AC02 IAmb IAmb 14 00 28.0
comp=Z,6.8nm,1.1s
L57A Andrews Acres 35.87 7 P P 14 00 17.4 +0.8
baz=190
ANMO Albuquerque 35.98 326 P P 14 00 19.3 +1.3
comp=Z,2.7nm,0.8s,baz=140,slow=11,SNR=4.6
ANMO Albuquerque 35.98 326 P P 14 00 19.6 +1.7
baz=137
ANMO Albuquerque 35.98 326 P P 14 00 16.4 -1.5
ANMO IAmb IAmb 14 00 20.7
comp=Z,15nm,1.4s
T25A Trinidad 36.55 330 P P 14 00 24.4 +1.5
baz=142,SNR=5.9
T25A Trinidad 36.55 330 P P 14 00 23.2 +0.4
T25A IAmb IAmb 14 00 25.3
comp=Z,8.4nm,0.9s
TUC Tucson 36.86 318 P P 14 00 26.4 +1.1
baz=129
TUC Tucson 36.86 318 P P 14 00 25.6 +0.2
JFWS Jewell Farm 37.05 351 P P 14 00 25.5 -1.2
baz=167
JFWS Jewell Farm 37.05 351 P P 14 00 25.3 -1.3
JFWS IAmb IAmb 14 00 26.0
comp=Z,8.7nm,0.8s
SDCO Great Sand Dun 37.57 330 P P 14 00 33.3 +1.8
baz=141,SNR=13
SDCO Great Sand Dun 37.57 330 P P 14 00 31.8 +0.2
SDCO IAmb IAmb 14 00 34.2
comp=Z,19nm,1.4s
W18A Petrified Fore 38.01 323 P P 14 00 37.3 +2.1
baz=133
214A Organ Pipe Nat 38.02 316 P P 14 00 36.7 +1.6
baz=126
214A Organ Pipe Nat 38.02 316 P P 14 00 35.6 +0.5
214A IAmb IAmb 14 00 37.5
comp=Z,6.5nm,0.8s
I59A Olmsteadville 38.08 10 P P 14 00 36.0 +0.6
baz=194
S22A 4UR Ranch, Cre 38.25 328 P P 14 00 38.8 +1.5
baz=139,SNR=8.0
Q24A Divide 38.35 331 P P 14 00 39.3 +1.2
baz=142
X16A Lo Mia Camp, P 38.61 320 P P 14 00 41.6 +1.3
MVCO Mesa Verde 38.76 326 P P 14 00 42.7 +1.2
baz=136,SNR=8.7
MVCO Mesa Verde 38.76 326 P P 14 00 42.2 +0.7
MVCO IAmb IAmb 14 00 45.0
comp=Z,9.9nm,0.9s
PLVO Plevna 38.84 6 P P 14 00 41.9 +0.1
PLVO IAmb IAmb 14 00 42.4
comp=Z,17nm,1.0s
113A Mohawk Valley, 39.15 316 P P 14 00 45.0 +0.4
113A IAmb IAmb 14 00 47.0
comp=Z,12nm,1.2s
ISCO Idaho Springs 39.23 332 P P 14 00 46.3 +0.9
baz=142
ISCO Idaho Springs 39.23 332 P P 14 00 45.3 -0.2
ECSD EROS Data Cent 39.23 344 P P 14 00 43.6 -1.5
baz=158
WUAZ Wupatki 39.28 322 P P 14 00 47.8 +2.0
baz=131,SNR=6.9
WUAZ Wupatki 39.28 322 P P 14 00 47.2 +1.3
WUAZ IAmb IAmb 14 00 48.6
comp=Z,7.6nm,0.8s
PV15 Paradox Valley 39.57 327 P P 14 00 49.5 +1.2
PV15 IAmb IAmb 14 00 53.7
comp=Z,16nm,1.4s
PV02 Paradox Valley 39.61 327 P P 14 00 50.0 +1.4
PV02 IAmb IAmb 14 00 51.2
comp=Z,9.1nm,0.8s
PV13 Radium Mtn., P 39.62 327 P P 14 00 50.0 +1.3
PV13 IAmb IAmb 14 00 51.1
comp=Z,10nm,0.8s
PV03 Paradox Valley 39.70 327 P P 14 00 50.5 +1.1
PV03 IAmb IAmb 14 00 51.6
comp=Z,8.1nm,0.8s
PV05 Paradox Valley 39.71 327 P P 14 00 50.0 +0.6
PV05 IAmb IAmb 14 00 51.5
comp=Z,8.7nm,0.8s
H03N2 Juan Fernandez 39.72 175 T T 14 43 17.5
baz=354,slow=76,SNR=12
H03N1 Juan Fernandez 39.72 175 T T 14 43 18.4
baz=354,slow=76,SNR=13
PV12 Saucer Basin, 39.72 327 P P 14 00 50.5 +1.0
PV07 Paradox Valley 39.73 327 P P 14 00 50.9 +1.3
PV07 IAmb IAmb 14 01 06.2
comp=Z,14nm,1.4s
PV18 Skein Mesa, Pa 39.73 327 P P 14 00 50.4 +0.8
PV18 IAmb IAmb 14 00 51.8
comp=Z,11nm,0.9s
H03N3 Juan Fernandez 39.73 175 T T 14 43 17.2
baz=354,slow=76,SNR=16
SPMN Marine on St. 39.74 349 P P 14 00 47.3 -2.1
baz=164
PV11 David Mesa, Pa 39.75 327 P P 14 00 50.7 +1.0
PV11 IAmb IAmb 14 00 51.5
comp=Z,12nm,0.9s
PV16 Nyswonger Mesa 39.78 327 P P 14 00 50.5 +0.4
PV16 IAmb IAmb 14 00 54.4
comp=Z,10nm,1.0s
PV17 East Wray Mesa 39.78 327 P P 14 00 50.6 +0.5
PV17 IAmb IAmb 14 00 54.4
comp=Z,17nm,1.2s
PV19 Morning Glory 39.81 327 P P 14 00 50.8 +0.5
PV19 IAmb IAmb 14 00 51.9
comp=Z,9.7nm,1.0s
PV04 Paradox Valley 39.83 327 P P 14 00 50.9 +0.5
PV22 Blue Mesa, Par 39.87 327 P P 14 00 51.0 +0.2
PV14 Lion Creek, Pa 39.88 327 P P 14 00 51.0 +0.1
GLA Glamis 40.04 316 P P 14 00 53.2 +1.1
baz=125
ESJX Sierra Juarez 40.26 314 P P 14 00 53.8 -0.2
U15A North Rim 40.44 322 P P 14 00 54.6 -1.0
E57A Chemin Saint G 40.58 9 P P 14 00 56.7 +0.4
baz=193
W13A Hualapai Mount 40.61 319 P P 14 00 57.6 +0.6
BDFB Brasilia 40.61 123 P P 14 00 57.1 +0.1
comp=Z,2.3nm,0.8s,baz=272,slow=10,SNR=4.3
BDFB LR LR 14 20 06.6
comp=Z,190nm,19.4s,baz=304,slow=40

RMX La Rumorosa 40.67 314 P P 14 00 57.5 +0.1
CPUP Villa Florida 40.68 144 P P 14 00 56.5 -0.8
comp=Z,0.5nm,0.4s,baz=352,slow=7.1,SNR=2.0
CPUP LR LR 14 18 28.4
comp=Z,232nm,20.9s,baz=332,slow=37
O20A White River Ci 40.77 329 P P 14 00 59.9 +1.7
baz=139
O20A White River Ci 40.77 329 P P 14 00 59.0 +0.8
O20A IAmb IAmb 14 01 10.7
comp=Z,9.2nm,1.1s
BC3 Big Chuckawall 40.81 316 P P 14 00 60.0 +1.5
baz=124
IRM Iron Mountain 40.89 317 P P 14 01 00.0 +1.0
baz=125
D55A Sainte-Anne-du 40.98 7 P P 14 00 59.2 -0.3
baz=191
MONP2 Monument Peak 41.07 315 P P 14 01 02.1 +1.3
baz=123
PKCU Pink Cliffs 41.11 323 P P 14 01 01.6 +0.4
KNB Kanab 41.14 322 P P 14 01 02.1 +0.9
SRU San Rafael Swe 41.23 326 P P 14 01 02.6 +0.6
BELC Belle Mtn. Jos 41.38 316 P P 14 01 04.6 +1.4
baz=124,SNR=5.6
LCMT Little Creek M 41.40 322 P P 14 01 03.7 +0.4
MTPU Mount Pierson 41.44 324 P P 14 01 04.8 +0.9
TPFO Pinon Flats 41.48 315 P P 14 01 05.0 +0.9
baz=123
PFO Pinyon Flats O 41.49 315 P P 14 01 04.5 +0.4
comp=Z,2.0nm,0.7s,baz=167,slow=6.6,SNR=3.7
PFO Pinyon Flats O 41.49 315 P P 14 01 05.6 +1.5
baz=123
PFO Pinyon Flats O 41.49 315 P P 14 01 03.9 -0.2
GMRC Granite Mounta 41.60 317 P P 14 01 06.1 +1.2
baz=125
P17A Butcher Ranch, 41.60 327 P P 14 01 05.7 +0.7
SZCU Shurtz Canyon 41.68 323 P P 14 01 06.6 +0.8
TMUT Trail Mountain 41.74 326 P P 14 01 06.5 +0.2
MVU Marysvale 41.76 324 P P 14 01 07.0 +0.6
CCUT Cedar City 41.82 322 P P 14 01 08.3 +1.5
K22A Casper 41.90 333 P P 14 01 08.4 +1.0
baz=143
TCRU Three Creeks R 41.97 324 P P 14 01 08.4 +0.3
RSSD Black Hills 42.06 337 P P 14 01 09.4 +0.6
baz=147
HEC Hector,Ludlow 42.08 317 P P 14 01 09.9 +1.1
baz=125
TUQ Turquoise Moun 42.15 318 P P 14 01 10.5 +1.0
baz=126
BBRC Big Bear Solar 42.16 316 P P 14 01 10.7 +1.0
baz=123
SHPR Sheep Range 42.28 320 P P 14 01 10.5 -0.1
MPU Maple Canyon 42.47 326 P P 14 01 12.8 +0.6
SHOC Shoshone, Teco 42.65 318 P P 14 01 14.8 +1.3
baz=126
GSC Goldstone, Bar 42.66 317 P P 14 01 15.1 +1.4
baz=124
PSUT Pine Spring 42.75 323 P P 14 01 14.6 +0.2
JLU Jordanelle 42.79 327 P P 14 01 14.9 +0.2
EDW2 Edwards Air Fo 43.24 316 P P 14 01 19.1 +0.8
baz=123
TPNV Topopah Spring 43.25 320 P P 14 01 20.2 +1.7
baz=127
TPNV Topopah Spring 43.25 320 P P 14 01 18.8 +0.3
DUG Dugway, Tooele 43.25 326 P P 14 01 19.5 +1.1
baz=133
FURC Furnace Creek, 43.37 319 P P 14 01 20.9 +1.7
baz=126
PD31 Pinedale Array 43.40 331 P P 14 01 19.0 -0.7
PDAR Pinedale Array 43.40 331 P P 14 01 19.4 -0.3
comp=Z,1.4nm,0.7s,baz=132,slow=10,SNR=13
PDAR PcP PcP 14 03 07.6 -0.5
comp=Z,1.1nm,0.9s,baz=134,slow=4.3,SNR=5.1
PDAR LR LR 14 21 22.9
comp=Z,160nm,18.1s,baz=136,slow=39
PDAR Pinedale Array 43.40 331 P P 14 01 18.9 -0.7
PDAR PcP 14 03 07.4 -0.7
BW06 Boulder Array 43.40 331 P P 14 01 20.3 +0.6
baz=139
BW06 Boulder Array 43.40 331 P P 14 01 18.9 -0.8
MPMC Manual Prospec 43.55 318 P P 14 01 21.8 +0.8
baz=124
HWUT Hardware Ranch 43.56 328 P P 14 01 21.2 +0.2
R11A Troy Canyon, C 43.68 322 P P 14 01 23.3 +1.4
baz=128,SNR=5.5
R11A Troy Canyon, C 43.68 322 P P 14 01 21.7 -0.2
SPUT South Promonto 43.82 327 P P 14 01 23.5 +0.5
ARVC Arvin 43.95 316 P P 14 01 24.8 +0.8
baz=122
ISA Isabella, Lake 44.00 317 P P 14 01 25.1 +0.7
CWC Cottonwood Cre 44.16 318 P P 14 01 26.8 +1.0
baz=124
AHID Auburn Hatcher 44.16 330 P P 14 01 25.6 -0.2
REDW Red Top Meadow 44.48 330 P P 14 01 28.2 -0.1
SNOW Snow King Moun 44.50 331 P P 14 01 28.3 -0.2
VES Vestal, Richgr 44.51 316 P P 14 01 29.7 +1.3
baz=123
TPH Tonopah 44.54 320 P P 14 01 28.9 +0.1
SMMC Simmler 44.86 315 P P 14 01 32.7 +1.4
baz=121
IMW Indian Meadow 44.92 331 P P 14 01 31.7 -0.2
FLWY Flagg Ranch 44.94 331 P P 14 01 31.8 -0.1
ELK Elko 45.00 325 P P 14 01 32.4 -0.2
comp=Z,4.7nm,0.8s,baz=126,slow=5.4,SNR=29
ELK LR LR 14 21 34.9
comp=Z,142nm,18.1s,baz=86,slow=38
ELK Elko 45.00 325 P P 14 01 33.0 +0.4
ELK IAmb IAmb 14 01 35.0
comp=Z,5.1nm,0.8s
RLMT Red Lodge 45.07 333 P P 14 01 33.0 0.0
baz=141
RLMT Red Lodge 45.07 333 P P 14 01 32.3 -0.7
ULM Lac du Bonnet 45.16 348 P P 14 01 31.5 -1.8
comp=Z,7.8nm,0.7s,baz=152,slow=7.2,SNR=7.4
ULM Lac du Bonnet 45.16 348 P P 14 01 31.4 -1.9
ULM IAmb IAmb 14 01 37.5
comp=Z,9.5nm,1.0s
NV11 Mina Array Sit 45.34 320 P P 14 01 35.7 +0.5
OMMB Old Mammoth Mi 45.42 319 P P 14 01 36.2 +0.2
NVAR Mina Array Bea 45.44 320 P P 14 01 36.0 0.0
comp=Z,3.2nm,0.8s,baz=126,slow=7.2,SNR=28
NVAR PcP PcP 14 03 14.8 -0.4
comp=Z,1.3nm,0.8s,baz=151,slow=4.0,SNR=5.5
NVAR LR LR 14 22 58.8
comp=Z,156nm,18.1s,baz=116,slow=39
LHV Little Huntoon 45.46 320 P P 14 01 36.2 +0.3
LHV IAmb IAmb 14 01 44.4
comp=Z,6.6nm,1.1s
MDPB Devils Postpil 45.49 319 P P 14 01 36.6 +0.1
MDPB IAmb IAmb 14 01 38.4
comp=Z,6.4nm,0.9s
YMR Madison River 45.51 332 P P 14 01 37.1 +0.7
YHH Holmes Hill 45.54 332 P P 14 01 37.2 +0.4
RYN Ryan 45.69 320 P P 14 01 38.3 +0.3
YHL Hebgen Lake 45.74 332 P P 14 01 39.2 +0.7
GCMT Greycliff 45.77 334 P P 14 01 38.5 +0.1
DGMT Dagmar 45.82 340 P P 14 01 39.3 +0.6
baz=149
QLMT Earthquake Lak 45.85 331 P P 14 01 39.5 +0.4
WAKR Walker 46.21 319 P P 14 01 42.2 +0.1
WAKR IAmb IAmb 14 01 46.6
comp=Z,6.1nm,1.1s
HLID Hailey 46.43 328 P P 14 01 44.5 +0.8
baz=134,SNR=6.2
HLID Hailey 46.43 328 P P 14 01 43.6 -0.1
HLID IAmb IAmb 14 01 48.2
comp=Z,3.4nm,0.8s
BCYI Bear Canyon 46.44 329 P P 14 01 43.6 -0.2
BOZ Bozeman (W) 46.51 332 P P 14 01 45.4 +1.1
baz=138,SNR=8.0
BOZ Bozeman (W) 46.51 332 P P 14 01 44.5 +0.2
LRM Limekiln Ridge 47.06 332 P P 14 01 47.5 -1.3
MFID Camas Ranch 47.09 327 P P 14 01 48.4 -0.4
MFID IAmb IAmb 14 01 53.2
comp=Z,3.7nm,0.9s
HRY Holter Researc 47.44 333 P P 14 01 51.1 -0.3
EGMT Eagleton 47.55 335 P P 14 01 52.5 +0.2
baz=142
BEKR Beckworth 47.57 320 P P 14 01 52.6 -0.1
BEKR IAmb IAmb 14 01 56.6
comp=Z,7.1nm,1.2s
PLCA Paso Flores 48.13 168 P P 14 01 59.0 +2.2
comp=Z,1.5nm,0.6s,baz=1.3,slow=10,SNR=7.3
PLCA Paso Flores 48.13 168 IAmb IAmb 14 02 06.0
comp=Z,4.9nm,1.1s
PLID Pearl Lake 48.31 328 P P 14 01 56.6 -1.7

PLID IAmb IAmb 14 02 01.2
comp=Z,9.4nm,1.3s
MSO Missoula 48.51 332 P P 14 01 59.9 +0.2
baz=136
MSO Missoula 48.51 332 P P 14 01 59.5 -0.3
J08A Circle Bar Ran 48.52 325 P P 14 01 59.1 -0.8
J08A IAmb IAmb 14 02 03.1
comp=Z,5.0nm,1.0s
I07A Izee 49.55 325 P P 14 02 06.2 -1.6
SCHQ Schefferville 49.98 12 LR LR 14 27 57.3
comp=Z,125nm,18.1s,baz=88,slow=42
YBH Yreka Blue Hor 50.09 321 LR LR 14 24 19.6
comp=Z,162nm,18.9s,baz=112,slow=37
WALA Waterton Lakes 50.12 334 P P 14 02 12.2 +0.1
WALA IAmb IAmb 14 02 18.0
comp=Z,7.9nm,1.1s
PINE Pine Mountain 50.20 324 P P 14 02 13.4 +0.5
E09A Wood Farm, Sta 50.38 329 P P 14 02 13.6 -0.2
E09A IAmb IAmb 14 02 18.1
comp=Z,6.9nm,0.9s
J04D Umpqua Nationa 50.57 323 P P 14 02 16.1 +0.4
baz=125
E07A Sunnyside 51.30 328 P P 14 02 21.3 +0.4
E07A IAmb IAmb 14 02 23.1
comp=Z,6.4nm,0.9s
BBB Bella Bella 58.99 329 LR LR 14 31 15.2
comp=Z,90nm,19.2s,baz=161,slow=39
YKA Yellowknife Ar 60.76 344 P P 14 03 26.8 -1.5
comp=Z,2.2nm,0.7s,baz=139,slow=6.1,SNR=7.7
YKA LR LR 14 34 14.4
comp=Z,73nm,18.6s,baz=0.0,slow=40
DLBC Dease Lake 63.45 334 P P 14 03 46.9 +0.4
comp=Z,3.5nm,0.8s,baz=137,slow=4.5,SNR=10
DLBC LR LR 14 33 19.1
comp=Z,124nm,20.0s,baz=126,slow=38
DLBC Dease Lake 63.45 334 P P 14 03 47.5 +0.9
DAWY Dawson 70.26 337 P P 14 04 29.6 -0.2
DAWY IAmb IAmb 14 04 30.2
comp=Z,5.3nm,1.1s
PPT Papeete 70.27 249 LR LR 14 28 44.8
comp=Z,123nm,18.1s,baz=56,slow=30
INK Inuvik 70.44 342 P P 14 04 31.3 +0.6
comp=Z,8.5nm,0.7s,baz=100,slow=5.5,SNR=31
INK LR LR 14 37 13.4
comp=Z,149nm,18.8s,baz=187,slow=37
INK Inuvik 70.44 342 P P 14 04 31.1 +0.4
VRDI Verde Repeater 70.72 333 P P 14 04 33.4 +0.5
SUMG Summit 71.36 13 P P 14 04 36.3 -0.5
SUMG Summit 71.36 13 *i* P P 14 04 35.0 -1.8
comp=Z,25nm,1.1s
SUMG Summit 71.36 13 *i* P P 14 04 35.0 -1.8
SUMG IAmb IAmb 14 04 37.3
comp=Z,25nm,1.1s
HDA Harding Lake 73.41 336 P P 14 04 47.8 -0.8
baz=111
ILAR Eielson Array 73.51 336 P P 14 04 48.8 -0.4
comp=Z,1.6nm,0.8s,baz=118,slow=5.1,SNR=17
ILAR LR LR 14 40 22.2
comp=Z,117nm,19.0s,baz=114,slow=38
ILAR Eielson Array 73.51 336 P P 14 04 47.9 -1.3
RND Reindeer 73.86 335 P P 14 04 51.3 -0.1
SUA Susitna One 74.11 332 P P 14 04 53.4 +0.4
MDM Murphy Dome 74.11 336 P P 14 04 53.0 +0.2
KTH Kantishna Hill 74.79 334 P P 14 04 56.3 -0.5
BPAW Bear Paw Mtn. 74.97 335 P P 14 04 57.2 -0.6
BPAW IAmb IAmb 14 04 59.9
comp=Z,7.5nm,0.9s
COLD Coldfoot 75.62 338 P P 14 05 01.9 +0.5
baz=108
COLD Coldfoot 75.62 338 P P 14 05 02.1 +0.7
COLD IAmb IAmb 14 05 03.4
comp=Z,3.6nm,0.8s
TOLK Toolik Lake Re 75.85 340 P P 14 05 03.0 +0.2
baz=109
TOLK Toolik Lake Re 75.85 340 P P 14 05 02.9 +0.1
DBIC Dimbokro 77.14 85 P P 14 05 12.6 +1.5
comp=Z,6.0nm,0.9s,baz=189,slow=2.9,SNR=4.2
DBIC LR LR 14 36 20.0
comp=Z,34nm,20.0s,baz=264,slow=33
DBIC Dimbokro 77.14 85 IAmb IAmb 14 05 13.4
comp=Z,10nm,1.1s
ESDC Sonseca Array 77.22 51 P P 14 05 12.6 +1.5
comp=Z,1.1nm,0.9s,baz=269,slow=5.3,SNR=4.4
ESDC LR LR 14 33 32.2
comp=Z,72nm,21.9s,baz=295,slow=31
TORD Torodi Ar. Bea 83.03 78 P P 14 05 42.1 -0.8
comp=Z,0.6nm,0.7s,baz=273,slow=5.1,SNR=3.4
TORD LR LR 14 42 29.6
comp=Z,34nm,20.4s,baz=310,slow=36
TORD Torodi Ar. Bea 83.03 78 IAmb IAmb 14 05 49.7
comp=Z,1.5nm,1.1s
NOA NORSAR Array B 86.34 29 P P 14 05 58.7 0.0
comp=Z,1.4nm,0.9s,baz=46,slow=13,SNR=2.8
NOA LR LR 14 41 56.3
comp=Z,24nm,20.2s,baz=300,slow=34
KEST Kesra 87.90 54 P P 14 06 08.3 +1.3
comp=Z,5.6nm,1.1s,baz=325,slow=4.7,SNR=2.5
KEST Kesra 87.90 54 P P 14 06 07.5 +0.6
GERES GERESS Array B 89.39 41 P P 14 06 13.6 -0.1
comp=Z,0.7nm,1.0s,baz=29,slow=31,SNR=2.2
ARCES ARCESS Array B 90.33 20 LR LR 14 47 01.4
comp=Z,26nm,18.1s,baz=45,slow=36
FINES FINESS Array B 93.24 27 LR LR 14 47 36.3
comp=Z,49nm,18.8s,baz=292,slow=35
AKASG Malin Array Be 98.63 37 LR LR 14 51 22.9
comp=Z,24nm,18.6s,baz=325,slow=35
ASAR Alice Springs 140.95 240 PKhKP PKPpre 14 12 40.9
comp=Z,0.2nm,0.8s,baz=116,slow=3.6,SNR=2.3
ASAR PKP **PKPdf 14 12 46.6 -1.3**
comp=Z,1.1nm,0.9s,baz=117,slow=1.8,SNR=8.3
WRA Warramunga Arr 141.70 246 PKhKP PKPpre 14 12 43.1
comp=Z,0.4nm,0.8s,baz=100,slow=2.6,SNR=2.6
WRA PKP **PKPdf 14 12 49.8 +0.4**
comp=Z,1.1nm,0.9s,baz=96,slow=2.7,SNR=7.2
CMAR Chiang Mai Arr 155.31 357 PKP PKPdf 14 13 11.0 -0.3
comp=Z,0.4nm,0.4s,baz=272,slow=1.4,SNR=4.7
CMAR PKPab **PKPab 14 13 33.9 -2.2**
comp=Z,0.4nm,0.6s,baz=332,slow=5.1,SNR=4.0

*MOS **09** 14:00:53.8± 1.0, 43.°01N× 146.°99E, h54km, mb4.2/3, Error ellipse: s-maj=16.6km s-min=9.6km az=120.1*
*JMA **09** 14:00:54.7± 0.1, 43.°01N× 146.°93E, h62km± 3km, M4.1*
*NIED **09** 14:00:54.7, 43.°01N× 146.°93E, h62km, MWJ 3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr} 1.19; $M_{\theta\theta}$ -0.65; $M_{\phi\phi}$ -0.54; $M_{r\theta}$ 3.32; $M_{r\phi}$ -1.77; $M_{\theta r}$ -0.32; Fault plane solution: M_0 3.90000×10^{14} NP1:ϕ_s 86.00000°, δ 81.00000°, λ 118.00000°. NP2:ϕ_s 193.00000°, δ 29.00000°, λ 20.00000°.*
*SKHL **09** 14:00:55.0± 0.3, 43.°08N× 147.°02E, h71km± 2km, mb4.5/5*
*IDC **09** 14:00:59.0± 3.5, 42.°95N× 146.°90E, h87km± 29km, mb3.4/10, mb1 3.6/11, mb1mx3.4/39, mbtmp3.7/11, Error ellipse: s-maj=28.9km s-min=22.1km az=168.0*

ISC 09 14:00:53.3±0.9, **43.°00N**±0.°07× **147.°10E**±0.°07, **h37**km±2km, **n55**, σ1 **s48**/67, **mb3.6**/13, **1C-7D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.06**	**291**	P		**Pn**	**14 01 12.2**	**+0.7**
NEM2				*e*S		**Sn**	**14 01 25.0**	**+0.1**
NMR	**Nemuro--Hokkai**	**1.07**	**291**	*i* P		**Pn**	**14 01 12.0**	**+0.4**
NMR				*i* S		**Sn**	**14 01 25.0**	**-0.2**
NMR	**Nemuro--Hokkai**	**1.07**	**291**	↓*i* PN		**Pn**	**14 01 12.2**	**+0.6**
NMR				*i* S		**Sn**	**14 01 25.1**	**-0.2**
GLVR	**Golovnino**	**1.37**	**303**	*i* P		**Pn**	**14 01 16.0**	**+0.2**
GLVR				AMB	AMB		14 01 16.0	
	181nm,0.4s							
GLVR				*i* S		**Sn**	**14 01 33.0**	**+0.4**
GLVR				A	A		14 01 36.0	
	2µm,0.3s							
GLVR				A	A		14 01 36.0	
	1um,0.3s							
GLVR	**Golovnino**	**1.37**	**303**	↓*i* PN		**Pn**	**14 01 16.3**	**+0.5**
GLVR				*i* S		**Sn**	**14 01 33.1**	**+0.4**
GLVR				pmax	pmax			
	comp=E,250nm,0.4s							
GLVR				pmax	pmax			
	comp=Z,2µm,0.4s							
GLVR				pmax	pmax			
	comp=N,347nm,0.3s							
GLVR				smax	smax			
	comp=N,2µm,0.3s							
GLVR				smax	smax			

comp=E,1µm,0.2s
YUK Yuzh-Kuril'sk 1.37 319 *i* P **Pn 14 01 16.0 +0.2**
YUK AMB AMB 14 01 17.0
comp=E,254nm,0.3s
YUK *i* S **Sn 14 01 32.0 -0.7**
YUK A A 14 01 37.0
comp=E,2µm,0.4s
YUK A A 14 01 37.0
comp=E,2µm,0.4s
YUK Yuzh-Kuril'sk 1.37 319*d* *i* PN **Pn 14 01 16.3 +0.5**
YUK *i* S **Sn 14 01 32.9 +0.2**
YUK pmax pmax
comp=Z,3µm,0.3s
YUK pmax pmax
comp=N,582nm,0.1s
YUK pmax pmax
comp=E,1µm,0.1s
YUK smax smax
comp=N,2µm,0.4s
YUK smax smax
comp=E,2µm,0.4s
GRPR Tuman 1.39 316 *i* P **Pn 14 01 16.0 0.0**
GRPR AMB AMB 14 01 17.0
comp=E,573nm,0.3s
GRPR *i* S **Sn 14 01 33.0 -0.1**
GRPR A A 14 01 36.0
comp=E,251nm,0.3s
GRPR A A 14 01 36.0
comp=E,2µm,0.3s
GRPR Tuman 1.39 316 ⇓*i* PN **Pn 14 01 16.4 +0.4**
GRPR *i* S **Sn 14 01 33.0 -0.1**
GRPR pmax pmax
comp=E,383nm,0.3s
GRPR pmax pmax
comp=E,573nm,0.3s
GRPR pmax pmax
comp=N,522nm,0.1s
GRPR smax smax
comp=N,3µm,0.3s
GRPR smax smax
comp=E,2µm,0.2s
JKHN Kushirohamanak 1.42 274 P **Pn 14 01 17.2 +0.7**
JKHN *e*S **Sn 14 01 33.8 -0.2**
JNSB Nemuroshibetsu 1.71 298 P **Pn 14 01 20.9 +0.4**
JNSB *e*S **Sn 14 01 41.0 -0.1**
JRA Rausu 1.72 304 P **Pn 14 01 21.4 +0.8**
JRA *e*S **Sn 14 01 41.6 +0.4**
RUSJ Misakicho 1.74 310 ⇓*i* PN **Pn 14 01 21.9 +1.0**
RUSJ *i* S **Sn 14 01 43.1 +1.3**
JAK Akkeshi 1.76 271 P **Pn 14 01 21.8 +0.6**
JAK *e*S **Sn 14 01 41.5 -0.8**
JNK Nakash 1.83 289 P **Pn 14 01 22.4 +0.2**
JNK *e*S **Sn 14 01 43.0 -1.1**
KUR Kuril'sk 2.30 14 *i* P **Pn 14 01 30.0 +1.4**
KUR AMB AMB 14 01 32.0
comp=E,89nm,0.4s
KUR *i* S **Sn 14 01 56.0 +0.4**
KUR A A 14 01 59.0
comp=E,414nm,0.2s
KUR A A 14 01 59.0
comp=E,232nm,0.2s
KUR Kuril'sk 2.30 14*d* *i* PN **Pn 14 01 30.5 +1.9**
KUR *i* S **Sn 14 01 56.7 +1.1**
KUR pmax pmax
comp=E,39nm,0.4s
KUR pmax pmax
comp=Z,89nm,0.4s
KUR pmax pmax
comp=N,31nm,0.2s
KUR smax smax
comp=N,414nm,0.2s
KUR smax smax
comp=E,232nm,0.2s
JOB Onbets 2.40 269 P **Pn 14 01 30.6 +0.7**
JOB *e*S **Sn 14 01 56.5 -1.5**
JAR Ashorobuto 2.45 278 P **Pn 14 01 31.5 +0.8**
JAR *e*S **Sn 14 01 58.6 -0.8**
JTKR Abashiri--Toko 2.52 294 P **Pn 14 01 32.9 +1.4**
JTKR *e*S **Sn 14 02 01.7 +0.8**
JCH Churui 2.77 263 P **Pn 14 01 35.7 +0.6**
JCH *e*S **Sn 14 02 05.8 -1.5**
JMP Maruseppu 2.90 292 P **Pn 14 01 38.4 +1.5**
ERM Erimo 3.08 253*d* *i* PN **Pn 14 01 41.6 +2.4**
JNBK Urakawa-nobuka 3.29 259 P **Pn 14 01 43.1 +1.0**
JKK2 Kamakawa 2 3.29 287 P **Pn 14 01 44.0 +1.8**
JFR Furan 3.30 274 P **Pn 14 01 43.8 +1.4**
JKA Kamikawa-asahi 3.46 290 *e*P **Pn 14 01 47.1 +2.6**
ASAJ Asahikawa 3.46 290 P **Pn 14 01 47.0 +2.6**
comp=E,10nm,0.3s,baz=112,slow=9.6,SNR=79
ASAJ S **Sn 14 02 28.9 +4.8**
comp=E,3.4nm,0.3s,baz=189,slow=32,SNR=6.2
JBT2 Biratori 2 3.49 268 P **Pn 14 01 45.5 +0.6**
YSS Yuzh-Sakhalins 5.01 324 *e*P **Pn 14 02 07.5 +1.7**
YSS AMB AMB 14 02 08.6
comp=E,10.0nm,0.6s
YSS *e*rx rx 14 02 16.0
YSS Yuzh-Sakhalins 5.01 324⇑ *e*PN **Pn 14 02 08.1 +2.3**
YSS pmax pmax
comp=Z,10.0nm,0.6s
SKR Severo-Kuril's 9.86 36 *e*S **Sn 14 04 57.2 -4.3**
SKR A A 14 04 59.9
comp=Z,80nm,1.0s
SKR A A 14 04 59.9
comp=Z,160nm,1.0s
BILL Bilibino 27.09 16 *e*rx rx 14 06 28.9
BILL Bilibino 27.09 16 *i* P **P 14 06 28.9 -3.2**
BILL pmax pmax
comp=Z,2.0nm,1.0s
H11N2 WAKE ISLAND Hy 28.56 138 T T 14 37 33.9
baz=329,slow=75
H11N1 WAKE ISLAND Hy 28.57 138 T T 14 37 34.4
baz=329,slow=75
H11N3 WAKE ISLAND Hy 28.58 138 T T 14 37 36.6
baz=329,slow=75
SONM Songino Array 28.73 294 P **P 14 06 46.9 -0.2**
comp=Z,0.6nm,0.5s,baz=83,slow=8.0,SNR=4.4
H11S1 WAKE ISLAND Hy 29.51 140 T T 14 38 44.5
baz=330,slow=76
H11S3 WAKE ISLAND Hy 29.52 140 T T 14 38 43.4
baz=330,slow=76
H11S2 WAKE ISLAND Hy 29.53 140 T T 14 38 48.6
baz=330,slow=76,SNR=51
TIK Tiksi 30.07 349 *e*P **P 14 06 55.9 -2.6**
TIXI Tiksi 30.09 349 *i* P **P 14 06 55.9 -2.7**
TLY Talaya 30.31 302 *e*rx rx 14 06 54.5
TLY Talaya 30.31 302 *i* P P 14 06 54.5 -6.4
TLY pmax pmax
comp=Z,3.0nm,0.8s
NRIK Noril'sk 39.89 332 *i* P P 14 08 16.8 -6.2
NRIK pmax pmax
comp=Z,1.0nm,1.1s
ILAR Eielson Array 42.12 36 P **P 14 08 43.0 +1.6**
comp=Z,0.4nm,0.7s,baz=273,slow=7.6,SNR=6.3
MKAR Makanchi Array 44.90 298 P **P 14 09 04.3 +0.2**
comp=Z,0.5nm,0.7s,baz=80,slow=8.4,SNR=6.0
INK Inuvik 47.07 30 P **P 14 09 22.3 +1.6**
comp=Z,0.6nm,0.5s,baz=295,slow=9.9,SNR=5.9
ARCES ARCESS Array B 59.94 340 P **P 14 10 54.7 -0.4**
comp=Z,2.7nm,0.8s,baz=1.0,slow=5.0,SNR=1.7
WRA Warramunga Arr 63.72 193 P **P 14 11 20.7 -0.3**
comp=Z,0.2nm,0.7s,baz=13,slow=7.7,SNR=1.9
FINES FINESS Array B 65.53 333 P **P 14 11 32.0 -0.3**
comp=Z,1.8nm,0.7s,baz=33,slow=7.3,SNR=7.4
NVAR Mina Array Bea 68.01 58 P **P 14 11 50.8 +1.9**
comp=Z,0.1nm,0.4s,baz=307,slow=7.8,SNR=1.9
NOA NORSAR Array B 70.29 339 P **P 14 12 02.4 0.0**
comp=Z,1.4nm,1.1s,baz=32,slow=6.5,SNR=4.7
TXAR Lajitas Array 83.10 56 P **P 14 13 16.6 +1.2**
comp=Z,0.1nm,0.5s,baz=282,slow=4.5,SNR=1.8

EAF 09 14:06:47.2±1.3, 22°.88S×28°.28E, h10km, MD4.0, Botswana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLWY	**Bulawayo**	**2.75**	**7**	*i* P	Pn	14 07 30.6	-0.9
BLWY				*i* S	Sn	14 08 03.9	-1.0
BLWY	**Bulawayo**	**2.75**	**7**	*i* P	Pn	14 07 30.6	-0.9
BLWY				*i* S	Sn	14 08 03.9	-1.0
LBTB	**Lobatse**	**3.24**	**229**	*i* P	Pn	14 07 37.0	-1.3
LBTB				*i* S	Sn	14 08 15.2	-1.9
LBTB	**Lobatse**	**3.24**	**229**	*i* P	Pn	14 07 37.0	-1.3
LBTB				*i* S	Sn	14 08 15.2	-1.9
BOSA	**Boshof**	**6.32**	**205**	*i* P	Pn	14 08 19.4	-1.3
BOSA				*i* S	Sn	14 09 28.5	-4.5
BOSA	**Boshof**	**6.32**	**205**	*i* P	Pn	14 08 19.4	-1.3
BOSA				*i* S	Sn	14 09 28.5	-4.5

IDC 09 14:24:31.9±55.0, 17°.95S×177°.45W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/36, mbtmp3.8/3, Error ellipse: s-maj=1007.0km s-min=165.7km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.41**	**241**	P	P	14 32 04.3	+0.6
	0.5nm,0.4s,baz=66,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**45.52**	**259**	P	P	14 32 53.3	-0.3
	0.6nm,0.4s,baz=97,slow=8.2,SNR=28						
ASAR	**Alice Springs**	**45.66**	**254**	P	P	14 32 54.3	-0.4
	1.3nm,0.7s,baz=88,slow=8.4,SNR=40						

*IDC **09** 14:37:51.4±0.9, 13°.32N×90°.74W, h0km, mb4.1/13, mb1 4.2/16, mb1mx4.0/50, mbtmp4.1/16, ML3.4/3, MS3.4/4, Ms1 3.4/4, ms1mx2.9/34, Error ellipse: s-maj=33.2km s-min=15.1km az=55.0*
*NEIC **09** 14:37:56.8±1.6, 13°.12N±0°.07×91°.00W±0°.07, h46km±7km, mb4.4/48, Error ellipse: s-maj=12.3km s-min=7.8km az=223.0*
*UCR **09** 14:37:57.7±1.6, 13°.10N×90°.90W, h21km±12km, ML3.5, mb4.4(NEIC)*
*SNET **09** 14:37:58.3±1.4, 13°.05N×90°.91W, h35km, ML3.6*
*GCG **09** 14:38:06.4±0.7, 14°.00N×91°.12W, h58km±16km, MD4.4*
ISC 09 14:37:56.0±0.5, 13°.18N±0°.06×90°.99W±0°.04, h33km, n126, σ1s28/126, mb4.4/31, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**1.26**	**17**	*e*P	**Pb**	**14 38 20.0**	**+0.6**
FUG	**Fuego 3**	**1.27**	**7**	*e*P	**Pb**	**14 38 19.2**	**-0.2**
ERG	**Entre ros, C**	**1.37**	**336**	*e*P	**Pn**	**14 38 19.7**	**+0.9**
NUBE	**Las Nubes**	**1.38**	**59**	*e*P	**Pn**	**14 38 19.9**	**+0.8**
NUBE				*e*S	**Sb**	**14 38 39.3**	**+0.6**
NUBE				IAML		14 38 56.0	
	comp=Z,450nm,0.5s						
NUBE	**Las Nubes**	**1.38**	**59**	*e*P	**Pn**	**14 38 19.9**	**+0.8**
NUBE				*e*S	**Sb**	**14 38 39.3**	**+0.6**
NUBE				IAML		14 38 56.0	
	comp=Z,450nm,0.5s						
SBLS	**San Blas**	**1.48**	**64**	*e*P	**Pn**	**14 38 22.3**	**+1.7**
SBLS	**San Blas**	**1.48**	**64**	*e*P	**Pn**	**14 38 22.3**	**+1.7**
RTR	**El Retiro**	**1.49**	**61**	*e*P	**Pn**	**14 38 22.4**	**+1.7**
RTR	**El Retiro**	**1.49**	**61**	*e*P	**Pn**	**14 38 22.4**	**+1.7**
RTAL	**Retalhuleu**	**1.50**	**333**	*e*P	**Pb**	**14 38 25.2**	**+2.0**
RTAL	**Retalhuleu**	**1.50**	**333**	Pn	**Pn**	**14 38 21.0**	**+0.4**
NBG	**Las Nubes**	**1.53**	**24**	*e*P	**Pb**	**14 38 24.7**	**+0.7**
STG3	**Santiaguito 3,**	**1.62**	**340**	*e*P	**Pn**	**14 38 22.6**	**+0.2**
CEDA	**San Andres**	**1.67**	**68**	*e*P	**Pb**	**14 38 25.4**	**-0.8**
CEDA				IAML		14 39 03.9	
	comp=Z,3µm,0.8s						
CEDA	**San Andres**	**1.67**	**68**	*e*P	**Pb**	**14 38 25.4**	**-0.8**
CEDA				IAML		14 39 03.9	
	comp=Z,3µm,0.8s						
BOQS	**Boqueron**	**1.75**	**72**	*e*P	**Pb**	**14 38 27.6**	**-0.2**
BOQS	**Boqueron**	**1.75**	**72**	*e*P	**Pb**	**14 38 27.6**	**-0.2**
TACO	**Tacachico**	**1.77**	**64**	*e*P	**Pn**	**14 38 26.1**	**+1.7**
TACO	**Tacachico**	**1.77**	**64**	*e*P	**Pn**	**14 38 26.1**	**+1.7**
SNET	**Serv Nac Est T**	**1.79**	**73**		**Pn**	**14 38 25.3**	**+0.7**
LFRS	**El Faro**	**1.93**	**77**	*e*P	**Pn**	**14 38 29.0**	**+2.3**
LFRS	**El Faro**	**1.93**	**77**	*e*P	**Pn**	**14 38 29.0**	**+2.3**
MTO3	**Montecristo**	**1.99**	**52**	*e*P	**Pb**	**14 38 30.9**	**-0.9**
MTO3	**Montecristo**	**1.99**	**52**	*e*P	**Pb**	**14 38 30.9**	**-0.9**
MTO3	**Montecristo**	**1.99**	**52**	Pn	**Pn**	**14 38 28.9**	**+1.3**
PAVA	**Las Pavas**	**2.07**	**75**	*e*P	**Pn**	**14 38 30.7**	**+2.2**
PAVA	**Las Pavas**	**2.07**	**75**	*e*P	**Pn**	**14 38 30.7**	**+2.2**
COEG	**Centro de Oper**	**2.10**	**78**	*e*P	**Pn**	**14 38 31.1**	**+2.1**
COEG	**Centro de Oper**	**2.10**	**78**	*e*P	**Pn**	**14 38 31.1**	**+2.1**
ESQI	**Esquipulas**	**2.11**	**49**	*e*P	**Pb**	**14 38 32.2**	**-1.5**
ESQI	**Esquipulas**	**2.11**	**49**		**Pn**	**14 38 30.5**	**+1.4**
HUEH	**Huehuetenango**	**2.18**	**347**		**Pn**	**14 38 31.6**	**+1.4**
MRL	**Marmol**	**2.27**	**34**	*e*P	**Pb**	**14 38 35.5**	**-1.1**
COEB	**Comit de Eme**	**2.42**	**82**	*e*P	**Pn**	**14 38 35.0**	**+1.6**
COEB	**Comit de Eme**	**2.42**	**82**	*e*P	**Pn**	**14 38 35.0**	**+1.6**
PACA	**Pacayal**	**2.61**	**83**	*e*P	**Pn**	**14 38 38.5**	**+2.5**
PACA	**Pacayal**	**2.61**	**83**	*e*P	**Pn**	**14 38 38.5**	**+2.5**
LCND	**La Caada**	**3.02**	**87**	*e*P	**Pn**	**14 38 43.0**	**+1.4**
LCND	**La Caada**	**3.02**	**87**	*e*P	**Pn**	**14 38 43.0**	**+1.4**
CCIG	**Comitan**	**3.27**	**340**		**Pn**	**14 38 47.1**	**+1.9**
TGUH	**Tegucigalpa,Un**	**3.72**	**76**		**Pn**	**14 38 51.5**	**+0.2**
PETF	**Flores**	**3.87**	**16**	Pn	**Pn**	**14 38 54.7**	**+1.5**
CRIN	**San Cristobal**	**3.87**	**97**	Pn	**Pn**	**14 38 53.6**	**+0.3**
MATN	**Matagalpa**	**4.94**	**92**	Pn	**Pn**	**14 39 08.5**	**+0.4**
CMIG	**Matias Romero**	**5.41**	**316**	Pn	**Pn**	**14 39 14.1**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=147,slow=15,SNR=7.4						
CMIG				Sn	**Sn**	**14 40 16.4**	**+0.9**
	comp=Z,2.1nm,0.3s,baz=47,slow=22,SNR=4.5						
JTS	**Las Juntas de**	**6.58**	**115**	Pn	**Pn**	**14 39 30.8**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=5.9,slow=12,SNR=5.2						
JTS				Lg	Lg	14 41 15.7	
	baz=292,slow=19,SNR=2.2						
TEIG	**Tepich**	**7.47**	**20**		**Pn**	**14 39 45.6**	**+2.9**
HELC	**Santa Helena**	**16.74**	**113**	*e*P	**P**	**14 41 51.3**	**+0.7**
833A	**Chaparral WMA,**	**16.98**	**334**	P	**P**	**14 41 53.2**	**+0.5**
GUY2C	**Guyana, Caldas**	**17.32**	**116**	*e*P	**P**	**14 41 59.4**	**+2.3**
TOLC	**Tolima**	**17.67**	**117**	*e*P	**P**	**14 42 13.5**	**+13**
PCON	**Cinco Dias**	**18.02**	**126**	*e*P	**P**	**14 42 08.8**	**+3.9**
ROSC	**El Rosal**	**18.42**	**115**	P	**P**	**14 42 08.6**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=156,slow=20,SNR=1.3						
ROSC	**El Rosal**	**18.42**	**115**		**P**	**14 42 08.8**	**-0.4**
ROSC				IAml	IAml	14 42 14.9	
	comp=Z,20nm,1.1s						
CHIC	**Chingaza**	**19.04**	**115**	*e*P	**Pn**	**14 42 19.9**	**+3.1**
JCT	**Junction City**	**19.04**	**336**	P	**P**	**14 42 15.8**	**+0.3**
RUSC	**La Rusia**	**19.08**	**111**	*e*P	**Pn**	**14 42 19.2**	**+1.8**
TX32	**Lajitas Array**	**19.92**	**326**	P	**P**	**14 42 24.6**	**-0.5**
TXAR	**Lajitas Array**	**19.92**	**326**	P	**P**	**14 42 26.1**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=154,slow=13,SNR=23						
TXAR	**Lajitas Array**	**19.92**	**326**	P	**P**	**14 42 25.1**	**0.0**
TX31	**Lajitas Ar. Si**	**19.92**	**326**	P	**P**	**14 42 24.4**	**-0.7**
TX31				IAmb	IAmb	14 42 30.7	
	comp=Z,29nm,1.2s						
SDV	**Santo Domingo**	**20.43**	**100**	P	**P**	**14 42 31.2**	**+0.3**
	comp=Z,4.4nm,0.4s,baz=258,slow=10.0,SNR=4.7						
SDV				LR	LR	14 50 46.5	
	comp=Z,40nm,19.1s,baz=260,slow=38						
WLAR	**White Oak Lake**	**20.50**	**355**	P	**P**	**14 42 32.4**	**+1.0**
WLAR				IAmb	IAmb	14 42 39.8	
	comp=Z,14nm,0.9s						
257A	**Skidaway Islan**	**20.82**	**24**	P	**P**	**14 42 35.0**	**+0.2**
GOGA	**Godfrey**	**21.27**	**18**	P	**P**	**14 42 40.8**	**+1.2**
X40A	**Basin Creek Fa**	**21.28**	**356**	P	**P**	**14 42 39.7**	**0.0**
X48A	**Hartselle**	**21.48**	**9**	P	**P**	**14 42 42.8**	**+1.0**
DR12	**Loma Pena Alta**	**21.50**	**72**	P	**P**	**14 42 42.6**	**+0.3**
WHAR	**Wooly Hollow**	**22.04**	**357**	P	**P**	**14 42 48.5**	**+0.6**
WHAR				IAmb	IAmb	14 42 52.6	
	comp=Z,22nm,1.4s						
W39A	**Magazine**	**22.06**	**354**	P	**P**	**14 42 48.7**	**+0.6**
W39A				IAmb	IAmb	14 43 04.7	
	comp=Z,14nm,1.2s						
FCAR	**Ozark Folk Cen**	**22.63**	**358**	P	**P**	**14 42 51.9**	**-2.3**
FCAR				IAmb	IAmb	14 43 02.8	
	comp=Z,11nm,1.0s						
MNTX	**Cornudas Mount**	**22.68**	**327**	P	**P**	**14 42 55.1**	**+0.3**
MNTX				IAmb	IAmb	14 42 59.9	
	comp=Z,16nm,1.1s						
LCAR	**Lake Charles**	**22.79**	**360**	P	**P**	**14 42 55.1**	**-0.7**
LCAR				IAmb	IAmb	14 43 21.5	
	comp=Z,16nm,1.5s						
WVT	**Waverly**	**23.03**	**7**	P	**P**	**14 42 57.9**	**-0.4**
WVT				IAmb	IAmb	14 43 14.3	
	comp=Z,15nm,1.4s						
U40A	**Yellville**	**23.14**	**356**	P	**P**	**14 42 58.7**	**-0.7**
TKL	**Tuckaleechee C**	**23.31**	**15**	P	**P**	**14 42 59.7**	**-1.4**
	comp=Z,3.5nm,0.6s,baz=186,slow=10,SNR=8.0						
TKL				LR	LR	14 52 09.6	
	comp=Z,191nm,18.8s,baz=188,slow=37						
TKL	**Tuckaleechee C**	**23.31**	**15**	P	**P**	**14 43 02.0**	**+0.9**
U49A	**Red Boiling Sp**	**23.70**	**10**	P	**P**	**14 43 04.5**	**-0.4**
U49A				IAmb	IAmb	14 43 08.1	
	comp=Z,8.1nm,1.0s						
ATAH	**Atahualpa**	**23.75**	**147**	P	**P**	**14 43 05.4**	**-0.6**
	comp=Z,14nm,1.2s,baz=298,slow=11,SNR=2.9						
MGMO	**Mountain Grove**	**23.90**	**357**	P	**P**	**14 43 06.7**	**-0.1**
T47A	**Sharon Grove**	**23.96**	**8**	P	**P**	**14 43 07.1**	**-0.2**
S39A	**Bolivar**	**24.50**	**356**	P	**P**	**14 43 11.4**	**-0.9**
121A	**Cookes Peak, D**	**24.64**	**324**	P	**P**	**14 43 13.4**	**-0.5**
121A				IAmb	IAmb	14 43 29.1	
	comp=Z,18nm,1.2s						
CCM	**Cathedral Cave**	**24.77**	**360**	P	**P**	**14 43 15.6**	**+0.8**
CCM				IAmb	IAmb	14 43 24.4	
	comp=Z,22nm,1.4s						
MTP	**Monte Pirata**	**24.97**	**75**	P	**P**	**14 43 16.7**	**-0.1**
MTP				IAmb	IAmb	14 43 22.5	
	comp=Z,26nm,1.4s						
BNM	**Barren Site**	**25.25**	**328**	P	**P**	**14 43 19.7**	**+0.3**
WCI	**Wyandotte Cave**	**25.29**	**9**	P	**P**	**14 43 18.9**	**-0.5**
WCI				IAmb	IAmb	14 43 22.2	
	comp=Z,8.5nm,0.8s						
ANMO	**Albuquerque**	**25.79**	**330**	P	**P**	**14 43 25.1**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=147,slow=14,SNR=3.7						
P40A	**Paris**	**26.26**	**358**	P	**P**	**14 43 28.3**	**+0.1**
P40A				IAmb	IAmb	14 43 51.8	
	comp=Z,14nm,1.4s						
NNA	**Nana**	**28.68**	**150**	LR	LR	14 52 54.5	
	comp=Z,49nm,18.3s,baz=10.0,slow=32						
U15A	**North Rim**	**30.02**	**324**	P	**P**	**14 44 02.0**	**-0.2**
SADO	**Sadowa**	**33.07**	**16**	P	**P**	**14 44 27.2**	**-1.4**
	comp=Z,6.1nm,0.9s,baz=218,slow=10,SNR=3.7						
SADO	**Sadowa**	**33.07**	**16**	P	**P**	**14 44 28.1**	**-0.5**
DELO	**Deloro Mine**	**33.26**	**18**	P	**P**	**14 44 29.4**	**-0.8**
E43A	**Lone Tree Farm**	**33.26**	**5**	P	**P**	**14 44 29.5**	**-0.7**
REDW	**Red Top Meadow**	**34.60**	**334**	P	**P**	**14 44 43.2**	**+1.0**
SNOW	**Snow King Moun**	**34.64**	**334**	P	**P**	**14 44 43.8**	**+1.2**
SNOW				IAmb	IAmb	14 44 46.5	
	comp=Z,3.8nm,0.6s						
EYMN	**Ely**	**34.66**	**359**	P	**P**	**14 44 40.9**	**-1.4**
TPAW	**Teton Pass**	**34.74**	**334**	P	**P**	**14 44 45.3**	**+1.8**
TPAW				IAmb	IAmb	14 45 00.9	
	comp=Z,3.4nm,1.1s						
NVAR	**Mina Array Bea**	**34.92**	**321**	P	**P**	**14 44 47.4**	**+2.4**
	comp=Z,3.8nm,0.8s,baz=135,slow=8.0,SNR=23						
NVAR	**Mina Array Bea**	**34.92**	**321**	P	**P**	**14 44 46.7**	**+1.7**
B35A	**Bob, Littlefor**	**35.15**	**357**	P	**P**	**14 44 45.4**	**-1.1**
SAML	**Samuel**	**35.30**	**127**	P	**P**	**14 44 46.5**	**-1.7**
SAML				IAmb	IAmb	14 44 55.9	
	comp=Z,8.5nm,1.5s						
PNTR	**Pine Nut**	**36.12**	**321**	P	**P**	**14 44 55.6**	**+0.3**
PNTR				IAmb	IAmb	14 45 01.3	
	comp=Z,4.5nm,0.7s						
MCMT	**McKenzie Canyo**	**36.63**	**334**	P	**P**	**14 45 01.5**	**+1.9**
ULM	**Lac du Bonnet**	**37.18**	**355**	P	**P**	**14 45 02.1**	**-1.8**
	comp=Z,4.2nm,0.8s,baz=172,slow=9.3,SNR=4.3						
J08A	**Circle Bar Ran**	**38.26**	**327**	P	**P**	**14 45 12.9**	**-0.4**
J08A				IAmb	IAmb	14 45 20.2	
	comp=Z,7.0nm,1.0s						
SIV	**San Ignacio**	**41.42**	**134**	P	**P**	**14 45 39.8**	**+0.1**
	comp=Z,7.7nm,0.9s,baz=310,slow=8.0,SNR=27						
SCHQ	**Schefferville**	**45.65**	**19**	P	**P**	**14 46 12.0**	**-1.4**
	comp=Z,3.7nm,0.9s,baz=226,slow=5.3,SNR=7.0						
SCHQ	**Schefferville**	**45.65**	**19**	P	**P**	**14 46 12.5**	**-0.8**
YKA	**Yellowknife Ar**	**52.04**	**346**	P	**P**	**14 47 02.0**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=149,slow=8.5,SNR=2.7						
LL01	**San Ignacio de**	**57.87**	**164**	P	**P**	**14 47 45.3**	**+0.8**
INK	**Inuvik**	**61.50**	**343**	P	**P**	**14 48 08.4**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=110,slow=5.6,SNR=6.5						
INK	**Inuvik**	**61.50**	**343**	P	**P**	**14 48 08.6**	**-0.6**
INK				IAmb	IAmb	14 48 12.5	
	comp=Z,6.0nm,1.3s						
RES	**Resolute Bay**	**61.53**	**359**	P	**P**	**14 48 08.2**	**-1.2**
	comp=Z,1.9nm,0.7s,baz=197,slow=7.3,SNR=6.4						
RES	**Resolute Bay**	**61.53**	**359**	P	**P**	**14 48 08.8**	**-0.6**
RES				IAmb	IAmb	14 48 09.0	
	comp=Z,4.2nm,0.9s						
GHO	**Glory Hole Cre**	**63.56**	**333**	P	**P**	**14 48 23.6**	**+0.4**
ILAR	**Eielson Array**	**63.97**	**337**	P	**P**	**14 48 25.9**	**+0.1**
	comp=Z,1.3nm,1.0s,baz=130,slow=3.7,SNR=7.8						
ILAR	**Eielson Array**	**63.97**	**337**	P	**P**	**14 48 26.3**	**+0.5**
TOLK	**Toolik Lake Re**	**66.62**	**340**	P	**P**	**14 48 43.8**	**+0.8**
TOLK				IAmb	IAmb	14 49 02.5	
	comp=Z,8.0nm,1.4s						
ARCES	**ARCESS Array B**	**86.60**	**18**	LR	LR	15 32 23.1	
	comp=Z,34nm,18.4s,baz=295,slow=38						
TORD	**Torodi Ar. Bea**	**89.61**	**77**	P	**P**	**14 50 49.9**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=296,slow=7.9,SNR=2.0						
WRA	**Warramunga Arr**	**136.14**	**255**	PKP	**PKPdf**	**14 57 14.0**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=92,slow=1.5,SNR=7.5						
ASAR	**Alice Springs**	**136.31**	**250**	PKP	**PKPdf**	**14 57 14.5**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=48,slow=1.4,SNR=2.4						
CMAR	**Chiang Mai Arr**	**147.07**	**342**	PKPbc	**PKPbc**	**14 57 36.2**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=354,slow=3.5,SNR=8.3						
CMAR	**Chiang Mai Arr**	**147.07**	**342**	PKPdf	**PKPdf**	**14 57 32.6**	**-1.8**

*IDC **09** 14:43:29.7±1.6, 16°.35S×175°.25W, h307km±28km, mb3.2/4, mb1 3.4/5, mb1mx3.0/29, mbtmp3.9/5, Error ellipse: s-maj=42.4km s-min=23.9km az=122.0*
*NEIC **09** 14:43:30.7±0.6, 16°.45S±0°.2×175°.3W±0°.3, h311km±15km, mb4.0/8, Error ellipse: s-maj=41.8km s-min=21.5km az=125.0*
ISC 09 14:43:29.7±0.9, 16°.4S±0°.2×175°.3W±0°.2, h300km, n14, σ0s61/14, mb3.8/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.21**	**55**	P	**Pn**	**14 44 39.6**	**+1.2**
	3.0nm,0.3s,baz=144,slow=2.0,SNR=11						
AFI				S	**S**	**14 45 32.3**	**-1.2**
	2.0nm,0.3s,baz=100,slow=22,SNR=6.7						
URZ	**Urewera**	**22.81**	**195**	P	**P**	**14 48 06.4**	**-0.5**
	7.4nm,0.7s,baz=346,slow=6.1,SNR=5.5						
URZ	**Urewera**	**22.81**	**195**	IAmb	IAmb	14 48 08.4	
	comp=Z,12nm,0.9s						
BKZ	**Black Stump Fm**	**23.82**	**196**	P	**P**	**14 48 16.3**	**+0.1**
BKZ				IAmb	IAmb	14 48 39.5	
	comp=Z,11nm,1.1s						
THZ	**Tophouse**	**27.27**	**199**	P	**P**	**14 48 46.9**	**-0.1**
WB0	**Warramunga Arr**	**47.78**	**258**	P	**P**	**14 51 38.0**	**+0.2**
WB2	**Warramunga Arr**	**47.81**	**258**	P	**P**	**14 51 38.2**	**+0.3**
WB2				IAmb	IAmb	14 51 42.2	
	comp=Z,9.6nm,1.4s						
WRAB	**Tennant Creek**	**47.81**	**258**	P	**P**	**14 51 38.3**	**+0.3**
WRAB				IAmb	IAmb	14 51 40.1	
	comp=Z,6.3nm,1.4s						

AAK					⇑S		Sn	15 31 48.6	-1.4	
	2.7nm,0.5s									
TKM2	**Tokmak 2**	**7.23**	**28**	⇓P			**Pn**	**15 30 42.3**	**-0.6**	
	4.4nm,0.6s									
TKM2					⇑S		**Sn**	**15 32 06.0**	**+1.1**	
	3.8nm,1.1s									
MKAR	**Makanchi Array**	**13.21**	**36**	P			**P**	**15 32 03.4**	**+0.9**	
	0.1nm,0.3s,baz=229,slow=13,SNR=3.6									
AB31	**Akbulak array**	**14.97**	**331**	⇓P			**P**	**15 32 22.5**	**+0.6**	
	0.3nm,0.3s,baz=164,slow=11,SNR=12									
AB31					⇑S		**S**	**15 35 07.8**	**+0.5**	
	0.3nm,0.5s									
KURBB	**Kurchatov Arra**	**15.02**	**19**	P			**P**	**15 32 25.4**	**+3.0**	
	0.1nm,0.3s,baz=201,slow=12,SNR=1.4									
AKTO	**Aktyubinsk**	**16.67**	**330**	P			**Pn**	**15 32 42.5**	**+0.8**	
	0.2nm,0.3s,baz=150,slow=13,SNR=3.0									
ZALV	**Zalesovo Beam**	**19.81**	**25**	P			**P**	**15 33 16.5**	**+1.8**	
	0.2nm,0.3s,baz=221,slow=9.7,SNR=4.3									
CMAR	**Chiang Mai Arr**	**30.53**	**119**	P			**P**	**15 34 53.4**	**-0.9**	
	0.2nm,0.4s,baz=306,slow=6.3,SNR=2.0									
WRA	**Warramunga Arr**	**82.07**	**122**	P			**P**	**15 40 57.1**	**-0.7**	
	0.1nm,0.4s,baz=324,slow=4.8,SNR=7.3									
ASAR	**Alice Springs**	**84.34**	**125**	P			**P**	**15 41 08.9**	**-0.4**	
	0.3nm,0.6s,baz=316,slow=4.6,SNR=7.2									

IDC 09 15:43:51.9±3.7, 10°.89S×118°.79E, h0km, mb3.3/1, mb1 3.2/3, mb1mx3.1/21, mbtmp3.0/3, ML2.7/2, Error ellipse: s-maj=270.0km s-min=30.9km az=48.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
WRA	**Warramunga Arr**	**17.47**	**123**	P		Pn	15 47 56.1	-1.1
	0.0nm,0.3s,baz=297,slow=13,SNR=2.0							
ASAR	**Alice Springs**	**19.21**	**133**	P		Pn	15 48 18.4	0.0
	0.1nm,0.3s,baz=303,slow=12,SNR=5.0							
MKAR	**Makanchi Array**	**66.04**	**333**	P		P	15 54 40.5	0.0
	0.1nm,0.4s,baz=142,slow=7.4,SNR=4.1							

*TEH **09** 15:52:37.7, 33°.01N×60°.28E, h8km, ML3.5*
*THR **09** 15:52:38.6±0.3, 33°.05N×60°.28E, h14km±3km, ML3.4*
ISC 09 15:52:38.3±1.5, 33°.03N±0°.03×60°.25E±0°.06, h1km±13km, n31, σ1s11/35, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
IDAH	**Dahanechah**	**0.44**	**228**	*e*Pg		**Pg**	**15 52 47.1**	**+0.4**
IDAH				*e*			15 52 47.3	
IDAH				*e*Sg		**Sg**	**15 52 53.2**	**+0.9**
IMON	**Monand**	**0.52**	**288**	*e*Pg		**Pb**	**15 52 48.9**	**-1.4**
IMON				*e*Sg		**Sb**	**15 52 56.7**	**-1.7**
SHRT	**Shahrakht**	**0.61**	**3**	*e*Pg		**Pg**	**15 52 50.1**	**+0.1**
SHRT				*e*Sg		**Sg**	**15 52 58.7**	**+0.7**
SHRT	**Shahrakht**	**0.61**	**3**	*e*Pg		**Pg**	**15 52 50.1**	**+0.1**
AFRZ	**Afriz**	**1.11**	**291**	*e*Pg		**Pg**	**15 52 59.5**	**0.0**
IKOO	**Kooshah**	**1.21**	**240**	*e*			15 53 05.4	
IKOO				*e*Pg		**Pb**	**15 53 01.8**	**-0.4**
ITEG	**Tejag**	**1.27**	**264**	*e*Pg		**Pb**	**15 53 02.6**	**-0.5**
ITEG				*e*			15 53 24.1	
BSRN	**Basiran**	**1.43**	**222**	*e*Pg		**Pg**	**15 53 05.6**	**-0.1**
BSRN				*e*Sg		**Sn**	**15 53 25.2**	**+0.2**
BSRN	**Basiran**	**1.43**	**222**	*e*Pg		**Pg**	**15 53 05.6**	**-0.1**
NHDN	**Nehbandan**	**1.65**	**186**	*e*			15 53 34.7	
NHDN				*e*Pg		**Pn**	**15 53 08.4**	**-0.1**
TKDS	**Koohdasht(Taba**	**2.68**	**283**	*e*Pn		**Pn**	**15 53 23.8**	**+1.1**
TKDS				*e*			15 54 07.8	
TABS	**Tabas**	**2.69**	**284**	*e*Pn		**Pn**	**15 53 23.9**	**+1.1**
TABS				*e*Sg		**Sg**	**15 54 03.4**	**-1.4**
TABS	**Tabas**	**2.69**	**284**	*e*Pn		**Pn**	**15 53 23.9**	**+1.1**
JRKH	**Jarkhoshk**	**2.87**	**2**	*e*Pn		**Pn**	**15 53 25.8**	**+0.5**
TPRV	**Parvadeh(Tabas**	**3.00**	**271**	*e*Pn		**Pn**	**15 53 28.5**	**+1.5**
TPRV				*e*			15 54 26.3	
IMOG	**Moghan**	**3.16**	**346**	*e*Pn		**Pn**	**15 53 30.4**	**+1.0**
TNSJ	**Nastanj**	**3.18**	**288**	*e*Pn		**Pn**	**15 53 30.4**	**+0.8**
TNSJ				*e*			15 54 31.2	
IMYA	**Miami**	**3.30**	**358**	*e*Pn		**Pn**	**15 53 32.3**	**+1.0**
IMYA				*e*			15 54 37.8	
IPAY	**Payeh**	**3.56**	**343**	*e*Pn		**Pn**	**15 53 36.4**	**+1.5**
IPAY				*e*			15 53 41.9	
IAKL	**Akhelmad**	**3.77**	**341**	*e*Pn		**Pn**	**15 53 39.2**	**+1.4**
IAKL				*e*			15 53 39.7	
CHMN	**Cheshme madani**	**3.92**	**217**	*e*Pn		**Pn**	**15 53 40.5**	**+0.5**
SBZV	**Sabzevar**	**3.99**	**328**	*e*Pn		**Pn**	**15 53 42.1**	**+1.3**
IKRD	**Kardeh**	**4.00**	**340**	*e*Pn		**Pn**	**15 53 39.1**	**-1.8**
IKRD				*e*			15 54 48.3	
KHGB	**Koh Gabri**	**4.17**	**232**	*e*Pn		**Pn**	**15 53 44.5**	**+1.2**
KHGB				*e*			15 55 02.6	
KBAM	**BAM**	**4.18**	**202**	*e*Pn		**Pn**	**15 53 43.8**	**+0.5**
TVBK	**TV Kerman**	**4.26**	**225**	*e*Pn		**Pn**	**15 53 45.1**	**+0.5**
ISFR	**Sfrayin**	**4.42**	**336**	*e*Pn		**Pn**	**15 53 47.8**	**+1.1**
NGRK	**Negar Kerman**	**4.53**	**223**	*e*Pn		**Pn**	**15 53 49.0**	**+0.7**
YZKH	**Yazd**	**4.81**	**264**	IAML			15 55 18.9	
	comp=E,21nm,0.5s							
ANAR	**Anarak**	**5.47**	**273**	*e*Pn		**Pn**	**15 54 03.2**	**+2.1**
KRSH	**Karshahi**	**6.84**	**280**	*e*Pn		**Pn**	**15 54 21.9**	**+1.9**

*IDC **09** 16:04:55.0±1.7, 21°.31S×178°.64W, h518km±18km, mb3.8/17, mb1 4.0/19, mb1mx3.8/30, mbtmp4.7/19, Error ellipse: s-maj=15.9km s-min=11.2km az=140.0*
*NEIC **09** 16:04:55.6±1.9, 21°.39S±0°.03×178°.6W±0°.1, h533km±6km, mb4.6/77, Error ellipse: s-maj=15.2km s-min=4.0km az=82.0*
ISC 09 16:04:55.4±0.3, 21°.45S±0°.05×178°.49W±0°.06, h536km, n227, σ1s45/243, mb4.5/50, 25C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MSVF	**Nonsavu**	**4.92**	**318**	P		**P**	**16 06 24.5**	**+0.6**
GLKZ	**Green Lake**	**7.80**	**176**	P		**P**	**16 06 47.2**	**-3.4**
GLKZ				S		**S**	**16 08 26.4**	**+1.3**
NIUE	**Niue**	**8.38**	**75**	P		**P**	**16 06 56.9**	**+0.3**
AFI	**Afiamalu**	**9.85**	**42**	P		**P**	**16 07 09.6**	**-2.2**
	7.7nm,0.3s,baz=124,slow=1.2,SNR=20							
AFI				S		**S**	**16 08 56.8**	**-7.0**
	5.0nm,0.3s,baz=75,slow=19,SNR=8.8							
AFI	**Afiamalu**	**9.85**	**42**	P		**P**	**16 07 09.5**	**-2.3**
FUNA	**Funafuti**	**13.04**	**350**	P		**P**	**16 07 42.9**	**-1.9**
DZM	**Mont Dzumac**	**14.01**	**265**	P		**P**	**16 07 53.5**	**-1.5**
	0.8nm,0.3s,baz=74,slow=21,SNR=7.7							
DZM	**Mont Dzumac**	**14.01**	**265**	P		**P**	**16 07 54.1**	**-0.9**
SANVU	**Saraoutou**	**14.82**	**291**	P		**P**	**16 08 02.7**	**-0.6**
OUZ	**Omahuta**	**15.38**	**205**	P		**P**	**16 08 09.3**	**+0.5**
OUZ				IAmb		IAmb	16 08 12.9	
	comp=Z,12nm,0.8s							
KUZ	**Kuaotunu**	**16.06**	**197**	P		**P**	**16 08 15.7**	**+0.1**
WIAZ	**Waiheke Island**	**16.27**	**199**	P		**P**	**16 08 18.7**	**+1.0**
MXZ	**Matakaoa Point**	**16.30**	**189**	P		**P**	**16 08 19.5**	**+1.5**
MXZ	**Matakaoa Point**	**16.30**	**189**	P		**P**	**16 08 17.9**	**-0.2**
MBAZ	**Motutapu North**	**16.32**	**199**	P		**P**	**16 08 20.0**	**+1.8**
ETAZ	**East Tamaki Re**	**16.48**	**199**	P		**P**	**16 08 21.2**	**+1.5**
WMGZ	**Waiomatatini S**	**16.54**	**189**	P		**P**	**16 08 23.1**	**+2.9**
MKAZ	**Moumakai**	**16.55**	**198**	P		**P**	**16 08 21.7**	**+1.3**
HAZ	**Te Kaha**	**16.57**	**190**	P		**P**	**16 08 21.1**	**+0.6**
AWAZ	**Awhitu Peninsu**	**16.67**	**199**	P		**P**	**16 08 22.0**	**+0.5**
RUGZ	**Raukumara Rang**	**16.79**	**191**	P		**P**	**16 08 22.8**	**0.0**
PUZ	**Puketiti**	**16.81**	**189**	P		**P**	**16 08 25.1**	**+2.3**
TWGZ	**Tauwhareparae**	**16.95**	**190**	P		**P**	**16 08 25.0**	**+0.8**
TWGZ				S		**S**	**16 11 09.1**	**-5.5**
URZ	**Urewera**	**17.18**	**192**	P		**P**	**16 08 25.0**	**-1.2**
	comp=Z,2.2nm,0.3s,baz=246,slow=2.4,SNR=14							
URZ				S		**S**	**16 11 12.4**	**-5.9**
	comp=Z,0.3nm,0.3s,baz=41,slow=20,SNR=1.6							
URZ	**Urewera**	**17.18**	**192**	P		**P**	**16 08 24.7**	**-1.5**
URZ				IAmb		IAmb	16 08 25.9	
	comp=Z,14nm,0.8s							
MUGZ	**Murupara**	**17.46**	**192**	P		**P**	**16 08 27.8**	**-1.0**
TLZ	**Tolley Road**	**17.60**	**196**	P		**P**	**16 08 32.2**	**+2.0**
BKZ	**Black Stump Fm**	**18.18**	**193**	P		**P**	**16 08 33.4**	**-2.1**
BKZ				IAmb		IAmb	16 08 43.5	
	comp=Z,22nm,1.4s							
BFZ	**Birch Farm**	**19.69**	**192**	P		**P**	**16 08 48.2**	**-0.9**
KNTN	**Kanton**	**19.70**	**20**	P		**P**	**16 08 48.3**	**-1.2**
SNZO	**South Karori**	**20.62**	**195**	P		**P**	**16 08 56.7**	**-0.9**
PLWZ	**Palliser**	**20.75**	**193**	P		**P**	**16 08 56.9**	**-1.9**
QRZ	**Quartz Range**	**20.77**	**200**	P		**P**	**16 08 57.2**	**-1.8**
NNZ	**Nelson**	**20.88**	**197**	P		**P**	**16 08 59.6**	**-0.3**
TUWZ	**Tuamarina**	**20.93**	**196**	P		**P**	**16 08 59.8**	**-0.5**
THZ	**Tophouse**	**21.52**	**198**	P		**P**	**16 09 05.0**	**-0.7**
KHZ	**Kahutara**	**21.95**	**196**	P		**P**	**16 09 08.6**	**-1.0**
LTZ	**Lake Taylor**	**22.64**	**198**	P		**P**	**16 09 13.7**	**-2.0**
OXZ	**Oxford**	**23.20**	**198**	P		**P**	**16 09 19.1**	**-1.7**
OXZ				IAmb		IAmb	16 09 23.8	
	comp=Z,22nm,1.0s							
RPZ	**Rata Peaks**	**23.85**	**199**	P		**P**	**16 09 27.7**	**+1.3**
	comp=Z,3.8nm,0.4s,baz=38,slow=6.9,SNR=5.6							
FOZ	**Fox Glacier**	**24.08**	**201**	P		**P**	**16 09 27.5**	**-1.0**
FOZ				IAmb		IAmb	16 09 28.1	
	comp=Z,37nm,1.4s							
WKZ	**Wanaka**	**25.50**	**201**	P		**P**	**16 09 40.1**	**-1.0**
WKZ				IAmb		IAmb	16 09 57.1	
	comp=Z,21nm,1.1s							
WHZ	**Wether Hill Ro**	**26.79**	**201**	P		**P**	**16 09 51.1**	**-1.3**
EIDS	**Eidsvold**	**28.16**	**256**	P		**P**	**16 10 04.4**	**-0.3**
EIDS				IAmb		IAmb	16 10 05.6	
	comp=Z,7.4nm,0.6s							
ARMA	**Armidale**	**28.25**	**245**	P		**P**	**16 10 06.0**	**+0.4**
ARMA				IAmb		IAmb	16 10 07.6	
	comp=Z,15nm,0.8s							
CAN	**Canberra**	**31.61**	**237**	P		**P**	**16 10 34.9**	**+0.4**
CAN				IAmb		IAmb	16 10 36.2	
	comp=Z,13nm,0.9s							
CTA	**Charters Tower**	**32.95**	**266**	P		**P**	**16 10 46.0**	**0.0**
	comp=Z,6.2nm,0.5s,baz=100,slow=12,SNR=4.9							
CTAO	**Charters Tower**	**32.95**	**266**	P		**P**	**16 10 46.0**	**0.0**
CTAO				IAmb		IAmb	16 10 46.9	
	comp=Z,13nm,0.9s							
TOO	**Toolangi**	**34.97**	**235**	P		**P**	**16 11 03.2**	**+0.5**
TOO				IAmb		IAmb	16 11 04.2	
	comp=Z,11nm,0.8s							
PMG	**Port Moresby**	**35.12**	**285**	P		**P**	**16 11 03.3**	**-0.9**
TAU	**Tasmania Unive**	**35.63**	**225**	P		**P**	**16 11 08.9**	**+0.8**
STKA	**Stephens Creek**	**36.97**	**245**	P		**P**	**16 11 19.8**	**+0.4**
	comp=Z,10nm,0.5s,baz=93,slow=10,SNR=41							
STKA	**Stephens Creek**	**36.97**	**245**	P		**P**	**16 11 19.4**	**+0.1**
BBOO	**Buckleboo**	**41.72**	**244**	P		**P**	**16 11 57.4**	**-0.2**
BBOO				IAmb		IAmb	16 11 58.3	
	comp=Z,24nm,0.9s							
WR0	**Warramunga Arr**	**43.83**	**263**	P		**P**	**16 12 13.3**	**-1.1**
WR0				IAmb		IAmb	16 12 15.0	
	comp=Z,7.5nm,0.7s							
AS31	**Alice Springs**	**43.86**	**258**	P		**P**	**16 12 13.9**	**-0.6**
AS31				IAmb		IAmb	16 12 15.0	
	comp=Z,6.7nm,0.6s							
ASAR	**Alice Springs**	**43.86**	**258**	P		**P**	**16 12 14.3**	**-0.2**
	comp=Z,26nm,0.6s,baz=92,slow=8.2,SNR=608							
ASAR				PcP		**PcP**	**16 13 49.5**	**+0.4**
	comp=Z,3.8nm,0.7s,baz=104,slow=3.9,SNR=10							
ASAR				ScP		**ScP**	**16 16 52.2**	**+2.4**
	comp=Z,0.3nm,0.6s,baz=112,slow=5.8,SNR=2.3							
ASAR				S		**S**	**16 18 04.2**	**-2.7**
	comp=Z,1.5nm,1.0s,baz=94,slow=15,SNR=7.7							
ASAR	**Alice Springs**	**43.86**	**258**	P		**P**	**16 12 13.5**	**-1.1**
ASAR				PcP		**PcP**	**16 13 49.4**	**+0.4**
WB0	**Warramunga Arr**	**44.00**	**263**	P		**P**	**16 12 14.6**	**-1.1**
WB2	**Warramunga Arr**	**44.01**	**263**	P		**P**	**16 12 14.6**	**-1.1**
WB2				IAmb		IAmb	16 12 15.7	
	comp=Z,19nm,0.9s							
WRAB	**Tennant Creek**	**44.01**	**263**	P		**P**	**16 12 14.7**	**-1.1**
WRAB				IAmb		IAmb	16 12 15.6	
	comp=Z,15nm,0.9s							
WRA	**Warramunga Arr**	**44.02**	**263**	P		**P**	**16 12 14.9**	**-0.9**
	comp=Z,10nm,0.6s,baz=95,slow=7.6,SNR=342							
WRA				PcP		**PcP**	**16 13 50.1**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=93,slow=4.1,SNR=4.7							
WRA				S		**S**	**16 18 07.3**	**-2.0**
	comp=Z,1.5nm,0.9s,baz=102,slow=14,SNR=5.3							
WRA	**Warramunga Arr**	**44.02**	**263**	P		**P**	**16 12 14.6**	**-1.3**
FORT	**Forrest**	**48.50**	**247**	P		**P**	**16 12 48.6**	**-1.1**
MTN	**Manton Dam**	**48.72**	**272**	P		**P**	**16 12 50.3**	**-1.2**
MTN				IAmb		IAmb	16 12 51.2	
	comp=Z,16nm,0.6s							
KNRA	**Kununurra**	**50.14**	**267**	P		**P**	**16 13 01.5**	**-0.4**
KNRA				IAmb		IAmb	16 13 02.4	
	comp=Z,21nm,0.7s							
FITZ	**Fitzroy Crossi**	**52.45**	**263**	P		**P**	**16 13 18.5**	**-0.1**
SIJI	**Sorong**	**53.04**	**286**	P		**P**	**16 13 22.8**	**-0.1**
	comp=Z,31nm,0.8s,baz=82,slow=7.2							
SOEI	**Soe**	**56.08**	**273**	P		**P**	**16 13 45.2**	**+0.9**
	comp=Z,39nm,0.6s							
SOEI	**Soe**	**56.08**	**273**	P		**P**	**16 13 44.5**	**+0.2**
SOEI				IAmb		IAmb	16 13 46.5	
	comp=Z,31nm,0.7s							
BATI	**Baumata**	**56.49**	**272**	P		**P**	**16 13 47.8**	**+0.7**
	comp=Z,24nm,0.5s,baz=84,slow=4.8,SNR=7.3							
VNDA	**Vanda**	**56.93**	**185**	P		**P**	**16 13 51.9**	**+2.8**
	comp=Z,0.3nm,0.4s,baz=9.0,slow=6.5,SNR=6.7							
VNDA	**Vanda**	**56.93**	**185**	P		**P**	**16 13 51.8**	**+2.8**
PSA00	**Pilbara Seismi**	**57.01**	**258**	P		**P**	**16 13 50.0**	**-0.6**
PSA00				IAmb		IAmb	16 13 50.5	
	comp=Z,12nm,0.7s							
PSA00	**Pilbara Seismi**	**57.01**	**258**	P		**P**	**16 13 49.7**	**-0.8**
PSA00				IAmb		IAmb	16 13 53.9	
	comp=Z,6.6nm,0.8s							
NWAO	**Narrogin (SRO)**	**57.54**	**244**	P		**P**	**16 13 53.5**	**-0.4**
NWAO				IAmb		IAmb	16 13 55.4	
	comp=Z,22nm,1.1s							
MORW	**Morawa**	**59.05**	**248**	P		**P**	**16 14 03.9**	**-0.4**
GIRL	**Giralia**	**61.86**	**255**	P		**P**	**16 14 23.8**	**+0.9**
JAGI	**Jajag, Banyuwa**	**65.92**	**270**	P		**P**	**16 14 47.9**	**-1.0**
QSPA	**South Pole Qui**	**68.63**	**180**	P		**P**	**16 15 06.5**	**+1.8**
UGM	**Wanagama**	**69.49**	**269**	P		**P**	**16 15 10.1**	**-0.7**
KKM	**Kota Kinabalu**	**69.56**	**285**	P		**P**	**16 15 11.5**	**+0.3**
KKM				IAmb		IAmb	16 15 14.1	
	comp=Z,21nm,1.1s							
MJAR	**Matsushiro Arr**	**70.70**	**324**	P		**P**	**16 15 17.1**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=165,slow=5.5,SNR=4.4							
MJAR	**Matsushiro Arr**	**70.70**	**324**	IAmb		IAmb	16 15 17.6	
	comp=Z,24nm,1.2s							
LEM	**Lembang**	**72.56**	**269**	P		**P**	**16 15 29.1**	**+0.2**
	comp=Z,15nm,0.5s,baz=150,slow=20							
KSM	**Kuching**	**73.09**	**278**	P		**P**	**16 15 32.6**	**+0.8**
KSM				IAmb		IAmb	16 15 33.1	
	comp=Z,9.7nm,0.8s							
GSTR	**Great Sitkin T**	**73.25**	**2**	P		**P**	**16 15 32.7**	**+0.9**
TPUB	**Ta-pu**	**74.11**	**303**	P		**P**	**16 15 36.5**	**-0.8**
SSLB	**Suanglung**	**74.11**	**304**	P		**P**	**16 15 37.1**	**-0.2**
SSLB				IAmb		IAmb	16 15 45.1	
	comp=Z,26nm,1.1s							
JTU	**Tsushima**	**74.49**	**317**	P		**P**	**16 15 40.3**	**+1.1**
UNV	**Unalaska Valle**	**75.69**	**7**	P		**P**	**16 15 45.7**	**+0.3**
AKUT	**Akutan**	**76.06**	**8**	P		**P**	**16 15 47.5**	**+0.1**
PEA0B	**Petropavlovsk-**	**77.06**	**346**	P		**P**	**16 15 53.5**	**+0.5**
PETK	**Petropavlovsk-**	**77.06**	**346**	P		**P**	**16 15 53.4**	**+0.3**
	comp=Z,6.6nm,0.7s,baz=157,slow=4.2,SNR=11							
BELA	**Belgrano 2**	**78.68**	**173**	P		**P**	**16 16 02.3**	**+0.7**
USA0B	**Ussuriysk Arra**	**79.49**	**326**	P		**P**	**16 16 07.2**	**+1.0**
USRK	**Ussuriysk Ar.**	**79.49**	**326**	P		**P**	**16 16 07.1**	**+0.9**
	comp=Z,3.5nm,0.8s,baz=115,slow=3.0,SNR=8.0							
USRK	**Ussuriysk Ar.**	**79.49**	**326**	P		**P**	**16 16 07.5**	**+1.3**
CBX	**Cerro Bola**	**79.69**	**49**	P		**P**	**16 16 09.3**	**+1.6**
NJ2	**Nanjing**	**80.13**	**310**	*e*P		**P**	**16 16 11.5**	**+1.6**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
MAW	**Mawson**	**80.52**	**200**	P		**P**	**16 16 12.2**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=130,slow=6.1,SNR=6.1							
WAKR	**Walker**	**81.34**	**43**	P		**P**	**16 16 18.6**	**+2.2**
BEKR	**Beckworth**	**81.58**	**41**	P		**P**	**16 16 18.9**	**+1.5**
PNTR	**Pine Nut**	**81.59**	**42**	P		**P**	**16 16 19.3**	**+1.7**
PNTR				IAmb		IAmb	16 16 21.1	
	comp=Z,7.1nm,0.7s							
NVAR	**Mina Array Bea**	**82.03**	**43**	P		**P**	**16 16 21.6**	**+1.8**
	comp=Z,3.0nm,0.8s,baz=224,slow=8.3,SNR=28							
NVAR	**Mina Array Bea**	**82.03**	**43**	P		**P**	**16 16 21.4**	**+1.5**
NV11	**Mina Array Sit**	**82.12**	**44**	P		**P**	**16 16 22.0**	**+1.8**
TPH	**Tonopah**	**82.52**	**44**	P		**P**	**16 16 24.2**	**+1.9**
TPNV	**Topopah Spring**	**82.53**	**46**	P		**P**	**16 16 24.4**	**+2.1**
IPM	**Ipoh**	**82.80**	**278**	P		**P**	**16 16 24.6**	**+0.5**
IPM				IAmb		IAmb	16 16 25.6	
	comp=Z,14nm,0.8s							
TUC	**Tucson**	**83.92**	**52**	P		**P**	**16 16 31.8**	**+2.5**
TMUT	**Trail Mountain**	**87.14**	**46**	P		**P**	**16 16 46.6**	**+1.7**
HLID	**Hailey**	**87.34**	**41**	P		**P**	**16 16 47.4**	**+1.8**
TRF	**Thorofare Moun**	**87.47**	**12**	P		**P**	**16 16 45.8**	**+0.1**
TRF				IAmb		IAmb	16 16 47.0	
	comp=Z,12nm,0.9s							
MNTX	**Cornudas Mount**	**87.67**	**55**	P		**P**	**16 16 49.4**	**+2.2**
RND	**Reindeer**	**87.72**	**13**	P		**P**	**16 16 47.4**	**+0.7**
RND				IAmb		IAmb	16 16 48.2	
	comp=Z,10nm,0.8s							
TXAR	**Lajitas Array**	**87.95**	**57**	P		**P**	**16 16 51.2**	**+2.6**
	comp=Z,2.0nm,0.9s,baz=224,slow=5.2,SNR=13							
TXAR	**Lajitas Array**	**87.95**	**57**	P		**P**	**16 16 51.0**	**+2.3**
XAN	**Xi'an**	**88.34**	**308**	P		**P**	**16 16 52.1**	**+1.8**
XAN				pP		PcP	16 16 55.2	+3.7
XAN				pmax		pmax		
	comp=Z,9.0nm,0.8s							
COLA	**College**	**89.22**	**13**	P		**P**	**16 16 53.8**	**+0.2**
COLA				IAmb		IAmb	16 16 54.6	
	comp=Z,7.2nm,0.6s							
IL31		**89.33**	**13**	P		**P**	**16 16 54.2**	**+0.1**
IL31				IAmb		IAmb	16 16 55.8	
	comp=Z,14nm,1.5s							
ILAR	**Eielson Array**	**89.33**	**13**	P		**P**	**16 16 54.5**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=216,slow=5.0,SNR=30							
REDW	**Red Top Meadow**	**89.44**	**42**	P		**P**	**16 16 57.1**	**+1.7**
REDW				IAmb		IAmb	16 16 58.8	
	comp=Z,6.9nm,1.2s							
HHC	**Hu-ho-hao-te**	**89.68**	**315**	*e*P		**P**	**16 16 56.9**	**+0.4**
HHC				pmax		pmax		
	comp=Z,14nm,1.0s							
HHC				pmax		pmax		
	comp=Z,74nm,5.1s							
PD31	**Pinedale Array**	**89.96**	**43**	P		**P**	**16 16 58.9**	**+1.0**
PDAR	**Pinedale Array**	**89.96**	**43**	P		**P**	**16 16 59.5**	**+1.6**
	comp=Z,2.0nm,0.7s,baz=214,slow=3.4,SNR=16							
PDAR	**Pinedale Array**	**89.96**	**43**	P		**P**	**16 16 59.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**90.00**	**290**	P		**P**	**16 17 00.3**	**+2.1**
	comp=Z,3.4nm,0.9s,baz=129,slow=3.3,SNR=27							
CMAR	**Chiang Mai Arr**	**90.00**	**290**	P		**P**	**16 16 59.6**	**+1.3**
CHTO	**Chiang Mai**	**90.13**	**290**	P		**P**	**16 16 59.4**	**+0.5**
CHTO				IAmb		IAmb	16 17 01.5	
	comp=Z,4.0nm,0.8s							
GTA	**Gaotai**	**97.21**	**309**	*e*P		**P**	**16 17 35.0**	**+4.1**
GTA				pP		pwP	16 19 35.8	+3.1
GTA				sP		sP	16 20 26.7	+4.7
GTA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ZALV	**Zalesovo Beam**	**110.94**	**321**	PKiKP		**PKiKP**	**16 22 26.8**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=209,slow=2.2,SNR=4.5							
MKAR	**Makanchi Array**	**111.51**	**313**	PKiKP		**PKiKP**	**16 22 28.3**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=104,slow=0.4,SNR=9.5							
ARCES	**ARCESS Array B**	**129.76**	**349**	PKP		**PKPdf**	**16 23 03.0**	**-0.1**
	comp=Z,3.4nm,0.6s,baz=0.6,slow=1.3,SNR=21							
FINES	**FINESS Array B**	**136.54**	**343**	PKhKP		PKPpre	16 23 02.8	
	comp=Z,1.3nm,0.9s,baz=35,slow=7.0,SNR=3.5							
FINES				PKP		**PKPdf**	**16 23 15.2**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=62,slow=3.3,SNR=7.4							
NB2	**NORSAR Subarra**	**139.86**	**353**	PKP		**PKPdf**	**16 23 15.6**	**-6.5**
	comp=Z,0.4nm,0.5s,baz=10,slow=3.2							
NOA	**NORSAR Array B**	**139.86**	**353**	PKhKP		**PKPdf**	**16 23 14.7**	**-7.4**
	comp=Z,0.4nm,0.6s,baz=26,slow=1.0,SNR=

comp=Z,3.5nm,1.0s
SQTA eP **PKPab 16 24 08.3 +1.6**
comp=Z,1.1nm,0.5s
PRED Cave del Predi 153.20 341 PKPab 16 24 06.9 -0.1
ABTA Abfaltersbach 153.22 343 eP **PKiKP 16 23 52.9 +0.2**
comp=Z,3.6nm,0.6s
ABTA i P **PKPab 16 24 07.9 +0.8**
comp=Z,3.1nm,0.6s
FETA Feichten 153.41 346 eP **PKiKP 16 23 53.4 +0.2**
comp=Z,1.9nm,0.6s
FUORN Ofenpass-Fuorn 153.90 346 PKPab 16 24 11.1 +0.9
TORD Torodi Ar. Bea 171.75 181 PKPab **PKPab 16 25 29.6 +0.8**
comp=Z,1.5nm,0.8s,baz=143,slow=5.0,SNR=3.9

*JMA **09** 16:12:00.4±0.1, 31°.24N×130°.37E, h152km±1km, M3.1*
*NEIC **09** 16:12:00.1±1.1, 31°.3N±0°.2×130°.4E±0°.1, h154km±7km, mb4.1/3, Error ellipse: s-maj=23.0km s-min=13.4km az=204.0*
*IDC **09** 16:12:01.3±5.7, 31°.45N×130°.13E, h162km±33km, mb3.5/3, mb1 3.6/5, mb1mx3.1/48, mbtmp4.0/5, Error ellipse: s-maj=75.9km s-min=29.4km az=24.0*

ISC 09 16:11:59.9±0.8, 31°.27N±0°.05×130°.27E±0°.08, h152km±6km, n24, σ1s01/32, mb4.0/6, Kyushu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JSU	**Suzuyama**	**0.29**	**34**	P		**Pn**	**16 12 21.1**	**+0.4**
JSU				*e*S		**Sn**	**16 12 37.3**	**+0.8**
JSU	**Suzuyama**	**0.29**	**34**			**Pn**	**16 12 21.0**	**+0.3**
JTSR	**Tashiro 2**	**0.57**	**100**	P		**Pn**	**16 12 21.9**	**0.0**
JTSR				*e*S		**Sn**	**16 12 37.8**	**-0.7**
JSJ	**Shimokoshiki**	**0.62**	**311**	P		**Pn**	**16 12 22.6**	**+0.5**
JTN	**Tanegashima 3**	**0.86**	**135**	P		**Pn**	**16 12 23.7**	**-0.1**
JTN				S		**Sn**	**16 12 41.4**	**-0.6**
JTZ	**Takazaki**	**0.95**	**48**	P		**Pn**	**16 12 24.6**	**+0.2**
JTZ				S		**Sn**	**16 12 43.3**	**+0.2**
JMTN	**Minamitane**	**1.02**	**148**	P		**Pn**	**16 12 25.0**	**-0.1**
JMTN				S		**Sn**	**16 12 44.2**	**0.0**
JYAK	**Yakushimahirau**	**1.04**	**168**	P		**Pn**	**16 12 25.3**	**0.0**
JYAK				S		**Sn**	**16 12 43.8**	**-0.8**
JIU3	**Izumi3**	**1.36**	**20**	P		**Pn**	**16 12 28.9**	**+0.7**
JIU3				S		**Sn**	**16 12 50.0**	**+0.1**
JNU	**Nakatsue**	**1.92**	**16**	P		**Pn**	**16 12 34.8**	**+0.5**
	12nm,0.3s,baz=181,slow=17,SNR=117							
JNU				S		**Sn**	**16 13 00.8**	**0.0**
	0.7nm,0.3s,baz=111,slow=14,SNR=1.1							
JTU	**Tsushima**	**3.33**	**348**	Pn		**Pn**	**16 12 52.4**	**+0.9**
JMN	**Monobe**	**3.92**	**50**			**Pn**	**16 12 58.2**	**-0.9**
JHS	**Saijyo**	**4.42**	**32**	Pn		**Pn**	**16 13 04.3**	**-1.5**
JWT	**Wachi**	**5.88**	**46**	Pn		**Pn**	**16 13 24.0**	**-1.0**
INU	**Inuyama**	**6.96**	**52**	Pn		**Pn**	**16 13 39.1**	**-0.3**
JGF	**Kuroka**	**7.34**	**52**	Pn		**Pn**	**16 13 43.9**	**-0.5**
JHJ	**Hachijo jima 2**	**8.28**	**75**	P		**Pn**	**16 14 00.1**	**+3.1**
	3.8nm,0.3s,baz=270,slow=20,SNR=1.5							
MJAR	**Matsushiro Arr**	**8.44**	**49**	P		**Pn**	**16 14 01.3**	**+2.2**
	0.1nm,0.3s,baz=229,slow=15,SNR=13							
BRVK	**Borovoye**	**47.91**	**315**	P		**P**	**16 20 22.7**	**+0.1**
BRVK				IAmb		IAmb	16 20 49.8	
	comp=Z,3.5nm,1.5s							
FITZ	**Fitzroy Crossi**	**49.28**	**186**	P		**P**	**16 20 34.7**	**+1.3**
FITZ				IAmb		IAmb	16 20 53.2	
	comp=Z,3.6nm,1.1s							
ARCES	**ARCESS Array B**	**66.00**	**338**	P		**P**	**16 22 28.8**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=76,slow=7.6,SNR=1.2							
FIA1	**FINESS Array S**	**69.38**	**330**	P		**P**	**16 22 49.7**	**-1.2**
FIA1				IAmb		IAmb	16 23 14.2	
	comp=Z,11nm,1.2s							
FINES	**FINESS Array B**	**69.39**	**330**	P		**P**	**16 22 49.7**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=74,slow=6.1,SNR=12							
NVAR	**Mina Array Bea**	**85.76**	**47**	P		**P**	**16 24 22.2**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=306,slow=5.4,SNR=2.1							

TAP 09 16:19:18.3, 22°.76N×120°.89E, h6km, ML1.4, 5C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ECL	**Taimali**	**0.17**	**160**	⇑*i*P		Pg	16 19 22.4	+0.6
	baz=159							
TWG	**Pinlang**	**0.18**	**70**	⇑*i*P		Pg	16 19 22.9	+1.0
	baz=71							
TWGBT	**Beinan**	**0.18**	**71**	⇑P		Pg	16 19 22.9	+0.9
	baz=71							
SSD	**Sandimen**	**0.24**	**267**	⇑*i*P		Pg	16 19 23.5	+0.4
	baz=272							
SSD				*e*S		Sg	16 19 26.5	+0.3
	baz=272							
MASBT	**Mashibuluo**	**0.28**	**239**	⇑P		Pg	16 19 24.2	+0.5
	baz=240							
MASBT				*e*S		Sg	16 19 27.7	+0.2
	baz=240							
SLGT	**Liugui**	**0.33**	**316**	P		Pg	16 19 25.3	+0.6
	baz=316							
EAST	**Anshuo**	**0.38**	**186**	*e*P		Pb	16 19 26.6	-0.8
	baz=185							
SSPT	**Xinbi**	**0.41**	**227**	P		Pb	16 19 27.4	-0.5
	baz=216							
SGST	**Jiashian**	**0.43**	**319**	*e*P		Pg	16 19 26.9	+0.3
	baz=320							
TWM1	**Shoushan**	**0.44**	**279**	*e*P		Pb	16 19 27.8	-0.7
	baz=279							
ELDTW	**Lidau**	**0.44**	**15**	P		Pg	16 19 27.4	+0.5
	baz=17							
SCZT	**Fangliau**	**0.46**	**213**	*e*P		Pg	16 19 27.8	+0.6
	baz=214							
SCZT				*e*S		Sg	16 19 33.7	+0.5
	baz=214							
CHN1	**Nanshi**	**0.54**	**322**	*e*P		Pb	16 19 31.3	+1.1
	baz=331							
WTP	**Ta-pu**	**0.55**	**332**	*e*P		Pb	16 19 30.9	+0.6
	baz=334							
TPUB	**Ta-pu**	**0.59**	**336**	*e*P		Pb	16 19 30.9	-0.2
	baz=336							
TWK	**Hsinying**	**0.63**	**324**	*e*P		Pn	16 19 32.9	-0.9
	baz=335							
TWF1	**Yuli**	**0.70**	**32**	P		Pg	16 19 32.1	+0.3
	baz=33							
YULB	**Yu-li**	**0.73**	**31**	P		Pg	16 19 32.4	-0.1
	baz=31							
ALS	**Alishan**	**0.75**	**354**	*e*P		Pb	16 19 34.5	+0.5
	baz=3.0							

ROM 09 16:21:44.8±0.2, 44°.238N±0°.007×10°.818E±0°.007, h20km±1km, ML1.2/2, Error ellipse: s-maj=0.8km s-min=0.2km az=147.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ZCCA	**Zocca**	**0.16**	**45**	P		Pb	16 21 49.4	-0.9
ZCCA				S		Sb	16 21 53.7	-0.5
POPM	**Popiglio**	**0.20**	**193**	P		Pb	16 21 50.3	-0.1
POPM				S		Sb	16 21 54.1	-0.2
POPM				AML		AML		
	comp=N,93μm,0.7s							
POPM				AML		AML		
	comp=E,93μm,0.2s							
FNVD	**Fontana Vidola**	**0.23**	**108**	P		Pb	16 21 50.1	-0.6
FNVD				S		Sb	16 21 54.5	-0.3
BDI	**Bagni Di Lucca**	**0.24**	**222**	P		Pb	16 21 50.8	0.0
BDI				S		Sb	16 21 55.0	+0.1
MTCR	**Monte La Croce**	**0.25**	**148**	P		Pb	16 21 51.0	+0.1
MTCR				S		Sb	16 21 55.3	+0.2
SARO	**Sassorosso**	**0.30**	**260**	P		Pb	16 21 51.4	-0.3
SARO				S		Sb	16 21 56.7	+0.4
VLC	**Villacollemand**	**0.32**	**256**	P		Pb	16 21 52.2	+0.4
VLC				AML		AML		
	comp=N,45μm,1.4s							
VLC				AML		AML		
	comp=E,53μm,1.5s							
CARD	**Cardoso**	**0.32**	**229**	P		Pb	16 21 51.8	0.0
CARD				S		Sb	16 21 56.6	0.0
MAIM	**Mastiano**	**0.40**	**216**	P		Pb	16 21 53.6	+0.4
MAIM				S		Sb	16 21 59.9	+1.2
CRMI	**Carmignano**	**0.46**	**166**	P		Pb	16 21 54.6	+0.4
CRMI				S		Sb	16 22 00.8	+0.3

*ISU **09** 16:23:19.5, 41°.05N×71°.79E, h10km*
*KRNET **09** 16:23:20.7±0.1, 41°.12N×71°.72E, h13km, mb2.6*
*SOME **09** 16:23:21.2, 41°.08N×71°.78E, h15km*
*NNC **09** 16:23:21.9±1.9, 41°.16N×71°.78E, h0km, mb3.2, mpv3.2,*

Error ellipse: s-maj=16.8km s-min=5.9km az=177.0

ISC 09 16:23:21.9±0.9, 41°.05N±0°.03×71°.70E±0°.02, h8km±6km, n35, σ1s44/60, 25C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NAM	**Namangan**	**0.06**	**210**	*i* P		**Pg**	**16 23 23.4**	**-0.3**
NAM				*i* S		**Sg**	**16 23 26.4**	**+1.4**
FRG	**Fergana**	**0.32**	**168**	*e*P		Pn	16 23 37.3	+4.4
FRG				*e*S		Sb	16 23 44.8	+10
OHH	**Osh**	**0.97**	**122**	⇑*i*P		**Pg**	**16 23 39.7**	**-0.9**
	baz=26							
OHH				⇑*i*S		**Sb**	**16 23 53.9**	**-0.3**
	baz=26							
OHH	**Osh**	**0.97**	**122**	*e*P		**Pg**	**16 23 39.9**	**-0.7**
OHH				*e*S		**Sg**	**16 23 51.7**	**-1.5**
ARSB	**Arslanbob**	**1.01**	**73**	⇑*i*P		**Pg**	**16 23 39.3**	**-1.9**
	baz=78							
ARSB				⇑*i*S		**Sg**	**16 23 52.8**	**-1.5**
	baz=78							
ARSB	**Arslanbob**	**1.01**	**73**	*e*P		**Pg**	**16 23 39.4**	**-1.8**
ARSB				*e*S		**Sg**	**16 23 51.8**	**-2.5**
BTK	**Batken**	**1.19**	**215**	⇓*i*P		**Pn**	**16 23 44.5**	**-0.5**
	baz=13							
BTK				⇓*i*S		**Sn**	**16 24 02.7**	**+1.2**
	baz=13							
BTK	**Batken**	**1.19**	**215**	*e*P		**Pg**	**16 23 43.3**	**-1.5**
BTK				*e*S		**Sn**	**16 24 03.0**	**+1.5**
CHRV	**Charvak**	**1.45**	**295**	*e*P		**Pn**	**16 23 47.6**	**-0.9**
CHRV				*e*S		**Sb**	**16 24 07.5**	**-0.2**
MNAS	**Manas**	**1.56**	**22**	⇑*i*P		**Pn**	**16 23 48.8**	**-1.3**
	baz=23							
MNAS				⇑*i*S		**Sn**	**16 24 09.6**	**-1.1**
	baz=23							
IUG	**Iuzhnay**	**1.67**	**312**	*e*P		**Pb**	**16 23 52.4**	**-0.5**
	101nm,0.2s							
IUG				*e*S		**Sb**	**16 24 14.6**	**+0.4**
	133nm,0.2s							
IUG	**Iuzhnay**	**1.67**	**312**	P		**Pb**	**16 23 52.4**	**-0.5**
	101nm,0.2s							
IUG				S		**Sb**	**16 24 14.6**	**+0.4**
	133nm,0.2s							
AML	**Almayashu**	**1.85**	**53**	⇓*i*P		**Pn**	**16 23 53.8**	**-0.5**
	baz=55							
AML				⇓*i*S		**Sn**	**16 24 18.4**	**+0.3**
	baz=55							
MRKS	**Merke**	**2.04**	**33**	*e*P		**Pn**	**16 23 57.9**	**+1.2**
	3.3nm,0.2s							
MRKS				*e*S		**Sn**	**16 24 24.2**	**+1.7**
	28nm,0.4s							
MRKS	**Merke**	**2.04**	**33**	Pg		**Pn**	**16 23 57.9**	**+1.2**
	3.3nm,0.2s							
MRKS				Lg		Lg	16 24 24.2	
	28nm,0.4s							
ARLS	**Aral**	**2.13**	**67**	⇑*i*P		**Pn**	**16 23 59.4**	**+1.4**
	baz=68							
ARLS				⇑*i*S		**Sb**	**16 24 27.5**	**-0.1**
	baz=68							
KK31	**Karatay Array**	**2.24**	**337**	⇑Pn		**Pn**	**16 23 59.5**	**+0.2**
	1.9nm,0.2s,baz=147,slow=15,SNR=94							
KK31				⇑Lg		Lg	16 24 29.1	
	12nm,0.6s,baz=158,slow=30,SNR=7.5							
EKS2	**Erkin-Say**	**2.24**	**43**	⇑*i*P		**Pn**	**16 23 59.9**	**+0.5**
	baz=44							
EKS2				⇑*i*S		**Sn**	**16 24 28.2**	**+0.8**
	baz=44							
UCH	**Uchtor**	**2.42**	**60**	⇑*i*P		**Pn**	**16 24 02.2**	**0.0**
	baz=61							
UCH				⇑*i*S		**Sn**	**16 24 33.0**	**+0.8**
	baz=61							
BRLS	**Borolday**	**2.42**	**326**	*e*P		**Pn**	**16 24 02.6**	**+0.8**
	21nm,0.2s							
BRLS				*e*S		**Sn**	**16 24 32.0**	**+0.3**
	35nm,0.3s							
BRLS	**Borolday**	**2.42**	**326**	Pg		**Pn**	**16 24 02.7**	**+0.8**
	21nm,0.2s							
BRLS				Lg		Lg	16 24 32.0	
	35nm,0.3s							
AAK	**Ala-Archa**	**2.62**	**52**	⇑*i*P		**Pn**	**16 24 04.9**	**+0.1**
	baz=53							
AAK				⇑*i*S		**Sn**	**16 24 37.9**	**+1.0**
	baz=53							
AAK	**Ala-Archa**	**2.62**	**52**	⇑Pg		**Pn**	**16 24 06.3**	**+1.5**
	2.7nm,0.8s							
AAK				⇑Lg		Lg	16 24 41.1	
	8.5nm,0.8s							
KBK	**Karagaybulak**	**2.91**	**55**	⇑*i*P		**Pn**	**16 24 09.1**	**+0.4**
	baz=57							
KBK				⇑*i*S		**Sn**	**16 24 45.0**	**+1.0**
	baz=57							
CHMS	**Chumysh**	**3.00**	**48**	⇓*i*P		**Pn**	**16 24 10.4**	**+0.6**
	baz=49							
CHMS				⇓*i*S		**Sn**	**16 24 46.7**	**+0.8**
	baz=49							
USP	**Ospenovka**	**3.04**	**42**	⇑*i*P		**Pn**	**16 24 10.9**	**+0.5**
	baz=43							
USP				⇑*i*S		**Sn**	**16 24 47.6**	**+0.5**
	baz=43							
SGDS	**Sogindy**	**3.24**	**41**	Pg		**Pb**	**16 24 19.3**	**-0.5**
	3.1nm,0.5s							
SGDS				Lg		Lg	16 25 00.3	
	4.6nm,0.4s							
TKM2	**Tokmak 2**	**3.46**	**56**	⇑*i*P		**Pn**	**16 24 16.5**	**+0.3**
	baz=57							
TKM2				⇑*i*S		**Sn**	**16 24 57.8**	**+0.3**
	baz=57							
TKM2	**Tokmak 2**	**3.46**	**56**	⇓Pg		**Pb**	**16 24 23.7**	**+0.2**
	2.3nm,0.9s							
TKM2				⇑Lg		Lg	16 25 07.8	
	2.7nm,0.4s							
KST	**Kastek**	**3.75**	**56**	*e*P		**Pb**	**16 24 28.2**	**-0.2**
	6.9nm,1.0s							
KST				*e*S		**Sb**	**16 25 15.8**	**+1.7**
	10nm,0.7s							
KST	**Kastek**	**3.75**	**56**	Pg		**Pb**	**16 24 28.2**	**-0.2**
	6.9nm,1.0s							
KST				Lg		Lg	16 25 15.8	
	10nm,0.7s							
BTLS	**Baital**	**4.35**	**23**	*e*P		**Pb**	**16 24 39.7**	**+1.1**
	0.9nm,0.5s							
BTLS				*e*S		**Sb**	**16 25 35.3**	**+4.2**
	2.6nm,0.4s							
BTLS	**Baital**	**4.35**	**23**	Pg		**Pb**	**16 24 39.7**	**+1.1**
	0.9nm,0.5s							
BTLS				Lg		Lg	16 25 35.3	
	2.6nm,0.4s							
MDOK	**Medeo**	**4.51**	**60**	*e*P		**Pb**	**16 24 43.4**	**+2.0**
	5.9nm,2.5s							
MDOK				*e*S		**Sg**	**16 25 42.0**	**-4.5**
	9.2nm,2.0s							
KTBS	**Karatobe**	**4.55**	**53**	*e*P		**Pb**	**16 24 42.8**	**+0.8**
KTBS				*e*S		**Sb**	**16 25 41.3**	**+4.2**

*MOS **09** 16:26:02.2±0.8, 23°.39S×179°.88W, h536km, mb4.7/11, Error ellipse: s-maj=8.3km s-min=7.4km az=49.1*
*BJI **09** 16:26:02.3±0.0, 23°.41S×179°.66W, h549km, mB5.0/28, mb4.9/54*
*IDC **09** 16:26:02.9±0.5, 23°.36S×179°.85W, h532km±5km, mb4.5/36, mb1 4.5/40, mb1mx4.5/44, mbtmp5.3/40, Error ellipse: s-maj=8.4km s-min=7.1km az=174.0*
*NEIC **09** 16:26:03.6±1.6, 23°.39S±0°.08×179°.85W±0°.07, h547km±4km, mb5.0/244, Error ellipse: s-maj=12.6km s-min=9.0km az=155.0*
*BGR **09** 16:26:05.6±0.0, 23°.36S×179°.46W, h565km±1km*
*GCMT **09** 16:26:06.6±0.4, 23°.53S±0°.04×179°.96W±0°.04, h550km±2km, MW5.2/57, Moment Tensor Solution. s57,c74; Duration: 1s0 Moment tensor: Scale 10^17Nm; Mrr-0.50±.03; Mθθ 0.31±.05; Mϕϕ 0.18±.05; Mrθ 0.37±.06; Mθϕ 0.01±.04; Mϕr-0.75±.05; Best double couple: M0 0.91200×10^17 NP1:ϕs134.00000°, δ12.00000°, λ-107.00000°. NP2:ϕs331.00000°, δ79.00000°, λ-87.00000°. Principal axes: T 0.7670, Plg34.0000°, Azm58.0000°; N 0.2910, Plg3.0000°, Azm150.0000°; P -1.0580, Plg56.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 09 16:26:02.5±0.3, 23°.42S±0°.04×179°.76W±0°.04, h539km±3km, h540km; pP-P, n1021, σ1s57/1144, mb5.0/235, 60C-30D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.02**	**340**	P		**P**	**16 27 42.0**	**+1.0**
MSVF	**Nonsavu**	**6.02**	**340**	P		**P**	**16 27 42.0**	**+1.0**
RIZ	**Raoul Island**	**6.03**	**165**	P		**P**	**16 27 42.9**	**+2.1**
RIZ				S		**S**	**16 29 06.9**	**+5.7**
RAO	**Raoul Island**	**6.04**	**165**	P		**P**	**16 27 41.4**	**+0.5**
	308nm,0.3s,baz=19,slow=8.9,SNR=6.4							
RAO				S		**S**	**16 28 55.4**	**-5.9**
	104nm,0.3s,baz=68,slow=19,SNR=1.7							
RAO	**Raoul Island**	**6.04**	**165**	P		**P**	**16 27 42.1**	**+1.3**
RAO	**Raoul Island**	**6.04**	**165**	P		**P**	**16 27 42.1**	**+1.3**
GLKZ	**Green Lake**	**6.05**	**165**	P		**P**	**16 27 41.6**	**+0.6**
GLKZ				S		**S**	**16 28 57.2**	**-4.3**
NIUE	**Niue**	**10.13**	**67**	P		**P**	**16 28 22.8**	**+1.1**
	baz=10,SNR=33							
NIUE	**Niue**	**10.13**	**67**	P		**P**	**16 28 22.5**	**+0.8**
AFI	**Afiamalu**	**12.10**	**40**	P		**P**	**16 28 39.8**	**-2.5**
	5.4nm,0.3s,baz=30,slow=7.2,SNR=30							
AFI				S		**S**	**16 30 46.7**	**-7.1**
	6.3nm,0.3s,baz=191,slow=16,SNR=3.7							
AFI	**Afiamalu**	**12.10**	**40**	P		**P**	**16 28 41.6**	**-0.7**
AFI	**Afiamalu**	**12.10**	**40**	P		**P**	**16 28 39.2**	**-3.1**
AFI				S		**S**	**16 30 45.6**	**-8.2**
DZM	**Mont Dzumac**	**12.80**	**273**	P		**P**	**16 28 49.6**	**+0.1**
	1.8nm,0.3s,baz=86,slow=15,SNR=16							
DZM	**Mont Dzumac**	**12.80**	**273**	*e*P		**P**	**16 28 50.6**	**+1.0**
	92nm,1.1s							
DZM	**Mont Dzumac**	**12.80**	**273**	P		**P**	**16 28 50.9**	**+1.4**
OUZ	**Omahuta**	**13.11**	**205**	P		**P**	**16 28 54.1**	**+1.8**
OUZ	**Omahuta**	**13.11**	**205**	P		**P**	**16 28 53.7**	**+1.4**
GRZ	**Great Barrier**	**13.44**	**197**	P		**P**	**16 28 59.0**	**+3.2**
WCZ	**Waipu Caves**	**13.49**	**201**	P		**P**	**16 28 58.5**	**+2.3**
KUZ	**Kuaotunu**	**13.85**	**195**	P		**P**	**16 29 00.7**	**+0.8**
MXZ	**Matakaoa Point**	**14.20**	**186**	P		**P**	**16 29 00.3**	**-3.3**
MXZ				S		**S**	**16 31 24.2**	**-8.8**
MXZ	**Matakaoa Point**	**14.20**	**186**	P		**P**	**16 29 04.6**	**+1.0**
SANVU	**Saraoutou**	**14.63**	**300**	P		**P**	**16 29 07.6**	**-0.8**
WHRZ	**Whale Island**	**14.66**	**190**	P		**P**	**16 29 11.1**	**+2.6**
WHRZ				S		**S**	**16 31 42.4**	**+0.6**
RUGZ	**Raukumara Rang**	**14.67**	**188**	P		**P**	**16 29 08.0**	**-0.7**
RUGZ				S		**S**	**16 31 37.1**	**-5.0**
OPRZ	**Ohinepanea**	**14.72**	**192**	P		**P**	**16 29 10.8**	**+1.6**
TWGZ	**Tauwhareparae**	**14.84**	**187**	P		**P**	**16 29 11.0**	**+0.7**
TWGZ				S		**S**	**16 31 40.6**	**-4.6**
FUNA	**Funafuti**	**14.84**	**356**	P		**P**	**16 29 08.8**	**-1.9**
OMRZ	**Omania**	**15.01**	**192**	P		**P**	**16 29 10.4**	**-1.8**
URZ	**Urewera**	**15.04**	**190**	P		**P**	**16 29 11.4**	**-1.0**
	23nm,0.3s,baz=3.8,slow=2.3,SNR=77							
URZ				S		**S**	**16 31 42.2**	**-6.5**
	6.0nm,0.3s,baz=37,slow=22,SNR=16							
URZ				ScP		**ScP**	**16 36 24.8**	**+0.1**
	0.2nm,0.3s,baz=27,slow=1.7,SNR=4.3							
URZ	**Urewera**	**15.04**	**190**	P		**P**	**16 29 09.7**	**-2.6**
URZ				S		**S**	**16 31 42.4**	**-6.4**
URZ	**Urewera**	**15.04**	**190**	P		**P**	**16 29 09.6**	**-2.8**
MWZ	**Matawai**	**15.05**	**188**	P		**P**	**16 29 11.3**	**-1.2**
MWZ				S		**S**	**16 31 43.5**	**-5.6**
TKGZ	**Te Karaka**	**15.11**	**187**	P		**P**	**16 29 14.1**	**+1.0**
CNGZ	**Carnagh Statio**	**15.12**	**186**	P		**P**	**16 29 13.8**	**+0.5**
HLRZ	**Highlands Stat**	**15.16**	**192**	P		**P**	**16 29 15.6**	**+1.9**
RRRZ	**Republican Roa**	**15.21**	**191**	P		**P**	**16 29 13.7**	**-0.5**
RAGZ	**Rawiri**	**15.22**	**188**	P		**P**	**16 29 15.6**	**+1.2**
HSRZ	**Hossack Road**	**15.24**	**192**	P		**P**	**16 29 15.3**	**+0.9**
GRRZ	**Galatos Road**	**15.30**	**192**	P		**P**	**16 29 17.3**	**+2.2**
MUGZ	**Murupara**	**15.30**	**190**	P		**P**	**16 29 12.5**	**-2.7**
MUGZ				S		**S**	**16 31 49.1**	**-4.5**
HRRZ	**Handcock Road**	**15.30**	**192**	P		**P**	**16 29 16.4**	**+1.2**
RIGZ	**Rimuhau**	**15.39**	**187**	P		**P**	**16 29 16.0**	**0.0**
RIGZ				S		**S**	**16 31 52.0**	**-2.5**
TLZ	**Tolley Road**	**15.40**	**194**	P		**P**	**16 29 16.8**	**+0.6**
RTZ	**Ruatahuna**	**15.40**	**190**	P		**P**	**16 29 14.5**	**-1.7**
RTZ				S		**S**	**16 31 48.1**	**-7.4**
WPRZ	**Whakapapatarin**	**15.45**	**192**	P		**P**	**16 29 18.2**	**+1.5**
KUTZ	**Kaahu Road**	**15.49**	**193**	P		**P**	**16 29 18.7**	**+1.6**
PRGZ	**Paritu Road**	**15.59**	**187**	P		**P**	**16 29 18.4**	**+0.3**
PRGZ				S		**S**	**16 31 54.5**	**-4.0**
WHTZ	**Whakaora**	**15.63**	**193**	P		**P**	**16 29 19.7**	**+1.0**
MTHZ	**Maungataniwha**	**15.66**	**190**	P		**P**	**16 29 17.3**	**-1.6**
MTHZ				S		**S**	**16 31 54.3**	**-5.5**
RAHZ	**Arahi**	**15.68**	**189**	P		**P**	**16 29 17.9**	**-1.1**
RAHZ				S		**S**	**16 31 57.2**	**-3.0**
KNZ	**Kokohu**	**15.71**	**187**	P		**P**	**16 29 17.9**	**-1.4**
KNZ				S		**S**	**16 31 54.0**	**-6.5**
WATZ	**Wairara**	**15.72**	**193**	P		**P**	**16 29 20.1**	**+0.6**
HIZ	**Hauiti**	**15.74**	**196**	P		**P**	**16 29 20.4**	**+0.8**
HIZ	**Hauiti**	**15.74**	**196**	P		**P**	**16 29 20.0**	**+0.5**
MHGZ	**Mahia Peninsul**	**15.81**	**187**	P		**P**	**16 29 20.8**	**+0.7**
MHGZ				S		**S**	**16 32 02.9**	**+0.5**
WHHZ	**Waihua**	**15.82**	**189**	P		**P**	**16 29 20.2**	**-0.2**
WHHZ				S		**S**	**16 31 57.7**	**-4.8**
RATZ	**Rangitukua**	**15.87**	**193**	P		**P**	**16 29 20.6**	**-0.4**
NMHZ	**Naumai**	**15.90**	**190**	P		P	16 29 11.8	-10
NMHZ				S		**S**	**16 32 01.6**	**-2.5**
RITZ	**Rihia Road**	**15.96**	**193**	P		**P**	**16 29 21.4**	**-0.4**
BKZ	**Black Stump Fm**	**16.02**	**191**	P		**P**	**16 29 19.4**	**-3.1**
BKZ				S		**S**	**16 31 59.1**	**-7.0**
BKZ	**Black Stump Fm**	**16.02**	**191**	P		**P**	**16 29 19.2**	**-3.2**
BKZ				IAmb		IAmb	16 29 27.6	
	comp=Z,66nm,0.6s							
ARHZ	**Aropaoanui**	**16.04**	**189**	P		**P**	**16 29 22.0**	**-0.5**
ARHZ				S		**S**	**16 32 00.8**	**-5.3**
TWVZ	**Taurewa**	**16.13**	**194**	P		**P**	**16 29 23.0**	**-0.6**
ETGZ	**East Tongariro**	**16.14**	**193**	P		**P**	**16 29 22.2**	**-1.4**
WTVZ	**West Tongariro**	**16.14**	**193**	P		**P**	**16 29 23.1**	**-0.7**
OTVZ	**Oturere**	**16.17**	**193**	P		**P**	**16 29 19.3**	**-4.8**
**NGZ

RPZ Rata Peaks 21.62 198 P P 16 30 12.1 -1.4
comp=Z,39nm,0.5s,baz=302,slow=0.4,SNR=45
RPZ ScP **ScP** **16 36 39.2 0.0**
comp=Z,17nm,0.7s,baz=267,slow=2.5,SNR=4.0
RPZ Rata Peaks 21.62 198 P P 16 30 11.8 -1.7
FOZ Fox Glacier 21.83 201 P P 16 30 13.9 -1.5
KNTN Kanton 21.95 22 P P 16 30 15.7 -1.2
LBZ Lake Benmore 22.49 199 P P 16 30 19.1 -2.2
LBZ IAmb IAmb 16 30 24.8
comp=Z,48nm,1.0s
ODZ Otahua Downs 22.95 198 P P 16 30 24.2 -1.2
ODZ IAmb IAmb 16 30 26.5
comp=Z,16nm,0.6s
WKZ Wanaka 23.25 201 P P 16 30 26.6 -1.5
HNR Honiara 23.88 302 P P 16 30 32.3 -1.7
comp=Z,97nm,0.8s,baz=223,slow=1.9,SNR=12
HNR Honiara 23.88 302 P P 16 30 32.4 -1.7
HNR pmax pmax
comp=Z,119nm,0.7s
HNR Honiara 23.88 302 P P 16 30 32.4 -1.7
MLZ Mavora Lakes 24.02 201 P P 16 30 34.3 -0.7
MLZ IAmb IAmb 16 30 36.3
comp=Z,86nm,0.8s
WHZ Wether Hill Ro 24.54 201 P P 16 30 39.1 -0.4
ARMA Armidale 26.40 248 P P 16 30 58.1 +1.7
baz=26,SNR=65
ARMA Armidale 26.40 248 P P 16 30 57.6 +1.3
EIDS Eidsvold 26.61 260 P P 16 30 58.7 +0.6
baz=27,SNR=49
EIDS Eidsvold 26.61 260 P P 16 30 58.3 +0.2
MGCD Mangrove Creek 27.36 243 P P 16 31 06.6 +2.0
baz=27,SNR=16
RIV Riverview 27.47 241 P P 16 31 07.0 +1.4
baz=28,SNR=4.1
RMQ Roma 28.67 257 P P 16 31 17.8 +1.7
baz=29,SNR=116
PAE Paea 28.80 84 *e*P **P 16 31 18.2 +0.9**
comp=Z,10nm,1.0s
PPT2 Papeete2 28.82 84 *e*P **P 16 31 18.9 +1.3**
comp=Z,80nm,1.1s
PPT Papeete 28.83 84 P **P 16 31 19.1 +1.5**
comp=Z,73nm,1.0s,baz=339,slow=4.5,SNR=7.8
PPT ScP **ScP** **16 37 03.5 +3.0**
comp=Z,38nm,1.0s,baz=214,slow=1.6,SNR=3.6
PPTF Pamatai, Papee 28.83 84 P **P 16 31 18.3 +0.6**
TIAR Tiarei 29.04 84 *e*P **P 16 31 20.5 +1.0**
comp=Z,44nm,1.1s
TVO Taravao 29.07 85 *e*P **P 16 31 20.7 +1.0**
comp=Z,26nm,0.8s
CNB Canberra Magne 29.29 239 P **P 16 31 23.0 +1.5**
baz=29,SNR=53
CAN Canberra 29.58 239 P **P 16 31 24.8 +0.8**
CAN pmax pmax
comp=Z,156nm,0.9s
CAN Canberra 29.58 239 P **P 16 31 24.8 +0.8**
YNG Young 29.81 241 P **P 16 31 27.3 +1.3**
baz=30,SNR=31
MEH Mehetia 30.12 85 *e*P **P 16 31 29.5 +0.7**
comp=Z,46nm,1.3s
PMOR Pomariorio Ree 31.18 80 *e*P **P 16 31 38.9 +1.1**
comp=Z,152nm,1.1s
CMSA Cobar Meteorol 31.60 248 P **P 16 31 41.8 +0.4**
baz=32,SNR=348
CTA Charters Tower 31.70 269 P **P 16 31 43.1 +0.7**
comp=Z,351nm,0.5s,baz=95,slow=11,SNR=710
CTA PcP **PcP** **16 34 18.0 +0.3**
comp=Z,4.3nm,0.6s,baz=242,slow=1.0,SNR=4.8
CTAO Charters Tower 31.70 269 P **P 16 31 42.5 +0.1**
CTAO Charters Tower 31.70 269 P **P 16 31 42.5 +0.1**
QLP Quilpie 32.72 257 P **P 16 31 51.2 +0.2**
baz=33,SNR=108
TOO Toolangi 32.90 237 P **P 16 31 53.2 +0.9**
baz=33,SNR=48
TOO Toolangi 32.90 237 P **P 16 31 52.8 +0.5**
TOO pmax pmax
comp=Z,109nm,0.9s
TOO Toolangi 32.90 237 P **P 16 31 52.8 +0.5**
RABL Rabaul 33.17 301 P **P 16 31 54.6 -0.3**
KRVT Keravat (AS076 33.21 301 P **P 16 31 53.2 -2.0**
comp=Z,116nm,0.7s,baz=315,slow=7.5,SNR=5.9
MOO Moorlands 33.32 227 P **P 16 31 57.0 +1.2**
baz=33,SNR=4.6
XMAS Kiritimati 33.35 44 P **P 16 31 57.3 +0.9**
TAU Tasmania Unive 33.43 226 P **P 16 31 56.8 +0.2**
TAU pmax pmax
comp=Z,50nm,0.7s
TAU Tasmania Unive 33.43 226 P **P 16 31 56.8 +0.2**
TAU IAmb IAmb 16 31 58.2
comp=Z,50nm,0.7s
MTSU Mount Surprise 33.94 272 P **P 16 32 01.9 +0.6**
baz=34,SNR=294
PMG Port Moresby 34.55 288 *de*P **P 16 32 06.7 +0.2**
comp=Z,273nm,0.7s,baz=83,slow=5.5,SNR=74
PMG Port Moresby 34.55 288 *de*P **P 16 32 06.7 +0.2**
PMG pmax pmax
comp=Z,267nm,0.9s
PMG Port Moresby 34.55 288 P **P 16 32 06.3 -0.2**
STKA Stephens Creek 35.11 247 P **P 16 32 11.6 +0.6**
comp=Z,114nm,0.6s,baz=95,slow=11,SNR=434
STKA S **S** **16 37 04.1 -1.5**
comp=Z,1.8nm,0.6s,baz=340,slow=20,SNR=2.8
STKA ScP **ScP** **16 37 24.2 +2.3**
comp=Z,2.4nm,0.7s,baz=358,slow=7.7,SNR=3.7
STKA Stephens Creek 35.11 247 P **P 16 32 11.6 +0.6**
baz=35,SNR=314
STKA Stephens Creek 35.11 247 P **P 16 32 11.3 +0.4**
STKA S **S** **16 37 04.1 -1.5**
STKA pmax pmax
comp=Z,25nm,0.7s
STKA Stephens Creek 35.11 247 P **P 16 32 11.3 +0.4**
STKA IAmb IAmb 16 32 12.6
comp=Z,25nm,0.7s
HTT Hallett 37.48 245 P **P 16 32 30.8 +0.3**
baz=38,SNR=98
QIS Mount Isa 37.71 266 P **P 16 32 32.3 -0.2**
baz=38,SNR=38
MANU Manus Island 38.28 299 P **P 16 32 36.5 -0.7**
MANU IAmb IAmb 16 32 37.5
comp=Z,24nm,0.7s
BBOO Buckleboo 39.84 246 P **P 16 32 49.2 -0.4**
baz=40,SNR=121
BBOO Buckleboo 39.84 246 P **P 16 32 48.9 -0.6**
TAOE Nuku Hiva Isla 40.55 76 *e*P **P 16 32 55.9 +0.3**
comp=Z,375nm,1.0s
TAOE Nuku Hiva Isla 40.55 76 P **P 16 32 56.8 +1.2**
AS31 Alice Springs 42.34 260 P **P 16 33 09.0 -0.5**
AS31 IAmb IAmb 16 33 10.9
comp=Z,56nm,0.5s
ASAR Alice Springs 42.34 260 P **P 16 33 09.7 +0.1**
comp=Z,190nm,0.8s,baz=94,slow=6.9,SNR=2160
ASAR PcP **PcP** **16 34 50.9 +0.2**
comp=Z,15nm,0.8s,baz=101,slow=5.4,SNR=7.0
ASAR ScP **ScP** **16 37 52.5 +2.4**
comp=Z,18nm,0.9s,baz=112,slow=4.1,SNR=18
ASAR Alice Springs 42.34 260 P **P 16 33 08.9 -0.7**
WR0 Warramunga Arr 42.48 266 P **P 16 33 09.7 -1.0**
WB2 Warramunga Arr 42.65 266 P **P 16 33 11.3 -0.8**
WB0 Warramunga Arr 42.66 266 P **P 16 33 11.1 -1.0**
WRAB Tennant Creek 42.66 266 *de*P **P 16 33 11.4 -0.7**
WRAB pmax pmax
comp=Z,241nm,0.8s
WRAB Tennant Creek 42.66 266 P **P 16 33 11.1 -0.9**
WRA Warramunga Arr 42.66 266 P **P 16 33 11.7 -0.5**
comp=Z,207nm,0.6s,baz=102,slow=8.1,SNR=634
WRA PcP **PcP** **16 34 52.4 +0.6**
comp=Z,14nm,0.9s,baz=99,slow=3.9,SNR=6.3
WRA ScP **ScP** **16 37 54.1 +2.6**
comp=Z,20nm,1.0s,baz=102,slow=4.1,SNR=17
WRA S **S** **16 38 51.7 -5.0**
comp=Z,14nm,1.0s,baz=101,slow=14,SNR=11
WRA Warramunga Arr 42.66 266 P **P 16 33 10.4 -1.7**
GENI Genyem 43.95 292 P **P 16 33 22.5 +0.3**
comp=Z,2µmcomp=Z,252nm,0.8s
KDU Kakadu 46.47 275 P **P 16 33 40.7 -0.8**
baz=46,SNR=85
FORT Forrest 46.69 249 P **P 16 33 42.2 -0.7**
baz=47,SNR=16
FORT Forrest 46.69 249 P **P 16 33 41.9 -1.0**
WRKA Warakurna 47.16 257 P **P 16 33 46.3 -0.3**
baz=47,SNR=877
MTN Manton Dam 47.64 274 P **P 16 33 49.5 -0.8**
baz=48,SNR=18
MTN Manton Dam 47.64 274 P **P 16 33 48.9 -1.4**
BAKI Biak 48.14 291 P **P 16 33 54.9 +0.9**
comp=Z,288nm,0.9s
KHLU Kahalu`u 48.68 31 P **P 16 33 58.7 +0.7**

MLOA Mauna Loa Obse 48.78 31 P **P 16 33 57.9 -1.2**
MLOA IAmb IAmb 16 34 18.5
comp=Z,120nm,1.2s
PUH Pauahi 48.81 31 P **P 16 33 59.4 +0.5**
HMH Humu'ula Sheep 48.88 31 P **P 16 34 00.7 +1.0**
KNRA Kununurra 48.91 269 P **P 16 33 59.6 -0.2**
baz=49,SNR=214
KNRA Kununurra 48.91 269 P **P 16 33 59.1 -0.6**
POHA Pohakuloa 48.99 31 P **P 16 34 00.3 -0.1**
POHA IAmb IAmb 16 34 11.3
comp=Z,113nm,0.9s
HPAH Hawaii Prepara 49.15 30 P **P 16 34 02.1 +0.7**
HON Honolulu 49.26 27 P **P 16 34 03.3 +1.2**
HON pmax pmax
comp=Z,308nm,1.0s
HON Honolulu 49.26 27 P **P 16 34 03.3 +1.2**
KIP Kipapa 49.34 27 *ce*P **P 16 34 04.0 +1.3**
KIP pmax pmax
comp=Z,268nm,2.5s
GUMO Guam 50.50 313 P **P 16 34 11.2 -0.2**
comp=Z,128nm,0.6s,baz=155,slow=8.9,SNR=9.2
GUMO Guam 50.50 313 P **P 16 34 11.0 -0.4**
GUMO pmax pmax
comp=Z,142nm,0.7s
GUMO Guam 50.50 313 P **P 16 34 11.0 -0.4**
FAKI Fak Fak 50.66 286 P **P 16 34 12.3 -0.3**
comp=Z,1µmcomp=Z,116nm,1.0s
FAKI Fak Fak 50.66 286 P **P 16 34 11.2 -1.4**
FAKI IAmb IAmb 16 34 13.1
comp=Z,139nm,1.2s
FITZ Fitzroy Crossi 51.09 265 P **P 16 34 15.8 +0.2**
comp=Z,82nm,0.6s,baz=117,slow=5.7,SNR=345
FITZ pP **pP** **16 35 57.8 +1.5**
comp=Z,11nm,0.8s,baz=88,slow=15,SNR=1.9
FITZ Fitzroy Crossi 51.09 265 P **P 16 34 15.9 +0.2**
baz=51,SNR=156
FITZ Fitzroy Crossi 51.09 265 P **P 16 34 15.6 -0.1**
KMBL Kambalda 51.91 248 P **P 16 34 21.0 -0.5**
baz=52,SNR=10
SIJI Sorong 52.50 288 P **P 16 34 25.9 0.0**
comp=Z,324nm,0.7s,baz=94,slow=5.2,SNR=292
SIJI ScP **ScP** **16 38 34.9 +1.7**
comp=Z,3.9nm,0.7s,baz=33,slow=7.0,SNR=3.7
VNDA Vanda 54.88 185 P **P 16 34 43.7 +2.0**
comp=Z,20nm,0.6s,baz=1.8,slow=7.5,SNR=186
VNDA PcP **PcP** **16 35 36.9 +1.4**
comp=Z,14nm,0.8s,baz=351,slow=6.3,SNR=5.7
VNDA Vanda 54.88 185 P **P 16 34 43.4 +1.7**
VNDA pmax pmax
comp=Z,33nm,0.9s
VNDA Vanda 54.88 185 P **P 16 34 43.4 +1.7**
SOEI Soe 55.03 274 P **P 16 34 44.7 +0.8**
comp=Z,4µmcomp=Z,459nm,0.9s
SOEI Soe 55.03 274 P **P 16 34 44.8 +0.8**
KLBR Kellerberrin 55.38 247 P **P 16 34 45.9 -0.1**
baz=55,SNR=42
BATI Baumata 55.42 274 P **P 16 34 47.9 +1.4**
comp=Z,234nm,0.5s,baz=147,slow=2.1,SNR=84
BATI Baumata 55.42 274 P **P 16 34 47.6 +1.1**
comp=Z,2µmcomp=Z,188nm,0.7s
MEEK Meekatharra 55.47 253 P **P 16 34 46.0 -0.7**
baz=55,SNR=37
PSA00 Pilbara Seismi 55.47 259 P **P 16 34 45.8 -0.9**
PSA00 IAmb IAmb 16 34 47.4
comp=Z,99nm,0.8s
NWAO Narrogin (SRO) 55.64 245 P **P 16 34 47.7 -0.1**
comp=Z,41nm,0.4s,baz=112,slow=6.5,SNR=87
NWAO Narrogin (SRO) 55.64 245 P **P 16 34 47.6 -0.1**
baz=56,SNR=25
NWAO Narrogin (SRO) 55.64 245 P **P 16 34 46.4 -1.4**
NWAO pmax pmax
comp=Z,167nm,1.3s
NWAO Narrogin (SRO) 55.64 245 P **P 16 34 46.4 -1.4**
NWAO IAmb IAmb 16 34 48.8
comp=Z,167nm,1.2s
RKGY Rocky Gully 55.65 243 P **P 16 34 48.0 +0.2**
baz=56,SNR=33
SANI Sanana 56.61 284 P **P 16 34 53.9 -0.8**
comp=Z,1µmcomp=Z,106nm,0.6s
MUN Mundaring 56.63 246 P **P 16 34 54.8 +0.2**
baz=57,SNR=47
TNTI Ternate 56.70 287 P **P 16 34 55.0 -0.3**
comp=Z,1µmcomp=Z,134nm,1.0s
TNTI Ternate 56.70 287 P **P 16 34 54.6 -0.7**
TNTI IAmb IAmb 16 34 56.1
comp=Z,120nm,1.0s
MORW Morawa 57.25 250 P **P 16 34 58.7 -0.2**
baz=57,SNR=168
MORW Morawa 57.25 250 P **P 16 34 58.4 -0.5**
MMRI Maumere 57.30 275 P **P 16 34 59.1 -0.4**
comp=Z,3µmcomp=Z,244nm,0.8s
MMRI Maumere 57.30 275 P **P 16 34 58.7 -0.8**
EDFI Ende, Flores 57.76 274 P **P 16 35 02.1 -0.6**
comp=Z,2µmcomp=Z,180nm,0.8s
WSI Waingapu 58.70 273 P **P 16 35 09.1 +0.2**
comp=Z,19µmcomp=Z,1µm,0.8s
KDI Kendari 58.81 280 P **P 16 35 10.5 +0.8**
comp=Z,99nm,1.1s
WBSI Waikabubak, Su 59.54 272 P **P 16 35 14.7 +0.1**
comp=Z,189nm,0.8s
KMSI Cibinong 59.59 285 P **P 16 35 14.5 -0.4**
comp=Z,26nm,0.8s
BSSI Bau Bau, Buton 59.86 277 P **P 16 35 16.2 -0.5**
comp=Z,6µmcomp=Z,492nmcomp=Z,54nm,1.0s
LUWI Luwuk 59.93 283 P **P 16 35 17.2 0.0**
comp=Z,2µmcomp=Z,240nm,1.0s
LUWI Luwuk 59.93 283 P **P 16 35 16.8 -0.4**
GIRL Giralia 60.24 256 P **P 16 35 20.3 +1.1**
baz=60,SNR=9.9
GIRL Giralia 60.24 256 P **P 16 35 19.9 +0.8**
GTOI Gorontalo 60.48 285 P **P 16 35 21.2 +0.4**
comp=Z,954nmcomp=Z,126nm,0.8s
BKSI Bulukumba 60.52 277 P **P 16 35 20.3 -0.8**
comp=Z,1µmcomp=Z,174nm,0.7s
CASY Casey 60.64 206 P **P 16 35 20.9 0.0**
CASY IAmb IAmb 16 35 22.1
comp=Z,81nm,0.8s
DDMP Don Marcelino, 60.77 292 *e*P **P 16 35 19.5 -3.2**
BNSI Bone 60.91 278 P **P 16 35 23.6 0.0**
comp=Z,1µmcomp=Z,136nm,0.8s
KAPI Kappang 60.98 278 P **P 16 35 24.1 -0.1**
comp=Z,26nm,0.5s,baz=148,slow=2.6,SNR=17
KAPI Kappang 60.98 278 P **P 16 35 23.7 -0.5**
KAPI pmax pmax
comp=Z,31nm,0.7s
KAPI Kappang 60.98 278 P **P 16 35 23.6 -0.5**
KAPI IAmb IAmb 16 35 24.5
comp=Z,31nm,0.7s
APSI Ampana 61.00 283 P **P 16 35 24.6 +0.4**
comp=Z,1µmcomp=Z,133nm,0.9s
PLAI Plampang 61.32 273 P **P 16 35 26.0 -0.3**
comp=Z,4µmcomp=Z,435nm,0.9s
SPSI Sidrap Palu 61.40 279 P **P 16 35 25.5 -1.3**
comp=Z,822nmcomp=Z,86nm,1.1s
TTSI Tana Toraja 61.73 280 P **P 16 35 28.7 -0.3**
comp=Z,566nmcomp=Z,60nm,1.2s
SKMP Bagumbayan, Su 61.98 292 *e*P **P 16 35 28.6 -2.0**
TWSI Taliwang, Sumb 62.17 272 P **P 16 35 31.5 -0.4**
comp=Z,1µmcomp=Z,85nm,0.6s
BUKP Musuan 62.24 293 *e*P **P 16 35 31.9 -0.4**
JCJ Chichijima 62.24 322 P **P 16 35 32.1 +0.1**
GLSP General Luna, 62.36 296 *e*P **P 16 35 30.8 -2.2**
CGP Cagayan de Oro 62.85 294 *e*P **P 16 35 36.1 -0.1**
MPSI Mapaga 63.12 283 P **P 16 35 37.3 -0.7**
comp=Z,2µmcomp=Z,224nm,0.8s
MSLP Maasin 63.59 295 *e*P **P 16 35 40.0 -0.9**
PAGZ Pagadian 63.65 292 *e*P **P 16 35 40.2 -1.1**
BESP Borongan 63.91 297 *e*P **P 16 35 41.4 -1.5**
SRBI Singaraja 63.95 272 P **P 16 35 43.1 -0.2**
comp=Z,2µmcomp=Z,150nm,1.1s
OCLP Ormoc 64.29 296 *e*P **P 16 35 44.3 -1.1**
JAGI Jajag, Banyuwa 64.78 272 P **P 16 35 47.6 -1.0**
comp=Z,147nm,1.1s
JAGI Jajag, Banyuwa 64.78 272 P **P 16 35 47.1 -1.5**
KBKI Kotabaru 64.94 278 P **P 16 35 49.9 +0.3**
comp=Z,268nmcomp=Z,34nm,1.0s
BKB Balikpapan 65.13 280 P **P 16 35 52.1 +1.3**
comp=Z,74nm,0.9s
BKB Balikpapan 65.13 280 P **P 16 35 51.3 +0.6**
BKB IAmb IAmb 16 35 53.4
comp=Z,60nm,1.0s
SMKI Samarinda 65.19 281 P **P 16 35 52.8 +1.6**
comp=Z,2µmcomp=Z,181nm,0.8s
KMMI Kalianget 65.48 273 P **P 16 35 54.2 +1.2**
comp=Z,2µmcomp=Z,162nm,1.1s
GMJI Gumukmas 65.50 271 P **P 16 35 52.6 -0.5**

comp=Z,113nm,0.9s
BLJI Banyuglugur 65.56 272 P **P 16 35 53.5 0.0**
comp=Z,165nm,0.9s
PVCP Virac 66.05 298 *e*P **P 16 35 55.2 -1.2**
BBKI Banjar Baru 66.08 277 P **P 16 35 57.2 +0.4**
comp=Z,1µmcomp=Z,71nm,1.1s
MYLDM Lahad Datu 66.57 287 P **P 16 36 00.8 +1.1**
MYLDM IAmb IAmb 16 36 19.8
comp=Z,36nm,0.9s
QSPA South Pole Qui 66.66 180 P **P 16 36 01.3 +1.7**
comp=Z,103nm,0.7s,baz=25,slow=1.1,SNR=604
QSPA South Pole Qui 66.66 180 P **P 16 36 01.1 +1.4**
GRJI Gresik 66.90 272 P **P 16 36 02.3 +0.5**
comp=Z,5µmcomp=Z,587nm,0.7s
MTKI Muara Teweh, K 67.07 279 P **P 16 36 02.7 -0.2**
comp=Z,55nm,0.8s
PWJI Pagerwojo 67.10 271 P **P 16 36 02.7 -0.3**
comp=Z,15nm,0.7s
WOJI Wonogiri, Jawa 67.98 271 P **P 16 36 08.6 +0.2**
comp=Z,129nm,0.9s
UGM Wanagama 68.32 271 P **P 16 36 10.0 -0.5**
SMRI Semarang 68.72 271 P **P 16 36 13.4 +0.5**
comp=Z,172nm,0.8s
SMRI Semarang 68.72 271 P **P 16 36 12.6 -0.4**
KKM Kota Kinabalu 68.98 287 P **P 16 36 14.4 -0.2**
KKM IAmb IAmb 16 36 15.2
comp=Z,56nm,0.6s
PBKI Pangkalan Bun 69.28 276 P **P 16 36 17.2 +0.9**
comp=Z,3µmcomp=Z,341nm,1.0s
KPJI Karang Pucung 70.00 271 P **P 16 36 20.4 -0.2**
comp=Z,142nm,0.8s
STKI Sintang 70.59 279 P **P 16 36 25.2 +1.1**
comp=Z,17µmcomp=Z,32nm,0.7s
SBUM Sibu 70.93 281 P **P 16 36 26.0 -0.1**
SBUM IAmb IAmb 16 36 27.7
comp=Z,48nm,1.4s
SBUM Sibu 70.93 281 P **P 16 36 27.0 +0.9**
CISI Cisompet, Garu 70.94 270 P **P 16 36 26.0 -0.2**
comp=Z,2µmcomp=Z,144nm,1.1s
CISI Cisompet, Garu 70.94 270 P **P 16 36 24.9 -1.3**
MJAR Matsushiro Arr 71.63 325 P **P 16 36 29.8 +0.2**
comp=Z,11nm,0.8s,baz=162,slow=5.7,SNR=27
MJAR Matsushiro Arr 71.63 325 P **P 16 36 29.3 -0.3**
MJAR pmax pmax
comp=Z,6.0nm,1.0s
MJAR Matsushiro Arr 71.63 325 P **P 16 36 29.3 -0.3**
MAJO Matsushiro 71.63 325 P **P 16 36 29.9 +0.2**
MAJO pmax pmax
comp=Z,18nm,1.0s
MAJO Matsushiro 71.63 325 P **P 16 36 29.9 +0.2**
MAT Matsushiro 71.63 325 P **P 16 36 29.6 -0.1**
MAT *e*S **SKiKP** **16 45 09.2 -1.6**
CNJI Cibinong 71.66 270 P **P 16 36 30.6 +0.3**
comp=Z,214nm,1.2s
XMIS Christmas Isla 71.85 266 P **P 16 36 30.6 -0.8**
JWT Wachi 72.20 323 P **P 16 36 33.6 +0.6**
JWT IAmb IAmb 16 36 34.8
comp=Z,33nm,0.8s
KSM Kuching 72.25 280 P **P 16 36 33.2 -0.5**
KSM IAmb IAmb 16 36 34.9
comp=Z,104nm,0.8s
KSM Kuching 72.25 280 P **P 16 36 34.0 +0.3**
CBJI Citeko 72.25 271 P **P 16 36 32.7 -1.1**
comp=Z,4µmcomp=Z,144nm,0.9s
DBJI Dramaga 72.30 270 P **P 16 36 33.7 -0.4**
comp=Z,6µmcomp=Z,99nm,1.1s
JSU Suzuyama 72.48 317 P **P 16 36 34.1 -0.6**
JSU IAmb IAmb 16 36 35.9
comp=Z,45nm,0.7s
TPI Tanjungpandan 72.94 274 P **P 16 36 38.5 +0.8**
comp=Z,36nm,1.0s
CGJI Cibinong 73.24 270 P **P 16 36 38.5 -1.0**
comp=Z,7µmcomp=Z,151nm,0.8s
JHS Saijyo 73.29 321 P **P 16 36 40.0 +0.7**
JHS IAmb IAmb 16 36 41.9
comp=Z,78nm,1.3s
JNU Nakatsue 73.31 318 P **P 16 36 39.6 +0.2**
JNU IAmb IAmb 16 36 40.9
comp=Z,26nm,1.0s
NACB Ninganchiao 74.00 306 P **P 16 36 42.6 -0.9**
NACB IAmb IAmb 16 36 44.1
comp=Z,117nm,1.1s
TPUB Ta-pu 74.23 304 P **P 16 36 43.6 -1.2**
TPUB IAmb IAmb 16 36 44.8
comp=Z,97nm,1.0s
SSLB Suanglung 74.26 305 P **P 16 36 43.8 -1.2**
SSLB IAmb IAmb 16 36 45.4
comp=Z,57nm,0.8s
PPBI Pangkal Pinang 74.56 274 P **P 16 36 47.5 +0.5**
comp=Z,4µmcomp=Z,56nm,1.1s
KLSI 74.86 271 P **P 16 36 47.6 -1.1**
comp=Z,11nm,1.5s
JKA Kamikawa-asahi 75.54 333 P **P 16 36 53.5 +1.9**
ASAJ Asahikawa 75.54 333 P **P 16 36 53.4 +1.7**
comp=Z,12nm,0.8s,baz=217,slow=8.6,SNR=13
ASAJ Asahikawa 75.54 333 P **P 16 36 53.5 +1.8**
ASAJ pmax pmax
comp=Z,19nm,0.9s
BELA Belgrano 2 76.88 173 P **P 16 36 58.5 -0.2**
KSI Kapahiang 77.23 272 P **P 16 37 01.0 -0.8**
comp=Z,153nm,1.0s
TJN Taejon 77.64 319 *ce*P **P 16 37 04.0 +0.6**
YSS Yuzh-Sakhalins 77.79 335 *e*P **P 16 37 06.1 +2.2**
YSS *e* 16 37 12.0
YSS *e**SP **sP** **16 39 53.1 +0.8**
YSS *e*S **S** **16 46 15.9 +3.4**
YSS *e* 16 46 27.7
YSS pmax pmax
comp=Z,20nm,1.1s
KSRS Korea Array 78.02 320 P **P 16 37 06.8 +1.4**
comp=Z,7.3nm,0.8s,baz=135,slow=5.8,SNR=29
KSAR Wonju Array Be 78.04 320 P **P 16 37 06.2 +0.7**
KSAR Wonju Array Be 78.04 320 P **P 16 37 06.2 +0.7**
KS19 Wonju Array Si 78.09 320 P **P 16 37 06.4 +0.6**
MYKOM Kota Tinggi 78.25 277 P **P 16 37 07.0 -0.2**
MYKOM IAmb IAmb 16 37 08.5
comp=Z,47nm,0.8s
MYKOM Kota Tinggi 78.25 277 P **P 16 37 08.0 +0.8**
MAW Mawson 78.28 200 P **P 16 37 07.5 +1.1**
comp=Z,56nm,0.9s,baz=127,slow=6.3,SNR=140
MAW Mawson 78.28 200 P **P 16 37 07.4 +1.1**
baz=78,SNR=80
MAW Mawson 78.28 200 P **P 16 37 06.7 +0.4**
MAW pmax pmax
comp=Z,17nm,1.1s
MAW Mawson 78.28 200 P **P 16 37 06.7 +0.4**
DLV T Lat 78.45 288 P **P 16 37 08.5 +0.1**
DLV IAmb IAmb 16 37 10.6
comp=Z,50nm,0.9s
PETK Petropavlovsk- 78.69 346 P **P 16 37 09.2 +0.6**
comp=Z,14nm,1.2s,baz=90,slow=7.4,SNR=5.6
PMSA Palmer Station 79.26 157 P **P 16 37 12.8 +1.2**
CNBA Chernabura Isl 79.82 12 P **P 16 37 14.7 +0.2**
CNBA IAmb IAmb 16 37 32.6
comp=Z,84nm,1.2s
USA0B Ussuriysk Arra 80.48 327 P **P 16 37 19.3 +1.1**
USA0B pmax pmax
comp=Z,24nm,1.1s
USA0B Ussuriysk Arra 80.48 327 P **P 16 37 19.3 +1.1**
USRK Ussuriysk Ar. 80.48 327 P **P 16 37 19.8 +1.5**
comp=Z,15nm,0.9s,baz=126,slow=3.3,SNR=26
USRK Ussuriysk Ar. 80.48 327 P **P 16 37 19.1 +0.8**
NJ2 Nanjing 80.51 311 *j*P **P 16 37 19.9 +1.2**
NJ2 pmax pmax
comp=Z,27nm,0.9s
SCZ2 Santa Cruz Isl 80.78 47 P **P 16 37 22.6 +2.5**
baz=234
TYV Tymovskoe 81.05 337 *e*P **P 16 37 22.5 +1.5**
TYV pmax pmax
comp=Z,17nm,1.3s
TYV pmax pmax
comp=Z,300nm,3.4s
PKM Mcpherson Peak 81.19 46 P **P 16 37 24.0 +1.6**
baz=234
CIS Catalina Islan 81.26 48 P **P 16 37 24.4 +1.8**
baz=235
SMMC Simmler 81.32 46 P **P 16 37 25.1 +2.2**
baz=233
PMPB Monarch Peak 81.34 44 P **P 16 37 24.5 +1.5**
PMPB IAmb IAmb 16 37 30.5
comp=Z,61nm,1.4s
PAGB Antelope Grade 81.40 45 P **P 16 37 25.0 +1.7**
GDXM Geysers 81.68 41 P **P 16 37 26.8 +2.1**
MNSI Mandailing Nat 81.75 274 P **P 16 37 24.3 -1.2**
comp=Z,58nm,0.9s

OSI	Osito Audit: C	81.75	47	P	P	16 37 27.7	+2.6
	baz=234						
OSI	Osito Audit: C	81.75	47	P	P	16 37 27.1	+1.9
KCPM	Cahto Peak	81.76	40	P	P	16 37 27.3	+2.1
KCPM				IAmb	IAmb	16 37 28.6	
	comp=Z,37nm,1.0s						
DECC	Green Verdugo	81.80	47	P	P	16 37 27.0	+1.6
	baz=234						
CBX	Cerro Bola	81.85	50	P	P	16 37 27.1	+1.3
PASC	Pasadena Art C	81.86	47	P	P	16 37 26.4	+0.8
109C	Camp Elliot, M	81.86	49	P	P	16 37 27.8	+2.1
	baz=235						
109C	Camp Elliot, M	81.86	49	P	P	16 37 26.3	+0.7
IPM	Ipoh	81.91	278	P	P	16 37 26.5	+0.1
IPM				IAmb	IAmb	16 37 27.6	
	comp=Z,75nm,0.8s						
IPM	Ipoh	81.91	278	P	P	16 37 27.0	+0.6
MWC	Mount Wilson	81.97	47	P	P	16 37 26.9	+0.5
MWC				pmax	pmax		
	comp=Z,26nm,1.1s						
MWC	Mount Wilson	81.97	47	P	P	16 37 26.9	+0.5
ARVC	Arvin	81.98	46	P	P	16 37 28.3	+2.1
	baz=234,SNR=6.9						
MDJ	Mudanjiang	81.99	326	P	P	16 37 27.3	+1.3
MDJ				sP	sP	16 40 19.6	+4.2
MDJ				pmax	pmax		
	comp=Z,29nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.3s						
MDJ	Mudanjiang	81.99	326	P	P	16 37 26.9	+0.9
MDJ				IAmb	IAmb	16 37 28.4	
	comp=Z,26nm,1.0s						
SPX	San Pedro Mart	81.99	51	P	P	16 37 28.1	+1.3
KMRM	Mail Ridge	82.03	40	P	P	16 37 27.4	+0.9
KMRM				IAmb	IAmb	16 37 30.9	
	comp=Z,70nm,1.1s						
TKX	Tecate	82.03	50	P	P	16 37 27.0	+0.4
BAR	Barrett	82.05	49	P	P	16 37 27.1	+0.4
ESJX	Sierra Juarez	82.18	50	P	P	16 37 28.5	+1.0
MURC	Murrieta	82.20	48	P	P	16 37 29.3	+1.9
	baz=235,SNR=6.0						
VES	Vestal, Richgr	82.23	46	P	P	16 37 29.1	+1.6
	baz=234,SNR=9.2						
BFSC	Mount Baldy Ra	82.25	48	P	P	16 37 29.3	+1.5
	baz=235,SNR=9.6						
MONP2	Monument Peak	82.34	49	P	P	16 37 30.6	+2.2
	baz=236,SNR=22						
SLBS	Sierra La Lagu	82.37	60	P	P	16 37 29.8	+1.2
SLBS				IAmb	IAmb	16 37 31.9	
	comp=Z,28nm,0.8s						
EDW2	Edwards Air Fo	82.39	47	P	P	16 37 30.3	+1.9
	baz=235,SNR=17						
RMX	La Rumorosa	82.42	50	P	P	16 37 30.6	+1.9
RMX				IAmb	IAmb	16 37 32.0	
	comp=Z,37nm,1.1s						
IKP	In-Ko-Pah, Jac	82.42	50	P	P	16 37 30.9	+2.2
	baz=236,SNR=14						
KHMM	Horse Mountain	82.43	39	P	P	16 37 30.6	+2.1
KHMM				IAmb	IAmb	16 37 32.2	
	comp=Z,30nm,1.1s						
ISA	Isabella, Lake	82.53	46	P	P	16 37 30.6	+1.5
ISA				pmax	pmax		
	comp=Z,34nm,0.9s						
ISA	Isabella, Lake	82.53	46	P	P	16 37 31.0	+2.0
	baz=234,SNR=33						
ISA	Isabella, Lake	82.53	46	P	P	16 37 30.6	+1.5
ISA				IAmb	IAmb	16 37 32.0	
	comp=Z,34nm,0.8s						
UBPT	Khong Chiam	82.57	290	P	P	16 37 30.4	+0.8
USHA	Ushuaia	82.58	147	P	P	16 37 31.0	+2.0
	comp=Z,12nm,0.3s,baz=313,slow=1.8,SNR=2.4						
KULM	Kulim	82.59	279	P	P	16 37 30.1	+0.3
KULM				IAmb	IAmb	16 37 31.2	
	comp=Z,41nm,0.8s						
CMB	Columbia Colle	82.70	43	P	P	16 37 31.3	+1.4
CMB				pmax	pmax		
	comp=Z,28nm,0.9s						
CMB	Columbia Colle	82.70	43	P	P	16 37 31.2	+1.4
CMB				IAmb	IAmb	16 37 32.5	
	comp=Z,28nm,0.8s						
PFO	Pinyon Flats O	82.72	49	P	P	16 37 32.0	+1.9
	comp=Z,6.3nm,0.7s,baz=254,slow=5.1,SNR=12						
PFO	Pinyon Flats O	82.72	49	*i* P	P	16 37 30.8	+0.7
PFO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PFO	Pinyon Flats O	82.72	49	P	P	16 37 31.8	+1.7
	baz=236,SNR=7.4						
PFO	Pinyon Flats O	82.72	49	P	P	16 37 31.5	+1.3
KRMB	Red Mountain	82.75	39	P	P	16 37 32.2	+2.1
KRMB				IAmb	IAmb	16 37 33.2	
	comp=Z,23nm,0.9s						
SWSC	Sam W. Stewart	82.81	50	P	P	16 37 32.7	+2.3
	baz=236,SNR=12						
WHN	Wuhan	82.89	307	⇑P	P	16 37 32.3	+1.4
WHN				pmax	pmax		
	comp=Z,84nm,0.9s						
AFDM	Forest Hills D	82.89	42	P	P	16 37 31.7	+1.0
AFDM				IAmb	IAmb	16 37 33.5	
	comp=Z,28nm,1.0s						
ORV	Oroville	82.93	41	P	P	16 37 32.1	+1.1
ORV				pmax	pmax		
	comp=Z,25nm,1.0s						
ORV	Oroville	82.93	41	P	P	16 37 32.0	+1.1
ORV				IAmb	IAmb	16 37 33.7	
	comp=Z,25nm,0.9s						
LRMC	Laurel Mtn Rad	82.95	47	P	P	16 37 33.2	+1.9
	baz=235,SNR=14						
WDC	Whiskeytown Da	82.95	40	P	P	16 37 32.5	+1.5
WDC				pmax	pmax		
	comp=Z,28nm,1.1s						
WDC	Whiskeytown Da	82.95	40	P	P	16 37 32.5	+1.5
N02D	Trinity Center	83.10	40	P	P	16 37 34.4	+2.6
	baz=231,SNR=12						
RPSI	Rantau Prapat	83.11	276	P	P	16 37 31.3	-1.1
RPSI				IAmb	IAmb	16 37 32.8	
	comp=Z,38nm,0.9s						
PSI	Prapat	83.15	276	P	P	16 37 31.3	-1.5
PSI				pmax	pmax		
	comp=Z,38nm,0.9s						
O03E	Paynes Creek	83.21	41	P	P	16 37 34.0	+1.6
	baz=232,SNR=15						
CWC	Cottonwood Cre	83.24	46	P	P	16 37 34.3	+1.6
	baz=234						
BELC	Belle Mtn. Jos	83.25	49	P	P	16 37 34.9	+2.1
	baz=236,SNR=28						
M02C	Callahan	83.27	39	P	P	16 37 35.2	+2.5
	baz=231,SNR=12						
MDPB	Devils Postpil	83.29	44	P	P	16 37 34.0	+0.9
MDPB				IAmb	IAmb	16 37 35.9	
	comp=Z,24nm,1.0s						
OMMB	Old Mammoth Mi	83.33	44	P	P	16 37 33.4	+0.1
L02E	Cave Junction	83.33	38	P	P	16 37 35.2	+2.4
	baz=230						
MPMC	Manual Prospec	83.41	46	P	P	16 37 35.3	+1.7
	baz=235,SNR=20						
GSC	Goldstone, Bar	83.43	47	P	P	16 37 35.0	+1.4
GSC				pmax	pmax		
	comp=Z,26nm,1.0s						
GSC	Goldstone, Bar	83.43	47	P	P	16 37 35.3	+1.7
	baz=235,SNR=20						
GSC	Goldstone, Bar	83.43	47	P	P	16 37 35.0	+1.4
GSC				IAmb	IAmb	16 37 36.4	
	comp=Z,26nm,0.9s						
BC3	Big Chuckawall	83.44	49	P	P	16 37 35.7	+2.0
	baz=236,SNR=14						
MLAC	Mammoth, Mammo	83.44	44	P	P	16 37 35.9	+2.1
	baz=234						
RUBR	Rubicon Trail	83.45	43	P	P	16 37 34.2	+0.4
RUBR				IAmb	IAmb	16 37 36.7	
	comp=Z,28nm,0.9s						
HEC	Hector,Ludlow	83.49	48	P	P	16 37 35.8	+1.9
	baz=236,SNR=36						
TIN	Tinemaha, Big	83.50	45	P	P	16 37 36.3	+2.3
	baz=234						
SYO	Syowa Base	83.53	193	⇑*i* P	P	16 37 32.1	-1.3
SYO	Syowa Base	83.53	193	⇓*e* PcP	P	16 37 34.6	+1.2
GLA	Glamis	83.55	50	P	P	16 37 35.8	+1.6
GLA				pmax	pmax		
	comp=Z,45nm,0.9s						
GLA	Glamis	83.55	50	P	P	16 37 36.7	+2.5
	baz=237,SNR=9.3						
GLA	Glamis	83.55	50	P	P	16 37 35.8	+1.6
GLA				IAmb	IAmb	16 37 37.8	
	comp=Z,45nm,0.9s						
YBH	Yreka Blue Hor	83.57	39	P	P	16 37 36.1	+1.9
	comp=Z,11nm,0.8s,baz=73,slow=1.5,SNR=28						
YBH	Yreka Blue Hor	83.57	39	P	P	16 37 36.0	+1.9
YBH				pmax	pmax		
	comp=Z,20nm,1.0s						
YBH	Yreka Blue Hor	83.57	39	P	P	16 37 36.0	+1.9
WAKR	Walker	83.58	43	P	P	16 37 35.5	+1.1
WAKR				IAmb	IAmb	16 37 37.5	
	comp=Z,31nm,1.0s						
CN2	Changchun	83.63	323	*e* P	P	16 37 34.9	+0.6
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
K02D	Willamette Mer	83.64	38	P	P	16 37 36.7	+2.2
	baz=230						
PIX	Pinacate	83.72	52	P	P	16 37 36.6	+1.6
GSI	Gunungsitoli	83.78	274	P	P	16 37 36.5	+0.7
	comp=Z,91nm,1.3s						
GSI	Gunungsitoli	83.78	274	P	P	16 37 35.9	+0.1
J01E	Myrtle Point	83.79	38	P	P	16 37 37.2	+2.2
	baz=230						
BEKR	Beckworth	83.82	42	P	P	16 37 36.5	+0.9
PNTR	Pine Nut	83.82	43	P	P	16 37 36.9	+1.3
PNTR				IAmb	IAmb	16 37 38.6	
	comp=Z,46nm,0.9s						
VCNR	Virginia City	83.92	43	P	P	16 37 36.0	-0.1
GMRC	Granite Mounta	83.92	48	P	P	16 37 38.1	+1.9
	baz=236,SNR=15						
IRM	Iron Mountain	83.93	49	P	P	16 37 38.4	+2.3
	baz=236,SNR=24						
LHV	Little Huntoon	84.02	44	P	P	16 37 37.3	+1.0
LHV				IAmb	IAmb	16 37 39.5	
	comp=Z,25nm,1.1s						
GRAC	Grapevine Rang	84.03	46	P	P	16 37 38.6	+2.1
	baz=235,SNR=11						
FURC	Furnace Creek,	84.06	46	P	P	16 37 38.4	+1.9
	baz=235						
TUQ	Turquoise Moun	84.10	47	P	P	16 37 38.9	+1.8
	baz=236,SNR=17						
M04C	Macdoel	84.11	40	P	P	16 37 38.9	+2.0
	baz=232,SNR=6.8						
L04D	Klamath Falls	84.11	39	P	P	16 37 38.8	+1.9
	baz=231,SNR=8.2						
SHOC	Shoshone, Teco	84.13	47	P	P	16 37 39.2	+2.2
	baz=236						
113A	Mohawk Valley,	84.14	51	P	P	16 37 38.4	+1.3
113A				IAmb	IAmb	16 37 40.5	
	comp=Z,29nm,1.1s						
KLR	Kul'dur	84.22	330	*ce* P	P	16 37 38.9	+1.8
KLR				pmax	pmax		
	comp=Z,15nm,1.5s						
NVAR	Mina Array Bea	84.25	44	P	P	16 37 39.2	+1.5
	comp=Z,9.4nm,0.9s,baz=221,slow=7.6,SNR=55						
NVAR				pP	pP	16 39 34.0	+0.1
	comp=Z,0.3nm,0.7s,baz=224,slow=5.0,SNR=1.5						
NVAR				PP	PP	16 41 02.3	-0.3
	comp=Z,1.8nm,1.0s,baz=222,slow=7.4,SNR=4.4						
NVAR	Mina Array Bea	84.25	44	P	P	16 37 38.5	+0.8
HSIG		84.25	55	P	P	16 37 39.1	+1.4
HSIG				IAmb	IAmb	16 37 40.7	
	comp=Z,38nm,0.9s						
PAHR	Pah Rah Range	84.33	42	P	P	16 37 39.1	+1.1
PAHR				IAmb	IAmb	16 37 40.7	
	comp=Z,25nm,1.2s						
NV11	Mina Array Sit	84.35	44	P	P	16 37 39.0	+0.8
214A	Organ Pipe Nat	84.39	52	P	P	16 37 40.8	+2.4
	baz=238						
214A	Organ Pipe Nat	84.39	52	P	P	16 37 40.1	+1.7
214A				IAmb	IAmb	16 37 42.0	
	comp=Z,24nm,1.1s						
KCSI	Kotacane, Aceh	84.49	276	P	P	16 37 40.8	+1.5
	comp=Z,26nm,1.6s						
NEE2	Needles Airpor	84.63	49	P	P	16 37 41.7	+2.2
	baz=237,SNR=5.8						
K04D	Chiloquin, OR	84.69	39	P	P	16 37 42.2	+2.5
	baz=232						
PDMCI	Parker Dam,Lak	84.70	49	P	P	16 37 42.2	+2.4
	baz=237,SNR=11						
TPNV	Topopah Spring	84.73	46	P	P	16 37 41.4	+1.3
TPNV				pmax	pmax		
	comp=Z,11nm,0.8s						
TPNV	Topopah Spring	84.73	46	P	P	16 37 41.9	+1.8
	baz=236,SNR=18						
TPNV	Topopah Spring	84.73	46	P	P	16 37 41.4	+1.3
TPH	Tonopah	84.74	45	P	P	16 37 41.2	+1.1
TPH				pmax	pmax		
	comp=Z,89nm,1.0s						
TPH	Tonopah	84.74	45	P	P	16 37 41.2	+1.1
KVN	Kaiserville	84.74	43	P	P	16 37 41.0	+0.9
KVN				pmax	pmax		
	comp=Z,15nm,1.0s						
KVN	Kaiserville	84.74	43	P	P	16 37 41.0	+0.9
J04D	Umpqua Nationa	84.87	38	P	P	16 37 43.1	+2.4
	baz=231,SNR=6.8						
TPTI		84.93	276	P	P	16 37 41.5	+0.1
	comp=Z,29nm,0.8s						
I04A	Tendick Farm,	85.04	38	P	P	16 37 42.8	+1.5
	baz=231						
MOD	Modoc Plateau	85.09	40	P	P	16 37 42.8	+1.1
SNAA	Sanae	85.14	179	*de* P	P	16 37 40.9	-0.6
SNAA				pmax	pmax		
	comp=Z,23nm,1.3s						
SNAA	Sanae	85.14	179	P	P	16 37 40.9	-0.6
SNAA				IAmb	IAmb	16 37 41.8	
	comp=Z,14nm,0.6s						
SHPR	Sheep Range	85.21	47	P	P	16 37 42.1	-0.3
K05A	Summer Lake	85.25	39	P	P	16 37 43.9	+1.4
K05A				IAmb	IAmb	16 37 45.7	
	comp=Z,30nm,1.0s						
Y14A	Wickenburg	85.31	50	P	P	16 37 42.7	-0.1
W13A	Hualapai Mount	85.31	49	P	P	16 37 43.8	+0.8
H04D	Lebanon	85.32	37	P	P	16 37 44.3	+1.8
	baz=231						
J05D	Fort Rock, OR	85.39	39	P	P	16 37 45.4	+2.2
	baz=232,SNR=14						
NVL	N'lazarevskaya	85.72	184	*e* P	P	16 37 42.0	-2.1
NVL				pmax	pmax		
	comp=Z,44nm,0.9s						
H04A	Detroit Lake	85.73	37	P	P	16 37 45.5	+0.9
PRN	Pahroc Range	85.78	46	P	P	16 37 46.7	+1.5
PRN				IAmb	IAmb	16 37 48.3	
	comp=Z,20nm,0.9s						
PINE	Pine Mountain	85.88	38	P	P	16 37 46.9	+1.4
PINE				IAmb	IAmb	16 37 48.2	
	comp=Z,20nm,0.8s						
R11A	Troy Canyon, C	85.96	45	P	P	16 37 47.4	+1.4
	baz=236,SNR=9.8						
R11A	Troy Canyon, C	85.96	45	P	P	16 37 46.4	+0.4
I05D	Terrebonne, OR	85.99	38	P	P	16 37 47.5	+1.7
	baz=232						
TUC	Tucson	86.05	52	P	P	16 37 48.0	+1.6
TUC				pmax	pmax		
	comp=Z,31nm,1.0s						
TUC	Tucson	86.05	52	P	P	16 37 49.2	+2.8
	baz=239						
TUC	Tucson	86.05	52	P	P	16 37 48.0	+1.6
TUC				IAmb	IAmb	16 37 50.2	
	comp=Z,31nm,0.9s						
ENH	Enshi	86.35	305	P	P	16 37 48.3	+0.5
ENH				IAmb	IAmb	16 37 50.0	
	comp=Z,56nm,0.9s						
SLVN	Son La	86.60	295	P	P	16 37 47.6	-1.6
319A	Douglas	86.68	54	P	P	16 37 49.3	-0.2
319A				IAmb	IAmb	16 37 53.4	
	comp=Z,51nm,1.1s						
GYA	Guiyang	86.69	301	⇓P	P	16 37 50.5	+0.8
GYA				pmax	pmax		
	comp=Z,14nm,0.6s						
LCMT	Little Creek M	86.78	47	P	P	16 37 49.6	-0.3
BJT	Baijiatuau	86.83	316	P	P	16 37 48.4	-1.4
BJT				pmax	pmax		
	comp=Z,12nm,0.8s						
BJT	Baijiatuau	86.83	316	P	P	16 37 48.4	-1.4
BJI	Beijing	86.84	316	P	P	16 37 51.0	+1.2
BJI				pmax	pmax		
	comp=Z,14nm,0.8s						
I07A	Izee	86.87	39	P	P	16 37 51.4	+1.2
I07A				IAmb	IAmb	16 37 53.2	
	comp=Z,31nm,1.0s						
F05D	White Salmon	86.88	37	P	P	16 37 51.9	+2.0
	baz=232						
CCUT	Cedar City	86.99	47	P	P	16 37 52.4	+1.4
J08A	Circle Bar Ran	87.04	40	P	P	16 37 52.1	+1.2
J08A				IAmb	IAmb	16 37 53.8	
	comp=Z,43nm,1.2s						
CAPN	Captain Cook N	87.04	14	P	P	16 37 48.6	-1.7
	baz=206						
KNB	Kanab	87.07	48	P	P	16 37 52.7	+1.5
KNB				pmax	pmax		
	comp=Z,23nm,1.1s						
KNB	Kanab	87.07	48	P	P	16 37 52.7	+1.5
U15A	North Rim	87.12	48	P	P	16 37 53.4	+1.7
U15A				IAmb	IAmb	16 37 54.9	
	comp=Z,30nm,0.8s						
PSUT	Pine Spring	87.19	46	P	P	16 37 52.0	+0.2
SZCU	Shurtz Canyon	87.20	47	P	P	16 37 52.4	+0.5
WUAZ	Wupatki	87.28	49	P	P	16 37 54.4	+2.1
	baz=239						
WUAZ	Wupatki	87.28	49	P	P	16 37 53.2	+1.0
HPIG		87.32	59	P	P	16 37 52.6	-0.1
HPIG				IAmb	IAmb	16 37 55.5	
	comp=Z,16nm,0.9s						
ELK	Elko	87.52	43	P	P	16 37 54.9	+1.5
	comp=Z,6.4nm,0.9s,baz=250,slow=5.0,SNR=24						
ELK	Elko	87.52	43	P	P	16 37 54.0	+0.7
ELK				pmax	pmax		
	comp=Z,13nm,1.2s						
ELK	Elko	87.52	43	P	P	16 37 54.0	+0.7
BBB	Bella Bella	87.73	29	P	P	16 37 54.9	+1.2
	comp=Z,29nm,1.0s,baz=260,slow=4.7,SNR=4.8						
BBB	Bella Bella	87.73	29	IAmb	IAmb	16 38 05.2	
	comp=Z,98nm,1.4s						
G08A	Pilot Rock	87.91	38	P	P	16 37 56.0	+1.1
G08A				IAmb	IAmb	16 37 57.8	
	comp=Z,25nm,1.0s						
TIY	Taiyuan	88.03	313	*e* P	P	16 37 57.2	+1.6
TIY				pmax	pmax		
	comp=Z,42nm,0.6s						
B05A	Bryant	88.03	34	P	P	16 37 57.4	+2.2
	baz=231						
MTPU	Mount Pierson	88.04	47	P	P	16 37 57.5	+1.5
E07A	Sunnyside	88.17	37	P	P	16 37 57.5	+1.5
E07A				IAmb	IAmb	16 37 59.0	
	comp=Z,26nm,0.9s						
W18A	Petrified Fore	88.22	50	P	P	16 37 58.4	+1.7
	baz=240						
W18A	Petrified Fore	88.22	50	P	P	16 37 57.5	+0.8
W18A				IAmb	IAmb	16 37 59.6	
	comp=Z,25nm,1.4s						
HAWA	Hanford	88.25	37	P	P	16 37 57.2	+0.8
HAWA				IAmb	IAmb	16 37 59.3	
	comp=Z,23nm,0.9s						
MVU	Marysvale	88.26	47	P	P	16 37 58.5	+1.6
MSU	Marysvale	88.29	47	P	P	16 37 58.6	+1.6
MSU	Marysvale	88.29	47	P	P	16 37 58.5	+1.6
121A	Cookes Peak, D	88.36	53	P	P	16 37 59.9	+2.5
	baz=241						
121A	Cookes Peak, D	88.36	53	P	P	16 37 58.7	+1.3
121A				IAmb	IAmb	16 38 01.0	
	comp=Z,15nm,0.9s						
GHO	Glory Hole Cre	88.43	14	P	P	16 37 57.1	+0.2
GHO				IAmb	IAmb	16 37 58.5	
	comp=Z,30nm,0.8s						
PLCA	Paso Flores	88.44	134	P	P	16 37 59.5	+1.8
	comp=Z,2.4nm,0.9s,baz=177,slow=23,SNR=4.7						
PLCA	Paso Flores	88.44	134	IAmb	IAmb	16 38 04.9	
	comp=Z,5.8nm,1.4s						
BMO	Blue Mountains	88.60	39	P	P	16 37 59.1	+1.0
BMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BMO	Blue Mountains	88.60	39	P	P	16 37 59.1	+1.0
XAN	Xi'an	88.62	308	P	P	16 37 59.9	+1.5
XAN				pmax	pmax		
	comp=Z,32nm,0.8s						
XAN	Xi'an	88.62	308	P	P	16 37 59.2	+0.8
XAN				pmax	pmax		
	comp=Z,29nm,0.7s						
XAN	Xi'an	88.62	308	P	P	16 37 59.2	+0.8
XAN				IAmb	IAmb	16 38 00.7	
	comp=Z,29nm,0.7s						
MFID	Camas Ranch	88.65	41	P	P	16 37 59.4	+1.0
MFID				IAmb	IAmb	16 38 01.2	
	comp=Z,29nm,1.0s						
CUT	Chulitna	88.70	13	P	P	16 37 58.6	+0.6
	baz=207						
DUG	Dugway, Tooele	88.77	45	P	P	16 37 58.4	-0.7
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DUG	Dugway, Tooele	88.77	45	P	P	16 38 00.4	+1.3
	baz=238						
DUG	Dugway, Tooele	88.77	45	P	P	16 37 58.4	-0.7
SEY	Seymchan	88.85	348	*i* P	P	16 37 59.3	+0.6
SCM	Sheep Creek Mo	88.85	15	P	P	16 37 59.1	+0.3
SCM				pmax	pmax		
	comp=Z,23nm,0.8s						
SCM	Sheep Creek Mo	88.85	15	P	P	16 37 59.1	+0.3
SCM				IAmb	IAmb	16 38 00.6	
	comp=Z,23nm,0.8s						
D08A	Wollman Farm,	88.99	37	P	P	16 38 00.7	+0.9
D08A				IAmb	IAmb	16 38 02.6	
	comp=Z,19nm,0.9s						
BGU	Big Grassy Mou	89.02	44	P	P	16 38 00.8	+0.5
E09A	Wood Farm, Sta	89.09	37	P	P	16 38 01.1	+0.9
E09A				IAmb	IAmb	16 38 02.7	
	comp=Z,17nm,1.0s						
Q16A	Castle Valley	89.17	47	P	P	16 38 01.9	+0.8
KMI	Kunming	89.24	298	⇑*i* P	P	16 38 03.8	+2.1
KMI				pmax	pmax		
	comp=Z,31nm,1.0s						
KMI				pmax	pmax		
	comp=Z,150nm,4.2s						
F10A	Beach Ranch, E	89.29	38	P	P	16 38 01.5	+0.2
F10A				IAmb	IAmb	16 38 03.4	
	comp=Z,12nm,0.8s						
N25K	Chitina, Valde	89.32	16	P	P	16 38 01.8	+0.7
	baz=212						
TMUT	Trail Mountain	89.35	46	P	P	16 38 03.4	+1.4
ZEA	Zeya	89.39	332	*e* P	P	16 38 02.5	+1.1
ZEA				pmax	pmax		
	comp=N,10.0nm,0.4s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MPU	Maple Canyon	89.44	45	P	P	16 38 03.4	+1.1
PLID	Pearl Lake	89.49	39	P	P	16 38 03.0	+0.5
PLID				IAmb	IAmb	16 38 04.8	
	comp=Z,21nm,1.4s						
B08A	Colville Reser	89.54	35	P	P	16 38 02.9	+0.5
CMAR	Chiang Mai Arr	89.57	290	P	P	16 38 05.0	+1.9
	comp=Z,23nm,0.9s,baz=136,slow=3.2,SNR=115						
CMAR				PP	PP	16 41 42.4	-2.4
	comp=Z,0.4nm,0.3s,baz=136,slow=33,SNR=2.2						
CMAR	Chiang Mai Arr	89.57	290	*i* P	P	16 38 05.0	+1.9
CMAR				pmax	pmax		
	comp=Z,26nm,0.9s						
CMAR	Chiang Mai Arr	89.57	290	P	P	16 38 04.5	+1.4
HLID	Hailey	89.59	41	P	P	16 38 04.8	+2.0
	baz=237						
HLID	Hailey	89.59	41	P	P	16 38 03.5	+0.7
HLID				IAmb	IAmb	16 38 05.8	
	comp=Z,14nm,1.0s						
SPUT	South Promonto	89.59	44	P	P	16 38 04.1	+1.1
KTH	Kantishna Hill	89.60	12	P	P	16 38 02.1	-0.2
KTH				IAmb	IAmb	16 38 03.2	
	comp=Z,12nm,1.0s						
TRF	Thorofare Moun	89.63	13	P	P	16 38 02.6	0.0
TRF				IAmb	IAmb	16 38 03.4	
	comp=Z,18nm,0.9s						
HVU	Hansel Valley	89.64	44	P	P	16 38 03.8	+0.7
HVU				pmax	pmax		
	comp=Z,26nm,1.0s						
HVU	Hansel Valley	89.64	44	P	P	16 38 03.8	+0.7
SRU	San Rafael Swe	89.71	47	P	P	16 38 04.8	+1.3
SRU	

TX31 Lajitas Ar. Si 89.99 58 P **P** **16 38 05.2 +0.3**
TX31 lAmb lAmb 16 38 08.2
comp=Z,48nm,0.9s
TX32 Lajitas Array 89.99 58 P **P** **16 38 04.9 0.0**
TX32 lAmb lAmb 16 38 08.2
comp=Z,15nm,0.9s
TXAR Lajitas Array 89.99 58 P **P** **16 38 07.0 +2.1**
comp=Z,9.2nm,0.7s,baz=214,slow=6.4,SNR=117
TXAR pP **pwP** **16 40 04.7 -1.5**
comp=Z,1.3nm,1.0s,baz=221,slow=6.8,SNR=4.6
TXAR PKKPbc **PKKPbc** **16 55 34.2 +0.9**
comp=Z,0.8nm,0.7s,baz=73,slow=3.7,SNR=9.4
TXAR Lajitas Array 89.99 58 P **P** **16 38 04.4 -0.6**
TCUT Toone Canyon 90.16 45 P **P** **16 38 06.7 +1.0**
MCK McKinley 90.17 13 P **P** **16 38 04.9 0.0**
baz=208
HHC Hu-ho-hao-te 90.24 315 *eP* **P** **16 38 07.6 +1.8**
HHC pmax pmax
comp=Z,35nm,1.1s
HHC pmax pmax
comp=Z,100nm,5.2s
HWUT Hardware Ranch 90.31 44 P **P** **16 38 05.8 -0.4**
HWUT lAmb lAmb 16 38 08.4
comp=Z,12nm,0.7s
PV17 East Wray Mesa 90.34 48 P **P** **16 38 06.5 0.0**
PV17 lAmb lAmb 16 38 09.5
comp=Z,15nm,1.4s
PV13 Radium Mtn., P 90.38 48 P **P** **16 38 06.9 +0.2**
PV16 Nyswonger Mesa 90.39 48 P **P** **16 38 06.6 -0.1**
PV23 Carpenter Ridg 90.39 48 P **P** **16 38 07.7 +0.8**
PV23 lAmb lAmb 16 38 09.2
comp=Z,11nm,0.9s
PV03 Paradox Valley 90.41 48 P **P** **16 38 07.1 +0.3**
PV04 Paradox Valley 90.44 48 P **P** **16 38 07.4 +0.5**
PV12 Saucer Basin, 90.47 48 P **P** **16 38 07.4 +0.2**
PV12 lAmb lAmb 16 38 09.6
comp=Z,22nm,1.3s
ANMO Albuquerque 90.48 52 P **P** **16 38 08.8 +1.6**
comp=Z,9.5nm,1.0s,baz=214,slow=5.5,SNR=21
ANMO Albuquerque 90.48 52 *ce*P **P** **16 38 08.5 +1.3**
ANMO pmax pmax
comp=Z,10.0nm,1.0s
ANMO Albuquerque 90.48 52 P **P** **16 38 08.8 +1.6**
baz=242
ANMO Albuquerque 90.48 52 P **P** **16 38 07.3 +0.1**
ANMO lAmb lAmb 16 38 09.9
comp=Z,13nm,1.1s
PV01 Paradox Valley 90.54 48 P **P** **16 38 07.5 +0.1**
PV01 lAmb lAmb 16 38 09.6
comp=Z,9.5nm,0.9s
PV22 Blue Mesa, Par 90.59 48 P **P** **16 38 07.8 +0.1**
PV07 Paradox Valley 90.64 48 P **P** **16 38 08.5 +0.6**
NEW Newport 90.68 36 P **P** **16 38 08.5 +0.8**
comp=Z,1.3nm,0.6s,baz=58,slow=2.0,SNR=3.8
NEW Newport 90.68 36 P **P** **16 38 08.6 +1.0**
baz=235
NEW Newport 90.68 36 lAmb lAmb 16 38 09.1
comp=Z,4.7nm,1.1s
CD2 Chengdu 91.00 303 P **P** **16 38 11.4 +1.9**
CD2 PP **PP** **16 42 00.5 +4.6**
CD2 S **S** **16 48 21.3 0.0**
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 pmax pmax
comp=Z,110nm,4.3s
RDMU Red Mountain 91.08 46 P **P** **16 38 09.8 0.0**
HDA Harding Lake 91.18 14 P **P** **16 38 09.8 +0.3**
baz=210
HDA Harding Lake 91.18 14 P **P** **16 38 09.8 +0.3**
DOT Dot Lake 91.19 15 P **P** **16 38 08.8 -0.7**
AHID Auburn Hatcher 91.21 43 P **P** **16 38 09.8 -0.6**
AHID lAmb lAmb 16 38 13.8
comp=Z,15nm,0.9s
MCMT McKenzie Canyo 91.22 41 P **P** **16 38 10.8 +0.4**
COLA College 91.40 13 *i* P **P** **16 38 09.7 -0.7**
COLA pmax pmax
comp=Z,3.0nm,0.9s
SCRK Sand Creek 91.48 15 P **P** **16 38 11.4 +0.4**
baz=212
ILAR Eielson Array 91.51 13 P **P** **16 38 10.4 -0.6**
comp=Z,0.9nm,0.6s,baz=224,slow=4.4,SNR=10
ILAR pP **pP** **16 40 10.2 +0.9**
comp=Z,2.3nm,0.9s,baz=223,slow=5.6,SNR=7.9
ILAR PKKP **PKKPdf** **16 55 27.0 -0.9**
comp=Z,0.4nm,0.6s,baz=344,slow=2.7,SNR=6.5
S22A 4UR Ranch, Cre 91.55 49 P **P** **16 38 13.9 +1.6**
baz=241
S22A 4UR Ranch, Cre 91.55 49 P **P** **16 38 13.1 +0.8**
S22A lAmb lAmb 16 38 15.0
comp=Z,14nm,1.0s
REDW Red Top Meadow 91.67 43 P **P** **16 38 13.2 +0.6**
REDW lAmb lAmb 16 38 15.3
comp=Z,20nm,1.2s
TPAW Teton Pass 91.68 43 P **P** **16 38 14.3 +1.6**
TPAW lAmb lAmb 16 38 15.9
comp=Z,15nm,1.4s
O20A White River Ci 91.74 47 P **P** **16 38 14.4 +1.5**
baz=241
O20A White River Ci 91.74 47 P **P** **16 38 13.7 +0.8**
O20A lAmb lAmb 16 38 14.7
comp=Z,7.3nm,0.8s
BILL Bilibino 91.77 355 *i* P **P** **16 38 09.6 -2.5**
BILL pmax pmax
comp=Z,3.0nm,1.1s
IMW Indian Meadow 91.90 42 P **P** **16 38 14.3 +0.7**
K27K Chicken 91.99 16 P **P** **16 38 14.7 +1.5**
baz=214
CMIG Matias Romero 92.11 72 P **P** **16 38 15.3 +0.4**
comp=Z,4.2nm,0.9s,baz=8.1,slow=7.1,SNR=2.6
FLWY Flagg Ranch 92.14 42 P **P** **16 38 15.4 +0.7**
FLWY lAmb lAmb 16 38 23.1
comp=Z,11nm,1.1s
BW06 Boulder Array 92.19 44 P **P** **16 38 16.0 +1.0**
baz=240
BW06 Boulder Array 92.19 44 P **P** **16 38 15.1 +0.1**
BW06 lAmb lAmb 16 38 17.5
comp=Z,8.2nm,0.9s
PD31 Pinedale Array 92.19 44 P **P** **16 38 15.2 +0.2**
PD31 lAmb lAmb 16 38 17.6
comp=Z,7.5nm,0.9s
PDAR Pinedale Array 92.19 44 P **P** **16 38 15.7 +0.7**
comp=Z,5.2nm,0.8s,baz=207,slow=3.8,SNR=30
PDAR pP **pP** **16 40 13.2 +0.1**
comp=Z,1.2nm,0.9s,baz=258,slow=4.5,SNR=4.9
PDAR PP **PP** **16 42 02.8 -2.3**
comp=Z,3.4nm,1.0s,baz=235,slow=7.0,SNR=11
PDAR PKKP **PKKPdf** **16 55 26.3 +0.2**
comp=Z,0.7nm,0.7s,baz=85,slow=5.2,SNR=5.1
YHL Hebgen Lake 92.24 42 P **P** **16 38 16.5 +1.3**
BOZ Bozeman (W) 92.36 41 P **P** **16 38 16.1 +0.5**
BOZ pmax pmax
comp=Z,18nm,1.3s
BOZ Bozeman (W) 92.36 41 P **P** **16 38 17.2 +1.7**
baz=239
BOZ Bozeman (W) 92.36 41 P **P** **16 38 16.1 +0.5**
BOZ lAmb lAmb 16 38 18.7
comp=Z,18nm,1.2s
SDCO Great Sand Dun 92.48 50 P **P** **16 38 17.6 +1.2**
baz=242
SDCO Great Sand Dun 92.48 50 P **P** **16 38 16.5 0.0**
SDCO lAmb lAmb 16 38 18.7
comp=Z,7.5nm,0.8s
DAWY Dawson 92.70 17 P **P** **16 38 17.1 +0.6**
EGAK Eagle 92.83 16 P **P** **16 38 17.6 +0.5**
EGAK lAmb lAmb 16 38 18.2
comp=Z,5.5nm,0.8s
833A Chaparral WMA, 92.92 60 P **P** **16 38 19.8 +1.5**
baz=245
T25A Trinidad 92.97 51 P **P** **16 38 19.8 +1.1**
baz=243
LZH Lanzhou 93.25 308 *eP* **P** **16 38 21.4 +1.5**
LZH pP pwP 16 40 20.6 -2.5
LZH sP sP 16 41 14.3 +3.1
LZH pmax pmax
comp=Z,32nm,1.0s
Q24A Divide 93.29 49 P **P** **16 38 21.7 +1.5**
baz=242
ISCO Idaho Springs 93.36 48 P **P** **16 38 21.8 +1.3**
baz=242
JCT Junction City 93.50 58 P **P** **16 38 21.2 +0.2**
JCT pmax pmax
comp=Z,9.0nm,0.9s
JCT Junction City 93.50 58 P **P** **16 38 21.9 +0.9**
baz=245
JCT Junction City 93.50 58 P **P** **16 38 21.2 +0.2**
JCT lAmb lAmb 16 38 22.8
comp=Z,8.7nm,0.8s
N23A Red Feather La 93.64 47 P **P** **16 38 23.2 +1.5**
baz=242
YAK Yakutsk 94.21 339 *i* P **P** **16 38 24.3 +0.9**
YAK pmax pmax
comp=Z,5.0nm,0.8s
ULN Ulaanbaatar 96.50 320 *ce*P **P** **16 38 34.9 +0.6**
ULN pmax pmax
comp=Z,2.0nm,0.9s
INK Inuvik 97.50 16 P **P** **16 38 38.5 +0.4**
comp=Z,1.2nm,0.7s,baz=140,slow=5.1,SNR=3.7
GTA Gaotai 97.56 310 *e*P **P** **16 38 40.3 +1.1**
GTA pP pP 16 40 39.6 +2.4
GTA sP sP 16 41 31.7 +0.9
GTA pmax pmax
comp=Z,4.0nm,1.2s
TIXI Tiksi 101.14 345 *i* P **Pdif** **16 38 54.6 +0.4**
ZSN Zaisan 110.41 314 *e*PKiKP **PKiKP** **16 43 32.7 -0.8**
comp=Z,1.8nm,1.0s,baz=314
ZSN Zaisan 110.41 314 *i* PKiKP **PKiKP** **16 43 32.6 -0.8**
ZSN pmax pmax
comp=Z,2.0nm,1.0s
ZALV Zalesovo Beam 111.72 321 PKiKP **PKiKP** **16 43 34.9 -0.8**
comp=Z,1.8nm,0.5s,baz=180,slow=1.7,SNR=12
ZALV Zalesovo Beam 111.72 321 **PKiKP** **16 43 34.5 -1.2**
MK31 Makanchi Array 111.99 313 *c i*PKiKP **PKiKP** **16 43 35.9 -0.6**
MKAR Makanchi Array 111.99 313 PKiKP **PKiKP** **16 43 35.8 -0.7**
comp=Z,3.2nm,0.6s,baz=212,slow=0.9,SNR=34
MKAR Makanchi Array 111.99 313 PKiKP **PKiKP** **16 43 35.6 -0.9**
SHLS Shalkode 113.27 309 *e*PKiKP **PKiKP** **16 43 37.9 -1.3**
baz=309
SHLS Shalkode 113.27 309 *i* PKiKP **PKiKP** **16 43 37.9 -1.3**
SATY Saty 114.01 308 *e*PKiKP PKPdf 16 43 40.4 -0.2
comp=Z,2.2nm,0.8s,baz=308
SATY Saty 114.01 308 *i* PKiKP PKPdf 16 43 40.3 -0.3
SATY pmax pmax
comp=Z,2.0nm,0.8s
TDK Taldyqorghan 114.34 310 *e*PKP PKPdf 16 43 40.7 -0.3
baz=310
TDK *e*PP **PP** **16 44 47.0 -0.5**
baz=310
TDK Taldyqorghan 114.34 310 *e*PKiKP PKPdf 16 43 40.7 -0.3
TDK *e* 16 44 46.9
KURK Kurchatov 115.00 317 *c i*PKiKP **PKPdf** **16 43 41.6 -0.4**
KURK pmax pmax
comp=Z,15nm,2.5s
KURK Kurchatov 115.00 317 **PKPdf** **16 43 40.8 -1.2**
TNSS Tian-Shan 115.06 308 *e*PKP **PKPdf** **16 43 42.5 -0.5**
comp=Z,53nm,0.7s,baz=308
TNSS Tian-Shan 115.06 308 *e*PKiKP **PKPdf** **16 43 42.5 -0.5**
TNSS pmax pmax
comp=Z,53nm,0.7s
KUU Kurty 115.63 309 *e*PKP **PKPdf** **16 43 42.2 -1.4**
comp=Z,4.1nm,1.1s,baz=309
KUU *e*PP **PP** **16 44 55.1 -1.4**
baz=309
KUU Kurty 115.63 309 *e*PKiKP **PKPdf** **16 43 42.1 -1.4**
KUU *e* 16 44 55.0
KUU pmax pmax
comp=Z,4.0nm,1.1s
SGDS Sogindy 116.80 308 *e*PKP **PKPdf** **16 43 45.0 -0.9**
comp=Z,1.6nm,0.7s,baz=308
SGDS Sogindy 116.80 308 *e*PKiKP **PKPdf** **16 43 45.0 -0.9**
SGDS pmax pmax
comp=Z,2.0nm,0.7s
BTLS Baital 117.41 310 *e*PKP **PKPdf** **16 43 46.1 -0.8**
comp=Z,2.6nm,0.7s,baz=310
BTLS Baital 117.41 310 *e*PKiKP **PKPdf** **16 43 46.1 -0.8**
BTLS pmax pmax
comp=Z,3.0nm,0.7s
DZA Taraz 119.13 307 *e*PKP **PKPdf** **16 43 49.8 -0.5**
comp=Z,7.1nm,0.7s,baz=307
DZA Taraz 119.13 307 *e*PKiKP **PKPdf** **16 43 49.8 -0.5**
DZA pmax pmax
comp=Z,7.0nm,0.7s
KK31 Karatay Array 119.75 307 PKiKP **PKPdf** **16 43 51.1 -0.4**
KK31 Karatay Array 119.75 307 **PKPdf** **16 43 51.1 -0.4**
KKAR Karatay Array 119.75 307 PKiKP **PKPdf** **16 43 51.0 -0.5**
KKAR Karatay Array 119.75 307 **PKPdf** **16 43 51.0 -0.5**
KKAR Karatay Array 119.75 307 **PKPdf** **16 43 50.8 -0.7**
KBL Kabul 119.82 297 PKiKP **PKPdf** **16 43 51.8 -0.4**
KBL Kabul 119.82 297 **PKPdf** **16 43 51.8 -0.4**
IUG luzhnay 120.02 306 *e*PKP **PKPdf** **16 43 52.0 -0.2**
comp=Z,2.7nm,0.5s,baz=306
IUG luzhnay 120.02 306 *e*PKiKP **PKPdf** **16 43 51.9 -0.2**
IUG pmax pmax
comp=Z,3.0nm,0.5s
BRLS Borolday 120.24 307 *e*PKP **PKPdf** **16 43 52.2 -0.2**
comp=Z,7.4nm,0.6s,baz=307
BRLS Borolday 120.24 307 *e*PKiKP **PKPdf** **16 43 52.2 -0.2**
BRLS pmax pmax
comp=Z,7.0nm,0.6s
BRVK Borovoye 120.29 319 *c i*PKiKP **PKiKP** **16 43 52.3 0.0**
BRVK pmax pmax
comp=Z,24nm,2.5s
SUR Sutherland 121.14 200 **PKiKP** **16 43 55.1 +0.1**
BOSA Boshof 122.93 206 PKP **PKiKP** **16 43 58.9 +0.4**
comp=Z,7.9nm,0.8s,baz=126,slow=2.4,SNR=12
SPA0 Spitsbergen Ar 124.66 356 *e*PKPdf **PKPdf** **16 43 60.0 0.0**
HRA Herat 125.37 296 **PKPdf** **16 44 02.4 -0.4**
SVE Sverdlovsk 125.42 324 *e*PKiKP **PKiKP** **16 44 02.2 -0.1**
SVE pmax pmax
comp=Z,12nm,1.4s
LBTB Lobatse 125.94 209 PKiKP **PKPdf** **16 44 04.0 -0.1**
LBTB Lobatse 125.94 209 **PKPdf** **16 44 04.0 -0.1**
ARU Arti 126.63 324 *i* PKiKP **PKiKP** **16 44 04.7 0.0**
ARU 16 46 10.7
ARU 16 50 22.5
ARU SS SS 17 02 34.8 +1.5
ARU Arti 126.63 324 **PKPdf** **16 44 04.0 -0.2**
ABKAR Akbulak array 127.03 315 **PKPdf** **16 44 04.9 -0.3**
AKTO Aktyubinsk 128.10 317 PKP **PKPdf** **16 44 07.1 -0.2**
comp=Z,7.6nm,0.7s,baz=90,slow=3.6,SNR=11
GEYT Alibeck 128.92 301 PKP **PKPdf** **16 44 09.3 +0.1**
comp=Z,8.5nm,0.7s,baz=243,slow=1.3,SNR=17
GEYT SKPbc SKPbc 16 46 40.6
comp=Z,2.1nm,0.7s,baz=325,slow=4.4,SNR=3.7
GEYT Alibeck 128.92 301 **PKPdf** **16 44 08.7 -0.5**
ARA0 ARCESS Array S 131.46 348 *e*PKPdf **PKPdf** **16 44 13.0 0.0**
ARCES ARCESS Array B 131.46 348 PKP **PKPdf** **16 44 12.8 -0.3**
comp=Z,4.9nm,0.6s,baz=12,slow=1.5,SNR=23
ARCES SKPbc **SKPab** **16 46 48.8 -0.5**
comp=Z,17nm,0.8s,baz=34,slow=4.3,SNR=16
KTK1 Kautokeino 132.32 349 *e*PKPdf **PKPdf** **16 44 14.3 -0.3**
LSZ Lusaka 132.82 218 PKiKP **PKPdf** **16 44 17.5 +0.1**
LSZ Lusaka 132.82 218 **PKPdf** **16 44 17.5 +0.1**
KLMR Klimovskoe 133.84 335 *e*PKiKP PKPpre 16 44 11.6
KLMR pmax pmax
comp=Z,16nm,1.5s
KLMR Klimovskoe 133.84 335 *e*PKPdf PKPpre 16 44 11.6
KLMR AMP 16 44 13.5
comp=Z,16nm,1.5s
KLMR *e*PP **PP** **16 46 48.0 -7.3**
TSUM Tsumeb 134.38 203 **PKPdf** **16 44 18.9 -1.4**
KMBO Kilima Mbogo 136.53 241 PKP **PKiKP** **16 44 26.0 -0.4**
comp=Z,8.2nm,1.0s,baz=57,slow=3.1,SNR=14
KMBO Kilima Mbogo 136.53 241 PKPdf **PKPdf** **16 44 23.4 -1.1**
VRH Novokhopyorsk 137.75 322 *e*PKiKP **PKPdf** **16 44 24.9 -0.3**
VRH pmax pmax
comp=Z,10.0nm,0.6s
FINES FINESS Array B 138.06 342 PKhKP PKPpre 16 44 14.3
comp=Z,2.0nm,0.7s,baz=43,slow=4.1,SNR=11
FINES PKP **PKPdf** **16 44 26.1 +0.6**
comp=Z,3.1nm,0.6s,baz=68,slow=3.4,SNR=13
FINES SKPbc **SKPbc** **16 47 09.4 +0.3**
comp=Z,15nm,0.8s,baz=43,slow=3.3,SNR=22
FINES FINESS Array B 138.06 342 **SKPbc** **16 47 09.0 -0.1**
OBN Obninsk 138.47 329 *i* PKiKP **PKPdf** **16 44 27.2 +0.8**
OBN pmax pmax
comp=Z,8.0nm,0.9s
LPSR Galich'ya Gora 138.63 325 *e*PKiKP **PKPdf** **16 44 26.3 -0.5**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
GNI Garni 139.12 305 PKiKP **PKPdf** **16 44 28.2 -0.2**
GNI Garni 139.12 305 **PKPdf** **16 44 28.2 -0.2**
ZEI Tsey 139.17 309 *i* PKiKP **PKPdf** **16 44 28.8 +0.3**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
VSR Storozhevoye 139.18 323 *e*PKiKP **PKPdf** **16 44 26.4 -1.5**
VSR pmax pmax
comp=Z,10.0nm,1.4s
KBZ Khabaz 139.64 311 *i* PKiKP **PKPdf** **16 44 28.8 -0.1**
KBZ pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 139.72 311 *e*PKiKP **PKPdf** **16 44 29.4 +0.1**
KIV pmax pmax
comp=Z,16nm,1.0s
GEVA Gevas 140.72 302 **PKPdf** **16 44 25.4 -6.0**
DOMB Dombas 140.93 353 *e*PKPdf **PKPdf** **16 44 23.9 -6.9**
NC303 NORSAR Array S 141.44 351 **PKPdf** **16 44 27.0 -4.7**
NB2 NORSAR Subarra 141.64 351 PKP **PKPdf** **16 44 27.9 -4.2**
comp=Z,1.2nm,0.5s,baz=16,slow=3.2
NB2 NORSAR Subarra 141.64 351 PKPdf **PKPdf** **16 44 27.9 -4.2**
comp=Z,1.2nm,0.5s,baz=16,slow=3.2
NOA NORSAR Array B 141.64 351 PKhKP **PKPdf** **16 44 27.9 -4.2**
comp=Z,3.2nm,0.7s,baz=16,slow=4.6,SNR=15
NOA SKPbc **SKPbc** **16 47 19.1 +0.5**
comp=Z,6.3nm,0.8s,baz=14,slow=4.2,SNR=18
SOC Sochi 141.88 312 *e*PKiKP **PKPdf** **16 44 32.0 -1.0**
SOC *e* 16 47 43.3
SOC *e*PPP PPP 16 50 56.0
SOC *e*SSS SSS 17 11 06.0
SOC pmax pmax
comp=Z,7.0nm,0.6s
NC602 NORSAR Array S 141.89 351 *e*PKPdf **PKPdf** **16 44 30.7 -1.7**
MBAR Mbarara 141.94 235 PKHKP **PKPdf** **16 44 30.9 -3.4**
MBAR Mbarara 141.94 235 PKPpre **PKPdf** **16 44 30.9 -3.4**
HFS Hagfors 142.12 349 PKhKP **PKPdf** **16 44 29.2 -3.7**
comp=Z,14nm,0.4s,baz=72,slow=4.8,SNR=74
HFS SKPbc **SKPbc** **16 47 19.9 +0.1**
comp=Z,14nm,0.8s,baz=90,slow=0.4,SNR=12
KOPT Kop Dagi 142.33 306 PKPpre **PKPdf** **16 44 31.8 -2.5**
SKAR Skarslia 142.34 354 *e*PKPdf **PKPdf** **16 44 32.1 -1.3**
BNGB Bingl 142.42 304 *e*P **PKPdf** **16 44 31.4 -2.9**
IZAR Zarasai 142.44 336 *e*P **PKPdf** **16 44 31.4 -2.2**
IDID Didziasalis 142.58 335 *e*P **PKPdf** **16 44 31.4 -2.5**
ISAL Salakas 142.62 336 *e*P **PKPdf** **16 44 31.9 -2.1**
MARD Mardin 142.67 301 PKPpre **PKPdf** **16 44 32.4 -2.4**
IGN Ignalina 142.75 336 *e*P **PKPdf** **16 44 32.3 -1.8**
OSL Oslo 142.77 351 *e*PKPdf **PKPdf** **16 44 31.6 -2.4**
NACGM Acgm 142.87 335 *e* **PKPdf** **16 44 32.0 -2.4**
MAZI Mazidag 142.90 302 *e*P **PKPdf** **16 44 33.3 -1.9**
ANN Anapa 142.99 314 *d i*PKHKP **PKPdf** **16 44 32.4 -2.5**
ANN pmax pmax
comp=Z,107nm,0.7s
KONO Kongsberg 143.20 352 *e*PKPbc PKPbc 16 44 32.9 -0.1
PTK Pertek 143.42 304 *e*P **PKPdf** **16 44 35.7 -0.4**
PABE Paberze 143.46 337 *e*P PKPbc 16 44 34.5 +0.6
SVRC Sivrice-ELAZID 143.60 303 *e*P PKPbc 16 44 35.3 0.0
PBUR Paburge 143.73 339 *e*P **PKPdf** **16 44 35.4 -0.5**
URFA Urfa 144.18 302 *e*P **PKPdf** **16 44 38.1 +0.7**
MALT Malatya 144.29 304 *e*P **PKPab** **16 44 38.6 +0.9**
RSDY Resadiye-TOKAT 144.56 307 *e*P **PKPab** **16 44 39.3 +0.7**
AKASG Malin Array Be 144.69 328 PKP **PKPdf** **16 44 37.7 0.0**
comp=Z,25nm,0.5s,baz=44,slow=4.1,SNR=170
AKASG SKPbc **SKiKP** **16 47 26.7 0.0**
comp=Z,13nm,0.8s,baz=45,slow=2.7,SNR=13
AKASG Malin Array Be 144.69 328 **PKPdf** **16 44 37.4 -0.3**
AKASG **SKPbc** **16 47 26.3 +0.2**
AKBB Malin Array Si 144.69 328 *c i*PKiKP **PKPdf** **16 44 37.6 -0.1**
AKBB Malin Array Si 144.69 328 PKPdf **PKPdf** **16 44 37.2 -0.4**
SUW Suwalki 144.91 336 PKiKP PKPbc 16 44 38.7 +0.1
SUW Suwalki 144.91 336 PKPbc 16 44 38.7 +0.1
SVSK Karacayir 144.95 307 *e*P **PKPab** **16 44 40.3 +0.3**
DARE Darende-Malaty 144.95 304 *e*P **PKPab** **16 44 40.5 +0.3**
SIM Simferopol' 145.07 316 *d i*PKiKP **PKPbc** **16 44 39.2 -0.1**
SIM pmax pmax
comp=Z,133nm,0.9s
TOKT Tokat 145.16 308 *e*P **PKPdf** **16 44 39.1 +0.2**
TOKA Tokat 145.21 308 PKPbc **PKPbc** **16 44 40.2 +0.2**
KVT Kavak 145.28 309 *e*P **PKPab** **16 44 41.6 +0.3**
GAZ Gaziantep 145.49 302 *e*P **PKPab** **16 44 42.1 -0.2**
GAZ Gaziantep 145.49 302 PKPdf **PKPdf** **16 44 37.6 -2.0**
KAC Achnashellach 145.72 5 *e*P **PKPbc** **16 44 41.0 +0.2**
SARI SarD1z-Kayseri 145.80 304 *e*P **PKPab** **16 44 42.9 -0.7**
KPL Plockton 145.84 6 *e*P **PKPbc** **16 44 41.2 +0.1**
BNN Bunyan 146.11 305 *e*P **PKPbc** **16 44 42.9 +0.2**
BZK Bozkurt 146.39 312 ⇓P **PKPbc** **16 44 44.3 +1.1**
TAHT Tahtakopru-Hat 146.47 301 *e*P **PKPbc** **16 44 44.7 +1.1**
DRUM Mains of Drumt 146.48 3 *e*P **PKPbc** **16 44 42.8 -0.2**
ASF Jabal al Asfar 146.55 293 PKPbc **PKPbc** **16 44 45.0 +0.9**
baz=93,slow=2.1
CORM Corum 146.59 308 *e*P **PKiKP** **16 44 45.2 -0.9**
SORM Soroca 146.74 325 ⇓P **PKPbc** **16 44 44.3 +0.4**
SORM Soroca 146.74 325 ⇓PKP2 **PKPbc** **16 44 44.3 +0.4**
PURM Purcari 146.84 321 ⇑P **PKiKP** **16 44 46.6 +0.4**
INVG Invergeldie, C 146.88 4 *e*P **PKPbc** **16 44 44.0 0.0**
LAWE Loch Awe, Argy 146.93 6 *e*P **PKPbc** **16 44 42.8 -1.4**
EAB Aberfoyle 147.09 5 *e*P **PKPbc** **16 44 45.1 +0.5**
KARA Karaisali 147.14 303 *e*P **PKiKP** **16 44 46.6 -0.6**
CANT Cankiri 147.17 309 *e*P **PKPbc** **16 44 45.6 +0.2**
BHL Bhannes 147.36 297 *e*P **PKPbc** **16 44 46.9 +0.7**
SHBL Chebaa 147.37 296 *e*P **PKiKP** **16 44 47.4 -0.6**
QRWL Qaraoun 147.39 296 *e*P **PKPbc** **16 44 47.1 +0.8**
EDI Edinburgh 147.43 4 *e*P **PKPbc** **16 44 45.7 +0.2**
PGBU Glenifferbraes 147.46 5 *e*P **PKPbc** **16 44 45.7 +0.2**
BR131 Keskin Array S 147.46 308 PKP2 **PKPbc** **16 44 45.9 -0.5**
BR131 Keskin Array S 147.46 308 **PKPdf** **16 44 42.1 -0.8**
BR131 PKPbc **PKPbc** **16 44 45.9 -0.5**
BR131 PKPab **PKPab** **16 44 50.2 -0.1**
BRTR Keskin Array B 147.46 308 PKPbc **PKPbc** **16 44 46.4 0.0**
comp=Z,15nm,0.6s,baz=133,slow=3.8,SNR=25
BRTR Keskin Array B 147.46 308 **PKPdf** **16 44 42.1 -0.8**
BRTR PKPbc **PKPbc** **16 44 46.4 0.0**
BRTR PKPab **PKPab** **16 44 50.6 +0.3**
DQRL Deir Qamar 147.46 296 *e*P **PKiKP** **16 44 47.6 -0.4**
ESY Stoneypath 147.47 3 *e*P **PKPbc** **16 44 45.9 +0.3**
BEL Belsk 147.53 336 *e*PKP **PKiKP** **16 44 46.8 -0.6**
MMAI Mount Meron Ar 147.70 295 PKPbc **PKiKP** **16 44 48.2 -0.3**
comp=Z,105nm,0.7s,baz=72,slow=5.4,SNR=135
LVV L'vov 147.73 331 *e*PKP2 **PKPbc** **16 44 46.7 +0.2**
VASR Vaslui 147.95 323 ⇑P **PKiKP** **16 44 48.0 -0.6**
AFSR Afar-Bala (An 147.97 308 *e*P **PKiKP** **16 44 48.5 -0.4**
EKA Eskdalemuir Ar 148.02 4 PKPbc **PKPbc** **16 44 47.0 0.0**
comp=Z,2.5nm,0.4s,baz=346,slow=2.4,SNR=34
BR231 Keskin MP Arra 148.04 309 **PKPbc** **16 44 48.0 +0.3**
NEWG New Galloway 148.16 5 *e*P **PKPbc** **16 44 47.3 -0.1**
TLCR 148.20 320 ⇓P **PKiKP** **16 44 48.7 -0.3**
TLCR 148.20 320 ⇓PKP2 **PKiKP** **16 44 48.7 -0.3**
GAL1 Galloway 148.37 5 *e*P **PKPbc** **16 44 47.9 0.0**
JURR Jurilovca 148.40 319 ⇓P **PKiKP** **16 44 49.2 -0.3**
EIL Elat 148.41 289 PKPbc **PKiKP** **16 44 49.7 -0.3**
comp=Z,38nm,0.7s,baz=86,slow=0.9,SNR=12
KWP Kalwaria Pacla 148.45 332 *e*PKP **PKiKP** **16 44 48.9 -0.6**
KWP Kalwaria Pacla 148.45 332 PKP2 **PKiKP** **16 44 48.9 -0.6**
KWP Kalwaria Pacla 148.45 332 **PKiKP** **16 44 48.9 -0.6**
IKL Isikli 148.46 302 *e*P **PKPbc** **16 44 49.2 +0.4**
GHRR 148.51 323 ⇑P **PKiKP** **16 44 49.4 -0.3**
EDMD Edmundbyers 148.58 2 *e*P **PKPbc** **16 44 48.4 -0.1**
AKKU Akkuyu-Mersin 148.59 302 *e*P **PKPbc** **16 44 49.6 +0.5**
BSEG Bad Segeberg 148.59 349 *e*PKPbc **PKPbc** **16 44 48.7 +0.3**
baz=20,slow=2.4
CFR Carcaliu 148.60 321 ⇓P **PKiKP** **16 44 49.6 -0.3**
CFR Carcaliu 148.60 321 ⇓PKP2 **PKiKP** **16 44 49.6 -0.3**
TPGR Topolog 148.62 320 ⇑P **PKiKP** **16 44 49.8 -0.2**
TESR Tescani 148.65 324 ⇑P **PKPbc** **16 44 49.4 +0.5**
BIZ Bicaz 148.68 325 ⇓P **PKiKP** **16 44 50.4 +0.3**
BUR08 Bucovina Ar. S 148.68 327 **PKiKP** **16 44 50.0 -0.1**
BURAR Bucovina Array 148.69 327 ⇑P **PKiKP** **16 44 50.3 +0.1**
BURAR Bucovina Array 148.69 327 ⇑PKP2 **PKiKP** **16 44 50.3 +0.1**
BURAR Bucovina Array 148.69 327 **PKPdf** **16 44 44.4 -0.2**
BURAR PKPbc **PKPbc** **16 44 49.6 +0.5**
BERE Bereket-Mersin 148.79 302 *e*P **PKiKP** **16 44 50.3 -0.5**
TIRR Tirgusor 148.84 319 ⇓P **PKiKP** **16 44 50.1 -0.2**
TIRR Tirgusor 148.84 319 **PKPbc** **16 44 49.4 0.0**
LADK Ladik-KONYA 148.91 306 *e*P **PKPbc** **16 44 49.9 -0.1**
MDUB Mudurnu 148.92 311 **PKPbc** **16 44 50.0 +0.1**
TEKE Tekeli-Mersin 148.93 302 *e*P **PKPbc** **16 44 49.9 0.0**
MFTR Murfatlar 148.99 319 ⇓P **PKiKP** **16 44 50.5 -0.2**
HARR Harsova 149.00 320 ⇑P **PKiKP** **16 44 50.8 +0.1**
HARR Harsova 149.00 320 ⇑PKP2 **PKiKP** **16 44 50.8 +0.1**
VRI Vrincioaia 149.00 323 ⇓P **PKPbc** **16 44 50.1 +0.3**
TLBR Topalu 149.01 320 ⇑P **PKiKP** **16 44 50.8 +0.1**
GDLE Glaisdale, N Y 149.03 1 *e*P **PKPbc** **16 44 49.8 +0.3**
CSS Mathiatis 149.04 299 **PKPbc** **16 44 50.4 +0.2**
PLOR Plostina 149.06 323 ⇓P **PKiKP** **16 44 50.5 -0.4**
MANR Mangalia 149.08 318 ⇑P **PKiKP** **16 44 51.0 +0.1**
KOLS Kolonicke sedl 149.16 331 *e*PKP **PKPbc** **16 44 50.4 +0.3**
KOLS *e* 16 44 57.7
RUE Ruedersdorf 149.19 344 *e*P **PKiKP** **16 44 50.7 -0.1**
OJC Ojcow 149.19 335 *e*PKP **PKiKP** **16 44 50.7 -0.3**
OJC Ojcow 149.19 335 **PKPbc** **16 44 50.5 +0.4**
BISRR Bisoca 149.21 322 ⇑P **PKiKP** **16 44 51.3 +0.1**
LEF Lefka 149.36 300 ⇑P **PKiKP** **16 44 51.7 -0.1**
UZH Uzhgorod 149.38 331 *e*PKHKP **PKiKP** **16 44 51.3 -0.1**
UZH *e* 16 44 58.1

OZUR		**149.38**	**324**	⇑P		**PKPbc**	**16 44 51.0**	**+0.3**
ICOR	**Ion Corvin**	**149.40**	**319**	⇓P		**PKiK**	**16 44 51.9**	**+0.3**
GULT	**Gulveren**	**149.41**	**311**	*e*P		**PKPbc**	**16 44 51.3**	**+0.2**
CIFT	**Cifteler, Eski**	**149.45**	**309**	*e*P		**PKPbc**	**16 44 50.9**	**-0.3**
ARCR	**ARCALÍA**	**149.48**	**327**	⇓P		**PKiK**	**16 44 52.1**	**+0.4**
SRCK	**Saricakaya, Es**	**149.50**	**310**	*e*P		**PKPbc**	**16 44 51.4**	**+0.2**
NEHR	**Nehoiu**	**149.51**	**322**	⇑P		**PKPbc**	**16 44 51.4**	**+0.4**
GAZI	**Gazipasa**	**149.53**	**302**	*e*P		**PKPbc**	**16 44 50.9**	**-0.5**
CRVS	**Cervenica-Dubn**	**149.54**	**332**	*e*PKP		**PKiK**	**16 44 52.0**	**+0.3**
ISR	**Istrita**	**149.56**	**322**	⇑P		**PKPbc**	**16 44 51.3**	**+0.1**
NIE	**Niedzica**	**149.63**	**334**	*e*PKP		**PKiK**	**16 44 52.5**	**+0.6**
MLR	**Muntele Rosu**	**149.67**	**323**	PKPbc		**PKPbc**	**16 44 51.5**	**-0.1**
	comp=Z,12nm,0.8s,baz=358,slow=2.6,SNR=20							
MLR	**Muntele Rosu**	**149.67**	**323**	⇑P		**PKPbc**	**16 44 51.8**	**+0.2**
MLR	**Muntele Rosu**	**149.67**	**323**	PKPbc		**PKPbc**	**16 44 50.9**	**-0.7**
DOPR	**Dopca**	**149.68**	**324**	⇓P		**PKiK**	**16 44 52.8**	**+0.6**
LEHL	**Lehliu**	**149.78**	**320**	⇓P		**PKiK**	**16 44 52.8**	**+0.4**
WME	**Myndd Eilian**	**149.87**	**5**	*e*P		**PKPbc**	**16 44 50.2**	**-1.3**
SECR		**149.88**	**322**	⇑P		**PKiK**	**16 44 52.7**	**+0.1**
KSP	**Ksiaz**	**149.92**	**340**	*e*PKP		**PKiK**	**16 44 52.9**	**+0.4**
ADVT	**Abdulvahap**	**149.95**	**311**	*e*P		**PKPbc**	**16 44 51.1**	**-1.1**
SULR		**149.98**	**321**	⇓P		**PKPbc**	**16 44 52.3**	**+0.2**
NRDL	**Niedersach Rie**	**150.00**	**348**	*e*PKPbc		**PKiK**	**16 44 52.4**	**-0.1**
	baz=20,slow=2.4							
NRDL				*e*PKPab		**PKPab**	**16 45 00.3**	**+0.4**
	baz=21,slow=4.5							
NRDL				*ep*PKPbc		**pPKPab**	**16 47 03.1**	**+3.4**
CJR	**Cluj-Napoca**	**150.12**	**327**	⇑P		**PKPbc**	**16 44 52.7**	**+0.2**
CJR	**Cluj-Napoca**	**150.12**	**327**	⇑PKIKP		**PKPbc**	**16 44 52.7**	**+0.2**
OKC	**Ostrava-Krasne**	**150.13**	**336**	*e*PKIKP		**PKPbc**	**16 44 52.4**	**+0.1**
OKC				*e*			16 45 01.7	
OKC	**Ostrava-Krasne**	**150.13**	**336**	⇑*e*PKP		**PKPbc**	**16 44 52.4**	**+0.1**
OKC				*e*PKPAB		**PKPab**	**16 45 01.7**	**+1.0**
OKC				*ep*PKP		**pPKPab**	**16 47 03.0**	**+2.7**
LANS	**Liptovska Anna**	**150.18**	**334**	*e*PKIKP		**PKiK**	**16 44 53.9**	**+0.8**
LANS				*e*			16 45 00.2	
LANS	**Liptovska Anna**	**150.18**	**334**	*e*PKP		**PKiK**	**16 44 53.9**	**+0.8**
LANS				*e*			16 45 00.2	
OSTC	**Ostas**	**150.19**	**339**	⇑*e*PKP		**PKiK**	**16 44 53.3**	**+0.3**
OSTC				*e*PKPAB		**PKPab**	**16 45 01.6**	**+0.7**
OSTC				*ep*PKP		**pPKPab**	**16 47 03.8**	**+3.2**
VOIR		**150.19**	**324**	⇑P		**PKPbc**	**16 44 52.7**	**-0.1**
VOIR		**150.19**	**324**	⇑PKIKP		**PKPbc**	**16 44 52.7**	**-0.1**
CHVC	**Chvalec**	**150.21**	**340**	⇑*e*PKP		**PKiK**	**16 44 53.3**	**+0.2**
ASSE	**Asse, Remlinge**	**150.24**	**347**	*e*PKPbc		**PKiK**	**16 44 53.0**	**+0.1**
	baz=20,slow=2.4							
UPC	**Upice**	**150.30**	**340**	*e*PKIKP		**PKiK**	**16 44 53.5**	**+0.3**
UPC				*e*			16 44 58.7	
UPC	**Upice**	**150.30**	**340**	⇑*e*PKP		**PKiK**	**16 44 53.5**	**+0.3**
UPC				*e*PKPAB		**PKPab**	**16 44 58.7**	**-2.7**
UPC				*ep*PKP		**pPKPab**	**16 47 04.7**	**+3.6**
DPC	**Dobruska-Polom**	**150.33**	**339**	*e*PKIKP		**PKiK**	**16 44 53.5**	**+0.1**
DPC	**Dobruska-Polom**	**150.33**	**339**	⇑*e*PKP		**PKiK**	**16 44 53.5**	**+0.1**
DPC				*e*PKPAB		**PKPab**	**16 45 03.7**	**+2.1**
DPC				*ep*PKP		**pPKPab**	**16 47 04.9**	**+3.7**
MORC	**Moravsky Berou**	**150.40**	**337**	⇑P		**PKiK**	**16 44 54.1**	**+0.6**
MORC	**Moravsky Berou**	**150.40**	**337**	*e*PKP		**PKiK**	**16 44 53.7**	**+0.2**
MORC				*e*			16 45 02.8	
MORC				*ep*PKP		**pPKPab**	**16 47 04.6**	**+3.0**
MORC	**Moravsky Berou**	**150.40**	**337**	PKIKP		**PKiK**	**16 44 53.6**	**0.0**
MORC	**Moravsky Berou**	**150.40**	**337**			**PKiK**	**16 44 53.6**	**0.0**
ISP	**Isparta**	**150.40**	**306**	PKIKP		**PKPbc**	**16 44 52.7**	**-0.8**
ISP	**Isparta**	**150.40**	**306**			**PKPbc**	**16 44 52.7**	**-0.8**
KRLC	**Kraliky**	**150.41**	**338**	*e*PKIKP		**PKiK**	**16 44 53.8**	**+0.2**
KRLC				*e*			16 45 02.8	
KRLC	**Kraliky**	**150.41**	**338**	⇑*e*PKP		**PKiK**	**16 44 53.8**	**+0.2**
KRLC				*e*PKPAB		**PKPab**	**16 45 02.8**	**+0.9**
KRLC				*ep*PKP		**pPKPab**	**16 47 05.0**	**+3.4**
FOEL	**Foel Wylfa**	**150.46**	**4**	*e*P		**PKPbc**	**16 44 53.2**	**+0.2**
CLL	**Collm**	**150.46**	**344**	*e*PKPdf		**PKPdf**	**16 44 47.0**	**-0.1**
CLL				⇓*i*PKPbc		**PKiK**	**16 44 53.7**	**+0.2**
	comp=Z,50nm,0.8s							
CLL				⇑*i*PKPab		**PKPab**	**16 45 02.5**	**+0.5**
	comp=Z,13nm,0.8s							
CLL				*ep*PKPbc		**pPKPab**	**16 47 00.0**	**-1.6**
CLL				*ep*PKPab		**pPKPbc**	**16 47 04.0**	**+6.4**
CLL	**Collm**	**150.46**	**344**	⇓*e*PKIKP		**PKPdf**	**16 44 47.0**	**-0.1**
CLL				*i*			16 45 02.5	
CLL				pmax		pmax		
	comp=Z,13nm,0.8s							
CLL	**Collm**	**150.46**	**344**			**PKPbc**	**16 44 53.2**	**+0.2**
RAZG	**Razgrad**	**150.48**	**319**	⇑P		**PKPbc**	**16 44 53.4**	**0.0**
ARMT	**Armutlu**	**150.49**	**312**	*e*P		**PKPbc**	**16 44 53.6**	**+0.1**
TVSB	**Tavsanli**	**150.56**	**310**	*e*P		**PKiK**	**16 44 54.4**	**+0.1**
CLZ	**Clausthal**	**150.57**	**347**	*e*PKPbc		**PKiK**	**16 44 54.0**	**+0.2**
	baz=20,slow=2.4							
CLZ				*ep*PKPbc		**pPKPab**	**16 47 04.4**	**+2.3**
IBBN	**Ibbenburen**	**150.59**	**351**	*e*PKPbc		**PKiK**	**16 44 53.9**	**+0.2**
	baz=20,slow=2.4							
IBBN				*ep*PKPbc		**pPKPab**	**16 47 04.4**	**+2.2**
BRG	**Berggiesshubel**	**150.60**	**342**	*e*PKP		**PKPdf**	**16 44 48.2**	**+0.9**
	comp=Z,2.1nm,0.8s							
BRG	**Berggiesshubel**	**150.60**	**342**	*i* PKP		**PKiK**	**16 44 53.9**	**+0.1**
	comp=Z,34nm,0.9s							
BRG				*ep*PKP		**pPKPab**	**16 47 01.1**	**-1.1**
	comp=Z,49nm,1.5s							
BRG	**Berggiesshubel**	**150.60**	**342**	*e*PKIKP		**PKPdf**	**16 44 48.2**	**+0.9**
BRG				pmax		pmax		
	comp=Z,2.0nm,0.9s							
BRG	**Berggiesshubel**	**150.60**	**342**	*e*PKPbc		**PKiK**	**16 44 54.0**	**+0.1**
	baz=20,slow=2.4							
CWF	**Charnwood Fore**	**150.70**	**2**	*e*P		**PKPbc**	**16 44 53.2**	**-0.3**
FBE	**Freiberg**	**150.72**	**343**	*e*PKPbc		**PKiK**	**16 44 54.4**	**+0.4**
	baz=20,slow=2.4							
FBE				*ep*PKPbc		**pPKPab**	**16 47 04.9**	**+2.2**
PVCC	**Panska Ves**	**150.72**	**341**	*e*PKIKP		**PKiK**	**16 44 54.4**	**+0.3**
PVCC	**Panska Ves**	**150.72**	**341**	⇑*e*PKP		**PKiK**	**16 44 54.4**	**+0.3**
PVCC				*ep*PKP		**pPKPab**	**16 47 06.0**	**+3.2**
KORT	**Korkueli**	**150.81**	**305**	*e*P		**PKPbc**	**16 44 54.7**	**+0.2**
HLM1	**Long Mynd**	**150.85**	**4**	*e*P		**PKPbc**	**16 44 53.7**	**-0.2**
NEUB	**Neuenburg**	**150.85**	**345**	*e*PKPbc		**PKiK**	**16 44 54.5**	**+0.2**
	baz=20,slow=2.4							
NEUB				*e*PKPab		**PKPab**	**16 45 04.2**	**+0.6**
	baz=21,slow=4.5							
LOT	**Lotru**	**150.88**	**325**	⇑P		**PKPbc**	**16 44 54.4**	**0.0**
VYHS	**Vyhne**	**150.95**	**334**	*e*PKIKP		**PKiK**	**16 44 54.6**	**-0.1**
VYHS				*e*			16 45 05.3	
VYHS	**Vyhne**	**150.95**	**334**	*e*PKP		**PKiK**	**16 44 54.5**	**-0.1**
VYHS				*e*			16 45 05.3	
PSZ	**Piszkesteto**	**150.97**	**332**	PKIKP		**PKPbc**	**16 44 54.2**	**-0.3**
PSZ	**Piszkesteto**	**150.97**	**332**			**PKPbc**	**16 44 54.1**	**-0.3**
DEV	**Deva**	**151.04**	**326**	⇑P		**PKiK**	**16 44 55.2**	**+0.3**
DEV	**Deva**	**151.04**	**326**	⇑PKIKP		**PKiK**	**16 44 55.2**	**+0.3**
JAVC	**Velka Javorina**	**151.11**	**336**	*e*PKP		**PKiK**	**16 44 56.5**	**+1.4**
JAVC				*e*			16 45 06.9	
JAVC				*ep*PKP		**pPKPab**	**16 47 07.1**	**+2.7**
VRAC	**Vranov**	**151.13**	**338**	PKPbc		**PKPbc**	**16 44 54.6**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=52,slow=3.5,SNR=6.5							
VRAC				PKPab		**PKPab**	**16 45 05.4**	**+0.5**
	comp=Z,11nm,0.8s,baz=50,slow=3.5,SNR=12							
VRAC	**Vranov**	**151.13**	**338**	⇓P		**PKiK**	**16 44 55.3**	**+0.3**
VRAC	**Vranov**	**151.13**	**338**	*e*PKP		**PKiK**	**16 44 55.3**	**+0.3**
VRAC				*e*			16 45 06.0	
VRAC				*ep*PKP		**pPKPab**	**16 47 06.7**	**+2.2**
PRA	**Prague**	**151.17**	**341**	*e*PKIKP		**PKiK**	**16 44 55.7**	**+0.7**
PRA	**Prague**	**151.17**	**341**	⇑*e*PKP		**PKiK**	**16 44 55.7**	**+0.7**
PRU	**Pruhonice**	**151.21**	**341**	*e*PKIKP		**PKPbc**	**16 44 54.9**	**+0.1**
PRU				*e*			16 45 06.1	
PRU	**Pruhonice**	**151.21**	**341**	⇑*e*PKP		**PKPbc**	**16 44 54.9**	**+0.1**
PRU				*e*PKPAB		**PKPab**	**16 45 06.1**	**+0.9**
PRU				*ep*PKP		**pPKPab**	**16 47 05.2**	**+0.4**
ELL	**Elmali**	**151.23**	**304**	PKIKP		**PKPbc**	**16 44 55.3**	**-0.1**
ELL	**Elmali**	**151.23**	**304**			**PKPbc**	**16 44 55.3**	**-0.1**
SIRR	**Siria**	**151.39**	**328**	⇑P		**PKiK**	**16 44 55.6**	**0.0**
KRUC	**Moravsky**	**151.41**	**338**	*e*PKP		**PKiK**	**16 44 55.6**	**0.0**
KRUC				*e*			16 45 07.0	
KRUC				*ep*PKP		**pPKPab**	**16 47 06.7**	**+1.1**
MOX	**Moxa**	**151.41**	**345**	*e*PKPbc		**PKiK**	**16 44 55.7**	**+0.2**
	baz=20,slow=2.4							
MOX				*ep*PKPbc		**pPKPab**	**16 47 05.8**	**+0.2**
TANN	**Tannenbergstha**	**151.41**	**344**	*e*PKPbc		**PKiK**	**16 44 55.7**	**+0.1**
	baz=20,slow=2.4							
TANN				*ep*PKPbc		**pPKPab**	**16 47 05.8**	**+0.2**
PLN	**Plauen**	**151.43**	**344**	*e*PKPbc		**PKiK**	**16 44 55.9**	**+0.3**
	baz=20,slow=2.4							
GZR	**Gura Zlata**	**151.43**	**326**	⇑P		**PKiK**	**16 44 55.8**	**0.0**
GZR	**Gura Zlata**	**151.43**	**326**	⇑PKIKP		**PKiK**	**16 44 55.8**	**0.0**
SMOL	**Smolenice**	**151.49**	**336**	*e*PKIKP		**PKiK**	**16 44 56.6**	**+0.8**
SMOL				*e*			16 45 07.9	
SMOL	**Smolenice**	**151.49**	**336**	*e*PKP		**PKiK**	**16 44 56.6**	**+0.8**
SMOL				*e*			16 45 07.9	
GUNZ	**Gunzen**	**151.50**	**344**	*e*PKPbc		**PKiK**	**16 44 56.3**	**+0.5**
	baz=20,slow=2.4							
GUNZ				*e*PKPab		**PKPab**	**16 45 07.0**	**+0.5**
	baz=21,slow=4.5							
GUNZ				*ep*PKPbc		**pPKPab**	**16 47 06.7**	**+0.7**
TREC	**Trest**	**151.52**	**339**	⇑*e*PKIKP		**PKiK**	**16 44 56.0**	**+0.2**
TREC	**Trest**	**151.52**	**339**	⇑*e*PKP		**PKiK**	**16 44 56.0**	**+0.2**
MONM	**Monmouth**	**151.53**	**4**	*e*P		**PKPbc**	**16 44 55.2**	**-0.2**
WERN	**Wernitzgruen**	**151.55**	**344**	*e*PKPbc		**PKiK**	**16 44 56.6**	**+0.7**
	baz=20,slow=2.4							
WERN				*e*PKPab		**PKPab**	**16 45 07.5**	**+0.8**
	baz=21,slow=4.5							
NKC	**Novy Kostel**	**151.58**	**343**	*e*PKIKP		**PKPdf**	**16 44 49.5**	**+0.6**
NKC				*e*			16 45 07.5	
NKC	**Novy Kostel**	**151.58**	**343**	*e*PKPDF		**PKPdf**	**16 44 49.5**	**+0.6**
NKC				⇑*e*PKP		**PKiK**	**16 44 56.5**	**+0.6**
NKC				*e*PKPAB		**PKPab**	**16 45 07.5**	**+0.7**
NKC				*ep*PKP		**pPKPbc**	**16 47 03.4**	**+2.9**
NKC				*ex*	x		16 47 07.5	
NKC				*ex*	x		16 47 14.2	
MANT	**Manisa**	**151.59**	**309**			**PKPbc**	**16 44 56.3**	**0.0**
UBBA	**Unterbreizbach**	**151.61**	**347**	*e*PKPab		**PKPab**	**16 45 08.0**	**+1.3**
	baz=21,slow=4.5							
AKAS	**Kas**	**151.62**	**303**			**PKPbc**	**16 44 55.9**	**-0.4**
PBCC	**Pribram**	**151.64**	**341**	⇑*e*PKP		**PKPbc**	**16 44 55.6**	**-0.2**
PBCC				*e*PKPAB		**PKPab**	**16 45 08.0**	**+0.9**
PBCC				*ep*PKP		**pPKPbc**	**16 47 02.2**	**+1.7**
PBCC				*ex*	x		16 47 07.5	
MODS	**Modra-Piesok**	**151.66**	**336**	*e*PKIKP		**PKPbc**	**16 44 55.7**	**-0.2**
MODS				*e*			16 45 07.7	
MODS	**Modra-Piesok**	**151.66**	**336**	*e*PKP		**PKPbc**	**16 44 55.7**	**-0.2**
MODS				*e*			16 45 07.6	
SRE	**Strehaia**	**151.69**	**324**	⇑P		**PKPbc**	**16 44 56.0**	**-0.1**
SRE	**Strehaia**	**151.69**	**324**	⇑PKIKP		**PKPbc**	**16 44 56.0**	**-0.1**
MANZ	**Manzenberg**	**151.90**	**344**	*e*PKPbc		**PKiK**	**16 44 56.9**	**+0.3**
	baz=20,slow=2.4							
HERR	**Herculane**	**151.97**	**325**	⇑P		**PKiK**	**16 44 57.1**	**+0.3**
ROTZ	**Rotzenmuhle**	**152.07**	**343**	*e*PKPab		**PKPab**	**16 45 09.6**	**+0.8**
	baz=21,slow=4.5							
ALN	**Alexandroupoli**	**152.21**	**315**	PKIKP		**PKPbc**	**16 44 56.4**	**-0.9**
ALN	**Alexandroupoli**	**152.21**	**315**			**PKPbc**	**16 44 56.4**	**-0.9**
KHC	**Kasperske Horo**	**152.26**	**341**	*e*PKIKP		**PKPdf**	**16 44 50.3**	**+0.4**
KHC				*e*			16 45 10.8	
KHC	**Kasperske Hory**	**152.26**	**341**	*e*PKPDF		**PKPdf**	**16 44 50.3**	**+0.4**
KHC				⇑*e*PKP		**PKiK**	**16 44 57.6**	**+0.2**
KHC				*e*PKPAB		**PKPab**	**16 45 10.8**	**+1.1**
KHC				*ep*PKP		**pPKPbc**	**16 47 05.0**	**+2.9**
KHC				*ex*	x		16 47 09.5	
KHC				*ex*	x		16 47 16.7	
MDVR	**Moldovita**	**152.40**	**326**	⇓P		**PKiK**	**16 44 57.9**	**0.0**
AHRW	**Bad Neuenahr-A**	**152.41**	**351**	*e*PKPab		**PKPab**	**16 45 11.2**	**+1.0**
	baz=21,slow=4.5							
WET	**Wettzell**	**152.46**	**342**	*e*PKPbc		**PKiK**	**16 44 58.1**	**+0.3**
	baz=20,slow=2.4							
WET				*e*PKPab		**PKPab**	**16 45 11.4**	**+0.9**
	baz=21,slow=4.5							
GEC2	**GERESS Array S**	**152.48**	**341**	*e*PKPbc		**PKiK**	**16 44 58.1**	**+0.2**
	baz=20,slow=2.4							
GEC2	**GERESS Array S**	**152.48**	**341**	PKPbc		**PKPbc**	**16 44 57.6**	**-0.1**
GERES	**GERESS Array B**	**152.48**	**341**	PKP		**PKPdf**	**16 44 50.0**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=90,slow=1.5,SNR=6.2							
GERES				PKPbc		**PKPbc**	**16 44 57.7**	**-0.1**
	comp=Z,3.3nm,0.7s,baz=45,slow=2.1,SNR=24							
GERES				PKPab		**PKPab**	**16 45 10.7**	**0.0**
	comp=Z,1.1nm,0.6s,baz=46,slow=3.9,SNR=5.4							
GERES	**GERESS Array B**	**152.48**	**341**			**PKPdf**	**16 44 49.2**	**-1.1**
GERES				PKPbc		**PKPbc**	**16 44 57.3**	**-0.5**
MEM	**Membach**	**152.49**	**352**	PKiKP		**PKiK**	**16 44 57.9**	**+0.1**
BTNL	**Ternell**	**152.49**	**352**	PKiKP		**PKPbc**	**16 44 57.7**	**+0.1**
CONA	**Conrad Observa**	**152.55**	**337**	*e*P		**PKiK**	**16 44 58.8**	**+0.7**
	comp=Z,4.5nm,0.7s,SNR=7.6							
CONA				*e*P		**PKPab**	**16 45 12.6**	**+1.6**
	comp=Z,8.3nm,0.7s							
CONA				*e*P		**pPKPab**	**16 47 09.1**	**-1.4**
	comp=Z,13nm,1.4s							
BMRD	**Maredsous**	**152.93**	**354**	PKiKP		**PKPbc**	**16 44 58.4**	**-0.1**
MOA	**Molln**	**153.17**	**339**	*e*P		pPKPbc	16 47 10.8	+6.6
	comp=Z,9.7nm,1.6s							
ARSA	**Arzberg**	**153.25**	**336**	*e*P		**PKPbc**	**16 44 58.6**	**-0.8**
	comp=Z,2.3nm,1.1s							
ARSA				*e*P		**PKPab**	**16 45 14.0**	**0.0**
	comp=Z,4.8nm,0.7s							
ARSA				*e*P		**pPKPab**	**16 47 10.3**	**-3.0**
	comp=Z,5.0nm,1.2s							
DIVS	**Divibare**	**153.76**	**327**			**PKPdf**	**16 44 51.1**	**-1.2**
DIVS						**PKPbc**	**16 45 00.4**	**-0.2**
DIVS						**PKPab**	**16 45 15.5**	**-0.9**
SOKA	**Soboth**	**153.91**	**336**	*e*P		**PKPdf**	**16 44 52.1**	**-0.3**
	comp=Z,5.7nm,1.0s							
SOKA				*e*P		**PKPab**	**16 45 17.7**	**+0.8**
	comp=Z,12nm,1.2s							
SOKA				*e*P		**pPKPab**	**16 47 12.9**	**-3.3**
	comp=Z,4.4nm,0.9s							
VAY	**Valandovo**	**154.16**	**319**	*i* P		**PKPab**	**16 45 19.1**	**+1.0**
STIP	**Stip**	**154.16**	**320**	*i* P		**PKPab**	**16 45 18.2**	**+0.2**
SKO	**Skopje**	**154.42**	**321**	*i* P		**PKPab**	**16 45 21.4**	**+2.2**
WATA	**Walderalm**	**154.46**	**342**	*i* P		**PKPab**	**16 45 20.2**	**+0.9**
	comp=Z,3.2nm,0.6s							
WATA				*e*P		**pPKPab**	**16 47 13.9**	**-4.6**
	comp=Z,5.4nm,1.4s							
WTTA	**Wattenberg**	**154.51**	**342**	*e*P		**PKPab**	**16 45 20.7**	**+1.1**
	comp=Z,6.2nm,0.6s							
WTTA				*e*P		**pPKPab**	**16 47 14.2**	**-4.5**
	comp=Z,9.6nm,1.3s							
RETA	**Reutte**	**154.55**	**343**	*e*P		**PKPab**	**16 45 20.6**	**+1.0**
	comp=Z,3.2nm,0.5s							
MOTA	**Moosalm**	**154.59**	**343**	*e*P		**PKPdf**	**16 44 53.3**	**-0.1**
	comp=Z,4.7nm,0.9s							
MOTA				*e*P		**PKPab**	**16 45 20.7**	**+0.8**
	comp=Z,3.8nm,0.8s							
MOTA				*e*P		**pPKPab**	**16 47 13.9**	**-5.2**
	comp=Z,14nm,1.4s							
PRED	**Cave del Predi**	**154.63**	**338**			**PKPab**	**16 45 19.4**	**-0.6**
SQTA	**Sankt Quirin**	**154.67**	**342**	*i* P		**PKPab**	**16 45 21.4**	**+1.2**
	comp=Z,6.4nm,0.8s							
SQTA				*e*P		**pPKPab**	**16 47 14.5**	**-4.9**
	comp=Z,5.2nm,1.0s							
ABTA	**Abfaltersbach**	**154.71**	**340**	*e*P		**PKPdf**	**16 44 53.1**	**-0.4**
	comp=Z,5.8nm,0.9s							
ABTA				*e*P		**PKPab**	**16 45 20.0**	**-0.4**
	comp=Z,8.4nm,1.7s							
ABTA				*e*P		**pPKPab**	**16 47 14.0**	**-5.5**
	comp=Z,7.5nm,1.1s							
VISS	**Visnje**	**154.72**	**336**	*e*PKPdf		**PKPdf**	**16 44 53.6**	**+0.1**
VISS				*i* PKPdif		**PKPbc**	**16 45 02.7**	**+0.1**
VISS				*i* PKPab		**PKPab**	**16 45 20.6**	**+0.2**
BOJS	**Bojanci**	**154.81**	**335**	*i* PKPdf		**PKPdf**	**16 44 54.0**	**+0.5**
BOJS				*i* PKPdif		**PKPbc**	**16 45 03.1**	**+0.4**
BOJS				*i* PKPab		**PKPab**	**16 45 21.3**	**+0.6**
DAVA	**Damuels**	**154.96**	**344**	*e*P		**PKPab**	**16 45 22.4**	**+1.0**
	comp=Z,5.1nm,0.7s,SNR=4.8							
FETA	**Feichten**	**154.99**	**343**	*e*P		**PKPdf**	**16 44 53.8**	**-0.2**
	comp=Z,8.7nm,1.0s							
PDG	**Podgorica**	**155.32**	**325**	⇑P		**PKPdf**	**16 45 00.4**	**+6.1**
PDG	**Podgorica**	**155.32**	**325**	PKPab		**PKPab**	**16 45 22.9**	**-0.1**
OHR	**Ohrid**	**155.34**	**321**	*i* P		**PKPab**	**16 45 24.1**	**+0.8**
DAVOX	**Davos/Dischmat**	**155.43**	**344**	PKP		**PKPdf**	**16 44 54.4**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=4.7,slow=6.1,SNR=5.6							
DAVOX				PKPbc		PKPbc	16 45 04.5	
	comp=Z,2.1nm,0.6s,baz=42,slow=18,SNR=4.6							
DAVOX				PKPab		**PKPab**	**16 45 23.9**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=324,slow=5.3,SNR=8.7							
FUORN	**Ofenpass-Fuorn**	**155.48**	**343**	PKPab		**PKPab**	**16 45 24.9**	**+1.0**
IDI	**Anoyia**	**155.55**	**304**	PKPab		**PKPab**	**16 45 24.2**	**-0.2**
	comp=Z,11nm,1.0s,baz=21,slow=10,SNR=5.4							
AGG	**Agios Georgios**	**155.62**	**315**	PKP2		**PKPab**	**16 45 23.6**	**-0.9**
AGG	**Agios Georgios**	**155.62**	**315**	PKPab		**PKPab**	**16 45 23.6**	**-0.9**
MURB	**Monte Urbino**	**157.75**	**336**			**PKPab**	**16 45 33.8**	**+0.3**
NRCA	**Norcia**	**157.89**	**334**			**PKPab**	**16 45 34.6**	**+0.4**
LIC	**Lamto**	**162.17**	**163**	*e*PKP1		**PKPdf**	**16 45 02.5**	**-0.7**
	comp=Z,85nm,1.5s							
LIC	**Lamto**	**162.17**	**163**	*e*P		**PKPab**	**16 45 54.5**	**+1.1**
	comp=Z,65nm,1.1s							
KIC	**Kosan Boka**	**162.38**	**163**	*e*PKP1		**PKPdf**	**16 45 03.0**	**-0.4**
	comp=Z,46nm,1.3s							
KIC	**Kosan Boka**	**162.38**	**163**	*e*P		**PKPab**	**16 45 55.5**	**+1.2**
	comp=Z,62nm,1.1s							
TIC	**Toumodi**	**162.57**	**162**	*e*PKP1		**PKPdf**	**16 45 03.4**	**-0.2**
TIC	**Toumodi**	**162.57**	**162**	*e*P		**PKPab**	**16 45 56.3**	**+1.1**
DBIC	**Dimbokro**	**162.64**	**163**	PKP		**PKPdf**	**16 45 03.5**	**-0.1**
	comp=Z,7.4nm,0.9s,baz=160,slow=2.8,SNR=6.5							
DBIC				PKPab		**PKPab**	**16 45 56.0**	**+0.5**
	comp=Z,17nm,1.1s,baz=228,slow=4.0,SNR=6.5							
ESDC	**Sonseca Array**	**163.40**	**11**	PKPab		**PKPab**	**16 45 58.7**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=331,slow=4.4,SNR=5.7							
ESDC	**Sonseca Array**	**163.40**	**11**			**PKPab**	**16 45 58.2**	**-0.1**
KEST	**Kesra**	**165.41**	**329**	PKPab		**PKPab**	**16 46 07.8**	**+0.4**
	comp=Z,4.4nm,0.9s,baz=254,slow=4.7,SNR=6.4							
TOA0	**Torodi Ar. Sit**	**169.69**	**188**			**PKPdf**	**16 45 07.9**	**-1.1**
TOA0				PKPab		**PKPab**	**16 46 26.5**	**0.0**
TORD	**Torodi Ar. Bea**	**169.69**	**188**	PKP		**PKPdf**	**16 45 08.5**	**-0.5**
	comp=Z,7.3nm,1.0s,baz=341,slow=1.6,SNR=20							
TORD				PKPab		**PKPab**	**16 46 26.4**	**-0.2**
	comp=Z,15nm,0.9s,baz=178,slow=3.9,SNR=30							
TORD				PP		**PP**	**16 50 18.1**	**+2.1**
	comp=Z,4.9nm,1.0s,baz=166,slow=4.1,SNR=7.9							
TORD	**Torodi Ar. Bea**	**169.69**	**188**			**PKPdf**	**16 45 08.1**	**-1.0**
TORD						**PKPab**	**16 46 26.2**	**-0.3**
KOWA	**Kowa**	**170.26**	**155**	PKP		**PKPdf**	**16 45 08.4**	**-1.0**
	comp=Z,2.6nm,0.8s,baz=89,slow=4.2,SNR=5.6							
KOWA				PKPab		**PKPab**	**16 46 29.6**

SIJI	**Sorong**	**52.06**	**283**	P		**P**	**16 39 41.5**	**+0.4**
	comp=Z,79nm,0.7s,baz=106,slow=5.9,SNR=52							
FITZ	**Fitzroy Crossi**	**52.96**	**260**	P		**P**	**16 39 47.7**	**+0.3**
	baz=54,SNR=6.8							
FITZ	**Fitzroy Crossi**	**52.96**	**260**	P		**P**	**16 39 47.2**	**-0.2**
FITZ				IAmb		IAmb	16 39 48.2	
	comp=Z,9.0nm,0.7s							
SOEI	**Soe**	**55.96**	**270**	P		**P**	**16 40 09.8**	**+1.2**
TNTI	**Ternate**	**56.29**	**283**	P		**P**	**16 40 10.8**	**+0.1**
TNTI				IAmb		IAmb	16 40 12.2	
	comp=Z,27nm,0.8s							
BATI	**Baumata**	**56.42**	**269**	P		**P**	**16 40 12.2**	**+0.4**
	comp=Z,39nm,0.8s,baz=127,slow=5.1,SNR=2.9							
PSA00	**Pilbara Seismi**	**57.87**	**255**	P		**P**	**16 40 20.9**	**-0.6**
PSA00				IAmb		IAmb	16 40 22.1	
	comp=Z,31nm,0.7s							
PSA00	**Pilbara Seismi**	**57.87**	**255**	P		**P**	**16 40 20.2**	**-1.4**
PSA00				IAmb		IAmb	16 40 21.3	
	comp=Z,19nm,0.8s							
MEEK	**Meekatharra**	**58.43**	**249**	P		**P**	**16 40 24.7**	**-0.5**
	baz=59,SNR=5.3							
KLBR	**Kellerberrin**	**58.85**	**243**	P		**P**	**16 40 27.5**	**-0.5**
	baz=60,SNR=12							
NWAO	**Narrogin (SRO)**	**59.24**	**242**	P		**P**	**16 40 30.2**	**-0.3**
	comp=Z,9.4nm,0.9s,baz=83,slow=14,SNR=1.8							
NWAO	**Narrogin (SRO)**	**59.24**	**242**	P		**P**	**16 40 31.1**	**+0.5**
	baz=60,SNR=3.7							
NWAO	**Narrogin (SRO)**	**59.24**	**242**	P		**P**	**16 40 30.4**	**-0.2**
NWAO				IAmb		IAmb	16 40 49.7	
	comp=Z,43nm,1.3s							
LUWI	**Luwuk**	**59.95**	**279**	P		**P**	**16 40 35.2**	**-0.3**
MUN	**Mundaring**	**60.15**	**243**	P		**P**	**16 40 36.8**	**+0.2**
	baz=61,SNR=3.2							
MORW	**Morawa**	**60.49**	**246**	P		**P**	**16 40 38.7**	**-0.2**
	baz=61,SNR=6.4							
MORW	**Morawa**	**60.49**	**246**	P		**P**	**16 40 38.1**	**-0.8**
MORW				IAmb		IAmb	16 40 40.8	
	comp=Z,11nm,0.8s							
KAPI	**Kappang**	**61.56**	**274**	P		**P**	**16 40 46.1**	**-0.1**
	comp=Z,5.9nm,0.3s,baz=144,slow=5.5,SNR=5.1							
KAPI	**Kappang**	**61.56**	**274**	P		**P**	**16 40 45.9**	**-0.2**
KAPI				IAmb		IAmb	16 40 46.8	
	comp=Z,10nm,0.8s							
GIRL	**Giralia**	**62.87**	**253**	P		**P**	**16 40 55.8**	**+1.3**
	baz=64,SNR=5.2							
GIRL	**Giralia**	**62.87**	**253**	P		**P**	**16 40 55.4**	**+0.9**
JAGI	**Jajag, Banyuwa**	**65.94**	**268**	P		**P**	**16 41 12.6**	**-1.4**
MJAR	**Matsushiro Arr**	**67.61**	**323**	P		**P**	**16 41 23.6**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=159,slow=6.1,SNR=9.8							
MJAR	**Matsushiro Arr**	**67.61**	**323**	P		**P**	**16 41 23.5**	**-0.4**
MAJO	**Matsushiro**	**67.61**	**323**	P		**P**	**16 41 23.8**	**-0.2**
MAJO				IAmb		IAmb	16 41 24.2	
	comp=Z,20nm,1.4s							
KKM	**Kota Kinabalu**	**68.56**	**284**	P		**P**	**16 41 30.2**	**-0.1**
KKM				IAmb		IAmb	16 41 57.3	
	comp=Z,29nm,1.3s							
UGM	**Wanagama**	**69.54**	**268**	P		**P**	**16 41 36.0**	**-0.1**
JHS	**Saijyo**	**69.61**	**319**	P		**P**	**16 41 37.0**	**+1.0**
JHS				IAmb		IAmb	16 41 50.9	
	comp=Z,50nm,1.5s							
ASAJ	**Asahikawa**	**70.97**	**331**	P		**P**	**16 41 44.8**	**+1.0**
	comp=Z,3.4nm,0.7s,baz=126,slow=8.7,SNR=2.2							
SSLB	**Suanglung**	**71.99**	**303**	P		**P**	**16 41 49.3**	**-1.0**
SSLB				IAmb		IAmb	16 41 50.4	
	comp=Z,16nm,1.0s							
TPUB	**Ta-pu**	**72.01**	**302**	P		**P**	**16 41 49.6**	**-0.8**
CISI	**Cisompet, Garu**	**72.22**	**268**	P		**P**	**16 41 51.0**	**-0.9**
QSPA	**South Pole Qui**	**72.43**	**180**	P		**P**	**16 41 52.7**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=72,slow=2.6,SNR=3.6							
QSPA	**South Pole Qui**	**72.43**	**180**	P		**P**	**16 41 53.0**	**+0.8**
QSPA				IAmb		IAmb	16 41 56.4	
	comp=Z,6.7nm,1.2s							
KSM	**Kuching**	**72.54**	**277**	P		**P**	**16 41 54.3**	**+0.7**
KSM				IAmb		IAmb	16 41 55.6	
	comp=Z,31nm,0.9s							
PETK	**Petropavlovsk-**	**73.38**	**345**	P		**P**	**16 41 57.6**	**+0.1**
	comp=Z,6.9nm,1.0s,baz=129,slow=8.1,SNR=2.1							
KSRS	**Korea Array**	**74.42**	**318**	P		**P**	**16 42 04.0**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=125,slow=6.6,SNR=5.4							
KMRM	**Mail Ridge**	**76.87**	**40**	P		**P**	**16 42 19.0**	**+1.6**
KMRM				IAmb		IAmb	16 42 19.8	
	comp=Z,24nm,1.0s							
MWC	**Mount Wilson**	**77.23**	**48**	P		**P**	**16 42 20.2**	**+0.5**
MWC				IAmb		IAmb	16 42 21.0	
	comp=Z,5.9nm,0.7s							
ESJX	**Sierra Juarez**	**77.62**	**51**	P		**P**	**16 42 22.2**	**+0.3**
NJ2	**Nanjing**	**77.67**	**309**	*e*P		**P**	**16 42 22.5**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,11nm,0.5s							
ISA	**Isabella, Lake**	**77.70**	**46**	P		**P**	**16 42 22.7**	**+0.6**
MNAI	**Manna**	**77.76**	**269**	P		**P**	**16 42 23.1**	**+0.3**
RMX	**La Rumorosa**	**77.82**	**50**	P		**P**	**16 42 23.1**	**+0.2**
AFDM	**Forest Hills D**	**77.84**	**42**	P		**P**	**16 42 22.9**	**+0.2**
MDPB	**Devils Postpil**	**78.35**	**44**	P		**P**	**16 42 26.2**	**+0.4**
YBH	**Yreka Blue Hor**	**78.38**	**39**	P		**P**	**16 42 26.5**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=153,slow=2.1,SNR=5.7							
YBH	**Yreka Blue Hor**	**78.38**	**39**	P		**P**	**16 42 26.5**	**+0.9**
OMMB	**Old Mammoth Mi**	**78.39**	**44**	P		**P**	**16 42 26.5**	**+0.5**
SLBS	**Sierra La Lagu**	**78.52**	**61**	P		**P**	**16 42 27.8**	**+1.1**
SLBS				IAmb		IAmb	16 42 29.6	
	comp=Z,8.1nm,1.2s							
WAKR	**Walker**	**78.59**	**43**	P		**P**	**16 42 27.7**	**+0.7**
BEKR	**Beckworth**	**78.75**	**42**	P		**P**	**16 42 28.2**	**+0.4**
PNTR	**Pine Nut**	**78.81**	**43**	P		**P**	**16 42 28.8**	**+0.7**
PNTR				IAmb		IAmb	16 42 30.0	
	comp=Z,9.0nm,0.8s							
LHV	**Little Huntoon**	**79.07**	**44**	P		**P**	**16 42 30.2**	**+1.0**
PAHR	**Pah Rah Range**	**79.29**	**42**	P		**P**	**16 42 31.0**	**+0.5**
NVAR	**Mina Array Bea**	**79.30**	**44**	P		**P**	**16 42 31.4**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=225,slow=8.7,SNR=17							
NVAR	**Mina Array Bea**	**79.30**	**44**	P		**P**	**16 42 31.3**	**+0.5**
NV11	**Mina Array Sit**	**79.40**	**44**	P		**P**	**16 42 31.6**	**+0.5**
KVN	**Kaiserville**	**79.77**	**43**	P		**P**	**16 42 33.6**	**+0.4**
TPH	**Tonopah**	**79.83**	**45**	P		**P**	**16 42 34.0**	**+0.5**
TPNV	**Topopah Spring**	**79.91**	**46**	P		**P**	**16 42 34.6**	**+0.7**
PRN	**Pahroc Range**	**80.96**	**46**	P		**P**	**16 42 39.8**	**+0.4**
TUC	**Tucson**	**81.62**	**52**	P		**P**	**16 42 43.7**	**+0.9**
TUC				IAmb		IAmb	16 42 45.4	
	comp=Z,4.8nm,0.9s							
LCMT	**Little Creek M**	**82.02**	**47**	P		**P**	**16 42 45.6**	**+0.9**
X16A	**Lo Mia Camp, P**	**82.09**	**50**	P		**P**	**16 42 46.1**	**+0.9**
X16A				IAmb		IAmb	16 42 48.2	
	comp=Z,5.5nm,0.9s							
IPM	**Ipoh**	**82.27**	**277**	P		**P**	**16 42 46.9**	**+0.5**
IPM				IAmb		IAmb	16 42 48.1	
	comp=Z,17nm,0.8s							
U15A	**North Rim**	**82.41**	**48**	P		**P**	**16 42 47.9**	**+0.9**
U15A				IAmb		IAmb	16 42 49.3	
	comp=Z,6.5nm,0.8s							
BELA	**Belgrano 2**	**82.46**	**173**	P		**P**	**16 42 46.6**	**+0.4**
ELK	**Elko**	**82.53**	**43**	P		**P**	**16 42 48.0**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=226,slow=4.8,SNR=8.1							
ELK	**Elko**	**82.53**	**43**	P		**P**	**16 42 47.6**	**+0.2**
RPSI	**Rantau Prapat**	**83.72**	**275**	P		**P**	**16 42 53.2**	**-0.4**
RPSI				IAmb		IAmb	16 42 54.5	
	comp=Z,11nm,0.7s							
ENH	**Enshi**	**84.02**	**304**	P		**P**	**16 42 55.9**	**+1.1**
ENH				IAmb		IAmb	16 42 57.0	
	comp=Z,15nm,1.0s							
MAW	**Mawson**	**84.09**	**200**	P		**P**	**16 42 54.7**	**+0.4**
	comp=Z,1.8nm,0.4s,baz=147,slow=3.6,SNR=13							
MAW	**Mawson**	**84.09**	**200**	P		**P**	**16 42 55.1**	**+0.8**
	baz=84,SNR=8.4							
MAW	**Mawson**	**84.09**	**200**	IAmb		IAmb	16 42 55.6	
	comp=Z,0.5nm,0.6s							
HLID	**Hailey**	**84.49**	**41**	P		**P**	**16 42 57.5**	**+0.5**
GSI	**Gunungsitoli**	**84.58**	**273**	P		**P**	**16 42 57.2**	**-0.7**
ILAR	**Eielson Array**	**85.64**	**13**	P		**P**	**16 43 01.1**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=223,slow=5.3,SNR=13							
TXAR	**Lajitas Array**	**85.94**	**58**	P		**P**	**16 43 05.9**	**+1.7**
	comp=Z,3.1nm,0.8s,baz=221,slow=6.3,SNR=19							
TXAR	**Lajitas Array**	**85.94**	**58**	P		**P**	**16 43 05.2**	**+1.0**
HHC	**Hu-ho-hao-te**	**86.99**	**314**	*e*P		**P**	**16 43 08.8**	**-0.1**
HHC				pmax		pmax		
	comp=Z,14nm,1.1s							
HHC				pmax		pmax		
	comp=Z,94nm,5.3s							
PDAR	**Pinedale Array**	**87.22**	**43**	P		**P**	**16 43 10.6**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=203,slow=3.1,SNR=11							
PDAR	**Pinedale Array**	**87.22**	**43**	P		**P**	**16 43 10.1**	**0.0**
CMAR	**Chiang Mai Arr**	**88.68**	**290**	P		**P**	**16 43 18.4**	**+1.2**
	comp=Z,2.4nm,0.9s,baz=112,slow=3.0,SNR=9.1							
CMAR	**Chiang Mai Arr**	**88.68**	**290**	P		**P**	**16 43 17.8**	**+0.6**
BUR08	**Bucovina Ar. S**	**144.30**	**332**			**PKPab**	**16 49 55.9**	**+0.3**
BURAR	**Bucovina Array**	**144.31**	**332**			**PKPab**	**16 49 55.8**	**+0.2**
KOLS	**Kolonicke sedl**	**144.50**	**336**	*e*PKP		**PKPdf**	**16 49 55.4**	**-0.2**
BR131	**Keskin Array S**	**144.50**	**315**	PKPdf		**PKPdf**	**16 49 56.0**	**0.0**
BRTR	**Keskin Array B**	**144.50**	**315**	PKP		PKPbc	16 49 56.2	+0.1
	comp=Z,2.2nm,0.7s,baz=104,slow=5.2,SNR=6.3							
BRTR	**Keskin Array B**	**144.50**	**315**	PKPdf		**PKPdf**	**16 49 55.8**	**-0.3**
CLL	**Collm**	**145.16**	**347**	*e*PKPbc		**PKPbc**	**16 49 58.0**	**+0.4**
DPC	**Dobruska-Polom**	**145.25**	**343**	*e*PKP		**PKPab**	**16 49 58.8**	**-0.2**
MLR	**Muntele Rosu**	**145.53**	**329**	PKPbc		**PKPbc**	**16 49 58.7**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=322,slow=7.8,SNR=3.5							
MMAI	**Mount Meron Ar**	**145.89**	**303**	PKPbc		**PKPbc**	**16 50 01.1**	**+0.7**
	comp=Z,3.4nm,0.4s,baz=63,slow=7.6,SNR=8.9							
MBAR	**Mbarara**	**145.97**	**241**			**PKPbc**	**16 50 02.0**	**+0.7**
VYHS	**Vyhne**	**146.11**	**339**	*e*PKP		**PKPbc**	**16 50 01.2**	**+0.8**
KHC	**Kasperske Hory**	**147.07**	**345**	*e*PKP		**PKPbc**	**16 50 03.4**	**+0.4**
GERES	**GERESS Array B**	**147.31**	**345**	PKPbc		**PKPbc**	**16 50 03.6**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=16,slow=4.4,SNR=7.1							
DAVOX	**Davos/Dischmat**	**150.10**	**348**	PKPbc		**PKPbc**	**16 50 10.9**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=98,slow=2.3,SNR=7.0							

WEL 09 16:32:28.5, 45°S±2°×16°7E±°, h106km±3km, M3.6/12, MLv3.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=68.4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLZ	**Mavora Lakes**	**0.51**	**108**	P	Pn	16 32 45.8	+0.7
MLZ				S	Sn	16 32 58.1	+0.5
MSZ	**Milford Sound**	**0.65**	**34**	P	Pn	16 32 46.4	+0.4
MSZ				S	Sn	16 32 58.7	-0.5
WHZ	**Wether Hill Ro**	**0.77**	**152**	P	Pn	16 32 48.0	+0.8
WHZ				S	Sn	16 33 02.0	+0.7
PYZ	**Puysegur Point**	**1.09**	**208**	P	Pn	16 32 50.4	0.0
PYZ				S	Sn	16 33 06.6	-0.2
WKZ	**Wanaka**	**1.19**	**72**	P	Pn	16 32 52.6	+1.0
WKZ				S	Sn	16 33 09.8	+0.9
EAZ	**Earnscleugh**	**1.33**	**92**	P	Pn	16 32 54.3	+1.2
EAZ				S	Sn	16 33 12.2	+0.4
JCZ	**Jackson Bay**	**1.50**	**41**	P	Pn	16 32 54.9	-0.2
JCZ				S	Sn	16 33 13.7	-1.6
APZ	**The Paps**	**1.67**	**167**	P	Pn	16 32 57.8	+0.6
APZ				S	Sn	16 33 19.4	+0.4
TUZ	**Tuapeka**	**1.72**	**116**	P	Pn	16 32 59.1	+1.4
TUZ				S	Sn	16 33 20.0	0.0
SYZ	**Scrubby Hill**	**1.79**	**139**	P	Pn	16 32 59.8	+1.2
SYZ				S	Sn	16 33 22.1	+0.6
LBZ	**Lake Benmore**	**2.13**	**68**	P	Pn	16 33 02.5	-0.5
LBZ				S	Sn	16 33 29.2	-0.2
ODZ	**Otahua Downs**	**2.29**	**87**	P	Pn	16 33 05.2	+0.3
ODZ				S	Sn	16 33 31.6	-1.3
HHSZ	**Highcliff Hill**	**2.33**	**108**	P	Pn	16 33 06.6	+1.1
HHSZ				S	Sn	16 33 33.5	-0.5
FOZ	**Fox Glacier**	**2.40**	**46**	P	Pn	16 33 05.3	-1.1
RPZ	**Rata Peaks**	**3.00**	**61**	P	Pn	16 33 13.0	-1.4
RPZ				S	Sn	16 33 48.0	-1.8
WVZ	**Waitaha Valley**	**3.20**	**49**	P	Pn	16 33 15.2	-1.8
WVZ				S	Sn	16 33 50.5	-4.0
OXZ	**Oxford**	**3.81**	**62**	P	Pn	16 33 23.4	-1.9
OXZ				S	Sn	16 34 05.3	-3.8
INZ	**Inchbonnie**	**3.82**	**51**	P	Pn	16 33 23.6	-1.7
INZ				S	Sn	16 34 06.8	-2.6
MQZ	**McQueen's Vall**	**4.03**	**70**	P	Pn	16 33 26.7	-1.5
LTZ	**Lake Taylor**	**4.26**	**57**	P	Pn	16 33 29.0	-2.3
LTZ				S	Sn	16 34 17.4	-2.5
OKCZ	**Okains Bay**	**4.30**	**72**	P	Pn	16 33 31.3	-0.5
OKCZ				S	Sn	16 34 16.8	-4.1
DSZ	**Denniston Nort**	**4.71**	**44**	P	Pn	16 33 35.2	-2.1
DSZ				S	Sn	16 34 26.1	-4.8
QRZ	**Quartz Range**	**5.76**	**42**	P	Pn	16 33 50.2	-1.4
QRZ				S	Sn	16 34 52.3	-4.0
NNZ	**Nelson**	**5.90**	**50**	P	Pn	16 33 53.0	-0.5
DUWZ	**D'Urville Isla**	**6.49**	**49**	P	Pn	16 34 01.2	-0.2
CAW	**Cannon Point**	**6.93**	**56**	P	Pn	16 34 05.0	-2.4
CAW				S	Sn	16 35 18.9	-5.8
MTW	**Mount Morrison**	**7.16**	**58**	P	Pn	16 34 08.2	-2.3
NEZ	**North Egmont**	**7.73**	**42**	P	Pn	16 34 19.1	+0.8
VRZ	**Vera Road**	**8.16**	**44**	P	Pn	16 34 23.7	-0.4
KRVZ	**Karewarewa**	**8.63**	**48**	P	Pn	16 34 28.2	-2.5
HIZ	**Hauiti**	**8.69**	**42**	P	Pn	16 34 29.2	-2.0
WCZ	**Waipu Caves**	**10.65**	**32**	P	Pn	16 34 58.2	+0.3

*ISU **09** 16:46:53.0, 41.11N×71.81E, h5km*
*KRNET **09** 16:46:53.8±0.1, 41.11N×71.72E, h16km, mb3.2*
*SOME **09** 16:46:54.9, 41.25N×71.77E, h0km*
*NNC **09** 16:46:54.7±2.0, 41.06N×71.84E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=17.0km s-min=5.9km az=5.0*
ISC 09 16:46:55.2±0.8, 41.02N±0.03×71.68E±0.02, h11km±5km, n60, σ1s81/102, 25C-14D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NAM	**Namangan**	**0.03**	**205**	*e*P	**Pg**	**16 46 56.9**	**-0.4**
NAM				*e*S	**Sg**	**16 46 59.9**	**+1.2**
OHH	**Osh**	**0.98**	**120**	⇓*i*P	**Pb**	**16 47 12.7**	**-1.5**
	baz=25						
OHH				⇓*i*S	**Sb**	**16 47 27.0**	**-0.1**
	baz=25						
OHH	**Osh**	**0.98**	**120**	*e*P	**Pb**	**16 47 12.4**	**-1.8**
OHH				*e*S	**Sb**	**16 47 25.5**	**-1.6**
ARSB	**Arslanbob**	**1.03**	**73**	⇓*i*P	**Pg**	**16 47 12.3**	**-2.8**
	baz=77						
ARSB				⇓*i*S	**Sg**	**16 47 26.3**	**-2.2**
	baz=77						
ARSB	**Arslanbob**	**1.03**	**73**	*e*P	**Pg**	**16 47 11.9**	**-3.2**
ARSB				*e*S	**Sg**	**16 47 25.4**	**-3.1**
BTK	**Batken**	**1.16**	**215**	⇑*i*P	**Pn**	**16 47 17.5**	**0.0**
	baz=13						
BTK				⇑*i*S	**Sn**	**16 47 35.0**	**+1.5**
	baz=13						
BTK	**Batken**	**1.16**	**215**	*e*P	**Pn**	**16 47 17.0**	**-0.5**
BTK				*i*S	**Sn**	**16 47 36.0**	**+2.5**
CHMG	**Chimgan**	**1.36**	**293**	*e*P	**Pb**	**16 47 20.8**	**0.0**
CHMG				*e*S	**Sn**	**16 47 38.7**	**+0.2**
CHRV	**Charvak**	**1.44**	**296**	*e*P	**Pg**	**16 47 21.8**	**-1.1**
CHRV				*e*S	**Sn**	**16 47 40.4**	**+0.1**
MNAS	**Manas**	**1.59**	**23**	⇑*i*P	**Pn**	**16 47 22.2**	**-1.3**
	baz=23						
MNAS				⇑*i*S	**Sn**	**16 47 42.8**	**-1.3**
	baz=23						
IUG	**Iuzhnay**	**1.67**	**313**	*e*P	**Pg**	**16 47 25.6**	**-1.6**
	534nm,0.3s						
IUG				*e*S	**Sg**	**16 47 48.0**	**-1.0**
	335nm,0.2s						
IUG	**Iuzhnay**	**1.67**	**313**	P	**Pg**	**16 47 25.6**	**-1.6**
	534nm,0.3s						
IUG				S	**Sg**	**16 47 48.0**	**-1.0**
	335nm,0.2s						
TAS	**Tashkent**	**1.82**	**280**	⇑*e*P	**Pg**	**16 47 28.0**	**-2.2**
	baz=78						
TAS				⇑*e*S	**Sg**	**16 47 52.8**	**-1.0**
	baz=78						
AML	**Almayashu**	**1.88**	**53**	⇑*i*P	**Pn**	**16 47 27.0**	**-0.6**
	baz=55						
AML				⇑*i*S	**Sn**	**16 47 51.4**	**-0.1**
	baz=55						
DZA	**Taraz**	**1.89**	**352**	*e*P	**Pb**	**16 47 28.3**	**-1.4**
	56nm,0.1s						
DZA				⇓*i*S	**Sn**	**16 47 52.4**	**+1.2**
	271nm,0.2s						
DZA	**Taraz**	**1.89**	**352**	P	**Pb**	**16 47 28.3**	**-1.4**
	56nm,0.1s						
DZA				S	**Sn**	**16 47 52.4**	**+1.2**
	271nm,0.2s						
MRKS	**Merke**	**2.07**	**33**	*e*P	**Pb**	**16 47 31.6**	**-1.3**
	21nm,0.3s						
MRKS				*e*S	**Sn**	**16 47 57.6**	**+1.6**
	102nm,0.3s						
MRKS	**Merke**	**2.07**	**33**	Pg	**Pb**	**16 47 31.6**	**-1.3**
	21nm,0.3s						
MRKS				Lg	Lg	16 47 57.6	
	102nm,0.3s						
ARLS	**Aral**	**2.16**	**66**	⇑*i*P	**Pn**	**16 47 32.2**	**+0.9**
	baz=68						
ARLS				⇑*i*S	**Sn**	**16 47 59.6**	**+1.5**
	baz=68						
KK31	**Karatay Array**	**2.25**	**338**	⇑Pn	**Pn**	**16 47 32.9**	**+0.4**
	7.2nm,0.2s,baz=149,slow=15,SNR=382			⇑Sn			
KK31					**Sb**	**16 48 02.6**	**-1.3**
	46nm,0.6s,baz=159,slow=31,SNR=8.3						
EKS2	**Erkin-Say**	**2.27**	**43**	⇑*i*P	**Pn**	**16 47 33.1**	**+0.3**
	baz=44						
EKS2				⇑*i*S	**Sn**	**16 48 02.0**	**+1.2**
	baz=44						
BRLS	**Borolday**	**2.43**	**326**	*e*P	**Pn**	**16 47 35.4**	**+0.4**
	24nm,0.3s						
BRLS				*e*S	**Sn**	**16 48 04.4**	**-0.2**
	157nm,0.4s						
BRLS	**Borolday**	**2.43**	**326**	Pg	**Pn**	**16 47 35.3**	**+0.4**
	24nm,0.3s						
BRLS				Lg	Lg	16 48 04.4	
	157nm,0.4s						
UCH	**Uchtor**	**2.44**	**60**	⇓*i*P	**Pn**	**16 47 36.0**	**+0.5**
	baz=61						
UCH				⇓*i*S	**Sn**	**16 48 06.9**	**+1.3**
	baz=61						
AAK	**Ala-Archa**	**2.65**	**52**	⇑*i*P	**Pn**	**16 47 38.8**	**+0.7**
	baz=53						
AAK				⇑*i*S	**Sn**	**16 48 11.2**	**+0.9**
	baz=53						
AAK	**Ala-Archa**	**2.65**	**52**	⇓Pg	**Pb**	**16 47 40.6**	**-2.2**
	4.1nm,0.3s						
AAK				⇓Lg	Lg	16 48 14.3	
	36nm,0.8s						
FRU1	**Bishkek**	**2.84**	**50**	⇑*i*P	**Pn**	**16 47 41.0**	**+0.5**
	baz=51						
FRU1				⇑*i*S	**Sn**	**16 48 15.4**	**+0.7**
	baz=51						
KBK	**Karagaybulak**	**2.94**	**55**	⇑*i*P	**Pn**	**16 47 42.6**	**+0.6**
	baz=56						
KBK				⇑*i*S	**Sn**	**16 48 18.5**	**+1.1**
	baz=56						
CHMS	**Chumysh**	**3.02**	**48**	⇑*i*P	**Pn**	**16 47 43.5**	**+0.4**
	baz=49						
CHMS				⇑*i*S	**Sn**	**16 48 20.2**	**+0.9**
	baz=49						
USP	**Ospenovka**	**3.07**	**42**	⇑*i*P	**Pn**	**16 47 44.2**	**+0.5**
	baz=43						
USP				⇑*i*S	**Sn**	**16 48 21.1**	**+0.6**
	baz=43						
SGDS	**Sogindy**	**3.27**	**41**	Pg	**Pb**	**16 47 51.0**	**-2.3**
	2.4nm,0.6s						
SGDS				Lg	Lg	16 48 31.3	
	19nm,0.5s						
TKM2	**Tokmak 2**	**3.48**	**56**	⇓*i*P	**Pn**	**16 47 50.2**	**+0.6**
	baz=57						
TKM2				⇓*i*S	**Sn**	**16 48 31.5**	**+0.6**
	baz=57						
TKM2	**Tokmak 2**	**3.48**	**56**	⇑Pg	**Pb**	**16 47 56.5**	**-0.5**
	2.8nm,0.4s						
TKM2				⇓Lg	Lg	16 48 41.0	
	9.4nm,0.4s						
ULHL	**Ulahol**	**3.63**	**69**	⇓*e*P	**Pn**	**16 47 52.5**	**+0.9**
	baz=70						
ULHL				⇓*i*S	**Sn**	**16 48 35.4**	**+0.8**
	baz=70						
DGS	**Degeres**	**3.77**	**53**	*e*P	**Pb**	**16 48 01.9**	**+0.1**
	2.5nm,0.4s						
DGS				*e*S	**Sb**	**16 48 49.8**	**+2.3**
	15nm,0.5s						
DGS	**Degeres**	**3.77**	**53**	Pg	**Pb**	**16 48 01.9**	**+0.1**
	2.5nm,0.4s						
DGS				Lg	Lg	16 48 49.8	
	15nm,0.5s						
KST	**Kastek**	**3.78**	**56**	*e*P	**Pb**	**16 48 02.0**	**0.0**
	9.2nm,1.2s						
KST				*e*S	**Sb**	**16 48 50.0**	**+2.2**
	40nm,0.5s						
KST	**Kastek**	**3.78**	**56**	Pg	**Pb**	**16 48 02.0**	**0.0**
	9.2nm,1.2s						
KST				Lg	Lg	16 48 50.5	
	40nm,0.5s						
KRBS	**Karabastau**	**3.99**	**47**	*e*P	**Pb**	**16 48 05.7**	**+0.1**
	1.1nm,0.4s						
KRBS				*e*S	**Sb**	**16 48 56.3**	**+2.5**
	8.3nm,0.5s						
KRBS	**Karabastau**	**3.99**	**47**	Pg	**Pb**	**16 48 05.7**	**+0.1**
	1.1nm,0.4s						
KRBS				Lg	Lg	16 48 56.3	
	8.3nm,0.5s						
MTBS	**Maitube**	**4.12**	**58**	*e*P	**Pb**	**16 48 07.9**	**+0.1**
	1.9nm,0.1s						
MTBS				*e*S	**Sb**	**16 48 59.7**	**+2.2**
	17nm

s-min=11.5km az=12.0

ISC 09 17:09:34.6±0.5, 64.68N±0.02×17.56W±0.03, h10km, n49, σ1 91/55, mb3.8/12, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.09**	**266**	P	**Pg**	**17 09 36.0**	**-1.1**
	baz=271						
IDYN	**Dyngjuhals**	**0.14**	**36**	P	**Pg**	**17 09 36.8**	**-1.1**
	baz=31						
IGRF	**Grimsfjall**	**0.30**	**155**	P	**Pg**	**17 09 39.2**	**-1.5**
	baz=157						
IGRF				S	**Sg**	**17 09 44.0**	**-0.8**
	baz=157						
ISKR	**Skrokkalda**	**0.38**	**252**	P	**Pg**	**17 09 40.9**	**-1.2**
	baz=254						
IHUS	**Husbondi**	**0.39**	**187**	P	**Pg**	**17 09 41.0**	**-1.4**
	baz=188						
IVOT	**Vottur**	**0.44**	**158**	P	**Pg**	**17 09 41.9**	**-1.4**
	baz=159						
IJOK	**Jokulheimar**	**0.47**	**219**	P	**Pg**	**17 09 42.3**	**-1.4**
	baz=220						
IMKO	**Mokollar**	**0.60**	**59**	P	**Pg**	**17 09 44.2**	**-2.0**
	baz=58						
IIEY	**Innrieyrar**	**0.64**	**203**	P	**Pg**	**17 09 44.9**	**-2.0**
	baz=204						
ISVA	**Svartarkot**	**0.67**	**11**	P	**Pg**	**17 09 45.9**	**-1.7**
	baz=9.9						
ISVA				S	**Sg**	**17 09 55.8**	**-0.6**
	baz=9.9						
IKSK	**Karasker**	**0.70**	**137**	P	**Pg**	**17 09 45.6**	**-2.6**
	baz=138						
IKAL	**Kalfafell**	**0.74**	**185**	P	**Pg**	**17 09 46.6**	**-2.2**
	baz=185						
IVAT	**Vatnsfell**	**0.77**	**231**	P	**Pg**	**17 09 47.6**	**-1.9**
	baz=232						
IVSH	**V-Sauoahnukur**	**0.79**	**80**	S	**Sg**	**17 09 58.5**	**-1.8**
	baz=79						
IVSH				P	**Pg**	**17 09 47.2**	**-2.8**
	baz=79						
IHVE	**Hveravellir**	**0.88**	**283**	P	**Pg**	**17 09 49.2**	**-2.4**
	baz=284						
IHVE				S	**Sb**	**17 10 01.9**	**-2.1**
	baz=284						
IMEL	**Melhnausar**	**0.97**	**23**	P	**Pg**	**17 09 50.8**	**-2.5**
	baz=22						
IREN	**Reynihlio**	**1.01**	**15**	P	**Pg**	**17 09 51.5**	**-2.6**
	baz=15						
IREN				S	**Sg**	**17 10 05.0**	**-2.1**
	baz=15						
ISNB	**Snabyli**	**1.06**	**207**	P	**Pg**	**17 09 52.0**	**-2.9**
	baz=208						
IKVO	**Krokottuvotn**	**1.08**	**15**	P	**Pg**	**17 09 52.5**	**-2.8**
	baz=14						
IGRS	**Grimsstaoir**	**1.14**	**31**	P	**Pb**	**17 09 54.2**	**-2.2**
	baz=31						
IFED	**Fedgar**	**1.14**	**236**	P	**Pb**	**17 09 53.9**	**-2.5**
	baz=236						
IRJU	**Rjupnafell**	**1.17**	**205**	P	**Pb**	**17 09 54.1**	**-2.8**
	baz=206						
ISKI	**Skildingahlsh**	**1.22**	**10**	P	**Pn**	**17 09 55.0**	**-2.7**
	baz=9.8						
BORG	**Borgarnes**	**1.62**	**274**	Pg	**Pn**	**17 10 01.5**	**-1.7**
	24nm,0.3s,baz=102,slow=7.0,SNR=58						
BORG				Lg	Lg	17 10 24.0	
	17nm,0.3s,baz=257,slow=23,SNR=3.4						
SCO	**Scoresbysund**	**6.07**	**346**		**Pn**	**17 11 05.2**	**+1.0**
SCO	**Scoresbysund**	**6.07**	**346**	*e*	**Pn**	**17 11 01.4**	**-2.8**
	baz=175,slow=9.3						
SCO				*i* P	**Pn**	**17 11 05.0**	**+0.8**
SCO				*i* S	**Sn**	**17 12 18.9**	**+5.3**
EKA	**Eskdalemuir Ar**	**11.79**	**136**	Pn	**Pn**	**17 12 23.1**	**+0.5**
	baz=326,slow=13,SNR=12						
NOA	**NORSAR Array B**	**13.56**	**92**	LR	LR	17 18 19.1	
	comp=Z,40nm,20.3s,baz=285,slow=38						
FINES	**FINESS Array B**	**19.73**	**79**	P	**Pn**	**17 14 06.1**	**+0.7**
	0.1nm,0.3s,baz=311,slow=13,SNR=2.4						
CLL	**Collm**	**20.73**	**116**	*eP*	Pn	17 14 16.0	-1.3
CLL	**Collm**	**20.73**	**116**	P	**P**	**17 14 15.1**	**+0.2**
CLL				IAmb	IAmb	17 14 16.8	
	comp=Z,14nm,1.5s						
GRF	**Grafenberg Arr**	**21.36**	**121**	*eP*	**P**	**17 14 22.4**	**+0.6**
	comp=Z,7.1nm,1.2s,baz=324,slow=10						
KHC	**Kasperske Hory**	**22.70**	**118**	*eP*	**P**	**17 14 37.6**	**+1.4**
DPC	**Dobruska-Polom**	**22.79**	**113**	*eP*	**P**	**17 14 38.3**	**+1.2**
GERES	**GERESS Array B**	**22.98**	**119**	P	**P**	**17 14 41.0**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=330,slow=7.8,SNR=6.2						
GERES	**GERESS Array B**	**22.98**	**119**	P	**P**	**17 14 38.8**	**-0.4**
ESDC	**Sonseca Array**	**26.27**	**156**	P	**P**	**17 15 11.5**	**+1.6**
	comp=Z,1.1nm,0.9s,baz=346,slow=9.8,SNR=6.4						
ESDC	**Sonseca Array**	**26.27**	**156**	P	**P**	**17 15 09.9**	**0.0**
BRTR	**Keskin Array B**	**28.51**	**105**	P	**P**	**17 16 58.6**	**+1.8**
	comp=Z,0.8nm,0.9s,baz=353,slow=10,SNR=3.1						
ILAR	**Eielson Array**	**45.66**	**332**	P	**P**	**17 17 55.4**	**+0.6**
	comp=Z,0.9nm,1.0s,baz=30,slow=6.5,SNR=5.9						
ILAR				PcP	**PcP**	**17 19 34.1**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=41,slow=2.0,SNR=5.3						
ZALV	**Zalesovo Beam**	**47.64**	**51**	P	**P**	**17 18 12.1**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=316,slow=10,SNR=2.6						
ZALV	**Zalesovo Beam**	**47.64**	**51**	P	**P**	**17 18 10.5**	**+0.1**
KURK	**Kurchatov**	**48.13**	**58**	P	**P**	**17 18 12.8**	**-1.4**
KURK				IAmb	IAmb	17 18 19.4	
	comp=Z,4.9nm,1.1s						
MKAR	**Makanchi Array**	**52.74**	**58**	P	**P**	**17 18 50.8**	**+1.7**
	comp=Z,1.0nm,0.9s,baz=310,slow=7.6,SNR=5.1						
PDAR	**Pinedale Array**	**53.15**	**293**	P	**P**	**17 18 53.0**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=44,slow=8.7,SNR=7.1						
PDAR	**Pinedale Array**	**53.15**	**293**	P	**P**	**17 18 51.3**	**-1.2**
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	**P**	**17 18 53.1**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=344,slow=9.0,SNR=2.4						
BTK	**Batken**	**53.98**	**72**	P	**P**	**17 18 59.1**	**+0.7**
BTK				IAmb	IAmb	17 19 03.6	
	comp=Z,6.1nm,1.1s						
CMAR	**Chiang Mai Arr**	**84.15**	**59**	P	**P**	**17 22 07.2**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=316,slow=6.4,SNR=4.9						

*IDC **09** 17:15:57.2±0.9, 19.68S×66.68W, h243km±12km, mb3.1/3, mb1 3.2/7, mb1mx3.1/26, mbtmp3.7/7, Error ellipse: s-maj=21.9km s-min=9.9km az=101.0*

ISC 09 17:15:57.8±0.9, 19.69S±0.07×66.67W±0.1, h250km, n7, σ1 41/9, mb3.5/3, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.57**	**215**	P	**Pn**	**17 16 57.4**	**+0.3**
	1.1nm,0.3s,baz=19,slow=6.7,SNR=18						
LVC				S	**S**	**17 17 42.2**	**-1.7**
	3.6nm,0.3s,baz=117,slow=22,SNR=20						
LPAZ	**La Paz**	**3.65**	**338**	P	**Pn**	**17 16 58.7**	**+0.4**
	1.6nm,0.3s,baz=128,slow=4.7,SNR=40						
LPAZ				S	**S**	**17 17 44.5**	**-1.6**
	0.5nm,0.3s,baz=280,slow=21,SNR=12						
SIV	**San Ignacio**	**6.49**	**56**	P	**Pn**	**17 17 31.6**	**-0.5**
	1.5nm,0.3s,baz=266,slow=8.7,SNR=31						
BDFB	**Brasilia**	**18.24**	**80**	P	**P**	**17 19 54.6**	**+1.4**
	0.5nm,0.3s,baz=284,slow=3.0,SNR=3.0						
PLCA	**Paso Flores**	**21.23**	**188**	P	**P**	**17 20 25.8**	**+1.2**
	1.1nm,0.7s,baz=0.4,slow=12,SNR=5.3						
PDAR	**Pinedale Array**	**73.63**	**329**	P	**P**	**17 27 05.2**	**+1.0**
	0.3nm,0.5s,baz=110,slow=7.8,SNR=2.5						
TORD	**Torodi Ar. Bea**	**74.78**	**70**	P	**P**	**17 27 09.9**	**-1.2**
	0.7nm,0.4s,baz=254,slow=5.1,SNR=12						

ASRS 09 17:25:31.1±0.3, 52°N±1°, 9°6E±°, h5km, MLh3.6/16, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TDJR	**Todzha**	**0.65**	**9**	Pg	Pn	17 25 46.1	-1.0
TDJR				Sg	Sb	17 25 55.4	+1.0
KZLR	**Kyzyl**	**0.93**	**267**	Pg	Pn	17 25 51.4	+0.6
KZLR				Sg	Sn	17 26 04.1	-0.4
KNGR	**Kungurtug, Tuv**	**1.52**	**139**	Pg	Pb	17 25 59.8	-0.1
KNGR				Sg	Sn	17 26 19.3	0.0
ERNS	**Erzin**	**1.58**	**199**	Pg	Pg	17 26 01.1	-0.2
ERNS				Sg	Sg	17 26 22.0	+0.3
ARDR	**Aradan**	**1.75**	**299**	Pg	Pg	17 26 06.8	+2.1
ARDR				Sg	Sg	17 26 31.6	+4.3
BLRR	**Bol'shaya Rech**	**2.50**	**302**	Pg	Pg	17 26 20.9	+1.9
BLRR				Sg	Sg	17 26 52.6	+1.1
ORL	**Orlik**	**2.51**	**70**	Pg	Pb	17 26 17.0	+0.3
ORL				Sg	Sb	17 26 48.0	+0.1
DJOS	**Djoyskaya Sosn**	**2.98**	**292**	Pg	Pg	17 26 29.1	+1.0
DJOS				Sg	Sg	17 27 07.5	+0.8
CERR	**Cheremushki**	**2.99**	**293**	Pg	Pg	17 26 30.3	+2.0
CERR				Sg	Sg	17 27 07.7	+0.7
DJO	**Djoy, Khakassi**	**3.08**	**291**	Pg	Pg	17 26 31.1	+1.1
DJO				Sg	Sg	17 27 09.4	-0.4
ORY	**Orie**	**3.29**	**352**	Pg	Pg	17 26 35.5	+1.4
ORY				Sg	Sb	17 27 13.0	+2.8
KTRR	**Kuturchin**	**3.35**	**343**	Pg	Pg	17 26 33.5	-1.7
KTRR				Sg	Sb	17 27 15.1	+3.2
TEL	**Teeli**	**3.67**	**261**	Pg	Pg	17 26 42.7	+1.3
TEL				Sg	Sg	17 27 26.6	-2.4
VEH	**Verkhnyaya Baz**	**3.75**	**296**	Pg	Pg	17 26 44.0	+1.2
VEH				Sg	Sg	17 27 32.2	+0.9
SHRR	**Shira**	**4.43**	**310**	Pg	Pg	17 26 56.2	+0.4
SHRR				Sg	Sg	17 27 56.5	+3.3
TASR	**Tashtagol**	**5.05**	**285**	Pg	Pg	17 27 09.4	+1.6
TASR				Sg	Sg	17 28 11.9	-1.4
CUR	**Chagan-Uzun**	**5.08**	**254**	Pg	Pg	17 27 08.2	-0.2
CUR				Sg	Sg	17 28 10.0	-4.1
ULGR	**Ulagan, Altay**	**5.15**	**260**	Pg	Pg	17 27 11.0	+1.4
ULGR				Sg	Sg	17 28 15.7	-0.6
ARTR	**Artybash**	**5.38**	**274**	Pg	Pg	17 27 15.3	+1.3
ARTR				Sg	Sg	17 28 26.6	+3.0
AKAR	**Aktash**	**5.44**	**258**	Pg	Pg	17 27 14.9	-0.4
AKAR				Sg	Sg	17 28 23.1	-2.7

*IDC **09** 17:35:41.6±0.6, 54.76S×129.59W, h0km, mb4.0/12, mb1 4.2/12, mb1mx4.1/32, mbtmp4.0/12, MS3.9/10, Ms1 3.9/10, ms1mx3.8/26, Error ellipse: s-maj=25.0km s-min=17.3km az=161.0*

*NEIC **09** 17:35:43.0±2.9, 55.0S±0.1×129.5W±0.3, h10km±1km, mb4.4/8, Error ellipse: s-maj=31.4km s-min=14.8km az=291.0*

*GCMT **09** 17:35:48.0±0.3, 55.09S±0.02×129.43W±0.03, h20km±2km, MW4.9/79, Moment Tensor Solution.. s22,c29; s79,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_rr0.03±.14; $M_{\theta\theta}$1.26±.15; $M_{\phi\phi}$-1.28±.12; $M_r\theta$1.39±.29; $M_{\theta\phi}$2.30±.10; $M_r\phi$0.38±.21; Best double couple: $M_0$2.96200×10^{16} NP1:$\chi_0$12.00000°,δ67.00000°,λ169.00000°. NP2: $\phi_0$106.00000°,δ80.00000°,λ24.00000°. Principal axes: T 3.2260, Plg24.0000°, Azm331.0000°; N -0.5210, Plg64.0000°, Azm127.0000°; P -2.6990, Plg9.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 17:35:42.9±0.6, 54.8S±0.1×129.5W±0.1, h10km, n60, σ1 25/30, mb4.1/12, MS4.1/13, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**32.66**	**202**	P	**P**	**17 42 16.6**	**+2.1**
	1.5nm,1.1s,baz=80,slow=7.3,SNR=6.8						
VNDA				LR	LR	17 52 46.0	
	comp=Z,86nm,18.8s,baz=86,slow=31						
VNDA	**Vanda**	**32.66**	**202**	P	**P**	**17 42 16.0**	**+1.5**
VNDA				IAmb	IAmb	17 42 26.3	
	comp=Z,4.7nm,1.0s						
TBI	**Tubuai**	**34.79**	**327**	*e*LR	LR	17 51 42.3	
	comp=Z,567nm,29.2s,baz=162						
TBI	**Tubuai**	**34.79**	**327**	*e*T	T	18 19 22.4	
	comp=Z,26nm,0.3s						
QSPA	**South Pole Qui**	**35.35**	**180**	P	**P**	**17 42 38.6**	**+0.5**
	comp=Z,5.2nm,0.9s,baz=98,slow=5.5,SNR=13						
QSPA	**South Pole Qui**	**35.35**	**180**	P	**P**	**17 42 38.0**	**-0.2**
BELA	**Belgrano 2**	**38.11**	**160**	P	**P**	**17 42 59.9**	**-1.5**
MEH	**Mehetia**	**39.54**	**332**	*e*T	T	18 25 16.5	
	comp=Z,3.2nm,0.1s						
PPT2	**Papeete2**	**40.24**	**330**	*e*LR	LR	17 54 28.0	
	comp=Z,662nm,25.8s,baz=167						
PPT	**Papeete**	**40.26**	**330**	LR	LR	17 55 32.9	
	comp=Z,278nm,19.5s,baz=178,slow=30						
RAR	**Rarotonga**	**40.57**	**314**	LR	LR	17 55 51.7	
	comp=Z,130nm,19.3s,baz=152,slow=30						
H03S2	**Juan Fernandez**	**40.71**	**80**	T	T	18 26 51.2	
	baz=221,slow=74,SNR=62						
H03S1	**Juan Fernandez**	**40.72**	**80**	T	T	18 26 49.8	
	baz=221,slow=74,SNR=68						
H03S3	**Juan Fernandez**	**40.73**	**80**	T	T	18 26 50.5	
	baz=221,slow=74,SNR=73						
PLCA	**Paso Flores**	**40.80**	**95**	P	**P**	**17 43 24.5**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=244,slow=14,SNR=3.1						
PLCA	**Paso Flores**	**40.80**	**95**	P	**P**	**17 43 21.4**	**-2.8**
PLCA				IAmb	IAmb	17 43 34.6	
	comp=Z,13nm,1.2s						
H03N3	**Juan Fernandez**	**40.99**	**80**	T	T	18 27 07.9	
	baz=224,slow=72,SNR=424						
H03N2	**Juan Fernandez**	**41.00**	**80**	T	T	18 26 59.7	
	baz=224,slow=72,SNR=541						
H03N1	**Juan Fernandez**	**41.01**	**80**	T	T	18 27 04.8	
	baz=224,slow=72,SNR=522						
VAH	**Vaihoa**	**41.95**	**333**	*e*T	T	18 28 16.7	
	comp=Z,29nm,0.3s						
PMOR	**Pomariorio Ree**	**42.24**	**333**	*e*T	T	18 28 39.3	
	comp=Z,3.1nm,0.3s						
LVC	**Limon Verde**	**54.94**	**80**	LR	LR	18 02 25.5	
	comp=Z,70nm,21.9s,baz=230,slow=29						
DZM	**Mont Dzumac**	**57.36**	**278**	*e*LR	LR	18 02 21.7	
	comp=Z,186nm,27.8s						
MAW	**Mawson**	**57.54**	**186**	P	**P**	**17 45 32.0**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=196,slow=12,SNR=3.8						
MAW				LR	LR	18 07 43.6	
	comp=Z,90nm,20.8s,baz=218,slow=33						
MAW	**Mawson**	**57.54**	**186**	P	**P**	**17 45 30.6**	**-1.2**
CPUP	**Villa Florida**	**58.74**	**92**	P	**P**	**17 45 40.5**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=215,slow=9.3,SNR=3.5						
NNA	**Nana**	**59.21**	**65**	LR	LR	18 03 55.2	
	comp=Z,82nm,21.7s,baz=212,slow=29						
LPAZ	**La Paz**	**60.41**	**76**	P	**P**	**17 45 54.5**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=177,slow=5.3,SNR=3.9						
ATAH	**Atahualpa**	**62.53**	**60**	LR	LR	18 07 06.0	
	comp=Z,197nm,18.2s,baz=209,slow=30						
STKA	**Stephens Creek**	**64.03**	**251**	LR	LR	18 08 22.6	
	comp=Z,145nm,21.6s,baz=196,slow=31						
BDFB	**Brasilia**	**72.47**	**92**	P	**P**	**17 47 10.8**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=241,slow=13,SNR=1.8						
ASAR	**Alice Springs**	**74.66**	**251**	P	**P**	**17 47 22.6**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=143,slow=6.0,SNR=16						
ASAR	**Alice Springs**	**74.66**	**251**	P	**P**	**17 47 22.1**	**-0.4**
ROSC	**El Rosal**	**74.87**	**58**	LR	LR	18 14 32.8	
	comp=Z,99nm,18.1s,baz=260,slow=31						
H01W1	**Cape Leeuwin H**	**75.33**	**230**	T	T	19 10 57.8	
	baz=147,slow=76,SNR=20						
H01W2	**Cape Leeuwin H**	**75.33**	**230**	T	T	19 11 03.2	
	baz=147,slow=76,SNR=18						
H01W3	**Cape Leeuwin H**	**75.35**	**230**	T	T	19 11 18.1	
	baz=147,slow=76,SNR=21						
WRA	**Warramunga Arr**	**77.41**	**253**	P	**P**	**17 47 38.0**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=144,slow=5.3,SNR=12						
WRA	**Warramunga Arr**	**77.41**	**253**	P	**P**	**17 47 35.2**	**-3.0**
FITZ	**Fitzroy Crossi**	**83.65**	**248**	P	**P**	**17 48 11.4**	**-0.2**
	comp=Z,5.7nm,1.0s,baz=155,slow=6.0,SNR=7.0						
FITZ	**Fitzroy Crossi**	**83.65**	**248**	P	**P**	**17 48 11.8**	**+0.1**
TXAR	**Lajitas Array**	**86.72**	**22**	P	**P**	**17 48 26.7**	**0.0**
	comp=Z,0.2nm,0.7s,baz=190,slow=10,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**90.84**	**302**	T	T	19 29 56.0	
	baz=148						
H11S3	**WAKE ISLAND Hy**	**90.86**	**302**	T	T	19 29 47.8	
	baz=148						
H11S1	**WAKE ISLAND Hy**	**90.86**	**302**	T	T	19 29 49.6	
	baz=148						
H11N3	**WAKE ISLAND Hy**	**91.79**	**302**	T	T	19 31 08.0	
	baz=148						
H11N1	**WAKE ISLAND Hy**	**91.79**	**302**	T	T	19 31 00.4	
	baz=148						
H11N2	**WAKE ISLAND Hy**	**91.81**	**302**	T	T	19 30 52.2	
	baz=148						
NVAR	**Mina Array Bea**	**93.38**	**9**	P	**P**	**17 48 56.5**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=118,slow=1.3,SNR=1.7						
BOSA	**Boshof**	**94.10**	**158**	LR	LR	18 28 46.5	
	comp=Z,94nm,18.3s,baz=206,slow=34						
ILAR	**Eielson Array**	**120.02**	**351**	PKP	**PKiKP**	**17 54 34.1**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=183,slow=1.2,SNR=5.7						
TORD	**Torodi Ar. Bea**	**123.74**	**118**	PKP	**PKPdf**	**17 54 40.4**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=287,slow=0.5,SNR=1.6						
SONM	**Songino Array**	**145.22**	**282**	PKPbc	**PKPbc**	**17 55 20.3**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=175,slow=3.6,SNR=4.4						
KEST	**Kesra**	**145.95**	**107**	PKPbc	**PKPab**	**17 55 24.1**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=232,slow=18,SNR=2.6						
DAVOX	**Davos/Dischmat**	**153.41**	**91**	PKPbc	**PKiKP**	**17 55 41.6**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=294,slow=7.7,SNR=3.6						
GERES	**GERESS Array B**	**156.68**	**90**	PKP	**PKPdf**	**17 55 38.2**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=225,slow=0.4,SNR=4.0						
MKAR	**Makanchi Array**	**158.52**	**261**	PKPab	**PKPab**	**17 56 13.3**	**-1.4**
	comp=Z,1.0nm,0.7s,baz=107,slow=4.6,SNR=10.0						
ZALV	**Zalesovo Beam**	**160.12**	**282**	PKPab	**PKPab**	**17 56 21.1**	**-0.3**
	comp=Z,1.0nm,0.6s,baz=108,slow=4.8,SNR=5.6						
BRTR	**Keskin Array B**	**161.12**	**136**	PKPab	**PKPab**	**17 56 26.0**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=185,slow=8.4,SNR=4.6						
MLR	**Muntele Rosu**	**161.78**	**111**	PKPab	**PKPab**	**17 56 28.7**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=166,slow=8.7,SNR=3.8						

IDC 09 17:41:24.7±917.0, 35.55N×8.78E, h0km, Error ellipse: s-maj=395.8km s-min=12.8km az=60.0, Tunisia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I48TN	**KESRA INFRASON**	**0.51**	**60**	*i*		17 44 20.0	
	baz=241,slow=299,SNR=0.6						
I26DE	**FREYUNG INFRAS**	**13.78**	**14**	*i*		19 03 40.0	
	baz=198,slow=325,SNR=2.4						
I43RU	**DUBNA INFRASON**	**28.57**	**33**	*i*		20 36 20.0	
	baz=231,slow=327,SNR=2.3						

*IDC **09** 17:47:25.6±0.7, 54.90S×129.71W, h0km, mb3.9/7, mb1 4.2/7, mb1mx4.0/33, mbtmp3.9/7, MS4.0/12, Ms1 4.0/12, ms1mx3.9/20, Error ellipse: s-maj=29.6km s-min=21.2km az=157.0*

*NEIC **09** 17:47:26.2±1.9, 54.7S±0.2×130.0W±0.2, h10km±1km, mb4.5/6, Error ellipse: s-maj=38.6km s-min=8.9km az=339.0*

ISC 09 17:47:26.7±0.6, 54.9S±0.2×129.9W±0.1, h10km, n55, σ1 17/25, mb4.0/9, MS4.1/15, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**32.55**	**202**	P	**P**	**17 53 59.1**	**+1.7**
	0.7nm,0.8s,baz=68,slow=7.0,SNR=6.0						
VNDA				LR	LR	18 03 06.6	
	comp=Z,91nm,21.0s,baz=88,slow=29						
TBI	**Tubuai**	**34.68**	**327**	*e*LR	LR	18 03 38.9	
	comp=Z,432nm,26.0s,baz=160						
TBI	**Tubuai**	**34.68**	**327**	*e*T	T	18 31 08.7	
	29nm,0.3s						
QSPA	**South Pole Qui**	**35.33**	**180**	P	**P**	**17 54 21.5**	**-0.3**
	4.0nm,1.1s,baz=109,slow=1.5,SNR=8.9						
QSPA	**South Pole Qui**	**35.33**	**180**	P	**P**	**17 54 22.4**	**+0.6**
QSPA				IAmb	IAmb	17 54 23.3	
	comp=Z,15nm,1.4s						
BELA	**Belgrano 2**	**38.17**	**160**	P	**P**	**17 54 45.2**	**-0.4**
BHW	**Baring Head**	**38.22**	**267**	P	**P**	**17 54 46.1**	**-0.4**
RPZ	**Rata Peaks**	**38.97**	**261**	LR	LR	18 06 53.9	
	comp=Z,349nm,21.6s,baz=191,slow=30						
URZ	**Urewera**	**39.00**	**273**	LR	LR	18 07 23.3	
	comp=Z,280nm,19.6s,baz=211,slow=31						
PAE	**Paea**	**40.07**	**330**	*e*T	T	18 37 52.0	
	comp=Z,1.7nm,0.3s						
PPT2	**Papeete2**	**40.14**	**330**	*e*LR	LR	18 06 10.9	
	comp=Z,509nm,25.8s,baz=170						
PPT	**Papeete**	**40.16**	**330**	LR	LR	18 07 16.2	
	comp=Z,212nm,18.4s,baz=179,slow=30						
RAR	**Rarotonga**	**40.41**	**314**	LR	LR	18 09 48.0	
	comp=Z,98nm,18.1s,baz=150,slow=33						
H03S2	**Juan Fernandez**	**40.95**	**81**	T	T	18 38 40.1	
	baz=221,slow=74,SNR=30						
H03S1	**Juan Fernandez**	**40.96**	**81**	T	T	18 38 51.4	
	baz=221,slow=74,SNR=31						
H03S3	**Juan Fernandez**	**40.97**	**81**	T	T	18 38 43.4	
	baz=221,slow=74,SNR=29						
PLCA	**Paso Flores**	**41.03**	**95**	P	**P**	**17 55 09.2**	**-0.8**
	comp=Z,2.1nm,1.0s,baz=250,slow=10.0,SNR=2.7						
PLCA				LR	LR	18 08 04.1	
	comp=Z,190nm,18.7s,baz=198,slow=30						
H03N3	**Juan Fernandez**	**41.23**	**80**	T	T	18 38 56.8	
	baz=224,slow=72,SNR=146						
H03N2	**Juan Fernandez**	**41.24**	**80**	T	T	18 38 45.4	
	baz=224,slow=72,SNR=308						
H03N1	**Juan Fernandez**	**41.25**	**80**	T	T	18 38 46.0	
	baz=224,slow=72,SNR=169						
VAH	**Vaihoa**	**41.86**	**334**	*e*T	T	18 40 03.8	
	comp=Z,40nm,0.3s						
PMOR	**Pomariorio Ree**	**42.15**	**334**	*e*T	T	18 40 25.9	
	comp=Z,3.5nm,0.3s						
LVC	**Limon Verde**	**55.18**	**80**	LR	LR	18 13 30.9	
	comp=Z,78nm,19.6s,baz=228,slow=28						
DZM	**Mont Dzumac**	**57.12**	**278**	*e*LR	LR	18 14 14.3	
	comp=Z,195nm,27.8s						
MAW	**Mawson**	**57.49**	**186**	LR	LR	18 20 09.6	
	comp=Z,71nm,19.1s,baz=234,slow=34						
CPUP	**Villa Florida**	**58.98**	**92**	P	**P**	**17 57 28.5**	**+2.2**
	comp=Z,3

TAP 09 17:49:18.9, 24°.68N×121°.91E, h8km, ML1.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.09**	**216**	*i* P	Pg	17 49 21.2	+0.1
	baz=213						
TWC				*i* S	Sg	17 49 22.8	+0.1
	baz=213						
NTC	**Toucheng**	**0.19**	**338**	*e*P	Pg	17 49 22.8	0.0
	baz=337						
NTC				*e*S	Sg	17 49 25.6	+0.2
	baz=337						
TWE	**Neicheng**	**0.22**	**281**	P	Pg	17 49 23.8	+0.4
	baz=274						
TWE				*e*S	Sg	17 49 27.4	+1.0
	baz=274						
ENAH	**Nanao**	**0.25**	**201**	P	Pg	17 49 24.1	+0.3
	baz=209						
ENAH				S	Sg	17 49 27.5	+0.4
	baz=209						
TIPB	**Shuangxi**	**0.30**	**346**	P	Pg	17 49 25.2	+0.3
	baz=345						
TIPB				*e*S	Sg	17 49 28.7	-0.3
	baz=345						
TWB1	**Santiao Chiao**	**0.34**	**13**	*e*S	Sg	17 49 29.9	-0.2
	baz=13						
NDT	**Datong Townshi**	**0.37**	**258**	*e*P	Pg	17 49 26.3	+0.2
	baz=258						
NDT				*e*S	Sg	17 49 31.5	+0.5
	baz=258						
NWLT	**Wulai**	**0.38**	**285**	*e*P	Pb	17 49 27.3	-0.6
	baz=284						
NWLT				*e*S	Sg	17 49 32.1	+0.7
	baz=284						
TATO	**Taipei**	**0.48**	**308**	*e*P	Pb	17 49 29.2	-0.4
	baz=307						
TATO				*e*S	Sg	17 49 34.1	-0.5
	baz=307						
YHNB	**Yeheng**	**0.48**	**269**	*e*P	Pg	17 49 28.6	+0.3
	baz=268						
YHNB				*e*S	Sg	17 49 34.6	-0.1
	baz=268						
NSK	**Sanguang**	**0.50**	**270**	*e*P	Pb	17 49 29.3	-0.6
	baz=269						
NSK				*e*S	Sg	17 49 35.7	+0.5
	baz=269						
NNS	**Nan Shan**	**0.54**	**244**	*e*P	Pg	17 49 29.1	-0.4
	baz=243						
NNS				*e*S	Sg	17 49 37.2	+0.6
	baz=243						
NACB	**Ninganchiao**	**0.58**	**209**	*e*P	Pg	17 49 30.5	+0.4
	baz=210						
NACB				*e*S	Sg	17 49 37.0	-0.7
	baz=210						
ETLH	**Xiulin Townshi**	**0.61**	**219**	*e*P	Pg	17 49 29.9	-0.8
	baz=220						
ETLH				*e*S	Sg	17 49 38.5	-0.2
	baz=220						
WHF	**Hehuan Shan**	**0.79**	**228**	*e*P	Pg	17 49 33.9	-0.3
	baz=227						
WHF				*e*S	Sg	17 49 44.6	+0.1
	baz=227						
CHGB	**Renai**	**0.91**	**227**	*e*P	Pg	17 49 36.1	-0.4
	baz=227						
CHGB				*e*S	Sb	17 49 49.4	0.0
	baz=227						
SSLB	**Suanglung**	**1.24**	**225**	*e*P	Pn	17 49 41.9	-0.7
	baz=223						

IDC 09 17:55:16.0±8.7, 17°.16S×168°.01E, h166km±112km, mb3.3/4, mb1 3.4/5, mb1mx3.1/29, mbtmp3.7/5, Error ellipse: s-maj=137.2km s-min=57.0km az=139.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.11**	**197**	P	Pn	17 56 31.7	+0.6
	0.8nm,0.3s,baz=47,slow=13,SNR=15						
DZM				S	Sn	17 57 29.8	-0.2
	1.4nm,0.3s,baz=294,slow=21,SNR=2.2						
WRA	**Warramunga Arr**	**32.01**	**260**	P	P	18 01 26.7	-0.3
	0.1nm,0.3s,baz=83,slow=8.5,SNR=1.0						
ASAR	**Alice Springs**	**32.56**	**253**	P	P	18 01 31.6	-0.2
	1.2nm,0.4s,baz=83,slow=8.8,SNR=57						
CMAR	**Chiang Mai Arr**	**76.59**	**294**	P	P	18 06 49.3	+0.6
	0.3nm,0.6s,baz=133,slow=5.3,SNR=3.1						
MKAR	**Makanchi Array**	**99.44**	**316**	P	Pdif	18 08 38.9	-0.8
	0.3nm,0.5s,baz=88,slow=4.3,SNR=1.0						

MAN 09 18:01:00.1, 14°.42N×120°.31E, h140km, mb4.1, ML2.9, MS2.5, Luzon

*IDC **09** 18:05:54.2±2.9, 23°.52S×177°.81W, h217km±23km, mb3.4/9, mb1 3.7/10, mb1mx3.5/21, mbtmp4.0/10, MS3.3/2, Ms1 3.3/2, ms1mx2.9/11, Error ellipse: s-maj=20.7km s-min=19.5km az=83.0*

ISC 09 18:05:52.5±0.8, 23°.6S±0°.1×177°.8W±0°.2, h200km, n22, σ1§44/19, mb3.6/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**11.17**	**32**	S	Sn	18 10 19.3	-12
	1.2nm,0.3s,baz=29,slow=23,SNR=6.8						
AFI				LR	LR	18 12 05.0	
	comp=Z,168nm,18.2s,baz=170,slow=33						
DZM	**Mont Dzumac**	**14.60**	**273**	LR	LR	18 13 09.3	
	comp=Z,106nm,19.9s,baz=48,slow=30						
URZ	**Urewera**	**15.28**	**195**	P	**Pn**	**18 09 17.5**	**-0.5**
	2.7nm,0.3s,baz=304,slow=2.1,SNR=14						
URZ				S	S	18 11 55.4	-12
	3.0nm,0.3s,baz=103,slow=19,SNR=12						
RPZ	**Rata Peaks**	**22.09**	**202**	P	**P**	**18 10 32.0**	**+0.5**
	5.2nm,0.4s,baz=2.0,slow=6.1,SNR=5.1						
STKA	**Stephens Creek**	**36.71**	**248**	P	**P**	**18 12 41.2**	**+0.7**
	1.6nm,0.7s,baz=93,slow=10,SNR=7.9						
STKA				PcP	**PcP**	**18 14 58.0**	**-0.7**
	1.7nm,1.0s,baz=45,slow=4.3,SNR=3.6						
ASAR	**Alice Springs**	**44.07**	**260**	P	**P**	**18 13 41.1**	**+0.1**
	0.8nm,0.4s,baz=93,slow=7.3,SNR=71						
ASAR				PcP	**PcP**	**18 15 22.1**	**-0.7**
	1.4nm,0.7s,baz=109,slow=3.7,SNR=14						
ASAR				ScP	**ScP**	**18 18 52.6**	**-2.9**
	0.2nm,0.7s,baz=111,slow=5.1,SNR=1.2						
WRA	**Warramunga Arr**	**44.44**	**265**	P	**P**	**18 13 43.3**	**-0.6**
	0.7nm,0.3s,baz=96,slow=8.3,SNR=56						
WRA				PcP	**PcP**	**18 15 23.4**	**-0.6**
	0.7nm,0.6s,baz=102,slow=3.1,SNR=6.7						
WRA				ScP	**ScP**	**18 18 54.6**	**-2.5**
	0.3nm,0.9s,baz=100,slow=4.1,SNR=1.9						
VNDA	**Vanda**	**54.88**	**185**	P	**P**	**18 15 02.7**	**+0.9**
	0.6nm,0.6s,baz=7.0,slow=8.4,SNR=12						
MAW	**Mawson**	**78.75**	**200**	P	**P**	**18 17 32.3**	**-0.1**
	1.2nm,0.5s,baz=135,slow=9.2,SNR=7.7						
NVAR	**Mina Array Bea**	**83.13**	**43**	P	**P**	**18 17 56.4**	**+0.1**
	0.4nm,0.6s,baz=229,slow=10.0,SNR=4.7						
H03S2	**Juan Fernandez**	**84.12**	**124**	T	T	19 51 05.7	
	baz=244						
H03S1	**Juan Fernandez**	**84.13**	**124**	T	T	19 51 01.0	
	baz=244						
H03S3	**Juan Fernandez**	**84.13**	**124**	T	T	19 50 38.9	
	baz=244						
H03N2	**Juan Fernandez**	**84.28**	**124**	T	T	19 50 28.5	
	baz=238						
H03N3	**Juan Fernandez**	**84.28**	**124**	T	T	19 50 33.2	
	baz=238						
H03N1	**Juan Fernandez**	**84.29**	**124**	T	T	19 50 48.1	
	baz=238						
PDAR	**Pinedale Array**	**91.06**	**43**	P	**P**	**18 18 33.8**	**-0.7**
	0.6nm,0.9s,baz=205,slow=4.0,SNR=2.7						
CMAR	**Chiang Mai Arr**	**91.31**	**289**	P	**P**	**18 18 36.9**	**+1.0**
	0.4nm,0.8s,baz=138,slow=3.3,SNR=2.8						
FINES	**FINESS Array B**	**138.75**	**343**	PKP	**PKPdf**	**18 24 54.8**	**+0.6**
	2.1nm,1.0s,baz=48,slow=2.1,SNR=4.0						
AKASG	**Malin Array Be**	**145.75**	**329**	PKPbc	**PKPdf**	**18 25 06.0**	**-0.9**
	1.8nm,0.4s,baz=42,slow=4.0,SNR=13						
BRTR	**Keskin Array B**	**148.96**	**309**	PKPbc	**PKPdf**	**18 25 16.1**	**+3.3**
	0.8nm,0.5s,baz=134,slow=4.2,SNR=2.5						
TORD	**Torodi Ar. Bea**	**169.62**	**177**	PKPab	**PKPab**	**18 26 50.0**	**-1.2**
	0.1nm,0.4s,baz=186,slow=2.2,SNR=4.3						

*PRE **09** 18:13:27.4±1.0, 26°.97S×26°.88E, h2km, ML2.8*
*EAF **09** 18:13:29.9±0.9, 26°.93S×26°.97E, h2km±10km, MD4.2*

ISC 09 18:13:28.3±1.5, 26°.96S±0°.03×26°.89E±0°.04, h12km±11km, n21, σ1§86/42, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WDLM	**Western Deep L**	**0.71**	**42**	*e*P	**Pb**	**18 13 42.1**	**-0.7**
WDLM				*e*S	**Sb**	**18 13 52.1**	**-0.5**
WDLM				AML	AML	18 14 00.2	
	comp=Z,314nm,0.3s						
KLOF	**Kloof**	**0.89**	**47**	*e*P	**Pb**	**18 13 44.9**	**-0.8**
KLOF				*e*S	**Sb**	**18 13 58.0**	**+0.5**
KLOF				AML	AML	18 14 04.4	
	comp=Z,538nm,0.1s						
KSR	**Koster**	**1.10**	**0**	*e*P	**Pg**	**18 13 48.9**	**-0.7**
KSR				*e*S	**Sg**	**18 14 03.9**	**-0.1**
KSR				AML	AML	18 14 09.5	
	comp=Z,340nm,0.4s						
ERPM	**east rand prop**	**1.35**	**63**	*e*P	**Pb**	**18 13 54.1**	**+0.4**
ERPM				*e*S	**Sn**	**18 14 13.5**	**+2.3**
ERPM				AML	AML	18 14 18.2	
	comp=Z,91nm,0.2s						
SWZ	**Schweizer**	**1.41**	**261**	*e*P	**Pn**	**18 13 54.4**	**+0.6**
SWZ				*e*S	**Sb**	**18 14 13.6**	**+1.1**
SWZ				AML	AML	18 14 22.3	
	comp=Z,311nm,0.7s						
BOSA	**Boshof**	**2.19**	**221**	*i* P	**Pb**	**18 14 07.7**	**-0.3**
BOSA				*i* S	**Sb**	**18 14 35.4**	**+0.3**
BOSA	**Boshof**	**2.19**	**221**	*e*P	**Pn**	**18 14 05.4**	**+0.8**
BOSA				*e*S	**Sn**	**18 14 33.5**	**+1.7**
BOSA				AML	AML	18 14 39.2	
	comp=Z,58nm,0.5s						
BOSA	**Boshof**	**2.19**	**221**	*i* P	**Pb**	**18 14 07.7**	**-0.3**
BOSA				*i* S	**Sb**	**18 14 35.4**	**+0.3**
LBTB	**Lobatse**	**2.26**	**329**	*i* P	**Pn**	**18 14 08.0**	**+2.4**
LBTB				*i* S	**Sn**	**18 14 36.0**	**+2.6**
LBTB	**Lobatse**	**2.26**	**329**	*e*P	**Pn**	**18 14 06.8**	**+1.2**
LBTB				*e*S	**Sn**	**18 14 34.2**	**+0.8**
LBTB				AML	AML	18 14 37.5	
	comp=Z,124nm,0.5s						
LBTB	**Lobatse**	**2.26**	**329**	*i* P	**Pn**	**18 14 08.0**	**+2.4**
LBTB				*i* S	**Sn**	**18 14 36.0**	**+2.6**
HVD	**Gariep Dam**	**3.83**	**198**	*e*P	**Pn**	**18 14 27.9**	**+0.7**
HVD				*e*S	**Sn**	**18 15 12.5**	**+0.3**
HVD				AML	AML	18 15 43.3	
	comp=Z,19nm,0.4s						
POGA	**Pongola**	**4.31**	**96**	*e*P	**Pn**	**18 14 34.2**	**+0.6**
POGA				*e*S	**Sn**	**18 15 24.1**	**+0.3**
POGA				AML	AML	18 15 48.8	
	comp=Z,36nm,0.5s						
UPI	**Upington**	**5.19**	**253**	*e*P	**Pn**	**18 14 46.8**	**+1.0**
UPI				*e*S	**Sn**	**18 15 44.3**	**-1.5**
UPI				AML	AML	18 16 10.9	
	comp=Z,7.7nm,0.4s						
MOPA	**Mopani**	**5.33**	**51**	*e*P	**Pn**	**18 14 48.5**	**+0.8**
MOPA				*e*S	**Sn**	**18 15 47.6**	**-1.4**
MOPA				AML	AML	18 16 20.9	
	comp=Z,19nm,0.7s						
GRAN	**Grantham**	**6.72**	**217**	*e*P	**Pn**	**18 15 07.9**	**+1.0**
GRAN				*e*S	**Sn**	**18 16 21.1**	**-2.3**
GRAN				AML	AML	18 16 52.3	
	comp=Z,3.8nm,0.7s						
BLWY	**Bulawayo**	**6.97**	**13**	*i* P	**Pn**	**18 15 11.9**	**+1.6**
BLWY				*i* S	**Sn**	**18 16 24.9**	**-4.8**
BLWY	**Bulawayo**	**6.97**	**13**	*i* P	**Pn**	**18 15 11.9**	**+1.6**
BLWY				*i* S	**Sn**	**18 16 24.9**	**-4.8**
SUR	**Sutherland**	**7.56**	**223**	*i* P	**Pn**	**18 15 20.9**	**+2.5**
SUR				*i* S	**Sn**	**18 16 42.5**	**-1.6**
SUR	**Sutherland**	**7.56**	**223**	*i* P	**Pn**	**18 15 20.9**	**+2.5**
SUR				*i* S	**Sn**	**18 16 42.5**	**-1.6**
CVNA	**Calvinia**	**7.69**	**232**	*e*P	**Pn**	**18 15 21.5**	**+1.3**
CVNA				*e*S	**Sn**	**18 16 44.3**	**-3.0**
CVNA				AML	AML	18 17 42.3	
	comp=Z,14nm,0.7s						

*ISK **09** 18:31:19.2, 39°.74N×44°.09E, h5km, ML2.9/13*
*DDA **09** 18:31:19.1, 39°.73N×44°.14E, h4km±3km, ML3.0*

ISC 09 18:31:19.8±1.0, 39°.75N±0°.02×44°.10E±0°.03, h8km±7km, n31, σ2§02/51, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGDI	**IGDIR**	**0.12**	**351**	*i* P	**Pg**	**18 31 22.4**	**-0.2**
IGDI				*i* S	**Sg**	**18 31 25.2**	**+0.7**
IGDI				IAML		18 31 29.0	
	comp=N,3μm,0.7s						
IGDI				IAML		18 31 29.0	
	comp=E,4μm,0.6s						
TASB	**TASBURUN-IGDIR**	**0.26**	**24**	PG	**Pb**	**18 31 25.6**	**-1.1**
DYDN	**Diyadin**	**0.38**	**238**	*i* P	**Pg**	**18 31 27.2**	**-0.1**
DYDN				*i* S	**Sb**	**18 31 33.6**	**-1.3**
DYDN				IAML		18 31 38.0	
	comp=N,2μm,1.1s						
DYDN				IAML		18 31 42.0	
	comp=E,2μm,0.8s						
CLDR	**Caldiran**	**0.62**	**193**	PG	**Pg**	**18 31 31.3**	**-0.5**
CLDR	**Caldiran**	**0.62**	**193**	*i* P	**Pb**	**18 31 31.7**	**-1.3**
CLDR				*i* S	**Sg**	**18 31 40.0**	**+0.1**
GNI	**Garni**	**0.64**	**51**	PG	**Pb**	**18 31 32.8**	**-0.4**
GNI				SG	**Sb**	**18 31 43.5**	**+1.2**
VMUR	**Van-Muradiye**	**0.86**	**209**	*i* P	**Pb**	**18 31 36.6**	**-0.4**
VMUR				*i* S	**Sg**	**18 31 47.4**	**-0.2**
DIGO	**Kars**	**0.87**	**320**	*i* P	**Pg**	**18 31 35.2**	**-1.3**
DIGO				*i* S	**Sn**	**18 31 52.6**	**+1.1**
DIGO				IAML		18 32 01.0	
	comp=E,453nm,0.6s						
AGRB	**Hanur-Agry**	**0.87**	**259**	PG	**Pg**	**18 31 35.9**	**-0.7**
AGRB				SG	**Sb**	**18 31 49.9**	**+0.7**
EAK	**Akyaka**	**1.01**	**338**	*i* P	**Pg**	**18 31 39.1**	**-0.1**
EAK				*i* S	**Sb**	**18 31 53.6**	**+0.4**
EAK				IAML		18 32 10.0	
	comp=E,263nm,1.2s						
KARS	**Kars**	**1.18**	**319**	PN	**Pn**	**18 31 42.7**	**+0.1**
EATA	**Eleskirt**	**1.25**	**276**	*i* P	**Pb**	**18 31 43.5**	**-0.2**
EATA				*i* S	**Sg**	**18 31 54.0**	**-5.9**
VANB	**Van**	**1.28**	**206**	PN	**Pn**	**18 31 46.7**	**+2.7**
TVAN	**Van**	**1.33**	**204**	*i* P	**Pb**	**18 31 45.3**	**+0.2**
TVAN				*i* S	**Sn**	**18 32 07.2**	**+4.4**
MLAZ	**Malazgirt-MUS**	**1.35**	**244**	PN	**Pb**	**18 31 46.3**	**+1.0**
ADCV	**BITLIS_Adilcev**	**1.42**	**229**	*i* P	**Pg**	**18 31 47.7**	**+0.7**
ADCV				*i* S	**Sg**	**18 32 01.6**	**-3.9**
SENK	**Senkaya-Erzuru**	**1.57**	**302**	PN	**Pg**	**18 31 49.6**	**-0.3**
AKDM	**Akdamar-Van**	**1.66**	**212**	PN	**Pg**	**18 31 50.8**	**-0.9**
BASK	**Baskale_VAN**	**1.69**	**183**	*i* P	**Pg**	**18 31 52.0**	**-0.3**
BASK				*i* S	**Sg**	**18 32 14.1**	**-0.1**
AKH	**Akhalkalaki**	**1.73**	**345**	PN	**Pb**	**18 31 51.5**	**-0.3**
KOPR	**Koprukoy-ERZUR**	**1.75**	**279**	PN	**Pb**	**18 31 52.1**	**-0.1**
GURO	**Guroymak-BITLI**	**2.00**	**234**	PN	**Pb**	**18 31 56.1**	**-0.4**
BLIS	**Bitlis-Merkez**	**2.04**	**230**	*i* P	**Pg**	**18 31 57.5**	**-1.4**
BLIS				*i* S	**Sg**	**18 32 24.0**	**-1.3**
VRTB	**Varto-Mus**	**2.13**	**255**	PN	**Pb**	**18 31 57.9**	**-0.8**
VRTB	**Varto-Mus**	**2.13**	**255**	*i* P	**Pg**	**18 32 02.0**	**+1.3**
VRTB				*i* S	**Sb**	**18 32 25.1**	**-0.2**
VRTB				IAML		18 32 46.0	
	comp=E,102nm,1.0s						
VRTB				IAML		18 33 03.0	
	comp=N,101nm,2.2s						
DAGI	**Agillar**	**2.13**	**309**	*i* P	**Pb**	**18 31 58.8**	**+0.1**
DAGI				*i* S	**Sg**	**18 32 28.9**	**+0.5**
YOVA	**Hakkari_Yksek**	**2.16**	**176**	*i* P	**Pg**	**18 32 00.6**	**-0.6**
YOVA				*i* S	**Sn**	**18 32 15.6**	**-7.7**
HAKT	**HAKKARI**	**2.21**	**188**	*i* P	**Pb**	**18 32 00.0**	**0.0**
HAKT				*i* S	**Sg**	**18 32 35.5**	**+4.8**
MUSM	**Mu-Merkez**	**2.26**	**244**	*i* P	**Pb**	**18 32 00.8**	**0.0**
MUSM				*i* S	**Sn**	**18 32 25.2**	**-0.3**
DDFL	**Dedoflistskaro**	**2.29**	**41**	*i* P	**Pg**	**18 32 02.7**	**-0.9**
DDFL				*i* S	**Sn**	**18 32 26.2**	**0.0**
KRIK	**Erzurum-spir**	**2.51**	**285**	*i* P	**Pg**	**18 32 07.3**	**-0.6**
KRIK				*i* S	**Sg**	**18 32 43.8**	**+3.4**

*NEIC **09** 18:39:55.0±1.1, 36°.33N±0°.01×97°.522W±0°.008, h5km±7km, Error ellipse: s-maj=1.8km s-min=0.9km az=187.0*
*CERI **09** 18:39:54.0, 36°.33N×97°.52W, h5km*
*TUL **09** 18:39:54.7±1.2, 36°.33N±0°.01×97°.52W±0°.02, h5km±2km, ML3.1, Error ellipse: s-maj=3.2km s-min=3.0km az=58.0*
*ANF **09** 18:39:57.5±1.4, 36°.34N×97°.52W, h26km±15km, ML3.6/6, Error ellipse: s-maj=8.2km s-min=4.9km az=150.0*

ISC 09 18:39:55.5±1.2, 36°.32N±0°.02×97°.52W±0°.03, h5km±11km, n38, σ1§06/44, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.42**	**297**		**Pg**	**18 40 03.0**	**-0.6**
CROK				Sg	**Sg**	**18 40 09.2**	**+0.2**
OK029	**Liberty Lake**	**0.52**	**174**		**Pg**	**18 40 05.3**	**-0.3**
OK029				Sg	**Sg**	**18 40 12.8**	**+0.4**
GC02	**Grant County #**	**0.60**	**333**		**Pg**	**18 40 06.2**	**-0.7**
OK031	**S. Brethren Rd**	**0.66**	**123**		**Pg**	**18 40 07.8**	**-0.4**
BCOK	**Bluff Creek, N**	**0.67**	**186**		**Pg**	**18 40 07.8**	**-0.4**
KAN13	**South Haven SW**	**0.69**	**3**		**Pg**	**18 40 08.1**	**-0.8**
OK030	**Cody Creek RV**	**0.71**	**123**		**Pg**	**18 40 08.8**	**-0.4**
KAN14	**Manchester OK**	**0.73**	**331**		**Pg**	**18 40 08.6**	**-0.9**
KAN14				Sg	**Sg**	**18 40 18.6**	**-0.4**
OK025	**Westminster Rd**	**0.75**	**169**		**Pg**	**18 40 09.4**	**-0.5**
KAN09	**Caldwell North**	**0.82**	**355**		**Pg**	**18 40 10.3**	**-0.9**
OKCFA	**Oklahoma City**	**0.90**	**176**		**Pg**	**18 40 12.1**	**-0.7**
OKCSW	**OKLAHOMA CITY**	**0.91**	**176**		**Pg**	**18 40 12.3**	**-0.7**
KAN10	**Anthony SW Sta**	**0.93**	**330**		**Pg**	**18 40 12.2**	**-1.1**
T35A	**Sooner Cattle**	**1.01**	**53**	Pg	**Pg**	**18 40 13.7**	**-1.1**
FNO	**Franklin**	**1.06**	**175**		**Pg**	**18 40 15.1**	**-0.8**
U32A	**Winter Ranch,**	**1.20**	**273**	Pn	**Pg**	**18 40 16.9**	**-1.5**
W35A	**Tecumseh**	**1.28**	**155**		**Pn**	**18 40 18.4**	**-1.6**
TUL1	**Leonard**	**1.46**	**106**	P	**Pn**	**18 40 21.2**	**-1.2**
	baz=287						
TUL1				S	**Sn**	**18 40 41.2**	**-0.7**
	baz=287						
TUL1	**Leonard**	**1.46**	**106**	Pn	**Pn**	**18 40 21.2**	**-1.2**
WMOK	**Wichita Mounta**	**1.88**	**213**	P	**Pn**	**18 40 28.1**	**-0.2**
	baz=32						
WMOK				S	**Sb**	**18 40 53.6**	**-0.5**
	baz=32						
WMOK	**Wichita Mounta**	**1.88**	**213**		**Pn**	**18 40 28.1**	**-0.2**
R32A	**Long Quarter,**	**2.30**	**336**		**Pn**	**18 40 35.1**	**+1.0**
X37A	**Clayton**	**2.46**	**134**		**Pn**	**18 40 37.4**	**+1.2**
U38A	**Gravette**	**2.53**	**86**		**Pn**	**18 40 38.6**	**+1.4**
MIAR	**Mount Ida**	**3.67**	**118**	P	**Pn**	**18 40 53.3**	**+0.3**
	baz=300						
MIAR	**Mount Ida**	**3.67**	**118**	Pn	**Pn**	**18 40 53.2**	**+0.3**
AMTX	**Amarillo**	**3.68**	**248**	Sb	**Sb**	**18 41 49.5**	**+3.5**
	baz=66						
AMTX	**Amarillo**	**3.68**	**248**	Pn	**Pn**	**18 40 52.2**	**-0.9**
AMTX					**Pb**	**18 41 02.5**	**+1.5**
U40A	**Yellville**	**3.77**	**88**	Pn	**Pn**	**18 40 55.0**	**+0.7**
X40A	**Basin Creek Fa**	**4.24**	**114**	P	**Pn**	**18 41 01.1**	**+0.4**
	baz=297						
X40A	**Basin Creek Fa**	**4.24**	**114**		**Pn**	**18 41 01.0**	**+0.2**
WHTX	**Lake Whitney,**	**4.32**	**179**	P	**Pn**	**18 41 01.4**	**-0.4**
	baz=359						
W41B	**Gary Mavity, V**	**4.44**	**103**		**Pn**	**18 41 03.1**	**-0.3**
R40A	**Maddies Statio**	**4.63**	**63**		**Pn**	**18 41 05.7**	**-0.3**
Z41A	**Richland Creek**	**4.94**	**127**	P	**Pn**	**18 41 11.3**	**+0.9**
	baz=310						
BGNE	**Belgrade**	**5.11**	**355**	P	**Pn**	**18 41 12.0**	**-0.7**
	baz=174						
BGNE	**Belgrade**	**5.11**	**355**		Lg	18 42 38.4	
435B	**Jarrell**	**5.52**	**181**	P	**Pn**	**18 41 17.7**	**-0.6**
	baz=0.5						
435B				S	**Sn**	**18 42 20.0**	**-2.2**
	baz=0.5						

*NEIC **09** 18:52:30.8±1.8, 13°.21N±0°.10×144°.2E±0°.1, h138km±7km, mb4.6/49, Error ellipse: s-maj=16.6km s-min=13.8km az=111.0*
*DJA **09** 18:52:30.0±0.3, 13°.N±4°.×14°.4E±°, h120km±4km, M4.4/24, mb4.6/24, mB5.5/3, MLv4.3/1, Mw(mB)4.9/3*
*IDC **09** 18:52:30.4±0.4, 13°.23N×144°.22E, h131km±4km, mb4.0/21, mb1 4.1/21, mb1mx4.0/36, mbtmp4.3/21, MS3.0/1, Ms1 3.0/1, ms1mx2.5/36, Error ellipse: s-maj=12.8km s-min=9.3km az=84.0*

ISC 09 18:52:30.8±0.4, 13°.21N±0°.06×144°.20E±0°.07, h138km, n123, σ0§92/121, mb4.5/59, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.75**	**60**	P	**Pn**	**18 52 52.1**	**-0.3**
	baz=185,slow=7.4						
GUMO				S	**Sn**	**18 53 07.6**	**-1.2**
	442nm,0.3s,baz=197,slow=23,SNR=10.0						
GUMO	**Guam**	**0.75**	**60**		**Pn**	**18 52 52.3**	**-0.1**
PATS	**Pohnpei**	**15.27**	**113**	P	**P**	**18 56 00.6**	**-0.3**
SIJI	**Sorong**	**18.98**	**223**	P	**P**	**18 56 41.0**	**-0.8**
	0.9nm,0.3s,baz=20,slow=13,SNR=7.0						
FAKI	**Fak Fak**	**19.94**	**217**	P	**P**	**18 56 53.3**	**+1.2**
FAKI				IAmb	IAmb	18 57 03.7	
	comp=Z,18nm,0.9s						
TNTI	**Ternate**	**20.75**	**235**	P	**P**	**18 56 59.5**	**-1.4**
	comp=Z,17nm,0.8s						
JSU	**Suzuyama**	**22.17**	**327**	P	**P**	**18 57 16.3**	**+0.5**
JSU				IAmb	IAmb	18 57 18.0	
	comp=Z,28nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**22.25**	**73**	T	T	19 20 41.6	
	baz=265,slow=74,SNR=6.3						
H11S1	**WAKE ISLAND Hy**	**22.27**	**73**	T	T	19 20 00.1	
	baz=265,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**22.27**	**73**	T	T	19 20 15.8	
	baz=265,slow=74,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**22.69**	**70**	T	T	19 20 35.9	
	baz=260,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**22.70**	**70**	T	T	19 21 21.5	
	baz=260,SNR=8.4						
H11N3	**WAKE ISLAND Hy**	**22.71**	**70**	T	T	19 20 33.8	
	baz=260,slow=75,SNR=11						
JYT	**Yasato**	**23.20**	**352**	P	**P**	**18 57 25.7**	**+0.2**
JYT				IAmb	IAmb	18 57 27.1	
	comp=Z,20nm,0.7s						
JNU	**Nakatsue**	**23.26**	**331**	P	**P**	**18 57 25.9**	**-0.2**
	comp=Z,25nm,0.7s,baz=135,slow=3.3,SNR=19						
**JN

comp=Z,6.5nm,1.0s
KNRA Kununurra 32.51 208 P P 18 58 48.8 +0.2
KNRA IAmb IAmb 18 58 48.9
comp=Z,7.3nm,0.8s
USRK Ussuriysk Ar. 32.61 344 P P 18 58 50.0 +0.7
comp=Z,2.1nm,0.6s,baz=158,slow=10,SNR=5.7
CTAO Charters Tower 33.15 176 P P 18 58 54.6 +0.5
SBUM Sibu 33.39 254 P P 18 58 56.6 +0.2
WB0 Warramunga Arr 34.16 197 P P 18 59 02.7 -0.2
WB0 IAmb IAmb 18 59 03.6
comp=Z,8.5nm,0.7s
WR0 Warramunga Arr 34.30 196 P P 18 59 04.0 -0.2
WR0 IAmb IAmb 18 59 04.3
comp=Z,12nm,1.1s
WRAB Tennant Creek 34.33 197 P P 18 59 02.3 -2.1
WB2 Warramunga Arr 34.34 197 P P 18 59 04.1 -0.4
WRA Warramunga Arr 34.34 197 P P 18 59 04.2 -0.3
comp=Z,8.6nm,0.6s,baz=20,slow=9.3,SNR=109
WRA pP **pP** **18 59 34.5 +1.3**
comp=Z,2.1nm,0.7s,baz=18,slow=9.4,SNR=2.4
WRA ScP **ScP** **19 05 10.4 +0.4**
comp=Z,0.7nm,0.7s,baz=13,slow=3.7,SNR=6.7
KSM Kuching 35.52 254 P P 18 59 14.0 -0.7
KSM IAmb IAmb 18 59 15.3
comp=Z,14nm,1.0s
FITZ Fitzroy Crossi 36.10 211 P P 18 59 19.2 -0.3
FITZ IAmb IAmb 18 59 20.4
comp=Z,12nm,1.1s
BJT Baijiatuau 36.34 322 P P 18 59 22.4 +1.0
BJI Beijing 36.34 323 P P 18 59 22.0 +0.5
BJI pmax pmax
comp=Z,18nm,0.7s
JAGI Jajag, Banyuwa 36.80 236 P P 18 59 23.9 -1.7
AS31 Alice Springs 38.00 195 P P 18 59 35.5 -0.2
ASAR Alice Springs 38.01 195 P P 18 59 35.4 -0.3
comp=Z,1.4nm,0.4s,baz=20,slow=12,SNR=72
ASAR ScP **ScP** **19 05 24.1 +0.7**
comp=Z,0.5nm,0.7s,baz=21,slow=3.6,SNR=6.6
ASAR Alice Springs 38.01 195 P P 18 59 35.2 -0.5
EIDS Eidsvold 38.92 170 P P 18 59 43.0 -0.2
EIDS IAmb IAmb 18 59 44.2
comp=Z,4.5nm,0.6s
UGM Wanagama 39.48 240 P P 18 59 48.0 -0.2
HHC Hu-ho-hac-te 39.64 320 *eP* **P 18 59 50.3 +1.0**
HHC pmax pmax
comp=Z,14nm,1.1s
HHC pmax pmax
comp=Z,150nm,5.5s
DZM Mont Dzumac 41.29 148 P P 19 00 04.4 +1.4
comp=Z,3.4nm,0.4s,baz=283,slow=5.2,SNR=9.4
CISI Cisompet, Garu 41.61 242 P P 19 00 03.5 -2.2
PSA00 Pilbara Seismi 42.03 215 P P 19 00 09.1 +0.2
SKJI Sukabumi 42.44 244 P P 19 00 07.4 -5.0
comp=Z,120nm,0.9s
LZH Lanzhou 42.76 309 *eP* **P 19 00 16.5 +1.6**
LZH pP pwP 19 00 47.8 -1.7
LZH sP sP 19 01 01.4 +1.7
LZH pmax pmax
comp=Z,13nm,1.2s
CGJI Cibinong 43.02 245 P P 19 00 14.6 -2.4
comp=Z,21nm,1.5s
CMAR Chiang Mai Arr 43.77 283 P P 19 00 24.1 +1.1
comp=Z,2.3nm,0.5s,baz=78,slow=6.6,SNR=31
CMAR pP **pP** **19 00 53.9 +0.8**
comp=Z,0.2nm,0.3s,baz=91,slow=5.4,SNR=2.0
CMAR PcP **PP** **19 02 08.8 +1.2**
comp=Z,2.3nm,0.6s,baz=92,slow=1.7,SNR=17
CMAR Chiang Mai Arr 43.77 283 P P 19 00 22.2 -0.9
CMAR **PP** **19 02 08.6 +0.9**
ARMA Armidale 43.96 171 P P 19 00 25.1 +0.7
STKA Stephens Creek 44.90 183 P P 19 00 31.1 -0.6
comp=Z,2.1nm,0.3s,baz=14,slow=7.5,SNR=23
STKA Stephens Creek 44.90 183 P P 19 00 31.4 -0.3
FORT Forrest 46.41 199 P P 19 00 44.0 +0.4
BBOO Buckleboo 46.41 189 P P 19 00 43.5 -0.2
SONM Songino Array 46.67 325 P P 19 00 46.1 +0.4
comp=Z,2.7nm,0.7s,baz=135,slow=8.0,SNR=8.8
SONM Songino Array 46.67 325 P P 19 00 43.8 -1.9
GTA Gaotai 46.94 312 *eP* **P 19 00 49.0 +1.1**
GTA pmax pmax
comp=Z,8.0nm,0.9s
GSI Gunungsitoli 47.64 260 P P 19 00 52.3 -1.2
GSI IAmb IAmb 19 01 06.3
comp=Z,12nm,1.0s
CAN Canberra 48.48 175 P P 19 00 59.7 +0.1
CAN IAmb IAmb 19 01 01.0
comp=Z,10nm,1.1s
MORW Morawa 50.06 213 P P 19 01 11.5 -0.3
MORW IAmb IAmb 19 01 11.7
comp=Z,5.0nm,0.5s
TOO Toolangi 50.52 179 P P 19 01 16.6 +1.6
LSA Lhasa 51.59 297 P P 19 01 24.5 +0.7
TAPN Taplejung 54.41 294 *eP* **P 19 01 43.9 -0.4**
RAMN Ramite 55.38 294 *eP* **P 19 01 51.0 -0.2**
GUN Gumba 56.06 295 *eP* **P 19 01 56.3 +0.1**
comp=Z,19nm,0.3s
PKI Pulchoki 56.46 294 *eP* **P 19 01 58.5 -0.5**
comp=Z,8.1nm,0.4s
PKIN Phulchoki 56.47 294 *eP* **P 19 01 58.3 -0.8**
comp=Z,8.0nm,0.3s
KKN Kakani 56.59 295 *eP* **P 19 01 59.7 -0.1**
DMN Daman 56.73 294 *eP* **P 19 02 00.4 -0.5**
WMQ Urumqi 56.93 314 *eP* **P 19 02 01.4 -0.4**
WMQ pP pP 19 02 35.4 +2.3
WMQ sP sP 19 02 50.0 +2.1
WMQ pmax pmax
comp=Z,15nm,1.1s
WMQ pmax pmax
comp=Z,210nm,5.3s
GKN Gorkha 57.16 295 *eP* **P 19 02 03.5 -0.3**
comp=Z,15nm,0.5s
DANN Dangsing 57.95 295 *eP* **P 19 02 09.7 +0.3**
comp=Z,51nm,0.5s
KOLN Koldanda 58.07 295 *eP* **P 19 02 10.1 -0.1**
PYUN Piuthan 58.62 295 *eP* **P 19 02 14.2 +0.2**
MK31 Makanchi Array 61.31 316 P P 19 02 32.8 +0.9
MKAR Makanchi Array 61.31 316 P P 19 02 32.6 +0.8
comp=Z,2.4nm,0.4s,baz=93,slow=8.6,SNR=72
MAKZ Makanchi 61.53 316 P P 19 02 34.0 +0.7
MAKZ IAmb IAmb 19 02 35.8
comp=Z,4.8nm,0.6s
ZALV Zalesovo Beam 61.55 325 P P 19 02 33.3 +0.1
comp=Z,1.1nm,0.4s,baz=116,slow=6.2,SNR=6.6
ZALV PcP **PcP** **19 03 13.0 -0.7**
comp=Z,1.7nm,0.5s,baz=124,slow=4.4,SNR=7.7
KURK Kurchatov 64.46 320 P P 19 02 52.6 +0.1
KURK IAmb IAmb 19 02 53.2
comp=Z,4.4nm,0.5s
ILAR Eielson Array 69.19 25 P P 19 03 20.8 -1.4
comp=Z,0.9nm,0.6s,baz=251,slow=5.8,SNR=6.7
ILAR Eielson Array 69.19 25 P P 19 03 19.7 -2.5
INK Inuvik 74.97 22 P P 19 03 56.6 +0.1
comp=Z,1.2nm,0.8s,baz=198,slow=7.4,SNR=4.3
INK Inuvik 74.97 22 P P 19 03 55.6 -0.8
ABKAR Akbulak array 76.39 318 P P 19 04 04.6 -0.3
ABKAR Akbulak array 76.39 318 P P 19 04 04.7 -0.3
GEYT Alibeck 78.96 307 P P 19 04 20.2 +0.6
comp=Z,1.3nm,0.4s,baz=67,slow=3.9,SNR=5.6
YKA Yellowknife Ar 83.50 27 P P 19 04 43.4 +0.5
comp=Z,0.8nm,0.5s,baz=284,slow=3.3,SNR=2.6
BEKR Beckworth 85.76 50 P P 19 04 56.3 +1.2
BEKR IAmb IAmb 19 04 57.0
comp=Z,3.9nm,0.6s
NEW Newport 85.94 41 P P 19 04 56.3 +0.7
NEW IAmb IAmb 19 04 57.5
comp=Z,8.3nm,0.9s
WAKR Walker 86.79 51 P P 19 04 58.7 -1.4
ARCES ARCESS Array B 87.25 342 P P 19 05 00.1 -1.3
comp=Z,3.2nm,0.9s,baz=28,slow=5.5,SNR=8.0
NVAR Mina Array Bea 87.67 51 P P 19 05 06.2 +1.9
comp=Z,2.4nm,0.6s,baz=268,slow=5.9,SNR=25
TPNV Topopah Spring 89.63 52 P P 19 05 14.9 +1.3
TPNV IAmb IAmb 19 05 16.1
comp=Z,3.9nm,0.8s
VNDA Vanda 91.13 176 P P 19 05 19.4 +0.1
comp=Z,0.6nm,0.8s,baz=344,slow=2.8,SNR=5.1
FINES FINESS Array B 91.23 335 P P 19 05 18.8 -1.4
comp=Z,1.0nm,0.4s,baz=61,slow=4.7,SNR=18
PDAR Pinedale Array 92.69 45 P P 19 05 28.4 +0.7
comp=Z,0.5nm,0.6s,baz=239,slow=1.4,SNR=4.7
PDAR Pinedale Array 92.69 45 P P 19 05 28.2 +0.4
ESDC Sonseca Array 119.62 332 PKP PKiKP 19 11 05.4 +0.5
comp=Z,0.3nm,0.6s,baz=9,0,slow=2.4,SNR=1.9
BOSA Boshof 121.50 244 PKP PKiKP 19 11 09.0 +0.1
comp=Z,1.0nm,0.4s,baz=108,slow=2.1,SNR=11

TORD Torodi Ar. Bea 134.54 304 PKP PKiKP 19 11 34.9 -0.4
comp=Z,1.1nm,0.6s,baz=48,slow=1.9,SNR=8.6
DBIC Dimbokro 143.47 301 PKhKP PKPbc 19 11 47.3 -0.4
comp=Z,4.8nm,0.4s,baz=40,slow=3.9,SNR=24
DBIC Dimbokro 143.47 301 PKPbc 19 11 47.4 -0.3
KIC Kosan Boka 143.53 300 *e*PKP1 PKPbc 19 11 47.7 -0.2
comp=Z,12nm,0.4s
TIC Toumodi 143.62 301 *e*PKP1 PKPbc 19 11 47.8 -0.4
LIC Lamto 143.85 300 *e*PKP1 PKPbc 19 11 48.6 -0.2
comp=Z,81nm,0.5s
LPAZ La Paz 148.60 100 PKPbc PKiKP 19 12 04.5 -0.2
comp=Z,2.2nm,0.6s,baz=296,slow=3.6,SNR=10
CPUP Villa Florida 155.95 126 PKPab PKPab 19 12 35.9 -1.1
comp=Z,0.9nm,0.6s,baz=292,slow=5.4,SNR=2.7

IDC 09 18:55:45.3±1.8, 37.32S×51.31E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.6/25, mbtmp3.7/4, MS3.2/4, Ms1 3.2/4, ms1mx3.0/34, Error ellipse: s-maj=84.2km s-min=33.3km az=28.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**19.02**	**348**	LR	LR	19 05 29.3	
	comp=Z,77nm,18.5s,baz=30,slow=31						
BOSA	**Boshof**	**23.46**	**284**	LR	LR	19 08 13.8	
	comp=Z,35nm,20.2s,baz=50,slow=32						
MAW	**Mawson**	**31.03**	**171**	LR	LR	19 11 31.1	
	comp=Z,50nm,18.9s,baz=52,slow=30						
H01W2	**Cape Leeuwin H**	**49.98**	**107**	T	T	19 58 19.0	
	baz=248,slow=75,SNR=104						
H01W3	**Cape Leeuwin H**	**49.98**	**107**	T	T	19 58 19.6	
	baz=248,slow=75,SNR=107						
H01W1	**Cape Leeuwin H**	**49.99**	**107**	T	T	19 58 19.8	
	baz=248,slow=75,SNR=127						
VNDA	**Vanda**	**58.10**	**166**	LR	LR	19 27 59.7	
	comp=Z,28nm,20.5s,baz=243,slow=33						
TORD	**Torodi Ar. Bea**	**68.49**	**307**	P	P	19 06 49.7	+0.2
	1.0nm,1.1s,baz=108,slow=4.7,SNR=3.0						
ASAR	**Alice Springs**	**70.42**	**105**	P	P	19 07 01.6	0.0
	0.6nm,0.7s,baz=234,slow=5.8,SNR=9.9						
CMAR	**Chiang Mai Arr**	**71.34**	**48**	P	P	19 07 07.1	+0.1
	0.6nm,0.8s,baz=238,slow=7.7,SNR=5.0						
WRA	**Warramunga Arr**	**72.80**	**102**	P	P	19 07 16.1	+0.2
	0.9nm,0.8s,baz=228,slow=5.0,SNR=6.9						
ILAR	**Eielson Array**	**150.46**	**16**	PKPbc	PKPbc	19 15 37.3	-0.5
	0.4nm,0.7s,baz=328,slow=4.3,SNR=4.5						

RSNC 09 19:00:10.1±1.1, 6.81N×73.15W, h151km±4km, ML3.2, Mw3.5,1C-5D, Fault plane solution: NP1:ϕ±28.00000°, δ55.00000°, λ-102.00000°., Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.22**	**188**	*i* P	Pn	19 00 30.5	-0.4
BARC				*eS*	Sn	19 00 45.3	-1.4
BARC				*i*		19 00 48.2	
	comp=Z,403nm,0.3s						
BRRC	**Barranca, Sant**	**0.63**	**298**	*i* P	Pn	19 00 32.3	+0.1
BRRC				*eS*	Sn	19 00 49.3	+0.2
BRRC				*i*		19 00 54.0	
	comp=Z,142nm,0.3s						
PAMC	**Pamplona, Colo**	**0.69**	**41**	*i* P	Pn	19 00 33.2	0.0
PAMC				*eS*	Sn	19 00 50.6	-0.2
RUSC	**La Rusia**	**0.92**	**176**	*i* P	Pn	19 00 34.4	-0.5
RUSC				*eS*	Sn	19 00 53.2	-0.5
RUSC				*i*		19 00 54.1	
	comp=Z,126nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.32**	**258**	*eP*	Pn	19 00 37.0	-0.9
PTBC				*eS*	Sn	19 00 58.4	-0.8
PTBC				*i*		19 01 05.6	
	comp=Z,296nm,0.4s						
TAMC	**Tame, Arauca**	**1.40**	**105**	*eP*	Pn	19 00 38.6	-0.1
TAMC				*i*		19 00 59.4	
	comp=Z,123nm,0.3s						
TAMC				*eS*	Sn	19 01 00.6	-0.1
OCAC	**Ocana**	**1.43**	**353**	*eP*	Pn	19 00 38.6	-0.5
OCAC				*eS*	Sn	19 01 00.3	-1.1
OCAC				*i*		19 01 06.9	
	comp=Z,107nm,0.2s						
SPBC	**San Pablo de B**	**1.47**	**218**	*eP*	Pn	19 00 39.4	-0.2
SPBC				*eS*	Sn	19 01 01.1	-1.1
SPBC				*i*		19 01 09.1	
	comp=Z,163nm,0.2s						
NORC	**Norcasia**	**2.11**	**234**	*eP*	Pn	19 00 46.2	-0.5
NORC				*eS*	Sn	19 01 14.3	-0.5
NORC				*i*		19 01 18.1	
	comp=Z,141nm,0.2s						
CHIC	**Chingaza**	**2.25**	**195**	*eP*	Pn	19 00 48.5	-0.1
CHIC				*eS*	Sn	19 01 17.6	-0.7
CHIC				*i*		19 01 24.1	
	comp=Z,43nm,0.3s						
ROSC	**El Rosal**	**2.28**	**211**	*eP*	Pn	19 00 50.2	+1.2
ROSC				*eS*	Sn	19 01 19.3	+0.4
ROSC				*i*		19 01 28.1	
	comp=Z,166nm,0.5s						
UREC	**San Jos de Ur**	**2.54**	**292**	*eP*	Pn	19 00 50.0	-1.8
UREC				*eS*	Sn	19 01 21.5	-2.4
UREC				*i*		19 01 34.4	
	comp=Z,92nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.71**	**234**	*eP*	Pn	19 00 55.3	+1.0
GUY2C				*eS*	Sn	19 01 29.1	+0.8
GUY2C				*i*		19 01 39.0	
	comp=Z,85nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.79**	**159**	*eP*	Pn	19 00 53.5	-1.4
PTGC				*eS*	Sn	19 01 26.9	-2.6
PTGC				*i*		19 01 27.5	
	comp=Z,59nm,0.6s						
CBOC	**Ciudad Bolivar**	**3.00**	**252**	*eP*	Pn	19 00 58.3	+0.6
DBBC	**Dabeiba**	**3.04**	**274**	*eP*	Pn	19 00 58.0	-0.2
DBBC				*eS*	Sn	19 01 34.4	-0.9
TOLC	**Tolima**	**3.09**	**224**	*eP*	Pn	19 00 60.0	+1.0
TOLC				*eS*	Sn	19 01 37.6	+0.8
TOLC				*i*		19 01 42.3	
	comp=Z,174nm,0.5s						
MOTC	**Monteria, Cord**	**3.16**	**308**	*eP*	Pn	19 00 57.6	-2.0
ARGC	**Ariguani, Magd**	**3.21**	**340**	*eP*	Pn	19 01 00.7	+0.5
ANIL	**Santa Ana**	**3.21**	**224**	*eP*	Pn	19 01 01.0	+0.5
SDV	**Santo Domingo**	**3.24**	**50**	*eP*	Pn	19 00 59.8	-0.9
PRAC	**Prado**	**3.53**	**209**	*eP*	Pn	19 01 03.6	-0.8
ORTC	**Ortega, Tolima**	**3.56**	**216**	*eP*	Pn	19 01 04.5	-0.3
SJCC	**San Jacinto, C**	**3.66**	**327**	*eP*	Pn	19 01 03.9	-2.2
YOTC	**Yotoco, Valle**	**4.24**	**229**	*eP*	Pn	19 01 12.8	-1.0
CAPC	**Capurgana**	**4.54**	**294**	*eP*	Pn	19 01 14.3	-3.2
MACC	**Macarena, Meta**	**4.69**	**189**	*eP*	Pn	19 01 17.0	-2.5
MACC				*eS*	Sn	19 02 08.1	-5.5
MACC				*i*		19 02 18.4	
	comp=Z,10nm,0.4s						
GARC	**Garzon, Huila**	**5.15**	**207**	*eP*	Pn	19 01 24.5	-1.4

IDC 09 19:13:53.6±2.7, 6.22S×130.43E, h133km±35km, mb3.0/1, mb1 2.9/5, mb1mx2.8/30, mbtmp3.2/5, Error ellipse: s-maj=66.7km s-min=21.1km az=87.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.38**	**9**	P	Pn	19 15 12.2	+0.2
	0.4nm,0.3s,baz=228,slow=22,SNR=10						
SIJI				S	Sn	19 16 08.8	-4.2
	1.2nm,0.3s,baz=207,slow=22,SNR=13						
FITZ	**Fitzroy Crossi**	**12.70**	**201**	P	Pn	19 16 48.4	-1.1
	0.0nm,0.3s,baz=38,slow=18,SNR=1.4						
FITZ				S	Sn	19 19 00.2	-9.4
	0.1nm,0.3s,baz=334,slow=22,SNR=1.9						
WRA	**Warramunga Arr**	**14.15**	**165**	P	Pn	19 17 08.2	-0.1
	0.1nm,0.3s,baz=346,slow=10,SNR=9.0						
WRA				S	Sn	19 19 31.8	-13
	0.1nm,0.3s,baz=352,slow=21,SNR=1.2						
ASAR	**Alice Springs**	**17.66**	**169**	P	Pn	19 17 51.4	-0.1
	0.1nm,0.3s,baz=346,slow=10,SNR=7.6						
MKAR	**Makanchi Array**	**67.82**	**326**	P	P	19 24 37.2	-0.1
	0.2nm,0.4s,baz=117,slow=6.9,SNR=6.3						

*IDC **09** 19:41:58.1±1.3, 54.39S×131.20W, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.8/28, mbtmp3.8/6, MS3.7/11, Ms1 3.6/11, ms1mx3.5/32, Error ellipse: s-maj=37.6km s-min=31.1km az=179.0*

ISC 09 19:41:59.6±1.3, 54.4S±0.2×131.2W±0.2, h10km, n32, σ0844/7, mb3.8/6, MS3.8/15, Pacific-Antarctic Ridge

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

VNDA Vanda 32.69 202 P P 19 48 30.8 -0.6
0.6nm,0.8s,baz=112,slow=10,SNR=2.5
TBI Tubuai 33.90 329 *e*LR LR 19 57 56.6
comp=Z,182nm,27.8s
TBI Tubuai 33.90 329 *e*T T 20 25 33.2
21nm,0.3s
QSPA South Pole Qui 35.77 180 P P 19 48 58.6 +0.1
1.2nm,0.8s,baz=114,slow=4.8,SNR=4.0
QSPA LR LR 20 01 32.5
comp=Z,144nm,18.4s,baz=80,slow=33
URZ Urewera 38.22 273 *e*LR LR 20 01 42.8
comp=Z,94nm,19.5s,baz=212,slow=31
RPZ Rata Peaks 38.28 262 *e*LR LR 20 01 23.2
comp=Z,134nm,20.3s,baz=124,slow=30
MEH Mehetia 38.70 334 *e*T T 20 31 28.4
4.9nm,0.2s
PPT2 Papeete2 39.38 332 *e*LR LR 20 00 40.8
comp=Z,213nm,26.2s
PPT Papeete 39.40 332 LR LR 20 02 55.7
comp=Z,122nm,18.4s,baz=180,slow=32
RAR Rarotonga 39.56 316 LR LR 20 01 32.4
comp=Z,42nm,19.5s,baz=120,slow=30
VAH Vaihoa 41.12 335 *e*T T 20 34 28.2
36nm,0.3s
H03S2 Juan Fernandez 41.64 82 T T 20 32 53.6
baz=221,slow=74,SNR=46
H03S1 Juan Fernandez 41.65 82 T T 20 32 54.9
baz=221,slow=74,SNR=50
H03S3 Juan Fernandez 41.66 82 T T 20 32 53.2
baz=221,slow=74,SNR=52
PLCA Paso Flores 41.84 97 LR LR 20 02 02.6
comp=Z,62nm,19.4s,baz=167,slow=29
H03N3 Juan Fernandez 41.91 82 T T 20 33 11.5
baz=224,slow=72,SNR=198
H03N2 Juan Fernandez 41.92 82 T T 20 33 09.9
baz=224,slow=72,SNR=565
H03N1 Juan Fernandez 41.93 82 T T 20 33 10.5
baz=224,slow=72,SNR=267
TAOE Nuku Hiva Isla 45.98 348 *e*LR LR 20 03 41.1
comp=Z,275nm,26.4s
SNAA Sanae 49.10 161 P P **19 50 47.1 +0.5**
1.3nm,1.0s,baz=212,slow=13,SNR=3.5
DZM Mont Dzumac 56.30 279 *e*LR LR 20 08 46.9
comp=Z,56nm,21.9s
MAW Mawson 57.86 186 LR LR 20 13 44.7
comp=Z,33nm,19.4s,baz=231,slow=33
CPUP Villa Florida 59.77 94 LR LR 20 12 34.1
comp=Z,70nm,19.0s,baz=228,slow=31
LPAZ La Paz 61.29 78 P P **19 52 15.7 -0.2**
1.4nm,0.9s,baz=186,slow=4.7,SNR=3.6
LPAZ LR LR 20 11 43.5
comp=Z,56nm,19.9s,baz=280,slow=29
STKA Stephens Creek 63.21 252 LR LR 20 14 24.0
comp=Z,66nm,21.6s,baz=193,slow=31
ASAR Alice Springs 73.85 252 P P **19 53 34.9 +0.3**
0.8nm,0.9s,baz=143,slow=5.5,SNR=5.6
H01W1 Cape Leeuwin H 74.83 231 T T 21 17 16.9
baz=147,slow=76,SNR=12
H01W2 Cape Leeuwin H 74.84 231 T T 21 17 07.6
baz=147,slow=76,SNR=14
H01W3 Cape Leeuwin H 74.85 231 T T 21 17 13.9
baz=147,slow=76,SNR=14
WRA Warramunga Arr 76.56 255 P P **19 53 50.3 +0.2**
0.9nm,1.0s,baz=142,slow=5.2,SNR=6.0
BOSA Boshof 94.87 159 LR LR 20 34 48.6
comp=Z,33nm,18.1s,baz=192,slow=33
MKAR Makanchi Array 157.58 264 PKPab PKPab 20 02 27.3 -0.1
0.5nm,0.7s,baz=127,slow=4.6,SNR=4.6

*IDC **09** 19:52:56.2±1.3, 14.60S×169.69E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.8/31, mbtmp3.8/7, ML3.8/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/35, Error ellipse: s-maj=60.6km s-min=22.9km az=141.0*
*NEIC **09** 19:53:00.3±0.8, 14.8S±0.1×169.7E±0.1, h26km±13km, mb4.6/9, Error ellipse: s-maj=18.9km s-min=14.0km az=127.0*

ISC 09 19:52:57.5±0.8, 14.7S±0.2×169.7E±0.1, h10km, n18, σ1819/17, mb4.2/10, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**2.50**	**252**	Pn	**Pn**	**19 53 39.0**	**+0.7**
DZM	**Mont Dzumac**	**7.97**	**202**	Pn	**Pn**	**19 54 53.6**	**+0.1**
	1.2nm,0.3s,baz=96,slow=19,SNR=15						
HNR	**Honiara**	**10.84**	**298**	LR	LR	19 59 49.1	
	comp=Z,32nm,19.2s,baz=328,slow=38						
NIUE	**Niue**	**20.01**	**105**	P	**P**	**19 57 30.7**	**+0.1**
STKA	**Stephens Creek**	**30.82**	**231**	P	**P**	**19 59 13.4**	**-0.4**
	2.2nm,0.9s,baz=100,slow=6.1,SNR=1.9						
WR0	**Warramunga Arr**	**33.90**	**256**	P	**P**	**19 59 43.0**	**+2.0**
WR0				IAmb	IAmb	19 59 54.1	
	comp=Z,12nm,1.5s						
WB0	**Warramunga Arr**	**34.03**	**256**	P	**P**	**19 59 42.4**	**+0.3**
WB0				IAmb	IAmb	19 59 43.7	
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**34.09**	**256**	P	**P**	**19 59 43.1**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=81,slow=6.0,SNR=7.9						
AS31	**Alice Springs**	**34.86**	**250**	P	**P**	**19 59 49.2**	**-0.1**
ASAR	**Alice Springs**	**34.86**	**250**	P	**P**	**19 59 50.8**	**+1.4**
	comp=Z,3.6nm,0.5s,baz=76,slow=9.1,SNR=75						
ASAR	**Alice Springs**	**34.86**	**250**	P	**P**	**19 59 50.4**	**+1.1**
KNRA	**Kununurra**	**39.45**	**263**	P	**P**	**20 00 28.7**	**+0.4**
KNRA				IAmb	IAmb	20 00 39.5	
	comp=Z,20nm,1.5s						
FITZ	**Fitzroy Crossi**	**42.30**	**259**	P	**P**	**20 00 53.9**	**+2.0**
SOEI	**Soe**	**44.58**	**271**	P	**P**	**20 01 09.3**	**-1.1**
MORW	**Morawa**	**51.38**	**244**	P	**P**	**20 02 01.4**	**-1.4**
MORW				IAmb	IAmb	20 02 11.0	
	comp=Z,11nm,1.2s						
ILAR	**Eielson Array**	**85.77**	**17**	P	**P**	**20 05 35.1**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=238,slow=4.7,SNR=5.8						
PDAR	**Pinedale Array**	**93.21**	**47**	P	**P**	**20 06 13.3**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=233,slow=8.4,SNR=2.4						
TXAR	**Lajitas Array**	**94.22**	**61**	P	**P**	**20 06 18.6**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=284,slow=7.3,SNR=2.0						

IDC 09 20:00:08.4±3.6, 21.78S×176.06W, h0km, mb3.3/2, mb1 3.5/2, mb1mx3.3/42, mbtmp3.3/2, Error ellipse: s-maj=192.7km s-min=46.0km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.00**	**258**	P	P	20 08 34.7	+0.8
	0.3nm,0.9s,baz=77,slow=8.7,SNR=1.9						
ASAR				PcP	PcP	20 10 09.6	-1.1
	0.5nm,0.9s,baz=109,slow=3.5,SNR=5.1						
WRA	**Warramunga Arr**	**46.23**	**263**	P	P	20 08 34.9	-0.8
	0.2nm,0.4s,baz=96,slow=7.5,SNR=10						
AKASG	**Malin Array Be**	**145.00**	**332**	PKPbc	PKPbc	20 19 46.1	-0.7
	1.1nm,0.4s,baz=39,slow=4.0,SNR=9.0						
GERES	**GERESS Array B**	**151.89**	**346**	PKPbc	PKiKP	20 20 06.1	+0.3
	0.1nm,0.4s,baz=8.7,slow=1.8,SNR=4.0						

*IDC **09** 20:06:39.0±0.9, 64.50N×17.72W, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.7/58, mbtmp3.8/8, ML3.9/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/43, Error ellipse: s-maj=31.7km s-min=11.3km az=16.0*
*NEIC **09** 20:06:39.1±1.6, 64.61N±0.10×17.8W±0.1, h8km±5km, mb4.5/7, Error ellipse: s-maj=15.4km s-min=6.0km az=205.0*

ISC 09 20:06:38.9±0.7, 64.46N±0.09×18.10W±0.08, h10km, n38, σ1979/38, mb4.0/12, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.42**	**283**	Pg	**Pg**	**20 07 06.4**	**+0.3**
	19nm,0.3s,baz=86,slow=6.4,SNR=48						
BORG				Lg	Lg	20 07 29.6	
	11nm,0.3s,baz=64,slow=23,SNR=8.4						
BORG	**Borgarnes**	**1.42**	**283**		**Pg**	**20 07 06.6**	**+0.5**
SCO	**Scoresbysund**	**6.23**	**348**	Pn	**Pn**	**20 08 09.5**	**-1.2**
SCO	**Scoresbysund**	**6.23**	**348**	*e*	**Pn**	**20 08 08.4**	**-2.3**
	baz=175,slow=7.4						
SCO				*i* P	**Pn**	**20 08 10.4**	**-0.3**
SCO				*eS*	**Sn**	**20 09 23.3**	**+1.5**
EKA	**Eskdalemuir Ar**	**11.80**	**134**	Pn	**Pn**	**20 09 27.6**	**+0.6**
	baz=322,slow=13,SNR=11						
DAG	**Danmarks Havn**	**12.38**	**359**	*i* P	**Pn**	**20 09 37.6**	**+2.8**
DAG	**Danmar

CLL	**Collm**	**20.85**	**114**	*e*P		**P**	**20 11 20.0**	**-0.6**
	comp=Z,12nm,1.3s							
CLL	**Collm**	**20.85**	**114**	P		**P**	**20 11 17.9**	**-2.7**
NKC	**Novy Kostel**	**21.48**	**117**	*e*P		**P**	**20 11 30.6**	**+3.2**
BRG	**Berggiesshubel**	**21.57**	**114**	*e*P		**P**	**20 11 28.7**	**+0.5**
	comp=Z,16nm,1.4s							
BRG	**Berggiesshubel**	**21.57**	**114**	*e*P		**P**	**20 11 28.7**	**+0.5**
	comp=Z,8.1nm,1.0s							
PRU	**Pruhonice**	**22.50**	**114**	*e*P		**P**	**20 11 40.6**	**+2.4**
CHVC	**Chvalec**	**22.63**	**112**	*e*P		**P**	**20 11 39.2**	**-0.5**
OSTC	**Ostas**	**22.72**	**111**	*e*P		**P**	**20 11 42.7**	**+2.1**
KHC	**Kasperske Hory**	**22.81**	**117**	*e*P		**P**	**20 11 42.3**	**+0.7**
DPC	**Dobruska-Polom**	**22.92**	**112**	*e*P		**P**	**20 11 44.1**	**+1.3**
GERES	**GERESS Array B**	**23.09**	**117**	P		**P**	**20 11 45.2**	**+0.6**
	comp=Z,1.6nm,1.0s,baz=345,slow=9.7,SNR=8.5							
GERES	**GERESS Array B**	**23.09**	**117**	P		**P**	**20 11 42.4**	**-2.1**
VRAC	**Vranov**	**23.85**	**113**	LR		LR	20 21 19.1	
	comp=Z,82nm,19.9s,baz=312,slow=37							
VYHS	**Vyhne**	**25.40**	**111**	*e*P		**P**	**20 12 07.3**	**+1.2**
KOLS	**Kolonicke sedl**	**26.46**	**107**	*e*P		**P**	**20 12 18.0**	**+2.2**
AKASG	**Malin Array Be**	**28.08**	**97**	P		**P**	**20 12 29.9**	**-0.3**
	comp=Z,0.1nm,0.2s,baz=324,slow=9.4,SNR=2.3							
AGG	**Agios Georgios**	**34.70**	**117**	P		**P**	**20 13 29.0**	**+0.4**
AGG				IAmb		IAmb	20 13 33.0	
	comp=Z,9.9nm,1.2s							
BRTR	**Keskin Array B**	**38.68**	**104**	P		**P**	**20 14 03.1**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=308,slow=5.1,SNR=1.6							
TIXI	**Tiksi**	**42.30**	**15**	P		**P**	**20 14 31.6**	**-0.4**
TIXI				IAmb		IAmb	20 14 34.3	
	comp=Z,4.5nm,0.9s							
ABKAR	**Akbulak array**	**42.30**	**72**	P		**P**	**20 14 31.5**	**-0.7**
TOLK	**Toolik Lake Re**	**42.83**	**336**	P		**P**	**20 14 38.8**	**+2.3**
TOLK				IAmb		IAmb	20 14 45.4	
	comp=Z,12nm,1.4s							
BMAR	**Burnt Mountain**	**42.96**	**333**	P		**P**	**20 14 34.4**	**-3.1**
ILAR	**Eielson Array**	**45.75**	**332**	P		**P**	**20 15 02.4**	**+2.7**
	comp=Z,1.6nm,1.0s,baz=26,slow=6.7,SNR=9.3							
KURK	**Kurchatov**	**48.45**	**58**	P		**P**	**20 15 20.1**	**-0.8**
KURK				IAmb		IAmb	20 15 21.5	
	comp=Z,4.4nm,0.9s							
GHO	**Glory Hole Cre**	**48.85**	**331**	P		**P**	**20 15 23.0**	**-1.0**
GHO				IAmb		IAmb	20 15 25.0	
	comp=Z,9.8nm,0.7s							
MKAR	**Makanchi Array**	**53.06**	**58**	P		**P**	**20 15 55.2**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=322,slow=7.7,SNR=6.0							
MKAR	**Makanchi Array**	**53.06**	**58**	P		**P**	**20 15 52.1**	**-3.7**
TORD	**Torodi Ar. Bea**	**53.06**	**156**	P		**P**	**20 15 57.1**	**+1.0**
	comp=Z,1.6nm,1.0s,baz=346,slow=7.8,SNR=5.0							
E09A	**Wood Farm, Sta**	**53.16**	**302**	P		**P**	**20 15 55.0**	**-1.5**
USRK	**Ussuriysk Ar.**	**69.16**	**23**	LR		LR	20 48 14.5	
	comp=Z,41nm,18.6s,baz=338,slow=36							

*NEIC **09** 20:10:18.9, 36.02N×97.10W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.68; $M_{\theta\theta}$5.82; $M_{\phi\phi}$-4.14; $M_{r\theta}$2.56; $M_{\theta\phi}$2.87; $M_{\phi r}$2.44; Fault plane solution: M_o6.90000×10^{14} NP1:ϕ_s213.81000°, δ84.74000°, λ-146.61000°. NP2:ϕ_s120.36000°, δ56.77000°, λ-6.29000°. Principal axes: T 7.6455, Plg19.0000°, Azm342.0000°; N -1.8661, Plg56.0000°, Azm222.0000°; P -5.7794, Plg27.0000°, Azm82.0000°;*

*IDC **09** 20:10:18.7±0.8, 36.04N×97.06W, h0km, mb3.4/1, mb1 3.9/8, mb1mx3.6/53, mbtmp3.6/8, ML3.5/7 Error ellipse: s-maj=13.6km s-min=9.5km az=170.0*

*TUL **09** 20:10:18.9±0.0, 36.02N×97.10W, h3km, ML4.1, mb4.2/5(NEIC), Mwr3.8/20(NEIC), Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

*NEIC **09** 20:10:19.0±0.7, 36.032N±0.009×97.09W±0.01, h5km±2km, Error ellipse: s-maj=3.0km s-min=2.0km az=119.0*

*ANF **09** 20:10:19.5±0.3, 36.01N×97.06W, h5km, ML5.1/19, Error ellipse: s-maj=3.0km s-min=2.4km az=5.0*

ISC 09 20:10:18.9±1.0, 36.03N±0.02×97.11W±0.02, h8km±7km, n145, σ1§94/174, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK031	**S. Brethren Rd**	**0.23**	**110**		**Pg**	**20 10 23.7**	**+0.1**
OK031				Sg	**Sg**	**20 10 26.9**	**+0.2**
OK030	**Cody Creek RV**	**0.28**	**112**		**Pg**	**20 10 24.6**	**+0.1**
OK029	**Liberty Lake**	**0.37**	**230**		**Pg**	**20 10 26.4**	**+0.4**
OK029				Sg	**Sg**	**20 10 31.7**	**+0.8**
OK025	**Westminster Rd**	**0.49**	**202**	Pg	**Pg**	**20 10 28.6**	**+0.3**
OK001	**Jones High Sch**	**0.49**	**197**	Pg	**Pg**	**20 10 28.7**	**+0.3**
OK009	**Oakdale Elemen**	**0.52**	**209**		**Pg**	**20 10 29.4**	**+0.5**
BCOK	**Bluff Creek, N**	**0.55**	**227**		**Pg**	**20 10 29.8**	**+0.3**
OK011	**Prague**	**0.65**	**148**		**Pg**	**20 10 31.3**	**0.0**
OKCFA	**Oklahoma City**	**0.68**	**204**		**Pg**	**20 10 32.0**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**0.68**	**203**		**Pg**	**20 10 32.0**	**0.0**
FNO	**Franklin**	**0.81**	**197**		**Pg**	**20 10 34.3**	**-0.1**
CROK	**Carrier**	**0.85**	**304**		**Pg**	**20 10 35.6**	**+0.4**
W35A	**Tecumseh**	**0.90**	**168**		**Pg**	**20 10 35.3**	**-0.8**
T35A	**Sooner Cattle**	**1.00**	**29**		**Pg**	**20 10 38.0**	**-0.2**
GC02	**Grant County #**	**1.02**	**324**		**Pg**	**20 10 38.3**	**0.0**
KAN13	**South Haven SW**	**1.02**	**343**		**Pg**	**20 10 38.5**	**0.0**
TUL1	**Leonard**	**1.08**	**96**	P	**Pg**	**20 10 38.6**	**-0.9**
	baz=277,SNR=464						
TUL1				S	**Sg**	**20 10 52.7**	**-0.7**
	baz=277						
TUL1	**Leonard**	**1.08**	**96**	Pg	**Pg**	**20 10 38.6**	**-0.9**
KAN14	**Manchester OK**	**1.15**	**324**		**Pg**	**20 10 40.8**	**-0.1**
KAN09	**Caldwell North**	**1.17**	**340**		**Pg**	**20 10 41.3**	**-0.1**
KAN05	**Bluff City Nor**	**1.24**	**330**		**Pg**	**20 10 42.2**	**-0.4**
KAN10	**Anthony SW Sta**	**1.35**	**324**		**Pn**	**20 10 44.3**	**+0.2**
KAN08	**Anthony NE Sta**	**1.38**	**330**		**Pn**	**20 10 44.9**	**+0.4**
KAN12	**Harper NE Stat**	**1.45**	**331**		**Pn**	**20 10 46.0**	**+0.5**
U32A	**Winter Ranch,**	**1.57**	**283**		**Pn**	**20 10 47.8**	**+0.7**
WMOK	**Wichita Mounta**	**1.88**	**227**	P	**Pn**	**20 10 52.2**	**+0.8**
	baz=46						
WMOK				S	**Sb**	**20 11 17.9**	**+0.7**
	baz=46						
WMOK	**Wichita Mounta**	**1.88**	**227**	Pn	**Pn**	**20 10 52.3**	**+0.9**
X37A	**Clayton**	**2.02**	**135**		**Pn**	**20 10 54.1**	**+0.8**
U38A	**Gravette**	**2.24**	**79**		**Pn**	**20 10 57.9**	**+1.6**
Z35A	**Perchaven, San**	**2.70**	**183**		**Pn**	**20 11 03.5**	**+0.9**
R32A	**Long Quarter,**	**2.71**	**332**		**Pn**	**20 11 03.9**	**+1.1**
W39A	**Magazine**	**2.84**	**106**	P	**Pn**	**20 11 05.2**	**+0.7**
	baz=288,SNR=101						
W39A				S	**Sn**	**20 11 41.0**	**+2.1**
	baz=288						
W39A	**Magazine**	**2.84**	**106**		**Pn**	**20 11 05.3**	**+0.8**
KSU1	**Kansas State U**	**3.09**	**7**	Pn	**Pn**	**20 11 08.8**	**+0.8**
	baz=187,SNR=60						
KSU1				Pb	**Pb**	**20 11 15.8**	**+1.7**
	baz=187						
KSU1				Sb	**Sg**	**20 11 55.8**	**-2.3**
	baz=187						
KSU1	**Kansas State U**	**3.09**	**7**	Pn	**Pn**	**20 11 09.6**	**+1.6**
MIAR	**Mount Ida**	**3.25**	**116**	P	**Pn**	**20 11 11.0**	**+0.9**
	baz=298,SNR=62						
MIAR				S	**Sn**	**20 11 49.9**	**+0.8**
	baz=298						
MIAR	**Mount Ida**	**3.25**	**116**	Pn	**Pn**	**20 11 11.1**	**+0.9**
Z38A	**Mt. Pleasant**	**3.27**	**147**	Pn	**Pn**	**20 11 10.9**	**+0.4**
S39A	**Bolivar**	**3.46**	**60**	Pn	**Pn**	**20 11 13.8**	**+0.7**
U40A	**Yellville**	**3.46**	**83**	P	**Pn**	**20 11 13.1**	**+0.1**
	baz=266,SNR=103						
U40A	**Yellville**	**3.46**	**83**	Pn	**Pn**	**20 11 13.2**	**+0.1**
CBKS	**Cedar Bluff**	**3.48**	**324**	Pn	**Pn**	**20 11 14.9**	**+1.6**
	baz=142,SNR=38						
CBKS				Pb	**Pb**	**20 11 22.7**	**+2.0**
	baz=142						
CBKS				Sb	**Sg**	**20 12 08.2**	**-2.3**
	baz=142						
X40A	**Basin Creek Fa**	**3.82**	**113**	P	**Pn**	**20 11 19.0**	**+1.0**
	baz=295,SNR=37						
X40A				Sn	**Sn**	**20 12 05.2**	**+1.9**
	baz=295						
X40A				Sb	**Sg**	**20 12 18.1**	**-3.6**
	baz=295						
X40A	**Basin Creek Fa**	**3.82**	**113**		**Pn**	**20 11 19.1**	**+1.0**
AMTX	**Amarillo**	**3.90**	**254**	P	**Pn**	**20 11 20.4**	**+1.1**
	baz=72						
AMTX				Sb	**Sg**	**20 12 20.9**	**-3.4**
	baz=72						
ABTX	**Abilene, Hawle**	**4.00**	**212**	Pn	**Pn**	**20 11 21.3**	**+0.8**
	baz=31						
ABTX				Pb	**Pb**	**20 11 31.1**	**+1.5**
	baz=31						
WHAR	**Wooly Hollow**	**4.00**	**99**	Pn	**Pn**	**20 11 21.3**	**+0.9**
WLAR	**White Oak Lake**	**4.04**	**124**	Pn	**Pn**	**20 11 21.9**	**+0.9**
WHTX	**Lake Whitney,**	**4.04**	**184**	Pn	**Pn**	**20 11 21.5**	**+0.4**
	baz=4.2,SNR=12						
WHTX				Pb	**Pb**	**20 11 31.6**	**+1.2**
	baz=4.2						
WHTX				Sb	**Sb**	**20 12 21.9**	**+2.5**
	baz=4.2						
W41B	**Gary Mavity, V**	**4.05**	**101**	P	**Pn**	**20 11 21.7**	**+0.5**
	baz=284,SNR=32						
W41B				Sb	**Sg**	**20 12 24.8**	**-4.2**
	baz=284						
237A	**Washetta, Mont**	**4.17**	**165**	Pn	**Pn**	**20 11 22.8**	**0.0**
Z41A	**Richland Creek**	**4.50**	**127**	P	**Pn**	**20 11 27.3**	**0.0**
	baz=309						
Z41A				S	**Sn**	**20 12 19.1**	**-0.9**
	baz=309						
Z41A	**Richland Creek**	**4.50**	**127**	Pn	**Pn**	**20 11 27.4**	**0.0**
NATX	**Nacogdoches**	**4.72**	**154**	S	**Sn**	**20 12 24.1**	**-1.4**
	baz=335						
LCAR	**Lake Charles**	**4.83**	**88**	Pn	**Pn**	**20 11 32.1**	**+0.3**
MSTX	**Muleshoe**	**5.08**	**248**	P	**Pn**	**20 11 36.4**	**+0.9**
	baz=64						
MSTX				Sb	**Sb**	**20 12 55.0**	**+5.6**
	baz=64						
CCM	**Cathedral Cave**	**5.11**	**65**	P	**Pn**	**20 11 37.3**	**+1.5**
	baz=248						
CCM				Sb	**Sb**	**20 12 55.3**	**+5.3**
	baz=248						
435B	**Jarrell**	**5.25**	**184**	P	**Pn**	**20 11 38.0**	**+0.2**
	baz=4.3						
435B				Sb	**Sb**	**20 12 59.1**	**+4.9**
	baz=4.3						
KSCO	**Kaye Shedlock'**	**5.30**	**306**	P	**Pn**	**20 11 41.2**	**+2.7**
	baz=122,SNR=24						
X43A	**Marvell**	**5.32**	**105**	P	**Pn**	**20 11 39.8**	**+1.3**
	baz=288						
X43A				Sb	**Sb**	**20 13 01.8**	**+5.8**
	baz=288						
BGNE	**Belgrade**	**5.43**	**352**	P	**Pn**	**20 11 40.8**	**+0.6**
	baz=171						
BGNE	**Belgrade**	**5.43**	**352**		**Pn**	**20 11 40.6**	**+0.4**
PBMO	**Poplar Bluff**	**5.44**	**80**		**Pn**	**20 11 41.6**	**+1.4**
T25A	**Trinidad**	**5.98**	**283**	P	**Pn**	**20 11 48.5**	**+0.6**
	baz=98						
T25A				Sb	**Sg**	**20 13 24.3**	**-6.5**
	baz=98						
T25A	**Trinidad**	**5.98**	**283**	Pn	**Pn**	**20 11 48.6**	**+0.7**
JCT	**Junction City**	**5.98**	**203**	P	**Pn**	**20 11 48.0**	**+0.2**
	baz=22						
JCT				Sb	**Sg**	**20 13 24.4**	**-6.5**
	baz=22						
OXF	**Oxford**	**6.48**	**101**	P	**Pn**	**20 11 54.1**	**-0.4**
	baz=286,SNR=12						
OXF				S	**Sn**	**20 13 10.6**	**+1.9**
	baz=286						
SCIA	**State Center**	**6.60**	**26**	P	**Pn**	**20 11 57.3**	**+1.0**
	baz=208						
SCIA				S	**Sn**	**20 13 09.9**	**-1.8**
	baz=208						
SDCO	**Great Sand Dun**	**6.94**	**287**	P	**Pn**	**20 12 02.9**	**+1.7**
	baz=102						
Q24A	**Divide**	**7.03**	**297**	P	**Pn**	**20 12 04.3**	**+1.9**
	baz=112,SNR=5.7						
WVT	**Waverly**	**7.51**	**87**	P	**Pn**	**20 12 08.9**	**+0.2**
	baz=272						
HDIL	**Hopedale**	**7.62**	**51**	P	**Pn**	**20 12 11.6**	**+1.3**
	baz=236,SNR=7.7						
HDIL				Sb	**Sb**	**20 14 10.9**	**+8.6**
	baz=236						
ECSD	**EROS Data Cent**	**7.70**	**3**	P	**Pn**	**20 12 10.6**	**-0.8**
	baz=183,SNR=10						
ISCO	**Idaho Springs**	**7.70**	**302**	P	**Pn**	**20 12 12.4**	**+0.8**
	baz=117						
ANMO	**Albuquerque**	**7.70**	**265**	Pn	**Pn**	**20 12 14.8**	**+3.2**
	0.2nm,0.3s,baz=90,slow=12,SNR=3.7						
ANMO				Pg	Pg	20 12 40.2	-6.2
	1.5nm,0.3s,baz=78,slow=16,SNR=18						
ANMO				Sn	**Sn**	**20 13 39.2**	**0.0**
	1.3nm,0.3s,baz=68,slow=12,SNR=3.2						
ANMO				Lg	Lg	20 14 20.2	
	1.9nm,0.3s,baz=343,slow=19,SNR=4.1						
MNTX	**Cornudas Mount**	**8.12**	**240**	P	**Pn**	**20 12 17.1**	**-0.1**
	baz=56						
TXAR	**Lajitas Array**	**8.67**	**221**	Pn	**Pn**	**20 12 24.0**	**-0.8**
	0.3nm,0.3s,baz=50,slow=11,SNR=10						
TXAR				Pg	Pg	20 12 51.8	-13
	1.0nm,0.3s,baz=40,slow=14,SNR=5.1						
TXAR				Lg	Lg	20 14 47.9	
	3.1nm,0.3s,baz=75,slow=20,SNR=3.8						
JFWS	**Jewell Farm**	**8.68**	**36**	P	**Pn**	**20 12 26.1**	**+1.4**
	baz=220						
JFWS	**Jewell Farm**	**8.68**	**36**	Pn	**Pn**	**20 12 26.1**	**+1.4**
CLTN	**Cedars of Leba**	**8.73**	**86**	Pn	**Pn**	**20 12 25.8**	**+0.3**
LRAL	**Lakeview Retre**	**8.86**	**107**	P	**Pn**	**20 12 27.4**	**+0.1**
	baz=293						
LRAL	**Lakeview Retre**	**8.86**	**107**	Pn	**Pn**	**20 12 27.4**	**+0.1**
M44A	**Midewin, Midew**	**8.87**	**50**	Pn	**Pn**	**20 12 27.7**	**+0.3**
WCI	**Wyandotte Cave**	**8.91**	**73**	P	**Pn**	**20 12 29.5**	**+1.5**
	baz=259						
SFIN	**Lafayette**	**8.99**	**58**	P	**Pn**	**20 12 30.0**	**+0.9**
	baz=244						
Y49A	**Blount Mountai**	**9.05**	**101**	Pn	**Pn**	**20 12 30.6**	**+0.7**
SWET	**Sewanee**	**9.14**	**92**	Pn	**Pn**	**20 12 32.2**	**+1.1**
U49A	**Red Boiling Sp**	**9.16**	**84**	Pn	**Pn**	**20 12 32.8**	**+1.4**
L44A	**Lake County Fo**	**9.42**	**47**	S	**Sn**	**20 14 17.5**	**-3.4**
	baz=232						
W50A	**Signal Mountai**	**9.64**	**91**	Pn	**Pn**	**20 12 38.8**	**+0.7**
RSSD	**Black Hills**	**9.66**	**329**	P	**Pn**	**20 12 40.3**	**+1.9**
	baz=144						
RSSD	**Black Hills**	**9.66**	**329**	Pn	**Pn**	**20 12 39.7**	**+1.3**
SPMN	**Marine on St.**	**9.74**	**18**	S	**Sn**	**20 14 27.2**	**-1.8**
	baz=201						
R49A	**Shelbyville**	**9.79**	**73**	Pn	**Pn**	**20 12 40.8**	**+0.8**
K22A	**Casper**	**9.84**	**315**	Pn	**Pn**	**20 12 42.4**	**+1.6**
T50A	**Nancy**	**9.93**	**81**	Pn	**Pn**	**20 12 41.9**	**0.0**
I42A	**Draeger Farm,**	**10.05**	**36**	Pn	**Pn**	**20 12 43.3**	**-0.2**
X51A	**Calhoun**	**10.12**	**95**	Pn	**Pn**	**20 12 44.7**	**+0.2**
F36A	**Milaca**	**10.18**	**14**	Pn	**Pn**	**20 12 43.6**	**-1.7**
CPCT	**Cooper Cave**	**10.25**	**90**	Pn	**Pn**	**20 12 46.3**	**0.0**
V51A	**Loudon**	**10.35**	**88**	Pn	**Pn**	**20 12 47.5**	**-0.2**
P49A	**Miami Univ. Ec**	**10.41**	**67**	P	**Pn**	**20 12 48.4**	**-0.1**
	baz=254						
R50A	**Paris**	**10.45**	**74**	Pn	**Pn**	**20 12 49.7**	**+0.7**
G40A	**Rib Lake**	**10.61**	**27**	Pn	**Pn**	**20 12 50.4**	**-0.8**
TKL	**Tuckaleechee C**	**10.83**	**88**	Pn	**Pn**	**20 12 54.1**	**-0.2**
	0.7nm,0.3s,baz=274,slow=14,SNR=8.3						
TKL				Sn	**Sn**	**20 14 51.8**	**-3.9**
	0.5nm,0.3s,baz=205,slow=17,SNR=1.4						
TKL				Lg	Lg	20 15 53.5	
	5.6nm,0.3s,baz=350,slow=20,SNR=7.0						
S51A	**Beattyville**	**10.95**	**78**	Pn	**Pn**	**20 12 56.3**	**+0.4**
TZTN	**Tazewell**	**10.96**	**83**	P	**Pn**	**20 12 56.3**	**+0.3**
	baz=271						
TZTN	**Tazewell**	**10.96**	**83**	Pn	**Pn**	**20 12 56.7**	**+0.7**
V52A	**Sevierville**	**10.96**	**87**	Pn	**Pn**	**20 12 54.3**	**-1.7**
N49A	**Columbus Grove**	**11.24**	**60**	Pn	**Pn**	**20 12 57.2**	**-2.7**
BG3	**Lake Jocassee**	**11.60**	**91**	Pn	**Pn**	**20 13 05.8**	**+0.9**
PDAR	**Pinedale Array**	**11.74**	**309**	Pn	**Pn**	**20 13 08.4**	**+1.6**
	0.2nm,0.3s,baz=125,slow=14,SNR=6.6						
PDAR				Pg		20 13 54.6	
	0.4nm,0.3s,baz=123,slow=16,SNR=3.7						
PDAR				Lg	Lg	20 16 24.6	
	0.6nm,0.3s,baz=107,slow=34,SNR=2.6						
ACSO	**Alum Creek Sta**	**11.89**	**65**	Pn	**Pn**	**20 13 07.3**	**-1.4**
S53A	**Williamson**	**12.12**	**78**	P	**Pn**	**20 13 12.3**	**+0.4**
	baz=267						
Q52A	**Bidwell**	**12.15**	**72**	P	**Pn**	**20 13 11.2**	**-1.1**
	baz=261						
AGMN	**Agassiz Nation**	**12.29**	**4**	P	**Pn**	**20 13 11.1**	**-3.1**
	baz=185						
AGMN	**Agassiz Nation**	**12.29**	**4**	Pn	**Pn**	**20 13 11.5**	**-2.7**
U54A	**Nelsons Funny**	**12.35**	**83**	Pn	**Pn**	**20 13 12.6**	**-2.5**
P52A	**Corning**	**12.37**	**69**	P	**Pn**	**20 13 16.1**	**+0.8**
	baz=258						
P52A	**Corning**	**12.37**	**69**	Pn	**Pn**	**20 13 14.5**	**-0.9**
T54A	**Tazewell**	**12.54**	**81**	P	**Pn**	**20 13 16.7**	**-1.0**
	baz=270						
B35A	**Bob, Littlefor**	**12.57**	**10**	Pn	**Pn**	**20 13 15.6**	**-2.3**
EYMN	**Ely**	**12.61**	**18**	P	**Pn**	**20 13 18.3**	**-0.3**
	baz=201						
EYMN				S	**Sn**	**20 15 32.9**	**-6.2**
	baz=201						
Q53A	**Leroy**	**12.70**	**73**	P	**Pn**	**20 13 19.0**	**-0.9**
	baz=262						
S54A	**Dingess, Beckl**	**12.77**	**77**	P	**Pn**	**20 13 19.6**	**-1.2**
	baz=267						
S54A	**Dingess, Beckl**	**12.77**	**77**	Pn	**Pn**	**20 13 19.0**	**-1.8**
E43A	**Lone Tree Farm**	**12.82**	**33**	Pn	**Pn**	**20 13 20.5**	**-1.0**
R54A	**Victor**	**13.05**	**76**	P	**Pn**	**20 13 23.4**	**-1.2**
	baz=265						
T55A	**Pulaski**	**13.17**	**80**	P	**Pn**	**20 13 24.5**	**-1.8**
	baz=270						
Q54A	**Coxs Mills**	**13.25**	**72**	Pn	**Pn**	**20 13 25.3**	**-2.1**
GCMT	**Greycliff**	**13.59**	**320**	Pn	**Pn**	**20 13 31.6**	**-0.5**
BIRD	**Birdtown, Kers**	**13.66**	**91**	Pn	**Pn**	**20 13 31.2**	**-1.8**
R55A	**Marlinton**	**13.74**	**76**	P	**Pn**	**20 13 32.6**	**-1.4**
	baz=266						
R55A	**Marlinton**	**13.74**	**76**	Pn	**Pn**	**20 13 33.0**	**-1.1**
ULM	**Lac du Bonnet**	**14.24**	**3**	Pn	Pn	20 13 36.0	-4.7
	0.9nm,0.3s,baz=179,slow=10,SNR=5.4						
ULM				Lg	Lg	20 17 38.3	
	0.6nm,0.3s,baz=123,slow=14,SNR=2.9						
T57A	**Hurt**	**14.40**	**81**	Pn	**Pn**	**20 13 40.7**	**-2.3**
S57A	**Dark Hollow, R**	**14.63**	**78**	Pn	**Pn**	**20 13 44.5**	**-1.8**
M56A	**Emporium**	**15.73**	**64**	Pn	**Pn**	**20 13 57.1**	**-3.6**
SADO	**Sadowa**	**16.21**	**52**	Pn	**Pn**	**20 14 04.1**	**-2.8**
	0.3nm,0.3s,baz=147,slow=9.5,SNR=1.1						
SADO				Lg	Lg	20 18 40.5	
	1.0nm,0.3s,baz=358,slow=21,SNR=4.2						
L56A	**Greenwood**	**16.34**	**62**	Pn	**Pn**	**20 14 06.0**	**-2.8**
L56A				IAmb	IAmb	20 14 07.9	
	comp=Z,26nm,1.2s						
M57A	**Sunshine Farm,**	**16.47**	**65**	Pn	**Pn**	**20 14 08.8**	**-1.4**
NVAR	**Mina Array Bea**	**17.05**	**284**	P	**P**	**20 14 19.5**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=85,slow=12,SNR=5.8						
KSPA	**Keystone Colle**	**17.51**	**65**	Pn	**Pn**	**20 14 20.8**	**-2.6**
KSPA				IAmb	IAmb	20 14 43.2	
	comp=Z,38nm,1.8s						
NCB	**Newcomb**	**19.20**	**59**	P	**P**	**20 14 43.2**	**0.0**
NCB				IAmb	IAmb	20 15 09.5	
	comp=Z,32nm,1.8s						
ILAR	**Eielson Array**	**41.11**	**330**	P	**P**	**20 18 04.4**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=110,slow=6.7,SNR=5.1						

*IDC **09** 20:30:53.0±0.9, 20.80S×67.27W, h196km±12km, mb3.0/3, mb1 3.4/7, mb1mx3.2/27, mbtmp3.8/7, Error ellipse: s-maj=21.6km s-min=10.1km az=101.0*

ISC 09 20:30:52.3±0.9, 20.87S±0.07×67.06W±0.09, h200km, n7, σ1§78/10, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.44**	**224**	P	**Pn**	**20 31 35.7**	**-0.2**
	15nm,0.3s,baz=45,slow=8.6,SNR=47						
LVC				S	**Sn**	**20 32 08.4**	**-1.5**
	6.2nm,0.3s,baz=254,slow=20,SNR=15						
LPAZ	**La Paz**	**4.67**	**347**	P	**Pn**	**20 32 03.6**	**+0.4**
	4.2nm,0.3s,baz=155,slow=8.4,SNR=56						
LPAZ				S	**Sn**	**20 32 57.2**	**-1.6**
	0.8nm,0.3s,baz=296,slow=18,SNR=8.0						
SIV	**San Ignacio**	**7.47**	**50**	P	**Pn**	**20 32 40.3**	**+1.5**
	4.9nm,0.3s,baz=259,slow=12,SNR=83						
SIV				S	**Sn**	**20 34 02.3**	**-1.2**
	0.2nm,0.3s,baz=156,slow=20,SNR=1.7						
CPUP	**Villa Florida**	**10.45**	**123**	P	**P**	**20 33 22.1**	**-2.5**
	0.3nm,0.3s,baz=300,slow=12,SNR=6.1						
PLCA	**Paso Flores**	**20.02**	**188**	P	**P**	**20 35 12.3**	**+2.4**
	3.3nm,0.8s,baz=0.7,slow=13,SNR=8.4						
TXAR	**Lajitas Array**	**61.13**	**324**	P	**P**	**20 40 45.9**	**+0.2**
	0.2nm,0.6s,baz=136,slow=8.5,SNR=2.3						
TORD	**Torodi Ar. Bea**	**75.52**	**70**	P	**P**	**20 42 16.3**	**+1.1**
	0.5nm,0.7s,baz=250,slow=6.0,SNR=5.8						

*TIR **09** 20:36:48.9, 40.13N×20.02E, h6km±1km, Md3.0, Ml3.1*

*ATH **09** 20:36:49.6, 40.14N×19.97E, h10km±1km, ML2.8/23, Error ellipse: s-maj=1.8km s-min=1.2km az=153.0*

*THE **09** 20:36:50.3, 40.15N×19.94E, h0km±2km, ML2.8/6, Error ellipse: s-maj=2.9km s-min=1.0km az=313.0*

ISC 09 20:36:49.3±1.1, 40.14N±0.02×20.01E±0.02, h8km±9km, n130, σ1§61/150, 10C-5D, Greece-Albania border region

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

TSLK	**Tsoukalades, L**	**1.41**	**159**	P	**Pg**	**20 37 17.6**	**+1.3**
LKD2	**Lefkada island**	**1.44**	**159**	P	**Pg**	**20 37 16.8**	**-0.2**
LKD2				AML	AML	20 37 43.9	
	comp=N,610μm,0.7s						
LKD2				AML	AML	20 37 48.3	
	comp=E,634μm,0.5s						
LKD2	**Lefkada island**	**1.44**	**159**	P	**Pg**	**20 37 16.8**	**-0.2**
LKD2				S	**Sg**	**20 37 38.5**	**+2.8**
	comp=E,330nm,0.7s						
NYDR	**Nydri-Lefkada**	**1.52**	**159**	P	**Pg**	**20 37 17.7**	**-0.8**
NYDR	**Nydri-Lefkada**	**1.52**	**159**	P	**Pg**	**20 37 17.7**	**-0.8**
PHP	**Peshkopia**	**1.58**	**12**	P	**Pg**	**20 37 19.3**	**-0.3**
	baz=11						
PHP				S	**Sg**	**20 37 42.2**	**+2.2**
	baz=11						
PHP	**Peshkopia**	**1.58**	**12**	P	**Pg**	**20 37 19.6**	**0.0**
EVGI	**Lefkada island**	**1.60**	**162**	P	**Pb**	**20 37 19.0**	**-0.1**
EVGI	**Lefkada island**	**1.60**	**162**	P	**Pb**	**20 37 19.0**	**-0.1**
KTI	**Kastanea**	**1.63**	**80**	P	**Pg**	**20 37 21.0**	**+0.4**
THL	**Klokotos Trika**	**1.65**	**110**	P	**Pg**	**20 37 20.9**	**0.0**
THL				AML	AML	20 37 51.5	
	comp=N,420μm,0.7s						
THL				AML	AML	20 37 55.0	
	comp=E,308μm,0.5s						
THL	**Klokotos Trika**	**1.65**	**110**	P	**Pg**	**20 37 20.9**	**0.0**
FSK	**Fiskardo**	**1.73**	**166**	P	**Pg**	**20 37 21.7**	**-0.8**
FSK				AML	AML	20 37 56.2	
	comp=N,185μm,0.5s						
FSK				AML	AML	20 37 58.2	
	comp=E,247μm,0.5s						
FSK	**Fiskardo**	**1.73**	**166**	P	**Pg**	**20 37 21.8**	**-0.8**
PDO	**Prodromos**	**1.79**	**149**	P	**Pb**	**20 37 22.0**	**-0.3**
PDO				AML	AML	20 38 02.8	
	comp=N,466μm,0.6s						
PDO				AML	AML	20 38 17.1	
	comp=E,361μm,0.6s						
PDO	**Prodromos**	**1.79**	**149**	P	**Pb**	**20 37 22.0**	**-0.3**
EVR	**Evrytania**	**1.85**	**131**	P	**Pg**	**20 37 24.6**	**-0.2**
EVR				AML	AML	20 37 58.9	
	comp=N,480μm,0.7s						
EVR				AML	AML	20 38 00.7	
	comp=E,346μm,0.6s						
EVR	**Evrytania**	**1.85**	**131**	P	**Pg**	**20 37 24.3**	**-0.5**
KEF5	**Kardakata, Kep**	**1.90**	**169**	P	**Pb**	**20 37 23.8**	**-0.3**
KEF5	**Kardakata, Kep**	**1.90**	**169**	P	**Pb**	**20 37 23.8**	**-0.3**
LIT	**Litokhoron**	**1.90**	**90**	P	**Pg**	**20 37 25.1**	**-0.7**
LIT				AML	AML	20 37 57.3	
	comp=N,291μm,0.7s						
LIT				AML	AML	20 38 00.1	
	comp=E,321μm,0.7s						
LIT	**Litokhoron**	**1.90**	**90**	P	**Pg**	**20 37 25.1**	**-0.7**
PUK	**Puka**	**1.90**	**357**	P	**Pb**	**20 37 24.2**	**-0.1**
	baz=358						
PUK				S	**Sg**	**20 37 51.6**	**+1.1**
	baz=358						
KEF4	**Livadi, Kephal**	**1.91**	**170**	P	**Pg**	**20 37 25.8**	**-0.1**
DMLN	**Damoulianata-K**	**1.92**	**171**	P	**Pb**	**20 37 24.6**	**0.0**
MAKR	**Makrakomi, Fth**	**1.99**	**124**	P	**Pg**	**20 37 26.8**	**-0.7**
MAKR				AML	AML	20 38 14.4	
	comp=E,244μm,1.4s						
MAKR				AML	AML	20 38 17.6	
	comp=N,292μm,1.7s						
MAKR	**Makrakomi, Fth**	**1.99**	**124**	P	**Pg**	**20 37 26.8**	**-0.7**
PSDA	**Pessada-Kefalo**	**2.07**	**167**	P	**Pb**	**20 37 25.8**	**-1.4**
AGG	**Agios Georgios**	**2.11**	**121**	P	**Pb**	**20 37 27.7**	**-0.1**
AGG				AML	AML	20 38 10.7	
	comp=N,243μm,1.0s						
AGG				AML	AML	20 38 13.6	
	comp=E,332μm,0.5s						
AGG	**Agios Georgios**	**2.11**	**121**	P	**Pb**	**20 37 28.1**	**+0.2**
SKO	**Skopje**	**2.12**	**30**	*i* Pn	**Pb**	**20 37 27.6**	**-0.4**
DRME	**Dracevica, Mon**	**2.14**	**343**	*e*Pn	**Pn**	**20 37 25.6**	**+0.3**
ANX	**Ano Chora**	**2.14**	**136**	P	**Pb**	**20 37 28.4**	**0.0**
ANX				AML	AML	20 38 16.6	
	comp=N,351μm,0.8s						
ANX				AML	AML	20 38 18.5	
	comp=E,462μm,0.7s						
ANX	**Ano Chora**	**2.14**	**136**	P	**Pb**	**20 37 28.4**	**0.0**
EFP	**Efpalio**	**2.26**	**139**	P	**Pb**	**20 37 29.6**	**-0.7**
EFP				AML	AML	20 38 13.2	
	comp=N,408μm,1.5s						
EFP				AML	AML	20 38 25.0	
	comp=E,346μm,0.7s						
EFP	**Efpalio**	**2.26**	**139**	P	**Pb**	**20 37 29.6**	**-0.7**
STIP	**Stip**	**2.26**	**46**	*i* Pn	**Pg**	**20 37 31.7**	**-1.0**
VAY	**Valandovo**	**2.27**	**58**	*i* Pn	**Pb**	**20 37 30.4**	**-0.2**
NOCI	**Noci**	**2.34**	**287**	P	**Pn**	**20 37 29.8**	**+1.7**
PDG	**Podgorica**	**2.36**	**346**	⇓P	**Pn**	**20 37 28.3**	**+0.1**
PDG				⇓S	**Sb**	**20 38 02.1**	**+0.9**
PDG	**Podgorica**	**2.36**	**346**	*e*Pn	**Pn**	**20 37 28.4**	**+0.1**
RLS	**Riolos of Patr**	**2.37**	**151**	P	**Pn**	**20 37 29.9**	**+1.5**
RLS	**Riolos of Patr**	**2.37**	**151**	P	**Pb**	**20 37 29.6**	**+1.5**
TRIZ	**Trizonia**	**2.39**	**137**	P	**Pb**	**20 37 31.3**	**-1.3**
TRIZ	**Trizonia**	**2.39**	**137**	P	**Pb**	**20 37 31.3**	**-1.3**
HORT	**Hortiatis**	**2.40**	**78**	P	**Pb**	**20 37 31.2**	**-1.7**
HORT	**Hortiatis**	**2.40**	**78**	P	**Pb**	**20 37 31.2**	**-1.7**
KALE	**Kalithea**	**2.41**	**136**	P	**Pb**	**20 37 31.0**	**-1.9**
KALE				AML	AML	20 38 16.5	
	comp=N,232μm,0.8s						
KALE				AML	AML	20 38 19.7	
	comp=E,176μm,0.6s						
KALE	**Kalithea**	**2.41**	**136**	P	**Pb**	**20 37 31.5**	**-1.4**
KNT	**Kendrikon**	**2.42**	**64**	P	**Pb**	**20 37 32.1**	**-1.1**
KNT	**Kendrikon**	**2.42**	**64**	P	**Pb**	**20 37 32.0**	**-1.1**
AXAR	**Agios Charalam**	**2.47**	**123**	P	**Pb**	**20 37 33.6**	**-0.4**
AXAR				AML	AML	20 38 24.7	
	comp=E,386μm,0.9s						
AXAR				AML	AML	20 38 29.9	
	comp=N,338μm,0.7s						
DRO	**Drossia**	**2.56**	**148**	P	**Pn**	**20 37 32.7**	**+1.6**
DRO	**Drossia**	**2.56**	**148**	P	**Pn**	**20 37 32.7**	**+1.6**
HCY	**Herceg Novi**	**2.57**	**334**	*e*Pn	**Pn**	**20 37 31.4**	**+0.1**
XOR	**Xorichti**	**2.57**	**107**	P	**Pb**	**20 37 34.1**	**-1.7**
XOR	**Xorichti**	**2.57**	**107**	P	**Pb**	**20 37 34.0**	**-1.7**
MATE	**Matera**	**2.58**	**282**	⇑P	**Pn**	**20 37 31.9**	**+0.6**
MATE				⇑S	**Sb**	**20 38 07.1**	**-0.4**
DSF	**Desfina**	**2.61**	**131**	P	**Pb**	**20 37 35.1**	**-1.3**
NEO	**Neokhori**	**2.61**	**108**	P	**Pb**	**20 37 34.2**	**-2.2**
NEO				AML	AML	20 38 23.5	
	comp=E,149μm,0.6s						
NEO				AML	AML	20 38 33.1	
	comp=N,203μm,0.6s						
NEO	**Neokhori**	**2.61**	**108**	P	**Pb**	**20 37 34.2**	**-2.2**
PLG	**Polygyros**	**2.64**	**84**	P	**Pb**	**20 37 34.8**	**-2.1**
PLG				AML	AML	20 38 12.5	
	comp=E,108μm,0.6s						
PLG				AML	AML	20 38 14.3	
	comp=N,141μm,0.6s						
PLG	**Polygyros**	**2.64**	**84**	P	**Pb**	**20 37 35.2**	**-1.7**
SOH	**Sokhos**	**2.64**	**74**	P	**Pb**	**20 37 34.9**	**-2.0**
SOH	**Sokhos**	**2.64**	**74**	P	**Pb**	**20 37 34.9**	**-2.0**
KLV	**Kalavryta, Ach**	**2.68**	**141**	P	**Pb**	**20 37 34.9**	**-2.6**
KLV	**Kalavryta, Ach**	**2.68**	**141**	P	**Pb**	**20 37 34.9**	**-2.6**
TIP	**Timpagrande**	**2.69**	**250**	⇑P	**Pn**	**20 37 30.1**	**-2.8**
TIP				⇑S	**Sn**	**20 38 03.3**	**-2.3**
ATAL	**Atalanti**	**2.74**	**121**	P	**Pb**	**20 37 36.5**	**-2.2**
ATAL	**Atalanti**	**2.74**	**121**	P	**Pb**	**20 37 36.5**	**-2.2**
PAIG	**Paliouri**	**2.83**	**93**	P	**Pn**	**20 37 36.8**	**+2.1**
PAIG	**Paliouri**	**2.83**	**93**	P	**Pn**	**20 37 36.8**	**+2.1**
GUR	**Goura**	**2.85**	**140**	P	**Pn**	**20 37 37.5**	**+2.3**
GUR				AML	AML	20 38 34.9	
	comp=N,174μm,0.5s						
GUR				AML	AML	20 38 36.1	
	comp=E,165μm,0.5s						
GUR	**Goura**	**2.85**	**140**	P	**Pn**	**20 37 37.5**	**+2.3**
TREB	**Trebinje**	**2.86**	**335**	*e*Pn	**Pn**	**20 37 33.9**	**-1.3**
SRS	**Serrai**	**2.90**	**69**	P	**Pb**	**20 37 38.6**	**-2.6**
SRS	**Serrai**	**2.90**	**69**	P	**Pb**	**20 37 38.6**	**-2.6**
BRY	**Bratogost**	**2.97**	**339**	*e*Pn	**Pn**	**20 37 38.0**	**+1.1**
LTK	**Loutraki**	**3.12**	**132**	P	**Pn**	**20 37 41.3**	**+2.4**
LTK	**Loutraki**	**3.12**	**132**	P	**Pn**	**20 37 41.3**	**+2.4**
AOS	**Alonnisos**	**3.14**	**107**	P	**Pn**	**20 37 41.1**	**+2.0**
AOS	**Alonnisos**	**3.14**	**107**	P	**Pn**	**20 37 41.1**	**+2.0**
TRIP	**Tripoli**	**3.15**	**145**	P	**Pn**	**20 37 42.0**	**+2.7**
TRIP	**Tripoli**	**3.15**	**145**	P	**Pn**	**20 37 42.0**	**+2.7**
NVR	**Nevrokopi**	**3.17**	**66**	P	**Pb**	**20 37 42.5**	**-3.3**
NVR	**Nevrokopi**	**3.17**	**66**	P	**Pb**	**20 37 42.5**	**-3.3**
UPM	**Unac-Piva**	**3.17**	**345**	*e*Pn	**Pn**	**20 37 40.3**	**+0.6**
VIL2	**Platees**	**3.18**	**126**	P	**Pn**	**20 37 42.3**	**+2.6**
STON	**Ston**	**3.23**	**328**	*e*Pn	**Pn**	**20 37 38.7**	**-1.6**
VILL	**Villia**	**3.24**	**127**	P	**Pn**	**20 37 42.3**	**+1.8**
ITM	**Ithomi**	**3.32**	**152**	P	**Pn**	**20 37 43.1**	**+1.6**
ITM	**Ithomi**	**3.32**	**152**	P	**Pn**	**20 37 43.1**	**+1.6**
BBLS	**Lazi?i**	**3.75**	**353**	*e*Pn	**Pb**	**20 37 52.7**	**-3.1**
DIVS	**Divibare**	**3.95**	**360**	*e*Pn	**Pn**	**20 37 51.8**	**+1.5**
BLKB	**Belogradchik**	**4.01**	**29**	⇑S	**Sn**	**20 38 38.0**	**-0.1**
HAPS	**Han Pijesak,Bl**	**4.02**	**349**	*e*Pn	**Pn**	**20 37 49.3**	**-2.0**
MDVR	**Moldovita**	**4.80**	**15**	⇓P	**Pn**	**20 38 00.6**	**-1.4**
FRGS	**Fruska Gora**	**5.02**	**358**	*e*Pn	**Pn**	**20 38 04.2**	**-0.7**
BZS	**Buzias**	**5.60**	**12**	⇑P	**Pn**	**20 38 12.8**	**0.0**
GZR	**Gura Zlata**	**5.63**	**20**	⇓P	**Pn**	**20 38 12.3**	**-1.1**
MORH	**Mrgy, Hungar**	**6.15**	**351**	*e*Pn	**Pn**	**20 38 18.6**	**-1.8**
VOIR		**6.46**	**33**	⇑P	**Pn**	**20 38 21.5**	**-3.3**
CRES	**Cresnjev**	**6.59**	**331**	*e*Pn	**Pn**	**20 38 24.9**	**-1.6**
MLR	**Muntele Rosu**	**6.90**	**37**	⇑P	**Pn**	**20 38 26.7**	**-4.1**
CEY	**Cerknica**	**6.93**	**326**	*e*Pn	**Pn**	**20 38 29.3**	**-1.9**
VRI	**Vrincioaia**	**7.55**	**38**	⇓P	**Pn**	**20 38 35.3**	**-4.3**
VYHS	**Vyhne**	**8.39**	**355**	*e*PN	**Pn**	**20 38 53.1**	**+1.9**

NEIC ***09*** *20:50:44.9±1.8, 64°.7N±0°.1×17°.7W±0°.1, h8km±7km, mb4.7/4, Error ellipse: s-maj=15.7km s-min=8.4km az=172.0*

IDC ***09*** *20:50:46.6±1.2, 64°.42N×17°.96W, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/38, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=41.1km s-min=13.3km az=24.0*

ISC 09 20:50:46.5±0.8**, 64°.63N**±0°.08×**17°.29W**±0°.08**, h10**km**, n17,** σ**2$35/18, mb3.6/4, Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.74**	**276**	Pg	Pn	20 51 13.1	-3.6
	9.7nm,0.3s,baz=101,slow=13,SNR=36						
BORG				Lg	Lg	20 51 34.3	
	9.1nm,0.3s,baz=55,slow=14,SNR=12						
BORG	**Borgarnes**	**1.74**	**276**		**Pn**	**20 51 13.3**	**-3.4**
SCO	**Scoresbysund**	**6.14**	**345**		**Pn**	**20 52 14.9**	**-2.2**
SCO	**Scoresbysund**	**6.14**	**345**	*e*	**Pn**	**20 52 14.7**	**-2.4**
	baz=186,slow=9.3						
SCO				*i* P	**Pn**	**20 52 17.0**	**-0.1**
SCO				*e*S	**Sn**	**20 53 31.9**	**+4.6**
EKA	**Eskdalemuir Ar**	**11.67**	**136**	Pn	**Pn**	**20 53 34.7**	**+1.8**
	baz=321,slow=13,SNR=9.4						
NC303	**NORSAR Array S**	**13.42**	**92**	Pn	**Pn**	**20 53 53.6**	**-3.2**
KBS	**Kingsbay**	**16.64**	**19**	Pn	**Pn**	**20 54 37.8**	**-1.6**
KBS				IAmb	IAmb	20 54 43.7	
	comp=Z,84nm,1.4s						
SPA0	**Spitsbergen Ar**	**16.86**	**23**	Pn	**Pn**	**20 54 40.3**	**-1.9**
ARD8	**ARCESS Array S**	**17.05**	**55**	Pn	**Pn**	**20 54 43.0**	**-1.6**
ARD8				IAmb	IAmb	20 55 40.8	
	comp=Z,110nm,1.9s						
FIA1	**FINESS Array S**	**19.62**	**79**	P	**P**	**20 55 14.9**	**+0.2**
CLL	**Collm**	**20.61**	**116**	*e*P	**P**	**20 55 27.0**	**+1.5**
GERES	**GERESS Array B**	**22.86**	**119**	P	**P**	**20 55 52.5**	**+2.8**
	comp=Z,0.6nm,0.9s,baz=313,slow=9.2,SNR=4.2						
GERES	**GERESS Array B**	**22.86**	**119**	P	**P**	**20 55 50.4**	**+0.6**
ILAR	**Eielson Array**	**45.76**	**333**	P	**P**	**20 59 09.5**	**+2.1**
	comp=Z,1.6nm,1.2s,baz=8.7,slow=6.6,SNR=5.4						
ILAR	**Eielson Array**	**45.76**	**333**	P	**P**	**20 59 07.4**	**0.0**
TORD	**Torodi Ar. Bea**	**53.08**	**157**	P	**P**	**21 00 05.2**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=342,slow=9.1,SNR=4.1						
PDAR	**Pinedale Array**	**53.27**	**293**	P	**P**	**21 00 05.7**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=40,slow=7.7,SNR=5.4						

IDC ***09*** *20:55:22.0±1.5, 34°.14N×140°.74E, h0km, mb3.6/5, mb1 3.8/9, mb1mx3.6/50, mbtmp3.7/9, ML3.2/4, Error ellipse: s-maj=35.8km s-min=18.2km az=81.0*

NEIC ***09*** *20:55:27.7±1.4, 34°.14N±0°.05×140°.42E±0°.04, h42km±11km, mb4.4/4, Error ellipse: s-maj=8.4km s-min=3.3km az=205.0*

JMA ***09*** *20:55:27.5±0.1, 34°.22N×140°.25E, h38km±1km, M3.7*

NIED ***09*** *20:55:27.5, 34°.22N×140°.25E, h38km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}0.94; $M_{θθ}$-2.02; $M_{φφ}$1.09; $M_{rθ}$-0.07; $M_{rφ}$-6.24; $M_{θφ}$0.44; Fault plane solution: $M_0$6.45000×10^{14} NP1:φ$_s$7.00000°, δ88.00000°, λ4.00000°. NP2:φ$_s$277.00000°, δ86.00000°, λ178.00000°.*

ISC 09 20:55:26.2±1.4**, 34°.20N**±0°.03×**140°.34E**±0°.06**, h27**km±11**km, n42,** σ**1$62/49, mb3.9/8, 2C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.69**	**244**	⇑P	**Pb**	**20 55 39.8**	**+0.2**
JMKN				S	**Sb**	**20 55 49.1**	**+0.4**
BSO4	**Boso 4**	**0.79**	**0**	⇑P	**Pn**	**20 55 42.2**	**+0.7**
JNIO	**Niijimaoohara**	**0.89**	**281**	P	**Pb**	**20 55 42.7**	**-0.3**
JNIO				S	**Sb**	**20 55 53.2**	**-1.4**
JIM2	**Oshima 3**	**0.91**	**305**	⇓P	**Pb**	**20 55 42.9**	**-0.5**
JIM2				S	**Sb**	**20 55 54.0**	**-1.1**
JTHY	**Toshimahigashi**	**0.93**	**291**	P	**Pb**	**20 55 43.6**	**0.0**
JTHY				S	**Sb**	**20 55 54.6**	**-0.9**
JKO	**Kozu shima**	**0.99**	**270**	P	**Pn**	**20 55 44.4**	**+0.1**
JHJ2	**Mitsune**	**1.16**	**202**	P	**Pb**	**20 55 47.4**	**-0.2**
JHJ2				S	**Sb**	**20 56 02.3**	**0.0**
JHJ2	**Mitsune**	**1.16**	**202**		**Pb**	**20 55 47.0**	**-0.6**
JHJ	**Hachijo jima 2**	**1.17**	**203**	Pn	**Pn**	**20 55 46.9**	**+0.2**
	69nm,0.3s,baz=62,slow=13,SNR=244						
JHJ				Sn	**Sn**	**20 56 01.0**	**-0.7**
	454nm,0.3s,baz=253,slow=19,SNR=15						
KTJ3	**Kamata3**	**1.28**	**306**	⇓P	**Pn**	**20 55 48.0**	**-0.2**
KTJ3				S	**Sn**	**20 56 03.6**	**-0.9**
JIZS	**Izushimoda**	**1.31**	**294**	⇓P	**Pn**	**20 55 49.0**	**+0.3**
JIZS				S	**Sn**	**20 56 04.8**	**-0.5**
JOD2	**Odawara 2**	**1.48**	**316**	⇓P	**Pn**	**20 55 51.1**	**0.0**
JOD2				S	**Sn**	**20 56 08.8**	**-0.7**
JFNN	**Fujinakano**	**1.69**	**307**	P	**Pn**	**20 55 54.8**	**+0.9**
JFNN				S	**Sn**	**20 56 14.6**	**0.0**
JSG	**Sagara**	**1.84**	**286**	Pn	**Pn**	**20 55 57.2**	**+1.3**
JYT	**Yasato**	**2.03**	**357**		**Pn**	**20 55 59.9**	**+1.3**
JGF	**Kuroka**	**2.82**	**301**		**Pn**	**20 56 11.9**	**+2.4**
MJAR	**Matsushiro Arr**	**2.92**	**324**	Pn	**Pn**	**20 56 12.6**	**+1.8**
	1.6nm,0.3s,baz=147,slow=11,SNR=141						
MJAR				Sn	**Sn**	**20 56 46.2**	**+1.2**
	1.5nm,0.3s,baz=148,slow=21,SNR=10						
MJAR	**Matsushiro Arr**	**2.92**	**324**		**Pn**	**20 56 11.8**	**+1.0**
MAJO	**Matsushiro**	**2.92**	**324**		**Pn**	**20 56 12.9**	**+2.1**
MAT	**Matsushiro**	**2.92**	**324**	P	**Pn**	**20 56 12.9**	**+2.1**
MAT				S	**Sn**	**20 56 46.0**	**+1.0**
INU	**Inuyama**	**2.96**	**294**		**Pn**	**20 56 12.9**	**+1.5**
JMM	**Marumori**	**3.68**	**6**		**Pn**	**20 56 23.6**	**+2.3**
JNU	**Nakatsue**	**7.96**	**265**	Pn	Pn	20 57 25.2	+5.1
	0.3nm,0.3s,baz=24,slow=6.6,SNR=1.1						
JNU				Sn	**Sn**	**20 58 45.7**	**-3.5**
	0.2nm,0.3s,baz=332,slow=15,SNR=2.3						
ASAJ	**Asahikawa**	**10.06**	**9**	Pn	**Pn**	**20 57 49.2**	**+0.4**
	0.3nm,0.3s,baz=203,slow=12,SNR=2.1						
ASAJ				Sn	**Sn**	**20 59 34.6**	**-6.1**
	0.1nm,0.3s,baz=351,slow=19,SNR=1.9						
KSRS	**Korea Array**	**10.59**	**291**	Pn	**Pn**	**20 58 00.1**	**+4.0**
	0.1nm,0.3s,baz=103,slow=14,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**27.61**	**115**	T	T	21 30 05.0	
	baz=306,slow=75,SNR=36						
H11N1	**WAKE ISLAND Hy**	**27.61**	**115**	T	T	21 30 04.0	
	baz=306,slow=75,SNR=31						
H11N3	**WAKE ISLAND Hy**	**27.62**	**115**	T	T	21 30 06.7	
	baz=306,slow=75,SNR=26						
H11S3	**WAKE ISLAND Hy**	**28.21**	**117**	T	T	21 30 53.6	
	baz=308,SNR=15						
H11S1	**WAKE ISLAND Hy**	**28.21**	**117**	T	T	21 30 53.0	
	baz=308						
H11S2	**WAKE ISLAND Hy**	**28.22**	**117**	T	T	21 30 57.3	
	baz=308						
ZALV	**Zalesovo Beam**	**43.23**	**315**	P	**P**	**21 03 26.4**	**+1.6**
	0.9nm,0.7s,baz=80,slow=10,SNR=4.8						
ZALV	**Zalesovo Beam**	**43.23**	**315**	P	**P**	**21 03 25.3**	**+0.5**
MKAR	**Makanchi Array**	**44.94**	**304**	P	**P**	**21 03 41.0**	**+2.3**
	0.3nm,0.7s,baz=64,slow=8.9,SNR=2.1						
DOT	**Dot Lake**	**53.66**	**32**	P	**P**	**21 04 43.9**	**-1.1**
DOT				IAmb	IAmb	21 04 45.2	
	comp=Z,12nm,0.8s						
WR0	**Warramunga Arr**	**54.13**	**187**	P	**P**	**21 04 49.1**	**+0.2**
WR0				IAmb	IAmb	21 04 55.6	
	comp=Z,3.0nm,1.1s						
WB2	**Warramunga Arr**	**54.14**	**187**	P	**P**	**21 04 49.1**	**+0.2**
WB2				IAmb	IAmb	21 04 54.3	
	comp=Z,2.9nm,1.0s						
WRA	**Warramunga Arr**	**54.14**	**187**	P	**P**	**21 04 48.8**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=6.0,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**54.14**	**187**	P	**P**	**21 04 48.8**	**-0.1**
ASAR	**Alice Springs**	**57.87**	**187**	P	**P**	**21 05 15.8**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=13,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**57.87**	**187**	P	**P**	**21 05 14.9**	**-0.7**
AKASG	**Malin Array Be**	**76.00**	**322**	P	**P**	**21 07 11.7**	**+1.0**

comp=Z,0.6nm,0.4s,baz=51,slow=6.1,SNR=2.4

IDC ***09*** *20:57:21.6±0.6, 54°.66S×130°.78W, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.3/28, mbtmp4.2/11, MS3.7/4, Ms1 3.7/4, ms1mx3.4/17, Error ellipse: s-maj=24.4km s-min=16.6km az=157.0*

NEIC ***09*** *20:57:22.8±1.9, 54°.9S±0°.2×130°.66W±0°.05, h10km±1km, mb4.6/11, Error ellipse: s-maj=30.8km s-min=5.2km az=359.0*

ISC 09 20:57:22.9±0.6**, 54°.8S**±0°.1×**130°.6W**±0°.1**, h10**km**, n52,** σ**1$04/32, mb4.5/14, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**32.46**	**202**	P	**P**	**21 03 55.6**	**+2.9**
	0.7nm,0.9s,baz=84,slow=7.8,SNR=6.6						
VNDA				PcP	**PcP**	**21 06 39.6**	**+0.2**
	1.1nm,1.0s,baz=96,slow=2.8,SNR=4.2						
VNDA				LR	LR	21 13 53.5	
	comp=Z,192nm,18.9s,baz=89,slow=30						
VNDA	**Vanda**	**32.46**	**202**	P	**P**	**21 03 51.9**	**-0.9**
TBI	**Tubuai**	**34.42**	**328**	*e*LR	LR	21 13 06.0	
	comp=Z,199nm,25.8s,baz=157						
TBI	**Tubuai**	**34.42**	**328**	*e*T	T	21 40 15.6	
	20nm,0.3s						
QSPA	**South Pole Qui**	**35.38**	**180**	P	**P**	**21 04 20.4**	**+1.9**
	7.0nm,1.0s,baz=91,slow=5.1,SNR=12						
QSPA	**South Pole Qui**	**35.38**	**180**	P	**P**	**21 04 18.0**	**-0.6**
QSPA				IAmb	IAmb	21 04 30.6	
	comp=Z,14nm,1.2s						
BELA	**Belgrano 2**	**38.37**	**160**	P	**P**	**21 04 43.2**	**-0.4**
MEH	**Mehetia**	**39.21**	**333**	*e*T	T	21 46 14.0	
	comp=Z,5.3nm,0.2s						
LL01	**San Ignacio de**	**39.31**	**96**	P	**P**	**21 04 49.7**	**-2.1**
PPT2	**Papeete2**	**39.90**	**331**	*e*LR	LR	21 15 47.3	
	comp=Z,223nm,25.5s,baz=153						
PPT	**Papeete**	**39.92**	**331**	LR	LR	21 17 15.1	
	comp=Z,130nm,18.3s,baz=180,slow=30						
H03S2	**Juan Fernandez**	**41.34**	**81**	T	T	21 49 09.0	
	baz=222,slow=74,SNR=129						
H03S1	**Juan Fernandez**	**41.34**	**81**	T	T	21 49 10.3	
	baz=222,slow=74,SNR=109						
H03S3	**Juan Fernandez**	**41.35**	**81**	T	T	21 49 09.4	
	baz=222,slow=74,SNR=122						
PLCA	**Paso Flores**	**41.44**	**96**	P	**P**	**21 05 10.8**	**+1.3**
	comp=Z,4.3nm,1.1s,baz=210,slow=13,SNR=4.3						
PLCA				LR	LR	21 18 52.7	
	comp=Z,36nm,21.2s,baz=292,slow=31						
PLCA	**Paso Flores**	**41.44**	**96**	P	**P**	**21 05 08.8**	**-0.7**
PLCA				IAmb	IAmb	21 05 11.6	
	comp=Z,8.2nm,1.2s						
H03N3	**Juan Fernandez**	**41.61**	**81**	T	T	21 49 20.4	
	baz=224,slow=72,SNR=175						
H03N2	**Juan Fernandez**	**41.62**	**81**	T	T	21 49 25.6	
	baz=224,slow=72,SNR=364						
H03N1	**Juan Fernandez**	**41.63**	**81**	T	T	21 49 19.3	
	baz=224,slow=72,SNR=248						
VAH	**Vaihoa**	**41.63**	**335**	*e*T	T	21 49 15.0	
	comp=Z,22nm,0.3s						
TAOE	**Nuku Hiva Isla**	**46.44**	**347**	*e*LR	LR	21 18 10.6	
	comp=Z,743nm,14.3s						
SNAA	**Sanae**	**48.61**	**161**	P	**P**	**21 06 06.2**	**+0.1**
SNAA				IAmb	IAmb	21 06 19.6	
	comp=Z,7.1nm,1.3s						
DZM	**Mont Dzumac**	**56.72**	**279**	*e*LR	LR	21 23 55.9	
	comp=Z,57nm,27.2s						
MAW	**Mawson**	**57.51**	**186**

PDAR			Lg		Lg	21 06 36.0	
	comp=E,8.3nm,0.3s,baz=69,slow=36,SNR=3.7						
PDAR	**Pinedale Array**	**3.31 253**	Pn		**Pn**	**21 05 53.2**	**0.0**
YNE	**Yellowstone No**	**3.62 291**			**Pn**	**21 05 57.5**	**0.0**
YMP	**Mirror Lake Pl**	**3.65 287**			**Pn**	**21 05 58.4**	**+0.5**
H17A	**Grant Village**	**3.88 281**			**Pn**	**21 06 01.5**	**+0.4**
FLWY	**Flagg Ranch**	**3.95 276**	Pn		**Pn**	**21 06 03.0**	**+1.1**
FLWY			IAML			21 07 14.1	
	comp=E,60nm,1.1s						
ISCO	**Idaho Springs**	**4.00 184**	Pn		**Pn**	**21 06 02.2**	**-0.6**
YNR	**Norris Junctio**	**4.01 285**	Pn		**Pn**	**21 06 03.2**	**+0.4**
SNOW	**Snow King Moun**	**4.01 267**			**Pn**	**21 06 03.4**	**+0.5**
SNOW			IAML			21 07 11.5	
	comp=E,61nm,1.1s						
SNOW			IAML			21 07 16.5	
	comp=E,69nm,1.6s						
YPP	**Pitchstone Pla**	**4.04 279**	Pn		**Pn**	**21 06 03.2**	**0.0**
REDW	**Red Top Meadow**	**4.09 266**			**Pn**	**21 06 04.5**	**+0.5**
REDW			IAML			21 07 11.7	
	comp=E,65nm,0.8s						
REDW			IAML			21 07 23.1	
	comp=E,75nm,0.8s						
IMW	**Indian Meadow**	**4.12 273**	Pn		**Pn**	**21 06 05.8**	**+1.5**
IMW			IAML			21 07 12.3	
	comp=E,45nm,0.6s						
IMW			IAML			21 07 18.5	
	comp=E,54nm,0.6s						
YHH	**Holmes Hill**	**4.14 286**			**Pn**	**21 06 04.8**	**+0.1**
TPAW	**Teton Pass**	**4.15 268**			**Pn**	**21 06 05.9**	**+1.1**
TPAW			IAML			21 07 30.5	
	comp=E,68nm,1.1s						
E28A	**Huff**	**4.25 48**			**Pn**	**21 06 07.5**	**+1.6**
O20A	**White River Ci**	**4.29 212**	Pn		**Pn**	**21 06 06.8**	**+0.3**
O20A			IAML			21 07 21.3	
	comp=E,70nm,0.8s						
O20A			IAML			21 07 24.7	
	comp=N,70nm,0.8s						
YHL	**Hebgen Lake**	**4.39 286**	Pn		**Pn**	**21 06 08.2**	**+0.2**
AHID	**Auburn Hatcher**	**4.40 258**			**Pn**	**21 06 07.2**	**-0.9**
AHID			IAML			21 06 43.9	
	comp=N,58nm,3.8s						
AHID			IAML			21 07 22.6	
	comp=E,52nm,3.7s						
ECR	**Eagle Creek**	**4.52 263**	Pn		**Pn**	**21 06 10.8**	**+1.0**
RDMU	**Red Mountain**	**4.55 226**			**Pn**	**21 06 10.1**	**-0.1**
QLMT	**Earthquake Lak**	**4.56 285**	Pn		**Pn**	**21 06 10.9**	**+0.6**
SUSD	**Miller**	**4.58 80**	Pn		**Pn**	**21 06 11.2**	**+0.8**
DGMT	**Dagmar**	**4.73 9**	Pn		**Pn**	**21 06 13.9**	**+1.4**
SMCO	**Snowmass**	**4.79 196**			**Pn**	**21 06 14.7**	**+1.0**
SMCO			IAML			21 07 38.7	
	comp=E,32nm,1.1s						
SMCO			IAML			21 07 40.4	
	comp=E,32nm,1.5s						
K31A	**O'Neill**	**4.89 102**	Pn		**Pn**	**21 06 14.9**	**+0.2**
BOZ	**Bozeman (W)**	**4.89 294**			**Pn**	**21 06 15.6**	**+0.8**
HWUT	**Hardware Ranch**	**5.14 247**			**Pn**	**21 06 18.7**	**+0.4**
HWUT			IAML			21 07 46.0	
	comp=E,52nm,1.0s						
HWUT			IAML			21 07 57.1	
	comp=E,44nm,1.2s						
KSCO	**Kaye Shedlock'**	**5.17 157**	Pn		**Pn**	**21 06 19.0**	**+0.4**
EGMT	**Eagleton**	**5.27 325**	Pn		**Pn**	**21 06 20.0**	**0.0**
EGMT			IAML			21 08 15.0	
	comp=E,68nm,0.9s						
HRY	**Holter Researc**	**5.49 304**			**Pn**	**21 06 23.8**	**+0.8**
MDND	**Maddock**	**5.66 42**	Pn		**Pn**	**21 06 25.5**	**+0.3**
SPUT	**South Promonto**	**5.87 247**			**Pn**	**21 06 29.1**	**+0.8**
PV22	**Blue Mesa, Par**	**5.89 208**			**Pn**	**21 06 29.4**	**+0.8**
PV07	**Paradox Valley**	**5.94 227**	Pn		**Pn**	**21 06 29.6**	**+0.4**
P17A	**Butcher Ranch,**	**5.96 225**	Pn		**Pn**	**21 06 29.9**	**+0.3**
PV15	**Paradox Valley**	**5.97 205**			**Pn**	**21 06 30.9**	**+1.1**
PV23	**Carpenter Ridg**	**6.05 209**			**Pn**	**21 06 31.8**	**+0.9**
SDCO	**Great Sand Dun**	**6.05 182**			**Pn**	**21 06 31.4**	**+0.5**
PV04	**Paradox Valley**	**6.06 208**			**Pn**	**21 06 31.7**	**+0.7**
MPU	**Maple Canyon**	**6.08 234**			**Pn**	**21 06 31.1**	**-0.1**
PV12	**Saucer Basin,**	**6.10 207**			**Pn**	**21 06 32.1**	**+0.6**
PV14	**Lion Creek, Pa**	**6.12 209**			**Pn**	**21 06 31.6**	**-0.2**
PV20	**West Nyswonger**	**6.13 209**			**Pn**	**21 06 32.0**	**+0.1**
SRU	**San Rafael Swe**	**6.13 222**			**Pn**	**21 06 31.8**	**-0.1**
PV11	**David Mesa, Pa**	**6.14 208**			**Pn**	**21 06 32.7**	**+0.7**
PV16	**Nyswonger Mesa**	**6.14 208**			**Pn**	**21 06 32.7**	**+0.7**
S22A	**4UR Ranch, Cre**	**6.16 192**			**Pn**	**21 06 32.6**	**+0.2**
PV03	**Paradox Valley**	**6.17 207**			**Pn**	**21 06 32.4**	**0.0**
PV02	**Paradox Valley**	**6.17 206**	Pn		**Pn**	**21 06 32.8**	**+0.2**
PV17	**East Wray Mesa**	**6.18 208**			**Pn**	**21 06 32.7**	**0.0**
PV01	**Paradox Valley**	**6.19 205**			**Pn**	**21 06 33.2**	**+0.5**
PV18	**Skein Mesa, Pa**	**6.20 208**			**Pn**	**21 06 33.8**	**+0.4**
PV13	**Radium Mtn., P**	**6.25 207**			**Pn**	**21 06 34.0**	**+0.5**
ECSD	**EROS Data Cent**	**6.25 88**	Pn		**Pn**	**21 06 33.7**	**+0.3**
TMUT	**Trail Mountain**	**6.34 227**			**Pn**	**21 06 34.9**	**0.0**
BGU	**Big Grassy Mou**	**6.44 246**	Pn		**Pn**	**21 06 36.4**	**+0.3**
CBKS	**Cedar Bluff**	**6.48 138**	Pn		**Pn**	**21 06 36.2**	**-0.3**
Q16A	**Castle Valley**	**6.60 224**	Pn		**Pn**	**21 06 38.3**	**-0.1**
HLID	**Hailey**	**6.65 271**	Pn		**Pn**	**21 06 40.2**	**+1.2**
DUG	**Dugway, Tooele**	**6.69 240**	Pn		**Pn**	**21 06 39.5**	**0.0**
F33A	**5 Mile Ranch,**	**6.69 69**			**Pn**	**21 06 38.5**	**-0.8**
MSO	**Missoula**	**6.84 299**	Pn		**Pn**	**21 06 41.9**	**+0.4**
MSU	**Marysvale**	**7.43 227**			**Pn**	**21 06 49.9**	**+0.2**
MVU	**Marysvale**	**7.45 227**			**Pn**	**21 06 50.3**	**+0.2**
ELK	**Elko**	**8.01 251**	Pn		**Pn**	**21 06 58.6**	**+0.8**
	comp=E,0.5nm,0.3s,baz=61,slow=8.2,SNR=8.8						
ELK	**Elko**	**8.01 251**			**Pn**	**21 06 57.8**	**+0.1**
ULM	**Lac du Bonnet**	**9.09 41**	Pn		**Pn**	**21 07 12.2**	**0.0**
	comp=E,1.7nm,0.3s,baz=232,slow=11,SNR=12						
ULM			Lg		Lg	21 09 43.9	
	comp=E,0.6nm,0.3s,baz=319,slow=9.3,SNR=2.7						
ULM	**Lac du Bonnet**	**9.09 41**			**Pn**	**21 07 12.4**	**+0.2**
NVAR	**Mina Array Bea**	**11.21 246**	Pn		**Pn**	**21 07 42.6**	**+1.1**
	comp=E,0.2nm,0.3s,baz=56,slow=13,SNR=7.3						
NVAR	**Mina Array Bea**	**11.21 246**			**Pn**	**21 07 41.3**	**-0.3**
TXAR	**Lajitas Array**	**14.49 174**	Pn		**P**	**21 08 34.0**	**+0.7**
	comp=E,0.0nm,0.3s,baz=357,slow=6.6,SNR=4.3						
TXAR			Lg		Lg	21 12 37.0	
	comp=E,0.1nm,0.3s,baz=18,slow=28,SNR=3.4						
ARCES	**ARCESS Array B**	**61.36 18**	P		**P**	**21 15 16.4**	**-0.6**
	comp=E,5.0nm,1.0s,baz=325,slow=6.1,SNR=7.3						
FINES	**FINESS Array B**	**67.97 23**	P		**P**	**21 16 00.8**	**+0.6**
	comp=E,1.1nm,0.8s,baz=355,slow=8.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**82.25 354**	P		**P**	**21 17 21.9**	**-0.9**
	comp=E,0.6nm,0.5s,baz=18,slow=5.2,SNR=2.5						

IDC ***09*** *21:18:19.3±0.7, 0.˚86N×146.˚20E, h0km, mb4.4/16, mb1 4.5/18, mb1mx4.3/43, mbtmp4.4/18, ML4.3/2, MS3.8/17, Ms1 3.8/17, ms1mx3.6/43, Error ellipse: s-maj=21.5km s-min=13.6km az=88.0*

NEIC ***09*** *21:18:20.1±1.2, 0.˚84N±0.˚08×146.˚2E±0.˚1, h16km±4km, mb4.7/19, Error ellipse: s-maj=15.6km s-min=11.2km az=70.0*

DJA ***09*** *21:18:20.7±0.5, 1.˚1N±4.˚×14.˚6E±.˚, h13km±3km, M4.8/19, mB6.0/3, mb4.7/19, MLv4.8/2, Mw(mB)5.6/3, Mwp7.3/1*

ISC 09 21:18:20.1±0.4, **0.˚85N**±0.˚07×**146.˚26E**±0.˚06, **h10**km, **n91, σ1°83/77, mb4.7**/40, **MS3.7**/13, **Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.08**	**159**	Pn	**Pn**	**21 19 07.6**	**-1.3**
MANU				Sn	**Sn**	**21 19 43.2**	**-2.6**
GENI	**Genyem**	**6.99**	**241**	P	**Pn**	**21 20 01.5**	**-1.1**
	0.6nm59nm,0.5s						
KRVT	**Keravat (AS076**	**7.71**	**132**	Pn	**Pn**	**21 20 12.4**	**-0.1**
	8.2nm,0.3s,baz=27,slow=1.9,SNR=3.7						
KRVT				Sn	**Sn**	**21 21 44.5**	**+4.6**
	7.1nm,0.3s,baz=225,slow=11,SNR=2.1						
KRVT				LR	LR	21 22 57.2	
	comp=Z,1µm,20.2s,baz=318,slow=36						
RABL	**Rabaul**	**7.74**	**130**	Pn	**Pn**	**21 20 12.0**	**-0.9**
PMG	**Port Moresby**	**10.23**	**175**	LR	LR	21 23 56.6	
	comp=Z,182nm,18.4s,baz=303,slow=33						
GUMO	**Guam**	**12.73**	**354**	LR	LR	21 25 08.9	
	comp=Z,105nm,21.8s,baz=164,slow=32						
PATS	**Pohnpei**	**13.41**	**63**	Pn	**Pn**	**21 21 30.0**	**-0.6**
SIJI	**Sorong**	**15.09**	**264**	Pn	**Pn**	**21 21 51.7**	**-2.0**
	0.6nm,0.3s,baz=74,slow=14,SNR=2.0						
HNR	**Honiara**	**17.03**	**127**	P	**P**	**21 22 22.0**	**+1.6**
	26nm,0.3s,baz=227,slow=2.8,SNR=4.0						
HNR				LR	LR	21 28 28.4	
	comp=Z,658nm,21.3s,baz=288,slow=36						
SANI	**Sanana**	**20.48**	**262**	P	**P**	**21 22 59.5**	**+1.2**
	17nm,1.4s						
CTA	**Charters Tower**	**20.81**	**180**	P	Pn	21 23 04.0	-0.3
	1.4nm,0.3s,baz=343,slow=7.5,SNR=4.0						

DAV	**Davao City (W)**	**21.53**	**287**	LR	LR	21 29 30.2	
	comp=Z,100nm,20.6s,baz=139,slow=31						
KMSI	**Cibinong**	**22.28**	**269**	P	**P**	**21 23 21.9**	**+4.1**
	92nm,1.0s						
GTOI	**Gorontalo**	**23.25**	**270**	P	**P**	**21 23 30.0**	**+2.0**
	29nm,1.0s						
LUWI	**Luwuk**	**23.57**	**265**	P	**P**	**21 23 30.2**	**-0.9**
	7um37nm,0.7s						
WB0	**Warramunga Arr**	**23.57**	**209**	P	**P**	**21 23 30.3**	**-0.8**
WR0	**Warramunga Arr**	**23.66**	**208**	P	**P**	**21 23 30.8**	**-1.2**
WR0				IAmb	IAmb	21 23 32.7	
	comp=Z,21nm,0.7s						
WRAB	**Tennant Creek**	**23.73**	**209**	P	**P**	**21 23 31.6**	**-1.1**
WB2	**Warramunga Arr**	**23.74**	**209**	P	**P**	**21 23 31.9**	**-0.8**
WB2				IAmb	IAmb	21 23 33.5	
	comp=Z,24nm,0.7s						
WRA	**Warramunga Arr**	**23.74**	**209**	P	**P**	**21 23 32.0**	**-0.8**
	comp=Z,26nm,0.8s,baz=31,slow=11,SNR=258						
WRA				LR	LR	21 33 05.3	
	comp=Z,387nm,19.3s,baz=25,slow=37						
KNRA	**Kununurra**	**23.85**	**226**	P	**P**	**21 23 32.7**	**-1.1**
KNRA				IAmb	IAmb	21 23 33.2	
	comp=Z,20nm,0.7s						
SOEI	**Soe**	**24.30**	**244**	P	**P**	**21 23 38.7**	**+0.5**
	comp=Z,49nm,1.2s						
SOEI	**Soe**	**24.30**	**244**	P	**P**	**21 23 36.7**	**-1.5**
BATI	**Baumata**	**25.03**	**243**	P	**P**	**21 23 45.0**	**+0.3**
	comp=Z,24nm,0.5s,baz=90,slow=3.0,SNR=5.0						
BATI				LR	LR	21 33 49.5	
	comp=Z,172nm,18.4s,baz=72,slow=37						
BATI	**Baumata**	**25.03**	**243**	P	**P**	**21 23 45.5**	**+0.8**
	comp=Z,24nm,0.9s						
MPSI	**Mapaga**	**26.37**	**269**	P	**P**	**21 24 00.9**	**+4.0**
	comp=Z,12nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**26.63**	**48**	T	T	21 52 12.2	
	baz=229						
H11S2	**WAKE ISLAND Hy**	**26.64**	**48**	T	T	21 52 11.9	
	baz=229,slow=74,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**26.65**	**48**	T	T	21 52 09.8	
	baz=229,slow=74,SNR=6.7						
ASAR	**Alice Springs**	**27.17**	**205**	P	**P**	**21 24 04.3**	**+0.3**
	comp=Z,13nm,0.9s,baz=35,slow=9.0,SNR=57						
ASAR				LR	LR	21 35 14.8	
	comp=Z,294nm,18.7s,baz=24,slow=37						
ASAR	**Alice Springs**	**27.17**	**205**	P	**P**	**21 24 03.2**	**-0.8**
H11N1	**WAKE ISLAND Hy**	**27.56**	**46**	T	T	21 53 29.5	
	baz=226						
H11N2	**WAKE ISLAND Hy**	**27.57**	**46**	T	T	21 53 30.7	
	baz=226,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**27.57**	**46**	T	T	21 53 30.1	
	baz=226						
FITZ	**Fitzroy Crossi**	**27.68**	**226**	P	**P**	**21 24 08.2**	**-0.4**
	comp=Z,9.2nm,0.6s,baz=40,slow=8.9,SNR=36						
FITZ				LR	LR	21 35 28.7	
	comp=Z,255nm,18.2s,baz=52,slow=37						
FITZ	**Fitzroy Crossi**	**27.68**	**226**	P	**P**	**21 24 08.0**	**-0.6**
FITZ				IAmb	IAmb	21 24 08.8	
	comp=Z,9.6nm,0.7s						
TGY	**Tagaytay City**	**28.30**	**299**	LR	LR	21 33 24.9	
	comp=Z,230nm,20.0s,baz=120,slow=32						
STKA	**Stephens Creek**	**32.85**	**187**	LR	LR	21 39 39.4	
	comp=Z,155nm,18.4s,baz=2.2,slow=39						
BBOO	**Buckleboo**	**34.84**	**195**	P	**P**	**21 25 10.7**	**-0.8**
JNU	**Nakatsue**	**35.21**	**337**	P	**P**	**21 25 14.6**	**-0.1**
	comp=Z,12nm,1.0s,baz=135,slow=2.9,SNR=2.2						
JNU	**Nakatsue**	**35.21**	**337**	P	**P**	**21 25 14.4**	**-0.3**
MJAR	**Matsushiro Arr**	**36.29**	**349**	LR	LR	21 39 51.3	
	comp=Z,50nm,19.0s,baz=285,slow=36						
DBJI	**Dnaga**	**40.12**	**259**	P	**P**	**21 25 59.5**	**+3.0**
	comp=Z,12µmcomp=Z,51nm,1.5s						
KSRS	**Korea Array**	**40.16**	**337**	P	**P**	**21 25 56.6**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=152,slow=9.4,SNR=7.1						
KSRS				LR	LR	21 40 35.1	
	comp=Z,63nm,19.5s,baz=345,slow=33						
MORW	**Morawa**	**41.48**	**222**	P	**P**	**21 26 07.2**	**-0.3**
MORW				IAmb	IAmb	21 26 08.3	
	comp=Z,12nm,0.8s						
USRK	**Ussuriysk Ar.**	**44.99**	**345**	P	**P**	**21 26 36.0**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=163,slow=8.0,SNR=6.4						
USRK	**Ussuriysk Ar.**	**44.99**	**345**	P	**P**	**21 26 35.1**	**-0.5**
NONG	**Nongkai**	**45.66**	**295**	P	**P**	**21 26 43.2**	**+1.8**
	comp=Z,20nm,0.9s						
UTTA	**Uttaradit**	**47.94**	**293**	P	**P**	**21 27 01.7**	**+2.4**
	comp=Z,13nm,0.8s						
XAN	**Xi'an**	**48.06**	**317**	P	**P**	**21 26 58.1**	**-2.0**
URZ	**Urewera**	**48.19**	**147**	LR	LR	21 46 24.5	
	comp=Z,79nm,18.3s,baz=31,slow=35						
GSI	**Gunungsitoli**	**48.68**	**271**	P	**P**	**21 27 04.9**	**-0.2**
	comp=Z,32nm,1.3s						
GSI				pP	**sP**	**21 27 09.7**	**+2.2**
	comp=Z,32nm,1.3s						
SUKH	**Sukhothai**	**48.72**	**293**	P	P	21 27 16.0	+11
	comp=Z,11nm,0.6s						
CM35	**Chiang Mai Arr**	**49.47**	**294**	P	**P**	**21 27 13.0**	**+1.9**
CM36	**Chiang Mai Arr**	**49.48**	**294**	P	**P**	**21 27 13.0**	**+1.8**
CM34	**Chiang Mai Arr**	**49.52**	**294**	P	**P**	**21 27 14.0**	**+2.5**
CM04	**Chiang Mai Arr**	**49.56**	**294**	P	**P**	**21 27 14.7**	**+2.9**
	comp=Z,4.9nm,1.0s						
CM09	**Chiang Mai Arr**	**49.56**	**294**	P	**P**	**21 27 16.1**	**+4.3**
	comp=Z,57nmcomp=Z,7.3nm,0.9s						
CM01	**Chiang Mai Arr**	**49.58**	**294**	P	**P**	**21 27 15.4**	**+3.5**
	comp=Z,47nmcomp=Z,5.4nm,1.1s						
CM05	**Chiang Mai Arr**	**49.59**	**294**	P	**P**	**21 27 14.0**	**+2.0**
	comp=Z,44nmcomp=Z,4.9nm,1.1s						
CM02	**Chiang Mai Arr**	**49.60**	**294**	P	**P**	**21 27 15.0**	**+2.9**
	comp=Z,55nmcomp=Z,7.0nm,0.9s						
CM31	**Chiang Mai Arr**	**49.61**	**294**	P	**P**	**21 27 15.0**	**+2.9**
	comp=Z,143nm,0.6s						
CM31	**Chiang Mai Arr**	**49.61**	**294**	P	**P**	**21 27 09.7**	**-2.5**
CM31				IAmb	IAmb	21 27 23.2	
	comp=Z,7.8nm,1.0s						
CMAR	**Chiang Mai Arr**	**49.61**	**294**	P	**P**	**21 27 13.8**	**+1.6**
	comp=Z,3.8nm,1.0s,baz=116,slow=5.9,SNR=22						
CMAR				LR	LR	21 46 38.7	
	comp=Z,48nm,20.7s,baz=340,slow=34						
CMAR	**Chiang Mai Arr**	**49.61**	**294**	P	**P**	**21 27 11.6**	**-0.5**
CM15	**Chiang Mai Arr**	**49.62**	**294**	P	**P**	**21 27 14.0**	**+1.8**
	comp=Z,7.4nm,0.9s						
CM13	**Chiang Mai Arr**	**49.63**	**294**	P	**P**	**21 27 15.0**	**+2.7**
CM32	**Chiang Mai Arr**	**49.75**	**294**	P	**P**	**21 27 16.0**	**+2.8**
ULN	**Ulaanbaatar**	**57.82**	**330**	P	**P**	**21 28 10.4**	**-1.6**
ULN				IAmb	IAmb	21 28 22.4	
	comp=Z,8.5nm,1.1s						
SHL	**Shillong**	**57.84**	**300**	P	**P**	**21 28 10.8**	**-1.8**
SHL				IAmb	IAmb	21 28 14.6	
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**58.13**	**329**	P	**P**	**21 28 15.2**	**+1.1**
	comp=Z,3.7nm,0.9s,baz=145,slow=8.3,SNR=5.3						
SONM	**Songino Array**	**58.13**	**329**	P	**P**	**21 28 13.0**	**-1.2**
LSA	**Lhasa**	**59.68**	**304**	P	**P**	**21 28 23.1**	**-2.6**
WMQ	**Urumqi**	**67.19**	**318**	P	**P**	**21 29 13.6**	**-1.1**
WMQ				IAmb	IAmb	21 29 31.6	
	comp=Z,6.6nm,1.0s						
MKAR	**Makanchi Array**	**71.81**	**319**	P	**P**	**21 29 43.7**	**+0.6**
	comp=Z,2.6nm,0.9s,baz=110,slow=5.8,SNR=6.7						
MKAR	**Makanchi Array**	**71.81**	**319**	P	**P**	**21 29 42.1**	**-1.0**
MAKZ	**Makanchi**	**72.02**	**319**	P	**P**	**21 29 43.8**	**-0.6**
MAKZ				IAmb	IAmb	21 29 53.2	
	comp=Z,5.5nm,0.8s						
ZALV	**Zalesovo Beam**	**72.88**	**327**	P	**P**	**21 29 49.1**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=115,slow=6.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**72.88**	**327**	P	**P**	**21 29 48.3**	**-1.0**
KURK	**Kurchatov**	**75.33**	**323**	P	**P**	**21 30 02.9**	**-0.8**
KURBB	**Kurchatov Arra**	**75.36**	**322**	P	**P**	**21 30 04.2**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=109,slow=5.2,SNR=6.1						
VNDA	**Vanda**	**78.75**	**177**	P	**P**	**21 30 23.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=7.1,slow=5.6,SNR=3.6						
ILAR	**Eielson Array**	**79.53**	**24**	P	**P**	**21 30 26.8**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=252,slow=5.7,SNR=25						
ILAR	**Eielson Array**	**79.53**	**24**	P	**P**	**21 30 26.5**	**-0.4**
YBH	**Yreka Blue Hor**	**90.21**	**48**	LR	LR	22 03 04.5	
	comp=Z,407nm,20.2s,baz=16,slow=30						
YKA	**Yellowknife Ar**	**93.47**	**27**	LR	LR	22 12 44.1	
	comp=Z,86nm,19.4s,baz=0.0,slow=35						
NVAR	**Mina Array Bea**	**93.74**	**52**	P	**P**	**21 31 39.8**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=258,slow=4.2,SNR=2.0						
NVAR	**Mina Array Bea**	**93.74**	**52**	P	**P**	**21 31 36.1**	**-1.8**
TORD	**Torodi Ar. Bea**	**142.21**	**293**	PKP	**PKPdf**	**21 37 53.4**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=210,slow=2.4,SNR=1.4						
CPUP	**Villa Florida**	**145.98**	**140**	PKPbc	**PKiKP**	**21 38 03.1**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=256,slow=4.2,SNR=4.0						
DBIC	**Dimbokro**	**150.23**	**285**	PKPbc	**PKiKP**	**21 38 14.9**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=56,slow=3.6,SNR=1.7						

BGR ***09*** *21:19:34.7±0.0, 6.˚84N×20.˚08W, h33km, mb5.1*

BJI ***09*** *21:19:38.0±0.0, 6.˚40N×17.˚50W, h5km, mB5.2/36, mb4.6/49, Ms5.3/34, Ms7 5.1/33*

REY ***09*** *21:19:39.1, 6.˚62N×17.˚38W, h8km*

IDC ***09*** *21:19:40.5±0.4, 6.˚55N×17.˚49W, h0km, mb4.3/31, mb1 4.5/37, mb1mx4.4/50, mbtmp4.3/37, ML3.1/4, MS4.9/45, Ms1 4.9/45, ms1mx4.9/48, Error ellipse: s-maj=13.1km s-min=7.5km az=16.0*

BGS ***09*** *21:19:40.9±1.9, 6.˚56N×17.˚07W, h5km, MS4.8*

MOS ***09*** *21:19:40.2±1.2, 6.˚51N×17.˚45W, h10km, mb5.1/49, MS4.7/26, Error ellipse: s-maj=8.1km s-min=5.8km az=110.4*

NEIC ***09*** *21:19:41.2±0.6, 6.˚56N±0.˚08×17.˚5W±0.˚2, h7km±4km, mb5.1/97, Mww5.4, Mwc5.3(GCMT), Error ellipse: s-maj=12.2km s-min=9.1km az=193.0*

GCMT ***09*** *21:19:47.2±0.1, 6.˚64N±0.˚01×17.˚41W±0.˚02, h12km, MW5.3/151, Moment Tensor Solution. s83,c130; s151,c296; Duration: 1ꜛ1 Moment tensor: Scale 10¹⁷ Nm; Mrr-1.41±.01; Mθθ0.89±.01; Mθθ0.52±.01; Mrθ0.16±.04; Mθφ-0.22±.01; Mφr0.08±.04; Best double couple: M₀1.20900×10¹⁷ NP1:ϕs119.00000°, δ43.00000°, λ-84.00000°. NP2:ϕs291.00000°, δ48.00000°, λ-96.00000°. Principal axes: T 0.9930, Plg3.0000°, Azm25.0000°; N 0.4360, Plg4.0000°, Azm294.0000°; P -1.4250, Plg85.0000°, Azm146.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***09*** *21:19:47, 6.˚62N×17.˚38W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.48; Mθθ0.96; Mθφ0.52; Mrθ0.06; Mθφ-0.25; Mφr-0.08; Fault plane solution: M₀1.33000×10¹⁷ NP1:ϕs112.00000°, δ43.00000°, λ-92.00000°. NP2:ϕs296.00000°, δ47.00000°, λ-88.00000°. Principal axes: T 1.0735, Plg2.0000°, Azm24.0000°; N 0.4095, Plg2.0000°, Azm114.0000°; P -1.4829, Plg88.0000°, Azm245.0000°;*

DNK ***09*** *21:19:48.0±7.6, 6.˚65N×17.˚47W, h15km±133km, ML3.1*

NEIC ***09*** *21:19:49, 6.˚46N×17.˚93W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.27; Mθθ0.99; Mθφ0.28; Mrθ0.74; Mθφ-0.04; Mφr1.17; Fault plane solution: M₀1.81000×10¹⁷ NP1:ϕs91.00000°, δ24.00000°, λ-51.00000°. NP2:ϕs229.00000°, δ71.00000°, λ-105.00000°. Principal axes: T 1.3529, Plg25.0000°, Azm332.0000°; N 0.6991, Plg15.0000°, Azm235.0000°; P -2.0520, Plg61.0000°, Azm116.0000°;*

ISC 09 21:19:41.6±0.6, **64.˚58N**±0.˚02×**17.˚36W**±0.˚02, **h3**km±3km, **n663, σ2°29/628, mb5.0**/159, **MS4.9**/82, **33C-26D, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRF	**Grimsfjall**	**0.18**	**167**	P	**Pg**	**21 19 43.3**	**-1.9**
	baz=167						
IGRF				S	**Sg**	**21 19 46.8**	**-0.8**
	baz=167						
IVON	**Vonarskard**	**0.19**	**298**	P	**Pg**	**21 19 42.4**	**-3.0**
	baz=290						
IVON				S	**Sg**	**21 19 45.4**	**-2.5**
	baz=290						
IDYN	**Dyngjuhals**	**0.21**	**359**	P	**Pg**	**21 19 42.9**	**-2.8**
	baz=2.1						
IHUS	**Husbondi**	**0.32**	**204**	P	**Pg**	**21 19 45.6**	**-2.1**
	baz=200						
IHUS				S	**Sg**	**21 19 50.6**	**-1.3**
	baz=200						
IVOT	**Vottur**	**0.32**	**166**	P	**Pg**	**21 19 45.9**	**-1.9**
	baz=166						
IVOT				S	**Sg**	**21 19 50.9**	**-1.1**
	baz=166						
ISKR	**Skrokkalda**

JMIC	**Jan Mayen**	**7.25**	**24**	Pn		**Pn**	**21 21 28.9**	**+0.6**		
	baz=166,slow=12,SNR=1.6									
LEWI	**Lewis, Hebride**	**8.18**	**137**	*e*P		**Pn**	**21 21 38.0**	**-3.2**		
WAL1	**Walls**	**8.48**	**114**	*e*P		**Pn**	**21 21 42.7**	**-2.6**		
LINV	**Loch Inver, As**	**8.69**	**132**	*e*P		**Pn**	**21 21 45.8**	**-2.3**		
KAC	**Achnashellach**	**9.19**	**135**	*e*P		**Pn**	**21 21 52.5**	**-2.4**		
KPL	**Plockton**	**9.22**	**137**	*e*P		**Pn**	**21 21 52.8**	**-2.5**		
MCD	**Coleburn Disti**	**9.78**	**129**	*e*P		**Pn**	**21 22 00.9**	**-2.1**		
DBG	**Daneborg**	**9.82**	**355**	*e*P		Pn	21 22 11.7	+8.2		
LAWE	**Loch Awe, Argy**	**10.21**	**139**	*e*P		**Pn**	**21 22 06.9**	**-2.0**		
LAWE				IAMs_20		IAMs_20	21 26 16.3			
	comp=Z,6µm,14.2s									
INVG	**Invergeldie, C**	**10.46**	**135**	*e*P		**Pn**	**21 22 09.4**	**-3.0**		
INVG				IAMs_20		IAMs_20	21 27 17.5			
	comp=Z,6µm,13.1s									
EAB	**Aberfoyle**	**10.58**	**137**	*e*P		**Pn**	**21 22 12.4**	**-1.5**		
PGBU	**Glenifferbraes**	**10.86**	**138**	*e*P		**Pn**	**21 22 15.8**	**-2.0**		
SUMG	**Summit**	**11.04**	**326**	*i* P		Pn	21 22 27.1	+6.5		
SUMG	**Summit**	**11.04**	**326**	*i* P		Pn	21 22 27.1	+6.5		
SUMG	**Summit**	**11.04**	**326**	*i* P		Pn	21 22 27.2	+6.5		
EDI	**Edinburgh**	**11.15**	**135**	*e*P		**Pn**	**21 22 19.5**	**-2.2**		
NEWG	**New Galloway**	**11.53**	**139**	*e*P		**Pn**	**21 22 24.7**	**-2.3**		
NEWG				IAMs_20		IAMs_20	21 27 49.1			
	comp=Z,10µm,11.2s									
EKA	**Eskdalemuir Ar**	**11.66**	**136**	Pn		**Pn**	**21 22 27.8**	**-0.9**		
	baz=325,slow=13,SNR=47									
EKA				LR		LR	21 26 38.6			
	comp=Z,4µm,21.2s,baz=345,slow=36									
ESK	**Eskdalemuir**	**11.66**	**136**	*e*P		**Pn**	**21 22 27.0**	**-1.7**		
ESK				IAMs_20		IAMs_20	21 28 58.3			
	comp=Z,5µm,11.1s									
ESK	**Eskdalemuir**	**11.66**	**136**	P		**Pn**	**21 22 27.7**	**-1.0**		
ESK	**Eskdalemuir**	**11.66**	**136**	Pn		**Pn**	**21 22 27.7**	**-1.0**		
DAG	**Danmarks Havn**	**12.26**	**359**	*i* P		**Pn**	**21 22 40.5**	**+3.7**		
DAG	**Danmarks Havn**	**12.26**	**359**	*i* P		**Pn**	**21 22 40.5**	**+3.7**		
DAG	**Danmarks Havn**	**12.26**	**359**	*i* P		**Pn**	**21 22 40.5**	**+3.7**		
KESW	**Keswick, Cumbr**	**12.31**	**138**	*e*P		**Pn**	**21 22 35.8**	**-1.9**		
KESW				IAMs_20		IAMs_20	21 28 08.8			
	comp=Z,7µm,11.6s									
DSB	**Dublin**	**12.68**	**149**	Pn		**Pn**	**21 22 41.8**	**-0.9**		
NC204	**NORSAR Array S**	**13.17**	**92**	Pn		**Pn**	**21 22 48.4**	**-1.0**		
NB2	**NORSAR Subarra**	**13.47**	**92**	Pn		**Pn**	**21 22 57.3**	**+3.8**		
	comp=Z,150nm,2.5s,baz=297,slow=14									
NB2	**NORSAR Subarra**	**13.47**	**92**	Pn		**Pn**	**21 22 57.3**	**+3.8**		
	baz=297,slow=14									
NOA	**NORSAR Array B**	**13.47**	**92**	Pn		**Pn**	**21 22 53.7**	**+0.3**		
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=8.9									
NOA				LR		LR	21 28 16.5			
	comp=Z,2µm,19.4s,baz=300,slow=38									
KONO	**Kongsberg**	**13.48**	**99**	*i* P		**Pn**	**21 22 56.1**	**+2.5**		
NC405	**NORSAR Array S**	**13.65**	**91**	Pn		**Pn**	**21 22 54.7**	**-1.2**		
SFJD	**Kangerlussuaq**	**13.76**	**295**	Pn		**Pn**	**21 22 57.8**	**+0.5**		
	comp=Z,0.4nm,0.3s,baz=62,slow=14,SNR=1.4									
SFJD				Lg		Lg	21 26 42.9			
	comp=Z,0.1nm,0.3s,baz=168,slow=22,SNR=4.8									
SFJD				LR		LR	21 27 45.6			
	comp=Z,11µm,19.0s,baz=89,slow=35									
SFJD	**Kangerlussuaq**	**13.76**	**295**	*i* P		**P**	**21 23 02.0**	**-4.0**		
SFJD	**Kangerlussuaq**	**13.76**	**295**	*i* P		**P**	**21 23 02.0**	**-4.0**		
GOET	**G??ttrup**	**14.91**	**108**	*i* P		**P**	**21 23 22.2**	**+3.3**		
GOET	**G??ttrup**	**14.91**	**108**	*e*P		**P**	**21 23 22.2**	**+3.3**		
HFS	**Hagfors**	**14.98**	**93**	Pn		**P**	**21 23 18.7**	**-1.0**		
	comp=Z,0.2nm,0.3s,baz=282,slow=8.2,SNR=10.0									
HFS				LR		LR	21 29 03.4			
	comp=Z,2µm,20.3s,baz=288,slow=37									
MUD	**Monsted U'grnd**	**15.28**	**110**	*i* P		**P**	**21 23 21.3**	**-1.7**		
MUD	**Monsted U'grnd**	**15.28**	**110**	*e*P		**P**	**21 23 21.3**	**-1.7**		
SPITS	**Spitsbergen Ar**	**16.92**	**23**	Pn		**P**	**21 23 44.1**	**+3.0**		
	baz=45,slow=4.8,SNR=4.7									
SPITS				LR		LR	21 28 34.7			
	comp=Z,5µm,19.4s,baz=230,slow=32									
ARCES	**ARCESS Array B**	**17.12**	**54**	P		**Pn**	**21 23 41.8**	**+0.2**		
	baz=275,slow=11,SNR=2.7									
ARCES				LR		LR	21 29 15.3			
	comp=Z,5µm,18.3s,baz=285,slow=33									
UCC	**Uccle**	**17.90**	**130**	Pn		**Pn**	**21 23 49.5**	**-1.9**		
SNF	**Seneffe**	**18.12**	**131**	Pn		**Pn**	**21 23 52.6**	**-1.5**		
SNF				x		x	21 24 08.7			
BEBN	**Eben Emael**	**18.34**	**128**	Pn		**Pn**	**21 23 55.3**	**-1.5**		
BMRD	**Maredsous**	**18.46**	**130**	Pn		**P**	**21 23 56.4**	**-1.8**		
BMRD				x		x	21 24 11.1			
BSTI	**Sart Tilman**	**18.49**	**128**	Pn		**Pn**	**21 23 58.9**	**+0.4**		
BSTI				x		x	21 24 18.8			
BGES	**Gesves**	**18.50**	**130**	Pn		**P**	**21 23 56.8**	**-1.8**		
BGES	**Gesves**	**18.50**	**130**	P		**Pn**	**21 24 04.8**	**+6.1**		
BCLA	**Clavier**	**18.54**	**129**	Pn		**P**	**21 23 58.4**	**-0.7**		
	comp=Z,43nm,1.7s									
DOU	**Dourbes**	**18.58**	**131**	pPn		**P**	**21 23 59.5**	**-0.1**		
DOU	**Dourbes**	**18.58**	**131**	P		**Pn**	**21 24 05.2**	**+5.5**		
MEM	**Membach**	**18.61**	**128**	Pn		**P**	**21 23 57.9**	**-2.0**		
MEM				x		x	21 24 17.9			
BTNL	**Ternell**	**18.68**	**127**	Pn		**P**	**21 23 59.4**	**-1.2**		
BTNL				x		x	21 24 19.3			
BHOU	**Houvegnez**	**18.83**	**128**	Pn		**P**	**21 24 01.6**	**-0.7**		
BHOU				PnPn		**PnPn**	**21 24 13.0**	**-1.6**		
SUF	**Sumiainen**	**19.12**	**76**	P		**Pn**	**21 24 09.0**	**+2.8**		
WLF	**Walferdange**	**19.47**	**129**	Pn		**P**	**21 24 07.0**	**-2.2**		
WLF				x		x	21 24 28.6			
FINES	**FINESS Array B**	**19.66**	**79**	P		**P**	**21 24 10.4**	**-0.9**		
	comp=Z,0.2nm,0.3s,baz=308,slow=7.1,SNR=10									
FINES				LR		LR	21 31 24.8			
	comp=Z,2µm,20.3s,baz=298,slow=36									
FINES	**FINESS Array B**	**19.66**	**79**	P		**P**	**21 24 10.6**	**-0.7**		
FINES	**FINESS Array B**	**19.66**	**79**	P		**P**	**21 24 10.6**	**-0.7**		
FIA1	**FINESS Array S**	**19.66**	**79**	P		**P**	**21 24 10.8**	**-0.5**		
FIA1				IAmb		IAmb	21 24 29.1			
	comp=Z,123nm,1.4s									
TULEG	**Thule**	**19.95**	**328**	*i* P	⇑	**Pn**	**21 24 16.3**	**+0.3**		
APA	**Apatity**	**20.32**	**59**	*i* P	⇓	Pn	21 24 24.9	+4.5		
APA				*i* S		Sn	21 28 12.0	+2.7		
APA				pmax		pmax				
	comp=Z,18nm,0.9s									
APA				MLR		MLR				
	comp=Z,4µm,17.0s									
MFF	**Saint Martin d**	**20.35**	**144**	*e*P		**P**	**21 24 19.0**	**+0.1**		
MFF				pmax		pmax				
	comp=Z,107nm,1.5s									
MOX	**Moxa**	**20.61**	**119**	P		**P**	**21 24 21.6**	**-0.1**		
MOX				pmax		pmax				
	comp=Z,62nm,3.0s									
CLL	**Collm**	**20.61**	**116**	*e*P		**P**	**21 24 20.0**	**-1.7**		
	comp=Z,112nm,1.5s									
CLL				*i*			21 24 28.3			
	comp=Z,145nm,1.5s									
CLL				*i*			21 24 31.3			
CLL				*i* PP		**PnPn**	**21 24 38.5**	**-0.5**		
CLL				*e*S		Sn	21 28 20.0	+3.4		
CLL				Lmax			21 35 00.0			
CLL	**Collm**	**20.61**	**116**	*e*P		**P**	**21 24 20.0**	**-1.7**		
CLL				*i*			21 24 28.3			
CLL				pmax		pmax				
	comp=Z,112nm,1.5s									
LVZ	**Lovozero**	**20.69**	**58**	*i* P		Pn	21 24 24.7	-0.1		
LVZ				pmax		pmax				
	comp=Z,41nm,1.1s									
GKP	**Gorka Klasztor**	**20.84**	**106**	*e*P		Pn	21 24 26.2	-0.3		
PBUR	**Paburge**	**20.93**	**96**	*e*P		**P**	**21 24 26.1**	**+1.0**		
ECH	**Echery**	**21.05**	**129**	P		**P**	**21 24 25.7**	**-0.9**		
ECH				pmax		pmax				
	comp=Z,80nm,1.3s									
ECH	**Echery**	**21.05**	**129**	P		**P**	**21 24 25.7**	**-0.9**		
JOF	**Joensuu**	**21.17**	**72**	P		**P**	**21 24 32.2**	**+4.5**		
JOF				pmax		pmax				
	comp=Z,84nm,1.2s									
GRA1	**Grafenberg Arr**	**21.24**	**121**	P		**P**	**21 24 27.8**	**-0.7**		
GRF	**Grafenberg Arr**	**21.24**	**121**	P		**P**	**21 24 27.8**	**-0.7**		
GRF				pmax		pmax				
	comp=Z,64nm,1.1s									
GRF	**Grafenberg Arr**	**21.24**	**121**	*e*P		**P**	**21 24 27.9**	**-0.7**		
	comp=Z,103nm,1.3s,baz=323,slow=10									
NKC	**Novy Kostel**	**21.26**	**118**	*e*P		**P**	**21 24 31.2**	**+2.5**		
NKC	**Novy Kostel**	**21.26**	**118**	*e*P		**P**	**21 24 31.2**	**+2.5**		
BRG	**Berggiesshubel**	**21.32**	**115**	*e*P		**P**	**21 24 28.5**	**-0.9**		
	comp=Z,196nm,1.5s									
BRG				S		Sn	21 28 34.0	+0.4		
BRG				*e*PCS		PcS	21 32 02.3	-8.9		
	comp=Z,9.5nm,1.4s									
	comp=N,3µm,15.2s									
	comp=E,3µm,14.5s									
	comp=Z,3µm,16.5s									
BRG	**Berggiesshubel**	**21.32**	**115**	*e*P		**P**	**21 24 28.5**	**-0.9**		
BRG				S		Sn	21 28 34.0	+0.4		
BRG				pmax		pmax				
	comp=Z,196nm,1.5s									
BRG				MLR		MLR				
	comp=N,3µm,15.2s									
BRG				MLR		MLR				
	comp=E,3µm,14.5s									
BRG				MLR		MLR				
	comp=Z,3µm,16.5s									
BFO	**Black Forest**	**21.35**	**127**	P		**P**	**21 24 29.1**	**-0.6**		
BFO				pmax		pmax				
	comp=Z,79nm,1.2s									
BFO	**Black Forest**	**21.35**	**127**	P		**P**	**21 24 29.1**	**-0.6**		
BFO				lAmb		lAmb	21 24 37.6			
	comp=Z,79nm,1.2s									
VSU	**Vasula**	**21.51**	**86**	*e*P		**P**	**21 24 29.7**	**-1.6**		
VSU	**Vasula**	**21.51**	**86**	*i* P		**P**	**21 24 32.5**	**+1.2**		
VSU				pmax		pmax				
	comp=Z,222nm,1.0s									
FRB	**Frobisher Bay**	**21.83**	**291**	P		**P**	**21 24 34.2**	**-0.6**		
	comp=Z,11nm,0.8s,baz=42,slow=12,SNR=3.8									
FRB				LR		LR	21 32 26.5			
	comp=Z,2µm,18.9s,baz=66,slow=35									
PVCC	**Panska Ves**	**21.84**	**115**	*e*P		**P**	**21 24 37.9**	**+3.0**		
PVCC	**Panska Ves**	**21.84**	**115**	*e*P		**P**	**21 24 37.9**	**+3.0**		
LFF	**La Frestale**	**22.12**	**144**	*e*P		**P**	**21 24 37.5**	**-0.5**		
LFF				pmax		pmax				
	comp=Z,72nm,1.1s									
PABE	**Paberze**	**22.14**	**95**	*e*P		**P**	**21 24 37.9**	**-0.2**		
PRA	**Prague**	**22.15**	**116**	*e*P		**P**	**21 24 40.6**	**+2.3**		
PRA	**Prague**	**22.15**	**116**	*e*P		**P**	**21 24 40.6**	**+2.3**		
PRU	**Pruhonice**	**22.26**	**116**	*e*P		**P**	**21 24 40.6**	**+1.2**		
PRU	**Pruhonice**	**22.26**	**116**	*e*P		**P**	**21 24 40.6**	**+1.2**		
KSP	**Ksiaz**	**22.28**	**112**	*e*P		**P**	**21 24 40.2**	**+0.5**		
KSP				*e*S		Sn	21 28 56.1	-0.4		
KSP				*e*L		L	21 33 02.3			
	comp=Z,2µm,21.0s									
PUL	**Pulkovo**	**22.32**	**80**	*i* P		**P**	**21 24 41.8**	**+1.9**		
PUL				pmax		pmax				
	comp=Z,37nm,0.7s									
CHVC	**Chvalec**	**22.38**	**113**	*e*P		**P**	**21 24 39.4**	**-1.4**		
CHVC				*ex*		x	21 24 45.0			
UPC	**Upice**	**22.43**	**113**	*e*P		**P**	**21 24 42.0**	**+0.8**		
UPC				*e*			21 24 45.8			
UPC	**Upice**	**22.43**	**113**	*e*P		**P**	**21 24 42.0**	**+0.8**		
UPC				*e*pP		**sP**	**21 24 45.8**	**+2.8**		
OSTC	**Ostas**	**22.47**	**113**	*e*P		**P**	**21 24 42.8**	**+1.1**		
KHC	**Kasperske Hory**	**22.58**	**118**	*e*P		**P**	**21 24 42.0**	**-1.0**		
KHC	**Kasperske Hory**	**22.58**	**118**	*e*P		**P**	**21 24 42.0**	**-1.0**		
KHC				*ex*		x	21 24 51.0			
DPC	**Dobruska-Polom**	**22.67**	**113**	*e*P		**P**	**21 24 42.2**	**-1.7**		
DPC				*e*			21 24 47.2			
DPC	**Dobruska-Polom**	**22.67**	**113**	*e*P		**P**	**21 24 42.2**	**-1.7**		
DPC				*e*pP		**sP**	**21 24 47.2**	**+1.5**		
SENIN	**Lac Senin/Sane**	**22.72**	**132**	P		**P**	**21 24 43.5**	**-1.2**		
SENIN				lAmb		lAmb	21 25 02.9			
	comp=Z,111nm,1.4s									
DAVA	**Damuels**	**22.78**	**126**	*e*P		**P**	**21 24 44.4**	**-0.9**		
	comp=Z,65nm,1.2s									
SUW	**Suwalki**	**22.81**	**98**	*e*P		**P**	**21 24 44.8**	**-0.5**		
GERES	**GERESS Array B**	**22.86**	**119**	P		**P**	**21 24 45.5**	**-0.4**		
	comp=Z,4.1nm,0.9s,baz=326,slow=8.3,SNR=22									
GERES				LR		LR	21 34 37.0			
	comp=Z,2µm,19.0s,baz=332,slow=39									
GERES	**GERESS Array B**	**22.86**	**119**	P		**P**	**21 24 44.9**	**-1.1**		
RETA	**Reutte**	**22.92**	**125**	*e*P		**P**	**21 24 45.9**	**-0.6**		
	comp=Z,86nm,2.6s									
IZAR	**Zarasai**	**22.97**	**92**	*e*P		**P**	**21 24 46.7**	**-0.2**		
ISAL	**Salakas**	**23.03**	**92**	*e*P		**P**	**21 24 48.0**	**+0.5**		
MOTA	**Moosalm**	**23.16**	**125**	*e*P		**P**	**21 24 49.5**	**+0.3**		
	comp=Z,169nm,1.6s,SNR=12									
TREC	**Trest**	**23.18**	**116**	*e*P		**P**	**21 24 48.6**	**-0.6**		
TREC				*e*			21 24 55.5			
TREC	**Trest**	**23.18**	**116**	*e*P		**P**	**21 24 48.6**	**-0.6**		
TREC				*ex*		x	21 24 55.5			
IIGN	**Ignalina**	**23.22**	**93**	*e*P		**P**	**21 24 49.4**	**-0.1**		
DAVOX	**Davos/Dischmat**	**23.22**	**127**	P		**P**	**21 24 49.0**	**-0.8**		
	comp=Z,5.9nm,0.9s,baz=322,slow=12,SNR=8.8									
DAVOX				LR		LR	21 34 33.7			
	comp=Z,2µm,19.2s,baz=274,slow=38									
PGAV	**Gavieira, Arco**	**23.25**	**163**	*e*P		**P**	**21 24 52.6**	**+2.5**		
	comp=Z,176nm,1.9s									
PGAV				*e*S		**S**	**21 29 09.8**	**+6.9**		
PGAV				*e*LR		LR	21 30 40.2			
	comp=Z,5µm,20.0s									
SQTA	**Sankt Quirin**	**23.31**	**125**	*e*P		**P**	**21 24 49.7**	**-0.9**		
	comp=Z,73nm,1.6s,SNR=7.5									
FETA	**Feichten**	**23.31**	**125**	*e*P		**P**	**21 24 52.2**	**+1.6**		
	comp=Z,36nm,1.2s									
TMCR	**Tamitsa**	**23.33**	**66**	*e*P		**P**	**21 24 49.6**	**-0.9**		
TMCR				*e*S		**S**	**21 29 00.7**	**-2.8**		
TMCR				pmax		pmax				
	comp=Z,132nm,0.9s									
WATA	**Walderalm**	**23.34**	**124**	*e*P		**P**	**21 24 50.3**	**-0.7**		
	comp=Z,35nm,1.4s,SNR=6.9									
BEL	**Belsk**	**23.36**	**105**	*e*P		**P**	**21 24 50.8**	**-0.1**		
WTTA	**Wattenberg**	**23.42**	**124**	*e*P		**P**	**21 24 51.3**	**-0.5**		
	comp=Z,46nm,1.3s,SNR=12									
IDID	**Didziasalis**	**23.46**	**92**	*e*P		**P**	**21 24 52.0**	**+0.1**		
PCAB	**Cabril**	**23.54**	**162**	*e*P		**P**	**21 24 55.6**	**+2.8**		
	comp=Z,103nm,1.5s									
VRAC	**Vranov**	**23.61**	**114**	P		**P**	**21 24 53.4**	**-0.1**		
	comp=Z,8.3nm,1.0s,baz=327,slow=11,SNR=14									
VRAC				LR		LR	21 35 21.4			
	comp=Z,2µm,18.3s,baz=325,slow=40									
VRAC	**Vranov**	**23.61**	**114**	*e*P	⇓	**P**	**21 24 51.3**	**-2.2**		
VRAC	**Vranov**	**23.61**	**114**	*e*P		**P**	**21 24 53.0**	**-0.4**		
VRAC	**Vranov**	**23.61**	**114**	*e*P	⇓	**P**	**21 24 51.3**	**-2.2**		
MORC	**Moravsky Berou**	**23.61**	**112**	*e*P	⇑	**P**	**21 24 52.4**	**-1.1**		
MORC	**Moravsky Berou**	**23.61**	**112**	*e*P		**P**	**21 24 52.6**	**-0.9**		
MORC	**Moravsky Berou**	**23.61**	**112**	*e*P	⇑	**P**	**21 24 52.4**	**-1.1**		
PBRG	**Braganca**	**23.62**	**160**	*e*P		**P**	**21 24 54.4**	**+0.7**		
	comp=Z,98nm,1.7s									
PBRG				*e*S		Sn	21 29 23.7	-5.1		
KRUC	**Moravsky**	**23.73**	**115**	*e*P		**P**	**21 24 53.1**	**-1.5**		
NACGM	**Naroch**	**23.75**	**93**	*e*P		**P**	**21 24 53.0**	**-1.8**		
NACGM				*e*S		**S**	**21 29 05.0**	**-5.5**		
NACGM				*e*LQ		LQ	21 33 48.0			
NACGM				*e*LR		LR	21 35 22.0			
NACGM				LRM		MLR	21 36 06.0			
	comp=Z,4.8nm,14.0s									
OKC	**Ostrava-Krasne**	**23.81**	**111**	*e*P		**P**	**21 24 55.6**	**+0.2**		
OKC	**Ostrava-Krasne**	**23.81**	**111**	*e*P		**P**	**21 24 55.6**	**+0.2**		
MOA	**Molln**	**23.90**	**119**	*e*P		**P**	**21 24 56.5**	**+0.2**		
	comp=Z,27nm,1.5s,SNR=9.7									
POLO	**Lamas de Olo**	**23.90**	**162**	*e*P		**P**	**21 24 56.6**	**+0.2**		
	comp=Z,61nm,1.5s									
POLO				*e*S		Sn	21 29 29.3	-6.2		
PVRL	**Vila Real**	**24.00**	**162**	*e*P		**P**	**21 24 58.9**	**+1.5**		
	comp=Z,114nm,1.7s									
ABTA	**Abfaltersbach**	**24.18**	**123**	*e*P		**P**	**21 24 59.2**	**+0.2**		
	comp=Z,46nm,1.4s,SNR=7.8									
OJC	**Ojcow**	**24.18**	**109**	*e*P		**P**	**21 24 58.2**	**-0.7**		
KBA	**Koelnbreinsper**	**24.20**	**122**	*e*P		**P**	**21 25 00.4**	**+1.0**		
	comp=Z,48nm,1.6s									
MVO	**Moncorvo**	**24.21**	**161**	*e*P		**P**	**21 25 02.9**	**+3.6**		
	comp=Z,128nm,1.5s									
MVO				*e*S		S	21 29 38.0	+20		
MVO				*e*LR		LR	21 31 31.4			
	comp=Z,3µm,18.0s									
JAVC	**Velka Javorina**	**24.39**	**113**	*e*P		**P**	**21 25 00.8**	**-0.1**		
CONA	**Conrad Observa**	**24.44**	**117**	*e*P		**P**	**21 25 00.3**	**-1.1**		
	comp=Z,21nm,1.1s,SNR=7.1									
MICGM	**Minsk**	**24.50**	**93**	*e*P	⇑	**P**	**21 25 02.0**	**+0.2**		
MICGM				PM			21 25 03.0			
	comp=Z,0.2nm,1.0s									
MICGM				*e*PP		**PnPn**	**21 25 38.0**	**+5.9**		
MICGM				*e*S		**S**	**21 29 20.0**	**-2.4**		
MICGM				*e*SS		**SnSn**	**21 30 02.0**	**-3.9**		
MICGM				*e*LR		LR	21 33 48.0			
MICGM				LRM		MLR	21 36 36.0			
	comp=Z,4.3nm,10.0s									
MICGM				LRM		MLR	21 37 04.0			
	comp=E,2.3nm,10.0s									
MNK	**Minsk**	**24.50**	**93**	*e*P	⇑	**P**	**21 25 02.0**	**+0.2**		
MNK				*e*			21 25 38.0			
MNK				*e*S		**S**	**21 29 12.0**	**-10**		
MNK				pmax		pmax				
	comp=Z,220nm,1.0s									
MNK				MLR		MLR				
	comp=Z,4µm,10.0s									
MNK				MLR		MLR				
	comp=E,2µm,10.0s									
PVIS	**Viseu**	**24.53**	**162**	*e*P		**P**	**21 25 03.3**	**+1.1**		
SMOL	**Smolenice**	**24.57**	**114**	*e*P		**P**	**21 25 02.6**	**+0.1**		
SMOL				pmax		pmax				
	comp=Z,33nm,1.1s									
SMOL	**Smolenice**	**24.57**	**114**	*e*P		**P**	**21 25 02.6**	**+0.1**		
MODS	**Modra-Piesok**	**24.63**	**115**	*e*P		**P**	**21 25 02.9**	**-0.1**		
MODS				pmax		pmax				
	comp=Z,128nm,1.6s									
MODS	**Modra-Piesok**	**24.63**	**115**	*e*P		**P**	**21 25 02.9**	**-0.1**		
MYKA	**Terra Mystica**	**24.69**	**122**	*e*P		**P**	**21 25 02.1**	**-1.6**		
	comp=Z,25nm,1.2s									
ARSA	**Arzberg**	**24.87**	**118**	*e*P		**P**	**21 25 04.4**	**-0.8**		
	comp=Z,16nm,1.1s									
LANS	**Liptovska Anna**	**24.88**	**111**	*e*P		**P**	**21 25 04.9**	**-0.4**		
LANS				pmax		pmax				
	comp=Z,21nm,1.0s									
LANS	**Liptovska Anna**	**24.88**	**111**	*e*P		**P**	**21 25 04.9**	**-0.4**		
MTE	**Manteigas**	**24.89**	**162**	*e*P		**P**	**21 25 10.1**	**+4.6**		
	comp=Z,165nm,1.5s									
MTE				*e*S		S	21 29 45.6	+17		
MTE				*e*LR		LR	21 31 51.5			
	comp=Z,5µm,20.0s									
COI	**Coimbra**	**24.97**	**164**	*e*S		S	21 29 50.0	+20		
NIE	**Niedzica**	**25.00**	**109**	*e*P		**P**	**21 25 07.5**	**+1.1**		
PCAS	**Casmilo, Conde**	**25.11**	**164**	*e*P		**P**	**21 25 10.1**	**+2.7**		
PCAS				*e*S		S	21 29 52.9	+20		
OBKA	**Obir**	**25.12**	**121**	*e*P		**P**	**21 25 06.8**	**-0.8**		
	comp=Z,19nm,1.2s									
VYHS	**Vyhne**	**25.15**	**112**	*e*P		**P**	**21 25 06.7**	**-1.0**		
VYHS				pmax		pmax				
	comp=Z,76nm,1.5s									
VYHS	**Vyhne**	**25.15**	**112**	*e*P		**P**	**21 25 06.7**	**-1.0**		
SOKA	**Soboth**	**25.16**	**120**	*e*P		**P**	**21 25 06.2**	**-1.7**		
	comp=Z,35nm,1.1s,SNR=11									
PCBR	**Castelo Branco**	**25.45**	**162**	*e*P		**P**	**21 25 13.5**	**+3.1**		
	comp=Z,117nm,1.5s									
SRO	**Srobarova**	**25.49**	**114**	*e*P		**P**	**21 25 10.4**	**-0.3**		
SRO				pmax		pmax				
	comp=Z,47nm,1.2s									
SRO	**Srobarova**	**25.49**	**114**	*e*P		**P**	**21 25 10.4**	**-0.3**		
SRO2	**Moca**	**25.56**	**114**	*e*P		**P**	**21 25 10.0**	**-1.4**		
SRO2				pmax		pmax				
	comp=Z,23nm,1.0s									
SRO2	**Moca**	**25.56**	**114**	*e*P		**P**	**21 25 10.0**	**-1.4**		
KLMR	**Klimovskoe**	**25.57**	**72**	*e*P		**P**	**21 25 09.3**	**-2.1**		
KLMR				*e*S		**S**	**21 29 36.8**	**-2.7**		
KLMR				pmax		pmax				
	comp=Z,104nm,1.4s									
KLMR	**Klimovskoe**	**25.57**	**72**	*e*P		**P**	**21 25 09.4**	**-2.0**		
KLMR				AMP			21 25 19.4			
	comp=Z,104nm,1.4s		

OZUR 29.89 107 ⇑P **P** **21 25 49.3 -1.0**
VOIR 30.12 109 ⇓P **P** **21 25 51.5 -0.9**
VOIR 30.12 109 ⇓P **P** **21 25 51.5 -0.9**
PDG Podgorica 30.36 119 ⇑P **P** **21 25 51.2 -3.2**
PLOR Plostina 30.45 107 ⇑P **P** **21 25 53.4 -1.8**
PLOR Plostina 30.45 107 ⇑P **P** **21 25 53.4 -1.8**
MLR Muntele Rosu 30.45 108 ⇓P **P** **21 25 53.7 -1.6**
MLR Muntele Rosu 30.45 108 ⇓P **P** **21 25 53.7 -1.6**
VRI Vrincioaia 30.47 106 ⇑P **P** **21 25 52.6 -2.7**
VRI Vrincioaia 30.47 106 ⇑P **P** **21 25 52.6 -2.7**
LPSR Galich'ya Gora 30.58 86 *e*P **P** **21 25 57.0 +0.8**
LPSR pmax pmax
comp=Z,20nm,1.3s
LPSR MLR MLR
comp=Z,1μm,15.0s
NEHR Nehoiu 30.64 107 ⇓P **P** **21 25 59.6 +2.7**
BISRR Bisoca 30.72 107 ⇓P P 21 26 02.9 +5.3
HUMR Humele 30.84 110 ⇓P **P** **21 25 57.8 -0.8**
KIRV Kirov 30.95 69*ce*P **P** **21 26 01.0 +1.6**
MATE Matera 30.98 124 ⇓P **P** **21 25 56.3 -3.5**
ISR Istrita 31.00 108 ⇑P P 21 26 06.6 +6.5
ISR Istrita 31.00 108 ⇑P P 21 26 06.6 +6.6
COPA Copaceanca 31.26 110 ⇓P **P** **21 26 01.8 -0.5**
SKO Skopje 31.59 117 *i* P **P** **21 26 06.5 +1.3**
CFR Carcaliu 31.61 106 ⇑P **P** **21 26 03.6 -1.6**
CFR Carcaliu 31.61 106 ⇑P **P** **21 26 03.7 -1.6**
VSR Storozhevoye 31.68 88 *e*P **P** **21 26 07.7 +1.8**
VSR pmax pmax
comp=Z,40nm,1.3s
VSR MLR MLR
comp=Z,1μm,16.0s
VTS Vitosha 31.74 114 *i* P **P** **21 26 10.9 +4.2**
PMOZ Porto Moniz, M 31.79 180 *e*LR LR 21 35 20.2
comp=Z,2μm,18.0s
VORD Divnogorie 31.91 88 *e*P **P** **21 26 05.9 -2.1**
VORD pmax pmax
comp=Z,40nm,1.4s
OHR Ohrid 32.08 118 *i* P **P** **21 26 12.2 +2.6**
PGB Panagyurishte 32.16 113 *i* P **P** **21 26 14.5 +4.2**
RAZG Razgrad 32.26 109 ⇑P **P** **21 26 07.7 -3.4**
SZH Strazhica 32.27 110 *i* P **P** **21 26 11.2 0.0**
KKB Krupnik 32.31 115 *i* P **P** **21 26 14.3 +2.7**
VAY Valandovo 32.58 116 *i* P **P** **21 26 13.2 -0.7**
PLD Plovdiv 32.75 113 *i* P **P** **21 26 19.2 +3.8**
MDT Midelt 32.76 160 P **P** **21 26 15.6 0.0**
comp=Z,11nm,1.0s,baz=14,slow=8.6,SNR=7.5
VRH Novokhopyorsk 32.79 85 *e*P **P** **21 26 14.2 -1.4**
VRH pmax pmax
comp=Z,30nm,1.0s
MMB Musomiste 32.80 114 *i* P P 21 26 21.0 +5.1
CHGQ Chibougamau 32.85 271 P **P** **21 26 15.1 -1.1**
baz=42
KEST Kesra 33.06 138 P **P** **21 26 18.3 +0.1**
comp=Z,5.7nm,0.8s,baz=295,slow=6.0,SNR=5.6
KEST LR LR 21 40 33.1
comp=Z,2μm,18.4s,baz=290,slow=38
JMB Yambol 33.20 110 *i* P P 21 26 13.7 -5.6
KDZ Kurdzhali 33.42 112 *i* P **P** **21 26 20.2 -1.1**
G64A Maxfield 34.03 261 P **P** **21 26 30.0 +3.5**
baz=37
LATQ La Tuque 34.08 267 P **P** **21 26 30.3 +3.4**
baz=39
PKME Peaks-Kenny Pk 34.25 261 P P 21 26 33.4 +5.0
baz=37
E60A Ste Agathe de 34.30 264 P **P** **21 26 31.3 +2.4**
baz=38
D58A Chemin du LacG 34.35 267 P **P** **21 26 31.8 +2.5**
baz=39
F61A St Evariste 34.41 264 P P 21 26 34.8 +4.9
baz=38
LSQQ Lebel-sur-Quev 34.61 273 P **P** **21 26 33.9 +2.4**
baz=41
D56A ZEC Mazanza, M 35.19 268 P **P** **21 26 38.7 +2.1**
baz=39
E57A Chemin Saint G 35.43 267 P **P** **21 26 41.2 +2.5**
baz=38
D55A Sainte-Anne-du 35.52 269 P **P** **21 26 42.2 +2.8**
baz=39
G60A Masonville 35.68 264 P **P** **21 26 43.7 +2.9**
baz=37
E56A St. Veronique 35.71 268 P **P** **21 26 43.2 +2.2**
baz=39
ANN Anapa 35.84 97 *e*P **P** **21 26 39.9 -2.2**
ANN *e*S **S** **21 32 20.1 -0.1**
ANN pmax pmax
comp=Z,49nm,1.4s
ANN MLR MLR
comp=Z,2μm,14.0s
ARU Arti 36.06 66*c i*P **P** **21 26 46.6 +2.7**
ARU 21 28 11.3
ARU S **S** **21 32 28.9 +5.6**
ARU SS **SS** **21 34 53.4 -6.4**
ARU pmax pmax
comp=Z,35nm,1.8s
ARU MLR MLR
comp=Z,3μm,18.0s
G58A Ormstown 36.38 266 P P 21 26 52.0 +5.3
baz=37
NRIK Noril'sk 36.49 35 P **P** **21 26 46.9 -0.6**
comp=Z,6.0nm,1.0s,baz=324,slow=5.8,SNR=8.7
NRIK LR LR 21 43 42.4
comp=Z,2μm,18.1s,baz=354,slow=39
NRIK Noril'sk 36.49 35*ce*P **P** **21 26 47.5 0.0**
NRIK pmax pmax
comp=Z,13nm,1.1s
I61A Oroboro, Fairl 36.56 263 P P 21 26 54.2 +5.9
baz=36
SVE Sverdlovsk 36.59 64 *e*P **P** **21 26 52.0 +3.5**
SVE pmax pmax
comp=Z,27nm,1.5s
SVE MLR MLR
comp=Z,3μm,18.0s
H59A Cadyville 36.63 265 P **P** **21 26 49.9 +1.0**
baz=37
G57A Newington 36.82 266 P **P** **21 26 53.6 +3.1**
baz=37
LONY Lake Ozonia 37.03 266 P **P** **21 26 52.5 +0.2**
baz=37
H57A Richville 37.50 266 P **P** **21 26 58.1 +1.8**
baz=37
SOC Sochi 37.80 96 *e*P **P** **21 26 57.6 -1.2**
SOC *e* 21 28 24.1
SOC *e*S **S** **21 32 48.1 -1.9**
SOC *e*SS **SnSn** **21 35 21.9 -7.6**
SOC pmax pmax
comp=Z,17nm,1.0s
SOC MLR MLR
comp=Z,892nm,15.0s
G54A Lake Saint Pet 37.92 270 P **P** **21 27 02.7 +2.8**
baz=38
GOF Gofitskoye 38.05 91⇑ *e*P **P** **21 27 00.6 -0.4**
GOF pmax pmax
comp=Z,67nm,0.9s
J58A Remsen 38.34 265 P P 21 27 09.5 +6.1
baz=36
BRTR Keskin Array B 38.40 105 P **P** **21 27 04.2 0.0**
comp=Z,3.6nm,0.8s,baz=324,slow=6.1,SNR=13
BRTR LR LR 21 45 34.2
comp=Z,391nm,18.5s,baz=314,slow=40
BRTR Keskin Array B 38.40 105 P **P** **21 27 03.2 -1.0**
K59A Cooperstown 38.63 264 P P 21 27 11.6 +5.7
baz=36
IDI Anoyia 38.73 118 P **P** **21 27 06.8 0.0**
comp=Z,20nm,0.9s,baz=313,slow=8.3,SNR=5.4
KIV Kislovodsk 38.78 92 *e*P **P** **21 27 06.5 -0.7**
KIV *e* 21 28 34.5
KIV *e*S **S** **21 33 04.5 -0.6**
KIV pmax pmax
comp=Z,37nm,1.1s
KIV MLR MLR
comp=Z,2μm,16.0s
H53A Bobcaygeon 38.79 269 P **P** **21 27 10.5 +3.3**
baz=37
KBZ Khabaz 39.05 92 P **P** **21 27 09.7 +0.4**
comp=Z,12nm,1.1s,baz=326,slow=11
KBZ LR LR 21 43 52.3
comp=Z,1μm,21.0s,baz=334,slow=37
KBZ Khabaz 39.05 92*ce*P **P** **21 27 11.0 +1.7**
KBZ pmax pmax
comp=Z,25nm,1.6s
L59A Walton 39.19 264 P P 21 27 15.8 +5.2
baz=35
YKA Yellowknife Ar 39.31 313 P **P** **21 27 11.6 +0.3**
comp=Z,5.7nm,1.1s,baz=40,slow=9.0,SNR=3.8
YKA PcP **PcP** **21 29 20.6 +1.0**
comp=Z,1.4nm,0.7s,baz=46,slow=2.7,SNR=3.2
YKA LR LR 21 43 32.1
comp=Z,1μm,18.2s,baz=0.0,slow=36
INK Inuvik 39.94 329 P **P** **21 27 15.0 -1.5**
comp=Z,3.9nm,0.8s,baz=16,slow=14,SNR=7.4
INK LR LR 21 45 24.4
comp=Z,1μm,18.1s,baz=58,slow=39
INK Inuvik 39.94 329 P **P** **21 27 14.7 -1.8**
INK pmax pmax
comp=Z,13nm,1.2s
INK Inuvik 39.94 329 P **P** **21 27 14.7 -1.8**
L57A Andrews Acres 40.12 265 P **P** **21 27 23.1 +4.8**
baz=35
ZEI Tsey 40.24 92 *e*P **P** **21 27 20.8 +1.2**
ZEI pmax pmax
comp=Z,22nm,1.8s
AKTO Aktyubinsk 40.25 73 P **P** **21 27 18.1 -1.2**
comp=Z,9.5nm,1.1s,baz=321,slow=7.7,SNR=12
AKTO LR LR 21 43 56.1
comp=Z,3μm,18.6s,baz=322,slow=36
L56A Greenwood 40.31 266 P **P** **21 27 23.5 +3.5**
baz=35
M57A Sunshine Farm, 40.78 265 P **P** **21 27 26.9 +3.1**
baz=35
N58A Sunbury 41.02 264 P **P** **21 27 27.5 +1.9**
baz=34
M56A Emporium 41.12 266 P **P** **21 27 27.6 +1.1**
baz=35
O59A Robesonia 41.22 263 P P 21 27 34.2 +6.8
baz=34
N57A Milroy 41.44 265 P **P** **21 27 31.8 +2.6**
baz=34
A21K Barrow 41.53 342 P **P** **21 27 32.9 +3.4**
baz=25,SNR=9.0
N56A West Decatur 41.63 266 P P 21 27 36.1 +5.3
baz=34
MAK Makhachkala 41.66 89 *e*P **P** **21 27 26.8 -4.1**
MAK *e* 21 29 03.5
MAK *e*S **S** **21 33 41.9 -5.9**
MAK *e*SS **SS** **21 36 47.9 -4.6**
MAK MLR MLR
comp=Z,1μm,16.0s
ULM Lac du Bonnet 41.68 289 P **P** **21 27 30.9 -0.1**
comp=Z,2.6nm,0.7s,baz=56,slow=11,SNR=1.6
ULM LR LR 21 44 43.9
comp=Z,1μm,18.6s,baz=48,slow=36
ULM Lac du Bonnet 41.68 289 P **P** **21 27 31.0 -0.1**
O58A Lewisberry 41.70 264 P P 21 27 37.4 +6.1
baz=34
M54A Oil Creek Stat 41.73 267 P P 21 27 36.8 +5.2
baz=35
O57A Amberson 41.93 264 P **P** **21 27 35.9 +2.7**
baz=34
TIXI Tiksi 42.10 15 *i* P **P** **21 27 37.5 +3.3**
TIXI Tiksi 42.10 15 P **P** **21 27 34.0 -0.2**
TIXI IAmb IAmb 21 27 43.6
comp=Z,42nm,1.2s
N54A Moraine State 42.32 267 P **P** **21 27 38.7 +2.2**
baz=35
GNI Garni 42.77 94*ce*P **P** **21 27 40.3 +0.1**
GNI pmax pmax
comp=Z,10.0nm,1.2s
GNI Garni 42.77 94 P **P** **21 27 39.2 -1.0**
GNI IAmb IAmb 21 27 50.5
comp=Z,52nm,1.4s
TOLK Toolik Lake Re 42.85 336 P **P** **21 27 40.5 +0.1**
baz=28,SNR=17
TOLK Toolik Lake Re 42.85 336 P **P** **21 27 39.8 -0.6**
M51A Elyria 42.97 270 P P 21 27 48.3 +6.7
baz=35
BMAR Burnt Mountain 43.00 333 P **P** **21 27 40.8 -0.8**
BRVK Borovoye 43.12 62*ce*P **P** **21 27 42.3 -0.4**
BRVK pmax pmax
comp=Z,19nm,1.7s
BRVK Borovoye 43.12 62 P **P** **21 27 42.1 -0.6**
O54A Avella 43.13 267 P **P** **21 27 46.4 +3.4**
baz=34
AGMN Agassiz Nation 43.20 287 P **P** **21 27 43.2 -0.3**
baz=38
Q57A Strasburg 43.24 264 P **P** **21 27 46.3 +2.4**
baz=33
N51A Ashland 43.39 269 P **P** **21 27 43.6 -1.5**
O53A New Philadelph 43.44 268 P **P** **21 27 45.9 +0.5**
baz=34
P55A Reedsville 43.45 266 P **P** **21 27 48.5 +2.9**
baz=34
R58A Rapidan 43.68 263 P P 21 27 52.2 +4.8
baz=33
O51A Pataskala 44.12 269 P **P** **21 27 50.8 -0.1**
baz=34
P53A Whipple 44.14 267 P **P** **21 27 50.9 -0.2**
baz=34
R56A Bull Pasture M 44.19 265 P **P** **21 27 52.2 +0.6**
baz=33
ACSO Alum Creek Sta 44.22 269 P **P** **21 27 51.2 -0.5**
baz=34
COLD Coldfoot 44.22 336 P **P** **21 27 53.5 +2.1**
baz=27
Q54A Coxs Mills 44.32 266 P **P** **21 27 54.4 +1.9**
baz=34
P52A Corning 44.34 268 P **P** **21 27 55.0 +2.3**
baz=34
Q53A Leroy 44.72 267 P **P** **21 27 58.8 +3.0**
baz=33
DAWY Dawson 44.80 328 P **P** **21 27 55.2 -0.9**
DAWY IAmb IAmb 21 28 05.3
comp=Z,20nm,1.1s
O49A Covington 44.84 271 P **P** **21 27 55.4 -1.2**
P51A Williamsport 44.87 269 P **P** **21 27 59.5 +2.5**
baz=34
Q52A Bidwell 44.96 268 P **P** **21 27 57.1 -0.5**
baz=34
T57A Hurt 45.31 263 P **P** **21 28 03.1 +2.7**
baz=32
F33A 5 Mile Ranch, 45.34 285 P **P** **21 27 59.0 -1.5**
F33A IAmb IAmb 21 28 08.3
comp=Z,23nm,1.0s
R53A Hurricane 45.35 267 P **P** **21 28 02.9 +2.2**
baz=33
K27K Chicken 45.43 329 P **P** **21 28 00.6 -0.5**
baz=30
K27K Chicken 45.43 329 IAmb IAmb 21 28 10.5
comp=Z,30nm,1.3s
P49A Miami Univ. Ec 45.54 270 P **P** **21 28 04.7 +2.5**
baz=34
ILAR Eielson Array 45.79 333 P **P** **21 28 03.5 -0.4**
comp=Z,2.8nm,1.0s,baz=25,slow=7.5,SNR=11
ILAR PcP **PcP** **21 29 40.1 -1.1**
comp=Z,3.0nm,0.9s,baz=357,slow=2.8,SNR=7.2
ILAR LR LR 21 49 42.2
comp=Z,1μm,19.6s,baz=26,slow=39
ILAR Eielson Array 45.79 333 P **P** **21 28 03.3 -0.6**
SFIN Lafayette 45.87 273 P **P** **21 28 04.1 -0.7**
baz=34
COLA College 45.89 333 *i* P **P** **21 28 07.8 +3.2**
COLA pmax pmax
comp=Z,33nm,1.3s
I23K Minto, Yukon-K 45.93 334 P **P** **21 28 05.2 +0.2**
baz=27
I23K Minto, Yukon-K 45.93 334 P **P** **21 28 04.2 -0.8**
I23K IAmb IAmb 21 28 18.6
comp=Z,22nm,1.3s
IMAR Indian Mountai 45.96 337 P **P** **21 28 04.6 -0.6**
S53A Williamson 45.97 267 P **P** **21 28 07.2 +1.5**
baz=33
HDA Harding Lake 46.12 332 P **P** **21 28 09.0 +2.5**
baz=28
BCAR Beaver Creek A 46.21 329 P **P** **21 28 06.6 -0.7**
T54A Tazewell 46.25 266 P **P** **21 28 09.5 +1.5**
baz=32
MLY Manley 46.29 335 P **P** **21 28 07.7 -0.2**
baz=26
NEA2 Nenana 46.37 334 P **P** **21 28 08.1 -0.5**
baz=26
BRZS Berezniki 46.47 63 *e*P **P** **21 28 08.9 -0.6**
BRZS LR LR 21 46 42.5
comp=Z,20nm,2.2s,baz=63
BRZS pmax pmax
comp=Z,245nm,13.6s,baz=63
BRZS Berezniki 46.47 63 *e*P **P** **21 28 08.8 -0.6**
BRZS MLR MLR
comp=Z,20nm,2.2s
BRZS
comp=Z,245nm,14.0s
T53A Wise 46.73 266 P **P** **21 28 14.7 +2.9**
baz=32
V56A Mocksville 46.84 264 P **P** **21 28 13.1 +0.6**
baz=32
V55A Taylorsville 47.12 264 P **P** **21 28 16.1 +1.4**
baz=32
MCK McKinley 47.12 333 P **P** **21 28 17.1 +2.7**
baz=26
HYT Haines Junctio 47.14 325 P **P** **21 28 13.9 -0.8**
ECSD EROS Data Cent 47.17 284 P **P** **21 28 17.0 +2.0**
baz=35
WCI Wyandotte Cave 47.31 271 P **P** **21 28 15.1 -1.1**
WCI pmax pmax
comp=Z,40nm,1.0s
WCI Wyandotte Cave 47.31 271 P **P** **21 28 16.1 -0.1**
baz=33
WCI Wyandotte Cave 47.31 271 P **P** **21 28 15.1 -1.1**
W56A Indian Trail 47.45 263 P **P** **21 28 18.7 +1.4**
baz=31
V54A Nebo 47.49 265 P **P** **21 28 19.5 +1.9**
baz=32
BILL Bilibino 47.64 358 *i* P **P** **21 28 20.7 +2.4**
BILL *i* 21 30 15.1
BILL *i* S S 21 35 04.5 -10
BILL pmax pmax
comp=Z,8.0nm,1.3s
BILL MLR MLR
comp=Z,823nm,16.0s
ZALV Zalesovo Beam 47.64 51 P **P** **21 28 17.6 -0.9**
comp=Z,5.3nm,1.1s,baz=331,slow=8.5,SNR=8.2
ZALV LR LR 21 51 20.6
comp=Z,710nm,18.2s,baz=326,slow=40
ZALV Zalesovo Beam 47.64 51 P **P** **21 28 17.4 -1.2**
KMSC Kings Mountain 47.77 264 P **P** **21 28 21.8 +2.1**
baz=32
KURK Kurchatov 48.11 58*ce*P **P** **21 28 20.8 -1.4**
KURK pmax pmax
comp=Z,18nm,1.7s
KURK Kurchatov 48.11 58 P **P** **21 28 20.5 -1.6**
KURBB Kurchatov Arra 48.15 58 P **P** **21 28 21.3 -1.2**
comp=Z,4.5nm,0.8s,baz=322,slow=7.5,SNR=15
KURBB PP **PP** **21 30 16.1 +1.8**
comp=Z,1.0nm,0.3s,baz=325,slow=9.9,SNR=1.9
W54A Cherokee Point 48.18 265 P **P** **21 28 22.6 -0.3**
baz=32
X56A White Oak 48.19 263 P **P** **21 28 25.2 +2.1**
baz=31
X55A Gracelyn & Ava 48.47 264 P **P** **21 28 27.8 +2.6**
baz=31
LAO LASA Array 48.68 294 P **P** **21 28 30.6 +3.8**
baz=35
EGMT Eagleton 48.97 297 P **P** **21 28 30.4 +1.5**
baz=35,SNR=9.7
W50A Signal Mountai 49.43 268 P **P** **21 28 31.2 -1.4**
CCM Cathedral Cave 49.59 275 P **P** **21 28 37.6 +4.0**
baz=33
WVT Waverly 49.73 271 P **P** **21 28 37.0 +2.2**
baz=32
GOGA Godfrey 50.16 265 P **P** **21 28 40.5 +2.3**
baz=31
GEYT Alibeck 50.38 84 P **P** **21 28 39.8 0.0**
comp=Z,3.0nm,1.0s,baz=312,slow=13,SNR=7.4
GEYT PP **PP** **21 30 35.0 +0.1**
comp=Z,2.2nm,0.8s,baz=317,slow=9.9,SNR=2.8
GEYT LR LR 21 52 26.5
comp=Z,979nm,18.2s,baz=230,slow=39
GEYT Alibeck 50.38 84 P **P** **21 28 39.0 -0.8**
S39A Bolivar 50.78 277 P **P** **21 28 41.5 -1.3**
KOWA Kowa 50.87 163 P **P** **21 28 42.2 -1.4**
KOWA IAmb IAmb 21 28 49.6
comp=Z,20nm,1.1s
BRLS Boroldav 51.04 70 *e*P **P** **21 28 46.3 +1.6**
baz=70
BRLS Boroldav 51.04 70 *e*P **P** **21 28 46.3 +1.6**
BTLS Baital 51.05 66 *e*P **P** **21 28 43.6 -1.2**
comp=Z,30nm,2.7s,baz=66
BTLS LR LR 21 49 38.1
comp=Z,463nm,18.0s,baz=66
BTLS Baital 51.05 66 *e*P **P** **21 28 43.5 -1.2**
BTLS pmax pmax
comp=Z,30nm,2.7s
BTLS MLR MLR
comp=Z,463nm,18.0s
BOZ Bozeman (W) 51.70 297 P **P** **21 28 49.2 -0.6**
baz=33,SNR=15
U40A Yellville 51.71 275 P **P** **21 28 48.3 -1.4**
baz=32
U40A Yellville 51.71 275 P **P** **21 28 48.1 -1.6**
DZA Taraz 51.76 69 *e*P **P** **21 28 49.2 -0.9**
baz=69
DZA LR LR 21 50 16.4
comp=Z,257nm,13.8s,baz=69
DZA Taraz 51.76 69 *e*P **P** **21 28 49.2 -0.9**
DZA MLR MLR
comp=Z,257nm,14.0s
IUG Iuzhnay 51.85 71 *e*P **P** **21 28 49.9 -1.0**
comp=Z,22nm,1.6s,baz=71
IUG Iuzhnay 51.85 71 *e*P **P** **21 28 49.9 -1.0**
IUG pmax pmax
comp=Z,22nm,1.6s
LRAL Lakeview Retre 52.01 268 P **P** **21 28 52.8 +0.8**
baz=31
K22A Casper 52.15 291 P **P** **21 28 54.2 +1.0**
baz=33
K22A Casper 52.15 291 IAmb IAmb 21 29 01.2
comp=Z,26nm,1.1s
H17A Grant Village 52.30 295 P **P** **21 28 57.2 +2.9**
baz=33
W41B Gary Mavity, V 52.45 274 P **P** **21 28 56.6 +1.4**
baz=32
SEY Seymchan 52.56 6 *i* P **P** **21 28 59.8 +4.1**
MAKZ Makanchi 52.59 59 P **P** **21 28 55.1 -1.1**
MAKZ pmax pmax
comp=Z,18nm,1.4s
MAKZ Makanchi 52.59 59 P **P** **21 28 55.1 -1.1**
SGDS Sogindy 52.61 66 *e*P **P** **21 28 56.0 -0.4**
comp=Z,26nm,2.6s,baz=66
SGDS pmax pmax
comp=Z,27nm,2.6s
MK31 Makanchi Array 52.72 58*ce*P **P** **21 28 59.1 +1.9**
MKAR Makanchi Array 52.72 58 P **P** **21 28 56.1 -1.1**
comp=Z,4.1nm,1.1s,baz=342,slow=6.4,SNR=9.1
MKAR LR LR 21 52 02.9
comp=Z,788nm,21.1s,baz=320,slow=37
MKAR Makanchi Array 52.72 58 *i* P **P** **21 28 56.2 -1.0**
MKAR pmax pmax
comp=Z,4.0nm,1.1s
MKAR Makanchi Array 52.72 58 P **P** **21 28 55.6 -1.5**
TDK Taldyqorghan 52.77 62 *e*P **P** **21 28 56.9 -0.7**
comp=Z,83nm,2.6s,baz=62
TDK LR LR 21 50 45.2
comp=Z,706nm,16.2s,baz=62
TDK Taldyqorghan 52.77 62 *e*P **P** **21 28 56.8 -0.7**
TDK pmax pmax
comp=Z,83nm,2.6s
TDK MLR MLR
comp=Z,706nm,16.0s
KUU Kurty 52.91 65 *e*P **P** **21 28 57.2 -1.4**
comp=Z,46nm,2.2s,baz=65
KUU LR LR 21 50 45.2
comp=Z,1μm,16.0s,baz=65
KUU Kurty 52.91 65 *e*P **P** **21 28 57.2 -1.4**
KUU pmax pmax
comp=Z,46nm,2.2s
KUU MLR MLR
comp=Z,1μm,16.0s
TOA0 Torodi Ar. Sit 53.04 157 P **P** **21 28 58.5 -1.3**
TOA0 IAmb IAmb 21 29 05.2
comp=Z,28nm,1.1s
TORD Torodi Ar. Bea 53.04 157 P **P** **21 28 58.0 -1.8**
comp=Z,10nm,1.1s,baz=342,slow=8.5,SNR=13
TORD LR LR 21 51 43.7
comp=Z,941nm,18.6s,baz=350,slow=36
TORD Torodi Ar. Bea 53.04 157 P **P** **21 28 58.0 -1.8**
ZSN Zaisan 53.10 56 *e*P **P** **21 28 59.0 -0.9**
baz=56
ZSN Zaisan 53.10 56 *e*P **P** **21 28 59.0 -0.9**
AAK Ala-Archa 53.24 67*ce*P **P** **21 29 01.6 +0.4**
AAK pmax pmax
comp=Z,61nm,1.7s
BW06 Boulder Array 53.26 293 P **P** **21 28 59.9 -1.6**
baz=32,SNR=22
BW06 Boulder Array 53.26 293 P **P** **21 28 60.0 -1.5**
BW06 IAmb IAmb 21 29 06.9
comp=Z,21nm,0.8s
PD31 Pinedale Array 53.26 293 IAmb IAmb 21 29 06.9
comp=Z,18nm,0.8s
PDAR Pinedale Array 53.26 293 P **P** **21 28 59.9 -1.6**
comp=Z,4.9nm,0.8s,baz=56,slow=6.4,SNR=28
PDAR LR LR 21 51 32.2

comp=Z,1µm,19.5s,baz=31,slow=36
PDAR Pinedale Array 53.26 293 P P 21 28 60.0 -1.5
X40A Basin Creek Fa 53.28 274 P P 21 29 01.8 +0.4
baz=31
N23A Red Feather La 53.39 289 P P 21 29 03.6 +1.1
baz=32
N23A Red Feather La 53.39 289 IAmb IAmb 21 29 09.0
comp=Z,30nm,1.1s
MIAR Mount Ida 53.55 275 P P 21 29 05.3 +1.8
baz=31
AAA Alma-Ata 53.71 65 eP P 21 29 03.4 -1.2
baz=65
AAA LR LR 21 51 02.6
comp=Z,1µm,15.8s,baz=65
AAA Alma-Ata 53.71 65 eP P 21 29 03.3 -1.2
AAA MLR MLR
comp=Z,1µm,16.0s
MDOK Medeo 53.80 65 eP P 21 29 04.4 -0.9
baz=64
MDOK LR LR 21 50 57.8
comp=Z,1µm,15.5s,baz=64
MDOK Medeo 53.80 65 eP P 21 29 04.4 -0.9
MDOK MLR MLR
comp=Z,1µm,16.0s
TNSS Tian-Shan 53.87 65 eP P 21 29 05.3 -0.8
baz=65
TNSS Tian-Shan 53.87 65 eP P 21 29 05.3 -0.8
KPKS Kokpek 54.18 63 eP P 21 29 07.7 -0.3
comp=Z,28nm,1.8s,baz=63
KPKS Kokpek 54.18 63 eP P 21 29 07.7 -0.3
KPKS pmax pmax
comp=Z,28nm,1.8s
SATY Saty 54.41 64 eP P 21 29 09.1 -0.8
baz=64
SATY LR LR 21 51 44.5
comp=Z,555nm,17.8s,baz=64
SATY Saty 54.41 64 eP P 21 29 09.0 -0.8
SATY MLR MLR
comp=Z,555nm,18.0s
HLID Hailey 54.48 298 P P 21 29 12.2 +1.9
baz=32
SHLS Shalkode 54.74 63 eP P 21 29 11.8 -0.3
comp=Z,18nm,1.7s,baz=62
SHLS Shalkode 54.74 63 eP P 21 29 11.8 -0.3
SHLS pmax pmax
comp=Z,18nm,1.7s
O20A White River Ci 54.96 291 P P 21 29 16.0 +2.2
baz=32,SNR=5.2
O20A White River Ci 54.96 291 IAmb IAmb 21 29 17.6
comp=Z,27nm,1.4s
IRK Irkutsk 55.09 40 eP P 21 29 11.2 -3.2
IRK pmax pmax
comp=Z,50nm,1.2s
TLY Talaya 55.42 40 i P P 21 29 16.6 -0.2
TLY pmax pmax
comp=Z,6.0nm,1.1s
WMOK Wichita Mounta 55.62 279 P P 21 29 19.5 +1.0
baz=31,SNR=6.6
SDCO Great Sand Dun 55.88 287 P P 21 29 22.2 +1.6
baz=31
T25A Trinidad 55.94 286 P P 21 29 22.8 +1.8
baz=31
S22A 4UR Ranch, Cre 56.42 288 P P 21 29 23.7 -0.8
baz=31
KSH Kashi 56.48 68 P P 21 29 25.8 +1.1
KSH sP sP 21 29 33.5 +6.9
KSH S **S 21 37 15.0 -1.3**
KSH pmax pmax
comp=Z,31nm,1.0s
KSH pmax pmax
comp=Z,370nm,5.0s
KSH LR LR
comp=Z,2µm,14.3s
KSH LR LR
comp=Z,1µm,11.4s
KSH LR LR
comp=Z,3µm,16.3s
ZAK Zakamensk 56.48 41 eP P 21 29 23.6 -0.9
ZAK pmax pmax
comp=Z,15nm,1.3s
PV04 Paradox Valley 56.72 290 IAmb IAmb 21 29 35.0
comp=Z,14nm,1.0s
DUG Dugway, Tooele 56.73 294 P P 21 29 28.9 +2.4
baz=31
DUG Dugway, Tooele 56.73 294 IAmb IAmb 21 29 43.4
comp=Z,34nm,1.4s
PV12 Saucer Basin, 56.74 290 IAmb IAmb 21 29 34.1
comp=Z,32nm,1.3s
PV11 David Mesa, Pa 56.78 290 IAmb IAmb 21 29 35.5
comp=Z,18nm,0.9s
PV10 Paradox Valley 56.78 290 IAmb IAmb 21 29 30.4
comp=Z,18nm,0.9s
PV16 Nyswonger Mesa 56.79 290 IAmb IAmb 21 29 32.9
comp=Z,13nm,1.0s
PV01 Paradox Valley 56.80 290 IAmb IAmb 21 29 34.6
comp=Z,23nm,1.1s
PV03 Paradox Valley 56.81 290 IAmb IAmb 21 29 33.1
comp=Z,19nm,1.0s
PV19 Morning Glory 56.82 290 IAmb IAmb 21 29 33.1
comp=Z,13nm,0.9s
PV17 East Wray Mesa 56.84 290 IAmb IAmb 21 29 33.2
comp=Z,21nm,1.0s
WMQ Urumqi 57.23 56 eP P 21 29 29.5 -0.4
WMQ sP sP 21 29 37.3 +5.5
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ pmax pmax
comp=Z,280nm,4.1s
WMQ LR LR
comp=Z,1µm,18.9s
WMQ LR LR
comp=Z,2µm,19.3s
WMQ LR LR
comp=Z,2µm,21.5s
MVCO Mesa Verde 57.56 289 P P 21 29 33.6 +1.1
baz=31
MSTX Muleshoe 57.97 282 P P 21 29 38.1 +2.8
baz=30
DBIC Dimbokro 58.49 165 P P 21 29 38.0 -0.9
comp=Z,9.1nm,1.1s,baz=356,slow=7.0,SNR=3.8
DBIC LR LR 21 55 37.0
comp=Z,1µm,18.5s,baz=344,slow=37
DBIC Dimbokro 58.49 165 P P 21 29 37.6 -1.3
DBIC pmax pmax
comp=Z,31nm,1.2s
DBIC Dimbokro 58.49 165 P P 21 29 37.6 -1.3
TIC Toumodi 58.50 166 ePKP1 P 21 29 36.8 -2.2
ANMO Albuquerque 58.67 286 P P 21 29 38.8 -1.5
ANMO pmax pmax
comp=Z,8.0nm,1.4s
ANMO Albuquerque 58.67 286 P P 21 29 41.2 +1.0
baz=30
ANMO Albuquerque 58.67 286 P P 21 29 38.8 -1.5
KIC Kosan Boka 58.81 165 ePKP1 P 21 29 37.7 -3.4
comp=Z,52nm,1.0s
ZEA Zeya 58.89 24 eP P 21 29 47.0 +5.7
ZEA eS S 21 38 00.0 +13
ZEA pmax pmax
comp=Z,10.0nm,1.6s
ZEA smax smax
comp=Z,100nm,0.6s
ZEA smax smax
comp=E,200nm,10.0s
ZEA MLR MLR
comp=Z,500nm,16.0s
LIC Lamto 58.91 166 ePKP1 P 21 29 38.2 -3.6
comp=Z,84nm,1.4s
R11A Troy Canyon, C 59.41 295 P P 21 29 44.9 -0.5
baz=30,SNR=12
R11A Troy Canyon, C 59.41 295 IAmb IAmb 21 30 03.0
comp=Z,24nm,1.5s
SONM Songino Array 59.67 40 P P 21 29 48.4 +1.5
comp=Z,1.2nm,0.5s,baz=323,slow=4.5,SNR=2.2
SONM LR LR 21 57 57.2
comp=Z,2µm,20.4s,baz=350,slow=38
SONM Songino Array 59.67 40 P P 21 29 46.3 -0.6
SONM pmax pmax
comp=Z,8.0nm,1.3s
SONM Songino Array 59.67 40 P P 21 29 46.3 -0.6
JCT Junction City 59.72 278 P P 21 29 48.0 +0.6
baz=30
U15A North Rim 59.77 292 IAmb IAmb 21 29 56.6
comp=Z,12nm,0.9s
KVN Kaiserville 59.77 298 IAmb IAmb 21 29 55.3
comp=Z,20nm,1.2s
ULN Ulaanbaatar 59.82 40 ceP P 21 29 49.1 +1.1
ULN pmax pmax
comp=Z,9.0nm,1.7s
WUAZ Wupatki 60.19 290 P P 21 29 50.1 -0.6
baz=30
NVAR Mina Array Bea 60.39 298 P P 21 29 51.2 -0.9
comp=Z,1.2nm,0.9s,baz=39,slow=5.8,SNR=6.4
NVAR LR LR 21 56 04.4
comp=Z,4µm,18.4s,baz=26,slow=36
NVAR Mina Array Bea 60.39 298 P P 21 29 50.9 -1.2
NIL Nilore 60.42 74 P P 21 29 50.9 -1.2
NIL pmax pmax
comp=Z,52nm,1.3s
NIL Nilore 60.42 74 P P 21 29 50.9 -1.2
WAKR Walker 60.76 298 IAmb IAmb 21 30 02.5
comp=Z,15nm,1.1s
SHPR Sheep Range 60.85 294 IAmb IAmb 21 30 13.2
comp=Z,24nm,1.5s
TPNV Topopah Spring 60.89 295 P P 21 29 56.0 +0.6
baz=29
TPNV Topopah Spring 60.89 295 IAmb IAmb 21 30 04.2
comp=Z,29nm,1.5s
MNTX Cornudas Mount 61.03 283 P P 21 29 58.1 +1.8
baz=30,SNR=5.7
X16A Lo Mia Camp, P 61.17 290 IAmb IAmb 21 30 04.2
comp=Z,14nm,1.1s
CWC Cottonwood Cre 62.05 296 P P 21 30 05.8 +2.5
baz=29
MPMC Manual Prospec 62.15 296 P P 21 30 04.1 0.0
baz=29
TX32 Lajitas Array 62.36 280 IAmb IAmb 21 30 14.0
comp=Z,19nm,1.5s
TXAR Lajitas Array 62.36 280 P P 21 30 04.3 -1.1
comp=Z,2.4nm,1.0s,baz=38,slow=3.3,SNR=12
TXAR LR LR 21 56 48.8
comp=Z,1µm,19.3s,baz=0.0,slow=36
TXAR Lajitas Array 62.36 280 P P 21 30 03.9 -1.5
PDMCI Parker Dam,Lak 62.36 292 P P 21 30 07.5 +2.3
baz=29
GSC Goldstone, Bar 62.55 295 P P 21 30 08.5 +2.0
baz=29
GMRC Granite Mounta 62.55 293 P P 21 30 06.4 -0.2
baz=29
PEA0B Petropavlovsk- 62.58 3 i P P 21 30 10.2 +3.8
PETK Petropavlovsk- 62.58 3 LR LR 21 56 35.0
comp=Z,446nm,20.9s,baz=17,slow=35
PET Petropavlovsk 62.69 3 eP P 21 30 07.8 +0.7
PET eS S 21 38 30.0 -5.8
PET MLR MLR
comp=Z,700nm,21.0s
TUC Tucson 62.74 288 P P 21 30 06.5 -1.4
TUC pmax pmax
comp=Z,21nm,1.5s
TUC Tucson 62.74 288 P P 21 30 09.5 +1.6
baz=29
TUC Tucson 62.74 288 P P 21 30 06.5 -1.4
TUC IAmb IAmb 21 30 14.0
comp=Z,21nm,1.5s
HEC Hector,Ludlow 62.77 294 P P 21 30 10.6 +2.5
baz=29
ISA Isabella, Lake 62.88 296 P P 21 30 09.9 +1.2
baz=28
IRM Iron Mountain 62.89 293 P P 21 30 10.3 +1.5
baz=29
BELC Belle Mtn. Jos 63.37 293 P P 21 30 12.6 +0.5
baz=28,SNR=7.9
EDW2 Edwards Air Fo 63.38 295 P P 21 30 13.7 +1.7
baz=28
BC3 Big Chuckawall 63.45 293 P P 21 30 13.6 +1.0
baz=28
BFSC Mount Baldy Ra 63.81 295 P P 21 30 15.9 +0.9
baz=28
214A Organ Pipe Nat 63.88 290 P P 21 30 17.1 +1.8
baz=28
214A Organ Pipe Nat 63.88 290 P P 21 30 13.8 -1.6
PFO Pinyon Flats O 63.89 293 P P 21 30 18.1 +2.5
baz=28
TPFO Pinon Flats 63.89 293 P P 21 30 13.9 -1.7
baz=28
KLR Kul'dur 63.99 22 i P P 21 30 19.3 +3.5
KLR pmax pmax
comp=Z,3.0nm,1.3s
MONP2 Monument Peak 64.51 293 P P 21 30 19.1 -0.6
baz=28
IKP In-Ko-Pah, Jac 64.60 293 P P 21 30 23.3 +3.2
baz=28
URIC Uribia, Colomb 64.76 242 eP P 21 30 22.7 +1.5
TKX Tecate 64.87 293 P P 21 30 20.6 -1.2
GTA Gaotai 65.31 49 eP P 21 30 25.8 +1.1
GTA pP sP 21 30 31.0 +4.3
GTA sP pP 21 30 33.9 +7.8
GTA S **S 21 39 08.9 -0.1**
GTA sS sS 21 39 17.9 +6.6
GTA pmax pmax
comp=Z,6.0nm,2.1s
GTA pmax pmax
comp=Z,130nm,8.0s
GTA LR LR
comp=Z,660nm,18.2s
GTA LR LR
comp=Z,920nm,18.9s
GTA LR LR
comp=Z,1µm,18.9s
SPX San Pedro Mart 65.76 291 P P 21 30 26.4 -1.6
SMRC Santa Marta, M 66.11 244 eP P 21 30 24.7 -5.2
SDV Santo Domingo 66.83 239 eP P 21 30 34.4 -0.4
SDV Santo Domingo 66.83 239 eP P 21 30 36.4 +1.6
HHC Hu-ho-hao-te 67.54 40 eP P 21 30 39.1 +0.1
HHC S **S 21 39 32.7 -3.3**
HHC pmax pmax
comp=Z,19nm,1.1s
HHC pmax pmax
comp=Z,190nm,5.3s
HHC LR LR
comp=Z,890nm,16.5s
HHC LR LR
comp=Z,520nm,14.7s
HHC LR LR
comp=Z,850nm,15.5s
SJCC San Jacinto, C 67.64 244 eP P 21 30 37.4 -2.4
YSS Yuzh-Sakhalins 67.72 15 eP P 21 30 43.1 +3.3
YSS MLR MLR
comp=Z,400nm,16.0s
YSS MLR MLR
comp=E,600nm,17.0s
MDJ Mudanjiang 68.09 25 P P 21 30 39.9 -2.3
MDJ pmax pmax
comp=E,10.0nm,2.0s
MDJ pmax pmax
comp=E,140nm,5.2s
MOTC Monteria, Cord 68.84 244 eP P 21 30 46.8 -0.4
USRK Ussuriysk Ar. 68.92 23 LR LR 22 03 01.2
comp=E,332nm,18.6s,baz=330,slow=38
PAMC Pamplona, Colo 69.03 241 eP P 21 30 44.4 -4.5
CMIG Matias Romero 69.35 266 LR LR 22 02 34.7
comp=E,352nm,18.7s,baz=38,slow=37
BJI Beijing 69.52 36 P P 21 30 52.6 +1.4
BJI S **S 21 40 07.8 +8.5**
BJI pmax pmax
comp=E,7.0nm,2.1s
BJI LR LR
comp=E,2µm,16.6s
BJI LR LR
comp=E,800nm,18.4s
BJI LR LR
comp=E,1µm,17.1s
MCPB Macapa, AP 69.56 217 eP P 21 30 54.3 +2.6
BRRC Barranca, Sant 69.62 242 eP P 21 30 50.9 -1.3
LZH Lanzhou 69.64 48 eP P 21 30 54.9 +2.7
LZH pP sP 21 30 59.5 +5.4
LZH eS **S 21 39 57.7 -3.5**
LZH sS sS 21 40 11.9 +8.4
LZH pmax pmax
comp=E,19nm,1.3s
LZH pmax pmax
comp=E,160nm,4.1s
LZH LR LR
comp=E,850nm,16.0s
LZH LR LR
comp=E,850nm,14.9s
LZH LR LR
comp=E,1µm,16.3s
UREC San Jos de Ur 69.73 244 eP P 21 30 44.0 -8.8
LPIG La Paz 69.75 283 LR LR 22 01 51.9
comp=E,903nm,18.6s,baz=26,slow=36
PTBC PUERTO BERRIO, 70.43 242 eP P 21 30 54.2 -2.8
RUSC La Rusia 70.50 241 eP P 21 30 55.8 -2.2
DBBC Dabeiba 70.67 244 eP P 21 30 57.3 -1.3
LSA Lhasa 71.01 61 P P 21 31 02.2 +1.2
LSA pmax pmax
comp=E,24nm,1.3s
SPBC San Pablo de B 71.10 242 eP P 21 31 00.5 -0.7
HELC Santa Helena 71.16 243 eP P 21 31 00.8 -1.1
NORC Norcasia 71.48 242 eP P 21 31 00.9 -2.6
MALB Monte Alegre 71.58 219 eP P 21 31 06.8 +2.8
PTGC Puerto Gaitan, 71.71 239 eP P 21 31 02.8 -2.0
CHIC Chingaza 71.91 241 eP P 21 31 08.3 +1.9
ROSC El Rosal 71.94 241 LR LR 21 58 58.8
comp=E,906nm,22.0s,baz=355,slow=33
ROSC El Rosal 71.94 241 eP P 21 31 06.0 -0.6
GUY2C Guyana, Caldas 71.98 243 eP P 21 31 04.8 -2.2
TOLC Tolima 72.55 242 eP P 21 31 08.5 -1.7
ORTC Ortega, Tolima 73.14 242 eP P 21 31 12.5 -0.9
PRAC Prado 73.19 242 eP P 21 31 09.7 -4.0
YOTC Yotoco, Valle 73.50 243 eP P 21 31 15.3 -0.3
CD2 Chengdu 74.37 50 eP P 21 31 21.0 +0.5
CD2 S **S 21 40 56.5 +1.0**
CD2 pmax pmax
comp=E,20nm,1.2s
CD2 pmax pmax
comp=E,160nm,6.0s
CD2 LR LR
comp=E,1µm,17.5s
CD2 LR LR
comp=E,820nm,14.1s
CD2 LR LR
comp=E,1µm,22.6s
PRPB Parauapebas 74.59 214 eP P 21 31 24.5 +2.7
KSRS Korea Array 74.69 28 LR LR 22 07 44.2
comp=E,636nm,18.3s,baz=338,slow=39
GARC Garzon, Huila 74.82 242 eP P 21 31 19.0 -4.5
POPC Popayan, Colom 74.95 243 eP P 21 31 20.9 -3.3
PCON Cinco Dias 75.03 242 eP P 21 31 24.4 -0.7
FLOC Florencia 75.43 241 eP P 21 31 25.8 -0.9
KMBO Kilima Mbogo 76.57 123 LR LR 22 08 45.3
comp=E,617nm,19.2s,baz=286,slow=38
NPGB Novo Progresso 76.84 219 eP P 21 31 36.2 +1.5
NJ2 Nanjing 77.77 37 eP P 21 31 36.9 -2.9
NJ2 pmax pmax
comp=E,2.0nm,0.6s
NJ2 LR LR
comp=E,930nm,20.8s
NJ2 LR LR
comp=E,530nm,17.5s
NJ2 LR LR
comp=E,2µm,18.4s
SSE Sheshan 79.27 35 P P 21 31 47.2 -0.9
SSE S **S 21 41 50.4 +1.6**
SSE pmax pmax
comp=E,15nm,0.7s
SSE pmax pmax
comp=E,80nm,3.5s
SSE LR LR
comp=E,480nm,19.6s
SSE LR LR
comp=E,340nm,18.8s
KMI Kunming 79.36 53 eP P 21 31 44.4 -4.5
KMI pP pP 21 31 49.7 -0.6
KMI PP **PP 21 34 49.1 +0.9**
KMI S **S 21 41 45.0 -5.4**
KMI sS sS 21 41 57.1 +4.4
KMI pmax pmax
comp=E,8.0nm,0.7s
KMI pmax pmax
comp=E,110nm,5.4s
KMI LR LR
comp=E,370nm,21.9s
KMI LR LR
comp=E,410nm,17.5s
KMI LR LR
comp=E,510nm,27.6s
GYA Guiyang 79.44 49 P P 21 31 50.9 +1.7
GYA S **S 21 41 57.7 +6.7**
GYA SS **SS 21 47 02.8 +5.7**
GYA pmax pmax
comp=E,10.0nm,1.4s
GYA pmax pmax
comp=E,87nm,3.5s
GYA LR LR
comp=E,470nm,15.6s
GYA LR LR
comp=E,310nm,14.4s
GYA LR LR
comp=E,500nm,19.9s
CLDB Colider 80.62 218 eP P 21 31 55.7 +0.2
SAML Samuel 80.92 226 P P 21 31 55.6 -1.5
SAML pmax pmax
comp=Z,14nm,1.3s
SAML Samuel 80.92 226 P P 21 31 55.6 -1.5
SAML Samuel 80.92 226 eP P 21 31 57.6 +0.5
ETMB Extrema 82.70 228 eP P 21 32 07.0 +0.6
BDFB Brasilia 83.34 210 P P 21 32 08.4 -1.3
comp=Z,1.7nm,0.6s,baz=27,slow=2.3,SNR=2.0
BDFB LR LR 22 02 52.2
comp=Z,989nm,21.3s,baz=340,slow=31
CMAR Chiang Mai Arr 84.12 59 P P 21 32 12.8 -1.0
comp=Z,2.2nm,1.0s,baz=316,slow=6.2,SNR=15
CMAR PP **PP 21 35 28.7 +1.2**
comp=Z,0.7nm,1.0s,baz=339,slow=8.5,SNR=2.9
CMAR LR LR 22 12 27.4
comp=Z,426nm,19.6s,baz=5.0,slow=38
IPMB Ipameri, GO 85.65 209 eP P 21 32 22.8 +1.4
PTLB Pontes e Lacer 85.90 220 eP P 21 32 23.8 +1.3
QIZ Qiongzhong 87.39 49 P P 21 32 28.2 -1.9
QIZ S **S 21 43 06.1 -5.3**
QIZ LR LR
comp=E,680nm,16.1s
QIZ LR LR
comp=E,440nm,18.8s
QIZ LR LR
comp=Z,790nm,16.6s
LPAZ La Paz 89.39 228 P P 21 32 38.6 -1.5
comp=Z,0.6nm,0.8s,baz=22,slow=5.4,SNR=1.5
LPAZ LR LR 22 10 08.6
comp=Z,242nm,19.5s,baz=5.0,slow=34
CPUP Villa Florida 95.81 215 LR LR 22 12 15.5
comp=Z,594nm,18.9s,baz=14,slow=33
BOSA Bosnof 98.66 143 LR LR 22 20 24.2
comp=Z,1µm,18.4s,baz=344,slow=37
TAOE Nuku Hiva Isla 111.65 297 eLR LR 22 11 26.4
comp=Z,546nm,26.2s
PPT2 Papeete2 123.20 302 eLR LR 22 16 48.5
comp=Z,594nm,22.2s
TBI Tubuai 128.42 299 eLR LR 22 19 14.0
comp=Z,475nm,23.5s
WRA Warramunga Arr 131.55 37 PKP PKPdf 21 38 55.4 0.0
comp=Z,2.0nm,1.2s,baz=354,slow=2.6,SNR=5.1
WRA Warramunga Arr 131.55 37 PKPdf 21 38 54.5 -0.8
ASAR Alice Springs 134.99 39 PKP PKPdf 21 39 00.4 -1.4
comp=Z,2.3nm,1.1s,baz=8.3,slow=1.3,SNR=5.3
ASAR Alice Springs 134.99 39 PKIKP PKPdf 21 39 00.9 -0.9
ASAR Alice Springs 134.99 39 PKPdf PKPdf 21 39 00.9 -0.9
SNAA Sanae 136.35 173 PKIKP PKPdf 21 39 03.3 +0.5
SNAA Sanae 136.35 173 PKPdf 21 39 03.3 +0.5
DZM Mont Dzumac 137.43 355 eLR LR 22 23 21.7
comp=Z,742nm,25.2s
SYO Syowa Base 139.17 152 eX PKPdf 21 39 00.2 -7.7
MAW Mawson 143.63 140 PKP PKPbc 21 39 14.0 +0.5
comp=Z,0.9nm,0.8s,baz=340,slow=4.7,SNR=2.5
STKA Stephens Creek 144.76 32 PKP PKPab 21 39 17.6 -0.4
comp=Z,3.3nm,0.8s,baz=54,slow=8.7,SNR=5.7
STKA Stephens Creek 144.76 32 PKIKP PKPbc 21 39 18.5 +0.4
STKA Stephens Creek 144.76 32 PKPdf PKPbc 21 39 18.5 +0.4

PRU 09 21:21:15.0±0.0, 50.30N×18.73E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.60**	**219**	*e*SG	Sg	21 21 35.1	+1.0
comp=Z,5.8nm,0.7s							
KRLC	**Kraliky**	**1.27**	**261**	*e*SG	Sg	21 21 55.5	-0.3
DPC	**Dobruska-Polom**	**1.54**	**273**	*e*SG	Sg	21 22 04.0	-0.6

*IDC **09** 21:32:04.6±1.2, 15.33S×173.47W, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.7/25, mbtmp3.7/6, ML4.1/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/32, Error ellipse: s-maj=57.9km s-min=21.4km az=138.0*
ISC 09 21:32:05.6±1.1, 15.3S±0.3×173.3W±0.3, h10km, n9, σ1°24/7, mb3.6/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.02**	**46**	Pn	**Pb**	**21 32 41.9**	**-0.6**
	60nm,0.3s,baz=218,slow=19,SNR=66						
AFI				Sn	**Sn**	**21 33 04.2**	**-0.9**
	50nm,0.3s,baz=79,slow=20,SNR=5.6						
AFI				LR	LR	21 33 21.8	
	comp=Z,140nm,18.1s,baz=3.0,slow=36						
URZ	**Urewera**	**24.38**	**199**	P	**P**	**21 37 23.7**	**-0.2**
	5.2nm,0.5s,baz=346,slow=4.2,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**38.95**	**329**	T	T	22 19 59.1	
	baz=146,slow=76,SNR=6.4						
H11S3	**WAKE ISLAND Hy**	**38.97**	**329**	T	T	22 20 00.7	
	baz=146,slow=76,SNR=5.9						
H11S1	**WAKE ISLAND Hy**	**38.97**	**329**	T	T	22 19 59.5	
	baz=146,slow=76,SNR=4.9						
WRA	**Warramunga Arr**	**49.97**	**257**	P	**P**	**21 40 59.3**	**-1.1**
	0.3nm,0.8s,baz=91,slow=6.8,SNR=2.0						
ASAR	**Alice Springs**	**50.24**	**252**	P	**P**	**21 41 01.6**	**-0.8**
	0.4nm,0.5s,baz=85,slow=8.6,SNR=6.8						
NVAR	**Mina Array Bea**	**74.19**	**42**	P	**P**	**21 43 44.4**	**+1.4**
	0.1nm,0.3s,baz=219,slow=8.1,SNR=1.6						
ILAR	**Eielson Array**	**82.34**	**11**	P	**P**	**21 44 28.2**	**+1.0**
	0.3nm,0.6s,baz=228,slow=6.9,SNR=7.5						

*IDC **09** 21:37:45.2±1.0, 54.˚98S×129.˚92W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.9/21, mbtmp3.8/5, MS3.7/3, Ms1 3.7/3, ms1mx3.3/24, Error ellipse: s-maj=56.8km s-min=27.3km az=147.0*

ISC 09 21:37:46.8±1.0, 55.˚0S±0.˚3×129.˚9W±0.˚3, h10km, n22, σ0§59/7, mb3.8/5, MS3.7/3, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**32.41**	**202**	P	**P**	**21 44 15.9**	**-0.2**
	0.5nm,0.6s,baz=27,slow=6.8,SNR=2.3						
RPZ	**Rata Peaks**	**38.93**	**262**	LR	LR	21 58 04.5	
	comp=Z,116nm,19.4s,baz=122,slow=31						
URZ	**Urewera**	**38.99**	**273**	LR	LR	21 57 56.0	
	comp=Z,77nm,19.8s,baz=212,slow=31						
PPT	**Papeete**	**40.28**	**330**	LR	LR	21 57 46.4	
	comp=Z,105nm,19.3s,baz=182,slow=30						
H03S2	**Juan Fernandez**	**41.00**	**80**	T	T	22 28 41.6	
	baz=221,slow=74,SNR=41						
H03S1	**Juan Fernandez**	**41.00**	**80**	T	T	22 28 43.3	
	baz=221,slow=74,SNR=41						
H03S3	**Juan Fernandez**	**41.02**	**80**	T	T	22 28 42.8	
	baz=221,slow=74,SNR=40						
H03N3	**Juan Fernandez**	**41.28**	**80**	T	T	22 28 60.0	
	baz=224,slow=72,SNR=195						
H03N2	**Juan Fernandez**	**41.28**	**80**	T	T	22 28 58.9	
	baz=224,slow=72,SNR=285						
H03N1	**Juan Fernandez**	**41.29**	**80**	T	T	22 28 59.9	
	baz=224,slow=72,SNR=197						
LPAZ	**La Paz**	**60.71**	**76**	P	**P**	**21 47 59.4**	**+0.4**
	0.5nm,0.5s,baz=231,slow=3.1,SNR=4.0						
ASAR	**Alice Springs**	**74.36**	**251**	P	**P**	**21 49 25.1**	**+0.5**
	1.0nm,0.9s,baz=136,slow=5.8,SNR=7.5						
H01W1	**Cape Leeuwin H**	**75.02**	**230**	T	T	23 12 58.6	
	baz=147,slow=76,SNR=7.3						
H01W2	**Cape Leeuwin H**	**75.03**	**230**	T	T	23 13 00.5	
	baz=147,slow=76,SNR=7.8						
H01W3	**Cape Leeuwin H**	**75.04**	**230**	T	T	23 12 59.3	
	baz=147,slow=76,SNR=6.1						
WRA	**Warramunga Arr**	**77.11**	**254**	P	**P**	**21 49 40.8**	**+0.4**
	1.3nm,1.0s,baz=138,slow=5.1,SNR=7.3						
TXAR	**Lajitas Array**	**86.97**	**23**	P	**P**	**21 50 31.7**	**-0.1**
	0.5nm,1.0s,baz=184,slow=5.9,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**91.66**	**303**	T	T	23 33 01.5	
	baz=147						
H11N1	**WAKE ISLAND Hy**	**91.67**	**303**	T	T	23 33 01.3	
	baz=147						
H11N2	**WAKE ISLAND Hy**	**91.68**	**303**	T	T	23 33 06.0	
	baz=147						
ILAR	**Eielson Array**	**120.15**	**352**	PKP	**PKPdf**	**21 56 35.4**	**-0.9**
	0.2nm,0.7s,baz=189,slow=2.4,SNR=1.5						
MKAR	**Makanchi Array**	**158.24**	**261**	PKPab	**PKPab**	**21 58 17.3**	**-0.1**
	0.6nm,0.9s,baz=104,slow=6.1,SNR=3.0						

*KRNET **09** 21:38:50.3±0.1, 40.˚45N×76.˚91E, mb3.0*
*SOME **09** 21:38:51.1, 40.˚52N×76.˚85E, h5km*
*NNC **09** 21:38:52.1±0.8, 40.˚51N×76.˚87E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=5.7km s-min=3.9km az=173.0*

ISC 09 21:38:54.2±1.6, 40.˚45N±0.˚08×76.˚89E±0.˚03, h10km, n66, σ1§50/105, 27C-17D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**1.69**	**7**	⇑*i*P	**Pn**	**21 39 22.6**	**-1.3**
	baz=7.0						
KDJ				⇑*i*S	**Sn**	**21 39 45.6**	**-0.1**
	baz=7.0						
ULHL	**Ulahol**	**1.86**	**345**	⇑*i*P	**Pn**	**21 39 25.1**	**-1.2**
	baz=45						
ULHL				⇑*i*S	**Sn**	**21 39 50.5**	**+0.6**
	baz=45						
BOOM	**Boomskoye usch**	**2.16**	**341**	⇓*e*P	**Pn**	**21 39 29.9**	**-0.5**
	baz=41						
BOOM				⇓*i*S	**Sn**	**21 39 58.5**	**+1.2**
	baz=41						
PRZ	**Przheval'sk**	**2.32**	**29**	⇑*i*P	**Pn**	**21 39 32.2**	**-0.4**
	baz=29						
PRZ				⇑*i*S	**Sn**	**21 40 02.8**	**+1.4**
	baz=29						
ARLS	**Aral**	**2.40**	**307**	⇑*e*P	**Pn**	**21 39 33.0**	**-0.6**
	baz=7.0						
ARLS				⇑*i*S	**Sn**	**21 40 04.2**	**+1.0**
	baz=7.0						
ANVS	**Anan'yevo**	**2.40**	**14**	⇓*i*P	**Pn**	**21 39 33.0**	**-0.7**
	baz=13						
ANVS				⇓*i*S	**Sn**	**21 40 04.2**	**+0.9**
	baz=13						
UCH	**Uchtor**	**2.52**	**315**	⇑*i*P	**Pn**	**21 39 35.0**	**-0.6**
	baz=15						
UCH				⇑*i*S	**Sn**	**21 40 07.8**	**+1.2**
	baz=15						
TNSS	**Tian-Shan**	**2.58**	**1**	*e*P	**Pb**	**21 39 38.8**	**-2.0**
	18nm,0.5s						
TNSS				*e*S	**Sb**	**21 40 12.7**	**-0.1**
	38nm,0.5s						
TNSS	**Tian-Shan**	**2.58**	**1**	Pg	**Pb**	**21 39 38.8**	**-2.0**
	18nm,0.5s						
TNSS				Lg	Lg	21 40 12.7	
	38nm,0.5s						
IZV	**Izvestkoviy**	**2.59**	**355**	*e*P	**Pb**	**21 39 39.5**	**-1.3**
	6.6nm,0.3s						
IZV				*e*S	**Sb**	**21 40 13.9**	**+1.2**
	34nm,0.4s						
IZV	**Izvestkoviy**	**2.59**	**355**	Pg	**Pb**	**21 39 39.5**	**-1.3**
	6.6nm,0.3s						
IZV				Lg	Lg	21 40 13.9	
	34nm,0.4s						
KBK	**Karagaybulak**	**2.64**	**327**	⇓*i*P	**Pn**	**21 39 36.3**	**-0.7**
	baz=27						
KBK				⇓*i*S	**Sn**	**21 40 10.5**	**+1.3**
	baz=27						
TKM2	**Tokmak 2**	**2.65**	**339**	⇓*i*P	**Pn**	**21 39 36.4**	**-0.8**
	baz=39						
TKM2				⇓*i*S	**Sn**	**21 40 10.7**	**+1.2**
	baz=39						
TKM2	**Tokmak 2**	**2.65**	**339**	⇓Pg	**Pn**	**21 39 38.5**	**+1.3**
	6.6nm,0.3s						
TKM2				⇓Lg	Lg	21 40 15.4	
	11nm,0.6s						
KST	**Kastek**	**2.68**	**345**	*e*P	**Pb**	**21 39 40.7**	**-1.6**
	8.9nm,0.3s						
KST				*e*S	**Sb**	**21 40 15.9**	**+0.6**
	16nm,0.6s						
KST	**Kastek**	**2.68**	**345**	Pg	**Pb**	**21 39 40.7**	**-1.6**
	8.9nm,0.3s						
KST				Lg	Lg	21 40 15.9	
	16nm,0.6s						
MTBS	**Maitube**	**2.70**	**353**	*e*P	**Pb**	**21 39 41.2**	**-1.4**
	3.8nm,0.2s						
MTBS				*e*S	**Sb**	**21 40 17.1**	**+1.3**
	36nm,0.2s						
MTBS	**Maitube**	**2.70**	**353**	Pg	**Pb**	**21 39 41.2**	**-1.4**
	3.8nm,0.2s						
MTBS				Lg	Lg	21 40 17.1	
	36nm,0.2s						
MDOK	**Medeo**	**2.71**	**2**	*e*P	**Pb**	**21 39 41.0**	**-1.9**
	6.3nm,0.3s						
MDOK				*e*S	**Sb**	**21 40 16.5**	**+0.3**
	52nm,0.4s						
MDOK	**Medeo**	**2.71**	**2**	Pg	**Pb**	**21 39 41.0**	**-1.9**
	6.3nm,0.3s						
MDOK				Lg	Lg	21 40 16.5	
	52nm,0.4s						
KNDC	**Almaty**	**2.76**	**1**	⇑Pg	**Pb**	**21 39 40.9**	**-2.8**
	13nm,0.5s						
KNDC				⇓Lg	Lg	21 40 19.2	
	158nm,0.7s						
KOTS	**Kotyrbulak**	**2.78**	**3**	*e*P	**Pb**	**21 39 43.0**	**-1.1**
	20nm,0.2s						
KOTS				*e*S	**Sb**	**21 40 20.0**	**+1.6**
	69nm,0.5s						
KOTS	**Kotyrbulak**	**2.78**	**3**	Pg	**Pb**	**21 39 43.0**	**-1.1**
	20nm,0.2s						
KOTS				Lg	Lg	21 40 20.0	
	69nm,0.5s						
AAK	**Ala-Archa**	**2.83**	**321**	⇓*e*P	**Pn**	**21 39 39.1**	**-0.5**
	baz=21						
AAK				⇓*e*S	**Sn**	**21 40 14.9**	**+1.1**
	baz=21						
AAK	**Ala-Archa**	**2.83**	**321**	⇑Pg	**Pb**	**21 39 42.3**	**-2.6**
	7.0nm,0.5s						
AAK				⇑Lg	Lg	21 40 20.3	
	45nm,0.8s						
SATY	**Saty**	**2.84**	**23**	*e*P	**Pb**	**21 39 43.8**	**-1.2**
	5.2nm,0.6s						
SATY				*e*S	**Sb**	**21 40 21.7**	**+1.8**
	66nm,0.4s						
SATY	**Saty**	**2.84**	**23**	Pg	**Pb**	**21 39 43.8**	**-1.2**
	5.2nm,0.6s						
SATY				Lg	Lg	21 40 21.7	
	66nm,0.4s						
FRU1	**Bishkek**	**2.90**	**325**	⇑*i*P	**Pn**	**21 39 40.0**	**-0.5**
	baz=25						
FRU1				⇑*i*S	**Sn**	**21 40 16.7**	**+1.2**
	baz=25						
DGS	**Degeres**	**2.91**	**344**	*e*P	**Pb**	**21 39 44.4**	**-1.9**
	22nm,0.6s						
DGS				*e*S	**Sb**	**21 40 22.4**	**+0.4**
	16nm,0.4s						
DGS	**Degeres**	**2.91**	**344**	Pg	**Pb**	**21 39 44.4**	**-1.9**
	22nm,0.6s						
DGS				Lg	Lg	21 40 22.3	
	16nm,0.4s						
AML	**Almayashu**	**2.94**	**306**	⇑*i*P	**Pn**	**21 39 40.9**	**-0.4**
	baz=6.0						
AML				⇑*i*S	**Sn**	**21 40 17.8**	**+1.0**
	baz=6.0						
ZHN	**Zhinishke**	**2.95**	**22**	*e*P	**Pb**	**21 39 45.7**	**-1.2**
	32nm,0.4s						
ZHN				*e*S	**Sb**	**21 40 24.4**	**+1.4**
	23nm,0.3s						
ZHN	**Zhinishke**	**2.95**	**22**	Pg	**Pb**	**21 39 45.7**	**-1.2**
	32nm,0.4s						
ZHN				Lg	Lg	21 40 24.4	
	23nm,0.3s						
CHMS	**Chumysh**	**3.01**	**328**	⇑*i*P	**Pn**	**21 39 41.5**	**-0.4**
	baz=28						
CHMS				⇑*i*S	**Sn**	**21 40 18.7**	**+0.7**
	baz=28						
ARSB	**Arslanbob**	**3.09**	**288**	⇑*i*P	**Pn**	**21 39 43.4**	**+0.3**
	baz=88						
ARSB				⇑*i*S	**Sn**	**21 40 21.2**	**+1.0**
	baz=88						
UZB	**Uzynbulak**	**3.13**	**30**	*e*P	**Pb**	**21 39 48.2**	**-1.7**
	3.4nm,0.4s						
UZB				*e*S	**Sb**	**21 40 29.2**	**+1.0**
	22nm,0.5s						
UZB	**Uzynbulak**	**3.13**	**30**	Pg	**Pb**	**21 39 48.2**	**-1.7**
	3.4nm,0.4s						
UZB				Lg	Lg	21 40 29.2	
	22nm,0.5s						
KURS	**Kuram**	**3.18**	**17**	*e*P	**Pb**	**21 39 49.3**	**-1.5**
	6.8nm,0.7s						
KURS				*e*S	**Sb**	**21 40 31.2**	**+1.6**
	18nm,0.7s						
KURS	**Kuram**	**3.18**	**17**	Pg	**Pb**	**21 39 49.3**	**-1.5**
	6.8nm,0.7s						
KURS				Lg	Lg	21 40 31.2	
	18nm,0.7s						
EKS2	**Erkin-Say**	**3.22**	**314**	⇑*i*P	**Pn**	**21 39 44.3**	**-0.5**
	baz=14						
EKS2				⇑*i*S	**Sn**	**21 40 24.5**	**+1.2**
	baz=14						
KTBS	**Karatobe**	**3.26**	**357**	*e*P	**Pb**	**21 39 51.2**	**-1.0**
	3.2nm,0.4s						
KTBS				*e*S	**Sb**	**21 40 34.0**	**+2.1**
	28nm,0.8s						
KTBS	**Karatobe**	**3.26**	**357**	Pg	**Pb**	**21 39 51.2**	**-1.0**
	3.2nm,0.4s						
KTBS				Lg	Lg	21 40 34.0	
	28nm,0.8s						
KPKS	**Kokpek**	**3.29**	**23**	*e*P	**Pb**	**21 39 51.5**	**-1.3**
	6.3nm,0.3s						
KPKS				*e*S	**Sb**	**21 40 34.5**	**+1.6**
	62nm,0.4s						
SHLS	**Shalkode**	**3.31**	**35**	*e*P	**Pg**	**21 39 55.7**	**-2.0**
	6.2nm,0.4s						
SHLS				*e*S	**Sg**	**21 40 41.9**	**+1.3**
	31nm,0.5s						
SHLS	**Shalkode**	**3.31**	**35**	Pg	**Pg**	**21 39 55.7**	**-2.0**
	6.2nm,0.4s						
SHLS				Lg	Lg	21 40 41.9	
	31nm,0.5s						
USP	**Ospenovka**	**3.33**	**328**	⇓*i*P	**Pn**	**21 39 45.6**	**-0.8**
	baz=28						
USP				⇓*i*S	**Sn**	**21 40 26.8**	**+0.8**
	baz=28						
KRBS	**Karabastau**	**3.37**	**345**	*e*P	**Pb**	**21 39 52.2**	**-1.8**
	12nm,0.5s						
KRBS				*e*S	**Sb**	**21 40 35.7**	**+0.8**
	30nm,0.5s						
KRBS	**Karabastau**	**3.37**	**345**	Pg	**Pb**	**21 39 52.2**	**-1.8**
	12nm,0.5s						
KRBS				Lg	Lg	21 40 35.7	
	30nm,0.5s						
SGDS	**Sogindy**	**3.44**	**331**	Pg	**Pb**	**21 39 53.8**	**-1.5**
	3.1nm,0.3s						
SGDS				Lg	Lg	21 40 38.6	
	5.4nm,0.5s						
KUU	**Kurty**	**3.46**	**353**	*e*P	**Pb**	**21 39 53.8**	**-1.7**
	2.4nm,0.2s						
KUU				*e*S	**Sb**	**21 40 39.0**	**+1.3**
	25nm,0.4s						
KUU	**Kurty**	**3.46**	**353**	Pg	**Pb**	**21 39 53.8**	**-1.7**
	2.4nm,0.2s						
KUU				Lg	Lg	21 40 39.0	
	25nm,0.4s						
PDGK	**Podgornoye**	**3.47**	**33**	⇓Pg	**Pb**	**21 39 53.6**	**-2.1**
	4.7nm,0.6s						
PDGK				⇓Lg	Lg	21 40 39.5	
	56nm,1.1s						
MRKS	**Merke**	**3.58**	**311**	*e*P	**Pb**	**21 39 55.7**	**-1.9**
	2.5nm,0.3s						
MRKS				*e*S	**Sb**	**21 40 42.1**	**+1.0**
	6.5nm,0.6s						
MRKS	**Merke**	**3.58**	**311**	Pg	**Pb**	**21 39 55.7**	**-1.9**
	2.5nm,0.3s						
MRKS				Lg	Lg	21 40 42.1	
	6.5nm,0.6s						
MNBS	**Baschi**	**3.79**	**17**	*e*P	**Pb**	**21 40 00.7**	**-0.5**
	2.0nm,0.4s						
MNBS				*e*S	**Sb**	**21 40 50.5**	**+3.2**
	30nm,0.2s						
MNBS	**Baschi**	**3.79**	**17**	Pg	**Pb**	**21 40 00.7**	**-0.5**
	2.0nm,0.4s						
MNBS				Lg	Lg	21 40 50.5	
	30nm,0.2s						
ARXS	**Arharly**	**3.82**	**10**	*e*P	**Pb**	**21 40 00.4**	**-1.3**
	2.2nm,0.4s						
ARXS				*e*S	**Sb**	**21 40 49.8**	**+1.8**
	21nm,0.6s						
ARXS	**Arharly**	**3.82**	**10**	Pg	**Pb**	**21 40 00.4**	**-1.3**
	2.2nm,0.4s						
ARXS				Lg	Lg	21 40 49.8	
	21nm,0.6s						
MNAS	**Manas**	**3.87**	**303**	⇑*e*P	**Pn**	**21 39 53.9**	**0.0**
	baz=3.0						
MNAS				⇑*i*S	**Sn**	**21 40 39.9**	**+0.3**
	baz=3.0						
KTMS	**Ketmen**	**3.95**	**40**	*e*P	**Pb**	**21 40 02.8**	**-1.1**
	4.2nm,0.1s						
KTMS				*e*S	**Sb**	**21 40 54.1**	**+2.3**
	11nm,0.4s						
KTMS	**Ketmen**	**3.95**	**40**	Pg	**Pb**	**21 40 02.8**	**-1.1**
	4.2nm,0.1s						
KTMS				Lg	Lg	21 40 54.1	
	11nm,0.4s						
DJR	**Jarkent**	**4.43**	**28**	*e*P	**Pb**	**21 40 11.7**	**-0.4**
	0.7nm,0.3s						
DJR				*e*S	**Sb**	**21 41 09.7**	**+4.1**
	8.5nm,0.5s						
DJR	**Jarkent**	**4.43**	**28**	Pg	**Pb**	**21 40 11.7**	**-0.4**
	0.7nm,0.3s						
DJR				Lg	Lg	21 41 09.7	
	8.5nm,0.5s						
TDK	**Taldyqorghan**	**4.68**	**13**	*e*P	**Pb**	**21 40 16.3**	**0.0**
	6.1nm,0.5s						
TDK				*e*S	**Sb**	**21 41 17.4**	**+4.6**
	34nm,0.5s						
TDK	**Taldyqorghan**	**4.68**	**13**	Pg	**Pb**	**21 40 16.3**	**0.0**
	6.1nm,0.5s						
TDK				Lg	Lg	21 41 17.4	
	34nm,0.5s						
KK31	**Karatay Array**	**5.46**	**301**	⇓Pg	**Pb**	**21 40 32.1**	**+2.5**
	0.2nm,0.3s,baz=130,slow=16,SNR=4.1						
KK31				⇑Lg	Lg	21 41 40.9	
	2.5nm,0.7s,baz=125,slow=30,SNR=5.6						

*SOME **09** 21:43:18.4, 43.˚90N×84.˚33E, h5km*
*NNC **09** 21:43:19.4±2.9, 44.˚02N×84.˚25E, h9km±15km, mb3.4, mpv3.1, Error ellipse: s-maj=23.1km s-min=8.9km az=120.0*

ISC 09 21:43:17.9±2.2, 43.˚93N±0.˚09×84.˚3E±0.˚1, h10km, n16, σ1§81/25, 6C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.91**	**262**	*e*P	**Pg**	**21 44 13.1**	**-0.6**
	9.6nm,0.2s						
KTMS				*e*S	**Sg**	**21 44 52.9**	**+1.5**
	17nm,0.5s						
KTMS	**Ketmen**	**2.91**	**262**	Pg	**Pb**	**21 44 10.9**	**+1.0**
KTMS				Lg	Lg	21 44 49.5	
MK31	**Makanchi Array**	**3.20**	**334**	⇓Pg	**Pb**	**21 44 15.2**	**+0.5**
	0.7nm,0.6s,baz=147,slow=17,SNR=15						
MK31				⇑Lg	Lg	21 44 56.6	
	0.7nm,0.2s,baz=146,slow=30,SNR=9.1						
DJR	**Jarkent**	**3.28**	**279**	*e*P	**Pg**	**21 44 19.7**	**-1.0**
	3.8nm,0.2s						
DJR				*e*S	**Sg**	**21 45 04.6**	**+1.5**
	9.0nm,0.6s						
DJR	**Jarkent**	**3.28**	**279**	Pg	**Pg**	**21 44 19.7**	**-1.0**
	3.8nm,0.2s						
DJR				Lg	Lg	21 45 04.6	
	9.0nm,0.6s						
MAKZ	**Makanchi**	**3.31**	**331**	⇑Pn	**Pn**	**21 44 09.4**	**-0.4**
	1.7nm,1.1s						
MAKZ				⇑Pg	**Pg**	**21 44 20.7**	**-0.6**
	3.0nm,1.0s						
MAKZ				⇑Lg	Lg	21 44 59.7	
	1.8nm,0.5s						
ZSN	**Zaisan**	**3.54**	**6**	*e*P	**Pg**	**21 44 24.2**	**-1.5**
	1.4nm,0.5s						
ZSN				*e*S	**Sg**	**21 45 12.5**	**+0.9**
	4.3nm,0.4s						
PDGK	**Podgornoye**	**3.55**	**262**	Pg	**Pg**	**21 44 24.1**	**-1.8**
	0.9nm,0.3s						
PDGK				Lg	Lg	21 45 12.2	
	3.2nm,0.5s						
PDGK	**Podgornoye**	**3.55**	**262**	⇑Pn	**Pn**	**21 44 15.5**	**+2.3**
	2.5nm,1.0s						
PDGK				⇑Pg	**Pb**	**21 44 23.6**	**+2.8**
	2.1nm,0.5s						
PDGK				⇓Lg	Lg	21 45 12.0	
	7.2nm,0.7s						
SHLS	**Shalkode**	**3.61**	**259**	*e*P	**Pb**	**21 44 19.0**	**-2.8**
	12nm,0.3s						
SHLS				*e*S	**Sb**	**21 45 03.4**	**-2.3**
	30nm,0.3s						
SHLS	**Shalkode**	**3.61**	**259**	Pg	**Pn**	**21 44 17.0**	**+3.1**
	7.6nm,0.4s						
SHLS				Lg	Lg	21 45 00.2	
	30nm,0.3s						
UZB	**Uzynbulak**	**3.92**	**260**	*e*P	**Pg**	**21 44 31.1**	**-1.9**
	3.6nm,0.4s						
UZB				*e*S	**Sg**	**21 45 24.1**	**+0.3**
	2.8nm,0.4s						
UZB	**Uzynbulak**	**3.92**	**260**	Pg	**Pg**	**21 44 31.1**	**-1.9**
	3.6nm,0.4s						
UZB				Lg	Lg	21 45 24.1	
	2.8nm,0.4s						
KPKS	**Kokpek**	**4.11**	**265**	*e*P	**Pg**	**21 44 34.0**	**-2.5**
	4.6nm,0.3s						
KPKS				*e*S	**Sg**	**21 45 29.4**	**-0.3**
	13nm,0.4s						
SATY	**Saty**	**4.38**	**261**	*e*P	**Pg**	**21 44 39.9**	**-1.9**
	1.6nm,0.2s						
SATY				*e*S	**Sg**	**21 45 38.9**	**+0.3**
	3.7nm,0.2s						
SATY	**Saty**	**4.38**	**261**	Pg	**Pg**	**21 44 39.9**	**-1.9**
	1.6nm,0.2s						
SATY				Lg	Lg	21 45 38.9	
	3.7nm,0.2s						

*IDC **09** 21:50:34.6±1.4, 28.˚60S×176.˚87W, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/34, mbtmp3.8/5, ML3.8/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/28, Error ellipse: s-maj=39.9km s-min=22.6km az=136.0*

ISC 09 21:50:35.4±1.1, 28.˚6S±0.˚2×176.˚8W±0.˚2, h10km, n17, σ0§64/12, mb3.9/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.21**	**235**	Pn	**Pn**	**21 50 57.8**	**-0.7**
	561nm,0.3s,baz=85,slow=10,SNR=15						
RAO				Sn	**Sb**	**21 51 14.3**	**+0.1**
	1µm,0.3s,baz=64,slow=22,SNR=7.8						
URZ	**Urewera**	**10.94**	**206**	Pn	**Pn**	**21 53 12.2**	**+0.2**
	0.7nm,0.3s,baz=114,slow=19,SNR=1.9						
URZ				Sn	Sn	21 55 00.8	-14
	1.3nm,0.3s,baz=149,slow=23,SNR=6.3						
DZM	**Mont Dzumac**	**16.47**	**289**	LR	LR	21 59 44.2	
	comp=Z,152nm,18.1s,baz=200,slow=34						
PPT2	**Papeete2**	**27.25**	**72**	*e*LR	LR	21 56 30.4	
	comp=Z,137nm,23.8s						
PPT	**Papeete**	**27.25**	**72**	LR	LR	22 07 02.6	
	comp=Z,220nm,18.3s,baz=192,slow=36						
STKA	**Stephens Creek**	**35.96**	**254**	P	**P**	**21 57 37.4**	**+0.9**
	0.5nm,0.2s,baz=88,slow=14,SNR=2.8						
ASAR	**Alice Springs**	**44.30**	**265**	P	**P**	**21 58 45.7**	**-0.1**
	0.8nm,0.4s,baz=103,slow=7.2,SNR=18						
WRA	**Warramunga Arr**	**45.13**	**270**	P	**P**	**21 58 52.0**	**-0.4**
	0.6nm,0.5s,baz=110,slow=7.7,SNR=9.6						
VNDA	**Vanda**	**50.04**	**186**	P	**P**	**21 59 29.6**	**-0.1**
	0.3nm,0.8s,baz=26,slow=5.6,SNR=4						
H03S2	**Juan Fernandez**	**80.60**	**123**	T	T	23 32 42.8	
	baz=239,slow=74,SNR=7.7						
H03S1	**Juan Fernandez**	**80.61**	**123**	T	T	23 32 45.1	
	baz=239,slow=74,SNR=7.1						
H03S3	**Juan Fernandez**	**80.61**	**123**	T	T	23 32 43.8	
	baz=239,slow=74,SNR=6.8						
MKAR	**Makanchi Array**	**117.39**	**311**	PKP	**PKiKP**	**22 09 21.9**	**+0.7**
	0.3nm,0.7s,baz=113,slow=2.7,SNR=1.9						
KURBB	**Kurchatov Arra**	**120.57**	**314**	PKP	**PKiKP**	**22 09 27.4**	**+

BOSC	**San Juan Bosco**	**2.08**	**64**	P		**Pn**	**22 02 20.5 +2.3**
SANGA	**Volcan Sangay**	**2.83**	**45**	P		**Pn**	**22 02 31.6 +2.9**
IGUA	**Igualata**	**3.10**	**34**	P		**Pn**	**22 02 34.6 +2.1**
BMAS	**Trigal station**	**3.18**	**36**	P		**Pn**	**22 02 35.7 +2.4**
ARRY	**Arrayan**	**3.19**	**37**	P		**Pn**	**22 02 35.7 +2.2**
BPAT	**Tungurahua Vol**	**3.21**	**37**	P		**Pn**	**22 02 33.3 -0.6**
BBIL	**Ulba Tungurahu**	**3.22**	**36**	P		**Pn**	**22 02 36.7 +2.9**
RETU	**Refugio**	**3.24**	**36**	P		**Pn**	**22 02 37.0 +2.6**
BULB	**Ulba Tungurahu**	**3.27**	**37**	P		**Pn**	**22 02 37.3 +2.6**
PIS1	**Pisayambo**	**3.59**	**33**	P		**Pn**	**22 02 41.7 +2.6**
ATAH	**Atahualpa**	**3.62**	**147**	P		**Pn**	**22 02 44.0 +4.7**
	24nm,0.3s,baz=347,slow=6.2,SNR=97						
ATAH				S		**Sn**	**22 03 25.6 +4.5**
	87nm,0.3s,baz=55,slow=20,SNR=9.6						
PKYU	**Pakayacu**	**3.67**	**49**	P		**Pn**	**22 02 41.7 +1.8**
ILLI	**Illinizas Sur**	**3.72**	**26**	P		**Pn**	**22 02 43.9 +2.9**
VCES	**Cotopaxi**	**3.81**	**31**	P		**Pn**	**22 02 45.1 +2.9**
CAMI	**Rancho Maria**	**3.86**	**29**	P		**Pn**	**22 02 46.6 +3.8**
BNAS	**Cotopaxi Volca**	**3.87**	**29**	P		**Pn**	**22 02 46.1 +3.0**
BREF	**Cotopaxi Volca**	**3.90**	**30**	P		**Pn**	**22 02 48.1 +4.7**
TAMB	**Tambo**	**3.91**	**31**	P		**Pn**	**22 02 48.2 +4.7**
VC1	**Cotopaxi 1**	**3.94**	**30**	P		**Pn**	**22 02 47.9 +4.0**
ARDO	**Archidona, Ten**	**4.00**	**40**	P		**Pn**	**22 02 45.5 +1.3**
ANTM	**Antisana-La Mi**	**4.12**	**31**	P		**Pn**	**22 02 48.6 +2.2**
ANTS	**Antisana-Sarah**	**4.18**	**32**	P		**Pn**	**22 02 49.7 +2.4**
ANTI	**Antisana**	**4.23**	**32**	P		**Pn**	**22 02 50.1 +2.2**
GGPC	**Guagua Pichinc**	**4.26**	**25**	P		**Pn**	**22 02 51.5 +3.1**
PINO	**Pino**	**4.27**	**24**	P		**Pn**	**22 02 51.6 +3.0**
YANA	**Yana**	**4.32**	**25**	P		**Pn**	**22 02 52.4 +3.2**
PULU	**Pululahua**	**4.48**	**25**	P		**Pn**	**22 02 54.5 +3.3**
PAC1	**Pacto, Paraso**	**4.59**	**20**	*e*P		**Pn**	**22 02 53.8 +1.2**
CUSE	**Cuicocha Este**	**4.78**	**24**	*e*P		**Pn**	**22 02 57.7 +2.3**
CUIC	**Cuicocha-Domo**	**4.79**	**25**	P		**Pn**	**22 02 58.8 +3.2**
PUAC	**Puerto Asis, P**	**5.96**	**40**	*e*P		Pn	22 03 31.7 +21
GCUF	**Volcan Galeras**	**6.07**	**30**	*e*P		**Pn**	**22 03 14.4 +1.2**
CRUC	**La Cruz**	**6.57**	**31**	*e*P		**Pn**	**22 03 22.8 +3.0**
PTLC	**Puerto Leguiza**	**6.99**	**53**	*e*P		Pn	22 03 33.6 +8.4
FLOC	**Florencia**	**7.34**	**40**	*e*P		**Pn**	**22 03 33.6 +3.5**
PCON	**Cinco Dias**	**7.50**	**32**	*e*P		Pn	22 03 40.6 +7.9
POPC	**Popayan, Colom**	**7.54**	**29**	*e*P		Pn	22 03 38.0 +4.9
GARC	**Garzon, Huila**	**7.90**	**38**	*e*P		**Pn**	**22 03 37.5 -0.6**
CZSB	**Cruzeiro do Su**	**8.44**	**116**	*e*P		**Pn**	**22 03 44.5 -0.7**
NNA	**Nana**	**8.60**	**156**	P		**Pn**	**22 03 49.5 +2.2**
	13nm,0.3s,baz=262,slow=19,SNR=26						
NNA				S		**Sn**	**22 05 22.3 -0.6**
	8.4nm,0.3s,baz=35,slow=16,SNR=8.4						
NNA	**Nana**	**8.60**	**156**			**Pn**	**22 03 49.6 +2.2**
NNA						**Sn**	**22 05 24.2 +1.2**
MACC	**Macarena, Meta**	**8.98**	**47**	*e*P		Pn	22 04 01.0 +8.4
PAYG	**Puerto Ayora**	**10.47**	**289**	Pn		**Pn**	**22 04 13.4 +0.4**
CBOC	**Ciudad Bolivar**	**10.79**	**24**	*e*P		Pn	22 04 09.2 -8.3
CHIC	**Chingaza**	**10.90**	**38**	*e*P		**Pn**	**22 04 21.1 +2.0**
ETMB	**Extrema**	**15.16**	**113**	*e*P		**Pn**	**22 05 11.2 -5.0**
SDV	**Santo Domingo**	**16.13**	**37**	P		**Pn**	**22 05 28.9 +0.1**
	1.4nm,0.3s,baz=257,slow=17,SNR=4.0						
SDV	**Santo Domingo**	**16.13**	**37**	Pn		**Pn**	**22 05 25.0 -3.8**
SDV	**Santo Domingo**	**16.13**	**37**	*e*P		P	22 05 43.3 +12
LPAZ	**La Paz**	**17.08**	**136**	P		**Pn**	**22 05 41.4 +0.2**
	0.4nm,0.3s,baz=322,slow=12,SNR=12						
LPAZ	**La Paz**	**17.08**	**136**	P		**Pn**	**22 05 41.6 +0.5**
LPAZ	**La Paz**	**17.08**	**136**	*e*P		**Pn**	**22 05 41.3 +0.2**
PB16	**IPOC Station P**	**17.71**	**144**	P		**Pn**	**22 05 48.9 +0.1**
PB16				IAmb		IAmb	22 05 53.4
	comp=Z,15nm,0.7s						
SAML	**Samuel**	**17.74**	**107**	P		**Pn**	**22 05 48.2 -0.4**
SAML				IAmb		IAmb	22 05 49.6
	comp=Z,18nm,0.8s						
SAML	**Samuel**	**17.74**	**107**	*e*P		**Pn**	**22 05 44.5 -4.2**
MNMC	**Minye Minye**	**18.29**	**146**	P		**P**	**22 05 55.3 +0.2**
MNMC				IAmb		IAmb	22 05 59.8
	comp=Z,17nm,1.1s						
PSGCX	**Pisagua**	**18.38**	**148**			**Pn**	**22 05 57.3 +0.8**
PSGCX				IAmb		IAmb	22 06 00.1
	comp=Z,19nm,0.9s						
PB11	**IPOC Station P**	**18.76**	**147**	P		**P**	**22 06 00.3 +0.1**
PB11				IAmb		IAmb	22 06 08.6
	comp=Z,12nm,0.9s						
PB01	**IPOC Station P**	**19.91**	**149**	P		**P**	**22 06 13.6 +1.0**
LVC	**Limon Verde**	**21.50**	**150**	P		**P**	**22 06 32.1 +2.0**
	comp=Z,4.1nm,0.6s,baz=314,slow=5.9,SNR=5.4						
LVC	**Limon Verde**	**21.50**	**150**	P		**P**	**22 06 29.6 -0.5**
LVC				IAmb		IAmb	22 06 35.1
	comp=Z,8.7nm,0.9s						
LVC	**Limon Verde**	**21.50**	**150**	*e*P		**P**	**22 06 32.7 +2.6**
SIV	**San Ignacio**	**22.36**	**123**	P		**P**	**22 06 39.5 +0.6**
	comp=Z,1.6nm,0.6s,baz=331,slow=11,SNR=6.2						
GO02	**Mina Guanaco**	**23.38**	**155**	P		**P**	**22 06 50.9 +1.3**
GO02				IAmb		IAmb	22 07 05.1
	comp=Z,6.9nm,0.9s						
PTLB	**Pontes e Lacer**	**23.75**	**120**	*e*P		**P**	**22 06 51.9 -0.8**
MALB	**Monte Alegre**	**26.16**	**86**	*e*P		**P**	**22 07 14.4 -0.3**
CPUP	**Villa Florida**	**31.25**	**137**	P		**P**	**22 08 01.9 +2.0**
	comp=Z,1.4nm,1.0s,baz=348,slow=19,SNR=3.8						
CPUP					pP	**sP**	**22 08 19.2 -1.9**
	comp=Z,1.3nm,0.9s,baz=313,slow=11,SNR=2.5						
CPUP	**Villa Florida**	**31.25**	**137**	P		**P**	**22 07 59.4 -0.4**
PLCA	**Paso Flores**	**37.55**	**168**	P		**P**	**22 08 55.0 +0.8**
TXAR	**Lajitas Array**	**40.05**	**328**	P		**P**	**22 09 16.7 +1.3**
	comp=Z,0.4nm,0.7s,baz=144,slow=9.3,SNR=5.9						
TXAR					PcP	**PcP**	**22 11 19.9 +0.5**
	comp=Z,1.0nm,0.8s,baz=152,slow=6.4,SNR=9.4						
TXAR	**Lajitas Array**	**40.05**	**328**	P		**P**	**22 09 15.0 -0.4**
TXAR						**PcP**	**22 11 18.3 -1.2**
U40A	**Yellville**	**41.88**	**345**	P		**P**	**22 09 29.2 -1.1**
MNTX	**Cornudas Mount**	**42.81**	**328**	P		**P**	**22 09 37.0 -0.9**
MNTX				IAmb		IAmb	22 09 39.9
	comp=Z,4.6nm,1.1s						
MSTX	**Muleshoe**	**43.35**	**333**	P		**P**	**22 09 41.6 -0.7**
ANMO	**Albuquerque**	**45.92**	**330**	P		**P**	**22 10 01.4 -1.5**
ANMO				IAmb		IAmb	22 10 05.6
	comp=Z,6.1nm,0.9s						
WUAZ	**Wupatki**	**48.96**	**326**	P		**P**	**22 10 25.8 -0.6**
WUAZ				IAmb		IAmb	22 10 29.6
	comp=Z,4.5nm,0.8s						
PV15	**Paradox Valley**	**49.59**	**331**	P		**P**	**22 10 30.4 -1.0**
PV13	**Radium Mtn., P**	**49.62**	**330**	P		**P**	**22 10 30.5 -1.0**
PV03	**Paradox Valley**	**49.70**	**331**	P		**P**	**22 10 31.3 -0.9**
PV03				IAmb		IAmb	22 10 33.8
	comp=Z,2.8nm,0.7s						
PV12	**Saucer Basin,**	**49.73**	**331**	P		**P**	**22 10 31.3 -1.1**
PDAR	**Pinedale Array**	**53.60**	**333**	P		**P**	**22 11 01.3 +0.1**
	comp=Z,0.6nm,0.6s,baz=122,slow=5.6,SNR=5.5						
ELK	**Elko**	**54.84**	**328**	P		**P**	**22 11 10.4 +0.1**
	comp=Z,0.7nm,0.6s,baz=154,slow=17,SNR=3.2						
LHV	**Little Huntoon**	**54.96**	**324**	P		**P**	**22 11 08.2 -2.6**
LHV				IAmb		IAmb	22 11 14.0
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**54.96**	**324**	P		**P**	**22 11 13.2 +2.0**
	comp=Z,1.8nm,0.6s,baz=128,slow=7.6,SNR=22						
NVAR	**Mina Array Bea**	**54.96**	**324**	P		**P**	**22 11 09.4 -1.7**
ULM	**Lac du Bonnet**	**55.74**	**348**	P		**P**	**22 11 15.7 -0.6**
	comp=Z,4.9nm,0.6s,baz=163,slow=9.0,SNR=4.8						
YBH	**Yreka Blue Hor**	**59.67**	**324**	P		**P**	**22 11 44.2 +0.1**
	comp=Z,1.4nm,0.9s,baz=127,slow=4.9,SNR=5.2						
INK	**Inuvik**	**80.98**	**342**	P		**P**	**22 13 53.5 -0.1**
	comp=Z,3.4nm,1.0s,baz=115,slow=2.9,SNR=5.6						
INK	**Inuvik**	**80.98**	**342**	P		**P**	**22 13 53.8 +0.3**
TORD	**Torodi Ar. Bea**	**83.21**	**76**	P		**P**	**22 14 06.6 +0.2**
	comp=Z,0.5nm,0.8s,baz=282,slow=7.2,SNR=2.3						
TORD					pP	**sP**	**22 14 26.7 -2.4**
	comp=Z,0.3nm,0.4s,baz=277,slow=5.5,SNR=2.8						
ILAR	**Eielson Array**	**83.89**	**337**	P		**P**	**22 14 07.2 -1.6**
	comp=Z,1.6nm,1.0s,baz=140,slow=4.0,SNR=9.4						
ILAR	**Eielson Array**	**83.89**	**337**	P		**P**	**22 14 08.0 -0.8**
STKA	**Stephens Creek**	**126.43**	**225**	PKP		**PKPdf**	**22 20 42.7 0.0**
	comp=Z,0.9nm,0.5s,baz=41,slow=18,SNR=2.0						
ZALV	**Zalesovo Beam**	**128.83**	**11**	PKP		**PKPdf**	**22 20 45.0 -1.6**
	comp=Z,0.3nm,0.3s,baz=301,slow=6.6,SNR=4.3						
MKAR	**Makanchi Array**	**134.87**	**17**	PKP		**PKPdf**	**22 20 57.0 -1.3**
	comp=Z,0.3nm,0.7s,baz=341,slow=3.8,SNR=4.4						
ASAR	**Alice Springs**	**136.69**	**229**	PKP		**PKPdf**	**22 21 01.7 -0.6**
	comp=Z,0.6nm,0.5s,baz=115,slow=2.3,SNR=6.3						
ASAR					pPKP	**sPKPdf**	**22 21 23.9 -1.7**
	comp=Z,0.4nm,0.6s,baz=114,slow=2.1,SNR=2.7						
WRA	**Warramunga Arr**	**138.37**	**234**	PKP		**PKPdf**	**22 21 04.9 -0.6**
	comp=Z,0.5nm,0.4s,baz=114,slow=2.2,SNR=11						
WRA					pPKP	**sPKPdf**	**22 21 26.8 -2.0**
	comp=Z,0.4nm,0.6s,baz=120,slow=1.7,SNR=2.9						
FITZ	**Fitzroy Crossi**	**146.19**	**229**	PKPbc		**PKPbc**	**22 21 20.7 +0.2**
	comp=Z,2.5nm,0.9s,baz=219,slow=1.5,SNR=6.2						

IDC 09 22:03:45.2±2.1, 7°38N×93°85E, h0km, mb3.5/6, mb1 3.5/6, mb1mx3.4/30, mbtmp3.5/6, Error ellipse: s-maj=106.4km s-min=22.9km az=55.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.51**	**348**	P	P	22 11 25.5	-0.4
	0.4nm,0.6s,baz=166,slow=7.9,SNR=5.0						
GEYT	**Alibeck**	**44.38**	**319**	P	P	22 11 57.4	-0.2
	0.6nm,0.4s,baz=120,slow=8.5,SNR=1.5						
KURBB	**Kurchatov Arra**	**44.95**	**346**	P	P	22 12 01.9	-0.1
	0.5nm,0.5s,baz=171,slow=7.0,SNR=8.6						
ZALV	**Zalesovo Beam**	**47.01**	**353**	P	P	22 12 18.4	+0.3
	0.4nm,0.4s,baz=168,slow=7.7,SNR=2.4						
WRA	**Warramunga Arr**	**48.21**	**125**	P	P	22 12 28.5	+0.6
	0.3nm,0.7s,baz=307,slow=8.5,SNR=2.5						
ASAR	**Alice Springs**	**49.82**	**129**	P	P	22 12 39.5	-0.8
	0.3nm,0.8s,baz=301,slow=7.5,SNR=2.5						

IDC 09 22:21:49.8±2.9, 6°65S×129°82E, h152km±39km, mb3.0/1, mb1 3.0/5, mb1mx2.9/28, mbtmp3.4/5, Error ellipse: s-maj=71.4km s-min=21.6km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.92**	**14**	P	Pn	22 23 15.6	+0.1
	0.8nm,0.3s,baz=242,slow=22,SNR=1.5						
SIJI				S	Sn	22 24 16.3	-6.3
	1.7nm,0.3s,baz=251,slow=23,SNR=8.2						
FITZ	**Fitzroy Crossi**	**12.09**	**199**	P	Pn	22 24 37.4	+0.1
	0.1nm,0.3s,baz=26,slow=12,SNR=8.2						
FITZ				S	Sn	22 26 42.0	-9.1
	0.1nm,0.3s,baz=353,slow=16,SNR=1.7						
WRA	**Warramunga Arr**	**13.93**	**162**	P	Pn	22 24 59.6	-1.2
	0.1nm,0.3s,baz=343,slow=12,SNR=2.0						
WRA				S	Sn	22 27 21.6	-14
	0.1nm,0.3s,baz=338,slow=20,SNR=4.0						
ASAR	**Alice Springs**	**17.37**	**167**	P	Pn	22 25 42.9	-0.3
	0.1nm,0.3s,baz=353,slow=10,SNR=7.8						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	22 32 31.5	0.0
	0.2nm,0.4s,baz=108,slow=6.6,SNR=4.1						

*IDC **09** 22:46:58.9±2.5, 1°18N×126°49E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/37, mbtmp3.2/3, Error ellipse: s-maj=234.2km s-min=28.1km az=66.0*

*DJA **09** 22:47:06.8±1.2, 1°N±5°×12°5E±°, h14km±11km, M3.9/8, mb4.2/1, MLv3.7/8*

ISC 09 22:47:04.9±1.7, 0°8N±0°2×125°6E±0°2, h35km, n7, σ1§05/7, mb3.0/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.58**	**263**	P	**Pn**	**22 47 29.5**	**-0.9**
LUWI	**Luwuk**	**3.31**	**237**	P	**Pn**	**22 47 53.6**	**-0.6**
APSI	**Ampana**	**4.24**	**247**	P	**Pn**	**22 48 07.5**	**+0.5**
SPSI	**Sidrap Palu**	**7.45**	**231**	P	**Pn**	**22 48 51.8**	**+0.7**
WRA	**Warramunga Arr**	**22.31**	**158**	P	**P**	**22 51 58.1**	**-1.4**
	0.2nm,0.4s,baz=339,slow=11,SNR=2.7						
ASAR	**Alice Springs**	**25.60**	**162**	P	**P**	**22 52 31.7**	**+0.6**
	0.1nm,0.3s,baz=341,slow=8.1,SNR=1.6						
MKAR	**Makanchi Array**	**59.34**	**327**	P	**P**	**22 57 04.0**	**+0.5**
	0.2nm,0.4s,baz=119,slow=8.0,SNR=4.6						

*NIC **09** 23:24:28.8±0.0, 34°11N×26°34E, h94km±7km, Ml4.8/3*

*HLW **09** 23:24:32.5, 34°43N×26°75E, h13km±21km, Md4.2, Ml4.4*

*IDC **09** 23:24:32.7±2.4, 34°63N×26°53E, h21km±15km, mb4.2/27, mb1 4.3/39, mb1mx4.2/55, mbtmp4.3/39, ML4.0/11, MS3.7/21, Ms1 3.7/21, ms1mx3.6/43, Error ellipse: s-maj=12.2km s-min=9.4km az=163.0*

*ISK **09** 23:24:33.5, 34°55N×26°63E, h112km±1km, ML4.1/7*

*NEIC **09** 23:24:35.9±2.3, 34°56N±0°06×26°59E±0°06, h50km±4km, Error ellipse: s-maj=8.9km s-min=6.9km az=157.0*

*THE **09** 23:24:35.4, 34°63N×26°47E, h7km±3km, ML4.1/5, Error ellipse: s-maj=3.8km s-min=1.8km az=16.0*

*MOS **09** 23:24:35.6±1.0, 34°66N×26°51E, h58km, mb4.9/24, Error ellipse: s-maj=5.1km s-min=3.0km az=88.4*

*ATH **09** 23:24:36.1, 34°75N×26°46E, h31km±1km, ML4.1/18, Error ellipse: s-maj=1.9km s-min=0.7km az=344.0*

*MED_RC **09** 23:24:36.0±0.4, 34°59N×26°57E, h41km±2km, MW4.6/13, Moment Tensor Solution.Mantle waves: s13,c16; Duration: 1§0 Moment tensor: Scale 10¹⁶Nm; Mrr0.73±.14; Mθθ-1.09±.08; Mφφ0.36±.09; Mrθ0.30±.05; Mrφ-0.21±.08; Mθφ-0.10±.05; Best double couple: M₀0.99000×10¹⁶ NP1:φs243.00000°, δ39.00000°, λ62.00000°. NP2:φs98.00000°, δ56.00000°, λ111.00000°. Principal axes: T 0.8200, Plg70.0000°, Azm57.0000°; N 0.3400, Plg17.0000°, Azm266.0000°; P -1.1600, Plg9.0000°, Azm173.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*GII **09** 23:24:36.4±0.3, 34°32N×26°81E, h60km, mb4.0/2, MD3.8/3*

*DDA **09** 23:24:36.0, 34°62N×26°58E, h85km±43km, MW4.4*

ISC 09 23:24:34.7±0.5, 34°54N±0°03×26°59E±0°03, h41km±4km, n624, σ1§71/680, mb4.6/92, MS3.8/17, 32C-21D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.65**	**332**	P	**Pn**	**23 24 45.4**	**-2.1**
ZKR				S	**Sn**	**23 24 52.4**	**-4.3**
ZKR				AML	AML	23 25 04.3	
	comp=E,50656μm,0.7s						
ZKR				AML	AML	23 25 07.3	
	comp=N,27170μm,0.6s						
ZKR	**Zakros**	**0.65**	**332**	P	**Pn**	**23 24 45.4**	**-2.1**
ZKR				S	**Sn**	**23 24 55.5**	**-1.2**
STIA	**Sitia Lasithi**	**0.78**	**329**	P	**Pn**	**23 24 47.5**	**-1.7**
FRMA	**Ierapetra Chan**	**0.85**	**305**	P	**Pn**	**23 24 47.6**	**-2.6**
NPS	**Neapolis**	**1.08**	**312**	P	**Pn**	**23 24 53.2**	**-0.2**
NPS				S	**Sn**	**23 25 05.4**	**-1.8**
NPS				AML	AML	23 25 17.3	
	comp=E,26382μm,0.9s						
NPS				AML	AML	23 25 22.3	
	comp=N,18235μm,0.9s						
NPS	**Neapolis**	**1.08**	**312**	P	**Pn**	**23 24 53.2**	**-0.2**
NPS				S	**Sn**	**23 25 05.3**	**-1.8**
NPS	**Neapolis**	**1.08**	**312**	P	**Pn**	**23 24 53.2**	**-0.2**
NPS				S	**Sn**	**23 25 08.1**	**+0.9**
	comp=N,11μm,0.9s						
LAST	**Lasithi**	**1.10**	**305**	P	**Pn**	**23 24 53.0**	**-0.7**
LAST				S	**Sn**	**23 25 06.5**	**-1.4**
LAST				AML	AML	23 25 23.5	
	comp=N,21152μm,1.3s						
LAST				AML	AML	23 25 24.5	
	comp=E,20397μm,1.2s						
LAST	**Lasithi**	**1.10**	**305**	P	**Pn**	**23 24 53.0**	**-0.7**
LAST				S	**Sn**	**23 25 06.5**	**-1.4**
	comp=E,11μm,1.2s						
KARP	**Karpathos**	**1.11**	**25**	P	**Pn**	**23 24 55.4**	**+1.5**
KARP				S	**Sn**	**23 25 08.1**	**+0.1**
KARP				AML	AML	23 25 20.6	
	comp=E,37926μm,0.8s						
KARP				AML	AML	23 25 27.4	
	comp=N,28712μm,0.7s						
KARP	**Karpathos**	**1.11**	**25**	PN	**Pn**	**23 24 56.4**	**+2.6**
KARP				SN	**Sn**	**23 25 12.9**	**+4.9**
KARP	**Karpathos**	**1.11**	**25**	⇑P	**Pn**	**23 24 56.4**	**+2.6**
KARP				S	Sn	23 25 17.6	+10
KARP				AML	AML	23 25 20.2	
	comp=N,38nm,0.8s						
KARP				AML	AML	23 25 20.2	
	comp=N,38nm,0.8s						
KARP				AML	AML	23 25 26.6	
	comp=N,29nm,0.7s						
KARP				AML	AML	23 25 26.6	
	comp=N,29nm,0.7s						
KARP	**Karpathos**	**1.11**	**25**		**Pn**	**23 24 55.6**	**+1.7**
KARP	**Karpathos**	**1.11**	**25**	P	**Pn**	**23 24 55.4**	**+1.5**
HRKL	**Herakleio**	**1.45**	**303**	PN	**Pn**	**23 25 00.7**	**+2.4**
HRKL				SN	**Sn**	**23 25 20.9**	**+4.8**
KSTL	**Kastelli Herak**	**1.46**	**302**	P	**Pn**	**23 24 55.2**	**-3.4**
IACM	**Heraklion**	**1.46**	**302**	P	**Pn**	**23 25 00.2**	**+1.6**
IACM				S	**Sn**	**23 25 16.5**	**-0.1**
IACM				AML	AML	23 25 35.4	
	comp=N,65722μm,1.1s						
IACM				AML	AML	23 25 42.1	
	comp=E,71895μm,0.9s						
IACM	**Heraklion**	**1.46**	**302**	P	**Pn**	**23 25 00.2**	**+1.6**
SIVA	**Sivas**	**1.54**	**289**	P	**Pn**	**23 25 01.1**	**+1.4**
SIVA				AML	AML	23 25 40.9	
	comp=N,14192μm,1.0s						
SIVA				AML	AML	23 25 44.0	
	comp=E,19534μm,0.7s						
SIVA	**Sivas**	**1.54**	**289**	P	**Pn**	**23 25 01.1**	**+1.4**
IDI	**Anoyia**	**1.58**	**299**	Pg	**Pn**	**23 25 01.1**	**+0.8**
	comp=E,74nm,0.3s,baz=123,slow=12,SNR=519						
IDI				Lg	Lg	23 25 20.8	
	comp=E,110nm,0.3s,baz=36,slow=16,SNR=4.8						
IDI	**Anoyia**	**1.58**	**299**	P	**Pn**	**23 25 01.5**	**+1.2**
IDI				S	**Sn**	**23 25 19.3**	**-0.3**
IDI				AML	AML	23 25 30.0	
	comp=E,4763μm,0.5s						
IDI				AML	AML	23 25 31.1	
	comp=N,5599μm,0.9s						
IDI	**Anoyia**	**1.58**	**299**	PN	**Pn**	**23 25 02.4**	**+2.1**
IDI	**Anoyia**	**1.58**	**299**	Pn	**Pn**	**23 25 02.7**	**+2.4**
IDI	**Anoyia**	**1.58**	**299**	P	**Pn**	**23 25 01.5**	**+1.2**
IDI				S	**Sn**	**23 25 24.0**	**+4.4**
	comp=N,3μm,0.7s						
ANAF	**Anafi Island**	**1.94**	**340**	P	**Pn**	**23 25 06.1**	**+1.0**
ANAF				AML	AML	23 25 32.9	
	comp=E,14338μm,0.4s						
ANAF				AML	AML	23 25 39.2	
	comp=N,11637μm,0.4s						
ANAF	**Anafi Island**	**1.94**	**340**	P	**Pn**	**23 25 06.1**	**+1.0**
THR6	**Thira Island,**	**2.06**	**332**	P	**Pn**	**23 25 07.4**	**+0.6**
THR6	**Thira Island,**	**2.06**	**332**	P	**Pn**	**23 25 07.4**	**+0.6**
SAP1	**Santorini-Akro**	**2.06**	**332**	P	**Pn**	**23 25 07.5**	**+0.7**
SAP1	**Santorini-Akro**	**2.06**	**332**	P	**Pn**	**23 25 07.5**	**+0.7**
THR8	**Santorini-Mono**	**2.08**	**334**	P	**Pn**	**23 25 07.3**	**+0.3**
THR8	**Santorini-Mono**	**2.08**	**334**	P	**Pn**	**23 25 07.3**	**+0.3**
GVD	**Gavdhos**	**2.08**	**279**	P	**Pn**	**23 25 08.8**	**+1.8**
GVD				S	**Sn**	**23 25 33.4**	**+1.6**
GVD				AML	AML	23 25 56.0	
	comp=E,4302μm,0.5s						
GVD				AML	AML	23 26 05.2	
	comp=N,3751μm,0.5s						
GVD	**Gavdhos**	**2.08**	**279**	PN	**Pn**	**23 25 08.9**	**+1.8**
GVD	**Gavdhos**	**2.08**	**279**	P	**Pn**	**23 25 08.8**	**+1.8**
GVD				S	**Sn**	**23 25 33.4**	**+1.6**
	comp=N,2μm,0.5s						
SAP2K	**Karterados**	**2.09**	**334**	P	**Pn**	**23 25 08.1**	**+0.9**
SAP2K	**Karterados**	**2.09**	**334**	P	**Pn**	**23 25 08.1**	**+0.9**
ARG	**Arkhangelos**	**2.10**	**36**	P	**Pn**	**23 25 09.5**	**+2.2**
ARG				AML	AML	23 25 54.6	
	comp=N,5460μm,1.7s						
ARG				AML	AML	23 25 55.0	
	comp=E,4732μm,1.3s						
ARG	**Arkhangelos**	**2.10**	**36**	PN	**Pn**	**23 25 09.2**	**+1.9**
ARG	**Arkhangelos**	**2.10**	**36**	⇑P	**Pn**	**23 25 09.6**	**+2.3**
ARG	**Arkhangelos**	**2.10**	**36**	P	**Pn**	**23 25 09.5**	**+2.2**
SNT1	**Gialos, Santor**	**2.10**	**334**	P	**Pn**	**23 25 08.2**	**+0.9**
SNT1	**Gialos, Santor**	**2.10**	**334**	P	**Pn**	**23 25 08.2**	**+0.9**
SNT5	**Nea Kammeni, S**	**2.10**	**333**	P	**Pn**	**23 25 08.1**	**+0.7**
SNT5	**Nea Kammeni, S**	**2.10**	**333**	P	**Pn**	**23 25 08.1**	**+0.7**
THR7	**Fira-Santorini**	**2.11**	**334**	P	**Pn**	**23 25 08.0**	**+0.5**
THR7	**Fira-Santorini**	**2.11**	**334**	P	**Pn**	**23 25 08.0**	**+0.5**
NIS1	**Nisyros Isl.**	**2.12**	**13**	P	**Pn**	**23 25 08.8**	**+1.1**
NIS1				AML	AML	23 25 50.9	
	comp=E,9765μm,0.7s						
NIS1				AML	AML	23 26 04.6	
	comp=N,6832μm,0.7s						
NIS1	**Nisyros Isl.**	**2.12**	**13**	PN	**Pn**	**23 25 08.7**	**+1.1**
NIS1	**Nisyros Isl.**	**2.12**	**13**	P	**Pn**	**23 25 08.8**	**+1.1**
NISR	**Nisiros**	**2.12**	**12**	P	**Pn**	**23 25 08.1**	**+0.5**
NISR	**Nisiros**	**2.12**	**12**	P	**Pn**	**23 25 08.1**	**+0.5**
THT2	**Imerovigli**	**2.12**	**334**	PN	**Pn**	**23 25 09.1**	**+1.4

comp=E,117nm,0.7s
TAVA IAML 23 26 15.0
comp=N,152nm,0.6s
ELL Elmali 3.49 50 P **Pn** **23 25 28.6 +2.0**
ELL Elmali 3.49 50 P **Pn** **23 25 28.3 +1.8**
ELL Elmali 3.49 50 **Pn** **23 25 28.6 +2.0**
DGB zmir 3.52 4 *i* P **Pn** **23 25 27.4 +0.6**
DGB *i* S Sn 23 26 27.2 +20
DGB IAML 23 26 45.0
comp=E,324nm,1.0s
DGB IAML 23 26 46.0
comp=N,160nm,1.0s
AKUM Antalya-Kumluc 3.55 59 *i* P **Pn** **23 25 28.2 +1.0**
AKUM *i* S **Sn** **23 26 06.6 -1.3**
AKUM IAML 23 26 12.0
comp=N,122nm,0.5s
AKUM IAML 23 26 15.0
comp=E,204nm,0.5s
MNVA Monemvasia 3.60 308 P **Pn** **23 25 28.7 +0.7**
GOLH Golhisar 3.62 41 *i* P **Pn** **23 25 29.8 +1.5**
GOLH *i* S **Sn** **23 26 03.3 -6.6**
GOLH IAML 23 26 24.0
comp=N,481nm,0.7s
VLI Veliai 3.69 307 P **Pn** **23 25 29.3 +0.2**
VLI Veliai 3.69 307 P **Pn** **23 25 29.3 +0.2**
URLA Izmir 3.82 0 *i* P **Pn** **23 25 31.1 +0.1**
URLA *i* S Sn 23 26 39.0 +24
URLA IAML 23 26 58.0
comp=N,204nm,1.3s
URLA IAML 23 27 02.0
comp=E,177nm,1.0s
BLCB Balcova 3.86 5 P **Pn** **23 25 32.5 +1.0**
KARY Karystos 3.90 334 P **Pn** **23 25 32.7 +0.6**
KARY Karystos 3.90 334 P **Pn** **23 25 32.7 +0.6**
KORT Korkueli 3.93 50 *i* P **Pn** **23 25 34.7 +2.2**
KORT *i* S **Sn** **23 26 16.9 -0.6**
KORT IAML 23 26 25.0
comp=E,444nm,0.6s
KORT IAML 23 26 31.0
comp=N,300nm,1.1s
KRND KRANIDI 3.98 317 P **Pn** **23 25 34.2 +1.0**
KRND KRANIDI 3.98 317 P **Pn** **23 25 34.2 +1.0**
VLY Voula,Athens 4.01 327 P **Pn** **23 25 35.0 +1.5**
VLY Voula,Athens 4.01 327 P **Pn** **23 25 35.0 +1.5**
OSC1 CSNet OBS 1 4.03 104 P **Pn** **23 25 32.1 -1.8**
OSC1 S **Sn** **23 26 19.8 0.0**
PSRA Psara 4.08 349 P **Pn** **23 25 35.5 +1.0**
ATHU Athens Univers 4.11 327 P **Pn** **23 25 36.2 +1.3**
ATHU Athens Univers 4.11 327 P **Pn** **23 25 36.2 +1.3**
DION Dionisos Attik 4.13 330 P **Pn** **23 25 36.7 +1.4**
DION Dionisos Attik 4.13 330 P **Pn** **23 25 36.7 +1.4**
PTL Penteli 4.14 329 P **Pn** **23 25 36.7 +1.3**
PTL Penteli 4.14 329 P **Pn** **23 25 36.7 +1.3**
ATH Athens Observa 4.14 327 P **Pn** **23 25 35.8 +0.5**
ATH Athens Observa 4.14 327 P **Pn** **23 25 38.6 +3.2**
ATH Athens Observa 4.14 327 P **Pn** **23 25 35.8 +0.5**
EPID Epidavros 4.16 319 P **Pn** **23 25 37.1 +1.3**
EPID Epidavros 4.16 319 P **Pn** **23 25 37.0 +1.3**
BRDR BURDUR-Merkez 4.23 41 *i* P **Pn** **23 25 38.0 +1.3**
BRDR *i* S **Sn** **23 26 24.8 0.0**
BRDR IAML 23 26 31.0
comp=N,152nm,0.5s
BRDR IAML 23 26 32.0
comp=E,111nm,0.8s
MANT Manisa 4.25 21 *i* P **Pn** **23 25 38.0 +0.7**
MANT *i* S **Sn** **23 26 25.0 -0.6**
MANT Manisa 4.25 21 Pn **Pn** **23 25 37.9 +0.7**
VLX Vlachokerasia 4.43 311 P **Pn** **23 25 40.2 +0.7**
VLX Vlachokerasia 4.43 311 P **Pn** **23 25 40.2 +0.7**
ZEDA zmir-Bergama 4.44 5 *i* P **Pn** **23 25 40.9 +1.4**
ZEDA *i* S Sn 23 26 52.6 +23
ZEDA IAML 23 27 12.0
comp=E,74nm,1.3s
AKHS Akhisar 4.45 12 *i* P **Pn** **23 25 39.7 +0.1**
VILL Villia 4.48 325 P **Pn** **23 25 41.5 +1.4**
VIL2 Platees 4.54 325 P **Pn** **23 25 41.5 +0.6**
LTK Loutraki 4.55 321 P **Pn** **23 25 41.9 +0.9**
LTK Loutraki 4.55 321 P **Pn** **23 25 41.9 +0.9**
KYMI Kymi, Euboea I 4.55 335 P **Pn** **23 25 42.3 +1.3**
KYMI Kymi, Euboea I 4.55 335 P **Pn** **23 25 42.4 +1.3**
ISP Isparta 4.57 43 P **Pn** **23 25 42.1 +0.7**
ISP Isparta 4.57 43 Pn **Pn** **23 25 42.1 +0.7**
TRIP Tripoli 4.60 312 P **Pn** **23 25 42.6 +0.9**
TRIP Tripoli 4.60 312 P **Pn** **23 25 42.6 +0.9**
USAK Uak-Merkez 4.61 24 *i* P **Pn** **23 25 42.8 +1.0**
USAK *i* S **Sn** **23 26 32.1 -2.0**
USAK IAML 23 26 36.0
comp=E,123nm,0.9s
USAK IAML 23 26 36.0
comp=N,93nm,0.8s
ITM Ithomi 4.61 306 P **Pn** **23 25 42.7 +0.8**
ITM Ithomi 4.61 306 PN **Pn** **23 25 42.4 +0.5**
ITM Ithomi 4.61 306 Pn **Pn** **23 25 43.3 +1.4**
ITM Ithomi 4.61 306 P **Pn** **23 25 42.7 +0.8**
SKY Skiros Island 4.63 340 P **Pn** **23 25 43.4 +1.2**
SKY Skiros Island 4.63 340 P **Pn** **23 25 43.4 +1.2**
KZIL AFYON_Kizioren 4.69 37 *i* P **Pn** **23 25 43.0 -0.1**
KZIL IAML 23 26 50.0
comp=E,68nm,0.9s
KZIL *i* S Sn 23 26 54.5 +18
KZIL IAML 23 27 08.0
comp=N,50nm,0.7s
SIGR SIGRI 4.70 353 P **Pn** **23 25 43.7 +0.6**
SIGR SIGRI 4.70 353 P **Pn** **23 25 43.7 +0.6**
AKMS Akamas 4.76 83 P **Pn** **23 25 42.8 -1.1**
AKMS AML AML 23 26 38.6
comp=N,1.3nm,0.6s
AKMS AML AML 23 26 44.3
comp=N,2.6nm,0.4s
GUR Goura 4.83 316 P **Pn** **23 25 45.1 +0.2**
GUR Goura 4.83 316 P **Pn** **23 25 45.1 +0.2**
BAGO Egridir - ISPA 4.84 43 *i* P **Pn** **23 25 46.5 +1.5**
BAGO *i* S **Sn** **23 26 33.4 -6.5**
STEP BALIKESIR_Sava 4.92 10 *i* P **Pn** **23 25 47.1 +1.0**
NATA Nata 4.94 85 P **Pn** **23 25 45.5 -0.9**
OSC2 CSNet OBS 4 4.95 106 S **Sn** **23 26 42.3 -0.1**
ALFC Alefka 4.98 81 P **Pn** **23 25 46.4 -0.6**
ALFC AML AML 23 26 44.8
comp=N,1.9nm,0.4s
ALFC AML AML 23 26 47.1
comp=N,1.9nm,0.6s
LKR Lokris 5.02 326 P **Pn** **23 25 48.0 +0.6**
LKR Lokris 5.02 326 P **Pn** **23 25 48.0 +0.6**
AOS Alonnisos 5.11 336 P **Pn** **23 25 49.7 +1.0**
AOS Alonnisos 5.11 336 P **Pn** **23 25 49.7 +1.0**
AFYO Afyonkarahisar 5.19 34 *i* P **Pn** **23 25 50.4 +0.6**
SZAC Souni 5.19 86 ⇓P **Pn** **23 25 49.1 -0.8**
BAYC CANAKKALE_Bayr 5.20 360 *i* P **Pn** **23 25 50.4 +0.5**
LEF Lefka 5.22 82 ⇓P Pn 23 25 55.2 +5.1
KALE Kalithea 5.26 318 P **Pn** **23 25 51.3 +0.5**
KALE Kalithea 5.26 318 P **Pn** **23 25 51.3 +0.5**
AXAR Agios Charalam 5.27 324 P **Pn** **23 25 52.7 +1.8**
AXAR Agios Charalam 5.27 324 P **Pn** **23 25 52.7 +1.8**
TRIZ Trizonia 5.28 318 P **Pn** **23 25 51.7 +0.7**
TRIZ Trizonia 5.28 318 P **Pn** **23 25 51.7 +0.7**
EFP Efpalio 5.41 317 P **Pn** **23 25 54.0 +1.1**
EFP Efpalio 5.41 317 P **Pn** **23 25 54.0 +1.1**
NEO Neokhori 5.47 331 P **Pn** **23 25 54.9 +1.2**
NEO Neokhori 5.47 331 P **Pn** **23 25 54.9 +1.2**
ASGA Asgata 5.50 86 P **Pn** **23 25 53.6 -0.4**
CSS Mathiatis 5.57 84 Pn **Pn** **23 25 54.4 -0.6**
CSS Mathiatis 5.57 84 ⇑P **Pn** **23 25 54.3 -0.7**
CSS Mathiatis 5.57 84 Pn **Pn** **23 25 54.8 -0.2**
AGG Agios Georgios 5.63 324 *i* P **Pn** **23 25 57.2 +1.3**
AGG *i* S **Sn** **23 26 50.9 -8.4**
AGG Agios Georgios 5.63 324 P **Pn** **23 25 57.5 +1.6**
AGG Agios Georgios 5.63 324 Pn **Pn** **23 25 57.5 +1.6**
AGG Agios Georgios 5.63 324 P **Pn** **23 25 57.2 +1.3**
MVOU Mavrovouni 5.82 83 P **Pn** **23 25 58.3 -0.1**
KESN Edirne-Kesan 6.28 1 *i* P **Pn** **23 26 05.7 +0.6**
ALN Alexandroupoli 6.37 356 *i* P **Pn** **23 26 06.5 +0.6**
ALN Alexandroupoli 6.37 356 P **Pn** **23 26 07.8 +1.9**
ALN Alexandroupoli 6.37 356 Pn **Pn** **23 26 07.8 +1.9**
MDUB Mudurnu 6.97 30 Pn **Pn** **23 26 16.3 +2.0**
OFRI `Ofer 7.26 103 Pn **Pn** **23 26 17.1 -1.2**
RZN Rozhen 7.29 349 *i* P **Pn** **23 26 21.3 +2.5**
MMB Musomiste 7.39 343 *i* P **Pn** **23 26 21.6 +1.5**
SLTI Sal'it 7.43 106 Pn **Pn** **23 26 18.7 -1.9**
SLTI Sn **Sn** **23 27 38.7 -4.9**
DQRL Deir Qamar 7.50 94 *e*P **Pn** **23 26 20.6 -1.0**
MMA0B Mount Meron ar 7.50 99 Pn **Pn** **23 26 20.6 -0.9**
MMAI Mount Meron Ar 7.50 99 Pn **Pn** **23 26 20.1 -1.4**
comp=N,12nm,0.3s,baz=285,slow=11,SNR=97
MMAI Sn **Sn** **23 27 41.2 -4.1**
comp=N,7.8nm,0.3s,baz=296,slow=11,SNR=2.1
KZIT Kziot 7.51 117 Pn Pn 23 26 19.1 -2.6
KZIT Sn **Sn** **23 27 40.9 -4.6**
BHL Bhannes 7.54 92 *e*P **Pn** **23 26 21.9 -0.3**
DIM Dimitrovgrad 7.55 354 *i* P **Pn** **23 26 23.9 +1.8**
AMAZ Amatzia 7.61 111 Pn **Pn** **23 26 21.3 -1.7**
QRWL Qaraoun 7.61 95 *e*P **Pn** **23 26 22.1 -1.1**
BR131 Keskin Array S 7.65 45 P **Pn** **23 26 25.2 +1.5**
BR131 Keskin Array S 7.65 45 Pn **Pn** **23 26 25.2 +1.5**
BRTR Keskin Array B 7.65 45 Pn **Pn** **23 26 24.9 +1.2**
comp=N,0.6nm,0.3s,baz=221,slow=13,SNR=20
BRTR Sn **Sn** **23 27 49.0 -0.1**
comp=N,1.2nm,0.3s,baz=215,slow=27,SNR=11
BRTR LR LR 23 30 30.3
comp=N,722nm,19.4s,baz=238,slow=47
BRTR Keskin Array B 7.65 45 Pn **Pn** **23 26 24.0 +0.3**
GEM Giv'at Ha'Em 7.66 97 Pn **Pn** **23 26 22.8 -1.0**
MMLI Mount Malkishu 7.67 103 Pn **Pn** **23 26 22.5 -1.4**
NATI Neve Ativ 7.71 97 Pn **Pn** **23 26 23.8 -0.6**
NATI Sn **Sn** **23 27 48.8 -1.7**
RCY Rachaya 7.75 95 *e*P **Pn** **23 26 23.6 -1.4**
HMDT Nahal Hemdat 7.81 104 Pn **Pn** **23 26 25.1 -0.7**
HMDT Sn **Sn** **23 27 49.9 -3.1**
KKB Krupnik 7.82 340 *i* P **Pn** **23 26 26.6 +0.7**
YTIR Yattir 7.83 111 Pn **Pn** **23 26 24.9 -1.3**
YTIR Sn **Sn** **23 27 49.3 -4.3**
UJAP Al Uja 7.87 107 Pn **Pn** **23 26 24.9 -1.6**
UJAP Sn **Sn** **23 27 50.7 -3.6**
STIP Stip 7.94 335 *i* Pn **Pn** **23 26 29.1 +1.6**
OHR Ohrid 8.00 327 *i* Pn **Pn** **23 26 30.6 +2.2**
DAMI2 DAM2 8.17 112 Pn **Pn** **23 26 29.2 -1.4**
GHAJ Ghor Haditha 8.21 111 Pn **Pn** **23 26 30.5 -0.7**
PRNI Paran 8.24 118 Pn **Pn** **23 26 30.1 -1.7**
PRNI Sn **Sn** **23 27 59.5 -4.2**
ZFRI Zfri 8.27 116 Pn **Pn** **23 26 30.1 -1.9**
KARJ KARJ 8.35 112 Pn Pn 23 26 26.2 -7.0
KARJ Sn Sn 23 27 52.3 -14
HRFI Mount Harif 8.44 120 Pn **Pn** **23 26 33.2 -1.3**
SKO Skopje 8.46 333 *i* Pn **Pn** **23 26 34.1 -0.5**
VTS Vitosha 8.49 343 *i* P **Pn** **23 26 38.1 +3.0**
MBRI Mt Berech 8.49 122 Pn **Pn** **23 26 33.7 -1.5**
SCTE Santa Cesarea 8.51 313 Pn **Pn** **23 26 34.6 -0.6**
EIL Elat 8.59 122 Pn **Pn** **23 26 35.5 -1.0**
comp=N,5.0nm,0.3s,baz=267,slow=2.1,SNR=77
EIL Sn Sn 23 28 06.4 -5.8
comp=N,5.2nm,0.3s,baz=221,slow=19,SNR=4.9
EIL Elat 8.59 122 Pn **Pn** **23 26 35.0 -1.5**
EIL Sn **Sn** **23 28 07.5 -4.7**
ILGA Ilgaz 8.61 39 Pn **Pn** **23 26 38.5 +1.6**
TIR Tirane 8.62 324 ⇑P **Pn** **23 26 35.1 -1.8**
TIR ⇓S **Sn** **23 28 11.9 -1.0**
TIR Tirane 8.62 324 P **Pn** **23 26 38.7 +1.8**
TIR Tirane 8.62 324 **Pn** **23 26 38.7 +1.8**
PRD Provadia 8.68 4 *i* P **Pn** **23 26 39.4 +1.8**
SZH Strazhica 8.73 357 *i* P Pn 23 26 28.0 -10
ASF Jabal al Asfar 8.94 102 Pn **Pn** **23 26 40.0 -1.4**
comp=N,0.2nm,0.3s,baz=240,slow=20,SNR=13
ASF Sn **Sn** **23 28 17.0 -3.9**
comp=N,0.2nm,0.3s,baz=306,slow=19,SNR=1.5
ASF Jabal al Asfar 8.94 102 P **Pn** **23 26 40.0 -1.4**
GAZ Gaziantep 9.02 70 Pn **Pn** **23 26 43.0 +0.6**
TIP Timpagrande 9.14 303 ⇓P **Pn** **23 26 41.1 -2.8**
TIP ⇓S **Sn** **23 28 20.7 -4.8**
TIP Timpagrande 9.14 303 **Pn** **23 26 42.6 -1.4**
CEL Celeste 9.39 296 **Pn** **23 26 46.8 -0.6**
TAR1 Taranto 9.50 312 *e*P **Pn** **23 26 46.8 -2.1**
TAR1 S **Sn** **23 28 28.5 -5.8**
DRME Dracevica, Mon 9.60 325 *e*Pn **Pn** **23 26 46.6 -3.6**
ICOR Ion Corvin 9.62 5 ⇓P **Pn** **23 26 52.2 +1.8**
PDG Podgorica 9.75 326 ⇓P **Pn** **23 26 49.1 -3.2**
PDG ⇓S **Sn** **23 28 37.3 -3.1**
PDG Podgorica 9.75 326 *e*Pn **Pn** **23 26 48.7 -3.6**
TOKA Tokat 9.76 51 Pn **Pn** **23 26 55.1 +2.7**
MATE Matera 9.93 311 ⇓P **Pn** **23 26 51.8 -3.0**
MATE ⇓S **Sn** **23 28 40.3 -4.6**
TIRR Tirgusor 10.01 8 P **Pn** **23 26 57.2 +1.4**
TIRR Tirgusor 10.01 8 Pn **Pn** **23 26 57.2 +1.4**
SG1 Sgolgore (BA) 10.06 312 *e*P **Pn** **23 26 54.6 -2.0**
SG1 S **Sn** **23 28 41.9 -6.2**
BAI Bari 10.10 313 *e*P **Pn** **23 26 54.0 -3.0**
BAI S **Sn** **23 28 41.2 -7.7**
HCY Herceg Novi 10.13 324 *e*Pn **Pn** **23 26 53.7 -3.8**
HARR Harsova 10.20 5 ⇓P **Pn** **23 27 00.8 +2.4**
HARR Harsova 10.20 5 ⇓P **Pn** **23 27 00.8 +2.4**
MALT Maltya 10.26 65 P **Pn** **23 26 59.9 +0.5**
VAE Valguarnera 10.29 290 Pn **Pn** **23 26 59.5 -0.2**
comp=N,3.2nm,0.3s,baz=170,slow=18,SNR=10
VAE Sn **Sn** **23 28 50.1 -3.7**
comp=N,1.9nm,0.3s,baz=40,slow=17,SNR=1.4
TREB Trebinje 10.40 324 *e*Pn Pn 23 26 54.3 -6.9
BRY Bratogost 10.45 325 *e*Pn Pn 23 26 56.7 -5.3
UPM Unac-Piva 10.52 328 *e*Pn **Pn** **23 26 59.5 -3.5**
CFR Carcaliu 10.70 6 ⇑P **Pn** **23 27 06.8 +1.6**
CFR Carcaliu 10.70 6 ⇑P **Pn** **23 27 06.8 +1.6**
DIVS Divibare 10.82 334 *e*Pn **Pn** **23 27 07.0 -0.1**
DIVS Divibare 10.82 334 **Pn** **23 27 07.1 -0.1**
STON Ston 10.83 323 *e*Pn Pn 23 27 01.4 -5.7
BBLS Lazići 10.85 337 *e*Pn **Pn** **23 27 03.9 -3.5**
VOIR 10.95 354 ⇓P **Pn** **23 27 09.4 +0.6**
VOIR 10.95 354 ⇓P **Pn** **23 27 09.4 +0.6**
MLR Muntele Rosu 10.95 358 Pn **Pn** **23 27 09.0 +0.1**
comp=N,0.0nm,0.3s,baz=183,slow=19,SNR=4.2
MLR LR LR 23 32 17.5
comp=N,680nm,19.2s,baz=195,slow=43
MLR Muntele Rosu 10.95 358 ⇑P **Pn** **23 27 11.0 +2.2**
MLR Muntele Rosu 10.95 358 P **Pn** **23 27 11.1 +2.2**
MLR Muntele Rosu 10.95 358 Pn **Pn** **23 27 11.1 +2.2**
BISRR Bisoca 11.00 0 ⇑P **Pn** **23 27 10.4 +0.9**
SGRT San Giovanni R 11.17 313 Pn **Pn** **23 27 09.4 -2.4**
HAPS Han Pijesak,Bl 11.22 331 *e*Pn Pn 23 27 06.8 -5.7
GZR Gura Zlata 11.23 346 ⇑P **Pn** **23 27 12.8 +0.2**
GZR Gura Zlata 11.23 346 ⇑P **Pn** **23 27 12.8 +0.2**
CLTB Caltabellotta 11.24 290 **Pn** **23 27 12.8 0.0**
CORL Corleone 11.24 291 **Pn** **23 27 13.5 +0.8**
PLOR Plostina 11.30 0 ⇓P **Pn** **23 27 15.6 +2.0**
PLOR Plostina 11.30 0 ⇓P **Pn** **23 27 15.6 +2.0**
VRI Vrincioaia 11.32 1 ⇓P **Pn** **23 27 15.8 +2.0**
VRI Vrincioaia 11.32 1 ⇓P **Pn** **23 27 15.8 +2.0**
PAOL Paolisi 11.50 308 **Pn** **23 27 15.9 -0.4**
BZS Buzias 11.70 343 ⇑P **Pn** **23 27 19.0 0.0**
BZS Buzias 11.70 343 ⇑P **Pn** **23 27 19.0 0.0**
MARD Mardin 11.84 72 Pn **Pn** **23 27 22.2 +1.2**
MGRS Mrkonjic Grad 12.29 326 *e*Pn **P** **23 27 39.0 +0.5**
BIZ Bicaz 12.40 358 ⇓P **Pn** **23 27 30.1 +1.6**
BLY Banja Luka 12.50 327 *e*Pn Pn 23 27 23.3 -6.6
AQU L'Aquila 12.94 311 P **Pn** **23 27 37.8 +1.8**
AQU L'Aquila 12.94 311 Pn **Pn** **23 27 37.8 +1.8**
BURAR Bucovina Array 13.11 356 ⇓P **Pn** **23 27 40.3 +2.0**
BURAR Bucovina Array 13.11 356 ⇓P **Pn** **23 27 40.3 +2.0**
BURAR Bucovina Array 13.11 356 Pn P 23 27 42.7 -5.0
MORH Mrgy, Hungar 13.13 335 *e*Pn Pn 23 27 30.8 -7.7
BUR08 Bucovina Ar. S 13.14 356 Pn **Pn** **23 27 40.6 +1.9**
NRCA Norcia 13.38 312 **Pn** **23 27 40.8 -1.2**
SOC Sochi 13.61 45 *e*P **Pn** **23 27 44.8 -0.3**
SOC *e* 23 30 16.0
SOC MLR MLR
comp=Z,383nm,15.0s
CRES Cresnjev 14.11 326 *e*Pn **Pn** **23 27 48.4 -3.4**
KEST Kesra 14.16 280 Pn **Pn** **23 27 51.5 -1.2**
comp=Z,0.2nm,0.3s,baz=66,slow=12,SNR=1.6
KEST Sn Sn 23 30 19.5 -9.0
comp=Z,0.1nm,0.3s,baz=96,slow=19,SNR=1.0
KEST Kesra 14.16 280 **Pn** **23 27 53.7 +1.0**
RIY Rijeka 14.21 323 *e*Pn Pn 23 27 47.8 -5.3
PSZ Piszkesteto 14.28 341 P **Pn** **23 27 54.6 +0.4**
PSZ Piszkesteto 14.28 341 **Pn** **23 27 54.6 +0.4**
UZH Uzhgorod 14.44 349 *e*P **P** **23 27 59.0 -3.4**
UZH *e*S **Sn** **23 30 39.0 +4.0**
UZH MLR MLR
comp=N,100nm,15.0s
UZH MLR MLR
comp=E,50nm,15.0s
UZH MLR MLR
comp=Z,90nm,15.0s
CEY Cerknica 14.53 324 *e*Pn Pn 23 27 53.2 -4.3
SRO2 Moca 14.57 338 *e*P **Pn** **23 27 54.2 -3.8**
SRO2 Moca 14.57 338 *e*P **Pn** **23 27 54.2 -3.8**
KOLS Kolonicke sedl 14.74 349 *e*P **P** **23 28 01.5 -4.2**
KOLS Kolonicke sedl 14.74 349 *e*P **P** **23 28 01.5 -4.2**
OSSC Osservatorio P 14.90 312 Pn **Pn** **23 28 01.8 -0.8**
SOKA Soboth 14.95 328 Pn **Pn** **23 28 03.1 -0.1**
comp=Z,2.8nm,0.5s
AKH Akhalkalaki 14.98 58 P **Pn** **23 28 04.4 +0.6**
AKH Akhalkalaki 14.98 58 Pn **Pn** **23 28 04.4 +0.6**
VYHS Vyhne 15.09 340 *e*P **Pn** **23 28 04.5 -0.5**
VYHS Vyhne 15.09 340 *e*P **Pn** **23 28 04.5 -0.5**
ARSA Arzberg 15.19 330 *e*Pn **Pn** **23 28 05.5 -0.8**
comp=Z,2.6nm,0.6s
KWP Kalwaria Pacla 15.35 350 P **P** **23 28 10.2 -2.3**
KWP Kalwaria Pacla 15.35 350 **P** **23 28 10.2 -2.3**
PRED Cave del Predi 15.45 324 Pn **Pn** **23 28 07.8 -2.0**
MODS Modra-Piesok 15.47 336 *e*P **P** **23 28 11.0 -2.8**
MODS Modra-Piesok 15.47 336 *e*P **P** **23 28 11.0 -2.8**
GNI Garni 15.48 63 *de*P **P** **23 28 12.9 -1.3**
GNI pmax pmax
comp=Z,28nm,1.7s
GNI Garni 15.48 63 **Pn** **23 28 10.7 +0.4**
KIV Kislovodsk 15.60 48 *e*P **P** **23 28 13.3 -2.1**
KIV pmax pmax
comp=Z,113nm,1.0s
KIV MLR MLR
comp=Z,343nm,13.0s
KIV Kislovodsk 15.60 48 Pn **P** **23 28 13.7 -1.7**
KIV IAmb IAmb 23 28 19.2
comp=Z,37nm,1.0s
CONA Conrad Observa 15.60 332 *e*Pn **Pn** **23 28 10.7 -1.0**
comp=Z,0.9nm,0.4s
KBZ Khabaz 15.61 49 Pn **P** **23 28 13.1 -2.2**
baz=180,slow=7.1
KBZ LR LR 23 36 13.4
comp=Z,164nm,18.8s,baz=24,slow=45
KBZ Khabaz 15.61 49 *ce*P **P** **23 28 14.3 -1.1**
KBZ pmax pmax
comp=Z,44nm,1.1s
TEOL Teolo 15.71 318 Pn **P** **23 28 15.9 -0.6**
TEOL IAmb IAmb 23 28 28.6
comp=Z,16nm,0.7s
ZEI Tsey 15.82 53 *e*P **P** **23 28 16.1 -1.8**
ZEI pmax pmax
comp=Z,36nm,1.2s
NAX Nakhchivan 15.82 67 P **P** **23 28 17.5 -0.4**
ZOU Zoufplan 15.82 323 **P** **23 28 14.8 -3.1**
CIMO Cimolais 15.92 322 **P** **23 28 18.5 -0.3**
KBA Koelnbreinsper 16.02 325 *e*Pn **P** **23 28 16.8 -3.3**
comp=Z,1.8nm,0.3s,SNR=4.1
CTI Castel Tesino 16.16 320 P **Pn** **23 28 17.7 -1.1**
CTI pmax pmax
comp=Z,9.0nm,0.7s
CTI Castel Tesino 16.16 320 **Pn** **23 28 17.7 -1.1**
ABTA Abfaltersbach 16.16 323 *e*Pn **Pn** **23 28 17.6 -1.6**
comp=Z,1.5nm,0.4s
MOA Molln 16.19 329 *e*Pn **P** **23 28 20.8 -1.0**
comp=Z,0.8nm,0.3s
AKASG Malin Array Be 16.27 6 Pn **Pn** **23 28 16.7 -3.4**
comp=Z,1.4nm,0.3s,baz=192,slow=11,SNR=6.1
AKASG LR LR 23 35 17.9
comp=Z,294nm,21.2s,baz=185,slow=40
AKASG Malin Array Be 16.27 6 *ce*P **P** **23 28 22.2 -0.4**
AKASG pmax pmax
comp=Z,6.0nm,0.3s
AKASG Malin Array Be 16.27 6 **P** **23 28 20.3 -2.3**
AKBB Malin Array Si 16.27 6 *ce*P **P** **23 28 20.7 -1.9**
AKBB Malin Array Si 16.27 6 Pn **Pn** **23 28 19.6 -0.5**
AKBB **S** **23 31 29.4 -1.4**
KRUC Moravsky 16.36 336 *e*PN **Pn** **23 28 20.6 -0.7**
GOF Gofitskoye 16.41 45 ⇑*e*P **P** **23 28 24.2 -0.1**
GOF pmax pmax
comp=Z,80nm,1.4s
OJC Ojcow 16.45 344 P **Pn** **23 28 21.4 -0.9**
OJC Ojcow 16.45 344 Pn **Pn** **23 28 21.4 -0.9**
VRAC Vranov 16.50 336 Pn **Pn** **23 28 21.6 -1.5**
comp=Z,0.4nm,0.3s,baz=147,slow=11,SNR=6.1
VRAC LR LR 23 35 19.5
comp=Z,140nm,20.2s,baz=164,slow=39
VRAC Vranov 16.50 336 ⇑P **P** **23 28 22.4 -2.9**
VRAC Vranov 16.50 336 *e*PN **Pn** **23 28 21.8 -1.3**
VRAC Vranov 16.50 336 ⇑P **P** **23 28 22.4 -2.9**
MORC Moravsky Berou 16.62 339 *e*PN **Pn** **23 28 23.2 -1.4**
MORC Moravsky Berou 16.62 339 P **Pn** **23 28 23.1 -1.5**
MORC Moravsky Berou 16.62 339 Pn **Pn** **23 28 23.1 -1.5**
WTTA Wattenberg 16.97 323 *e*Pn **P** **23 28 29.7 -1.0**
comp=Z,3.1nm,0.4s
WATA Walderalm 17.05 323 *e*Pn **P** **23 28 29.5 -2.0**
comp=Z,18nm,1.2s
SQTA Sankt Quirin 17.16 322 *e*Pn **P** **23 28 31.8 -0.9**
comp=Z,1.8nm,0.3s
GEC2 GERESS Array S 17.20 330 **P** **23 28 30.8 -2.3**
GERES GERESS Array B 17.20 330 P **P** **23 28 31.0 -2.1**
comp=Z,0.6nm,0.3s,baz=142,slow=12,SNR=30
GERES LR LR 23 36 44.1
comp=Z,260nm,18.4s,baz=146,slow=43
GERES GERESS Array B 17.20 330 P **P** **23 28 31.3 -1.8**
GERES GERESS Array B 17.20 330 Pn **P** **23 28 31.2 -1.8**
GROC Groznyy 17.25 54 *e*P **P** **23 28 32.8 -0.8**
GROC *e*S **Sn** **23 31 43.2 -0.1**
GROC pmax pmax
comp=Z,26nm,1.2s
FUORN Ofenpass-Fuorn 17.26 319 Pn **P** **23 28 34.1 +0.2**
FETA Feichten 17.27 321 *e*Pn **P** **23 28 33.6 -0.4**
comp=Z,2.7nm,0.6s
ZKTA Zakatala 17.27 60 P **P** **23 28 33.7 -0.2**
MOTA Moosalm 17.30 322 *e*Pn **P** **23 28 32.1 -2.1**
comp=Z,2.4nm,0.5s
MNGR Mingechevir, A 17.37 63 P **P** **23 28 35.3 +0.4**
KHC Kasperske Hory 17.47 330 *e*P **P** **23 28 34.4 -1.6**
KHC Kasperske Hory 17.47 330 *e*P **P** **23 28 34.4 -1.6**
KHC *ex* x 23 28 44.0
DPC Dobruska-Polom 17.50 338 *e*P **P** **23 28 34.8 -1.5**
DPC Dobruska-Polom 17.50 338 *e*P **P** **23 28 34.8 -1.5**
DPC *ex* x 23 28 39.7
RETA Reutte 17.56 322 *e*Pn **P** **23 28 35.7 -1.4**
comp=Z,3.4nm,0.4s,SNR=5.4
DAVOX Davos/Dischmat 17.57 319 P **P** **23 28 35.5 -1.8**
comp=Z,0.7nm,0.3s,baz=138,slow=16,SNR=4.3
DAVOX LR LR 23 36 48.6
comp=Z,356nm,19.3s,baz=82,slow=42
TUE Stuetta 17.68 318 **P** **23 28 38.2 -0.2**
PBCC Pribram 17.75 332 *e*P **Pn** **23 28 36.5 -2.1**
PBCC *ex* x 23 28 44.0
CHVC Chvalec 17.79 338 *e*P **P** **23 28 38.3 -1.2**
CHVC *ex* x 23 28 45.0
PRU Pruhonice 17.79 334 *e*P **P** **23 28 38.8 -0.7**
PRU Pruhonice 17.79 334 *e*P **P** **23 28 38.8 -0.7**
PRU *ex* x 23 28 47.0
DAVA Damuels 17.89 320 *e*Pn **P** **23 28 40.4 -0.4**
comp=Z,3.0nm,0.3s
PRA Prague 17.90 334 *e*P **P** **23 28 40.8 +0.1**
PRA Prague 17.90 334 *e*P **P** **23 28 40.8 +0.1**
KSP Ksiaz 17.94 338 *e*P **P** **23 28 40.2 -0.9**
PVCC Panska Ves 18.23 335 *e*P **Pn** **23 28 44.1 -0.4**
PVCC Panska Ves 18.23 335 *e*P **Pn** **23 28 44.1 -0.4**
MAK Makhachkala 18.32 56 *e*P **Pn** **23 28 45.2 -0.4**
MAK *e*S **S** **23 32 10.3 -2.4**
MAK pmax pmax
comp=Z,234nm,1.0s
MAK MLR MLR
comp=Z,153nm,15.0s
BRG Berggiesshubel 18.74 334 *e*P **Pn** **23 28 49.4 -1.2**
comp=Z,17nm,1.5s
BRG Berggiesshubel 18.74 334 *e*P **Pn** **23 28 49.4 -1.2**
SENIN Lac Senin/Sane 18.79 315 P **Pn** **23 28 50.8 -0.7**
SENIN IAmb IAmb 23 28 59.1
comp=Z,20nm,0.9s
SENIN **Sn** **23 32 17.6 -3.1**
NKC Novy Kostel 18.79 331 *e*P **Pn** **23 28 51.1 -0.2**
NKC Novy Kostel 18.79 331 *e*P **Pn** **23 28 51.1 -0.2**
VORD Divnogorie 18.84 26 *e*P **Pn** **23 28 51.4 -0.4**
VORD pmax pmax
comp=Z,30nm,0.8s
GRA1 Grafenberg Arr 18.90 328 P **Pn** **23 28 51.9 -0.6**
GRF Grafenberg Arr 18.90 328 P **Pn** **23 28 51.9 -0.6**
GRF pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 19.00 25 *e*P **Pn** **23 28 52.9 -0.9**
VSR pmax pmax
comp=Z,40nm,1.3s
BFO Black Forest 19.36 321 P **Pn** **23 28 56.2 -1.9**
BFO pmax pmax
comp=Z,9.0nm,0.9s
BFO Black Forest 19.36 321 P **Pn** **23 28 56.2 -1.9**
CLL Collm 19.44 334 *e*P **Pn** **23 28 57.0 -2.0**
comp=Z,5.0nm,0.8s
CLL *i* pP **pP** **23 29 08.8 +2.0**

CLL ePP PnPn 23 29 13.0 +0.2
CLL i sP sP 23 29 15.0 +3.4
CLL e(PPP) 23 29 19.0
CLL eS Sn 23 32 36.0 +0.1
CLL Collm 19.44 334 eP Pn 23 28 57.0 -2.0
CLL eS Sn 23 32 36.0 +0.1
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.44 334 P Pn 23 28 57.6 -1.4
SUW Suwalki 19.62 354 eP Pn 23 28 58.9 -2.2
SUW Suwalki 19.62 354 P P 23 28 58.1 -1.4
SUW pmax pmax
comp=Z,45nm,0.5s
SUW Suwalki 19.62 354 P P 23 28 58.1 -1.4
GKP Gorka Klasztor 19.87 343 eP Pn 23 29 03.0 -1.0
ECH Echery 19.91 319 P Pn 23 29 03.1 -1.5
ECH pmax pmax
comp=Z,14nm,1.0s
ECH Echery 19.91 319 P Pn 23 29 03.1 -1.5
VRH Novokhopyorsk 19.95 29 eP Pn 23 29 03.6 -1.4
VRH pmax pmax
comp=Z,100nm,1.1s
LPSR Galich'ya Gora 20.10 22 eP P 23 29 04.4 -0.3
LPSR pmax pmax
comp=Z,70nm,1.0s
NACGM Naroch 20.37 0 e P 23 29 06.0 -1.6
IDID Didziasalis 20.78 0 eP P 23 29 11.2 -0.8
IIGN Ignalina 20.82 359 eP P 23 29 11.6 -0.9
IIGN IAmb IAmb 23 29 13.7
comp=Z,7.6nm,0.7s
ISAL Salakas 21.04 359 eP P 23 29 12.8 -2.0
PABE Paberze 21.05 356 eP P 23 29 13.6 -1.3
IZAR Zarasai 21.22 359 eP P 23 29 14.1 -2.7
IZAR IAmb IAmb 23 29 24.8
comp=Z,7.6nm,0.9s
WLF Walferdange 21.31 321 P P 23 29 17.6 -0.2
WLF Walferdange 21.31 321 P P 23 29 18.0 +0.2
WLF pmax pmax
comp=Z,26nm,1.0s
WLF Walferdange 21.31 321 P P 23 29 17.9 +0.2
WLF IAmb IAmb 23 29 25.1
comp=Z,26nm,1.0s
CAF Calviac 21.45 306 eP P 23 29 18.7 -0.7
CAF pmax pmax
comp=Z,21nm,1.6s
OBN Obninsk 21.72 16 i P P 23 29 19.5 -2.6
OBN i 23 29 44.0
OBN i 23 33 21.0
OBN pmax pmax
comp=Z,39nm,1.0s
OBN MLR MLR
comp=Z,322nm,17.0s
OBN Obninsk 21.72 16 P P 23 29 21.8 -0.2
OBN IAmb IAmb 23 29 24.8
comp=Z,31nm,0.7s
PBUR Paburge 21.73 353 eP P 23 29 20.8 -1.4
TAM Tamanrasset 21.83 243 P P 23 29 25.0 +1.3
TAM pmax pmax
comp=Z,15nm,1.1s
TAM Tamanrasset 21.83 243 P P 23 29 25.0 +1.3
TAM IAmb IAmb 23 29 29.2
comp=Z,15nm,1.1s
BTNL Ternell 21.89 323 P P 23 29 23.6 -0.5
MEM Membach 21.97 323 P P 23 29 25.2 +0.3
BSD Bornholm Skovb 22.12 342 eP P 23 29 25.2 -1.2
BSD Bornholm Skovb 22.12 342 i P P 23 29 25.2 -1.2
BSD Bornholm Skovb 22.12 342 eP P 23 29 25.2 -1.2
BSTI Sart Tilman 22.17 323 P P 23 29 27.8 +0.7
BCLA Clavier 22.20 322 P P 23 29 26.8 -0.6
BGES Gesves 22.29 322 P P 23 29 28.5 +0.1
LFF La Frestale 22.34 305 eP P 23 29 31.1 +2.2
LFF pmax pmax
comp=Z,8.0nm,0.8s
DOU Dourbes 22.38 321 P P 23 29 29.0 -0.2
BMRD Maredsous 22.41 321 P P 23 29 29.6 0.0
MOS Moscow 22.53 16 eP P 23 29 28.9 -1.9
MOS e*PP pP 23 29 41.1 +0.9
MOS e 23 29 52.9
MOS ePPP PPP 23 29 59.5
MOS eS S 23 33 32.2 -2.9
MOS pmax pmax
comp=Z,100nm,1.4s
MOS pmax pmax
comp=Z,200nm,1.6s
CLF Chambon-Foret 22.59 314 P P 23 29 32.1 +0.5
CLF IAmb IAmb 23 29 36.0
comp=Z,27nm,1.1s
SNF Seneffe 22.78 321 P P 23 29 33.3 -0.2
UCC Uccle 22.91 322 P P 23 29 34.3 -0.6
UCC pmax pmax
comp=Z,21nm,1.0s
UCC Uccle 22.91 322 P P 23 29 34.3 -0.6
UCC IAmb IAmb 23 29 45.7
comp=Z,21nm,1.0s
MFF Saint Martin d 23.49 309 eP P 23 29 40.6 -0.1
MFF pmax pmax
comp=Z,27nm,1.3s
VSU Vasula 23.93 0 eP P 23 29 44.0 -0.6
ESBB Sonseca Array 24.83 291 P P 23 29 54.3 +1.1
ESBB IAmb IAmb 23 30 02.2
comp=Z,9.4nm,1.0s
ESDC Sonseca Array 24.83 291 P P 23 29 53.6 +0.5
comp=Z,2.2nm,0.6s,baz=82,slow=9.1,SNR=30
ESDC Sonseca Array 24.83 291 P P 23 29 54.4 +1.3
PAB San Pablo 25.12 291 P P 23 29 55.6 -0.2
PAB pmax pmax
comp=Z,9.0nm,1.0s
PAB San Pablo 25.12 291 P P 23 29 55.6 -0.2
PAB IAmb IAmb 23 30 10.7
comp=Z,8.8nm,1.0s
PUL Pulkovo 25.37 4ceP P 23 29 59.8 +2.1
PUL pmax pmax
comp=Z,55nm,0.4s
GEYT Alibeck 25.59 73 P P 23 30 00.9 +0.9
comp=Z,5.7nm,0.5s,baz=255,slow=9.1,SNR=23
GEYT Alibeck 25.59 73 P P 23 30 01.8 +1.7
GYA0B ALIBECK ARRAY 25.59 73 P P 23 30 01.1 +1.0
GYA0B IAmb IAmb 23 30 12.1
comp=Z,18nm,0.8s
MDT Midelt 25.97 275 P P 23 30 03.9 +0.3
MDT comp=Z,2.1nm,0.7s,baz=96,slow=13,SNR=5.4 LR LR 23 42 19.8
comp=Z,170nm,20.5s,baz=84,slow=41
FINES FINESS Array B 26.93 359 P P 23 30 10.8 -0.9
comp=Z,2.7nm,0.3s,baz=166,slow=11,SNR=53
FINES LR LR 23 41 23.2
comp=Z,148nm,20.5s,baz=184,slow=38
FINES FINESS Array B 26.93 359 P P 23 30 10.7 -1.1
HFS Hagfors 26.96 346 P P 23 30 09.9 -2.2
comp=Z,3.5nm,0.4s,baz=132,slow=6.2,SNR=23
HFS LR LR 23 42 41.9
comp=Z,314nm,18.7s,baz=166,slow=41
UOSS Minazif 27.35 102 P P 23 30 17.3 +1.3
UOSS IAmb IAmb 23 30 18.4
comp=Z,13nm,1.1s
KLMR Klimovskoe 27.63 14 eP P 23 30 16.4 -1.7
KLMR pmax pmax
comp=Z,29nm,0.9s
KLMR Klimovskoe 27.63 14 eP P 23 30 16.4 -1.7
KLMR AMP 23 30 18.3
comp=Z,29nm,0.9s
AKTO Aktyubinsk 27.83 46 P P 23 30 20.0 -0.1
comp=Z,6.8nm,1.0s,baz=251,slow=11,SNR=11
NB2 NORSAR Subarra 28.31 344 P P 23 30 22.4 -1.8
comp=Z,1.0nm,0.5s,baz=149,slow=11
NOA NORSAR Array B 28.31 344 P P 23 30 22.1 -2.1
comp=Z,0.2nm,0.3s,baz=145,slow=9.6,SNR=8.4
NOA LR LR 23 42 40.2
comp=Z,108nm,21.9s,baz=145,slow=39
KIRV Kirov 28.45 25ceP P 23 30 24.5 -0.9
ABKAR Akbulak array 28.58 49 P P 23 30 27.5 +0.8
ABKAR Akbulak array 28.58 49 P P 23 30 27.5 +0.8
EKA Eskdalemuir Ar 29.23 325 P P 23 30 32.0 -0.4
comp=Z,1.2nm,0.4s,baz=125,slow=11,SNR=12
EKA Eskdalemuir Ar 29.23 325 P P 23 30 32.0 -0.4
HRA Herat 29.31 80 P P 23 30 34.0 +0.4
TMCR Tamitsa 30.48 10 eP P 23 30 42.7 -0.6
TMCR pmax pmax
comp=Z,12nm,0.9s
ARU Arti 30.88 35c i P P 23 30 48.1 +1.1
ARU *PP pwP 23 31 01.2 +0.1
ARU 23 31 49.4
ARU S S 23 35 49.1 +1.1
ARU SS SnSn 23 37 27.9 -1.8
ARU pmax pmax
comp=Z,19nm,1.9s
ARU Arti 30.88 35 P P 23 30 47.5 +0.5
ARU IAmb IAmb 23 31 03.9
comp=Z,9.0nm,1.1s
TOA0 Torodi Ar. Sit 31.02 233 P P 23 30 49.3 +0.7
TOA0 IAmb IAmb 23 31 08.2
comp=Z,5.7nm,0.8s
TORD Torodi Ar. Bea 31.02 233 P P 23 30 49.6 +1.0
comp=Z,4.5nm,0.3s,baz=36,slow=8.9,SNR=109
TORD PcP PcP 23 33 43.5 -0.4
comp=Z,0.3nm,0.7s,baz=33,slow=1.5,SNR=1.2
TORD Torodi Ar. Bea 31.02 233 P P 23 30 49.2 +0.6
SVE Sverdlovsk 32.07 35 eP P 23 30 58.6 +1.2
KOWA Kowa 34.04 242 P P 23 31 15.6 +0.5
comp=Z,3.1nm,0.6s,baz=32,slow=12,SNR=15
KOWA Kowa 34.04 242 P P 23 31 15.8 +0.7
KOWA IAmb IAmb 23 31 17.1
comp=Z,6.4nm,0.9s
CHGR Chuyangaron 34.20 70 P P 23 31 17.5 +1.1
CHGR IAmb IAmb 23 31 19.2
comp=Z,17nm,1.2s
KBL Kabul 34.78 78 P P 23 31 22.7 +1.1
KBL pmax pmax
comp=Z,5.0nm,1.2s
KBL Kabul 34.78 78 P P 23 31 22.7 +1.1
KK31 Karatay Array 34.94 63 P P 23 31 24.5 +1.8
KK31 pmax pmax
comp=Z,9.0nm,1.1s
KK31 Karatay Array 34.94 63 P P 23 31 24.5 +1.8
KK31 IAmb IAmb 23 31 25.4
comp=Z,9.0nm,1.1s
KKAR Karatay Array 34.94 63 P P 23 31 24.6 +1.9
KKAR pmax pmax
comp=Z,9.0nm,1.1s
KKAR Karatay Array 34.94 63 P P 23 31 24.6 +1.9
KKAR IAmb IAmb 23 31 25.4
comp=Z,9.0nm,1.1s
KKAR Karatay Array 34.94 63 P P 23 31 23.8 +1.1
ARC3 ARCESS Array S 35.06 359 P P 23 31 22.2 -1.1
ARC3 IAmb IAmb 23 31 29.9
comp=Z,19nm,1.1s
ARCES ARCESS Array B 35.06 359 P P 23 31 22.1 -1.3
comp=Z,3.1nm,0.4s,baz=175,slow=7.7,SNR=66
ARCES LR LR 23 45 28.1
comp=Z,116nm,21.8s,baz=215,slow=36
GAR Garm 35.06 70 P P 23 31 25.5 +1.7
GAR IAmb IAmb 23 31 29.2
comp=Z,6.0nm,1.1s
ARD1 ARCESS Array S 35.07 359 P P 23 31 23.7 +0.3
ARD1 IAmb IAmb 23 31 38.4
comp=Z,13nm,1.0s
MBAR Mbarara 35.17 173 P P 23 31 26.0 +1.0
MBAR pmax pmax
comp=Z,4.0nm,1.2s
MBAR Mbarara 35.17 173 P P 23 31 26.0 +1.0
BRVK Borovoye 35.88 45ceP P 23 31 31.7 +1.1
BRVK pmax pmax
comp=Z,16nm,1.7s
BRVK Borovoye 35.88 45 P P 23 31 30.9 +0.3
BRVK IAmb IAmb 23 31 33.2
comp=Z,11nm,1.1s
PMOZ Porto Moniz, M 36.27 280 P P 23 31 32.0 -2.2
AAK Ala-Archa 37.89 63ceP P 23 31 50.1 +2.1
AAK pmax pmax
comp=Z,40nm,1.7s
NIL Nilore 38.39 78 P P 23 31 53.8 +1.7
NIL pmax pmax
comp=Z,19nm,1.1s
NIL Nilore 38.39 78 P P 23 31 53.8 +1.7
NIL IAmb IAmb 23 31 55.9
comp=Z,19nm,1.1s
KSH Kashi 39.34 68 eP P 23 31 59.2 -1.0
KSH pmax pmax
comp=Z,26nm,1.4s
KSH pmax pmax
comp=Z,260nm,6.3s
DBIC Dimbokro 40.12 234 P P 23 32 06.7 +0.1
comp=Z,3.4nm,0.4s,baz=26,slow=9.3,SNR=17
DBIC LR LR 23 50 41.6
comp=Z,96nm,18.2s,baz=48,slow=39
DBIC Dimbokro 40.12 234 P P 23 32 06.7 +0.1
DBIC pmax pmax
comp=Z,6.0nm,0.9s
DBIC Dimbokro 40.12 234 IAmb IAmb 23 32 20.3
comp=Z,5.7nm,0.8s
TIC Toumodi 40.24 234 eP P 23 32 07.8 +0.1
KIC Kosan Boka 40.27 233 eP P 23 32 08.2 +0.3
comp=Z,25nm,0.6s
LIC Lamto 40.56 233 eP P 23 32 10.6 +0.3
comp=Z,10nm,0.4s
KURBB Kurchatov Arra 40.61 50 P P 23 32 11.8 +1.5
comp=Z,9.5nm,0.9s,baz=277,slow=8.8,SNR=42
KURBB PP PP 23 33 45.2 +1.0
comp=Z,4.8nm,1.1s,baz=271,slow=12,SNR=5.1
KURBB PcP PcP 23 34 11.6 -0.1
comp=Z,1.0nm,0.8s,baz=274,slow=4.2,SNR=2.1
KURK Kurchatov 40.67 50ceP P 23 32 12.0 +1.2
KURK pmax pmax
comp=Z,27nm,1.7s
KURK Kurchatov 40.67 50 P P 23 32 12.2 +1.4
KURK IAmb IAmb 23 32 14.0
comp=Z,15nm,1.1s
CMLA Cha da Macela 41.76 290 P P 23 32 19.4 -0.6
CMLA Cha da Macela 41.76 290 P P 23 32 19.4 -0.6
MAKZ Makanchi 42.93 56 P P 23 32 31.2 +1.8
MAKZ pmax pmax
comp=Z,5.0nm,1.1s
MAKZ Makanchi 42.93 56 P P 23 32 31.2 +1.8
MK31 Makanchi Array 43.14 56 P P 23 32 32.7 +1.5
MK31 pmax pmax
comp=Z,11nm,1.1s
MK31 Makanchi Array 43.14 56 P P 23 32 32.7 +1.5
MK31 IAmb IAmb 23 32 33.7
comp=Z,11nm,1.1s
MKAR Makanchi Array 43.14 56 P P 23 32 32.6 +1.5
comp=Z,7.0nm,0.9s,baz=269,slow=8.6,SNR=46
MKAR PcP PcP 23 34 21.8 +1.5
comp=Z,1.0nm,0.7s,baz=288,slow=4.0,SNR=1.7
MKAR LR LR 23 53 22.4
comp=Z,80nm,18.9s,baz=267,slow=40
MKAR Makanchi Array 43.14 56 P P 23 32 32.4 +1.2
SPA0 Spitsbergen Ar 43.97 357 P P 23 32 37.8 +0.4
SPITS Spitsbergen Ar 43.97 357 P P 23 32 37.0 -0.3
comp=Z,2.7nm,0.4s,baz=151,slow=12,SNR=34
SCO Scoresbysund 44.34 339 P P 23 32 40.4 0.0
SCO Scoresbysund 44.34 339 P P 23 32 40.4 0.0
ZAA0 Zalesovo Array 44.59 46 P P 23 32 43.5 +0.8
ZAA0 IAmb IAmb 23 32 55.0
comp=Z,5.8nm,0.9s
ZALV Zalesovo Beam 44.59 46 P P 23 32 43.4 +0.8
comp=Z,3.5nm,0.6s,baz=271,slow=9.0,SNR=15
ZALV PP PP 23 34 28.3 +1.3
comp=Z,1.2nm,0.6s,baz=278,slow=10.0,SNR=1.6
ZALV Zalesovo Beam 44.59 46 P P 23 32 43.3 +0.7
DAG Danmarks Havn 46.92 347 i P P 23 33 00.1 -0.6
DAG Danmarks Havn 46.92 347 i P P 23 33 00.1 -0.6
DAG Danmarks Havn 46.92 347 i P P 23 33 00.1 -0.6
WMQ Urumqi 47.31 60 eP P 23 33 06.4 +2.1
WMQ sP sP 23 33 24.7 +5.2
WMQ pmax pmax
comp=Z,22nm,1.3s
WMQ pmax pmax
comp=Z,220nm,4.7s
WMQ Urumqi 47.31 60 P P 23 33 04.8 +0.5
WMQ pmax pmax
comp=Z,18nm,1.2s
WMQ Urumqi 47.31 60 P P 23 33 04.8 +0.5
NRIK Noril'sk 47.95 25 P P 23 33 08.7 -0.1
comp=Z,1.5nm,0.5s,baz=262,slow=6.4,SNR=3.5
NRIK Noril'sk 47.95 25ceP P 23 33 10.6 +1.8
NRIK pmax pmax
comp=Z,4.0nm,1.0s
DANN Dangsing 48.62 81 eP P 23 33 17.0 +2.1
SUMG Summit 49.98 339 i P P 23 33 25.0 +0.2
SUMG pmax pmax
comp=Z,20nm,0.8s
SUMG Summit 49.98 339 P P 23 33 25.2 +0.5
SUMG Summit 49.98 339 i P P 23 33 25.0 +0.2
comp=Z,20nm,0.8s
SUMG Summit 49.98 339 i P P 23 33 25.0 +0.2
SUMG IAmb IAmb 23 33 27.1
comp=Z,20nm,0.8s
DMN Daman 50.01 81 eP P 23 33 26.8 +1.4
PKIN Phulchoki 50.26 81 eP P 23 33 28.1 +0.8
comp=Z,35nm,1.0s
PKI Pulchoki 50.27 81 eP P 23 33 28.4 +0.9
comp=Z,43nm,1.1s
GUN Gumba 50.52 80 eP P 23 33 29.2 -0.2
comp=Z,41nm,1.0s
TLY Talaya 56.17 47 i P P 23 34 11.5 +1.3
TLY pmax pmax
comp=Z,7.0nm,1.0s
TLY Talaya 56.17 47 P P 23 34 12.2 +2.0
TLY IAmb IAmb 23 34 13.9
comp=Z,11nm,1.1s
ZAK Zakamensk 56.28 49 eP P 23 34 12.6 +1.5
ZAK pmax pmax
comp=Z,12nm,1.1s
ZAK pmax pmax
comp=Z,7.0nm,1.0s
SHL Shillong 56.37 80 P P 23 34 12.0 -0.2
SHL pmax pmax
comp=Z,9.0nm,1.1s
SHL Shillong 56.37 80 P P 23 34 12.0 -0.2
SHL IAmb IAmb 23 34 13.2
comp=Z,8.8nm,1.1s
GTA Gaotai 57.22 62 eP P 23 34 19.9 +1.9
GTA pP pP 23 34 32.1 +3.1
GTA sP sP 23 34 37.4 +4.0
GTA S S 23 42 10.3 -0.7
GTA Gaotai 57.22 62 SS SS 23 46 01.2 +1.1
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,100nm,5.8s
GTA LR LR
comp=N,93nm,16.0s
GTA LR LR
comp=E,110nm,15.6s
GTA LR LR
comp=Z,130nm,18.5s
TULEG Thule 57.97 344 P P 23 34 22.2 -0.3
SONM Songino Array 58.97 51 P P 23 34 31.5 +1.4
comp=Z,4.3nm,0.7s,baz=266,slow=8.6,SNR=10
SONM PP PP 23 36 41.3 +0.8
comp=Z,1.0nm,0.4s,baz=289,slow=4.4,SNR=1.9
SONM LR LR 00 02 06.2
comp=Z,86nm,21.6s,baz=236,slow=38
SONM Songino Array 58.97 51 P P 23 34 31.0 +0.9
SONM pmax pmax
comp=Z,6.0nm,1.1s
SONM Songino Array 58.97 51 P P 23 34 31.0 +0.9
ULN Ulaanbaatar 59.38 50ceP P 23 34 33.3 +0.3
ULN pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 59.38 50 P P 23 34 33.7 +0.7
TIXI Tiksi 61.34 21ceP P 23 34 46.5 +0.8
TIXI pmax pmax
comp=Z,9.0nm,0.8s
TIXI Tiksi 61.34 21 P P 23 34 45.9 +0.2
TIXI IAmb IAmb 23 34 46.2
comp=Z,3.7nm,1.1s
BOSA Boshof 62.82 181 P P 23 34 57.6 +1.3
comp=Z,1.0nm,0.4s,baz=360,slow=6.1,SNR=8.6
CD2 Chengdu 63.51 69 eP P 23 35 02.4 +1.4
CD2 pmax pmax
comp=Z,20nm,1.3s
SCHQ Schefferville 64.42 320 P P 23 35 07.0 +0.4
comp=Z,5.7nm,0.5s,baz=79,slow=4.2,SNR=21
HHC Hu-ho-hao-te 65.01 56 eP P 23 35 13.5 +2.8
HHC pmax pmax
comp=Z,28nm,1.1s
HHC pmax pmax
comp=Z,110nm,5.3s
CHTO Chiang Mai 65.30 84 P P 23 35 12.9 +0.1
CHTO pmax pmax
comp=Z,6.0nm,1.2s
CHTO Chiang Mai 65.30 84 P P 23 35 12.9 +0.1
CHTO IAmb IAmb 23 35 15.5
comp=Z,6.2nm,1.1s
CMAR Chiang Mai Arr 65.47 84 P P 23 35 14.1 +0.2
comp=Z,0.9nm,0.5s,baz=301,slow=7.5,SNR=14
CMAR PP PP 23 37 38.0 -0.2
comp=Z,0.6nm,0.3s,baz=302,slow=9.6,SNR=4.3
CMAR LR LR 00 10 13.5
comp=Z,14nm,18.8s,baz=110,slow=42
CMAR Chiang Mai Arr 65.47 84ceP P 23 35 15.3 +1.4
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 65.47 84 P P 23 35 14.8 +0.9
YAK Yakutsk 65.83 30 i P P 23 35 16.6 +1.1
YAK pmax pmax
comp=Z,4.0nm,0.6s
XAN Xi'an 66.05 64 P P 23 35 18.8 +1.3
XAN pmax pmax
comp=Z,9.0nm,1.2s
XAN Xi'an 66.05 64 P P 23 35 18.8 +1.3
XAN IAmb IAmb 23 35 23.6
comp=Z,8.8nm,1.2s
HIA Hailar 66.63 45 P P 23 35 22.0 +1.0
HIA pmax pmax
comp=Z,20nm,1.1s
HIA Hailar 66.63 45 P P 23 35 21.9 +1.0
GYA Guiyang 67.81 72 eP P 23 35 30.2 +1.3
GYA pmax pmax
comp=Z,7.0nm,0.8s
ENH Enshi 68.20 68 P P 23 35 31.7 +0.5
ENH IAmb IAmb 23 35 35.1
comp=Z,8.4nm,1.1s
BJT Baijiatuau 68.53 56 P P 23 35 34.4 +1.4
BJT pmax pmax
comp=Z,7.0nm,1.0s
BJT Baijiatuau 68.53 56 P P 23 35 34.4 +1.4
BJT IAmb IAmb 23 35 35.6
comp=Z,7.0nm,1.0s
BILL Bilibino 73.38 15 i P P 23 36 02.5 +0.6
BILL i 23 36 23.3
BILL i 23 38 47.8
BILL pmax pmax
comp=Z,6.0nm,1.5s
BILL MLR MLR
comp=Z,112nm,16.0s
KLR Kul'dur 73.47 41 i P P 23 36 04.0 +1.2
KLR pmax pmax
comp=Z,4.0nm,1.1s
SADO Sadowa 76.31 315 P P 23 36 18.4 -0.9
INK Inuvik 76.39 353 P P 23 36 19.8 +0.5
comp=Z,2.6nm,1.1s,baz=25,slow=6.7,SNR=1.8
INK Inuvik 76.39 353 P P 23 36 19.8 +0.5
INK pmax pmax
comp=Z,2.0nm,1.0s
USA0B Ussuriysk Arra 76.45 46 P P 23 36 20.2 +0.1
USA0B pmax pmax
comp=Z,10.0nm,1.1s
USA0B Ussuriysk Arra 76.45 46 P P 23 36 20.2 +0.1
USA0B IAmb IAmb 23 36 22.5
comp=Z,10nm,1.1s
USRK Ussuriysk Ar. 76.45 46 P P 23 36 21.0 +1.0
comp=Z,4.0nm,0.6s,baz=302,slow=5.3,SNR=11
USRK Ussuriysk Ar. 76.45 46 P P 23 36 20.7 +0.6
J54A Appleton 76.87 314 P P 23 36 22.2 -0.3
KSAR Wonju Array Be 77.71 53 P P 23 36 28.1 +0.8
KSAR Wonju Array Be 77.71 53 P P 23 36 28.1 +0.8
KSRS Korea Array 77.73 53 P P 23 36 28.6 +1.2
comp=Z,4.7nm,1.0s,baz=297,slow=4.7,SNR=11
KSRS LR LR 00 15 25.5
comp=Z,78nm,20.5s,baz=326,slow=39
BMAR Burnt Mountain 78.13 357 P P 23 36 30.6 +1.4
COLD Coldfoot 78.53 359 P P 23 36 31.5 +0.2
COLD IAmb IAmb 23 36 33.4
comp=Z,5.5nm,1.0s
IMAR Indian Mountai 79.80 0 P P 23 36 39.1 +0.9
YHNB Yeheng 80.12 67 P P 23 36 40.0 -0.9
V60A Jim Taylor Roa 80.35 307 P P 23 36 40.5 -1.3
N51A Ashland 80.51 313 P P 23 36 42.3 -0.2
NACB Ninganchiao 80.56 67 P P 23 36 41.8 -1.4
YSS Yuzh-Sakhalins 80.69 39ceP P 23 36 45.8 +2.4
YSS pmax pmax
comp=Z,32nm,2.5s
YSS Yuzh-Sakhalins 80.69 39 P P 23 36 42.6 -0.8
MDM Murphy Dome 80.75 358 P P 23 36 43.9 +0.4
MDM IAmb IAmb 23 36 47.2
comp=Z,3.6nm,0.7s
ILAR Eielson Array 80.89 357 P P 23 36 44.3 +0.2
comp=Z,1.0nm,0.8s,baz=356,slow=3.3,SNR=9.2
CCB Clear Creek Bu 81.05 358 P P 23 36 44.5 -0.5
CCB IAmb IAmb 23 36 46.3
comp=Z,8.5nm,1.2s
DAWY Dawson 81.10 354 P P 23 36 46.2 +0.8

DAWY			IAmb	IAmb	23 37 03.9
	comp=Z,8.5nm,1.1s				
WRH	**Wood River Hil**	**81.23 358**	P	**P**	**23 36 46.8 +0.8**
WRH			IAmb	IAmb	23 37 00.2
	comp=Z,7.7nm,0.7s				
HDA	**Harding Lake**	**81.25 357**	P	**P**	**23 36 46.8 +0.7**
HDA			IAmb	IAmb	23 36 47.5
	comp=Z,9.9nm,1.1s				
CUPR	**Culebra, Puert**	**81.34 286**	P	**P**	**23 36 46.5 -0.8**
ULM	**Lac du Bonnet**	**81.48 327**	P	**P**	**23 36 47.5 0.0**
	comp=Z,1.3nm,0.5s,baz=58,slow=4.6,SNR=1.5				
GRGR	**Grenville**	**81.80 279**	P	**P**	**23 36 49.9 +0.1**
E38A	**The Farm, Brul**	**81.93 322**	P	P	23 36 55.1 +5.1
E38A			IAmb	IAmb	23 37 03.8
	comp=Z,4.4nm,0.7s				
BCAR	**Beaver Creek A**	**82.29 355**	P	**P**	**23 36 52.7 +1.1**
U54A	**Nelsons Funny**	**82.85 310**	P	**P**	**23 36 52.8 -2.3**
U54A			IAmb	IAmb	23 37 10.8
	comp=Z,12nm,1.1s				
Y58A	**Scranton**	**83.04 306**	P	**P**	**23 36 56.6 +0.6**
NHSC	**New Hope**	**83.86 306**	P	**P**	**23 36 58.4 -1.8**
KSM	**Kuching**	**83.99 92**	P	**P**	**23 36 58.4 -2.8**
L42A	**Oliver, Polo**	**84.03 318**	P	**P**	**23 36 59.5 -1.4**
MJAR	**Matsushiro Arr**	**84.86 49**	LR	LR	00 18 56.7
	comp=Z,31nm,19.2s,baz=305,slow=38				
MJAR	**Matsushiro Arr**	**84.86 49**	P	**P**	**23 37 06.1 +0.8**
MJAR			pmax	pmax	
	comp=Z,6.0nm,1.0s				
MJAR	**Matsushiro Arr**	**84.86 49**	P	**P**	**23 37 06.1 +0.8**
Z47A	**Carrollton**	**88.92 310**	P	**P**	**23 37 24.8 -0.2**
PDAR	**Pinedale Array**	**93.24 329**	P	**P**	**23 37 45.4 +0.1**
	comp=Z,0.3nm,0.6s,baz=60,slow=6.3,SNR=1.9				
PDAR			LR	LR	00 25 59.0
	comp=Z,104nm,18.5s,baz=39,slow=40				
REDW	**Red Top Meadow**	**93.29 330**	P	**P**	**23 37 46.8 +1.3**
DAV	**Davao City (W)**	**93.39 79**	LR	LR	00 26 53.3
	comp=Z,33nm,18.5s,baz=103,slow=40				
CPUP	**Villa Florida**	**99.81 245**	LR	LR	00 24 35.3
	comp=Z,51nm,18.6s,baz=36,slow=36				

*IDC **09** 23:34:03.0±3.1, 37.41N×142.61E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.3/43, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=62.6km s-min=36.3km az=70.0*
*JMA **09** 23:34:08.6±0.1, 37.42N×141.95E, h34km±3km, M3.8*
ISC 09 23:34:05.4±1.8, 37.36N±0.04×142.03E±0.07, h8km±10km, n23, σ1§48/31, Off east of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.92**	**271**	P	**Pb**	**23 34 24.4**	**+0.8**
JFK				S	**Sg**	**23 34 35.3**	**+0.4**
JMST	**Minamisoumatoc**	**0.97**	**292**	P	**Pb**	**23 34 24.9**	**+0.4**
JMST				S	**Sg**	**23 34 36.3**	**-0.4**
ONAJ	**Iwakimizuishiy**	**1.01**	**255**	P	**Pb**	**23 34 25.8**	**+0.6**
ONAJ				*eS*	**Sg**	**23 34 37.8**	**-0.2**
JIKH	**Ishinomakikobu**	**1.04**	**335**	P	**Pg**	**23 34 25.9**	**+0.5**
JIKH				*eS*	**Sg**	**23 34 37.7**	**-1.3**
JMM	**Marumori**	**1.10**	**297**	P	**Pg**	**23 34 27.0**	**+0.5**
JMM				S	**Sg**	**23 34 39.7**	**-1.1**
JIO	**Ouri**	**1.21**	**334**	P	**Pg**	**23 34 28.5**	**-0.2**
JIO				S	**Sg**	**23 34 42.1**	**-2.3**
JFT	**Otama**	**1.35**	**277**	P	**Pg**	**23 34 31.5**	**+0.2**
JFT				*eS*	**Sb**	**23 34 47.6**	**-0.9**
JOU	**Okura**	**1.47**	**313**	P	**Pn**	**23 34 32.8**	**+0.6**
JOU				S	**Sn**	**23 34 50.1**	**-1.6**
JMK	**Ichinoseki**	**1.71**	**338**	P	**Pn**	**23 34 36.3**	**+0.9**
JMK				*eS*	**Sn**	**23 34 56.1**	**-1.4**
JYS	**Shirataka**	**1.77**	**299**	P	**Pn**	**23 34 37.9**	**+1.5**
JYS				*eS*	**Sn**	**23 34 58.7**	**-0.4**
JFY	**Yanaizu**	**1.85**	**272**	P	**Pn**	**23 34 38.6**	**+1.2**
JYK	**Kaneyama**	**2.03**	**320**	P	**Pn**	**23 34 41.2**	**+1.3**
JYK				*eS*	**Sn**	**23 35 05.1**	**-0.4**
MJAR	**Matsushiro Arr**	**3.17**	**256**	Pn	**Pb**	**23 35 00.5**	**-1.4**
	0.6nm,0.3s,baz=70,slow=7.1,SNR=8.0						
MJAR				Sn	**Sn**	**23 35 35.4**	**+1.9**
	0.8nm,0.3s,baz=122,slow=16,SNR=6.2						
MAT	**Matsushiro**	**3.17**	**256**	P	**Pn**	**23 34 55.8**	**+0.3**
MAT				*eS*	**Sn**	**23 35 29.6**	**-3.9**
JHJ	**Hachijo jima 2**	**4.62**	**204**	Pn	**Pn**	**23 35 16.9**	**+1.4**
	12nm,0.3s,baz=18,slow=15,SNR=8.4						
JHJ				Sn	**Sn**	**23 36 05.8**	**-3.4**
	5.9nm,0.3s,baz=18,slow=1.2,SNR=1.0						
H11N2	**WAKE ISLAND Hy**	**27.90**	**122**	T	T	00 09 26.7	
	baz=314,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**27.91**	**122**	T	T	00 09 28.9	
	baz=314,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**27.92**	**122**	T	T	00 09 28.1	
	baz=314,slow=75,SNR=17						
H11S1	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	00 10 20.4	
	baz=316,slow=76,SNR=19						
H11S3	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	00 10 22.5	
	baz=316,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**28.65**	**124**	T	T	00 10 20.8	
	baz=316,slow=76,SNR=16						
MKAR	**Makanchi Array**	**44.36**	**302**	P	**P**	**23 42 17.7**	**+1.6**
	0.4nm,0.6s,baz=90,slow=8.8,SNR=4.6						
WRA	**Warramunga Arr**	**57.46**	**189**	P	**P**	**23 43 54.5**	**-0.3**
	0.4nm,1.0s,baz=7.0,slow=6.9,SNR=1.8						

*IDC **09** 23:44:15.3±2.4, 60.97S×28.20W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/16, mbtmp3.9/3, Error ellipse: s-maj=83.3km s-min=42.8km az=9.0*
*NEIC **09** 23:44:23.5±2.3, 60.4S±0.1×28.5W±0.3, h35km±2km, mb4.3/16, Error ellipse: s-maj=26.8km s-min=15.3km az=56.0*
ISC 09 23:44:19.7±0.8, 60.3S±0.1×28.4W±0.1, h10km, n23, σ1§27/22, mb4.3/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.47**	**321**	Pn	**Pn**	**23 46 08.4**	**-0.2**
SNAA	**Sanae**	**15.23**	**149**		**Pn**	**23 47 55.1**	**+0.5**
PMSA	**Palmer Station**	**16.85**	**239**	Pn	**Pn**	**23 48 15.4**	**+0.1**
BELA	**Belgrano 2**	**17.74**	**184**	P	**Pn**	**23 48 25.8**	**-0.7**
PLCA	**Paso Flores**	**32.41**	**288**	P	**P**	**23 50 46.8**	**-2.7**
PLCA				IAmb	IAmb	23 51 06.8	
	comp=Z,2.7nm,1.1s						
VA03	**San Esteban**	**38.91**	**296**	P	**P**	**23 51 45.6**	**+0.2**
VA03				IAmb	IAmb	23 51 58.4	
	comp=Z,7.8nm,0.8s						
CPUP	**Villa Florida**	**39.33**	**317**	P	**P**	**23 51 50.3**	**+1.5**
	comp=Z,0.7nm,0.4s,baz=164,slow=7.1,SNR=4.3						
CPUP	**Villa Florida**	**39.33**	**317**	P	**P**	**23 51 50.0**	**+1.2**
AC05	**El Transito**	**42.15**	**299**	P	**P**	**23 52 14.3**	**+2.0**
AC05				IAmb	IAmb	23 52 27.4	
	comp=Z,5.3nm,1.1s						
GO02	**Mina Guanaco**	**45.07**	**303**	P	**P**	**23 52 37.6**	**+1.6**
GO02				IAmb	IAmb	23 52 38.7	
	comp=Z,3.6nm,0.8s						
PB01	**IPOC Station P**	**48.70**	**305**	P	**P**	**23 53 05.4**	**+1.3**
PB01				IAmb	IAmb	23 53 11.5	
	comp=Z,4.6nm,1.1s						
GO01	**Chusmiza**	**49.81**	**306**	P	**P**	**23 53 13.2**	**0.0**
PB11	**IPOC Station P**	**49.91**	**306**	P	**P**	**23 53 13.4**	**-0.2**
CASY	**Casey**	**50.09**	**160**	P	**P**	**23 53 15.3**	**+1.1**
PSGCX	**Pisagua**	**50.25**	**305**	P	**P**	**23 53 16.6**	**+0.6**
PSGCX				IAmb	IAmb	23 53 23.1	
	comp=Z,4.9nm,0.9s						
MNMC	**Minye Minye**	**50.46**	**306**	P	**P**	**23 53 19.2**	**+1.4**
LPAZ	**La Paz**	**52.46**	**309**	P	**P**	**23 53 33.9**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=180,slow=4.0,SNR=2.6						
LPAZ	**La Paz**	**52.46**	**309**	IAmb	IAmb	23 53 48.5	
	comp=Z,1.2nm,1.1s						
TOA0	**Torodi Ar. Sit**	**77.11**	**30**	P	**P**	**23 56 12.9**	**-0.2**
TOA0				IAmb	IAmb	23 56 16.8	
	comp=Z,3.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**77.11**	**30**	P	**P**	**23 56 13.1**	**0.0**
	comp=Z,0.9nm,0.5s,baz=198,slow=6.4,SNR=19						
TORD	**Torodi Ar. Bea**	**77.11**	**30**	P	**P**	**23 56 12.8**	**-0.3**
ZALV	**Zalesovo Beam**	**144.66**	**70**	PKP	**PKPab**	**00 03 52.2**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=234,slow=2.4,SNR=4.2						
ILAR	**Eielson Array**	**152.30**	**306**	PKPbc	**PKPbc**	**00 04 12.2**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=146,slow=1.8,SNR=6.6						

*IDC **09** 23:45:03.5±1.9, 21.89S×179.18W, h521km±20km, mb3.2/9, mb1 3.6/11, mb1mx3.4/25, mbtmp4.2/11, Error ellipse: s-maj=23.6km s-min=13.7km az=148.0*
*NEIC **09** 23:45:04.5±1.5, 21.9S±0.1×179.2W±0.1, h531km±7km, mb4.7/34, Error ellipse: s-maj=22.2km s-min=11.6km az=135.0*
ISC 09 23:45:06.1±0.6, 22.0S±0.1×179.3W±0.1, h550km, n61, σ1§16/59, mb4.7/23, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.91**	**329**	P	**P**	**23 46 35.0**	**-0.4**
AFI	**Afiamalu**	**10.72**	**43**	P	P	23 47 26.5	-5.2
	5.0nm,0.3s,baz=234,slow=18,SNR=6.3						
AFI				S	S	23 49 19.8	-11
	1.0nm,0.3s,baz=146,slow=7.3,SNR=1.2						
AFI	**Afiamalu**	**10.72**	**43**	P	P	23 47 26.7	-5.0
DZM	**Mont Dzumac**	**13.25**	**267**	P	**P**	**23 47 55.7**	**-2.1**
URZ	**Urewera**	**16.54**	**190**	P	**P**	**23 48 27.9**	**-2.6**
	0.6nm,0.3s,baz=336,slow=9.9,SNR=6.9						
URZ	**Urewera**	**16.54**	**190**	IAmb	IAmb	23 48 28.9	
	comp=Z,12nm,0.8s						
BKZ	**Black Stump Fm**	**17.52**	**191**	P	**P**	**23 48 36.4**	**-3.1**
BKZ				IAmb	IAmb	23 49 08.5	
	comp=Z,45nm,1.7s						
BHW	**Baring Head**	**20.01**	**193**	P	**P**	**23 49 00.1**	**-2.0**
QRZ	**Quartz Range**	**20.05**	**198**	P	**P**	**23 49 02.8**	**+0.3**
PLWZ	**Palliser**	**20.08**	**192**	P	**P**	**23 49 01.3**	**-1.5**
TUWZ	**Tuamarina**	**20.23**	**195**	P	**P**	**23 49 03.7**	**-0.4**
THZ	**Tophouse**	**20.81**	**197**	P	**P**	**23 49 09.4**	**0.0**
THZ				IAmb	IAmb	23 49 10.4	
	comp=Z,68nm,1.7s						
KHZ	**Kahutara**	**21.26**	**195**	P	**P**	**23 49 15.6**	**+2.2**
EIDS	**Eidsvold**	**27.34**	**257**	P	**P**	**23 50 08.1**	**+0.6**
CTAO	**Charters Tower**	**32.20**	**267**	P	**P**	**23 50 50.3**	**+0.7**
CTAO				IAmb	IAmb	23 50 50.7	
	comp=Z,48nm,1.8s						
TOO	**Toolangi**	**34.08**	**235**	P	**P**	**23 51 05.6**	**+0.3**
TOO				IAmb	IAmb	23 52 34.8	
	comp=Z,34nm,1.6s						
STKA	**Stephens Creek**	**36.10**	**246**	P	**P**	**23 51 22.5**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=77,slow=8.5,SNR=6.8						
BBOO	**Buckleboo**	**40.84**	**245**	P	**P**	**23 51 59.8**	**-0.7**
BBOO				IAmb	IAmb	23 53 41.2	
	comp=Z,40nm,1.6s						
AS31	**Alice Springs**	**43.05**	**258**	P	**P**	**23 52 18.1**	**+0.1**
ASAR	**Alice Springs**	**43.05**	**258**	P	**P**	**23 52 18.3**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=88,slow=8.2,SNR=44						
ASAR				PcP	**pP**	**23 53 56.0**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=100,slow=4.2,SNR=4.9						
ASAR	**Alice Springs**	**43.05**	**258**	P	**P**	**23 52 17.4**	**-0.6**
WR0	**Warramunga Arr**	**43.06**	**264**	P	**P**	**23 52 18.1**	**0.0**
WB0	**Warramunga Arr**	**43.23**	**264**	P	**P**	**23 52 19.1**	**-0.4**
WB2	**Warramunga Arr**	**43.23**	**264**	P	**P**	**23 52 19.3**	**-0.2**
WRA	**Warramunga Arr**	**43.24**	**264**	P	**P**	**23 52 19.4**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=96,slow=5.0,SNR=24						
WRA				PcP	**PcP**	**23 53 55.6**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=104,slow=4.1,SNR=2.5						
WRA				ScP	**ScP**	**23 56 59.9**	**+4.4**
	comp=Z,0.4nm,0.7s,baz=95,slow=4.2,SNR=2.5						
WRA				S	**S**	**23 58 08.2**	**+0.9**
	comp=Z,0.6nm,1.0s,baz=95,slow=15,SNR=2.8						
WRA	**Warramunga Arr**	**43.24**	**264**	P	**P**	**23 52 19.5**	**-0.2**
FORT	**Forrest**	**47.64**	**248**	P	**P**	**23 52 52.8**	**-0.1**
FORT				IAmb	IAmb	23 54 04.3	
	comp=Z,20nm,0.9s						
KNRA	**Kununurra**	**49.40**	**268**	P	**P**	**23 53 06.2**	**0.0**
KNRA				IAmb	IAmb	23 55 01.3	
	comp=Z,15nm,1.2s						
FITZ	**Fitzroy Crossi**	**51.67**	**264**	P	**P**	**23 53 23.2**	**+0.5**
PSA00	**Pilbara Seismi**	**56.20**	**258**	P	**P**	**23 53 53.5**	**-1.2**
PSA00				IAmb	IAmb	23 55 09.5	
	comp=Z,65nm,1.6s						
VNDA	**Vanda**	**56.35**	**185**	P	**P**	**23 53 55.5**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=2.9,slow=5.7,SNR=5.5						
VNDA	**Vanda**	**56.35**	**185**	P	**P**	**23 53 56.1**	**+1.4**
MORW	**Morawa**	**58.19**	**249**	P	**P**	**23 54 07.5**	**-0.6**
MORW				IAmb	IAmb	23 55 43.3	
	comp=Z,87nm,2.0s						
CASY	**Casey**	**62.14**	**206**	P	**P**	**23 54 33.4**	**-0.2**
CASY				IAmb	IAmb	23 55 18.3	
	comp=Z,20nm,1.1s						
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	**23 55 12.1**	**+0.9**
UGM	**Wanagama**	**68.76**	**270**	P	**P**	**23 55 15.2**	**-0.7**
MJAR	**Matsushiro Arr**	**70.70**	**325**	P	**P**	**23 55 27.4**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=149,slow=4.7,SNR=1.8						
NVAR	**Mina Array Bea**	**82.90**	**44**	P	**P**	**23 56 33.6**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=235,slow=9.3,SNR=3.8						
SCM	**Sheep Creek Mo**	**87.34**	**15**	P	**P**	**23 56 54.6**	**+0.1**
CRQM	**Cirque**	**87.47**	**17**	P	**P**	**23 56 55.2**	**0.0**
N25K	**Chitina, Valde**	**87.81**	**16**	P	**P**	**23 56 56.9**	**+0.2**
GLB	**Gilahina Butte**	**87.87**	**16**	P	**P**	**23 56 56.9**	**0.0**
GLB				IAmb	IAmb	23 57 29.4	
	comp=Z,23nm,1.5s						
BALM	**Baldy**	**87.92**	**17**	P	**P**	**23 56 57.5**	**+0.3**
BALM				IAmb	IAmb	23 59 40.8	
	comp=Z,9.8nm,0.6s						
KTH	**Kantishna Hill**	**88.09**	**12**	P	**P**	**23 56 58.1**	**+0.2**
BARN	**Barnard Glacie**	**88.12**	**17**	P	**P**	**23 56 58.1**	**-0.2**
BARN				IAmb	IAmb	23 58 40.5	
	comp=Z,30nm,1.6s						
CTGM	**Chitina Glacie**	**88.14**	**17**	P	**P**	**23 56 58.7**	**+0.4**
CTGM				IAmb	IAmb	23 59 35.5	
	comp=Z,38nm,1.7s						
RND	**Reindeer**	**88.38**	**13**	P	P	23 56 56.5	-2.8
CMAR	**Chiang Mai Arr**	**89.49**	**290**	P	**P**	**23 57 07.5**	**+2.1**
	comp=Z,0.8nm,0.4s,baz=134,slow=3.8,SNR=8.4						
HDA	**Harding Lake**	**89.67**	**13**	P	**P**	**23 57 04.5**	**-0.7**
HDA				IAmb	IAmb	23 59 07.0	
	comp=Z,34nm,1.9s						
CCB	**Clear Creek Bu**	**89.70**	**13**	P	**P**	**23 57 04.2**	**-1.1**
CCB				IAmb	IAmb	23 58 42.4	
	comp=Z,15nm,1.7s						
IMAR	**Indian Mountai**	**89.80**	**10**	P	**P**	**23 57 05.6**	**-0.1**
ILAR	**Eielson Array**	**90.00**	**13**	P	**P**	**23 57 06.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=220,slow=5.3,SNR=7.4						
PDAR	**Pinedale Array**	**90.83**	**44**	P	**P**	**23 57 11.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=282,slow=4.5,SNR=2.3						
MKAR	**Makanchi Array**	**111.33**	**313**	PKiKP	**PKiKP**	**00 02 35.6**	**-2.1**
	comp=Z,0.1nm,0.4s,baz=165,slow=1.1,SNR=4.5						
ARCES	**ARCESS Array B**	**130.13**	**349**	PKP	**PKPdf**	**00 03 12.7**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=91,slow=0.5,SNR=5.3						
FINES	**FINESS Array B**	**136.82**	**343**	PKP	**PKPdf**	**00 03 25.4**	**-0.5**
	comp=Z,3.8nm,1.1s,baz=104,slow=4.4,SNR=3.7						
NOA	**NORSAR Array B**	**140.27**	**352**	PKhKP	PKPpre	00 03 22.8	
	comp=Z,0.5nm,0.8s,baz=22,slow=5.4,SNR=1.2						
AKASG	**Malin Array Be**	**143.69**	**329**	PKP	PKPab	00 03 37.0	-0.5
	comp=Z,1.4nm,0.5s,baz=42,slow=4.1,SNR=9.5						
BRTR	**Keskin Array B**	**146.90**	**310**	PKPbc	**PKPdf**	**00 03 45.5**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=143,slow=2.5,SNR=5.1						
GERES	**GERESS Array B**	**151.34**	**352**	PKPbc	**PKPbc**	**00 03 57.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6,SNR=7.8						
TORD	**Torodi Ar. Bea**	**171.18**	**186**	PKP	**PKPdf**	**00 04 11.7**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=250,slow=4.3,SNR=2.7						

*NEIC **10** 00:05:24.4±3.0, 16.12S±0.06×173.13W±0.07, h10km±1km, mb4.4/5, Error ellipse: s-maj=11.8km s-min=9.6km az=227.0*
*IDC **10** 00:05:25.7±2.3, 16.05S×173.23W, h0km, mb3.8/5, mb1 4.2/6, mb1mx3.9/32, mbtmp3.8/6, ML3.7/1, MS2.8/2, Ms1 2.8/2, ms1mx2.6/30, Error ellipse: s-maj=124.0km s-min=21.7km az=145.0*
ISC 10 00:05:26.9±0.6, 16.14S±0.06×173.08W±0.10, h26km, n29, σ1§78/25, mb3.9/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.55**	**30**	Pn	**Pn**	**00 06 06.8**	**+0.1**
	15nm,0.3s,baz=246,slow=5.6,SNR=8.9						
AFI				Sn	**Sn**	**00 06 34.1**	**-2.8**
	58nm,0.3s,baz=48,slow=22,SNR=18						
AFI				LR	LR	00 07 09.9	
	comp=Z,207nm,18.1s,baz=165,slow=41						
AFI	**Afiamalu**	**2.55**	**30**		**Pn**	**00 06 06.8**	**+0.1**
AFI					**Sn**	**00 06 34.5**	**-2.5**
NIUE	**Niue**	**4.19**	**135**	Pn	**Pn**	**00 06 29.5**	**+0.4**
RAR	**Rarotonga**	**13.58**	**114**	LR	LR	00 12 40.9	
	comp=Z,29nm,18.6s,baz=268,slow=32						
RAR	**Rarotonga**	**13.58**	**114**	Pn	**Pn**	**00 08 37.5**	**-0.3**
RAO	**Raoul Island**	**13.79**	**198**	Pn	**Pn**	**00 08 40.2**	**-0.5**
PAE	**Paea**	**22.53**	**97**	*eT*	T	00 33 22.9	
	0.7nm,0.3s						
PPT2	**Papeete2**	**22.54**	**97**	*eT*	T	00 33 23.4	
	2.0nm,0.3s						
MXZ	**Matakaoa Point**	**22.66**	**198**	P	**P**	**00 10 23.9**	**-2.2**
TBI	**Tubuai**	**23.34**	**112**	*e*LR	LR	00 16 15.2	
	comp=Z,70nm,27.8s						
TBI	**Tubuai**	**23.34**	**112**	*e*T	T	00 34 32.7	
	5.0nm,0.4s						

TAOE	**Nuku Hiva Isla**	**32.92**	**81**	*e*LR	LR	00 20 36.6
	comp=Z,181nm,26.3s					
WRA	**Warramunga Arr**	**49.98**	**257**	P	**P**	**00 14 20.9**	**+1.6**
	0.3nm,0.4s,baz=96,slow=6.3,SNR=5.2					
WRA	**Warramunga Arr**	**49.98**	**257**	P	**P**	**00 14 18.9**	**-0.4**
AS31	**Alice Springs**	**50.18**	**252**	P	**P**	**00 14 21.5**	**+0.8**
ASAR	**Alice Springs**	**50.18**	**252**	P	**P**	**00 14 21.9**	**+1.1**
	1.6nm,0.5s,baz=84,slow=8.5,SNR=16					
ASAR	**Alice Springs**	**50.18**	**252**	P	**P**	**00 14 20.1**	**-0.7**
SAUI	**Saumlaki**	**54.86**	**272**	P	**P**	**00 14 52.8**	**-2.8**
GSTR	**Great Sitkin T**	**68.00**	**358**	P	**P**	**00 16 24.9**	**+1.3**
PETK	**Petropavlovsk-**	**73.43**	**342**	P	**P**	**00 16 56.8**	**+0.2**
MDPB	**Devils Postpil**	**73.71**	**42**	P	**P**	**00 16 59.0**	**0.0**
MDPB				IAmb	IAmb	00 17 04.6	
	comp=Z,4.4nm,0.9s					
NVAR	**Mina Array Bea**	**74.67**	**42**	P	**P**	**00 17 07.5**	**+3.0**
	comp=Z,0.6nm,0.7s,baz=231,slow=9.8,SNR=5.1					
NVAR	**Mina Array Bea**	**74.67**	**42**	P	**P**	**00 17 02.1**	**-2.4**
PD31	**Pinedale Array**	**82.61**	**42**	P	**P**	**00 17 47.1**	**-1.1**
PD31				IAmb	IAmb	00 17 53.2	
	comp=Z,2.2nm,1.0s					
PDAR	**Pinedale Array**	**82.61**	**42**	P	**P**	**00 17 51.1**	**+2.9**
	comp=Z,1.0nm,0.8s,baz=228,slow=3.8,SNR=7.3					
PDAR	**Pinedale Array**	**82.61**	**42**	P	**P**	**00 17 49.7**	**+1.6**
ILAR	**Eielson Array**	**83.11**	**11**	P	**P**	**00 17 52.7**	**+2.8**
	comp=Z,0.6nm,0.8s,baz=227,slow=6.3,SNR=5.9					
GERES	**GERESS Array B**	**146.92**	**352**	PKPbc	**PKiKP**	**00 25 10.4**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=35,slow=4.9,SNR=3.5					
BRTR	**Keskin Array B**	**146.92**	**321**	PKPbc	**PKiKP**	**00 25 10.8**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=88,slow=2.6,SNR=7.4					

*IDC **10** 00:17:32.9±4.2, 26.20N×126.70E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/37, mbtmp3.5/4, Error ellipse: s-maj=254.3km s-min=23.9km az=63.0*
*JMA **10** 00:17:43.3±0.2, 25.91N×125.86E, h76km±4km, M3.6*
ISC 10 00:17:43.7±1.0, 25.92N±0.09×125.85E±0.08, h74km±12km, n20, σ0§61/31, mb3.5/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.94**	**64**	P	**Pn**	**00 18 01.4**	**-0.2**
JKE				S	**Sn**	**00 18 14.8**	**-0.1**
JIKM	**Ikemajima**	**1.13**	**209**	P	**Pn**	**00 18 04.3**	**+0.3**
JIKM				S	**Sn**	**00 18 19.2**	**+0.1**
JOGS	**Gusukube**	**1.22**	**199**	P	**Pn**	**00 18 05.1**	**0.0**
JOGS				*eS*	**Sn**	**00 18 21.1**	**-0.1**
JIRB	**Irabujima**	**1.24**	**210**	P	**Pn**	**00 18 05.3**	**-0.1**
JIRB				S	**Sn**	**00 18 21.1**	**-0.7**
JMJ2	**Miyako jima3**	**1.26**	**202**	P	**Pn**	**00 18 05.7**	**0.0**
JMJ2				*eS*	**Sn**	**00 18 21.9**	**-0.3**
JAGN	**Aguni-jima**	**1.42**	**62**	P	**Pn**	**00 18 08.1**	**+0.4**
JAGN				S	**Sn**	**00 18 25.8**	**0.0**
JTJ	**Tarama**	**1.64**	**219**	P	**Pn**	**00 18 11.1**	**+0.5**
JTJ				*eS*	**Sn**	**00 18 30.6**	**-0.4**
JJT3	**Tamagusuku3**	**1.76**	**82**	P	**Pn**	**00 18 13.2**	**+1.0**
JJT3				*eS*	**Sn**	**00 18 35.2**	**+1.4**
JISG	**Ishigakijimahi**	**1.92**	**227**	P	**Pn**	**00 18 14.8**	**+0.4**
JISG				*eS*	**Sn**	**00 18 38.0**	**+0.3**
JNTH	**Nagotoyohara**	**2.04**	**72**	P	**Pn**	**00 18 15.6**	**-0.4**
JIJ	**Ishigaki jima**	**2.19**	**225**	P	**Pn**	**00 18 17.8**	**-0.1**
JIH	**Iheya**	**2.20**	**59**	P	**Pn**	**00 18 18.0**	**-0.1**
JIH				S	**Sn**	**00 18 43.5**	**-0.9**
JKRS	**Kuro-shima**	**2.36**	**225**	P	**Pn**	**00 18 20.5**	**+0.2**
JKRS				S	**Sn**	**00 18 47.6**	**-0.7**
IRIF	**Iriomote-Funau**	**2.48**	**231**	P	**Pn**	**00 18 22.3**	**+0.4**
JYRO	**Yoronjima**	**2.58**	**64**	P	**Pn**	**00 18 23.3**	**+0.1**
JOKE	**Okinoerabujima**	**2.83**	**59**	P	**Pn**	**00 18 25.8**	**-0

WB2	**Warramunga Arr**	**47.49 264**	P	**P**	**00 39 28.8**	**+0.1**
WB2			IAmb	IAmb	00 39 29.6	
	comp=Z,6.1nm,0.9s					
WB0	**Warramunga Arr**	**47.49 264**	P	**P**	**00 39 28.7**	**0.0**
WB0			IAmb	IAmb	00 39 29.5	
	comp=Z,4.2nm,0.7s					
WRA	**Warramunga Arr**	**47.50 264**	P	**P**	**00 39 28.9**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=92,slow=8.4,SNR=37					
WRA	**Warramunga Arr**	**47.50 264**	P	**P**	**00 39 27.6**	**-1.2**
FORT	**Forrest**	**51.23 249**	P	**P**	**00 39 58.5**	**+1.4**
MTN	**Manton Dam**	**52.49 272**	P	**P**	**00 40 06.9**	**+0.1**
MTN			IAmb	IAmb	00 40 12.2	
	comp=Z,9.5nm,1.1s					
KNRA	**Kununurra**	**53.77 267**	P	**P**	**00 40 16.7**	**+0.5**
KNRA			IAmb	IAmb	00 40 25.8	
	comp=Z,7.0nm,1.1s					
FITZ	**Fitzroy Crossi**	**55.92 263**	P	**P**	**00 40 33.5**	**+1.8**
MORW	**Morawa**	**61.79 248**	P	**P**	**00 41 12.8**	**+0.3**
MORW			IAmb	IAmb	00 41 16.8	
	comp=Z,3.0nm,0.8s					

WEL 10 00:56:00.8, 43°S±2″×17°2E±1″3, h11km±20km, M2.1/6, ML2.1/6, MLv2.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=89.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OXZ	**Oxford**	**0.13**	**196**	P	Pb	00 56 05.4	0.0
LTZ	**Lake Taylor**	**0.44**	**18**	P	Pb	00 56 10.8	+0.2
MHCZ	**Mount Hutt**	**0.50**	**229**	P	Pb	00 56 12.2	+0.5
MQZ	**McQueen's Vall**	**0.65**	**141**	P	Pb	00 56 14.6	+0.4
INZ	**Inchbonnie**	**0.67**	**315**	P	Pb	00 56 15.3	+0.8
GVZ	**Greta Valley S**	**0.73**	**72**	P	Pn	00 56 16.7	-0.4
WACZ	**Wakanui South**	**0.76**	**194**	P	Pn	00 56 17.3	-0.2
OKCZ	**Okains Bay**	**0.88**	**127**	P	Pn	00 56 18.9	-0.3
ARCZ	**Arundel**	**1.00**	**221**	P	Pn	00 56 20.6	-0.2

*JMA **10** 00:59:22.9±0.3, 25°.02N×123°.61E, h14km, M2.7*
*IDC **10** 00:59:23.7±1.3, 25°.66N×123°.71E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/42, mbtmp3.8/5, MS3.2/4, Ms1 3.2/4, ms1mx2.7/37, Error ellipse: s-maj=55.4km s-min=26.2km az=61.0*
*NEIC **10** 00:59:24.9±0.7, 25°.21N±0°.09×123°.9E±0°.1, h36km±12km, mb4.4/2, Error ellipse: s-maj=17.1km s-min=9.0km az=50.0*
ISC 10 00:59:21.7±1.7, 25°.07N±0°.07×123°.72E±0°.04, h12km±11km, n28, σ1°972/30, mb3.8/8, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JISG	**Ishigakijimahi**	**0.72**	**132**	P	**Pn**	**00 59 37.4**	**-0.3**
JISG				S	Sn	00 59 48.3	-0.3
IRIF	**Iriomote-Funau**	**0.73**	**179**	P	**Pg**	**00 59 36.3**	**+0.5**
IRIF				S	**Sg**	**00 59 44.4**	**-1.0**
JIJ	**Ishigaki jima**	**0.80**	**151**	P	**Pg**	**00 59 38.0**	**+0.8**
JIJ				*e*S	**Sg**	**00 59 49.0**	**+1.4**
JKRS	**Kuro-shima**	**0.87**	**162**	P	**Pg**	**00 59 39.3**	**+0.8**
YOJ	**Yonaguni jima**	**0.88**	**227**	P	**Pg**	**00 59 37.5**	**-1.3**
YOJ				*e*S	**Sg**	**00 59 47.7**	**-2.7**
YOJ	**Yonaguni jima**	**0.88**	**227**	Pn	**Pn**	**00 59 43.7**	**+3.7**
JYNG	**Yonagunijimaku**	**0.94**	**229**	P	**Pb**	**00 59 38.4**	**-1.5**
JYNG				*e*S	**Sb**	**00 59 49.1**	**-3.1**
HATJ	**Hateruma jima**	**1.01**	**176**	P	**Pb**	**00 59 41.3**	**+0.2**
HATJ				*e*S	**Sb**	**00 59 54.1**	**-0.2**
TATO	**Taipei**	**2.03**	**268**	Pn	**Pb**	**00 59 59.4**	**+0.9**
NACB	**Ninganchiao**	**2.13**	**246**	Pn	**Pb**	**01 00 00.8**	**+0.5**
YHNB	**Yeheng**	**2.17**	**260**	Pn	**Pb**	**01 00 01.2**	**+0.3**
YULB	**Yu-li**	**2.77**	**234**	Pn	**Pb**	**01 00 10.8**	**-0.4**
SSLB	**Suanglung**	**2.83**	**244**	Pn	**Pn**	**01 00 09.8**	**+3.1**
TPUB	**Ta-pu**	**3.33**	**239**	Pn	**Pn**	**01 00 17.9**	**+4.2**
JNU	**Nakatsue**	**10.17**	**36**	LR	LR	01 05 45.4	
	comp=Z,111nm,19.1s,baz=5.0,slow=39						
KSRS	**Korea Array**	**12.86**	**15**	LR	LR	01 06 49.0	
	comp=Z,62nm,18.9s,baz=180,slow=36						
ERM	**Erimo**	**23.32**	**39**	P	**P**	**01 04 27.4**	**-2.3**
ERM				IAmb	IAmb	01 04 31.4	
	comp=Z,46nm,0.9s						
LEM	**Lembang**	**35.37 208**		LR	LR	01 20 03.2	
	comp=Z,28nm,19.1s,baz=198,slow=34						
MKAR	**Makanchi Array**	**39.35 314**		P	**P**	**01 06 51.0**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=98,slow=10,SNR=8.5						
MAKZ	**Makanchi**	**39.56 314**		P	**P**	**01 06 52.9**	**+0.3**
MAKZ				IAmb	IAmb	01 07 07.7	
	comp=Z,2.2nm,1.0s						
ZALV	**Zalesovo Beam**	**40.80 325**		P	**P**	**01 07 02.8**	**0.0**
	comp=Z,0.6nm,0.6s,baz=117,slow=9.0,SNR=3.6						
ZALV				LR	LR	01 24 40.7	
	comp=Z,49nm,18.1s,baz=67,slow=38						
KURBB	**Kurchatov Arra**	**42.95 318**		P	**P**	**01 07 20.7**	**+0.2**
	comp=Z,0.8nm,0.2s,baz=108,slow=8.1,SNR=4.1						
WRA	**Warramunga Arr**	**45.91 166**		P	P	01 07 52.8	+8.3
	comp=Z,0.9nm,0.8s,baz=348,slow=8.9,SNR=6.0						
ABKAR	**Akbulak array**	**54.49 314**		P	**P**	**01 08 49.7**	**+0.5**
ILAR	**Eielson Array**	**67.37**	**28**	P	**P**	**01 10 17.2**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=278,slow=6.2,SNR=2.5						
SPB2	**Spitsbergen Ar**	**69.11 348**		P	**P**	**01 10 26.4**	**-0.9**
SPA2	**Spitsbergen Ar**	**69.11 348**		P	**P**	**01 10 25.8**	**-1.5**
CLL	**Collm**	**82.73 324**		*e*P	**P**	**01 11 45.0**	**-0.4**
	comp=Z,9.0nm,1.2s						

*IDC **10** 01:19:47.4±0.7, 10°.53N×124°.36E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.0/44, mbtmp4.1/17, MS3.5/14, Ms1 3.5/14, ms1mx3.3/37, Error ellipse: s-maj=28.1km s-min=14.0km az=77.0*
*MAN **10** 01:19:48.7, 10°.64N×124°.29E, h2km, mb5.3, ML4.3, MS4.5*
MAN Intensity V - San Francisco, Cebu; Intensity IV - Cebu City; Mandaue City; Intensity III - Talisay, City Cebu; Intensity II - Lapu-Lapu City; Vallehermoso, Negros Oriental; San Carlos City, Negros Occidental; Intensity I - Bogo City, Ormoc City, Leyte.
*NEIC **10** 01:19:54.8±1.1, 10°.58N±0°.09×124°.4E±0°.1, h50km±8km, mb4.5/22, Error ellipse: s-maj=15.9km s-min=13.3km az=77.0*
ISC 10 01:19:48.0±1.3, 10°.57N±0°.03×124°.40E±0°.03, h1km±8km, n88, σ1°882/92, mb4.3/34, MS3.5/14, 3C-4D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.50**	**240**	*i*P	**Pg**	**01 19 58.5**	**+0.9**
LLP				*i* S	**Sg**	**01 20 05.5**	**+1.5**
OCLP	**Ormoc**	**0.52**	**23**	*e*P	**Pb**	**01 19 59.9**	**0.0**
OCLP				*e*S	**Sb**	**01 20 08.5**	**+0.6**
MSLP	**Maasin**	**0.62**	**134**	*e*P	**Pn**	**01 20 02.7**	**-1.3**
MSLP				*e*S	**Sn**	**01 20 18.2**	**+3.5**
TBP	**Tagbilaran**	**1.02**	**211**	*i*P	**Pn**	**01 20 11.6**	**+2.1**
TBP				*i* S	**Sn**	**01 20 26.1**	**+1.5**
BESP	**Borongan**	**1.44**	**45**	*e*P	**Pg**	**01 20 15.8**	**+0.2**
GUIM	**Jordan**	**1.79**	**272**	*e*P	**Pn**	**01 20 18.4**	**-1.6**
GUIM				*e*S	**Sn**	**01 20 41.6**	**-1.7**
CNOP	**Candoni, Negro**	**1.89**	**247**	*e*P	**Pn**	**01 20 19.9**	**-1.5**
CNOP				*e*S	**Sn**	**01 20 44.0**	**-1.9**
CGP	**Cagayan de Oro**	**2.12**	**172**	*e*P	**Pn**	**01 20 27.4**	**+0.1**
CGP				*e*S	**Sg**	**01 20 55.8**	**-0.5**
JAP	**San Jose, Anti**	**2.42**	**274**	*e*P	**Pn**	**01 20 29.9**	**+1.1**
BUKP	**Musuan**	**2.75**	**166**	*e*P	**Pb**	**01 20 36.0**	**-2.0**
BUKP				*e*S	**Sg**	**01 21 14.5**	**-2.1**
PVCP	**Virac**	**3.02**	**355**	*e*P	**Pn**	**01 20 36.8**	**-0.2**
KCP	**Kidapawan**	**3.60**	**169**	*i*P	**Pn**	**01 20 47.6**	**+2.5**
DAV	**Davao City (W)**	**3.67**	**161**	Pn	**Pn**	**01 20 49.2**	**+3.3**
	52nm,0.3s,baz=176,slow=2.0,SNR=1.7						
DAV				Sn	**Sn**	**01 21 27.8**	**-2.1**
	50nm,0.3s,baz=244,slow=24,SNR=4.2						
SKMP	**Bagumbayan, Su**	**4.03**	**178**	*e*P	**Pb**	**01 20 56.4**	**-3.4**
MATI	**Mati**	**4.04**	**153**	*e*P	**Pb**	**01 20 56.6**	**-3.4**
MATI				*e*S	**Sn**	**01 21 43.2**	**+4.1**
LQP	**Lukban**	**4.50**	**322**	*e*P	**Pn**	**01 20 54.6**	**-2.9**
DDMP	**Don Marcelino,**	**4.62**	**164**	*e*P	**Pn**	**01 21 03.7**	**+4.6**
DDMP				*e*S	**Sn**	**01 21 56.1**	**+2.6**
TGY	**Tagaytay City**	**4.88**	**316**	LR	LR	01 23 05.4	
	comp=Z,897nm,19.6s,baz=219,slow=41						
MYLDM	**Lahad Datu**	**7.93**	**228**	Pn	**Pn**	**01 21 48.5**	**+4.0**
TNTI	**Ternate**	**10.17**	**163**	Pn	**Pn**	**01 22 14.5**	**-0.8**
LUWI	**Luwuk**	**11.65**	**188**	Pn	**Pn**	**01 22 31.2**	**-4.4**
SIJI	**Sorong**	**13.26**	**149**	LR	LR	01 27 48.1	
	comp=Z,106nm,18.5s,baz=320,slow=36						
SBUM	**Sibu**	**14.54**	**237**	P	**P**	**01 23 23.9**	**+2.0**
QIZ	**Qiongzhong**	**16.39**	**303**	P	**Pn**	**01 23 39.4**	**0.0**
QIZ				S	**Sn**	**01 26 44.9**	**+2.9**
QIZ					pmax	pmax	
	comp=Z,240nm,2.6s						
QIZ					pmax	pmax	
	comp=Z,130nm,2.9s						
GUMO	**Guam**	**20.23**	**79**	LR	LR	01 30 57.0	
	comp=Z,35nm,20.0s,baz=67,slow=33						
BATI	**Baumata**	**20.66**	**182**	P	**P**	**01 24 29.9**	**+0.5**
	comp=Z,13nm,0.4s,baz=162,slow=8.8,SNR=1.9						
WHN	**Wuhan**	**21.96**	**336**	P	**P**	**01 24 50.3**	**+7.0**
WHN				S	Sn	01 29 07.5	+11
WHN				LR	LR		
	comp=Z,540nm,12.6s						
NJ2	**Nanjing**	**21.98**	**347**	*e*P	**P**	**01 24 43.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GYA	**Guiyang**	**23.03**	**316**	P	**P**	**01 24 59.6**	**+4.7**
GYA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
IPM	**Ipoh**	**23.94**	**257**	P	**P**	**01 25 04.3**	**+0.3**
KULM	**Kulim**	**24.10**	**259**	P	**P**	**01 25 05.8**	**+0.4**
KULM				IAmb	IAmb	01 25 09.5	
	comp=Z,34nm,1.4s						
CMAR	**Chiang Mai Arr**	**25.84**	**291**	P	**P**	**01 25 20.9**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=165,slow=28,SNR=1.3						
CMAR				LR	LR	01 34 45.5	
	comp=Z,56nm,19.0s,baz=154,slow=35						
CMAR	**Chiang Mai Arr**	**25.84**	**291**	P	**P**	**01 25 21.7**	**+0.4**
PSI	**Prapat**	**26.44**	**255**	P	**P**	**01 25 26.9**	**0.0**
	comp=Z,4.1nm,0.7s,baz=11,slow=1.9,SNR=4.0						
RPSI	**Rantau Prapat**	**26.47**	**255**	P	**P**	**01 25 26.9**	**-0.1**
KSAR	**Wonju Array Be**	**26.94**	**6**	P	**P**	**01 25 31.2**	**+0.3**
KSRS	**Korea Array**	**26.95**	**6**	P	**P**	**01 25 31.9**	**+0.8**
	comp=Z,3.1nm,0.6s,baz=186,slow=10.0,SNR=11						
KSRS				LR	LR	01 36 55.3	
	comp=Z,51nm,19.8s,baz=194,slow=38						
XAN	**Xi'an**	**27.32**	**331**	P	**P**	**01 25 34.9**	**+0.3**
XAN				pP		01 25 42.0	
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN	**Xi'an**	**27.32**	**331**	P	**P**	**01 25 34.2**	**-0.4**
XAN				IAmb	IAmb	01 25 43.6	
	comp=Z,11nm,1.2s						
CD2	**Chengdu**	**27.87**	**320**	*e*P	**P**	**01 25 38.4**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KRVT	**Keravat (AS076**	**31.22**	**117**	LR	LR	01 37 17.1	
	comp=Z,55nm,18.7s,baz=94,slow=34						
LZH	**Lanzhou**	**31.50**	**327**	*e*P	**P**	**01 26 12.3**	**+0.5**
LZH				pP		01 26 17.0	
LZH				sP		01 26 20.0	
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
WRA	**Warramunga Arr**	**31.86**	**162**	P	**P**	**01 26 14.6**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=342,slow=9.1,SNR=2.7						
WRA				LR	LR	01 40 17.2	
	comp=Z,56nm,18.9s,baz=355,slow=39						
HHC	**Hu-ho-hao-te**	**32.22**	**342**	*e*P	P	01 26 22.9	+4.9
HHC				pmax	pmax		
	comp=Z,12nm,1.2s						
HHC				pmax	pmax		
	comp=Z,170nm,5.5s						
USRK	**Ussuriysk Ar.**	**34.14**	**10**	P	**P**	**01 26 35.1**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=134,slow=43,SNR=4.4						
MDJ	**Mudanjiang**	**34.22**	**7**	P	**P**	**01 26 38.0**	**+2.8**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.2s						
ASAR	**Alice Springs**	**35.27**	**165**	P	**P**	**01 26 42.2**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=88,slow=11,SNR=4.3						
GTA	**Gaotai**	**36.11**	**327**	P	**P**	**01 26 52.9**	**+1.1**
GTA				pP		01 26 59.0	
GTA				sP		01 27 02.1	
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,130nm,4.1s						
GTA				LR	LR		
	comp=N,66nm,20.8s						
GTA				LR	LR		
	comp=E,150nm,19.1s						
GTA				LR	LR		
	comp=Z,160nm,20.4s						
ULN	**Ulaanbaatar**	**39.94**	**342**	P	**P**	**01 27 24.6**	**+0.6**
SONM	**Songino Array**	**40.12**	**341**	P	**P**	**01 27 25.2**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=139,slow=9.0,SNR=1.9						
SONM				LR	LR	01 45 03.8	
	comp=Z,126nm,19.0s,baz=185,slow=38						
MORW	**Morawa**	**40.23**	**191**	P	**P**	**01 27 26.2**	**-0.2**
MORW				IAmb	IAmb	01 27 29.2	
	comp=Z,19nm,1.4s						
FORT	**Forrest**	**41.26**	**175**	P	**P**	**01 27 34.2**	**-0.7**
NWAO	**Narrogin (SRO)**	**43.79**	**189**	P	**P**	**01 27 55.7**	**+0.2**
BBOO	**Buckleboo**	**44.55**	**166**	P	**P**	**01 28 02.6**	**+1.0**
BBOO				IAmb	IAmb	01 28 14.7	
	comp=Z,15nm,1.2s						
STKA	**Stephens Creek**	**45.30**	**159**	P	**P**	**01 28 08.2**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=358,slow=8.9,SNR=4.5						
STKA				LR	LR	01 51 40.9	
	comp=Z,29nm,19.4s,baz=25,slow=42						
STKA	**Stephens Creek**	**45.30**	**159**	P	**P**	**01 28 09.4**	**+1.8**
WMQ	**Urumqi**	**45.87**	**323**	*e*P	**P**	**01 28 13.5**	**+1.4**
MK31	**Makanchi Array**	**50.68**	**323**	P	**P**	**01 28 48.2**	**-1.0**
MKAR	**Makanchi Array**	**50.68**	**323**	P	**P**	**01 28 49.1**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=125,slow=8.3,SNR=16						
MKAR	**Makanchi Array**	**50.68**	**323**	P	**P**	**01 28 49.6**	**+0.4**
MAKZ	**Makanchi**	**50.88**	**323**	P	**P**	**01 28 50.7**	**+0.1**
NIL	**Nilore**	**52.05**	**305**	P	**P**	**01 28 59.5**	**-0.1**
ZALV	**Zalesovo Beam**	**53.49**	**332**	P	**P**	**01 29 09.6**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=123,slow=6.6,SNR=7.9						
ZALV				LR	LR	01 54 01.7	
	comp=Z,51nm,18.7s,baz=70,slow=38						
ZALV	**Zalesovo Beam**	**53.49**	**332**	P	**P**	**01 29 08.0**	**-2.0**
KURK	**Kurchatov**	**54.79**	**326**	P	**P**	**01 29 19.5**	**+0.1**
KURK				IAmb	IAmb	01 29 20.6	
	comp=Z,8.0nm,0.8s						
KURBB	**Kurchatov Arra**	**54.79**	**326**	P	**P**	**01 29 19.4**	**0.0**
	comp=Z,3.0nm,0.7s,baz=128,slow=6.9,SNR=38						
KBL	**Kabul**	**55.65**	**305**	P	**P**	**01 29 25.8**	**-0.4**
KBL				IAmb	IAmb	01 29 28.0	
	comp=Z,3.8nm,1.0s						
GAR	**Garm**	**55.69**	**310**	P	**P**	**01 29 26.1**	**-0.3**
KK31	**Karatay Array**	**56.74**	**315**	P	**P**	**01 29 33.2**	**-0.4**
KK31				IAmb	IAmb	01 29 34.5	
	comp=Z,5.2nm,1.1s						
KKAR	**Karatay Array**	**56.74**	**315**	P	**P**	**01 29 33.5**	**-0.1**
KKAR	**Karatay Array**	**56.74**	**315**	P	**P**	**01 29 33.1**	**-0.5**
KKAR				IAmb	IAmb	01 29 34.5	
	comp=Z,5.2nm,1.1s						
BRVK	**Borovoye**	**60.45**	**326**	P	**P**	**01 29 58.7**	**-0.6**
BRVK				IAmb	IAmb	01 30 10.2	
	comp=Z,3.2nm,0.9s						
TIXI	**Tiksi**	**61.09**	**2**	P	**P**	**01 30 02.4**	**-0.9**
NRIK	**Noril'sk**	**63.28**	**346**	P	**P**	**01 30 17.3**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=122,slow=6.9,SNR=9.7						
NRIK				LR	LR	01 59 43.6	
	comp=Z,71nm,19.5s,baz=6.0,slow=38						
GEYT	**Alibeck**	**64.89**	**307**	LR	LR	02 01 32.5	
	comp=Z,68nm,19.9s,baz=355,slow=39						
GYA0B	**ALIBECK ARRAY**	**64.89**	**307**	P	**P**	**01 30 29.2**	**-0.1**
GYA0B				IAmb	IAmb	01 30 33.0	
	comp=Z,4.1nm,0.8s						
ABKAR	**Akbulak array**	**65.45**	**319**		**P**	**01 30 31.9**	**-0.7**
ARU	**Arti**	**67.97**	**327**		**P**	**01 30 48.2**	**-0.4**
ARU				IAmb	IAmb	01 30 56.2	
	comp=Z,8.3nm,1.4s						
ILAR	**Eielson Array**	**79.97**	**26**	P	**P**	**01 31 58.5**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=239,slow=4.7,SNR=5.2						
ILAR	**Eielson Array**	**79.97**	**26**	P	**P**	**01 31 59.5**	**+0.7**
BMAR	**Burnt Mountain**	**80.71**	**23**	P	**P**	**01 32 02.6**	**-0.1**
BRTR	**Keskin Array B**	**83.92**	**309**	P	**P**	**01 32 19.1**	**-1.1**
AKASG	**Malin Array Be**	**85.17**	**321**	P	**P**	**01 32 24.0**	**-2.1**
	comp=Z,0.2nm,0.2s,baz=63,slow=5.0,SNR=4.6						
AKASG	**Malin Array Be**	**85.17**	**321**	P	**P**	**01 32 25.2**	**-0.9**
VNDA	**Vanda**	**90.47**	**172**	P	**P**	**01 32 49.5**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=307,slow=6.6,SNR=8.3						
VNDA				LR	LR	02 14 11.9	
	comp=Z,14nm,19.2s,baz=12,slow=36						
NOA	**NORSAR Array B**	**91.67**	**333**	LR	LR	02 16 48.8	
	comp=Z,76nm,18.6s,baz=300,slow=37						
GERES	**GERESS Array B**	**95.32**	**322**	P	**P**	**01 33 11.9**	**-2.2**
	comp=Z,0.2nm,0.5s,baz=269,slow=5.3,SNR=3.5						
GERES	**GERESS Array B**	**95.32**	**322**	P	**P**	**01 33 12.3**	**-1.8**

*IDC **10** 01:28:52.5±0.9, 12°.41S×14°.94E, h0km, mb3.9/6, mb1 4.1/11, mb1mx3.8/38, mbtmp4.0/11, ML3.4/5, MS2.9/3, Ms1 2.9/3, ms1mx2.6/31, Error ellipse: s-maj=31.5km s-min=13.6km az=61.0*
*NEIC **10** 01:28:55.4±1.8, 12°.5S±0°.1×14°.8E±0°.2, h15km±2km, mb4.1/8, Error ellipse: s-maj=26.1km s-min=14.3km az=78.0*
ISC 10 01:28:54.5±0.7, 12°.55S±0°.07×14°.97E±0°.09, h10km, n43, σ2°26/48, mb4.0/9, Angola

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**7.07**	**160**	Pn	**Pn**	**01 30 39.9**	**+1.7**
	3.9nm,0.3s,baz=4.1,slow=10,SNR=39						
TSUM				Sn	**Sn**	**01 31 57.5**	**-1.3**
	8.1nm,0.3s,baz=270,slow=21,SNR=8.3						
TSUM				Lg	Lg	01 32 39.8	
	16nm,0.3s,baz=267,slow=12,SNR=14						
TSUM				LR	LR	01 32 44.9	
	comp=Z,30nm,19.7s,baz=335,slow=32						
TSUM	**Tsumeb**	**7.07**	**160**	*i* P	**Pn**	**01 30 40.6**	**+2.4**
TSUM				*i* S	Sn	01 31 50.8	-8.0
TSUM	**Tsumeb**	**7.07**	**160**		**Pn**	**01 30 40.5**	**+2.2**
LSZ	**Lusaka**	**13.11**	**103**	Pn	**Pn**	**01 32 01.7**	**+0.7**
	0.2nm,0.3s,baz=282,slow=14,SNR=5.2						
LSZ				Sn	**Sn**	**01 34 24.5**	**-2.6**
	0.4nm,0.3s,baz=246,slow=19,SNR=2.5						
LSZ				Lg	Lg	01 35 47.9	
	0.8nm,0.3s,baz=15,slow=16,SNR=3.9						
LSZ				LR	LR	01 37 17.2	
	comp=Z,97nm,19.1s,baz=306,slow=38						
LSZ	**Lusaka**	**13.11**	**103**	*i* P	**Pn**	**01 32 04.1**	**+3.1**
LSZ				*i* S	**Sn**	**01 34 27.4**	**+0.2**
LSZ	**Lusaka**	**13.11**	**103**		**Pn**	**01 32 03.8**	**+2.8**
LSZ	**Lusaka**	**13.11**	**103**	*i* P	**Pn**	**01 32 04.1**	**+3.1**
LSZ				*i* S	**Sn**	**01 34 27.4**	**+0.2**
BLWY	**Bulawayo**	**15.10**	**122**	*i* P	**Pn**	**01 32 29.4**	**+1.3**
BLWY				*i* S	**Sn**	**01 35 10.1**	**-5.5**
BLWY	**Bulawayo**	**15.10**	**122**	*i* P	**Pn**	**01 32 29.4**	**+1.3**
BLWY				*i* S	**Sn**	**01 35 10.1**	**-5.5**
MATP	**Matopo**	**15.14**	**123**	Pn	**Pn**	**01 32 29.6**	**+0.9**
	0.3nm,0.3s,baz=53,slow=12,SNR=6.7						
MATP				Sn	**Sn**	**01 35 15.1**	**-1.6**
	0.3nm,0.3s,baz=42,slow=5.2,SNR=2.4						
MATP				Lg	Lg	01 36 55.1	
	0.7nm,0.3s,baz=45,slow=23,SNR=4.4						
LBTB	**Lobatse**	**15.95**	**143**	Pn	**Pn**	**01 32 40.0**	**+0.8**
	0.4nm,0.3s,baz=320,slow=13,SNR=6.4						
LBTB				Sn	**Sn**	**01 35 29.9**	**-6.4**
	0.2nm,0.3s,baz=50,slow=18,SNR=3.1						
LBTB				Lg	Lg	01 37 19.3	
	baz=45,slow=12,SNR=1.9						
LBTB	**Lobatse**	**15.95**	**143**	*i* P	**Pn**	**01 32 38.0**	**-1.2**
LBTB				*i* S	Sn	01 35 24.8	-11
LBTB	**Lobatse**	**15.95**	**143**		**Pn**	**01 32 39.8**	**+0.6**
LBTB				IAmb	IAmb	01 32 46.0	
	comp=Z,18nm,1.3s						
LBTB	**Lobatse**	**15.95**	**143**	*i* P	**Pn**	**01 32 38.0**	**-1.2**
LBTB				*i* S	Sn	01 35 24.8	-11
BOSA	**Boshof**	**18.64**	**151**	P	**Pn**	**01 33 14.6**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=341,slow=12,SNR=5.6						
BOSA				Lg	Lg	01 38 46.0	
	baz=251,slow=17,SNR=5.4						
BOSA	**Boshof**	**18.64**	**151**	*i* P	**P**	**01 33 09.9**	**-2.6**
BOSA				*i* S	Sn	01 36 28.8	-13
BOSA	**Boshof**	**18.64**	**151**	*i* P	**P**	**01 33 11.6**	**-1.0**
BOSA				*i* S	Sn	01 36 28.6	-13
BOSA	**Boshof**	**18.64**	**151**	P	**P**	**01 33 14.3**	**+1.7**
BOSA	**Boshof**	**18.64**	**151**	*i* P	**P**	**01 33 11.6**	**-1.0**
BOSA				*i* S	Sn	01 36 28.6	-13
MBAR	**Mbarara**	**19.63**	**54**	Lg	Lg	01 39 02.0	
	comp=Z,0.6nm,0.3s,baz=131,slow=15,SNR=3.9						
MBAR				LR	LR	01 41 18.2	
	comp=Z,39nm,20.0s,baz=214,slow=38						
SUR	**Sutherland**	**20.45**	**166**	Lg	Lg	01 39 41.0	
	comp=Z,14nm,0.9s,baz=348,slow=11,SNR=3.7						
SUR	**Sutherland**	**20.45**	**166**	P	**P**	**01 33 34.8**	**+2.4**
KMBO	**Kilima Mbogo**	**24.83**	**65**	Lg	Lg	01 41 52.9	
	comp=Z,1.4nm,0.8s,baz=50,slow=23,SNR=1.9						
TOA0	**Torodi Ar. Sit**	**28.73**	**332**	P	**P**	**01 34 50.4**	**-1.9**
TOA0				IAmb	IAmb	01 34 50.8	
	comp=Z,2.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**28.73**	**332**	P	**P**	**01 34 49.4**	**-2.9**
	comp=Z,1.1nm,

TARZ	Mount Tarawera	0.84	64	P	Pn	01 33 43.4 +0.1
TOZ	Tahuroa Road	0.88	358	P	Pn	01 33 43.6 +0.3
BKZ	Black Stump Fm	0.93	127	P	Pn	01 33 43.6 -0.1
BHHZ	Black Hill Sta	0.97	155	P	Pn	01 33 43.7 -0.2
MUGZ	Murupara	0.97	83	P	Pn	01 33 43.5 -0.5
MTHZ	Maungataniwha	1.05	104	P	Pn	01 33 44.5 0.0
KWHZ	Kaweka Forest	1.07	140	P	Pn	01 33 45.1 +0.4
MARZ	Manawahe	1.09	56	P	Pn	01 33 44.9 0.0
NMHZ	Naumai	1.10	117	P	Pn	01 33 45.9 +0.9
OPRZ	Ohinepanea	1.10	47	P	Pn	01 33 45.0 +0.1
RTZ	Ruatahuna	1.13	91	P	Pn	01 33 45.0 -0.1
KRHZ	Kereru	1.22	148	P	Pn	01 33 46.1 +0.2
WAZ	Wanganui	1.22	200	P	Pn	01 33 46.1 +0.2
LREZ	Lake Rotokare	1.23	226	P	Pn	01 33 46.3 +0.5
MCHZ	McNeill Hill	1.23	133	P	Pn	01 33 46.9 +1.0
RAHZ	Arahi	1.25	105	P	Pn	01 33 46.6 +0.6
URZ	Urewera	1.28	75	P	Pn	01 33 45.8 -0.5
NEZ	North Egmont	1.31	239	P	Pn	01 33 46.9 +0.3
ARHZ	Aropaoanui	1.31	120	P	Pn	01 33 47.3 +0.7
PKE	Pukeiti	1.34	244	P	Pn	01 33 47.1 +0.2
KHEZ	Kahui Hut	1.37	240	P	Pn	01 33 47.3 +0.1
PNHZ	Pukenui	1.40	159	P	Pn	01 33 47.4 0.0
WHHZ	Waihua	1.40	110	P	Pn	01 33 47.9 +0.5
SNGZ	Shannon Statio	1.42	98	P	Pn	01 33 48.0 +0.5
MYRZ	Mayor Island	1.44	23	P	Pn	01 33 48.5 +0.7
NBEZ	Newall Road No	1.46	243	P	Pn	01 33 48.2 +0.3
RAGZ	Rawiri	1.48	86	P	Pn	01 33 48.3 +0.1
TSZ	Takapari Road	1.49	167	P	Pn	01 33 48.1 0.0
NMEZ	Namu Road	1.52	238	P	Pn	01 33 48.6 +0.2
MKAZ	Moumakai	1.53	349	P	Pn	01 33 49.0 +0.4
KAHZ	Kahuranaki	1.58	139	P	Pn	01 33 49.6 +0.6
MWZ	Matawai	1.58	81	P	Pn	01 33 48.9 -0.2
CKHZ	Cape Kidnapper	1.59	132	P	Pn	01 33 49.8 +0.7
OHWZ	Ohakea	1.60	186	P	Pn	01 33 49.6 +0.4
WPHZ	Waipukurau	1.61	155	P	Pn	01 33 49.5 +0.2
AWAZ	Awhitu Peninsu	1.70	335	P	Pn	01 33 50.8 +0.6
KNZ	Kokohu	1.72	105	P	Pn	01 33 50.7 +0.4
ETAZ	East Tamaki Re	1.72	343	P	Pn	01 33 51.0 +0.6
RIGZ	Rimuhau	1.74	94	P	Pn	01 33 51.1 +0.4
PXZ	Pawanui	1.75	145	P	Pn	01 33 50.9 +0.3
DVHZ	Dannevirke	1.76	164	P	Pn	01 33 50.4 -0.4
POWZ	Post Office Ro	1.79	174	P	Pn	01 33 50.7 -0.4
RUGZ	Raukumara Rang	1.80	70	P	Pn	01 33 50.4 -1.0
TKGZ	Te Karaka	1.82	85	P	Pn	01 33 51.9 +0.6
WTAZ	Waiatarua	1.84	335	P	Pn	01 33 51.9 +0.2
EPAZ	Eden Park BICE	1.84	340	P	Pn	01 33 52.3 +0.7
WIAZ	Waiheke Island	1.84	350	P	Pn	01 33 52.1 +0.5
PRGZ	Paritu Road	1.86	100	P	Pn	01 33 52.1 +0.3
PRHZ	Porangahau	1.86	150	P	Pn	01 33 51.9 +0.1
HBAZ	Herne Bay Bore	1.87	340	P	Pn	01 33 52.7 +0.8
MBAZ	Motutapu North	1.91	344	P	Pn	01 33 53.0 +0.7
MHGZ	Mahia Peninsul	1.93	107	P	Pn	01 33 53.0 +0.5
HAZ	Te Kaha	1.96	65	P	Pn	01 33 52.1 -0.7
TWGZ	Tauwhareparae	1.97	78	P	Pn	01 33 53.5 +0.5
PRWZ	Pori Road	1.97	170	P	Pn	01 33 52.7 -0.2
ANWZ	Angora Road	1.99	159	P	Pn	01 33 53.1 +0.1
RVAZ	Riverhead Bore	1.99	337	P	Pn	01 33 54.0 +0.9
MRZ	Mangatainoka R	2.05	179	P	Pn	01 33 53.0 -0.8
ABAZ	Army Bay	2.08	344	P	Pn	01 33 55.5 +1.3
CNGZ	Carnagh Statio	2.10	87	P	Pn	01 33 54.9 +0.6
PKGZ	Pakihiroa	2.12	71	P	Pn	01 33 54.6 -0.1
BFZ	Birch Farm	2.14	165	P	Pn	01 33 54.3 -0.4
TIWZ	Tintock	2.18	173	P	Pn	01 33 54.7 -0.6
PUZ	Puketiti	2.20	77	P	Pn	01 33 55.2 -0.3
OGWZ	Otaki Gorge	2.23	187	P	Pn	01 33 55.0 -0.6
HOWZ	Holdsworth Sta	2.29	180	P	Pn	01 33 55.6 -0.8
KIWZ	Kapiti Island	2.30	73	P	Pn	01 33 55.5 -1.1
GRZ	Great Barrier	2.35	358	P	Pn	01 33 58.0 +0.8
CPWZ	Castlepoint	2.35	168	P	Pn	01 33 57.0 -0.1
WMGZ	Waiomatatini S	2.40	72	P	Pn	01 33 57.4 -0.3
MXZ	Matakaoa Point	2.42	65	P	Pn	01 33 58.1 +0.2
TMWZ	Te Maipa	2.51	174	P	Pn	01 33 57.9 -1.0
DUWZ	D'Urville Isla	2.52	209	P	Pn	01 33 57.7 -1.4
CAW	Cannon Point	2.52	188	P	Pn	01 33 58.0 -1.0
MTW	Mount Morrison	2.55	181	P	Pn	01 33 58.1 -1.2
WEL	Wellington	2.74	192	P	Pn	01 34 00.4 -1.1
PAWZ	Paruwai Farm	2.77	182	P	Pn	01 34 00.6 -1.4
TCW	Tory Channel	2.77	200	P	Pn	01 34 00.7 -1.3
TRWZ	Traveller	2.79	178	P	Pn	01 34 00.9 -1.3
MSWZ	Moikau Station	2.81	184	P	Pn	01 34 01.0 -1.4
WCZ	Waipu Caves	2.83	340	P	Pn	01 34 03.8 +1.1
BHW	Baring Head	2.84	190	P	Pn	01 34 01.3 -1.4
PLWZ	Palliser	2.97	184	P	Pn	01 34 02.6 -1.7
TUWZ	Tuamarina	3.07	203	P	Pn	01 34 03.8 -1.7
NNZ	Nelson	3.08	212	P	Pn	01 34 03.7 -2.0
QRZ	Quartz Range	3.21	225	P	Pn	01 34 04.9 -2.3
CMWZ	Cape Campbell	3.30	198	P	Pn	01 34 07.6 -0.6
BSWZ	Blackbirch Sta	3.35	202	P	Pn	01 34 07.5 -1.4
OUZ	Omahuta	3.72	335	P	Pn	01 34 14.6 +1.0
THZ	Tophouse	3.74	212	P	Pn	01 34 11.3 -2.5
KHZ	Kahutara	4.10	201	P	Pn	01 34 16.5 -1.7
DSZ	Denniston Nort	4.24	221	P	Pn	01 34 17.2 -2.9
GVZ	Greta Valley S	4.75	203	P	Pn	01 34 24.0 -2.5
LTZ	Lake Taylor	4.85	210	P	Pn	01 34 24.6 -3.3
AMCZ	Amberley	5.06	205	P	Pn	01 34 28.1 -2.5
INZ	Inchbonnie	5.16	216	P	Pn	01 34 28.2 -3.5
OXZ	Oxford	5.41	208	P	Pn	01 34 31.5 -3.5
OKCZ	Okains Bay	5.44	199	P	Pn	01 34 32.6 -2.9
MQZ	McQueen's Vall	5.54	202	P	Pn	01 34 33.1 -3.5
RACZ	Rakaia	5.72	206	P	Pn	01 34 35.7 -3.4
WVZ	Waitaha Valley	5.76	218	P	Pn	01 34 36.9 -2.7
MHCZ	Mount Hutt	5.76	210	P	Pn	01 34 36.5 -3.1
WAKZ	Wakanui South	6.01	206	P	Pn	01 34 37.7 -3.3
RPZ	Rata Peaks	6.12	212	P	Pn	01 34 41.7 -2.6
GCSZ	Gaunt Creek Bo	6.14	218	P	Pn	01 34 40.5 -4.0
FOZ	Fox Glacier	6.55	219	P	Pn	01 34 46.8 -3.0
LBZ	Lake Benmore	7.03	213	P	Pn	01 34 53.6 -2.6
ODZ	Otahua Downs	7.40	208	P	Pn	01 34 57.7 -3.2
HHSZ	Highcliff Hill	8.14	205	P	Pn	01 35 07.9 -2.8
TUZ	Tuapeka	8.54	209	P	Pn	01 35 14.6 -1.4
MLZ	Mavora Lakes	8.72	217	P	Pn	01 35 15.6 -2.7
WHZ	Wether Hill Ro	9.20	215	P	Pn	01 35 21.6 -3.0
APZ	The Paps	9.91	212	P	Pn	01 35 30.7 -3.2

WEL 10 01:51:17.3, 43.6S±0.9×17.3E±, h12km±2km, M2.3/9, ML2.5/9, MLv2.3/9, Error ellipse: s-maj=0.0km s-min=0.0km az=110.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.11	199	P	Pb	01 51 21.5	+0.2
OKCZ	Okains Bay	0.28	116	P	Pb	01 51 24.4	+0.1
AMCZ	Amberley	0.43	355	P	Pb	01 51 27.0	+0.3
RACZ	Rakaia	0.43	253	P	Pb	01 51 27.7	+0.9
OXZ	Oxford	0.56	299	P	Pb	01 51 29.4	+0.4
GVZ	Greta Valley S	0.68	21	P	Pb	01 51 31.7	+0.7
WACZ	Wakanui South	0.71	241	P	Pn	01 51 33.2	+0.1
MHCZ	Mount Hutt	0.83	274	P	Pn	01 51 35.0	+0.2
LTZ	Lake Taylor	0.88	349	P	Pn	01 51 35.3	-0.2
ARCZ	Arundel	1.16	252	P	Pg	01 51 40.9	+1.3
RPZ	Rata Peaks	1.20	264	P	Pg	01 51 40.4	0.0
INZ	Inchbonnie	1.27	313	P	Pg	01 51 42.1	+0.4
KHZ	Kahutara	1.33	28	P	Pn	01 51 41.2	-0.5
LBZ	Lake Benmore	1.98	246	P	Pg	01 51 56.4	+1.2
ODZ	Otahua Downs	2.07	225	P	Pg	01 51 57.7	+0.8

IDC 10 02:17:51.9±7.8, 6.69S×129.65E, h58km±75km, mb3.5/2, mb1 3.4/5, mb1mx3.3/34, mbtmp3.5/5, ML3.2/3, Error ellipse: s-maj=68.9km s-min=33.1km az=57.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.99	199	P	Pn	02 20 40.9	+0.8
	0.2nm,0.3s,baz=20,slow=12,SNR=3.1						
FITZ				S	Sn	02 22 53.2	+0.8
	0.1nm,0.3s,baz=309,slow=6.5,SNR=2.6						
WRA	Warramunga Arr	13.94	161	P	Pn	02 21 04.6	-2.0
	0.1nm,0.3s,baz=342,slow=13,SNR=3.8						
WRA				S	Sn	02 23 32.6	-7.3
	0.1nm,0.3s,baz=343,slow=23,SNR=3.1						
ASAR	Alice Springs	17.37	167	P	P	02 21 50.7	-0.3
	0.1nm,0.3s,baz=347,slow=8.4,SNR=3.7						
STKA	Stephens Creek	27.43	158	P	P	02 23 32.4	+0.2
	0.7nm,0.3s,baz=330,slow=14,SNR=2.8						
MKAR	Makanchi Array	67.78	327	P	P	02 28 43.5	0.0
	0.3nm,0.5s,baz=121,slow=7.2,SNR=4.2						

*IDC **10** 02:26:49.2±0.8, 51.2°92N×178.2°28E, h0km, mb3.9/13, mb1 4.1/13, mb1mx3.8/57, mbtmp3.9/13, MS3.9/1, Ms1 3.9/1, ms1mx2.6/46, Error ellipse: s-maj=26.4km s-min=17.0km az=155.0*

*AEIC **10** 02:27:03.1.6, 51.8N±0.2°×178.6E±0.1, h123km±4km, ML3.5, mb4.1/45(NEIC), Error ellipse: s-maj=22.1km s-min=11.1km az=176.0*

*NEIC **10** 02:27:03.6±1.2, 51.9N±0.1°×178.4E±0.1, h119km±5km, Error ellipse: s-maj=21.3km s-min=11.7km az=175.0*

ISC 10 02:27:03.9±0.7, 51.9N±0.1×178.41E±0.06, h121km±6km, n95, σ0.95/98, mb4.0/33, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	Little Sitkin	0.10	41		Pn	02 27 20.1	-0.4
LSSE	Little Sitkin	0.12	59		Pn	02 27 19.9	-0.5
LSNW	Little Sitkin	0.12	35		Pn	02 27 19.8	-0.7
LSNW					Sn	02 27 35.2	+2.2
LSPA	Little Sitkin	0.13	51		Pn	02 27 20.1	-0.5
CETU	Semis' Tuman	0.68	82		Pn	02 27 22.6	-0.6
CESW	Semis' Southwe	0.72	87		Pn	02 27 23.0	-0.5
CEAP	Semis' Anvil P	0.74	79		Pn	02 27 23.5	-0.1
AMKA	Amchitka	0.75	131		Pn	02 27 23.5	-0.2
AMKA					Sn	02 27 37.9	-0.8
CERB	Semis' Cerberu	0.76	85		Pn	02 27 23.5	-0.3
CERAA	Semis' Rag'd T	0.79	87		Pn	02 27 23.8	-0.3
CERAA					Sn	02 27 39.5	+0.1
GAEA	Gareloi East	1.77	92		Pn	02 27 34.6	+0.1
TASE	Tanaga Southea	2.21	90		Pn	02 27 39.7	-0.3
TAFP	Tanaga Falls P	2.24	88		Pn	02 27 40.0	-0.4
TAFP					Sn	02 28 07.2	-1.1
KIMD	Kanaga Island	2.71	91		Pn	02 27 45.7	-0.6
ADK	Adak	3.04	88	Pn	Pn	02 27 49.0	-1.7
GSTR	Great Sitkin T	3.43	84	Pn	Pn	02 27 54.6	-1.2
GSMY	Great Sitkin M	3.43	85		Pn	02 27 55.5	-0.3
ATKA	Atka Island	4.58	83	Pn	Pn	02 28 09.7	-1.4
KOKI	Mount Kliuchef	4.58	81		Pn	02 28 11.0	-0.2
KOFP	Korovin Flat P	4.64	82		Pn	02 28 12.9	+1.0
NIKH	Nikolski High	7.87	77	Pn	Pn	02 28 55.4	+0.1
OKTU	Okmok Mt. Tuli	8.38	74	Pn	Pn	02 29 03.6	+1.2
MGOD	Makushin Gods	9.12	72		Pn	02 29 13.7	+1.4
UNV	Unalaska Valle	9.34	72	Pn	Pn	02 29 16.0	+0.8
KDAK	Kodiak Island	17.64	59	P	P	02 31 00.9	0.0
CNPM	China Poot	18.61	54	P	P	02 31 11.5	-0.1
BRLK	Bradley Lake	18.83	53	P	P	02 31 13.5	-0.4
KTH	Kantishna Hill	19.89	42	P	P	02 31 25.7	+0.2
KTH				IAmb	IAmb	02 31 36.1	
	comp=Z,20nm,1.4s						
IMAR	Indian Mountai	19.90	34	P	Pn	02 31 28.4	+0.1
BPAW	Bear Paw Mtn.	20.07	41	P	P	02 31 27.6	+0.3
BPAW				IAmb	IAmb	02 31 28.4	
	comp=Z,6.1nm,1.2s						
GHO	Glory Hole Cre	20.21	48	P	P	02 31 29.2	+0.2
BWN	Browne	20.72	41	P	P	02 31 34.5	+0.3
SCM	Sheep Creek Mo	20.96	48	P	P	02 31 35.9	-1.1
SCM				IAmb	IAmb	02 31 39.4	
	comp=Z,14nm,1.2s						
I23K	Minto, Yukon-K	21.13	39	P	P	02 31 38.5	-0.1
DHY	Denali Highway	21.25	45	P	P	02 31 40.2	0.0
DHY				IAmb	IAmb	02 31 41.1	
	comp=Z,5.2nm,0.9s						
MDM	Murphy Dome	21.50	40	P	P	02 31 42.4	-0.3
MDM				IAmb	IAmb	02 31 45.9	
	comp=Z,12nm,1.5s						
KLU	Klutina	21.55	50	P	P	02 31 43.4	+0.1
KLU				IAmb	IAmb	02 31 43.6	
	comp=Z,15nm,1.2s						
M24K	Tolsona, Glenn	21.56	48	P	P	02 31 45.6	+2.3
CCB	Clear Creek Bu	21.56	41	P	P	02 31 43.6	+0.4
HDA	Harding Lake	21.83	42	P	P	02 31 45.9	-0.2
HDA				IAmb	IAmb	02 31 47.3	
	comp=Z,9.8nm,1.4s						
ILAR	Eielson Array	21.97	41	P	P	02 31 45.0	-2.7
	comp=Z,0.3nm,0.6s,baz=244,slow=8.4,SNR=8.5						
ILAR	Eielson Array	21.97	41	P	P	02 31 48.4	+0.7
GLB	Gilahina Butte	22.55	50	P	P	02 31 53.6	+0.1
GLB				IAmb	IAmb	02 31 59.6	
	comp=Z,11nm,1.3s						
TOLK	Toolik Lake Re	22.68	30	P	P	02 31 55.2	+0.4
VRDI	Verde Repeater	22.69	51	P	P	02 31 55.0	-0.1
VRDI				IAmb	IAmb	02 31 55.5	
	comp=Z,11nm,1.2s						
TGL	Tana Glacier	22.94	52	P	P	02 31 57.1	-0.3
TGL				IAmb	IAmb	02 31 58.6	
	comp=Z,11nm,1.0s						
FYU	Fort Yukon	23.25	37	P	P	02 31 59.1	-0.9
FYU				IAmb	IAmb	02 32 16.8	
	comp=Z,14nm,1.5s						
BARN	Barnard Glacie	23.54	51	P	P	02 32 04.3	+1.3
BARN				IAmb	IAmb	02 32 15.5	
	comp=Z,10nm,1.4s						
CTGM	Chitina Glacie	23.69	52	P	P	02 32 04.9	+0.6
BCAR	Beaver Creek A	23.73	46	P	P	02 32 05.5	+1.0
K27K	Chicken	23.79	44	P	P	02 32 04.3	-0.7
K27K				IAmb	IAmb	02 32 08.5	
	comp=Z,7.0nm,1.3s						
PCA	Pinnacle	24.18	54	P	P	02 32 09.5	+0.9
DAWY	Dawson	24.95	44	P	P	02 32 15.8	+0.2
JKA	Kamikawa-asahi	24.98	26	P	P	02 32 13.7	-2.3
ASAJ	Asahikawa	24.98	266	P	P	02 32 13.5	-2.5
	comp=Z,3.3nm,0.4s,baz=30,slow=14,SNR=2.5						
HYT	Haines Junctio	25.55	52	P	P	02 32 23.9	+2.7
HYT				IAmb	IAmb	02 32 24.6	
	comp=Z,4.3nm,0.7s						
INK	Inuvik	28.06	36	P	P	02 32 43.0	-0.4
	comp=Z,0.6nm,0.5s,baz=280,slow=6.1,SNR=5.2						
INK	Inuvik	28.06	36	P	P	02 32 43.7	+0.4
DLBC	Dease Lake	29.54	57	P	P	02 32 56.0	-0.6
DLBC				IAmb	IAmb	02 33 03.8	
	comp=Z,9.2nm,1.4s						
USRK	Ussuriysk Ar.	31.51	275	P	P	02 33 12.2	-1.8
	comp=Z,1.2nm,0.6s,baz=64,slow=13,SNR=2.7						
USRK	Ussuriysk Ar.	31.51	275	P	P	02 33 13.8	-0.3
BJT	Baijiatuau	43.59	280	P	P	02 34 57.0	+1.3
BJT				IAmb	IAmb	02 34 57.1	
	comp=Z,2.9nm,0.5s						
PNTR	Pine Nut	44.00	82	P	P	02 34 59.8	+0.5
PNTR				IAmb	IAmb	02 35 05.9	
	comp=Z,4.3nm,1.0s						
WAKR	Walker	44.47	82	P	P	02 35 03.7	+0.8
SONM	Songino Array	44.86	295	P	P	02 35 05.7	-0.2
	comp=Z,0.7nm,0.5s,baz=56,slow=11,SNR=1.9						
KVN	Kaiserville	44.95	81	P	P	02 35 07.0	+0.2
RYN	Ryan	44.95	81	P	P	02 35 07.0	+0.2
NVAR	Mina Array Bea	45.21	81	P	P	02 35 08.8	-0.1
	comp=Z,0.4nm,0.5s,baz=294,slow=7.7,SNR=7.2						
NVAR	Mina Array Bea	45.21	81	P	P	02 35 09.5	+0.7
NV11	Mina Array Sit	45.30	81	P	P	02 35 09.7	+0.2
R11A	Troy Canyon, C	46.92	80	P	P	02 35 21.8	-0.4
SPR3	Spring Creek 3	47.27	78	P	P	02 35 25.3	+0.2
PDAR	Pinedale Array	47.80	71	P	P	02 35 27.7	-1.4
	comp=Z,0.4nm,0.5s,baz=328,slow=4.7,SNR=2.6						
PRN	Pahroc Range	47.84	80	P	P	02 35 29.9	+0.6
PRN				IAmb	IAmb	02 35 41.8	
	comp=Z,3.0nm,1.3s						
SFJD	Kangerlussuaq	55.82	21	LR	LR	03 04 02.6	
	comp=Z,112nm,20.1s,baz=176,slow=40						
ARCES	ARCESS Array B	57.29	349	P	P	02 36 36.3	-1.9
	comp=Z,7.8nm,1.2s,baz=13,slow=8.3,SNR=1.5						
MK31	Makanchi Array	58.35	307	P	P	02 36 44.6	-1.4
MK31				IAmb	IAmb	02 36 58.6	
	comp=Z,2.2nm,1.3s						
MKAR	Makanchi Array	58.35	307	P	P	02 36 44.9	-1.1
	comp=Z,0.6nm,0.5s,baz=41,slow=6.8,SNR=7.3						
BRVK	Borovoye	59.39	318	P	P	02 36 53.2	+0.2
BRVK				IAmb	IAmb	02 36 54.0	
	comp=Z,1.9nm,0.7s						
ARU	Arti	61.25	327	P	P	02 37 05.4	-0.2
FINES	FINESS Array B	64.89	346	P	P	02 37 28.7	-0.8
	comp=Z,2.6nm,1.0s,baz=12,slow=7.1,SNR=4.1						
FINES	FINESS Array B	64.89	346	P	P	02 37 28.9	-0.7
ABKAR	Akbulak array	66.47	321	P	P	02 37 40.0	0.0
ABKAR				IAmb	IAmb	02 37 45.8	
	comp=Z,2.7nm,1.4s						
KKAR	Karatay Array	66.75	311	P	P	02 37 41.6	-0.3
NIL	Nilore	72.69	303	P	P	02 38 18.8	+0.4
AKASG	Malin Array Be	74.52	340	P	P	02 38 28.5	-0.2
	comp=Z,0.3nm,0.3s,baz=24,slow=7.1,SNR=3.2						
HRA	Herat	77.58	311	P	P	02 38 47.5	+0.8
HRA				IAmb	IAmb	02 38 47.6	
	comp=Z,2.4nm,0.6s						
BURAR	Bucovina Array	78.26	342	P	P	02 38 51.1	+1.1
WRA	Warramunga Arr	81.20	221	P	P	02 39 06.3	+0.3
	comp=Z,0.9nm,0.7s,baz=32,slow=6.3,SNR=7.0						
WRA	Warramunga Ar	81.20	221	P	P	02 39 06.0	+0.1
ASAR	Alice Springs	84.71	220	P	P	02 39 24.1	+0.1
	comp=Z,0.3nm,0.6s,baz=16,slow=4.9,SNR=2.6						
STKA	Stephens Creek	89.43	211	P	P	02 39 48.2	+1.6
	comp=Z,1.0nm,0.5s,baz=356,slow=6.7,SNR=3.8						
STKA	Stephens Creek	89.43	211	P	P	02 39 48.3	+1.7
LBTB	Lobatse	146.13	312	PKPbc	PKPbc	02 46 29.8	+0.1
	comp=Z,1.6nm,0.5s,baz=64,slow=1.6,SNR=4.2						
LBTB	Lobatse	146.13	312	P	PKPbc	02 46 29.8	+0.1

*TUL **10** 02:30:56.7±1.3, 36.756N±0.010×97.57W±0.02, h4km±7km, ML3.5, Error ellipse: s-maj=2.0km s-min=1.3km az=117.0*

*NEIC **10** 02:30:57.1±1.0, 36.74N±0.02×97.56W±0.02, h5km±2km, Error ellipse: s-maj=3.8km s-min=3.0km az=26.0*

*ANF **10** 02:30:58.7±0.8, 36.65N×97.53W, h6km±5km, ML4.1/8, Error ellipse: s-maj=3.2km s-min=2.5km az=26.0*

ISC 10 02:30:56.7±1.2, 36.74N±0.02×97.54W±0.02, h0km±11km, n65, σ0.93/77, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN13	South Haven SW	0.28	11	Pg	Pg	02 31 02.5	+0.4
KAN13				Sg	Sg	02 31 06.2	+0.6
GC02	Grant County #	0.28	294		Pg	02 31 02.1	+0.1
GC02				Sg	Sg	02 31 05.9	+0.3
KAN09	Caldwell North	0.40	351	Pg	Pg	02 31 04.5	+0.1
KAN09				Sg	Sg	02 31 10.0	+0.4
KAN14	Manchester OK	0.40	303	Pg	Pg	02 31 04.4	0.0
KAN14				Sg	Sg	02 31 09.7	+0.1
CROK	Carrier	0.43	237	Pg	Pg	02 31 05.0	+0.2
CROK				Sg	Sg	02 31 11.0	+0.6
KAN05	Bluff City Nor	0.45	324	Pg	Pg	02 31 05.4	0.0
KAN10	Anthony SW Sta	0.58	311	Pg	Pg	02 31 07.9	-0.1
KAN10				Sg	Sg	02 31 15.6	0.0
KAN08	Anthony NE Sta	0.59	325	Pg	Pg	02 31 08.0	-0.1
KAN12	Harper NE Stat	0.66	327		Pg	02 31 09.3	-0.2
T35A	Sooner Cattle	0.84	78		Pg	02 31 13.1	+0.2
T35A				Sg	Sg	02 31 24.4	+0.6
OK029	Liberty Lake	0.94	176		Pg	02 31 14.9	+0.1
OK031	S. Brethren Rd	0.97	144		Pg	02 31 15.5	+0.2
OK030	Cody Creek RV	1.02	143		Pg	02 31 16.3	+0.1
BCOK	Bluff Creek, N	1.08	183		Pb	02 31 17.3	-1.0
OK025	Westminster Rd	1.17	172		Pb	02 31 19.0	-0.8
U32A	Winter Ranch,	1.23	253		Pn	02 31 19.4	-1.8
OKCFA	Oklahoma City	1.32	177		Pn	02 31 21.6	-0.8
OKCSW	OKLAHOMA CITY	1.33	176		Pn	02 31 21.8	-0.8
FNO	Franklin	1.48	176		Pn	02 31 24.3	-0.3
TUL1	Leonard	1.64	120	P	Pn	02 31 26.8	0.0
	baz=301						
TUL1				S	Sb	02 31 49.2	+0.2
	baz=301						
TUL1	Leonard	1.64	120		Pn	02 31 26.8	0.0
W35A	Tecumseh	1.68	161		Pn	02 31 27.2	-0.1
R32A	Long Quarter,	1.92	331	Pn	Pn	02 31 30.7	+0.1
WMOK	Wichita Mounta	2.24	207	P	Pn	02 31 35.0	0.0
	baz=26						
WMOK				S	Sb	02 32 03.8	-2.4
	baz=26						
KSU1	Kansas State U	2.47	17	P	Pb	02 31 40.2	-1.8
	baz=198						
KSU1				S	Sb	02 32 12.8	-0.1
	baz=198						
KSU1	Kansas State U	2.47	17	Pn	Pb	02 31 39.4	-2.5
CBKS	Cedar Bluff	2.70	321	S	Sb	02 32 19.8	+0.1
	baz=140						
CBKS	Cedar Bluff	2.70	321	Pn	Pn	02 31 42.1	+0.7
X37A	Clayton	2.78	140	Pn	Pn	02 31 43.1	+0.6
Z35A	Perchaven, San	3.41	176	Pn	Pn	02 31 51.2	+0.1
W39A	Magazine	3.42	116	Pb	Pb	02 31 59.4	+1.3
	baz=298						
W39A				Sb	Sg	02 32

CNJI	Cibinong	6.32	123	P		Pn	02 37 21.6	-1.1
	0.6nm53nm,0.6s							
LEM	Lembang	6.51	117	Pn		Pn	02 37 28.5	+3.0
	4.9nm,0.3s,baz=307,slow=20,SNR=2.0							
LEM				LR		LR	02 40 15.2	
	comp=Z,565nm,21.2s,baz=236,slow=41							
GSI	Gunungsitoli	6.65	321	P		Pn	02 37 27.3	+0.1
	0.8nm109nm,0.5s							
GSI	Gunungsitoli	6.65	321	Pn		Pn	02 37 27.6	+0.4
CISI	Cisompet, Garu	7.03	121	P		Pn	02 37 33.2	+0.7
	1.4nm75nm,0.6s							
CISI				S		Sn	02 38 52.4	+1.3
	1.4nm75nm,0.6s							
CISI	Cisompet, Garu	7.03	121	Pn		Pn	02 37 32.1	-0.4
RPSI	Rantau Prapat	7.13	336	Pn		Pn	02 37 33.6	-0.2
RPSI	Rantau Prapat	7.13	336			Pn	02 37 32.9	-0.9
PSI	Prapat	7.23	337	Pn		Pn	02 37 32.9	-2.4
	1.9nm,0.3s,baz=178,slow=12,SNR=6.3							
CMJI	Cimerak	7.69	120	P		Pn	02 37 41.8	+0.4
	0.3nm67nm,1.3s							
IPM	Ipoh	8.35	355	Pn		Pn	02 37 52.2	+1.7
IPM	Ipoh	8.35	355	P		Pn	02 37 55.0	+4.5
KCSI	Kotacane, Aceh	8.38	331	P		Pn	02 37 50.5	-0.4
	20nm,0.5s							
TPTI		8.46	327	P		Pn	02 37 51.7	-0.2
	15nm,0.7s							
KULM	Kulim	9.19	353	Pn		Pn	02 38 02.6	+0.6
KULM	Kulim	9.19	353	P		Pn	02 38 02.0	0.0
UGM	Wanagama	9.58	115	Pn		Pn	02 38 07.9	+0.5
COCO	West Island	9.58	210	Pn		Pn	02 38 07.8	+0.4
MLSI	Meulaboh, Aceh	9.72	326	P		Pn	02 38 09.6	+0.4
BBKI	Banjar Baru	13.05	89	P		P	02 39 07.3	+4.0
JAGI	Jajag, Banyuwa	13.12	111	Pn		Pn	02 38 54.4	-1.4
SPMM	Sapulut	16.99	60	P		P	02 39 50.0	+2.9
SPSI	Sidrap Palu	17.96	91	P		P	02 39 56.3	-1.5
	15nm,0.8s							
KAPI	Kappang	17.96	94	P		P	02 39 56.9	-0.9
	1.2nm,0.3s,baz=278,slow=8.0,SNR=4.3							
KAPI				LR		LR	02 47 33.7	
	comp=Z,198nm,18.9s,baz=276,slow=39							
KAPI	Kappang	17.96	94	P		Pn	02 39 58.5	+0.6
TTSI	Tana Toraja	18.04	88	P		Pn	02 39 58.7	-0.1
	14nm,0.7s							
BNSI	Bone	18.30	92	P		Pn	02 40 02.7	+0.7
	19nm,0.9s							
BKSI	Bulukumba	18.35	95	P		Pn	02 40 02.7	+0.1
	26nm,0.7s							
MPSI	Mapaga	18.60	77	P		Pn	02 40 12.4	+6.8
UBPT	Khong Chiam	19.40	11			P	02 40 12.6	-0.9
APSI	Ampana	20.08	82	P		P	02 40 17.3	-3.7
LUWI	Luwuk	21.17	83	P		P	02 40 47.4	+15
LUWI	Luwuk	21.17	83	P		P	02 40 31.2	-1.6
GTOI	Gorontalo	21.70	78	P		P	02 40 37.6	-0.8
	149nm,0.5s							
GTOI	Gorontalo	21.70	78	S		P	02 40 37.1	-1.3
CM31	Chiang Mai Arr	22.38	353	P		P	02 40 45.8	+0.1
CMAR	Chiang Mai Arr	22.38	353	P		P	02 40 44.5	-1.2
	4.0nm,0.5s,baz=186,slow=8.8,SNR=14							
CMAR				LR		LR	02 50 01.5	
	comp=Z,146nm,18.5s,baz=200,slow=38							
CMAR	Chiang Mai Arr	22.38	353	P		P	02 40 45.7	0.0
PALK	Pallekele	23.77	298	LR		LR	02 49 16.9	
	comp=Z,92nm,19.8s,baz=211,slow=34							
QIZ	Qiongzhong	24.12	19	P		P	02 41 03.6	+0.9
QIZ				S		S	02 45 18.3	+1.7
QIZ				pmax		pmax		
	comp=Z,290nm,4.2s							
SLVN	Son La	25.16	5	P		P	02 41 10.9	-1.2
DAV	Davao City (W)	26.14	65	LR		LR	02 52 24.7	
	comp=Z,109nm,18.7s,baz=266,slow=38							
FITZ	Fitzroy Crossi	27.30	123	P		P	02 41 30.8	-0.6
	1.1nm,0.6s,baz=306,slow=7.2,SNR=6.2							
FITZ				LR		LR	02 53 37.9	
	comp=Z,77nm,19.7s,baz=298,slow=39							
FITZ	Fitzroy Crossi	27.30	123	P		P	02 41 30.8	-0.6
H08S2	Diego Garcia H	29.36	261	T		T	03 11 44.2	
	baz=84,slow=75,SNR=29							
H08S3	Diego Garcia H	29.36	261	T		T	03 11 47.2	
	baz=84,slow=75,SNR=91							
H08S1	Diego Garcia H	29.38	261	T		T	03 11 48.1	
	baz=84,slow=75,SNR=8.7							
FAKI	Fak Fak	30.44	89	P		P	02 41 58.5	-0.9
GYA	Guiyang	30.54	9	⇓P		P	02 42 00.3	0.0
GYA				S		S	02 46 46.8	-11
GYA				pmax		pmax		
	comp=Z,9.0nm,0.8s							
GYA				pmax		pmax		
	comp=Z,100nm,4.1s							
GYA				LR		LR		
	comp=N,180nm,4.3s							
GYA				LR		LR		
	comp=E,130nm,5.0s							
GYA				LR		LR		
	comp=Z,220nm,16.3s							
SHL	Shillong	30.81	342	P		P	02 42 01.1	-1.7
SHL				IAmb		IAmb	02 42 02.5	
	comp=Z,12nm,0.5s							
H01W3	Cape Leeuwin H	32.90	161	T		T	03 16 34.9	
	baz=337,slow=76,SNR=83							
H01W2	Cape Leeuwin H	32.92	161	T		T	03 16 29.8	
	baz=337,slow=76,SNR=101							
H01W1	Cape Leeuwin H	32.92	161	T		T	03 16 33.8	
	baz=337,slow=76,SNR=49							
ODAN	Odare	33.58	336	eP		P	02 42 27.5	+0.4
TAPN	Taplejung	33.90	337	eP		P	02 42 30.2	+0.3
	comp=Z,60nm,0.8s							
RAMN	Ramite	33.99	335	eP		P	02 42 31.4	+0.8
CD2	Chengdu	34.66	3	eP		P	02 42 34.9	-1.2
CD2				LR		LR		
	comp=N,400nm,17.9s							
CD2				LR		LR		
	comp=E,290nm,13.1s							
CD2				LR		LR		
	comp=Z,490nm,20.0s							
CD2	Chengdu	34.66	3	eP		P	02 42 36.8	+0.7
CD2				pmax		pmax		
	comp=Z,20nm,0.9s							
CD2				pmax		pmax		
	comp=Z,230nm,10.6s							
CD2				LR		LR		
	comp=Z,300nm,22.4s							
CD2				LR		LR		
	comp=Z,240nm,14.7s							
CD2				LR		LR		
	comp=Z,310nm,24.4s							
PKI	Pulchoki	35.04	334	eP		P	02 42 40.5	+0.7
	comp=Z,8.1nm,0.4s							
GUN	Gumba	35.13	335	eP		P	02 42 40.5	-0.1
WB0	Warramunga Arr	35.51	119	P		P	02 42 43.1	-0.5
WB0				IAmb		IAmb	02 42 56.6	
	comp=Z,4.4nm,0.8s							
WRA	Warramunga Arr	35.52	119	P		P	02 42 42.5	-1.2
	comp=Z,1.4nm,0.3s,baz=301,slow=11,SNR=36							
WRA				PcP		PcP	02 45 11.8	-0.4
	comp=Z,0.6nm,0.6s,baz=299,slow=2.4,SNR=2.9							
WRA	Warramunga Arr	35.52	119	P		P	02 42 44.1	+0.4
WB2	Warramunga Arr	35.54	119	P		P	02 42 43.4	-0.5
WB2				IAmb		IAmb	02 43 02.4	
	comp=Z,4.5nm,0.6s							
WB2				PcP		PcP	02 45 13.2	+1.0
WR0	Warramunga Arr	35.71	119	P		P	02 42 44.7	-0.7
WR0				IAmb		IAmb	02 43 04.1	
	comp=Z,14nm,1.4s							
GKN	Gorkha	35.75	334	eP		P	02 42 45.5	-0.2
	comp=Z,17nm,0.3s							
KOLN	Koldanda	36.02	332	eP		P	02 42 48.1	0.0
DANN	Dangsing	36.44	333	eP		P	02 42 51.5	-0.3
	comp=Z,65nm,0.4s							
FORT	Forrest	36.47	140	P		P	02 42 52.0	+0.3
PYUN	Piuthan	36.59	332	eP		P	02 42 52.9	-0.1
	comp=Z,22nm,0.4s							
AS31	Alice Springs	36.72	125	P		P	02 42 54.0	0.0
AS31				IAmb		IAmb	02 43 00.1	
	comp=Z,2.5nm,0.3s							
ASAR	Alice Springs	36.72	125	P		P	02 42 54.0	0.0
	comp=Z,1.1nm,0.3s,baz=298,slow=7.9,SNR=22							
ASAR	Alice Springs	36.72	125	P		P	02 42 53.3	-0.7
XAN	Xi'an	38.33	10	P		P	02 43 06.1	-1.3
XAN				pmax		pmax		
	comp=Z,8.0nm,0.7s							
XAN				pmax		pmax		
	comp=Z,62nm,3.8s							
XAN				LR		LR		
	comp=Z,290nm,15.0s							
XAN				LR		LR		
	comp=Z,320nm,20.0s							
XAN				LR		LR		
	comp=Z,340nm,20.4s							
NJ2	Nanjing	39.27	23	eP		P	02 43 16.0	+0.8
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.7s							
LZH	Lanzhou	39.82	3	eP		P	02 43 21.6	+1.7
LZH				pP		pP	02 43 37.4	+2.7
LZH				sP		sP	02 43 44.4	+2.9
LZH				pmax		pmax		
	comp=Z,28nm,1.5s							
BBOO	Buckleboo	43.07	136	P		P	02 43 46.9	+0.4
BBOO				IAmb		IAmb	02 43 48.4	
	comp=Z,20nm,1.4s							
GTA	Gaotai	43.13	358	eP		P	02 43 48.5	+1.6
GTA				pP		pP	02 44 03.5	+1.6
GTA				sP		sP	02 44 10.6	+2.0
GTA				pmax		pmax		
	comp=Z,5.0nm,1.1s							
GTA				pmax		pmax		
	comp=Z,130nm,5.7s							
GTA				LR		LR		
	comp=Z,140nm,19.1s							
GTA				LR		LR		
	comp=Z,140nm,20.8s							
GTA				LR		LR		
	comp=Z,220nm,20.4s							
HHC	Hu-ho-hao-te	45.42	10	eP		P	02 44 05.4	+0.2
HHC				pmax		pmax		
	comp=Z,23nm,1.1s							
HHC				pmax		pmax		
	comp=Z,140nm,5.4s							
BJT	Baijiatuan	45.66	15	P		P	02 44 06.7	-0.3
BJT				IAmb		IAmb	02 44 07.5	
	comp=Z,6.9nm,0.6s							
BJI	Beijing	45.68	15	P		P	02 44 05.4	-1.7
BJI				pmax		pmax		
	comp=Z,3.0nm,0.5s							
JNU	Nakatsue	45.98	35	LR		LR	03 03 24.5	
	comp=Z,77nm,21.1s,baz=312,slow=36							
NIL	Nilore	46.05	326	P		P	02 44 09.5	-0.7
CTAO	Charters Tower	46.21	114	P		P	02 44 11.8	+0.1
CTAO				IAmb		IAmb	02 44 13.4	
	comp=Z,17nm,1.2s							
STKA	Stephens Creek	46.58	131	P		P	02 44 15.5	+1.1
	comp=Z,6.5nm,0.7s,baz=305,slow=8.0,SNR=20							
STKA	Stephens Creek	46.58	131	P		P	02 44 15.4	+0.9
KSRS	Korea Array	47.79	28	P		P	02 44 23.1	-0.5
	comp=Z,2.3nm,0.8s,baz=217,slow=7.0,SNR=6.7							
JHS	Saijyo	48.62	35	P		P	02 44 30.3	+0.1
JHS				IAmb		IAmb	02 44 48.3	
	comp=Z,7.5nm,1.0s							
WMQ	Urumqi	49.16	347	eP		P	02 44 35.3	+1.1
WMQ				pP		pP	02 44 47.9	-1.5
WMQ				sP		sP	02 44 56.5	+0.5
WMQ				pmax		pmax		
	comp=Z,45nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,280nm,5.7s							
WMQ	Urumqi	49.16	347	P		P	02 44 34.2	0.0
KSH	Kashi	49.30	334	eP		P	02 44 34.6	-0.8
KSH				pmax		pmax		
	comp=Z,20nm,0.8s							
KSH				pmax		pmax		
	comp=Z,270nm,4.6s							
INU	Inuyama	51.15	37	P		P	02 44 48.4	-1.0
JHJ	Hachijo jima 2	51.47	41	LR		LR	03 04 10.1	
	comp=Z,46nm,20.2s,baz=180,slow=33							
SONM	Songino Array	51.67	4	P		P	02 44 53.0	-0.2
	comp=Z,9.9nm,0.7s,baz=184,slow=9.7,SNR=24							
SONM	Songino Array	51.67	4	P		P	02 44 53.2	0.0
ULN	Ulaanbaatar	51.75	5	P		P	02 44 53.2	-0.5
ULN				IAmb		IAmb	02 44 55.1	
	comp=Z,6.4nm,1.0s							
EIDS	Eidsvold	51.89	119	P		P	02 44 56.6	+1.5
EIDS				IAmb		IAmb	02 45 14.6	
	comp=Z,6.9nm,1.0s							
MK31	Makanchi Array	53.33	343	P		P	02 45 04.7	-0.6
MK31				IAmb		IAmb	02 45 24.0	
	comp=Z,8.5nm,0.9s							
MKAR	Makanchi Array	53.33	343	P		P	02 45 04.6	-0.7
	comp=Z,13nm,0.7s,baz=148,slow=8.0,SNR=92							
MKAR	Makanchi Array	53.33	343	P		P	02 45 03.8	-1.6
MAKZ	Makanchi	53.43	343	P		P	02 45 05.2	-0.9
MAKZ				IAmb		IAmb	02 45 24.0	
	comp=Z,14nm,1.4s							
KK31	Karatay Array	54.64	332	P		P	02 45 14.6	-0.3
KKAR	Karatay Array	54.64	332	P		P	02 45 14.3	-0.6
USA0B	Ussuriysk Arra	55.02	26	P		P	02 45 16.0	-1.7
USRK	Ussuriysk Ar.	55.02	26	P		P	02 45 16.6	-1.1
	comp=Z,14nm,0.5s,baz=212,slow=4.6,SNR=49							
USRK	Ussuriysk Ar.	55.02	26	P		P	02 45 15.9	-1.8
TLY	Talaya	55.38	1	P		P	02 45 20.7	+0.5
TLY				IAmb		IAmb	02 45 21.5	
	comp=Z,3.1nm,0.8s							
KURK	Kurchatov	57.92	343	P		P	02 45 37.1	-1.0
GEYT	Alibeck	58.02	320	P		P	02 45 39.1	-0.1
	comp=Z,3.2nm,0.8s,baz=140,slow=7.7,SNR=5.7							
GEYT	Alibeck	58.02	320	P		P	02 45 38.8	-0.4
ZAA0	Zalesovo Array	59.35	348	P		P	02 45 46.8	-1.2
ZALV	Zalesovo Beam	59.35	348	P		P	02 45 46.6	-1.4
	comp=Z,18nm,0.5s,baz=179,slow=5.4,SNR=54							
ZALV				LR		LR	03 11 56.4	
	comp=Z,85nm,18.7s,baz=191,slow=37							
ZALV	Zalesovo Beam	59.35	348	P		P	02 45 46.1	-1.9
BRVK	Borovoye	62.63	339	P		P	02 46 09.3	-1.0
BRVK				IAmb		IAmb	02 46 10.0	
	comp=Z,3.8nm,0.8s							
ABKAR	Akbulak array	64.14	331	P		P	02 46 19.1	-1.2
ABKAR				IAmb		IAmb	02 46 21.1	
	comp=Z,8.6nm,0.8s							
MARD	Mardin	69.81	312	P		P	02 46 57.6	+0.8
KBZ	Khabaz	70.88	319	P		P	02 47 03.2	+0.2
	comp=Z,4.9nm,0.8s,baz=56,slow=24,SNR=10							
PEA0B	Petropavlovsk-	73.55	31	P		P	02 47 18.2	-0.6
PETK	Petropavlovsk-	73.55	31	P		P	02 47 17.1	-1.7
	comp=Z,5.1nm,0.8s,baz=316,slow=6.0,SNR=3.6							
NRIK	Noril'sk	73.73	355	P		P	02 47 19.3	-0.2
	comp=Z,2.6nm,0.3s,baz=194,slow=6.1,SNR=8.1							
BKZ	Black Stump Fm	75.71	129	P		P	02 47 31.9	+0.2
BKZ				IAmb		IAmb	02 47 48.9	
	comp=Z,15nm,1.2s							
BR131	Keskin Array S	75.89	312	P		P	02 47 32.4	-0.4
BRTR	Keskin Array B	75.89	312	P		P	02 47 32.0	-0.8
	comp=Z,2.0nm,0.5s,baz=154,slow=6.3,SNR=14							
BRTR	Keskin Array B	75.89	312	P		P	02 47 31.6	-1.2
BOSA	Boshof	76.31	242	LR		LR	03 13 51.7	
	comp=Z,90nm,21.5s,baz=62,slow=30							
SYO	Syowa Base	76.66	199	⇓esP		sP	02 48 00.0	+1.4
KLMR	Klimovskoe	80.29	334	eP		P	02 47 56.6	+0.1
TIRR	Tirgusor	80.93	316	P		P	02 48 01.0	+0.7
TIRR				IAmb		IAmb	02 48 07.1	
	comp=Z,11nm,1.0s							
IDI	Anoyia	81.57	306	⇓P		P	02 48 03.5	-0.6
IDI	Anoyia	81.57	306	P		P	02 48 04.7	+0.6
ALN	Alexandroupoli	81.80	312	P		P	02 48 04.9	-0.1
ALN				IAmb		IAmb	02 48 19.9	
	comp=Z,4.7nm,1.1s							
SORM	Soroca	81.91	320	⇑P		P	02 48 04.4	-1.0
AKASG	Malin Array Be	82.05	322	P		P	02 48 04.8	-1.3
	comp=Z,1.3nm,0.5s,baz=90,slow=4.5,SNR=8.5							
AKASG	Malin Array Be	82.05	322	P		P	02 48 03.8	-2.3
TESR	Tescani	82.64	318	⇓P		P	02 48 08.3	-0.9
MLR	Muntele Rosu	82.88	317	⇓P		P	02 48 10.8	0.0
MLR	Muntele Rosu	82.88	317	P		P	02 48 11.6	+0.9
MLR				IAmb		IAmb	02 48 13.2	
	comp=Z,4.3nm,0.9s							
VOIR		83.48	316	⇓P		P	02 48 12.2	-1.5
ARR	Arges	83.75	316	⇓P		P	02 48 14.2	-1.0
BURAR	Bucovina Array	83.84	319	⇑P		P	02 48 15.6	+0.1
BURAR	Bucovina Array	83.84	319	P		P	02 48 16.4	+0.8
BUR08	Bucovina Ar. S	83.86	319	P		P	02 48 16.3	+0.7
BUR08				IAmb		IAmb	02 48 34.8	
	comp=Z,7.6nm,1.4s							
AGG	Agios Georgios	84.25	310	P		P	02 48 17.6	-0.2
LIT	Litokhoron	84.31	311	P		P	02 48 17.3	-0.8
BZS	Buzias	85.89	316	⇑P		P	02 48 26.8	+1.1
KOLS	Kolonicke sedl	86.03	319	eP		P	02 48 26.4	0.0
FINES	FINESS Array B	86.60	332	P		P	02 48 28.1	-0.8
	comp=Z,1.0nm,0.5s,baz=104,slow=4.8,SNR=12							
FINES	FINESS Array B	86.60	332	P		P	02 48 28.6	-0.3
VYHS	Vyhne	88.20	319	eP		P	02 48 37.9	+0.9
ARCES	ARCESS Array B	88.84	340	P		P	02 48 39.6	+0.1
	comp=Z,3.5nm,0.7s,baz=99,slow=5.9,SNR=15							
PRED	Cave del Predi	91.55	316	P		P	02 48 53.5	+0.8
PRED				IAmb		IAmb	02 48 55.3	
	comp=Z,3.7nm,0.9s							
GERES	GERESS Array B	91.63	319	P		P	02 48 53.2	+0.2
	comp=Z,0.5nm,0.6s,baz=71,slow=5.8,SNR=5.1							
GERES	GERESS Array B	91.63	319	P		P	02 48 53.1	+0.1
SPITS	Spitsbergen Ar	92.84	348	P		P	02 48 57.1	-0.8
	comp=Z,5.5nm,0.8s,baz=149,slow=5.9,SNR=5.2							
DAVOX	Davos/Dischmat	94.10	316	P		P	02 49 05.4	+0.8
	comp=Z,1.0nm,0.4s,baz=212,slow=4.5,SNR=5.5							
NVAR	Mina Array Bea	129.90	41	PKP		PKiKP	02 54 56.9	+0.2
	comp=Z,0.3nm,0.7s,baz=252,slow=2.3,SNR=3.6							
NVAR	Mina Array Bea	129.90	41			PKPdf	02 54 56.2	+0.3
PDAR	Pinedale Array	132.32	31	PKP		PKPdf	02 54 59.5	-0.8
	comp=Z,0.3nm,0.5s,baz=220,slow=3.9,SNR=3.6							
PDAR	Pinedale Array	132.32	31			PKPdf	02 54 59.1	-1.3
CPUP	Villa Florida	143.78	213	PKP		PKPdf	02 55 21.2	-0.3
	comp=Z,1.4nm,0.7s,baz=162,slow=2.5,SNR=5.7							
CPUP	Villa Florida	143.78	213	PKPdf		PKPdf	02 55 20.9	-0.6
BDFB	Brasilia	144.35	236	PKP		PKPdf	02 55 22.8	-0.1
	comp=Z,2.9nm,0.6s,baz=105,slow=3.9,SNR=8.6							
TXAR	Lajitas Array	145.05	41	PKPbc		PKPbc	02 55 23.0	-0.2
	comp=Z,6.1nm,0.7s,baz=292,slow=1.2,SNR=80							
TKL	Tuckaleechee C	147.98	9	PKPbc		PKPbc	02 55 30.2	-1.3
	comp=Z,5.2nm,0.7s,baz=144,slow=2.3,SNR=10							
TKL	Tuckaleechee C	147.98	9			PKPdf	02 55 29.8	+1.4

IDC ***10*** *02:39:01.0±0.4, 23.96S×69.64E, h0km, mb4.5/36, mb1 4.6/36, mb1mx4.5/58, mbtmp4.5/36, MS4.2/19, Ms1 4.2/19, ms1mx4.0/33, Error ellipse: s-maj=13.6km s-min=10.8km az=44.0*

BJI ***10*** *02:39:00.0±0.0, 24.10S×69.70E, h5km, mB5.3/31, mb5.0/50, Ms4.9/21, Ms7 4.6/21*

MOS ***10*** *02:39:01.2±0.8, 23.97S×69.63E, h13km, mb5.3/56, Error ellipse: s-maj=10.2km s-min=5.8km az=100.5*

NEIC ***10*** *02:39:02.5±1.9, 23.98S±0.10×69.56E±0.10, h10km±1km, mb5.2/87, Error ellipse: s-maj=17.0km s-min=14.7km az=193.0*

GCMT ***10*** *02:39:03.5±0.2, 23.77S±0.02×69.52E±0.02, h12km, MW5.0/119, Moment Tensor Solution. s45,c53; s119,c177; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-2.94±.06; Mθθ 0.74±.07; Mϕϕ 2.20±.06; Mrθ 0.52±.25; Mθϕ-1.23±.05; Mϕr 2.06±.25; Best double couple: Ms 3.58200×1016 NP1 ϕs 313.00000°, δ 34.00000°, λ -124.00000°. NP2 ϕs 172.00000°, δ 63.00000°, λ -70.00000°. Principal axes: T 3.3190, Plg 15.0000°, Azm 247.0000°; N 0.5220, Plg 18.0000°, Azm 342.0000°; P -3.8460, Plg 66.0000°, Azm 119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 02:39:02.6±0.3, 24.05S±0.06×69.53E±0.05, h10km, n404, σ 0.94/396, mb5.1/140, MS4.3/25, 33C-10D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	13.05	280	Pn	Pn		02 42 04.4	-3.8
H08S1	Diego Garcia H	16.55	10	T	T		02 59 44.1	
	baz=190,slow=76,SNR=33							
H08S2	Diego Garcia H	16.56	10	T	T		02 59 43.5	
	baz=190,slow=76,SNR=75							
H08S3	Diego Garcia H	16.57	10	T	T		02 59 47.7	
	baz=190,slow=76,SNR=440							
SBV	Sambava	21.32	296	P	P		02 43 51.2	+1.4
ABPO	Ambohimpanom	21.33	279	P	P		02 43 51.5	+1.4
ABPO				pmax	pmax			
	comp=Z,106nm,1.5s							
ABPO	Ambohimpanom	21.33	279	P	P		02 43 51.5	+1.4
OPO	Ambohidratompo	21.50	280	P	P		02 43 53.4	+1.4
	comp=Z,2.7nm,0.8s,baz=96,slow=11,SNR=8.9							
XMIS	Christmas Isla	36.91	75	P	P		02 46 10.0	-1.9
KIBK	Kibwezi	37.30	301	P	P		02 46 16.4	+1.1
	SNR=5.6							
KMBO	Kilima Mbogo	38.67	301	P	P		02 46 27.2	+0.1
	comp=Z,4.2nm,1.0s,baz=112,slow=8.1,SNR=16							
KMBO				LR	LR		02 59 00.7	
	comp=Z,226nm,21.2s,baz=94,slow=31							
KMBO	Kilima Mbogo	38.67	301	P	P		02 46 27.9	+0.8
KMBO				P	P		02 46 27.9	+0.8
KMBO	Kilima Mbogo	38.67	301	P	P		02 46 26.8	-0.2
KMBO				pmax	pmax			
	comp=Z,31nm,1.4s							
KMBO	Kilima Mbogo	38.67	301	P	P		02 46 26.8	-0.2
RPSI	Rantau Prapat	39.04	51	P	P		02 46 31.1	+1.3
PSI	Prapat	39.11	51	P	P		02 46 31.1	+0.5
PSI				pmax	pmax			
	comp=Z,44nm,1.5s							
CNJI	Cibinong	39.67	71	P	P		02 46 36.7	+1.6
	comp=Z,18μmcomp=Z,82nm,1.4s							
BOSA	Boshof	39.77	254	P	P		02 46 36.2	+0.3
	comp=Z,6.0nm,1.0s,baz=91,slow=8.8,SNR=9.4							
BOSA				LR	LR		03 00 26.1	
	comp=Z,732nm,19.3s,baz=99,slow=32							
BOSA	Boshof	39.77	254	P	P		02 46 36.3	+0.3
BOSA				pmax	pmax			
	comp=Z,49nm,1.6s							
BOSA	Boshof	39.77	254	P	P		02 46 36.3	+0.3
LSZ	Lusaka	39.78	275	P	P		02 46 37.5	+1.3
LSZ				P	P		02 46 37.5	+1.3
LSZ	Lusaka	39.78	275	P	P		02 46 36.1	0.0
LSZ				pmax	pmax			
	comp=Z,17nm,1.2s							
LSZ	Lusaka	39.78	275	P	P		02 46 36.1	0.0
H01W2	Cape Leeuwin H	40.02	116	T	T		03 29 09.2	
	baz=273,slow=75,SNR=39							
H01

CASY IAmb IAmb 02 47 56.0
comp=Z,26nm,1.2s
UOSS Minazif 50.39 344 P P 02 47 59.3 -0.8
CM31 Chiang Mai Arr 51.07 37 P P 02 48 05.0 -0.4
CM31 IAmb IAmb 02 48 07.3
comp=Z,40nm,1.6s
CMAR Chiang Mai Arr 51.07 37 P P 02 48 05.0 -0.4
comp=Z,1.4nm,0.4s,baz=228,slow=6.7,SNR=17
CMAR Chiang Mai Arr 51.07 37 *ce*P **P 02 48 06.3 +0.9**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CHTO Chiang Mai 51.36 37 P P 02 48 07.1 -0.5
CHTO pmax pmax
comp=Z,16nm,1.5s
CHTO Chiang Mai 51.36 37 P P 02 48 07.1 -0.5
FITZ Fitzroy Crossi 52.41 95 P P 02 48 15.4 -0.2
comp=Z,5.8nm,1.0s,baz=234,slow=6.3,SNR=6.1
FITZ LR LR 03 10 24.6
comp=Z,105nm,18.1s,baz=277,slow=36
UBPT Khong Chiam 52.54 46 P P 02 48 16.3 -0.2
UBPT IAmb IAmb 02 48 24.1
comp=Z,58nm,1.4s
SHL Shillong 53.86 25 P P 02 48 25.6 -0.7
SHL pmax pmax
comp=Z,84nm,1.7s
SHL Shillong 53.86 25 P P 02 48 25.6 -0.7
SOEI Soe 53.95 85 P P 02 48 26.7 -0.4
SOEI IAmb IAmb 02 49 30.4
comp=Z,73nm,1.7s
SLVN Son La 56.16 39 P P 02 48 42.1 -0.7
SLVN IAmb IAmb 02 48 50.1
comp=Z,42nm,1.7s
NVL N'lazarevskaya 57.03 200 *e*P **P 02 48 49.6 +1.4**
NVL pmax pmax
comp=Z,9.0nm,0.7s
NIL Nilore 57.49 4 P P 02 48 50.9 -1.1
NIL pmax pmax
comp=Z,38nm,1.4s
NIL Nilore 57.49 4 P P 02 48 50.9 -1.1
NIL IAmb IAmb 02 48 58.5
comp=Z,38nm,1.4s
QIZ Qiongzhong 58.12 46 P P 02 48 56.0 -0.7
QIZ sP **sP 02 49 00.9 +1.2**
QIZ S **S 02 56 59.5 +1.4**
QIZ LR LR
comp=Z,290nm,10.8s
QIZ LR LR
comp=Z,250nm,12.0s
QIZ LR LR
comp=Z,380nm,17.6s
KBL Kabul 58.27 360 P P 02 48 58.0 +0.3
SNR=17
KBL P P **02 48 58.0 +0.3**
SNR=17
KBL Kabul 58.27 360 P P 02 48 57.7 0.0
KBL pmax pmax
comp=Z,44nm,1.2s
KBL Kabul 58.27 360 P P 02 48 57.7 0.0
KBL IAmb IAmb 02 49 05.1
comp=Z,44nm,1.2s
ASAR Alice Springs 58.38 104 P P 02 48 57.8 -0.8
comp=Z,6.5nm,0.7s,baz=253,slow=6.3,SNR=63
ASAR PcP **PcP 02 49 48.6 -0.9**
comp=Z,3.4nm,0.8s,baz=258,slow=3.9,SNR=8.2
ASAR Alice Springs 58.38 104 P P 02 48 57.5 -1.1
AS31 Alice Springs 58.38 104 P P 02 48 57.5 -1.2
KMI Kunming 58.52 36 P P 02 49 00.3 +0.7
KMI pmax pmax
comp=Z,12nm,1.1s
KMI LR LR
comp=Z,360nm,21.6s
KMI LR LR
comp=Z,190nm,21.4s
KMI LR LR
comp=Z,340nm,28.9s
HRA Herat 58.52 353 P P 02 48 57.5 -2.0
WRA Warramunga Arr 59.77 100 P P 02 49 07.5 -0.8
comp=Z,5.2nm,0.7s,baz=253,slow=7.0,SNR=30
WRA PcP **PcP 02 49 54.1 -1.0**
comp=Z,1.9nm,0.8s,baz=262,slow=2.7,SNR=5.7
WRA Warramunga Arr 59.77 100 P P 02 49 07.0 -1.3
WRA pmax pmax
comp=Z,2.0nm,1.3s
WRA Warramunga Arr 59.77 100 P P 02 49 07.0 -1.3
WB2 Warramunga Arr 59.78 100 IAmb IAmb 02 49 14.9
comp=Z,50nm,1.6s
WRAB Tennant Creek 59.78 100 *ce*P **P 02 49 08.6 +0.2**
WRAB pmax pmax
comp=Z,17nm,1.3s
WB0 Warramunga Arr 59.87 100 IAmb IAmb 02 49 15.5
comp=Z,38nm,1.6s
WR0 Warramunga Arr 59.95 100 IAmb IAmb 02 49 16.1
comp=Z,37nm,1.4s
GYA Guiyang 61.72 38 ⇓P **P 02 49 21.8 +0.4**
GYA pmax pmax
comp=Z,10.0nm,1.6s
GYA LR LR
comp=Z,300nm,21.6s
SNAA Sanae 61.83 200 P P 02 49 22.1 +0.5
SNAA Sanae 61.83 200 P P 02 49 21.8 +0.2
comp=Z,4.4nm,0.7s,baz=110,slow=6.5,SNR=29
SNAA Sanae 61.83 200 P P 02 49 21.4 -0.1
GEYT Alibeck 62.58 350 P P 02 49 26.1 -0.7
GYA0B ALIBECK ARRAY 62.58 350 P P 02 49 26.9 +0.1
GYA0B IAmb IAmb 02 49 37.3
comp=Z,19nm,1.4s
TGY Tagaytay City 62.92 58 LR LR 03 14 22.6
comp=Z,319nm,20.1s,baz=315,slow=34
STKA Stephens Creek 63.10 115 P P 02 49 30.2 -0.4
comp=Z,2.6nm,0.9s,baz=316,slow=7.8,SNR=4.3
STKA Stephens Creek 63.10 115 P P 02 49 30.2 -0.4
VNA2 Neumayer--Watz 63.21 201 P P 02 49 31.4 +0.7
VNA1 Neumayer--Stat 63.48 201 P P 02 49 33.4 +1.0
KSH Kashi 63.52 6 *e*P **P 02 49 29.8 -3.4**
KSH pmax pmax
comp=Z,76nm,1.2s
SIJI Sorong 63.96 79 P P 02 49 36.5 -0.1
comp=Z,15nm,0.6s,baz=225,slow=10.0,SNR=4.2
SIJI LR LR 03 14 29.6
comp=Z,109nm,21.9s,baz=306,slow=33
VNA3 Neumayer Olymp 63.97 201 P P 02 49 36.3 +0.6
IUG luzhnay 65.86 0 *e*P **P 02 49 48.1 -0.3**
comp=Z,29nm,1.7s,baz=0.5
IUG luzhnay 65.86 0 *e*P **P 02 49 48.1 -0.3**
IUG pmax pmax
comp=Z,29nm,1.7s
QSPA South Pole Qui 66.08 180 P P 02 49 50.0 +0.3
comp=Z,3.4nm,0.7s,baz=268,slow=2.7,SNR=11
QSPA South Pole Qui 66.08 180 P P 02 49 49.3 -0.3
QSPA IAmb IAmb 02 49 59.2
comp=Z,14nm,1.0s
AAK Ala-Archa 66.51 4 *ce*P **P 02 49 51.9 -0.7**
AAK pmax pmax
comp=Z,69nm,1.7s
DZA Taraz 66.63 1 *e*P **P 02 49 52.8 -0.5**
baz=1.5
DZA Taraz 66.63 1 *e*P **P 02 49 52.7 -0.5**
KKAR Karatay Array 66.82 1 P P 02 49 54.0 -0.4
KKAR Karatay Array 66.82 1 P P 02 49 54.0 -0.4
KKAR Karatay Array 66.82 1 IAmb IAmb 02 50 01.8
comp=Z,38nm,1.2s
TNSS Tian-Shan 67.10 6 *e*P **P 02 49 55.8 -0.9**
baz=6.0
TNSS Tian-Shan 67.10 6 *e*P **P 02 49 55.7 -0.9**
VNDA Vanda 67.20 166 P **P 02 49 57.0 +0.5**
comp=Z,5.0nm,0.9s,baz=272,slow=7.2,SNR=20
VNDA Vanda 67.20 166 P P 02 49 56.1 -0.4
VNDA pmax pmax
comp=Z,68nm,2.0s
VNDA Vanda 67.20 166 P P 02 49 56.1 -0.4
MDOK Medeo 67.24 6 *e*P **P 02 49 56.6 -0.6**
AAA Alma-Ata 67.27 6 *e*P **P 02 49 56.9 -0.5**
baz=5.9
AAA Alma-Ata 67.27 6 *e*P **P 02 49 56.8 -0.5**
SATY Saty 67.27 7 *i* P **P 02 49 56.8 -0.6**
comp=Z,24nm,1.6s,baz=7.1
SATY Saty 67.27 7 *i* P **P 02 49 56.8 -0.6**
SATY pmax pmax
comp=Z,24nm,1.6s
SGDS Sogindy 67.33 4 *e*P **P 02 49 57.0 -0.7**
comp=Z,26nm,1.8s,baz=4.1
SGDS Sogindy 67.33 4 *e*P **P 02 49 57.0 -0.7**
SGDS pmax pmax
comp=Z,26nm,1.8s

SHLS Shalkode 67.50 8 *e*P **P 02 49 58.9 0.0**
comp=Z,32nm,1.5s,baz=8.2
SHLS Shalkode 67.50 8 *e*P **P 02 49 58.8 0.0**
SHLS pmax pmax
comp=Z,32nm,1.5s
KPKS Kokpek 67.71 7 *e*P **P 02 49 59.3 -0.8**
comp=Z,24nm,1.6s,baz=7.2
KUU Kurty 67.90 5 *e*P **P 02 50 00.3 -1.0**
comp=Z,68nm,1.7s,baz=5.4
GNI Garni 67.92 340 *ce*P **P 02 50 00.2 -1.4**
GNI pmax pmax
comp=Z,44nm,1.7s
GNI Garni 67.92 340 P **P 02 50 01.6 0.0**
LZH Lanzhou 68.04 29 *e*P **P 02 50 03.1 +0.6**
LZH pP pwP 02 50 07.4 -1.6
LZH sP sP 02 50 09.9 +4.4
LZH pmax pmax
comp=Z,18nm,1.1s
XAN Xi'an 68.85 34 P **P 02 50 07.2 -0.2**
XAN pP pwP 02 50 12.2 -1.7
XAN pmax pmax
comp=Z,13nm,1.6s
BTLS Baital 68.88 3 *e*P **P 02 50 06.8 -0.5**
comp=Z,17nm,1.5s,baz=3.5
BTLS Baital 68.88 3 *e*P **P 02 50 06.8 -0.5**
BTLS pmax pmax
comp=Z,17nm,1.5s
GTA Gaotai 69.19 25 P **P 02 50 10.4 +0.9**
GTA pP pwP 02 50 15.6 -0.4
GTA sP sP 02 50 19.1 +6.5
GTA S **S 02 59 17.3 +1.8**
GTA pmax pmax
comp=Z,12nm,1.4s
GTA pmax pmax
comp=Z,73nm,4.7s
GTA LR LR
comp=Z,170nm,22.5s
GTA LR LR
comp=Z,160nm,22.1s
GTA LR LR
comp=Z,200nm,22.1s
TDK Taldyqorghan 69.19 7 *e*P **P 02 50 08.5 -0.8**
baz=6.8
TDK Taldyqorghan 69.19 7 *e*P **P 02 50 08.4 -0.8**
WHN Wuhan 69.24 41 P P 02 50 11.8 +2.0
AKH Akhalkalaki 69.46 339 P P 02 50 11.6 +0.4
AKH pmax pmax
comp=Z,39nm,1.3s
AKH Akhalkalaki 69.46 339 P P 02 50 11.6 +0.4
AKH IAmb IAmb 02 50 13.4
comp=Z,39nm,1.3s
WMQ Urumqi 69.57 14 *e*P **P 02 50 11.5 -0.2**
WMQ pP pwP 02 50 16.8 -1.4
WMQ pmax pmax
comp=Z,38nm,1.1s
WMQ pmax pmax
comp=Z,350nm,4.5s
WMQ LR LR
comp=Z,420nm,22.7s
WMQ LR LR
comp=Z,370nm,22.7s
CTA Charters Tower 70.39 104 P P 02 50 17.0 -0.3
comp=Z,3.4nm,0.7s,baz=214,slow=7.3,SNR=2.7
CTA LR LR 03 18 42.3
comp=Z,598nm,19.4s,baz=250,slow=34
GROC Groznyy 70.39 342 *e*P **P 02 50 16.3 -0.4**
GROC pmax pmax
comp=Z,55nm,1.4s
ZEI Tsey 70.58 340 *e*P **P 02 50 18.1 0.0**
ZEI pmax pmax
comp=Z,8.0nm,1.1s
MAKZ Makanchi 71.42 9 P **P 02 50 21.8 -1.1**
MAKZ pmax pmax
comp=Z,17nm,1.3s
MAKZ Makanchi 71.42 9 P **P 02 50 21.8 -1.1**
MK31 Makanchi Array 71.45 9 *ce*P **P 02 50 22.1 -1.0**
MK31 Makanchi Array 71.45 9 IAmb IAmb 02 50 29.4
comp=Z,18nm,1.2s
MKAR Makanchi Array 71.45 9 P **P 02 50 22.3 -0.7**
comp=Z,5.5nm,0.7s,baz=196,slow=6.2,SNR=38
MKAR LR LR 03 19 02.2
comp=Z,111nm,21.1s,baz=175,slow=34
MKAR Makanchi Array 71.45 9 *ce*P **P 02 50 22.0 -1.1**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 71.45 9 P **P 02 50 21.7 -1.4**
KBZ Khabaz 71.74 340 P **P 02 50 25.4 +0.6**
comp=Z,2.2nm,0.8s,baz=58,slow=24,SNR=5.7
KBZ Khabaz 71.74 340 *ce*P **P 02 50 25.2 +0.4**
KBZ pmax pmax
comp=Z,17nm,1.9s
BRTR Keskin Array B 71.75 332 P **P 02 50 25.4 +0.2**
comp=Z,2.9nm,0.7s,baz=163,slow=6.5,SNR=9.9
BR131 Keskin Array S 71.75 332 P **P 02 50 25.2 0.0**
BR131 Keskin Array S 71.75 332 *i* P **P 02 50 25.1 0.0**
KIV Kislovodsk 72.01 340 *e*P **P 02 50 26.5 -0.1**
KIV pmax pmax
comp=Z,34nm,1.0s
KIV Kislovodsk 72.01 340 P **P 02 50 26.2 -0.4**
KIV IAmb IAmb 02 50 42.1
comp=Z,16nm,1.1s
ZSN Zaisan 72.50 11 *e*P **P 02 50 28.7 -0.6**
comp=Z,3.2nm,0.9s,baz=11
ZSN Zaisan 72.50 11 *e*P **P 02 50 28.7 -0.6**
ZSN pmax pmax
comp=Z,3.0nm,0.9s
IDI Anoyia 72.60 323 P **P 02 50 30.2 0.0**
comp=Z,5.9nm,0.7s,baz=88,slow=7.3,SNR=6.1
SOC Sochi 72.66 338 *e*P **P 02 50 29.5 -0.9**
SOC *e* 02 53 10.6
SOC *e*PPP PPP 02 54 55.2
SOC *e*S **S 02 59 54.7 -0.7**
SOC *e*SS **SS 03 04 36.8 +1.3**
SOC pmax pmax
comp=Z,13nm,0.7s
NJ2 Nanjing 73.03 42 *e*P **P 02 50 33.4 +0.6**
NJ2 pmax pmax
comp=Z,11nm,0.5s
MANT Manisa 73.11 327 P **P 02 50 34.3 +0.8**
ABKAR Akbulak array 73.47 353 P **P 02 50 33.9 -1.1**
BRZS Berezniki 73.75 2 *e*P **P 02 50 35.6 -1.1**
comp=Z,28nm,2.3s,baz=2.2
BRZS Berezniki 73.75 2 *e*P **P 02 50 35.6 -1.1**
BRZS pmax pmax
comp=Z,28nm,2.3s
ANN Anapa 74.53 337 *e*P **P 02 50 41.7 +0.4**
ANN pmax pmax
comp=Z,97nm,1.5s
BTO Baotou 74.54 31 *e*P **P 02 50 37.4 -4.2**
KURK Kurchatov 74.87 6 P **P 02 50 42.6 -0.5**
KURK P P 02 50 42.6 -0.5
KURK Kurchatov 74.87 6 *ce*P **P 02 50 42.4 -0.7**
KURK pmax pmax
comp=Z,33nm,1.7s
KURK Kurchatov 74.87 6 P **P 02 50 41.3 -1.9**
KURK IAmb IAmb 02 50 50.1
comp=Z,32nm,1.2s
HHC Hu-ho-hao-te 75.46 32 *e*P **P 02 50 46.9 -0.1**
HHC pmax pmax
comp=Z,12nm,1.1s
HHC pmax pmax
comp=Z,110nm,5.1s
TOA0 Torodi Ar. Sit 75.85 292 P **P 02 50 49.8 +0.1**
TOA0 P **P 02 50 49.8 +0.1**
TORD Torodi Ar. Bea 75.85 292 P **P 02 50 49.9 +0.3**
comp=Z,4.0nm,1.0s,baz=105,slow=5.7,SNR=14
TORD LR LR 03 22 40.5
comp=Z,196nm,20.3s,baz=115,slow=34
TORD Torodi Ar. Bea 75.85 292 P **P 02 50 49.0 -0.6**
SIM Simferopol' 75.89 335 *e*P **P 02 50 49.8 +0.6**
SIM pmax pmax
comp=Z,50nm,1.4s
ALN Alexandroupoli 76.20 328 P **P 02 50 50.2 -0.8**
ALN Alexandroupoli 76.20 328 P **P 02 50 50.2 -0.8**
BRVK Borovoye 76.78 0 P **P 02 50 53.3 -0.7**
BRVK P **P 02 50 53.3 -0.7**
BRVK Borovoye 76.78 0 P **P 02 50 52.6 -1.4**
BRVK pmax pmax
comp=Z,24nm,1.6s
BRVK Borovoye 76.78 0 P **P 02 50 52.6 -1.4**
BRVK IAmb IAmb 02 51 00.5
comp=Z,24nm,1.6s
BJI Beijing 77.17 35 P **P 02 50 56.7 +0.2**
BJI pmax pmax
comp=Z,6.0nm,1.7s

TAM Tamanrasset 77.66 302 P **P 02 51 00.4 +0.5**
TAM pmax pmax
comp=Z,16nm,1.5s
TAM Tamanrasset 77.66 302 P **P 02 51 00.4 +0.5**
TIRR Tirgusor 77.86 331 ⇑P **P 02 50 59.0 -1.2**
TIRR Tirgusor 77.86 331 ⇑P **P 02 50 59.0 -1.2**
TIRR Tirgusor 77.86 331 ⇑P **P 02 50 59.0 -1.2**
TIRR Tirgusor 77.86 331 IAmb IAmb 02 51 07.4
comp=Z,19nm,0.9s
VAY Valandovo 78.26 326 *i* P **P 02 51 01.9 -0.6**
KIC Kosan Boka 78.36 282 *e*P **P 02 51 03.7 -0.1**
comp=Z,101nm,1.6s
CFR Carcaliu 78.55 332 ⇓P **P 02 51 04.4 +0.4**
CFR Carcaliu 78.55 332 ⇓P **P 02 51 04.4 +0.4**
LIC Lamto 78.56 282 *e*P **P 02 51 05.6 +0.7**
comp=Z,6.0nm,0.3s
DBIC Dimbokro 78.60 283 P **P 02 51 05.9 +0.8**
comp=Z,11nm,1.1s,baz=102,slow=10,SNR=3.0
DBIC LR LR 03 24 23.4
comp=Z,342nm,18.2s,baz=104,slow=35
DBIC Dimbokro 78.60 283 IAmb IAmb 02 51 13.3
comp=Z,18nm,1.1s
STIP Stip 78.73 326 *i* P **P 02 51 04.0 -1.2**
TIC Toumodi 78.73 283 *e*P **P 02 51 05.8 -0.1**
ZAA0 Zalesovo Array 78.79 9 IAmb IAmb 02 51 11.6
comp=Z,26nm,1.2s
ZALV Zalesovo Beam 78.79 9 P **P 02 51 04.4 -0.8**
comp=Z,6.3nm,0.7s,baz=196,slow=4.6,SNR=20
VRH Novokhopyorsk 78.83 343 *e*P **P 02 51 04.5 -1.0**
VRH pmax pmax
comp=Z,30nm,1.8s
SONM Songino Array 78.85 24 P **P 02 51 05.1 -0.8**
comp=Z,2.6nm,0.8s,baz=209,slow=4.6,SNR=12
SONM LR LR 03 24 40.9
comp=Z,201nm,21.7s,baz=190,slow=35
SONM Songino Array 78.85 24 P **P 02 51 04.7 -1.2**
SONM pmax pmax
comp=Z,19nm,1.4s
SONM Songino Array 78.85 24 P **P 02 51 04.7 -1.2**
OHR Ohrid 79.03 325 *i* P **P 02 51 08.7 +1.7**
ULN Ulaanbaatar 79.13 25 *ce*P **P 02 51 07.3 -0.1**
ULN pmax pmax
comp=Z,26nm,1.7s
ULN Ulaanbaatar 79.13 25 P **P 02 51 06.5 -0.9**
ULN IAmb IAmb 02 51 14.0
comp=Z,24nm,1.4s
VORD Divnogorie 79.31 341 *e*P **P 02 51 07.2 -0.9**
VORD pmax pmax
comp=Z,10.0nm,1.4s
SKO Skopje 79.32 326 *i* P **P 02 51 08.0 -0.4**
VSR Storozhevoye 79.57 341 *e*P **P 02 51 08.7 -0.8**
VSR pmax pmax
comp=Z,20nm,1.5s
TIR Tirane 79.70 324 ⇑P **P 02 51 10.2 -0.3**
TIR Tirane 79.70 324 ⇑P **P 02 51 10.2 -0.3**
MLR Muntele Rosu 79.76 330 P **P 02 51 11.6 +0.8**
comp=Z,6.4nm,0.8s,baz=212,slow=1.0,SNR=15
MLR Muntele Rosu 79.76 330 ⇑P **P 02 51 11.7 +0.8**
MLR Muntele Rosu 79.76 330 ⇑P **P 02 51 11.7 +0.8**
MLR Muntele Rosu 79.76 330 IAmb IAmb 02 51 19.6
comp=Z,40nm,1.2s
ZAK Zakamensk 79.90 21 *e*P P 02 51 17.5 +6.0
ZAK pmax pmax
comp=Z,6.0nm,1.9s
ARR Arges 80.26 330 ⇓P **P 02 51 12.2 -1.4**
DOPR Dopca 80.38 330 ⇓P **P 02 51 12.6 -1.4**
ARU Arti 80.70 354 *c i* P **P 02 51 15.7 +0.2**
ARU 02 54 15.6
ARU S **S 03 01 24.9 +2.1**
ARU SS **SS 03 06 41.4 +4.8**
ARU pmax pmax
comp=Z,37nm,1.9s
ARU Arti 80.70 354 P **P 02 51 14.2 -1.3**
ARU IAmb IAmb 02 51 22.9
comp=Z,47nm,1.5s
PDG Podgorica 80.78 325 ⇓P **P 02 51 15.1 -1.2**
PDG Podgorica 80.78 325 IAmb IAmb 02 51 24.2
comp=Z,72nm,2.0s
SORM Soroca 80.79 333 ⇓P **P 02 51 14.6 -1.6**
SORM Soroca 80.79 333 ⇓P **P 02 51 14.6 -1.6**
LPSR Galich'ya Gora 80.86 342 *e*P **P 02 51 16.1 -0.3**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
SVE Sverdlovsk 80.91 355 *e*P **P 02 51 16.9 +0.3**
SVE pmax pmax
comp=Z,44nm,1.5s
HERR Herculane 80.95 328 ⇓P **P 02 51 16.0 -1.1**
TLY Talaya 81.14 21 *e*P **P 02 51 19.2 +1.2**
TLY pmax pmax
comp=Z,48nm,1.9s
TLY MLR MLR
comp=Z,263nm,15.0s
TLY Talaya 81.14 21 P **P 02 51 17.6 -0.4**
TLY IAmb IAmb 02 51 20.2
comp=Z,36nm,1.8s
GZR Gura Zlata 81.15 329 ⇑P **P 02 51 18.0 -0.3**
GZR Gura Zlata 81.15 329 ⇑P **P 02 51 18.0 -0.3**
KOWA Kowa 81.37 290 P **P 02 51 19.8 -0.3**
KOWA IAmb IAmb 02 51 23.2
comp=Z,42nm,1.5s
DIVS Divibare 81.58 326 IAmb IAmb 02 51 29.4
comp=Z,47nm,1.6s
BURAR Bucovina Array 81.71 331 ⇑P **P 02 51 19.5 -1.8**
BURAR Bucovina Array 81.71 331 ⇑P **P 02 51 19.5 -1.8**
BURAR Bucovina Array 81.71 331 P **P 02 51 20.9 -0.3**
BUR08 Bucovina Ar. S 81.74 331 IAmb IAmb 02 51 34.9
comp=Z,32nm,1.6s
BZS Buzias 81.87 328 ⇑P **P 02 51 21.9 -0.1**
BZS Buzias 81.87 328 ⇑P **P 02 51 21.9 -0.1**
KSAR Wonju Array Be 82.16 43 P **P 02 51 22.3 -1.4**
KSAR Wonju Array Be 82.16 43 P **P 02 51 22.3 -1.4**
KSRS Korea Array 82.19 43 P **P 02 51 23.1 -0.8**
comp=Z,2.3nm,0.8s,baz=237,slow=5.0,SNR=8.6
KSRS LR LR 03 27 05.7
comp=Z,61nm,19.6s,baz=228,slow=35
LSTV Lastovo 82.28 324 Sn S 03 01 29.1 -11
KEST Kesra 82.28 315 P **P 02 51 24.9 +0.4**
comp=Z,3.8nm,0.7s,baz=336,slow=1.8,SNR=6.3
KEST LR LR 03 26 54.6
comp=Z,134nm,19.8s,baz=14,slow=35
KEST Kesra 82.28 315 P **P 02 51 25.5 +0.9**
KEST IAmb IAmb 02 51 28.2
comp=Z,61nm,1.9s
SIRR Siria 82.32 329 ⇑P **P 02 51 23.8 -0.6**
AKASG Malin Array Be 82.50 335 P **P 02 51 24.8 -0.4**
comp=Z,3.4nm,0.7s,baz=141,slow=4.3,SNR=25
AKASG Malin Array Be 82.50 335 P **P 02 51 24.2 -0.9**
AKASG pmax pmax
comp=Z,17nm,1.7s
AKASG Malin Array Be 82.50 335 P **P 02 51 24.2 -0.9**
AKBB Malin Array Si 82.50 335 *ce*P **P 02 51 24.8 -0.3**
AKBB Malin Array Si 82.50 335 IAmb IAmb 02 51 32.2
comp=Z,55nm,1.8s
OBN Obninsk 83.74 342 *ce*P **P 02 51 31.5 +0.1**
OBN *i* 02 51 37.9
OBN *e* 02 54 43.1
OBN pmax pmax
comp=Z,35nm,1.7s
UZH Uzhgorod 83.77 331 *e*P **P 02 51 30.1 -1.7**
UZH *i* 02 51 36.7
LVV L'vov 83.90 332 *e*P **P 02 51 31.8 -0.6**
MOS Moscow 83.99 343 *e*P **P 02 51 29.7 -3.0**
MOS pmax pmax
comp=Z,49nm,1.3s
KOLS Kolonicke sedl 84.00 331 *e*P **P 02 51 32.8 -0.2**
KOLS pmax pmax
comp=Z,35nm,1.9s
KOLS Kolonicke sedl 84.00 331 *e*P **P 02 51 32.8 -0.2**
KIRV Kirov 84.00 350 *ce*P **P 02 51 32.4 -0.3**
CRVS Cervenica-Dubn 84.34 330 *e*P **P 02 51 35.4 +0.7**
CRVS pmax pmax
comp=Z,67nm,1.6s
CRVS Cervenica-Dubn 84.34 330 *e*P **P 02 51 35.4 +0.7**
NRCA Norcia 84.41 322 IAmb IAmb 02 51 43.4
comp=Z,24nm,1.4s
CN2 Changchun 84.76 37 *e*P **P 02 51 38.1 +1.2**
SRO Srobarova 85.03 328 *e*P **P 02 51 38.3 +0.1**
SRO Srobarova 85.03 328 *e*P **P 02 51 38.3 +0.1**
VYHS Vyhne 85.26 329 *e*P **P 02 51 39.4 0.0**
VYHS pmax pmax
comp=Z,26nm,1.4s
VYHS Vyhne 85.26 329 *e*P **P 02 51 39.4 0.0**
HIA Hailar 85.58 30 *i* P **P 02 51 41.0 0.0**
HIA pmax pmax

	comp=Z,15nm,1.3s							
SOKA	**Soboth**	85.89	326	*e*P		P	02 51 42.5	-0.1
	comp=Z,7.3nm,1.4s							
MODS	**Modra-Piesok**	85.92	328	*e*P		P	02 51 41.1	-1.6
MODS				pmax		pmax		
	comp=Z,32nm,1.7s							
MODS	**Modra-Piesok**	85.92	328	*e*P		P	02 51 41.1	-1.6
SMOL	**Smolenice**	85.94	328	*e*P		P	02 51 42.9	+0.1
SMOL	**Smolenice**	85.94	326	*e*P		P	02 51 42.9	+0.1
ARSA	**Arzberg**	86.02	326	*e*P		P	02 51 43.5	+0.2
	comp=Z,8.2nm,1.1s							
OBKA	**Obir**	86.03	325	*e*P		P	02 51 43.6	+0.3
	comp=Z,3.5nm,0.6s							
OJC	**Ojcow**	86.04	331	IAmb		IAmb	02 51 45.2	
	comp=Z,52nm,1.7s							
JAVC	**Velka Javorina**	86.07	329	*e*P		P	02 51 44.3	+0.9
CONA	**Conrad Observa**	86.31	327	*i* P		P	02 51 44.8	+0.1
	comp=Z,25nm,1.6s,SNR=7.5							
MYKA	**Terra Mystica**	86.58	325	*e*P		P	02 51 46.0	0.0
	comp=Z,7.9nm,1.2s							
NACGM	**Naroch**	86.74	337	*e*		P	02 51 46.0	-0.5
MORC	**Moravsky Berou**	86.76	329	*e*P		P	02 51 46.6	-0.2
MORC	**Moravsky Berou**	86.76	329	IAmb		IAmb	02 51 54.6	
	comp=Z,31nm,1.6s							
KRUC	**Moravsky**	86.82	328	*e*P		P	02 51 46.7	-0.3
ZOU	**Zoufplan**	86.88	325	IAmb		IAmb	02 51 55.0	
	comp=Z,54nm,2.0s							
VRAC	**Vranov**	86.89	328	P		P	02 51 47.6	+0.2
	comp=Z,0.7nm,0.3s,baz=161,slow=5.3,SNR=8.3							
VRAC	**Vranov**	86.89	328	*e*P		P	02 51 46.9	-0.5
KBA	**Koelnbreinsper**	87.03	325	*e*P		P	02 51 48.6	+0.3
	comp=Z,5.9nm,1.1s							
MOA	**Molln**	87.06	326	*i* P		P	02 51 48.4	+0.2
	comp=Z,24nm,1.6s,SNR=6.9							
ABTA	**Abfaltersbach**	87.25	325	*i* P		P	02 51 49.5	+0.2
	comp=Z,24nm,1.6s,SNR=8.0							
MDJ	**Mudanjiang**	87.58	38	P		P	02 51 51.1	+0.2
MDJ				pmax		pmax		
	comp=Z,7.0nm,0.7s							
MDJ				pmax		pmax		
	comp=Z,190nm,4.2s							
DPC	**Dobruska-Polom**	87.73	329	*e*P		P	02 51 51.2	-0.3
OSTC	**Ostas**	87.92	329	*e*P		P	02 51 52.8	+0.4
GEC2	**GERESS Array S**	88.00	327	IAmb		IAmb	02 51 54.5	
	comp=Z,34nm,1.9s							
GERES	**GERESS Array B**	88.00	327	P		P	02 51 52.0	-0.9
	comp=Z,0.6nm,0.7s,baz=132,slow=5.6,SNR=6.5							
GERES	**GERESS Array B**	88.00	327	P		P	02 51 52.0	-0.9
GERES	**GERESS Array B**	88.00	327	P		P	02 51 51.4	-1.5
CHVC	**Chvalec**	88.02	329	*e*P		P	02 51 52.9	+0.1
CHVC				*ex*		x	02 51 59.6	
WTTA	**Wattenberg**	88.04	325	*i* P		P	02 51 54.2	+1.0
	comp=Z,26nm,1.5s,SNR=5.2							
KLMR	**Klimovskoe**	88.04	346	*e*P		P	02 51 50.9	-1.7
KLMR				pmax		pmax		
	comp=Z,99nm,1.4s							
KLMR	**Klimovskoe**	88.04	346	*e*P		P	02 51 50.9	-1.7
KLMR				AMP			02 52 00.7	
	comp=Z,99nm,1.4s							
WATA	**Walderalm**	88.12	325	*e*P		P	02 51 53.3	-0.2
	comp=Z,18nm,1.5s							
SQTA	**Sankt Quirin**	88.24	325	*e*P		P	02 51 54.1	0.0
	comp=Z,17nm,1.7s							
KHC	**Kasperske Hory**	88.24	327	*e*P		P	02 51 53.3	-0.7
KHC				*ep*P		pwP	02 51 59.6	-1.1
PRU	**Pruhonice**	88.33	328	*e*P		P	02 51 54.7	+0.4
PRU				*ex*		x	02 52 00.6	
FETA	**Feichten**	88.37	324	*e*P		P	02 51 55.2	+0.4
	comp=Z,18nm,1.4s							
MOTA	**Moosalm**	88.37	325	*e*P		P	02 51 55.5	+0.7
	comp=Z,13nm,1.1s							
MJAR	**Matsushiro Arr**	88.43	49	LR		LR	03 32 07.6	
	comp=Z,88nm,18.2s,baz=250,slow=36							
RETA	**Reute**	88.64	325	*i* P		P	02 51 55.8	-0.1
	comp=Z,25nm,1.5s,SNR=6.9							
DAVOX	**Davos/Dischmat**	88.68	324	P		P	02 51 56.0	-0.2
	comp=Z,5.7nm,0.6s,baz=151,slow=3.4,SNR=17							
PVCC	**Panska Ves**	88.68	328	*e*P		P	02 51 56.4	+0.5
USRK	**Ussuriysk Ar.**	88.71	40	P		P	02 51 54.7	-1.5
	comp=Z,2.1nm,0.8s,baz=283,slow=3.3,SNR=6.4							
USRK				LR		LR	03 30 07.2	
	comp=Z,179nm,20.9s,baz=204,slow=35							
USRK	**Ussuriysk Ar.**	88.71	40	P		P	02 51 54.3	-1.9
DAVA	**Damuels**	88.99	324	*i* P		P	02 51 57.7	0.0
	comp=Z,16nm,0.9s,SNR=7.0							
BRG	**Berggiesshubel**	89.21	328	*e*P		P	02 51 59.3	+0.9
	comp=Z,30nm,1.6s							
BRG	**Berggiesshubel**	89.21	328	*e*P		P	02 51 59.3	+0.9
BRG				pmax		pmax		
	comp=Z,30nm,1.6s							
GRF	**Grafenberg Arr**	89.78	326	*e*P		P	02 52 01.3	+0.1
	comp=Z,36nm,1.6s,baz=129,slow=5.7							
GRF				*ep*P		pwP	02 52 07.0	-0.9
CLL	**Collm**	89.94	328	⇑*i* P		P	02 52 02.4	+0.6
	comp=Z,83nm,2.2s							
CLL				*es*P		pwP	02 52 07.0	-1.5
CLL	**Collm**	89.94	328	⇑*i* P		P	02 52 02.4	+0.6
CLL				*e*			02 52 07.0	
CLL				pmax		pmax		
	comp=Z,83nm,2.2s							
CLL	**Collm**	89.94	328	IAmb		IAmb	02 52 04.7	
	comp=Z,49nm,1.8s							
BFO	**Black Forest**	90.45	324	P		P	02 52 03.7	-0.6
BFO				pmax		pmax		
	comp=Z,23nm,1.4s							
BFO	**Black Forest**	90.45	324	P		P	02 52 03.7	-0.6
BFO				IAmb		IAmb	02 52 12.2	
	comp=Z,23nm,1.4s							
MDT	**Midelt**	90.47	306	P		P	02 52 06.2	+1.4
	comp=Z,4.2nm,0.8s,baz=97,slow=6.1,SNR=4.9							
KLR	**Kul'dur**	91.53	35	*ce*P		P	02 52 07.5	-1.8
KLR				pmax		pmax		
	comp=Z,18nm,1.3s							
FINES	**FINESS Array B**	92.09	341	P		P	02 52 10.2	-1.3
	comp=Z,2.3nm,0.9s,baz=90,slow=1.9,SNR=4.4							
FINES				LR		LR	03 32 07.8	
	comp=Z,70nm,18.3s,baz=142,slow=35							
FINES	**FINESS Array B**	92.09	341	*ce*P		P	02 52 10.5	-1.0
FINES				pmax		pmax		
	comp=Z,2.0nm,0.9s							
FINES	**FINESS Array B**	92.09	341	P		P	02 52 12.4	+0.8
ESDC	**Sonseca Array**	93.28	312	P		P	02 52 17.9	+0.3
	comp=Z,1.0nm,0.7s,baz=114,slow=3.9,SNR=14							
ESDC				LR		LR	03 34 32.6	
	comp=Z,94nm,18.9s,baz=315,slow=36							
ESDC	**Sonseca Array**	93.28	312	P		P	02 52 17.2	-0.5
NRIK	**Noril'sk**	94.03	6	P		P	02 52 20.0	-0.4
	comp=Z,1.1nm,0.4s,baz=220,slow=4.4,SNR=4.9							
NRIK	**Noril'sk**	94.03	6	*ce*P		P	02 52 20.5	+0.1
NRIK				pmax		pmax		
	comp=Z,13nm,1.9s							
ARCES	**ARCESS Array B**	98.52	346	LR		LR	03 36 15.8	
	comp=Z,77nm,20.3s,baz=310,slow=35							
BILL	**Bilibino**	114.57	24	*i* PKIKP		PKPdf	02 57 41.7	-0.6
BILL				pmax		pmax		
	comp=Z,4.0nm,1.3s							
LPAZ	**La Paz**	122.41	230	PKP		PKiKP	02 58 02.3	+2.4
	comp=Z,1.3nm,0.9s,baz=90,slow=5.1,SNR=2.9							
IMAR	**Indian Mountai**	129.95	21			PKiKP	02 58 12.5	-0.2
ILAR	**Eielson Array**	132.96	20	PKP		PKPdf	02 58 18.0	+0.4
	comp=Z,0.5nm,0.9s,baz=327,slow=6.3,SNR=4.4							
ILAR	**Eielson Array**	132.96	20	PKIKP		PKiKP	02 58 18.3	-0.4
ILAR	**Eielson Array**	132.96	20			PKiKP	02 58 18.3	-0.4
SKT	**Skwentna**	133.06	25			PKPpre	02 58 10.7	
TRY	**Troy**	144.42	311			PKPab	02 58 37.7	+0.3
H57A	**Richville**	144.94	314	P		PKPab	02 58 37.7	-1.5
	baz=66							
I58A	**Old Forge**	144.97	313	P		PKPbc	02 58 39.2	-0.3
	baz=68							
K59A	**Cooperstown**	145.22	311	P		PKPbc	02 58 40.2	-0.1
	baz=69							
J58A	**Remsen**	145.30	312	P		PKPbc	02 58 40.6	+0.1
	baz=68							
N61A	**South Mountain**	145.50	308	P		PKPab	02 58 41.6	+0.2
	baz=72							
M60A	**Port Jervis**	145.56	309	P		PKPdf	02 58 41.5	+0.2
	baz=71							
BRNJ	**Basking Ridge**	145.72	308	PKPdf		PKPdf	02 58 41.5	0.0
J57A	**Williamstown**	145.76	313	P		PKPbc	02 58 41.9	0.0
	baz=67							
K58A	**Earlville**	145.77	312	P		PKPbc	02 58 42.0	0.0
	baz=68							
N60A	**Cedar Hill Far**	146.04	308	P		PKPdf	02 58 42.1	0.0
	baz=71							
M59A	**Waymart**	146.06	309	P		PKPdf	02 58 42.4	+0.3
	baz=70							
L58A	**Harry Jones Me**	146.18	311	P		PKPbc	02 58 43.4	+0.1
	baz=69							
BINY	**Binghamton**	146.22	311	P		PKPbc	02 58 43.7	+0.3
	baz=68							
BINY	**Binghamton**	146.22	311	PKPdf		PKPbc	02 58 43.1	-0.3
K57A	**Scipio Center**	146.38	312	P		PKPbc	02 58 44.0	+0.1
	baz=67							
O60A	**Telford**	146.44	307	P		PKPbc	02 58 43.6	-0.5
	baz=72							
N59A	**State Game Lan**	146.51	309	P		PKPbc	02 58 44.0	-0.3
	baz=70							
M58A	**Price's Panora**	146.84	310	P		PKPbc	02 58 45.2	-0.1
	baz=69							
L57A	**Andrews Acres**	146.88	311	P		PKPbc	02 58 45.3	-0.1
	baz=68							
N58A	**Sunbury**	147.21	309	P		PKPbc	02 58 46.2	-0.1
	baz=70							
L56A	**Greenwood**	147.32	312	P		PKPbc	02 58 46.8	+0.2
	baz=67							
M57A	**Sunshine Farm,**	147.32	310	P		PKPbc	02 58 46.8	+0.2
	baz=68							
P59A	**Jarrettsville**	147.41	307	P		PKPbc	02 58 46.4	-0.5
	baz=72							
O58A	**Lewisberry**	147.60	308	P		PKPbc	02 58 47.1	-0.3
	baz=70							
N57A	**Milroy**	147.83	309	P		PKPbc	02 58 47.2	-0.8
	baz=69							
N56A	**West Decatur**	148.30	310	P		PKPbc	02 58 49.3	+0.1
	baz=68							
Q58A	**Fox Den Farm,**	148.54	306	P		PKPbc	02 58 49.5	-0.4
	baz=71							
O56A	**Blue Knob Stat**	148.73	309	P		PKPbc	02 58 49.9	-0.5
	baz=68							
R58B	**Mineral**	148.99	304	P		PKPbc	02 58 51.1	0.0
	baz=73							
T59A	**Double "B" Far**	149.01	302	P		PKPbc	02 58 50.5	-0.6
	baz=75							
V60A	**Jim Taylor Roa**	149.08	300	P		PKPbc	02 58 51.4	+0.1
	baz=77							
P56A	**Dayton Farm, R**	149.20	308	P		PKPbc	02 58 51.6	+0.1
	baz=69							
S58A	**Poland Farm, P**	149.22	304	P		PKPbc	02 58 50.5	-1.2
	baz=73							
N53A	**Lisbon**	150.11	311			PKPab	02 58 58.8	-1.0
Q55A	**Buckhannon**	150.28	307	P		PKPbc	02 58 54.7	+0.4
	baz=69							
T57A	**Hurt**	150.31	303	P		PKPbc	02 58 54.2	-0.2
	baz=73							
V58A	**Windy Hill, Pi**	150.53	301	P		PKPbc	02 58 54.6	-0.3
	baz=75							
U57A	**Blanch**	150.54	302	P		PKPbc	02 58 54.1	-0.8
	baz=74							
W58A	**Raeford**	150.82	299	P		PKPbc	02 58 55.4	-0.2
	baz=76							
Q54A	**Coxs Mills**	150.83	308	P		PKPbc	02 58 55.3	-0.2
	baz=68							
T56A	**Rocky Mt**	150.90	304	P		PKPbc	02 58 56.2	+0.4
	baz=72							
S55A	**Lewisburg**	151.02	305	P		PKPbc	02 58 56.3	+0.2
	baz=70							
V57A	**Coltrane Farms**	151.03	301	P		PKPbc	02 58 55.4	-0.7
	baz=74							
P53A	**Whipple**	151.04	309	P		PKPbc	02 58 56.2	+0.2
	baz=66							
BLA	**Blacksburg**	151.14	304	P		PKPbc	02 58 56.6	+0.2
	baz=71							
U56A	**King**	151.37	302	P		PKPbc	02 58 57.2	+0.3
	baz=73							
W57A	**Gilead**	151.39	300	P		PKPbc	02 58 56.8	-0.2
	baz=75							
T55A	**Pulaski**	151.44	304	P		PKPbc	02 58 57.3	+0.2
	baz=71							
ULM	**Lac Du Bonnet**	151.48	340	PKPbc		PKPbc	02 58 55.2	-1.4
	comp=Z,5.2nm,0.6s,baz=339,slow=3.7,SNR=11							
P52A	**Corning**	151.50	310	P		PKPbc	02 58 56.9	-0.2
	baz=65							
EYMN	**Ely**	151.79	332	P		PKPbc	02 58 57.3	-0.2
	baz=39							
W56A	**Indian Trail**	151.86	300	P		PKPbc	02 58 58.0	-0.1
	baz=75							
P51A	**Williamsport**	152.22	310	P		PKPbc	02 58 58.0	-0.7
	baz=64							
S53A	**Williamson**	152.26	306	P		PKPbc	02 58 58.5	-0.4
	baz=69							
WVT	**Waverly**	157.07	307	PKP2		PKPab	02 59 27.1	-2.1
WVT	**Waverly**	157.07	307			PKPab	02 59 27.1	-2.1
K05A	**Summer Lake**	159.47	22	PKPab		PKPab	02 59 39.9	+0.3
PDAR	**Pinedale Array**	161.32	358	PKPab		PKPab	02 59 46.4	-1.2
	comp=Z,0.7nm,0.7s,baz=38,slow=2.6,SNR=4.6							
PDAR	**Pinedale Array**	161.32	358	PKPdf		PKPdf	02 59 01.9	-2.0
PDAR						PKPab	02 59 46.5	-1.1
PAHR	**Pah Rah Range**	162.67	24	PKPab		PKPab	02 59 52.7	-0.9
X37A	**Clayton**	163.18	312			PKPdf	02 59 06.3	+0.6
NVAR	**Mina Array Bea**	164.19	23	PKPab		PKPab	02 59 59.9	-0.5
	comp=Z,2.2nm,0.7s,baz=304,slow=3.5,SNR=18							
NVAR	**Mina Array Bea**	164.19	23			PKPdf	02 59 07.6	+0.8
NVAR						PKPab	03 00 00.0	-0.3
PV02	**Paradox Valley**	165.81	354			PKPab	03 00 07.2	-0.2
ANMO	**Albuquerque**	168.59	343	PKP2		PKPab	03 00 19.6	-0.2
ANMO							03 59 09.0	
ANMO	**Albuquerque**	168.59	343			PKPdf	02 59 09.0	-1.4
ANMO				PKPab		PKPab	03 00 19.6	-0.2
MNTX	**Cornudas Mount**	171.15	331			PKPdf	02 59 12.3	+0.6
TUC	**Tucson**	171.77	2	PKIKP		PKPdf	02 59 12.9	+0.8
TUC	**Tucson**	171.77	2	PKPdf		PKPdf	02 59 12.9	+0.8
TUC						PKPab	03 00 33.3	-0.4
TXAR	**Lajitas Array**	171.96	312	PKPab		PKPab	03 00 35.1	+0.2
	comp=Z,0.7nm,0.9s,baz=66,slow=4.3,SNR=8.2							

DJA 10 02:39:46.0±1.1, 0°N±4°×122°2E±°, h179km±8km, M2.8/5, MLv2.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APSI	**Ampana**	1.20	190	P	Pn	02 40 16.2	+1.0
APSI				S	Sn	02 40 38.8	+0.9
GTOI	**Gorontalo**	1.20	73	P	Pn	02 40 14.9	-0.3
LUWI	**Luwuk**	1.60	145	P	Pn	02 40 18.8	0.0
LUWI				S	Sn	02 40 44.4	+0.1
MPSI	**Mapaga**	1.96	272	P	Pn	02 40 21.7	-0.9
MPSI				S	Sn	02 40 51.2	+0.3

*ANF **10** 02:43:12.0±0.7, 41°.87N×119°.63W, h0km±5km, ML3.6/17, Error ellipse: s-maj=3.3km s-min=2.2km az=157.0*
*IDC **10** 02:43:12.2±0.8, 41°.91N×119°.62W, h0km, mb3.5/1, mb1 3.5/6, mb1mx3.4/55, mbtmp3.1/6, ML3.3/5, MS3.2/3, Ms1 3.2/3, ms1mx2.8/32, Error ellipse: s-maj=13.5km s-min=5.7km az=8.0*
*SEA **10** 02:43:13.9±3.8, 41°.84N±0°.04×119°.65W±0°.05, h0km±7km, Error ellipse: s-maj=6.5km s-min=5.0km az=190.0*
*REN **10** 02:43:13.6±2.9, 41°.92N±0°.04×119°.64W±0°.04, h0km±7km, ML3.6/5, ML3.7/46(SEA), Error ellipse: s-maj=6.4km s-min=4.3km az=180.0*
*NEIC **10** 02:43:15.9±2.6, 41°.92N±0°.04×119°.74W±0°.04, h15km±6km, Error ellipse: s-maj=6.2km s-min=2.8km az=216.0*

ISC 10 02:43:13.4±0.7, 41°.94N±0°.03×119°.68W±0°.03, h10km, n80, σ1°78/90, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	0.47	266		Pb	02 43 23.1	-0.8
MOD					Sb	02 43 30.1	-0.9
K05A	**Summer Lake**	1.20	311	Pg	Pg	02 43 36.9	+0.5
M04C	**Macdoel**	1.62	265	P	Pb	02 43 42.5	-1.0
	baz=85,SNR=352						
M04C				S	Sg	02 44 05.5	-0.1
	baz=85						
J08A	**Circle Bar Ran**	1.67	32	Pn	Pb	02 43 43.3	-1.0
K04D	**Chiloquin, OR**	1.69	295	Pb	Pg	02 43 44.9	-0.9
	baz=114						
K04D				S	Sg	02 44 08.1	+0.4
	baz=114						
J05D	**Fort Rock, OR**	1.77	320	Pb	Pg	02 43 46.8	-0.5
	baz=139						
J05D				Sg	Sg	02 44 12.8	+2.5
	baz=139						
L04D	**Klamath Falls**	1.98	279	P	Pn	02 43 47.3	+0.2
	baz=98,SNR=208						
L04D				Sb	Sg	02 44 16.7	-0.2
	baz=98						
PINE	**Pine Mountain**	2.07	334		Pg	02 43 52.0	-1.1
BEKR	**Beckworth**	2.13	194	Pn	Pn	02 43 49.9	+0.7
I07A	**Izee**	2.15	3	Pn	Pb	02 43 52.0	-0.4
PAHR	**Pah Rah Range**	2.24	174	Pn	Pn	02 43 50.6	-0.1
YBH	**Yreka Blue Hor**	2.28	266	Pn	Pn	02 43 51.0	-0.1
	4.7nm,0.3s,baz=72,slow=12,SNR=136						
YBH				Lg	Lg	02 44 25.3	
	41nm,0.3s,baz=189,slow=8.6,SNR=18						
YBH	**Yreka Blue Hor**	2.28	266	Pn	Pn	02 43 50.9	-0.2
O03E	**Paynes Creek**	2.30	225	P	Pn	02 43 51.4	0.0
	baz=44,SNR=62						
O03E				Sb	Sg	02 44 25.0	-2.2
	baz=44						
M02C	**Callahan**	2.44	258	P	Pn	02 43 53.0	-0.4
	baz=77,SNR=28						
M02C				Sb	Sg	02 44 30.3	-1.6
	baz=77						
N02D	**Trinity Center**	2.47	248	P	Pn	02 43 53.2	-0.6
	baz=67,SNR=12						
N02D				Sb	Sg	02 44 31.3	-1.5
	baz=67						
HUMO	**Hull Mountain**	2.52	286	Pn	Pn	02 43 54.9	+0.5
WDC	**Whiskeytown Da**	2.55	239	Pn	Pn	02 43 54.6	-0.2
I05D	**Terrebonne, OR**	2.69	334	Pb	Pb	02 44 02.5	+0.9
	baz=152						
I05D				Sb	Sg	02 44 39.3	-0.4
	baz=152						
I04A	**Tendick Farm,**	2.73	314	Pb	Pb	02 44 03.6	+1.1
	baz=132						
I04A				Sb	Sg	02 44 39.9	-1.3
	baz=132						
ORV	**Oroville**	2.76	211	Pn	Pn	02 43 59.3	+1.7
PNTR	**Pine Nut**	2.85	179		Pb	02 44 03.6	-0.9
RUBR	**Rubicon Trail**	2.91	187		Pb	02 44 04.9	-0.6
L02E	**Cave Junction**	2.93	276	P	Pn	02 44 00.9	+0.8
	baz=93,SNR=55						
L02E				Sb	Sb	02 44 44.1	+2.4
	baz=93						
K02D	**Willamette Mer**	3.05	286	P	Pn	02 44 02.4	+0.6
	baz=103,SNR=147						
KVN	**Kaiserville**	3.13	157	Pn	Pn	02 44 03.2	+0.3
KRMB	**Red Mountain**	3.19	264	Pn	Pn	02 44 04.7	+0.9
MFID	**Camas Ranch**	3.20	61	Pn	Pn	02 44 04.5	+0.7
I03D	**Drain, OR**	3.22	304	Pb	Pb	02 44 11.4	+0.7
	baz=122						
I03D				Sb	Sg	02 44 55.1	-1.8
	baz=122						
KHMM	**Horse Mountain**	3.23	252		Pg	02 44 14.6	-0.7
J01E	**Myrtle Point**	3.37	293	Pg	Pg	02 44 17.5	-0.5
	baz=110						
G08A	**Pilot Rock**	3.39	9		Pn	02 44 07.4	+0.9
KBO	**Bosley Butte**	3.40	276		Pg	02 44 15.8	-2.7
H04D	**Lebanon**	3.42	320	Pg	Pg	02 44 18.3	-0.6
	baz=138						
RYN	**Ryan**	3.42	165		Pn	02 44 09.0	+2.1
WAKR	**Walker**	3.44	177	Pn	Pn	02 44 08.8	+1.7
G05D	**Wamic, OR**	3.51	341	Sb	Sg	02 45 03.6	-2.5
	baz=159						
ELK	**Elko**	3.55	108	Pn	Pn	02 44 09.2	+0.5
	16nm,0.3s,baz=288,slow=16,SNR=108						
ELK				Pg	Pb	02 44 14.0	-2.4
	16nm,0.3s,baz=293,slow=18,SNR=126						
ELK				Sn	Sn	02 44 50.1	-0.8
	5.5nm,0.3s,baz=38,slow=19,SNR=3.7						
ELK				Lg	Lg	02 45 00.3	
	7.3nm,0.3s,baz=51,slow=18,SNR=3.3						
ELK				LR	LR	02 45 52.1	
	comp=Z,138nm,20.7s,baz=346,slow=46						
NVAR	**Mina Array Bea**	3.66	163	Pn	Pn	02 44 10.2	-0.1
	1.7nm,0.3s,baz=342,slow=13,SNR=34						
NVAR				Pg	Pb	02 44 17.9	-0.4
	5.0nm,0.3s,baz=350,slow=15,SNR=36						
NVAR				Lg	Lg	02 45 09.1	
	13nm,0.3s,baz=345,slow=17,SNR=9.6						
NVAR	**Mina Array Bea**	3.66	163	Pn	Pn	02 44 11.1	+0.8
NV11	**Mina Array Sit**	3.69	161		Pn	02 44 12.5	+1.9
LHV	**Little Huntoon**	3.79	166		Pn	02 44 14.2	+2.4
F05D	**White Salmon**	4.15	343	Sb	Sg	02 45 22.7	-3.8
	baz=161						
HLID	**Hailey**	4.20	66	Pb	Pb	02 44 26.4	-1.0
	baz=249						
HLID				Sb	Sb	02 45 21.0	+2.7
	baz=249						
HLID	**Hailey**	4.20	66		Pn	02 44 18.6	+1.0
TPH	**Topopah**	4.29	153		Pn	02 44 21.4	+2.4
MDPB	**Devils Postpil**	4.33	174	Pn	Pn	02 44 22.0	+2.6
OMMB	**Old Mammoth Mi**	4.35	173	Pn	Pn	02 44 22.5	+2.7
R11A	**Troy Canyon, C**	4.76	138	P	Pn	02 44 27.9	+2.5
	baz=320						
R11A	**Troy Canyon, C**	4.76	138		Pn	02 44 28.0	+2.6
BGU	**Big Grassy Mou**	5.10	99		Pn	02 44 30.6	+0.7
BCYI	**Bear Canyon**	5.16	61		Pn	02 44 28.3	-2.7
SPUT	**South Promonto**	5.45	94		Pn	02 44 36.2	+1.4
DUG	**Dugway, Tooele**	5.47	106	P	Pn	02 44 37.1	+2.0
	baz=291						
DUG	**Dugway, Tooele**	5.47	106		Pn	02 44 36.7	+1.6
PSUT	**Pine Spring**	5.60	125		Pn	02 44 39.3	+2.4
TPNV	**Topopah Spring**	5.64	151	Pn	Pn	02 44 39.9	+2.4
PRN	**Pahroc Range**	5.76	140		Pn	02 44 41.6	+2.6
HWUT	**Hardware Ranch**	6.07	90	Pn	Pn	02 44 45.9	+2.5
TCRU	**Three Creeks R**	6.45	119	Pn	Pn	02 44 50.7	+2.0
ICU	**Indian Springs**	6.53	135		Pn	02 44 52

baz=21
MNAS ⇑*iS* **Sg** **03 17 58.6 +0.4**
baz=21
IUG **luzhnay** **1.66 310** *e*P **Pb** **03 17 40.7 -0.4**
35nm,0.1s
IUG *e*S **Sg** **03 18 03.0 -0.5**
96nm,0.4s
IUG **luzhnay** **1.66 310** P **Pb** **03 17 40.7 -0.4**
35nm,0.1s
IUG S **Sg** **03 18 03.8 +0.3**
91nm,0.3s
AML **Almayashu** **1.79 54**⇑*e*P **Pb** **03 17 43.3 0.0**
baz=54
AML ⇑*iS* **Sg** **03 18 07.0 -0.4**
baz=54
DZA **Taraz** **1.82 350** *e*P **Pb** **03 17 43.0 -0.6**
69nm,0.1s
DZA *e*S **Sb** **03 18 07.0 +0.4**
172nm,0.1s
MRKS **Merke** **1.98 33** *e*P **Pb** **03 17 47.0 +0.6**
4.9nm,0.3s
MRKS *e*S **Sg** **03 18 14.0 +0.3**
12nm,0.3s
MRKS **Merke** **1.98 33** Pg **Pb** **03 17 47.0 +0.6**
4.6nm,0.2s
MRKS Lg Lg 03 18 13.7
12nm,0.3s
ARLS **Aral** **2.08 68**⇑*iP* **Pb** **03 17 47.1 -1.0**
baz=67
ARLS ⇑*iS* **Sb** **03 18 14.0 -0.1**
baz=67
EKS2 **Erkin-Say** **2.17 43**⇑*iP* **Pb** **03 17 48.6 -1.1**
baz=43
EKS2 ⇑*iS* **Sb** **03 18 15.8 -1.1**
baz=43
KK31 **Karatay Array** **2.21 336** ⇑Pn **Pb** **03 17 49.6 -0.7**
1.0nm,0.2s,baz=136,slow=13,SNR=37
KK31 ⇑Lg Lg 03 18 18.3
3.5nm,0.3s,baz=142,slow=28,SNR=11
UCH **Uchtor** **2.36 60**⇓*e*P **Pn** **03 17 51.2 +1.7**
baz=60
UCH ⇓*iS* **Sb** **03 18 20.6 -1.9**
baz=60
BRLS **Boroldaу** **2.40 324** *e*P **Pn** **03 17 51.1 +1.4**
19nm,0.1s
BRLS *e*S **Sb** **03 18 21.0 -2.3**
29nm,0.3s
BRLS **Boroldaу** **2.40 324** Pg **Pn** **03 17 50.7 +1.0**
19nm,0.1s
BRLS Lg Lg 03 18 21.0
22nm,0.3s
AAK **Ala-Archa** **2.56 52**⇑*e*P **Pb** **03 17 54.3 -2.0**
baz=52
AAK ⇑*iS* **Sb** **03 18 25.2 -2.9**
baz=52
AAK **Ala-Archa** **2.56 52** ⇑Pg **Pg** **03 17 59.3 +0.2**
2.3nm,0.8s
AAK ⇑Lg Lg 03 18 30.3
4.4nm,0.5s
SGDS **Sogindy** **3.18 41** Pg **Pb** **03 18 07.7 +0.9**
1.5nm,0.2s
SGDS Lg Lg 03 18 49.6
3.1nm,0.5s
KST **Kastek** **3.69 57** *e*P **Pb** **03 18 18.1 +2.5**
1.0nm,0.2s
KST *e*S **Sg** **03 19 06.9 -1.5**
2.3nm,0.4s
KST **Kastek** **3.69 57** Pg **Pb** **03 18 16.5 +0.9**
1.1nm,0.2s
KST Lg Lg 03 19 05.0
2.3nm,0.4s

NEIC ***10*** *03:40:22.2±2.5, 10.27S±0.04×161.78E±0.09, h56km±7km, mb4.7/36, Error ellipse: s-maj=13.2km s-min=4.2km az=67.0*
IDC ***10*** *03:40:24.7±2.5, 10.29S×161.63E, h78km±20km, mb4.0/13, mb1 4.2/15, mb1mx4.0/35, mbtmp4.4/15, MS3.4/10, Ms1 3.4/10, ms1mx3.2/28, Error ellipse: s-maj=22.7km s-min=13.6km az=84.0*
ISC 10 03:40:21.7±0.5, 10.27S±0.07×161.84E±0.07, h50km, n71, σ1ᵖ38/66, mb4.7/30, MS3.4/11, 1C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.04**	**294**	P	**Pn**	**03 40 53.7**	**0.0**
	257nm,0.3s,baz=180,slow=1.8,SNR=34						
HNR				S	**Sn**	**03 41 18.4**	**+0.4**
	1μm,0.3s,baz=135,slow=19,SNR=6.9						
HNR				LR	LR	03 41 50.6	
	comp=Z,828nm,19.2s,baz=122,slow=46						
HNR	**Honiara**	**2.04**	**294**		**Pn**	**03 40 54.0**	**+0.3**
HNR				Sn	**Sn**	**03 41 19.4**	**+1.4**
SANVU	**Saraoutou**	**7.34**	**135**	Pn	**Pn**	**03 42 06.8**	**+0.5**
KRVT	**Keravat (AS076**	**11.39**	**301**	LR	LR	03 47 57.6	
	comp=Z,247nm,20.0s,baz=124,slow=40						
DZM	**Mont Dzumac**	**12.54**	**160**	P	**Pn**	**03 43 19.0**	**+1.4**
	baz=323,slow=17						
DZM	**Mont Dzumac**	**12.54**	**160**	*e*Pn	**Pn**	**03 43 18.6**	**+1.0**
	15nm,0.3s						
DZM				*e*Sn	Sn	03 45 27.3	-8.6
	2.1nm,0.3s						
DZM				*e*LR	LR	03 46 08.0	
	comp=Z,323nm,25.4s						
DZM	**Mont Dzumac**	**12.54**	**160**	Pn	**Pn**	**03 43 18.6**	**+1.0**
PATS	**Pohnpei**	**17.35**	**348**	P	**Pn**	**03 44 21.1**	**+0.7**
CTA	**Charters Tower**	**17.92**	**235**	P	**Pn**	**03 44 26.9**	**-0.6**
	0.8nm,0.3s,baz=65,slow=16,SNR=7.7						
CTAO	**Charters Tower**	**17.92**	**235**	P	**P**	**03 44 28.4**	**+0.9**
EIDS	**Eidsvold**	**18.16**	**213**	P	**Pn**	**03 44 31.0**	**+0.6**
ARMA	**Armidale**	**22.20**	**204**	P	**P**	**03 45 13.6**	**-0.4**
AFI	**Afiamalu**	**26.04**	**101**	S	**S**	**03 50 12.8**	**-5.6**
	83nm,0.3s,baz=76,slow=18,SNR=9.4						
WR0	**Warramunga Arr**	**28.02**	**247**	P	**P**	**03 46 06.2**	**-2.2**
WB0	**Warramunga Arr**	**28.11**	**247**	P	**P**	**03 46 07.3**	**-1.8**
WB0				IAmb	IAmb	03 46 25.0	
	comp=Z,14nm,1.2s						
WB2	**Warramunga Arr**	**28.19**	**247**	P	**P**	**03 46 08.6**	**-1.3**
WB2				IAmb	IAmb	03 46 25.1	
	comp=Z,11nm,1.2s						
WRA	**Warramunga Arr**	**28.20**	**247**	P	**P**	**03 46 08.1**	**-1.9**
	comp=Z,2.8nm,0.7s,baz=77,slow=9.2,SNR=24						
WRA				LR	LR	03 57 17.9	
	comp=Z,130nm,18.2s,baz=65,slow=36						
WRA	**Warramunga Arr**	**28.20**	**247**	P	**P**	**03 46 07.9**	**-2.0**
STKA	**Stephens Creek**	**28.52**	**218**	P	**P**	**03 46 13.1**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=73,slow=18,SNR=3.8						
STKA				LR	LR	03 57 23.9	
	comp=Z,209nm,18.3s,baz=28,slow=36						
STKA	**Stephens Creek**	**28.52**	**218**	P	**P**	**03 46 13.1**	**+0.4**
GUMO	**Guam**	**29.07**	**324**	LR	LR	03 59 24.3	
	comp=Z,23nm,18.3s,baz=140,slow=39						
ASAR	**Alice Springs**	**29.79**	**240**	P	**P**	**03 46 22.2**	**-1.8**
	comp=Z,0.7nm,0.4s,baz=63,slow=10.0,SNR=9.8						
ASAR				LR	LR	03 58 12.6	
	comp=Z,199nm,18.1s,baz=52,slow=36						
TOO	**Toolangi**	**30.92**	**206**	P	**P**	**03 46 34.7**	**+0.9**
TOO				IAmb	IAmb	03 46 47.3	
	comp=Z,26nm,1.4s						
BKZ	**Black Stump Fm**	**31.61**	**158**	P	**P**	**03 46 41.3**	**+1.4**
BKZ				IAmb	IAmb	03 46 56.0	
	comp=Z,9.8nm,1.1s						
SIJI	**Sorong**	**31.80**	**285**	LR	LR	04 01 08.8	
	comp=Z,61nm,19.0s,baz=204,slow=39						
KNRA	**Kununurra**	**32.66**	**257**	P	**P**	**03 46 47.9**	**-1.4**
KNRA				IAmb	IAmb	03 47 04.7	
	comp=Z,17nm,0.8s						
BBOO	**Buckleboo**	**32.67**	**223**	P	**P**	**03 46 49.7**	**+0.4**
BBOO				IAmb	IAmb	03 47 04.6	
	comp=Z,8.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**35.90**	**253**	P	**P**	**03 47 15.2**	**-2.2**
FITZ				IAmb	IAmb	03 47 32.2	
	comp=Z,8.4nm,0.9s						
DAV	**Davao City (W)**	**40.01**	**294**	LR	LR	04 02 39.5	
	comp=Z,22nm,19.6s,baz=348,slow=34						
MORW	**Morawa**	**46.67**	**240**	P	**P**	**03 48 44.6**	**-1.0**
MORW				IAmb	IAmb	03 49 03.3	
	comp=Z,14nm,1.4s						
TBI	**Tubuai**	**48.18**	**112**	*e*LR	LR	04 02 30.5	
	comp=Z,63nm,32.8s						
JGF	**Kuroka**	**51.15**	**334**	P	**P**	**03 49 19.7**	**-0.2**
JMN	**Monobe**	**51.20**	**330**	P	**P**	**03 49 20.2**	**-0.1**
HUH	**Hualalai**	**51.22**	**54**	P	**P**	**03 49 21.9**	**+1.0**
JSU	**Suzuyama**	**51.28**	**325**	P	**P**	**03 49 20.9**	**+0.1**
MJAR	**Matsushiro Arr**	**51.60**	**336**	P	**P**	**03 49 21.1**	**-2.0**
	comp=Z,99nm,0.8s,baz=169,slow=9.0,SNR=8.7						
MJAR				LR	LR	04 09 37.5	
	comp=Z,18nm,21.9s,baz=105,slow=34						
MJAR	**Matsushiro Arr**	**51.60**	**336**	P	**P**	**03 49 21.7**	**-1.5**
MAJO	**Matsushiro**	**51.60**	**336**	P	**P**	**03 49 22.1**	**-1.1**
MAJO				IAmb	IAmb	03 49 22.2	
	comp=Z,6.4nm,0.7s						
JNU	**Nakatsue**	**52.27**	**327**	P	**P**	**03 49 26.7**	**-1.5**
	comp=Z,7.8nm,0.8s,baz=45,slow=4.8,SNR=4.5						
JNU	**Nakatsue**	**52.27**	**327**	P	**P**	**03 49 27.5**	**-0.7**
JHS	**Saijyo**	**52.59**	**330**	P	**P**	**03 49 30.1**	**-0.5**
JKA	**Kamikawa-asahi**	**56.88**	**344**	P	**P**	**03 50 00.1**	**-1.3**
JKA				IAmb	IAmb	03 50 02.9	
	comp=Z,13nm,0.8s						
ASAJ	**Asahikawa**	**56.88**	**344**	P	**P**	**03 50 02.0**	**+0.7**
	comp=Z,14nm,0.9s,baz=237,slow=13,SNR=8.1						
KSRS	**Korea Array**	**57.13**	**328**	P	**P**	**03 50 02.9**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=141,slow=7.3,SNR=12						
KSRS				LR	LR	04 12 48.4	
	comp=Z,32nm,20.0s,baz=108,slow=34						
KSAR	**Wonju Array Be**	**57.14**	**328**	P	**P**	**03 50 02.1**	**-1.3**
TAOE	**Nuku Hiva Isla**	**57.16**	**94**	*e*LR	LR	04 06 17.0	
	comp=Z,234nm,32.0s						
USA0B	**Ussuriysk Arra**	**60.60**	**336**	P	**P**	**03 50 28.0**	**+0.7**
USA0B				IAmb	IAmb	03 50 28.2	
	comp=Z,13nm,0.9s						
USRK	**Ussuriysk Ar.**	**60.60**	**336**	P	**P**	**03 50 27.4**	**+0.1**
	comp=Z,9.9nm,0.8s,baz=146,slow=6.5,SNR=20						
USRK	**Ussuriysk Ar.**	**60.60**	**336**	P	**P**	**03 50 27.8**	**+0.6**
VNDA	**Vanda**	**67.24**	**180**	P	**P**	**03 51 10.4**	**0.0**
	comp=Z,0.7nm,0.6s,baz=346,slow=9.2,SNR=5.9						
CMAR	**Chiang Mai Arr**	**68.29**	**295**	LR	LR	04 20 27.4	
	comp=Z,21nm,20.0s,baz=277,slow=35						
ULN	**Ulaanbaatar**	**75.45**	**325**	P	**P**	**03 52 01.1**	**+0.5**
ULN				IAmb	IAmb	03 52 01.4	
	comp=Z,8.1nm,0.8s						
SONM	**Songino Array**	**75.80**	**325**	P	**P**	**03 52 02.4**	**-0.2**
	comp=Z,6.2nm,0.7s,baz=140,slow=6.0,SNR=16						
SONM	**Songino Array**	**75.80**	**325**	P	**P**	**03 52 02.6**	**0.0**
TLY	**Talaya**	**79.38**	**327**	P	**P**	**03 52 22.4**	**+0.1**
QSPA	**South Pole Qui**	**79.73**	**180**	P	**P**	**03 52 23.8**	**-0.4**
KTH	**Kantishna Hill**	**81.90**	**19**	P	**P**	**03 52 35.0**	**-0.7**
KTH				IAmb	IAmb	03 52 50.2	
	comp=Z,15nm,1.3s						
IMAR	**Indian Mountai**	**82.75**	**17**	P	**P**	**03 52 41.1**	**+1.2**
CRQM	**Cirque**	**82.94**	**24**	P	**P**	**03 52 40.0**	**-1.3**
CCB	**Clear Creek Bu**	**83.65**	**19**	P	**P**	**03 52 44.5**	**0.0**
IL31		**84.03**	**20**	P	**P**	**03 52 46.9**	**+0.4**
IL31				IAmb	IAmb	03 53 00.6	
	comp=Z,7.1nm,1.4s						
ILAR	**Eielson Array**	**84.03**	**20**	P	**P**	**03 52 46.3**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=246,slow=5.4,SNR=18						
DAWY	**Dawson**	**86.25**	**22**	P	**P**	**03 52 58.4**	**+0.7**
DAWY				IAmb	IAmb	03 53 00.5	
	comp=Z,6.9nm,1.2s						
NVAR	**Mina Array Bea**	**88.48**	**51**	P	**P**	**03 53 11.2**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=236,slow=7.4,SNR=13						
NVAR	**Mina Array Bea**	**88.48**	**51**	P	**P**	**03 53 10.6**	**+1.3**
MK31	**Makanchi Array**	**90.34**	**317**	P	**P**	**03 53 15.4**	**-2.2**
MK31				IAmb	IAmb	03 53 16.3	
	comp=Z,1.3nm,0.7s						
MKAR	**Makanchi Array**	**90.34**	**317**	P	**P**	**03 53 15.9**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=94,slow=6.3,SNR=17						
MKAR	**Makanchi Array**	**90.34**	**317**	P	**P**	**03 53 15.7**	**-1.9**
ZALV	**Zalesovo Beam**	**90.70**	**325**	P	**P**	**03 53 16.5**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=100,slow=5.2,SNR=3.0						
SYO	**Syowa Base**	**91.38**	**198**⇑	*e*PcP	**PcP**	**03 53 24.0**	**+1.2**
CCUT	**Cedar City**	**92.09**	**52**	P	**P**	**03 53 27.9**	**+1.7**

IDC ***10*** *03:43:46.2±1.2, 28.27N×143.54E, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.6/39, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=36.4km s-min=24.9km az=80.0*
NEIC ***10*** *03:43:51.1±1.8, 28.68N±0.06×143.4E±0.2, h32km±6km, mb4.5/5, Error ellipse: s-maj=21.3km s-min=9.3km az=93.0*
ISC 10 03:43:51.6±0.8, 28.65N±0.08×143.3E±0.1, h35km, n20, σ1ᵖ09/21, mb4.0/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.85**	**213**	Pn	**Pn**	**03 44 20.4**	**-0.6**
JHJ	**Hachijo jima 2**	**5.39**	**326**	Pn	**Pn**	**03 45 06.8**	**-2.8**
	6.3nm,0.3s,baz=66,slow=21,SNR=8.3						
JHJ				Sn	**Sn**	**03 46 09.6**	**-0.9**
	8.9nm,0.3s,baz=139,slow=19,SNR=4.0						
MJAR	**Matsushiro Arr**	**8.97**	**333**	Pn	**Pn**	**03 45 57.9**	**-0.9**
	0.3nm,0.3s,baz=160,slow=11,SNR=6.9						
MJAR	**Matsushiro Arr**	**8.97**	**333**	Pn	**Pn**	**03 45 58.9**	**+0.1**
MAJO	**Matsushiro**	**8.97**	**333**	Pn	**Pn**	**03 45 59.0**	**+0.3**
JMM	**Marumori**	**9.43**	**348**	Pn	**Pn**	**03 46 04.4**	**-0.6**
FAKI	**Fak Fak**	**33.15**	**201**	P	**P**	**03 50 24.8**	**0.0**
WB0	**Warramunga Arr**	**48.90**	**191**	P	**P**	**03 52 33.9**	**-0.3**
WB0				IAmb	IAmb	03 52 35.7	
	comp=Z,3.8nm,0.8s						
WR0	**Warramunga Arr**	**49.07**	**191**	P	**P**	**03 52 35.3**	**-0.2**
WR0				IAmb	IAmb	03 52 37.5	
	comp=Z,6.6nm,1.3s						
WB2	**Warramunga Arr**	**49.08**	**191**	P	**P**	**03 52 35.4**	**-0.2**
WRA	**Warramunga Arr**	**49.09**	**191**	P	**P**	**03 52 35.7**	**0.0**
	comp=Z,3.2nm,0.8s,baz=12,slow=8.5,SNR=20						
WRA	**Warramunga Arr**	**49.09**	**191**	P	**P**	**03 52 35.5**	**-0.2**
MKAR	**Makanchi Array**	**50.28**	**309**	P	**P**	**03 52 45.9**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=89,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**50.28**	**309**	P	**P**	**03 52 45.8**	**+1.2**
ILAR	**Eielson Array**	**55.87**	**29**	P	**P**	**03 53 23.3**	**-2.1**
	comp=Z,0.6nm,0.8s,baz=253,slow=7.0,SNR=4.0						
INK	**Inuvik**	**61.20**	**25**	P	**P**	**03 54 02.6**	**+0.2**
ABKAR	**Akbulak array**	**64.74**	**314**	P	**P**	**03 54 27.7**	**+1.3**
FINES	**FINESS Array B**	**77.00**	**334**	P	**P**	**03 55 41.3**	**+0.8**
NVAR	**Mina Array Bea**	**78.77**	**52**	P	**P**	**03 55 51.3**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=271,slow=6.0,SNR=2.5						
NVAR	**Mina Array Bea**	**78.77**	**52**	P	**P**	**03 55 51.9**	**+0.8**

TAP ***10*** *03:46:09.0, 24.43N×122.68E, h53km±1km, ML2.6, C*
JMA ***10*** *03:46:08.5±0.1, 24.37N×122.73E, h58km±2km, M2.2*
ISC 10 03:46:08.7±1.3, 24.43N±0.06×122.72E±0.03, h55km±9km, n29, σ0ᵖ40/49, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.21**	**85**	P	**Pn**	**03 46 17.9**	**+0.2**
JYNG				S	**Sn**	**03 46 24.2**	**0.0**
YOJ	**Yonaguni jima**	**0.27**	**84**	*i* P	**Pn**	**03 46 18.2**	**+0.1**
	baz=82						
YOJ				*i* S	**Sn**	**03 46 25.0**	**+0.1**
	baz=82						
YOJ	**Yonaguni jima**	**0.27**	**84**	P	**Pn**	**03 46 18.2**	**+0.1**
YOJ				S	**Sn**	**03 46 25.0**	**+0.1**
TWC	**Suao**	**0.81**	**283**	P	**Pn**	**03 46 23.8**	**-0.3**
	baz=283						
TWC				S	**Sn**	**03 46 34.7**	**-0.7**
	baz=283						
NTC	**Toucheng**	**0.91**	**298**	*e*P	**Pn**	**03 46 25.3**	**-0.1**
	baz=298						
NTC				S	**Sn**	**03 46 37.4**	**-0.3**
	baz=298						
IRIF	**Iriomote-Funau**	**0.93**	**96**	P	**Pn**	**03 46 25.3**	**-0.4**
IRIF				S	**Sn**	**03 46 38.1**	**0.0**
TIPB	**Shuangxi**	**0.97**	**304**	P	**Pn**	**03 46 26.2**	**-0.1**
	baz=304						
TIPB				S	**Sn**	**03 46 39.0**	**-0.2**
	baz=304						
NACB	**Ninganchiao**	**1.06**	**256**	*e*P	**Pn**	**03 46 26.8**	**-0.6**
	baz=255						
NACB				S	**Sn**	**03 46 40.9**	**-0.3**
	baz=255						
NWF	**Wu-fen Shan**	**1.06**	**307**	P	**Pn**	**03 46 27.6**	**+0.1**
	baz=308						
WFSB	**Wu-fen Shan**	**1.06**	**307**	P	**Pn**	**03 46 27.5**	**+0.1**
	baz=308						
HATJ	**Hateruma jima**	**1.06**	**111**	P	**Pn**	**03 46 27.5**	**+0.1**
HATJ				*e*S	**Sn**	**03 46 41.2**	**-0.1**
NDT	**Datong Townshi**	**1.11**	**279**	*e*P	**Pn**	**03 46 28.7**	**+0.6**
	baz=279						
NDT				*e*S	**Sn**	**03 46 43.1**	**+0.6**
	baz=279						
ETLH	**Xiulin Townshi**	**1.15**	**259**	P	**Pn**	**03 46 28.5**	**-0.2**
	baz=258						
ETLH				*e*S	**Sn**	**03 46 42.8**	**-0.7**
	baz=258						
NWLT	**Wulai**	**1.16**	**287**	*e*P	**Pn**	**03 46 29.0**	**+0.3**
	baz=287						
NWLT				S	**Sn**	**03 46 43.4**	**-0.2**
	baz=287						
JKRS	**Kuro-shima**	**1.19**	**99**	P	**Pn**	**03 46 29.3**	**+0.1**
JKRS				S	**Sn**	**03 46 44.8**	**+0.4**
YHNB	**Yeheng**	**1.24**	**281**	*e*P	**Pn**	**03 46 30.6**	**+0.6**
	baz=281						
YHNB				*e*S	**Sn**	**03 46 45.5**	**-0.2**
	baz=281						
NSK	**Sanguang**	**1.26**	**281**	*e*P	**Pn**	**03 46 30.9**	**+0.7**
	baz=281						
NSK				*e*S	**Sn**	**03 46 46.1**	**-0.1**
	baz=281						
YM01	**YM01**	**1.26**	**304**	S	**Sn**	**03 46 46.1**	**0.0**
	baz=305						
JIJ	**Ishigaki jima**	**1.30**	**93**	P	**Pn**	**03 46 30.2**	**-0.4**
JIJ				S	**Sn**	**03 46 46.4**	**-0.6**
WHF	**Hehuan Shan**	**1.36**	**258**	*e*P	**Pn**	**03 46 32.3**	**+0.5**
	baz=257						
TWT	**Tachien**	**1.42**	**263**	*e*P	**Pn**	**03 46 33.1**	**+0.7**
	baz=262						
TDCB	**Techi**	**1.43**	**263**	*e*P	**Pn**	**03 46 32.9**	**+0.4**
	baz=262						
TDCB				*e*S	**Sn**	**03 46 50.2**	**-0.2**
	baz=262						
CHGB	**Renai**	**1.46**	**256**	P	**Pn**	**03 46 33.2**	**+0.2**
	baz=255						
CHGB				S	**Sn**	**03 46 50.6**	**-0.6**
	baz=255						
JISG	**Ishigakijimahi**	**1.46**	**84**	P	**Pn**	**03 46 32.4**	**-0.4**
JISG				*e*S	**Sn**	**03 46 50.3**	**-0.5**
HGSD	**Ruisui**	**1.51**	**232**	*e*P	**Pn**	**03 46 33.8**	**+0.4**
	baz=230						
TWF1	**Yuli**	**1.69**	**231**	*e*P	**Pn**	**03 46 36.1**	**+0.2**
	baz=229						
SSLB	**Suanglung**	**1.73**	**249**	*e*P	**Pn**	**03 46 37.0**	**+0.4**
	baz=247						
TYC	**Yuchr**	**1.78**	**253**	*e*P	**Pn**	**03 46 37.1**	**0.0**
	baz=252						
JTJ	**Tarama**	**1.82**	**83**	P	**Pn**	**03 46 38.3**	**+0.6**
JTJ				S	**Sn**	**03 47 00.0**	**+0.4**

IDC ***10*** *03:55:51.6±1.6, 33.00N×132.79E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.3/49, mbtmp3.7/4, ML3.1/1, MS2.3/1, Ms1 2.3/1, ms1mx2.0/34, Error ellipse: s-maj=39.1km s-min=21.7km az=45.0*
JMA ***10*** *03:55:55.8, 33.05N×132.69E, h34km, M3.7*
JMA Felt II J1.
NIED ***10*** *03:55:55.9, 33.05N×132.69E, h34km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.65; Mθθ-0.24; Mϕϕ1.89; Mrθ1.56; Mθϕ2.19; Mϕr-0.86; Fault plane solution: M₀3.34000×10¹⁴ NP1: ϕs247.00000°, δ61.00000°, λ-36.00000°. NP2: ϕs357.00000°, δ59.00000°, λ-145.00000°.*
ISC 10 03:55:56.1±0.9, 33.06N±0.04×132.69E±0.04, h31km±6km, n13, σ0ᵖ58/19, mb3.7/3, 4C-3D, Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UWA2	**Uwa jima 2**	**0.16**	**340**	⇓P	**Pb**	**03 56 01.9**	**-0.1**
UWA2				S	**Sb**	**03 56 06.3**	**+0.2**
JTO	**Tosashimizu**	**0.22**	**155**	⇑P	**Pb**	**03 56 02.4**	**-0.2**
JTO				S	**Sb**	**03 56 07.0**	**-0.1**
JKU	**Kubokawa**	**0.40**	**52**	⇓P	**Pb**	**03 56 04.8**	**-0.2**
JKU				S	**Sb**	**03 56 11.1**	**0.0**
JNA	**Nagahama**	**0.52**	**340**	⇑P	**Pb**	**03 56 06.6**	**-0.3**
JNA				S	**Sb**	**03 56 14.3**	**-0.1**
JET	**Tanbara**	**0.78**	**23**	⇓P	**Pb**	**03 56 10.3**	**-0.8**
JET				*e*S	**Sb**	**03 56 21.0**	**-0.3**
JUS	**Usuki**	**0.79**	**270**	⇑P	**Pb**	**03 56 10.3**	**-1.0**
JUS				S	**Sb**	**03 56 21.2**	**-0.4**
JHM	**Kurahashi**	**1.08**	**353**	⇑P	**Pn**	**03 56 15.1**	**0.0**
JNU	**Nakatsue**	**1.52**	**273**	Pn	**Pn**	**03 56 21.2**	**0.0**
	22nm,0.3s,baz=60,slow=5.0,SNR=88						
JNU				Sn	**Sb**	**03 56 43.5**	**+0.9**
	43nm,0.3s,baz=284,slow=12,SNR=11						
MJAR	**Matsushiro Arr**	**5.71**	**51**	LR	LR	03 59 59.0	
	comp=Z,32nm,20.2s,baz=265,slow=43						
KSRS	**Korea Array**	**5.86**	**320**	Pn	**Pn**	**03 57 21.3**	**+0.4**
	0.5nm,0.3s,baz=137,slow=14,SNR=4.3						
WRA	**Warramunga Arr**	**52.73**	**178**	P	**P**	**04 05 07.2**	**-0.9**
	0.4nm,0.6s,baz=0.9,slow=7.8,SNR=3.5						
ASAR	**Alice Springs**	**56.42**	**179**	P	**P**	**04 05 35.0**	**+0.2**
	0.4nm,0.5s,baz=12,slow=14,SNR=5.5						
FINES	**FINESS Array B**	**68.85**	**330**	P	**P**	**04 06 58.2**	**+1.0**
	3.1nm,0.9s,baz=76,slow=5.9,SNR=3.9						

IDC 10 03:57:52.6±1.7, 13.98S×166.51E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.8/34, mbtmp3.9/5, ML3.3/1, MS3.3/8, Ms1 3.3/8, ms1mx3.2/26, Error ellipse: s-maj=41.0km s-min=28.1km az=121.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.86**	**304**	LR	LR	04 02 40.9	
	comp=Z,97nm,21.3s,baz=128,slow=37						
DZM	**Mont Dzumac**	**8.05**	**180**	Pn	Pn	03 59 51.7	+0.7
	0.4nm,0.3s,baz=24,slow=20,SNR=6.6						
DZM				Sn	Sn	04 01 21.6	-1.2
	0.4nm,0.3s,baz=284,slow=19,SNR=1.8						
DZM				LR	LR	04 02 39.5	
	comp=Z,122nm,21.9s,baz=285,slow=36						
DZM	**Mont Dzumac**	**8.05**	**180**	*e*Pn	Pn	03 59 53.3	+2.3
	3.4nm,0.3s						
DZM				*e*LR	LR	04 01 57.8	
	comp=Z,211nm,24.2s						
KRVT	**Keravat (AS076**	**17.21**	**303**	LR	LR	04 09 10.6	
	comp=Z,59nm,18.3s,baz=129,slow=39						
PMG	**Port Moresby**	**19.48**	**281**	LR	LR	04 08 00.4	
	comp=Z,90nm,20.2s,baz=84,slow=31						
CTA	**Charters Tower**	**20.29**	**250**	P	Pn	04 02 31.2	-0.9
	6.7nm,1.0s,baz=75,slow=12,SNR=3.9						
AFI	**Afiamalu**	**21.07**	**92**	LR	LR	04 08 48.8	
	comp=Z,125nm,18.3s,baz=300,slow=31						
STKA	**Stephens Creek**	**28.93**	**228**	LR	LR	04 15 12.6	
	comp=Z,114nm,18.0s,baz=26,slow=36						
WRA	**Warramunga Arr**	**31.30**	**255**	P	P	04 04 14.6	-0.3
	2.5nm,0.9s,baz=84,slow=8.8,SNR=12						
WRA				LR	LR	04 16 30.8	
	comp=Z,82nm,18.0s,baz=95,slow=36						
**AS

PB01	**IPOC Station P**	**3.29**	**180**	Pn		**Pn**	**04 24 45.5**	**-1.3**
PB01				Sn		**Sn**	**04 25 24.5**	**-1.7**
PB09	**IPOC Station P**	**4.04**	**177**	Pn		**Pn**	**04 24 58.2**	**+1.4**
LVC	**Limon Verde**	**4.88**	**174**	P		**Pn**	**04 25 06.1**	**-1.9**
	3.5nm,0.3s,baz=53,slow=15,SNR=27							
LVC				S		**Sn**	**04 26 03.6**	**-0.4**
	3.9nm,0.3s,baz=215,slow=24,SNR=15							
PB06	**IPOC Station P**	**4.94**	**181**	Pn		**Pn**	**04 25 08.6**	**-0.1**
PB15	**IPOC Station P**	**5.44**	**180**	Pn		**Pn**	**04 25 15.4**	**0.0**
PB14	**IPOC Station P**	**6.91**	**187**	Pn		**Pn**	**04 25 33.1**	**-2.1**
GO02	**Mina Guanaco**	**7.39**	**181**	Pn		**Pn**	**04 25 40.4**	**-1.2**
SIV	**San Ignacio**	**8.22**	**79**	P		**Pn**	**04 25 50.6**	**-2.0**
	6.8nm,0.3s,baz=273,slow=13,SNR=88							
AC01	**Pan de Azucar**	**8.44**	**187**	Pn		**Pn**	**04 25 52.0**	**-3.4**
AC02	**Maricunga**	**9.06**	**178**	Pn		**Pn**	**04 26 02.3**	**-1.8**
SAML	**Samuel**	**10.66**	**36**	Pn		**Pn**	**04 26 24.0**	**-1.2**
AC05	**El Transito**	**11.07**	**184**	Pn		**Pn**	**04 26 27.5**	**-3.1**
CO01	**Juntas del Tor**	**12.20**	**183**	Pn		**Pn**	**04 26 44.1**	**-1.4**
GO04	**Tololo Observa**	**12.44**	**185**	Pn		**Pn**	**04 26 46.7**	**-1.9**
CO03	**El Pedregal**	**13.09**	**185**	P		**Pn**	**04 26 58.4**	**+1.5**
VA03	**San Esteban**	**14.99**	**184**	P		**P**	**04 27 22.6**	**-0.4**
MT02	**Curacav**	**15.53**	**185**	P		**Pn**	**04 27 27.2**	**-0.3**
MT02				IAmb		IAmb	04 27 35.5	
	comp=Z,33nm,1.4s							
BDFB	**Brasilia**	**20.66**	**87**	P		**P**	**04 28 24.9**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=264,slow=10.0,SNR=12							
BDFB	**Brasilia**	**20.66**	**87**	P		**P**	**04 28 24.9**	**-0.2**
BDFB				IAmb		IAmb	04 28 27.9	
	comp=Z,14nm,1.5s							
PLCA	**Paso Flores**	**22.94**	**182**	P		**P**	**04 28 50.2**	**+2.0**
	comp=Z,1.3nm,0.7s,baz=356,slow=12,SNR=5.7							
PLCA	**Paso Flores**	**22.94**	**182**	P		**P**	**04 28 49.9**	**+1.7**
OBIP	**Obispado Ponce**	**35.67**	**5**	P		**P**	**04 30 41.1**	**+0.1**
SJG	**San Juan**	**35.77**	**5**	P		**P**	**04 30 42.9**	**+1.0**
T59A	**Double "B" Far**	**54.95**	**352**	P		**P**	**04 33 13.3**	**+0.8**
T59A				IAmb		IAmb	04 33 18.9	
	comp=Z,13nm,1.4s							
PBMO	**Poplar Bluff**	**57.72**	**340**	P		**P**	**04 33 32.3**	**+0.1**
PBMO				IAmb		IAmb	04 33 46.4	
	comp=Z,12nm,1.5s							
GLA	**Glamis**	**66.54**	**319**	P		**P**	**04 34 30.4**	**-0.8**
GLA				IAmb		IAmb	04 34 36.7	
	comp=Z,3.7nm,0.5s							
PV18	**Skein Mesa, Pa**	**66.87**	**327**	P		**P**	**04 34 31.2**	**-2.2**
PV18				IAmb		IAmb	04 34 48.2	
	comp=Z,9.1nm,1.5s							
DBIC	**Dimbokro**	**68.23**	**75**	P		**P**	**04 34 41.6**	**-0.5**
	comp=Z,4.6nm,1.0s,baz=229,slow=9.1,SNR=4.7							
DBIC	**Dimbokro**	**68.23**	**75**	P		**P**	**04 34 42.0**	**-0.1**
ULM	**Lac du Bonnet**	**71.59**	**342**	P		**P**	**04 35 02.4**	**+0.5**
	comp=Z,1.1nm,0.4s,baz=161,slow=6.7,SNR=5.8							
ULM	**Lac du Bonnet**	**71.59**	**342**	P		**P**	**04 35 02.3**	**+0.4**
ULM				IAmb		IAmb	04 35 12.6	
	comp=Z,13nm,1.4s							
KOWA	**Kowa**	**72.05**	**68**	P		**P**	**04 35 05.7**	**+0.3**
KOWA				IAmb		IAmb	04 35 10.8	
	comp=Z,5.7nm,1.3s							
QSPA	**South Pole Qui**	**72.43**	**180**	P		**P**	**04 35 09.4**	**+2.3**
TOA0	**Torodi Ar. Sit**	**76.63**	**71**	P		**P**	**04 35 32.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**76.63**	**71**	P		**P**	**04 35 32.2**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=259,slow=5.5,SNR=38							
TORD	**Torodi Ar. Bea**	**76.63**	**71**	P		**P**	**04 35 32.5**	**+0.6**

NEIC ***10*** *04:41:14.9±2.1, 10.°03N±0.°07×126.°74E±0.°09, h8km±1km, mb5.5/211, Ms_20 4.9/100, Mwb5.2/30, Mwc5.4(GCMT), Error ellipse: s-maj=15.4km s-min=10.8km az=70.0*

MAN ***10*** *04:41:15.2, 10.°03N×126.°84E, h7km, mb5.9, ML4.9, MS5.5*

MAN Intensity I - Surigao City.

MOS ***10*** *04:41:18.8±1.1, 10.°08N×126.°70E, h45km, mb5.7/62, MS4.8/27, Error ellipse: s-maj=7.6km s-min=4.1km az=111.5*

GCMT ***10*** *04:41:18.9±0.1, 10.°07N±0.°01×126.°93E±0.°01, h12km, MW5.4/142, Moment Tensor Solution. s117,c183; s142,c279; Duration: 1s2 Moment tensor: Scale 10¹⁷ Nm; Mrr=1.36±.01; Mθθ=0.00±.01; Mϕϕ=1.36±.01; Mrθ=0.05±.04; Mrϕ=-0.37±.01; Mθϕ=0.08±.04; Best double couple: Mo1.41100×10¹⁷ NP1:ϕs342.00000°, δ44.00000°, λ-95.00000°. NP2:ϕs169.00000°, δ46.00000°, λ-86.00000°. Principal axes: T 1.4560, Plg1.0000°, Azm256.0000°; N -0.0900, Plg3.0000°, Azm346.0000°; P -1.3650, Plg87.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***10*** *04:41:18.9±0.0, 9.94N×127.03E, h59km, mB5.2/72, mb5.1/78, Ms5.1/83, Ms7 5.0/77*

DJA ***10*** *04:41:19.1±0.5, 10.°N±3.°×12.°7E±.°, h42km±4km, M5.2/91, mb5.3/91, mB5.6/57, MLv5.7/2, Mw(mB)5.2/57, Mwp5.4/13*

NEIC ***10*** *04:41:19, 10.°02N×126.°96E, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=1.41; Mθθ=0.04; Mϕϕ 1.45; Mrθ=0.30; Mrϕ=-0.37; Mθϕ=0.10; Fault plane solution: Mo1.51000×10¹⁷ NP1:ϕs154.00000°, δ46.00000°, λ-108.00000°. NP2:ϕs360.00000°, δ47.00000°, λ-72.00000°. Principal axes: T 1.5348, Plg1.0000°, Azm77.0000°; N -0.0511, Plg13.0000°, Azm167.0000°; P -1.4836, Plg77.0000°, Azm345.0000°;*

IDC ***10*** *04:41:21.5±0.5, 10.°03N×126.°69E, h53km±3km, mb4.9/30, mb1 5.0/33, mb1mx5.0/36, mbtmp5.2/33, MS4.7/33, Ms1 4.7/33, ms1mx4.6/44 Error ellipse: s-maj=13.9km s-min=8.4km az=83.0*

NEIC ***10*** *04:41:21.7, 10.°03N×126.°80E, h8km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=7.64; Mθθ-0.61; Mϕϕ 8.25; Mrθ-1.83; Mθϕ-4.08; Mrϕ 0.62; Fault plane solution: Mo9.16000×10¹⁶ NP1:ϕs145.36000°, δ50.68000°, λ-108.22000°. NP2:ϕs352.80000°, δ42.71000°, λ-69.11000°. Principal axes: T 9.9349, Plg4.0000°, Azm248.0000°; N -1.8339, Plg14.0000°, Azm157.0000°; P -8.1010, Plg75.0000°, Azm354.0000°;*

KLM ***10*** *04:41:23.0, 9.99N×127.06E, h72km, mb5.5*

ISC 10 04:41:20.3±0.3, 10.°03N±0.°03×126.°83E±0.°04, h46km±2km, h46km:pP-P, n1037, σ1°53/1001, mb5.4/267, MS4.9/113, 36C-30D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BIP	**Bislig**	**1.88**	**198**	↑*eP*		**Pn**	**04 41 47.4**	**-2.6**
BIP				*eS*		**Sn**	**04 42 09.2**	**-3.4**
CGP	**Cagayan de Oro**	**2.63**	**234**	↓*eP*		**Pn**	**04 41 57.5**	**-2.7**
CGP				*i* S		**Sn**	**04 42 31.6**	**+0.6**
LLP	**Lapu-Lapu**	**2.84**	**276**	↑*eP*		**Pn**	**04 42 02.5**	**-0.6**
LLP				*eS*		**Sn**	**04 42 36.8**	**+0.7**
TBP	**Tagbilaran**	**2.95**	**264**	↓*eP*		**Pn**	**04 42 07.9**	**+3.3**
TBP				*eS*		Sn	04 42 11.9	-27
DAV	**Davao City (W)**	**3.19**	**203**	P		**Pn**	**04 42 10.0**	**+2.0**
	33nm,0.3s,baz=78,slow=3.8,SNR=8.4							
DAV				S		**Sn**	**04 42 47.9**	**+3.0**
	99nm,0.3s,baz=247,slow=20,SNR=7.9							
DAV	**Davao City (W)**	**3.19**	**203**	↓*eP*		Pn	04 42 12.9	+4.9
JAP	**San Jose, Anti**	**4.86**	**279**	↓*eP*		**Pn**	**04 42 32.5**	**+1.6**
SGSI	**Sangihe**	**6.43**	**192**	P		Pn	04 42 56.5	+3.9
	2.6nm6µm304nm,0.7s							
SGSI				S		**Sn**	**04 44 08.0**	**+3.2**
	2.6nm6µm304nm,0.7s							
LQP	**Lukban**	**6.58**	**309**	↑*eP*		**Pn**	**04 42 54.5**	**-0.2**
PGP	**Puerto Galera**	**6.71**	**302**	↑*eP*		**Pn**	**04 42 56.7**	**+0.3**
TGY	**Tagaytay City**	**7.04**	**306**	P		Pn	**04 43 02.5**	**+1.5**
	25nm,0.3s,baz=79,slow=1.4,SNR=3.2							
TGY				LR		LR	04 46 42.7	
	comp=Z,12µm,18.3s,baz=138,slow=46							
MNI	**Manado**	**8.76**	**193**	P		Pn	**04 43 27.2**	**+2.7**
TNTI	**Ternate**	**9.21**	**177**	P		Pn	**04 43 30.2**	**-0.5**
	2µm4µm339nm,1.1s							
TNTI	**Ternate**	**9.21**	**177**	Pn		Pn	**04 43 29.9**	**-0.8**
KMSI	**Cibinong**	**9.81**	**197**	P		**Pn**	**04 43 39.0**	**+0.1**
	300nm,0.9s							
GTOI	**Gorontalo**	**10.08**	**202**	P		Pn	**04 43 41.5**	**-1.0**
	614nm72nm,1.4s							
KKM	**Kota Kinabalu**	**11.23**	**250**	Pn		**Pn**	**04 44 01.1**	**+2.7**
SIJI	**Sorong**	**11.69**	**158**	P		**Pn**	**04 44 02.1**	**-2.5**
	6.7nm,0.3s,baz=345,slow=16,SNR=8.0							
SIJI				S		Sn	04 45 59.5	-14
	2.2nm,0.3s,baz=229,slow=19,SNR=3.3							
SIJI				LR		LR	04 49 50.7	
	comp=Z,4µm,19.1s,baz=16,slow=43							
LUWI	**Luwuk**	**11.72**	**200**	P		Pn	04 44 12.6	+7.6
LUWI	**Luwuk**	**11.72**	**200**	Pn		**Pn**	**04 44 08.1**	**+3.1**
MPSI	**Mapaga**	**11.85**	**216**	P		**Pn**	**04 44 08.7**	**+2.0**
	741nm20nm,1.0s							
SANI	**Sanana**	**12.03**	**184**	P		**Pn**	**04 44 04.9**	**-4.3**
APSI	**Ampana**	**12.03**	**206**	P		**Pn**	**04 44 11.7**	**+2.4**
	1µm86nm,1.1s							
FAKI	**Fak Fak**	**13.95**	**157**	P		**Pn**	**04 44 34.9**	**-0.6**
	3µm2µm133nm,1.1s							
FAKI	**Fak Fak**	**13.95**	**157**	Pn		**Pn**	**04 44 35.7**	**+0.2**
SMKI	**Samarinda**	**14.14**	**223**	P		P	04 44 57.4	+13
YULB	**Yu-li**	**14.30**	**339**	P		**P**	**04 44 47.4**	**+1.0**
TPUB	**Ta-pu**	**14.47**	**337**	P		**P**	**04 44 44.8**	**-3.3**
TTSI	**Tana Toraja**	**14.75**	**209**	P		**Pn**	**04 44 47.3**	**+1.2**
	6µm2µm119nm,1.2s							
BNDI	**Bandanaira**	**14.78**	**168**	P		P	04 44 56.2	+4.6
SSLB	**Suanglung**	**14.79**	**338**	P		**P**	**04 44 49.5**	**-2.2**
BKB	**Balikpapan**	**14.95**	**222**	P		**Pn**	**04 44 47.7**	**-1.2**
	7µm5µm351nm,1.0s							
BKB	**Balikpapan**	**14.95**	**222**	P		**P**	**04 44 53.3**	**-0.3**
YHNB	**Yeheng**	**15.46**	**341**	P		**P**	**04 44 57.3**	**-2.0**
SPSI	**Sidrap Palu**	**15.58**	**207**	P		**Pn**	**04 44 56.4**	**-0.6**
	3µm124nm,1.2s							
BNSI	**Bone**	**15.82**	**205**	P		**Pn**	**04 44 59.4**	**-0.7**
	4µm154nm,1.2s							
SBUM	**Sibu**	**16.35**	**244**	P		**P**	**04 45 08.3**	**-0.8**
SBUM	**Sibu**	**16.35**	**244**	P		**P**	**04 45 12.0**	**+2.9**
KAPI	**Kappang**	**16.53**	**206**	P		**Pn**	**04 45 07.8**	**-1.2**
	2.8nm,0.3s,baz=41,slow=8.0,SNR=12							
KAPI				LR		LR	04 52 43.9	
	comp=Z,2µm,19.9s,baz=16,slow=42							
KAPI	**Kappang**	**16.53**	**206**	P		**Pn**	**04 45 09.1**	**+0.1**
KAPI				pmax		pmax		
	comp=Z,76nm,1.1s							
KAPI	**Kappang**	**16.53**	**206**	P		**Pn**	**04 45 09.1**	**+0.1**
BKSI	**Bulukumba**	**16.65**	**204**	P		**Pn**	**04 45 10.0**	**-0.6**
	comp=Z,1µmcomp=Z,43nm,0.8s							
QZH	**Quanzhou**	**16.77**	**333**	P		**P**	**04 45 14.8**	**+1.1**
QZH				S		**Sn**	**04 48 19.5**	**+2.0**
QZH				LR		LR		
	comp=Z,2µm,19.0s							
QZH				LR		LR		
	comp=Z,1µm,17.5s							
QZH				LR		LR		
	comp=Z,4µm,20.4s							
KBKI	**Kotabaru**	**16.98**	**219**	P		**P**	**04 45 17.3**	**+1.3**
	comp=Z,1µmcomp=Z,54nm,0.7s							
BSSI	**Bau Bau, Buton**	**17.26**	**202**	P		**P**	**04 45 19.1**	**-0.1**
	comp=Z,839nmcomp=Z,51nm,1.3s							
BBKI	**Banjar Baru**	**17.95**	**222**	P		**P**	**04 45 29.7**	**+2.9**
	comp=Z,5µmcomp=Z,124nm,1.2s							
GUMO	**Guam**	**18.00**	**77**	LR		LR	04 52 21.1	
	comp=Z,3µm,18.4s,baz=217,slow=36							
DLV	**T Lat**	**18.11**	**278**	P		**P**	**04 45 27.7**	**-1.1**
GENI	**Genyem**	**18.27**	**133**	P		**Pn**	**04 45 29.1**	**-1.4**
	comp=Z,7µmcomp=Z,6µmcomp=Z,201nm,1.2s							
KSM	**Kuching**	**18.50**	**244**	P		**Pn**	**04 45 34.7**	**+1.3**
KSM	**Kuching**	**18.50**	**244**	P		**Pn**	**04 45 36.0**	**+2.7**
QIZ	**Qiongzhong**	**18.71**	**300**	P		**Pn**	**04 45 35.1**	**-0.8**
QIZ				pP		**sP**	**04 45 47.0**	**-1.6**
QIZ				sP		**pwP**	**04 45 55.6**	**+1.8**
QIZ				S		**Sn**	**04 49 03.3**	**-1.1**
QIZ				pmax		pmax		
	comp=Z,26nm,1.4s							
QIZ				pmax		pmax		
	comp=Z,670nm,6.3s							
QIZ				LR		LR		
	comp=Z,2µm,16.9s							
QIZ				LR		LR		
	comp=Z,3µm,17.3s							
QIZ				LR		LR		
	comp=Z,5µm,18.0s							
MMRI	**Maumere**	**19.10**	**194**	P		**Pn**	**04 45 40.1**	**-0.5**
	comp=Z,5µmcomp=Z,523nm,1.1s							
MMRI	**Maumere**	**19.10**	**194**	P		**Pn**	**04 45 40.3**	**-0.3**
MMRI				IAmb		IAmb	04 45 49.7	
	comp=Z,512nm,1.1s							
EDFI	**Ende, Flores**	**19.35**	**196**	P		**Pn**	**04 45 43.5**	**-0.1**
	comp=Z,1µmcomp=Z,75nm,0.9s							
PBKI	**Pangkalan Bun**	**19.70**	**231**	P		**P**	**04 45 46.2**	**+0.2**
	comp=Z,8µmcomp=Z,298nm,1.3s							
SOEI	**Soe**	**19.82**	**187**	P		**Pn**	**04 45 48.7**	**-0.5**
	comp=Z,4µmcomp=Z,196nm,0.9s							
SOEI	**Soe**	**19.82**	**187**	P		**Pn**	**04 45 48.8**	**-0.5**
SOEI				IAmb		IAmb	04 46 29.9	
	comp=Z,328nm,1.0s							
BATI	**Baumata**	**20.35**	**189**	P		Pn	04 45 53.3	-2.1
	comp=Z,236nm,0.4s,baz=150,slow=0.8,SNR=26							
BATI				LR		LR	04 55 28.9	
	comp=Z,2µm,19.0s,baz=30,slow=42							
BATI	**Baumata**	**20.35**	**189**	P		Pn	04 45 54.0	-1.4
	comp=Z,4µmcomp=Z,298nm,1.0s							
PLAI	**Plampang**	**20.79**	**206**	P		Pn	04 45 59.6	-1.1
	comp=Z,2µmcomp=Z,163nm,1.1s							
WBSI	**Waikabubak, Su**	**20.90**	**201**	P		**P**	**04 45 58.1**	**-0.9**
	comp=Z,2µmcomp=Z,144nm,0.8s							
BASI	**Baing, Sumba**	**21.06**	**197**	P		**P**	**04 45 59.1**	**-1.6**
	comp=Z,2µmcomp=Z,217nm,1.0s							
TWSI	**Taliwang, Sumb**	**21.11**	**208**	P		**P**	**04 46 01.0**	**-0.3**
	comp=Z,1µmcomp=Z,93nm,1.1s							
KMMI	**Kalianget**	**21.26**	**218**	P		**P**	**04 46 04.0**	**+1.1**
	comp=Z,3µmcomp=Z,102nm,1.4s							
UBPT	**Khong Chiam**	**21.48**	**286**	P		**P**	**04 46 05.1**	**-0.2**
	comp=Z,34nm,1.2s							
UBPT	**Khong Chiam**	**21.48**	**286**	P		**P**	**04 46 03.9**	**-1.3**
SSE	**Sheshan**	**21.61**	**347**	P		**P**	**04 46 07.3**	**+0.8**
SSE				S		**S**	**04 50 03.2**	**-0.2**
SSE				pmax		pmax		
	comp=Z,60nm,1.4s							
SSE				pmax		pmax		
	comp=Z,380nm,7.6s							
SSE				LR		LR		
	comp=Z,960nm,19.9s							
SSE				LR		LR		
	comp=Z,410nm,20.3s							
JSU	**Suzuyama**	**21.63**	**8**	P		**P**	**04 46 07.9**	**+1.1**
JSU				IAmb		IAmb	04 46 11.8	
	comp=Z,341nm,1.7s							
JAGI	**Jajag, Banyuwa**	**22.30**	**215**	P		**P**	**04 46 13.9**	**-0.1**
	comp=Z,2µmcomp=Z,86nm,1.5s							
JAGI	**Jajag, Banyuwa**	**22.30**	**215**	P		**P**	**04 46 13.7**	**-0.4**
GMJI	**Gumukmas**	**22.55**	**217**	P		**P**	**04 46 18.3**	**+1.6**
	comp=Z,2µmcomp=Z,60nm,1.1s							
MTN	**Manton Dam**	**23.12**	**169**	P		**P**	**04 46 21.6**	**-1.0**
	baz=23,SNR=9.6							
MTN	**Manton Dam**	**23.12**	**169**	IAmb		IAmb	04 46 25.9	
	comp=Z,134nm,0.9s							
NJ2	**Nanjing**	**23.13**	**343**	*e*P		**P**	**04 46 22.3**	**-0.2**
NJ2				pP		**sP**	**04 46 37.7**	**+2.1**
NJ2				sP		**pwP**	**04 46 43.8**	**+0.8**
NJ2				S		**S**	**04 50 30.5**	**-0.1**
NJ2				pmax		pmax		
	comp=Z,47nm,1.0s							
NJ2				pmax		pmax		
	comp=Z,1µm,5.7s							
NJ2				LR		LR		
	comp=Z,1µm,16.1s							
NJ2				LR		LR		
	comp=Z,1µm,17.1s							
NJ2				LR		LR		
	comp=Z,2µm,18.9s							
KDU	**Kakadu**	**23.25**	**166**	P		**P**	**04 46 22.4**	**-1.5**
	baz=23,SNR=78							
JNU	**Nakatsue**	**23.28**	**9**	P		**P**	**04 46 24.6**	**+0.5**
	comp=Z,92nm,0.9s,baz=177,slow=4.7,SNR=20							
JNU	**Nakatsue**	**23.28**	**9**	IAmb		IAmb	04 46 28.9	
	comp=Z,119nm,1.0s							
PWJI	**Pagerwojo**	**23.36**	**220**	P		**P**	**04 46 25.4**	**+0.5**
	comp=Z,40nm,1.3s							
WHN	**Wuhan**	**23.49**	**332**	P		**P**	**04 46 26.1**	**0.0**
WHN				S		**S**	**04 50 40.7**	**+4.2**
WHN				pmax		pmax		
	comp=Z,290nm,1.7s							
WHN				LR		LR		
	comp=Z,5µm,16.5s							
WHN				LR		LR		
	comp=Z,4µm,13.7s							
WHN				LR		LR		
	comp=Z,9µm,18.1s							
SMRI	**Semarang**	**23.55**	**225**	P		**P**	**04 46 26.9**	**+0.1**
	comp=Z,173nm,1.1s							
SMRI	**Semarang**	**23.55**	**225**	P		**P**	**04 46 26.7**	**-0.1**
SMRI				IAmb		IAmb	04 46 33.6	
	comp=Z,172nm,1.0s							
MANU	**Manus Island**	**23.70**	**119**	P		**P**	**04 46 28.6**	**+0.3**
WOJI	**Wonogiri, Jawa**	**23.79**	**222**	P		**P**	**04 46 29.6**	**+0.6**
	comp=Z,2µmcomp=Z,128nm,1.3s							
PPBI	**Pangkal Pinang**	**23.90**	**241**	P		**P**	**04 46 30.9**	**+0.8**
	comp=Z,19µmcomp=Z,242nm,1.1s							
UGM	**Wanagama**	**24.11**	**223**	P		**P**	**04 46 33.1**	**+1.0**
KHON	**Khomkaen**	**24.19**	**288**	P		**P**	**04 46 33.1**	**+0.3**
	comp=Z,226nm,0.9s							
YOGI	**Yogyakarta**	**24.20**	**223**	P		**P**	**04 46 33.9**	**+1.1**
	comp=Z,4µmcomp=Z,196nm,1.8s							
MYKOM	**Kota Tinggi**	**24.26**	**252**	P		**P**	**04 46 35.0**	**+1.6**
NONG	**Nongkai**	**24.30**	**292**	P		**P**	**04 46 33.2**	**-0.6**
	comp=Z,86nm,1.1s							
JMN	**Monobe**	**24.46**	**14**	IAmb		IAmb	04 46 41.3	
	comp=Z,189nm,1.3s							
SLVN	**Son La**	**24.73**	**300**	P		**P**	**04 46 36.9**	**-0.8**
SLVN				IAMs_20		IAMs_20	04 56 44.9	
	comp=Z,4µm,20.0s							
KPJI	**Karang Pucung**	**24.81**	**227**	P		**P**	**04 46 39.1**	**+0.8**
	comp=Z,2µmcomp=Z,126nm,1.4s							
CHAI	**Chaiyaphum**	**24.89**	**286**	P		**P**	**04 46 39.0**	**-0.1**
	comp=Z,1µmcomp=Z,155nm,0.9s							
GYA	**Guiyang**	**25.11**	**313**	↓P		**P**	**04 46 41.6**	**+0.4**
GYA				PcP		**PcP**	**04 50 17.0**	**+2.2**
GYA				S		**S**	**04 50 53.0**	**-10**
GYA				pmax		pmax		
	comp=Z,27nm,1.3s							
GYA				pmax		pmax		
	comp=Z,400nm,6.1s							
GYA				LR		LR		
	comp=Z,2µm,20.2s							
GYA				LR		LR		
	comp=Z,2µm,19.2s							
GYA				LR		LR		
	comp=Z,3µm,21.7s							
LEM	**Lembang**	**25.43**	**230**	P		**P**	**04 46 44.5**	**+0.3**
	comp=Z,53nm,0.7s,baz=72,slow=7.9,SNR=14							
LEM	**Lembang**	**25.43**	**230**	P		**P**	**04 46 44.9**	**+0.7**
	comp=Z,2µmcomp=Z,2µmcomp=Z,76nm,1.1s							
CMJI	**Cimerak**	**25.46**	**227**	P		**P**	**04 46 45.2**	**+0.9**
	comp=Z,108nm,1.2s							
PMBI	**Palembang**	**25.46**	**241**	P		**P**	**04 46 47.0**	**+2.6**
JHS	**Saijyo**	**25.51**	**12**	P		**P**	**04 46 45.1**	**+0.5**
PATY	**Pattaya**	**25.60**	**279**	P		**P**	**04 46 50.3**	**+4.7**
	comp=Z,79nm,0.8s							
KNRA	**Kununurra**	**25.61**	**176**	P		**P**	**04 46 44.6**	**-1.0**
	baz=25,SNR=38							
KNRA	**Kununurra**	**25.61**	**176**	IAmb		IAmb	04 47 29.9	
	comp=Z,91nm,1.0s							
CISI	**Cisompet, Garu**	**25.77**	**228**	P		**P**	**04 46 48.0**	**+0.9**
	comp=Z,8µmcomp=Z,129nm,1.1s							
CISI	**Cisompet, Garu**	**25.77**	**228**	P		**P**	**04 46 47.6**	**+0.5**
ENH	**Enshi**	**25.83**	**324**	IAMs_20		IAMs_20	04 58 05.7	
	comp=Z,3µm,19.0s							
JHJ	**Hachijo jima 2**	**25.89**	**26**	LR		LR	04 57 12.2	
	comp=Z,1µm,19.9s,baz=222,slow=37							
DBJI	**Dramaga**	**25.91**	**231**	P		**P**	**04 46 48.0**	**-0.4**
	comp=Z,130nm,1.5s							
CNJI	**Cibinong**	**26.11**	**229**	P		**P**	**04 46 51.1**	**+0.9**
	comp=Z,2µmcomp=Z,174nm,1.1s							
SBJI	**Serang**	**26.13**	**233**	P		**P**	**04 46 50.3**	**0.0**
	comp=Z,8µmcomp=Z,644nm,1.0s							
IPM	**Ipoh**	**26.18**	**260**	P		**P**	**04 46 50.5**	**-0.4**
IPM				IAmb		IAmb	04 47 08.2	
	comp=Z,177nm,1.0s							
IPM	**Ipoh**	**26.18**	**260**	P		**P**	**04 46 52.0**	**+1.2**
TJN	**Taejon**	**26.23**	**1**	*ce*P		**P**	**04 46 49.7**	**-1.3**
JWT	**Wachi**	**26.32**	**16**	IAmb		IAmb	04 47 11.8	
	comp=Z,113nm,1.5s							
JWT				IAMs_20		IAMs_20	04 58 49.4	
	comp=Z,3µm,18.0s							
KULM	**Kulim**	**26.36**	**262**	P		**P**	**04 46 51.0**	**-1.5**
KULM				IAmb		IAmb	04 47 09.7	
	comp=Z,84nm,1.0s							
KULM	**Kulim**	**26.36**	**262**	P		**P**	**04 46 54.0**	**+1.5**
KLSI		**26.43**	**237**	P		**P**	**04 46 53.8**	**+0.7**
	comp=Z,604nmcomp=Z,59nm,0.9s							
UTTA	**Uttaradit**	**26.61**	**290**	P		**P**	**04 46 54.7**	**0.0**
	comp=Z,229nmcomp=Z,24nm,1.1s							
PHIT	**Phitsanulok**	**26.62**	**288**	P		**P**	**04 46 56.2**	**+1.4**
	comp=Z,186nm,1.0s							
CGJI	**Cibinong**	**26.77**	**233**	P		**P**	**04 46 56.4**	**+0.3**
	comp=Z,2µmcomp=Z,73nm,0.9s							
PHET	**Kaeng Krachan**	**26.81**	**279**	P		**P**	**04 46 59.0**	**+2.5**
	comp=Z,957nmcomp=Z,116nm,1.0s							
INU	**Inuyama**	**26.86**	**19**	IAMs_20		IAMs_20	04 59 03.8	
	comp=Z,2µm,19.0s							
JGF	**Kuroka**	**27.20**	**19**	IAMs_20		IAMs_20	04 58 37.7	
	comp=Z,2µm,18.0s						

CMAR LR LR 04 59 10.6
comp=Z,1μm,19.4s,baz=154,slow=38
CMAR Chiang Mai Arr 28.27 290 P **P** **04 47 07.8 -1.7**
CM15 Chiang Mai Arr 28.28 290 P **P** **04 47 10.0 +0.3**
comp=Z,378nmcomp=Z,15nm,0.9s
CM13 Chiang Mai Arr 28.29 290 P **P** **04 47 09.7 -0.1**
comp=Z,152nmcomp=Z,19nm,1.0s
MJAR Matsushiro Arr 28.34 20 P **P** **04 47 09.9 0.0**
comp=Z,78nm,0.6s,baz=194,slow=8.9,SNR=7.8
MJAR PcP **PcP** **04 50 22.1 +0.1**
comp=Z,3.6nm,0.8s,baz=188,slow=3.3,SNR=4.3
MJAR LR LR 04 59 44.7
comp=Z,2μm,18.4s,baz=195,slow=39
MJAR Matsushiro Arr 28.34 20 P **P** **04 47 09.4 -0.6**
MJAR Matsushiro Arr 28.34 20 P **P** **04 47 09.4 -0.6**
MAJO Matsushiro 28.34 20 P **P** **04 47 09.9 0.0**
MAJO pmax pmax
comp=Z,10.0nm,0.8s
MAJO MLR MLR
comp=Z,2μm,19.0s
MAJO Matsushiro 28.34 20 P **P** **04 47 09.9 0.0**
MAJO Matsushiro 28.34 20 IAms_20 IAms_20 05 00 01.8
comp=Z,2μm,19.0s
MAT Matsushiro 28.34 20 P **P** **04 47 08.2 -1.8**
MAT S **S** **04 51 51.8 -1.7**
CMMT Chiang Mai 28.35 291 P **P** **04 47 10.1 -0.2**
comp=Z,281nmcomp=Z,8.6nm,1.4s
CM33 Chiang Mai Arr 28.35 291 P **P** **04 47 09.0 -1.3**
CHTO Chiang Mai 28.35 291 P **P** **04 47 08.1 -2.2**
CHTO pmax pmax
comp=Z,22nm,1.2s
CHTO Chiang Mai 28.35 291 P **P** **04 47 08.1 -2.2**
CM32 Chiang Mai Arr 28.40 291 P **P** **04 47 10.0 -0.7**
MNSI Mandailing Nat 28.61 253 P **P** **04 47 13.6 +1.0**
comp=Z,161nm,1.0s
PSI Prapat 28.63 257 P **P** **04 47 11.9 -1.0**
comp=Z,30nm,0.7s,baz=357,slow=3.1,SNR=17
PSI LR LR 05 01 22.5
comp=Z,1μm,19.0s,baz=66,slow=42
PSI Prapat 28.63 257 P **P** **04 47 12.2 -0.7**
PSI pmax pmax
comp=Z,57nm,1.0s
RPSI Rantau Prapat 28.66 257 P **P** **04 47 12.2 -0.8**
RPSI IAmb IAmb 04 47 31.1
comp=Z,57nm,1.0s
KRVT Keravat (AS076 28.86 118 LR LR 04 58 42.9
comp=Z,892nm,18.9s,baz=299,slow=36
XAN Xi'an 29.00 328 P **P** **04 47 14.9 -1.0**
XAN pP sP 04 47 29.2 -0.5
XAN PP **PP** **04 48 16.3 -5.7**
XAN S **S** **04 52 05.5 +1.5**
XAN pmax pmax
comp=Z,34nm,1.3s
XAN pmax pmax
comp=Z,460nm,3.8s
XAN LR LR
comp=Z,2μm,17.6s
XAN LR LR
comp=Z,1μm,17.6s
XAN LR LR
comp=Z,3μm,19.1s
XAN Xi'an 29.00 328 P **P** **04 47 14.2 -1.7**
XAN pmax pmax
comp=Z,359nm,1.6s
XAN MLR MLR
comp=Z,2μm,19.0s
XAN Xi'an 29.00 328 P **P** **04 47 14.2 -1.7**
XAN Xi'an 29.00 328 IAms_20 IAms_20 05 00 42.6
comp=Z,2μm,19.0s
DL2 Dalian 29.13 352 P **P** **04 47 14.6 -2.3**
DL2 pP **sP** **04 47 28.8 -2.1**
DL2 S **S** **04 52 08.5 +2.7**
DL2 sS sS 04 52 33.5 +12
DL2 pmax pmax
comp=Z,22nm,2.0s
DL2 pmax pmax
comp=Z,230nm,6.1s
DL2 LR LR
comp=Z,1μm,19.4s
DL2 LR LR
comp=Z,670nm,15.6s
DL2 LR LR
comp=Z,2μm,20.2s
MHMT Maesarieng 29.14 289 P **P** **04 47 17.9 +0.6**
KCSI Kotacane, Aceh 29.56 259 P **P** **04 47 22.0 +0.9**
comp=Z,53nm,0.8s
SISI Saibi 29.83 249 P **P** **04 47 23.0 -0.5**
comp=Z,2μmcomp=Z,137nm,1.0s
CD2 Chengdu 29.86 317 P **P** **04 47 22.3 -1.3**
CD2 S **S** **04 52 16.0 -1.6**
CD2 pmax pmax
comp=Z,30nm,1.2s
CD2 pmax pmax
comp=Z,410nm,11.8s
CD2 LR LR
comp=Z,2μm,19.4s
CD2 LR LR
comp=Z,3μm,19.6s
CD2 LR LR
comp=Z,4μm,19.6s
LHMI Lhok Sumawe 29.99 263 P **P** **04 47 25.3 +0.4**
comp=Z,332nm,1.1s
TIY Taiyuan 30.46 337 *e*P P 04 47 33.0 +4.1
TIY pP pwP 04 47 46.0 -4.4
TIY sP sP 04 47 53.2 +11
TIY S **S** **04 52 29.9 +3.0**
TIY pmax pmax
comp=Z,350nm,5.7s
TIY LR LR
comp=Z,2μm,15.1s
TIY LR LR
comp=Z,680nm,17.6s
TIY LR LR
comp=Z,1μm,19.0s
WB0 Warramunga Arr 30.53 166 P **P** **04 47 26.9 -2.6**
WRAB Tennant Creek 30.68 166*ce*P **P** **04 47 29.3 -1.6**
WRAB pmax pmax
comp=Z,56nm,1.3s
WRAB Tennant Creek 30.68 166 P **P** **04 47 27.6 -3.3**
WRA Warramunga Arr 30.69 166 P **P** **04 47 29.1 -1.8**
comp=Z,25nm,1.0s,baz=347,slow=9.6,SNR=64
WRA PcP **PcP** **04 50 29.4 +1.1**
comp=Z,8.0nm,0.8s,baz=338,slow=3.4,SNR=6.1
WRA Warramunga Arr 30.69 166 P **P** **04 47 28.6 -2.3**
WRA Warramunga Arr 30.69 166 P **P** **04 47 28.6 -2.3**
WR0 Warramunga Arr 30.75 166 P **P** **04 47 29.4 -2.0**
WR0 IAmb IAmb 04 47 32.1
comp=Z,61nm,1.1s
BJI Beijing 31.35 344 P **P** **04 47 36.4 -0.2**
BJI sP **pwP** **04 47 58.8 +2.0**
BJI PcP **PcP** **04 50 31.7 +2.1**
BJI S **S** **04 52 39.0 -1.6**
BJI pmax pmax
comp=Z,13nm,1.5s
BJI pmax pmax
comp=Z,220nm,4.0s
BJI LR LR
comp=Z,960nm,19.9s
BJI LR LR
comp=Z,490nm,23.6s
BJI LR LR
comp=Z,960nm,19.9s
SNY Shenyang 31.80 355 ⇑P **P** **04 47 41.7 +1.2**
SNY S **S** **04 52 51.5 +3.9**
SNY pmax pmax
comp=Z,22nm,1.2s
SNY pmax pmax
comp=Z,340nm,4.3s
SNY LR LR
comp=Z,1μm,20.6s
SNY LR LR
comp=Z,1μm,15.7s
SNY LR LR
comp=Z,2μm,20.1s
PSA00 Pilbara Seismi 32.15 192 P **P** **04 47 44.1 +0.4**
PSA00 Pilbara Seismi 32.15 192 IAmb IAmb 04 47 45.0
comp=Z,62nm,0.9s
MTSU Mount Surprise 32.88 148 P **P** **04 47 51.5 +1.2**
baz=33,SNR=17
JTM Tenmabayashi 33.12 20 IAms_20 IAms_20 05 02 45.1
comp=Z,2μm,20.0s
LZH Lanzhou 33.29 325 *e*P **P** **04 47 55.0 +1.2**
LZH pP sP 04 48 09.6 +2.2
LZH sP pwP 04 48 17.8 +2.2
LZH S **S** **04 53 11.7 +0.4**
LZH sS sS 04 53 34.5 +7.5
LZH pmax pmax
comp=Z,62nm,1.7s
LZH pmax pmax
comp=Z,380nm,5.4s
LZH LR LR
comp=Z,2μm,14.1s
LZH LR LR
comp=Z,1μm,14.8s
LZH LR LR
comp=Z,2μm,16.0s
HHC Hu-ho-hao-te 33.54 339 *e*P **P** **04 47 56.6 +0.7**
HHC pP sP 04 48 11.5 +2.1
HHC PP **PP** **04 49 10.3 -2.1**
HHC S **S** **04 53 13.1 -1.8**
HHC sS sS 04 53 38.7 +8.1
HHC pmax pmax
comp=Z,34nm,1.1s
HHC pmax pmax
comp=Z,640nm,5.2s
HHC LR LR
comp=Z,2μm,18.9s
HHC LR LR
comp=Z,1μm,19.5s
HHC LR LR
comp=Z,2μm,17.7s
CN2 Changchun 33.67 358 *e*P **P** **04 47 58.5 +1.7**
CN2 *ep*P pwP 04 48 16.0 -1.8
CN2 *e*S **S** **04 53 16.6 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,330nm,5.0s
CN2 LR LR
comp=Z,800nm,19.0s
CN2 LR LR
comp=Z,950nm,13.0s
CN2 LR LR
comp=Z,1μm,18.0s
BTO Baotou 33.90 337 *e*P **P** **04 48 01.0 +2.0**
BTO S **S** **04 53 21.8 +1.3**
ASAR Alice Springs 34.20 168 P **P** **04 48 00.3 -1.3**
comp=Z,11nm,0.4s,baz=354,slow=6.8,SNR=95
ASAR PcP **PcP** **04 50 39.0 +1.1**
comp=Z,16nm,0.9s,baz=349,slow=2.6,SNR=10
ASAR ScP **ScP** **04 54 16.9 -2.4**
comp=Z,1.7nm,0.9s,baz=358,slow=3.0,SNR=3.9
ASAR Alice Springs 34.20 168 P **P** **04 47 59.4 -2.3**
USA0B Ussuriysk Arra 34.34 7*d*P **P** **04 48 01.7 -0.9**
USRK Ussuriysk Ar. 34.34 7 P **P** **04 48 03.0 +0.4**
comp=Z,11nm,0.8s,baz=199,slow=8.3,SNR=16
USRK PcP **PcP** **04 50 38.6 +0.7**
comp=Z,2.3nm,0.5s,baz=197,slow=4.5,SNR=3.5
USRK LR LR 05 02 12.0
comp=Z,1μm,20.9s,baz=180,slow=36
USRK Ussuriysk Ar. 34.34 7 P **P** **04 48 02.5 0.0**
MDJ Mudanjiang 34.54 3 P **P** **04 48 05.4 +1.0**
MDJ pP sP 04 48 19.5 +0.6
MDJ sP pwP 04 48 29.2 +5.2
MDJ PP **PP** **04 49 23.6 +0.3**
MDJ S **S** **04 53 31.8 +1.7**
MDJ pmax pmax
comp=Z,35nm,1.3s
MDJ pmax pmax
comp=Z,210nm,5.8s
MDJ LR LR
comp=Z,1μm,16.2s
MDJ LR LR
comp=Z,990nm,16.2s
MDJ LR LR
comp=Z,1μm,16.9s
MDJ Mudanjiang 34.54 3 IAmb IAmb 04 48 10.4
comp=Z,82nm,1.3s
GIRL Giralia 34.74 201 P **P** **04 48 06.5 +0.2**
baz=35,SNR=15
WRKA Warakurna 34.88 178 P **P** **04 48 06.7 -0.9**
baz=35,SNR=70
ERM Erimo 34.94 21 *i* P **P** **04 48 07.8 0.0**
ERM pmax pmax
comp=Z,69nm,1.2s
JEW Eniwo 35.09 19 IAms_20 IAms_20 05 04 03.6
comp=Z,2μm,19.0s
CTAO Charters Tower 35.52 147 P **P** **04 48 13.5 +0.5**
CTAO pmax pmax
comp=Z,28nm,0.9s
CTAO MLR MLR
comp=Z,2μm,19.0s
CTAO Charters Tower 35.52 147 P **P** **04 48 13.5 +0.5**
CTAO Charters Tower 35.52 147 IAms_20 IAms_20 05 04 39.2
comp=Z,2μm,19.0s
TEY Ternei 35.88 12 *e*P **P** **04 48 17.2 +1.3**
SHL Shillong 36.54 300 IAmb IAmb 04 48 38.7
comp=Z,38nm,0.7s
SHL IAms_20 IAms_20 05 05 09.5
comp=Z,2μm,19.0s
JKA Kamikawa-asahi 36.61 19 IAms_20 IAms_20 05 05 46.7
comp=Z,1μm,19.0s
MEEK Meekatharra 37.31 192 P **P** **04 48 27.1 -1.2**
baz=37,SNR=66
YUK Yuzh-Kuril'sk 37.68 23 *e*P **P** **04 48 29.9 -1.3**
YUK *e**PP **sP** **04 48 43.2 -2.8**
YUK *i* 04 49 56.6
YUK *e*S **S** **04 54 15.5 -2.6**
YUK *e*SS **SS** **04 57 01.3 -3.1**
YUK MLR MLR
comp=Z,692nm,18.0s
YUK MLR MLR
comp=N,905nm,21.0s
GTA Gaotai 37.89 325 ⇑P **P** **04 48 33.6 +0.3**
GTA pP sP 04 48 48.6 +1.7
GTA sP pwP 04 48 56.0 +0.9
GTA PP **PnPn** **04 50 04.5 +2.5**
GTA PcP **PcP** **04 50 51.7 +2.9**
GTA S **S** **04 54 22.8 +1.0**
GTA pmax pmax
comp=N,36nm,1.5s
GTA pmax pmax
comp=N,470nm,6.1s
GTA LR LR
comp=N,1μm,18.7s
GTA LR LR
comp=N,1μm,18.3s
GTA LR LR
comp=N,2μm,20.8s
HNR Honiara 38.21 119 LR LR 05 02 34.2
comp=N,609nm,21.2s,baz=294,slow=33
LSA Lhasa 38.62 306 IAms_20 IAms_20 05 06 25.4
comp=Z,1μm,19.0s
YSS Yuzh-Sakhalins 39.21 17⇓*e*P **P** **04 48 45.0 +1.0**
YSS *e**SP **sP** **04 48 58.4 0.0**
YSS *e* 04 50 13.6
YSS *e* 04 50 53.2
YSS *e*S **S** **04 54 45.0 +3.9**
YSS *e*SS **SS** **04 57 27.0 -8.5**
YSS pmax pmax
comp=Z,30nm,1.3s
YSS pmax pmax
comp=Z,400nm,7.7s
YSS MLR MLR
comp=E,400nm,17.0s
YSS MLR MLR
comp=Z,700nm,17.0s
YSS MLR MLR
comp=N,600nm,14.0s
KLR Kul'dur 39.29 5*de*P **P** **04 48 44.3 -0.4**
KLR pmax pmax
comp=Z,52nm,1.4s
KLR MLR MLR
comp=Z,822nm,19.0s
H11S3 WAKE ISLAND Hy 39.46 73 T T 05 32 03.9
baz=262,slow=74,SNR=92
KUR Kuril'sk 39.47 24 *e*P **P** **04 48 47.1 +1.0**
KUR S **S** **04 54 46.4 +1.4**
KUR MLR MLR
comp=Z,500nm,13.0s
H11S1 WAKE ISLAND Hy 39.47 73 T T 05 32 03.9
baz=262,slow=74,SNR=45
H11S2 WAKE ISLAND Hy 39.48 73 T T 05 32 03.4
baz=262,slow=74,SNR=53
HIA Hailar 39.56 353 IAms_20 IAms_20 05 07 02.2
comp=Z,2μm,20.0s
H11N1 WAKE ISLAND Hy 39.81 71 T T 05 32 28.1
baz=265,slow=74,SNR=73
H11N2 WAKE ISLAND Hy 39.81 71 T T 05 32 29.0
baz=265,slow=74,SNR=72
H11N3 WAKE ISLAND Hy 39.82 71 T T 05 32 29.7
baz=265,slow=74,SNR=70
QLP Quilpie 40.13 155 P **P** **04 48 51.9 +0.1**
baz=40,SNR=9.3
MORW Morawa 40.24 195 P **P** **04 48 51.9 -0.8**
baz=40,SNR=17
FORT Forrest 40.59 178 P **P** **04 48 54.7 -1.0**
baz=40,SNR=44
FORT Forrest 40.59 178 P **P** **04 48 54.2 -1.4**
FORT IAmb IAmb 04 48 57.4
comp=Z,140nm,0.8s
TAPN Taplejung 40.65 301 *e*P **P** **04 48 55.2 -1.4**
comp=Z,20nm,0.4s
ODAN Odare 40.78 300 *e*P **P** **04 48 56.5 -1.1**
comp=Z,92nm,0.7s
ULN Ulaanbaatar 41.24 340 P **P** **04 49 01.1 +0.1**
ULN pmax pmax
comp=Z,75nm,1.2s
ULN MLR MLR
comp=Z,2μm,20.0s
ULN Ulaanbaatar 41.24 340 P **P** **04 49 01.1 +0.1**
ULN Ulaanbaatar 41.24 340 IAMs_20 IAMs_20 05 09 12.1
comp=Z,2μm,20.0s
GRNR Gornyy 41.38 9⇓*i*P **P** **04 49 03.6 +1.7**
GRNR *e*S **S** **04 55 17.9 +4.4**
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=N,520nm,15.0s
GRNR MLR MLR
comp=E,140nm,15.0s
GRNR MLR MLR
comp=Z,750nm,17.0s
KMBL Kambalda 41.43 186 P **P** **04 49 01.7 -0.8**
baz=41,SNR=16
SONM Songino Array 41.44 339 P **P** **04 49 01.7 -0.9**
comp=Z,8.8nm,0.7s,baz=156,slow=9.2,SNR=26
SONM pP **sP** **04 49 18.1 +1.7**
comp=Z,21nm,0.9s,baz=153,slow=8.6,SNR=13
SONM PcP **PcP** **04 51 00.9 +1.1**
comp=Z,6.5nm,0.9s,baz=143,slow=3.8,SNR=3.6
SONM LR LR 05 09 09.9
comp=Z,1μm,19.2s,baz=148,slow=40
SONM Songino Array 41.44 339 P **P** **04 49 02.6 0.0**
SONM pmax pmax
comp=Z,38nm,1.1s
SONM Songino Array 41.44 339 P **P** **04 49 02.6 0.0**
RAMN Ramite 41.48 299 *e*P **P** **04 49 01.9 -1.5**
RMQ Roma 42.09 150 P **P** **04 49 09.0 +1.0**
baz=42,SNR=8.2
CHLP Challavanipeta 42.22 286 *e*P **P** **04 49 08.5 -0.8**
KLBR Kellerberrin 42.29 192 P **P** **04 49 08.9 -0.7**
baz=42,SNR=25
GUN Gumba 42.37 301 *e*P **P** **04 49 09.1 -1.7**
comp=Z,107nm,1.0s
EIDS Eidsvold 42.38 147 P **P** **04 49 09.9 -0.5**
baz=42,SNR=10.0
EIDS Eidsvold 42.38 147 P **P** **04 49 09.3 -1.1**
EIDS IAMs_20 IAMs_20 05 09 03.1
comp=Z,1μm,20.0s
PKI Pulchoki 42.67 300 *e*P **P** **04 49 11.4 -1.8**
comp=Z,18nm,0.5s
PKIN Phulchoki 42.68 300 *e*P **P** **04 49 11.4 -1.9**
TYV Tymovskoe 42.75 15 *e*P **P** **04 49 13.1 +0.1**
TYV pmax pmax
comp=Z,10.0nm,1.5s
TYV pmax pmax
comp=Z,500nm,7.0s
KKN Kakani 42.84 300 *e*P **P** **04 49 12.6 -1.9**
DMN Daman 42.94 300 *e*P **P** **04 49 13.3 -2.0**
MUN Mundaring 42.99 193 P **P** **04 49 14.6 -0.6**
baz=43,SNR=12
CIT Chita 43.25 348 *e*P **P** **04 49 18.1 +0.9**
CIT *e* 04 49 33.6
CIT *e* 04 51 05.8
CIT pmax pmax
comp=Z,126nm,2.5s
GKN Gorkha 43.45 300 *e*P **P** **04 49 18.0 -1.3**
BBOO Buckleboo 43.50 169 P **P** **04 49 18.5 -0.8**
baz=43,SNR=118
ZEA Zeya 43.59 0 *e*P **P** **04 49 19.0 -0.8**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
ZEA MLR MLR
comp=N,800nm,17.0s
ZEA MLR MLR
comp=Z,800nm,18.0s
NWAO Narrogin (SRO) 43.69 192 LR LR 05 09 54.5
comp=Z,280nm,18.8s,baz=328,slow=39
NWAO Narrogin (SRO) 43.69 192 P **P** **04 49 20.1 -0.8**
baz=44,SNR=26
NWAO Narrogin (SRO) 43.69 192 P **P** **04 49 19.9 -0.9**
NWAO pmax pmax
comp=Z,76nm,0.8s
NWAO Narrogin (SRO) 43.69 192 P **P** **04 49 19.9 -0.9**
NWAO IAmb IAmb 04 49 22.8
comp=Z,76nm,0.8s
NWAO Narrogin (SRO) 43.69 192 IAmb IAmb 04 49 22.8
comp=Z,61nm,0.8s
STKA Stephens Creek 44.00 162 P **P** **04 49 23.4 0.0**
comp=Z,54nm,0.4s,baz=335,slow=8.3,SNR=82
STKA PcP **PcP** **04 51 09.0 +0.5**
comp=Z,6.8nm,0.4s,baz=318,slow=6.9,SNR=3.5
STKA LR LR 05 09 30.4
comp=Z,468nm,22.0s,baz=343,slow=38
STKA Stephens Creek 44.00 162 P **P** **04 49 22.7 -0.7**
baz=44,SNR=114
KOLN Koldanda 44.27 300 *e*P **P** **04 49 24.5 -1.5**
comp=Z,45nm,0.6s
DANN Dangsing 44.28 300 *e*P **P** **04 49 24.6 -1.6**
PVM Polavaram 44.43 284 *e*P **P** **04 49 27.1 0.0**
ZAK Zakamensk 44.69 339 *e*P **P** **04 49 28.6 -0.2**
ZAK pmax pmax
comp=Z,25nm,1.3s
HTT Hallett 44.73 166 P **P** **04 49 29.1 -0.1**
baz=45,SNR=29
PYUN Piuthan 44.88 300 *e*P **P** **04 49 29.6 -1.2**
comp=Z,45nm,0.5s
CMSA Cobar Meteorol 45.11 157 P **P** **04 49 32.2 -0.1**
baz=45,SNR=9.5
MYLAV Mylavaram 45.35 284 *e*P **P** **04 49 34.6 +0.1**
TLY Talaya 45.65 340 *e*P **P** **04 49 37.1 +0.8**
TLY *e* 04 49 54.7
TLY *e*S **S** **04 56 23.6 +7.8**
TLY pmax pmax
comp=Z,76nm,1.1s
TLY MLR MLR
comp=Z,2μm,14.0s
TLY Talaya 45.65 340 P **P** **04 49 36.0 -0.3**
TLY IAmb IAmb 04 49 55.8
comp=Z,82nm,1.1s
TLY IAMs_20 IAMs_20 05 12 01.8
comp=Z,1μm,19.0s
PALK Pallekele 45.66 270 LR LR 05 09 05.6
comp=Z,1μm,20.7s,baz=180,slow=37
PALK Pallekele 45.66 270 P **P** **04 49 37.7 +0.7**
PALK pmax pmax
comp=Z,131nm,2.0s
PALK Pallekele 45.66 270 P **P** **04 49 37.6 +0.7**
PALK IAmb IAmb 04 49 52.8
comp=Z,131nm,2.0s
GGR Gangavaram 45.82 285 *e*P **P** **04 49 37.5 -0.7**
IRK Irkutsk 45.91 341 *e*P **P** **04 49 34.9 -3.5**
IRK *e* 04 51 14.1
IRK pmax pmax
comp=Z,74nm,0.8s
ADKI Addanki 45.96 282 *e*P **P** **04 49 38.6 -0.7**
SKHT Srikalahasti 46.20 279 *e*P **P** **04 49 41.3 +0.1**
MOY Mondy 46.57 338 *e*P **P** **04 49 43.0 -0.7**
MOY pmax pmax
comp=Z,138nm,2.3s
NJS Nagarjunasagar 46.62 283 *e*P **P** **04 49 44.0 -0.4**
ARMA Armidale 46.75 150 P **P** **04 49 44.4 -1.0**
baz=47,SNR=7.3
ARMA Armidale 46.75 150 P **P** **04 49 45.9 +0.6**
ARMA IAmb IAmb 04 49 50.9
comp=Z,97nm,1.6s
ARMA IAMs_20 IAMs_20 05 11 51.0
comp=Z,2μm,18.0s
CUPL Choutuppal 47.01 284 *e*P **P** **04 49 47.1 -0.5**
HYB Hyderabad 47.37 284 *i* P **P** **04 49 49.0 -1.4**
HYB *e*sP **pP** **04 49 53.5 -6.8**
HYBB Hyderabad (bro 47.37 284 *e*P **P** **04 49 49.2 -1.2**
WMQ Urumqi 47.75 322 *e*P **P** **04 49 56.0 +3.0**
WMQ pP sP 04 50 08.4 +1.6
WMQ sP pwP 04 50 17.5 +2.4

WMQ pmax pmax
comp=Z,31nm,0.7s
WMQ pmax pmax
comp=Z,480nm,4.1s
WMQ LR LR
comp=Z,3µm,17.1s
WMQ LR LR
comp=Z,2µm,18.5s
WMQ LR LR
comp=Z,3µm,18.3s
URV Uravakonda 48.57 281 *e*P **P 04 49 58.7 -1.0**
BOD Bodaibo 48.69 351 *e*P **P 04 49 58.6 -1.3**
BOD pmax pmax
comp=Z,46nm,1.4s
KLRI Killari 49.26 285 *e*P **P 04 50 04.0 -1.0**
PETK Petropavlovsk- 49.63 24 P **P 04 50 08.0 +0.8**
comp=Z,8.9nm,0.6s,baz=194,slow=2.6,SNR=16
PETK PcP **PcP 04 51 29.9 +1.8**
comp=Z,9.2nm,1.0s,baz=222,slow=1.9,SNR=1.6
PETK LR LR 05 12 41.2
comp=Z,832nm,19.0s,baz=213,slow=38
PETK Petropavlovsk- 49.63 24 P **P 04 50 08.4 +1.2**
CAN Canberra 49.74 156 P **P 04 50 09.3 +1.1**
CAN pmax pmax
comp=Z,102nm,1.4s
CAN Canberra 49.74 156 P **P 04 50 09.3 +1.1**
CAN IAmb IAmb 04 50 11.8
comp=Z,102nm,1.4s
CNB Canberra Magne 49.88 156 P **P 04 50 11.6 +2.2**
baz=50,SNR=7.8
DZM Mont Dzumac 50.27 130 *e*P **P 04 50 11.9 -0.7**
comp=Z,59nm,1.2s
DZM *e*S **S 04 57 20.4 -1.8**
comp=Z,273nm,34.8s
DZM *e*LR LR 05 04 42.2
comp=Z,1µm,27.9s
TOO Toolangi 50.48 161 P **P 04 50 14.7 +1.0**
baz=50,SNR=9.7
TOO Toolangi 50.48 161 IAmb IAmb 04 50 17.3
comp=Z,95nm,1.1s
ZSN Zaisan 51.38 324 *e*P **P 04 50 20.0 -0.5**
comp=Z,5.4nm,1.4s,baz=324
ZSN *e*S **S 04 57 35.2 -1.6**
baz=324
ZSN Zaisan 51.38 324 *e*P **P 04 50 20.0 -0.5**
ZSN *e*S **S 04 57 35.2 -1.6**
YAK Yakutsk 51.95 2 *e*P **P 04 50 24.4 0.0**
YAK *e**PP **sP 04 50 37.5 -1.7**
YAK *e* 04 51 36.2
YAK *e*PPP PPP 04 53 26.7
YAK *e*S **S 04 57 43.9 -0.2**
YAK *e**SS sS 04 58 08.5 +8.0
YAK pmax pmax
comp=Z,74nm,1.3s
YAK pmax pmax
comp=N,39nm,1.4s
YAK pmax pmax
comp=E,21nm,1.5s
YAK pmax pmax
comp=Z,262nm,4.6s
YAK pmax pmax
comp=N,91nm,3.3s
YAK pmax pmax
comp=E,160nm,3.7s
YAK smax smax
comp=N,225nm,4.2s
YAK smax smax
comp=E,288nm,4.8s
YAK MLR MLR
comp=Z,1µm,24.0s
YAK MLR MLR
comp=N,692nm,21.0s
YAK MLR MLR
comp=E,327nm,26.0s
YAK Yakutsk 51.95 2 IAMs_20 IAMs_20 05 13 19.7
comp=Z,988nm,20.0s
MK31 Makanchi Array 52.55 323*ce*P **P 04 50 29.3 +0.1**
MKAR Makanchi Array 52.55 323 P **P 04 50 29.4 +0.1**
comp=Z,21nm,0.7s,baz=117,slow=8.0,SNR=63
MKAR pP **sP 04 50 44.8 +1.6**
comp=Z,20nm,0.7s,baz=120,slow=8.0,SNR=12
MKAR PcP **PcP 04 51 40.0 +0.9**
comp=Z,28nm,0.9s,baz=92,slow=10,SNR=11
MKAR ScP **ScP 04 55 32.8 0.0**
comp=Z,1.7nm,1.1s,baz=139,slow=2.9,SNR=2.0
MKAR LR LR 05 15 43.3
comp=Z,1µm,19.9s,baz=110,slow=39
MKAR PKPPKP 05 20 58.7
comp=Z,1.1nm,1.1s,baz=4.4,slow=1.6,SNR=4.2
MKAR Makanchi Array 52.55 323 P **P 04 50 28.9 -0.3**
MA2 Magadan 52.62 15 *i* P **P 04 50 30.4 +0.9**
MA2 pmax pmax
comp=Z,22nm,1.0s
SHLS Shalkode 52.70 317 *e*P **P 04 50 27.5 -3.1**
comp=Z,5.3nm,0.8s,baz=318
SHLS Shalkode 52.70 317 *e*P **P 04 50 27.4 -3.1**
SHLS pmax pmax
comp=Z,5.0nm,0.8s
MAKZ Makanchi 52.75 323 P **P 04 50 30.4 -0.3**
MAKZ pmax pmax
comp=Z,66nm,1.3s
MAKZ MLR MLR
comp=Z,2µm,20.0s
MAKZ Makanchi 52.75 323 P **P 04 50 30.4 -0.3**
MAKZ IAmb IAmb 04 50 34.6
comp=Z,66nm,1.3s
PDGK Podgornoye 52.75 318 P **P 04 50 30.9 0.0**
PRZ Przheval'sk 53.14 316 IAMs_20 IAMs_20 05 17 13.4
comp=Z,1µm,19.0s
KPKS Kokpek 53.34 317 *e*P **P 04 50 34.3 -0.9**
comp=Z,4.1nm,0.7s,baz=317
SATY Saty 53.36 317 *e*P **P 04 50 33.9 -1.5**
baz=317
SATY Saty 53.36 317 *e*P **P 04 50 33.9 -1.5**
KSH Kashi 53.80 312 *e*P P 04 50 43.6 +4.9
KSH pP pwP 04 50 58.8 -2.1
KSH S **S 04 58 14.4 +4.0**
KSH pmax pmax
comp=Z,19nm,0.6s
KSH pmax pmax
comp=Z,560nm,5.5s
KSH LR LR
comp=Z,2µm,14.1s
KSH LR LR
comp=Z,1µm,10.2s
KSH LR LR
comp=Z,3µm,19.0s
TDK Taldyqorghan 54.15 319 *e*P **P 04 50 40.6 -0.5**
baz=319
TDK LR LR 05 14 35.5
comp=Z,1µm,21.5s,baz=319
TDK Taldyqorghan 54.15 319 *e*P **P 04 50 40.5 -0.5**
TDK MLR MLR
comp=Z,1µm,22.0s
MDOK Medeo 54.32 317 *e*P **P 04 50 41.9 -0.6**
baz=316
MDOK *e*S **S 04 58 16.2 -1.2**
baz=316
MDOK LR LR 05 15 23.8
comp=Z,494nm,18.7s,baz=316
MDOK Medeo 54.32 317 *e*P **P 04 50 41.8 -0.6**
MDOK *e*S **S 04 58 16.1 -1.2**
MDOK MLR MLR
comp=Z,494nm,19.0s
NIL Nilore 54.32 304 P **P 04 50 41.1 -1.4**
NIL pmax pmax
comp=Z,38nm,0.8s
NIL Nilore 54.32 304 P **P 04 50 41.1 -1.4**
NIL IAmb IAmb 04 50 59.8
comp=Z,38nm,0.8s
TNSS Tian-Shan 54.34 316 *e*P **P 04 50 41.7 -1.3**
baz=316
TNSS Tian-Shan 54.34 316 *e*P **P 04 50 41.6 -1.3**
AAA Alma-Ata 54.43 317 *e*P **P 04 50 41.8 -1.3**
baz=316
AAA LR LR 05 15 44.4
comp=Z,660nm,19.6s,baz=316
AAA Alma-Ata 54.43 317 *e*P **P 04 50 41.8 -1.3**
AAA MLR MLR
comp=Z,660nm,20.0s
KUU Kurty 55.07 317 *e*P **P 04 50 46.6 -1.1**
comp=Z,16nm,0.9s,baz=317
ZAA0 Zalesovo Array 55.10 331 P **P 04 50 46.7 -0.9**
ZAA0 IAmb IAmb 04 50 49.8
comp=Z,53nm,0.9s
ZAA0 IAMs_20 IAMs_20 05 17 13.8
comp=Z,1µm,19.0s
ZALV Zalesovo Beam 55.10 331 P **P 04 50 46.7 -1.0**
comp=Z,33nm,0.7s,baz=116,slow=5.6,SNR=70
ZALV pP **sP 04 51 02.7 +1.0**
comp=Z,28nm,0.7s,baz=123,slow=6.2,SNR=12
ZALV PcP **PcP 04 51 49.2 +0.6**
comp=Z,7.4nm,0.6s,baz=122,slow=5.2,SNR=1.9
ZALV LR LR 05 17 25.4
comp=Z,1µm,19.4s,baz=129,slow=39
ZALV Zalesovo Beam 55.10 331 *i* P **P 04 50 47.5 -0.2**
ZALV pmax pmax
comp=Z,33nm,0.7s
ZALV Zalesovo Beam 55.10 331 P **P 04 50 46.8 -0.9**
TKM2 Tokmak 2 55.22 316 P **P 04 50 50.1 +1.0**
SNR=8.2
TKM2 Tokmak 2 55.22 316 *i* P **P 04 50 49.0 -0.1**
TKM2 pmax pmax
comp=Z,12nm,0.9s
KBK Karagaybulak 55.58 315 P **P 04 50 53.2 +1.6**
SNR=6.5
UCH Uchtor 55.73 315 P **P 04 50 54.0 +1.0**
SNR=5.8
AAK Ala-Archa 55.88 315 *i* P **P 04 50 54.4 +0.6**
AAK pmax pmax
comp=Z,24nm,1.1s
AAK Ala-Archa 55.88 315 IAMs_20 IAMs_20 05 18 17.2
comp=Z,1µm,19.0s
TAU Tasmania Unive 55.91 162 P **P 04 50 54.6 +1.0**
TAU pmax pmax
comp=Z,78nm,0.9s
TAU Tasmania Unive 55.91 162 P **P 04 50 54.6 +1.0**
SEY Seymchan 55.92 14 *i* P **P 04 50 53.9 +0.5**
SGDS Sogindy 56.07 316 *e*P **P 04 50 53.5 -1.4**
baz=316
SGDS Sogindy 56.07 316 *e*P **P 04 50 53.5 -1.4**
AML Almayashu 56.28 314 P **P 04 50 58.5 +1.6**
SNR=15
EKS2 Erkin-Say 56.39 315 P **P 04 50 58.9 +1.6**
SNR=8.0
KURK Kurchatov 56.58 325*ce*P **P 04 50 57.6 -0.7**
KURK pmax pmax
comp=Z,168nm,2.2s
KURK Kurchatov 56.58 325 P **P 04 50 57.5 -0.7**
KURBB Kurchatov Arra 56.58 325 P **P 04 50 58.3 -0.1**
BTLS Baital 57.02 318 *e*P **P 04 51 00.5 -1.2**
comp=Z,2.3nm,0.6s,baz=318
BTLS *e*S **S 04 58 51.3 -1.6**
baz=318
BTLS Baital 57.02 318 *e*P **P 04 51 00.4 -1.2**
BTLS *e*S **S 04 58 51.3 -1.6**
BTLS pmax pmax
comp=Z,2.0nm,0.6s
MSVF Nonsavu 57.62 118 P **P 04 51 06.9 +0.6**
MSVF pmax pmax
comp=Z,59nm,1.1s
MSVF Nonsavu 57.62 118 P **P 04 51 06.9 +0.6**
MSVF IAmb IAmb 04 51 11.8
comp=Z,58nm,1.1s
GAR Garm 57.87 310 IAmb IAmb 04 51 23.7
comp=Z,102nm,1.5s
KBL Kabul 57.92 304 P **P 04 51 06.7 -1.7**
KBL pmax pmax
comp=Z,12nm,0.8s
KBL MLR MLR
comp=Z,500nm,20.0s
KBL Kabul 57.92 304 P **P 04 51 06.7 -1.7**
DZA Taraz 58.18 315 *e*P **P 04 51 09.4 -0.4**
baz=314
DZA Taraz 58.18 315 *e*P **P 04 51 09.4 -0.4**
CHGR Chuyangaron 58.67 309 IAmb IAmb 04 51 39.8
comp=Z,31nm,0.7s
KK31 Karatay Array 58.81 315 P **P 04 51 13.0 -1.2**
KK31 pmax pmax
comp=Z,11nm,0.9s
KK31 Karatay Array 58.81 315 P **P 04 51 13.0 -1.2**
KKAR Karatay Array 58.81 315 P **P 04 51 13.3 -0.9**
KKAR pmax pmax
comp=Z,11nm,0.9s
KKAR Karatay Array 58.81 315 P **P 04 51 13.3 -0.9**
KKAR Karatay Array 58.81 315 P **P 04 51 12.1 -2.1**
IUG luzhnay 58.89 313 *e*P **P 04 51 14.0 -0.9**
comp=Z,3.7nm,0.7s,baz=313
IUG *e*S **S 04 59 16.1 -1.6**
baz=313
IUG luzhnay 58.89 313 *e*P **P 04 51 14.0 -0.9**
IUG *e*S **S 04 59 16.1 -1.6**
IUG pmax pmax
comp=Z,4.0nm,0.7s
BRZS Berezniki 59.70 323 *e*P **P 04 51 18.6 -1.6**
comp=Z,2.9nm,0.8s,baz=323
BRZS Berezniki 59.70 323 *e*P **P 04 51 18.6 -1.6**
BRZS pmax pmax
comp=Z,3.0nm,0.8s
TIXI Tiksi 61.58 1 P **P 04 51 32.1 -0.5**
TIXI pmax pmax
comp=Z,70nm,1.3s
TIXI MLR MLR
comp=Z,1µm,20.0s
TIXI Tiksi 61.58 1 P **P 04 51 32.1 -0.5**
TIXI IAmb IAmb 04 51 34.9
comp=Z,70nm,1.3s
TIXI IAMs_20 IAMs_20 05 19 56.9
comp=Z,1µm,20.0s
BRVK Borovoye 62.25 325 P **P 04 51 36.6 -0.8**
BRVK pmax pmax
comp=Z,27nm,0.9s
BRVK MLR MLR
comp=Z,800nm,19.0s
BRVK Borovoye 62.25 325 P **P 04 51 36.6 -0.8**
BRVK IAmb IAmb 04 51 54.5
comp=Z,27nm,0.8s
BRVK IAMs_20 IAMs_20 05 22 16.6
comp=Z,774nm,19.0s
OUZ Omahuta 63.06 138 IAmb IAmb 04 51 47.2
comp=Z,50nm,1.1s
HRA Herat 63.46 303 IAMs_20 IAMs_20 05 23 15.8
comp=Z,650nm,21.0s
BILL Bilibino 63.48 15*ce*P **P 04 51 46.4 +1.0**
BILL pmax pmax
comp=Z,27nm,1.1s
BILL MLR MLR
comp=Z,732nm,19.0s
BILL Bilibino 63.48 15 P **P 04 51 45.2 -0.2**
BILL IAmb IAmb 04 51 48.3
comp=Z,36nm,1.1s
BILL IAMs_20 IAMs_20 05 24 44.9
comp=Z,741nm,18.0s
NRIK Noril'sk 64.38 346 P **P 04 51 51.6 +0.4**
comp=Z,44nm,0.9s,baz=130,slow=6.7,SNR=44
NRIK LR LR 05 23 14.8
comp=Z,1µm,19.2s,baz=180,slow=39
NRIK Noril'sk 64.38 346*ce*P **P 04 51 50.6 -0.6**
NRIK pmax pmax
comp=Z,100nm,1.1s
NRIK MLR MLR
comp=Z,948nm,20.0s
QRZ Quartz Range 65.84 143 P **P 04 52 03.3 +2.2**
QRZ Quartz Range 65.84 143 IAMs_20 IAMs_20 05 21 41.3
comp=Z,897nm,19.0s
VRZ Vera Road 66.13 141 P **P 04 52 05.7 +2.7**
MLZ Mavora Lakes 66.48 150 P **P 04 52 06.2 +0.9**
WKZ Wanaka 66.56 149 P **P 04 52 06.1 +0.4**
NNZ Nelson 66.58 143 P **P 04 52 06.7 +0.8**
THZ Tophouse 66.65 144 P **P 04 52 06.4 0.0**
THZ Tophouse 66.65 144 IAMs_20 IAMs_20 05 22 30.1
comp=Z,793nm,19.0s
NGZ Ngauruhoe 66.69 140 P **P 04 52 08.9 +2.0**
OTVZ Oturere 66.72 140 P P 04 52 10.7 +3.7
WHVZ Whangaehu Hut 66.75 141 P **P 04 52 10.2 +2.9**
WHZ Wether Hill Ro 66.77 150 IAmb IAmb 04 52 43.9
comp=Z,55nm,1.2s
LBZ Lake Benmore 66.87 148 P **P 04 52 07.3 -0.3**
MOVZ Moawhango 66.92 141 P **P 04 52 10.5 +2.3**
LTZ Lake Taylor 66.94 145 IAMs_20 IAMs_20 05 27 10.4
comp=Z,1µm,18.0s
TUWZ Tuamarina 67.05 143 P **P 04 52 10.0 +1.2**
URZ Urewera 67.12 139 IAMs_20 IAMs_20 05 22 26.8
comp=Z,1µm,20.0s
GEYT Alibeck 67.13 307 P **P 04 52 08.6 -1.0**
comp=Z,9.0nm,0.7s,baz=101,slow=4.7,SNR=11
GEYT pP **sP 04 52 23.4 -0.5**
comp=Z,13nm,0.9s,baz=72,slow=4.7,SNR=5.9
GEYT LR LR 05 27 00.9
comp=Z,535nm,18.1s,baz=85,slow=41
GEYT Alibeck 67.13 307 P **P 04 52 09.2 -0.4**
GYA0B ALIBECK ARRAY 67.13 307 IAmb IAmb 04 52 27.1
comp=Z,26nm,0.9s
GYA0B IAMs_20 IAMs_20 05 27 07.9
comp=Z,1µm,19.0s
BSWZ Blackbirch Sta 67.18 144 P **P 04 52 10.3 +0.6**
AB31 Akbulak array 67.42 319 *i* P **P 04 52 10.1 -1.0**
ABKAR Akbulak array 67.42 319 P **P 04 52 10.2 -0.9**
KRHZ Kereru 67.45 140 P **P 04 52 12.4 +0.9**
ODZ Otahua Downs 67.55 148 IAmb IAmb 04 52 18.2
comp=Z,79nm,1.5s
BHW Baring Head 67.58 143 P **P 04 52 13.2 +1.0**
BFZ Birch Farm 67.98 141 IAMs_20 IAMs_20 05 26 15.1
comp=Z,711nm,18.0s
UOSS Minazif 68.34 293 P **P 04 52 17.0 -0.4**
SVE Sverdlovsk 68.71 327⇓*e*P **P 04 52 19.1 0.0**
SVE pmax pmax
comp=Z,130nm,1.4s
SVE MLR MLR
comp=Z,1µm,20.0s
ARU Arti 69.73 327*c* *i*P **P 04 52 24.9 -0.5**
ARU *PP **sP 04 52 40.8 +1.2**
ARU 04 54 54.6
ARU S **S 05 01 30.9 0.0**
ARU SS **SS 05 05 52.7 -7.0**
ARU pmax pmax
comp=Z,39nm,0.6s
ARU Arti 69.73 327 P **P 04 52 24.5 -0.9**
TNA Tin City 70.80 24 P **P 04 52 32.9 +1.1**
baz=251
SOCY Socotra 71.32 280 P **P 04 52 35.2 -0.8**
SOCY IAmb IAmb 04 52 39.2
comp=Z,35nm,0.8s
RDOG Red Dog Mine 73.42 22 IAmb IAmb 04 52 51.0
comp=Z,78nm,1.2s
KIRV Kirov 74.94 328*ce*P **P 04 52 56.5 +0.1**
SVW2 Sparrevohn 75.28 29 IAmb IAmb 04 53 02.2
comp=Z,48nm,1.0s
TTA Tatalina 75.28 27 P **P 04 52 59.5 +1.0**
TTA pmax pmax
comp=Z,23nm,0.9s
TTA Tatalina 75.28 27 P **P 04 52 59.5 +1.0**
MAK Makhachkala 75.44 312 *e*P **P 04 53 01.4 +1.8**
MAK *e* 04 55 50.8
MAK *e*S **S 05 02 41.0 +4.5**
MAK *e*SS **SS 05 07 28.6 +1.1**
MAK pmax pmax
comp=Z,281nm,1.3s
MAK MLR MLR
comp=Z,512nm,21.0s
A21K Barrow 76.25 19 P **P 04 53 04.4 +0.7**
baz=260,SNR=17
IMAR Indian Mountai 76.59 24 P **P 04 53 06.3 +0.5**
GROC Groznyy 76.69 312 *e*P **P 04 53 07.2 +0.4**
GROC *e* 04 53 20.5
GROC pmax pmax
comp=Z,48nm,1.0s
SKT Skwentna 77.28 29 IAmb IAmb 04 53 14.2
comp=Z,52nm,1.1s
GNI Garni 77.58 309 *i* P **P 04 53 11.7 -0.4**
GNI pmax pmax
comp=Z,19nm,1.3s
GNI Garni 77.58 309 P **P 04 53 12.6 +0.5**
GNI IAmb IAmb 04 53 16.2
comp=Z,110nm,1.6s
KTH Kantishna Hill 77.63 27 IAmb IAmb 04 53 16.6
comp=Z,38nm,1.2s
SUA Susitna One 77.63 29 IAmb IAmb 04 53 17.5
comp=Z,56nm,0.8s
MLY Manley 77.78 26 P **P 04 53 12.2 -0.3**
baz=269,SNR=15
CUT Chulitna 77.89 28 P **P 04 53 13.6 +0.5**
baz=268
TRF Thorofare Moun 77.91 27 IAmb IAmb 04 53 16.0
comp=Z,51nm,1.1s
COLD Coldfoot 78.09 23 P **P 04 53 14.6 +0.4**
baz=268,SNR=26
COLD Coldfoot 78.09 23 IAmb IAmb 04 53 18.0
comp=Z,53nm,1.2s
ZEI Tsey 78.09 312 *e*P **P 04 53 13.9 -1.0**
ZEI pmax pmax
comp=Z,65nm,1.4s
RC01 Rabbit Creek A 78.11 30 P **P 04 53 14.7 +0.3**
baz=269
CLDR Caldiran 78.27 308 *e*P **P 04 53 15.8 -0.2**
I23K Minto, Yukon-K 78.36 25 P **P 04 53 16.0 +0.4**
baz=269,SNR=14
I23K Minto, Yukon-K 78.36 25 IAmb IAmb 04 53 21.2
comp=Z,122nm,1.8s
TOLK Toolik Lake Re 78.39 22 P **P 04 53 16.7 +0.8**
baz=268,SNR=26
TOLK Toolik Lake Re 78.39 22 IAmb IAmb 04 53 19.6
comp=Z,44nm,1.0s
PMR Palmer 78.41 29 IAmb IAmb 04 53 18.2
comp=Z,48nm,1.0s
AKH Akhalkalaki 78.47 310 ⇓P **P 04 53 18.3 +1.4**
AKH Akhalkalaki 78.47 310 P **P 04 53 17.2 +0.3**
AKH pmax pmax
comp=Z,310nm,1.4s
AKH Akhalkalaki 78.47 310 P **P 04 53 17.2 +0.3**
NEA2 Nenana 78.47 26 P **P 04 53 17.5 +1.1**
baz=269,SNR=6.6
GHO Glory Hole Cre 78.51 29 IAmb IAmb 04 53 19.1
comp=Z,63nm,1.2s
MCK McKinley 78.52 27 P **P 04 53 16.3 -0.3**
baz=269,SNR=29
RND Reindeer 78.56 27 IAmb IAmb 04 53 19.8
comp=Z,81nm,1.3s
GOF Gofitskoye 78.60 314⇑*e*P P 04 53 07.2 -10
KNK Knik Glacier 78.73 29 IAmb IAmb 04 53 20.7
comp=Z,86nm,1.1s
KNK IAMs_20 IAMs_20 05 24 13.4
comp=Z,703nm,19.0s
KBZ Khabaz 78.78 313 P **P 04 53 18.1 -0.2**
comp=Z,8.1nm,0.5s,baz=56,slow=24,SNR=23
KBZ LR LR 05 33 26.3
comp=Z,821nm,18.8s,baz=170,slow=40
KBZ Khabaz 78.78 313*de*P **P 04 53 17.6 -0.7**
KBZ pmax pmax
comp=Z,48nm,1.3s
SML Sawmill 78.79 29 IAmb IAmb 04 53 20.9
comp=Z,92nm,1.1s
KARS Kars 78.83 310 *e*P **P 04 53 20.7 +1.8**
WRH Wood River Hil 78.90 26 IAmb IAmb 04 53 23.9
comp=Z,45nm,1.2s
KIV Kislovodsk 78.92 313 *e*P **P 04 53 18.6 -0.7**
KIV *e*S **S 05 03 13.1 -1.5**
KIV pmax pmax
comp=Z,92nm,1.0s
KIV pmax pmax
comp=Z,74nm,3.5s
KIV Kislovodsk 78.92 313 P **P 04 53 18.5 -0.8**
KIV IAMs_20 IAMs_20 05 33 25.6
comp=Z,833nm,19.0s
AGRB Hanur-Agry 78.96 308 *e*P **P 04 53 20.5 +0.8**
TCOL CIGO, UAF Yank 79.00 26 P **P 04 53 19.5 +0.4**
baz=270
GEVA Gevas 79.00 307 IAmb IAmb 04 53 37.5
comp=Z,113nm,1.7s
COLA College 79.00 26 *i* P **P 04 53 19.3 +0.2**
COLA pmax pmax
comp=Z,18nm,1.0s
COLA College 79.00 26 P **P 04 53 19.6 +0.4**
AKDM Akdamar-Van 79.06 307 *e*P **P 04 53 21.6 +1.3**
POKR Poker Plat Res 79.18 25 P **P 04 53 20.5 +0.3**
baz=270,SNR=5.5
POKR Poker Plat Res 79.18 25 IAmb IAmb 04 53 24.4
comp=Z,64nm,1.6s
VRH Novokhopyorsk 79.20 320 *e*P **P 04 53 19.9 -0.6**
VRH pmax pmax
comp=Z,80nm,0.7s
DHY Denali Highway 79.22 28 IAmb IAmb 04 53 26.5
comp=Z,81nm,1.8s
MLAZ Malazgirt-MUS 79.33 308 *e*P **P 04 53 23.9 +2.1**
SENK Senkaya-Erzuru 79.38 310 *e*P **P 04 53 24.2 +2.1**
HDA Harding Lake 79.39 26 P **P 04 53 21.1 -0.3**
baz=271,SNR=13
HDA Harding Lake 79.39 26 IAmb IAmb 04 53 24.7
comp=Z,48nm,1.4s
IL31 79.41 26 P **P 04 53 20.7 -0.7**
ILAR Eielson Array 79.41 26 P **P 04 53 20.4 -1.1**
comp=Z,6.7nm,0.7s,baz=244,slow=4.6,SNR=35
ILAR PKKPbc **PKKPbc 05 12 10.9 -2.2**
comp=Z,1.1nm,0.8s,baz=126,slow=2.6,SNR=7.3
ILAR PKPPKP **P'P'df 05 20 12.1 -3.8**
comp=Z,1.1nm,1.1s,baz=160,slow=3.9,SNR=4.5
ILAR LR LR 05 27 13.1
comp=Z,257nm,21.9s,baz=282,slow=35
FID Port Fidalgo 79.71 30 IAmb IAmb 04 53 28.1

GURO **Guroymak-BITLI** 79.78 307 *e*P P 04 53 25.2 +1.0
KOPR **Koprukoy-ERZUR** 79.81 309 *e*P P 04 53 25.6 +1.3
M24K **Tolsona, Glenn** 79.81 29 P P 04 53 24.0 +0.3
baz=272
M24K **Tolsona, Glenn** 79.81 29 IAmb IAmb 04 53 29.8
comp=Z,46nm,0.8s
KLU **Klutina** 79.95 29 IAmb IAmb 04 53 27.6
comp=Z,53nm,1.3s
KLMR **Klimovskoe** 80.01 330*d* *i*P P 04 53 25.2 +0.5
KLMR *e* 04 56 26.9
KLMR pmax pmax
comp=Z,213nm,1.1s
KLMR MLR MLR
comp=Z,484nm,16.0s
KLMR **Klimovskoe** 80.01 330⇓ *i*P P 04 53 25.2 +0.5
KLMR *e*P P 04 53 25.2 +0.5
KLMR *e*P P 04 53 25.2 +0.5
KLMR AMP 04 53 27.1
comp=Z,213nm,1.1s
KLMR *e*PP PP 04 56 26.9 +0.1
KLMR LQ LQ 05 22 37.2
KLMR LQ LQ 05 22 37.2
KLMR LR LR 05 28 21.7
KLMR AMP 05 33 17.2
comp=Z,484nm,16.1s
FYU **Fort Yukon** 80.05 24 IAmb IAmb 04 53 31.1
comp=Z,81nm,1.4s
VRTB **Varto-Mus** 80.18 308 *e*P P 04 53 28.4 +2.1
BMAR **Burnt Mountain** 80.27 23 P P 04 53 26.1 0.0
RIDG **Independent Ri** 80.34 27 IAmb IAmb 04 53 29.2
comp=Z,96nm,1.2s
TMCR **Tamitsa** 80.53 334 *e*P P 04 53 25.3 -2.1
TMCR pmax pmax
comp=Z,117nm,1.4s
CHOM **Cayeli-Rize** 80.54 310 *e*P P 04 53 28.7 +0.6
N25K **Chitina, Valde** 80.58 29 P P 04 53 28.8 +0.9
baz=274,SNR=6.7
DOT **Dot Lake** 80.69 27 IAmb IAmb 04 53 31.2
comp=Z,42nm,1.2s
SCRK **Sand Creek** 80.71 27 P P 04 53 28.7 +0.1
baz=274,SNR=16
VORD **Divnogorie** 80.75 320 *e*P P 04 53 27.1 -1.8
VORD pmax pmax
comp=Z,40nm,0.7s
BNGB **Bingl** 80.80 308 *e*P P 04 53 31.1 +1.5
VSR **Storozhevoye** 80.81 320 *e*P P 04 53 28.3 -0.9
VSR pmax pmax
comp=Z,60nm,0.8s
LPSR **Galich'ya Gora** 80.85 322 *e*P P 04 53 29.3 -0.1
LPSR pmax pmax
comp=Z,130nm,1.0s
MARD **Mardin** 80.88 306 P P 04 53 29.6 -0.5
MARD IAmb IAmb 04 53 35.3
comp=Z,41nm,0.6s
MENT **Mentasta** 80.90 28 IAmb IAmb 04 53 41.3
comp=Z,49nm,1.4s
GLB **Gilahina Butte** 80.96 29 IAmb IAmb 04 53 33.2
comp=Z,49nm,1.1s
GLB IAMs_20 IAMs_20 05 27 20.1
comp=Z,688nm,22.0s
L26K **Log Cabin Wild** 81.06 27 P P 04 53 30.9 +0.5
baz=274,SNR=7.9
SOC **Sochi** 81.09 313 *e*P P 04 53 28.1 -2.8
SOC *e* 04 56 34.8
SOC *e*PPP PPP 04 58 26.0
SOC *e*S S 05 03 31.7 -5.5
SOC *e*SSS SSS 05 12 18.0
SOC pmax pmax
comp=Z,29nm,1.0s
MAZI **Mazidag** 81.13 307 *e*P P 04 53 32.6 +1.2
CRQM **Cirque** 81.34 30 IAmb IAmb 04 53 42.0
comp=Z,46nm,1.1s
MOS **Moscow** 81.35 325 *e*P P 04 53 29.7 -2.3
MOS *e**PP sP 04 53 44.7 -2.0
MOS *e*S S 05 03 33.6 -5.8
MOS pmax pmax
comp=Z,161nm,0.9s
TGL **Tana Glacier** 81.50 30 P P 04 53 31.2 -1.6
TGL IAmb IAmb 04 53 39.1
comp=Z,106nm,1.7s
K27K **Chicken** 81.54 26 P P 04 53 34.1 +1.3
baz=276
LVZ **Lovozero** 81.61 338*c* *e*P P 04 53 33.6 +0.4
LVZ pmax pmax
comp=Z,68nm,1.3s
LVZ **Lovozero** 81.61 338 P P 04 53 33.5 +0.3
BALM **Baldy** 81.70 29 IAmb IAmb 04 53 37.9
comp=Z,95nm,1.7s
ISLE **Juniper Island** 81.75 30 IAmb IAmb 04 53 37.6
comp=Z,47nm,1.2s
BCAR **Beaver Creek A** 81.77 27 P P 04 53 34.8 +0.6
PTK **Pertek** 81.81 308 *e*P P 04 53 35.9 +0.8
SVRC **Sivrice-ELAZID** 81.93 308 *e*P P 04 53 37.9 +2.2
OBN **Obninsk** 82.01 325⇑ *i*P P 04 53 34.9 -0.5
OBN *e*S S 05 03 47.3 +1.1
OBN *e*SS SS 05 09 09.4 +3.9
OBN pmax pmax
comp=Z,104nm,0.9s
OBN MLR MLR
comp=Z,695nm,20.0s
OBN **Obninsk** 82.01 325 P P 04 53 35.0 -0.5
BARN **Barnard Glacie** 82.03 29 IAmb IAmb 04 53 40.2
comp=Z,72nm,1.3s
APA **Apatity** 82.11 337⇓ *i*P P 04 53 34.8 -1.0
APA pmax pmax
comp=Z,60nm,0.9s
URFA **Urfa** 82.42 307 *e*P P 04 53 39.5 +1.4
ANN **Anapa** 82.60 314*c* *i*P P 04 53 38.1 -0.7
ANN *e**PP sP 04 53 53.9 +0.6
ANN *e* 04 56 43.0
ANN *e*S S 05 03 53.6 +0.9
ANN pmax pmax
comp=Z,110nm,1.0s
MALT **Malatya** 82.62 308 *e*P P 04 53 40.3 +1.1
DAWY **Dawson** 82.71 26 IAmb IAmb 04 53 42.7
comp=Z,35nm,1.1s
DAWY IAMs_20 IAMs_20 05 28 54.4
comp=Z,674nm,21.0s
RSDY **Resadiye-TOKAT** 83.21 310 *e*P P 04 53 42.9 +0.8
DARE **Darende-Malaty** 83.33 308 *e*P P 04 53 43.2 +0.3
ABPO **Ambohimpanom** 83.56 249 P P 04 53 42.7 -1.8
ABPO pmax pmax
comp=Z,34nm,1.0s
ABPO **Ambohimpanom** 83.56 249 P P 04 53 42.7 -1.8
ABPO IAmb IAmb 04 54 00.3
comp=Z,34nm,0.9s
GAZ **Gaziantep** 83.72 307 *e*P P 04 53 46.1 +1.2
GAZ **Gaziantep** 83.72 307 IAmb IAmb 04 53 48.0
comp=Z,57nm,1.2s
TOKT **Tokat** 83.81 310 *e*P P 04 53 45.7 +0.4
TOKA **Tokat** 83.86 310 IAmb IAmb 04 53 48.1
comp=Z,28nm,1.0s
KEV **Kevo** 84.05 340 P P 04 53 47.2 +1.5
KEV pmax pmax
comp=Z,263nm,2.0s
KEV **Kevo** 84.05 340 P P 04 53 47.2 +1.5
HYT **Haines Junctio** 84.08 29 IAmb IAmb 04 53 50.3
comp=Z,37nm,1.0s
KVT **Kavak** 84.08 311 *e*P P 04 53 47.7 +1.1
SARI **SarD1z-Kayseri** 84.18 308 *e*P P 04 53 48.6 +1.3
INK **Inuvik** 84.30 22 IAmb IAmb 04 53 50.0
comp=Z,46nm,1.3s
SPA0 **Spitsbergen Ar** 84.36 349 *e*P P 04 53 48.6 +1.4
BNN **Bunyan** 84.56 308 *e*P P 04 53 49.9 +0.7
DIKM **Dikmen** 84.59 311⇑ P P 04 53 49.9 +0.8
ARA0 **ARCESS Array S** 84.61 340 *e*P P 04 53 50.0 +1.3
ARCES **ARCESS Array B** 84.61 340 P P 04 53 48.3 -0.4
comp=Z,24nm,0.7s,baz=80,slow=5.5,SNR=127
ARCES PKiKP **PKiKP** 04 59 01.8 +0.2
comp=Z,2.2nm,0.8s,baz=270,slow=0.6,SNR=5.3
ARCES LR LR 05 37 11.5
comp=Z,381nm,19.4s,baz=10.0,slow=40
KOZT **Kozan** 84.77 307 *e*P P 04 53 51.1 +1.0
SIM **Simferopol'** 84.91 315*c* *i*P P 04 53 51.3 +0.7
SIM pmax pmax
comp=Z,159nm,0.6s
HAMF **Hammerfest** 84.93 341 *e*P P 04 53 51.5 +1.4
CORM **Corum** 85.28 310 *e*P P 04 53 53.7 +0.9
WHY **Whitehorse** 85.37 29 IAmb IAmb 04 53 56.8
comp=Z,69nm,1.2s
SKAG **Skagway** 85.40 30 IAmb IAmb 04 53 59.0
comp=Z,33nm,1.0s
BZK **Bozkurt** 85.47 312⇑ P P 04 53 53.2 -0.3
BZK **Bozkurt** 85.47 312 *e*P P 04 53 51.1 -2.4

KTK1 **Kautokeino** 85.53 339 *e*P P 04 53 54.9 +1.7
BESE **Bessie Mountai** 85.83 31 IAmb IAmb 04 54 02.1
comp=Z,60nm,1.6s
ILGA **Ilgaz** 85.83 311 P P 04 53 55.1 -0.5
ILGA IAmb IAmb 04 53 58.1
comp=Z,32nm,0.8s
SIT **Sitka** 85.90 33 IAmb IAmb 04 54 00.0
comp=Z,76nm,1.4s
BR131 **Keskin Array S** 86.11 309 *i* P P 04 53 55.6 -1.3
BRTR **Keskin Array B** 86.11 309 P P 04 53 56.1 -0.8
comp=Z,10nm,0.8s,baz=111,slow=3.4,SNR=37
BRTR pP **sP** 04 54 11.6 +0.1
comp=Z,15nm,0.8s,baz=104,slow=3.7,SNR=14
BRTR LR LR 05 39 28.7
comp=Z,96nm,18.2s,baz=90,slow=40
BRTR **Keskin Array B** 86.11 309 P P 04 53 55.6 -1.3
FINES **FINESS Array B** 86.36 332 P P 04 53 57.1 -0.4
comp=Z,27nm,0.4s,baz=80,slow=4.6,SNR=233
FINES pP **sP** 04 54 12.6 +0.4
comp=Z,20nm,0.4s,baz=93,slow=6.5,SNR=9.8
FINES LR LR 05 37 42.4
comp=Z,709nm,19.5s,baz=76,slow=39
FINES **FINESS Array B** 86.36 332 P P 04 53 57.5 +0.1
AFSR **Afar-Bala (An** 86.59 309 *e*P P 04 53 57.1 -2.1
VSU **Vasula** 86.76 329 *e*P P 04 54 00.1 +0.7
VSU **Vasula** 86.76 329 *i* P P 04 53 59.5 0.0
VSU pmax pmax
comp=Z,232nm,1.2s
TRO **Tromso** 86.78 341 *e*P P 04 53 59.9 +0.5
PPT **Papeete** 86.97 108 LR LR 05 29 11.9
comp=Z,408nm,18.5s,baz=290,slow=33
PPT2 **Papeete2** 86.97 108 *e*P P 04 54 00.5 -0.9
comp=Z,68nm,1.5s
PPT2 **Papeete2** 86.97 108 *e*S S 05 04 34.6 -2.6
comp=Z,333nm,25.8s
PPT2 **Papeete2** 86.97 108 *e*LQ LQ 05 17 31.7
comp=Z,427nm,25.8s
PPT2 *e*LR LR 05 21 41.8
comp=Z,949nm,22.5s,baz=287
PAE **Paea** 86.98 108 *e*P P 04 54 00.2 -1.1
comp=Z,8.9nm,1.2s
BERE **Bereket-Mersin** 87.02 306 *e*P P 04 54 02.4 +1.0
MICGM **Minsk** 87.06 325 *e* P 04 54 01.0 -0.1
MNK **Minsk** 87.06 325 *e*P P 04 54 01.0 -0.1
AKASG **Malin Array Be** 87.10 321 P P 04 54 00.8 -0.5
comp=Z,12nm,0.6s,baz=62,slow=5.0,SNR=66
AKASG pP **sP** 04 54 15.9 -0.2
comp=Z,12nm,0.6s,baz=63,slow=4.3,SNR=7.2
AKASG **Malin Array Be** 87.10 321 P P 04 54 00.4 -0.9
AKASG pmax pmax
comp=Z,48nm,1.4s
AKASG **Malin Array Be** 87.10 321 P P 04 54 00.3 -0.9
AKBB **Malin Array Si** 87.10 321 P P 04 54 00.4 -0.9
AKBB pmax pmax
comp=Z,164nm,1.5s
AKBB **Malin Array Si** 87.10 321 P P 04 54 00.4 -0.9
TIAR **Tiarei** 87.18 108 *e*P P 04 54 01.3 -1.0
comp=Z,16nm,1.2s
TVO **Taravao** 87.31 108 *e*P P 04 54 02.0 -1.0
comp=Z,30nm,1.3s
IDID **Didziasalis** 87.52 326 *e*P P 04 54 02.7 -0.5
PURM **Purcari** 87.55 317⇑ P P 04 54 04.8 +1.3
NACGM **Naroch** 87.59 325 *e* P 04 54 04.0 +0.4
IZAR **Zarasai** 87.68 326 *e*P P 04 54 04.4 +0.4
ISAL **Salakas** 87.79 326 *e*P P 04 54 04.7 +0.1
IIGN **Ignalina** 87.80 326 *e*P P 04 54 03.8 -0.8
SORM **Soroca** 88.21 318⇓ P P 04 54 07.9 +1.2
TBI **Tubuai** 88.22 114 *e*S S 05 04 46.3 -2.5
comp=Z,323nm,25.8s
TBI **Tubuai** 88.22 114 *e*LQ LQ 05 18 13.2
comp=Z,467nm,42.2s
TBI *e*LR LR 05 22 20.9
comp=Z,876nm,24.2s,baz=288
MEH **Mehetia** 88.44 108 *e*P P 04 54 07.0 -1.3
comp=Z,35nm,1.4s
TLCR 88.56 316⇑ P P 04 54 08.8 +0.5
STEI **Steigen** 88.67 339 *e*P P 04 54 08.3 0.0
ISP **Isparta** 88.86 308 P P 04 54 08.6 -1.5
ISP pmax pmax
comp=Z,29nm,0.9s
ISP **Isparta** 88.86 308 P P 04 54 08.6 -1.5
ISP IAmb IAmb 04 54 26.6
comp=Z,29nm,0.9s
FAUS **Fauske** 88.87 339 *e*P P 04 54 09.5 +0.1
TPGR **Topolog** 88.90 315⇑ P P 04 54 11.6 +1.5
VASR **Vaslui** 88.92 317⇓ P P 04 54 11.3 +1.2
PABE **Paberze** 88.99 326 *e*P P 04 54 10.3 +0.2
TIRR **Tirgusor** 89.00 315⇓ P P 04 54 10.5 0.0
TIRR **Tirgusor** 89.00 315 IAmb IAmb 04 54 12.7
comp=Z,40nm,0.8s
CFR **Carcaliu** 89.03 316⇓ P P 04 54 11.9 +1.3
TLBR **Topalu** 89.23 315⇑ P P 04 54 13.0 +1.4
SLIT **Slitere, Latvi** 89.27 329 *e*P P 04 54 11.9 +0.5
HARR **Harsova** 89.28 315⇓ P P 04 54 12.2 +0.4
VNDA **Vanda** 89.62 173 P P 04 54 13.3 +0.7
comp=Z,31nm,1.1s,baz=319,slow=6.3,SNR=48
VNDA LR LR 05 35 29.0
comp=Z,258nm,19.2s,baz=354,slow=36
VNDA **Vanda** 89.62 173 P P 04 54 12.2 -0.4
VNDA pmax pmax
comp=Z,42nm,1.1s
VNDA **Vanda** 89.62 173 P P 04 54 12.2 -0.4
VNDA IAmb IAmb 04 54 15.4
comp=Z,42nm,1.1s
MAW **Mawson** 89.67 200 P P 04 54 12.7 -0.2
comp=Z,3.3nm,1.0s,baz=108,slow=3.2,SNR=4.2
MAW LR LR 05 30 22.8
comp=Z,190nm,21.5s,baz=57,slow=33
MAW **Mawson** 89.67 200 P P 04 54 12.4 -0.5
MAW **Mawson** 89.67 200 P P 04 54 12.4 -0.5
MOR8 **Moi Rana** 89.67 338 *e*P P 04 54 12.3 -0.9
TESR **Tescani** 89.72 317⇓ P P 04 54 15.0 +1.1
KMBO **Kilima Mbogo** 89.78 269 P P 04 54 14.3 -0.7
comp=Z,3.1nm,1.0s,baz=111,slow=8.1,SNR=5.1
KMBO LR LR 05 35 17.8
comp=Z,369nm,18.4s,baz=94,slow=36
KMBO **Kilima Mbogo** 89.78 269 P P 04 54 13.8 -1.3
KMBO pmax pmax
comp=Z,19nm,1.3s
KMBO MLR MLR
comp=Z,500nm,18.0s
KMBO **Kilima Mbogo** 89.78 269 P P 04 54 13.8 -1.3
KMBO **Kilima Mbogo** 89.78 269 IAMs_20 IAMs_20 05 34 36.8
comp=Z,454nm,18.0s
VRI **Vrincioaia** 89.83 317⇑ P P 04 54 14.7 +0.3
SUW **Suwalki** 89.86 325 *e*P P 04 54 13.8 -0.5
BISRR **Bisoca** 89.92 316⇓ P P 04 54 15.3 +0.4
PBUR **Paburge** 89.94 327 *e*P P 04 54 14.6 0.0
BIZ **Bicaz** 89.98 318⇓ P P 04 54 15.8 +0.8
NEHR **Nehoiu** 90.23 316⇑ P P 04 54 17.8 +1.5
BURAR **Bucovina Array** 90.39 318⇑ P P 04 54 18.3 +1.2
BURAR **Bucovina Array** 90.39 318 P P 04 54 17.1 0.0
BUR08 **Bucovina Ar. S** 90.39 319 IAmb IAmb 04 54 20.3
comp=Z,56nm,1.1s
OZUR 90.40 317⇑ P P 04 54 18.9 +1.8
MLR **Muntele Rosu** 90.45 316⇓ P P 04 54 18.6 +1.1
MLR **Muntele Rosu** 90.45 316 IAmb IAmb 04 54 19.8
comp=Z,26nm,1.1s
LVV **L'vov** 90.55 321 *e*P P 04 54 17.1 -0.5
LVV *e*S S 05 05 07.8 -1.8
DAG **Danmarks Havn** 91.06 353 *i* P P 04 54 19.0 -0.5
DAG pmax pmax
comp=Z,30nm,0.9s
DAG **Danmarks Havn** 91.06 353 *i* P P 04 54 19.0 -0.5
comp=Z,30nm,0.9s
DAG **Danmarks Havn** 91.06 353 *i* P P 04 54 19.0 -0.5
DAG IAmb IAmb 04 54 20.9
comp=Z,30nm,0.9s
VOIR 91.07 316⇓ P P 04 54 20.5 +0.3
NSS **Namsos** 91.32 337 *e*P P 04 54 20.8 0.0
KWP **Kalwaria Pacla** 91.42 321 *e*P P 04 54 22.2 +0.5
KWP **Kalwaria Pacla** 91.42 321 P P 04 54 21.7 0.0
KWP pmax pmax
comp=Z,143nm,0.9s
KWP **Kalwaria Pacla** 91.42 321 P P 04 54 21.7 0.0
RES **Resolute Bay** 91.63 10 IAmb IAmb 04 54 25.1
comp=Z,25nm,1.0s
BEL **Belsk** 91.90 323 *e*P P 04 54 25.0 +1.2
KOLS **Kolonicke sedl** 91.90 320 *e*P P 04 54 23.6 -0.3
KOLS pmax pmax
comp=Z,38nm,1.3s
KOLS **Kolonicke sedl** 91.90 320 *e*P P 04 54 23.6 -0.3
LOT **Lotru** 91.94 317⇑ P P 04 54 24.2 -0.2
UZH **Uzhgorod** 91.98 320 *e*P P 04 54 24.0 -0.3

CRVS **Cervenica-Dubn** 92.42 320 *e*P P 04 54 27.3 +0.9
CRVS **Cervenica-Dubn** 92.42 320 *e*P P 04 54 27.3 +0.9
TBLU **Trondheim** 92.58 336 *e*P P 04 54 27.1 +0.4
GZR **Gura Zlata** 92.62 317⇑ P P 04 54 28.1 +0.6
NIE **Niedzica** 92.98 321 *e*P P 04 54 29.1 +0.1
OJC **Ojcow** 93.02 322 *e*P P 04 54 29.4 +0.3
SIRR **Siria** 93.11 318⇑ P P 04 54 29.7 +0.1
KECS **Kecovo** 93.17 320 *e*P P 04 54 30.6 +0.8
KECS pmax pmax
comp=Z,32nm,1.0s
KECS **Kecovo** 93.17 320 *e*P P 04 54 30.6 +0.8
NB2 **NORSAR Subarra** 93.22 334 P P 04 54 28.7 -1.1
comp=Z,4.8nm,0.7s,baz=66,slow=4.6
NB2 **NORSAR Subarra** 93.22 334 P P 04 54 28.7 -1.1
baz=66,slow=4.6
NOA **NORSAR Array B** 93.22 334 P P 04 54 28.0 -1.8
comp=Z,7.9nm,0.7s,baz=63,slow=4.6,SNR=27
NOA pP **sP** 04 54 44.2 -0.3
comp=Z,0.4nm,0.5s,baz=329,slow=13,SNR=2.0
NOA LR LR 05 42 26.2
comp=Z,544nm,18.3s,baz=75,slow=39
BZS **Buzias** 93.33 317⇑ P P 04 54 30.6 0.0
DBG **Daneborg** 93.35 351 *i* P P 04 54 30.1 +0.1
DBG IAmb IAmb 04 54 32.4
comp=Z,19nm,0.9s
MDVR **Moldovita** 93.53 316⇓ P P 04 54 31.7 +0.1
LANS **Liptovska Anna** 93.58 321 *e*P P 04 54 32.4 +0.7
LANS pmax pmax
comp=Z,9.0nm,1.0s
LANS **Liptovska Anna** 93.58 321 *e*P P 04 54 32.4 +0.7
DOMB **Dombas** 93.65 335 *e*P P 04 54 32.2 +0.4
PSZ **Piszkesteto** 93.72 320⇓ P P 04 54 33.9 +1.5
PSZ **Piszkesteto** 93.72 320 IAmb IAmb 04 54 34.9
comp=Z,34nm,1.0s
YKA **Yellowknife Ar** 93.75 24 P P 04 54 32.6 +0.5
comp=Z,3.4nm,0.5s,baz=309,slow=3.1,SNR=14
YKA PKKP **PKKPdf** 05 11 35.6 -0.9
comp=Z,0.9nm,0.4s,baz=116,slow=3.8,SNR=4.1
YKA LR LR 05 38 06.8
comp=Z,219nm,20.6s,baz=0.0,slow=36
IDI **Anoyia** 93.85 307⇓ P P 04 54 32.8 -0.5
IDI **Anoyia** 93.85 307 IAMs_20 IAMs_20 05 31 34.5
comp=Z,433nm,19.0s
OSL **Oslo** 93.94 333 *e*P P 04 54 33.0 0.0
VAY **Valandovo** 93.95 313 *i* P P 04 54 32.8 -0.8
STIP **Stip** 94.12 313 *i* P P 04 54 32.4 -1.9
OKC **Ostrava-Krasne** 94.15 322 *e*P P 04 54 35.8 +1.5
VYHS **Vyhne** 94.20 321 *e*P P 04 54 35.0 +0.5
VYHS pmax pmax
comp=Z,34nm,1.3s
VYHS **Vyhne** 94.20 321 *e*P P 04 54 35.0 +0.5
LIT **Litokhoron** 94.36 312 IAmb IAmb 04 54 36.0
comp=Z,30nm,1.3s
MORC **Moravsky Berou** 94.54 322 *e*P P 04 54 36.5 +0.4
MORC **Moravsky Berou** 94.54 322 P P 04 54 35.9 -0.2
MORC **Moravsky Berou** 94.54 322 P P 04 54 35.9 -0.2
SKAR **Skarsla** 94.64 334 *e*P P 04 54 36.4 +0.1
FRGS **Fruska Gora** 94.69 317 *e*P P 04 54 36.5 -0.4
SRO **Srobarova** 94.76 320 *e*P P 04 54 38.3 +1.2
SRO pmax pmax
comp=Z,32nm,0.9s
SRO **Srobarova** 94.76 320 *e*P P 04 54 38.3 +1.2
JAVC **Velka Javorina** 94.79 321 *e*P P 04 54 38.7 +1.4
AGG **Agios Georgios** 94.80 311 IAmb IAmb 04 54 37.2
comp=Z,15nm,1.0s
KSP **Ksiaz** 94.89 323 *e*P P 04 54 38.1 +0.5
DIVS **Divibare** 94.91 316 *e*P P 04 54 37.4 -0.6
DIVS **Divibare** 94.91 316 IAmb IAmb 04 54 40.4
comp=Z,15nm,0.9s
OSTC **Ostas** 95.05 323 *e*P P 04 54 38.1 -0.3
DPC **Dobruska-Polom** 95.06 323 *e*P P 04 54 39.4 +0.9
MORH **Mrgy, Hungar** 95.10 319 *e*P P 04 54 38.0 -0.7
CHVC **Chvalec** 95.13 323 *e*P P 04 54 37.5 -1.3
MODS **Modra-Piesok** 95.21 321 *e*P P 04 54 39.3 +0.1
MODS pmax pmax
comp=Z,35nm,1.4s
MODS **Modra-Piesok** 95.21 321 *e*P P 04 54 39.3 +0.1
VRAC **Vranov** 95.29 322⇑ P P 04 54 41.5 +1.9
VRAC **Vranov** 95.29 322 *e*P P 04 54 40.2 +0.7
BBLS **Lazići** 95.39 316 *e*P P 04 54 39.0 -1.2
KRUC **Moravsky** 95.50 322 *e*P P 04 54 40.7 +0.2
HAPS **Han Pijesak,Bl** 95.62 316 *e*P P 04 54 40.0 -1.3
ITM **Ithomi** 95.64 309 IAmb IAmb 04 54 56.8
comp=Z,35nm,1.3s
TIR **Tirane** 95.88 314 IAmb IAmb 04 55 01.4
comp=Z,21nm,0.9s
PDG **Podgorica** 95.96 315⇓ P P 04 54 42.6 -0.1
PDG **Podgorica** 95.96 315 *e*P P 04 54 41.7 -1.0
PDG **Podgorica** 95.96 315 IAmb IAmb 04 54 44.2
comp=Z,18nm,0.9s
PVCC **Panska Ves** 96.02 324 *e*P P 04 54 45.1 +2.3
DRME **Dracevica, Mon** 96.09 315 *e*P P 04 54 42.5 -0.8
MBAR **Mbarara** 96.11 270 IAMs_20 IAMs_20 05 38 39.4
comp=Z,500nm,18.0s
BRG **Berggiesshubel** 96.25 324 *i* P P 04 54 43.9 +0.1
comp=Z,38nm,1.3s
BRG *e* 04 54 59.6
comp=Z,24nm,1.5s
comp=N,487nm,13.6s
comp=E,432nm,21.5s
comp=Z,726nm,18.6s
BRG **Berggiesshubel** 96.25 324 *i* P P 04 54 43.9 +0.1
BRG *e* 04 54 59.6
BRG pmax pmax
comp=Z,38nm,1.3s
BRG MLR MLR
comp=N,487nm,13.6s
BRG MLR MLR
comp=E,432nm,21.5s
BRG MLR MLR
comp=Z,726nm,18.6s
PRU **Pruhonice** 96.26 323 *e*P P 04 54 44.5 +0.6
CONA **Conrad Observa** 96.26 321 *i* P P 04 54 44.3 +0.2
comp=Z,45nm,1.6s,SNR=12
BRY **Bratogost** 96.30 315 *e*P P 04 54 45.1 +0.6
HCY **Herceg Novi** 96.49 315 *e*P P 04 54 45.1 0.0
BLY **Banja Luka** 96.58 318 *e*P P 04 54 45.0 -0.5
CLL **Collm** 96.61 325 *i* P P 04 54 44.9 -0.5
comp=Z,28nm,1.2s
CLL *i* sP **PcP** 04 54 49.5 +3.9
comp=Z,20nm,1.1s
CLL *i* 04 55 01.1
comp=Z,28nm,1.3s
CLL *e* 04 55 08.0
CLL *e*PP **PP** 04 58 37.0 -2.8
CLL *e*S **S** 05 05 59.0 -4.1
CLL *e* 05 07 11.0
CLL *e*PS **PS** 05 07 28.0 -1.0
CLL *e*SS SS 05 13 00.0 +23
CLL *e*SSSS 05 19 24.0
CLL Lm MLR 05 47 00.0
comp=Z,700nm,18.5s
CLL **Collm** 96.61 325 *i* P P 04 54 44.9 -0.5
CLL *i* *PP **sP** 04 55 01.1 +0.9
CLL *e*S **S** 05 05 59.0 -4.1
CLL pmax pmax
comp=Z,28nm,1.2s
CLL MLR MLR
comp=Z,700nm,18.5s
CLL **Collm** 96.61 325 P P 04 54 45.2 -0.2
CLL IAmb IAmb 04 54 47.7
comp=Z,28nm,1.2s
PBCC **Pribram** 96.70 323 *e*P P 04 54 47.0 +1.1
ARSA **Arzberg** 96.73 320 *i* P P 04 54 46.3 +0.2
comp=Z,26nm,1.2s,SNR=12
SCO **Scoresbysund** 96.90 350 *i* P P 04 54 48.1 +1.8
SCO pmax pmax
comp=Z,13nm,1.1s
SCO **Scoresbysund** 96.90 350 *i* P P 04 54 48.1 +1.8
comp=Z,13nm,1.1s
SCO **Scoresbysund** 96.90 350 *i* P P 04 54 48.1 +1.8
SCO IAmb IAmb 04 54 49.3
comp=Z,13nm,1.1s
SUMG **Summit** 97.01 356 *i* P Pdif 04 54 48.8 +1.4
SUMG **Summit** 97.01 356 *i* P Pdif 04 54 48.8 +1.4
SUMG **Summit** 97.01 356 *i* P Pdif 04 54 48.8 +1.4
KHC **Kasperske Hory** 97.18 323 *e*P Pdif 04 54 48.1 -0.1
KHC *e*pP sP 04 55 03.5 +0.5
BISS **Bistriski jare** 97.21 320 *i* P Pdif 04 54 48.2 -0.1
BISS *i* 04 54 50.0
GERES **GERESS Array B** 97.22 322 P Pdif 04 54 48.3 -0.2
comp=Z,9.2nm,0.9s,baz=64,slow=3.1,SNR=56
GERES pP sP 04 55 03.4 +0.1
comp=Z,7.2nm,0.9s,baz=64,slow=6.1,SNR=8.1

PERS **Pernice** 97.22 320 *i* P Pdif 04 54 48.4 -0.1
PERS *i* 04 54 50.1
SOKA Soboth 97.26 320 *i* P Pdif 04 54 49.1 +0.4
comp=Z,31nm,1.2s,SNR=11
MOA Molin 97.28 321 *i* P Pdif 04 54 48.8 +0.1
comp=Z,53nm,0.9s,SNR=24
CRES Cresnjev 97.31 319 *eP* Pdif 04 54 48.8 -0.1
OBKA Obir 97.63 320 *eP* Pdif 04 54 50.1 -0.2
comp=Z,21nm,0.9s
LJU Ljubljana 97.83 319 *i* P Pdif 04 54 51.4 +0.2
LJU Ljubljana 97.83 319 *eP* Pdif 04 54 52.0 +0.9
B08A Colville Reser 97.85 38 IAmb IAmb 04 54 54.0
comp=Z,19nm,1.4s
G05D Wamic, OR 97.85 41 P Pdif 04 54 50.5 -0.7
baz=293
CEY Cerknica 98.01 319 *i* P Pdif 04 54 52.2 +0.2
CEY Cerknica 98.01 319 *eP* **P 04 54 50.3 -1.7**
MYKA Terra Mystica 98.16 320 *eP* Pdif 04 54 53.1 +0.4
comp=Z,17nm,1.4s
KBA Koelnbreinsper 98.16 321 *i* P Pdif 04 54 52.5 -0.3
comp=Z,30nm,1.2s,SNR=7.9
JAVS Javornik 98.18 319 *i* P Pdif 04 54 52.7 -0.2
PRED Cave del Predi 98.28 320 IAmb IAmb 04 54 54.9
comp=Z,13nm,0.9s
SYO Syowa Base 98.30 201⇑ *eX* **P 04 54 50.2 -2.3**
SYO Syowa Base 98.30 201⇓ *eP* Pdif 04 55 02.4 +10
GRF Grafenberg Arr 98.33 324 *e*Pdiff Pdif 04 54 53.7 +0.3
GRF *epP*diff sP 04 55 09.2 +1.1
GRF *eL* L 05 46 26.9
comp=Z,632nm,19.1s
ZOU Zoufplan 98.61 320 P **P 04 54 53.8 -1.0**
D08A Wollman Farm, 98.64 39 IAmb IAmb 04 54 57.6
comp=Z,8.5nm,1.1s
ABTA Abfaltersbach 98.82 321 *i* P **P 04 54 54.3 -1.3**
comp=Z,28nm,1.1s,SNR=8.5
STAL STALIGIAL 98.90 320 P **P 04 54 54.2 -1.7**
CIMO Cimolais 99.05 320 P **Pdif 04 54 54.2 -2.4**
WTTA Wattenberg 99.14 321 *i* P **Pdif 04 54 56.7 -0.5**
comp=Z,55nm,1.0s,SNR=17
WATA Walderalm 99.15 321 *i* P **Pdif 04 54 57.3 +0.2**
comp=Z,37nm,1.1s,SNR=8.9
SQTA Sankt Quirin 99.42 321 *i* P **Pdif 04 54 58.8 +0.4**
comp=Z,41nm,1.0s,SNR=11
MOTA Moosalm 99.43 322 *i* P **Pdif 04 54 58.3 -0.2**
comp=Z,33nm,1.0s,SNR=14
RETA Reutte 99.58 322 *eP* **Pdif 04 54 59.4 +0.4**
comp=Z,6.8nm,1.1s
CTI Castel Tesino 99.66 320 IAmb IAmb 04 55 01.3
comp=Z,30nm,1.4s
FETA Feichten 99.81 321 *i* P **Pdif 04 55 00.5 +0.4**
comp=Z,30nm,1.1s,SNR=8.7
QSPA South Pole Qui 99.89 180 IAMs_20 IAMs_20 05 40 52.7
comp=Z,538nm,21.0s
DAVA Damuels 100.20 322 *i* P **Pdif 04 55 02.5 +0.7**
comp=Z,20nm,1.1s,SNR=5.4
FUORN **Ofenpass-Fuorn** 100.27 321 Pdif **Pdif 04 55 02.4 +0.1**
NVAR Mina Array Bea 102.60 47 P **Pdif 04 55 13.9 +1.1**
comp=Z,1.3nm,0.9s,baz=271,slow=2.3,SNR=8.9
NVAR Mina Array Bea 102.60 47 **Pdif 04 55 14.4 +1.6**
TJX Tijuana 105.89 52 IAMs_20 IAMs_20 05 51 17.7
comp=Z,438nm,18.0s
PDAR Pinedale Array 106.52 40 PKiKP **PKiKP 04 59 41.7 +0.8**
comp=Z,0.2nm,0.4s,baz=230,slow=4.2,SNR=2.1
PDAR PKKPab **PKKPdf 05 11 14.3 +1.0**
comp=Z,0.7nm,0.8s,baz=101,slow=4.7,SNR=5.2
SFX San Felipe 108.19 53 IAMs_20 IAMs_20 05 37 12.9
comp=Z,516nm,19.0s
SNAA Sanae 111.29 195 P **PKiKP 04 59 48.4 -0.3**
SNAA Sanae 111.29 195 IAMs_20 IAMs_20 05 46 22.6
comp=Z,392nm,19.0s
ES08 SONSECA Array 112.71 321 IAMs_20 IAMs_20 05 56 11.3
comp=Z,472nm,20.0s
ES05 SONSECA Array 112.75 321 IAMs_20 IAMs_20 05 31 29.3
comp=Z,287nm,21.0s
VNA2 Neumayer--Watz 112.91 195 P **PKiKP 04 59 51.9 +0.2**
VNA3 Neumayer Olymp 113.26 194 P **PKiKP 04 59 52.6 +0.2**
VNA1 Neumayer--Stat 113.31 195 P **PKiKP 04 59 54.3 +1.8**
SCHQ Schefferville 114.37 9 PKP PKPdf 04 59 56.6 +1.5
comp=Z,2.7nm,0.7s,baz=159,slow=14,SNR=1.5
TXAR Lajitas Array 117.56 49 PKP **PKiKP 05 00 02.8 +0.6**
comp=Z,1.4nm,0.5s,baz=352,slow=1.9,SNR=33
TXAR PKKPab **PKKPab 05 10 26.7 -2.1**
comp=Z,0.4nm,0.8s,baz=108,slow=7.1,SNR=3.9
TXAR Lajitas Array 117.56 49 PKPdf **PKiKP 05 00 01.7 -0.4**
FNO Franklin 118.56 41 **PKiKP 05 00 05.0 +1.2**
JCT Junction City 119.77 46 PKIKP **PKiKP 05 00 06.4 +0.1**
JCT Junction City 119.77 46 PKPdf **PKiKP 05 00 06.4 +0.1**
CCM Cathedral Cave 120.39 34 PKIKP **PKiKP 05 00 07.4 +0.2**
CCM Cathedral Cave 120.39 34 PKPdf **PKiKP 05 00 07.4 +0.2**
G54A Lake Saint Pet 120.43 20 P **PKiKP 05 00 07.1 0.0**
baz=331
WHTX Lake Whitney, 120.52 44 P **PKiKP 05 00 07.7 0.0**
baz=307
U40A Yellville 120.64 37 P **PKiKP 05 00 07.5 -0.3**
baz=313
E57A Chemin Saint G 120.75 17 P **PKiKP 05 00 07.6 -0.1**
baz=336
SFIN Lafayette 120.84 30 P **PKiKP 05 00 08.1 0.0**
baz=320
W39A Magazine 120.87 38 P **PKiKP 05 00 08.4 +0.2**
baz=312
TORD Torodi Ar. Bea 120.87 292 PKP **PKiKP 05 00 08.4 -0.3**
comp=Z,5.7nm,0.4s,baz=47,slow=1.9,SNR=104
TORD PKKPab **PKKPab 05 10 13.6 -0.5**
comp=Z,2.0nm,0.6s,baz=271,slow=3.2,SNR=16
TORD Torodi Ar. Bea 120.87 292 PKPdf **PKPdf 05 00 07.4 -1.2**
H53A Bobcaygeon 120.98 21 P **PKiKP 05 00 08.0 -0.3**
baz=331
E58A La Victoria 121.03 16 P **PKiKP 05 00 08.4 +0.1**
baz=337
D62A Allapoint, All 121.41 13 P **PKiKP 05 00 09.4 +0.5**
baz=342
MIAR Mount Ida 121.42 39 P **PKiKP 05 00 09.5 +0.1**
baz=312
E60A Ste Agathe de 121.52 15 P **PKiKP 05 00 09.6 +0.5**
baz=339
D63A Stockholm 121.64 12 P **PKiKP 05 00 09.6 +0.2**
baz=343
E61A Lac Etchemin 121.69 14 P **PKiKP 05 00 09.6 0.0**
baz=340
G57A Newington 121.69 18 P **PKiKP 05 00 09.0 -0.6**
baz=335
PBMO Poplar Bluff 121.75 35 **PKiKP 05 00 09.0 -1.0**
F60A Warwick 121.76 15 P **PKiKP 05 00 10.0 +0.3**
baz=338
W41B Gary Mavity, V 121.81 37 P **PKiKP 05 00 09.5 -0.6**
baz=313
H57A Richville 122.15 19 P **PKiKP 05 00 10.2 -0.3**
baz=334
H59A Cadyville 122.50 17 P **PKiKP 05 00 10.6 -0.6**
baz=336
I57A Carthage 122.53 19 P **PKiKP 05 00 11.5 +0.2**
baz=334
H58A Gabriels 122.56 18 P **PKiKP 05 00 11.1 -0.3**
baz=335
ERPA Erie 122.57 23 P **PKiKP 05 00 11.5 0.0**
baz=328
H60A Morristown 122.86 17 P **PKiKP 05 00 12.1 +0.2**
baz=337
HKT Hockley 122.86 44 PKIKP **PKiKP 05 00 14.1 +1.9**
HKT Hockley 122.86 44 PKPdf **PKiKP 05 00 14.1 +1.9**
M53A WI Miller and 122.87 24 P **PKiKP 05 00 12.3 +0.2**
baz=327
ACSO Alum Creek Sta 122.88 27 P **PKiKP 05 00 12.3 +0.2**
baz=324
WCI Wyandotte Cave 122.89 31 PKIKP **PKiKP 05 00 11.8 -0.3**
WCI Wyandotte Cave 122.89 31 P **PKiKP 05 00 12.3 +0.2**
baz=320
WCI Wyandotte Cave 122.89 31 PKPdf **PKiKP 05 00 11.8 -0.3**
I58A Old Forge 122.97 19 P **PKiKP 05 00 12.8 +0.6**
baz=334
K56A Middlesex 123.06 21 P **PKiKP 05 00 12.7 +0.3**
baz=331
H61A Lyndonville 123.10 16 P **PKiKP 05 00 12.9 +0.5**
baz=338
O51A Pataskala 123.12 27 P **PKiKP 05 00 12.7 +0.2**
baz=325
G63A Kingsbury 123.14 14 P **PKiKP 05 00 13.0 +0.5**
baz=341
J58A Remsen 123.17 19 P **PKiKP 05 00 13.0 +0.4**
baz=334
I59A Olmsteadville 123.22 18 P **PKiKP 05 00 13.1 +0.5**
baz=336
M54A Oil Creek Stat 123.22 24 P **PKiKP 05 00 13.1 +0.4**
baz=328
H62A Milan 123.26 15 P **PKiKP 05 00 13.3 +0.6**
baz=339
K57A Scipio Center 123.32 20 P **PKiKP 05 00 13.1 +0.2**
baz=332
J59A Piesco 123.32 18 P **PKiKP 05 00 13.1 +0.2**
baz=335
I60A Shoreham 123.35 17 P **PKiKP 05 00 12.7 -0.2**
baz=336
LBNH Lisbon 123.37 16 P **PKiKP 05 00 13.4 +0.5**
baz=338
P51A Williamsport 123.45 28 P **PKiKP 05 00 13.5 +0.3**
baz=324
H63A New Sharon 123.46 14 P **PKiKP 05 00 13.5 +0.4**
baz=340
L56A Greenwood 123.47 22 P **PKiKP 05 00 13.3 0.0**
baz=331
O52A Adamsville 123.48 26 P **PKiKP 05 00 13.3 0.0**
baz=326
N54A Moraine State 123.55 24 P **PKiKP 05 00 14.0 +0.6**
baz=328
K58A Earlville 123.58 20 P **PKiKP 05 00 14.1 +0.6**
baz=333
O53A New Philadelph 123.64 26 P **PKiKP 05 00 14.5 +0.9**
baz=326
WVT Waverly 123.66 34 PKIKP **PKiKP 05 00 13.5 -0.2**
WVT Waverly 123.66 34 P **PKiKP 05 00 14.0 +0.3**
baz=318
WVT Waverly 123.66 34 PKPdf **PKiKP 05 00 13.5 -0.2**
P52A Corning 123.75 27 P **PKiKP 05 00 14.3 +0.5**
baz=325
M56A Emporium 123.81 22 P **PKiKP 05 00 14.2 +0.2**
baz=330
L57A Andrews Acres 123.84 21 P **PKiKP 05 00 15.0 +1.0**
baz=332
H65A Eastbrook 123.85 13 P **PKiKP 05 00 13.8 0.0**
baz=342
OXF Oxford 123.94 36 P **PKiKP 05 00 14.9 +0.6**
baz=316
H66A Whiting 123.96 12 P **PKiKP 05 00 14.5 +0.5**
baz=343
BINY Binghamton 123.97 20 P **PKiKP 05 00 15.1 +0.9**
baz=333
J61A Chester 124.02 17 P **PKiKP 05 00 15.2 +1.0**
baz=337
O54A Avella 124.05 25 P **PKiKP 05 00 15.3 +0.9**
baz=327
L58A Harry Jones Me 124.16 20 P **PKiKP 05 00 15.8 +1.2**
baz=333
P53A Whipple 124.19 26 P **PKiKP 05 00 15.7 +1.0**
baz=326
Q52A Bidwell 124.23 27 P **PKiKP 05 00 15.4 +0.6**
baz=325
N56A West Decatur 124.25 23 P **PKiKP 05 00 15.8 +1.0**
baz=330
K60A Five Rivers En 124.28 18 P **PKiKP 05 00 15.8 +1.1**
baz=335
M57A Sunshine Farm, 124.33 22 P **PKiKP 05 00 15.9 +1.0**
baz=331
M57A Sunshine Farm, 124.33 22 **PKiKP 05 00 15.9 +1.0**
K61A Williamstown 124.42 18 P **PKiKP 05 00 16.2 +1.1**
baz=336
O55A Ligonier 124.47 24 P **PKiKP 05 00 16.2 +1.0**
baz=328
P54A Burton 124.49 25 P **PKiKP 05 00 16.3 +0.9**
baz=327
M58A Price's Panora 124.54 21 P **PKiKP 05 00 16.3 +1.0**
baz=332
Q53A Leroy 124.65 27 P **PKiKP 05 00 16.7 +1.1**
baz=326
N57A Milroy 124.68 22 P **PKiKP 05 00 16.6 +1.0**
baz=331
O56A Blue Knob Stat 124.71 24 P **PKiKP 05 00 16.7 +0.9**
baz=329
O56A Blue Knob Stat 124.71 24 **PKiKP 05 00 16.9 +1.2**
M59A Waymart 124.75 20 P **PKiKP 05 00 15.6 -0.2**
baz=333
L61A Hillsdale 1, H 124.77 18 P **PKiKP 05 00 16.2 +0.4**
baz=336
PMSA Palmer Station 124.81 174 *eP* **PKiKP 05 00 19.9 +4.9**
P55A Reedsville 124.84 25 P **PKiKP 05 00 16.1 +0.1**
baz=328
Q54A Coxs Mills 124.85 26 P **PKiKP 05 00 16.6 +0.6**
baz=326
R53A Hurricane 124.89 27 P **PKiKP 05 00 16.7 +0.6**
baz=325
N58A Sunbury 124.91 22 P **PKiKP 05 00 16.6 +0.5**
baz=332
O57A Amberson 125.12 23 P **PKiKP 05 00 16.5 0.0**
baz=330
Q55A Buckhannon 125.17 26 P **PKiKP 05 00 17.0 +0.3**
baz=327
N59A State Game Lan 125.18 21 P **PKiKP 05 00 17.1 +0.4**
baz=333
M60A Port Jervis 125.21 20 P **PKiKP 05 00 17.1 +0.5**
baz=284
P56A Dayton Farm, R 125.25 24 P **PKiKP 05 00 17.5 +0.7**
baz=329
S53A Williamson 125.34 28 P **PKiKP 05 00 17.2 +0.1**
baz=324
R54A Victor 125.45 27 P **PKiKP 05 00 17.6 +0.3**
baz=326
N60A Cedar Hill Far 125.46 20 P **PKiKP 05 00 17.5 +0.3**
baz=333
O58A Lewisberry 125.46 22 P **PKiKP 05 00 17.4 +0.2**
baz=331
Q56A Snyder Ridge, 125.50 25 P **PKiKP 05 00 17.7 +0.4**
baz=328
M61A Granite Spring 125.50 19 P **PKiKP 05 00 17.5 +0.2**
baz=335
KOWA Kowa 125.51 296 PKPdf **PKPdf 05 00 15.5 -2.0**
TZTN Tazewell 125.57 30 P **PKiKP 05 00 18.1 +0.6**
baz=322
P57A Homestead Farm 125.60 24 P **PKiKP 05 00 18.0 +0.5**
baz=330
S54A Dingess, Beckl 125.62 27 P **PKiKP 05 00 17.8 +0.2**
baz=325
T53A Wise 125.71 29 P **PKiKP 05 00 18.4 +0.5**
baz=324
PAL Palisades 125.73 19 P **PKiKP 05 00 18.1 +0.5**
baz=335
R55A Marlinton 125.74 26 P **PKiKP 05 00 18.4 +0.5**
baz=327
L64A Middleborough 125.80 16 P **PKiKP 05 00 17.9 +0.1**
baz=338
Q57A Strasburg 125.82 24 P **PKiKP 05 00 18.7 +0.7**
baz=329
N61A South Mountain 125.83 20 P **PKiKP 05 00 18.4 +0.6**
baz=334
O60A Telford 125.84 21 P **PKiKP 05 00 18.7 +0.8**
baz=333
P58A Pank, Wackersv 125.87 23 P **PKiKP 05 00 19.0 +1.0**
baz=330
R56A Bull Pasture M 125.95 25 P **PKiKP 05 00 19.0 +0.7**
baz=328
S55A Lewisburg 126.00 27 P **PKiKP 05 00 18.8 +0.4**
baz=326
P59A Jarrettsville 126.09 22 P **PKiKP 05 00 18.6 +0.2**
baz=331
T54A Tazewell 126.10 28 P **PKiKP 05 00 19.4 +0.8**
baz=325
TKL Tuckaleechee C 126.15 31 PKIKP **PKiKP 05 00 19.2 +0.5**
TKL Tuckaleechee C 126.15 31 **PKiKP 05 00 19.1 +0.5**
Q58A Fox Den Farm, 126.19 24 P **PKiKP 05 00 19.3 +0.6**
baz=330
LRAL Lakeview Retre 126.40 36 P **PKiKP 05 00 20.1 +0.8**
baz=317
R57A Stanardsville 126.41 25 P **PKiKP 05 00 19.7 +0.5**
baz=329
T55A Pulaski 126.42 27 P **PKiKP 05 00 19.8 +0.6**
baz=326
U54A Nelsons Funny 126.42 29 P **PKiKP 05 00 19.7 +0.4**
baz=324
BLA Blacksburg 126.50 27 P **PKiKP 05 00 20.1 +0.7**
baz=326
R58A Rapidan 126.62 24 P **PKiKP 05 00 20.3 +0.8**
baz=329
Q59A Harwood 126.66 23 P **PKiKP 05 00 20.4 +0.8**
baz=331
S57A Dark Hollow, R 126.68 25 P **PKiKP 05 00 20.5 +0.8**
baz=328
T56A Rocky Mt 126.83 27 P **PKiKP 05 00 20.6 +0.6**
baz=326
Q60A Greensboro 126.85 22 P **PKiKP 05 00 20.4 +0.4**
baz=332
CBN Corbin Frederi 126.95 24 P **PKiKP 05 00 20.7 +0.5**
baz=330
R58B Mineral 126.95 24 P **PKiKP 05 00 20.8 +0.6**
baz=329
V54A Nebo 126.96 29 P **PKiKP 05 00 20.7 +0.4**
baz=324
R59A King George, V 127.06 24 P **PKiKP 05 00 20.9 +0.5**
baz=330
BG3 Lake Jocassee 127.10 31 **PKiKP 05 00 21.5 +0.9**
S58A Poland Farm, P 127.18 25 P **PKiKP 05 00 20.9 +0.2**
baz=329
T57A Hurt 127.19 26 P **PKiKP 05 00 21.3 +0.5**
baz=327
U56A King 127.23 28 P **PKiKP 05 00 20.9 +0.1**
baz=326
V55A Taylorsville 127.25 29 P **PKiKP 05 00 21.4 +0.5**
baz=325
S59A Mechanicsville 127.36 24 P **PKiKP 05 00 21.7 +0.7**
baz=330
W54A Cherokee Point 127.40 30 P **PKiKP 05 00 21.9 +0.7**
baz=323
T58A Grand View Acr 127.55 26 P **PKiKP 05 00 22.2 +0.7**
baz=328
V56A Mocksville 127.62 28 P **PKiKP 05 00 22.2 +0.6**
baz=325
U57A Blanch 127.63 27 P **PKiKP 05 00 22.2 +0.6**
baz=327
S60A Water View 127.67 24 P **PKiKP 05 00 22.6 +1.0**
baz=330
BRAL Brewton 127.72 37 P **PKiKP 05 00 22.8 +0.9**
baz=316
X54A Belton 127.73 31 P **PKiKP 05 00 22.8 +0.9**
baz=323
KMSC Kings Mountain 127.77 29 P **PKiKP 05 00 22.8 +0.9**
baz=324
PAULI Pauline 127.79 30 **PKiKP 05 00 22.4 +0.4**
V57A Coltrane Farms 127.89 27 P **PKiKP 05 00 23.3 +1.1**
baz=326
T59A Double "B" Far 127.94 25 P **PKiKP 05 00 23.4 +1.2**
baz=329
U58A Oxford 128.01 26 P **PKiKP 05 00 23.5 +1.1**
baz=328
GOGA Godfrey 128.06 32 P **PKiKP 05 00 23.8 +1.2**
baz=321
T60A Surry 128.13 24 P **PKiKP 05 00 23.8 +1.3**
baz=330
W56A Indian Trail 128.13 29 P **PKiKP 05 00 23.5 +0.9**
baz=325
X55A Gracelyn & Ava 128.16 30 P **PKiKP 05 00 23.5 +0.7**
baz=324
V58A Windy Hill, Pi 128.26 27 P **PKiKP 05 00 23.7 +0.8**
baz=327
W57A Gilead 128.39 28 P **PKiKP 05 00 23.9 +0.7**
baz=326
X56A White Oak 128.44 30 P **PKiKP 05 00 24.1 +0.8**
baz=324
U60A Pendleton 128.53 25 P **PKiKP 05 00 24.2 +0.8**
baz=329
V59A Middlesex 128.67 26 P **PKiKP 05 00 24.7 +0.9**
baz=328
W58A Raeford 128.85 28 P **PKiKP 05 00 25.0 +0.9**
baz=326
X57A Johnson Farm, 128.91 29 P **PKiKP 05 00 25.2 +1.0**
baz=325
U61A Possum Corner 128.94 24 P **PKiKP 05 00 25.5 +1.3**
baz=330
V60A Jim Taylor Roa 129.09 25 P **PKiKP 05 00 25.8 +1.2**
baz=329
KIC Kosan Boka 129.09 287 *e*PKP2 **PKiKP 05 00 24.8 -0.3**
comp=Z,35nm,0.8s
DBIC Dimbokro 129.10 287 PKP **PKiKP 05 00 25.1 0.0**
comp=Z,5.6nm,0.5s,baz=79,slow=2.1,SNR=13
DBIC pPKP **sPKPdf 05 00 39.9 +0.5**
comp=Z,3.8nm,0.7s,baz=96,slow=1.2,SNR=2.1
X58A Rowland 129.19 28 P **PKiKP 05 00 25.8 +1.0**
baz=326
Z56A Williston 129.21 31 P **PKiKP 05 00 25.9 +1.1**
baz=323
TIC Toumodi 129.26 287 *e*PKP2 **PKiKP 05 00 26.3 +0.8**
V61A Roper 129.35 25 P **PKiKP 05 00 26.4 +1.3**
baz=330
LIC Lamto 129.40 287 *e*PKP2 **PKiKP 05 00 25.3 -0.5**
comp=Z,42nm,0.7s
W60A Pink Hill 129.50 26 P **PKiKP 05 00 26.6 +1.2**
baz=328
TIGA Tifton 129.50 34 P **PKiKP 05 00 26.6 +1.1**
baz=320
Z57A Bowman 129.56 30 P **PKiKP 05 00 26.7 +1.1**
baz=324
Y58A Scranton 129.57 29 P **PKiKP 05 00 27.1 +1.5**
baz=326
X60A Albert Glenn T 129.79 27 P **PKiKP 05 00 26.9 +0.9**
baz=328
V62A Hyde County Ai 129.80 24 P **PKiKP 05 00 27.0 +1.0**
baz=330
Y59A Loris 129.87 28 P **PKiKP 05 00 27.3 +1.1**
baz=326
157A Early Branch 129.91 31 P **PKiKP 05 00 27.7 +1.4**
baz=323
Z58A St. Stephen 129.97 29 P **PKiKP 05 00 27.4 +1.0**
baz=325
MATN Matagalpa 140.27 56 IAMs_20 IAMs_20 05 50 26.0
comp=Z,230nm,21.0s
MTDJ Mount Denham 143.03 41 *eP* PKiKP 05 01 03.8 +10
PLCA Paso Flores 145.77 156 PKPbc **PKiKP 05 00 56.2 -2.3**
comp=Z,55nm,1.0s,baz=236,slow=2.9,SNR=64
PLCA Paso Flores 145.77 156 *eP* **PKiKP 05 00 57.9 -0.5**
UPA Univ. de Panam 147.57 55 *eP* **PKiKP 05 01 00.7 -2.3**
AGPR Aguadilla, PR 148.52 26 **PKiKP 05 01 03.3 -1.3**
UPD2 Meteti 149.14 54 *eP* **PKPbc 05 01 03.1 -1.6**
SJG San Juan 149.24 25 *eP* **PKiKP 05 01 05.9 -0.2**
SJG San Juan 149.24 25 PKP2 **PKiKP 05 01 05.1 -1.0**
SJG San Juan 149.24 25 **PKiKP 05 01 05.1 -1.0**
MTP Monte Pirata 149.49 24 **PKPbc 05 01 04.4 -1.1**
CAPC Capurgana 149.61 53 *eP* **PKPbc 05 01 03.1 -2.9**
LCBC Los crdobas, 150.24 52 *eP* **PKiKP 05 01 08.1 -0.3**
SMRC Santa Marta, M 150.31 45 *eP* **PKPbc 05 01 04.3 -3.3**
SJCC San Jacinto, C 150.48 49 *eP* **PKPbc 05 01 06.2 -2.0**
MOTC Monteria, Cord 150.83 51 *eP* **PKPbc 05 01 05.5 -3.4**
ARGC Ariguani, Magd 151.19 47 *eP* **PKPbc 05 01 06.6 -3.1**
URIC Uribia, Colomb 151.43 41 *eP* **PKPbc 05 01 06.1 -4.2**
DBBC Dabeiba 151.48 54 *eP* **PKPbc 05 01 06.3 -4.2**
URES San Jos de Ur 151.57 52 *eP* **PKPdf 05 01 05.1 +0.7**
PEL Peldehue 151.90 148 PKIKP **PKPdf 05 01 06.2 +1.7**
PEL Peldehue 151.90 148 PKPdf **PKPdf 05 01 06.2 +1.7**
CBOC Ciudad Bolivar 152.30 56 *eP* **PKPdf 05 01 04.4 -1.4**
HELC Santa Helena 152.51 55 *eP* **PKPdf 05 01 08.2 +1.9**
PAC1 Pacto, Paraso 152.53 70 *eP* **PKPdf 05 01 07.1 +1.0**
CUSE Cuicocha Este 152.88 69 *eP* **PKPab 05 01 28.0 +2.7**
OCAC Ocana 152.95 49 *eP* **PKPbc 05 01 09.8 -4.2**
YOTC Yotoco, Valle 153.04 60 *eP* **PKPdf 05 01 06.7 0.0**
PTBC PUERTO BERRIO 153.16 53 *eP* **PKPdf 05 01 06.9 +0.1**
GUY2C **Guyana, Caldas** 153.19 57 *eP* **PKPdf 05 01 09.0 +1.6**
BRRC Barranca, Sant 153.38 51 *eP* **PKPdf 05 01 08.1 +1.0**
NORC Norcasia 153.41 55 *eP* **PKiKP 05 01 15.2 +0.2**
GCUF Volcan Galeras 153.46 66 *eP* **PKPbc 05 01 10.4 -5.1**
POPC Popayan, Colom 153.47 63 *eP* **PKPdf 05 01 09.1 +1.6**
ANIL Santa Ana 153.57 58 *eP* **PKPdf 05 01 07.0 -0.7**
TOLC Tolima 153.59 58 *eP* **PKPdf 05 01 09.1 +1.3**
SOTA Rioblanco 153.72 64 *eP* **PKPdf 05 01 10.6 +2.4**
PCON Cinco Dias 153.81 63 *eP* **PKPbc 05 01 11.2 -5.1**
MARP Paez Belalcaza 153.95 62 *eP* **PKPdf 05 01 10.5 +2.2**
SPBC San Pablo de B 153.99 54 *eP* **PKPdf 05 01 09.0 +0.9**
PAMC Pamplona, Colo 154.00 49 *eP* **PKPdf 05 01 10.1 +1.5**
ORTC Ortega, Tolima 154.01 59 *eP* **PKPdf 05 01 08.0 -0.1**
BARC Barichara 154.11 51 *eP* **PKiKP 05 01 18.2 +1.6**
ROSC El Rosal 154.27 56 PKP **PKPdf 05 01 10.3 +1.4**
comp=Z,17nm,1.0s,baz=357,slow=1.5,SNR=12
ROSC PKPbc **pPKPdf 05 01 18.2 -1.9**
comp=Z,8.8nm,0.8s,baz=180,slow=5.1,SNR=6.8
ROSC El Rosal 154.27 56 *eP* **PKPdf 05 01 11.3 +2.4**
SDV Santo Domingo 154.40 43 *eP* **PKPdf 05 01 07.6 -1.1**
SDV Santo Domingo 154.40 43 PKPdf **PKPdf 05 01 09.4 +0.6**
SDV IAMs_20 IAMs_20 05 56 27.7
comp=Z,219nm,20.0s
SDV Santo Domingo 154.40 43 *eP* **PKPbc 05 01 11.6 -5.5**
PRAC Prado 154.42 59 *eP* **PKPdf 05 01 06.8 -1.8**
BETC Betania 154.48 61 *eP* **PKPdf 05 01 10.0 +1.2**
RUSC La Rusia 154.63 52 *eP* **PKPdf 05 01 11.3 +1.8**
GARC Garzon, Huila 154.67 63 *eP* **PKPdf 05 01 11.3 +2.1**
FLOC Florencia 154.82 64 *eP* **PKPdf 05 01 09.5 +0.3**
CHIC Chingaza 154.87 56 *eP* **PKPdf 05 01 10.3 +0.6**
MACC Macarena, Meta 156.12 61 *eP* **PKPdf 05 01 11.4 +0.5**
PTLC Puerto Leguiza 156.21 66 *eP* **PKPdf 05 01 13.0 +2.0**
PTGC Puerto Gaitan, 156.40 54 *eP* **PKPdf 05 01 11.2 -0.1**
ITQB Itaqui 160.19 171 *eP* **PKPdf 05 01 18.7 +3.3**
LVC Limon Verde 160.41 132 *eP* **PKPdf 05 01 18.7 +2.4**
CZSB Cruzeiro do Su 160.56 85 *eP* **PKPdf 05 01 19.6 +3.4**
CPUP Villa Florida 163.31 167 PKP **PKPdf 05 01 19.9 +1.2**
comp=Z,5.9nm,1.0s,baz=210,slow=1.1,SNR=9.8
CPUP PKPab **PKPab 05 02 10.0 +0.8**

comp=Z,13nm,0.9s,baz=195,slow=4.4,SNR=14

CPUP	**Villa Florida**	**163.31**	**167**	PKIKP	**PKPdf**	**05 01 19.2**	**+0.5**
CPUP						05 02 10.0	
CPUP	**Villa Florida**	**163.31**	**167**		**PKPdf**	**05 01 19.2**	**+0.5**
CPUP				PKPab	**PKPab**	**05 02 09.9**	**+0.8**
LPAZ	**La Paz**	**164.16**	**115**	PKP	**PKPdf**	**05 01 21.9**	**+1.4**
	comp=Z,14nm,1.0s,baz=16,slow=4.3,SNR=30						
LPAZ				PKPab	**PKPab**	**05 02 15.2**	**+1.0**
	comp=Z,8.2nm,0.9s,baz=346,slow=3.1,SNR=6.3						
LPAZ	**La Paz**	**164.16**	**115**	*eP*	**PKPdf**	**05 01 21.9**	**+1.4**
LPAZ	**La Paz**	**164.16**	**115**	PKIKP	**PKPdf**	**05 01 21.5**	**+1.0**
LPAZ	**La Paz**	**164.16**	**115**		**PKPdf**	**05 01 21.5**	**+1.0**
LPAZ	**La Paz**	**164.16**	**115**	*eP*	**PKPdf**	**05 01 23.8**	**+3.3**
PTGB	**Pitanga**	**165.36**	**184**	*eP*	**PKPdf**	**05 01 24.0**	**+3.4**
PCMB	**Pacaembu**	**168.34**	**189**	*eP*	**PKPdf**	**05 01 26.1**	**+3.2**
ROSB	**Rosrio**	**168.56**	**308**	*eP*	**PKPdf**	**05 01 27.0**	**+3.7**
MACA	**Manacapuru-AM**	**169.89**	**48**	*eP*	**PKPdf**	**05 01 27.9**	**+3.8**
SAML	**Samuel**	**170.06**	**85**	PKIKP	**PKPdf**	**05 01 23.9**	**-0.3**
SAML	**Samuel**	**170.06**	**85**		**PKPdf**	**05 01 23.9**	**-0.3**
SAML					**PKPab**	**05 02 41.0**	**+1.3**
SIV	**San Ignacio**	**170.28**	**128**	PKPab	**PKPab**	**05 02 41.8**	**+1.3**
	comp=Z,2.5nm,0.9s,baz=207,slow=14,SNR=1.5						
MCPB	**Macapa, AP**	**170.33**	**353**	*eP*	**PKPdf**	**05 01 27.6**	**+3.3**
IPMB	**Ipameri, GO**	**170.75**	**211**	*eP*	**PKPdf**	**05 01 26.4**	**+1.9**
MALB	**Monte Alegre**	**171.80**	**8**	*eP*	**PKPdf**	**05 01 30.0**	**+4.9**
PTLB	**Pontes e Lacer**	**172.07**	**133**	*eP*	**PKPdf**	**05 01 28.8**	**+3.7**
BDFB	**Brasilia**	**172.49**	**221**	PKP	**PKPdf**	**05 01 25.5**	**0.0**
	comp=Z,6.9nm,1.1s,baz=34,slow=4.1,SNR=6.7						
BDFB	**Brasilia**	**172.49**	**221**		**PKPdf**	**05 01 26.6**	**+1.1**
PRPB	**Paraupebas**	**174.93**	**319**	*eP*	**PKPdf**	**05 01 29.4**	**+3.1**

IDC 10 04:56:55.6±3.2, 6.03S×147.17E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.4/35, mbtmp3.4/4, ML2.6/2, Error ellipse: s-maj=68.0km s-min=42.1km az=92.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.36**	**180**	Pn	Pn	04 57 50.2	+0.9
	8.3nm,0.3s,baz=5.4,slow=8.4,SNR=3.8						
PMG				Sn	Sn	04 58 23.9	-6.1
	5.8nm,0.3s,baz=189,slow=19,SNR=3.5						
WRA	**Warramunga Arr**	**18.62**	**221**	P	P	05 01 14.7	-0.2
	0.1nm,0.3s,baz=45,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**21.69**	**215**	P	P	05 01 47.7	-0.6
	0.4nm,0.4s,baz=55,slow=8.8,SNR=5.6						
FITZ	**Fitzroy Crossi**	**24.19**	**238**	P	P	05 02 14.3	+0.3
	1.2nm,0.5s,baz=82,slow=7.1,SNR=5.9						
TORD	**Torodi Ar. Bea**	**145.26**	**284**	PKPbc	PKPbc	05 16 35.1	-1.0
	0.3nm,0.4s,baz=78,slow=4.2,SNR=4.4						

*KLM **10** 04:59:29.0, 8.23S×107.03E, h77km, mb4.7*
*DJA **10** 04:59:29.2±0.3, 8.5±2.2×107.7E±, h10km, M4.9/22, mB5.6/6, mb5.0/6, MLv4.6/22, Mw(mB)5.1/6*
*NEIC **10** 04:59:31.1±2.1, 8.19S±0.05×107.31E±0.0, h56km±1km, mb4.6/26, Error ellipse: s-maj=8.7km s-min=6.9km az=106.0*
*IDC **10** 04:59:36.2±1.1, 7.84S×107.49E, h98km±9km, mb3.9/16, mb1 4.0/16, mb1mx3.8/40, mbtmp4.2/16, Error ellipse: s-maj=21.4km s-min=11.3km az=52.0*

ISC 10 04:59:32.0±1.0, 8.11S±0.06×107.30E±0.05, h63km±8km, n149, σ1$36/150, mb4.4/26, 2C-1D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.75**	**43**	P	**Pn**	**04 59 46.2**	**-0.9**
CISI				S	**Sn**	**04 59 57.8**	**-0.4**
CISI	**Cisompet, Garu**	**0.75**	**43**		**Pn**	**04 59 46.5**	**-0.7**
CISI				Sn	**Sn**	**04 59 57.5**	**-0.7**
CNJI	**Cibinong**	**0.81**	**348**	Pg	**Pn**	**04 59 47.4**	**-0.5**
CNJI				S	**Sn**	**04 59 59.4**	**-0.1**
CMJI	**Cimerak**	**1.18**	**74**	P	**Pn**	**04 59 52.2**	**-0.4**
CMJI				Pg	**Pn**	**04 59 52.1**	**-0.5**
CMJI				Pn	**Pn**	**04 59 52.2**	**-0.4**
LEM	**Lembang**	**1.31**	**14**	P	**Pn**	**04 59 55.6**	**+1.2**
	602nm,0.3s,baz=59,slow=1.4,SNR=119						
LEM				S	**Sn**	**05 00 13.0**	**+1.8**
	611nm,0.3s,baz=187,slow=11,SNR=14						
LEM	**Lembang**	**1.31**	**14**	P	**Pn**	**04 59 55.3**	**+0.8**
LEM				S	**Sn**	**05 00 15.0**	**+3.8**
SKJI	**Sukabumi**	**1.32**	**326**	P	**Pn**	**04 59 54.3**	**-0.2**
SKJI				Pn	Pn	04 59 54.8	+0.3
SKJI				S	**Sn**	**05 00 13.6**	**+2.4**
DBJI	**Dramaga**	**1.64**	**340**	P	**Pn**	**04 59 59.1**	**+0.4**
DBJI				S	**Sn**	**05 00 22.2**	**+3.3**
KPJI	**Karang Pucung**	**1.79**	**65**	P	**Pn**	**05 00 02.6**	**+1.9**
KPJI				S	**Sn**	**05 00 26.7**	**+4.2**
TNG	**Tangerang**	**2.03**	**341**	P		05 00 05.7	
TNG				P	**Pn**	**05 00 05.6**	**+1.6**
CGJI	**Cibinong**	**2.18**	**313**	P	**Pn**	**05 00 05.9**	**-0.1**
SBJI	**Serang**	**2.29**	**329**	P	**Pn**	**05 00 08.0**	**+0.5**
XMIS	**Christmas Isla**	**2.86**	**215**		Pn	05 00 12.6	-2.8
UGM	**Wanagama**	**3.20**	**87**	P	**Pn**	**05 00 20.0**	**+0.1**
UGM	**Wanagama**	**3.20**	**87**		**Pn**	**05 00 19.8**	**-0.1**
UGM				Sn	**Sn**	**05 00 55.3**	**-1.6**
SMRI	**Semarang**	**3.29**	**72**		**Pn**	**05 00 22.4**	**+1.3**
WOJI	**Wonogiri, Jawa**	**3.60**	**86**	P	**Pn**	**05 00 26.2**	**+0.8**
KLSI		**4.25**	**323**	P	**Pn**	**05 00 34.4**	**+0.1**
PWJI	**Pagerwojo**	**4.46**	**89**	P	**Pn**	**05 00 37.3**	**+0.1**
GRJI	**Gresik**	**5.27**	**77**	P	**Pn**	**05 00 49.4**	**+1.1**
	0.3nm789nm52nm,0.6s						
MNAI	**Manna**	**5.70**	**311**	P	**Pn**	**05 00 54.2**	**0.0**
	1.9nm12μm251nm,0.5s						
MNAI	**Manna**	**5.70**	**311**	Pn	**Pn**	**05 00 54.3**	**+0.1**
PPBI	**Pangkal Pinang**	**6.02**	**349**	P	**Pn**	**05 00 59.5**	**+0.9**
	0.9nm17μm38nm,0.5s						
GMJI	**Gumukmas**	**6.08**	**92**	P	**Pn**	**05 01 00.2**	**+0.8**
	0.3nm2μm53nm,0.7s						
KSI	**Kapahiang**	**6.45**	**313**	P	**Pn**	**05 01 04.8**	**+0.4**
	1.1nm9μm143nm,0.5s						
JAGI	**Jajag, Banyuwa**	**6.79**	**94**	P	**Pn**	**05 01 09.9**	**+0.8**
	0.4nm2μm63nm,0.8s						
JAGI	**Jajag, Banyuwa**	**6.79**	**94**	Pn	**Pn**	**05 01 10.0**	**+0.9**
SRBI	**Singaraja**	**7.83**	**90**	P	**Pn**	**05 01 24.3**	**+0.9**
KSM	**Kuching**	**9.98**	**18**	P	**Pn**	**05 01 56.0**	**+3.2**
SISI	**Saibi**	**10.60**	**309**	P	**Pn**	**05 01 58.7**	**-2.5**
MNSI	**Mandailing Nat**	**11.73**	**319**	P	**Pn**	**05 02 13.3**	**-3.3**
GIRL	**Giralia**	**15.91**	**156**	Pn	**Pn**	**05 03 09.2**	**-2.9**
SOEI	**Soe**	**16.84**	**97**	P	**Pn**	**05 03 23.6**	**-0.4**
SOEI				IAmb	IAmb	05 03 36.8	
	comp=Z,41nm,1.1s						
PSA00	**Pilbara Seismi**	**18.04**	**139**	P	**P**	**05 03 37.8**	**-0.4**
PSA00				IAmb	IAmb	05 03 40.8	
	comp=Z,21nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.41**	**121**	P	**P**	**05 04 05.1**	**+1.0**
	comp=Z,4.6nm,0.7s,baz=285,slow=7.1,SNR=9.6						
FITZ	**Fitzroy Crossi**	**20.41**	**121**	P	**P**	**05 04 05.1**	**+1.0**
KNRA	**Kununurra**	**22.29**	**112**	P	**P**	**05 04 25.2**	**+0.9**
KNRA				IAmb	IAmb	05 04 27.0	
	comp=Z,36nm,1.5s						
SIJI	**Sorong**	**24.93**	**74**	P	**P**	**05 04 47.4**	**-2.3**
	comp=Z,11nm,0.6s,baz=177,slow=17,SNR=3.4						
FAKI	**Fak Fak**	**25.35**	**80**	P	**P**	**05 04 52.5**	**-0.9**
H01W3	**Cape Leeuwin H**	**27.38**	**168**	T	T	05 35 04.0	
	baz=348,slow=76,SNR=1.1						
H01W1	**Cape Leeuwin H**	**27.39**	**168**	T	T	05 35 04.2	
	baz=348,slow=76,SNR=5.3						
H01W2	**Cape Leeuwin H**	**27.39**	**168**	T	T	05 35 06.0	
	baz=348,slow=76,SNR=6.6						
CMAR	**Chiang Mai Arr**	**27.66**	**343**	P	**P**	**05 05 11.8**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=179,slow=9.5,SNR=6.6						
WB0	**Warramunga Arr**	**28.68**	**117**	P	**P**	**05 05 22.4**	**-0.9**
WRA	**Warramunga Arr**	**28.70**	**117**	P	**P**	**05 05 23.5**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=287,slow=10,SNR=15						
WRA				PcP	**PcP**	**05 08 33.0**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=305,slow=2.3,SNR=6.9						
WRA	**Warramunga Arr**	**28.70**	**117**	P	**P**	**05 05 23.6**	**+0.1**
WRA				PcP	**PcP**	**05 08 32.8**	**0.0**
WB2	**Warramunga Arr**	**28.70**	**117**	P	**P**	**05 05 23.5**	**-0.1**
WB2				PcP	**PcP**	**05 08 32.8**	**-0.1**
WR0	**Warramunga Arr**	**28.88**	**117**	P	**P**	**05 05 25.3**	**+0.3**
ASAR	**Alice Springs**	**29.81**	**124**	P	**P**	**05 05 33.5**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=307,slow=8.8,SNR=12						
ASAR				PcP	**PcP**	**05 08 36.0**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=264,slow=1.1,SNR=5.7						
ASAR	**Alice Springs**	**29.81**	**124**	P	**P**	**05 05 32.7**	**-0.7**
ASAR				PcP	**PcP**	**05 08 36.0**	**+0.3**
H08S2	**Diego Garcia H**	**34.48**	**268**	T	T	05 43 08.9	
	baz=93,slow=74,SNR=6.2						
H08S3	**Diego Garcia H**	**34.49**	**268**	T	T	05 43 11.6	
	baz=93,slow=74,SNR=17						
H08S1	**Diego Garcia H**	**34.49**	**268**	T	T	05 43 09.4	
	baz=93,slow=74,SNR=4.0						
BBOO	**Buckleboo**	**36.24**	**137**	P	**P**	**05 06 29.6**	**+0.4**
BBOO				IAmb	IAmb	05 06 47.3	
	comp=Z,14nm,1.4s						
CTA	**Charters Tower**	**39.51**	**112**	P	**P**	**05 06 58.1**	**+1.2**
	comp=Z,4.5nm,0.7s,baz=297,slow=11,SNR=4.3						
CTAO	**Charters Tower**	**39.51**	**112**	P	**P**	**05 06 58.4**	**+1.5**
CTAO				IAmb	IAmb	05 06 59.1	
	comp=Z,24nm,1.3s						
STKA	**Stephens Creek**	**39.68**	**131**	P	**P**	**05 06 59.4**	**+1.1**
	comp=Z,15nm,0.7s,baz=306,slow=8.5,SNR=33						
STKA	**Stephens Creek**	**39.68**	**131**	P	**P**	**05 06 59.3**	**+1.1**
STKA				IAmb	IAmb	05 07 00.1	
	comp=Z,2.7nm,0.7s						
STKA				PcP	**PcP**	**05 09 04.8**	**+0.8**
NJ2	**Nanjing**	**41.43**	**15**	*eP*	**P**	**05 07 14.5**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LZH	**Lanzhou**	**44.08**	**356**	*eP*	**P**	**05 07 37.8**	**+3.7**
LZH				pP	pP	05 07 53.1	+3.5
LZH				sP	sP	05 08 00.4	+3.7
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
CAN	**Canberra**	**46.75**	**132**	P	**P**	**05 07 56.5**	**+1.3**
CAN				IAmb	IAmb	05 08 02.6	
	comp=Z,8.2nm,1.0s						
GTA	**Gaotai**	**47.78**	**352**	*eP*	**P**	**05 08 03.2**	**0.0**
GTA				pP	pP	05 08 12.4	-6.5
GTA				sP	sP	05 08 16.1	-10
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**48.87**	**4**	*eP*	**P**	**05 08 12.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.4s						
JHS	**Saijyo**	**49.33**	**28**	P	**P**	**05 08 14.4**	**-0.7**
WMQ	**Urumqi**	**54.66**	**343**	*eP*	**P**	**05 08 56.9**	**+2.3**
SONM	**Songino Array**	**55.70**	**359**	P	**P**	**05 09 01.3**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=169,slow=8.8,SNR=3.9						
SONM				PcP	**PcP**	**05 10 00.7**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=166,slow=3.0,SNR=3.4						
SONM	**Songino Array**	**55.70**	**359**	P	**P**	**05 09 01.6**	**-0.5**
SONM				PcP	**PcP**	**05 10 01.1**	**+0.3**
SOCY	**Socotra**	**56.70**	**290**	P	**P**	**05 09 10.5**	**+0.8**
MK31	**Makanchi Array**	**59.02**	**340**	P	**P**	**05 09 24.1**	**-1.3**
MKAR	**Makanchi Array**	**59.02**	**340**	P	**P**	**05 09 24.1**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=145,slow=8.0,SNR=15						
MKAR	**Makanchi Array**	**59.02**	**340**	P	**P**	**05 09 24.2**	**-1.2**
KURK	**Kurchatov**	**63.64**	**340**	P	**P**	**05 09 55.6**	**-0.8**
KURK				IAmb	IAmb	05 09 58.4	
	comp=Z,4.9nm,1.2s						
MAW	**Mawson**	**66.40**	**197**	P	**P**	**05 10 15.5**	**+1.5**
	comp=Z,2.5nm,0.7s,baz=46,slow=7.7,SNR=6.7						
MAW	**Mawson**	**66.40**	**197**	P	**P**	**05 10 15.7**	**+1.6**
BKZ	**Black Stump Fm**	**68.80**	**129**	P	**P**	**05 10 30.7**	**+0.7**
ABKAR	**Akbulak array**	**70.51**	**329**	P	**P**	**05 10 39.3**	**-0.8**
SYO	**Syowa Base**	**74.57**	**200**	*eP*	**P**	**05 11 03.8**	**-0.1**
SYO	**Syowa Base**	**74.57**	**200**	*eP*	**P**	**05 11 07.2**	**+3.3**
SYO	**Syowa Base**	**74.57**	**200**	*eP*	P	05 11 10.9	+7.0
VNDA	**Vanda**	**74.83**	**169**	P	**P**	**05 11 06.7**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=298,slow=5.8,SNR=4.9						
NRIK	**Noril'sk**	**78.48**	**353**	P	**P**	**05 11 25.0**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=117,slow=4.5,SNR=2.2						
BOSA	**Boshof**	**79.21**	**242**	P	**P**	**05 11 32.8**	**+1.8**
	comp=Z,2.4nm,1.0s,baz=85,slow=3.4,SNR=4.0						
BOSA	**Boshof**	**79.21**	**242**	P	**P**	**05 11 32.5**	**+1.5**
BOSA				IAmb	IAmb	05 11 36.9	
	comp=Z,7.2nm,1.1s						
TIXI	**Tiksi**	**80.86**	**7**	P	**P**	**05 11 36.9**	**-1.9**
QSPA	**South Pole Qui**	**81.89**	**180**	P	**P**	**05 11 45.6**	**+1.0**
QSPA				IAmb	IAmb	05 11 46.4	
	comp=Z,17nm,1.5s						
BRTR	**Keskin Array B**	**82.78**	**312**	P	**P**	**05 11 49.3**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=120,slow=7.3,SNR=7.3						
BRTR	**Keskin Array B**	**82.78**	**312**	P	**P**	**05 11 49.7**	**0.0**
ILGA	**Ilgaz**	**83.11**	**313**	P	**P**	**05 11 50.0**	**-1.5**
ILGA				IAmb	IAmb	05 11 52.6	
	comp=Z,10nm,1.1s						
KLMR	**Klimovskoe**	**86.50**	**333**	*eP*	**P**	**05 12 06.5**	**-1.2**
KLMR				AMP		05 12 08.1	
	comp=Z,10.0nm,1.1s						
SNAA	**Sanae**	**88.56**	**197**	P	**P**	**05 12 19.3**	**+1.6**
SNAA	**Sanae**	**88.56**	**197**	P	**P**	**05 12 19.4**	**+1.7**
SNAA				IAmb	IAmb	05 12 20.4	
	comp=Z,5.6nm,1.0s						
AKASG	**Malin Array Be**	**88.74**	**322**	P	**P**	**05 12 17.9**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=92,slow=4.5,SNR=2.5						
VNA2	**Neumayer--Watz**	**90.21**	**197**	P	**P**	**05 12 27.2**	**+1.9**
	baz=53,slow=5.3						
VNA3	**Neumayer Olymp**	**90.73**	**197**	P	**P**	**05 12 29.2**	**+1.5**
KOLS	**Kolonicke sedl**	**92.79**	**319**	*eP*	**P**	**05 12 37.6**	**-0.1**
FINES	**FINESS Array B**	**92.88**	**332**	P	**P**	**05 12 37.4**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=76,slow=8.0,SNR=4.7						
FINES	**FINESS Array B**	**92.88**	**332**	P	**P**	**05 12 37.6**	**-0.1**
K05A	**Summer Lake**	**125.53**	**42**	PKPdf	**PKiKP**	**05 18 28.0**	**+1.0**
BEKR	**Beckworth**	**127.06**	**45**	PKPdf	**PKPdf**	**05 18 27.1**	**-2.6**
SPUT	**South Promonto**	**131.73**	**40**	PKPdf	**PKPdf**	**05 18 34.5**	**-4.0**
CPUP	**Villa Florida**	**142.65**	**203**	PKhKP	PKPpre	05 18 54.1	
	comp=Z,1.0nm,0.5s,baz=169,slow=5.0,SNR=4.9						
CPUP	**Villa Florida**	**142.65**	**203**		**PKPdf**	**05 18 56.1**	**-2.7**
MOQ	**Mont Orford**	**142.93**	**359**	PKPpre	PKPpre	05 18 54.9	
P38A	**Dawn**	**143.49**	**27**	PKPdf	PKPbc	05 18 57.1	-0.2
TX31	**Lajitas Ar. Si**	**144.06**	**50**	PKPdf	PKPbc	05 18 59.9	+0.5
TX32	**Lajitas Array**	**144.06**	**50**	PKPdf	**PKPdf**	**05 19 00.5**	**-0.9**
TXAR	**Lajitas Array**	**144.06**	**50**	PKP	PKPbc	05 18 60.0	+0.5
	comp=Z,0.4nm,0.5s,baz=315,slow=0.9,SNR=8.8						
NCB	**Newcomb**	**144.25**	**2**	PKPdf	PKPbc	05 18 59.0	-0.5
WMOK	**Wichita Mounta**	**144.28**	**38**	PKPdf	PKPbc	05 19 00.1	+0.2
I62A	**Tamworth**	**144.35**	**358**	PKPdf	PKPbc	05 18 59.6	-0.1
HNH	**Hanover**	**144.54**	**359**	PKPdf	**PKPdf**	**05 19 00.8**	**-0.9**
L48A	**N Adams**	**144.74**	**15**	PKPdf	PKPbc	05 19 01.1	0.0
ACCN	**Adirondack Com**	**144.85**	**1**		PKPbc	05 19 01.1	-0.2
Q44A	**Mansfield**	**145.12**	**21**		**PKPab**	**05 19 02.0**	**-0.3**
S39A	**Bolivar**	**145.13**	**29**		**PKPbc**	**05 19 01.7**	**-0.8**
TUL1	**Leonard**	**145.21**	**34**		**PKPdf**	**05 19 03.0**	**-0.1**
WVNY	**West Valley, N**	**145.44**	**8**	PKPdf	**PKPbc**	**05 19 02.7**	**-0.6**
Q44A	**Meyer Farm, Va**	**146.00**	**23**	PKPbc	**PKPbc**	**05 19 04.8**	**-0.3**
BDFB	**Brasilia**	**146.02**	**226**	PKPbc	**PKPab**	**05 19 07.6**	**+1.1**
	comp=Z,3.7nm,0.6s,baz=138,slow=3.4,SNR=7.5						
MGMO	**Mountain Grove**	**146.06**	**29**	PKPbc	**PKPbc**	**05 19 05.2**	**-0.2**
N51A	**Ashland**	**146.21**	**13**	PKPbc	**PKPab**	**05 19 05.8**	**-0.7**
M56A	**Emporium**	**146.41**	**7**	PKPbc	**PKPbc**	**05 19 05.9**	**-0.4**
KSPA	**Keystone Colle**	**146.58**	**4**	PKPbc	**PKPbc**	**05 19 06.7**	**0.0**
T42A	**Van Buren**	**146.71**	**27**	PKPbc	**PKPbc**	**05 19 07.2**	**-0.1**
P49A	**Miami Univ. Ec**	**146.91**	**17**	PKPbc	**PKPbc**	**05 19 07.3**	**-0.4**
FCAR	**Ozark Folk Cen**	**147.14**	**30**	PKPbc	**PKPbc**	**05 19 08.0**	**-0.5**
N59A	**State Game Lan**	**147.22**	**4**	PKPbc	**PKPbc**	**05 19 08.3**	**-0.3**
MIAR	**Mount Ida**	**147.43**	**33**	PKPbc	**PKPbc**	**05 19 09.5**	**+0.1**
P52A	**Corning**	**147.49**	**14**	PKPbc	**PKPbc**	**05 19 08.9**	**-0.5**
WCI	**Wyandotte Cave**	**147.60**	**20**	PKPbc	**PKPbc**	**05 19 09.6**	**-0.1**
MVL	**Millersville**	**148.08**	**5**	PKPbc	**PKPbc**	**05 19 10.8**	**-0.1**
Q54A	**Coxs Mills**	**148.40**	**12**	PKPbc	**PKPbc**	**05 19 11.6**	**-0.2**
R53A	**Hurricane**	**148.77**	**14**	PKPbc	**PKPbc**	**05 19 12.8**	**0.0**
S51A	**Beattyville**	**148.99**	**17**	PKPbc	**PKPbc**	**05 19 13.0**	**-0.4**
T50A	**Nancy**	**149.18**	**19**	PKPbc	**PKPbc**	**05 19 13.5**	**-0.4**
CLTN	**Cedars of Leba**	**149.49**	**22**	PKPbc	**PKPbc**	**05 19 14.6**	**-0.1**
TZTN	**Tazewell**	**150.02**	**18**	PKPbc	**PKPbc**	**05 19 15.7**	**-0.3**
PB07	**IPOC Station P**	**150.22**	**185**	PKPbc	**PKiKP**	**05 19 18.3**	**+0.4**
V51A	**Loudon**	**150.45**	**19**	PKPbc	**PKPbc**	**05 19 16.9**	**-0.1**
V52A	**Sevierville**	**150.65**	**18**	PKPbc	**PKiKP**	**05 19 17.7**	**-0.5**
TKL	**Tuckaleechee C**	**150.77**	**19**	PKPbc	**PKiKP**	**05 19 17.8**	**-0.7**
V53A	**Saluda**	**151.05**	**17**	PKPbc	**PKiKP**	**05 19 18.4**	**-0.6**
V55A	**Taylorsville**	**151.31**	**15**	PKPbc	**PKPbc**	**05 19 18.6**	**-0.4**
LRAL	**Lakeview Retre**	**151.88**	**26**	PKPbc	**PKPbc**	**05 19 20.1**	**-0.3**
GO01	**Chusmiza**	**152.18**	**187**	PKPbc	**PKiKP**	**05 19 23.4**	**+1.0**
Y52A	**Lilburn**	**152.31**	**21**	PKPbc	**PKiKP**	**05 19 21.9**	**+0.2**
HODGE	**Hodges**	**152.55**	**17**	PKPbc	**PKiKP**	**05 19 21.9**	**-0.2**
LPAZ	**La Paz**	**155.34**	**191**	PKPab	**PKPab**	**05 19 47.4**	**+2.1**
	comp=Z,1.6nm,0.7s,baz=180,slow=6.0,SNR=7.2						
LPAZ	**La Paz**	**155.34**	**191**	PKPdf	**PKPdf**	**05 19 16.4**	**-3.7**

*VAO **10** 05:05:23.6±0.4, 23.69S×66.96W, h226km±5km, mb3.7*
*NEIC **10** 05:05:23.2±1.8, 23.75S±0.08×67.71W±0.2, h253km±18km, Error ellipse: s-maj=23.4km s-min=11.4km az=89.0*
*IDC **10** 05:05:23.3±1.2, 23.70S×66.69W, h191km±12km, mb3.1/2, mb1 3.3/8, mb1mx3.2/21, mbtmp3.7/8, Error ellipse: s-maj=19.8km s-min=16.2km az=8.0*
*GUC **10** 05:05:24.9±0.5, 23.72S×67.13W, h236km±10km, ML4.3*

ISC 10 05:05:23.2±0.7, 23.73S±0.05×66.92W±0.08, h218km±10km, n66, σ1$06/89, 11C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.14**	**301**	P	**Pn**	**05 06 06.0**	**+1.1**
	31nm,0.3s,baz=132,slow=6.6,SNR=339						
LVC				S	**S**	**05 06 37.3**	**+0.2**
	64nm,0.3s,baz=296,slow=21,SNR=36						
LVC	**Limon Verde**	**2.14**	**301**		**Pn**	**05 06 06.0**	**+1.1**
LVC				S	**S**	**05 06 37.9**	**+0.8**
LVC	**Limon Verde**	**2.14**	**301**	*eP*	**Pn**	**05 06 05.9**	**+1.0**
LVC				*eS*	**S**	**05 06 37.7**	**+0.6**
PB15	**IPOC Station P**	**2.40**	**282**	*iP*	**Pn**	**05 06 08.6**	**+1.2**
PB15				*iS*	**S**	**05 06 42.0**	**+0.4**
PB15	**IPOC Station P**	**2.40**	**282**	Pn	**Pn**	**05 06 08.6**	**+1.2**
PB15				S	**S**	**05 06 42.2**	**+0.7**
PB06	**IPOC Station P**	**2.64**	**292**	*iP*	**Pn**	**05 06 11.3**	**+1.3**
PB06				*iS*	**S**	**05 06 45.8**	**-0.3**
PB06				IAML		05 06 48.5	
	comp=N,379nm,0.4s						
PB06	**IPOC Station P**	**2.64**	**292**	Pn	**Pn**	**05 06 11.1**	**+1.1**
PB06				S	**S**	**05 06 45.9**	**-0.3**
GO02	**Mina Guanaco**	**2.82**	**239**	*iP*	**Pn**	**05 06 13.5**	**+1.4**
GO02				*iS*	**S**	**05 06 50.5**	**+0.5**
GO02				IAML		05 06 52.1	
	comp=E,670nm,0.6s						
GO02	**Mina Guanaco**	**2.82**	**239**	Pn	**Pn**	**05 06 13.4**	**+1.4**
GO02				S	**S**	**05 06 50.8**	**+0.7**
PB09	**IPOC Station P**	**2.88**	**311**	*iP*	**Pn**	**05 06 14.1**	**+1.5**
PB09				*iS*	**S**	**05 06 51.4**	**+0.4**
PB09				IAML		05 06 55.5	
	comp=E,176nm,0.3s						
PB09	**IPOC Station P**	**2.88**	**311**	Pn	**Pn**	**05 06 13.9**	**+1.3**
PB09				S	**S**	**05 06 51.6**	**+0.6**
PB03	**IPOC Station P**	**3.10**	**302**	*iP*	**Pn**	**05 06 16.1**	**+1.0**
PB03				*iS*	**S**	**05 06 55.0**	**-0.5**
PB03				IAML		05 06 57.1	
	comp=E,414nm,0.2s						
PB05	**IPOC Station P**	**3.14**	**285**	*iP*	**Pn**	**05 06 16.3**	**+0.8**
PB05				*iS*	**S**	**05 06 55.2**	**-1.0**
PB04	**IPOC Station P**	**3.28**	**294**	*iP*	**Pn**	**05 06 18.3**	**+1.0**
PB04				*iS*	**S**	**05 06 58.1**

CKHZ	**Cape Kidnapper**	**6.39**	**201**	P	Pn	05 50 38.6	+0.9
CKHZ				S	S	05 51 58.3	+4.2
OTVZ	**Oturere**	**6.49**	**212**	P	Pn	05 50 39.2	+0.2
KAHZ	**Kahuranaki**	**6.58**	**202**	P	Pn	05 50 40.4	+0.5
KAHZ				S	S	05 52 02.3	+4.0
BHHZ	**Black Hill Sta**	**6.59**	**208**	P	Pn	05 50 39.2	-1.0
BHHZ				S	S	05 51 59.4	+0.6
FWVZ	**Far West T-bar**	**6.61**	**212**	P	Pn	05 50 40.4	-0.2
KRHZ	**Kereru**	**6.61**	**206**	P	Pn	05 50 39.4	-1.0
KRHZ				S	S	05 51 59.5	+0.5
WHVZ	**Whangaehu Hut**	**6.62**	**212**	P	Pn	05 50 40.6	0.0
MOVZ	**Moawhango**	**6.65**	**210**	P	Pn	05 50 40.0	-0.9
MOVZ				S	S	05 52 00.8	+0.8
WNVZ	**Wahianoa**	**6.65**	**212**	P	Pn	05 50 40.6	-0.4
WNVZ				S	S	05 52 02.4	+2.3
PXZ	**Pawanui**	**6.79**	**201**	P	Pn	05 50 42.4	-0.1
PNHZ	**Pukenui**	**6.91**	**206**	P	Pn	05 50 43.2	-0.8
PNHZ				S	S	05 52 04.4	-1.2
BFZ	**Birch Farm**	**7.58**	**203**	P	Pn	05 50 51.0	-1.0
TCW	**Tory Channel**	**8.78**	**210**	P	Pn	05 51 03.8	-2.5
TCW				S	S	05 52 43.1	-3.5

*ISN **10** 05:55:48.2±0.9, 32.°88N×47.°88E, h8km±999km, ML3.6*
*TEH **10** 05:55:49.9, 32.°69N×47.°78E, h8km, ML3.7*
*THR **10** 05:55:53.6±0.5, 32.°73N×47.°99E, h15km±8km, ML3.4*

ISC 10 05:55:49.9±1.4,**32.°67N**±0.°03×**47.°77E**±0.°03,**h0**km±13km, **n54**,σ1**s55/60**,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.85**	**4**	*e*		05 56 24.4	
IKFM				*ePg*	**Pb**	**05 56 06.5**	**-1.0**
IKMR	**Kamar-syah**	**0.98**	**31**	*e*		05 56 11.4	
IKMR				*ePg*	**Pg**	**05 56 08.6**	**-0.2**
IDOB	**Doab**	**1.16**	**17**	*ePg*	**Pb**	**05 56 11.9**	**-1.1**
BMDN	**Meydan**	**1.33**	**41**	*ePg*	**Pg**	**05 56 15.6**	**+0.2**
BMDN				*e*		05 56 40.9	
IKOM	**Komasi**	**1.51**	**352**	*ePg*	**Pg**	**05 56 19.6**	**+0.7**
IKOM				*e*		05 56 48.1	
AHWZ	**Ahwaz**	**1.53**	**151**	*ePg*	**Pg**	**05 56 19.1**	**-0.1**
AHWZ				*eSg*	**Sg**	**05 56 42.1**	**+3.0**
IBDR	**Badra**	**1.61**	**286**	*ePn*	**Pn**	**05 56 19.0**	**-0.5**
IBDR				*eSn*	**Sg**	**05 56 42.0**	**+0.5**
IBDR	comp=E,720nm,0.5s			AML	AML	05 56 48.2	
IBDR	comp=N,716nm,0.6s			AML	AML	05 56 50.9	
HSAM	**Samen**	**1.68**	**24**	*ePg*	**Pg**	**05 56 21.6**	**-0.6**
HSAM				*e*		05 56 23.5	
KCHF	**Cheshme Sefid,**	**1.71**	**339**	*ePg*	**Pg**	**05 56 22.1**	**-0.5**
KER	**Kermanshah**	**1.79**	**343**	*ePg*	**Pg**	**05 56 23.7**	**-0.4**
IBZA	**Bozab**	**1.79**	**2**	*ePg*	**Pg**	**05 56 24.3**	**+0.1**
IBZA				*e*		05 56 51.8	
IGHG	**Ghaleghazi**	**1.93**	**329**	*ePn*	**Pb**	**05 56 25.0**	**-1.1**
IGHG				*e*		05 57 00.4	
IVIS	**Veis**	**2.00**	**338**	*ePn*	**Pb**	**05 56 25.7**	**-1.5**
KHMZ	**Khomeyn**	**2.12**	**59**	*ePg*	**Pb**	**05 56 29.0**	**-0.3**
KHMZ	comp=E,311nm,0.5s			IAML		05 57 03.7	
KHMZ	**Khomeyn**	**2.12**	**59**	*ePg*	**Pb**	**05 56 29.0**	**-0.3**
NSR	**Nassriya**	**2.16**	**220**	*ePn*	**Pb**	**05 56 28.0**	**-1.9**
NSR				*eSn*	**Sb**	**05 56 58.0**	**+0.8**
NSR	comp=E,608nm,0.5s			AML	AML	05 57 06.9	
IALM	**Almabolaq**	**2.21**	**9**	*ePn*	**Pb**	**05 56 28.8**	**-2.0**
IDHR	**Dehrash**	**2.33**	**331**	*ePn*	**Pb**	**05 56 30.9**	**-1.9**
IDHR				*e*		05 57 09.1	
ILIN	**Lien**	**2.34**	**344**	*ePn*	**Pb**	**05 56 31.3**	**-1.7**
ILIN				*e*		05 57 14.5	
HSRG	**Sareghieh**	**2.60**	**9**	*ePn*	**Pb**	**05 56 35.3**	**-2.2**
HSRG				*e*		05 57 19.7	
IPIR	**Pirpir**	**2.63**	**89**	*ePn*	**Pb**	**05 56 35.5**	**-2.6**
IPIR				*e*		05 57 21.6	
ASAO	**Ashtian**	**2.65**	**45**	*ePn*	**Pb**	**05 56 36.0**	**-2.4**
ASAO				*eSg*	**Sb**	**05 57 11.4**	**-0.2**
ASAO	comp=E,154nm,0.3s			IAML		05 57 17.6	
ASAO	**Ashtian**	**2.65**	**45**	*ePn*	**Pb**	**05 56 36.0**	**-2.4**
ROKH	**ROKH**	**2.78**	**96**	*ePn*	**Pb**	**05 56 37.2**	**-3.4**
ROKH				*e*		05 57 23.5	
BHD	**Baghdad**	**2.91**	**283**	*ePn*	**Pn**	**05 56 38.0**	**+0.6**
BHD				*eSn*	**Sn**	**05 57 13.0**	**-0.1**
BHD	comp=E,490nm,0.4s			AML	AML	05 57 31.2	
IRAZ	**Razeghan**	**3.26**	**33**	*ePn*	**Pb**	**05 56 45.3**	**-3.5**
IKLH	**Kolahrood**	**3.27**	**78**	*ePn*	**Pn**	**05 56 43.7**	**+1.1**
IKLH				*e*		05 57 42.8	
QABG	**Abgarm-Qazvin**	**3.38**	**26**	*ePn*	**Pn**	**05 56 44.6**	**+0.5**
GHVR	**GHOM**	**3.45**	**58**	*ePn*	**Pn**	**05 56 45.7**	**+0.8**
GHVR				*eSg*	**Sb**	**05 57 34.4**	**0.0**
GHVR	comp=N,87nm,0.4s			IAML		05 57 47.8	
GHVR	**GHOM**	**3.45**	**58**	*ePn*	**Pn**	**05 56 45.7**	**+0.8**
IQOM	**Qom**	**3.50**	**51**	*ePn*	**Pn**	**05 56 47.4**	**+1.6**
IGAR	**Gharneh**	**3.62**	**93**	*ePn*	**Pn**	**05 56 47.5**	**+0.1**
IGAR				*e*		05 57 43.9	
KLNJ	**Kolanjah**	**3.65**	**116**	*ePn*	**Pn**	**05 56 48.5**	**+0.5**
IMHD	**Mahdasht**	**3.85**	**38**	*ePn*	**Pn**	**05 56 52.1**	**+1.7**
IZEF	**Zefreh**	**3.85**	**85**	*ePn*	**Pn**	**05 56 52.6**	**+2.0**
KRSH	**Karshahi**	**3.88**	**69**	*ePn*	**Pn**	**05 56 52.6**	**+1.7**
QSDN	**Sirdan**	**3.99**	**16**	*ePn*	**Pn**	**05 56 54.6**	**+2.1**
IRAM	**Rameshesh**	**4.00**	**101**	*ePn*	**Pn**	**05 56 53.2**	**+0.5**
IHSB	**Hasanabad**	**4.01**	**46**	*ePn*	**Pn**	**05 56 54.7**	**+2.1**
IVRN	**Varamin**	**4.03**	**54**	*ePn*	**Pn**	**05 56 54.8**	**+1.9**
IGZV	**Ghazvin**	**4.22**	**28**	*ePn*	**Pn**	**05 56 57.6**	**+2.0**
NASN	**Na'in**	**4.25**	**87**	*ePn*	**Pn**	**05 56 57.4**	**+1.2**
NASN	**Na'in**	**4.25**	**87**	*ePn*	**Pn**	**05 56 57.4**	**+1.2**
QALM	**Alamut, Qazvin**	**4.44**	**32**	*ePn*	**Pn**	**05 56 59.1**	**+0.4**
IDMV	**Damavand**	**4.57**	**50**	*ePn*	**Pn**	**05 57 01.6**	**+1.1**
ANAR	**Anarak**	**5.04**	**83**	*ePn*	**Pn**	**05 57 08.2**	**+1.4**
ISAD	**Sadrabad**	**5.07**	**97**	*ePn*	**Pn**	**05 57 08.1**	**+0.7**
IFIR	**Firoozkooh**	**5.08**	**53**	*ePn*	**Pn**	**05 57 08.6**	**+1.0**
ILAS	**Lasjerd**	**5.09**	**57**	*ePn*	**Pn**	**05 57 10.1**	**+2.5**
IALA	**Alasht**	**5.38**	**49**	*ePn*	**Pn**	**05 57 13.3**	**+1.6**
ISHM	**Shahmirzad**	**5.54**	**54**	*ePn*	**Pn**	**05 57 15.8**	**+2.0**
ICHK	**Chekchek**	**5.63**	**93**	*ePn*	**Pn**	**05 57 16.1**	**+1.1**
IANJ	**Anjilo**	**5.81**	**60**	*ePn*	**Pn**	**05 57 18.5**	**+1.0**
TPRV	**Parvadeh(Tabas**	**7.51**	**85**	*ePn*	**Pn**	**05 57 41.7**	**+0.9**

*IDC **10** 06:08:11.8±4.4, 37.°16N×72.°04E, h220km±43km, mb3.2/2, mb1 3.1/8, mb1mx2.8/62, mbtmp3.7/8, Error ellipse: s-maj=49.2km s-min=22.7km az=173.0*

ISC 10 06:08:03.7±1.8,**36.°8N**±0.°1×**71.°9E**±0.°1,**h150**km,**n10**, σ2**s27/12**,**1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.20**	**18**	⇑*Pn*	**Pn**	**06 09 37.2**	**+4.1**
AAK	2.0nm,0.5s			⇓*Sn*	**Sn**	**06 10 42.4**	**-0.7**
KK31	**Karatay Array**	**6.41**	**351**	*Pn*	**Pn**	**06 09 39.6**	**+3.8**
KK31	3.3nm,0.4s,baz=166,slow=12,SNR=21			⇓*Sn*	**Sn**	**06 10 45.3**	**-2.6**
GEYT	**Alibeck**	**11.01**	**280**	P	**P**	**06 10 45.5**	**-0.1**
MKAR	**Makanchi Array**	**12.67**	**35**	P	**Pn**	**06 10 59.0**	**+0.6**
KURBB	**Kurchatov Array**	**14.65**	**17**	P	**Pn**	**06 11 22.2**	**-1.3**
BVAR	**Borovoye Array**	**16.28**	**357**	P	**Pn**	**06 11 43.0**	**-0.7**
AKTO	**Aktyubinsk**	**16.90**	**328**	P	**Pn**	**06 11 51.6**	**+0.3**
ZALV	**Zalesovo Beam**	**19.38**	**24**	P	**P**	**06 12 16.2**	**-1.6**
SONM	**Songino Array**	**27.61**	**55**	P	**P**	**06 13 36.5**	**-0.5**
ARCES	**ARCESS Array B**	**41.16**	**337**	P	**P**	**06 15 31.2**	**-1.6**

*BJI **10** 06:13:07.0±0.0, 6.°50S×104.°20E, h15km, mB5.1/24, mb5.0/38, Ms4.5/13, Ms7 4.3/13*
*NEIC **10** 06:13:12.0±2.1, 6.°36S±0.°06×104.°35E±0.°06, h35km±1km, mb4.9/65, Error ellipse: s-maj=11.0km s-min=8.9km az=234.0*
*DJA **10** 06:13:12.0±0.3, 7.°S±3.°×10.°4E±.°, h42km±5km, M4.8/28, mb4.9/28, mB5.2/14, MLv5.1/13, Mw(mB)4.6/14, Mwp5.6/1*
*KLM **10** 06:13:15.0, 6.°43S×104.°14E, h71km, mb4.7*
*IDC **10** 06:13:16.0±1.6, 6.°31S×104.°26E, h63km±14km, mb4.4/31, mb1 4.5/34, mb1mx4.4/52, mbtmp4.7/34, MS3.8/16, Ms1 3.8/16, ms1mx3.6/35, Error ellipse: s-maj=13.3km s-min=8.3km az=42.0*

ISC 10 06:13:09.5±0.7,**6.°43S**±0.°04×**104.°23E**±0.°03,**h15**km±4km, **n370**,σ1**s25/371**,**mb4.8**/84,**MS3.9**/20,**2C-23D,Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**1.46**	**97**	P	**Pb**	**06 13 36.9**	**+0.5**
CGJI				S	**Sg**	**06 13 56.5**	**-0.3**
KLSI		**1.80**	**16**	P	**Pg**	**06 13 43.5**	**-0.6**
KLSI				S	**Sg**	**06 14 08.3**	**+0.8**
SBJI	**Serang**	**1.91**	**81**	P	**Pb**	**06 13 43.6**	**-0.5**
SBJI				S	**Sb**	**06 14 09.5**	**+1.7**
SKJI	**Sukabumi**	**2.38**	**104**	P	**Pb**	**06 13 50.9**	**-1.2**
SKJI				S	**Sn**	**06 14 18.9**	**+2.0**
TNG	**Tangerang**	**2.41**	**84**	P	**Pb**	**06 13 51.3**	**-1.4**
TNG				S	**Sb**	**06 14 21.5**	**-0.7**
MNAI	**Manna**	**2.42**	**328**	P	**Pb**	**06 13 52.2**	**-0.5**
MNAI				S	**Sb**	**06 14 21.4**	**-0.9**
MNAI	**Manna**	**2.42**	**328**	P	**Pn**	**06 13 49.2**	**+0.8**
DBJI	**Dramaga**	**2.51**	**93**	P	**Pb**	**06 13 52.4**	**-1.8**
DBJI				S	**Sb**	**06 14 23.2**	**-1.7**
CBJI	**Citeko**	**2.60**	**90**	P	**Pb**	**06 13 55.6**	**-0.3**
KSI	**Kapahiang**	**3.21**	**329**	P	**Pb**	**06 14 03.1**	**-3.1**
LEM	**Lembang**	**3.39**	**97**	P	**Pb**	**06 14 07.0**	**-2.4**
LEM	49nm,0.3s,baz=193,slow=16,SNR=52 70nm,0.3s,baz=188,slow=22,SNR=6.7			S	**Sb**	**06 14 47.8**	**-2.7**
LEM	comp=Z,2μm,20.2s,baz=344,slow=43			LR	LR	06 15 42.7	
PMBI	**Palembang**	**3.52**	**9**	*Pn*	**Pn**	**06 14 02.6**	**-1.1**
CISI	**Cisompet, Garu**	**3.73**	**108**	*P*	**Pn**	**06 14 08.2**	**+1.6**
CISI	**Cisompet, Garu**	**3.73**	**108**	*Pn*	**Pn**	**06 14 04.2**	**-2.4**
XMIS	**Christmas Isla**	**4.26**	**161**	*Pn*	**Pn**	**06 14 10.2**	**-3.7**
CMJI	**Cimerak**	**4.40**	**108**	*P*	**Pn**	**06 14 17.3**	**+1.6**
KPJI	**Karang Pucung**	**4.75**	**101**	*P*	**Pn**	**06 14 22.7**	**+2.1**
TPI	**Tanjungpandan** 0.7nm930nm55nm,0.7s	**4.99**	**43**	*P*	**Pn**	**06 14 27.6**	**+3.7**
YOGI	**Yogyakarta** 0.8nm127nm,2.0s	**6.17**	**103**	*P*	**Pn**	**06 14 43.2**	**+3.0**
SMRI	**Semarang**	**6.20**	**96**	*Pn*	**Pn**	**06 14 37.4**	**-3.1**
UGM	**Wanagama** 1.3nm197nm,0.7s	**6.42**	**104**	*P*	**Pn**	**06 14 45.5**	**+2.0**
UGM	**Wanagama**	**6.42**	**104**	*Pn*	**Pn**	**06 14 46.3**	**+2.8**
WOJI	**Wonogiri, Jawa** 0.3nm53nm,1.3s	**6.79**	**102**	*P*	**Pn**	**06 14 50.8**	**+2.2**
BKNI	**Bangkinang**	**7.43**	**334**	*Pn*	**Pn**	**06 14 58.6**	**+1.2**
PWJI	**Pagerwojo** 0.8nm2μm147nm,0.9s	**7.68**	**102**	*P*	**Pn**	**06 15 02.8**	**+2.0**
MYKOM	**Kota Tinggi**	**8.17**	**357**	*P*	*Pn*	06 15 18.0	+10
GRJI	**Gresik** 1μm156nm,0.6s	**8.21**	**94**	*P*	**Pn**	**06 15 10.6**	**+2.5**
MNSI	**Mandailing Nat** 38nm,0.5s	**8.55**	**327**	*P*	**Pn**	**06 15 13.0**	**+0.2**
COCO	**West Island**	**9.27**	**231**	*Pn*	**Pn**	**06 15 23.7**	**+0.9**
GMJI	**Gumukmas** 77nm,0.6s	**9.32**	**102**	*P*	**Pn**	**06 15 25.4**	**+2.0**
BLJI	**Banyuglugur** 3μm97nm,0.6s	**9.38**	**99**	*P*	**Pn**	**06 15 26.7**	**+2.4**
ABJI	**Asem Bagus** 4μm384nm,0.8s	**10.02**	**98**	*P*	**Pn**	**06 15 35.8**	**+2.8**
JAGI	**Jajag, Banyuwa** 4μm155nm,1.0s	**10.04**	**102**	*P*	**Pn**	**06 15 35.1**	**+1.8**
JAGI	**Jajag, Banyuwa**	**10.04**	**102**	*Pn*	**Pn**	**06 15 33.4**	**+0.1**
GSI	**Gunungsitoli** 3μm31nm,0.7s	**10.16**	**319**	*P*	**Pn**	**06 15 34.5**	**-0.4**
GSI	**Gunungsitoli**	**10.16**	**319**	*Pn*	**Pn**	**06 15 33.2**	**-1.6**
SRBI	**Singaraja** 141nm,0.5s	**11.02**	**99**	*P*	**Pn**	**06 15 49.3**	**+2.6**
SBUM	**Sibu**	**11.89**	**42**	*Pn*	**Pn**	**06 15 56.1**	**-2.5**
SBUM	**Sibu**	**11.89**	**42**	*P*	*Pn*	06 16 06.0	+7.4
KULM	**Kulim**	**12.18**	**343**	*P*	*P*	06 16 10.0	-5.1
PLAI	**Plampang** 73nm,0.8s	**13.64**	**101**	*P*	**Pn**	**06 16 21.5**	**-1.0**
WBSI	**Waikabubak, Su**	**15.35**	**103**	*P*	**Pn**	**06 16 42.4**	**-3.3**
KAPI	**Kappang** baz=30,slow=20,SNR=1.2	**15.51**	**86**	*P*	**Pn**	**06 16 49.1**	**+1.3**
KAPI	comp=Z,697nm,19.1s,baz=237,slow=39			LR	LR	06 23 25.6	
BKSI	**Bukumba** 622nm67nm,0.9s	**15.85**	**87**	*P*	**P**	**06 16 54.5**	**-1.4**
TTSI	**Tana Toraja** 22nm,1.0s	**15.89**	**79**	*P*	**P**	**06 16 55.3**	**-1.1**
BNSI	**Bone** 31nm,1.6s	**15.93**	**84**	*P*	**P**	**06 16 55.8**	**-1.1**
BSSI	**Bau Bau, Buton** 9μm590nm26nm,0.9s	**16.16**	**90**	*P*	**P**	**06 16 58.1**	**-1.4**
SPMM	**Sapulut**	**16.48**	**48**	*P*	**P**	**06 17 06.0**	**+3.0**
MPSI	**Mapaga** 431nm36nm,1.2s	**17.02**	**67**	*P*	**P**	**06 17 10.3**	**+1.4**
KKM	**Kota Kinabalu**	**17.22**	**44**	*Pn*	**Pn**	**06 17 06.9**	**-2.9**
EDFI	**Ende, Flores** 365nm25nm,0.6s	**17.46**	**99**	*P*	**Pn**	**06 17 11.6**	**-1.1**
MMRI	**Maumere**	**17.98**	**98**	*Pn*	**Pn**	**06 17 16.4**	**-2.7**
MMRI	comp=Z,84nm,0.7s			IAmb	IAmb	06 17 38.4	
APSI	**Ampana** comp=Z,725nmcomp=Z,67nm,1.1s	**18.22**	**73**	*P*	**P**	**06 17 24.5**	**+2.3**
MYLDM	**Lahad Datu**	**18.33**	**51**	*Pn*	**Pn**	**06 17 18.9**	**-4.5**
GIRL	**Giralia** baz=19,SNR=10	**18.79**	**150**	*P*	**P**	**06 17 27.1**	**-1.2**
GIRL	**Giralia**	**18.79**	**150**	*P*	**P**	**06 17 26.7**	**-1.7**
BATI	**Baumata** comp=Z,26nm,0.3s,baz=270,slow=9.7,SNR=4.0	**19.59**	**102**	*P*	**P**	**06 17 38.0**	**+0.7**
BATI	comp=Z,10nm,0.3s,baz=231,slow=18,SNR=2.1			S	**S**	**06 21 15.1**	**-3.1**
GTOI	**Gorontalo** comp=Z,326nmcomp=Z,19nm,0.8s	**20.01**	**70**	*P*	**P**	**06 17 42.3**	**+0.4**
SOEI	**Soe** comp=Z,2μmcomp=Z,390nm,0.9s	**20.11**	**101**	*P*	**P**	**06 17 42.7**	**-0.4**
SOEI	**Soe**	**20.11**	**101**	*P*	**P**	**06 17 41.9**	**-1.2**
PSAD1	**Pilbara Seismi**	**21.23**	**136**	*P*	**P**	**06 17 56.1**	**+1.1**
PSAD1	comp=Z,48nm,1.0s			IAmb	IAmb	06 17 57.0	
PSAC1	**Pilbara Seismi**	**21.27**	**136**	*P*	**P**	**06 17 55.9**	**+0.4**
PSAC1	comp=Z,48nm,1.0s			IAmb	IAmb	06 17 57.4	
PSAA2	**Pilbara Seismi**	**21.32**	**136**	*P*	**P**	**06 17 56.8**	**+0.8**
PSAA2	comp=Z,52nm,1.0s			IAmb	IAmb	06 17 57.9	
PSAA1	**Pilbara Seismi**	**21.32**	**136**	*P*	**P**	**06 17 56.9**	**+0.9**
PSAA1	comp=Z,57nm,1.0s			IAmb	IAmb	06 17 57.9	
PSA00	**Pilbara Seismi**	**21.32**	**136**	*P*	**P**	**06 17 57.0**	**+0.9**
PSA00	comp=Z,56nm,1.1s			IAmb	IAmb	06 17 57.9	
PSAB3	**Pilbara Seismi**	**21.34**	**136**	*P*	**P**	**06 17 57.2**	**+1.0**
PSAB3	comp=Z,53nm,1.0s			IAmb	IAmb	06 17 58.1	
SANI	**Sanana** comp=Z,14nm,0.9s	**22.12**	**80**	*P*	**P**	**06 18 04.0**	**-0.7**
CHAI	**Chaiyaphum**	**22.30**	**354**	*P*	**P**	**06 18 09.2**	**+2.7**
FITZ	**Fitzroy Crossi** comp=Z,17nm,0.8s,baz=295,slow=5.1,SNR=38	**23.89**	**121**	*P*	**P**	**06 18 22.7**	**0.0**
FITZ	comp=Z,2.3nm,0.9s,baz=55,slow=18,SNR=2.0			S	**S**	**06 22 42.4**	**+3.8**
FITZ	comp=Z,176nm,19.1s,baz=296,slow=36			LR	LR	06 27 39.8	
FITZ	**Fitzroy Crossi** baz=24,SNR=16	**23.89**	**121**	*P*	**P**	**06 18 22.6**	**-0.2**
FITZ	**Fitzroy Crossi**	**23.89**	**121**	*P*	**P**	**06 18 22.5**	**-0.2**
SUKH	**Sukhothai**	**24.19**	**349**	*P*	**P**	**06 18 26.8**	**+1.3**
CM04	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,12nm,0.8s	**25.21**	**348**	*P*	**P**	**06 18 34.0**	**-0.8**
CM05	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,64nmcomp=Z,6.5nm,0.9s	**25.22**	**348**	*P*	**P**	**06 18 34.6**	**-0.2**
CM01	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,149nmcomp=Z,9.7nm,0.8s	**25.23**	**348**	*P*	**P**	**06 18 37.5**	**+2.5**
CM13	**Chiang Mai Arr**	**25.25**	**348**	*P*	**P**	**06 18 35.1**	**0.0**
CM02	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,9.8nm,0.9s	**25.25**	**348**	*P*	**P**	**06 18 35.0**	**-0.2**
CM09	**Chiang Mai Arr** comp=Z,0.0nmcomp=Z,9.3nm,0.9s	**25.25**	**348**	*P*	**P**	**06 18 35.4**	**+0.2**
CM15	**Chiang Mai Arr** comp=Z,0.1nmcomp=Z,8.2nm,0.8s	**25.27**	**348**	*P*	**P**	**06 18 35.9**	**+0.5**
CM31	**Chiang Mai Arr**	**25.27**	**348**	*P*	**P**	**06 18 33.6**	**-1.7**
CMAR	**Chiang Mai Arr** comp=Z,3.2nm,0.6s,baz=182,slow=8.8,SNR=22	**25.27**	**348**	*P*	**P**	**06 18 34.4**	**-1.0**
CMAR	comp=Z,217nm,19.2s,baz=222,slow=39			LR	LR	06 29 35.2	
CMMT	**Chiang Mai** comp=Z,0.0nmcomp=Z,254nmcomp=Z,6.1nm,0.8s	**25.62**	**348**	*P*	**P**	**06 18 38.2**	**-0.3**
CHTO	**Chiang Mai**	**25.62**	**348**	*P*	**P**	**06 18 37.1**	**-1.4**
KNRA	**Kununurra** baz=26,SNR=13	**25.74**	**113**	*P*	**P**	**06 18 39.2**	**-0.5**
KNRA	**Kununurra**	**25.74**	**113**	*P*	**P**	**06 18 39.3**	**-0.5**
QIZ	**Qiongzhong**	**25.89**	**12**	*P*	**P**	**06 18 42.7**	**+1.7**
QIZ				*sP*	**sP**	**06 18 47.0**	**+0.3**
QIZ				*S*	**S**	**06 23 15.8**	**+5.2**
QIZ				*sS*	**sS**	**06 23 20.2**	**+2.5**
QIZ	comp=Z,470nm,12.4s			LR	LR		
QIZ	comp=Z,220nm,8.8s			LR	LR		
QIZ	comp=Z,590nm,19.4s			LR	LR		
PALK	**Pallekele** comp=Z,237nm,19.3s,baz=229,slow=34	**27.13**	**300**	LR	LR	06 28 41.0	
MTN	**Manton Dam** baz=27,SNR=4.6	**27.26**	**106**	*P*	**P**	**06 18 54.1**	**+0.6**
MTN	**Manton Dam**	**27.26**	**106**	*P*	**P**	**06 18 51.6**	**-1.8**
MTN	comp=Z,18nm,0.7s			IAmb	IAmb	06 19 02.4	
SIJI	**Sorong** comp=Z,85nm,18.4s,baz=247,slow=42	**27.53**	**80**	LR	LR	06 32 15.7	
KDU	**Kakadu** baz=29,SNR=20	**28.52**	**105**	*P*	**P**	**06 19 03.4**	**-1.3**
NWAO	**Narrogin (SRO)** comp=Z,336nm,20.2s,baz=298,slow=33	**29.01**	**157**	LR	LR	06 29 24.2	
WRKA	**Warakurna** baz=30,SNR=4.2	**29.55**	**131**	*P*	**P**	**06 19 13.9**	**+0.1**
H01W3	**Cape Leeuwin H** baz=343,slow=76,SNR=97	**29.75**	**163**	*T*	*T*	06 50 44.3	
H01W2	**Cape Leeuwin H** baz=343,slow=76,SNR=130	**29.77**	**163**	*T*	*T*	06 50 45.5	
H01W1	**Cape Leeuwin H** baz=343,slow=76,SNR=110	**29.77**	**163**	*T*	*T*	06 50 45.9	
H08S2	**Diego Garcia H** baz=89,slow=75,SNR=16	**31.52**	**266**	*T*	*T*	06 53 26.3	
H08S3	**Diego Garcia H** baz=89,slow=75,SNR=47	**31.53**	**266**	*T*	*T*	06 53 19.5	
H08S1	**Diego Carcia H** baz=89,slow=75,SNR=14	**31.54**	**266**	*T*	*T*	06 53 15.8	
WB0	**Warramunga Arr**	**32.15**	**117**	*P*	**P**	**06 19 35.2**	**-1.6**
WB0	comp=Z,11nm,0.8s			IAmb	IAmb	06 19 37.5	
WRA	**Warramunga Arr** comp=Z,12nm,0.7s,baz=290,slow=10,SNR=103	**32.17**	**118**	*P*	**P**	**06 19 36.6**	**-0.4**
WRA	comp=Z,56nm,21.6s,baz=295,slow=38			LR	LR	06 33 24.2	
WRA	**Warramunga Arr**	**32.17**	**118**	*P*	**P**	**06 19 36.2**	**-0.7**
WRAB	**Tennant Creek**	**32.17**	**118**	*P*	**P**	**06 19 32.8**	**-4.2**
WRAB	comp=Z,16nm,0.8s			IAmb	IAmb	06 19 37.7	
WB2	**Warramunga Arr**	**32.18**	**118**	*P*	**P**	**06 19 36.2**	**-0.9**
WB2	comp=Z,14nm,0.7s			IAmb	IAmb	06 19 37.7	
WC3	**Warramunga Arr**	**32.20**	**118**	*P*	**P**	**06 19 37.2**	**-0.1**
WC3	comp=Z,15nm,0.8s			IAmb	IAmb	06 19 38.0	
WR0	**Warramunga Arr**	**32.35**	**117**	*P*	**P**	**06 19 38.6**	**+0.1**
WR0	comp=Z,15nm,0.7s			IAmb	IAmb	06 19 39.4	
GYA	**Guiyang**	**32.78**	**4**	⇑*P*	**P**	**06 19 43.4**	**+1.1**
GYA	comp=Z,11nm,0.9s			pmax	pmax		
GYA	comp=Z,150nm,3.5s			pmax	pmax		
GYA	comp=Z,270nm,19.5s			LR	LR		
GYA	comp=Z,260nm,17.1s			LR	LR		
GYA	comp=Z,230nm,16.0s			LR	LR		
ASAR	**Alice Springs** comp=Z,1.6nm,0.5s,baz=300,slow=7.8,SNR=13	**33.27**	**124**	P	**P**	**06 19 46.6**	**0.0**
ASAR	comp=Z,1.9nm,0.9s,baz=299,slow=3.1,SNR=6.1			PcP	**PcP**	**06 22 29.1**	**+0.1**
ASAR	comp=Z,1.0nm,0.9s,baz=303,slow=15,SNR=4.1			S	**S**	**06 25 07.6**	**+1.0**
ASAR	comp=Z,179nm,21.8s,baz=300,slow=36			LR	LR	06 33 24.7	
ASAR	**Alice Springs**	**33.27**	**124**	*P*	**P**	**06 19 45.3**	**-1.3**
ODAN	**Odare**	**36.90**	**334**	*eP*	**P**	**06 20 17.9**	**-0.1**
QIS	**Mount Isa** baz=37,SNR=5.6	**37.04**	**116**	*P*	**P**	**06 20 19.1**	**0.0**
CD2	**Chengdu**	**37.13**	**359**	*eP*	**P**	**06 20 20.6**	**+0.9**
TAPN	**Taplejung** comp=Z,40nm,1.0s	**37.19**	**335**	*eP*	**P**	**06 20 20.2**	**-0.4**
WHN	**Wuhan**	**38.02**	**14**	*P*	*P*	06 20 33.5	+6.3
WHN				*S*	**S**	**06 26 22.3**	**+3.3**
WHN	comp=Z,680nm,18.3s			LR	LR		
PKIN	**Phulchoki**	**38.40**	**333**	*eP*	**P**	**06 20 31.3**	**+0.5**
GUN	**Gumba**	**38.47**	**333**	*eP*	**P**	**06 20 31.3**	**-0.1**
DMN	**Daman**	**38.56**	**332**	*eP*	**P**	**06 20 32.8**	**+0.7**
GKN	**Gorkha**	**39.11**	**332**	*eP*	**P**	**06 20 37.0**	**+0.4**
KOLN	**

comp=Z,13nm,0.8s
KSAR Wonju Array Be 48.91 25 P P 06 21 54.8 -0.1
KSRS Korea Array 48.94 25 P P 06 21 55.5 +0.4
comp=Z,6.8nm,0.8s,baz=217,slow=7.7,SNR=23
KS19 Wonju Array Si 48.96 25 P P 06 21 55.5 +0.2
KS19 IAmb IAmb 06 21 56.6
comp=Z,9.6nm,0.9s
YNG Young 49.27 130 P P 06 21 59.3 +1.5
baz=49,SNR=11
JHS Saijyo 49.39 31 P P 06 21 58.0 -0.7
NIL Nilore 49.51 326 P P 06 21 59.1 -0.5
CAN Canberra 50.13 131 P P 06 22 03.8 -0.7
JWT Wachi 50.82 33 P P 06 22 08.9 -0.6
MGCD Mangrove Creek 50.94 128 P P 06 22 11.9 +1.4
baz=51,SNR=5.6
WMQ Urumqi 52.20 345 P P 06 22 20.5 +0.7
WMQ pP pwP 06 22 26.7 -0.2
WMQ sP sP 06 22 29.6 +3.9
WMQ pmax pmax
comp=Z,40nm,0.9s
WMQ pmax pmax
comp=Z,340nm,5.7s
WMQ LR LR
comp=Z,440nm,16.7s
WMQ LR LR
comp=Z,410nm,16.3s
WMQ Urumqi 52.20 345 P P 06 22 20.0 +0.2
KBL Kabul 52.58 323 P P 06 22 22.3 -0.7
KSH Kashi 52.65 333 eP P 06 22 22.2 -1.1
KSH pmax pmax
comp=Z,30nm,0.9s
KSH pmax pmax
comp=Z,260nm,5.1s
MAT Matsushiro 53.29 34 P P 06 22 27.8 -0.1
MJAR Matsushiro Arr 53.29 34 P P 06 22 26.5 -1.4
comp=Z,2.8nm,0.7s,baz=204,slow=7.2,SNR=6.0
MJAR Matsushiro Arr 53.29 34 P P 06 22 25.8 -2.1
CN2 Changchun 53.55 19 eP P 06 22 28.8 -0.9
CN2 esP pwP 06 22 37.6 +0.8
CN2 pmax pmax
comp=Z,20nm,0.9s
SONM Songino Array 54.06 2 P P 06 22 34.1 +0.6
comp=Z,12nm,0.8s,baz=179,slow=8.9,SNR=39
SONM PcP PcP 06 23 38.3 -0.1
comp=Z,4.4nm,0.6s,baz=181,slow=4.4,SNR=6.2
SONM Songino Array 54.06 2 P P 06 22 33.3 -0.2
SONM PcP 06 23 38.6 +0.2
ULN Ulaanbaatar 54.12 2 P P 06 22 33.8 -0.1
ULN IAmb IAmb 06 22 35.0
comp=Z,11nm,1.1s
SHLS Shalkode 54.23 338 eP P 06 22 33.5 -1.3
comp=Z,11nm,0.9s,baz=338
SATY Saty 54.55 337 eP P 06 22 37.2 0.0
comp=Z,3.3nm,0.8s,baz=337
KPKS Kokpek 54.79 337 eP P 06 22 38.5 -0.3
comp=Z,5.2nm,0.9s,baz=338
GAR Garm 55.05 328 P P 06 22 40.1 -0.7
MDOK Medeo 55.18 336 eP P 06 22 41.7 0.0
baz=336
CHGR Chuyangaron 55.42 327 P P 06 22 41.9 -1.6
BTK Batken 55.57 329 P P 06 22 44.4 -0.2
BTK IAmb IAmb 06 22 45.3
comp=Z,6.9nm,0.7s
KUU Kurty 56.07 336 eP P 06 22 47.0 -1.0
comp=Z,11nm,1.0s,baz=336
TDK Taldyqorghan 56.20 338 eP P 06 22 48.5 -0.4
comp=Z,11nm,0.6s,baz=338
USA0B Ussuriysk Arra 56.27 24 P P 06 22 48.5 -0.8
USA0B IAmb IAmb 06 22 49.6
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 56.27 24 P P 06 22 49.0 -0.4
comp=Z,15nm,0.8s,baz=213,slow=6.3,SNR=23
USRK Ussuriysk Ar. 56.27 24 P P 06 22 48.4 -1.0
ZSN Zaisan 56.31 344 eP P 06 22 49.9 +0.2
comp=Z,8.0nm,0.8s,baz=344
SGDS Sogindy 56.42 334 eP P 06 22 50.1 -0.5
comp=Z,3.5nm,1.3s,baz=335
MK31 Makanchi Array 56.46 342 P P 06 22 50.0 -0.7
MK31 IAmb IAmb 06 22 51.1
comp=Z,8.2nm,0.8s
MKAR Makanchi Array 56.46 342 P P 06 22 50.4 -0.3
comp=Z,13nm,0.8s,baz=147,slow=8.3,SNR=94
MKAR Makanchi Array 56.46 342 P P 06 22 49.8 -0.9
MAKZ Makanchi 56.57 342 P P 06 22 50.7 -0.7
OPO Ambohidratompo 56.77 252 P P 06 22 55.6 +2.0
comp=Z,3.7nm,0.8s,baz=51,slow=11,SNR=4.1
HIA Hailar 57.10 12 P P 06 22 54.5 -0.7
HIA IAmb IAmb 06 22 55.4
comp=Z,15nm,1.1s
DZA Taraz 57.47 332 eP P 06 22 57.2 -0.7
baz=332
IUG Iuzhnay 57.53 330 eP P 06 22 58.3 -0.2
comp=Z,4.6nm,1.2s,baz=330
TLY Talaya 57.88 360 P P 06 23 00.5 -0.2
TLY IAmb IAmb 06 23 02.2
comp=Z,12nm,1.0s
BTLS Baital 57.95 335 eP P 06 23 00.2 -1.1
baz=335
KK06 Karatay Array 58.00 331 P P 06 23 00.8 -0.9
KK07 Karatay Array 58.01 331 P P 06 23 01.0 -0.7
KK31 Karatay Array 58.02 331 P P 06 23 01.1 -0.6
KKAR Karatay Array 58.02 331 P P 06 23 00.6 -1.2
KKAR Karatay Array 58.02 331 P P 06 23 00.8 -0.9
KURBB Kurchatov Array 61.01 342 P P 06 23 21.9 -0.4
comp=Z,7.0nm,0.9s,baz=159,slow=6.1,SNR=53
KURK Kurchatov 61.06 342 P P 06 23 22.0 -0.6
KURK IAmb IAmb 06 23 23.2
comp=Z,13nm,0.9s
GEYT Alibeck 61.53 320 P P 06 23 26.0 -0.1
comp=Z,4.2nm,0.6s,baz=100,slow=7.5,SNR=2.4
GEYT Alibeck 61.53 320 P P 06 23 25.5 -0.6
ZAA0 Zalesovo Array 62.33 347 P P 06 23 30.2 -0.9
ZALV Zalesovo Beam 62.33 347 P P 06 23 30.4 -0.7
comp=Z,12nm,0.5s,baz=142,slow=5.1,SNR=59
ZALV Zalesovo Beam 62.33 347 P P 06 23 30.2 -0.9
BRZS Berezniki 62.50 338 eP P 06 23 31.2 -1.2
comp=Z,2.6nm,1.4s,baz=338
BRZS Berezniki 62.50 338 eP P 06 23 31.1 -1.2
BVAR Borovoye Array 65.80 338 P P 06 23 53.4 -0.5
comp=Z,1.9nm,0.7s,baz=216,slow=27,SNR=7.0
KMBO Kilima Mbogo 67.00 271 LR LR 06 47 31.8
comp=Z,120nm,21.9s,baz=258,slow=31
MAW Mawson 67.14 196 P P 06 24 03.2 +0.9
comp=Z,3.8nm,0.8s,baz=23,slow=6.9,SNR=8.7
MAW LR LR 06 48 39.8
comp=Z,135nm,18.9s,baz=54,slow=32
MAW Mawson 67.14 196 P P 06 24 03.6 +1.3
baz=67,SNR=6.2
MAW Mawson 67.14 196 P P 06 24 03.1 +0.9
ABKAR Akbulak array 67.54 330 P P 06 24 04.4 -0.7
AKTO Aktyubinsk 69.25 330 P P 06 24 14.4 -1.4
comp=Z,2.7nm,0.6s,baz=148,slow=9.5,SNR=2.0
ARU Arti 72.94 335 P P 06 24 38.3 +0.3
ARU IAmb IAmb 06 24 39.0
comp=Z,24nm,1.2s
KBZ Khabaz 74.40 319 P P 06 24 46.4 -0.5
comp=Z,7.1nm,0.9s,baz=235,slow=23,SNR=5.5
PETK Petropavlovsk- 74.46 30 P P 06 24 45.9 -1.1
comp=Z,3.9nm,0.9s,baz=212,slow=5.1,SNR=1.8
ASF Jabal al Asfar 74.58 306 P P 06 24 48.6 +0.2
comp=Z,17nm,0.9s,baz=120,slow=1.0,SNR=7.2
LSZ Lusaka 74.90 256 P P 06 24 51.3 +0.7
comp=Z,2.1nm,0.4s,baz=88,slow=4.5,SNR=7.5
LSZ Lusaka 74.90 256 P P 06 24 48.6 -2.0
SYO Syowa Base 75.10 200‖ eP P 06 24 50.3 -0.2
SYO Syowa Base 75.10 200‖ epP pP 06 25 03.0 +8.1
MMAI Mount Meron Ar 76.04 306 P P 06 24 58.5 +1.9
comp=Z,6.6nm,0.6s,baz=89,slow=7.7,SNR=5.7
NRIK Noril'sk 76.47 354 P P 06 24 56.3 -2.0
comp=Z,4.9nm,0.7s,baz=204,slow=2.4,SNR=8.7
NRIK Noril'sk 76.47 354 i P P 06 24 56.3 -2.0
LBTB Lobatse 77.03 246 P P 06 25 03.7 +1.1
LBTB IAmb IAmb 06 25 04.5
comp=Z,6.9nm,0.9s
VNDA Vanda 77.04 169 P P 06 25 01.6 +0.2
comp=Z,3.5nm,0.9s,baz=295,slow=5.8,SNR=16
VNDA LR LR 06 56 49.4
comp=Z,59nm,18.1s,baz=280,slow=34
VNDA Vanda 77.04 169 P P 06 25 01.2 -0.2
BOSA Boshof 77.29 242 P P 06 25 04.9 +0.9
comp=Z,2.6nm,0.6s,baz=118,slow=3.8,SNR=7.4
BOSA Boshof 77.29 242 P P 06 25 04.4 +0.5
BOSA IAmb IAmb 06 25 20.7
comp=Z,24nm,1.4s
BR131 Keskin Array S 79.40 312 P P 06 25 15.6 +0.3
BR131 IAmb IAmb 06 25 16.4
comp=Z,8.1nm,0.8s
BRTR Keskin Array B 79.40 312 P P 06 25 15.7 +0.3
comp=Z,9.4nm,0.8s,baz=134,slow=7.1,SNR=25
BRTR LR LR 07 02 00.0
comp=Z,32nm,19.4s,baz=144,slow=37
TIXI Tiksi 79.59 8 P P 06 25 14.2 -1.3
ILGA Ilgaz 79.75 314 P P 06 25 17.0 -0.4
ILGA IAmb IAmb 06 25 24.5
comp=Z,12nm,1.2s
BZK Bozkurt 79.83 315 ‖P P 06 25 18.5 +1.1
QSPA South Pole Qui 83.56 180 P P 06 25 36.8 -0.1
QSPA IAmb IAmb 06 25 38.3
comp=Z,8.8nm,1.1s
KLMR Klimovskoe 83.64 334 eP P 06 25 36.7 -0.4
KLMR AMP 06 25 38.2
comp=Z,26nm,1.3s
TIRR Tirgusor 84.45 316 ‖P P 06 25 43.0 +1.4
CFR Carcaliu 84.82 316 ‖P P 06 25 44.4 +1.0
HARR Harsova 84.84 316 ‖P P 06 25 44.1 +0.5
IDI Anoyia 85.04 306 P P 06 25 46.5 +1.5
comp=Z,6.9nm,0.7s,baz=54,slow=6.9,SNR=4.7
IDI Anoyia 85.04 306 ‖P P 06 25 46.5 +1.5
SORM Soroca 85.42 319 ‖P P 06 25 46.8 +0.4
AKASG Malin Array Be 85.55 322 P P 06 25 47.2 +0.2
comp=Z,4.2nm,0.6s,baz=88,slow=4.7,SNR=11
AKASG Malin Array Be 85.55 322 P P 06 25 47.4 +0.4
VRI Vrincioaia 85.95 317 ‖P P 06 25 50.8 +1.7
PLOR Plostina 86.00 317 ‖P P 06 25 50.8 +1.4
TESR Tescani 86.15 317 ‖P P 06 25 51.2 +1.1
MLR Muntele Rosu 86.40 316 P P 06 25 53.1 +1.6
comp=Z,16nm,0.9s,baz=176,slow=1.9,SNR=12
MLR Muntele Rosu 86.40 316 ‖P P 06 25 53.0 +1.4
MLR Muntele Rosu 86.40 316 P P 06 25 52.7 +1.1
BIZ Bicaz 86.61 318 ‖P P 06 25 53.7 +1.3
DOPR Dopca 86.88 317 ‖P P 06 25 54.6 +0.8
VOIR 87.00 316 ‖P P 06 25 54.9 +0.5
BURAR Bucovina Array 87.35 318 ‖P P 06 25 57.8 +1.6
BUR08 Bucovina Ar. S 87.37 318 P P 06 25 57.4 +1.2
ARCR ARCALIA 87.81 318 ‖P P 06 26 00.7 +2.5
LIT Litokhoron 87.81 311 P P 06 25 57.6 -0.8
GZR Gura Zlata 88.56 316 ‖P P 06 26 02.7 +0.8
DEV Deva 88.56 316 ‖P P 06 26 03.6 +1.8
HERR Herculane 88.72 315 ‖P P 06 26 03.8 +1.3
MDVR Moldovita 89.19 315 ‖P P 06 26 06.1 +1.3
SNAA Sanae 89.24 198 P P 06 26 06.1 +1.5
BZS Buzias 89.40 316 ‖P P 06 26 06.7 +0.9
SIRR Siria 89.48 317 ‖P P 06 26 07.3 +1.1
KOLS Kolonicke sedl 89.54 319 eP P 06 26 06.6 +0.3
FINES FINESS Array B 89.97 332 P P 06 26 08.4 +0.4
comp=Z,1.5nm,0.5s,baz=108,slow=6.2,SNR=4.1
DIVS Divibare 90.30 314 P P 06 26 09.6 -0.5
DIVS IAmb IAmb 06 26 12.3
comp=Z,9.0nm,1.1s
PDG Podgorica 90.59 312 ‖P P 06 26 12.3 +0.9
VNA2 Neumayer--Watz 90.88 198 P P 06 26 14.0 +1.8
VNA1 Neumayer--Stat 91.25 198 P P 06 26 15.7 +1.9
VNA3 Neumayer Olymp 91.43 197 P P 06 26 16.2 +1.4
ARCES ARCESS Array B 92.05 340 P P 06 26 17.3 -0.2
comp=Z,2.9nm,0.8s,baz=325,slow=1.5,SNR=3.8
NOA NORSAR Array B 97.04 331 LR LR 07 15 59.4
comp=Z,36nm,18.4s,baz=280,slow=39
NVAR Mina'ar Bea 130.09 44 PKP PKiKP 06 32 21.4 +1.0
comp=Z,0.3nm,0.6s,baz=316,slow=2.5,SNR=2.7
PDAR Pinedale Array 133.12 34 PKP PKPdf 06 32 25.5 +0.3
comp=Z,0.3nm,0.6s,baz=48,slow=1.3,SNR=2.3
PDAR SKP 06 35 52.7
comp=Z,0.5nm,0.9s,baz=352,slow=3.6,SNR=2.8
ULM Lac du Bonnet 133.19 18 PKP PKPdf 06 32 25.0 +0.3
comp=Z,3.4nm,0.8s,baz=306,slow=4.6,SNR=2.9
CPUP Villa Florida 142.84 208 PKhKP PKPdf 06 32 40.2 -3.1
comp=Z,1.9nm,0.8s,baz=117,slow=4.5,SNR=3.3
BINY Binghamton 144.38 0 P PKPab 06 32 42.8 -0.7
baz=360
L59A Walton 144.38 359 P PKPab 06 32 42.9 -0.7
baz=1.2
L56A Greenwood 144.41 2 P PKPab 06 32 43.3 -0.4
baz=357
L58A Harry Jones Me 144.53 0 P PKPab 06 32 43.4 -0.7
baz=360
L57A Andrews Acres 144.56 1 P PKPab 06 32 43.8 -0.4
baz=358
WMOK Wichita Mounta 144.73 34 P PKPab 06 32 44.7 -0.3
baz=318
M51A Elyria 144.78 8 P PKPab 06 32 44.8 -0.1
baz=349
BDFB Brasilia 144.84 231 PKP PKPdf 06 32 47.1 0.0
comp=Z,2.8nm,0.6s,baz=89,slow=2.8,SNR=6.8
M53A WI Miller and 144.86 6 P PKPab 06 32 44.3 -1.0
baz=352
M54A Oil Creek Stat 144.90 5 P PKPab 06 32 45.0 -0.4
baz=353
M56A Emporium 145.03 3 P PKPbc 06 32 44.5 -1.4
baz=356
M59A Waymart 145.03 360 P PKPbc 06 32 45.1 -0.8
baz=0.6
TXAR Lajitas Array 145.20 46 PKPbc PKPdf 06 32 47.5 +0.1
comp=Z,6.6nm,0.8s,baz=284,slow=2.0,SNR=62
TXAR Lajitas Array 145.20 46 PKPbc 06 32 46.9 -0.1
M58A Price's Panora 145.20 1 P PKPbc 06 32 45.8 -0.7
baz=359,SNR=8.9
M57A Sunshine Farm, 145.22 2 P PKPbc 06 32 46.0 -0.6
baz=358,SNR=7.1
M61A Granite Spring 145.22 357 P PKPbc 06 32 46.3 -0.2
baz=3.5
M60A Port Jervis 145.24 358 P PKPbc 06 32 45.8 -0.8
baz=2.0,SNR=5.5
TUL1 Leonard 145.38 29 P PKPbc 06 32 46.6 -0.6
baz=323
N54A Moraine State 145.41 6 P PKPbc 06 32 46.5 -0.7
baz=353
CCM Cathedral Cave 145.52 22 P PKPdf 06 32 46.9 -0.7
baz=332
PAL Palisades 145.53 358 P PKPdf 06 32 47.3 -0.1
baz=3.3
N62A Caumsett State 145.58 357 P PKPdf 06 32 47.0 -0.5
baz=4.0
N56A West Decatur 145.59 3 P PKPdf 06 32 47.1 -0.5
baz=356,SNR=5.3
N59A State Game Lan 145.66 0 P PKPdf 06 32 47.5 -0.3
baz=0.0,SNR=12
N60A Cedar Hill Far 145.70 359 P PKPdf 06 32 47.4 -0.4
baz=1.2
ACSO Alum Creek Sta 145.73 10 P PKPdf 06 32 47.5 -0.4
baz=347,SNR=7.8
N58A Sunbury 145.73 1 P PKPdf 06 32 47.5 -0.3
baz=358,SNR=12
ABTX Abilene, Hawle 145.75 37 P PKPdf 06 32 47.9 -0.2
baz=314
N57A Milroy 145.78 2 P PKPdf 06 32 47.1 -0.8
baz=357,SNR=8.7
N61A South Mountain 145.80 358 P PKPdf 06 32 47.5 -0.4
baz=2.6
O51A Pataskala 145.87 9 P PKPdf 06 32 48.0 -0.2
baz=348,SNR=9.1
O53A New Philadelph 145.97 7 P PKPdf 06 32 48.6 +0.3
baz=350,SNR=5.3
O52A Adamsville 146.02 8 P PKPdf 06 32 48.4 +0.1
baz=349,SNR=5.6
P49A Miami Univ. Ec 146.07 12 P PKPdf 06 32 48.3 -0.2
baz=344,SNR=7.1
O54A Avella 146.14 6 P PKPdf 06 32 48.9 +0.3
baz=352
O56A Blue Knob Stat 146.21 4 P PKPdf 06 32 48.9 +0.1
baz=355,SNR=8.4
O55A Ligonier 146.22 5 P PKPdf 06 32 48.9 +0.2
baz=354
O60A Telford 146.26 359 P PKPdf 06 32 49.0 +0.3
baz=0.7
O59A Robesonia 146.26 1 P PKPdf 06 32 49.1 +0.3
baz=359
O57A Amberson 146.32 3 P PKPdf 06 32 49.2 +0.3
baz=357
U40A Yellville 146.35 25 P PKPdf 06 32 49.1 +0.1
baz=328
O58A Lewisberry 146.44 2 P PKPdf 06 32 49.5 +0.4
baz=358
P51A Williamsport 146.44 10 P PKPdf 06 32 49.0 -0.1
baz=347
P52A Corning 146.45 9 P PKPdf 06 32 49.0 -0.1
baz=349
P53A Whipple 146.70 8 P PKPbc 06 32 50.5 -0.7
baz=350
P54A Burton 146.70 7 P PKPbc 06 32 50.8 -0.3
baz=352
MCWV Mont Chateau 146.71 6 P PKPbc 06 32 50.8 -0.3
baz=353
P60A Greenville 146.76 360 P PKPbc 06 32 50.9 -0.4
baz=0.2
P55A Reedsville 146.86 6 P PKPbc 06 32 50.9 -0.8
baz=353
P61A Hammonton 146.89 359 P PKPbc 06 32 50.9 -0.7
baz=1.8
WCI Wyandotte Cave 146.93 15 P PKPbc 06 32 51.1 -0.7
baz=341
P56A Dayton Farm, R 146.95 4 P PKPdf 06 32 50.8 +0.8
baz=354,SNR=5.3
P59A Jarrettsville 146.96 1 P PKPbc 06 32 51.2 -0.6
baz=359
P57A Homestead Farm 147.03 3 P PKPbc 06 32 51.5 -0.6
baz=356
P58A Pank, Wackersv 147.06 2 P PKPbc 06 32 51.6 -0.5
baz=357
Q52A Bidwell 147.08 9 P PKPbc 06 32 51.7 -0.5
baz=348
JCT Junction City 147.11 40 P PKPbc 06 32 52.3 -0.4
baz=312
Q54A Coxs Mills 147.27 7 P PKPbc 06 32 52.3 -0.4
baz=351
Q53A Leroy 147.30 8 P PKPbc 06 32 52.6 -0.2
baz=349
Q55A Buckhannon 147.34 6 P PKPbc 06 32 52.7 -0.4
baz=352
Q56A Snyder Ridge, 147.39 5 P PKPbc 06 32 52.9 -0.2
baz=354
Q57A Strasburg 147.45 4 P PKPbc 06 32 52.9 -0.4
baz=355
WHTX Lake Whitney, 147.49 36 P PKPbc 06 32 53.2 -0.4
baz=317
MIAR Mount Ida 147.54 28 P PKPbc 06 32 53.2 -0.5
baz=326
Q60A Greensboro 147.57 0 P PKPbc 06 32 53.8 +0.3
baz=360
Q58A Fox Den Farm, 147.59 3 P PKPbc 06 32 52.7 -0.9
baz=356
W41B Gary Mavity, V 147.62 26 P PKPbc 06 32 53.5 -0.3
baz=328
R53A Hurricane 147.75 9 P PKPbc 06 32 53.9 -0.2
baz=348
X40A Basin Creek Fa 147.94 27 P PKPbc 06 32 53.7 -1.0
baz=327
R54A Victor 148.04 8 P PKPbc 06 32 54.4 -0.6
baz=350
R55A Marlinton 148.05 6 P PKPbc 06 32 54.6 -0.4
baz=352
R57A Stanardsville 148.18 4 P PKPbc 06 32 54.8 -0.4
baz=355
R58A Rapidan 148.21 3 P PKPbc 06 32 55.0 -0.3
baz=356
S53A Williamson 148.36 10 P PKPbc 06 32 55.6 -0.2
baz=348
S54A Dingess, Beckl 148.37 8 P PKPbc 06 32 55.6 -0.2
baz=350
WVT Waverly 148.44 19 P PKPbc 06 32 56.0 0.0
baz=337
S55A Lewisburg 148.50 7 P PKPbc 06 32 56.2 0.0
baz=351
R58B Mineral 148.55 3 P PKPbc 06 32 55.9 -0.3
baz=356
S57A Dark Hollow, R 148.68 5 P PKPbc 06 32 56.3 -0.2
baz=354
833A Chaparral WMA, 148.78 43 P PKPbc 06 32 57.2 +0.1
baz=310
S58A Poland Farm, P 148.89 4 P PKPbc 06 32 56.3 -0.8
baz=356
T54A Tazewell 149.05 9 P PKPbc 06 32 56.9 -0.7
baz=349
BLA Blacksburg 149.07 7 P PKPbc 06 32 57.3 -0.3
baz=351
TZTN Tazewell 149.19 12 P PKPbc 06 32 57.4 -0.5
baz=345
T56A Rocky Mt 149.29 7 P PKPbc 06 32 57.7 -0.5
baz=352
T58A Grand View Acr 149.52 4 P PKPbc 06 32 58.0 -0.7
baz=355
U54A Nelsons Funny 149.54 10 P PKPbc 06 32 58.4 -0.5
baz=348
T59A Double "B" Far 149.56 3 P PKPbc 06 32 58.0 -0.8
baz=356
U57A Blanch 149.96 6 P PKPbc 06 32 58.9 -0.9
baz=353
U58A Oxford 150.07 4 P PKPbc 06 32 59.8 -0.3
baz=354
U60A Pendleton 150.07 2 P PKPbc 06 32 59.6 -0.5
baz=357
V54A Nebo 150.25 10 P PKPbc 06 33 00.9 +0.3
baz=348
V55A Taylorsville 150.29 9 P PKPbc 06 33 00.8 +0.2
baz=349
V56A Mocksville 150.44 8 P PKPbc 06 33 00.7 -0.3
baz=350
V57A Coltrane Farms 150.45 7 P PKPbc 06 33 00.7 -0.3
baz=352
V58A Windy Hill, Pi 150.61 6 P PKiKP 06 33 01.9 -0.2
baz=353
V61A Roper 150.77 1 P PKPbc 06 33 01.8 +0.1
baz=358
KMSC Kings Mountain 150.97 9 P PKPbc 06 33 02.2 0.0
baz=349
X54A Belton 151.36 11 P PKPbc 06 33 03.1 -0.1
baz=346
X55A Gracelyn & Ava 151.57 10 P PKPbc 06 33 03.3 -0.4
baz=348

BJI **10** *06:16:38.0±0.0, 37.°10N×28.°80E, h5km, mB5.0/10, mb4.6/14, Ms4.8/2, Ms7 4.5/2*
MOS **10** *06:16:39.9±1.5, 37.°11N×28.°76E, h11km, mb4.9/28, Error ellipse: s-maj=4.8km s-min=3.4km az=89.0*
ATH **10** *06:16:39.8, 37.°21N×28.°75E, h13km±1km, ML4.7/10, Error ellipse: s-maj=1.5km s-min=0.8km az=141.0*
ISK **10** *06:16:40.5, 37.°13N×28.°78E, h12km, ML4.5/27*
THE **10** *06:16:40.6, 37.°10N×28.°77E, h0km, ML4.5/9, Error ellipse: s-maj=0.9km s-min=0.5km az=55.0*
IDC **10** *06:16:40.1±0.4, 37.°12N×28.°84E, h0km, mb4.4/30, mb1 4.5/42, mb1mx4.4/61, mbtmp4.4/42, ML4.2/11, MS3.8/20, Ms1 3.8/20, ms1mx3.6/40, Error ellipse: s-maj=10.2km s-min=9.4km az=136.0*
DDA **10** *06:16:40.0, 37.°12N×28.°74E, h14km±3km, MW4.8*
NEIC **10** *06:16:40.7±1.9, 37.°10N±0.°04×28.°81E±0.°04, h8km±2km, Error ellipse: s-maj=6.6km s-min=4.4km az=203.0*
GCMT **10** *06:16:40.5±0.3, 37.°10N±0.°02×28.°68E±0.°03, h17km±1km, MW4.8/96, Moment Tensor Solution. s22,c24; s96,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.10±.12; $M_{\theta\theta}$1.68±.08; $M_{\phi\phi}$0.42±.07; $M_{r\theta}$-0.31±.16; $M_{\theta\phi}$-0.64±.04; $M_{r\phi}$0.75±.21; Best double couple: M_o2.17000×10^{16} NP1:ϕ_s281.00000°, δ38.00000°, λ-110.00000°. NP2: ϕ_s126.00000°, δ54.00000°, λ-75.00000°. Principal axes: T 2.0300, Plg8.0000°, Azm205.0000°; N 0.2890, Plg12.0000°, Azm297.0000°; P -2.3110, Plg75.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MED_RC **10** *06:16:40.0±0.3, 37.°14N×28.°71E, h12km, MW4.8/31, Moment Tensor Solution. Body waves: s4,c4;Mantle waves: s31,c44; Duration: 1s1 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.58±.09; $M_{\theta\theta}$1.36±.06; $M_{\phi\phi}$0.22±.04; $M_{r\theta}$-0.11±.10; $M_{\theta\phi}$-0.57±.03; $M_{r\phi}$0.66±.11; Best double couple: M_o1.72000×10^{16} NP1:ϕ_s276.00000°, δ41.00000°, λ-117.00000°. NP2:ϕ_s130.00000°, δ54.00000°, λ-68.00000°. Principal axes: T 1.6400, Plg7.0000°, Azm205.0000°; N 0.1600, Plg17.0000°, Azm297.0000°; P -1.8000, Plg71.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*
NIC **10** *06:16:41.2±0.0, 37.°15N×28.°81E, h11km±2km, Ml5.0/4*
NEIC **10** *06:16:41.3, 37.°15N×28.°82E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.70; $M_{\theta\theta}$1.21; $M_{\phi\phi}$0.49; $M_{r\theta}$-0.44; $M_{\theta\phi}$-0.87; $M_{r\phi}$0.17; Fault plane solution: M_o1.81000×10^{16} NP1:ϕ_s120.36000°, δ52.45000°, λ-94.26000°. NP2:ϕ_s307.33000°, δ37.76000°, λ-84.48000°. Principal axes: T 1.8510, Plg7.0000°, Azm213.0000°; N -0.0811, Plg3.0000°, Azm123.0000°; P -1.7699, Plg82.0000°, Azm8.0000°;*
HLW **10** *06:16:41.3, 37.°11N×28.°90E, h24km±23km, Md4.9, Ml5.2*
GII **10** *06:16:44.4±0.0, 36.°79N×28.°92E, h13km, mb4.4/5,*

MD4.4/5

ISC 10 06:16:41.2±0.5,**37°09N**±0°02×**28°78E**±0°01,**h8**km±3km,
h8km:pP-P,n543,σ1§**57**/653,**mb4.7**/83,**MS3.9**/12,**55C-5D,**
Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	**0.29**	**201**			**Pg**		**06 16 47.6**	**+0.6**
DALY	**Dalyan (Mula)**	**0.29**	**201**	⇑*iP*		**Pg**		**06 16 47.0**	**+0.1**
DALY				IAML				06 16 55.0	
	comp=E,60μm,0.5s								
DALY				*i* S		**Sb**		**06 16 55.6**	**+1.9**
DALY				IAML				06 16 56.0	
	comp=N,58μm,0.5s								
TAVA	**DENIZLI_Tavas**	**0.39**	**15**	⇑*iP*		**Pg**		**06 16 46.9**	**-1.9**
TAVA				*i* S		**Sg**		**06 16 53.2**	**-0.8**
TAVA				IAML				06 16 54.0	
	comp=N,32μm,0.4s								
TAVA				IAML				06 16 54.0	
	comp=E,43μm,0.6s								
YER	**Yerkesik**	**0.40**	**276**	PG		**Pg**		**06 16 48.8**	**-0.3**
YER	**Yerkesik**	**0.40**	**276**	P		**Pg**		**06 16 47.9**	**-1.2**
YER				S		**Sg**		**06 16 55.6**	**+1.2**
YER	**Yerkesik**	**0.40**	**276**	P		**Pg**		**06 16 48.2**	**-0.9**
YER				S		**Sg**		**06 16 55.6**	**+1.2**
CAME	**Cameli-Denizli**	**0.44**	**110**	PG		**Pg**		**06 16 50.1**	**+0.3**
FETY	**Fethiye**	**0.52**	**152**	PG		**Pg**		**06 16 51.7**	**+0.5**
FETY	**Fethiye**	**0.52**	**152**	⇑*iP*		**Pg**		**06 16 50.9**	**-0.3**
FETY				*i* S		**Sb**		**06 16 59.6**	**-0.6**
FETY				IAML				06 17 02.0	
	comp=N,16μm,0.9s								
FETY				IAML				06 17 03.0	
	comp=E,23μm,0.6s								
FETY	**Fethiye**	**0.52**	**152**	P		**Pg**		**06 16 51.1**	**-0.1**
FETY				S		**Sb**		**06 17 00.3**	**+0.2**
TURN	**Turunc**	**0.54**	**234**	PG		**Pg**		**06 16 51.8**	**+0.3**
TURN	**Turunc**	**0.54**	**234**	⇑*iP*		**Pg**		**06 16 50.6**	**-1.0**
TURN				*i* S		**Sb**		**06 17 01.5**	**+0.8**
TURN				IAML				06 17 03.0	
	comp=E,15μm,0.6s								
TURN				IAML				06 17 10.0	
	comp=N,10μm,1.0s								
MRSB	**Marmaris-Mugla**	**0.60**	**232**	PG		**Pg**		**06 16 53.2**	**+0.4**
GOLH	**Golhisar**	**0.64**	**77**	⇑*iP*		**Pg**		**06 16 52.4**	**-1.1**
GOLH				*i* S		**Sb**		**06 17 03.1**	**-0.6**
GOLH				IAML				06 17 06.0	
	comp=N,28μm,0.6s								
GOLH				IAML				06 17 12.0	
	comp=E,9μm,0.5s								
MLSB	**Milas**	**0.83**	**284**	PG		**Pg**		**06 16 56.8**	**-0.4**
MLSB				SG		**Sb**		**06 17 09.1**	**-0.1**
AYDN	**Tasoluk**	**0.92**	**309**	⇑*iP*		**Pg**		**06 16 57.3**	**-1.5**
AYDN				*i* S		**Sg**		**06 17 09.1**	**-1.7**
AYDN				IAML				06 17 15.0	
	comp=E,19μm,0.5s								
AYDN				IAML				06 17 16.0	
	comp=N,10μm,0.6s								
DATC	**Datca-Mugla**	**0.96**	**250**	PG		**Pg**		**06 16 59.7**	**+0.1**
ELL	**Elmali**	**0.96**	**111**	PG		**Pg**		**06 16 59.9**	**+0.2**
ELL	**Elmali**	**0.96**	**111**	P		**Pg**		**06 16 59.4**	**-0.3**
ELL								06 17 08.8	
ELL	**Elmali**	**0.96**	**111**	P		**Pg**		**06 16 58.5**	**-1.2**
ELL				S		**Sb**		**06 17 13.6**	**+0.5**
ELL	**Elmali**	**0.96**	**111**			**Pg**		**06 16 59.4**	**-0.3**
ELL				Sg		**Sg**		**06 17 08.8**	**-3.5**
ARG	**Arkhangelos**	**1.02**	**211**	P		**Pg**		**06 17 00.2**	**-0.5**
ARG				S		**Sn**		**06 17 16.3**	**0.0**
ARG				AML	AML			06 17 22.6	
	comp=N,49795μm,0.5s								
ARG				AML	AML			06 17 22.9	
	comp=E,76001μm,0.5s								
ARG	**Arkhangelos**	**1.02**	**211**	PG		**Pg**		**06 17 00.8**	**0.0**
ARG	**Arkhangelos**	**1.02**	**211**	P		**Pg**		**06 17 00.3**	**-0.5**
ARG				S		**Sn**		**06 17 17.5**	**+1.2**
ARG	**Arkhangelos**	**1.02**	**211**	P		**Pg**		**06 17 00.4**	**-0.4**
ARG				S		**Sn**		**06 17 17.6**	**+1.2**
ARG	**Arkhangelos**	**1.02**	**211**	P		**Pg**		**06 17 00.3**	**-0.5**
ARG				S		**Sn**		**06 17 15.8**	**-0.5**
	comp=E,32μm,0.5s								
BDRM	**Kayabasi**	**1.07**	**269**	*i* P		**Pg**		**06 17 01.2**	**-0.6**
BDRM				*i* S		**Sn**		**06 17 17.9**	**+0.3**
BDRM				IAML				06 17 24.0	
	comp=E,9μm,0.6s								
AKAS	**Kas**	**1.08**	**142**	PN		**Pb**		**06 17 02.2**	**0.0**
AKAS	**Kas**	**1.08**	**142**	⇑*iP*		**Pg**		**06 17 01.9**	**-0.1**
AKAS				*i* S		**Sn**		**06 17 23.4**	**+5.3**
AKAS				IAML				06 17 25.0	
	comp=E,24μm,1.1s								
AKAS	**Kas**	**1.08**	**142**			**Pg**		**06 17 01.9**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.11**	**320**	PN		**Pg**		**06 17 01.5**	**-1.0**
KSL	**Kastellorizon**	**1.14**	**145**	P		**Pb**		**06 17 03.2**	**+0.1**
KSL				S		**Sn**		**06 17 20.9**	**+1.7**
KSL				AML	AML			06 17 26.2	
KSL				AML	AML			06 17 28.9	
KSL	**Kastellorizon**	**1.14**	**145**	P		**Pn**		**06 17 03.4**	**-0.1**
KSL	**Kastellorizon**	**1.14**	**145**	P		**Pg**		**06 17 02.5**	**-0.5**
BODT	**Bodrum**	**1.18**	**269**	PN		**Pb**		**06 17 03.3**	**-0.5**
BODT	**Bodrum**	**1.18**	**269**	P		**Pb**		**06 17 02.3**	**-1.5**
BODT				S		**Sg**		**06 17 19.0**	**-0.1**
BRDR	**BURDUR-Merkez**	**1.18**	**59**	⇑*iP*		**Pg**		**06 17 01.9**	**-2.0**
BRDR				*i* S		**Sn**		**06 17 21.1**	**+0.7**
BRDR				IAML				06 17 23.0	
	comp=E,12μm,0.6s								
BRDR				IAML				06 17 24.0	
	comp=N,14μm,0.7s								
YKAV	**Yalikavak-Bodr**	**1.20**	**272**	PN		**Pb**		**06 17 03.6**	**-0.6**
DEMR	**Demre-Antalya**	**1.24**	**133**	PN		**Pn**		**06 17 04.6**	**-0.2**
KORT	**Korkueli**	**1.26**	**94**	PN		**Pn**		**06 17 04.7**	**-0.5**
KORT	**Korkueli**	**1.26**	**94**	⇑*iP*		**Pn**		**06 17 03.9**	**-1.3**
KORT				*i* S		**Sn**		**06 17 24.3**	**+1.9**
KORT				IAML				06 17 28.0	
	comp=N,10μm,1.1s								
KORT				IAML				06 17 31.0	
	comp=E,12μm,0.8s								
BASM	**Basmaki-Afyon**	**1.30**	**50**	PN		**Pn**		**06 17 04.5**	**-1.3**
KHL	**Karahalli**	**1.36**	**25**	PN		**Pn**		**06 17 05.6**	**-1.0**
GCAM	**G?zelcaml?**	**1.38**	**297**	PN		**Pn**		**06 17 06.1**	**-0.6**
GCAM	**G?zelcaml?**	**1.38**	**297**	⇓*iP*		**Pn**		**06 17 05.6**	**-1.1**
GCAM				*i* S		**Sg**		**06 17 26.5**	**+1.0**
GCAM				IAML				06 17 29.0	
	comp=E,6μm,0.7s								
GCAM				IAML				06 17 30.0	
	comp=N,6μm,0.8s								
NIS1	**Nisyros Isl.**	**1.38**	**250**	P		**Pn**		**06 17 06.4**	**-0.3**
NIS1				S		**Sn**		**06 17 25.1**	**0.0**
NIS1				AML	AML			06 17 33.6	
	comp=E,89912μm,0.9s								
NIS1				AML	AML			06 17 41.9	
NIS1	**Nisyros Isl.**	**1.38**	**250**	PN		**Pn**		**06 17 06.5**	**-0.2**
NIS1	**Nisyros Isl.**	**1.38**	**250**	P		**Pn**		**06 17 05.8**	**-0.9**
NIS1				S		**Sb**		**06 17 24.8**	**-0.2**
	comp=E,55μm,0.8s								
MANT	**Manisa**	**1.41**	**353**	⇑*iP*		**Pn**		**06 17 05.5**	**-1.9**
MANT				*i* S		**Sb**		**06 17 26.0**	**-0.1**
MANT				IAML				06 17 33.0	
	comp=E,4μm,0.8s								
MANT				IAML				06 17 38.0	
	comp=N,3μm,0.5s								
MANT	**Manisa**	**1.41**	**353**	Pn		**Pn**		**06 17 05.4**	**-1.9**
MANT				Sn		**Sb**		**06 17 25.6**	**-0.4**
NISR	**Nisiros**	**1.41**	**251**	P		**Pn**		**06 17 07.1**	**-0.1**
NISR				S		**Sg**		**06 17 26.6**	**0.0**
NISR	**Nisiros**	**1.41**	**251**	P		**Pn**		**06 17 06.2**	**-1.0**
NISR				S		**Sg**		**06 17 26.3**	**-0.3**
	comp=N,26μm,1.1s								
KULA	**Kula-Manisa**	**1.42**	**356**	PN		**Pn**		**06 17 06.3**	**-1.1**
KULA	**Kula-Manisa**	**1.42**	**356**	P		**Pn**		**06 17 05.8**	**-1.6**
KULA				S		**Sb**		**06 17 26.3**	**-0.1**
AKUM	**Antalya-Kumluc**	**1.47**	**121**	⇑*iP*		**Pg**		**06 17 09.1**	**-0.3**
AKUM				*i* S		**Sg**		**06 17 33.7**	**+5.3**
AKUM				IAML				06 17 36.0	
	comp=E,7μm,0.7s								
AKUM				IAML				06 17 40.0	
	comp=N,7μm,1.3s								
BCK	**Bucak**	**1.49**	**75**	PN		**Pn**		**06 17 07.5**	**-0.8**
KOSK	**Kos Island**	**1.49**	**257**	PN		**Pn**		**06 17 07.9**	**-0.3**
KOSK	**Kos Island**	**1.49**	**257**	P		**Pn**		**06 17 07.3**	**-0.9**
KOSK				S		**Sn**		**06 17 26.9**	**-0.9**
	comp=N,14μm,0.6s								
KEMT	**Kemer-ANTALYA**	**1.50**	**108**	PN		**Pn**		**06 17 08.1**	**-0.3**
ISP	**Isparta**	**1.56**	**62**	P		**Pn**		**06 17 09.1**	**-0.3**
ISP				S		**Sn**		**06 17 29.6**	**-0.3**
ISP				AML	AML			06 17 36.5	
	comp=N,50628μm,0.9s								
ISP				AML	AML			06 17 40.5	
	comp=E,53354μm,1.1s								
ISP	**Isparta**	**1.56**	**62**	PN		**Pn**		**06 17 08.6**	**-0.8**
ISP	**Isparta**	**1.56**	**62**	P		**Pn**		**06 17 08.6**	**-0.8**
ISP								06 17 30.0	
ISP	**Isparta**	**1.56**	**62**	Pn		**Pn**		**06 17 08.6**	**-0.8**
ISP				Sn		**Sn**		**06 17 30.0**	**+0.1**
KZIL	**AFYON_Kizioren**	**1.58**	**42**	⇑*iP*		**Pn**		**06 17 08.8**	**-0.9**
KZIL				*i* S		**Sg**		**06 17 37.8**	**+5.7**
KZIL				IAML				06 17 40.0	
	comp=N,7μm,1.1s								
KZIL				IAML				06 17 42.0	
	comp=E,6μm,0.7s								
USAK	**Uak-Merkez**	**1.63**	**6**	⇑*iP*		**Pn**		**06 17 08.9**	**-1.4**
USAK				*i* S		**Sn**		**06 17 29.8**	**-1.6**
USAK				IAML				06 17 41.0	
	comp=N,2μm,0.7s								
USAK				IAML				06 17 50.0	
	comp=E,3μm,0.8s								
SMG	**Samos**	**1.67**	**292**	P		**Pn**		**06 17 09.4**	**-1.3**
SMG				S		**Sn**		**06 17 31.9**	**-0.4**
SMG				AML	AML			06 17 40.6	
	comp=N,17953μm,0.4s								
SMG				AML	AML			06 17 40.8	
	comp=E,13950μm,0.7s								
SMG	**Samos**	**1.67**	**292**	P		**Pn**		**06 17 09.4**	**-1.3**
SMG				S		**Sn**		**06 17 32.0**	**-0.3**
	comp=E,8μm,0.5s								
GOMA	**Golmarmara-Man**	**1.75**	**337**	PN		**Pn**		**06 17 11.3**	**-0.6**
DGB	**zmir**	**1.79**	**303**	⇓*iP*		**Pn**		**06 17 11.0**	**-1.4**
DGB				*i* S		**Sg**		**06 17 40.7**	**+2.0**
DGB				IAML				06 17 47.0	
	comp=N,3μm,0.7s								
DGB				IAML				06 17 53.0	
	comp=E,2μm,0.8s								
BAGO	**Egridir - ISPA**	**1.83**	**60**	⇑*iP*		**Pn**		**06 17 12.8**	**-0.2**
BAGO				*i* S		**Sb**		**06 17 38.6**	**+0.6**
BAGO				IAML				06 17 45.0	
	comp=E,2μm,0.9s								
BAGO				IAML				06 17 48.0	
	comp=N,2μm,0.8s								
BLCB	**Balcova**	**1.89**	**314**	PN		**Pn**		**06 17 13.0**	**-0.8**
BLCB	**Balcova**	**1.89**	**314**	P		**Pn**		**06 17 12.8**	**-1.0**
BLCB				S		**Sn**		**06 17 37.1**	**-0.7**
AKHS	**Akhisar**	**1.94**	**337**	⇑*iP*		**Pn**		**06 17 13.1**	**-1.4**
AKHS				*i* S		**Sg**		**06 17 44.3**	**+0.7**
AKHS				IAML				06 17 53.0	
	comp=E,1μm,0.6s								
AKS	**Akhisar**	**1.94**	**337**	PN		**Pn**		**06 17 13.7**	**-0.8**
KARP	**Karpathos**	**2.02**	**221**	P		**Pn**		**06 17 16.9**	**+1.3**
KARP				S		**Sb**		**06 17 43.8**	**+0.3**
KARP				AML	AML			06 17 50.5	
	comp=N,31036μm,0.6s								
KARP				AML	AML			06 17 55.9	
	comp=E,28617μm,0.9s								
KARP	**Karpathos**	**2.02**	**221**	PN		**Pn**		**06 17 15.7**	**+0.1**
KARP	**Karpathos**	**2.02**	**221**	P		**Pn**		**06 17 16.5**	**+0.8**
KARP				S		**Sb**		**06 17 42.8**	**-0.8**
KARP				AML	AML			06 17 49.9	
	comp=E,31nm,0.6s								
KARP				AML	AML			06 17 49.9	
	comp=E,31nm,0.6s								
KARP				AML	AML			06 17 55.1	
	comp=E,29nm,0.9s								
KARP				AML	AML			06 17 55.1	
	comp=E,29nm,0.9s								
KARP	**Karpathos**	**2.02**	**221**	Pn		**Pn**		**06 17 16.7**	**+1.1**
KARP	**Karpathos**	**2.02**	**221**	P		**Pn**		**06 17 15.3**	**-0.3**
GDZ	**Gediz**	**2.07**	**15**	⇑*iP*		**Pn**		**06 17 14.9**	**-1.4**
GDZ				*i* S		**Sg**		**06 17 51.1**	**+3.4**
GDZ				IAML				06 17 55.0	
	comp=N,1μm,1.1s								
GDZ				IAML				06 17 57.0	
	comp=E,1μm,1.4s								
AFYO	**Afyonkarahisar**	**2.07**	**35**	⇑*iP*		**Pn**		**06 17 16.0**	**-0.4**
AFYO				*i* S		**Sg**		**06 17 53.0**	**+5.2**
AFYO				IAML				06 17 59.0	
	comp=E,8μm,0.8s								
AFYO				IAML				06 18 03.0	
	comp=N,7μm,0.9s								
URLA	**Izmir**	**2.15**	**307**	PN		**Pn**		**06 17 16.8**	**-0.5**
URLA	**Izmir**	**2.15**	**307**	*i* P		**Pn**		**06 17 16.2**	**-1.2**
URLA				*i* S		**Sg**		**06 17 54.6**	**+4.4**
URLA				IAML				06 18 00.0	
	comp=E,2μm,1.7s								
URLA				IAML				06 18 01.0	
	comp=N,2μm,1.1s								
KEPZ	**Antalya-Kepez**	**2.27**	**94**	⇓*iP*		**Pb**		**06 17 20.9**	**-1.5**
KEPZ				*i* S		**Sg**		**06 17 53.1**	**-0.9**
KEPZ				IAML				06 18 02.0	
	comp=N,1μm,0.8s								
KEPZ				IAML				06 18 05.0	
	comp=E,1μm,0.7s								
ZEDA	**zmir-Bergama**	**2.31**	**325**	*i* P		**Pn**		**06 17 18.0**	**-1.5**
ZEDA				*i* S		**Sg**		**06 17 57.4**	**+2.1**
ZEDA				IAML				06 17 58.0	
	comp=E,1μm,1.9s								
ZEDA				IAML				06 17 59.0	
	comp=N,2μm,1.6s								
AMGA	**Amorgos Island**	**2.33**	**264**	P		**Pn**		**06 17 19.4**	**-0.5**
AMGA	**Amorgos Island**	**2.33**	**264**	P		**Pn**		**06 17 18.5**	**-1.3**
STEP	**BALIKESIR_Sava**	**2.43**	**340**	⇑*iP*		**Pn**		**06 17 19.4**	**-1.8**
STEP				*i* S		**Sg**		**06 17 58.1**	**-1.2**
STEP				IAML				06 18 04.0	
	comp=E,3μm,0.8s								
STEP				IAML				06 18 08.0	
	comp=N,3μm,1.4s								
DOGA	**KONYA_Doganhis**	**2.50**	**65**	*i* P		**Pn**		**06 17 22.3**	**0.0**
DOGA				*i* S		**Sb**		**06 17 55.8**	**-1.7**
DOGA				IAML				06 18 13.0	
	comp=N,2μm,1.0s								
DOGA				IAML				06 18 14.0	
	comp=E,2μm,0.9s								
ANAF	**Anafi Island**	**2.53**	**254**	P		**Pn**		**06 17 22.7**	**+0.2**
ANAF	**Anafi Island**	**2.53**	**254**	P		**Pn**		**06 17 21.6**	**-0.9**
ANAF				S		**Sn**		**06 17 53.2**	**-0.3**
	comp=E,6μm,0.7s								
AUKIR	**Kirka- Seyitga**	**2.58**	**32**	*i* P		**Pn**		**06 17 23.7**	**+0.4**
AUKIR				*i* S		**Sg**		**06 18 07.5**	**+3.4**
AUKIR				IAML				06 18 18.0	
	comp=E,2μm,1.4s								
AUKIR				IAML				06 18 27.0	
	comp=N,3μm,1.2s								
APE	**Apeiranthos**	**2.60**	**270**	P		**Pn**		**06 17 23.5**	**-0.1**
APE	**Apeiranthos**	**2.60**	**270**	⇑P		**Pn**		**06 17 22.6**	**-1.0**
APE	**Apeiranthos**	**2.60**	**270**	*i* P		**Pn**		**06 17 23.9**	**+0.3**
APE	**Apeiranthos**	**2.60**	**270**	P		**Pn**		**06 17 23.3**	**-0.2**
APE	**Apeiranthos**	**2.60**	**270**	P		**Pn**		**06 17 22.6**	**-1.0**
AYVA	**Ayvalik**	**2.76**	**324**	*i* P		**Pn**		**06 17 24.2**	**-1.5**
AYVA				*i* S		**Sg**		**06 18 12.1**	**+2.2**
AYVA				IAML				06 18 13.0	
	comp=E,1μm,0.8s								
AYVA				IAML				06 18 25.0	
	comp=N,1μm,0.7s								
BALY	**Balya**	**2.80**	**341**	*i* P		**Pn**		**06 17 25.5**	**-0.8**
BALY				*i* S		**Sg**		**06 18 15.4**	**+4.4**
BALY				IAML				06 18 19.0	
	comp=N,855nm,0.8s								
ZKR	**Zakros**	**2.87**	**227**	P		**Pn**		**06 17 28.9**	**+1.7**
ZKR				S		**Sn**		**06 18 03.9**	**+2.0**
ZKR				AML	AML			06 18 18.5	
	comp=E,10681μm,0.9s								
ZKR				AML	AML			06 18 19.3	
	comp=N,6066μm,0.9s								
PRK	**Paraskevi**	**2.92**	**318**	P		**Pn**		**06 17 27.7**	**-0.3**
PRK				S		**Sn**		**06 18 01.5**	**-1.8**
PRK				AML	AML			06 18 23.3	
	comp=E,9736μm,0.8s								
PRK				AML	AML			06 18 23.5	
	comp=N,8451μm,0.8s								
PRK	**Paraskevi**	**2.92**	**318**	P		**Pn**		**06 17 27.2**	**-0.7**
KMER	**Konya-Meram**	**2.93**	**76**	*i* P		**Pn**		**06 17 30.2**	**+2.0**
KMER				*i* S		**Sb**		**06 18 07.3**	**-2.5**
KMER				IAML				06 18 14.0	
	comp=E,1μm,0.8s								
KMER				IAML				06 18 28.0	
	comp=N,1μm,1.2s								
GAZI	**Gazipasa**	**2.97**	**106**	*i* P		**Pn**		**06 17 29.9**	**+1.4**
GAZI				*i* S		**Sn**		**06 18 03.1**	**-1.3**
GAZI				IAML				06 18 20.0	
	comp=N,1μm,0.4s								
GAZI				IAML				06 18 21.0	
	comp=E,2μm,0.8s								
KDHN	**Kadinhani**	**3.00**	**61**	*i* P		**Pn**		**06 17 29.6**	**+0.5**
KDHN				*i* S		**Sg**		**06 18 19.4**	**+1.9**
KDHN				IAML				06 18 21.0	
	comp=N,518nm,1.2s								
ULDT	**Uludag**	**3.06**	**5**	*i* P		**Pn**		**06 17 28.9**	**-1.0**
ULDT				*i* S		**Sg**		**06 18 22.0**	**+2.6**
ULDT				IAML				06 18 33.0	
	comp=N,794nm,0.8s								
BORA	**Eskisehir**	**3.08**	**25**	*i* P		**Pn**		**06 17 29.1**	**-1.1**
BORA				*i* S		**Sg**		**06 18 22.4**	**+2.4**
SIGR	**SIGRI**	**3.13**	**313**	P		**Pn**		**06 17 30.1**	**-0.7**
SIGR				S		**Sn**		**06 18 07.0**	**-1.4**
SIGR				AML	AML			06 18 31.2	
	comp=E,2439μm,0.6s								
SIGR				AML	AML			06 18 34.9	
	comp=N,2823μm,1.4s								
SIGR	**SIGRI**	**3.13**	**313**	P		**Pn**		**06 17 30.2**	**-0.6**
NPS	**Neapolis**	**3.15**	**236**	P		**Pn**		**06 17 31.9**	**+0.8**
NPS				S		**Sn**		**06 18 11.3**	**+2.4**
NPS				AML	AML			06 18 15.2	
	comp=E,8508μm,0.5s								
NPS				AML	AML			06 18 18.8	
	comp=N,7751μm,1.0s								
BAYC	**CANAKKALE_Bayr**	**3.18**	**327**	*i* P		**Pn**		**06 17 30.4**	**-1.1**
BAYC				*i* S		**Sg**		**06 18 22.8**	**-0.4**
BAYC				IAML				06 18 30.0	
	comp=E,745nm,1.6s								
AUSIV	**SIVRIHISAR**	**3.19**	**42**	*i* P		**Pn**		**06 17 28.4**	**-3.4**
AUSIV				*i* S		**Sn**		**06 18 12.8**	**+2.7**
LAST	**Lasithi**	**3.30**	**235**	P		**Pn**		**06 17 34.0**	**+0.8**
KNL	**Balıkesir**	**3.32**	**343**	*i* P		**Pn**		**06 17 32.3**	**-1.2**
KNL				*i* S		**Sg**		**06 18 27.3**	**-0.7**
KNL				IAML				06 18 35.0	
	comp=E,1μm,2.0s								
KNL				IAML				06 18 53.0	
	comp=N,1μm,1.7s								
ERMK	**Ermenek**	**3.34**	**96**	*i* P		**Pn**		**06 17 37.2**	**+3.3**
ERMK				*i* S		**Sn**		**06 18 17.5**	**+3.7**
ERMK				IAML				06 18 28.0	
	comp=E,2μm,0.6s								
ERMK				IAML				06 18 30.0	
	comp=N,3μm,0.6s								
EZN	**Ezine**	**3.34**	**325**	P		**Pn**		**06 17 32.5**	**-1.2**
EZN				S		**Sn**		**06 18 13.1**	**-0.5**
	comp=N,2μm,1.4s								
BOZC	**Bozcaada**	**3.48**	**323**	*i* P		**Pn**		**06 17 35.7**	**0.0**
BOZC				*i* S		**Sg**		**06 18 33.8**	**+0.7**
BOZC				IAML				06 18 40.0	
	comp=E,629nm,1.7s								
BOZC				IAML				06 18 43.0	
	comp=N,669nm,1.9s								
AUMIH	**MIHALICIK**	**3.49**	**37**	*i* P		**Pn**		**06 17 37.2**	**+1.3**
AUMIH				*i* S		**Sb**		**06 18 26.2**	**+0.4**
AUMIH				IAML				06 18 41.0	
	comp=E,506nm,1.1s								
AUMIH				IAML				06 18 50.0	
	comp=N,872nm,2.2s								
AKMS	**Akamas**	**3.54**	**125**	P		**Pn**		**06 17 36.8**	**+0.2**
AKMS				AML	AML			06 18 20.5	
	comp=N,5.8nm,0.5s								
AKMS				AML	AML			06 18 21.6	
	comp=N,8.7nm,0.7s								
GEYV	**SAKARYA_Geyve**	**3.59**	**19**	*i* P		**Pn**		**06 17 37.4**	**+0.3**
GEYV				*i* S		**Sb**		**06 18 32.2**	**+3.7**
GEYV				IAML				06 19 01.0	
	comp=E,1μm,1.4s								
GEYV				IAML				06 19 06.0	
	comp=N,1μm,1.4s								
IDI	**Anoyia**	**3.63**	**241**	Pn		**Pn**		**06 17 39.1**	**+1.4**
IDI	comp=N,51nm,0.3s,baz=56,slow=13,SNR=146								
				Sn		**Sn**		**06 18 22.8**	**+2.0**
	comp=N,52nm,0.3s,baz=323,slow=20,SNR=2.2								
IDI	**Anoyia**	**3.63**	**241**	P		**Pn**		**06 17 39.1**	**+1.4**
IDI	**Anoyia**	**3.63**	**241**	⇑P		**Pn**		**06 17 37.7**	**0.0**
IDI	**Anoyia**	**3.63**	**241**	Pn		**Pn**		**06 17 39.2**	**+1.5**
ALFC	**Alefka**	**3.64**	**121**	⇓P		**Pn**		**06 17 38.3**	**+0.4**
ALFC				AML	AML			06 18 22.1	
	comp=N,6.1nm,0.7s								
ALFC				AML	AML			06 18 27.0	
	comp=N,4.7nm,0.7s								
SKY	**Skiros Island**	**3.79**	**299**	P		**Pn**		**06 17 39.5**	**-0.4**
SART	**Tekirdag**	**3.80**	**341**	*i* P		**Pn**		**06 17 38.9**	**-1.2**
SART				*i* S		Sn		06 18 15.8	-9.3
GOKA	**anakkale-Gk**	**3.83**	**325**	*i* P		**Pn**		**06 17 39.7**	**-0.7**
GOKA				*i* S		**Sn**		**06 18 17.8**	**-7.7**
GOKA				IAML				06 18 27.0	
	comp=N,1μm,0.3s								
GOKA				IAML				06 18 52.0	
	comp=E,941nm,1.1s								
SIVA	**Sivas**	**3.83**	**238**	P		**Pn**		**06 17 43.0**	**+2.6**
NATA	**Nata**	**3.84**	**126**	P		**Pn**		**06 17 40.9**	**+0.3**
NATA				AML	AML			06 18 27.7	

comp=E,285nm,1.6s
AOS Alonnisos 4.39 300 P **Pn** **06 17 48.4 +0.3**
MVOU Mavrovouni 4.44 116 ⇑P **Pn** **06 17 48.5 -0.3**
CMDR Camlidere-ANKA 4.46 39 *i* P **Pn** **06 17 49.6 +0.5**
CMDR IAML 06 19 15.0
comp=N,1μm,1.6s
CMDR IAML 06 19 16.0
comp=E,1μm,2.0s
BCAM Yenicaga 4.51 34 *i* P **Pn** **06 17 50.1 +0.2**
BCAM IAML 06 19 26.0
comp=N,332nm,2.3s
BCAM IAML 06 19 30.0
comp=E,247nm,2.0s
KIRS Kırehir-Merke 4.53 62 *i* P **Pn** **06 17 50.4 +0.2**
BR131 Keskin Array S 4.63 54 P **Pn** **06 17 52.2 +0.6**
BR131 Keskin Array S 4.63 54 **Pn** **06 17 52.2 +0.6**
BRTR Keskin Array B 4.63 54 Pn **Pn** **06 17 52.1 +0.5**
comp=E,34nm,0.3s,baz=240,slow=17,SNR=812
BRTR Sn **Sn** **06 18 47.4 +1.7**
comp=E,12nm,0.3s,baz=220,slow=24,SNR=14
BRTR LR LR 06 20 11.4
comp=E,583nm,18.4s,baz=265,slow=46
BRTR Keskin Array B 4.63 54 **Pn** **06 17 51.7 +0.1**
KTHA Kythira Island 4.67 261 P **Pn** **06 17 53.2 +1.1**
KDZE Karadeniz Ereo 4.69 25 ⇑P **Pn** **06 17 52.7 +0.4**
VLI Veliai 4.70 267 P **Pn** **06 17 53.4 +1.0**
THAS Thassos island 4.73 319 P **Pn** **06 17 52.0 -0.8**
THAS Thassos island 4.73 319 P **Pn** **06 17 51.8 -1.0**
RDO Rodhopi 4.77 329 P **Pn** **06 17 52.6 -0.7**
GULE Gulek 4.79 86 *i* P **Pn** **06 17 56.1 +2.3**
GULE IAML 06 19 34.0
comp=N,484nm,1.5s
GULE IAML 06 19 34.0
comp=E,518nm,0.9s
OSC2 CSNet OBS 4 4.92 144 P **Pn** **06 17 56.0 +0.6**
DELI KIRIKKALE 4.96 53 *i* P **Pn** **06 17 56.5 +0.4**
DELI IAML 06 20 12.0
comp=E,213nm,6.4s
DELI IAML 06 20 19.0
comp=N,139nm,2.7s
EDRB Edirne 5.00 342 P **Pn** **06 17 55.3 -1.3**
AKO Adana 5.33 84 *i* P **Pn** **06 18 04.6 +3.6**
AKO IAML 06 19 19.0
comp=E,118nm,1.5s
AKO IAML 06 19 57.0
comp=N,174nm,1.0s
AGG Agios Georgios 5.45 293 P **Pn** **06 18 03.4 +0.7**
AGG Agios Georgios 5.45 293 **Pn** **06 18 03.4 +0.7**
ITM Ithomi 5.48 273 **Pn** **06 18 04.1 +1.0**
SIRC Yozgat 5.49 64 *i* P **Pn** **06 18 05.6 +2.2**
ILGA Ilgaz 5.51 43 *i* P **Pn** **06 18 04.1 +0.4**
ILGA IAML 06 19 55.0
comp=N,325nm,2.1s
ILGA IAML 06 20 03.0
comp=E,383nm,1.7s
ILGA Ilgaz 5.51 43 **Pn** **06 18 02.7 -1.0**
DIM Dimitrovgrad 5.55 334 *i* P **Pn** **06 18 04.1 0.0**
RZN Rozhen 5.57 327 *i* P **Pn** **06 18 04.2 -0.3**
LIT Litokhoron 5.77 303 P **Pn** **06 18 07.7 +0.6**
LIT Litokhoron 5.77 303 **Pn** **06 18 07.7 +0.6**
COAL Corum-Alaca 5.79 55 *i* P **Pn** **06 18 07.8 +0.4**
COAL IAML 06 20 03.0
comp=E,121nm,1.9s
COAL IAML 06 20 09.0
comp=N,175nm,2.1s
CTAK Corum_Osmancik 5.88 51 *i* P **Pn** **06 18 09.1 +0.3**
CTAK IAML 06 20 14.0
comp=N,205nm,3.1s
CTAK IAML 06 20 31.0
comp=E,170nm,2.2s
PLD Plovdiv 5.92 329 *i* P **Pn** **06 18 09.9 +0.8**
MMB Musomiste 5.96 320 *i* P **Pn** **06 18 09.6 -0.1**
PRD Provadia 6.19 351 *i* P **Pn** **06 18 13.3 +0.5**
NEF NEVSHA 6.27 350 *i* P **Pn** **06 18 13.9 -0.1**
BZK Bozkurt 6.32 38 ⇑P **Pn** **06 18 15.4 +0.8**
VAY Valandovo 6.41 313 *i* Pn **Pn** **06 18 17.7 +1.8**
BHL Bhannes 6.44 118 *eP* **Pn** **06 18 15.7 -0.8**
HWQ Hawqa 6.47 114 *eP* **Pn** **06 18 17.0 +0.2**
DQRL Deir Qamar 6.49 119 *eP* **Pn** **06 18 16.1 -1.0**
KKB Krupnik 6.49 319 *i* P **Pn** **06 18 18.0 +1.0**
PGB Panagyurishte 6.51 328 *i* P **Pn** **06 18 17.2 0.0**
PSN Preselentsi 6.60 356 *i* P **Pn** **06 18 17.4 -1.0**
QRWL Qaraoun 6.66 120 *eP* **Pn** **06 18 18.2 -1.1**
RAZG Razgrad 6.70 346 ⇑P **Pn** **06 18 18.9 -1.0**
GAZ Gaziantep 6.73 87 **Pn** **06 18 19.9 -0.5**
DIKM Dikmen 6.77 46 ⇑P **Pn** **06 18 21.2 +0.4**
OFRI `Ofer 6.77 129 Pn **Pn** **06 18 20.4 -0.5**
OFRI Sn **Sn** **06 19 33.5 -4.7**
MMA0B Mount Meron ar 6.78 125 Pn **Pn** **06 18 20.0 -1.1**
MMAI Mount Meron Ar 6.78 125 Pn **Pn** **06 18 20.6 -0.4**
comp=E,101nm,0.3s,baz=318,slow=12,SNR=159
MMAI Sn **Sn** **06 19 34.0 -4.5**
comp=E,24nm,0.3s,baz=309,slow=16,SNR=4.0
MMAI LR LR 06 22 11.8
comp=E,336nm,19.0s,baz=355,slow=49
RCY Rachaya 6.79 120 *eP* **Pn** **06 18 20.5 -0.8**
SHBL Chebaa 6.81 121 *eP* **Pn** **06 18 21.0 -0.5**
BLGI Bet Lehem HaGe 6.83 128 Pn **Pn** **06 18 20.8 -0.8**
GEM Giv'at Ha'Em 6.84 122 Pn **Pn** **06 18 20.9 -0.8**
NATI Neve Ativ 6.86 122 Pn **Pn** **06 18 21.3 -0.7**
NATI Sn **Sn** **06 19 36.8 -3.4**
STIP Stip 6.87 314 *i* Pn **Pn** **06 18 21.3 -0.9**
VTS Vitosha 6.98 324 *i* P **Pn** **06 18 25.5 +1.7**
ICOR Ion Corvin 7.06 354 ⇑P **Pn** **06 18 25.2 +0.5**
MMLI Mount Malkishu 7.17 128 Pn **Pn** **06 18 25.6 -0.7**
MMLI Sn **Sn** **06 19 44.3 -3.7**
MPEP Malo Peshtene 7.35 330 *i* P **Pn** **06 18 29.3 +0.5**
HMDT Nahal Hemdat 7.36 129 Pn **Pn** **06 18 28.0 -0.9**
HMDT Sn **Sn** **06 19 49.4 -3.2**
TIRR Tirgusor 7.36 358 ⇑P **Pn** **06 18 28.5 -0.4**
TIRR Tirgusor 7.36 358 ⇑P **Pn** **06 18 28.5 -0.4**
TIRR Tirgusor 7.36 358 P **Pn** **06 18 28.4 -0.5**
TIRR Tirgusor 7.36 358 **Pn** **06 18 28.4 -0.5**
UJAP Al Üja 7.53 131 Pn **Pn** **06 18 30.4 -0.8**
HARR Harsova 7.62 355 ⇑P **Pn** **06 18 32.5 +0.1**
HHAG Hagoal 7.64 158 AMP 06 20 00.0
baz=158
KZIT Kziot 7.73 141 Pn **Pn** **06 18 33.1 -0.9**
KZIT Sn **Sn** **06 19 56.7 -5.1**
MALT Malatya 7.74 78 P **Pn** **06 18 38.5 +4.2**
YTIR Yattir 7.75 136 Pn **Pn** **06 18 33.8 -0.6**
TPGR Topolog 7.76 358 ⇑P **Pn** **06 18 33.9 -0.5**
GHAJ Ghor Haditha 8.05 134 Pn **Pn** **06 18 37.8 -0.6**
CFR Carcaliu 8.09 357 ⇑P **Pn** **06 18 38.4 -0.6**
TIR Tirane 8.12 304 ⇑P **Pn** **06 18 39.1 -0.3**
TIR Tirane 8.12 304 P **Pn** **06 18 41.5 +2.1**
TIR Tirane 8.12 304 Pn **Pn** **06 18 41.5 +2.1**
ISR Istrita 8.20 349 ⇑P **Pn** **06 18 40.0 -0.4**
ASF Jabal al Asfar 8.29 124 Pn **Pn** **06 18 42.9 +1.1**
comp=E,0.8nm,0.3s,baz=264,slow=22,SNR=24
SEV Sevastopol' 8.31 25 *eP* **Pn** **06 18 42.6 +0.7**
SEV *eS* **Sn** **06 20 10.8 -5.2**
ZFRI Zfri 8.41 139 Pn **Pn** **06 18 42.1 -1.3**
PRNI Paran 8.48 141 Pn **Pn** **06 18 43.4 -1.0**
KRMI Paran Flat 8.54 143 Pn **Pn** **06 18 43.5 -1.6**
MLR Muntele Rosu 8.66 347 Pn **Pn** **06 18 47.5 +0.7**
comp=E,3.0nm,0.3s,baz=173,slow=2.1,SNR=34
MLR Sn **Sn** **06 20 24.9 +0.2**
comp=E,1.3nm,0.3s,baz=139,slow=18,SNR=1.7
MLR Muntele Rosu 8.66 347 ⇑P **Pn** **06 18 47.3 +0.4**
MLR Muntele Rosu 8.66 347 **Pn** **06 18 46.5 -0.4**
HRFI Mount Harif 8.76 142 Pn **Pn** **06 18 46.9 -1.2**
VOIR 8.80 343 ⇑P **Pn** **06 18 48.6 -0.1**
SIM Simferopol' 8.82 25 *eP* **Pn** **06 18 48.5 -0.4**
SIM *eS* **Sn** **06 20 27.7 -0.8**
SIM pmax pmax
comp=Z,63nm,0.7s
SIM smax smax
comp=N,144nm,1.3s
SIM smax smax
comp=E,22nm,0.8s
MBRI Mt Berech 8.90 143 Pn **Pn** **06 18 48.7 -1.4**
PLOR Plostina 8.90 350 ⇑P **Pn** **06 18 50.4 +0.4**
VRI Vrincioaia 8.90 351 ⇑P **Pn** **06 18 49.9 -0.2**
EIL Elat 9.02 143 Pn **Pn** **06 18 50.5 -1.2**
comp=E,17nm,0.3s,baz=124,slow=9.7,SNR=44
EIL Sn **Sn** **06 20 26.7 -6.7**
comp=E,8.9nm,0.3s,baz=94,slow=19,SNR=3.8
EIL LR LR 06 24 14.2
comp=E,232nm,18.7s,baz=316,slow=50
EIL Elat 9.02 143 Pn **Pn** **06 18 50.1 -1.6**
PDG Podgorica 9.07 309 ⇑P **Pn** **06 18 51.8 -0.5**
PDG Podgorica 9.07 309 **Pn** **06 18 53.5 +1.2**

SUDU Sudak 9.10 29 *eP* **Pn** **06 18 52.4 -0.3**
SUDU *eS* **Sn** **06 20 33.5 -1.7**
HERR Herculane 9.15 330 ⇑P **Pn** **06 18 52.3 -1.1**
LOT Lotru 9.16 337 ⇑P **Pn** **06 18 53.5 -0.2**
OZUR 9.27 347 ⇑P **Pn** **06 18 55.0 -0.1**
MDVR Moldovita 9.36 327 ⇑P **Pn** **06 18 55.7 -0.7**
GZR Gura Zlata 9.44 333 ⇑P **Pn** **06 18 56.7 -0.8**
TESR Tescani 9.55 351 ⇑P **Pn** **06 18 57.0 -1.9**
MARD Mardin 9.57 85 Pn **Pn** **06 19 01.5 +2.1**
DIVS Divibare 9.67 319 **Pn** **06 19 00.2 -0.5**
TIP Timpagrande 9.70 286 **Pn** **06 19 01.9 +0.8**
BIZ Bicaz 10.04 349 ⇑P **Pn** **06 19 05.6 0.0**
MATE Matera 10.07 294 ⇑P **Pn** **06 19 04.2 -1.7**
ANN Anapa 10.10 38 *eP* **Pn** **06 19 06.9 +0.5**
ANN *eS* **Sn** **06 20 59.4 -0.4**
ANN pmax pmax
comp=Z,47nm,1.3s
ANN MLR MLR
comp=Z,480nm,8.0s
ANN MLR MLR
comp=N,396nm,8.0s
STON Ston 10.28 308 *ePn* **Pn** **06 19 12.5 +3.7**
CEL Celeste 10.29 280 **Pn** **06 19 09.7 +0.6**
SOC Sochi 10.56 49 *eP* **Pn** **06 19 15.2 +2.4**
SOC *e* 06 21 15.2
SOC MLR MLR
comp=Z,684nm,13.0s
LSTV Lastovo 10.74 306 *ePn* **Pn** **06 19 17.1 +1.8**
BURAR Bucovina Array 10.84 347 ⇑P **Pn** **06 19 17.3 +0.6**
BURAR Bucovina Array 10.84 347 Pn **Pn** **06 19 16.2 -0.5**
BUR08 Bucovina Ar. S 10.87 347 **Pn** **06 19 16.9 -0.2**
MAKA Makarska 10.92 308 *ePn* **Pn** **06 19 19.9 +2.3**
RICI Ricice 10.95 309 *ePn* **Pn** **06 19 20.9 +2.7**
SORM Soroca 11.04 358 ⇑P **Pn** **06 19 18.0 -1.3**
VAE Valguarnera 11.46 276 Pn **Pn** **06 19 26.1 +1.0**
comp=Z,2.3nm,0.3s,baz=123,slow=22,SNR=3.3
KIJV Kijevo 11.67 310 *ePn* **Pn** **06 19 31.3 +3.3**
PAOL Paolisi 11.73 294 Pn **Pn** **06 19 26.7 -2.1**
MORI Morici 12.03 308 *ePn* **Pn** **06 19 33.7 +0.9**
AKH Akhalkalaki 12.19 65 P **Pn** **06 19 34.7 -0.5**
AKH Akhalkalaki 12.19 65 **Pn** **06 19 34.7 -0.5**
UZH Uzhgorod 12.47 340 *eP* **Pn** **06 19 43.0 +4.2**
KIV Kislovodsk 12.60 53 *eP* **Pn** **06 19 43.5 +2.8**
KIV pmax pmax
comp=Z,37nm,1.0s
KIV MLR MLR
comp=Z,356nm,12.0s
KBZ Khabaz 12.63 54 Pn **Pn** **06 19 44.9 +3.9**
comp=Z,0.2nm,0.3s,baz=233,slow=20,SNR=3.7
KBZ LR LR 06 25 28.3
comp=Z,176nm,19.4s,baz=71,slow=42
KBZ Khabaz 12.63 54 *i* P **Pn** **06 19 43.5 +2.5**
KBZ pmax pmax
comp=Z,17nm,1.1s
PSZ Piszkesteto 12.64 332 P **Pn** **06 19 41.5 +0.2**
PSZ Piszkesteto 12.64 332 **Pn** **06 19 41.5 +0.2**
GNI Garni 12.85 71 *i* P **Pn** **06 19 46.1 +1.9**
GNI pmax pmax
comp=Z,20nm,1.0s
KECS Kecovo 12.90 335 *e* **Pn** **06 19 49.4 +4.6**
ZEI Tsey 12.91 59 *eP* **Pn** **06 19 47.5 +2.3**
ZEI pmax pmax
comp=Z,26nm,1.3s
KWP Kalwaria Pacla 13.28 343 P **Pn** **06 19 50.0 0.0**
KWP Kalwaria Pacla 13.28 343 **Pn** **06 19 50.0 0.0**
GOF Gofitskoye 13.37 49 ⇑*eP* **Pn** **06 19 53.6 +2.5**
GOF pmax pmax
comp=Z,22nm,0.7s
VYHS Vyhne 13.52 331 *eP* **Pn** **06 19 56.9 +3.7**
VYHS Vyhne 13.52 331 *ePN* **Pn** **06 19 56.9 +3.7**
AKASG Malin Array Be 13.61 1 Pn **Pn** **06 19 52.8 -1.6**
comp=Z,0.8nm,0.3s,baz=183,slow=12,SNR=14
AKASG LR LR 06 24 54.4
comp=Z,295nm,20.7s,baz=205,slow=36
AKASG Malin Array Be 13.61 1 **Pn** **06 19 50.1 -4.3**
AKBB Malin Array Si 13.61 1 P **Pn** **06 19 52.1 -2.3**
AKBB Malin Array Si 13.61 1 **Pn** **06 19 52.1 -2.3**
LANS Liptovska Anna 13.82 334 *e* P 06 20 11.9 +6.0
MODS Modra-Piesok 14.07 327 *eP* **Pn** **06 20 01.4 +0.6**
MODS Modra-Piesok 14.07 327 *ePN* **Pn** **06 20 01.4 +0.6**
MODS *e* 06 20 11.7
OBKA Obir 14.17 316 *ePn* **Pn** **06 20 00.7 -1.4**
comp=Z,1.5nm,0.3s
JAVC Velka Javorina 14.28 329 *e* P 06 20 16.1 +5.1
CONA Conrad Observa 14.40 323 *ePn* **Pn** **06 20 04.7 -0.6**
comp=Z,1.2nm,0.5s
OJC Ojcow 14.63 337 P **Pn** **06 20 07.3 -1.1**
OJC Ojcow 14.63 337 Pn **Pn** **06 20 07.3 -1.1**
OKC Ostrava-Krasne 14.88 332 *eP* **P** **06 20 18.5 +1.0**
OKC *epP* pP 06 20 22.4
KRUC Moravsky 14.98 327 *e* **P** **06 20 22.7 +4.0**
MORC Moravsky Berou 15.06 331 *e* **P** **06 20 23.7 +4.1**
MORC Moravsky Berou 15.06 331 P **Pn** **06 20 12.9 -1.3**
MORC pmax pmax
comp=Z,19nm,1.4s
MORC Moravsky Berou 15.06 331 Pn **Pn** **06 20 12.9 -1.3**
VRAC Vranov 15.08 328 Pn **P** **06 20 19.5 -0.3**
comp=Z,0.3nm,0.3s,baz=150,slow=14,SNR=4.0
VRAC LR LR 06 27 38.4
comp=Z,394nm,18.1s,baz=126,slow=44
VRAC Vranov 15.08 328 *e* **P** **06 20 24.0 +4.2**
ZOU Zoufplan 15.09 314 Pn **Pn** **06 20 11.4 -3.3**
KBA Koelnbreinsper 15.17 316 *ePn* **Pn** **06 20 15.4 -0.4**
comp=Z,6.7nm,0.7s
CIMO Cimolais 15.27 312 Pn **Pn** **06 20 17.3 +0.3**
MAK Makhachkala 15.48 62 *eP* **Pn** **06 20 18.2 -1.6**
MAK *eS* **Sn** **06 23 11.1 -0.3**
MAK pmax pmax
comp=Z,333nm,1.3s
MAK MLR MLR
comp=Z,311nm,16.0s
KRLC Kraliky 15.59 330 *eP* **P** **06 20 26.3 +0.7**
KRLC *epP* **sP** **06 20 30.3 +0.9**
KRLC AMS AMS 06 27 20.0
comp=Z,800nm,10.8s
CTI Castel Tesino 15.61 310 P **Pn** **06 20 20.9 -0.7**
CTI pmax pmax
comp=Z,34nm,1.2s
CTI Castel Tesino 15.61 310 Pn **Pn** **06 20 20.9 -0.7**
KEST Kesra 15.71 271 Pn **Pn** **06 20 24.9 +2.0**
comp=Z,0.4nm,0.3s,baz=7.3,slow=3.1,SNR=7.1
KEST LR LR 06 28 43.3
comp=Z,146nm,19.1s,baz=338,slow=46
KEST Kesra 15.71 271 Pn **Pn** **06 20 22.7 -0.2**
VORD Divnogorie 15.77 25 *eP* **Pn** **06 20 23.1 -0.4**
VORD pmax pmax
comp=Z,30nm,0.8s
VSR Storozhevoye 15.94 24 *eP* **Pn** **06 20 23.6 -2.1**
VSR pmax pmax
comp=Z,30nm,0.7s
DPC Dobruska-Polom 15.99 330 *eP* **P** **06 20 30.4 +0.4**
DPC *epP* **sP** **06 20 34.3 +0.4**
GEC2 GERESS Array S 16.08 322 Pn **Pn** **06 20 26.4 -1.2**
GERES GERESS Array B 16.08 322 Pn **P** **06 20 30.5 -0.6**
comp=Z,0.4nm,0.3s,baz=132,slow=13,SNR=44
GERES GERESS Array B 16.08 322 **Pn** **06 20 28.6 +1.0**
OSTC Ostas 16.20 330 *eP* **P** **06 20 36.7 +4.5**
OSTC *ex* x 06 20 40.8
WTTA Wattenberg 16.24 314 *ePn* **Pn** **06 20 27.3 -2.5**
comp=Z,6.4nm,0.8s
WATA Walderalm 16.31 314 *ePn* **Pn** **06 20 31.6 +0.9**
comp=Z,1.6nm,0.2s
KHC Kasperske Hory 16.33 322 *eP* **P** **06 20 35.1 +1.3**
KHC *ex* x 06 20 38.7
KHC AMS AMS 06 27 20.0
comp=Z,800nm,13.8s
PRU Pruhonice 16.48 326 *eP* **P** **06 20 36.3 +1.0**
PRU *epP* **sP** **06 20 39.7 +0.5**
PRU AMS AMS 06 27 40.0
comp=Z,900nm,9.8s
MOTA Moosalm 16.59 314 *ePn* **P** **06 20 35.9 -0.9**
comp=Z,8.5nm,0.9s
FETA Feichten 16.64 312 *ePn* **P** **06 20 36.3 -1.1**
comp=Z,9.0nm,0.8s
FUORN Ofenpass-Fuorn 16.73 310 Pn **Pn** **06 20 33.9 -2.1**
VRH Novokhopyorsk 16.85 29 *eP* **Pn** **06 20 37.7 +0.4**
VRH pmax pmax
comp=Z,140nm,1.6s
DAVOX Davos/Dischmat 17.04 311 P **Pn** **06 20 40.6 +0.8**
comp=Z,0.1nm,0.3s,baz=336,slow=20,SNR=3.3
DAVOX LR LR 06 28 31.5
comp=Z,306nm,20.5s,baz=220,slow=42
LPSR Galich'ya Gora 17.07 21 *eP* **Pn** **06 20 38.9 -1.1**

LPSR pmax pmax
comp=Z,50nm,1.0s
DAVA Damuels 17.28 312 *ePn* **Pn** **06 20 41.6 -1.2**
comp=Z,2.2nm,0.2s
BRG Berggiesshubel 17.38 327 *eP* **P** **06 20 47.6 +2.3**
comp=Z,48nm,1.8s
comp=N,964nm,16.2s
comp=E,987nm,21.2s
comp=Z,564nm,14.7s
BRG Berggiesshubel 17.38 327 *eP* **P** **06 20 47.6 +2.3**
BRG pmax pmax
comp=Z,48nm,1.8s
BRG MLR MLR
comp=N,964nm,16.2s
BRG MLR MLR
comp=E,987nm,21.2s
BRG MLR MLR
comp=Z,564nm,14.7s
MICGM Minsk 17.42 358 *e* **Pn** **06 20 45.0 +0.6**
MNK Minsk 17.42 358 *eP* **Pn** **06 20 45.0 +0.6**
NACGM Naroch 17.87 356 *e* **Pn** **06 20 50.0 +0.1**
GRA1 Grafenberg Arr 17.87 320 **Pn** **06 20 47.6 -2.5**
GRF Grafenberg Arr 17.87 320 P **Pn** **06 20 47.6 -2.5**
GRF pmax pmax
comp=Z,51nm,1.3s
GRF Grafenberg Arr 17.87 320 *eP* **P** **06 20 51.5 +0.8**
comp=Z,32nm,1.2s,baz=128,slow=12
CLL Collm 18.11 327 *eP* **Pn** **06 20 52.0 -0.9**
CLL *epP* **P** **06 20 54.0 +0.7**
CLL *i* sP **sP** **06 20 57.7 +0.5**
comp=Z,57nm,1.6s
CLL *eS* **S** **06 24 25.0 +4.2**
CLL Collm 18.11 327 *eP* **P** **06 20 54.0 +0.7**
CLL Collm 18.11 327 P **Pn** **06 20 52.1 -0.9**
MOX Moxa 18.29 323 P **P** **06 20 59.3 +4.0**
BNI Bardonecchia 18.43 302 P **P** **06 20 56.2 -0.8**
BNI pmax pmax
comp=Z,22nm,0.8s
BNI Bardonecchia 18.43 302 P **P** **06 20 56.2 -0.8**
STU Stuttgart 18.43 315 P **Pn** **06 20 58.2 +1.3**
STU pmax pmax
comp=Z,53nm,1.0s
STU Stuttgart 18.43 315 P **Pn** **06 20 58.2 +1.3**
STU IAmb IAmb 06 21 03.4
comp=Z,53nm,1.0s
SENIN Lac Senin/Sane 18.47 307 P **P** **06 20 57.1 -0.5**
BFO Black Forest 18.70 313 P **P** **06 20 58.7 -1.2**
BFO pmax pmax
comp=Z,50nm,1.4s
BFO Black Forest 18.70 313 P **P** **06 20 58.7 -1.2**
BFO IAmb IAmb 06 21 07.8
comp=Z,50nm,1.4s
OBN Obninsk 18.79 14 ⇑*eP* **Pn** **06 21 02.6 +1.4**
OBN *eS* **S** **06 24 36.1 +1.5**
OBN pmax pmax
comp=Z,55nm,1.3s
OBN MLR MLR
comp=Z,208nm,16.0s
ECH Echery 19.34 312 P **P** **06 21 06.3 -0.6**
ECH pmax pmax
comp=Z,35nm,1.4s
ECH Echery 19.34 312 P **P** **06 21 06.3 -0.6**
MOS Moscow 19.59 15 *eP* **P** **06 21 07.8 -1.7**
MOS pmax pmax
comp=Z,46nm,0.7s
SSB Saint Sauveur 19.94 302 P **P** **06 21 13.2 -0.3**
SSB pmax pmax
comp=Z,16nm,1.2s
SSB Saint Sauveur 19.94 302 P **P** **06 21 13.2 -0.3**
BSD Bornholm Skovb 20.36 337 *eP* **P** **06 21 16.7 -1.2**
BSD pmax pmax
comp=Z,73nm,1.0s
BSD Bornholm Skovb 20.36 337 *i* P **P** **06 21 16.7 -1.2**
comp=Z,73nm,1.0s
BSD Bornholm Skovb 20.36 337 *eP* **P** **06 21 16.8 -1.2**
BSD IAmb IAmb 06 21 20.4
comp=Z,73nm,1.0s
WLF Walferdange 20.60 315 P **P** **06 21 20.3 -0.3**
WLF Walferdange 20.60 315 P **P** **06 21 19.9 -0.7**
WLF pmax pmax
comp=Z,41nm,1.1s
WLF Walferdange 20.60 315 P **P** **06 21 19.9 -0.7**
WLF IAmb IAmb 06 21 30.3
comp=Z,41nm,1.1s
BTNL Ternell 21.08 317 P **P** **06 21 25.9 +0.1**
MEM Membach 21.16 317 P **P** **06 21 26.8 +0.2**
MEM pP **sP** **06 21 31.0 +0.5**
SSF Saint Saulge 21.16 306 *eP* **P** **06 21 27.6 +0.9**
SSF pmax pmax
comp=Z,31nm,1.1s
RCHB Rochefort 21.36 315 PnPn **PnPn** **06 21 48.1 -0.4**
VSU Vasula 21.43 357 *i* P **P** **06 21 32.3 +2.9**
VSU pmax pmax
comp=Z,141nm,1.0s
BCLA Clavier 21.45 316 P **P** **06 21 30.2 +0.4**
BCLA PnPn **PnPn** **06 21 48.2 -1.6**
BGES Gesves 21.55 316 P **P** **06 21 31.2 +0.3**
BGES x x 06 21 41.3
BMRD Maredsous 21.70 315 P **P** **06 21 32.4 0.0**
BMRD pP **sP** **06 21 37.2 +0.9**
BMRD PnPn **PnPn** **06 21 52.8 -0.2**
DOU Dourbes 21.70 314 P **P** **06 21 32.1 -0.2**
DOU pP **pP** **06 21 34.1 -0.8**
SNF Seneffe 22.07 315 P **P** **06 21 36.4 0.0**
SNF pP **sP** **06 21 40.2 -0.1**
SNF x x 06 21 49.7
GEYT Alibeck 23.25 79 P **P** **06 21 49.5 +0.6**
comp=Z,2.6nm,0.5s,baz=272,slow=9.5,SNR=3.5
GEYT LR LR 06 32 59.5
comp=Z,130nm,20.5s,baz=335,slow=42
GEYT Alibeck 23.25 79 P **P** **06 21 46.8 -2.1**
GYA0B ALIBECK ARRAY 23.25 79 P **P** **06 21 47.6 -1.3**
GYA0B IAmb IAmb 06 22 06.6
comp=Z,22nm,1.1s
FINES FINESS Array B 24.43 357 P **P** **06 21 59.8 -0.3**
comp=Z,22nm,0.8s,baz=141,slow=12,SNR=17
FINES LR LR 06 31 29.9
comp=Z,138nm,18.5s,baz=317,slow=36
FINES FINESS Array B 24.43 357 P **P** **06 21 59.9 -0.1**
FINES FINESS Array B 24.43 357 P **P** **06 21 59.9 -0.1**
FIA1 FINESS Array S 24.43 357 P **P** **06 22 00.6 +0.5**
FIA1 IAmb IAmb 06 22 05.0
comp=Z,38nm,0.9s
TAM Tamanrasset 24.60 241 P **P** **06 22 02.4 +0.3**
TAM pmax pmax
comp=Z,13nm,0.8s
TAM Tamanrasset 24.60 241 P **P** **06 22 02.4 +0.3**
TAM IAmb IAmb 06 22 07.2
comp=Z,12nm,0.8s
KLMR Klimovskoe 24.74 13 *eP* **P** **06 22 03.4 +0.6**
KLMR pmax pmax
comp=Z,38nm,1.1s
KLMR Klimovskoe 24.74 13 *eP* **P** **06 22 03.4 +0.6**
KLMR AMP 06 22 08.3
comp=Z,38nm,1.1s
AKTO Aktyubinsk 24.78 48 P **P** **06 22 02.0 -1.3**
comp=Z,9.0nm,0.8s,baz=248,slow=12,SNR=17
AKTO LR LR 06 34 46.9
comp=Z,203nm,19.6s,baz=254,slow=44
HFS Hagfors 25.00 342 P **P** **06 22 05.0 -0.1**
comp=Z,15nm,0.9s,baz=163,slow=11,SNR=9.6
HFS LR LR 06 34 08.8
comp=Z,212nm,19.7s,baz=148,slow=42
ABKAR Akbulak array 25.58 52 P **P** **06 22 09.1 -1.4**
ABKAR Akbulak array 25.58 52 P **P** **06 22 09.4 -1.2**
ESBB Sonseca Array 25.72 286 P **P** **06 22 12.1 +0.1**
ESDC Sonseca Array 25.72 286 P **P** **06 22 12.2 +0.2**
comp=Z,1.8nm,0.5s,baz=77,slow=8.6,SNR=13
ESDC Sonseca Array 25.72 286 P **P** **06 22 12.9 +0.8**
PAB San Pablo 26.03 286 P **P** **06 22 14.7 -0.2**
PAB pmax pmax
comp=Z,10.0nm,0.8s
PAB San Pablo 26.03 286 P **P** **06 22 14.7 -0.2**
PAB IAmb IAmb 06 22 24.8
comp=Z,10nm,0.8s
UOSS Minazif 26.34 110 P **P** **06 22 18.3 +0.6**
UOSS IAmb IAmb 06 22 40.9
comp=Z,30nm,1.2s
NB2 NORSAR Subarra 26.41 341 P **P** **06 22 17.0 -1.0**
comp=Z,2.0nm,0.8s,baz=145,slow=10
NOA NORSAR Array B 26.41 341 P **P** **06 22 16.6 -1.5**
comp=Z,2.9nm,0.8s,baz=145,slow=8.7,SNR=9.3
NOA LR LR 06 33 42.7
comp=Z,183nm,20.4s,baz=160,slow=39
HRA Herat 27.21 86 P **P** **06 22 25.1 -0.7**

MDT Midelt 27.61 271 P **P** **06 22 29.1 -0.2**
comp=Z,2.3nm,0.8s,baz=99,slow=9.5,SNR=4.6
ARU Arti 27.76 36*c* *i*P **P** **06 22 32.4 +2.2**
ARU 06 23 13.0
ARU S **S** **06 27 17.2 +4.4**
ARU SS **SnSn** **06 28 26.1 +1.3**
ARU pmax pmax
comp=Z,19nm,1.5s
ARU Arti 27.76 36 P **P** **06 22 28.4 -1.8**
ARU IAmb IAmb 06 22 45.9
comp=Z,17nm,0.9s
EKA Eskdalemuir Ar 28.29 320 P **P** **06 22 35.6 +0.7**
comp=Z,2.0nm,0.5s,baz=125,slow=9.6,SNR=4.1
EKA PcP **PcP** **06 25 49.4 +1.6**
comp=Z,1.3nm,0.7s,baz=96,slow=2.9,SNR=3.0
ARC3 ARCESS Array S 32.55 358 P **P** **06 23 12.6 +0.2**
ARA3 ARCESS Array S 32.55 358 P **P** **06 23 12.6 +0.2**
ARC6 ARCESS Array S 32.55 358 P **P** **06 23 12.4 0.0**
ARCES ARCESS Array B 32.55 358 P **P** **06 23 12.2 -0.2**
comp=Z,12nm,0.9s,baz=122,slow=1.6,SNR=8.3
ARC2 ARCESS Array S 32.55 358 P **P** **06 23 11.3 -1.0**
ARC7 ARCESS Array S 32.56 358 P **P** **06 23 12.9 +0.4**
KEV Kevo 32.74 359 P **P** **06 23 12.8 -1.1**
KEV pmax pmax
comp=Z,68nm,1.4s
KEV Kevo 32.74 359 P **P** **06 23 12.8 -1.1**
BRVK Borovoye 32.83 48 *i* P **P** **06 23 17.6 +2.6**
BRVK pmax pmax
comp=Z,3.0nm,1.1s
SOCY Socotra 33.55 131 P **P** **06 23 20.1 -1.6**
BRZS Berezniki 33.84 53 pmax pmax
comp=Z,3.0nm,1.4s
TOA0 Torodi Ar. Sit 33.98 233 P **P** **06 23 24.6 -0.8**
TOA0 IAmb IAmb 06 23 35.9
comp=Z,16nm,0.8s
TORD Torodi Ar. Bea 33.98 233 P **P** **06 23 24.9 -0.4**
comp=Z,11nm,0.6s,baz=34,slow=8.6,SNR=48
TORD PcP **PcP** **06 26 05.5 +2.0**
comp=Z,2.4nm,0.7s,baz=17,slow=1.9,SNR=3.9
TORD LR LR 06 40 12.5
comp=Z,178nm,19.0s,baz=15,slow=42
TORD Torodi Ar. Bea 33.98 233 P **P** **06 23 24.8 -0.6**
TORD **PcP** **06 26 02.3 -1.2**
AAK Ala-Archa 35.18 66 *i* P **P** **06 23 39.2 +3.4**
AAK pmax pmax
comp=Z,12nm,1.0s
KSH Kashi 36.78 71 *e*P **P** **06 23 48.9 -0.6**
KSH sP sP 06 23 57.4 +4.0
KSH pmax pmax
comp=Z,30nm,0.9s
KSH pmax pmax
comp=Z,400nm,5.2s
KOWA Kowa 36.83 241 P **P** **06 23 49.4 -0.5**
comp=Z,0.9nm,0.3s,baz=51,slow=12,SNR=2.8
KOWA Kowa 36.83 241 P **P** **06 23 49.4 -0.5**
KOWA IAmb IAmb 06 24 12.6
comp=Z,26nm,1.5s
KURBB Kurchatov Arra 37.62 53 P **P** **06 23 55.6 -0.6**
comp=Z,2.9nm,0.5s,baz=276,slow=8.9,SNR=4.7
KURBB PcP **PcP** **06 26 13.6 -0.1**
comp=Z,6.6nm,0.8s,baz=271,slow=3.8,SNR=14
KURK Kurchatov 37.68 53 *i* P **P** **06 23 58.3 +1.5**
KURK pmax pmax
comp=Z,4.0nm,0.8s
KMBO Kilima Mbogo 38.83 166 P **P** **06 24 05.6 -1.4**
comp=Z,0.8nm,0.6s,baz=61,slow=9.4,SNR=4.1
KMBO Kilima Mbogo 38.83 166 P **P** **06 24 04.3 -2.7**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 38.83 166 P **P** **06 24 04.3 -2.7**
MK31 Makanchi Array 40.26 59 P **P** **06 24 17.1 -1.4**
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 40.26 59 P **P** **06 24 17.1 -1.4**
MKAR Makanchi Array 40.26 59 P **P** **06 24 17.2 -1.3**
comp=Z,1.6nm,0.7s,baz=276,slow=7.5,SNR=4.4
MKAR PcP **PcP** **06 26 22.3 +0.1**
comp=Z,3.9nm,0.8s,baz=278,slow=3.1,SNR=4.6
MKAR Makanchi Array 40.26 59 *i* P **P** **06 24 19.2 +0.7**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR Makanchi Array 40.26 59 P **P** **06 24 17.7 -0.8**
MKAR **PcP** **06 26 21.6 -0.6**
ZALV Zalesovo Beam 41.54 48 P **P** **06 24 27.6 -1.3**
comp=Z,1.5nm,0.6s,baz=263,slow=11,SNR=1.7
ZALV PcP **PcP** **06 26 28.0 +1.9**
comp=Z,1.9nm,0.6s,baz=246,slow=5.3,SNR=2.8
ZALV LR LR 06 44 46.3
comp=Z,150nm,18.5s,baz=271,slow=41
DBIC Dimbokro 43.07 234 P **P** **06 24 40.6 -1.1**
comp=Z,6.4nm,0.9s,baz=8.4,slow=9.2,SNR=5.3
DBIC PcP **PcP** **06 26 33.2 +1.4**
comp=Z,5.4nm,0.7s,baz=88,slow=3.4,SNR=3.8
DBIC Dimbokro 43.07 234 P **P** **06 24 41.3 -0.4**
DBIC 06 26 32.5
DBIC pmax pmax
comp=Z,16nm,1.1s
DBIC Dimbokro 43.07 234 P **P** **06 24 41.3 -0.4**
DBIC IAmb IAmb 06 24 47.1
comp=Z,16nm,1.1s
DBIC **PcP** **06 26 32.5 +0.7**
TIC Toumodi 43.19 234 *e*PKP2 **P** **06 24 41.7 -1.1**
KIC Kosan Boka 43.23 233 *e*PKP2 **P** **06 24 42.2 -0.9**
comp=Z,47nm,1.2s
LIC Lamto 43.52 233 *e*P **P** **06 24 43.2 -2.2**
comp=Z,51nm,1.1s
WMQ Urumqi 44.50 62 *e*P **P** **06 24 54.4 +1.3**
WMQ pmax pmax
comp=Z,17nm,1.1s
WMQ pmax pmax
comp=Z,230nm,5.1s
WMQ Urumqi 44.50 62 P **P** **06 24 52.5 -0.6**
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ Urumqi 44.50 62 P **P** **06 24 52.5 -0.6**
WMQ IAmb IAmb 06 25 03.6
comp=Z,10nm,1.1s
NRIK Noril'sk 44.88 25 pmax pmax
comp=Z,15nm,1.5s
SUMG Summit 48.26 338 *i* P **P** **06 25 27.0 +4.4**
SUMG pmax pmax
comp=Z,55nm,1.2s
SUMG Summit 48.26 338 *i* P **P** **06 25 27.0 +4.4**
comp=Z,55nm,1.2s
SUMG Summit 48.26 338 *i* P **P** **06 25 27.0 +4.4**
SUMG IAmb IAmb 06 25 33.9
comp=Z,55nm,1.2s
LSZ Lusaka 52.09 181 PcP **PcP** **06 27 07.4 +3.6**
comp=Z,1.1nm,0.3s,baz=357,slow=5.4,SNR=4.5
ZAK Zakamensk 53.26 50 *e*P **P** **06 25 57.8 -2.5**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
PALK Pallekele 55.61 109 P **P** **06 26 16.9 -0.8**
PALK pmax pmax
comp=Z,22nm,1.5s
PALK Pallekele 55.61 109 P **P** **06 26 16.9 -0.8**
PALK IAmb IAmb 06 26 27.0
comp=Z,22nm,1.4s
SONM Songino Array 55.99 53 P **P** **06 26 19.7 -0.5**
comp=Z,0.6nm,0.6s,baz=302,slow=8.3,SNR=2.2
SONM PcP **PcP** **06 27 19.2 +0.7**
comp=Z,2.0nm,0.9s,baz=283,slow=5.2,SNR=4.1
SONM LR LR 06 53 07.8
comp=Z,112nm,18.1s,baz=263,slow=39
SONM Songino Array 55.99 53 P **P** **06 26 19.4 -0.8**
SONM **PcP** **06 27 18.4 -0.1**
TULEG Thule 56.01 344 P **P** **06 26 18.8 -1.0**
TULEG IAmb IAmb 06 26 30.2
comp=Z,16nm,1.0s
ULN Ulaanbaatar 56.40 52 *i* P **P** **06 26 24.7 +1.6**
ULN pmax pmax
comp=Z,2.0nm,0.9s
TSUM Tsumeb 56.98 193 P **P** **06 26 26.6 -0.8**
TSUM IAmb IAmb 06 26 33.0
comp=Z,8.0nm,1.1s
OPO Ambohidratompo 58.02 159 P **P** **06 26 35.8 +1.0**
comp=Z,16nm,0.8s,baz=316,slow=6.4,SNR=16
TIXI Tiksi 58.31 21 P **P** **06 26 35.9 -0.1**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
TIXI Tiksi 58.31 21 P **P** **06 26 35.9 -0.1**
TIXI IAmb IAmb 06 26 43.2
comp=Z,8.0nm,1.0s
ABPO Ambohimpanom 58.46 159 P **P** **06 26 38.6 +0.7**
ABPO pmax pmax
comp=Z,11nm,1.0s
ABPO Ambohimpanom 58.46 159 P **P** **06 26 38.5 +0.7**
ABPO IAmb IAmb 06 26 42.8
comp=Z,10nm,0.9s
LZH Lanzhou 58.73 66 *e*P **P** **06 26 39.7 0.0**
LZH pP sP 06 26 44.3 +0.5
LZH sP pP 06 26 46.7 +4.0
LZH pmax pmax
comp=Z,16nm,1.3s
DGAR Diego Garcia 60.22 128 P **P** **06 26 49.0 -1.0**
DGAR Diego Garcia 60.22 128 P **P** **06 26 49.0 -1.0**
LBTB Lobatse 61.85 183 P **P** **06 27 00.6 -0.3**
LBTB pmax pmax
comp=Z,16nm,1.0s
LBTB Lobatse 61.85 183 P **P** **06 27 00.6 -0.3**
HHC Hu-ho-hao-te 62.13 58 *e*P **P** **06 27 03.7 +0.9**
HHC pmax pmax
comp=Z,20nm,1.1s
HHC pmax pmax
comp=Z,70nm,5.6s
RES Resolute Bay 62.54 346 P **P** **06 27 04.7 -0.2**
comp=Z,4.0nm,0.7s,baz=73,slow=13,SNR=2.7
CMAR Chiang Mai Arr 63.48 86 P **P** **06 27 10.5 -1.5**
comp=Z,0.8nm,0.4s,baz=292,slow=7.4,SNR=6.5
CMAR Chiang Mai Arr 63.48 86 P **P** **06 27 09.8 -2.2**
BOSA Boshof 65.44 183 P **P** **06 27 25.7 +1.1**
comp=Z,8.8nm,1.0s,baz=40,slow=6.2,SNR=6.4
BOSA LR LR 06 55 10.0
comp=Z,97nm,20.0s,baz=6.0,slow=35
BOSA Boshof 65.44 183 P **P** **06 27 24.7 +0.1**
BOSA pmax pmax
comp=Z,22nm,1.3s
BOSA Boshof 65.44 183 P **P** **06 27 24.7 +0.1**
WVL Waterville 70.36 311 P **P** **06 27 55.6 +0.1**
BILL Bilibino 70.44 16 *i* P **P** **06 27 58.7 +3.2**
BILL pmax pmax
comp=Z,8.0nm,1.2s
NJ2 Nanjing 71.56 64 *e*P **P** **06 28 01.0 -1.9**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
USRK Ussuriysk Ar. 73.39 47 P **P** **06 28 14.9 +1.2**
comp=Z,3.0nm,0.8s,baz=357,slow=6.1,SNR=3.0
INK Inuvik 74.08 353 P **P** **06 28 18.4 +1.1**
comp=Z,3.0nm,0.9s,baz=22,slow=12,SNR=6.6
INK Inuvik 74.08 353 P **P** **06 28 16.7 -0.6**
INK pmax pmax
comp=Z,11nm,1.2s
INK Inuvik 74.08 353 P **P** **06 28 16.6 -0.6**
INK IAmb IAmb 06 28 29.6
comp=Z,11nm,1.2s
TOLK Toolik Lake Re 74.58 359 P **P** **06 28 20.4 +0.2**
TOLK IAmb IAmb 06 28 26.4
comp=Z,5.4nm,0.9s
KSRS Korea Array 74.78 55 P **P** **06 28 23.1 +1.3**
comp=Z,1.0nm,0.3s,baz=307,slow=3.8,SNR=4.7
BMAR Burnt Mountain 75.68 357 P **P** **06 28 27.2 +0.6**
COLD Coldfoot 76.00 360 P **P** **06 28 28.8 +0.4**
COLD IAmb IAmb 06 28 41.8
comp=Z,8.6nm,0.9s
YKA Yellowknife Ar 76.48 343 P **P** **06 28 32.6 +1.5**
comp=Z,2.0nm,0.8s,baz=0.8,slow=9.3,SNR=3.4
IMAR Indian Mountai 77.23 1 P **P** **06 28 35.2 -0.2**
YSS Yuzh-Sakhalins 77.59 40‖ *e*P **P** **06 28 37.4 -0.3**
YSS pmax pmax
comp=Z,20nm,1.2s
POKR Poker Plat Res 78.08 358 P **P** **06 28 39.7 -0.4**
POKR IAmb IAmb 06 28 53.0
comp=Z,13nm,1.1s
I23K Minto, Yukon-K 78.08 359 P **P** **06 28 40.0 0.0**
I23K IAmb IAmb 06 28 53.8
comp=Z,7.7nm,1.1s
MDM Murphy Dome 78.25 359 P **P** **06 28 41.0 -0.1**
MDM IAmb IAmb 06 28 53.9
comp=Z,11nm,1.0s
COLA College 78.33 359 *i* P **P** **06 28 43.4 +1.9**
COLA pmax pmax
comp=Z,3.0nm,1.1s
IL31 78.41 358 P **P** **06 28 43.0 +1.1**
IL31 IAmb IAmb 06 28 53.2
comp=Z,10nm,1.5s
ILAR Eielson Array 78.41 358 P **P** **06 28 41.5 -0.5**
comp=Z,0.9nm,0.9s,baz=346,slow=4.2,SNR=4.6
ILAR Eielson Array 78.41 358 P **P** **06 28 41.8 -0.2**
ILAR Eielson Array 78.41 358 P **P** **06 28 41.8 -0.2**
WRH Wood River Hil 78.74 359 P **P** **06 28 43.3 -0.5**
WRH IAmb IAmb 06 28 55.0
comp=Z,12nm,1.0s
DAWY Dawson 78.74 355 P **P** **06 28 44.2 +0.3**
DAWY IAmb IAmb 06 28 56.4
comp=Z,14nm,1.1s
HDA Harding Lake 78.78 358 P **P** **06 28 43.0 -1.0**
HDA IAmb IAmb 06 28 56.0
comp=Z,12nm,0.9s
K27K Chicken 78.95 356 P **P** **06 28 44.9 -0.1**
K27K IAmb IAmb 06 28 57.5
comp=Z,13nm,1.1s
BPAW Bear Paw Mtn. 79.14 360 P **P** **06 28 46.0 -0.1**
BPAW IAmb IAmb 06 28 58.0
comp=Z,9.4nm,1.0s
PETK Petropavlovsk- 79.85 28 LR LR 07 09 55.8
comp=Z,53nm,19.7s,baz=85,slow=40
BCAR Beaver Creek A 79.90 356 P **P** **06 28 50.0 -0.2**
HYT Haines Junctio 81.79 353 P **P** **06 29 00.4 0.0**
HYT IAmb IAmb 06 29 08.3
comp=Z,17nm,1.2s
MAJO Matsushiro 81.84 50*c**e*P **P** **06 29 02.0 +1.0**
MAJO pmax pmax
comp=Z,37nm,2.5s
MAT Matsushiro 81.84 50 P **P** **06 28 59.9 -1.1**
MJAR Matsushiro Arr 81.85 50 P **P** **06 29 00.5 -0.6**
comp=Z,5.4nm,1.0s,baz=309,slow=5.3,SNR=6.6
MJAR Matsushiro Arr 81.85 50 P **P** **06 29 01.3 +0.3**
MJAR pmax pmax
comp=Z,5.0nm,1.0s
MJAR Matsushiro Arr 81.85 50 P **P** **06 29 01.3 +0.3**
BALM Baldy 81.95 356 P **P** **06 29 01.1 -0.2**
BALM IAmb IAmb 06 29 14.9
comp=Z,16nm,1.1s
CPCT Cooper Cave 84.93 311 P **P** **06 29 14.7 -2.2**
U49A Red Boiling Sp 84.95 313 P **P** **06 29 18.9 +1.8**
152A Waverly Hall 86.92 309 P **P** **06 29 25.3 -1.5**
CCM Cathedral Cave 86.98 317 P **P** **06 29 25.0 -2.0**
CCM pmax pmax
comp=Z,14nm,1.4s
CCM Cathedral Cave 86.98 317 P **P** **06 29 25.0 -2.0**
CCM IAmb IAmb 06 29 29.7
comp=Z,14nm,1.4s
EGMT Eagleton 87.55 334 P **P** **06 29 29.1 -0.6**
T42A Van Buren 87.63 316 P **P** **06 29 29.0 -1.2**
BDFB Brasilia 89.14 250 P **P** **06 29 39.1 +1.5**
comp=Z,6.2nm,0.7s,baz=75,slow=3.3,SNR=13
BDFB LR LR 07 10 05.0
comp=Z,120nm,20.1s,baz=108,slow=36
BDFB Brasilia 89.14 250 P **P** **06 29 37.4 -0.2**
BDFB pmax pmax
comp=Z,7.0nm,0.8s
BDFB Brasilia 89.14 250 P **P** **06 29 37.4 -0.2**
BDFB IAmb IAmb 06 29 41.5
comp=Z,6.6nm,0.8s
NEW Newport 89.75 338 P **P** **06 29 38.9 -1.1**
NEW pmax pmax
comp=Z,6.0nm,1.1s
NEW Newport 89.75 338 P **P** **06 29 38.9 -1.1**
NEW IAmb IAmb 06 29 43.6
comp=Z,6.2nm,1.1s
BOZ Bozeman (W) 90.29 333 P **P** **06 29 42.3 -0.4**
BOZ pmax pmax
comp=Z,7.0nm,1.2s
BOZ Bozeman (W) 90.29 333 P **P** **06 29 42.3 -0.4**
BOZ IAmb IAmb 06 29 46.4
comp=Z,6.9nm,1.1s
YHL Hebgen Lake 90.77 333 P **P** **06 29 43.5 -1.7**
PHWY Pilot Hill 91.46 327 P **P** **06 29 45.6 -2.8**
PDAR Pinedale Array 91.93 331 P **P** **06 29 51.1 +0.6**
comp=Z,0.6nm,0.8s,baz=79,slow=4.5,SNR=5.0
PDAR LR LR 07 16 33.7
comp=Z,172nm,18.8s,baz=36,slow=39
PDAR Pinedale Array 91.93 331 P **P** **06 29 47.9 -2.6**
HAWA Hanford 92.15 339 P **P** **06 29 49.6 -1.5**
HAWA IAmb IAmb 06 29 55.6
comp=Z,8.0nm,1.1s
MOD Modoc Plateau 96.46 337 P **P** **06 30 08.6 -2.6**
NVAR Mina Array Bea 98.95 334 P Pdif 06 30 22.8 +0.2
comp=Z,0.4nm,0.6s,baz=29,slow=4.2,SNR=4.7
NVAR Mina Array Bea 98.95 334 P **P** **06 30 20.8 -1.7**
ASAR Alice Springs 115.53 101 PKP **PKPdf** **06 35 22.3 -1.8**
comp=Z,0.4nm,0.7s,baz=337,slow=1.2,SNR=2.7

*REY **10** 06:21:01.0, 64.66N×17.35W, h2km*
*IDC **10** 06:21:01.4±0.8, 64.59N×17.64W, h0km, mb3.9/12, mb1 4.1/14, mb1mx3.8/53, mbtmp3.9/14, ML3.7/2, MS3.5/4, Ms1 3.4/4, ms1mx3.1/37, Error ellipse: s-maj=27.3km s-min=12.6km az=19.0*
*NEIC **10** 06:21:02.8±1.5, 64.53N±0.09×17.58W±0.08, h8km±5km, mb4.2/7, Error ellipse: s-maj=12.9km s-min=4.3km az=166.0*

ISC 10 06:21:02.1±0.5, **64.67N**±0.02×**17.46W**±0.02, **h10**km, **n83,** σ1§**90**/114, **mb4.0**/14, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**18**	P		**Pg**	**06 21 03.7**	**-1.4**
	baz=358							
IDYN				S		**Sg**	**06 21 06.7**	**-0.7**
	baz=358							
IVON	**Vonarskard**	**0.13**	**271**	P		**Pg**	**06 21 05.1**	**-0.1**
	baz=273							
IGRF	**Grimsfjall**	**0.28**	**163**	P		**Pg**	**06 21 06.3**	**-1.4**
	baz=172							
IGRF				S		**Sg**	**06 21 10.0**	**-1.5**
	baz=172							
ISKR	**Skrokkalda**	**0.42**	**255**	P		**Pb**	**06 21 09.8**	**-1.8**
	baz=257							
ISKR				S		**Sb**	**06 21 15.9**	**-2.0**
	baz=257							
IVOT	**Vottur**	**0.42**	**163**	P		**Pg**	**06 21 08.9**	**-1.4**
	baz=169							
IVOT				S		**Sg**	**06 21 14.9**	**-0.9**
	baz=169							
THOR	**Thorvaldshraun**	**0.43**	**51**	P		**Pg**	**06 21 08.9**	**-1.5**
	baz=47							
THOR				S		**Sg**	**06 21 15.9**	**-0.2**
	baz=47							
IJOK	**Jokulheimar**	**0.49**	**223**	P		**Pb**	**06 21 10.5**	**-2.2**
	baz=228							
IJOK				S		**Sb**	**06 21 18.6**	**-1.4**
	baz=228							
IMKO	**Mokollar**	**0.57**	**57**	P		**Pg**	**06 21 11.3**	**-1.8**
	baz=54							
IMKO				S		**Sg**	**06 21 19.4**	**-1.2**
	baz=54							
IIEY	**Innrieyrar**	**0.65**	**207**	P		**Pg**	**06 21 13.2**	**-1.4**
	baz=211							
IIEY				S		**Sb**	**06 21 22.4**	**-2.1**
	baz=211							
IKSK	**Karasker**	**0.67**	**140**	P		**Pg**	**06 21 12.6**	**-2.3**
	baz=142							
IKSK				S		**Sg**	**06 21 21.7**	**-1.9**
	baz=142							
ISVA	**Svartarkot**	**0.68**	**7**	P		**Pg**	**06 21 13.5**	**-1.6**
	baz=3.6							
ISVA				S		**Sg**	**06 21 22.5**	**-1.5**
	baz=3.6							
IKAL	**Kalfafell**	**0.73**	**188**	P		**Pg**	**06 21 14.2**	**-1.9**
	baz=192							
IKAL				S		**Sg**	**06 21 24.5**	**-1.2**
	baz=192							
IVSH	**V-Sauoahnukur**	**0.75**	**79**	P		**Pg**	**06 21 14.2**	**-2.4**
	baz=78							
IVSH				S		**Sg**	**06 21 24.3**	**-2.1**
	baz=78							
IVAT	**Vatnsfell**	**0.80**	**233**	P		**Pb**	**06 21 16.3**	**-1.7**
	baz=235							
IHVE	**Hveravellir**	**0.93**	**283**	P		**Pb**	**06 21 18.3**	**-1.9**
	baz=283							
IHVE				S		**Sb**	**06 21 30.9**	**-1.6**
	baz=283							
IMEL	**Melhnausar**	**0.96**	**20**	P		**Pg**	**06 21 18.0**	**-2.6**
	baz=18							
IMEL				S		**Sg**	**06 21 30.9**	**-2.2**
	baz=18							
IREN	**Reynihlio**	**1.01**	**13**	P		**Pg**	**06 21 18.7**	**-2.7**
	baz=11							
IREN				S		**Sg**	**06 21 32.8**	**-1.7**
	baz=11							
ISNB	**Snabyli**	**1.07**	**209**	P		**Pg**	**06 21 20.4**	**-2.2**
	baz=212							
ISNB				S		**Sb**	**06 21 35.1**	**-1.6**
	baz=212							
IKVO	**Krokottuvotn**	**1.08**	**13**	P		**Pg**	**06 21 20.3**	**-2.4**
	baz=10							
IKVO				S		**Sg**	**06 21 34.5**	**-2.1**
	baz=10							
ISLY	**Slysaalda**	**1.12**	**221**	P		**Pb**	**06 21 21.3**	**-2.1**
	baz=223							
ISLY				S		**Sb**	**06 21 36.7**	**-1.4**
	baz=223							
IGRS	**Grimsstaoir**	**1.12**	**29**	P		**Pb**	**06 21 21.5**	**-2.1**
	baz=27							
IGRS				S		**Sb**	**06 21 35.9**	**-2.3**
	baz=27							
IFED	**Fedgar**	**1.17**	**237**	P		**Pb**	**06 21 22.4**	**-1.9**
	baz=239							
IRJU	**Rjupnafell**	**1.18**	**207**	P		**Pb**	**06 21 22.6**	**-1.9**
	baz=209							
IMJO	**Mjoaskard**	**1.22**	**234**	P		**Pb**	**06 21 23.1**	**-2.1**
	baz=235							
IMJO				S		**Sg**	**06 21 39.5**	**-1.7**
	baz=235							
ISKI	**Skildingahlsh**	**1.22**	**8**	P		**Pn**	**06 21 22.2**	**-2.9**
	baz=6.3							
ISKI				S		**Sg**	**06 21 39.7**	**-1.5**
	baz=6.3							
IGHA	**Grjothals**	**1.23**	**15**	P		**Pn**	**06 21 22.2**	**-3.0**
	baz=14							
IGRA	**Granastaoir**	**1.25**	**358**	P		**Pn**	**06 21 23.0**	**-2.6**
	baz=356							
IGRA				S		**Sn**	**06 21 41.3**	**-1.2**
	baz=356							
IGYG	**Gygjarholskot**	**1.26**	**253**	P		**Pn**	**06 21 23.3**	**-2.3**
	baz=254							
IHAU	**Haukadalur**	**1.30**	**238**	P		**Pn**	**06 21 24.4**	**-1.8**
	baz=240							
IHAU				S		**Sg**	**06 21 41.9**	**-2.0**
	baz=240							
IHVO	**Lagu-Hvolar**	**1.30**	**209**	P		**Pb**	**06 21 24.9**	**-1.7**
	baz=210							
IHVO				S		**Sb**	**06 21 41.4**	**-1.9**
	baz=210							
IDIM	**Dimmadalss**	**1.31**	**9**	P		**Pn**	**06 21 23.8**	**-2.7**
	baz=7.6							
IDIM				S		**Sb**	**06 21 41.6**	**-2.1**
	baz=7.6							
IHLA	**Hella**	**1.34**	**343**	P		**Pn**	**06 21 24.9**	**-1.9**
	baz=342							
IHLA				S		**Sg**	**06 21 43.4**	**-1.6**
	baz=342							
IALF	**Alftagrof**	**1.41**	**213**	P		**Pn**	**06 21 26.3**	**-1.4**
	baz=215							
IHED	**Heoinshofoi**	**1.42**	**2**	P		**Pn**	**06 21 25.4**	**-2.5**
	baz=0.7							
IHED				S		**Sb**	**06 21 45.1**	**-1.5**
	baz=0.7							
IESK	**Eystri-Skogar**	**1.45**	**218**	P		**Pn**	**06 21 26.7**	**-1.5**
	baz=220							
IESK				S		**Sb**	**06 21 45.7**	**-1.7**
	baz=220							
ISAU	**Saurbar**	**1.46**	**243**	P		**Pn**	**06 21 26.2**	**-2.2**
	baz=244							
IBRE	**Brettingsstaoi**	**1.47**	**353**	P		**Pn**	**06 21 26.3**	**-2.3**
	baz=351							
IBRE				S		**Sb**	**06 21 46.5**	**-1.7**
	baz=351							
IMID	**Miomork**	**1.47**	**227**	P		**Pn**	**06 21 27.0**	**-1.6**
	baz=229							
IMID				S		**Sg**	**06 21 47.4**	**-1.9**
	baz=229							
IGIL	**Gilhagi**	**1.49**	**18**	P		**Pn**	**06 21 26.1**	**-2.7**
	baz=16							
IGIL				S		**Sn**	**06 21 46.9**	**-1.3**
	baz=16							
ISIG	**Siglufjorour**	**1.59**	**338**	P		**Pn**	**06 21 28.3**	**-1.9**
	baz=337							
IASM	**Asmuli**	**1.61**	**240**	P		**Pn**	**06 21 28.6**	**-1.9**
	baz=241							
BORG	**Borgarnes**	**1.66**	**274**	Pn		**Pb**	**06 21 30.5**	**-2.3**
	20nm,0.3s,baz=92,slow=7.0,SNR=32							
BORG				Sn		**Sg**	**06 21 52.9**	**-2.6**
	22nm,0.3s,baz=40,slow=22,SNR=6.4							
IKRO	**Krokur**	**1.69**	**252**	P		**Pn**	**06 21 30.2**	**-1.4**
	baz=252							
ISOL	**Solvholt**	**1.69**	**245**	P		**Pn**	**06 21 29.6**	**-2.0**

	baz=246								
IHEI	**Heioarbar**	**1.71**	**256**	P		**Pn**	**06 21 30.4**	**-1.4**
	baz=256								
IVME	**Vestmannaeyjar**	**1.77**	**226**	P		**Pb**	**06 21 32.1**	**-2.4**
	baz=228								
ILEI	**Leirhofn**	**1.79**	**13**	P		**Pn**	**06 21 31.1**	**-1.8**
	baz=11								
IHRN	**Hraun**	**1.83**	**324**	P		**Pn**	**06 21 32.4**	**-1.0**
	baz=323								
IBJA	**Bjarnastaoir**	**1.83**	**248**	P		**Pn**	**06 21 32.6**	**-0.9**
	baz=249								
ISAN	**Sandskeio**	**1.89**	**253**	P		**Pb**	**06 21 33.9**	**-2.8**
	baz=254								
SCO	**Scoresbysund**	**6.09**	**346**			**Pn**	**06 22 34.5**	**+2.6**
SCO					Sn	**Sn**	**06 23 46.0**	**+4.5**
SCO	**Scoresbysund**	**6.09**	**346**	*e*		**Pn**	**06 22 32.1**	**+0.2**
	baz=177,slow=7.4								
SCO				*i*	P	**Pn**	**06 22 34.0**	**+2.1**
SCO				*i*	S	**Sn**	**06 23 47.0**	**+5.5**
JMIC	**Jan Mayen**	**7.18**	**24**	LR		LR	06 25 22.2	
	comp=Z,107nm,19.7s,baz=262,slow=36								
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn		**Pn**	**06 23 49.6**	**+0.2**
	baz=321,slow=13,SNR=7.2								
ESK	**Eskdalemuir**	**11.75**	**136**	Pn		**Pn**	**06 23 50.6**	**+1.1**
NC204	**NORSAR Array S**	**13.21**	**92**	Pn		**Pn**	**06 24 08.4**	**-1.1**
SFJD	**Kangerlussuaq**	**13.68**	**295**	LR		LR	06 28 17.2	
	comp=Z,203nm,20.8s,baz=90,slow=32								
HFS	**Hagfors**	**15.03**	**93**	Pn		**P**	**06 24 41.1**	**+1.5**
	0.1nm,0.3s,baz=284,slow=6.0,SNR=4.8								
FINES	**FINESS Array B**	**19.69**	**79**	P		**Pn**	**06 25 32.0**	**-0.4**
	0.2nm,0.3s,baz=325,slow=12,SNR=3.3								
FINES	**FINESS Array B**	**19.69**	**79**	P		**Pn**	**06 25 32.5**	**+0.1**
TULEG	**Thule**	**19.86**	**327**	P		**Pn**	**06 25 35.2**	**+0.9**
TULEG					IAmb	IAmb	06 25 41.9	
	comp=Z,23nm,1.4s								
CLL	**Collm**	**20.69**	**116**	P		Pn	06 25 43.7	-0.5
CLL					IAmb	IAmb	06 25 48.5	
	comp=Z,7.8nm,0.7s								
BFO	**Black Forest**	**21.44**	**127**	P		**P**	**06 25 50.3**	**+0.2**
GEC2	**GERESS Array S**	**22.94**	**119**	P		**P**	**06 26 07.8**	**+1.6**
GEC2					IAmb	IAmb	06 26 25.1	
	comp=Z,17nm,1.5s								
GERES	**GERESS Array B**	**22.94**	**119**	P		**P**	**06 26 08.0**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=329,slow=7.0,SNR=3.7								
GERES	**GERESS Array B**	**22.94**	**119**	P		**P**	**06 26 07.5**	**+1.3**
DAVOX	**Davos/Dischmat**	**23.31**	**127**	P		**P**	**06 26 10.4**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=343,slow=20,SNR=1.9								
MORC	**Moravsky Berou**	**23.68**	**112**	P		**P**	**06 26 14.7**	**+1.2**
MORC					IAmb	IAmb	06 26 17.4	
	comp=Z,7.4nm,1.1s								
ESDC	**Sonseca Array**	**26.25**	**156**	P		**P**	**06 26 37.1**	**0.0**
	comp=Z,1.6nm,0.8s,baz=349,slow=9.1,SNR=7.3								
AKASG	**Malin Array Be**	**27.82**	**98**	P		**P**	**06 26 51.4**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=325,slow=9.1,SNR=3.1								
IDI	**Anoyia**	**38.81**	**118**	P		**P**	**06 28 27.1**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=342,slow=13,SNR=3.9								
KBZ	**Khabaz**	**39.10**	**92**	P		**P**	**06 28 31.6**	**+2.6**
	comp=Z,3.2nm,0.9s,baz=233,slow=20,SNR=2.9								
KBZ					LR	LR	06 44 12.5		
	comp=Z,118nm,20.7s,baz=132,slow=36								
ULM	**Lac du Bonnet**	**41.62**	**289**	P		**P**	**06 28 48.9**	**-0.9**
	comp=Z,2.2nm,0.4s,baz=79,slow=5.2,SNR=4.2								
ULM	**Lac du Bonnet**	**41.62**	**289**	P		**P**	**06 28 48.9**	**-0.9**
GEYT	**Alibeck**	**50.41**	**84**	LR		LR	06 52 58.4	
	comp=Z,64nm,18.7s,baz=5.0,slow=38								
KOWA	**Kowa**	**50.96**	**163**	P		**P**	**06 30 05.2**	**+1.7**
	comp=Z,3.0nm,0.9s,baz=315,slow=10.0,SNR=3.8								
KKAR	**Karatay Array**	**51.26**	**70**	P		**P**	**06 30 07.9**	**+2.3**
KKAR					IAmb	IAmb	06 30 16.0	
	comp=Z,3.7nm,1.1s								
MK31	**Makanchi Array**	**52.71**	**58**	P		**P**	**06 30 16.9**	**+0.6**
MKAR	**Makanchi Array**	**52.71**	**58**	P		**P**	**06 30 18.6**	**+2.3**
	comp=Z,0.9nm,0.9s,baz=326,slow=7.0,SNR=4.4								
MKAR	**Makanchi Array**	**52.71**	**58**	P		**P**	**06 30 17.4**	**+1.1**
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P		**P**	**06 30 20.3**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=340,slow=8.6,SNR=6.3								
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**	**06 30 21.9**	**+1.7**
	comp=Z,2.3nm,1.0s,baz=54,slow=7.5,SNR=8.0								
TXAR	**Lajitas Array**	**62.30**	**280**	P		**P**	**06 31 24.1**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=81,slow=6.5,SNR=2.1								

IDC 10 06:29:52.9±2.8, 54°16N×86°44E, h0km, mb1 2.7/2, mb1mx2.7/34, mbtmp2.7/2, ML2.6/2, Error ellipse: s-maj=21.5km s-min=13.6km az=61.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.98**	**258**	*i*		06 35 30.0	
	baz=79,slow=338,SNR=2.5						
ZALV	**Zalesovo Beam**	**0.98**	**258**	Pg	Pg	06 30 10.2	-1.4
	1.1nm,0.3s,baz=74,slow=16,SNR=9.8						
ZALV				Lg	Lg	06 30 25.6	
	1.7nm,0.3s,baz=76,slow=30,SNR=9.6						
KURBB	**Kurchatov Arra**	**6.00**	**237**	Pn	Pn	06 31 23.8	+1.0
	0.1nm,0.3s,baz=54,slow=13,SNR=9.9						
KURBB				Lg	Lg	06 33 04.3	
	0.0nm,0.3s,baz=54,slow=30,SNR=3.9						
MKAR	**Makanchi Array**	**7.83**	**201**	Pn	Pn	06 31 48.8	+0.8
	0.1nm,0.3s,baz=25,slow=11,SNR=2.9						

IDC 10 06:34:45.6±2.6, 54°06N×86°49E, h0km, mb1 2.9/2, mb1mx2.9/34, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=20.8km s-min=13.5km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**264**	*i*		06 40 29.5	
	baz=82,slow=336,SNR=2.2						
ZALV	**Zalesovo Beam**	**0.99**	**264**	Pg	Pg	06 35 03.3	-1.3
	0.6nm,0.3s,baz=84,slow=16,SNR=6.8						
ZALV				Lg	Lg	06 35 18.5	
	2.0nm,0.3s,baz=84,slow=26,SNR=15						
KURBB	**Kurchatov Arra**	**5.97**	**238**	Pn	Pn	06 36 16.2	+1.1
	0.1nm,0.3s,baz=55,slow=14,SNR=14						
KURBB				Lg	Lg	06 37 54.5	
	0.0nm,0.3s,baz=60,slow=33,SNR=8.4						
MKAR	**Makanchi Array**	**7.75**	**202**	Pn	Pn	06 36 40.2	+0.7
	0.1nm,0.3s,baz=23,slow=14,SNR=5.4						
MKAR				Lg	Lg	06 38 52.1	
	0.1nm,0.3s,baz=26,slow=30,SNR=6.8						

IDC 10 06:58:22.5±3.1, 54°03N×86°52E, h0km, mb1 2.7/2, mb1mx2.6/46, mbtmp2.7/2, ML2.0/2, Error ellipse: s-maj=25.6km s-min=15.7km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**266**	*i*		07 04 10.0	
	baz=85,slow=324,SNR=4.4						
ZALV	**Zalesovo Beam**	**1.01**	**266**	Pg	Pg	06 58 40.4	-1.4
	0.4nm,0.3s,baz=85,slow=18,SNR=6.1						
ZALV				Lg	Lg	06 58 56.6	
	1.0nm,0.3s,baz=93,slow=31,SNR=10						
KURBB	**Kurchatov Arra**	**5.97**	**238**	Pn	Pn	06 59 52.6	+0.5
	0.0nm,0.3s,baz=56,slow=14,SNR=7.5						
MKAR	**Makanchi Array**	**7.74**	**202**	Pn	Pn	07 00 17.7	+1.4
	0.0nm,0.3s,baz=25,slow=13,SNR=2.5						

*IDC **10** 07:00:06.2±11.0, 36°25N×71°53E, h84km±100km, mb3.5/4, mb1 3.6/7, mb1mx3.2/44, mbtmp3.9/7, ML3.5/3, Error ellipse: s-maj=73.5km s-min=49.2km az=148.0*
*NNC **10** 07:00:12.2±5.8, 37°01N×71°02E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=48.2km s-min=44.9km az=98.0*
ISC 10 07:00:10.8±1.8, 36°6N±0°2×71°2E±0°2, h100km, n10, σ1s12/12, mb4.0/4, 1C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.51**	**356**	⇑Pn	**Pn**	**07 01 44.3**	**+0.3**
	7.0nm,0.3s,baz=180,slow=13,SNR=111						
KK31				⇓Sn	**Sn**	**07 02 54.9**	**-1.9**
	1.4nm,0.3s,baz=187,slow=24,SNR=4.7						
AAK	**Ala-Archa**	**6.55**	**22**	Pn	**Pn**	**07 01 44.6**	**-0.1**
	3.0nm,0.7s						
AAK				Sn	**Sn**	**07 02 58.7**	**+0.6**
	3.5nm,0.6s						
KURBB	**Kurchatov Arra**	**14.99**	**18**	P	**Pn**	**07 03 37.8**	**+0.7**
	0.1nm,0.3s,baz=206,slow=10,SNR=4.9						

AKTO	**Aktyubinsk**	**16.75**	**330**	P		**Pn**	**07 04 00.0**	**+0.8**
	0.6nm,0.3s,baz=148,slow=9.8,SNR=8.3								
ZALV	**Zalesovo Beam**	**19.77**	**24**	P		**P**	**07 04 31.1**	**-1.7**
	1.1nm,0.3s,baz=207,slow=9.9,SNR=14								
FINES	**FINESS Array B**	**37.47**	**326**	P		**P**	**07 07 15.5**	**+1.2**
	2.0nm,0.9s,baz=134,slow=9.9,SNR=4.2								
ARCES	**ARCESS Array B**	**41.10**	**338**	P		**P**	**07 07 45.0**	**+0.6**
	2.5nm,0.8s,baz=113,slow=9.1,SNR=1.9								
NB2	**NORSAR Subarra**	**44.37**	**323**	P		**P**	**07 08 11.5**	**+0.5**
	comp=Z,3.5nm,0.7s,baz=95,slow=7.4								
NOA	**NORSAR Array B**	**44.37**	**323**	P		**P**	**07 08 11.4**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=96,slow=7.7,SNR=4.9								
TORD	**Torodi Ar. Bea**	**65.84**	**269**	P		**P**	**07 10 45.0**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=50,slow=5.7,SNR=4.8								

IDC 10 07:02:12.8±7.4, 23°95S×69°65E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/43, mbtmp3.5/3, Error ellipse: s-maj=250.6km s-min=44.3km az=50.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**16.44**	**10**	T	T	07 22 56.8	
	baz=189,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**16.44**	**10**	T	T	07 22 57.6	
	baz=189,slow=76,SNR=12						
H08S3	**Diego Garcia H**	**16.46**	**10**	T	T	07 22 58.4	
	baz=189,slow=76,SNR=46						
ASAR	**Alice Springs**	**58.30**	**104**	P	P	07 12 09.8	-0.1
	0.5nm,0.7s,baz=251,slow=6.1,SNR=6.4						
WRA	**Warramunga Arr**	**59.68**	**100**	P	P	07 12 19.5	0.0
	0.3nm,0.6s,baz=252,slow=7.5,SNR=2.3						
MKAR	**Makanchi Array**	**71.34**	**9**	P	P	07 13 34.1	-0.2
	0.4nm,0.6s,baz=197,slow=4.5,SNR=3.6						
DLBC	**Dease Lake**	**142.79**	**17**	PKP	PKPdf	07 21 48.5	+0.6
	2.7nm,0.8s,baz=270,slow=1.0,SNR=7.2						

*NEIC **10** 07:04:45.0±0.8, 19°1N±0°1×145°1E±0°3, h140km±11km, mb4.3/8, Error ellipse: s-maj=38.4km s-min=17.3km az=100.0*
*IDC **10** 07:04:47.0±8.6, 19°12N×144°78E, h152km±65km, mb3.2/3, mb1 3.6/4, mb1mx3.1/47, mbtmp3.8/4, Error ellipse: s-maj=129.6km s-min=31.3km az=120.0*
ISC 10 07:04:46.3±1.0, 19°14N±0°09×145°0E±0°2, h150km, n15, σ0s82/16, mb4.2/8, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.52**	**181**	P	**Pn**	**07 06 07.0**	**+0.3**
	2.9nm,0.3s,baz=336,slow=20,SNR=2.7						
GUMO				S	**Sn**	**07 07 10.5**	**+1.0**
	6.0nm,0.3s,baz=12,slow=20,SNR=2.4						
GUMO	**Guam**	**5.52**	**181**		**Pn**	**07 06 04.9**	**-1.8**
JSU	**Suzuyama**	**17.95**	**316**	P	**P**	**07 08 45.1**	**0.0**
MTN	**Manton Dam**	**34.58**	**204**	P	**P**	**07 11 20.9**	**+0.1**
MTN				IAmb	IAmb	07 11 28.6	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**40.03**	**196**	P	**P**	**07 12 06.8**	**0.0**
WB0				IAmb	IAmb	07 12 34.4	
	comp=Z,7.3nm,1.4s						
WRAB	**Tennant Creek**	**40.20**	**196**	P	**P**	**07 12 06.9**	**-1.2**
WRAB				IAmb	IAmb	07 12 19.1	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**40.21**	**196**	P	**P**	**07 12 08.2**	**-0.1**
WB2				IAmb	IAmb	07 12 09.5	
	comp=Z,5.5nm,1.2s						
WRA	**Warramunga Arr**	**40.21**	**196**	P	**P**	**07 12 08.0**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=18,slow=8.6,SNR=26						
WRA	**Warramunga Arr**	**40.21**	**196**	P	**P**	**07 12 08.5**	**+0.2**
WC3	**Warramunga Arr**	**40.22**	**196**	P	**P**	**07 12 08.4**	**+0.1**
WC3				IAmb	IAmb	07 12 11.9	
	comp=Z,6.9nm,1.2s						
FITZ	**Fitzroy Crossi**	**41.58**	**208**	P	**P**	**07 12 20.4**	**+0.9**
ASAR	**Alice Springs**	**43.89**	**195**	P	**P**	**07 12 38.4**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=20,slow=11,SNR=5.2						
ILAR	**Eielson Array**	**63.57**	**26**	P	**P**	**07 15 00.6**	**0.0**
NVAR	**Mina Array Bea**	**83.43**	**52**	P	**P**	**07 16 58.7**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=264,slow=6.0,SNR=3.9						
NVAR	**Mina Array Bea**	**83.43**	**52**	P	**P**	**07 16 56.8**	**-0.7**

*IDC **10** 07:13:32.6±1.6, 76°66N×97°07W, h0km, mb3.6/2, mb1 4.0/7, mb1mx3.6/46, mbtmp3.8/7, ML3.5/5, Error ellipse: s-maj=29.0km s-min=21.6km az=68.0*
*OTT **10** 07:13:34.3±0.3, 76°72N×97°05W, h18km, MN3.5/2, 149km northeast from Polaris, Nu Boothia Ungava Seismic Zone.*
ISC 10 07:13:30.4±0.8, 76°64N±0°06×97°19W±0°06, h10km, n16, σ3s11/25, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RES	**Resolute Bay**	**2.04**	**163**	Pn	**Pb**	**07 14 08.0**	**+0.5**
	5.0nm,0.3s,baz=341,slow=16,SNR=112						
RES				Sn	**Sg**	**07 14 35.4**	**-0.5**
	22nm,0.3s,baz=36,slow=12,SNR=6.1						
RES	**Resolute Bay**	**2.04**	**163**	PN	**Pb**	**07 14 08.1**	**+0.7**
RES				SN	**Sb**	**07 14 35.0**	**+2.1**
RES				Trac		07 14 47.7	
	comp=Z,122nm,0.3s						
TULEG	**Thule**	**6.56**	**77**	PN	**Pn**	**07 15 08.3**	**+1.7**
TULEG				SN	**Sn**	**07 16 18.5**	**-2.9**
TULEG				Trac		07 16 23.2	
	comp=Z,40nm,0.5s						
TULEG	**Thule**	**6.56**	**77**	*e*	**Pn**	**07 15 06.9**	**+0.2**
	baz=286,slow=7.9						
TULEG				*i* P	**Pn**	**07 15 08.7**	**+2.1**
TULEG				*i*		07 16 20.0	
TULEG				IAML		07 16 23.4	
	comp=Z,12nm,0.4s						
KUKN	**Kugluktuk,NWT**	**10.33**	**221**	PN	**Pn**	**07 16 00.5**	**+2.1**
KUKN				SN	**Sn**	**07 17 51.4**	**-2.6**
DHRN	**Dharma Camp**	**11.76**	**227**	PN	**Pn**	**07 16 19.9**	**+2.0**
DHRN				SN	**Sn**	**07 18 24.2**	**-4.8**
DHRN				Trac		07 18 32.9	
	comp=Z,128nm,2.2s						
INK	**Inuvik**	**13.46**	**251**	Pn	**Pn**	**07 16 41.0**	**0.0**
	comp=Z,0.4nm,0.3s,baz=30,slow=23,SNR=10.0						
INK				Sn	**Sn**	**07 19 03.8**	**-6.7**
	comp=Z,0.2nm,0.3s,baz=174,slow=4.1,SNR=6.1						
INK	**Inuvik**	**13.46**	**251**	PN	**Pn**	**07 16 43.5**	**+2.4**
INK				SN	**Sn**	**07 19 04.9**	**-5.6**
INK				Trac		07 19 10.6	
	comp=Z,448nm,4.5s						
YKA	**Yellowknife Ar**	**15.33**	**212**	Pn	**Pn**	**07 17 04.7**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=17,slow=12,SNR=8.0						
SUMG	**Summit**	**15.47**	**75**	*i* P	**Pn**	**07 17 09.1**	**+0.5**
SUMG				*e*		07 19 51.3	
SUMG	**Summit**	**15.47**	**75**	*e*P	**Pn**	**07 17 09.2**	**+0.5**
SUMG				*e*		07 19 51.3	
FRB	**Frobisher Bay**	**15.87**	**129**	Pn	**Pn**	**07 17 10.7**	**-2.7**
	comp=Z,2.0nm,0.3s,baz=332,slow=15,SNR=1.8						
DAG	**Danmarks Havn**	**16.85**	**51**	*e*	**Pn**	**07 17 22.6**	**-3.2**
	baz=301,slow=12						
DAG				*i* P	**P**	**07 17 25.7**	**-2.2**
DAG				*e*S	Sn	07 20 16.6	-16
DAG				IAML		07 20 39.9	
	comp=Z,2.3nm,0.4s						
ILAR	**Eielson Array**	**19.40**	**260**	P	**Pn**	**07 17 59.5**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=31,slow=11,SNR=17						
DLBC	**Dease Lake**	**21.57**	**231**	P	**P**	**07 18 25.0**	**+5.3**
	comp=Z,1.8nm,1.0s,baz=27,slow=14,SNR=3.6						
SONM	**Songino Array**	**54.90**	**341**	P	**P**	**07 23 04.4**	**+3.7**
	comp=Z,0.4nm,0.4s,baz=350,slow=7.6,SNR=2.9						

*NEIC **10** 07:41:57.8±0.9, 14°3S±0°1×167°3E±0°2, h176km±6km, mb4.3/8, Error ellipse: s-maj=27.4km s-min=12.8km az=122.0*
*IDC **10** 07:41:58.2±6.8, 14°35S×167°28E, h171km±70km, mb3.5/6, mb1 3.6/7, mb1mx3.4/30, mbtmp3.9/7, MS3.9/1, Ms1 3.9/1, ms1mx2.6/25, Error ellipse: s-maj=61.3km s-min=25.9km az=154.0*
ISC 10 07:41:57.9±0.8, 14°32S±0°08×167°3E±0°1, h170km, n22, σ0s93/23, mb3.8/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.13**	**186**	Pn	**Pn**	**07 42 26.8**	**+1.1**
SANVU				Sn	**Sn**	**07 42 48.3**	**+1.1**
DZM	**Mont Dzumac**	**7.76**	**186**	P	**Pn**	**07 43 48.7**	**+0.5**
	2.3nm,0.3s,baz=198,slow=12,SNR=15						
DZM				S	**Sn**	**07 45 14.5**	**-0.7**
	0.4nm,0.3s,baz=74,slow=19,SNR=2.9						
DZM	**Mont Dzumac**	**7.76**	**186**		**Pn**	**07 43 47.7**	**-0.5**
AFI	**Afiamalu**	**20.26**	**91**	P	**P**	**07 46 20.0**	**-0.5**
AFI				IAmb	IAmb	07 46 20.7	
	comp=Z,40nm,1.1s						
PATS	**Pohnpei**	**22.84**	**336**	P	**P**	**07 46 45.6**	**-1.1**
STKA	**Stephens Creek**	**29.31**	**229**	P	**P**	**07 47 45.1**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=65,slow=10,SNR=4.9						
STKA	**Stephens Creek**	**29.31**	**229**	P	**P**	**07 47 44.8**	**+0.2**
STKA				IAmb	IAmb	07 47 50.8	
	comp=Z,0.6nm,1.0s						
WB0	**Warramunga Arr**	**31.92**	**256**	P	**P**	**07 48 06.8**	**-1.0**
WB0				IAmb	IAmb	07 48 24.5	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**31.98**	**255**	P	**P**	**07 48 07.6**	**-0.6**
WB2				IAmb	IAmb	07 48 25.0	
	comp=Z,7.5nm,1.4s						
WRA	**Warramunga Arr**	**31.99**	**255**	P	**P**	**07 48 07.4**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=86,slow=9.3,SNR=7.2						
WRA	**Warramunga Arr**	**31.99**	**255**	P	**P**	**07 48 07.3**	**-1.1**
AS31	**Alice Springs**	**32.88**	**249**	P	**P**	**07 48 15.2**	**-0.9**
ASAR	**Alice Springs**	**32.88**	**249**	P	**P**	**07 48 15.0**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=76,slow=9.3,SNR=14						
ASAR	**Alice Springs**	**32.88**	**249**	P	**P**	**07 48 14.4**	**-1.7**
BBOO	**Buckleboo**	**33.88**	**232**	P	**P**	**07 48 25.3**	**+0.7**
BBOO				IAmb	IAmb	07 48 43.8	
	comp=Z,14nm,1.2s						
DAV	**Davao City (W)**	**46.55**	**294**	LR	LR	08 10 21.4	
	comp=Z,119nm,18.0s,baz=166,slow=37						
SONM	**Songino Array**	**82.20**	**324**	P	**P**	**07 54 01.5**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=141,slow=5.0,SNR=2.8						
ILAR	**Eielson Array**	**86.12**	**18**	P	**P**	**07 54 18.8**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=233,slow=4.7,SNR=14						
ILAR	**Eielson Array**	**86.12**	**18**	P	**P**	**07 54 18.3**	**-1.0**
MKAR	**Makanchi Array**	**96.95**	**316**	P	**P**	**07 55 10.8**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=88,slow=7.9,SNR=5.1						
MKAR	**Makanchi Array**	**96.95**	**316**	P	**P**	**07 55 10.5**	**+0.4**
ARCES	**ARCESS Array B**	**119.87**	**345**	PKP	**PKiKP**	**08 00 27.5**	**-0.1**
	comp=Z,3.6nm,1.0s,baz=71,slow=2.1,SNR=12						

*NNC **10** 07:42:54.5±0.5, 44°09N×79°48E, h0km, mb4.0, mpv2.8, Error ellipse: s-maj=5.4km s-min=2.6km az=108.0*
*SOME **10** 07:42:55.3, 44°50N×79°43E, h10km*
ISC 10 07:42:53.4±2.0, 44°55N±0°07×79°45E±0°08, h13km±19km, n8, σ0s58/11, 4C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**0.32**	**131**	⇑*i*P	**Pb**	**07 43 01.4**	**+0.3**
	5.8nm,0.1s						
DJR				⇓*i*S	**Sb**	**07 43 05.7**	**-0.6**
	12nm,0.3s						
DJR	**Jarkent**	**0.32**	**131**	P	**Pb**	**07 43 01.1**	**0.0**
	5.8nm,0.1s						
DJR				S	**Sb**	**07 43 05.7**	**-0.6**
	11nm,0.2s						
KAPS	**Kapalarasan**	**0.74**	**355**	*e*P	**Pn**	**07 43 10.0**	**+0.2**
	0.3nm,0.1s						
KAPS				*e*S	**Sn**	**07 43 20.8**	**-0.2**
	2.9nm,0.2s						
MNBS	**Baschi**	**0.89**	**239**	*e*P	**Pg**	**07 43 10.7**	**+0.2**
	0.5nm,0.2s						
MNBS				*e*S	**Sg**	**07 43 21.1**	**-1.1**
	0.6nm,0.1s						
KPKS	**Kokpek**	**1.21**	**207**	*e*P	**Pg**	**07 43 17.2**	**+0.4**
	1.3nm,0.3s						
KPKS				*e*S	**Sg**	**07 43 32.7**	**+0.1**
	5.0nm,0.2s						
PDGK	**Podgornoye**	**1.22**	**179**	P	Pn	07 43 09.6	-6.7
PDGK				S	Sb	07 43 20.2	-12
PDGK	**Podgornoye**	**1.22**	**179**	⇑P	Pn	07 43 09.6	-6.7
	0.5nm,0.3s						
PDGK				⇑S	Sb	07 43 19.9	-12
	1.7nm,0.3s						
KNDC	**Almaty**	**2.23**	**234**	⇑Pg	**Pn**	**07 43 30.6**	**+0.4**
	14nm,0.3s						
KNDC				⇓Lg	Lg	07 43 57.3	
	24nm,0.6s						

*BGR **10** 07:43:58.4±0.3, 51°16N×5°94E, h10km, ML2.4/4, Error ellipse: s-maj=4.4km s-min=2.2km az=102.0*
*BUG **10** 07:43:59.6±0.5, 51°12N×6°02E, h5km±2km, MD2.7/9, ML3.0/11*
*BNS **10** 07:43:59.3±0.3, 51°14N×5°99E, h9km±2km, ML2.0*
*LDG **10** 07:43:59.1±0.1, 51°14N×5°97E, h10km, Md2.5/1, Ml2.7/15, Error ellipse: s-maj=1.4km s-min=1.2km az=158.0*
ISC 10 07:43:58.2±0.7, 51°15N±0°02×5°94E±0°02, h17km, n76, σ1s42/132, 11C-5D, The Netherlands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RWB	**Wassenberg**	**0.14**	**110**	*e*Pg	**Pg**	**07 44 02.2**	**-0.1**
RWB				*e*Sg	**Sg**	**07 44 04.8**	**-0.2**
	406nm,0.3s						
HKB	**Herkenbosch**	**0.15**	**76**	⇑P	**Pg**	**07 44 02.3**	**-0.1**
HKB				S	**Sg**	**07 44 05.1**	**0.0**
RODG	**Roetgen-Dahlhe**	**0.15**	**93**	⇑*e*Pg	**Pg**	**07 44 02.3**	**-0.1**
RODG				*e*Sg	**

WTSB				*e*Sg	**Sb**	07 44 28.5	-0.8
LOH	**Wallersheim-Lo**	**1.04**	**158**	*e*Pg	**Pb**	07 44 17.9	+0.1
LOH				*e*Sg	**Sb**	07 44 31.2	0.0
	comp=N,25nm,0.2s						
LKLB	**Kalborn**	**1.06**	**174**	P	**Pb**	07 44 17.8	-0.3
LKLB				S	**Sb**	07 44 31.5	-0.1
UCC	**Uccle**	**1.06**	**251**	P	**Pb**	07 44 17.5	-0.6
UCC				S	**Sb**	07 44 31.6	0.0
UCC	**Uccle**	**1.06**	**251**	*e*Pg	**Pb**	07 44 18.5	+0.4
RCHB	**Rochefort**	**1.09**	**205**	⇑P	**Pb**	07 44 18.8	+0.1
RCHB				S	**Sb**	07 44 32.8	+0.1
	comp=E,42nm,0.2s						
BHE	**Schloss Buerre**	**1.12**	**135**	*e*Sg	**Sb**	07 44 33.5	0.0
	comp=E,35nm,0.2s						
BRQR	**Ronquire**	**1.22**	**244**	⇓P	**Pn**	07 44 20.9	+0.5
HMES	**Hamm, Michael-**	**1.23**	**65**	Sg	**Sb**	07 44 37.6	+1.1
LVIA	**Vianden**	**1.23**	**172**	P	**Pn**	07 44 21.2	+0.6
LVIA				S	**Sb**	07 44 36.2	-0.4
	comp=N,36nm,0.2s						
SNF	**Seneffe**	**1.23**	**239**	⇓P	**Pn**	07 44 21.2	+0.5
GIVF	**Givet**	**1.27**	**214**	*e*Pn	**Pn**	07 44 21.7	+0.5
GIVF				*e*Sg	**Sb**	07 44 38.7	+1.0
	comp=N,44nm,0.2s						
BSKQ	**Steenkerk**	**1.28**	**248**	⇓P	**Pn**	07 44 21.7	+0.4
BSKQ				S	**Sn**	07 44 37.9	-0.1
	comp=E,15nm,0.1s						
SORT	**Sorpetalsperre**	**1.29**	**80**	*e*Sg	**Sb**	07 44 37.6	-0.8
	comp=E,46nm,0.3s						
BGG	**Burgeitz**	**1.30**	**136**	*e*Pg	**Pn**	07 44 21.9	+0.3
DOU	**Dourbes**	**1.36**	**220**	⇑P	**Pn**	07 44 22.8	+0.3
WLF	**Walferdange**	**1.50**	**175**	*e*Sg	**Sn**	07 44 45.1	+1.7
BAIF	**Baives**	**1.55**	**226**	*e*Pn	**Pn**	07 44 26.0	+0.9
BAIF				*e*Sn	**Sn**	07 44 44.0	-0.8
BAIF				*e*Sg	**Sb**	07 44 47.0	+1.1
	comp=E,8.4nm,0.3s						
IBBN	**Ibbenburen**	**1.62**	**44**	Sn	**Sb**	07 44 49.4	+1.7
IBBE	**Ibbenbueren Ea**	**1.63**	**44**	Sn	**Sb**	07 44 49.9	+1.9
TNS	**Taunus Mts**	**1.85**	**119**	Pn	**Pn**	07 44 30.0	+0.8
TNS				*e*Pg	**Pb**	07 44 33.3	+1.7
TNS				Sn	**Sb**	07 44 54.9	+0.5
PAGF	**Fort de Pagny**	**2.60**	**183**	*e*Pg	**Pb**	07 44 46.8	+2.4
PAGF				*e*Sn	**Sn**	07 45 09.0	-1.7
	baz=5.4						
PAGF				*e*Sg	**Sb**	07 45 19.8	+3.7
	comp=E,5.1nm,0.2s						
MEZF	**Maizieres J'vi**	**2.71**	**193**	*e*Pn	**Pn**	07 44 40.5	-0.5
MEZF	**Maizieres J'vi**	**2.71**	**193**	*e*Pg	**Pb**	07 44 48.9	+2.6
	baz=13						
MEZF				*e*Sn	**Sn**	07 45 11.7	-1.8
	baz=14						
MEZF				*e*Sg	**Sb**	07 45 23.7	+4.4
	comp=E,7.3nm,0.3s						
CLZ	**Clausthal**	**2.86**	**74**	Pn	**Pn**	07 44 46.2	+3.2
CLZ				Sn	**Sn**	07 45 20.0	+3.0
CLZ				Sg	**Sb**	07 45 26.8	+3.4
CDF	**Champ du Feu**	**2.88**	**162**	*e*Pn	**Pn**	07 44 42.9	-0.5
CDF				*e*Sn	**Sn**	07 45 15.2	-2.4
CDF				*e*Sg	**Sg**	07 45 29.3	-1.3
	comp=E,2.4nm,0.3s						
SFTF	**Sexfontaines**	**3.01**	**192**	*e*Pn	**Pn**	07 44 44.6	-0.5
SFTF	**Sexfontaines**	**3.01**	**192**	*e*P	**Pn**	07 44 48.5	+3.4
	baz=5.4						
SFTF	**Sexfontaines**	**3.01**	**192**	*e*Pg	**Pb**	07 44 54.5	+3.2
SFTF				*e*Sg	**Sb**	07 45 32.2	+4.5
	comp=E,18nm,0.4s						
HAU	**Haudompre**	**3.16**	**175**	*e*Pn	**Pn**	07 44 46.5	-0.7
HAU	**Haudompre**	**3.16**	**175**	*e*P	**Pn**	07 44 50.6	+3.4
HAU				*e*Sn	**Sn**	07 45 22.1	-2.4
	comp=E,7.7nm,0.3s						
HAU				*e*Sg	**Sg**	07 45 38.0	-1.7
	comp=E,7.1nm,0.2s						
HINF	**Hinteralfeld**	**3.39**	**170**	*e*Pn	**Pn**	07 44 50.2	-0.2
HINF				*e*Sn	**Sn**	07 45 28.4	-1.8
HINF				*e*Sg	**Sg**	07 45 44.8	-2.3
	comp=E,1.7nm,0.2s						
LOR	**Lormes**	**4.12**	**200**	*e*Pn	**Pn**	07 45 00.6	+0.2
	baz=21						
LOR	**Lormes**	**4.12**	**200**	*e*Pg	Pb	07 45 15.4	+5.1
	baz=23						
LOR				*e*Sn	**Sn**	07 45 45.6	-2.6
LOR				*e*Sg	**Sg**	07 46 08.0	-2.4
	comp=E,5.7nm,0.3s,baz=16						
SSF	**Saint Saulge**	**4.39**	**202**	*e*Pn	**Pn**	07 45 04.0	-0.1
SSF				*e*Sn	**Sn**	07 45 52.2	-2.7
SSF				*e*Sg	**Sg**	07 46 16.3	-3.0
	comp=E,2.5nm,0.3s						
LDF	**La Druitiere**	**4.68**	**239**	*e*Pn	**Pn**	07 45 06.5	-1.6
AVF	**Avril sur Loir**	**4.69**	**202**	*e*Pn	**Pn**	07 45 08.2	+0.1
SMF	**Signal de Mont**	**4.72**	**198**	*e*Pn	**Pn**	07 45 08.4	-0.2
FLN	**La Foliniere**	**4.79**	**242**	*e*Pn	**Pn**	07 45 09.3	-0.2
	baz=55						
FLN				*e*Sn	**Sn**	07 46 01.8	-2.7
	comp=E,0.5nm,0.1s						
BGF	**Bois d'Agland**	**5.03**	**205**	*e*Pn	**Pn**	07 45 13.2	+0.3
GRR	**Gorron**	**5.20**	**240**	*e*Pn	**Pn**	07 45 15.1	-0.1
GRR				*e*Sn	**Sn**	07 46 11.5	-3.2
	comp=E,4.5nm,0.2s						
MFF	**Saint Martin d**	**6.07**	**224**	*e*Pn	**Pn**	07 45 25.8	-1.3
SGMF	**Saint Gilles**	**6.23**	**246**	*e*Pn	**Pn**	07 45 28.8	-0.5
SGMF				*e*Sn	**Sn**	07 46 35.9	-4.1
	comp=E,0.7nm,0.2s						
QUIF	**Quistinic**	**6.75**	**245**	*e*Pn	**Pn**	07 45 35.7	-0.8

*IDC **10** 08:25:59.1±2.7,54.˚12N×87.˚20E, h0km, mb1 2.9/2, mb1mx2.9/33, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=22.5km s-min=15.2km az=67.0*
*NNC **10** 08:26:02.9±2.5,54.˚07N×86.˚76E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=17.3km s-min=15.5km az=35.0, Suspected Mining explosion.*

ISC 10 08:26:01.2±4.4,54.˚1N±0.˚2×86.˚9E±0.˚2, h0km, n8, σ0s 89/12, 7C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.25**	**262**	*i*		08 33 55.8	
	baz=80,slow=335,SNR=2.0						
ZALV	**Zalesovo Beam**	**1.25**	**262**	Pg	**Pg**	**08 26 24.6**	**-0.6**
	2.8nm,0.3s,baz=82,slow=16,SNR=16						
ZALV				Lg	Lg	08 26 44.5	
	1.2nm,0.3s,baz=81,slow=28,SNR=14						
ZALV				*i*		08 33 58.7	
	0.9nm,0.3s,baz=19,slow=35,SNR=4.4						
KURK	**Kurchatov**	**6.12**	**239**	⇓Pn	**Pn**	**08 27 32.5**	**-0.3**
	1.8nm,0.8s						
KURK				⇑Sn	**Sn**	**08 28 43.7**	**+0.3**
	2.9nm,0.9s						
KURK				⇑Lg	Lg	08 29 14.9	
	9.3nm,0.9s						
KURBB	**Kurchatov Arra**	**6.22**	**239**	Pn	**Pn**	**08 27 35.1**	**+0.9**
	0.1nm,0.3s,baz=56,slow=14,SNR=7.4						
KURBB				Sn	**Sn**	**08 28 46.2**	**+0.2**
	0.0nm,0.3s,baz=54,slow=23,SNR=2.0						
KURBB				Lg	Lg	08 29 21.5	
	0.1nm,0.3s,baz=57,slow=31,SNR=5.7						
KURBB	**Kurchatov Arra**	**6.22**	**239**	⇓Pn	**Pn**	**08 27 34.8**	**+0.6**
	5.3nm,0.9s						
KURBB				⇑Sn	**Sn**	**08 28 46.0**	**+0.1**
	6.1nm,0.7s						
KURBB				⇑Lg	Lg	08 29 15.4	
	10nm,0.8s						
MK31	**Makanchi Array**	**7.92**	**204**	Pn	**Pn**	**08 27 58.1**	**+0.6**
	0.6nm,0.7s,baz=30,slow=14,SNR=6.3						
MK31				⇓Sn	**Sn**	**08 29 27.5**	**-0.2**
	3.6nm,1.1s						
MK31				⇑Lg	Lg	08 30 10.9	
	4.6nm,0.8s,baz=36,slow=31,SNR=4.7						
MKAR	**Makanchi Array**	**7.92**	**204**	Pn	**Pn**	**08 27 57.3**	**-0.2**
	0.1nm,0.3s,baz=26,slow=14,SNR=5.3						
MKAR				Sn	**Sn**	**08 29 26.1**	**-1.6**
	0.1nm,0.3s,baz=23,slow=27,SNR=2.9						
MKAR				Lg	Lg	08 30 11.7	
	0.2nm,0.3s,baz=30,slow=33,SNR=5.6						
MAKZ	**Makanchi**	**7.98**	**205**	⇑Sn	**Sn**	**08 29 30.7**	**+1.5**
	2.5nm,1.1s						
MAKZ				⇑Lg	Lg	08 30 15.4	
	5.7nm,1.1s						

*NEIC **10** 08:40:13.4±1.7,32.˚85N±0.˚03×118.˚60W±0.˚03, h13km±3km, Error ellipse: s-maj=3.7km s-min=3.3km az=176.0*
*PAS **10** 08:40:14.1±2.0,32.˚856N±0.˚007×118.˚60W±0.˚02, h10km±3km, ML3.4/207, Error ellipse: s-maj=2.9km s-min=1.1km az=92.0*

*SCEDC **10** 08:40:14.1,32.˚86N×118.˚60W, h10km*
*ANF **10** 08:40:14.5±0.5,32.˚92N×118.˚59W, h15km±1km, ML3.5/26, Error ellipse: s-maj=5.1km s-min=2.9km az=24.0*

ISC 10 08:40:13.7±1.1,32.˚85N±0.˚04×118.˚63W±0.˚03, h16km±5km, n117, σ1s 0.0/144, Off coast of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCI2	**San Clemente I**	**0.14**	**28**	P	**Pg**	**08 40 17.4**	**-0.1**
	baz=199,SNR=1000						
SCI2				S	**Sg**	**08 40 19.7**	**-0.4**
	baz=199						
SCI2	**San Clemente I**	**0.14**	**28**		**Pg**	08 40 17.4	-0.1
SCI2					**Sg**	08 40 19.8	-0.3
CIAC	**Catalina I. Ai**	**0.57**	**18**		**Pg**	08 40 24.5	-0.6
CIAC					**Sg**	08 40 32.2	-0.5
CIS	**Catalina Islan**	**0.57**	**18**	P	**Pg**	08 40 24.5	-0.6
	baz=196,SNR=100						
CIS				S	**Sg**	**08 40 32.1**	**-0.6**
	baz=196						
SNCC	**San Nicolas Is**	**0.85**	**298**		**Pg**	08 40 29.2	-1.0
SNCC					**Sg**	08 40 41.8	+0.4
FMP	**Fort Macarthur**	**0.90**	**18**	P	**Pg**	08 40 30.6	-0.5
	baz=197,SNR=39						
FMP	**Fort Macarthur**	**0.90**	**18**		**Pg**	08 40 30.7	-0.5
FMP					**Sg**	08 40 42.4	-0.6
RPV	**Rancho Palos V**	**0.91**	**12**		**Pg**	08 40 30.7	-0.6
RPV					**Sg**	08 40 42.8	-0.4
WTT2	**Watts, South G**	**1.14**	**16**		**Pn**	08 40 35.6	+0.7
BHPC	**Baldwin Hills**	**1.15**	**11**		**Sb**	08 40 50.0	0.0
PT2	**Point Dume**	**1.16**	**353**		**Pb**	08 40 35.0	-0.3
LCGC	**La Cienega, Cu**	**1.16**	**10**		**Pb**	08 40 35.3	-0.1
LCGC					**Sb**	08 40 50.3	0.0
GORC	**Green Oak Ranc**	**1.21**	**75**		**Pn**	08 40 35.0	-0.1
RHC	**Rose Hills Cem**	**1.25**	**24**		**Pn**	08 40 36.5	-0.2
RHC					**Sb**	08 40 53.3	+0.3
DJJ	**Donna J Jenkin**	**1.26**	**6**		**Pn**	08 40 36.1	-0.6
DJJ					**Sb**	08 40 52.1	-0.9
DJJ	**Donna J Jenkin**	**1.26**	**6**		**Pn**	08 40 36.7	+0.1
GVRC	**Garvey Reservo**	**1.27**	**19**		**Pg**	08 40 38.4	+0.3
ELS	**Elsinore Mount**	**1.28**	**51**		**Pn**	08 40 36.1	-0.9
109C	**Camp Elliot, M**	**1.28**	**88**	P	**Pn**	08 40 36.2	-0.7
	baz=269,SNR=45						
109C	**Camp Elliot, M**	**1.28**	**88**		**Pn**	08 40 36.4	-0.6
GR2C	**Griffith Obs.**	**1.29**	**12**		**Pn**	08 40 36.6	-0.5
HLLC	**North Hollywoo**	**1.34**	**9**		**Sg**	08 40 56.6	-0.2
PASC	**Pasadena Art C**	**1.36**	**16**	Pn	**Pn**	08 40 37.5	-0.6
PASC	**Pasadena Art C**	**1.36**	**16**		**Sn**	08 40 54.2	-1.7
TJX	**Tijuana**	**1.37**	**104**	Pn	**Pn**	08 40 39.5	+0.5
BLCC	**Black Canyon**	**1.39**	**358**		**Pn**	08 40 37.8	-0.7
CHNC	**Chino**	**1.39**	**34**		**Sn**	08 40 56.0	-0.5
MURC	**Murrieta**	**1.41**	**58**	P	**Pn**	08 40 38.3	-0.5
	baz=238,SNR=138						
MURC	**Murrieta**	**1.41**	**58**		**Pb**	08 40 40.3	+0.6
MURC					**Sn**	08 40 56.1	-1.1
PSRC	**Puddingstone R**	**1.41**	**29**		**Pn**	08 40 38.6	-0.2
PSRC					**Sn**	08 40 55.4	-1.7
DECC	**Green Verdugo**	**1.42**	**10**	P	**Pn**	08 40 38.3	-0.7
	baz=189,SNR=36						
DECC				S	**Sn**	**08 40 55.7**	**-1.6**
	baz=189						
DECC	**Green Verdugo**	**1.42**	**10**		**Pn**	08 40 38.2	-0.7
DECC					**Sn**	08 40 55.7	-1.6
SCZ2	**Santa Cruz Isl**	**1.42**	**324**	P	**Pn**	08 40 38.2	-0.6
	baz=142,SNR=29						
SCZ2				S	**Sn**	**08 40 56.3**	**-0.9**
	baz=142						
SCZ2	**Santa Cruz Isl**	**1.42**	**324**		**Pn**	08 40 38.5	-0.4
SCZ2					**Sn**	08 40 55.9	-1.4
SDRC	**San Diego Road**	**1.42**	**94**		**Pn**	08 40 38.3	-0.6
SDRC					**Sn**	08 40 56.3	-1.1
DPP	**Dos Picos Cty**	**1.42**	**84**		**Pn**	08 40 38.3	-0.7
DPP					**Sn**	08 40 55.6	-1.8
SME	**Santa Rosa Min**	**1.44**	**47**		**Pn**	08 40 38.8	-0.4
MWC	**Mount Wilson**	**1.45**	**19**		**Pn**	08 40 39.0	-0.5
MWC	**Mount Wilson**	**1.45**	**19**		**Sn**	08 40 58.9	+0.7
MLSC	**Mira Loma**	**1.45**	**38**		**Sn**	08 40 57.0	-1.1
PEM	**Pine Mountain**	**1.45**	**26**		**Pn**	08 40 39.1	-0.3
OAT	**Oat Mountain**	**1.48**	**0**		**Pb**	08 40 42.0	+0.9
STCC	**Santa Clara**	**1.52**	**342**		**Pn**	08 40 40.8	+0.5
BACC	**Bachelor Mtn.**	**1.53**	**60**		**Pn**	08 40 40.0	-0.4
RVR	**Riverside**	**1.54**	**42**		**Pn**	08 40 40.4	-0.2
RVR					**Sn**	08 40 58.6	-1.7
CHFC	**Chilao Flat St**	**1.56**	**19**		**Pn**	08 40 40.5	-0.4
SSK	**Sunset Peak**	**1.56**	**30**		**Pn**	08 40 40.7	-0.3
PLM	**Palomar**	**1.56**	**71**		**Pn**	08 40 40.4	-0.6
DGR	**Domenigoni Val**	**1.57**	**59**		**Pn**	08 40 40.9	-0.1
DGR					**Sn**	08 40 59.9	-1.2
XTL	**Crystal Lake,**	**1.57**	**24**		**Pn**	08 40 40.7	-0.5
PDE	**Pardee, Santa**	**1.58**	**1**		**Sn**	08 41 00.6	-0.8
BFSC	**Mount Baldy Ra**	**1.60**	**30**	P	**Pn**	08 40 40.9	-0.6
	baz=210,SNR=155						
BFSC				S	**Sn**	**08 41 00.8**	**-1.2**
	baz=210						
BFSC	**Mount Baldy Ra**	**1.60**	**30**		**Pn**	08 40 41.0	-0.5
BFSC					**Sn**	08 41 00.7	-1.2
HMTC	**Hemet**	**1.60**	**57**		**Pn**	08 40 41.0	-0.5
HMTC					**Sn**	08 41 02.1	+0.2
SS2	**San Sevaine**	**1.65**	**35**		**Pn**	08 40 41.7	-0.3
POB	**Polly Butte**	**1.65**	**59**		**Pn**	08 40 42.1	0.0
BAR	**Barrett**	**1.66**	**96**		**Pn**	08 40 42.0	-0.2
JNH	**Juniper Hills**	**1.69**	**19**		**Pn**	08 40 42.7	0.0
TKX	**Tecate**	**1.73**	**99**	Pn	**Pn**	08 40 43.5	+0.4
CBX	**Cerro Bola**	**1.74**	**108**	Pn	**Pn**	08 40 43.4	0.0
OSI	**Osito Audit: C**	**1.76**	**357**		**Pn**	08 40 44.3	+0.7
OSI	**Osito Audit: C**	**1.76**	**357**		**Sn**	08 41 05.0	-0.7
DNR	**Dunn Ranch,Anz**	**1.82**	**66**		**Pn**	08 40 45.6	+1.1
SBC	**Santa Barbara**	**1.82**	**330**	P	**Pn**	08 40 44.5	+0.1
	baz=149						
MONP2	**Monument Peak**	**1.85**	**88**	P	**Pn**	08 40 44.8	-0.3
	baz=269,SNR=24						
BORC	**Borrego Spring**	**1.90**	**77**		**Pb**	08 40 48.1	+0.1
CCX	**Cicese**	**1.93**	**120**		**Pn**	08 40 45.3	-0.6
PFO	**Pinyon Flats O**	**1.97**	**67**	P	**Pn**	08 40 46.9	+0.3
	baz=248,SNR=43						
PFO				Sb	**Sb**	**08 41 14.3**	**+0.7**
	baz=248						
PFO	**Pinyon Flats O**	**1.97**	**67**		**Pn**	08 40 46.7	+0.1
BBRC	**Big Bear Solar**	**2.00**	**45**	P	**Pn**	08 40 46.7	-0.4
	baz=225,SNR=53						
EDW2	**Edwards Air Fo**	**2.09**	**14**	P	**Pn**	**08 40 48.8**	**+0.6**
	baz=194,SNR=63						
IKP	**In-Ko-Pah, Jac**	**2.13**	**95**	P	**Pn**	08 40 49.0	+0.2
	baz=276,SNR=34						
IKP	**In-Ko-Pah, Jac**	**2.13**	**95**		**Pn**	08 40 49.5	+0.7
FIGC	**Figueroa Mtn.**	**2.19**	**329**		**Pn**	08 40 50.3	+0.8
HYS	**Haystack Butte**	**2.19**	**23**		**Pn**	08 40 50.5	+1.0
PKM	**Mcpherson Peak**	**2.26**	**334**	P	**Pn**	08 40 50.8	+0.2
	baz=153						
PKM				S	**Sn**	**08 41 18.1**	**-0.2**
	baz=153						
ARVC	**Arvin**	**2.27**	**356**	P	**Pn**	08 40 51.3	+0.6
	baz=175,SNR=28						
ARVC				S	**Sn**	**08 41 18.1**	**-0.3**
	baz=175						
CCAC	**Calif City Air**	**2.35**	**12**		**Pb**	08 40 56.9	+1.2
CTCC	**Cactus City**	**2.35**	**69**		**Pn**	08 40 49.8	-1.9
ESJX	**Sierra Juarez**	**2.42**	**110**		**Pn**	08 40 52.4	-0.3
BELC	**Belle Mtn. Jos**	**2.48**	**62**	Pb	**Pb**	08 40 58.4	+0.4
	baz=243						
DTP	**Desert Tortois**	**2.49**	**15**		**Pn**	08 40 54.5	+0.8
BCH	**Branch Mountai**	**2.62**	**333**		**Pn**	08 40 56.0	+0.5
SMMC	**Simmler**	**2.70**	**336**	P	**Pn**	08 40 57.6	+0.9
	baz=154,SNR=6.9						
SMMC				S	**Sn**	**08 41 29.1**	**0.0**
	baz=154						
LRMC	**Laurel Mtn Rad**	**2.73**	**16**	P	**Pn**	08 40 57.3	+0.2
	baz=196,SNR=9.5						
YEG	**Yeguas Mountai**	**2.80**	**337**		**Pn**	08 40 57.8	-0.3
ISA	**Isabella, Lake**	**2.80**	**3**	P	**Pn**	08 40 58.6	+0.6
	baz=182,SNR=12						
ISA	**Isabella, Lake**	**2.80**	**3**		**Pn**	08 40 58.4	+0.4
GSC	**Goldstone, Bar**	**2.87**	**31**	P	**Pn**	08 40 59.7	+0.8
	baz=212,SNR=35						
GSC	**Goldstone, Bar**	**2.87**	**31**	Pn	**Pn**	08 41 00.1	+1.2
VES	**Vestal, Richgr**	**3.00**	**353**	S	**Sn**	**08 41 35.6**	**-0.7**
	baz=172						
GMRC	**Granite Mounta**	**3.13**	**51**	P	**Pn**	08 41 03.3	+0.7
	baz=232,SNR=13						
PAGB	**Antelope Grade**	**3.17**	**335**		**Pn**	08 41 03.9	+0.9
IRM	**Iron Mountain**	**3.19**	**65**	P	**Pn**	08 41 03.7	+0.5
	baz=247						
GLA	**Glamis**	**3.20**	**85**	Pn	**Pn**	08 41 04.4	+1.0
SPX	**San Pedro Mart**	**3.24**	**123**	Pn	**Pn**	08 41 06.5	+2.2
MPMC	**Manual Prospec**	**3.33**	**16**	P	**Pn**	08 41 06.3	+0.9
	baz=196,SNR=18						
SFX	**San Felipe**	**3.69**	**118**	Pn	**Pn**	08 41 11.2	+1.2
PMPB	**Monarch Peak**	**3.80**	**332**	Pn	**Pn**	08 41 11.4	-0.4
113A	**Mohawk Valley,**	**4.09**	**90**	Pn	**Pn**	08 41 16.1	+0.4
TPNV	**Topopah Spring**	**4.53**	**25**	P	**Pn**	08 41 23.8	+2.0
	baz=206						
TPNV	**Topopah Spring**	**4.53**	**25**	Pn	**Pn**	08 41 24.1	+2.3
W13A	**Hualapai Mount**	**4.53**	**59**	Pn	**Pn**	08 41 23.5	+1.6
SAO	**San Andreas Ge**	**4.54**	**330**	Pn	**Pn**	08 41 22.1	+0.3
SHPR	**Sheep Range**	**4.63**	**37**	Pn	**Pn**	08 41 23.9	+0.7
OMMB	**Old Mammoth Mi**	**4.76**	**356**	Pn	**Pn**	08 41 27.7	+2.6
MDPB	**Devils Postpil**	**4.78**	**356**		**Pn**	08 41 26.1	+0.7
Y14A	**Wickenburg**	**4.82**	**76**		**Pn**	08 41 26.2	+0.4
LHV	**Little Huntoon**	**5.39**	**1**	Pn	**Pn**	08 41 35.1	+1.8
PRN	**Pahroc Range**	**5.40**	**32**		**Pn**	08 41 36.3	+2.5
NVAR	**Mina Array Bea**	**5.57**	**3**	Pn	**Pn**	08 41 37.8	+1.6
NV11	**Mina Array Sit**	**5.58**	**4**	Pn	**Pn**	08 41 39.6	+3.4
R11A	**Troy Canyon, C**	**6.01**	**23**	Pn	**Pn**	08 41 42.7	+0.5
X16A	**Lo Mia Camp, P**	**6.19**	**73**	Pn	**Pn**	08 41 47.0	+2.3
KNB	**Kanab**	**6.32**	**47**	Pn	**Pn**	08 41 47.4	+0.9
CCUT	**Cedar City**	**6.36**	**41**	Pn	**Pn**	08 41 50.2	+3.1
PSUT	**Pine Spring**	**6.87**	**33**	Pn	**Pn**	08 41 56.5	+2.5

*NEIC **10** 08:42:41.7±2.2,32.˚82N±0.˚02×118.˚61W±0.˚01, h11km±3km, Error ellipse: s-maj=3.6km s-min=0.6km az=208.0*
*SCEDC **10** 08:42:41.5,32.˚77N×118.˚59W, h12km*
*NEIC **10** 08:42:42.8,32.˚87N×118.˚65W, h5km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 1.70; Mθθ -1.61; Mϕϕ -0.09; Mrθ -0.38; Mϕθ 0.69; Mϕr 0.10; Fault plane solution: M0 1.8400×10^15 NP1:ϕs 112.68000°, δ 38.84000°, λ 92.24000°. NP2:ϕs 289.80000°, δ 51.19000°, λ 88.19000°. Principal axes: T 1.7444, Plg 84.0000°, Azm 188.0000°; N 0.1729, Plg 1.0000°, Azm 291.0000°; P -1.9173, Plg 6.0000°, Azm 21.0000°;*
*PAS **10** 08:42:42.9±2.8,32.˚87N±0.˚02×118.˚65W±0.˚02, h5km±3km, Mwr 4.1/6 Error ellipse: s-maj=3.6km s-min=2.2km az=206.0*
*ANF **10** 08:42:42.6±0.3,32.˚90N×118.˚64W, h16km±1km, ML 4.4/37, Error ellipse: s-maj=2.9km s-min=1.7km az=21.0*
*IDC **10** 08:42:43.2±1.0,32.˚93N×118.˚53W, h0km, mb3.7/3, mb1 3.9/9, mb1mx3.7/41, mbtmp3.7/9, ML3.3/5, MS3.5/15, Ms1 3.5/15, ms1mx3.3/57, Error ellipse: s-maj=13.7km s-min=10.7km az=11.0*

ISC 10 08:42:43.1±1.0,32.˚87N±0.˚03×118.˚62W±0.˚03, h13km±6km, n233, σ1s 56/272, mb3.7/3, MS3.6/10, Off coast of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCI2	**San Clemente I**	**0.13**	**29**	P	**Pg**	**08 42 46.3**	**-0.1**
	baz=189,SNR=1000						
SCI2				S	**Sg**	**08 42 48.7**	**-0.2**
	baz=189						
SCI2	**San Clemente I**	**0.13**	**29**		**Pb**	08 42 48.6	+1.0
CIAC	**Catalina I. Ai**	**0.56**	**18**		**Pg**	08 42 53.4	-0.8
CIAC					**Sg**	08 43 01.1	-0.5
CIS	**Catalina Islan**	**0.56**	**18**	P	**Pg**	08 42 53.4	-0.7
	baz=193,SNR=686						
CIS				S	**Sg**	**08 43 01.0**	**-0.6**
	baz=193						
SNCC	**San Nicolas Is**	**0.85**	**297**	P	**Pg**	**08 42 57.8**	**-1.7**
	baz=121,SNR=47						
SNCC	**San Nicolas Is**	**0.85**	**297**		**Sg**	08 43 10.1	-0.5
SNCC	**San Nicolas Is**	**0.85**	**297**	Pg	**Pg**	08 42 57.9	-1.7
FMP	**Fort Macarthur**	**0.89**	**18**	P	**Pg**	08 42 59.4	-0.8
	baz=195,SNR=385						
FMP				S	**Sg**	**08 43 11.5**	**-0.4**
	baz=195						
FMP	**Fort Macarthur**	**0.89**	**18**		**Pg**	08 42 59.5	-0.8
FMP					**Sg**	08 43 11.8	-0.1
RPV	**Rancho

BFSC S Sn 08 43 29.2 -2.5
baz=208
BFSC Mount Baldy Ra 1.59 30 Pn 08 43 09.8 -1.3
BFSC Sn 08 43 29.2 -2.5
HMTC Hemet 1.59 58 Pn 08 43 09.9 -1.2
HMTC Sn 08 43 29.4 -2.3
SS2 San Sevaine 1.63 35 Pn 08 43 10.6 -1.0
POB Polly Butte 1.64 60 Pn 08 43 10.7 -1.2
BAR Barrett 1.65 96 Pn 08 43 10.4 -1.6
BAR Barrett 1.65 96 Pn Pn 08 43 10.2 -1.7
JNH Juniper Hills 1.67 19 Pn 08 43 11.1 -1.3
MAYG Mataguay Scout 1.69 78 Pn 08 43 11.3 -1.2
TKX Tecate 1.73 99 Pn Pn 08 43 10.2 -2.7
LRRC Littlerock Res 1.73 17 Pn 08 43 12.2 -0.7
CBX Cerro Bola 1.74 108 Pn Pn 08 43 12.0 -1.3
OSI Osito Audit: C 1.75 357 P Pn 08 43 12.0 -1.3
baz=176,SNR=30
OSI S Sn 08 43 33.0 -2.5
baz=176
OSI Osito Audit: C 1.75 357 Pn 08 43 11.9 -1.3
LEOC Leona Valley 1.78 8 Pn 08 43 12.6 -1.1
DNR Dunn Ranch,Anz 1.81 67 Pn 08 43 13.8 -0.4
SBC Santa Barbara 1.82 330 P Pn 08 43 12.7 -1.4
baz=150,SNR=46
SBC S Sn 08 43 35.3 -1.7
baz=150
MONP2 Monument Peak 1.85 89 P Pn 08 43 13.6 -1.2
baz=267,SNR=49
MONP2 S Sn 08 43 37.3 -1.0
baz=267
BSM San Miguel Isl 1.86 309 Pn 08 43 14.3 -0.4
RYS Reyes Peak 1.87 341 Pb 08 43 17.4 0.0
BORC Borrego Spring 1.90 77 Pn 08 43 14.7 -0.5
CCX Cicese 1.93 120 Pn Pn 08 43 14.5 -1.2
SBB Saddle Back Bu 1.94 20 Pn 08 43 15.3 -0.6
BTL Butler Peak 1.94 44 Pn 08 43 15.6 -0.5
PFO Pinyon Flats O 1.96 67 Pn Pn 08 43 15.8 -0.5
21nm,0.3s,baz=256,slow=14,SNR=29
PFO LR LR 08 43 24.1
comp=Z,93nm,20.7s,baz=237,slow=22
PFO Sn Sn 08 43 39.4 -1.4
44nm,0.3s,baz=264,slow=14,SNR=5.0
PFO Lg Lg 08 43 43.6
181nm,0.3s,baz=339,slow=22,SNR=32
PFO Pinyon Flats O 1.96 67 P Pn 08 43 15.7 -0.5
baz=245,SNR=134
PFO Sb Sb 08 43 43.7 +0.5
baz=245
PFO Pinyon Flats O 1.96 67 Pn 08 43 15.9 -0.3
XPFO Pion Flat 1.96 67 Pn Pn 08 43 15.9 -0.4
BBRC Big Bear Solar 1.99 45 P Pn 08 43 16.2 -0.5
baz=223,SNR=225
BBRC S Sn 08 43 40.2 -1.5
baz=223
BBRC Big Bear Solar 1.99 45 Pn 08 43 16.4 -0.4
CBKC Canebrake 2.00 88 Pn 08 43 16.3 -0.4
SYP Santa Ynez Pea 2.00 326 Pn 08 43 16.4 -0.4
TPO Tropico Hills 2.03 9 Pn 08 43 17.0 -0.2
PMD Palm Desert 2.04 67 Pn 08 43 17.2 0.0
EDW2 Edwards Air Fo 2.08 14 P Pn 08 43 17.4 -0.3
baz=193,SNR=398
EDW2 Edwards Air Fo 2.08 14 Pn 08 43 17.5 -0.3
IKP In-Ko-Pah, Jac 2.13 95 P Pn 08 43 17.9 -0.6
baz=274,SNR=35
EW2 E Wide Canyon 2.14 59 Pn 08 43 19.4 +0.8
RMX La Rumorosa 2.16 96 Pn 08 43 19.2 +0.2
HYS Haystack Butte 2.18 23 Pn 08 43 19.0 -0.1
FIGC Figueroa Mtn. 2.18 329 Pn 08 43 18.8 -0.4
CRR Carrizo Plain 2.23 89 Pn 08 43 20.4 +0.6
PKM Mcpherson Peak 2.25 334 P Pn 08 43 19.6 -0.7
baz=154,SNR=49
PKM S Sn 08 43 46.6 -1.4
baz=154
PKM Mcpherson Peak 2.25 334 Pn 08 43 19.8 -0.5
ARVC Arvin 2.26 356 P Pn 08 43 20.1 -0.2
baz=175,SNR=94
ARVC S Sn 08 43 47.1 -1.0
baz=175
ARVC Arvin 2.26 356 Pn 08 43 20.1 -0.2
YUH Yuha Desert 2.29 95 Pn 08 43 20.4 -0.2
GATR Gnd/Air Tx Cnt 2.30 318 Pn 08 43 20.2 -0.7
TEJ El Tejon 2.36 359 Pn 08 43 21.8 +0.1
SWSC Sam W. Stewart 2.38 87 Sb Sb 08 43 56.8 +1.7
baz=266
RRX Edison Barstow 2.42 34 P Pn 08 43 21.5 -1.0
baz=213,SNR=36
ESJX Sierra Juarez 2.42 110 Pn 08 43 20.9 -1.7
BELC Belle Mtn. Jos 2.47 62 Pb Pb 08 43 26.5 -1.0
baz=241
BELC Sb Sb 08 43 59.2 +1.3
baz=241
DTP Desert Tortois 2.48 15 Pn 08 43 23.0 -0.4
TPC Twentynine Pal 2.48 59 Pn 08 43 23.9 +0.6
CRGC Crocker Grade 2.54 339 Pn 08 43 22.9 -1.4
FRK Frink 2.56 77 Pn 08 43 24.9 +0.6
CARC Carrizo Plain 2.64 338 Pn 08 43 25.6 +0.1
WOFM Oak Flat 2.66 358 Pn 08 43 26.0 +0.1
UABX UABC, Campus M 2.69 94 Pn Pn 08 43 26.9 +0.8
SMMC Simmler 2.69 335 P Pn 08 43 25.9 -0.4
baz=155,SNR=68
LRMC Laurel Mtn Rad 2.72 16 P Pn 08 43 26.5 -0.3
baz=196,SNR=34
LRMC S Sn 08 43 58.2 -1.4
baz=196
HEC Hector,Ludlow 2.73 44 P Pn 08 43 26.4 -0.5
baz=223
BC3 Big Chuckawall 2.77 73 P Pn 08 43 26.6 -0.8
baz=252
ISA Isabella, Lake 2.79 2 P Pn 08 43 27.5 -0.2
baz=182,SNR=50
ISA S Sn 08 43 59.5 -1.7
baz=182
ISA Isabella, Lake 2.79 2 Pn Pn 08 43 27.5 -0.2
YEG Yeguas Mountai 2.79 337 Pn 08 43 32.0 -1.0
WHFM Hanning Flat 2.83 5 Pn 08 43 28.0 -0.2
CPBX Cerro Prieto 2.83 98 Pn Pn 08 43 27.3 -0.9
GSC Goldstone, Bar 2.86 31 P Pn 08 43 28.5 -0.1
baz=211,SNR=91
GSC S Sn 08 44 01.9 -1.1
baz=211
GSC Goldstone, Bar 2.86 31 Pn Pn 08 43 28.7 +0.1
SRTC Snort 2.91 14 Pn 08 43 29.3 0.0
VES Vestal, Richgr 2.99 353 P Pn 08 43 29.5 -0.8
baz=172,SNR=26
VES S Sn 08 44 05.1 -1.0
baz=172
GMRC Granite Mounta 3.12 51 P Pn 08 43 31.4 -0.9
baz=231,SNR=29
PAGB Antelope Grade 3.16 335 Pn 08 43 32.2 -0.4
GLA Glamis 3.20 86 P Pn 08 43 32.1 -1.0
baz=266
GLA Glamis 3.20 86 Pn 08 43 31.9 -1.3
SPX San Pedro Mart 3.25 123 Pn Pn 08 43 32.8 -1.3
MPMC Manual Prospec 3.32 16 P Pn 08 43 34.8 -0.2
baz=196,SNR=13
TUQ Turquoise Moun 3.40 40 P Pn 08 43 35.5 -0.6
baz=220,SNR=15
SHOC Shoshone, Teco 3.59 32 P Pn 08 43 38.7 +0.1
baz=212,SNR=14
SFX San Felipe 3.69 119 Pn Pn 08 43 40.5 +0.6
PMPB Monarch Peak 3.79 332 Pn Pn 08 43 40.0 -1.5
FURC Furnace Creek, 3.87 21 P Pn 08 43 42.2 -0.2
baz=202
113A Mohawk Valley, 4.09 90 Pn Pn 08 43 45.6 +0.2
GRAC Grapevine Rang 4.25 14 P Pn 08 43 48.4 +0.8
baz=194,SNR=8.7
TPNV Topopah Spring 4.52 25 P Pn 08 43 51.8 +0.4
baz=205,SNR=40
TPNV Topopah Spring 4.52 25 Pn Pn 08 43 52.5 +1.1
W13A Hualapai Mount 4.52 59 Pn Pn 08 43 52.1 +0.5
SAO San Andreas Ge 4.53 330 Pn Pn 08 43 51.3 -0.2
SHPR Sheep Range 4.62 37 Pn Pn 08 43 53.9 +1.0
OMMB Old Mammoth Mi 4.75 356 Pn 08 43 55.9 +1.2
MDPB Devils Postpil 4.77 356 Pn 08 43 55.8 +0.8
Y14A Wickenburg 4.82 76 Pn 08 43 55.6 +0.2
214A Organ Pipe Nat 5.00 99 P Pn 08 43 57.2 -0.8
baz=281
214A Organ Pipe Nat 5.00 99 Pn Pn 08 43 58.2 +0.3
TPH Tonopah 5.32 12 Pn 08 44 03.0 +0.4
CMB Columbia Colle 5.35 345 Pn 08 44 02.7 -0.1
LHV Little Huntoon 5.37 1 Pn Pn 08 44 03.9 +0.9
PRN Pahroc Range 5.39 32 Pn 08 44 03.4 -0.1
NVAR Mina Array Bea 5.56 3 Pn Pn 08 44 07.9 +2.1
0.3nm,0.3s,baz=187,slow=14,SNR=4.6
NVAR Pg Pb 08 44 22.0 +1.9
0.8nm,0.3s,baz=186,slow=13,SNR=7.2
NVAR Lg Lg 08 45 28.6
0.7nm,0.3s,baz=191,slow=19,SNR=2.8
NVAR Mina Array Bea 5.56 3 Pn 08 44 07.7 +1.9
NV11 Mina Array Sit 5.57 4 Pn Pn 08 44 08.9 +3.0
WAKR Walker 5.67 354 Pn Pn 08 44 09.3 +2.1
R11A Troy Canyon, C 6.00 23 Pn Pn 08 44 15.1 +3.3
LCMT Little Creek M 6.05 45 Pn 08 44 12.5 0.0
KVN Kaiserville 6.19 4 Pn Pn 08 44 16.8 +2.4
X16A Lo Mia Camp, P 6.19 74 Pn 08 44 15.7 +1.3
PNTR Pine Nut 6.26 353 Pn Pn 08 44 15.6 +0.2
RUBR Rubicon Trail 6.30 349 Pn Pn 08 44 15.2 -0.7
KNB Kanab 6.31 47 Pn Pn 08 44 15.7 -0.4
U15A North Rim 6.31 54 Pn Pn 08 44 17.3 +1.1
CCUT Cedar City 6.35 41 Pn Pn 08 44 17.9 +1.1
VCNR Virginia City 6.47 353 Pn Pn 08 44 19.3 +1.0
SZCU Shurtz Canyon 6.54 42 Pn Pn 08 44 20.0 +0.7
WUAZ Wupatki 6.56 64 P Pn 08 44 19.4 -0.1
baz=247
WUAZ Wupatki 6.56 64 Pn Pn 08 44 17.7 -1.9
PAHR Pah Rah Range 6.85 355 Pn Pn 08 44 20.6 -3.0
PSUT Pine Spring 6.86 33 Pn Pn 08 44 25.1 +1.5
PKCU Pink Cliffs 6.90 47 Pn Pn 08 44 25.2 +0.9
SPR3 Spring Creek 3 7.04 28 Pn Pn 08 44 27.2 +1.0
ORV Oroville 7.07 342 Pn Pn 08 44 27.6 +1.3
BEKR Beckworth 7.12 349 Pn Pn 08 44 27.5 +0.2
MTPU Mount Pierson 7.37 44 Pn Pn 08 44 33.2 +2.5
TCRU Three Creeks R 7.62 39 Pn Pn 08 44 36.1 +2.0
MVU Marysvale 7.67 41 Pn Pn 08 44 37.3 +2.5
MSU Marysvale 7.70 41 Pn Pn 08 44 37.4 +2.2
SRIG Santa Rosalia 7.82 133 Pn Pn 08 44 37.3 +0.7
O03E Paynes Creek 7.84 342 P Pn 08 44 37.5 +0.5
baz=160
319A Douglas 8.06 98 Pn Pn 08 44 39.9 -0.2
WDC Whiskeytown Da 8.31 339 Pn Pn 08 44 44.7 +1.3
ELK Elko 8.32 18 Pn Pn 08 44 42.9 -0.8
0.1nm,0.3s,baz=288,slow=20,SNR=4.1
ELK Lg Lg 08 47 03.3
0.3nm,0.3s,baz=307,slow=19,SNR=3.4
DUG Dugway, Tooele 8.68 31 Pn Pn 08 44 50.5 +2.0
NLU North Lily Min 8.82 35 Pn Pn 08 44 52.7 +2.1
SRU San Rafael Swe 9.05 44 Pn Pn 08 44 55.6 +2.0
MOD Modoc Plateau 9.12 352 Pn Pn 08 44 54.1 -0.4
121A Cookes Peak, D 9.14 89 P Pn 08 44 53.8 -1.2
baz=274
121A Cookes Peak, D 9.14 89 Pn Pn 08 44 57.2 +2.2
P17A Butcher Ranch, 9.17 42 Pn Pn 08 44 52.9 -2.4
BGU Big Grassy Mou 9.20 27 Pn Pn 08 44 58.1 +2.3
YBH Yreka Blue Hor 9.43 341 Pn Pn 08 45 02.9 +4.2
0.1nm,0.3s,baz=183,slow=6.7,SNR=8.9
YBH LR LR 08 48 45.0
comp=Z,75nm,21.5s,baz=170,slow=38
JLU Jordanelle 9.63 35 Pn Pn 08 45 06.0 +4.4
ANMO Albuquerque 10.32 75 Pn Pn 08 45 15.9 +4.8
0.1nm,0.3s,baz=295,slow=19,SNR=1.8
ANMO Lg Lg 08 48 08.5
0.1nm,0.3s,baz=131,slow=14,SNR=3.0
ANMO LR LR 08 48 44.2
comp=Z,152nm,21.1s,baz=246,slow=35
ANMO Albuquerque 10.32 75 Pn Pn 08 45 14.2 +3.0
HWUT Hardware Ranch 10.38 31 Pn Pn 08 45 15.2 +3.3
HLID Hailey 11.18 16 P Pn 08 45 27.2 +4.4
baz=198
HLID Hailey 11.18 16 Pn Pn 08 45 26.9 +4.1
LPIG La Paz 11.38 138 Pn Pn 08 45 28.4 +2.9
1.5nm,0.3s,baz=270,slow=3.0,SNR=2.5
LPIG LR LR 08 49 31.6
comp=Z,144nm,20.6s,baz=322,slow=36
TPAW Teton Pass 12.20 27 Pn Pn 08 45 37.9 +1.0
PDAR Pinedale Array 12.20 33 Pn Pn 08 45 39.6 +2.8
baz=225,slow=11,SNR=4.8
PDAR LR LR 08 50 59.1
comp=Z,142nm,20.5s,baz=226,slow=41
PDAR Pinedale Array 12.20 33 Pn 08 45 40.4 +3.6
SNOW Snow King Moun 12.25 28 Pn Pn 08 45 38.3 +0.8
MSTX Muleshoe 13.29 81 Pn Pn 08 45 54.5 +2.8
TX31 Lajitas Ar. Si 13.29 101 Pn P 08 45 56.8 -4.6
TX32 Lajitas Array 13.29 101 Pn P 08 45 57.0 -4.5
TXAR Lajitas Array 13.29 101 Pn Pn 08 45 56.3 +4.6
0.1nm,0.3s,baz=279,slow=12,SNR=11
NEW Newport 15.42 4 Pn P 08 46 26.1 +1.1
0.2nm,0.3s,baz=177,slow=8.9,SNR=4.7
NEW LR LR 08 52 31.3
comp=Z,230nm,19.0s,baz=162,slow=38
ULM Lac du Bonnet 24.16 37 P P 08 47 58.7 -0.3
3.0nm,0.9s,baz=239,slow=5.9,SNR=1.9
ULM LR LR 08 57 32.6
comp=Z,218nm,19.2s,baz=224,slow=37
CMIG Matias Romero 26.55 121 LR LR 08 58 43.6
comp=Z,72nm,18.7s,baz=268,slow=36
DLBC Dease Lake 26.71 347 LR LR 08 59 57.4
comp=Z,137nm,18.0s,baz=222,slow=39
TKL Tuckaleechee C 28.85 75 LR 09 01 25.4
comp=Z,204nm,20.6s,baz=57,slow=39
YKA Yellowknife Ar 29.75 4 LR LR 09 01 45.3
comp=Z,163nm,19.9s,baz=0.0,slow=38
SADO Sadowa 32.67 57 LR LR 09 02 29.4
comp=Z,230nm,18.4s,baz=90,slow=36
ILAR Eielson Array 36.32 340 P P 08 49 49.3 +2.9
0.5nm,0.6s,baz=156,slow=8.0,SNR=11
INK Inuvik 36.51 351 P P 08 49 50.5 +2.7
1.1nm,0.9s,baz=174,slow=5.6,SNR=4.0
PPT Papeete 58.23 215 LR LR 09 12 19.5
comp=Z,20nm,20.7s,baz=0.5,slow=30
NOA NORSAR Array B 77.91 22 LR LR 09 27 41.6
comp=Z,33nm,18.4s,baz=290,slow=35
GERES GERESS Array B 88.22 29 LR LR 09 38 15.1
comp=Z,73nm,21.7s,baz=280,slow=38
HHC Hu-ho-hao-te 93.26 324 eP P 08 55 57.0 -0.8
HHC pmax pmax
comp=Z,12nm,1.1s
HHC pmax pmax
comp=Z,170nm,5.2s
AKTO Aktyubinsk 97.01 2 LR LR 09 43 46.6
comp=Z,22nm,20.8s,baz=272,slow=38
WRA Warramunga Arr 114.53 261 PKP PKiKP 09 01 24.0 +0.5
comp=Z,0.3nm,0.8s,baz=57,slow=2.1,SNR=2.0
ASAR Alice Springs 116.57 258 PKP PKiKP 09 01 28.0 +0.6
comp=Z,0.3nm,0.6s,baz=72,slow=2.5,SNR=4.0
MAW Mawson 145.21 181 PKPbc PKPdf 09 02 20.4 +0.8
comp=Z,5.0nm,0.9s,baz=167,slow=4.5,SNR=10

RSNC 10 08:49:00.4±1.0, 0.79N×77.97W, h4km±4km, ML2.0, Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBC	**Cumbal**	**0.21**	**45**	*eP*	Pg	08 49 05.8	+1.2
CMBC				*eS*	Sg	08 49 09.0	+1.6
CMBC				*i*		08 49 09.7	
	comp=Z,234nm,0.3s						
CMBC	**Cumbal**	**0.21**	**45**	*eP*	Pg	08 49 05.4	+0.8
CMBC				*eS*	Sg	08 49 09.1	+1.7
CMBC				*i*		08 49 09.7	
	comp=Z,234nm,0.3s						
CUSE	**Cuicocha Este**	**0.65**	**221**	*eP*	Pb	08 49 15.0	+0.4
PAC1	**Pacto, Paraso**	**0.97**	**237**	*eP*	Pg	08 49 17.3	-1.8
PAC1				*i*		08 49 34.4	
	comp=Z,33nm,0.2s						

IDC 10 09:00:26.8±2.4, 54°22N×86°03E, h0km, mb1 3.2/2, mb1mx3.0/38, mbtmp3.2/2, ML3.1/2, Error ellipse: s-maj=18.1km s-min=10.8km az=53.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.76**	**249**	*i*		09 05 09.5	
	baz=slow=333,SNR=1.9						
ZALV	**Zalesovo Beam**	**0.76**	**249**	Pg	Pg	09 00 40.0	-1.5
	2.0nm,0.3s,baz=70,slow=17,SNR=15						
ZALV				Lg	Lg	09 00 52.9	
	5.8nm,0.3s,baz=73,slow=30,SNR=21						
KURBB	**Kurchatov Arra**	**5.83**	**235**	Pn	Pn	09 01 55.8	+1.3
	0.3nm,0.3s,baz=50,slow=13,SNR=4.8						
MKAR	**Makanchi Array**	**7.81**	**199**	Pn	Pn	09 02 22.7	+1.0
	0.5nm,0.3s,baz=15,slow=11,SNR=22						

*IDC **10** 09:08:19.3±2.0, 28°37S×68°97W, h77km±17km, mb4.2/12, mb1 4.3/18, mb1mx4.2/29, mbtmp4.5/18, MS3.4/4, Ms1 3.3/4, ms1mx3.0/24, Error ellipse: s-maj=18.8km s-min=11.4km az=76.0*
*VAO **10** 09:08:19.5±1.4, 28°45S×69°09W, h87km±12km, mb4.4*
*SJA **10** 09:08:20.0±0.8, 28°36S×69°09W, h119km±4km, ML5.0, MW4.5*
*GUC **10** 09:08:21.0±0.7, 28°35S×69°21W, h114km±5km, ML5.1*
*NEIC **10** 09:08:21.2±2.3, 28°38S±0°05×69°05W±0°07, h98km±5km, mb4.8/163, Md5.0(SJA), Error ellipse: s-maj=8.9km s-min=7.2km az=99.0*

ISC 10 09:08:21.3±0.7, 28°37S±0°03×69°08W±0°03, h100km±6km, n493, σ1°29/472, mb4.8/86, 11C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VCA	**Vinchina**	**0.86**	**116**	*i*	P	**09 08 41.9**	**+1.5**
VCA				*eS*	**Sn**	**09 08 57.2**	**+2.5**
VCA					IAML	09 08 58.5	
	comp=Z,22μm,0.3s						
AC05	**El Transito**	**1.15**	**246**	⇑*i*	P	**09 08 44.3**	**+0.8**
AC05				*i*	S	**09 09 01.5**	**+1.3**
AC05					IAML	09 09 03.1	
	comp=N,24μm,0.7s						
AC05	**El Transito**	**1.15**	**246**		P	**09 08 44.5**	**+1.1**
GO03	**Copiap**	**1.27**	**307**	⇑*i*	P	**09 08 45.5**	**+0.6**
GO03				*i*	S	**09 09 03.5**	**+0.8**
GO03	**Copiap**	**1.27**	**307**		P	**09 08 45.4**	**+0.6**
GO03	**Copiap**	**1.27**	**307**	*i*	P	**09 08 45.5**	**+0.6**
GO03				*eS*		**09 09 04.2**	**+1.5**
AC02	**Maricunga**	**1.52**	**358**	⇑*i*	P	**09 08 50.4**	**+2.0**
AC02				*i*	S	**09 09 12.3**	**+3.5**
AC02					IAML	09 09 15.2	
	comp=N,17μm,0.4s						
AC02	**Maricunga**	**1.52**	**358**			**09 08 50.5**	**+2.1**
LCO	**Las Campanas**	**1.56**	**245**	Pn	P	**09 08 49.4**	**+0.8**
AC04	**Llanos de Chal**	**1.76**	**275**	⇑*i*	P	**09 08 50.8**	**0.0**
AC04				*i*	S	**09 09 13.0**	**-0.3**
AC04	**Llanos de Chal**	**1.76**	**275**	Pn	P	**09 08 51.0**	**+0.2**
AROD	**Rodeo**	**1.83**	**191**	*i*	P	**09 08 53.5**	**+1.5**
AROD				*eS*		**09 09 17.5**	**+2.2**
CO01	**Juntas del Tor**	**1.83**	**209**	⇑*i*	P	**09 08 53.6**	**+1.6**
CO01				*i*	S	**09 09 17.5**	**+2.2**
CO01	**Juntas del Tor**	**1.83**	**209**			**09 08 53.4**	**+1.4**
ACLC	**CERRO LA CRUZ**	**2.15**	**120**	*i*	P	**09 08 56.4**	**+0.5**
ACLC				*eS*		**09 09 23.5**	**+1.1**
ACLC					IAML	09 09 24.9	
	comp=Z,6μm,0.3s						
ACCO	**Cerro Coronel**	**2.21**	**180**	*i*	P	**09 08 58.0**	**+1.0**
GO04	**Tololo Observa**	**2.34**	**219**	⇑*i*	P	**09 08 58.7**	**+0.1**
GO04				*eS*		**09 09 27.2**	**+0.2**
GO04					IAML	09 09 31.1	
	comp=N,13μm,0.5s						
GO04	**Tololo Observa**	**2.34**	**219**			**09 08 58.7**	**+0.1**
AC01	**Pan de Azucar**	**2.59**	**328**	⇑*i*	P	**09 09 01.8**	**+0.2**
AC01				*i*	S	**09 09 32.2**	**-0.3**
AC01	**Pan de Azucar**	**2.59**	**328**	Pn	P	**09 09 01.8**	**+0.2**
CO03	**El Pedregal**	**2.83**	**209**	⇑*i*	P	**09 09 05.1**	**+0.2**
CO03				*i*	S	**09 09 39.4**	**+0.9**
CO03					IAML	09 09 41.1	
	comp=E,5μm,0.5s						
CO03	**El Pedregal**	**2.83**	**209**			**09 09 05.1**	**+0.2**
CYA	**Choya**	**2.89**	**92**	*i*	P	**09 09 06.2**	**+0.6**
CYA				*eS*		**09 09 39.7**	**-0.1**
RTLL	**Cerro Villicun**	**3.00**	**170**	*i*	P	**09 09 07.6**	**+0.5**
RTLL					IAML	09 09 44.6	
	comp=Z,7μm,0.4s						
APLL	**PUNTA DE LOS L**	**3.01**	**133**	*i*	P	**09 09 07.5**	**+0.3**
ZON	**Zonda**	**3.19**	**174**			**09 09 10.1**	**+0.4**
ZON	**Zonda**	**3.19**	**174**	*i*	P	**09 09 10.0**	**+0.4**
GO02	**Mina Guanaco**	**3.22**	**352**	⇑*i*	P	**09 09 11.4**	**+1.1**
GO02				*i*	S	**09 09 49.5**	**+1.5**
GO02					IAML	09 10 01.8	
	comp=N,5μm,0.5s						
GO02	**Mina Guanaco**	**3.22**	**352**			**09 09 11.4**	**+1.1**
CO02	**Combarbal**	**3.28**	**210**	⇑*i*	P	**09 09 10.2**	**-0.6**
CO02				*i*	S	**09 09 48.7**	**-0.5**
CO02					IAML	09 09 50.4	
	comp=E,7μm,0.4s						
CO02	**Combarbal**	**3.28**	**210**	Pn	Pn	**09 09 10.3**	**-0.6**
RTLS	**Leoncito**	**3.43**	**183**	*i*	P	**09 09 14.0**	**+0.9**
RTLS					IAML	09 10 00.9	
	comp=Z,2μm,0.9s						
FSA	**Cafayete**	**3.56**	**52**	*i*	P	**09 09 16.5**	**+1.8**
AHML	**Horco Molle**	**3.68**	**66**	*i*	P	**09 09 16.6**	**+0.4**
AUSP	**Uspallata**	**3.85**	**184**	*i*	P	**09 09 19.5**	**+0.7**
PB14	**IPOC Station P**	**3.91**	**342**	*eP*		**09 09 19.8**	**+0.3**
PB14				*i*	S	**09 10 04.7**	**+0.1**
PB14	**IPOC Station P**	**3.91**	**342**	Pn	Pn	**09 09 19.8**	**+0.3**
PB14	**IPOC Station P**	**3.91**	**342**	*i*	P	**09 09 19.9**	**+0.4**
PB14					IAML	09 10 17.9	
	comp=Z,3μm,0.5s						
ASAL	**Salagasta**	**4.22**	**177**	*i*	P	**09 09 24.0**	**+0.5**
ASAL					IAML	09 10 18.7	
	comp=Z,918nm,1.1s						
ARCO	**CERRO ARCO**	**4.46**	**178**	*i*	P	**09 09 27.4**	**+0.5**
ARCO					IAML	09 10 22.9	
	comp=Z,888nm,0.5s						
VA03	**San Esteban**	**4.56**	**196**			**09 09 27.3**	**-0.8**
AAGR	**Agrelo**	**4.71**	**177**	*i*	P	**09 09 30.5**	**+0.3**
AAGR					IAML	09 10 47.7	
	comp=Z,634nm,0.7s						
SLA	**San Lorenzo**	**4.84**	**42**	*i*	P	**09 09 33.4**	**+1.4**
ROC1	**El Roble**	**4.89**	**199**			**09 09 30.2**	**-2.5**
ROC1	**El Roble**	**4.89**	**199**	*i*	P	**09 09 30.1**	**-2.5**
TCA	**Tanti**	**4.90**	**128**	*i*	P	**09 09 31.8**	**-0.9**
TCA					IAML	09 10 51.9	
	comp=Z,708nm,0.7s						
PEL	**Peldehue**	**4.96**	**196**			**09 09 31.7**	**-1.8**
PEL	**Peldehue**	**4.96**	**196**	*i*	P	**09 09 31.7**	**-1.8**
MRA	**San Martin**	**4.98**	**145**	*i*	P	**09 09 33.4**	**-0.4**
MRA					IAML	09 10 55.2	
	comp=Z,1μm,0.7s						
PB10	**IPOC Station P**	**5.01**	**344**	Pn	Pn	**09 09 33.3**	**-0.9**
VA01	**Torpederas**	**5.14**	**205**	Pn	Pn	**09 09 32.5**	**-3.4**
PB15	**IPOC Station P**	**5.15**	**356**			**09 09 36.3**	**+0.1**
PB15	**IPOC Station P**	**5.15**	**356**	*i*	P	**09 09 36.5**	**+0.3**
MT02	**Curacav**	**5.19**	**199**			**09 09 33.8**	**-2.8**
MT05	**Renca**	**5.21**	**195**	Pn	Pn	**09 09 35.0**	**-1.8**
PB05	**IPOC Station P**	**5.58**	**349**	*i*	P	**09 09 40.1**	**-1.9**
PB05					IAML	09 11 01.4	
	comp=Z,1μm,0.6s						
PB06	**IPOC Station P**	**5.65**	**355**			**09 09 42.3**	**-0.7**
PB06	**IPOC Station P**	**5.65**	**355**	*i*	P	**09 09 42.4**	**-0.7**
PB06					IAML	09 11 28.1	
	comp=Z,713nm,0.6s						
LVC	**Limon Verde**	**5.73**	**2**	P		**09 09 44.0**	**-0.3**
	comp=Z,59nm,0.3s,baz=186,slow=9.3,SNR=411						
LVC				S	**Sn**	**09 10 46.3**	**-2.7**
	comp=Z,47nm,0.3s,baz=228,slow=12,SNR=3.9						
LVC	**Limon Verde**	**5.73**	**2**	*i*	P	**09 09 44.0**	**-0.3**
LVC					IAML	09 11 27.5	
	comp=Z,370nm,0.7s						
PB04	**IPOC Station P**	**6.08**	**351**	*i*	P	**09 09 46.9**	**-2.0**
SUCO	**SUCO**	**6.14**	**145**	*i*	P	**09 09 49.2**	**-0.3**
SUCO					IAML	09 11 31.6	
	comp=Z,527nm,0.8s						
PB09	**IPOC Station P**	**6.54**	**359**			**09 09 54.8**	**-0.4**
PB09	**IPOC Station P**	**6.54**	**359**	*i*	P	**09 09 54.7**	**-0.4**
PB09					IAML	09 11 36.6	
	comp=Z,586nm,0.7s						
LAMA	**Las Malvinas**	**6.55**	**181**	*i*	P	**09 09 53.8**	**-1.3**
BO02	**Sierra Bellavi**	**6.57**	**192**	Pn	Pn	**09 09 52.4**	**-3.0**
COIS	**El Sosneado**	**6.74**	**184**	*i*	P	**09 09 56.7**	**-0.9**
YJA	**Yavi**	**6.96**	**28**	*i*	P	**09 10 02.9**	**+1.8**
PUMA	**Malargue**	**7.12**	**182**	*i*	P	**09 10 01.1**	**-1.6**
EDS3	**Malargue**	**7.39**	**182**	*i*	P	**09 10 06.2**	**-0.4**
TA01	**Diego Aracena**	**7.83**	**352**		Pn	**09 10 11.3**	**-1.2**
PB08	**IPOC Station P**	**8.19**	**360**		Pn	**09 10 15.3**	**-2.5**
PSGCX	**Pisagua**	**8.78**	**354**		Pn	**09 10 21.0**	**-4.5**
PB16	**IPOC Station P**	**9.99**	**358**	Pn	Pn	**09 10 40.7**	**-1.7**
CPUP	**Villa Florida**	**10.65**	**82**	P	Pn	**09 10 48.0**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=260,slow=12,SNR=8.3						
CPUP				LR	LR	09 15 07.3	
	comp=Z,81nm,18.8s,baz=272,slow=39						
CPUP	**Villa Florida**	**10.65**	**82**	Pn	Pn	**09 10 46.5**	**-4.3**
LC01	**Cunco**	**10.76**	**192**	Pn	Pn	09 10 47.1	-5.1
ITQB	**Itaqui**	**10.98**	**100**	*eP*	Pn	**09 10 53.5**	**-1.9**
LPAZ	**La Paz**	**12.05**	**4**	P	Pn	**09 11 08.1**	**-2.2**
	comp

PLCA Paso Flores 12.40 185 Pn Pn 09 11 11.2 -3.0
CPSB Cacapava Do Su 13.79 102 eP Pn 09 11 29.7 -2.8
PLTB Pedras Altas 13.83 108 eP Pn 09 11 31.2 -1.8
LL01 San Ignacio de 14.24 190 Pn 09 11 37.4 -0.8
SIV San Ignacio 14.37 33 P Pn 09 11 36.8 -3.3
comp=Z,0.7nm,0.3s,baz=215,slow=7.9,SNR=18
AQDB Aquidauana 14.49 60 eP Pn 09 11 41.3 -0.4
ITAB Concordia 15.05 90 eP Pn 09 11 47.5 -1.2
CNLB Canela 16.01 98 eP Pn 09 12 00.4 -0.4
VILB Vilhena 17.43 30 eP P 09 12 17.6 -0.5
PCMB Pacaembu 17.49 71 eP Pn 09 12 19.2 +0.2
NNA Nana 17.84 334 P Pn 09 12 24.3 +1.1
comp=Z,1.0nm,0.3s,baz=225,slow=11,SNR=2.0
ITRB Iturama 19.14 67 eP P 09 12 36.2 -0.5
PET01 Itanhaem-SP 19.96 83 eP P 09 12 45.7 +0.1
BB19B Bebedouro 20.02 73 eP P 09 12 45.7 -0.6
SAML Samuel 20.10 17 eP P 09 12 45.9 -1.2
ARAG Araguaiana, MT 20.34 55 eP P 09 12 49.1 -0.7
VAO Valinhos 20.63 80 eP P 09 12 52.7 -0.2
CZSB Cruzeiro do Su 20.81 350 eP P 09 12 55.9 +1.1
PARB Paraibuna 21.69 82 eP P 09 13 03.1 -1.1
IPMB Ipameri, GO 21.76 66 eP P 09 13 05.7 +0.7
ATAH Atahualpa 22.88 336 P P 09 13 16.5 -0.5
comp=Z,9.0nm,0.9s,baz=143,slow=10,SNR=2.1
BDFB Brasilia 23.23 61 P P 09 13 19.0 -1.1
comp=Z,3.6nm,0.5s,baz=219,slow=10,SNR=5.0
BDFB LR LR 09 23 39.8
comp=Z,151nm,20.5s,baz=320,slow=40
BSCB Bom Sucesso 23.25 77 eP P 09 13 19.9 -0.3
SNDB Serra Nova Dou 23.29 49 eP P 09 13 18.4 -2.0
EFI East Falkland 24.71 163 P P 09 13 32.1 -0.9
EFI IAmb IAmb 09 13 34.2
comp=Z,51nm,0.9s
NPGB Novo Progresso 24.86 34 eP P 09 13 35.1 +0.3
MACA Manacapuru-AM 26.31 19 eP P 09 13 48.1 +0.3
USHA Ushuaia 26.45 179 P P 09 13 49.5 +0.8
comp=Z,16nm,0.5s,baz=354,slow=10,SNR=11
JANB Januaria 26.48 65 eP P 09 13 48.6 -0.8
ITTB Itaituba 27.03 30 eP P 09 13 54.5 +0.2
PTLC Puerto Leguiza 28.90 348 eP P 09 14 08.5 -2.4
FLOC Florencia 30.44 347 eP P 09 14 26.3 +1.8
GCUF Volcan Galeras 30.47 344 eP P 09 14 28.1 +2.8
SOTA Rioblanco 31.17 345 eP P 09 14 32.5 +1.0
PCON Cinco Dias 31.32 346 eP P 09 14 35.9 +3.0
POPC Popayan, Colom 31.58 345 eP P 09 14 36.8 +2.0
YOTC Yotoco, Valle 32.91 347 eP P 09 14 46.0 -0.4
TOLC Tolima 33.30 349 eP P 09 14 49.4 -0.6
ROSC El Rosal 33.40 350 LR LR 09 29 35.8
comp=Z,80nm,18.1s,baz=202,slow=38
GUY2C Guyana, Caldas 33.94 349 eP P 09 14 57.0 +1.3
NORC Norcasia 34.19 350 eP P 09 14 58.2 +0.9
RUSC La Rusia 34.27 353 eP P 09 14 58.6 0.0
CBOC Ciudad Bolivar 34.68 348 eP P 09 15 01.9 +0.2
HELC Santa Helena 34.91 349 eP P 09 15 04.0 +0.1
PTBC PUERTO BERRIO, 35.09 351 eP P 09 15 03.0 -2.0
DBBC Dabeiba 35.84 348 eP P 09 15 13.3 +1.7
SDV Santo Domingo 37.06 357 P P 09 15 21.1 -1.0
SDV IAmb IAmb 09 15 22.3
comp=Z,15nm,1.1s
SDV Santo Domingo 37.06 357 eP P 09 15 21.4 -0.6
MOTC Monteria, Cord 37.47 349 eP P 09 15 24.3 -1.0
ARGC Ariguani, Magd 38.32 352 eP P 09 15 31.2 -1.3
SJCC San Jacinto, C 38.49 350 eP P 09 15 32.5 -1.4
GRGR Grenville 40.90 11 P P 09 15 53.1 -0.7
FDF Fort de France 43.53 11 P P 09 16 13.6 -1.6
MATN Matagalpa 44.17 336 P P 09 16 20.6 +0.2
MATN IAmb IAmb 09 16 22.9
comp=Z,14nm,0.7s
TGUH Tegucigalpa,Un 45.70 335 P P 09 16 32.3 -0.3
MLPR Magueyes Islan 46.10 3 P P 09 16 34.0 -1.6
OBIP Obispado Ponce 46.20 3 P P 09 16 34.8 -1.4
PDPR Patillas Dam, 46.20 4 P P 09 16 34.5 -1.9
PDPR IAmb IAmb 09 16 35.5
comp=Z,13nm,0.7s
MTP Monte Pirata 46.31 5 P P 09 16 34.9 -2.3
DR12 Loma Pena Alta 46.88 360 P P 09 16 40.0 -1.6
GTBY Guantanamo Bay 48.36 352 P P 09 16 53.0 0.0
GTBY IAmb IAmb 09 16 54.2
comp=Z,19nm,0.9s
CCIG Comitan 49.68 330 P P 09 17 02.5 -0.9
CCIG IAmb IAmb 09 17 18.5
comp=Z,16nm,1.3s
VNA3 Neumayer Olymp 53.68 160 P P 09 17 32.4 0.0
TLIG Tlapa 53.84 324 P P 09 17 35.7 +1.5
TLIG IAmb IAmb 09 17 37.3
comp=Z,8.0nm,0.7s
VNA2 Neumayer--Watz 54.29 159 P P 09 17 36.7 0.0
baz=270,slow=7.1
SNAA Sanae 55.90 160 P P 09 17 48.2 -0.2
SNAA Sanae 55.90 160 P P 09 17 48.4 0.0
comp=Z,5.5nm,0.5s,baz=281,slow=7.8,SNR=99
SNAA Sanae 55.90 160 P P 09 17 48.4 0.0
SNAA IAmb IAmb 09 17 49.2
comp=Z,18nm,1.3s
553A Crawfordville 60.04 345 P P 09 18 17.2 -0.5
BRAL Brewton 61.63 343 P P 09 18 28.6 +0.2
baz=162
QSPA South Pole Qui 61.86 180 P P 09 18 30.6 +0.8
QSPA IAmb IAmb 09 18 31.4
comp=Z,9.8nm,0.8s
NHSC New Hope 62.03 349 P P 09 18 31.8 +0.7
baz=169
GOGA Godfrey 62.94 347 P P 09 18 36.7 -0.4
baz=166
Y57A Sumter 62.96 349 P P 09 18 37.7 +0.5
baz=169
X60A Albert Glenn T 63.16 352 P P 09 18 39.4 +0.9
baz=171
X59A McDuffie Farm, 63.24 351 P P 09 18 39.4 +0.3
baz=170
X58A Rowland 63.33 351 P P 09 18 40.2 +0.5
baz=170
LRAL Lakeview Retre 63.39 343 P P 09 18 39.6 -0.4
baz=162
LRAL Lakeview Retre 63.39 343 P P 09 18 39.6 -0.4
833A Chaparral WMA, 63.41 330 P P 09 18 42.0 +1.7
baz=150
X56A White Oak 63.53 349 P P 09 18 41.2 +0.2
baz=168
X55A Gracelyn & Ava 63.61 348 P P 09 18 41.7 +0.2
baz=168
W58A Raeford 63.77 351 P P 09 18 43.1 +0.5
baz=170
W57A Gilead 64.01 350 P P 09 18 44.6 +0.5
baz=169
Y49A Blount Mountai 64.03 344 P P 09 18 43.5 -0.7
W56A Indian Trail 64.08 350 P P 09 18 44.8 +0.2
baz=169
KMSC Kings Mountain 64.22 349 P P 09 18 45.5 +0.1
baz=168
W54A Cherokee Point 64.31 348 P P 09 18 45.9 -0.2
baz=167
V59A Middlesex 64.37 352 P P 09 18 47.1 +0.7
baz=171
V58A Windy Hill, Pi 64.51 351 P P 09 18 48.3 +0.9
baz=170
V57A Coltrane Farms 64.70 350 P P 09 18 48.7 +0.1
baz=170
V56A Mocksville 64.73 350 P P 09 18 49.3 +0.5
baz=169
X48A Hartselle 64.75 344 P P 09 18 48.5 -0.4
X48A IAmb IAmb 09 18 49.3
comp=Z,8.5nm,0.5s
Y45A Yeager Farm, C 64.86 341 P P 09 18 50.0 +0.3
V55A Taylorsville 64.89 349 P P 09 18 50.4 +0.5
baz=168
V55A Taylorsville 64.89 349 P P 09 18 50.2 +0.3
V55A IAmb IAmb 09 18 59.0
comp=Z,11nm,1.2s
U60A Pendleton 64.94 353 P P 09 18 50.6 +0.4
baz=172
V54A Nebo 64.94 348 P P 09 18 50.7 +0.5
baz=167
V53A Saluda 64.99 348 P P 09 18 50.1 -0.5
V53A IAmb IAmb 09 18 51.5
comp=Z,12nm,1.4s
SLBS Sierra La Lagu 65.02 319 P P 09 18 52.8 +1.7
SLBS IAmb IAmb 09 18 54.1
comp=Z,7.7nm,0.8s
W50A Signal Mountai 65.05 345 P P 09 18 50.6 -0.4
W50A IAmb IAmb 09 18 51.9
comp=Z,24nm,1.4s
CPCT Cooper Cave 65.12 346 P P 09 18 51.8 +0.4
CPCT IAmb IAmb 09 18 52.2
comp=Z,28nm,1.5s
TKL Tuckaleechee C 65.17 347 P P 09 18 50.9 -0.8
TKL IAmb IAmb 09 18 52.1
comp=Z,6.6nm,0.8s
U57A Blanch 65.17 351 P P 09 18 52.2 +0.5
baz=170
237A Washetta, Mont 65.19 335 P P 09 18 52.2 +0.3
SWET Sewanee 65.21 345 IAmb IAmb 09 18 52.3
comp=Z,12nm,0.7s
HPIG 65.24 324 P P 09 18 53.8 +1.2
HPIG IAmb IAmb 09 18 55.1
comp=Z,13nm,0.9s
U56A King 65.24 350 P P 09 18 52.6 +0.5
baz=169
OXF Oxford 65.43 342 P P 09 18 53.3 -0.1
baz=160
JCT Junction City 65.45 331 P P 09 18 55.0 +1.3
baz=150
JCT Junction City 65.45 331 P P 09 18 53.9 +0.2
T59A Double "B" Far 65.48 353 P P 09 18 54.0 +0.4
baz=172
T60A Surry 65.55 353 P P 09 18 53.7 -0.3
baz=172
T58A Grand View Acr 65.57 352 P P 09 18 54.7 +0.5
baz=171
U54A Nelsons Funny 65.64 349 P P 09 18 54.4 -0.4
baz=168
T57A Hurt 65.72 351 P P 09 18 55.8 +0.6
baz=170
T57A Hurt 65.72 351 P P 09 18 55.5 +0.3
T57A IAmb IAmb 09 19 03.5
comp=Z,11nm,1.4s
WHTX Lake Whitney, 65.81 334 P P 09 18 56.8 +0.9
baz=153
WHTX Lake Whitney, 65.81 334 P P 09 18 56.2 +0.3
X43A Marvell 65.85 340 P P 09 18 57.1 +1.1
baz=159
T56A Rocky Mt 65.86 350 P P 09 18 56.7 +0.6
baz=169
TZTN Tazewell 65.98 347 P P 09 18 56.7 -0.2
baz=166
T55A Pulaski 66.06 350 P P 09 18 58.0 +0.6
baz=169
T54A Tazewell 66.13 349 P P 09 18 57.9 0.0
baz=168
CLTN Cedars of Leba 66.14 345 IAmb IAmb 09 18 58.6
comp=Z,7.6nm,0.6s
S58A Pound Farm, P 66.17 352 P P 09 18 58.5 +0.4
baz=171
T53A Wise 66.22 348 P P 09 18 58.5 0.0
baz=167
TXAR Lajitas Array 66.22 327 P P 09 18 60.0 +1.3
comp=Z,4.7nm,0.7s,baz=150,slow=8.3,SNR=62
TX31 Lajitas Ar. Si 66.22 327 IAmb IAmb 09 19 00.5
comp=Z,13nm,0.8s
U49A Red Boiling Sp 66.42 345 P P 09 18 59.6 -0.1
S57A Dark Hollow, R 66.43 351 P P 09 19 00.8 +1.1
baz=170
S56A Natural Bridge 66.43 351 P P 09 19 00.7 +1.0
baz=170
X40A Basin Creek Fa 66.43 339 P P 09 19 00.7 +0.9
baz=157
R58B Mineral 66.49 352 P P 09 19 01.5 +1.4
baz=172
WVT Waverly 66.54 344 P P 09 19 00.4 -0.1
baz=162
WVT Waverly 66.54 344 P P 09 19 00.1 -0.4
WVT IAmb IAmb 09 19 00.9
comp=Z,11nm,0.7s
R59A King George, V 66.64 353 P P 09 19 02.1 +1.0
baz=172
S55A Lewisburg 66.66 350 P P 09 19 02.0 +0.8
baz=169
MIAR Mount Ida 66.72 338 P P 09 19 02.6 +1.0
baz=157
S54A Dingess, Beckl 66.81 349 P P 09 19 02.3 +0.1
baz=168
S54A Dingess, Beckl 66.81 349 P P 09 19 01.8 -0.4
S54A IAmb IAmb 09 19 19.5
comp=Z,13nm,1.2s
S53A Williamson 66.83 349 P P 09 19 02.3 0.0
baz=167
R58A Rapidan 66.84 352 P P 09 19 02.9 +0.6
baz=171
W41B Gary Mavity, V 66.88 339 P P 09 19 03.0 +0.4
baz=158,SNR=5.0
W41B Gary Mavity, V 66.88 339 IAmb IAmb 09 19 04.0
comp=Z,6.1nm,0.7s
R57A Stanardsville 66.90 352 P P 09 19 03.6 +0.9
baz=171
WHAR Wooly Hollow 67.00 340 P P 09 19 03.7 +0.3
WHAR IAmb IAmb 09 19 04.1
comp=Z,6.0nm,0.7s
S51A Beattyville 67.05 348 P P 09 19 03.3 -0.4
S51A IAmb IAmb 09 19 04.1
comp=Z,10nm,0.9s
R55A Marlinton 67.10 351 P P 09 19 05.2 +1.1
baz=169
R54A Victor 67.13 350 P P 09 19 04.5 +0.3
baz=169
T47A Sharon Grove 67.18 344 IAmb IAmb 09 19 05.1
comp=Z,15nm,1.3s
ABTX Abilene, Hawle 67.24 332 P P 09 19 05.9 +0.8
baz=151
ABTX Abilene, Hawle 67.24 332 P P 09 19 05.9 +0.8
ABTX IAmb IAmb 09 19 07.0
comp=Z,13nm,0.9s
X37A Clayton 67.37 337 P P 09 19 05.5 -0.2
X37A IAmb IAmb 09 19 07.8
comp=Z,10nm,0.9s
LCAR Lake Charles 67.38 341 P P 09 19 05.1 -0.6
LCAR IAmb IAmb 09 19 06.7
comp=Z,15nm,0.9s
W39A Magazine 67.38 338 P P 09 19 07.4 +1.6
baz=156
W39A Magazine 67.38 338 IAmb IAmb 09 19 07.3
comp=Z,9.3nm,0.6s
Q58A Fox Den Farm, 67.44 353 P P 09 19 07.2 +1.1
baz=172
Q57A Strasburg 67.61 352 P P 09 19 08.9 +1.7
baz=171
Q56A Snyder Ridge, 67.72 352 P P 09 19 09.5 +1.7
baz=170
Q56A Snyder Ridge, 67.72 352 P P 09 19 08.2 +0.4
Q56A IAmb IAmb 09 19 24.6
comp=Z,14nm,1.4s
Q55A Buckhannon 67.79 351 P P 09 19 09.7 +1.3
baz=170
Q53A Leroy 67.88 350 P P 09 19 10.0 +1.1
baz=168
Q54A Coxs Mills 67.89 350 P P 09 19 09.0 +0.1
baz=169
P58A Pank, Wackersv 67.94 353 P P 09 19 10.8 +1.6
baz=172
P59A Jarrettsville 67.97 354 P P 09 19 10.9 +1.5
baz=173
P57A Homestead Farm 68.01 353 P P 09 19 10.7 +1.0
baz=171
Q52A Bidwell 68.10 349 P P 09 19 10.5 +0.2
baz=167
P56A Dayton Farm, R 68.13 352 P P 09 19 11.6 +1.2
baz=171
U40A Yellville 68.15 339 P P 09 19 11.1 +0.5
baz=158,SNR=7.7
U40A Yellville 68.15 339 P P 09 19 10.7 0.0
U40A IAmb IAmb 09 19 11.6
comp=Z,10nm,0.6s
WCI Wyandotte Cave 68.18 345 P P 09 19 10.1 -0.6
baz=164
T42A Van Buren 68.26 341 P P 09 19 10.5 -0.8
P55A Reedsville 68.26 351 P P 09 19 11.9 +0.6
baz=170
S44A Carbondale 68.38 343 P P 09 19 11.9 -0.1
S44A IAmb IAmb 09 19 12.6
comp=Z,11nm,0.7s
MCWV Mont Chateau 68.41 351 P P 09 19 13.2 +1.0
baz=170
HHAR Hobbs 68.43 339 IAmb IAmb 09 19 13.8
comp=Z,8.1nm,0.9s
P54A Burton 68.45 351 P P 09 19 13.2 +0.8
baz=169
P53A Whipple 68.47 350 P P 09 19 13.0 +0.4
baz=168
O58A Lewisberry 68.53 354 P P 09 19 12.7 -0.1
baz=172
O60A Telford 68.58 355 P P 09 19 14.5 +1.3
baz=174
O59A Robesonia 68.64 354 P P 09 19 15.2 +1.6
baz=173
O57A Amberson 68.69 353 P P 09 19 15.1 +1.2
baz=172
TUL1 Leonard 68.71 337 P P 09 19 14.4 +0.3
baz=155,SNR=8.0
MGMO Mountain Grove 68.71 340 IAmb IAmb 09 19 15.0
comp=Z,9.5nm,0.8s
U38A Gravette 68.72 338 P P 09 19 14.1 -0.1
U38A IAmb IAmb 09 19 15.0
comp=Z,8.8nm,0.6s
P52A Corning 68.73 349 P P 09 19 13.8 -0.4
baz=168
WMOK Wichita Mounta 68.75 334 P P 09 19 14.4 0.0
baz=152
O56A Blue Knob Stat 68.85 352 P P 09 19 15.6 +0.6
baz=171
O55A Ligonier 68.88 352 P P 09 19 15.4 +0.3
baz=170
MNTX Cornudas Mount 69.00 327 P P 09 19 16.2 +0.1
baz=146,SNR=20
MNTX Cornudas Mount 69.00 327 P P 09 19 16.4 +0.3
MNTX IAmb IAmb 09 19 17.2
comp=Z,8.0nm,0.8s
P49A Miami Univ. Ec 69.10 347 P P 09 19 16.1 -0.4
baz=165
BCOK Bluff Creek, N 69.13 335 P P 09 19 15.5 -1.2
O52A Adamsville 69.16 350 P P 09 19 16.7 -0.1
baz=168
N59A State Game Lan 69.21 355 P P 09 19 18.4 +1.3
baz=174
N57A Milroy 69.22 353 P P 09 19 17.9 +0.8
baz=172
N58A Sunbury 69.22 354 P P 09 19 17.9 +0.8
baz=173
CCM Cathedral Cave 69.26 341 P P 09 19 18.0 +0.5
baz=159
CCM Cathedral Cave 69.26 341 P P 09 19 17.0 -0.5
O51A Pataskala 69.31 349 P P 09 19 17.6 -0.1
baz=167
N56A West Decatur 69.46 353 P P 09 19 19.1 +0.4
baz=171
ACSO Alum Creek Sta 69.46 349 P P 09 19 18.9 +0.2
baz=167
M60A Port Jervis 69.53 356 P P 09 19 20.5 +1.5
baz=175
M62A Hamden 69.55 357 P P 09 19 20.6 +1.5
baz=176
M64A Tiverton 69.59 358 P P 09 19 21.0 +1.6
baz=178
HSIG 69.71 321 P P 09 19 21.3 +0.8
N54A Moraine State 69.71 351 P P 09 19 21.4 +1.2
baz=170
M58A Price's Panora 69.72 354 P P 09 19 21.9 +1.7
baz=173
MSTX Muleshoe 69.72 331 P P 09 19 21.2 +0.7
baz=149,SNR=21
M57A Sunshine Farm, 69.75 354 P P 09 19 21.9 +1.5
baz=172
M59A Waymart 69.80 355 P P 09 19 22.1 +1.3
baz=174
L63A North Scituate 69.92 358 P P 09 19 22.5 +1.1
baz=178
L64A Middleborough 69.97 359 P P 09 19 22.7 +1.0
baz=178
M56A Emporium 70.01 353 P P 09 19 22.5 +0.5
baz=171
L65A Cape Cod Natio 70.05 359 P P 09 19 22.9 +0.7
baz=179
M55A Ridgway 70.06 352 P P 09 19 22.8 +0.5
M55A IAmb IAmb 09 19 24.5
comp=Z,25nm,1.5s
VNDA Vanda 70.09 190 P P 09 19 23.2 +1.0
comp=Z,0.8nm,0.7s,baz=129,slow=6.6,SNR=5.2
SYO Syowa Base 70.17 159 eP P 09 19 21.2 -1.5
SYO Syowa Base 70.17 159 ePcP PcP 09 19 40.6 -3.4
M54A Oil Creek Stat 70.21 352 P P 09 19 23.8 +0.5
baz=170
P43A Skaggs, Pawnee 70.28 343 P P 09 19 23.4 -0.3
P43A IAmb IAmb 09 19 24.2
comp=Z,18nm,0.9s
L58A Harry Jones Me 70.34 355 P P 09 19 24.9 +0.9
baz=174
L57A Andrews Acres 70.38 354 P P 09 19 25.0 +0.8
baz=173
L59A Walton 70.42 355 P P 09 19 26.1 +1.5
baz=174
BINY Binghamton 70.50 355 P P 09 19 26.2 +1.2
baz=173
L61B Northampton 70.54 357 P P 09 19 26.3 +1.1
baz=176
L56A Greenwood 70.58 353 P P 09 19 26.4 +0.8
baz=172
L56A Greenwood 70.58 353 P P 09 19 25.8 +0.3
L56A IAmb IAmb 09 19 27.1
comp=Z,12nm,0.8s
319A Douglas 70.68 324 IAmb IAmb 09 19 29.3
comp=Z,15nm,1.0s
121A Cookes Peak, D 70.85 326 P P 09 19 29.1 +1.5
baz=144
121A Cookes Peak, D 70.85 326 IAmb IAmb 09 19 30.6
comp=Z,17nm,0.9s
WVNY West Valley, N 70.96 353 P P 09 19 28.4 +0.6
WVNY IAmb IAmb 09 19 29.4
comp=Z,13nm,0.8s
DBIC Dimbokro 70.97 71 P P 09 19 29.1 +0.6
comp=Z,6.7nm,0.5s,baz=220,slow=6.7,SNR=16
DBIC Dimbokro 70.97 71 P P 09 19 28.6 +0.2
DBIC IAmb IAmb 09 19 29.6
comp=Z,8.8nm,0.7s
K59A Cooperstown 70.99 356 P P 09 19 29.3 +1.3
baz=174
K58A Earlville 71.03 355 P P 09 19 29.4 +1.2
baz=174
K58A Earlville 71.03 355 P P 09 19 28.8 +0.6
HDIL Hopedale 71.09 344 P P 09 19 28.7 +0.1
baz=161
K56A Middlesex 71.12 354 P P 09 19 29.4 +0.6
baz=172
J61A Chester 71.43 357 P P 09 19 32.1 +1.6
baz=177
Y22D IRIS PASSCAL I 71.69 328 PcP 09 19 53.9 +2.8
KSU1 Kansas State U 71.87 338 P P 09 19 33.9 +0.6
baz=155
R32A Long Quarter, 71.99 336 IAmb IAmb 09 19 35.9
comp=Z,30nm,1.4s
ANMO Albuquerque 72.19 328 P P 09 19 37.7 +2.1
baz=146
ANMO Albuquerque 72.19 328 P P 09 19 37.1 +1.6
ANMO IAmb IAmb 09 19 38.2
comp=Z,7.8nm,0.7s
TUC Tucson 72.19 324 P P 09 19 37.2 +1.7
baz=142
TUC Tucson 72.19 324 P P 09 19 37.4 +1.8
H58A Gabriels 72.58 356 P P 09 19 38.5 +1.1
baz=175
H61A Lyndonville 72.59 358 P P 09 19 38.9 +1.4
baz=177
H60A Morristown 72.65 357 P P 09 19 40.6 +2.8
baz=177
CBKS Cedar Bluff 72.71 335 P P 09 19 39.4 +1.1
baz=152,SNR=6.0
CBKS Cedar Bluff 72.71 335 IAmb IAmb 09 19 40.3
comp=Z,16nm,0.7s
H59A Cadyville 72.78 357 P P 09 19 39.3 +0.7
baz=176
214A Organ Pipe Nat 73.00 322 P P 09 19 42.2 +2.0
baz=140,SNR=11
214A Organ Pipe Nat 73.00 322 P P 09 19 42.2 +2.0
214A IAmb IAmb 09 19 43.2
comp=Z,25nm,1.1s
H53A Bobcaygeon 73.10 353 P P 09 19 41.5 +1.0
baz=171
T25A Trinidad 73.11 331 P P 09 19 42.7 +1.7
baz=148,SNR=10
T25A Trinidad 73.11 331 P P 09 19 42.3 +1.2
T25A IAmb IAmb 09 19 43.7
comp=Z,14nm,0.9s
G62A West of Eustis 73.24 359 P P 09 19 43.1 +1.7
baz=179
G62A West of Eustis 73.24 359 P P 09 19 43.0 +1.7
G64A Maxfield 73.27 0 P P 09 19 42.8 +1.3
baz=180
PKME Peaks-Kenny Pk 73.28 360 P P 09 19 43.2 +1.7
baz=180
SFX San Felipe 73.43 320 P P 09 19 44.6 +1.9
JFWS Jewell Farm 73.55 344 P P 09 19 43.2 0.0

	baz=161						
G54A	**Lake Saint Pet**	**73.87**	**353**	P		**P**	**09 19 45.3 +0.3**
	baz=172						
F64A	**Sherman**	**73.88**	**1**	P		**P**	**09 19 46.1 +1.1**
	baz=181						
W18A	**Petrified Fore**	**73.89**	**326**	P		**P**	**09 19 46.3 +0.7**
	baz=143						
F59A	**Saint Guilaume**	**73.94**	**357**	P		**P**	**09 19 48.5 +3.2**
	baz=176						
KSCO	**Kaye Shedlock'**	**73.98**	**333**	P		**P**	**09 19 48.1 +2.1**
	baz=150						
F60A	**Warwick**	**74.03**	**358**	P		**P**	**09 19 46.5 +0.7**
	baz=177						
SDCO	**Great Sand Dun**	**74.09**	**331**	P		**P**	**09 19 48.6 +1.8**
	baz=147,SNR=9.3						
I42A	**Draeger Farm,**	**74.17**	**345**	P		**P**	**09 19 47.0 +0.2**
I42A				IAmb		IAmb	09 19 58.7
	comp=Z,32nm,1.5s						
X16A	**Lo Mia Camp, P**	**74.19**	**325**	IAmb		IAmb	09 19 50.4
	comp=Z,11nm,1.1s						
E60A	**Ste Agathe de**	**74.41**	**358**	P		**P**	**09 19 49.1 +1.0**
	baz=178						
ALGO	**Algonquin Park**	**74.41**	**354**	P		**P**	**09 19 48.4 +0.2**
	baz=172						
E63A	**Oxbow**	**74.44**	**0**	P		**P**	**09 19 49.6 +1.3**
	baz=180						
E64A	**Bridgewater**	**74.44**	**1**	P		**P**	**09 19 49.7 +1.4**
	baz=181						
BGNE	**Belgrade**	**74.45**	**338**	P		**P**	**09 19 49.5 +1.0**
	baz=154						
H43A	**Windswept, Lux**	**74.47**	**346**	P		**P**	**09 19 48.6 +0.2**
H43A				IAmb		IAmb	09 20 03.6
	comp=Z,18nm,1.0s						
E57A	**Chemin Saint G**	**74.56**	**356**	P		**P**	**09 19 50.0 +1.0**
	baz=175						
E62A	**Clayton Lake**	**74.63**	**360**	P		**P**	**09 19 51.0 +1.7**
	baz=180						
E62A	**Clayton Lake**	**74.63**	**360**	P		**P**	**09 19 50.6 +1.2**
E62A				IAmb		IAmb	09 19 58.3
	comp=Z,18nm,1.4s						
S22A	**4UR Ranch, Cre**	**74.67**	**330**	P		**P**	**09 19 52.2 +1.9**
	baz=146						
ESJX	**Sierra Juarez**	**74.77**	**320**	P		**P**	**09 19 51.6 +0.9**
Q24A	**Divide**	**74.97**	**332**	P		**P**	**09 19 53.9 +2.0**
	baz=148						
MVCO	**Mesa Verde**	**74.99**	**328**	P		**P**	**09 19 53.7 +1.7**
	baz=145,SNR=12						
MVCO	**Mesa Verde**	**74.99**	**328**	IAmb		IAmb	09 19 54.6
	comp=Z,11nm,0.8s						
WUAZ	**Wupatki**	**75.02**	**325**	P		**P**	**09 19 54.2 +2.1**
	baz=142,SNR=8.8						
D63A	**Stockholm**	**75.05**	**1**	P		**P**	**09 19 53.1 +1.3**
	baz=181						
D62A	**Allapoint, All**	**75.09**	**0**	P		**P**	**09 19 53.6 +1.6**
	baz=180						
D58A	**Chemin du LacG**	**75.19**	**357**	P		**P**	**09 19 53.6 +1.0**
	baz=176						
D55A	**Sainte-Anne-du**	**75.25**	**355**	P		**P**	**09 19 53.3 +0.3**
	baz=174						
BATG	**Bathurst New B**	**75.34**	**2**	P		**P**	**09 19 54.0 +0.6**
BATG				IAmb		IAmb	09 20 07.5
	comp=Z,23nm,1.5s						
IKP	**In-Ko-Pah, Jac**	**75.34**	**320**	P		**P**	**09 19 55.3 +1.4**
	baz=138						
SWSC	**Sam W. Stewart**	**75.39**	**321**	P		**P**	**09 19 55.3 +1.3**
	baz=139						
BAR	**Barrett**	**75.68**	**320**	P		**P**	**09 19 57.3 +1.5**
MONP2	**Monument Peak**	**75.70**	**320**	P		**P**	**09 19 58.0 +1.9**
	baz=138						
BC3	**Big Chuckawall**	**75.73**	**321**	P		**P**	**09 19 57.7 +1.6**
	baz=139,SNR=7.0						
PV01	**Paradox Valley**	**75.78**	**329**	IAmb		IAmb	09 19 59.4
	comp=Z,13nm,1.3s						
ISCO	**Idaho Springs**	**75.86**	**332**	P		**P**	**09 19 58.5 +1.5**
	baz=147,SNR=6.1						
PV15	**Paradox Valley**	**75.90**	**329**	IAmb		IAmb	09 20 00.3
	comp=Z,21nm,1.4s						
PV13	**Radium Mtn., P**	**75.91**	**329**	IAmb		IAmb	09 19 59.8
	comp=Z,11nm,0.8s						
IRM	**Iron Mountain**	**75.94**	**322**	P		**P**	**09 19 59.0 +1.8**
	baz=139,SNR=5.4						
PV07	**Paradox Valley**	**76.06**	**329**	P		**P**	**09 19 60.0 +1.9**
ECSD	**EROS Data Cent**	**76.06**	**340**	P		**P**	**09 19 57.9 +0.2**
	baz=155						
ECSD	**EROS Data Cent**	**76.06**	**340**	IAmb		IAmb	09 19 58.5
	comp=Z,8.8nm,0.6s						
U15A	**North Rim**	**76.19**	**325**	P		**P**	**09 20 01.0 +2.1**
U15A				IAmb		IAmb	09 20 02.1
	comp=Z,10.0nm,0.9s						
TPFO	**Pinon Flats**	**76.25**	**321**	P		**P**	**09 20 01.0 +1.9**
	baz=138						
PFO	**Pinyon Flats O**	**76.25**	**321**	P		**P**	**09 20 01.1 +2.0**
	baz=138						
BELC	**Belle Mtn. Jos**	**76.29**	**321**	P		**P**	**09 20 01.0 +1.7**
	baz=139						
SPMN	**Marine on St.**	**76.36**	**343**	IAmb		IAmb	09 19 59.5
	comp=Z,9.5nm,0.8s						
MURC	**Murrieta**	**76.66**	**320**	P		**P**	**09 20 03.3 +2.0**
	baz=138						
GMRC	**Granite Mounta**	**76.69**	**322**	P		**P**	**09 20 03.6 +2.0**
	baz=139,SNR=7.1						
KNB	**Kanab**	**76.92**	**325**	P		**P**	**09 20 04.7 +1.8**
N23A	**Red Feather La**	**76.92**	**332**	P		**P**	**09 20 04.6 +1.7**
	baz=147						
BBRC	**Big Bear Solar**	**76.99**	**321**	P		**P**	**09 20 05.5 +2.1**
	baz=138						
HEC	**Hector,Ludlow**	**77.09**	**322**	P		**P**	**09 20 06.2 +2.4**
	baz=138						
F36A	**Milaca**	**77.14**	**343**	IAmb		IAmb	09 20 04.0
	comp=Z,8.5nm,0.6s						
O20A	**White River Ci**	**77.26**	**330**	P		**P**	**09 20 06.5 +1.8**
	baz=145,SNR=11						
O20A	**White River Ci**	**77.26**	**330**	IAmb		IAmb	09 20 07.5
	comp=Z,21nm,0.9s						
TUQ	**Turquoise Moun**	**77.32**	**322**	P		**P**	**09 20 07.4 +2.3**
	baz=139						
BFSC	**Mount Baldy Ra**	**77.39**	**320**	P		**P**	**09 20 07.4 +1.9**
	baz=137						
LSQQ	**Lebel-sur-Quev**	**77.39**	**355**	P		**P**	**09 20 05.3 +0.3**
	baz=173						
SRU	**San Rafael Swe**	**77.46**	**328**	P		**P**	**09 20 07.0 +1.2**
GSC	**Goldstone, Bar**	**77.70**	**322**	P		**P**	**09 20 08.9 +1.7**
	baz=138						
DECC	**Green Verdugo**	**77.78**	**320**	P		**P**	**09 20 09.5 +2.0**
	baz=137						
MAW	**Mawson**	**77.83**	**163**	P		**P**	**09 20 07.3 -0.1**
	comp=Z,1.1nm,0.5s,baz=265,slow=12,SNR=3.1						
MAW	**Mawson**	**77.83**	**163**			pP	09 20 36.2 +1.9
SHOC	**Shoshone, Teco**	**77.86**	**322**	P		**P**	**09 20 09.7 +1.7**
	baz=139						
EDW2	**Edwards Air Fo**	**78.05**	**321**	P		**P**	**09 20 10.5 +1.5**
	baz=137						
RDMU	**Red Mountain**	**78.21**	**330**	P		**P**	**09 20 11.2 +1.1**
LRMC	**Laurel Mtn Rad**	**78.31**	**321**	P		**P**	**09 20 12.1 +1.5**
	baz=138						
EYMN	**Ely**	**78.59**	**345**	P		**P**	**09 20 12.0 +0.4**
	baz=160						
FURC	**Furnace Creek,**	**78.60**	**322**	P		**P**	**09 20 13.3 +1.3**
	baz=138						
K22A	**Casper**	**78.63**	**333**	P		**P**	**09 20 13.7 +1.4**
	baz=147,SNR=5.9						
K22A	**Casper**	**78.63**	**333**	IAmb		IAmb	09 20 14.8
	comp=Z,12nm,0.8s						
TPNV	**Topopah Spring**	**78.63**	**323**	P		**P**	**09 20 14.1 +1.8**
	baz=139						
MPMC	**Manual Prospec**	**78.63**	**322**	P		**P**	**09 20 13.8 +1.4**
	baz=138						
ISA	**Isabella, Lake**	**78.88**	**321**	P		**P**	**09 20 15.1 +1.5**
	baz=137						
RSSD	**Black Hills**	**78.91**	**335**	P		**P**	**09 20 15.1 +1.3**
	baz=149						
RSSD	**Black Hills**	**78.91**	**335**	P		**P**	**09 20 15.2 +1.3**
PKM	**Mcpherson Peak**	**79.08**	**320**	P		**P**	**09 20 16.7 +1.9**
	baz=136						
SPR3	**Spring Creek 3**	**79.21**	**326**	P		**P**	**09 20 16.8 +1.1**
SPR3				IAmb		IAmb	09 20 18.0
	comp=Z,17nm,1.4s						
CWC	**Cottonwood Cre**	**79.24**	**322**	P		**P**	**09 20 17.3 +1.6**
	baz=137						
GRAC	**Grapevine Rang**	**79.26**	**323**	P		**P**	**09 20 17.6 +1.9**
	baz=138						
R11A	**Troy Canyon, C**	**79.34**	**325**	P		**P**	**09 20 17.9 +1.6**
	baz=139,SNR=9.0						
R11A	**Troy Canyon, C**	**79.34**	**325**	P		**P**	**09 20 16.1 -0.1**
VES	**Vestal, Richgr**	**79.35**	**321**	P		**P**	**09 20 18.1 +2.0**
	baz=137						
DUG	**Dugway, Tooele**	**79.40**	**327**	P		**P**	**09 20 18.1 +1.7**
	baz=142						

SMMC	**Simmler**	**79.49**	**320**	P		**P**	**09 20 19.2 +2.3**
	baz=136						
TOA0	**Torodi Ar. Sit**	**79.88**	**69**	P		**P**	**09 20 19.6 +0.2**
TOA0				IAmb		IAmb	09 20 20.3
	comp=Z,7.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**79.88**	**69**	P		**P**	**09 20 19.8 +0.3**
	comp=Z,6.3nm,0.6s,baz=272,slow=5.8,SNR=39						
TORD	**Torodi Ar. Bea**	**79.88**	**69**	P		**P**	**09 20 19.4 0.0**
HWUT	**Hardware Ranch**	**79.94**	**329**	IAmb		IAmb	09 20 21.4
	comp=Z,10nm,1.0s						
BW06	**Boulder Array**	**79.98**	**331**	P		**P**	**09 20 21.5 +1.8**
	baz=144,SNR=6.3						
PDAR	**Pinedale Array**	**79.98**	**331**	P		**P**	**09 20 20.6 +0.9**
	comp=Z,5.9nm,0.9s,baz=128,slow=6.3,SNR=28						
PDAR	**Pinedale Array**	**79.98**	**331**	P		**P**	**09 20 19.8 +0.1**
AGMN	**Agassiz Nation**	**80.01**	**342**	P		**P**	**09 20 19.9 +0.6**
	baz=156						
AGMN	**Agassiz Nation**	**80.01**	**342**	IAmb		IAmb	09 20 20.4
	comp=Z,8.5nm,0.8s						
BOSA	**Boshof**	**80.41**	**117**	P		**P**	**09 20 22.3 -0.1**
MLAC	**Mammoth, Mammo**	**80.52**	**322**	P		**P**	**09 20 24.6 +2.0**
	baz=137						
MDND	**Maddock**	**80.67**	**340**	P		**P**	**09 20 24.3 +1.3**
	baz=153						
NVAR	**Mina Array Bea**	**80.82**	**323**	P		**P**	**09 20 25.8 +1.5**
	comp=Z,2.0nm,0.9s,baz=164,slow=6.4,SNR=14						
FLWY	**Flagg Ranch**	**81.54**	**331**	IAmb		IAmb	09 20 30.3
	comp=Z,13nm,0.7s						
H17A	**Grant Village**	**81.74**	**331**	P		**P**	**09 20 31.0 +2.0**
	baz=144						
RLMT	**Red Lodge**	**81.78**	**333**	P		**P**	**09 20 30.5 +1.3**
	baz=145						
ULM	**Lac du Bonnet**	**81.80**	**343**	P		**P**	**09 20 28.7 -0.1**
	comp=Z,6.6nm,0.6s,baz=150,slow=6.5,SNR=12						
ULM	**Lac du Bonnet**	**81.80**	**343**	IAmb		IAmb	09 20 29.7
	comp=Z,13nm,1.1s						
LAO	**LASA Array**	**81.91**	**335**	P		**P**	**09 20 30.6 +1.0**
	baz=148						
PNTR	**Pine Nut**	**81.99**	**323**	IAmb		IAmb	09 20 33.0
	comp=Z,9.0nm,0.8s						
YNE	**Yellowstone No**	**82.00**	**332**	P		**P**	**09 20 31.2 +0.9**
DGMT	**Dagmar**	**82.70**	**337**	P		**P**	**09 20 35.2 +1.5**
	baz=149						
HLID	**Hailey**	**82.77**	**329**	P		**P**	**09 20 36.1 +1.8**
	baz=141						
MCMT	**McKenzie Canyo**	**83.06**	**330**	P		**P**	**09 20 37.0 +1.2**
BOZ	**Bozeman (W)**	**83.15**	**331**	P		**P**	**09 20 37.4 +1.2**
	baz=143						
O03E	**Paynes Creek**	**84.04**	**322**	P		**P**	**09 20 41.8 +1.1**
	baz=135						
EGMT	**Eagleton**	**84.35**	**334**	P		**P**	**09 20 43.2 +1.0**
	baz=145						
EGMT	**Eagleton**	**84.35**	**334**	IAmb		IAmb	09 20 43.5
	comp=Z,7.0nm,0.8s						
J08A	**Circle Bar Ran**	**84.55**	**326**	IAmb		IAmb	09 20 45.6
	comp=Z,11nm,1.0s						
PLID	**Pearl Lake**	**84.67**	**329**	IAmb		IAmb	09 20 45.9
	comp=Z,7.1nm,0.8s						
MSO	**Missoula**	**85.10**	**331**	P		**P**	**09 20 47.8 +1.8**
	baz=141						
M04C	**Macdoel**	**85.11**	**323**	P		**P**	**09 20 47.7 +1.5**
	baz=135						
K05A	**Summer Lake**	**85.30**	**324**	P		**P**	**09 20 48.9 +1.8**
K05A				IAmb		IAmb	09 20 49.6
	comp=Z,18nm,1.1s						
J05D	**Fort Rock, OR**	**85.87**	**325**	P		**P**	**09 20 51.5 +1.6**
	baz=136						
PINE	**Pine Mountain**	**86.09**	**325**	P		**P**	**09 20 52.5 +1.5**
PINE				IAmb		IAmb	09 20 54.8
	comp=Z,7.5nm,0.8s						
I05D	**Terrebonne, OR**	**86.68**	**325**	P		**P**	**09 20 55.2 +1.5**
	baz=136						
K02D	**Willamette Mer**	**86.72**	**323**	P		**P**	**09 20 55.5 +1.5**
	baz=134						
NEW	**Newport**	**87.59**	**330**	P		**P**	**09 20 58.3 +0.3**
	baz=139						
B05A	**Bryant**	**89.85**	**328**	P		**P**	**09 21 09.8 +1.2**
	baz=135						
TOLK	**Toolik Lake Re**	**112.73**	**337**	P		**PKiKP**	**09 26 46.3 +0.8**
	baz=110						
A21K	**Barrow**	**115.80**	**339**	P		**PKiKP**	**09 26 51.9 +0.8**
	baz=102						
ASAR	**Alice Springs**	**123.72**	**206**	PKP		**PKPdf**	**09 27 07.3 -0.7**
	comp=Z,1.2nm,0.4s,baz=131,slow=1.7,SNR=30						
ASAR	**Alice Springs**	**123.72**	**206**	PKPdf		**PKPdf**	**09 27 07.1 -0.9**
WRA	**Warrumunga Arr**	**126.91**	**208**	PKP		**PKPdf**	**09 27 13.9 -0.2**
	comp=Z,2.2nm,0.5s,baz=156,slow=1.7,SNR=70						
WRA	**Warramunga Arr**	**126.91**	**208**			**PKPdf**	**09 27 13.8 -0.4**
SEY	**Seymchan**	**136.25**	**334**	PKP		**PKiKP**	**09 27 31.4 -0.6**
	comp=Z,2.7nm,0.4s,baz=98,slow=6.2,SNR=11						
PETK	**Petropavlovsk-**	**137.81**	**319**	PKP		**PKiKP**	**09 27 35.0 -0.5**
	comp=Z,5.6nm,0.9s,baz=90,slow=4.3,SNR=1.7						
YAK	**Yakutsk**	**144.11**	**345**	PKP		PKPbc	09 27 43.2 +0.3
	comp=Z,33nm,0.6s,baz=206,slow=0.2,SNR=19						
KURBB	**Kurchatov Arra**	**146.97**	**39**	PKPbc		**PKPdf**	**09 27 50.8 +1.0**
	comp=Z,8.2nm,0.6s,baz=304,slow=3.1,SNR=47						
KURK	**Kurchatov**	**146.97**	**39**			**PKPbc**	**09 27 51.9 -0.1**
ZALV	**Zalesovo Beam**	**148.10**	**29**	PKPbc		**PKPbc**	**09 27 55.5 +0.6**
	comp=Z,15nm,0.4s,baz=312,slow=3.7,SNR=19						
ZALV	**Zalesovo Beam**	**148.10**	**29**			**PKPbc**	**09 27 55.3 +0.3**
KSH	**Kashi**	**149.13**	**60**	PP		PP	09 31 27.8 -3.0
KSH	**Kashi**	**149.13**	**60**	LR		LR	
	comp=E,2μm,14.8s						
KSH	**Kashi**	**149.13**	**60**	LR		LR	
	comp=N,720nm,5.6s						
KSH	**Kashi**	**149.13**	**60**	PKPbc		**PKPbc**	**09 27 58.4 +0.2**
KSH	**Kashi**	**149.13**	**60**	sPKP			09 28 29.8
ASAJ	**Asahikawa**	**150.23**	**310**	PKPbc		**PKiKP**	**09 28 01.1 -0.2**
	comp=N,15nm,1.0s,baz=293,slow=10,SNR=5.8						
MKAR	**Makanchi Array**	**151.03**	**43**	PKPbc		**PKPbc**	**09 28 02.6 +0.2**
	comp=N,15nm,0.6s,baz=298,slow=2.1,SNR=90						
KLR	**Kul'dur**	**153.75**	**328**	PKPbc		**PKPbc**	**09 28 08.4 +0.1**
	comp=N,0.6nm,0.4s,baz=82,slow=3.5,SNR=7.8						
KSRS	**Korea Array**	**163.11**	**307**	PKPab		**PKPab**	**09 29 04.7 +2.2**
	comp=N,0.5nm,0.6s,baz=54,slow=4.5,SNR=4.5						
LZH	**Lanzhou**	**170.25**	**36**	*e*PKP		**PKPdf**	**09 28 15.6 -2.2**
LZH				pPKP		pPKPdf	09 28 42.5 -4.3
LZH				sPKP			09 28 52.9

REY **10** *09:16:39.7, 64.˚68N×17.˚46W, h6km*
IDC **10** *09:16:40.1±0.9, 64.˚54N×17.˚61W, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.6/63, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=27.9km s-min=16.1km az=5.0*
ISC 10 09:16:40.1±0.5, **64.˚67N**±0.˚02×**17.˚49W**±0.˚02, **h10km, n59,**
σ2^{0}07/72, mb3.8/8, 2C, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.11**	**271**	P		**Pg**	**09 16 42.4**	**-0.6**
	baz=276							
IDYN	**Dyngjuhals**	**0.13**	**24**	P		**Pg**	**09 16 42.6**	**-0.7**
	baz=18							
IGRF	**Grimsfjall**	**0.28**	**160**	P		**Pb**	**09 16 45.2**	**-2.2**
	baz=163							
IHUS	**Husbondi**	**0.38**	**191**	P		**Pb**	**09 16 47.2**	**-1.9**
	baz=193							
IHUS				S		**Sb**	**09 16 53.0**	**-2.1**
	baz=193							
ISKR	**Skrokkalda**	**0.40**	**254**	P		**Pb**	**09 16 47.4**	**-2.0**
	baz=254							
ISKR				S		**Sb**	**09 16 54.0**	**-1.6**
	baz=254							
IVOT	**Vottur**	**0.42**	**161**	P		**Pb**	**09 16 47.8**	**-1.9**
	baz=164							
THOR	**Thorvaldshraun**	**0.44**	**53**	P		**Pb**	**09 16 47.6**	**-2.4**
	baz=52							
THOR				S		**Sb**	**09 16 54.3**	**-2.3**
	baz=52							
IJOK	**Jokulheimar**	**0.48**	**222**	P		**Pb**	**09 16 48.9**	**-1.8**
	baz=223							
IJOK				S		**Sb**	**09 16 56.3**	**-1.5**
	baz=223							
IMKO	**Mokollar**	**0.58**	**57**	P		**Pb**	**09 16 50.0**	**-2.4**
	baz=57							
IMKO				S		**Sb**	**09 16 58.5**	**-2.3**
	baz=57							
IIEY	**Innrieyrar**	**0.64**	**206**	P		**Pb**	**09 16 51.5**	**-1.9**
	baz=207							
IIEY				S		**Sb**	**09 17 00.8**	**-1.6**
	baz=207							
IKSK	**Karasker**	**0.68**	**139**	P		**Pg**	**09 16 51.1**	**-2.1**
	baz=140							
ISVA	**Svartarkot**	**0.68**	**8**	P		**Pb**	**09 16 51.8**	**-2.2**
	baz=7.3							
ISVA				S		**Sb**	**09 17 01.7**	**-1.7**
	baz=7.3							

IKAL	**Kalfafell**	**0.73**	**187**	P		**Pg**	**09 16 52.8**	**-1.4**
	baz=188							
IVSH	**V-Sauoahnukur**	**0.77**	**79**	P		**Pg**	**09 16 52.9**	**-2.1**
	baz=79							
IVSH				S		**Sg**	**09 17 03.8**	**-1.2**
	baz=79							
IVAT	**Vatnsfell**	**0.79**	**233**	P		**Pb**	**09 16 54.3**	**-1.6**
	baz=233							
IHVE	**Hveravellir**	**0.91**	**284**	P		**Pg**	**09 16 55.6**	**-2.0**
	baz=283							
IHVE				S		**Sn**	**09 17 09.0**	**-3.2**
	baz=283							
IMEL	**Melhnausar**	**0.97**	**21**	P		**Pg**	**09 16 56.5**	**-2.2**
	baz=20							
IMEL				S		**Sb**	**09 17 10.2**	**-1.7**
	baz=20							
IREN	**Reynihlio**	**1.01**	**14**	P		**Pg**	**09 16 57.3**	**-2.3**
	baz=13							
ISNB	**Snabyli**	**1.06**	**208**	P		**Pg**	**09 16 58.6**	**-1.9**
	baz=209							
IKVO	**Krokottuvotn**	**1.08**	**14**	P		**Pg**	**09 16 58.4**	**-2.5**
	baz=13							
IGRS	**Grimsstaoir**	**1.13**	**30**	P		**Pn**	**09 17 00.1**	**-1.9**
	baz=30							
IFED	**Fedgar**	**1.16**	**237**	P		**Pn**	**09 17 00.7**	**-1.6**
	baz=237							
IFED				S		**Sn**	**09 17 16.6**	**-1.6**
	baz=237							
IRJU	**Rjupnafell**	**1.18**	**207**	P		**Pn**	**09 17 00.8**	**-1.8**
	baz=207							
IMJO	**Mjoaskard**	**1.21**	**233**	P		**Pg**	**09 17 01.4**	**-1.9**
	baz=233							
ISKI	**Skildingahlsh**	**1.22**	**9**	P		**Pb**	**09 17 00.8**	**-2.5**
	baz=8.4							
IGHA	**Grjothals**	**1.23**	**16**	P		**Pn**	**09 17 00.6**	**-2.8**
	baz=16							
IGRA	**Granastaoir**	**1.25**	**358**	P		**Pn**	**09 17 01.3**	**-2.4**
	baz=358							
IHAU	**Haukadalur**	**1.29**	**238**	P		**Pb**	**09 17 02.7**	**-1.7**
	baz=238							
IHVO	**Lagu-Hvolar**	**1.29**	**208**	P		**Pb**	**09 17 02.7**	**-1.8**
	baz=208							
IDIM	**Dimmadalss**	**1.32**	**10**	P		**Pn**	**09 17 02.1**	**-2.4**
	baz=9.4							
IHLA	**Hella**	**1.33**	**344**	P		**Pb**	**09 17 02.9**	**-2.3**
	baz=343							
IALF	**Alftagrof**	**1.40**	**213**	P		**Pb**	**09 17 04.4**	**-1.9**
	baz=213							
IHED	**Heoinshofoi**	**1.42**	**3**	P		**Pn**	**09 17 03.9**	**-2.0**
	baz=2.4							
IESK	**Eystri-Skogar**	**1.44**	**218**	P		**Pb**	**09 17 05.0**	**-2.0**
	baz=218							
ISAU	**Saurbar**	**1.45**	**243**	P		**Pn**	**09 17 04.7**	**-1.6**
	baz=243							
IMID	**Miomork**	**1.46**	**227**	P		**Pb**	**09 17 05.8**	**-1.6**
	baz=227							
IBRE	**Brettingsstaoi**	**1.47**	**353**	P		**Pn**	**09 17 04.7**	**-1.9**
	baz=353							
IGIL	**Gilhagi**	**1.49**	**18**	P		**Pn**	**09 17 04.6**	**-2.4**
	baz=18							
ISIG	**Siglufjorour**	**1.58**	**339**	P		**Pn**	**09 17 06.5**	**-1.7**
	baz=338							
IASM	**Asmuli**	**1.60**	**240**	P		**Pb**	**09 17 07.8**	**-1.9**
	baz=240							
BORG	**Borgarnes**	**1.65**	**274**	Pn		**Pb**	**09 17 08.0**	**-2.6**
	11nm,0.3s,baz=90,slow=6.9,SNR=62							
BORG				Sn		**Sg**	**09 17 31.6**	**-1.5**
	3.7nm,0.3s,baz=203,slow=22,SNR=8.4							
IKRO	**Krokur**	**1.68**	**252**	P		**Pb**	**09 17 08.6**	**-2.5**
	baz=252							
ISOL	**Solvholt**	**1.68**	**245**	P		**Pb**	**09 17 08.5**	**-2.5**
	baz=245							
IHEI	**Heioarbar**	**1.69**	**255**	P		**Pb**	**09 17 08.8**	**-2.5**
	baz=256							
ILEI	**Leirhofn**	**1.79**	**13**	P		**Pn**	**09 17 09.6**	**-1.4**
	baz=13							
IHRN	**Hraun**	**1.82**	**324**	P		**Pn**	**09 17 10.2**	**-1.2**
	baz=324							
SCO	**Scoresbysund**	**6.08**	**346**	*e*		**Pn**	**09 18 10.0**	**+0.1**
	baz=177,slow=7.4							
SCO				*i*	P	**Pn**	**09 18 11.0**	**+1.1**
SCO				*e*	S	**Sn**	**09 19 25.1**	**+5.6**
SCO					IAML		09 19 32.9	
	comp=Z,1.0nm,0.6s							
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn		**Pn**	**09 19 28.8**	**+1.1**
	baz=321,slow=13,SNR=6.0							
CLL	**Collm**	**20.70**	**116**	*e*	P	Pn	09 21 23.0	+0.5
BRG	**Berggiesshubel**	**21.41**	**115**	*e*	P	**P**	**09 21 29.5**	**+1.7**
	comp=Z,17nm,1.5s							
VOIR		**30.21**	**109**	⇑	P	**P**	**09 22 51.2**	**+0.8**
VRI	**Vrincioaia**	**30.55**	**106**	⇑	P	**P**	**09 22 53.2**	**-0.2**
BVAR	**Borovoye Array**	**43.19**	**62**		P	**P**	**09 24 43.2**	**+2.5**
	comp=Z,1.5nm,0.8s,baz=252,slow=28,SNR=5.4							
ILAR	**Eielson Array**	**45.68**	**332**	P		P	09 25 04.3	+3.9
	comp=Z,1.2nm,1.1s,baz=18,slow=6.6,SNR=6.7							
ILAR				PcP		**PcP**	**09 26 39.1**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=5.0,slow=4.2,SNR=4.8							
KURBB	**Kurchatov Arra**	**48.15**	**58**	P		**P**	**09 25 21.8**	**+1.9**
	comp=Z,1.8nm,0.8s,baz=325,slow=7.1,SNR=13							
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P		**P**	**09 25 58.8**	**+0.9**
	comp=Z,1.4nm,1.0s,baz=342,slow=9.8,SNR=4.5							
PDAR	**Pinedale Array**	**53.18**	**293**	P		**P**	**09 26 00.1**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=73,slow=7.0,SNR=6.5							
SONM	**Songino Array**	**59.63**	**40**	P		**P**	**09 26 45.6**	**+1.6**
	comp=Z,0.8nm,1.0s,baz=324,slow=9.0,SNR=2.9							
TXAR	**Lajitas Array**	**62.29**	**280**	P		**P**	**09 27 04.3**	**+2.1**
	comp=Z,0.6nm,1.0s,baz=48,slow=1.9,SNR=5.0							

NIC **10** *09:20:40.8±0.0, 37.˚28N×28.˚74E, h0km±3km, Ml4.5/4*
HLW **10** *09:20:40.1, 37.˚43N×28.˚74E, h25km±23km, Md4.6, Ml4.6*
ISK **10** *09:20:42.3, 37.˚

TURN					IAML			09 21 07.0	
	comp=E,6µm,0.3s								
FETY	**Fethiye**	**0.55**	**152**		PG	**Pg**		09 20 54.7	**-0.2**
FETY	**Fethiye**	**0.55**	**152**	⇑	*i*P	**Pg**		09 20 53.4	**-1.5**
FETY					*i* S	**Sb**		09 21 03.7	**-0.4**
MRSB	**Marmaris-Mugla**	**0.61**	**228**		PG	**Pg**		09 20 55.4	**-0.5**
GOLH	**Golhisar**	**0.65**	**80**	⇑	*i*P	**Pg**		09 20 54.9	**-1.9**
GOLH					*i* S	**Sb**		09 21 06.2	**-0.8**
GOLH					IAML			09 21 13.0	
	comp=N,8µm,0.6s								
MLSB	**Milas**	**0.80**	**283**		PG	**Pg**		09 20 58.6	**-1.0**
MLSB					SG	**Sg**		09 21 10.4	**+0.3**
AYDN	**Tasoluk**	**0.88**	**308**	*i*	P	**Pg**		09 20 59.9	**-1.3**
AYDN					*i* S	**Sb**		09 21 14.2	**+0.7**
AYDN					IAML			09 21 15.0	
	comp=N,6µm,0.4s								
AYDN					IAML			09 21 18.0	
	comp=E,10µm,0.7s								
DATC	**Datca-Mugla**	**0.95**	**248**		PG	**Pg**		09 21 01.6	**-0.8**
ELL	**Elmali**	**1.00**	**112**		PG	**Pg**		09 21 02.8	**-0.5**
ELL	**Elmali**	**1.00**	**112**		P	**Pg**		09 21 01.2	**-2.2**
ELL					S	**Sn**		09 21 19.3	**+0.7**
ELL	**Elmali**	**1.00**	**112**		Pg	**Pg**		09 21 01.9	**-1.4**
ARG	**Arkhangelos**	**1.04**	**209**		P	**Pg**		09 21 03.0	**-1.1**
ARG					S	**Sn**		09 21 19.4	**-0.1**
ARG					AML	AML		09 21 23.6	
	comp=E,16076µm,0.4s								
ARG					AML	AML		09 21 27.3	
	comp=N,8349µm,0.4s								
ARG	**Arkhangelos**	**1.04**	**209**		PG	**Pg**		09 21 03.2	**-0.9**
ARG	**Arkhangelos**	**1.04**	**209**	⇑	P	**Pg**		09 21 02.9	**-1.1**
ARG					S	**Sn**		09 21 22.3	**+2.8**
ARG	**Arkhangelos**	**1.04**	**209**		P	**Pg**		09 21 03.1	**-1.1**
ARG					S	**Sg**		09 21 17.8	**+0.2**
	comp=N,6µm,0.5s								
BDRM	**Kayabasi**	**1.05**	**267**	*i*	P	**Pg**		09 21 03.7	**-0.6**
BDRM				*i*	S	**Sb**		09 21 18.4	**0.0**
BDRM					IAML			09 21 24.0	
	comp=E,3µm,0.7s								
AYDB	**Zeytinkoy-Aydi**	**1.07**	**320**		PG	**Pg**		09 21 03.3	**-1.5**
AKAS	**Kas**	**1.12**	**142**		PN	**Pg**		09 21 05.5	**-0.2**
AKAS	**Kas**	**1.12**	**142**	⇑	*i*P	**Pg**		09 21 04.6	**-1.1**
AKAS					*i* S	**Sn**		09 21 27.3	**+5.5**
AKAS					IAML			09 21 29.0	
	comp=E,4µm,0.5s								
AKAS	**Kas**	**1.12**	**142**		Pg	**Pg**		09 21 05.3	**-0.4**
BODT	**Bodrum**	**1.16**	**267**		PN	**Pb**		09 21 05.6	**-0.8**
BODT	**Bodrum**	**1.16**	**267**		P	**Pb**		09 21 04.6	**-1.8**
BODT					S	**Sg**		09 21 21.4	**-0.1**
KSL	**Kastellorizon**	**1.18**	**145**		P	**Pb**		09 21 06.0	**-0.7**
KSL					S	**Sn**		09 21 23.3	**+0.4**
KSL					AML	AML		09 21 30.4	
	comp=N,11416µm,0.5s								
KSL					AML	AML		09 21 30.7	
	comp=E,17920µm,0.5s								
KSL	**Kastellorizon**	**1.18**	**145**		P	**Pb**		09 21 05.9	**-0.7**
KSL					S	**Sn**		09 21 25.8	**+2.9**
KSL	**Kastellorizon**	**1.18**	**145**		P	**Pb**		09 21 05.8	**-0.9**
YKAV	**Yalikavak-Bodr**	**1.18**	**270**		PN	**Pb**		09 21 05.7	**-1.0**
YKAV					SN	**Sn**		09 21 22.8	**-0.2**
BRDR	**BURDUR-Merkez**	**1.19**	**61**	⇑	*i*P	**Pg**		09 21 04.3	**-2.7**
BRDR					*i* S	**Sn**		09 21 24.5	**+1.2**
BRDR					IAML			09 21 27.0	
	comp=N,3µm,0.7s								
BRDR					IAML			09 21 28.0	
	comp=E,2µm,0.4s								
DEMR	**Demre-Antalya**	**1.28**	**133**		PN	**Pb**		09 21 08.3	**-0.1**
KORT	**Korkueli**	**1.28**	**95**		PN	**Pn**		09 21 08.0	**-0.3**
KORT	**Korkueli**	**1.28**	**95**	⇑	*i*P	**Pn**		09 21 07.7	**-0.6**
KORT					*i* S	**Sn**		09 21 29.8	**+4.1**
KORT					IAML			09 21 32.0	
	comp=N,3µm,0.8s								
KORT					IAML			09 21 32.0	
	comp=E,7µm,0.6s								
BASM	**Basmaki-Afyon**	**1.30**	**52**		PN	**Pn**		09 21 07.8	**-0.8**
GCAM	**G?zelcaml?**	**1.34**	**296**		PN	**Pn**		09 21 08.6	**-0.5**
GCAM					SN	**Sg**		09 21 27.7	**+0.3**
GCAM	**G?zelcaml?**	**1.34**	**296**	⇓	*i*P	**Pn**		09 21 08.1	**-0.9**
GCAM					*i* S	**Sg**		09 21 29.8	**+2.4**
GCAM					IAML			09 21 33.0	
	comp=N,5µm,0.6s								
GCAM					IAML			09 21 34.0	
	comp=E,3µm,0.4s								
KHL	**Karahalli**	**1.34**	**27**		PN	**Pn**		09 21 08.6	**-0.6**
NIS1	**Nisyros Isl.**	**1.37**	**248**		P	**Pb**		09 21 09.6	**-0.3**
NIS1					S	**Sg**		09 21 28.5	**+0.3**
NIS1					AML	AML		09 21 38.0	
	comp=E,47768µm,0.4s								
NIS1					AML	AML		09 21 41.5	
	comp=N,48008µm,0.5s								
NIS1	**Nisyros Isl.**	**1.37**	**248**		PN	**Pn**		09 21 09.3	**-0.2**
NIS1	**Nisyros Isl.**	**1.37**	**248**		P	**Pn**		09 21 08.2	**-1.3**
NIS1					S	**Sb**		09 21 25.8	**-1.7**
	comp=N,24µm,0.5s								
MANT	**Manisa**	**1.37**	**353**	⇑	*i*P	**Pn**		09 21 07.9	**-1.8**
MANT					*i* S	**Sg**		09 21 28.4	**-0.1**
MANT					IAML			09 21 33.0	
	comp=N,1µm,0.4s								
MANT					IAML			09 21 33.0	
	comp=E,2µm,0.7s								
MANT	**Manisa**	**1.37**	**353**		Pn	**Pn**		09 21 08.4	**-1.3**
KULA	**Kula-Manisa**	**1.39**	**357**		PN	**Pn**		09 21 08.4	**-1.4**
KULA	**Kula-Manisa**	**1.39**	**357**		P	**Pn**		09 21 08.2	**-1.6**
NISR	**Nisiros**	**1.40**	**249**		P	**Pn**		09 21 09.4	**-0.5**
NISR	**Nisiros**	**1.40**	**249**		P	**Pn**		09 21 08.6	**-1.3**
KOSK	**Kos Island**	**1.47**	**256**		PN	**Pn**		09 21 10.8	**0.0**
KOSK	**Kos Island**	**1.47**	**256**		P	**Pn**		09 21 08.9	**-1.9**
KOSK					S	**Sn**		09 21 29.4	**-0.8**
	comp=E,7µm,0.5s								
BCK	**Bucak**	**1.50**	**76**		PN	**Pn**		09 21 11.2	**-0.1**
AKUM	**Antalya-Kumluc**	**1.50**	**122**	⇓	*i*P	**Pg**		09 21 12.8	**-0.3**
AKUM					*i* S	**Sg**		09 21 37.4	**+4.8**
AKUM					IAML			09 21 42.0	
	comp=E,1µm,0.7s								
AKUM					IAML			09 21 45.0	
	comp=N,848nm,0.6s								
KEMT	**Kemer-ANTALYA**	**1.53**	**109**		PN	**Pb**		09 21 12.2	**-0.5**
ISP	**Isparta**	**1.57**	**63**		P	**Pn**		09 21 11.6	**-0.7**
ISP					S	**Sb**		09 21 33.1	**-0.3**
ISP					AML	AML		09 21 39.5	
	comp=E,11449µm,1.1s								
ISP					AML	AML		09 21 42.5	
	comp=N,15637µm,0.8s								
ISP	**Isparta**	**1.57**	**63**		PN	**Pn**		09 21 12.1	**-0.2**
ISP	**Isparta**	**1.57**	**63**		Pn	**Pn**		09 21 11.5	**-0.7**
KZIL	**AFYON_Kizioren**	**1.58**	**44**	⇑	*i*P	**Pn**		09 21 11.3	**-1.1**
KZIL					*i* S	**Sg**		09 21 38.2	**+3.3**
KZIL					IAML			09 21 44.0	
	comp=N,2µm,1.4s								
KZIL					IAML			09 21 48.0	
	comp=E,1µm,0.8s								
USAK	**Uak-Merkez**	**1.60**	**7**	⇑	*i*P	**Pn**		09 21 11.3	**-1.4**
USAK					*i* S	**Sg**		09 21 35.0	**-0.6**
USAK					IAML			09 21 41.0	
	comp=E,749nm,0.7s								
SMG	**Samos**	**1.64**	**291**		P	**Pn**		09 21 12.3	**-0.9**
SMG					S	**Sn**		09 21 34.3	**0.0**
SMG					AML	AML		09 21 45.5	
	comp=E,7992µm,0.6s								
SMG					AML	AML		09 21 47.3	
	comp=N,9718µm,0.4s								
SMG	**Samos**	**1.64**	**291**		P	**Pn**		09 21 12.1	**-1.0**
SMG					S	**Sn**		09 21 33.5	**-0.8**
	comp=N,4µm,0.5s								
GOMA	**Golmarmara-Man**	**1.71**	**337**		PN	**Pn**		09 21 14.2	**0.0**
DGB	**zmir**	**1.75**	**302**	⇓	*i*P	**Pn**		09 21 13.5	**-1.2**
DGB					*i* S	**Sg**		09 21 40.0	**-0.5**
DGB					IAML			09 21 47.0	
	comp=E,964nm,0.5s								
DGB					IAML			09 21 48.0	
	comp=N,1µm,0.7s								
BAGO	**Egridir - ISPA**	**1.83**	**61**	⇑	*i*P	**Pn**		09 21 15.2	**-0.7**
BAGO					*i* S	**Sg**		09 21 45.5	**+2.4**
BLCB	**Balcova**	**1.85**	**313**		PN	**Pn**		09 21 15.8	**-0.3**
BLCB	**Balcova**	**1.85**	**313**		P	**Pn**		09 21 15.3	**-0.8**
BLCB					S	**Sn**		09 21 38.0	**-1.6**
AKHS	**Akhisar**	**1.90**	**337**	⇑	*i*P	**Pn**		09 21 15.0	**-1.8**
AKHS					*i* S	**Sg**		09 21 46.4	**+1.0**
AKHS					IAML			09 21 53.0	
	comp=E,810nm,0.6s								
AKS	**Akhisar**	**1.90**	**337**		PN	**Pn**		09 21 15.7	**-1.1**
SHAP	**Saphane-Kutahy**	**1.93**	**11**		PN	**Pn**		09 21 16.9	**-0.4**
SIMA	**Simav-Kutahya**	**1.96**	**5**		PN	**Pn**		09 21 17.4	**-0.3**
GEDZ	**Gediz**	**1.99**	**15**		PN	**Pn**		09 21 17.7	**-0.3**
SHUT	**Suhut-Afyon**	**2.01**	**44**		PN	**Pn**		09 21 18.1	**-0.3**
KARP	**Karpathos**	**2.03**	**220**		P	**Pn**		09 21 19.5	**+0.8**
KARP					S	**Sn**		09 21 45.3	**+1.1**
KARP					AML	AML		09 21 55.2	
	comp=N,7695µm,0.4s								
KARP					AML	AML		09 21 58.4	
	comp=E,11008µm,0.8s								
KARP	**Karpathos**	**2.03**	**220**		PN	**Pn**		09 21 19.1	**+0.5**
KARP	**Karpathos**	**2.03**	**220**	⇑	P	**Pn**		09 21 18.7	**+0.1**
KARP					S	**Sb**		09 21 46.2	**-0.5**
KARP					AML	AML		09 21 54.8	
	comp=E,7.7nm,0.5s								
KARP					AML	AML		09 21 54.8	
	comp=E,7.7nm,0.5s								
KARP					AML	AML		09 21 57.6	
	comp=E,11nm,0.8s								
KARP					AML	AML		09 21 57.6	
	comp=E,11nm,0.8s								
KARP	**Karpathos**	**2.03**	**220**		Pn	**Pn**		09 21 19.2	**+0.5**
KARP	**Karpathos**	**2.03**	**220**		P	**Pn**		09 21 18.4	**-0.2**
KARP					S	**Sn**		09 21 44.1	**0.0**
	comp=E,5µm,0.6s								
GDZ	**Gediz**	**2.04**	**16**	*i*	P	**Pn**		09 21 17.3	**-1.6**
GDZ				*i*	S	**Sg**		09 21 50.4	**+0.5**
AFYO	**Afyonkarahisar**	**2.06**	**36**	*i*	P	**Pn**		09 21 18.2	**-0.8**
AFYO				*i*	S	**Sg**		09 21 55.3	**+4.9**
AFYO					IAML			09 21 59.0	
	comp=N,2µm,0.9s								
AFYO					IAML			09 22 05.0	
	comp=E,2µm,0.9s								
URLA	**Izmir**	**2.11**	**306**		PN	**Pn**		09 21 19.9	**+0.2**
URLA	**Izmir**	**2.11**	**306**	*i*	P	**Pn**		09 21 19.5	**-0.2**
URLA				*i*	S	**Sg**		09 21 56.2	**+4.1**
URLA					IAML			09 22 03.0	
	comp=E,573nm,0.8s								
URLA					IAML			09 22 05.0	
	comp=N,569nm,0.7s								
ZEDA	**zmir-Bergama**	**2.27**	**325**	*i*	P	**Pn**		09 21 20.7	**-1.1**
ZEDA				*i*	S	**Sg**		09 21 59.9	**+2.9**
ZEDA					IAML			09 22 07.0	
	comp=N,588nm,0.7s								
KEPZ	**Antalya-Kepez**	**2.29**	**95**	*i*	P	**Pb**		09 21 23.7	**-1.9**
KEPZ				*i*	S	**Sg**		09 21 57.9	**+0.1**
KEPZ					IAML			09 22 17.0	
	comp=E,408nm,0.9s								
CESE	**eme**	**2.29**	**302**		PN	**Pn**		09 21 22.4	**+0.3**
AMGA	**Amorgos Island**	**2.31**	**264**		P	**Pn**		09 21 22.5	**+0.1**
TVSB	**Tavsanli**	**2.39**	**13**		PN	**Pn**		09 21 22.6	**-1.0**
STEP	**BALIKESIR_Sava**	**2.39**	**340**	*i*	P	**Pn**		09 21 22.2	**-1.4**
STEP				*i*	S	**Sg**		09 22 01.5	**+0.4**
STEP					IAML			09 22 06.0	
	comp=N,1µm,0.6s								
STEP					IAML			09 22 09.0	
	comp=E,1µm,0.7s								
DKL	**Dikili**	**2.43**	**324**		PN	**Pn**		09 21 24.1	**+0.1**
SEYD	**Seydisehir-KON**	**2.47**	**83**		PN	**Pn**		09 21 25.1	**+0.4**
DST	**Dursunbey**	**2.48**	**358**		PN	**Pn**		09 21 25.2	**+0.4**
DOGA	**KONYA_Doganhis**	**2.51**	**66**	*i*	P	**Pn**		09 21 25.9	**+0.6**
DOGA				*i*	S	**Sb**		09 21 58.8	**-1.8**
ANAF	**Anafi Island**	**2.52**	**253**		P	**Pn**		09 21 25.4	**+0.2**
AUKIR	**Kırka- Seyitga**	**2.56**	**32**	*i*	P	**Pb**		09 21 30.2	**-0.2**
AUKIR				*i*	S	**Sg**		09 22 09.3	**+2.7**
APE	**Apeiranthos**	**2.58**	**270**		P	**Pn**		09 21 25.8	**-0.4**
APE	**Apeiranthos**	**2.58**	**270**		PN	**Pn**		09 21 26.6	**+0.5**
APE	**Apeiranthos**	**2.58**	**270**	⇑	P	**Pn**		09 21 24.8	**-1.4**
BALB	**Balikesir**	**2.60**	**345**		PN	**Pn**		09 21 26.7	**+0.3**
ALAN	**Alanya-ANTALYA**	**2.69**	**101**		PN	**Pn**		09 21 28.8	**+1.2**
AYVA	**Ayvalik**	**2.72**	**324**	*i*	P	**Pn**		09 21 27.6	**-0.4**
AYVA				*i*	S	**Sg**		09 22 10.4	**-1.2**
BALY	**Balya**	**2.76**	**341**	*i*	P	**Pn**		09 21 28.1	**-0.6**
THT2	**Imerovigli**	**2.76**	**257**		PN	**Pn**		09 21 29.1	**+0.5**
ZKR	**Zakros**	**2.87**	**226**		P	**Pn**		09 21 31.0	**+0.8**
ZKR					S	**Sn**		09 22 05.5	**+0.7**
ZKR					AML	AML		09 22 18.5	
	comp=N,1468µm,0.6s								
ZKR					AML	AML		09 22 19.1	
	comp=E,3986µm,0.5s								
ZKR	**Zakros**	**2.87**	**226**		PN	**Pn**		09 21 31.1	**+1.0**
CIFT	**Cifteler, Eski**	**2.88**	**38**		PN	**Pn**		09 21 30.5	**+0.2**
PRK	**Paraskevi**	**2.88**	**318**		P	**Pn**		09 21 30.5	**+0.2**
PRK	**Paraskevi**	**2.88**	**318**		P	**Pn**		09 21 29.3	**-1.0**
PRK					S	**Sn**		09 22 03.9	**-1.2**
	comp=E,2µm,0.7s								
ORLT	**Orhaneli**	**2.92**	**2**		PN	**Pn**		09 21 31.5	**+0.7**
KMER	**Konya-Meram**	**2.94**	**76**	*i*	P	**Pn**		09 21 32.3	**+1.1**
KMER				*i*	S	**Sn**		09 22 09.2	**+2.4**
AUBOZ	**BOZOYUK**	**2.96**	**19**	*i*	P	**Pn**		09 21 30.6	**-0.7**
AUBOZ				*i*	S	**Sg**		09 22 17.8	**-1.3**
GAZI	**Gazipasa**	**3.00**	**106**		PN	**Pn**		09 21 32.8	**+1.0**
GAZI	**Gazipasa**	**3.00**	**106**	*i*	P	**Pn**		09 21 33.0	**+1.2**
KDHN	**Kadinhani**	**3.00**	**61**	*i*	P	**Pn**		09 21 31.7	**-0.3**
KIZT	**Kizilcal**	**3.03**	**54**		PN	**Pn**		09 21 32.9	**+0.6**
ULDT	**Uludag**	**3.03**	**6**	*i*	P	**Pn**		09 21 31.8	**-0.7**
GONE	**Gonen-Balikesi**	**3.04**	**344**		PN	**Pn**		09 21 32.6	**+0.2**
BORA	**Eskisehir**	**3.06**	**25**	*i*	P	**Pn**		09 21 32.0	**-0.7**
LADK	**Ladik-KONYA**	**3.06**	**68**		PN	**Pn**		09 21 33.4	**+0.6**
SIGR	**SIGRI**	**3.09**	**313**		P	**Pn**		09 21 33.3	**+0.1**
SIGR	**SIGRI**	**3.09**	**313**		PN	**Pn**		09 21 33.9	**+0.8**
BAYC	**CANAKKALE_Bayr**	**3.14**	**327**	*i*	P	**Pn**		09 21 32.5	**-1.2**
NPS	**Neapolis**	**3.15**	**235**		P	**Pn**		09 21 35.0	**+1.1**
NPS					S	**Sn**		09 22 12.4	**+0.7**
NPS					AML	AML		09 22 18.4	
	comp=E,3691µm,0.4s								
NPS					AML	AML		09 22 19.9	
	comp=N,2282µm,0.7s								
IGD	**Bursa**	**3.15**	**6**	*e*	P	**Pb**		09 21 39.5	**-0.9**
SVRH	**Sivrihisar-ESK**	**3.18**	**42**		PN	**Pn**		09 21 34.9	**+0.5**
CAVI	**Cavuskoy**	**3.19**	**15**		PN	**Pn**		09 21 34.9	**+0.4**
MDNY	**Mudanya-Bursa**	**3.24**	**2**		PN	**Pn**		09 21 35.7	**+0.5**
SRCK	**Saricakaya, Es**	**3.26**	**26**		PN	**Pn**		09 21 35.1	**-0.4**
KNL	**Balıkesir**	**3.29**	**343**	*i*	P	**Pn**		09 21 35.4	**-0.4**
EDC	**Edincik**	**3.29**	**348**		PN	**Pn**		09 21 36.3	**+0.4**
LAST	**Lasithi**	**3.30**	**235**		P	**Pn**		09 21 36.9	**+0.9**
EZN	**Ezine**	**3.30**	**325**		PN	**Pn**		09 21 36.6	**+0.6**
GEMT	**Gemlik**	**3.32**	**6**		PN	**Pn**		09 21 36.9	**+0.6**
ERMK	**Ermenek**	**3.37**	**97**	*i*	P	**Pn**		09 21 40.2	**+3.1**
ERMK				*i*	S	**Sn**		09 22 20.7	**+3.4**
GPA	**Golpazari**	**3.39**	**21**		PN	**Pn**		09 21 37.8	**+0.6**
ADVT	**Abdulvahap**	**3.39**	**13**		PN	**Pn**		09 21 37.7	**+0.4**
ARMT	**Armutlu**	**3.44**	**1**		PN	**Pn**		09 21 38.7	**+0.8**
BOZC	**Bozcaada**	**3.44**	**323**		PN	**Pn**		09 21 38.5	**+0.5**
BOZC	**Bozcaada**	**3.44**	**323**	*i*	P	**Pn**		09 21 38.1	**+0.1**
HRKL	**Herakleio**	**3.46**	**240**		PN	**Pn**		09 21 39.4	**+1.2**
AUMIH	**MIHALICIK**	**3.48**	**37**	*i*	P	**Pb**		09 21 47.7	**+1.7**
AUMIH				*i*	S	**Sg**		09 22 34.7	**-1.1**
TRML	**Termal-Yalova**	**3.50**	**5**		PN	**Pn**		09 21 39.4	**+0.7**
BOZY	**Bozyazi-Mersin**	**3.54**	**105**		PN	**Pn**		09 21 40.6	**+1.3**
CFTB	**Yalova**	**3.56**	**7**		PN	**Pn**		09 21 40.4	**+0.9**
GEYV	**SAKARYA_Geyve**	**3.56**	**19**	*i*	P	**Pb**		09 21 49.0	**+1.6**
GEYV				*i*	S	**Sg**		09 22 38.6	**0.0**
GULT	**Gulveren**	**3.58**	**22**		PN	**Pn**		09 21 40.4	**+0.5**
AKMS	**Akamas**	**3.58**	**125**		P	**Pn**		09 21 40.0	**+0.2**
AKMS					AML	AML		09 22 25.7	
	comp=N,2.3nm,0.7s								
AKMS					AML	AML		09 22 26.0	
	comp=N,2.0nm,0.5s								
CHBY	**Cihanbeyli**	**3.58**	**65**		PN	**Pn**		09 21 40.6	**+0.6**
MRMT	**Marmara Adasi**	**3.59**	**346**		PN	**Pn**		09 21 39.9	**-0.2**
LPK	**Lapseki**	**3.60**	**335**		PN	**Pn**		09 21 40.7	**+0.6**
KRMN	**Karaman**	**3.60**	**88**		PN	**Pn**		09 21 41.4	**+1.2**
IDI	**Anoyia**	**3.62**	**241**		Pn	**Pn**		09 21 41.9	**+1.4**
	comp=N,43nm,0.3s,baz=56,slow=13,SNR=160								
IDI						Sn	**Sn**	09 22 25.5	**+2.1**
	comp=N,39nm,0.3s,baz=108,slow=20,SNR=2.5								
IDI						LR	LR	09 23 21.2	
	comp=N,655nm,18.6s,baz=6.5,slow=44								
IDI	**Anoyia**	**3.62**	**241**	⇑	P	**Pn**		09 21 42.5	**+2.0**
IDI	**Anoyia**	**3.62**	**241**		PN	**Pn**		09 21 41.6	**+1.1**
IDI	**Anoyia**	**3.62**	**241**		Pn	**Pn**		09 21 41.4	**+0.9**
TEKE	**Tekeli-Mersin**	**3.64**	**104**		PN	**Pn**		09 21 42.2	**+1.6**
BERE	**Bereket-Mersin**	**3.67**	**101**		PN	**Pn**		09 21 42.4	**+1.2**
ALFC	**Alefka**	**3.68**	**121**	⇓	P	**Pn**		09 21 40.3	**-0.9**
ALFC					AML	AML		09 22 27.4	
	comp=N,1.9nm,0.6s								
ALFC					AML	AML		09 22 28.3	
	comp=N,2.6nm,0.6s								
GELI	**Tayfur-Gelibol**	**3.72**	**332**		PN	**Pn**		09 21 41.7	**-0.1**
SPNC	**Sapanca-Adapaz**	**3.76**	**18**		PN	**Pn**		09 21 42.9	**+0.6**
HRT	**Hereke**	**3.76**	**11**		PN	**Pn**		09 21 42.7	**+0.3**
MAR6	**Marsite Statio**	**3.76**	**342**		PN	**Pn**		09 21 42.9	**+0.6**
RKY	**Sarkoy-Tekirda**	**3.77**	**341**		PN	**Pn**		09 21 43.1	**+0.7**
MAR3	**Marsite Statio**	**3.79**	**343**		PN	**Pn**		09 21 43.3	**+0.6**
GADA	**Gvkgeada**	**3.79**	**325**		PN	**Pn**		09 21 42.7	**0.0**
SAUV	**Serdivan-Sakar**	**3.81**	**18**		PN	**Pn**		09 21 43.8	**+0.8**
SIVA	**Sivas**	**3.83**	**238**		P	**Pn**		09 21 45.1	**+1.9**
MDUB	**Mudurnu**	**3.85**	**29**		PN	**Pn**		09 21 44.7	**+1.1**
MDUB	**Mudurnu**	**3.85**	**29**		Pn	**Pn**		09 21 44.5	**+0.9**
AKDN	**Akdeniz- Kıbrı**	**3.86**	**117**		PN	**Pn**		09 21 45.3	**+1.6**
YORU	**Yoruktepe-Mers**	**3.86**	**103**		PN	**Pn**		09 21 45.2	**+1.5**
NATA	**Nata**	**3.88**	**126**		P	**Pn**		09 21 44.1	**+0.1**
OREN	**Orenkoy-Mersin**	**3.89**	**102**		PN	**Pn**		09 21 45.5	**+1.4**
LEF	**Lefka**	**3.90**	**120**	⇓	P	**Pn**		09 21 44.1	**-0.1**
LEF	**Lefka**	**3.90**	**120**		PN	**Pn**		09 21 44.5	**+0.3**
LEF	**Lefka**	**3.90**	**120**	*i*	P	**Pn**		09 21 43.2	**-1.0**
SULT	**Sultanhani-AKS**	**3.93**	**73**		PN	**Pn**		09 21 46.1	**+1.4**
LIA	**Limnos Island**	**3.94**	**316**		P	**Pn**		09 21 44.9	**+0.2**
KAVV	**Kandilli-Istan**	**3.94**	**3**		PN	**Pn**		09 21 45.7	**+0.9**
ISK	**Istanbul-Kandi**	**3.94**	**3**		PN	**Pn**		09 21 45.6	**+0.8**
ERIK	**Erikli-Kesan**	**3.95**	**334**		PN	**Pn**		09 21 45.7	**+0.8**
AKK1	**Akkuyu-Mersin**	**3.97**	**103**		PN	**Pn**		09 21 46.7	**+1.5**
AKKU	**Akkuyu-Mersin**	**3.97**	**103**		PN	**Pn**		09 21 46.9	**+1.7**
TKR	**Tekirdag**	**3.98**	**347**		PN	**Pn**		09 21 46.1	**+0.8**
AKK2	**Akkuyu-Mersin**	**3.98**	**103**		PN	**Pn**		09 21 46.8	**+1.5**
YUVA	**Yuva-Kibriscik**	**3.99**	**34**		PN	**Pn**		09 21 46.1	**+0.6**
YESY	**Yesilyurt**	**4.02**	**79**		PN	**Pn**		09 21 47.2	**+1.2**
KEBE	**Keben-Mersin**	**4.04**	**98**		PN	**Pn**		09 21 47.6	**+1.4**
KESN	**Edirne-Kesan**	**4.04**	**337**	*i*	P	**Pn**		09 21 45.2	**-1.2**
IKL	**Isikli**	**4.06**	**101**		PN	**Pn**		09 21 47.9	**+1.5**
VAM	**Vamos**	**4.06**	**246**		P	**Pn**		09 21 48.5	**+2.0**
SAHE	**Sakarya_HENDEK**	**4.07**	**23**	*i*	P	**Pn**		09 21 46.1	**-0.5**
TISA	**Tisan-Mersin**	**4.07**	**102**		PN	**Pn**		09 21 48.1	**+1.5**
SILT	**Sile**	**4.08**	**9**		PN	**Pn**		09 21 47.6	**+0.9**
KIBS	**BOLU**	**4.08**	**35**	*i*	P	**Pn**		09 21 47.0	**+0.2**
SZAC	**Souni**	**4.10**	**124**	⇑	P	**Pn**		09 21 45.9	**-1.1**
SZAC					AML	AML		09 22 41.9	
	comp=N,1.6

AKASG	**Malin Array Be**	**13.58**	**1**	Pn		**Pn**	**09 23 56.9**	**+0.1**
	comp=N,0.7nm,0.3s,baz=180,slow=11,SNR=2.8							
VRAC	**Vranov**	**15.04**	**328**	Pn		**P**	**09 24 22.3**	**+0.1**
	comp=N,0.6nm,0.3s,baz=175,slow=13,SNR=3.9							
KEST	**Kesra**	**15.69**	**271**	Pn		**P**	**09 24 30.8**	**+1.2**
	comp=N,0.4nm,0.3s,baz=358,slow=4.5,SNR=6.7							
GERES	**GERESS Array B**	**16.05**	**322**	Pn		**P**	**09 24 35.6**	**+2.1**
	comp=N,0.2nm,0.3s,baz=125,slow=12,SNR=17							
GERES	**GERESS Array B**	**16.05**	**322**	P		**P**	**09 24 33.0**	**-0.4**
CLL	**Collm**	**18.07**	**327**	*eP*		**P**	**09 24 57.0**	**+1.3**
SENIN	**Lac Senin/Sane**	**18.43**	**307**			**Pn**	**09 25 02.8**	**+2.8**
SENIN				IAmb		IAmb	09 25 06.9	
	comp=Z,24nm,1.4s							
GEYT	**Alibeck**	**23.26**	**79**	LR		LR	09 37 13.1	
	comp=Z,47nm,18.3s,baz=245,slow=43							
FINES	**FINESS Array B**	**24.40**	**357**	P		**P**	**09 26 03.1**	**+0.6**
	comp=Z,6.7nm,0.7s,baz=164,slow=10,SNR=14							
FIA1	**FINESS Array S**	**24.40**	**357**	P		**P**	**09 26 03.5**	**+0.9**
FIA1				IAmb		IAmb	09 26 06.2	
	comp=Z,7.0nm,0.8s							
TAM	**Tamanrasset**	**24.60**	**241**	P		**P**	**09 26 03.9**	**-0.9**
TAM				IAmb		IAmb	09 26 07.2	
	comp=Z,10nm,1.0s							
AKTO	**Aktyubinsk**	**24.78**	**48**	P		**P**	**09 26 05.0**	**-1.1**
	comp=Z,3.6nm,0.7s,baz=258,slow=10,SNR=6.7							
HFS	**Hagfors**	**24.96**	**342**	LR		LR	09 38 00.1	
	comp=Z,170nm,18.4s,baz=158,slow=41							
ABKAR	**Akbulak array**	**25.58**	**52**	P		**P**	**09 26 12.3**	**-1.0**
ABKAR	**Akbulak array**	**25.58**	**52**	P		**P**	**09 26 11.3**	**-2.0**
ESDC	**Sonseca Array**	**25.69**	**286**	P		**P**	**09 26 14.2**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=74,slow=10,SNR=9.7							
ESDC	**Sonseca Array**	**25.69**	**286**	IAmb		IAmb	09 26 15.8	
	comp=Z,12nm,1.4s							
NOA	**NORSAR Array B**	**26.38**	**341**	P		**P**	**09 26 21.0**	**+0.5**
	comp=Z,2.1nm,1.2s,baz=141,slow=11,SNR=2.1							
NOA				LR		LR	09 37 21.0	
	comp=Z,31nm,21.2s,baz=135,slow=38							
ARU	**Arti**	**27.75**	**36**	LR		LR	09 40 31.7	
	comp=Z,90nm,18.8s,baz=212,slow=43							
EKA	**Eskdalemuir Ar**	**28.25**	**320**	P		**P**	**09 26 39.7**	**+2.4**
	comp=Z,0.8nm,0.7s,baz=128,slow=6.6,SNR=2.3							
ARCES	**ARCESS Array B**	**32.52**	**358**	P		**P**	**09 27 15.4**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=173,slow=10.0,SNR=4.7							
ARCES				LR		LR	09 42 07.1	
	comp=Z,50nm,19.2s,baz=160,slow=39							
TOA0	**Torodi Ar. Sit**	**33.99**	**232**	P		**P**	**09 27 27.5**	**-0.8**
TOA0				IAmb		IAmb	09 27 28.8	
	comp=Z,4.9nm,0.7s							
TORD	**Torodi Ar. Bea**	**33.99**	**232**	P		**P**	**09 27 27.4**	**-0.9**
	comp=Z,2.5nm,0.4s,baz=33,slow=8.9,SNR=36							
TORD	**Torodi Ar. Bea**	**33.99**	**232**	P		**P**	**09 27 27.4**	**-0.9**
KOWA	**Kowa**	**36.83**	**241**	P		**P**	**09 27 50.5**	**-2.2**
	comp=Z,1.0nm,0.3s,baz=60,slow=8.6,SNR=3.6							
DBIC	**Dimbokro**	**43.07**	**234**	P		**P**	**09 28 43.6**	**-0.9**
	comp=Z,4.0nm,0.6s,baz=27,slow=9.4,SNR=5.7							
DBIC	**Dimbokro**	**43.07**	**234**	P		**P**	**09 28 43.7**	**-0.9**
TLY	**Talaya**	**53.13**	**49**	LR		LR	09 54 44.7	
	comp=Z,42nm,19.7s,baz=358,slow=38							
SONM	**Songino Array**	**55.99**	**53**	P		**P**	**09 30 23.1**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=298,slow=6.2,SNR=2.1							
ILAR	**Eielson Array**	**78.38**	**358**	P		**P**	**09 32 44.4**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=325,slow=4.3,SNR=6.2							
BDFB	**Brasilia**	**89.13**	**250**	P		**P**	**09 33 41.0**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=101,slow=5.2,SNR=4.3							

*IDC **10** 09:22:25.8±1.5, 37.03N×28.95E, h0km, mb4.1/2, mb1 4.0/6, mb1mx3.6/55, mbtmp4.0/6, ML3.8/3, Error ellipse: s-maj=30.4km s-min=23.1km az=142.0*
*DDA **10** 09:22:26.1, 37.13N×28.78E, h7km±2km, ML3.2*
*ISK **10** 09:22:26.6, 37.16N×28.73E, h3km, ML3.7/22*
ISC 10 09:22:26.6±1.1, 37.15N±0.02×28.77E±0.02, h3km±9km, n54, σ0 93/65, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TAVA	**DENIZLI_Tavas**	**0.33**	**21**	*i* P		**Pg**	**09 22 33.1**	**+0.1**
TAVA				*i* S		**Sg**	**09 22 38.1**	**+0.7**
DALY	**Dalyan (Mula)**	**0.35**	**195**	PG		**Pg**	**09 22 33.4**	**+0.2**
DALY	**Dalyan (Mula)**	**0.35**	**195**	*i* P		**Pg**	**09 22 33.4**	**+0.2**
DALY				IAML			09 22 44.0	
	comp=N,3μm,0.7s							
DALY				IAML			09 22 45.0	
	comp=E,2μm,0.4s							
YER	**Yerkesik**	**0.39**	**267**	PG		**Pg**	**09 22 34.4**	**+0.4**
YER				SG		**Sg**	**09 22 40.3**	**+1.3**
CAME	**Cameli-Denizli**	**0.48**	**116**	PG		**Pb**	**09 22 37.4**	**-0.3**
TURN	**Turunc**	**0.56**	**228**	PG		**Pb**	**09 22 37.9**	**-1.2**
TURN				SG		**Sb**	**09 22 46.3**	**-1.2**
TURN	**Turunc**	**0.56**	**228**	*i* P		**Pg**	**09 22 37.1**	**-0.2**
TURN				*i* S		**Sb**	**09 22 45.9**	**-1.6**
TURN				IAML			09 22 50.0	
	comp=N,1μm,0.6s							
TURN				IAML			09 22 52.0	
	comp=E,1μm,0.7s							
FETY	**Fethiye**	**0.58**	**154**	PG		**Pb**	**09 22 39.1**	**-0.2**
FETY	**Fethiye**	**0.58**	**154**	*i* P		**Pg**	**09 22 37.4**	**-0.2**
FETY				*i* S		**Sg**	**09 22 44.9**	**-0.2**
FETY				IAML			09 22 48.0	
	comp=E,781nm,1.2s							
FETY				IAML			09 22 52.0	
	comp=N,429nm,0.7s							
MRSB	**Marmaris-Mugla**	**0.63**	**226**	PG		**Pg**	**09 22 38.9**	**+0.2**
GOLH	**Golhisar**	**0.64**	**82**	*i* P		**Pg**	**09 22 38.4**	**-0.4**
GOLH				IAML			09 22 48.0	
	comp=E,4μm,0.8s							
GOLH				IAML			09 22 51.0	
	comp=N,2μm,0.9s							
MLSB	**Milas**	**0.80**	**280**	PG		**Pg**	**09 22 42.3**	**+0.3**
DATC	**Datca-Mugla**	**0.97**	**246**	PG		**Pb**	**09 22 45.5**	**-0.5**
ELL	**Elmali**	**1.00**	**113**	PG		**Pn**	**09 22 47.2**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**319**	PG		**Pg**	**09 22 47.1**	**+0.3**
BDRM	**Kayabasi**	**1.06**	**266**	*i* P		**Pb**	**09 22 47.0**	**-0.6**
BDRM				*i* S		**Sb**	**09 23 02.5**	**+0.7**
BDRM				IAML			09 23 08.0	
	comp=E,792nm,0.4s							
ARG	**Arkhangelos**	**1.07**	**209**	PG		**Pn**	**09 22 47.7**	**-0.7**
AKAS	**Kas**	**1.14**	**143**	PN		**Pn**	**09 22 49.6**	**+0.1**
AKAS	**Kas**	**1.14**	**143**	*i* P		**Pn**	**09 22 51.0**	**+1.5**
AKAS				*i* S		**Sn**	**09 23 09.3**	**+3.6**
BRDR	**BURDUR-Merkez**	**1.17**	**62**	*i* P		**Pn**	**09 22 49.1**	**-0.7**
BRDR				*i* S		**Sn**	**09 23 06.6**	**+0.3**
BRDR				IAML			09 23 09.0	
	comp=E,607nm,0.9s							
BRDR				IAML			09 23 13.0	
	comp=N,670nm,0.7s							
BODT	**Bodrum**	**1.17**	**266**	PN		**Pb**	**09 22 49.1**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.19**	**269**	PN		**Pb**	**09 22 49.4**	**-0.3**
BASM	**Basmaki-Afyon**	**1.27**	**53**	PN		**Pn**	**09 22 51.5**	**+0.1**
KORT	**Korkueli**	**1.28**	**96**	PN		**Pn**	**09 22 52.3**	**+0.9**
DEMR	**Demre-Antalya**	**1.29**	**135**	PN		**Pn**	**09 22 52.7**	**+1.2**
KHL	**Karahalli**	**1.31**	**27**	PN		**Pb**	**09 22 52.6**	**+0.7**
GCAM	**G?zelcaml?**	**1.34**	**295**	PN		**Pb**	**09 22 52.5**	**+0.2**
GCAM	**G?zelcaml?**	**1.34**	**295**	*i* P		**Pn**	**09 22 51.7**	**-0.4**
GCAM				*i* S		**Sn**	**09 23 10.8**	**+0.4**
GCAM				IAML			09 23 16.0	
	comp=E,722nm,0.5s							
GCAM				IAML			09 23 16.0	
	comp=N,835nm,0.9s							
MANT	**Manisa**	**1.35**	**353**	*i* P		**Pn**	**09 22 51.2**	**-1.3**
MANT				*i* S		**Sg**	**09 23 09.3**	**-0.5**
MANT				IAML			09 23 16.0	
	comp=E,421nm,0.5s							
MANT				IAML			09 23 16.0	
	comp=N,528nm,0.4s							
KULA	**Kula-Manisa**	**1.36**	**357**	PN		**Pb**	**09 22 52.7**	**-0.1**
NIS1	**Nisyros Isl.**	**1.39**	**247**	PN		**Pg**	**09 22 53.2**	**+0.1**
BCK	**Bucak**	**1.48**	**58**	PN		**Pg**	**09 22 55.2**	**+0.2**
KOSK	**Kos Island**	**1.49**	**255**	PN		**Pb**	**09 22 54.6**	**-0.2**
AKUM	**Antalya-Kumluc**	**1.51**	**123**	*i* P		**Pg**	**09 22 55.0**	**-0.5**
AKUM				IAML			09 23 22.0	
	comp=N,259nm,0.7s							
AKUM				IAML			09 23 22.0	
	comp=E,359nm,0.9s							
KEMT	**Kemer-ANTALYA**	**1.54**	**110**	PN		**Pg**	**09 22 56.7**	**+0.7**
ISP	**Isparta**	**1.55**	**64**	PN		**Pg**	**09 22 55.8**	**-0.4**
KZIL	**AFYON_Kizioren**	**1.55**	**44**	*i* P		**Pn**	**09 22 54.9**	**-0.3**
KZIL				IAML			09 23 25.0	
	comp=E,513nm,0.7s							
KZIL				IAML			09 23 28.0	
	comp=N,495nm,1.0s							
USAK	**Uak-Merkez**	**1.57**	**7**	*i* P		**Pn**	**09 22 55.4**	**-0.1**
USAK				IAML			09 23 22.0	
	comp=E,259nm,1.1s							
USAK				IAML			09 23 26.0	
	comp=N,174nm,0.8s							
GOMA	**Golmarmara-Man**	**1.69**	**337**	PN		**Pb**	**09 22 57.6**	**-0.7**
DGB	**zmir**	**1.75**	**302**	*i* P		**Pn**	**09 22 57.3**	**-0.4**
BAGO	**Egridir - ISPA**	**1.81**	**62**	*i* P		**Pn**	**09 22 58.2**	**-0.6**
BLCB	**Balcova**	**1.84**	**313**	PN		**Pn**	**09 22 59.6**	**+0.6**
AKS	**Akhisar**	**1.88**	**337**	PN		**Pn**	**09 23 00.3**	**+0.7**
SIMA	**Simav-Kutahya**	**1.94**	**5**	PN		**Pb**	**09 23 01.3**	**-1.2**
GEDZ	**Gediz**	**1.96**	**15**	PN		**Pb**	**09 23 01.7**	**-1.2**
SHUT	**Suhut-Afyon**	**1.99**	**45**	PN		**Pb**	**09 23 02.3**	**-1.1**
GDZ	**Gediz**	**2.01**	**16**	*i* P		**Pn**	**09 23 01.5**	**-0.1**
KARP	**Karpathos**	**2.06**	**219**	PN		**Pb**	**09 23 03.0**	**-1.6**
IDI	**Anoyia**	**3.65**	**240**	Pn		**Pn**	**09 23 25.4**	**+1.4**
	baz=51,slow=16,SNR=2.4							
IDI				Sn		**Sn**	**09 24 06.8**	**-0.7**
	baz=298,slow=18,SNR=1.9							
BRTR	**Keskin Array B**	**4.61**	**55**	Pn		**Pn**	**09 23 38.4**	**+1.1**
	comp=N,5.8nm,0.3s,baz=237,slow=17,SNR=7.1							
MMAI	**Mount Meron Ar**	**6.83**	**125**	Pn		**Pn**	**09 24 05.7**	**-2.0**
	comp=N,2.5nm,0.3s,baz=302,slow=12,SNR=1.7							
GERES	**GERESS Array B**	**16.03**	**322**	Pn		**P**	**09 26 18.3**	**+1.8**
	comp=N,0.1nm,0.3s,baz=128,slow=11,SNR=2.5							
FINES	**FINESS Array B**	**24.37**	**357**	P		**P**	**09 27 45.4**	**-0.3**
	comp=N,3.2nm,0.7s,baz=159,slow=12,SNR=3.5							
TORD	**Torodi Ar. Bea**	**34.01**	**232**	P		**P**	**09 29 10.9**	**-0.9**
	comp=N,1.0nm,0.4s,baz=36,slow=9.0,SNR=4.2							

*IDC **10** 09:23:29.0±1.4, 37.09N×28.85E, h0km, mb4.0/2, mb1 4.0/5, mb1mx3.5/52, mbtmp4.1/5, ML4.1/3, Error ellipse: s-maj=36.1km s-min=18.2km az=144.0*
*DDA **10** 09:23:28.8, 37.13N×28.73E, h7km±2km, ML3.1*
*ISK **10** 09:23:29.7, 37.11N×28.73E, h1km, ML3.6/32*
ISC 10 09:23:30.1±1.1, 37.14N±0.02×28.75E±0.02, h2km±9km, n56, σ1 900/69, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DALY	**Dalyan (Mula)**	**0.33**	**193**	PG		**Pg**	**09 23 36.3**	**-0.1**
DALY	**Dalyan (Mula)**	**0.33**	**193**	*i* P		**Pg**	**09 23 35.9**	**-0.5**
TAVA	**DENIZLI_Tavas**	**0.35**	**22**	*i* P		**Pg**	**09 23 35.5**	**-1.4**
TAVA				IAML			09 23 41.0	
	comp=E,4μm,0.6s							
TAVA				IAML			09 23 41.0	
	comp=N,4μm,0.3s							
TAVA				*i* S		**Sg**	**09 23 41.4**	**-0.1**
YER	**Yerkesik**	**0.37**	**269**	PG		**Pg**	**09 23 37.7**	**+0.5**
YER				SG		**Sg**	**09 23 43.7**	**+1.7**
CAME	**Cameli-Denizli**	**0.49**	**114**	PG		**Pg**	**09 23 40.2**	**+0.7**
TURN	**Turunc**	**0.54**	**228**	PG		**Pg**	**09 23 40.7**	**+0.2**
TURN				SG		**Sb**	**09 23 48.7**	**-1.8**
TURN	**Turunc**	**0.54**	**228**	*i* P		**Pg**	**09 23 39.6**	**-0.9**
TURN				IAML			09 23 51.0	
	comp=E,1μm,0.4s							
TURN				IAML			09 23 52.0	
	comp=N,1μm,0.6s							
FETY	**Fethiye**	**0.57**	**152**	PG		**Pg**	**09 23 41.3**	**+0.2**
FETY	**Fethiye**	**0.57**	**152**	*i* P		**Pg**	**09 23 40.2**	**-0.9**
FETY				*i* S		**Sg**	**09 23 48.1**	**-0.3**
FETY				IAML			09 23 51.0	
	comp=N,449nm,0.8s							
FETY				IAML			09 23 52.0	
	comp=E,357nm,0.3s							
MRSB	**Marmaris-Mugla**	**0.61**	**226**	PG		**Pg**	**09 23 41.9**	**+0.1**
GOLH	**Golhisar**	**0.66**	**81**	*i* P		**Pg**	**09 23 42.1**	**-0.7**
GOLH				IAML			09 23 51.0	
	comp=E,1μm,1.6s							
GOLH				*i* S		**Sg**	**09 23 52.0**	**+0.7**
GOLH				IAML			09 23 55.0	
	comp=N,1μm,0.5s							
MLSB	**Milas**	**0.79**	**282**	PG		**Pg**	**09 23 45.8**	**+0.6**
DATC	**Datca-Mugla**	**0.95**	**247**	PG		**Pb**	**09 23 48.6**	**-0.7**
ELL	**Elmali**	**1.01**	**112**	PG		**Pb**	**09 23 50.4**	**0.0**
BDRM	**Kayabasi**	**1.04**	**266**	*i* P		**Pg**	**09 23 49.3**	**-0.8**
BDRM				IAML			09 24 07.0	
	comp=E,366nm,0.4s							
ARG	**Arkhangelos**	**1.05**	**209**	PG		**Pg**	**09 23 50.1**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**320**	PG		**Pb**	**09 23 51.3**	**+0.1**
AKAS	**Kas**	**1.14**	**142**	PN		**Pb**	**09 23 52.1**	**-0.5**
AKAS	**Kas**	**1.14**	**142**	*i* P		**Pn**	**09 23 53.6**	**+0.4**
AKAS				*i* S		**Sn**	**09 24 11.4**	**+2.0**
BODT	**Bodrum**	**1.15**	**267**	PN		**Pb**	**09 23 52.5**	**-0.2**
YKAV	**Yalikavak-Bodr**	**1.17**	**270**	PN		**Pb**	**09 23 52.9**	**-0.2**
BRDR	**BURDUR-Merkez**	**1.19**	**62**	*i* P		**Pg**	**09 23 53.3**	**+0.5**
BRDR				*i* S		**Sg**	**09 24 06.6**	**-1.7**
BRDR				IAML			09 24 12.0	
	comp=E,464nm,0.5s							
BRDR				IAML			09 24 13.0	
	comp=N,483nm,0.5s							
KORT	**Korkueli**	**1.29**	**96**	PN		**Pg**	**09 23 55.5**	**+0.6**
BASM	**Basmaki-Afyon**	**1.30**	**53**	PN		**Pg**	**09 23 55.8**	**+0.8**
DEMR	**Demre-Antalya**	**1.30**	**134**	PN		**Pg**	**09 23 55.2**	**+0.2**
GCAM	**G?zelcaml?**	**1.33**	**295**	PN		**Pg**	**09 23 56.1**	**+0.5**
GCAM	**G?zelcaml?**	**1.33**	**295**	*i* P		**Pn**	**09 23 54.9**	**-0.7**
GCAM				*i* S		**Sb**	**09 24 12.7**	**-0.5**
GCAM				IAML			09 24 18.0	
	comp=E,414nm,0.5s							
GCAM				IAML			09 24 19.0	
	comp=N,509nm,0.5s							
KHL	**Karahalli**	**1.33**	**27**	PN		**Pg**	**09 23 56.7**	**+1.0**
MANT	**Manisa**	**1.36**	**354**	*i* P		**Pn**	**09 23 53.8**	**-2.5**
MANT				*i* S		**Sb**	**09 24 12.6**	**-1.7**
MANT				IAML			09 24 16.0	
	comp=E,193nm,0.5s							
MANT				IAML			09 24 20.0	
	comp=N,283nm,0.3s							
NIS1	**Nisyros Isl.**	**1.37**	**247**	PN		**Pg**	**09 23 56.3**	**0.0**
KULA	**Kula-Manisa**	**1.37**	**357**	PN		**Pn**	**09 23 56.5**	**+0.1**
KOSK	**Kos Island**	**1.47**	**255**	PN		**Pb**	**09 23 57.8**	**-0.3**
BCK	**Bucak**	**1.50**	**77**	PN		**Pb**	**09 23 58.9**	**+0.1**
AKUM	**Antalya-Kumluc**	**1.52**	**122**	*i* P		**Pg**	**09 23 59.8**	**+0.6**
AKUM				*i* S		**Sg**	**09 24 20.2**	**+1.2**
AKUM				IAML			09 24 25.0	
	comp=E,327nm,0.9s							
AKUM				IAML			09 24 27.0	
	comp=N,271nm,0.7s							
KEMT	**Kemer-ANTALYA**	**1.55**	**110**	PN		**Pb**	**09 23 59.3**	**-0.2**
ISP	**Isparta**	**1.57**	**64**	PN		**Pn**	**09 23 59.1**	**0.0**
KZIL	**AFYON_Kizioren**	**1.57**	**44**	*i* P		**Pn**	**09 23 58.8**	**-0.4**
KZIL				*i* S		**Sg**	**09 24 21.4**	**+0.8**
KZIL				IAML			09 24 28.0	
	comp=E,322nm,0.7s							
KZIL				IAML			09 24 31.0	
	comp=N,333nm,0.8s							
GOMA	**Golmarmara-Man**	**1.70**	**338**	PN		**Pb**	**09 24 01.7**	**-0.3**
BLCB	**Balcova**	**1.83**	**313**	PN		**Pn**	**09 24 03.5**	**+0.8**
AKS	**Akhisar**	**1.89**	**337**	PN		**Pn**	**09 24 04.5**	**+1.1**
SIMA	**Simav-Kutahya**	**1.95**	**5**	PN		**Pn**	**09 24 05.5**	**+1.2**
GEDZ	**Gediz**	**1.97**	**15**	PN		**Pn**	**09 24 05.8**	**+1.2**
SHUT	**Suhut-Afyon**	**2.01**	**45**	PN		**Pn**	**09 24 06.2**	**+1.0**
KARP	**Karpathos**	**2.04**	**219**	PN		**Pn**	**09 24 05.9**	**+0.4**
URLA	**Izmir**	**2.10**	**306**	PN		**Pn**	**09 24 07.2**	**+0.9**
TVSB	**Tavsanli**	**2.37**	**14**	PN		**Pn**	**09 24 11.6**	**+1.4**
DKL	**Dikili**	**2.41**	**324**	PN		**Pn**	**09 24 11.9**	**+1.3**
SEYD	**Seydisehir-KON**	**2.48**	**83**	PN		**Pn**	**09 24 12.7**	**+1.1**
BALB	**Balikesir**	**2.59**	**345**	PN		**Pn**	**09 24 14.9**	**+1.9**
ALAN	**Alanya-ANTALYA**	**2.70**	**101**	PN		**Pn**	**09 24 15.8**	**+1.3**
ZKR	**Zakros**	**2.88**	**226**	PN		**Pn**	**09 24 17.8**	**+0.8**
IDI	**Anoyia**	**3.62**	**240**	Pn		**Pn**	**09 24 28.5**	**+1.2**
	comp=N,11nm,0.3s,baz=45,slow=15,SNR=3.4							
IDI				Sn		**Sn**	**09 25 13.0**	**+2.3**
	comp=N,6.9nm,0.3s,baz=312,slow=15,SNR=2.2							
BRTR	**Keskin Array B**	**4.63**	**55**	Pn		**Pn**	**09 24 41.3**	**+0.1**
	comp=N,6.6nm,0.3s,baz=239,slow=17,SNR=12							
BRTR				Sn		**Sn**	**09 25 35.1**	**-0.4**
	comp=N,0.8nm,0.3s,baz=217,slow=22,SNR=2.9							
MMAI	**Mount Meron Ar**	**6.83**	**125**	Pn		**Pn**	**09 25 10.0**	**-1.5**
	comp=N,6.0nm,0.3s,baz=306,slow=12,SNR=4.9							
FINES	**FINESS Array B**	**24.39**	**357**	P		**P**	**09 28 49.6**	**+0.1**
	comp=N,2.7nm,0.8s,baz=165,slow=11,SNR=3.7							
TORD	**Torodi Ar. Bea**	**33.99**	**232**	P		**P**	**09 30 13.8**	**-1.5**
	comp=N,1.1nm,0.4s,baz=34,slow=8.8,SNR=7.2							

IDC 10 09:25:44.9±3.0, 54.48N×86.63E, h0km, mb1 3.3/2, mb1mx3.1/53, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=25.4km s-min=16.6km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.19**	**244**	*i*			09 32 48.3	
	baz=64,slow=335,SNR=4.7							
ZALV	**Zalesovo Beam**	**1.19**	**244**	Pg		Pg	09 26 06.0	-1.6
	2.0nm,0.3s,baz=63,slow=17,SNR=14							
ZALV				Lg		Lg	09 26 23.7	
	1.6nm,0.3s,baz=61,slow=26,SNR=7.1							
KURBB	**Kurchatov Arra**	**6.27**	**235**	Pn		Pn	09 27 19.5	+1.0
	0.1nm,0.3s,baz=53,slow=14,SNR=13							
KURBB				Lg		Lg	09 29 06.1	
	0.0nm,0.3s,baz=52,slow=29,SNR=5.0							
MKAR	**Makanchi Array**	**8.17**	**201**	Pn		Pn	09 27 45.5	+0.9
	0.4nm,0.3s,baz=25,slow=13,SNR=13							
MKAR				Lg		Lg	09 30 03.6	
	baz=30,slow=29,SNR=2.4							

*NIED **10** 09:26:30.1, 46.89N×153.11E, h30km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.34; $M_{\theta\theta}$-0.75; $M_{\phi\phi}$0.41; $M_{r\theta}$-0.57; $M_{\theta\phi}$-0.35; $M_{\phi r}$0.43; Fault plane solution: $M_0$1.03000×10^{15} NP1: ϕ_s293.00000°, δ77.00000°, λ131.00000°. NP2: ϕ_s37.00000°, δ43.00000°, λ19.00000°.*
*JMA **10** 09:26:30.1±0.8, 46.89N×153.11E, h30km, M4.6*
*SKHL **10** 09:26:33.7±0.1, 46.78N×152.93E, h74km±6km, mb5.0/5*
*MOS **10** 09:26:33.4±0.8, 46.87N×152.78E, h69km, mb4.4/1, Error ellipse: s-maj=17.5km s-min=8.2km az=60.4*
*NEIC **10** 09:26:37.4±2.6, 46.9N±0.1×152.8E±0.2, h86km±7km, mb4.0/4, Error ellipse: s-maj=26.9km s-min=11.7km az=129.0*
*IDC **10** 09:26:37.4±2.5, 46.93N×152.71E, h85km±22km, mb3.6/12, mb1 3.9/16, mb1mx3.7/56, mbtmp4.0/16, MS2.9/6, Ms1 2.9/6, ms1mx2.7/47, Error ellipse: s-maj=20.4km s-min=14.7km az=138.0*
ISC 10 09:26:32.2±0.7, 46.55N±0.09×153.18E±0.09, h50km, n78, σ2 905/85, mb3.9/14, 2C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**3.94**	**252**	*i* P		**Pn**	**09 27 30.7**	**+0.6**
KUR				AMB		AMB	09 27 31.8	
	130nm,0.9s							
KUR				*i* S		**Sn**	**09 28 13.5**	**-1.4**
KUR				A		A	09 28 19.3	
	290nm,0.6s							
KUR				A		A	09 28 19.3	
	380nm,0.6s							
KUR	**Kuril'sk**	**3.94**	**252**	*d* iPN		**Pn**	**09 27 31.3**	**+1.2**
KUR				*i* S		**Sn**	**09 28 18.4**	**+3.5**
KUR				pmax		pmax		
	comp=Z,197nm,0.4s							
KUR				pmax		pmax		
	comp=N,70nm,0.3s							
KUR				pmax		pmax		
	comp=E,19nm,0.1s							
KUR				pmax		pmax		
	comp=Z,248nm,1.1s							
KUR				smax		smax		
	comp=E,466nm,1.2s							
KUR				smax		smax		
	comp=N,552nm,0.9s							
KUR				smax		smax		
	comp=E,287nm,0.5s							
KUR				smax		smax		
	comp=N,456nm,0.4s							
SKR	**Severo-Kuril's**	**4.58**	**24**	*eP*		**Pn**	**09 27 39.0**	**+0.2**
SKR				AMB		AMB	09 27 40.0	
	comp=N,155nm,0.5s							
SKR				*eS*		**Sn**	**09 28 27.9**	**-2.7**
SKR				A		A	09 28 48.0	
	comp=N,216nm,0.8s							
SKR				A		A	09 28 48.0	
	comp=N,192nm,0.8s							
SKR	**Severo-Kuril's**	**4.58**	**24**	*e*PN		**Pn**	**09 27 39.0**	**+0.2**
SKR				*eS*		**Sn**	**09 28 27.9**	**-2.7**
SKR				pmax		pmax		
	comp=Z,155nm,0.5s							
SKR				smax		smax		
	comp=N,216nm,0.8s							
SKR				smax		smax	

JFR	**Furan**	**8.25**	**250**	P	**Pn**	**09 28 30.0**	**+0.8**
ERM	**Erimo**	**8.50**	**241**	PN	**Pn**	**09 28 34.5**	**+2.0**
ERM	**Erimo**	**8.50**	**241**	Pn	**Pn**	**09 28 34.5**	**+2.0**
JEM	**Erimo**	**8.50**	**241**	Pn	Pn	09 28 27.5	-5.1
JRBN	**Rebuntou**	**8.52**	**267**	P	**Pn**	**09 28 35.0**	**+2.2**
JBT2	**Biratori 2**	**8.58**	**248**	P	**Pn**	**09 28 33.4**	**-0.3**
JNBK	**Urakawa-nobuka**	**8.60**	**244**	P	**Pn**	**09 28 32.8**	**-1.1**
JNBK				*e*S	**Sn**	**09 30 04.4**	**-5.0**
JNB	**Noboribetsu**	**9.58**	**249**	P	**Pn**	**09 28 47.4**	**0.0**
JYM2	**Yakumo 2**	**10.19**	**249**	P	**Pn**	**09 28 55.0**	**-0.7**
JANG	**Nango**	**10.48**	**238**	P	**Pn**	**09 28 55.9**	**-3.8**
JANG				*e*S	Sn	09 30 45.9	-10
JRG	**Rokugo**	**11.63**	**237**	P	**Pn**	**09 29 13.4**	**-2.1**
MA2	**Magadan**	**13.13**	**355**	P	**Pn**	**09 29 34.6**	**-1.1**
	comp=N,4.2nm,0.3s,baz=166,slow=11,SNR=10.0						
MA2				LR	LR	09 33 59.7	
	comp=N,65nm,21.3s,baz=166,slow=35						
KLR	**Kul'dur**	**14.62**	**288**	LR	LR	09 35 22.3	
	comp=N,32nm,19.0s,baz=42,slow=37						
MJAR	**Matsushiro Arr**	**14.99**	**234**	P	**P**	**09 30 06.0**	**+0.6**
	comp=N,0.1nm,0.3s,baz=52,slow=13,SNR=5.0						
MJAR				LR	LR	09 36 07.3	
	comp=N,42nm,18.6s,baz=350,slow=38						
MAJO	**Matsushiro**	**15.00**	**234**	P	**P**	**09 30 05.2**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MAJO	**Matsushiro**	**15.00**	**234**	Pn	**P**	**09 30 05.2**	**-0.2**
MAJO				IAmb	IAmb	09 30 20.7	
	comp=Z,9.8nm,0.9s						
SEY	**Seymchan**	**16.43**	**359**	P	**P**	**09 30 20.5**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=182,slow=13,SNR=9.3						
SEY				LR	LR	09 36 38.3	
	comp=Z,95nm,20.9s,baz=308,slow=38						
JHJ	**Hachijo jima 2**	**16.87**	**222**	LR	LR	09 36 40.0	
	comp=Z,24nm,20.6s,baz=275,slow=36						
KSRS	**Korea Array**	**20.78**	**253**	P	Pn	09 31 13.6	+1.7
	comp=Z,0.7nm,0.6s,baz=58,slow=10,SNR=2.7						
JNU	**Nakatsue**	**21.66**	**240**	P	**P**	**09 31 24.1**	**+5.7**
	comp=Z,16nm,1.0s,baz=124,slow=7.3,SNR=3.1						
H11N2	**WAKE ISLAND Hy**	**29.02**	**153**	T	T	10 03 43.7	
	baz=340,slow=76,SNR=1522						
H11N1	**WAKE ISLAND Hy**	**29.03**	**153**	T	T	10 03 45.4	
	baz=340,slow=76,SNR=1014						
H11N3	**WAKE ISLAND Hy**	**29.03**	**153**	T	T	10 03 42.5	
	baz=340,slow=76,SNR=749						
H11S1	**WAKE ISLAND Hy**	**30.10**	**154**	T	T	10 05 02.8	
	baz=341,slow=76,SNR=1070						
H11S3	**WAKE ISLAND Hy**	**30.11**	**154**	T	T	10 04 58.9	
	baz=341,slow=76,SNR=1076						
H11S2	**WAKE ISLAND Hy**	**30.12**	**154**	T	T	10 04 58.9	
	baz=341,slow=76,SNR=854						
IMAR	**Indian Mountai**	**33.91**	**36**	P	**P**	**09 33 09.7**	**-0.2**
ILAR	**Eielson Array**	**36.68**	**38**	P	**P**	**09 33 34.5**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=258,slow=7.1,SNR=12						
BCAR	**Beaver Creek A**	**39.02**	**41**	P	**P**	**09 33 55.4**	**+1.9**
INK	**Inuvik**	**41.80**	**32**	P	**P**	**09 34 17.6**	**+1.3**
	comp=Z,2.1nm,0.6s,baz=302,slow=8.3,SNR=14						
INK	**Inuvik**	**41.80**	**32**	P	**P**	**09 34 17.3**	**+1.0**
INK	**Inuvik**	**41.80**	**32**	P	**P**	**09 34 17.3**	**+1.0**
MKAR	**Makanchi Array**	**47.08**	**298**	P	**P**	**09 34 58.1**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=72,slow=9.4,SNR=2.7						
MKAR				PcP	**PcP**	**09 36 28.5**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=63,slow=4.2,SNR=2.0						
NVAR	**Mina Array Bea**	**62.49**	**62**	P	**P**	**09 36 53.4**	**+2.8**
	comp=Z,0.4nm,0.4s,baz=288,slow=7.5,SNR=6.6						
FINES	**FINESS Array B**	**64.25**	**335**	P	**P**	**09 36 59.6**	**-2.0**
	comp=Z,1.5nm,0.4s,baz=30,slow=7.0,SNR=16						
FINES	**FINESS Array B**	**64.25**	**335**	P	**P**	**09 36 58.8**	**-2.8**
PDAR	**Pinedale Array**	**64.83**	**54**	P	**P**	**09 37 07.5**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=294,slow=1.5,SNR=7.8						
WRA	**Warramunga Arr**	**68.33**	**199**	P	**P**	**09 37 30.2**	**+2.1**
	comp=Z,0.1nm,0.5s,baz=14,slow=6.5,SNR=1.9						
NB2	**NORSAR Subarra**	**68.44**	**341**	P	**P**	**09 37 26.9**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=28,slow=6.2						
NOA	**NORSAR Array B**	**68.44**	**341**	P	**P**	**09 37 27.1**	**-1.4**
	comp=Z,2.6nm,0.8s,baz=28,slow=6.3,SNR=6.6						
HFS	**Hagfors**	**68.67**	**340**	P	**P**	**09 37 28.3**	**-1.5**
	comp=Z,2.7nm,0.4s,baz=39,slow=5.7,SNR=8.6						
AKASG	**Malin Array Be**	**71.74**	**326**	P	**P**	**09 37 46.8**	**-2.0**
	comp=Z,1.8nm,0.5s,baz=33,slow=6.3,SNR=5.7						
AKASG	**Malin Array Be**	**71.74**	**326**	IAmb	IAmb	09 37 47.2	
	comp=Z,1.6nm,1.4s						
ASAR	**Alice Springs**	**72.03**	**199**	P	**P**	**09 37 53.6**	**+2.9**
	comp=Z,0.5nm,0.8s,baz=11,slow=5.4,SNR=6.8						
TXAR	**Lajitas Array**	**77.55**	**61**	P	**P**	**09 38 24.8**	**+1.9**
	comp=Z,0.5nm,0.5s,baz=296,slow=4.5,SNR=16						
GERES	**GERESS Array B**	**78.66**	**334**	P	**P**	**09 38 26.2**	**-2.5**
	comp=Z,0.2nm,0.2s,baz=265,slow=32,SNR=5.0						
CPUP	**Villa Florida**	**148.53**	**61**	PKPbc	**PKPbc**	**09 46 12.5**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=203,slow=1.3,SNR=3.3						

NEIC ***10*** *09:37:08.8±1.2, 45.8°N±0.1°×150.5°E±0.1°, h104km±6km, mb4.5/64, Error ellipse: s-maj=16.2km s-min=12.4km az=140.0*

IDC ***10*** *09:37:08.3±2.8, 45.92°N×150.53°E, h98km±24km, mb3.9/25, mb1 4.1/29, mb1mx3.9/55, mbtmp4.3/29, Error ellipse: s-maj=13.8km s-min=12.8km az=152.0*

SKHL ***10*** *09:37:08.4±0.7, 45.55°N×150.85°E, h122km±11km, mb5.1/2, msh5.7/6*

MOS ***10*** *09:37:08.1±1.4, 45.80°N×150.66°E, h117km, mb4.4/13, Error ellipse: s-maj=8.8km s-min=6.1km az=71.7*

NIED ***10*** *09:37:10.5, 45.02°N×150.82°E, h125km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.06; Mθθ1.44; Mφφ-1.38; Mrθ0.42; Mθφ-0.40; Mφr-0.07; Fault plane solution: M₀1.52000×10¹⁵ NP1: φs144.00000°, δ80.00000°, λ11.00000°. NP2:φs52.00000°, δ79.00000°, λ170.00000°*

JMA ***10*** *09:37:10.5±0.7, 45.02°N×150.82°E, h125km, M4.6*

ISC 10 09:37:06.9±0.5, 45.62°N±0.05°×150.80°E±0.05°, h100km, n219, σ2s05/240, mb4.4/67, 15C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.10**	**261**	*e*P	**Pn**	**09 37 43.8**	**+3.1**
KUR				AMB	AMB	09 37 44.4	
	2μm,0.3s						
KUR				*i* S	**Sn**	**09 38 10.2**	**+3.6**
KUR				A	A	09 38 11.0	
	7μm,0.4s						
KUR				A	A	09 38 11.0	
	9μm,0.4s						
KUR	**Kuril'sk**	**2.10**	**261**	*c i* PN	**Pn**	**09 37 43.8**	**+3.1**
KUR				*i* S	**Sn**	**09 38 09.8**	**+3.2**
KUR				pmax	pmax		
	comp=E,388nm,0.3s						
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				pmax	pmax		
	comp=N,664nm,0.2s						
KUR				smax	smax		
	comp=N,8μm,0.3s						
KUR				smax	smax		
	comp=E,9μm,0.7s						
YUK	**Yuzh-Kuril'sk**	**3.85**	**248**	*i* P	**Pn**	**09 38 06.5**	**+2.5**
YUK				AMB	AMB	09 38 08.0	
	comp=E,822nm,1.4s						
YUK				AMB	AMB	09 38 08.0	
	comp=E,91nm,0.4s						
YUK				*i* S	**Sn**	**09 38 51.3**	**+3.0**
YUK				A	A	09 38 56.0	
	comp=E,1μm,0.4s						
YUK				A	A	09 38 56.0	
	comp=E,2μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.85**	**248**	*c* iPN	**Pn**	**09 38 06.5**	**+2.5**
YUK				*i* S	**Sn**	**09 38 50.3**	**+2.0**
YUK				pmax	pmax		
	comp=Z,822nm,1.4s						
YUK				pmax	pmax		
	comp=N,389nm,0.2s						
YUK				pmax	pmax		
	comp=E,139nm,0.2s						
YUK				pmax	pmax		
	comp=Z,908nm,0.2s						
YUK				smax	smax		
	comp=E,1μm,0.3s						
YUK				smax	smax		
	comp=N,1μm,0.5s						
GRPR	**Tuman**	**3.93**	**247**	*i* P	**Pn**	**09 38 07.4**	**+2.3**
GRPR				AMB	AMB	09 38 08.0	
	comp=N,68nm,0.4s						
GRPR				*i* S	**Sn**	**09 38 51.2**	**+1.0**
GRPR				A	A	09 38 55.0	
	comp=N,2μm,0.4s						
GRPR				A	A	09 38 55.0	
	comp=N,813nm,0.4s						
GRPR	**Tuman**	**3.93**	**247**	*i* PN	**Pn**	**09 38 07.4**	**+2.3**
GRPR				*i* S	**Sn**	**09 38 51.2**	**+1.0**
GRPR				pmax	pmax		
	comp=Z,678nm,0.4s						
GRPR				pmax	pmax		
	comp=E,147nm,0.2s						
GRPR				pmax	pmax		
	comp=N,219nm,0.1s						
GRPR				smax	smax		
	comp=N,2μm,0.4s						
GRPR				smax	smax		
	comp=E,813nm,0.2s						
RUSJ	**Misakicho**	**4.23**	**251**	*i* PN	**Pn**	**09 38 12.6**	**+3.5**
RUSJ				*e*S	**Sn**	**09 39 01.7**	**+4.3**
NEM2	**Nemuro 2**	**4.26**	**240**	P	**Pn**	**09 38 10.6**	**+1.0**
NEM2				*e*S	**Sn**	**09 38 56.7**	**-1.5**
NMR	**Nemuro--Hokkai**	**4.27**	**240**	*i* P	**Pn**	**09 38 10.0**	**+0.4**
NMR	**Nemuro--Hokkai**	**4.27**	**240**	*i* PN	**Pn**	**09 38 10.6**	**+1.0**
NMR				*i* S	**Sn**	**09 38 56.7**	**-1.6**
JRA	**Rausu**	**4.38**	**249**	P	**Pn**	**09 38 14.0**	**+2.9**
JRA				*e*S	**Sn**	**09 39 04.0**	**+3.0**
JNK	**Nakash**	**4.79**	**247**	P	**Pn**	**09 38 19.2**	**+2.4**
JAK	**Akkeshi**	**5.10**	**241**	P	**Pn**	**09 38 21.8**	**+0.8**
JAK				*e*S	**Sn**	**09 39 17.1**	**-1.5**
JTKR	**Abashiri--Toko**	**5.17**	**254**	P	**Pn**	**09 38 24.7**	**+2.8**
JTKR				*e*S	**Sn**	**09 39 23.8**	**+3.5**
JMP	**Maruseppu**	**5.53**	**256**	P	**Pn**	**09 38 30.0**	**+3.2**
JAR	**Ashorobuto**	**5.54**	**248**	P	**Pn**	**09 38 29.3**	**+2.4**
JOB	**Onbets**	**5.69**	**244**	P	**Pn**	**09 38 30.5**	**+1.6**
JOB				*e*S	**Sn**	**09 39 32.3**	**-0.5**
YSS	**Yuzh-Sakhalins**	**5.73**	**286**	*e*P	**Pn**	**09 38 32.3**	**+2.8**
YSS				AMB	AMB	09 38 33.0	
	comp=E,80nm,0.5s						
YSS				AMB	AMB	09 38 39.0	
	comp=E,200nm,6.0s						
YSS				*erx*	rx	09 38 41.1	
YSS				*e*S	**Sn**	**09 39 35.8**	**+1.9**
YSS				A	A	09 39 40.0	
	comp=E,40nm,0.8s						
YSS				A	A	09 39 40.0	
	comp=E,70nm,0.8s						
YSS	**Yuzh-Sakhalins**	**5.73**	**286**	*e*P	**Pn**	**09 38 32.3**	**+2.8**
YSS				pmax	pmax		
	comp=Z,80nm,1.1s						
YSS				pmax	pmax		
	comp=N,70nm,0.5s						
YSS				pmax	pmax		
	comp=E,70nm,0.5s						
YSS				pmax	pmax		
	comp=Z,200nm,5.8s						
YSS	**Yuzh-Sakhalins**	**5.73**	**286**	Pn	**Pn**	**09 38 31.1**	**+1.6**
JKK2	**Kamakawa 2**	**5.99**	**256**	P	**Pn**	**09 38 36.3**	**+3.2**
JKA	**Kamikawa-asahi**	**6.02**	**258**	*e*P	**Pn**	**09 38 36.8**	**+3.4**
JKA	**Kamikawa-asahi**	**6.02**	**258**	Pn	**Pn**	**09 38 36.8**	**+3.4**
ASAJ	**Asahikawa**	**6.02**	**259**	P	**Pn**	**09 38 36.0**	**+2.6**
	comp=Z,1.8nm,0.3s,baz=88,slow=7.5,SNR=22						
ASAJ				S	Sn	09 39 58.2	+17
	comp=Z,1.2nm,0.3s,baz=72,slow=20,SNR=2.4						
ASAJ	**Asahikawa**	**6.02**	**259**	PN	**Pn**	**09 38 36.8**	**+3.4**
JCH	**Churui**	**6.14**	**243**	P	**Pn**	**09 38 36.1**	**+1.1**
JCH				*e*S	**Sn**	**09 39 41.3**	**-2.4**
SKR	**Severo-Kuril's**	**6.19**	**33**	*e*P	**Pn**	**09 38 35.0**	**-0.7**
SKR				AMB	AMB	09 38 38.0	
	comp=Z,110nm,0.7s						
SKR				*e*S	**Sn**	**09 39 43.2**	**-1.8**
SKR				A	A	09 39 55.5	
	comp=Z,89nm,0.9s						
SKR				A	A	09 39 55.5	
	comp=Z,72nm,0.9s						
SKR	**Severo-Kuril's**	**6.19**	**33**	*e*PN	**Pn**	**09 38 35.9**	**+0.2**
SKR				*e*S	**Sn**	**09 39 43.2**	**-1.8**
SKR				pmax	pmax		
	comp=Z,110nm,0.7s						
SKR				smax	smax		
	comp=E,72nm,0.9s						
SKR				smax	smax		
	comp=N,89nm,0.9s						
JEM	**Erimo**	**6.59**	**240**	P	**Pn**	**09 38 43.2**	**+2.0**
ERM	**Erimo**	**6.59**	**240**	*i* PN	**Pn**	**09 38 43.0**	**+1.8**
ERM	**Erimo**	**6.59**	**240**	Pn	**Pn**	**09 38 43.9**	**+2.7**
JBT2	**Biratori 2**	**6.69**	**248**	P	**Pn**	**09 38 44.7**	**+2.1**
JNBK	**Urakawa-nobuka**	**6.70**	**243**	P	**Pn**	**09 38 43.7**	**+1.1**
JNBK				*e*S	**Sn**	**09 39 54.8**	**-2.6**
UGL	**Uglegorsk**	**6.87**	**303**	*e*P	**Pn**	**09 38 48.0**	**+3.1**
UGL				AMB	AMB	09 38 51.0	
	comp=N,27nm,0.7s						
UGL				*e*S	**Sn**	**09 40 03.6**	**+2.1**
UGL				A	A	09 40 07.0	
	comp=N,33nm,1.1s						
UGL	**Uglegorsk**	**6.87**	**303**	PN	**Pn**	**09 38 48.0**	**+3.1**
UGL				S	**Sn**	**09 40 01.7**	**+0.2**
UGL				pmax	pmax		
	comp=Z,27nm,0.7s						
UGL				smax	smax		
	comp=N,33nm,1.1s						
PAU	**Pauzhetka**	**7.08**	**32**	*e*P	**Pn**	**09 38 47.8**	**0.0**
PAU				AMB	AMB	09 38 48.7	
	comp=N,136nm,0.4s						
PAU				*e*S	**Sn**	**09 40 04.7**	**-2.0**
PAU				A	A	09 40 08.5	
	comp=N,195nm,1.3s						
PAU				A	A	09 40 08.5	
	comp=N,76nm,1.3s						
TYV	**Tymovskoe**	**7.56**	**317**	*e*P	**Pn**	**09 38 56.8**	**+2.6**
TYV				AMB	AMB	09 38 57.5	
	comp=N,15nm,1.0s						
TYV				*e*S	**Sn**	**09 40 18.4**	**+0.2**
TYV				A	A	09 40 20.8	
	comp=N,13nm,1.5s						
TYV	**Tymovskoe**	**7.56**	**317**	*e*PN	**Pn**	**09 38 56.8**	**+2.6**
TYV				*e*S	**Sn**	**09 40 18.4**	**+0.2**
TYV				pmax	pmax		
	comp=Z,15nm,1.2s						
TYV				smax	smax		
	comp=E,13nm,1.5s						
JNB	**Noboribetsu**	**7.70**	**249**	P	**Pn**	**09 38 58.3**	**+2.0**
JNB				*e*S	**Sn**	**09 40 21.5**	**-0.4**
JKB	**Kayabe**	**7.99**	**246**	P	**Pn**	**09 39 01.0**	**+0.8**
JKB				*e*S	**Sn**	**09 40 24.2**	**-4.7**
JYM2	**Yakumo 2**	**8.31**	**249**	P	**Pn**	**09 39 06.0**	**+1.5**
JSR	**Shiriuchi**	**8.57**	**245**	P	**Pn**	**09 39 09.1**	**+1.0**
JSR				*e*S	**Sn**	**09 40 38.8**	**-4.2**
JANG	**Nango**	**8.58**	**236**	P	**Pn**	**09 39 07.1**	**-1.2**
JANG				*e*S	**Sn**	**09 40 36.0**	**-7.4**
JTM	**Tenmabayashi**	**8.59**	**239**	P	**Pn**	**09 39 08.5**	**+0.2**
JTM				*e*S	**Sn**	**09 40 36.6**	**-6.8**
JTM	**Tenmabayashi**	**8.59**	**239**	Pn	**Pn**	**09 39 08.8**	**+0.4**
JTH	**Tanohata**	**8.68**	**232**	P	**Pn**	**09 39 08.1**	**+1.5**
PEA0B	**Petropavlovsk-**	**8.74**	**28**	PN	**Pn**	**09 39 10.6**	**+0.2**
PEA0B	**Petropavlovsk-**	**8.74**	**28**	Pn	**Pn**	**09 39 10.6**	**+0.2**
PETK	**Petropavlovsk-**	**8.74**	**28**	P	**Pn**	**09 39 10.7**	**+0.3**
	comp=E,1.3nm,0.3s,baz=204,slow=8.8,SNR=22						
JOSM	**Okushiri--Mats**	**8.91**	**251**	P	**Pn**	**09 39 14.0**	**+1.3**
OFUJ	**Ofunato**	**9.39**	**229**	P	**Pn**	**09 39 18.4**	**-0.9**
JRG	**Rokugo**	**9.74**	**234**	P	**Pn**	**09 39 24.2**	**+0.2**
JRG				*e*S	**Sn**	**09 41 07.0**	**-4.5**
JIO	**Ouri**	**10.02**	**228**	P	**Pn**	**09 39 26.9**	**-1.0**
JIO				*e*S	**Sn**	**09 41 10.7**	**-7.7**
JMM	**Marumori**	**10.76**	**227**	Pn	**Pn**	**09 39 36.8**	**-1.0**
JYA	**Atsumi**	**10.81**	**233**	P	**Pn**	**09 39 38.5**	**-0.1**
MAJO	**Matsushiro**	**13.11**	**231**	*i* PN	**Pn**	**09 40 08.8**	**-0.5**
MJAR	**Matsushiro Arr**	**13.11**	**231**	P	**Pn**	**09 40 09.9**	**+0.6**
	comp=E,0.1nm,0.3s,baz=33,slow=13,SNR=5.8						
USRK	**Ussuriysk Ar.**	**13.41**	**271**	P	**Pn**	**09 40 14.0**	**+0.9**
	baz=82,slow=15,SNR=3.0						
USRK	**Ussuriysk Ar.**	**13.41**	**271**	PN	**Pn**	**09 40 14.0**	**+0.9**
EKMR	**Ekimchan**	**13.80**	**309**	*e*P	**Pn**	**09 40 19.0**	**+1.0**
BMKR	**Bomnak**	**16.69**	**311**	*e*P	**Pn**	**09 40 54.0**	**-0.5**
BMKR				AMB	AMB	09 41 04.0	
	comp=E,4.0nm,0.8s						
SEY	**Seymchan**	**17.38**	**2**	P	**P**	**09 41 00.5**	**-2.1**
	comp=E,0.9nm,0.3s,baz=211,slow=8.9,SNR=11						
KROS	**Kirovskiy**	**17.60**	**309**	*e*P	**P**	**09 41 04.0**	**-1.1**
KROS				AMB	AMB	09 41 07.5	
	comp=E,6.0nm,0.8s						
KSRS	**Korea Array**	**18.92**	**253**	P	**Pn**	**09 41 23.9**	**+2.4**
	comp=E,0.2nm,0.3s,baz=55,slow=11,SNR=3.2						
YAK	**Yakutsk**	**20.47**	**331**	P	**P**	**09 41 33.3**	**-3.0**
	comp=E,7.9nm,0.3s,baz=125,slow=2.5,SNR=4.9						
YAK	**Yakutsk**	**20.47**	**331**	*e*P	**P**	**09 41 34.3**	**-2.0**
YAK	**Yakutsk**	**20.47**	**331**	*e*P	**P**	**09 41 32.6**	**-3.7**
YAK				*e*S	**S**	**09 45 18.4**	**-1.2**
YAK				*e**SS	**sS**	**09 45 48.8**	**-2.0**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.6s						
YAK				smax	smax		
	comp=E,152nm,3.3s						
YAK				smax	smax		
	comp=N,169nm,4.3s						
BILL	**Bilibino**	**23.88**	**14**	*e*P	**P**	**09 42 11.6**	**+0.8**
BILL	**Bilibino**	**23.88**	**14**	P	**P**	**09 42 11.6**	**+0.8**
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
BILL	**Bilibino**	**23.88**	**14**	P	**P**	**09 42 11.6**	**+0.8**
BJI	**Beijing**	**25.86**	**270**	P	**P**	**09 42 31.0**	**+2.0**
BJI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NJ2	**Nanjing**	**28.12**	**252**	*e*P	**P**	**09 42 50.8**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
TIXI	**Tiksi**	**28.13**	**345**	P	**P**	**09 42 45.8**	**-3.2**
TIXI				pmax	pmax		
	comp=Z,21nm,0.4s						
TIXI	**Tiksi**	**28.13**	**345**	P	**P**	**09 42 45.8**	**-3.2**
HHC	**Hu-ho-hao-te**	**28.78**	**275**	*e*P	**P**	**09 42 58.9**	**+3.7**
HHC				pmax	pmax		
	comp=Z,29nm,1.1s						
HHC				pmax	pmax		
	comp=Z,74nm,5.6s						
H11N2	**WAKE ISLAND Hy**	**29.04**	**147**	T	T	10 14 06.9	
	baz=337,slow=74,SNR=466						
H11N1	**WAKE ISLAND Hy**	**29.05**	**147**	T	T	10 14 07.6	
	baz=337,SNR=366						
H11N3	**WAKE ISLAND Hy**	**29.05**	**147**	T	T	10 14 08.0	
	baz=337,slow=74,SNR=421						
H11S1	**WAKE ISLAND Hy**	**30.08**	**149**	T	T	10 15 27.6	
	baz=336,slow=76,SNR=544						
H11S3	**WAKE ISLAND Hy**	**30.09**	**149**	T	T	10 15 28.5	
	baz=336,slow=76,SNR=398						
H11S2	**WAKE ISLAND Hy**	**30.10**	**149**	T	T	10 15 27.4	
	baz=336,slow=76,SNR=453						
IMAR	**Indian Mountai**	**35.63**	**35**	P	**P**	**09 43 55.1**	**+0.5**
A21K	**Barrow**	**35.74**	**26**	P	**P**	**09 43 56.2**	**+0.7**
LZH	**Lanzhou**	**36.32**	**272**	*e*P	**P**	**09 44 03.1**	**+2.0**
LZH				pP	pP	09 44 25.6	+1.9
LZH				sP	sP	09 44 37.2	+2.1
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
BPAW	**Bear Paw Mtn.**	**36.65**	**39**	P	**P**	**09 44 04.5**	**+1.1**
BPAW				IAmb	IAmb	09 44 08.3	
	comp=Z,9.3nm,1.2s						
KTH	**Kantishna Hill**	**36.66**	**40**	P	**P**	**09 44 04.1**	**+0.6**
COLD	**Coldfoot**	**37.17**	**34**	P	**P**	**09 44 08.9**	**+1.2**
COLD				IAmb	IAmb	09 44 17.4	
	comp=Z,6.1nm,1.1s						
I23K	**Minto, Yukon-K**	**37.38**	**37**	P	**P**	**09 44 11.1**	**+1.6**
I23K				IAmb	IAmb	09 44 20.8	
	comp=Z,3.7nm,0.9s						
TOLK	**Toolik Lake Re**	**37.55**	**31**	P	**P**	**09 44 12.2**	**+1.2**
MDM	**Murphy Dome**	**37.86**	**37**	P	**P**	**09 44 14.0**	**+0.4**
MDM				IAmb	IAmb	09 44 15.8	
	comp=Z,5.0nm,0.9s						
SML	**Sawmill**	**37.90**	**42**	P	**P**	**09 44 15.5**	**+1.5**
WRH	**Wood River Hil**	**37.92**	**38**	P	**P**	**09 44 15.4**	**+1.3**
WRH				IAmb	IAmb	09 44 25.8	
	comp=Z,6.0nm,1.1s						
COLA	**College**	**38.02**	**37**	*i* P	**P**	**09 44 14.0**	**-0.9**
COLA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CCB	**Clear Creek Bu**	**38.04**	**38**	P	**P**	**09 44 16.8**	**+1.8**
CCB				IAmb	IAmb	09 44 26.7	
	comp=Z,8.6nm,1.3s						
DHY	**Denali Highway**	**38.27**	**40**	P	**P**	**09 44 18.3**	**+1.1**
DHY				IAmb	IAmb	09 44 33.6	
	comp=Z,14nm,1.2s						
SCM	**Sheep Creek Mo**	**38.37**	**42**	P	**P**	**09 44 19.3**	**+1.3**
SCM				pmax	pmax		
	comp=Z,33nm,1.4s						
SCM	**Sheep Creek Mo**	**38.37**	**42**	P	**P**	**09 44 19.3**	**+1.3**
HDA	**Harding Lake**	**38.41**	**38**	P	**P**	**09 44 18.6**	**+0.4**
IL31		**38.43**	**38**	P	**P**	**09 44 19.0**	**+0.7**
IL31				IAmb	IAmb	09 44 20.6	
	comp=Z,14nm,1.5s						
ILAR	**Eielson Array**	**38.43**	**38**	P	**P**	**09 44 19.1**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=266,slow=5.3,SNR=18						
NRIK	**Noril'sk**	**38.92**	**330**	P	**P**	**09 44 20.9**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=76,slow=8.3,SNR=3.8						
KLU	**Klutina**	**39.07**	**43**	P	**P**	**09 44 25.5**	**+1.6**
KLU				IAmb	IAmb	09 44 26.7	
	comp=Z,15nm,1.2s						
FYU	**Fort Yukon**	**39.10**	**35**	P	**P**	**09 44 25.7**	**+1.8**
BMAR	**Burnt Mountain**	**39.36**	**33**	P	**P**	**09 44 26.2**	**+0.1**
CRQM	**Cirque**	**40.51**	**44**	P	**P**	**09 44 37.9**	**+2.0**
K27K	**Chicken**	**40.56**	**39**	P	**P**	**09 44 37.9**	**+1.8**
K27K				IAmb	IAmb	09 44 38.6	
	comp=Z,8.6nm,1.1s						
BCAR	**Beaver Creek A**	**40.81**	**40**	P	**P**	**09 44 39.3**	**+1.1**
BARN	**Barnard

SUMG	**Summit**	**61.93**	**3**	*i* P		**P**	**09 47 16.4**	**+0.5**
	comp=Z,56nm,0.8s								
SUMG	**Summit**	**61.93**	**3**	*i* P		**P**	**09 47 16.5**	**+0.5**
SUMG				IAmb	IAmb		09 47 17.9		
	comp=Z,56nm,0.8s								
BOZ	**Bozeman (W)**	**63.75**	**51**	P		**P**	**09 47 29.4**	**+1.3**
BOZ				pmax	pmax				
	comp=Z,1.0nm,0.7s								
BOZ	**Bozeman (W)**	**63.75**	**51**	P		P	**09 47 29.4**	**+1.3**
SCO	**Scoresbysund**	**64.10**	**357**	P		**P**	**09 47 30.0**	**+0.3**
SCO				pmax	pmax				
	comp=Z,14nm,1.5s								
SCO	**Scoresbysund**	**64.10**	**357**	P		P	**09 47 29.9**	**+0.3**
SCO				IAmb	IAmb		09 47 46.8		
	comp=Z,14nm,1.5s								
KVN	**Kaiserville**	**64.12**	**60**	P		P	**09 47 32.6**	**+1.9**
KVN				pmax	pmax				
	comp=Z,4.0nm,1.1s								
KVN	**Kaiserville**	**64.12**	**60**	P		**P**	**09 47 32.5**	**+1.9**
KVN				IAmb	IAmb		09 47 34.0		
	comp=Z,3.7nm,1.1s								
FIA1	**FINESS Array S**	**64.37**	**334**	P		P	**09 47 29.1**	**-2.5**
FINES	**FINESS Array B**	**64.37**	**334**	P		**P**	**09 47 30.0**	**-1.6**
	comp=Z,2.6nm,0.6s,baz=37,slow=7.5,SNR=16								
LHV	**Little Huntoon**	**64.38**	**61**	P		**P**	**09 47 34.8**	**+2.8**
LHV				IAmb	IAmb		09 47 36.2		
	comp=Z,7.6nm,1.3s								
NVAR	**Mina Array Bea**	**64.39**	**61**	P		**P**	**09 47 35.1**	**+2.6**
	comp=Z,1.5nm,0.7s,baz=294,slow=6.9,SNR=16								
NVAR	**Mina Array Bea**	**64.39**	**61**	P		**P**	**09 47 33.9**	**+1.4**
ICESG	**Greenland Ices**	**65.35**	**4**	*i* P		**P**	**09 47 38.8**	**+0.5**
GEYT	**Alibeck**	**65.79**	**300**	P		**P**	**09 47 42.6**	**+1.3**
	comp=Z,3.8nm,0.7s,baz=35,slow=5.4,SNR=5.9								
R11A	**Troy Canyon, C**	**66.09**	**59**	P		**P**	**09 47 45.0**	**+1.6**
PDAR	**Pinedale Array**	**66.71**	**52**	P		**P**	**09 47 48.5**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=273,slow=1.5,SNR=20								
PDAR	**Pinedale Array**	**66.71**	**52**	P		**P**	**09 47 48.6**	**+1.3**
WB0	**Warramunga Arr**	**66.76**	**197**	P		**P**	**09 47 49.4**	**+2.0**
WR0	**Warramunga Arr**	**66.91**	**197**	P		**P**	**09 47 50.5**	**+2.1**
WR0				IAmb	IAmb		09 48 09.3		
	comp=Z,6.0nm,1.4s								
WB2	**Warramunga Arr**	**66.94**	**197**	P		**P**	**09 47 50.8**	**+2.2**
WB2				IAmb	IAmb		09 47 55.3		
	comp=Z,5.9nm,1.2s								
WRA	**Warramunga Arr**	**66.94**	**197**	P		**P**	**09 47 50.8**	**+2.2**
	comp=Z,0.8nm,0.5s,baz=14,slow=6.8,SNR=15								
WRA	**Warramunga Arr**	**66.94**	**197**	P		**P**	**09 47 50.0**	**+1.4**
MSU	**Marysvale**	**68.01**	**57**	P		**P**	**09 47 57.5**	**+1.9**
MSU	**Marysvale**	**68.01**	**57**	P		**P**	**09 47 57.5**	**+1.9**
K22A	**Casper**	**68.46**	**51**	P		**P**	**09 47 59.5**	**+1.2**
K22A				IAmb	IAmb		09 48 07.5		
	comp=Z,7.1nm,1.4s								
NC303	**NORSAR Array S**	**68.57**	**340**	P		**P**	**09 47 57.7**	**-0.7**
NC405	**NORSAR Array S**	**68.58**	**340**	P		**P**	**09 47 58.1**	**-0.4**
NC204	**NORSAR Array S**	**68.67**	**341**	P		**P**	**09 47 58.3**	**-0.8**
NB201	**NORSAR Array S**	**68.74**	**340**	P		**P**	**09 47 58.5**	**-1.0**
NB2	**NORSAR Subarra**	**68.77**	**340**	P		**P**	**09 47 58.5**	**-1.2**
	comp=Z,2.5nm,0.4s,baz=29,slow=6.5								
NOA	**NORSAR Array B**	**68.77**	**340**	P		**P**	**09 47 58.3**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=28,slow=6.6,SNR=14								
HFS	**Hagfors**	**68.94**	**339**	P		**P**	**09 47 59.2**	**-1.5**
	comp=Z,3.1nm,0.4s,baz=65,slow=4.2,SNR=11								
NC602	**NORSAR Array S**	**68.95**	**340**	P		**P**	**09 47 59.3**	**-1.5**
PV14	**Lion Creek, Pa**	**69.95**	**55**	P		**P**	**09 48 08.9**	**+1.3**
PV14				IAmb	IAmb		09 48 09.5		
	comp=Z,3.5nm,0.6s								
PV19	**Morning Glory**	**70.01**	**55**	IAmb	IAmb		09 48 22.2		
	comp=Z,11nm,1.0s								
PV17	**East Wray Mesa**	**70.05**	**55**	IAmb	IAmb		09 48 10.8		
	comp=Z,6.1nm,0.9s								
PV11	**David Mesa, Pa**	**70.08**	**55**	P		**P**	**09 48 10.3**	**+1.9**
PV11				IAmb	IAmb		09 48 10.5		
	comp=Z,3.5nm,0.6s								
PV12	**Saucer Basin,**	**70.11**	**55**	P		**P**	**09 48 11.4**	**+2.8**
PV03	**Paradox Valley**	**70.13**	**55**	P		**P**	**09 48 10.4**	**+1.7**
PV01	**Paradox Valley**	**70.37**	**55**	P		**P**	**09 48 12.0**	**+1.8**
KBZ	**Khabaz**	**70.47**	**313**	P		**P**	**09 48 11.9**	**+1.6**
	comp=Z,6.6nm,0.8s,baz=326,slow=7.5								
KBZ	**Khabaz**	**70.47**	**313**	*eP*		**P**	**09 48 10.0**	**-0.4**
KBZ	**Khabaz**	**70.47**	**313**	*ceP*		**P**	**09 48 10.0**	**-0.4**
KBZ				pmax	pmax				
	comp=Z,8.0nm,0.9s								
ASAR	**Alice Springs**	**70.64**	**196**	P		**P**	**09 48 14.8**	**+3.3**
	comp=Z,0.5nm,0.5s,baz=13,slow=6.4,SNR=14								
AKASG	**Malin Array Be**	**71.58**	**325**	P		**P**	**09 48 16.0**	**-0.9**
	comp=Z,1.8nm,0.3s,baz=36,slow=6.1,SNR=11								
AKASG	**Malin Array Be**	**71.58**	**325**	*i* P		**P**	**09 48 15.8**	**-1.1**
AKASG				pmax	pmax				
	comp=Z,2.0nm,0.3s								
ECSD	**EROS Data Cent**	**72.83**	**44**	P		**P**	**09 48 24.2**	**-0.3**
ANMO	**Albuquerque**	**73.80**	**57**	*ceP*		**P**	**09 48 31.5**	**+0.8**
ANMO				pmax	pmax				
	comp=Z,11nm,2.5s								
SCHQ	**Schefferville**	**74.97**	**21**	P		**P**	**09 48 37.0**	**+0.2**
	comp=Z,2.9nm,0.6s,baz=282,slow=6.9,SNR=6.5								
SCHQ	**Schefferville**	**74.97**	**21**	IAmb	IAmb		09 48 37.9		
	comp=Z,6.1nm,0.8s								
BUR08	**Bucovina Ar. S**	**75.61**	**325**	P		**P**	**09 48 41.8**	**0.0**
BUR08				IAmb	IAmb		09 48 41.8		
	comp=Z,5.1nm,0.6s								
BURAR	**Bucovina Array**	**75.63**	**325**	↑↑P		**P**	**09 48 40.6**	**-0.3**
BURAR	**Bucovina Array**	**75.63**	**325**	↑↑P		**P**	**09 48 40.6**	**-0.3**
BURAR	**Bucovina Array**	**75.63**	**325**	P		**P**	**09 48 40.8**	**-0.1**
KOLS	**Kolonicke sedl**	**75.69**	**328**	*eP*		**P**	**09 48 38.7**	**-2.4**
KOLS	**Kolonicke sedl**	**75.69**	**328**	*eP*		**P**	**09 48 38.7**	**-2.4**
BIZ	**Bicaz**	**75.82**	**324**	↓↓P		**P**	**09 48 42.2**	**+0.4**
TESR	**Tescani**	**75.94**	**324**	↓↓P		**P**	**09 48 42.3**	**-0.2**
TPGR	**Topolog**	**76.50**	**322**	↑↑P		**P**	**09 48 46.3**	**+0.5**
LANS	**Liptovska Anna**	**76.53**	**330**	*eP*		**P**	**09 48 47.5**	**+1.6**
LANS	**Liptovska Anna**	**76.53**	**330**	*eP*		**P**	**09 48 47.5**	**+1.6**
CLL	**Collm**	**76.81**	**334**	*i* P		**P**	**09 48 47.0**	**-0.3**
	comp=Z,13nm,1.2s								
CLL	**Collm**	**76.81**	**334**	*i* P		**P**	**09 48 47.0**	**-0.3**
CLL				pmax	pmax				
	comp=Z,13nm,1.2s								
EKA	**Eskdalemuir Ar**	**77.04**	**345**	P		**P**	**09 48 48.1**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=13,slow=4.7,SNR=9.7								
MLR	**Muntele Rosu**	**77.05**	**324**	P		**P**	**09 48 49.7**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=111,slow=11,SNR=5.2								
MLR	**Muntele Rosu**	**77.05**	**324**	↓↓P		**P**	**09 48 49.7**	**+0.8**
VYHS	**Vyhne**	**77.31**	**330**	*eP*		**P**	**09 48 50.9**	**+0.7**
VYHS	**Vyhne**	**77.31**	**330**	*eP*		**P**	**09 48 50.9**	**+0.7**
VOIR		**77.46**	**324**	↓↓P		**P**	**09 48 51.9**	**+0.7**
VOIR		**77.46**	**324**	↓↓P		**P**	**09 48 51.9**	**+0.7**
ARR	**Arges**	**77.69**	**324**	↓↓P		**P**	**09 48 50.4**	**-2.1**
BRTR	**Keskin Array B**	**78.09**	**315**	P		**P**	**09 48 55.4**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=56,slow=2.2,SNR=5.6								
ANTO	**Ankara**	**78.40**	**316**	↑↑P		**P**	**09 48 59.9**	**+3.4**
ANTO	**Ankara**	**78.40**	**316**	↑↑P		**P**	**09 48 59.9**	**+3.4**
GZR	**Gura Zlata**	**78.42**	**325**	↓↓P		P	09 48 51.1	-5.4
GERES	**GERESS Array B**	**78.75**	**333**	P		**P**	**09 48 58.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=47,slow=6.0,SNR=11								
R40A	**Maddies Statio**	**79.08**	**46**	P		**P**	**09 49 01.1**	**+0.9**
R40A				IAmb	IAmb		09 49 11.8		
	comp=Z,10nm,1.4s								
ABTX	**Abilene, Hawle**	**79.40**	**54**	P		**P**	**09 49 03.7**	**+1.7**
TXAR	**Lajitas Array**	**79.45**	**59**	P		**P**	**09 49 04.2**	**+1.8**
	comp=Z,0.7nm,0.5s,baz=296,slow=4.3,SNR=17								
TXAR	**Lajitas Array**	**79.45**	**59**	P		**P**	**09 49 03.8**	**+1.3**
MMAI	**Mount Meron Ar**	**82.34**	**310**	P		**P**	**09 49 18.5**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=60,slow=8.5,SNR=4.9								
PLCA	**Paso Flores**	**149.70**	**96**	PKPbc		**PKiKP**	**09 56 46.2**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=286,slow=1.8,SNR=4.1								

IDC ***10*** *09:56:46.0±1.7,23.96S×69.47E,h0km,mb4.0/9, mb1 4.2/9,mb1mx3.9/46,mbtmp4.0/9,Error ellipse: s-maj=68.0km s-min=23.1km az=39.0*

NEIC ***10*** *09:56:48.4±1.4,23.77S±0.09×69.7E±0.1,h10km±1km, mb4.5/14,Error ellipse: s-maj=26.2km s-min=8.8km az=122.0*

ISC 10 09:56:48.2±0.8,23.8S±0.2×69.7E±0.1,h10km,n40, σ0.8 81/34,mb4.4/16,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RER	**Riviere de l'E**	**13.19**	**279**	Pn		**Pn**	**09 59 56.5**	**+0.6**
H08S1	**Diego Carcia H**	**16.27**	**10**	T		T	10 17 26.5	
	baz=190,slow=76,SNR=56							
H08S2	**Diego Garcia H**	**16.27**	**10**	T		T	10 17 25.9	
	baz=190,slow=76,SNR=40							
H08S3	**Diego Garcia H**	**16.29**	**10**	T		T	10 17 26.5	
	baz=190,slow=76,SNR=163							
H01W2	**Cape Leeuwin H**	**39.97**	**116**	T		T	10 46 58.3	
	baz=273,slow=75,SNR=15							
H01W3	**Cape Leeuwin H**	**39.97**	**116**	T		T	10 46 55.6	
	baz=273,slow=75,SNR=12							
H01W1	**Cape Leeuwin H**	**39.98**	**116**	T		T	10 46 59.5	
	baz=273,slow=75,SNR=14							
ASAR	**Alice Springs**	**58.26**	**104**	P		**P**	**10 06 44.2**	**+0.8**
	1.7nm,0.7s,baz=251,slow=6.1,SNR=27							
ASAR				PcP		**PcP**	**10 07 33.9**	**-0.8**
	0.9nm,0.8s,baz=254,slow=3.7,SNR=5.9							
ASAR	**Alice Springs**	**58.26**	**104**	P		**P**	**10 06 42.1**	**-1.3**
WRA	**Warramunga Arr**	**59.63**	**100**	P		**P**	**10 06 53.9**	**+1.0**
	2.2nm,0.8s,baz=253,slow=7.0,SNR=16							
WRA	**Warramunga Arr**	**59.63**	**100**	P		**P**	**10 06 53.5**	**+0.5**
WB2	**Warramunga Arr**	**59.64**	**100**	P		**P**	**10 06 53.5**	**+0.5**
WB2				IAmb	IAmb		10 07 06.6	
	comp=Z,3.5nm,1.1s							
WRAB	**Tennant Creek**	**59.64**	**100**	P		**P**	**10 06 54.3**	**+1.2**
WRAB				IAmb	IAmb		10 06 55.1	
	comp=Z,4.2nm,0.9s							
WB0	**Warramunga Arr**	**59.73**	**100**	P		**P**	**10 06 54.6**	**+1.0**
WR0	**Warramunga Arr**	**59.81**	**100**	P		**P**	**10 06 55.0**	**+0.9**
WR0				IAmb	IAmb		10 06 56.2	
	comp=Z,3.5nm,1.0s							
SNAA	**Sanae**	**62.14**	**200**	P		**P**	**10 07 09.2**	**-0.1**
KK31	**Karatay Array**	**66.56**	**1**	P		**P**	**10 07 38.4**	**0.0**
KK31				IAmb	IAmb		10 07 46.9	
	comp=Z,4.5nm,1.1s							
KKAR	**Karatay Array**	**66.56**	**1**	P		**P**	**10 07 38.8**	**+0.4**
KKAR	**Karatay Array**	**66.56**	**1**	P		**P**	**10 07 37.6**	**-0.8**
KKAR				IAmb	IAmb		10 07 46.9	
	comp=Z,4.5nm,1.1s							
MK31	**Makanchi Array**	**71.16**	**9**	P		**P**	**10 08 07.5**	**+0.5**
MKAR	**Makanchi Array**	**71.16**	**9**	P		**P**	**10 08 07.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=190,slow=6.0,SNR=11							
MKAR	**Makanchi Array**	**71.16**	**9**	P		**P**	**10 08 06.9**	**-0.1**
BRTR	**Keskin Array B**	**71.61**	**331**	P		**P**	**10 08 10.3**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=136,slow=5.0,SNR=2.5							
AB07	**Akbulak array**	**73.22**	**353**	P		**P**	**10 08 17.6**	**-1.6**
AB08	**Akbulak array**	**73.22**	**353**	P		**P**	**10 08 18.3**	**-0.9**
AB03	**Akbulak array**	**73.23**	**353**	P		**P**	**10 08 18.1**	**-1.2**
AB01	**Akbulak array**	**73.24**	**353**	P		**P**	**10 08 18.9**	**-0.3**
AB31	**Akbulak array**	**73.24**	**353**	P		**P**	**10 08 19.4**	**+0.1**
AB31				IAmb	IAmb		10 08 26.9	
	comp=Z,5.1nm,1.2s							
ABKAR	**Akbulak array**	**73.24**	**353**	P		**P**	**10 08 19.8**	**+0.5**
ABKAR				IAmb	IAmb		10 08 26.9	
	comp=Z,5.1nm,1.2s							
ABKAR	**Akbulak array**	**73.24**	**353**	P		**P**	**10 08 19.4**	**+0.1**
KURK	**Kurchatov**	**74.59**	**6**	P		**P**	**10 08 28.2**	**+1.0**
KURK				IAmb	IAmb		10 08 35.3	
	comp=Z,7.3nm,1.4s							
ZALV	**Zalesovo Beam**	**78.50**	**9**	P		**P**	**10 08 50.0**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=213,slow=5.1,SNR=3.8							
ZALV	**Zalesovo Beam**	**78.50**	**9**	P		**P**	**10 08 48.0**	**-1.3**
SONM	**Songino Array**	**78.54**	**24**	P		**P**	**10 08 50.9**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=205,slow=6.4,SNR=2.2							
SONM	**Songino Array**	**78.54**	**24**	P		**P**	**10 08 49.4**	**-0.4**
KSRS	**Korea Array**	**81.87**	**43**	P		**P**	**10 09 08.3**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=237,slow=5.2,SNR=2.8							
AKASG	**Malin Array Be**	**82.34**	**335**	P		**P**	**10 09 09.7**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=139,slow=4.3,SNR=4.8							
AKASG	**Malin Array Be**	**82.34**	**335**	IAmb		IAmb	10 09 16.6	
	comp=Z,0.9nm,0.8s							
GERES	**GERESS Array B**	**87.88**	**327**	P		**P**	**10 09 37.2**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=152,slow=4.4,SNR=6.9							
ULM	**Lac du Bonnet**	**151.30**	**341**	PKPbc		**PKPbc**	**10 16 41.2**	**-0.7**
	comp=Z,2.1nm,0.5s,baz=90,slow=1.0,SNR=1.8							

BJI ***10*** *10:04:18.5±0.0,22.75S×171.40E,h5km,mB5.9/71, mb5.6/78,Ms5.8/83,Ms7 5.6/75*

IDC ***10*** *10:04:19.7±0.3,22.77S×171.42E,h0km,mb5.4/27, mb1 5.5/31,mb1mx5.4/33,mbtmp5.4/31,ML5.2/3,MS5.6/34, Ms1 5.6/34,ms1mx5.5/40,Error ellipse: s-maj=10.7km s-min=10.3km az=22.0*

NEIC ***10*** *10:04:21.9,22.77S×171.45E,h8km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr2.28; Mθθ-1.50; Mφφ-0.78; Mrθ6.46; Mrφ-0.06; Mθφ-1.13; Fault plane solution: M0 6.86000×10^17^ NP1:φ99.45000°, δ82.04000°,λ91.51000°. NP2:φ268.66000°,δ8.10000°, λ79.32000°. Principal axes: T 7.2349, Plg53.0000°, Azm11.0000°; N -0.8150, Plg1.0000°, Azm279.0000°; P -6.4198, Plg37.0000°, Azm188.0000°;*

NEIC ***10*** *10:04:21.1±2.0,22.77S±0.08×171.45E±0.07,h7km±1km, mb5.8/281,Ms_20 5.9/827,Mwb5.8/60,Mwc5.8/10,Mww5.9, Mwc5.9(GCMT) Error ellipse: s-maj=12.8km s-min=11.1km az=7.0*

MOS ***10*** *10:04:24.0±1.2,22.70S×171.46E,h33km,mb6.0/49, MS5.7/36,Error ellipse: s-maj=8.2km s-min=6.7km az=121.3*

NEIC ***10*** *10:04:27,22.81S×171.42E,h18km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr2.45; Mθθ-2.25; Mφφ-0.19; Mrθ7.38; Mrφ3.45; Mθφ-1.29; Fault plane solution: M0 8.58000×10^17^ NP1:φ343.00000°, δ22.00000°,λ152.00000°. NP2:φ100.00000°,δ80.00000°, λ70.00000°. Principal axes: T 7.9764, Plg51.0000°, Azm348.0000°; N 1.0974, Plg19.0000°, Azm104.0000°; P -9.0739, Plg32.0000°, Azm206.0000°;*

GCMT ***10*** *10:04:28.1±0.1,22.79S±0.01×171.40E±0.01,h18km, MW5.9/156,Moment Tensor Solution. s138,c290; s156,c405; Duration: 2s1 Moment tensor: Scale 10^17^ Nm; Mrr2.16±.04; Mθθ-1.96±.04; Mφφ-0.20±.04; Mrθ7.03±.24; Mrφ3.23±.03; Mθr-1.45±.10; Best double couple: M0 8.07900×10^17^ NP1:φ345.00000°,δ21.00000°, λ152.00000°. NP2:φ101.00000°,δ80.00000°,λ71.00000°. Principal axes: T 7.5130, Plg51.0000°, Azm350.0000°; N 1.1310, Plg19.0000°, Azm104.0000°; P -8.6450, Plg33.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *10:04:30,22.47S×171.44E,h26km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr1.98; Mθθ-1.73; Mφφ-0.24; Mrθ8.20; Mrφ1.89; Mθr-2.80; Fault plane solution: M0 9.06000×10^17^ NP1:φ330.00000°, δ10.00000°,λ131.00000°. NP2:φ109.00000°,δ82.00000°, λ83.00000°. Principal axes: T 8.6497, Plg52.0000°, Azm11.0000°; N 0.7752, Plg6.0000°, Azm110.0000°; P -9.4249, Plg37.0000°, Azm205.0000°;*

NEIC ***10*** *10:04:39.6,21.96S×170.00E,h32km,Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr6.58; Mθθ-5.39; Mφφ-1.20; Mrθ1.12; Mrφ2.17; Mθr0.69; Fault plane solution: M0 6.57000×10^17^ NP1:φ301.46000°, δ42.27000°,λ102.85000°. NP2:φ104.33000°,δ49.02000°, λ78.57000°. Principal axes: T 6.7902, Plg81.0000°, Azm314.0000°; N -0.4386, Plg9.0000°, Azm112.0000°; P -6.3516, Plg3.0000°, Azm202.0000°;*

ISC 10 10:04:21.8±0.4,22.81S±0.03×171.49E±0.03,h12km±2km, h12km:pP-P,n1444,σ1 43/1059,mb5.8/243,MS5.9/500, 104C-17D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**4.73**	**278**	Pn		**Pn**	**10 05 32.5**	**-0.5**
	95nm,0.3s,baz=125,slow=12,SNR=391							
DZM				Sn		**Sn**	**10 06 26.8**	**-1.0**
	110nm,0.3s,baz=192,slow=22,SNR=5.7							

DZM	**Mont Dzumac**	**4.73**	**278**	Pn		**Pn**	**10 05 32.8**	**-0.2**
NFK	**Norfolk Island**	**6.99**	**207**	P		**Pn**	**10 06 02.5**	**-1.4**
	baz=7.0,SNR=125								
SANVU	**Saraoutou**	**8.37**	**330**	Pn		**Pn**	**10 06 26.7**	**+3.8**
RAO	**Raoul Island**	**11.48**	**126**	LR		LR	10 10 31.4		
	comp=Z,40μm,20.2s,baz=314,slow=32								
OUZ	**Omahuta**	**12.50**	**172**	Pn		**Pn**	**10 07 20.9**	**+1.3**
LHI	**Lord Howe Isla**	**14.05**	**229**	P		**Pn**	**10 07 41.6**	**+0.9**
	baz=14,SNR=7.5								
LHI	**Lord Howe Isla**	**14.05**	**229**	Pn		**Pn**	**10 07 40.6**	**-0.1**
MXZ	**Matakaoa Point**	**15.83**	**160**	P		**P**	**10 08 09.0**	**+0.7**
HIZ	**Hauiti**	**15.92**	**170**	P		**P**	**10 08 07.9**	**-1.4**
FUNA	**Funafuti**	**16.01**	**29**			**P**	**10 08 11.5**	**+1.1**
FUNA				IAmb	IAmb		10 08 28.2		
	comp=Z,704nm,1.4s								
URZ	**Urewera**	**16.14**	**164**	Pn		**Pn**	**10 08 09.3**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=352,slow=8.3,SNR=7.5								
URZ				Sn		**S**	**10 11 23.3**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=349,slow=16,SNR=1.7								
URZ				LR		LR	10 12 50.1		
	comp=Z,57μm,21.8s,baz=351,slow=32								
BKZ	**Black Stump Fm**	**16.86**	**166**	P		**P**	**10 08 20.4**	**+0.7**
BKZ				IAmb	IAmb		10 08 35.9		
	comp=Z,1μm,1.9s								
HNR	**Honiara**	**17.30**	**318**	P		**Pn**	**10 08 22.8**	**-0.5**
	comp=Z,6.8nm,0.3s,baz=239,slow=2.3,SNR=3.5								
HNR				S		**S**	**10 11 40.2**	**-4.5**
	comp=Z,3.8nm,0.3s,baz=284,slow=19,SNR=2.6								
HNR				LR		LR	10 13 52.4		
	comp=Z,14μm,21.5s,baz=150,slow=33								
HNR	**Honiara**	**17.30**	**318**	P		**P**	**10 08 24.1**	**-0.6**
HNR				pmax	pmax				
	comp=Z,1μm,0.9s								
HNR	**Honiara**	**17.30**	**318**	P		**P**	**10 08 24.1**	**-0.6**
NIUE	**Niue**	**17.75**	**81**	P		**P**	**10 08 32.9**	**+3.2**
NIUE				IAmb	IAmb		10 09 09.5		
	comp=Z,2μm,2.0s								
QRZ	**Quartz Range**	**17.99**	**177**	P		**P**	**10 08 33.1**	**+1.0**
QRZ				IAmb	IAmb		10 08 36.6		
	comp=Z,2μm,2.0s								
AFI	**Afiamalu**	**18.16**	**64**	P		**P**	**10 08 34.6**	**+0.2**
	comp=Z,8.8nm,0.3s,baz=278,slow=3.3,SNR=20								
AFI				S		**Sn**	**10 11 56.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=294,slow=20,SNR=1.9								
AFI				LR		LR	10 14 14.1		
	comp=Z,21μm,18.8s,baz=236,slow=33								
AFI	**Afiamalu**	**18.16**	**64**	P		**P**	**10 08 34.5**	**+0.2**
AFI							10 11 56.8		
AFI				pmax	pmax				
	comp=Z,353nm,1.2s								
AFI	**Afiamalu**	**18.16**	**64**			**P**	**10 08 34.5**	**+0.2**
BFZ	**Birch Farm**	**18.27**	**168**	P		**P**	**10 08 36.0**	**+0.7**
BFZ				IAmb	IAmb		10 09 04.4		
	comp=Z,596nm,1.4s								
NNZ	**Nelson**	**18.42**	**175**	P		**Pn**	**10 08 37.9**	**+0.9**
SNZO	**South Karori**	**18.65**	**172**	P		**Pn**	**10 08 40.9**	**+1.2**
BHW	**Baring Head**	**18.76**	**172**	P		**Pn**	**10 08 41.0**	**-0.1**
EIDS	**Eidsvold**	**18.81**	**258**	P		**Pn**	**10 08 43.4**	**+1.5**
	baz=19,SNR=46								
EIDS	**Eidsvold**	**18.81**	**258**			**Pn**	**10 08 43.9**	**+2.1**
EIDS				IAmb	IAmb		10 08 47.9		
	comp=Z,712nm,1.6s								
MSWZ	**Moikau Station**	**18.82**	**171**	P		**P**	**10 08 41.5**	**+0.1**
THZ	**Tophouse**	**18.94**	**177**	IAmb	IAmb		10 09 05.6		
	comp=Z,2μm,2.0s								
ARMA	**Armidale**	**19.29**	**243**	P		**Pn**	**10 08 48.5**	**+0.8**
	baz=19,SNR=37								
ARMA	**Armidale**	**19.29**	**243**	P		**Pn**	**10 08 49.4**	**+1.6**
ARMA				IAmb	IAmb		10 08 54.0		
	comp=Z,784nm,1.4s								
LTZ	**Lake Taylor**	**19.93**	**178**	P		**Pn**	**10 08 54.7**	**-0.5**
LTZ				IAmb	IAmb		10 09 10.5		
	comp=Z,571nm,1.2s								
OXZ	**Oxford**	**20.47**	**179**	IAmb	IAmb		10 09 04.7		
	comp=Z,654nm,1.3s								
MGCD	**Mangrove Creek**	**20.73**	**236**	P		Pn	10 09 04.1	-0.6	
	baz=21,SNR=37								
RPZ	**Rata Peaks**	**20.86**	**181**	P		**P**	**10 09 04.7**	**+1.2**
	comp=Z,611nm,1.2s,baz=17,slow=5.0,SNR=51								
RPZ				S		**S**	**10 12 52.4**	**-3.5**
	comp=Z,5.7nm,0.7s,baz=162,slow=19,SNR=1.8								
RPZ				LR		LR	10 15 57.6		
	comp=Z,30μm,20.9s,baz=2.5,slow=33								
RPZ	**Rata Peaks**	**20.86**	**181**	P		Pn	10 09 05.2	-0.7	
MQZ	**McQueen's Vall**	**20.86**	**178**	IAmb	IAmb		10 09 07.7		
	comp=Z,605nm,1.7s								
RIV	**Riverview**	**20.96**	**234**	P	

comp=Z,31µm,19.0s
PMG Port Moresby 26.85 296 P **P** **10 10 02.6 +0.2**
comp=Z,199nm,0.8s,baz=111,slow=5.9,SNR=47
PMG ScP **ScP** **10 17 06.7 +1.6**
comp=Z,52nm,1.1s,baz=57,slow=4.9,SNR=6.5
PMG Port Moresby 26.85 296 P **P** **10 10 03.2 +0.8**
PMG pmax pmax
comp=Z,205nm,0.9s
PMG MLR MLR
comp=Z,15µm,18.0s
PMG Port Moresby 26.85 296 P **P** **10 10 03.2 +0.8**
PMG IAmb IAmb 10 10 04.9
comp=Z,205nm,0.8s
PMG ScP **ScP** **10 17 07.3 +2.1**
STKA Stephens Creek 27.98 245 P **P** **10 10 12.9 +0.4**
comp=Z,64nm,1.0s,baz=80,slow=9.5,SNR=81
STKA ScP **ScP** **10 17 11.0 +2.6**
comp=Z,11nm,0.9s,baz=70,slow=5.8,SNR=5.4
STKA LR LR 10 20 27.6
comp=Z,14µm,20.0s,baz=75,slow=35
STKA Stephens Creek 27.98 245 P **P** **10 10 13.1 +0.6**
baz=28,SNR=40
STKA Stephens Creek 27.98 245 P **P** **10 10 12.3 -0.2**
STKA pmax pmax
comp=Z,104nm,1.6s
STKA MLR MLR
comp=Z,3µm,21.0s
STKA Stephens Creek 27.98 245 P **P** **10 10 12.3 -0.2**
MOO Moorlands 28.16 220 P **P** **10 10 15.6 +1.7**
baz=28,SNR=12
TAU Tasmania Unive 28.36 219 P **P** **10 10 16.2 +0.5**
TAU pmax pmax
comp=Z,286nm,1.2s
TAU MLR MLR
comp=Z,34µm,19.0s
TAU Tasmania Unive 28.36 219 P **P** **10 10 16.2 +0.5**
TAU IAmb IAmb 10 10 18.3
comp=Z,286nm,1.2s
TAU Tasmania Unive 28.36 219 IAMs_20 IAMs_20 10 19 53.0
comp=Z,34µm,19.0s
QIS Mount Isa 29.69 268 P **P** **10 10 27.9 +0.1**
baz=30,SNR=20
HTT Hallett 30.50 242 P **P** **10 10 35.2 +0.3**
baz=30,SNR=37
MANU Manus Island 31.21 308 IAmb IAmb 10 11 01.2
comp=Z,309nm,1.9s
KWAJ Kwajalein Atol 31.64 353 P **P** **10 10 44.9 -0.1**
KWAJ pmax pmax
comp=Z,388nm,1.2s
KWAJ Kwajalein Atol 31.64 353 P **P** **10 10 44.9 -0.1**
PATS Pohnpei 32.16 335 P **P** **10 10 49.9 +0.4**
baz=32,SNR=4.7
PATS Pohnpei 32.16 335 P **P** **10 10 49.1 -0.4**
PATS IAmb IAmb 10 10 51.4
comp=Z,182nm,1.0s
PATS IAMs_20 IAMs_20 10 20 58.9
comp=Z,37µm,22.0s
BBOO Buckleboo 32.76 244 P **P** **10 10 54.7 0.0**
baz=33,SNR=17
BBOO Buckleboo 32.76 244 P **P** **10 10 54.6 0.0**
BBOO IAMs_20 IAMs_20 10 23 12.9
comp=Z,24µm,19.0s
MCQ Macquarie Isla 33.02 193 P **P** **10 10 58.0 +1.3**
MCQ pmax pmax
comp=Z,674nm,1.5s
MCQ Macquarie Isla 33.02 193 P **P** **10 10 58.0 +1.3**
WR0 Warramunga Arr 34.47 268 IAmb IAmb 10 11 10.3
comp=Z,310nm,1.6s
ASAR Alice Springs 34.49 261 P **P** **10 11 08.8 -1.1**
comp=Z,170nm,1.2s,baz=86,slow=8.3,SNR=294
ASAR S **S** **10 16 34.3 -4.1**
comp=Z,2.3nm,1.0s,baz=84,slow=22,SNR=2.6
ASAR ScP **ScP** **10 17 32.0 +1.8**
comp=Z,7.4nm,0.9s,baz=94,slow=3.4,SNR=6.3
ASAR PKiKP **PKiKP** **10 21 07.9 -0.5**
comp=Z,1.6nm,0.9s,baz=67,slow=1.1,SNR=6.8
ASAR LR LR 10 25 04.9
comp=Z,10µm,20.0s,baz=100,slow=36
ASAR P3KPbc 10 42 09.1
comp=Z,0.4nm,0.7s,baz=292,slow=4.6,SNR=4.5
ASAR Alice Springs 34.49 261 P **P** **10 11 08.6 -1.3**
ASAR ScP **ScP** **10 17 33.2 +3.0**
WR4 Warramunga Arr 34.59 268 IAMs_20 IAMs_20 10 25 28.4
comp=Z,16µm,18.0s
WR3 Warramunga Arr 34.61 268 IAMs_20 IAMs_20 10 25 29.9
comp=Z,16µm,18.0s
WC3 Warramunga Arr 34.62 268 IAMs_20 IAMs_20 10 25 29.2
comp=Z,16µm,18.0s
WB2 Warramunga Arr 34.65 268 IAMs_20 IAMs_20 10 25 30.8
comp=Z,16µm,18.0s
WB3 Warramunga Arr 34.65 268 IAMs_20 IAMs_20 10 25 30.8
comp=Z,15µm,18.0s
WB1 Warramunga Ar. 34.65 268 IAMs_20 IAMs_20 10 25 30.8
comp=Z,16µm,18.0s
WRAB Tennant Creek 34.65 268 P **P** **10 11 10.0 -1.3**
WRAB pmax pmax
comp=Z,618nm,2.0s
WRAB MLR MLR
comp=Z,15µm,18.0s
WRAB Tennant Creek 34.65 268 P **P** **10 11 10.0 -1.3**
WC4 Warramunga Arr 34.65 268 IAMs_20 IAMs_20 10 25 22.0
comp=Z,16µm,19.0s
WRA Warramunga Arr 34.66 268 P **P** **10 11 09.7 -1.8**
comp=Z,29nm,0.5s,baz=98,slow=8.3,SNR=142
WRA PcP **PcP** **10 13 43.8 -1.8**
comp=Z,6.1nm,0.8s,baz=104,slow=2.6,SNR=3.6
WRA S **S** **10 16 36.0 -5.1**
comp=Z,4.5nm,1.1s,baz=95,slow=23,SNR=3.0
WRA ScP **ScP** **10 17 34.1 +3.2**
comp=Z,20nm,1.1s,baz=97,slow=4.1,SNR=11
WRA PKiKP **PKiKP** **10 21 07.3 -1.2**
comp=Z,1.1nm,0.7s,baz=42,slow=0.3,SNR=9.4
WRA LR LR 10 25 33.0
comp=Z,14µm,18.6s,baz=105,slow=37
WRA Warramunga Arr 34.66 268 P **P** **10 11 09.2 -2.2**
WRA pmax pmax
comp=Z,36nm,2.0s
WRA Warramunga Arr 34.66 268 P **P** **10 11 09.2 -2.2**
TBI Tubuai 35.85 99 *eS* **S** **10 16 56.5 -2.8**
comp=Z,3µm,26.2s
TBI *eLQ* LQ 10 19 23.0
comp=Z,8µm,27.2s
TBI *eLR* LR 10 20 52.9
comp=Z,3µm,29.5s
GENI Genyem 36.41 299 P **P** **10 11 26.8 +0.3**
comp=Z,4µmcomp=Z,9µmcomp=Z,461nm,1.4s
PAE Paea 36.81 89 *eP* **P** **10 11 27.2 -2.6**
comp=Z,13nm,1.0s
PPT2 Papeete2 36.83 89 *eP* **P** **10 11 27.9 -2.2**
comp=Z,158nm,1.4s
PPT2 *eS* **S** **10 17 11.9 -2.6**
comp=Z,4µm,25.5s
PPT2 *eLQ* LQ 10 19 43.0
comp=Z,9µm,27.2s
PPT2 *eLR* LR 10 21 22.0
comp=Z,5µm,23.8s,baz=246
PPT Papeete 36.84 89 P **P** **10 11 30.5 +0.4**
comp=Z,66nm,0.7s,baz=49,slow=2.9,SNR=18
PPT LR LR 10 23 01.3
comp=Z,2µm,19.9s,baz=258,slow=30
PPTF Pamatai, Papee 36.84 89 P **P** **10 11 31.3 +1.1**
PPTF IAmb IAmb 10 11 42.7
comp=Z,366nm,1.7s
TIAR Tiarei 37.05 89 *eP* **P** **10 11 29.4 -2.5**
comp=Z,31nm,0.8s
TVO Taravao 37.08 90 *eP* **P** **10 11 29.8 -2.4**
comp=Z,44nm,0.7s
MEH Mehetia 38.15 90 *eP* **P** **10 11 38.7 -2.6**
comp=Z,48nm,1.2s
KDU Kakadu 38.40 278 P **P** **10 11 43.1 -0.2**
baz=38,SNR=62
XMAS Kiritimati 39.08 55 P **P** **10 11 50.1 +1.1**
PMOR Pomariorio Ree 39.10 86 *eP* **P** **10 11 46.8 -2.4**
comp=Z,208nm,1.2s
FORT Forrest 39.38 249 P **P** **10 11 51.2 -0.2**
baz=39,SNR=26
FORT Forrest 39.38 249 P **P** **10 11 50.8 -0.7**
FORT IAmb IAmb 10 11 53.2
comp=Z,460nm,1.2s
WRKA Warakurna 39.43 258 P **P** **10 11 51.4 -0.5**
baz=40,SNR=116
MTN Manton Dam 39.57 277 P **P** **10 11 52.9 -0.2**
baz=40,SNR=45
MTN Manton Dam 39.57 277 IAmb IAmb 10 11 54.7
comp=Z,141nm,0.7s
MTN IAMs_20 IAMs_20 10 29 07.1
comp=Z,14µm,18.0s

BAKI Biak 40.53 297 P **P** **10 12 01.9 +0.8**
comp=Z,9µmcomp=Z,624nm,1.1s
KNRA Kununurra 40.85 272 P **P** **10 12 03.6 -0.2**
baz=41,SNR=30
KNRA Kununurra 40.85 272 P **P** **10 12 03.5 -0.3**
WAKE Wake Island 42.10 353 IAMs_20 IAMs_20 10 26 12.5
comp=Z,15µm,20.0s
FAKI Fak Fak 42.84 292 P **P** **10 12 20.1 -0.1**
comp=Z,3µmcomp=Z,5µmcomp=Z,142nm,1.8s
FAKI Fak Fak 42.84 292 P **P** **10 12 20.0 -0.1**
FAKI IAmb IAmb 10 12 31.3
comp=Z,459nm,1.5s
FITZ Fitzroy Crossi 43.09 268 LR LR 10 30 25.0
comp=Z,7µm,19.2s,baz=106,slow=36
FITZ Fitzroy Crossi 43.09 268 P **P** **10 12 22.2 +0.2**
baz=43,SNR=181
FITZ Fitzroy Crossi 43.09 268 P **P** **10 12 22.2 +0.2**
BNDI Bandanaira 44.09 288 P **P** **10 12 30.1 -0.1**
comp=Z,3µmcomp=Z,13µmcomp=Z,531nm,1.2s
GUMO Guam 44.59 322 LR LR 10 31 04.1
comp=Z,8µm,18.0s,baz=126,slow=36
GUMO Guam 44.59 322 P **P** **10 12 36.5 +2.4**
GUMO pmax pmax
comp=Z,329nm,1.3s
GUMO MLR MLR
comp=Z,9µm,18.0s
GUMO Guam 44.59 322 P **P** **10 12 36.5 +2.4**
KMBL Kambalda 44.68 248 P **P** **10 12 34.4 -0.3**
baz=45,SNR=22
SIJI Sorong 44.75 293 LR LR 10 32 26.7
comp=Z,9µm,18.4s,baz=106,slow=38
SOEI Soe 46.95 278 P **P** **10 12 54.5 +1.5**
comp=Z,6µmcomp=Z,269nm,1.1s
SOEI Soe 46.95 278 P **P** **10 12 54.0 +1.0**
BATI Baumata 47.34 277 LR LR 10 32 32.4
comp=Z,15µm,20.2s,baz=139,slow=36
PSAD2 Pilbara Seismi 47.52 261 IAMs_20 IAMs_20 10 33 51.9
comp=Z,15µm,18.0s
PSAB3 Pilbara Seismi 47.62 261 IAMs_20 IAMs_20 10 32 41.6
comp=Z,10µm,20.0s
PSAB2 Pilbara Seismi 47.63 261 IAMs_20 IAMs_20 10 33 47.7
comp=Z,10µm,19.0s
PSA00 Pilbara Seismi 47.64 261 P **P** **10 12 57.9 -0.2**
PSA00 Pilbara Seismi 47.64 261 IAmb IAmb 10 13 00.2
comp=Z,518nm,1.3s
PSA00 IAMs_20 IAMs_20 10 34 12.0
comp=Z,18µm,18.0s
PSAC3 Pilbara Seismi 47.64 261 IAMs_20 IAMs_20 10 32 51.1
comp=Z,11µm,19.0s
PSAB1 Pilbara Seismi 47.66 261 IAMs_20 IAMs_20 10 33 48.6
comp=Z,10µm,19.0s
PSAD1 Pilbara Seismi 47.67 261 IAMs_20 IAMs_20 10 34 13.0
comp=Z,16µm,18.0s
PSAC1 Pilbara Seismi 47.68 261 IAMs_20 IAMs_20 10 33 48.1
comp=Z,11µm,20.0s
PSAD3 Pilbara Seismi 47.68 261 IAMs_20 IAMs_20 10 32 43.2
comp=Z,12µm,19.0s
MBWA Marble Bar 47.83 262 IAMs_20 IAMs_20 10 34 01.0
comp=Z,12µm,18.0s
MEEK Meekatharra 47.91 254 P **P** **10 12 59.3 -0.9**
baz=48,SNR=35
KLBR Kellerberrin 48.19 247 P **P** **10 13 01.8 -0.5**
baz=48,SNR=31
TAOE Nuku Hiva Isla 48.33 81 *eS* **S** **10 20 01.2 -2.7**
comp=Z,4µm,26.1s
TAOE *eLR* LR 10 26 41.4
comp=Z,3µm,25.5s
TAOE Nuku Hiva Isla 48.33 81 P **P** **10 13 05.2 +1.5**
TAOE IAmb IAmb 10 13 16.6
comp=Z,129nm,1.0s
NWAO Narrogin (SRO) 48.56 246 P **P** **10 13 05.2 0.0**
comp=Z,324nm,1.2s,baz=91,slow=7.5,SNR=27
NWAO LR LR 10 33 23.6
comp=Z,13µm,18.8s,baz=92,slow=36
NWAO Narrogin (SRO) 48.56 246 P **P** **10 13 05.2 0.0**
baz=49,SNR=20
NWAO Narrogin (SRO) 48.56 246 P **P** **10 13 05.2 0.0**
NWAO Narrogin (SRO) 48.56 246 IAmb IAmb 10 13 06.9
comp=Z,454nm,1.3s
NWAO Narrogin (SRO) 48.56 246 IAMs_20 IAMs_20 10 32 22.1
comp=Z,14µm,20.0s
SANI Sanana 48.70 288 P **P** **10 13 06.8 +0.4**
comp=Z,4µmcomp=Z,6µmcomp=Z,408nm,0.8s
MMRI Maumere 49.23 278 P **P** **10 13 11.1 +0.6**
comp=Z,6µmcomp=Z,319nm,0.9s
MUN Muna 49.48 247 P **P** **10 13 12.4 +0.2**
baz=50,SNR=32
EDFI Ende, Flores 49.69 278 P **P** **10 13 14.5 +0.4**
comp=Z,2µmcomp=Z,121nm,1.3s
MORW Morawa 49.88 251 P **P** **10 13 14.8 -0.5**
baz=50,SNR=54
MORW Morawa 49.88 251 IAMs_20 IAMs_20 10 33 11.4
comp=Z,14µm,21.0s
BASI Baing, Sumba 50.16 276 P **P** **10 13 19.7 +2.1**
comp=Z,8µmcomp=Z,540nm,1.4s
WSI Waingapu 50.62 276 P P 10 13 27.7 +6.6
KDI Kendari 50.81 284 P **P** **10 13 25.5 +3.0**
comp=Z,2µmcomp=Z,153nm,1.1s
WBSI Waikabubak, Su 51.46 276 P **P** **10 13 28.3 +0.8**
comp=Z,6µmcomp=Z,397nm,1.5s
KMSI Cibinong 51.73 290 P P 10 13 35.5 +6.1
BSSI Bau Bau, Buton 51.80 280 P **P** **10 13 32.4 +2.4**
comp=Z,2µmcomp=Z,2µmcomp=Z,108nm,1.2s
LUWI Luwuk 52.00 288 P **P** **10 13 33.1 +1.7**
comp=Z,6µmcomp=Z,450nm,1.1s
LUWI Luwuk 52.00 288 P **P** **10 13 32.7 +1.3**
SGSI Sangihe 52.01 294 P **P** **10 13 32.7 +1.2**
comp=Z,5µmcomp=Z,209nm,1.5s
BKSI Bulukumba 52.48 281 P **P** **10 13 35.3 +0.4**
comp=Z,2µmcomp=Z,2µmcomp=Z,208nm,1.1s
GIRL Giralia 52.51 258 P **P** **10 13 36.6 +1.5**
baz=52,SNR=6.5
GIRL Giralia 52.51 258 P **P** **10 13 36.7 +1.5**
BNSI Bone 52.88 282 P **P** **10 13 39.0 +1.1**
comp=Z,4µmcomp=Z,249nm,1.5s
KAPI Kappang 52.94 281 S **S** **10 21 09.3 +1.5**
comp=Z,5.0nm,0.4s,baz=106,slow=17,SNR=2.4
KAPI Kappang 52.94 281 P **P** **10 13 38.9 +0.5**
KAPI pmax pmax
comp=Z,789nm,1.5s
KAPI MLR MLR
comp=Z,5µm,19.0s
KAPI Kappang 52.94 281 P **P** **10 13 38.9 +0.5**
APSI Ampana 53.05 287 P **P** **10 13 40.8 +1.6**
comp=Z,2µmcomp=Z,3µmcomp=Z,167nm,1.1s
PLAI Plampang 53.24 276 P **P** **10 13 41.4 +0.8**
comp=Z,4µmcomp=Z,218nm,1.2s
OPA Opana 53.28 36 IAMs_20 IAMs_20 10 30 45.0
comp=Z,13µm,22.0s
SPSI Sidrap Palu 53.37 283 P **P** **10 13 41.5 0.0**
comp=Z,3µmcomp=Z,111nm,1.2s
TTSI Tana Toraja 53.72 284 P **P** **10 13 44.8 +0.7**
comp=Z,3µmcomp=Z,154nm,1.3s
DAV Davao City (W) 53.84 299 LR LR 10 37 13.8
comp=Z,1µm,18.7s,baz=120,slow=37
TWSI Taliwang, Sumb 54.10 276 P **P** **10 13 47.6 +0.7**
comp=Z,2µmcomp=Z,116nm,1.1s
VNDA Vanda 54.96 183 P **P** **10 13 52.5 +0.2**
comp=Z,42nm,1.2s,baz=359,slow=7.5,SNR=63
VNDA PcP **PcP** **10 14 54.3 +0.4**
comp=Z,11nm,0.8s,baz=343,slow=4.4,SNR=4.7
VNDA S **S** **10 21 34.6 +1.1**
comp=Z,0.7nm,1.0s,baz=8.8,slow=7.2,SNR=2.2
VNDA LR LR 10 34 07.8
comp=Z,7µm,19.6s,baz=10,slow=32
VNDA Vanda 54.96 183 P **P** **10 13 52.1 -0.2**
VNDA IAmb IAmb 10 13 54.4
comp=Z,188nm,1.6s
MPSI Mapaga 55.18 287 P **P** **10 13 55.0 +0.2**
comp=Z,2µmcomp=Z,138nm,1.1s
SRBI Singaraja 55.87 276 P **P** **10 14 00.8 +1.1**
comp=Z,3µmcomp=Z,5µmcomp=Z,278nm,1.2s
JAGI Jajag, Banyuwa 56.70 275 P **P** **10 14 05.8 +0.1**
comp=Z,3µmcomp=Z,4µmcomp=Z,325nm,1.4s
JAGI Jajag, Banyuwa 56.70 275 P **P** **10 14 05.1 -0.6**
ABJI Asem Bagus 56.88 276 P P 10 14 13.5 +6.6
KBKI Kotabaru 56.90 281 P **P** **10 14 09.7 +2.6**
comp=Z,827nmcomp=Z,50nm,1.3s
BKB Balikpapan 57.12 284 P **P** **10 14 09.9 +1.3**
comp=Z,4µmcomp=Z,4µmcomp=Z,193nm,1.1s
SMKI Samarinda 57.21 285 P **P** **10 14 13.4 +4.2**
comp=Z,4µmcomp=Z,13µmcomp=Z,182nm,0.7s
KMMI Kalianget 57.40 276 P P 10 14 16.4 +5.8
GMJI Gumukmas 57.43 275 P **P** **10 14 13.1 +2.3**
comp=Z,3µmcomp=Z,98nm,1.3s
BLJI Banyuglugur 57.48 275 P P 10 14 16.1 +4.9
comp=Z,3µmcomp=Z,65nm,1.1s

CASY Casey 57.74 205 P **P** **10 14 12.1 -0.1**
CASY Casey 57.74 205 IAMs_20 IAMs_20 10 33 45.9
comp=Z,9µm,20.0s
BBKI Banjar Baru 58.03 281 P **P** **10 14 16.3 +1.2**
comp=Z,4µmcomp=Z,140nm,1.4s
GRJI Gresik 58.82 276 P P 10 14 27.7 +7.1
PWJI Pagerwojo 59.03 274 P **P** **10 14 23.9 +1.9**
comp=Z,3µmcomp=Z,94nm,1.8s
MTKI Muara Teweh, K 59.05 283 P **P** **10 14 24.4 +2.2**
TBJI Tambak Boyo 59.44 276 P P 10 14 31.1 +6.3
WOJI Wonogiri, Jawa 59.91 274 P **P** **10 14 29.1 +1.0**
comp=Z,3µmcomp=Z,190nm,1.3s
KKM Kota Kinabalu 61.16 291 P **P** **10 14 37.0 +0.2**
PBKI Pangkalan Bun 61.22 280 P **P** **10 14 41.2 +4.1**
comp=Z,9µmcomp=Z,510nm,1.1s
KPJI Karang Pucung 61.92 274 P **P** **10 14 42.6 +0.8**
comp=Z,3µmcomp=Z,237nm,1.3s
STKI Sintang 62.57 283 P P 10 14 51.4 +5.3
comp=Z,61µmcomp=Z,107nm,1.0s
JCJI Jatiwangi 62.85 274 P P 10 14 54.2 +6.2
CISI Cisompet, Garu 62.87 273 P **P** **10 14 52.9 +4.7**
comp=Z,2µmcomp=Z,3µmcomp=Z,237nm,1.3s
CISI Cisompet, Garu 62.87 273 P **P** **10 14 48.3 0.0**
SBUM Sibu 62.96 285 P **P** **10 14 48.6 -0.1**
JHJ Hachijo jima 2 63.31 330 LR LR 10 42 51.2
comp=Z,3µm,18.8s,baz=140,slow=37
LEM Lembang 63.32 274 LR LR 10 41 48.0
comp=Z,5µm,20.6s,baz=132,slow=36
CNJI Cibinong 63.59 273 P P 10 14 58.5 +5.5
XMIS Christmas Isla 63.83 269 P **P** **10 14 52.6 -1.9**
XMIS IAmb IAmb 10 15 01.3
comp=Z,86nm,0.8s
XMIS IAMs_20 IAMs_20 10 42 46.9
comp=Z,6µm,19.0s
CBJI Citeko 64.18 274 P **P** **10 14 58.3 +1.5**
comp=Z,14µmcomp=Z,185nm,0.6s
DBJI Dramaga 64.22 274 P **P** **10 14 57.9 +0.8**
comp=Z,14µmcomp=Z,308nm,1.3s
SKJI Sukabumi 64.23 273 P P 10 15 03.0 +5.8
TPI Tanjungpandan 64.86 278 P **P** **10 15 03.9 +2.6**
comp=Z,2µmcomp=Z,124nm,1.4s
SBJI Serang 64.96 274 P **P** **10 15 04.4 +2.5**
comp=Z,10µmcomp=Z,564nm,1.4s
CGJI Cibinong 65.17 273 P **P** **10 15 03.2 -0.1**
comp=Z,3µmcomp=Z,314nm,1.5s
INU Inuyama 66.43 330 P **P** **10 15 11.2 +0.3**
INU IAmb IAmb 10 15 15.3
comp=Z,60nm,1.2s
JGF Kuroka 66.48 330 P **P** **10 15 10.6 -0.7**
JGF IAmb IAmb 10 15 21.3
comp=Z,196nm,1.9s
PPBI Pangkal Pinang 66.49 278 P **P** **10 15 14.8 +3.0**
comp=Z,11µmcomp=Z,147nm,1.2s
YOJ Yonaguni jima 66.50 312 P **P** **10 15 12.0 +0.4**
YOJ pmax pmax
comp=Z,303nm,0.8s
JMN Monobe 66.66 326 IAmb IAmb 10 15 15.6
comp=Z,102nm,1.1s
KLSI 66.79 275 P **P** **10 15 13.4 -0.3**
comp=Z,581nmcomp=Z,32nm,1.3s
TWG Pinlang 66.81 309 IAmb IAmb 10 15 19.2
comp=Z,63nm,0.9s
MJAR Matsushiro Arr 66.88 331 P **P** **10 15 12.4 -1.4**
comp=Z,24nm,0.9s,baz=165,slow=6.7,SNR=42
MJAR PcP **PcP** **10 15 43.3 +0.9**
comp=Z,22nm,0.9s,baz=164,slow=4.3,SNR=7.0
MJAR PKP2ab 10 43 47.6
comp=Z,0.5nm,0.3s,baz=6.4,slow=2.1,SNR=5.4
MJAR LR LR 10 44 53.7
comp=Z,2µm,18.9s,baz=130,slow=36
MJAR Matsushiro Arr 66.88 331 P **P** **10 15 12.6 -1.2**
MJAR 10 15 43.3
MJAR pmax pmax
comp=Z,13nm,0.8s
MJAR Matsushiro Arr 66.88 331 P **P** **10 15 12.6 -1.2**
MAJO Matsushiro 66.88 331 *i* P **P** **10 15 12.2 -1.6**
MAJO pmax pmax
comp=Z,42nm,0.9s
MAJO MLR MLR
comp=Z,3µm,18.0s
MAJO Matsushiro 66.88 331 P **P** **10 15 12.1 -1.7**
MAJO IAmb IAmb 10 15 18.9
comp=Z,43nm,0.8s
MAT Matsushiro 66.88 331 P **P** **10 15 12.0 -1.8**
MAT S **S** **10 24 05.2 -1.2**
JMM Marumori 66.90 334 P **P** **10 15 13.7 -0.1**
JMM IAmb IAmb 10 15 17.6
comp=Z,78nm,1.1s
YULB Yu-li 67.01 310 IAmb IAmb 10 15 43.7
comp=Z,56nm,1.1s
JWT Wachi 67.14 328 IAmb IAmb 10 15 18.4
comp=Z,66nm,1.0s
QSPA South Pole Qui 67.27 180 P **P** **10 15 15.3 -0.7**
comp=Z,214nm,1.1s,baz=23,slow=2.4,SNR=208
QSPA South Pole Qui 67.27 180 P **P** **10 15 15.4 -0.7**
QSPA South Pole Qui 67.27 180 IAMs_20 IAMs_20 10 42 28.0
comp=Z,7µm,19.0s
YHNB Yeheng 67.77 311 P **P** **10 15 17.8 -1.9**
JNU Nakatsue 67.78 324 LR LR 10 40 48.7
comp=Z,4µm,22.0s,baz=146,slow=32
JNU Nakatsue 67.78 324 IAmb IAmb 10 15 20.6
comp=Z,63nm,1.0s
TATO Taipei 67.89 311 P **P** **10 15 20.2 -0.2**
JHS Saijyo 68.05 327 P **P** **10 15 19.7 -1.5**
JHS IAmb IAmb 10 15 42.1
comp=Z,54nm,0.9s
JSD Sado 68.10 332 IAmb IAmb 10 15 26.4
comp=Z,61nm,0.8s
LHSI Lahat 68.23 275 P **P** **10 15 22.8 0.0**
comp=Z,3µmcomp=Z,138nm,1.3s
MNAI Manna 68.55 274 P **P** **10 15 26.1 +1.3**
comp=Z,11µmcomp=Z,550nm,1.2s
DSRI Dabo 68.59 279 P **P** **10 15 26.3 +1.2**
comp=Z,4µmcomp=Z,85nm,1.4s
KSI Kapahiang 69.15 275 P **P** **10 15 29.9 +1.2**
comp=Z,7µmcomp=Z,421nm,1.4s
TPRI Tanjung Pinang 69.22 280 P **P** **10 15 29.7 +0.7**
comp=Z,32µmcomp=Z,188nm,1.2s
JTM Tenmabayashi 69.31 336 IAmb IAmb 10 15 30.2
comp=Z,81nm,1.0s
ERM Erimo 69.62 338 IAMs_20 IAMs_20 10 39 44.3
comp=Z,9µm,22.0s
JEM Erimo 69.62 338 IAMs_20 IAMs_20 10 42 38.6
comp=Z,7µm,20.0s
QZH Quanzhou 69.90 310 *i* P **P** **10 15 32.2 -0.7**
QZH S **S** **10 24 40.4 -2.4**
QZH pmax pmax
comp=Z,40nm,0.9s
QZH pmax pmax
comp=Z,1µm,8.5s
QZH LR LR
comp=Z,700nm,14.2s
QZH LR LR
comp=Z,1µm,18.5s
QZH LR LR
comp=Z,2µm,17.1s
YUK Yuzh-Kuril'sk 70.55 341 *c i* P **P** **10 15 36.2 -0.2**
YUK *i* 10 15 56.3
YUK *i* S **S** **10 24 51.0 +1.4**
YUK *e* 10 25 36.2
YUK pmax pmax
comp=Z,222nm,3.1s
DLV T Lat 70.69 292 IAmb IAmb 10 15 44.3
comp=Z,134nm,1.2s
JEW Eniwo 70.95 337 IAMs_20 IAMs_20 10 40 54.6
comp=Z,6µm,22.0s
KUR Kuril'sk 71.06 343 *eP* **P** **10 15 40.3 +0.8**
KUR *i* 10 16 03.1
KUR *i* S **S** **10 24 59.6 +4.1**
KUR *e* 10 25 18.6
KUR pmax pmax
comp=Z,212nm,1.0s
KUR pmax pmax
comp=Z,2µm,7.4s
SDSI Sungai Dareh 71.29 277 P **P** **10 15 43.1 +1.4**
comp=Z,8µmcomp=Z,100nm,1.2s
JKA Kamikawa-asahi 71.67 338 P **P** **10 15 43.3 0.0**
JKA IAmb IAmb 10 15 47.9
comp=Z,139nm,1.6s
JKA IAMs_20 IAMs_20 10 41 21.4
comp=Z,6µm,22.0s
ASAJ Asahikawa 71.67 338 P **P** **10 15 43.3 0.0**
ASAJ pmax pmax
comp=Z,139nm,1.6s
SSE Sheshan 72.09 316 P **P** **10 15 45.4 -0.7**
SSE S **S** **10 25 06.0 -2.0**

SSE pmax pmax
comp=Z,35nm,0.7s
SSE pmax pmax
comp=Z,250nm,8.2s
SSE LR LR
comp=Z,590nm,19.6s
SSE LR LR
comp=Z,770nm,19.7s
TJN Taejon 72.13 324 *ce*P **P 10 15 45.5 -0.7**
BKNI Bangkinang 72.15 278 P **P 10 15 50.6 +3.7**
comp=Z,5μmcomp=Z,309nm,1.5s
KSRS Korea Array 72.62 325 P **P 10 15 49.0 -0.1**
comp=Z,40nm,0.8s,baz=143,slow=6.0,SNR=132
KSRS LR LR 10 45 06.5
comp=Z,2μm,21.1s,baz=134,slow=34
KSAR Wonju Array Be 72.64 325 P **P 10 15 48.4 -0.8**
KSAR Wonju Array Be 72.64 325 P **P 10 15 48.4 -0.8**
GZH Guangzhou 72.66 305 P **P 10 15 51.0 +1.4**
GZH S **S 10 25 17.6 +2.8**
GZH pmax pmax
comp=Z,1μm,3.4s
GZH LR LR
comp=Z,1μm,18.7s
GZH LR LR
comp=Z,1μm,17.1s
KS19 Wonju Array Si 72.69 325 IAmb IAmb 10 15 52.0
comp=Z,57nm,0.9s
QIZ Qiongzhong 73.17 300 P **P 10 15 52.7 -0.1**
QIZ pP **pP 10 15 55.4 -0.1**
QIZ S **S 10 25 23.0 +2.2**
QIZ sS **SKiKP 10 25 27.8 +2.7**
QIZ pmax pmax
comp=Z,36nm,1.3s
QIZ pmax pmax
comp=Z,640nm,3.5s
QIZ LR LR
comp=Z,930nm,17.2s
QIZ LR LR
comp=Z,2μm,19.2s
QIZ LR LR
comp=Z,2μm,18.0s
QIZ Qiongzhong 73.17 300 IAmb IAmb 10 16 04.2
comp=Z,174nm,1.5s
SISI Saibi 73.28 276 P **P 10 15 56.0 +2.4**
comp=Z,2μmcomp=Z,126nm,1.4s
INCN Inchon 73.34 324 P **P 10 15 54.0 +0.6**
INCN pmax pmax
comp=Z,126nm,1.0s
INCN Inchon 73.34 324 P **P 10 15 54.0 +0.6**
INCN IAmb IAmb 10 15 56.4
comp=Z,126nm,1.0s
MNSI Mandailing Nat 73.67 278 P **P 10 15 55.2 -0.7**
comp=Z,3μmcomp=Z,194nm,0.8s
IPM Ipoh 73.88 282 P **P 10 15 56.3 -0.9**
IPM Ipoh 73.88 282 P **P 10 15 57.0 -0.1**
YSS Yuzh-Sakhalins 74.13 340 *ce*P **P 10 15 58.3 +0.5**
YSS pmax pmax
comp=Z,121nm,1.3s
YSS MLR MLR
comp=Z,4μm,18.0s
YSS Yuzh-Sakhalins 74.13 340 P **P 10 15 58.2 +0.5**
YSS IAmb IAmb 10 16 00.6
comp=Z,78nm,0.8s
NJ2 Nanjing 74.22 315 *e*P **P 10 15 58.4 -0.3**
NJ2 pP **sP 10 16 02.5 +0.1**
NJ2 sP **pwP 10 16 04.3 -2.3**
NJ2 S **S 10 25 31.6 -0.6**
NJ2 ScS **ScS 10 26 09.7 +0.5**
NJ2 pmax pmax
comp=Z,62nm,0.9s
NJ2 pmax pmax
comp=Z,500nm,8.8s
NJ2 LR LR
comp=Z,2μm,17.5s
NJ2 LR LR
comp=Z,2μm,21.3s
NJ2 LR LR
comp=Z,3μm,20.8s
SKR Severo-Kuril's 74.42 350 *e*P **P 10 15 58.4 -0.9**
SKR *e* 10 16 16.0
SKR *e*S **S 10 25 33.4 -0.2**
SKR pmax pmax
comp=Z,500nm,14.6s
SKR MLR MLR
comp=Z,2μm,16.0s
SKR MLR MLR
comp=Z,2μm,15.0s
KULM Kulim 74.56 283 P **P 10 15 58.1 -3.0**
KULM Kulim 74.56 283 P **P 10 16 02.0 +0.9**
TEY Ternei 74.64 335⇑ *e*P **P 10 16 00.1 -0.7**
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=Z,20nm,0.9s
TEY pmax pmax
comp=E,10.0nm,0.7s
HHU Hamhung 74.67 326 P **P 10 16 01.6 +0.5**
HHU pP **pwP 10 16 10.5 +1.5**
HHU S **S 10 25 37.6 +0.7**
PYAG Pyongyang 74.95 325 P **P 10 16 03.3 +0.6**
PYAG pP **pwP 10 16 12.3 +1.7**
PYAG S **S 10 25 44.5 +4.4**
KIWB Kanaga Island 75.00 7 P **P 10 16 01.4 -1.4**
RPSI Rantau Prapat 75.04 279 P **P 10 16 03.7 -0.2**
RPSI IAmb IAmb 10 16 08.9
comp=Z,190nm,1.2s
PYS Pyongsong 75.05 325 P **P 10 16 04.3 +1.0**
VLA Vladivostok 75.05 331 *c i*P **P 10 16 02.8 -0.4**
VLA pmax pmax
comp=Z,25nm,0.9s
VLA MLR MLR
comp=Z,2μm,18.0s
PSI Prapat 75.09 280 S **S 10 25 39.4 -3.5**
comp=Z,2.1nm,0.4s,baz=183,slow=22,SNR=6.8
PSI Prapat 75.09 280 P **P 10 16 03.7 -0.6**
PSI pmax pmax
comp=Z,190nm,1.2s
PSI MLR MLR
comp=Z,3μm,19.0s
ADK Adak 75.09 8 IAMs_20 IAMs_20 10 42 52.1
comp=Z,6μm,20.0s
TSI Tuntungan 75.70 280 P **P 10 16 12.3 +4.6**
comp=Z,185nm,0.9s
GSI Gunungsitoli 75.71 278 P **P 10 16 12.5 +4.8**
comp=Z,3μmcomp=Z,219nm,1.2s
GSI Gunungsitoli 75.71 278 IAMs_20 IAMs_20 10 55 56.8
comp=Z,6μm,18.0s
ATKA Atka Island 75.73 9 IAMs_20 IAMs_20 10 41 29.2
comp=Z,6μm,21.0s
USA0B Ussuriysk Arra 75.86 332 *c i*P **P 10 16 07.6 -0.3**
USRK Ussuriysk Ar. 75.86 332 P **P 10 16 07.3 -0.6**
comp=Z,13nm,0.8s,baz=133,slow=3.8,SNR=48
USRK LR LR 10 45 40.9
comp=Z,3μm,21.2s,baz=131,slow=33
USRK Ussuriysk Ar. 75.86 332 P **P 10 16 07.5 -0.4**
USRK Ussuriysk Ar. 75.86 332 P **P 10 16 07.5 -0.4**
MAW Mawson 75.93 202 P **P 10 16 08.2 +0.2**
comp=Z,118nm,1.1s,baz=110,slow=7.6,SNR=133
MAW LR LR 10 46 57.4
comp=Z,7μm,18.1s,baz=92,slow=34
MAW Mawson 75.93 202 P **P 10 16 07.9 -0.1**
baz=76,SNR=66
MAW Mawson 75.93 202 P **P 10 16 08.0 -0.1**
MAW pmax pmax
comp=Z,37nm,1.1s
MAW Mawson 75.93 202 P **P 10 16 08.0 0.0**
WHN Wuhan 76.29 312 ⇓ *i*P **P 10 16 10.9 +0.3**
WHN S **S 10 25 53.2 -2.1**
WHN pmax pmax
comp=Z,100nm,1.0s
WHN pmax pmax
comp=Z,1μm,4.5s
WHN LR LR
comp=Z,3μm,15.2s
WHN LR LR
comp=Z,3μm,14.1s
WHN LR LR
comp=Z,6μm,19.4s
PET Petropavlovsk 76.33 352 *c i*P **P 10 16 10.2 -0.1**
PET *e*S **S 10 25 53.1 -1.6**
PET *e*SS **SS 10 30 43.7 -5.9**
PET pmax pmax
comp=Z,1μm,13.3s
PET MLR MLR
comp=Z,6μm,20.0s
PET Petropavlovsk 76.33 352 IAMs_20 IAMs_20 10 44 05.7
comp=Z,6μm,20.0s
SUJ Sinuiju 76.39 325 P **P 10 16 11.1 +0.2**
SUJ pP **pwP 10 16 20.4 +1.6**
SUJ S **S 10 25 55.3 -0.6**
KCSI Kotacane, Aceh 76.43 280 P **P 10 16 09.8 -2.1**
comp=Z,1μmcomp=Z,62nm,1.4s
PEA0B Petropavlovsk- 76.54 352 P **P 10 16 12.2 +0.7**
PEA0B pmax pmax
comp=Z,144nm,1.1s
PEA0B Petropavlovsk- 76.54 352 P **P 10 16 12.2 +0.7**
PEA0B IAmb IAmb 10 18 00.1
comp=Z,144nm,1.1s
PETK Petropavlovsk- 76.54 352 P **P 10 16 11.1 -0.5**
comp=Z,24nm,0.8s,baz=140,slow=5.5,SNR=15
PETK LR LR 10 44 26.0
comp=Z,9μm,21.0s,baz=155,slow=32
TPTI 76.86 279 P **P 10 16 16.0 +1.7**
comp=Z,634nmcomp=Z,31nm,1.2s
DL2 Dalian 77.11 322⇑ *i*P **P 10 16 15.2 +0.1**
DL2 S **S 10 26 02.9 -1.0**
DL2 pmax pmax
comp=Z,140nm,1.0s
DL2 pmax pmax
comp=Z,950nm,3.5s
DL2 LR LR
comp=Z,820nm,25.6s
DL2 LR LR
comp=Z,2μm,20.3s
DL2 LR LR
comp=Z,3μm,23.5s
MDJ Mudanjiang 77.25 331 P **P 10 16 15.9 +0.2**
MDJ pP sP 10 16 19.1 -0.4
MDJ sP pP 10 16 20.4 +1.9
MDJ PP **PP 10 19 14.9 +4.8**
MDJ S **S 10 26 06.8 +1.6**
MDJ SS **SS 10 31 07.1 +3.2**
MDJ pmax pmax
comp=Z,43nm,1.1s
MDJ pmax pmax
comp=Z,940nm,4.3s
MDJ LR LR
comp=Z,2μm,19.0s
MDJ LR LR
comp=Z,2μm,20.0s
MDJ LR LR
comp=Z,4μm,21.0s
MDJ Mudanjiang 77.25 331 P **P 10 16 15.5 -0.3**
MDJ IAmb IAmb 10 16 19.8
comp=Z,69nm,1.2s
NIKH Nikolski High 77.37 12 P **P 10 16 16.3 +0.1**
SNY Shenyang 78.10 325⇑ P **P 10 16 19.8 -0.7**
SNY S **S 10 26 16.0 +1.5**
SNY pmax pmax
comp=Z,35nm,1.9s
SNY pmax pmax
comp=Z,760nm,8.6s
SNY LR LR
comp=Z,2μm,19.1s
SNY LR LR
comp=Z,2μm,21.1s
SNY LR LR
comp=Z,4μm,22.1s
BELA Belgrano 2 78.37 175 P **P 10 16 19.9 -1.8**
CN2 Changchun 78.59 328⇑ P **P 10 16 22.8 -0.4**
CN2 *es*P pwP 10 16 31.3 +0.2
CN2 *e*S **S 10 26 17.3 -2.3**
CN2 pmax pmax
comp=Z,110nm,1.2s
CN2 pmax pmax
comp=Z,810nm,4.0s
CN2 LR LR
comp=Z,3μm,20.0s
CN2 LR LR
comp=Z,3μm,24.0s
CN2 LR LR
comp=Z,4μm,24.0s
UNV Unalaska Valle 78.67 13 IAMs_20 IAMs_20 10 44 19.1
comp=Z,6μm,20.0s
GRNR Gornyy 79.53 338⇑ *i*P **P 10 16 29.0 +0.8**
GRNR *e*S **S 10 26 34.9 +5.5**
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR smax smax
comp=N,3.0nm,0.9s
ENH Enshi 79.55 309 IAmb IAmb 10 16 29.9
comp=Z,132nm,0.8s
GYA Guiyang 79.57 304 ⇓ P **P 10 16 30.0 +0.8**
GYA PcP **PcP 10 16 38.4 +1.3**
GYA S **S 10 26 28.8 -2.3**
GYA pmax pmax
comp=Z,43nm,1.1s
GYA pmax pmax
comp=Z,670nm,5.0s
GYA LR LR
comp=Z,1μm,17.7s
GYA LR LR
comp=Z,970nm,20.4s
GYA LR LR
comp=Z,1μm,20.7s
KLR Kul'dur 79.98 335 *ce*P **P 10 16 30.7 0.0**
KLR pmax pmax
comp=Z,119nm,2.0s
KLR MLR MLR
comp=Z,2μm,18.0s
PAF Port-aux-Franc 80.00 221 P **P 10 16 31.5 +0.5**
PAF pmax pmax
comp=Z,715nm,1.4s
PAF Port-aux-Franc 80.00 221 P **P 10 16 31.5 +0.5**
PAF IAMs_20 IAMs_20 10 43 14.9
comp=Z,5μm,21.0s
NKL Nikolayevsk 80.23 342 *e*P **P 10 16 31.5 -0.4**
NKL *i* 10 19 37.9
NKL *e*S **S 10 26 37.6 +1.0**
NKL pmax pmax
comp=N,8.0nm,1.2s
NKL pmax pmax
comp=Z,49nm,1.1s
NKL smax smax
comp=E,58nm,1.6s
NKL MLR MLR
comp=E,859nm,17.0s
NKL MLR MLR
comp=N,183nm,18.0s
NKL MLR MLR
comp=Z,3μm,16.0s
BJT Baijiatuan 81.01 320 IAmb IAmb 10 16 43.2
comp=Z,54nm,0.9s
BJI Beijing 81.02 320 P **P 10 16 35.7 -0.7**
BJI PP **PP 10 19 42.9 +1.2**
BJI S **S 10 26 46.2 +0.7**
BJI SS **SS 10 32 03.7 +3.1**
BJI pmax pmax
comp=Z,55nm,1.1s
BJI pmax pmax
comp=Z,660nm,3.9s
BJI LR LR
comp=Z,2μm,23.2s
BJI LR LR
comp=Z,2μm,25.2s
BJI LR LR
comp=Z,4μm,23.7s
SPIA Saint Paul Isl 81.14 10 IAMs_20 IAMs_20 10 45 36.3
comp=Z,5μm,20.0s
LAMP Lampang 81.32 294 P **P 10 16 41.0 +2.4**
SDPT Sand Point 81.44 16 IAMs_20 IAMs_20 10 49 33.5
comp=Z,6μm,18.0s
CM36 Chiang Mai Arr 81.77 294 P **P 10 16 42.0 +1.0**
CM35 Chiang Mai Arr 81.80 294 P **P 10 16 42.0 +0.9**
CM04 Chiang Mai Arr 81.82 294 P **P 10 16 43.3 +2.1**
CM09 Chiang Mai Arr 81.83 294 P **P 10 16 43.4 +2.1**
CM01 Chiang Mai Arr 81.84 294 P **P 10 16 43.5 +2.1**
CM05 Chiang Mai Arr 81.85 294 P **P 10 16 43.4 +2.0**
CM02 Chiang Mai Arr 81.86 294 P **P 10 16 43.5 +2.1**
TIY Taiyuan 81.87 317 *e*P **P 10 16 41.8 +0.7**
TIY S **S 10 26 54.5 -0.1**
TIY pmax pmax
comp=Z,110nm,0.9s
TIY LR LR
comp=Z,980nm,18.3s
TIY LR LR
comp=Z,2μm,17.1s
TIY LR LR
comp=Z,3μm,18.8s
CM31 Chiang Mai Arr 81.87 294 P **P 10 16 43.6 +2.1**
CM31 Chiang Mai Arr 81.87 294 IAmb IAmb 10 16 44.9
comp=Z,112nm,0.8s
CMAR Chiang Mai Arr 81.87 294 P **P 10 16 43.7 +2.2**
comp=Z,80nm,0.8s,baz=136,slow=4.0,SNR=235
CMAR PKKPbc **PKKPbc 10 35 13.4 +1.2**
comp=Z,4.5nm,0.9s,baz=285,slow=3.9,SNR=19
CMAR LR LR 10 55 37.8
comp=Z,2μm,19.6s,baz=190,slow=38
CMAR Chiang Mai Arr 81.87 294 *i*P **P 10 16 43.7 +2.2**
CMAR pmax pmax
comp=Z,86nm,0.8s
CMAR Chiang Mai Arr 81.87 294 P **P 10 16 42.9 +1.4**
CM34 Chiang Mai Arr 81.88 294 P **P 10 16 43.0 +1.5**
CM15 Chiang Mai Arr 81.89 294 P **P 10 16 43.0 +1.4**
CM13 Chiang Mai Arr 81.89 294 P **P 10 16 43.6 +2.0**
KMI Kunming 81.93 301 P **P 10 16 43.1 +1.1**
KMI PP **PP 10 19 51.0 +1.2**
KMI S **S 10 26 54.9 -1.2**
KMI pmax pmax
comp=Z,69nm,1.6s
KMI pmax pmax
comp=Z,770nm,3.5s
KMI LR LR
comp=Z,920nm,16.7s
KMI LR LR
comp=Z,2μm,19.4s
KMI LR LR
comp=Z,1μm,18.1s
KMI Kunming 81.93 301 P **P 10 16 43.6 +1.6**
KMI pmax pmax
comp=Z,235nm,1.5s
KMI MLR MLR
comp=Z,2μm,18.0s
KMI Kunming 81.93 301 P **P 10 16 43.6 +1.6**
CMMT Chiang Mai 82.03 294 P **P 10 16 44.0 +1.6**
CHTO Chiang Mai 82.03 294 P **P 10 16 44.3 +1.9**
CHTO pmax pmax
comp=Z,139nm,0.9s
CHTO MLR MLR
comp=Z,1μm,18.0s
CHTO Chiang Mai 82.03 294 P **P 10 16 44.3 +1.9**
CHTO Chiang Mai 82.03 294 IAmb IAmb 10 16 45.5
comp=Z,139nm,0.8s
CM33 Chiang Mai Arr 82.03 294 P **P 10 16 43.0 +0.6**
CM32 Chiang Mai Arr 82.04 294 P **P 10 16 44.0 +1.6**
XAN Xi'an 82.06 312 P **P 10 16 42.8 +0.6**
XAN pP pwP 10 16 51.3 +1.2
XAN S **S 10 26 55.9 -0.8**
XAN SS **SS 10 32 18.1 +1.6**
XAN pmax pmax
comp=Z,100nm,1.0s
XAN pmax pmax
comp=Z,1μm,3.9s
XAN LR LR
comp=Z,1μm,17.8s
XAN LR LR
comp=Z,1μm,16.9s
XAN LR LR
comp=Z,3μm,17.6s
XAN Xi'an 82.06 312 IAmb IAmb 10 16 43.8
comp=Z,83nm,0.8s
SYO Syowa Base 82.10 196⇑ *i*P **P 10 16 39.0 -2.8**
SYO Syowa Base 82.10 196⇓ *i*pP **P 10 16 42.1 +0.3**
SYO Syowa Base 82.10 196⇑ *e*PcP **PcP 10 16 47.0 -0.2**
MHMT Maesarieng 82.60 293 P **P 10 16 47.3 +2.0**
PMSA Palmer Station 82.85 159 P **P 10 16 45.4 -0.4**
PMSA Palmer Station 82.85 159 *e*P **P 10 16 45.9 +0.1**
CHIR Chirikof Islan 83.16 18 IAMs_20 IAMs_20 10 46 01.0
comp=Z,8μm,21.0s
CD2 Chengdu 84.06 307 P **P 10 16 53.2 +0.6**
CD2 PP **PP 10 20 06.3 -0.7**
CD2 S **S 10 27 16.6 -0.6**
CD2 SS **SS 10 32 44.9 -1.4**
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 pmax pmax
comp=Z,920nm,8.2s
CD2 LR LR
comp=Z,2μm,22.4s
CD2 LR LR
comp=Z,3μm,20.8s
CD2 LR LR
comp=Z,3μm,19.2s
HHC Hu-ho-hao-te 84.28 319⇑ *i*P **P 10 16 53.8 +0.2**
HHC pP PcP 10 16 58.3 +1.0
HHC sP pwP 10 17 00.8 -0.7
HHC S **SKSac 10 27 17.0 -0.1**
HHC sS sS 10 27 25.1 +1.4
HHC SS **SS 10 32 49.0 -0.4**
HHC pmax pmax
comp=Z,84nm,0.9s
HHC pmax pmax
comp=Z,520nm,5.2s
HHC LR LR
comp=Z,2μm,21.4s
HHC LR LR
comp=Z,2μm,23.5s
HHC LR LR
comp=Z,5μm,22.4s
DGPR DIGLIPUR 84.78 287 *e*P **P 10 16 56.5 -0.1**
BTO Baotou 85.09 318 *e*P **P 10 16 57.7 0.0**
HIA Hailar 85.24 329 *c i*P **P 10 16 57.0 -1.1**
HIA pmax pmax
comp=Z,25nm,0.9s
HIA MLR MLR
comp=Z,2μm,18.0s
ZEA Zeya 85.26 335 *e*P **P 10 16 58.2 +0.1**
ZEA *e* 10 20 10.8
ZEA *e*S **SKSac 10 27 21.5 -1.0**
ZEA *e* 10 28 26.3
ZEA pmax pmax
comp=E,20nm,1.8s
ZEA pmax pmax
comp=N,40nm,0.9s
ZEA pmax pmax
comp=Z,40nm,0.9s
ZEA pmax pmax
comp=Z,500nm,7.0s
ZEA pmax pmax
comp=N,100nm,4.5s
ZEA pmax pmax
comp=Z,200nm,9.1s
ZEA smax smax
comp=N,400nm,16.8s
NVL N'lazarevskaya 85.59 187 *e*P **P 10 16 55.8 -3.8**
NVL *e*S **SKSac 10 27 21.2 -3.3**
NVL pmax pmax
comp=Z,154nm,1.3s
SNAA Sanae 85.69 182 P **P 10 16 58.7 -1.5**
SNAA Sanae 85.69 182 P **P 10 16 58.8 -1.5**
comp=Z,68nm,1.1s,baz=188,slow=4.6,SNR=105
SNAA Sanae 85.69 182 P **P 10 16 58.4 -1.9**
SNAA pmax pmax
comp=Z,215nm,1.4s
SNAA Sanae 85.69 182 P **P 10 16 58.4 -1.9**
KDAK Kodiak Island 85.71 18 IAMs_20 IAMs_20 10 48 11.4
comp=Z,7μm,21.0s
SNCC San Nicolas Is 86.16 52 P **P 10 17 04.2 +1.1**
baz=240
SNCC San Nicolas Is 86.16 52 IAMs_20 IAMs_20 10 47 18.3
comp=Z,5μm,19.0s
VNA3 Neumayer Olymp 86.20 180 P **P 10 17 01.3 -1.5**
MCCM Marconi Confer 86.38 46 IAMs_20 IAMs_20 10 47 59.8
comp=Z,6μm,20.0s
SCZ2 Santa Cruz Isl 86.45 51 P **P 10 17 05.5 +1.0**
baz=240
VNA2 Neumayer--Watz 86.52 180 P **P 10 17 03.2 -1.0**
baz=165,slow=6.7
SAO San Andreas Ge 86.61 48 P **P 10 17 05.4 +0.2**
SAO pmax pmax
comp=Z,54nm,1.1s
SAO San Andreas Ge 86.61 48 P **P 10 17 05.4 +0.2**
SAO IAmb IAmb 10 17 09.0
comp=Z,54nm,1.1s
SAO IAMs_20 IAMs_20 10 47 15.0
comp=Z,7μm,20.0s
SBC Santa Barbara 86.62 51 P **P 10 17 06.0 +0.7**
baz=239
LZH Lanzhou 86.66 311 *e*P **P 10 17 06.6 +0.9**
LZH pP pwP 10 17 12.3 -1.3
LZH sP sP 10 17 16.5 +7.0
LZH PP **PP 10 20 27.1 -1.1**
LZH SKS **SKSac 10 27 30.8 -1.7**
LZH S **S 10 27 44.0 +1.1**
LZH sS ScS 10 27 52.7 +1.7
LZH pmax pmax
comp=Z,130nm,1.3s

LZH pmax pmax
comp=Z,910nm,7.6s
LZH LR LR
comp=Z,2µm,17.6s
LZH LR LR
comp=Z,2µm,19.5s
LZH LR LR
comp=Z,2µm,20.2s
SCI2 San Clemente I 86.73 52 P P 10 17 06.4 +0.5
baz=240
KCPM Cahto Peak 86.75 44 P P 10 17 06.9 +0.9
KCPM IAmb IAmb 10 17 13.4
comp=Z,54nm,0.9s
KCPM IAMs_20 IAMs_20 10 47 30.2
comp=Z,5µm,20.0s
PMPB Monarch Peak 86.77 49 IAmb IAmb 10 17 36.1
comp=Z,78nm,1.2s
PMPB IAMs_20 IAMs_20 10 48 57.3
comp=Z,6µm,19.0s
PKM Mcpherson Peak 86.78 50 P P 10 17 07.3 +1.0
baz=239
SEY Seymchan 86.78 351 *i* P P 10 17 03.8 -1.6
GDXM Geysers 86.79 46 P P 10 17 07.9 +1.8
GDXM IAmb IAmb 10 17 10.4
comp=Z,59nm,1.4s
VNA1 Neumayer--Stat 86.80 180 P P 10 17 04.5 -1.2
SMMC Simmler 86.87 50 P P 10 17 07.5 +1.0
baz=239
PAGB Antelope Grade 86.90 49 IAMs_20 IAMs_20 10 48 42.8
comp=Z,6µm,19.0s
KMRM Mail Ridge 86.97 44 IAmb IAmb 10 17 27.4
comp=Z,76nm,1.2s
KMRM IAMs_20 IAMs_20 10 50 27.9
comp=Z,6µm,19.0s
CIS Catalina Islan 87.04 52 P P 10 17 07.8 +0.4
baz=240
JCC Jacoby Creek, 87.09 43 IAMs_20 IAMs_20 10 50 49.4
comp=Z,3µm,18.0s
KHMM Horse Mountain 87.31 43 P P 10 17 09.5 +0.8
KHMM IAmb IAmb 10 17 21.8
comp=Z,53nm,1.0s
OSI Osito Audit: C 87.42 51 P P 10 17 09.8 +0.6
baz=240
OSI Osito Audit: C 87.42 51 IAMs_20 IAMs_20 10 47 57.6
comp=Z,7µm,20.0s
GO09 Cerro Castillo 87.46 146 P P 10 17 09.5 +0.2
DECC Green Verdugo 87.52 51 P P 10 17 09.6 -0.1
baz=240
HOM Homer 87.55 18 P P 10 17 10.2 +1.0
baz=214
KRMB Red Mountain 87.56 43 IAmb IAmb 10 17 14.0
comp=Z,103nm,1.5s
CNPM China Poot 87.56 18 IAMs_20 IAMs_20 10 47 37.2
comp=Z,7µm,22.0s
PASC Pasadena Art C 87.58 51 IAmb IAmb 10 17 34.1
comp=Z,47nm,1.4s
PASC Pasadena Art C 87.58 51 IAMs_20 IAMs_20 10 48 41.0
comp=Z,5µm,19.0s
ARVC Arvin 87.60 50 P P 10 17 10.2 +0.2
baz=240,SNR=13
TJX Tijuana 87.60 53 IAMs_20 IAMs_20 10 49 38.6
comp=Z,4µm,19.0s
MWC Mount Wilson 87.70 51 P P 10 17 09.6 -1.2
MWC pmax pmax
comp=Z,155nm,1.9s
MWC Mount Wilson 87.70 51 P P 10 17 09.6 -1.2
MWC IAmb IAmb 10 17 35.8
comp=Z,155nm,1.9s
MWC IAMs_20 IAMs_20 10 48 17.1
comp=Z,5µm,20.0s
109C Camp Elliot, M 87.75 53 P P 10 17 11.1 +0.3
baz=241
109C Camp Elliot, M 87.75 53 P P 10 17 10.9 +0.2
109C IAmb IAmb 10 17 24.9
comp=Z,45nm,1.4s
109C IAMs_20 IAMs_20 10 47 55.4
comp=Z,4µm,20.0s
VES Vestal, Richgr 87.78 50 P P 10 17 11.1 +0.2
baz=240,SNR=15
CBX Cerro Bola 87.80 54 P P 10 17 11.7 +0.5
VOG Valley Oaks Go 87.81 49 P P 10 17 10.9 -0.1
baz=240
BRLK Bradley Lake 87.85 18 IAMs_20 IAMs_20 10 51 09.7
comp=Z,6µm,20.0s
WDC Whiskeytown Da 87.91 44 IAmb IAmb 10 17 17.6
comp=Z,122nm,1.6s
WDC IAMs_20 IAMs_20 10 49 19.2
comp=Z,4µm,20.0s
TKX Tecate 87.96 53 IAMs_20 IAMs_20 10 52 11.1
comp=Z,3µm,18.0s
BAR Barrett 87.97 53 P P 10 17 11.8 0.0
BAR IAmb IAmb 10 17 24.1
comp=Z,54nm,1.6s
BAR IAMs_20 IAMs_20 10 49 57.2
comp=Z,4µm,19.0s
CMB Columbia Colle 87.99 47 P P 10 17 12.2 +0.3
CMB pmax pmax
comp=Z,57nm,1.4s
CMB Columbia Colle 87.99 47 P P 10 17 12.2 +0.3
CMB IAmb IAmb 10 17 16.2
comp=Z,57nm,1.4s
BFSC Mount Baldy Ra 88.00 52 P P 10 17 12.2 +0.1
baz=241,SNR=16
N02D Trinity Center 88.02 44 P P 10 17 13.1 +1.1
baz=237,SNR=22
MURC Murrieta 88.03 52 P P 10 17 12.4 +0.3
baz=241
ORV Oroville 88.04 45 IAmb IAmb 10 17 18.0
comp=Z,76nm,1.4s
ORV IAMs_20 IAMs_20 10 52 51.7
comp=Z,5µm,19.0s
EDW2 Edwards Air Fo 88.07 51 P P 10 17 13.1 +0.8
baz=240,SNR=13
SPX San Pedro Mart 88.09 55 IAMs_20 IAMs_20 10 49 25.8
comp=Z,4µm,20.0s
L02E Cave Junction 88.09 42 P P 10 17 13.1 +0.9
baz=237
ISA Isabella, Lake 88.12 50 P P 10 17 12.7 +0.1
baz=240,SNR=35
ISA Isabella, Lake 88.12 50 IAmb IAmb 10 17 25.0
comp=Z,59nm,1.1s
ISA IAMs_20 IAMs_20 10 49 02.0
comp=Z,5µm,20.0s
M02C Callahan 88.15 43 P P 10 17 13.4 +0.8
baz=237,SNR=18
ESJX Sierra Juarez 88.18 54 IAmb IAmb 10 17 24.9
comp=Z,92nm,2.0s
ESJX IAMs_20 IAMs_20 10 50 58.0
comp=Z,4µm,19.0s
O03E Paynes Creek 88.23 45 P P 10 17 13.1 0.0
baz=238,SNR=25
MONP2 Monument Peak 88.25 53 P P 10 17 14.1 +0.6
baz=241,SNR=14
IKP In-Ko-Pah, Jac 88.37 54 P P 10 17 14.2 +0.3
baz=242,SNR=11
RMX La Rumorosa 88.37 54 IAMs_20 IAMs_20 10 50 09.3
comp=Z,5µm,19.0s
YBH Yreka Blue Hor 88.42 43 IAmb IAmb 10 17 28.7
comp=Z,49nm,1.1s
J01E Myrtle Point 88.44 41 P P 10 17 14.7 +0.8
baz=236
BBRC Big Bear Solar 88.54 52 P P 10 17 15.2 +0.4
baz=241
SEW Seward 88.55 18 IAMs_20 IAMs_20 10 49 59.5
comp=Z,5µm,20.0s
SFX San Felipe 88.56 55 P P 10 17 15.6 +1.0
SFX IAMs_20 IAMs_20 10 49 19.1
comp=Z,4µm,19.0s
PFO Pinyon Flats O 88.57 53*c i* P P 10 17 15.2 +0.4
PFO pmax pmax
comp=Z,19nm,1.4s
PFO MLR MLR
comp=Z,5µm,16.0s
PFO Pinyon Flats O 88.57 53 P P 10 17 15.2 +0.4
baz=241
PFO Pinyon Flats O 88.57 53 P P 10 17 15.8 +1.0
PFO IAmb IAmb 10 17 18.5
comp=Z,61nm,1.8s
PFO Pinyon Flats O 88.57 53 IAMs_20 IAMs_20 10 48 29.2
comp=Z,5µm,20.0s
TPFO Pinon Flats 88.57 53 P P 10 17 14.9 0.0
baz=241
XPFO Pion Flat 88.57 53 IAMs_20 IAMs_20 10 48 29.2
comp=Z,5µm,20.0s
LRMC Laurel Mtn Rad 88.59 50 P P 10 17 15.0 +0.1
baz=241,SNR=14
SAIH SAIHA 88.66 295 *e* P P 10 17 16.3 +0.8

RUBR Rubicon Trail 88.67 46 P P 10 17 16.1 +0.8
RUBR IAMs_20 IAMs_20 10 49 20.5
comp=Z,6µm,20.0s
MDPB Devils Postpil 88.68 48 IAmb IAmb 10 17 24.5
comp=Z,106nm,1.5s
MDPB IAMs_20 IAMs_20 10 48 40.8
comp=Z,5µm,20.0s
OMMB Old Mammoth Mi 88.72 48 IAmb IAmb 10 17 46.4
OMMB IAMs_20 IAMs_20 10 49 02.5
comp=Z,6µm,20.0s
SWSC Sam W. Stewart 88.74 53 P P 10 17 16.0 +0.5
baz=242,SNR=11
HUMO Hull Mountain 88.74 42 IAmb IAmb 10 17 24.8
comp=Z,63nm,1.2s
O22K Cooper Landing 88.78 18 P P 10 17 15.8 +0.9
baz=215
O22K Cooper Landing 88.78 18 IAMs_20 IAMs_20 10 58 39.5
comp=Z,5µm,18.0s
CWC Cottonwood Cre 88.78 49 P P 10 17 16.5 +0.7
baz=240
RRX Edison Barstow 88.78 51 P P 10 17 16.3 +0.6
baz=241
MLAC Mammoth, Mammc 88.84 48 P P 10 17 16.9 +0.7
baz=240,SNR=16
UABX UABC, Campus M 88.86 54 IAMs_20 IAMs_20 10 50 23.8
comp=Z,4µm,19.0s
CPBX Cerro Prieto 88.86 54 IAmb IAmb 10 17 40.5
comp=Z,162nm,2.0s
SRIG Santa Rosalia 88.91 60 IAmb IAmb 10 17 29.9
comp=Z,120nm,1.5s
SRIG IAMs_20 IAMs_20 10 49 47.7
comp=Z,5µm,20.0s
ANM Nome 88.92 10 IAMs_20 IAMs_20 10 51 19.0
comp=Z,4µm,20.0s
L04D Klamath Falls 88.94 43 P P 10 17 16.9 +0.5
baz=238,SNR=12
BEKR Beckworth 88.95 46 P P 10 17 17.2 +0.6
BEKR IAmb IAmb 10 17 22.5
comp=Z,93nm,1.5s
BEKR IAMs_20 IAMs_20 10 50 10.9
comp=Z,5µm,20.0s
TIN Tinemaha, Big 88.98 49 P P 10 17 17.6 +1.0
baz=240
M04C Macdoel 89.00 43 P P 10 17 17.4 +0.7
baz=238
MPMC Manual Prospec 89.01 50 P P 10 17 17.2 +0.3
baz=241,SNR=31
I02D Swisshome 89.02 41 P P 10 17 17.4 +0.9
baz=236
PNTR Pine Nut 89.06 47 P P 10 17 17.5 +0.4
PNTR IAmb IAmb 10 17 30.2
comp=Z,86nm,1.1s
LPIG La Paz 89.09 63 P P 10 17 18.5 +1.2
baz=99,slow=4.6
BELC Belle Mtn. Jos 89.09 52 P P 10 17 17.7 +0.4
baz=242,SNR=23
I03D Drain, OR 89.09 41 P P 10 17 17.5 +0.6
baz=237
KOHI KOHIMA 89.12 298 *e* P P 10 17 17.6 -0.1
KOHI IAmb IAmb 10 17 21.4
comp=Z,103nm,1.4s
GSC Goldstone, Bar 89.13 51 P P 10 17 17.8 +0.4
baz=241,SNR=14
GSC Goldstone, Bar 89.13 51 IAMs_20 IAMs_20 10 49 11.8
comp=Z,5µm,20.0s
SLBS Sierra La Lagu 89.21 64 P P 10 17 19.4 +1.4
SLBS IAmb IAmb 10 17 31.3
comp=Z,157nm,1.6s
HEC Hector,Ludlow 89.24 52 P P 10 17 18.4 +0.5
baz=241
RC01 Rabbit Creek A 89.27 18 P P 10 17 18.4 +1.1
baz=215
SUA Susitna One 89.30 17 IAMs_20 IAMs_20 10 49 33.3
comp=Z,6µm,21.0s
BC3 Big Chuckawall 89.33 53 P P 10 17 18.9 +0.5
baz=242,SNR=15
LHV Little Huntoon 89.38 48 P P 10 17 19.5 +1.1
LHV IAmb IAmb 10 17 22.3
comp=Z,82nm,1.3s
LHV IAMs_20 IAMs_20 10 49 15.3
comp=Z,6µm,20.0s
JORH JORHAT 89.44 299 *e* P P 10 17 18.1 -0.9
TNA Tin City 89.49 8 IAMs_20 IAMs_20 10 53 18.0
comp=Z,4µm,20.0s
K04D Chiloquin, OR 89.50 43 P P 10 17 19.8 +0.8
baz=238
GLA Glamis 89.51 54 P P 10 17 20.1 +0.9
baz=242,SNR=11
GLA Glamis 89.51 54 IAmb IAmb 10 17 23.2
comp=Z,76nm,1.3s
GLA IAMs_20 IAMs_20 10 50 55.1
comp=Z,5µm,19.0s
PAHR Pah Rah Range 89.52 46 IAmb IAmb 10 17 23.5
comp=Z,116nm,1.5s
PAHR IAMs_20 IAMs_20 10 50 56.9
comp=Z,5µm,19.0s
SKT Skwentna 89.52 17 IAMs_20 IAMs_20 10 51 33.1
comp=Z,4µm,20.0s
GRAC Grapevine Rang 89.55 49 P P 10 17 19.9 +0.6
baz=241,SNR=36
RYN Ryan 89.56 47 P P 10 17 19.9 +0.5
RYN IAmb IAmb 10 17 25.5
comp=Z,37nm,0.9s
RYN IAMs_20 IAMs_20 10 49 40.0
comp=Z,7µm,20.0s
COR Corvallis 89.61 40 IAMs_20 IAMs_20 10 48 00.8
comp=Z,5µm,22.0s
J04D Umpqua Nationa 89.61 42 P P 10 17 19.8 +0.2
baz=238,SNR=14
NVAR Mina Array Bea 89.61 48 P P 10 17 20.1 +0.4
comp=Z,22nm,0.9s,baz=227,slow=8.1,SNR=137
NVAR PKKPbc **PKKPbc** 10 34 57.8 +2.9
comp=Z,0.6nm,0.7s,baz=64,slow=3.4,SNR=4.7
NVAR PKPPKP **P'P'df** 10 43 03.9 +3.8
comp=Z,1.3nm,0.9s,baz=84,slow=2.7,SNR=8.0
NVAR LR LR 10 49 37.1
comp=Z,7µm,20.8s,baz=256,slow=30
NVAR Mina Array Bea 89.61 48 P P 10 17 20.0 +0.2
FURC Furnace Creek, 89.65 50 P P 10 17 20.0 +0.3
baz=241,SNR=24
HIN Hinchinbrook I 89.66 19 IAMs_20 IAMs_20 10 51 51.0
comp=Z,6µm,20.0s
GMRC Granite Mounta 89.71 52 P P 10 17 20.6 +0.4
baz=242,SNR=17
NV11 Mina Array Sit 89.71 48 IAmb IAmb 10 17 26.7
comp=Z,36nm,0.8s
I04A Tendick Farm, 89.72 41 P P 10 17 20.1 +0.2
baz=238
IRM Iron Mountain 89.79 53 P P 10 17 20.9 +0.5
baz=242,SNR=21
SHOC Shoshone, Teco 89.79 51 P P 10 17 20.6 +0.2
baz=241,SNR=22
TUQ Turquoise Moun 89.82 51 P P 10 17 21.0 +0.3
baz=242,SNR=6.2
PMR Palmer 89.85 18 IAMs_20 IAMs_20 10 49 23.9
comp=Z,6µm,22.0s
GLI Glacier Island 89.87 19 IAMs_20 IAMs_20 10 49 31.4
comp=Z,6µm,22.0s
DIB Dawson Inlet, 89.87 30 IAmb IAmb 10 17 24.8
comp=Z,63nm,1.1s
DIB IAMs_20 IAMs_20 10 49 41.1
comp=Z,6µm,20.0s
KNK Knik Glacier 89.90 18 IAMs_20 IAMs_20 10 51 53.1
comp=Z,4µm,20.0s
H04D Lebanon 89.91 41 P P 10 17 21.4 +0.7
baz=237
FID Port Fidalgo 89.95 19 IAMs_20 IAMs_20 10 52 00.2
comp=Z,7µm,20.0s
G03D McMinnville, O 89.97 40 P P 10 17 22.5 +1.5
baz=237
EYAK Cordova Ski Ar 90.02 20 IAMs_20 IAMs_20 10 50 42.4
comp=Z,7µm,20.0s
CIT Chita 90.02 328 *e* P P 10 17 20.8 -0.3
CIT *e* 10 17 30.7
CIT pmax pmax
comp=Z,320nm,2.1s
MOD Modoc Plateau 90.04 44 IAmb IAmb 10 17 34.5
comp=Z,42nm,1.1s
MOD IAMs_20 IAMs_20 10 53 05.5
comp=Z,3µm,19.0s
KVN Kaiserville 90.05 47 IAmb IAmb 10 17 28.2
comp=Z,39nm,0.9s
GHO Glory Hole Cre 90.06 18 IAMs_20 IAMs_20 10 49 30.3
comp=Z,6µm,22.0s
K05A Summer Lake 90.09 43 IAmb IAmb 10 17 35.8
comp=Z,117nm,1.3s
PPLA Purkeypile 90.12 16 IAMs_20 IAMs_20 10 55 22.9
comp=Z,5µm,20.0s
J05D Fort Rock, OR 90.17 42 P P 10 17 22.7 +0.6
baz=238
113A Mohawk Valley, 90.17 54 P P 10 17 23.2 +1.0
113A IAmb IAmb 10 17 34.8
comp=Z,48nm,1.4s
113A IAMs_20 IAMs_20 10 50 57.7
comp=Z,4µm,19.0s
SML Sawmill 90.25 18 IAMs_20 IAMs_20 10 58 25.5
comp=Z,5µm,18.0s
BELO BELONIA 90.26 295 *e* P P 10 17 21.8 -1.0
TPNV Topopah Spring 90.31 50 P P 10 17 23.5 +0.5
baz=242,SNR=28
TPNV Topopah Spring 90.31 50 IAmb IAmb 10 17 35.3
comp=Z,31nm,0.9s
TPNV IAMs_20 IAMs_20 10 50 34.1
comp=Z,6µm,20.0s
NEE2 Needles Airpor 90.46 52 P P 10 17 24.3 +0.8
baz=242
E03A Lebam 90.53 39 P P 10 17 24.6 +1.1
214A Organ Pipe Nat 90.53 55 P P 10 17 24.6 +0.6
baz=243
214A Organ Pipe Nat 90.53 55 P P 10 17 24.9 +0.9
214A IAMs_20 IAMs_20 10 50 01.2
comp=Z,4µm,20.0s
SCM Sheep Creek Mo 90.56 18 IAMs_20 IAMs_20 10 50 49.6
comp=Z,4µm,21.0s
TEZP TEZPUR 90.56 299 *e* P P 10 17 24.1 -0.1
F04D Rainier, OR 90.59 39 P P 10 17 24.9 +1.1
baz=237
PDMCI Parker Dam,Lak 90.59 53 P P 10 17 24.8 +0.7
baz=243,SNR=13
PINE Pine Mountain 90.62 42 P P 10 17 24.4 +0.1
PINE IAmb IAmb 10 17 31.0
comp=Z,52nm,0.9s
BILL Bilibino 90.66 358⇓ *e* P P 10 17 22.6 -1.0
BILL *e* 10 21 00.7
BILL *i* S **SKSac** 10 27 57.1 +2.6
BILL *i* PS **PnS** 10 29 32.3 +4.1
BILL pmax pmax
comp=Z,37nm,1.1s
BILL MLR MLR
comp=Z,2µm,19.0s
BILL Bilibino 90.66 358 P P 10 17 22.8 -0.8
BILL IAmb IAmb 10 17 28.4
comp=Z,38nm,1.1s
I05D Terrebonne, OR 90.66 41 P P 10 17 24.8 +0.5
baz=238
HSIG 90.68 59 IAmb IAmb 10 17 28.3
comp=Z,30nm,1.0s
HSIG IAMs_20 IAMs_20 10 48 35.4
comp=Z,4µm,21.0s
AGT Agartala 90.69 296 *e* P P 10 17 26.6 +1.8
KLU Klutina 90.70 19 IAmb IAmb 10 18 01.1
comp=Z,41nm,1.4s
KLU IAMs_20 IAMs_20 10 50 18.5
comp=Z,6µm,21.0s
NLWA Neilton Lookou 90.82 38 IAmb IAmb 10 17 27.1
comp=Z,48nm,1.1s
NLWA IAMs_20 IAMs_20 10 50 08.7
comp=Z,6µm,20.0s
F04A Amboy 90.86 40 P P 10 17 24.8 -0.3
F04A IAmb IAmb 10 17 38.4
comp=Z,60nm,1.0s
F04A IAMs_20 IAMs_20 10 48 57.0
comp=Z,5µm,22.0s
SHL Shillong 90.87 297 *e* P P 10 17 26.0 +0.1
SHL IAmb IAmb 10 17 28.5
comp=Z,49nm,0.8s
SHPR Sheep Range 90.87 51 IAmb IAmb 10 17 38.2
comp=Z,42nm,1.3s
SHPR IAMs_20 IAMs_20 10 49 58.0
comp=Z,4µm,20.0s
YAK Yakutsk 90.90 342 *e* P P 10 17 23.4 -1.4
YAK *e**PP **pwP** 10 17 31.3 -1.4
YAK *e*S **SKSac** 10 27 54.7 -1.4
YAK *e* 10 28 20.8
YAK *e*SS **SS** 10 34 22.2 -2.7
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,3.0nm,0.6s
YAK pmax pmax
comp=E,3.0nm,1.5s
YAK pmax pmax
comp=Z,344nm,4.8s
YAK pmax pmax
comp=N,311nm,5.1s
YAK pmax pmax
comp=E,199nm,5.3s
YAK smax smax
comp=E,72nm,2.5s
YAK smax smax
comp=N,213nm,3.2s
YAK MLR MLR
comp=Z,6µm,20.0s
YAK MLR MLR
comp=N,3µm,25.0s
YAK MLR MLR
comp=E,3µm,21.0s
YAK Yakutsk 90.90 342 IAMs_20 IAMs_20 10 57 11.8
comp=Z,5µm,19.0s
ULN Ulaanbaatar 90.97 323 *ce* P P 10 17 25.7 -0.1
ULN pmax pmax
comp=Z,69nm,1.0s
ULN MLR MLR
comp=Z,2µm,19.0s
ULN Ulaanbaatar 90.97 323 P P 10 17 26.1 +0.3
KTH Kantishna Hill 90.99 16 IAMs_20 IAMs_20 10 52 49.8
comp=Z,5µm,20.0s
CRQM Cirque 91.00 20 IAmb IAmb 10 17 37.1
comp=Z,71nm,1.3s
CRQM IAMs_20 IAMs_20 10 52 05.8
comp=Z,6µm,20.0s
CRAG Craig 91.05 28 IAMs_20 IAMs_20 10 52 57.3
comp=Z,6µm,19.0s
TRF Thorofare Moun 91.06 16 IAMs_20 IAMs_20 10 52 43.9
comp=Z,4µm,20.0s
GTA Gaotai 91.09 313 ⇑P P 10 17 27.1 +0.6
GTA pP sP 10 17 30.8 +0.5
GTA sP pwP 10 17 33.2 -1.2
GTA SKS **SKSac** 10 27 56.8 -1.8
GTA S **S** 10 28 25.0 +0.6
GTA sS sS 10 28 33.0 +4.0
GTA SS **SS** 10 34 29.8 +0.9
GTA pmax pmax
comp=Z,23nm,1.2s
GTA pmax pmax
comp=Z,440nm,6.3s
GTA LR LR
comp=Z,890nm,18.7s
GTA LR LR
comp=Z,1µm,20.0s
GTA LR LR
comp=Z,950nm,21.3s
TGL Tana Glacier 91.10 21 IAmb IAmb 10 17 27.9
comp=Z,40nm,1.2s
E04D Cinebar 91.11 39 P P 10 17 26.6 +0.4
baz=237
M24K Tolsona, Glenn 91.11 18 P P 10 17 26.9 +0.9
baz=218
M24K Tolsona, Glenn 91.11 18 IAMs_20 IAMs_20 10 50 54.2
comp=Z,5µm,21.0s
ISLE Juniper Island 91.14 21 IAmb IAmb 10 17 31.3
comp=Z,28nm,0.8s
W13A Hualapai Mount 91.14 52 IAMs_20 IAMs_20 10 50 52.3
comp=Z,5µm,20.0s
G05D Wamic, OR 91.15 41 P P 10 17 27.2 +0.6
baz=238
SIT Sitka 91.19 26 IAMs_20 IAMs_20 10 53 45.7
comp=Z,5µm,19.0s
N25K Chitina, Valde 91.19 19 P P 10 17 26.1 -0.3
baz=220
N25K Chitina, Valde 91.19 19 IAMs_20 IAMs_20 10 52 59.4
comp=Z,4µm,20.0s
VRDI Verde Repeater 91.26 20 IAMs_20 IAMs_20 10 55 02.2
comp=Z,4µm,19.0s
Y14A Wickenburg 91.27 54 IAMs_20 IAMs_20 10 50 14.7
comp=Z,4µm,20.0s
GUWA GUWAHATI 91.28 298 *e* P P 10 17 26.1 -1.5
GLB Gilahina Butte 91.31 20 P P 10 17 26.1 -0.8
GLB IAMs_20 IAMs_20 10 51 21.5
comp=Z,4µm,20.0s
BBB Bella Bella 91.32 32 IAMs_20 IAMs_20 10 57 32.7
comp=Z,5µm,18.0s
SONM Songino Array 91.32 322 P P 10 17 26.9 -0.5
comp=Z,52nm,0.9s,baz=138,slow=4.8,SNR=185

SONM PKKPbc **PKKPdf** **10 34 49.6 +1.2**
comp=Z,1.4nm,0.9s,baz=300,slow=3.8,SNR=5.3
SONM PKPPKP **P'P'df** **10 42 59.2 +3.4**
comp=Z,0.4nm,0.6s,baz=258,slow=1.4,SNR=5.2
SONM LR LR 10 58 56.8
comp=Z,2µm,19.0s,baz=116,slow=36
SONM Songino Array 91.32 322 P **P** **10 17 26.9 -0.5**
D04E Lakebay 91.33 38 P **P** **10 17 27.4 +0.2**
baz=237
D03D Eldon 91.34 38 P **P** **10 17 27.9 +0.7**
baz=237
PRN Pahroc Range 91.37 50 IAmb IAmb 10 17 40.6
comp=Z,37nm,0.9s
F05D White Salmon 91.40 40 P **P** **10 17 28.0 +0.3**
baz=238
TABL Table Mountain 91.42 21 IAmb IAmb 10 17 32.5
comp=Z,31nm,0.8s
BPAW Bear Paw Mtn. 91.42 16 IAMs_20 IAMs_20 10 56 40.4
comp=Z,5µm,19.0s
R11A Troy Canyon, C 91.44 49 P **P** **10 17 28.3 +0.1**
baz=242,SNR=18
R11A Troy Canyon, C 91.44 49 IAMs_20 IAMs_20 10 49 49.8
comp=Z,4µm,21.0s
BALM Baldy 91.47 21 P **P** **10 17 27.2 -0.5**
BALM IAmb IAmb 10 17 38.6
comp=Z,27nm,1.0s
BALM IAMs_20 IAMs_20 10 52 30.8
comp=Z,6µm,20.0s
MCARA McCarthy VSAT 91.51 20 IAMs_20 IAMs_20 10 50 45.9
comp=Z,4µm,20.0s
DHY Denali Highway 91.53 17 IAMs_20 IAMs_20 10 54 18.4
comp=Z,5µm,20.0s
MCK McKinley 91.64 16 P **P** **10 17 29.9 +1.6**
baz=216
LON Longmire 91.65 39 IAMs_20 IAMs_20 10 49 20.9
comp=Z,6µm,22.0s
BARN Barnard Glacie 91.71 21 IAmb IAmb 10 17 31.0
comp=Z,35nm,1.0s
PGC Sidney 91.74 37 IAMs_20 IAMs_20 10 49 12.2
comp=Z,7µm,22.0s
CTGM Chitina Glacie 91.75 21 IAmb IAmb 10 17 42.0
comp=Z,34nm,1.1s
D05A Enumclaw 91.78 39 IAMs_20 IAMs_20 10 49 45.3
comp=Z,6µm,22.0s
BWN Browne 91.86 16 IAMs_20 IAMs_20 10 54 02.2
comp=Z,5µm,20.0s
J08A Circle Bar Ran 91.94 43 IAmb IAmb 10 17 43.0
comp=Z,42nm,1.2s
PAX Paxson 91.99 18 IAMs_20 IAMs_20 10 54 39.5
comp=Z,4µm,19.0s
WRAK Wrangell Islan 92.00 28 IAMs_20 IAMs_20 10 53 16.3
comp=Z,4µm,19.0s
A04D Lummi Island 92.20 37 P **P** **10 17 32.5 +1.3**
baz=237
TUC Tucson 92.23 56 P **P** **10 17 33.2 +1.3**
TUC Tucson 92.23 56 P **P** **10 17 33.1 +1.2**
baz=244
TUC Tucson 92.23 56 P **P** **10 17 33.2 +1.3**
TUC Tucson 92.23 56 IAMs_20 IAMs_20 10 51 14.2
comp=Z,4µm,20.0s
MLY Manley 92.26 15 P **P** **10 17 30.7 -0.5**
baz=214
B05A Bryant 92.29 38 P **P** **10 17 32.5 +0.8**
baz=238
NEA2 Nenana 92.31 16 P **P** **10 17 31.3 -0.1**
baz=216
F07A Phinny Hill Vi 92.32 41 IAMs_20 IAMs_20 10 50 29.7
comp=Z,4µm,20.0s
IMAR Indian Mountai 92.37 14 P **P** **10 17 31.4 -0.2**
JIS Juneau Island 92.38 25 IAMs_20 IAMs_20 10 49 50.2
comp=Z,6µm,21.0s
BESE Bessie Mountai 92.40 25 IAmb IAmb 10 17 35.6
comp=Z,45nm,1.3s
BESE IAMs_20 IAMs_20 10 50 42.6
comp=Z,6µm,20.0s
WRH Wood River Hil 92.46 16 IAmb IAmb 10 17 34.3
comp=Z,57nm,1.8s
MENT Mentasta 92.48 19 IAMs_20 IAMs_20 10 51 16.4
comp=Z,6µm,21.0s
H03S2 Juan Fernandez 92.51 128 T T 12 00 34.2
baz=238,slow=74,SNR=8.3
H03S1 Juan Fernandez 92.52 128 T T 12 00 30.0
baz=238,slow=74,SNR=7.7
H03S3 Juan Fernandez 92.53 128 T T 12 00 33.8
baz=238,slow=74,SNR=9.0
RDOG Red Dog Mine 92.54 9 IAMs_20 IAMs_20 10 53 31.7
comp=Z,4µm,20.0s
LTY Liberty 92.58 39 IAmb IAmb 10 18 09.7
comp=Z,31nm,1.4s
LTY IAMs_20 IAMs_20 10 50 23.5
comp=Z,6µm,22.0s
G08A Pilot Rock 92.60 41 IAMs_20 IAMs_20 10 50 21.2
comp=Z,4µm,20.0s
X16A Lo Mia Camp, P 92.64 54 IAmb IAmb 10 17 37.7
comp=Z,31nm,1.2s
X16A IAMs_20 IAMs_20 10 50 16.0
comp=Z,4µm,20.0s
L26K Log Cabin Wild 92.65 19 P **P** **10 17 32.8 -0.2**
baz=221
I23K Minto, Yukon-K 92.69 15 P **P** **10 17 32.0 -1.1**
baz=216
I23K Minto, Yukon-K 92.69 15 IAMs_20 IAMs_20 10 54 00.8
comp=Z,4µm,20.0s
E07A Sunnyside 92.70 40 IAmb IAmb 10 17 45.7
comp=Z,22nm,0.9s
E07A IAMs_20 IAMs_20 10 50 19.8
comp=Z,4µm,21.0s
HDA Harding Lake 92.71 17 P **P** **10 17 32.2 -1.1**
baz=218
HDA Harding Lake 92.71 17 P **P** **10 17 32.6 -0.7**
HDA IAmb IAmb 10 17 39.8
comp=Z,19nm,0.8s
RIDG Independent Ri 92.77 18 IAMs_20 IAMs_20 10 57 03.0
comp=Z,4µm,19.0s
B06A Marblemount 92.78 38 IAMs_20 IAMs_20 10 51 31.5
comp=Z,5µm,20.0s
HAWA Hanford 92.81 40 IAmb IAmb 10 17 46.7
comp=Z,82nm,1.7s
HAWA IAMs_20 IAMs_20 10 50 11.6
comp=Z,5µm,22.0s
MDM Murphy Dome 92.82 16 IAmb IAmb 10 17 34.5
comp=Z,29nm,1.1s
MDM IAMs_20 IAMs_20 10 54 29.3
comp=Z,5µm,20.0s
TCOL CIGO, UAF Yank 92.84 16 P **P** **10 17 32.8 -1.0**
baz=217
TCOL CIGO, UAF Yank 92.84 16 P **P** **10 17 31.6 -2.2**
TCOL IAmb IAmb 10 17 34.6
comp=Z,30nm,1.1s
COLA College 92.85 16 P **P** **10 17 31.8 -2.0**
COLA pmax pmax
comp=Z,32nm,1.1s
COLA College 92.85 16 P **P** **10 17 31.8 -2.0**
COLA IAmb IAmb 10 17 34.6
comp=Z,32nm,1.1s
U15A North Rim 92.90 52 P **P** **10 17 35.7 +0.5**
U15A IAmb IAmb 10 17 47.8
comp=Z,32nm,0.8s
U15A IAMs_20 IAMs_20 10 51 09.7
comp=Z,4µm,20.0s
DOT Dot Lake 92.92 18 IAmb IAmb 10 17 44.8
comp=Z,27nm,1.2s
DOT IAMs_20 IAMs_20 10 55 08.0
comp=Z,5µm,20.0s
319A Douglas 92.99 57 P **P** **10 17 35.3 -0.2**
319A IAMs_20 IAMs_20 10 50 39.4
comp=Z,5µm,20.0s
ILAR Eielson Array 93.02 17 P **P** **10 17 33.1 -1.5**
comp=Z,10nm,1.0s,baz=234,slow=6.0,SNR=44
ILAR PKKP **PKKPdf** **10 34 44.3 -1.5**
comp=Z,0.9nm,0.9s,baz=360,slow=1.6,SNR=4.8
ILAR PKPPKP **P'P'df** **10 42 54.0 +3.3**
comp=Z,1.7nm,1.2s,baz=30,slow=0.3,SNR=4.0
ILAR LR LR 10 53 44.8
comp=Z,7µm,20.2s,baz=244,slow=32
ILAR Eielson Array 93.02 17 P **P** **10 17 32.4 -2.2**
E08A Dider Farm, El 93.14 40 IAmb IAmb 10 17 38.8
comp=Z,60nm,1.5s
E08A IAMs_20 IAMs_20 10 50 55.4
comp=Z,5µm,21.0s
POKR Poker Flat Res 93.15 16 P **P** **10 17 33.8 -1.4**
baz=217
BCAR Beaver Creek A 93.16 19 P **P** **10 17 33.4 -2.0**
WUAZ Wupatki 93.17 53 P **P** **10 17 36.7 +0.4**
baz=244
WUAZ Wupatki 93.17 53 P **P** **10 17 36.8 +0.5**
WUAZ IAmb IAmb 10 17 45.3
comp=Z,23nm,1.1s

LSA Lhasa 93.17 301 P **P** **10 17 37.2 +0.4**
LSA LR LR
comp=Z,3µm,15.7s
LSA LR LR
comp=Z,2µm,19.9s
LSA Lhasa 93.17 301 IAmb IAmb 10 18 11.8
comp=Z,41nm,1.3s
SCRK Sand Creek 93.19 18 P **P** **10 17 34.7 -0.9**
baz=220
BMO Blue Mountains 93.41 42 IAMs_20 IAMs_20 10 54 03.5
comp=Z,3µm,20.0s
PALK Pallekele 93.50 276 LR LR 11 02 49.1
comp=Z,2µm,18.4s,baz=228,slow=38
PALK Pallekele 93.50 276 P **P** **10 17 38.9 +0.7**
PALK pmax pmax
comp=Z,58nm,1.2s
PALK MLR MLR
comp=Z,3µm,18.0s
PALK Pallekele 93.50 276 P **P** **10 17 38.9 +0.7**
PALK IAmb IAmb 10 17 50.9
comp=Z,58nm,1.2s
D08A Wollman Farm, 93.51 40 IAMs_20 IAMs_20 10 50 33.1
comp=Z,5µm,22.0s
MFID Camas Ranch 93.66 44 IAMs_20 IAMs_20 10 52 44.8
comp=Z,4µm,20.0s
E09A Wood Farm, Sta 93.70 41 IAMs_20 IAMs_20 10 51 11.3
comp=Z,4µm,20.0s
K27K Chicken 93.79 19 P **P** **10 17 38.2 0.0**
baz=222
K27K Chicken 93.79 19 IAMs_20 IAMs_20 10 52 27.9
comp=Z,6µm,20.0s
BWNR Bhubaneshwar 93.89 290 *eP* **P** **10 17 39.7 +0.1**
BWNR IAmb IAmb 10 17 46.4
comp=Z,57nm,1.3s
B08A Colville Reser 93.92 39 IAMs_20 IAMs_20 10 51 14.9
comp=Z,5µm,21.0s
F10A Beach Ranch, E 94.00 41 IAMs_20 IAMs_20 10 51 56.1
comp=Z,3µm,20.0s
HPIG 94.07 63 IAMs_20 IAMs_20 10 49 53.5
comp=Z,4µm,21.0s
EFI East Falkland 94.08 152 IAMs_20 IAMs_20 10 50 57.9
comp=Z,4µm,22.0s
DUG Dugway, Tooele 94.19 48 P **P** **10 17 40.6 -0.3**
baz=244
DUG Dugway, Tooele 94.19 48 IAMs_20 IAMs_20 10 52 39.8
comp=Z,5µm,20.0s
COLD Coldfoot 94.19 14 P **P** **10 17 40.1 +0.1**
baz=215
COLD Coldfoot 94.19 14 IAMs_20 IAMs_20 10 55 39.5
comp=Z,4µm,20.0s
W18A Petrified Fore 94.21 54 IAMs_20 IAMs_20 10 53 42.5
comp=Z,4µm,19.0s
DLBC Dease Lake 94.25 27 IAMs_20 IAMs_20 10 50 26.6
comp=Z,6µm,22.0s
C09A Chrisman Ranch 94.26 40 IAMs_20 IAMs_20 10 53 42.9
comp=Z,4µm,20.0s
ZAK Zakamensk 94.41 323 *eP* **P** **10 17 41.0 -0.5**
ZAK pmax pmax
comp=Z,40nm,1.4s
PLCA Paso Flores 94.48 138 P **P** **10 17 42.6 +0.3**
comp=Z,12nm,1.1s,baz=235,slow=4.0,SNR=14
PLCA PKKPbc **PKKPbc** **10 34 41.5 0.0**
comp=Z,2.7nm,0.9s,baz=207,slow=2.7,SNR=7.2
PLCA LR LR 10 50 57.1
comp=Z,878nm,21.5s,baz=232,slow=30
PLCA Paso Flores 94.48 138 P **P** **10 17 42.0 -0.3**
PLCA pmax pmax
comp=Z,50nm,1.4s
PLCA Paso Flores 94.48 138 P **P** **10 17 42.0 -0.3**
PLCA IAmb IAmb 10 17 44.1
comp=Z,50nm,1.4s
PLCA Paso Flores 94.48 138 *eP* **P** **10 17 42.7 +0.3**
EGAK Eagle 94.61 18 IAMs_20 IAMs_20 10 53 54.7
comp=Z,5µm,20.0s
DAWY Dawson 94.62 19 IAMs_20 IAMs_20 10 56 30.1
comp=Z,4µm,19.0s
121A Cookes Peak, D 94.62 57 P **P** **10 17 43.5 +0.4**
baz=246
121A Cookes Peak, D 94.62 57 IAMs_20 IAMs_20 10 52 42.7
comp=Z,5µm,20.0s
HLID Hailey 94.64 45 P **P** **10 17 43.2 +0.4**
baz=243
HLID Hailey 94.64 45 IAMs_20 IAMs_20 10 53 07.2
comp=Z,4µm,20.0s
LC01 Cunco 94.69 136 IAmb IAmb 10 17 57.0
comp=Z,26nm,0.9s
CHLP Challavanipeta 94.73 288 *eP* **P** **10 17 44.6 +1.0**
CHLP IVMs_BB IVMs_BB 11 03 07.2
comp=Z,350nm,20.2s
IRK Irkutsk 94.83 325 *eP* **P** **10 17 41.8 -1.5**
IRK pmax pmax
comp=Z,54nm,2.3s
FYU Fort Yukon 94.85 16 IAMs_20 IAMs_20 10 55 42.0
comp=Z,6µm,20.0s
TLY Talaya 94.88 325 *c iP* **P** **10 17 42.7 -0.8**
TLY pmax pmax
comp=Z,28nm,0.9s
TLY MLR MLR
comp=Z,2µm,20.0s
TLY Talaya 94.88 325 P **P** **10 17 43.3 -0.3**
TLY IAmb IAmb 10 17 44.4
comp=Z,27nm,0.8s
TLY IAMs_20 IAMs_20 10 55 51.4
comp=Z,4µm,22.0s
TAPN Taplejung 95.01 297 *eP* **P** **10 17 45.6 +0.5**
comp=Z,76nm,1.0s
ODAN Odare 95.08 297 *eP* **P** **10 17 45.7 +0.4**
comp=Z,61nm,0.8s
NEW Newport 95.16 39 P **P** **10 17 43.7 -1.3**
comp=Z,0.7nm,0.5s,baz=333,slow=6.8,SNR=2.5
NEW Newport 95.16 39 IAMs_20 IAMs_20 10 51 51.7
comp=Z,4µm,21.0s
EPT El Paso 95.31 58 IAMs_20 IAMs_20 10 52 24.0
comp=Z,4µm,20.0s
DGAR Diego Garcia 95.42 260 IAMs_20 IAMs_20 10 59 17.8
comp=Z,5µm,19.0s
TOLK Toolik Lake Re 95.49 13 P **P** **10 17 46.0 0.0**
baz=216
TOLK Toolik Lake Re 95.49 13 IAMs_20 IAMs_20 11 00 27.8
comp=Z,4µm,19.0s
BMAR Burnt Mountain 95.68 16 P **P** **10 17 46.1 -0.8**
RAMN Ramite 95.76 297 *eP* **P** **10 17 48.5 0.0**
comp=Z,22nm,0.8s
Y22D IRIS ASSCAL I 95.91 56 IAMs_20 IAMs_20 10 54 10.5
comp=Z,4µm,19.0s
MVCO Mesa Verde 95.98 52 P **P** **10 17 49.1 -0.1**
baz=246
MVCO Mesa Verde 95.98 52 IAMs_20 IAMs_20 10 52 36.4
comp=Z,4µm,21.0s
PV14 Lion Creek, Pa 96.08 51 P **P** **10 17 50.8 +1.1**
PV14 IAMs_20 IAMs_20 10 54 49.8
comp=Z,5µm,19.0s
PV19 Morning Glory 96.08 51 IAMs_20 IAMs_20 10 53 00.9
comp=Z,4µm,20.0s
PV16 Nyswonger Mesa 96.13 51 IAMs_20 IAMs_20 10 55 01.2
comp=Z,4µm,20.0s
PV03 Paradox Valley 96.16 51 IAMs_20 IAMs_20 10 53 23.9
comp=Z,3µm,20.0s
PV11 David Mesa, Pa 96.16 51 IAMs_20 IAMs_20 10 53 35.9
comp=Z,4µm,20.0s
MNTX Cornudas Mount 96.17 58 P **P** **10 17 50.0 +0.1**
baz=247
MNTX Cornudas Mount 96.17 58 IAMs_20 IAMs_20 10 54 36.6
comp=Z,3µm,19.0s
PV12 Saucer Basin, 96.22 51 IAMs_20 IAMs_20 10 53 26.4
comp=Z,4µm,20.0s
MOY Mondy 96.30 324 *eP* **P** **10 17 50.1 -0.1**
MOY pmax pmax
comp=Z,86nm,2.9s
PV01 Paradox Valley 96.31 51 P **P** **10 17 51.3 +0.6**
PV22 Blue Mesa, Par 96.31 51 IAMs_20 IAMs_20 10 55 16.1
comp=Z,4µm,20.0s
BI02 San Fabin de 96.34 134 P **P** **10 17 51.2 +0.3**
PV07 Paradox Valley 96.38 51 IAMs_20 IAMs_20 10 55 07.8
comp=Z,3µm,20.0s
PVM Polavaram 96.41 286 *eP* **P** **10 17 51.8 +0.5**
PVM IVMs_BB IVMs_BB 11 09 31.2
comp=Z,215nm,22.1s
MSO Missoula 96.41 42 P **P** **10 17 50.7 -0.1**
baz=244
MSO Missoula 96.41 42 IAMs_20 IAMs_20 10 52 06.9
comp=Z,4µm,22.0s
PV15 Paradox Valley 96.46 51 IAMs_20 IAMs_20 10 53 44.8
comp=Z,4µm,20.0s
A21K Barrow 96.46 10 P **P** **10 17 50.4 +0.2**
baz=209
A21K Barrow 96.46 10 IAMs_20 IAMs_20 10 57 39.1
comp=Z,5µm,20.0s
AHID Auburn Hatcher 96.47 46 IAMs_20 IAMs_20 10 57 43.7
comp=Z,4µm,19.0s
ANMO Albuquerque 96.60 55 P **P** **10 17 52.3 +0.3**
comp=Z,2.6nm,1.0s,baz=224,slow=5.6,SNR=5.7
ANMO Albuquerque 96.60 55 P **P** **10 17 52.1 0.0**
ANMO pmax pmax
comp=Z,16nm,1.6s
ANMO Albuquerque 96.60 55 P **P** **10 17 52.2 +0.2**
baz=247
ANMO Albuquerque 96.60 55 P **P** **10 17 52.1 0.0**
ANMO Albuquerque 96.60 55 IAMs_20 IAMs_20 10 54 43.9
comp=Z,4µm,20.0s
DLMT Dillon 96.60 44 IAMs_20 IAMs_20 10 55 41.1
comp=Z,4µm,18.0s
JTMT Jette 96.61 41 IAMs_20 IAMs_20 10 53 04.1
comp=Z,5µm,21.0s
TX31 Lajitas Ar. Si 96.63 61 P **P** **10 17 52.4 +0.2**
TX31 IAmb IAmb 10 18 34.5
comp=Z,55nm,1.6s
TX32 Lajitas Array 96.63 61 P **P** **10 17 52.5 +0.4**
TXAR Lajitas Array 96.63 61 P **P** **10 17 51.9 -0.3**
comp=Z,0.7nm,0.6s,baz=221,slow=5.0,SNR=12
TXAR PP **PP** **10 21 50.4 +3.4**
comp=Z,0.6nm,0.9s,baz=261,slow=4.5,SNR=3.6
TXAR PKKP **PKKPdf** **10 34 37.7 -0.2**
comp=Z,0.8nm,0.8s,baz=98,slow=3.8,SNR=6.3
TXAR PKPPKP **P'P'df** **10 42 51.1 +2.6**
comp=Z,0.2nm,0.8s,baz=180,slow=0.9,SNR=2.1
TXAR LR LR 10 54 24.0
comp=Z,5µm,19.1s,baz=0.0,slow=31
TXAR Lajitas Array 96.63 61 P **P** **10 17 52.3 +0.1**
TXAR Lajitas Array 96.63 61 P **P** **10 17 52.3 +0.1**
GUN Gumba 96.72 297 *eP* **P** **10 17 53.1 +0.2**
comp=Z,64nm,1.0s
SKHT Srikalahasti 96.83 282 *eP* **P** **10 17 54.4 +1.1**
SKHT IVMs_BB IVMs_BB 11 11 30.4
comp=Z,396nm,13.3s
TPAW Teton Pass 96.87 46 IAMs_20 IAMs_20 10 53 46.4
comp=Z,4µm,20.0s
REDW Red Top Meadow 96.88 46 IAMs_20 IAMs_20 10 53 45.7
comp=Z,4µm,20.0s
PKI Pulchoki 96.98 297 *eP* **P** **10 17 54.1 0.0**
comp=Z,50nm,0.8s
SNOW Snow King Moun 96.99 46 IAMs_20 IAMs_20 10 55 55.5
comp=Z,4µm,19.0s
PKIN Phulchoki 96.99 297 *eP* **P** **10 17 54.0 -0.1**
comp=Z,42nm,0.8s
EPYK Eagle Plains 97.05 19 IAmb IAmb 10 18 04.0
comp=Z,49nm,1.8s
EPYK IAMs_20 IAMs_20 10 53 45.1
comp=Z,5µm,21.0s
IMW Indian Meadow 97.05 45 P Pdif 10 17 54.1 0.0
IMW IAmb IAmb 10 18 04.8
comp=Z,27nm,1.8s
IMW IAMs_20 IAMs_20 10 53 32.1
comp=Z,4µm,21.0s
MYLAV Mylavaram 97.10 285 *eP* Pdif 10 17 55.1 +0.6
MYLAV IVMs_BB IVMs_BB 11 05 08.2
comp=Z,346nm,19.7s
KKN Kakani 97.17 297 *eP* Pdif 10 17 55.1 +0.2
comp=Z,56nm,0.8s
DMN Daman 97.24 297 *eP* Pdif 10 17 55.6 +0.3
comp=Z,81nm,0.9s
FLWY Flagg Ranch 97.28 45 P **P** **10 17 54.9 -0.1**
FLWY IAMs_20 IAMs_20 10 54 01.3
comp=Z,4µm,21.0s
YHL Hebgen Lake 97.29 44 P **P** **10 17 54.2 -0.9**
BOZ Bozeman (W) 97.32 44 P Pdif 10 17 55.4 +0.3
baz=245
BOZ Bozeman (W) 97.32 44 IAMs_20 IAMs_20 10 55 17.1
comp=Z,4µm,20.0s
O20A White River Ci 97.35 50 IAMs_20 IAMs_20 10 54 41.3
comp=Z,5µm,20.0s
ADKI Addanki 97.37 284 *eP* Pdif 10 17 56.7 +1.0
WALA Waterton Lakes 97.42 40 IAMs_20 IAMs_20 10 52 40.4
comp=Z,5µm,22.0s
S22A 4UR Ranch, Cre 97.42 52 P **P** **10 17 55.5 -0.3**
baz=247
S22A 4UR Ranch, Cre 97.42 52 IAMs_20 IAMs_20 10 54 16.3
comp=Z,5µm,20.0s
BW06 Boulder Array 97.50 47 IAMs_20 IAMs_20 10 58 02.1
comp=Z,5µm,18.0s
PD31 Pinedale Array 97.50 47 P Pdif 10 17 56.1 +0.1
PDAR Pinedale Array 97.50 47 P Pdif 10 17 56.1 +0.1
comp=Z,1.0nm,0.6s,baz=214,slow=3.6,SNR=8.0
PDAR PP **PP** **10 21 52.5 -1.2**
comp=Z,1.1nm,0.9s,baz=238,slow=8.3,SNR=3.7
PDAR PKKPbc **PKKPbc** **10 34 33.8 -0.5**
comp=Z,0.6nm,0.9s,baz=82,slow=6.5,SNR=3.7
PDAR PKPPKP **P'P'df** **10 42 49.4 +3.9**
comp=Z,1.2nm,1.0s,baz=101,slow=4.7,SNR=5.0
PDAR LR LR 10 57 09.6
comp=Z,4µm,18.2s,baz=250,slow=32
PDAR Pinedale Array 97.50 47 P **P** **10 17 55.0 -1.0**
GKN Gorkha 97.77 297 *eP* **P** **10 17 56.9 -0.6**
comp=Z,28nm,1.0s
SMCO Snowmass 97.87 51 IAMs_20 IAMs_20 10 56 53.2
comp=Z,4µm,18.0s
VA01 Torpederas 98.12 131 IAMs_20 IAMs_20 10 59 01.8
comp=Z,3µm,18.0s
NJS Nagarjunasagar 98.22 284 *eP* Pdif 10 18 00.2 +0.7
NJS IVMs_BB IVMs_BB 11 05 33.5
comp=Z,260nm,20.1s
SDCO Great Sand Dun 98.39 53 IAMs_20 IAMs_20 10 54 27.1
comp=Z,4µm,21.0s
KOLN Koldanda 98.54 296 *eP* **P** **10 18 00.6 -0.4**
comp=Z,28nm,0.8s
DANN Dangsing 98.62 297 *eP* **P** **10 18 00.7 -0.7**
comp=Z,37nm,0.9s
RLMT Red Lodge 98.64 45 P Pdif 10 18 01.0 0.0
baz=246
RLMT Red Lodge 98.64 45 P Pdif 10 18 01.9 +0.9
RLMT IAMs_20 IAMs_20 10 55 08.2
comp=Z,5µm,19.0s
CUPL Choutuppal 98.83 285 *e*Pdif Pdif 10 18 02.2 0.0
CUPL IVMs_BB IVMs_BB 11 12 56.1
comp=Z,289nm,19.7s
MSTX Muleshoe 99.05 57 IAMs_20 IAMs_20 10 54 53.9
comp=Z,5µm,20.0s
RPR Rampur 99.05 287 *e*Pdif **Pdif** **10 18 03.0 -0.1**
RPR IVMs_BB IVMs_BB 11 10 34.6
comp=Z,228nm,17.0s
ISCO Idaho Springs 99.08 51 IAMs_20 IAMs_20 10 57 43.2
comp=Z,3µm,19.0s
Q24A Divide 99.10 52 IAMs_20 IAMs_20 10 56 11.9
comp=Z,4µm,19.0s
PYUN Piuthan 99.17 297 *e*P **Pdif** **10 18 03.0 -0.8**
HYBB Hyderabad (bro 99.20 285 *e*Pdif **Pdif** **10 18 03.8 -0.1**
HYBB IVMs_BB IVMs_BB 11 10 34.0
comp=Z,354nm,17.3s
N23A Red Feather La 99.25 50 IAMs_20 IAMs_20 10 54 35.8
comp=Z,4µm,21.0s
INK Inuvik 99.26 18 P **Pdif** **10 18 01.2 -1.7**
comp=Z,2.1nm,1.0s,baz=307,slow=5.5,SNR=3.1
INK PKKPbc **PKKPbc** **10 34 31.0 +1.2**
comp=Z,1.2nm,0.7s,baz=36,slow=3.7,SNR=3.4
URV Uravakonda 99.48 282 *e*Pdif **Pdif** **10 18 05.4 +0.2**
URV IVMs_BB IVMs_BB 11 14 51.4
comp=Z,291nm,18.4s
EGMT Eagleton 99.49 42 IAMs_20 IAMs_20 10 54 48.4
comp=Z,3µm,20.0s
K22A Casper 99.51 48 IAMs_20 IAMs_20 10 56 10.4
comp=Z,5µm,20.0s
CO02 Combarbal 99.58 130 IAMs_20 IAMs_20 11 01 57.5
comp=Z,3µm,18.0s
PHWY Pilot Hill 99.75 49 IAMs_20 IAMs_20 10 55 54.8
comp=Z,5µm,20.0s
NGP Nagpur 100.08 289 *eP* **Pdif** **10 18 06.6 -1.2**
NGP IAmb IAmb 10 18 11.6
comp=Z,28nm,1.5s
JCT Junction City 100.17 61 IAMs_20 IAMs_20 10 55 45.7
comp=Z,5µm,19.0s
AMTX Amarillo 100.22 57 IAMs_20 IAMs_20 10 56 10.8
comp=Z,4µm,20.0s
KSCO Kaye Shedlock' 100.95 52 IAMs_20 IAMs_20 10 57 10.9
comp=Z,4µm,19.0s
ABTX Abilene, Hawle 101.03 59 IAMs_20 IAMs_20 10 56 27.5
comp=Z,5µm,20.0s
KLRI Killari 101.17 285 *e*Pdif **Pdif** **10 18 12.4 -0.3**
KLRI IVMs_BB IVMs_BB 11 12 06.5
comp=Z,396nm,18.7s
WMQ Urumqi 101.17 313 *eP* **Pdif** **10 18 12.8 +0.7**
WMQ pP sPdif 10 18 16.9 +0.9
WMQ SKS **SKSac** **10 28 51.7 +0.4**
WMQ S **Sdif** **10 29 49.0 -2.3**
WMQ SS **SS** **10 36 52.1 +0.5**

WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ pmax pmax
comp=Z,380nm,6.7s
WMQ LR LR
comp=Z,2µm,19.7s
WMQ LR LR
comp=Z,3µm,20.3s
WMQ LR LR
comp=Z,7µm,23.5s
WMQ Urumqi 101.17 313 IAMs_20 IAMs_20 11 02 58.3
comp=Z,3µm,21.0s
735A Kenedy 101.24 63 IAMs_20 IAMs_20 11 06 03.3
comp=Z,3µm,18.0s
RSSD Black Hills 101.73 47 IAMs_20 IAMs_20 10 58 12.2
comp=Z,5µm,20.0s
435B Jarrell 102.07 62 IAMs_20 IAMs_20 10 56 45.1
comp=Z,4µm,20.0s
WMOK Wichita Mounta 102.42 57 IAMs_20 IAMs_20 10 57 10.0
comp=Z,4µm,20.0s
WHTX Lake Whitney, 102.57 61 IAMs_20 IAMs_20 10 57 13.3
comp=Z,5µm,20.0s
C36M Paulatuk 102.66 19 IAMs_20 IAMs_20 10 56 53.4
comp=Z,5µm,22.0s
U32A Winter Ranch, 102.78 56 IAMs_20 IAMs_20 10 58 42.5
comp=Z,4µm,19.0s
DGMT Dagmar 103.11 43 IAMs_20 IAMs_20 10 58 28.2
comp=Z,4µm,20.0s
Z35A Perchaven, San 103.16 59 IAMs_20 IAMs_20 10 57 14.9
comp=Z,5µm,20.0s
HKT Hockley 103.23 63 IAMs_20 IAMs_20 10 56 08.9
comp=Z,3µm,22.0s
RER Riviere de l'E 103.64 240 IAMs_20 IAMs_20 11 01 19.7
comp=Z,4µm,18.0s
R32A Long Quarter, 103.65 54 IAMs_20 IAMs_20 10 59 17.4
comp=Z,3µm,20.0s
OKCFA Oklahoma City 103.67 57 IAMs_20 IAMs_20 10 58 11.1
comp=Z,4µm,20.0s
OK029 Liberty Lake 103.78 57 IAMs_20 IAMs_20 10 56 42.1
comp=Z,5µm,22.0s
OK025 Westminster Rd 103.81 57 IAMs_20 IAMs_20 10 57 46.8
comp=Z,4µm,19.0s
237A Washetta, Mont 103.90 61 IAMs_20 IAMs_20 10 59 56.5
comp=Z,4µm,20.0s
ZSN Zaisan 104.25 316 *e*PKiKP **PKiKP 10 22 42.0 -0.4**
baz=316
OK031 S. Brethren Rd 104.31 57 IAMs_20 IAMs_20 10 57 31.0
comp=Z,5µm,21.0s
OK030 Cody Creek RV 104.34 57 IAMs_20 IAMs_20 10 57 42.9
comp=Z,5µm,20.0s
NATX Nacogdoches 104.75 62 IAMs_20 IAMs_20 10 58 49.1
comp=Z,4µm,18.0s
E28A Huff 104.76 45 IAMs_20 IAMs_20 11 03 19.1
comp=Z,3µm,19.0s
T35A Sooner Cattle 104.85 56 IAMs_20 IAMs_20 10 58 39.3
comp=Z,5µm,21.0s
BGNE Belgrade 104.97 51 IAMs_20 IAMs_20 10 59 11.1
comp=Z,5µm,21.0s
X37A Clayton 105.04 59 IAMs_20 IAMs_20 10 58 15.5
comp=Z,5µm,20.0s
TUL1 Leonard 105.10 57 IAMs_20 IAMs_20 10 59 15.1
comp=Z,4µm,20.0s
N33A J Bar K, Exete 105.28 52 IAMs_20 IAMs_20 11 00 54.3
comp=Z,4µm,19.0s
KSU1 Kansas State U 105.42 54 IAMs_20 IAMs_20 11 00 05.3
comp=Z,5µm,20.0s
MKAR Makanchi Array 105.74 314 Pdiff **Pdif 10 18 31.8 -0.5**
comp=Z,2.0nm,0.8s,baz=100,slow=4.4,SNR=15
MKAR PKiKP **PKiKP 10 22 45.2 0.0**
comp=Z,6.2nm,1.1s,baz=72,slow=4.0,SNR=6.7
MKAR PKKPbc **PKKPbc 10 34 08.3 -1.7**
comp=Z,1.8nm,0.9s,baz=304,slow=2.6,SNR=7.7
MKAR PKPPKP **P'P'df 10 42 31.5 +2.0**
comp=Z,1.6nm,1.0s,baz=223,slow=4.6,SNR=3.7
MKAR Makanchi Array 105.74 314 P **Pdif 10 18 31.3 -1.0**
MKAR Makanchi Array 105.74 314 Pdif **Pdif 10 18 31.3 -1.0**
MAKZ Makanchi 105.95 314 P **Pdif 10 18 32.0 -1.2**
MAKZ MLR MLR
comp=Z,2µm,21.0s
MAKZ Makanchi 105.95 314 Pdif **Pdif 10 18 32.0 -1.2**
ZALV Zalesovo Beam 106.22 322 Pdiff **Pdif 10 18 33.6 -0.5**
comp=Z,6.0nm,0.8s,baz=108,slow=5.0,SNR=16
ZALV PKiKP **PKiKP 10 22 45.1 -0.6**
comp=Z,1.9nm,0.6s,baz=236,slow=0.5,SNR=5.1
U38A Gravette 106.34 57 IAMs_20 IAMs_20 11 01 03.0
comp=Z,4µm,19.0s
MIAR Mount Ida 106.44 59 IAMs_20 IAMs_20 10 58 25.7
comp=Z,4µm,20.0s
HHAR Hobbs 106.65 57 IAMs_20 IAMs_20 10 59 05.0
comp=Z,3µm,21.0s
Z41A Richland Creek 106.69 61 IAMs_20 IAMs_20 10 59 44.5
comp=Z,5µm,20.0s
KPKS Kokpek 107.28 310 LR LR 11 09 25.4
comp=Z,423nm,14.9s,baz=310
D32A Dogwood Acres, 107.34 46 IAMs_20 IAMs_20 11 10 52.4
comp=Z,3µm,18.0s
SATY Saty 107.38 310 *e*PKiKP **PKiKP 10 22 48.1 -0.3**
baz=310
F33A 5 Mile Ranch, 107.49 47 IAMs_20 IAMs_20 11 05 43.5
comp=Z,4µm,19.0s
S39A Bolivar 107.51 56 IAMs_20 IAMs_20 11 00 41.7
comp=Z,4µm,20.0s
U40A Yellville 107.51 57 IAMs_20 IAMs_20 11 00 40.9
comp=Z,3µm,20.0s
143A Socs Landing, 107.67 61 IAMs_20 IAMs_20 11 00 11.3
comp=Z,4µm,19.0s
P38A Dawn 107.86 54 IAMs_20 IAMs_20 11 02 25.8
comp=Z,4µm,19.0s
TDK Taldyqorghan 107.87 312 LR LR 11 09 58.4
comp=Z,728nm,16.7s,baz=312
FCAR Ozark Folk Cen 107.95 58 IAMs_20 IAMs_20 10 59 24.7
comp=Z,4µm,21.0s
MDOK Medeo 108.36 310 LR LR 11 10 07.8
comp=Z,711nm,16.9s,baz=310
N38A Joes South For 108.37 53 IAMs_20 IAMs_20 11 00 52.4
comp=Z,4µm,19.0s
R40A Maddies Statio 108.47 56 IAMs_20 IAMs_20 11 00 43.1
comp=Z,4µm,21.0s
AAA Alma-Ata 108.47 310 LR LR 11 10 24.2
comp=Z,840nm,18.4s,baz=310
X43A Marvell 108.57 60 IAMs_20 IAMs_20 11 01 50.2
comp=Z,3µm,19.0s
LCAR Lake Charles 108.76 58 IAMs_20 IAMs_20 11 00 33.0
comp=Z,4µm,21.0s
ULM Lac du Bonnet 108.83 43 IAMs_20 IAMs_20 11 00 37.5
comp=Z,4µm,20.0s
NRIK Noril'sk 109.01 338 PKiKP **PKiKP 10 22 50.5 -0.1**
comp=Z,3.1nm,0.8s,baz=58,slow=2.9,SNR=5.9
KUU Kurty 109.04 310 LR LR 11 11 13.6
comp=Z,910nm,18.7s,baz=310
T42A Van Buren 109.05 57 IAMs_20 IAMs_20 11 00 48.7
comp=Z,4µm,20.0s
KURBB Kurchatov Arra 109.12 318 Pdiff **Pdif 10 18 48.4 +1.2**
comp=Z,2.1nm,1.0s,baz=98,slow=3.0,SNR=8.6
KURBB PKiKP **PKiKP 10 22 51.0 -0.3**
comp=Z,7.1nm,0.8s,baz=107,slow=2.1,SNR=36
KURBB PKKPbc **PKKPbc 10 33 58.2 -1.2**
comp=Z,1.8nm,1.1s,baz=276,slow=3.6,SNR=8.8
CCM Cathedral Cave 109.19 56 IAMs_20 IAMs_20 11 00 53.2
comp=Z,4µm,20.0s
F36A Milaca 109.37 48 IAMs_20 IAMs_20 11 07 09.4
comp=Z,4µm,18.0s
MET Memphis--Engin 109.48 59 IAMs_20 IAMs_20 11 01 34.3
comp=Z,4µm,21.0s
PBMO Poplar Bluff 109.50 57 IAMs_20 IAMs_20 11 03 21.7
comp=Z,3µm,21.0s
146A Union 109.55 62 IAMs_20 IAMs_20 11 02 30.4
comp=Z,3µm,20.0s
GNAR Gosnell 109.62 58 IAMs_20 IAMs_20 11 01 47.0
comp=Z,4µm,20.0s
SPMN Marine on St. 109.72 48 IAMs_20 IAMs_20 11 04 15.7
comp=Z,4µm,18.0s
OXF Oxford 109.75 60 IAMs_20 IAMs_20 11 02 36.3
comp=Z,5µm,20.0s
PEBM Pemiscott Bayo 109.78 58 IAMs_20 IAMs_20 11 01 51.2
comp=Z,4µm,20.0s
LPAZ La Paz 109.92 118 PKiKP **PKiKP 10 22 54.5 -0.1**
comp=Z,1.9nm,0.9s,baz=233,slow=7.8,SNR=5.6
LPAZ PKKPbc **PKKPbc 10 33 57.1 +0.5**
comp=Z,1.8nm,0.9s,baz=92,slow=2.1,SNR=6.5
PVMO Portageville 109.98 58 IAMs_20 IAMs_20 11 01 30.4
comp=Z,4µm,20.0s
PARMO Parma 110.00 58 IAMs_20 IAMs_20 11 01 10.9
comp=Z,5µm,21.0s
PENMO Penman 110.05 58 IAMs_20 IAMs_20 11 01 11.2
comp=Z,5µm,21.0s
LNXT Lenox 110.07 58 IAMs_20 IAMs_20 11 01 59.8
comp=Z,5µm,20.0s
W45A Hickory Valley 110.08 59 IAMs_20 IAMs_20 11 01 52.2
comp=Z,4µm,20.0s
SLM Saint Louis 110.10 56 IAMs_20 IAMs_20 11 01 32.2
comp=Z,5µm,20.0s
N41A Harden Midland 110.11 53 IAMs_20 IAMs_20 11 04 57.4
comp=Z,4µm,19.0s
HALT Halls 110.15 59 IAMs_20 IAMs_20 11 02 03.8
comp=Z,4µm,20.0s
SGDS Sogindy 110.15 310 *e*PKiKP **PKiKP 10 22 52.4 -1.2**
comp=Z,1.7nm,1.1s,baz=310
SGDS Sogindy 110.15 310 *i* PKiKP **PKiKP 10 22 52.4 -1.2**
SGDS pmax pmax
comp=Z,2.0nm,1.1s
GLAT Glass 110.27 58 IAMs_20 IAMs_20 11 00 57.1
comp=Z,5µm,21.0s
HICK Hickman 110.38 58 IAMs_20 IAMs_20 11 01 31.0
comp=Z,5µm,21.0s
S44A Carbondale 110.63 57 IAMs_20 IAMs_20 11 03 05.5
comp=Z,4µm,20.0s
E38A The Farm, Brul 110.87 47 IAMs_20 IAMs_20 11 07 30.8
comp=Z,3µm,19.0s
P43A Skaggs, Pawnee 110.87 55 IAMs_20 IAMs_20 11 04 10.5
comp=Z,4µm,20.0s
BTLS Baital 110.89 311 *e*PKiKP **PKiKP 10 22 54.3 -0.5**
comp=Z,2.0nm,0.7s,baz=311
BTLS Baital 110.89 311 *i* PKiKP **PKiKP 10 22 54.3 -0.5**
BTLS pmax pmax
comp=Z,2.0nm,0.7s
PLAL Pickwick Lake 110.93 60 IAMs_20 IAMs_20 11 03 41.5
comp=Z,3µm,20.0s
T45A Paducah 110.95 58 IAMs_20 IAMs_20 11 03 08.0
comp=Z,4µm,20.0s
I40A Norwalk 110.97 50 IAMs_20 IAMs_20 11 01 31.8
comp=Z,5µm,22.0s
EYMN Ely 111.17 46 IAMs_20 IAMs_20 11 02 36.6
comp=Z,3µm,20.0s
HDIL Hodale 111.23 54 IAMs_20 IAMs_20 11 04 38.2
comp=Z,4µm,20.0s
L42A Oliver, Polo 111.26 52 IAMs_20 IAMs_20 11 02 45.8
comp=Z,5µm,21.0s
WVT Waverly 111.39 59 IAMs_20 IAMs_20 11 02 50.6
comp=Z,4µm,20.0s
G40A Rib Lake 111.53 49 IAMs_20 IAMs_20 11 02 41.6
comp=Z,4µm,20.0s
X48A Hartselle 111.63 61 IAMs_20 IAMs_20 11 03 14.2
comp=Z,4µm,20.0s
O44A Mansfield 111.77 54 IAMs_20 IAMs_20 11 04 56.4
comp=Z,4µm,19.0s
CPUP Villa Florida 112.03 133 PKiKP **PKiKP 10 22 56.4 -1.3**
comp=Z,0.5nm,0.3s,baz=259,slow=2.2,SNR=5.2
CPUP PKKPbc **PKKPbc 10 33 48.7 -0.5**
comp=Z,1.3nm,0.6s,baz=1.6,slow=4.1,SNR=3.2
V48A Smith Brothers 112.10 59 IAMs_20 IAMs_20 11 02 52.5
comp=Z,4µm,20.0s
T47A Sharon Grove 112.14 58 IAMs_20 IAMs_20 11 03 44.6
comp=Z,4µm,20.0s
GAR Garm 112.39 304 IAMs_20 IAMs_20 11 17 20.9
comp=Z,2µm,19.0s
COWI Conover 112.42 48 IAMs_20 IAMs_20 11 03 46.0
comp=Z,4µm,20.0s
CLTN Cedars of Leba 112.56 59 IAMs_20 IAMs_20 11 03 25.8
comp=Z,4µm,21.0s
BRZS Berezniki 112.68 316 *e*PKiKP **PKiKP 10 22 57.0 -1.1**
comp=Z,2.2nm,0.8s,baz=316
BRZS Berezniki 112.68 316 *i* PKiKP **PKiKP 10 22 57.0 -1.1**
BRZS pmax pmax
comp=Z,2.0nm,0.8s
SWET Sewanee 112.69 60 IAMs_20 IAMs_20 11 06 16.3
comp=Z,3µm,20.0s
RES Resolute Bay 112.77 17 IAMs_20 IAMs_20 11 03 41.5
comp=Z,4µm,21.0s
FPAL Fort Paine 112.80 61 IAMs_20 IAMs_20 11 04 01.2
comp=Z,4µm,20.0s
D41A Chassell 112.97 47 IAMs_20 IAMs_20 11 08 02.4
comp=Z,4µm,19.0s
WCI Wyandotte Cave 113.03 57 IAMs_20 IAMs_20 11 02 43.0
comp=Z,3µm,22.0s
U49A Red Boiling Sp 113.09 59 IAMs_20 IAMs_20 11 03 35.6
comp=Z,4µm,20.0s
152A Waverly Hall 113.11 63 IAMs_20 IAMs_20 11 04 23.7
comp=Z,3µm,21.0s
W50A Signal Mountai 113.18 60 IAMs_20 IAMs_20 11 03 06.3
comp=Z,3µm,21.0s
IUG Iuzhnay 113.21 308 *e*PKiKP **PKiKP 10 22 58.7 -0.8**
baz=308
IUG Iuzhnay 113.21 308 *i* PKiKP **PKiKP 10 22 58.6 -0.8**
X51A Calhoun 113.41 61 IAMs_20 IAMs_20 11 04 39.5
comp=Z,4µm,20.0s
L46A Eue Claire 113.73 53 IAMs_20 IAMs_20 11 05 42.2
comp=Z,3µm,20.0s
CPCT Cooper Cave 113.87 60 IAMs_20 IAMs_20 11 03 38.4
comp=Z,4µm,19.0s
R49A Shadale 113.91 57 IAMs_20 IAMs_20 11 03 30.3
comp=Z,4µm,19.0s
E43A Lone Tree Farm 113.93 48 IAMs_20 IAMs_20 11 11 39.0
comp=Z,4µm,19.0s
N47A Urbana 113.98 54 IAMs_20 IAMs_20 11 07 16.9
comp=Z,4µm,18.0s
V51A Loudon 114.07 60 IAMs_20 IAMs_20 11 04 33.9
comp=Z,3µm,19.0s
GOGA Godfrey 114.30 62 IAMs_20 IAMs_20 11 07 27.1
comp=Z,3µm,18.0s
154A Montrose 114.43 63 IAMs_20 IAMs_20 11 05 25.5
comp=Z,3µm,20.0s
BVAR Borovoye Array 114.49 319 PKP PKPdf 10 23 00.5 -0.9
comp=Z,9.8nm,0.8s,baz=238,slow=24,SNR=25
TKL Tuckaleechee C 114.51 60 IAMs_20 IAMs_20 11 06 21.3
comp=Z,4µm,18.0s
BRVK Borovoye 114.56 319*c* *i* PKiKP PKPdf 10 23 01.5 0.0
BRVK pmax pmax
comp=Z,20nm,1.3s
BRVK MLR MLR
comp=Z,3µm,19.0s
BRVK Borovoye 114.56 319 IAMs_20 IAMs_20 11 12 49.2
comp=Z,3µm,19.0s
R50A Paris 114.56 57 IAMs_20 IAMs_20 11 03 29.6
comp=Z,4µm,20.0s
V52A Sevierville 114.68 60 IAMs_20 IAMs_20 11 05 02.0
comp=Z,3µm,18.0s
S51A Beattyville 115.02 58 IAMs_20 IAMs_20 11 05 05.5
comp=Z,4µm,20.0s
L48A N Adams 115.09 53 IAMs_20 IAMs_20 11 06 09.2
comp=Z,3µm,19.0s
V53A Saluda 115.28 60 IAMs_20 IAMs_20 11 04 40.7
comp=Z,3µm,20.0s
Q51A Peebles 115.45 56 IAMs_20 IAMs_20 11 05 57.9
comp=Z,3µm,20.0s
HODGE Hodges 115.45 62 IAMs_20 IAMs_20 11 05 16.5
comp=Z,4µm,20.0s
AAM Ann Arbor 115.72 53 IAMs_20 IAMs_20 11 15 04.7
comp=Z,3µm,18.0s
PAULI Pauline 115.92 61 IAMs_20 IAMs_20 11 06 18.9
comp=Z,3µm,20.0s
Z56A Williston 116.00 63 IAMs_20 IAMs_20 11 08 47.2
comp=Z,2µm,19.0s
257A Skidaway Islan 116.02 64 IAMs_20 IAMs_20 11 06 22.7
comp=Z,2µm,19.0s
U54A Nelsons Funny 116.22 59 IAMs_20 IAMs_20 11 07 05.6
comp=Z,3µm,20.0s
JSC Jenkinsville 116.27 62 IAMs_20 IAMs_20 11 06 10.2
comp=Z,3µm,20.0s
KMSC Kings Mountain 116.37 61 IAMs_20 IAMs_20 11 09 51.7
comp=Z,3µm,19.0s
N51A Ashland 116.47 54 IAMs_20 IAMs_20 11 06 41.8
comp=Z,4µm,20.0s
K50A Casco 116.53 52 IAMs_20 IAMs_20 11 05 24.3
comp=Z,4µm,20.0s
V55A Taylorsville 116.59 60 IAMs_20 IAMs_20 11 07 01.4
comp=Z,4µm,20.0s
Y57A Sumter 116.93 62 IAMs_20 IAMs_20 11 06 41.7
comp=Z,3µm,20.0s
NHSC New Hope 116.94 63 IAMs_20 IAMs_20 11 09 27.1
comp=Z,3µm,19.0s
BIRD Birdtown, Kers 116.99 62 IAMs_20 IAMs_20 11 06 31.1
comp=Z,3µm,20.0s
U56A King 117.33 60 IAMs_20 IAMs_20 11 07 51.1
comp=Z,4µm,18.0s
BLA Blacksburg 117.44 59 IAMs_20 IAMs_20 11 06 40.8
comp=Z,4µm,20.0s
W57A Gilead 117.45 61 IAMs_20 IAMs_20 11 11 00.4
comp=Z,3µm,19.0s
Y58A Scranton 117.51 63 IAMs_20 IAMs_20 11 06 30.9
comp=Z,3µm,20.0s
SAML Samuel 117.88 114 PKiKP **PKPdf 10 23 07.6 -1.6**
SAML Samuel 117.88 114 **PKPdf 10 23 07.6 -1.6**
X58A Rowland 117.88 62 IAMs_20 IAMs_20 11 06 57.9
comp=Z,4µm,21.0s
Y59A Loris 118.17 63 IAMs_20 IAMs_20 11 09 03.5
comp=Z,4µm,20.0s
MCWV Mont Chateau 118.22 56 IAMs_20 IAMs_20 11 08 11.9
comp=Z,3µm,20.0s
V58A Windy Hill, Pi 118.26 61 IAMs_20 IAMs_20 11 08 01.8
comp=Z,3µm,20.0s
T57A Hurt 118.33 59 IAMs_20 IAMs_20 11 06 38.4
comp=Z,4µm,20.0s
ERPA Erie 118.40 53 IAMs_20 IAMs_20 11 07 27.7
comp=Z,4µm,19.0s
S57A Dark Hollow, R 118.67 58 IAMs_20 IAMs_20 11 07 37.4
comp=Z,4µm,20.0s
Y60A Bolivia 118.71 63 IAMs_20 IAMs_20 11 07 46.8
comp=Z,3µm,20.0s
TULEG Thule 118.80 13 IAMs_20 IAMs_20 11 07 41.6
comp=Z,4µm,22.0s
CNNC Cliffs of the 119.17 61 IAMs_20 IAMs_20 11 08 07.8
comp=Z,2µm,19.0s
SADO Sadowa 119.24 50 IAMs_20 IAMs_20 11 13 36.7
comp=Z,3µm,18.0s
M55A Ridgway 119.24 54 IAMs_20 IAMs_20 11 09 03.1
comp=Z,3µm,20.0s
BOSA Boshof 119.39 214 PKP **PKPdf 10 23 11.9 0.0**
comp=Z,5.8nm,0.6s,baz=144,slow=2.3,SNR=8.6
BOSA Boshof 119.39 214 **PKPdf 10 23 11.1 -0.8**
U59A Littleton 119.40 60 IAMs_20 IAMs_20 11 08 45.9
comp=Z,4µm,20.0s
T59A Double "B" Far 119.67 59 IAMs_20 IAMs_20 11 07 50.1
comp=Z,4µm,21.0s
V60A Jim Taylor Roa 119.75 61 IAMs_20 IAMs_20 11 08 57.1
comp=Z,3µm,20.0s
SSPA Standing Stone 119.82 55 IAMs_20 IAMs_20 11 07 54.0
comp=Z,4µm,20.0s
SOCY Socotra 119.84 271 PKPdf **PKiKP 10 23 13.7 +0.7**
SVE Sverdlovsk 120.17 324 *i* PKiKP **PKiKP 10 23 12.3 0.0**
SVE pmax pmax
comp=Z,29nm,0.9s
L56A Greenwood 120.20 53 IAMs_20 IAMs_20 11 08 24.4
comp=Z,4µm,21.0s
V61A Roper 120.30 61 IAMs_20 IAMs_20 11 08 34.8
comp=Z,3µm,19.0s
DELO Deloro Mine 120.31 51 IAMs_20 IAMs_20 11 14 19.0
comp=Z,4µm,19.0s
T60A Surry 120.35 59 IAMs_20 IAMs_20 11 07 58.8
comp=Z,4µm,20.0s
U61A Possum Corner 120.48 60 IAMs_20 IAMs_20 11 09 37.4
comp=Z,4µm,19.0s
SDMD Soldier's Deli 120.51 57 IAMs_20 IAMs_20 11 09 24.8
comp=Z,3µm,20.0s
PAGS Pennsylvania G 120.67 56 IAMs_20 IAMs_20 11 10 30.1
comp=Z,4µm,20.0s
N58A Sunbury 120.73 55 IAMs_20 IAMs_20 11 08 51.5
comp=Z,4µm,20.0s
V62A Hyde County Ai 120.78 61 IAMs_20 IAMs_20 11 09 28.4
comp=Z,3µm,19.0s
J56A Wolcott 120.79 52 IAMs_20 IAMs_20 11 09 13.9
comp=Z,4µm,20.0s
MVL Millersville 120.94 56 IAMs_20 IAMs_20 11 10 32.1
comp=Z,4µm,19.0s
VAO Valinhos 121.07 138 *e*P **PKPdf 10 23 14.6 -0.6**
RCLB Rio Claro- Sao 121.14 137 *e*P **PKiKP 10 23 16.0 +0.6**
S61A Accomac 121.25 59 IAMs_20 IAMs_20 11 09 25.6
comp=Z,4µm,21.0s
UOSS Minazif 121.30 286 PKPdf **PKPdf 10 23 14.4 -1.0**
ARU Arti 121.35 323 *i* PKiKP **PKPdf 10 23 14.3 -0.2**
ARU 10 24 45.5
ARU 10 30 26.1
ARU SP SP 10 34 41.3 +5.3
ARU SS **SS 10 41 16.6 -3.1**
ARU Arti 121.35 323 PKPdf **PKPdf 10 23 13.6 -0.9**
ARU IAMs_20 IAMs_20 11 17 59.5
comp=Z,3µm,19.0s
BB19B Bebedouro 121.48 135 *e*P **PKPdf 10 23 15.4 -0.6**
WUPA West Chester U 121.50 56 IAMs_20 IAMs_20 11 08 08.1
comp=Z,2µm,20.0s
GEYT Alibeck 121.70 301 PKP **PKPdf 10 23 15.8 0.0**
comp=Z,14nm,0.7s,baz=236,slow=1.6,SNR=19
GEYT Alibeck 121.70 301 **PKPdf 10 23 15.3 -0.6**
AKTO Aktyubinsk 122.10 316 PKP **PKPdf 10 23 15.8 -0.3**
comp=Z,32nm,0.8s,baz=86,slow=2.1,SNR=88
BRNJ Basking Ridge 122.35 55 IAMs_20 IAMs_20 11 09 52.4
comp=Z,3µm,19.0s
D56A ZEC Mazanza, M 122.37 48 P **PKiKP 10 23 17.7 +0.8**
baz=271
LONY Lake Ozonia 122.48 51 IAMs_20 IAMs_20 11 07 47.5
comp=Z,4µm,22.0s
ESAR Angra dos Reis 122.58 140 *e*P **PKiKP 10 23 18.6 +0.4**
L60A Shokan 122.67 54 P **PKiKP 10 23 18.1 +0.4**
baz=268
NCB Newcomb 122.73 51 IAMs_20 IAMs_20 11 08 50.1
comp=Z,4µm,21.0s
CLDB Colider 122.86 121 *e*P **PKPdf 10 23 17.7 -1.1**
ARAG Araguaiana, MT 122.89 128 *e*P **PKPdf 10 23 18.3 -0.5**
MACA Manacapuru-AM 122.95 110 *e*P **PKPdf 10 23 18.3 -0.7**
MAN01 Angra dos Reis 122.98 140 *e*P **PKPdf 10 23 18.6 -0.3**
J60A Lant Hill Farm 123.30 52 P **PKiKP 10 23 19.3 +0.4**
baz=269
SPITS Spitsbergen Ar 123.35 354 PKP **PKiKP 10 23 18.3 +0.2**
comp=Z,4.0nm,0.6s,baz=47,slow=2.6,SNR=3.2
K61A Williamstown 123.40 53 P **PKiKP 10 23 19.9 +0.8**
baz=269
D58A Chemin du LacG 123.65 48 P **PKiKP 10 23 19.7 +0.2**
baz=272
VAS01 Vassouras-RJ 123.74 140 *e*P **PKiKP 10 23 20.9 +0.3**
L61B Northampton 123.83 53 P **PKiKP 10 23 20.3 +0.3**
baz=269
IPMB Ipameri, GO 123.88 133 *e*P **PKiKP 10 23 20.9 -0.1**
BSCB Bom Sucesso 123.91 138 *e*P **PKiKP 10 23 20.9 -0.1**
J61A Chester 123.93 52 P **PKPdf 10 23 19.9 0.0**
baz=270
F60A Warwick 124.33 49 P **PKiKP 10 23 20.9 0.0**
baz=272
H61A Lyndonville 124.38 51 P **PKiKP 10 23 21.3 +0.3**
baz=271
J62A Henniker 124.47 52 P **PKiKP 10 23 21.6 +0.4**
baz=270
FFD Franklin Falls 124.59 52 IAMs_20 IAMs_20 11 14 59.4
comp=Z,4µm,21.0s
HRV Adam Dziewonsk 124.66 53 P **PKiKP 10 23 22.2 +0.6**
baz=270
K63A Dunstable 124.68 53 P **PKiKP 10 23 21.9 +0.3**
baz=270
E61A Lac Etchemin 125.32 48 P **PKiKP 10 23 23.0 +0.1**
baz=273
NPGB Novo Progresso 125.41 117 *e*P **PKPdf 10 23 23.7 +0.1**
BDFB Brasilia 125.64 131 PKP **PKPdf 10 23 23.9 -0.3**
comp=Z,17nm,0.8s,baz=215,slow=0.9,SNR=21
BDFB Brasilia 125.64 131 PKiKP **PKPdf 10 23 23.2 -1.0**
BDFB MLR MLR
comp=Z,3µm,18.0s
BDFB Brasilia 125.64 131 PKPdf **PKPdf 10 23 23.2 -1.0**
BDFB IAMs_20 IAMs_20 11 19 00.5
comp=Z,3µm,18.0s
SNDB Serra Nova Dou 125.67 125 *e*P **PKPdf 10 23 24.3 +0.2**
DAG Danmarks Havn 125.75 3 *i* PKiKP **PKPdf 10 23 21.2 -1.2**
DAG Danmarks Havn 125.75 3 *i* P **PKPdf 10 23 21.2 -1.2**
DAG Danmarks Havn 125.75 3 *i* P **PKPdf 10 23 21.2 -1.2**
KIRV Kirov 125.80 327 *e*PKiKP **PKPdf 10 23 22.0 -0.9**
G63A Kingsbury 126.00 50 P **PKiKP 10 23 24.6 +0.4**
baz=273
I64A Boothbay 126.04 52 P **PKiKP 10 23 24.7 +0.4**
baz=272
SJG San Juan 126.07 84 PKiKP **PKiKP 10 23 26.1 +1.0**
SJG MLR MLR
comp=Z,700nm,19.0s
SJG San Juan 126.07 84 **PKiKP 10 23 26.1 +1.0**
PKME Peaks-Kenny Pk 126.22 50 P **PKiKP 10 23 25.1 +0.4**
baz=273
D62A Allapoint, All 126.26 48 P **PKiKP 10 23 25.0 +0.4**
baz=275
H64A Troy 126.31 51 P **PKiKP 10 23 25.0 +0.2**
baz=273
F63A Nahmakanta, Br 126.33 49 P **PKiKP 10 23 25.2 +0.3**
baz=274
HUMP Col San Antoni 126.35 84 **PKPdf 10 23 25.1 -0.1**
ITTB Itaituba 126.56 114 *e*P **PKiKP 10 23 26.3 0.0**
G64A Maxfield 126.60 50 P **PKiKP 10 23 25.3 -0.1**
baz=274
E63A Oxbow 126.75 48 P **PKiKP 10 23 26.2 +0.5**
baz=275
F64A Sherman 126.84 49 P **PKiKP 10 23 26.0 +0.2**
baz=274
D63A Stockholm 126.91 48 P **PKPdf 10 23 25.7 +0.2**
baz=276
PQI Presque Isle 127.00 48 **PKiKP 10 23 26.2 0.0**
E64A Bridgewater 127.16 48 P **PKiKP 10 23 26.6 +0.1**
baz=275

SUMG Summit 127.47 11 IAms_20 IAms_20 11 19 55.6
comp=Z,4µm,20.0s
LSZ Lusaka 127.82 227 IAms_20 IAms_20 11 11 11.3
comp=Z,3µm,20.0s
RIB01 Linhares ES 127.82 141 *e*P **PKiKP 10 23 28.9 +0.2**
SJMB Sao Joao De Ma 127.83 140 *e*P **PKPdf 10 23 28.3 +0.1**
BSFB Barra de Sao F 127.93 140 *e*P **PKPdf 10 23 27.2 -1.2**
DBG Daneborg 128.08 4 *i* P **PKPdf 10 23 25.5 -1.4**
DBG IAmb IAmb 10 23 27.5
comp=Z,4.4nm,1.0s
APA Apatity 128.28 341 ⇓ *i* PKIKP **PKPdf 10 23 21.0 -6.5**
APA pmax pmax
comp=Z,12nm,1.1s
JANB Januaria 128.57 134 *e*P **PKPdf 10 23 29.2 -0.5**
ARCES ARCESS Array B 129.04 345 PKP **PKPdf 10 23 27.8 -1.1**
comp=Z,4.0nm,0.6s,baz=92,slow=2.5,SNR=19
NAN01 Guarapari, ES 129.13 140 *e*P **PKPdf 10 23 30.6 0.0**
MALB Monte Alegre 129.13 113 *e*P **PKPdf 10 23 30.9 +0.1**
KMBO Kilima Mbogo 129.50 248 PKP **PKiKP 10 23 33.5 +1.0**
comp=Z,2.1nm,0.3s,baz=84,slow=2.3,SNR=18
KMBO SKPab SKPbc 10 27 00.6 +7.0
comp=Z,1.5nm,0.4s,baz=71,slow=5.1,SNR=5.7
KMBO Kilima Mbogo 129.50 248 IAms_20 IAms_20 11 18 58.4
comp=Z,3µm,18.0s
KLMR Klimovskoe 129.66 332 *e*PKIKP **PKPdf 10 23 28.2 -2.1**
KLMR pmax pmax
comp=Z,62nm,1.4s
KLMR MLR MLR
comp=Z,1µm,21.0s
KLMR Klimovskoe 129.66 332 *e*PKPdf **PKPdf 10 23 28.2 -2.1**
KLMR *e*PKPdf **PKPdf 10 23 28.2 -2.1**
KLMR *e*PKPdf **PKPdf 10 23 28.2 -2.1**
KLMR AMP 10 23 40.5
comp=Z,62nm,1.4s
KLMR LQ LQ 11 07 15.6
KLMR LQ LQ 11 07 15.6
KLMR LR LR 11 10 32.2
KLMR AMP 11 22 04.4
comp=Z,1µm,21.2s
MAK Makhachkala 129.82 308 *e*P **Pdif 10 20 14.0 -5.4**
MAK *e*SS SS 10 42 58.3 -8.6
MAK *e*SSS SSS 10 47 47.7
SDBA SAO DESIDERIO 130.04 131 *e*P **PKPdf 10 23 32.6 +0.1**
PRPB Parauapebas 130.39 120 *e*P **PKPdf 10 23 33.2 0.0**
SMTB Santa Maria do 130.46 125 *e*P **PKPdf 10 23 33.5 +0.2**
GROC Groznyy 131.04 308 *i* PKIKP **PKPdf 10 23 33.0 -0.5**
GROC *e* 10 25 50.2
GROC pmax pmax
comp=Z,24nm,0.5s
TSUM Tsumeb 131.08 213 PKPdf **PKiKP 10 23 35.8 +0.3**
MCPB Macapa, AP 131.79 112 *e*P **PKiKP 10 23 36.3 -0.5**
GNI Garni 132.12 304 *i* PKIKP **PKPdf 10 23 35.3 -0.5**
VRH Novokhopyorsk 132.14 319 *e*PKIKP **PKPdf 10 23 35.0 -0.3**
VRH pmax pmax
comp=Z,50nm,0.7s
ZEI Tsey 132.47 308 *i* PKIKP **PKiKP 10 23 37.7 +0.1**
ZEI pmax pmax
comp=Z,19nm,1.3s
GDU01 Guandu, BA 132.63 137 *e*P **PKPdf 10 23 37.8 +0.4**
GOF Gofitskoye 132.73 311 ⇑ *e*PKIKP **PKiKP 10 23 38.7 +1.0**
FURI Furi 132.76 261 IAms_20 IAms_20 11 16 27.5
comp=Z,3µm,22.0s
MOS Moscow 132.81 326 *e*PKIKP **PKPdf 10 23 34.6 -1.8**
AKH Akhalkalaki 132.94 306 IAms_20 IAms_20 11 35 20.8
comp=Z,2µm,20.0s
KBZ Khabaz 133.06 309 PKP **PKiKP 10 23 38.9 +0.5**
comp=Z,6.2nm,0.8s,baz=146,slow=5.0
KBZ Khabaz 133.06 309 *i* PKIKP **PKiKP 10 23 37.9 -0.5**
KIV Kislovodsk 133.18 309 *i* PKIKP **PKPdf 10 23 36.0 -1.6**
KIV *e* 10 26 01.1
KIV *e*SS SS 10 43 44.3 -3.7
KIV pmax pmax
comp=Z,59nm,1.1s
KIV Kislovodsk 133.18 309 IAms_20 IAms_20 11 27 51.5
comp=Z,2µm,21.0s
LPSR Galich'ya Gora 133.32 322 *e*PKIKP **PKPdf 10 23 37.0 -0.4**
LPSR pmax pmax
comp=Z,40nm,0.8s
OBN Obninsk 133.62 326 *e*PKIKP **PKPdf 10 23 37.2 -0.7**
OBN *i* 10 23 46.8
OBN *i* 10 26 11.6
OBN *e*PS **PS 10 36 14.5 -11**
OBN *i* 10 38 06.3
OBN pmax pmax
comp=Z,33nm,1.0s
VSR Storozhevoye 133.66 320 *e*PKIKP **PKPdf 10 23 37.3 -0.8**
VSR pmax pmax
comp=Z,50nm,1.1s
VORD Divnogorie 133.67 320 *e*PKIKP **PKPdf 10 23 37.5 -0.6**
VORD pmax pmax
comp=Z,20nm,0.8s
TMAB Tom-Au,PA,Br 134.00 118 *e*P **PKiKP 10 23 40.9 -0.3**
FINES FINESS Array B 134.67 337 PKhKP PKPpre 10 23 29.8
comp=Z,2.5nm,0.8s,baz=20,slow=2.2,SNR=5.5
FINES PKP **PKPdf 10 23 39.7 0.0**
comp=Z,10nm,0.9s,baz=98,slow=3.1,SNR=8.7
FINES SKPbc **SKPbc 10 27 06.9 -2.8**
comp=Z,5.5nm,0.8s,baz=64,slow=4.4,SNR=4.6
MBAR Mbarara 135.28 244 PKP **PKPdf 10 23 42.9 +0.3**
comp=Z,2.7nm,0.2s,baz=185,slow=9.2,SNR=3.4
SOC Sochi 135.36 310 *i* PKIKP **PKPdf 10 23 41.1 -0.5**
SOC *e* 10 26 13.4
SOC *e*PS **PS 10 36 37.6 -3.5**
SOC *e*SS SS 10 44 12.3 -1.8
SOC *e*SSS SSS 10 49 08.8
SOC pmax pmax
comp=Z,17nm,0.7s
SOC MLR MLR
comp=Z,1µm,22.0s
ANN Anapa 136.68 312 *i* PKIKP **PKPdf 10 23 39.4 -4.6**
ANN *e* 10 26 25.0
ANN *e*SS SS 10 44 31.4 +1.7
ANN pmax pmax
comp=Z,35nm,0.8s
ANN MLR MLR
comp=N,2µm,25.0s
ANN MLR MLR
comp=Z,2µm,24.0s
ROSB Rosrio 136.87 122 *e*P **PKPdf 10 23 45.8 +0.5**
MICGM Minsk 138.27 329 *e*PKP **PKPdf 10 23 43.0 -3.6**
MICGM *e*PP **PP 10 26 39.0 +3.3**
MICGM *e*SKP 10 27 11.0
MICGM *e*PKS **PKSdf 10 27 25.0 +2.5**
MICGM *e*SKS **SKSdf 10 31 07.0 +10**
MICGM *e*SKKS SKKSac 10 33 58.0 +28
MICGM sSKSP 10 36 12.0
MICGM *e*SS SS 10 45 20.0 +32
MICGM *e*LR LR 11 21 44.0
MICGM LRM MLR 11 26 52.0
comp=Z,3.5nm,20.0s
MNK Minsk 138.27 329 *e*PKIKP **PKPdf 10 23 43.0 -3.6**
MNK *e* 10 26 39.0
MNK *e*SS SS 10 45 20.0 +32
IZAR Zarasai 138.29 331 *e*P **PKPdf 10 23 47.5 +0.9**
IDID Didziasalis 138.33 330 *e*P **PKPdf 10 23 46.1 -0.6**
ISAL Salakas 138.46 331 *e*P **PKPdf 10 23 47.0 +0.1**
IIGN Ignalina 138.55 331 *e*P **PKPdf 10 23 45.8 -1.3**
NACGM Naroch 138.56 330 *e*PKP PKPpre 10 23 34.0
NACGM *e*SKS **SKSdf 10 30 58.0 +0.6**
NACGM *e*LQ LQ 11 18 23.0
NACGM *e*LR LR 11 22 34.0
SIM Simferopol' 138.90 313 *i* PKIKP **PKPdf 10 23 48.1 0.0**
SIM pmax pmax
comp=Z,56nm,0.9s
ASF Jabal al Asfar 138.91 293 PKP **PKiKP 10 23 50.5 -0.3**
comp=Z,2.9nm,0.7s,baz=121,slow=5.9
DIKM Dikmen 138.99 308 ⇑ P **PKiKP 10 23 51.1 +0.5**
NB2 NORSAR Subarra 139.42 345 PKP PKPpre 10 23 40.6
comp=Z,6.1nm,1.0s,baz=22,slow=3.6
NOA NORSAR Array B 139.42 345 PKhKP PKPpre 10 23 38.8
comp=Z,1.0nm,0.9s,baz=36,slow=3.8,SNR=5.8
PABE Paberze 139.45 332 *e*P PKPpre 10 23 41.6
AKASG Malin Array Be 139.60 323 PKhKP PKPpre 10 23 40.2
comp=Z,7.8nm,0.8s,baz=53,slow=3.4,SNR=16
AKASG PKP **PKPdf 10 23 48.8 -0.4**
comp=Z,6.8nm,0.7s,baz=60,slow=1.6,SNR=14
AKASG SKPbc **SKPbc 10 27 23.1 -1.6**
comp=Z,14nm,1.0s,baz=50,slow=2.9,SNR=10
BZK Bozkurt 139.82 309 ⇓ P **PKiKP 10 23 51.5 -0.7**
MMAI Mount Meron Ar 140.13 295 PKhKP PKPpre 10 23 44.5
comp=Z,1.6nm,0.5s,baz=70,slow=4.7,SNR=2.0
ILGA Ilgaz 140.26 307 IAms_20 IAms_20 11 36 00.2
comp=Z,2µm,20.0s
BRTR Keskin Array B 140.62 305 PKhKP PKPpre 10 23 46.4
comp=Z,3.2nm,0.9s,baz=123,slow=4.6,SNR=7.2
BRTR PKP **PKPdf 10 23 51.5 -0.1**
comp=Z,10nm,0.9s,baz=98,slow=2.5,SNR=13
BRTR SKPab **SKPab 10 27 42.0 +1.5**
comp=Z,3.8nm,1.1s,baz=95,slow=4.9,SNR=3.6
BRTR Keskin Array B 140.62 305 **PKPdf 10 23 47.7 -3.9**
SUW Suwalki 140.76 331 IAms_20 IAms_20 11 25 51.4
comp=Z,2µm,21.0s
RCBR Riachuelo 140.91 133 PKIKP **PKPdf 10 23 51.6 -1.2**
RCBR MLR MLR
comp=Z,2µm,19.0s
RCBR Riachuelo 140.91 133 **PKPdf 10 23 51.6 -1.2**
RCBR Riachuelo 140.91 133 IAms_20 IAms_20 11 24 06.1
comp=Z,2µm,19.0s
RCBR Riachuelo 140.91 133 *e*P **PKPdf 10 23 53.0 +0.2**
SHEL Horse Pasture 141.38 184 IAms_20 IAms_20 11 25 21.3
comp=Z,2µm,18.0s
MILM Milestii Mici 141.60 318 ⇑ P **PKPdf 10 23 53.7 +0.9**
CSS Mathiatis 141.68 298 IAms_20 IAms_20 11 32 44.7
comp=Z,2µm,19.0s
CIFT Cifteler, Eski 142.65 306 P **PKPdf 10 23 56.2 +1.1**
TPGR Topolog 142.71 315 ⇑ P **PKPdf 10 23 53.1 -1.9**
CFR Carcaliu 142.76 316 ⇑ P **PKPdf 10 23 52.5 -2.5**
CFR Carcaliu 142.76 316 ⇑ PKIKP **PKPdf 10 23 52.5 -2.5**
SRCK Saricakaya, Es 142.79 307 P **PKPdf 10 23 53.7 -1.6**
TIRR Tirgusor 142.87 315 ⇑ P **PKPdf 10 23 52.4 -2.9**
TIRR Tirgusor 142.87 315 ⇑ P **PKPdf 10 23 52.4 -2.9**
TIRR Tirgusor 142.87 315 ⇑ PKIKP **PKPdf 10 23 52.4 -2.9**
LVV L'vov 142.89 325 *e*PKHKP **PKPdf 10 23 50.4 -4.7**
LVV *e*SKS **SKSdf 10 30 57.6 -7.1**
MFTR Murfatlar 142.98 314 ⇑ P **PKPdf 10 23 54.6 -0.8**
HARR Harsova 143.10 315 ⇑ P **PKPdf 10 23 54.3 -1.3**
HARR Harsova 143.10 315 ⇑ PKIKP **PKPdf 10 23 54.3 -1.3**
SILT Sile 143.19 309 P PKPbc 10 23 52.9 0.0
SHUT Suhut-Afyon 143.23 304 P PKPbc 10 23 54.4 +1.2
BIZ Bicaz 143.24 319 ⇑ P **PKPdf 10 23 54.5 -1.4**
HRT Hereke 143.27 308 P PKPbc 10 23 52.7 -0.5
BEL Belsk 143.28 329 *e*PKP PKPbc 10 23 53.4 +0.6
BEL *e*L L 11 29 57.6
comp=Z,2µm,20.1s
BSD Bornholm Skovb 143.31 338 *i* PKIKP PKPbc 10 23 53.0 +0.3
BSD Bornholm Skovb 143.31 338 *i* P PKPbc 10 23 53.0 +0.3
BSD Bornholm Skovb 143.31 338 *i* P PKPbc 10 23 53.1 +0.3
CAVI Cavuskoy 143.33 307 P PKPbc 10 23 53.4 +0.1
ADVT Abdulvahap 143.34 308 P PKPbc 10 23 52.9 -0.4
VRI Vrincioaia 143.36 318 ⇑ P PKPbc 10 23 54.0 +0.8
VRI Vrincioaia 143.36 318 ⇑ PKIKP PKPbc 10 23 54.0 +0.8
PLOR Plostina 143.41 318 ⇑ P PKPbc 10 23 53.7 +0.3
PLOR Plostina 143.41 318 ⇑ PKIKP PKPbc 10 23 53.7 +0.3
ICOR Ion Corvin 143.41 314 ⇑ P **PKPdf 10 23 55.7 -0.5**
ISP Isparta 143.42 303 P PKPab 10 23 52.9 +0.2
ISP Isparta 143.42 303 IAms_20 IAms_20 11 37 44.4
comp=Z,2µm,19.0s
BUR08 Bucovina Ar. S 143.42 321 PKPdf PKPbc 10 23 54.5 +1.0
BURAR Bucovina Array 143.42 321 ⇑ P PKPbc 10 23 54.8 +1.4
BURAR Bucovina Array 143.42 321 ⇑ PKIKP PKPbc 10 23 54.8 +1.3
BISRR Bisoca 143.51 317 ⇑ P PKPbc 10 23 54.8 +1.1
KLYT Kilyos 143.59 309 P PKPab 10 23 52.9 -0.2
ISK Istanbul-Kandi 143.64 309 P PKPab 10 23 53.4 +0.1
KAVV Kandilli-Istan 143.64 309 P PKPbc 10 23 53.7 -0.4
KWP Kalwaria Pacla 143.70 325 *e*PKP PKPbc 10 23 54.3 +0.2
KWP *e*L L 11 31 12.8
comp=Z,2µm,20.0s
GEMT Gemlik 143.74 308 P PKPbc 10 23 54.5 0.0
BGKT Bogazkoy 143.81 309 P PKPbc 10 23 54.7 +0.1
ISR Istrita 143.81 316 ⇑ P PKPbc 10 23 55.0 +0.4
ISR Istrita 143.81 316 ⇑ PKIKP PKPbc 10 23 55.0 +0.4
TVSB Tavsanli 143.82 306 P PKPab 10 23 54.5 +0.3
NEHR Nehoiu 143.82 317 ⇑ P PKPbc 10 23 55.7 +1.0
OZUR 143.83 318 ⇓ P PKPbc 10 23 55.5 +0.9
GKP Gorka Klasztor 143.84 334 *e*PKP PKPbc 10 23 54.6 +0.3
GKP *e*L L 11 31 06.6
comp=Z,3µm,19.7s
ARMT Armutlu 143.94 308 P PKPbc 10 23 54.9 -0.2
MUD Monsted U'grnd 143.97 343 *i* PKIKP PKPab 10 23 54.0 0.0
MUD Monsted U'grnd 143.97 343 *i* P PKPab 10 23 54.0 0.0
MUD Monsted U'grnd 143.97 343 *i* P PKPab 10 23 54.0 0.0
CTKS Kestanelik-??a 143.98 309 P PKPbc 10 23 55.9 +0.8
MDNY Mudanya-Bursa 143.98 308 P PKPbc 10 23 55.2 0.0
MLR Muntele Rosu 144.02 317 ⇑ P PKPbc 10 23 55.3 0.0
MLR Muntele Rosu 144.02 317 ⇑ PKIKP PKPbc 10 23 55.3 0.0
PRD Provadia 144.04 313 *i* P **PKPdf 10 23 56.3 -1.0**
CTYL Yalikoy Yolu 144.05 310 P PKPbc 10 23 55.5 +0.1
DOPR Dopca 144.14 318 ⇑ P PKPbc 10 23 56.3 +0.7
SECR 144.15 317 ⇑ P **PKPdf 10 23 56.7 -0.8**
SLVT Silivri 144.19 310 P **PKPdf 10 23 57.1 -0.6**
ARCR ARCALIA 144.20 321 ⇑ P **PKPdf 10 23 57.1 -0.4**
PLAR PLOIESTI 144.22 316 ⇑ P **PKPdf 10 23 57.3 -0.4**
KOLS Kolonicke sedl 144.34 325 *e*PKIKP **PKPab 10 23 55.7 -0.1**
KOLS Kolonicke sedl 144.34 325 *e*PKP **PKPab 10 23 55.7 -0.1**
BMR Baia Mare 144.38 322 ⇑ P PKPbc 10 23 56.7 +0.5
BMR Baia Mare 144.38 322 ⇑ PKIKP PKPbc 10 23 56.7 +0.5
UZH Uzhgorod 144.51 324 *c* i PKIKP **PKPab 10 23 55.8 -0.5**
UZH *i* 10 24 01.0
UZH *e* 10 24 12.2
CAME Cameli-Denizli 144.56 302 P PKPbc 10 23 57.7 +0.4
CRLT Corlu 144.56 310 P **PKPdf 10 23 57.8 -0.5**
SGRR Singureni 144.56 315 ⇑ P **PKPdf 10 23 58.2 0.0**
VOIR 144.60 318 ⇑ P PKPbc 10 23 57.6 +0.5
VOIR 144.60 318 ⇑ PKIKP PKPbc 10 23 57.6 +0.5
LINV Loch Inver, As 144.62 357 *e*P **PKPab 10 23 50.7 -5.7**
MDB Medias 144.66 319 ⇑ P **PKPdf 10 23 58.0 -0.4**
MDB Medias 144.66 319 ⇑ PKIKP **PKPdf 10 23 58.0 -0.4**
KULA Kula-Manisa 144.67 305 P **PKPdf 10 23 58.2 -0.5**
LEWI Lewis, Hebride 144.68 358 *e*P **PKPab 10 23 50.8 -5.8**
MTUR Matau 144.69 317 ⇑ P PKPbc 10 23 57.8 +0.4
MTUR Matau 144.69 317 ⇑ PKIKP PKPbc 10 23 57.8 +0.4
EDC Edincik 144.73 308 P PKPbc 10 23 57.9 +0.3
CRVS Cervenica-Dubn 144.79 325 *e*PKIKP **PKPdf 10 23 58.4 -0.1**
CRVS Cervenica-Dubn 144.79 325 *e*PKP **PKPdf 10 23 58.4 -0.1**
FETY Fethiye 144.80 302 P PKPbc 10 23 58.0 0.0
OJC Ojcow 144.81 328 *e*PKP **PKPab 10 23 57.0 -0.4**
OJC *e*L L 11 28 50.7
comp=Z,3µm,21.6s
CJR Cluj-Napoca 144.84 321 ⇓ P **PKPdf 10 23 58.8 +0.1**
CJR Cluj-Napoca 144.84 321 ⇓ PKIKP **PKPdf 10 23 58.8 +0.1**
MRMT Marmara Adasi 144.84 309 P **PKPab 10 23 57.8 -0.1**
JMB Yambol 144.88 312 *i* P **PKPdf 10 23 58.4 -0.4**
ARR Arges 144.89 318 ⇑ P **PKPdf 10 23 59.3 +0.4**
BALB Balikesir 144.94 307 P **PKiKP 10 24 07.0 +4.2**
SZH Strazhica 145.00 314 *i* P **PKPdf 10 23 58.7 -0.3**
EDRB Edirne 145.00 311 P **PKPdf 10 23 58.7 -0.4**
MAR3 Marsite Statio 145.01 309 P **PKPdf 10 23 59.1 0.0**
MAR6 Marsite Statio 145.04 309 P **PKPdf 10 23 59.2 0.0**
MCD Coleburn Disti 145.05 355 *e*P **PKPbc 10 23 56.4 -1.7**
HUMR Humele 145.06 316 ⇑ P **PKPdf 10 23 58.8 -0.3**
NIE Niedzica 145.08 327 *e*L L 11 28 30.4
comp=Z,1µm,22.2s
NIE Niedzica 145.08 327 *e*PKP **PKPdf 10 23 58.9 -0.2**
DALY Dalyan (Mula) 145.09 302 P **PKPdf 10 23 59.5 +0.1**
RKY Sarkoy-Tekirda 145.11 309 P **PKPbc 10 23 58.8 +0.1**
ZIMR 145.21 315 ⇑ P **PKPdf 10 23 59.7 +0.4**
ZIMR 145.21 315 ⇑ PKIKP **PKPdf 10 23 59.7 +0.4**
KAC Achnashellach 145.27 357 *e*P **PKPbc 10 23 57.6 -1.1**
MDO Dochfour 145.27 356 *e*P **PKPbc 10 23 58.0 -0.8**
YER Yerkesik 145.31 303 P **PKPdf 10 24 00.3 +0.5**
LOT Lotru 145.38 319 ⇑ P **PKPab 10 23 59.8 -0.1**
AYDB Zeytinkoy-Aydi 145.41 304 P **PKPab 10 24 00.3 +0.1**
PVL Pavlikeni 145.41 314 *i* P **PKPab 10 24 00.7 +0.9**
TURN Turunc 145.42 302 P **PKPab 10 24 00.8 +0.7**
KPL Plockton 145.44 357 *e*P **PKPbc 10 23 54.1 -5.1**
LPK Lapseki 145.51 309 P **PKPab 10 24 00.5 +0.2**
KECS Kecovo 145.56 325 *e*PKIKP **PKPab 10 24 01.0 +0.8**
KECS Kecovo 145.56 325 *e*PKP **PKPab 10 24 01.0 +0.8**
ERIK Erikli-Kesan 145.59 309 P **PKPab 10 24 00.6 0.0**
ARG Arkhangelos 145.64 301 P **PKPab 10 24 01.8 +0.9**
DRUM Mains of Drumt 145.65 354 *e*P **PKPab 10 23 57.9 -1.8**
MLSB Milas 145.66 303 P **PKPab 10 24 02.6 +1.6**
LANS Liptovska Anna 145.67 327 *e*PKP2 **PKPab 10 24 01.4 +0.7**
LANS Liptovska Anna 145.67 327 *e*PKP **PKPab 10 24 01.4 +0.7**
DEV Deva 145.68 320 ⇑ P **PKPab 10 24 00.8 0.0**
DEV Deva 145.68 320 ⇑ PKP2 **PKPab 10 24 00.8 0.0**
GELI Tayfur-Gelibol 145.71 309 P **PKPdf 10 24 00.3 0.0**
DIM Dimitrovgrad 145.76 312 *i* P **PKPdf 10 24 00.1 -0.3**
RUE Ruedersdorf 145.81 336 *e*P **PKPab 10 24 01.1 +0.2**
ENEZ Enez 145.82 310 P **PKPbc 10 24 01.1 +0.1**
DKL Dikili 145.83 307 P **PKPbc 10 24 00.8 -0.3**
ALN Alexandroupoli 145.84 310 P **PKPbc 10 24 00.9 -0.2**
ALN Alexandroupoli 145.84 310 PKP2 **PKPdf 10 24 00.5 0.0**
ALN Alexandroupoli 145.84 310 PKPdf **PKPdf 10 24 00.5 0.0**
OKC Ostrava-Krasne 145.86 329 *e*PKP **PKPab 10 24 01.4 +0.1**
OKC AMS AMS 11 28 30.0
comp=Z,2µm,18.0s
BLCB Balcova 145.93 305 P **PKPab 10 24 01.9 0.0**
GCAM G?zelcaml? 145.97 304 P **PKPab 10 24 02.2 +0.1**
KDZ Kurdzhali 146.00 312 P **PKPab 10 24 01.9 -0.2**
KDZ Kurdzhali 146.00 312 *i* P **PKPbc 10 24 01.8 +0.2**
KSP Ksiaz 146.01 332 *e*L L 11 27 52.0
comp=Z,3µm,22.2s
KSP Ksiaz 146.01 332 *e*PKP **PKPbc 10 24 01.4 +0.1**
GZR Gura Zlata 146.01 319 ⇑ P **PKPdf 10 24 00.8 0.0**
GZR Gura Zlata 146.01 319 ⇑ PKIKP **PKPdf 10 24 00.8 0.0**
EZN Ezine 146.01 308 P **PKPab 10 24 02.1 -0.1**
BODT Bodrum 146.08 303 P **PKPab 10 24 02.3 -0.3**
RDO Rodhopi 146.11 311 P **PKPbc 10 24 01.9 0.0**
SRE Strehaia 146.12 318 ⇑ P **PKPab 10 24 03.5 +1.0**
SRE Strehaia 146.12 318 ⇑ PKP2 **PKPab 10 24 03.5 +1.0**
MORC Moravsky Berou 146.19 329 *e*PKP **PKPdf 10 24 01.4 +0.5**
GADA Gvkgeada 146.20 309 P **PKPbc 10 24 02.2 0.0**
BOZC Bozcaada 146.20 308 P **PKPbc 10 24 02.3 +0.1**
SIRR Siria 146.21 321 ⇑ P **PKPbc 10 24 02.0 -0.1**
PSZ Piszkesteto 146.22 325 ⇑ P **PKPbc 10 24 01.6 -0.5**
PSZ Piszkesteto 146.22 325 ⇑ PKP2 **PKPbc 10 24 01.6 -0.5**
PSZ Piszkesteto 146.22 325 IAms_20 IAms_20 11 28 41.2
comp=Z,3µm,22.0s
OSTC Ostas 146.25 331 *e*PKP **PKPab 10 24 02.7 -0.1**
OSTC AMS AMS 11 27 20.0
comp=Z,2µm,20.7s
INVG Invergeldie, C 146.26 356 *e*P **PKPdf 10 23 60.0 -0.8**
URLA Izmir 146.27 305 P **PKPbc 10 24 02.6 +0.1**
NIS1 Nisyros Isl. 146.30 302 P **PKPbc 10 24 02.9 +0.2**
CHVC Chvalec 146.30 331 *e*PKP **PKPbc 10 24 02.5 +0.3**
CHVC AMS AMS 11 27 10.0
comp=Z,2µm,21.0s
PLD Plovdiv 146.30 313 P **PKPbc 10 24 01.9 -0.6**
PLD Plovdiv 146.30 313 *i* P **PKPab 10 24 03.1 -0.1**
KRLC Kraliky 146.34 330 *e*PKP **PKPdf 10 24 01.6 +0.4**
KRLC AMS AMS 11 25 20.0
comp=Z,2µm,23.2s
DPC Dobruska-Polom 146.35 331 *e*PKP **PKPab 10 24 03.1 -0.1**
DPC AMS AMS 11 32 20.0
comp=Z,2µm,20.3s
UPC Upice 146.38 331 *e*PKP **PKPab 10 24 03.0 -0.3**
UPC AMS AMS 11 27 20.0
comp=Z,2µm,20.4s
MPEP Malo Peshtene 146.40 315 *i* P **PKPbc 10 24 02.5 -0.2**
VYHS Vyhne 146.41 326 *e*PKP2 **PKPdf 10 24 01.3 0.0**
VYHS Vyhne 146.41 326 *e*PKP **PKPdf 10 24 01.3 0.0**
VYHS *e* 10 24 03.4
RZN Rozhen 146.46 312 *i* P **PKPbc 10 24 03.0 -0.2**
PGB Panagyurishte 146.47 314 *i* P **PKPbc 10 24 02.7 -0.4**
PUNG Punghina 146.48 317 ⇑ P **PKPab 10 24 04.0 +0.2**
HERR Herculane 146.49 319 ⇓ P **PKPbc 10 24 02.9 0.0**
LAWE Loch Awe, Argy 146.51 357 *e*P **PKPdf 10 23 56.3 -4.8**
EAB Aberfoyle 146.52 356 *e*P **PKPdf 10 24 01.1 0.0**
SIGR SIGRI 146.56 307 P **PKPbc 10 24 03.1 -0.2**
BZS Buzias 146.59 320 ⇑ P **PKPdf 10 24 02.4 +0.7**
BZS Buzias 146.59 320 ⇑ PKP2 **PKPdf 10 24 02.4 +0.7**
ESY Stoneypath 146.64 354 *e*P **PKPdf 10 24 01.3 -0.2**
JAVC Velka Javorina 146.75 328 *e*PKP **PKPbc 10 24 03.3 -0.3**
JAVC *e* 10 24 05.6
EBL Broad Law 146.83 354 *e*P **PKPdf 10 24 01.8 0.0**
PGBU Glenifferbraes 146.90 356 *e*P **PKPdf 10 24 00.0 -1.8**
VRAC Vranov 146.96 329 ⇑ P PKPdf 10 23 53.9 -8.3
VRAC Vranov 146.96 329 *e*PKP **PKPdf 10 24 02.7 +0.5**
VRAC *e* 10 24 04.8
VRAC Vranov 146.96 329 ⇑ PKHKP PKPdf 10 23 53.9 -8.3
MDVR Moldovita 146.97 319 ⇑ P **PKPbc 10 24 03.8 -0.6**
BRG Berggiesshubel 146.99 334 *i* PKP **PKPdf 10 24 02.7 +0.5**
comp=Z,112nm,1.0s
BRG Berggiesshubel 146.99 334 SS SS 10 46 31.0 +2.9
BRG Berggiesshubel 146.99 334 *i* PKP2 **PKPdf 10 24 02.7 +0.5**
BRG 10 24 03.0
BRG pmax pmax
comp=Z,112nm,1.0s
BRG MLR MLR
comp=N,2µm,24.5s
BRG MLR MLR
comp=E,1µm,22.3s
BRG MLR MLR
comp=Z,2µm,22.5s
BRG Berggiesshubel 146.99 334
comp=Z,2µm,22.5s
BRG Berggiesshubel 146.99 334
comp=N,2µm,24.5s
BRG Berggiesshubel 146.99 334
comp=E,1µm,22.3s
BRG Berggiesshubel 146.99 334 PKP **PKPdf 10 24 03.0 +0.8**
PVCC Panska Ves 146.99 333 *e*PKP **PKPbc 10 24 04.5 +0.3**
PVCC AMS AMS 11 33 20.0
comp=E,2µm,20.1s
BANR Banloc 147.00 320 ⇓ P **PKPbc 10 24 04.7 +0.4**
CLL Collm 147.02 335 *e*PKPdf **PKPdf 10 24 02.0 -0.2**
CLL *i* PKPbc **PKPbc 10 24 04.1 -0.1**
comp=Z,91nm,0.9s
CLL *i* 10 24 14.0
CLL *e*PKSdf **PKSdf 10 27 38.0 +0.7**
CLL *e*PPP PPP 10 30 54.0
CLL *e*SKKSac SKKSac 10 34 18.0 -2.5
CLL *e*PSKS 10 37 42.0
CLL *e*PPS PPS 10 40 18.0
CLL *e*SS **SS 10 46 30.0 +1.6**
CLL *e*PSS PSS 10 47 18.0
CLL *e*SSS SSS 10 52 05.0
CLL *e* 10 54 24.0
CLL *e* 10 56 48.0
CLL Lm MLR 11 32 00.0
comp=N,2µm,20.9s
CLL Lm MLR 11 32 00.0
comp=E,1µm,20.5s
CLL Lm MLR 11 32 00.0
comp=Z,3µm,20.5s
CLL Collm 147.02 335 *e*PKIKP **PKPdf 10 24 02.0 -0.2**
CLL *i* 10 24 04.1
CLL *e* 10 27 38.0
CLL pmax pmax
comp=Z,91nm,0.9s
CLL MLR MLR
comp=Z,3µm,20.5s
VTS Vitosha 147.06 314 *i* P **PKPbc 10 24 04.1 -0.8**
SMOL Smolenice 147.10 328 *e*PKP2 **PKPab 10 24 06.1 -0.1**
SMOL Smolenice 147.10 328 *e*PKP **PKPab 10 24 06.1 -0.1**
KRUC Moravsky 147.23 329 *e*PKP **PKPdf 10 24 02.7 +0.1**
KRUC *e* 10 24 05.6
MODS Modra-Piesok 147.27 328 *e*PKIKP **PKPdf 10 24 02.1 -0.7**
MODS *e* 10 24 05.2
MODS *e* 10 24 10.3
MODS Modra-Piesok 147.27 328 *e*PKP **PKPdf 10 24 02.1 -0.7**
MODS *e* 10 24 05.2
MODS *e* 10 24 10.3
ESK Eskdalemuir 147.29 354 *e*P **PKPdf 10 24 02.9 +0.4**
ESK Eskdalemuir 147.29 354 PKP2 **PKPbc 10 24 03.7 -1.2**
ESK Eskdalemuir 147.29 354 PKPdf **PKPbc 10 24 03.7 -1.2**
PRA Prague 147.38 332 *e*PKP **PKPbc 10 24 05.8 +0.5**
PRA AMS AMS 11 33 40.0
comp=Z,2µm,19.7s
PRU Pruhonice 147.40 332 *e*PKP **PKPbc 10 24 05.7 +0.4**
PRU AMS AMS 11 34 00.0
comp=Z,3µm,18.7s
APE Apeiranthos 147.45 304 ⇑ P **PKPbc 10 24 06.0 0.0**
APE Apeiranthos 147.45 304 P **PKPdf 10 24 04.4 +0.9**
APE Apeiranthos 147.45 304 ⇑ PKP2 **PKPbc 10 24 06.0 0.0**
TREC Trest 147.49 330 *e*PKP **PKPbc 10 24 06.1 +0.5**
TREC AMS AMS 11 28 30.0
comp=Z,2µm,21.2s
KKB Krupnik 147.50 313 *i* P **PKPdf 10 24 02.8 -0.5**
OUR Ouranopolis 147.51 310 P **PKPbc 10 24 05.4 -0.5**
NEWG New Galloway 147.58 355 *e*P **PKPbc 10 24 04.7 -0.9**
EDMD Edmundbyers 147.65 353 *e*P **PKPdf 10 24 02.7 -0.5**
GAL1 Galloway 147.86 356 *e*P **PKPdf 10 24 03.6 +0.1**
PBCC Pribram 147.86 332 *e*PKP **PKPbc 10 24 06.9 +0.3**
FRGS Fruska Gora 147.90 321 ⇑ *i* P **PKPbc 10 24 06.9 0.0**
KNT Kendrikon 147.93 312 P **PKPbc 10 24 06.9 -0.2**
MORH Mrgy, Hungar 147.94 323 ⇑ *i* P **PKPbc 10 24 06.7 -0.2**
AOS Alonnisos 148.01 308 P **PKPbc 10 24 06.7 -0.7**
HORT Hortiatis 148.02 311 P **PKPdf 10 24 03.4 -0.9**
VAY Valandovo 148.08 313 *i* P **PKPbc 10 24 06.6 -0.8**
NKC Novy Kostel 148.09 334 *e*PKP **PKPbc 10 24 07.6 +0.4**
NKC AMS AMS 11 33 10.0
comp=Z,3µm,19.7s
STIP Stip 148.17 314 *i* P **PKPbc 10 24 06.7 -1.0**
CONA Conrad Observa 148.27 328 *i* P **PKPbc 10 24 08.3 +0.4**
comp=Z,52nm,0.7s,SNR=49

DIVS	Divibare	148.38 319	⇑	*i* P		PKPdf	10 24 04.1	-0.7
DIVS	Divibare	148.38 319		IAMs_20		IAMs_20	11 35 16.0	
	comp=Z,3µm,20.0s							
TEKS	Tekeris	148.41 320	⇑	*i* P		PKPbc	10 24 08.1	-0.2
IDI	Anoyia	148.42 301	⇓	P		PKPbc	10 24 08.9	+0.3
IOMK	Kirk Michael	148.45 356		*e*P		PKPdf	10 24 05.9	+1.5
KHC	Kasperske Hory	148.46 332		*e*PKP		PKPdf	10 24 05.1	+0.4
KHC				*e*pPKP		PKPbc	10 24 08.7	+0.4
KHC				AMS		AMS	11 24 50.0	
	comp=Z,4µm,22.1s							
SKO	Skopje	148.54 314		*i* P		PKPbc	10 24 09.0	+0.3
GERES	GERESS Array B	148.62 331		PKP		PKPdf	10 24 04.7	-0.4
	comp=Z,58nm,0.9s,baz=52,slow=1.6,SNR=15							
GERES				PKPbc		sPKPdf	10 24 08.1	-0.9
	comp=Z,58nm,0.9s,baz=41,slow=2.4,SNR=82							
GERES	GERESS Array B	148.62 331				PKPdf	10 24 06.5	+1.4
BEHE	Becsehely	148.78 325	⇑	*i* P		PKiKP	10 24 10.6	+0.1
BBLS	Lazići	148.86 319	⇑	*i* P		PKPbc	10 24 09.3	-0.2
ARSA	Arzberg	148.90 328		*i* P		PKPbc	10 24 09.5	0.0
	comp=Z,12nm,0.6s,SNR=12							
ASCN	Ascension	148.92 169		IAMs_20		IAMs_20	11 22 09.6	
	comp=Z,2µm,22.0s							
GRF	Grafenberg Arr	149.00 335		*e*PKP		PKPdf	10 24 05.2	-0.3
	baz=37,slow=2.1							
GRF				*e*L		L	11 34 28.6	
	comp=Z,3µm,19.9s							
HAPS	Han Pijesak,BI	149.01 320	⇑	*i* P		PKPbc	10 24 08.9	-1.0
RUDO	Rudo	149.02 319		*e*P		PKPbc	10 24 09.1	-0.7
MOA	Molln	149.09 330		*i* P		PKPbc	10 24 09.9	0.0
	comp=Z,23nm,0.6s,SNR=17							
AGG	Agios Georgios	149.19 309		P		PKPdf	10 24 05.3	-0.9
AGG	Agios Georgios	149.19 309		PKiKP		PKPdf	10 24 06.8	+0.6
AGG	Agios Georgios	149.19 309		PKPdf		PKPdf	10 24 06.8	+0.6
OHR	Ohrid	149.37 313		*i* P		PKPbc	10 24 10.8	-0.1
STNC	Stoke	149.38 353		*e*P		PKPbc	10 24 10.7	+0.3
PERS	Pernice	149.53 327		*i* PKPdf		PKPdf	10 24 05.7	-0.9
PERS				*i* PKPbc		PKPbc	10 24 10.8	-0.3
UPM	Unac-Piva	149.53 318	⇑	*i* P		PKPbc	10 24 10.5	-0.9
SOKA	Soboth	149.54 327		*i* P		PKPbc	10 24 10.9	-0.2
	comp=Z,51nm,0.9s,SNR=51							
BLY	Banja Luka	149.65 322	⇑	*i* P		PKPbc	10 24 11.4	+0.1
GOLS	Golise	149.69 326		*e*PKPdf		PKPdf	10 24 06.4	-0.4
GOLS				*i* PKPbc		PKPbc	10 24 11.6	+0.1
FOEL	Foel Wylfa	149.69 354		*e*P		PKPbc	10 24 09.2	-2.0
PDG	Podgorica	149.72 317	⇓	P		PKPbc	10 24 11.2	-0.4
PDG	Podgorica	149.72 317	⇑	*i* P		PKPbc	10 24 11.2	-0.4
PDG	Podgorica	149.72 317		IAMs_20		IAMs_20	11 35 24.7	
	comp=Z,2µm,20.0s							
LLW	Llanuwychllyn	149.78 354		*e*P		PKPbc	10 24 10.8	-0.6
TIR	Tirane	149.88 315	⇓	P		PKiKP	10 24 12.6	-0.3
TIR	Tirane	149.88 315	⇓	PKP2		PKiKP	10 24 12.6	-0.3
DRME	Dracevica, Mon	149.90 316	⇑	*i* P		PKPbc	10 24 11.9	-0.1
OBKA	Obir	149.90 327		*i* P		PKPbc	10 24 11.5	-0.5
	comp=Z,38nm,0.9s,SNR=11							
CRES	Cresnjev	149.90 326	⇑	*i* P		PKPbc	10 24 11.7	-0.2
MGRS	Mrkonjic Grad	149.91 322		*e*P		PKPab	10 24 26.6	+9.0
BTNL	Ternell	150.01 341		PKiKP		PKPbc	10 24 12.1	0.0
BTNL				PKPab		PKPab	10 24 17.8	+0.1
MEM	Membach	150.02 341		PKPdf		PKPdf	10 24 06.9	-0.2
MEM				PKiKP		PKPbc	10 24 11.9	-0.1
KBA	Koelnbreinsper	150.08 329		*i* P		PKPbc	10 24 11.9	-0.7
	comp=Z,63nm,0.9s,SNR=24							
TREB	Trebinje	150.14 318	⇑	*i* P		PKPbc	10 24 11.5	-1.1
BSTI	Sart Tilman	150.17 342		PKiKP		PKPbc	10 24 12.8	+0.4
HCY	Herceg Novi	150.19 317	⇑	*i* P		PKPbc	10 24 12.2	-0.6
LJU	Ljubljana	150.23 327		*i* PKPdf		PKPdf	10 24 07.1	-0.5
LJU				*i* PKPbc		PKPbc	10 24 12.7	0.0
LJU				*i* pPKPab		sPKPab	10 24 21.7	-0.9
LJU	Ljubljana	150.23 327	⇑	*i* P		PKPbc	10 24 12.3	-0.4
BHOU	Houvegnez	150.25 341		PKPdf		PKPdf	10 24 07.7	+0.2
BHOU				PKiKP		PKPbc	10 24 13.0	+0.4
MYKA	Terra Mystica	150.26 328		*i* P		PKPbc	10 24 11.9	-0.9
	comp=Z,39nm,0.6s,SNR=14							
GORS	Gorjuse	150.31 328		*i* PKPbc		PKPbc	10 24 12.3	-0.7
GORS				*e*pPKPab		pPKPab	10 24 21.4	-0.7
UCC	Uccle	150.31 343		PKiKP		PKPbc	10 24 12.8	+0.1
BCLA	Clavier	150.40 342		PKPdf		PKPdf	10 24 06.7	-1.0
BCLA				PKiKP		PKPbc	10 24 12.8	-0.2
STON	Ston	150.45 319	⇑	*i* P		PKPbc	10 24 11.4	-1.9
BGES	Gesves	150.49 342		PKiKP		PKiKP	10 24 13.8	-0.2
BGES				PKPab		PKPab	10 24 19.5	-0.2
CEY	Cerknica	150.49 326	⇑	*i* P		PKPbc	10 24 12.5	-0.9
MCH1	Michaelchurch	150.55 353		*e*P		PKPbc	10 24 10.9	-2.4
JAVS	Javornik	150.57 327		*i* PKPdf		PKPdf	10 24 07.3	-0.9
JAVS				*i* PKPbc		PKPbc	10 24 13.2	-0.5
SNF	Seneffe	150.60 343		PKiKP		PKPbc	10 24 13.3	-0.1
ZOU	Zoufplan	150.63 329				PKPdf	10 24 08.1	-0.4
BMRD	Maredsous	150.65 343		PKPdf		PKPdf	10 24 07.6	-0.5
BMRD				PKiKP		PKPbc	10 24 13.6	0.0
MONM	Monmouth	150.69 353		*e*P		PKPbc	10 24 11.1	-2.4
WATA	Walderalm	150.69 332		*i* P		PKPbc	10 24 13.8	-0.2
	comp=Z,30nm,0.6s,SNR=17							
ABTA	Abfaltersbach	150.71 330		*e*P		PKPbc	10 24 13.4	-0.6
	comp=Z,72nm,0.8s							
WTTA	Wattenberg	150.72 331		*i* P		PKPbc	10 24 14.0	-0.1
	comp=Z,83nm,0.8s,SNR=19							
RIY	Rijeka	150.74 326	⇑	*i* P		PKPbc	10 24 12.0	-1.9
WLF	Walferdange	150.81 340		PKiKP		PKiKP	10 24 14.7	0.0
SKDS	Skadanscina	150.83 326		*i* PKPdf		PKPdf	10 24 07.7	-0.9
SKDS				*i* PKPbc		PKPbc	10 24 13.7	-0.5
SWN1	Swindon	150.88 351		*e*P		PKiKP	10 24 14.3	-0.3
DOU	Dourbes	150.89 343		PKPdf		PKPdf	10 24 08.3	-0.2
DOU				PKiKP		PKPbc	10 24 14.4	+0.2
DOU				PKPab		PKPab	10 24 20.5	-0.8
MOTA	Moosalm	150.89 332		*i* P		PKPbc	10 24 14.0	-0.5
	comp=Z,59nm,0.7s,SNR=24							
RETA	Reute	150.93 333		*i* P		PKPbc	10 24 14.2	-0.3
	comp=Z,22nm,0.6s,SNR=11							
SQTA	Sankt Quirin	150.94 332		*i* P		PKPbc	10 24 14.3	-0.3
	comp=Z,67nm,0.7s,SNR=20							
STAL	STALIGIAL	150.97 329				PKPdf	10 24 10.3	+1.5
BFO	Black Forest	151.21 336		PKiKP		PKPdf	10 24 08.2	-0.9
BFO	Black Forest	151.21 336		PKPdf		PKPdf	10 24 08.2	-0.9
BFO				IAMs_20		IAMs_20	11 30 08.3	
	comp=Z,3µm,22.0s							
FETA	Feichten	151.30 332		*i* P		PKPbc	10 24 15.5	+0.1
	comp=Z,66nm,0.9s,SNR=18							
SCTE	Santa Cesarea	151.42 313		IAMs_20		IAMs_20	11 33 16.1	
	comp=Z,2µm,20.0s							
DAVA	Damuels	151.45 333		*i* P		PKPbc	10 24 15.5	-0.3
	comp=Z,20nm,0.7s,SNR=7.9							
CTI	Castel Tesino	151.63 330		IAMs_20		IAMs_20	11 35 08.8	
	comp=Z,2µm,21.0s							
DAVOX	Davos/Dischmat	151.85 333		PKPbc		PKiKP	10 24 16.9	-0.2
	comp=Z,69nm,0.7s,baz=333,slow=2.3,SNR=6.2							
MATE	Matera	152.29 316	⇓	P		PKPbc	10 24 17.6	0.0
TIP	Timpagrande	153.01 313	⇑	P		PKiKP	10 24 20.0	+0.4
TIP	Timpagrande	153.01 313		IAMs_20		IAMs_20	11 39 18.2	
	comp=Z,2µm,21.0s							
NRCA	Norcia	153.14 323		IAMs_20		IAMs_20	11 32 06.5	
	comp=Z,2µm,22.0s							
MURB	Monte Urbino	153.17 324				PKPdf	10 24 14.7	+2.4
ZCCA	Zocca	153.20 328				PKPbc	10 24 19.3	-0.4
SENIN	Lac Senin/Sane	153.24 335		IAMs_20		IAMs_20	11 34 34.0	
	comp=Z,3µm,21.0s							
AQU	L'Aquila	153.29 322	⇑	*i* P		PKPbc	10 24 19.1	-0.8
PAOL	Paolisi	153.42 319		IAMs_20		IAMs_20	11 48 10.3	
	comp=Z,2µm,19.0s							
OSSC	Osservatorio P	153.66 326		IAMs_20		IAMs_20	11 36 50.4	
	comp=Z,3µm,21.0s							
CEL	Celeste	154.05 312		IAMs_20		IAMs_20	11 49 10.9	
	comp=Z,2µm,20.0s							
CASP	Castiglione de	154.38 326		IAMs_20		IAMs_20	11 37 02.0	
	comp=Z,1µm,20.0s							
VSL	Villasalto	157.46 322		IAMs_20		IAMs_20	11 35 47.1	
	comp=Z,2µm,21.0s							
MAHO	Mahon	159.81 330		PKP		PKPdf	10 24 31.2	+10
MAHO	Mahon	159.81 330		PP		PP	10 28 45.6	+4.8
KEST	Kesra	159.83 314		PKP		PKPdf	10 24 20.6	-0.6
	comp=Z,7.1nm,0.8s,baz=226,slow=0.7,SNR=6.4							
KEST				PKPab		PKPab	10 24 57.6	-2.6
	comp=Z,8.6nm,0.8s,baz=15,slow=2.4,SNR=4.8							
KEST	Kesra	159.83 314		PKPdf		PKPdf	10 24 20.6	-0.6
ESDC	Sonseca Array	162.75 348		PKP		PKPdf	10 24 23.3	-0.7
	comp=Z,1.1nm,0.9s,baz=303,slow=2.0,SNR=5.9							
ESDC				PKPab		PKPab	10 25 11.2	-1.4
	comp=Z,4.2nm,0.9s,baz=7.4,slow=3.8,SNR=9.7							
ESDC				PP		PP	10 28 59.3	+3.1
	comp=Z,1.7nm,1.0s,baz=38,slow=6.5,SNR=4.6							
ESDC	Sonseca Array	162.75 348				PKPdf	10 24 24.5	+0.4
ESDC						PKPab	10 25 11.8	-0.8
LIC	Lamto	163.18 192		*e*PKIKP		PKPdf	10 24 24.4	-0.8
	comp=Z,245nm,2.1s							
LIC	Lamto	163.18 192		*e*P		PKPab	10 25 14.6	-0.4
	comp=Z,257nm,2.2s							
KIC	Kosan Boka	163.25 193		*e*PKIKP		PKPdf	10 24 24.1	-1.1
	comp=Z,134nm,1.7s							
KIC	Kosan Boka	163.25 193		*e*P		PKPab	10 25 14.6	-0.7
	comp=Z,426nm,2.3s							
DBIC	Dimbokro	163.57 193		PKP		PKPdf	10 24 25.7	+0.2
	comp=Z,6.8nm,0.9s,baz=46,slow=0.9,SNR=5.9							
DBIC				PKPab		PKPab	10 25 16.4	-0.4
	comp=Z,19nm,1.1s,baz=162,slow=8.2,SNR=5.8							
DBIC				PP		PP	10 29 00.8	+0.4
	comp=Z,22nm,1.1s,baz=141,slow=4.1,SNR=4.4							
DBIC	Dimbokro	163.57 193				PKPdf	10 24 26.1	+0.5
TIC	Toumodi	163.58 192		*e*PKIKP		PKPdf	10 24 24.2	-1.4
TIC	Toumodi	163.58 192		*e*P		PKPab	10 25 16.3	-0.5
CART	Cartagena	163.91 338		PKP		PKPdf	10 24 13.0	-12
EVO	Evora	164.32 359		PKP		PKPdf	10 24 26.8	+1.3
EVO	Evora	164.32 359		PP		PP	10 29 17.5	+13
EMAL	Malaga-Limoner	165.65 347		PKP		PKPdf	10 24 31.6	+4.9
EMAL	Malaga-Limoner	165.65 347		PP		PP	10 29 08.7	-2.6
TORD	Torodi Ar. Bea	166.35 227		PKP		PKPdf	10 24 27.9	+0.1
	comp=Z,26nm,1.0s,baz=354,slow=1.0,SNR=67							
TORD				PKPab		PKPab	10 25 29.0	-0.1
	comp=Z,66nm,1.2s,baz=120,slow=3.0,SNR=20							
TORD				PP		PP	10 29 14.1	-2.1
	comp=Z,16nm,1.4s,baz=243,slow=1.0,SNR=5.5							
TORD	Torodi Ar. Bea	166.35 227				PKPdf	10 24 27.4	-0.5
PVLZ	Peæn de	167.14 344		PP		PP	10 29 21.2	+2.2
IFR	Ifrane	168.92 345		PKP		PKPdf	10 24 31.5	+2.1
IFR	Ifrane	168.92 345		PP		PP	10 29 25.9	-2.6
MDT	Midelt	169.45 342		PKP		PKPdf	10 24 29.9	+0.2
	comp=Z,2.0nm,0.8s,baz=306,slow=3.0,SNR=4.0							
MDT				PKPab		pPKPab	10 25 44.8	-0.4
	comp=Z,2.2nm,0.7s,baz=53,slow=5.1,SNR=2.9							
AVE	Averroes	169.50 355		PKP		PKPdf	10 24 42.2	+13
AVE	Averroes	169.50 355		PP		PP	10 29 34.3	+3.3
KOWA	Kowa	170.70 208		PKP		PKPdf	10 24 31.1	+0.4
	comp=Z,14nm,1.1s,baz=340,slow=1.4,SNR=12							
KOWA				PKPab		PKPab	10 25 48.5	+0.3
	comp=Z,77nm,1.2s,baz=140,slow=3.9,SNR=13							
KOWA				PP		PP	10 29 35.3	-2.2
	comp=Z,15nm,1.1s,baz=154,slow=4.0,SNR=5.4							
KOWA	Kowa	170.70 208				PKPdf	10 24 30.7	0.0
KOWA				PKPab		PKPab	10 25 48.4	+0.2

LJU 10 10:22:33.4, 45°.93N×15°.49E, h4km, ML0.3, 1D,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CESS	Cesta pri Krsk	0.04	338	⇓ *i* Pg	Pg	10 22 34.5	-0.1
CESS				*i* Sg	Sg	10 22 35.4	-0.1
	comp=Z,28nm,0.1s						
CRES	Cresnjev	0.11	191	*i* Pg	Pg	10 22 35.6	-0.1
CRES				*i* Sg	Sg	10 22 37.4	+0.2
	comp=Z,3.0nm,0.0s						
LEGS	Legarje	0.12	278	*i* Sg	Sg	10 22 38.3	+0.9
GCIS	Gornji Cirnik	0.12	124	*i* Pg	Pg	10 22 36.0	+0.2
GCIS				*e*Sg	Sg	10 22 37.7	+0.3
	comp=Z,2.0nm,0.1s						

*DJA **10** 10:24:09.6±0.6, 8°.S±4°×12°.0E±°, h179km±7km, M3.8/13, mb3.9/2, MLv3.7/13*
*IDC **10** 10:24:11.7±4.1, 8°.25S×119°.56E, h178km±29km, mb3.3/3, mb1 3.3/6, mb1mx3.0/54, mbtmp3.8/6, Error ellipse: s-maj=119.3km s-min=15.2km az=66.0*
ISC 10 10:24:11.3±0.8, 8°.39S±0°.05×119°.67E±0°.06, h170km, n18,
σ1§70/21, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	1.27	193	P	Pn	10 24 40.3	-0.1
WBSI				S	Sn	10 25 02.4	-0.5
PLAI	Plampang	1.93	257	P	Pn	10 24 46.4	-0.5
BASI	Baing, Sumba	2.02	154	P	Pn	10 24 43.8	-4.2
EDFI	Ende, Flores	2.02	100	P	Pn	10 24 48.1	0.0
BSSI	Bau Bau, Buton	2.38	20	P	Pn	10 24 51.0	-1.0
TWSI	Taliwang, Sumb	2.78	263	P	Pn	10 24 56.0	-0.9
TWSI				S	Sn	10 25 34.2	+2.0
BKSI	Bulukumba	3.08	8	P	Pn	10 24 59.7	-0.8
KAPI	Kappang	3.35	1	P	Pn	10 25 03.2	-0.8
	8.7nm,0.3s,baz=176,slow=8.3,SNR=12						
BNSI	Bone	3.99	6	P	Pn	10 25 12.0	0.0
SPSI	Sidrap Palu	4.40	1	P	Pn	10 25 16.5	-0.8
SOEI	Soe	4.73	107	P	Pn	10 25 15.4	-6.4
TTSI	Tana Toraja	5.31	2	P	Pn	10 25 29.8	+0.6
	0.1nm16nm,0.6s						
JAGI	Jajag, Banyuwa	5.46	269	P	Pn	10 25 30.0	-1.2
FITZ	Fitzroy Crossi	11.26	150	P	Pn	10 26 49.7	+2.2
	0.5nm,0.3s,baz=332,slow=10,SNR=26						
FITZ				S	Sn	10 28 48.2	-4.2
	0.4nm,0.3s,baz=176,slow=19,SNR=5.6						
WRA	Warramunga Arr	18.26	131	P	P	10 28 13.4	+1.2
	0.3nm,0.3s,baz=304,slow=12,SNR=20						
WRA				S	S	10 31 31.0	-1.2
	0.2nm,0.3s,baz=296,slow=23,SNR=5.2						
ASAR	Alice Springs	20.41	140	P	P	10 28 37.0	+1.7
	1.4nm,0.4s,baz=312,slow=9.6,SNR=30						
ASAR				S	S	10 32 12.3	-2.5
	2.3nm,1.3s,baz=333,slow=26,SNR=5.2						
STKA	Stephens Creek	31.01	142	P	P	10 30 14.8	+1.9
	1.9nm,0.6s,baz=307,slow=11,SNR=4.2						
SONM	Songino Array	57.20	349	P	P	10 33 38.9	-1.8
	0.3nm,0.5s,baz=179,slow=6.6,SNR=2.4						

*IDC **10** 10:24:18.5±1.8, 26°.86S×106°.67W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.9/25, mbtmp3.8/5, Error ellipse: s-maj=62.3km s-min=27.0km az=42.0*
ISC 10 10:24:20.3±1.8, 26°.8S±0°.3×106°.6W±0°.3, h10km, n14,
σ1§44/8, mb3.8/5, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H03N2	Juan Fernandez	24.79	112	T	T	10 55 04.9	
	baz=283,slow=75,SNR=152						
H03N3	Juan Fernandez	24.80	112	T	T	10 55 06.1	
	baz=283,slow=75,SNR=136						
H03N1	Juan Fernandez	24.81	112	T	T	10 55 06.5	
	baz=283,slow=75,SNR=88						
PLCA	Paso Flores	32.79	124	P	P	10 30 53.2	-0.5
	1.1nm,0.7s,baz=265,slow=11,SNR=3.0						
LPAZ	La Paz	37.16	82	P	P	10 31 33.0	+0.7
	0.5nm,0.6s,baz=270,slow=12,SNR=3.3						
TXAR	Lajitas Array	55.90	3	P	P	10 33 57.5	-0.9
	0.8nm,0.9s,baz=185,slow=9.8,SNR=6.1						
NVAR	Mina Array Bea	65.82	350	P	P	10 35 07.2	+1.3
	0.4nm,0.5s,baz=179,slow=8.7,SNR=7.8						
PDAR	Pinedale Array	69.28	358	P	P	10 35 27.8	0.0
	0.8nm,0.6s,baz=169,slow=7.0,SNR=6.2						
H01W1	Cape Leeuwin H	107.52	214	T	T	12 39 37.2	
	baz=139,slow=76,SNR=7.9						
H01W2	Cape Leeuwin H	107.52	214	T	T	12 39 43.3	
	baz=139,slow=76,SNR=8.7						
H01W3	Cape Leeuwin H	107.53	214	T	T	12 39 43.9	
	baz=139,slow=76,SNR=8.8						
SONM	Songino Array	146.77	318	PKPbc	PKPdf	10 44 02.2	+1.4
	2.0nm,1.2s,baz=54,slow=2.5,SNR=2.0						
ZALV	Zalesovo Beam	151.60	346	PKPab	PKPab	10 44 20.7	-2.3
	1.2nm,0.6s,baz=6.3,slow=3.4,SNR=2.2						
KURBB	Kurchatov Arra	155.90	352	PKPab	PKPab	10 44 41.4	+0.1
	0.2nm,0.5s,baz=13,slow=4.4,SNR=4.1						

*IDC **10** 10:27:25.5±1.6, 22°.74S×171°.32E, h0km, mb4.2/6, mb1 4.4/7, mb1mx4.0/36, mbtmp4.2/7, ML4.1/1, MS4.3/1, Ms1 4.3/1, ms1mx3.5/33, Error ellipse: s-maj=75.0km s-min=23.7km az=165.0*
*NEIC **10** 10:27:26.4±2.8, 23°.0S±0°.1×171°.34E±0°.04, h10km±2km, mb4.4/11, Error ellipse: s-maj=19.8km s-min=4.1km az=163.0*
ISC 10 10:27:26.9±0.8, 22°.9S±0°.1×171°.32E±0°.08, h10km, n24,
σ1§10/23, mb4.3/10, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.58	280	Pn	Pn	10 28 37.0	+0.6
	9.7nm,0.3s,baz=117,slow=19,SNR=91						
DZM				Sn	Sn	10 29 29.1	-0.7
	4.1nm,0.3s,baz=175,slow=14,SNR=6.4						
DZM	Mont Dzumac	4.58	280		Pn	10 28 37.2	+0.8
MSVF	Nonsavu	8.16	52	Pn	Pn	10 29 26.7	+1.2
OUZ	Omahuta	12.41	171	Pn	Pn	10 30 23.7	+0.1
HNR	Honiara	17.28	319	LR	LR	10 37 11.5	
	comp=Z,1µm,20.8s,baz=360,slow=34						
BFZ	Birch Farm	18.18	168	P	P	10 31 40.2	+0.5
BFZ				IAmb	IAmb	10 31 41.9	
	comp=Z,56nm,1.3s						
CTA	Charters Tower	23.48	272	P	P	10 32 38.6	+1.7
	comp=Z,2.8nm,0.6s,baz=113,slow=13,SNR=3.9						
STKA	Stephens Creek	27.78	245	P	P	10 33 17.2	+1.1
	comp=Z,1.3nm,0.7s,baz=58,slow=1.0,SNR=3.7						
STKA	Stephens Creek	27.78	245	IAmb	IAmb	10 33 19.9	
	comp=Z,1.4nm,1.3s						
WR0	Warramunga Arr	34.30	268	P	P	10 34 11.9	-1.8
WR0				IAmb	IAmb	10 34 12.6	
	comp=Z,7.3nm,1.4s						
AS31	Alice Springs	34.31	261	P	P	10 34 13.6	-0.2
ASAR	Alice Springs	34.31	261	P	P	10 34 13.6	-0.2
	comp=Z,3.6nm,0.8s,baz=89,slow=9.3,SNR=29						
ASAR	Alice Springs	34.31	261	P	P	10 34 12.3	-1.5
WB0	Warramunga Arr	34.48	268	P	P	10 34 14.5	-0.7
WB0				IAmb	IAmb	10 34 30.1	
	comp=Z,6.2nm,1.3s						
WB2	Warramunga Arr	34.48	268	P	P	10 34 14.1	-1.2
WB2				IAmb	IAmb	10 34 27.3	
	comp=Z,3.9nm,0.9s						
WRAB	Tennant Creek	34.48	268	P	P	10 34 13.9	-1.4
WRAB				IAmb	IAmb	10 34 17.6	
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	34.49	268	P	P	10 34 14.1	-1.3
	comp=Z,1.0nm,0.5s,baz=98,slow=8.1,SNR=15						
MTN	Manton Dam	39.42	278	P	P	10 34 56.8	-0.6
FITZ	Fitzroy Crossi	42.92	268	P	P	10 35 26.3	+0.2
	comp=Z,7.3nm,0.8s,baz=124,slow=6.7,SNR=13						
FITZ	Fitzroy Crossi	42.92	268	P	P	10 35 26.1	0.0
FITZ				IAmb	IAmb	10 35 27.4	
	comp=Z,9.3nm,0.9s						
QSPA	South Pole Qui	67.15	180	P	P	10 38 20.4	-0.4
NVAR	Mina Array Bea	89.81	48	P	P	10 40 24.7	-1.4
	comp=Z,0.8nm,0.7s,baz=229,slow=8.7,SNR=8.9						
NVAR	Mina Array Bea	89.81	48	P	P	10 40 24.4	-1.8
GERES	GERESS Array B	148.64	331	PKPbc	PKiKP	10 47 15.7	-0.1
	comp=Z,0.4nm,0.2s,baz=29,slow=2.2,SNR=2.6						

*BJI **10** 10:34:28.6±0.0, 19°.61N×94°.69E, h63km, mB4.9/16, mb4.5/28, Ms4.4/6, Ms7 4.3/6*
*NEIC **10** 10:34:29.1±1.7, 19°.47N±0°.08×94°.92E±0°.08, h67km±1km, mb4.6/20, Error ellipse: s-maj=13.2km s-min=9.8km az=220.0*
*IDC **10** 10:34:29.9±0.6, 19°.53N×95°.03E, h72km±4km, mb4.0/18, mb1 4.1/20, mb1mx3.9/47, mbtmp4.3/20, MS4.9/2, Ms1 4.9/2, ms1mx3.8/51, Error ellipse: s-maj=17.7km s-min=8.8km az=48.0*
*NDI **10** 10:34:30.6±2.8, 19°.39N×94°.92E, h66km, ML4.3, mb4.6(NEIC)*
ISC 10 10:34:29.3±0.5, 19°.44N±0°.05×94°.81E±0°.05, h70km±4km,
h70km:pP-P, n113, σ1§76/131, mb4.3/26, 1C-1D, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MHMT	Maesarieng	3.21	113	P	Pn	10 35 16.0	-1.4
	11µm366nm,0.9s						
MHMT	Maesarieng	3.21	113	P	Pn	10 35 16.0	-1.4
SAIH	SAIHA	3.48	331	*i* P	Pn	10 35 24.2	+3.0
CM32	Chiang Mai Arr	3.90	101	P	Pn	10 35 26.0	-0.7
CM32	Chiang Mai Arr	3.90	101	P	Pn	10 35 26.0	-0.7
CHTO	Chiang Mai	3.96	98	Pn	Pn	10 35 27.1	-0.4
CH

LZH					LR		LR		
	comp=E,510nm,13.6s								
LZH					LR		LR		
	comp=E,640nm,15.8s								
XAN	**Xi'an**	**19.20**	**38**		P		**P**	**10 38 47.8**	**+0.2**
XAN					IAmb		IAmb	10 38 50.6	
	comp=Z,9.8nm,0.7s								
GTA	**Gaotai**	**20.36**	**11**		P		**P**	**10 39 00.1**	**-0.1**
GTA					pP		pP	10 39 14.1	-0.7
GTA					sP		sP	10 39 21.1	-2.6
GTA					pmax		pmax		
	comp=Z,7.0nm,1.1s								
NIL	**Nilore**	**23.85**	**311**		P		**P**	**10 39 35.7**	**-0.6**
NIL					IAmb		IAmb	10 39 39.4	
	comp=Z,11nm,0.7s								
NJ2	**Nanjing**	**24.96**	**55**	*eP*	**P**		**P**	**10 39 46.0**	**-0.2**
NJ2					pmax		pmax		
	comp=E,6.0nm,0.5s								
WMQ	**Urumqi**	**25.03**	**348**	*eP*	**P**		**P**	**10 39 47.1**	**+0.3**
WMQ					pP		pP	10 40 05.9	+2.5
WMQ					pmax		pmax		
	comp=Z,19nm,1.1s								
WMQ					pmax		pmax		
	comp=Z,300nm,7.1s								
HHC	**Hu-ho-hao-te**	**25.70**	**30**	*eP*	**P**		**P**	**10 39 54.2**	**+1.2**
HHC					pmax		pmax		
	comp=Z,11nm,1.0s								
HHC					pmax		pmax		
	comp=Z,310nm,5.1s								
KSH	**Kashi**	**25.77**	**325**	*eP*	**P**		**P**	**10 39 53.1**	**-0.5**
KSH					sP		sP	10 40 14.6	-4.1
KSH					pmax		pmax		
	comp=Z,610nm,5.4s								
MK31	**Makanchi Array**	**29.15**	**342**		P		**P**	**10 40 23.8**	**+0.1**
MKAR	**Makanchi Array**	**29.15**	**342**		P		**P**	**10 40 24.0**	**+0.4**
	comp=Z,3.6nm,0.6s,baz=152,slow=9.5,SNR=38								
MKAR					ScP		**ScP**	**10 47 04.6**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=106,slow=4.3,SNR=5.7								
MKAR	**Makanchi Array**	**29.15**	**342**		P		**P**	**10 40 23.5**	**-0.2**
SONM	**Songino Array**	**29.84**	**16**		P		**P**	**10 40 30.0**	**0.0**
	comp=Z,1.6nm,0.7s,baz=197,slow=11,SNR=8.6								
SONM					ScP		**ScP**	**10 47 06.5**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=207,slow=4.5,SNR=4.9								
SONM	**Songino Array**	**29.84**	**16**		P		**P**	**10 40 29.6**	**-0.3**
TLY	**Talaya**	**32.91**	**10**		LR		LR	10 56 51.0	
	comp=Z,3μm,21.7s,baz=139,slow=41								
KURBB	**Kurchatov Arra**	**33.69**	**341**		P		**P**	**10 41 03.7**	**+0.2**
	comp=Z,5.0nm,0.7s,baz=152,slow=8.3,SNR=20								
KURBB					pP		**pP**	**10 41 20.4**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=152,slow=8.3,SNR=5.8								
KURBB					PcP		**PcP**	**10 43 42.8**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=154,slow=2.8,SNR=7.0								
KURK	**Kurchatov**	**33.74**	**341**		P		**P**	**10 41 03.7**	**-0.2**
KURK					IAmb		IAmb	10 41 04.9	
	comp=Z,6.0nm,0.7s								
KURK	**Kurchatov**	**33.74**	**341**				**pP**	**10 41 20.4**	**-0.5**
KURK							**PcP**	**10 43 42.8**	**+0.8**
ZALV	**Zalesovo Beam**	**35.29**	**350**		P		**P**	**10 41 17.2**	**0.0**
	comp=Z,2.1nm,0.4s,baz=164,slow=10,SNR=9.4								
ZALV					pP		**pP**	**10 41 33.1**	**-1.2**
	comp=Z,3.5nm,0.5s,baz=171,slow=8.9,SNR=5.4								
ZALV	**Zalesovo Beam**	**35.29**	**350**		P		**P**	**10 41 17.0**	**-0.2**
ZALV							**pP**	**10 41 35.6**	**+1.3**
GEYT	**Alibeck**	**36.79**	**308**		P		**P**	**10 41 31.7**	**+1.3**
ABKAR	**Akbulak array**	**40.78**	**325**		P		**P**	**10 42 04.2**	**+0.7**
AKTO	**Aktyubinsk**	**42.47**	**325**		P		**P**	**10 42 18.6**	**+1.2**
	comp=Z,2.3nm,0.5s,baz=122,slow=8.2,SNR=9.1								
AKTO					pP		**pP**	**10 42 37.2**	**+2.3**
	comp=Z,3.7nm,0.7s,baz=127,slow=7.0,SNR=5.5								
FITZ	**Fitzroy Crossi**	**48.04**	**139**		P		**P**	**10 43 01.6**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=346,slow=9.6,SNR=12								
FITZ					pP		**pP**	**10 43 20.1**	**+0.6**
	comp=Z,3.0nm,0.8s,baz=314,slow=2.4,SNR=3.0								
FITZ					PcP		**PcP**	**10 44 29.3**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=346,slow=4.2,SNR=4.5								
KNRA	**Kununurra**	**48.30**	**134**		P		**P**	**10 43 02.7**	**-1.1**
NRIK	**Noril'sk**	**50.09**	**357**		P		**P**	**10 43 16.6**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=140,slow=6.6,SNR=4.3								
WB0	**Warramunga Arr**	**54.99**	**133**		P		**P**	**10 43 53.4**	**-0.3**
WRA	**Warramunga Arr**	**55.07**	**133**		P		**P**	**10 43 53.8**	**-0.4**
	comp=Z,5.2nm,0.6s,baz=319,slow=7.4,SNR=74								
WRA	**Warramunga Arr**	**55.07**	**133**		P		**P**	**10 43 53.0**	**-1.2**
WRAB	**Tennant Creek**	**55.07**	**133**		P		**P**	**10 43 53.9**	**-0.4**
WRAB					IAmb		IAmb	10 43 54.6	
	comp=Z,7.8nm,0.8s								
WB2	**Warramunga Arr**	**55.08**	**133**		P		**P**	**10 43 53.9**	**-0.4**
WR0	**Warramunga Arr**	**55.22**	**133**		P		**P**	**10 43 54.8**	**-0.5**
TIXI	**Tiksi**	**55.84**	**12**		P		**P**	**10 43 58.0**	**-1.1**
AS31	**Alice Springs**	**57.35**	**137**		P		**P**	**10 44 10.3**	**-0.2**
AS31					IAmb		IAmb	10 44 11.1	
	comp=Z,1.5nm,0.5s								
ASAR	**Alice Springs**	**57.35**	**137**		P		**P**	**10 44 10.6**	**+0.1**
	comp=Z,3.3nm,0.5s,baz=317,slow=7.2,SNR=68								
ASAR	**Alice Springs**	**57.35**	**137**		P		**P**	**10 44 10.0**	**-0.5**
KRVT	**Keravat (AS076**	**60.99**	**107**		LR		LR	11 11 51.4	
	comp=Z,476nm,18.0s,baz=22,slow=41								
FINES	**FINESS Array B**	**62.96**	**330**		P		**P**	**10 44 48.3**	**+0.1**
	comp=Z,3.1nm,1.0s,baz=96,slow=3.8,SNR=4.3								
ARCES	**ARCESS Array B**	**64.72**	**339**		P		**P**	**10 45 00.6**	**+0.8**
	comp=Z,3.0nm,0.9s,baz=101,slow=6.3,SNR=6.5								
STKA	**Stephens Creek**	**67.92**	**138**		P		**P**	**10 45 19.4**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=297,slow=11,SNR=4.9								
STKA	**Stephens Creek**	**67.92**	**138**		IAmb		IAmb	10 45 21.7	
	comp=Z,1.0nm,0.9s								
GERES	**GERESS Array B**	**69.83**	**316**		P		**P**	**10 45 32.5**	**0.0**
	comp=Z,0.7nm,0.5s,baz=76,slow=5.6,SNR=6.4								
GERES	**GERESS Array B**	**69.83**	**316**		P		**P**	**10 45 33.2**	**+0.7**
NB2	**NORSAR Subarra**	**70.11**	**329**		P		**P**	**10 45 33.8**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=86,slow=6.2								
NOA	**NORSAR Array B**	**70.11**	**329**		P		**P**	**10 45 34.0**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=86,slow=6.1,SNR=7.1								
NOA					pP		**pP**	**10 45 52.5**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=85,slow=6.2,SNR=3.8								
BOSA	**Boshof**	**82.41**	**236**		P		**P**	**10 46 45.8**	**+1.6**
	comp=Z,5.1nm,0.5s,baz=67,slow=2.4,SNR=17								
BOSA	**Boshof**	**82.41**	**236**		IAmb		IAmb	10 46 46.1	
	comp=Z,7.2nm,0.7s								
BMAR	**Burnt Mountain**	**83.12**	**20**		P		**P**	**10 46 48.0**	**+0.8**
MDM	**Murphy Dome**	**83.26**	**22**		P		**P**	**10 46 47.5**	**-0.5**
MDM					IAmb		IAmb	10 46 49.2	
	comp=Z,6.6nm,0.6s								
ILAR	**Eielson Array**	**83.84**	**22**		P		**P**	**10 46 50.1**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=291,slow=5.4,SNR=21								
ESDC	**Sonseca Array**	**84.30**	**310**		P		**P**	**10 46 55.1**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=63,slow=4.6,SNR=5.7								
TORD	**Torodi Ar. Bea**	**88.58**	**283**		P		**P**	**10 47 16.3**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=66,slow=4.5,SNR=14								
TORD					pP		**pP**	**10 47 36.9**	**+2.4**
	comp=Z,1.1nm,0.7s,baz=51,slow=4.0,SNR=3.7								
TORD	**Torodi Ar. Bea**	**88.58**	**283**		P		**P**	**10 47 14.4**	**-0.7**
TORD					pP		**pP**	**10 47 34.9**	**+0.4**
NVAR	**Mina Array Bea**	**114.58**	**28**		PKP		PKPdf	10 53 02.9	+0.8
	comp=Z,0.2nm,0.5s,baz=284,slow=2.2,SNR=3.9								
TXAR	**Lajitas Array**	**128.33**	**21**		PKP		**PKiKP**	**10 53 29.1**	**0.0**
	comp=Z,0.4nm,0.5s,baz=152,slow=0.9,SNR=12								
TXAR					pPKP		**pPKPdf**	**10 53 49.2**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=18,slow=1.8,SNR=3.3								
BDFB	**Brasilia**	**144.40**	**270**		PKP		**PKPdf**	**10 53 58.4**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=97,slow=7.4,SNR=6.6								
CPUP	**Villa Florida**	**153.47**	**250**		PKPbc		**PKPbc**	**10 54 20.3**	**0.0**
	comp=Z,0.4nm,0.3s,baz=150,slow=1.4,SNR=3.9								

*MAN **10** 10:51:13.6, 13°.67N×120°.50E, h107km, mb4.3, ML3.2, MS2.9*
*NEIC **10** 10:51:14.5±1.1, 13°.8N±0°.1×121°.1E±0°.2, h128km±2km, mb4.1/11, Error ellipse: s-maj=35.0km s-min=14.5km az=81.0*
*IDC **10** 10:51:14.2±0.7, 13°.76N×121°.10E, h121km±4km, mb3.5/9, mb1 3.6/9, mb1mx3.3/47, mbtmp3.9/9, Error ellipse: s-maj=39.0km s-min=14.2km az=64.0*
ISC 10 10:51:12.7±0.7, 13°.54N±0°.09×120°.52E±0°.10, h100km, n31, σ2s06/33, mb4.1/14, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.42**	**95**	⇑*eP*	**Pn**	**10 51 31.0**	**+3.0**
PGP				*eS*	**Sn**	**10 51 41.5**	**+2.1**
TGY	**Tagaytay City**	**0.69**	**36**	P	**Pn**	**10 51 32.9**	**+2.7**
	211nm,0.3s,baz=221,slow=4.0,SNR=20						
TGY				S	**Sn**	**10 51 46.4**	**+3.2**
	696nm,0.3s,baz=22,slow=19,SNR=37						
TGY	**Tagaytay City**	**0.69**	**36**	⇑*eP*	**Pn**	**10 51 32.6**	**+2.4**
TGY				*i* S	**Sn**	**10 51 46.5**	**+3.4**
LQP	**Lukban**	**1.14**	**60**	⇓*iP*	**Pn**	**10 51 37.0**	**+2.1**
LQP				*i* S	**Sn**	**10 51 54.2**	**+2.6**
MYLDM	**Lahad Datu**	**8.54**	**194**	Pn	Pn	10 53 20.6	+7.0
TPUB	**Ta-pu**	**9.71**	**1**	Pn	**Pn**	**10 53 27.5**	**-2.0**
CMAR	**Chiang Mai Arr**	**21.30**	**286**	P	**P**	**10 55 56.5**	**+5.0**
	0.4nm,0.3s,baz=105,slow=8.9,SNR=4.4						
WRA	**Warramunga Arr**	**35.94**	**157**	P	**P**	**10 58 02.6**	**-1.2**
	0.2nm,0.5s,baz=339,slow=9.3,SNR=7.8						
WRA	**Warramunga Arr**	**35.94**	**157**	IAmb	IAmb	10 58 11.8	
	comp=Z,0.1nm,1.1s						
WB2	**Warramunga Arr**	**35.95**	**157**	P	**P**	**10 58 02.7**	**-1.2**
WB2				IAmb	IAmb	10 58 04.3	
	comp=Z,2.4nm,1.1s						
WR0	**Warramunga Arr**	**36.03**	**157**	P	**P**	**10 58 03.7**	**-0.9**
SONM	**Songino Array**	**36.16**	**344**	P	**P**	**10 58 05.0**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=163,slow=10,SNR=5.7						
SONM	**Songino Array**	**36.16**	**344**	IAmb	IAmb	10 58 05.9	
	comp=Z,0.8nm,0.7s						
AS31	**Alice Springs**	**39.23**	**160**	P	**P**	**10 58 30.4**	**-1.1**
ASAR	**Alice Springs**	**39.23**	**160**	P	**P**	**10 58 30.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=336,slow=7.9,SNR=8.5						
MK31	**Makanchi Array**	**46.06**	**324**	P	**P**	**10 59 26.0**	**-0.5**
MKAR	**Makanchi Array**	**46.06**	**324**	P	**P**	**10 59 27.5**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=136,slow=8.8,SNR=14						
MKAR				PcP	**PcP**	**11 01 01.5**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=101,slow=4.7,SNR=2.1						
MKAR	**Makanchi Array**	**46.06**	**324**	P	**P**	**10 59 26.5**	**0.0**
MAKZ	**Makanchi**	**46.24**	**324**	P	**P**	**10 59 29.0**	**+1.0**
MAKZ				IAmb	IAmb	10 59 29.4	
	comp=Z,1.8nm,0.6s						
ZAA0	**Zalesovo Array**	**49.12**	**333**	P	**P**	**10 59 49.3**	**-0.7**
ZAA0				IAmb	IAmb	10 59 50.0	
	comp=Z,2.2nm,1.1s						
ZALV	**Zalesovo Beam**	**49.12**	**333**	P	**P**	**10 59 48.7**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=125,slow=6.8,SNR=8.8						
ZALV	**Zalesovo Beam**	**49.12**	**333**	P	**P**	**10 59 49.3**	**-0.7**
KURK	**Kurchatov**	**50.23**	**326**	P	**P**	**10 59 58.9**	**+0.5**
KKAR	**Karatay Array**	**51.96**	**315**	P	**P**	**11 00 11.8**	**+0.2**
NRIK	**Noril'sk**	**59.53**	**347**	P	**P**	**11 01 03.5**	**-1.7**
	comp=Z,1.7nm,0.6s,baz=117,slow=9.0,SNR=2.6						
GEYT	**Alibeck**	**60.09**	**306**	P	**P**	**11 01 11.6**	**+1.9**
	comp=Z,1.7nm,0.4s,baz=163,slow=5.6,SNR=2.8						
ABKAR	**Akbulak array**	**60.74**	**319**	P	**P**	**11 01 13.2**	**-0.6**
ABKAR				IAmb	IAmb	11 01 14.5	
	comp=Z,1.8nm,0.6s						
A21K	**Barrow**	**74.98**	**19**	P	**P**	**11 02 40.4**	**-2.2**
A21K				IAmb	IAmb	11 02 50.3	
	comp=Z,6.7nm,1.1s						
IMAR	**Indian Mountai**	**76.00**	**25**	P	**P**	**11 02 44.9**	**-3.7**
ARCES	**ARCESS Array B**	**79.17**	**339**	P	**P**	**11 03 04.6**	**-1.6**
	comp=Z,6.4nm,1.1s,baz=46,slow=8.7,SNR=4.9						
TXAR	**Lajitas Array**	**119.71**	**44**	PKP	**PKPdf**	**11 09 51.0**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=343,slow=0.9,SNR=3.5						

IDC 10 11:13:44.5±2.6, 6°.24S×128°.58E, h339km±35km, mb2.8/1, mb1 2.7/5, mb1mx2.6/34, mbtmp3.5/5, Error ellipse: s-maj=63.3km s-min=14.6km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.97**	**27**	P	Pn	11 15 14.2	-0.6
	0.7nm,0.3s,baz=229,slow=19,SNR=2.6						
SIJI				S	S	11 16 24.3	-3.5
	1.2nm,0.3s,baz=315,slow=20,SNR=1.7						
FITZ	**Fitzroy Crossi**	**12.13**	**193**	P	Pn	11 16 26.0	-2.0
	0.1nm,0.3s,baz=18,slow=15,SNR=3.2						
WRA	**Warramunga Arr**	**14.73**	**158**	P	Pn	11 16 57.8	-0.9
	0.3nm,0.3s,baz=331,slow=12,SNR=27						
ASAR	**Alice Springs**	**18.07**	**164**	P	P	11 17 34.1	+1.2
	0.1nm,0.3s,baz=344,slow=12,SNR=11						
ASAR				S	S	11 20 42.2	-0.1
	0.1nm,0.3s,baz=350,slow=26,SNR=4.3						
MKAR	**Makanchi Array**	**66.82**	**327**	P	P	11 24 00.7	0.0
	0.3nm,0.5s,baz=125,slow=7.8,SNR=4.8						

*IDC **10** 11:15:37.1±1.8, 7°.47S×128°.76E, h148km±21km, mb3.4/2, mb1 3.6/7, mb1mx3.3/36, mbtmp4.0/7, Error ellipse: s-maj=32.6km s-min=15.7km az=104.0*
ISC 10 11:15:35.6±0.8, 7°.63S±0°.06×128°.82E±0°.09, h131km, n7, σ2s96/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.70**	**243**	P	**Pn**	**11 17 00.3**	**+2.2**
	26nm,0.3s,baz=109,slow=1.7,SNR=10						
BATI				S	**Sn**	**11 18 00.9**	**-1.6**
	31nm,0.3s,baz=39,slow=24,SNR=12						
SIJI	**Sorong**	**7.15**	**20**	P	**Pn**	**11 17 19.1**	**+1.5**
	3.2nm,0.3s,baz=93,slow=22,SNR=8.3						
SIJI				S	**Sn**	**11 18 35.2**	**-2.3**
	1.3nm,0.3s,baz=184,slow=15,SNR=2.2						
FITZ	**Fitzroy Crossi**	**10.85**	**196**	P	**Pn**	**11 18 09.2**	**+1.9**
	0.3nm,0.3s,baz=30,slow=17,SNR=1.7						
FITZ				S	**Sn**	**11 20 03.3**	**-3.8**
	1.1nm,0.3s,baz=105,slow=20,SNR=3.3						
WRA	**Warramunga Arr**	**13.36**	**157**	P	**Pn**	**11 18 42.0**	**+1.9**
	0.5nm,0.3s,baz=342,slow=13,SNR=15						
WRA				S	**Sn**	**11 21 03.9**	**-3.7**
	1.8nm,0.3s,baz=332,slow=22,SNR=10						
ASAR	**Alice Springs**	**16.67**	**164**	P	P	**11 19 25.9**	**+4.1**
	0.4nm,0.3s,baz=338,slow=10,SNR=27						
ASAR				S	**Sn**	**11 22 24.7**	**-2.7**
	0.6nm,0.3s,baz=345,slow=24,SNR=6.2						
SONM	**Songino Array**	**58.68**	**342**	P	P	**11 25 17.9**	**-1.5**
	0.2nm,0.3s,baz=152,slow=5.4,SNR=4.3						
MKAR	**Makanchi Array**	**68.12**	**327**	P	P	**11 26 20.0**	**-1.4**
	0.6nm,0.4s,baz=119,slow=8.1,SNR=8.8						

*IDC **10** 11:19:35.1±0.6, 13°.71N×144°.76E, h139km±6km, mb3.3/6, mb1 3.4/6, mb1mx3.2/54, mbtmp3.7/6, Error ellipse: s-maj=40.3km s-min=15.6km az=94.0*
ISC 10 11:19:35.5±1.0, 13°.7N±0°.2×144°.8E±0°.4, h144km±9km, n8, σ0s45/9, mb3.5/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.16**	**141**	P	**Pn**	**11 19 55.3**	**+0.4**
	143nm,0.3s,baz=286,slow=5.1,SNR=68						
GUMO				S	**Sn**	**11 20 09.2**	**-0.5**
	176nm,0.3s,baz=21,slow=23,SNR=38						
WRA	**Warramunga Arr**	**34.99**	**197**	P	P	**11 26 14.2**	**0.0**
	0.6nm,0.7s,baz=24,slow=8.9,SNR=3.2						
FITZ	**Fitzroy Crossi**	**36.81**	**211**	P	P	**11 26 29.3**	**-0.5**
	1.2nm,0.6s,baz=49,slow=13,SNR=2.8						
ASAR	**Alice Springs**	**38.64**	**196**	P	P	**11 26 44.9**	**-0.2**
	0.3nm,0.6s,baz=9.8,slow=6.0,SNR=4.8						
STKA	**Stephens Creek**	**45.44**	**184**	P	P	**11 27 40.4**	**+0.4**
	1.6nm,0.7s,baz=345,slow=12,SNR=3.1						
MKAR	**Makanchi Array**	**61.33**	**316**	P	P	**11 29 36.4**	**+0.4**
	0.4nm,0.5s,baz=95,slow=8.0,SNR=5.7						
KURBB	**Kurchatov Arra**	**64.46**	**320**	P	P	**11 29 56.4**	**-0.2**
	baz=98,slow=6.6						
ILAR	**Eielson Array**	**68.50**	**25**	P	P	**11 30 21.8**	**-0.2**
	0.4nm,0.7s,baz=249,slow=5.6,SNR=6.5						

*SJA **10** 11:38:31.8±0.7, 19°.47S×69°.85W, h36km±6km, ML5.7, MW5.4*
*MOS **10** 11:38:53.0±1.0, 21°.53S×68°.57W, h56km, mb5.8/23, Error ellipse: s-maj=10.8km s-min=6.3km az=101.0*
*VAO **10** 11:38:58.4±0.2, 21°.53S×68°.49W, h104km, mb5.9*
*NEIC **10** 11:38:58.5±1.9, 21°.61S±0°.04×68°.47W±0°.06, h100km±3km, Error ellipse: s-maj=8.7km s-min=6.6km az=89.0*
*GUC **10** 11:38:59.3±0.8, 21°.63S×68°.73W, h111km±4km, ML5.6*
*IDC **10** 11:38:59.5±0.4, 21°.60S×68°.40W, h103km±3km, mb5.0/28, mb1 5.0/33, mb1mx5.0/37, mbtmp5.3/33, MS4.5/11, Ms1 4.5/11, ms1mx4.4/24, Error ellipse: s-maj=9.9km s-min=5.7km az=100.0*
*NEIC **10** 11:38:59.3, 21°.61S×68°.51W, h113km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=1.02; Mθθ=0.84; Mθφ=0.08; Mφφ=1.32; Mφr=-1.71; Fault plane solution: Mo2.36000×10^17 NP1:φs=5.64000°, δ74.40000°, λ-122.10000°. NP2:φs=252.44000°, δ35.32000°, λ-27.71000°. Principal axes: T 2.4224, Plg23.0000°, Azm120.0000°; N -0.1298, Plg31.0000°, Azm15.0000°; P -2.2927, Plg50.0000°, Azm240.0000°;*
*NEIC **10** 11:39:00, 21°.64S×68°.63W, h110km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr=1.12; Mθθ-0.00; Mθφ 1.12; Mrθ 0.28; Mφφ 1.69; Mφr-2.17; Fault plane solution: Mo2.98000×10^17 NP1:φs252.00000°, δ37.00000°, λ-23.00000°. NP2:φs1.00000°, δ76.00000°, λ-124.00000°. Principal axes: T 3.0435, Plg24.0000°, Azm117.0000°; N -0.1232, Plg33.0000°, Azm10.0000°; P -2.9204, Plg47.0000°, Azm235.0000°;*
*BJI **10** 11:39:00.5±0.0, 21°.40S×68°.92W, h116km, mB5.6/16*
*NEIC **10** 11:39:04, 21°.63S×68°.77W, h123km, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr-1.23; Mθθ 0.53; Mφφ 0.71; Mrθ 0.44; Mrφ 1.59; Mφr-1.83; Fault plane solution: Mo2.69000×10^17 NP1:φs256.00000°, δ41.00000°, λ-28.00000°. NP2:φs8.00000°, δ72.00000°, λ-128.00000°. Principal axes: T 2.5509, Plg18.0000°, Azm125.0000°; N 0.2525, Plg36.0000°, Azm21.0000°; P -2.8034, Plg48.0000°, Azm237.0000°;*
*GCMT **10** 11:39:06.0±0.1, 21°.63S±0°.01×68°.80W±0°.01, h118km±1km, MW5.5/136, Moment Tensor Solution. s122,c192; s136,c271; Duration: 1s4 Moment tensor: Scale 10^17 Nm; Mrr-1.11±.03; Mθθ 0.58±.04; Mφφ 0.53±.04; Mrθ 0.47±.02; Mrφ 1.60±.03; Mθr-1.77±.03; Best double couple: Mo2.60100×10^17 NP1:φs259.00000°, δ43.00000°, λ-26.00000°. NP2:φs8.00000°, δ73.00000°, λ-130.00000°. Principal axes: T 2.4470, Plg18.0000°, Azm127.0000°; N 0.3090, Plg38.0000°, Azm23.0000°; P -2.7550, Plg47.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 10 11:38:59.2±0.3, 21°.58S±0°.03×68°.55W±0°.03, h106km±2km, h106km:pP-P, n1107, σ1s29/997, mb5.7/272, 17C-8D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.68**	**252**	⇑*iP*	**Pn**	**11 39 17.4**	**+0.2**
PB09				*eS*	**Sn**	**11 39 30.5**	**+0.2**
PB09	**IPOC Station P**	**0.68**	**252**		**Pn**	**11 39 17.6**	**+0.4**
PB09	**IPOC Station P**	**0.68**	**252**	*eS*	**Sn**	**11 39 31.9**	**+1.2**
PB09				IAML		11 39 35.2	
	comp=Z,49μm,0.6s						
PB01	**IPOC Station P**	**1.03**	**301**	⇑*iP*	**Pn**	**11 39 20.4**	**-0.1**
PB01				*i* S	**Sn**	**11 39 36.1**	**-0.4**
PB01	**IPOC Station P**	**1.03**	**301**		**Pn**	**11 39 20.4**	**-0.1**
PB01	**IPOC Station P**	**1.03**	**301**	*eS*	**Sn**	**11 39 20.2**	**-0.2**
PB01				IAML		11 39 22.6	
	comp=Z,41μm,0.3s						
LVC	**Limon Verde**	**1.08**	**198**	P	**Pn**	**11 39 21.6**	**+0.4**
	comp=Z,7μm,0.3s,baz=24,slow=10						
LVC				S	**Sn**	**11 39 38.2**	**+0.2**
	comp=Z,4μm,0.3s,baz=139,slow=20,SNR=87						
LVC	**Limon Verde**	**1.08**	**198**	*eP*	**Pn**	**11 39 21.8**	**+0.5**
LVC				*eS*	**Sn**	**11 39 37.9**	**0.0**
LVC	**Limon Verde**	**1.08**	**198**	*eP*	**Pn**	**11 39 21.7**	**+0.4**
LVC	**Limon Verde**	**1.08**	**198**	*eP*	**Pn**	**11 39 21.8**	**+0.5**
LVC				*eS*	**Sn**	**11 39 37.5**	**-0.5**
PB03	**IPOC Station P**	**1.21**	**247**	⇑*iP*	**Pn**	**11 39 22.0**	**-0.6**
PB03				*i* S	**Sn**	**11 39 38.6**	**-1.6**
PB03	**IPOC Station P**	**1.21**	**247**	*eS*	**Sn**	**11 39 38.9**	**-1.4**
PB03				IAML		11 39 42.1	
	comp=Z,59μm,0.4s						
PB07	**IPOC Station P**	**1.25**	**263**	⇑*iP*	**Pn**	**11 39 22.4**	**-0.6**
PB07				*i* S	**Sn**	**11 39 39.8**	**-1.3**
PB07				IAML		11 39 42.4	
	comp=N,183μm,0.5s						
PB07	**IPOC Station P**	**1.25**	**263**		**Pn**	**11 39 22.6**	**-0.5**
PB07	**IPOC Station P**	**1.25**	**263**	*eS*	**Sn**	**11 39 39.8**	**-1.3**
PB07				IAML		11 39 42.0	
	comp=Z,133μm,0.5s						
PB06	**IPOC Station P**	**1.47**	**220**	⇓*iP*	**Pn**	**11 39 25.3**	**-0.3**
PB06				*i* S	**Sn**	**11 39 44.7**	**-0.8**
PB06	**IPOC Station P**	**1.47**	**220**		**Pn**	**11 39 25.1**	**-0.5**
PB06	**IPOC Station P**	**1.47**	**220**	*eP*	**Pn**	**11 39 25.2**	**-0.3**
PB06				*eS*	**Sn**	**11 39 45.6**

VA03 San Esteban 11.28 189 Pn 11 41 31.3 -5.9
CPUP Villa Florida 11.29 117 P Pn 11 41 35.4 -1.9
comp=Z,4.7nm,0.3s,baz=298,slow=11,SNR=218
CPUP LR LR 11 47 04.5
comp=Z,1µm,21.6s,baz=284,slow=43
CPUP Villa Florida 11.29 117 eP Pn 11 41 35.5 -1.8
ROC1 El Roble 11.56 190 Pn Pn 11 41 34.6 -6.5
ROC1 El Roble 11.56 190 eP Pn 11 41 40.2 -0.9
PEL Peldehue 11.67 189 P Pn 11 41 40.3 -2.1
PEL Peldehue 11.67 189 Pn 11 41 40.3 -2.1
VILB Vilhena 11.71 44 eP Pn 11 41 41.7 -1.2
VA01 Torpederas 11.72 193 Pn Pn 11 41 41.8 -1.3
MT02 Curacav 11.86 191 Pn Pn 11 41 41.0 -3.8
ETMB Extrema 11.91 11 eP Pn 11 41 43.0 -2.6
MT05 Renca 11.92 189 Pn Pn 11 41 43.6 -2.2
AQDB Aquidauana 12.05 87 eP Pn 11 41 45.2 -2.2
NNA Nana 12.41 319 P Pn 11 41 49.9 -2.3
comp=Z,3.5nm,0.3s,baz=158,slow=12,SNR=17
NNA S Sn **11 44 02.0 -6.8**
comp=Z,4.2nm,0.3s,baz=63,slow=9.0,SNR=1.7
NNA LR LR 11 47 07.7
comp=Z,2µm,19.9s,baz=154,slow=39
NNA Nana 12.41 319 P Pn 11 41 49.5 -2.8
NNA 11 44 02.0
NNA Nana 12.41 319 Pn Pn 11 41 49.5 -2.8
ITQB Itaqui 13.43 129 eP Pn 11 42 04.0 -1.4
SAML Samuel 13.58 23 P Pn 11 42 04.8 -2.7
SAML Samuel 13.58 23 Pn Pn 11 42 04.8 -2.7
SAML Samuel 13.58 23 eP Pn 11 42 05.2 -2.3
TRCB Terra Rica 14.79 98 eP Pn 11 42 21.9 -1.2
H03N1 Juan Fernandez 14.96 216 T T 11 57 38.6
baz=36,slow=72,SNR=3.3
H03N2 Juan Fernandez 14.97 216 T T 11 57 37.5
baz=36,slow=72,SNR=2.8
H03N3 Juan Fernandez 14.97 216 T T 11 57 34.9
baz=36,slow=72,SNR=3.5
VA04 Juan Fernndez 15.07 215 Pn Pn 11 42 24.7 -1.7
BI02 San Fabin de 15.21 188 Pn Pn 11 42 26.8 -1.6
PTGB Pitanga 15.48 105 eP Pn 11 42 31.2 -0.6
BI03 Tigo 15.70 193 Pn 11 42 32.4 -1.9
BI03 IAmb IAmb 11 42 37.2
comp=Z,433nm,1.5s
ITAB Concordia 15.97 114 eP Pn 11 42 36.8 -1.0
PCMB Pacaembu 16.08 93 eP Pn 11 42 38.5 -0.7
CPSB Cacapava Do Su 16.16 126 eP Pn 11 42 38.5 -1.6
CPSB eS Sn **11 45 40.3 +1.0**
CLDB Colider 16.21 51 eP Pn 11 42 39.0 -1.9
PLTB Pedras Altas 16.75 130 eP Pn 11 42 44.6 -2.9
ARAG Araguaiana, MT 16.90 73 eP Pn 11 42 48.3 -0.9
ITRB Iturama 17.13 87 eP Pn 11 42 51.8 -0.3
ATAH Atahualpa 17.25 325 P Pn 11 42 54.2 +0.5
comp=Z,1.2nm,0.3s,baz=174,slow=8.9,SNR=18
ATAH S Sn **11 46 05.0 -0.8**
comp=Z,0.3nm,0.3s,baz=84,slow=9.2,SNR=1.0
LC01 Cunco 17.49 189 P 11 42 53.9 -2.1
FRTB Fartura 17.64 99 eP P 11 42 57.3 -0.4
CNLB Canela 17.73 119 eP P 11 42 57.3 -1.4
TIJ01 Guaruva-PR 18.31 106 eP P 11 43 05.5 +0.3
BB19B Bebedouro 18.66 92 eP P 11 43 08.9 -0.1
SNDB Serra Nova Dou 19.07 63 eP P 11 43 12.7 -0.7
PLCA Paso Flores 19.17 185 P P 11 43 14.0 -0.4
comp=Z,3.7nm,0.3s,baz=6.0,slow=11,SNR=120
PLCA S S **11 46 45.4 -0.6**
comp=Z,0.2nm,0.3s,baz=55,slow=10,SNR=1.8
PLCA Paso Flores 19.17 185 P 11 43 13.9 -0.5
PLCA Paso Flores 19.17 185 eP P 11 43 14.1 -0.4
NPGB Novo Progresso 19.27 43 eP P 11 43 14.3 -1.3
IPMB Ipameri, GO 19.47 83 eP P 11 43 17.0 -0.8
RCLB Rio Claro- Sao 19.51 96 eP P 11 43 17.4 -0.8
SPB Sao Paulo 19.60 100 P P 11 43 18.3 -0.8
SPB Sao Paulo 19.60 100 eP P 11 43 17.8 -1.3
PET01 Itanhaem-SP 19.77 102 eP P 11 43 20.0 -1.0
MACA Manacapuru-AM 19.84 24 eP P 11 43 20.5 -1.3
VAO Valinhos 20.02 98 eP P 11 43 22.4 -1.4
BDFB Brasilia 20.33 77 P P 11 43 26.2 -1.0
comp=Z,195nm,0.9s,baz=256,slow=12,SNR=110
BDFB S S **11 47 04.7 -4.7**
comp=Z,43nm,0.9s,baz=91,slow=18,SNR=1.9
BDFB LR LR 11 53 01.2
comp=Z,2µm,20.1s,baz=246,slow=42
BDFB Brasilia 20.33 77 P P 11 43 26.5 -0.7
BDFB pmax pmax
comp=Z,308nm,1.1s
BDFB Brasilia 20.33 77 P P 11 43 26.5 -0.7
BDFB IAmb IAmb 11 43 28.1
comp=Z,308nm,1.1s
LL01 San Ignacio de 20.99 188 P P 11 43 33.1 -0.8
ITTB Itaituba 21.15 38 eP P 11 43 34.3 -1.7
PARB Paraibuna 21.26 99 eP P 11 43 35.6 -1.5
PEXB Peixe 21.52 67 eP P 11 43 38.7 -1.2
BSCB Bom Sucesso 22.16 93 eP P 11 43 44.9 -1.8
ESAR Angra dos Reis 22.35 98 eP P 11 43 47.1 -1.4
PTLC Puerto Leguiza 22.46 343 eP P 11 43 38.6 -11
MAN01 Angra dos Reis 22.79 98 eP P 11 43 51.4 -1.6
VAS01 Vassouras-RJ 23.29 96 eP P 11 43 56.7 -1.2
PUAC Puerto Asis, P 23.35 339 eP P 11 44 00.2 +1.8
PRPB Paraupebas 23.73 53 eP P 11 43 59.9 -1.9
CUSE Cuicocha Este 23.79 335 eP P 11 44 01.2 -1.5
SMTB Santa Maria do 23.81 61 eP P 11 44 01.7 -0.8
JANB Januaria 23.89 78 eP P 11 44 01.3 -2.0
PAC1 Pacto, Paraso 23.91 334 eP P 11 44 04.8 +1.2
MALB Monte Alegre 24.04 37 eP P 11 44 02.9 -1.7
FLOC Florencia 24.05 342 eP P 11 44 04.1 -0.6
MACC Macarena, Meta 24.14 347 eP P 11 44 05.5 0.0
CMBC Cumbal 24.15 337 eP P 11 44 07.0 +1.0
CPAS1 Pasto 24.20 338 eP P 11 44 14.3 +7.8
GCUF Volcan Galeras 24.24 338 eP P 11 44 11.0 +4.0
CCUFI Cufio, Nario 24.25 338 eP P 11 44 09.8 +2.8
GUVC San Jose del G 24.31 350 eP P 11 44 07.1 +0.1
SDBA SAO DESIDERIO 24.35 72 eP P 11 44 05.7 -1.8
CRUC La Cruz 24.43 339 eP P 11 44 08.4 -0.1
GARC Garzon, Huila 24.58 343 eP P 11 44 09.8 +0.1
SOTA Rioblanco 24.86 341 eP P 11 44 17.1 +4.6
PCON Cinco Dias 24.97 341 eP P 11 44 15.7 +2.0
BETC Betania 25.04 344 eP P 11 44 15.8 +2.0
POPC Popayan, Colom 25.26 341 eP P 11 44 18.1 +2.2
SJMB Sao Joao De Ma 25.84 89 eP P 11 44 19.4 -1.5
PTGC Puerto Gaitan, 25.86 352 eP P 11 44 21.1 0.0
PRAC Prado 25.89 345 eP P 11 44 18.1 -3.4
BSFB Barra de Sao F 26.13 89 eP P 11 44 22.0 -1.5
ORTC Ortega, Tolima 26.17 345 eP P 11 44 26.1 +2.2
RIB01 Linhares ES 26.46 90 eP P 11 44 25.5 -1.0
MCPB Macapa, AP 26.53 39 eP P 11 44 25.5 -1.6
YOTC Yotoco, Valle 26.53 342 eP P 11 44 31.0 +3.8
CHIC Chingaza 26.54 348 eP P 11 44 27.9 +0.2
ANIL Santa Ana 26.77 345 eP P 11 44 32.0 +2.5
TOLC Tolima 26.84 345 eP P 11 44 31.7 +1.5
ROSC El Rosal 26.86 347 P P 11 44 30.1 -0.5
comp=Z,9.0nm,0.4s,baz=112,slow=10,SNR=2.4
ROSC LR LR 11 55 11.6
comp=Z,2µm,19.4s,baz=196,slow=36
ROSC El Rosal 26.86 347 eP P 11 44 20.8 -10
ROSC El Rosal 26.86 347 P P 11 44 30.0 -0.5
ROSC IAmb IAmb 11 45 28.1
comp=Z,168nm,1.2s
GUY2C Guyana, Caldas 27.47 345 eP P 11 44 37.8 +1.8
TMAB Tom-Au,PA,Br 27.58 49 eP P 11 44 34.9 -1.7
SPBC San Pablo de B 27.60 348 eP P 11 44 39.2 +2.4
RUSC La Rusia 27.66 350 eP P 11 44 38.9 +1.1
NORC Norcasia 27.68 346 eP P 11 44 39.0 +1.5
TAMC Tame, Arauca 28.02 353 eP P 11 44 41.8 +1.3
BARC Barichara 28.37 350 eP P 11 44 43.0 -0.8
HELC Santa Helena 28.44 345 eP P 11 44 43.8 -0.8
PTBC PUERTO BERRIO, 28.54 348 eP P 11 44 42.2 -2.9
GDU01 Guandu, BA 28.66 79 eP P 11 44 44.3 -1.8
BRRC Barranca, Sant 28.96 349 eP P 11 44 48.8 +0.1
PAMC Pamplona, Colo 29.03 351 eP P 11 44 49.8 -0.1
DBBC Dabeiba 29.40 344 eP P 11 44 54.5 +1.8
OCAC Ocana 30.00 351 eP P 11 44 55.7 -2.4
ROSB Rosrio 30.15 55 eP P 11 44 58.8 -0.5
SDV Santo Domingo 30.35 356 P P 11 45 00.9 -0.3
comp=Z,16nm,0.7s,baz=219,slow=7.8,SNR=12
SDV pP pP **11 45 25.3 -0.9**
comp=Z,64nm,1.0s,baz=201,slow=6.5,SNR=8.2
SDV Santo Domingo 30.35 356 eP P 11 45 00.6 -0.7
SDV Santo Domingo 30.35 356 P P 11 44 59.8 -1.4
SDV IAmb IAmb 11 45 32.2
comp=Z,93nm,0.9s
SDV Santo Domingo 30.35 356 eP P 11 44 59.5 -1.8
MDP Montagnes des 30.76 32 P P 11 45 05.0 +0.3
comp=Z,28nm,0.7s,baz=206,slow=8.8,SNR=18
EFI East Falkland 31.13 167 i P P 11 45 06.9 -0.6
EFI pmax pmax
comp=Z,45nm,1.0s
CAPC Capurgana 31.25 343 eP P 11 45 10.9 +1.9
ARGC Ariguani, Magd 31.74 349 eP P 11 45 13.8 +0.5
PCRV Puerto La Cruz 31.79 7 P P 11 45 14.6 +0.8
comp=Z,23nm,0.6s,baz=155,slow=3.6,SNR=8.5
SJCC San Jacinto, C 31.95 348 eP P 11 45 14.3 -0.9
USHA Ushuaia 33.20 180 P P 11 45 26.5 +0.9
comp=Z,20nm,0.6s,baz=298,slow=4.4,SNR=2.8
RCBR Riachuelo 35.26 68 P P 11 45 43.5 -0.5
comp=Z,174nm,0.7s,baz=235,slow=10,SNR=54
RCBR Riachuelo 35.26 68 P P 11 45 43.5 -0.5
RCBR Riachuelo 35.26 68 eP P 11 45 42.6 -1.4
JTS Las Juntas de 35.53 331 P P 11 45 48.1 +1.9
comp=Z,12nm,0.8s,baz=160,slow=1.3,SNR=7.5
JTS Las Juntas de 35.53 331 i P P 11 45 46.7 +0.5
JTS pmax pmax
comp=Z,21nm,1.1s
JTS Las Juntas de 35.53 331 P P 11 45 46.3 +0.1
JTS pP pP **11 46 14.2 +2.8**
JTS IAmb IAmb 11 46 28.9
comp=Z,157nm,1.7s
FDF Fort de France 36.81 12 P P 11 45 56.6 -0.5
FDF pmax pmax
comp=Z,164nm,1.0s
FDF Fort de France 36.81 12 P P 11 45 56.6 -0.5
FDF IAmb IAmb 11 46 18.9
comp=Z,164nm,1.0s
ACON Acoyapa 37.12 332 P P 11 45 60.0 +0.3
MATN Matagalpa 38.31 332 P P 11 46 09.9 +0.1
ICMP Isla Caja de M 39.27 3 P P 11 46 17.0 -0.6
ICMP pP pP **11 46 45.8 +2.6**
MLPR Magueyes Islan 39.34 2 P P 11 46 17.1 -1.0
MLPR IAmb IAmb 11 46 45.4
comp=Z,169nm,1.0s
OBIP Obispado Ponce 39.43 3 IAmb IAmb 11 46 49.0
comp=Z,171nm,0.9s
PDPR Patillas Dam, 39.43 4 IAmb IAmb 11 46 45.2
comp=Z,142nm,0.8s
SJG San Juan 39.52 4 P P 11 46 18.5 -1.1
comp=Z,94nm,0.8s,baz=184,slow=3.6,SNR=18
SJG pP pP **11 46 43.9 -1.4**
comp=Z,122nm,0.6s,baz=132,slow=6.1,SNR=6.4
SJG San Juan 39.52 4 eP P 11 46 18.3 -1.4
SJG San Juan 39.52 4 P P 11 46 18.3 -1.4
SJG IAmb IAmb 11 46 48.2
comp=Z,148nm,0.8s
MTP Monte Pirata 39.54 4 P P 11 46 17.5 -2.4
MTP pP pP **11 46 45.1 -0.3**
MTP IAmb IAmb 11 46 45.8
comp=Z,64nm,0.8s
HUMP Col San Antoni 39.57 4 P P 11 46 18.2 -1.9
HUMP pP pP **11 46 45.5 -0.2**
HUMP IAmb IAmb 11 46 46.4
comp=Z,146nm,1.3s
MPR Mayaguez 39.57 2 IAmb IAmb 11 46 46.5
comp=Z,114nm,0.8s
CBYP Canovanas 39.70 4 P P 11 46 19.4 -1.8
CBYP pP pP **11 46 46.8 0.0**
CBYP IAmb IAmb 11 46 47.4
comp=Z,186nm,1.0s
GCPR Guaynabo City 39.72 4 P P 11 46 19.3 -2.0
AOPR Arecibo Observ 39.72 3 IAmb IAmb 11 46 47.6
comp=Z,82nm,0.8s
EMPR Esperanza - Ma 39.86 3 P P 11 46 20.5 -2.0
EMPR pP pP **11 46 47.1 -1.1**
TGUH Tegucigalpa,Un 39.90 331 P P 11 46 24.0 +0.9
TGUH pP pP **11 46 50.1 +1.4**
TGUH IAmb IAmb 11 47 04.5
comp=Z,121nm,1.0s
DR12 Loma Pena Alta 40.13 359 P P 11 46 23.1 -1.7
SDDR Presa de Saban 40.40 356 P P 11 46 29.7 +2.6
SDDR pP pP **11 46 52.0 -0.8**
MTDJ Mount Denham 40.53 347 P P 11 46 28.1 -0.1
MTDJ pP pP **11 46 55.4 +1.5**
MTDJ IAmb IAmb 11 46 56.9
comp=Z,140nm,1.2s
ESQI Esquipulas 41.31 329 P P 11 46 36.3 +1.6
FSCY Frank Sound, G 42.48 342 P P 11 46 44.6 +0.6
FSCY pP pP **11 47 12.0 +2.1**
LCCY Blossom Villag 42.52 344 P P 11 46 44.6 +0.3
LCCY pP pP **11 47 11.4 +1.2**
HUEH Huehuetenango 43.03 327 P P 11 46 49.6 +0.9
HUEH IAmb IAmb 11 46 51.2
comp=Z,127nm,0.7s
PMSA Palmer Station 43.28 177 eP P 11 46 50.0 +0.1
PETF Flores 43.59 330 P P 11 46 53.9 +0.9
PETF IAmb IAmb 11 46 55.5
comp=Z,102nm,1.2s
CCIG Comitan 44.17 327 P P 11 46 58.1 +0.3
CCIG IAmb IAmb 11 46 60.0
comp=Z,119nm,1.2s
CMIG Matias Romero 46.30 324 P P 11 47 14.7 +0.2
comp=Z,49nm,1.0s,baz=128,slow=5.4,SNR=29
TLIG Tlapa 48.77 321 P P 11 47 34.5 +0.8
TLIG IAmb IAmb 11 47 36.8
comp=Z,101nm,1.1s
TLIG pP **11 47 59.6 -0.2**
060A Indiantown 49.67 346 P P 11 47 41.0 +0.8
060A pP **11 48 08.4 +1.7**
DWPF Disney Wildern 50.95 345 P P 11 47 50.1 +0.3
MOIG Morelia 51.97 320 P P 11 47 58.0 +0.1
656A Williston 52.42 345 P P 11 48 00.9 +0.1
456A Hilliard 53.59 346 P P 11 48 10.1 +0.7
553A Crawfordville 53.69 343 pP pP 11 48 38.8 +1.7
ASCN Ascension 53.87 88 P P 11 48 10.1 -1.8
451A Vernon 54.47 342 P P 11 48 15.4 -0.3
TIGA Tifton 54.66 344 P P 11 48 17.1 0.0
baz=163
TIGA Tifton 54.66 344 P P 11 48 17.4 +0.3
TIGA IAmb IAmb 11 48 18.4
comp=Z,92nm,0.9s
255A Hazlehurst 54.85 346 P P 11 48 18.5 0.0
352A Blakely 55.05 343 pP 11 48 47.8 +0.8
158A Hollywood 55.15 348 P P 11 48 21.7 +1.1
baz=167,SNR=5.7
157A Early Branch 55.25 347 P P 11 48 21.9 +0.6
baz=166
CSU Charleston Sou 55.37 348 P P 11 48 22.9 +0.7
CSU pP **11 48 50.6 +1.5**
BRAL Brewton 55.37 341 P P 11 48 22.7 +0.4
baz=159,SNR=9.3
Z59A Georgetown, SC 55.47 349 P P 11 48 23.0 +0.1
baz=168
NHSC New Hope 55.50 348 P P 11 48 24.3 +1.1
baz=167,SNR=22
NHSC New Hope 55.50 348 P P 11 48 24.2 +1.1
NHSC pP pP **11 48 52.0 +1.9**
Z58A St. Stephen 55.66 349 P P 11 48 25.2 +0.9
baz=167,SNR=16
Z57A Bowman 55.79 348 P P 11 48 25.8 +0.6
baz=166,SNR=16
250A Grady 55.90 342 pP 11 48 53.5 +0.3
Z56A Williston 55.95 347 P P 11 48 26.5 +0.1
baz=166
Y60A Bolivia 56.04 350 P P 11 48 27.4 +0.4
baz=169,SNR=11
152A Waverly Hall 56.12 344 P P 11 48 26.4 -1.1
152A IAmb IAmb 11 48 28.4
comp=Z,91nm,1.1s
152A pP **11 48 54.5 -0.2**
Y59A Loris 56.13 350 P P 11 48 28.1 +0.5
baz=168
Y59A Loris 56.13 350 IAmb IAmb 11 48 29.0
comp=Z,90nm,1.1s
Y58A Scranton 56.19 349 P P 11 48 28.6 +0.6
baz=168,SNR=11
Y58A Scranton 56.19 349 P P 11 48 28.5 +0.5
346A Big Creek Wild 56.36 338 P P 11 48 29.1 -0.2
Y56A Pelion 56.39 347 P P 11 48 29.4 -0.1
baz=166
Y57A Sumter 56.43 348 P P 11 48 30.4 +0.7
baz=167,SNR=12
Y57A Sumter 56.43 348 P P 11 48 30.1 +0.3
GOGA Godfrey 56.51 345 P P 11 48 30.2 -0.1
baz=163,SNR=12
GOGA Godfrey 56.51 345 IAmb IAmb 11 48 31.3
comp=Z,64nm,1.1s
X60A Albert Glenn T 56.56 351 P P 11 48 31.0 +0.3
baz=170,SNR=5.8
X59A McDuffie Farm, 56.66 350 P P 11 48 31.7 +0.4
baz=169,SNR=6.7
X58A Rowland 56.76 349 P P 11 48 32.6 +0.5
baz=168,SNR=12
X58A Rowland 56.76 349 P P 11 48 32.3 +0.2
X58A IAmb IAmb 11 48 33.7
comp=Z,115nm,0.9s
Z51A Franklin 56.85 343 IAmb IAmb 11 48 33.7
comp=Z,56nm,1.0s
JSC Jenkinsville 56.86 347 P P 11 48 32.8 0.0
JSC pmax pmax
comp=Z,46nm,1.0s
JSC Jenkinsville 56.86 347 P P 11 48 32.8 0.0
344A Westbrook Farm 56.86 337 P P 11 48 32.7 -0.2
344A IAmb IAmb 11 48 34.3
comp=Z,78nm,0.8s
W60A Pink Hill 56.99 351 P P 11 48 34.0 +0.3
baz=170
W61A Ground Anchor 57.01 352 P P 11 48 34.1 +0.2
baz=171,SNR=10.0
X56A White Oak 57.01 348 P P 11 48 34.5 +0.6
baz=166,SNR=24
HODGE Hodges 57.02 346 P P 11 48 34.1 +0.2
HODGE IAmb IAmb 11 48 35.4
comp=Z,65nm,1.2s
Y52A Lilburn 57.09 345 P P 11 48 34.1 -0.3
Y52A IAmb IAmb 11 48 35.4
comp=Z,78nm,1.1s
LRAL Lakeview Retre 57.10 342 P P 11 48 34.2 -0.3
baz=160,SNR=22
LRAL Lakeview Retre 57.10 342 IAmb IAmb 11 48 35.2
comp=Z,78nm,1.1s
X55A Gracelyn & Ava 57.12 347 P P 11 48 35.2 +0.6
baz=166,SNR=19
441A DeRidder 57.16 335 P P 11 48 36.2 +1.2
W58A Raeford 57.20 350 P P 11 48 35.7 +0.6
baz=168,SNR=37
CNNC Cliffs of the 57.20 351 P P 11 48 35.3 +0.2
baz=170
W59A Clinton 57.21 350 P P 11 48 35.5 +0.3
baz=169
V62A Hyde County Ai 57.26 353 P P 11 48 36.0 +0.4
baz=172
X54A Belton 57.35 346 P P 11 48 36.7 +0.4
baz=165,SNR=21
342A Flagon Creek P 57.38 336 pP pP 11 49 04.5 +0.8
W57A Gilead 57.46 349 P P 11 48 37.4 +0.4
baz=167,SNR=18
W57A Gilead 57.46 349 IAmb IAmb 11 48 38.6
comp=Z,97nm,0.9s
VBMS Vicksburg 57.48 338 P P 11 48 37.0 -0.2
baz=156
VBMS Vicksburg 57.48 338 IAmb IAmb 11 48 38.4
comp=Z,130nm,1.3s
PAULI Pauline 57.49 347 P P 11 48 37.5 +0.3
PAULI IAmb IAmb 11 48 39.0
comp=Z,159nm,1.3s
PAULI pP **11 49 05.3 +0.8**
735A Kenedy 57.54 329 P P 11 48 38.1 +0.4
W56A Indian Trail 57.55 348 P P 11 48 38.2 +0.5
baz=167,SNR=25
V61A Roper 57.56 352 P P 11 48 38.0 +0.3
baz=171
V61A Roper 57.56 352 P P 11 48 38.5 +0.8
HKT Hockley 57.57 332 i P P 11 48 38.4 +0.6
HKT pmax pmax
comp=Z,54nm,1.2s
HKT Hockley 57.57 332 P P 11 48 38.2 +0.3
HKT IAmb IAmb 11 48 40.0
comp=Z,100nm,1.3s
Z47A Carrollton 57.57 341 IAmb IAmb 11 48 38.5
comp=Z,82nm,0.8s
V60A Jim Taylor Roa 57.63 352 P P 11 48 38.6 +0.4
baz=170
V60A Jim Taylor Roa 57.63 352 IAmb IAmb 11 49 07.8
comp=Z,99nm,1.4s
Y49A Blount Mountai 57.70 342 IAmb IAmb 11 48 39.3
comp=Z,84nm,1.1s
KMSC Kings Mountain 57.70 348 P P 11 48 39.3 +0.5
baz=166,SNR=27
KMSC Kings Mountain 57.70 348 IAmb IAmb 11 48 40.5
comp=Z,135nm,1.1s
V59A Middlesex 57.77 351 P P 11 48 39.6 +0.5
baz=169,SNR=15
W54A Cherokee Point 57.82 347 P P 11 48 40.3 +0.7
baz=165,SNR=32
833A Chaparral WMA, 57.87 328 P P 11 48 40.7 +0.7
baz=146,SNR=37
833A Chaparral WMA, 57.87 328 P P 11 48 40.1 +0.1
833A pP pP **11 49 07.3 +0.4**
BG3 Lake Jocassee 57.90 346 IAmb IAmb 11 48 41.7
comp=Z,54nm,1.0s
V58A Windy Hill, Pi 57.93 350 P P 11 48 40.7 +0.3
baz=168,SNR=19
V58A Windy Hill, Pi 57.93 350 P P 11 48 40.2 -0.1
V58A IAmb IAmb 11 48 41.8
comp=Z,117nm,1.2s
X51A Calhoun 57.95 344 P P 11 48 40.4 -0.1
U61A Possum Corner 58.08 352 P P 11 48 41.5 +0.2
baz=171,SNR=6.3
FPAL Fort Paine 58.12 343 IAmb IAmb 11 48 42.4
comp=Z,86nm,1.1s
V57A Coltrane Farms 58.14 349 P P 11 48 42.1 +0.4
baz=168,SNR=22
V56A Mocksville 58.19 349 P P 11 48 42.9 +0.8
baz=167,SNR=59
W52A Murphy 58.23 345 IAmb IAmb 11 48 43.7
comp=Z,107nm,1.1s
143A Socs Landing, 58.23 337 P P 11 48 42.6 +0.1
143A IAmb IAmb 11 48 45.5
comp=Z,57nm,0.8s
U59A Littleton 58.28 351 P P 11 48 43.2 +0.5
baz=170,SNR=15
U59A Littleton 58.28 351 IAmb IAmb 11 48 44.2
comp=Z,68nm,1.1s
U60A Pendleton 58.31 352 P P 11 48 43.0 +0.1
baz=171
V55A Taylorsville 58.37 348 P P 11 48 44.2 +0.8
baz=166,SNR=58
U58A Oxford 58.43 351 P P 11 48 44.3 +0.5
baz=169,SNR=18
V54A Nebo 58.44 347 P P 11 48 44.5 +0.6
baz=165,SNR=49
V53A Saluda 58.52 346 IAmb IAmb 11 48 45.8
comp=Z,68nm,0.9s
U57A Blanch 58.59 350 P P 11 48 45.4 +0.5
baz=168,SNR=31
BELA Belgrano 2 58.62 172 P P 11 48 44.9 +0.3
NATX Nacogdoches 58.64 334 P P 11 48 46.5 +1.1
baz=152,SNR=20
U56A King 58.69 349 P P 11 48 46.5 +0.9
baz=167,SNR=33
T59A Double "B" Far 58.85 352 P P 11 48 47.0 +0.4
baz=170,SNR=23
T59A Double "B" Far 58.85 352 IAmb IAmb 11 48 48.2
comp=Z,81nm,1.1s
T60A Surry 58.91 352 P P 11 48 47.5 +0.4
baz=171,SNR=6.4
T60A Surry 58.91 352 P P 11 48 47.3 +0.2
T58A Grand View Acr 58.97 351 P P 11 48 48.0 +0.5
baz=169,SNR=28
V51A Loudon 59.00 345 IAmb IAmb 11 48 48.8
comp=Z,72nm,0.9s
435B Jarrell 59.06 331 P P 11 48 48.7 +0.4
baz=148,SNR=5.5
435B Jarrell 59.06 331 IAmb IAmb 11 48 49.8
comp=Z,55nm,0.8s
T57A Hurt 59.13 350 P P 11 48 49.3 +0.6
baz=168,SNR=34
T57A Hurt 59.13 350 IAmb IAmb 11 48 50.4
comp=Z,104nm,1.1s
U54A Nelsons Funny 59.13 348 P P 11 48 49.1 +0.4
baz=166,SNR=38
OXF Oxford 59.21 340 P P 11 48 48.2 -1.0
baz=157,SNR=36
Z41A Richland Creek 59.24 336 P P 11 48 50.2 +0.7
baz=154,SNR=12
T56A Rocky Mt 59.29 349 P P 11 48 50.8 +1.1
baz=168,SNR=45
SHEL Horse Pasture 59.39 96 P P 11 48 51.7 +0.7
SHEL pmax pmax
comp=Z,484nm,0.8s
SHEL Horse Pasture 59.39 96 P P 11 48 51.6 +0.7
S60A Water View 59.46 353 P P 11 48 51.2 +0.3
baz=171
T55A Pulaski 59.51 349 P P 11 48 52.3 +1.0
baz=167,SNR=41
TZTN Tazewell 59.52 346 P P 11 48 51.2 -0.2
baz=164,SNR=18
TZTN Tazewell 59.52 346 IAmb IAmb 11 48 52.4
comp=Z,98nm,1.1s
BLA Blacksburg 59.54 349 P P 11 48 52.3 +0.8

baz=167,SNR=28
S58A Poland Farm, P 59.55 351 P **P** **11 48 51.9 +0.4**
baz=170,SNR=7.3
S58A Poland Farm, P 59.55 351 IAmb IAmb 11 48 53.1
comp=Z,50nm,1.2s
RCRC Randolf Colleg 59.56 350 P **P** **11 48 52.0 +0.5**
S59A Mechanicsville 59.60 352 P **P** **11 48 52.1 +0.3**
baz=171
T54A Tazewell 59.61 348 P **P** **11 48 52.3 +0.3**
baz=166,SNR=29
X43A Marvell 59.70 339 P **P** **11 48 52.6 +0.1**
baz=156,SNR=20
T53A Wise 59.73 347 P **P** **11 48 52.9 +0.1**
baz=165,SNR=33
S57A Dark Hollow, R 59.83 350 P **P** **11 48 54.2 +0.8**
baz=169,SNR=28
JCT Junction City 59.85 329 P **P** **11 48 53.9 +0.2**
baz=146,SNR=49
S56A Natural Bridge 59.85 350 P **P** **11 48 54.2 +0.7**
baz=168,SNR=20
R58B Mineral 59.88 351 P **P** **11 48 54.5 +0.9**
baz=170,SNR=20
R58B Mineral 59.88 351 P **P** **11 48 53.8 +0.1**
R58B IAmb IAmb 11 48 56.1
comp=Z,86nm,1.1s
VNA3 Neumayer Olymp 59.89 161 P **P** **11 48 54.0 +0.5**
R59A King George, V 60.01 352 P **P** **11 48 55.4 +0.8**
baz=171,SNR=5.6
R60A Leonardtown, M 60.01 353 P **P** **11 48 54.9 +0.3**
baz=171
U49A Red Boiling Sp 60.03 344 IAmb IAmb 11 48 55.6
comp=Z,102nm,1.1s
WHTX Lake Whitney, 60.03 332 P **P** **11 48 55.3 +0.4**
baz=149,SNR=16
CBN Corbin Frederi 60.04 352 P **P** **11 48 55.4 +0.6**
baz=170
Z38A Mt. Pleasant 60.09 335 P **P** **11 48 55.5 +0.2**
VNA1 Neumayer--Stat 60.09 160 P **P** **11 48 55.8 +1.0**
S55A Lewisburg 60.10 349 P **P** **11 48 56.2 +0.9**
baz=167,SNR=69
HPIG 60.15 322 IAmb IAmb 11 48 58.3
comp=Z,117nm,1.3s
R58A Rapidan 60.22 351 P **P** **11 48 56.6 +0.5**
baz=170,SNR=15
WVT Waverly 60.23 342 P **P** **11 48 54.9 -1.2**
WVT pmax pmax
comp=Z,144nm,0.8s
WVT Waverly 60.23 342 P **P** **11 48 55.4 -0.8**
baz=159
WVT Waverly 60.23 342 P **P** **11 48 54.9 -1.2**
S54A Dingess, Beckl 60.27 348 P **P** **11 48 56.9 +0.4**
baz=166,SNR=37
T50A Nancy 60.28 345 IAmb IAmb 11 48 57.3
comp=Z,92nm,0.9s
R57A Stanardsville 60.29 351 P **P** **11 48 57.5 +0.9**
baz=169,SNR=28
S53A Williamson 60.32 348 P **P** **11 48 56.7 -0.1**
baz=166,SNR=12
X40A Basin Creek Fa 60.35 337 P **P** **11 48 56.9 -0.1**
baz=154,SNR=11
SLBS Sierra La Lagu 60.40 316 P **P** **11 48 59.5 +1.9**
VNA2 Neumayer--Watz 60.46 161 P **P** **11 48 58.0 +0.6**
baz=280,slow=7.6
R55A Marlinton 60.53 350 P **P** **11 48 59.5 +1.3**
baz=168,SNR=34
R56A Bull Pasture M 60.53 350 P **P** **11 48 59.3 +1.0**
baz=168,SNR=17
R54A Victor 60.58 349 P **P** **11 48 59.1 +0.6**
baz=167,SNR=40
S51A Beattyville 60.58 346 IAmb IAmb 11 48 59.5
comp=Z,76nm,1.1s
Q59A Harwood 60.61 353 P **P** **11 48 59.1 +0.5**
baz=171
Q60A Greensboro 60.65 353 P **P** **11 48 59.4 +0.5**
baz=172
MIAR Mount Ida 60.68 336 P **P** **11 48 59.4 +0.1**
baz=153,SNR=74
UTMT University of 60.73 341 P **P** **11 48 59.5 0.0**
W41B Gary Mavity, V 60.76 338 P **P** **11 48 59.7 -0.1**
baz=155,SNR=43
W41B Gary Mavity, V 60.76 338 IAmb IAmb 11 49 00.8
comp=Z,125nm,1.2s
Q58A Fox Den Farm, 60.81 352 P **P** **11 49 00.6 +0.6**
baz=170,SNR=13
WHAR Wooly Hollow 60.88 338 IAmb IAmb 11 49 01.6
comp=Z,73nm,0.9s
TXAR Lajitas Array 60.89 325 P **P** **11 49 01.2 +0.3**
comp=Z,8.8nm,0.6s,baz=149,slow=8.7,SNR=165
TXAR pP **pP** **11 49 28.4 +0.2**
comp=Z,12nm,1.0s,baz=161,slow=8.0,SNR=5.2
TXAR PKP2bc 12 18 26.7
comp=Z,0.5nm,0.9s,baz=282,slow=1.2,SNR=4.2
TXAR Lajitas Array 60.89 325 P **P** **11 49 01.0 +0.1**
TX31 Lajitas Ar. Si 60.89 325 IAmb IAmb 11 49 02.6
comp=Z,163nm,1.4s
R53A Hurricane 60.91 348 P **P** **11 49 01.0 +0.3**
baz=166,SNR=13
R53A Hurricane 60.91 348 IAmb IAmb 11 49 02.1
comp=Z,125nm,1.1s
LPIG La Paz 60.93 316 P **P** **11 49 02.1 +1.0**
comp=Z,60nm,1.0s,baz=125,slow=1.4,SNR=11
Q57A Strasburg 61.00 351 P **P** **11 49 02.5 +1.2**
baz=170,SNR=31
HICK Hickman 61.02 341 P **P** **11 49 01.7 +0.2**
Q56A Snyder Ridge, 61.12 351 P **P** **11 49 03.5 +1.3**
baz=169,SNR=46
SDMD Soldier's Deli 61.17 353 P **P** **11 49 02.8 +0.4**
LCAR Lake Charles 61.20 339 IAmb IAmb 11 49 03.4
comp=Z,77nm,0.9s
P61A Hammonton 61.21 355 P **P** **11 49 03.6 +0.8**
baz=173
Q55A Buckhannon 61.22 350 P **P** **11 49 04.0 +1.2**
baz=168,SNR=21
HENM Henderson Moun 61.26 341 P **P** **11 49 02.5 -0.7**
P58A Pank, Wackersv 61.30 352 P **P** **11 49 03.9 +0.6**
baz=171,SNR=13
P59A Jarrettsville 61.32 353 P **P** **11 49 04.2 +0.8**
baz=172,SNR=20
W39A Magazine 61.34 337 P **P** **11 49 04.2 +0.5**
baz=153,SNR=67
W39A Magazine 61.34 337 P **P** **11 49 03.5 -0.1**
Q54A Coxs Mills 61.34 349 P **P** **11 49 03.8 +0.2**
baz=167,SNR=31
Q54A Coxs Mills 61.34 349 IAmb IAmb 11 49 05.0
comp=Z,86nm,0.8s
Q53A Leroy 61.34 348 P **P** **11 49 04.1 +0.5**
baz=166,SNR=41
R50A Paris 61.36 346 IAmb IAmb 11 49 04.8
comp=Z,125nm,1.3s
FCAR Ozark Folk Cen 61.36 338 IAmb IAmb 11 49 04.4
comp=Z,114nm,1.1s
P57A Homestead Farm 61.39 352 P **P** **11 49 05.2 +1.2**
baz=170,SNR=9.8
P57A Homestead Farm 61.39 352 IAmb IAmb 11 49 06.3
comp=Z,79nm,0.9s
P60A Greenville 61.43 354 P **P** **11 49 04.5 +0.3**
baz=172,SNR=6.3
P56A Dayton Farm, R 61.52 351 P **P** **11 49 06.1 +1.2**
baz=169,SNR=16
ABTX Abilene, Hawle 61.55 330 P **P** **11 49 05.5 +0.2**
baz=147,SNR=29
R49A Shelbyville 61.57 345 IAmb IAmb 11 49 05.8
comp=Z,68nm,1.0s
Q52A Bidwell 61.58 348 P **P** **11 49 05.3 +0.1**
baz=166,SNR=12
O61A Allentown 61.61 355 P **P** **11 49 06.0 +0.6**
baz=174
P55A Reedsville 61.68 350 P **P** **11 49 06.9 +1.0**
baz=168,SNR=25
MVL Millersville 61.69 353 IAmb IAmb 11 49 08.3
comp=Z,54nm,1.1s
WCI Wyandotte Cave 61.79 344 P **P** **11 49 05.5 -1.2**
WCI pmax pmax
comp=Z,106nm,0.9s
WCI Wyandotte Cave 61.79 344 P **P** **11 49 05.8 -0.8**
baz=161
WCI Wyandotte Cave 61.79 344 P **P** **11 49 05.5 -1.2**
WCI IAmb IAmb 11 49 07.1
comp=Z,106nm,0.9s
MCWV Mont Chateau 61.83 350 P **P** **11 49 07.7 +0.8**
baz=168,SNR=18
MCWV Mont Chateau 61.83 350 IAmb IAmb 11 49 08.9
comp=Z,76nm,0.8s
Q51A Peebles 61.86 347 IAmb IAmb 11 49 08.1
comp=Z,101nm,1.1s
P54A Burton 61.88 350 P **P** **11 49 08.0 +0.7**
baz=167,SNR=49
O58A Lewisberry 61.88 353 P **P** **11 49 07.9 +0.7**
baz=171,SNR=15
O60A Telford 61.91 354 P **P** **11 49 08.0 +0.6**
baz=173,SNR=6.1
P53A Whipple 61.92 349 P **P** **11 49 08.1 +0.5**
baz=166,SNR=30
U40A Yellville 62.04 338 P **P** **11 49 08.2 -0.2**
baz=154,SNR=42
U40A Yellville 62.04 338 IAmb IAmb 11 49 09.3
comp=Z,83nm,0.8s
O57A Amberson 62.05 352 P **P** **11 49 09.4 +1.0**
baz=170,SNR=22
T42A Van Buren 62.06 340 IAmb IAmb 11 49 09.4
comp=Z,140nm,1.6s
SNAA Sanae 62.09 161 P **P** **11 49 08.8 +0.4**
SNAA Sanae 62.09 161 P **P** **11 49 08.9 +0.4**
comp=Z,34nm,0.6s,baz=280,slow=8.1,SNR=191
SNAA Sanae 62.09 161*d* P **P** **11 49 08.1 -0.3**
SNAA pmax pmax
comp=Z,46nm,1.0s
SNAA Sanae 62.09 161 P **P** **11 49 08.5 0.0**
SNAA IAmb IAmb 11 49 10.1
comp=Z,36nm,0.7s
LUPA Lehigh Univers 62.19 354 P **P** **11 49 09.7 +0.4**
P52A Corning 62.21 348 P **P** **11 49 09.4 0.0**
baz=166,SNR=12
O56A Blue Knob Stat 62.23 351 P **P** **11 49 10.5 +0.8**
baz=170,SNR=29
P51A Williamsport 62.24 347 P **P** **11 49 09.2 -0.4**
baz=165,SNR=7.7
P51A Williamsport 62.24 347 IAmb IAmb 11 49 10.4
comp=Z,166nm,1.4s
N61A South Mountain 62.24 355 P **P** **11 49 10.3 +0.7**
baz=174,SNR=6.1
O55A Ligonier 62.28 351 P **P** **11 49 10.9 +0.9**
baz=169,SNR=28
N63A Mattituck 62.36 357 P **P** **11 49 10.8 +0.4**
baz=176
HHAR Hobbs 62.36 337 IAmb IAmb 11 49 11.6
comp=Z,138nm,1.1s
N62A Caumsett State 62.36 356 P **P** **11 49 10.9 +0.5**
baz=175
O54A Avella 62.43 350 P **P** **11 49 11.4 +0.5**
baz=168,SNR=12
O54A Avella 62.43 350 IAmb IAmb 11 49 12.3
comp=Z,59nm,0.8s
N60A Cedar Hill Far 62.43 354 P **P** **11 49 11.4 +0.5**
baz=173,SNR=8.0
PAL Palisades 62.47 355 P **P** **11 49 11.4 +0.3**
baz=174
N59A State Game Lan 62.54 354 P **P** **11 49 12.4 +0.8**
baz=172,SNR=6.1
N59A State Game Lan 62.54 354 P **P** **11 49 12.0 +0.4**
MGMO Mountain Grove 62.56 339 IAmb IAmb 11 49 12.8
comp=Z,81nm,0.8s
N58A Sunbury 62.56 353 P **P** **11 49 12.3 +0.6**
baz=171,SNR=25
N58A Sunbury 62.56 353 IAmb IAmb 11 49 13.7
comp=Z,86nm,1.0s
N57A Milroy 62.58 352 P **P** **11 49 12.3 +0.4**
baz=171,SNR=30
O52A Adamsville 62.62 349 P **P** **11 49 12.1 -0.1**
baz=166,SNR=14
O52A Adamsville 62.62 349 IAmb IAmb 11 49 13.3
comp=Z,63nm,0.8s
O53A New Philadelph 62.63 349 P **P** **11 49 12.5 +0.2**
baz=167,SNR=15
O53A New Philadelph 62.63 349 IAmb IAmb 11 49 13.7
comp=Z,91nm,0.9s
P49A Miami Univ. Ec 62.65 346 P **P** **11 49 11.7 -0.6**
baz=163,SNR=9.7
P49A Miami Univ. Ec 62.65 346 IAmb IAmb 11 49 12.7
comp=Z,105nm,1.0s
YLE Yale 62.71 356 IAmb IAmb 11 49 14.6
comp=Z,68nm,1.0s
FVM French Village 62.72 341 P **P** **11 49 12.1 -0.8**
FVM pmax pmax
comp=Z,193nm,0.8s
FVM French Village 62.72 341 P **P** **11 49 12.1 -0.8**
TUL1 Leonard 62.73 335 P **P** **11 49 13.1 +0.1**
baz=152,SNR=24
TUL1 Leonard 62.73 335 IAmb IAmb 11 49 14.3
comp=Z,131nm,1.1s
BLO Bloomington 62.73 344 IAmb IAmb 11 49 13.4
comp=Z,86nm,0.8s
OLIL Olney 62.74 343 IAmb IAmb 11 49 13.1
comp=Z,77nm,0.9s
M61A Granite Spring 62.76 356 P **P** **11 49 13.3 +0.2**
baz=174
O51A Pataskala 62.79 348 P **P** **11 49 13.1 -0.3**
baz=165,SNR=13
M62A Hamden 62.83 356 P **P** **11 49 14.5 +1.0**
baz=175
N56A West Decatur 62.84 352 P **P** **11 49 14.3 +0.6**
baz=170,SNR=9.2
M60A Port Jervis 62.84 355 P **P** **11 49 14.2 +0.6**
baz=174,SNR=6.5
WMOK Wichita Mounta 62.95 332 P **P** **11 49 14.0 -0.5**
baz=148,SNR=14
ACSO Alum Creek Sta 62.95 348 P **P** **11 49 14.1 -0.2**
baz=165,SNR=24
ACSO Alum Creek Sta 62.95 348 P **P** **11 49 14.2 -0.2**
OKCFA Oklahoma City 62.96 334 IAmb IAmb 11 49 15.4
comp=Z,58nm,0.9s
CCM Cathedral Cave 63.04 340 P **P** **11 49 14.7 -0.3**
CCM pmax pmax
comp=Z,125nm,0.9s
CCM Cathedral Cave 63.04 340 P **P** **11 49 14.4 -0.6**
baz=156
CCM Cathedral Cave 63.04 340 P **P** **11 49 14.7 -0.3**
CCM IAmb IAmb 11 49 15.9
comp=Z,125nm,0.8s
OK025 Westminster Rd 63.06 334 IAmb IAmb 11 49 15.9
comp=Z,116nm,0.9s
M58A Price's Panora 63.06 353 P **P** **11 49 16.1 +1.0**
baz=172,SNR=26
M57A Sunshine Farm, 63.10 353 P **P** **11 49 16.3 +1.0**
baz=171,SNR=17
M57A Sunshine Farm, 63.10 353 IAmb IAmb 11 49 17.4
comp=Z,81nm,1.1s
N53A Lisbon 63.11 350 IAmb IAmb 11 49 45.5
comp=Z,180nm,1.3s
M59A Waymart 63.12 354 P **P** **11 49 16.3 +0.8**
baz=173,SNR=25
N54A Moraine State 63.12 350 P **P** **11 49 16.4 +0.8**
baz=168,SNR=31
Q44A Meyer Farm, Va 63.15 342 P **P** **11 49 14.7 -1.0**
L63A North Scituate 63.19 357 P **P** **11 49 16.5 +0.7**
baz=177,SNR=6.3
O49A Covington 63.19 346 IAmb IAmb 11 49 17.2
comp=Z,115nm,1.1s
L64A Middleborough 63.23 358 P **P** **11 49 16.5 +0.4**
baz=178
BRYW Bryant College 63.24 358 IAmb IAmb 11 49 46.0
comp=Z,64nm,0.8s
SLM Saint Louis 63.26 341 IAmb IAmb 11 49 17.0
comp=Z,157nm,1.4s
OK029 Liberty Lake 63.29 334 IAmb IAmb 11 49 17.6
comp=Z,104nm,0.9s
P46A Rosedale 63.33 344 P **P** **11 49 15.7 -1.2**
P46A IAmb IAmb 11 49 17.0
comp=Z,146nm,1.2s
M56A Emporium 63.38 352 P **P** **11 49 17.9 +0.7**
baz=170,SNR=16
M56A Emporium 63.38 352 IAmb IAmb 11 49 19.5
comp=Z,149nm,1.2s
M55A Ridgway 63.44 351 IAmb IAmb 11 49 19.9
comp=Z,161nm,1.2s
L60A Shokan 63.47 355 P **P** **11 49 18.6 +0.8**
baz=174,SNR=8.9
N51A Ashland 63.49 348 IAmb IAmb 11 49 18.8
comp=Z,58nm,0.9s
R40A Maddies Statio 63.59 339 IAmb IAmb 11 49 19.4
comp=Z,90nm,0.8s
M54A Oil Creek Stat 63.61 351 P **P** **11 49 19.1 +0.4**
baz=168,SNR=25
L61A Hillsdale 1, H 63.62 356 P **P** **11 49 19.5 +0.7**
baz=175,SNR=5.5
MNTX Cornudas Mount 63.66 325 P **P** **11 49 19.1 -0.1**
baz=142,SNR=86
MNTX Cornudas Mount 63.66 325 P **P** **11 49 17.8 -1.4**
L58A Harry Jones Me 63.66 354 P **P** **11 49 19.9 +0.9**
baz=172,SNR=27
M53A WI Miller and 63.70 350 P **P** **11 49 19.5 +0.2**
baz=167,SNR=11
M53A WI Miller and 63.70 350 P **P** **11 49 18.9 -0.5**
M53A IAmb IAmb 11 49 49.3
comp=Z,106nm,0.9s
L57A Andrews Acres 63.73 353 P **P** **11 49 20.2 +0.7**
baz=171,SNR=12
L59A Walton 63.73 355 P **P** **11 49 20.4 +0.8**
baz=173,SNR=35
L59A Walton 63.73 355 IAmb IAmb 11 49 22.2
comp=Z,121nm,1.1s
L61B Northampton 63.82 357 P **P** **11 49 20.7 +0.6**
baz=176,SNR=7.8
HRV Adam Dziewonsk 63.83 358 P **P** **11 49 20.2 +0.1**
HRV pmax pmax
comp=Z,38nm,0.9s
HRV Adam Dziewonsk 63.83 358 P **P** **11 49 20.2 +0.1**
BINY Binghamton 63.83 354 P **P** **11 49 20.9 +0.7**
baz=172,SNR=26
BINY Binghamton 63.83 354 IAmb IAmb 11 49 22.7
comp=Z,139nm,1.1s
M51A Elyria 63.86 349 P **P** **11 49 20.2 -0.2**
baz=166,SNR=8.8
T35A Sooner Cattle 63.89 335 IAmb IAmb 11 49 22.7
comp=Z,127nm,1.1s
M52A Chesterland 63.91 349 IAmb IAmb 11 49 50.5
comp=Z,92nm,0.9s
L56A Greenwood 63.94 353 P **P** **11 49 21.4 +0.5**
baz=171,SNR=15
L56A Greenwood 63.94 353 IAmb IAmb 11 49 23.1
comp=Z,150nm,1.2s
P43A Skaggs, Pawnee 63.98 342 P **P** **11 49 19.7 -1.5**
K63A Dunstable 64.01 358 P **P** **11 49 21.3 +0.1**
baz=177
K62A Royalston 64.02 357 P **P** **11 49 21.9 +0.6**
baz=176
SFIN Lafayette 64.02 344 P **P** **11 49 20.2 -1.2**
baz=161,SNR=12
SFIN Lafayette 64.02 344 IAmb IAmb 11 49 21.4
comp=Z,94nm,1.1s
K60A Five Rivers En 64.07 356 P **P** **11 49 22.6 +1.0**
baz=174
K61A Williamstown 64.08 356 P **P** **11 49 22.7 +0.9**
baz=175,SNR=6.4
M50A Fremont 64.09 348 IAmb IAmb 11 49 51.3
comp=Z,157nm,1.4s
L53A Girard 64.14 350 P **P** **11 49 22.4 +0.2**
baz=168,SNR=7.2
MSTX Muleshoe 64.14 329 P **P** **11 49 22.4 -0.1**
baz=145,SNR=69
N47A Urbana 64.16 346 IAmb IAmb 11 49 23.2
comp=Z,147nm,1.2s
O44A Mansfield 64.16 343 IAmb IAmb 11 49 22.9
comp=Z,77nm,1.1s
TRY Troy 64.16 356 IAmb IAmb 11 49 52.4
comp=Z,65nm,0.9s
ERPA Erie 64.25 351 P **P** **11 49 23.3 +0.4**
baz=168,SNR=9.6
K59A Cooperstown 64.30 355 P **P** **11 49 24.1 +0.9**
baz=174,SNR=33
WVNY West Valley, N 64.34 352 IAmb IAmb 11 49 25.3
comp=Z,121nm,0.9s
KAN13 South Haven SW 64.35 335 P **P** **11 49 23.9 +0.2**
K58A Earlville 64.36 354 P **P** **11 49 24.3 +0.8**
baz=173,SNR=24
K58A Earlville 64.36 354 IAmb IAmb 11 49 25.5
comp=Z,88nm,0.9s
AMTX Amarillo 64.37 330 P **P** **11 49 24.2 +0.2**
baz=146
AMTX Amarillo 64.37 330 IAmb IAmb 11 49 25.0
comp=Z,88nm,1.2s
K57A Scipio Center 64.41 353 P **P** **11 49 24.2 +0.2**
baz=172,SNR=13
SRIG Santa Rosalia 64.42 317 IAmb IAmb 11 49 27.2
comp=Z,94nm,1.3s
U32A Winter Ranch, 64.44 333 IAmb IAmb 11 49 25.6
comp=Z,95nm,1.1s
K56A Middlesex 64.47 353 P **P** **11 49 24.6 +0.2**
baz=171,SNR=11
MMNY Mt. Morris Dam 64.57 352 IAmb IAmb 11 49 27.1
comp=Z,84nm,1.0s
P40A Paris 64.64 340 P **P** **11 49 24.6 -0.9**
P40A IAmb IAmb 11 49 26.3
comp=Z,107nm,0.9s
J60A Lant Hill Farm 64.66 356 P **P** **11 49 26.3 +0.8**
baz=175
J61A Chester 64.71 357 P **P** **11 49 26.8 +0.9**
baz=176
HDIL Hopedale 64.77 343 P **P** **11 49 25.4 -0.9**
baz=159,SNR=9.5
HDIL Hopedale 64.77 343 IAmb IAmb 11 49 26.5
comp=Z,82nm,1.0s
HSIG 64.82 319 P **P** **11 49 28.1 +1.2**
HSIG IAmb IAmb 11 49 29.6
comp=Z,112nm,1.3s
L48A N Adams 64.89 347 IAmb IAmb 11 49 55.5
comp=Z,212nm,1.6s
J58A Remsen 64.92 355 P **P** **11 49 27.8 +0.6**
baz=173,SNR=6.6
J58A Remsen 64.92 355 P **P** **11 49 27.5 +0.3**
J59A Piesco 64.95 355 P **P** **11 49 28.3 +0.8**
baz=174,SNR=28
J59A Piesco 64.95 355 IAmb IAmb 11 49 30.1
comp=Z,132nm,1.1s
J56A Wolcott 64.99 353 P **P** **11 49 27.7 +0.1**
baz=172,SNR=9.9
J56A Wolcott 64.99 353 P **P** **11 49 27.9 +0.3**
J56A IAmb IAmb 11 49 29.3
comp=Z,130nm,1.1s
J57A Williamstown 65.03 354 P **P** **11 49 28.3 +0.4**
baz=172,SNR=12
J57A Williamstown 65.03 354 IAmb IAmb 11 49 30.1
comp=Z,103nm,1.1s
I62A Tamworth 65.18 358 P **P** **11 49 29.7 +0.8**
baz=177
J54A Appleton 65.20 352 IAmb IAmb 11 49 58.4
comp=Z,93nm,1.3s
P38A Dawn 65.21 339 IAmb IAmb 11 49 30.1
comp=Z,74nm,0.8s
I58A Old Forge 65.22 355 P **P** **11 49 29.8 +0.6**
baz=173,SNR=12
I59A Olmsteadville 65.24 356 P **P** **11 49 30.1 +0.8**
baz=174,SNR=12
I60A Shoreham 65.25 356 P **P** **11 49 30.2 +1.0**
baz=175,SNR=8.5
I61A Oroboro, Fairl 65.28 357 P **P** **11 49 30.7 +1.2**
baz=176,SNR=8.7
K50A Casco 65.34 349 P **P** **11 49 28.9 -1.0**
K50A IAmb IAmb 11 49 30.4
comp=Z,92nm,0.7s
N41A Harden Midland 65.35 341 IAmb IAmb 11 49 31.0
comp=Z,133nm,1.2s
I57A Carthage 65.52 354 P **P** **11 49 31.5 +0.4**
baz=173,SNR=10
319A Douglas 65.56 322 IAmb IAmb 11 49 34.5
comp=Z,92nm,0.9s
LBNH Lisbon 65.57 357 P **P** **11 49 32.7 +1.3**
baz=176
121A Cookes Peak, D 65.59 324 P **P** **11 49 33.6 +1.6**
baz=140,SNR=38
121A Cookes Peak, D 65.59 324 IAmb IAmb 11 49 35.0
comp=Z,175nm,1.4s
PECO Prince Edward 65.65 353 IAmb IAmb 11 49 33.4
comp=Z,82nm,1.0s
KSU1 Kansas State U 65.83 336 P **P** **11 49 33.0 -0.2**
baz=151,SNR=15
KSU1 Kansas State U 65.83 336 P **P** **11 49 32.1 -1.1**
KSU1 IAmb IAmb 11 49 34.1
comp=Z,85nm,1.0s
H61A Lyndonville 65.86 357 P **P** **11 49 34.3 +1.0**
baz=176
H62A Milan 65.88 358 P **P** **11 49 34.5 +1.1**
baz=177
H58A Gabriels 65.88 356 P **P** **11 49 34.1 +0.7**
baz=174,SNR=17
H64A Troy 65.90 359 P **P** **11 49 34.8 +1.3**
baz=179
H63A New Sharon 65.93 359 P **P** **11 49 35.4 +1.8**
baz=178
H57A Richville 66.02 355 P **P** **11 49 34.7 +0.4**
baz=173,SNR=19
R32A Long Quarter, 66.06 334 IAmb IAmb 11 49 36.2
comp=Z,143nm,1.0s
I51A Listowel 66.06 350 P **P** **11 49 34.4 -0.2**
baz=167,SNR=11
H59A Cadyville 66.07 356 P **P** **11 49 35.3 +0.7**
baz=175,SNR=12
LONY Lake Ozonia 66.11 355 P **P** **11 49 35.5 +0.6**
baz=174,SNR=15
LONY Lake Ozonia 66.11 355 IAmb IAmb 11 49 36.8
comp=Z,66nm,1.1s
N38A Joes South For 66.17 340 IAmb IAmb 11 49 36.0
comp=Z,98nm,1.1s
J47A Sunmer 66.22 347 IAmb IAmb 11 49 36.0

comp=Z,113nm,1.1s
DELO Deloro Mine 66.30 353 P P 11 49 35.9 -0.1
Y22D IRIS PASSCAL I 66.31 326 P P 11 49 37.2 +0.6
Y22D IAmb IAmb 11 50 19.0
comp=Z,175nm,1.5s
G63A Kingsbury 66.38 359 P P 11 49 37.4 +0.8
baz=179
G60A Masonville 66.45 357 P P 11 49 38.2 +1.2
baz=176
H53A Bobcaygeon 66.47 352 P P 11 49 37.3 +0.1
baz=170,SNR=11
G62A West of Eustis 66.50 358 P P 11 49 38.5 +1.2
baz=178,SNR=14
G64A Maxfield 66.51 360 P P 11 49 38.3 +0.9
baz=180
K43A Burlington 66.52 344 P P 11 49 37.2 -0.3
K43A IAmb IAmb 11 49 37.9
comp=Z,106nm,0.8s
PKME Peaks-Kenny Pk 66.53 359 P P 11 49 38.2 +0.7
baz=179
G61A St-Isidore-de- 66.60 358 P P 11 49 39.2 +1.2
baz=177,SNR=8.2
G58A Ormstown 66.60 356 P P 11 49 38.3 +0.4
baz=174
G57A Newington 66.62 355 P P 11 49 38.5 +0.4
baz=174,SNR=12
NVL N'lazarevskaya 66.64 159 *e*P **P 11 49 38.6 +0.7**
NVL *e*S **S 11 58 17.3 -3.3**
NVL pmax pmax
comp=Z,29nm,0.8s
MOQ Mont Orford 66.66 357 P P 11 49 39.3 +0.9
L40A Anamosa 66.71 342 IAmb IAmb 11 49 40.0
comp=Z,136nm,1.1s
ANMO Albuquerque 66.75 327 *i* P **P 11 49 40.3 +0.9**
ANMO pmax pmax
comp=Z,40nm,1.0s
ANMO Albuquerque 66.75 327 P P 11 49 40.4 +1.0
baz=142
ANMO Albuquerque 66.75 327 P P 11 49 40.5 +1.0
PLVO Plevna 66.75 353 IAmb IAmb 11 50 08.7
comp=Z,76nm,1.2s
CBKS Cedar Bluff 66.81 334 P P 11 49 40.0 +0.4
baz=148,SNR=43
F63A Nahmakanta, Br 66.96 360 P P 11 49 42.0 +1.7
baz=179
N35A Tabor 67.04 338 P P 11 49 39.6 -1.2
N35A IAmb IAmb 11 49 41.7
comp=Z,159nm,1.1s
TUC Tucson 67.11 322 P P 11 49 42.8 +1.2
TUC pmax pmax
comp=Z,150nm,1.5s
TUC Tucson 67.11 322 P P 11 49 42.9 +1.2
baz=137
TUC Tucson 67.11 322 P P 11 49 42.8 +1.2
TUC IAmb IAmb 11 49 44.4
comp=Z,150nm,1.5s
F64A Sherman 67.12 0 P P 11 49 41.8 +0.6
baz=180,SNR=7.8
F64A Sherman 67.12 0 P P 11 49 41.3 +0.1
SCIA State Center 67.17 340 P P 11 49 41.3 -0.3
baz=155,SNR=9.0
SCIA State Center 67.17 340 IAmb IAmb 11 49 43.1
comp=Z,145nm,1.2s
F59A Saint Guilaume 67.22 357 P P 11 49 42.9 +1.1
baz=176
JFWS Jewell Farm 67.22 343 P P 11 49 41.2 -0.7
JFWS pmax pmax
comp=Z,85nm,1.0s
JFWS Jewell Farm 67.22 343 P P 11 49 41.5 -0.4
baz=158,SNR=9.7
JFWS Jewell Farm 67.22 343 P P 11 49 41.2 -0.7
JFWS IAmb IAmb 11 49 42.8
comp=Z,85nm,0.9s
G54A Lake Saint Pet 67.22 353 P P 11 49 42.0 +0.1
baz=170,SNR=13
F61A St Evariste 67.27 358 P P 11 49 43.3 +1.1
baz=178
F60A Warwick 67.30 357 P P 11 49 42.4 +0.1
baz=177,SNR=7.5
T25A Trinidad 67.49 330 P P 11 49 45.0 +1.0
baz=144,SNR=29
T25A Trinidad 67.49 330 P P 11 49 44.4 +0.3
T25A IAmb IAmb 11 49 46.5
comp=Z,92nm,1.3s
N33A J Bar K, Exete 67.58 337 IAmb IAmb 11 49 45.5
comp=Z,142nm,0.9s
E63A Oxbow 67.68 0 P P 11 49 45.6 +0.8
baz=180
E64A Bridgewater 67.68 1 P P 11 49 45.6 +0.9
baz=181,SNR=5.7
GLMI Grayling 67.69 348 P P 11 49 44.7 -0.2
baz=164
GLMI Grayling 67.69 348 P P 11 49 43.8 -1.1
GLMI IAmb IAmb 11 49 46.1
comp=Z,96nm,1.1s
K38A Parkersburg 67.70 341 P P 11 49 44.5 -0.5
K38A IAmb IAmb 11 49 45.7
comp=Z,76nm,0.9s
E61A Lac Etchemin 67.71 359 P P 11 49 46.2 +1.2
baz=178,SNR=6.2
ALGO Algonquin Park 67.77 353 P P 11 49 45.2 -0.1
baz=170,SNR=9.6
E58A La Victoria 67.77 356 P P 11 49 45.5 +0.2
baz=175,SNR=8.5
I42A Draeger Farm, 67.78 344 IAmb IAmb 11 49 46.4
comp=Z,197nm,1.4s
E57A Chemin Saint G 67.86 356 P P 11 49 46.4 +0.5
baz=174,SNR=8.3
E62A Clayton Lake 67.88 359 P P 11 49 47.0 +1.0
baz=179,SNR=11
E62A Clayton Lake 67.88 359 P P 11 49 46.1 0.0
PQI Presque Isle 67.93 0 P P 11 49 47.4 +1.1
214A Organ Pipe Nat 68.04 320 P P 11 49 49.2 +1.8
baz=136,SNR=40
214A Organ Pipe Nat 68.04 320 IAmb IAmb 11 49 50.6
comp=Z,190nm,1.4s
H43A Windswept, Lux 68.04 345 P P 11 49 46.2 -0.8
H43A IAmb IAmb 11 49 47.7
comp=Z,56nm,0.9s
E55A Montcerf-Lytto 68.05 354 P P 11 49 47.3 +0.2
baz=172,SNR=6.9
E56A St. Veronique 68.06 355 P P 11 49 47.3 +0.2
baz=174,SNR=18
LIC Lamto 68.09 74 *e*P **P 11 49 47.5 -0.5**
comp=Z,168nm,1.0s
PIX Pinacate 68.15 320 P P 11 49 48.8 +0.8
PIX IAmb IAmb 11 49 50.7
comp=Z,122nm,1.6s
KSCO Kaye Shedlock' 68.20 332 P P 11 49 49.2 +0.8
baz=146,SNR=28
KSCO Kaye Shedlock' 68.20 332 IAmb IAmb 11 49 50.6
comp=Z,182nm,1.3s
D60A Saint Jean D'O 68.21 358 P P 11 49 49.0 +1.0
baz=178,SNR=8.2
L34A Svendsen Farm, 68.27 338 P P 11 49 47.5 -1.1
L34A IAmb IAmb 11 49 49.4
comp=Z,153nm,1.1s
TIC Toumodi 68.28 73 *e*P **P 11 49 49.0 -0.3**
D63A Stockholm 68.30 0 P P 11 49 49.2 +0.6
baz=180,SNR=8.5
D62A Allapoint, All 68.34 360 P P 11 49 49.7 +0.8
baz=180
D62A Allapoint, All 68.34 360 P P 11 49 49.2 +0.3
D62A IAmb IAmb 11 49 50.8
comp=Z,81nm,1.1s
KIC Kosan Boka 68.40 74 *e*P **P 11 49 49.8 -0.2**
comp=Z,861nm,1.4s
BGNE Belgrade 68.42 336 P P 11 49 49.7 +0.1
baz=150,SNR=26
BGNE Belgrade 68.42 336 P P 11 49 49.6 0.0
DBIC Dimbokro 68.43 73 P P 11 49 50.1 0.0
comp=Z,195nm,1.0s,baz=221,slow=6.3,SNR=69
DBIC S **S 11 58 41.9 -1.9**
comp=Z,11nm,1.0s,baz=154,slow=22,SNR=6.6
DBIC LR LR 12 18 38.0
comp=Z,748nm,20.8s,baz=238,slow=35
DBIC Dimbokro 68.43 73 P P 11 49 50.3 +0.1
DBIC IAmb IAmb 11 49 51.2
comp=Z,148nm,0.9s
D58A Chemin du LacG 68.47 357 P P 11 49 50.4 +0.8
baz=176,SNR=22
D61A St Aubert, Com 68.48 359 P P 11 49 50.5 +0.8
baz=178,SNR=6.8
SDCO Great Sand Dun 68.49 329 P P 11 49 51.5 +1.1
baz=143,SNR=94
SDCO Great Sand Dun 68.49 329 IAmb IAmb 11 49 52.9
comp=Z,77nm,1.0s

D56A ZEC Mazanza, M 68.54 355 P P 11 49 50.6 +0.5
baz=174,SNR=13
D55A Sainte-Anne-du 68.56 355 P P 11 49 50.6 +0.3
baz=173,SNR=26
BATG Bathurst New B 68.57 2 P P 11 49 51.3 +1.0
W18A Petrified Fore 68.61 325 P P 11 49 52.2 +1.2
baz=139
QSPA South Pole Qui 68.61 180 S S 11 58 46.2 +1.6
comp=Z,0.8nm,1.1s,baz=173,slow=22,SNR=9.0
QSPA South Pole Qui 68.61 180 P P 11 49 51.7 +1.1
LATQ La Tuque 68.75 357 P P 11 49 51.9 +0.6
baz=176,SNR=11
LATQ La Tuque 68.75 357 P P 11 49 51.7 +0.4
X16A Lo Mia Camp, P 69.03 323 IAmb IAmb 11 49 56.9
comp=Z,93nm,1.2s
S22A 4UR Ranch, Cre 69.13 328 P P 11 49 55.3 +0.9
baz=142,SNR=26
I37A Lemond, Waseca 69.14 341 IAmb IAmb 11 49 54.8
comp=Z,66nm,0.9s
Q24A Divide 69.30 330 P P 11 49 56.4 +1.0
baz=144,SNR=51
Q24A Divide 69.30 330 P P 11 49 55.4 0.0
Q24A IAmb IAmb 11 49 57.8
comp=Z,78nm,0.9s
MVCO Mesa Verde 69.55 327 P P 11 49 58.2 +1.3
baz=140,SNR=68
MVCO Mesa Verde 69.55 327 IAmb IAmb 11 49 59.5
comp=Z,83nm,0.9s
K31A O'Neill 69.70 337 P P 11 49 57.6 +0.2
TAOE Nuku Hiva Isla 69.74 268 *e*P **P 11 49 59.5 +1.1**
comp=Z,432nm,1.3s
TAOE *e*S **S 11 59 00.0 +0.5**
comp=Z,288nm,25.2s
TAOE Nuku Hiva Isla 69.74 268 *e*LR LR 12 10 59.5
comp=Z,578nm,36.8s
TAOE Nuku Hiva Isla 69.74 268 *e*T T 13 04 23.0
comp=Z,13nm,0.2s
WUAZ Wupatki 69.80 324 P P 11 50 00.2 +1.8
baz=138,SNR=67
WUAZ Wupatki 69.80 324 IAmb IAmb 11 50 01.6
comp=Z,156nm,1.1s
VLDQ Val d'Or 69.83 354 IAmb IAmb 11 49 59.7
comp=Z,87nm,0.9s
ECSD EROS Data Cent 69.92 339 P P 11 49 58.8 +0.1
baz=152,SNR=20
GLA Glamis 70.02 320 P P 11 50 01.3 +1.7
baz=134,SNR=10
GLA Glamis 70.02 320 IAmb IAmb 11 50 02.7
comp=Z,299nm,1.9s
SPMN Marine on St. 70.06 342 P P 11 49 59.0 -0.5
baz=156,SNR=13
SPMN Marine on St. 70.06 342 P P 11 49 57.6 -1.9
ISCO Idaho Springs 70.19 330 P P 11 50 02.0 +1.2
baz=144,SNR=45
ISCO Idaho Springs 70.19 330 IAmb IAmb 11 50 03.2
comp=Z,151nm,1.7s
PV01 Paradox Valley 70.30 327 IAmb IAmb 11 50 04.3
comp=Z,125nm,1.4s
PV15 Paradox Valley 70.41 328 IAmb IAmb 11 50 05.2
comp=Z,129nm,1.1s
PV02 Paradox Valley 70.44 327 IAmb IAmb 11 50 05.2
comp=Z,146nm,1.5s
PV13 Radium Mtn., P 70.44 327 IAmb IAmb 11 50 05.0
comp=Z,147nm,1.4s
RMX La Rumorosa 70.47 319 P P 11 50 03.1 +0.6
RMX IAmb IAmb 11 50 05.3
comp=Z,114nm,1.2s
PDMCI Parker Dam,Lak 70.49 321 P P 11 50 03.8 +1.4
baz=135,SNR=11
IKP In-Ko-Pah, Jac 70.52 319 P P 11 50 04.7 +2.0
baz=133,SNR=33
PV03 Paradox Valley 70.53 327 IAmb IAmb 11 50 05.5
comp=Z,140nm,1.7s
SWSC Sam W. Stewart 70.53 319 P P 11 50 04.2 +1.5
baz=134,SNR=15
PV18 Skein Mesa, Pa 70.55 327 IAmb IAmb 11 50 05.5
comp=Z,111nm,1.5s
PV12 Saucer Basin, 70.55 327 P P 11 50 04.0 +1.0
PV12 IAmb IAmb 11 50 06.0
comp=Z,272nm,2.0s
PV11 David Mesa, Pa 70.57 327 IAmb IAmb 11 50 05.8
comp=Z,186nm,1.7s
PV17 East Wray Mesa 70.60 327 IAmb IAmb 11 50 05.8
comp=Z,134nm,1.6s
PV16 Nyswonger Mesa 70.61 327 IAmb IAmb 11 50 06.0
comp=Z,130nm,1.7s
CBX Cerro Bola 70.63 318 P P 11 50 05.7 +2.2
PV04 Paradox Valley 70.66 327 IAmb IAmb 11 50 06.3
comp=Z,173nm,1.8s
PV22 Blue Mesa, Par 70.71 328 P P 11 50 04.6 +0.6
PV22 IAmb IAmb 11 50 06.6
comp=Z,141nm,1.4s
LSQQ Lebel-sur-Quev 70.72 354 P P 11 50 03.7 +0.2
baz=172
TKX Tecate 70.77 318 IAmb IAmb 11 50 06.2
comp=Z,118nm,1.3s
BC3 Big Chuckawall 70.81 320 P P 11 50 06.3 +1.7
baz=134,SNR=65
MONP2 Monument Peak 70.88 319 P P 11 50 06.9 +1.8
baz=133,SNR=30
W13A Hualapai Mount 70.91 322 IAmb IAmb 11 50 08.5
comp=Z,138nm,1.7s
IRM Iron Mountain 70.98 320 P P 11 50 07.1 +1.6
baz=134,SNR=98
NEE2 Needles Airpor 71.10 321 P P 11 50 07.8 +1.7
baz=135
DRLN Deer Lake 71.20 8 P P 11 50 07.0 +0.6
N23A Red Feather La 71.21 331 P P 11 50 08.2 +1.2
baz=143,SNR=26
N23A Red Feather La 71.21 331 P P 11 50 07.9 +0.9
109C Camp Elliot, M 71.30 318 P P 11 50 09.0 +1.7
baz=133,SNR=7.2
SUSD Miller 71.35 338 P P 11 50 07.1 -0.4
baz=150
CHGQ Chibougamau 71.36 356 P P 11 50 07.7 +0.3
baz=174,SNR=16
BELC Belle Mtn. Jos 71.38 320 P P 11 50 09.6 +1.6
baz=134,SNR=32
TPFO Pinon Flats 71.38 319 P P 11 50 09.7 +1.7
baz=133,SNR=36
PFO Pinyon Flats O 71.39 319 LR LR 12 18 21.5
comp=Z,246nm,18.7s,baz=104,slow=33
PFO Pinyon Flats O 71.39 319 *i* P **P 11 50 09.2 +1.2**
PFO pmax pmax
comp=Z,67nm,1.3s
PFO Pinyon Flats O 71.39 319 P P 11 50 09.7 +1.7
baz=133,SNR=35
PFO Pinyon Flats O 71.39 319 P P 11 50 09.7 +1.7
PFO IAmb IAmb 11 50 11.2
comp=Z,126nm,1.6s
O20A White River Ci 71.68 329 P P 11 50 11.0 +1.3
baz=141,SNR=53
O20A White River Ci 71.68 329 IAmb IAmb 11 50 12.4
comp=Z,76nm,0.8s
GMRC Granite Mounta 71.72 321 P P 11 50 12.0 +2.0
baz=134,SNR=99
MURC Murrieta 71.83 319 P P 11 50 12.1 +1.5
baz=133,SNR=19
LCMT Little Creek M 71.92 324 P P 11 50 12.5 +1.3
BBRC Big Bear Solar 72.11 319 P P 11 50 14.5 +1.9
baz=133,SNR=17
HEC Hector,Ludlow 72.15 320 P P 11 50 14.5 +1.9
baz=134,SNR=37
EYMN Ely 72.21 344 P P 11 50 12.0 -0.5
baz=158,SNR=15
SCI2 San Clemente I 72.26 317 P P 11 50 14.7 +1.6
baz=132,SNR=6.8
TUQ Turquoise Moun 72.33 321 P P 11 50 15.1 +1.5
baz=134,SNR=6.4
CIS Catalina Islan 72.45 318 P P 11 50 15.9 +1.6
baz=132
BFSC Mount Baldy Ra 72.55 319 P P 11 50 16.5 +1.5
baz=133,SNR=38
RRX Edison Barstow 72.58 320 P P 11 50 17.0 +2.1
baz=133
FMP Fort Macarthur 72.59 318 P P 11 50 16.4 +1.4
baz=132
SHPR Sheep Range 72.63 322 P P 11 50 16.0 +0.6
RDMU Red Mountain 72.66 328 P P 11 50 15.8 +0.2
KOWA Kowa 72.74 66 P P 11 50 15.7 -0.6
GSC Goldstone, Bar 72.75 320 P P 11 50 18.0 +1.8
baz=134,SNR=43
GSC Goldstone, Bar 72.75 320 IAmb IAmb 11 50 19.4
comp=Z,166nm,1.6s
MWC Mount Wilson 72.78 319 IAmb IAmb 11 50 19.3
comp=Z,226nm,1.6s
PASC Pasadena Art C 72.83 319 IAmb IAmb 11 50 19.5

comp=Z,127nm,1.3s
SHOC Shoshone, Teco 72.85 321 P P 11 50 18.2 +1.6
baz=134,SNR=20
K22A Casper 72.88 332 P P 11 50 17.7 +0.9
baz=143,SNR=6.2
DECC Green Verdugo 72.97 319 P P 11 50 18.9 +1.5
baz=132,SNR=12
RSSD Black Hills 73.02 334 P P 11 50 18.6 +1.0
RSSD pmax pmax
comp=Z,46nm,1.0s
RSSD Black Hills 73.02 334 P P 11 50 18.2 +0.6
baz=146
RSSD Black Hills 73.02 334 P P 11 50 18.6 +1.0
SNCC San Nicolas Is 73.05 317 P P 11 50 18.8 +1.0
baz=131
EDW2 Edwards Air Fo 73.18 319 P P 11 50 19.9 +1.3
baz=132,SNR=23
MPU Maple Canyon 73.27 327 P P 11 50 20.3 +1.1
PSUT Pine Spring 73.35 324 P P 11 50 20.9 +1.1
LRMC Laurel Mtn Rad 73.40 320 P P 11 50 21.5 +1.5
baz=133,SNR=24
OSI Osito Audit: C 73.45 319 P P 11 50 21.5 +1.3
baz=132
NLU North Lily Min 73.45 326 P P 11 50 21.3 +1.0
TPNV Topopah Spring 73.57 322 P P 11 50 22.8 +1.8
baz=134,SNR=70
TPNV Topopah Spring 73.57 322 IAmb IAmb 11 50 24.4
comp=Z,113nm,1.2s
FURC Furnace Creek, 73.59 321 P P 11 50 22.7 +1.9
baz=134,SNR=65
SCZ2 Santa Cruz Isl 73.61 318 P P 11 50 22.5 +1.4
baz=131,SNR=5.6
JLU Jordanelle 73.62 327 P P 11 50 21.5 +0.2
MPMC Manual Prospec 73.68 320 P P 11 50 23.1 +1.5
baz=133,SNR=34
AGMN Agassiz Nation 73.74 341 P P 11 50 21.6 +0.1
baz=154,SNR=11
TBI Tubuai 73.79 251 *e*P **P 11 50 23.8 +1.4**
comp=Z,285nm,1.5s
TBI *e*S **S 11 59 45.2 -0.3**
comp=Z,304nm,32.0s
TBI Tubuai 73.79 251 *e*LQ LQ 12 10 07.0
comp=Z,334nm,31.2s
TBI *e*LR LR 12 13 06.4
comp=Z,370nm,42.2s
ARVC Arvin 73.86 319 P P 11 50 24.1 +1.7
baz=132,SNR=12
SBC Santa Barbara 73.95 318 P P 11 50 23.9 +0.9
baz=131
ISA Isabella, Lake 74.00 320 P P 11 50 25.0 +1.6
baz=132,SNR=44
DUG Dugway, Tooele 74.01 326 P P 11 50 24.9 +1.5
baz=138,SNR=35
DUG Dugway, Tooele 74.01 326 IAmb IAmb 11 50 26.4
comp=Z,114nm,1.3s
MEH Mehetia 74.17 257 *e*P **P 11 50 26.0 +1.2**
comp=Z,40nm,1.3s
R11A Troy Canyon, C 74.17 323 P P 11 50 26.5 +2.0
baz=135,SNR=89
R11A Troy Canyon, C 74.17 323 P P 11 50 25.5 +1.0
GRAC Grapevine Rang 74.25 321 P P 11 50 26.6 +1.9
baz=133,SNR=12
CWC Cottonwood Cre 74.29 320 P P 11 50 26.9 +1.8
baz=133
PKM Mcpherson Peak 74.31 318 P P 11 50 27.0 +1.6
baz=131,SNR=29
BW06 Boulder Array 74.35 330 P P 11 50 26.2 +0.8
baz=141,SNR=32
BW06 Boulder Array 74.35 330 P P 11 50 25.4 0.0
PD31 Pinedale Array 74.35 330 P P 11 50 25.2 -0.3
PDAR Pinedale Array 74.35 330 P P 11 50 25.9 +0.4
comp=Z,9.6nm,0.7s,baz=128,slow=7.5,SNR=60
PDAR pP **pP 11 50 54.3 +0.6**
comp=Z,6.4nm,0.7s,baz=134,slow=8.5,SNR=4.6
PDAR Pinedale Array 74.35 330 P P 11 50 25.3 -0.1
HWUT Hardware Ranch 74.43 328 P P 11 50 26.3 +0.4
HWUT IAmb IAmb 11 50 28.1
comp=Z,184nm,1.6s
VES Vestal, Richgr 74.49 319 P P 11 50 27.8 +1.7
baz=132,SNR=42
MDND Maddock 74.53 339 P P 11 50 26.7 +0.6
baz=150,SNR=10
VAH Vaihoa 74.59 259 *e*P **P 11 50 28.5 +1.3**
comp=Z,216nm,1.4s
SMMC Simmler 74.70 318 P P 11 50 29.3 +1.9
baz=131,SNR=22
TIN Tinemaha, Big 74.79 321 P P 11 50 29.8 +1.8
baz=133,SNR=8.1
PMOR Pomariorio Ree 74.91 260 *e*P **P 11 50 30.4 +1.4**
comp=Z,429nm,1.5s
VOG Valley Oaks Go 74.99 320 P P 11 50 29.6 +0.6
baz=132
PAGB Antelope Grade 75.13 319 P P 11 50 30.8 +1.0
PAGB IAmb IAmb 11 50 32.9
comp=Z,130nm,1.3s
TVO Taravao 75.27 256 *e*P **P 11 50 32.5 +1.3**
comp=Z,52nm,1.4s
REDW Red Top Meadow 75.41 330 P P 11 50 32.1 +0.5
REDW IAmb IAmb 11 50 34.1
comp=Z,207nm,1.6s
TIAR Tiarei 75.43 257 *e*P **P 11 50 33.3 +1.3**
comp=Z,14nm,1.2s
ECR Eagle Creek 75.43 329 P P 11 50 32.3 +0.7
SNOW Snow King Moun 75.44 330 P P 11 50 32.3 +0.5
ULM Lac du Bonnet 75.50 342 P P 11 50 31.7 +0.1
comp=Z,11nm,0.5s,baz=170,slow=5.0,SNR=30
ULM Lac du Bonnet 75.50 342 *i* P **P 11 50 30.6 -1.0**
ULM Lac du Bonnet 75.50 342 IAmb IAmb 11 50 32.4
comp=Z,154nm,1.6s
MLAC Mammoth, Mammo 75.53 321 P P 11 50 34.3 +1.9
baz=132,SNR=19
TPAW Teton Pass 75.56 330 P P 11 50 32.5 +0.1
PAE Paea 75.61 256 *e*P **P 11 50 34.2 +1.2**
comp=Z,27nm,1.2s
PPTF Pamatai, Papee 75.61 257 P P 11 50 34.7 +1.6
PPTF IAmb IAmb 11 50 36.8
comp=Z,235nm,1.3s
PPT2 Papeete2 75.62 257 *e*P **P 11 50 34.6 +1.4**
comp=Z,160nm,1.3s
PPT2 *e*S **S 12 00 04.5 -1.8**
comp=Z,414nm,23.5s
PPT2 Papeete2 75.62 257 *e*LQ LQ 12 10 52.7
comp=Z,1µm,29.2s
PPT2 *e*LR LR 12 13 56.3
comp=Z,991nm,36.5s
PPT Papeete 75.63 257 P P 11 50 35.4 +2.2
comp=Z,99nm,1.1s,baz=107,slow=5.0,SNR=16
PPT LR LR 12 14 02.5
comp=Z,50nm,19.2s,baz=95,slow=28
MDPB Devils Postpil 75.68 321 P P 11 50 33.7 +0.5
NV11 Mina Array Sit 75.68 322 P P 11 50 33.1 -0.1
LHV Little Huntoon 75.76 322 P P 11 50 34.2 +0.9
NVAR Mina Array Bea 75.77 322 P P 11 50 35.0 +1.4
comp=Z,20nm,1.0s,baz=149,slow=6.3,SNR=127
NVAR pP **pP 11 51 02.8 +0.8**
comp=Z,9.1nm,0.9s,baz=133,slow=5.5,SNR=4.8
NVAR Mina Array Bea 75.77 322 P P 11 50 34.1 +0.4
PMPB Monarch Peak 75.78 319 IAmb IAmb 11 50 36.8
comp=Z,123nm,1.2s
IMW Indian Meadow 75.86 330 P P 11 50 34.8 +0.6
FLWY Flagg Ranch 75.89 330 P P 11 50 35.1 +0.9
FLWY IAmb IAmb 11 50 37.3
comp=Z,102nm,0.8s
LAO LASA Array 76.00 334 P P 11 50 35.5 +0.8
baz=144,SNR=6.4
LAO LASA Array 76.00 334 IAmb IAmb 11 51 05.0
comp=Z,88nm,1.1s
RYN Ryan 76.03 322 P P 11 50 35.9 +0.8
RLMT Red Lodge 76.05 332 P P 11 50 36.3 +1.2
baz=141,SNR=40
RLMT Red Lodge 76.05 332 P P 11 50 35.6 +0.5
RLMT IAmb IAmb 11 50 37.7
comp=Z,386nm,1.9s
KVN Kaiserville 76.07 322 P P 11 50 36.0 +0.6
KVN pmax pmax
comp=Z,76nm,1.0s
KVN Kaiserville 76.07 322 P P 11 50 36.0 +0.6
H17A Grant Village 76.08 330 P P 11 50 37.7 +2.3
baz=140,SNR=9.7
H17A Grant Village 76.08 330 P P 11 50 37.1 +1.8
YPP Pitchstone Pla 76.08 330 P P 11 50 37.0 +1.6
SCHQ Schefferville 76.11 1 P P 11 50 35.5 +0.5
comp=Z,26nm,0.9s,baz=180,slow=5.3,SNR=13
LKWY Lake 76.12 331 P P 11 50 37.4 +1.8
LKWY pmax pmax
comp=Z,72nm,1.1s
LKWY Lake 76.12 331 P P 11 50 37.4 +1.8

YMP Mirror Lake Pl 76.15 331 P P 11 50 36.3 +0.5
YNE Yellowstone No 76.29 331 P P 11 50 37.4 +0.8
YUF Upper Falls 76.29 331 P P 11 50 39.2 +2.6
SYO Syowa Base 76.31 159⇑ iP P 11 50 35.4 -0.6
SYO Syowa Base 76.31 159⇑ iPcP PcP 11 50 45.2 -2.3
YNR Norris Junctio 76.37 331 P P 11 50 39.1 +2.1
YMR Madison River 76.46 330 P P 11 50 38.9 +1.4
WAKR Walker 76.47 321 P P 11 50 38.8 +1.1
WAKR IAmb IAmb 11 50 41.1
comp=Z,120nm,1.5s
SAO San Andreas Ge 76.53 319 P P 11 50 38.7 +0.9
SAO pmax pmax
comp=Z,25nm,1.1s
SAO San Andreas Ge 76.53 319 P P 11 50 38.7 +0.9
YHB Horse Butte 76.63 330 P P 11 50 39.7 +1.3
DGMT Dagmar 76.68 337 P P 11 50 39.4 +1.0
baz=146
YHL Hebgen Lake 76.70 330 P P 11 50 40.2 +1.3
CMB Columbia Colle 76.72 320 P P 11 50 38.9 0.0
CMB pmax pmax
comp=Z,57nm,1.6s
CMB Columbia Colle 76.72 320 P P 11 50 38.9 0.0
GCMT Greycliff 76.74 332 P P 11 50 39.4 +0.4
VNDA Vanda 76.83 190 P P 11 50 40.8 +2.0
comp=Z,13nm,1.0s,baz=134,slow=5.3,SNR=60
VNDA Vanda 76.83 190 P P 11 50 40.8 +2.0
PNTR Pine Nut 76.96 322 P P 11 50 41.8 +1.4
PNTR IAmb IAmb 11 50 43.6
comp=Z,90nm,1.1s
TOA0 Torodi Ar. Sit 77.06 70 IAmb IAmb 11 50 42.6
comp=Z,94nm,0.9s
TORD Torodi Ar. Bea 77.06 70 P P 11 50 40.9 -0.4
comp=Z,75nm,0.9s,baz=257,slow=5.4,SNR=238
TORD S S 12 00 19.4 -2.5
comp=Z,6.7nm,1.0s,baz=252,slow=9.7,SNR=10
TORD LR LR 12 23 27.0
comp=Z,475nm,21.4s,baz=350,slow=35
TORD Torodi Ar. Bea 77.06 70 P P 11 50 40.9 -0.4
VCNR Virginia City 77.12 322 P P 11 50 42.6 +1.3
PAHR Pah Rah Range 77.25 322 IAmb IAmb 11 50 45.0
comp=Z,146nm,1.0s
RUBR Rubicon Trail 77.25 321 P P 11 50 43.6 +1.5
HLID Hailey 77.29 328 P P 11 50 43.9 +1.7
baz=137,SNR=139
HLID Hailey 77.29 328 IAmb IAmb 11 50 45.3
comp=Z,101nm,1.0s
BCYI Bear Canyon 77.35 329 P P 11 50 43.4 +1.0
BOZ Bozeman (W) 77.47 331 P P 11 50 43.2 +0.1
BOZ pmax pmax
comp=Z,94nm,1.7s
BOZ Bozeman (W) 77.47 331 P P 11 50 44.3 +1.3
baz=140,SNR=23
BOZ Bozeman (W) 77.47 331 P P 11 50 43.2 +0.1
DLMT Dillon 77.75 330 P P 11 50 45.5 +0.9
DLMT IAmb IAmb 11 50 47.4
comp=Z,121nm,1.4s
MFID Camas Ranch 77.90 327 IAmb IAmb 11 50 48.5
comp=Z,164nm,1.4s
LRM Limekiln Ridge 78.02 330 P P 11 50 46.6 +0.4
SUR Sutherland 78.25 120 P P 11 50 48.8 +1.0
SUR IAmb IAmb 11 50 51.2
comp=Z,131nm,1.4s
ORV Oroville 78.37 321 IAmb IAmb 11 50 50.9
comp=Z,192nm,1.2s
EGMT Eagleton 78.52 333 P P 11 50 49.1 +0.4
baz=141,SNR=18
EGMT Eagleton 78.52 333 P P 11 50 48.5 -0.2
O03E Paynes Creek 79.03 321 P P 11 50 51.8 +0.1
baz=131,SNR=24
PLID Pearl Lake 79.18 328 IAmb IAmb 11 50 55.0
comp=Z,72nm,0.8s
J08A Circle Bar Ran 79.23 325 P P 11 50 54.1 +1.4
J08A IAmb IAmb 11 50 55.7
comp=Z,184nm,1.6s
MSO Missoula 79.46 330 P P 11 50 55.2 +1.3
baz=138,SNR=28
BMO Blue Mountains 79.67 327 P P 11 50 56.4 +1.3
BMO pmax pmax
comp=Z,94nm,1.1s
BMO Blue Mountains 79.67 327 P P 11 50 56.4 +1.3
BMO IAmb IAmb 11 50 57.6
comp=Z,94nm,1.1s
KCPM Cahto Peak 79.69 320 IAmb IAmb 11 50 58.5
comp=Z,97nm,1.1s
TSUM Tsumeb 79.69 107 P P 11 50 56.7 +0.8
TSUM IAmb IAmb 11 50 59.9
comp=Z,129nm,0.8s
N02D Trinity Center 79.99 321 P P 11 50 57.4 +0.5
baz=130,SNR=18
M04C Macdoel 80.02 322 P P 11 50 58.1 +1.0
baz=131
KMRM Mail Ridge 80.10 320 IAmb IAmb 11 51 00.6
comp=Z,171nm,1.2s
K05A Summer Lake 80.11 324 IAmb IAmb 11 51 00.7
comp=Z,176nm,1.0s
I07A Izee 80.27 325 P P 11 50 59.8 +1.5
I07A IAmb IAmb 11 51 01.2
comp=Z,112nm,1.2s
JTMT Jette 80.30 331 P P 11 50 59.5 +1.1
M02C Callahan 80.35 322 P P 11 50 59.6 +0.8
baz=130,SNR=11
K04D Chiloquin, OR 80.52 323 P P 11 51 00.7 +1.0
baz=131,SNR=11
L04D Klamath Falls 80.56 323 P P 11 51 00.7 +0.8
baz=131,SNR=11
J05D Fort Rock, OR 80.67 324 P P 11 51 02.1 +1.6
baz=132,SNR=39
G08A Pilot Rock 80.81 327 IAmb IAmb 11 51 03.7
comp=Z,138nm,1.7s
PINE Pine Mountain 80.84 324 IAmb IAmb 11 51 04.5
comp=Z,134nm,0.9s
KRMB Red Mountain 81.04 321 IAmb IAmb 11 51 05.2
comp=Z,84nm,1.0s
WALA Waterton Lakes 81.10 332 P P 11 51 02.9 +0.2
J04D Umpqua Nationa 81.12 323 P P 11 51 04.1 +1.1
baz=131,SNR=20
FFC Flin Flon 81.22 341 P P 11 51 03.0 0.0
FFC pmax pmax
comp=Z,67nm,1.4s
FFC Flin Flon 81.22 341 P P 11 51 03.0 0.0
L02E Cave Junction 81.27 322 P P 11 51 05.0 +1.4
baz=130,SNR=11
I05D Terrebonne, OR 81.42 325 P P 11 51 05.9 +1.5
baz=132,SNR=24
K02D Willamette Mer 81.64 322 P P 11 51 07.0 +1.3
baz=130,SNR=18
I04A Tendick Farm, 81.65 324 P P 11 51 06.3 +0.7
baz=131,SNR=9.1
KBO Bosley Butte 81.66 322 IAmb IAmb 11 51 08.8
comp=Z,219nm,1.4s
HAWA Hanford 81.86 327 P P 11 51 07.5 +1.0
HAWA IAmb IAmb 11 51 09.2
comp=Z,387nm,1.9s
NEW Newport 81.99 330 P P 11 51 07.4 +0.2
baz=135,SNR=14
G05D Wamic, OR 82.01 325 P P 11 51 08.5 +1.1
baz=132,SNR=10
J01E Myrtle Point 82.09 323 P P 11 51 09.0 +1.2
baz=130
I03D Drain, OR 82.11 323 P P 11 51 09.1 +1.2
baz=130,SNR=7.3
E07A Sunnyside 82.14 327 IAmb IAmb 11 51 10.8
comp=Z,178nm,1.9s
C09A Chrisman Ranch 82.21 329 P P 11 51 09.4 +1.0
C09A IAmb IAmb 11 51 10.7
comp=Z,103nm,0.8s
H04D Lebanon 82.30 324 P P 11 51 09.6 +0.8
baz=130
F05D White Salmon 82.51 326 P P 11 51 11.4 +1.4
baz=132,SNR=7.5
I02D Swisshome 82.64 323 P P 11 51 12.3 +1.6
baz=130
COR Corvallis 82.65 324 P P 11 51 12.3 +1.6
COR pmax pmax
comp=Z,333nm,1.5s
COR Corvallis 82.65 324 P P 11 51 12.3 +1.6
FCC Fort Churchill 82.79 347 P P 11 51 11.4 +0.4
FCC pmax pmax
comp=Z,53nm,0.9s
FCC Fort Churchill 82.79 347 P P 11 51 11.4 +0.4
G03D McMinnville, O 83.03 324 P P 11 51 15.0 +2.3
baz=130
B08A Colville Reser 83.11 329 P P 11 51 13.1 0.0
BOSA Boshof 83.11 118 P P 11 51 13.8 0.0
comp=Z,24nm,0.7s,baz=271,slow=5.5,SNR=6.2
F04D Rainier, OR 83.46 325 P P 11 51 15.9 +1.1
baz=130
RAR Rarotonga 83.51 250 P P 11 51 15.9 +0.2
comp=Z,18nm,0.9s,baz=219,slow=6.5,SNR=3.7
RAR LR LR 12 19 00.6
comp=Z,323nm,19.4s,baz=110,slow=29
E04D Cinebar 83.53 326 P P 11 51 16.0 +0.8
baz=131
MAW Mawson 84.16 163 P P 11 51 19.0 +0.9
comp=Z,9.6nm,0.6s,baz=212,slow=6.3,SNR=69
MAW Mawson 84.16 163 P P 11 51 19.0 +0.9
B06A Marblemount 84.27 328 P P 11 51 18.7 -0.2
B06A IAmb IAmb 11 51 20.2
comp=Z,59nm,0.8s
B05A Bryant 84.41 327 P P 11 51 19.5 0.0
baz=131,SNR=14
D03D Eldon 84.44 326 P P 11 51 19.1 -0.6
baz=130,SNR=6.1
TAM Tamanrasset 84.56 63 IAmb IAmb 11 51 53.9
comp=Z,76nm,1.2s
A04D Lummi Island 85.02 327 P P 11 51 23.2 +0.6
baz=131
PAB San Pablo 85.33 44 P P 11 51 25.7 +1.1
PAB pmax pmax
comp=Z,47nm,1.3s
PAB San Pablo 85.33 44 P P 11 51 25.7 +1.1
PGC Sidney 85.34 327 P P 11 51 24.1 -0.2
PGC IAmb IAmb 11 51 26.4
comp=Z,82nm,1.1s
ESDC Sonseca Array 85.66 44 P P 11 51 26.9 +0.7
comp=Z,11nm,1.0s,baz=241,slow=4.6,SNR=20
ESDC pP pP 11 51 56.8 +1.8
comp=Z,25nm,1.1s,baz=242,slow=5.3,SNR=8.1
ESDC LR LR 12 29 37.2
comp=Z,171nm,18.6s,baz=225,slow=36
ESDC Sonseca Array 85.66 44 P P 11 51 26.4 +0.3
XMAS Kiritimati 89.72 272 P P 11 51 47.8 +1.7
LSZ Lusaka 90.55 107 P P 11 51 52.0 +1.8
LSZ pmax pmax
comp=Z,33nm,0.8s
LSZ Lusaka 90.55 107 P P 11 51 52.0 +1.8
LSZ IAmb IAmb 11 51 57.5
comp=Z,33nm,0.8s
YKA Yellowknife Ar 91.38 340 P P 11 51 52.9 +0.2
comp=Z,28nm,0.6s,baz=127,slow=5.4,SNR=90
CASY Casey 92.41 180 P P 11 51 58.1 +0.5
CASY IAmb IAmb 11 52 00.3
comp=Z,72nm,1.1s
ICESG Greenland Ices 92.80 10 e P 11 52 00.3 +0.8
ICESG i 11 52 15.6
KEST Kesra 93.08 53 P P 11 52 02.1 +0.8
comp=Z,3.8nm,0.8s,baz=247,slow=5.8,SNR=2.6
KEST LR LR 12 36 32.5
comp=Z,320nm,18.2s,baz=189,slow=37
DLBC Dease Lake 94.43 332 IAmb IAmb 11 52 38.1
comp=Z,27nm,1.1s
EKA Eskdalemuir Ar 94.51 31 pP pP 11 52 35.8 -0.7
comp=Z,11nm,1.2s,baz=231,slow=5.3,SNR=4.4
SUMG Summit 96.09 9 eP P 11 52 15.5 +0.9
SUMG Summit 96.09 9 iP P 11 52 15.5 +0.9
SUMG Summit 96.09 9 eP P 11 52 15.6 +0.9
DAVOX Davos/Dischmat 97.89 43 P Pdif 11 52 23.4 +0.2
comp=Z,1.5nm,0.3s,baz=339,slow=12,SNR=3.5
FETA Feichten 98.52 43 eP Pdif 11 52 28.8 +2.9
comp=Z,9.8nm,1.5s
RETA Reutte 98.72 42 eP Pdif 11 52 27.9 +1.2
comp=Z,7.9nm,1.2s
MOTA Moosalm 98.88 43 eP Pdif 11 52 29.3 +1.9
comp=Z,7.9nm,1.2s
SQTA Sankt Quirin 98.90 43 eP Pdif 11 52 29.2 +1.7
comp=Z,8.4nm,0.7s
WATA Walderalm 99.18 43 eP Pdif 11 52 31.8 +3.0
comp=Z,2.2nm,0.4s
WTTA Wattenberg 99.19 43 eP Pdif 11 52 31.6 +2.7
comp=Z,8.8nm,0.9s
ABTA Abfaltersbach 99.56 44 eP Pdif 11 52 33.5 +3.1
comp=Z,4.0nm,0.8s
GERES GERESS Array B 101.05 42 P Pdif 11 52 37.4 +0.4
comp=Z,0.6nm,0.6s,baz=294,slow=7.0,SNR=4.0
CLL Collm 101.47 39 ePP PP 11 56 46.0 -4.0
K27K Chicken 102.25 334 P Pdif 11 52 42.1 +0.3
baz=114
L26K Log Cabin Wild 102.37 333 P Pdif 11 52 42.5 +0.1
baz=113
M24K Tolsona, Glenn 103.23 332 P Pdif 11 52 46.4 0.0
baz=111
ILAR Eielson Array 104.47 334 Pdiff Pdif 11 52 52.1 +0.4
comp=Z,0.5nm,0.9s,baz=77,slow=4.5,SNR=4.1
ILAR pP PKiKP 11 57 01.6 -5.7
comp=Z,0.7nm,0.9s,baz=102,slow=10,SNR=4.3
HFS Hagfors 104.70 31 PP PP 11 57 10.1 -3.8
comp=Z,8.0nm,0.9s,baz=174,slow=6.7,SNR=4.8
A21K Barrow 109.64 340 P PKiKP 11 57 17.3 +0.6
baz=99
FINES FINESS Array B 110.90 31 PKKPbc PKKPbc 12 08 18.0 -1.4
comp=Z,4.9nm,1.1s,baz=128,slow=3.1,SNR=3.5
DZM Mont Dzumac 111.02 234 eLR LR 12 30 28.6
comp=Z,384nm,30.4s
AKASG Malin Array 111.24 43 PKKPbc PKKPbc 12 08 16.4 -1.5
comp=Z,0.4nm,0.3s,baz=68,slow=2.6,SNR=4.8
ARCES ARCESS Array B 111.44 22 PKKPbc PKKPbc 12 08 16.8 -1.1
comp=Z,3.6nm,0.9s,baz=62,slow=2.9,SNR=3.5
BRTR Keskin Array B 112.60 55 PKiKP PKiKP 11 57 24.0 +0.5
comp=Z,1.3nm,0.7s,baz=198,slow=3.6,SNR=4.2
OBN Obninsk 116.03 38 ePKiKP PKPdf 11 57 28.8 -0.5
OBN pmax pmax
comp=Z,9.0nm,1.0s
KLMR Klimovskoe 117.40 32 ePKiKP PKPdf 11 57 31.1 -0.7
KLMR pmax pmax
comp=Z,18nm,1.2s
KLMR Klimovskoe 117.40 32 ePKPdf PKPdf 11 57 31.2 -0.6
KLMR AMP 11 57 33.1
comp=Z,18nm,1.2s
KLMR ePKKPbc PKKPbc 12 07 50.2 -6.9
STKA Stephens Creek 119.51 209 PKP PKiKP 11 57 37.5 +0.5
comp=Z,7.1nm,0.9s,baz=173,slow=2.4,SNR=11
STKA Stephens Creek 119.51 209 PKPdf PKiKP 11 57 37.1 +0.2
KIV Kislovodsk 119.76 51 ePKiKP PKiKP 11 57 37.8 +0.7
KIV pmax pmax
comp=Z,24nm,1.0s
KBZ Khabaz 119.91 51 PKP PKiKP 11 57 38.4 +1.1
comp=Z,8.8nm,0.9s,baz=236,slow=24,SNR=12
KBZ Khabaz 119.91 51c iPKiKP PKiKP 11 57 38.6 +1.4
ZEI Tsey 120.61 52 iPKiKP PKiKP 11 57 39.2 +0.3
ZEI pmax pmax
comp=Z,5.0nm,0.8s
GNI Garni 121.13 55 iPKiKP PKiKP 11 57 40.8 +0.8
BILL Bilibino 122.72 339 iPKiKP PKiKP 11 57 42.0 -0.1
MAK Makhachkala 123.26 52 eP Pdif 11 54 15.3 -0.4
MAK i 11 57 41.7
MAK e 11 59 27.1
MAK ePPP PPP 12 02 06.6
MAK eSS SS 12 16 03.5 +0.3
MAK eSSS SSS 12 20 42.0
MAK pmax pmax
comp=Z,388nm,1.3s
NWAO Narrogin (SRO) 125.52 186 PKP PKiKP 11 57 48.7 -0.1
comp=Z,11nm,1.0s,baz=231,slow=6.8,SNR=4.2
CTA Charters Tower 126.40 222 PKP PKiKP 11 57 51.5 +0.6
comp=Z,14nm,0.9s,baz=180,slow=4.5,SNR=9.9
ARU Arti 128.03 34 PKP PKiKP 11 57 52.9 -0.1
comp=Z,2.2nm,0.5s,baz=295,slow=2.1,SNR=12
ARU Arti 128.03 34 iPKiKP PKiKP 11 57 53.5 +0.6
ARU 11 59 56.7
ARU 12 04 57.4
ARU SP SP 12 09 52.4 +1.0
H11S2 WAKE ISLAND Hyl 28.22 277 T T 14 17 35.3
baz=102,SNR=383
H11S1 WAKE ISLAND Hyl 28.23 277 T T 14 17 35.2
baz=102,slow=74,SNR=181
H11S3 WAKE ISLAND Hyl 28.24 277 T T 14 17 37.7
baz=102,slow=74,SNR=160
H11N3 WAKE ISLAND Hyl 28.30 279 T T 14 17 39.3
baz=103,slow=75,SNR=147
H11N2 WAKE ISLAND Hyl 28.32 279 T T 14 17 46.1
baz=103,slow=75,SNR=116
H11N1 WAKE ISLAND Hyl 28.32 279 T T 14 17 43.3
baz=103,slow=75,SNR=117
AKTO Aktyubinsk 129.47 42 PKP PKPdf 11 57 55.7 +0.4
comp=Z,5.9nm,0.8s,baz=286,slow=2.2,SNR=14
ASAR Alice Springs 130.00 207 PKHKP PKPpre 11 57 44.2
comp=Z,0.7nm,1.0s,baz=129,slow=1.7,SNR=8.9
ASAR PKP PKPdf 11 57 57.2 0.0
comp=Z,25nm,0.9s,baz=147,slow=2.2,SNR=108
ASAR pPKP pPKPdf 11 58 26.3 -1.1
comp=Z,8.2nm,1.1s,baz=130,slow=1.6,SNR=2.7
ASAR SKPab SKPbc 12 01 11.4 +1.0
comp=Z,1.9nm,0.9s,baz=146,slow=5.4,SNR=5.6
NRIK Noril'sk 130.08 11 PKP PKiKP 11 57 57.2 +0.5
comp=Z,3.6nm,0.7s,baz=91,slow=2.9,SNR=7.1
NRIK Noril'sk 130.08 11 iPKiKP PKiKP 11 57 56.7 0.0
SEY Seymchan 130.31 337 iPKiKP PKiKP 11 57 57.6 +0.3
ABKAR Akbulak array 130.98 43 PKPdf PKiKP 11 57 59.1 0.0
GEYT Alibeck 131.55 58 PKP PKiKP 11 58 00.3 -0.4
comp=Z,2.2nm,0.5s,baz=300,slow=3.3,SNR=5.5
GEYT SKPbc SKPab 12 01 17.7 +1.5
comp=Z,4.3nm,0.8s,baz=243,slow=6.2,SNR=8.6
PETK Petropavlovsk- 132.83 324 PKP PKiKP 11 58 02.9 +0.2
comp=Z,10nm,1.0s,baz=96,slow=2.6,SNR=9.1
PETK SKPab SKPab 12 01 20.8 -0.3
comp=Z,25nm,1.2s,baz=72,slow=9.5,SNR=3.6
WRA Warramunga Arr 133.05 210 PKhKP PKPpre 11 57 49.5
comp=Z,1.2nm,1.1s,baz=161,slow=2.0,SNR=6.5
WRA PKP PKiKP 11 58 03.7 -0.6
comp=Z,25nm,0.9s,baz=155,slow=1.7,SNR=25
WRA PP PP 12 00 26.3 -2.6
comp=Z,3.4nm,1.2s,baz=152,slow=5.4,SNR=4.5
WRA SKPab SKPbc 12 01 21.7 +0.3
comp=Z,7.8nm,1.0s,baz=152,slow=3.0,SNR=11
WRAB Tennant Creek 133.06 210 iPKiKP PKPdf 11 58 02.4 -0.7
PMG Port Moresby 133.34 232 PKP PKiKP 11 58 05.2 +0.3
comp=Z,35nm,1.1s,baz=7.5,slow=1.8,SNR=6.0
PMG Port Moresby 133.34 232 iPKiKP PKPdf 11 58 03.2 -0.5
BRVK Borovoye 135.60 35 iPKiKP PKPdf 11 58 07.4 +0.7
YAK Yakutsk 137.67 347 ePKiKP PKPdf 11 58 09.7 -0.6
YAK e 12 00 57.9
YAK pmax pmax
comp=Z,35nm,1.2s
YAK pmax pmax
comp=N,2.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=Z,169nm,4.7s
YAK pmax pmax
comp=N,112nm,3.9s
YAK pmax pmax
comp=E,133nm,4.3s
FITZ Fitzroy Crossi 138.19 200 PKhKP PKPpre 11 58 04.3
comp=E,5.2nm,0.9s,baz=182,slow=6.0,SNR=7.0
FITZ PKP PKiKP 11 58 13.8 -0.8
comp=E,24nm,1.1s,baz=205,slow=6.1,SNR=12
BRZS Berezniki 138.39 38 ePKP PKPdf 11 58 12.4 +0.3
baz=38
BRZS Berezniki 138.39 38 ePKiKP PKPdf 11 58 12.3 +0.3
IUG luzhnay 139.77 50 ePKP PKPdf 11 58 15.5 +0.5
comp=E,1.7nm,0.8s,baz=50
IUG luzhnay 139.77 50 ePKiKP PKPdf 11 58 15.4 +0.5
IUG pmax pmax
comp=Z,2.0nm,0.8s
DZA Taraz 140.45 48 ePKP PKPdf 11 58 15.9 -0.2
baz=48
DZA Taraz 140.45 48 ePKiKP PKPdf 11 58 15.8 -0.2
KURK Kurchatov 141.21 33 iPKiKP PKiKP 11 58 19.2 -0.6
KURK Kurchatov 141.21 33 PKPdf PKPdf 11 58 14.9 -2.2
BTLS Baital 141.45 44 ePKP PKPdf 11 58 18.2 +0.5
comp=Z,1.9nm,1.3s,baz=44
BTLS Baital 141.45 44 ePKiKP PKPdf 11 58 18.2 +0.5
BTLS pmax pmax
comp=Z,2.0nm,1.3s
ZALV Zalesovo Beam 141.88 25 PKhKP PKPpre 11 58 14.1
comp=Z,5.9nm,0.7s,baz=305,slow=5.2,SNR=18
ZALV PKP PKPdf 11 58 19.4 +1.2
comp=Z,14nm,0.7s,baz=289,slow=2.4,SNR=22
ZALV SKPbc SKiKP 12 01 47.5 -0.2
comp=Z,3.2nm,0.8s,baz=316,slow=4.0,SNR=3.5
SGDS Sogindy 142.49 46 ePKP PKPdf 11 58 20.3 +0.5
baz=46
SGDS Sogindy 142.49 46 ePKiKP PKPdf 11 58 20.2 +0.5
AAK Ala-Archa 142.71 47 iPKiKP PKPdf 11 58 20.6 +0.3
KUU Kurty 143.43 44 ePKP PKPbc 11 58 20.1 +1.3
comp=Z,9.7nm,0.9s,baz=45
BOD Bodaibo 143.76 358 ePKHKP PKPab 11 58 17.7 -0.8
BOD pmax pmax
comp=Z,51nm,1.4s
AAA Alma-Ata 144.10 45 ePKP PKPdf 11 58 22.8 +0.2
baz=45
AAA Alma-Ata 144.10 45 ePKiKP PKPdf 11 58 22.8 +0.2
TNSS Tian-Shan 144.20 45 ePKP PKPdf 11 58 23.6 +0.3
comp=Z,117nm,1.2s,baz=46
TNSS Tian-Shan 144.20 45 ePKiKP PKPdf 11 58 23.5 +0.3
TNSS pmax pmax
comp=Z,117nm,1.2s
MDOK Medeo 144.21 45 ePKP PKPdf 11 58 22.4 -0.5
comp=Z,207nm,1.2s,baz=45
MDOK Medeo 144.21 45 ePKiKP PKPdf 11 58 22.3 -0.6
MDOK pmax pmax
comp=Z,207nm,1.2s
YSS Yuzh-Sakhalins 144.21 323 kePKiKP PKPbc 11 58 21.0 0.0
YSS pmax pmax
comp=Z,50nm,1.2s
YSS pmax pmax
comp=Z,300nm,2.6s
YSS MLR MLR
comp=Z,300nm,14.0s
YSS MLR MLR
comp=N,200nm,15.0s
TDK Taldyqorghan 144.22 41 ePKP PKPdf 11 58 22.4 -0.3
baz=42
TDK Taldyqorghan 144.22 41 ePKiKP PKPdf 11 58 22.3 -0.3
KSH Kashi 144.89 51 PKP PKPdf 11 58 24.3 +0.2
KSH pPKP pPKPdf 11 58 52.7 -2.0
KSH SS SS 12 20 22.1 -1.7
KSH AMB AMB
comp=N,810nm,10.2s
KSH LR LR
comp=N,330nm,5.4s
KSH LR LR
comp=N,280nm,4.8s
KSH LR LR
comp=N,600nm,7.1s
KPKS Kokpek 145.13 44 ePKP PKPbc 11 58 24.2 0.0
comp=N,51nm,1.4s,baz=44
SATY Saty 145.14 44 ePKP PKPbc 11 58 24.3 +0.1
comp=N,15nm,1.4s,baz=45
SATY Saty 145.14 44 ePKiKP PKPbc 11 58 24.3 +0.1
SATY pmax pmax
comp=Z,15nm,1.4s
MAKZ Makanchi 145.32 36 PKiKP PKPab 11 58 25.4 +0.6
MAKZ Makanchi 145.32 36 PKPdf PKPab 11 58 25.4 +0.6
PRZ Przheval'sk 145.40 45 PKiKP PKiKP 11 58 27.9 -1.1
PRZ Przheval'sk 145.40 45 PKiKP 11 58 27.9 -1.1
MK31 Makanchi Array 145.50 36 iPKiKP PKPab 11 58 25.4 -0.1
MKAR Makanchi Array 145.50 36 PKPbc PKPab 11 58 25.7 +0.2
comp=Z,14nm,0.7s,baz=329,slow=4.2,SNR=102
MKAR pPKPbc pPKPdf 11 58 55.8 +0.6
comp=Z,55nm,0.8s,baz=316,slow=3.3,SNR=10
MKAR SKPbc SKiKP 12 01 58.2 +2.7
comp=Z,2.6nm,0.8s,baz=305,slow=3.3,SNR=3.6
MKAR Makanchi Array 145.50 36 PKPdf PKPab 11 58 25.9 +0.4
ZEA Zeya 145.71 343 iPKP2 PKPbc 11 58 25.5 0.0
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=N,20nm,0.8s
ZEA pmax pmax
comp=Z,90nm,1.3s
SHLS Shalkode 145.78 44 ePKP PKPbc 11 58 26.2 0.0
comp=Z,8.3nm,0.8s,baz=44
SHLS Shalkode 145.78 44 ePKiKP PKPbc 11 58 26.2 0.0
SHLS pmax pmax
comp=Z,8.0nm,0.8s
BATI Baumata 146.21 202 PKPbc PKPab 11 58 29.9 +1.0
comp=Z,75nm,0.8s,baz=170,slow=0.5,SNR=6.6
ZSN Zaisan 146.46 33 ePKP PKPdf 11 58 26.8 +0.3
comp=Z,9.0nm,1.1s,baz=34
ZSN Zaisan 146.46 33 ePKiKP PKPdf 11 58 26.7 +0.3
ZSN pmax pmax
comp=Z,9.0nm,1.1s
ERM Erimo 146.51 315 PKP2 PKPab 11 58 30.0 +0.6
ERM Erimo 146.51 315 PKPab PKPab 11 58 30.0 +0.6
GUMO Guam 147.22 262 PKiKP PKPbc 11 58 30.0 -1.0
GUMO Guam 147.22 262 PKPbc 11 58 30.0 -1.0
KLR Kul'dur 148.04 335 diPKiKP PKPdf 11 58 29.1 +0.1
FAKI Fak Fak 148.26 222 PKPdf 11 58 32.0 +1.6
HYB Hyderabad 148.75 92 iPKP PKPdf 11 58 31.0 -0.1
HYB esPKP 11 59 08.5
TEY Ternei 148.79 324⇑ iePKiKP PKPdf 11 58 31.8 +1.5
TEY pmax pmax
comp=Z,20nm,1.4s
MOY Mondy 148.89 13 ePKiKP PKPbc 11 58 32.6 -1.9
MOY pmax pmax
comp=Z,147nm,1.6s

IRK	**Irkutsk**	**148.89**	**9**	*e*PKIKP	**PKPdf**	**11 58 31.6**	**+1.3**
IRK				pmax	pmax			
	comp=Z,143nm,2.3s							
TLY	**Talaya**	**149.35**	**10**	*i* PKHKP	**PKPdf**	**11 58 31.7**	**+0.6**
TLY	**Talaya**	**149.35**	**10**		**PKPdf**	**11 58 33.1**	**+2.1**
CIT	**Chita**	**149.57**	**357**	*e*PKHKP	**PKPdf**	**11 58 32.5**	**+1.1**
JAGI	**Jajag, Banyuwa**	**150.02**	**185**	PKPdf	**PKPdf**	**11 58 33.7**	**+0.5**
WMQ	**Urumqi**	**150.33**	**36**	*e*PKPbc	**PKPdf**	**11 58 32.6**	**-0.3**
WMQ				LR	LR			
	comp=Z,1μm,25.3s							
WMQ				LR	LR			
	comp=Z,360nm,21.9s							
ZAK	**Zakamensk**	**150.54**	**11**	*e*PKIKP	**PKPdf**	**11 58 33.6**	**+0.5**
ZAK				pmax	pmax			
	comp=Z,31nm,1.5s							
KMMI	**Kalianget**	**151.44**	**185**	PKP	**PKiKP**	**11 58 43.9**	**+1.9**
USRK	**Ussuriysk Ar.**	**151.76**	**328**	PKP	**PKPdf**	**11 58 36.0**	**+1.0**
	comp=Z,6.1nm,1.0s,baz=294,slow=1.1,SNR=13							
USRK				PKPbc	**PKiKP**	**11 58 41.9**	**+0.1**
	comp=Z,31nm,0.9s,baz=22,slow=1.5,SNR=45							
USRK	**Ussuriysk Ar.**	**151.76**	**328**	PKIKP	**PKPdf**	**11 58 36.0**	**+1.0**
KAPI	**Kappang**	**152.34**	**198**	PKP	**PKPdf**	**11 58 38.5**	**+1.7**
	comp=Z,10nm,0.9s,baz=205,slow=1.4,SNR=2.5							
KAPI				PKPbc	**PKiKP**	**11 58 44.7**	**+0.8**
	comp=Z,69nm,1.0s,baz=222,slow=2.3,SNR=13							
MJAR	**Matsushiro Arr**	**152.39**	**309**	PKP	**PKPdf**	**11 58 36.9**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=235,slow=2.4,SNR=2.1							
MJAR				PKPbc	**PKPbc**	**11 58 43.2**	**+0.1**
	comp=Z,28nm,0.9s,baz=83,slow=1.6,SNR=42							
MAT	**Matsushiro**	**152.39**	**309**	PKP	**PKPdf**	**11 58 36.7**	**+0.5**
MDJ	**Mudanjiang**	**152.58**	**331**	PKPbc	**PKPdf**	**11 58 37.0**	**+0.8**
PYUN	**Piuthan**	**153.41**	**70**	*e*P	**PKPdf**	**11 58 38.6**	**+0.4**
SONM	**Songino Array**	**153.49**	**8**	PKP	**PKPdf**	**11 58 39.2**	**+1.6**
	comp=Z,12nm,0.9s,baz=284,slow=0.3,SNR=47							
SONM				PKPbc	**PKiKP**	**11 58 46.3**	**+0.9**
	comp=Z,7.1nm,0.8s,baz=347,slow=0.9,SNR=14							
SONM				pPKP	**pPKPdf**	**11 59 06.8**	**-1.4**
	comp=Z,7.8nm,0.6s,baz=314,slow=1.0,SNR=5.2							
KOLN	**Koldanda**	**153.99**	**71**	*e*P	**PKPdf**	**11 58 38.8**	**-0.2**
	comp=Z,38nm,1.4s							
DANN	**Dangsing**	**154.04**	**69**	*e*P	**PKPdf**	**11 58 39.9**	**+0.7**
	comp=Z,44nm,0.8s							
GKN	**Gorkha**	**154.86**	**70**	*e*P	**PKPdf**	**11 58 40.3**	**+0.1**
CN2	**Changchun**	**154.98**	**336**	*e*PKPbc	**PKPdf**	**11 58 39.6**	**0.0**
CN2				LR	LR			
	comp=Z,280nm,20.0s							
CN2				LR	LR			
	comp=Z,290nm,20.0s							
CN2				LR	LR			
	comp=Z,550nm,20.0s							
DMN	**Daman**	**155.33**	**71**	*e*P	**PKPdf**	**11 58 41.1**	**+0.1**
KKN	**Kakani**	**155.46**	**70**	*e*P	**PKPdf**	**11 58 41.6**	**+0.5**
PKIN	**Phulchoki**	**155.59**	**71**	*e*P	**PKPdf**	**11 58 41.1**	**-0.2**
PKI	**Pulchoki**	**155.60**	**71**	*e*P	**PKPdf**	**11 58 41.6**	**+0.2**
GUN	**Gumba**	**155.96**	**70**	*e*P	**PKPdf**	**11 58 42.5**	**+0.6**
RAMN	**Ramite**	**156.74**	**72**	*e*P	**PKPdf**	**11 58 43.0**	**+0.2**
	comp=Z,57nm,1.3s							
ODAN	**Odare**	**157.45**	**72**	*e*P	**PKPdf**	**11 58 43.9**	**+0.2**
	comp=Z,67nm,1.2s							
TAPN	**Taplejung**	**157.66**	**70**	*e*P	**PKPdf**	**11 58 44.2**	**+0.2**
	comp=Z,38nm,1.3s							
KSRS	**Korea Array**	**158.71**	**322**	PKP	**PKPdf**	**11 58 45.8**	**+1.2**
	comp=Z,14nm,1.0s,baz=56,slow=1.1,SNR=49							
KSRS				pPKP	**pPKPdf**	**11 59 16.6**	**+1.7**
	comp=Z,7.8nm,1.0s,baz=54,slow=1.1,SNR=5.6							
GTA	**Gaotai**	**159.63**	**27**	⇓PKP	**PKPdf**	**11 58 46.8**	**+1.0**
GTA				pPKP	pPKPdf	11 59 18.1	+1.8
GTA				PKPab	**PKPab**	**11 59 25.9**	**+1.3**
GTA				sPKP		11 59 30.4		
GTA				LR	LR			
	comp=Z,140nm,18.7s							
GTA				LR	LR			
	comp=Z,120nm,19.6s							
GTA				LR	LR			
	comp=Z,160nm,18.7s							
HHC	**Hu-ho-hao-te**	**160.79**	**360**	*e*PKP	**PKPdf**	**11 58 49.0**	**+2.0**
BJI	**Beijing**	**161.16**	**349**	PKP	**PKPdf**	**11 58 48.2**	**+0.9**
LZH	**Lanzhou**	**164.09**	**23**	*e*PKP	**PKPdf**	**11 58 50.9**	**+0.4**
LZH				pPKP	pPKPdf	11 59 17.8	-3.3
LZH				sPKP		11 59 28.4		
LZH				LR	LR			
	comp=Z,160nm,17.8s							
LZH				LR	LR			
	comp=Z,160nm,18.5s							
LZH				LR	LR			
	comp=Z,160nm,20.1s							
TIA	**Tai'an**	**164.61**	**342**	PKP	**PKPdf**	**11 58 51.5**	**+0.7**
XAN	**Xi'an**	**167.39**	**10**	PKP	**PKPdf**	**11 58 54.1**	**+1.0**
XAN				pPKP	pPKPdf	11 59 26.1	+2.4
NJ2	**Nanjing**	**167.66**	**329**	*e*PKP	**PKPdf**	**11 58 53.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**167.84**	**103**	PKP	**PKPdf**	**11 58 54.4**	**+0.6**
	comp=Z,6.2nm,0.9s,baz=271,slow=1.9,SNR=45							
CMAR				PKPab	**PKPab**	**12 00 01.8**	**+0.5**
	comp=Z,3.6nm,1.0s,baz=242,slow=5.8,SNR=6.6							
CMAR				PP	**PP**	**12 03 53.6**	**+3.2**
	comp=Z,5.0nm,1.0s,baz=258,slow=5.6,SNR=9.9							
CD2	**Chengdu**	**168.43**	**35**	PKP	**PKPdf**	**11 58 54.3**	**+0.4**
CD2				pPKP	pPKPdf	11 59 26.1	+1.6
GYA	**Guiyang**	**173.46**	**41**	⇓PKP	**PKPdf**	**11 58 57.0**	**+0.2**
GYA				PP	**PP**	**12 04 19.8**	**+2.4**
GYA				SKKS		12 10 55.9		
GYA				SS	**SS**	**12 25 21.5**	**-3.4**
GYA				AMB	AMB			
	comp=Z,280nm,16.7s							
QIZ	**Qiongzhong**	**177.04**	**149**	PKP	**PKPdf**	**11 58 56.2**	**-1.6**
QIZ				PP	**PP**	**12 04 32.5**	**-1.5**
QIZ				SS	SS	12 25 56.3	-1.8
QIZ				LR	LR			
	comp=Z,220nm,31.4s							
QIZ				LR	LR			
	comp=Z,280nm,20.6s							
QIZ				LR	LR			
	comp=Z,260nm,17.2s							

*KRNET **10** 11:50:23.9±0.1,40.°84N×69.°60E,mb2.5*
*SOME **10** 11:50:26.0,41.°07N×70.°25E,h0km*
*NNC **10** 11:50:27.7±5.7,41.°04N×70.°19E,h0km,mb3.3,mpv3.1,*
Error ellipse: s-maj=42.2km s-min=23.6km az=36.0
ISC 10 11:50:26.3±1.6,41.°04N±0.°04×70.°25E±0.°06,h18km±12km,
n15,σ1s65/26,11C-3D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.07**	**156**	⇑*i*P	**Pb**	**11 50 46.0**	**-0.4**
BTK	baz=30			⇑*i*S	**Sn**	**11 51 02.2**	**+1.2**
	baz=30						
IUG	**Iuzhnay**	**1.12**	**352**	*e*P	**Pg**	**11 50 47.4**	**-0.7**
	27nm,0.2s						
IUG				*e*S	**Sb**	**11 51 01.3**	**-0.3**
	16nm,0.3s						
IUG	**Iuzhnay**	**1.12**	**352**	P	**Pg**	**11 50 47.4**	**-0.7**
	27nm,0.2s						
IUG				S	**Sb**	**11 51 01.3**	**-0.3**
	16nm,0.3s						
OHH	**Osh**	**1.99**	**104**	⇑*i*P	**Pb**	**11 51 02.9**	**+0.8**
	baz=96						
OHH				⇑*i*S	**Sg**	**11 51 31.6**	**+1.1**
	baz=96						
BRLS	**Boroldav**	**2.01**	**351**	*e*P	**Pn**	**11 50 59.9**	**+0.5**
	15nm,0.3s						
BRLS				*e*S	**Sn**	**11 51 22.9**	**-1.3**
	9.4nm,0.2s						
BRLS	**Boroldav**	**2.01**	**351**	P	**Pn**	**11 50 59.9**	**+0.5**
	15nm,0.3s						
BRLS				S	**Sn**	**11 51 22.9**	**-1.3**
	9.4nm,0.2s						
KK31	**Karatay Array**	**2.07**	**5**	⇓Pn	**Pg**	**11 51 05.0**	**-1.1**
	1.2nm,0.3s,baz=191,slow=15,SNR=31						
KK31				⇓Sn	**Sg**	**11 51 34.3**	**+1.2**
	1.9nm,0.3s,baz=182,slow=26,SNR=8.0						
ARSB	**Arslanbob**	**2.08**	**81**	⇑*i*P	**Pg**	**11 51 05.9**	**-0.4**
	baz=78						
ARSB				⇑*i*S	**Sg**	**11 51 35.7**	**+2.3**
	baz=78						
MNAS	**Manas**	**2.22**	**49**	⇑*i*P	**Pb**	**11 51 07.1**	**+1.0**
	baz=52						
MNAS				⇑*i*S	**Sg**	**11 51 39.1**	**+1.2**
	baz=52						
MRKS	**Merke**	**2.80**	**52**	*e*P	**Pg**	**11 51 18.7**	**-1.3**
	4.9nm,0.5s						
MRKS				*e*S	**Sg**	**11 51 55.9**	**-0.5**
	4.3nm,0.5s						
MRKS	**Merke**	**2.80**	**52**	Pg	**Pb**	**11 51 16.9**	**+1.0**
	4.9nm,0.5s						
MRKS				Lg	Lg	11 51 52.4	
	4.3nm,0.5s						
AAK	**Ala-Archa**	**3.55**	**62**	⇑Pg	**Pg**	**11 51 32.2**	**-2.1**
	1.2nm,0.6s						
AAK				⇓Lg	Lg	11 52 22.7	
	2.0nm,0.7s						
TKM2	**Tokmak 2**	**4.41**	**63**	⇑Pg	**Pg**	**11 51 47.6**	**-3.2**
	5.3nm,1.2s						
TKM2				⇑Lg	Lg	11 52 47.0	
	2.3nm,0.6s						
KRBS	**Karabastau**	**4.82**	**55**	*e*P	**Pg**	**11 51 55.6**	**-2.9**
	0.8nm,0.5s						
KRBS				*e*S	**Sg**	**11 52 59.2**	**-1.7**
	1.7nm,0.5s						
KRBS	**Karabastau**	**4.82**	**55**	Pg	**Pb**	**11 51 53.6**	**+3.4**
	0.8nm,0.5s						
KRBS				Lg	Lg	11 52 55.3	
	1.4nm,0.6s						

*IDC **10** 12:03:20.4±0.9,51.°71N×172.°15E,h0km,mb4.0/21,*
mb1 4.2/22,mb1mx4.0/58,mbtmp4.1/22,ML3.4/1,Error
ellipse: s-maj=28.3km s-min=12.7km az=173.0
*MOS **10** 12:03:21.8±1.1,51.°60N×172.°11E,h29km,mb4.4/2,Error*
ellipse: s-maj=10.9km s-min=6.0km az=40.3
*NEIC **10** 12:03:24.5±1.3,51.°7N±0.°3×172.°2E±0.°1,h30km±7km,*
mb4.5/46,Error ellipse: s-maj=37.1km s-min=9.7km
az=183.0
*KRSC **10** 12:03:25.6±2.0,51.°61N×171.°12E,h16km±22km,ML4.6*
ISC 10 12:03:24.2±0.6,51.°52N±0.°08×172.°00E±0.°05,h35km,n137,
σ2s30/146,mb4.4/43,Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**4.57**	**89**	Pn	**Pn**	**12 04 27.5**	**-3.3**
MKZ	**Mys Kozlova**	**6.90**	**300**	*e*P	**Pn**	**12 05 02.5**	**-0.2**
MKZ				*e*S	**Sn**	**12 06 14.9**	**-5.0**
MKZ	**Mys Kozlova**	**6.90**	**300**	P	**Pn**	**12 05 02.5**	**-0.2**
MKZ				S	**Sn**	**12 06 14.9**	**-5.0**
ADK	**Adak**	**7.05**	**83**	P	**Pn**	**12 05 02.6**	**-2.2**
ADK	**Adak**	**7.05**	**83**	Pn	**Pn**	**12 05 02.6**	**-2.2**
KBTR	**Krutoberegovo**	**7.18**	**314**	*e*P	**Pn**	**12 05 06.7**	**+0.2**
KBTR				*e*S	**Sn**	**12 06 23.4**	**-3.3**
KBTR	**Krutoberegovo**	**7.18**	**314**	P	**Pn**	**12 05 06.7**	**+0.2**
KBTR				S	**Sn**	**12 06 23.4**	**-3.3**
SPN	**Mys Shipunski**	**7.51**	**287**	*e*P	**Pn**	**12 05 11.1**	**0.0**
SPN				*e*S	**Sn**	**12 06 29.5**	**-5.5**
SPN	**Mys Shipunski**	**7.51**	**287**	P	**Pn**	**12 05 11.1**	**0.0**
SPN				S	**Sn**	**12 06 29.5**	**-5.5**
KZV	**Kizimen**	**7.88**	**302**	*e*P	**Pn**	**12 05 16.8**	**+0.5**
KZV	**Kizimen**	**7.88**	**302**	P	**Pn**	**12 05 16.8**	**+0.5**
SMKR	**Semkarok**	**8.01**	**313**	*e*P	**Pn**	**12 05 19.5**	**+1.5**
SMKR				*e*S	**Sn**	**12 06 45.1**	**-2.1**
SMKR	**Semkarok**	**8.01**	**313**	P	**Pn**	**12 05 19.5**	**+1.5**
SMKR				S	**Sn**	**12 06 45.1**	**-2.1**
ZLN	**Zelenaya**	**8.02**	**309**	*e*P	**Pn**	**12 05 20.6**	**+2.5**
ZLN				*e*S	**Sn**	**12 06 45.3**	**-2.2**
ZLN	**Zelenaya**	**8.02**	**309**	P	**Pn**	**12 05 20.6**	**+2.5**
ZLN				S	**Sn**	**12 06 45.3**	**-2.2**
KII	**Karymskiy**	**8.02**	**293**	*e*S	**Sn**	**12 06 42.1**	**-5.4**
TUMR	**Tumrok**	**8.02**	**303**	*e*P	**Pn**	**12 05 18.9**	**+0.6**
TUMR				*e*S	**Sn**	**12 06 43.8**	**-3.9**
TUMR	**Tumrok**	**8.02**	**303**	P	**Pn**	**12 05 18.9**	**+0.6**
TUMR				S	**Sn**	**12 06 43.8**	**-3.9**
CIRR	**Tsirk**	**8.09**	**309**	*e*P	**Pn**	**12 05 21.5**	**+2.3**
CIRR	**Tsirk**	**8.09**	**309**	P	**Pn**	**12 05 21.5**	**+2.3**
BZWR	**Bezymyannyi-We**	**8.14**	**308**	*e*P	**Pn**	**12 05 22.5**	**+2.6**
BZWR	**Bezymyannyi-We**	**8.14**	**308**	P	**Pn**	**12 05 22.5**	**+2.6**
SRKR	**Sorokina**	**8.18**	**313**	*e*P	**Pn**	**12 05 21.6**	**+1.2**
SRKR	**Sorokina**	**8.18**	**313**	P	**Pn**	**12 05 21.6**	**+1.2**
SMAR	**Somma**	**8.26**	**287**	*e*P	**Pn**	**12 05 21.9**	**+0.3**
SMAR	**Somma**	**8.26**	**287**	P	**Pn**	**12 05 21.9**	**+0.3**
DALK	**Dalny**	**8.27**	**286**	*e*P	**Pn**	**12 05 21.7**	**+0.2**
DALK				*e*S	**Sn**	**12 06 47.3**	**-6.2**
DALK	**Dalny**	**8.27**	**286**	P	**Pn**	**12 05 21.7**	**+0.2**
DALK				S	**Sn**	**12 06 47.3**	**-6.2**
AVH	**Avacha**	**8.30**	**287**	*e*P	**Pn**	**12 05 23.1**	**+1.1**
AVH	**Avacha**	**8.30**	**287**	P	**Pn**	**12 05 23.1**	**+1.1**
KRX	**Arik**	**8.37**	**288**	*e*P	**Pn**	**12 05 23.6**	**+0.6**
KRX	**Arik**	**8.37**	**288**	P	**Pn**	**12 05 23.6**	**+0.6**
RUS	**Russkaya**	**8.38**	**282**	*e*P	**Pn**	**12 05 23.8**	**+0.8**
RUS				*e*S	**Sn**	**12 06 52.7**	**-3.6**
RUS	**Russkaya**	**8.38**	**282**	P	**Pn**	**12 05 23.8**	**+0.8**
RUS				S	**Sn**	**12 06 52.7**	**-3.6**
KRMR	**Karymshinskiy**	**8.63**	**284**	*e*P	**Pn**	**12 05 27.9**	**+1.5**
KRMR				*e*S	**Sn**	**12 06 57.4**	**-5.0**
KRMR	**Karymshinskiy**	**8.63**	**284**	P	**Pn**	**12 05 27.9**	**+1.5**
KRMR				S	**Sn**	**12 06 57.4**	**-5.0**
GRL	**Gorelyy**	**8.65**	**282**	*e*P	**Pn**	**12 05 28.4**	**+1.5**
GRL				*e*S	**Sn**	**12 06 58.1**	**-5.1**
GRL	**Gorelyy**	**8.65**	**282**	P	**Pn**	**12 05 28.4**	**+1.5**
GRL				S	**Sn**	**12 06 58.1**	**-5.1**
KDTR	**Khodutka, Kamc**	**8.66**	**277**	*e*P	**Pn**	**12 05 27.1**	**+0.2**
KDTR				*e*S	**Sn**	**12 06 58.6**	**-4.6**
KDTR	**Khodutka, Kamc**	**8.66**	**277**	P	**Pn**	**12 05 27.1**	**+0.2**
KDTR				S	**Sn**	**12 06 58.6**	**-4.6**
SRDR	**Sredinnyy**	**8.69**	**308**	*e*P	**Pn**	**12 05 30.6**	**+3.2**
SRDR	**Sredinnyy**	**8.69**	**308**	P	**Pn**	**12 05 30.6**	**+3.2**
ASAK	**Asacha**	**8.76**	**281**	*e*S	**Sn**	**12 07 01.3**	**-4.3**
GNL	**Ganaly**	**8.83**	**290**	*e*P	**Pn**	**12 05 30.4**	**+1.1**
GNL	**Ganaly**	**8.83**	**290**	P	**Pn**	**12 05 30.4**	**+1.1**
PEA0B	**Petropavlovsk-**	**8.91**	**286**	P	**Pn**	**12 05 32.3**	**+2.0**
PEA0B	**Petropavlovsk-**	**8.91**	**286**	Pn	**Pn**	**12 05 32.3**	**+2.0**
PETK	**Petropavlovsk-**	**8.91**	**286**	Pn	**Pn**	**12 05 32.0**	**+1.8**
	2.2nm,0.3s,baz=102,slow=19,SNR=29						
PETK				Sn	**Sn**	**12 07 05.2**	**-4.1**
	3.1nm,0.3s,baz=91,slow=20,SNR=8.3						
PETK	**Petropavlovsk-**	**8.91**	**286**		**Pn**	**12 05 31.8**	**+1.5**
UNV	**Unalaska Valle**	**13.24**	**71**	Pn	**Pn**	**12 06 28.6**	**-0.9**
SDPT	**Sand Point**	**16.79**	**66**	Pn	**Pn**	**12 07 14.2**	**-2.2**
CHGN	**Chignik**	**18.00**	**63**		**Pn**	**12 07 29.4**	**-1.9**
CHGN				lAmb	lAmb	12 07 38.4	
	comp=Z,73nm,1.4s						
OHAK	**Old Harbor**	**20.85**	**61**	P	**P**	**12 07 58.7**	**-4.0**
ASAJ	**Asahikawa**	**20.98**	**261**	P	**P**	**12 08 08.2**	**+4.0**
	comp=Z,2.4nm,0.8s,baz=89,slow=14,SNR=1.7						
KDAK	**Kodiak Island**	**21.24**	**59**	P	**P**	**12 08 03.8**	**-3.1**
KDAK	**Kodiak Island**	**21.24**	**59**	P	**P**	**12 08 03.8**	**-3.1**
CNPM	**China Poot**	**22.05**	**54**	P	**P**	**12 08 15.9**	**+0.3**
CNPM				lAmb	lAmb	12 08 33.2	
	comp=Z,33nm,1.2s						
PPLA	**Purkeypile**	**22.16**	**45**	P	**P**	**12 08 17.5**	**+0.6**
SKT	**Skwentna**	**22.26**	**48**	P	**P**	**12 08 19.1**	**+1.3**
SKT				lAmb	lAmb	12 08 19.4	
	comp=Z,24nm,1.2s						
KTH	**Kantishna Hill**	**22.88**	**44**	P	**P**	**12 08 24.1**	**-0.3**
KTH				lAmb	lAmb	12 08 25.3	
	comp=Z,12nm,0.8s						
O22K	**Cooper Landing**	**22.90**	**52**	P	**P**	**12 08 23.1**	**-1.4**
PMR	**Palmer**	**23.32**	**49**	P	**P**	**12 08 26.3**	**-2.4**
PMR				pmax	pmax			
	comp=Z,6.0nm,0.8s						
PMR	**Palmer**	**23.32**	**49**	P	**P**	**12 08 26.3**	**-2.4**
GHO	**Glory Hole Cre**	**23.44**	**49**	P	**P**	**12 08 28.3**	**-1.8**
GHO				lAmb	lAmb	12 08 47.4	
	comp=Z,20nm,1.3s						
SML	**Sawmill**	**23.72**	**49**	P	**P**	**12 08 31.5**	**-1.2**
SCM	**Sheep Creek Mo**	**24.20**	**49**	P	**P**	**12 08 35.4**	**-1.8**
SCM	**Sheep Creek Mo**	**24.20**	**49**	P	**P**	**12 08 35.4**	**-1.8**
COLD	**Coldfoot**	**24.31**	**35**	P	**P**	**12 08 39.3**	**+1.3**
A21K	**Barrow**	**24.36**	**24**	P	**P**	**12 08 37.3**	**-1.1**
A21K				lAmb	lAmb	12 08 50.7	
	comp=Z,21nm,1.1s						
MDM	**Murphy Dome**	**24.37**	**41**	P	**P**	**12 08 38.4**	**-0.2**
MDM				lAmb	lAmb	12 08 51.3	
	comp=Z,13nm,1.0s						
CCB	**Clear Creek Bu**	**24.47**	**42**	P	**P**	**12 08 38.7**	**-0.8**
HDA	**Harding Lake**	**24.78**	**43**	P	**P**	**12 08 40.5**	**-1.9**
IL31		**24.89**	**42**	P	**P**	**12 08 42.1**	**-1.1**
ILAR	**Eielson Array**	**24.89**	**42**	P	**P**	**12 08 42.4**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=248,slow=8.8,SNR=47						
YAK	**Yakutsk**	**24.99**	**311**	P	**P**	**12 08 43.9**	**-0.3**
	comp=Z,10nm,0.7s,baz=103,slow=1.1,SNR=7.7						
N25K	**Chitina, Valde**	**25.48**	**50**	P	**P**	**12 08 48.3**	**-0.5**
N25K				lAmb	lAmb	12 08 57.0	
	comp=Z,22nm,1.5s						
KLR	**Kul'dur**	**25.55**	**281**	P	**P**	**12 08 51.4**	**+1.9**
	comp=Z,2.9nm,0.7s,baz=83,slow=9.5,SNR=6.3						
GLB	**Gilahina Butte**	**25.84**	**50**	P	**P**	**12 08 51.4**	**-0.7**
GLB				lAmb	lAmb	12 09 05.6	
	comp=Z,12nm,0.9s						
DOT	**Dot Lake**	**25.91**	**45**	P	**P**	**12 08 52.1**	**-0.6**
DOT				lAmb	lAmb	12 08 53.1	
	comp=Z,7.5nm,0.7s						
FYU	**Fort Yukon**	**25.97**	**38**	P	**P**	**12 08 52.1**	**-0.9**
FYU				lAmb	lAmb	12 08 56.5	
	comp=Z,19nm,1.2s						
MENT	**Mentasta**	**25.99**	**47**	lAmb	lAmb	12 08 58.0	
	comp=Z,12nm,1.0s						
VRDI	**Verde Repeater**	**26.01**	**51**	P	**P**	**12 08 52.8**	**-1.0**
VRDI				lAmb	lAmb	12 08 54.6	
	comp=Z,15nm,1.1s						
CRQM	**Cirque**	**26.16**	**52**	P	**P**	**12 08 54.2**	**-0.8**
CRQM				lAmb	lAmb	12 09 05.8	
	comp=Z,16nm,1.1s						
MCARA	**McCarthy VSAT**	**26.22**	**50**	P	**P**	**12 08 54.8**	**-0.6**
MCARA				lAmb	lAmb	12 09 09.4	
	comp=Z,15nm,0.8s						
TGL	**Tana Glacier**	**26.31**	**52**	P	**P**	**12 08 55.8**	**-0.5**
TGL				lAmb	lAmb	12 09 09.8	
	comp=Z,16nm,1.0s						
BMAR	**Burnt Mountain**	**26.44**	**37**	P	**P**	**12 08 56.0**	**-1.4**
BALM	**Baldy**	**26.54**	**51**	P	**P**	**12 08 57.6**	**-0.9**
BALM				lAmb	lAmb	12 09 12.8	
	comp=Z,13nm,1.2s						
K27K	**Chicken**	**26.83**	**44**	P	**P**	**12 09 00.2**	**-0.6**
BCAR	**Beaver Creek A**	**26.88**	**47**	P	**P**	**12 08 59.8**	**-1.5**
CTGM	**Chitina Glacie**	**27.04**	**51**	P	**P**	**12 09 02.5**	**-0.5**
TABL	**Table Mountain**	**27.14**	**52**	P	**P**	**12 09 02.9**	**-1.1**
DAWY	**Dawson**	**28.01**	**45**	P	**P**	**12 09 11.7**	**+0.2**
HYT	**Haines Junctio**	**28.91**	**51**	lAmb	lAmb	12 09 33.1	
	comp=Z,6.7nm,0.8s						
EPYK	**Eagle Plains**	**29.30**	**40**	P	**P**	**12 09 22.1**	**-0.9**
INK	**Inuvik**	**30.71**	**36**	P	**P**	**12 09 34.4**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=265,slow=4.9,SNR=5.0						
INK	**Inuvik**	**30.71**	**36**	lAmb	lAmb	12 09 48.2	
	comp=Z,15nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**31.97**	**189**	T	T	12 43 39.0	
	baz=6.4,slow=76,SNR=3.1						
H11N3	**WAKE ISLAND Hy**	**31.98**	**189**	T	T	12 43 40.8	
	baz=6.4,slow=76,SNR=3.5						
H11N1	**WAKE ISLAND Hy**	**31.99**	**189**	T	T	12 43 41.4	
	baz=6.4,slow=76,SNR=3.6						
H11S1	**WAKE ISLAND Hy**	**33.20**	**189**	T	T	12 45 09.4	
	baz=6.2,slow=76,SNR=3.3						
H11S3	**WAKE ISLAND Hy**	**33.22**	**189**	T	T	12 45 11.5	
	baz=6.2,slow=76,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**33.22**	**189**	T	T	12 45 11.1	
	baz=6.2,slow=76,SNR=4.1						
YKA	**Yellowknife Ar**	**39.25**	**45**	P	**P**	**12 10 48.7**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=291,slow=6.1,SNR=7.4						
SONM	**Songino Array**	**41.34**	**292**	P	**P**	**12 11 08.5**	**+2.1**
	comp=Z,1.4nm,0.6s,baz=59,slow=11,SNR=6.5						
YBH	**Yreka Blue Hor**	**44.50**	**76**	P	**P**	**12 11 32.4**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=342,slow=6.4,SNR=2.3						
YBH	**Yreka Blue Hor**	**44.50**	**76**	lAmb	lAmb	12 11 45.5	
	comp=Z,9.1nm,1.1s						
NVAR	**Mina Array Bea**	**49.19**	**77**	P	**P**	**12 12 10.8**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=293,slow=7.7,SNR=7.9						
NVAR	**Mina Array Bea**	**49.19**	**77**	P	**P**	**12 12 07.9**	**-1.0**
SPITS	**Spitsbergen Ar**	**49.72**	**354**	P	**P**	**12 12 12.6**	**+0.5**
	comp=Z,4.6nm,0.8s,baz=11,slow=8.8,SNR=1.6						
PDAR	**Pinedale Array**	**51.66**	**67**	P	**P**	**12 12 27.4**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=300,slow=4.2,SNR=6.8						
ULM	**Lac du Bonnet**	**54.29**	**52**	P	**P**	**12 12 47.6**	**+1.2**
	comp=Z,3.1nm,0.8s,baz=307,slow=5.1,SNR=2.7						
KURK	**Kurchatov**	**54.60**	**309**	P	**P**	**12 12 48.9**	**+0.1**
KURK	**Kurchatov**	**54.60**	**309**	P	**P**	**12 12 48.9**	**+0.1**
PV13	**Radium Mtn., P**	**55.05**	**71**	lAmb	lAmb	12 12 53.5	
	comp=Z,4.7n

1.5nm,0.3s,baz=197,slow=19,SNR=2.1
MYLDM **Lahad Datu** 8.07 268 Pn **Pn** 12 22 05.3 +0.8
APSI Ampana 8.13 218 P **Pn** 12 22 06.5 +1.2
0.5nm1µm145nm,1.0s
MPSI Mapaga 8.48 232 P **Pn** 12 22 11.2 +1.1
664nm28nm,0.7s
SPMM Sapulut 10.13 266 P **Pn** 12 22 36.0 +3.4
TTSI Tana Toraja 10.92 218 P **Pn** 12 22 45.1 +1.7
1µm146nm,0.9s
SPSI Sidrap Palu 11.68 216 P **Pn** 12 22 53.9 +0.3
64nm,0.7s
BNSI Bone 11.85 213 P **Pn** 12 22 54.8 -1.0
38nm,0.6s
KAPI Kappang 12.55 213 P **Pn** 12 23 05.3 +0.1
2.4nm,0.3s,baz=23,slow=12,SNR=15
KAPI Kappang 12.55 213 Pn **Pn** 12 23 05.1 -0.1
BKSI Bulukumba 12.62 211 P **Pn** 12 23 05.5 -0.6
18nm,0.7s
BSSI Bau Bau, Buton 13.15 208 P **Pn** 12 23 13.1 0.0
432nm34nm,0.7s
MTKI Muara Teweh, K 13.37 241 P **Pn** 12 23 18.2 +2.2
KBKI Kotabaru 13.65 230 P **Pn** 12 23 21.7 +1.9
20nm,0.7s
SBUM Sibu 14.68 258 P **P** 12 23 35.8 -0.9
SBUM Sibu 14.68 258 P **P** 12 23 37.0 +0.3
MMRI Maumere 14.78 197 P **P** 12 23 40.0 +2.1
BBKI Banjar Baru 14.79 233 P **P** 12 23 36.6 -1.3
22nm,0.8s
EDFI Ende, Flores 15.06 199 P **Pn** 12 23 37.7 -0.2
25nm,0.8s
SOEI Soe 15.41 189 P **P** 12 23 45.3 +0.3
77nm,0.8s
SOEI Soe 15.41 189 P **P** 12 23 45.4 +0.4
SOEI IAmb IAmb 12 24 00.1
comp=Z,65nm,0.9s
BATI Baumata 15.96 191 P **P** 12 23 50.8 -0.1
comp=Z,17nm,0.3s,baz=34,slow=0.9,SNR=16
BATI Baumata 15.96 191 P **P** 12 23 51.5 +0.6
comp=Z,53nm,0.7s
KSM Kuching 16.76 256 P **P** 12 23 59.5 -0.3
KSM Kuching 16.76 256 P **P** 12 24 02.0 +2.2
YULB Yu-li 18.43 344 P **P** 12 24 17.6 -0.5
TPUB Ta-pu 18.53 342 P **P** 12 24 18.3 -0.9
TPUB IAmb IAmb 12 24 31.4
comp=Z,70nm,1.4s
JAGI Jajag, Banyuwa 18.68 222 P **P** 12 24 21.6 +0.7
JAGI IAmb IAmb 12 24 28.0
comp=Z,37nm,0.8s
MTN Manton Dam 18.85 166 P **P** 12 24 23.3 +0.5
MTN IAmb IAmb 12 24 31.7
comp=Z,17nm,0.6s
SSLB Suanglung 18.90 344 P **P** 12 24 23.4 +0.2
YHNB Yeheng 19.63 346 P **P** 12 24 31.5 +0.2
YHNB IAmb IAmb 12 24 36.3
comp=Z,59nm,1.4s
SMRI Semarang 20.43 232 P Pn 12 24 42.0 -0.9
UGM Wanagama 20.90 230 P Pn 12 24 46.9 -1.5
QIZ Qiongzhong 21.10 311 P **P** 12 24 49.9 +2.8
QIZ S **S** 12 28 35.3 -1.6
QIZ sS **sS** 12 29 05.6 -0.5
KNRA Kununurra 21.23 174 P **P** 12 24 49.1 +0.6
LEM Lembang 22.60 237 P **P** 12 25 03.9 +0.7
comp=Z,22nm,0.6s,baz=345,slow=13,SNR=4.5
MYKOM **Kota Tinggi** 23.01 261 P **P** 12 25 06.4 -0.7
MYKOM IAmb IAmb 12 25 08.8
comp=Z,18nm,0.8s
MYKOM **Kota Tinggi** 23.01 261 P **P** 12 25 07.0 -0.1
KTGM Kuala Trenggan 23.36 271 P **P** 12 25 11.0 +0.5
FITZ Fitzroy Crossi 23.55 182 P **P** 12 25 12.7 +0.6
comp=Z,4.5nm,0.5s,baz=5.7,slow=8.5,SNR=34
FITZ Fitzroy Crossi 23.55 182 P **P** 12 25 12.3 +0.2
IPM Ipoh 25.50 269 P **P** 12 25 31.0 +1.1
JCJ Chichijima 26.04 33 P **P** 12 25 32.7 -1.9
WB0 Warramunga Arr 26.33 163 P **P** 12 25 37.4 +0.1
WRAB Tennant Creek 26.48 163 P **P** 12 25 38.5 -0.1
WRAB IAmb IAmb 12 25 45.1
comp=Z,13nm,0.7s
WRA Warramunga Ar 26.48 163 P **P** 12 25 39.0 +0.3
comp=Z,4.7nm,0.4s,baz=343,slow=11,SNR=86
WRA ScP **ScP** 12 32 34.7 +1.5
comp=Z,0.8nm,0.8s,baz=341,slow=3.1,SNR=6.6
WRA Warramunga Arr 26.48 163 P **P** 12 25 38.9 +0.3
WB2 Warramunga Arr 26.49 163 P **P** 12 25 39.1 +0.4
WB2 IAmb IAmb 12 25 44.6
comp=Z,22nm,1.0s
WR0 Warramunga Ar 26.56 163 P **P** 12 25 39.6 +0.3
WR0 IAmb IAmb 12 25 45.8
comp=Z,11nm,0.6s
NJ2 Nanjing 27.31 346 *eP* **P** 12 25 46.5 +0.6
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PSI Prapat 27.74 265 P **P** 12 25 49.7 -0.4
comp=Z,3.9nm,0.8s,baz=357,slow=3.3,SNR=4.6
RPSI Rantau Prapat 27.75 265 P **P** 12 25 49.7 -0.4
PSA00 Pilbara Seismi 27.79 194 P **P** 12 25 50.2 0.0
PSA00 IAmb IAmb 12 25 57.0
comp=Z,13nm,0.6s
CMAR Chiang Mai Arr 29.86 298 P **P** 12 26 09.0 +0.2
comp=Z,1.1nm,0.6s,baz=119,slow=7.5,SNR=6.3
ASAR Alice Springs 29.93 166 P **P** 12 26 09.5 +0.1
comp=Z,2.4nm,0.4s,baz=344,slow=6.8,SNR=72
ASAR PcP **PcP** 12 29 10.7 +0.6
comp=Z,3.2nm,0.5s,baz=348,slow=2.0,SNR=13
ASAR ScP **ScP** 12 32 46.0 +2.1
comp=Z,0.7nm,0.7s,baz=347,slow=3.0,SNR=6.5
ASAR Alice Springs 29.93 166 P **P** 12 26 09.6 +0.3
ASAR **PcP** 12 29 09.3 -0.8
GIRL Giralia 30.55 203 P **P** 12 26 15.6 +0.8
JWT Wachi 30.65 14 P **P** 12 26 14.2 -1.3
KSRS Korea Array 31.74 2 P **P** 12 26 24.5 -0.6
comp=Z,0.7nm,0.6s,baz=188,slow=9.2,SNR=2.6
KSRS PcP **PcP** 12 29 15.3 +0.8
comp=Z,0.9nm,0.8s,baz=206,slow=3.3,SNR=4.6
CTAO Charters Tower 32.01 143 P **P** 12 26 28.4 +0.8
CTAO IAmb IAmb 12 26 30.9
comp=Z,8.8nm,1.0s
XAN Xi'an 32.72 332 P **P** 12 26 32.2 -1.6
XAN pmax pmax
comp=Z,7.0nm,0.5s
JMM Marumori 34.64 20 P **P** 12 26 50.1 -0.2
JMM IAmb IAmb 12 26 57.2
comp=Z,14nm,0.9s
BJT Baijiatuau 35.55 346 P **P** 12 26 58.0 -0.1
BJT IAmb IAmb 12 26 60.0
comp=Z,18nm,1.0s
BJI Beijing 35.57 346 P **P** 12 26 58.4 +0.2
BJI pmax pmax
comp=Z,18nm,0.9s
MORW Morawa 35.92 196 P **P** 12 27 01.1 -0.3
FORT Forrest 36.18 178 P **P** 12 27 03.9 +0.3
LZH Lanzhou 36.86 329 *eP* **P** 12 27 09.7 +0.2
LZH pP pP 12 27 32.3 +1.3
LZH sP sP 12 27 44.0 +2.2
LZH pmax pmax
comp=Z,19nm,1.0s
HHC Hu-ho-hao-te 37.61 341 *eP* **P** 12 27 15.8 +0.1
HHC pmax pmax
comp=Z,19nm,1.1s
HHC pmax pmax
comp=Z,180nm,5.2s
USRK Ussuriysk Ar. 38.75 6 P **P** 12 27 25.3 +0.2
comp=Z,5.8nm,0.6s,baz=178,slow=7.5,SNR=16
EIDS Eidsvold 38.90 143 P **P** 12 27 27.6 +1.1
EIDS IAmb IAmb 12 27 46.2
comp=Z,7.4nm,1.0s
MDJ Mudanjiang 38.97 3 P **P** 12 27 27.6 +0.7
MDJ pmax pmax
comp=Z,16nm,0.8s
MDJ pmax pmax
comp=Z,200nm,7.9s
MDJ Mudanjiang 38.97 3 P **P** 12 27 26.9 0.0
MDJ IAmb IAmb 12 27 28.7
comp=Z,14nm,0.8s
BBOO Buckleboo 39.23 167 P **P** 12 27 29.9 +0.7
BBOO IAmb IAmb 12 27 33.5
comp=Z,10nm,0.9s
NWAO Narrogin (SRO) 39.32 192 P **P** 12 27 30.2 +0.2
comp=Z,10nm,0.4s,baz=23,slow=8.2,SNR=29
NWAO Narrogin (SRO) 39.32 192 P **P** 12 27 30.4 +0.5
NWAO Narrogin (SRO) 39.32 192 P **P** 12 27 30.5 +0.5
NWAO IAmb IAmb 12 27 40.6
comp=Z,54nm,1.4s
STKA Stephens Creek 39.90 160 P **P** 12 27 35.1 +0.3
comp=Z,8.2nm,0.4s,baz=337,slow=8.7,SNR=28
STKA Stephens Creek 39.90 160 P **P** 12 27 34.9 0.0

H11S3 WAKE ISLAND Hy 41.14 68 T T 13 11 59.4
baz=258,slow=75,SNR=16
H11S1 WAKE ISLAND Hy 41.16 68 T T 13 11 59.3
baz=258,slow=75,SNR=14
H11S2 WAKE ISLAND Hy 41.16 68 T T 13 11 56.7
baz=258,slow=75,SNR=24
GTA Gaotai 41.46 328 *eP* **P** 12 27 47.4 -0.3
GTA pP pP 12 28 08.6 -1.0
GTA sP sP 12 28 22.0 +1.8
GTA PcP **PcP** 12 29 45.1 +1.1
GTA pmax pmax
comp=Z,4.0nm,0.9s
H11N1 WAKE ISLAND Hy 41.61 67 T T 13 12 29.5
baz=255,slow=75,SNR=8.0
H11N2 WAKE ISLAND Hy 41.62 67 T T 13 12 30.8
baz=255,slow=75,SNR=6.8
H11N3 WAKE ISLAND Hy 41.63 67 T T 13 12 31.1
baz=255,slow=75,SNR=6.6
TAPN Taplejung 42.84 305 *eP* **P** 12 27 59.4 0.0
comp=Z,9.2nm,0.3s
ARMA Armidale 43.09 148 P **P** 12 28 00.8 -0.2
ARMA IAmb IAmb 12 28 06.7
comp=Z,12nm,0.9s
RAMN Ramite 43.60 304 *eP* **P** 12 28 05.1 -0.4
comp=Z,11nm,0.6s
GUN Gumba 44.55 305 *eP* **P** 12 28 12.3 -0.9
comp=Z,12nm,0.4s
SONM Songino Array 45.51 341 P **P** 12 28 19.9 -0.3
comp=Z,1.4nm,0.3s,baz=158,slow=8.3,SNR=9.1
SONM PcP **PcP** 12 29 57.6 +0.1
comp=Z,1.7nm,0.8s,baz=148,slow=2.5,SNR=5.2
SONM Songino Array 45.51 341 P **P** 12 28 19.9 -0.3
CAN Canberra 45.82 154 P **P** 12 28 23.8 +1.1
CAN IAmb IAmb 12 28 40.6
comp=Z,22nm,1.5s
KOLN Koldanda 46.38 303 *eP* **P** 12 28 26.6 -0.9
comp=Z,16nm,0.2s
DANN Dangsing 46.45 304 *eP* **P** 12 28 26.9 -1.2
comp=Z,11nm,0.3s
PYUN Piuthan 47.00 304 *eP* **P** 12 28 31.6 -0.7
TLY Talaya 49.74 341 P **P** 12 28 51.7 -1.0
TLY IAmb IAmb 12 28 54.5
comp=Z,5.2nm,0.7s
WMQ Urumqi 51.15 324 *eP* **P** 12 29 04.4 +0.9
PETK Petropavlovsk- 53.78 23 P **P** 12 29 22.6 -0.1
comp=Z,3.5nm,0.8s,baz=215,slow=2.3,SNR=4.4
MKAR Makanchi Array 55.97 325 P **P** 12 29 37.7 -0.9
comp=Z,3.5nm,0.4s,baz=118,slow=7.4,SNR=72
MKAR PcP **PcP** 12 30 35.8 -0.3
comp=Z,3.3nm,0.8s,baz=118,slow=4.2,SNR=9.0
MKAR ScP **ScP** 12 34 28.1 +1.3
comp=Z,0.4nm,0.7s,baz=108,slow=4.7,SNR=3.8
MKAR Makanchi Array 55.97 325 P **P** 12 29 37.4 -1.3
MAKZ Makanchi 56.16 324 P **P** 12 29 39.2 -0.8
KDJ Kajisay 56.89 318 P **P** 12 29 45.1 -0.4
KDJ IAmb IAmb 12 30 04.1
comp=Z,11nm,1.0s
ZAA0 Zalesovo Array 58.89 333 P **P** 12 29 57.2 -1.7
ZAA0 IAmb IAmb 12 30 06.0
comp=Z,2.7nm,0.7s
ZALV Zalesovo Beam 58.89 333 P **P** 12 29 57.2 -1.8
comp=Z,2.8nm,0.5s,baz=118,slow=5.9,SNR=12
ZALV PcP **PcP** 12 30 46.1 -1.2
comp=Z,1.3nm,0.5s,baz=172,slow=2.9,SNR=4.0
ZALV LR LR 12 57 55.1
comp=Z,134nm,18.2s,baz=302,slow=38
ZALV Zalesovo Beam 58.89 333 P **P** 12 29 57.4 -1.6
KURK Kurchatov 60.12 327 P **P** 12 30 06.4 -1.1
KURK IAmb IAmb 12 30 13.4
comp=Z,5.7nm,0.6s
KKAR Karatay Array 61.80 316 P **P** 12 30 17.4 -1.7
KKAR Karatay Array 61.80 316 P **P** 12 30 17.6 -1.5
BRVK Borovoye 65.78 327 P **P** 12 30 44.2 -0.8
BRVK IAmb IAmb 12 30 48.2
comp=Z,8.1nm,0.9s
TIXI Tiksi 66.00 1 P **P** 12 30 45.3 -0.7
NRIK Noril'sk 68.61 346 P **P** 12 31 02.9 +0.4
comp=Z,5.8nm,0.5s,baz=121,slow=6.9,SNR=11
ABKAR Akbulak array 70.64 320 P **P** 12 31 14.3 -1.1
ABKAR Akbulak array 70.64 320 P **P** 12 31 14.1 -1.3
ARU Arti 73.31 327 P **P** 12 31 32.1 +0.9
ARU IAmb IAmb 12 31 33.7
comp=Z,7.6nm,0.5s
BPAW Bear Paw Mtn. 81.69 26 P **P** 12 32 18.2 +0.4
BPAW IAmb IAmb 12 32 19.2
comp=Z,18nm,1.3s
COLD Coldfoot 82.25 23 P **P** 12 32 22.0 +1.3
I23K Minto, Yukon-K 82.46 25 IAmb IAmb 12 32 26.1
comp=Z,15nm,1.3s
ILAR Eielson Array 83.50 26 P **P** 12 32 26.6 -0.5
comp=Z,1.0nm,0.5s,baz=249,slow=5.0,SNR=18
ILAR Eielson Array 83.50 26 P **P** 12 32 25.1 -2.0
BMAR Burnt Mountain 84.43 23 P **P** 12 32 32.9 +1.0
VNDA Vanda 85.27 173 P **P** 12 32 35.7 -0.1
comp=Z,2.3nm,0.8s,baz=323,slow=6.6,SNR=12
VNDA Vanda 85.27 173 P **P** 12 32 36.7 +0.9
K27K Chicken 85.60 26 P **P** 12 32 39.3 +1.5
K27K IAmb IAmb 12 32 40.2
comp=Z,11nm,1.4s
SPA0 Spitsbergen Ar 88.65 349 *eP* **P** 12 32 52.7 +0.5
ARA0 ARCESS Array S 88.67 340 *eP* **P** 12 32 51.5 -1.0
ARCES ARCESS Array B 88.67 340 P **P** 12 32 51.8 -0.7
comp=Z,4.1nm,0.6s,baz=84,slow=5.7,SNR=25
HAMF Hammerfest 89.03 341 *eP* **P** 12 32 53.6 -0.4
KBS Kingsbay 89.17 350 *eP* **P** 12 32 54.2 -0.4
HSPB Hornsund (broa 89.25 348 *eP* **P** 12 32 56.0 +1.0
KTK1 Kautokeino 89.58 339 *eP* **P** 12 32 56.2 -0.5
FINES FINESS Array B 90.15 332 P **P** 12 32 58.9 -0.5
comp=Z,2.4nm,0.4s,baz=72,slow=4.5,SNR=26
STEI Steigen 92.72 339 *eP* **P** 12 33 10.1 -1.2
FAUS Fauske 92.91 339 *eP* **P** 12 33 11.1 -1.0
MOR8 Moi Rana 93.68 338 *eP* **P** 12 33 13.4 -2.4
SYO Syowa Base 94.10 201⇑ *eP* **P** 12 33 17.0 -0.5
HFS Hagfors 96.33 332 P **P** 12 33 26.5 -1.5
comp=Z,1.3nm,0.3s,baz=52,slow=8.0,SNR=8.8
NB2 NORSAR Subarra 97.08 334 P **P** 12 33 29.7 -1.7
comp=Z,0.7nm,0.6s,baz=66,slow=4.8
NB2 NORSAR Subarra 97.08 334 P **P** 12 33 29.7 -1.7
baz=66,slow=4.8
NOA NORSAR Array B 97.08 334 P **P** 12 33 30.0 -1.4
comp=Z,1.2nm,0.7s,baz=65,slow=4.6,SNR=5.3
TXAR Lajitas Array 120.56 51 PKP **PKiKP** 12 38 52.2 +0.5
comp=Z,0.2nm,0.6s,baz=252,slow=1.8,SNR=2.4
TORD Torodi Ar. Bea 122.20 289 PKP **PKPdf** 12 38 54.8 -0.1
comp=Z,1.5nm,0.5s,baz=49,slow=1.8,SNR=10
PLCA Paso Flores 141.77 159 PKP **PKPdf** 12 39 29.7 -1.4
comp=Z,1.1nm,0.7s,baz=243,slow=4.5,SNR=3.1

*INET **10** 12:46:21.5, 12.°07N×86.°49W, h199km, ML4.7*
*IDC **10** 12:46:22.0±0.8, 12.°11N×86.°31W, h187km±6km, mb3.7/15, mb1 3.9/19, mb1mx3.7/40, mbtmp4.3/19, Error ellipse: s-maj=17.0km s-min=9.6km az=57.0*
*NEIC **10** 12:46:23.0±1.5, 12.°08N±0.°06×86.°45W±0.°06, h194km±6km, mb4.7/84, Error ellipse: s-maj=16.9km s-min=8.7km az=54.0*
*UCR **10** 12:46:23.0±1.1, 11.°92N×86.°60W, h180km, ML4.0, MW4.3, mb4.7(NEIC)*
*SNET **10** 12:46:24.4±0.8, 11.°98N×86.°63W, h172km±8km, ML4.2*
ISC 10 12:46:22.1±0.6, **12.°08N**±0.°06×**86.°45W**±0.°06, **h188**km±6km, **n369**, o**0s99**/**355**, **mb4.7**/50, **12C-1D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNGN	**Cerro Negro**	**0.49**	**329**	*eP*	**Pn**	**12 46 48.4**	**+0.5**
CNGN	**Cerro Negro**	**0.49**	**329**	*eP*	**Pn**	**12 46 48.4**	**+0.5**
CRIN	**San Cristobal**	**0.85**	**316**		**Pn**	**12 46 50.5**	**+0.7**
MATN	**Matagalpa**	**0.99**	**31**		**Pn**	**12 46 51.7**	**+0.9**
ACON	**Acoyapa**	**1.25**	**95**		**Pn**	**12 46 53.3**	**+0.7**
HZTE	**Horizontes, Gu**	**1.59**	**148**⇓	*eP*	**Pn**	**12 46 56.8**	**+1.0**
GBS3	**Finca Las Img**	**1.61**	**143**⇑	*iP*	**Pn**	**12 46 56.1**	**+0.2**
BUAI	**Buenos Aires**	**1.62**	**137**⇑	*iP*	**Pn**	**12 46 56.4**	**+0.4**
GB1A	**Borinquen Arri**	**1.62**	**141**	*eP*	**Pn**	**12 46 56.6**	**+0.5**
BUEV	**Buena Vista**	**1.63**	**141**⇑	*iP*	**Pn**	**12 46 56.8**	**+0.6**
LAPC	**Finca la Perla**	**1.64**	**143**⇑	*iP*	**Pn**	**12 46 56.3**	**+0.1**
LAPC				*i* S	**Sn**	**12 47 21.4**	**-1.2**
GPS1	**Guardaparques**	**1.68**	**140**	*i* P	**Pn**	**12 46 57.5**	**+0.8**
GPS3	**Bodega del ICE**	**1.69**	**141**⇑	*iP*	**Pn**	**12 46 57.3**	**+0.5**
GPS2	**Hotel Rincn d**	**1.70**	**141**⇑	*iP*	**Pn**	**12 46 57.4**	**+0.6**
LIM1	**Limonal**	**1.80**	**139**	*i* P	**Pn**	**12 46 58.7**	**+0.8**
GUAB	**Guayabo de Bag**	**1.81**	**139**	*i* P	**Pn**	**12 46 58.3**	**+0.4**
COLC	**Colonia**	**1.86**	**139**⇑	*iP*	**Pn**	**12 46 58.9**	**+0.5**
LCND	**La Caada**	**1.87**	**311**	*eP*	**Pn**	**12 46 59.3**	**+0.9**
LCND				IAML		12 47 35.8	
	comp=Z,1µm,0.4s						
LCND	**La Caada**	**1.87**	**311**	*eP*	**Pn**	**12 46 59.3**	**+0.9**
LCND				IAML		12 47 35.8	
	comp=Z,1µm,0.4s						
CUI	**Cuipilapa**	**1.89**	**138**⇑	*iP*	**Pn**	**12 46 59.3**	**+0.6**
ORTG	**Ortega, Santa**	**1.96**	**150**⇑	*eP*	**Pn**	**12 47 00.4**	**+0.9**
ORTG				*eS*	**Sn**	**12 47 26.3**	**-2.2**
ACAL	**Aguas Claras**	**1.99**	**136**	*iP*	**Pn**	**12 47 00.7**	**+0.8**
GUAI	**GUAI**	**2.02**	**153**⇑	*iP*	**Pn**	**12 47 00.8**	**+0.8**
JUCU	**Jucuarįn**	**2.11**	**304**	*eP*	**Pn**	**12 47 01.8**	**+0.8**
JUCU				*eS*	**Sn**	**12 47 31.5**	**+0.2**
JUCU	**Jucuarįn**	**2.11**	**304**	*eP*	**Pn**	**12 47 01.8**	**+0.8**
JUCU				*eS*	**Sn**	**12 47 31.5**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.12**	**338**	*eP*	**Pn**	**12 47 03.1**	**+1.8**
TGUH	**Tegucigalpa,Un**	**2.12**	**338**		**Pn**	**12 47 03.0**	**+1.8**
VSM	**San Miguel**	**2.23**	**307**	*eP*	**Pn**	**12 47 03.9**	**+1.3**
VSM	**San Miguel**	**2.23**	**307**	*eP*	**Pn**	**12 47 03.9**	**+1.3**
LCY	**Lacayo**	**2.24**	**307**	*eP*	**Pn**	**12 47 04.0**	**+1.4**
LCY	**Lacayo**	**2.24**	**307**	*eP*	**Pn**	**12 47 04.0**	**+1.4**
RANC	**El Ranchito**	**2.25**	**307**	IAML		12 47 38.2	
	comp=Z,1µm,0.5s						
RANC	**El Ranchito**	**2.25**	**307**	IAML		12 47 38.2	
	comp=Z,1µm,0.5s						
PACA	**Pacayal**	**2.29**	**307**	*eP*	**Pn**	**12 47 04.8**	**+1.7**
PACA	**Pacayal**	**2.29**	**307**	*eP*	**Pn**	**12 47 04.8**	**+1.7**
JTS	**Las Juntas de**	**2.30**	**140**	P	**Pn**	**12 47 03.6**	**+0.5**
	comp=Z,49nm,0.3s,baz=32,slow=13,SNR=87						
JTS				S	**Sn**	**12 47 33.5**	**-1.6**
	comp=Z,410nm,0.3s,baz=20,slow=20,SNR=16						
JTS	**Las Juntas de**	**2.30**	**140**	*eP*	**Pn**	**12 47 03.7**	**+0.5**
JTS	**Las Juntas de**	**2.30**	**140**		**Pn**	**12 47 03.7**	**+0.6**
ARE1	**Arenal 1**	**2.34**	**133**⇓	*iP*	**Pn**	**12 47 04.5**	**+1.0**
ALJI	**Alcalda de J**	**2.42**	**301**	*eP*	**Pn**	**12 47 05.3**	**+0.9**
ALJI				*eS*	**Sn**	**12 47 36.9**	**-0.3**
ALJI	**Alcalda de J**	**2.42**	**301**	*eP*	**Pn**	**12 47 05.3**	**+0.9**
ALJI				*eS*	**Sn**	**12 47 36.9**	**-0.3**
TECA	**Tecapa**	**2.45**	**305**	*eP*	**Pn**	**12 47 06.2**	**+1.2**
TECA	**Tecapa**	**2.45**	**305**	*eP*	**Pn**	**12 47 06.2**	**+1.2**
COEB	**Comit de Eme**	**2.47**	**305**	*eP*	**Pn**	**12 47 06.2**	**+1.1**
COEB				IAML		12 47 47.4	
	comp=Z,963nm,0.3s						
COEB	**Comit de Eme**	**2.47**	**305**	*eP*	**Pn**	**12 47 06.2**	**+1.1**
COEB				IAML		12 47 47.4	
	comp=Z,963nm,0.3s						
LAFE	**Finca La Fe, P**	**2.71**	**146**	*eP*	**Pn**	**12 47 08.5**	**+0.6**
COEG	**Centro de Oper**	**2.83**	**303**	*eP*	**Pn**	**12 47 10.4**	**+1.2**
COEG				*eS*	**Sn**	**12 47 45.9**	**0.0**
COEG				IAML		12 47 52.4	
	comp=Z,559nm,0.5s						
COEG	**Centro de Oper**	**2.83**	**303**	*eP*	**Pn**	**12 47 10.4**	**+1.2**
COEG				*eS*	**Sn**	**12 47 45.9**	**0.0**
COEG				IAML		12 47 52.4	
	comp=Z,559nm,0.5s						
PAVA	**Las Pavas**	**2.92**	**304**	*eP*	**Pn**	**12 47 11.5**	**+1.1**
PAVA	**Las Pavas**	**2.92**	**304**	*eP*	**Pn**	**12 47 11.5**	**+1.1**
JACO	**JACO, Garabito**	**2.98**	**144**⇑	*eP*	**Pn**	**12 47 11.8**	**+0.9**
LFRS	**El Faro**	**2.98**	**301**	*eP*	**Pn**	**12 47 12.4**	**+1.4**
LFRS	**El Faro**	**2.98**	**301**	*eP*	**Pn**	**12 47 12.4**	**+1.4**
HDC	**Heredia**	**3.08**	**132**	Pn	**Pn**	**12 47 13.8**	**+1.4**
SNET	**Serv Nac Est T**	**3.15**	**301**		**Pn**	**12 47 14.7**	**+1.6**
BOQS	**Boqueron**	**3.22**	**301**	*eP*	**Pn**	**12 47 15.3**	**+1.3**
BOQS				*eS*	**Sn**	**12 47 55.7**	**+1.2**
BOQS	**Boqueron**	**3.22**	**301**	*eP*	**Pn**	**12 47 15.3**	**+1.3**
BOQS				*eS*	**Sn**	**12 47 55.7**	**+1.2**
TACO	**Tacachico**	**3.40**	**304**	*eP*	**Pn**	**12 47 17.4**	**+1.3**
TACO				*eS*	**Sn**	**12 47 59.1**	**+0.9**
TACO	**Tacachico**	**3.40**	**304**	*eP*	**Pn**	**12 47 17.4**	**+1.3**
TACO				*eS*	**Sn**	**12 47 59.1**	**+0.9**
SNJE	**San Jose**	**3.56**	**300**	*eP*	**Pn**	**12 47 20.6**	**+2.5**
SNJE	**San Jose**	**3.56**	**300**	*eP*	**Pn**	**12 47 20.6**	**+2.5**
SBLS	**San Blas**	**3.56**	**300**	*eP*	**Pn**	**12 47 19.8**	**+1.5**
SBLS	**San Blas**	**3.56**	**300**	*eP*	**Pn**	**12 47 19.8**	**+1.5**
RTR	**El Retiro**	**3.60**	**300**	*eP*	**Pn**	**12 47 21.5**	**+2.7**
MTO3	**Montecristo**	**3.66**	**309**		**Pn**	**12 47 21.4**	**+2.0**
ESQI	**Esquipulas**	**3.75**	**312**	*eP*	**Pn**	**12 47 22.7**	**+2.3**
ESQI	**Esquipulas**	**3.75**	**312**		**Pn**	**12 47 22.7**	**+2.3**
EDDO	**Dominical**	**3.79**	**138**	*eP*	**Pn**	**12 47 22.8**	**+2.0**
CMIG	**Matias Romero**	**9.57**	**302**	P	**Pn**	**12 48 36.5**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=121,slow=10,SNR=10						
CMIG				S	**Sn**	**12 50 14.7**	**-8.0**
	comp=Z,0.2nm,0.3s,baz=220,slow=6.0,SNR=1.6						
PTBC	**PUERTO BERRIO,**	**13.05**	**114**	*eP*	**Pn**	**12 49 21.0**	**+0.3**
RREF	**El Recreo**	**13.09**	**122**	*eP*	**Pn**	**12 49 19.7**	**-2.1**
NORC	**Norcasia**	**13.14**	**119**	*eP*	**Pn**	**12 49 22.8**	**+0.9**
ANIL	**Santa Ana**	**13.27**	**124**	*eP*	**P**	**12 49 26.9**	**-0.2**
TOLC	**Tolima**	**13.28**	**123**	*eP*	**P**	**12 49 28.9**	**+1.7**
GTBY	**Guantanamo Bay**	**13.40**	**53**	P	**P**	**12 49 30.2**	**+2.2**
OCAC	**Ocana**	**13.47**	**105**	*eP*	**Pn**	**12 49 23.4**	**-2.8**
POPC	**Popayan, Colom**	**13.55**	**134**	*eP*	**P**	**12 49 28.8**	**-1.3**
SPBC	**San Pablo de B**	**13.79**	**117**	*eP*	**Pn**	**12 49 30.2**	**+0.1**
SPBC				*eP*	**P**	**12 49 30.4**	**-2.1**
SOTA	**Rioblanco**	**13.88**	**135**	*eP*	**P**	**12 49 35.8**	**+1.8**
ROSC	**El Rosal**	**13.98**	**120**	P	**Pn**	**12 49 31.7**	**-1.1**
	comp=Z,1.9nm,0.3s,baz=300,slow=20,SNR=1.7						
ROSC	**El Rosal**	**13.98**	**120**	P	**P**	**12 49 33.9**	**-1.1**
PRAC	**Prado**	**14.14**	**125**	*eP*	**P**	**12 49 36.3**	**-0.1**
URIC	**Uribia, Colomb**	**14.15**	**90**	*eP*	**P**	**12 49 37.3**	**+0.9**
BARC	**Barichara**	**14.18**	**111**	*eP*	**Pn**	**12 49 34.7**	**-0.3**
PAMC	**Pamplona, Colo**	**14.34**	**108**	*eP*	**Pn**	**12 49 37.7**	**+0.3**
BETC	**Betania**	**14.35**	**130**	*eP*	**Pn**	**12 49 37.6**	**+0.5**
RUSC	**La Rusia**	**14.55**	**114**	*eP*	**Pn**	**12 49 37.8**	**-2.2**
CHIC	**Chingaza**	**14.59**	**119**	*eP*	**P**	**12 49 41.5**	**-0.3**
SDV	**Santo Domingo**	**15.87**	**100**	P	**P**	**12 49 55.2**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=265,slow=5.6,SNR=28						
SDV	**Santo Domingo**	**15.87**	**100**	*eP*	**P**	**12 49 55.1**	**-0.7**
SDV	**Santo Domingo**	**15.87**	**100**		**P**	**12 49 54.8**	**-0.9**
SDV				IAmb	IAmb	12 49 57.1	
	comp=Z,42nm,0.8s						
GUVC	**San Jose del G**	**16.65**	**124**	*eP*	**P**	**12 50 04.0**	**-0.1**
833A	**Chaparral WMA,**	**20.19**	**325**	P	**P**	**12 50 43.5**	**+1.1**
	baz=141						
SJG	**San Juan**	**20.48**	**71**	P	**P**	**12 50 45.6**	**0.0**
	comp=Z,10nm,0.4s,baz=263,slow=7.2,SNR=5.8						
SJG	**San Juan**	**20.48**	**71**	IAmb	IAmb	12 50 47.7	
	comp=Z,25nm,0.9s						
152A	**Waverly Hall**	**20.55**	**4**	P	**P**	**12 50 47.6**	**+1.4**
ATAH	**Atahualpa**	**20.70**	**157**	P	**P**	**12 50 48.8**	**+0.4**
	comp=Z,6.5nm,0.7s,baz=344,slow=7.4,SNR=3.8						
LRAL	**Lakeview Retre**	**20.86**	**359**	P	**P**	**12 50 50.6**	**+1.1**
	baz=178,SNR=5.7						
LRAL	**Lakeview Retre**	**20.86**	**359**		**P**	**12 50 51.2**	**+1.7**
157A	**Early Branch**	**21.10**	**13**	P	**P**	**12 50 53.7**	**+1.7**
	baz=195						

BIRD Birdtown, Kers 23.11 13 P P 12 51 12.0 +0.5
BIRD IAmb IAmb 12 51 13.1
comp=Z,20nm,0.7s
W54A Cherokee Point 23.23 9 P P 12 51 13.4 +0.9
baz=190,SNR=6.2
MIAR Mount Ida 23.29 345 P P 12 51 13.0 0.0
baz=162,SNR=6.4
MIAR Mount Ida 23.29 345 P P 12 51 13.2 +0.2
X58A Rowland 23.29 15 P P 12 51 12.7 -0.3
baz=198
CPCT Cooper Cave 23.33 4 IAmb IAmb 12 51 16.8
comp=Z,27nm,0.9s
KMSC Kings Mountain 23.42 11 P P 12 51 13.6 -0.7
baz=192
TXAR Lajitas Array 23.49 320 P P 12 51 15.8 +0.7
comp=Z,4.9nm,0.7s,baz=142,slow=9.0,SNR=59
TXAR Lajitas Array 23.49 320 P P 12 51 16.1 +1.0
TX31 Lajitas Ar. Si 23.49 320 P P 12 51 15.9 +0.9
TX31 IAmb IAmb 12 51 18.0
comp=Z,18nm,0.8s
TX32 Lajitas Array 23.49 320 P P 12 51 16.6 +1.5
X59A McDuffie Farm, 23.50 16 P P 12 51 14.4 -0.6
baz=199
W56A Indian Trail 23.56 12 P P 12 51 15.4 -0.2
baz=194
W41B Gary Mavity, V 23.59 348 P P 12 51 15.7 -0.1
baz=166,SNR=5.7
W41B Gary Mavity, V 23.59 348 IAmb IAmb 12 51 17.2
comp=Z,17nm,1.1s
TKL Tuckaleechee C 23.60 5 P P 12 51 16.9 +1.0
comp=Z,8.8nm,0.6s,baz=170,slow=9.3,SNR=16
TKL Tuckaleechee C 23.60 5 P P 12 51 17.7 +1.8
TKL IAmb IAmb 12 51 19.8
comp=Z,36nm,1.4s
W57A Gilead 23.71 13 P P 12 51 16.8 -0.1
baz=196
WHAR Wooly Hollow 23.71 348 IAmb IAmb 12 51 18.1
comp=Z,15nm,1.0s
V53A Saluda 23.72 7 IAmb IAmb 12 51 20.7
comp=Z,20nm,0.8s
W58A Raeford 23.76 15 P P 12 51 17.6 +0.2
baz=198
ABTX Abilene, Hawle 23.77 331 P P 12 51 18.6 +1.1
baz=146
CLTN Cedars of Leba 23.91 0 IAmb IAmb 12 51 21.9
comp=Z,16nm,0.8s
V54A Nebo 23.94 9 P P 12 51 20.0 +0.9
baz=191,SNR=5.6
W39A Magazine 23.96 345 P P 12 51 19.0 -0.1
baz=162
W39A Magazine 23.96 345 P P 12 51 19.5 +0.4
W39A IAmb IAmb 12 51 22.3
comp=Z,21nm,1.2s
WVT Waverly 23.98 357 P P 12 51 19.3 -0.1
baz=177
V55A Taylorsville 24.14 10 P P 12 51 21.9 +1.1
baz=192,SNR=6.2
V55A Taylorsville 24.14 10 IAmb IAmb 12 51 24.6
comp=Z,22nm,0.7s
V56A Mocksville 24.23 12 P P 12 51 22.4 +0.7
baz=194,SNR=5.1
V57A Coltrane Farms 24.46 13 P P 12 51 24.4 +0.7
baz=196
V58A Windy Hill, Pi 24.52 14 P P 12 51 24.7 +0.4
baz=197,SNR=12
U54A Nelsons Funny 24.69 9 P P 12 51 26.8 +0.9
baz=191,SNR=7.0
V59A Middlesex 24.72 16 P P 12 51 26.8 +0.7
baz=199
U40A Yellville 24.85 348 P P 12 51 27.4 +0.1
baz=165
U40A Yellville 24.85 348 P P 12 51 27.4 +0.1
T53A Wise 25.05 7 P P 12 51 28.1 -1.0
baz=189
U57A Blanch 25.08 14 P P 12 51 29.7 +0.4
baz=196,SNR=8.1
TUL1 Leonard 25.19 342 P P 12 51 30.3 0.0
baz=158
WMOK Wichita Mounta 25.19 336 P P 12 51 30.8 +0.4
baz=151,SNR=7.5
WMOK Wichita Mounta 25.19 336 P P 12 51 32.7 +2.3
U58A Oxford 25.23 15 P P 12 51 31.0 +0.2
baz=198
T54A Tazewell 25.26 9 P P 12 51 31.0 0.0
baz=191
T55A Pulaski 25.45 11 P P 12 51 33.3 +0.6
baz=193
T56A Rocky Mt 25.50 12 P P 12 51 33.4 +0.3
baz=195
BLA Blacksburg 25.60 11 P P 12 51 33.5 -0.6
baz=194
T57A Hurt 25.64 13 P P 12 51 34.5 +0.2
baz=196
T57A Hurt 25.64 13 P P 12 51 34.8 +0.4
T57A IAmb IAmb 12 51 35.6
comp=Z,11nm,0.6s
T58A Grand View Acr 25.76 15 P P 12 51 35.2 -0.3
baz=198
S54A Dingess, Beckl 26.02 9 P P 12 51 38.0 +0.2
baz=191
WCI Wyandotte Cave 26.04 0 P P 12 51 37.6 -0.4
baz=180
T59A Double "B" Far 26.04 16 P P 12 51 37.9 -0.1
baz=200
T59A Double "B" Far 26.04 16 IAmb IAmb 12 51 40.2
comp=Z,14nm,1.1s
S55A Lewisburg 26.13 11 P P 12 51 38.5 -0.3
baz=193
MNTX Cornudas Mount 26.19 321 P P 12 51 38.8 -0.6
baz=134
CCM Cathedral Cave 26.22 351 P P 12 51 39.1 -0.5
baz=169
CCM Cathedral Cave 26.22 351 P P 12 51 39.2 -0.3
CCM IAmb IAmb 12 51 40.3
comp=Z,13nm,1.3s
S56A Natural Bridge 26.23 12 P P 12 51 39.2 -0.4
baz=195
S57A Dark Hollow, R 26.44 13 P P 12 51 41.6 0.0
baz=196
R54A Victor 26.45 10 P P 12 51 41.4 -0.2
baz=192
R53A Hurricane 26.45 8 P P 12 51 41.5 -0.1
baz=190
S58A Poland Farm, P 26.52 15 P P 12 51 42.6 +0.4
baz=198
R55A Marlinton 26.70 11 P P 12 51 44.3 +0.3
baz=194
R58B Mineral 26.89 15 P P 12 51 46.2 +0.6
baz=199
R56A Bull Pasture M 26.96 12 P P 12 51 47.0 +0.7
baz=195
S60A Water View 26.98 17 P P 12 51 47.3 +0.9
baz=201
Q53A Leroy 27.03 8 P P 12 51 47.5 +0.7
baz=190
R57A Stanardsville 27.05 14 P P 12 51 47.2 +0.2
baz=197
R58A Rapidan 27.18 15 P P 12 51 48.3 +0.2
baz=198
Q54A Coxs Mills 27.26 10 P P 12 51 49.2 +0.3
baz=192,SNR=5.5
Q54A Coxs Mills 27.26 10 IAmb IAmb 12 51 50.4
comp=Z,18nm,0.8s
Q55A Buckhannon 27.40 11 P P 12 51 50.3 +0.2
baz=194
Q56A Snyder Ridge, 27.62 12 P P 12 51 52.8 +0.7
baz=195
Q56A Snyder Ridge, 27.62 12 IAmb IAmb 12 51 54.5
comp=Z,20nm,0.8s
P53A Whipple 27.66 8 P P 12 51 52.8 +0.4
baz=191,SNR=7.8
P53A Whipple 27.66 8 P P 12 51 53.1 +0.7
P52A Corning 27.71 7 P P 12 51 52.9 0.0
baz=189,SNR=5.5
Q57A Strasburg 27.78 14 P P 12 51 53.4 -0.1
baz=197
Q58A Fox Den Farm, 27.86 15 P P 12 51 54.3 +0.1
baz=198
P54A Burton 27.92 10 P P 12 51 54.7 0.0
baz=192
P55A Reedsville 27.94 11 P P 12 51 55.2 +0.3
baz=194
MCWV Mont Chateau 28.08 11 P P 12 51 56.7 +0.6
baz=194
P56A Dayton Farm, R 28.14 13 P P 12 51 56.3 -0.4
baz=196
O51A Pataskala 28.16 6 P P 12 51 56.3 -0.5
baz=188

SFIN Lafayette 28.19 359 P P 12 51 56.5 -0.6
baz=179
ACSO Alum Creek Sta 28.21 6 P P 12 51 57.3 +0.1
baz=187
ACSO Alum Creek Sta 28.21 6 IAmb IAmb 12 51 58.3
comp=Z,22nm,0.8s
O52A Adamsville 28.22 7 P P 12 51 57.5 +0.1
baz=190
O52A Adamsville 28.22 7 P P 12 51 57.4 0.0
P57A Homestead Farm 28.30 14 P P 12 51 58.6 +0.5
baz=198,SNR=5.2
P57A Homestead Farm 28.30 14 IAmb IAmb 12 52 00.3
comp=Z,22nm,0.9s
O53A New Philadelph 28.44 8 P P 12 51 59.5 +0.3
baz=191,SNR=5.8
HDIL Hopedale 28.48 355 P P 12 51 59.6 0.0
baz=174
P58A Pank, Wackersv 28.48 15 P P 12 51 59.8 +0.2
baz=199
O54A Avella 28.50 10 P P 12 51 59.5 -0.3
baz=192
SDMD Soldier's Deli 28.52 16 IAmb IAmb 12 52 01.7
comp=Z,9.7nm,0.8s
N49A Columbus Grove 28.80 4 P P 12 52 02.5 0.0
P59A Jarrettsville 28.82 16 P P 12 52 02.9 +0.3
baz=200
O56A Blue Knob Stat 28.93 13 P P 12 52 04.1 +0.4
baz=196
O57A Amberson 29.08 14 P P 12 52 05.5 +0.5
baz=198,SNR=7.1
ANMO Albuquerque 29.12 325 P P 12 52 06.2 +0.6
baz=137
O58A Lewisberry 29.17 15 P P 12 52 06.6 +0.8
baz=199
MVL Millersville 29.21 16 IAmb IAmb 12 52 08.2
comp=Z,22nm,1.0s
P60A Greenville 29.23 17 P P 12 52 06.6 +0.3
baz=202
N56A West Decatur 29.61 13 P P 12 52 10.3 +0.6
baz=196
N57A Milroy 29.62 14 P P 12 52 10.1 +0.4
baz=198
M53A WI Miller and 29.68 9 P P 12 52 10.4 +0.1
baz=191
T25A Trinidad 29.71 330 P P 12 52 10.7 -0.1
baz=143
O60A Telford 29.77 17 P P 12 52 11.3 +0.3
baz=202
N58A Sunbury 29.90 15 P P 12 52 11.8 -0.4
baz=199,SNR=8.2
N58A Sunbury 29.90 15 P P 12 52 12.0 -0.2
M54A Oil Creek Stat 29.91 10 P P 12 52 12.2 -0.1
baz=193
LUPA Lehigh Univers 30.04 17 IAmb IAmb 12 52 15.3
comp=Z,14nm,0.8s
M56A Emporium 30.17 12 P P 12 52 14.6 -0.1
baz=196,SNR=5.2
N59A State Game Lan 30.22 16 P P 12 52 15.7 +0.7
baz=201,SNR=14
L53A Girard 30.25 9 P P 12 52 15.1 -0.2
baz=192
M57A Sunshine Farm, 30.27 14 P P 12 52 16.2 +0.7
baz=198,SNR=8.7
M57A Sunshine Farm, 30.27 14 P P 12 52 16.2 +0.7
N60A Cedar Hill Far 30.36 17 P P 12 52 16.3 0.0
baz=202
ERPA Erie 30.45 10 P P 12 52 17.2 +0.1
baz=192
M58A Price's Panora 30.47 15 P P 12 52 17.5 +0.2
baz=199
SDCO Great Sand Dun 30.72 330 P P 12 52 19.8 0.0
baz=141
KSPA Keystone Colle 30.82 16 IAmb IAmb 12 52 21.9
comp=Z,19nm,0.8s
PAL Palisades 30.85 19 P P 12 52 21.0 +0.5
baz=204
M59A Waymart 30.89 16 P P 12 52 21.5 +0.6
baz=201,SNR=9.4
JFWS Jewell Farm 30.90 355 P P 12 52 21.0 0.0
baz=173
M60A Port Jervis 30.92 17 P P 12 52 21.2 0.0
baz=203,SNR=6.1
L56A Greenwood 30.93 13 P P 12 52 21.5 +0.1
baz=197,SNR=5.5
L57A Andrews Acres 30.96 14 P P 12 52 21.9 +0.3
baz=198,SNR=5.1
M61A Granite Spring 31.17 19 P P 12 52 23.9 +0.6
baz=204
L58A Harry Jones Me 31.25 15 P P 12 52 24.7 +0.6
baz=200,SNR=11
BINY Binghamton 31.36 15 P P 12 52 25.4 +0.3
baz=200,SNR=8.4
BINY Binghamton 31.36 15 P P 12 52 25.2 +0.2
MMNY Mt. Morris Dam 31.43 12 P P 12 52 24.4 -1.2
K56A Middlesex 31.52 13 P P 12 52 26.7 +0.3
baz=197,SNR=5.4
M62A Hamden 31.57 20 P P 12 52 27.0 +0.2
baz=206
L59A Walton 31.60 16 P P 12 52 27.7 +0.5
baz=202,SNR=6.8
L59A Walton 31.60 16 IAmb IAmb 12 52 28.8
comp=Z,24nm,0.8s
L60A Shin 31.65 18 P P 12 52 28.0 +0.4
baz=203,SNR=5.4
K57A Scipio Center 31.73 14 P P 12 52 28.1 -0.2
baz=199
M63A Gales Ferry 31.82 21 P P 12 52 28.6 -0.4
baz=207
I51A Listowel 31.95 7 P P 12 52 30.4 +0.1
baz=190
K58A Earlville 31.98 15 P P 12 52 30.3 -0.1
baz=200,SNR=5.7
K58A Earlville 31.98 15 IAmb IAmb 12 52 31.6
comp=Z,23nm,0.8s
L61A Hillsdale 1, H 32.04 18 P P 12 52 31.3 +0.3
baz=204
J56A Wolcott 32.17 13 P P 12 52 31.6 -0.5
baz=198
K59A Cooperstown 32.20 16 P P 12 52 32.1 -0.3
baz=202,SNR=7.7
L63A North Scituate 32.38 21 P P 12 52 34.1 +0.2
baz=208
J57A Williamstown 32.50 14 P P 12 52 34.8 -0.2
baz=199
L61B Northampton 32.54 19 P P 12 52 35.3 -0.1
baz=206
J58A Remsen 32.63 15 P P 12 52 36.1 0.0
baz=200,SNR=6.1
J58A Remsen 32.63 15 IAmb IAmb 12 52 36.7
comp=Z,17nm,0.7s
ECSD EROS Data Cent 32.74 346 P P 12 52 36.0 -1.0
baz=161
K62A Royalston 32.88 19 P P 12 52 38.6 +0.3
baz=206
J59A Piesco 32.93 16 P P 12 52 39.0 +0.2
baz=202
J59A Piesco 32.93 16 IAmb IAmb 12 52 40.1
comp=Z,15nm,1.1s
PV19 Morning Glory 32.95 326 IAmb IAmb 12 52 39.7
comp=Z,16nm,1.0s
I58A Old Forge 33.02 15 P P 12 52 39.0 -0.5
baz=201,SNR=5.3
J60A Lant Hill Farm 33.04 18 P P 12 52 40.1 +0.4
baz=204
H53A Bobcaygeon 33.08 10 P P 12 52 39.1 -0.8
baz=194,SNR=8.2
I57A Carthage 33.08 14 P P 12 52 40.0 0.0
baz=200
K63A Dunstable 33.14 20 P P 12 52 40.3 -0.2
baz=207
SADO Sadowa 33.17 10 P P 12 52 39.8 -1.0
comp=Z,12nm,0.7s,baz=219,slow=9.4,SNR=8.9
SADO Sadowa 33.17 10 P P 12 52 39.8 -1.0
SADO IAmb IAmb 12 52 41.2
comp=Z,15nm,0.8s
J61A Chester 33.39 19 P P 12 52 43.2 +0.5
baz=205
I59A Olmsteadville 33.41 17 P P 12 52 42.6 -0.3
baz=203,SNR=5.9
SPMN Marine on St. 33.48 352 P P 12 52 42.2 -1.2
baz=169
SPMN Marine on St. 33.48 352 IAmb IAmb 12 52 42.9
comp=Z,12nm,0.8s
LPAZ La Paz 33.51 147 P P 12 52 44.6 -0.1
comp=Z,1.2nm,0.4s,baz=358,slow=3.4,SNR=7.4
LPAZ La Paz 33.51 147 P P 12 52 44.8 +0.1
J62A Henniker 33.52 20 P P 12 52 44.5 +0.7
baz=206

I60A Shoreham 33.62 17 P P 12 52 45.5 +0.8
baz=204
H57A Richville 33.64 14 P P 12 52 45.0 +0.2
baz=200
J63A Strafford 33.81 20 P P 12 52 46.8 +0.5
baz=208
H58A Gabriels 33.91 16 P P 12 52 47.0 -0.2
baz=202
G54A Lake Saint Pet 33.96 11 P P 12 52 47.0 -0.6
baz=195,SNR=5.0
COWI Conover 33.98 357 P P 12 52 46.9 -0.9
LONY Lake Ozonia 33.99 15 P P 12 52 47.3 -0.6
baz=201,SNR=6.3
LONY Lake Ozonia 33.99 15 P P 12 52 47.3 -0.6
LONY IAmb IAmb 12 52 48.6
comp=Z,17nm,0.9s
I61A Oroboro, Fairl 34.03 19 P P 12 52 47.7 -0.5
baz=205
H59A Cadyville 34.25 16 P P 12 52 49.8 -0.3
baz=202
I62A Tamworth 34.26 20 P P 12 52 50.1 -0.1
baz=207
G57A Newington 34.34 14 P P 12 52 50.4 -0.4
baz=200
LBNH Lisbon 34.40 19 P P 12 52 51.3 -0.1
baz=206
H60A Morristown 34.45 17 P P 12 52 51.1 -0.8
baz=204
ALGO Algonquin Park 34.51 10 P P 12 52 51.3 -0.9
baz=194,SNR=5.0
PB16 IPOC Station P 34.53 151 P P 12 52 54.9 +1.5
PB16 IAmb IAmb 12 52 56.9
comp=Z,10.0nm,0.6s
G58A Ormstown 34.62 16 P P 12 52 52.5 -0.7
baz=202
H61A Lyndonville 34.66 18 P P 12 52 53.1 -0.6
baz=205
I63A Otisfield 34.66 20 P P 12 52 53.4 -0.2
baz=208
PFO Pinyon Flats O 34.78 313 P P 12 52 54.7 -0.2
baz=121
H62A Milan 34.94 19 P P 12 52 55.9 -0.1
baz=207
G60A Masonville 35.05 18 P P 12 52 56.9 -0.1
baz=204
F57A Harrington 35.08 14 P P 12 52 57.0 -0.1
baz=200
MNMC Minye Minye 35.18 152 P P 12 52 59.9 +1.2
E55A Montcerf-Lytto 35.37 12 P P 12 52 59.3 -0.4
baz=198
H63A New Sharon 35.39 20 P P 12 53 00.1 +0.2
baz=208
G61A St-Isidore-de- 35.46 18 P P 12 53 00.3 -0.1
baz=206
H64A Troy 35.65 21 P P 12 53 02.4 +0.3
baz=210
G62A West of Eustis 35.72 19 P P 12 53 02.2 -0.5
baz=207,SNR=6.6
G62A West of Eustis 35.72 19 P P 12 53 02.8 +0.2
G62A IAmb IAmb 12 53 04.0
comp=Z,21nm,0.8s
E57A Chemin Saint G 35.77 15 P P 12 53 02.4 -0.7
baz=201
G63A Kingsbury 35.93 20 P P 12 53 04.5 +0.1
baz=209
F60A Warwick 35.95 17 P P 12 53 04.0 -0.6
baz=204
E58A La Victoria 35.95 16 P P 12 53 04.0 -0.6
baz=202
D55A Sainte-Anne-du 36.04 13 P P 12 53 04.4 -0.9
baz=198,SNR=5.5
H65A Eastbrook 36.05 22 P P 12 53 05.0 -0.5
baz=211
PKME Peaks-Kenny Pk 36.17 21 P P 12 53 06.2 -0.2
baz=209
G64A Maxfield 36.35 21 P P 12 53 07.9 0.0
baz=210
E60A Ste Agathe de 36.46 18 P P 12 53 08.6 -0.3
baz=205
H66A Whiting 36.48 23 P P 12 53 08.5 -0.6
baz=212
PDAR Pinedale Array 36.57 331 P P 12 53 09.7 -0.5
comp=Z,0.3nm,0.6s,baz=135,slow=9.0,SNR=2.3
F63A Nahmakanta, Br 36.62 21 P P 12 53 09.3 -0.9
baz=209
D58A Chemin du LacG 36.73 16 P P 12 53 10.8 -0.4
baz=202
G65A Princeton 36.74 22 P P 12 53 10.8 -0.5
baz=212
E61A Lac Etchemin 36.81 19 P P 12 53 11.5 -0.4
baz=206
F64A Sherman 37.02 21 P P 12 53 12.4 -1.3
baz=210
LATQ La Tuque 37.02 15 P P 12 53 12.3 -1.3
baz=202
D60A Saint Jean D'O 37.11 18 P P 12 53 13.6 -0.7
baz=206
E62A Clayton Lake 37.28 19 P P 12 53 15.6 -0.2
baz=208
E63A Oxbow 37.48 21 P P 12 53 17.5 0.0
baz=210
D61A St Aubert, Com 37.59 18 P P 12 53 18.2 -0.2
baz=207
E64A Bridgewater 37.68 21 P P 12 53 18.7 -0.5
baz=211
LSQQ Lebel-sur-Quev 37.70 10 P P 12 53 18.0 -1.3
baz=195
D62A Allapoint, All 37.84 19 P P 12 53 20.5 0.0
baz=208
D62A Allapoint, All 37.84 19 P P 12 53 20.8 +0.3
D62A IAmb IAmb 12 53 21.8
comp=Z,11nm,0.7s
D63A Stockholm 38.12 20 P P 12 53 22.8 0.0
baz=210
RLMT Red Lodge 38.27 334 P P 12 53 23.9 -0.5
baz=142
LMN Caledonia Moun 38.36 25 IAmb IAmb 12 53 25.7
comp=Z,21nm,0.8s
NVAR Mina Array Bea 38.63 318 P P 12 53 29.4 +1.9
comp=Z,1.8nm,0.7s,baz=126,slow=7.6,SNR=18
NVAR Mina Array Bea 38.63 318 P P 12 53 28.4 +0.8
HLID Hailey 39.58 328 P P 12 53 35.0 -0.2
baz=134
BOZ Bozeman (W) 39.69 332 P P 12 53 35.8 -0.3
baz=139
SCHQ Schefferville 45.36 16 P P 12 54 19.9 -1.5
comp=Z,11nm,0.8s,baz=210,slow=7.8,SNR=11
CPUP Villa Florida 47.53 144 P P 12 54 36.6 -2.1
comp=Z,1.0nm,0.6s,baz=330,slow=8.1,SNR=3.2
PLCA Paso Flores 54.57 165 P P 12 55 31.1 +0.2
comp=Z,3.7nm,0.6s,baz=336,slow=7.5,SNR=9.9
PLCA Paso Flores 54.57 165 P P 12 55 31.1 +0.2
INK Inuvik 63.85 342 P P 12 56 33.8 -0.3
comp=Z,1.2nm,0.8s,baz=108,slow=9.4,SNR=3.2
INK Inuvik 63.85 342 IAmb IAmb 12 56 34.0
comp=Z,7.6nm,1.4s
ILAR Eielson Array 66.75 336 P P 12 56 51.9 -1.0
comp=Z,0.8nm,0.9s,baz=116,slow=4.3,SNR=6.6
SUA Susitna One 67.29 332 P P 12 56 58.7 +2.2
ESDC Sonseca Array 76.65 52 P P 12 57 51.0 -1.5
comp=Z,1.5nm,0.9s,baz=284,slow=6.8,SNR=7.6
LZH Lanzhou 131.12 349 PKP PKiKP 13 05 15.8 +2.6
LZH sPKP 13 06 15.5
STKA Stephens Creek 131.73 238 PKP PKiKP 13 05 13.8 -0.5
comp=Z,3.2nm,0.7s,baz=85,slow=4.0,SNR=9.6
ASAR Alice Springs 140.04 248 PKhKP PKPpre 13 05 22.1
comp=Z,0.7nm,0.7s,baz=111,slow=3.9,SNR=14
ASAR PKP PKPdf 13 05 29.2 +0.2
comp=Z,2.4nm,0.7s,baz=103,slow=1.9,SNR=16
ASAR Alice Springs 140.04 248 PKPpre 13 05 23.7
WRA Warramunga Arr 140.11 253 PKhKP PKPpre 13 05 23.1
comp=Z,0.5nm,0.6s,baz=91,slow=2.2,SNR=10
WRA PKP PKPdf 13 05 29.6 +0.4
comp=Z,4.1nm,0.6s,baz=92,slow=2.5,SNR=61
WRA Warramunga Arr 140.11 253 PKPdf 13 05 26.5 -2.7
CMAR Chiang Mai Arr 149.19 350 PKPbc PKPbc 13 05 48.0 -1.2
comp=Z,0.4nm,0.4s,baz=353,slow=3.2,SNR=5.4

IDC ***10*** *12:46:37.4±9.4, 36°.33N×71°.87E, h90km±40km, mb3.6/2, mb1 3.7/7, mb1mx3.2/47, mbtmp3.9/7, Error ellipse: s-maj=143.2km s-min=30.4km az=159.0*
NNC ***10*** *12:46:47.1±4.3, 37°.68N×71°.37E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=33.9km s-min=22.0km az=171.0*
ISC 10 12:46:42.5±0.9**, 37°.03N**±0°.07×**71°.62E**±0°.08**, h106**km**, n30,** σ2**s22**/35**, 5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.34**	**17**	P	**Pn**	**12 48 01.9**	**+1.7**
	SNR=39						
UCH	**Uchtor**	**5.65**	**22**	P	**Pn**	**12 48 06.2**	**+1.7**
	SNR=6.6						
EKS2	**Erkin-Say**	**5.87**	**16**	P	**Pn**	**12 48 09.8**	**+2.8**
	SNR=13						
AAK	**Ala-Archa**	**6.02**	**21**	P	**Pn**	**12 48 11.5**	**+2.3**
	SNR=13						
AAK	**Ala-Archa**	**6.02**	**21**	⇑P	**Pn**	**12 48 10.9**	**+1.7**
	6.1nm,0.4s						
AAK				⇑S	**Sn**	**12 49 15.6**	**-1.2**
	20nm,0.6s						
KK31	**Karatay Array**	**6.13**	**352**	P	**Pn**	**12 48 11.6**	**+1.1**
	5.3nm,0.3s,baz=176,slow=13,SNR=90						
KK31				⇓S	**Sn**	**12 49 15.7**	**-3.5**
	12nm,0.5s,baz=173,slow=22,SNR=9.4						
CHMS	**Chumysh**	**6.43**	**21**	P	**Pn**	**12 48 16.4**	**+1.9**
	SNR=9.6						
USP	**Ospenovka**	**6.61**	**19**	P	**Pn**	**12 48 18.5**	**+1.5**
	SNR=6.3						
TKM2	**Tokmak 2**	**6.63**	**26**	P	**Pn**	**12 48 19.6**	**+2.2**
	SNR=5.9						
TKM2	**Tokmak 2**	**6.63**	**26**	⇓P	**Pn**	**12 48 19.4**	**+2.0**
	5.8nm,0.5s						
TKM2				⇓S	**Sn**	**12 49 29.8**	**-1.8**
	4.7nm,0.6s						
GEYT	**Alibeck**	**10.77**	**279**	P	**Pn**	**12 49 13.2**	**-0.3**
	0.9nm,0.3s,baz=102,slow=12,SNR=5.3						
GEYT				S	Sn	12 51 06.4	-5.7
	3.6nm,0.3s,baz=130,slow=25,SNR=10						
MKAR	**Makanchi Array**	**12.57**	**36**	P	**Pn**	**12 49 38.5**	**+1.1**
	0.1nm,0.3s,baz=225,slow=14,SNR=12						
PYUN	**Piuthan**	**13.07**	**130**	*e*P	**Pn**	**12 49 42.6**	**-1.7**
	28nm,0.4s						
PYUN				eS	Sn	12 51 53.4	-15
DANN	**Dangsing**	**13.38**	**127**	*e*P	**Pn**	**12 49 46.4**	**-2.0**
	10nm,0.4s						
KOLN	**Koldanda**	**13.68**	**129**	*e*P	**Pn**	**12 49 50.7**	**-1.6**
	17nm,0.6s						
GKN	**Gorkha**	**14.18**	**126**	*e*P	**Pn**	**12 49 56.8**	**-1.9**
	18nm,0.5s						
KURBB	**Kurchatov Arra**	**14.46**	**18**	P	**P**	**12 50 07.1**	**+1.4**
	0.1nm,0.3s,baz=205,slow=11,SNR=7.0						
KKN	**Kakani**	**14.75**	**125**	*e*P	**Pn**	**12 50 04.4**	**-1.5**
	14nm,0.5s						
AB31	**Akbulak array**	**14.88**	**329**	P	**Pn**	**12 50 05.9**	**-1.3**
	0.6nm,0.3s,baz=137,slow=12,SNR=52						
AB31				⇑S	**Sn**	**12 52 45.8**	**-5.5**
	0.4nm,0.4s,baz=150,slow=24,SNR=9.0						
PKIN	**Phulchoki**	**14.97**	**125**	*e*P	**Pn**	**12 50 07.2**	**-1.5**
PKI	**Pulchoki**	**14.98**	**125**	*e*P	**Pn**	**12 50 07.8**	**-1.2**
GUN	**Gumba**	**15.06**	**123**	*e*P	**Pn**	**12 50 07.8**	**-2.3**
	8.1nm,0.4s						
RAMN	**Ramite**	**16.18**	**124**	*e*P	**P**	**12 50 23.5**	**-1.6**
	9.0nm,0.4s						
AKTO	**Aktyubinsk**	**16.59**	**328**	P	**P**	**12 50 31.4**	**+2.3**
	1.8nm,0.3s,baz=134,slow=10,SNR=31						
AKTO	**Aktyubinsk**	**16.59**	**328**	⇑P	**P**	**12 50 31.7**	**+2.5**
	11nm,0.6s						
AKTO				⇑S	**Sn**	**12 53 28.3**	**-4.1**
	4.3nm,1.0s						
TAPN	**Taplejung**	**16.67**	**121**	*e*P	**Pn**	**12 50 28.5**	**-1.5**
ODAN	**Odare**	**16.77**	**123**	*e*P	**Pn**	**12 50 29.5**	**-1.6**
	9.0nm,0.5s						
ZALV	**Zalesovo Beam**	**19.23**	**24**	P	**Pn**	**12 50 59.9**	**-0.2**
	0.5nm,0.3s,baz=211,slow=9.7,SNR=6.2						
ARCES	**ARCESS Array B**	**40.85**	**337**	P	**P**	**12 54 15.8**	**+2.4**
	2.2nm,0.8s,baz=99,slow=8.0,SNR=6.8						
NOA	**NORSAR Array B**	**44.26**	**323**	P	**P**	**12 54 42.9**	**+1.7**
	0.7nm,0.5s,baz=95,slow=8.5,SNR=3.4						

IDC ***10*** *13:20:04.6±0.7,38.75N×75.64E,h0km,mb3.9/18, mb1 4.1/23,mb1mx4.0/43,mbtmp4.0/23,ML3.6/5,MS2.9/1, Ms1 2.9/1,ms1mx2.4/46,Error ellipse: s-maj=14.6km s-min=13.9km az=155.0*

SOME ***10*** *13:20:04.0,38.73N×75.60E,h10km*

BJI ***10*** *13:20:04.7±0.0,38.76N×75.53E,h8km,mB4.4/5, mb4.4/22,ML4.2/7*

MOS ***10*** *13:20:07.7±1.1,38.76N×75.62E,h33km,mb4.3/11,Error ellipse: s-maj=8.5km s-min=5.3km az=91.1*

NNC ***10*** *13:20:08.8±1.3,38.92N×75.57E,h0km,mb4.8,mpv4.5, Error ellipse: s-maj=10.2km s-min=6.6km az=163.0*

NEIC ***10*** *13:20:11.3±1.4,38.81N±0.07×75.59E±0.07,h46km±8km, mb4.5/49,Error ellipse: s-maj=10.0km s-min=7.6km az=154.0*

ISC 10 13:20:05.6±0.4,38.62N±0.04×75.50E±0.03,h10km,n223,
σ1.997/246,mb4.3/41,17C-5D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.97**	**22**	Pg	Pg	13 20 11.5	-13
KSH				Sg	Sg	13 20 17.3	-20
KSH				smax	smax		
	comp=N,12μm,0.4s						
KSH				smax	smax		
	comp=E,22μm,0.6s						
ULHL	**Ulahol**	**3.67**	**9**	P	**Pn**	**13 21 04.4**	**+1.8**
	SNR=16						
UCH	**Uchtor**	**3.68**	**348**	P	**Pn**	**13 21 04.6**	**+1.6**
	SNR=28						
KDJ	**Kajisay**	**3.73**	**20**	PN	**Pn**	**13 21 04.3**	**+0.8**
KDJ	**Kajisay**	**3.73**	**20**		**Pn**	**13 21 04.3**	**+0.8**
AML	**Almayashu**	**3.77**	**339**	P	**Pn**	**13 21 05.4**	**+1.3**
	SNR=14						
BTK	**Batken**	**3.91**	**293**	PN	**Pn**	**13 21 07.3**	**+1.6**
BTK	**Batken**	**3.91**	**293**		**Pn**	**13 21 07.3**	**+1.6**
KBK	**Karagaybulak**	**4.06**	**354**	P	**Pn**	**13 21 09.6**	**+1.8**
	SNR=75						
GAR	**Garm**	**4.07**	**277**		**Pn**	**13 21 11.5**	**+3.5**
AAK	**Ala-Archa**	**4.09**	**350**	P	**Pn**	**13 21 10.2**	**+1.8**
	SNR=92						
AAK	**Ala-Archa**	**4.09**	**350**	⇓Pn	**Pn**	**13 21 09.9**	**+1.6**
	88nm,0.8s						
AAK				Lg	Lg	13 22 13.0	
	150nm,0.9s						
AAK	**Ala-Archa**	**4.09**	**350**	PN	**Pn**	**13 21 09.9**	**+1.6**
AAK	**Ala-Archa**	**4.09**	**350**	Pn	**Pn**	**13 21 09.8**	**+1.6**
FRU1	**Bishkek**	**4.24**	**351**	PN	**Pn**	**13 21 09.9**	**-0.4**
FRU1	**Bishkek**	**4.24**	**351**		**Pn**	**13 21 09.9**	**-0.4**
EKS2	**Erkin-Say**	**4.25**	**343**	P	**Pn**	**13 21 12.2**	**+1.7**
	SNR=21						
TKM2	**Tokmak 2**	**4.30**	**1**	P	**Pn**	**13 21 13.2**	**+1.9**
	SNR=18						
TKM2	**Tokmak 2**	**4.30**	**1**	⇑Pn	**Pn**	**13 21 12.6**	**+1.4**
	24nm,0.6s						
TKM2				⇓Pg	**Pb**	**13 21 23.9**	**+2.5**
	46nm,0.5s						
TKM2				⇑Lg	Lg	13 22 15.9	
	224nm,1.3s						
TKM2	**Tokmak 2**	**4.30**	**1**	PN	**Pn**	**13 21 12.6**	**+1.4**
TKM2				PG	**Pb**	**13 21 23.9**	**+2.5**
TKM2				LG	Lg	13 22 15.9	
CHMS	**Chumysh**	**4.41**	**353**	P	**Pn**	**13 21 14.4**	**+1.8**
	SNR=27						
KST	**Kastek**	**4.43**	**4**	*e*P	**Pb**	**13 21 23.8**	**+0.2**
	92nm,0.8s						
KST				⇑*i*S	**Sb**	**13 22 21.5**	**+4.3**
	106nm,0.8s						
KST	**Kastek**	**4.43**	**4**	Pg	**Pb**	**13 21 23.8**	**+0.2**
	92nm,0.8s						
KST				Lg	Lg	13 22 21.5	
	106nm,0.8s						
KST	**Kastek**	**4.43**	**4**	*e*PN	**Pb**	**13 21 23.8**	**+0.2**
KST				*i* S	**Sb**	**13 22 21.5**	**+4.3**
MRKS	**Merke**	**4.47**	**338**	*e*P	**Pb**	**13 21 24.3**	**+0.1**
	90nm,0.6s						
MRKS				eS	**Sb**	**13 22 21.9**	**+3.7**
	42nm,0.5s						
MRKS	**Merke**	**4.47**	**338**	*e*PN	**Pb**	**13 21 24.3**	**+0.1**
MRKS				eS	**Sb**	**13 22 21.9**	**+3.7**
IZV	**Izvestkoviy**	**4.49**	**10**	*e*P	**Pb**	**13 21 23.8**	**-0.9**
	50nm,0.5s						
IZV				eS	**Sb**	**13 22 21.4**	**+2.4**
	106nm,0.8s						
IZV	**Izvestkoviy**	**4.49**	**10**	Pg	**Pb**	**13 21 23.8**	**-0.9**
	50nm,0.5s						
IZV				Lg	Lg	13 22 21.4	
	106nm,0.8s						
IZV	**Izvestkoviy**	**4.49**	**10**	*e*PN	**Pb**	**13 21 23.8**	**-0.9**
IZV				eS	**Sb**	**13 22 21.4**	**+2.4**
TNSS	**Tian-Shan**	**4.55**	**13**	*e*P	**Pb**	**13 21 24.4**	**-1.3**
	58nm,0.7s						
TNSS				*e*S	**Sb**	**13 22 22.5**	**+1.8**
	55nm,0.7s						
TNSS	**Tian-Shan**	**4.55**	**13**	Pg	**Pb**	**13 21 24.4**	**-1.3**
	58nm,0.7s						
TNSS				Lg	Lg	13 22 22.5	
	68nm,0.9s						
TNSS	**Tian-Shan**	**4.55**	**13**	*e*PN	**Pb**	**13 21 24.4**	**-1.3**
TNSS				eS	**Sb**	**13 22 22.5**	**+1.8**
MTBS	**Maitube**	**4.56**	**9**	*e*P	**Pb**	**13 21 25.2**	**-0.6**
	40nm,0.5s						
MTBS				eS	**Sb**	**13 22 23.7**	**+2.9**
	29nm,0.5s						
MTBS	**Maitube**	**4.56**	**9**	Pg	**Pb**	**13 21 25.2**	**-0.6**
	40nm,0.5s						
MTBS				Lg	Lg	13 22 23.7	
	38nm,0.4s						
MTBS	**Maitube**	**4.56**	**9**	*e*PN	**Pb**	**13 21 25.2**	**-0.6**
MTBS				eS	**Sb**	**13 22 23.7**	**+2.9**
DGS	**Degeres**	**4.62**	**2**	*e*P	**Pb**	**13 21 26.8**	**0.0**
	119nm,0.6s						
DGS				eS	**Sb**	**13 22 27.0**	**+4.4**
	91nm,0.8s						
DGS	**Degeres**	**4.62**	**2**	Pg	**Pb**	**13 21 26.8**	**0.0**
	119nm,0.6s						
DGS				Lg	Lg	13 22 27.0	
	91nm,0.8s						
DGS	**Degeres**	**4.62**	**2**	*e*PN	**Pb**	**13 21 26.8**	**0.0**
DGS				eS	**Sb**	**13 22 27.0**	**+4.4**
MDOK	**Medeo**	**4.69**	**14**	*e*P	**Pb**	**13 21 27.1**	**-0.9**
	70nm,0.9s						
MDOK				eS	**Sb**	**13 22 26.9**	**+2.3**
	110nm,0.9s						
MDOK	**Medeo**	**4.69**	**14**	Pg	**Pb**	**13 21 27.1**	**-0.9**
	70nm,0.9s						
MDOK				Lg	Lg	13 22 26.9	
	110nm,0.9s						
MDOK	**Medeo**	**4.69**	**14**	*e*PN	**Pb**	**13 21 27.1**	**-0.9**
MDOK				eS	**Sb**	**13 22 26.9**	**+2.3**
USP	**Ospenovka**	**4.71**	**351**	P	**Pn**	**13 21 18.8**	**+2.1**
	SNR=6.9						
KNDC	**Almaty**	**4.73**	**13**	⇓Pn	**Pn**	**13 21 18.8**	**+1.8**
	24nm,0.5s						
KNDC				⇑Pg	**Pb**	**13 21 31.5**	**+2.9**
	87nm,0.7s						
KNDC				⇓Lg	Lg	13 22 31.3	
	182nm,0.7s						
KOTS	**Kotyrbulak**	**4.77**	**14**	*e*P	**Pb**	**13 21 29.4**	**0.0**
	152nm,0.5s						
KOTS				eS	**Sb**	**13 22 30.7**	**+3.8**
	440nm,0.5s						
KOTS	**Kotyrbulak**	**4.77**	**14**	Pg	**Pb**	**13 21 29.4**	**0.0**
	152nm,0.5s						
KOTS				Lg	Lg	13 22 30.7	
	440nm,0.5s						
SGDS	**Sogindy**	**4.88**	**353**	Pg	**Pb**	**13 21 31.7**	**+0.6**
	146nm,0.8s						
SGDS				Lg	Lg	13 22 34.9	
	86nm,0.8s						
SATY	**Saty**	**4.95**	**25**	*e*P	**Pb**	**13 21 32.8**	**+0.3**
	55nm,0.6s						
SATY				eS	**Sb**	**13 22 36.7**	**+4.5**
	138nm,1.3s						
SATY	**Saty**	**4.95**	**25**	Pg	**Pb**	**13 21 32.5**	**+0.1**
	55nm,0.6s						
SATY				Lg	Lg	13 22 36.0	
	138nm,1.3s						
CHGR	**Chuyangaron**	**4.97**	**272**		**Pn**	**13 21 23.1**	**+2.8**
KRBS	**Karabastau**	**5.08**	**1**	*e*P	**Pb**	**13 21 34.0**	**-0.5**
	44nm,0.7s						
KRBS				eS	**Sb**	**13 22 39.2**	**+3.6**
	69nm,0.8s						
KTBS	**Karatobe**	**5.17**	**10**	*e*P	**Pb**	**13 21 36.1**	**0.0**
	46nm,0.7s						
KTBS				eS	**Sb**	**13 22 42.6**	**+4.4**
	95nm,0.7s						
KTBS	**Karatobe**	**5.17**	**10**	Pg	**Pb**	**13 21 36.1**	**0.0**
	46nm,0.7s						
KTBS				Lg	Lg	13 22 42.6	
	95nm,0.7s						
UZB	**Uzunbulak**	**5.25**	**29**	*e*P	**Pb**	**13 21 38.0**	**+0.4**
	41nm,0.8s						
UZB				eS	**Sb**	**13 22 45.0**	**+4.3**
	78nm,1.4s						
UZB	**Uzunbulak**	**5.25**	**29**	Pg	**Pb**	**13 21 38.0**	**+0.4**
	41nm,0.8s						
UZB				Lg	Lg	13 22 45.1	
	78nm,1.4s						
KURS	**Kuram**	**5.27**	**22**	*e*P	**Pb**	**13 21 39.4**	**+1.6**
	56nm,0.7s						
KURS				eS	**Sb**	**13 22 48.0**	**+6.9**
	102nm,1.3s						
KURS	**Kuram**	**5.27**	**22**	Pg	**Pb**	**13 21 39.3**	**+1.6**
	56nm,0.7s						
KURS				Lg	Lg	13 22 48.0	
	102nm,1.3s						
NIL	**Nilore**	**5.28**	**201**	PN	Pb	13 21 32.1	-5.9
NIL	**Nilore**	**5.28**	**201**		Pb	13 21 32.1	-5.9
KUU	**Kurty**	**5.31**	**7**	*e*P	**Pb**	**13 21 38.2**	**-0.2**
	48nm,0.7s						
KUU				eS	**Sb**	**13 22 46.3**	**+4.1**
	80nm,0.8s						
DZA	**Taraz**	**5.32**	**325**	*e*P	**Pb**	**13 21 41.8**	**+3.2**
	102nm,0.1s						
DZA				eS	**Sg**	**13 22 52.0**	**-4.2**
	180nm,0.4s						
DZA	**Taraz**	**5.32**	**325**	Pg	**Pg**	**13 21 44.1**	**-3.3**
	77nm,0.1s						
DZA				Lg	Lg	13 22 56.3	
	198nm,0.4s						
KPKS	**Kokpek**	**5.41**	**25**	*e*P	**Pb**	**13 21 40.6**	**+0.4**
	104nm,0.7s						
KPKS				eS	**Sb**	**13 22 50.5**	**+5.3**
	176nm,0.5s						
SHLS	**Shalkode**	**5.44**	**32**	*e*P	**Pg**	**13 21 46.9**	**-2.8**
	77nm,0.5s						
SHLS				eS	**Sg**	**13 23 01.1**	**+1.0**
	199nm,1.2s						
IUG	**Iuzhnay**	**5.47**	**312**	*e*P	**Pb**	**13 21 44.0**	**+2.9**
	65nm,0.9s						
IUG				eS	**Sg**	**13 22 56.6**	**-4.4**
	96nm,0.7s						
IUG	**Iuzhnay**	**5.47**	**312**	Pg	**Pb**	**13 21 44.0**	**+2.9**
	65nm,0.9s						
IUG				Lg	Lg	13 22 56.6	
	96nm,0.7s						
PDGK	**Podgornoye**	**5.59**	**31**	Pg	**Pb**	**13 21 41.3**	**-2.0**
	15nm,0.5s						
PDGK				Lg	Lg	13 22 51.4	
	35nm,0.9s						
PDGK	**Podgornoye**	**5.59**	**31**	⇑Pn	**Pn**	**13 21 29.3**	**+0.4**
	17nm,0.5s						
PDGK				⇑Pg	**Pb**	**13 21 47.6**	**+4.3**
	48nm,1.1s						
PDGK				⇓Lg	Lg	13 23 01.6	
	169nm,1.2s						
PDGK	**Podgornoye**	**5.59**	**31**	PN	**Pn**	**13 21 29.3**	**+0.4**
PDGK				PG	**Pb**	**13 21 47.6**	**+4.3**
CEP	**Cherat**	**5.60**	**212**	P	Pb	13 21 36.5	-6.9
CEP				S	**Sb**	**13 22 47.0**	**-3.6**
ARXS	**Arharly**	**5.86**	**17**	*e*P	**Pb**	**13 21 49.9**	**+2.1**
	71nm,0.8s						
ARXS				eS	**Sb**	**13 23 06.2**	**+8.1**
	47nm,0.9s						
ARXS	**Arharly**	**5.86**	**17**	Pg	**Pb**	**13 21 49.9**	**+2.1**
	71nm,0.8s						
ARXS				Lg	Lg	13 23 06.2	
	47nm,0.9s						
KK02	**Karatay Array**	**5.86**	**321**	Pn	**Pn**	**13 21 33.4**	**+0.9**
KK31	**Karatay Array**	**5.86**	**321**	Pn	**Pn**	**13 21 33.4**	**+0.8**
	5.6nm,0.4s,baz=131,slow=13,SNR=91						
KK31				⇑Pg	Pb	13 21 53.4	+5.5
	7.2nm,0.5s,baz=136,slow=17,SNR=6.7						
KK31				⇑Sn	**Sn**	**13 22 39.6**	**-0.2**
	6.2nm,0.3s,baz=143,slow=25,SNR=5.0						
KK31				⇑Lg	Lg	13 23 09.5	
	9.9nm,0.5s						
KK31	**Karatay Array**	**5.86**	**321**	PN	**Pn**	**13 21 33.4**	**+0.8**
KK31				PG	Pb	13 21 53.4	+5.5
KK31	**Karatay Array**	**5.86**	**321**		**Pn**	**13 21 33.1**	**+0.5**
KKAR	**Karatay Array**	**5.86**	**321**	PN	**Pn**	**13 21 33.1**	**+0.6**
KKAR	**Karatay Array**	**5.86**	**321**		**Pn**	**13 21 33.1**	**+0.6**
KK01	**Karatay Array**	**5.87**	**321**	Pn	**Pn**	**13 21 33.7**	**+1.1**
KK05	**Karatay Array**	**5.87**	**322**	Pn	**Pn**	**13 21 33.4**	**+0.8**
KK03	**Karatay Array**	**5.87**	**321**	Pn	**Pn**	**13 21 33.6**	**+1.0**
MNBS	**Baschi**	**5.88**	**21**	*e*P	**Pb**	**13 21 48.3**	**+0.1**
	38nm,0.5s						
MNBS				eS	**Sb**	**13 23 03.7**	**+5.1**
	34nm,0.7s						
BRLS	**Boroldaу**	**6.16**	**318**	*e*P	**Pb**	**13 21 56.9**	**+4.0**
	32nm,0.2s						
BRLS				eS	**Sg**	**13 23 18.1**	**-5.1**
	63nm,1.0s						
BRLS	**Boroldaу**	**6.16**	**318**	Pg	**Pb**	**13 21 56.9**	**+4.0**
	32nm,0.2s						
BRLS				Lg	Lg	13 23 18.1	
	63nm,1.0s						
DJR	**Jarkent**	**6.55**	**28**	Pg	**Pb**	**13 22 01.8**	**+2.2**
	16nm,0.6s						
DJR				Lg	Lg	13 23 26.3	
	33nm,1.2s						
THW	**Thamme Wali**	**6.56**	**209**	P	Pn	13 21 48.6	+6.4
KBL	**Kabul**	**6.60**	**234**	PN	Pn	13 21 49.0	+6.2
KBL	**Kabul**	**6.60**	**234**		Pn	13 21 49.0	+6.2
MAKZ	**Makanchi**	**9.47**	**28**	P	**Pn**	**13 22 21.7**	**-0.3**
MAKZ	**Makanchi**	**9.47**	**28**	Pn	**Pn**	**13 22 21.6**	**-0.3**
MK31	**Makanchi Array**	**9.57**	**29**	P	**Pn**	**13 22 22.7**	**-0.7**
MK31	**Makanchi Array**	**9.57**	**29**		**Pn**	**13 22 22.7**	**-0.7**
MKAR	**Makanchi Array**	**9.57**	**29**	Pn	**Pn**	**13 22 23.1**	**-0.4**
	2.1nm,0.3s,baz=204,slow=13,SNR=92						
MKAR				Lg	Lg	13 25 05.0	
	0.1nm,0.3s,baz=201,slow=26,SNR=2.5						
MKAR				LR	LR	13 26 11.0	
	comp=Z,60nm,18.2s,baz=204,slow=39						
MKAR	**Makanchi Array**	**9.57**	**29**	Pn	**Pn**	**13 22 22.3**	**-1.1**
WMQ	**Urumqi**	**10.55**	**57**	*e*P	**Pn**	**13 22 38.5**	**+1.6**
WMQ	**Urumqi**	**10.55**	**57**	P	**Pn**	**13 22 36.4**	**-0.5**
WMQ	**Urumqi**	**10.55**	**57**		**Pn**	**13 22 36.4**	**-0.5**
KURBB	**Kurchatov Arra**	**12.19**	**9**	Pn	**Pn**	**13 22 56.8**	**-2.5**
	0.1nm,0.3s,baz=193,slow=12,SNR=9.2						
KURBB				Lg	Lg	13 26 27.4	
	0.1nm,0.3s,baz=200,slow=29,SNR=4.9						
PYUN	**Piuthan**	**12.21**	**147**	*e*P	**Pn**	**13 23 00.4**	**+0.7**
	51nm,0.4s						
PYUN				eS	**Sn**	**13 25 13.4**	**-2.6**
KURK	**Kurchatov**	**12.30**	**9**	*ce*P	**Pn**	**13 22 58.6**	**-2.0**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KURK	**Kurchatov**	**12.30**	**9**	Pn	**Pn**	**13 22 58.0**	**-2.6**
DANN	**Dangsing**	**12.34**	**144**	*e*P	**Pn**	**13 23 02.2**	**+0.6**
	comp=Z,22nm,0.5s						
KOLN	**Koldanda**	**12.76**	**146**	*e*P	**Pn**	**13 23 07.1**	**-0.2**
	comp=Z,22nm,0.4s						
GKN	**Gorkha**	**13.04**	**142**	*e*P	**Pn**	**13 23 10.4**	**-0.7**
	comp=Z,30nm,0.4s						
KKN	**Kakani**	**13.54**	**140**	*e*P	**Pn**	**13 23 17.6**	**-0.3**
DMN	**Daman**	**13.60**	**141**	*e*P	**Pn**	**13 23 19.1**	**+0.3**
	comp=Z,22nm,0.6s						
GEYT	**Alibeck**	**13.68**	**273**	Pn	**Pn**	**13 23 20.5**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=89,slow=12,SNR=2.6						
GEYT				Sn	**Sn**	**13 25 52.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=81,slow=26,SNR=2.9						
GUN	**Gumba**	**13.75**	**138**	*e*P	**Pn**	**13 23 19.8**	**-1.1**
	comp=Z,22nm,0.5s						
PKIN	**Phulchoki**	**13.77**	**140**	*e*P	**Pn**	**13 23 19.8**	**-1.4**
PKI	**Pulchoki**	**13.78**	**140**	*e*P	**Pn**	**13 23 20.1**	**-1.3**
	comp=Z,18nm,0.4s						
BRVK	**Borovoye**	**14.89**	**348**	*i* P	**Pn**	**13 23 36.3**	**+0.3**
BRVK	**Borovoye**	**14.89**	**348**	P	**P**	**13 23 40.8**	**-0.9**
RAMN	**Ramite**	**14.90**	**138**	*e*P	**Pn**	**13 23 34.4**	**-2.1**
TAPN	**Taplejung**	**15.19**	**134**	*e*P	**Pn**	**13 23 38.8**	**-1.6**
ODAN	**Odare**	**15.39**	**136**	*e*P	**Pn**	**13 23 41.7**	**-1.4**
	comp=Z,29nm,0.5s						
ABKAR	**Akbulak array**	**15.42**	**319**	Pn	**Pn**	**13 23 39.4**	**-3.6**
ABKAR	**Akbulak array**	**15.42**	**319**	Pn	**Pn**	**13 23 39.1**	**-4.0**
ZAA0	**Zalesovo Array**	**16.61**	**20**		**Pn**	**13 23 55.4**	**-2.9**
ZALV	**Zalesovo Beam**	**16.61**	**20**	Pn	**Pn**	**13 23 55.8**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=215,slow=12,SNR=17						
ZALV	**Zalesovo Beam**	**16.61**	**20**		**Pn**	**13 23 54.5**	**-3.9**
AKTO	**Aktyubinsk**	**17.13**	**319**	P	**Pn**	**13 24 03.8**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=113,slow=16,SNR=22						
GTA	**Gaotai**	**18.90**	**80**	*e*P	**Pn**	**13 24 27.1**	**+0.1**
GTA				pP	sP	13 24 31.6	-0.3
GTA				sP	pP	13 24 34.2	+4.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SHL	**Shillong**	**18.99**	**128**	P	**Pn**	**13 24 28.6**	**+0.5**
SHL				pmax	pmax		
	comp=Z,19nm,1.1s						
SHL	**Shillong**	**18.99**	**128**	P	**Pn**	**13 24 28.6**	**+0.5**
WSAR	**Wadi Sarin**	**21.03**	**228**	P	**P**	**13 24 52.7**	**+3.2**
	comp=Z,25nm,1.2s,baz=228,slow=1.4,SNR=4.6						
ARU	**Arti**	**21.07**	**333**	P	**P**	**13 24 50.1**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=175,slow=5.5,SNR=6.2						
ARU	**Arti**	**21.07**	**333**	*e*P	**P**	**13 24 49.1**	**-0.6**
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	**Arti**	**21.07**	**333**		**P**	**13 24 49.2**	**-0.5**
LZH	**Lanzhou**	**22.64**	**88**	*e*P	**P**	**13 25 08.3**	**+1.4**
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
ZAK	**Zakamensk**	**22.90**	**50**	*e*P	**P**	**13 25 07.2**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GNI	**Garni**	**23.77**	**283**	*i* P	**P**	**13 25 19.9**	**+1.5**
GNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SONM	**Songino Array**	**24.19**	**58**	P	**P**	**13 25 22.1**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=257,slow=10.0,SNR=9.5						
SONM	**Songino Array**	**24.19**	**58**	P	**P**	**13 25 20.9**	**-1.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**24.19**	**58**	P	**P**	**13 25 20.9**	**-1.3**
ULN	**Ulaanbaatar**	**24.63**	**58**

ARC5	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.3**	**+0.1**
ARCES	**ARCESS Array B**	**40.63**	**336**	P		**P**	**13 27 45.4**	**+0.1**
	comp=Z,4.3nm,0.6s,baz=110,slow=9.2,SNR=18							
ARD6	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.5**	**+0.2**
ARA3	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.5**	**+0.2**
ARB4	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.5**	**+0.2**
ARB4				IAmb		IAmb	13 28 05.4	
	comp=Z,14nm,1.2s							
ARC1	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.7**	**+0.4**
ARB5	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.4**	**+0.1**
ARD1	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.7**	**+0.4**
ARC6	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.8**	**+0.5**
ARC6				IAmb		IAmb	13 27 57.8	
	comp=Z,20nm,1.3s							
ARC7	**ARCESS Array S**	**40.63**	**336**	P		**P**	**13 27 45.3**	**0.0**
ARD7	**ARCESS Array S**	**40.64**	**336**	P		**P**	**13 27 45.2**	**-0.2**
ARD7				IAmb		IAmb	13 27 57.3	
	comp=Z,18nm,1.1s							
ARD9	**ARCESS Array S**	**40.64**	**336**	P		**P**	**13 27 45.5**	**+0.1**
ARD8	**ARCESS Array S**	**40.64**	**336**	P		**P**	**13 27 45.7**	**+0.3**
KLR	**Kul'dur**	**41.00**	**56**	P		**P**	**13 27 47.8**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=297,slow=6.8,SNR=3.5							
KLR	**Kul'dur**	**41.00**	**56**	*i* P		**P**	**13 27 47.4**	**-1.2**
KLR				pmax		pmax		
	comp=Z,3.0nm,1.2s							
TWG	**Pinlang**	**41.78**	**99**	P		**P**	**13 27 55.0**	**-0.3**
USA0B	**Ussuriysk Arra**	**42.02**	**64**	*i* P		**P**	**13 27 56.5**	**-0.5**
USRK	**Ussuriysk Ar.**	**42.02**	**64**	P		**P**	**13 27 56.3**	**-0.7**
USRK	**Ussuriysk Ar.**	**42.02**	**64**	P		**P**	**13 27 56.3**	**-0.7**
TIXI	**Tiksi**	**42.47**	**22**	*ce*P		**P**	**13 27 58.6**	**-1.7**
TIXI				pmax		pmax		
	comp=Z,20nm,0.8s							
TIXI	**Tiksi**	**42.47**	**22**	P		**P**	**13 27 58.9**	**-1.4**
NC405	**NORSAR Array S**	**44.65**	**322**	P		**P**	**13 28 18.7**	**+0.6**
GERES	**GERESS Array B**	**44.67**	**304**	P		**P**	**13 28 19.2**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=81,slow=8.2,SNR=3.9							
NB201	**NORSAR Array S**	**44.86**	**322**	P		**P**	**13 28 18.3**	**-1.4**
NB2	**NORSAR Subarra**	**44.90**	**322**	P		**P**	**13 28 20.1**	**0.0**
	comp=Z,0.7nm,0.5s,baz=90,slow=7.9							
NOA	**NORSAR Array B**	**44.90**	**322**	P		**P**	**13 28 20.4**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=90,slow=7.9,SNR=5.5							
INTR	**Introdacqua**	**46.20**	**295**	P		**P**	**13 28 30.7**	**0.0**
INTR				IAmb		IAmb	13 28 56.3	
	comp=Z,8.4nm,1.0s							
DAG	**Danmarks Havn**	**53.72**	**343**	*i* P		**P**	**13 29 27.1**	**-0.1**
DAG				pmax		pmax		
	comp=Z,12nm,0.7s							
DAG	**Danmarks Havn**	**53.72**	**343**	*i* P		**P**	**13 29 27.1**	**-0.1**
	comp=Z,12nm,0.7s							
DAG	**Danmarks Havn**	**53.72**	**343**	*i* P		**P**	**13 29 27.2**	**-0.1**
DAG				IAmb		IAmb	13 29 29.0	
	comp=Z,12nm,0.7s							
DBG	**Daneborg**	**54.77**	**341**	*i* P		P	13 29 29.9	-4.9
ESDC	**Sonseca Array**	**59.62**	**298**	P		**P**	**13 30 10.3**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=54,slow=6.7,SNR=9.7							
ESDC	**Sonseca Array**	**59.62**	**298**	IAmb		IAmb	13 30 15.9	
	comp=Z,12nm,1.5s							
SUMG	**Summit**	**60.21**	**342**	P		**P**	**13 30 14.9**	**+1.2**
SUMG				pmax		pmax		
	comp=Z,13nm,0.9s							
SUMG	**Summit**	**60.21**	**342**	P		**P**	**13 30 14.9**	**+1.2**
SUMG	**Summit**	**60.21**	**342**	*i* P		**P**	**13 30 12.4**	**-1.3**
SUMG	**Summit**	**60.21**	**342**	*i* P		**P**	**13 30 12.4**	**-1.3**
ICESG	**Greenland Ices**	**62.58**	**339**	*i* P		P	13 30 18.0	-12
TOLK	**Toolik Lake Re**	**67.93**	**16**	P		**P**	**13 31 03.1**	**-1.0**
TOLK				IAmb		IAmb	13 31 04.1	
	comp=Z,13nm,1.5s							
COLD	**Coldfoot**	**68.93**	**17**	P		**P**	**13 31 10.2**	**-0.1**
COLD				IAmb		IAmb	13 31 12.1	
	comp=Z,3.5nm,1.0s							
TOA0	**Torodi Ar. Sit**	**69.31**	**271**	P		**P**	**13 31 13.8**	**+0.4**
TOA0				IAmb		IAmb	13 31 14.2	
	comp=Z,8.7nm,1.5s							
TORD	**Torodi Ar. Bea**	**69.31**	**271**	P		**P**	**13 31 14.1**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=52,slow=5.1,SNR=7.0							
TORD	**Torodi Ar. Bea**	**69.31**	**271**	P		**P**	**13 31 14.1**	**+0.6**
INK	**Inuvik**	**71.20**	**11**	P		**P**	**13 31 23.7**	**-0.4**
INK				pmax		pmax		
	comp=Z,2.0nm,0.6s							
INK	**Inuvik**	**71.20**	**11**	P		**P**	**13 31 23.7**	**-0.4**
INK				IAmb		IAmb	13 31 25.1	
	comp=Z,2.4nm,0.6s							
BPAW	**Bear Paw Mtn.**	**71.24**	**20**	P		**P**	**13 31 23.7**	**-0.9**
BPAW				IAmb		IAmb	13 31 48.1	
	comp=Z,7.8nm,1.4s							
C36M	**Paulatuk**	**71.38**	**7**	P		**P**	**13 31 24.3**	**-0.9**
IL31		**71.72**	**18**	P		**P**	**13 31 26.8**	**-0.6**
IL31				IAmb		IAmb	13 31 27.4	
	comp=Z,5.1nm,1.2s							
ILAR	**Eielson Array**	**71.72**	**18**	P		**P**	**13 31 26.6**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=819,slow=4.7,SNR=13							
ILAR	**Eielson Array S**	**71.72**	**18**	P		**P**	**13 31 26.0**	**-1.4**
HYT	**Haines Junctio**	**77.29**	**16**	P		**P**	**13 31 59.6**	**-0.5**
HYT				IAmb		IAmb	13 32 10.6	
	comp=Z,9.9nm,1.5s							
YKA	**Yellowknife Ar**	**78.91**	**5**	P		**P**	**13 32 07.9**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=356,slow=5.5,SNR=7.6							
YKA	**Yellowknife Ar**	**78.91**	**5**	*ce*P		**P**	**13 32 08.3**	**-0.4**
YKA				pmax		pmax		
	comp=Z,4.0nm,0.8s							
WRA	**Warramunga Arr**	**80.18**	**125**	P		**P**	**13 32 16.3**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=320,slow=4.3,SNR=9.5							
WRA	**Warramunga Arr**	**80.18**	**125**	IAmb		IAmb	13 32 21.3	
	comp=Z,0.1nm,1.0s							
ASAR	**Alice Springs**	**82.63**	**128**	P		**P**	**13 32 29.8**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=315,slow=5.4,SNR=6.7							

RSNC ***10*** *13:30:16.6±1.2, 6.°84N×73.°16W, h148km±4km, ML3.5, Mw3.8, Fault plane solution: NP1:φs105.00000°, δ44.00000°, λ38.00000°.*

IDC ***10*** *13:30:19.8±7.2, 4.°73N×76.°69W, h95km±76km, mb3.1/1, mb1 3.7/2, mb1mx3.1/25, mbtmp3.7/2, ML2.8/1, Error ellipse: s-maj=96.3km s-min=34.5km az=41.0*

ISC 10 13:30:15.7±0.9, 6.°85N±0.°03×73.°13W±0.°04, h152km±6km, n38, σ1§40/62, 6C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**192**	*i* P	**Pn**	**13 30 36.6**	**-0.1**
BARC				*e*S	**Sn**	**13 30 51.9**	**-0.8**
BARC				*i*		13 30 53.2	
	comp=Z,1μm,0.4s						
BRRC	**Barranca, Sant**	**0.63**	**294**	⇑*i* P	**Pn**	**13 30 38.4**	**+0.4**
BRRC				*e*S	**Sn**	**13 30 54.9**	**-0.1**
BRRC				*i*		13 30 58.5	
	comp=Z,388nm,0.3s						
PAMC	**Pamplona, Colo**	**0.65**	**41**	⇑*i* P	**Pn**	**13 30 39.3**	**+0.6**
PAMC				*e*S	**Sn**	**13 30 56.2**	**0.0**
PAMC				*i*		13 30 58.5	
	comp=Z,845nm,0.5s						
RUSC	**La Rusia**	**0.95**	**177**	⇑*e*P	**Pn**	**13 30 40.7**	**-0.2**
RUSC				*e*S	**Sn**	**13 30 59.5**	**-0.5**
RUSC				*i*		13 31 01.0	
	comp=Z,612nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	⇓*i* P	**Pn**	**13 30 43.2**	**-0.8**
PTBC				*e*S	**Sn**	**13 31 04.5**	**-1.0**
PTBC				*i*		13 31 09.4	
	comp=Z,337nm,0.4s						
TAMC	**Tame, Arauca**	**1.39**	**107**	⇑*i* P	**Pn**	**13 30 45.1**	**+0.7**
TAMC				*i*		13 31 05.8	
	comp=Z,104nm,0.4s						
TAMC				*e*S	**Sn**	**13 31 06.3**	**0.0**
TAMC				*i*		13 31 07.2	
	comp=E,353nm,0.3s						
OCAC	**Ocana**	**1.40**	**352**	*e*P	**Pn**	**13 30 44.7**	**+0.1**
OCAC				*e*S	**Sn**	**13 31 06.4**	**-0.4**
OCAC				*i*		13 31 11.1	
	comp=Z,275nm,0.3s						
SPBC	**San Pablo de B**	**1.51**	**218**	*e*P	**Pn**	**13 30 45.6**	**-0.1**
SPBC				*e*S	**Sn**	**13 31 07.2**	**-1.4**
SPBC				*i*		13 31 12.0	
	comp=Z,431nm,0.4s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**13 30 52.9**	**+0.1**
NORC				*e*S	**Sn**	**13 31 21.2**	**0.0**
NORC				*i*		13 31 22.9	
	comp=Z,220nm,0.2s						
CHIC	**Chingaza**	**2.28**	**195**	⇓*e*P	**Pn**	**13 30 54.8**	**0.0**
CHIC				*e*S	**Sn**	**13 31 24.2**	**-0.6**
CHIC				*i*		13 31 27.7	
	comp=Z,121nm,0.4s						
ROSC	**El Rosal**	**2.32**	**211**	P	**Pn**	**13 30 57.1**	**+2.0**
	comp=Z,46nm,0.3s,baz=303,slow=17,SNR=53						
ROSC				S	**Sn**	**13 31 26.8**	**+1.3**
	comp=Z,89nm,0.3s,baz=28,slow=23,SNR=22						
ROSC	**El Rosal**	**2.32**	**211**	*e*P	**Pn**	**13 30 54.8**	**-0.4**
ROSC				*e*S	**Sn**	**13 31 25.3**	**-0.2**
ROSC				*i*		13 31 30.5	
	comp=Z,257nm,0.5s						
HELC	**Santa Helena**	**2.47**	**255**	*e*Pn	**Pn**	**13 30 58.8**	**+1.8**
HELC				*e*S	**Sn**	**13 31 27.8**	**-0.9**
HELC				*i*		13 31 35.3	
	comp=Z,167nm,0.4s						
UREC	**San Jos de Ur**	**2.55**	**291**	*e*P	**Pn**	**13 30 56.5**	**-1.1**
UREC				*e*S	**Sn**	**13 31 27.9**	**-1.9**
UREC				*i*		13 31 31.9	
	comp=Z,137nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.75**	**234**	*e*P	**Pn**	**13 31 01.1**	**+0.6**
GUY2C				*e*S	**Sn**	**13 31 36.5**	**+1.5**
GUY2C				*i*		13 31 47.6	
	comp=Z,158nm,0.7s						
PTGC	**Puerto Gaitan,**	**2.81**	**159**	⇑*e*P	**Pn**	**13 31 00.0**	**-0.8**
PTGC				*e*S	**Sn**	**13 31 33.2**	**-2.5**
PTGC				*i*		13 31 35.9	
	comp=Z,169nm,0.5s						
RREF	**El Recreo**	**2.93**	**229**	*e*P	**Pn**	**13 30 59.8**	**-3.2**
RREF				*e*S	**Sn**	**13 31 35.1**	**-4.2**
RREF				*i*		13 31 45.9	
	comp=Z,176nm,0.3s						
DBBC	**Dabeiba**	**3.06**	**273**	*e*P	**Pn**	**13 31 04.7**	**+0.6**
TOLC	**Tolima**	**3.13**	**224**	*e*P	**Pn**	**13 31 06.1**	**+0.9**
TOLC				*e*S	**Sn**	**13 31 44.2**	**+0.8**
TOLC				*i*		13 31 51.2	
	comp=Z,352nm,0.4s						
MOTC	**Monteria, Cord**	**3.16**	**308**	*e*P	**Pn**	**13 31 04.3**	**-0.9**
MOTC				*e*S	**Sn**	**13 31 42.4**	**-1.2**
MOTC				*i*		13 31 59.4	
	comp=Z,45nm,0.5s						
ARGC	**Ariguani, Magd**	**3.19**	**340**	*e*P	**Pn**	**13 31 06.4**	**+0.8**
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**13 31 06.3**	**+0.4**
SDV				*e*S	**Sn**	**13 31 43.2**	**-1.5**
SDV				*i*		13 31 48.2	
	comp=Z,96nm,0.5s						
ANIL	**Santa Ana**	**3.25**	**224**	*e*P	**Pn**	**13 31 08.1**	**+1.4**
PRAC	**Prado**	**3.57**	**209**	*e*P	**Pn**	**13 31 10.2**	**-0.3**
PRAC				*e*S	**Sn**	**13 31 53.1**	**0.0**
PRAC				*i*		13 31 59.1	
	comp=Z,155nm,0.3s						
ORTC	**Ortega, Tolima**	**3.60**	**216**	*e*P	**Pn**	**13 31 11.1**	**+0.2**
ORTC				*e*S	**Sn**	**13 31 54.4**	**+0.7**
ORTC				*i*		13 32 01.7	
	comp=Z,106nm,0.5s						
SJCC	**San Jacinto, C**	**3.65**	**326**	⇑*e*P	**Pn**	**13 31 10.8**	**-0.8**
SJCC				*e*S	**Sn**	**13 31 52.5**	**-2.4**
SJCC				*i*		13 31 56.5	
	comp=Z,84nm,0.4s						
YOTC	**Yotoco, Valle**	**4.28**	**229**	*e*P	**Pn**	**13 31 19.5**	**-0.4**
MACC	**Macarena, Meta**	**4.72**	**189**	*e*P	**Pn**	**13 31 24.0**	**-1.6**
MACC				*e*S	**Sn**	**13 32 15.6**	**-4.5**
MACC				*i*		13 32 44.8	
	comp=N,75nm,0.3s						
MARP	**Paez Belalcaza**	**4.87**	**215**	*e*P	**Pn**	**13 31 27.7**	**-0.1**
URIC	**Uribia, Colomb**	**4.96**	**13**	*e*P	**Pn**	**13 31 27.1**	**-1.5**
GARC	**Garzon, Huila**	**5.19**	**207**	*e*P	**Pn**	**13 31 31.3**	**-0.7**
PCON	**Cinco Dias**	**5.54**	**216**	*e*P	**Pn**	**13 31 38.3**	**+1.3**
POPC	**Popayan, Colom**	**5.55**	**220**	*e*P	**Pn**	**13 31 37.1**	**+0.4**
FLOC	**Florencia**	**5.80**	**206**	*e*P	**Pn**	**13 31 39.8**	**-0.1**
SOTA	**Rioblanco**	**5.82**	**217**	*e*P	**Pn**	**13 31 41.5**	**+0.9**
TXAR	**Lajitas Array**	**36.44**	**312**	P	**P**	**13 37 06.5**	**+0.4**
	comp=N,0.4nm,0.7s,baz=130,slow=8.4,SNR=6.4						
ASAR	**Alice Springs**	**149.12**	**234**	PKPbc	**PKPdf**	**13 49 45.9**	**+3.2**
	comp=N,0.3nm,0.6s,baz=117,slow=3.5,SNR=7.3						
WRA	**Warramunga Arr**	**150.34**	**241**	PKPbc	**PKPbc**	**13 49 49.2**	**-0.9**
	comp=N,0.3nm,0.4s,baz=106,slow=2.8,SNR=9.0						

JMA ***10*** *13:34:22.6±0.1, 34.°13N×135.°55E, h68km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs74.00000°, δ40.00000°, λ180.00000°. NP2: φs164.00000°, δ90.00000°, λ50.00000°. Principal axes: T Plg33.0000°, Azm41.0000°; N Plg40.0000°, Azm164.0000°; P Plg33.0000°, Azm286.0000°;*

JMA Felt I J1.

IDC ***10*** *13:34:22.7±1.7, 34.°12N×135.°66E, h68km±24km, mb3.0/3, mb1 3.4/7, mb1mx3.2/45, mbtmp3.5/7 Error ellipse: s-maj=30.2km s-min=14.3km az=22.0*

ISC 10 13:34:22.5±0.9, 34.°14N±0.°04×135.°56E±0.°03, h67km±6km, n24, σ0§57/41, mb3.6/3, 6C-10D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWY	**Kouya**	**0.08**	**20**	⇓P	**Pn**	**13 34 32.8**	**+0.3**
JWY				S	**Sn**	**13 34 39.7**	**-0.1**
JTNC	**Tanabenakahech**	**0.32**	**172**	⇑P	**Pn**	**13 34 33.7**	**+0.1**
JTNC				S	**Sn**	**13 34 41.3**	**-0.4**
JWM	**Minabe**	**0.34**	**210**	⇑P	**Pn**	**13 34 33.6**	**-0.1**
JWM				S	**Sn**	**13 34 41.2**	**-0.6**
JHE	**Heguri**	**0.52**	**11**	⇓P	**Pn**	**13 34 35.4**	**0.0**
JHE				S	**Sn**	**13 34 44.5**	**-0.3**
JKN2	**Miekihoku**	**0.60**	**80**	⇓P	**Pn**	**13 34 36.3**	**+0.2**
JKN2				S	**Sn**	**13 34 46.1**	**0.0**
JAWN	**Awajishima-nag**	**0.64**	**303**	⇑P	**Pn**	**13 34 36.8**	**+0.2**
JAWN				S	**Sn**	**13 34 46.8**	**-0.2**
TSUJ	**Tsu 2**	**0.91**	**51**	⇓P	**Pn**	**13 34 39.7**	**0.0**
TSUJ				S	**Sn**	**13 34 52.0**	**-0.5**
JAI	**Aioi**	**0.98**	**250**	⇑P	**Pn**	**13 34 40.7**	**+0.1**
JAI				S	**Sn**	**13 34 53.8**	**-0.3**
JIE	**Ise**	**0.98**	**75**	⇓P	**Pn**	**13 34 40.8**	**+0.1**
JIE				S	**Sn**	**13 34 53.7**	**-0.4**
JKS	**Kasai**	**1.03**	**325**	⇓P	**Pn**	**13 34 41.3**	**+0.1**
JKS				S	**Sn**	**13 34 54.6**	**-0.5**
TTO1	**TONANKAI O.B.S**	**1.14**	**116**	⇓P	**Pn**	**13 34 42.7**	**+0.3**
JWT	**Wachi**	**1.15**	**354**	⇑P	**Pn**	**13 34 42.8**	**0.0**
JWT				S	**Sn**	**13 34 57.4**	**-0.5**
TTO2	**TONANKAI O.B.S**	**1.29**	**108**	⇓P	**Pn**	**13 34 44.6**	**+0.3**
JJS	**Sakaide**	**1.37**	**280**	⇓P	**Pn**	**13 34 45.3**	**-0.3**
JJS				S	**Sn**	**13 35 02.0**	**-1.0**
JAD	**Aida**	**1.40**	**305**	⇓P	**Pn**	**13 34 45.8**	**-0.2**
JAD				S	**Sn**	**13 35 03.2**	**-0.5**
JMN	**Monobe**	**1.46**	**254**	⇑P	**Pn**	**13 34 46.8**	**0.0**
JMN				S	**Sn**	**13 35 04.5**	**-0.6**
MAT	**Matsushiro**	**3.23**	**41**	P	**Pn**	**13 35 10.9**	**+0.1**
MAT				*e*S	**Sn**	**13 35 47.7**	**-0.5**
MJAR	**Matsushiro Arr**	**3.23**	**41**	P	**Pn**	**13 35 10.7**	**-0.2**
	0.8nm,0.3s,baz=226,slow=14,SNR=19						
JHJ	**Hachijo jima 2**	**3.67**	**105**	P	**Pn**	**13 35 17.2**	**+0.5**
	32nm,0.3s,baz=72,slow=24,SNR=12						
JHJ				S	**Sn**	**13 35 57.6**	**-1.3**
	12nm,0.3s,baz=268,slow=22,SNR=1.5						
JNU	**Nakatsue**	**4.03**	**257**	P	**Pn**	**13 35 22.5**	**+0.7**
	2.2nm,0.3s,baz=120,slow=5.4,SNR=25						
JNU				S	**Sn**	**13 36 06.9**	**-1.0**
	3.8nm,0.3s,baz=309,slow=22,SNR=8.6						
KSRS	**Korea Array**	**7.03**	**300**	P	**Pn**	**13 36 04.8**	**+2.1**
	0.6nm,0.3s,baz=112,slow=14,SNR=6.4						
MKAR	**Makanchi Array**	**41.69**	**304**	P	**P**	**13 42 04.9**	**+0.4**
	0.2nm,0.5s,baz=89,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**53.79**	**181**	P	**P**	**13 43 38.1**	**-0.2**
	0.4nm,0.5s,baz=359,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**57.51**	**182**	P	**P**	**13 44 05.2**	**+0.3**
	0.4nm,0.8s,baz=357,slow=4.0,SNR=2.9						

IDC ***10*** *13:51:21.5±4.1, 50.°01S×119.°52E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.9/15, mbtmp3.9/4, MS3.6/5, Ms1 3.6/5, ms1mx3.3/23, Error ellipse: s-maj=150.1km s-min=25.7km az=98.0*

NEIC ***10*** *13:51:22.1±1.6, 50.°2S±0.°1×119.°5E±0.°5, h15km±6km, mb4.3/9, Error ellipse: s-maj=48.0km s-min=14.3km az=107.0*

ISC 10 13:51:21.5±1.0, 50.°1S±0.°2×119.°0E±0.°3, h10km, n20, σ1§10/12, mb4.0/8, MS3.6/5, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.57**	**345**	T	T	14 11 08.8	
	baz=165,slow=74,SNR=28						
H01W1	**Cape Leeuwin H**	**15.57**	**345**	T	T	14 11 07.5	
	baz=165,slow=74,SNR=25						
H01W3	**Cape Leeuwin H**	**15.58**	**345**	T	T	14 11 06.6	
	baz=165,slow=74,SNR=24						
STKA	**Stephens Creek**	**24.74**	**51**	P	**P**	**13 56 41.9**	**-1.0**
	2.1nm,0.8s,baz=195,slow=10,SNR=3.9						
STKA				LR	LR	14 04 27.0	
	comp=Z,96nm,21.6s,baz=208,slow=32						
STKA	**Stephens Creek**	**24.74**	**51**	IAmb	IAmb	13 56 49.7	
	comp=Z,2.3nm,1.1s						
ASAR	**Alice Springs**	**28.79**	**29**	P	**P**	**13 57 19.4**	**0.0**
	comp=Z,1.8nm,0.8s,baz=210,slow=8.2,SNR=21						
ASAR				LR	LR	14 07 15.5	
	comp=Z,163nm,20.9s,baz=186,slow=33						
ASAR	**Alice Springs**	**28.79**	**29**	P	**P**	**13 57 18.8**	**-0.7**
AS31	**Alice Springs**	**28.79**	**29**	P	**P**	**13 57 19.3**	**-0.2**
AS31				IAmb	IAmb	13 57 21.3	
	comp=Z,5.2nm,1.8s						
VNDA	**Vanda**	**31.89**	**164**	P	**P**	**13 57 47.5**	**+1.2**
	comp=Z,1.2nm,0.9s,baz=304,slow=8.6,SNR=9.8						
FITZ	**Fitzroy Crossi**	**32.32**	**12**	P	**P**	**13 57 52.9**	**+2.3**
WRA	**Warramunga Arr**	**32.42**	**28**	P	**P**	**13 57 51.5**	**-0.1**
	comp=Z,1.1nm,1.0s,baz=200,slow=8.4,SNR=5.5						
WRA	**Warramunga Arr**	**32.42**	**28**	IAmb	IAmb	13 57 58.6	
	comp=Z,0.2nm,1.2s						
WB2	**Warramunga Arr**	**32.42**	**28**	P	**P**	**13 57 51.2**	**-0.3**
WB2				IAmb	IAmb	13 57 58.6	
	comp=Z,7.6nm,1.2s						
MAW	**Mawson**	**32.47**	**216**	LR	LR	14 09 25.5	
	comp=Z,74nm,19.1s,baz=58,slow=33						
MAW	**Mawson**	**32.47**	**216**	P	**P**	**13 57 50.6**	**-0.9**
WB0	**Warramunga Arr**	**32.60**	**28**	P	**P**	**13 57 53.5**	**+0.4**
WB0				IAmb	IAmb	13 58 01.7	
	comp=Z,5.8nm,1.1s						
QSPA	**South Pole Qui**	**40.07**	**180**	P	**P**	**13 58 55.7**	**-0.9**
QSPA				IAmb	IAmb	13 59 11.9	
	comp=Z,8.2nm,1.2s						
SNAA	**Sanae**	**51.86**	**200**	LR	LR	14 20 54.8	
	comp=Z,126nm,21.9s,baz=187,slow=34						
SNAA	**Sanae**	**51.86**	**200**	P	**P**	**14 00 30.1**	**+0.8**
AFI	**Afiamalu**	**66.10**	**83**	LR	LR	14 25 35.6	
	comp=Z,37nm,18.3s,baz=292,slow=31						

BJI ***10*** *13:52:31.2±0.0, 27.°89N×55.°33E, h5km, mB5.1/56, mb4.9/69, Ms5.2/79, Ms7 4.9/73*

SGS ***10*** *13:52:36.2, 28.°23N×56.°27E, h17km, Ml5.0*

IDC ***10*** *13:52:36.8±0.4, 27.°95N×55.°95E, h0km, mb5.0/33, mb1 5.1/38, mb1mx5.1/41, mbtmp5.0/38, ML4.7/3, MS4.7/33, Ms1 4.7/33, ms1mx4.6/41, Error ellipse: s-maj=11.0km s-min=10.0km az=166.0*

DSN ***10*** *13:52:36.2±0.9, 28.°09N×56.°72E, h10km, mb5.8/1, ML5.7/12, Error ellipse: s-maj=27.7km s-min=6.3km az=90.0*

MOS ***10*** *13:52:36.3±1.1, 27.°85N×55.°89E, h15km, mb5.4/103, MS4.6/19, Error ellipse: s-maj=4.5km s-min=3.2km az=99.1*

NEIC ***10*** *13:52:37.4±1.3, 27.°90N±0.°06×55.°86E±0.°08, h10km±1km, mb5.4/241, Error ellipse: s-maj=12.2km s-min=9.6km az=103.0*

GCMT ***10*** *13:52:38.4±0.2, 27.°75N±0.°01×55.°71E±0.°01, h15km, MW5.2/126, Moment Tensor Solution. s85,c121; s126,c215; Duration: 1§0 Moment tensor: Scale 10¹⁶ Nm; Mrr-0.48±.11; Mθθ-0.48±.11; Mφφ0.96±.10; Mrθ5.74±.31; Mrφ5.64±.08; Mθφ3.61±.31; Best double couple: Ms8.38100×10¹⁶ NP1:φs349.00000°, δ41.00000°, λ180.00000°. NP2:φs79.00000°, δ90.00000°, λ49.00000°. Principal axes: T 10.0390, Plg32.0000°, Azm316.0000°; N -3.3170, Plg41.0000°, Azm79.0000°; P -6.7220, Plg32.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

TEH ***10*** *13:52:38.1, 27.°90N×55.°96E, h8km, ML5.4*

OMAN ***10*** *13:52:38.9, 28.°15N×56.°33E, h47km, mb6.4/14, ml5.4/17, ms4.7/3, Mwp5.2/16*

THR ***10*** *13:52:39.5±0.5, 27.°85N×56.°03E, h25km±6km, ML5.2*

BGR ***10*** *13:52:43.0±0.0, 27.°58N×55.°22E, h33km, mb5.2, Ms4.6*

ISC 10 13:52:38.0±0.7, 27.88N±0.°02×55.90E±0.°02, h11km±4km, n1126, σ1§58/1245, mb5.3/309, MS4.8/79, 57C-25D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.53**	**154**	*e*Pg	**Pb**	**13 52 49.1**	**-0.3**
BNDS	**Bandar-Abbas**	**0.53**	**154**	*e*Pg	**Pb**	**13 52 49.2**	**-0.3**
GENO	**Geno**	**0.53**	**153**	*e*Pg	**Pg**	**13 52 48.1**	**-0.3**
GENO				*e*Sg	**Sb**	**13 52 57.4**	**+0.2**
LAR1	**LAR**	**1.37**	**262**	*e*Pg	**Pg**	**13 53 05.9**	**+1.6**
LAR1				*e*		13 53 51.7	
KHNJ	**Kahnooj**	**1.60**	**87**	*e*Pg	**Pb**	**13 53 06.8**	**-0.7**
SHME	**Shamm**	**1.83**	**173

SNR=113
FAQ Al Faqa, Dubai 3.13 185 *e*Pn **Pn 13 53 30.2 +2.9**
ASHO Ashiyiah 3.19 177 *i* P **Pn 13 53 30.9 +2.8**
SNR=882
ASHO Ashiyiah 3.19 177 P **Pn 13 53 31.0 +3.0**
SNR=882
ASHO Ashiyiah 3.19 177 *e*Pn **Pn 13 53 30.9 +2.8**
ASUD Al Ashush, Dub 3.28 189 *i* P **Pb 13 53 33.0 -3.2**
SNR=25
ASUD Al Ashush, Dub 3.28 189 P **Pb 13 53 33.1 -3.1**
SNR=25
ASUD P **Pb 13 53 33.1 -3.1**
SNR=25
AJN Ajban 3.40 194 *i* P **Pn 13 53 34.2 +3.2**
SNR=43
AJN Ajban 3.40 194 P **Pn 13 53 34.2 +3.2**
SNR=18
AJN P **Pn 13 53 34.2 +3.2**
SNR=18
AJN Ajban 3.40 194 *e*Pn **Pn 13 53 33.8 +2.8**
SHI Shiraz 3.46 301 P **Pn 13 53 34.2 +2.3**
SHI Shiraz 3.46 301 *e*Pn **Pn 13 53 34.2 +2.3**
SHI *e* 13 54 56.9
IMEH Mehriz 3.67 343 *e*Pn **Pn 13 53 37.9 +2.9**
IBAF Bafgh 3.71 356 *e*Pn **Pn 13 53 37.6 +2.2**
SOHO SOHO 3.77 171 *i* P **Pn 13 53 37.0 +0.9**
SNR=77
SOHO SOHO 3.77 171 *e*Pn **Pn 13 53 38.3 +2.2**
ALNE Al Ain 3.81 182 *i* P **Pn 13 53 39.3 +2.7**
SNR=70
ALNE Al Ain 3.81 182 *e*Pn **Pn 13 53 39.3 +2.7**
KAZ1 Kazerun 4.13 296 *e*Pn **Pn 13 53 43.0 +2.0**
KAZ1 *e* 13 55 27.4
AHBU AHRAM 4.18 285 *e*Pn **Pn 13 53 45.5 +3.9**
ISAD Sadrabad 4.46 335 *e*Pn **Pn 13 53 48.7 +2.9**
HOQ Hoqain 4.46 163 P **Pn 13 53 46.2 +0.6**
SNR=82
HOQ P **Pn 13 53 46.2 +0.6**
SNR=82
ICHK Chekchek 4.54 344 *e*Pn **Pn 13 53 49.3 +2.5**
ARQ Araqi 4.56 173 P **Pn 13 53 49.4 +2.5**
SNR=154
ARQ P **Pn 13 53 49.4 +2.5**
SNR=154
YZKH Yazd 4.64 346 *e*Pn **Pn 13 53 50.9 +2.8**
YZKH Yazd 4.64 346 *e*Pn **Pn 13 53 50.9 +2.8**
SZD1 Zahaedan-tmp 4.64 69 *e*Pn **Pn 13 53 50.7 +2.5**
CHBR Chabahar 4.68 118 *e*Pn **Pn 13 53 49.2 +0.6**
CHBR Chabahar 4.68 118 *e*Pn **Pn 13 53 49.2 +0.6**
BIDO Bidbid 4.78 155 P **Pn 13 53 50.4 +0.4**
SNR=46
BIDO Bidbid 4.78 155 *e*Pn **Pn 13 53 51.0 +1.1**
KLNJ Kolanjah 4.88 311 *e*Pn **Pn 13 53 54.0 +2.3**
BSRN Basiran 4.94 34 *e*Pn **Pn 13 53 54.0 +1.7**
BSRN Basiran 4.94 34 *e*Pn **Pn 13 53 54.0 +1.7**
IRAM Ramesheh 4.97 323 *e*Pn **Pn 13 53 54.9 +2.2**
NHDN Nehbandan 5.03 45 *e*Pn **Pn 13 53 55.8 +2.3**
SMDO Samad 5.18 158 P **Pn 13 53 57.1 +1.6**
SNR=168
TPRV Parvadeh(Tabas 5.18 7 *e*Pn **Pn 13 53 58.0 +2.5**
UMZA Um Al Zommool 5.19 188 *e*Pn **Pn 13 53 58.3 +2.8**
WSAR Wadi Sarin 5.24 151 Pn **Pn 13 53 57.1 +0.9**
comp=N,55nm,0.3s,baz=347,slow=11,SNR=412
WSAR Sn **Sn 13 54 54.7 -1.9**
comp=N,68nm,0.3s,baz=62,slow=23,SNR=11
WSAR Wadi Sarin 5.24 151 P **Pn 13 53 57.0 +0.8**
SNR=68
WSAR S **Sn 13 54 54.6 -1.9**
BSY Bisya 5.25 167 P **Pn 13 53 58.4 +2.0**
SNR=107
BSY P **Pn 13 53 58.4 +2.0**
SNR=107
SLWR Sila 5.36 226 *e*Pn **Pn 13 54 00.7 +2.8**
ITEG Tejag 5.57 25 *e*Pn **Pn 13 54 02.8 +1.8**
IGAR Gharneh 5.61 324 *e*Pn **Pn 13 54 03.9 +2.3**
ANAR Anarak 5.62 341 *e*Pn **Pn 13 53 03.6 +2.1**
SLWS 5.63 238 P **Pn 13 54 04.1 +2.5**
SLWS 5.63 238 S **Sn 13 55 08.9 +2.6**
TKDS Koohdasht(Taba 5.81 10 *e*Pn **Pn 13 54 06.6 +2.4**
JMDO Jabal Madar 5.84 160 P **Pn 13 54 06.2 +1.7**
SNR=61
JMDO P **Pn 13 54 06.2 +1.7**
SNR=61
TABS Tabas 5.85 10 *e*Pn **Pn 13 54 06.9 +2.2**
TABS Tabas 5.85 10 *e*Pn **Pn 13 54 06.9 +2.2**
IZEF Zefreh 5.88 329 *e*Pn **Pn 13 54 06.6 +1.4**
IDAH Dahanechah 5.93 34 *e*Pn **Pn 13 54 09.5 +3.5**
WBK Wadi Bani Khal 5.94 151 P **Pn 13 54 06.6 +0.8**
SNR=177
WBK S **Sn 13 55 14.0 +0.2**
TNSJ Nastanj 6.09 6 *e*Pn **Pn 13 54 09.9 +1.8**
ROKH ROKH 6.13 318 *e*Pn **Pn 13 54 10.6 +2.0**
AFRZ Afriz 6.14 25 *e*Pn **Pn 13 54 10.7 +1.9**
IMON Monand 6.21 31 *e*Pn **Pn 13 54 13.1 +3.3**
IPIR Pirpir 6.46 319 *e*Pn **Pn 13 54 15.0 +1.7**
JLN Jalan Bani Buh 6.53 150 P **Pn 13 54 14.8 +0.8**
SNR=68
JLN S **Sn 13 55 26.8 -1.7**
IKLH Kolahrood 6.58 327 *e*Pn **Pn 13 54 16.2 +1.3**
NHRD Haradh 6.94 245 P **Pn 13 54 21.3 +1.8**
QAM Ghamsar 7.01 328 *e*Pn **Pn 13 54 22.9 +2.2**
MHTO MHTO 7.12 164 P **Pn 13 54 23.0 +1.0**
SNR=193
MHTO P **Pn 13 54 23.0 +1.0**
SNR=193
SMAN Sihmah 7.19 258 P **Pn 13 54 23.5 +0.4**
SMAN Sihmah 7.19 258 S **Sn 13 55 44.2 -0.7**
IANJ Anjilo 7.75 348 *e*Pn **Pn 13 54 32.4 +1.4**
ILAS Lasjerd 7.89 342 *e*Pn **Pn 13 54 35.3 +2.4**
IVRN Varamin 7.94 334 *e*Pn **Pn 13 54 36.1 +2.7**
DQM DQM 8.05 169 P **Pn 13 54 35.5 +0.6**
SNR=15
IQOM Qom 8.08 330 *e*Pn **Pn 13 54 36.3 +0.8**
IFIR Firoozkooh 8.19 342 *e*Pn **Pn 13 54 39.4 +2.4**
ISHM Shahmirzad 8.21 345 *e*Pn **Pn 13 54 39.3 +2.0**
IDMV Damavand 8.35 338 *e*Pn **Pn 13 54 41.5 +2.2**
BMDN Meydan 8.39 315 *e*Pn **Pn 13 54 40.8 +1.1**
HRA Herat 8.46 38 Pn **Pn 13 54 41.8 +1.1**
IHSB Hasanabad 8.50 334 *e*Pn **Pn 13 54 43.6 +2.4**
IKIA Kiasar 8.51 348 *e*Pn **Pn 13 54 43.8 +2.4**
IKMR Kamar-syah 8.57 313 *e*Pn **Pn 13 54 42.4 +0.4**
IALA Alasht 8.59 343 *e*Pn **Pn 13 54 45.9 +3.4**
SBZV Sabzevar 8.61 9 *e*Pn **Pn 13 54 44.8 +2.1**
IMOG Moghan 8.71 19 *e*Pn **Pn 13 54 48.0 +3.9**
TEH Tehran 8.73 335 *e*Pn **Pn 13 54 46.4 +2.1**
IGLO Ghaloghah 8.78 349 *e*Pn **Pn 13 54 48.2 +3.2**
RQBS RQBS 8.84 269 P **Pn 13 54 45.6 -0.1**
JRKH Jarkhoshk 8.85 24 *e*Pn **Pn 13 54 49.4 +3.5**
IPRN Peran 8.87 341 *e*Pn **Pn 13 54 49.4 +3.2**
IDOB Doab 8.88 313 *e*Pn **Pn 13 54 44.9 -1.5**
HSAM Samen 8.89 317 *e*Pn **Pn 13 54 47.0 +0.4**
IKFM Kafar-mosalman 8.93 311 *e*Pn **Pn 13 54 47.1 +0.2**
IPAY Payeh 8.94 16 *e*Pn **Pn 13 54 50.4 +3.2**
IMHD Mahdasht 8.97 332 *e*Pn **Pn 13 54 49.2 +1.7**
IAKL Akhelmad 9.03 15 *e*Pn **Pn 13 54 51.3 +2.8**
IRAZ Razeghan 9.06 327 *e*Pn **Pn 13 54 49.9 +0.9**
IKRD Kardeh 9.14 13 *e*Pn **Pn 13 54 57.2 +7.2**
IMYA Miami 9.16 22 *e*Pn **Pn 13 54 54.2 +4.0**
ISFR Sfrayin 9.32 10 *e*Pn **Pn 13 54 55.2 +2.7**
IMND Minoodasht 9.36 358 *e*Pn **Pn 13 54 54.1 +1.3**
QABG Abgarm-Qazvin 9.48 327 *e*Pn **Pn 13 54 55.3 +0.7**
IBZA Bozab 9.52 316 *e*Pn **Pn 13 54 55.7 +0.5**
IKOM Komasi 9.55 313 *e*Pn **Pn 13 54 56.0 +0.5**
IALM Almabolaq 9.60 318 *e*Pn **Pn 13 54 56.0 -0.3**
QALM Alamut, Qazvin 9.62 334 *e*Pn **Pn 13 55 00.1 +3.5**
HSRG Sareghieh 9.80 320 *e*Pn **Pn 13 54 59.9 +0.7**
SHAO Shalim 9.81 182 *i* P **Pn 13 54 58.9 -0.2**
SNR=29
SHAO Shalim 9.81 182 P **Pn 13 54 59.5 +0.4**
SNR=151
SHAO P **Pn 13 54 59.5 +0.4**
SNR=151
KCHF Cheshme Sefid, 9.92 312 *e*Pn **Pn 13 55 01.1 +0.5**
KER Kermanshah 9.92 313 *e*Pn **Pn 13 55 00.6 -0.1**
WHFO Wadi Hawf 10.11 192 P **Pn 13 55 03.3 +0.2**
SNR=216
DMTO DMTO 10.15 185 P **Pn 13 55 04.0 +0.3**
SNR=92
DMTO P **Pn 13 55 04.0 +0.3**
SNR=92
DMTO P **Pn 13 55 04.0 +0.3**
SNR=47
DMTO P **Pn 13 55 04.0 +0.3**
SNR=47
GEYT Alibeck 10.19 10 Pn **Pn 13 55 05.0 +0.8**
comp=N,0.3nm,0.3s,baz=183,slow=12,SNR=12
GEYT LR LR 13 59 04.0
comp=N,4µm,19.3s,baz=185,slow=38
GYA0 ALIBECK ARRAY 10.19 10 P **Pn 13 55 03.5 -0.8**
GYA0B ALIBECK ARRAY 10.19 10 Pn **Pn 13 55 03.5 -0.7**
IVIS Veis 10.20 313 *e*Pn **Pn 13 55 03.9 -0.5**
IGHG Ghaleghazi 10.26 311 *e*Pn **Pn 13 55 04.7 -0.7**
QSDN Sirdan 10.31 328 *e*Pn **Pn 13 55 07.8 +1.7**
ILIN Lien 10.37 315 *e*Pn **Pn 13 55 06.9 0.0**
RBK Rabkut 10.45 189 P **Pn 13 55 09.0 +1.2**
SNR=54
IDHR Dehrash 10.60 312 *e*Pn **Pn 13 55 09.2 -0.8**
ABTO Aybut 10.75 193 P **Pn 13 55 12.0 0.0**
SNR=36
ISRB Sarab 12.09 327 *e*Pn **Pn 13 55 32.0 +1.6**
LKRN Lenkeran, Azer 12.33 333 P **Pn 13 55 36.6 +3.2**
IHRS Heris 12.78 327 *e*Pn **Pn 13 55 40.1 +0.3**
IAZR Azarshahr 12.84 322 *e*Pn **Pn 13 55 44.0 +3.3**
KBL Kabul 13.05 56 P **P 13 55 49.5 -4.5**
SNR=31
CUKT Cukurca 13.94 315 P **Pn 13 55 54.3 -1.3**
NAX Nakhchivan 14.21 325 P **P 13 56 02.8 -3.9**
THW Thamme Wali 14.53 66 P **Pn 13 56 03.5 0.0**
VANB Van 14.95 319 *e*P **P 13 56 13.1 -1.8**
GEVA Gevas 14.96 317 Pn **Pn 13 56 08.4 -1.1**
CEP Cherat 14.96 63 P **Pn 13 56 10.0 +0.4**
GANJ Ganja 14.98 331 P **Pn 13 56 12.3 +2.6**
AKDM Akdamar-Van 15.01 317 *e*P **Pn 13 56 10.0 -0.2**
CLDR Caldiran 15.02 321 *e*P **P 13 56 13.9 -2.0**
SEKA Sheki 15.10 334 P **Pn 13 56 13.5 +2.3**
GNI Garni 15.33 326 *e*P **P 13 56 17.2 -2.0**
GNI Garni 15.33 326 *ce*P **P 13 56 17.0 -2.2**
GNI pmax pmax
comp=Z,185nm,1.3s
GNI Garni 15.33 326 P **P 13 56 17.3 -1.9**
GNI IAmb IAmb 13 56 31.4
comp=Z,194nm,0.9s
CHGR Chuyangaron 15.42 42 P **Pn 13 56 13.7 -1.9**
ZKTA Zakatala 15.69 333 P **P 13 56 22.2 -0.8**
SOCY Socotra 15.71 187 P **Pn 13 56 14.8 -4.7**
SNR=17
SOCY Socotra 15.71 187 Pn **Pn 13 56 13.5 -6.0**
SOCY IAmb IAmb 13 56 20.6
comp=Z,241nm,1.2s
GURO Guroymak-BITLI 15.73 316 *e*P **P 13 56 24.9 +1.3**
MLAZ Malazgirt-MUS 15.80 319 *e*P **P 13 56 25.6 +1.2**
MARD Mardin 15.82 310 Pn **Pn 13 56 18.0 -2.9**
AGRB Hanur-Agry 15.84 321 *e*P **P 13 56 27.4 +2.5**
NIL Nilore 15.98 65 P **Pn 13 56 22.2 -0.5**
NIL pmax pmax
comp=Z,104nm,0.8s
NIL Nilore 15.98 65 **Pn 13 56 22.2 -0.5**
SVAN Silvan-Diyarba 16.01 313 *e*P **Pn 13 56 23.5 +0.3**
MAZI Mazidag 16.13 310 *e*P **P 13 56 29.8 +1.8**
GAR Garm 16.34 44 Pn **Pn 13 56 25.4 -2.0**
VRTB Varto-Mus 16.46 317 *e*P **P 13 56 31.1 -0.7**
MAK Makhachkala 16.52 338 *e*P **Pn 13 56 27.0 -2.5**
MAK *e*S **Sn 13 59 30.0 -2.8**
MAK pmax pmax
comp=Z,474nm,1.1s
MAK MLR MLR
comp=Z,3µm,18.0s
DYBB Diyarbakir 16.59 311 *e*P **P 13 56 35.9 +2.7**
AJM Ajmer 16.73 90 *ǁ i*x **P 13 56 36.0 +1.3**
KOPR Koprukoy-ERZUR 16.76 320 *e*P **P 13 56 35.4 +0.3**
BNGB Bingl 16.84 315 *e*P **Pn 13 56 34.5 +0.8**
SENK Senkaya-Erzuru 16.88 322 *e*P **P 13 56 37.5 +1.1**
AKH Akhalkalaki 16.90 326 *e*P **P 13 56 37.5 +0.9**
AKH Akhalkalaki 16.90 326 P **P 13 56 36.0 -0.6**
AKH pmax pmax
comp=Z,82nm,1.1s
AKH Akhalkalaki 16.90 326 P **P 13 56 36.0 -0.6**
ASF Jabal al Asfar 17.00 289 P **Pn 13 56 35.4 -0.5**
baz=63,slow=17,SNR=1.9
ASF S **Sn 13 59 37.0 -7.9**
comp=Z,0.8nm,0.3s,baz=76,slow=24,SNR=1.4
YEDI Yedisu-Bingol 17.19 316 *e*P **P 13 56 40.9 +1.1**
URFA Urfa 17.23 308 *e*P **P 13 56 42.7 +2.4**
BTK Batken 17.31 42 P **Pn 13 56 38.5 -1.1**
BTK pmax pmax
comp=Z,125nm,1.2s
BTK Batken 17.31 42 Pn **Pn 13 56 38.5 -1.1**
TAS Tashkent 17.33 36 P **P 13 56 41.5 +0.3**
TAS pmax pmax
comp=Z,185nm,0.9s
TAS Tashkent 17.33 36 **P 13 56 41.5 +0.3**
TAS IAmb IAmb 13 56 58.5
comp=Z,185nm,0.9s
GROC Groznyy 17.34 334 *e*P **P 13 56 41.3 0.0**
GROC *e*S **Sn 13 59 54.0 +1.2**
GROC pmax pmax
comp=Z,159nm,1.2s
SVRC Sivrice-ELAZID 17.38 311 *e*P **P 13 56 43.3 +1.4**
KOPT Kop Dagi 17.57 317 Pn **Pn 13 56 40.5 -2.6**
PTK Pertek 17.60 313 *e*P **P 13 56 44.1 -0.3**
ZEI Tsey 17.78 330 *e*P **P 13 56 46.4 0.0**
ZEI pmax pmax
comp=Z,230nm,1.5s
MALT Malatya 17.93 310 *e*P **P 13 56 49.7 +1.7**
BATM Batumi 17.96 323 *e*P **P 13 56 51.8 +3.6**
BAYT Aydıntepe-Bayb 18.02 318 *e*P **P 13 56 51.4 +2.4**
CHOM Cayeli-Rize 18.12 321 *e*P **P 13 56 52.4 +2.5**
RCY Rachaya 18.14 293 *e*P **P 13 56 50.8 +0.5**
BHK Bhakra 18.17 74 *e*P **P 13 56 52.8 +2.2**
SHBL Chebaa 18.18 292 *e*P **P 13 56 50.6 -0.2**
HWQ Hawqa 18.23 295 *e*P **P 13 56 53.1 +1.8**
GAZ Gaziantep 18.26 305 *e*P **P 13 56 52.0 +0.4**
GAZ Gaziantep 18.26 305 P **Pn 13 56 50.6 -0.8**
IUG luzhnay 18.31 35 *i* P **P 13 56 52.5 +0.3**
comp=Z,84nm,1.2s,baz=35
IUG *e*S **Sn 14 00 18.1 +1.7**
baz=35
IUG luzhnay 18.31 35 *i* P **P 13 56 52.4 +0.3**
IUG *e*S **Sn 14 00 18.1 +1.7**
IUG pmax pmax
comp=Z,85nm,1.2s
BHL Bhannes 18.38 294 *e*P **P 13 56 53.7 +0.8**
MMAI Mount Meron Ar 18.39 291 P **P 13 56 54.4 +1.3**
comp=Z,1.9nm,0.3s,baz=96,slow=14,SNR=21
MMAI S **Sn 14 00 10.1 -8.5**
comp=Z,1.7nm,0.3s,baz=119,slow=28,SNR=3.0
MMAI LR LR 14 05 02.2
comp=Z,935nm,18.4s,baz=75,slow=40
ARPR Arapgir-MALATY 18.40 312 *e*P **P 13 56 54.1 +0.9**
EIL Elat 18.45 281 P **Pn 13 56 55.1 +1.4**
comp=Z,1.2nm,0.3s,baz=102,slow=13,SNR=12
EIL LR LR 14 06 06.0
comp=Z,2µm,21.0s,baz=97,slow=44
KTUT Trabzon 18.62 319 *e*P **Pn 13 56 58.6 +2.9**
TAHT Tahtakopru-Hat 18.70 302 *e*P **Pn 13 56 57.9 +1.2**
DARE Darende-Malaty 18.71 309 *e*P **Pn 13 56 58.5 +1.6**
NDI New Delhi 18.79 83 *e*P **Pn 13 56 59.0 +1.1**
BRLS Borolday 18.86 33 *e*P **P 13 56 55.3 -2.8**
baz=33
BRLS Borolday 18.86 33 *e*P **P 13 56 55.3 -2.8**
KBZ Khabaz 18.97 330 P **Pn 13 57 02.1 +2.3**
comp=Z,0.8nm,0.3s,baz=152,slow=13,SNR=29
KBZ Khabaz 18.97 330 *ce*P **Pn 13 57 01.2 +1.3**
ESPY Espiye-Giresun 19.19 317 *e*P **Pn 13 57 04.3 +1.7**
KIV Kislovodsk 19.25 330 *i* P **Pn 13 57 03.6 +0.3**
SNR=24
KIV Kislovodsk 19.25 330 *e*P **Pn 13 57 04.9 +1.6**
KIV Kislovodsk 19.25 330 *e*P **Pn 13 57 03.6 +0.3**
KIV *e*S **S 14 00 41.8 +1.5**
KIV pmax pmax
comp=Z,517nm,1.1s
KIV MLR MLR
comp=Z,2µm,14.0s
KIV Kislovodsk 19.25 330 **Pn 13 57 03.2 -0.1**
KIV IAmb IAmb 13 57 12.8
comp=Z,141nm,0.9s
KK31 Karatay Array 19.25 34 P **Pn 13 57 04.6 +1.3**
KK31 Karatay Array 19.25 34 P **P 13 57 01.8 -0.5**
KKAR Karatay Array 19.25 34 P **P 13 57 02.6 +0.3**
KKAR pmax pmax
comp=Z,111nm,1.2s
KKAR Karatay Array 19.25 34 P **P 13 57 02.6 +0.3**
CEYT Ceyhan 19.27 303 *e*P **Pn 13 57 04.7 +1.2**
SARI SarD1z-Kayseri 19.37 308 *e*P **Pn 13 57 06.4 +1.5**
KOZT Kozan 19.39 305 *e*P **Pn 13 57 06.3 +1.2**
DZA Taraz 19.51 36 *e*P **P 13 57 05.2 0.0**
baz=36
DZA *e*S **S 14 00 46.1 +0.6**
baz=36
DZA LR LR 14 04 47.9
comp=Z,967nm,11.0s,baz=36
DZA Taraz 19.51 36 *e*P **P 13 57 05.2 0.0**
DZA *e*S **S 14 00 46.1 +0.6**
DZA MLR MLR
comp=Z,967nm,11.0s
SVSK Karacayir 19.71 312 *e*P **Pn 13 57 10.2 +1.4**
RSDY Resadiye-TOKAT 19.76 314 *e*P **Pn 13 57 10.8 +1.3**
BNN Bunyan 19.97 308 *e*P **Pn 13 57 13.7 +1.7**
GOF Gofitskoye 19.98 333 *ǁ i*P **Pn 13 57 12.5 +0.5**
GOF pmax pmax
comp=Z,109nm,0.7s
TOKT Tokat 20.22 313 *e*P Pn 13 57 14.8 -0.1
TOKA Tokat 20.27 313 P **P 13 57 13.0 -0.5**
TOKA IAmb IAmb 13 57 20.0
comp=Z,132nm,0.9s
KSH Kashi 20.29 50 P **P 13 57 09.4 -4.4**
KSH pP Pn 13 57 14.0 -1.8
KSH PP **PnPn 13 57 26.0 -4.5**
KSH S S 14 00 42.9 -18
KSH pmax pmax
comp=Z,39nm,0.8s
KSH pmax pmax
comp=Z,1µm,3.9s
KSH LR LR
comp=Z,7µm,9.3s
KSH LR LR
comp=Z,6µm,8.9s
AML Almayashu 20.30 41 P **P 13 57 14.2 0.0**
SNR=72
ATD Arta Tunnel 20.36 220 P Pn 13 57 17.4 +0.7
comp=Z,172nm,1.1s,baz=30,slow=8.4,SNR=33
ATD LR LR 14 06 46.6
comp=Z,3µm,19.7s,baz=40,slow=42
ATD Arta Tunnel 20.36 220 Pn Pn 13 57 15.9 -0.8
ATD IAmb IAmb 13 57 19.8
comp=Z,306nm,1.2s
ATD Arta Tunnel 20.36 220 *e*P Pn 13 57 16.5 -0.2
ATD Arta Tunnel 20.36 220 *e*S **S 14 01 02.5 -0.3**
ATD Arta Tunnel 20.36 220 *e*P Pn 13 57 16.5 -0.2
ATD Arta Tunnel 20.36 220 *e*S **S 14 01 02.5 -0.3**
SOC Sochi 20.39 324 *e*P **P 13 57 15.1 +0.3**
SOC *e*PPP PPP 13 57 38.5
SOC *i* S **S 14 01 03.6 +0.6**
SOC *e*SSS SSS 14 01 33.9
SOC pmax pmax
comp=Z,207nm,0.9s
SOC MLR MLR
comp=Z,3µm,15.0s
CSS Mathiatis 20.49 296 P **P 13 57 14.8 -1.2**
EKS2 Erkin-Say 20.69 40 P **P 13 57 18.9 +0.8**
SNR=32
UCH Uchtor 20.84 42 P **P 13 57 20.6 +0.4**
SNR=21
AAK Ala-Archa 21.08 41 P **P 13 57 23.6 +1.2**
SNR=31
AAK Ala-Archa 21.08 41 *i* P **P 13 57 22.6 +0.2**
AAK pmax pmax
comp=Z,91nm,1.1s
TEND Ethiopian Broa 21.24 224 *e*P P 13 57 32.1 +8.0
TEND *e*S Sn 14 01 29.5 +2.3
FRU1 Bishkek 21.27 41 P **P 13 57 24.6 +0.3**
FRU1 pmax pmax
comp=Z,53nm,0.8s
FRU1 Bishkek 21.27 41 P **P 13 57 24.6 +0.3**
KBK Karagaybulak 21.36 41 P **P 13 57 26.7 +1.3**
SNR=16
CHMS Chumysh 21.45 40 P **P 13 57 32.0 +5.7**
SNR=18
USP Ospenovka 21.48 40 P **P 13 57 27.1 +0.5**
SNR=16
AB31 Akbulak array 21.57 7 *i* P **P 13 57 27.8 +0.4**
ABKAR Akbulak array 21.57 7 P **P 13 57 27.4 0.0**
ABKAR IAmb IAmb 13 57 38.2
comp=Z,159nm,0.9s
ABKAR Akbulak array 21.57 7 P **P 13 57 27.4 0.0**
SGDS Sogindy 21.67 39 *i* P **P 13 57 28.4 -0.3**
comp=Z,60nm,1.6s,baz=39
SGDS *e*S **S 14 01 29.3 +0.8**
baz=39
SGDS Sogindy 21.67 39 *i* P **P 13 57 28.3 -0.3**
SGDS *e*S **S 14 01 29.3 +0.8**
SGDS pmax pmax
comp=Z,60nm,1.6s
BR131 Keskin Array S 21.89 308 P **P 13 57 31.8 +0.7**
BR131 pmax pmax
comp=Z,99nm,0.9s
BR131 Keskin Array S 21.89 308 P **P 13 57 31.8 +0.7**
BR131 IAmb IAmb 13 57 37.7
comp=Z,99nm,0.8s
BRTR Keskin Array B 21.89 308 P **P 13 57 32.7 +1.5**
comp=Z,57nm,0.9s,baz=129,slow=13,SNR=86
BRTR LR LR 14 07 28.6
comp=Z,3µm,19.6s,baz=124,slow=41
BRTR Keskin Array B 21.89 308 P **P 13 57 31.0 -0.1**
ULHL Ulahol 21.89 44 P **P 13 57 32.3 +1.1**
SNR=10.0
TKM2 Tokmak 2 21.90 42 P **P 13 57 34.2 +2.9**
SNR=15
TKM2 Tokmak 2 21.90 42 *i* P **P 13 57 31.4 +0.1**
TKM2 pmax pmax
comp=Z,68nm,1.1s
KDJ Kajisay 22.41 45 P **P 13 57 36.4 -0.3**
KDJ pmax pmax
comp=Z,109nm,0.9s
KDJ Kajisay 22.41 45 P **P 13 57 36.4 -0.3**
KDJ IAmb IAmb 13 57 59.8
comp=Z,110nm,0.9s
ANN Anapa 22.42 324 *e*P **P 13 57 37.0 +0.4**
ANN *e*S **S 14 01 45.2 +2.6**
ANN pmax pmax
comp=Z,339nm,1.6s
ANN MLR MLR
comp=Z,2µm,11.0s
ANN MLR MLR
comp=N,957nm,12.0s
ILGA Ilgaz 22.45 312 P **P 13 57 36.0 -1.1**
ILGA IAmb IAmb 13 57 46.7
comp=Z,158nm,1.2s
ANTO Ankara 22.54 308 P **P 13 57 33.2 -4.8**
ANTO Ankara 22.54 308 P **P 13 57 33.1 -4.8**
BR231 Keskin MP Arra 22.54 308 P **P 13 57 37.4 -0.7**
BR231 IAmb IAmb 13 57 43.5
comp=Z,226nm,1.3s
AKTO Aktyubinsk 22.58 4 P **P 13 57 38.4 +0.1**
comp=Z,39nm,0.8s,baz=177,slow=10,SNR=90
AKTO LR LR 14 08 34.7
comp=Z,3µm,20.2s,baz=170,slow=43
TNSS Tian-Shan 22.77 43 *e*P **P 13 57 40.8 0.0**
baz=43
TNSS Tian-Shan 22.77 43 *e*P **P 13 57 40.7 0.0**
AAA Alma-Ata 22.85 42 *e*P **P 13 57 41.5 +0.3**
baz=42
AAA LR LR 14 05 54.2
comp=Z,1µm,14.0s,baz=42
AAA Alma-Ata 22.85 42 *e*P **P 13 57 41.5 +0.3**
AAA MLR MLR
comp=Z,1µm,14.0s
MDOK Medeo 22.90 43 *i* P **P 13 57 42.0 0.0**
baz=43
MDOK *e*S **S 14 01 53.0 +1.3**
baz=43
MDOK LR LR 14 05 50.8
comp=Z,2µm,10.3s,baz=43
MDOK Medeo 22.90 43 *i* P **P 13 57 41.9 0.0**
MDOK *e*S **S 14 01 53.0 +1.3**
MDOK MLR MLR
comp=Z,2µm,10.0s
KUU Kurty 22.92 40 *i* P **P 13 57 42.1 +0.2**
comp=Z,54nm,1.1s,baz=40
KUU *e*S **S 14 01 53.0 +1.3**
baz=40
KUU LR LR 14 07 21.7
comp=Z,2µm,10.6s,baz=40
HYB Hyderabad 23.31 112 *i* P **P 13 57 47.0 +0.8**
HYB *e*S Sn 14 02 12.0 -5.0
PRZ Przheval'sk 23.36 46 P **P 13 57 46.0 -0.7**
PRZ pmax pmax
comp=Z,83nm,1.0s
PRZ Przheval'sk 23.36 46 P **P 13 57 46.0 -0.7**
PRZ IAmb IAmb 13 58 09.1
comp=Z,82nm,0.9s

ISP	**Isparta**	**23.45**	**301**		P	**P**	**13 57 46.8**	**-0.7**
ISP					pmax	pmax		
	comp=Z,78nm,1.0s							
ISP	**Isparta**	**23.45**	**301**		P	**P**	**13 57 46.8**	**-0.7**
ISP					IAmb	IAmb	13 58 07.7	
	comp=Z,78nm,1.0s							
ELL	**Elmali**	**23.63**	**299**		P	**P**	**13 57 48.6**	**-0.7**
ELL					pmax	pmax		
	comp=Z,552nm,1.3s							
ELL	**Elmali**	**23.63**	**299**		P	**P**	**13 57 48.5**	**-0.7**
SATY	**Saty**	**23.67**	**44**	*eP*		**P**	**13 57 50.1**	**+0.5**
	comp=Z,39nm,1.9s,baz=44							
SATY					*eS*	**S**	**14 02 05.8**	**+1.3**
	baz=44							
SATY	**Saty**	**23.67**	**44**	*eP*		**P**	**13 57 50.1**	**+0.5**
SATY					*eS*	**S**	**14 02 05.7**	**+1.3**
SATY					pmax	pmax		
	comp=Z,39nm,1.9s							
ANKE	**Ethiopia-Afar**	**23.73**	**223**	*eP*		**P**	**13 57 48.1**	**-2.5**
ANKE					*eS*	**S**	**14 02 16.1**	**+10**
AKAS	**Kas**	**23.74**	**297**		P	**P**	**13 57 50.0**	**-0.4**
MDUB	**Mudurnu**	**23.90**	**308**		P	**P**	**13 57 51.5**	**-0.3**
PYUN	**Piuthan**	**23.91**	**83**	*eP*		**P**	**13 57 53.0**	**+0.9**
	comp=Z,143nm,0.6s							
KPKS	**Kokpek**	**24.06**	**44**	*i* P		**P**	**13 57 53.6**	**+0.3**
	comp=Z,183nm,1.9s,baz=44							
KPKS					LR	LR	14 06 53.1	
	comp=Z,402nm,10.2s,baz=44							
SIM	**Simferopol'**	**24.33**	**320**	*eP*		**P**	**13 57 56.8**	**+1.2**
SIM					pmax	pmax		
	comp=Z,178nm,1.1s							
SHLS	**Shalkode**	**24.38**	**45**	*i* P		**P**	**13 57 59.4**	**+3.1**
	comp=Z,50nm,0.9s,baz=46							
SHLS					*eS*	**S**	**14 02 21.6**	**+5.8**
	baz=46							
SHLS					LR	LR	14 07 39.4	
	comp=Z,669nm,11.0s,baz=46							
SHLS	**Shalkode**	**24.38**	**45**	*i* P		**P**	**13 57 59.4**	**+3.1**
SHLS					*eS*	**S**	**14 02 21.6**	**+5.8**
SHLS					pmax	pmax		
	comp=Z,50nm,0.9s							
SHLS					MLR	MLR		
	comp=Z,669nm,11.0s							
KOLN	**Koldanda**	**24.48**	**84**	*eP*		**P**	**13 57 58.1**	**+0.7**
	comp=Z,118nm,0.9s							
PDGK	**Podgornoye**	**24.49**	**45**		P	**P**	**13 57 57.3**	**0.0**
DANN	**Dangsing**	**24.56**	**82**	*eP*		**P**	**13 57 59.1**	**+0.9**
	comp=Z,382nm,0.7s							
AAE	**Adis Abeba**	**24.76**	**224**	*eP*		**P**	**13 58 03.6**	**+3.5**
AAE	**Adis Abeba**	**24.76**	**224**	*eS*		S	14 02 35.5	+13
AAE	**Adis Abeba**	**24.76**	**224**	*eP*		**P**	**13 58 03.6**	**+3.5**
AAE	**Adis Abeba**	**24.76**	**224**	*eS*		S	14 02 35.5	+13
TDK	**Taldyqorghan**	**24.77**	**40**	*eP*		**P**	**13 57 60.0**	**+0.3**
	comp=Z,70nm,0.9s,baz=40							
TDK					LR	LR	14 08 27.4	
	comp=Z,3μm,12.1s,baz=40							
TDK	**Taldyqorghan**	**24.77**	**40**	*eP*		**P**	**13 57 59.9**	**+0.3**
TDK					pmax	pmax		
	comp=Z,70nm,0.9s							
TDK					MLR	MLR		
	comp=Z,3μm,12.0s							
FURI	**Furi**	**24.91**	**224**	*eP*		**P**	**13 58 05.1**	**+3.6**
FURI	**Furi**	**24.91**	**224**	*eP*		**P**	**13 58 05.1**	**+3.6**
MANT	**Manisa**	**25.13**	**302**		P	**P**	**13 58 02.5**	**-0.7**
GKN	**Gorkha**	**25.36**	**83**	*eP*		**P**	**13 58 05.8**	**+0.4**
	comp=Z,170nm,0.9s							
BRZS	**Berezniki**	**25.52**	**26**	*i* P		**P**	**13 58 07.0**	**+0.5**
	comp=Z,73nm,1.5s,baz=26							
BRZS					LR	LR	14 08 28.0	
	comp=Z,570nm,12.2s,baz=26							
BRZS	**Berezniki**	**25.52**	**26**	*i* P		**P**	**13 58 06.9**	**+0.5**
BRZS					pmax	pmax		
	comp=Z,73nm,1.5s							
BRZS					MLR	MLR		
	comp=Z,570nm,12.0s							
KARP	**Karpathos**	**25.56**	**295**		P	**P**	**13 58 06.3**	**-0.6**
KARP	**Karpathos**	**25.56**	**295**		P	**P**	**13 58 08.6**	**+1.7**
VRH	**Novokhopyorsk**	**25.64**	**339**	*eP*		**P**	**13 58 08.0**	**+0.6**
VRH					*eS*	**S**	**14 02 32.5**	**-3.0**
VRH					pmax	pmax		
	comp=Z,810nm,1.6s							
VRH					smax	smax		
	comp=E,330nm,6.9s							
BODT	**Bodrum**	**25.72**	**298**		P	**P**	**13 58 09.5**	**+1.1**
DMN	**Daman**	**25.82**	**84**	*eP*		**P**	**13 58 10.4**	**+0.7**
	comp=E,93nm,0.9s							
KKN	**Kakani**	**25.95**	**83**	*eP*		**P**	**13 58 11.5**	**+0.7**
	comp=E,154nm,0.8s							
PKIN	**Phulchoki**	**26.08**	**84**	*eP*		**P**	**13 58 12.6**	**+0.6**
	comp=E,147nm,0.7s							
PKI	**Pulchoki**	**26.09**	**84**	*eP*		**P**	**13 58 12.7**	**+0.5**
	comp=E,184nm,0.9s							
SMG	**Samos**	**26.24**	**299**		P	**P**	**13 58 14.3**	**+1.3**
GUN	**Gumba**	**26.46**	**83**	*eP*		**P**	**13 58 16.1**	**+0.5**
	comp=E,387nm,0.9s							
VSR	**Storozhevoye**	**26.52**	**336**	*eP*		**P**	**13 58 15.4**	**0.0**
VSR					*eS*	**S**	**14 02 50.6**	**+1.3**
VSR					pmax	pmax		
	comp=Z,50nm,1.3s							
VSR					smax	smax		
	comp=E,810nm,8.2s							
ANAF	**Anafi Island**	**26.80**	**296**		P	**P**	**13 58 18.6**	**+0.5**
VORR	**Voronezh**	**26.88**	**337**	*eP*		**P**	**13 58 19.0**	**+0.4**
VORR					pmax	pmax		
	comp=Z,350nm,1.6s							
MANR	**Mangalia**	**27.09**	**313**	⇑P		**P**	**13 58 21.8**	**+1.1**
APE	**Apeiranthos**	**27.12**	**297**	⇑P		**P**	**13 58 22.3**	**+1.3**
APE	**Apeiranthos**	**27.12**	**297**	*i* P		**P**	**13 58 20.3**	**-0.7**
APE					pmax	pmax		
	comp=Z,39nm,0.8s							
THR5	**Thira Island,**	**27.15**	**296**		P	**P**	**13 58 21.6**	**+0.3**
EZN	**Ezine**	**27.18**	**304**		P	**P**	**13 58 22.3**	**+0.9**
RAMN	**Ramite**	**27.23**	**85**	*eP*		**P**	**13 58 24.4**	**+2.0**
	comp=Z,53nm,0.7s							
PSN	**Preselentsi**	**27.30**	**313**	*i* P		**P**	**13 58 24.3**	**+1.8**
BRVK	**Borovoye**	**27.32**	**19**		P	**P**	**13 58 22.8**	**+0.2**
BRVK	**Borovoye**	**27.32**	**19**	*i* P		**P**	**13 58 22.3**	**-0.3**
BRVK					pmax	pmax		
	comp=Z,83nm,0.9s							
BRVK	**Borovoye**	**27.32**	**19**		P	**P**	**13 58 22.5**	**-0.1**
BRVK					IAmb	IAmb	13 58 29.3	
	comp=Z,89nm,0.8s							
BVAR	**Borovoye Array**	**27.32**	**19**		P	**P**	**13 58 22.2**	**-0.4**
	comp=Z,20nm,0.7s,baz=224,slow=33,SNR=188							
JURR	**Jurilovca**	**27.35**	**315**	⇑P		**P**	**13 58 23.1**	**+0.1**
IDI	**Anoyia**	**27.36**	**293**		P	**P**	**13 58 24.7**	**+1.5**
	comp=Z,65nm,0.9s,baz=110,slow=10.0,SNR=25							
IDI	**Anoyia**	**27.36**	**293**	⇑P		**P**	**13 58 25.0**	**+1.7**
IDI	**Anoyia**	**27.36**	**293**		P	**P**	**13 58 22.0**	**-1.2**
IDI					IAmb	IAmb	13 58 27.9	
	comp=Z,88nm,1.0s							
IDI	**Anoyia**	**27.36**	**293**		P	**P**	**13 58 24.1**	**+0.9**
TIRR	**Tirgusor**	**27.50**	**314**	⇑P		**P**	**13 58 25.0**	**+0.8**
TIRR	**Tirgusor**	**27.50**	**314**	⇑P		**P**	**13 58 25.0**	**+0.8**
TIRR	**Tirgusor**	**27.50**	**314**		P	**P**	**13 58 23.4**	**-0.9**
TIRR					pmax	pmax		
	comp=Z,40nm,0.9s							
TIRR	**Tirgusor**	**27.50**	**314**		P	**P**	**13 58 23.4**	**-0.9**
TIRR					IAmb	IAmb	13 58 28.1	
	comp=Z,40nm,0.9s							
PRD	**Provadia**	**27.61**	**311**	*i* P		**P**	**13 58 25.6**	**+0.3**
TPGR	**Topolog**	**27.68**	**315**	⇑P		**P**	**13 58 27.2**	**+1.2**
ALN	**Alexandroupoli**	**27.71**	**306**		P	**P**	**13 58 25.4**	**-0.8**
ALN					pmax	pmax		
	comp=Z,36nm,0.9s							
ALN	**Alexandroupoli**	**27.71**	**306**		P	**P**	**13 58 25.4**	**-0.8**
ALN	**Alexandroupoli**	**27.71**	**306**		P	**P**	**13 58 26.6**	**+0.4**
ICOR	**Ion Corvin**	**27.74**	**313**	⇓P		**P**	**13 58 28.4**	**+1.9**
LPSR	**Galich'ya Gora**	**27.75**	**338**	*eP*		**P**	**13 58 26.7**	**+0.3**
LPSR					*eS*	**S**	**14 03 08.7**	**+0.1**
LPSR					pmax	pmax		
	comp=Z,110nm,0.9s							
LPSR					smax	smax		
	comp=E,240nm,6.5s							
MAKZ	**Makanchi**	**27.84**	**40**		P	**P**	**13 58 26.7**	**-0.7**
MAKZ					pmax	pmax		
	comp=Z,181nm,1.5s							
MAKZ	**Makanchi**	**27.84**	**40**		P	**P**	**13 58 26.6**	**-0.7**
HARR	**Harsova**	**27.91**	**314**	⇓P		**P**	**13 58 29.3**	**+1.3**
ODAN	**Odare**	**27.94**	**85**	*eP*		**P**	**13 58 30.6**	**+1.8**
	comp=Z,54nm,0.9s							
SMTH	**Samothraki Isl**	**27.95**	**305**		P	**P**	**13 58 28.4**	**0.0**
CFR	**Carcaliu**	**28.01**	**315**	⇓P		**P**	**13 58 29.0**	**+0.2**
MK31	**Makanchi Array**	**28.02**	**41**	*i* P		**P**	**13 58 29.2**	**+0.3**
MK31					pmax	pmax		
	comp=Z,57nm,1.2s							
MK31	**Makanchi Array**	**28.02**	**41**		P	**P**	**13 58 28.0**	**-0.9**
MKAR	**Makanchi Array**	**28.02**	**41**		P	**P**	**13 58 29.2**	**+0.3**
	comp=Z,12nm,0.8s,baz=226,slow=8.0,SNR=65							
MKAR					ScP	**ScP**	**14 05 25.3**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=222,slow=2.0,SNR=5.6							
MKAR					LR	LR	14 11 07.9	
	comp=Z,1μm,21.5s,baz=214,slow=40							
MKAR	**Makanchi Array**	**28.02**	**41**		P	**P**	**13 58 27.9**	**-1.1**
LIA	**Limnos Island**	**28.04**	**303**		P	**P**	**13 58 29.4**	**+0.2**
RDO	**Rodhopi**	**28.15**	**306**		P	**P**	**13 58 30.0**	**-0.1**
TAPN	**Taplejung**	**28.15**	**84**	*eP*		**P**	**13 58 31.7**	**+1.0**
	comp=Z,24nm,0.7s							
RAZG	**Razgrad**	**28.35**	**311**	⇑P		**P**	**13 58 32.7**	**+0.7**
KDZ	**Kurdzhali**	**28.40**	**307**	*i* P		**P**	**13 58 33.9**	**+1.5**
KURBB	**Kurchatov Arra**	**28.47**	**31**		P	**P**	**13 58 33.4**	**+0.4**
	comp=Z,6.7nm,0.6s,baz=232,slow=8.8,SNR=86							
KURBB					PcP	**PcP**	**14 01 44.1**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=228,slow=3.3,SNR=5.1							
KURBB					ScP	**ScP**	**14 05 26.5**	**+0.7**
	comp=Z,2.9nm,0.9s,baz=237,slow=3.5,SNR=6.5							
KURBB	**Kurchatov Arra**	**28.47**	**31**		P	**P**	**13 58 32.9**	**0.0**
MILM	**Milestii Mici**	**28.49**	**319**	⇑P		**P**	**13 58 34.2**	**+1.1**
KYMI	**Kymi, Euboea I**	**28.55**	**300**		P	**P**	**13 58 34.6**	**+0.9**
KURK	**Kurchatov**	**28.58**	**31**		P	**P**	**13 58 33.3**	**-0.5**
KURK					pmax	pmax		
	comp=Z,21nm,0.9s							
KURK	**Kurchatov**	**28.58**	**31**		P	**P**	**13 58 33.3**	**-0.5**
KURK	**Kurchatov**	**28.58**	**31**			**ScP**	**14 05 26.5**	**+0.4**
ARU	**Arti**	**28.59**	**3**		P	**P**	**13 58 34.2**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=197,slow=8.9,SNR=3.1							
ARU					LR	LR	14 10 36.7	
	comp=Z,2μm,19.2s,baz=182,slow=38							
ARU	**Arti**	**28.59**	**3**	*c i* P		**P**	**13 58 34.3**	**+0.4**
ARU							13 59 24.0	
ARU					S	**S**	**14 03 25.9**	**+4.0**
ARU					SS	**SnSn**	**14 04 45.8**	**+4.3**
ARU					pmax	pmax		
	comp=Z,27nm,1.9s							
ARU					MLR	MLR		
	comp=Z,3μm,14.0s							
ARU	**Arti**	**28.59**	**3**		P	**P**	**13 58 33.2**	**-0.7**
ANKY	**Antikythira Is**	**28.71**	**294**		P	**P**	**13 58 37.4**	**+2.2**
AOS	**Alonnisos**	**28.83**	**301**		P	**P**	**13 58 37.4**	**+1.1**
RZN	**Rozhen**	**28.91**	**307**	*i* P		**P**	**13 58 37.7**	**+0.6**
KRND	**KRANIDI**	**29.05**	**297**		P	**P**	**13 58 38.0**	**-0.2**
VLI	**Veliai**	**29.11**	**296**		P	**P**	**13 58 38.0**	**-0.8**
SVE	**Sverdlovsk**	**29.13**	**5**	*e*	P	**P**	**13 58 39.2**	**+0.6**
SVE					*eS*	**S**	**14 03 34.5**	**+4.2**
SVE					pmax	pmax		
	comp=Z,26nm,0.9s							
SVE					MLR	MLR		
	comp=Z,5μm,13.0s							
VRI	**Vrincioaia**	**29.21**	**316**	⇓P		**P**	**13 58 40.7**	**+1.1**
SECR		**29.25**	**314**	⇓P		**P**	**13 58 41.4**	**+1.5**
NEHR	**Nehoiu**	**29.28**	**315**	⇓P		**P**	**13 58 42.5**	**+2.3**
LTK	**Loutraki**	**29.30**	**299**		P	**P**	**13 58 41.1**	**+0.7**
XOR	**Xorichti**	**29.40**	**301**		P	**P**	**13 58 42.1**	**+0.8**
SORM	**Soroca**	**29.41**	**321**	⇑P		**P**	**13 58 42.2**	**+0.9**
COPA	**Copaceanca**	**29.43**	**312**	⇓P		**P**	**13 58 43.0**	**+1.4**
PLG	**Polygyros**	**29.45**	**303**		P	**P**	**13 58 42.1**	**+0.3**
MLR	**Muntele Rosu**	**29.53**	**315**		P	**P**	**13 58 44.0**	**+1.5**
	comp=Z,38nm,1.0s,baz=0.2,slow=3.9,SNR=21							
MLR	**Muntele Rosu**	**29.53**	**315**	⇑P		**P**	**13 58 44.6**	**+2.0**
MLR	**Muntele Rosu**	**29.53**	**315**		P	**P**	**13 58 41.2**	**-1.3**
SRS	**Serrai**	**29.54**	**305**		P	**P**	**13 58 42.7**	**+0.1**
TESR	**Tescani**	**29.57**	**317**	⇓P		**P**	**13 58 43.4**	**+0.7**
PGB	**Panagyurishte**	**29.57**	**308**	*i* P		**P**	**13 58 44.7**	**+1.8**
MMB	**Musomiste**	**29.58**	**306**	*i* P		**P**	**13 58 44.9**	**+2.0**
SOH	**Sokhos**	**29.64**	**304**		P	**P**	**13 58 43.6**	**+0.2**
VLX	**Vlachokerasia**	**29.65**	**297**		P	**P**	**13 58 43.0**	**-0.7**
HORT	**Hortiatis**	**29.76**	**304**		P	**P**	**13 58 44.5**	**-0.1**
GUR	**Goura**	**29.77**	**298**		P	**P**	**13 58 44.9**	**+0.2**
ZSN	**Zaisan**	**29.86**	**41**	*eP*		**P**	**13 58 45.1**	**-0.2**
	comp=Z,33nm,2.1s,baz=41							
ZSN					*eS*	**S**	**14 03 43.1**	**+1.1**
	baz=41							
ZSN	**Zaisan**	**29.86**	**41**	*eP*		**P**	**13 58 45.1**	**-0.2**
ZSN					*eS*	**S**	**14 03 43.1**	**+1.1**
ZSN					pmax	pmax		
	comp=Z,33nm,2.1s							
STFAR	**Stefanesti-Arg**	**29.89**	**313**	⇑P		**P**	**13 58 48.0**	**+2.4**
MTUR	**Matau**	**29.98**	**314**	⇓P		**P**	**13 58 48.2**	**+1.7**
AGG	**Agios Georgios**	**29.98**	**300**		P	**P**	**13 58 45.3**	**-1.2**
AGG					pmax	pmax		
	comp=Z,47nm,1.2s							
AGG	**Agios Georgios**	**29.98**	**300**		P	**P**	**13 58 45.3**	**-1.2**
AGG					IAmb	IAmb	13 58 50.0	
	comp=Z,47nm,1.2s							
AGG	**Agios Georgios**	**29.98**	**300**		P	**P**	**13 58 46.4**	**-0.1**
ITM	**Ithomi**	**29.98**	**297**		P	**P**	**13 58 45.8**	**-0.7**
WMQ	**Urumqi**	**30.05**	**50**	*eP*		**P**	**13 58 48.1**	**+1.0**
WMQ					pP	pP	13 58 49.9	-1.0
WMQ					sP	sP	13 58 57.4	+4.9
WMQ					S	**S**	**14 03 46.4**	**+1.1**
WMQ					ScS	**ScS**	**14 09 25.8**	**-0.7**
WMQ					pmax	pmax		
	comp=Z,89nm,0.9s							
WMQ					pmax	pmax		
	comp=Z,530nm,4.3s							
WMQ					LR	LR		
	comp=Z,3μm,17.5s							
WMQ					LR	LR		
	comp=Z,3μm,14.1s							
WMQ					LR	LR		
	comp=Z,6μm,22.7s							
WMQ	**Urumqi**	**30.05**	**50**		P	**P**	**13 58 47.0**	**-0.1**
WMQ					pmax	pmax		
	comp=Z,45nm,0.8s							
WMQ	**Urumqi**	**30.05**	**50**		P	**P**	**13 58 47.0**	**-0.1**
WMQ					IAmb	IAmb	13 58 58.0	
	comp=Z,45nm,0.8s							
KNT	**Kendrikon**	**30.06**	**305**		P	P	13 58 52.0	+4.9
VOIR		**30.07**	**314**	⇑P		**P**	**13 58 48.0**	**+0.7**
PYL	**PYLOS**	**30.09**	**296**		P	**P**	**13 58 46.1**	**-1.3**
DOPR	**Dopca**	**30.09**	**315**	⇓P		**P**	**13 58 48.4**	**+1.0**
LIT	**Litokhoron**	**30.09**	**303**		P	**P**	**13 58 46.3**	**-1.1**
LIT					pmax	pmax		
	comp=Z,30nm,0.8s							
LIT	**Litokhoron**	**30.09**	**303**		P	**P**	**13 58 46.3**	**-1.1**
LIT					IAmb	IAmb	13 58 51.0	
	comp=Z,30nm,0.8s							
LIT	**Litokhoron**	**30.09**	**303**		P	**P**	**13 58 47.3**	**-0.2**
BIZ	**Bicaz**	**30.10**	**317**	⇓P		**P**	**13 58 48.4**	**+1.0**
AMT	**Artemida-Makis**	**30.20**	**297**		P	**P**	**13 58 49.5**	**+1.0**
ANX	**Ano Chora**	**30.21**	**299**		P	**P**	**13 58 48.6**	**0.0**
VTS	**Vitosha**	**30.25**	**308**	*i* P		**P**	**13 58 48.8**	**-0.1**
DRO	**Drossia**	**30.27**	**298**		P	**P**	**13 58 49.5**	**+0.5**
ARR	**Arges**	**30.31**	**314**	⇓P		**P**	**13 58 50.6**	**+1.2**
VAY	**Valandovo**	**30.34**	**305**	*i* P		**P**	**13 58 50.4**	**+0.8**
EVR	**Evrytania**	**30.36**	**300**		P	**P**	**13 58 49.5**	**-0.4**
AKASG	**Malin Array Be**	**30.46**	**326**		P	**P**	**13 58 50.2**	**-0.3**
	comp=Z,31nm,0.6s,baz=134,slow=8.7,SNR=61							
AKASG					PcP	**PcP**	**14 01 49.7**	**0.0**
	comp=Z,9.1nm,0.8s,baz=101,slow=1.8,SNR=5.0							
AKASG					LR	LR	14 13 51.4	
	comp=Z,968nm,21.1s,baz=135,slow=42							
AKASG	**Malin Array Be**	**30.46**	**326**		P	**P**	**13 58 49.0**	**-1.5**
AKBB	**Malin Array Si**	**30.46**	**326**		P	**P**	**13 58 49.8**	**-0.7**
AKBB					pmax	pmax		
	comp=Z,90nm,0.8s							
AKBB	**Malin Array Si**	**30.46**	**326**		P	**P**	**13 58 49.8**	**-0.7**
OBN	**Obninsk**	**30.61**	**338**	⇑P		**P**	**13 58 53.2**	**+1.4**
OBN	**Obninsk**	**30.61**	**338**	*ce*	P	**P**	**13 58 51.4**	**-0.4**
OBN					*e*		14 00 01.3	
OBN					*eS*	**S**	**14 03 52.1**	**-1.5**
OBN					*eSS*	**ScP**	**14 05 38.5**	**+6.0**
OBN					pmax	pmax		
	comp=Z,202nm,1.3s							
OBN					MLR	MLR		
	comp=Z,1μm,16.0s							
OBN	**Obninsk**	**30.61**	**338**		P	**P**	**13 58 50.7**	**-1.1**
STIP	**Stip**	**30.72**	**306**	*i* P		P	13 58 43.5	-10
PDO	**Prodromos**	**30.78**	**299**		P	**P**	**13 58 53.2**	**-0.3**
MOS	**Moscow**	**30.80**	**340**	*eP*		**P**	**13 58 53.7**	**+0.3**
MOS					*e*		13 59 04.2	
MOS					pmax	pmax		
	comp=Z,228nm,1.3s							
MOS					pmax	pmax		
	comp=N,134nm,1.1s							
MOS					MLR	MLR		
	comp=Z,600nm,15.0s							
LSA	**Lhasa**	**30.87**	**78**		P	**P**	**13 58 57.3**	**+2.3**
LSA					S	**S**	**14 03 59.2**	**0.0**
LSA					LR	LR		
	comp=Z,4μm,14.9s							
LSA					LR	LR		
	comp=Z,5μm,14.9s							
LSA					LR	LR		
	comp=Z,8μm,15.0s							
LSA	**Lhasa**	**30.87**	**78**		P	**P**	**13 58 54.8**	**-0.2**
LSA					pmax	pmax		
	comp=Z,11nm,0.8s							
LSA	**Lhasa**	**30.87**	**78**		P	**P**	**13 58 54.8**	**-0.2**
LOT	**Lotru**	**30.90**	**313**	⇓P		**P**	**13 58 55.0**	**+0.4**
BURAR	**Bucovina Array**	**30.95**	**318**	⇓P		**P**	**13 58 55.9**	**+0.8**
BURAR	**Bucovina Array**	**30.95**	**318**		P	**P**	**13 58 54.6**	**-0.5**
SRE	**Strehaia**	**30.97**	**311**	⇑P		**P**	**13 58 57.3**	**+2.2**
BUR08	**Bucovina Ar. S**	**30.98**	**318**		P	**P**	**13 58 54.4**	**-0.9**
KIRV	**Kirov**	**31.02**	**353**	*ce*	P	**P**	**13 58 55.0**	**-0.4**
NYDR	**Nydri-Lefkada**	**31.17**	**299**		P	**P**	**13 58 56.3**	**-0.7**
EVGI	**Lefkada island**	**31.19**	**299**		P	**P**	**13 58 56.3**	**-0.9**
LKD2	**Lefkada island**	**31.22**	**300**		P	**P**	**13 58 56.9**	**-0.5**
TSLK	**Tsoukalades, L**	**31.23**	**300**		P	**P**	**13 58 56.9**	**-0.6**
SKO	**Skopje**	**31.33**	**306**	*i* P		**P**	**13 58 58.9**	**+0.5**
GZR	**Gura Zlata**	**31.52**	**313**	⇑P		**P**	**13 59 00.8**	**+0.7**
CJR	**Cluj-Napoca**	**31.53**	**315**	⇓P		**P**	**13 59 02.4**	**+2.3**
HERR	**Herculane**	**31.57**	**311**	⇓P		**P**	**13 59 02.0**	**+1.5**
OHR	**Ohrid**	**31.58**	**304**	*i* P		**P**	**13 59 01.3**	**+0.7**
DEV	**Deva**	**31.63**	**313**	⇑P		**P**	**13 59 01.3**	**+0.4**
PHP	**Peshkopia**	**31.98**	**305**		P	**P**	**13 59 03.7**	**-0.4**
MDVR	**Moldovita**	**32.00**	**311**	⇑P		**P**	**13 59 05.1**	**+0.8**
KEK	**Kerkira**	**32.04**	**301**		P	**P**	**13 59 03.1**	**-1.5**
SHL	**Shillong**	**32.15**	**86**		P	**P**	**13 59 05.1**	**-0.8**
SHL					pmax	pmax		
	comp=Z,16nm,0.9s							
SHL	**Shillong**	**32.15**	**86**		P	**P**	**13 59 05.1**	**-0.8**
TIR	**Tirane**	**32.32**	**304**	⇓P		**P**	**13 59 08.3**	**+1.2**
TIR	**Tirane**	**32.32**	**304**		P	**P**	**13 59 05.6**	**-1.4**
TIR					pmax	pmax		
	comp=Z,200nm,1.2s							
TIR	**Tirane**	**32.32**	**304**		P	**P**	**13 59 05.6**	**-1.4**
BZS	**Buzias**	**32.36**	**312**	⇓P		**P**	**13 59 09.2**	**+1.8**
SIRR	**Siria**	**32.58**	**314**	⇑P		**P**	**13 59 10.8**	**+1.5**
LVV	**L'vov**	**32.72**	**321**	*eP*		**P**	**13 59 11.9**	**+1.5**
LVV					*eS*	**S**	**14 04 26.4**	**-0.3**
DIVS	**Divibare**	**32.95**	**309**	*eP*		**P**	**13 59 13.1**	**+0.4**
DIVS	**Divibare**	**32.95**	**309**		P	**P**	**13 59 10.7**	**-2.0**
DIVS					IAmb	IAmb	13 59 18.2	
	comp=Z,39nm,1.3s							
DRME	**Dracevica, Mon**	**33.01**	**305**	⇑*i* P		**P**	**13 59 11.8**	**-1.3**
PDG	**Podgorica**	**33.02**	**306**	⇑P		**P**	**13 59 12.9**	**-0.2**
PDG	**Podgorica**	**33.02**	**306**	*eP*		**P**	**13 59 12.7**	**-0.4**
PDG	**Podgorica**	**33.02**	**306**		P	**P**	**13 59 10.5**	**-2.6**
PDG					IAmb	IAmb	13 59 24.6	
	comp=Z,44nm,1.3s							
SCTE	**Santa Cesarea**	**33.11**	**301**		P	**P**	**13 59 12.4**	**-1.5**
SCTE					IAmb	IAmb	13 59 15.5	
	comp=Z,28nm,0.7s							
UZH	**Uzhgorod**	**33.16**	**318**	*eP*		**P**	**13 59 13.7**	**-0.6**
UZH					*e*		13 59 15.0	
UZH					*e*		14 00 26.2	
UZH					*i* S	**S**	**14 04 29.6**	**-4.0**
UZH					*eSS*	**SnSn**	**14 06 40.6**	**+7.9**
BBLS	**Lazići**	**33.29**	**308**	⇑*i* P		**P**	**13 59 15.7**	**+0.1**
KOLS	**Kolonicke sedl**	**33.31**	**318**	*eP*		**P**	**13 59 15.9**	**+0.3**
KOLS					pmax	pmax		
	comp=Z,68nm,1.4s							
KOLS	**Kolonicke sedl**	**33.31**	**318**	*eP*		**P**	**13 59 15.9**	**+0.3**
KWP	**Kalwaria Pacla**	**33.38**	**320**	*eP*		**P**	**13 59 16.6**	**+0.4**
KWP					*eL*	L	14 21 05.4	
	comp=Z,812nm,16.7s							
KWP	**Kalwaria Pacla**	**33.38**	**320**		P	**P**	**13 59 14.7**	**-1.5**
KWP					pmax	pmax		
	comp=Z,38nm,1.0s							
KWP	**

VYHS Vyhne 35.20 316 *e*P **P 13 59 32.5 +0.5**
OJC Ojcow 35.32 319 *e*P **P 13 59 33.3 +0.2**
OJC *e*L L 14 18 39.2
comp=Z,904nm,20.1s
OJC Ojcow 35.32 319 P **P 13 59 32.2 -0.9**
OJC pmax pmax
comp=Z,72nm,1.2s
OJC Ojcow 35.32 319 P **P 13 59 32.2 -0.9**
OJC lAmb lAmb 13 59 36.2
comp=Z,72nm,1.2s
SUW Suwalki 35.41 327 *e*P **P 13 59 34.3 +0.6**
SUW *e*L L 14 18 28.8
comp=Z,1µm,20.8s
SUW Suwalki 35.41 327 P **P 13 59 32.4 -1.3**
SUW pmax pmax
comp=Z,247nm,1.1s
SUW Suwalki 35.41 327 P **P 13 59 32.4 -1.3**
SGRT San Giovanni R 35.43 304 P **P 13 59 33.2 -1.0**
SGRT lAmb lAmb 13 59 36.6
comp=Z,22nm,0.7s
BEHE Becsehely 35.83 312 ⇑*i*P **P 13 59 41.0 +3.6**
PABE Paberze 35.91 329 *e*P **P 13 59 38.8 +0.8**
JAVC Velka Javorina 36.05 316 *e*P **P 13 59 40.2 +0.8**
SMOL Smolenice 36.08 315 *e*P **P 13 59 39.9 +0.4**
SMOL pmax pmax
comp=Z,22nm,1.2s
SMOL Smolenice 36.08 315 *e*P **P 13 59 39.8 +0.3**
MODS Modra-Piesok 36.12 315 *e*P **P 13 59 39.1 -0.9**
MODS pmax pmax
comp=Z,142nm,1.8s
MODS Modra-Piesok 36.12 315 *e*P **P 13 59 39.1 -0.9**
OKC Ostrava-Krasne 36.13 318 *e*P **P 13 59 41.4 +1.4**
OKC AMS AMS 14 17 20.0
comp=Z,1µm,22.4s
KOGS Kog 36.17 312 *e*P **P 13 59 40.8 +0.5**
ZST Bratislava 36.17 315 *e*P **P 13 59 40.9 +0.6**
ZST pmax pmax
comp=Z,162nm,1.4s
ZST Bratislava 36.17 315 *e*P **P 13 59 40.9 +0.6**
PAOL Paolisi 36.19 302 P **P 13 59 40.0 -0.7**
PUL Pulkovo 36.37 338 *ce*P **P 13 59 43.6 +1.7**
PUL pmax pmax
comp=Z,142nm,0.4s
GCIS Gornji Cirnik 36.42 310 *e*P **P 13 59 43.0 +0.5**
MORC Moravsky Berou 36.47 317 ⇓P **P 13 59 43.2 +0.3**
MORC Moravsky Berou 36.47 317 *e*P **P 13 59 42.6 -0.4**
MORC Moravsky Berou 36.47 317 P **P 13 59 41.6 -1.4**
MORC pmax pmax
comp=Z,17nm,0.9s
MORC Moravsky Berou 36.47 317 P **P 13 59 41.6 -1.4**
CRES Cresnjev 36.53 310 *e*P **P 13 59 44.0 +0.6**
CRES Cresnjev 36.53 310 ⇑*i*P **P 13 59 44.0 +0.6**
BOJS Bojanci 36.58 310 *e*P **P 13 59 44.5 +0.6**
VSU Vasula 36.68 335 *e*P **P 13 59 45.0 +0.5**
VSU Vasula 36.68 335 *i* P **P 13 59 43.7 -0.8**
VSU pmax pmax
comp=Z,166nm,1.1s
INTR Introdacqua 36.83 304 P **P 13 59 45.9 -0.3**
INTR lAmb lAmb 13 59 50.5
comp=Z,88nm,0.8s
CONA Conrad Observa 36.87 314 *i* P **P 13 59 46.4 0.0**
comp=Z,37nm,0.7s,SNR=23
CORL Corleone 36.87 297 P **P 13 59 45.6 -0.9**
CORL lAmb lAmb 13 59 55.2
comp=Z,74nm,0.9s
VRAC Vranov 36.87 316 ⇑P **P 13 59 46.7 +0.4**
VRAC Vranov 36.87 316 *e*P **P 13 59 46.2 -0.2**
ARSA Arzberg 36.88 313 *i* P **P 13 59 46.5 +0.1**
comp=Z,62nm,1.6s,SNR=18
ARSA *e*S **S 14 05 31.5 +0.6**
comp=Z,5.0nm,1.1s
GBRS Gornja Briga 36.89 310 *i* P **P 13 59 47.7 +1.1**
KRUC Moravsky 36.91 316 *e*P **P 13 59 46.7 +0.1**
SOKA Soboth 37.04 312 *i* P **P 13 59 48.0 +0.2**
comp=Z,24nm,0.9s,SNR=6.6
PBUR Paburge 37.15 329 *e*P **P 13 59 48.9 +0.3**
CEY Cerknica 37.20 310 ⇑*i*P **P 13 59 49.2 0.0**
LJU Ljubljana 37.21 310 ⇑*i*P **P 13 59 49.7 +0.5**
MBAR Mbarara 37.22 225 P **P 13 59 48.4 -1.4**
MBAR pmax pmax
comp=Z,26nm,0.9s
MBAR Mbarara 37.22 225 P **P 13 59 48.4 -1.4**
AQU L'Aquila 37.25 304 P **P 13 59 48.7 -1.0**
AQU pmax pmax
comp=Z,110nm,1.0s
AQU L'Aquila 37.25 304 *e*P **P 13 59 50.7 +1.0**
AQU L'Aquila 37.25 304 P **P 13 59 48.7 -1.0**
AQU lAmb lAmb 14 00 13.6
comp=Z,110nm,1.0s
OBKA Obir 37.31 311 *i* P **P 13 59 49.1 -1.1**
comp=Z,53nm,1.4s,SNR=8.0
DPC Dobruska-Polom 37.42 318 *e*P **P 13 59 51.1 +0.1**
DPC AMS AMS 14 18 00.0
comp=Z,1µm,20.8s
JAVS Javornik 37.48 310 *i* P **P 13 59 51.8 +0.1**
NRCA Norcia 37.54 305 P **P 13 59 51.7 -0.5**
NRCA lAmb lAmb 13 59 56.3
comp=Z,63nm,0.8s
TREC Trest 37.55 316 *e*P **P 13 59 52.6 +0.5**
OSTC Ostas 37.56 318 *e*P **P 13 59 52.0 -0.1**
OSTC AMS AMS 14 18 10.0
comp=Z,2µm,22.6s
KSP Ksiaz 37.62 319 *e*P **P 13 59 54.3 +1.6**
KSP *e*L L 14 18 34.5
comp=Z,1µm,18.1s
UPC Upice 37.66 318 *e*P **P 13 59 53.3 +0.3**
UPC AMS AMS 14 18 10.0
comp=Z,1µm,20.0s
CHVC Chvalec 37.66 318 *e*P **P 13 59 53.3 +0.2**
MOA Molln 37.87 313 *i* P **P 13 59 55.0 +0.2**
comp=Z,27nm,0.7s,SNR=15
SLIT Slitere, Latvi 37.94 331 *e*P **P 13 59 54.9 -0.3**
SLIT *e* 14 00 43.8
MYKA Terra Mystica 37.95 311 *e*P **P 13 59 55.8 +0.2**
comp=Z,10nm,0.7s
PRED Cave del Predi 37.95 311 P **P 13 59 55.0 -0.6**
GTA Gaotai 37.98 61 ⇑P **P 13 59 56.6 +0.6**
GTA pP sP 14 00 01.5 +0.1
GTA sP pP 14 00 04.6 +4.7
GTA S **S 14 05 49.6 +1.5**
GTA SS **SS 14 08 34.2 -0.7**
GTA pmax pmax
comp=Z,13nm,1.2s
GTA pmax pmax
comp=Z,220nm,4.2s
GTA LR LR
comp=Z,2µm,17.4s
GTA LR LR
comp=Z,1µm,16.2s
GTA LR LR
comp=Z,1µm,16.6s
MURB Monte Urbino 38.03 305 P **P 13 59 55.5 -0.8**
MURB lAmb lAmb 14 00 08.7
comp=Z,89nm,0.9s
TMCR Tamitsa 38.07 347 *e*P **P 13 59 56.0 -0.2**
TMCR *e*S **S 14 05 51.0 +2.6**
TMCR pmax pmax
comp=Z,45nm,0.9s
KBA Koelnbreinsper 38.26 312 *i* P **P 13 59 58.2 -0.1**
comp=Z,67nm,0.7s,SNR=30
KBA *e*S **S 14 05 53.1 +0.9**
comp=Z,13nm,2.2s
PRU Pruhonice 38.36 317 *e*P **P 13 59 58.8 -0.1**
PRU AMS AMS 14 19 10.0
comp=Z,2µm,19.4s
ZOU Zoufplan 38.38 311 P **P 13 59 58.4 -0.9**
ZOU lAmb lAmb 14 00 02.3
comp=Z,80nm,1.5s
PRA Prague 38.45 317 *e*P **P 14 00 03.5 +3.8**
PRA AMS AMS 14 19 10.0
comp=Z,600nm,15.0s
LATE Laterza 38.46 304 P **P 13 59 57.9 -2.0**
STAL STALIGIAL 38.49 310 P **P 13 59 58.9 -1.1**
GEC2 GERESS Array S 38.52 315 P **P 13 59 59.3 -1.0**
GERES GERESS Array B 38.52 315 P **P 14 00 00.2 -0.2**
comp=Z,11nm,0.6s,baz=108,slow=8.6,SNR=53
GERES PcP **PcP 14 02 13.6 +0.5**
comp=Z,2.8nm,0.8s,baz=118,slow=3.8,SNR=4.0
GERES LR LR 14 19 21.2
comp=Z,561nm,18.7s,baz=118,slow=42
GERES GERESS Array B 38.52 315 P **P 13 59 59.8 -0.6**
GERES **PcP 14 02 11.4 -1.7**
PVCC Panska Ves 38.53 317 AMS AMS 14 19 30.0
comp=Z,1µm,12.9s

PBCC Pribram 38.59 316 *e*P **P 14 00 01.0 +0.1**
CIMO Cimolais 38.68 310 P **P 14 00 00.9 -0.8**
CIMO lAmb lAmb 14 00 04.4
comp=Z,34nm,0.7s
KHC Kasperske Hory 38.68 315 *e*P **P 14 00 01.6 -0.1**
KHC AMS AMS 14 20 50.0
comp=Z,1µm,17.3s
ABTA Abfaltersbach 38.73 311 *i* P **P 14 00 01.8 -0.4**
comp=Z,34nm,0.6s,SNR=17
ABTA *e*S **S 14 05 56.7 -2.5**
comp=Z,14nm,1.5s
OSSC Osservatorio P 38.99 306 P **P 14 00 03.1 -1.2**
TEOL Teolo 39.01 309 P **P 14 00 03.7 -0.7**
TEOL lAmb lAmb 14 00 07.7
comp=Z,44nm,0.7s
FIA1 FINESS Array S 39.02 328 P **P 14 00 04.0 -0.3**
FIA1 lAmb lAmb 14 00 15.8
comp=Z,43nm,0.8s
FINES FINESS Array B 39.02 338 P **P 14 00 04.3 +0.1**
comp=Z,24nm,0.6s,baz=134,slow=8.9,SNR=77
FINES LR LR 14 18 50.8
comp=Z,1µm,21.7s,baz=142,slow=40
FINES FINESS Array B 39.02 338 P **P 14 00 04.0 -0.3**
BRG Berggiesshubel 39.02 318 *i* P **P 14 00 04.2 -0.2**
comp=Z,27nm,1.2s
comp=N,968nm,28.3s
comp=E,1µm,11.0s
comp=Z,1µm,24.6s
BRG Berggiesshubel 39.02 318 *i* P **P 14 00 04.2 -0.2**
BRG pmax pmax
comp=Z,27nm,1.2s
BRG MLR MLR
comp=N,968nm,28.3s
BRG MLR MLR
comp=E,1µm,11.0s
BRG MLR MLR
comp=Z,1µm,24.6s
CTI Castel Tesino 39.16 310 P **P 14 00 04.6 -1.2**
CTI pmax pmax
comp=Z,41nm,0.8s
CTI Castel Tesino 39.16 310 P **P 14 00 04.6 -1.2**
ZCCA Zocca 39.31 307 P **P 14 00 05.9 -1.2**
ZCCA lAmb lAmb 14 00 14.0
comp=Z,76nm,0.9s
WTTA Wattenberg 39.44 312 *i* P **P 14 00 07.8 -0.4**
comp=Z,89nm,0.6s,SNR=34
WTTA *e*S **S 14 06 08.3 -1.6**
comp=Z,33nm,1.2s
WATA Walderalm 39.49 312 *i* P **P 14 00 07.8 -0.8**
comp=Z,137nm,0.9s,SNR=36
WATA *e*S **S 14 06 09.3 -1.4**
comp=Z,34nm,1.6s
RUE Ruedersdorf 39.68 320 *e*P **P 14 00 10.5 +0.6**
MHMT Maesarieng 39.70 95 P **P 14 00 13.5 +3.0**
comp=Z,24nm,0.8s
SQTA Sankt Quirin 39.71 311 *i* P **P 14 00 09.7 -0.7**
comp=Z,123nm,0.5s,SNR=56
SQTA *e*S **S 14 06 10.8 -3.2**
comp=Z,16nm,1.4s
NKC Novy Kostel 39.72 316 *e*P **P 14 00 10.5 +0.2**
CLL Collm 39.72 318 *i* P **P 14 00 10.4 +0.1**
comp=Z,37nm,1.1s
CLL *i* 14 00 20.5
CLL *e*PP **PP 14 01 41.0 -0.4**
CLL *e*PPP PPP 14 02 05.0
CLL *e*S **S 14 06 14.0 +0.2**
CLL *e*SS **SnSn 14 09 12.0 +0.6**
CLL LmH 14 18 00.0
comp=N,800nm,19.8s
CLL LmH 14 18 00.0
comp=E,800nm,19.7s
CLL Collm 39.72 318 *i* P **P 14 00 10.4 +0.1**
CLL *i* 14 00 20.5
CLL *e*S **S 14 06 14.0 +0.2**
CLL pmax pmax
comp=Z,37nm,1.1s
CLL Collm 39.72 318 P **P 14 00 09.7 -0.6**
MOTA Moosalm 39.81 312 *i* P **P 14 00 10.3 -0.9**
comp=Z,52nm,0.7s,SNR=22
MOTA *e*S **S 14 06 13.5 -2.0**
comp=Z,26nm,1.5s
FETA Feichten 39.99 311 *i* P **P 14 00 12.4 -0.4**
comp=Z,91nm,0.6s,SNR=46
FETA *e*S **S 14 06 16.0 -2.2**
comp=Z,20nm,1.1s
VSL Villasalto 40.01 299 P **P 14 00 12.6 -0.3**
VSL lAmb lAmb 14 00 17.9
comp=Z,95nm,0.9s
KEST Kesra 40.03 293 P **P 14 00 15.3 +2.1**
comp=Z,24nm,0.9s,baz=10,slow=1.6,SNR=17
KEST LR LR 14 20 22.4
comp=Z,1µm,19.2s,baz=357,slow=42
KEST Kesra 40.03 293 P **P 14 00 13.2 0.0**
RETA Reutte 40.07 312 *i* P **P 14 00 12.4 -0.9**
comp=Z,34nm,0.6s,SNR=11
RETA *e*S **S 14 06 16.5 -2.7**
comp=Z,13nm,1.4s
BSD Bornholm Skovb 40.13 324 *i* P **P 14 00 12.8 -0.7**
BSD pmax pmax
comp=Z,36nm,0.7s
BSD Bornholm Skovb 40.13 324 *i* P **P 14 00 12.8 -0.7**
comp=Z,36nm,0.7s
BSD Bornholm Skovb 40.13 324 *i* P **P 14 00 12.8 -0.7**
BSD *i* P **P 14 00 13.0 -0.6**
BSD lAmb lAmb 14 00 13.6
comp=Z,36nm,0.7s
FUORN Ofenpass-Fuorn 40.22 310 P **P 14 00 15.1 +0.3**
GRA1 Grafenberg Arr 40.32 315 P **P 14 00 15.5 +0.2**
GRA1 lAmb lAmb 14 00 17.6
comp=Z,75nm,0.7s
GRF Grafenberg Arr 40.32 315 P **P 14 00 15.5 +0.2**
GRF pmax pmax
comp=Z,75nm,0.7s
GRF Grafenberg Arr 40.32 315 *e*P **P 14 00 15.3 0.0**
comp=Z,66nm,1.2s,baz=111,slow=9.2
GRF *e*L L 14 22 10.7
comp=Z,871nm,20.2s
CM32 Chiang Mai Arr 40.34 94 P **P 14 00 18.0 +2.2**
MSSA Maissana 40.34 307 P **P 14 00 15.1 -0.6**
MSSA lAmb lAmb 14 00 26.7
comp=Z,171nm,1.5s
CHTO Chiang Mai 40.36 93 P **P 14 00 15.5 -0.5**
CHTO pmax pmax
comp=Z,12nm,1.0s
CHTO Chiang Mai 40.36 93 P **P 14 00 15.5 -0.5**
CM33 Chiang Mai Arr 40.36 93 P **P 14 00 17.0 +1.0**
CM13 Chiang Mai Arr 40.47 94 P **P 14 00 19.7 +2.8**
comp=Z,103nmcomp=Z,9.5nm,1.1s
CM15 Chiang Mai Arr 40.48 94 P **P 14 00 20.1 +3.2**
comp=Z,82nmcomp=Z,9.2nm,1.2s
CM31 Chiang Mai Arr 40.49 94 P **P 14 00 20.4 +3.4**
comp=Z,3µmcomp=Z,255nm,1.1s
CM31 Chiang Mai Arr 40.49 94 P **P 14 00 17.1 0.0**
CMAR Chiang Mai Arr 40.49 94 P **P 14 00 18.7 +1.6**
comp=Z,3.5nm,0.8s,baz=298,slow=7.7,SNR=25
CMAR PcP **PcP 14 02 20.9 +1.2**
comp=Z,4.6nm,0.9s,baz=283,slow=4.9,SNR=6.9
CMAR ScP **ScP 14 06 13.0 +3.9**
comp=Z,0.7nm,0.6s,baz=309,slow=4.5,SNR=3.1
CMAR LR LR 14 19 56.7
comp=Z,1µm,20.9s,baz=321,slow=40
CM02 Chiang Mai Arr 40.50 94 P **P 14 00 20.0 +2.8**
comp=Z,92nmcomp=Z,9.0nm,0.9s
CM05 Chiang Mai Arr 40.51 94 P **P 14 00 20.1 +2.8**
comp=Z,65nmcomp=Z,6.6nm,1.0s
CM01 Chiang Mai Arr 40.52 94 P **P 14 00 20.7 +3.4**
comp=Z,102nmcomp=Z,9.1nm,0.8s
CM34 Chiang Mai Arr 40.53 93 P **P 14 00 19.0 +1.6**
CM09 Chiang Mai Arr 40.54 94 P **P 14 00 20.0 +2.5**
comp=Z,73nmcomp=Z,9.4nm,0.9s
CM04 Chiang Mai Arr 40.54 94 P **P 14 00 20.9 +3.3**
comp=Z,90nmcomp=Z,11nm,1.0s
CM35 Chiang Mai Arr 40.60 93 P **P 14 00 19.0 +1.0**
CM36 Chiang Mai Arr 40.60 94 P **P 14 00 19.0 +1.0**
DAVA Damuels 40.61 311 *i* P **P 14 00 17.3 -0.6**
comp=Z,145nm,0.5s,SNR=52
DAVA *e*S **S 14 06 25.5 -1.9**
comp=Z,18nm,1.1s
TUE Stuetta 40.81 310 P **P 14 00 18.4 -1.3**
TUE lAmb lAmb 14 00 22.2
comp=Z,113nm,1.5s
PAYA Payao 40.99 92 P **P 14 00 23.4 +2.2**
comp=Z,4µmcomp=Z,479nm,1.0s
LAMP Lampang 41.08 93 P **P 14 00 26.2 +4.3**
comp=Z,1µmcomp=Z,25nm,1.2s
MOY Mondy 41.13 42 *e*P **P 14 00 23.1 +1.0**

MOY pmax pmax
comp=Z,64nm,1.6s
LZH Lanzhou 41.14 66 *e*P **P 14 00 23.0 +0.6**
LZH sP sP 14 00 29.2 +1.4
LZH S **S 14 06 34.4 -1.2**
LZH SS **SS 14 09 37.6 -0.6**
LZH pmax pmax
comp=Z,26nm,1.0s
LZH pmax pmax
comp=Z,180nm,6.0s
LZH LR LR
comp=Z,850nm,19.0s
LZH LR LR
comp=Z,1µm,24.9s
SUKH Sukhothai 41.46 95 P **P 14 00 27.7 +2.7**
comp=Z,41nm,1.0s
CD2 Chengdu 41.56 74 P **P 14 00 25.1 -0.7**
CD2 S **S 14 06 39.9 -1.8**
CD2 ScS **ScS 14 10 27.4 -2.4**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 pmax pmax
comp=Z,220nm,7.2s
CD2 LR LR
comp=Z,5µm,19.2s
CD2 LR LR
comp=Z,1µm,16.9s
CD2 LR LR
comp=Z,2µm,16.2s
COP Copenhagen 41.65 324 *e*P **P 14 00 27.1 +1.0**
COP Copenhagen 41.65 324 *i* P **P 14 00 27.1 +1.0**
COP Copenhagen 41.65 324 *e*P **P 14 00 27.1 +1.0**
KMI Kunming 41.81 83 ⇑P **P 14 00 28.9 +0.8**
KMI pP sP 14 00 32.8 -0.8
KMI sP pP 14 00 35.0 +3.0
KMI PP **PP 14 02 06.8 +2.0**
KMI S **S 14 06 43.0 -3.0**
KMI pmax pmax
comp=Z,21nm,1.2s
KMI pmax pmax
comp=Z,270nm,4.6s
KMI LR LR
comp=Z,1µm,19.9s
KMI LR LR
comp=Z,830nm,21.5s
KMI LR LR
comp=Z,930nm,19.8s
BFO Black Forest 41.84 312 P **P 14 00 26.4 -1.5**
BFO pmax pmax
comp=Z,12nm,0.7s
BFO Black Forest 41.84 312 P **P 14 00 26.4 -1.5**
APA Apatity 41.98 347 ⇑*i*P **P 14 00 29.6 +1.0**
APA pmax pmax
comp=Z,36nm,0.9s
APA MLR MLR
comp=Z,3µm,17.0s
LVZ Lovozero 42.03 348 P **P 14 00 27.4 -1.8**
LVZ pmax pmax
comp=Z,20nm,0.7s
LVZ Lovozero 42.03 348 P **P 14 00 27.4 -1.8**
UTHA Uthaitani 42.06 98 P **P 14 00 32.9 +2.9**
comp=Z,374nmcomp=Z,38nm,0.8s
UTTA Uttaradit 42.18 94 P **P 14 00 33.1 +2.2**
comp=Z,811nmcomp=Z,98nm,0.9s
SENIN Lac Senin/Sane 42.19 309 P **P 14 00 29.1 -1.8**
PHIT Phitsanulok 42.27 95 P **P 14 00 35.0 +3.3**
comp=Z,220nm,1.0s
BNI Bardonecchia 42.45 307 P **P 14 00 31.4 -1.6**
BNI pmax pmax
comp=Z,149nm,1.5s
BNI Bardonecchia 42.45 307 P **P 14 00 31.4 -1.6**
BNI lAmb lAmb 14 00 36.4
comp=Z,149nm,1.5s
LPL La Plagne 42.47 308 *e*P **P 14 00 32.4 -0.8**
LPL pmax pmax
comp=Z,32nm,0.7s
ECH Echery 42.59 312 P **P 14 00 31.8 -2.2**
ECH pmax pmax
comp=Z,38nm,0.9s
ECH Echery 42.59 312 P **P 14 00 31.8 -2.2**
TLY Talaya 42.72 43 *e*P **P 14 00 35.9 +0.9**
TLY *e*S **S 14 06 59.9 +1.5**
TLY *e*SSS SSS 14 10 34.5
TLY pmax pmax
comp=Z,48nm,1.6s
TLY MLR MLR
comp=Z,6µm,12.0s
TLY Talaya 42.72 43 P **P 14 00 35.2 +0.2**
PHET Kaeng Krachan 43.36 101 P **P 14 00 45.2 +4.6**
comp=Z,478nmcomp=Z,64nm,0.8s
WLF Walferdange 43.51 314 P **P 14 00 41.1 -0.2**
WLF Walferdange 43.51 314 P **P 14 00 40.7 -0.7**
WLF pmax pmax
comp=Z,32nm,0.7s
WLF Walferdange 43.51 314 P **P 14 00 40.7 -0.7**
WLF lAmb lAmb 14 00 43.3
comp=Z,32nm,0.7s
MUD Monsted U'grnd 43.64 324 *e*P **P 14 00 41.0 -1.2**
MUD Monsted U'grnd 43.64 324 *i* P **P 14 00 41.0 -1.2**
MUD Monsted U'grnd 43.64 324 *e*P **P 14 00 41.1 -1.2**
SONM Songino Array 43.68 49 P **P 14 00 43.4 +0.5**
comp=Z,9.0nm,1.1s,baz=252,slow=7.9,SNR=36
SONM LR LR 14 21 25.4
comp=Z,1µm,20.4s,baz=257,slow=40
SONM Songino Array 43.68 49 P **P 14 00 42.8 -0.1**
SONM pmax pmax
comp=Z,18nm,0.9s
SONM Songino Array 43.68 49 P **P 14 00 42.8 -0.1**
BTNL Ternell 43.71 315 P **P 14 00 44.7 +1.7**
BHOU Houvegnez 43.74 315 P **P 14 00 43.6 +0.4**
BHOU PP **PP 14 02 22.7 -2.3**
MEM Membach 43.79 315 P **P 14 00 44.5 +0.9**
comp=Z,38nm,1.2s
MEM PP **PP 14 02 23.6 -1.9**
SLVN Son La 43.91 88 P **P 14 00 44.4 -0.6**
SSB Saint Sauveur 43.97 307 P **P 14 00 43.4 -1.8**
SSB pmax pmax
comp=Z,64nm,1.5s
SSB Saint Sauveur 43.97 307 P **P 14 00 43.4 -1.8**
SSB lAmb lAmb 14 00 47.8
comp=Z,64nm,1.5s
ULN Ulaanbaatar 44.13 49 *ce*P **P 14 00 47.1 +0.6**
ULN pmax pmax
comp=Z,44nm,1.7s
ULN Ulaanbaatar 44.13 49 P **P 14 00 46.0 -0.5**
CHAI Chaiyaphum 44.15 96 P **P 14 00 49.9 +3.0**
comp=Z,36nm,0.8s
RCHB Rochefort 44.19 314 P **P 14 00 47.6 +0.7**
comp=Z,44nm,1.5s
BCLA Clavier 44.20 315 P **P 14 00 47.4 +0.5**
BCLA PP **PP 14 02 27.6 -2.1**
NC602 NORSAR Array S 44.27 331 P **P 14 00 45.5 -1.8**
NC602 lAmb lAmb 14 00 49.8
comp=Z,42nm,0.9s
NC602 NORSAR Array S 44.27 331 *e*P **P 14 00 47.3 0.0**
OSL Oslo 44.27 329 *e*P **P 14 00 47.2 -0.1**
BGES Gesves 44.33 315 ⇑P **P 14 00 48.4 +0.5**
comp=Z,45nm,1.5s
NONG Nongkai 44.35 92 P **P 14 00 49.0 +0.5**
comp=Z,160nm,0.9s
NC405 NORSAR Array S 44.37 331 P **P 14 00 47.2 -0.9**
BMRD Maredsous 44.51 315 P **P 14 00 50.4 +1.1**
comp=Z,45nm,1.6s
NB201 NORSAR Array S 44.52 331 P **P 14 00 48.2 -1.2**
NB2 NORSAR Subarra 44.55 331 P **P 14 00 48.9 -0.7**
comp=Z,29nm,0.8s,baz=116,slow=7.9
NB2 NORSAR Subarra 44.55 331 P **P 14 00 48.9 -0.7**
baz=116,slow=7.9
NOA NORSAR Array B 44.55 331 P **P 14 00 48.9 -0.7**
comp=Z,12nm,0.6s,baz=116,slow=7.9,SNR=63
NOA LR LR 14 22 06.3
comp=Z,876nm,21.6s,baz=115,slow=40
NC303 NORSAR Array S 44.57 331 P **P 14 00 48.7 -1.0**
NC303 lAmb lAmb 14 00 51.0
comp=Z,121nm,1.5s
DOU Dourbes 44.58 314 ⇑P **P 14 00 50.4 +0.4**
comp=Z,41nm,1.4s
NAO01 NORSAR Array S 44.60 330 P **P 14 00 48.9 -1.1**
NAO01 lAmb lAmb 14 00 58.0
comp=Z,110nm,1.4s
KONO Kongsberg 44.66 329 *ce*P **P 14 00 49.9 -0.5**
KONO pmax pmax
comp=Z,67nm,1.3s
KONO Kongsberg 44.66 329 P **P 14 00 49.2 -1.3**
KONO lAmb lAmb 14 00 55.3

	comp=Z,94nm,1.4s							
KONO	**Kongsberg**	**44.66**	**329**	*e*P	**P**	**14 00 50.5**	**+0.1**	
KHON	**Khomkaen**	**44.72**	**95**	P	**P**	**14 00 54.4**	**+2.9**	
	comp=Z,76nm,0.8s							
NBO00	**NORSAR Array S**	**44.73**	**331**	P	**P**	**14 00 49.9**	**-1.1**	
NBO00				IAmb	IAmb	14 00 58.7		
	comp=Z,107nm,1.5s							
NC204	**NORSAR Array S**	**44.85**	**331**	P	**P**	**14 00 51.4**	**-0.7**	
NC204				IAmb	IAmb	14 01 15.2		
	comp=Z,56nm,1.2s							
SNF	**Seneffe**	**44.85**	**315**	⇑P	**P**	**14 00 52.7**	**+0.6**	
	comp=Z,60nm,1.1s							
SSF	**Saint Saulge**	**44.87**	**310**	*e*P	**P**	**14 00 51.9**	**-0.4**	
SSF				pmax	pmax			
	comp=Z,126nm,1.3s							
GYA	**Guiyang**	**44.92**	**80**	⇓P	**P**	**14 00 55.9**	**+2.8**	
GYA				PP	**PP**	**14 02 40.3**	**+2.3**	
GYA				S	**S**	**14 07 26.3**	**-5.0**	
GYA				SS	**ScS**	**14 10 49.7**	**-1.3**	
GYA				pmax	pmax			
	comp=Z,7.0nm,0.9s							
GYA				pmax	pmax			
	comp=Z,130nm,4.8s							
GYA				LR	LR			
	comp=Z,810nm,18.8s							
GYA				LR	LR			
	comp=Z,630nm,21.2s							
SRAK	**Srakaew**	**44.98**	**98**	P	P	14 01 00.8	+7.2	
	comp=Z,3µmcomp=Z,450nm,0.8s							
KEV	**Kevo**	**45.10**	**346**	P	**P**	**14 00 53.6**	**-0.2**	
KEV				pmax	pmax			
	comp=Z,66nm,0.8s							
KEV	**Kevo**	**45.10**	**346**	P	**P**	**14 00 53.6**	**-0.2**	
ARD4	**ARCESS Array S**	**45.24**	**345**	P	**P**	**14 00 55.0**	**+0.1**	
ARD5	**ARCESS Array S**	**45.24**	**345**	P	**P**	**14 00 55.0**	**+0.1**	
ARD5				IAmb	IAmb	14 00 58.4		
	comp=Z,109nm,1.4s							
ARD3	**ARCESS Array S**	**45.24**	**346**	P	**P**	**14 00 54.8**	**-0.1**	
ARD3				IAmb	IAmb	14 00 57.7		
	comp=Z,76nm,1.2s							
ARD6	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 55.1**	**+0.1**	
ARD6				IAmb	IAmb	14 00 58.5		
	comp=Z,98nm,1.3s							
ARC3	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 55.0**	**0.0**	
ARC4	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.8**	**-0.2**	
ARB3	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.8**	**-0.2**	
ARC5	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 55.0**	**0.0**	
ARA2	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.9**	**-0.1**	
ARB2	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.9**	**-0.1**	
ARC2	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.8**	**-0.2**	
ARC2				IAmb	IAmb	14 00 57.8		
	comp=Z,72nm,1.2s							
ARA0	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.9**	**-0.2**	
ARA0	**ARCESS Array S**	**45.25**	**345**	*e*P	**P**	**14 00 54.8**	**-0.2**	
ARB4	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 55.0**	**0.0**	
ARCES	**ARCESS Array B**	**45.25**	**345**	P	**P**	**14 00 55.5**	**+0.4**	
	comp=Z,25nm,0.9s,baz=142,slow=6.1,SNR=32							
ARCES				LR	LR	14 23 37.9		
	comp=Z,1µm,19.3s,baz=130,slow=41							
ARA1	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.9**	**-0.2**	
ARA1				IAmb	IAmb	14 00 57.8		
	comp=Z,72nm,1.3s							
ARA3	**ARCESS Array S**	**45.25**	**345**	P	**P**	**14 00 54.9**	**-0.1**	
SNART	**Snartemo**	**45.30**	**326**	*e*P	**P**	**14 00 56.4**	**+0.9**	
SNART	**Snartemo**	**45.30**	**326**	*e*P	**P**	**14 00 54.2**	**-1.3**	
KTK1	**Kautokeino**	**45.38**	**344**	*e*P	**P**	**14 00 56.3**	**+0.3**	
NRIK	**Noril'sk**	**45.39**	**15**	P	**P**	**14 00 56.6**	**+0.6**	
	comp=Z,21nm,0.8s,baz=214,slow=7.3,SNR=15							
NRIK				LR	LR	14 23 54.0		
	comp=Z,1µm,18.6s,baz=211,slow=41							
NRIK	**Noril'sk**	**45.39**	**15**	*ce*P	**P**	**14 00 56.0**	**-0.1**	
NRIK				pmax	pmax			
	comp=Z,30nm,1.0s							
SRIT	**Nakonsritamara**	**45.41**	**106**	P	**P**	**14 00 56.6**	**-0.4**	
XAN	**Xi'an**	**45.46**	**69**	P	**P**	**14 00 57.2**	**-0.1**	
XAN				pP	sP	14 01 01.6	-1.1	
XAN				PP	**PP**	**14 02 46.4**	**+2.8**	
XAN				S	**S**	**14 07 39.5**	**+0.7**	
XAN				SS	**ScS**	**14 10 53.9**	**-0.2**	
XAN				pmax	pmax			
	comp=Z,13nm,0.9s							
XAN				pmax	pmax			
	comp=Z,110nm,3.5s							
XAN				LR	LR			
	comp=Z,1µm,19.7s							
XAN				LR	LR			
	comp=Z,2µm,20.7s							
XAN	**Xi'an**	**45.46**	**69**	P	**P**	**14 00 56.5**	**-0.8**	
XAN				pmax	pmax			
	comp=Z,20nm,1.0s							
XAN	**Xi'an**	**45.46**	**69**	P	**P**	**14 00 56.5**	**-0.8**	
TAM	**Tamanrasset**	**45.56**	**275**	P	**P**	**14 00 57.0**	**-1.3**	
TAM				pmax	pmax			
	comp=Z,22nm,1.0s							
TAM	**Tamanrasset**	**45.56**	**275**	P	**P**	**14 00 57.0**	**-1.3**	
SKAR	**Skarslia**	**45.68**	**329**	*e*P	**P**	**14 00 59.4**	**+0.8**	
CAF	**Calviac**	**45.70**	**307**	*e*P	**P**	**14 00 58.4**	**-0.6**	
CAF				pmax	pmax			
	comp=Z,43nm,1.1s							
CLF	**Chambon-Foret**	**45.81**	**311**	P	**P**	**14 00 59.2**	**-0.5**	
CLF				IAmb	IAmb	14 01 01.5		
	comp=Z,97nm,1.4s							
BTO	**Baotou**	**45.84**	**59**	*e*P	P	14 00 55.0	-5.3	
BTO				S	**S**	**14 07 42.2**	**-2.1**	
DOMB	**Dombas**	**45.92**	**331**	*e*P	**P**	**14 01 01.8**	**+1.3**	
NSS	**Namsos**	**45.97**	**335**	*e*P	**P**	**14 01 01.0**	**+0.3**	
TBLU	**Trondheim**	**45.98**	**333**	*e*P	**P**	**14 01 01.9**	**+1.0**	
MOR8	**Moi Rana**	**46.01**	**338**	*e*P	**P**	**14 01 01.5**	**+0.4**	
BLS5	**Blasjo**	**46.05**	**327**	*e*P	**P**	**14 01 03.9**	**+2.4**	
ODD1	**Odda**	**46.15**	**328**	*e*P	**P**	**14 01 03.3**	**+1.0**	
FAUS	**Fauske**	**46.46**	**340**	*e*P	**P**	**14 01 04.7**	**+0.2**	
HAMF	**Hammerfest**	**46.51**	**346**	*e*P	**P**	**14 01 05.8**	**+0.9**	
STOK	**Stokkvaagen**	**46.58**	**338**	*e*P	**P**	**14 01 07.2**	**+1.7**	
N2TV	**TVrnvik**	**46.62**	**340**	*e*P	**P**	**14 01 07.6**	**+1.8**	
N2IH	**Innhavet**	**46.62**	**341**	*e*P	**P**	**14 01 06.2**	**+0.3**	
KONS	**Konsvik**	**46.63**	**338**	*e*P	**P**	**14 01 06.1**	**+0.2**	
MOL	**Molde**	**46.79**	**332**	*e*P	**P**	**14 01 08.4**	**+1.2**	
STEI	**Steigen**	**46.81**	**340**	*e*P	**P**	**14 01 07.8**	**+0.6**	
HYA	**Hoyanger**	**46.82**	**330**	*e*P	**P**	**14 01 08.3**	**+0.8**	
AKN	**Aaknes**	**46.86**	**331**	*e*P	**P**	**14 01 09.0**	**+1.2**	
TRO	**Tromso**	**46.90**	**343**	*e*P	**P**	**14 01 08.4**	**+0.4**	
BER	**Bergen**	**46.92**	**328**	*e*P	**P**	**14 01 08.9**	**+0.6**	
OPO	**Ambohidratompo**	**46.94**	**191**	LR	LR	14 19 13.8		
	comp=Z,980nm,19.8s,baz=182,slow=34							
HHC	**Hu-ho-hao-te**	**47.01**	**59**	*e*P	**P**	**14 01 10.9**	**+1.5**	
HHC				sP	sP	14 01 17.9	+3.0	
HHC				S	**S**	**14 08 01.1**	**+0.1**	
HHC				pmax	pmax			
	comp=Z,54nm,1.1s							
HHC				pmax	pmax			
	comp=Z,110nm,5.1s							
HHC				LR	LR			
	comp=Z,620nm,11.6s							
HHC				LR	LR			
	comp=Z,850nm,10.6s							
HHC				LR	LR			
	comp=Z,730nm,12.4s							
ASK	**Askoy**	**47.02**	**328**	*e*P	**P**	**14 01 09.6**	**+0.5**	
MFF	**Saint Martin d**	**47.33**	**309**	*e*P	**P**	**14 01 11.2**	**-0.5**	
MFF				pmax	pmax			
	comp=Z,72nm,1.4s							
N2VI	**Vinje**	**47.36**	**340**	*e*P	**P**	**14 01 11.0**	**-0.5**	
ABPO	**Ambohimpanom**	**47.37**	**191**	P	**P**	**14 01 12.5**	**+0.1**	
ABPO				pmax	pmax			
	comp=Z,28nm,1.2s							
ABPO	**Ambohimpanom**	**47.37**	**191**	P	**P**	**14 01 12.4**	**+0.1**	
ABPO				IAmb	IAmb	14 01 16.1		
	comp=Z,28nm,1.1s							
LOF	**Lofoten**	**47.44**	**340**	*e*P	**P**	**14 01 11.4**	**-0.8**	
UBPT	**Khong Chiam**	**47.48**	**95**	P	**P**	**14 01 15.2**	**+2.0**	
UBPT	**Khong Chiam**	**47.48**	**95**	P	**P**	**14 01 12.8**	**-0.3**	
UBPT				IAmb	IAmb	14 01 18.6		
	comp=Z,70nm,1.4s							
FOO	**Floro**	**47.49**	**330**	*e*P	**P**	**14 01 14.4**	**+1.7**	
N2RO	**R st**	**47.53**	**339**	*e*P	**P**	**14 01 13.5**	**+0.6**	
TIY	**Taiyuan**	**47.89**	**63**	*e*P	**P**	**14 01 17.3**	**+1.0**	
TIY				S	**S**	**14 08 14.4**	**+0.8**	
TIY				LR	LR			
	comp=Z,370nm,9.0s							
TIY				LR	LR			
	comp=Z,540nm,10.1s							
TIY				LR	LR			
	comp=Z,880nm,16.4s							
KULM	**Kulim**	**48.03**	**109**	P	**P**	**14 01 16.3**	**-1.2**	
KULM				IAmb	IAmb	14 01 31.2		
	comp=Z,29nm,1.3s							
KULM	**Kulim**	**48.03**	**109**	P	**P**	**14 01 19.0**	**+1.5**	
CART	**Cartagena**	**48.20**	**297**	P	**P**	**14 01 16.5**	**-2.1**	
CART				IAmb	IAmb	14 01 19.6		
	comp=Z,28nm,1.0s							
IPM	**Ipoh**	**48.79**	**110**	P	**P**	**14 01 21.6**	**-1.7**	
IPM	**Ipoh**	**48.79**	**110**	P	**P**	**14 01 25.0**	**+1.6**	
FIGM	**Figuig**	**49.20**	**290**	P	**P**	**14 01 27.1**	**+0.6**	
	SNR=16							
SESP	**Santiago Espad**	**49.36**	**298**	P	**P**	**14 01 27.8**	**+0.2**	
MONM	**Monmouth**	**49.45**	**316**	*e*P	**P**	**14 01 27.1**	**-0.9**	
MONM				IAmb	IAmb	14 01 28.7		
	comp=Z,67nm,1.2s							
HLM1	**Long Mynd**	**49.57**	**317**	*e*P	**P**	**14 01 28.5**	**-0.3**	
HLM1				IAmb	IAmb	14 01 30.9		
	comp=Z,54nm,1.3s							
TAF	**Taforalt**	**49.69**	**293**	P	**P**	**14 01 31.5**	**+1.3**	
ESY	**Stoneypath**	**49.86**	**321**	*e*P	**P**	**14 01 30.6**	**-0.4**	
JBK	**JBK**	**49.89**	**293**	P	**P**	**14 01 33.2**	**+1.4**	
	SNR=5.7							
QIZ	**Qiongzhong**	**49.93**	**88**	P	**P**	**14 01 29.6**	**-2.5**	
QIZ				S	**S**	**14 08 43.0**	**+0.5**	
QIZ				LR	LR			
	comp=Z,750nm,25.1s							
QIZ				LR	LR			
	comp=Z,460nm,20.0s							
QIZ				LR	LR			
	comp=Z,470nm,17.5s							
LRW	**Lerwick**	**49.95**	**327**	*e*P	**P**	**14 01 30.8**	**-0.8**	
DRUM	**Mains of Drumt**	**49.95**	**322**	*e*P	**P**	**14 01 31.2**	**-0.4**	
DRUM				IAmb	IAmb	14 01 33.9		
	comp=Z,43nm,0.8s							
BOD	**Bodaibo**	**49.96**	**36**	⇓*i*P	**P**	**14 01 31.0**	**-0.8**	
BOD				pmax	pmax			
	comp=Z,76nm,1.5s							
YEL1	**Yell**	**50.01**	**327**	*e*P	**P**	**14 01 31.9**	**-0.1**	
DYA	**Yadsworthy**	**50.05**	**314**	*e*P	**P**	**14 01 32.1**	**-0.5**	
DYA				IAmb	IAmb	14 01 33.7		
	comp=Z,44nm,0.8s							
EBL	**Broad Law**	**50.07**	**321**	*e*P	**P**	**14 01 32.4**	**-0.3**	
ESK	**Eskdalemuir**	**50.10**	**320**	P	**P**	**14 01 31.9**	**-0.9**	
ESK				pmax	pmax			
	comp=Z,20nm,0.7s							
ESK	**Eskdalemuir**	**50.10**	**320**	P	**P**	**14 01 31.9**	**-0.9**	
ESK				IAmb	IAmb	14 01 35.0		
	comp=Z,20nm,0.7s							
VOI	**Vohitsoka**	**50.27**	**191**	P	**P**	**14 01 36.5**	**+1.9**	
	SNR=15							
ESBB	**Sonseca Array**	**50.30**	**300**	P	**P**	**14 01 34.5**	**-0.2**	
ESBB				IAmb	IAmb	14 01 37.8		
	comp=Z,68nm,1.4s							
ESDC	**Sonseca Array**	**50.30**	**300**	P	**P**	**14 01 34.7**	**0.0**	
	comp=Z,33nm,1.2s,baz=70,slow=7.2,SNR=56							
ESDC				LR	LR	14 26 03.8		
	comp=Z,805nm,19.0s,baz=110,slow=40							
ESDC	**Sonseca Array**	**50.30**	**300**	P	**P**	**14 01 33.9**	**-0.8**	
BJT	**Baijiatuau**	**50.57**	**60**	P	**P**	**14 01 36.4**	**-0.3**	
BJT				pmax	pmax			
	comp=Z,14nm,0.9s							
BJT	**Baijiatuau**	**50.57**	**60**	P	**P**	**14 01 36.4**	**-0.3**	
BJI	**Beijing**	**50.57**	**60**	P	**P**	**14 01 36.6**	**0.0**	
BJI				S	**S**	**14 08 48.6**	**-2.4**	
BJI				pmax	pmax			
	comp=Z,10.0nm,1.0s							
BJI				LR	LR			
	comp=Z,670nm,14.8s							
BJI				LR	LR			
	comp=Z,940nm,15.5s							
BJI				LR	LR			
	comp=Z,540nm,23.7s							
WHN	**Wuhan**	**50.59**	**72**	P	**P**	**14 01 38.8**	**+1.9**	
WHN				ScP	**ScP**	**14 06 46.3**	**-4.4**	
WHN				S	**S**	**14 08 49.5**	**-1.9**	
WHN				ScS	**ScS**	**14 11 25.9**	**-2.3**	
WHN				LR	LR			
	comp=Z,2µm,16.7s							
WHN				LR	LR			
	comp=Z,2µm,13.5s							
PAB	**San Pablo**	**50.61**	**300**	P	**P**	**14 01 36.4**	**-0.6**	
PAB				pmax	pmax			
	comp=Z,45nm,1.1s							
PAB	**San Pablo**	**50.61**	**300**	P	**P**	**14 01 36.4**	**-0.6**	
PAB				IAmb	IAmb	14 01 40.1		
	comp=Z,45nm,1.1s							
LSZ	**Lusaka**	**50.62**	**216**	LR	LR	14 24 08.6		
	comp=Z,646nm,19.1s,baz=34,slow=37							
LSZ	**Lusaka**	**50.62**	**216**	P	**P**	**14 01 35.6**	**-1.7**	
LSZ				pmax	pmax			
	comp=Z,19nm,1.4s							
LSZ	**Lusaka**	**50.62**	**216**	P	**P**	**14 01 35.5**	**-1.7**	
NEWG	**New Galloway**	**50.66**	**320**	*e*P	**P**	**14 01 36.1**	**-0.9**	
INVG	**Invergeldie, C**	**50.73**	**322**	*e*P	**P**	**14 01 36.5**	**-1.0**	
INVG				IAmb	IAmb	14 01 39.1		
	comp=Z,22nm,0.6s							
EAB	**Aberfoyle**	**50.85**	**321**	*e*P	**P**	**14 01 37.5**	**-1.0**	
PALE	**Palemas**	**50.86**	**294**	P	**P**	**14 01 39.9**	**+0.9**	
HOPEN	**Hopen**	**50.91**	**351**	*e*P	**P**	**14 01 38.1**	**-0.6**	
LAWE	**Loch Awe, Argy**	**51.45**	**321**	*e*P	**P**	**14 01 42.2**	**-0.8**	
LAWE				IAmb	IAmb	14 01 43.5		
	comp=Z,23nm,0.9s							
HORN	**Hornachuelos**	**51.52**	**298**	P	**P**	**14 01 43.1**	**-0.8**	
KAC	**Achnashellach**	**51.55**	**323**	*e*P	**P**	**14 01 43.2**	**-0.6**	
LINV	**Loch Inver, As**	**51.59**	**324**	*e*P	**P**	**14 01 43.4**	**-0.6**	
LINV				IAmb	IAmb	14 01 45.7		
	comp=Z,26nm,0.6s							
KPL	**Plockton**	**51.72**	**323**	*e*P	**P**	**14 01 44.4**	**-0.6**	
DSB	**Dublin**	**51.74**	**317**	P	**P**	**14 01 44.0**	**-1.2**	
DSB				IAmb	IAmb	14 02 00.7		
	comp=Z,60nm,1.4s							
TIA	**Tai'an**	**51.81**	**64**	P	**P**	**14 01 46.5**	**+0.5**	
TIA				S	**S**	**14 09 07.4**	**-0.8**	
TIA				pmax	pmax			
	comp=Z,14nm,0.6s							
TIA				LR	LR			
	comp=Z,900nm,13.5s							
TIA				LR	LR			
	comp=Z,840nm,17.8s							
TIA				LR	LR			
	comp=Z,910nm,19.9s							
MDT	**Midelt**	**51.84**	**291**	P	**P**	**14 01 47.8**	**+1.3**	
	SNR=19							
LCRM	**LCR**	**51.88**	**292**	P	**P**	**14 01 49.0**	**+2.2**	
	SNR=9.2							
SMIR	**Smir Dam**	**51.95**	**295**	P	**P**	**14 01 47.0**	**0.0**	
	SNR=7.5							
MD31	**MD31**	**51.96**	**291**	P	**P**	**14 01 46.5**	**-0.8**	
CZD	**Col de Zad**	**52.16**	**292**	P	**P**	**14 01 49.8**	**+0.8**	
PBRG	**Braganca**	**52.19**	**303**	*e*P	**P**	**14 01 49.3**	**+0.5**	
	comp=Z,55nm,1.7s							
GOLM	**Goulmima**	**52.36**	**290**	P	**P**	**14 01 52.0**	**+1.6**	
	SNR=7.9							
RSA	**Sarsar**	**52.44**	**294**	P	**P**	**14 01 49.8**	**-1.0**	
TOA0	**Torodi Ar. Sit**	**52.45**	**265**	P	**P**	**14 01 50.2**	**-0.8**	
TORD	**Torodi Ar. Bea**	**52.45**	**265**	P	**P**	**14 01 51.0**	**0.0**	
	comp=Z,64nm,0.6s,baz=58,slow=7.0,SNR=403							
TORD				LR	LR	14 25 20.7		
	comp=Z,838nm,20.5s,baz=55,slow=37							
TORD	**Torodi Ar. Bea**	**52.45**	**265**	P	**P**	**14 01 49.2**	**-1.8**	
MVO	**Moncorvo**	**52.47**	**302**	*e*P	**P**	**14 01 51.6**	**+0.6**	
	comp=Z,54nm,1.2s							
HIA	**Hailar**	**52.62**	**48**	P	**P**	**14 01 52.0**	**+0.1**	
HIA				pmax	pmax			
	comp=Z,13nm,1.0s							
HIA	**Hailar**	**52.62**	**48**	P	**P**	**14 01 52.0**	**+0.1**	
MTE	**Manteigas**	**52.95**	**301**	*e*P	**P**	**14 01 53.7**	**-0.9**	
	comp=Z,108nm,1.5s							
MTE	**Manteigas**	**52.95**	**301**	P	**P**	**14 01 53.6**	**-0.9**	
MTE				IAmb	IAmb	14 01 58.1		
	comp=Z,71nm,1.1s							
PMRV	**Marv??o**	**52.96**	**300**	*e*P	**P**	**14 01 54.7**	**+0.1**	
	comp=Z,41nm,1.5s							
PCBR	**Castelo Branco**	**52.97**	**300**	*e*P	**P**	**14 01 55.8**	**+1.2**	
	comp=Z,98nm,1.3s							
PVRL	**Vila Real**	**52.98**	**302**	*e*P	**P**	**14 01 55.4**	**+0.7**	
	comp=Z,67nm,1.3s							
POLO	**Lamas de Olo**	**53.02**	**302**	*e*P	**P**	**14 01 55.6**	**+0.5**	
	comp=Z,59nm,1.5s							
TZRR	**Tazzarine**	**53.08**	**289**	P	**P**	**14 01 57.0**	**+1.4**	
	SNR=30							
PVIS	**Viseu**	**53.18**	**302**	*e*P	**P**	**14 01 57.1**	**+0.9**	
	comp=Z,101nm,1.4s							
ZGR	**Zagora**	**53.28**	**288**	P	**P**	**14 01 59.0**	**+1.9**	
	SNR=9.1							
PGAV	**Gavieira, Arco**	**53.31**	**303**	*e*P	**P**	**14 01 58.8**	**+1.6**	
	comp=Z,115nm,1.6s							
ZHG	**ZHG**	**53.39**	**292**	P	**P**	**14 01 57.9**	**+0.1**	
SPA0	**Spitsbergen Ar**	**53.42**	**351**	P	**P**	**14 01 57.1**	**-0.3**	
SPA0				IAmb	IAmb	14 02 05.4		
	comp=Z,55nm,1.1s							
SPA0	**Spitsbergen Ar**	**53.42**	**351**	*e*P	**P**	**14 01 57.8**	**+0.4**	
PVAQ	**Vaqueiros**	**53.52**	**297**	*e*P	**P**	**14 01 59.7**	**+1.1**	
PVAQ	**Vaqueiros**	**53.52**	**297**	P	**P**	**14 01 57.2**	**-1.5**	
PVAQ				IAmb	IAmb	14 02 01.2		
	comp=Z,40nm,1.4s							
PBEJ	**Beja**	**53.53**	**298**	*e*P	**P**	**14 01 59.0**	**+0.2**	
	comp=Z,46nm,1.2s							
EVO	**Evora**	**53.57**	**299**	*e*P	**P**	**14 01 59.5**	**+0.5**	
	comp=Z,72nm,1.4s							
COI	**Coimbra**	**53.63**	**301**	*e*P	**P**	**14 02 00.2**	**+0.8**	
PMTG	**Montargil**	**53.65**	**300**	*e*P	**P**	**14 01 59.8**	**+0.2**	
	comp=Z,46nm,1.6s							
PCAS	**Casmilo, Conde**	**53.72**	**301**	*e*P	**P**	**14 02 01.0**	**+0.9**	
	comp=Z,107nm,1.8s							
PCVE	**Castro Verde**	**53.73**	**298**	*e*P	**P**	**14 02 00.2**	**0.0**	
	comp=Z,55nm,1.7s							
NJ2	**Nanjing**	**54.02**	**69**	*e*P	**P**	**14 02 02.3**	**-0.1**	
NJ2				pmax	pmax			
	comp=Z,13nm,0.5s							
NJ2				LR	LR			
	comp=Z,960nm,16.6s							
NJ2				LR	LR			
	comp=Z,650nm,22.3s							
NJ2				LR	LR			
	comp=Z,940nm,19.9s							
PSBE	**So Bento**	**54.02**	**300**	*e*P	**P**	**14 02 03.6**	**+1.2**	
PNCL	**Nicolau / Gran**	**54.04**	**298**	*e*P	**P**	**14 02 03.0**	**+0.6**	
	comp=Z,61nm,1.5s							
OUZM	**OUZ**	**54.05**	**289**	P	**P**	**14 02 03.4**	**+0.7**	
PFVI	**Vila Bisbo**	**54.44**	**297**	*e*P	**P**	**14 02 05.7**	**+0.3**	
	comp=Z,95nm,2.3s							
PFVI	**Vila Bisbo**	**54.44**	**297**	P	**P**	**14 02 03.9**	**-1.5**	
KBS	**Kingsbay**	**54.58**	**351**	P	**P**	**14 02 05.7**	**-0.1**	
KBS				pmax	pmax			
	comp=Z,29nm,0.8s							
KBS	**Kingsbay**	**54.58**	**351**	P	**P**	**14 02 05.7**	**-0.1**	
KBS				IAmb	IAmb	14 02 08.8		
	comp=Z,29nm,0.8s							
KBS	**Kingsbay**	**54.58**	**351**	*e*P	**P**	**14 02 07.2**	**+1.4**	
KBS	**Kingsbay**	**54.58**	**351**	*i*P	**P**	**14 02 03.7**	**-2.0**	
KSI	**Kapahiang**	**54.79**	**117**	P	**P**	**14 02 10.1**	**+1.9**	
OUK	**Oukaimeden**	**54.90**	**290**	P	**P**	**14 02 12.0**	**+2.8**	
	SNR=10							
DL2	**Dalian**	**54.91**	**60**	P	**P**	**14 02 09.7**	**+1.0**	
DL2				S	**S**	**14 09 52.6**	**+2.4**	
DL2				pmax	pmax			
	comp=Z,55nm,1.2s							
DL2				LR	LR			
	comp=Z,1µm,17.2s							
DL2				LR	LR			
	comp=Z,440nm,13.6s							
DL2				LR	LR			
	comp=Z,770nm,18.6s							
TTIG	**Tnine Tigouga,**	**55.54**	**289**	P	**P**	**14 02 13.0**	**-0.6**	
KOWA	**Kowa**	**56.95**	**270**	P	**P**	**14 02 23.3**	**-0.4**	
CN2	**Changchun**	**56.99**	**54**	*e*P	**P**	**14 02 23.4**	**-0.2**	
CN2				*es*P	sP	14 02 31.0	+1.9	
CN2				*eS*	**S**	**14 10 14.3**	**-3.5**	
CN2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CN2				LR	LR			
	comp=Z,960nm,14.0s							
CN2				LR	LR			
	comp=Z,1µm,14.0s							
CN2				LR	LR			
	comp=Z,950nm,17.0s							
ZEA	**Zeya**	**57.15**	**42**	*e*P	**P**	**14 02 24.7**	**+0.1**	
ZEA				*e*		14 04 29.3		
ZEA				*eS*	**S**	**14 10 13.6**	**-6.1**	
ZEA				*e*		14 14 16.5		
ZEA				pmax	pmax			
	comp=E,10.0nm,0.8s							
ZEA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ZEA				pmax	pmax			
	comp=Z,200nm,6.7s							
ZEA				pmax	pmax			
	comp=Z,100nm,6.1s							
ZEA				smax	smax			
	comp=E,200nm,11.6s							
ZEA				smax	smax			
	comp=N,200nm,11.4s							
ZEA				MLR	MLR			
	comp=E,600nm,12.0s							
ZEA				MLR	MLR			
	comp=Z,700nm,12.0s							
KSM	**Kuching**	**58.20**	**107**	P	**P**	**14 02 30.5**	**-2.0**	
KSM	**Kuching**	**58.20**	**107**	P	**P**	**14 02 33.0**	**+0.5**	
YAK	**Yakutsk**	**58.21**	**32**	LR	LR	14 31 36.5		
	comp=Z,459nm,20.7s,baz=270,slow=40							
YAK	**Yakutsk**	**58.21**	**32**	*e*P	**P**	**14 02 29.9**	**-1.9**	
YAK				*e*		14 03 20.9		
YAK				*e*		14 04 39.8		
YAK				*eS*	**S**	**14 10 29.7**	**-3.5**	
YAK				*e**SS	sS	14 10 47.7	+8.0	
YAK				*e*		14 12 15.3		
YAK				*eSS*	**SS**	**14 14 29.4**	**+5.0**	
YAK				pmax	pmax			
	comp=Z,34nm,1.1s							
YAK				pmax	pmax			
	comp=N,3.0nm,1.4s							
YAK				pmax	pmax			
	comp=E,26nm

	comp=Z,890nm,9.4s								
MDJ	**Mudanjiang**	**59.79**	**52**		P	**P**	**14 02 41.5**	**-1.7**
SCO	**Scoresbysund**	**59.95**	**338**		P	**P**	**14 02 44.9**	**+1.1**
SCO					pmax	pmax			
	comp=Z,44nm,1.3s								
SCO	**Scoresbysund**	**59.95**	**338**		P	**P**	**14 02 44.9**	**+1.1**
SCO					IAmb	IAmb	14 02 48.4		
	comp=Z,44nm,1.3s								
KS19	**Wonju Array Si**	**60.00**	**61**		P	**P**	**14 02 44.0**	**-0.7**
KS19					IAmb	IAmb	14 02 56.0		
	comp=Z,16nm,0.6s								
KSAR	**Wonju Array Be**	**60.03**	**61**		P	**P**	**14 02 43.9**	**-1.0**
KSAR	**Wonju Array Be**	**60.03**	**61**		P	**P**	**14 02 43.9**	**-1.0**
KSRS	**Korea Array**	**60.06**	**61**		P	**P**	**14 02 44.5**	**-0.5**
	comp=Z,8.0nm,0.6s,baz=277,slow=7.4,SNR=34								
KSRS					LR	LR	14 31 18.6		
	comp=Z,426nm,18.1s,baz=284,slow=39								
LBTB	**Lobatse**	**60.15**	**212**		P	**P**	**14 02 46.6**	**+0.8**
LBTB					pmax	pmax			
	comp=Z,23nm,1.0s								
LBTB	**Lobatse**	**60.15**	**212**		P	**P**	**14 02 46.6**	**+0.8**
LBTB					IAmb	IAmb	14 02 53.6		
	comp=Z,23nm,1.0s								
KLR	**Kul'dur**	**60.45**	**47**		LR	LR	14 31 35.6		
	comp=Z,1μm,19.8s,baz=277,slow=39								
KLR	**Kul'dur**	**60.45**	**47**	*ce*	P	**P**	**14 02 46.7**	**-0.9**
KLR					pmax	pmax			
	comp=Z,18nm,1.3s								
KKM	**Kota Kinabalu**	**61.01**	**99**		P	**P**	**14 02 53.2**	**+1.2**
KKM					IAmb	IAmb	14 03 04.9		
	comp=Z,22nm,1.1s								
DBIC	**Dimbokro**	**61.11**	**262**		P	**P**	**14 02 52.6**	**0.0**
	comp=Z,27nm,0.7s,baz=40,slow=7.0,SNR=30								
DBIC					LR	LR	14 32 58.4		
	comp=Z,534nm,18.6s,baz=36,slow=40								
DBIC	**Dimbokro**	**61.11**	**262**		P	**P**	**14 02 52.5**	**0.0**
DBIC					pmax	pmax			
	comp=Z,29nm,0.9s								
DBIC	**Dimbokro**	**61.11**	**262**		P	**P**	**14 02 52.5**	**0.0**
DBIC					IAmb	IAmb	14 02 57.6		
	comp=Z,30nm,0.8s								
KIC	**Kosan Boka**	**61.15**	**262**	*e*	P	**P**	**14 02 52.6**	**-0.3**
	comp=Z,46nm,0.8s								
TIC	**Toumodi**	**61.26**	**262**	*e*	P	**P**	**14 02 53.5**	**-0.1**
LIC	**Lamto**	**61.47**	**262**	*e*	P	**P**	**14 02 54.6**	**-0.4**
	comp=Z,96nm,0.9s								
USA0B	**Ussuriysk Arra**	**61.56**	**53**	*i*	P	**P**	**14 02 52.8**	**-2.4**
USRK	**Ussuriysk Ar.**	**61.56**	**53**		P	**P**	**14 02 54.0**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=274,slow=5.5,SNR=5.6								
USRK					LR	LR	14 31 57.6		
	comp=Z,726nm,20.8s,baz=281,slow=38								
USRK	**Ussuriysk Ar.**	**61.56**	**53**		P	**P**	**14 02 53.6**	**-1.6**
GRNR	**Gornyy**	**63.13**	**45**⇑	*i*	P	**P**	**14 03 05.0**	**-0.6**
GRNR				*e*	S	**S**	**14 11 39.1**	**+2.5**
GRNR					pmax	pmax			
	comp=Z,6.0nm,1.1s								
GRNR					smax	smax			
	comp=N,4.0nm,1.0s								
GRNR					MLR	MLR			
	comp=E,360nm,15.0s								
GRNR					MLR	MLR			
	comp=N,490nm,14.0s								
GRNR					MLR	MLR			
	comp=Z,280nm,14.0s								
BOSA	**Boshof**	**63.39**	**210**		P	**P**	**14 03 08.2**	**+0.6**
	comp=Z,6.0nm,0.5s,baz=24,slow=6.7,SNR=18								
BOSA					LR	LR	14 34 24.1		
	comp=Z,756nm,18.1s,baz=47,slow=40								
BOSA	**Boshof**	**63.39**	**210**		P	**P**	**14 03 07.7**	**+0.1**
BOSA					pmax	pmax			
	comp=Z,18nm,0.8s								
BOSA	**Boshof**	**63.39**	**210**		P	**P**	**14 03 07.7**	**+0.1**
BOSA					IAmb	IAmb	14 03 29.9		
	comp=Z,18nm,0.8s								
MYLDM	**Lahad Datu**	**63.42**	**99**		P	**P**	**14 03 07.4**	**-0.6**
MYLDM					IAmb	IAmb	14 03 22.5		
	comp=Z,52nm,1.4s								
SUMG	**Summit**	**64.96**	**341**		P	**P**	**14 03 18.2**	**+0.4**
SUMG					pmax	pmax			
	comp=Z,110nm,1.1s								
SUMG	**Summit**	**64.96**	**341**		P	**P**	**14 03 18.2**	**+0.4**
SUMG	**Summit**	**64.96**	**341**	*i*	P	**P**	**14 03 18.2**	**+0.4**
	comp=Z,82nm,0.7s								
SUMG	**Summit**	**64.96**	**341**	*i*	P	**P**	**14 03 18.2**	**+0.4**
SUMG					IAmb	IAmb	14 03 20.6		
	comp=Z,82nm,0.7s								
JMN	**Monobe**	**65.75**	**63**		P	**P**	**14 03 23.3**	**+0.2**
JMN					IAmb	IAmb	14 03 30.8		
	comp=Z,33nm,0.9s								
JWT	**Wachi**	**66.45**	**61**		P	**P**	**14 03 27.9**	**+0.4**
JWT					IAmb	IAmb	14 03 36.9		
	comp=Z,31nm,0.9s								
TYV	**Tymovskoe**	**66.95**	**43**	*e*	P	**P**	**14 03 30.2**	**-0.2**
TYV				*e*	S	**S**	**14 12 26.5**	**+3.1**
TYV					pmax	pmax			
	comp=Z,13nm,1.0s								
TYV					pmax	pmax			
	comp=Z,500nm,5.0s								
TYV					smax	smax			
	comp=E,1μm,6.2s								
MPSI	**Mapaga**	**66.99**	**102**		P	**P**	**14 03 33.2**	**+1.9**
	comp=E,522nmcomp=E,26nm,1.3s								
INU	**Inuyama**	**67.69**	**61**		P	**P**	**14 03 35.5**	**+0.2**
INU					IAmb	IAmb	14 03 37.5		
	comp=Z,33nm,1.1s								
JGF	**Kuroka**	**67.86**	**60**		P	**P**	**14 03 35.6**	**-0.9**
JGF					IAmb	IAmb	14 03 56.0		
	comp=Z,19nm,1.1s								
YSS	**Yuzh-Sakhalins**	**68.15**	**47**	*e*	P	**P**	**14 03 37.2**	**-0.9**
YSS				*e*			14 04 02.5		
YSS				*e*	S	**S**	**14 12 38.6**	**+0.6**
YSS				*e*			14 13 11.0		
YSS				*e*			14 13 27.0		
YSS					pmax	pmax			
	comp=Z,40nm,0.8s								
YSS					MLR	MLR			
	comp=Z,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**68.15**	**47**		P	**P**	**14 03 37.1**	**-0.9**
MAJO	**Matsushiro**	**68.21**	**59**	*i*	P	**P**	**14 03 37.5**	**-1.2**
MAJO					pmax	pmax			
	comp=Z,7.0nm,0.9s								
MAT	**Matsushiro**	**68.21**	**59**		P	**P**	**14 03 37.5**	**-1.2**
MAT					S	**S**	**14 12 39.0**	**-0.1**
MJAR	**Matsushiro Arr**	**68.21**	**59**		P	**P**	**14 03 38.5**	**-0.2**
	comp=Z,4.2nm,1.0s,baz=289,slow=8.6,SNR=7.9								
SEY	**Seymchan**	**68.41**	**29**	*i*	P	**P**	**14 03 39.0**	**-0.4**
MBO	**M'Bour**	**68.43**	**275**		P	**P**	**14 03 39.1**	**-1.2**
JEW	**Eniwo**	**68.55**	**52**		P	**P**	**14 03 40.3**	**-0.3**
TTSI	**Tana Toraja**	**68.64**	**106**		P	**P**	**14 03 45.2**	**+3.5**
	comp=Z,14nm,1.0s								
MA2	**Magadan**	**68.76**	**33**	*i*	P	**P**	**14 03 41.5**	**-0.2**
MA2					pmax	pmax			
	comp=Z,30nm,1.0s								
JTM	**Tenmabayashi**	**68.94**	**54**		P	**P**	**14 03 42.1**	**-1.0**
ILULI	**Ilulissat**	**70.00**	**339**		P	**P**	**14 03 47.4**	**-1.7**
ILULI					pmax	pmax			
	comp=Z,36nm,1.0s								
ILULI	**Ilulissat**	**70.00**	**339**		P	**P**	**14 03 47.4**	**-1.7**
ILULI					IAmb	IAmb	14 03 57.2		
	comp=Z,36nm,1.0s								
BKSI	**Bulukumba**	**70.09**	**108**		P	**P**	**14 03 53.2**	**+2.6**
	comp=Z,431nmcomp=Z,13nm,0.9s								
TULEG	**Thule**	**70.48**	**348**		P	**P**	**14 03 51.6**	**-0.4**
TULEG	**Thule**	**70.48**	**348**⇑	*i*	P	**P**	**14 03 52.0**	**-0.1**
TULEG					IAmb	IAmb	14 03 53.8		
	comp=Z,43nm,0.7s								
JHJ2	**Mitsune**	**70.63**	**62**		P	**P**	**14 03 52.9**	**-0.8**
SFJD	**Kangerlussuaq**	**70.81**	**336**		P	**P**	**14 03 53.6**	**-0.5**
SFJD					pmax	pmax			
	comp=Z,27nm,1.0s								
SFJD	**Kangerlussuaq**	**70.81**	**336**		P	**P**	**14 03 53.6**	**-0.5**
SFJD					IAmb	IAmb	14 03 57.6		
	comp=Z,27nm,1.0s								
BSSI	**Bau Bau, Buton**	**70.83**	**108**		P	**P**	**14 03 55.0**	**-0.2**
	comp=Z,327nmcomp=Z,16nm,0.8s								
YUK	**Yuzh-Kuril'sk**	**71.17**	**50**		P	**P**	**14 03 55.0**	**-1.8**
YUK					PPP	PPP	14 08 16.2		
YUK				*e*	S	**S**	**14 13 08.0**	**-5.6**
YUK					SS	**SS**	**14 17 46.8**	**0.0**
YUK					MLR	MLR			
	comp=Z,415nm,14.0s								
NRS	**Narsarsuaq**	**71.18**	**330**		P	**P**	**14 03 56.1**	**-0.4**
NRS					pmax	pmax			
	comp=Z,89nm,1.5s								
NRS	**Narsarsuaq**	**71.18**	**330**		P	**P**	**14 03 56.1**	**-0.4**
BILL	**Bilibino**	**71.63**	**22**	*ce*	P	**P**	**14 03 59.5**	**+0.4**
BILL					pmax	pmax			
	comp=Z,42nm,1.3s								
BILL	**Bilibino**	**71.63**	**22**		P	**P**	**14 03 59.1**	**0.0**
BILL					IAmb	IAmb	14 04 01.8		
	comp=Z,52nm,1.3s								
KUR	**Kuril'sk**	**72.08**	**48**		P	**P**	**14 04 00.5**	**-1.7**
KUR				*e*	S	**S**	**14 13 24.2**	**+0.2**
KUR					MLR	MLR			
	comp=Z,700nm,14.0s								
EDFI	**Ende, Flores**	**73.23**	**110**		P	**P**	**14 04 12.5**	**+2.9**
TNTI	**Ternate**	**73.28**	**98**		P	**P**	**14 04 11.3**	**+1.4**
	comp=Z,1μmcomp=Z,39nm,1.7s								
TNTI	**Ternate**	**73.28**	**98**		P	**P**	**14 04 09.7**	**-0.1**
TNTI					IAmb	IAmb	14 04 17.5		
	comp=Z,46nm,1.2s								
SANI	**Sanana**	**73.45**	**101**		P	**P**	**14 04 12.3**	**+1.4**
	comp=Z,32nm,0.9s								
PETK	**Petropavlovsk-**	**74.81**	**38**		LR	LR	14 38 45.1		
	comp=Z,451nm,19.0s,baz=301,slow=37								
BATI	**Baunata**	**75.64**	**110**		P	**P**	**14 04 24.2**	**+0.6**
	comp=Z,53nm,1.0s								
SOEI	**Soe**	**75.91**	**109**		P	**P**	**14 04 28.6**	**+3.4**
	comp=Z,993nmcomp=Z,94nm,0.9s								
SOEI	**Soe**	**75.91**	**109**		P	**P**	**14 04 24.5**	**-0.8**
BNDI	**Bandanaira**	**78.06**	**102**		P	**P**	**14 04 40.1**	**+2.9**
	comp=Z,2μmcomp=Z,150nm,1.1s								
A21K	**Barrow**	**78.47**	**10**		P	**P**	**14 04 39.3**	**+0.8**
	baz=331								
A21K	**Barrow**	**78.47**	**10**		P	**P**	**14 04 38.7**	**+0.2**
FAKI	**Fak Fak**	**79.33**	**99**		P	**P**	**14 04 43.8**	**-0.5**
FAKI					IAmb	IAmb	14 04 59.1		
	comp=Z,41nm,1.2s								
RDOG	**Red Dog Mine**	**80.11**	**14**		P	**P**	**14 04 47.4**	**-0.2**
RDOG					IAmb	IAmb	14 04 52.9		
	comp=Z,45nm,1.3s								
FITZ	**Fitzroy Crossi**	**81.49**	**116**		P	**P**	**14 04 55.3**	**-0.3**
TOLK	**Toolik Lake Re**	**81.95**	**9**		P	**P**	**14 04 58.3**	**+0.9**
	baz=338								
TOLK	**Toolik Lake Re**	**81.95**	**9**		P	**P**	**14 04 57.8**	**+0.3**
TOLK					IAmb	IAmb	14 05 01.1		
	comp=Z,31nm,0.9s								
ANM	**Nome**	**82.40**	**17**		P	**P**	**14 05 00.0**	**+0.2**
ANM					pmax	pmax			
	comp=Z,81nm,1.1s								
ANM	**Nome**	**82.40**	**17**		P	**P**	**14 05 00.0**	**+0.2**
KNRA	**Kununurra**	**82.74**	**112**		P	**P**	**14 05 02.1**	**-0.2**
KNRA					IAmb	IAmb	14 05 10.1		
	comp=Z,51nm,1.3s								
C36M	**Paulatuk**	**83.06**	**360**		P	**P**	**14 05 02.8**	**-0.3**
	baz=0.1								
C36M	**Paulatuk**	**83.06**	**360**		P	**P**	**14 05 02.4**	**-0.7**
C36M					IAmb	IAmb	14 05 04.3		
	comp=Z,29nm,0.7s								
COLD	**Coldfoot**	**83.17**	**10**		P	**P**	**14 05 04.5**	**+0.8**
	baz=337								
COLD	**Coldfoot**	**83.17**	**10**		P	**P**	**14 05 03.9**	**+0.2**
COLD					IAmb	IAmb	14 05 06.5		
	comp=Z,37nm,1.0s								
BMAR	**Burnt Mountain**	**83.74**	**8**		P	**P**	**14 05 07.4**	**+0.6**
INK	**Inuvik**	**83.85**	**4**		P	**P**	**14 05 07.0**	**-0.2**
INK					pmax	pmax			
	comp=Z,45nm,1.4s								
INK	**Inuvik**	**83.85**	**4**		P	**P**	**14 05 07.0**	**-0.2**
INK					IAmb	IAmb	14 05 09.5		
	comp=Z,45nm,1.4s								
NWAO	**Narrogin (SRO)**	**83.94**	**132**		P	**P**	**14 05 09.1**	**+0.9**
	comp=Z,15nm,0.7s,baz=324,slow=3.7,SNR=6.8								
NWAO	**Narrogin (SRO)**	**83.94**	**132**		IAmb	IAmb	14 05 14.7		
	comp=Z,40nm,1.1s								
SCHQ	**Schefferville**	**84.12**	**331**		P	**P**	**14 05 09.2**	**+0.3**
	comp=Z,27nm,0.9s,baz=37,slow=4.0,SNR=21								
SCHQ					LR	LR	14 45 07.2		
	comp=Z,185nm,18.1s,baz=42,slow=38								
SCHQ	**Schefferville**	**84.12**	**331**		P	**P**	**14 05 08.4**	**-0.5**
FYU	**Fort Yukon**	**84.48**	**8**		P	**P**	**14 05 10.6**	**+0.1**
MLY	**Manley**	**85.11**	**11**		P	**P**	**14 05 14.2**	**+0.5**
	baz=337								
I23K	**Minto, Yukon-K**	**85.22**	**10**		P	**P**	**14 05 14.8**	**+0.7**
	baz=338								
I23K	**Minto, Yukon-K**	**85.22**	**10**		P	**P**	**14 05 14.4**	**+0.2**
I23K					IAmb	IAmb	14 05 17.8		
	comp=Z,30nm,1.0s								
PRP	**Porcupine Dome**	**85.44**	**9**		P	**P**	**14 05 15.1**	**-0.5**
PRP					IAmb	IAmb	14 05 18.4		
	comp=Z,35nm,1.1s								
POKR	**Poker Plat Res**	**85.55**	**10**		P	**P**	**14 05 16.4**	**+0.5**
	baz=340								
POKR	**Poker Plat Res**	**85.55**	**10**		P	**P**	**14 05 15.8**	**-0.1**
POKR					IAmb	IAmb	14 05 18.6		
	comp=Z,42nm,1.1s								
EPYK	**Eagle Plains**	**85.56**	**5**		P	**P**	**14 05 15.9**	**0.0**
	baz=349								
MDM	**Murphy Dome**	**85.58**	**10**		P	**P**	**14 05 15.9**	**-0.1**
TCOL	**CIGO, UAF Yank**	**85.72**	**10**		P	**P**	**14 05 16.8**	**+0.2**
	baz=339								
TCOL	**CIGO, UAF Yank**	**85.72**	**10**		P	**P**	**14 05 16.2**	**-0.5**
TCOL					IAmb	IAmb	14 05 18.8		
	comp=Z,24nm,0.9s								
COLA	**College**	**85.72**	**10**		P	**P**	**14 05 16.2**	**-0.4**
COLA					pmax	pmax			
	comp=Z,26nm,1.0s								
COLA	**College**	**85.72**	**10**		P	**P**	**14 05 16.2**	**-0.4**
COLA					IAmb	IAmb	14 05 18.8		
	comp=Z,26nm,0.9s								
NEA2	**Nenana**	**85.79**	**11**		P	**P**	**14 05 17.0**	**-0.1**
	baz=338								
BPAW	**Bear Paw Mtn.**	**85.92**	**11**		P	**P**	**14 05 17.3**	**-0.4**
CCB	**Clear Creek Bu**	**85.94**	**10**		P	**P**	**14 05 17.0**	**-0.7**
CCB					IAmb	IAmb	14 05 19.3		
	comp=Z,20nm,1.2s								
IL31		**85.96**	**10**		P	**P**	**14 05 16.9**	**-1.0**
ILAR	**Eielson Array**	**85.96**	**10**		P	**P**	**14 05 17.1**	**-0.7**
	comp=Z,11nm,0.9s,baz=332,slow=3.5,SNR=74								
ILAR					LR	LR	14 49 08.6		
	comp=Z,400nm,18.6s,baz=331,slow=40								
ILAR	**Eielson Array**	**85.96**	**10**		P	**P**	**14 05 16.6**	**-1.2**
TTA	**Tatalina**	**86.00**	**14**		P	**P**	**14 05 18.1**	**-0.1**
TTA					pmax	pmax			
	comp=Z,40nm,1.2s								
TTA	**Tatalina**	**86.00**	**14**		P	**P**	**14 05 18.1**	**-0.1**
TTA					IAmb	IAmb	14 05 21.6		
	comp=Z,40nm,1.2s								
WRH	**Wood River Hil**	**86.06**	**10**		P	**P**	**14 05 17.8**	**-0.6**
GENI	**Genyem**	**86.13**	**95**		P	**P**	**14 05 21.1**	**+1.5**
	comp=Z,3μmcomp=Z,97nm,1.1s								
HDA	**Harding Lake**	**86.29**	**10**		P	**P**	**14 05 18.8**	**-0.8**
	baz=340								
HDA	**Harding Lake**	**86.29**	**10**		P	**P**	**14 05 18.6**	**-0.9**
HDA					IAmb	IAmb	14 05 20.5		
	comp=Z,19nm,0.8s								
KTH	**Kantishna Hill**	**86.43**	**12**		P	**P**	**14 05 19.5**	**-0.9**
KTH					IAmb	IAmb	14 05 22.1		
	comp=Z,32nm,0.9s								
MCK	**McKinley**	**86.61**	**11**		P	**P**	**14 05 21.0**	**-0.1**
	baz=338								
TRF	**Thorofare Moun**	**86.64**	**11**		P	**P**	**14 05 21.2**	**-0.3**
EGAK	**Eagle**	**86.69**	**7**		P	**P**	**14 05 21.3**	**-0.2**
PPLA	**Purkeypile**	**86.80**	**12**		P	**P**	**14 05 21.9**	**-0.4**
RND	**Reindeer**	**86.93**	**11**		P	**P**	**14 05 21.7**	**-1.1**
RND					pmax	pmax			
	comp=Z,43nm,1.2s								
RND	**Reindeer**	**86.93**	**11**		P	**P**	**14 05 21.6**	**-1.1**
RND					IAmb	IAmb	14 05 24.8		
	comp=Z,43nm,1.2s								
SCRK	**Sand Creek**	**87.12**	**9**		P	**P**	**14 05 24.4**	**+0.7**
	baz=342								
K27K	**Chicken**	**87.31**	**8**		P	**P**	**14 05 25.4**	**+0.8**
	baz=344								
DOT	**Dot Lake**	**87.42**	**9**		P	**P**	**14 05 24.8**	**-0.3**
DOT					IAmb	IAmb	14 05 27.0		
	comp=Z,27nm,0.9s								
DHY	**Denali Highway**	**87.48**	**10**		P	**P**	**14 05 24.8**	**-0.8**
DHY					IAmb	IAmb	14 05 47.4		
	comp=Z,19nm,0.8s								
DAWY	**Dawson**	**87.58**	**7**		P	**P**	**14 05 25.0**	**-0.9**
SVW2	**Sparrevohn**	**87.72**	**15**		P	**P**	**14 05 26.0**	**-0.5**
SVW2					IAmb	IAmb	14 05 33.3		
	comp=Z,28nm,1.2s								
SKT	**Skwentna**	**87.77**	**13**		P	**P**	**14 05 26.7**	**-0.1**
L26K	**Log Cabin Wild**	**88.12**	**9**		P	**P**	**14 05 29.1**	**+0.7**
	baz=343								
MENT	**Mentasta**	**88.15**	**9**		P	**P**	**14 05 28.7**	**0.0**
MENT					IAmb	IAmb	14 05 34.6		
	comp=Z,32nm,1.1s								
SUA	**Susitna One**	**88.39**	**12**		P	**P**	**14 05 29.0**	**-0.9**
GHO	**Glory Hole Cre**	**88.44**	**12**		P	**P**	**14 05 30.0**	**-0.1**
SML	**Sawmill**	**88.51**	**11**		P	**P**	**14 05 29.8**	**-0.6**
PMR	**Palmer**	**88.57**	**12**		P	**P**	**14 05 30.1**	**-0.4**
PMR					pmax	pmax			
	comp=Z,44nm,1.2s								
PMR	**Palmer**	**88.57**	**12**		P	**P**	**14 05 30.1**	**-0.4**
M24K	**Tolsona, Glenn**	**88.58**	**10**		P	**P**	**14 05 32.7**	**+2.0**
	baz=341								
M24K	**Tolsona, Glenn**	**88.58**	**10**		P	**P**	**14 05 30.4**	**-0.3**
KNK	**Knik Glacier**	**88.86**	**11**		P	**P**	**14 05 31.8**	**-0.1**
RC01	**Rabbit Creek A**	**88.93**	**12**		P	**P**	**14 05 33.0**	**+0.7**
	baz=338								
KLU	**Klutina**	**89.20**	**10**		P	**P**	**14 05 33.0**	**-0.7**
WB0	**Warramunga Arr**	**89.43**	**113**		P	**P**	**14 05 34.5**	**-0.8**
WB0					IAmb	IAmb	14 06 02.3		
	comp=Z,24nm,1.3s								
WRA	**Warramunga Arr**	**89.47**	**113**		P	**P**	**14 05 36.4**	**+0.9**
	comp=Z,10nm,1.1s,baz=316,slow=4.0,SNR=15								
WRA	**Warramunga Arr**	**89.47**	**113**	*i*	P	**P**	**14 05 36.5**	**+1.0**
WRA					pmax	pmax			
	comp=Z,7.0nm,0.8s								
WRA	**Warramunga Arr**	**89.47**	**113**		P	**P**	**14 05 35.0**	**-0.5**
WRAB	**Tennant Creek**	**89.47**	**113**	*ce*	P	**P**	**14 05 34.6**	**-0.9**
WRAB					pmax	pmax			
	comp=Z,15nm,1.3s								
WB2	**Warramunga Arr**	**89.48**	**113**		P	**P**	**14 05 35.0**	**-0.5**
O22K	**Cooper Landing**	**89.49**	**12**		P	**P**	**14 05 34.2**	**-0.7**
YKA	**Yellowknife Ar**	**89.62**	**356**		P	**P**	**14 05 36.2**	**+0.8**
	comp=Z,26nm,1.0s,baz=0.7,slow=5.1,SNR=29								
YKA					LR	LR	14 52 32.0		
	comp=Z,309nm,18.4s,baz=0.0,slow=40								
HYT	**Haines Junctio**	**90.94**	**7**		P	**P**	**14 05 42.0**	**+0.2**
E62A	**Clayton Lake**	**90.96**	**326**		P	**P**	**14 05 41.9**	**-0.1**
E62A					IAmb	IAmb	14 05 44.9		
	comp=Z,28nm,1.4s								
ASAR	**Alice Springs**	**90.97**	**116**		P	**P**	**14 05 43.3**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=301,slow=4.6,SNR=17								
ASAR	**Alice Springs**	**90.97**	**116**		P	**P**	**14 05 42.5**	**+0.1**
AS31	**Alice Springs**	**90.97**	**116**		P	**P**	**14 05 42.3**	**-0.1**
SKAG	**Skagway**	**92.49**	**6**		P	**P**	**14 05 49.5**	**+0.6**
MOQ	**Mont Orford**	**93.23**	**326**		P	**P**	**14 05 52.0**	**-0.7**
E57A	**Chemin Saint G**	**93.34**	**328**		P	**P**	**14 05 53.6**	**+0.5**
	baz=43								
BESE	**Bessie Mountai**	**93.40**	**6**		P	**P**	**14 05 52.6**	**-0.6**
BESE					IAmb	IAmb	14 05 56.3		
	comp=Z,20nm,1.2s								
D55A	**Sainte-Anne-du**	**93.50**	**329**		P	**P**	**14 05 54.6**	**+0.8**
	baz=42								
E56A	**St. Veronique**	**93.66**	**329**		P	**P**	**14 05 55.2**	**+0.7**
	baz=42								
DLBC	**Dease Lake**	**93.87**	**3**		P	**P**	**14 05 55.2**	**-0.1**
DLBC					IAmb	IAmb	14 06 02.3		
	comp=Z,15nm,1.1s								
E55A	**Montcerf-Lytto**	**94.19**	**329**		P	**P**	**14 05 58.1**	**+1.1**
	baz=41								
G58A	**Ormstown**	**94.22**	**327**		P	**P**	**14 05 57.6**	**+0.5**
	baz=43								
FRNY	**Flat Rock**	**94.23**	**327**		P	**P**	**14 05 56.0**	**-1.2**
FRNY					IAmb	IAmb	14 06 00.8		
	comp=Z,28nm,1.5s								
H58A	**Gabriels**	**94.82**	**327**		P	**P**	**14 05 59.8**	**-0.2**
	baz=43								
LONY	**Lake Ozonia**	**94.87**	**327**		P	**P**	**14 06 00.4**	**+0.3**
	baz=42								
LONY	**Lake Ozonia**	**94.87**	**327**		P	**P**	**14 05 59.7**	**-0.5**
LONY					IAmb	IAmb	14 06 02.1		
	comp=Z,26nm,1.1s								
I59A	**Olmsteadville**	**95.13**	**326**		P	**P**	**14 06 01.6**	**+0.3**
	baz=43								
MAW	**Mawson**	**95.33**	**177**		P	**P**	**14 06 03.1**	**+1.7**
	comp=Z,2.0nm,0.8s,baz=290,slow=4.0,SNR=4.3								
MAW	**Mawson**	**95.33**	**177**		P	**P**	**14 06 01.9**	**+0.6**
FFC	**Flin Flon**	**95.56**	**347**		P	**P**	**14 06 03.1**	**0.0**
FFC					pmax	pmax			
	comp=Z,15nm,1.2s								
FFC	**Flin Flon**	**95.56**	**347**		P	**P**	**14 06 03.0**	**0.0**
FFC					IAmb	IAmb	14 06 05.3		
	comp=Z,15nm,1.2s								
J59A	**Piesco**	**95.68**	**326**		P	**P**	**14 06 04.6**	**+0.7**
	baz=43								
J59A	**Piesco**	**95.68**	**326**		P	**P**	**14 06 03.2**	**-0.7**
J59A					IAmb	IAmb	14 06 06.7		
	comp=Z,20nm,1.2s								
PLVO	**Plevna**	**95.73**	**329**		P	**P**	**14 06 04.1**	**0.0**
PLVO					IAmb	IAmb	14 06 06.6		
	comp=Z,28nm,1.3s								
I57A	**Carthage**	**95.89**	**327**		P	**P**	**14 06 04.6**	**-0.2**
	baz=42			

OBIP	**Obispado Ponce**	**1.69**	**89**	⇓	*e*P		**Pn**	**13 58 22.5**	**+1.1**
OBIP	**Obispado Ponce**	**1.69**	**89**	⇓	P		**Pn**	**13 58 22.5**	**+1.1**
OBIP					S		**Sn**	**13 58 43.1**	**+0.5**
CELP	**Cerrillos**	**1.71**	**88**	⇓	*e*P		**Pn**	**13 58 22.8**	**+1.0**
CELP	**Cerrillos**	**1.71**	**88**	⇓	P		**Pn**	**13 58 22.8**	**+1.0**
CELP					S		**Sn**	**13 58 42.8**	**-0.3**
ICMP	**Isla Caja de M**	**1.77**	**94**		Pn		**Pn**	**13 58 22.7**	**+0.3**
EMPR	**Esperanza - Ma**	**1.81**	**75**	⇓	*e*P		**Pn**	**13 58 24.1**	**+1.1**
EMPR	**Esperanza - Ma**	**1.81**	**75**		Pn		**Pn**	**13 58 23.9**	**+0.9**
EMPR	**Esperanza - Ma**	**1.81**	**75**	⇓	P		**Pn**	**13 58 24.1**	**+1.1**
EMPR					S		**Sn**	**13 58 46.2**	**+0.7**
BANI	**BANI**	**1.92**	**282**		Pn		**Pn**	**13 58 27.0**	**+2.4**
SJG	**San Juan**	**2.12**	**87**				**Pn**	**13 58 27.5**	**+0.5**
IGPR	**InterUniversit**	**2.16**	**91**	⇑	*e*P		**Pn**	**13 58 28.0**	**+0.4**
IGPR	**InterUniversit**	**2.16**	**91**		Pn		**Pn**	**13 58 28.3**	**+0.7**
IGPR	**InterUniversit**	**2.16**	**91**	⇑	P		**Pn**	**13 58 28.0**	**+0.4**
IGPR					S		**Sn**	**13 58 54.0**	**+0.3**
GCPR	**Guaynabo City**	**2.20**	**82**	⇑	*e*P		**Pn**	**13 58 28.8**	**+0.7**
GCPR	**Guaynabo City**	**2.20**	**82**		*e*S		**Sn**	**13 58 54.6**	**-0.1**
GCPR	**Guaynabo City**	**2.20**	**82**		Pn		**Pn**	**13 58 28.9**	**+0.8**
PDPR	**Patillas Dam,**	**2.24**	**89**	⇑	*e*P		**Pn**	**13 58 30.4**	**+1.7**
PDPR	**Patillas Dam,**	**2.24**	**89**		Pn		**Pn**	**13 58 29.5**	**+0.8**
PDPR	**Patillas Dam,**	**2.24**	**89**	⇑	P		**Pn**	**13 58 30.4**	**+1.7**
PDPR					S		**Sn**	**13 58 55.4**	**-0.2**
HUMP	**Col San Antoni**	**2.41**	**87**	⇑	*e*P		**Pn**	**13 58 32.4**	**+1.5**
HUMP	**Col San Antoni**	**2.41**	**87**		Pn		**Pn**	**13 58 31.8**	**+0.9**
HUMP	**Col San Antoni**	**2.41**	**87**	⇑	P		**Pn**	**13 58 32.4**	**+1.5**
HUMP					S		**Sn**	**13 59 00.1**	**+0.5**
CBYP	**Canovanas**	**2.41**	**83**	⇓	*e*P		**Pn**	**13 58 32.0**	**+1.0**
CBYP	**Canovanas**	**2.41**	**83**		Pn		**Pn**	**13 58 35.3**	**+4.3**
CBYP	**Canovanas**	**2.41**	**83**	⇓	P		**Pn**	**13 58 32.0**	**+1.0**
CBYP					S		**Sn**	**13 59 00.5**	**+0.7**
MTP	**Monte Pirata**	**2.69**	**88**	⇑	*e*P		**Pn**	**13 58 35.6**	**+0.9**
MTP	**Monte Pirata**	**2.69**	**88**				**Pn**	**13 58 36.0**	**+1.4**
MTP	**Monte Pirata**	**2.69**	**88**	⇑	P		**Pn**	**13 58 35.6**	**+0.9**
MTP					S		**Sn**	**13 59 06.0**	**-0.4**
SDDR	**Presa de Saban**	**2.93**	**290**	⇑	*e*P		**Pn**	**13 58 40.7**	**+2.7**
SDDR	**Presa de Saban**	**2.93**	**290**				**Pn**	**13 58 39.4**	**+1.5**
SDDR	**Presa de Saban**	**2.93**	**290**	⇑	P		**Pn**	**13 58 40.7**	**+2.7**
SDDR					*i* P			13 58 40.8	
SDDR					S		**Sn**	**13 59 14.5**	**+2.3**
CUPR	**Culebra, Puert**	**2.96**	**84**	⇓	*e*P		**Pn**	**13 58 38.5**	**+0.2**
CUPR	**Culebra, Puert**	**2.96**	**84**		Pn		**Pn**	**13 58 39.5**	**+1.2**
CUPR	**Culebra, Puert**	**2.96**	**84**	⇓	P		**Pn**	**13 58 38.5**	**+0.2**
CUPR					S		**Sn**	**13 59 13.4**	**+0.6**
TBVI	**Tortola**	**3.60**	**83**	⇑	*e*P		**Pn**	**13 58 47.5**	**+0.5**
TBVI	**Tortola**	**3.60**	**83**	⇑	P		**Pn**	**13 58 47.5**	**+0.5**
TBVI					S		**Sn**	**13 59 28.6**	**+0.2**
GRTK	**Grand Turk**	**4.34**	**324**		Pn		**Pn**	**13 58 54.1**	**-3.0**
URIC	**Uribia, Colomb**	**7.18**	**210**		*e*P		**Pn**	**13 59 35.7**	**-0.1**
URIC					*e*S		Sn	14 00 43.7	-12
URIC					*i*			14 01 03.1	
	comp=Z,21nm,0.5s								
DLPL	**La Plaine**	**7.33**	**110**		Pn		**Pn**	**13 59 38.1**	**+0.2**
SVB	**Belmont**	**8.32**	**123**		Pn		**Pn**	**13 59 52.7**	**+1.2**
GRGR	**Grenville**	**8.73**	**131**		Pn		**Pn**	**13 59 59.3**	**+2.2**
SJCC	**San Jacinto, C**	**10.42**	**220**		*e*P		**Pn**	**14 00 20.5**	**+0.4**
SJCC					*e*S		Sn	14 02 01.8	-13
SJCC					*i*			14 02 24.5	
	comp=Z,4.8nm,0.4s								
PAMC	**Pamplona, Colo**	**11.41**	**202**		*e*P		**Pn**	**14 00 35.5**	**+1.5**
PAMC					*e*S		**Sn**	**14 02 34.6**	**-5.3**
PAMC					*i*			14 02 43.1	
	comp=Z,8.4nm,0.3s								

*BJI **10** 14:11:08.2±0.0,50.°72S×119.°50E,h16km,mB5.5/9, mb4.9/29,Ms5.0/9,Ms7 4.7/10*
*IDC **10** 14:11:11.0±0.5,50.°11S×119.°87E,h0km,mb4.3/17, mb1 4.4/17,mb1mx4.3/33,mbtmp4.3/17,MS4.5/20, Ms1 4.5/20,ms1mx4.4/26,Error ellipse: s-maj=22.8km s-min=13.2km az=116.0*
*NEIC **10** 14:11:12.6±1.7,50.°13S±0.°09×119.°7E±0.°2,h15km±3km, mb4.8/40,Error ellipse: s-maj=17.2km s-min=12.9km az=104.0*
*GCMT **10** 14:11:12.6±0.1,50.°11S±0.°01×119.°87E±0.°02,h12km, MW5.2/123,Moment Tensor Solution. s65,c93; s123,c206; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-6.70±.10; Mθθ5.84±.09; Mϕϕ0.86±.10; Mrθ-1.09±.30; Mθϕ-2.24±.08; Mϕr2.10±.33; Best double couple: M6.7 10000×10¹⁶ NP1:ϕs279.00000°,δ39.00000°, λ-109.00000°. NP2:ϕs123.00000°,δ54.00000°, λ-75.00000°. Principal axes: T 6.9360, Plg8.0000°, Azm203.0000°; N 0.3310, Plg12.0000°, Azm294.0000°; P -7.2640, Plg76.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:11:12.2±0.3,50.°16S±0.°06×119.°85E±0.°09,h10km,n123, σ0.°88/109,mb4.7/35,MS4.5/26,1C-1D,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.81**	**343**	T	T	14 30 57.2	
	baz=165,slow=73						
H01W1	**Cape Leeuwin H**	**15.81**	**343**	T	T	14 31 02.6	
	baz=165,slow=73						
H01W3	**Cape Leeuwin H**	**15.82**	**343**	T	T	14 31 09.5	
	baz=165,slow=73						
CASY	**Casey**	**16.86**	**193**	Pn	**Pn**	**14 15 05.5**	**-2.5**
NWAO	**Narrogin (SRO)**	**17.32**	**353**	P	**P**	**14 15 16.1**	**+0.8**
	0.7nm,0.3s,baz=169,slow=9.0,SNR=6.0						
NWAO				LR	LR	14 20 08.5	
	comp=Z,4μm,21.8s,baz=171,slow=31						
NWAO	**Narrogin (SRO)**	**17.32**	**353**	P	**P**	**14 15 15.5**	**+0.1**
	baz=17,SNR=4.6						
NWAO	**Narrogin (SRO)**	**17.32**	**353**		**Pn**	**14 15 13.7**	**-0.3**
NWAO	**Narrogin (SRO)**	**17.32**	**353**	IAmb	IAmb	14 15 21.7	
	comp=Z,42nm,1.5s						
TAU	**Tasmania Unive**	**20.16**	**80**		Pn	14 15 47.6	-0.7
TAU				IAmb	IAmb	14 16 10.6	
	comp=Z,75nm,1.4s						
BBOO	**Buckleboo**	**21.08**	**41**		**P**	**14 15 56.5**	**0.0**
BBOO				IAmb	IAmb	14 16 03.9	
	comp=Z,63nm,1.2s						
MORW	**Morawa**	**21.26**	**351**	P	**P**	**14 15 59.0**	**+0.6**
	baz=21,SNR=7.3						
MORW	**Morawa**	**21.26**	**351**	P	**P**	**14 15 58.2**	**-0.2**
HTT	**Hallett**	**21.84**	**47**	P	**P**	**14 16 04.6**	**-0.1**
	baz=22,SNR=3.2						
MEEK	**Meekatharra**	**23.50**	**357**	P	**P**	**14 16 22.3**	**+0.2**
	baz=23,SNR=4.0						
STKA	**Stephens Creek**	**24.40**	**50**	P	**P**	**14 16 30.8**	**+0.2**
	comp=Z,5.6nm,0.6s,baz=193,slow=6.1,SNR=15						
STKA				LR	LR	14 24 16.0	
	comp=Z,2μm,21.0s,baz=216,slow=32						
STKA	**Stephens Creek**	**24.40**	**50**	P	**P**	**14 16 30.5**	**-0.1**
	baz=24,SNR=9.2						
STKA	**Stephens Creek**	**24.40**	**50**	P	**P**	**14 16 29.6**	**-0.9**
WRKA	**Warakurna**	**25.92**	**18**	P	**P**	**14 16 44.1**	**-0.3**
	baz=26,SNR=6.6						
GIRL	**Giralia**	**27.81**	**349**	P	**P**	**14 17 02.9**	**+1.5**
	baz=28,SNR=5.6						
ASAR	**Alice Springs**	**28.63**	**28**	P	**P**	**14 17 08.4**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=205,slow=8.9,SNR=44						
ASAR				PcP	**PcP**	**14 20 18.4**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=195,slow=1.9,SNR=4.6						
ASAR				LR	LR	14 27 05.3	
	comp=Z,3μm,21.2s,baz=196,slow=33						
ASAR	**Alice Springs**	**28.63**	**28**	P	**P**	**14 17 07.5**	**-1.3**
AS31	**Alice Springs**	**28.63**	**28**	P	**P**	**14 17 07.8**	**-1.0**
ARMA	**Armidale**	**30.90**	**62**	P	**P**	**14 17 28.2**	**-0.7**
VNDA	**Vanda**	**31.65**	**164**	P	**P**	**14 17 35.8**	**+0.8**
	comp=Z,3.1nm,0.8s,baz=300,slow=9.8,SNR=21						
VNDA				LR	LR	14 29 37.1	
	comp=Z,1μm,19.8s,baz=322,slow=35						
VNDA	**Vanda**	**31.65**	**164**	P	**P**	**14 17 35.6**	**+0.7**
VNDA				IAmb	IAmb	14 17 55.3	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**32.27**	**26**	P	**P**	**14 17 40.4**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=199,slow=9.1,SNR=14						
WRA				PcP	**PcP**	**14 20 28.2**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=206,slow=3.0,SNR=4.2						
WRA				LR	LR	14 29 20.6	
	comp=Z,1μm,21.2s,baz=195,slow=34						
WRA	**Warramunga Arr**	**32.27**	**26**	P	**P**	**14 17 39.0**	**-1.9**
WB2	**Warramunga Arr**	**32.28**	**26**	P	**P**	**14 17 39.6**	**-1.3**
WR0	**Warramunga Arr**	**32.31**	**27**	P	**P**	**14 17 40.2**	**-1.1**
WR0				IAmb	IAmb	14 18 00.5	
	comp=Z,12nm,1.2s						
FITZ	**Fitzroy Crossi**	**32.32**	**10**	P	**P**	**14 17 41.3**	**+0.1**
	baz=32,SNR=5.7						
FITZ	**Fitzroy Crossi**	**32.32**	**10**	P	**P**	**14 17 40.8**	**-0.5**
FITZ				IAmb	IAmb	14 17 48.4	
	comp=Z,9.5nm,1.1s						
WB0	**Warramunga Arr**	**32.46**	**26**	P	**P**	**14 17 41.5**	**-1.1**
WB0				IAmb	IAmb	14 17 48.6	
	comp=Z,21nm,1.5s						
MAW	**Mawson**	**32.70**	**216**	P	**P**	**14 17 45.0**	**+0.9**
	comp=Z,4.1nm,1.2s,baz=74,slow=9.4,SNR=4.1						
MAW				PcP	**PcP**	**14 20 30.1**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=56,slow=3.6,SNR=2.7						
MAW				LR	LR	14 29 15.3	
	comp=Z,883nm,18.1s,baz=57,slow=33						
MAW	**Mawson**	**32.70**	**216**	P	**P**	**14 17 45.1**	**+0.9**
	baz=33,SNR=4.3						
MAW	**Mawson**	**32.70**	**216**	P	**P**	**14 17 44.5**	**+0.3**
RPZ	**Rata Peaks**	**34.97**	**100**	LR	LR	14 29 11.7	
	comp=Z,662nm,20.8s,baz=236,slow=31						
KNRA	**Kununurra**	**35.14**	**15**	P	**P**	**14 18 05.6**	**-0.3**
	baz=35,SNR=3.8						
KNRA	**Kununurra**	**35.14**	**15**	P	**P**	**14 18 05.3**	**-0.6**
KNRA				IAmb	IAmb	14 18 12.2	
	comp=Z,17nm,1.0s						
CTA	**Charters Tower**	**36.59**	**45**	P	**P**	**14 18 18.3**	**0.0**
	comp=Z,1.7nm,0.4s,baz=223,slow=13,SNR=2.7						
CTAO	**Charters Tower**	**36.59**	**45**	P	**P**	**14 18 18.3**	**0.0**
CTAO				IAmb	IAmb	14 18 33.5	
	comp=Z,15nm,1.2s						
MTN	**Manton Dam**	**38.34**	**18**	P	**P**	**14 18 33.3**	**+0.2**
MTN				IAmb	IAmb	14 18 35.1	
	comp=Z,29nm,1.4s						
KDU	**Kakadu**	**38.77**	**20**	P	**P**	**14 18 36.6**	**-0.1**
	baz=39,SNR=6.4						
QSPA	**South Pole Qui**	**39.97**	**180**	P	**P**	**14 18 47.0**	**+0.4**
	comp=Z,4.9nm,0.8s,baz=309,slow=1.4,SNR=26						
QSPA				PcP	**PcP**	**14 20 52.8**	**+1.3**
	comp=Z,2.5nm,1.0s,baz=315,slow=1.4,SNR=3.0						
QSPA	**South Pole Qui**	**39.97**	**180**	P	**P**	**14 18 46.8**	**+0.2**
QSPA				IAmb	IAmb	14 19 00.2	
	comp=Z,25nm,1.2s						
HIZ	**Hauiti**	**40.16**	**95**	P	**P**	**14 18 48.1**	**-0.1**
SOEI	**Soe**	**40.44**	**7**	P	**P**	**14 18 50.1**	**-0.7**
BKZ	**Black Stump Fm**	**40.84**	**97**	P	**P**	**14 18 54.3**	**+0.4**
BKZ				IAmb	IAmb	14 18 54.9	
	comp=Z,22nm,1.2s						
DZM	**Mont Dzumac**	**45.89**	**70**	P	**P**	**14 19 35.6**	**+0.8**
	comp=Z,8.0nm,0.9s,baz=217,slow=20,SNR=2.5						
DZM	**Mont Dzumac**	**45.89**	**70**	*e*S	**S**	**14 26 19.9**	**+0.7**
	comp=Z,175nm,28.2s						
DZM				*e*LR	LR	14 32 34.7	
	comp=Z,662nm,22.9s						
PMG	**Port Moresby**	**46.51**	**39**	LR	LR	14 38 55.2	
	comp=Z,883nm,19.2s,baz=213,slow=36						
FAKI	**Fak Fak**	**48.23**	**17**	P	**P**	**14 19 52.2**	**-0.8**
SIJI	**Sorong**	**50.06**	**15**	LR	LR	14 41 49.2	
	comp=Z,760nm,20.1s,baz=197,slow=37						
BELA	**Belgrano 2**	**51.27**	**187**	P	**P**	**14 20 14.9**	**-0.6**
SNAA	**Sanae**	**51.95**	**200**	P	**P**	**14 20 21.1**	**+0.4**
SNAA	**Sanae**	**51.95**	**200**	P	**P**	**14 20 20.9**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=146,slow=8.7,SNR=11						
SNAA	**Sanae**	**51.95**	**200**	P	P	14 20 15.6	-5.1
SNAA				IAmb	IAmb	14 20 39.0	
	comp=Z,16nm,1.1s						
KSM	**Kuching**	**52.08**	**348**	P	**P**	**14 20 22.2**	**0.0**
KSM				IAmb	IAmb	14 20 42.3	
	comp=Z,22nm,1.5s						
SBUM	**Sibu**	**52.81**	**350**	P	**P**	**14 20 26.6**	**-1.0**
SBUM				IAmb	IAmb	14 20 34.9	
	comp=Z,11nm,1.1s						
KRVT	**Keravat (AS076**	**53.13**	**42**	LR	LR	14 42 03.4	
	comp=Z,23nm,20.5s,baz=230,slow=35						
VNA2	**Neumayer--Watz**	**53.48**	**199**	P	**P**	**14 20 32.5**	**+0.5**
	baz=150,slow=7.5						
MYKOM	**Kota Tinggi**	**53.54**	**340**	P	**P**	**14 20 32.7**	**-0.3**
MYKOM				IAmb	IAmb	14 20 34.2	
	comp=Z,30nm,1.4s						
VNA3	**Neumayer Olymp**	**53.70**	**198**	P	**P**	**14 20 33.6**	**+0.1**
VNA1	**Neumayer--Stat**	**53.88**	**199**	P	**P**	**14 20 35.3**	**+0.5**
MYLDM	**Lahad Datu**	**55.12**	**358**	P	**P**	**14 20 45.7**	**+1.2**
IPM	**Ipoh**	**56.80**	**337**	P	**P**	**14 20 56.2**	**-0.3**
DAV	**Davao City (W)**	**57.21**		LR	LR	14 46 33.7	
	comp=Z,315nm,20.5s,baz=165,slow=37						
GUMO	**Guam**	**67.17**	**26**	LR	LR	14 49 47.0	
	comp=Z,211nm,21.9s,baz=199,slow=34						
CMAR	**Chiang Mai Arr**	**70.77**	**339**	P	**P**	**14 22 28.4**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=191,slow=5.7,SNR=19						
CMAR				LR	LR	14 50 19.9	
	comp=Z,143nm,20.4s,baz=204,slow=33						
CMAR	**Chiang Mai Arr**	**70.77**	**339**	P	**P**	**14 22 26.8**	**-1.6**
CHTO	**Chiang Mai**	**71.11**	**339**	P	**P**	**14 22 28.4**	**-2.1**
BOSA	**Boshof**	**71.37**	**248**	LR	LR	14 48 12.2	
	comp=Z,544nm,18.0s,baz=102,slow=31						
TBI	**Tubuai**	**72.86**	**106**	*e*LR	LR	14 44 58.3	
	comp=Z,161nm,26.0s						
TPUB	**Ta-pu**	**73.13**	**1**	P	**P**	**14 22 42.6**	**0.0**
MATP	**Matopo**	**75.44**	**256**	P	**P**	**14 22 56.3**	**-0.2**
	comp=Z,3.5nm,1.0s,baz=120,slow=8.3,SNR=5.5						
KMI	**Kunming**	**76.47**	**344**	⇑	P	**P**	**14 23 02.2**	**+0.1**
KMI					pP	pwP	14 23 11.3	+1.8
KMI					sP	PcP	14 23 15.6	+1.8
KMI					pmax	pmax		
	comp=Z,25nm,1.6s							
KMI					pmax	pmax		
	comp=Z,230nm,6.3s							
KMI					LR	LR		
	comp=Z,330nm,19.5s							
KMI					LR	LR		
	comp=Z,190nm,23.0s							
KMI					LR	LR		
	comp=Z,280nm,23.1s							
PPT2	**Papeete2**	**77.07**	**102**	*e*LR	LR	14 46 56.0		
	comp=Z,176nm,23.0s							
PPT	**Papeete**	**77.08**	**102**	LR	LR	14 50 08.2		
	comp=Z,153nm,18.5s,baz=276,slow=30							
GYA	**Guiyang**	**77.17**	**348**	⇓	P	**P**	**14 23 05.9**	**0.0**
GYA					pmax	pmax		
	comp=Z,7.0nm,1.7s							
GYA					LR	LR		
	comp=Z,270nm,31.2s							
GO09	**Cerro Castillo**	**78.42**	**172**	P	**P**	**14 23 11.9**	**-0.7**
LSZ	**Lusaka**	**79.49**	**259**	P	**P**	**14 23 19.8**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=141,slow=8.5,SNR=4.6						
LSZ	**Lusaka**	**79.49**	**259**	P	**P**	**14 23 18.9**	**-0.3**
LSZ				IAmb	IAmb	14 23 29.0	
	comp=Z,12nm,1.4s						
WHN	**Wuhan**	**80.49**	**355**	P	**P**	**14 23 24.3**	**+0.4**
NJ2	**Nanjing**	**81.85**	**359**	*e*P	**P**	**14 23 34.4**	**+3.3**
NJ2				pmax	pmax			
	comp=Z,14nm,0.6s							
CD2	**Chengdu**	**81.96**	**346**	P	**P**	**14 23 32.2**	**+0.4**
CD2				pmax	pmax			
	comp=Z,20nm,1.3s							
LSA	**Lhasa**	**83.48**	**335**	P	**P**	**14 23 39.5**	**-0.8**
KMBO	**Kilima Mbogo**	**84.39**	**275**	P	**P**	**14 23 47.1**	**+2.0**
	comp=Z,0.9nm,0.4s,baz=155,slow=4.5,SNR=13						
KMBO				LR	LR	14 53 13.7	
	comp=Z,119nm,21.3s,baz=96,slow=30						
KMBO	**Kilima Mbogo**	**84.39**	**275**	P	**P**	**14 23 43.3**	**-1.8**
KMBO				IAmb	IAmb	14 23 48.5	
	comp=Z,15nm,1.3s						
LZH	**Lanzhou**	**87.03**	**347**	*e*P	**P**	**14 24 00.0**	**+2.5**
LZH				pP	pwP	14 24 04.8	-0.1
LZH				sP	sP	14 24 07.1	+6.9
LZH				pmax	pmax			
	comp=Z,20nm,1.3s							
KSAR	**Wonju Array Be**	**87.51**	**6**	P	**P**	**14 23 59.6**	**0.0**
KSRS	**Korea Array**	**87.52**	**6**	P	**P**	**14 24 00.5**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=192,slow=6.0,SNR=6.9						
MJAR	**Matsushiro Arr**	**87.84**	**15**	LR	LR	15 00 06.7	
	comp=Z,158nm,21.8s,baz=10.0,slow=33						
PLCA	**Paso Flores**	**89.03**	**172**	P	**P**	**14 24 07.2**	**0.0**
	comp=Z,0.8nm,0.5s,baz=187,slow=6.0,SNR=3.2						
PLCA				LR	LR	15 03 04.4	
	comp=Z,198nm,20.1s,baz=156,slow=35						
BJI	**Beijing**	**89.87**	**357**	P	**P**	**14 24 11.4**	**+0.8**
BJI				pmax	pmax			
	comp=Z,6.0nm,1.6s							
WSAR	**Wadi Sarin**	**90.89**	**306**	LR	LR	14 57 51.0		
	comp=Z,197nm,19.7s,baz=122,slow=31							
GTA	**Gaotai**	**90.92**	**345**	P	**P**	**14 24 15.7**	**0.0**
GTA				pP	pwP	14 24 22.7	-0.4
GTA				sP	sP	14 24 26.5	+8.1
GTA				pmax	pmax			
	comp=Z,8.0nm,1.6s							
GTA				LR	LR			
	comp=Z,160nm,23.8s							
GTA				LR	LR			
	comp=Z,140nm,21.7s							
GTA				LR	LR			
	comp=Z,270nm,22.1s							
HHC	**Hu-ho-hao-te**	**90.92**	**354**	*e*P	**P**	**14 24 16.5**	**+0.9**
HHC				pmax	pmax			
	comp=Z,19nm,1.0s							
USRK	**Ussuriysk Ar.**	**94.57**	**9**	P	**P**	**14 24 33.4**	**+1.2**
	comp=Z,1.0nm,0.7s,baz=189,slow=8.2,SNR=5.5						
USRK				LR	LR	15 07 20.9	
	comp=Z,81nm,21.9s,baz=158,slow=36						
WMQ	**Urumqi**	**97.71**	**337**	*e*P	**P**	**14 24 46.5**	**-0.2**
WMQ				pP	pwP	14 24 52.8	-1.3
WMQ				sP	sP	14 24 56.2	+6.8
WMQ				LR	LR			
	comp=Z,310nm,24.1s							
WMQ				LR	LR			
	comp=Z,290nm,25.3s							
SONM	**Songino Array**	**98.30**	**351**	P	**P**	**14 24 48.8**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=197,slow=4.7,SNR=3.8						
SONM	**Songino Array**	**98.30**	**351**	IAmb	IAmb	14 24 50.5	
	comp=Z,1.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**117.95**	**256**	PKP	**PKPdf**	**14 29 58.7**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=117,slow=1.6,SNR=2.5						
ILAR	**Eielson Array**	**135.03**	**37**	PKP	**PKPdf**	**14 30 28.9**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=250,slow=2.4,SNR=2.8						
NVAR	**Mina Array Bea**	**137.77**	**83**	PKP	**PKiKP**	**14 30 38.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=235,slow=4.0,SNR=5.4						
NVAR	**Mina Array Bea**	**137.77**	**83**		**PKPdf**	**14 30 37.1**	**+0.7**
TXAR	**Lajitas Array**	**141.31**	**106**	PKP	**PKPdf**	**14 30 43.9**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=194,slow=3.7,SNR=4.6						
MNTX	**Cornudas Mount**	**141.86**	**102**		**PKPdf**	**14 30 44.0**	**+0.3**
S22A	**4UR Ranch, Cre**	**144.74**	**92**		**PKPdf**	**14 30 48.7**	**-0.4**
REDW	**Red Top Meadow**	**145.18**	**81**		**PKPab**	**14 30 49.3**	**+0.1**
LRM	**Limekiln Ridge**	**145.32**	**77**		**PKPdf**	**14 30 50.0**	**+0.3**
IMW	**Indian Meadow**	**145.38**	**80**		**PKPab**	**14 30 50.2**	**+0.1**
SDCO	**Great Sand Dun**	**145.60**	**93**		**PKPdf**	**14 30 50.4**	**-0.1**
BW06	**Boulder Array**	**145.71**	**83**	PKPdf	**PKPbc**	**14 30 50.8**	**-0.1**
PD31	**Pinedale Array**	**145.71**	**83**		**PKPdf**	**14 30 50.5**	**0.0**
PDAR	**Pinedale Array**	**145.71**	**83**	PKPbc	**PKPdf**	**14 30 50.5**	**0.0**
	comp=Z,2.1nm,0.8s,baz=205,slow=3.1,SNR=14						
PDAR	**Pinedale Array**	**145.71**	**83**	PKPdf	**PKPdf**	**14 30 49.6**	**-0.8**
WALA	**Waterton Lakes**	**145.77**	**71**		**PKPbc**	**14 30 50.9**	**+0.1**
YKA	**Yellowknife Ar**	**148.40**	**46**	PKPbc	**PKPbc**	**14 30 57.3**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=287,slow=2.0,SNR=8.2						
DAG	**Danmarks Havn**	**148.87**	**343**	*i* P	**PKPbc**	**14 30 57.0**	**-1.4**
	comp=Z,17nm,1.1s						
DAG	**Danmarks Havn**	**148.87**	**343**	*i* P	**PKPbc**	**14 30 57.0**	**-1.4**
DAG				IAmb	IAmb	14 31 03.6	
	comp=Z,17nm,1.1s						
RSSD	**Black Hills**	**149.89**	**84**		**PKPbc**	**14 31 01.8**	**-0.4**
RSSD					**PKPab**	**14 31 07.8**	**0.0**
DBG	**Daneborg**	**150.57**	**339**	*i* P	**PKPbc**	**14 31 02.3**	**-0.3**
U40A	**Yellville**	**152.73**	**108**		**PKPbc**	**14 31 08.3**	**-0.4**
S39A	**Bolivar**	**153.29**	**105**		**PKPbc**	**14 31 09.5**	**-0.3**

*ANF **10** 14:11:11.4±0.7,41.°87N×119.°59W,h0km±6km,ML3.2/10, Error ellipse: s-maj=5.0km s-min=3.2km az=89.0*
*REN **10** 14:11:12.8±1.8,41.°86N±0.°04×119.°61W±0.°04,h2km±7km, ML3.5/3,Error ellipse: s-maj=6.4km s-min=4.2km az=179.0*

ISC 10 14:11:12.2±1.0,41.°87N±0.°03×119.°62W±0.°03,h10km,n33, σ1.°31/43,Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.51**	**274**		**Pg**	**14 11 20.1**	**-2.0**
MOD					**Sg**	**14 11 29.7**	**+0.8**
K05A	**Summer Lake**	**1.27**	**313**		**Pn**	**14 11 34.8**	**-1.5**
**M04C

SRDR	**Sredinnyy**	**1.47**	**2**	*eP*		**Pn**	**14 19 33.4**	**+0.5**	
GNL	**Ganaly**	**1.52**	**221**	*eP*		**Pn**	**14 19 34.0**	**+0.5**	
KLY	**Klyuchi**	**1.58**	**21**	*eP*		**Pn**	**14 19 34.9**	**+1.1**	
KLY				*eS*		**Sn**	**14 20 00.5**	**+0.4**	
KRX	**Arik**	**1.60**	**201**	*eP*		**Pn**	**14 19 35.5**	**+1.2**	
KRER	**Koryakskii**	**1.63**	**199**	*eP*		**Pn**	**14 19 36.4**	**+1.7**	
SDLR	**Sedlovina**	**1.64**	**196**	*eP*		**Pn**	**14 19 35.5**	**+0.9**	
SMAR	**Somma**	**1.66**	**197**	*eP*		**Pn**	**14 19 36.2**	**+1.2**	
KOK	**Koryaka**	**1.67**	**201**	*eP*		**Pn**	**14 19 35.4**	**+0.5**	
AVH	**Avacha**	**1.67**	**199**	*eP*		**Pn**	**14 19 36.5**	**+1.6**	
NLC	**Nalytchevo**	**1.69**	**186**	*eP*		**Pn**	**14 19 35.5**	**+0.5**	
NLC				*eS*		**Sn**	**14 20 01.5**	**-0.4**	
SPN	**Mys Shipunski**	**1.77**	**172**	*eP*		**Pn**	**14 19 35.4**	**-0.4**	
SPN				*eS*		**Sn**	**14 20 01.4**	**-2.0**	
DALK	**Dalny**	**1.89**	**196**	*eP*		**Pn**	**14 19 37.9**	**+0.9**	
DALK				*eS*		**Sn**	**14 20 05.8**	**+0.2**	
PET	**Petropavlovsk**	**1.92**	**198**	*eP*		**Pn**	**14 19 38.1**	**+0.9**	
PET	**Petropavlovsk**	**1.92**	**198**	Pn		**Pn**	**14 19 38.1**	**+0.9**	
SRKR	**Sorokina**	**2.01**	**25**	*eP*		**Pn**	**14 19 39.2**	**+1.0**	
SMKR	**Semkarok**	**2.02**	**30**	*eP*		**Pn**	**14 19 39.9**	**+1.5**	
PEA0B	**Petropavlovsk-**	**2.08**	**214**	Pn		**Pn**	**14 19 39.9**	**+0.9**	
PETK	**Petropavlovsk-**	**2.08**	**214**	P		**Pn**	**14 19 40.2**	**+1.2**	
	0.9nm,0.3s,baz=52,slow=12,SNR=17								
PETK	**Petropavlovsk-**	**2.08**	**214**			**Pn**	**14 19 39.9**	**+0.9**	
KRMR	**Karymshinskiy**	**2.21**	**204**	*eP*		**Pn**	**14 19 42.2**	**+1.9**	
KRMR				*eS*		**Sn**	**14 20 13.2**	**+1.6**	
KBG	**Krutoberegovo**	**2.25**	**50**	*eP*		**Pn**	**14 19 40.8**	**+0.2**	
KBG				*eS*		**Sn**	**14 20 10.7**	**-1.6**	
KBTR	**Krutoberegovo**	**2.27**	**52**	*eP*		**Pn**	**14 19 41.2**	**+0.3**	
KBTR				*eS*		**Sn**	**14 20 11.7**	**-1.0**	
GRL	**Gorelyy**	**2.48**	**202**	*eP*		**Pn**	**14 19 44.3**	**+0.8**	
RUS	**Russkaya**	**2.51**	**196**	*eP*		**Pn**	**14 19 43.7**	**0.0**	
RUS				*eS*		**Sn**	**14 20 15.5**	**-2.0**	
KDTR	**Khodutka, Kamc**	**3.19**	**198**	*eP*		**Pn**	**14 19 51.7**	**+0.1**	
KDTR				*eS*		**Sn**	**14 20 28.8**	**-2.9**	
BKI	**Bering**	**3.67**	**82**	*eS*		**Sn**	**14 20 43.3**	**+1.0**	
JKA	**Kamikawa-asahi**	**15.38**	**233**	P		**P**	**14 22 30.0**	**+2.6**	
JKA	**Kamikawa-asahi**	**15.38**	**233**	IAmb		IAmb	14 22 33.5		
	comp=Z,22nm,1.4s								
ASAJ	**Asahikawa**	**15.38**	**233**	P		**P**	**14 22 30.0**	**+2.6**	
	comp=Z,0.2nm,0.3s,baz=81,slow=11,SNR=5.0								
ERM	**Erimo**	**16.80**	**227**	P		**P**	**14 22 44.8**	**+1.7**	
USA0B	**Ussuriysk Arra**	**20.73**	**251**	P		**P**	**14 23 22.6**	**-2.9**	
MJAR	**Matsushiro Arr**	**23.48**	**228**	LR		LR	14 36 11.0		
	comp=Z,324nm,18.3s,baz=290,slow=43								
PPLA	**Purkeypile**	**25.60**	**52**	P		P	14 24 07.1	-4.2	
PPLA				IAmb		IAmb	14 24 27.4		
	comp=Z,12nm,1.3s								
KBS	**Kingsbay**	**45.09**	**352**	P		P	14 26 48.2	-8.0	
MKAR	**Makanchi Array**	**47.17**	**294**	P		**P**	**14 27 10.1**	**-2.7**	
	comp=Z,0.3nm,0.5s,baz=46,slow=8.3,SNR=2.6								
MKAR	**Makanchi Array**	**47.17**	**294**	P		P	14 27 09.3	-3.5	
TXAR	**Lajitas Array**	**70.20**	**67**	P		P	14 29 50.0	-1.9	
WRA	**Warramunga Arr**	**77.57**	**204**	P		**P**	**14 30 35.4**	**+1.0**	
	comp=Z,0.4nm,0.5s,baz=20,slow=6.1,SNR=9.6								
ASAR	**Alice Springs**	**81.25**	**204**	P		**P**	**14 30 55.8**	**+1.4**	
	comp=Z,0.3nm,0.7s,baz=17,slow=4.4,SNR=5.0								

*IDC **10** 14:24:33.3±2.1,23°.17S×179°.77E,h497^{km}±23^{km},mb3.4/9, mb1 3.6/11,mb1mx3.4/24,mbtmp4.4/11,Error ellipse: s-maj=22.1km s-min=16.5km az=90.0*

*NEIC **10** 14:24:35.4±2.8,23°.10S±0°.09×179°.8E±0°.1,h539^{km}±5^{km}, mb4.7/41,Error ellipse: s-maj=19.6km s-min=13.2km az=100.0*

ISC 10 14:24:35.2±0.5,**23°.18S**±0°.06×**180°.00W**±0°.08,**h550**km, **n100**,σ1§97/109,**mb4.5**/27,**1C**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.72**	**341**	P	**P**	**14 26 11.7**	**+0.1**
NIUE	**Niue**	**10.25**	**68**	P	**P**	**14 26 58.1**	**+2.3**
AFI	**Afiamalu**	**12.07**	**42**	P	**P**	**14 27 13.8**	**-0.9**
	1.9nm,0.3s,baz=102,slow=1.1,SNR=5.8						
AFI				S	**S**	**14 29 21.3**	**-4.6**
	0.4nm,0.3s,baz=212,slow=23,SNR=2.1						
AFI	**Afiamalu**	**12.07**	**42**	P	**P**	**14 27 14.0**	**-0.7**
DZM	**Mont Dzumac**	**12.57**	**272**	P	**P**	**14 27 22.4**	**+2.6**
OUZ	**Omahuta**	**13.23**	**204**	P	**P**	**14 27 29.3**	**+3.1**
OUZ	**Omahuta**	**13.23**	**204**	P	**P**	**14 27 27.6**	**+1.3**
KUZ	**Kuaotunu**	**14.01**	**194**	P	**P**	**14 27 33.7**	**-0.7**
WIAZ	**Waiheke Island**	**14.20**	**196**	P	**P**	**14 27 37.1**	**+0.8**
SANVU	**Saraoutou**	**14.31**	**300**	P	**P**	**14 27 36.9**	**-0.8**
MXZ	**Matakaoa Point**	**14.41**	**185**	P	**P**	**14 27 36.3**	**-2.1**
MXZ				S	**S**	**14 30 09.6**	**+0.2**
MXZ	**Matakaoa Point**	**14.41**	**185**	P	**P**	**14 27 38.1**	**-0.3**
HAZ	**Te Kaha**	**14.65**	**187**	P	**P**	**14 27 39.7**	**-1.1**
HAZ				S	**S**	**14 30 07.8**	**-6.1**
PKGZ	**Pakihiroa**	**14.75**	**186**	P	**P**	**14 27 43.2**	**+1.2**
RUGZ	**Raukumara Rang**	**14.87**	**187**	P	**P**	**14 27 42.3**	**-1.0**
PUZ	**Puketiti**	**14.92**	**185**	P	**P**	**14 27 44.1**	**+0.4**
PUZ				S	**S**	**14 30 12.2**	**-6.7**
URZ	**Urewera**	**15.23**	**189**	P	**P**	**14 27 43.7**	**-3.2**
	6.3nm,0.3s,baz=276,slow=3.1,SNR=30						
URZ				S	**S**	**14 30 20.1**	**-4.2**
	1.3nm,0.3s,baz=62,slow=20,SNR=8.5						
URZ	**Urewera**	**15.23**	**189**	P	**P**	**14 27 43.6**	**-3.2**
HIZ	**Hauiti**	**15.90**	**195**	P	**P**	**14 27 54.5**	**+0.9**
BKZ	**Black Stump Fm**	**16.21**	**190**	P	**P**	**14 27 53.2**	**-3.4**
BKZ				IAmb	IAmb	14 28 03.1	
	comp=Z,17nm,1.0s						
VRZ	**Vera Road**	**16.51**	**194**	P	**P**	**14 28 01.4**	**+2.1**
PKE	**Pukeiti**	**16.76**	**196**	P	**P**	**14 28 02.2**	**+0.6**
NEZ	**North Egmont**	**16.81**	**196**	P	**P**	**14 28 04.8**	**+2.7**
PREZ	**Palmer Road**	**16.86**	**196**	P	**P**	**14 28 04.8**	**+2.3**
LREZ	**Lake Rotokare**	**16.91**	**195**	P	**P**	**14 28 04.8**	**+1.9**
WAZ	**Wanganui**	**17.06**	**193**	P	**P**	**14 28 05.7**	**+1.4**
BFZ	**Birch Farm**	**17.73**	**189**	P	**P**	**14 28 08.0**	**-2.4**
MRZ	**Mangatainoka R**	**17.82**	**191**	P	**P**	**14 28 10.0**	**-1.2**
KIW	**Kapiti Island**	**18.14**	**192**	P	**P**	**14 28 11.8**	**-2.4**
DUWZ	**D'Urville Isla**	**18.30**	**195**	P	**P**	**14 28 15.7**	**+0.1**
TCW	**Tory Channel**	**18.61**	**194**	P	**P**	**14 28 20.4**	**+1.9**
MSWZ	**Moikau Station**	**18.61**	**191**	P	**P**	**14 28 18.1**	**-0.4**
SNZO	**South Karori**	**18.61**	**193**	P	**P**	**14 28 19.0**	**+0.5**
BHW	**Baring Head**	**18.68**	**192**	P	**P**	**14 28 18.1**	**-0.9**
QRZ	**Quartz Range**	**18.68**	**198**	P	**P**	**14 28 20.8**	**+1.6**
QRZ	**Quartz Range**	**18.68**	**198**	P	**P**	**14 28 20.2**	**+1.1**
PLWZ	**Palliser**	**18.76**	**191**	P	**P**	**14 28 19.4**	**-0.5**
NNZ	**Nelson**	**18.82**	**196**	P	**P**	**14 28 20.9**	**+0.5**
NNZ				P	**S**	**14 31 21.0**	**-2.4**
NNZ	**Nelson**	**18.82**	**196**	P	**P**	**14 28 20.5**	**+0.1**
TUWZ	**Tuamarina**	**18.89**	**194**	P	**P**	**14 28 21.2**	**+0.2**
TUWZ	**Tuamarina**	**18.89**	**194**	P	**P**	**14 28 20.1**	**-0.9**
BSWZ	**Blackbirch Sta**	**19.18**	**194**	P	**P**	**14 28 26.0**	**+2.3**
BSWZ	**Blackbirch Sta**	**19.18**	**194**	P	**P**	**14 28 23.2**	**-0.4**
THZ	**Tophouse**	**19.46**	**196**	P	**P**	**14 28 26.7**	**+0.4**
THZ	**Tophouse**	**19.46**	**196**	P	**P**	**14 28 26.2**	**0.0**
DSZ	**Denniston Nort**	**19.74**	**198**	P	**P**	**14 28 30.3**	**+1.5**
KHZ	**Kahutara**	**19.92**	**194**	P	**P**	**14 28 30.1**	**-0.2**
KHZ	**Kahutara**	**19.92**	**194**	P	**P**	**14 28 29.8**	**-0.6**
KHZ				IAmb	IAmb	14 28 33.5	
	comp=Z,32nm,1.3s						
LTZ	**Lake Taylor**	**20.57**	**196**	P	**P**	**14 28 35.8**	**-0.5**
LTZ	**Lake Taylor**	**20.57**	**196**	P	**P**	**14 28 35.3**	**-1.1**
LTZ				IAmb	IAmb	14 28 37.9	
	comp=Z,27nm,0.9s						
INZ	**Inchbonnie**	**20.75**	**198**	P	**P**	**14 28 37.6**	**-0.2**
OXZ	**Oxford**	**21.14**	**196**	P	**P**	**14 28 40.7**	**-0.7**
MQZ	**McQueen's Vall**	**21.35**	**195**	P	**P**	**14 28 42.7**	**-0.5**
RPZ	**Rata Peaks**	**21.77**	**198**	P	**P**	**14 28 47.0**	**0.0**
	comp=Z,10nm,0.4s,baz=358,slow=1.2,SNR=7.3						
RPZ	**Rata Peaks**	**21.77**	**198**	P	**P**	**14 28 46.9**	**-0.2**
FOZ	**Fox Glacier**	**21.97**	**200**	P	**P**	**14 28 48.1**	**-0.7**
LBZ	**Lake Benmore**	**22.63**	**199**	P	**P**	**14 28 52.6**	**-2.1**
LBZ				IAmb	IAmb	14 29 14.5	
	comp=Z,43nm,1.3s						
ODZ	**Otahua Downs**	**23.11**	**197**	P	**P**	**14 28 57.7**	**-1.2**
ODZ				IAmb	IAmb	14 29 08.2	
	comp=Z,60nm,1.5s						
WKZ	**Wanaka**	**23.39**	**200**	P	**P**	**14 28 59.9**	**-1.6**
MLZ	**Mavora Lakes**	**24.16**	**201**	P	**P**	**14 29 08.1**	**-0.2**
MLZ				IAmb	IAmb	14 29 15.6	
	comp=Z,27nm,1.2s						
WHZ	**Wether Hill Ro**	**24.68**	**200**	P	**P**	**14 29 13.1**	**+0.2**
ARMA	**Armidale**	**26.28**	**248**	P	**P**	**14 29 28.6**	**+1.2**
ARMA				IAmb	IAmb	14 29 49.1	
	comp=Z,41nm,1.5s						
EIDS	**Eidsvold**	**26.43**	**259**	P	**P**	**14 29 28.9**	**+0.2**
CAN	**Canberra**	**29.50**	**239**	P	**P**	**14 29 56.0**	**+0.5**
CAN				IAmb	IAmb	14 30 07.8	
	comp=Z,30nm,1.5s						

CTAO	**Charters Tower**	**31.48**	**269**	P		**P**	**14 30 12.7**	**+0.2**	
CTAO				IAmb		IAmb	14 30 13.8		
	comp=Z,17nm,0.5s								
TOO	**Toolangi**	**32.84**	**236**	P		**P**	**14 30 24.2**	**+0.3**	
TOO				IAmb		IAmb	14 30 37.7		
	comp=Z,27nm,1.2s								
PMG	**Port Moresby**	**34.27**	**288**	P		**P**	**14 30 34.8**	**-1.3**	
PMG				IAmb		IAmb	14 30 37.7		
	comp=Z,40nm,1.0s								
STKA	**Stephens Creek**	**34.99**	**247**	P		**P**	**14 30 42.5**	**+0.4**	
	comp=Z,2.9nm,0.7s,baz=82,slow=8.5,SNR=7.1								
STKA	**Stephens Creek**	**34.99**	**247**	P		**P**	**14 30 41.0**	**-1.0**	
BBOO	**Buckleboo**	**39.73**	**246**	P		**P**	**14 31 20.1**	**-0.6**	
BBOO				IAmb		IAmb	14 31 22.3		
	comp=Z,15nm,1.1s								
AS31	**Alice Springs**	**42.16**	**260**	P		**P**	**14 31 39.6**	**-0.5**	
ASAR	**Alice Springs**	**42.16**	**260**	P		**P**	**14 31 39.9**	**-0.2**	
	comp=Z,4.0nm,0.8s,baz=92,slow=7.2,SNR=89								
ASAR				ScP		**ScP**	**14 36 25.1**	**+4.9**	
	comp=Z,0.2nm,0.5s,baz=116,slow=4.3,SNR=4.5								
ASAR				S		**S**	**14 37 17.5**	**-3.2**	
	comp=Z,1.6nm,1.4s,baz=146,slow=37,SNR=1.9								
ASAR	**Alice Springs**	**42.16**	**260**	P		**P**	**14 31 39.4**	**-0.8**	
WR0	**Warramunga Arr**	**42.27**	**265**	P		**P**	**14 31 39.5**	**-1.5**	
WB2	**Warramunga Arr**	**42.45**	**265**	P		**P**	**14 31 41.5**	**-0.9**	
WB0	**Warramunga Arr**	**42.45**	**266**	P		**P**	**14 31 41.5**	**-0.9**	
WB0				IAmb		IAmb	14 31 42.5		
	comp=Z,13nm,1.2s								
WRAB	**Tennant Creek**	**42.45**	**265**	P		**P**	**14 31 40.8**	**-1.6**	
WRAB				IAmb		IAmb	14 32 03.5		
	comp=Z,8.3nm,0.6s								
WRA	**Warramunga Arr**	**42.46**	**265**	P		**P**	**14 31 41.8**	**-0.7**	
	comp=Z,2.9nm,0.3s,baz=94,slow=8.4,SNR=209								
WRA				S		**S**	**14 37 21.7**	**-3.4**	
	comp=Z,0.3nm,0.5s,baz=99,slow=17,SNR=2.8								
WRA	**Warramunga Arr**	**42.46**	**265**	P		**P**	**14 31 41.2**	**-1.4**	
FORT	**Forrest**	**46.56**	**249**	P		**P**	**14 32 11.9**	**-2.0**	
FORT				IAmb		IAmb	14 32 15.0		
	comp=Z,15nm,0.7s								
KNRA	**Kununurra**	**48.69**	**269**	P		**P**	**14 32 29.8**	**-0.3**	
KNRA				IAmb		IAmb	14 32 57.5		
	comp=Z,21nm,1.4s								
FITZ	**Fitzroy Crossi**	**50.89**	**265**	P		**P**	**14 32 46.0**	**-0.1**	
SOEI	**Soe**	**54.79**	**274**	P		**P**	**14 33 15.4**	**+1.3**	
SOEI				IAmb		IAmb	14 33 21.6		
	comp=Z,15nm,0.9s								
VNDA	**Vanda**	**55.09**	**185**	P		**P**	**14 33 18.2**	**+3.1**	
	comp=Z,0.6nm,0.5s,baz=14,slow=7.7,SNR=8.0								
VNDA	**Vanda**	**55.09**	**185**	P		**P**	**14 33 14.9**	**-0.2**	
QSPA	**South Pole Qui**	**66.90**	**180**	P		**P**	**14 34 35.8**	**+3.0**	
KSRS	**Korea Array**	**77.70**	**320**	P		**P**	**14 35 38.4**	**+2.9**	
	comp=Z,1.0nm,0.8s,baz=126,slow=5.6,SNR=4.8								
PEA0B	**Petropavlovsk-**	**78.41**	**346**	P		**P**	**14 35 36.7**	**-2.2**	
PEA0B				IAmb		IAmb	14 35 38.4		
	comp=Z,50nm,1.2s								
PETK	**Petropavlovsk-**	**78.41**	**346**	P		**P**	**14 35 41.4**	**+2.5**	
	comp=Z,6.7nm,0.8s,baz=105,slow=9.7,SNR=6.4								
MAW	**Mawson**	**78.42**	**200**	P		**P**	**14 35 41.3**	**+2.5**	
	comp=Z,2.1nm,0.7s,baz=136,slow=8.3,SNR=7.2								
MAW	**Mawson**	**78.42**	**200**	P		**P**	**14 35 41.5**	**+2.6**	
NJ2	**Nanjing**	**80.19**	**311**	*eP*		**P**	**14 35 48.7**	**-0.1**	
NJ2				pmax		pmax			
	comp=Z,8.0nm,0.5s								
KMI	**Kunming**	**88.93**	**298**	⇑P		**P**	**14 36 28.6**	**-3.4**	
KMI				pmax		pmax			
	comp=Z,13nm,1.9s								
CMAR	**Chiang Mai Arr**	**89.28**	**290**	P		**P**	**14 36 36.4**	**+2.9**	
	comp=Z,1.4nm,1.0s,baz=132,slow=3.2,SNR=8.6								
CMAR	**Chiang Mai Arr**	**89.28**	**290**	P		**P**	**14 36 34.5**	**+1.0**	
LZH	**Lanzhou**	**92.94**	**308**	*eP*		**P**	**14 36 47.4**	**-2.8**	
LZH				pP		pwP	14 38 58.2	+3.0	
LZH				pmax		pmax			
	comp=Z,17nm,1.5s								
ARCES	**ARCESS Array B**	**131.19**	**348**	PKP		**PKiKP**	**14 42 45.8**	**+0.6**	
	comp=Z,3.0nm,0.9s,baz=321,slow=1.3,SNR=4.8								
AKASG	**Malin Array Be**	**144.37**	**328**	PKP		**PKPab**	**14 43 09.6**	**+0.5**	
	comp=Z,2.2nm,0.5s,baz=46,slow=4.1,SNR=6.6								
BRTR	**Keskin Array B**	**147.14**	**308**	PKPbc		**PKPab**	**14 43 19.4**	**-1.3**	
	comp=Z,0.8nm,0.4s,baz=95,slow=1.7,SNR=2.1								
CLL	**Collm**	**150.17**	**344**	*i* PKPbc		**PKiKP**	**14 43 25.8**	**+1.3**	

*ANF **10** 14:47:19.1±0.2,37°.16N×113°.97W,h0^{km},ML3.0/18,Error ellipse: s-maj=2.1km s-min=1.9km az=33.0*

*UUSS **10** 14:47:20.8±0.9,37°.17N±0°.04×114°.02W±0°.04,h11^{km}±7^{km}, ML3.0/8,ML2.9/9(REN),Error ellipse: s-maj=6.1km s-min=4.4km az=166.0*

*REN **10** 14:47:21.2±1.4,37°.17N±0°.03×114°.00W±0°.03,h6^{km}±7^{km}, Error ellipse: s-maj=4.1km s-min=2.6km az=142.0*

ISC 10 14:47:20.6±0.9,**37°.16N**±0°.02×**114°.04W**±0°.02,**h12**^{km}±8^{km}, **n69**,σ1§13/78,**Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ICU	**Indian Springs**	**0.10**	**98**		**Pg**	**14 47 23.3**	**-0.2**
SGSU	**St. George Fir**	**0.37**	**108**		**Pg**	**14 47 28.2**	**+0.3**
WDO	**Saint George**	**0.37**	**99**		**Pg**	**14 47 28.2**	**+0.2**
WDO					**Sg**	**14 47 33.2**	**+0.3**
REUT	**Washington Fie**	**0.42**	**99**		**Pg**	**14 47 29.2**	**+0.2**
REUT					**Sg**	**14 47 34.8**	**+0.2**
HHS	**Hurricane**	**0.59**	**89**		**Pb**	**14 47 32.5**	**-0.5**
LCMT	**Little Creek M**	**0.66**	**103**		**Pg**	**14 47 33.3**	**-0.1**
LCMT	**Little Creek M**	**0.66**	**103**		**Sg**	**14 47 41.7**	**-0.3**
CCUT	**Cedar City**	**0.66**	**54**		**Pg**	**14 47 33.4**	**-0.1**
ARUT	**Antelope Range**	**0.79**	**37**		**Pg**	**14 47 35.9**	**0.0**
PRN	**Pahroc Range**	**0.84**	**287**		**Pb**	**14 47 37.5**	**+0.2**
SZCU	**Shurtz Canyon**	**0.87**	**60**		**Pg**	**14 47 37.2**	**-0.3**
KNB	**Kanab**	**0.99**	**98**		**Pg**	**14 47 39.2**	**-0.4**
SHPR	**Sheep Range**	**1.11**	**234**	Pn	**Pn**	**14 47 41.4**	**-0.5**
EKU	**East Kanab**	**1.24**	**94**		**Pn**	**14 47 43.8**	**-0.1**
DWU	**Dry Willow Pea**	**1.25**	**41**		**Pg**	**14 47 44.8**	**+0.1**
PSUT	**Pine Spring**	**1.38**	**6**		**Pb**	**14 47 46.4**	**0.0**
PKCU	**Pink Cliffs**	**1.41**	**78**		**Pb**	**14 47 47.0**	**0.0**
U15A	**North Rim**	**1.58**	**117**		**Pb**	**14 47 50.0**	**0.0**
NMUT	**North Mineral**	**1.65**	**35**		**Pn**	**14 47 50.2**	**+0.6**
R11A	**Troy Canyon, C**	**1.70**	**314**	P	**Pn**	**14 47 50.9**	**+0.5**
	baz=133,SNR=299						
R11A				Sb	**Sg**	**14 48 16.3**	**+0.9**
	baz=133						
R11A	**Troy Canyon, C**	**1.70**	**314**		**Pn**	**14 47 50.7**	**+0.4**
MTPU	**Mount Pierson**	**1.71**	**59**		**Pn**	**14 47 50.0**	**-0.7**
TPNV	**Topopah Spring**	**1.78**	**264**	P	**Pn**	**14 47 52.2**	**+0.8**
	baz=82,SNR=30						
TPNV				S	**Sb**	**14 48 17.4**	**+1.7**
	baz=82						
TPNV	**Topopah Spring**	**1.78**	**264**		**Pn**	**14 47 51.9**	**+0.5**
TCRU	**Three Creeks R**	**1.92**	**41**	Pn	**Pn**	**14 47 53.1**	**-0.2**
MVU	**Marysvale**	**1.97**	**47**		**Pn**	**14 47 54.5**	**+0.4**
MSU	**Marysvale**	**2.00**	**47**		**Pn**	**14 47 54.6**	**+0.2**
W13A	**Hualapai Mount**	**2.06**	**176**		**Pn**	**14 47 56.4**	**+1.1**
SHOC	**Shoshone, Teco**	**2.20**	**236**	Pg	**Pb**	**14 48 01.8**	**+1.5**
	baz=55						
SHOC				Sb	**Sg**	**14 48 30.5**	**-0.7**
	baz=55						
TUQ	**Turquoise Moun**	**2.30**	**222**	P	**Pn**	**14 47 59.7**	**+1.2**
	baz=41,SNR=13						
TUQ				Sb	**Sg**	**14 48 33.7**	**-0.8**
	baz=41						
FURC	**Furnace Creek,**	**2.37**	**254**	Sb	**Sg**	**14 48 35.7**	**-1.1**
	baz=72						
NEE2	**Needles Airpor**	**2.44**	**191**	Sb	**Sg**	**14 48 37.4**	**-1.5**
	baz=12						
GRAC	**Grapevine Rang**	**2.67**	**267**	Sb	**Sg**	**14 48 46.0**	**-0.2**
	baz=85						
TPH	**Tonopah**	**2.69**	**291**		**Pn**	**14 48 04.5**	**+0.7**
WUAZ	**Wupatki**	**2.71**	**127**	Pg	**Pb**	**14 48 10.3**	**+1.2**
	baz=309						
WUAZ				Sb	**Sb**	**14 48 43.5**	**+1.1**
	baz=309						
GMRC	**Granite Mounta**	**2.71**	**209**	P	**Pn**	**14 48 04.8**	**+0.6**
	baz=29,SNR=9.7						
GSC	**Goldstone, Bar**	**2.91**	**231**	Pg	**Pg**	**14 48 15.2**	**-1.1**
	baz=50						
GSC	**Goldstone, Bar**	**2.91**	**231**	Pn	**Pn**	**14 48 07.4**	**+0.6**
HEC	**Hector,Ludlow**	**2.98**	**219**	Pg	**Pg**	**14 48 17.0**	**-0.7**
	baz=38						
MPMC	**Manual Prospec**	**2.99**	**249**	P	**Pn**	**14 48 09.5**	**+1.5**
	baz=67,SNR=23						
MPMC				Sb	**Sg**	**14 48 54.3**	**-2.3**
	baz=67						
TMUT	**Trail Mountain**	**3.08**	**45**	Pn	**Pn**	**14 48 08.6**	**-0.8**
IRM	**Iron Mountain**	**3.13**	**197**	P	**Pn**	**14 48 10.9**	**+1.0**
	baz=17,SNR=5.8						
IRM				Sb	**Sg**	**14 48 58.9**	**-2.3**
	baz=17						
DUG	**Dugway, Tooele**	**3.18**	**17**	Pg	**Pg**	**14 48 20.1**	**-1.4**
	baz=197						
Y14A	**Wickenburg**	**3.33**	**165**	Pn	**Pn**	**14 48 13.8**	**+1.3**
LRMC	**Laurel Mtn Rad**	**3.39**	**241**	Sb	**Sg**	**14 49 07.3**	**-2.1**
	baz=59						
SRU	**San Rafael Swe**	**3.39**	**54**	Pn	**Pn**	**14 48 13.6**	**+0.1**
NV11	**Mina Array Sit**	**3.50**	**292**		**Pn**	**14 48 15.5**	**+0.5**
NVAR	**Mina Array Bea**	**3.60**	**292**	Pn	**Pn**	**14 48 17.4**	**+0.9**
ELK	**Elko**	**3.70**	**346**	Pn	**Pn**	**14 48 18.0**	**+0.2**
LHV	**Little Huntoon**	**3.70**	**288**		**Pn**	**14 48 18.9**	**+1.2**
KVN	**Kaiserville**	**3.71**	**302**		**Pn**	**14 48 19.0**	**+1.0**
RYN	**Ryan**	**3.83**	**294**	Pn	**Pn**	**14 48 20.7**	**+1.1**
ISA	**Isabella, Lake**	**3.88**	**249**	Pn	**Pn**	**14 48 22.2**	**+2.1**
EDW2	**Edwards Air Fo**	**3.93**	**236**	Pg	**Pg**	**14 48 34.5**	**-1.4**
	baz=54						
OMMB	**Old Mammoth Mi**	**3.98**	**278**	Pn	**Pn**	**14 48 22.7**	**+1.0**
W18A	**Petrified Fore**	**4.04**	**119**	Pg	**Pg**	**14 48 35.2**	**-2.8**
	baz=302						
W18A	**Petrified Fore**	**4.04**	**119**	Pn	**Pn**	**14 48 24.1**	**+1.7**
MDPB	**Devils Postpil**	**4.04**	**278**	Pn	**Pn**	**14 48 23.8**	**+1.3**
PFO	**Pinyon Flats O**	**4.06**	**210**	Pg	**Pg**	**14 48 37.0**	**-1.4**
	baz=29						
PFO	**Pinyon Flats O**	**4.06**	**210**	Pn	**Pn**	**14 48 23.5**	**+0.9**
PV23	**Carpenter Ridg**	**4.19**	**71**	Pn	**Pn**	**14 48 24.6**	**0.0**
PV04	**Paradox Valley**	**4.25**	**72**	Pn	**Pn**	**14 48 27.4**	**+2.1**
MVCO	**Mesa Verde**	**4.43**	**88**	Pg	**Pg**	**14 48 42.5**	**-2.9**
	baz=271						
MVCO	**Mesa Verde**	**4.43**	**88**	Pn	**Pn**	**14 48 29.1**	**+1.2**
WAKR	**Walker**	**4.48**	**289**	Pn	**Pn**	**14 48 30.2**	**+1.7**
PV15	**Paradox Valley**	**4.56**	**73**	Pn	**Pn**	**14 48 30.2**	**+0.5**
PNTR	**Pine Nut**	**4.79**	**295**	Pn	**Pn**	**14 48 32.4**	**-0.3**
CBX	**Cerro Bola**	**5.30**	**205**	Pn	**Pn**	**14 48 41.6**	**+1.9**
ESJX	**Sierra Juarez**	**5.38**	**198**	Pn	**Pn**	**14 48 42.1**	**+1.2**

RSNC 10 14:49:38.0±1.3,**6°.83N×73°.16W,h154**^{km}±5^{km},**ML3.2, Mw3.6,1C-4D,Northern Colombia**

| Code | Station Name | Δ° | AZ° | Phase ID Op | ISC |

0.2nm,0.7s,baz=266,slow=5.8,SNR=2.0
WRA Warramunga Arr 64.02 105 P P 15 04 31.2 +0.1
0.5nm,0.8s,baz=274,slow=5.6,SNR=3.5
SONM Songino Array 72.05 27 P P 15 05 21.1 0.0
0.5nm,0.8s,baz=211,slow=4.2,SNR=1.5

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*ATA **10** 14:58:25.2±1.4, 38°.89N×38°.67E, h5km±265km, ML1.6, MW4.7*
*ISK **10** 14:58:26.9, 39°.01N×38°.67E, h5km, ML1.6/4*
ISC 10 14:58:27.0±0.9, 38°.98N±0°.06×38°.67E±0°.03, h13km, n11, σ0s58/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARPR	**Arapgir-MALATY**	**0.28**	**295**	PG	**Pg**	**14 58 33.3**	**+0.3**
ARPR				SG	**Sb**	**14 58 38.6**	**-0.2**
KEMA	**Kemaliye**	**0.32**	**336**	*eP*	**Pg**	**14 58 32.8**	**-0.9**
KEMA				IAML		14 58 40.3	
	comp=Z,17nm,0.4s						
REFA	**Refahiye_ERZN**	**0.43**	**11**	*eP*	Pn	14 58 45.9	+6.9
REFA				IAML		14 59 06.4	
	comp=Z,13nm,0.1s						
PTK	**Pertek**	**0.57**	**98**	PG	**Pb**	**14 58 39.3**	**+0.2**
PTK				SG	**Sb**	**14 58 48.2**	**+1.0**
MALT	**Malatya**	**0.69**	**196**	PG	**Pn**	**14 58 41.9**	**-0.7**
MALT				SG	**Sn**	**14 58 52.9**	**-0.2**
TNCL	**Tunceli-Merkez**	**0.70**	**78**	*eP*	**Pg**	**14 58 40.1**	**-0.5**
TNCL				*eS*	**Sb**	**14 58 51.0**	**+0.3**
TNCL				IAML		14 58 55.2	
	comp=Z,30nm,0.3s						
SVRC	**Sivrice-ELAZID**	**0.78**	**140**	PG	**Pn**	**14 58 43.6**	**-0.3**
DARE	**Darende-Malaty**	**1.01**	**247**	PG	**Pn**	**14 58 47.7**	**+0.7**
ERZN	**Erzincan**	**1.02**	**53**	PG	**Pn**	**14 58 47.4**	**+0.2**
BNGB	**Bingl**	**1.57**	**89**	PN	**Pg**	**14 58 57.0**	**-0.2**
SVSK	**Karacayir**	**1.60**	**307**	PN	**Pg**	**14 58 57.3**	**-0.4**

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*IDC **10** 15:20:46.5±2.3, 63°.24S×169°.74E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.9/24, mbtmp3.9/5, ML3.6/1, MS4.2/7, Ms1 4.2/7, ms1mx3.8/21, Error ellipse: s-maj=97.6km s-min=24.9km az=70.0*
*NEIC **10** 15:20:48.4±0.7, 63°.22S±0°.07×169°.4E±0°.6, h10km±1km, mb4.5/6, Error ellipse: s-maj=44.3km s-min=7.1km az=77.0*
ISC 10 15:20:48.4±0.9, 63°.24S±0°.10×169°.4E±0°.3, h10km, n33, σ0s72/15, mb3.9/6, MS4.0/5, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**14.55**	**187**	Pn	**Pn**	**15 24 12.9**	**-1.0**
	0.2nm,0.3s,baz=6.2,slow=13,SNR=40						
VNDA				LR	LR	15 28 36.6	
	comp=Z,1μm,21.0s,baz=6.0,slow=32						
VNDA	**Vanda**	**14.55**	**187**	Pn	**Pn**	**15 24 14.8**	**+0.9**
RPZ	**Rata Peaks**	**19.58**	**4**	LR	LR	15 31 07.0	
	comp=Z,3μm,19.5s,baz=52,slow=32						
THZ	**Tophouse**	**21.61**	**7**	P	**P**	**15 25 38.4**	**0.0**
MSWZ	**Moikau Station**	**22.13**	**12**	P	**P**	**15 25 43.6**	**-0.2**
URZ	**Urewera**	**25.45**	**14**	LR	LR	15 34 30.6	
	comp=Z,461nm,21.6s,baz=211,slow=32						
QSPA	**South Pole Qui**	**26.85**	**180**	P	**P**	**15 26 28.2**	**-0.7**
	2.6nm,1.1s,baz=52,slow=5.1,SNR=4.1						
QSPA				LR	LR	15 35 03.5	
	comp=Z,351nm,21.8s,baz=25,slow=32						
STKA	**Stephens Creek**	**35.96**	**318**	P	**P**	**15 27 48.8**	**-0.2**
	1.4nm,0.7s,baz=207,slow=14,SNR=2.1						
STKA	**Stephens Creek**	**35.96**	**318**	IAmb	IAmb	15 28 10.8	
	comp=Z,2.6nm,1.5s						
BBOO	**Buckleboo**	**36.92**	**310**	P	**P**	**15 27 56.4**	**-0.8**
BBOO				IAmb	IAmb	15 28 17.5	
	comp=Z,12nm,1.1s						
BELA	**Belgrano 2**	**38.37**	**172**	P	**P**	**15 28 09.7**	**+0.8**
MAW	**Mawson**	**39.26**	**215**	LR	LR	15 44 23.8	
	comp=Z,508nm,19.7s,baz=96,slow=36						
H01W1	**Cape Leeuwin H**	**43.94**	**283**	T	T	16 16 25.7	
	baz=147,slow=76,SNR=303						
H01W2	**Cape Leeuwin H**	**43.94**	**283**	T	T	16 16 33.5	
	baz=147,slow=76,SNR=257						
H01W3	**Cape Leeuwin H**	**43.95**	**283**	T	T	16 16 34.4	
	baz=147,slow=76,SNR=281						
NWAO	**Narrogin (SRO)**	**44.27**	**288**	LR	LR	15 42 58.9	
	comp=Z,209nm,21.1s,baz=78,slow=30						
SNAA	**Sanae**	**45.26**	**183**	P	**P**	**15 29 05.3**	**-0.1**
SNAA				IAmb	IAmb	15 29 10.4	
	comp=Z,11nm,1.5s						
ASAR	**Alice Springs**	**46.05**	**312**	P	**P**	**15 29 12.9**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=161,slow=8.6,SNR=7.4						
ASAR	**Alice Springs**	**46.05**	**312**	P	**P**	**15 29 13.6**	**+1.4**
WRA	**Warramunga Arr**	**49.38**	**315**	P	**P**	**15 29 37.9**	**-0.1**
	comp=Z,0.9nm,1.0s,baz=165,slow=5.9,SNR=5.0						
WRA	**Warramunga Arr**	**49.38**	**315**	IAmb	IAmb	15 29 40.8	
	comp=Z,0.3nm,1.4s						
H03S2	**Juan Fernandez**	**69.22**	**124**	T	T	16 47 48.6	
	baz=204,slow=74,SNR=171						
H03S1	**Juan Fernandez**	**69.22**	**124**	T	T	16 47 50.0	
	baz=204,slow=74,SNR=209						
H03S3	**Juan Fernandez**	**69.23**	**124**	T	T	16 47 49.3	
	baz=204,slow=74,SNR=146						
H03N3	**Juan Fernandez**	**69.56**	**124**	T	T	16 48 16.8	
	baz=222,slow=74						
H03N2	**Juan Fernandez**	**69.57**	**124**	T	T	16 48 16.9	
	baz=222						
H03N1	**Juan Fernandez**	**69.58**	**124**	T	T	16 48 16.6	
	baz=222,slow=74						
BOSA	**Boshof**	**84.13**	**211**	LR	LR	16 09 23.5	
	comp=Z,48nm,19.4s,baz=188,slow=35						
H08S2	**Diego Garcia H**	**86.32**	**260**	T	T	17 09 22.8	
	baz=153,slow=76,SNR=10						
H08S3	**Diego Garcia H**	**86.34**	**260**	T	T	17 09 28.1	
	baz=151,slow=76,SNR=140						
ILAR	**Eielson Array**	**131.72**	**23**	PKP	**PKPdf**	**15 39 59.7**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=232,slow=4.4,SNR=1.8						
BRTR	**Keskin Array B**	**144.84**	**249**	PKPbc	**PKPab**	**15 40 23.9**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=163,slow=4.8,SNR=5.2						
BRTR	**Keskin Array B**	**144.84**	**249**		**PKPab**	**15 40 23.6**	**-0.3**

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*WEL **10** 15:23:05.5±0.6, 36°.52S×18°.0W±°, h33km, M5.0/30, ML5.2/30, MLv5.0/30, Error ellipse: s-maj=0.0km s-min=0.0km az=119.4*
*IDC **10** 15:23:09.1±1.6, 36°.01S×179°.81E, h34km±11km, mb4.4/17, mb1 4.5/20, mb1mx4.4/23, mbtmp4.5/20, ML3.8/3, MS4.3/13, Ms1 4.3/13, ms1mx4.0/25, Error ellipse: s-maj=15.0km s-min=12.5km az=179.0*
*NEIC **10** 15:23:10.5±1.3, 36°.18S±0°.07×179°.78E±0°.08, h51km±5km, mb4.8/35, Error ellipse: s-maj=12.5km s-min=5.8km az=139.0*
*GCMT **10** 15:23:10.5±0.3, 36°.14S±0°.02×179°.94W±0°.02, h25km, MW5.0/85, Moment Tensor Solution. s55,c75; s85,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.51±.18; $M_{\theta\theta}$-0.56±.11; $M_{\phi\phi}$-2.95±.11; $M_{r\theta}$0.29±.27; $M_{\theta\phi}$-1.51±.08; $M_{\phi r}$3.03±.24; Best double couple: $M_0$4.71300×10^{16} NP1:ϕ_s13.00000°, δ65.00000°, λ79.00000°. NP2: ϕ_s219.00000°, δ27.00000°, λ113.00000°. Principal axes: T 4.7250, Plg68.0000°, Azm261.0000°; N -0.0260, Plg10.0000°, Azm18.0000°; P -4.7010, Plg20.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 10 15:23:09.0±0.7, 36°.19S±0°.04×179°.97W±0°.05, h40km±5km, n251, σ1s58/253, mb4.9/42, MS4.2/15, 3C, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.95**	**225**	Pn	**Pn**	**15 23 38.3**	**-1.4**
PKGZ	**Pakihiroa**	**2.31**	**222**	P	**Pn**	**15 23 44.4**	**-0.2**
PKGZ				S	**Sn**	**15 24 14.9**	**+3.1**
PUZ	**Puketiti**	**2.35**	**217**	P	**Pn**	**15 23 44.7**	**-0.5**
PUZ				S	**Sn**	**15 24 14.9**	**+2.0**
HAZ	**Te Kaha**	**2.39**	**228**	P	**Pn**	**15 23 45.4**	**-0.2**
HAZ				S	**Sn**	**15 24 18.6**	**+4.9**
TWGZ	**Tauwhareparae**	**2.57**	**219**	P	**Pn**	**15 23 48.0**	**-0.2**
RUGZ	**Raukumara Rang**	**2.59**	**226**	P	**Pn**	**15 23 48.8**	**+0.2**
CNGZ	**Carnagh Statio**	**2.71**	**212**	P	**Pn**	**15 23 50.2**	**0.0**
TKGZ	**Te Karaka**	**2.84**	**217**	P	**Pn**	**15 23 51.0**	**-0.9**
TKGZ				S	**Sn**	**15 24 26.7**	**+1.8**
MWZ	**Matawai**	**2.93**	**222**	P	**Pn**	**15 23 52.4**	**-0.8**
MWZ				S	**Sn**	**15 24 28.5**	**+1.4**
WHRZ	**Whale Island**	**2.96**	**235**	P	**Pn**	**15 23 54.5**	**+1.0**
RIGZ	**Rimuhau**	**3.10**	**215**	P	**Pn**	**15 23 54.2**	**-1.2**
RIGZ				S	**Sn**	**15 24 32.1**	**+1.0**
RAGZ	**Rawiri**	**3.11**	**221**	P	**Pn**	**15 23 55.3**	**-0.3**
RAGZ				S	**Sn**	**15 24 33.1**	**+1.5**
URZ	**Urewera**	**3.12**	**228**	Pn	**Pn**	**15 23 54.8**	**-0.8**
	51nm,0.3s,baz=41,slow=10,SNR=197						
URZ				Sn	**Sn**	**15 24 31.5**	**-0.2**
	77nm,0.3s,baz=39,slow=18,SNR=10						
URZ				LR	LR	15 25 02.7	
	comp=Z,1μm,21.7s,baz=36,slow=36						
URZ	**Urewera**	**3.12**	**228**	P	**Pn**	**15 23 55.1**	**-0.6**
URZ				S	**Sn**	**15 24 33.1**	**+1.4**
URZ	**Urewera**	**3.12**	**228**	Pn	**Pn**	**15 23 54.5**	**-1.2**
PRGZ	**Paritu Road**	**3.22**	**211**	P	**Pn**	**15 23 55.6**	**-1.5**
MARZ	**Manawahe**	**3.23**	**235**	P	**Pn**	**15 23 56.8**	**-0.5**
OPRZ	**Ohinepanea**	**3.24**	**238**	P	**Pn**	**15 23 56.6**	**-0.7**
EDRZ	**Edgecumbe**	**3.25**	**233**	P	**Pn**	**15 23 57.7**	**+0.1**
SNGZ	**Shannon Statio**	**3.36**	**219**	P	**Pn**	**15 23 58.3**	**-0.7**
SNGZ				S	**Sn**	**15 24 38.5**	**+0.8**
KNZ	**Kokohu**	**3.39**	**213**	P	**Pn**	**15 23 57.7**	**-1.8**
KNZ				S	**Sn**	**15 24 41.2**	**+2.8**
MHGZ	**Mahia Peninsul**	**3.41**	**209**	P	**Pn**	**15 23 58.2**	**-1.5**
MHGZ				S	**Sn**	**15 24 39.4**	**+0.6**
RTZ	**Ruatahuna**	**3.43**	**224**	P	**Pn**	**15 24 00.3**	**+0.2**
RTZ				S	**Sn**	**15 24 43.9**	**+4.4**
MUGZ	**Murupara**	**3.46**	**228**	P	**Pn**	**15 23 59.5**	**-1.0**
MUGZ				S	**Sn**	**15 24 41.2**	**+1.0**
TARZ	**Mount Tarawera**	**3.48**	**233**	P	**Pn**	**15 24 01.2**	**+0.5**
OMRZ	**Omania**	**3.50**	**236**	P	**Pn**	**15 24 01.1**	**+0.1**
KUZ	**Kuaotunu**	**3.52**	**260**	P	**Pn**	**15 24 01.1**	**-0.1**
RRRZ	**Republican Roa**	**3.53**	**232**	P	**Pn**	**15 24 01.1**	**-0.3**
KARZ	**Kaharoa**	**3.54**	**238**	P	**Pn**	**15 24 01.2**	**-0.3**
HLRZ	**Highlands Stat**	**3.59**	**234**	P	**Pn**	**15 24 02.0**	**-0.2**
RAHZ	**Arahi**	**3.59**	**220**	P	**Pn**	**15 24 02.0**	**-0.2**
RAHZ				S	**Sn**	**15 24 47.5**	**+4.1**
NGRZ	**Ngongotaha**	**3.62**	**237**	P	**Pn**	**15 24 03.0**	**+0.4**
WHHZ	**Waihua**	**3.64**	**217**	P	**Pn**	**15 24 02.1**	**-0.7**
WHHZ				S	**Sn**	**15 24 48.5**	**+3.9**
UTU	**Utuhina**	**3.65**	**236**	P	**Pn**	**15 24 04.4**	**+1.4**
MTHZ	**Maungataniwha**	**3.67**	**223**	P	**Pn**	**15 24 02.6**	**-0.8**
MTHZ				S	**Sn**	**15 24 47.5**	**+2.0**
HSRZ	**Hossack Road**	**3.69**	**234**	P	**Pn**	**15 24 03.9**	**+0.3**
GRZ	**Great Barrier**	**3.70**	**268**	P	**Pn**	**15 24 04.2**	**+0.5**
PRRZ	**Plateau Road**	**3.71**	**230**	P	**Pn**	**15 24 03.3**	**-0.5**
HRRZ	**Handcock Road**	**3.71**	**233**	P	**Pn**	**15 24 04.0**	**+0.1**
ALRZ	**Allen Road**	**3.77**	**230**	P	**Pn**	**15 24 04.1**	**-0.6**
GRRZ	**Galatos Road**	**3.80**	**234**	P	**Pn**	**15 24 05.3**	**+0.2**
NMHZ	**Naumai**	**3.87**	**220**	P	**Pn**	**15 24 06.0**	**-0.1**
NMHZ				S	**Sn**	**15 24 50.3**	**-0.1**
ARHZ	**Aropaoanui**	**3.90**	**217**	P	**Pn**	**15 24 05.2**	**-1.2**
ARHZ				S	**Sn**	**15 24 53.0**	**+2.0**
MRHZ	**Matea Rd**	**3.90**	**226**	P	**Pn**	**15 24 06.4**	**-0.2**
TOZ	**Tahuroa Road**	**3.94**	**246**	P	**Pn**	**15 24 06.7**	**-0.3**
WIAZ	**Waiheke Island**	**3.99**	**260**	P	**Pn**	**15 24 08.1**	**+0.4**
KUTZ	**Kaahu Road**	**4.07**	**234**	P	**Pn**	**15 24 08.9**	**+0.2**
BKZ	**Black Stump Fm**	**4.09**	**222**	P	**Pn**	**15 24 07.7**	**-1.4**
BKZ				S	**Sn**	**15 25 00.2**	**+4.5**
BKZ	**Black Stump Fm**	**4.09**	**222**		**Pn**	**15 24 07.5**	**-1.6**
HATZ	**Hinemaiaia**	**4.13**	**228**	P	**Pn**	**15 24 09.1**	**-0.6**
CKHZ	**Cape Kidnapper**	**4.18**	**213**	P	**Pn**	**15 24 07.6**	**-2.7**
ETAZ	**East Tamaki Re**	**4.18**	**258**	P	**Pn**	**15 24 11.8**	**+1.5**
RATZ	**Rangitukua**	**4.31**	**230**	P	**Pn**	**15 24 12.0**	**-0.2**
WCZ	**Waipu Caves**	**4.61**	**271**	P	**Pn**	**15 24 18.6**	**+2.3**
HIZ	**Hauiti**	**4.73**	**239**		**Pn**	**15 24 17.4**	**-0.5**
OUZ	**Omahuta**	**5.33**	**279**	Pn	**Pn**	**15 24 25.5**	**-0.6**
BFZ	**Birch Farm**	**5.38**	**212**	Pn	**Pn**	**15 24 23.4**	**-3.3**
MSWZ	**Moikau Station**	**6.42**	**214**	Pn	Pn	15 24 36.2	-4.8
PLWZ	**Palliser**	**6.54**	**213**	Pn	**Pn**	**15 24 38.7**	**-4.0**
BHW	**Baring Head**	**6.59**	**216**	Pn	**Pn**	**15 24 39.7**	**-3.6**
SNZO	**South Karori**	**6.59**	**218**	Pn	Pn	15 24 39.0	-4.4
TUWZ	**Tuamarina**	**7.07**	**220**	Pn	Pn	15 24 44.9	-5.0
GLKZ	**Green Lake**	**7.12**	**15**	S	**Sn**	**15 26 05.8**	**-4.4**
NNZ	**Nelson**	**7.23**	**224**	Pn	**Pn**	**15 24 48.2**	**-3.9**
BSWZ	**Blackbirch Sta**	**7.31**	**219**	Pn	Pn	15 24 48.9	-4.4
QRZ	**Quartz Range**	**7.49**	**230**	Pn	Pn	15 24 51.3	-4.4
THZ	**Tophouse**	**7.86**	**223**	Pn	Pn	15 24 56.2	-4.7
CTZ	**Chatham Island**	**7.96**	**162**	P	**Pn**	**15 24 59.4**	**-2.8**
CTZ				S	**Sn**	**15 26 25.2**	**-5.7**
KHZ	**Kahutara**	**8.00**	**217**	Pn	Pn	15 24 57.5	-5.0
LTZ	**Lake Taylor**	**8.90**	**220**	Pn	Pn	15 25 10.5	-4.6
MQZ	**McQueen's Vall**	**9.40**	**215**	Pn	Pn	15 25 16.0	-5.8
OXZ	**Oxford**	**9.41**	**218**	Pn	Pn	15 25 17.2	-4.9
RPZ	**Rata Peaks**	**10.19**	**220**	Pn	**Pn**	**15 25 33.4**	**+0.7**
	0.7nm,0.3s,baz=120,slow=21,SNR=1.9						
RPZ				Sn	Sn	15 27 14.6	-11
	3.7nm,0.3s,baz=0.2,slow=23,SNR=6.8						
RPZ	**Rata Peaks**	**10.19**	**220**	Pn	Pn	15 25 27.3	-5.4
LBZ	**Lake Benmore**	**11.11**	**220**	Pn	Pn	15 25 39.9	-5.4
ODZ	**Otahua Downs**	**11.36**	**216**	Pn	Pn	15 25 42.8	-5.8
WHZ	**Wether Hill Ro**	**13.30**	**219**	Pn	**Pn**	**15 26 11.6**	**-3.5**
LHI	**Lord Howe Isla**	**18.02**	**279**	P	**P**	**15 27 19.9**	**+3.4**
	baz=18,SNR=3.9						
DZM	**Mont Dzumac**	**18.38**	**316**	P	**P**	**15 27 18.2**	**-2.4**
	0.1nm,0.3s,baz=122,slow=19,SNR=1.4						
DZM	**Mont Dzumac**	**18.38**	**316**	*eP*	**Pn**	**15 27 25.1**	**+4.2**
	94nm,1.3s						
DZM				*eLR*	LR	15 31 39.8	
	comp=Z,3μm,23.4s						
DZM	**Mont Dzumac**	**18.38**	**316**	P	**P**	**15 27 20.7**	**+0.1**
MSVF	**Nonsavu**	**18.47**	**354**		**Pn**	**15 27 22.4**	**+0.4**
MSVF				IAmb	IAmb	15 27 31.0	
	comp=Z,31nm,0.9s						
AFI	**Afiamalu**	**23.37**	**20**	P	**P**	**15 28 14.8**	**+0.6**
	comp=Z,24nm,0.8s,baz=247,slow=7.7,SNR=4.1						
AFI	**Afiamalu**	**23.37**	**20**	P	**P**	**15 28 15.5**	**+1.3**
AFI				IAmb	IAmb	15 28 33.9	
	comp=Z,40nm,0.9s						
SANVU	**Saraoutou**	**23.62**	**328**	P	**P**	**15 28 16.4**	**0.0**
ARMA	**Armidale**	**24.38**	**275**	P	**P**	**15 28 21.6**	**-2.1**
ARMA				IAmb	IAmb	15 28 37.4	
	comp=Z,26nm,1.2s						
EIDS	**Eidsvold**	**27.02**	**285**	P	**P**	**15 28 48.6**	**+1.2**
	baz=27,SNR=5.9						
EIDS	**Eidsvold**	**27.02**	**285**	P	**P**	**15 28 46.8**	**-0.6**
EIDS				IAmb	IAmb	15 29 00.0	
	comp=Z,21nm,1.0s						
RMQ	**Roma**	**28.31**	**281**	P	**P**	**15 29 00.7**	**+1.8**
	baz=28,SNR=7.3						
TBI	**Tubuai**	**29.28**	**73**	*eLQ*	LQ	15 35 00.3	
	comp=Z,580nm,25.8s						
TBI				*eLR*	LR	15 36 38.2	
	comp=Z,523nm,26.8s,baz=240						
QLP	**Quilpie**	**31.87**	**277**	P	**P**	**15 29 31.3**	**+0.8**
	baz=32,SNR=11						
STKA	**Stephens Creek**	**32.00**	**266**	P	**P**	**15 29 30.3**	**-1.3**
	comp=Z,6.3nm,1.0s,baz=101,slow=9.1,SNR=6.3						
STKA	**Stephens Creek**	**32.00**	**266**	P	**P**	**15 29 32.4**	**+0.9**
	baz=32,SNR=4.6						
STKA	**Stephens Creek**	**32.00**	**266**	P	**P**	**15 29 30.1**	**-1.5**
HNR	**Honiara**	**32.29**	**321**	LR	LR	15 40 29.9	
	comp=Z,288nm,20.5s,baz=178,slow=32						
PAE	**Paea**	**32.58**	**64**	*eT*	T	16 03 40.2	
	comp=Z,1.4nm,0.4s						
PPT2	**Papeete2**	**32.63**	**63**	*eP*	**P**	**15 29 41.2**	**+4.0**
	comp=Z,30nm,1.3s						
PPT2				*eLQ*	LQ	15 36 30.0	
	comp=Z,410nm,23.5s						
PPT2				*eLR*	LR	15 38 12.0	
	comp=Z,596nm,24.5s,baz=220						
PPT2	**Papeete2**	**32.63**	**63**	*eT*	T	16 03 44.8	
	comp=Z,2.1nm,0.3s						
PPT	**Papeete**	**32.65**	**63**	P	**P**	**15 29 39.2**	**+1.9**
	comp=Z,27nm,1.1s,baz=216,slow=10,SNR=3.2						
PPT				LR	LR	15 39 39.0	
	comp=Z,253nm,21.1s,baz=212,slow=30						
TVO	**Taravao**	**32.74**	**64**	*eP*	**P**	**15 29 41.9**	**+3.7**
	comp=Z,7.9nm,1.0s						
TVO	**Taravao**	**32.74**	**64**	*eT*	T	16 03 52.3	
	comp=Z,1.0nm,0.3s						
TIAR	**Tiarei**	**32.82**	**64**	*eP*	**P**	**15 29 42.8**	**+4.0**
	comp=Z,6.8nm,0.8s						
CTA	**Charters Tower**	**33.62**	**289**	P	**P**	**15 29 44.0**	**-1.9**
	comp=Z,20nm,0.8s,baz=112,slow=11,SNR=18						
CTAO	**Charters Tower**	**33.62**	**289**	P	**P**	**15 29 46.1**	**+0.3**
KNTN	**Kanton**	**34.11**	**15**	P	**P**	**15 29 50.9**	**+0.8**
BBOO	**Buckleboo**	**36.17**	**262**	P	**P**	**15 30 05.2**	**-2.4**
BBOO				IAmb	IAmb	15 30 21.3	
	comp=Z,7.6nm,0.8s						
MTSU	**Mount Surprise**	**36.25**	**290**	P	**P**	**15 30 09.6**	**+1.1**
	baz=36,SNR=8.5						
QIS	**Mount Isa**	**38.53**	**283**	P	**P**	**15 30 27.7**	**-0.1**
	baz=38,SNR=15						
PMG	**Port Moresby**	**40.02**	**304**	P	**P**	**15 30 38.5**	**-1.7**
	comp=Z,16nm,0.9s,baz=111,slow=8.6,SNR=4.2						
PMG				LR	LR	15 45 47.0	
	comp=Z,938nm,18.1s,baz=147,slow=34						
PMG	**Port Moresby**	**40.02**	**304**	IAmb	IAmb	15 30 41.8	
	comp=Z,28nm,1.0s						
KRVT	**Keravat (AS076**	**40.88**	**314**	P	P	15 30 42.4	-4.9
	comp=Z,77nm,0.8s,baz=94,slow=7.7,SNR=4.9						
KRVT				LR	LR	15 46 24.5	
	comp=Z,262nm,19.9s,baz=148,slow=34						
RABL	**Rabaul**	**40.89**	**315**	P	**P**	**15 30 46.1**	**-1.3**
AS31	**Alice Springs**	**41.52**	**274**	P	**P**	**15 30 51.6**	**-1.1**
ASAR	**Alice Springs**	**41.52**	**274**	P	**P**	**15 30 51.7**	**-1.0**
	comp=Z,18nm,0.8s,baz=118,slow=7.8,SNR=165						
ASAR				PcP	**PcP**	**15 32 50.5**	**+0.9**
	comp=Z,2.5nm,1.0s,baz=110,slow=5.1,SNR=1.3						
ASAR				ScP	**ScP**	**15 36 35.5**	**-1.0**
	comp=Z,1.2nm,1.0s,baz=101,slow=3.9,SNR=6.2						
ASAR				S	**S**	**15 37 05.9**	**+0.1**
	comp=Z,2.0nm,0.9s,baz=125,slow=16,SNR=9.2						
ASAR				LR	LR	15 48 23.6	
	comp=Z,1μm,18.1s,baz=124,slow=37						
ASAR	**Alice Springs**	**41.52**	**274**	P	**P**	**15 30 50.3**	**-2.4**
VNDA	**Vanda**	**42.19**	**186**	P	**P**	**15 30 59.1**	**+1.7**
	comp=Z,0.9nm,0.9s,baz=92,slow=15,SNR=0.9						
VNDA				LR	LR	15 45 57.5	
	comp=Z,205nm,18.6s,baz=28,slow=32						
WR0	**Warramunga Arr**	**42.87**	**280**	P	**P**	**15 31 02.6**	**-1.0**
WR0				IAmb	IAmb	15 31 03.8	
	comp=Z,23nm,0.9s						
WB2	**Warramunga Arr**	**43.03**	**279**	P	**P**	**15 31 03.9**	**-1.1**
WRAB	**Tennant Creek**	**43.03**	**279**	P	**P**	**15 31 03.5**	**-1.5**
WRAB				IAmb	IAmb	15 31 05.0	
	comp=Z,24nm,0.8s						
WRA	**Warramunga Arr**	**43.04**	**279**	P	**P**	**15 31 04.0**	**-1.0**
	comp=Z,20nm,0.7s,baz=120,slow=7.8,SNR=126						
WRA				PcP	**PcP**	**15 32 56.4**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=129,slow=3.4,SNR=2.6						
WRA				ScP	**ScP**	**15 36 42.6**	**0.0**
	comp=Z,0.2nm,0.8s,baz=105,slow=3.9,SNR=4.5						
WRA				S	**S**	**15 37 26.1**	**-2.0**
	comp=Z,4.3nm,1.0s,baz=121,slow=14,SNR=10						
WRA				LR	LR	15 49 23.5	
	comp=Z,2μm,18.5s,baz=120,slow=37						
WRA	**Warramunga Arr**	**43.04**	**279**	P	**P**	**15 31 02.6**	**-2.4**
WB0	**Warramunga Arr**	**43.09**	**280**	P	**P**	**15 31 04.2**	**-1.1**
FORT	**Forrest**	**43.26**	**262**	P	**P**	**15 31 05.9**	**-0.8**
FORT				IAmb	IAmb	15 31 12.7	
	comp=Z,20nm,0.7s						
TAOE	**Nuku Hiva Isla**	**45.26**	**63**	*e*LR	LR	15 44 01.0	
	comp=Z,386nm,25.6s						
WRKA	**Warakurna**	**45.42**	**269**	P	**P**	**15 31 22.4**	**-1.7**
	baz=45,SNR=18						
MTN	**Manton Dam**	**49.57**	**285**	P	**P**	**15 31 55.1**	**-1.3**
GENI	**Genyem**	**49.71**	**303**	P	**P**	**15 31 56.3**	**-1.0**
	comp=Z,30nm,0.6s						
KNRA	**Kununurra**	**49.80**	**280**	P	**P**	**15 31 57.8**	**-0.3**
	baz=50,SNR=7.0						
KNRA	**Kununurra**	**49.80**	**280**	P	**P**	**15 31 57.0**	**-1.1**
FITZ	**Fitzroy Crossi**	**50.99**	**276**	P	**P**	**15 32 06.7**	**-0.3**
	baz=51,SNR=7.5						
FITZ	**Fitzroy Crossi**	**50.99**	**276**	P	**P**	**15 32 05.9**	**-1.1**
FITZ				IAmb	IAmb	15 32 07.8	
	comp=Z,13nm,1.0s						
NWAO	**Narrogin (SRO)**	**51.02**	**254**	P	**P**	**15 32 04.5**	**-2.6**
KLBR	**Kellerberrin**	**51.13**	**256**	P	**P**	**15 32 06.9**	**-1.0**
	baz=51,SNR=7.3						
MUN	**Mundaring**	**52.19**	**255**	P	**P**	**15 32 15.0**	**-0.8**
	baz=52,SNR=3.9						
MEEK	**Meekatharra**	**52.52**	**262**	P	**P**	**15 32 16.7**	**-1.7**
	baz=52,SNR=5.5						
MORW	**Morawa**	**53.51**	**258**	P	**P**	**15 32 24.1**	**-1.6**
**P

comp=Z,16nm,1.4s
WMQ Urumqi 115.44 307 *e*PKP **PKiKP 15 41 46.7 +0.5**
ZSN Zaisan 118.76 310 *e*PKP **PKPdf 15 41 52.1 -0.3**
baz=310
MK31 Makanchi Array 120.13 308 PKPdf 15 41 54.3 -0.8
MKAR Makanchi Array 120.13 308 PKP **PKPdf 15 41 54.5 -0.6**
comp=Z,4.3nm,0.9s,baz=64,slow=2.8,SNR=26
MKAR Makanchi Array 120.13 308 PKPdf 15 41 54.0 -1.1
MAKZ Makanchi 120.34 306 PKPdf 15 41 54.4 -1.1
SHLS Shalkode 120.61 303 *e*PKP **PKPdf 15 41 55.4 -0.9**
baz=304
ZALV Zalesovo Beam 121.17 317 PKPdf 15 41 56.3 -0.5
comp=Z,1.9nm,0.8s,baz=117,slow=2.0,SNR=7.9
ZALV Zalesovo Beam 121.17 317 PKPdf 15 41 55.6 -1.2
KPKS Kokpek 121.26 303 *e*PKP **PKPdf 15 41 57.1 -0.4**
baz=304
SATY Saty 121.29 303 *e*PKP **PKPdf 15 41 57.4 -0.2**
baz=303
TDK Taldyqorghan 122.00 305 *e*PKP **PKPdf 15 41 58.1 -0.6**
baz=305
KUU Kurty 123.00 303 *e*PKP **PKPdf 15 41 59.8 -0.9**
baz=303
KURK Kurchatov 123.75 311 PKPdf 15 42 01.5 -0.4
SGDS Sogindy 124.01 302 *e*PKP **PKPdf 15 42 02.1 -0.6**
baz=302
NRIK Noril'sk 124.19 335 PKP **PKPdf 15 42 01.3 -0.9**
comp=Z,3.5nm,0.9s,baz=86,slow=4.3,SNR=5.3
KBL Kabul 124.82 290 PKPdf 15 42 04.3 -0.4
GAR Garm 125.53 296 PKPdf 15 42 05.6 -0.3
BTK Batken 125.53 297 PKPdf **PKPdf 15 42 05.8 0.0**
DZA Taraz 126.11 301 *e*PKP **PKPdf 15 42 06.6 -0.1**
baz=301
CHGR Chuyangaron 126.25 295 PKPdf 15 42 07.4 +0.1
KK31 Karatay Array 126.74 301 PKPdf 15 42 08.1 +0.1
KKAR Karatay Array 126.74 301 PKPdf 15 42 08.1 +0.2
IUG Iuzhnay 126.78 299 *e*PKP **PKPdf 15 42 08.2 0.0**
baz=300
BRZS Berezniki 127.21 309 *e*PKP **PKPdf 15 42 07.8 -0.8**
baz=310
KMBO Kilima Mbogo 129.24 231 PKP **PKiKP 15 42 14.6 -0.1**
comp=Z,0.8nm,0.7s,baz=114,slow=4.0,SNR=3.6
BRVK Borovoye 129.32 313 PKPdf 15 42 12.3 -0.2
GEYT Alibeck 134.27 290 PKP **PKPdf 15 42 21.9 -0.5**
comp=Z,2.5nm,0.8s,baz=304,slow=3.4,SNR=5.7
GEYT SKPbc **SKPbc 15 45 49.8 +1.1**
comp=Z,2.6nm,0.7s,baz=222,slow=3.6,SNR=10
GEYT Alibeck 134.27 290 PKPdf 15 42 22.4 0.0
ABKAR Akbulak array 135.22 306 PKPdf 15 42 23.6 -0.1
ARU Arti 136.34 317 PKPdf 15 42 25.1 -0.5
ARCES ARCESS Array B 143.82 345 PKP PKPbc 15 42 36.7 +0.2
comp=Z,3.7nm,0.7s,baz=318,slow=1.6,SNR=7.2
KLMR Klimovskoe 144.91 327 *e*PKPdf **PKPab 15 42 38.3 -1.8**
KLMR AMP 15 42 40.6
comp=Z,46nm,1.4s
GEVA Gevas 145.91 287 PKPdf 15 42 43.9 +0.3
LIC Lamto 149.82 170 *e*PKIKP **PKPab 15 43 02.4 +1.7**
comp=Z,82nm,1.3s
FIA1 FINESS Array S 149.86 335 PKPbc 15 42 54.1 +0.2
FINES FINESS Array B 149.86 335 PKPbc **PKiKP 15 42 54.5 -0.3**
comp=Z,32nm,0.8s,baz=97,slow=4.4,SNR=54
FINES FINESS Array B 149.86 335 PKPbc 15 42 54.0 0.0
KIC Kosan Boka 149.99 170 *e*PKIKP **PKPab 15 43 02.7 +1.3**
comp=Z,32nm,1.1s
TIC Toumodi 150.23 170 *e*PKIKP **PKPab 15 43 03.0 +0.6**
DBIC Dimbokro 150.28 170 PKPbc **PKiKP 15 42 57.1 -0.1**
comp=Z,6.0nm,1.0s,baz=207,slow=7.2,SNR=2.5
QRWL Qaraoun 150.73 275 *e*P **PKiKP 15 42 58.1 +0.4**
BHL Bhannes 150.85 276 *e*P **PKiKP 15 42 58.1 +0.1**
DQRL Deir Qamar 150.86 276 *e*P **PKiKP 15 42 58.2 +0.3**
VSU Vasula 151.64 330 *e*P **PKPbc 15 42 58.4 +0.3**
ILGA Ilgaz 153.34 291 PKPbc 15 43 02.5 -0.4
BR131 Keskin Array S 153.36 288 PKPbc 15 43 02.1 -0.8
BRTR Keskin Array B 153.36 288 PKPbc **PKPbc 15 43 02.5 -0.3**
comp=Z,10nm,0.9s,baz=146,slow=4.4,SNR=25
BRTR PKPab **sPKPdf 15 43 13.1 +1.9**
comp=Z,4.5nm,0.8s,baz=278,slow=5.0,SNR=16
BRTR Keskin Array B 153.36 288 PKPbc 15 43 02.0 -0.8
IDID Didziasalis 153.57 325 *e*P **PKiKP 15 43 03.1 +0.4**
ISAL Salakas 153.70 326 *e*P **PKiKP 15 43 03.3 +0.3**
NACGM Naroch 153.78 324 *e* **PKiKP 15 43 04.0 +0.8**
IIGN Ignalina 153.78 325 *e*P **PKiKP 15 43 03.5 +0.4**
NB2 NORSAR Subarra154.13 348 PKPdf **PKiKP 15 43 04.2 +0.4**
comp=Z,20nm,1.4s,baz=31,slow=1.9
NB2 NORSAR Subarra154.13 348 PKPdf **PKiKP 15 43 04.2 +0.4**
baz=31,slow=1.9
NOA NORSAR Array B154.13 348 PKP **PKPdf 15 42 55.7 +0.1**
comp=Z,0.5nm,0.9s,baz=261,slow=7.6,SNR=2.2
NOA PKPbc **PKiKP 15 43 04.0 +0.2**
comp=Z,2.8nm,1.0s,baz=32,slow=2.0,SNR=4.8
AKASG Malin Array Be 154.53 314 PKP **PKPdf 15 42 55.2 -1.2**
comp=Z,0.4nm,0.4s,baz=58,slow=2.9,SNR=1.6
AKASG PKPbc **PKPbc 15 43 04.6 -0.2**
comp=Z,4.4nm,0.6s,baz=56,slow=2.4,SNR=18
AKASG Malin Array Be 154.53 314 PKPbc 15 43 04.2 -0.6
AKBB Malin Array Si 154.53 314 PKPbc 15 43 04.5 -0.3
PABE Paberze 154.70 327 *e*P **PKiKP 15 43 05.8 +0.8**
TORD Torodi Ar. Bea 157.01 184 PKP **PKPdf 15 43 01.8 +1.0**
comp=Z,2.4nm,1.0s,baz=329,slow=2.5,SNR=8.0
TORD PKPab **PKPab 15 43 32.3 +1.4**
comp=Z,6.0nm,1.1s,baz=176,slow=3.7,SNR=6.2
TORD Torodi Ar. Bea 157.01 184 PKPdf 15 43 00.5 -0.3
GERES GERESS Array B 163.86 326 PKPab **PKPab 15 43 59.0 -1.2**
comp=Z,0.9nm,0.7s,baz=25,slow=3.5,SNR=6.1
GERES GERESS Array B 163.86 326 PKPab 15 43 59.1 -1.0
ESDC Sonseca Array 175.30 41 PKP **PKPdf 15 43 16.8 +2.3**
comp=Z,1.2nm,0.8s,baz=352,slow=3.3,SNR=4.6
ESDC SKP **SKPdf 15 46 41.1 -1.1**
comp=Z,0.5nm,0.3s,baz=286,slow=4.6,SNR=1.7
ESDC Sonseca Array 175.30 41 PKPdf 15 43 15.0 +0.4

IDC 10 15:54:55.4±8.5, 8°30S×128°58E, h0km, mb3.9/1, mb1 3.6/3, mb1mx3.3/25, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=290.7km s-min=94.2km az=77.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.85**	**155**	Pn	Pn	15 57 57.9	-1.6
	0.3nm,0.3s,baz=331,slow=12,SNR=26						
WRA				Sn	Sn	16 00 17.1	-6.3
	0.2nm,0.3s,baz=331,slow=24,SNR=6.5						
ASAR	**Alice Springs**	**16.11**	**162**	Pn	Pn	15 58 44.8	+1.3
	0.1nm,0.3s,baz=340,slow=8.2,SNR=9.5						
ASAR				Sn	Sn	16 01 45.1	+2.2
	0.1nm,0.3s,baz=356,slow=28,SNR=2.3						
STKA	**Stephens Creek**	**26.40**	**154**	P	P	16 00 33.9	+0.1
	0.9nm,0.5s,baz=324,slow=8.7,SNR=2.9						

MAN 10 16:11:59.7, 8.86N×122.34E, h45km, mb4.4, ML3.2, MS3.0, Mindanao

*IDC **10** 16:17:05.9±3.0, 22.88N×11.74W, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.5/57, mbtmp3.7/5, ML3.5/2, Error ellipse: s-maj=93.2km s-min=32.0km az=78.0*
ISC 10 16:17:07.6±2.9, 22.9N±0.2×11.6W±0.5, h10km, n7, σ0.74/8, mb3.7/3, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOWA	**Kowa**	**11.00**	**138**	Pn	**Pn**	**16 19 45.9**	**+0.7**
	0.6nm,0.3s,baz=326,slow=9.9,SNR=7.3						
KOWA				Sn	**Sn**	**16 21 47.5**	**-0.9**
	0.4nm,0.3s,baz=78,slow=20,SNR=6.2						
TORD	**Torodi Ar. Bea**	**15.92**	**125**	Pn	**Pn**	**16 20 52.4**	**+0.5**
	0.1nm,0.3s,baz=309,slow=13,SNR=3.3						
GERES	**GERESS Array B**	**32.79**	**31**	P	**P**	**16 23 41.7**	**+0.6**
	0.7nm,0.7s,baz=219,slow=10,SNR=5.1						
FINES	**FINESS Array B**	**46.43**	**24**	P	**P**	**16 25 33.4**	**-0.8**
	2.5nm,1.0s,baz=215,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**76.28**	**45**	P	**P**	**16 28 56.9**	**+0.2**
	0.3nm,0.5s,baz=303,slow=5.3,SNR=6.4						
WRA	**Warramunga Arr**	**148.22**	**91**	PKPbc	**PKPbc**	**16 36 54.4**	**-0.3**
	0.4nm,0.7s,baz=291,slow=2.5,SNR=5.0						
ASAR	**Alice Springs**	**148.37**	**98**	PKPbc	**PKPbc**	**16 36 54.8**	**-0.3**
	0.4nm,0.7s,baz=269,slow=1.8,SNR=8.9						

*IDC **10** 16:18:16.7±0.8, 2.44N×99.26E, h134km±9km, mb3.2/6, mb1 3.2/7, mb1mx3.0/58, mbtmp3.5/7, Error ellipse: s-maj=65.5km s-min=16.0km az=56.0*
*DJA **10** 16:18:18.0±0.5, 2.7N±3.3×9.9E±*, h127km±5km, M3.1/8, MLv3.1/8*
ISC 10 16:18:17.0±0.8, 2.33N±0.07×98.97E±0.09, h150km, n13, σ1.40/17, mb3.3/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.47**	**355**	P	**Pn**	**16 18 37.1**	**-1.2**
	25nm,0.3s,baz=360,slow=11,SNR=32						
PSI				S	**Sn**	**16 18 51.9**	**-2.8**
	13nm,0.3s,baz=0.1,slow=21,SNR=55						
MNSI	**Mandailing Nat**	**1.64**	**158**	P	**Pn**	**16 18 47.7**	**-0.4**
KCSI	**Kotacane, Aceh**	**1.68**	**315**	P	**Pn**	**16 18 47.5**	**-1.0**
KCSI				S	**Sn**	**16 19 10.6**	**-2.1**
GSI	**Gunungsitoli**	**1.73**	**234**	P	**Pn**	**16 18 48.7**	**-0.3**
GSI				S	**Sn**	**16 19 12.2**	**-1.3**
TPTI		**2.01**	**297**	P	**Pn**	**16 18 51.8**	**-0.4**
TPTI				S	**Sn**	**16 19 17.4**	**-1.9**
LHMI	**Lhok Sumawe**	**3.52**	**325**	P	**Pn**	**16 19 11.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**16.03**	**360**	P	**Pn**	**16 21 54.1**	**-0.1**
	0.1nm,0.3s,baz=190,slow=11,SNR=4.5						
WRA	**Warramunga Arr**	**41.17**	**124**	P	**P**	**16 25 46.8**	**-0.2**
	0.3nm,0.4s,baz=302,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**42.70**	**129**	P	**P**	**16 25 59.0**	**-0.4**
	0.3nm,0.5s,baz=302,slow=7.9,SNR=13						
SONM	**Songino Array**	**45.78**	**7**	P	**P**	**16 26 23.9**	**+0.3**
	0.3nm,0.4s,baz=190,slow=7.3,SNR=2.0						
MKAR	**Makanchi Array**	**46.61**	**344**	P	**P**	**16 26 30.6**	**+0.6**
	0.2nm,0.4s,baz=158,slow=9.4,SNR=5.2						
GEYT	**Alibeck**	**51.51**	**319**	P	**P**	**16 27 09.8**	**+2.3**
	0.8nm,0.4s,baz=183,slow=10,SNR=1.5						
ZALV	**Zalesovo Beam**	**52.75**	**350**	P	**P**	**16 27 16.8**	**+0.6**
	0.5nm,0.4s,baz=173,slow=7.7,SNR=2.7						

IDC 10 16:21:49.4±3.1, 12.23S×65.71E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/58, mbtmp3.7/6, MS3.6/2, Ms1 3.6/2, ms1mx2.9/44, Error ellipse: s-maj=106.0km s-min=29.4km az=54.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**8.07**	**56**	T	T	16 32 14.0	
	baz=233						
H08S2	**Diego Garcia H**	**8.09**	**56**	T	T	16 32 10.0	
	baz=233,slow=74						
H08S3	**Diego Garcia H**	**8.09**	**56**	T	T	16 32 14.6	
	baz=233,slow=74						
PALK	**Pallekele**	**24.45**	**38**	LR	LR	16 33 42.8	
	comp=Z,51nm,18.8s,baz=275,slow=29						
H01W3	**Cape Leeuwin H**	**49.22**	**126**	T	T	17 23 24.0	
	baz=285,slow=75,SNR=6.3						
H01W2	**Cape Leeuwin H**	**49.23**	**126**	T	T	17 23 22.9	
	baz=285,slow=75,SNR=7.2						
H01W1	**Cape Leeuwin H**	**49.24**	**126**	T	T	17 23 24.9	
	baz=285,slow=75,SNR=6.2						
MKAR	**Makanchi Array**	**60.61**	**13**	P	P	16 32 02.0	0.0
	0.5nm,0.7s,baz=205,slow=6.4,SNR=4.8						
ASAR	**Alice Springs**	**65.36**	**111**	P	P	16 32 34.1	-0.1
	0.9nm,0.8s,baz=274,slow=6.1,SNR=5.0						
WRA	**Warramunga Arr**	**66.02**	**106**	P	P	16 32 38.5	0.0
	0.7nm,0.8s,baz=273,slow=5.2,SNR=5.5						
ZALV	**Zalesovo Beam**	**67.90**	**12**	P	P	16 32 48.6	-1.0
	0.5nm,0.4s,baz=205,slow=6.4,SNR=3.7						
SONM	**Songino Array**	**69.89**	**28**	P	P	16 33 03.2	+0.9
	0.3nm,0.4s,baz=203,slow=6.3,SNR=3.0						
AKASG	**Malin Array Be**	**70.28**	**336**	P	P	16 33 04.7	+0.3
	0.4nm,0.5s,baz=150,slow=5.9,SNR=2.3						
MA2	**Magadan**	**97.95**	**31**	LR	LR	17 20 45.9	
	comp=Z,75nm,20.8s,baz=352,slow=36						

*IDC **10** 16:24:52.3±2.0, 17.01S×178.97W, h541km±28km, mb2.9/7, mb1 3.2/9, mb1mx3.0/31, mbtmp3.9/9, Error ellipse: s-maj=53.7km s-min=14.3km az=152.0*
*NEIC **10** 16:24:52.1±1.9, 17.2S±0.2×178.8W±0.2, h555km±10km, mb4.2/17, Error ellipse: s-maj=31.3km s-min=16.7km az=148.0*
ISC 10 16:24:52.0±0.7, 17.1S±0.2×178.9W±0.1, h550km, n33, σ0.77/30, mb4.0/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.97**	**258**	P	P	16 26 13.1	+6.1
AFI	**Afiamalu**	**7.58**	**66**	P	**P**	**16 26 46.0**	**+0.2**
	2.4nm,0.3s,baz=259,slow=16,SNR=4.6						
DZM	**Mont Dzumac**	**14.65**	**248**	P	**P**	**16 27 58.5**	**+0.4**
	0.4nm,0.3s,baz=40,slow=16,SNR=1.3						
DZM	**Mont Dzumac**	**14.65**	**248**	P	**P**	**16 27 56.5**	**-1.6**
OUZ	**Omahuta**	**19.22**	**199**	P	**P**	**16 28 40.4**	**-0.5**
OUZ				IAmb	IAmb	16 28 41.7	
	comp=Z,9.6nm,0.9s						
ARMA	**Armidale**	**29.93**	**238**	P	**P**	**16 30 15.9**	**-0.2**
CTAO	**Charters Tower**	**33.11**	**259**	P	**P**	**16 30 44.2**	**+1.0**
CTAO				IAmb	IAmb	16 31 02.8	
	comp=Z,9.2nm,1.1s						
TOO	**Toolangi**	**37.30**	**230**	P	**P**	**16 31 17.8**	**0.0**
STKA	**Stephens Creek**	**38.59**	**240**	P	**P**	**16 31 29.0**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=85,slow=9.8,SNR=8.3						
STKA	**Stephens Creek**	**38.59**	**240**	IAmb	IAmb	16 31 29.4	
	comp=Z,0.7nm,0.7s						
BBOO	**Buckleboo**	**43.37**	**240**	P	**P**	**16 32 06.2**	**-0.1**
BBOO				IAmb	IAmb	16 32 08.9	
	comp=Z,6.6nm,0.9s						
WR0	**Warramunga Arr**	**44.12**	**259**	P	**P**	**16 32 12.4**	**+0.1**
WB0	**Warramunga Arr**	**44.27**	**259**	P	**P**	**16 32 13.6**	**+0.1**
WB2	**Warramunga Arr**	**44.30**	**259**	P	**P**	**16 32 13.8**	**+0.1**
WB2				IAmb	IAmb	16 32 34.6	
	comp=Z,7.5nm,1.4s						
WRAB	**Tennant Creek**	**44.30**	**259**	P	**P**	**16 32 13.7**	**0.0**
WRAB				IAmb	IAmb	16 32 27.2	
	comp=Z,5.3nm,1.1s						
WRA	**Warramunga Arr**	**44.31**	**259**	P	**P**	**16 32 14.0**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=96,slow=6.8,SNR=73						
WRA	**Warramunga Arr**	**44.31**	**259**	IAmb	IAmb	16 32 14.8	
	comp=Z,0.1nm,0.7s						
AS31	**Alice Springs**	**44.55**	**254**	P	**P**	**16 32 16.1**	**+0.5**
AS31				IAmb	IAmb	16 32 16.8	
	comp=Z,3.6nm,0.7s						
ASAR	**Alice Springs**	**44.55**	**253**	P	**P**	**16 32 16.3**	**+0.7**
	comp=Z,9.6nm,0.4s,baz=90,slow=7.6,SNR=544						
ASAR	**Alice Springs**	**44.55**	**253**	P	**P**	**16 32 15.6**	**0.0**
FORT	**Forrest**	**49.91**	**244**	P	**P**	**16 32 55.0**	**-0.7**
KNRA	**Kununurra**	**50.10**	**264**	P	**P**	**16 32 58.2**	**+1.0**
FITZ	**Fitzroy Crossi**	**52.69**	**260**	P	**P**	**16 33 17.5**	**+1.5**
MBWA	**Marble Bar**	**57.81**	**255**	P	**P**	**16 33 50.9**	**-0.7**
MJAR	**Matsushiro Arr**	**67.00**	**323**	P	**P**	**16 34 50.2**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=201,slow=9.8,SNR=1.4						
PAHR	**Pah Rah Range**	**79.17**	**43**	P	**P**	**16 35 58.8**	**-1.6**
PAHR				IAmb	IAmb	16 36 00.2	
	comp=Z,10nm,1.1s						
NVAR	**Mina Array Bea**	**79.20**	**44**	P	**P**	**16 36 01.6**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=226,slow=8.7,SNR=2.5						
HDA	**Harding Lake**	**84.92**	**13**	P	**P**	**16 36 27.9**	**-0.8**
HDA				IAmb	IAmb	16 36 28.7	
	comp=Z,8.2nm,0.8s						
ILAR	**Eielson Array**	**85.24**	**13**	P	**P**	**16 36 31.2**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=216,slow=5.7,SNR=4.8						
TXAR	**Lajitas Array**	**85.98**	**58**	P	**P**	**16 36 35.4**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=212,slow=7.0,SNR=6.5						
PDAR	**Pinedale Array**	**87.12**	**44**	P	**P**	**16 36 40.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=241,slow=1.3,SNR=3.5						
CLL	**Collm**	**144.60**	**347**	*e*PKPbc	**PKPab**	**16 43 27.0**	**+0.1**
CLL				LmV		16 56 00.0	
	comp=Z,100nm,21.9s						
GERES	**GERESS Array B**	**146.74**	**345**	PKPbc	**PKiKP**	**16 43 33.6**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=21,slow=3.6,SNR=2.5						

*IDC **10** 16:36:15.7±0.6, 64.55N×17.63W, h0km, mb3.8/17, mb1 4.0/21, mb1mx3.8/52, mbtmp3.8/21, ML3.1/4, Error ellipse: s-maj=19.8km s-min=9.5km az=10.0*
*REY **10** 16:36:15.8, 64.67N×17.44W, h10km*
*NEIC **10** 16:36:16.8±1.8, 64.55N±0.10×17.7W±0.2, h8km±4km, mb4.3/13, Error ellipse: s-maj=14.0km s-min=10.1km az=192.0*
ISC 10 16:36:17.0±0.4, 64.67N±0.02×17.49W±0.03, h10km, n91, σ2.97/101, mb3.8/22, 1C, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.11**	**273**	P	**Pg**	**16 36 18.7**	**-1.1**
	baz=270						
IDYN	**Dyngjuhals**	**0.14**	**23**	P	**Pg**	**16 36 18.8**	**-1.4**
	baz=16						
IGRF	**Grimsfjall**	**0.28**	**159**	P	**Pg**	**16 36 21.2**	**-1.4**
	baz=164						
IGRF				S	**Sg**	**16 36 25.5**	**-1.0**
	baz=164						
IHUS	**Husbondi**	**0.38**	**191**	P	**Pg**	**16 36 23.4**	**-1.1**
	baz=194						
IHUS				S	**Sg**	**16 36 28.9**	**-0.6**
	baz=194						
ISKR	**Skrokkalda**	**0.40**	**255**	P	**Pb**	**16 36 23.7**	**-2.5**
	baz=255						
ISKR				S	**Sb**	**16 36 29.9**	**-2.5**
	baz=255						
IVOT	**Vottur**	**0.42**	**161**	P	**Pg**	**16 36 23.8**	**-1.5**
	baz=164						
IJOK	**Jokulheimar**	**0.47**	**222**	P	**Pg**	**16 36 24.8**	**-1.4**
	baz=224						
IJOK				S	**Sb**	**16 36 32.0**	**-2.5**
	baz=224						
IMKO	**Mokollar**	**0.58**	**57**	P	**Pg**	**16 36 26.2**	**-2.1**
	baz=57						
IMKO				S	**Sg**	**16 36 33.9**	**-2.0**
	baz=57						
IIEY	**Innrieyrar**	**0.64**	**206**	P	**Pg**	**16 36 27.6**	**-1.7**
	baz=207						
IIEY				S	**Sb**	**16 36 36.6**	**-2.6**
	baz=207						
IKSK	**Karasker**	**0.67**	**139**	P	**Pg**	**16 36 27.2**	**-2.8**
	baz=140						
IKAL	**Kalfafell**	**0.73**	**187**	P	**Pg**	**16 36 29.1**	**-1.9**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**79**	P	**Pg**	**16 36 29.0**	**-2.8**
	baz=79						
IVSH				S	**Sg**	**16 36 39.6**	**-2.3**
	baz=79						
IVAT	**Vatnsfell**	**0.79**	**233**	P	**Pb**	**16 36 30.3**	**-2.4**
	baz=233						
IHVE	**Hveravellir**	**0.91**	**284**	P	**Pg**	**16 36 31.8**	**-2.7**
	baz=283						
IHVE				S	**Sb**	**16 36 44.5**	**-2.5**
	baz=283						
IMEL	**Melhnausar**	**0.97**	**21**	P	**Pg**	**16 36 32.7**	**-3.0**
	baz=20						
IREN	**Reynihlio**	**1.01**	**14**	P	**Pg**	**16 36 33.4**	**-3.0**
	baz=13						
ISNB	**Snabyli**	**1.06**	**209**	P	**Pg**	**16 36 34.7**	**-2.6**
	baz=209						
IKVO	**Krokottuvotn**	**1.08**	**14**	P	**Pb**	**16 36 34.5**	**-3.3**
	baz=12						
ISLY	**Slysaalda**	**1.10**	**221**	P	**Pg**	**16 36 35.6**	**-2.6**
	baz=221						
IGRS	**Grimsstaoir**	**1.13**	**30**	P	**Pb**	**16 36 36.2**	**-2.5**
	baz=29						
IFED	**Fedgar**	**1.15**	**237**	P	**Pg**	**16 36 36.7**	**-2.4**
	baz=237						
IRJU	**Riupnafell**	**1.17**	**207**	P	**Pb**	**16 36 36.8**	**-2.5**
	baz=208						
ISKI	**Skildingahlsh**	**1.22**	**9**	P	**Pn**	**16 36 36.8**	**-3.3**
	baz=8.1						
IGHA	**Grjothals**	**1.23**	**16**	P	**Pn**	**16 36 36.8**	**-3.5**
	baz=15						
IGYG	**Gygjarholskot**	**1.24**	**253**	P	**Pb**	**16 36 37.5**	**-2.9**
	baz=253						
IGRA	**Granastaoir**	**1.26**	**358**	P	**Pn**	**16 36 37.3**	**-3.3**
	baz=358						
IGRA				S	**Sb**	**16 36 54.7**	**-2.2**
	baz=358						
IHAU	**Haukadalur**	**1.29**	**238**	P	**Pb**	**16 36 38.6**	**-2.6**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.29**	**208**	P	**Pn**	**16 36 38.8**	**-2.2**
	baz=209						
IDIM	**Dimmadalss**	**1.32**	**10**	P	**Pn**	**16 36 38.3**	**-3.1**
	baz=9.2						
IHLA	**Hella**	**1.34**	**344**	P	**Pn**	**16 36 38.9**	**-2.7**
	baz=343						
IHED	**Heoinshofoi**	**1.42**	**3**	P	**Pn**	**16 36 39.8**	**-3.0**
	baz=2.2						
IESK	**Eystri-Skogar**	**1.43**	**218**	P	**Pn**	**16 36 41.0**	**-1.9**
	baz=218						
ISAU	**Saurbar**	**1.44**	**243**	P	**Pn**	**16 36 40.5**	**-2.6**
	baz=243						
IMID	**Miomork**	**1.46**	**227**	P	**Pn**	**16 36 41.6**	**-1.7**
	baz=228						
IGIL	**Gilhagi**	**1.49**	**18**	P	**Pn**	**16 36 40.7**	**-3.1**
	baz=18						
ISIG	**Siglufjorour**	**1.59**	**339**	P	**Pn**	**16 36 42.7**	**-2.4**
	baz=338						
IASM	**Asmuli**	**1.60**	**240**	P	**Pn**	**16 36 43.4**	**-1.8**
	baz=240						
BORG	**Borgarnes**	**1.65**	**275**	Pg	**Pn**	**16 36 43.5**	**-2.4**
	28nm,0.3s,baz=99,slow=13,SNR=76						
BORG				Lg	Lg	16 37 07.3	
	14nm,0.3s,baz=83,slow=23,SNR=9.4						
BORG	**Borgarnes**	**1.65**	**275**		**Pn**	**16 36 43.8**	**-2.1**
IKRO	**Krokur**	**1.68**	**252**	P	**Pn**	**16 36 44.2**	**-2.1**
	baz=252						
ISOL	**Solvholt**	**1.68**	**245**	P	**Pn**	**16 36 44.4**	**-1.9**
	baz=246						
IHEI	**Heioarbar**	**1.69**	**256**	P	**Pn**	**16 36 44.6**	**-1.9**
	baz=256						
ILEI	**Leirhofn**	**1.80**	**13**	P	**Pn**	**16 36 45.8**	**-2.2**
	baz=12						
IHRN	**Hraun**	**1.82**	**324**	P	**Pn**	**16 36 46.2**	**-2.0**
	baz=323						
SCO	**Scoresbysund**	**6.08**	**346**		**Pn**	**16 37 46.0**	**-0.8**
SCO	**Scoresbysund**	**6.08**	**346**	*e*	**Pn**	**16 37 44.9**	**-1.9**
	baz=167,slow=6.2						
SCO				*i* P	**Pn**	**16 37 47.7**	**+0.9**
SCO				*i* S	**Sn**	**16 39 03.0**	**+6.6**
DBG	**Daneborg**	**9.73**	**356**	*e*P	Pn	16 38 44.3	+7.5
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**16 39 03.6**	**-0.9**
	baz=324,slow=15,SNR=7.9						
NOA	**NORSAR Array B**	**13.53**	**92**	Pn	**Pn**	**16 39 28.8**	**+0.1**
	0.0nm,0.3s,baz=309,slow=16,SNR=2.0						
HFS	**Hagfors**	**15.04**	**93**	Pn	**Pn**	**16 39 50.9**	**+1.6**
	0.1nm,0.3s,baz=270,slow=13,SNR=1.7						
ARCES	**ARCESS Array B**	**17.11**	**55**	P	**P**	**16 40 18.0**	**+0.4**
	baz=279,slow=12,SNR=7.8						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**16 40 47.5**	**0.0**
	0.1nm,0.3s,baz=306,slow=6.6,SNR=1.8						
CLL	**Collm**	**20.70**	**116**	*e*P	**P**	**16 40 58.0**	**+1.

MKAR Makanchi Array 52.72 58 P P 16 45 31.5 +0.2
comp=Z,0.7nm,0.8s,baz=311,slow=7.7,SNR=6.4
TORD Torodi Ar. Bea 53.14 156 P P 16 45 33.4 -1.3
comp=Z,1.7nm,1.0s,baz=342,slow=7.7,SNR=4.8
TORD Torodi Ar. Bea 53.14 156 P P 16 45 33.2 -1.5
PD31 Pinedale Array 53.18 293 P P 16 45 35.0 -0.1
PD31 IAmb IAmb 16 46 04.4
comp=Z,5.7nm,1.5s
PDAR Pinedale Array 53.18 293 P P 16 45 35.5 +0.4
comp=Z,0.8nm,0.7s,baz=50,slow=7.9,SNR=7.6
PDAR Pinedale Array 53.18 293 P P 16 45 34.7 -0.3
BTK Batken 53.96 72 P P 16 45 40.9 +0.3
BTK IAmb IAmb 16 45 43.1
comp=Z,4.5nm,1.1s
GAR Garm 54.65 73 P P 16 45 46.5 +0.8
SONM Songino Array 59.64 40 P P 16 46 21.5 +0.6
comp=Z,0.6nm,0.9s,baz=339,slow=3.7,SNR=2.7
SONM Songino Array 59.64 40 IAmb IAmb 16 46 22.9
comp=Z,0.7nm,0.8s
TXAR Lajitas Array 62.29 280 P P 16 46 39.0 -0.1
comp=Z,0.7nm,1.0s,baz=64,slow=5.7,SNR=4.2
CMAR Chiang Mai Arr 84.13 59 P P 16 48 48.4 +0.4
comp=Z,0.5nm,0.9s,baz=330,slow=6.9,SNR=5.7

EAF 10 16:36:22.7±2.2, 24.76S×22.51E, h10km, MD3.6, Botswana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.81**	**96**	*i* P	Pb	16 37 12.3	-0.8
LBTB				*i* S	Sn	16 37 40.3	-1.6
LBTB	**Lobatse**	**2.81**	**96**	*i* P	Pb	16 37 12.3	-0.8
LBTB				*i* S	Sn	16 37 40.3	-1.6
BOSA	**Boshof**	**4.55**	**148**	*i* P	Pn	16 37 31.7	-0.1
BOSA				*i* S	Sn	16 38 14.0	-11
BOSA	**Boshof**	**4.55**	**148**	*i* P	Pn	16 37 31.7	-0.1
BOSA				*i* S	Sn	16 38 14.0	-11
BLWY	**Bulawayo**	**7.28**	**52**	*i* P	Pn	16 37 59.6	-10
BLWY				*i* S	Sn	16 39 03.6	-28
BLWY	**Bulawayo**	**7.28**	**52**	*i* P	Pn	16 37 59.6	-10
BLWY				*i* S	Sn	16 39 03.6	-28

IDC 10 16:41:24.6±1.6, 50.05S×120.02E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.6/4, MS3.3/8, Ms1 3.3/8, ms1mx3.1/20, Error ellipse: s-maj=67.1km s-min=27.2km az=89.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.74**	**342**	T	T	17 01 20.0	
	baz=165,slow=73,SNR=25						
H01W1	**Cape Leeuwin H**	**15.74**	**342**	T	T	17 01 22.2	
	baz=165,slow=73,SNR=22						
H01W3	**Cape Leeuwin H**	**15.75**	**342**	T	T	17 01 25.3	
	baz=165,slow=73,SNR=24						
NWAO	**Narrogin (SRO)**	**17.23**	**352**	LR	LR	16 50 34.6	
	comp=Z,103nm,20.9s,baz=227,slow=32						
STKA	**Stephens Creek**	**24.24**	**50**	LR	LR	16 56 25.0	
	comp=Z,55nm,18.2s,baz=208,slow=37						
ASAR	**Alice Springs**	**28.48**	**27**	P	P	16 47 20.9	-0.5
	0.7nm,0.7s,baz=206,slow=9.0,SNR=6.0						
ASAR				LR	LR	16 57 19.6	
	comp=Z,106nm,20.9s,baz=180,slow=34						
VNDA	**Vanda**	**31.72**	**164**	P	P	16 47 49.5	-0.1
	0.9nm,0.9s,baz=294,slow=9.8,SNR=6.7						
VNDA				LR	LR	16 59 48.3	
	comp=Z,78nm,20.3s,baz=298,slow=35						
WRA	**Warramunga Arr**	**32.13**	**26**	P	P	16 47 54.0	+0.4
	0.3nm,0.8s,baz=198,slow=7.9,SNR=2.1						
WRA				LR	LR	17 01 28.5	
	comp=Z,42nm,18.2s,baz=165,slow=38						
MAW	**Mawson**	**32.85**	**216**	LR	LR	16 58 30.7	
	comp=Z,21nm,19.9s,baz=52,slow=31						
SNAA	**Sanae**	**52.09**	**200**	LR	LR	17 11 25.7	
	comp=Z,85nm,18.8s,baz=189,slow=35						
CMAR	**Chiang Mai Arr**	**70.70**	**339**	P	P	16 52 42.4	+0.2
	0.4nm,0.6s,baz=186,slow=4.6,SNR=5.2						
PLCA	**Paso Flores**	**89.12**	**172**	LR	LR	17 31 29.3	
	comp=Z,16nm,20.2s,baz=153,slow=34						

*STR **10** 17:01:49.4±0.9, 44°N±5°×°±°, h15km±5km, MLv2.2/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*LDG **10** 17:01:49.5±0.1, 44.15N×8.57E, h10km, Md2.2/2, Ml2.4/36, Error ellipse: s-maj=1.5km s-min=1.0km az=144.0*
*GEN **10** 17:01:49.7, 44.15N×8.57E, h8km±1km, Ml2.0*
ROM 10 17:01:49.4±0.2, 44.159N±0.010×8.552E±0.007, h9km±1km, ML2.2/1, 2C-6D, Error ellipse: s-maj=1.0km s-min=0.5km az=353.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FINB	**Finale Ligure**	**0.16**	**277**	*i* P	Pg	17 01 53.6	+0.7
FINB				S	Sg	17 01 56.7	+1.4
FINB				AML	AML		
	comp=E,622μm,0.4s						
FINB				AML	AML		
	comp=N,814μm,0.2s						
FINB				AML	AML		
	comp=N,2650μm,0.2s						
FINB				AML	AML		
	comp=E,1560μm,0.4s						
QLNO	**Quiliano**	**0.22**	**318**	*i* P	Pg	17 01 54.5	+0.6
QLNO				S	Sg	17 01 57.9	+0.9
QLNO				AML	AML		
	comp=E,711μm,0.9s						
QLNO				AML	AML		
	comp=N,716μm,0.3s						
QLNO				AML	AML		
	comp=N,1084μm,0.4s						
QLNO				AML	AML		
	comp=E,940μm,0.5s						
RORO	**Rocca Rossa**	**0.35**	**263**	P	Pg	17 01 56.7	+0.4
RORO				S	Sg	17 02 01.9	+0.8
RORO	**Rocca Rossa**	**0.35**	**263**	*e*P	Pg	17 01 56.7	+0.4
RORO				S	Sg	17 02 01.8	+0.7
RORO				AML	AML		
	comp=E,474μm,0.9s						
RORO				AML	AML		
	comp=N,530μm,0.8s						
RORO				AML	AML		
	comp=E,1195μm,0.1s						
RORO				AML	AML		
	comp=N,1195μm,0.1s						
PCP	**Piancastagn**	**0.38**	**359**	P	Pg	17 01 57.1	+0.1
PCP				S	Sg	17 02 02.5	+0.5
PCP	**Piancastagn**	**0.38**	**359**	P	Pg	17 01 57.0	+0.1
PCP				S	Sg	17 02 02.8	+0.7
PCP				AML	AML		
	comp=N,434μm,0.4s						
PCP				AML	AML		
	comp=E,494μm,0.3s						
PCP				AML	AML		
	comp=N,448μm,0.6s						
PCP				AML	AML		
	comp=N,448μm,0.6s						
GBOS	**Grotte di Boss**	**0.52**	**279**	P	Pg	17 01 59.9	+0.4
GBOS				S	Sg	17 02 07.1	+0.8
GBOS	**Grotte di Boss**	**0.52**	**279**	*e*P	Pg	17 01 59.9	+0.4
GBOS				S	Sg	17 02 07.2	+0.9
GBOS				AML	AML		
	comp=E,284μm,0.2s						
GBOS				AML	AML		
	comp=N,413μm,0.2s						
GBOS				AML	AML		
	comp=N,696μm,0.2s						
GBOS				AML	AML		
	comp=E,548μm,0.2s						
GBOS				AML	AML		
	comp=N,696μm,0.2s						
IMI	**Imperia**	**0.54**	**243**	P	Pg	17 02 00.1	+0.3
IMI				S	Sg	17 02 07.8	+1.0
IMI	**Imperia**	**0.54**	**243**	*e*P	Pg	17 02 00.1	+0.3
IMI				S	Sg	17 02 07.9	+1.0
IMI				AML	AML		
	comp=E,184μm,0.3s						
IMI				AML	AML		
	comp=N,380μm,0.3s						
MGRO	**Montegrosso**	**0.55**	**258**	P	Pg	17 02 00.4	+0.3
MGRO				S	Sg	17 02 08.3	+1.0
MGRO	**Montegrosso**	**0.55**	**258**	*e*P	Pg	17 02 00.3	+0.2
MGRO				S	Sb	17 02 08.6	-0.7
MGRO				AML	AML		
	comp=E,362μm,0.3s						
MGRO				AML	AML		
	comp=N,323μm,0.4s						
MGRO				AML	AML		
	comp=N,322μm,0.4s						
MGRO				AML	AML		
	comp=E,596μm,0.3s						
MGRO				AML	AML		
	comp=N,492μm,0.4s						
MGRO				AML	AML		
	comp=E,596μm,0.3s						
GORR	**Gorreto**	**0.69**	**50**	P	Pg	17 02 03.1	+0.3
GORR				S	Sg	17 02 12.4	+0.5
GORR	**Gorreto**	**0.69**	**50**	P	Pg	17 02 03.0	+0.2
GORR				AML	AML		
	comp=E,270μm,1.4s						
GORR				AML	AML		
	comp=N,307μm,0.9s						
GORR				AML	AML		
	comp=E,460μm,0.4s						
GORR				AML	AML		
	comp=N,584μm,0.4s						
GORR				AML	AML		
	comp=E,460μm,0.4s						
ROTM	**Rocchetta Tana**	**0.70**	**348**	P	Pb	17 02 03.9	0.0
ROTM				S	Sb	17 02 14.3	+0.6
ROTM	**Rocchetta Tana**	**0.70**	**348**	P	Pb	17 02 03.9	0.0
ROTM				AML	AML		
	comp=E,717μm,0.5s						
ROTM				AML	AML		
	comp=N,746μm,1.5s						
ROTM				AML	AML		
	comp=N,806μm,0.5s						
ROTM				AML	AML		
	comp=E,875μm,0.5s						
ROTM				AML	AML		
	comp=E,874μm,0.5s						
MSSA	**Maissana**	**0.71**	**77**	P	Pg	17 02 02.7	-0.4
MSSA				AML	AML		
	comp=E,149μm,0.7s						
MSSA				AML	AML		
	comp=N,170μm,1.6s						
SAOF	**Saorge**	**0.74**	**257**	Pg	Pg	17 02 04.0	+0.3
SAOF				Sg	Sb	17 02 14.3	-0.4
SAOF	**Saorge**	**0.74**	**257**	P	Pg	17 02 04.0	+0.3
SAOF				S	Sb	17 02 14.6	-0.1
SAOF	**Saorge**	**0.74**	**257**	AML	AML		
	comp=E,146μm,0.3s						
SAOF				AML	AML		
	comp=N,202μm,1.3s						
SAOF				AML	AML		
	comp=N,258μm,0.6s						
SAOF				AML	AML		
	comp=E,255μm,0.2s						
ENR	**Entracque**	**0.82**	**275**	P	Pg	17 02 05.0	-0.2
ENR				S	Sb	17 02 16.8	-0.2
ENR	**Entracque**	**0.82**	**275**	*e*P	Pg	17 02 05.0	-0.2
ENR				S	Sb	17 02 17.1	0.0
ENR				AML	AML		
	comp=E,228μm,1.3s						
ENR				AML	AML		
	comp=N,405μm,0.3s						
ENR				AML	AML		
	comp=E,398μm,0.9s						
ENR				AML	AML		
	comp=N,578μm,0.6s						
ENR				AML	AML		
	comp=E,452μm,1.4s						
TURF	**col de Turini**	**0.86**	**258**	Pg	Pb	17 02 06.3	-0.3
TURF				Sg	Sb	17 02 17.9	-0.4
SBF	**Sospel**	**0.86**	**250**	*e*Pg	Pb	17 02 06.3	-0.2
SBF				*e*Sg	Sg	17 02 17.2	+0.1
	comp=E,151nm,0.3s						
BOB	**Bobbio (Coli)**	**0.88**	**46**	P	Pg	17 02 06.5	0.0
STV	**Sant Anna di V**	**0.89**	**276**	P	Pb	17 02 06.8	-0.3
STV				S	Sb	17 02 19.0	0.0
STV	**Sant Anna di V**	**0.89**	**276**	P	Pb	17 02 06.8	-0.2
STV				S	Sb	17 02 19.1	+0.1
STV				AML	AML		
	comp=E,134μm,0.6s						
STV				AML	AML		
	comp=N,217μm,0.3s						
STV				AML	AML		
	comp=N,291μm,0.3s						
STV				AML	AML		
	comp=E,180μm,0.3s						
ESCA	**l'Escarene**	**0.91**	**249**	Pg	Pb	17 02 07.5	+0.1
ESCA				Sg	Sb	17 02 20.6	+0.9
MONC	**Moncucco Torin**	**1.02**	**334**	P	Pn	17 02 09.9	0.0
MONC				AML	AML		
	comp=N,184μm,1.2s						
MONC				AML	AML		
	comp=E,160μm,1.0s						
MONC				AML	AML		
	comp=N,194μm,1.6s						
ISO	**Isola**	**1.08**	**272**	Pg	Pg	17 02 10.2	0.0
ISO				Sg	Sb	17 02 24.7	+0.1
PZZ	**Stroppo**	**1.09**	**289**	P	Pg	17 02 09.7	-0.6
PZZ				S	Sb	17 02 25.2	+0.4
PZZ				AML	AML		
	comp=E,279μm,1.5s						
PZZ				AML	AML		
	comp=N,206μm,0.2s						
PZZ				AML	AML		
	comp=N,220μm,0.2s						
GRAM	**Graiana**	**1.14**	**72**	P	Pg	17 02 10.2	-1.1
GRAM				AML	AML		
	comp=E,176μm,0.2s						
GRAM				AML	AML		
	comp=N,158μm,1.0s						
GRAM				AML	AML		
	comp=E,202μm,0.3s						
BHB	**Bricherasio**	**1.15**	**307**	P	Pb	17 02 11.1	-0.3
BHB				S	Sb	17 02 26.8	+0.3
BHB				AML	AML		
	comp=E,166μm,1.2s						
BHB				AML	AML		
	comp=N,153μm,0.4s						
EQUI	**Equi**	**1.15**	**89**	P	Pb	17 02 10.5	-1.0
CALF	**Calern**	**1.25**	**252**	Pg	Pg	17 02 13.7	+0.4
CALF				Sg	Sn	17 02 30.6	+0.5
SURF	**Saint Ours**	**1.29**	**285**	Pn	Pn	17 02 12.9	-0.9
SURF				Pg	Pb	17 02 13.9	0.0
SURF				Sg	Sn	17 02 31.6	+0.3
RSP	**Reno Superiore**	**1.35**	**318**	P	Pn	17 02 14.5	-0.1
RSP				AML	AML		
	comp=E,56μm,1.5s						
RSP				AML	AML		
	comp=N,60μm,0.8s						
ERBM	**Eremo**	**1.36**	**78**	P	Pn	17 02 14.2	-0.5
MBDF	**Montbardon**	**1.40**	**295**	*e*Pn	Pn	17 02 14.2	-1.0
MBDF	**Montbardon**	**1.40**	**295**	*e*Pg	Pb	17 02 15.7	-0.1
MBDF				*e*Sg	Sn	17 02 33.9	0.0
	comp=N,36nm,0.5s						
CARD	**Cardoso**	**1.40**	**95**	*e*P	Pn	17 02 00.1	-15
CARD				AML	AML		
	comp=N,134μm,1.2s						
CARD				AML	AML		
	comp=E,124μm,1.5s						
MAIM	**Mastiano**	**1.42**	**99**	P	Pb	17 02 16.0	-0.1
MAIM				AML	AML		
	comp=E,109μm,1.6s						
MAIM				AML	AML		
	comp=N,79μm,1.6s						
RRL	**Rocca Remolon**	**1.47**	**302**	P	Pn	17 02 16.7	+0.3
OGAG	**Argentiere**	**1.47**	**282**	Pg	Pg	17 02 18.8	+1.1
OGAG				Sg	Sg	17 02 38.9	+2.1
BDI	**Bagni Di Lucca**	**1.48**	**93**	P	Pn	17 02 16.2	0.0
PII	**Pisa**	**1.49**	**106**	P	Pb	17 02 17.2	-0.1
FRF	**La Foret Royal**	**1.50**	**247**	*e*Pn	Pn	17 02 14.9	-1.7
FRF	**La Foret Royal**	**1.50**	**247**	*e*Pg	Pb	17 02 17.8	+0.3
FRF				*e*Sn	Sn	17 02 33.7	-2.6
FRF				*e*Sg	Sb	17 02 37.0	+0.4
	comp=N,30nm,0.3s						
POPM	**Popiglio**	**1.59**	**93**	P	Pb	17 02 18.7	-0.3
OGDI	**Digne**	**1.62**	**269**	Pg	Pg	17 02 21.5	+1.0
PGF	**Pioggiola**	**1.64**	**168**	*e*Pn	Pn	17 02 15.5	-3.1
PGF				*e*Sn	Sn	17 02 33.9	-6.0
	comp=N,3.3nm,0.2s						
LSD	**Lago del Serru**	**1.65**	**323**	AML	AML		
	comp=E,24μm,1.5s						
LSD				AML	AML		
	comp=N,26μm,1.6s						
LMR	**La Mourre**	**1.69**	**242**	*e*Pn	Pn	17 02 17.3	-1.9
LMR	**La Mourre**	**1.69**	**242**	*e*Pg	Pb	17 02 21.3	+0.6
LMR				*e*Sn	Sn	17 02 37.9	-3.1
	comp=N,2.8nm,0.2s						
LMR				*e*Sg	Sg	17 02 43.6	-0.3
	comp=N,9.3nm,0.2s						
OGMO	**Fort Saint-Gob**	**1.70**	**309**	Pn	Pn	17 02 18.1	-1.2
OGMO				Sg	Sb	17 02 42.3	-0.1
LPG	**La Plagne**	**1.85**	**317**	*e*Pn	Pn	17 02 20.2	-1.4
LPG	**La Plagne**	**1.85**	**317**	*e*Pg	Pb	17 02 24.2	+0.6
LPG				*e*Sn	Sn	17 02 43.2	-2.1
	comp=N,1.4nm,0.2s						
LPG				*e*Sg	Sg	17 02 49.4	+0.4
	comp=N,5.0nm,0.2s						
LPL	**La Plagne**	**1.88**	**317**	*e*P	Pn	17 02 22.5	+0.6
LPL	**La Plagne**	**1.88**	**317**	*e*Pg	Pb	17 02 24.2	+0.2
LPL				*e*Sn	Sn	17 02 41.9	-3.9
	comp=N,1.1nm,0.1s						
LPL				*e*Sg	Sg	17 02 49.4	-0.3
	comp=N,8.9nm,0.3s						
MLYF	**Mely**	**2.02**	**266**	Pn	Pn	17 02 23.0	-0.7
MLYF				Pg	Pb	17 02 27.1	+0.8
ORIF	**Oris-en-Rattie**	**2.06**	**293**	*e*Pn	Pn	17 02 22.7	-1.6
ORIF	**Oris-en-Rattie**	**2.06**	**293**	*e*P	Pn	17 02 25.1	+0.8
ORIF	**Oris-en-Rattie**	**2.06**	**293**	*e*Pg	Pb	17 02 27.8	+0.8
ORIF				*e*Sn	Sn	17 02 46.9	-3.2
	comp=N,1.0nm,0.2s						
ORIF				*e*Sg	Sb	17 02 53.8	+1.1
	comp=N,5.0nm,0.4s						
SMRF	**Simiane la Rot**	**2.15**	**266**	*e*Pn	Pn	17 02 24.0	-1.5
SMRF	**Simiane la Rot**	**2.15**	**266**	*e*P	Pn	17 02 26.5	+1.0
SMRF	**Simiane la Rot**	**2.15**	**266**	*e*Pg	Pb	17 02 29.5	+0.9
SMRF				*e*Sn	Sn	17 02 49.3	-3.1
	comp=N,1.2nm,0.2s						
SMRF				*e*Sg	Sg	17 02 58.1	-0.5
	comp=N,14nm,0.3s						
RUSF	**Rustrel**	**2.22**	**265**	Pn	Pn	17 02 26.1	-0.4
VIVF	**Saint-Julien-l**	**2.86**	**285**	*e*Pn	Pn	17 02 34.0	-1.3
VIVF	**Saint-Julien-l**	**2.86**	**285**	*e*Pg	Pg	17 02 42.9	-1.3
VIVF				*e*Sn	Sn	17 03 05.6	-4.3
	comp=N,1.4nm,0.2s						
VIVF				*e*Sg	Sg	17 03 19.5	-1.8
	comp=N,1.9nm,0.3s						
CABF	**La Chapelle**	**3.00**	**326**	*e*Pn	Pn	17 02 35.8	-1.5
CABF	**La Chapelle**	**3.00**	**326**	*e*P	Pn	17 02 38.7	+1.4
CABF				*e*Sn	Sn	17 03 10.1	-3.4
LASF	**Ste Croix**	**3.38**	**270**	*e*Pn	Pn	17 02 40.9	-1.5
LASF	**Ste Croix**	**3.38**	**270**	*e*Pg	Pg	17 02 52.5	-1.7
LASF				*e*Sn	Sn	17 03 18.7	-4.0
	comp=N,0.8nm,0.2s						
LASF				*e*Sg	Sg	17 03 35.7	-2.3
	comp=N,1.0nm,0.2s						
HINF	**Hinteralfeld**	**3.84**	**343**	*e*Pn	Pn	17 02 47.2	-1.6
HINF				*e*Sn	Sn	17 03 29.8	-4.3
HAU	**Haudompre**	**4.14**	**339**	*e*Pn	Pn	17 02 51.2	-1.7
HAU	**Haudompre**	**4.14**	**339**	*e*P	Pn	17 02 53.2	+0.3
HAU				*e*Sn	Sn	17 03 36.6	-4.8
SMF	**Signal de Mont**	**4.15**	**308**	*e*Pn	Pn	17 02 50.8	-2.1
SMF	**Signal de Mont**	**4.15**	**308**	*e*P	Pn	17 02 54.8	+1.9
SMF				*e*Sn	Sn	17 03 36.7	-4.8
	comp=N,0.4nm,0.2s						
SMF				*e*Sg	Sg	17 03 59.7	-2.8
	comp=N,1.5nm,0.3s						
CDF	**Champ du Feu**	**4.34**	**349**	*e*Pn	Pn	17 02 54.4	-1.3
CDF				*e*Sn	Sn	17 03 42.8	-3.7
	comp=N,1.3nm,0.3s						
AVF	**Avril sur Loir**	**4.50**	**308**	*e*Pn	Pn	17 02 55.9	-1.9
AVF	**Avril sur Loir**	**4.50**	**308**	*e*Pg	Pg	17 03 13.0	-2.7
AVF				*e*Sn	Sn	17 03 45.0	-5.3
	comp=N,1.4nm,0.4s						
LOR	**Lormes**	**4.52**	**315**	*e*Pn	Pn	17 02 56.3	-1.8
	baz=132						
LOR	**Lormes**	**4.52**	**315**	*e*P	Pn	17 03 00.1	+2.0
	baz=135						
LOR	**Lormes**	**4.52**	**315**	*e*Pg	Pg	17 03 12.9	-3.1
	baz=135						
LOR				*e*Sn	Sn	17 03 45.8	-5.0
	comp=N,0.3nm,0.2s						
LOR				*e*Sg	Sg	17 04 11.8	-2.8
	comp=N,0.8nm,0.3s						
SSF	**Saint Saulge**	**4.58**	**311**	*e*P	Pn	17 03 00.3	+1.5
SSF	**Saint Saulge**	**4.58**	**311**	*e*Pg	Pg	17 03 14.7	-2.4
SSF				*e*Sn	Sn	17 03 47.0	-5.1
	comp=N,1.1nm,0.4s						
MTLF	**Montolieu**	**4.66**	**262**	*e*Pn	Pn	17 02 58.5	-1.5
MTLF	**Montolieu**	**4.66**	**262**	*e*Pg	Pg	17 03 15.5	-3.2
MTLF				*e*Sn	Sn	17 03 48.4	-5.8
	comp=N,0.3nm,0.2s						
MTLF				*e*Sg	Sg	17 04 16.2	-2.9
	comp=N,0.7nm,0.2s						
BGF	**Bois d'Agland**	**4.68**	**303**	*e*P	Pn	17 03 00.5	+0.2
BGF	**Bois d'Agland**	**4.68**	**303**	*e*Pg	Pg	17 03 16.2	-2.9
BGF				*e*Sn	Sn	17 03 50.0	-4.7
	comp=N,0.9nm,0.2s						
CAF	**Calviac**	**4.70**	**282**	*e*Pn	Pn	17 02 59.1	-1.4
CAF	**Calviac**	**4.70**	**282**	*e*Pg	Pg	17 03 16.8	-2.6
CAF				*e*Sn	Sn	17 03 52.7	-2.5
	comp=N,0.3nm,0.1s						
CAF				*e*Sg	Sg	17 04 19.1	-1.2
HYF	**Humbligny**	**5.18**	**309**	*e*Pn	Pn	17 03 04.7	-2.4
HYF				*e*Sn	Sn	17 04 01.7	-5.2
EPF	**Esparros**	**6.07**	**262**	*e*Pg	Pg	17 03 42.3	-3.3
EPF				*e*Sg	Sg	17 05 00.5	-3.7
	comp=N,0.7nm,0.3s						

*IDC **10** 17:02:39.5±1.6, 51.45S×139.53E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.8/23, mbtmp3.8/5, ML3.7/1, MS3.5/7, Ms1 3.5/7, ms1mx3.1/27, Error ellipse: s-maj=108.9km s-min=23.0km az=88.0*
*NEIC **10** 17:02:40.5±0.7, 51.4S±0.1×139.8E±1.0, h10km±1km, mb4.3/8, Error ellipse: s-maj=105.8km s-min=14.2km az=79.0*
ISC 10 17:02:40.4±1.1, 51.4S±0.1×139.8E±0.5, h10km, n28, σ0 46/17, mb4.2/7, MS3.4/6, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**19.58**	**4**	P	**Pn**	**17 07 10.7**	**+0.9**
	0.1nm,0.3s,baz=173,slow=12,SNR=5.0						
STKA				LR	LR	17 13 23.8	
	comp=Z,108nm,21.3s,baz=206,slow=33						
STKA	**Stephens Creek**	**19.58**	**4**	P	**P**	**17 07 08.1**	**-0.4**
STKA				IAmb	IAmb	17 07 33.7	
	comp=Z,6.2nm,1.8s						
H01W1	**Cape Leeuwin H**	**24.80**	**302**	T	T	17 33 31.0	
	baz=139,slow=75,SNR=15						
H01W2	**Cape Leeuwin H**	**24.80**	**302**	T	T	17 33 31.5	
	baz=139,slow=75,SNR=17						
H01W3	**Cape Leeuwin H**	**24.81**	**302**	T	T	17 33 31.4	
	baz=139,slow=75,SNR=17						
ASAR	**Alice Springs**	**28.09**	**348**	P	**P**	**17 08 32.1**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=169,slow=9.1,SNR=11						
ASAR				LR	LR	17 19 07.8	
	comp=Z,72nm,18.9s,baz=150,slow=35						
AS31	**Alice Springs**	**28.10**	**348**	P	**P**	**17 08 31.4**	**-0.9**
WR0	**Warramunga Arr**	**31.68**	**350**	P	**P**	**17 09 03.9**	**-0.1**
WR0				IAmb	IAmb	17 09 17.8	
	comp=Z,11nm,1.6s						
WB2	**Warramunga Arr**	**31.72**	**350**	P	**P**	**17 09 04.0**	**-0.3**
WB2				IAmb	IAmb	17 09 05.4	
	comp=Z,8.3nm,1.0s						
WRA	**Warramunga Arr**	**31.72**	**350**	P	**P**	**17 09 04.2**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=174,slow=7.6,SNR=25						
WRA				LR	LR	17 20 34.7	
	comp=Z,70nm,19.6s,baz=200,slow=34						
WRA	**Warramunga Arr**	**31.72**	**350**	P	**P**	**17 09 04.5**	**+0.2**
WRAB	**Tennant Creek**	**31.73**	**350**	P	**P**	**17 09 04.2**	**-0.2**
WB0	**Warramunga Arr**	**31.89**	**350**	P	**P**	**17 09 05.9**	**+0.1**
WB0				IAmb	IAmb	17 09 11.2	
	comp=Z,6.0nm,1.1s						
DZM	**Mont Dzumac**	**35.85**	**45**	LR	LR	17 21 12.7	
	comp=Z,800nm,21.9s,baz=50,slow=31						
QSPA	**South Pole Qui**	**38.68**	**180**	P	**P**	**17 10 04.2**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=305,slow=4.3,SNR=6.4						
QSPA	**South Pole Qui**	**38.68**	**180**	P	**P**	**17 10 04.3**	**+0.3**
QSPA				IAmb	IAmb	17 10 20.9	
	comp=Z,5.

CMAR	**Chiang Mai Arr**	**78.25**	**321**	P		**P**	**17 14 40.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=177,slow=4.5,SNR=1.8							
H03S2	**Juan Fernandez**	**88.51**	**149**	T		T	18 54 25.1	
	baz=201,slow=74,SNR=8.6							
H03S1	**Juan Fernandez**	**88.51**	**149**	T		T	18 54 26.0	
	baz=201,slow=74,SNR=10							
H03S3	**Juan Fernandez**	**88.53**	**149**	T		T	18 54 26.5	
	baz=201,slow=74,SNR=13							
SDCO	**Great Sand Dun**	**133.03**	**80**			PKPpre	17 21 43.5	
C36M	**Paulatuk**	**138.82**	**32**			**PKiKP**	**17 22 06.9**	**-0.5**
ARCES	**ARCESS Array B**	**145.16**	**326**	PKPbc		**PKPdf**	**17 22 16.6**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=72,slow=3.7,SNR=4.6							
GERES	**GERESS Array B**	**146.03**	**287**	PKPbc		**PKPbc**	**17 22 19.2**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=124,slow=3.6,SNR=5.0							
GERES	**GERESS Array B**	**146.03**	**287**			**PKPbc**	**17 22 19.3**	**-0.4**

*STR **10** 17:02:52.2±0.8, 44°N±3°×±°, h2km±7km, MLv2.5/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*GEN **10** 17:02:52.3, 44°.15N×8°.57E, h7km±3km, Ml2.3*
*ROM **10** 17:02:52.1±0.2, 44°.163N±0°.008×8°.548E±0°.007, h9km, ML2.5/17, Error ellipse: s-maj=0.9km s-min=0.3km az=343.0*
*LDG **10** 17:02:52.0±0.1, 44°.18N×8°.58E, h10km, Md2.5/2, Ml2.6/21, Error ellipse: s-maj=1.5km s-min=1.0km az=155.0*

ISC 10 17:02:52.0±0.8, **44°.18N**±0°.02×**8°.56E**±0°.02, **h18**km±2km, **n95**,σ1**9**70/155, **3C-4D**, **Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FINB	**Finale Ligure**	**0.17**	**270**	⇓*i*P		**Pb**	**17 02 56.2**	**+0.5**
FINB				S		**Sb**	**17 02 59.1**	**+1.2**
FINB				AML		AML		
	comp=E,1560μm,0.4s							
FINB				AML		AML		
	comp=N,2650μm,0.2s							
QLNO	**Quiliano**	**0.21**	**314**	P		**Pg**	**17 02 57.1**	**-0.1**
QLNO				S		**Sb**	**17 03 00.5**	**+0.4**
QLNO				AML		AML		
	comp=N,1084μm,0.4s							
QLNO				AML		AML		
	comp=E,939μm,0.5s							
QLNO				AML		AML		
	comp=E,940μm,0.5s							
RORO	**Rocca Rossa**	**0.36**	**260**	P		**Pg**	**17 02 59.3**	**-0.3**
RORO				S		**Sg**	**17 03 04.5**	**-0.3**
RORO	**Rocca Rossa**	**0.36**	**260**	⇑*e*P		**Pg**	**17 02 59.4**	**-0.3**
RORO				S		**Sg**	**17 03 04.5**	**-0.3**
RORO				AML		AML		
	comp=N,1195μm,0.1s							
RORO				AML		AML		
	comp=E,1195μm,0.1s							
PCP	**Piancastagn**	**0.36**	**359**	P		**Pg**	**17 02 59.6**	**-0.1**
PCP				S		**Sg**	**17 03 05.2**	**+0.3**
PCP	**Piancastagn**	**0.36**	**359**	P		**Pg**	**17 02 59.7**	**-0.1**
PCP				S		**Sg**	**17 03 05.4**	**+0.4**
PCP				AML		AML		
	comp=N,448μm,0.6s							
PCP				AML		AML		
	comp=E,410μm,0.6s							
PCP				AML		AML		
	comp=N,448μm,0.6s							
GBOS	**Grotte di Boss**	**0.52**	**277**	P		**Pg**	**17 03 02.5**	**0.0**
GBOS				S		**Sg**	**17 03 09.6**	**-0.1**
GBOS	**Grotte di Boss**	**0.52**	**277**	⇓P		**Pg**	**17 03 02.5**	**0.0**
GBOS				S		**Sg**	**17 03 09.8**	**+0.2**
GBOS				AML		AML		
	comp=E,548μm,0.2s							
GBOS				AML		AML		
	comp=N,696μm,0.2s							
GBOS				AML		AML		
	comp=N,696μm,0.2s							
IMI	**Imperia**	**0.55**	**241**	P		**Pg**	**17 03 02.7**	**-0.4**
IMI				S		**Sg**	**17 03 10.5**	**0.0**
IMI	**Imperia**	**0.55**	**241**	⇓*e*P		**Pg**	**17 03 02.7**	**-0.4**
IMI				S		**Sg**	**17 03 10.5**	**0.0**
IMI				AML		AML		
	comp=E,391μm,1.6s							
IMI				AML		AML		
	comp=N,695μm,1.3s							
MGRO	**Montegrosso**	**0.56**	**256**	P		**Pg**	**17 03 02.9**	**-0.3**
MGRO				S		**Sg**	**17 03 11.0**	**+0.3**
MGRO	**Montegrosso**	**0.56**	**256**	⇓*e*P		**Pg**	**17 03 03.0**	**-0.3**
MGRO				S		**Sg**	**17 03 11.1**	**+0.3**
MGRO				AML		AML		
	comp=N,495μm,0.3s							
MGRO				AML		AML		
	comp=E,596μm,0.3s							
MGRO				AML		AML		
	comp=E,596μm,0.3s							
MGRO				AML		AML		
	comp=N,496μm,0.3s							
GORR	**Gorreto**	**0.68**	**51**	P		**Pb**	**17 03 05.5**	**+0.1**
GORR				S		**Sb**	**17 03 14.9**	**+0.5**
GORR	**Gorreto**	**0.68**	**51**	P		**Pb**	**17 03 05.6**	**+0.3**
GORR				S		**Sb**	**17 03 15.4**	**+1.0**
GORR				AML		AML		
	comp=E,460μm,0.4s							
GORR				AML		AML		
	comp=E,460μm,0.4s							
GORR				AML		AML		
	comp=N,584μm,0.4s							
ROTM	**Rocchetta Tana**	**0.69**	**348**	P		**Pb**	**17 03 06.4**	**+1.1**
ROTM	**Rocchetta Tana**	**0.69**	**348**	⇑*i*P		**Pb**	**17 03 06.5**	**+1.1**
ROTM				S		**Sb**	**17 03 16.1**	**+1.6**
ROTM				AML		AML		
	comp=E,875μm,0.5s							
ROTM				AML		AML		
	comp=N,1250μm,0.4s							
ROTM				AML		AML		
	comp=E,874μm,0.5s							
ROTM				AML		AML		
	comp=N,1250μm,0.4s							
SAOF	**Saorge**	**0.75**	**255**	Pg		**Pb**	**17 03 06.6**	**+0.1**
SAOF				Sg		**Sb**	**17 03 17.0**	**+0.6**
SAOF	**Saorge**	**0.75**	**255**	P		**Pb**	**17 03 06.6**	**+0.1**
SAOF				S		**Sb**	**17 03 17.0**	**+0.6**
SAOF	**Saorge**	**0.75**	**255**	AML		AML		
	comp=N,367μm,0.8s							
SAOF				AML		AML		
	comp=E,288μm,0.8s							
ENR	**Entracque**	**0.82**	**274**	P		**Pb**	**17 03 07.6**	**-0.1**
ENR				S		**Sb**	**17 03 19.7**	**+1.2**
ENR	**Entracque**	**0.82**	**274**	P		**Pb**	**17 03 07.7**	**-0.1**
ENR				S		**Sb**	**17 03 19.8**	**+1.3**
ENR				AML		AML		
	comp=E,452μm,1.4s							
ENR				AML		AML		
	comp=N,788μm,0.3s							
ENR				AML		AML		
	comp=E,452μm,1.4s							
ENR				AML		AML		
	comp=E,398μm,0.9s							
TURF	**col de Turini**	**0.86**	**257**	Pg		**Pb**	**17 03 08.9**	**+0.3**
TURF				Sg		**Sb**	**17 03 20.8**	**+0.9**
SBF	**Sospel**	**0.87**	**249**	*e*Pg		**Pb**	**17 03 08.7**	**+0.1**
SBF				*e*Sg		**Sb**	**17 03 19.9**	**0.0**
	comp=E,101nm,0.2s							
STV	**Sant Anna di V**	**0.89**	**275**	P		**Pb**	**17 03 09.1**	**+0.2**
STV	**Sant Anna di V**	**0.89**	**275**	P		**Pb**	**17 03 09.3**	**+0.4**
STV				S		**Sb**	**17 03 21.6**	**+1.2**
STV				AML		AML		
	comp=E,244μm,0.9s							
STV				AML		AML		
	comp=N,458μm,0.3s							
STV				AML		AML		
	comp=E,244μm,0.9s							
ESCA	**l'Escarene**	**0.92**	**248**	Pg		**Pb**	**17 03 10.1**	**+0.6**
ESCA				Sg		**Sg**	**17 03 23.3**	**+1.1**
MONC	**Moncucco Torin**	**1.00**	**333**	AML		AML		
	comp=N,268μm,1.4s							
MONC				AML		AML		
	comp=E,230μm,1.5s							
MONC				AML		AML		
	comp=N,267μm,1.4s							
MONC				AML		AML		
	comp=E,230μm,1.5s							
ISO	**Isola**	**1.08**	**271**	Pg		**Pb**	**17 03 13.0**	**+0.7**
ISO				Sg		**Sb**	**17 03 27.5**	**+1.4**
PZZ	**Stroppo**	**1.09**	**288**	P		**Pb**	**17 03 12.5**	**+0.2**
PZZ	**Stroppo**	**1.09**	**288**	P		**Pb**	**17 03 12.5**	**+0.2**
PZZ				S		**Sb**	**17 03 27.3**	**+1.1**
PZZ				AML		AML		
	comp=E,474μm,0.2s							
PZZ				AML		AML		
	comp=N,306μm,0.5s							
PZZ				AML		AML		
	comp=E,473μm,0.2s							
GRAM	**Graiana**	**1.13**	**73**	P		**Pn**	**17 03 13.6**	**+0.6**
GRAM				AML		AML		
	comp=N,248μm,1.5s							
GRAM				AML		AML		
	comp=E,338μm,1.6s							
BHB	**Bricherasio**	**1.14**	**306**	P		**Pn**	**17 03 13.8**	**+0.7**
BHB				S		**Sb**	**17 03 29.2**	**+1.6**
BHB				AML		AML		
	comp=E,266μm,0.6s							
BHB				AML		AML		
	comp=N,258μm,0.9s							
CALF	**Calern**	**1.26**	**251**	Pg		**Pb**	**17 03 16.5**	**+1.2**
CALF				Sg		**Sn**	**17 03 33.1**	**+1.8**
SARO	**Sassorosso**	**1.33**	**89**	P		**Pn**	**17 03 16.4**	**+0.7**
SARO				AML		AML		
	comp=E,45μm,0.7s							
SARO				AML		AML		
	comp=N,54μm,0.6s							
SARO				AML		AML		
	comp=N,54μm,0.6s							
RSP	**Reno Superiore**	**1.34**	**317**	P		**Pn**	**17 03 17.3**	**+1.4**
RSP				AML		AML		
	comp=E,91μm,0.5s							
RSP				AML		AML		
	comp=N,82μm,0.8s							
ERBM	**Eremo**	**1.35**	**79**	P		**Pb**	**17 03 17.7**	**+0.9**
ERBM				AML		AML		
	comp=E,102μm,1.5s							
ERBM				AML		AML		
	comp=N,146μm,1.5s							
MBDF	**Montbardon**	**1.39**	**294**	*e*Pn		**Pn**	**17 03 16.4**	**-0.3**
MBDF	**Montbardon**	**1.39**	**294**	*e*Pg		**Pn**	**17 03 18.0**	**+1.3**
MBDF				*e*Sn		**Sn**	**17 03 34.0**	**-0.6**
MBDF				*e*Sg		**Sb**	**17 03 36.5**	**+1.5**
	comp=N,21nm,0.2s							
CARD	**Cardoso**	**1.39**	**96**	P		**Pn**	**17 03 17.5**	**+0.9**
CARD				AML		AML		
	comp=E,140μm,0.9s							
CARD				AML		AML		
	comp=E,140μm,0.9s							
CARD				AML		AML		
	comp=N,134μm,1.2s							
TRAV	**Traversella**	**1.45**	**337**	P		**Pn**	**17 03 18.3**	**+0.8**
RRL	**Rocca Remolon**	**1.47**	**301**	P		**Pn**	**17 03 19.3**	**+1.5**
OGAG	**Argentiere**	**1.47**	**281**	Pg		**Pg**	**17 03 21.5**	**+1.1**
PII	**Pisa**	**1.49**	**107**	⇑P		**Pb**	**17 03 19.8**	**+0.6**
FRF	**La Foret Royal**	**1.51**	**247**	*e*Pn		**Pn**	**17 03 17.4**	**-0.7**
FRF	**La Foret Royal**	**1.51**	**247**	*e*Pg		**Pb**	**17 03 20.4**	**+0.8**
FRF				*e*Sn		**Sn**	**17 03 36.2**	**-1.2**
FRF				*e*Sg		**Sb**	**17 03 39.7**	**+1.3**
	comp=N,34nm,0.2s							
BNI	**Bardonecchia**	**1.60**	**304**	P		**Pb**	**17 03 21.7**	**+0.5**
OGDI	**Digne**	**1.63**	**268**	Pg		**Pg**	**17 03 24.2**	**+0.9**
OGDI				Sg		**Sg**	**17 03 46.5**	**+1.9**
PGF	**Pioggiola**	**1.66**	**169**	*e*Pn		**Pn**	**17 03 18.1**	**-2.2**
PGF				*e*Sn		**Sn**	**17 03 36.5**	**-4.7**
	comp=N,9.0nm,0.2s							
OGMO	**Fort Saint-Gob**	**1.69**	**308**	Pg		**Pb**	**17 03 23.4**	**+0.8**
OGMO				Sg		**Sb**	**17 03 44.7**	**+1.3**
LMR	**La Mourre**	**1.71**	**241**	*e*Pn		**Pn**	**17 03 20.0**	**-0.8**
LMR	**La Mourre**	**1.71**	**241**	*e*Pg		**Pb**	**17 03 24.0**	**+1.1**
LMR				*e*Sn		**Sn**	**17 03 40.3**	**-1.9**
LMR				*e*Sg		**Sb**	**17 03 46.2**	**+2.2**
	comp=N,18nm,0.2s							
BLAF	**les Blancs**	**1.83**	**264**	Pg		**Pb**	**17 03 27.1**	**+2.2**
BLAF				Sg		**Sg**	**17 03 51.6**	**+0.7**
LPG	**La Plagne**	**1.84**	**316**	*e*Pn		**Pn**	**17 03 22.7**	**-0.3**
LPG	**La Plagne**	**1.84**	**316**	*e*P		**Pn**	**17 03 24.9**	**+1.9**
LPG	**La Plagne**	**1.84**	**316**	*e*Pg		**Pb**	**17 03 26.2**	**+0.9**
LPG				*e*Sn		**Sn**	**17 03 44.7**	**-1.2**
LPG				*e*Sg		**Sb**	**17 03 51.4**	**+3.3**
	comp=N,7.1nm,0.2s							
LPL	**La Plagne**	**1.86**	**316**	*e*P		**Pn**	**17 03 25.0**	**+1.8**
LPL				*e*Sn		**Sn**	**17 03 44.4**	**-2.0**
LPL				*e*Sg		**Sb**	**17 03 51.5**	**+2.8**
	comp=N,9.3nm,0.2s							
RSL	**Roselend**	**2.04**	**318**	Pg		**Pb**	**17 03 29.9**	**+1.2**
ORIF	**Oris-en-Rattie**	**2.05**	**292**	Pn		**Pn**	**17 03 27.4**	**+1.7**
ORIF	**Oris-en-Rattie**	**2.05**	**292**	*e*Pn		**Pn**	**17 03 25.2**	**-0.5**
ORIF	**Oris-en-Rattie**	**2.05**	**292**	*e*P		**Pn**	**17 03 27.6**	**+1.9**
ORIF	**Oris-en-Rattie**	**2.05**	**292**	*e*Pg		**Pb**	**17 03 30.3**	**+1.5**
ORIF				*e*Sn		**Sn**	**17 03 49.3**	**-1.6**
ORIF				*e*Sg		**Sb**	**17 03 57.1**	**+3.1**
	comp=N,7.4nm,0.2s							
ARTF	**Artigues**	**2.08**	**254**	Pn		**Pn**	**17 03 28.5**	**+2.5**
ARTF				Sg		**Sg**	**17 03 58.5**	**-0.4**
BSTF	**la Bastide-des**	**2.12**	**263**	Pg		**Pg**	**17 03 32.9**	**+0.1**
BSTF				Sg		**Sg**	**17 04 00.4**	**+0.1**
SMRF	**Simiane la Rot**	**2.16**	**266**	*e*Pn		**Pn**	**17 03 26.5**	**-0.6**
SMRF	**Simiane la Rot**	**2.16**	**266**	*e*P		**Pn**	**17 03 29.1**	**+2.0**
SMRF	**Simiane la Rot**	**2.16**	**266**	*e*Pg		**Pb**	**17 03 32.4**	**+1.8**
SMRF				*e*Sn		**Sn**	**17 03 51.7**	**-1.7**
SMRF				*e*Sg		**Sb**	**17 04 00.2**	**+3.2**
	comp=N,16nm,0.2s							
RUSF	**Rustrel**	**2.23**	**265**	Pn		**Pn**	**17 03 30.1**	**+2.1**
LMD	**Lutirano**	**2.27**	**91**	S		**Sb**	**17 04 02.0**	**+1.8**
ARCI	**Arcidosso**	**2.50**	**121**	S		**Sg**	**17 04 15.0**	**+2.5**
VIVF	**Saint-Julien-l**	**2.86**	**285**	*e*Pn		**Pn**	**17 03 36.1**	**-0.6**
VIVF	**Saint-Julien-l**	**2.86**	**285**	*e*Pg		**Pb**	**17 03 45.3**	**+2.8**
VIVF				*e*Sn		**Sn**	**17 04 08.5**	**-2.2**
VIVF				*e*Sg		**Sb**	**17 04 22.1**	**+4.9**
	comp=N,3.6nm,0.3s							
PE3	**Peglio**	**2.88**	**98**	S		**Sg**	**17 04 27.0**	**+2.2**
CABF	**La Chapelle**	**2.99**	**325**	*e*Pn		**Pn**	**17 03 38.4**	**-0.2**
CABF				*e*Sn		**Sn**	**17 04 12.6**	**-1.4**
FRE8	**Fregona**	**3.26**	**54**	S		**Sb**	**17 04 27.0**	**-1.6**
LASF	**Ste Croix**	**3.39**	**270**	*e*Pn		**Pn**	**17 03 43.2**	**-0.8**
LASF	**Ste Croix**	**3.39**	**270**	*e*Pg		**Pb**	**17 03 54.9**	**+3.4**
LASF				*e*Sn		**Sn**	**17 04 21.2**	**-2.5**
LASF				*e*Sg		**Sg**	**17 04 38.4**	**-2.4**
	comp=N,0.6nm,0.2s							
HINF	**Hinteralfeld**	**3.83**	**343**	*e*Pn		**Pn**	**17 03 49.8**	**-0.2**
HINF	**Hinteralfeld**	**3.83**	**343**	*e*P		**Pn**	**17 03 52.5**	**+2.5**
HINF				*e*Sn		**Sn**	**17 04 32.1**	**-2.5**
	comp=N,0.9nm,0.3s							
HINF	**Hinteralfeld**	**3.83**	**343**	*e*Sg		**Pn**	**17 03 49.4**	**-0.6**
	comp=N,1.5nm,0.2s							
HAU	**Haudompre**	**4.12**	**339**	*e*Pn		**Pn**	**17 03 53.8**	**-0.3**
HAU	**Haudompre**	**4.12**	**339**	*e*P		**Pn**	**17 03 56.1**	**+2.0**
HAU				*e*Sn		**Sn**	**17 04 39.1**	**-2.7**
	comp=N,7.5nm,0.5s							
HAU	**Haudompre**	**4.12**	**339**	*e*Sg		**Pn**	**17 03 55.7**	**+1.6**
	comp=N,2.5nm,0.2s							
SMF	**Signal de Mont**	**4.14**	**308**	*e*Pn		**Pn**	**17 03 53.5**	**-0.8**
SMF	**Signal de Mont**	**4.14**	**308**	*e*P		**Pn**	**17 03 57.2**	**+2.9**
SMF				*e*Sn		**Sn**	**17 04 39.2**	**-2.9**
SMF				*e*Sg		**Sg**	**17 05 02.1**	**-2.7**
	comp=N,0.4nm,0.2s							
VCEL	**Villa Celiera**	**4.25**	**113**	AML		AML		
	comp=N,384μm,0.1s							
VCEL				AML		AML		
	comp=E,218μm,0.2s							
AVF	**Avril sur Loir**	**4.50**	**307**	*e*Pn		**Pn**	**17 03 58.5**	**-0.7**
AVF	**Avril sur Loir**	**4.50**	**307**	*e*Pg		**Pg**	**17 04 15.7**	**-2.4**
AVF				*e*Sn		**Sn**	**17 04 47.5**	**-3.5**
AVF				*e*Sg		**Sg**	**17 05 13.2**	**-3.1**
	comp=E,0.2nm,0.2s							
LOR	**Lormes**	**4.51**	**315**	*e*Pn		**Pn**	**17 03 58.7**	**-0.7**
	baz=132							
LOR	**Lormes**	**4.51**	**315**	*e*P		**Pn**	**17 04 02.7**	**+3.3**
LOR	**Lormes**	**4.51**	**315**	*e*Pg		Pb	17 04 15.8	+5.1
LOR				*e*Sn		**Sn**	**17 04 48.1**	**-3.3**
LOR				*e*Sg		**Sg**	**17 05 13.8**	**-3.1**
	comp=E,0.4nm,0.2s							
SSF	**Saint Saulge**	**4.57**	**311**	*e*P		**Pn**	**17 04 03.1**	**+2.9**
SSF				*e*Sn		**Sn**	**17 04 49.6**	**-3.1**
	comp=E,0.9nm,0.3s							
MTLF	**Montolieu**	**4.67**	**262**	*e*Pn		**Pn**	**17 04 01.1**	**-0.5**
MTLF	**Montolieu**	**4.67**	**262**	*e*Pg		Pb	17 04 18.0	+4.7
MTLF				*e*Sn		**Sn**	**17 04 51.1**	**-4.1**
MTLF				*e*Sg		**Sg**	**17 05 18.8**	**-3.1**
BGF	**Bois d'Agland**	**4.67**	**303**	*e*P		**Pn**	**17 04 03.3**	**+1.7**
BGF				*e*Sn		**Sn**	**17 04 52.5**	**-2.9**
BGF				*e*Sg		**Sg**	**17 05 19.6**	**-2.5**
	comp=E,2.8nm,0.4s							
CAF	**Calviac**	**4.70**	**281**	*e*Pn		**Pn**	**17 04 01.6**	**-0.4**

*NEIC **10** 17:17:42.6, 61°.52N×140°.68W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr 0.70; Mθθ -2.84; Mφφ 2.14; Mrθ 0.56; Mrφ 1.81; Mθφ -0.47; Fault plane solution: Mb 3.22000×10^14 NP1: φs 242.71000°, δ 78.08000°, λ -0.94000°. NP2: φs 332.91000°, δ 89.08000°, λ -168.08000°. Principal axes: T 2.7620, Plg 8.0000°, Azm 107.0000°; N 0.7748, Plg 78.0000°, Azm 337.0000°; P -3.5369, Plg 9.0000°, Azm 198.0000°;*
*IDC **10** 17:17:43.8±1.0, 62°.28N×139°.42W, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.4/48, mbtmp3.4/4, ML3.2/2 Error ellipse: s-maj=26.6km s-min=11.0km az=43.0*
*AEIC **10** 17:17:43±1.9, 61°.540N±0°.010×140°.71W±0°.02, h1km±1km, ML3.4, Mwr3.6/32(NEIC), Error ellipse: s-maj=2.9km s-min=2.6km az=315.0*
*NEIC **10** 17:17:43.2±1.9, 61°.55N±0°.01×140°.71W±0°.03, h2km±5km, Error ellipse: s-maj=2.4km s-min=1.2km az=141.0*

ISC 10 17:17:43.0±1.1, **61°.54N**±0°.02×**140°.71W**±0°.02, **h4**km±10km, **n106**,σ1**9**09/115, **Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YUK3	**Moose Creek**	**0.27**	**26**			**Pg**	**17 17 48.2**	**0.0**
YUK3						**Sg**	**17 17 52.3**	**+0.6**
YUK1	**Sand Pete Hill**	**0.62**	**8**			**Pg**	**17 17 54.6**	**-0.4**
YUK1						**Sg**	**17 18 03.5**	**+0.4**
CTGM	**Chitina Glacie**	**0.65**	**208**			**Pg**	**17 17 55.4**	**-0.1**
CTGM	**Chitina Glacie**	**0.65**	**208**			**Sb**	**17 18 05.1**	**-1.2**
BARN	**Barnard Glacie**	**0.67**	**224**			**Pg**	**17 17 55.6**	**-0.2**
BARN	**Barnard Glacie**	**0.67**	**224**			**Sb**	**17 18 05.9**	**-0.9**
LOGN	**Logan Glacier**	**0.73**	**191**			**Pg**	**17 17 56.8**	**-0.2**
LOGN						**Sb**	**17 18 07.5**	**-1.2**
BVCY	**Beaver Creek**	**0.88**	**355**			**Pg**	**17 17 59.4**	**-0.5**
BVCY						**Sg**	**17 18 11.5**	**+0.1**
PTPK	**Patty Peak**	**0.92**	**248**			**Pg**	**17 18 00.5**	**-0.1**
PTPK						**Sg**	**17 18 12.6**	**+0.2**
BALM	**Baldy**	**0.94**	**238**			**Pg**	**17 18 00.5**	**-0.5**
BALM	**Baldy**	**0.94**	**238**			**Sb**	**17 18 14.2**	**-0.5**
GRNC	**Granite Creek**	**0.95**	**213**			**Pg**	**17 18 00.9**	**-0.4**
GRNC						**Sb**	**17 18 14.5**	**-0.7**
KIAG	**Kiagna River**	**1.01**	**233**			**Pg**	**17 18 02.1**	**-0.3**
KIAG						**Sb**	**17 18 16.0**	**-0.7**
YUK4	**Talbot Arm**	**1.01**	**100**			**Pg**	**17 18 01.9**	**-0.4**
YUK4						**Sb**	**17 18 16.0**	**-0.8**
TABL	**Table Mountain**	**1.12**	**191**			**Pg**	**17 18 03.6**	**-0.9**
TABL	**Table Mountain**	**1.12**	**191**			**Sg**	**17 18 19.3**	**+0.3**
MCARA	**McCarthy VSAT**	**1.12**	**263**			**Pb**	**17 18 04.3**	**-0.6**
MCARA	**McCarthy VSAT**	**1.12**	**263**			**Sg**	**17 18 18.6**	**-0.4**
ISLE	**Juniper Island**	**1.23**	**221**			**Pn**	**17 18 05.8**	**-1.2**
ISLE	**Juniper Island**	**1.23**	**221**			**Sn**	**17 18 19.4**	**-0.7**
RKAV	**Rock Avalanche**	**1.28**	**194**			**Pn**	**17 18 06.5**	**-1.2**
RKAV						**Sg**	**17 18 24.3**	**+0.3**
YUK6	**Outpost Mounta**	**1.28**	**117**			**Pn**	**17 18 06.0**	**-1.8**
YAH	**Yahtse**	**1.28**	**204**			**Pn**	**17 18 06.8**	**-1.1**
YAH	**Yahtse**	**1.28**	**204**			**Sn**	**17 18 25.3**	**-0.2**
TGL	**Tana Glacier**	**1.29**	**234**			**Pn**	**17 18 06.9**	**-1.0**
TGL	**Tana Glacier**	**1.29**	**234**			**Sg**	**17 18 24.8**	**+0.3**
VRDI	**Verde Repeater**	**1.36**	**258**	Pg		**Pn**	**17 18 08.1**	**-0.7**
VRDI	**Verde Repeater**	**1.36**	**258**			**Sg**	**17 18 27.3**	**+0.7**
SAMH	**Samovar Hills**	**1.41**	**182**			**Pb**	**17 18 09.6**	**-0.4**
SAMH						**Sg**	**17 18 29.8**	**+1.5**
CRQM	**Cirque**	**1.42**	**237**			**Pn**	**17 18 08.5**	**-1.2**
PCA	**Pinnacle**	**1.46**	**171**			**Pb**	**17 18 10.0**	**-0.8**
PCA	**Pinnacle**	**1.46**	**171**			**Sg**	**17 18 31.2**	**+1.3**
GLB	**Gilahina Butte**	**1.49**	**268**			**Pb**	**17 18 10.4**	**-0.8**
GLB	**Gilahina Butte**	**1.49**	**268**			**Sg**	**17 18 30.7**	**-0.1**
CHX	**Chaix Hills**	**1.49**	**188**			**Pg**	**17 18 11.4**	**-0.2**
MESA	**MESA**	**1.49**	**205**			**Pb**	**17 18 11.3**	**0.0**
MESA	**MESA**	**1.49**	**205**			**Sg**	**17 18 32.3**	**+1.4**
BC03		**1.61**	**342**			**Pb**	**17 18 12.1**	**-1.2**
BCAR	**Beaver Creek A**	**1.61**	**342**			**Pn**	**17 18 11.5**	**-0.8**
KULT	**Kultieth River**	**1.63**	**218**			**Pb**	**17 18 13.4**	**-0.1**
KHIT	**Khitrov Hills**	**1.66**	**230**			**Pb**	**17 18 13.8**	**-0.2**
BCPM	**Bancas Point**	**1.67**	**161**			**Pb**	**17 18 13.7**	**-0.6**
CYK	**Cape Yakataga**	**1.70**	**212**			**Pb**	**17 18 14.3**	**-0.4**
HYT	**Haines Junctio**	**1.71**	**113**	Pn		**Pn**	**17 18 13.1**	**-0.5**
SNH	**Sunshine Point**	**1.72**	**218**			**Pb**	**17 18 15.1**	**0.0**
GRIN	**Grindle Hills**	**1.79**	**227**			**Pb**	**17 18 16.1**	**-0.3**
BERG	**Berg Lake**	**1.86**	**233**			**Pb**	**17 18 17.4**	**-0.1**
N25K	**Chitina, Valde**	**1.86**	**274**			**Pb**	**17 18 17.4**	**-0.2**
L26K	**Log Cabin Wild**	**1.94**	**322**			**Pb**	**17 18 18.2**	**-0.6**
SUCK	**Suckling Hills**	**2.10**	**227**	Pg		**Pg**	**17 18 22.7**	**-0.6**
HMT	**Hamilton**	**2.11**	**237**			**Pb**	**17 18 22.4**	**+0.6**
RAGM	**Ragged Mountai**	**2.25**	**241**			**Pb**	**17 18 24.8**	**+0.6**
KLU	**Klutina**	**2.50**	**271**			**Pb**	**17 18 28.1**	**-0.3**
K27K	**Chicken**	**2.58**	**346**			**Pn**	**17 18 25.7**	**+0.2**
DAWY	**Dawson**	**2.61**	**13**			**Pn**	**17 18 25.9**	**0.0**
DOT	**Dot Lake**	**2.63**	**325**			**Pn**

ASAR	**Alice Springs**	**20.64**	**206**	P	P	17 25 45.9	+0.4
	0.5nm,0.6s,baz=38,slow=11,SNR=11						
DAV	**Davao City (W)**	**21.83**	**304**	LR	LR	17 35 46.3	
	comp=Z,46nm,19.2s,baz=12,slow=40						
MKAR	**Makanchi Array**	**74.83**	**321**	P	P	17 32 46.6	0.0
	0.3nm,0.7s,baz=131,slow=8.4,SNR=3.2						

NIED ***10*** *17:21:25.5,38˚.89N×141˚.97E,h49km,MW3.6,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr2.30; Mθθ-0.41; Mφφ-1.89; Mrθ0.67; Mθφ-0.86; Mφr1.99; Fault plane solution: M₀3.11000×10¹⁴ NP1:φs21.00000°, δ66.00000°, λ,87.00000°. NP2:φs209.00000°, δ24.00000°, λ,97.00000°.*

JMA ***10*** *17:21:25.4±0.1,38˚.89N×141˚.97E,h49km±1km,M3.6*

JMA Felt I J1.

IDC ***10*** *17:21:26.1±2.5,38˚.89N×142˚.21E,h64km±22km,mb3.4/7, mb1 3.5/11,mb1mx3.3/51,mbtmp3.6/11,MS2.6/2, Ms1 2.6/2,ms1mx2.2/30,Error ellipse: s-maj=28.5km s-min=14.9km az=102.0*

ISC 10 17:21:24.8±1.5, 38˚.85N±0˚.06×142˚.1E±0˚.1, h47km±11km, n29,σ1s29/30, mb3.7/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.41**	**304**	P	**Pn**	**17 21 34.7**	**0.0**
OFUJ				S	**Sn**	**17 21 41.0**	**-0.8**
JKMT	**Kesennumamotoy**	**0.49**	**265**	P	**Pn**	**17 21 35.4**	**-0.3**
JKMT				S	**Sn**	**17 21 42.3**	**-1.2**
JMK	**Ichinoseki**	**0.69**	**279**	P	**Pn**	**17 21 37.8**	**-0.5**
JMK				S	**Sn**	**17 21 46.5**	**-1.5**
JIO	**Ouri**	**0.71**	**236**	P	**Pn**	**17 21 38.3**	**-0.2**
JIO				S	**Sn**	**17 21 47.0**	**-1.4**
JOM	**Ohasama**	**0.88**	**315**	P	**Pn**	**17 21 40.4**	**-0.4**
JOM				S	**Sn**	**17 21 51.2**	**-1.4**
JOU	**Okura**	**1.22**	**247**	P	**Pn**	**17 21 45.0**	**-0.5**
JRG	**Rokugo**	**1.26**	**296**	P	**Pn**	**17 21 45.3**	**-0.7**
JYK	**Kaneyama**	**1.36**	**273**	P	**Pn**	**17 21 46.8**	**-0.5**
JMM	**Marumori**	**1.42**	**227**	P	**Pn**	**17 21 47.7**	**-0.4**
JMM				eS	**Sn**	**17 22 04.2**	**-1.4**
JANG	**Nango**	**1.59**	**344**	P	**Pn**	**17 21 50.0**	**-0.4**
MAT	**Matsushiro**	**3.85**	**234**	P	**Pn**	**17 22 22.7**	**+1.2**
MAT				eS	**Sn**	**17 23 06.5**	**+1.0**
MJAR	**Matsushiro Arr**	**3.85**	**234**	P	**Pn**	**17 22 23.5**	**+2.0**
	0.5nm,0.3s,baz=39,slow=12,SNR=32						
ASAJ	**Asahikawa**	**5.27**	**4**	P	**Pn**	**17 22 41.0**	**0.0**
	0.7nm,0.3s,baz=206,slow=14,SNR=13						
ASAJ				S	**Sn**	**17 23 41.1**	**+0.7**
	0.5nm,0.3s,baz=283,slow=32,SNR=1.7						
USRK	**Ussuriysk Ar.**	**9.27**	**308**	P	**Pn**	**17 23 38.5**	**+2.8**
	baz=122,slow=14,SNR=7.6						
KSRS	**Korea Array**	**11.25**	**267**	P	**Pn**	**17 24 06.7**	**+3.9**
	0.1nm,0.3s,baz=72,slow=14,SNR=2.7						
KSRS				LR	LR	17 27 36.8	
	comp=Z,21nm,20.1s,baz=40,slow=33						
KLR	**Kul'dur**	**12.76**	**328**	LR	LR	17 29 22.6	
	comp=Z,37nm,18.0s,baz=352,slow=37						
H11N2	**WAKE ISLAND Hy**	**28.67**	**125**	T	T	17 57 43.6	
	baz=317,slow=75,SNR=522						
H11N1	**WAKE ISLAND Hy**	**28.68**	**125**	T	T	17 57 45.6	
	baz=317,slow=75,SNR=253						
H11N3	**WAKE ISLAND Hy**	**28.69**	**125**	T	T	17 57 45.0	
	baz=317,slow=75,SNR=293						
H11S1	**WAKE ISLAND Hy**	**29.45**	**127**	T	T	17 58 36.5	
	baz=318,slow=76,SNR=178						
H11S3	**WAKE ISLAND Hy**	**29.45**	**127**	T	T	17 58 36.6	
	baz=318,slow=76,SNR=156						
H11S2	**WAKE ISLAND Hy**	**29.46**	**127**	T	T	17 58 38.7	
	baz=318,slow=76,SNR=132						
ZALV	**Zalesovo Beam**	**41.11**	**311**	P	**P**	**17 29 03.7**	**-0.2**
	0.7nm,0.5s,baz=88,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**43.64**	**301**	P	**P**	**17 29 24.1**	**-0.4**
	1.0nm,0.6s,baz=84,slow=9.1,SNR=12						
ILAR	**Eielson Array**	**47.68**	**33**	P	**P**	**17 29 55.6**	**-0.5**
	0.3nm,0.7s,baz=266,slow=6.3,SNR=2.3						
WRA	**Warramunga Arr**	**58.93**	**189**	P	**P**	**17 31 18.4**	**-0.7**
	0.4nm,0.6s,baz=5.9,slow=7.5,SNR=12						
ASAR	**Alice Springs**	**62.66**	**188**	P	**P**	**17 31 44.9**	**+0.4**
	0.2nm,0.6s,baz=11,slow=4.9,SNR=4.1						
FINES	**FINESS Array B**	**67.46**	**332**	P	**P**	**17 32 14.8**	**-0.4**
	2.8nm,0.9s,baz=28,slow=8.6,SNR=4.0						
AKASG	**Malin Array Be**	**73.19**	**322**	P	**P**	**17 32 49.7**	**-0.7**
	0.7nm,0.5s,baz=44,slow=6.1,SNR=1.9						

IDC 10 18:01:30.7±520.0, 56˚.61N×2˚.03E, h0km, Error ellipse: s-maj=185.1km s-min=128.1km az=26.0, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I26DE	**FREYUNG INFRAS**	**10.50**	**133**	*i*		19 07 40.0	
	baz=323,slow=325,SNR=2.2						
I37NO	**I37NO**	**14.53**	**24**	*i*		19 27 10.0	
	baz=219,slow=329,SNR=0.7						
I43RU	**DUBNA INFRASONI**	**19.21**	**75**	*i*		20 03 30.0	
	baz=281,slow=323,SNR=0.9						

IDC ***10*** *18:10:34.2±9.5,26˚.45N×124˚.88E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.3/46,mbtmp3.5/3,MS3.2/6,Ms1 3.2/6, ms1mx2.8/32,Error ellipse: s-maj=550.2km s-min=29.5km az=60.0*

JMA ***10*** *18:10:35.1±0.2,25˚.07N×123˚.60E,h15km,M3.0*

ISC 10 18:10:35.1±1.7, 25˚.04N±0˚.08×123˚.60E±0˚.04, h14km±12km, n18,σ0s41/16, mb3.4/3, MS3.3/4, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.71**	**170**	P	**Pg**	**18 10 49.2**	**+0.2**
YOJ	**Yonaguni jima**	**0.78**	**223**	P	**Pg**	**18 10 50.4**	**+0.1**
YOJ				S	**Sg**	**18 11 00.9**	**+0.3**
JISG	**Ishigakijimahi**	**0.79**	**125**	P	**Pg**	**18 10 50.2**	**-0.3**
JISG				eS	**Sb**	**18 11 01.9**	**+0.7**
JYNG	**Yonagunijimaku**	**0.83**	**225**	P	**Pb**	**18 10 50.9**	**-0.4**
JYNG				eS	**Sb**	**18 11 02.2**	**-0.2**
JIJ	**Ishigaki jima**	**0.84**	**143**	P	**Pb**	**18 10 50.8**	**-0.6**
JIJ				eS	**Sb**	**18 11 01.8**	**-0.7**
JKRS	**Kuro-shima**	**0.88**	**155**	P	**Pb**	**18 10 52.0**	**-0.2**
HATJ	**Hateruma jima**	**1.00**	**169**	P	**Pb**	**18 10 54.1**	**0.0**
HATJ				eS	**Sb**	**18 11 07.4**	**+0.3**
JTJ	**Tarama**	**1.08**	**111**	P	**Pb**	**18 10 55.5**	**-0.1**
JTJ				eS	**Sg**	**18 11 10.2**	**+0.1**
JMJ2	**Miyako jima3**	**1.60**	**100**	P	**Pn**	**18 11 03.2**	**+0.2**
KSRS	**Korea Array**	**12.91**	**16**	LR	LR	18 18 29.2	
	comp=Z,54nm,20.5s,baz=192,slow=42						
DAV	**Davao City (W)**	**17.97**	**174**	LR	LR	18 21 06.9	
	comp=Z,51nm,20.1s,baz=322,slow=33						
KLR	**Kul'dur**	**24.98**	**13**	LR	LR	18 25 45.2	
	comp=Z,68nm,19.2s,baz=196,slow=39						
SONM	**Songino Array**	**26.51**	**333**	LR	LR	18 26 06.0	
	comp=Z,62nm,18.4s,baz=124,slow=36						
MKAR	**Makanchi Array**	**39.28**	**314**	P	**P**	**18 18 03.5**	**+0.1**
	0.5nm,0.8s,baz=104,slow=8.9,SNR=4.2						
ZALV	**Zalesovo Beam**	**40.75**	**325**	LR	LR	18 35 27.3	
	comp=Z,46nm,18.3s,baz=67,slow=37						
WRA	**Warramunga Arr**	**45.92**	**166**	P	P	18 19 06.8	+9.2
	1.1nm,0.9s,baz=350,slow=9.0,SNR=5.3						
NRIK	**Noril'sk**	**49.17**	**344**	LR	LR	18 42 51.2	
	comp=Z,41nm,20.0s,baz=215,slow=40						
ASAR	**Alice Springs**	**49.44**	**168**	P	P	18 19 35.2	+10
	0.3nm,0.8s,baz=347,slow=8.2,SNR=6.5						

IDC ***10*** *18:22:30.5±0.6,13˚.62N×90˚.29W,h0km,mb4.7/19, mb1 4.9/20,mb1mx4.7/33,mbtmp4.7/20,ML5.2/1,MS4.3/26, Ms1 4.3/26,ms1mx4.1/41,Error ellipse: s-maj=26.8km s-min=12.3km az=52.0*

INET ***10*** *18:22:33.8, 12˚.99N×90˚.93W,h19km,MW4.2*

UCR ***10*** *18:22:35.6±1.2, 13˚.27N×90˚.90W,h37km±999km,ML4.4, MW4.1,mb4.9(NEIC)*

NEIC ***10*** *18:22:35.1±2.3, 13˚.23N±0˚.07×90˚.87W±0˚.06,h44km±5km, mb4.9/407,Md4.6(SNET),Error ellipse: s-maj=10.9km s-min=7.5km az=216.0*

SNET ***10*** *18:22:35.1±1.4, 13˚.23N×90˚.91W,h35km±999km,ML4.6*

GCMT ***10*** *18:22:35.1±0.3, 13˚.17N±0˚.02×91˚.32W±0˚.02,h16km, MW5.0/105,Moment Tensor Solution. s61,c77; s105,c143; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.02±.13; Mθθ-2.49±.09; Mφφ-0.53±.09; Mrθ1.59±.23; Mθφ1.21±.06; Mφr-2.80±.33; Best double couple: M₀4.41000×10¹⁶ NP1:φs278.00000°, δ27.00000°, λ53.00000°. NP2:φs139.00000°, δ69.00000°, λ107.00000°. Principal axes: T 4.6580, Plg62.0000°, Azm75.0000°; N -0.4990, Plg16.0000°, Azm312.0000°; P -4.1620, Plg22.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GCG ***10*** *18:22:43.5±0.4, 14˚.03N×91˚.07W,h66km±9km,MD4.8*

ISC 10 18:22:31.3±1.2, 13˚.20N±0˚.04×90˚.91W±0˚.03, h14km±7km, n974,σ1s33/973, mb4.9/197, MS4.4/30, 6C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**1.07**	**25**	*eP*	**Sn**	**18 23 09.4**	**+2.5**
MOYG	**Moyuta, Jutiap**	**1.17**	**43**	*eP*	**Sn**	**18 23 07.9**	**-1.4**
PCG	**Pacaya**	**1.22**	**14**	*eP*	**Pg**	**18 22 56.5**	**+1.6**
FUG	**Fuego 3**	**1.25**	**3**	*eP*	**Pg**	**18 22 56.4**	**+1.0**
FUG				*eP*		18 22 56.8	
NUBE	**Las Nubes**	**1.30**	**57**	*↑iP*	**Pb**	**18 22 56.8**	**+1.1**
NUBE				*eS*	**Sb**	**18 23 12.5**	**+0.1**
NUBE	**Las Nubes**	**1.30**	**57**	*↑iP*	**Pb**	**18 22 56.8**	**+1.1**
NUBE				*eS*	**Sb**	**18 23 12.5**	**+0.1**
ERG	**Entre ros, C**	**1.39**	**333**	*eP*	**Pb**	**18 22 57.4**	**+0.3**
SBLS	**San Blas**	**1.40**	**63**	*eP*	**Pb**	**18 22 58.6**	**+1.1**
SBLS	**San Blas**	**1.40**	**63**	*eP*	**Pb**	**18 22 58.6**	**+1.1**
RTR	**El Retiro**	**1.41**	**60**	*eP*	**Pg**	**18 22 58.8**	**+0.4**
RTR	**El Retiro**	**1.41**	**60**	*eP*	**Pg**	**18 22 58.8**	**+0.4**
SNJE	**San Jose**	**1.43**	**62**	*eP*	**Pb**	**18 22 59.0**	**+1.1**
SNJE	**San Jose**	**1.43**	**62**	*eP*	**Pb**	**18 22 59.0**	**+1.1**
NBG	**Las Nubes**	**1.49**	**21**	*eP*	**Pg**	**18 23 01.4**	**+1.4**
RTAL	**Retalhuleu**	**1.53**	**330**	*eS*	**Sn**	**18 23 17.7**	**-0.2**
RTAL	**Retalhuleu**	**1.53**	**330**	Pn	**Pn**	**18 22 57.5**	**-0.7**
UNIC	**Universidad Ca**	**1.54**	**59**	*eP*	**Pb**	**18 23 00.5**	**+0.9**
UNIC				*eS*	**Sb**	**18 23 18.7**	**-0.3**
UNIC	**Universidad Ca**	**1.54**	**59**	*eP*	**Pb**	**18 23 00.5**	**+0.9**
UNIC				*eS*	**Sb**	**18 23 18.7**	**-0.3**
CEDA	**San Andres**	**1.59**	**68**	*eP*	**Pb**	**18 23 01.2**	**+0.6**
CEDA				IAML		18 23 33.4	
	comp=Z,15μm,0.5s						
CEDA	**San Andres**	**1.59**	**68**	*eP*	**Pb**	**18 23 01.2**	**+0.6**
CEDA				IAML		18 23 33.4	
	comp=Z,15μm,0.5s						
STG3	**Santiaguito 3,**	**1.64**	**337**	*eP*	**Pn**	**18 23 00.4**	**+0.5**
BOQS	**Boqueron**	**1.67**	**71**	*eP*	**Pb**	**18 23 02.5**	**+0.4**
BOQS	**Boqueron**	**1.67**	**71**	*eP*	**Pb**	**18 23 02.5**	**+0.4**
TACO	**Tacachico**	**1.70**	**63**	*↑iP*	**Pb**	**18 23 02.9**	**+0.6**
TACO	**Tacachico**	**1.70**	**63**	*↑iP*	**Pb**	**18 23 02.9**	**+0.6**
SNET	**Serv Nac Est T**	**1.70**	**73**	*eP*	**Pb**	**18 23 02.4**	**0.0**
SNET				IAML		18 23 41.2	
	comp=Z,4μm,0.4s						
SNET	**Serv Nac Est T**	**1.70**	**73**	*eP*	**Pb**	**18 23 02.4**	**0.0**
SNET				IAML		18 23 41.2	
	comp=Z,4μm,0.4s						
SNET	**Serv Nac Est T**	**1.70**	**73**		**Pn**	**18 23 01.4**	**+0.7**
UEES	**Universidad Ev**	**1.70**	**72**	*eP*	**Pb**	**18 23 02.5**	**0.0**
UEES				IAML		18 23 43.7	
	comp=Z,5μm,0.4s						
UEES	**Universidad Ev**	**1.70**	**72**	*eP*	**Pb**	**18 23 02.5**	**0.0**
UEES				IAML		18 23 43.7	
	comp=Z,5μm,0.4s						
OPAM	**Oficina de Pla**	**1.74**	**73**	*eP*	**Pb**	**18 23 04.0**	**+0.9**
OPAM	**Oficina de Pla**	**1.74**	**73**	*eP*	**Pb**	**18 23 04.0**	**+0.9**
AEIL	**Aeropuerto Ilo**	**1.81**	**74**	*eP*	**Pb**	**18 23 04.7**	**+0.4**
AEIL	**Aeropuerto Ilo**	**1.81**	**74**	*eP*	**Pb**	**18 23 04.7**	**+0.4**
LFU	**La Fuente**	**1.83**	**72**	*eP*	**Pb**	**18 23 05.3**	**+0.6**
LFU	**La Fuente**	**1.83**	**72**	*eP*	**Pb**	**18 23 05.3**	**+0.6**
LFRS	**El Faro**	**1.85**	**76**	*eP*	**Pb**	**18 23 04.4**	**-0.6**
LFRS	**El Faro**	**1.85**	**76**	*eP*	**Pb**	**18 23 04.4**	**-0.6**
LBRS	**Las Brisas**	**1.89**	**73**	*eP*	**Pb**	**18 23 05.7**	**0.0**
LBRS	**Las Brisas**	**1.89**	**73**	*eP*	**Pb**	**18 23 05.7**	**0.0**
MTO3	**Montecristo**	**1.92**	**51**	*eP*	**Pb**	**18 23 06.5**	**+0.3**
MTO3	**Montecristo**	**1.92**	**51**	*eP*	**Pb**	**18 23 06.5**	**+0.3**
MTO3	**Montecristo**	**1.92**	**51**		**Pb**	**18 23 06.1**	**-0.2**
PAVA	**Las Pavas**	**1.98**	**75**	*eP*	**Pb**	**18 23 07.2**	**-0.2**
PAVA	**Las Pavas**	**1.98**	**75**	*eP*	**Pb**	**18 23 07.2**	**-0.2**
COEG	**Centro de Oper**	**2.02**	**78**	*eP*	**Pb**	**18 23 07.1**	**-0.7**
COEG				IAML		18 23 50.4	
	comp=Z,6μm,0.5s						
COEG	**Centro de Oper**	**2.02**	**78**	*eP*	**Pb**	**18 23 07.1**	**-0.7**
COEG				IAML		18 23 50.4	
	comp=Z,6μm,0.5s						
ESQI	**Esquipulas**	**2.04**	**48**		**Pb**	**18 23 08.2**	**0.0**
HUEH	**Huehuetenango**	**2.19**	**345**	*eP*	**Pb**	**18 23 09.6**	**-1.2**
HUEH	**Huehuetenango**	**2.19**	**345**	Pn	**Pb**	**18 23 09.7**	**-1.2**
MRL	**Marmol**	**2.22**	**32**	*eP*	**Pb**	**18 23 12.1**	**+0.7**
ALJI	**Alcalda de J**	**2.28**	**86**	*eP*	**Pn**	**18 23 09.9**	**+1.3**
ALJI	**Alcalda de J**	**2.28**	**86**	*eP*	**Pn**	**18 23 09.9**	**+1.3**
COEB	**Comit de Eme**	**2.33**	**82**	*eP*	**Pn**	**18 23 11.0**	**+1.6**
COEB				IAML		18 23 52.7	
	comp=Z,3μm,0.5s						
COEB	**Comit de Eme**	**2.33**	**82**	*eP*	**Pn**	**18 23 11.0**	**+1.6**
COEB				IAML		18 23 52.7	
	comp=Z,3μm,0.5s						
TECA	**Tecapa**	**2.36**	**83**	*eP*	**Pn**	**18 23 11.6**	**+1.7**
TECA	**Tecapa**	**2.36**	**83**	*eP*	**Pn**	**18 23 11.6**	**+1.7**
PACA	**Pacayal**	**2.53**	**84**	*eP*	**Pb**	**18 23 15.0**	**-1.7**
PACA	**Pacayal**	**2.53**	**84**	*eP*	**Pb**	**18 23 15.0**	**-1.7**
LCY	**Lacayo**	**2.56**	**85**	*eP*	**Pn**	**18 23 14.8**	**+2.4**
LCY	**Lacayo**	**2.56**	**85**	*eP*	**Pn**	**18 23 14.8**	**+2.4**
VSM	**San Miguel**	**2.58**	**85**	*eP*	**Pn**	**18 23 15.3**	**+2.4**
VSM	**San Miguel**	**2.58**	**85**	*eP*	**Pn**	**18 23 15.3**	**+2.4**
JUCU	**Jucuarįn**	**2.59**	**88**	*eP*	**Pn**	**18 23 14.5**	**+1.6**
JUCU				IAML		18 24 05.8	
	comp=Z,2μm,0.6s						
JUCU	**Jucuarįn**	**2.59**	**88**	*eP*	**Pn**	**18 23 14.5**	**+1.6**
JUCU				IAML		18 24 05.8	
	comp=Z,2μm,0.6s						
LCND	**La Caada**	**2.94**	**87**	*eP*	**Pn**	**18 23 19.6**	**+1.9**
LCND				IAML		18 23 36.8	
	comp=Z,2μm,0.5s						
LCND	**La Caada**	**2.94**	**87**	*eP*	**Pn**	**18 23 19.6**	**+1.9**
LCND				IAML		18 23 36.8	
	comp=Z,2μm,0.5s						
CSGN	**Cosiguina Volc**	**3.27**	**93**	Pn	**Pn**	**18 23 25.1**	**+2.8**
CCIG	**Comitan**	**3.29**	**339**		**Pn**	**18 23 25.8**	**+3.2**
TGUH	**Tegucigalpa,Un**	**3.64**	**76**	*eP*	**Pn**	**18 23 29.6**	**+2.2**
TGUH	**Tegucigalpa,Un**	**3.64**	**76**	*eP*	**Pn**	**18 23 29.6**	**+2.2**
TGUH	**Tegucigalpa,Un**	**3.64**	**76**	Pn	**Pn**	**18 23 29.3**	**+1.9**
CRIN	**San Cristobal**	**3.79**	**97**		**Pn**	**18 23 31.0**	**+1.5**
PETF	**Flores**	**3.83**	**15**	Pn	**Pn**	**18 23 33.6**	**+3.7**
MATN	**Matagalpa**	**4.86**	**93**		**Pn**	**18 23 45.1**	**+0.9**
CMIG	**Matias Romero**	**5.45**	**316**	Pn	**Pn**	**18 23 51.9**	**-0.3**
	comp=Z,3.6nm,0.3s,baz=128,slow=12,SNR=30						
CMIG				Sn	**Sn**	**18 24 54.2**	**-0.6**
	comp=Z,4.0nm,0.3s,baz=79,slow=18,SNR=1.9						
CMIG	**Matias Romero**	**5.45**	**316**		**Pn**	**18 23 51.6**	**-0.6**
ACON	**Acoyapa**	**5.73**	**102**		**Pn**	**18 23 56.4**	**+0.4**
HZTE	**Horizontes, Gu**	**5.75**	**115**	*eP*	**Pn**	**18 23 58.9**	**+2.5**
BUEV	**Buena Vista**	**5.89**	**113**	*eP*	**Pn**	**18 24 01.6**	**+3.4**
GB1A	**Boringuen Arri**	**5.89**	**113**	*eP*	**Pn**	**18 24 01.7**	**+3.4**
GPS2	**Hotel Rincn d**	**5.95**	**113**	*eP*	**Pn**	**18 24 02.2**	**+3.0**
CUI	**Cuipilapa**	**6.16**	**114**	*eP*	**Pn**	**18 24 05.0**	**+3.0**
JTS	**Las Juntas de**	**6.51**	**116**	Pn	**Pn**	**18 24 07.8**	**+1.0**
	comp=Z,6.1nm,0.3s,baz=3.9,slow=20,SNR=16						
JTS				Sn	**Sn**	**18 25 16.2**	**-4.7**
	comp=Z,2.3nm,0.3s,baz=356,slow=21,SNR=0.9						
JTS				Lg	Lg	18 25 51.4	
	baz=348,slow=22,SNR=1.9						
JTS	**Las Juntas de**	**6.51**	**116**	*eP*	**Pn**	**18 24 09.4**	**+2.6**
ESPN	**Las Esperanzas**	**6.53**	**98**	Pn	**Pn**	**18 24 07.9**	**+0.9**
ARE1	**Arenal 1**	**6.64**	**114**	*eP*	**Pn**	**18 24 11.6**	**+3.0**
JACO	**JACO, Garabito**	**7.06**	**119**	*eP*	**Pn**	**18 24 17.3**	**+3.0**
HDC	**Heredia**	**7.38**	**115**	Pn	**Pn**	**18 24 18.1**	**-0.7**
TEIG	**Tepich**	**7.43**	**19**		**Pn**	**18 24 22.9**	**+3.5**
RIMA	**Rio Macho**	**7.70**	**116**	*eP*	**Pn**	**18 24 27.2**	**+3.9**
DRK0	**Durika**	**8.47**	**117**	*eP*	**Pn**	**18 24 37.3**	**+3.4**
RIOS	**Rincon, Osa**	**8.52**	**121**	*eP*	**Pn**	**18 24 38.7**	**+4.3**
TLIG	**Tlapa**	**8.57**	**301**		**Pn**	**18 24 37.3**	**+2.2**
FSCY	**Frank Sound, G**	**11.14**	**56**	Pn	**Pn**	**18 25 12.3**	**+2.0**
MOIG	**Morelia**	**11.78**	**305**	Pn	**Pn**	**18 25 21.2**	**+2.0**
LCCY	**Blossom Villag**	**12.21**	**57**	Pn	**Pn**	**18 25 25.3**	**+0.3**
CBCY	**The Bluff, Cay**	**12.51**	**57**	Pn	**Pn**	**18 25 32.6**	**+3.5**
PAYG	**Puerto Ayora**	**13.79**	**177**	Pn	**Pn**	**18 25 49.0**	**+2.4**
MTDJ	**Mount Denham**	**13.81**	**67**	Pn	**Pn**	**18 25 46.8**	**-0.1**
ZAIG	**Zacatecas**	**14.61**	**312**	Pn	**Pn**	**18 25 59.6**	**+1.6**
DBBC	**Dabeiba**	**15.71**	**112**	*eP*	**P**	**18 26 15.2**	**-1.3**
SJCC	**San Jacinto, C**	**15.76**	**100**	*eP*	**P**	**18 26 17.3**	**+0.3**
CBOC	**Ciudad Bolivar**	**16.39**	**115**	*eP*	**P**	**18 26 24.6**	**+0.4**
HELC	**Santa Helena**	**16.67**	**113**	*eP*	**P**	**18 26 28.4**	**+0.9**
735A	**Kenedy**	**16.85**	**339**	Pn	**Pn**	**18 26 25.7**	**-1.2**
735A				IAmb	IAmb	18 26 39.2	
	comp=Z,51nm,0.7s						
060A	**Indiantown**	**16.95**	**34**	Pn	**Pn**	**18 26 27.8**	**-0.3**
833A	**Chaparral WMA,**	**17.00**	**334**	P	**Pn**	**18 26 29.8**	**+1.0**
	baz=150						
833A	**Chaparral WMA,**	**17.00**	**334**	Pn	**Pn**	**18 26 28.3**	**-0.5**
YOTC	**Yotoco, Valle**	**17.05**	**121**	*eP*	**P**	**18 26 30.9**	**-0.6**
GUY2C	**Guyana, Caldas**	**17.26**	**116**	*eP*	**P**	**18 26 35.8**	**+1.7**
HKT	**Hockley**	**17.29**	**345**		**P**	**18 26 34.0**	**+0.3**
HKT				IAmb	IAmb	18 26 38.0	
	comp=Z,117nm,1.5s						
PTBC	**PUERTO BERRIO,**	**17.50**	**111**	*eP*	**P**	**18 26 36.2**	**0.0**
NORC	**Norcasia**	**17.54**	**114**	*eP*	**Pn**	**18 26 35.3**	**-0.4**
PAC1	**Pacto, Paraso**	**17.59**	**136**	*eP*	**Pn**	**18 26 33.1**	**-3.3**
441A	**DeRidder**	**17.60**	**353**		**Pn**	**18 26 35.7**	**-0.5**
441A				IAmb	IAmb	18 26 45.2	
	comp=Z,139nm,0.9s						
POPC	**Popayan, Colom**	**17.61**	**126**	*eP*	**P**	**18 26 39.7**	**+1.9**
656A	**Willston**	**17.87**	**24**		**Pn**	**18 26 39.5**	**-0.1**
656A				IAmb	IAmb	18 26 58.4	
	comp=Z,166nm,1.1s						
SOTA	**Rioblanco**	**17.92**	**127**	*eP*	P	18 26 48.8	+7.4
GCUF	**Volcan Galeras**	**17.94**	**130**	*eP*	**Pn**	**18 26 37.6**	**-3.5**
553A	**Crawfordville**	**17.94**	**18**	P	**Pn**	**18 26 40.1**	**-0.4**
PCON	**Cinco Dias**	**17.96**	**126**	*eP*	**P**	**18 26 45.3**	**+3.3**
OCAC	**Ocana**	**17.97**	**104**	*eP*	**Pn**	**18 26 41.3**	**+0.2**
451A	**Vernon**	**17.98**	**15**	P	**P**	**18 26 41.4**	**0.0**
MARP	**Paez Belalcaza**	**18.01**	**124**	*eP*	**P**	**18 26 43.6**	**+1.3**
ORTC	**Ortega, Tolima**	**18.02**	**119**	*eP*	**P**	**18 26 45.7**	**+3.7**
342A	**Flagon Creek P**	**18.14**	**356**		**Pn**	**18 26 42.0**	**-0.9**
342A				IAmb	IAmb	18 26 48.1	
	comp=Z,128nm,0.9s						
346A	**Big Creek Wild**	**18.15**	**4**	Pn	**P**	**18 26 45.1**	**+1.8**
346A				IAmb	IAmb	18 27 03.7	
	comp=Z,171nm,1.2s						
344A	**Westbrook Farm**	**18.17**	**0**	P	**P**	**18 26 46.6**	**+3.1**
344A				IAmb	IAmb	18 26 54.3	
	comp=Z,150nm,0.9s						
SPBC	**San Pablo de B**	**18.21**	**113**	*eP*	**P**	**18 26 44.8**	**+0.5**
BRAL	**Brewton**	**18.24**	**11**	P	**Pn**	**18 26 42.2**	**-1.9**
BRAL				IAmb	IAmb	18 26 50.7	
	comp=Z,229nm,1.5s						
ROSC	**El Rosal**	**18.36**	**115**	P	**P**	**18 26 49.3**	**+3.2**
	comp=Z,2.0nm,0.3s,baz=302,slow=1.5,SNR=33						
ROSC	**El Rosal**	**18.36**	**115**	*eP*	**P**	**18 26 50.8**	**+4.7**
ROSC	**El Rosal**	**18.36**	**115**	Pn	**P**	**18 26 48.9**	**+2.8**
PRAC	**Prado**	**18.42**	**119**	*eP*	**Pn**	**18 26 49.2**	**+2.7**
BETC	**Betania**	**18.52**	**123**	*eP*	**Pn**	**18 26 51.4**	**+3.5**
URIC	**Uribia, Colomb**	**18.53**	**93**	*eP*	**P**	**18 26 41.9**	**-5.7**
435B	**Jarrell**	**18.55**	**342**	P	**Pn**	**18 26 48.5**	**+0.5**
	baz=159						
435B	**Jarrell**	**18.55**	**342**	P	**Pn**	**18 26 49.0**	**+1.0**
GARC	**Garzon, Huila**	**18.77**	**124**	*eP*	**P**	**18 26 48.4**	**-2.1**
NATX	**Nacogdoches**	**18.80**	**350**	P	**Pn**	**18 26 51.1**	**+0.2

MIAR IAmb IAmb 18 27 39.4
comp=Z,44nm,0.9s
157A Early Branch 21.41 23 P P **18 27 18.2 -0.6**
baz=207
X48A Hartselle 21.45 9 P P **18 27 20.0 +0.7**
X48A IAmb IAmb 18 27 26.7
comp=Z,29nm,0.8s
Y52A Lilburn 21.50 16 P P **18 27 20.5 +0.7**
Y52A IAmb IAmb 18 27 26.6
comp=Z,53nm,1.0s
X37A Clayton 21.68 350 P P **18 27 22.2 +0.5**
X37A IAmb IAmb 18 27 50.5
comp=Z,72nm,1.1s
FPAL Fort Paine 21.79 12 P P **18 27 23.4 +0.4**
FPAL IAmb IAmb 18 27 30.3
comp=Z,50nm,0.8s
PLAL Pickwick Lake 21.84 6 P P **18 27 24.7 +1.2**
W41B Gary Mavity, V 21.91 357 P P **18 27 23.5 -0.7**
baz=176,SNR=11
W41B Gary Mavity, V 21.91 357 P P **18 27 24.4 +0.1**
X51A Calhoun 21.97 13 P P **18 27 25.7 +0.9**
X51A IAmb IAmb 18 27 48.4
comp=Z,71nm,1.4s
WHAR Wooly Hollow 22.03 357 P P **18 27 25.3 -0.3**
WHAR IAmb IAmb 18 27 27.2
comp=Z,44nm,0.9s
W39A Magazine 22.06 354 P P **18 27 25.9 +0.2**
baz=172,SNR=16
W39A Magazine 22.06 354 P P **18 27 26.0 +0.2**
W39A IAmb IAmb 18 27 28.5
comp=Z,38nm,0.9s
Z57A Bowman 22.07 23 P P **18 27 25.3 -0.6**
baz=207
NHSC New Hope 22.11 25 P P **18 27 25.8 -0.5**
baz=208
HODGE Hodges 22.37 19 P P **18 27 29.6 +0.4**
SWET Sewanee 22.38 11 P P **18 27 29.3 0.0**
SWET IAmb IAmb 18 27 32.8
comp=Z,40nm,0.8s
CLNB Carlsbad 22.39 330 P P **18 27 30.5 +1.0**
Z58A St. Stephen 22.46 25 P P **18 27 29.8 -0.2**
baz=209
W50A Signal Mountai 22.48 12 P P **18 27 30.7 +0.2**
W50A IAmb IAmb 18 27 41.8
comp=Z,34nm,0.9s
W35A Tecumseh 22.52 347 P P **18 27 29.3 -1.4**
GDL2 Guadalupe Moun 22.58 329 P P **18 27 32.4 +0.8**
WMOK Wichita Mounta 22.60 343 P P **18 27 30.7 -1.0**
baz=160,SNR=13
WMOK Wichita Mounta 22.60 343 P P **18 27 30.2 -1.4**
X54A Belton 22.62 19 P P **18 27 31.5 -0.3**
baz=202
FCAR Ozark Folk Cen 22.62 357 P P **18 27 31.0 -0.8**
FCAR IAmb IAmb 18 27 33.0
comp=Z,35nm,0.8s
W52A Murphy 22.70 15 P P **18 27 33.3 +0.6**
MNTX Cornudas Mount 22.71 327 P P **18 27 33.0 +0.1**
baz=141,SNR=34
MNTX Cornudas Mount 22.71 327 P P **18 27 32.7 -0.2**
MNTX IAmb IAmb 18 27 43.2
comp=Z,56nm,0.9s
FNO Franklin 22.73 346 P P **18 27 32.2 -0.8**
JSC Jenkinsville 22.75 21 P P **18 27 33.2 0.0**
V48A Smith Brothers 22.75 9 P P **18 27 33.0 -0.2**
V48A IAmb IAmb 18 27 35.0
comp=Z,44nm,0.8s
LCAR Lake Charles 22.78 359 P P **18 27 32.7 -0.7**
LCAR IAmb IAmb 18 27 53.2
comp=Z,34nm,0.8s
X55A Gracelyn & Ava 22.79 20 P P **18 27 33.0 -0.6**
baz=204
Y57A Sumter 22.83 23 P P **18 27 33.7 -0.3**
Y57A IAmb IAmb 18 27 41.1
comp=Z,39nm,1.0s
BG3 Lake Jocassee 22.87 17 P P **18 27 34.5 +0.1**
CPCT Cooper Cave 22.89 14 P P **18 27 34.6 -0.1**
CPCT IAmb IAmb 18 27 52.8
comp=Z,70nm,1.5s
OKCFA Oklahoma City 22.90 346 P P **18 27 33.3 -1.5**
WVT Waverly 23.00 6 P P **18 27 35.1 -0.7**
baz=187
WVT Waverly 23.00 6 P P **18 27 35.8 -0.1**
WVT IAmb IAmb 18 27 48.6
comp=Z,47nm,1.1s
X56A White Oak 23.02 21 P P **18 27 35.2 -0.8**
baz=205
CPRX Cap Rock 23.02 331 P P **18 27 35.9 -0.3**
OK025 Westminster Rd 23.03 347 P P **18 27 35.1 -1.1**
OK025 IAmb IAmb 18 27 38.1
comp=Z,72nm,0.9s
TUL1 Leonard 23.04 350 P P **18 27 35.0 -1.3**
baz=168
TUL1 Leonard 23.04 350 P P **18 27 34.7 -1.6**
TUL1 IAmb IAmb 18 27 59.5
comp=Z,44nm,1.1s
PAULI Pauline 23.05 19 P P **18 27 36.0 -0.3**
PAULI IAmb IAmb 18 27 57.2
comp=Z,53nm,1.3s
U40A Yellville 23.13 356 P P **18 27 36.3 -0.9**
baz=175,SNR=18
U40A Yellville 23.13 356 P P **18 27 36.0 -1.2**
U40A IAmb IAmb 18 27 38.3
comp=Z,48nm,0.8s
HHAR Hobbs 23.15 354 P P **18 27 36.0 -1.4**
BCOK Bluff Creek, N 23.17 346 P P **18 27 36.2 -1.3**
CLTN Cedars of Leba 23.17 9 P P **18 27 37.4 -0.1**
CLTN IAmb IAmb 18 27 39.0
comp=Z,41nm,0.9s
W54A Cherokee Point 23.18 18 P P **18 27 36.6 -1.1**
baz=202,SNR=6.0
OK029 Liberty Lake 23.26 346 P P **18 27 37.3 -1.3**
OK029 IAmb IAmb 18 27 38.4
comp=Z,48nm,1.0s
TKL Tuckaleechee C 23.27 15 P P **18 27 38.5 -0.1**
comp=Z,42nm,0.7s,baz=183,slow=10,SNR=41
TKL LR LR 18 37 28.9
comp=Z,2µm,20.2s,baz=202,slow=40
TKL Tuckaleechee C 23.27 15 P P **18 27 38.8 +0.2**
TKL IAmb IAmb 18 27 40.8
comp=Z,44nm,0.7s
V51A Loudon 23.27 14 P P **18 27 38.2 -0.4**
V51A IAmb IAmb 18 27 42.0
comp=Z,35nm,1.0s
MSTX Muleshoe 23.32 334 P P **18 27 39.1 -0.2**
baz=150
MSTX Muleshoe 23.32 334 P P **18 27 39.0 -0.2**
MSTX IAmb IAmb 18 28 05.7
comp=Z,37nm,1.1s
X57A Johnson Farm, 23.34 23 P P **18 27 38.7 -0.6**
baz=207
U38A Gravette 23.36 353 P P **18 27 38.4 -1.0**
PBMO Poplar Bluff 23.49 1 P P **18 27 39.7 -1.0**
V52A Sevierville 23.49 15 P P **18 27 41.0 +0.2**
V52A IAmb IAmb 18 27 47.6
comp=Z,47nm,1.1s
KMSC Kings Mountain 23.50 20 P P **18 27 40.6 -0.3**
baz=204
KMSC Kings Mountain 23.50 20 P P **18 27 40.3 -0.6**
V53A Saluda 23.54 17 P P **18 27 41.2 -0.1**
V53A IAmb IAmb 18 27 51.4
comp=Z,34nm,0.8s
U49A Red Boiling Sp 23.67 10 P P **18 27 41.8 -0.7**
U49A IAmb IAmb 18 27 43.4
comp=Z,44nm,0.7s
AMTX Amarillo 23.69 338 P P **18 27 42.7 -0.2**
baz=153
AMTX Amarillo 23.69 338 P P **18 27 42.0 -0.8**
AMTX IAmb IAmb 18 27 45.1
comp=Z,37nm,0.8s
Y60A Bolivia 23.71 27 P P **18 27 42.0 -0.9**
baz=212
ATAH Atahualpa 23.72 148 P P **18 27 46.0 +2.5**
comp=Z,24nm,1.0s,baz=311,slow=6.3,SNR=9.0
T42A Van Buren 23.73 360 P P **18 27 42.0 -1.2**
W56A Indian Trail 23.75 21 P P **18 27 42.2 -1.1**
baz=205
T45A Paducah 23.81 4 P P **18 27 42.3 -1.5**
MGMO Mountain Grove 23.89 357 P P **18 27 43.6 -1.1**
MGMO IAmb IAmb 18 27 46.0
comp=Z,62nm,0.9s
V54A Nebo 23.89 18 P P **18 27 44.0 -0.7**
baz=202,SNR=6.9
T47A Sharon Grove 23.94 8 P P **18 27 44.6 -0.5**
W57A Gilead 23.98 22 P P **18 27 44.4 -1.1**
baz=207

X59A McDuffie Farm, 24.03 26 P P **18 27 45.1 -0.9**
baz=210
T35A Sooner Cattle 24.15 349 P P **18 27 45.2 -1.9**
W58A Raeford 24.16 24 P P **18 27 46.7 -0.5**
baz=208
TZTN Tazewell 24.17 15 P P **18 27 46.7 -0.6**
baz=197
TZTN Tazewell 24.17 15 P P **18 27 46.2 -1.1**
TZTN IAmb IAmb 18 27 54.2
comp=Z,33nm,0.8s
V55A Taylorsville 24.19 20 P P **18 27 46.9 -0.5**
baz=203,SNR=5.2
V55A Taylorsville 24.19 20 P P **18 27 46.6 -0.9**
V55A IAmb IAmb 18 28 11.4
comp=Z,54nm,1.4s
U32A Winter Ranch, 24.20 344 P P **18 27 45.4 -2.2**
X60A Albert Glenn T 24.30 27 P P **18 27 48.2 -0.2**
baz=212
SJG San Juan 24.32 75 P P **18 27 46.7 -2.1**
comp=Z,0.0nm,0.4s,baz=310,slow=7.6,SNR=3.9
SJG San Juan 24.32 75 P P **18 27 47.7 -1.1**
T50A Nancy 24.34 12 P P **18 27 47.9 -0.9**
GC02 Grant County # 24.37 346 P P **18 27 48.6 -0.5**
HSIG 24.38 313 P P **18 27 50.0 +0.7**
V56A Mocksville 24.39 21 P P **18 27 48.6 -0.7**
baz=205
S44A Carbondale 24.44 3 P P **18 27 48.6 -1.1**
S44A IAmb IAmb 18 27 50.7
comp=Z,54nm,1.0s
S39A Bolivar 24.49 355 P P **18 27 49.4 -0.8**
U54A Nelsons Funny 24.62 18 P P **18 27 50.3 -1.2**
baz=201,SNR=6.7
U54A Nelsons Funny 24.62 18 P P **18 27 51.2 -0.3**
U54A IAmb IAmb 18 27 58.6
comp=Z,34nm,0.8s
121A Cookes Peak, D 24.68 324 P P **18 27 53.7 +1.5**
baz=137,SNR=35
121A Cookes Peak, D 24.68 324 P P **18 27 53.9 +1.7**
FVM French Village 24.69 1 P P **18 27 50.6 -1.4**
V57A Coltrane Farms 24.72 22 P P **18 27 51.4 -0.8**
baz=206
KAN08 Anthony NE Sta 24.75 346 P P **18 27 51.8 -0.7**
319A Douglas 24.76 320 P P **18 27 54.5 +1.6**
CCM Cathedral Cave 24.76 359 P P **18 27 51.2 -1.4**
baz=179
CCM Cathedral Cave 24.76 359 P P **18 27 50.0 -2.6**
CCM IAmb IAmb 18 27 54.1
comp=Z,41nm,0.9s
W60A Pink Hill 24.82 26 P P **18 27 53.0 -0.1**
baz=212
USIN University of 24.84 6 P P **18 27 52.1 -1.1**
USIN IAmb IAmb 18 27 54.3
comp=Z,50nm,0.9s
T53A Wise 24.85 16 P P **18 27 52.6 -0.9**
baz=199,SNR=6.5
V58A Windy Hill, Pi 24.88 23 P P **18 27 53.2 -0.5**
baz=208
V58A Windy Hill, Pi 24.88 23 P P **18 27 52.6 -1.2**
V58A IAmb IAmb 18 28 00.8
comp=Z,18nm,0.7s
MTP Monte Pirata 24.89 75 P P **18 27 50.5 -3.4**
MTP IAmb IAmb 18 27 54.9
comp=Z,36nm,0.9s
U56A King 24.92 20 P P **18 27 53.6 -0.5**
baz=205
R40A Maddies Statio 25.02 357 P P **18 27 54.4 -0.5**
R40A IAmb IAmb 18 28 13.9
comp=Z,21nm,0.8s
T54A Tazewell 25.19 18 P P **18 27 55.8 -0.8**
baz=202,SNR=5.9
S51A Beattyville 25.20 14 P P **18 27 55.6 -1.0**
S51A IAmb IAmb 18 28 05.0
comp=Z,23nm,0.7s
V59A Middlesex 25.21 25 P P **18 27 55.8 -0.8**
baz=210
WCI Wyandotte Cave 25.27 9 P P **18 27 56.3 -0.9**
baz=190
WCI Wyandotte Cave 25.27 9 P P **18 27 56.6 -0.6**
BNM Barren Site 25.28 328 P P **18 27 59.2 +1.6**
U57A Blanch 25.36 22 P P **18 27 57.4 -0.7**
baz=207,SNR=6.7
Y22D IRIS PASSCAL I 25.37 328 P P **18 27 58.6 +0.2**
baz=141
Y22D IRIS PASSCAL I 25.37 328 P P **18 28 00.6 +2.3**
LENM Lemitar 25.47 328 P P **18 28 01.4 +2.1**
T55A Pulaski 25.49 19 P P **18 27 59.0 -0.2**
baz=203
R49A Shelbyville 25.51 11 P P **18 27 58.2 -1.2**
R49A IAmb IAmb 18 27 59.6
comp=Z,26nm,0.8s
OLIL Olney 25.56 5 P P **18 27 59.3 -0.5**
OLIL IAmb IAmb 18 28 00.2
comp=Z,36nm,0.9s
S53A Williamson 25.61 16 P P **18 28 00.4 0.0**
baz=200
U58A Oxford 25.63 24 P P **18 27 59.4 -1.1**
baz=208
T56A Rocky Mt 25.65 20 P P **18 28 00.7 -0.1**
baz=205
Q44A Meyer Farm, Va 25.66 3 P P **18 27 59.4 -1.3**
Q44A IAmb IAmb 18 28 02.3
comp=Z,33nm,1.1s
R50A Paris 25.66 12 P P **18 28 00.2 -0.5**
R50A IAmb IAmb 18 28 01.3
comp=Z,24nm,0.7s
BLA Blacksburg 25.69 20 P P **18 28 01.2 +0.1**
baz=204
ANMO Albuquerque 25.82 330 P P **18 28 03.4 +0.9**
comp=Z,6.4nm,0.7s,baz=148,slow=12,SNR=22
ANMO LR LR 18 40 06.2
comp=Z,304nm,20.4s,baz=145,slow=41
ANMO Albuquerque 25.82 330 P P **18 28 03.1 +0.6**
baz=143
ANMO Albuquerque 25.82 330 P P **18 28 03.1 +0.6**
U59A Littleton 25.89 25 P P **18 28 02.7 -0.1**
baz=210
T57A Hurt 25.90 22 P P **18 28 02.4 -0.5**
baz=206
T57A Hurt 25.90 22 P P **18 28 02.8 -0.2**
S54A Dingess, Beckl 25.95 18 P P **18 28 02.8 -0.7**
baz=202
S54A Dingess, Beckl 25.95 18 P P **18 28 02.5 -1.0**
S54A IAmb IAmb 18 28 09.9
comp=Z,16nm,0.7s
R32A Long Quarter, 26.06 346 P P **18 28 03.8 -0.7**
T58A Grand View Acr 26.12 23 P P **18 28 03.9 -1.0**
baz=208
BLO Bloomington 26.16 8 P P **18 28 03.7 -1.6**
S55A Lewisburg 26.18 19 P P **18 28 05.0 -0.5**
baz=203
R53A Hurricane 26.27 16 P P **18 28 06.1 -0.2**
baz=200
R53A Hurricane 26.27 16 P P **18 28 05.2 -1.0**
R53A IAmb IAmb 18 28 07.7
comp=Z,23nm,0.9s
KSU1 Kansas State U 26.29 350 P P **18 28 07.0 +0.6**
baz=167
KSU1 Kansas State U 26.29 350 P P **18 28 06.4 -0.1**
KSU1 IAmb IAmb 18 28 08.0
comp=Z,22nm,0.7s
TUC Tucson 26.33 320 P P **18 28 07.9 +0.8**
baz=132
TUC Tucson 26.33 320 P P **18 28 08.1 +1.0**
P43A Skaggs, Pawnee 26.37 2 P P **18 28 06.8 -0.3**
S56A Natural Bridge 26.40 21 P P **18 28 08.0 +0.5**
baz=205
R54A Victor 26.40 18 P P **18 28 07.8 +0.2**
baz=202
P38A Dawn 26.43 355 P P **18 28 07.6 -0.1**
P46A Rosedale 26.52 6 P P **18 28 08.0 -0.6**
P46A IAmb IAmb 18 28 08.9
comp=Z,44nm,0.9s
T59A Double "B" Far 26.52 24 P P **18 28 07.8 -0.8**
baz=210
T59A Double "B" Far 26.52 24 P P **18 28 07.4 -1.1**
Q51A Peebles 26.59 13 P P **18 28 08.8 -0.4**
P48A Milroy 26.61 10 P P **18 28 08.1 -1.2**
P48A IAmb IAmb 18 28 09.2
comp=Z,33nm,0.9s
S57A Dark Hollow, R 26.69 21 P P **18 28 10.0 -0.1**
baz=206
T25A Trinidad 26.73 335 P P **18 28 11.8 +1.1**
baz=150,SNR=5.1
T25A Trinidad 26.73 335 P P **18 28 11.8 +1.1**
R55A Marlinton 26.76 19 P P **18 28 11.2 +0.4**
baz=204,SNR=5.2

R55A Marlinton 26.76 19 P P **18 28 10.8 -0.1**
R55A IAmb IAmb 18 28 12.7
comp=Z,30nm,0.9s
Q52A Bidwell 26.78 15 P P **18 28 09.7 -1.2**
baz=199
P49A Miami Univ. Ec 26.80 11 P P **18 28 10.3 -0.8**
baz=193
P49A Miami Univ. Ec 26.80 11 P P **18 28 09.6 -1.5**
Q53A Leroy 26.88 16 P P **18 28 11.3 -0.5**
baz=200
S58A Poland Farm, P 26.89 23 P P **18 28 11.2 -0.6**
baz=208
P51A Williamsport 27.09 13 P P **18 28 13.6 0.0**
baz=197
P51A Williamsport 27.09 13 P P **18 28 12.9 -0.7**
R56A Bull Pasture M 27.11 20 P P **18 28 13.8 -0.1**
baz=205
Q54A Coxs Mills 27.19 17 P P **18 28 13.9 -0.6**
baz=202,SNR=17
Q54A Coxs Mills 27.19 17 P P **18 28 13.7 -0.9**
R58B Mineral 27.26 23 P P **18 28 14.3 -0.9**
baz=208
SFIN Lafayette 27.29 6 P P **18 28 14.0 -1.4**
baz=188,SNR=5.3
SFIN Lafayette 27.29 6 P P **18 28 14.4 -1.0**
SFIN IAmb IAmb 18 28 15.2
comp=Z,29nm,0.9s
R57A Stanardsville 27.32 22 P P **18 28 15.2 -0.5**
baz=207
214A Organ Pipe Nat 27.43 316 P P **18 28 18.7 +1.9**
baz=128,SNR=5.5
214A Organ Pipe Nat 27.43 316 P P **18 28 18.3 +1.4**
Q55A Buckhannon 27.43 19 P P **18 28 16.0 -0.7**
baz=203
P52A Corning 27.45 15 P P **18 28 16.1 -0.8**
baz=198
P52A Corning 27.45 15 P P **18 28 16.0 -0.9**
P52A IAmb IAmb 18 28 18.8
comp=Z,17nm,0.8s
P53A Whipple 27.50 16 P P **18 28 16.6 -0.8**
baz=200,SNR=6.2
P53A Whipple 27.50 16 P P **18 28 16.2 -1.2**
P53A IAmb IAmb 18 28 18.6
comp=Z,34nm,0.9s
R58A Rapidan 27.51 22 P P **18 28 17.4 -0.1**
baz=208
CZSB Cruzeiro do Su 27.55 138 eP P **18 28 19.5 +1.4**
W18A Petrified Fore 27.68 325 P P **18 28 20.9 +1.7**
baz=137
W18A Petrified Fore 27.68 325 P P **18 28 20.9 +1.7**
W18A IAmb IAmb 18 28 23.0
comp=Z,29nm,1.1s
KSCO Kaye Shedlock' 27.73 340 P P **18 28 19.6 0.0**
Q56A Snyder Ridge, 27.75 20 P P **18 28 19.7 0.0**
baz=205,SNR=5.4
Q56A Snyder Ridge, 27.75 20 P P **18 28 20.1 +0.4**
Q56A IAmb IAmb 18 28 21.3
comp=Z,39nm,1.2s
R59A King George, V 27.76 24 P P **18 28 19.2 -0.5**
baz=210
ACSO Alum Creek Sta 27.82 13 P P **18 28 19.3 -0.9**
baz=196,SNR=8.9
ACSO Alum Creek Sta 27.82 13 P P **18 28 19.5 -0.7**
O51A Pataskala 27.82 14 P P **18 28 19.1 -1.1**
baz=197
P54A Burton 27.87 17 P P **18 28 19.6 -1.1**
baz=202,SNR=14
N47A Urbana 27.95 8 P P **18 28 20.3 -1.1**
N47A IAmb IAmb 18 28 21.7
comp=Z,33nm,0.9s
P55A Reedsville 27.98 18 P P **18 28 22.0 +0.3**
baz=203
O52A Adamsville 27.98 15 P P **18 28 20.7 -1.0**
baz=199,SNR=8.7
O52A Adamsville 27.98 15 P P **18 28 21.2 -0.5**
O52A IAmb IAmb 18 28 23.7
comp=Z,44nm,0.9s
X16A Lo Mia Camp, P 28.16 322 P P **18 28 25.8 +2.2**
X16A IAmb IAmb 18 28 31.5
comp=Z,16nm,0.8s
Q58A Fox Den Farm, 28.19 22 P P **18 28 24.1 +0.5**
baz=208
O53A New Philadelph 28.27 16 P P **18 28 24.0 -0.2**
baz=200
O53A New Philadelph 28.27 16 P P **18 28 24.1 -0.1**
O53A IAmb IAmb 18 28 24.9
comp=Z,21nm,0.8s
S22A 4UR Ranch, Cre 28.27 333 P P **18 28 25.1 +0.4**
P56A Dayton Farm, R 28.29 20 P P **18 28 24.0 -0.4**
baz=205
O54A Avella 28.43 17 P P **18 28 24.6 -1.2**
baz=202,SNR=7.6
O54A Avella 28.43 17 P P **18 28 24.5 -1.2**
P57A Homestead Farm 28.55 21 P P **18 28 26.2 -0.5**
baz=207
P57A Homestead Farm 28.55 21 P P **18 28 26.5 -0.3**
113A Mohawk Valley, 28.56 317 P P **18 28 27.7 +0.8**
MVCO Mesa Verde 28.62 330 P P **18 28 28.9 +1.2**
baz=142,SNR=7.6
MVCO Mesa Verde 28.62 330 P P **18 28 29.0 +1.3**
NNA Nana 28.65 150 LR LR 18 37 43.6
comp=Z,227nm,19.8s,baz=280,slow=32
L42A Oliver, Polo 28.72 2 P P **18 28 27.2 -1.0**
L42A IAmb IAmb 18 28 27.8
comp=Z,24nm,0.7s
SPX San Pedro Mart 28.75 312 P P **18 28 30.0 +1.0**
L40A Anamosa 28.76 360 P P **18 28 27.8 -0.8**
L40A IAmb IAmb 18 28 28.5
comp=Z,32nm,0.8s
O55A Ligonier 28.78 19 P P **18 28 27.9 -0.9**
baz=204
Y14A Wickenburg 28.80 320 P P **18 28 29.6 +0.5**
P58A Pank, Wackersv 28.82 22 P P **18 28 27.9 -1.1**
baz=208
N53A Lisbon 28.89 16 P P **18 28 28.3 -1.4**
N53A IAmb IAmb 18 28 30.7
comp=Z,38nm,0.8s
WUAZ Wupatki 28.89 324 P P **18 28 32.0 +2.0**
baz=135
WUAZ Wupatki 28.89 324 P P **18 28 31.5 +1.5**
WUAZ IAmb IAmb 18 28 43.1
comp=Z,28nm,0.9s
SDMD Soldier's Deli 28.92 23 P P **18 28 29.2 -0.8**
L44A Lake County Fo 28.99 5 P P **18 28 29.6 -1.0**
baz=186
O56A Blue Knob Stat 29.07 20 P P **18 28 30.7 -0.7**
baz=205,SNR=6.6
O56A Blue Knob Stat 29.07 20 P P **18 28 30.4 -1.0**
O56A IAmb IAmb 18 28 32.9
comp=Z,19nm,0.9s
L48A N Adams 29.19 10 P P **18 28 30.6 -1.9**
P59A Jarrettsville 29.25 23 P P **18 28 32.1 -0.9**
baz=210
N54A Moraine State 29.27 17 P P **18 28 32.0 -1.1**
baz=202,SNR=9.8
N54A Moraine State 29.27 17 P P **18 28 32.0 -1.1**
O57A Amberson 29.33 21 P P **18 28 32.8 -0.9**
baz=207
PV01 Paradox Valley 29.39 331 P P **18 28 36.0 +1.5**
GLA Glamis 29.44 316 P P **18 28 36.3 +1.4**
baz=126
GLA Glamis 29.44 316 P P **18 28 36.5 +1.7**
GLA IAmb IAmb 18 28 40.6
comp=Z,19nm,0.8s
M52A Chesterland 29.44 15 P P **18 28 33.1 -1.5**
M52A IAmb IAmb 18 28 35.4
comp=Z,23nm,0.7s
ISCO Idaho Springs 29.50 337 P P **18 28 35.7 +0.2**
baz=150
ISCO Idaho Springs 29.50 337 P P **18 28 35.9 +0.3**
O58A Lewisberry 29.51 22 P P **18 28 34.7 -0.6**
baz=208
M53A WI Miller and 29.52 16 P P **18 28 34.0 -1.4**
baz=200
M53A WI Miller and 29.52 16 P P **18 28 34.5 -0.9**
M53A IAmb IAmb 18 28 36.2
comp=Z,27nm,0.7s
SMCO Snowmass 29.52 334 P P **18 28 36.0 +0.1**
PV02 Paradox Valley 29.53 331 P P **18 28 35.9 +0.1**
PV13 Radium Mtn., P 29.53 331 P P **18 28 37.1 +1.4**
MVL Millersville 29.62 23 P P **18 28 34.8 -1.4**
JFWS Jewell Farm 29.62 1 P P **18 28 35.1 -1.1**
baz=181
JFWS Jewell Farm 29.62 1 P P **18 28 35.2 -1.0**
JFWS IAmb IAmb 18 28 36.2
comp=Z,25nm,0.6s

PV03 Paradox Valley 29.62 331 P P 18 28 36.9 +0.4
ESJX Sierra Juarez 29.62 313 P P 18 28 36.9 +0.4
PV18 Skein Mesa, Pa 29.64 331 P P 18 28 36.9 +0.2
PV12 Saucer Basin, 29.64 331 P P 18 28 37.7 +1.0
PV12 IAmb IAmb 18 28 48.8
comp=Z,18nm,0.8s
PV07 Paradox Valley 29.67 331 P P 18 28 36.4 -0.5
PV16 Nyswonger Mesa 29.69 331 P P 18 28 36.4 -0.8
N56A West Decatur 29.74 19 P P 18 28 36.5 -0.8
baz=205
PV04 Paradox Valley 29.75 331 P P 18 28 39.1 +1.4
PV04 IAmb IAmb 18 28 49.6
comp=Z,14nm,0.8s
PDMCI Parker Dam,Lak 29.76 319 P P 18 28 38.9 +1.4
baz=129
PV14 Lion Creek, Pa 29.79 331 P P 18 28 38.4 +0.3
PV14 IAmb IAmb 18 28 44.2
comp=Z,38nm,0.9s
PV22 Blue Mesa, Par 29.81 331 P P 18 28 39.2 +1.0
N57A Milroy 29.85 21 P P 18 28 37.5 -0.7
baz=207
M54A Oil Creek Stat 29.86 17 P P 18 28 37.9 -0.5
baz=202
M54A Oil Creek Stat 29.86 17 P P 18 28 37.6 -0.8
M54A IAmb IAmb 18 28 38.9
comp=Z,18nm,0.9s
O59A Robesonia 29.95 23 P P 18 28 39.2 +0.1
baz=210
SWSC Sam W. Stewart 30.04 315 P P 18 28 41.9 +1.8
baz=125
U15A North Rim 30.06 324 P P 18 28 41.3 +0.8
U15A IAmb IAmb 18 28 51.5
comp=Z,23nm,0.9s
IKP In-Ko-Pah, Jac 30.09 314 P P 18 28 42.6 +2.0
baz=124
M55A Ridgway 30.09 18 P P 18 28 40.2 -0.3
M55A IAmb IAmb 18 28 41.0
comp=Z,17nm,0.8s
W13A Hualapai Mount 30.11 320 P P 18 28 42.7 +1.8
L53A Girard 30.11 16 P P 18 28 39.8 -0.7
baz=201
BC3 Big Chuckawall 30.22 316 P P 18 28 44.1 +2.3
baz=126,SNR=17
M56A Emporium 30.29 19 P P 18 28 41.1 -1.1
baz=205,SNR=6.8
M56A Emporium 30.29 19 P P 18 28 41.1 -1.1
M56A IAmb IAmb 18 28 42.8
comp=Z,24nm,0.8s
CBX Cerro Bola 30.30 313 P P 18 28 43.2 +0.7
IRM Iron Mountain 30.32 318 P P 18 28 44.8 +2.2
baz=128,SNR=7.7
ERPA Erie 30.34 16 P P 18 28 41.5 -1.0
baz=201
ERPA Erie 30.34 16 P P 18 28 41.6 -1.0
TKX Tecate 30.40 314 P P 18 28 44.1 +0.8
MONP2 Monument Peak 30.45 314 P P 18 28 46.0 +2.1
baz=124,SNR=5.6
M57A Sunshine Farm, 30.51 21 P P 18 28 43.6 -0.5
baz=207,SNR=6.9
M57A Sunshine Farm, 30.51 21 P P 18 28 43.0 -1.1
M57A IAmb IAmb 18 28 45.9
comp=Z,21nm,0.8s
LUPA Lehigh Univers 30.51 24 P P 18 28 43.5 -0.6
LUPA IAmb IAmb 18 28 45.9
comp=Z,19nm,0.7s
N23A Red Feather La 30.57 337 P P 18 28 45.4 +0.4
baz=150
N59A State Game Lan 30.63 23 P P 18 28 44.2 -1.1
baz=210
N59A State Game Lan 30.63 23 P P 18 28 43.4 -1.8
I42A Draeger Farm, 30.64 3 P P 18 28 43.6 -1.6
PHWY Pilot Hill 30.75 338 P P 18 28 46.2 -0.4
KNB Kanab 30.77 324 P P 18 28 48.9 +2.2
M58A Price's Panora 30.77 22 P P 18 28 46.1 -0.4
baz=208
I37A Lemond, Waseca 30.79 356 P P 18 28 45.4 -1.2
PKCU Pink Cliffs 30.79 325 P P 18 28 48.6 +1.5
BELC Belle Mtn. Jos 30.79 317 P P 18 28 48.3 +1.4
baz=126
ECSD EROS Data Cent 30.82 352 P P 18 28 46.0 -0.9
baz=169
ECSD EROS Data Cent 30.82 352 P P 18 28 46.2 -0.7
N60A Cedar Hill Far 30.85 24 P P 18 28 46.6 -0.4
baz=211
TPFO Pinon Flats 30.87 315 P P 18 28 49.9 +2.4
baz=125
XPFO Pion Flat 30.88 315 P P 18 28 46.7 -0.9
PFO Pinyon Flats O 30.88 315 LR LR 18 43 06.7
comp=Z,457nm,18.3s,baz=139,slow=40
PFO Pinyon Flats O 30.88 315 P P 18 28 47.0 -0.6
I45A Fountain 30.99 7 P P 18 28 47.0 -1.3
WVNY West Valley, N 31.00 18 P P 18 28 47.3 -1.1
WVNY IAmb IAmb 18 28 49.1
comp=Z,26nm,0.8s
LCMT Little Creek M 31.01 324 P P 18 28 51.0 +2.3
GMRC Granite Mounta 31.04 318 P P 18 28 51.1 +2.1
baz=128,SNR=12
L56A Greenwood 31.08 19 P P 18 28 48.4 -0.8
baz=206,SNR=7.8
L56A Greenwood 31.08 19 P P 18 28 48.0 -1.2
L56A IAmb IAmb 18 28 50.2
comp=Z,22nm,0.8s
SRU San Rafael Swe 31.10 330 P P 18 28 50.7 +1.1
MTPU Mount Pierson 31.15 326 P P 18 28 52.2 +1.9
L57A Andrews Acres 31.19 20 P P 18 28 49.2 -1.0
baz=207
Q16A Castle Valley 31.28 329 P P 18 28 51.7 +0.6
M59A Waymart 31.30 23 P P 18 28 50.3 -0.8
baz=210
SZCU Shurtz Canyon 31.33 325 P P 18 28 51.6 0.0
M60A Port Jervis 31.43 24 P P 18 28 51.3 -0.9
baz=211
CCUT Cedar City 31.45 324 P P 18 28 54.2 +1.5
P17A Butcher Ranch, 31.49 330 P P 18 28 53.8 +0.8
MSU Marysvale 31.50 327 P P 18 28 54.1 +1.0
HEC Hector,Ludlow 31.51 317 P P 18 28 55.9 +2.8
baz=127
MMNY Mt. Morris Dam 31.51 18 P P 18 28 52.2 -0.7
MMNY IAmb IAmb 18 28 53.9
comp=Z,30nm,0.9s
MVU Marysvale 31.51 327 P P 18 28 54.8 +1.5
TUQ Turquoise Moun 31.61 319 P P 18 28 55.8 +1.7
baz=128
K56A Middlesex 31.66 19 P P 18 28 53.4 -0.9
baz=206,SNR=9.5
I51A Listowel 31.66 14 P P 18 28 53.2 -1.1
baz=198
BINY Binghamton 31.67 21 P P 18 28 53.4 -1.0
baz=208
TCRU Three Creeks R 31.71 327 P P 18 28 56.4 +1.4
MEDO Medina 31.74 17 P P 18 28 54.0 -0.9
RWWY Rawlins 31.74 336 P P 18 28 55.3 0.0
RWWY IAmb IAmb 18 28 58.2
comp=Z,15nm,0.8s
M61A Granite Spring 31.76 25 P P 18 28 54.2 -0.8
baz=213
J54A Appleton 31.78 17 P P 18 28 54.2 -1.0
SHPR Sheep Range 31.81 321 P P 18 28 56.6 +0.8
SHPR IAmb IAmb 18 29 02.5
comp=Z,17nm,1.2s
K57A Scipio Center 31.96 20 P P 18 28 55.9 -0.9
baz=207
SPMN Marine on St. 31.96 357 P P 18 28 55.9 -0.9
baz=176,SNR=23
SPMN Marine on St. 31.96 357 P P 18 28 55.8 -1.1
G40A Rib Lake 31.97 1 P P 18 28 55.9 -1.1
G40A IAmb IAmb 18 29 23.2
comp=Z,13nm,1.1s
L59A Walton 32.01 23 P P 18 28 56.3 -1.0
baz=210
L59A Walton 32.01 23 P P 18 28 56.5 -0.8
L59A IAmb IAmb 18 28 58.0
comp=Z,15nm,0.8s
J55A Hilton 32.02 18 P P 18 28 56.3 -1.1
G45A Suttons Bay 32.05 7 P P 18 28 55.7 -2.0
BFSC Mount Baldy Ra 32.05 315 P P 18 28 58.8 +0.8
baz=124
GSC Goldstone, Bar 32.10 318 P P 18 28 59.3 +1.0
baz=127
GSC Goldstone, Bar 32.10 318 P P 18 28 58.2 -0.1
SHOC Shoshone, Teco 32.12 319 P P 18 29 00.3 +1.9
baz=128
L60A Shokan 32.15 24 P P 18 28 57.1 -1.5
baz=212
KSCT Kent School, K 32.22 25 P P 18 28 58.5 -0.6
KSCT IAmb IAmb 18 29 00.7
comp=Z,14nm,0.8s
K58A Earlville 32.28 21 P P 18 28 58.9 -0.8
baz=208,SNR=5.9
K58A Earlville 32.28 21 P P 18 28 58.2 -1.6
K58A IAmb IAmb 18 29 08.4
comp=Z,17nm,0.8s
K22A Casper 32.31 338 P P 18 29 00.1 0.0
baz=150,SNR=5.1
K22A Casper 32.31 338 P P 18 29 00.2 0.0
K22A IAmb IAmb 18 29 02.4
comp=Z,14nm,0.9s
MWC Mount Wilson 32.32 315 P P 18 29 00.8 +0.4
MWC IAmb IAmb 18 29 06.4
comp=Z,17nm,1.3s
J56A Wolcott 32.33 19 P P 18 28 59.2 -0.9
baz=206,SNR=13
J56A Wolcott 32.33 19 P P 18 28 58.7 -1.4
PRN Pahroc Range 32.34 322 P P 18 29 02.2 +1.8
MPU Maple Canyon 32.34 329 P P 18 29 00.4 -0.2
PSUT Pine Spring 32.42 325 P P 18 29 02.6 +1.3
F42A Maple Grove Fa 32.54 4 P P 18 28 59.9 -2.0
M63A Gales Ferry 32.57 27 P P 18 29 01.2 -1.0
baz=216
K59A Cooperstown 32.58 22 P P 18 29 02.3 -0.1
baz=210
L61A Hillsdale 1, H 32.59 24 P P 18 29 01.8 -0.6
baz=212
F36A Milaca 32.63 357 P P 18 29 00.7 -2.0
F36A IAmb IAmb 18 29 02.3
comp=Z,14nm,0.8s
EDW2 Edwards Air Fo 32.65 316 P P 18 29 04.1 +1.0
baz=125
JLU Jordanelle 32.70 330 P P 18 29 02.8 -0.9
J57A Williamstown 32.73 20 P P 18 29 02.0 -1.6
baz=207,SNR=6.5
J57A Williamstown 32.73 20 P P 18 29 01.3 -2.3
J57A IAmb IAmb 18 29 04.3
comp=Z,26nm,0.8s
TPNV Topopah Spring 32.76 321 P P 18 29 05.8 +1.6
baz=130,SNR=12
TPNV Topopah Spring 32.76 321 P P 18 29 06.4 +2.2
TPNV IAmb IAmb 18 29 11.6
comp=Z,15nm,1.0s
LRMC Laurel Mtn Rad 32.78 317 P P 18 29 06.8 +2.4
baz=126
RSSD Black Hills 32.81 342 P P 18 29 04.0 -0.6
baz=156
RSSD Black Hills 32.81 342 P P 18 29 04.0 -0.6
COWI Conover 32.83 2 P P 18 29 02.0 -2.4
FURC Furnace Creek, 32.84 319 P P 18 29 07.1 +2.4
baz=128,SNR=6.2
PECO Prince Edward 32.88 19 P P 18 29 03.8 -1.1
CTU Camp Tracy 32.92 330 P P 18 29 06.5 +0.9
J58A Remsen 32.94 21 P P 18 29 04.6 -0.8
baz=209
J58A Remsen 32.94 21 P P 18 29 03.7 -1.7
TRY Troy 32.99 24 P P 18 29 05.5 -0.5
TRY IAmb IAmb 18 29 07.5
comp=Z,19nm,0.9s
MPMC Manual Prospec 33.00 318 P P 18 29 08.2 +1.9
baz=127,SNR=28
H53A Boygeon 33.00 16 P P 18 29 05.4 -0.6
baz=202,SNR=12
SADO Sadowa 33.03 15 P P 18 29 05.1 -1.2
DUG Dugway, Tooele 33.07 328 P P 18 29 08.7 +1.9
baz=138
DUG Dugway, Tooele 33.07 328 P P 18 29 08.2 +1.3
TCUT Toone Canyon 33.09 331 P P 18 29 08.9 +1.8
K61A Williamstown 33.10 24 P P 18 29 06.8 -0.1
baz=212
QUA2 Belchertown 33.15 26 P P 18 29 06.5 -0.8
QUA2 IAmb IAmb 18 29 08.3
comp=Z,13nm,0.8s
L61B Northampton 33.16 25 P P 18 29 06.1 -1.3
baz=214
DELO Deloro Mine 33.22 17 P P 18 29 06.3 -1.6
E43A Lone Tree Farm 33.24 5 P P 18 29 06.1 -1.9
R11A Troy Canyon, C 33.28 323 P P 18 29 10.7 +1.9
baz=132,SNR=13
R11A Troy Canyon, C 33.28 323 P P 18 29 11.0 +2.2
R11A IAmb IAmb 18 29 23.1
comp=Z,15nm,1.1s
E38A The Farm, Brul 33.31 359 P P 18 29 07.1 -1.5
J59A Piesco 33.31 22 P P 18 29 08.1 -0.6
baz=210
J59A Piesco 33.31 22 P P 18 29 07.2 -1.5
J59A IAmb IAmb 18 29 33.9
comp=Z,34nm,1.5s
I57A Carthage 33.31 20 P P 18 29 08.0 -0.7
baz=208
I58A Old Forge 33.33 21 P P 18 29 08.2 -0.7
baz=209
ARVC Arvin 33.35 316 P P 18 29 11.2 +2.1
baz=124
ISA Isabella, Lake 33.41 317 P P 18 29 11.2 +1.4
baz=125,SNR=5.5
ISA Isabella, Lake 33.41 317 P P 18 29 12.2 +2.4
ISA IAmb IAmb 18 29 22.2
comp=Z,16nm,1.2s
GRAC Grapevine Rang 33.49 320 P P 18 29 12.6 +2.2
baz=128,SNR=12
ETMB Extrema 33.52 132 eP P 18 29 11.6 +0.8
J60A Lant Hill Farm 33.52 23 P P 18 29 10.2 -0.3
baz=212
E46A Sault Ste Mari 33.53 8 P P 18 29 08.6 -2.0
L64A Middleborough 33.53 28 P P 18 29 10.7 +0.1
baz=217
HWUT Hardware Ranch 33.54 331 P P 18 29 12.3 +1.3
HWUT IAmb IAmb 18 29 21.0
comp=Z,16nm,0.8s
ACCN Adirondack Com 33.55 23 P P 18 29 09.9 -0.9
ACCN IAmb IAmb 18 29 11.4
comp=Z,8.9nm,0.8s
PD31 Pinedale Array 33.59 335 P P 18 29 10.3 -1.2
PD31 PcP PcP 18 31 53.0 +1.3
PDAR Pinedale Array 33.59 335 P P 18 29 11.3 -0.1
comp=Z,3.8nm,0.8s,baz=128,slow=9.6,SNR=13
PDAR PcP PcP 18 31 52.5 +0.7
comp=Z,2.5nm,0.8s,baz=113,slow=3.9,SNR=7.1
PDAR ScP ScP 18 35 41.4 +5.2
comp=Z,0.9nm,0.8s,baz=150,slow=6.3,SNR=5.3
CWC Cottonwood Cre 33.61 318 P P 18 29 12.8 +1.2
baz=126
BGU Big Grassy Mou 33.73 329 P P 18 29 11.9 -0.7
D41A Chassel 33.81 3 P P 18 29 11.0 -2.0
I59A Olmsteadville 33.82 22 P P 18 29 12.6 -0.6
baz=211
PLVO Plevna 33.85 18 P P 18 29 11.7 -1.7
PLVO IAmb IAmb 18 29 13.9
comp=Z,22nm,0.8s
H57A Richville 33.87 20 P P 18 29 12.4 -1.1
baz=208
G54A Lake Saint Pet 33.89 16 P P 18 29 12.6 -1.2
baz=203,SNR=9.2
PKM Mcpherson Peak 33.90 315 P P 18 29 16.9 +2.8
baz=122
VES Vestal, Richgr 33.92 317 P P 18 29 16.7 +2.5
baz=124,SNR=7.2
TIN Tinemaha, Big 34.07 319 P P 18 29 17.6 +2.0
baz=127
TPH Tonopah 34.08 321 P P 18 29 17.4 +1.7
I60A Shoreham 34.08 23 P P 18 29 15.1 -0.3
baz=212
MACA Manacapuru-AM 34.12 116 eP P 18 29 16.8 +0.8
J62A Henniker 34.16 25 P P 18 29 15.5 -0.5
baz=214
AHID Auburn Hatcher 34.25 333 P P 18 29 17.3 +0.1
AHID IAmb IAmb 18 29 19.5
comp=Z,10nm,0.8s
H58A Gabriels 34.25 22 P P 18 29 15.7 -1.2
baz=210
HVU Hansel Valley 34.25 330 P P 18 29 16.8 -0.3
LONY Lake Ozonia 34.28 21 P P 18 29 15.6 -1.6
baz=209,SNR=5.1
LONY Lake Ozonia 34.28 21 P P 18 29 15.3 -1.8
LONY IAmb IAmb 18 29 25.0
comp=Z,22nm,1.1s
ALGO Algonquin Park 34.42 16 P P 18 29 17.4 -0.8
baz=202,SNR=8.9
J63A Strafford 34.51 26 P P 18 29 18.4 -0.7
baz=215
G57A Newington 34.57 20 P P 18 29 18.3 -1.3
baz=208
I61A Oroboro, Fairl 34.58 24 P P 18 29 19.1 -0.6
baz=213
ECR Eagle Creek 34.60 333 P P 18 29 19.2 -1.0
H59A Cadyville 34.62 22 P P 18 29 18.9 -1.1
baz=210
REDW Red Top Meadow 34.62 334 P P 18 29 20.8 +0.4
EYMN Ely 34.65 359 P P 18 29 18.4 -1.8
baz=179,SNR=11
EYMN Ely 34.65 359 P P 18 29 18.2 -2.1
PAGB Antelope Grade 34.65 315 P P 18 29 21.9 +1.4
PAGB IAmb IAmb 18 29 28.4
comp=Z,24nm,1.1s
SNOW Snow King Moun 34.66 334 P P 18 29 21.8 +1.0
ELK Elko 34.74 327 P P 18 29 22.4 +1.0
ELK IAmb IAmb 18 29 33.0
comp=Z,9.9nm,0.8s
TPAW Teton Pass 34.77 334 P P 18 29 22.0 +0.3
TPAW IAmb IAmb 18 29 28.3
comp=Z,15nm,0.8s
NV11 Mina Array Sit 34.87 321 P P 18 29 24.8 +2.3
I62A Tamworth 34.88 25 P P 18 29 21.7 -0.6
baz=215
I62A Tamworth 34.88 25 P P 18 29 21.0 -1.3
I62A IAmb IAmb 18 29 23.2
comp=Z,13nm,0.8s
OMMB Old Mammoth Mi 34.90 319 P P 18 29 25.0 +2.1
OMMB IAmb IAmb 18 29 29.3
comp=Z,19nm,1.0s
H60A Morristown 34.92 23 P P 18 29 21.2 -1.5
baz=212
G58A Ormstown 34.93 21 P P 18 29 22.0 -0.7
baz=209
MDPB Devils Postpil 34.96 319 P P 18 29 25.8 +2.4
MDPB IAmb IAmb 18 29 27.1
comp=Z,23nm,0.9s
NVAR Mina Array Bea 34.96 321 P P 18 29 26.2 +2.9
comp=Z,42nm,0.8s,baz=137,slow=8.5,SNR=160
NVAR PcP PcP 18 31 57.1 +1.3
comp=Z,6.8nm,0.8s,baz=136,slow=3.7,SNR=7.8
NVAR ScP ScP 18 35 46.9 +5.7
comp=Z,1.3nm,0.8s,baz=140,slow=5.2,SNR=6.2
NVAR LR LR 18 46 12.5
comp=Z,580nm,18.9s,baz=119,slow=41
NVAR Mina Array Bea 34.96 321 P P 18 29 24.9 +1.6
LHV Little Huntoon 34.97 320 P P 18 29 26.0 +2.9
B35A Bob, Littlefor 35.14 357 P P 18 29 22.6 -1.8
FLWY Flagg Ranch 35.15 335 P P 18 29 25.9 +1.0
G59A Clarenceville 35.18 22 P P 18 29 24.4 -0.4
baz=211
RYN Ryan 35.22 321 P P 18 29 27.0 +1.5
RYN IAmb IAmb 18 29 29.2
comp=Z,14nm,0.9s
KVN Kaiserville 35.23 322 P P 18 29 27.7 +2.1
KVN IAmb IAmb 18 29 30.6
comp=Z,24nm,1.1s
AGMN Agassiz Nation 35.24 354 P P 18 29 24.6 -0.8
baz=172
AGMN Agassiz Nation 35.24 354 P P 18 29 23.6 -1.8
SAML Samuel 35.24 127 P P 18 29 24.5 -1.2
SAML IAmb IAmb 18 29 31.1
comp=Z,18nm,0.9s
SAML Samuel 35.24 127 eP P 18 29 26.0 +0.3
F57A Harrington 35.29 20 P P 18 29 24.8 -1.0
baz=208
MDND Maddock 35.30 350 P P 18 29 25.4 -0.5
baz=165,SNR=5.5
MDND Maddock 35.30 350 P P 18 29 24.9 -1.0
I63A Otisfield 35.34 26 P P 18 29 25.4 -0.9
baz=216
E55A Montcerf-Lytto 35.44 18 P P 18 29 25.8 -1.2
baz=205,SNR=5.5
RLMT Red Lodge 35.45 337 P P 18 29 27.6 +0.1
baz=148,SNR=8.6
RLMT Red Lodge 35.45 337 P P 18 29 27.4 -0.1
RLMT IAmb IAmb 18 29 29.7
comp=Z,9.7nm,0.8s
YMP Mirror Lake Pl 35.47 336 P P 18 29 30.5 +2.7
G60A Masonville 35.51 23 P P 18 29 26.8 -0.9
baz=212
YNE Yellowstone No 35.64 337 P P 18 29 29.1 0.0
YNR Norris Junctio 35.66 336 P P 18 29 30.0 +0.7
WAKR Walker 35.71 320 P P 18 29 32.1 +2.3
WAKR IAmb IAmb 18 29 33.8
comp=Z,14nm,0.9s
MOQ Mont Orford 35.72 23 P P 18 29 27.4 -2.2
YMR Madison River 35.74 335 P P 18 29 31.7 +1.7
YHH Holmes Hill 35.79 335 P P 18 29 30.9 +0.4
E56A St. Veronique 35.83 19 P P 18 29 30.0 -0.4
baz=207,SNR=8.3
YHL Hebgen Lake 35.97 335 P P 18 29 33.7 +1.6
G61A St-Isidore-de- 35.98 24 P P 18 29 31.3 -0.4
baz=213
E57A Chemin Saint G 36.00 20 P P 18 29 31.2 -0.7
baz=208
CMB Columbia Colle 36.03 319 P P 18 29 34.1 +1.7
CMB IAmb IAmb 18 29 36.9
comp=Z,17nm,0.9s
QLMT Earthquake Lak 36.06 335 P P 18 29 34.9 +2.2
D55A Sainte-Anne-du 36.12 18 P P 18 29 32.0 -0.9
baz=206,SNR=14
PNTR Pine Nut 36.16 321 P P 18 29 36.1 +2.4
GCMT Greycliff 36.17 338 P P 18 29 33.1 -0.4
E58A La Victoria 36.26 21 P P 18 29 33.2 -0.9
baz=210
G62A West of Eustis 36.32 25 P P 18 29 33.9 -0.7
baz=215,SNR=5.6
G62A West of Eustis 36.32 25 P P 18 29 33.1 -1.6
G62A IAmb IAmb 18 29 35.3
comp=Z,15nm,0.8s
VCNR Virginia City 36.32 321 P P 18 29 36.3 +1.3
VCNR IAmb IAmb 18 29 41.4
comp=Z,17nm,1.1s
D56A ZEC Mazanza, M 36.37 19 P P 18 29 33.8 -1.3
baz=207,SNR=6.0
HLID Hailey 36.39 331 P P 18 29 36.4 +0.9
baz=139,SNR=9.8
HLID Hailey 36.39 331 P P 18 29 36.4 +0.9
HLID PcP PcP 18 32 01.7 +1.9
F60A Warwick 36.39 22 P P 18 29 34.2 -1.1
baz=212
H64A Troy 36.40 26 P P 18 29 34.6 -0.7
baz=217
PAHR Pah Rah Range 36.41 322 P P 18 29 36.6 +0.8
PAHR IAmb IAmb 18 29 39.2
comp=Z,12nm,0.9s
RUBR Rubicon Trail 36.48 320 P P 18 29 39.5 +3.1
BCYI Bear Canyon 36.50 332 P P 18 29 37.0 +0.6
VLDQ Val d'Or 36.57 15 P P 18 29 34.9 -1.8
VLDQ IAmb IAmb 18 29 36.4
comp=Z,17nm,0.9s
MCMT McKenzie Canyo 36.66 334 P P 18 29 39.6 +1.7
BOZ Bozeman (W) 36.77 335 P P 18 29 39.0 +0.3
baz=145,SNR=11
BOZ Bozeman (W) 36.77 335 P P 18 29 39.9 +1.2
DGMT Dagmar 36.86 345 P P 18 29 39.2 -0.1
baz=158
DGMT Dagmar 36.86 345 P P 18 29 37.6 -1.6
DGMT IAmb IAmb 18 29 41.8
comp=Z,16nm,0.8s
PKME Peaks-Kenny Pk 36.87 26 P P 18 29 38.9 -0.4
baz=216
H65A Eastbrook 36.87 27 P P 18 29 39.0 -0.3
baz=218
MFID Camas Ranch 36.97 329 P P 18 29 41.1 +0.8
MFID IAmb IAmb 18 29 44.1
comp=Z,12nm,1.0s
DLMT Dillon 36.98 334 P P 18 29 41.2 +0.7
DLMT IAmb IAmb 18 29 43.5
comp=Z,12nm,1.0s
D58A Chemin du LacG 37.02 21 P P 18 29 39.6 -1.0
baz=210
BEKR Beckworth 37.10 321 P P 18 29 43.7 +2.1
BEKR IAmb IAmb 18 29 45.6
comp=Z,23nm,0.9s
ULM Lac du Bonnet 37.17 355 P P 18 29 39.7 -2.1
comp=Z,49nm,0.8s,baz=176,slow=8.8,SNR=50
ULM PcP PcP 18 32 02.0 +0.3
comp=Z,8.9nm,1.0s,baz=162,slow=6.5,SNR=3.0
ULM LR LR 18 48 15.9
comp=Z,714nm,18.1s,baz=164,slow=42
ULM Lac du Bonnet 37.17 355 P P 18 29 39.4 -2.5
LRM Limekiln Ridge 37.28 335 P P 18 29 43.9 +0.7
LATQ La Tuque 37.31 20 P P 18 29 42.7 -0.3
baz=210
LATQ La Tuque 37.31 20 P P 18 29 41.8 -1.2
H66A Whiting 37.36 28 P P 18 29 42.7 -0.9
baz=220

LSQQ Lebel-sur-Quev 37.56 15 P P 18 29 43.9 -1.2
baz=202
G65A Princeton 37.57 27 P P 18 29 44.4 -0.8
baz=219
G65A Princeton 37.57 27 P P 18 29 43.8 -1.5
G65A IAmb IAmb 18 29 59.3
comp=Z,34nm,1.3s
ORV Oroville 37.62 320 P P 18 29 47.5 +1.6
ORV IAmb IAmb 18 29 52.9
comp=Z,12nm,0.9s
F64A Sherman 37.74 26 P P 18 29 46.2 -0.5
baz=217
HRY Holter Researc 37.76 336 P P 18 29 47.5 +0.4
PB16 IPOC Station P 37.78 146 P P 18 29 47.9 -0.1
EGMT Eagleton 38.10 339 P P 18 29 50.5 +0.6
baz=149
EGMT Eagleton 38.10 339 P P 18 29 50.0 +0.1
EGMT IAmb IAmb 18 29 51.8
comp=Z,14nm,0.8s
E63A Oxbow 38.16 25 P P 18 29 49.5 -0.7
baz=217
E63A Oxbow 38.16 25 P P 18 29 48.9 -1.3
E63A IAmb IAmb 18 30 11.9
comp=Z,29nm,1.4s
O03E Paynes Creek 38.25 321 P P 18 29 52.4 +1.2
baz=126,SNR=12
PLID Pearl Lake 38.29 331 P P 18 29 51.6 0.0
PLID IAmb IAmb 18 29 53.4
comp=Z,18nm,0.8s
J08A Circle Bar Ran 38.29 327 P P 18 29 52.5 +0.9
MOD Modoc Plateau 38.34 324 P P 18 29 52.1 +0.1
MOD IAmb IAmb 18 30 04.3
comp=Z,16nm,1.2s
MNMC Minye Minye 38.38 146 P P 18 29 53.7 +1.0
E64A Bridgewater 38.41 26 P P 18 29 52.2 -0.1
baz=218
D62A Allapoint, All 38.43 24 P P 18 29 51.1 -1.4
baz=216
D62A Allapoint, All 38.43 24 P P 18 29 50.7 -1.8
D62A IAmb IAmb 18 29 53.4
comp=Z,13nm,1.0s
PQI Presque Isle 38.52 25 P P 18 29 52.4 -0.9
MSO Missoula 38.71 335 P P 18 29 55.0 0.0
baz=142,SNR=5.2
MSO Missoula 38.71 335 P P 18 29 54.5 -0.5
MSO IAmb IAmb 18 30 12.0
comp=Z,21nm,1.4s
BMO Blue Mountains 38.74 330 P P 18 29 54.8 -0.5
D63A Stockholm 38.78 25 P P 18 29 54.7 -0.8
baz=217
WDC Whiskeytown Da 38.87 320 P P 18 29 56.6 +0.3
CHGQ Chibougamau 39.04 17 P P 18 29 56.2 -1.4
baz=206,SNR=8.6
ITTB Itaituba 39.04 114 eP P 18 29 58.0 -0.1
M04C Macdoel 39.16 322 P P 18 30 00.3 +1.4
baz=128,SNR=6.8
K05A Summer Lake 39.20 324 P P 18 30 01.4 +2.1
K05A IAmb IAmb 18 30 11.4
comp=Z,22nm,1.3s
N02D Trinity Center 39.20 321 P P 18 29 59.7 +0.5
baz=126
MALB Monte Alegre 39.31 110 eP P 18 30 00.8 +0.5
I07A Izee 39.33 327 P P 18 30 00.6 +0.4
I07A IAmb IAmb 18 30 03.8
comp=Z,16nm,1.0s
KMRM Mail Ridge 39.40 319 P P 18 30 02.6 +1.7
F10A Beach Ranch, E 39.52 331 P P 18 30 01.7 -0.1
M02C Callahan 39.54 321 P P 18 30 02.3 +0.4
baz=126
K04D Chiloquin, OR 39.63 324 P P 18 30 04.1 +1.3
baz=128
YBH Yreka Blue Hor 39.65 322 P P 18 30 02.4 -0.6
L04D Klamath Falls 39.70 323 P P 18 30 04.3 +0.9
baz=127,SNR=6.9
J05D Fort Rock, OR 39.75 325 P P 18 30 05.0 +1.1
baz=130
KHMM Horse Mountain 39.78 320 P P 18 30 06.0 +1.9
G08A Pilot Rock 39.88 329 P P 18 30 04.2 -0.6
G08A PcP PcP 18 32 12.3 +1.8
PINE Pine Mountain 39.91 326 P P 18 30 05.8 +0.6
PINE IAmb IAmb 18 30 10.2
comp=Z,20nm,0.9s
PINE PcP PcP 18 32 12.1 +1.3
VILB Vilhena 40.02 129 eP P 18 30 06.5 +0.2
J04D Umpqua Nationa 40.22 324 P P 18 30 09.5 +1.7
baz=129,SNR=5.3
E09A Wood Farm, Sta 40.35 331 P P 18 30 08.2 -0.4
WALA Waterton Lakes 40.49 337 P P 18 30 09.7 -0.1
NPGB Novo Progresso 40.64 118 eP P 18 30 10.6 -0.8
I04A Tendick Farm, 40.73 325 P P 18 30 13.4 +1.6
baz=129
E08A Dider Farm, El 40.77 330 P P 18 30 11.6 -0.5
K02D Willamette Mer 40.79 322 P P 18 30 14.2 +1.8
baz=126
MCPB Macapa, AP 40.80 106 eP P 18 30 12.3 -0.4
KBO Bosley Butte 40.85 321 P P 18 30 13.2 +0.4
HAWA Hanford 40.94 330 P P 18 30 12.8 -0.7
G05D Wamic, OR 41.06 327 P P 18 30 16.0 +1.5
baz=131,SNR=7.6
D08A Wollman Farm, 41.11 331 P P 18 30 15.3 +0.4
D08A IAmb IAmb 18 30 16.6
comp=Z,19nm,1.0s
H04A Detroit Lake 41.17 326 P P 18 30 16.6 +1.2
H04A IAmb IAmb 18 30 25.4
comp=Z,33nm,0.9s
NEW Newport 41.18 333 P P 18 30 15.6 +0.1
baz=139
NEW Newport 41.18 333 P P 18 30 15.1 -0.4
I03D Drain, OR 41.21 324 P P 18 30 17.6 +1.9
baz=128
E07A Sunnyside 41.21 330 P P 18 30 15.9 +0.1
E07A IAmb IAmb 18 30 17.6
comp=Z,19nm,0.8s
J01E Myrtle Point 41.23 323 P P 18 30 17.4 +1.6
baz=126
KEBM Edson Butte 41.29 322 P P 18 30 19.4 +2.9
C09A Chrisman Ranch 41.35 332 P P 18 30 17.7 +0.9
C09A IAmb IAmb 18 30 19.1
comp=Z,25nm,0.6s
SIV San Ignacio 41.37 134 P P 18 30 17.7 +0.3
comp=Z,28nm,1.1s,baz=311,slow=7.6,SNR=47
SIV LR LR 18 46 42.4
comp=Z,210nm,18.1s,baz=294,slow=35
H04D Lebanon 41.37 325 P P 18 30 18.3 +1.2
baz=129
F05D White Salmon 41.57 328 P P 18 30 20.4 +1.7
baz=132
LVC Limon Verde 41.61 149 LR LR 18 47 47.9
comp=Z,176nm,19.1s,baz=322,slow=36
G03D McMinnville, O 42.10 326 P P 18 30 25.0 +2.1
baz=129
B08A Colville Reser 42.24 332 P P 18 30 24.1 -0.1
CLDB Colider 42.26 123 eP P 18 30 25.1 +0.4
LON Longmire 42.33 328 P P 18 30 25.3 +0.4
LON IAmb IAmb 18 30 27.1
comp=Z,23nm,0.8s
FFC Flin Flon 42.34 350 P P 18 30 24.2 -0.6
FFC IAmb IAmb 18 30 25.3
comp=Z,24nm,0.9s
PTLB Pontes e Lacer 42.40 131 eP P 18 30 25.5 -0.3
F04D Rainier, OR 42.51 327 P P 18 30 28.5 +2.2
baz=130
E04D Cinebar 42.59 328 P P 18 30 28.1 +1.2
baz=131
C06D Leavenworth 42.67 330 P P 18 30 28.6 +1.0
baz=134
D05A Enumclaw 42.71 329 P P 18 30 27.4 -0.5
D05A IAmb IAmb 18 30 30.1
comp=Z,27nm,0.9s
E03A Lebam 43.10 327 P P 18 30 32.4 +1.3
B06A Marblemount 43.37 330 P P 18 30 33.3 +0.1
B05A Bryant 43.49 330 P P 18 30 34.4 +0.2
baz=133
D03D Eldon 43.50 328 P P 18 30 34.9 +0.6
baz=131
A04D Lummi Island 44.10 330 P P 18 30 39.2 +0.1
baz=132
PRPB Parauapebas 45.12 113 eP P 18 30 47.7 -0.1
TMAB Tom-Au,PA,Br 45.21 107 eP P 18 30 48.7 +0.3
SCHQ Schefferville 45.61 19 P P 18 30 48.8 -2.4
comp=Z,53nm,0.9s,baz=222,slow=6.2,SNR=21
SCHQ LR LR 18 51 08.7
comp=Z,1µm,18.2s,baz=202,slow=38
SCHQ Schefferville 45.61 19 P P 18 30 48.9 -2.2
SNDB Serra Nova Dou 46.58 121 eP P 18 30 59.1 -0.1

CO03 El Pedregal 47.90 156 P P 18 31 09.1 -0.4
CO03 IAmb IAmb 18 31 13.9
comp=Z,18nm,1.0s
AQDB Aquidauana 48.15 133 eP P 18 31 11.5 +0.1
ARAG Araguaiana, MT 48.17 125 eP P 18 31 10.9 -0.7
SMTB Santa Maria do 48.28 115 eP P 18 31 13.2 +0.6
ROSB Rosrio 49.10 106 eP P 18 31 19.3 +0.4
PEXB Peixe 49.17 119 eP P 18 31 18.9 -0.5
ZON Zonda 49.34 155 P P 18 31 20.4 0.0
ZON IAmb IAmb 18 31 25.6
comp=Z,16nm,1.2s
CPUP Villa Florida 51.09 140 P P 18 31 33.3 -0.4
comp=Z,3.3nm,0.9s,baz=293,slow=8.4,SNR=5.2
CPUP LR LR 18 54 38.6
comp=Z,173nm,19.6s,baz=338,slow=38
CPUP Villa Florida 51.09 140 P P 18 31 32.9 -0.8
CPUP Villa Florida 51.09 140 eP P 18 31 34.8 +1.1
BDFB Brasilia 51.20 123 P P 18 31 34.0 -0.8
comp=Z,6.0nm,0.7s,baz=298,slow=4.8,SNR=3.5
BDFB Brasilia 51.20 123 P P 18 31 35.2 +0.4
BDFB IAmb IAmb 18 31 40.9
comp=Z,12nm,1.0s
DIB Dawson Inlet, 51.72 329 P P 18 31 38.7 +0.6
YKA Yellowknife Ar 52.05 346 P P 18 31 39.1 -1.3
comp=Z,11nm,0.9s,baz=142,slow=7.9,SNR=21
YKA PcP PcP 18 32 52.0 -0.4
comp=Z,3.8nm,0.9s,baz=143,slow=4.2,SNR=5.8
SDBA SAO DESIDERIO 52.23 117 eP P 18 31 42.4 -0.1
IPMB Ipameri, GO 52.29 125 eP P 18 31 42.5 -0.4
BI02 San Fabin de 52.94 160 P P 18 31 45.8 -1.6
BI02 IAmb IAmb 18 32 06.4
comp=Z,21nm,1.4s
TAOE Nuku Hiva Isla 53.58 248 eT T 19 28 55.3
comp=Z,23nm,0.3s
DLBC Dease Lake 53.82 336 P P 18 31 55.1 +1.5
JANB Januaria 53.99 120 eP P 18 31 58.4 +3.0
ITAB Concordia 55.06 137 eP P 18 32 02.4 -0.5
CPSB Cacapava Do Su 56.39 141 eP P 18 32 12.1 -0.4
BSCB Bom Sucesso 56.65 126 eP P 18 32 15.7 +1.1
PLCA Paso Flores 56.88 162 P P 18 32 16.0 +0.1
comp=Z,2.3nm,0.9s,baz=340,slow=12,SNR=3.5
PLCA LR LR 18 51 36.2
comp=Z,163nm,18.3s,baz=340,slow=31
PLCA Paso Flores 56.88 162 P P 18 32 14.9 -0.9
PLCA Paso Flores 56.88 162 eP P 18 32 16.1 +0.3
PLTB Pterras Altas 57.24 142 eP P 18 32 17.6 -0.9
GDU01 Guandu, BA 57.46 116 eP P 18 32 20.3 0.0
RCBR Riachuelo 57.80 106 LR LR 18 59 20.3
comp=Z,176nm,19.8s,baz=295,slow=38
RCBR Riachuelo 57.80 106 P P 18 32 24.2 +1.3
RCBR Riachuelo 57.80 106 eP P 18 32 22.2 -0.7
ESAR Angra dos Reis 58.01 128 eP P 18 32 25.4 +1.4
BSFB Barra de Sao F 58.71 122 eP P 18 32 28.5 -0.5
RIB01 Linhares ES 59.32 122 eP P 18 32 33.4 +0.2
C36M Paulatuk 59.91 347 P P 18 32 34.8 -1.7
baz=142
DAWY Dawson 60.82 338 P P 18 32 42.1 -0.8
MCARA McCarthy VSAT 60.87 334 P P 18 32 44.4 +1.1
BCAR Beaver Creek A 61.20 336 P P 18 32 45.3 -0.2
EPYK Eagle Plains 61.23 341 P P 18 32 45.7 0.0
EPYK IAmb IAmb 18 32 55.9
comp=Z,20nm,1.4s
GLB Gilahina Butte 61.23 334 P P 18 32 46.4 +0.6
INK Inuvik 61.51 343 P P 18 32 46.7 -0.8
RES Resolute Bay 61.52 359 LR LR 19 02 16.0
comp=Z,615nm,18.4s,baz=168,slow=39
RES Resolute Bay 61.52 359 P P 18 32 45.4 -2.1
N25K Chitina, Valde 61.65 334 P P 18 32 49.8 +1.1
baz=117,SNR=6.5
N25K Chitina, Valde 61.65 334 P P 18 32 48.9 +0.3
L26K Log Cabin Wild 61.80 336 P P 18 32 49.9 +0.4
baz=119
K27K Chicken 61.80 337 P P 18 32 49.9 +0.4
baz=120
K27K Chicken 61.80 337 P P 18 32 49.9 +0.4
EGAK Eagle 61.85 338 P P 18 32 49.1 -0.7
EGAK IAmb IAmb 18 32 49.9
comp=Z,8.1nm,1.0s
MENT Mentasta 61.90 336 P P 18 32 49.8 -0.5
MENT IAmb IAmb 18 32 52.0
comp=Z,6.2nm,0.7s
KLU Klutina 62.16 334 P P 18 32 53.4 +1.3
DOT Dot Lake 62.38 336 P P 18 32 53.7 +0.2
DOT IAmb IAmb 18 32 55.0
comp=Z,10.0nm,0.8s
SCRK Sand Creek 62.51 337 P P 18 32 54.4 0.0
baz=118
M24K Tolsona, Glenn 62.54 334 P P 18 32 55.1 +0.6
baz=116
PMOR Pomariorio Ree 62.97 245 eT T 19 40 38.6
comp=Z,3.7nm,0.3s
KNK Knik Glacier 63.24 333 P P 18 33 00.0 +0.8
O22K Cooper Landing 63.46 332 P P 18 33 01.6 +1.0
baz=111
GHO Glory Hole Cre 63.59 333 P P 18 33 01.8 +0.2
RC01 Rabbit Creek A 63.69 332 P P 18 33 02.9 +0.7
baz=112
BRLK Bradley Lake 63.75 331 P P 18 33 03.4 +0.7
PRP Porcupine Dome 63.82 338 P P 18 33 02.9 -0.2
PRP IAmb IAmb 18 33 04.1
comp=Z,8.7nm,0.7s
CNPM China Poot 63.84 330 P P 18 33 04.3 +1.1
HDA Harding Lake 63.86 336 P P 18 33 03.1 -0.1
baz=116,SNR=5.1
HDA Harding Lake 63.86 336 P P 18 33 02.8 -0.4
HDA IAmb IAmb 18 33 04.1
comp=Z,8.9nm,0.8s
IL18 Eielson Array 63.94 337 P P 18 33 03.1 -0.7
IL31 63.99 337 P P 18 33 03.4 -0.7
IL31 IAmb IAmb 18 33 06.0
comp=Z,14nm,0.8s
ILAR Eielson Array 63.99 337 P P 18 33 03.8 -0.3
comp=Z,14nm,1.0s,baz=119,slow=4.5,SNR=65
ILAR PcP PcP 18 33 39.8 +0.3
comp=Z,2.3nm,0.8s,baz=166,slow=2.0,SNR=4.2
ILAR LR LR 19 04 02.0
comp=Z,242nm,18.6s,baz=128,slow=39
ILAR Eielson Array 63.99 337 P P 18 33 03.2 -0.9
HOM Homer 64.08 330 P P 18 33 04.9 +0.2
baz=109
RND Reindeer 64.20 335 P P 18 33 06.2 +0.6
SUA Susitna One 64.28 333 P P 18 33 06.7 +0.5
SUA IAmb IAmb 18 33 07.5
comp=Z,16nm,0.8s
CCB Clear Creek Bu 64.29 336 P P 18 33 05.4 -0.7
WRH Wood River Hil 64.33 336 P P 18 33 05.8 -0.6
WRH IAmb IAmb 18 33 11.4
comp=Z,9.9nm,1.0s
POKR Poker Plat Res 64.35 337 P P 18 33 06.4 -0.1
baz=116
POKR Poker Plat Res 64.35 337 P P 18 33 06.2 -0.3
POKR IAmb IAmb 18 33 07.8
comp=Z,8.2nm,0.8s
MCK McKinley 64.37 335 P P 18 33 06.3 -0.3
baz=114
BMAR Burns Mountain 64.41 340 P P 18 33 06.8 -0.1
TULEG Thule 64.41 6 P P 18 33 05.0 -1.7
TULEG IAmb IAmb 18 33 05.7
comp=Z,9.9nm,0.7s
TULEG Thule 64.41 6 *i* P P 18 33 04.9 -1.7
TULEG IAmb IAmb 18 33 05.5
comp=Z,10nm,0.7s
COLA College 64.41 337 P P 18 33 06.1 -0.6
COLA IAmb IAmb 18 33 08.3
comp=Z,14nm,1.0s
COLA PcP 18 33 41.1 0.0
CUT Chulitna 64.41 334 P P 18 33 07.0 +0.1
baz=112
TCOL CIGO, UAF Yank 64.41 337 P P 18 33 06.8 0.0
baz=115
TCOL CIGO, UAF Yank 64.41 337 P P 18 33 06.3 -0.5
TCOL IAmb IAmb 18 33 08.3
comp=Z,14nm,1.0s
TCOL PcP 18 33 41.9 +0.8
MDM Murphy Dome 64.59 337 P P 18 33 07.2 -0.9
MDM PcP 18 33 41.7 -0.2
BWN Browne 64.76 336 P P 18 33 09.4 +0.3
NEA2 Nenana 64.77 336 P P 18 33 09.0 -0.2
baz=114,SNR=8.3
SKT Skwentna 64.81 333 P P 18 33 08.8 -0.7
TRF Thorofare Moun 64.81 335 P P 18 33 09.5 -0.2
RSO Redoubt South 64.87 331 P P 18 33 09.9 -0.2
I23K Minto, Yukon-K 65.11 337 P P 18 33 10.9 -0.4
baz=114,SNR=12

I23K Minto, Yukon-K 65.11 337 P P 18 33 11.3 0.0
KTH Kantishna Hill 65.12 335 P P 18 33 11.0 -0.5
KTH IAmb IAmb 18 33 13.7
comp=Z,18nm,1.0s
BPAW Bear Paw Mtn. 65.34 335 P P 18 33 12.4 -0.6
BPAW IAmb IAmb 18 33 14.7
comp=Z,16nm,1.0s
PPT Papeete 65.48 244 LR LR 18 54 37.5
comp=Z,229nm,18.3s,baz=2.5,slow=29
PPT2 Papeete2 65.48 244 eLR LR 18 52 45.6
comp=Z,315nm,25.0s,baz=56
MLY Manley 65.60 336 P P 18 33 14.7 +0.1
baz=112,SNR=22
COLD Coldfoot 66.26 339 P P 18 33 19.0 +0.2
baz=114,SNR=9.4
COLD Coldfoot 66.26 339 P P 18 33 19.2 +0.4
COLD IAmb IAmb 18 33 21.9
comp=Z,12nm,1.1s
TOLK Toolik Lake Re 66.63 340 P P 18 33 21.1 -0.1
baz=115,SNR=6.6
TOLK Toolik Lake Re 66.63 340 P P 18 33 21.2 0.0
TOLK IAmb IAmb 18 33 22.3
comp=Z,9.5nm,0.8s
SUMG Summit 66.73 15 P P 18 33 20.2 -1.9
SUMG Summit 66.73 15 *i* P P 18 33 20.7 -1.4
comp=Z,64nm,0.9s
SUMG Summit 66.73 15 *i* P P 18 33 20.8 -1.4
SUMG IAmb IAmb 18 33 23.0
comp=Z,64nm,0.9s
IMAR Indian Mountai 67.11 337 P P 18 33 23.1 -1.1
TBI Tubuai 67.81 238 eS S 18 42 22.2 -5.3
comp=Z,86nm,25.2s
TBI Tubuai 67.81 238 eLR LR 18 54 04.6
comp=Z,249nm,28.8s
A21K Barrow 69.89 342 P P 18 33 41.3 -0.2
baz=109
DBG Daneborg 72.19 16 *i* P P 18 33 53.2 -2.2
DAG Danmarks Havn 73.20 13⇑ *i* P P 18 33 59.4 -1.9
comp=Z,15nm,0.8s
DAG Danmarks Havn 73.20 13⇑ *i* P P 18 33 59.4 -1.9
DAG IAmb IAmb 18 34 00.1
comp=Z,15nm,0.8s
ESDC Sonseca Array 79.38 52 P P 18 34 34.5 -2.8
comp=Z,7.1nm,1.0s,baz=290,slow=5.9,SNR=20
ESDC LR LR 19 04 49.3
comp=Z,126nm,20.4s,baz=295,slow=32
BILL Bilibino 82.59 338 P P 18 34 53.8 0.0
KOWA Kowa 83.82 77 P P 18 35 00.3 -0.9
NB2 NORSAR Subarra 84.34 29 P P 18 35 01.6 -1.4
comp=Z,4.9nm,0.9s,baz=289,slow=5.3
NOA NORSAR Array B 84.34 29 P P 18 35 01.5 -1.4
comp=Z,2.1nm,0.8s,baz=290,slow=5.1,SNR=7.3
NOA LR LR 19 10 09.0
comp=Z,129nm,21.2s,baz=290,slow=34
TIC Toumodi 84.52 84 eP P 18 35 04.4 -0.4
LIC Lamto 84.61 85 eP P 18 35 04.9 -0.3
comp=Z,106nm,0.9s
DBIC Dimbokro 84.68 84 P P 18 35 04.5 -1.0
comp=Z,19nm,0.7s,baz=263,slow=4.9,SNR=24
DBIC LR LR 19 08 55.5
comp=Z,119nm,21.2s,baz=271,slow=33
DBIC Dimbokro 84.68 84 P P 18 35 04.7 -0.8
KIC Kosan Boka 84.86 85 eP P 18 35 06.1 -0.3
comp=Z,78nm,0.9s
ARCES ARCESS Array B 86.56 18 P P 18 35 11.9 -1.9
comp=Z,3.3nm,0.9s,baz=289,slow=3.7,SNR=5.2
ARCES LR LR 19 14 16.3
comp=Z,222nm,18.4s,baz=310,slow=36
DAVA Damuels 87.59 42 eP P 18 35 18.6 -0.9
comp=Z,9.9nm,1.1s
FUORN Ofenpass-Fuorn 88.04 43 P P 18 35 20.3 -1.5
FUORN IAmb IAmb 18 35 21.2
comp=Z,16nm,1.3s
RETA Reutte 88.11 42 eP P 18 35 20.9 -0.9
comp=Z,8.5nm,0.9s
FETA Feichten 88.22 42 eP P 18 35 21.5 -1.0
comp=Z,4.0nm,1.0s
CLL Collm 88.30 38 *i* P P 18 35 21.3 -1.3
comp=Z,11nm,1.0s
CLL eS S 18 46 12.0 +4.7
CLL Collm 88.30 38 P P 18 35 20.5 -2.1
CLL IAmb IAmb 18 35 22.9
comp=Z,11nm,1.0s
NKC Novy Kostel 88.32 39 eP P 18 35 21.1 -1.6
MOTA Moosalm 88.37 42 eP P 18 35 22.1 -1.1
comp=Z,7.6nm,1.1s
KHC Kasperske Hory 89.37 39 eP P 18 35 26.4 -1.3
ABTA Abfaltersbach 89.47 42 eP P 18 35 27.4 -0.9
comp=Z,9.4nm,1.1s
TOA0 Torodi Ar. Sit 89.53 77 P P 18 35 26.6 -2.4
TOA0 IAmb IAmb 18 35 27.5
comp=Z,8.4nm,1.2s
TORD Torodi Ar. Bea 89.53 77 P P 18 35 26.4 -2.6
comp=Z,2.8nm,0.7s,baz=290,slow=5.6,SNR=14
TORD LR LR 19 13 14.9
comp=Z,153nm,19.6s,baz=265,slow=34
TORD Torodi Ar. Bea 89.53 77 P P 18 35 26.5 -2.6
GEC2B GERESS ARRAY S 89.54 40 P P 18 35 25.9 -2.7
GERES GERESS Array B 89.54 40 P P 18 35 26.4 -2.2
comp=Z,1.9nm,0.8s,baz=281,slow=2.2,SNR=12
GERES LR LR 19 11 22.1
comp=Z,144nm,20.4s,baz=290,slow=33
GERES GERESS Array B 89.54 40 P P 18 35 26.1 -2.5
KBA Koelnbreinsper 89.90 41 eP P 18 35 29.5 -0.9
comp=Z,5.5nm,1.1s
DPC Dobruska-Polom 90.61 38 eP P 18 35 32.2 -1.3
TAM Tamanrasset 90.76 67 P P 18 35 33.2 -1.7
TAM IAmb IAmb 18 35 36.3
comp=Z,5.8nm,1.3s
FINES FINESS Array B 90.77 25 P P 18 35 32.2 -1.7
comp=Z,3.9nm,1.0s,baz=251,slow=8.7,SNR=2.3
FINES LR LR 19 16 52.2
comp=Z,234nm,18.8s,baz=277,slow=36
TIXI Tiksi 91.26 348 P P 18 35 34.1 -1.9
TIXI IAmb IAmb 18 35 40.6
comp=Z,6.1nm,1.1s
NRIK Noril'sk 97.67 1 LR LR 19 23 09.2
comp=Z,418nm,20.3s,baz=18,slow=37
AKASG Malin Array Be 97.81 34 LR LR 19 23 11.4
comp=Z,119nm,18.2s,baz=265,slow=38
DZM Mont Dzumac 106.41 251 eLR LR 19 11 56.6
comp=Z,85nm,28.0s
SONM Songino Array 117.31 347 PKP PKiKP 18 41 17.3 +0.5
comp=Z,0.8nm,0.8s,baz=304,slow=1.3,SNR=4.4
SONM Songino Array 117.31 347 PKiKP 18 41 16.9 +0.1
KSRS Korea Array 117.80 326 PKP PKiKP 18 41 20.1 +2.2
comp=Z,2.6nm,0.8s,baz=2.3,slow=2.0,SNR=11
BOSA Boshof 119.06 115 PKP PKiKP 18 41 22.0 +1.4
comp=Z,6.9nm,0.8s,baz=353,slow=2.1,SNR=8.6
BOSA Boshof 119.06 115 PKiKP 18 41 21.6 +1.0
MKAR Makanchi Array 119.98 5 PKP PKPdf 18 41 21.1 -0.8
comp=Z,0.8nm,0.7s,baz=347,slow=1.6,SNR=5.8
HHC Hu-ho-hao-te 122.34 340 ePKP PKiKP 18 41 27.1 +0.3
WMQ Urumqi 123.25 1 ePKP PKiKP 18 41 29.1 +0.6
WMQ LR LR
comp=Z,510nm,20.1s
WMQ LR LR
comp=Z,600nm,20.9s
GTA Gaotai 126.72 350 PKP PKPdf 18 41 34.9 -0.2
GTA LR LR
comp=Z,200nm,21.7s
GTA LR LR
comp=Z,150nm,22.1s
GTA LR LR
comp=Z,220nm,22.1s
NJ2 Nanjing 126.74 328 ePKP PKiKP 18 41 36.0 +0.4
STKA Stephens Creek 128.58 240 PKP PKPdf 18 41 39.0 +0.3
comp=Z,2.4nm,0.9s,baz=348,slow=5.5,SNR=4.0
STKA Stephens Creek 128.58 240 PKPdf 18 41 37.8 -0.8
LZH Lanzhou 129.04 345 PKP PKPdf 18 41 39.0 -0.7
LZH sPKP 18 41 53.5
WHN Wuhan 130.18 331 PKP PKiKP 18 41 44.1 +1.6
WRA Warramunga Arr 136.22 255 PKhKP PKPpre 18 41 46.5
comp=Z,0.4nm,0.8s,baz=39,slow=2.8,SNR=4.6
WRA Warramunga Arr 136.22 255 PKPdf 18 41 53.7 +0.3
ASAR Alice Springs 136.39 250 PKhKP PKPpre 18 41 45.0
comp=Z,0.4nm,0.8s,baz=116,slow=2.2,SNR=2.2
GYA Guiyang 137.04 337 ePKP PKPdf 18 41 54.5 -0.4
PAYA Payao 145.95 342 P PKPab 18 42 11.9 0.0
CM34 Chiang Mai Arr 146.65 342 P PKPbc 18 42 13.0 -0.6
LAMP Lampang 146.81 342 P PKiKP 18 42 16.3 -0.5
CM32 Chiang Mai Arr 146.92 343 P PKPbc 18 42 14.0 -0.4
CM09 Chiang Mai Arr 147.08 343 P PKPbc 18 42 15.0 +0.2
CM31 Chiang Mai Arr 147.08 343 P PKPbc 18 42 15.0 +0.2
CMAR Chiang Mai Arr 147.08 343 PKPbc PKPbc 18 42 14.4 -0.4
comp=Z,15nm,0.7s,baz=340,slow=3.4,SNR=56

CMAR	**Chiang Mai Arr**	**147.08**	**343**		**PKPbc**	**18 42 15.3**	**+0.5**
CM15	**Chiang Mai Arr**	**147.09**	**343**	P	**PKPbc**	**18 42 15.2**	**+0.4**
CM02	**Chiang Mai Arr**	**147.10**	**343**	P	**PKPab**	**18 42 15.7**	**-0.7**
CM01	**Chiang Mai Arr**	**147.11**	**343**	P	**PKPbc**	**18 42 15.0**	**+0.1**
CM04	**Chiang Mai Arr**	**147.12**	**343**	P	**PKPbc**	**18 42 15.0**	**+0.1**
CM13	**Chiang Mai Arr**	**147.13**	**343**	P	**PKPab**	**18 42 15.8**	**-0.6**
CM05	**Chiang Mai Arr**	**147.13**	**343**	P	**PKPbc**	**18 42 15.7**	**+0.7**
UTTA	**Uttaradit**	**147.24**	**340**	P	**PKPbc**	**18 42 16.1**	**+0.8**
MHMT	**Maesarieng**	**147.63**	**344**	P	**PKPab**	**18 42 18.0**	**-0.4**
SUKH	**Sukhothai**	**147.79**	**341**	P	**PKPbc**	**18 42 17.6**	**+0.8**
PHIT	**Phitsanulok**	**147.80**	**339**	P	**PKiKP**	**18 42 18.8**	**0.0**
HYB	**Hyderabad**	**147.85**	**19**	*i* PKP	**PKPbc**	**18 42 16.0**	**-1.0**

*SOME **10** 18:36:53.8, 41.˚78N×76.˚78E, h15km*
*NNC **10** 18:36:54.2±0.5, 41.˚83N×76.˚78E, h0km, mb3.6, mpv3.5, Error ellipse: s-maj=3.2km s-min=1.9km az=173.0*
*KRNET **10** 18:36:54.4±0.1, 41.˚85N×76.˚76E, h18km, mb2.9*
*KNET **10** 18:36:56.8±0.6, 41.˚89N×76.˚64E, h16km±2km, ml2.2, Error ellipse: s-maj=6.2km s-min=2.7km az=63.0*

ISC 10 18:36:54.6±1.3, **41.˚85N**±0.˚04×**76.˚76E**±0.˚02, **h6**km±11km, **n73**, σ1.8°12/125, **31C-38D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KDJ	**Kajisay**	**0.42**	**48**	⇑*i*P		**Pg**	**18 37 02.6**	**-0.2**
	baz=49							
KDJ				⇑*i*S		**Sg**	**18 37 08.7**	**+0.3**
	baz=49							
ULHL	**Ulahol**	**0.55**	**316**	⇓*i*P		**Pg**	**18 37 05.5**	**+0.2**
	baz=16							
ULHL				⇓*i*S		**Sg**	**18 37 13.3**	**+0.7**
	baz=16							
ULHL	**Ulahol**	**0.55**	**316**	⇓P		**Pg**	**18 37 05.6**	**+0.2**
	29nm,0.1s							
ULHL				⇑S		**Sb**	**18 37 14.0**	**-1.1**
	54nm,0.1s							
BOOM	**Boomskoye usch**	**0.89**	**317**	⇑*i*P		**Pb**	**18 37 11.0**	**-1.5**
	baz=17							
BOOM				⇑*i*S		**Sb**	**18 37 23.3**	**-1.3**
	baz=17							
ANVS	**Anan'yevo**	**1.15**	**35**	⇓*i*P		**Pb**	**18 37 16.0**	**-1.0**
	baz=35							
ANVS				⇓*i*S		**Sg**	**18 37 31.9**	**+0.2**
	baz=35							
IZV	**Izvestkoviy**	**1.19**	**355**	⇓*e*P		**Pn**	**18 37 16.7**	**-1.2**
	26nm,0.3s							
IZV				⇓*e*S		**Sg**	**18 37 33.8**	**+0.7**
	184nm,0.3s							
IZV	**Izvestkoviy**	**1.19**	**355**	P		**Pn**	**18 37 16.7**	**-1.2**
	26nm,0.3s							
IZV				S		**Sg**	**18 37 33.7**	**+0.7**
	184nm,0.3s							
TNSS	**Tian-Shan**	**1.20**	**7**	⇑*i*P		**Pb**	**18 37 17.2**	**-0.7**
	20nm,0.2s							
TNSS				⇓*i*S		**Sg**	**18 37 34.0**	**+0.9**
	115nm,0.3s							
TNSS	**Tian-Shan**	**1.20**	**7**	P		**Pb**	**18 37 17.2**	**-0.7**
	17nm,0.2s							
TNSS				S		**Sg**	**18 37 34.0**	**+0.9**
	115nm,0.3s							
MTBS	**Maitube**	**1.30**	**349**	⇓*e*P		**Pb**	**18 37 18.9**	**-0.7**
	51nm,0.2s							
MTBS				⇑*e*S		**Sg**	**18 37 37.1**	**+0.5**
	137nm,0.2s							
MTBS	**Maitube**	**1.30**	**349**	P		**Pb**	**18 37 18.9**	**-0.7**
	51nm,0.2s							
MTBS				S		**Sg**	**18 37 37.1**	**+0.5**
	137nm,0.2s							
KST	**Kastek**	**1.33**	**334**	⇓*i*P		**Pb**	**18 37 19.5**	**-0.6**
	21nm,0.2s							
KST				⇑*i*S		**Sg**	**18 37 37.9**	**+0.5**
	25nm,0.2s							
KST	**Kastek**	**1.33**	**334**	P		**Pb**	**18 37 19.4**	**-0.7**
	21nm,0.2s							
KST				S		**Sg**	**18 37 38.0**	**+0.5**
	25nm,0.2s							
MDOK	**Medeo**	**1.33**	**9**	⇑*e*P		**Pb**	**18 37 19.2**	**-0.9**
	15nm,0.2s							
MDOK				⇓*i*S		**Sg**	**18 37 37.7**	**+0.2**
	112nm,0.4s							
MDOK	**Medeo**	**1.33**	**9**	Pg		**Pb**	**18 37 19.2**	**-0.9**
	15nm,0.2s							
MDOK				Lg		Lg	18 37 37.7	
	112nm,0.4s							
PRZ	**Przheval'sk**	**1.38**	**62**	⇑*e*P		**Pb**	**18 37 20.0**	**-0.8**
	baz=62							
PRZ				⇑*i*S		**Sg**	**18 37 38.9**	**+0.1**
	baz=62							
TKM2	**Tokmak 2**	**1.38**	**322**	⇑*i*P		**Pb**	**18 37 19.9**	**-0.9**
	baz=22							
TKM2				⇑*i*S		**Sg**	**18 37 38.7**	**-0.2**
	baz=22							
TKM2	**Tokmak 2**	**1.38**	**322**	⇓P		**Pb**	**18 37 20.3**	**-0.6**
	16nm,0.2s,SNR=67							
TKM2				⇓S		**Sg**	**18 37 39.9**	**+1.0**
	41nm,0.1s							
TKM2	**Tokmak 2**	**1.38**	**322**	⇓P		**Pb**	**18 37 20.2**	**-0.6**
	8.2nm,0.5s							
TKM2				⇓S		**Sg**	**18 37 39.2**	**+0.4**
	5.7nm,0.2s							
KNDC	**Almaty**	**1.38**	**6**	⇑P		**Pg**	**18 37 20.7**	**-0.3**
	6.7nm,0.2s							
KNDC				⇓S		**Sg**	**18 37 39.9**	**+1.0**
	408nm,0.5s							
KOTS	**Kotyrbulak**	**1.41**	**11**	⇑*e*P		**Pb**	**18 37 20.8**	**-0.6**
	38nm,0.2s							
KOTS				⇓*e*S		**Sg**	**18 37 40.5**	**+0.5**
	303nm,0.2s							
KOTS	**Kotyrbulak**	**1.41**	**11**	P		**Pb**	**18 37 20.8**	**-0.6**
	38nm,0.2s							
KOTS				S		**Sg**	**18 37 40.5**	**+0.5**
	303nm,0.2s							
KBK	**Karagaybulak**	**1.57**	**302**	⇓*i*P		**Pb**	**18 37 23.4**	**-0.7**
	baz=2.0							
KBK				⇓*i*S		**Sb**	**18 37 44.2**	**-0.1**
	baz=2.0							
KBK	**Karagaybulak**	**1.57**	**302**	⇓P		**Pb**	**18 37 23.9**	**-0.2**
	7.5nm,0.1s,SNR=12							
KBK				⇓S		**Sg**	**18 37 45.3**	**+0.3**
	51nm,0.2s							
DGS	**Degeres**	**1.57**	**333**	⇓*i*P		**Pb**	**18 37 23.8**	**-0.3**
	10nm,0.2s							
DGS				⇑*e*S		**Sg**	**18 37 45.4**	**+0.2**
	53nm,0.3s							
DGS	**Degeres**	**1.57**	**333**	P		**Pb**	**18 37 23.8**	**-0.3**
	10nm,0.2s							
DGS				S		**Sg**	**18 37 45.4**	**+0.2**
	53nm,0.3s							
UCH	**Uchtor**	**1.72**	**284**	⇓*i*P		**Pb**	**18 37 26.2**	**-0.6**
	baz=84							
UCH				⇓*i*S		**Sg**	**18 37 49.4**	**-0.4**
	baz=84							
SATY	**Saty**	**1.72**	**45**	⇑*e*P		**Pb**	**18 37 25.9**	**-0.7**
	33nm,0.2s							
SATY				⇓*e*S		**Sg**	**18 37 49.3**	**-0.6**
	155nm,0.2s							
SATY	**Saty**	**1.72**	**45**	P		**Pb**	**18 37 25.9**	**-0.7**
	33nm,0.2s							
SATY				S		**Sg**	**18 37 49.3**	**-0.6**
	155nm,0.2s							
ZHN	**Zhinishke**	**1.81**	**43**	*e*P		**Pb**	**18 37 27.2**	**-1.0**
	58nm,0.4s							
ZHN				*e*S		**Sg**	**18 37 51.7**	**-1.1**
	74nm,0.2s							
ZHN	**Zhinishke**	**1.81**	**43**	P		**Pb**	**18 37 27.6**	**-0.6**
	58nm,0.4s							
ZHN				S		**Sg**	**18 37 52.0**	**-0.8**
	74nm,0.2s							
ARLS	**Aral**	**1.82**	**271**	⇑*e*P		**Pb**	**18 37 27.7**	**-0.7**
	baz=72							
ARLS				⇑*i*S		**Sb**	**18 37 51.7**	**+0.2**
	baz=72							
FRU1	**Bishkek**	**1.85**	**302**	⇓*i*P		**Pb**	**18 37 28.2**	**-0.6**
	baz=2.0							
FRU1				⇓*i*S		**Sg**	**18 37 53.0**	**-1.0**
	baz=2.0							
AAK	**Ala-Archa**	**1.86**	**296**	⇓*i*P		**Pb**	**18 37 28.4**	**-0.6**
	baz=96							
AAK				⇓*i*S		**Sg**	**18 37 53.3**	**-1.0**
	baz=96							
AAK	**Ala-Archa**	**1.86**	**296**	⇓P		**Pb**	**18 37 28.6**	**-0.5**
	5.3nm,0.1s,SNR=16							
AAK				⇓S		**Sg**	**18 37 53.5**	**-0.9**
	22nm,0.3s							
AAK	**Ala-Archa**	**1.86**	**296**	⇓P		**Pb**	**18 37 28.6**	**-0.5**
	2.7nm,0.4s							
AAK				⇓S		**Sg**	**18 37 53.2**	**-1.0**
	17nm,0.5s							
KTBS	**Karatobe**	**1.86**	**358**	*e*P		**Pb**	**18 37 28.7**	**-0.4**
	8.3nm,0.2s							
KTBS				*e*S		**Sg**	**18 37 54.1**	**-0.4**
	159nm,0.3s							
KTBS	**Karatobe**	**1.86**	**358**	Pg		**Pb**	**18 37 28.7**	**-0.4**
	8.3nm,0.2s							
KTBS				Lg		Lg	18 37 54.1	
	159nm,0.3s							
CHMS	**Chumysh**	**1.88**	**308**	⇑*e*P		**Pb**	**18 37 28.5**	**-0.8**
	baz=8.0							
CHMS				⇑*i*S		**Sb**	**18 37 53.5**	**+0.4**
	baz=8.0							
CHMS	**Chumysh**	**1.88**	**308**	⇑P		**Pb**	**18 37 28.5**	**-0.8**
	4.6nm,0.2s,SNR=7.3							
CHMS				⇑S		**Sg**	**18 37 54.5**	**-0.5**
	19nm,0.2s							
KURS	**Kuram**	**1.94**	**32**	*e*P		**Pb**	**18 37 30.0**	**-0.4**
	7.5nm,0.3s							
KURS				*e*S		**Sg**	**18 37 55.9**	**-1.1**
	22nm,0.3s							
KURS	**Kuram**	**1.94**	**32**	Pg		**Pb**	**18 37 30.0**	**-0.4**
	7.5nm,0.3s							
KURS				Lg		Lg	18 37 55.9	
	22nm,0.3s							
KRBS	**Karabastau**	**2.01**	**337**	*e*P		**Pb**	**18 37 31.5**	**-0.2**
	16nm,0.3s							
KRBS				*e*S		**Sg**	**18 37 58.6**	**-0.6**
	44nm,0.3s							
KRBS	**Karabastau**	**2.01**	**337**	Pg		**Pb**	**18 37 31.5**	**-0.2**
	16nm,0.3s							
KRBS				Lg		Lg	18 37 58.6	
	44nm,0.3s							
KUU	**Kurty**	**2.07**	**352**	*e*P		**Pb**	**18 37 32.0**	**-0.5**
	4.2nm,0.2s							
KUU				*e*S		**Sg**	**18 37 59.7**	**-1.3**
	41nm,0.3s							
KUU	**Kurty**	**2.07**	**352**	Pg		**Pb**	**18 37 32.0**	**-0.5**
	4.2nm,0.2s							
KUU				Lg		Lg	18 37 59.7	
	41nm,0.3s							
UZB	**Uzynbulak**	**2.12**	**51**	*e*P		**Pb**	**18 37 32.1**	**-1.4**
	13nm,0.3s							
UZB				*e*S		**Sb**	**18 37 59.8**	**-0.2**
	34nm,0.2s							
UZB	**Uzynbulak**	**2.12**	**51**	Pg		**Pb**	**18 37 32.1**	**-1.4**
	13nm,0.3s							
UZB				Lg		Lg	18 37 59.8	
	34nm,0.2s							
KPKS	**Kokpek**	**2.15**	**41**	*e*P		**Pb**	**18 37 33.1**	**-0.9**
	53nm,0.1s							
KPKS				*e*S		**Sg**	**18 38 01.7**	**-2.1**
	76nm,0.3s							
USP	**Ospenovka**	**2.19**	**311**	⇓P		**Pb**	**18 37 34.2**	**-0.4**
	10.0nm,0.3s,SNR=14							
SGDS	**Sogindy**	**2.25**	**316**	Pg		**Pb**	**18 37 35.1**	**-0.5**
	7.9nm,0.3s							
SGDS				Lg		Lg	18 38 05.2	
	12nm,0.4s							
AML	**Almayashu**	**2.30**	**278**	⇓*i*P		**Pb**	**18 37 34.8**	**-2.0**
	baz=78							
AML				⇓*i*S		**Sb**	**18 38 04.2**	**-1.4**
	baz=78							
AML	**Almayashu**	**2.30**	**278**	⇑P		**Pb**	**18 37 36.3**	**-0.5**
	8.5nm,0.2s,SNR=39							
SHLS	**Shalkode**	**2.39**	**56**	*e*P		**Pg**	**18 37 41.7**	**+1.3**
	14nm,0.4s							
SHLS				*e*S		**Sg**	**18 38 16.2**	**+4.9**
	70nm,0.5s							
SHLS	**Shalkode**	**2.39**	**56**	Pg		**Pg**	**18 37 41.7**	**+1.3**
	14nm,0.4s							
SHLS				Lg		Lg	18 38 16.8	
	70nm,0.5s							
ARXS	**Arharly**	**2.49**	**18**	*e*P		**Pb**	**18 37 39.9**	**+0.1**
	10nm,0.2s							
ARXS				*e*S		**Sg**	**18 38 12.9**	**-1.7**
	36nm,0.3s							
ARXS	**Arharly**	**2.49**	**18**	Pg		**Pb**	**18 37 39.9**	**+0.1**
	10nm,0.2s							
ARXS				Lg		Lg	18 38 12.6	
	36nm,0.3s							
PDGK	**Podgornoye**	**2.50**	**53**	Pg		**Pb**	**18 37 38.2**	**-1.8**
	2.2nm,0.3s							
PDGK				Lg		Lg	18 38 10.3	
	10nm,0.5s							
PDGK	**Podgornoye**	**2.50**	**53**	⇓Pg		**Pb**	**18 37 38.4**	**-1.6**
	2.0nm,0.4s							
PDGK				⇑Lg		Lg	18 38 11.1	
	12nm,0.6s							
MNBS	**Baschi**	**2.54**	**28**	*e*P		**Pb**	**18 37 40.6**	**+0.1**
	6.7nm,0.1s							
MNBS				*e*S		**Sg**	**18 38 14.5**	**-1.6**
	45nm,0.3s							
MNBS	**Baschi**	**2.54**	**28**	Pg		**Pb**	**18 37 40.6**	**+0.1**
	6.7nm,0.1s							
MNBS				Lg		Lg	18 38 14.5	
	45nm,0.3s							
MRKS	**Merke**	**2.77**	**290**	*e*P		**Pb**	**18 37 44.9**	**+0.3**
	5.4nm,0.4s							
MRKS				*e*S		**Sg**	**18 38 22.1**	**-1.5**
	20nm,0.4s							
MRKS	**Merke**	**2.77**	**290**	Pg		**Pb**	**18 37 44.9**	**+0.3**
	5.4nm,0.4s							
MRKS				Lg		Lg	18 38 21.9	
	20nm,0.4s							
ARSB	**Arslanbob**	**2.88**	**261**	⇑*i*P		**Pb**	**18 37 43.0**	**-3.5**
	baz=61							
ARSB				⇑*i*S		**Sn**	**18 38 17.5**	**+1.3**
	baz=61							
KTMS	**Ketmen**	**3.09**	**58**	Pg		**Pb**	**18 37 49.5**	**-0.6**
	21nm,0.2s							
KTMS				Lg		Lg	18 38 29.4	
	12nm,0.3s							
MNAS	**Manas**	**3.23**	**283**	⇑*i*P		**Pn**	**18 37 46.6**	**+0.7**
	baz=83							
MNAS				⇑*i*S		**Sn**	**18 38 25.2**	**+0.5**
	baz=83							
DJR	**Jarkent**	**3.33**	**41**	*e*P		**Pb**	**18 37 53.8**	**-0.3**
	3.9nm,0.3s							
DJR				*e*S		**Sb**	**18 38 36.9**	**+2.0**
	8.1nm,0.4s							
DJR	**Jarkent**	**3.33**	**41**	Pg		**Pb**	**18 37 53.7**	**-0.3**
	3.9nm,0.3s							
DJR				Lg		Lg	18 38 36.9	
	8.1nm,0.4s							
TDK	**Taldyqorghan**	**3.37**	**20**	*e*P		**Pb**	**18 37 55.1**	**+0.4**
	14nm,0.3s							
TDK				*e*S		**Sg**	**18 38 39.2**	**-3.7**
	60nm,0.5s							
TDK	**Taldyqorghan**	**3.37**	**20**	Pg		**Pb**	**18 37 55.1**	**+0.4**
	14nm,0.3s							
TDK				Lg		Lg	18 38 39.2	
	60nm,0.5s							
KK31	**Karatay Array**	**4.79**	**287**	Pg		**Pb**	**18 38 22.2**	**+3.3**
	0.2nm,0.3s,baz=99,slow=15,SNR=8.0							
KK31				⇑Lg		Lg	18 39 24.2	
	1.0nm,0.4s,baz=102,slow=28,SNR=7.2							
IUG	**luzhnay**	**5.02**	**276**	Pg		**Pb**	**18 38 26.3**	**+3.3**
	0.7nm,0.1s							
IUG				Lg		Lg	18 39 32.7	
	5.5nm,0.6s							
MK31	**Makanchi Array**	**6.34**	**37**	⇑Pn		**Pn**	**18 38 28.6**	**+0.1**
	0.6nm,0.7s,baz=226,slow=11,SNR=2.8							
MK31				⇓Lg		Lg	18 40 15.6	
	0.7nm,0.5s							

*IDC **10** 18:55:18.8±3.1, 35.˚91S×179.˚86E, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.7/24, mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=72.2km s-min=43.8km az=128.0*
*WEL **10** 18:55:22.7±1.0, 37.˚5±7.˚1×18.˚0W±.˚, h132km, M3.7/14, ML3.9/12, MLv3.7/14, Error ellipse: s-maj=0.0km s-min=0.0km az=166.4*
*NEIC **10** 18:55:25.6±1.9, 35.˚96S±0.˚07×179.˚5E±0.˚2, h37km±14km, mb4.1/6, Error ellipse: s-maj=22.3km s-min=5.2km az=67.0*

ISC 10 18:55:22.1±3.0, **36.˚21S**±0.˚07×**179.˚6E**±0.˚1, **h7**km±15km, **n35**, σ1.9°66/52, **mb4.1/5, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.69**	**217**	P		**Pb**	**18 55 53.6**	**+0.1**
MXZ				S		**Sg**	**18 56 18.9**	**+2.5**
MXZ	**Matakaoa Point**	**1.69**	**217**	Pn		**Pb**	**18 55 53.7**	**+0.3**
WMGZ	**Waiomatatini S**	**1.85**	**210**	P		**Pb**	**18 55 56.5**	**+0.2**
WMGZ				S		**Sg**	**18 56 22.3**	**+0.6**
HAZ	**Te Kaha**	**2.10**	**222**	P		**Pb**	**18 56 00.9**	**+0.3**
HAZ				S		**Sg**	**18 56 31.3**	**+1.6**
PUZ	**Puketiti**	**2.13**	**209**	P		**Pb**	**18 55 59.6**	**-1.5**
PUZ				S		**Sg**	**18 56 29.2**	**-1.5**
RUGZ	**Raukumara Rang**	**2.31**	**220**	P		**Pb**	**18 56 03.4**	**-0.8**
RUGZ				S		**Sg**	**18 56 35.4**	**-1.0**
TWGZ	**Tauwhareparae**	**2.34**	**212**	P		**Pb**	**18 56 02.9**	**-1.7**
TWGZ				S		**Sb**	**18 56 34.3**	**+0.7**
CNGZ	**Carnagh Statio**	**2.52**	**205**	P		**Pn**	**18 56 04.6**	**+1.3**
CNGZ				S		**Sb**	**18 56 37.4**	**-1.3**
TKGZ	**Te Karaka**	**2.61**	**211**	P		**Pn**	**18 56 06.3**	**+1.6**
TKGZ				S		**Sb**	**18 56 40.4**	**-1.2**
WHRZ	**Whale Island**	**2.65**	**231**	P		**Pb**	**18 56 09.3**	**-0.5**
MWZ	**Matawai**	**2.67**	**217**	P		**Pn**	**18 56 07.5**	**+1.9**
MWZ				S		**Sb**	**18 56 42.2**	**-1.1**
URZ	**Urewera**	**2.83**	**223**	Pn		**Pn**	**18 56 09.8**	**+2.1**
	9.4nm,0.3s,baz=100,slow=12,SNR=118							
URZ				Sn		**Sb**	**18 56 46.8**	**-1.1**
	11nm,0.3s,baz=182,slow=23,SNR=9.9							
URZ	**Urewera**	**2.83**	**223**	P		**Pn**	**18 56 09.8**	**+2.1**
URZ				S		**Sb**	**18 56 46.6**	**-1.3**
RAGZ	**Rawiri**	**2.85**	**216**	P		**Pn**	**18 56 10.0**	**+1.9**
RAGZ				S		**Sb**	**18 56 48.0**	**-0.6**
RIGZ	**Rimuhau**	**2.88**	**209**	P		**Pn**	**18 56 10.3**	**+1.9**
RIGZ				S		**Sb**	**18 56 46.4**	**-2.8**
PRGZ	**Paritu Road**	**3.02**	**206**	P		**Pn**	**18 56 11.2**	**+0.8**
PRGZ				S		**Sn**	**18 56 48.4**	**+1.6**
SNGZ	**Shannon Statio**	**3.12**	**214**	S		**Sn**	**18 56 51.8**	**+2.5**
MUGZ	**Murupara**	**3.18**	**224**	P		**Pn**	**18 56 14.7**	**+2.2**
MUGZ				S		**Sb**	**18 56 54.3**	**-3.5**
KNZ	**Kokohu**	**3.18**	**208**	P		**Pn**	**18 56 12.4**	**-0.1**
KNZ				S		**Sn**	**18 56 51.4**	**+0.7**
KARZ	**Kaharoa**	**3.21**	**235**	P		**Pn**	**18 56 15.7**	**+2.7**
MHGZ	**Mahia Peninsul**	**3.22**	**204**	P		**Pn**	**18 56 13.3**	**+0.3**
MHGZ				S		**Sn**	**18 56 47.7**	**-4.0**
BKZ	**Black Stump Fm**	**3.83**	**219**			**Pn**	**18 56 23.4**	**+2.0**
OUZ	**Omahuta**	**4.96**	**280**	Pn		**Pn**	**18 56 35.8**	**-1.2**
BFZ	**Birch Farm**	**5.17**	**209**	Pn		**Pn**	**18 56 38.6**	**-1.3**
ASAR	**Alice Springs**	**41.15**	**275**	P		**P**	**19 03 06.6**	**-0.6**
	1.0nm,0.6s,baz=116,slow=7.8,SNR=26							
ASAR	**Alice Springs**	**41.15**	**275**	P		**P**	**19 03 06.5**	**-0.7**
WR0	**Warramunga Arr**	**42.50**	**280**	P		**P**	**19 03 17.9**	**-0.3**
WR0				IAmb		IAmb	19 03 41.8	
	comp=Z,5.3nm,1.4s							
WC3	**Warramunga Arr**	**42.64**	**280**	P		**P**	**19 03 18.3**	**-1.0**
WB2	**Warramunga Arr**	**42.66**	**280**	P		**P**	**19 03 18.6**	**-0.9**
WRAB	**Tennant Creek**	**42.67**	**280**	P		**P**	**19 03 18.5**	**-1.1**
WRAB				IAmb		IAmb	19 03 21.4	
	comp=Z,6.4nm,1.5s							
WRA	**Warramunga Arr**	**42.67**	**280**	P		**P**	**19 03 19.1**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=119,slow=7.8,SNR=42							
WRA	**Warramunga Arr**	**42.67**	**280**	P		**P**	**19 03 18.9**	**-0.8**
WB0	**Warramunga Arr**	**42.72**	**280**	P		**P**	**19 03 18.3**	**-1.8**
WB0				IAmb		IAmb	19 03 19.5	
	comp=Z,3.8nm,1.0s							
FINES	**FINESS Array B**	**149.72**	**335**	PKPbc		**PKPdf**	**19 15 08.8**	**+1.8**
	comp=Z,1.1nm,0.6s,baz=25,slow=3.7,SNR=5.6							
FINES	**FINESS Array B**	**149.72**	**335**			**PKPdf**	**19 15 09.2**	**+2.2**

BJI 10 19:01:56.0±0.0, **31.˚51N**×**115.˚51E**, **h7**km, **mb3.6**/2, **ML3.7**/17, **1C, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
WHN	**Wuhan**	**1.39**	**226**	⇑*i*Pg		Pn	19 02 21.2	-0.5
WHN						Sb	19 02 39.8	-0.3
WHN					smax	smax		
	comp=N,2μm,0.8s							
WHN					smax	smax		
	comp=E,1μm,0.6s							
NJ2	**Nanjing**	**2.90**	**78**	*e*Pg		Pb	19 02 48.7	+0.7
NJ2						Sb	19 03 24.0	+0.3
NJ2					smax	smax		
	comp=N,210nm,0.5s							
NJ2					smax	smax		
	comp=E,240nm,0.4s							
TIA	**Tai'an**	**4.88**	**16**	Pn		Pn	19 03 10.4	+0.6
TIA				Pg		Pb	19 03 18.3	-3.5
TIA				Sg		Sb	19 04 23.4	+2.7
TIA					smax	smax		
	comp=N,42nm,0.5s							
TIA					smax	smax		
	comp=E,74nm,0.7s							
XAN	**Xi'an**	**6.09**	**296**	Pn		Pn	19 03 27.3	+0.7
XAN				Pg		Pb	19 03 47.3	+4.8
XAN				Sg		Sg	19 05 12.2	+0.5
XAN					smax	smax		
	comp=N,61nm,0.9s							
XAN					smax	smax		
	comp=E,48nm,0.8s							
GYA	**Guiyang**	**9.24**	**239**	*e*P		Pn	19 04 11.2	+1.4
GYA					pmax	pmax		
	comp=Z,4.0nm,1.0s							
GTA	**Gaotai**	**15.01**	**306**	P		Pn	19 05 28.5	-0.2
GTA				pP		P	19 05 32.0	-2.2
GTA				sP		pP	19 05 34.7	-1.6
GTA					pmax	pmax		
	comp=Z,2.0nm,1.2s							
WMQ	**Urumqi**	**25.09**	**307**	*e*P		P	19 07 22.3	+1.0

*KRNET **10** 19:09:56.4±0.1, 39.˚00N×70.˚29E, mb3.4*
*NNC **10** 19:09:59.1±4.8, 38.˚99N×70.˚66E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=34.9km s-min=22.2km az=21.0*
*SOME **10** 19:10:01.5, 39.˚37N×71.˚28E, h5km*

ISC 10 19:10:04.1±2.8, **39.˚4N**±0.˚1×**70.˚81E**±0.˚06, **h10**km, **n18**, σ2.5°47/35, **20C-8D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BTK	**Batken**	**0.69**	**1**	⇑*i*P		**Pg**	**19 10 17.2**	**-0.3**
	baz=21							
BTK				⇑*i*S		**Sn**	**19 10 32.6**	**+1.8**
	baz=21			

	12nm,0.5s							
MRKS				Lg	Lg	19 11 57.4		
	4.9nm,0.6s							
EKS2	**Erkin-Say**	**3.98**	**33**	⇑*e*P	**Pn**	**19 11 05.5**	**+0.1**	
	baz=35							
EKS2				⇑*i*S	**Sn**	**19 11 56.0**	**+3.8**	
	baz=35							
UCH	**Uchtor**	**4.01**	**43**	⇑*e*P	**Pn**	**19 11 06.2**	**+0.2**	
	baz=44							
UCH				⇑*e*S	**Sn**	**19 11 57.2**	**+4.0**	
	baz=44							
AAK	**Ala-Archa**	**4.29**	**39**	⇓*i*P	**Pn**	**19 11 10.0**	**+0.3**	
	baz=40							
AAK				⇓*i*S	**Sn**	**19 12 03.7**	**+3.8**	
	baz=40							
AAK	**Ala-Archa**	**4.29**	**39**	⇑Pn	**Pn**	**19 11 10.1**	**+0.5**	
	4.8nm,0.6s							
AAK				⇑Pg	**Pb**	**19 11 21.1**	**+1.3**	
	3.5nm,0.7s							
AAK				⇓Sn	**Sb**	**19 12 07.5**	**-4.2**	
	5.8nm,0.7s							
TKM2	**Tokmak 2**	**5.06**	**44**	⇑Pn	**Pn**	**19 11 21.1**	**+0.8**	
	3.8nm,0.7s							
TKM2				⇓Sn	**Sb**	**19 12 27.1**	**-6.9**	
	4.1nm,0.9s							
TKM2				⇑Lg	Lg	19 12 50.5		
	3.3nm,0.8s							

*NEIC **10** 19:22:34.4±1.3,61°.37N±0°.02×149°.71W±0°.01, h36km±10km, Error ellipse: s-maj=3.5km s-min=0.6km az=171.0*
*AEIC **10** 19:22:34±1.3, 61°.38N±0°.02×149°.71W±0°.05, h37km±8km, ML3.3, Error ellipse: s-maj=3.8km s-min=3.2km az=138.0*
*ANF **10** 19:22:34.7±0.3, 61°.39N×149°.87W, h33km±2km, ML3.8/15, Error ellipse: s-maj=3.2km s-min=2.5km az=130.0*

ISC 10 19:22:34.5±1.1, 61°.38N±0°.02×149°.70W±0°.02, h33km±3km, n130, σ0°70/154, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RC01	**Rabbit Creek A**	**0.29**	**184**	P		**Pn**		**19 22 42.0**	**-0.4**
	baz=2.6,SNR=598								
RC01				S		**Sb**		**19 22 48.4**	**+1.0**
	baz=2.6								
RC01	**Rabbit Creek A**	**0.29**	**184**			**Pn**		**19 22 42.0**	**-0.4**
RC01						**Sb**		**19 22 48.5**	**+1.2**
PMR	**Palmer**	**0.34**	**52**			**Pb**		**19 22 42.2**	**-0.6**
PMR	**Palmer**	**0.34**	**52**			**Sn**		**19 22 48.9**	**+0.2**
FIS	**Fire Island**	**0.35**	**227**			**Pb**		**19 22 43.0**	**+0.2**
SUA	**Susitna One**	**0.51**	**280**			**Pn**		**19 22 44.3**	**-1.3**
SUA	**Susitna One**	**0.51**	**280**			**Sb**		**19 22 52.6**	**-0.3**
GHO	**Glory Hole Cre**	**0.54**	**43**			**Pn**		**19 22 44.9**	**-1.0**
GHO	**Glory Hole Cre**	**0.54**	**43**			**Sn**		**19 22 53.8**	**-0.1**
KNK	**Knik Glacier**	**0.60**	**86**			**Pn**		**19 22 45.8**	**-0.8**
KNK	**Knik Glacier**	**0.60**	**86**			**Sn**		**19 22 55.6**	**+0.4**
SML	**Sawmill**	**0.78**	**56**			**Pn**		**19 22 48.1**	**-1.1**
SML	**Sawmill**	**0.78**	**56**			**Sn**		**19 22 59.8**	**-0.1**
PWL	**Port Wells**	**0.84**	**128**			**Pn**		**19 22 49.2**	**-0.8**
PWL						**Sn**		**19 23 01.4**	**+0.1**
O22K	**Cooper Landing**	**0.90**	**181**	P		**Pn**		**19 22 49.6**	**-1.2**
	baz=0.4,SNR=38								
O22K				S		**Sn**		**19 23 03.0**	**+0.3**
	baz=0.4								
O22K	**Cooper Landing**	**0.90**	**181**			**Pn**		**19 22 49.4**	**-1.4**
O22K	**Cooper Landing**	**0.90**	**181**			**Sn**		**19 23 02.8**	**+0.1**
SLKM	**Skilak Lake**	**0.91**	**196**			**Pn**		**19 22 49.7**	**-1.3**
SLKM						**Sn**		**19 23 02.8**	**-0.2**
CAPN	**Captain Cook N**	**0.94**	**230**	P		**Pn**		**19 22 51.7**	**+0.4**
	baz=48								
CAPN	**Captain Cook N**	**0.94**	**230**			**Pn**		**19 22 51.8**	**+0.4**
STLK	**Strandline Lak**	**1.03**	**277**			**Pn**		**19 22 52.1**	**-0.6**
SKT	**Skwentna**	**1.06**	**305**			**Pn**		**19 22 52.0**	**-1.0**
SKT	**Skwentna**	**1.06**	**305**			**Sn**		**19 23 06.4**	**-0.3**
CUT	**Chulitna**	**1.06**	**345**	P		**Pn**		**19 22 52.3**	**-0.7**
	baz=166,SNR=24								
CUT				S		**Sn**		**19 23 06.7**	**+0.1**
	baz=166								
CUT	**Chulitna**	**1.06**	**345**			**Pn**		**19 22 52.4**	**-0.6**
CUT						**Sn**		**19 23 06.9**	**+0.3**
CGLM	**Capps Glacier**	**1.12**	**267**			**Pn**		**19 22 53.2**	**-0.7**
SPCG	**Spurr Capps Gl**	**1.12**	**266**			**Pn**		**19 22 53.4**	**-0.6**
SPCG						**Sn**		**19 23 08.7**	**+0.4**
SPCP	**Crater Peak Br**	**1.19**	**266**			**Pn**		**19 22 54.5**	**-0.5**
SPCP						**Sn**		**19 23 10.5**	**+0.4**
CRP	**Crater Peak**	**1.19**	**266**			**Pn**		**19 22 54.5**	**-0.4**
CRP						**Sn**		**19 23 10.5**	**+0.4**
CKN	**Chakachatna No**	**1.21**	**264**			**Pn**		**19 22 54.8**	**-0.3**
SPCN	**Chakachatna No**	**1.21**	**264**			**Pn**		**19 22 54.6**	**-0.5**
SPCN						**Sn**		**19 23 10.8**	**+0.4**
SCM	**Sheep Creek Mo**	**1.22**	**67**			**Pn**		**19 22 54.8**	**-0.5**
SCM	**Sheep Creek Mo**	**1.22**	**67**			**Sn**		**19 23 11.8**	**+1.1**
SPCR	**Spurr Chakacha**	**1.23**	**263**			**Pn**		**19 22 54.6**	**-0.8**
SEW	**Seward**	**1.29**	**175**			**Pn**		**19 22 55.0**	**-1.1**
SPBG	**Spurr Blockage**	**1.29**	**266**			**Pn**		**19 22 55.8**	**-0.5**
GLI	**Glacier Island**	**1.36**	**111**			**Pn**		**19 22 56.3**	**-0.9**
GLI	**Glacier Island**	**1.36**	**111**			**Sn**		**19 23 14.7**	**+0.7**
SPWE	**Spurr West**	**1.38**	**267**			**Pn**		**19 22 57.3**	**-0.3**
WAT7	**Susitna Watana**	**1.51**	**15**			**Pn**		**19 22 59.2**	**-0.1**
WAT6	**Susitna Watana**	**1.52**	**37**			**Pn**		**19 22 59.1**	**-0.4**
RDT	**Redoubt**	**1.55**	**240**			**Pn**		**19 22 59.3**	**-0.5**
WAT1	**Susitna Watana**	**1.55**	**20**			**Pn**		**19 22 59.9**	**+0.1**
HUR	**Hurricane**	**1.60**	**1**			**Pn**		**19 23 00.9**	**+0.4**
DFR	**Drift River**	**1.66**	**243**			**Pn**		**19 23 00.9**	**-0.4**
DFR	**Drift River**	**1.66**	**243**			**Pn**		**19 23 00.8**	**-0.5**
DFR						**Sn**		**19 23 21.8**	**+0.3**
WAT2	**Susitna Watana**	**1.67**	**18**			**Pn**		**19 23 01.5**	**0.0**
FID	**Port Fidalgo**	**1.69**	**111**			**Pn**		**19 23 00.7**	**-1.0**
FID	**Port Fidalgo**	**1.69**	**111**			**Sn**		**19 23 22.0**	**-0.1**
RDJH	**Redoubt Jeurge**	**1.71**	**244**			**Pn**		**19 23 01.6**	**-0.4**
RDJH						**Sn**		**19 23 23.1**	**+0.3**
REF	**Redoubt East F**	**1.72**	**240**			**Pn**		**19 23 01.9**	**-0.4**
REF						**Sn**		**19 23 24.2**	**+1.1**
BRSE	**Bradley Lake S**	**1.72**	**198**			**Pn**		**19 23 01.2**	**-0.9**
BRLK	**Bradley Lake**	**1.73**	**200**	Pn		**Pn**		**19 23 01.3**	**-0.9**
BRLK	**Bradley Lake**	**1.73**	**200**			**Sn**		**19 23 23.5**	**+0.5**
RDN	**Redoubt North**	**1.73**	**241**			**Pn**		**19 23 01.9**	**-0.5**
RSO	**Redoubt South**	**1.75**	**240**			**Pn**		**19 23 02.0**	**-0.7**
RDWB	**Redoubt West**	**1.78**	**241**			**Pn**		**19 23 02.5**	**-0.5**
RDWB						**Sn**		**19 23 24.9**	**+0.4**
NCT	**North Crescent**	**1.78**	**244**			**Pn**		**19 23 02.5**	**-0.5**
NCT						**Sn**		**19 23 25.2**	**+0.8**
KLU	**Klutina**	**1.82**	**85**			**Pn**		**19 23 03.1**	**-0.4**
M24K	**Tolsona, Glenn**	**1.83**	**65**	P		**Pn**		**19 23 03.9**	**+0.3**
	baz=248,SNR=43								
M24K				S		**Sb**		**19 23 28.6**	**-1.3**
	baz=248								
M24K	**Tolsona, Glenn**	**1.83**	**65**	Pn		**Pn**		**19 23 04.1**	**+0.4**
HIN	**Hinchinbrook I**	**1.85**	**121**	Pn		**Pn**		**19 23 03.7**	**-0.2**
HIN	**Hinchinbrook I**	**1.85**	**121**			**Sn**		**19 23 27.4**	**+1.3**
DIV	**Divide**	**1.91**	**96**			**Pn**		**19 23 04.5**	**-0.3**
DIV						**Sn**		**19 23 28.5**	**+0.7**
PPLA	**Purkeypile**	**1.92**	**324**			**Pn**		**19 23 04.5**	**-0.5**
PPLA	**Purkeypile**	**1.92**	**324**			**Sn**		**19 23 28.8**	**+0.8**
HOM	**Homer**	**1.98**	**210**	P		**Pn**		**19 23 05.3**	**-0.3**
	baz=28								
HOM				S		**Sn**		**19 23 28.8**	**-0.4**
	baz=28								
CNPM	**China Poot**	**2.01**	**203**			**Pn**		**19 23 05.3**	**-0.8**
DHY	**Denali Highway**	**2.02**	**32**			**Pn**		**19 23 06.2**	**-0.1**
RND	**Reindeer**	**2.07**	**11**			**Pn**		**19 23 06.8**	**-0.2**
TRF	**Thorofare Moun**	**2.10**	**353**	Pn		**Pn**		**19 23 06.7**	**-0.7**
EYAK	**Cordova Ski Ar**	**2.10**	**112**			**Pn**		**19 23 06.9**	**-0.4**
ILS	**Iliamna Low So**	**2.19**	**231**			**Pn**		**19 23 08.7**	**+0.1**
KTH	**Kantishna Hill**	**2.25**	**346**			**Pn**		**19 23 09.7**	**+0.2**
MCK	**McKinley**	**2.39**	**8**	P		**Pn**		**19 23 11.8**	**+0.5**
	baz=189,SNR=20								
MCK				S		**Sn**		**19 23 39.8**	**+0.5**
	baz=189								
MCK	**McKinley**	**2.39**	**8**			**Pn**		**19 23 11.7**	**+0.5**
N25K	**Chitina, Valde**	**2.46**	**82**	P		**Pn**		**19 23 13.0**	**+0.7**
	baz=267,SNR=16								
N25K				S		**Sn**		**19 23 42.2**	**+1.1**
	baz=267								
N25K	**Chitina, Valde**	**2.46**	**82**			**Pn**		**19 23 12.8**	**+0.5**
OPT	**Oil Point**	**2.46**	**227**			**Pn**		**19 23 12.7**	**+0.4**
BMRM	**Bremner River**	**2.50**	**97**			**Pn**		**19 23 11.7**	**-1.1**
BPAW	**Bear Paw Mtn.**	**2.79**	**348**	Pn		**Pn**		**19 23 16.3**	**-0.5**
BWN	**Browne**	**2.80**	**2**			**Pn**		**19 23 16.5**	**-0.5**
GLB	**Gilahina Butte**	**2.83**	**86**	Pn		**Pn**		**19 23 17.0**	**-0.4**
SVW2	**Sparrevohn**	**2.86**	**267**			**Pn**		**19 23 16.9**	**-0.8**
VRDI	**Verde Repeater**	**3.02**	**90**	Pn		**Pn**		**19 23 19.4**	**-0.7**
WRH	**Wood River Hil**	**3.19**	**13**			**Pn**		**19 23 22.1**	**-0.2**
MENT	**Mentasta**	**3.21**	**58**			**Pn**		**19 23 24.3**	**+1.7**
MCARA	**McCarthy VSAT**	**3.21**	**87**			**Pn**		**19 23 23.7**	**+1.1**
NEA2	**Nenana**	**3.24**	**5**	P		**Pn**		**19 23 22.9**	**0.0**
	baz=186								
NEA2				S		**Sn**		**19 24 00.4**	**+0.1**
	baz=186								
NEA2	**Nenana**	**3.24**	**5**			**Pn**		**19 23 22.6**	**-0.3**
CRQM	**Cirque**	**3.25**	**98**			**Pn**		**19 23 25.4**	**+2.2**
RIDG	**Independent Ri**	**3.26**	**41**	Pn		**Pn**		**19 23 21.5**	**-1.8**
KHIT	**Khitrov Hills**	**3.29**	**104**			**Pn**		**19 23 23.0**	**-0.7**
HDA	**Harding Lake**	**3.29**	**21**	P		**Pn**		**19 23 24.3**	**+0.7**
	baz=204,SNR=9.7								
HDA	**Harding Lake**	**3.29**	**21**	Pn		**Pn**		**19 23 24.6**	**+0.9**
TT01	**Tatalina**	**3.34**	**300**			**Pn**		**19 23 23.6**	**-0.7**
TTA	**Tatalina**	**3.35**	**300**	Pn		**Pn**		**19 23 23.6**	**-0.9**
CCB	**Clear Creek Bu**	**3.39**	**14**			**Pn**		**19 23 24.3**	**-0.7**
TGL	**Tana Glacier**	**3.40**	**98**			**Pn**		**19 23 24.6**	**-0.6**
DOT	**Dot Lake**	**3.46**	**46**			**Pn**		**19 23 27.7**	**+1.6**
PTPK	**Patty Peak**	**3.50**	**90**			**Pn**		**19 23 25.9**	**-0.7**
BALM	**Baldy**	**3.57**	**92**			**Pn**		**19 23 26.5**	**-1.1**
KIAG	**Kiagna River**	**3.59**	**94**			**Pn**		**19 23 26.9**	**-1.0**
TCOL	**CIGO, UAF Yank**	**3.60**	**13**	S		**Sn**		**19 24 08.7**	**-0.6**
	baz=194								
IL31		**3.63**	**19**			**Pn**		**19 23 28.9**	**+0.6**
MDM	**Murphy Dome**	**3.65**	**10**			**Pn**		**19 23 28.4**	**-0.2**
MLY	**Manley**	**3.69**	**353**	P		**Pn**		**19 23 29.0**	**-0.2**
	baz=172,SNR=13								
MLY	**Manley**	**3.69**	**353**			**Pn**		**19 23 29.0**	**-0.2**
SCRK	**Sand Creek**	**3.70**	**43**	P		**Pn**		**19 23 29.8**	**+0.3**
	baz=228								
SCRK	**Sand Creek**	**3.70**	**43**			**Pn**		**19 23 29.8**	**+0.3**
I23K	**Minto, Yukon-K**	**3.79**	**2**	P		**Pn**		**19 23 30.5**	**+0.1**
	baz=183,SNR=15								
I23K				S		**Sn**		**19 24 13.8**	**+0.1**
	baz=183								
I23K	**Minto, Yukon-K**	**3.79**	**2**			**Pn**		**19 23 31.0**	**+0.6**
POKR	**Poker Plat Res**	**3.89**	**14**	P		**Pn**		**19 23 32.2**	**+0.4**
	baz=196								
POKR				S		**Sn**		**19 24 17.2**	**+0.9**
	baz=196								
POKR	**Poker Plat Res**	**3.89**	**14**			**Pn**		**19 23 32.7**	**+0.9**
BARN	**Barnard Glacie**	**3.90**	**91**			**Pn**		**19 23 32.2**	**0.0**
GRNC	**Granite Creek**	**3.92**	**96**			**Pn**		**19 23 32.4**	**-0.1**
YAH	**Yahtse**	**4.02**	**101**			**Pn**		**19 23 33.7**	**-0.2**
BC03		**4.07**	**62**			**Pn**		**19 23 34.5**	**+0.1**
BCAR	**Beaver Creek A**	**4.07**	**62**			**Pn**		**19 23 33.8**	**-0.6**
CTGM	**Chitina Glacie**	**4.07**	**92**			**Pn**		**19 23 32.6**	**-1.9**
K27K	**Chicken**	**4.40**	**50**	Pn		**Pn**		**19 23 39.3**	**+0.4**
PRP	**Porcupine Dome**	**4.55**	**22**	Pn		**Pn**		**19 23 40.9**	**-0.2**
IM03		**4.96**	**340**			**Pn**		**19 23 46.5**	**0.0**
IMAR	**Indian Mountai**	**4.96**	**340**			**Pn**		**19 23 46.4**	**-0.1**
DAWY	**Dawson**	**5.45**	**56**			**Pn**		**19 23 52.9**	**-0.4**
FYU	**Fort Yukon**	**5.56**	**19**			**Pn**		**19 23 55.1**	**+0.3**
COLD	**Coldfoot**	**5.88**	**358**	S		**Sn**		**19 25 05.4**	**+0.2**
	baz=178								
COLD	**Coldfoot**	**5.88**	**358**	Pn		**Pn**		**19 23 59.5**	**+0.5**
BMAR	**Burnt Mountain**	**6.46**	**18**			**Pn**		**19 24 07.1**	**-0.1**
TOLK	**Toolik Lake Re**	**7.29**	**0**	S		**Sn**		**19 25 40.1**	**0.0**
	baz=180								

*IDC **10** 20:35:55.7±1.1,28°.24N×66°.10E, h0km, mb3.7/11, mb1 3.9/12, mb1mx3.5/59, mbtmp3.7/12, ML3.8/1, MS3.0/6, Ms1 3.0/6, ms1mx2.7/46, Error ellipse: s-maj=24.0km s-min=23.1km az=10.0*

ISC 10 20:35:56.5±0.8, 28°.2N±0°.1×66°.18E±0°.09, h10km, n21, σ1§04/18, mb3.6/11, MS3.0/4, Pakistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**8.39**	**236**			**Pn**		**20 37 57.8**	**-0.5**
	1.2nm,0.3s,baz=100,slow=7.7,SNR=31								
WSAR						Sn		20 39 22.9	-10
	0.5nm,0.3s,baz=106,slow=16,SNR=1.4								
WSAR						LR	LR	20 42 12.3	
	comp=Z,111nm,18.6s,baz=128,slow=45								
GEYT	**Alibeck**	**11.84**	**327**	LR		LR		20 43 47.7	
	comp=Z,53nm,19.1s,baz=65,slow=40								
PYUN	**Piuthan**	**14.84**	**86**	*e*P		**Pn**		**20 39 25.2**	**-1.4**
	11nm,0.4s								
KOLN	**Koldanda**	**15.40**	**87**	*e*P		**Pn**		**20 39 34.2**	**0.0**
	4.8nm,0.5s								
DANN	**Dangsing**	**15.50**	**85**	*e*P		**Pn**		**20 39 35.7**	**+0.2**
	6.2nm,0.5s								
GKN	**Gorkha**	**16.29**	**86**	*e*P		**P**		**20 39 47.4**	**-1.3**
	2.6nm,0.4s								
PKIN	**Phulchoki**	**17.00**	**87**	*e*P		**P**		**20 39 56.1**	**-0.6**
	4.1nm,0.3s								
PKIN				*e*S		Sn		20 42 52.6	-11
GUN	**Gumba**	**17.40**	**86**	*e*P		**P**		**20 40 01.1**	**0.0**
	12nm,0.6s								
MKAR	**Makanchi Array**	**22.48**	**30**	P		**P**		**20 40 55.6**	**-0.4**
	0.8nm,0.5s,baz=213,slow=11,SNR=13								
MKAR						LR	LR	20 51 42.6	
	comp=Z,64nm,19.7s,baz=216,slow=42								
AKTO	**Aktyubinsk**	**23.08**	**347**	LR		LR		20 52 16.7	
	comp=Z,111nm,19.5s,baz=141,slow=43								
KBZ	**Khabaz**	**24.30**	**316**	P		**P**		**20 41 13.7**	**-0.4**
	1.0nm,0.6s,baz=146,slow=7.8								
KURBB	**Kurchatov Arra**	**24.30**	**19**	P		**P**		**20 41 14.2**	**+0.1**
	1.3nm,0.7s,baz=212,slow=9.2,SNR=7.1								
PALK	**Pallekele**	**24.92**	**144**	LR		LR		20 52 00.8	
	comp=Z,35nm,18.3s,baz=74,slow=39								
BVAR	**Borovoye Array**	**25.02**	**6**	P		**P**		**20 41 21.3**	**+0.7**
	1.1nm,0.8s,baz=232,slow=26,SNR=5.3								
ZALV	**Zalesovo Beam**	**29.16**	**23**	P		**P**		**20 41 58.2**	**+0.5**
	1.6nm,0.6s,baz=220,slow=10,SNR=7.0								
SONM	**Songino Array**	**36.75**	**47**	P		**P**		**20 43 04.2**	**0.0**
	0.2nm,0.4s,baz=315,slow=43,SNR=3.0								
FINES	**FINESS Array B**	**42.58**	**333**	P		**P**		**20 43 50.9**	**-1.5**
	2.0nm,0.8s,baz=142,slow=9.6,SNR=5.9								
FINES						LR	LR	21 03 07.3	
	comp=Z,62nm,20.0s,baz=226,slow=38								
GERES	**GERESS Array B**	**44.94**	**312**	P		**P**		**20 44 11.6**	**-0.2**
	0.5nm,0.7s,baz=96,slow=6.8,SNR=4.3								
ARCES	**ARCESS Array B**	**47.53**	**342**	P		**P**		**20 44 33.4**	**+1.7**
	1.1nm,0.6s,baz=117,slow=7.3,SNR=6.0								
WRA	**Warramunga Arr**	**81.39**	**118**	P		**P**		**20 48 16.1**	**+2.2**
	0.6nm,0.8s,baz=318,slow=4.3,SNR=4.1								
ASAR	**Alice Springs**	**83.14**	**121**	P		**P**		**20 48 23.9**	**+0.8**
	0.2nm,0.4s,baz=209,slow=39,SNR=2.5								

*MOS **10** 20:48:14.6±1.3, 39°.36N×19°.39E, h13km, mb4.8/5, Error ellipse: s-maj=6.9km s-min=4.9km az=63.7*
*IDC **10** 20:48:14.1±0.7, 39°.33N×19°.58E, h0km, mb4.0/16, mb1 4.0/28, mb1mx3.9/54, mbtmp4.0/28, ML3.8/12, MS3.0/6, Ms1 3.0/6, ms1mx2.6/58, Error ellipse: s-maj=13.1km s-min=10.6km az=126.0*
*ATH **10** 20:48:15.7, 39°.32N×19°.32E, h21km±1km, ML3.9/30, Error ellipse: s-maj=2.5km s-min=1.0km az=88.0*
*LDG **10** 20:48:15.8±0.1, 39°.35N×19°.43E, h10km, Ml3.7/11, Error ellipse: s-maj=3.0km s-min=1.5km az=23.0*
*THE **10** 20:48:16.9, 39°.31N×19°.41E, h0km±1km, ML3.9/13, Error ellipse: s-maj=1.9km s-min=0.5km az=261.0*
*NEIC **10** 20:48:16.4±2.8, 39°.34N±0°.04×19°.37E±0°.06, h11km±5km, Error ellipse: s-maj=7.1km s-min=5.6km az=129.0*
*TIR **10** 20:48:16.5, 39°.37N×19°.45E, h23km±1km, Ml4.2*
*PDG **10** 20:48:17.2±0.5, 39°.40N×19°.42E, h21km±1km, ML3.7/13, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*ROM **10** 20:48:17.2±0.0, 39°.37N×19°.38E, h10km, ML4.2*

ISC 10 20:48:16.9±0.9, 39°.36N±0°.02×19°.38E±0°.02, h18km±4km, n474, σ1§77/558, mb4.1/24, MS3.3/3, 34C-30D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.48**	**42**	P		**Pg**		**20 48 25.9**	**-0.8**
KEK				S		**Sb**		**20 48 34.5**	**+0.9**
KEK					AML	AML		20 48 36.3	
	comp=E,23988μm,0.2s								
KEK					AML	AML		20 48 40.6	
	comp=N,19568μm,0.5s								
KEK	**Kerkira**	**0.48**	**42**	P		**Pg**		**20 48 25.6**	**-1.0**
KEK				S		**Sb**		**20 48 34.5**	**+0.9**
KEK					AML	AML			
	comp=N,4165μm,0.4s								
KEK					AML	AML			
	comp=E,3695μm,0.9s								
KEK	**Kerkira**	**0.48**	**42**	P		**Pg**		**20 48 25.6**	**-1.0**
	baz=38								
KEK	**Kerkira**	**0.48**	**42**	P		**Pg**		**20 48 25.6**	**+1.0**
KEK				S		**Sb**		**20 48 34.3**	**+0.7**
	comp=E,13μm,0.3s								
KASA	**Kassiopi**	**0.58**	**48**	P		**Pg**		**20 48 28.5**	**+0.1**
KASA				S		**Sb**		**20 48 36.9**	**+0.6**
KASA					AML	AML		20 48 39.2	
	comp=N,49081μm,0.2s								
KASA					AML	AML		20 48 39.2	
	comp=E,70838μm,0.3s								
SRN	**Sarande**	**0.71**	**42**	⇑*e*P		**Pg**		**20 48 30.4**	**-0.5**
SRN					S	**Sb**		**20 48 41.4**	**+1.3**
SRN					AML	AML			
	comp=E,12300μm,0.3s								
SRN					AML	AML			
	comp=N,11250μm,0.3s								
SRN	**Sarande**	**0.71**	**42**	P		**Pg**		**20 48 29.7**	**-1.1**
	baz=39								
SRN				S		**Sg**		**20 48 40.2**	**-0.1**
	baz=39								
SRN					AMP				
	comp=N,36nm,0.3s,baz=39								
SRN	**Sarande**	**0.71**	**42**	P		**Pg**		**20 48 29.3**	**-1.6**
SRN				S		**Sb**		**20 48 41.4**	**+1.3**
IGT	**Igoumenitsa**	**0.76**	**76**	P		**Pg**		**20 48 31.8**	**0.0**
IGT				S		**Sb**		**20 48 42.2**	**+0.7**
IGT					AML	AML		20 48 43.8	
	comp=N,19201μm,0.4s								
IGT					AML	AML		20 48 48.8	
	comp=E,11102μm,0.5s								
IGT	**Igoumenitsa**	**0.76**	**76**	S		**Sg**		**20 48 41.3**	**-0.5**
	baz=76								
SCTE	**Santa Cesarea**	**1.00**	**316**	P		**Pb**		**20 48 36.6**	**+0.9**
SCTE				S		**Sn**		**20 48 52.0**	**+2.3**
SCTE					AML	AML			
	comp=E,13800μm,0.5s								
SCTE					AML	AML			
	comp=N,12000μm,1.3s								
SCTE	**Santa Cesarea**	**1.00**	**316**			**Pb**		**20 48 36.5**	**+0.8**
SCTE	**Santa Cesarea**	**1.00**	**316**	P		**Pb**		**20 48 36.6**	**+0.9**
	baz=314								
SCTE				S		**Sn**		**20 48 51.5**	**+1.8**
	baz=314								
VLO	**Vlora**	**1.11**	**5**	P		**Pn**		**20 48 38.9**	**+1.4**
VLO				S		**Sn**		**20 48 53.3**	**+0.9**
VLO	**Vlora**	**1.11**	**5**	P		**Pn**		**20 48 39.0**	**+1.4**
	baz=1.0								
VLO				S		**Sn**		**20 48 53.4**	**+0.9**
	baz=1.0								
VLO					AMP				
	comp=E,28nm,0.4s,baz=1.0								
VLO	**Vlora**	**1.11**	**5**	P		**Pn**		**20 48 39.0**	**+1.4**
VLO				S		**Sn**		**20 48 55.7**	**+3.2**
TSLK	**Tsoukalades, L**	**1.13**	**118**	P		**Pb**		**20 48 37.7**	**-0.2**
TSLK				S		**Sn**		**20 48 54.3**	**+1.5**
TSLK					AML	AML		20 48 55.7	
	comp=E,18245μm,0.6s								
TSLK					AML	AML		20 48 60.0	
	comp=N,17171μm,0.5s								
TSLK	**Tsoukalades, L**	**1.13**	**118**	P		**Pb**		**20 48 37.2**	**-0.6**
TSLK				S		**Sb**		**20 48 53.5**	**+1.4**
	comp=N,9μm,0.5s								
LKD2	**Lefkada island**	**1.15**	**119**	P		**Pb**		**20 48 38.5**	**+0.3**
LKD2				S		**Sb**		**20 48 54.1**	**+1.4**
LKD2					AML	AML		20 49 02.5	
	comp=E,17679μm,0.5s								
LKD2					AML	AML		20 49 02.6	
	comp=N,25069μm,0.7s								
LKD2	**Lefkada island**	**1.15**	**119**	P		**Pb**		**20 48 37.5**	**-0.7**
	baz=121								
LKD2				S		**Sb**		**20 48 53.8**	**+1.0**
	baz=121								
LKD2	**Lefkada island**	**1.15**	**119**	P		**Pb**		**20 48 37.1**	**-1.1**

LADO S **Sb** **20 49 14.2 +0.8**
LADO AML AML
comp=E,170µm,0.7s
LADO AML AML
comp=E,234µm,1.1s
LADO AML AML
comp=N,146µm,0.3s
EVR **Evrytania** **1.94 102** P **Pn** **20 48 50.7 +1.7**
EVR AML AML 20 49 30.1
comp=E,2352µm,0.5s
EVR AML AML 20 49 35.2
comp=N,2990µm,0.8s
EVR **Evrytania** **1.94 102** P **Pn** **20 48 50.8 +1.7**
EVR S **Sn** **20 49 15.6 +2.6**
TAR1 **Taranto** **1.99 307** ⇑*i* Pn **Pb** **20 48 53.1 +0.6**
TAR1 (Sn) Sg 20 49 29.4 +8.4
PIPA **Pietrapaola** **1.99 275** ⇓*e* P **Pn** **20 48 50.9 +1.2**
PIPA S **Sn** **20 49 17.0 +2.9**
PIPA AML AML
comp=E,3840µm,1.1s
PIPA AML AML
comp=N,2200µm,1.3s
PIPA AML AML
comp=E,3460µm,0.7s
PIPA AML AML
comp=N,2245µm,1.3s
PIPA AML AML
comp=E,4295µm,0.4s
PIPA AML AML
comp=E,4290µm,0.4s
PIPA AML AML
comp=N,2335µm,0.7s
PIPA AML AML
comp=N,2495µm,0.7s
TIR **Tirane** **2.02 10** P **Pn** **20 48 51.7 +1.6**
TIR S **Sb** **20 49 18.0 0.0**
TIR **Tirane** **2.02 10** P **Pn** **20 48 51.6 +1.6**
TIR S **Sg** **20 49 21.6 -0.4**
TIR AML AML
comp=E,5245µm,0.6s
TIR AML AML
comp=N,4210µm,0.6s
TIR **Tirane** **2.02 10** Pn **Pn** **20 48 51.6 +1.6**
TIR **Tirane** **2.02 10** P **Pn** **20 48 51.7 +1.6**
baz=9.0
TIR S **Sb** **20 49 18.0 0.0**
baz=9.0
TIR AMP
comp=N,5.4nm,0.6s,baz=9.0
TIR **Tirane** **2.02 10** P **Pn** **20 48 51.6 +1.5**
TIP **Timpagrande** **2.04 266** ⇑P **Pn** **20 48 52.0 +1.5**
TIP **Timpagrande** **2.04 266** ⇓*e* P **Pn** **20 48 51.3 +0.9**
TIP S **Sn** **20 49 17.8 +2.3**
TIP AML AML
comp=E,384µm,0.5s
TIP AML AML
comp=N,313µm,0.7s
TIP AML AML
comp=E,458µm,0.5s
TIP AML AML
comp=N,378µm,0.7s
TIP AML AML
comp=N,850µm,1.3s
TIP AML AML
comp=N,1042µm,1.3s
TIP AML AML
comp=E,980µm,1.0s
TIP AML AML
comp=E,1140µm,1.0s
TIP **Timpagrande** **2.04 266** Pn **Pn** **20 48 51.4 +0.9**
THL **Klokotos Trika** **2.05 83** P **Pn** **20 48 52.0 +1.5**
THL AML AML 20 49 29.7
comp=E,3111µm,0.6s
THL AML AML 20 49 30.1
comp=N,3889µm,0.6s
THL **Klokotos Trika** **2.05 83** P **Pn** **20 48 52.2 +1.8**
OHR **Ohrid** **2.06 31** *i* Pn **Pn** **20 48 53.0 +2.3**
KZN **Kozani** **2.07 62** P **Pn** **20 48 52.6 +1.7**
KZN AML AML 20 49 26.0
comp=E,4896µm,0.5s
KZN AML AML 20 49 28.8
comp=N,3617µm,0.8s
KZN **Kozani** **2.07 62** P **Pn** **20 48 52.5 +1.7**
RLS **Riolos of Patr** **2.09 128** P **Pn** **20 48 52.1 +1.2**
RLS AML AML 20 49 33.8
comp=N,3246µm,0.7s
RLS AML AML 20 49 35.4
comp=E,2855µm,0.6s
RLS **Riolos of Patr** **2.09 128** P **Pn** **20 48 52.1 +1.2**
SERS **Sersale** **2.12 262** ⇓*e* P **Pn** **20 48 52.3 +0.8**
SERS S **Sn** **20 49 19.5 +2.2**
SERS AML AML
comp=N,1160µm,0.6s
SERS AML AML
comp=E,1014µm,0.6s
SERS AML AML
comp=N,1325µm,0.7s
SERS AML AML
comp=E,1115µm,0.7s
ANX **Ano Chora** **2.12 110** P **Pn** **20 48 53.5 +1.9**
ANX AML AML 20 49 31.7
comp=E,5071µm,0.5s
ANX AML AML 20 49 33.6
comp=N,4892µm,0.6s
ANX **Ano Chora** **2.12 110** P **Pn** **20 48 53.2 +1.6**
MAKR **Makrakomi, Fth** **2.17 98** P **Pn** **20 48 54.4 +2.3**
EFP **Efpalio** **2.18 114** P **Pn** **20 48 53.9 +1.7**
EFP AML AML 20 49 33.3
comp=E,3852µm,0.5s
EFP AML AML 20 49 43.7
comp=N,4840µm,0.8s
EFP **Efpalio** **2.18 114** P **Pn** **20 48 53.8 +1.6**
EFP S **Sn** **20 49 20.2 +1.5**
comp=N,3µm,0.7s
CELI **Celico** **2.23 272** ⇓*e* P **Pn** **20 48 54.2 +1.2**
CELI S **Sb** **20 49 24.6 +0.7**
CELI AML AML
comp=E,3195µm,1.2s
CELI AML AML
comp=N,3295µm,0.7s
CELI AML AML
comp=E,1295µm,1.2s
CELI AML AML
comp=N,1325µm,0.7s
NOCI **Noci** **2.28 310** P **Pn** **20 48 55.0 +1.3**
NOCI S **Sn** **20 49 21.9 +0.6**
NOCI AML AML
comp=N,5760µm,0.4s
NOCI AML AML
comp=E,5020µm,1.1s
DRO **Drossia** **2.30 127** P **Pn** **20 48 55.3 +1.3**
DRO **Drossia** **2.30 127** P **Pn** **20 48 55.2 +1.3**
AGG **Agios Georgios** **2.32 97** P **Pn** **20 48 56.2 +2.0**
AGG AML AML 20 49 37.1
comp=E,2604µm,0.7s
AGG AML AML 20 49 40.7
comp=N,3134µm,0.7s
AGG **Agios Georgios** **2.32 97** P **Pn** **20 48 55.8 +1.6**
AGG S **Sn** **20 49 25.0 +2.8**
AGG **Agios Georgios** **2.32 97** Pn **Pn** **20 48 56.0 +1.8**
AGG **Agios Georgios** **2.32 97** P **Pn** **20 48 55.9 +1.8**
AGG S **Sn** **20 49 25.0 +2.8**
comp=N,1µm,0.6s
TRIZ **Trizonia** **2.32 114** P **Pn** **20 48 55.7 +1.5**
LTRZ **Laterza** **2.33 303** P **Pn** **20 48 56.4 +2.1**
LTRZ AML AML
comp=N,3595µm,0.6s
LTRZ AML AML
comp=E,2790µm,0.4s
KTI **Kastanea** **2.35 63** P **Pn** **20 48 56.2 +1.5**
LRSO **Larissa Observ** **2.35 81** P **Pn** **20 48 56.5 +1.9**
LRSO **Larissa Observ** **2.35 81** P **Pn** **20 48 56.3 +1.7**
KALE **Kalithea** **2.36 113** P **Pn** **20 48 56.5 +1.7**
GRI **Girifalco** **2.36 258** ⇑*i* P **Pn** **20 48 56.1 +1.3**
GRI AML AML
comp=E,760µm,0.9s
GRI AML AML
comp=N,660µm,0.6s
ALIK **Aliki, Aigiali** **2.40 116** P **Pn** **20 48 56.9 +1.7**
SALB **San Lorenzo Be** **2.40 283** P **Pn** **20 48 56.4 +1.0**
SALB S **Sn** **20 49 27.2 +2.8**
SALB AML AML
comp=E,1560µm,0.3s
SALB AML AML
comp=N,1285µm,0.5s
SALB AML AML
comp=E,1635µm,0.3s
SALB AML AML
comp=N,1220µm,0.4s
CAR1 **CAROLEI** **2.46 269** P **Pn** **20 48 57.8 +1.6**
CAR1 AML AML
comp=N,1420µm,0.8s
CAR1 AML AML
comp=E,1890µm,0.6s
PHP **Peshkopia** **2.46 19** P **Pn** **20 48 57.7 +1.5**
baz=17
PHP S **Sn** **20 49 28.9 +3.1**
baz=17
PHP AMP
comp=N,3.2nm,1.1s,baz=17
PHP **Peshkopia** **2.46 19** P **Pn** **20 48 57.5 +1.3**
PLAC **Placanica** **2.47 249** ⇓*e* P **Pn** **20 48 57.2 +1.0**
PLAC AML AML
comp=N,798µm,0.8s
PLAC AML AML
comp=N,726µm,0.6s
PLAC AML AML
comp=E,702µm,0.6s
PLAC AML AML
comp=E,842µm,0.7s
LIT **Litokhoron** **2.51 72** P **Pn** **20 48 58.0 +1.2**
LIT **Litokhoron** **2.51 72** Pn **Pn** **20 48 58.0 +1.2**
LIT **Litokhoron** **2.51 72** P **Pn** **20 48 58.1 +1.2**
KLV **Kalavryta, Ach** **2.53 120** P **Pn** **20 48 58.7 +1.5**
KLV AML AML 20 49 51.0
comp=N,1294µm,0.6s
KLV AML AML 20 49 53.8
comp=E,1636µm,0.7s
KLV **Kalavryta, Ach** **2.53 120** ⇑P **Pn** **20 48 58.6 +1.4**
KLV AML AML
comp=E,986µm,0.7s
KLV AML AML
comp=N,824µm,1.3s
KLV **Kalavryta, Ach** **2.53 120** P **Pn** **20 48 58.6 +1.4**
T0702 **Acquaformosa (** **2.57 279** P **Pn** **20 49 00.6 +2.9**
MIGL **Miglionico** **2.58 300** P **Pn** **20 49 00.2 +2.4**
MIGL AML AML
comp=N,9845µm,1.0s
MIGL AML AML
comp=E,7425µm,0.9s
AMT **Artemida-Makis** **2.58 134** P **Pn** **20 48 59.9 +2.1**
AMT AML AML 20 49 58.2
comp=E,2818µm,0.9s
AMT AML AML 20 50 02.6
comp=N,3720µm,0.7s
DLFA **Delphi** **2.58 109** P **Pn** **20 48 59.6 +1.7**
DLFA AML AML 20 49 50.6
comp=E,1656µm,0.6s
DLFA AML AML 20 49 52.8
comp=N,1622µm,0.7s
BAI **Bari** **2.59 313** ⇑*i* Pn **Pn** **20 48 58.9 +1.0**
BAI Sn **Sg** **20 49 43.9 +3.7**
ULC **Ulcinj** **2.61 358** ⇑*i* Pn **Pn** **20 48 59.6 +1.5**
ULC *i* Sn **Sn** **20 49 30.7 +1.4**
AXAR **Agios Charalam** **2.62 102** P **Pn** **20 48 59.9 +1.6**
AMUR **Altamura** **2.63 307** P **Pn** **20 48 59.7 +1.2**
AMUR AML AML
comp=N,2140µm,0.7s
AMUR AML AML
comp=E,2435µm,0.7s
CET2 **Cetraro** **2.66 275** P **Pn** **20 49 01.4 +2.6**
CET2 AML AML
comp=N,3500µm,0.8s
CET2 AML AML
comp=E,2245µm,0.6s
MMN **Mormanno** **2.67 283** ⇑*e* P **Pb** **20 49 02.7 -1.4**
MMN AML AML
comp=E,483µm,1.4s
MMN AML AML
comp=N,768µm,0.4s
SCHR **S. Chirico Rap** **2.68 289** P **Pn** **20 49 01.6 +2.4**
SCHR AML AML
comp=E,1240µm,0.5s
SCHR AML AML
comp=N,1245µm,1.0s
T0721 **Laino Castello** **2.69 284** P **Pb** **20 49 03.2 -1.3**
T0721 AML AML
comp=E,2480µm,1.1s
T0721 AML AML
comp=N,1610µm,0.6s
PUK **Puka** **2.71 8** ⇑*e* P **Pn** **20 49 00.7 +1.1**
PUK AML AML
comp=N,1070µm,0.5s
PUK AML AML
comp=E,1060µm,0.7s
PUK **Puka** **2.71 8** P **Pn** **20 49 00.8 +1.1**
baz=7.0
GUR **Goura** **2.72 121** P **Pn** **20 49 01.2 +1.4**
GUR **Goura** **2.72 121** P **Pn** **20 49 01.4 +1.6**
VOL2 **Volos** **2.77 89** P **Pn** **20 49 00.6 +0.2**
CUC **Castrocucco** **2.82 284** P **Pn** **20 49 03.6 +2.5**
CUC AML AML
comp=N,1085µm,0.8s
CUC AML AML
comp=N,908µm,0.8s
CUC AML AML
comp=E,1645µm,0.6s
CUC AML AML
comp=E,1330µm,0.6s
JOPP **Joppolo** **2.82 256** ⇓*e* P **Pn** **20 49 02.2 +1.0**
JOPP AML AML
comp=E,856µm,0.7s
JOPP AML AML
comp=N,1135µm,0.6s
SIRI **Monte Sirino -** **2.83 288** ⇓*e* P **Pn** **20 49 02.8 +1.5**
SIRI AML AML
comp=E,1235µm,1.0s
SIRI AML AML
comp=N,1270µm,0.5s
SIRI AML AML
comp=N,1250µm,0.5s
SIRI AML AML
comp=E,1260µm,1.0s
DRME **Dracevica, Mon** **2.83 357** *e* Pn **Pn** **20 49 02.3 +1.1**
DRME *i* Sn **Sn** **20 49 35.9 +1.1**
DRME **Dracevica, Mon** **2.83 357** *e* Pn **Pn** **20 49 01.9 +0.7**
THAL **Thalero** **2.89 116** P **Pn** **20 49 02.9 +0.9**
SOI **Samo** **2.90 245** ⇓*e* P **Pn** **20 49 02.6 +0.5**
SOI AML AML
comp=E,562µm,0.5s
SOI AML AML
comp=N,652µm,0.7s
LKR **Lokris** **2.91 103** P **Pn** **20 49 03.0 +0.8**
LKR **Lokris** **2.91 103** P **Pn** **20 49 03.1 +0.8**
ATAL **Atalanti** **2.91 102** P **Pn** **20 49 03.4 +1.1**
TRIP **Tripoli** **2.91 128** P **Pn** **20 49 04.3 +1.9**
TRIP AML AML 20 50 01.9
comp=E,1579µm,0.8s
TRIP AML AML 20 50 09.8
comp=N,1395µm,0.8s
TRIP **Tripoli** **2.91 128** P **Pn** **20 49 04.5 +2.1**
MCEL **Monticello** **2.92 290** ⇓P **Pn** **20 49 04.5 +2.0**
MCEL AML AML
comp=N,1530µm,0.7s
MCEL AML AML
comp=E,1054µm,0.5s
MCEL AML AML
comp=N,1495µm,0.6s
MCEL AML AML
comp=E,1070µm,0.5s
CEL **Celeste** **2.94 249** P **Pn** **20 49 03.9 +1.2**
CEL AML AML
comp=N,804µm,0.8s
CEL AML AML
comp=N,672µm,0.8s
CEL AML AML
comp=E,1068µm,0.5s
CEL AML AML
comp=E,891µm,0.4s
CEL **Celeste** **2.94 249** Pn **Pn** **20 49 03.9 +1.2**
MTSN **Montesano sull** **2.94 289** P **Pn** **20 49 04.7 +2.0**
MTSN AML AML
comp=E,1220µm,0.8s
MTSN AML AML
comp=N,1116µm,0.7s
XOR **Xorichti** **2.96 89** P **Pn** **20 49 03.7 +0.8**
ITM **Ithomi** **2.96 137** P **Pn** **20 49 03.9 +0.9**
ITM **Ithomi** **2.96 137** Pn **Pn** **20 49 04.2 +1.3**
ITM **Ithomi** **2.96 137** P **Pn** **20 49 04.9 +1.9**
BUM **Brajici-Budva** **2.96 353** ⇓*i* Pn **Pn** **20 49 03.5 +0.4**
BUM *i* Sn **Sn** **20 49 39.1 +0.9**
MRVN **Minervino Murg** **2.97 306** P **Pn** **20 49 04.8 +1.6**
MRVN AML AML
comp=E,1044µm,0.5s
MRVN AML AML
comp=N,1235µm,1.0s
NEO **Neokhori** **2.98 90** P **Pn** **20 49 03.9 +0.6**
NEO AML AML 20 49 58.5
comp=N,2101µm,0.7s
NEO AML AML 20 49 58.9
comp=E,1332µm,0.5s
NEO **Neokhori** **2.98 90** P **Pn** **20 49 03.9 +0.6**
MPAZ **Palizzi** **2.99 243** ⇓*e* P **Pn** **20 49 03.7 +0.3**
MPAZ AML AML
comp=N,715µm,0.3s
MPAZ AML AML
comp=E,656µm,0.4s
ACER **Acerenza** **3.00 300** P **Pn** **20 49 05.7 +2.2**
ACER AML AML
comp=N,2780µm,0.5s
ACER AML AML
comp=E,3055µm,0.4s
ACER AML AML
comp=N,2910µm,0.5s
ACER AML AML
comp=E,3180µm,0.4s
MSCL **Scilla** **3.02 249** ⇑*i* P **Pn** **20 49 05.1 +1.2**
MSCL AML AML
comp=E,1645µm,1.6s
MSCL AML AML
comp=N,2910µm,0.7s
THE **Thessaloniki** **3.04 64** P **Pn** **20 49 05.1 +1.1**
THE AML AML 20 49 53.8
comp=N,642µm,0.5s
THE AML AML 20 50 07.3
comp=E,766µm,0.8s
SKO **Skopje** **3.05 30** *i* Pn **Pn** **20 49 05.6 +1.5**
MGR **Morigerati** **3.05 286** ⇓*e* P **Pn** **20 49 06.0 +1.7**
MGR AML AML
comp=E,792µm,0.6s
MGR AML AML
comp=N,804µm,1.0s
BCI **Bajram Curri** **3.05 10** P **Pn** **20 49 06.1 +1.8**
baz=8.0
BCI S **Sn** **20 49 44.2 +3.9**
baz=8.0
PALZ **Palazzo San Ge** **3.06 302** P **Pn** **20 49 06.2 +1.8**
PALZ AML AML
comp=E,6045µm,1.5s
PALZ AML AML
comp=N,4015µm,1.1s
SLCN **Sala Consilina** **3.06 291** P **Pn** **20 49 07.3 +2.8**
SLCN AML AML
comp=N,1580µm,0.9s
SLCN AML AML
comp=E,1930µm,0.6s
PDG **Podgorica** **3.07 358** *e* Pn **Pn** **20 49 05.1 +0.6**
PDG **Podgorica** **3.07 358** Pn **Pn** **20 49 05.0 +0.6**
TTG **Podgorica** **3.07 358** ⇓*i* Pn **Pn** **20 49 05.3 +0.8**
TTG *i* Sn **Sn** **20 49 41.4 +0.7**
VLX **Vlachokerasia** **3.08 129** P **Pn** **20 49 06.7 +1.9**
VLX **Vlachokerasia** **3.08 129** P **Pn** **20 49 06.6 +1.9**
PYL **PYLOS** **3.08 142** P **Pn** **20 49 05.4 +0.7**
PYL **PYLOS** **3.08 142** P **Pn** **20 49 04.9 +0.2**
LTK **Loutraki** **3.11 114** P **Pn** **20 49 05.8 +0.8**
LTK AML AML 20 50 07.0
comp=E,810µm,0.8s
LTK AML AML 20 50 09.1
comp=N,917µm,0.7s
LTK **Loutraki** **3.11 114** P **Pn** **20 49 05.6 +0.6**
HORT **Hortiatis** **3.12 65** P **Pn** **20 49 05.7 +0.6**
HORT **Hortiatis** **3.12 65** P **Pn** **20 49 05.8 +0.6**
LOUT **Loutraki** **3.13 115** P **Pn** **20 49 06.1 +0.8**
VAY **Valandovo** **3.13 50** *i* Pn **Pn** **20 49 06.5 +1.2**
HCY **Herceg Novi** **3.16 348** ⇓*i* Pn **Pn** **20 49 05.6 -0.1**
HCY *i* Sn **Sn** **20 49 43.8 +0.9**
HCY **Herceg Novi** **3.16 348** *e* Pn **Pn** **20 49 05.8 +0.1**
STIP **Stip** **3.17 42** *i* Pn **Pn** **20 49 08.8 +2.9**
BULG **Bulgheria - Ca** **3.17 284** P **Pn** **20 49 07.5 +1.5**
BULG AML AML
comp=E,798µm,0.9s
BULG AML AML
comp=E,780µm,0.9s
BULG AML AML
comp=N,1344µm,0.5s
BULG AML AML
comp=N,1376µm,0.5s
MTTG **Motta San Giov** **3.19 246** ⇑*e* P **Pn** **20 49 07.3 +1.2**
CEME **Cevo** **3.21 354** ⇑*i* Pn **Pn** **20 49 06.4 0.0**
CEME *i* Sn **Sn** **20 49 45.0 +0.8**
KNT **Kendrikon** **3.24 55** P **Pn** **20 49 07.7 +0.9**
PVY **Plav** **3.26 8** ⇓*i* Pn **Pn** **20 49 08.4 +1.1**
PVY *i* Sn **Sn** **20 49 46.3 +0.6**
PLG **Polygyros** **3.29 71** P **Pn** **20 49 08.3 +0.7**
PLG AML AML 20 49 53.2
comp=E,575µm,0.4s
PLG AML AML 20 50 07.6
comp=N,781µm,0.7s
PLG **Polygyros** **3.29 71** P **Pn** **20 49 07.8 +0.3**
MRLC **Muro Lucano** **3.30 296** P **Pn** **20 49 10.8 +3.2**
MRLC AML AML
comp=E,701µm,0.6s
MRLC AML AML
comp=N,810µm,0.6s
VILL **Villia** **3.30 110** P **Pn** **20 49 08.3 +0.6**
CDRU **Civita di Ruta** **3.33 291** P **Pn** **20 49 11.2 +3.0**
CDRU AML AML
comp=N,376µm,0.5s
CDRU AML AML
comp=E,604µm,0.6s
PAIG **Paliouri** **3.37 79** P **Pn** **20 49 08.9 +0.3**
SOH **Sokhos** **3.38 63** P **Pn** **20 49 10.2 +1.4**
EPID **Epidavros** **3.41 119** P **Pn** **20 49 09.8 +0.6**
NKME **Niksic** **3.42 355** ⇓*i* Pn **Pn** **20 49 10.5 +1.1**
NKME *i* Sn **Sn** **20 49 50.0 +0.5**
TREB **Trebinje** **3.45 347** *e* Pn **Pn** **20 49 09.5 -0.2**
NKY **Niksic** **3.46 355** *e* Pn **Pn** **20 49 10.7 +0.7**
NKY *i* Sn **Sn** **20 49 50.2 -0.4**
MCSR **Castroreale** **3.48 250** P **Pn** **20 49 11.5 +1.3**
MCSR AML AML
comp=N,1890µm,0.4s
MCSR AML AML
comp=E,1490µm,0.4s
KOME **Kolasin** **3.49 2** ⇑*i* Pn **Pn** **20 49 11.3 +0.9**
KOME *i* Sn **Sn** **20 49 51.6 +0.3**
AOS **Alonnisos** **3.50 92** P **Pn** **20 49 11.2 +0.9**
AOS **Alonnisos** **3.50 92** P **Pn** **20 49 10.8 +0.4**
IVA **Berane** **3.53 6** *e* Pn **Pn** **20 49 11.8 +0.9**
IVA *i* Sn **Sn** **20 49 52.6 +0.3**
MSAG **Monte S. Angel** **3.54 313** ⇑*e* P **Pn** **20 49 12.2 +1.2**
MSAG AML AML
comp=E,1218µm,0.6s
MSAG AML AML
comp=N,2950µm,0.3s
MSAG AML AML
comp=E,1335µm,0.6s
MSAG AML AML
comp=N,2870µm,0.3s
KRND **KRANIDI** **3.56 122** P **Pn** **20 49 11.8 +0.6**
KRND **KRANIDI** **3.56 122** P **Pn** **20 49 11.5 +0.3**
CAFE **Carife** **3.58 299** P **Pn** **20 49 14.4 +2.7**
CAFE AML AML
comp=E,943µm,0.9s
CAFE AML AML
comp=N,704µm,0.5s
CAFE AML AML
comp=E,922µm,1.4s
CAFE AML AML
comp=N,746µm,0.6s
BRY **Bratogost** **3.60 350** *e* Pn **Pn** **20 49 12.6 +0.7**
BRY *i* Sn **Sn** **20 49 53.4 -0.6**
BRY **Bratogost** **3.60 350** *e* Pn **Pn** **20 49 12.6 +0.7**
SGRT **San Giovanni R** **3.66 312** ⇑P **Pn** **20 49 13.8 +1.1**
SGRT AML AML
comp=E,1184µm,1.4s
SGRT AML AML
comp=N,1260µm,0.9s
SGRT **San Giovanni R** **3.66 312** Pn **Pn** **20 49 13.8 +1.1**
ATH **Athens Observa** **3.67 111** P **Pn** **20 49 13.6 +0.9**
ATH **Athens Observa** **3.67 111** P **Pn** **20 49 13.7 +1.0**
SRS **Serrai** **3.67 60** P **Pn** **20 49 13.4 +0.6**
OUR **Ouranopolis** **3.67 73** P **Pn** **20 49 13.6 +0.8**
STON **Ston** **3.73 341** *e* Pn **Pn** **20 49 13.4 -0.2**
STON **Ston** **3.73 341** *e* Pn **Pn** **20 49 13.5 0.0**
PTL **Penteli** **3.74 109** P **Pn** **20 49 14.7 +0.9**

PTL Penteli 3.74 109 P Pn 20 49 14.6 +0.8
KYMI Kymi, Euboea I 3.75 100 P Pn 20 49 14.6 +0.8
VLY Voula,Athens 3.77 112 P Pn 20 49 14.7 +0.6
VLY AML AML 20 50 03.6
comp=N,526µm,0.4s
VLY AML AML 20 50 04.0
comp=E,730µm,0.4s
VLY Voula,Athens 3.77 112 P Pn 20 49 14.9 +0.8
KKB Krupnik 3.77 47 *e*P Pn 20 49 15.2 +1.0
DION Dionisos Attik 3.78 108 P Pn 20 49 15.3 +1.0
DION Dionisos Attik 3.78 108 P Pn 20 49 15.1 +0.8
EMSG Monte Spagnolo 3.79 248 S Sn 20 50 03.0 +4.2
MOCO Biccari - m.te 3.80 303 P Pn 20 49 17.6 +3.0
MOCO AML AML
comp=E,1180µm,0.8s
MOCO AML AML
comp=E,1155µm,0.7s
MOCO AML AML
comp=N,510µm,0.9s
MOCO AML AML
comp=N,497µm,1.1s
IFIL Filicudi I Eol 3.83 260 P Pn 20 49 15.2 +0.2
IFIL AML AML
comp=N,698µm,0.7s
IFIL AML AML
comp=E,1980µm,0.6s
VLI Veliai 3.85 132 P Pn 20 49 16.6 +1.4
VLI AML AML 20 50 06.8
comp=N,600µm,0.7s
VLI AML AML 20 50 14.0
comp=E,550µm,0.8s
VLI Veliai 3.85 132 P Pn 20 49 17.9 +2.7
UPM Unac-Piva 3.86 355 *e*Pn Pn 20 49 16.2 +0.7
UPM *i* Sn Sn 20 50 00.4 -0.1
UPM Unac-Piva 3.86 355 *e*Pn Pn 20 49 17.6 +2.1
AGST Augusta-Monte 3.88 239 P Pn 20 49 13.8 -1.8
LSTV Lastovo 3.89 332 *e*Pn Pn 20 49 15.8 +0.1
HAGA Augusta 3.91 239⇓ *e*P Pn 20 49 14.1 -1.9
HAGA AML AML
comp=E,632µm,0.3s
HAGA AML AML
comp=N,388µm,1.3s
MNVA Monemvasia 3.93 132 P Pn 20 49 16.7 +0.4
NVR Nevrokopi 3.96 58 P Pn 20 49 17.9 +1.1
PLE Pljevlja 3.97 0 *e*Pn Pn 20 49 18.1 +1.1
PLE *i* Sn Sn 20 50 03.3 +0.2
MSFR San Fratello 3.97 252 P Pn 20 49 18.0 +1.0
MSFR AML AML
comp=E,296µm,0.9s
MSFR AML AML
comp=N,156µm,1.6s
HCRL Carlentini 4.00 240⇓ *e*P Pn 20 49 15.6 -1.7
HCRL AML AML
comp=E,650µm,1.1s
HCRL AML AML
comp=N,552µm,0.3s
MMB Musomiste 4.00 55 *e*P Pn 20 49 18.0 +0.7
MELA Melanico ??? S 4.00 307 P Pn 20 49 19.0 +1.7
MELA AML AML
comp=N,2240µm,1.2s
MELA AML AML
comp=N,2410µm,1.2s
MELA AML AML
comp=E,2680µm,0.4s
MELA AML AML
comp=E,2600µm,0.4s
IACL Alicudi 4.00 260 P Pn 20 49 17.8 +0.5
IACL AML AML
comp=E,319µm,0.6s
IACL AML AML
comp=N,325µm,0.3s
TREM Isole Tremiti 4.03 314 P Pn 20 49 18.8 +1.1
TREM AML AML
comp=N,1505µm,0.7s
TREM AML AML
comp=E,1855µm,0.6s
PAOL Paolisi 4.05 296 Pn Pn 20 49 19.5 +1.5
SKY Skiros Island 4.05 95 P Pn 20 49 19.0 +1.0
VITU Vitulano (BN) 4.07 298 P Pn 20 49 21.6 +3.3
HLNI Lentini 4.07 242⇓ *e*P Pn 20 49 16.5 -1.8
HLNI AML AML
comp=E,409µm,1.2s
HLNI AML AML
comp=N,296µm,0.5s
HAVL Avola 4.12 236 P Pn 20 49 17.0 -2.0
HAVL AML AML
comp=N,964µm,0.3s
HAVL AML AML
comp=E,952µm,0.3s
KARY Karystos 4.17 107 P Pn 20 49 20.3 +0.7
KTHA Kythira Island 4.25 136 P Pn 20 49 22.4 +1.6
KTHA Kythira Island 4.25 136 P Pn 20 49 22.6 +1.8
BSSO Busso 4.25 302 P Pn 20 49 24.3 +3.4
BSSO AML AML
comp=N,487µm,0.8s
BSSO AML AML
comp=E,188µm,1.1s
BSSO AML AML
comp=E,476µm,1.1s
BSSO AML AML
comp=N,209µm,0.9s
RUDO Rudo 4.26 360 *e*Pn Pn 20 49 21.0 +0.2
KAVA Kavala 4.26 66 P Pn 20 49 21.1 +0.3
THAS Thassos island 4.29 71 P Pn 20 49 21.1 -0.1
HPAC Pachino 4.29 233 P Pn 20 49 20.8 -0.4
HPAC AML AML
comp=N,914µm,0.5s
HPAC AML AML
comp=E,1260µm,0.9s
MAKA Makarska 4.31 336 *e*Pn Pn 20 49 21.9 +0.4
VAE Valguarnera 4.33 246 Pn Pn 20 49 25.6 +3.8
comp=E,3.7nm,0.3s,baz=340,slow=10,SNR=3.7
VAE Sn Sn 20 50 14.3 +2.4
comp=E,2.1nm,0.3s,baz=37,slow=23,SNR=2.4
VAE Valguarnera 4.33 246 Pn 20 49 25.6 +3.8
HMDC Modica 4.34 238 P Pn 20 49 20.5 -1.5
HMDC AML AML
comp=E,856µm,0.6s
HMDC AML AML
comp=N,740µm,0.4s
VTS Vitosha 4.37 41 *e*P Pn 20 49 23.0 +0.5
TRIV Trivento 4.39 305 P Pn 20 49 25.3 +2.5
TRIV AML AML
comp=E,656µm,0.6s
TRIV AML AML
comp=N,673µm,1.6s
VAGA Valle Agricola 4.43 299 P Pn 20 49 28.0 +4.7
VAGA AML AML
comp=E,399µm,0.8s
VAGA AML AML
comp=N,669µm,0.6s
RICI Ricice 4.46 339 *e*Pn Pn 20 49 24.3 +0.6
BBLS Lazići 4.51 0 *e*Pn Pn 20 49 23.9 -0.4
LIA Limnos Island 4.51 81 P Pn 20 49 25.1 +0.8
RZN Rozhen 4.69 59 *e*P Pn 20 49 27.9 +1.0
HAPS Han Pijesak,BI 4.74 356 *e*Pn Pn 20 49 27.2 -0.3
DIVS Divibare 4.76 5 *e*Pn Pn 20 49 27.0 -0.8
DIVS Divibare 4.76 5 Pn Pn 20 49 27.6 -0.2
SMTH Samothraki Isl 4.86 75 P Pn 20 49 29.3 +0.2
INTR Introdacqua 4.94 304 P Pn 20 49 33.0 +2.9
INTR AML AML
comp=N,752µm,1.0s
INTR AML AML
comp=E,515µm,0.9s
INTR Introdacqua 4.94 304 Pn Pn 20 49 32.6 +2.5
SIGR SIGRI 5.03 90 P Pn 20 49 32.7 +1.3
RDO Rodhopi 5.04 67 P Pn 20 49 31.7 +0.2
GADA Gvkgeada 5.09 79 P Pn 20 49 32.9 +0.6
KDZ Kurdzhali 5.14 62 *e*P Pn 20 49 32.9 -0.1
KIJV Kijevo 5.15 335 *e*Pn Pn 20 49 34.2 +1.1
TEKS Tekeris 5.19 1 *e*Pn Pn 20 49 33.5 -0.1
MORI Morici 5.28 330 *e*Pn Pn 20 49 36.0 +1.2
ALN Alexandroupoli 5.34 71 P Pn 20 49 36.0 +0.4
ALN Alexandroupoli 5.34 71 Pn Pn 20 49 36.0 +0.4
ALN Alexandroupoli 5.34 71 P Pn 20 49 35.9 +0.4
PRK Paraskevi 5.35 89 P Pn 20 49 38.8 +3.0
PRK Paraskevi 5.35 89 P Pn 20 49 38.4 +2.6
APE Apeiranthos 5.36 113 *i* P Pn 20 49 36.0 +0.1
DIM Dimitrovgrad 5.39 58 *e*P Pn 20 49 37.5 +1.1
AQU L'Aquila 5.43 305 P Pn 20 49 39.3 +2.3
AQU L'Aquila 5.43 305 *e*Pn Pn 20 49 41.2 +4.2
AQU L'Aquila 5.43 305 Pn Pn 20 49 39.3 +2.3
TERO Teramo 5.45 309 P Pn 20 49 39.8 +2.5
BLY Banja Luka 5.63 344 *e*Pn Pn 20 49 39.6 0.0

DUGI Dugi Otok 5.65 326 *e*Pn Pn 20 49 40.7 +0.8
FRGS Fruska Gora 5.81 3 *e*Pn Pn 20 49 38.9 -3.2
UDBI Udbina 5.83 334 *e*Pn Pn 20 49 44.2 +1.8
NRCA Norcia 5.87 308 Pn 20 49 45.5 +2.5
HERR Herculane 5.96 21 ⇑P Pn 20 49 44.9 +0.7
IDI Anoyia 5.98 131 Pn Pn 20 49 43.7 -0.9
comp=E,1.7nm,0.3s,baz=315,slow=5.9,SNR=20
IDI Sn Sn 20 50 46.8 -5.8
comp=E,3.3nm,0.3s,baz=58,slow=16,SNR=4.3
IDI Anoyia 5.98 131 ⇑P Pn 20 49 45.6 +1.0
IDI Anoyia 5.98 131 P Pn 20 49 44.5 -0.1
FDMO Fiordimonte 6.00 310 P Pn 20 49 47.3 +2.5
NVLJ Novalja 6.19 329 *e*Pn Pn 20 49 48.3 +1.0
SZH Strazhica 6.29 50 *e*P Pn 20 49 50.0 +1.2
MURB Monte Urbino 6.47 309 Pn 20 49 53.2 +2.0
GZR Gura Zlata 6.54 22 ⇑P Pn 20 49 53.4 +1.2
MOSL Moslavina 6.55 344 *e*Pn Pn 20 49 52.0 -0.2
HUMR Humele 6.64 37 ⇓P Pn 20 49 55.3 +1.7
RAZG Razgrad 6.81 50 ⇑P Pn 20 49 56.9 +1.1
MORH Mrgy, Hungar 6.88 356 *e*Pn Pn 20 49 55.9 -0.8
OZLJ Ozalj 6.89 336 *e*Pn Pn 20 49 57.8 +0.9
SGRR Singureni 6.92 43 ⇓P Pn 20 49 59.4 +2.0
RIY Rijeka 6.98 330 *e*Pn Pn 20 49 59.5 +1.3
RIY Rijeka 6.98 330 *e*Pn Pn 20 49 57.7 -0.4
PTJ Puntijarka 7.01 340 *e*Pn Pn 20 49 59.0 +0.3
GBRS Gornja Briga 7.03 333 *i* Pn Pn 20 50 00.3 +1.4
GBRS *i* Sn Sn 20 51 15.4 -3.0
CRES Cresnjev 7.08 337 *e*Pn Pn 20 50 00.0 +0.4
KALN Kalnik 7.10 343 *e*Pn Pn 20 50 00.1 +0.2
CEY Cerknica 7.35 332 *e*Pn Pn 20 50 03.9 +0.6
VOIR 7.38 33 ⇑P Pn 20 50 06.6 +2.8
GBAS Gorenja Brezov 7.51 333 *e*Pn Pn 20 50 06.5 +1.0
SECR 7.54 39 ⇓P Pn 20 50 08.2 +2.3
RASA Rasa 7.57 48 ⇑P Pn 20 50 08.3 +2.1
LJU Ljubljana 7.58 333 *e*Pn Pn 20 50 06.6 +0.2
GROS Grobnik 7.65 339 *i* Pn Pn 20 50 07.4 0.0
MLR Muntele Rosu 7.82 36 Pn Pn 20 50 11.0 +1.2
comp=E,0.6nm,0.3s,baz=142,slow=21,SNR=27
MLR Sn Sn 20 51 35.2 -2.7
comp=E,0.3nm,0.3s,baz=226,slow=10.0,SNR=1.5
MLR Muntele Rosu 7.82 36 ⇓P Pn 20 50 12.4 +2.6
MLR Muntele Rosu 7.82 36 P Pn 20 50 11.0 +1.2
MLR 20 51 35.2
MLR Muntele Rosu 7.82 36 Pn Pn 20 50 11.5 +1.7
PERS Pernice 7.92 338 *i* Pn Pn 20 50 11.4 +0.3
PERS *e*Sn Sn 20 51 34.4 -5.8
NEHR Nehoiu 7.93 38 ⇑P Pn 20 50 13.9 +2.6
OBKA Obir 7.98 335 *e*Pn Pn 20 50 13.4 +1.4
comp=E,4.1nm,0.4s
OBKA *e*Sn Sn 20 51 39.2 -2.6
comp=E,19nm,0.3s
SOKA Soboth 7.98 338 *i* Pn Pn 20 50 12.8 +0.9
comp=E,11nm,0.3s
SOKA Sn Sn 20 51 38.0 -3.7
comp=E,11nm,0.7s
OZUR 8.22 33 ⇑P Pn 20 50 16.6 +1.4
BISRR Bisoca 8.22 39 ⇓P Pn 20 50 18.0 +2.7
PRED Cave del Predi 8.27 331 Pn Pn 20 50 17.3 +1.4
TEOL Teolo 8.28 319 Pn Pn 20 50 15.3 -0.7
TLBR Topalu 8.28 48 ⇓P Pn 20 50 17.7 +1.7
HARR Harsova 8.30 47 ⇓P Pn 20 50 18.2 +2.0
ORH Orhaniye 8.33 76 P Pn 20 50 01.1 -16
ARSA Arzberg 8.38 342 *e*Pn Pn 20 50 17.8 +0.5
comp=E,2.6nm,0.3s
ARSA *e*Sn Sn 20 51 49.4 -2.0
comp=E,3.5nm,0.4s
MYKA Terra Mystica 8.39 332 Pn Pn 20 50 19.7 +2.0
comp=E,1.5nm,0.2s
MYKA *e*Sn Sn 20 51 50.5 -1.5
comp=E,4.4nm,0.3s
PLOR Plostina 8.41 37 ⇑P Pn 20 50 20.0 +2.1
TIRR Tirgusor 8.45 50 ⇓P Pn 20 50 20.0 +1.7
TIRR Tirgusor 8.45 50 P Pn 20 50 20.4 +2.1
TIRR Tirgusor 8.45 50 Pn Pn 20 50 20.4 +2.1
STAL STĂLIGIAL 8.46 327 Pn 20 50 19.1 +0.5
VRI Vrincioaia 8.46 37 ⇑P Pn 20 50 20.9 +2.4
PGF Pioggiola 8.48 295 *e*P Pn 20 50 21.5 +2.7
ZOU Zoufplan 8.59 329 Pn 20 50 21.3 +0.8
TPGR Topolog 8.68 48 ⇑P Pn 20 50 23.0 +1.5
ELL Elmali 8.71 104 P Pn 20 50 22.3 +1.3
ELL Elmali 8.71 104 Pn Pn 20 50 22.3 +0.3
CFR Carcaliu 8.71 45 ⇑P Pn 20 50 23.3 +1.3
KEST Kesra 8.75 249 Pn Pn 20 50 25.4 +2.8
comp=E,0.5nm,0.3s,baz=190,slow=6.3,SNR=5.0
KEST LR LR 20 54 09.7
comp=E,82nm,18.4s,baz=194,slow=40
KEST Kesra 8.75 249 Pn 20 50 24.6 +2.1
CTI Castel Tesino 8.78 322 P Pn 20 50 23.2 +0.3
CTI Castel Tesino 8.78 322 Pn Pn 20 50 23.2 +0.3
KBA Koelnbreinsper 8.88 332 *e*Pn Pn 20 50 26.9 +2.4
comp=E,1.1nm,0.2s
KBA *e*Sn Sn 20 51 59.6 -4.5
comp=E,4.9nm,0.5s
JURR Jurilovca 8.89 50 ⇓P Pn 20 50 26.2 +1.8
ABTA Abfaltersbach 8.93 328 *e*Pn Pn 20 50 28.5 +3.5
comp=E,5.1nm,0.3s
ABTA *e*Sn Sn 20 51 59.8 -5.4
comp=E,20nm,0.6s
CONA Conrad Observa 8.94 345 *e*Pn Pn 20 50 27.1 +2.0
comp=E,0.6nm,0.2s
CONA *i* Sn Sn 20 52 06.8 +1.4
comp=E,2.3nm,0.3s
VYHS Vyhne 9.14 358 *e*P Pn 20 50 30.4 +2.5
VYHS *e* 20 52 08.4
VYHS Vyhne 9.14 358 *e*PN Pn 20 50 30.4 +2.5
VYHS *e*SN Sn 20 52 08.4 -1.8
MOA Molln 9.26 338 *i* Pn Pn 20 50 30.7 +1.2
comp=E,5.5nm,0.2s
MOA *e*Sn Sn 20 52 11.2 -2.0
comp=E,8.5nm,0.4s
BURAR Bucovina Array 9.28 25 ⇓P Pn 20 50 32.5 +2.7
BURAR Bucovina Array 9.28 25 P Pn 20 50 32.5 +2.7
BUR08 Bucovina Ar. S 9.30 25 Pn Pn 20 50 31.3 +1.2
WTTA Wattenberg 9.71 327 *e*Pn Pn 20 50 36.9 +1.2
comp=E,1.7nm,0.2s
WTTA *e*Sn Sn 20 52 18.3 -6.0
comp=E,9.2nm,0.4s
SQTA Sankt Quirin 9.86 326 *i* Pn Pn 20 50 42.7 +5.0
comp=E,1.8nm,0.3s
SQTA *e*Sn Sn 20 52 22.1 -5.8
comp=E,3.8nm,0.3s
FUORN Ofenpass-Fuorn 9.86 320 Pn Pn 20 50 38.6 +0.7
FETA Feichten 9.92 323 *e*Pn Pn 20 50 40.6 +1.9
comp=E,0.5nm,0.2s
FETA *e*Sn Sn 20 52 25.3 -4.3
comp=E,3.3nm,0.4s
MOTA Moosalm 10.00 326 *e*Pn Pn 20 50 44.5 +4.8
comp=E,2.5nm,0.4s
MOTA Sn Sn 20 52 27.5 -4.0
comp=E,2.8nm,0.3s
DAVOX Davos/Dischmat 10.16 320 Pn Pn 20 50 45.0 +3.0
comp=E,0.3nm,0.3s,baz=161,slow=19,SNR=2.9
DAVOX Davos/Dischmat 10.16 320 P Pn 20 50 45.0 +3.0
TUE Stuetta 10.23 317 Pn Pn 20 50 45.4 +2.5
GEC2 GERESS Array S 10.32 339 Pn Pn 20 50 44.7 +0.6
GERES GERESS Array B 10.32 339 Pn Pn 20 50 45.0 +0.9
comp=E,0.6nm,0.3s,baz=160,slow=14,SNR=17
GERES Sn Sn 20 52 33.1 -6.2
comp=E,1.1nm,0.3s,baz=153,slow=22,SNR=6.4
GERES GERESS Array B 10.32 339 P Pn 20 50 45.0 +0.9
GERES GERESS Array B 10.32 339 Pn Pn 20 50 44.5 +0.4
FRF La Foret Royal 10.44 298 *e*P Pn 20 50 49.4 +3.8
LMR La Mourre 10.46 296 *e*P Pn 20 50 49.9 +4.0
DAVA Damuels 10.51 322 *e*Pn Pn 20 50 50.2 +3.4
comp=E,0.6nm,0.2s
DAVA Sn Sn 20 52 38.5 -5.6
comp=E,6.4nm,0.4s
KHC Kasperske Hory 10.62 339 *e*PN Pn 20 50 48.6 +0.5
KHC *e*SN Sn 20 52 40.3 -6.1
MBDF Montbardon 10.80 304 *e*P Pn 20 50 54.2 +3.5
BRTR Keskin Array B 11.02 84 Pn Pn 20 50 56.1 +2.4
comp=E,0.2nm,0.3s,baz=264,slow=12,SNR=5.5
BRTR LR LR 20 55 35.9
comp=E,27nm,20.4s,baz=264,slow=41
BRTR Keskin Array B 11.02 84 P Pn 20 50 56.1 +2.4
BRTR Keskin Array B 11.02 84 Pn Pn 20 50 54.2 +0.5
LPG La Plagne 11.16 307 *e*P Pn 20 50 59.7 +3.9
LPL La Plagne 11.18 307 *e*P Pn 20 50 59.6 +3.6
ORIF Oris-en-Rattie 11.46 303 *e*P Pn 20 51 03.2 +3.6
CABF La Chapelle 12.13 311 *e*Pn Pn 20 51 06.8 -2.0
CABF La Chapelle 12.13 311 *e*P Pn 20 51 12.2 +3.4
CABF *e*Sn Sn 20 53 15.0 -8.5
comp=E,0.5nm,0.2s

HINF Hinteralfeld 12.39 317 *e*Pn Pn 20 51 10.7 -1.7
HINF Hinteralfeld 12.39 317 *e*P Pn 20 51 15.7 +3.3
HINF *e*Sn Sn 20 53 21.3 -8.7
comp=E,2.3nm,0.2s
CDF Champ du Feu 12.56 320 *e*Pn Pn 20 51 12.1 -2.6
CDF Champ du Feu 12.56 320 *e*P Pn 20 51 17.4 +2.7
CDF *e*Sn Sn 20 53 25.0 -9.1
comp=E,1.5nm,0.3s
HAU Haudompre 12.78 317 *e*Pn Pn 20 51 15.8 -1.8
HAU *e*Sn Sn 20 53 30.3 -9.0
comp=E,4.5nm,0.3s
AKASG Malin Array Be 13.29 28 Pn Pn 20 51 24.3 -0.3
comp=E,0.6nm,0.3s,baz=214,slow=11,SNR=7.4
AKASG Malin Array Be 13.29 28 P Pn 20 51 24.3 -0.3
PAGF Fort de Pagny 13.45 318 *e*Pn Pn 20 51 24.2 -2.5
baz=138
PAGF Fort de Pagny 13.45 318 *e*P Pn 20 51 30.1 +3.4
PAGF *e*Sn Sn 20 53 46.4 -9.2
comp=E,1.0nm,0.2s
SFTF Sexfontaines 13.60 315 *e*Pn Pn 20 51 26.5 -2.3
baz=134
SFTF *e*Sn Sn 20 53 50.1 -9.3
comp=E,0.4nm,0.2s
MEZF Maizieres J'vi 13.77 316 *e*Pn Pn 20 51 28.5 -2.6
MEZF Maizieres J'vi 13.77 316 *e*P Pn 20 51 34.8 +3.7
baz=138
MEZF *e*Sn Sn 20 53 54.1 -9.4
comp=E,0.4nm,0.2s
LOR Lormes 13.78 310 *e*Pn Pn 20 51 28.8 -2.4
baz=127
LOR Lormes 13.78 310 *e*P Pn 20 51 34.3 +3.1
baz=129
LOR *e*Sn Sn 20 53 54.1 -10
comp=E,2.7nm,0.3s
AVF Avril sur Loir 13.86 308 *e*P Pn 20 51 35.8 +3.5
SSF Saint Saulge 13.89 309 *e*Pn Pn 20 51 30.6 -2.1
SSF Saint Saulge 13.89 309 *e*P Pn 20 51 35.2 +2.5
SSF *e*Sn Sn 20 53 56.9 -9.5
comp=E,0.5nm,0.2s
MMAI Mount Meron Ar 14.40 111 Pn Pn 20 51 35.6 -4.3
comp=E,1.4nm,0.3s,baz=307,slow=12,SNR=10
BAIF Baives 15.16 320 *e*Pn Pn 20 51 47.9 -2.1
BAIF *e*Sn Sn 20 54 27.3 -10
comp=E,0.5nm,0.2s
EIL Elat 16.05 122 Pn Pn 20 51 57.9 -3.7
comp=E,0.6nm,0.3s,baz=336,slow=3.2,SNR=5.4
EIL Elat 16.05 122 Pn 20 51 57.9 -3.7
KIV Kislovodsk 17.99 68 *e*P Pn 20 52 26.8 +0.7
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,50nm,13.0s
KVAR Kislovodsk Arr 18.00 68 Pn Pn 20 52 24.5 -1.6
baz=62,slow=20,SNR=1.3
KVAR Kislovodsk Arr 18.00 68 P Pn 20 52 24.5 -1.6
ESDC Sonseca Array 18.01 278 P Pn 20 52 27.3 +1.0
comp=Z,0.1nm,0.3s,baz=74,slow=9.8,SNR=10
ESDC LR LR 20 59 00.6
comp=Z,53nm,18.5s,baz=65,slow=36
KBZ Khabaz 18.12 68*ce*P P 20 52 29.3 +1.6
VORD Divnogorie 18.15 44 *e*P Pn 20 52 26.0 -1.8
VORD pmax pmax
comp=Z,4.0nm,0.7s
VSR Storozhevoye 18.22 43 *e*P Pn 20 52 28.0 -0.7
VSR pmax pmax
comp=Z,5.0nm,0.6s
GOF Gofitskoye 18.40 64⇑ *e*P P 20 52 30.4 -0.5
GOF pmax pmax
comp=Z,23nm,0.6s
ZEI Tsey 18.79 72 *e*P P 20 52 36.3 +1.0
ZEI pmax pmax
comp=Z,7.0nm,0.6s
LPSR Galich'ya Gora 18.89 39 *e*P P 20 52 35.3 -0.9
LPSR pmax pmax
comp=Z,10.0nm,0.7s
GNI Garni 19.50 80*ce*P P 20 52 44.4 +1.2
GNI pmax pmax
comp=Z,37nm,1.7s
GNI Garni 19.50 80 P P 20 52 44.0 +0.9
GNI IAmb IAmb 20 52 45.4
comp=Z,18nm,0.8s
OBN Obninsk 19.53 31*ce*P P 20 52 43.8 +0.7
OBN *e*S S 20 56 26.1 +3.4
OBN pmax pmax
comp=Z,47nm,2.5s
OBN MLR MLR
comp=Z,106nm,18.0s
VRH Novokhopyorsk 19.59 45 *e*P P 20 52 44.8 +0.9
VRH pmax pmax
comp=Z,10.0nm,1.1s
MOS Moscow 20.39 31 *e*P P 20 52 51.7 -0.8
MOS *e* 20 52 57.0
MOS pmax pmax
comp=Z,38nm,0.9s
HFS Hagfors 21.11 352 P P 20 53 00.1 0.0
comp=Z,1.3nm,0.4s,baz=159,slow=13,SNR=7.4
HFS Hagfors 21.11 352 P P 20 53 00.2 0.0
HFS Hagfors 21.11 352 P P 20 53 00.1 0.0
EKA Eskdalemuir Ar 21.95 324 P P 20 53 10.6 +1.3
comp=Z,1.2nm,0.5s,baz=123,slow=8.5,SNR=10
EKA Eskdalemuir Ar 21.95 324 P P 20 53 10.6 +1.3
EKA Eskdalemuir Ar 21.95 324 P P 20 53 10.6 +1.3
NB2 NORSAR Subarra 22.29 350 P P 20 53 13.5 +0.5
comp=Z,12nm,1.4s,baz=153,slow=10
NOA NORSAR Array B 22.29 350 P P 20 53 13.1 +0.1
comp=Z,1.1nm,0.8s,baz=43,slow=24,SNR=3.2
NOA LR LR 21 04 06.2
comp=Z,20nm,19.9s,baz=295,slow=43
NOA NORSAR Array B 22.29 350 P P 20 53 13.1 +0.1
FINES FINESS Array B 22.50 8 P P 20 53 14.3 -0.7
comp=Z,3.2nm,0.6s,baz=173,slow=9.7,SNR=8.7
FINES FINESS Array B 22.50 8 P P 20 53 14.4 -0.7
FINES FINESS Array B 22.50 8 P P 20 53 14.1 -1.0
FIA1 FINESS Array S 22.50 8 P P 20 53 14.1 -1.0
KIRV Kirov 27.18 35 LR LR 21 05 35.5
comp=Z,89nm,18.2s,baz=202,slow=38
KIRV Kirov 27.18 35*ce*P P 20 53 59.0 0.0
AKTO Aktyubinsk 29.21 55 P P 20 54 16.1 -1.2
comp=Z,2.6nm,0.7s,baz=269,slow=8.3,SNR=8.9
AKTO Aktyubinsk 29.21 55 P P 20 54 16.1 -1.2
AKTO Aktyubinsk 29.21 55 P P 20 54 16.1 -1.2
ABKAR Akbulak array 30.34 58 P P 20 54 26.7 -0.6
ARCES ARCESS Array B 30.42 4 P P 20 54 26.6 -1.2
comp=Z,2.2nm,0.9s,baz=194,slow=11,SNR=1.5
ARCES ARCESS Array B 30.42 4 P P 20 54 26.6 -1.2
TORD Torodi Ar. Bea 30.43 216 P P 20 54 28.3 0.0
comp=Z,1.7nm,0.8s,baz=37,slow=11,SNR=6.6
ARU Arti 30.79 43 P P 20 54 30.5 -0.7
comp=Z,1.6nm,0.7s,baz=212,slow=6.9,SNR=9.0
ARU Arti 30.79 43*d i*P P 20 54 30.2 -1.0
ARU S S 20 59 34.0 +0.5
ARU pmax pmax
comp=Z,11nm,1.3s
ARU Arti 30.79 43 P P 20 54 31.2 0.0
ARU IAmb IAmb 20 54 31.4
comp=Z,5.4nm,0.8s
SVE Sverdlovsk 32.01 43 *e*P P 20 54 42.2 +0.3
SVE pmax pmax
comp=Z,18nm,0.9s
UOSS Minazif 34.08 104 P P 20 54 60.0 -0.3
UOSS IAmb IAmb 20 55 00.0
comp=Z,4.7nm,0.8s
BRVK Borovoye 37.00 51*ce*P P 20 55 25.3 +0.2
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BRVK Borovoye 37.00 51 P P 20 55 25.0 0.0
BRVK IAmb IAmb 20 55 26.4
comp=Z,4.9nm,0.8s
DBIC Dimbokro 39.18 220 P P 20 55 43.8 0.0
comp=Z,1.9nm,0.4s,baz=96,slow=12,SNR=6.4
DBIC Dimbokro 39.18 220 P P 20 55 43.9 0.0
DBIC pmax pmax
comp=Z,47nm,1.6s
DBIC Dimbokro 39.18 220 P P 20 55 43.9 0.0
KURK Kurchatov 42.30 54 P P 20 56 08.5 -0.8
KURK pmax pmax
comp=Z,4.0nm,1.2s
KURK Kurchatov 42.30 54 P P 20 56 08.5 -0.8
MAKZ Makanchi 45.24 59 P P 20 56 32.6 -0.4
MAKZ pmax pmax
comp=Z,2.0nm,1.0s
MAKZ Makanchi 45.24 59 P P 20 56 32.6 -0.4
MK31 Makanchi Array 45.45 59 P P 20 56 34.2 -0.5
MK31 pmax pmax
comp=Z,2.0nm,0.8s

MK31	**Makanchi Array**	**45.45**	**59**	P	**P**	**20 56 34.2**	**-0.5**
MK31				IAmb	IAmb	20 56 34.7	
	comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**45.45**	**59**	P	**P**	**20 56 33.9**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=284,slow=7.4,SNR=39						
MKAR	**Makanchi Array**	**45.45**	**59**	P	**P**	**20 56 34.0**	**-0.7**
MKAR	**Makanchi Array**	**45.45**	**59**	P	**P**	**20 56 34.0**	**-0.7**
ZAA0	**Zalesovo Array**	**45.58**	**49**	P	**P**	**20 56 35.3**	**-0.2**
ZAA0				IAmb	IAmb	20 56 35.8	
	comp=Z,4.3nm,0.6s						
ZALV	**Zalesovo Beam**	**45.58**	**49**	P	**P**	**20 56 34.8**	**-0.8**
	comp=Z,4.5nm,0.6s,baz=278,slow=8.7,SNR=16						
ZALV				LR	LR	21 18 15.3	
	comp=Z,33nm,19.7s,baz=60,slow=40						
ZALV	**Zalesovo Beam**	**45.58**	**49**	P	**P**	**20 56 35.1**	**-0.4**
ZALV	**Zalesovo Beam**	**45.58**	**49**	P	**P**	**20 56 35.1**	**-0.4**
NRIK	**Noril'sk**	**46.15**	**27**	P	**P**	**20 56 40.3**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=244,slow=5.4,SNR=3.6						
NRIK	**Noril'sk**	**46.15**	**27**	*i* P	**P**	**20 56 39.9**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NRIK	**Noril'sk**	**46.15**	**27**	P	**P**	**20 56 40.3**	**+0.5**
TLY	**Talaya**	**57.15**	**48**	*i* P	**P**	**20 58 02.1**	**-0.2**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SONM	**Songino Array**	**60.40**	**51**	P	**P**	**20 58 23.8**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=268,slow=9.3,SNR=4.7						
SONM	**Songino Array**	**60.40**	**51**	P	**P**	**20 58 23.8**	**-1.3**
BOSA	**Boshof**	**67.84**	**174**	P	**P**	**20 59 14.4**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=341,slow=6.8,SNR=4.2						
BOSA	**Boshof**	**67.84**	**174**	P	**P**	**20 59 14.3**	**+0.3**
BOSA				pmax	pmax		
	comp=Z,62nm,1.8s						
BOSA	**Boshof**	**67.84**	**174**	P	**P**	**20 59 14.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**70.61**	**82**	P	**P**	**20 59 29.5**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=304,slow=7.2,SNR=6.6						
CMAR	**Chiang Mai Arr**	**70.61**	**82**	*ce* P	**P**	**20 59 30.7**	**-0.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KSRS	**Korea Array**	**79.27**	**50**	P	**P**	**21 00 21.4**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=299,slow=5.4,SNR=3.4						
KSRS	**Korea Array**	**79.27**	**50**	P	**P**	**21 00 21.4**	**+0.3**

WEL 10 20:53:47.3±0.6, 40.°S±3.°×17.°5E±.°, h82km±8km, M2.9/42, ML3.1/29, MLv2.9/42, Error ellipse: s-maj=0.0km s-min=0.0km az=109.6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.20**	**341**	P	Pn	20 54 00.4	+1.1
WAZ				S	Sn	20 54 10.3	+2.0
MTVZ	**Mangateitei**	**0.64**	**29**	P	Pn	20 54 02.8	+0.2
PKVZ	**Pokaka**	**0.69**	**18**	P	Pn	20 54 03.4	+0.3
POWZ	**Post Office Ro**	**0.69**	**130**	P	Pn	20 54 03.7	+0.7
LREZ	**Lake Rotokare**	**0.71**	**313**	P	Pn	20 54 04.2	+1.0
WNVZ	**Wahianoa**	**0.74**	**33**	P	Pn	20 54 04.0	+0.3
MOVZ	**Moawhango**	**0.76**	**44**	P	Pn	20 54 03.9	+0.1
DRZ	**Dome Shelter**	**0.77**	**30**	P	Pn	20 54 05.9	+1.6
WHVZ	**Whangaehu Hut**	**0.78**	**31**	P	Pn	20 54 04.4	+0.2
FWVZ	**Far West T-bar**	**0.79**	**28**	P	Pn	20 54 04.5	+0.3
MRZ	**Mangatainoka R**	**0.81**	**151**	P	Pn	20 54 05.0	+0.8
TUVZ	**Tukino**	**0.82**	**34**	P	Pn	20 54 04.8	+0.3
VRZ	**Vera Road**	**0.86**	**344**	P	Pn	20 54 05.1	+0.3
PNHZ	**Pukenui**	**0.87**	**88**	P	Pn	20 54 05.4	+0.5
OGWZ	**Otaki Gorge**	**0.87**	**175**	P	Pn	20 54 05.8	+0.9
NGZ	**Ngauruhoe**	**0.88**	**28**	P	Pn	20 54 05.2	+0.1
BHHZ	**Black Hill Sta**	**0.89**	**59**	P	Pn	20 54 05.3	0.0
BHHZ				S	Sn	20 54 19.7	+1.0
DVHZ	**Dannevirke**	**0.91**	**113**	P	Pn	20 54 05.8	+0.4
PRWZ	**Pori Road**	**0.92**	**132**	P	Pn	20 54 06.4	+0.9
PRWZ				S	Sn	20 54 20.1	+1.1
KIW	**Kapiti Island**	**0.92**	**188**	P	Pn	20 54 05.9	+0.4
TWVZ	**Taurewa**	**0.92**	**18**	P	Pn	20 54 05.4	-0.3
WTVZ	**West Tongariro**	**0.93**	**26**	P	Pn	20 54 05.6	-0.1
PREZ	**Palmer Road**	**0.93**	**310**	P	Pn	20 54 06.9	+1.2
ETVZ	**East Tongariro**	**0.95**	**32**	P	Pn	20 54 06.2	+0.2
KRVZ	**Karewarewa**	**0.96**	**28**	P	Pn	20 54 06.1	0.0
TMVZ	**Te Maari**	**0.97**	**31**	P	Pn	20 54 06.4	+0.2
HOWZ	**Holdsworth Sta**	**1.01**	**160**	P	Pn	20 54 07.0	+0.5
NEZ	**North Egmont**	**1.01**	**312**	P	Pn	20 54 07.8	+1.1
KHEZ	**Kahui Hut**	**1.05**	**308**	P	Pn	20 54 08.4	+1.3
KRHZ	**Kereru**	**1.05**	**73**	P	Pn	20 54 07.1	+0.1
WPHZ	**Waipukurau**	**1.06**	**97**	P	Pn	20 54 07.5	+0.4
KATZ	**Kakaramea**	**1.09**	**27**	P	Pn	20 54 07.6	0.0
PKE	**Pukeiti**	**1.13**	**312**	P	Pn	20 54 08.9	+0.9
BFZ	**Birch Farm**	**1.16**	**130**	P	Pn	20 54 08.6	+0.3
ANWZ	**Angora Road**	**1.19**	**116**	P	Pn	20 54 09.5	+0.8
DUWZ	**D'Urville Isla**	**1.22**	**226**	P	Pn	20 54 09.2	0.0
PRHZ	**Porangahau**	**1.24**	**105**	P	Pn	20 54 09.8	+0.4
MTW	**Mount Morrison**	**1.25**	**165**	P	Pn	20 54 10.0	+0.4
BKZ	**Black Stump Fm**	**1.35**	**55**	P	Pn	20 54 10.8	0.0
WEL	**Wellington**	**1.35**	**190**	P	Pn	20 54 10.9	+0.1
PXZ	**Pawanui**	**1.38**	**94**	P	Pn	20 54 11.1	0.0
TCW	**Tory Channel**	**1.40**	**205**	P	Pn	20 54 11.4	0.0
KAHZ	**Kahuranaki**	**1.40**	**84**	P	Pn	20 54 11.5	+0.1
HIZ	**Hauiti**	**1.44**	**353**	P	Pn	20 54 12.0	0.0
BHW	**Baring Head**	**1.47**	**186**	P	Pn	20 54 12.1	-0.1
MSWZ	**Moikau Station**	**1.47**	**175**	P	Pn	20 54 12.3	0.0
CKHZ	**Cape Kidnapper**	**1.57**	**80**	P	Pn	20 54 14.0	+0.4
PLWZ	**Palliser**	**1.62**	**175**	P	Pn	20 54 14.0	-0.3
ARHZ	**Aropaoanui**	**1.64**	**66**	P	Pn	20 54 14.2	-0.2
TLZ	**Tolley Road**	**1.66**	**13**	P	Pn	20 54 14.4	-0.4
TUMZ	**Tuamarina**	**1.71**	**210**	P	Pn	20 54 15.1	-0.3
MTHZ	**Maungataniwha**	**1.76**	**52**	P	Pn	20 54 15.9	-0.1
NNZ	**Nelson**	**1.81**	**225**	P	Pn	20 54 16.0	-0.6
BSWZ	**Blackbirch Sta**	**1.98**	**207**	P	Pn	20 54 18.5	-0.5
QRZ	**Quartz Range**	**2.13**	**245**	P	Pn	20 54 19.8	-1.2
TOZ	**Tahuroa Road**	**2.24**	**9**	P	Pn	20 54 22.0	-0.4
URZ	**Urewera**	**2.32**	**44**	P	Pn	20 54 21.7	-1.7
MHGZ	**Mahia Peninsul**	**2.33**	**71**	P	Pn	20 54 22.7	-0.9
THZ	**Tophouse**	**2.44**	**222**	P	Pn	20 54 24.5	-0.7
MWZ	**Matawai**	**2.50**	**51**	P	Pn	20 54 24.2	-1.7
KHZ	**Kahutara**	**2.72**	**205**	P	Pn	20 54 27.9	-0.9
RUGZ	**Raukumara Rang**	**2.84**	**47**	P	Pn	20 54 28.3	-2.2
MKAZ	**Moumakai**	**2.84**	**1**	P	Pn	20 54 30.2	-0.3
AWAZ	**Awhitu Peninsu**	**2.90**	**353**	P	Pn	20 54 31.4	+0.1
DSZ	**Denniston Nort**	**3.06**	**233**	P	Pn	20 54 31.9	-1.5
PKGZ	**Pakihiroa**	**3.12**	**50**	P	Pn	20 54 32.5	-1.8
GVZ	**Greta Valley S**	**3.38**	**206**	P	Pn	20 54 36.0	-1.8
LTZ	**Lake Taylor**	**3.53**	**216**	P	Pn	20 54 37.8	-2.0
WCZ	**Waipu Caves**	**4.04**	**202**	P	Pn	20 54 46.7	-0.1
OKCZ	**Okains Bay**	**4.06**	**201**	P	Pn	20 54 44.5	-2.5
MQZ	**McQueen's Vall**	**4.17**	**205**	P	Pn	20 54 45.0	-3.4
AKCZ	**Akaroa Harbour**	**4.24**	**202**	P	Pn	20 54 46.9	-2.5
RACZ	**Rakaia**	**4.36**	**209**	P	Pn	20 54 47.9	-3.2
MHCZ	**Mount Hutt**	**4.44**	**215**	P	Pn	20 54 49.2	-2.9
WACZ	**Wakanui South**	**4.66**	**210**	P	Pn	20 54 52.3	-2.8
ARCZ	**Arundel**	**4.94**	**215**	P	Pn	20 54 56.5	-2.4
ODZ	**Otahua Downs**	**6.05**	**211**	P	Pn	20 55 10.9	-3.2
CTZ	**Chatham Island**	**7.27**	**124**	P	Pn	20 55 29.7	-1.0

IDC 10 21:09:03.5±48.0, 22.°88S×173.°56W, h0km, mb4.4/3, mb1 4.6/3, mb1mx3.8/25, mbtmp4.4/3, Error ellipse: s-maj=918.7km s-min=166.8km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.58**	**247**	P	P	21 16 43.0	-1.9
	2.0nm,0.4s,baz=90,slow=9.1,SNR=10						
ASAR	**Alice Springs**	**48.03**	**258**	P	P	21 17 45.0	+0.1
	2.1nm,0.4s,baz=90,slow=7.4,SNR=60						
WRA	**Warramunga Arr**	**48.39**	**263**	P	P	21 17 49.0	+1.3
	2.2nm,0.3s,baz=98,slow=6.9,SNR=151						

*ANF **10** 21:22:07.1±0.4, 61.°10N×146.°92W, h0km, ML3.7/15, Error ellipse: s-maj=5.1km s-min=2.5km az=153.0*
*NEIC **10** 21:22:08.9±1.9, 61.°24N±0.°01×146.°99W±0.°03, h4km±7km, Error ellipse: s-maj=2.1km s-min=1.6km az=52.0*
*AEIC **10** 21:22:08±2.0, 61.°24N±0.°03×147.°02W±0.°04, h6km±5km, ML3.1, Error ellipse: s-maj=4.5km s-min=1.7km az=211.0*
ISC 10 21:22:08.9±0.7, 61.°19N±0.°02×147.°04W±0.°02, h10km, n126, σ1s24/152, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JPK	**Jack Peak**	**0.25**	**122**		**Pg**	**21 22 14.5**	**+0.4**
JPK					**Sg**	**21 22 18.6**	**+1.1**
GLI	**Glacier Island**	**0.31**	**185**		**Pg**	**21 22 15.4**	**+0.2**
GLI	**Glacier Island**	**0.31**	**185**		**Sg**	**21 22 19.9**	**+0.6**
VMT	**TAPS TI Valdez**	**0.34**	**108**		**Pg**	**21 22 15.6**	**-0.1**
VMT					**Sg**	**21 22 20.7**	**+0.5**
FID	**Port Fidalgo**	**0.52**	**148**		**Pg**	**21 22 18.4**	**-0.6**
DIV	**Divide**	**0.62**	**95**		**Pg**	**21 22 19.5**	**-1.3**
KLU	**Klutina**	**0.62**	**60**		**Pg**	**21 22 19.6**	**-1.2**
KLU	**Klutina**	**0.62**	**60**		**Sg**	**21 22 27.4**	**-1.5**
SCM	**Sheep Creek Mo**	**0.66**	**348**		**Pg**	**21 22 20.4**	**-1.2**
SCM					**Sg**	**21 22 29.1**	**-1.2**
PWL	**Port Wells**	**0.71**	**243**		**Pb**	**21 22 22.5**	**-0.9**
KNK	**Knik Glacier**	**0.72**	**289**		**Pg**	**21 22 22.4**	**-0.4**
HIN	**Hinchinbrook I**	**0.84**	**162**		**Pn**	**21 22 25.8**	**-1.0**
SML	**Sawmill**	**0.88**	**315**		**Pg**	**21 22 24.6**	**-1.2**
SML					**Sg**	**21 22 36.7**	**-0.5**
EYAK	**Cordova Ski Ar**	**0.90**	**135**		**Pg**	**21 22 25.4**	**-0.8**
M24K	**Tolsona, Glenn**	**1.01**	**24**	P	**Pg**	**21 22 26.6**	**-1.6**
	baz=205,SNR=81						
M24K				S	**Sg**	**21 22 42.4**	**+1.1**
	baz=205						
M24K	**Tolsona, Glenn**	**1.01**	**24**		**Pg**	**21 22 26.6**	**-1.6**
GHO	**Glory Hole Cre**	**1.08**	**304**		**Pg**	**21 22 28.0**	**-1.6**
GHO					**Sg**	**21 22 42.9**	**-0.7**
PMR	**Palmer**	**1.08**	**293**		**Pb**	**21 22 28.6**	**-1.1**
BMRM	**Bremner River**	**1.20**	**100**		**Pn**	**21 22 29.5**	**-2.3**
N25K	**Chitina, Valde**	**1.25**	**69**	P	**Pn**	**21 22 29.8**	**-2.7**
	baz=254						
N25K				S	**Sb**	**21 22 45.2**	**-3.4**
	baz=254						
N25K	**Chitina, Valde**	**1.25**	**69**		**Pn**	**21 22 29.8**	**-2.7**
RC01	**Rabbit Creek A**	**1.31**	**267**	P	**Pb**	**21 22 33.2**	**-0.4**
	baz=82,SNR=19						
RC01				S	**Sg**	**21 22 51.4**	**+0.3**
	baz=82						
RC01	**Rabbit Creek A**	**1.31**	**267**		**Pb**	**21 22 33.3**	**-0.4**
RC01					**Sg**	**21 22 51.1**	**0.0**
WAT6	**Susitna Watana**	**1.43**	**347**		**Pn**	**21 22 32.8**	**-2.3**
O22K	**Cooper Landing**	**1.50**	**243**	P	**Pn**	**21 22 35.4**	**-0.4**
	baz=59,SNR=20						
O22K				S	**Sg**	**21 22 56.1**	**-0.8**
	baz=59						
O22K	**Cooper Landing**	**1.50**	**243**		**Pb**	**21 22 35.7**	**-1.0**
O22K					**Sg**	**21 22 56.7**	**-0.2**
GLB	**Gilahina Butte**	**1.58**	**79**		**Pn**	**21 22 35.1**	**-1.9**
HMT	**Hamilton**	**1.61**	**121**		**Pn**	**21 22 36.5**	**-0.9**
SEW	**Seward**	**1.61**	**229**		**Pb**	**21 22 37.6**	**-1.1**
SLKM	**Skilak Lake**	**1.70**	**248**		**Pb**	**21 22 39.2**	**-1.0**
SLKM					**Sg**	**21 23 02.0**	**-1.6**
VRDI	**Verde Repeater**	**1.73**	**87**		**Pn**	**21 22 38.3**	**-0.9**
WAT1	**Susitna Watana**	**1.79**	**337**		**Pn**	**21 22 38.5**	**-1.4**
SUA	**Susitna One**	**1.81**	**280**		**Pn**	**21 22 40.3**	**+0.1**
BERG	**Berg Lake**	**1.82**	**115**		**Pn**	**21 22 40.4**	**+0.1**
BERG					**Sb**	**21 23 04.5**	**-0.6**
WAT7	**Susitna Watana**	**1.86**	**333**		**Pn**	**21 22 40.0**	**-0.9**
DHY	**Denali Highway**	**1.90**	**355**	P	**Pn**	**21 22 39.8**	**-1.6**
WAT2	**Susitna Watana**	**1.92**	**338**		**Pn**	**21 22 40.7**	**-1.1**
WAT2					**Sn**	**21 23 07.5**	**+1.5**
PAX	**Paxson**	**1.93**	**22**	P	**Pn**	**21 22 41.0**	**-0.8**
MCARA	**McCarthy VSAT**	**1.95**	**83**	P	**Pn**	**21 22 42.5**	**+0.5**
CRQM	**Cirque**	**1.95**	**101**	P	**Pn**	**21 22 42.6**	**+0.5**
CUT	**Chulitna**	**1.96**	**310**	P	**Pn**	**21 22 42.6**	**+0.5**
	baz=126,SNR=34						
CUT				S	**Sb**	**21 23 09.2**	**+0.1**
	baz=126						
CUT	**Chulitna**	**1.96**	**310**		**Pn**	**21 22 42.6**	**+0.5**
CUT					**Sb**	**21 23 09.3**	**+0.3**
CAPN	**Captain Cook N**	**2.05**	**260**	Pb	**Pb**	**21 22 45.7**	**-0.5**
	baz=75						
CAPN				Sb	**Sg**	**21 23 14.0**	**-0.7**
	baz=75						
CAPN	**Captain Cook N**	**2.05**	**260**		**Pb**	**21 22 45.9**	**-0.3**
TGL	**Tana Glacier**	**2.10**	**100**	Pn	**Pn**	**21 22 44.2**	**+0.1**
HUR	**Hurricane**	**2.17**	**327**		**Pn**	**21 22 45.5**	**+0.5**
PTPK	**Patty Peak**	**2.21**	**88**		**Pn**	**21 22 46.7**	**+0.9**
PTPK					Lg	21 23 16.3	
BALM	**Baldy**	**2.28**	**92**	Pn	**Pn**	**21 22 47.2**	**+0.5**
KIAG	**Kiagna River**	**2.29**	**95**		**Pn**	**21 22 47.6**	**+0.7**
SKT	**Skwentna**	**2.29**	**292**	Pn	**Pn**	**21 22 47.2**	**+0.5**
STLK	**Strandline Lak**	**2.33**	**280**		**Pn**	**21 22 48.5**	**+1.2**
BRSE	**Bradley Lake S**	**2.34**	**233**		**Pn**	**21 22 48.2**	**+0.8**
BRSE					**Sb**	**21 23 16.6**	**-3.4**
MENT	**Mentasta**	**2.35**	**40**	Pn	**Pn**	**21 22 47.1**	**-0.4**
ISLE	**Juniper Island**	**2.37**	**102**	Pn	**Pn**	**21 22 48.1**	**+0.2**
RND	**Reindeer**	**2.38**	**340**	Pn	**Pn**	**21 22 48.2**	**+0.3**
BRLK	**Bradley Lake**	**2.38**	**235**	Pn	**Pn**	**21 22 48.4**	**+0.4**
SPCG	**Spurr Capps Gl**	**2.41**	**275**		**Pn**	**21 22 49.7**	**+1.2**
SPCP	**Crater Peak Br**	**2.48**	**274**		**Pn**	**21 22 50.5**	**+1.2**
SPCN	**Chakachatna No**	**2.49**	**273**		**Pn**	**21 22 50.8**	**+1.3**
L26K	**Log Cabin Wild**	**2.53**	**42**	P	**Pn**	**21 22 50.8**	**+0.8**
	baz=226						
L26K				Sb	**Sb**	**21 23 27.5**	**+2.1**
	baz=226						
L26K	**Log Cabin Wild**	**2.53**	**42**		**Pn**	**21 22 50.9**	**+0.9**
SPBG	**Spurr Blockage**	**2.58**	**274**		**Pn**	**21 22 51.7**	**+1.0**
BARN	**Barnard Glacie**	**2.61**	**91**	Pn	**Pn**	**21 22 51.7**	**+0.4**
GRNC	**Granite Creek**	**2.62**	**98**		**Pn**	**21 22 52.2**	**+0.8**
CNPM	**China Poot**	**2.67**	**233**	Pn	**Pn**	**21 22 51.8**	**-0.2**
MCK	**McKinley**	**2.70**	**342**	P	**Pn**	**21 22 53.0**	**+0.7**
	baz=160,SNR=75						
MCK				S	**Sn**	**21 23 28.2**	**+3.1**
	baz=160						
MCK	**McKinley**	**2.70**	**342**		**Pn**	**21 22 53.2**	**+0.9**
MESA	**MESA**	**2.70**	**110**	Pn	**Pn**	**21 22 52.6**	**+0.1**
YAH	**Yahtse**	**2.73**	**105**	Pn	**Pn**	**21 22 53.2**	**+0.3**
TRF	**Thorofare Moun**	**2.73**	**328**	Pn	**Pn**	**21 22 52.4**	**-0.5**
RIDG	**Independent Ri**	**2.75**	**21**	Pn	**Pn**	**21 22 54.6**	**+1.5**
CTGM	**Chitina Glacie**	**2.78**	**92**	Pn	**Pn**	**21 22 54.6**	**+1.0**
DFR	**Drift River**	**2.83**	**260**		**Pn**	**21 22 54.9**	**+0.7**
DOT	**Dot Lake**	**2.83**	**98**	Pn	**Pn**	**21 22 55.3**	**+1.2**
RSO	**Redoubt South**	**2.89**	**258**	Pn	**Pn**	**21 22 56.6**	**+1.5**
RDWB	**Redoubt West**	**2.93**	**259**		**Pn**	**21 22 56.6**	**+1.0**
NCT	**North Crescent**	**2.95**	**260**		**Pn**	**21 22 56.9**	**+1.1**
LOGN	**Logan Glacier**	**2.96**	**94**		**Pn**	**21 22 57.1**	**+1.0**
PPLA	**Purkeypile**	**2.97**	**307**	Pn	**Pn**	**21 22 56.9**	**+0.8**
KTH	**Kantishna Hill**	**2.98**	**324**	Pn	**Pn**	**21 22 56.9**	**+0.7**
TABL	**Table Mountain**	**2.98**	**102**	Pn	**Pn**	**21 22 57.2**	**+0.8**
BC03		**3.10**	**50**		**Pn**	**21 22 57.9**	**+0.1**
BCAR	**Beaver Creek A**	**3.10**	**50**	Pn	**Pn**	**21 22 58.7**	**+0.8**
SCRK	**Sand Creek**	**3.13**	**25**	P	**Pn**	**21 22 59.1**	**+0.8**
	baz=208						
SCRK	**Sand Creek**	**3.13**	**25**		**Pn**	**21 22 59.2**	**+0.8**
IVE	**Iliamna Volcan**	**3.17**	**251**		**Pn**	**21 22 59.4**	**+0.4**
BWN	**Browne**	**3.19**	**341**	Pn	**Pn**	**21 22 59.6**	**+0.6**
HDA	**Harding Lake**	**3.23**	**1**	P	**Pn**	**21 23 00.6**	**+1.0**
	baz=181						
HDA				S	**Sn**	**21 23 40.9**	**+2.8**
	baz=181						
HDA				S	**Sn**	**21 23 40.9**	**+2.8**
	baz=181						
HDA	**Harding Lake**	**3.23**	**1**	Pn	**Pn**	**21 23 00.8**	**+1.2**
WRH	**Wood River Hil**	**3.33**	**352**	Pn	**Pn**	**21 23 00.9**	**0.0**
BPAW	**Bear Paw Mtn.**	**3.44**	**330**	Pn	**Pn**	**21 23 02.8**	**+0.2**
CCB	**Clear Creek Bu**	**3.49**	**355**	Pn	**Pn**	**21 23 03.6**	**+0.6**
PCA	**Pinnacle**	**3.52**	**105**	Pn	**Pn**	**21 23 03.6**	**+0.1**
NEA2	**Nenana**	**3.54**	**346**	P	**Pn**	**21 23 04.2**	**+0.4**
	baz=164,SNR=16						
NEA2				S	**Sn**	**21 23 46.4**	**+0.8**
	baz=164						
NEA2	**Nenana**	**3.54**	**346**		**Pn**	**21 23 04.3**	**+0.4**
IL31		**3.59**	**1**	Pn	**Pn**	**21 23 04.6**	**0.0**
ILAR	**Eielson Array**	**3.59**	**1**	Pn	**Pn**	**21 23 05.4**	**+0.8**
CHUM	**Lake Minchumin**	**3.64**	**320**		**Pn**	**21 23 06.2**	**+0.9**
K27K	**Chicken**	**3.66**	**37**	Pn	**Pn**	**21 23 06.8**	**+1.3**
COLA	**College**	**3.72**	**355**		**Pn**	**21 23 07.0**	**+0.7**
COLA	**College**	**3.72**	**355**	Pn	**Pn**	**21 23 06.8**	**+0.6**
TCOL	**CIGO, UAF Yank**	**3.72**	**355**	S	**Sn**	**21 23 52.8**	**+2.8**
	baz=174						
TCOL	**CIGO, UAF Yank**	**3.72**	**355**	Pn	**Pn**	**21 23 07.2**	**+1.0**
MDM	**Murphy Dome**	**3.82**	**352**	Pn	**Pn**	**21 23 09.0**	**+1.3**
POKR	**Poker Plat Res**	**3.95**	**358**	P	**Pn**	**21 23 10.1**	**+0.7**
	baz=177						
POKR				S	**Sn**	**21 23 58.8**	**+3.1**
	baz=177						
POKR	**Poker Plat Res**	**3.95**	**358**	Pn	**Pn**	**21 23 10.8**	**+1.4**
I23K	**Minto, Yukon-K**	**4.11**	**346**	P	**Pn**	**21 23 12.5**	**+0.8**
	baz=164,SNR=18						
I23K				S	**Sn**	**21 24 02.9**	**+3.2**
	baz=164						
I23K	**Minto, Yukon-K**	**4.11**	**346**	Pn	**Pn**	**21 23 11.8**	**+0.2**
SVW2	**Sparrevohn**	**4.14**	**272**	Pn	**Pn**	**21 23 11.8**	**-0.4**
MLY	**Manley**	**4.21**	**338**	P	**Pn**	**21 23 13.7**	**+0.7**
	baz=154,SNR=24						
MLY				S	**Sn**	**21 24 03.8**	**+1.7**
	baz=154						
MLY	**Manley**	**4.21**	**338**		**Pn**	**21 23 13.8**	**+0.7**
PRP	**Porcupine Dome**	**4.40**	**8**	Pn	**Pn**	**21 23 16.3**	**+0.6**
EGAK	**Eagle**	**4.49**	**34**	Pn	**Pn**	**21 23 18.6**	**+1.8**
DAWY	**Dawson**	**4.56**	**47**	Pn	**Pn**	**21 23 19.5**	**+1.7**
TT01	**Tatalina**	**4.56**	**296**		**Pn**	**21 23 18.7**	**+0.8**
TTA	**Tatalina**	**4.57**	**296**	Pn	**Pn**	**21 23 18.2**	**+0.1**
FYU	**Fort Yukon**	**5.46**	**8**	Pn	**Pn**	**21 23 31.0**	**+0.9**
IM03		**5.67**	**331**		**Pn**	**21 23 33.8**	**+0.9**
IMAR	**Indian Mountai**	**5.67**	**331**	Pn	**Pn**	**21 23 33.7**	**+0.7**
COLD	**Coldfoot**	**6.22**	**349**	P	**Pn**	**21 23 41.3**	**+0.8**
	baz=165,SNR=9.0						
COLD	**Coldfoot**	**6.22**	**349**	Pn	**Pn**	**21 23 41.3**	**+0.8**
BM03	**Burnt Mountain**	**6.34**	**9**		**Pn**	**21 23 42.6**	**+0.3**
BMAR	**Burnt Mountain**	**6.35**	**9**	Pn	**Pn**	**21 23 43.8**	**+1.3**
CHIR	**Chirikof Islan**	**7.01**	**224**	Pn	**Pn**	**21 23 50.4**	**-1.0**
TOLK	**Toolik Lake Re**	**7.56**	**353**	S	**Sn**	**21 25 28.3**	**+3.6**
	baz=170						
INK	**Inuvik**	**9.16**	**33**	Pn	**Pn**	**21 24 19.5**	**-1.3**

IDC 10 21:22:26.7±1.8, 50.°04S×119.°32E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.6/23, mbtmp3.5/4, MS3.6/5, Ms1 3.6/5, ms1mx3.3/28, Error ellipse: s-maj=72.8km s-min=30.5km az=91.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**15.60**	**344**	T	T	21 42 15.9	
	baz=165,slow=73,SNR=22						
H01W1	**Cape Leeuwin H**	**15.61**	**344**	T	T	21 42 15.4	
	baz=165,slow=73,SNR=12						
H01W3	**Cape Leeuwin H**	**15.62**	**344**	T	T	21 42 19.4	
	baz=165,slow=73,SNR=14						
NWAO	**Narrogin (SRO)**	**17.17**	**354**	LR	LR	21 31 36.2	
	comp=Z,74nm,18.2s,baz=348,slow=32						
ASAR	**Alice Springs**	**28.69**	**29**	P	P	21 28 25.6	+0.2
	0.6nm,0.7s,baz=204,slow=8.9,SNR=5.3						
VNDA	**Vanda**	**31.85**	**164**	P	P	21 28 52.7	0.0
	0.6nm,0.7s,baz=306,slow=8.5,SNR=2.7						
WRA	**Warramunga Arr**	**32.33**	**27**	P	P	21 28 57.2	-0.3
	0.4nm,0.9s,baz=198,slow=8.0,SNR=1.6						
CMAR	**Chiang Mai Arr**	**70.54**	**339**	P	P	21 33 43.4	+0.1
	0.3nm,0.7s,baz=188,slow=5.5,SNR=2.5						
SUR	**Sutherland**	**70.93**	**242**	LR	LR	21 58 19.7	
	comp=Z,100nm,20.0s,baz=298,slow=30						
LBTB	**Lobatse**	**73.53**	**251**	LR	LR	21 59 10.4	
	comp=Z,40nm,21.0s,baz

VWDT				*e*S	**Sg**	**21 35 14.6**	**0.0**		
	baz=209								
SBCB	**Hsinchu**	**0.64**	**318**	*e*P	**Pn**	**21 35 08.7**	**-0.5**		
	baz=319								
EGFH	**Guangfu**	**0.65**	**183**	⇑*i*P	**Pb**	**21 35 07.0**	**-0.4**		
EGFH	baz=179			*e*S	**Sb**	**21 35 15.6**	**-0.8**		
	baz=179								
NSY	**Sanyi**	**0.65**	**279**	⇑*i*P	**Pn**	**21 35 08.0**	**-1.3**		
NSY	baz=279			*e*S	**Sb**	**21 35 16.9**	**+0.4**		
	baz=279								
NMLH	**Miaoli**	**0.65**	**290**	⇑*i*P	**Pn**	**21 35 08.3**	**-1.1**		
NMLH	baz=291			*e*S	**Sb**	**21 35 17.0**	**+0.4**		
	baz=291								
TATO	**Taipei**	**0.66**	**2**	⇑*i*P	**Pn**	**21 35 08.3**	**-1.0**		
TATO	baz=356			*e*S	**Sb**	**21 35 17.4**	**+0.6**		
	baz=356								
HSN	**Hsinchu**	**0.66**	**317**	*e*P	**Pn**	**21 35 09.4**	**0.0**		
HSN	baz=324			*e*S	**Sn**	**21 35 18.8**	**-1.2**		
	baz=324								
TWA	**Mucha**	**0.67**	**9**	⇑*i*P	**Pn**	**21 35 08.5**	**-1.1**		
TWA	baz=14			*e*S	**Sb**	**21 35 17.7**	**+0.5**		
	baz=14								
SMLT	**Sun Moon Lake**	**0.67**	**230**	⇑*i*P	**Pb**	**21 35 07.2**	**-0.7**		
SMLT	baz=227			*e*S	**Sg**	**21 35 15.7**	**-0.1**		
	baz=227								
EGS		**0.68**	**39**	*e*P	**Pn**	**21 35 08.5**	**-1.2**		
EGS	baz=56			*e*S	**Sb**	**21 35 18.5**	**+1.1**		
	baz=56								
TYC	**Yuchr**	**0.69**	**234**	⇑*i*P	**Pb**	**21 35 07.5**	**-0.6**		
TYC	baz=221			*e*S	**Sg**	**21 35 15.6**	**-0.8**		
	baz=221								
NCUH	**Zhongli**	**0.70**	**339**	*e*P	**Pn**	**21 35 10.1**	**+0.1**		
NCUH	baz=342			*e*S	**Sn**	**21 35 20.2**	**-0.7**		
	baz=342								
NCU	**National Centr**	**0.70**	**339**	*e*P	**Pn**	**21 35 10.0**	**+0.1**		
NCU	baz=342			*e*S	**Sn**	**21 35 20.1**	**-0.8**		
	baz=342								
SSLB	**Suanglung**	**0.70**	**222**	⇑*i*P	**Pg**	**21 35 07.1**	**-0.5**		
SSLB	baz=219			*e*S	**Sg**	**21 35 15.8**	**-0.9**		
	baz=219								
TAP	**Taipei**	**0.72**	**3**	*e*P	**Pn**	**21 35 09.9**	**-0.4**		
TAP	baz=7.0			*e*S	**Sb**	**21 35 19.0**	**+0.3**		
	baz=7.0								
TIPB	**Shuangxi**	**0.73**	**27**	⇑*i*P	**Pb**	**21 35 09.2**	**+0.3**		
TIPB	baz=17			*e*S	**Sb**	**21 35 19.4**	**+0.4**		
	baz=17								
TCU	**Taichung**	**0.74**	**257**	*e*P	**Pn**	**21 35 09.7**	**-0.8**		
TCU	baz=256			*e*S	**Sb**	**21 35 20.0**	**+0.9**		
	baz=256								
WDJ	**Dajia District**	**0.75**	**273**	*e*P	**Pb**	**21 35 09.1**	**-0.1**		
	baz=272								
TWS1	**Kuangyinshan**	**0.78**	**357**	⇑*i*P	**Pn**	**21 35 11.5**	**+0.4**		
TWS1	baz=8.0			*e*S	**Sn**	**21 35 22.8**	**-0.1**		
	baz=8.0								
NWF	**Wu-fen Shan**	**0.81**	**21**	*e*P	**Pn**	**21 35 10.9**	**-0.6**		
NWF	baz=24			*e*S	**Sn**	**21 35 23.1**	**-0.5**		
	baz=24								
WFSB	**Wu-fen Shan**	**0.81**	**21**	*i* P	**Pn**	**21 35 10.9**	**-0.5**		
WFSB	baz=24			*e*S	**Sn**	**21 35 22.5**	**-1.0**		
	baz=24								
EHY	**Hungye**	**0.82**	**189**	⇑*i*P	**Pb**	**21 35 09.7**	**-0.6**		
	baz=179								
HGSD	**Ruisui**	**0.82**	**183**	⇓*i*P	**Pb**	**21 35 10.5**	**+0.2**		
HGSD	baz=179			*e*S	**Sb**	**21 35 22.2**	**+0.8**		
	baz=179								
WHYT	**Xinyi Township**	**0.83**	**222**	*e*P	**Pb**	**21 35 09.9**	**-0.7**		
	baz=220								
YM01	**YM01**	**0.83**	**7**	⇑*i*P	**Pn**	**21 35 11.9**	**0.0**		
YM01	baz=25			*e*S	**Sb**	**21 35 22.5**	**+0.6**		
	baz=25								
WJS	**Zhushan**	**0.83**	**234**	⇑*i*P	**Pn**	**21 35 10.9**	**-0.9**		
WJS	baz=224			*e*S	**Sn**	**21 35 23.0**	**-1.2**		
	baz=224								
WNT	**Mingjian**	**0.83**	**239**	P	**Pn**	**21 35 11.6**	**-0.2**		
WNT	baz=228			*e*S	**Sn**	**21 35 23.0**	**-1.2**		
	baz=228								
YM04	**YM04**	**0.84**	**5**	⇑*i*P	**Pn**	**21 35 11.9**	**0.0**		
YM04	baz=24			*e*S	**Sb**	**21 35 22.6**	**+0.6**		
	baz=24								
TWB1	**Santiao Chiao**	**0.84**	**35**	⇑*i*P	**Pn**	**21 35 11.3**	**-0.6**		
TWB1	baz=47			*e*S	**Sb**	**21 35 22.3**	**+0.3**		
	baz=47								
YM10	**YM10**	**0.84**	**6**	*i* P	**Pn**	**21 35 12.0**	**+0.1**		
YM10	baz=26			*e*S	**Sn**	**21 35 23.3**	**-1.1**		
	baz=26								
NTST	**Danshui**	**0.84**	**359**	*e*P	**Pn**	**21 35 12.6**	**+0.6**		
NTST	baz=11			*e*S	**Sn**	**21 35 25.0**	**+0.6**		
	baz=11								
YM05	**YM05**	**0.85**	**6**	⇑*i*P	**Pn**	**21 35 12.2**	**+0.1**		
YM05	baz=26			*e*S	**Sn**	**21 35 23.4**	**-1.3**		
	baz=26								
YM11	**YM11**	**0.85**	**7**	*e*P	**Pn**	**21 35 12.5**	**+0.3**		
YM11	baz=26			*e*S	**Sb**	**21 35 23.0**	**+0.5**		
	baz=26								
WCHH	**Zhanghua**	**0.86**	**254**	*e*P	**Pn**	**21 35 12.4**	**+0.3**		
WCHH	baz=252			*e*S	**Sb**	**21 35 22.6**	**+0.1**		
	baz=252								
YM03	**YM03**	**0.86**	**5**	⇑*i*P	**Pn**	**21 35 12.4**	**+0.1**		
YM03	baz=24			*e*S	**Sn**	**21 35 25.9**	**+0.8**		
	baz=24								
ANP	**Anpu**	**0.87**	**3**	P	**Pn**	**21 35 12.5**	**+0.1**		
ANP	baz=23			*e*S	**Sn**	**21 35 24.9**	**-0.3**		
	baz=23								
YM08	**YM08**	**0.88**	**8**	*e*P	**Pn**	**21 35 12.2**	**-0.2**		
YM08	baz=11			*e*S	**Sn**	**21 35 25.6**	**+0.3**		
	baz=11								
NWRT	**Kuosheng**	**0.90**	**11**	*e*P	**Pn**	**21 35 13.5**	**+0.8**		
	baz=11								
YULB	**Yu-li**	**0.93**	**189**	P	**Pb**	**21 35 11.9**	**-0.4**		
YULB	baz=180			*e*S	**Sb**	**21 35 24.9**	**+0.2**		
	baz=180								
TWY	**Chenhua**	**0.96**	**7**	*e*P	**Pn**	**21 35 13.3**	**-0.3**		
TWY	baz=24			*e*S	**Sn**	**21 35 27.7**	**+0.4**		
	baz=24								
TWF1	**Yuli**	**0.97**	**189**	*e*P	**Pb**	**21 35 12.6**	**-0.3**		
TWF1	baz=192			*e*S	**Sb**	**21 35 26.1**	**+0.3**		
	baz=192								
EYUL	**Yuli**	**0.97**	**188**	P	**Pn**	**21 35 13.2**	**-0.6**		
EYUL	baz=192			*e*S	**Sn**	**21 35 26.9**	**-0.7**		
	baz=192								
ALS	**Alishan**	**1.00**	**217**	P	**Pb**	**21 35 13.4**	**-0.3**		
ALS	baz=214			*e*S	**Sn**	**21 35 27.6**	**-1.2**		
	baz=214								
CHN5	**Tsauling**	**1.01**	**225**	*e*P	**Pn**	**21 35 14.3**	**-0.1**		
CHN5	baz=216			*e*S	**Sn**	**21 35 29.3**	**+0.6**		
	baz=216								
WGK	**Gukeng**	**1.04**	**233**	*e*P	**Pn**	**21 35 15.5**	**+0.9**		
WGK	baz=229			*e*S	**Sn**	**21 35 29.8**	**+0.7**		
	baz=229								
WDLH	**Douliu**	**1.05**	**234**	*e*P	**Pn**	**21 35 15.8**	**+1.0**		
	baz=230								
WDLH				*e*S	**Sn**	**21 35 31.7**	**+2.2**		
	baz=230								
RLNB	**Erlin**	**1.09**	**247**	*e*P	**Pn**	**21 35 16.2**	**+0.8**		
RLNB	baz=244			*e*S	**Sn**	**21 35 31.0**	**+0.4**		
	baz=244								
WTK	**Tuku**	**1.17**	**238**	P	**Pn**	**21 35 16.1**	**-0.3**		
	baz=236								
ELDTW	**Lidau**	**1.19**	**200**	P	**Pn**	**21 35 16.6**	**-0.3**		
ELDTW	baz=187			*e*S	**Sb**	**21 35 32.1**	**-0.2**		
	baz=187								
CHN2	**Minshiung**	**1.20**	**229**	*e*P	**Pg**	**21 35 18.6**	**+1.6**		
	baz=241								
CHN2				*e*S	**Sn**	**21 35 36.1**	**+3.0**		
	baz=241								
CHKT	**Chengkung**	**1.22**	**184**	*e*P	**Pn**	**21 35 16.7**	**-0.3**		
	baz=168								
CHKT				*e*S	**Sn**	**21 35 35.0**	**+1.5**		
	baz=168								
CHN4	**Tsaushan**	**1.25**	**220**	*e*P	**Pg**	**21 35 18.6**	**+0.6**		
	baz=217								
CHN4				*e*S	**Sn**	**21 35 35.6**	**+1.2**		
	baz=217								
CHY	**Chiayi**	**1.25**	**230**	P	**Pg**	**21 35 18.8**	**+0.7**		
	baz=241								
CHY				*e*S	**Sn**	**21 35 36.5**	**+2.0**		
	baz=241								
TPUB	**Ta-pu**	**1.27**	**217**	P	**Pg**	**21 35 18.3**	**0.0**		
	baz=214								
TPUB				*e*S	**Sn**	**21 35 36.7**	**+1.8**		
	baz=214								
STYT	**Tauyuan**	**1.32**	**210**	P	**Pg**	**21 35 19.3**	**0.0**		
	baz=212								
STYT				*e*S	**Sg**	**21 35 37.3**	**+0.9**		
	baz=212								
WTP	**Ta-pu**	**1.32**	**216**	*e*P	**Pg**	**21 35 19.5**	**+0.1**		
	baz=214								
WTP				*e*S	**Sg**	**21 35 36.3**	**-0.2**		
	baz=214								
WSF	**Szhu**	**1.32**	**240**	*e*P	**Pg**	**21 35 19.4**	**0.0**		
	baz=236								
WSF				*e*S	**Sg**	**21 35 37.9**	**+1.4**		
	baz=236								
EDH	**Donghe**	**1.34**	**186**	*e*P	**Pg**	**21 35 19.7**	**-0.1**		
	baz=170								
EDH				*e*S	**Sg**	**21 35 37.5**	**+0.2**		
	baz=170								
WLGB	**Puzi**	**1.35**	**232**	*e*P	**Pg**	**21 35 19.4**	**-0.5**		
	baz=229								
WLGB				*e*S	**Sg**	**21 35 39.5**	**+2.0**		
	baz=229								
JYNG	**Yonagunijimaku**	**1.36**	**84**	P	**Pg**	**21 35 20.9**	**+0.8**		
JYNG				*e*S	**Sg**	**21 35 39.6**	**+1.9**		
TWK	**Hsinying**	**1.38**	**221**	P	**Pg**	**21 35 21.1**	**+0.7**		
	baz=217								
TWK				*e*S	**Sg**	**21 35 39.4**	**+1.2**		
	baz=217								
SNST	**Tainan City**	**1.41**	**219**	*e*P	**Pg**	**21 35 21.2**	**+0.2**		
	baz=216								
SNST				*e*S	**Sg**	**21 35 40.3**	**+1.1**		
	baz=216								
CHN1	**Nanshi**	**1.42**	**217**	*e*P	**Pg**	**21 35 21.8**	**+0.7**		
	baz=215								
CHN1				*e*S	**Sg**	**21 35 40.6**	**+1.1**		
	baz=215								
YOJ	**Yonaguni jima**	**1.42**	**84**	*e*P	**Pg**	**21 35 21.5**	**+0.3**		
	baz=75								
YOJ				*e*S	**Sg**	**21 35 41.8**	**+2.2**		
	baz=75								
YOJ	**Yonaguni jima**	**1.42**	**84**	P	**Pg**	**21 35 21.7**	**+0.5**		
PCYT	**Pengchaiyu**	**1.42**	**23**	*e*P	**Pg**	**21 35 21.0**	**-0.2**		
	baz=29								
PCYT				*e*S	**Sg**	**21 35 39.9**	**+0.2**		
	baz=29								
LONT	**Longtian**	**1.44**	**192**	*e*P	**Pb**	**21 35 20.3**	**-0.6**		
	baz=175								
LONT				*e*S	**Sg**	**21 35 39.8**	**-0.5**		
	baz=175								
ICHU	**Yijhu**	**1.44**	**229**	*e*P	**Pb**	**21 35 20.4**	**-0.6**		
	baz=241								
SGST	**Jiashian**	**1.47**	**213**	*e*P	**Pg**	**21 35 21.6**	**-0.7**		
	baz=203								
SGST				*e*S	**Sg**	**21 35 42.9**	**+1.6**		
	baz=203								
CHN8	**Yiju**	**1.50**	**230**	*e*P	**Pg**	**21 35 22.6**	**-0.2**		
	baz=239								
CHN8				*e*S	**Sg**	**21 35 43.5**	**+1.2**		
	baz=239								
SLGT	**Liugui**	**1.52**	**210**	*e*P	**Pg**	**21 35 23.4**	**+0.3**		
	baz=196								
SLGT				*e*S	**Sg**	**21 35 44.6**	**+1.9**		
	baz=196								
TWG	**Pinlang**	**1.53**	**194**	*e*P	**Pb**	**21 35 21.8**	**-0.7**		
	baz=176								
TWG				*e*S	**Sg**	**21 35 42.3**	**-0.9**		
	baz=176								
TWGBT	**Beinan**	**1.53**	**193**	*e*P	**Pn**	**21 35 21.1**	**-0.4**		
	baz=174								
SCLT	**Jiali**	**1.63**	**226**	*e*P	**Pg**	**21 35 24.7**	**-0.5**		
	baz=203								
SCLT				*e*S	**Sg**	**21 35 48.1**	**+1.8**		
	baz=203								
SCST	**Cishan**	**1.68**	**212**	*e*P	**Pg**	**21 35 26.7**	**+0.5**		
	baz=211								
SSD	**Sandimen**	**1.74**	**206**	*e*P	**Pg**	**21 35 27.7**	**+0.3**		
	baz=203								
SSD				*e*S	**Sg**	**21 35 49.8**	**-0.1**		
	baz=203								
TWM1	**Shoushan**	**1.77**	**213**	*e*P	**Pg**	**21 35 29.2**	**+1.3**		
	baz=211								
TSMG	**Majia**	**1.77**	**205**	*e*P	**Pg**	**21 35 27.5**	**-0.5**		
	baz=201								
TSMG				*e*S	**Sg**	**21 35 50.8**	**-0.1**		
	baz=201								
ECL	**Taimali**	**1.77**	**195**	*e*P	**Pb**	**21 35 26.4**	**-0.2**		
	baz=195								
MASBT	**Mashibuluo**	**1.86**	**204**	*e*P	**Pg**	**21 35 28.8**	**-0.9**		
	baz=200								
MASBT				*e*S	**Sg**	**21 35 53.3**	**-0.5**		
	baz=200								
PNG	**Penghu**	**1.90**	**247**	*e*P	**Pb**	**21 35 28.7**	**-0.1**		
	baz=243								
PNG				*e*S	**Sb**	**21 35 52.4**	**-0.2**		
	baz=243								
PHUB	**P'eng-hu**	**1.91**	**246**	*e*P	**Pn**	**21 35 26.8**	**+0.3**		
	baz=242								
PHUB				*e*S	**Sb**	**21 35 53.4**	**+0.6**		
	baz=242								
PTTC	**Pingtan**	**1.94**	**308**	*e*P	**Pn**	**21 35 27.4**	**+0.4**		
	baz=305								
VWUC	**VWUC**	**1.95**	**291**	*e*P	**Pn**	**21 35 27.3**	**+0.1**		
	baz=288								
WDGT	**Dungji**	**1.96**	**238**	*e*P	**Pb**	**21 35 29.3**	**-0.5**		
	baz=234								
WDGT				*e*S	**Sb**	**21 35 54.1**	**-0.1**		
	baz=234								
SSPT	**Xinbi**	**2.00**	**204**	*e*P	**Pg**	**21 35 32.1**	**-0.3**		
	baz=203								
EAST	**Anshuo**	**2.00**	**197**	*e*P	**Pg**	**21 35 31.7**	**-0.8**		
	baz=183								
EAST				*e*S	**Sg**	**21 35 56.9**	**-1.6**		
	baz=183								
TAW	**Tawu**	**2.02**	**195**	*e*P	**Pb**	**21 35 30.6**	**-0.2**		
	baz=178								
IRIF	**Iriomote-Funau**	**2.07**	**89**	P	**Pb**	**21 35 31.5**	**-0.1**		
IRIF				*e*S	**Sg**	**21 35 59.1**	**-1.4**		
SCZT	**Fangliau**	**2.08**	**202**	*e*P	**Pb**	**21 35 32.2**	**+0.3**		
	baz=200								
VCHM	**Qimei**	**2.17**	**240**	*e*P	**Pb**	**21 35 31.9**	**-1.4**		
	baz=240								
PTMZ	**Houxiangcun**	**2.25**	**289**	*e*P	**Pn**	**21 35 31.5**	**+0.2**		
	baz=287								
LAY	**Lan-yu**	**2.27**	**178**	*e*P	**Pn**	**21 35 31.6**	**0.0**		
	baz=169								
MATB	**Ma-tsu**	**2.29**	**323**	*e*P	**Pn**	**21 35 32.7**	**+0.9**		
	baz=320								
JKRS	**Kuro-shima**	**2.33**	**91**	P	**Pb**	**21 35 35.5**	**-0.5**		
JKRS				*e*S	**Sb**	**21 36 05.5**	**+0.7**		
TWKBT	**Hengchun**	**2.44**	**194**	*e*P	**Pb**	**21 35 36.2**	**-1.8**		
	baz=179								
JIJ	**Ishigaki jima**	**2.44**	**88**	P	**Pb**	**21 35 36.3**	**-1.8**		
JIJ				*e*S	**Sb**	**21 36 08.1**	**-0.2**		
JISG	**Ishigakijimahi**	**2.61**	**83**	P	**Pb**	**21 35 38.2**	**-2.7**		
JISG				*e*S	**Sb**	**21 36 12.1**	**-0.9**		
KNM	**Kinmen**	**2.77**	**273**	*e*P	**Pn**	**21 35 40.3**	**+2.0**		
	baz=272								
KNMB	**Chin-men Tao**	**2.81**	**274**	*e*P	**Pn**	**21 35 38.9**	**-0.1**		
	baz=273								
MHZQ	**Yeshan**	**2.83**	**309**	*e*P	**Pn**	**21 35 41.5**	**+2.2**		
	baz=307								
XPSS	**Dashiqiu**	**2.85**	**336**	*e*P	**Pn**	**21 35 40.4**	**+0.9**		
	baz=334								
JTJ	**Tarama**	**2.97**	**83**	P	**Pb**	**21 35 44.2**	**-2.8**		
AXDP	**Jialang**	**3.23**	**281**	*e*P	**Pn**	**21 35 45.6**	**+0.8**		
	baz=280								

BJI ***10*** *21:37:55.9±0.0,29.°81S×177.°21W,h17km,mB5.8/48, mb5.4/49,Ms5.3/52,Ms7 5.1/51*

BGR ***10*** *21:37:58.2±0.0,30.°56S×177.°31W,h33km,Ms5.3*

MOS ***10*** *21:37:58.5±1.1,30.°03S×177.°77W,h22km,mb5.8/34, MS5.2/29,Error ellipse: s-maj=8.8km s-min=7.1km az=96.3*

IDC ***10*** *21:38:00.6±1.9,29.°99S×177.°76W,h26km±11km,mb5.4/39, mb1 5.4/39,mb1mx5.3/44,mbtmp5.5/39,MS4.9/25, Ms1 5.0/25,ms1mx4.9/28,Error ellipse: s-maj=11.3km s-min=10.3km az=86.0*

NEIC ***10*** *21:38:00.8±1.8,30.°04S±0.°06×177.°9W±0.°1,h29km±1km, mb5.8/295,Ms_20 5.3/359,Mwb5.5/34,Mww5.7, Mwc5.6(GCMT),Error ellipse: s-maj=16.1km s-min=9.3km az=99.0*

NEIC ***10*** *21:38:01.4,29.°98S×177.°88W,h35km,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr2.43; Mθθ-0.08; Mϕϕ-2.35; Mrθ0.53; Mθϕ-0.60; Mϕr0.50; Fault plane solution: M0 2.57000×1017 NP1:ϕs185.03000°, δ38.71000°,λ76.09000°. NP2:ϕs22.64000°,δ52.63000°, λ100.91000°. Principal axes: T 2.5644, Plg79.0000°, Azm336.0000°; N 0.0101, Plg9.0000°, Azm196.0000°; P -2.5745, Plg7.0000°, Azm105.0000°;*

GCMT ***10*** *21:38:03.8±0.1,30.°06S±0.°01×177.°45W±0.°01,h42km, MW5.6/144,Moment Tensor Solution. s144,c277; s142,c260; Duration: 1s6 Moment tensor: Scale 1017 Nm; Mrr3.01±.04; Mθθ-0.39±.03; Mϕϕ-2.62±.03; Mrθ0.49±.03; Mθϕ-1.02±.02; Mϕr1.58±.03; Best double couple: M0 3.43700×1017 NP1:ϕs203.00000°,δ31.00000°, λ93.00000°. NP2:ϕs19.00000°,δ59.00000°,λ88.00000°. Principal axes: T 3.4350, Plg76.0000°, Azm283.0000°; N 0.0030, Plg2.0000°, Azm20.0000°; P -3.4380, Plg14.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***10*** *21:38:04,30.°08S×177.°40W,h44km,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr2.94; Mθθ-0.29; Mϕϕ-2.66; Mrθ0.49; Mθϕ-1.05; Mϕr1.51; Fault plane solution: M0 3.39000×1017 NP1:ϕs202.00000°, δ31.00000°,λ92.00000°. NP2:ϕs19.00000°,δ59.00000°, λ89.00000°. Principal axes: T 3.3371, Plg76.0000°, Azm285.0000°; N 0.1121, Plg1.0000°, Azm20.0000°; P -3.4493, Plg14.0000°, Azm110.0000°;*

NEIC ***10*** *21:38:06,29.°87S×177.°61W,h22km,Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr2.75; Mθθ0.16; Mϕϕ-2.92; Mrθ1.29; Mθϕ-0.74; Mϕr3.72; Fault plane solution: M0 4.91000×1017 NP1:ϕs186.00000°, δ19.00000°,λ79.00000°. NP2:ϕs18.00000°,δ72.00000°, λ94.00000°. Principal axes: T 4.7474, Plg63.0000°, Azm294.0000°; N 0.3035, Plg4.0000°, Azm197.0000°; P -5.0509, Plg27.0000°, Azm105.0000°;*

ISC 10 21:38:00.1±0.4,30.°15S±0.°03×177.°59W±0.°04,h28km±2km, h28km:pP-P,n1291,σ1953/1153,mb5.8/259,MS5.3/238, 46C-21D,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**0.93**	**342**	P	**Pn**	**21 38 16.1**	**-1.2**
GLKZ				S	**Sb**	**21 38 26.4**	**-3.1**
RAO	**Raoul Island**	**0.94**	**342**	Pn	**Pn**	**21 38 16.3**	**-1.1**
	9μm,0.3s,baz=198,slow=3.0,SNR=349						
RAO				Sn	**Sb**	**21 38 26.4**	**-3.4**
	52μm,0.3s,baz=86,slow=19,SNR=18						
RAO	**Raoul Island**	**0.94**	**342**		**Pn**	**21 38 15.9**	**-1.5**
RIZ	**Raoul Island**	**0.95**	**342**	P	**Pn**	**21 38 16.4**	**-1.2**
RIZ				S	**Sb**	**21 38 27.1**	**-3.0**
MXZ	**Matakaoa Point**	**8.14**	**204**	P	**Pn**	**21 39 54.2**	**-2.1**
MXZ				S	**Sn**	**21 41 25.1**	**-2.3**
MXZ	**Matakaoa Point**	**8.14**	**204**	Pn	**Pn**	**21 39 54.0**	**-2.3**
WMGZ	**Waiomatatini S**	**8.34**	**202**	P	**Pn**	**21 39 58.1**	**-0.9**
WMGZ				S	**Sn**	**21 41 31.8**	**-0.4**
HAZ	**Te Kaha**	**8.50**	**206**	P	**Pn**	**21 40 00.5**	**-0.8**
HAZ				S	**Sn**	**21 41 32.7**	**-3.6**
PKGZ	**Pakihiroa**	**8.51**	**204**	P	**Pn**	**21 39 59.7**	**-1.9**
PKGZ				S	**Sn**	**21 41 36.5**	**-0.2**
PUZ	**Puketiti**	**8.62**	**202**	P	**Pn**	**21 40 01.7**	**-1.2**
PUZ				S	**Sn**	**21 41 34.9**	**-4.3**
RUGZ	**Raukumara Rang**	**8.73**	**205**	P	**Pn**	**21 40 02.8**	**-1.7**
TWGZ	**Tauwhareparae**	**8.81**	**203**	P	**Pn**	**21 40 04.8**	**-0.7**
TWGZ				S	**Sn**	**21 41 40.6**	**-3.3**
WCZ	**Waipu Caves**	**8.89**	**227**	P	Pn	21 40 14.5	+7.8
OUZ	**Omahuta**	**8.98**	**233**	P	Pn	21 40 15.9	+8.0
MWZ	**Matawai**	**9.11**	**205**	P	**Pn**	**21 40 07.2**	**-2.4**
MWZ				S	**Sn**	**21 41 49.0**	**-2.2**
URZ	**Urewera**	**9.20**	**207**	P	**Pn**	**21 40 09.2**	**-1.6**
URZ				S	**Sn**	**21 41 50.2**	**-3.2**
URZ	**Urewera**	**9.20**	**207**	Pn	**Pn**	**21 40 09.2**	**-1.6**
RIGZ	**Rimuhau**	**9.36**	**203**	P	**Pn**	**21 40 11.6**	**-1.4**
RIGZ				S	**Sn**	**21 41 54.2**	**-3.2**
TOZ	**Tahuroa Road**	**9.49**	**215**	P	Pn	21 40 24.6	+10
PRGZ	**Paritu Road**	**9.51**	**202**	P	**Pn**	**21 40 12.7**	**-2.5**
MUGZ	**Murupara**	**9.52**	**208**	P	**Pn**	**21 40 12.6**	**-2.7**
MUGZ				S	**Sn**	**21 41 56.4**	**-5.0**
KNZ	**Kokohu**	**9.67**	**203**	P	**Pn**	**21 40 14.8**	**-2.5**
MHGZ	**Mahia Peninsul**	**9.71**	**201**	P	**Pn**	**21 40 15.3**	**-2.7**
RAHZ	**Arahi**	**9.78**	**205**	P	**Pn**	**21 40 18.4**	**-0.4**
MTHZ	**Maungataniwha**	**9.82**	**206**	P	**Pn**	**21 40 18.2**	**-1.2**
MTHZ				S	**Sn**	**21 42 04.6**	**-4.1**
WHHZ	**Waihua**	**9.87**	**204**	P	**Pn**	**21 40 24.3**	**+4.2**
WHHZ				S	**Sn**	**21 42 06.5**	**-3.4**
MRHZ	**Matea Rd**	**9.97**	**208**	S	**Sn**	**21 42 08.8**	**-3.7**
NMHZ	**Naumai**	**10.04**	**206**	S	**Sn**	**21 42 12.3**	**-2.0**
ARHZ	**Aropaoanui**	**10.12**	**205**	P	**Pn**	**21 40 21.2**	**-2.3**
ARHZ				S	**Sn**	**21 42 11.0**	**-5.0**
BKZ	**Black Stump Fm**	**10.23**	**207**	P	**Pn**	**21 40 23.3**	**-1.7**
BKZ				S	**Sn**	**21 42 14.1**	**-4.6**
BKZ	**Black Stump Fm**	**10.23**	**207**	Pn	**Pn**	**21 40 21.7**	**-3.3**
MCHZ	**McNeill Hill**	**10.39**	**205**	P	**Pn**	**21 40 25.7**	**-1.5**
HIZ	**Hauiti**	**10.42**	**215**	P	**Pn**	**21 40 31.5**	**+3.9**
CKHZ	**Cape Kidnapper**	**10.44**	**203**	P	**Pn**	**21 40 23.8**	**-4.1**
TMVZ	**Te Maari**	**10.51**	**210**	P	**Pn**	**21 40 30.9**	**+2.0**
ETVZ	**East Tongariro**	**10.52**	**210**	P	**Pn**	**21 40 30.8**	**+1.7**
WTVZ	**West Tongariro**	**10.56**	**210**	P	**Pn**	**21 40 32.4**	**+2.8**
KAHZ	**Kahuranaki**	**10.63**	**204**	P	**Pn**	**21 40 26.6**	**-3.9**
BHHZ	**Black Hill Sta**	**10.67**	**208**	P	**Pn**	**21 40 30.8**	**-0.3**
KRHZ	**Kereru**

DZM Mont Dzumac 16.43 296 *e*Pn **P** **21 41 54.3 +3.0**
1µm,1.4s
DZM *e*S **S** **21 44 56.9 -5.1**
7µm,25.6s
DZM *e*LQ LQ 21 45 02.9
7µm,24.1s
DZM *e*LR LR 21 45 44.5
comp=Z,26µm,24.9s
DZM Mont Dzumac 16.43 296 P **P** **21 41 54.5 +3.1**
FOZ Fox Glacier 16.71 213 Pn **Pn** **21 41 52.3 +0.2**
AFI Afiamalu 17.03 20 Pn Pn 21 41 48.4 -8.0
2.6nm,0.3s,baz=357,slow=12,SNR=8.5
AFI Afiamalu 17.03 20 P **Pn** **21 41 56.0 -0.4**
AFI Afiamalu 17.03 20 Pn **Pn** **21 41 50.0 -6.4**
LBZ Lake Benmore 17.19 211 P **P** **21 41 59.5 -0.1**
LBZ Lake Benmore 17.19 211 **P** **21 41 58.7 -0.9**
ODZ Otahua Downs 17.52 209 Pn **P** **21 42 02.3 -0.8**
RAR Rarotonga 18.34 65 P **P** **21 42 09.8 -2.5**
4.1nm,0.3s,baz=216,slow=6.0,SNR=16
RAR LR LR 21 47 32.8
comp=Z,4µm,20.0s,baz=246,slow=31
RAR Rarotonga 18.34 65 P **P** **21 42 12.2 -0.2**
RAR pmax pmax
comp=Z,391nm,1.4s
RAR Rarotonga 18.34 65 P **P** **21 42 12.2 -0.2**
LHI Lord Howe Isla 20.09 260 P Pn 21 42 33.7 +0.3
baz=20,SNR=7.9
LHI Lord Howe Isla 20.09 260 P Pn 21 42 35.5 +2.1
LHI IAmb IAmb 21 42 37.9
comp=Z,406nm,0.8s
SANVU Saraoutou 20.23 313 P **P** **21 42 33.7 +0.6**
TBI Tubuai 25.97 82 *e*S **S** **21 47 52.9 -6.4**
comp=Z,3µm,28.8s
TBI *e*LQ LQ 21 48 36.1
comp=Z,8µm,26.2s
TBI *e*LR LR 21 49 56.8
comp=Z,13µm,26.8s,baz=246
TBI Tubuai 25.97 82 *e*T T 22 10 04.7
comp=Z,72nm,0.3s
ARMA Armidale 26.54 262 P **P** **21 43 39.1 +3.4**
baz=27,SNR=22
ARMA Armidale 26.54 262 P **P** **21 43 38.4 +2.7**
ARMA IAmb IAmb 21 43 40.8
comp=Z,228nm,1.1s
RIV Riverview 26.70 254 P **P** **21 43 39.9 +2.9**
baz=27,SNR=7.7
MGCD Mangrove Creek 26.76 255 P **P** **21 43 41.0 +3.5**
baz=27,SNR=20
KNTN Kanton 27.79 13 P **P** **21 43 44.7 -2.1**
KNTN IAmb IAmb 21 43 47.0
comp=Z,177nm,1.1s
EIDS Eidsvold 28.08 272 P **P** **21 43 51.0 +1.7**
baz=28,SNR=12
EIDS Eidsvold 28.08 272 P **P** **21 43 50.4 +1.0**
EIDS IAmb IAmb 21 43 52.7
comp=Z,280nm,1.1s
EIDS IAMs_20 IAMs_20 21 53 00.4
comp=Z,7µm,20.0s
CNB Canberra Magne 28.19 251 P **P** **21 43 53.4 +3.0**
baz=28,SNR=31
PAE Paea 28.38 70 *e*P **P** **21 43 52.7 +0.6**
comp=Z,8.1nm,1.0s
PAE Paea 28.38 70 *e*T T 22 13 00.3
comp=Z,32nm,0.3s
PPT2 Papeete2 28.42 70 *e*P **P** **21 43 53.4 +0.9**
comp=Z,47nm,1.3s
PPT2 *e*S **S** **21 48 31.2 -6.9**
comp=Z,2µm,27.0s
PPT2 *e*LQ LQ 21 49 43.5
comp=Z,5µm,23.8s
PPT2 *e*LR LR 21 51 04.0
comp=Z,12µm,26.2s,baz=234
PPT2 Papeete2 28.42 70 *e*T T 22 13 04.4
comp=Z,25nm,0.3s
PPTF Pamatai, Papee 28.43 70 P **P** **21 43 53.0 +0.4**
PPT Papeete 28.43 70 P **P** **21 43 49.9 -2.7**
comp=Z,14nm,0.6s,baz=103,slow=23,SNR=1.8
PPT LR LR 21 52 14.2
comp=Z,3µm,21.2s,baz=242,slow=30
CAN Canberra 28.49 251 P **P** **21 43 55.7 +2.6**
baz=29
CAN Canberra 28.49 251 P **P** **21 43 55.2 +2.2**
CAN pmax pmax
comp=Z,254nm,1.1s
CAN MLR MLR
comp=Z,4µm,19.0s
CAN Canberra 28.49 251 P **P** **21 43 55.2 +2.2**
CAN IAmb IAmb 21 43 57.3
comp=Z,254nm,1.1s
TVO Taravao 28.59 71 *e*T T 22 13 16.2
comp=Z,5.4nm,0.3s
TIAR Tiarei 28.62 70 *e*P **P** **21 43 55.2 +0.9**
comp=Z,16nm,0.8s
TIAR Tiarei 28.62 70 *e*T T 22 13 19.0
comp=Z,3.4nm,0.3s
YNG Young 28.99 253 P **P** **21 44 00.5 +3.0**
baz=29,SNR=19
HNR Honiara 29.41 310 P **P** **21 43 59.9 -1.3**
comp=Z,53nm,0.4s,baz=232,slow=12,SNR=2.0
HNR Honiara 29.41 310 P **P** **21 43 59.1 -2.1**
HNR pmax pmax
comp=Z,236nm,0.9s
HNR MLR MLR
comp=Z,3µm,19.0s
HNR Honiara 29.41 310 P **P** **21 43 59.1 -2.1**
HNR IAmb IAmb 21 44 18.6
comp=Z,236nm,0.9s
MEH Mehetia 29.52 72 *e*T T 22 14 26.2
comp=Z,47nm,0.3s
RMQ Roma 29.79 269 P **P** **21 44 07.3 +2.8**
baz=30,SNR=53
MOO Moorlands 30.71 237 P **P** **21 44 14.0 +1.5**
baz=31,SNR=6.8
TAU Tasmania Unive 30.71 236 P **P** **21 44 14.2 +1.7**
TAU pmax pmax
comp=Z,170nm,1.2s
TAU MLR MLR
comp=Z,5µm,19.0s
TAU Tasmania Unive 30.71 236 P **P** **21 44 14.2 +1.7**
TAU IAmb IAmb 21 44 15.4
comp=Z,170nm,1.2s
TAU IAMs_20 IAMs_20 21 54 52.4
comp=Z,5µm,19.0s
PMOR Pomariorio Ree 31.17 68 *e*P **P** **21 44 16.9 +0.1**
comp=Z,25nm,0.8s
PMOR Pomariorio Ree 31.17 68 *e*T T 22 16 28.4
comp=Z,7.9nm,0.3s
VAH Vaihoa 31.25 68 *e*P **P** **21 44 18.3 +0.8**
comp=Z,81nm,1.3s
VAH Vaihoa 31.25 68 *e*T T 22 16 34.8
comp=Z,37nm,0.2s
TOO Toolangi 31.39 246 P **P** **21 44 21.1 +2.5**
baz=32,SNR=16
TOO Toolangi 31.39 246 P **P** **21 44 20.9 +2.3**
TOO pmax pmax
comp=Z,218nm,1.1s
TOO MLR MLR
comp=Z,4µm,20.0s
TOO Toolangi 31.39 246 P **P** **21 44 20.9 +2.3**
TOO IAmb IAmb 21 44 23.0
comp=Z,218nm,1.1s
CMSA Cobar Meteorol 31.46 258 P **P** **21 44 21.5 +2.2**
baz=32,SNR=152
TARA Tarawa 32.61 342 P **P** **21 44 27.2 -2.2**
TARA IAmb IAmb 21 44 43.7
comp=Z,182nm,1.0s
QLP Quilpie 33.68 267 P **P** **21 44 39.8 +1.1**
baz=34,SNR=57
CTA Charters Tower 34.11 279 LR LR 21 57 15.4
comp=Z,6µm,18.3s,baz=122,slow=34
CTAO Charters Tower 34.11 279 P **P** **21 44 43.7 +1.1**
CTAO pmax pmax
comp=Z,560nm,1.0s
CTAO MLR MLR
comp=Z,6µm,18.0s
CTAO Charters Tower 34.11 279 P **P** **21 44 43.6 +1.1**
CTAO Charters Tower 34.11 279 IAMs_20 IAMs_20 21 57 47.4
comp=Z,6µm,18.0s
STKA Stephens Creek 34.88 257 P **P** **21 44 50.6 +1.4**
comp=Z,155nm,0.8s,baz=93,slow=9.3,SNR=127
STKA LR LR 21 58 10.8
comp=Z,5µm,18.2s,baz=94,slow=35
STKA Stephens Creek 34.88 257 P **P** **21 44 50.8 +1.6**
baz=35,SNR=152
STKA Stephens Creek 34.88 257 P **P** **21 44 50.2 +1.1**
STKA pmax pmax
comp=Z,71nm,1.2s
STKA MLR MLR
comp=Z,1µm,19.0s
STKA Stephens Creek 34.88 257 P **P** **21 44 50.2 +1.1**
MTSU Mount Surprise 36.60 280 P **P** **21 45 05.3 +1.3**
baz=37,SNR=76
HTT Hallett 36.91 253 P **P** **21 45 07.9 +1.3**
baz=37,SNR=58
XMAS Kiritimati 37.35 35 P **P** **21 45 11.5 +1.2**
PMG Port Moresby 38.82 295 LR LR 21 58 38.3
comp=Z,4µm,21.7s,baz=128,slow=32
PMG Port Moresby 38.82 295 P **P** **21 45 23.0 +0.2**
PMG pmax pmax
comp=Z,165nm,1.1s
PMG MLR MLR
comp=Z,4µm,22.0s
PMG Port Moresby 38.82 295 P **P** **21 45 23.0 +0.2**
PMG IAmb IAmb 21 45 24.8
comp=Z,165nm,1.1s
BBOO Buckleboo 39.38 254 P **P** **21 45 27.9 +0.6**
baz=40,SNR=12
BBOO Buckleboo 39.38 254 P **P** **21 45 27.7 +0.4**
BBOO IAmb IAmb 21 45 29.3
comp=Z,172nm,0.9s
BBOO IAMs_20 IAMs_20 22 01 19.9
comp=Z,5µm,19.0s
QIS Mount Isa 39.65 274 P **P** **21 45 30.4 +0.7**
baz=40,SNR=21
KWAJ Kwajalein Atol 41.26 337 IAMs_20 IAMs_20 21 59 38.4
comp=Z,3µm,19.0s
MANU Manua Island 43.41 303 P **P** **21 45 59.6 -1.0**
AS31 Alice Springs 43.48 266 P **P** **21 46 00.3 -0.8**
ASAR Alice Springs 43.48 266 P **P** **21 46 00.2 -0.8**
comp=Z,75nm,0.8s,baz=109,slow=7.6,SNR=278
ASAR PcP **PcP** **21 47 47.9 -1.1**
comp=Z,17nm,0.9s,baz=101,slow=4.8,SNR=3.7
ASAR ScP **ScP** **21 51 36.4 -2.0**
comp=Z,5.5nm,0.8s,baz=120,slow=4.2,SNR=7.4
ASAR PKiKP **PKiKP** **21 54 49.8 -1.7**
comp=Z,1.9nm,1.1s,baz=113,slow=1.4,SNR=3.8
ASAR LR LR 22 03 43.6
comp=Z,6µm,18.5s,baz=108,slow=36
ASAR Alice Springs 43.48 266 P **P** **21 45 59.5 -1.6**
WR0 Warramunga Arr 44.26 272 P **P** **21 46 06.6 -0.8**
WR0 IAMs_20 IAMs_20 22 04 10.2
comp=Z,4µm,18.0s
WR9 Warramunga Arr 44.28 272 IAMs_20 IAMs_20 22 04 09.8
comp=Z,4µm,19.0s
WR8 Warramunga Arr 44.30 272 IAMs_20 IAMs_20 22 04 20.1
comp=Z,4µm,18.0s
WR7 Warramunga Arr 44.32 272 IAMs_20 IAMs_20 22 04 28.7
comp=Z,4µm,18.0s
WR6 Warramunga Arr 44.34 272 IAMs_20 IAMs_20 22 04 20.2
comp=Z,4µm,18.0s
WR5 Warramunga Arr 44.36 272 IAMs_20 IAMs_20 22 04 20.8
comp=Z,4µm,18.0s
WR4 Warramunga Arr 44.38 272 IAMs_20 IAMs_20 22 04 21.3
comp=Z,4µm,18.0s
WR3 Warramunga Arr 44.40 272 IAMs_20 IAMs_20 22 04 22.8
comp=Z,4µm,18.0s
WC3 Warramunga Arr 44.41 272 P **P** **21 46 07.8 -0.7**
baz=45
WC3 Warramunga Arr 44.41 272 IAMs_20 IAMs_20 22 04 23.0
comp=Z,4µm,18.0s
WR2 Warramunga Arr 44.42 272 IAMs_20 IAMs_20 22 04 23.4
comp=Z,5µm,22.0s
WC2 Warramunga Arr 44.43 272 IAMs_20 IAMs_20 22 04 23.5
comp=Z,4µm,18.0s
WB1 Warramunga Ar. 44.43 272 IAMs_20 IAMs_20 22 04 23.6
comp=Z,4µm,18.0s
WB2 Warramunga Arr 44.43 272 P **P** **21 46 07.8 -1.0**
WB2 IAMs_20 IAMs_20 22 04 23.7
comp=Z,4µm,18.0s
WB3 Warramunga Arr 44.44 272 IAMs_20 IAMs_20 22 04 23.8
comp=Z,4µm,18.0s
WRAB Tennant Creek 44.44 272 P **P** **21 46 08.2 -0.6**
WRAB pmax pmax
comp=Z,346nm,1.0s
WRAB MLR MLR
comp=Z,4µm,18.0s
WRAB Tennant Creek 44.44 272 P **P** **21 46 08.2 -0.6**
WRAB Tennant Creek 44.44 272 IAMs_20 IAMs_20 22 04 23.6
comp=Z,4µm,18.0s
WB4 Warramunga Arr 44.44 272 IAMs_20 IAMs_20 22 04 23.9
comp=Z,4µm,18.0s
WR1 Warramunga Arr 44.44 272 IAMs_20 IAMs_20 22 02 50.9
comp=Z,3µm,20.0s
WRA Warramunga Arr 44.44 272 P **P** **21 46 08.2 -0.6**
comp=Z,226nm,0.8s,baz=110,slow=8.1,SNR=323
WRA PcP **PcP** **21 47 51.9 -0.3**
comp=Z,24nm,1.0s,baz=107,slow=3.6,SNR=3.6
WRA ScP **ScP** **21 51 39.7 -2.7**
comp=Z,7.1nm,1.0s,baz=117,slow=4.3,SNR=5.3
WRA S **S** **21 52 39.2 -3.0**
comp=Z,10nm,1.1s,baz=110,slow=14,SNR=4.7
WRA PKiKP **PKiKP** **21 54 50.7 -1.7**
comp=Z,2.7nm,1.1s,baz=111,slow=0.3,SNR=6.2
WRA LR LR 22 03 02.9
comp=Z,3µm,21.6s,baz=120,slow=34
WRA Warramunga Arr 44.44 272 P **P** **21 46 07.5 -1.4**
WB5 Warramunga Arr 44.45 272 IAMs_20 IAMs_20 22 04 24.0
comp=Z,3µm,18.0s
WB7 Warramunga Arr 44.45 272 IAMs_20 IAMs_20 22 05 55.7
comp=Z,3µm,18.0s
WC1 Warramunga Arr 44.45 272 IAMs_20 IAMs_20 22 04 34.1
comp=Z,3µm,18.0s
WB6 Warramunga Arr 44.45 272 IAMs_20 IAMs_20 22 06 04.2
comp=Z,3µm,18.0s
WB8 Warramunga Arr 44.46 272 IAMs_20 IAMs_20 22 06 03.3
comp=Z,4µm,18.0s
WB9 Warramunga Arr 44.46 272 IAMs_20 IAMs_20 22 03 58.5
comp=Z,3µm,19.0s
WB0 Warramunga Arr 44.47 272 P **P** **21 46 07.9 -1.1**
WB0 IAMs_20 IAMs_20 22 04 15.5
comp=Z,3µm,18.0s
FORT Forrest 46.45 255 P **P** **21 46 24.2 -0.5**
baz=47,SNR=28
FORT Forrest 46.45 255 P **P** **21 46 23.8 -0.8**
FORT IAMs_20 IAMs_20 22 05 47.2
comp=Z,3µm,19.0s
WRKA Warakurna 47.86 262 P **P** **21 46 34.4 -1.3**
baz=48,SNR=60
VNDA Vanda 48.38 186 P **P** **21 46 42.1 +3.2**
comp=Z,9.4nm,0.8s,baz=5.3,slow=8.8,SNR=23
VNDA LR LR 22 04 05.6
comp=Z,622nm,20.6s,baz=30,slow=32
VNDA Vanda 48.38 186 P **P** **21 46 42.5 +3.5**
VNDA pmax pmax
comp=Z,59nm,1.4s
VNDA Vanda 48.38 186 P **P** **21 46 42.5 +3.5**
GENI Genyem 48.47 296 P **P** **21 46 40.3 -0.1**
KDU Kakadu 49.22 279 P **P** **21 46 45.1 -1.2**
baz=50,SNR=27
MTN Manton Dam 50.30 278 P **P** **21 46 53.3 -1.1**
MTN IAmb IAmb 21 46 55.1
comp=Z,77nm,0.9s
KNRA Kununurra 51.04 274 P **P** **21 46 59.6 -0.4**
baz=51,SNR=28
KNRA Kununurra 51.04 274 P **P** **21 46 59.5 -0.5**
KNRA IAmb IAmb 21 47 01.5
comp=Z,120nm,1.0s
KNRA IAMs_20 IAMs_20 22 07 07.7
comp=Z,3µm,20.0s
KMBL Kambalda 51.44 252 P **P** **21 47 01.9 -1.0**
baz=52,SNR=6.1
FITZ Fitzroy Crossi 52.72 269 P **P** **21 47 12.1 -0.4**
comp=Z,128nm,0.9s,baz=148,slow=6.6,SNR=95
FITZ Fitzroy Crossi 52.72 269 P **P** **21 47 11.8 -0.7**
baz=53,SNR=51
FITZ Fitzroy Crossi 52.72 269 P **P** **21 47 12.3 -0.1**
KHLU Kahalu`u 53.69 26 P **P** **21 47 21.1 +1.5**
WRMHI West Rim 53.74 26 P **P** **21 47 21.0 +1.0**
WRMHI IAmb IAmb 21 47 36.7
comp=Z,165nm,1.0s
PUH Pauahi 53.75 26 P **P** **21 47 21.3 +1.3**
BYL Byron's Ledge 53.76 26 P **P** **21 47 21.2 +1.0**
BYL IAmb IAmb 21 47 22.8
comp=Z,173nm,1.0s
HATHI Halema'uma'u T 53.77 26 P **P** **21 47 20.1 -0.1**
HATHI IAmb IAmb 21 47 37.0
comp=Z,176nm,1.2s
SBLHI Steaming Bluff 53.77 26 P **P** **21 47 21.4 +1.1**
MLH Mauna Loa 53.79 26 P **P** **21 47 20.8 +0.3**
MLH IAmb IAmb 21 47 25.9
comp=Z,124nm,1.1s
HMH Humu'ula Sheep 53.85 26 P **P** **21 47 22.3 +1.2**
POHA Pohakuloa 53.97 26 P **P** **21 47 22.4 +0.6**
POHA IAmb IAmb 21 47 40.2
comp=Z,156nm,1.1s
HPAH Hawaii Prepara 54.16 26 P **P** **21 47 23.5 +0.5**
HON Honolulu 54.54 23 P **P** **21 47 25.4 -0.2**
HON pmax pmax
comp=Z,230nm,1.1s
HON Honolulu 54.54 23 P **P** **21 47 25.4 -0.2**
FAKI Fak Fak 54.59 290 P **P** **21 47 25.8 -0.5**
comp=Z,2µmcomp=Z,150nm,1.2s
FAKI Fak Fak 54.59 290 P **P** **21 47 25.2 -1.0**
KIP Kipapa 54.62 23 *ce*P **P** **21 47 27.8 +1.5**
KIP pmax pmax
comp=Z,217nm,1.3s
KIP Kipapa 54.62 23 P **P** **21 47 27.2 +1.0**
KIP IAmb IAmb 21 47 30.2
comp=Z,165nm,1.1s
KLBR Kellerberrin 54.77 251 P **P** **21 47 26.0 -1.3**
baz=55,SNR=22
NWAO Narrogin (SRO) 54.82 249 P **P** **21 47 25.0 -2.7**
NWAO P **P** **21 47 25.0 -2.7**
NWAO Narrogin (SRO) 54.82 249 P **P** **21 47 26.3 -1.4**
NWAO pmax pmax
comp=Z,111nm,1.5s
NWAO MLR MLR
comp=Z,2µm,20.0s
NWAO Narrogin (SRO) 54.82 249 P **P** **21 47 26.3 -1.4**
NWAO IAmb IAmb 21 47 27.9
comp=Z,111nm,1.4s
NWAO Narrogin (SRO) 54.82 249 P **P** **21 47 26.5 -1.2**
NWAO IAmb IAmb 21 47 27.9
comp=Z,90nm,1.4s
NWAO IAMs_20 IAMs_20 22 08 13.1
comp=Z,2µm,20.0s
CASY Casey 55.52 208 P **P** **21 47 32.3 0.0**
CASY IAmb IAmb 21 47 33.9
comp=Z,119nm,0.8s
MEEK Meekatharra 55.58 257 P **P** **21 47 32.3 -1.1**
baz=56,SNR=21
BNDI Bandanaira 55.62 287 P **P** **21 47 32.9 -0.8**
comp=Z,2µmcomp=Z,35µmcomp=Z,328nm,1.1s
MUN Mundaring 55.91 250 P **P** **21 47 34.5 -1.2**
baz=56,SNR=9.0
PSA00 Pilbara Seismi 56.35 263 P **P** **21 47 37.4 -1.4**
PSA00 IAmb IAmb 21 47 39.1
comp=Z,118nm,1.4s
PSA00 Pilbara Seismi 56.35 263 P **P** **21 47 37.3 -1.6**
PSA00 IAmb IAmb 21 47 39.1
comp=Z,42nm,1.3s
GUMO Guam 56.55 315 LR LR 22 08 56.7
comp=Z,1µm,20.8s,baz=124,slow=33
SIJI Sorong 56.57 291 P **P** **21 47 39.9 -0.7**
comp=Z,286nm,1.0s,baz=86,slow=4.6,SNR=92
MBWA Marble Bar 56.60 263 P P 21 47 35.8 -4.9
MBWA P P 21 47 35.8 -4.9
MORW Morawa 56.94 253 P **P** **21 47 41.6 -1.4**
baz=57,SNR=8.1
MORW Morawa 56.94 253 P **P** **21 47 41.4 -1.6**
MORW IAmb IAmb 21 47 43.3
comp=Z,187nm,1.8s
MORW IAMs_20 IAMs_20 22 13 26.1
comp=Z,2µm,19.0s
SOEI Soe 57.67 278 P **P** **21 47 49.2 +0.7**
comp=Z,3µmcomp=Z,2µmcomp=Z,252nm,1.0s
SOEI Soe 57.67 278 P **P** **21 47 48.5 0.0**
BATI Baumata 57.97 277 P **P** **21 47 51.2 +0.7**
comp=Z,129nm,1.0s,baz=133,slow=1.5,SNR=20
BATI Baumata 57.97 277 P **P** **21 47 51.6 +1.2**
comp=Z,1µmcomp=Z,82nm,1.1s
QSPA South Pole Qui 59.96 180 P **P** **21 48 06.0 +2.4**
comp=Z,56nm,1.0s,baz=11,slow=2.2,SNR=88
QSPA LR LR 22 11 31.0
comp=Z,709nm,18.6s,baz=51,slow=33
QSPA South Pole Qui 59.96 180 P **P** **21 48 06.7 +3.1**
MMRI Maumere 59.96 278 P **P** **21 48 03.4 -0.9**
comp=Z,2µmcomp=Z,4µmcomp=Z,337nm,1.1s
MMRI Maumere 59.96 278 P **P** **21 48 01.9 -2.3**
SANI Sanana 60.23 286 P **P** **21 48 05.0 -1.1**
comp=Z,2µmcomp=Z,2µmcomp=Z,211nm,1.2s
EDFI Ende, Flores 60.38 277 P **P** **21 48 06.3 -0.9**
comp=Z,721nmcomp=Z,50nm,1.3s
BASI Baing, Sumba 60.62 275 P **P** **21 48 09.0 +0.2**
comp=Z,1µmcomp=Z,2µmcomp=Z,160nm,1.3s
TNTI Ternate 60.69 290 P **P** **21 48 08.1 -1.1**
comp=Z,1µmcomp=Z,2µmcomp=Z,156nm,1.1s
TNTI Ternate 60.69 290 P **P** **21 48 07.8 -1.3**
GIRL Giralia 60.74 259 P **P** **21 48 09.8 +0.4**
baz=61,SNR=4.8
GIRL Giralia 60.74 259 P **P** **21 48 09.9 +0.5**
WSI Waingapu 61.13 276 P **P** **21 48 12.2 0.0**
comp=Z,6µmcomp=Z,449nm,1.0s
WBSI Waikabubak, Su 61.92 275 P **P** **21 48 17.3 -0.3**
comp=Z,1µmcomp=Z,136nm,1.2s
BSSI Bau Bau, Buton 62.71 279 P **P** **21 48 21.2 -1.6**
comp=Z,559nmcomp=Z,36nm,1.3s
KMSI Cibinong 63.35 288 P **P** **21 48 26.0 -1.1**
comp=Z,147nm,1.0s
BKSI Bulukumba 63.44 280 P **P** **21 48 26.3 -1.4**
comp=Z,2µmcomp=Z,1µmcomp=Z,95nm,1.2s
LUWI Luwuk 63.46 285 P **P** **21 48 27.4 -0.4**
comp=Z,3µmcomp=Z,326nm,1.1s
LUWI Luwuk 63.46 285 P **P** **21 48 26.9 -0.9**
PLAI Plampang 63.71 275 P **P** **21 48 28.9 -0.6**
comp=Z,2µmcomp=Z,2µmcomp=Z,339nm,1.0s
SGSI Sangihe 63.87 291 P **P** **21 48 29.3 -1.2**
comp=Z,75nm,0.7s
KAPI Kappang 63.91 280 P **P** **21 48 30.4 -0.4**
comp=Z,27nm,0.7s,baz=129,slow=2.6,SNR=18
KAPI Kappang 63.91 280 P **P** **21 48 26.7 -4.1**
KAPI Kappang 63.91 280 P **P** **21 48 30.3 -0.5**
KAPI pmax pmax
comp=Z,209nm,1.7s
KAPI Kappang 63.91 280 P **P** **21 48 30.3 -0.5**
KAPI IAmb IAmb 21 48 31.8
comp=Z,209nm,1.6s
BNSI Bone 63.93 281 P **P** **21 48 30.5 -0.4**
comp=Z,2µmcomp=Z,134nm,1.2s
SPSI Sidrap Palu 64.44 281 P **P** **21 48 32.7 -1.6**
comp=Z,2µmcomp=Z,1µmcomp=Z,78nm,1.1s
APSI Ampana 64.47 285 P **P** **21 48 34.4 -0.1**
comp=Z,1µmcomp=Z,128nm,1.1s
TWSI Taliwang, Sumb 64.52 275 P **P** **21 48 34.1 -0.7**
comp=Z,1µmcomp=Z,12nm,1.1s
TTSI Tana Toraja 64.88 282 P **P** **21 48 36.1 -1.0**
comp=Z,932nmcomp=Z,98nm,1.2s
DAV Davao City (W) 65.84 294 P **P** **21 48 42.9 -0.4**
comp=Z,129nm,0.3s,baz=244,slow=4.5,SNR=7.0
DAV LR LR 22 17 12.1
comp=Z,286nm,18.7s,baz=124,slow=36
DAV Davao City (W) 65.84 294 P **P** **21 48 42.4 -0.9**
DNP Denpasar 66.00 274 P **P** **21 48 44.6 +0.2**
comp=Z,258nm,0.8s
KCP Kidapawan 66.19 294 *i*P **P** **21 48 44.8 -0.9**
SRBI Singaraja 66.28 274 P **P** **21 48 45.6 -0.6**
comp=Z,3µmcomp=Z,224nm,1.1s
MPSI Mapaga 66.62 285 P **P** **21 48 46.7 -1.6**
comp=Z,1µmcomp=Z,114nm,1.0s
JAGI Jajag, Banyuwa 67.01 274 P **P** **21 48 49.5 -1.4**
comp=Z,2µmcomp=Z,211nm,1.1s
JAGI Jajag, Banyuwa 67.01 274 P **P** **21 48 49.2 -1.6**
ABJI Asem Bagus 67.27 274 P **P** **21 48 52.1 -0.4**
comp=Z,2µmcomp=Z,54nm,0.9s
CGP Cagayan de Oro 67.38 295 *ie*P **P** **21 48 53.0 -0.1**
GMJI Gumukmas 67.72 273 P **P** **21 48 54.5 -0.8**
comp=Z,2µmcomp=Z,192nm,1.1s
BLJI Banyuglugur 67.84 274 P **P** **21 48 55.5 -0.6**
comp=Z,3µmcomp=Z,108nm,1.2s
KBKI Kotabaru 67.86 279 P **P** **21 48 55.9 -0.3**
comp=Z,935nmcomp=Z,56nm,1.1s
KMMI Kalianget 67.86 275 P **P** **21 48 57.2 +1.0**
comp=Z,199nm,1.1s
BKB Balikpapan 68.29 282 P **P** **21 48 59.4 +0.5**
BKB IAmb IAmb 21 49 21.8
comp=Z,58nm,0.8s
BBKI Banjar Baru 68.91 279 P **P** **21 49 02.6 -0.2**
comp=Z,2µmcomp=Z,121nm,1.1s
GRJI Gresik 69.21 274 P **P** **21 49 06.0 +1.3**
comp=Z,737nmcomp=Z,82nm,1.0s
PWJI Pagerwojo 69.26 273 P **P** **21 49 04.5 -0.5**
comp=Z,105nm,1.2s
WOJI Wonogiri, Jawa 70.11 272 P **P** **21 49 09.8 -0.4**
comp=Z,2µmcomp=Z,185nm,1.1s
MTKI Muara Teweh, K 70.16 281 P **P** **21 49 09.9 -0.6**
UGM Wanagama 70.42 272 P **P** **21 49 11.5 -0.7**
comp=Z,152nm,1.1s
UGM Wanagama 70.42 272 P **P** **21 49 11.1 -1.1**
MYLDM Lahad Datu 70.45 288 P **P** **21 49 13.1 +0.8**
MYLDM IAmb IAmb 21 49 49.5
comp=Z,118nm,1.1s

SMRI Semarang 70.91 273 P **P** **21 49 14.4 -0.7**
SMRI IAmb IAmb 21 49 36.2
comp=Z,124nm,1.1s
SPMM Sapulut 71.87 287 P **P** **21 49 21.0 +0.1**
PBKI Pangkalan Bun 72.01 277 P **P** **21 49 22.1 +0.3**
comp=Z,4μmcomp=Z,470nm,1.0s
KPJI Karang Pucung 72.08 272 P **P** **21 49 21.8 -0.4**
comp=Z,2μmcomp=Z,65nm,1.1s
MAW Mawson 72.67 200 P **P** **21 49 25.8 +1.1**
comp=Z,69nm,1.1s,baz=122,slow=7.0,SNR=64
MAW LR LR 22 20 06.0
comp=Z,1μm,21.1s,baz=115,slow=35
MAW Mawson 72.67 200 P **P** **21 49 25.8 +1.1**
KKM Kota Kinabalu 72.82 288 P **P** **21 49 25.4 -1.3**
KKM IAmb IAmb 21 49 27.3
comp=Z,160nm,1.0s
CISI Cisompet, Garu 72.94 271 P **P** **21 49 26.3 -1.1**
comp=Z,2μmcomp=Z,162nm,1.1s
CISI Cisompet, Garu 72.94 271 P **P** **21 49 25.7 -1.7**
LQP Lukban 73.26 298⇑ *e*P **P** **21 49 27.6 -1.7**
XMIS Christmas Isla 73.41 267 P **P** **21 49 28.9 -1.2**
XMIS IAmb IAmb 21 49 30.6
comp=Z,83nm,1.0s
LEM Lembang 73.46 272 P **P** **21 49 30.5 -0.1**
comp=Z,131nm,0.9s,baz=35,slow=2.4,SNR=19
STKI Sintang 73.60 280 P **P** **21 49 31.4 +0.2**
comp=Z,19μmcomp=Z,61nm,0.9s
CNJI Cibinong 73.65 271 P **P** **21 49 30.6 -0.9**
comp=Z,2μmcomp=Z,201nm,1.0s
TGY Tagaytay City 73.72 297 P **P** **21 49 31.8 -0.1**
comp=Z,140nm,0.3s,baz=322,slow=1.7,SNR=12
TGY LR LR 22 20 28.1
comp=Z,290nm,19.5s,baz=118,slow=35
SBUM Sibu 74.21 282 P **P** **21 49 34.6 -0.2**
SBUM IAmb IAmb 21 49 36.0
comp=Z,146nm,1.1s
SBUM Sibu 74.21 282 P **P** **21 49 35.0 +0.2**
SKJI Sukabumi 74.30 271 P **P** **21 49 34.4 -0.9**
comp=Z,122nm,1.2s
CBJI Citeko 74.33 272 P **P** **21 49 33.9 -1.5**
comp=Z,3μmcomp=Z,100nm,1.0s
DBJI Dramaga 74.35 271 P **P** **21 49 35.0 -0.6**
comp=Z,4μmcomp=Z,185nm,1.1s
CGJI Cibinong 75.23 271 P **P** **21 49 39.2 -1.5**
comp=Z,2μmcomp=Z,121nm,1.1s
KSM Kuching 75.32 280 P **P** **21 49 40.5 -0.7**
KSM IAmb IAmb 21 49 41.9
comp=Z,180nm,1.2s
KSM Kuching 75.32 280 P **P** **21 49 40.0 -1.2**
TPI Tanjungpandan 75.44 275 P **P** **21 49 41.7 -0.2**
comp=Z,1μmcomp=Z,75nm,1.2s
GO09 Cerro Castillo 75.78 141 IAmb IAmb 21 49 48.7
comp=Z,115nm,1.4s
KLSI 77.01 272 P **P** **21 49 48.9 -1.9**
comp=Z,506nmcomp=Z,34nm,1.0s
JYT Yasato 77.02 326 P **P** **21 49 49.5 -0.8**
JYT IAMs_20 IAMs_20 22 20 54.0
comp=Z,1μm,21.0s
PPBI Pangkal Pinang 77.05 275 P **P** **21 49 51.0 0.0**
comp=Z,2μmcomp=Z,6μmcomp=Z,78nm,1.3s
SYO Syowa Base 77.44 193‖ *e*P **P** **21 49 51.8 -0.4**
SYO Syowa Base 77.44 193⇑ *i*pP pP 21 50 00.0 0.0
INU Inuyama 77.91 323 P **P** **21 49 54.6 -0.7**
INU IAmb IAmb 21 49 56.7
comp=Z,72nm,0.9s
JMM Marumori 78.05 328 IAMs_20 IAMs_20 22 22 55.4
comp=Z,1μm,20.0s
MJAR Matsushiro Arr 78.24 325 P **P** **21 49 56.5 -0.7**
comp=Z,60nm,1.0s,baz=162,slow=5.6,SNR=56
MJAR LR LR 22 25 31.7
comp=Z,266nm,18.0s,baz=130,slow=37
MJAR Matsushiro Arr 78.24 325 P **P** **21 49 55.4 -1.7**
MJAR pmax pmax
comp=Z,42nm,1.1s
MJAR Matsushiro Arr 78.24 325 P **P** **21 49 55.4 -1.7**
MAJO Matsushiro 78.24 325 P **P** **21 49 56.2 -1.0**
MAJO pmax pmax
comp=Z,92nm,1.1s
MAJO Matsushiro 78.24 325 P **P** **21 49 56.1 -1.0**
MAJO IAmb IAmb 21 49 58.5
comp=Z,92nm,1.1s
MAT Matsushiro 78.24 325 P **P** **21 49 55.6 -1.5**
MAT S **S** **21 59 50.6 +0.4**
SNAA Sanae 78.39 178 P **P** **21 49 59.0 +1.3**
SNAA Sanae 78.39 178 P **P** **21 49 58.7 +1.1**
comp=Z,24nm,1.0s,baz=181,slow=4.0,SNR=1.6
SNAA Sanae 78.39 178 *ce*P **P** **21 49 56.8 -0.9**
SNAA pmax pmax
comp=Z,79nm,1.7s
SNAA Sanae 78.39 178 P **P** **21 49 58.7 +1.1**
SNAA IAmb IAmb 21 50 07.4
comp=Z,75nm,1.0s
VNA3 Neumayer Olymp 78.53 176 P **P** **21 49 59.2 +0.9**
JSU Suzuyama 78.69 317 IAmb IAmb 21 50 01.0
comp=Z,88nm,1.2s
JSU IAMs_20 IAMs_20 22 18 45.7
comp=Z,1μm,22.0s
YOJ Yonaguni jima 78.69 307 IAMs_20 IAMs_20 22 20 48.9
comp=Z,1μm,18.0s
JWT Wachi 78.70 322 P **P** **21 49 59.1 -0.6**
JWT IAmb IAmb 21 50 01.3
comp=Z,90nm,1.1s
VNA2 Neumayer--Watz 78.97 177 P **P** **21 50 02.3 +1.6**
baz=169,slow=6.4
NVL N'lazarevskaya 79.14 183 *e*P **P** **21 50 02.6 +0.9**
NVL *e*S **S** **21 59 52.6 -6.4**
NVL pmax pmax
comp=Z,56nm,0.9s
VNA1 Neumayer--Stat 79.20 176 P **P** **21 50 03.4 +1.5**
KSI Kapahiang 79.37 272 P **P** **21 50 02.9 -1.1**
comp=Z,122nm,0.9s
JSD Sado 79.39 326 IAmb IAmb 21 50 05.3
comp=Z,96nm,1.1s
JNU Nakatsue 79.61 318 P **P** **21 50 03.9 -0.8**
comp=Z,85nm,1.1s,baz=24,slow=7.8,SNR=5.9
JNU Nakatsue 79.61 318 IAmb IAmb 21 50 07.6
comp=Z,92nm,1.1s
TPUB Ta-pu 79.63 305 IAmb IAmb 21 50 20.1
comp=Z,60nm,0.8s
JHS Saijyo 79.72 321 IAmb IAmb 21 50 07.1
comp=Z,143nm,1.1s
H03S2 Juan Fernandez 80.31 123 T T 23 19 33.5
baz=238,slow=74,SNR=251
H03S1 Juan Fernandez 80.32 123 T T 23 19 34.7
baz=238,slow=74,SNR=187
H03S3 Juan Fernandez 80.32 123 T T 23 19 35.6
baz=238,slow=74,SNR=145
LL01 San Ignacio de 80.35 134 IAMs_20 IAMs_20 22 16 53.8
comp=Z,2μm,19.0s
H03N3 Juan Fernandez 80.50 123 T T 23 19 42.9
baz=242,slow=73,SNR=90
H03N2 Juan Fernandez 80.50 123 T T 23 19 41.5
baz=242,slow=73,SNR=76
H03N1 Juan Fernandez 80.51 123 T T 23 19 41.4
baz=242,slow=73,SNR=157
MYKOM Kota Tinggi 81.01 277 P **P** **21 50 13.0 +0.3**
YUK Yuzh-Kuril'sk 81.04 334 *e*P P 21 50 05.8 -6.3
YUK *e* 21 53 16.7
YUK *e*S **S** **22 00 13.8 -5.6**
YUK *e*SS **SS** **22 05 42.2 +7.1**
YUK pmax pmax
comp=E,163nm,1.2s
YUK pmax pmax
comp=Z,170nm,1.2s
YUK pmax pmax
comp=N,139nm,1.3s
KUR Kuril'sk 81.34 336 P **P** **21 50 14.4 +0.7**
KUR *e* 21 50 20.1
KUR *e* 21 53 20.2
KUR PPP PPP 21 55 08.6
KUR S **S** **22 00 23.6 +1.1**
KUR MLR MLR
comp=Z,1μm,16.0s
KUR MLR MLR
comp=N,900nm,18.0s
KUR MLR MLR
comp=E,400nm,12.0s
ADK Adak 81.68 1 P **P** **21 50 14.9 -0.4**
ADK pmax pmax
comp=Z,364nm,1.1s
ADK Adak 81.68 1 P **P** **21 50 14.9 -0.4**
JEW Eniwo 81.81 331 IAmb IAmb 21 50 19.7
comp=Z,130nm,1.2s
JEW IAMs_20 IAMs_20 22 23 32.2
comp=Z,2μm,19.0s
QZH Quanzhou 82.11 305⇑ *i*P **P** **21 50 18.2 0.0**

JKA Kamikawa-asahi 82.38 332 IAmb IAmb 21 50 23.6
comp=Z,66nm,1.0s
JKA IAMs_20 IAMs_20 22 24 29.5
comp=Z,2μm,20.0s
ASAJ Asahikawa 82.38 332 P **P** **21 50 19.7 +0.6**
comp=Z,47nm,0.9s,baz=235,slow=7.9,SNR=12
DLV T Lat 82.42 288 IAmb IAmb 21 50 22.2
comp=Z,164nm,1.1s
PLCA Paso Flores 82.42 133 P **P** **21 50 21.9 +2.1**
comp=Z,13nm,1.1s,baz=234,slow=6.6,SNR=11
PLCA LR LR 22 18 23.3
comp=Z,2μm,21.6s,baz=258,slow=29
PLCA Paso Flores 82.42 133 P **P** **21 50 22.1 +2.2**
PLCA pmax pmax
comp=Z,80nm,1.3s
PLCA Paso Flores 82.42 133 P **P** **21 50 22.1 +2.2**
PLCA IAmb IAmb 21 50 39.1
comp=Z,80nm,1.2s
BKNI Bangkinang 82.69 275 P **P** **21 50 20.7 -0.9**
comp=Z,115nm,1.0s
EFI East Falkland 82.81 147 *i*P **P** **21 50 20.3 -1.2**
EFI pmax pmax
comp=Z,50nm,1.2s
BI03 Tigo 82.90 129 IAMs_20 IAMs_20 22 17 54.5
comp=Z,2μm,22.0s
SNCC San Nicolas Is 83.61 46 P **P** **21 50 27.7 +1.8**
baz=228
TJN Taejon 83.95 318 *ce*P **P** **21 50 26.3 -1.2**
SCI2 San Clemente I 84.05 46 P **P** **21 50 30.0 +1.9**
baz=228
SCZ2 Santa Cruz Isl 84.05 45 P **P** **21 50 29.6 +1.5**
baz=228
SLBS Sierra La Lagu 84.12 58 P **P** **21 50 31.1 +2.3**
MNSI Mandailing Nat 84.19 274 P **P** **21 50 27.2 -2.1**
comp=Z,660nmcomp=Z,32nm,1.1s
SBC Santa Barbara 84.30 45 P **P** **21 50 31.1 +1.8**
baz=228
KSRS Korea Array 84.39 319 P **P** **21 50 30.1 +0.4**
comp=Z,19nm,0.9s,baz=141,slow=5.6,SNR=48
KSRS LR LR 22 27 25.4
comp=Z,401nm,18.3s,baz=131,slow=35
CIS Catalina Islan 84.41 46 P **P** **21 50 31.3 +1.3**
baz=228,SNR=8.2
KS19 Wonju Array Si 84.45 319 IAmb IAmb 21 50 50.5
comp=Z,119nm,1.9s
PKM Mcpherson Peak 84.54 44 P **P** **21 50 33.0 +2.2**
baz=228,SNR=21
YSS Yuzh-Sakhalins 84.68 334 *e*P **P** **21 50 32.0 +1.1**
YSS *e* 21 50 40.9
YSS *e*S **S** **22 01 00.9 +4.6**
YSS pmax pmax
comp=Z,120nm,1.1s
YSS pmax pmax
comp=Z,400nm,5.3s
YSS MLR MLR
comp=Z,2μm,17.0s
YSS Yuzh-Sakhalins 84.68 334 P **P** **21 50 31.5 +0.6**
FMP Fort Macarthur 84.69 46 P **P** **21 50 33.4 +2.1**
baz=229
SMMC Simmler 84.72 44 P **P** **21 50 34.0 +2.5**
baz=227,SNR=12
IPM Ipoh 84.80 278 IAmb IAmb 21 50 33.0
comp=Z,76nm,1.2s
IPM IAMs_20 IAMs_20 22 33 03.4
comp=Z,2μm,20.0s
PAGB Antelope Grade 84.85 43 IAMs_20 IAMs_20 22 26 08.1
comp=Z,1μm,18.0s
SAO San Andreas Ge 84.85 42 IAmb IAmb 21 50 35.5
comp=Z,86nm,1.2s
PMPB Monarch Peak 84.86 43 P **P** **21 50 34.4 +2.2**
PMPB IAMs_20 IAMs_20 22 25 40.1
comp=Z,1μm,19.0s
109C Camp Elliot, M 84.90 47 P **P** **21 50 33.9 +1.6**
baz=229
109C Camp Elliot, M 84.90 47 IAmb IAmb 21 50 35.7
comp=Z,108nm,1.6s
MCCM Marconi Confer 85.00 40 IAMs_20 IAMs_20 22 25 19.6
comp=Z,1μm,19.0s
DECC Green Verdugo 85.02 46 P **P** **21 50 34.5 +1.4**
baz=228
OSI Osito Audit: C 85.02 45 P **P** **21 50 35.0 +2.0**
baz=228
OSI Osito Audit: C 85.02 45 IAMs_20 IAMs_20 22 25 18.8
comp=Z,1μm,20.0s
BAR Barrett 85.04 48 IAmb IAmb 21 50 51.7
comp=Z,176nm,1.8s
PASC Pasadena Art C 85.06 46 IAmb IAmb 21 50 36.3
comp=Z,81nm,1.1s
PASC Pasadena Art C 85.06 46 IAMs_20 IAMs_20 22 25 26.9
comp=Z,1μm,18.0s
INCN Inchon 85.14 319 P **P** **21 50 33.4 -0.2**
MWC Mount Wilson 85.17 46 P **P** **21 50 35.7 +1.7**
MWC pmax pmax
comp=Z,106nm,1.2s
MWC MLR MLR
comp=Z,900nm,19.0s
MWC Mount Wilson 85.17 46 P **P** **21 50 35.6 +1.7**
MWC IAmb IAmb 21 50 37.2
comp=Z,106nm,1.2s
MWC IAMs_20 IAMs_20 22 25 22.9
comp=Z,942nm,19.0s
QIZ Qiongzhong 85.21 295 P **P** **21 50 35.3 +1.0**
QIZ sP **sP** **21 50 45.2 +0.3**
QIZ S **S** **22 01 03.2 +0.4**
QIZ sS **sS** **22 01 16.5 +0.6**
QIZ SS **SS** **22 06 36.4 -1.3**
QIZ pmax pmax
comp=Z,160nm,2.8s
QIZ LR LR
comp=Z,290nm,8.4s
QIZ LR LR
comp=Z,350nm,13.1s
QIZ LR LR
comp=Z,610nm,24.3s
ARVC Arvin 85.30 45 P **P** **21 50 36.1 +1.7**
baz=228,SNR=5.9
MURC Murrieta 85.30 47 P **P** **21 50 36.2 +1.7**
baz=229,SNR=16
MONP2 Monument Peak 85.33 48 P **P** **21 50 36.6 +1.7**
baz=230,SNR=38
PET Petropavlovsk 85.38 346 *e*P **P** **21 50 32.5 -1.7**
PET *e*S **SKSac** **22 00 59.5 +2.7**
PET pmax pmax
comp=Z,800nm,15.9s
PET pmax pmax
comp=Z,93nm,1.2s
PET MLR MLR
comp=Z,900nm,20.0s
IKP In-Ko-Pah, Jac 85.38 48 P **P** **21 50 36.5 +1.6**
baz=230,SNR=16
BFSC Mount Baldy Ra 85.43 46 P **P** **21 50 36.7 +1.5**
baz=229,SNR=41
HOPS Hopland Field 85.49 40 IAMs_20 IAMs_20 22 24 52.5
comp=Z,2μm,19.0s
GDXM Geysers 85.51 40 IAmb IAmb 21 50 39.1
comp=Z,61nm,1.1s
KULM Kulim 85.53 279 IAMs_20 IAMs_20 22 33 18.3
comp=Z,1μm,20.0s
KULM Kulim 85.53 279 P **P** **21 50 36.0 0.0**
BO02 Sierra Bellavi 85.54 128 IAmb IAmb 21 50 54.4
comp=Z,94nm,1.2s
BO02 IAMs_20 IAMs_20 22 18 36.4
comp=Z,1μm,22.0s
VES Vestal, Richgr 85.62 44 P **P** **21 50 37.3 +1.4**
baz=228,SNR=18
EDW2 Edwards Air Fo 85.65 45 P **P** **21 50 37.7 +1.5**
baz=229,SNR=27
TEY Ternei 85.66 329⇑ *e*P **P** **21 50 33.5 -2.3**
TEY pmax pmax
comp=Z,10.0nm,1.2s
PEA0B Petropavlovsk- 85.66 345 *ce*P **P** **21 50 36.1 +0.4**
PETK Petropavlovsk- 85.66 345 P **P** **21 50 35.8 +0.1**
comp=Z,68nm,0.8s,baz=128,slow=6.6,SNR=44
PETK LR LR 22 21 57.2
comp=Z,863nm,21.9s,baz=167,slow=31
KCPM Cahto Peak 85.70 39 IAmb IAmb 21 50 39.9
comp=Z,116nm,1.2s
RPSI Rantau Prapat 85.71 276 IAmb IAmb 21 50 36.9
comp=Z,103nm,1.3s
RPSI IAMs_20 IAMs_20 22 28 25.4
comp=Z,2μm,21.0s
PSI Prapat 85.76 276 P **P** **21 50 35.5 -1.8**
comp=Z,42nm,1.1s,baz=178,slow=5.7,SNR=15
VOG Valley Oaks Go 85.77 43 P **P** **21 50 38.5 +1.9**
baz=228
SWSC Sam W. Stewart 85.77 48 P **P** **21 50 38.5 +1.8**
baz=230,SNR=16

TPFO Pinon Flats 85.78 47 P **P** **21 50 38.5 +1.6**
baz=230,SNR=12
PFO Pinyon Flats O 85.78 47 P **P** **21 50 38.7 +1.7**
comp=Z,49nm,1.1s,baz=242,slow=3.8,SNR=48
PFO Pinyon Flats O 85.78 47 P **P** **21 50 39.3 +2.4**
PFO pmax pmax
comp=Z,102nm,1.3s
PFO Pinyon Flats O 85.78 47 P **P** **21 50 38.4 +1.5**
baz=230,SNR=8.1
PFO Pinyon Flats O 85.78 47 P **P** **21 50 39.3 +2.4**
PFO IAmb IAmb 21 50 40.5
comp=Z,102nm,1.2s
ISA Isabella, Lake 85.87 44 P **P** **21 50 39.2 +2.0**
baz=228,SNR=35
ISA Isabella, Lake 85.87 44 IAMs_20 IAMs_20 22 26 14.3
comp=Z,1μm,19.0s
BBRC Big Bear Solar 85.91 46 P **P** **21 50 39.2 +1.5**
baz=229
VA01 Torpederas 85.92 126 IAMs_20 IAMs_20 22 18 57.6
comp=Z,1μm,19.0s
KMRM Mail Ridge 86.02 38 P **P** **21 50 40.2 +2.3**
GSI Gunungsitoli 86.18 274 P **P** **21 50 39.0 -0.3**
comp=Z,2μmcomp=Z,163nm,1.4s
LRMC Laurel Mtn Rad 86.23 45 P **P** **21 50 40.9 +1.7**
baz=229,SNR=32
RRX Edison Barstow 86.26 46 P **P** **21 50 40.7 +1.5**
baz=229
BELC Belle Mtn. Jos 86.32 47 P **P** **21 50 41.0 +1.3**
baz=230,SNR=66
CMB Columbia Colle 86.34 42 P **P** **21 50 40.5 +1.0**
CMB pmax pmax
comp=Z,91nm,1.2s
CMB MLR MLR
comp=Z,1μm,20.0s
CMB Columbia Colle 86.34 42 P **P** **21 50 40.5 +1.0**
CMB IAmb IAmb 21 50 42.5
comp=Z,91nm,1.1s
CMB IAMs_20 IAMs_20 22 26 19.3
comp=Z,1μm,20.0s
MT05 Renca 86.35 127 IAMs_20 IAMs_20 22 18 48.8
comp=Z,2μm,19.0s
NJ2 Nanjing 86.35 310 *e*P **P** **21 50 39.0 -0.6**
NJ2 sP **sP** **21 50 50.2 -0.1**
NJ2 S **SKKSac** **22 01 10.9 -1.0**
NJ2 SS **SS** **22 06 56.6 +2.4**
NJ2 pmax pmax
comp=Z,24nm,0.9s
NJ2 pmax pmax
comp=Z,530nm,4.3s
NJ2 LR LR
comp=Z,690nm,21.8s
NJ2 LR LR
comp=Z,490nm,24.2s
NJ2 LR LR
comp=Z,810nm,23.2s
PIX Pinacate 86.43 50 IAmb IAmb 21 50 43.4
comp=Z,58nm,1.2s
BC3 Big Chuckawall 86.45 48 P **P** **21 50 42.4 +2.2**
baz=230,SNR=50
GLA Glamis 86.47 48 P **P** **21 50 42.1 +1.9**
baz=231,SNR=12
KHMM Horse Mountain 86.47 38 P **P** **21 50 42.6 +2.4**
KHMM IAmb IAmb 21 50 43.7
comp=Z,90nm,1.1s
HSIG 86.58 54 IAmb IAmb 21 50 44.1
comp=Z,76nm,1.3s
CWC Cottonwood Cre 86.63 44 P **P** **21 50 42.5 +1.4**
baz=228
HEC Hector,Ludlow 86.64 46 P **P** **21 50 42.4 +1.3**
baz=230,SNR=28
GSC Goldstone, Bar 86.66 46 P **P** **21 50 43.1 +1.9**
baz=229,SNR=91
GSC Goldstone, Bar 86.66 46 IAMs_20 IAMs_20 22 26 02.2
comp=Z,1μm,20.0s
MPMC Manual Prospec 86.73 45 P **P** **21 50 43.1 +1.4**
baz=229,SNR=92
ORV Oroville 86.75 40 P **P** **21 50 42.9 +1.5**
ORV pmax pmax
comp=Z,76nm,1.4s
ORV MLR MLR
comp=Z,900nm,18.0s
ORV Oroville 86.75 40 P **P** **21 50 42.9 +1.5**
ORV IAmb IAmb 21 50 44.4
comp=Z,76nm,1.4s
ORV IAMs_20 IAMs_20 22 26 44.0
comp=Z,944nm,18.0s
MDPB Devils Postpil 86.83 43 IAmb IAmb 21 50 45.4
comp=Z,70nm,1.3s
MDPB IAMs_20 IAMs_20 22 27 01.3
comp=Z,1μm,18.0s
VA03 San Esteban 86.83 126 IAMs_20 IAMs_20 22 20 31.5
comp=Z,2μm,20.0s
KRMB Red Mountain 86.84 37 IAmb IAmb 21 50 45.6
comp=Z,108nm,1.2s
OMMB Old Mammoth Mi 86.86 43 IAmb IAmb 21 50 46.6
comp=Z,69nm,1.3s
OMMB IAMs_20 IAMs_20 22 26 45.2
comp=Z,1μm,19.0s
WDC Whiskeytown Da 86.90 39 IAmb IAmb 21 50 45.3
comp=Z,106nm,1.2s
TIN Tinemaha, Big 86.94 44 P **P** **21 50 43.8 +1.2**
baz=228
IRM Iron Mountain 86.96 47 P **P** **21 50 44.5 +1.9**
baz=230,SNR=95
MLAC Mammoth, Mammo 86.97 43 P **P** **21 50 44.5 +1.7**
baz=228,SNR=8.3
113A Mohawk Valley, 86.98 49 IAmb IAmb 21 50 46.5
comp=Z,106nm,1.4s
113A IAMs_20 IAMs_20 22 25 27.4
comp=Z,999nm,18.0s
GMRC Granite Mounta 87.04 47 P **P** **21 50 44.7 +1.6**
baz=230,SNR=45
N02D Trinity Center 87.09 38 P **P** **21 50 44.3 +1.2**
baz=225,SNR=15
O03E Paynes Creek 87.10 39 P **P** **21 50 43.8 +0.6**
baz=226,SNR=24
214A Organ Pipe Nat 87.10 50 P **P** **21 50 45.6 +2.3**
baz=232,SNR=11
214A Organ Pipe Nat 87.10 50 IAmb IAmb 21 51 03.5
comp=Z,76nm,1.2s
214A IAMs_20 IAMs_20 22 25 20.9
comp=Z,984nm,18.0s
USA0B Ussuriysk Arra 87.15 326 *ci*P **P** **21 50 43.5 +0.3**
USA0B Ussuriysk Arra 87.15 326 IAmb IAmb 21 50 47.0
comp=Z,76nm,1.1s
USRK Ussuriysk Ar. 87.15 326 P **P** **21 50 43.7 +0.5**
comp=Z,41nm,1.0s,baz=147,slow=3.1,SNR=34
USRK LR LR 22 26 37.9
comp=Z,348nm,19.7s,baz=129,slow=34
USRK Ussuriysk Ar. 87.15 326 P **P** **21 50 43.6 +0.4**
RUBR Rubicon Trail 87.17 41 IAmb IAmb 21 51 01.8
comp=Z,111nm,1.3s
RUBR IAMs_20 IAMs_20 22 25 35.1
comp=Z,1μm,20.0s
WAKR Walker 87.21 42 IAMs_20 IAMs_20 22 21 02.2
comp=Z,1μm,22.0s
TUQ Turquoise Moun 87.29 46 P **P** **21 50 45.9 +1.6**
baz=230,SNR=39
M02C Callahan 87.30 38 P **P** **21 50 45.6 +1.4**
baz=225,SNR=14
SHOC Shoshone, Teco 87.37 45 P **P** **21 50 46.8 +2.2**
baz=230,SNR=8.6
CO02 Combarbal 87.38 125 P **P** **21 50 46.5 +1.5**
CO02 IAmb IAmb 21 51 03.4
comp=Z,96nm,1.1s
FURC Furnace Creek, 87.38 45 P **P** **21 50 46.2 +1.7**
baz=229,SNR=21
GRAC Grapevine Rang 87.42 44 P **P** **21 50 46.6 +1.7**
baz=229,SNR=16
L02E Cave Junction 87.45 37 P **P** **21 50 47.0 +2.2**
baz=225
PNTR Pine Nut 87.51 41 P **P** **21 50 46.3 +0.9**
PNTR IAmb IAmb 21 50 48.4
comp=Z,84nm,1.1s
PNTR IAMs_20 IAMs_20 22 27 16.2
comp=Z,1μm,20.0s
LHV Little Huntoon 87.58 43 IAmb IAmb 21 50 48.9
comp=Z,82nm,1.1s
LHV IAMs_20 IAMs_20 22 27 09.2
comp=Z,1μm,18.0s
BEKR Beckworth 87.61 40 P **P** **21 50 46.8 +1.0**
BEKR IAMs_20 IAMs_20 22 25 58.6
comp=Z,942nm,20.0s
YBH Yreka Blue Hor 87.62 38 P **P** **21 50 46.9 +1.2**
comp=Z,20nm,1.0s,baz=146,slow=2.2,SNR=23
YBH Yreka Blue Hor 87.62 38 P **P** **21 50 47.2 +1.5**
YBH pmax pmax

comp=Z,41nm,1.2s
YBH Yreka Blue Hor 87.62 38 P P 21 50 47.2 +1.5
VCNR Virginia City 87.62 41 IAmb IAmb 21 50 48.9
comp=Z,84nm,1.5s
VCNR IAMs_20 IAMs_20 22 26 09.1
comp=Z,1µm,19.0s
NEE2 Needles Airpor 87.69 47 P P 21 50 48.3 +2.3
baz=231,SNR=7.0
PDMCI Parker Dam,Lak 87.70 48 P P 21 50 48.4 +2.3
baz=231,SNR=20
K02D Willamette Mer 87.80 37 P P 21 50 48.2 +1.6
baz=225,SNR=7.6
CO03 El Pedregal 87.80 125 IAmb IAmb 21 51 05.3
comp=Z,62nm,1.1s
NVAR Mina Array Bea 87.82 43 P P 21 50 47.9 +1.0
comp=Z,36nm,0.9s,baz=221,slow=7.9,SNR=104
NVAR PKKP **PKKPbc 22 08 34.9 +0.2**
comp=Z,1.8nm,0.9s,baz=140,slow=2.6,SNR=6.4
NVAR PKPPKP **P'P'df 22 16 42.4 +4.3**
comp=Z,0.9nm,0.8s,baz=100,slow=4.5,SNR=5.3
NVAR LR LR 22 27 13.9
comp=Z,1µm,18.0s,baz=251,slow=34
RYN Ryan 87.82 42 IAmb IAmb 21 50 49.8
comp=Z,72nm,1.4s
NV11 Mina Array Sit 87.90 43 IAmb IAmb 21 50 50.2
comp=Z,81nm,1.2s
TYV Tymovskoe 87.97 336 *e*P **P 21 50 48.3 +1.3**
TYV pmax pmax
comp=Z,900nm,4.8s
TYV pmax pmax
comp=Z,82nm,1.5s
J01E Myrtle Point 88.00 36 P P 21 50 49.0 +1.7
baz=224
PAHR Pah Rah Range 88.05 41 IAmb IAmb 21 50 50.7
comp=Z,48nm,1.1s
PAHR IAMs_20 IAMs_20 22 26 58.0
comp=Z,2µm,19.0s
TPNV Topopah Spring 88.07 45 P P 21 50 49.7 +1.7
baz=230,SNR=50
TPNV Topopah Spring 88.07 45 IAmb IAmb 21 50 51.6
comp=Z,101nm,1.2s
TPNV IAMs_20 IAMs_20 22 27 37.5
comp=Z,1µm,18.0s
HUMO Hull Mountain 88.11 37 IAmb IAmb 21 50 51.6
comp=Z,123nm,1.7s
M04C Macdoel 88.12 38 P P 21 50 49.8 +1.6
baz=226,SNR=9.9
L04D Klamath Falls 88.17 38 P P 21 50 49.9 +1.5
baz=226,SNR=8.9
Y14A Wickenburg 88.20 49 IAMs_20 IAMs_20 22 26 24.8
comp=Z,979nm,18.0s
W13A Hualapai Mount 88.36 47 IAmb IAmb 21 50 53.4
comp=Z,84nm,1.2s
SHPR Sheep Range 88.45 46 IAmb IAmb 21 50 53.8
comp=Z,95nm,1.4s
SHPR IAMs_20 IAMs_20 22 25 55.8
comp=Z,838nm,18.0s
WHN Wuhan 88.48 307 ⇓P **P 21 50 50.3 +0.4**
WHN sP **pwP 21 51 05.9 +3.1**
WHN S **S 22 01 36.0 +2.0**
WHN pmax pmax
comp=Z,1µm,6.5s
WHN LR LR
comp=Z,420nm,9.1s
WHN LR LR
comp=Z,500nm,12.5s
WHN LR LR
comp=Z,1µm,20.3s
MDJ Mudanjiang 88.62 325 P **P 21 50 51.0 +0.8**
MDJ pP pP 21 50 57.7 -0.4
MDJ sP pwP 21 51 02.0 -1.1
MDJ PP **PP 21 54 23.5 +4.1**
MDJ S **S 22 01 39.9 +5.2**
MDJ pmax pmax
comp=Z,28nm,1.0s
MDJ pmax pmax
comp=Z,680nm,4.7s
MDJ LR LR
comp=Z,440nm,16.5s
MDJ LR LR
comp=Z,360nm,17.9s
MDJ LR LR
comp=Z,870nm,20.6s
MDJ Mudanjiang 88.62 325 IAmb IAmb 21 51 12.5
comp=Z,53nm,1.3s
I03D Drain, OR 88.68 36 P P 21 50 51.8 +1.3
baz=225,SNR=7.9
TUC Tucson 88.68 51 P P 21 50 53.9 +3.0
TUC MLR MLR
comp=Z,700nm,20.0s
TUC MLR MLR
comp=Z,141µm,1.4s
TUC Tucson 88.68 51 P P 21 50 53.9 +3.0
baz=233
TUC Tucson 88.68 51 P P 21 50 53.9 +3.0
I02D Swisshome 88.72 36 P P 21 50 52.9 +2.3
baz=224
K04D Chiloquin, OR 88.75 38 P P 21 50 52.6 +1.5
baz=226
ZON Zonda 88.83 126 IAmb IAmb 21 51 10.8
comp=Z,106nm,1.4s
J04D Umpqua Nationa 88.99 37 P P 21 50 53.9 +1.6
baz=226,SNR=14
DL2 Dalian 89.01 317 P P 21 50 49.4 -2.8
DL2 S **SKKSac 22 01 35.2 +3.7**
DL2 pmax pmax
comp=Z,45nm,1.1s
DL2 pmax pmax
comp=Z,410nm,4.2s
DL2 LR LR
comp=Z,420nm,18.7s
DL2 LR LR
comp=Z,540nm,22.7s
DL2 LR LR
comp=Z,790nm,24.7s
MOD Modoc Plateau 89.03 39 IAmb IAmb 21 50 55.2
comp=Z,59nm,1.2s
PRN Pahroc Range 89.10 45 IAMs_20 IAMs_20 22 26 20.7
comp=Z,930nm,20.0s
319A Douglas 89.15 53 IAmb IAmb 21 50 57.3
comp=Z,90nm,1.2s
ZAIG Zacatecas 89.18 63 IAmb IAmb 21 51 13.2
comp=Z,105nm,1.9s
ZAIG IAMs_20 IAMs_20 22 25 25.5
comp=Z,1µm,18.0s
AC05 El Transito 89.22 123 IAmb IAmb 21 51 12.4
comp=Z,52nm,1.0s
I04A Tendick Farm, 89.23 36 P P 21 50 54.6 +1.4
baz=226,SNR=18
COR Corvallis 89.33 35 IAMs_20 IAMs_20 22 21 08.0
comp=Z,2µm,20.0s
R11A Troy Canyon, C 89.38 44 P P 21 50 56.0 +1.8
baz=230,SNR=11
R11A Troy Canyon, C 89.38 44 IAMs_20 IAMs_20 22 28 39.0
comp=Z,1µm,19.0s
KHON Khomkaen 89.39 289 P P 21 50 55.0 +0.5
J05D Fort Rock, OR 89.48 37 P P 21 50 55.9 +1.4
baz=226,SNR=35
X16A Lo Mia Camp, P 89.52 49 P P 21 50 57.4 +2.4
H04D Lebanon 89.57 36 P P 21 50 56.2 +1.5
baz=225,SNR=11
TLIG Tlapa 89.57 69 IAmb IAmb 21 51 15.1
comp=Z,94nm,1.5s
TLIG IAMs_20 IAMs_20 22 20 58.6
comp=Z,1µm,22.0s
G03D McMinnville, O 89.80 35 P P 21 50 57.6 +1.9
baz=225
SNY Shenyang 89.83 320 ⇑P **P 21 50 56.0 +0.1**
SNY S **S 22 01 50.3 +4.2**
SNY pmax pmax
comp=Z,24nm,1.0s
SNY pmax pmax
comp=Z,320nm,5.9s
SNY LR LR
comp=Z,280nm,21.1s
SNY LR LR
comp=Z,310nm,24.5s
SNY LR LR
comp=Z,770nm,21.6s
CHAI Chaiyaphum 89.85 288 P P 21 50 57.0 +0.3
H04A Detroit Lake 89.97 36 P P 21 50 57.8 +1.2
H04A IAmb IAmb 21 50 59.2
comp=Z,90nm,1.1s
UNM Universidad Na 90.01 68 IAMs_20 IAMs_20 22 21 15.9
comp=Z,996nm,21.0s
TIA Tai'an 90.06 313 P P 21 50 57.8 +0.6
TIA S **SKKSac 22 01 42.2 +2.6**
TIA pmax pmax
comp=Z,39nm,0.8s
TIA LR LR
comp=Z,350nm,24.9s
TIA LR LR
comp=Z,470nm,22.8s
TIA LR LR
comp=Z,920nm,23.5s
KDAK Kodiak Island 90.08 13 P P 21 50 59.2 +2.5
KDAK pmax pmax
comp=Z,138nm,1.5s
KDAK Kodiak Island 90.08 13 P P 21 50 59.2 +2.5
KDAK IAmb IAmb 21 50 59.4
comp=Z,138nm,1.5s
I05D Terrebonne, OR 90.16 37 P P 21 50 59.3 +1.8
baz=226,SNR=5.5
U15A North Rim 90.20 47 IAmb IAmb 21 51 02.2
comp=Z,98nm,1.1s
GRNR Gornyy 90.22 333 ⇑*i*P **P 21 50 58.9 +1.3**
GRNR *e*S **S 22 01 54.2 +4.8**
GRNR pmax pmax
comp=Z,50nm,1.1s
GRNR smax smax
comp=N,6.0nm,0.7s
WUAZ Wupatki 90.23 48 P P 21 51 00.7 +2.5
baz=233,SNR=19
F04D Rainier, OR 90.54 35 P P 21 51 01.4 +2.2
baz=225,SNR=5.1
G05D Wamic, OR 90.80 36 P P 21 51 02.0 +1.6
baz=226
121A Cookes Peak, D 90.85 52 P P 21 51 03.4 +2.2
baz=234
121A Cookes Peak, D 90.85 52 IAmb IAmb 21 51 05.2
comp=Z,78nm,1.4s
121A IAMs_20 IAMs_20 22 27 23.5
comp=Z,979nm,19.0s
I07A Izee 90.94 38 IAmb IAmb 21 51 04.3
comp=Z,67nm,1.1s
KLR Kul'dur 91.00 330 P P 21 51 01.2 0.0
comp=Z,17nm,0.9s,baz=126,slow=2.5,SNR=36
KLR Kul'dur 91.00 330 *ce*P **P 21 51 01.9 +0.7**
KLR pmax pmax
comp=Z,49nm,1.3s
J08A Circle Bar Ran 91.01 39 IAmb IAmb 21 51 04.5
comp=Z,79nm,1.2s
J08A IAMs_20 IAMs_20 22 28 24.0
comp=Z,1µm,19.0s
NLWA Neilton Lookou 91.06 33 IAmb IAmb 21 51 22.8
comp=Z,45nm,1.1s
W18A Petrified Fore 91.06 49 P P 21 51 04.2 +2.0
baz=234,SNR=10
E04D Cinebar 91.09 34 P P 21 51 03.6 +1.9
baz=225,SNR=13
ELK Elko 91.12 42 P P 21 51 02.5 +0.1
comp=Z,15nm,1.0s,baz=229,slow=4.6,SNR=31
ELK Elko 91.12 42 IAMs_20 IAMs_20 22 25 52.9
comp=Z,1µm,20.0s
SLVN Son La 91.14 294 P P 21 51 03.2 +0.5
F05D White Salmon 91.17 35 P P 21 51 04.1 +2.0
baz=226
EPT El Paso 91.30 54 IAMs_20 IAMs_20 22 30 58.5
comp=Z,871nm,18.0s
D04E Lakebay 91.43 34 P P 21 51 05.9 +2.6
baz=225
D03D Eldon 91.53 33 P P 21 51 05.7 +1.9
baz=225,SNR=7.3
LON Longmire 91.60 35 IAMs_20 IAMs_20 22 22 27.9
comp=Z,988nm,22.0s
GYA Guiyang 91.73 300 ⇓P **P 21 51 06.0 +0.6**
GYA PP **PP 21 54 42.8 -1.9**
GYA SKS **SKSac 22 01 31.5 -5.0**
GYA S **SKKSac 22 01 54.5 +1.7**
GYA pmax pmax
comp=Z,15nm,1.1s
GYA pmax pmax
comp=Z,160nm,7.0s
GYA LR LR
comp=Z,240nm,19.4s
GYA LR LR
comp=Z,280nm,18.3s
GYA LR LR
comp=Z,380nm,20.8s
ENH Enshi 91.75 304 P P 21 51 05.8 +0.5
PHIT Phitsanulok 91.80 289 P P 21 51 09.2 +3.5
DIB Dawson Inlet, 91.81 25 IAmb IAmb 21 51 07.7
comp=Z,48nm,1.2s
F07A Phinny Hill Vi 91.95 36 IAmb IAmb 21 51 08.6
comp=Z,53nm,1.2s
TX31 Lajitas Ar. Si 91.96 57 P P 21 51 08.4 +2.1
TX32 Lajitas Array 91.96 57 IAmb IAmb 21 51 09.7
comp=Z,44nm,1.3s
TXAR Lajitas Array 91.96 57 P P 21 51 07.9 +1.5
comp=Z,14nm,1.1s,baz=208,slow=5.1,SNR=63
TXAR PKKP **PKKPbc 22 08 24.3 +0.7**
comp=Z,0.7nm,0.9s,baz=123,slow=3.3,SNR=5.0
TXAR LR LR 22 27 18.8
comp=Z,634nm,18.0s,baz=0.0,slow=32
TXAR Lajitas Array 91.96 57 P P 21 51 07.5 +1.1
UTTA Uttaradit 91.97 289 P P 21 51 08.2 +1.7
comp=Z,0.1nmcomp=Z,250nmcomp=Z,26nm,0.9s
HOM Homer 92.01 13 P P 21 51 06.9 +1.3
baz=202
MNTX Cornudas Mount 92.05 54 P P 21 51 07.8 +1.2
baz=236,SNR=10
MNTX Cornudas Mount 92.05 54 IAmb IAmb 21 51 09.7
comp=Z,38nm,1.4s
DUG Dugway, Tooele 92.21 44 P P 21 51 08.8 +1.6
baz=232
DUG Dugway, Tooele 92.21 44 IAMs_20 IAMs_20 22 30 19.9
comp=Z,1µm,18.0s
Y22D IRIS PASSCAL I 92.33 52 P P 21 51 09.6 +1.6
baz=235
Y22D IRIS PASSCAL I 92.33 52 IAMs_20 IAMs_20 22 28 29.5
comp=Z,971nm,19.0s
CMIG Matias Romero 92.34 72 P P 21 51 10.1 +1.9
comp=Z,6.3nm,1.0s,baz=225,slow=4.6,SNR=7.5
E07A Sunnyside 92.44 36 IAmb IAmb 21 51 11.1
comp=Z,74nm,1.2s
HAWA Hanford 92.49 36 IAmb IAmb 21 51 11.2
comp=Z,56nm,1.1s
MFID Camas Ranch 92.50 40 IAmb IAmb 21 51 11.3
comp=Z,63nm,1.1s
B05A Bryant 92.52 33 P P 21 51 10.0 +1.7
baz=226,SNR=7.2
A04D Lummi Island 92.55 33 P P 21 51 10.0 +1.6
baz=225
BNM Barren Site 92.58 52 P P 21 51 10.8 +1.5
SUKH Sukhothai 92.60 289 P P 21 51 12.0 +2.6
BBB Bella Bella 92.71 28 P P 21 51 10.1 +1.1
comp=Z,37nm,1.1s,baz=308,slow=1.4,SNR=6.0
BBB Bella Bella 92.71 28 IAmb IAmb 21 51 12.1
comp=Z,56nm,1.2s
E08A Dider Farm, El 92.80 36 IAmb IAmb 21 51 12.4
comp=Z,48nm,1.3s
SRU San Rafael Swe 92.95 46 P P 21 51 12.1 +1.3
SRU pmax pmax
comp=Z,51nm,1.3s
SRU San Rafael Swe 92.95 46 P P 21 51 12.1 +1.3
BJI Beijing 93.00 315 P P 21 51 10.9 +0.2
BJI SKS **SKSac 22 01 45.9 +3.3**
BJI S **ScS 22 02 16.9 +0.2**
BJI pmax pmax
comp=Z,16nm,1.1s
BJI pmax pmax
comp=Z,250nm,3.5s
BJI LR LR
comp=Z,430nm,20.9s
BJI LR LR
comp=Z,430nm,20.2s
BJI LR LR
comp=Z,910nm,36.0s
MVCO Mesa Verde 93.10 48 P P 21 51 13.4 +1.8
baz=234
ANMO Albuquerque 93.14 51 P P 21 51 12.9 +1.1
comp=Z,14nm,1.0s,baz=204,slow=5.7,SNR=29
ANMO Albuquerque 93.14 51 P P 21 51 13.5 +1.7
ANMO pmax pmax
comp=Z,36nm,1.3s
ANMO MLR MLR
comp=Z,1µm,18.0s
ANMO Albuquerque 93.14 51 P P 21 51 13.5 +1.7
baz=235
ANMO Albuquerque 93.14 51 P P 21 51 13.5 +1.7
ANMO IAmb IAmb 21 51 15.0
comp=Z,36nm,1.2s
ANMO Albuquerque 93.14 51 IAMs_20 IAMs_20 22 28 58.0
comp=Z,1µm,18.0s
MA2 Magadan 93.15 344 IAMs_20 IAMs_20 22 27 08.4
comp=Z,1µm,22.0s
D08A Wollman Farm, 93.25 36 IAmb IAmb 21 51 14.5
comp=Z,36nm,1.0s
E09A Wood Farm, Sta 93.29 37 IAmb IAmb 21 51 14.3
comp=Z,56nm,1.2s
HLID Hailey 93.39 41 P P 21 51 14.5 +1.8
baz=231
HLID Hailey 93.39 41 IAmb IAmb 21 51 15.7
comp=Z,40nm,1.1s
F10A Beach Ranch, E 93.41 37 IAmb IAmb 21 51 14.5
comp=Z,47nm,1.1s
PV14 Lion Creek, Pa 93.45 47 IAmb IAmb 21 53 00.1
comp=Z,31nm,1.0s
PV14 IAMs_20 IAMs_20 22 39 46.5
comp=Z,1µm,18.0s
PV16 Nyswonger Mesa 93.48 47 IAmb IAmb 21 53 53.4
comp=Z,41nm,1.4s
PLID Pearl Lake 93.48 39 IAmb IAmb 21 51 15.6
comp=Z,54nm,1.1s
PV03 Paradox Valley 93.49 47 IAmb IAmb 21 51 16.8
comp=Z,56nm,1.8s
PV11 David Mesa, Pa 93.50 47 IAMs_20 IAMs_20 22 26 51.3
comp=Z,959nm,19.0s
PV23 Carpenter Ridg 93.50 47 IAmb IAmb 21 53 19.3
comp=Z,20nm,0.7s
PV02 Paradox Valley 93.53 47 IAMs_20 IAMs_20 22 40 09.8
comp=Z,1µm,21.0s
PV12 Saucer Basin, 93.56 47 IAmb IAmb 21 51 16.6
comp=Z,65nm,1.5s
CM36 Chiang Mai Arr 93.56 289 P P 21 51 15.0 +1.2
CM04 Chiang Mai Arr 93.59 289 P P 21 51 16.0 +2.0
comp=Z,0.0nmcomp=Z,118nmcomp=Z,13nm,1.0s
PV01 Paradox Valley 93.60 48 IAmb IAmb 21 54 40.5
comp=Z,90nm,1.9s
CM09 Chiang Mai Arr 93.61 289 P P 21 51 16.0 +1.9
comp=Z,0.0nmcomp=Z,128nmcomp=Z,15nm,1.0s
CM01 Chiang Mai Arr 93.62 289 P P 21 51 16.0 +1.9
comp=Z,0.0nmcomp=Z,92nmcomp=Z,12nm,0.9s
CM05 Chiang Mai Arr 93.62 289 P P 21 51 16.4 +2.3
comp=Z,0.0nmcomp=Z,80nmcomp=Z,9.4nm,1.0s
CM02 Chiang Mai Arr 93.64 289 P P 21 51 16.0 +1.8
comp=Z,0.1nmcomp=Z,122nmcomp=Z,16nm,1.2s
CM31 Chiang Mai Arr 93.65 289 P P 21 51 17.2 +2.9
comp=Z,1.0nmcomp=Z,4µmcomp=Z,358nm,1.7s
CM31 Chiang Mai Arr 93.65 289 P P 21 51 14.8 +0.5
CMAR Chiang Mai Arr 93.65 289 P P 21 51 15.0 +0.7
comp=Z,6.0nm,0.8s,baz=146,slow=3.4,SNR=27
CMAR PKKP **PKKPbc 22 08 19.8 +1.2**
comp=Z,0.5nm,0.4s,baz=280,slow=3.2,SNR=4.3
CMAR LR LR 22 35 41.8
comp=Z,274nm,19.5s,baz=125,slow=37
CMAR Chiang Mai Arr 93.65 289 P P 21 51 15.0 +0.7
CMAR Chiang Mai Arr 93.65 289 P P 21 51 14.6 +0.3
CM13 Chiang Mai Arr 93.67 289 P P 21 51 16.1 +1.8
comp=Z,0.0nmcomp=Z,98nmcomp=Z,12nm,0.9s
CM15 Chiang Mai Arr 93.67 289 P P 21 51 16.0 +1.7
comp=Z,0.0nmcomp=Z,121nmcomp=Z,12nm,1.0s
RC01 Rabbit Creek A 93.71 13 P P 21 51 15.7 +2.2
baz=204
PV07 Paradox Valley 93.73 47 IAmb IAmb 21 52 32.5
comp=Z,29nm,1.0s
LVC Limon Verde 93.75 119 P P 21 51 17.4 +2.1
comp=Z,6.4nm,1.1s,baz=218,slow=7.1,SNR=3.4
HWUT Hardware Ranch 93.82 43 IAMs_20 IAMs_20 22 31 37.5
comp=Z,1µm,18.0s
CM32 Chiang Mai Arr 93.83 289 P P 21 51 23.0 +7.9
CM03 Chiang Mai 93.83 289 P P 21 51 12.9 -2.2
CHTO P **P 21 51 12.9 -2.2**
CHTO Chiang Mai 93.83 289 P P 21 51 15.2 +0.1
CHTO pmax pmax
comp=Z,13nm,1.0s
CHTO Chiang Mai 93.83 289 P P 21 51 15.2 +0.1
CM33 Chiang Mai Arr 93.83 289 P P 21 51 16.0 +0.9
SUA Susitna One 93.86 13 IAmb IAmb 21 51 22.2
comp=Z,35nm,1.1s
TA01 Diego Aracena 93.92 116 IAMs_20 IAMs_20 22 23 52.9
comp=Z,2µm,20.0s
TIY Taiyuan 93.97 312 *e*P **P 21 51 16.6 +1.2**
KMI Kunming 94.03 297 P P 21 51 15.9 -0.2
KMI pP pP 21 51 24.9 +0.9
KMI sP pwP 21 51 28.8 -0.2
KMI PP **PP 21 55 05.3 +2.5**
KMI SKS **SKSac 22 01 50.2 +0.7**
KMI S **S 22 02 22.1 -3.1**
KMI sS sS 22 02 39.6 +1.1
KMI SS **SS 22 08 46.8 +0.8**
KMI pmax pmax
comp=Z,17nm,1.2s
KMI pmax pmax
comp=Z,220nm,7.2s
KMI LR LR
comp=Z,180nm,20.0s
KMI LR LR
comp=Z,410nm,19.4s
KMI LR LR
comp=Z,450nm,20.6s
GLI Glacier Island 94.06 14 IAMs_20 IAMs_20 22 29 03.7
comp=Z,1µm,20.0s
C09A Chrisman Ranch 94.08 36 IAMs_20 IAMs_20 22 24 32.6
comp=Z,1µm,22.0s
SKT Skwentna 94.19 12 IAMs_20 IAMs_20 22 29 24.8
comp=Z,1µm,19.0s
XAN Xi'an 94.25 307 P P 21 51 17.5 +0.8
XAN pP sP 21 51 27.8 +0.4
XAN pmax pmax
comp=Z,7.0nm,1.1s
XAN pmax pmax
comp=Z,350nm,6.1s
XAN LR LR
comp=Z,350nm,19.2s
XAN LR LR
comp=Z,420nm,20.3s
XAN LR LR
comp=Z,770nm,18.9s
XAN Xi'an 94.25 307 P P 21 51 17.1 +0.4
XAN pmax pmax
comp=Z,19nm,1.3s
XAN Xi'an 94.25 307 P P 21 51 17.1 +0.4
PMR Palmer 94.29 13 P P 21 51 17.5 +1.4
PMR pmax pmax
comp=Z,54nm,1.5s
PMR Palmer 94.29 13 P P 21 51 17.5 +1.4
PMR IAmb IAmb 21 51 32.8
comp=Z,54nm,1.5s
TTA Tatalina 94.35 10 IAmb IAmb 21 51 20.5
comp=Z,32nm,1.2s
GHO Glory Hole Cre 94.49 13 IAmb IAmb 21 51 18.4
comp=Z,41nm,1.1s
S22A 4UR Ranch, Cre 94.50 49 P P 21 51 19.6 +1.5
baz=235
833A Chaparral WMA, 94.57 60 P P 21 51 19.7 +1.5
baz=238
833A Chaparral WMA, 94.57 60 IAMs_20 IAMs_20 22 28 49.9
comp=Z,909nm,20.0s
AHID Auburn Hatcher 94.80 43 IAMs_20 IAMs_20 22 32 18.3
comp=Z,860nm,20.0s
SCM Sheep Creek Mo 94.87 14 IAmb IAmb 21 52 28.4
comp=Z,91nm,1.5s
ISLE Juniper Island 94.92 17 IAMs_20 IAMs_20 22 26 05.7
comp=Z,1µm,20.0s
TGL Tana Glacier 94.93 16 IAMs_20 IAMs_20 22 25 32.9
comp=Z,1µm,20.0s
NEW Newport 94.96 36 P P 21 51 19.7 0.0
comp=Z,4.4nm,0.8s,baz=242,slow=5.0,SNR=4.1
NEW Newport 94.96 36 P P 21 51 20.4 +0.8
baz=229
NEW Newport 94.96 36 IAMs_20 IAMs_20 22 24 34.0
comp=Z,1µm,21.0s
O20A White River Ci 94.97 46 P P 21 51 21.3 +1.3
baz=235
PCA Pinnacle 95.01 18 IAMs_20 IAMs_20 22 25 35.5
comp=Z,1µm,20.0s
MCMT McKenzie Canyo 95.06 40 P P 21 51 21.2 +0.8
TABL Table Mountain 95.08 17 IAMs_20 IAMs_20 22 31 51.1
comp=Z,1µm,19.0s
MSTX Muleshoe 95.13 54 IAmb IAmb 21 51 23.2
comp=Z,34nm,1.1s
N25K Chitina, Valde 95.26 15 P P 21 51 23.1 +2.4
baz=208
TPAW Teton Pass 95.32 42 IAmb IAmb 21 51 24.6
comp=Z,45nm,1.3s
M24K Tolsona, Glenn 95.36 14 P P 21 51 22.3 +1.2
baz=207
SNET Serv Nac Est T 95.36 77 IAMs_20 IAMs_20 22 24 12.6
comp=Z,1µm,20.0s
SDCO Great Sand Dun 95.36 49 P P 21 51 23.7 +1.6

baz=236
JCT Junction City 95.40 58 P **P** 21 51 22.8 +0.8
baz=238
SNOW Snow King Moun 95.42 42 IAmb IAmb 21 51 25.0
comp=Z,52nm,1.1s
PBA Port Blair 95.47 280 IAMs_20 IAMs_20 22 34 25.6
comp=Z,2µm,22.0s
IMW Indian Meadow 95.57 42 IAMs_20 IAMs_20 22 24 30.7
comp=Z,1µm,22.0s
MTO3 Montecristo 95.60 77 IAMs_20 IAMs_20 22 23 47.0
comp=Z,957nm,22.0s
MSO Missoula 95.70 38 P **P** 21 51 25.0 +1.9
baz=231
BW06 Boulder Array 95.71 43 P **P** 21 51 24.4 +0.9
baz=234
BW06 Boulder Array 95.71 43 IAMs_20 IAMs_20 22 32 06.5
comp=Z,1µm,20.0s
PDAR Pinedale Array 95.71 43 P **P** 21 51 24.1 +0.7
comp=Z,6.5nm,1.0s,baz=204,slow=3.3,SNR=24
PDAR PP **PP** 21 55 15.1 -0.6
comp=Z,2.0nm,1.0s,baz=227,slow=5.9,SNR=6.5
PDAR PKKP **PKKPbc** 22 08 14.3 -0.1
comp=Z,2.2nm,0.8s,baz=82,slow=4.1,SNR=12
PDAR PKPPKP **P'P'df** 22 16 29.3 +5.6
comp=Z,0.7nm,0.9s,baz=111,slow=8.1,SNR=4.6
PDAR LR LR 22 31 32.7
comp=Z,652nm,18.0s,baz=234,slow=34
PDAR Pinedale Array 95.71 43 P **P** 21 51 23.6 +0.2
T25A Trinidad 95.75 50 P **P** 21 51 25.5 +1.8
baz=237
KTH Kantishna Hill 95.75 12 IAmb IAmb 21 51 52.0
comp=Z,92nm,2.0s
TRF Thorofare Moun 95.77 12 IAMs_20 IAMs_20 22 30 37.6
comp=Z,2µm,20.0s
SEY Seymchan 95.82 347 P **P** 21 51 22.4 -0.6
comp=Z,38nm,1.1s,baz=146,slow=5.1,SNR=23
FLWY Flagg Ranch 95.82 42 IAmb IAmb 21 51 27.1
comp=Z,49nm,1.1s
FLWY IAMs_20 IAMs_20 22 32 34.3
comp=Z,995nm,20.0s
QLMT Earthquake Lak 95.86 41 P **P** 21 51 25.5 +1.5
YHB Horse Butte 95.94 41 P **P** 21 51 26.6 +2.1
RND Reindeer 96.00 13 IAmb IAmb 21 51 29.8
comp=Z,33nm,1.1s
RND IAMs_20 IAMs_20 22 30 37.6
comp=Z,1µm,20.0s
735A Kenedy 96.04 60 IAMs_20 IAMs_20 22 33 35.8
comp=Z,1µm,18.0s
H17A Grant Village 96.08 42 P **P** 21 51 27.3 +2.2
baz=234
H17A Grant Village 96.08 42 IAMs_20 IAMs_20 22 24 43.1
comp=Z,1µm,22.0s
ZEA Zeya 96.20 331 *e*P **P** 21 51 25.0 -0.1
ZEA *e* 22 04 13.8
ZEA pmax pmax
comp=Z,20nm,1.2s
BOZ Bozeman (W) 96.21 40 P **P** 21 51 27.1 +1.5
baz=233
YNR Norris Junctio 96.21 41 P **P** 21 51 27.7 +2.0
BPAW Bear Paw Mtn. 96.25 11 IAMs_20 IAMs_20 22 30 40.1
comp=Z,935nm,22.0s
CD2 Chengdu 96.25 302 P **P** 21 51 26.4 +0.4
CD2 S **S** 22 02 44.2 +0.3
CD2 SS **SS** 22 09 20.0 +2.8
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,210nm,11.6s
CD2 LR LR
comp=Z,410nm,19.7s
CD2 LR LR
comp=Z,560nm,20.6s
CD2 LR LR
comp=Z,520nm,25.8s
Q24A Divide 96.27 48 P **P** 21 51 27.4 +1.2
baz=236
Q24A Divide 96.27 48 IAMs_20 IAMs_20 22 31 11.4
comp=Z,1µm,18.0s
MCK McKinley 96.28 12 P **P** 21 51 26.2 +1.0
baz=205
LKWY Lake 96.28 42 IAMs_20 IAMs_20 22 31 40.4
comp=Z,2µm,20.0s
HHC Hu-ho-hao-te 96.32 314 *e*P **P** 21 51 27.1 +1.0
HHC PP **PP** 21 55 22.8 +2.6
HHC SKS **SKSac** 22 02 00.4 -0.3
HHC S **S** 22 02 41.6 -2.6
HHC sS pS 22 02 54.5 0.0
HHC pmax pmax
comp=Z,9.0nm,1.1s
HHC pmax pmax
comp=Z,63nm,5.2s
HHC LR LR
comp=Z,350nm,25.1s
HHC LR LR
comp=Z,430nm,25.5s
HHC LR LR
comp=Z,1µm,26.5s
HYT Haines Junctio 96.37 19 IAMs_20 IAMs_20 22 29 02.4
comp=Z,913nm,20.0s
AMTX Amarillo 96.38 53 P **P** 21 51 27.8 +1.3
baz=238
ISCO Idaho Springs 96.44 47 P **P** 21 51 28.1 +1.1
baz=236
RWWY Rawlins 96.50 45 IAmb IAmb 21 51 29.4
comp=Z,35nm,1.2s
YMP Mirror Lake Pl 96.53 41 P **P** 21 51 30.1 +2.9
ABTX Abilene, Hawle 96.63 56 IAMs_20 IAMs_20 22 33 21.1
comp=Z,1µm,18.0s
HIA Hailar 96.72 324 *i* P **P** 21 51 27.2 -0.4
HIA pmax pmax
comp=Z,4.0nm,1.0s
HIA Hailar 96.72 324 IAMs_20 IAMs_20 22 32 40.0
comp=Z,869nm,21.0s
DLBC Dease Lake 96.75 23 P **P** 21 51 28.1 +0.5
comp=Z,3.7nm,0.9s,baz=146,slow=4.0,SNR=3.7
L26K Log Cabin Wild 96.79 15 P **P** 21 51 29.0 +1.4
baz=210
N23A Red Feather La 96.84 46 P **P** 21 51 30.2 +1.5
baz=236
NEA2 Nenana 97.04 12 P Pdif 21 51 29.7 +1.0
baz=205
RIDG Independent Ri 97.09 14 IAMs_20 IAMs_20 22 30 52.8
comp=Z,1µm,18.0s
WRH Wood River Hil 97.11 12 IAmb IAmb 21 51 31.2
comp=Z,51nm,1.4s
BTO Baotou 97.15 313 *e*P Pdif 21 51 36.4 +6.4
MLY Manley 97.15 11 P Pdif 21 51 30.3 +1.1
baz=203
DOT Dot Lake 97.18 14 IAmb IAmb 21 54 16.6
comp=Z,43nm,1.7s
TGUH Tegucigalpa,Un 97.20 78 IAMs_20 IAMs_20 22 24 49.4
comp=Z,974nm,22.0s
RLMT Red Lodge 97.26 42 P Pdif 21 51 32.2 +1.7
baz=234
RLMT Red Lodge 97.26 42 P Pdif 21 51 31.3 +0.8
HDA Harding Lake 97.27 13 P Pdif 21 51 30.4 +0.7
baz=207
HDA Harding Lake 97.27 13 IAMs_20 IAMs_20 22 38 11.2
comp=Z,817nm,20.0s
CCB Clear Creek Bu 97.32 12 P **P** 21 51 29.0 -0.9
JTS Las Juntas de 97.35 82 *i* P **P** 21 51 29.9 -1.4
JTS pmax pmax
comp=Z,8.0nm,1.3s
JTS Las Juntas de 97.35 82 IAMs_20 IAMs_20 22 25 49.8
comp=Z,796nm,18.0s
K22A Casper 97.47 45 P Pdif 21 51 32.4 +0.9
baz=236
K22A Casper 97.47 45 IAMs_20 IAMs_20 22 29 54.3
comp=Z,1µm,19.0s
SCRK Sand Creek 97.48 14 P Pdif 21 51 32.1 +1.2
baz=209
I23K Minto, Yukon-K 97.49 12 P Pdif 21 51 31.7 +1.1
baz=205
I23K Minto, Yukon-K 97.49 12 IAMs_20 IAMs_20 22 31 18.1
comp=Z,1µm,20.0s
TCOL CIGO, UAF Yank 97.51 12 P Pdif 21 51 31.0 +0.3
baz=206
COLA College 97.52 12 *i* P Pdif 21 51 31.1 +0.3
COLA pmax pmax
comp=Z,14nm,1.0s
COLA College 97.52 12 P **P** 21 51 30.5 -0.2
MDM Murphy Dome 97.52 12 P **P** 21 51 31.0 +0.1
MDM IAmb IAmb 21 51 35.6
comp=Z,31nm,1.3s
MDM IAMs_20 IAMs_20 22 31 10.0
comp=Z,1µm,20.0s
IMAR Indian Mountai 97.57 10 P Pdif 21 51 32.0 +0.9

IL31 97.61 13 IAmb IAmb 21 51 36.1
comp=Z,31nm,1.4s
ILAR Eielson Array 97.61 13 P **P** 21 51 30.9 -0.3
comp=Z,5.2nm,1.1s,baz=214,slow=4.7,SNR=12
ILAR LR LR 22 36 13.4
comp=Z,93nm,18.2s,baz=222,slow=36
ILAR Eielson Array 97.61 13 P **P** 21 51 31.1 -0.1
ILAR Eielson Array 97.61 13 P **P** 21 51 31.1 -0.1
POKR Poker Plat Res 97.81 12 P Pdif 21 51 32.5 +0.3
baz=206
POKR Poker Plat Res 97.81 12 IAMs_20 IAMs_20 22 31 05.6
comp=Z,1µm,20.0s
LPAZ La Paz 97.92 114 LR LR 22 26 56.4
comp=Z,517nm,21.7s,baz=209,slow=30
K27K Chicken 97.95 15 IAMs_20 IAMs_20 22 31 24.6
comp=Z,839nm,20.0s
WMOK Wichita Mounta 98.34 55 IAMs_20 IAMs_20 22 35 25.0
comp=Z,911nm,18.0s
RDOG Red Dog Mine 98.52 6 IAMs_20 IAMs_20 22 33 41.4
comp=Z,925nm,19.0s
BILL Bilibino 98.63 354 *ce*P Pdif 21 51 36.1 +0.4
BILL *e* 21 55 47.0
BILL *e* 22 02 59.9
BILL *i* PS PS 22 04 23.2 -8.5
BILL *e*SS SS 22 09 55.6 +6.5
BILL pmax pmax
comp=Z,13nm,0.9s
BILL MLR MLR
comp=Z,709nm,19.0s
BILL Bilibino 98.63 354 P Pdif 21 51 36.0 +0.3
EGAK Eagle 98.80 15 IAMs_20 IAMs_20 22 32 20.0
comp=Z,928nm,20.0s
LZH Lanzhou 98.86 307 *e*P Pdif 21 51 39.1 +1.4
LZH pP sP 21 51 47.1 -1.4
LZH sP pwP 21 51 50.3 -0.3
LZH SS SS 22 09 56.8 +2.8
LZH pmax pmax
comp=Z,9.0nm,1.5s
LZH pmax pmax
comp=Z,140nm,7.1s
LZH LR LR
comp=Z,370nm,27.1s
LZH LR LR
comp=Z,440nm,31.4s
LZH LR LR
comp=Z,710nm,38.5s
COLD Coldfoot 99.26 10 P **Pdif** 21 51 40.2 +1.7
baz=204
OKCFA Oklahoma City 99.62 55 IAMs_20 IAMs_20 22 36 20.0
comp=Z,1µm,19.0s
CBKS Cedar Bluff 99.76 51 IAMs_20 IAMs_20 22 33 06.1
comp=Z,1µm,19.0s
RSSD Black Hills 99.79 45 P **Pdif** 21 51 43.0 +1.2
baz=238
OK029 Liberty Lake 99.81 54 IAMs_20 IAMs_20 22 34 58.9
comp=Z,1µm,20.0s
CPUP Villa Florida 99.86 128 P **Pdif** 21 51 44.2 +1.8
comp=Z,1.3nm,0.8s,baz=227,slow=4.4,SNR=3.1
CPUP PKKP **PKKPbc** 22 08 00.3 -1.2
comp=Z,1.5nm,0.6s,baz=95,slow=2.7,SNR=7.4
OK030 Cody Creek RV 100.35 55 IAMs_20 IAMs_20 22 33 26.7
comp=Z,1µm,20.0s
YAK Yakutsk 101.15 338 P **Pdif** 21 51 46.5 -0.5
comp=Z,5.8nm,0.4s,baz=94,slow=4.2,SNR=4.1
YAK Yakutsk 101.15 338 *e*P **Pdif** 21 51 45.0 -2.0
YAK *e*PPP PPP 21 58 04.9
YAK *e*S **SKSac** 22 02 23.6 -0.1
YAK *e*SS **SS** 22 10 25.2 +0.7
YAK pmax pmax
comp=Z,12nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.5s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK pmax pmax
comp=Z,158nm,4.4s
YAK pmax pmax
comp=N,45nm,2.2s
YAK pmax pmax
comp=E,111nm,4.1s
YAK smax smax
comp=N,106nm,3.6s
YAK smax smax
comp=E,86nm,3.5s
YAK Yakutsk 101.15 338 Pdif **Pdif** 21 51 45.7 -1.3
YAK IAMs_20 IAMs_20 22 29 54.9
comp=Z,1µm,22.0s
KSU1 Kansas State U 102.02 52 IAMs_20 IAMs_20 22 38 42.6
comp=Z,886nm,20.0s
A21K Barrow 102.27 7 P **Pdif** 21 51 53.6 +1.8
baz=199
U38A Gravette 102.29 55 IAMs_20 IAMs_20 22 39 59.7
comp=Z,977nm,19.0s
SONM Songino Array 103.19 318 Pdiff **Pdif** 21 52 01.0 +4.3
comp=Z,1.5nm,0.9s,baz=148,slow=5.2,SNR=5.4
SONM PP **PP** 21 56 05.1 -7.3
comp=Z,3.0nm,1.0s,baz=129,slow=5.1,SNR=6.8
INK Inuvik 103.45 15 PP **PP** 21 56 10.9 -2.6
comp=Z,5.6nm,1.0s,baz=216,slow=6.3,SNR=5.1
S39A Bolivar 103.63 54 IAMs_20 IAMs_20 22 41 32.0
comp=Z,1µm,19.0s
PALK Pallekele 103.72 270 IAMs_20 IAMs_20 22 39 33.0
comp=Z,1µm,20.0s
ROSC El Rosal 103.89 92 IAMs_20 IAMs_20 22 29 17.5
comp=Z,1µm,22.0s
P38A Dawn 104.37 52 IAMs_20 IAMs_20 22 37 33.0
comp=Z,678nm,19.0s
YKA Yellowknife Ar 105.07 25 PP **PP** 21 56 21.7 -4.0
comp=Z,2.1nm,1.0s,baz=230,slow=6.8,SNR=2.5
YKA PKKP **PKKPab** 22 08 01.2 0.0
comp=Z,7.2nm,1.0s,baz=47,slow=4.5,SNR=8.5
FVM French Village 105.81 55 IAMs_20 IAMs_20 22 40 14.8
comp=Z,1µm,19.0s
GLAT Glass 105.88 57 IAMs_20 IAMs_20 22 39 03.0
comp=Z,996nm,19.0s
SAML Samuel 106.05 111 IAMs_20 IAMs_20 22 32 19.5
comp=Z,910nm,21.0s
C36M Paulatuk 106.53 17 IAMs_20 IAMs_20 22 33 27.7
comp=Z,776nm,20.0s
MTDJ Mount Denham 107.40 79 IAMs_20 IAMs_20 22 30 41.9
comp=Z,805nm,21.0s
T47A Sharon Grove 107.77 57 IAMs_20 IAMs_20 22 40 24.1
comp=Z,1µm,19.0s
SWET Sewanee 107.90 59 IAMs_20 IAMs_20 22 38 40.9
comp=Z,1µm,19.0s
CLTN Cedars of Leba 107.97 58 IAMs_20 IAMs_20 22 38 54.5
comp=Z,1µm,19.0s
SPB Sao Paulo 108.28 132 IAMs_20 IAMs_20 22 33 46.0
comp=Z,1µm,22.0s
SDV Santo Domingo 109.05 91 IAMs_20 IAMs_20 22 33 00.1
comp=Z,766nm,22.0s
T50A Nancy 109.44 58 IAMs_20 IAMs_20 22 36 39.5
comp=Z,724nm,18.0s
W56A Indian Trail 111.90 61 P **PKiKP** 21 56 32.6 +0.1
baz=248
ACSO Alum Creek Sta 112.01 55 P **PKiKP** 21 56 32.8 +0.2
baz=249
WMQ Urumqi 113.35 308 *e*PKP **PKiKP** 21 56 34.6 -0.5
WMQ LR LR
comp=Z,520nm,23.5s
WMQ LR LR
comp=Z,640nm,20.7s
WMQ LR LR
comp=Z,2µm,24.5s
BDFB Brasilia 113.44 126 IAMs_20 IAMs_20 22 38 37.4
comp=Z,1µm,21.0s
N54A Moraine State 114.40 56 P PKPdf 21 56 37.0 -0.1
baz=251
U59A Littleton 114.45 61 IAMs_20 IAMs_20 22 42 57.5
comp=Z,954nm,20.0s
V60A Jim Taylor Roa 114.65 62 IAMs_20 IAMs_20 22 44 25.9
comp=Z,837nm,19.0s
ABPO Ambohimpanom 114.80 227 IAMs_20 IAMs_20 22 38 01.6
comp=Z,664nm,19.0s
M54A Oil Creek Stat 114.81 55 P PKPdf 21 56 37.7 -0.2
baz=251
OPO Ambohidratompo 115.15 228 PKP **PKPdf** 21 56 39.8 +0.2
comp=Z,4.3nm,0.8s,baz=231,slow=5.0,SNR=5.2
Q58A Fox Den Farm, 115.41 58 P **PKPdf** 21 56 38.8 -0.3
baz=251
SUR Sutherland 115.41 197 PKP **PKPdf** 21 56 40.2 +0.4
comp=Z,11nm,1.0s,baz=259,slow=6.8,SNR=2.4
U61A Possum Corner 115.47 61 IAMs_20 IAMs_20 22 44 47.4
comp=Z,998nm,18.0s
O57A Amberson 115.85 57 P **PKPdf** 21 56 39.8 -0.2
baz=252
M56A Emporium 115.86 55 P **PKPdf** 21 56 39.7 -0.2
baz=252
N57A Milroy 116.08 56 P **PKPdf** 21 56 40.4 0.0
baz=252
ZSN Zaisan 116.37 311 *e*PKP **PKPdf** 21 56 39.6 -1.2
comp=Z,5.6nm,1.0s,baz=311
ZSN Zaisan 116.37 311 *e*PKIKP **PKPdf** 21 56 39.5 -1.2
ZSN pmax pmax
comp=Z,6.0nm,1.0s
RES Resolute Bay 116.90 17 PKP **PKPdf** 21 56 39.4 -1.5
comp=Z,8.6nm,1.1s,baz=321,slow=5.0,SNR=4.9
RES Resolute Bay 116.90 17 PKIKP **PKPdf** 21 56 40.8 -0.1
RES MLR MLR
comp=Z,1µm,19.0s
RES Resolute Bay 116.90 17 PKPdf **PKPdf** 21 56 40.8 -0.1
RES IAMs_20 IAMs_20 22 39 56.8
comp=Z,981nm,19.0s
L57A Andrews Acres 116.97 55 P **PKPdf** 21 56 42.3 +0.2
baz=253
G54A Lake Saint Pet 117.09 51 P **PKiKP** 21 56 43.1 +0.9
baz=254
K57A Scipio Center 117.42 55 P **PKiKP** 21 56 43.1 +0.2
baz=254
BHK Bhakra 117.60 292 *ex* **PKiKP** 21 56 43.0 -0.6
LUPA Lehigh Univers 117.62 57 IAMs_20 IAMs_20 22 44 57.7
comp=Z,1µm,20.0s
BOSA Boshof 117.63 203 PKP **PKPdf** 21 56 44.0 0.0
comp=Z,6.2nm,0.9s,baz=148,slow=3.5,SNR=6.0
BINY Binghamton 117.64 55 P **PKiKP** 21 56 44.0 +0.6
baz=254
L58A Harry Jones Me 117.69 55 P **PKiKP** 21 56 43.7 +0.2
baz=254
MK31 Makanchi Array 117.88 310 *c i*PKIKP **PKPdf** 21 56 41.7 -2.0
MKAR Makanchi Array 117.88 310 PKP **PKPdf** 21 56 42.5 -1.2
comp=Z,14nm,1.0s,baz=68,slow=3.3,SNR=36
MKAR PKKPbc **PKKPab** 22 07 06.0 +0.3
comp=Z,1.0nm,0.9s,baz=292,slow=7.6,SNR=4.4
MKAR Makanchi Array 117.88 310 PKPdf **PKPdf** 21 56 42.2 -1.5
DHRM DHARAMSHALA 117.97 293 *eP* **PKPdf** 21 56 43.4 -1.2
J57A Williamstown 117.97 54 P **PKiKP** 21 56 44.2 +0.3
baz=254
K58A Earlville 118.04 55 P **PKiKP** 21 56 44.4 +0.3
baz=254
ZALV Zalesovo Beam 118.08 318 PKP **PKPdf** 21 56 42.7 -1.1
comp=Z,5.6nm,0.7s,baz=148,slow=0.7,SNR=12
ZALV Zalesovo Beam 118.08 318 PKIKP **PKPdf** 21 56 43.6 -0.2
ZALV Zalesovo Beam 118.08 318 PKPdf **PKPdf** 21 56 43.6 -0.2
MAKZ Makanchi 118.09 310 PKIKP **PKPdf** 21 56 42.3 -1.8
MAKZ MLR MLR
comp=Z,700nm,22.0s
MAKZ Makanchi 118.09 310 PKPdf **PKPdf** 21 56 42.3 -1.8
MAKZ IAMs_20 IAMs_20 22 43 05.2
comp=Z,681nm,22.0s
L59A Walton 118.31 55 P **PKiKP** 21 56 45.0 +0.2
baz=254
I57A Carthage 118.35 53 P **PKiKP** 21 56 45.0 +0.4
baz=255
M60A Port Jervis 118.37 57 P **PKiKP** 21 56 45.1 +0.3
baz=254
K59A Cooperstown 118.61 55 P **PKiKP** 21 56 45.4 +0.2
baz=254
I58A Old Forge 118.77 54 P **PKiKP** 21 56 45.8 +0.3
baz=255
LSQQ Lebel-sur-Quev 118.77 48 P **PKPdf** 21 56 45.0 -0.2
baz=256
PAL Palisades 118.80 57 P **PKPdf** 21 56 45.4 -0.1
baz=254
L60A Shokan 118.84 56 P **PKiKP** 21 56 46.2 +0.5
baz=254
SHLS Shalkode 118.86 305 *e*PKP **PKPdf** 21 56 44.2 -1.7
comp=Z,19nm,1.4s,baz=306
SHLS Shalkode 118.86 305 *e*PKIKP **PKPdf** 21 56 44.1 -1.7
SHLS pmax pmax
comp=Z,19nm,1.4s
D55A Sainte-Anne-du 119.27 50 P **PKPdf** 21 56 46.1 -0.2
baz=256
LONY Lake Ozonia 119.28 53 P **PKPdf** 21 56 46.3 -0.1
baz=256
L61A Hillsdale 1, H 119.38 56 P **PKPdf** 21 56 46.9 +0.2
baz=255
E56A St. Veronique 119.44 51 P **PKPdf** 21 56 46.3 -0.3
baz=256
KPKS Kokpek 119.49 306 *e*PKP **PKPdf** 21 56 45.9 -1.1
comp=Z,40nm,1.5s,baz=306
NRIK Noril'sk 119.55 336 PKP **PKPdf** 21 56 45.8 -0.4
comp=Z,11nm,1.0s,baz=73,slow=2.6,SNR=14
SATY Saty 119.58 305 *e*PKP **PKPdf** 21 56 46.3 -1.0
comp=Z,17nm,1.1s,baz=305
SATY Saty 119.58 305 *e*PKIKP **PKPdf** 21 56 46.2 -1.0
SATY pmax pmax
comp=Z,17nm,1.1s
M62A Hamden 119.65 57 P **PKiKP** 21 56 47.5 +0.3
baz=255
MCLT Moule a Chique 119.69 91 IAMs_20 IAMs_20 22 49 44.5
comp=Z,902nm,21.0s
J60A Lant Hill Farm 119.74 55 P **PKPdf** 21 56 47.2 -0.1
baz=256
D56A ZEC Mazanza, M 119.75 50 P **PKPdf** 21 56 47.2 0.0
baz=257
G58A Ormstown 119.77 52 P **PKiKP** 21 56 47.9 +0.5
baz=256
I60A Shoreham 119.98 54 P **PKiKP** 21 56 48.0 +0.2
baz=256
E57A Chemin Saint G 120.01 51 P **PKPdf** 21 56 47.8 +0.1
baz=257
TDK Taldyqorghan 120.06 307 *e*PKP **PKPdf** 21 56 46.5 -1.5
comp=Z,34nm,0.9s,baz=307
TDK Taldyqorghan 120.06 307 *e*PKIKP **PKPdf** 21 56 46.4 -1.5
TDK pmax pmax
comp=Z,34nm,0.9s
L61B Northampton 120.07 56 P **PKiKP** 21 56 48.3 +0.2
baz=256
KDJ Kajisay 120.22 304 IAMs_20 IAMs_20 22 52 02.6
comp=Z,571nm,20.0s
KSH Kashi 120.42 301 PKP **PKiKP** 21 56 49.3 +0.3
KSH PP **PP** 21 58 17.4 +1.3
KSH AMB AMB
comp=Z,580nm,6.1s
MDOK Medeo 120.57 305 *e*PKP **PKPdf** 21 56 48.2 -0.9
baz=305
MDOK Medeo 120.57 305 *e*PKIKP **PKPdf** 21 56 48.2 -0.9
H60A Morristown 120.57 53 P **PKiKP** 21 56 49.6 +0.6
baz=257
TNSS Tian-Shan 120.61 305 *e*PKP **PKPdf** 21 56 49.3 -0.3
baz=305
TNSS Tian-Shan 120.61 305 *e*PKIKP **PKPdf** 21 56 49.2 -0.3
AAA Alma-Ata 120.67 305 *e*PKP **PKPdf** 21 56 48.4 -0.9
comp=Z,18nm,1.0s,baz=305
AAA Alma-Ata 120.67 305 *e*PKIKP **PKPdf** 21 56 48.3 -0.9
AAA pmax pmax
comp=Z,18nm,1.0s
L63A North Scituate 120.69 57 P **PKPdf** 21 56 49.3 +0.1
baz=256
I61A Oroboro, Fairl 120.76 54 P **PKPdf** 21 56 49.4 +0.1
baz=257
LBTB Lobatse 120.81 205 PKP **PKiKP** 21 56 50.9 +0.6
comp=Z,6.7nm,1.1s,baz=245,slow=4.2,SNR=3.6
NIL Nilore 120.85 293 P **PKPdf** 21 56 46.2 -3.6
NIL Nilore 120.85 293 PKIKP **PKPdf** 21 56 49.0 -0.8
NIL MLR MLR
comp=Z,400nm,19.0s
NIL Nilore 120.85 293 PKPdf **PKPdf** 21 56 49.0 -0.8
ULHL Ulahol 120.92 304 P **PKPdf** 21 56 47.7 -2.2
SNR=8.9
D58A Chemin du LacG 121.01 50 P **PKPdf** 21 56 49.4 -0.2
baz=258
LBNH Lisbon 121.03 54 P **PKPdf** 21 56 49.6 -0.2
baz=257
H61A Lyndonville 121.10 54 P **PKPdf** 21 56 49.6 -0.3
baz=257
KURK Kurchatov 121.13 314 PKIKP **PKPdf** 21 56 48.8 -1.0
KURK MLR MLR
comp=Z,600nm,22.0s
KURK Kurchatov 121.13 314 PKPdf **PKPdf** 21 56 48.8 -1.0
KURBB Kurchatov Arra 121.17 314 PKKPbc PKKPbc 22 06 53.2 +0.5
comp=Z,0.7nm,0.9s,baz=270,slow=4.8,SNR=6.0
KUU Kurty 121.24 306 *e*PKP **PKPdf** 21 56 48.6 -1.6
comp=Z,59nm,1.5s,baz=306
I62A Tamworth 121.36 54 P **PKPdf** 21 56 50.7 +0.2
baz=257
J63A Strafford 121.41 55 P **PKPdf** 21 56 50.7 +0.2
baz=257
G61A St-Isidore-de- 121.54 53 P **PKiKP** 21 56 51.2 +0.3
baz=258
TKM2 Tokmak 2 121.54 304 P **PKPdf** 21 56 50.2 -0.9
SNR=35
H62A Milan 121.65 54 P **PKiKP** 21 56 51.5 +0.4
baz=258

E60A	Ste Agathe de	121.82	52	P		PKPdf	21 56 51.2	0.0		
	baz=259									
I63A	Otisfield	121.94	54	P		PKPdf	21 56 51.5	0.0		
	baz=258									
KBK	Karagaybulak	121.95	304	P		PKPdf	21 56 51.5	-0.3		
	SNR=30									
F61A	St Evariste	122.05	52	P		PKPdf	21 56 51.7	0.0		
	baz=259									
UCH	Uchtor	122.16	303	P		PKPdf	21 56 52.4	-0.3		
	SNR=22									
CHMS	Chumysh	122.17	304	P		PKPdf	21 56 51.3	-0.7		
	SNR=30									
G62A	West of Eustis	122.22	53	P		PKPdf	21 56 51.9	-0.1		
	baz=258									
AAK	Ala-Archa	122.27	304	P		PKPdf	21 56 51.8	-0.6		
	SNR=20									
AAK	Ala-Archa	122.27	304	PKPdf		PKPdf	21 56 52.1	-0.4		
AAK	Ala-Archa	122.27	304	P		PKPdf	21 56 51.7	-0.7		
AAK	Ala-Archa	122.27	304	*c*	*i* PKIKP	PKPdf	21 56 51.3	-1.1		
AAK					pmax	pmax				
	comp=Z,43nm,1.4s									
AAK	Ala-Archa	122.27	304		IAMs_20	IAMs_20	22 53 03.2			
	comp=Z,556nm,20.0s									
D60A	Saint Jean D'O	122.28	51	P		PKiKP	21 56 52.5	+0.3		
	baz=259									
SGDS	Sogindy	122.35	305	*e*	PKP	PKPdf	21 56 51.2	-1.3		
	baz=305									
SGDS	Sogindy	122.35	305	*e*	PKIKP	PKPdf	21 56 51.1	-1.3		
USP	Ospenovka	122.40	305	P		PKPdf	21 56 51.8	-0.7		
	SNR=18									
AML	Almayashu	122.73	303	P		PKPdf	21 56 53.3	-0.4		
	SNR=55									
EKS2	Erkin-Say	122.79	304	P		PKPdf	21 56 52.9	-0.5		
	SNR=19									
G63A	Kingsbury	122.83	53	P		PKPdf	21 56 53.4	+0.2		
	baz=259									
ALE	Alert	122.95	8		IAMs_20	IAMs_20	22 50 22.3			
	comp=Z,732nm,20.0s									
H64A	Troy	123.01	54	P		PKiKP	21 56 54.0	+0.3		
	baz=259									
PKME	Peaks-Kenny Pk	123.08	53	P		PKiKP	21 56 54.2	+0.3		
	baz=259									
E62A	Clayton Lake	123.18	52	P		PKiKP	21 56 54.3	+0.3		
	baz=260									
F63A	Nahmakanta, Br	123.30	53	P		PKiKP	21 56 54.7	+0.3		
	baz=260									
TULEG	Thule	123.44	15	*i*	P	PKPdf	21 56 53.2	-0.3		
TULEG					IAmb	IAmb	21 56 54.1			
	comp=Z,48nm,1.1s									
G64A	Maxfield	123.45	53	P		PKiKP	21 56 55.0	+0.4		
	baz=260									
D62A	Allapoint, All	123.58	51	P		PKiKP	21 56 55.0	+0.2		
	baz=261									
H65A	Eastbrook	123.70	54	P		PKPdf	21 56 54.8	-0.1		
	baz=260									
MATP	Matopo	123.79	210		PKP	PKPdf	21 56 56.1	0.0		
	comp=Z,16nm,1.0s,baz=164,slow=2.7,SNR=18									
F64A	Sherman	123.84	53	P		PKPdf	21 56 55.3	+0.2		
	baz=260									
E63A	Oxbow	123.89	52	P		PKiKP	21 56 55.6	+0.1		
	baz=261									
D63A	Stockholm	124.21	51	P		PKiKP	21 56 56.2	+0.1		
	baz=261									
PQI	Presque Isle	124.21	52	PKPdf		PKPdf	21 56 54.9	-0.8		
G65A	Princeton	124.27	53	P		PKiKP	21 56 56.3	+0.1		
	baz=260									
E64A	Bridgewater	124.30	52	P		PKiKP	21 56 56.3	+0.1		
	baz=261									
KBL	Kabul	124.45	293	P		PKPdf	21 56 57.0	0.0		
	SNR=45									
KBL	Kabul	124.45	293		PKIKP	PKPdf	21 56 56.4	-0.5		
KBL					MLR	MLR				
	comp=Z,400nm,21.0s									
KBL	Kabul	124.45	293		PKPdf	PKPdf	21 56 56.4	-0.5		
DZA	Taraz	124.60	304	*e*	PKP	PKPdf	21 56 55.6	-1.1		
	comp=Z,24nm,0.9s,baz=304									
DZA	Taraz	124.60	304	*e*	PKIKP	PKPdf	21 56 55.6	-1.1		
DZA					pmax	pmax				
	comp=Z,24nm,0.9s									
KKAR	Karatay Array	125.23	304		PKIKP	PKPdf	21 56 57.2	-0.7		
KKAR	Karatay Array	125.23	304		PKPdf	PKPdf	21 56 57.2	-0.7		
IUG	Iuzhnay	125.41	302	*e*	PKP	PKPdf	21 56 57.5	-0.9		
	comp=Z,40nm,1.3s,baz=302									
IUG	Iuzhnay	125.41	302	*e*	PKIKP	PKPdf	21 56 57.5	-0.9		
IUG					pmax	pmax				
	comp=Z,40nm,1.3s									
BRLS	Borolday	125.70	304	*e*	PKP	PKPdf	21 56 58.0	-0.8		
	comp=Z,23nm,0.8s,baz=303									
BRLS	Borolday	125.70	304	*e*	PKIKP	PKPdf	21 56 58.0	-0.8		
BRLS					pmax	pmax				
	comp=Z,23nm,0.8s									
SCHQ	Schefferville	125.82	42		PKP	PKPdf	21 56 57.0	-1.6		
	comp=Z,14nm,1.1s,baz=44,slow=1.2,SNR=4.5									
BRVK	Borovoye	126.54	316	P		PKPdf	21 56 59.2	-0.9		
BRVK	Borovoye	126.54	316		PKIKP	PKPdf	21 56 59.5	-0.5		
BRVK					MLR	MLR				
	comp=Z,500nm,18.0s									
BRVK	Borovoye	126.54	316		PKPdf	PKPdf	21 56 59.5	-0.5		
BRVK	Borovoye	126.54	316		IAMs_20	IAMs_20	22 54 16.2			
	comp=Z,540nm,18.0s									
LSZ	Lusaka	128.46	212		PKP	PKiKP	21 57 06.8	+1.1		
	comp=Z,15nm,1.0s,baz=138,slow=3.1,SNR=21									
LSZ	Lusaka	128.46	212		PKIKP	PKiKP	21 57 06.5	+0.8		
LSZ					MLR	MLR				
	comp=Z,600nm,21.0s									
LSZ	Lusaka	128.46	212		PKPdf	PKiKP	21 57 06.5	+0.8		
LSZ	Lusaka	128.46	212		IAMs_20	IAMs_20	22 51 46.7			
	comp=Z,648nm,21.0s									
JLN	Jalan Bani Buh	128.66	275	P		PKiKP	21 57 05.5	-0.2		
RCBR	Riachuelo	128.74	128		IAMs_20	IAMs_20	22 52 13.7			
	comp=Z,685nm,18.0s									
TSUM	Tsumeb	128.80	199		PKP	PKiKP	21 57 06.2	-0.1		
	comp=Z,1.3nm,0.3s,baz=280,slow=0.5,SNR=3.9									
TSUM	Tsumeb	128.80	199		IAMs_20	IAMs_20	22 51 51.4			
	comp=Z,789nm,20.0s									
WBK	Wadi Bani Khal	129.21	276	P		PKPdf	21 57 04.4	-1.7		
DQM	DQM	129.44	272	P		PKPdf	21 57 06.6	0.0		
MHTO	MHTO	129.47	273	P		PKPdf	21 57 05.7	-0.9		
	SNR=6.4									
WSAR	Wadi Sarin	129.72	276	P		PKiKP	21 57 07.8	0.0		
JMDO	Jabal Madar	129.87	275	P		PKPdf	21 57 05.1	-2.3		
SMDO	Samad	130.16	276	P		PKPdf	21 57 06.8	-1.2		
	SNR=5.9									
BIDO	Bidbid	130.25	276	P		PKPdf	21 57 06.8	-1.2		
BSY	Bisya	130.78	275	P		PKPdf	21 57 07.6	-1.5		
	SNR=5.2									
HOQ	Hoqain	130.98	276	P		PKPdf	21 57 07.7	-1.7		
	SNR=6.5									
RBK	Rabkut	131.35	267	P		PKPdf	21 57 10.6	+0.3		
SPA0	Spitsbergen Ar	131.48	356	PKPdf		PKPdf	21 57 09.2	+0.4		
ARQ	Aragi	131.57	276	P		PKPdf	21 57 07.4	-3.2		
SOHO	SOHO	131.83	277	*i*	PKPdf	PKPdf	21 57 10.3	-0.7		
	SNR=18									
SOHO	SOHO	131.83	277	P		PKPdf	21 57 08.4	-2.6		
SVE	Sverdlovsk	131.93	321	*e*	PKIKP	PKPdf	21 57 10.1	-0.1		
SVE					pmax	pmax				
	comp=Z,46nm,1.4s									
DAG	Danmarks Havn	132.26	6	*i*	PKIKP	PKPdf	21 57 08.6	-1.7		
DAG					pmax	pmax				
	comp=Z,6.0nm,0.9s									
DAG	Danmarks Havn	132.26	6	*i*	P	PKPdf	21 57 08.6	-1.7		
	comp=Z,6.4nm,0.9s									
DAG	Danmarks Havn	132.26	6	*i*	P	PKPdf	21 57 08.6	-1.7		
DAG					IAmb	IAmb	21 57 10.2			
	comp=Z,6.4nm,0.9s									
SUMG	Summit	132.37	15	*i*	PKIKP	PKiKP	21 57 12.0	-0.2		
SUMG	Summit	132.37	15		PKPdf	PKiKP	21 57 11.9	-0.3		
SUMG	Summit	132.37	15	*i*	P	PKiKP	21 57 12.0	-0.2		
SUMG	Summit	132.37	15	*i*	P	PKiKP	21 57 12.0	-0.2		
UOSS	Minazif	132.38	277	*i*	PKPdf	PKPdf	21 57 10.7	-1.3		
	SNR=15									
UOSS	Minazif	132.38	277	P		PKPdf	21 57 11.1	-1.0		
UOSS	Minazif	132.38	277		PKPdf	PKPdf	21 57 10.4	-1.6		
HATD	Hatta, Dubai	132.41	277	*i*	PKPdf	PKPdf	21 57 10.9	-1.2		
	SNR=18									
HATD	Hatta, Dubai	132.41	277	P		PKPdf	21 57 11.6	-0.5		
	SNR=14									
MDH	Madha	132.41	278	*i*	PKPdf	PKPdf	21 57 10.3	-1.8		
	SNR=7.5									
MDH	Madha	132.41	278	P		PKPdf	21 57 11.0	-1.1		
	SNR=7.4									
ASHO	Ashiyiah	132.42	277	*i*	PKPdf	PKPdf	21 57 11.0	-1.1		
	SNR=17									
ASHO	Ashiyiah	132.42	277	P		PKPdf	21 57 11.4	-0.8		
	SNR=12									
ALNE	Al Ain	132.48	276	*i*	PKPdf	PKPdf	21 57 11.8	-0.5		
	SNR=5.4									
MSFE	Esma-Masafi	132.55	278	*i*	PKPdf	PKPdf	21 57 12.0	-0.4		
	SNR=12									
BANOM	Banah	132.61	279		PKPdf	PKPdf	21 57 11.3	-1.2		
FAQ	Al Faqa, Dubai	132.84	277		PKPdf	PKPdf	21 57 11.8	-1.1		
NAZ	Nazwa, Dubai	132.86	277	P		PKPdf	21 57 12.5	-0.5		
	SNR=6.6									
ABKAR	Akbulak array	133.01	311		PKPdf	PKPdf	21 57 11.6	-0.9		
ASUD	Al Ashush, Dub	133.03	277		PKPdf	PKPdf	21 57 12.6	-0.6		
KIBK	Kibrezi	133.09	233	P		PKiKP	21 57 14.6	-0.5		
	SNR=8.8									
ARU	Arti	133.12	321	*c*	*i* PKIKP	PKPdf	21 57 12.3	-0.1		
ARU					pmax	pmax				
	comp=Z,34nm,1.0s									
ARU	Arti	133.12	321		PKPdf	PKPdf	21 57 12.1	-0.4		
AJN	Ajban	133.31	276	P		PKPdf	21 57 13.0	-0.8		
GEYT	Alibeck	133.77	295		PKP	PKPdf	21 57 14.5	+0.1		
	comp=Z,38nm,0.9s,baz=225,slow=1.9,SNR=34									
GEYT					SKPbc	SKPbc	22 00 42.2	+0.9		
	comp=Z,20nm,1.0s,baz=225,slow=0.8,SNR=12									
GEYT	Alibeck	133.77	295			PKPbc	21 57 05.4			
GEYT						PKPdf	21 57 14.0	-0.4		
DBG	Daneborg	134.31	8	*i*	P	PKPdf	21 57 12.2	-2.0		
DBG					IAmb	IAmb	21 57 16.1			
	comp=Z,16nm,1.0s									
KMBO	Kilima Mbogo	134.51	233		PKP	PKiKP	21 57 18.8	+0.7		
	comp=Z,9.8nm,1.0s,baz=43,slow=2.3,SNR=19									
KMBO					SKPbc	SKPab	22 00 46.9	-1.1		
	comp=Z,8.7nm,1.0s,baz=99,slow=3.7,SNR=13									
KMBO	Kilima Mbogo	134.51	233	*i*	PKIKP	PKiKP	21 57 18.0	-0.1		
	SNR=8.9									
KMBO	Kilima Mbogo	134.51	233		PKIKP	PKiKP	21 57 17.7	-0.5		
KMBO					MLR	MLR				
	comp=Z,500nm,20.0s									
KMBO	Kilima Mbogo	134.51	233			PKiKP	21 57 17.7	-0.5		
KMBO	Kilima Mbogo	134.51	233		IAMs_20	IAMs_20	22 52 43.2			
	comp=Z,486nm,20.0s									
KIRV	Kirov	137.31	326	*i*	PKIKP	PKPdf	21 57 18.8	-1.4		
ATD	Arta Tunnel	138.19	252		PKP	PKPdf	21 57 23.9	+0.7		
	comp=Z,20nm,0.9s,baz=274,slow=2.6,SNR=5.8									
ATD	Arta Tunnel	138.19	252		P	PKPdf	21 57 21.0	-2.3		
ATD	Arta Tunnel	138.19	252		IAMs_20	IAMs_20	22 50 56.1			
	comp=Z,678nm,22.0s									
APA	Apatity	138.28	343	⇓	*i* PKHKP	PKPpre	21 56 59.4			
APA					pmax	pmax				
	comp=Z,10.0nm,1.0s									
ARCES	ARCESS Array B	138.42	348		PKhKP	PKPpre	21 57 13.5			
	comp=Z,11nm,0.8s,baz=63,slow=1.5,SNR=17									
H10N3	ASCENSION HYDR	138.88	154		T	T	00 34 12.6			
	baz=204,slow=74,SNR=713									
H10N1	ASCENSION HYDR	138.88	154		T	T	00 34 09.2			
	baz=204,slow=74,SNR=401									
H10N2	ASCENSION HYDR	138.90	154		T	T	00 34 10.2			
	baz=204,slow=74,SNR=368									
MBAR	Mbarara	139.22	227		IAMs_20	IAMs_20	23 02 31.8			
	comp=Z,634nm,19.0s									
KLMR	Klimovskoe	140.71	332	*e*	PKIKP	PKPdf	21 57 23.8	-2.5		
KLMR				*e*			22 00 23.0			
KLMR					pmax	pmax				
	comp=Z,87nm,1.3s									
KLMR	Klimovskoe	140.71	332	*e*	PKPdf	PKPdf	21 57 23.8	-2.5		
KLMR					AMP		21 57 30.4			
	comp=Z,87nm,1.3s									
KLMR				*e*	PP	PP	22 00 23.1	-3.3		
RAYN	Ar Rayn	141.16	271		IAMs_20	IAMs_20	23 02 54.0			
	comp=Z,526nm,19.0s									
MAK	Makhachkala	142.02	302	*e*	P	Pdif	21 54 46.6	-2.6		
MAK				*i*			21 57 30.2			
MAK				*e*			22 00 33.8			
MAK				*e*	SSS	SSS	22 24 25.1			
MAK					pmax	pmax				
	comp=Z,305nm,1.3s									
MOR8	Moi Rana	143.21	352	*e*	PKPdf	PKPdf	21 57 31.3	+0.6		
GROC	Groznyy	143.24	303	*e*	PKIKP	PKPdf	21 57 31.0	-0.4		
GROC				*e*			22 00 44.0			
GROC					pmax	pmax				
	comp=Z,78nm,1.5s									
VRH	Novokhopyorsk	144.10	317	*e*	PKIKP	PKPab	21 57 30.5	+0.2		
VRH					pmax	pmax				
	comp=Z,40nm,0.8s									
GNI	Garni	144.27	298		PKPdf	PKPbc	21 57 31.8	-0.1		
GNI	Garni	144.27	298		PKIKP	PKPbc	21 57 32.2	+0.3		
GNI					MLR	MLR				
	comp=Z,900nm,22.0s									
GNI	Garni	144.27	298		PKPdf	PKPbc	21 57 32.2	+0.3		
GNI	Garni	144.27	298		IAMs_20	IAMs_20	23 06 10.8			
	comp=Z,889nm,22.0s									
MOS	Moscow	144.33	326	*e*	PKIKP	PKPab	21 57 30.1	-0.9		
MOS					pmax	pmax				
	comp=Z,154nm,1.2s									
ZEI	Tsey	144.67	302	*i*	PKIKP	PKPab	21 57 30.8	-2.2		
ZEI					pmax	pmax				
	comp=Z,93nm,1.3s									
PUL	Pulkovo	144.92	336	*e*	P	PKPab	21 57 32.5	-0.5		
PUL	Pulkovo	144.92	336	*i*	PKIKP	PKPab	21 57 32.8	-0.2		
GOF	Gofitskoye	144.93	307	⇑	*i* PKIKP	PKPbc	21 57 33.7	+0.1		
GOF					pmax	pmax				
	comp=Z,176nm,1.1s									
FINES	FINESS Array B	145.03	340		PKP	PKPbc	21 57 32.4	-1.0		
	comp=Z,420nm,0.9s,baz=51,slow=3.9,SNR=500									
NSS	Namsos	145.08	353	*e*	PKPbc	PKPbc	21 57 33.5	0.0		
AKH	Akhalkalaki	145.12	300	⇓	P	PKPdf	21 57 34.9	-0.1		
AKH	Akhalkalaki	145.12	300		IAMs_20	IAMs_20	23 04 44.7			
	comp=Z,537nm,21.0s									
LPSR	Galich'ya Gora	145.15	321	*e*	PKIKP	PKPbc	21 57 33.5	-0.5		
LPSR					pmax	pmax				
	comp=Z,200nm,1.0s									
OBN	Obninsk	145.17	326	⇓	P	PKPbc	21 57 33.4	-0.6		
OBN	Obninsk	145.17	326	*c*	*i* PKIKP	PKPbc	21 57 33.0	-1.0		
OBN				*i*			22 00 57.7			
OBN				*i*			22 04 35.2			
OBN					pmax	pmax				
	comp=Z,442nm,1.2s									
OBN	Obninsk	145.17	326			PKPbc	21 57 32.7	-1.3		
KBZ	Khabaz	145.26	304		PKPbc	PKPbc	21 57 34.3	-0.4		
KBZ	Khabaz	145.26	304	*c*	*i* PKP2	PKPbc	21 57 33.5	-1.2		
KIV	Kislovodsk	145.38	305	⇑	P	PKPbc	21 57 35.0	-0.2		
KIV	Kislovodsk	145.38	305	*i*	PKPdf	PKPbc	21 57 34.8	-0.4		
	SNR=34									
KIV	Kislovodsk	145.38	305	*i*	PKP2	PKPbc	21 57 34.0	-1.2		
KIV				*e*			22 00 50.1			
KIV				*e*	SS	SS	22 19 37.9	-7.9		
KIV					pmax	pmax				
	comp=Z,286nm,1.1s									
KIV					MLR	MLR				
	comp=Z,2μm,25.0s									
KIV	Kislovodsk	145.38	305			PKPbc	21 57 34.7	-0.5		
KIV					IAMs_20	IAMs_20	23 07 36.5			
	comp=Z,712nm,19.0s									
VORR	Voronezh	145.38	319	*e*	PKP2	PKPbc	21 57 32.0	-2.8		
VORR					pmax	pmax				
	comp=Z,350nm,1.6s									
VSR	Storozhevoye	145.59	318	*e*	PKIKP	PKPdf	21 57 34.3	-0.9		
VSR					pmax	pmax				
	comp=Z,300nm,1.1s									
GEVA	Gevas	145.64	295		IAMs_20	IAMs_20	23 10 09.3			
	comp=Z,445nm,21.0s									
CHVG	Ch'k'valeri	146.01	303	⇑	P	PKPbc	21 57 37.1	0.0		
CHVG	Ch'k'valeri	146.01	303	⇑	PKP2	PKPbc	21 57 37.1	0.0		
VSU	Vasula	147.14	336	*e*	P	PKPbc	21 57 39.3	-0.5		
VSU	Vasula	147.14	336	*i*	PKP2	PKPdf	21 57 38.5	+0.9		
MOL	Molde	147.40	356	*e*	PKPbc	PKPbc	21 57 40.6	+0.2		
SOC	Sochi	147.56	305	*e*	PKIKP	PKPdf	21 57 37.4	-1.4		
SOC				*i*			21 57 41.1			
SOC				*e*			22 01 05.5			
SOC				*e*	PPP	PPP	22 04 23.8			
SOC				*e*	SS	SS	22 20 09.3	-1.1		
SOC					pmax	pmax				
	comp=Z,9.0nm,0.7s									
SOC					pmax	pmax				
	comp=Z,110nm,0.9s									
SOC					MLR	MLR				
	comp=Z,671nm,17.0s									
DOMB	Dombas	147.80	354	*e*	PKPbc	PKPbc	21 57 40.9	-0.7		
AKN	Aaknes	147.82	356	*e*	PKPbc	PKPbc	21 57 41.6	0.0		
KTUT	Trabzon	147.97	300	⇑	P	PKPbc	21 57 43.1	+0.4		
FOO	Floro	148.50	358	*e*	PKPbc	PKPbc	21 57 43.6	+0.2		
NB2	NORSAR Subarra	148.56	352		PKP	PKPbc	21 57 43.0	-0.6		
	comp=Z,177nm,1.2s,baz=16,slow=3.2									
NB2	NORSAR Subarra	148.56	352		PKPab	PKPbc	21 57 43.0	-0.6		
	baz=16,slow=3.2									
NOA	NORSAR Array B	148.56	352		PKPbc	PKPbc	21 57 43.2	-0.4		
	comp=Z,113nm,1.0s,baz=16,slow=4.6,SNR=91									
NBO00	NORSAR Array S	148.62	352		PKPbc	PKPbc	21 57 43.8	+0.1		
NC602	NORSAR Array S	148.81	351	*e*	PKPbc	PKPbc	21 57 44.1	-0.1		
ANN	Anapa	148.86	308	*i*	PKP2	PKPbc	21 57 44.0	-0.8		
ANN				*e*			22 01 12.6			
ANN				*e*			22 04 47.1			
ANN					pmax	pmax				
	comp=Z,321nm,1.1s									
ANN					pmax	pmax				
	comp=N,78nm,1.0s									
ANN					pmax	pmax				
	comp=E,42nm,1.1s									
HYA	Hoyanger	148.88	356	*e*	PKPbc	PKPbc	21 57 44.6	+0.3		
SUE	Sulen	149.05	358	*e*	PKPbc	PKPbc	21 57 45.0	+0.2		
SKAR	Skarslia	149.21	354	*e*	PKPbc	PKPbc	21 57 45.5	+0.2		
SLIT	Slitere, Latvi	149.26	339	*e*	P	PKPbc	21 57 45.0	-0.4		
IZAR	Zarasai	149.33	333	*e*	P	PKPbc	21 57 44.6	-1.1		
IDID	Didziasalis	149.45	332	*e*	P	PKPbc	21 57 45.1	-0.8		
ISAL	Salakas	149.51	333	*e*	P	PKPbc	21 57 45.5	-0.6		
MICGM	Minsk	149.54	330	⇑	*i* PKP	PKPbc	21 57 46.0	-0.2		
MICGM					PKPM		21 57 47.0			
	comp=Z,1.2nm,1.0s									
MICGM				*e*	PP	PP	22 01 04.0	-15		
MICGM				*e*	SKS	SKSdf	22 04 25.0	-23		
MICGM				*e*	SKKS	SKKSdf	22 13 28.0	-15		
MICGM				*e*	LQ	LQ	22 55 22.0			
MICGM				*e*	LR	LR	22 59 04.0			
MNK	Minsk	149.54	330	⇑	*i* PKP2	PKPbc	21 57 46.0	-0.2		
MNK							22 55 22.0			
MNK					pmax	pmax				
	comp=Z,1μm,1.0s									
ASK	Askoy	149.61	357	*e*	PKPbc	PKPbc	21 57 46.5	+0.3		
IIGN	Ignalina	149.63	333	*e*	P	PKPbc	21 57 45.1	-1.3		
OSL	Oslo	149.69	352	*e*	PKPbc	PKPbc	21 57 46.5	+0.1		
BER	Bergen	149.70	357	*e*	PKPdf	PKPdf	21 57 42.0	+0.2		
NACGM	Naroch	149.73	332	*e*	P	PKPbc	21 57 46.0	-0.7		
NACGM					PM		21 57 47.0			
	comp=Z,0.8nm,1.0s									
NACGM				*e*	SKS	SKSdf	22 04 25.0	-23		
NACGM				*e*	LR	LR	22 54 03.0			
LRW	Lerwick	149.92	4	*e*	P	PKPbc	21 57 45.1	-1.2		
KONO	Kongsberg	150.10	353		PKP2	PKPbc	21 57 47.2	-0.2		
KONO	Kongsberg	150.10	353			PKPbc	21 57 47.2	-0.2		
KONO	Kongsberg	150.10	353	*e*	pPKPdf	PKPbc	21 57 47.6	+0.2		
ODD1	Odda	150.10	356	*e*	pPKPdf	PKPbc	21 57 47.8	+0.3		
GAZ	Gaziantep	150.32	293		IAMs_20	IAMs_20	23 10 09.4			
	comp=Z,644nm,19.0s									
PABE	Paberze	150.38	335	*e*	P	PKPbc	21 57 48.1	-0.1		
BLS5	Blasjo	150.60	356	*e*	PKPbc	PKPbc	21 57 49.2	+0.5		
PBUR	Paburge	150.68	337	*e*	P	PKPbc	21 57 48.7	-0.3		
SIM	Simferopol'	151.06	310	*d*	*i* PKIKP	PKPbc	21 57 49.4	-0.8		
SIM					pmax	pmax				
	comp=Z,234nm,0.9s									
DIKM	Dikmen	151.19	302	⇑	P	PKPbc	21 57 49.9	-0.7		
LEWI	Lewis, Hebride	151.29	10	*e*	P	PKPbc	21 57 49.9	-0.4		
AKASG	Malin Array Be	151.31	323		PKPbc	PKPbc	21 57 50.1	-0.5		
	comp=Z,89nm,0.8s,baz=47,slow=3.2,SNR=22									
AKASG	Malin Array Be	151.31	323		PKIKP	PKPdf	21 57 44.2	-0.4		
AKASG							21 57 49.7			
AKASG	Malin Array Be	151.31	323			PKPdf	21 57 44.2	-0.4		
AKASG						PKPbc	21 57 49.7	-0.9		
RCY	Rachaya	151.47	285	*e*	P	PKPdf	21 57 45.8	+0.2		
LINV	Loch Inver, As	151.52	8	*e*	P	PKPbc	21 57 50.4	-0.4		
HOMB	Homborsund	151.57	353	*e*	PKPbc	PKiKP	21

	baz=19,slow=4.3						
DBIC	**Dimbokro**	**155.66**	**162**	PKP	**PKPdf**	**21 57 53.0**	**+1.0**
	comp=Z,10nm,1.1s,baz=304,slow=1.9,SNR=3.3						
DBIC	**Dimbokro**	**155.66**	**162**	PKIKP	**PKPdf**	**21 57 53.0**	**+1.0**
OZUR		**155.81**	**318**	⇑P	PKPdf	21 58 00.9	+10
KOLS	**Kolonicke sedl**	**155.91**	**327**	*e*PKIKP	**PKPdf**	**21 57 50.7**	**-0.5**
KOLS				*e*		21 58 16.6	
KOLS	**Kolonicke sedl**	**155.91**	**327**	*e*PKP	**PKPdf**	**21 57 50.7**	**-0.5**
KOLS				*e*		21 58 16.6	
MLR	**Muntele Rosu**	**156.04**	**316**	⇑P	**PKPdf**	**21 57 54.4**	**+2.7**
MLR	**Muntele Rosu**	**156.04**	**316**	⇑PKIKP	**PKPdf**	**21 57 54.4**	**+2.7**
OJC	**Ojcow**	**156.06**	**332**	*e*PKPdf	**PKPdf**	**21 57 50.7**	**-0.7**
OJC				*e*PKPab	**PKPab**	**21 58 18.6**	**-0.2**
OJC				*e*L	L	23 03 31.3	
	comp=Z,931nm,19.7s						
UZH	**Uzhgorod**	**156.11**	**326**	*e*PKIKP	**PKPdf**	**21 57 56.2**	**+4.7**
UZH				*i*		21 58 01.5	
UZH				*e*		21 58 04.3	
NEF	**NEVSHA**	**156.26**	**310**	*e*P	**PKPdf**	**21 57 51.2**	**-0.7**
SULR		**156.26**	**314**	⇑P	**PKPab**	**21 58 20.9**	**+1.0**
CRVS	**Cervenica-Dubn**	**156.31**	**328**	*e*PKIKP	**PKPdf**	**21 57 52.7**	**+0.9**
CRVS	**Cervenica-Dubn**	**156.31**	**328**	*e*PKP	**PKPdf**	**21 57 52.7**	**+0.9**
CRVS				*e*		21 58 19.9	
NIE	**Niedzica**	**156.46**	**330**	*e*PKPdf	**PKPdf**	**21 57 53.2**	**+1.3**
NIE				*e*PKPab	**PKPab**	**21 58 20.7**	**+0.1**
NIE				*e*L	L	23 04 32.8	
	comp=Z,425nm,25.3s						
AKAS	**Kas**	**156.49**	**292**	IAMs_20	IAMs_20	23 11 58.8	
	comp=Z,601nm,21.0s						
KSP	**Ksiaz**	**156.87**	**337**	*e*PKPdf	**PKPdf**	**21 57 52.5**	**+0.1**
KSP				*e*PKPab	**PKPab**	**21 58 22.5**	**+0.3**
KSP				*e*L	L	23 06 44.7	
	comp=Z,824nm,23.6s						
NRDL	**Niedersach Rie**	**156.97**	**348**	*e*PKPdf	**PKPdf**	**21 57 52.6**	**+0.3**
	baz=21,slow=0.9						
NRDL				*e*PKPab	**PKPab**	**21 58 22.1**	**-0.4**
	baz=19,slow=4.3						
LANS	**Liptovska Anna**	**157.02**	**330**	*e*PKIKP	**PKPdf**	**21 57 55.6**	**+2.8**
LANS	**Liptovska Anna**	**157.02**	**330**	*e*PKP	**PKPdf**	**21 57 55.5**	**+2.8**
LANS				*e*		21 58 23.2	
OKC	**Ostrava-Krasne**	**157.02**	**333**	*e*PKPAB	**PKPab**	**21 58 22.3**	**-0.7**
KECS	**Kecovo**	**157.06**	**328**	*e*PKP2	**PKPab**	**21 58 23.0**	**-0.2**
KECS	**Kecovo**	**157.06**	**328**	*e*PKP	**PKPab**	**21 58 23.0**	**-0.2**
OSTC	**Ostas**	**157.13**	**337**	*e*PKPDF	**PKPdf**	**21 57 53.3**	**+0.5**
OSTC				*ex*	x	21 58 02.1	
OSTC				*e*PKPAB	**PKPab**	**21 58 24.3**	**+0.8**
CHVC	**Chvalec**	**157.16**	**337**	*e*PKPDF	**PKPdf**	**21 57 53.2**	**+0.4**
CHVC				*e*PKPAB	**PKPab**	**21 58 23.2**	**-0.4**
ASSE	**Asse, Remlinge**	**157.21**	**347**	*e*PKPab	**PKPab**	**21 58 23.2**	**-0.3**
	baz=19,slow=4.3						
UPC	**Upice**	**157.24**	**337**	*e*PKPAB	**PKPab**	**21 58 24.0**	**+0.1**
DPC	**Dobruska-Polom**	**157.27**	**337**	*e*PKPDF	**PKPdf**	**21 57 53.3**	**+0.3**
DPC				*e*PKPAB	**PKPab**	**21 58 24.0**	**-0.1**
MORC	**Moravsky Berou**	**157.30**	**334**	*e*PKP	**PKPdf**	**21 57 53.0**	**-0.1**
MORC				*e*		21 58 24.4	
KRLC	**Kraliky**	**157.34**	**335**	*e*PKPAB	**PKPab**	**21 58 24.3**	**-0.1**
CLL	**Collm**	**157.44**	**342**	*e*PKPdf	**PKPdf**	**21 57 53.0**	**-0.1**
	comp=Z,46nm,2.1s						
CLL				*e*		21 57 56.0	
CLL				*i* PKPdiff	**sPKPdf**	**21 58 04.5**	**+0.5**
	comp=Z,50nm,1.5s						
CLL				*e*		21 58 08.0	
CLL				*i* PKPab	**PKPab**	**21 58 24.3**	**-0.4**
	comp=Z,131nm,1.0s						
CLL				*i*		21 58 27.3	
CLL				*e*		21 59 05.0	
CLL				*e*PP	**PP**	**22 02 01.0**	**-2.3**
CLL				*e*PPP	PPP	22 05 37.0	
CLL				*e*		22 08 24.0	
CLL				*e*PPPrev		22 10 57.0	
CLL				*e*(SKSP)		22 12 10.0	
CLL				*e*PSKS		22 12 30.0	
CLL				*e*		22 14 16.0	
CLL				*e*PPS	PPS	22 15 19.0	
CLL				*e*		22 20 12.0	
CLL				*e*SS	SS	22 22 01.0	+4.2
CLL				*e*PSS	PSS	22 22 48.0	
CLL				*e*SSS	SSS	22 28 18.0	
CLL				*e*SSSS		22 32 06.0	
CLL				LmV		23 07 00.0	
	comp=Z,600nm,21.0s						
CLL	**Collm**	**157.44**	**342**	*e*PKIKP	**PKPdf**	**21 57 53.0**	**-0.1**
CLL				*i*		21 58 04.5	
CLL				pmax	pmax		
	comp=Z,46nm,2.1s						
CLL				MLR	MLR		
	comp=Z,600nm,21.0s						
IBBN	**Ibbenburen**	**157.51**	**351**	*e*PKPab	**PKPab**	**21 58 24.7**	**-0.2**
	baz=19,slow=4.3						
CLZ	**Clausthal**	**157.54**	**347**	*e*PKPdf	**PKPdf**	**21 57 54.2**	**+0.9**
	baz=21,slow=0.9						
CLZ				*e*PKPab	**PKPab**	**21 58 24.9**	**-0.2**
	baz=19,slow=4.3						
PVCC	**Panska Ves**	**157.69**	**339**	*e*PKPAB	**PKPab**	**21 58 26.0**	**+0.2**
FBE	**Freiberg**	**157.69**	**342**	*e*PKPab	**PKPab**	**21 58 25.7**	**-0.1**
	baz=19,slow=4.3						
PSZ	**Piszkesteto**	**157.75**	**328**	⇑P	**PKPab**	**21 58 26.3**	**0.0**
PSZ	**Piszkesteto**	**157.75**	**328**	⇑PKP2	**PKPab**	**21 58 26.3**	**0.0**
VYHS	**Vyhne**	**157.79**	**330**	*e*PKIKP	**PKPdf**	**21 57 53.1**	**-0.6**
VYHS	**Vyhne**	**157.79**	**330**	*e*PKP	**PKPdf**	**21 57 53.1**	**-0.6**
VYHS				*e*		21 58 26.3	
NEUB	**Neuenburg**	**157.83**	**344**	*e*PKPab	**PKPab**	**21 58 25.9**	**-0.5**
	baz=19,slow=4.3						
JAVC	**Velka Javorina**	**157.99**	**332**	*e*PKP	**PKPdf**	**21 57 54.7**	**+0.7**
JAVC				*e*		21 58 28.0	
ALN	**Alexandroupoli**	**158.04**	**306**	PKIKP	**PKPdf**	**21 57 53.0**	**-1.2**
ALN				PKP	**PKPab**	**21 58 26.9**	**-0.8**
ALN	**Alexandroupoli**	**158.04**	**306**		**PKPdf**	**21 57 53.0**	**-1.2**
ALN				PKPab	**PKPab**	**21 58 26.9**	**-0.8**
VRAC	**Vranov**	**158.04**	**335**	⇑P	**PKPab**	**21 58 27.6**	**+0.2**
VRAC	**Vranov**	**158.04**	**335**	*e*PKP	**PKPdf**	**21 57 53.4**	**-0.6**
VRAC				*e*		21 58 27.0	
VRAC	**Vranov**	**158.04**	**335**	⇑PKP2	**PKPab**	**21 58 27.6**	**+0.2**
PRA	**Prague**	**158.13**	**339**	*e*PKPAB	**PKPab**	**21 58 28.1**	**+0.4**
PRU	**Pruhonice**	**158.17**	**339**	*e*PKPAB	**PKPab**	**21 58 28.4**	**+0.5**
KRUC	**Moravsky**	**158.32**	**335**	*e*PKP	**PKPdf**	**21 57 53.7**	**-0.6**
KRUC				*e*		21 58 27.4	
SMOL	**Smolenice**	**158.36**	**332**	*e*PKP2	**PKPab**	**21 58 29.1**	**+0.3**
SMOL	**Smolenice**	**158.36**	**332**	*e*PKP	**PKPab**	**21 58 29.1**	**+0.3**
TANN	**Tannenbergstha**	**158.39**	**342**	*e*PKPab	**PKPab**	**21 58 28.7**	**-0.2**
	baz=19,slow=4.3						
MOX	**Moxa**	**158.39**	**344**	*e*PKPdf	**PKPdf**	**21 57 53.6**	**-0.8**
	baz=21,slow=0.9						
MOX				*e*PKPab	**PKPab**	**21 58 28.4**	**-0.5**
	baz=19,slow=4.3						
PLN	**Plauen**	**158.41**	**343**	*e*PKPab	**PKPab**	**21 58 28.7**	**-0.2**
	baz=19,slow=4.3						
BUG	**Bochum--Univer**	**158.43**	**352**	*e*PKPdf	**PKPdf**	**21 57 53.9**	**-0.4**
	baz=21,slow=0.9						
BUG				*e*PKPab	**PKPab**	**21 58 28.2**	**-0.7**
	baz=19,slow=4.3						
BZS	**Buzias**	**158.44**	**321**	⇓P	**PKPdf**	**21 57 54.1**	**-0.4**
BZS	**Buzias**	**158.44**	**321**	⇓PKIKP	**PKPdf**	**21 57 54.1**	**-0.4**
TREC	**Trest**	**158.45**	**336**	*e*PKPAB	**PKPab**	**21 58 29.4**	**+0.2**
GUNZ	**Gunzen**	**158.47**	**342**	*e*PKPab	**PKPab**	**21 58 29.1**	**-0.1**
	baz=19,slow=4.3						
WERN	**Wernitzgruen**	**158.53**	**342**	*e*PKPab	**PKPab**	**21 58 29.5**	**0.0**
	baz=19,slow=4.3						
MODS	**Modra-Piesok**	**158.53**	**332**	*e*PKIKP	**PKPdf**	**21 57 54.2**	**-0.4**
MODS				*e*		21 58 28.9	
MODS	**Modra-Piesok**	**158.53**	**332**	*e*PKP	**PKPdf**	**21 57 54.2**	**-0.4**
MODS				*e*		21 58 28.9	
UBBA	**Unterbreizbach**	**158.58**	**347**	*e*PKPab	**PKPab**	**21 58 29.1**	**-0.4**
	baz=19,slow=4.3						
PBCC	**Pribram**	**158.61**	**339**	*e*PKPAB	**PKPab**	**21 58 30.0**	**+0.2**
ZST	**Bratislava**	**158.75**	**332**	*e*PKP2	**PKPab**	**21 58 31.0**	**+0.5**
ZST	**Bratislava**	**158.75**	**332**	*e*PKP	**PKPab**	**21 58 31.0**	**+0.5**
MANZ	**Manzenberg**	**158.88**	**342**	*e*PKPab	**PKPab**	**21 58 30.8**	**-0.2**
	baz=19,slow=4.3						
MDVR	**Moldovita**	**158.91**	**319**	⇑P	**PKPab**	**21 58 30.9**	**-0.6**
ROTZ	**Rotzenmuhle**	**159.05**	**342**	*e*PKPab	**PKPab**	**21 58 31.9**	**+0.2**
	baz=19,slow=4.3						
KHC	**Kasperske Hory**	**159.23**	**339**	*e*PKPDF	**PKPdf**	**21 57 55.2**	**-0.2**
KHC				*e*PKPAB	**PKPab**	**21 58 32.6**	**0.0**
KHC				*ex*	x	21 58 46.5	
BEBN	**Eben Emael**	**159.23**	**354**	PKPab	**PKPab**	**21 58 32.2**	**-0.2**
UCC	**Uccle**	**159.32**	**356**	PKPab	**PKPab**	**21 58 32.6**	**-0.2**
AHRW	**Bad Neuenahr-A**	**159.33**	**352**	*e*PKPdf	**PKPdf**	**21 57 54.8**	**-0.6**
	baz=21,slow=0.9						
AHRW				*e*PKPab	**PKPab**	**21 58 32.6**	**-0.2**
	baz=19,slow=4.3						
GRF	**Grafenberg Arr**	**159.37**	**344**	*e*PKPab	**PKPab**	**21 58 33.2**	**+0.1**
	baz=19,slow=4.3						
GRF				*e*L	L	23 04 31.1	
	comp=Z,490nm,21.9s						
MEM	**Membach**	**159.38**	**353**	PKPab	**PKPab**	**21 58 32.8**	**-0.3**
MEM				PKPab	**PKPab**	**21 58 32.9**	**-0.3**
BTNL	**Ternell**	**159.40**	**353**	PKPdf	**PKPdf**	**21 57 55.8**	**+0.3**
BTNL				PKPab	**PKPab**	**21 58 33.0**	**-0.3**
WET	**Wettzell**	**159.43**	**340**	*e*PKPab	**PKPab**	**21 58 33.5**	**+0.1**
	baz=19,slow=4.3						
GEC2	**GERESS Array S**	**159.44**	**338**	*e*PKPdf	**PKPdf**	**21 57 54.8**	**-0.9**
	baz=21,slow=0.9						
GEC2				*e*PKPab	**PKPab**	**21 58 33.2**	**-0.3**
	baz=19,slow=4.3						
GERES	**GERESS Array B**	**159.44**	**338**	PKP	**PKPdf**	**21 57 54.5**	**-1.2**
	comp=Z,3.7nm,1.1s,baz=90,slow=1.3,SNR=12						
GERES				PKPab	**PKPab**	**21 58 32.4**	**-1.2**
	comp=Z,23nm,1.0s,baz=354,slow=1.3,SNR=4.3						
GERES	**GERESS Array B**	**159.44**	**338**		**PKPdf**	**21 57 54.4**	**-1.3**
GERES					**PKPab**	**21 58 32.9**	**-0.7**
TNS	**Taunus Mts**	**159.44**	**349**	*e*PKPdf	**PKPdf**	**21 57 54.8**	**-0.8**
	baz=21,slow=0.9						
TNS				*e*PKPab	**PKPab**	**21 58 32.9**	**-0.5**
	baz=19,slow=4.3						
BSTI	**Sart Tilman**	**159.45**	**354**	PKPab	**PKPab**	**21 58 33.1**	**-0.2**
CONA	**Conrad Observa**	**159.46**	**334**	*e*P	**PKPdf**	**21 57 56.0**	**+0.2**
	comp=Z,12nm,1.8s						
CONA				*e*P	**PKPab**	**21 58 33.9**	**+0.2**
	comp=Z,44nm,1.2s,SNR=6.6						
SNF	**Seneffe**	**159.62**	**357**	PKPab	**PKPab**	**21 58 33.7**	**-0.4**
BCLA	**Clavier**	**159.64**	**355**	PKPab	**PKPab**	**21 58 32.8**	**-1.4**
BHOU	**Houvegnez**	**159.64**	**353**	PKPab	**PKPab**	**21 58 34.4**	**+0.1**
BGES	**Gesves**	**159.69**	**355**	PKPab	**PKPab**	**21 58 34.1**	**-0.4**
BMRD	**Maredsous**	**159.79**	**356**	PKPdf	**PKPdf**	**21 57 56.3**	**+0.4**
BMRD				PKPab	**PKPab**	**21 58 34.8**	**-0.1**
BMRD				*x*	x	21 58 37.7	
BMRD				pPKPab	**pPKPab**	**21 58 42.7**	**-0.2**
MOA	**Molln**	**160.11**	**336**	*e*P	**PKPdf**	**21 57 56.7**	**+0.2**
	comp=Z,2.9nm,0.8s						
MOA				*e*P	**PKPab**	**21 58 36.7**	**+0.3**
	comp=Z,45nm,1.2s,SNR=9.6						
ARSA	**Arzberg**	**160.14**	**333**	*e*P	**PKPdf**	**21 57 56.3**	**-0.2**
	comp=Z,7.9nm,1.4s						
ARSA				*e*P	**PKPab**	**21 58 36.2**	**-0.4**
	comp=Z,26nm,1.6s						
VAY	**Valandovo**	**160.25**	**310**	*i* P	**PKPab**	**21 58 36.8**	**-0.5**
WLF	**Walferdange**	**160.30**	**353**	PKPdf	**PKPdf**	**21 57 56.9**	**+0.3**
WLF				PKPab	**PKPab**	**21 58 36.8**	**-0.3**
WLF				sPKPab	**sPKPab**	**21 58 48.0**	**+0.1**
WLF	**Walferdange**	**160.30**	**353**	*e*PKPab	**PKPab**	**21 58 37.2**	**+0.1**
	baz=19,slow=4.3						
STIP	**Stip**	**160.32**	**311**	*i* P	**PKPab**	**21 58 36.5**	**-1.2**
IDI	**Anoyia**	**160.42**	**291**	⇑P	**PKPdf**	**21 57 58.1**	**+0.8**
KOGS	**Kog**	**160.48**	**330**	*e*PKPdf	**PKPdf**	**21 57 56.2**	**-0.7**
SKO	**Skopje**	**160.66**	**313**	*i* P	**PKPab**	**21 58 39.7**	**+0.6**
STU	**Stuttgart**	**160.69**	**346**	PKIKP	**PKPdf**	**21 57 57.3**	**+0.3**
STU						21 58 38.7	
STU	**Stuttgart**	**160.69**	**346**	*e*PKPdf	**PKPdf**	**21 57 56.1**	**-0.9**
	baz=21,slow=0.9						
STU				*e*PKPab	**PKPab**	**21 58 38.4**	**-0.5**
	baz=19,slow=4.3						
STU	**Stuttgart**	**160.69**	**346**	PKPdf	**PKPdf**	**21 57 57.3**	**+0.3**
STU					**PKPab**	**21 58 38.7**	**-0.2**
RJOB	**Jochberg**	**160.70**	**338**	*e*PKPab	**PKPab**	**21 58 38.1**	**-0.9**
	baz=19,slow=4.3						
FUR	**Furstenfeldbru**	**160.76**	**342**	*e*PKPab	**PKPab**	**21 58 39.2**	**0.0**
	baz=19,slow=4.3						
PERS	**Pernice**	**160.80**	**333**	*i* PKPdf	**PKPdf**	**21 57 57.9**	**+0.6**
PERS				*e*PKPab	**PKPab**	**21 58 39.3**	**-0.2**
SOKA	**Soboth**	**160.80**	**333**	*i* P	**PKPdf**	**21 57 57.4**	**+0.1**
	comp=Z,13nm,1.3s						
SOKA				*e*P	**PKPab**	**21 58 39.1**	**-0.5**
	comp=Z,55nm,1.5s,SNR=8.0						
KBA	**Koelnbreinsper**	**161.09**	**336**	*e*P	**PKPdf**	**21 57 57.3**	**-0.4**
	comp=Z,8.8nm,1.3s						
KBA				*e*P	**PKPab**	**21 58 39.9**	**-1.1**
	comp=Z,25nm,1.0s						
KBA				*e*P	**PP**	**22 02 24.4**	**+0.8**
	comp=Z,16nm,1.2s						
OBKA	**Obir**	**161.13**	**333**	*e*P	**PKPab**	**21 58 40.1**	**-1.0**
	comp=Z,17nm,1.1s						
BFO	**Black Forest**	**161.29**	**348**	PKP2	**PKPab**	**21 58 41.2**	**-0.3**
BFO	**Black Forest**	**161.29**	**348**	*e*PKPab	**PKPab**	**21 58 40.9**	**-0.6**
	baz=19,slow=4.3						
BFO	**Black Forest**	**161.29**	**348**	PKPab	**PKPab**	**21 58 41.2**	**-0.3**
MYKA	**Terra Mystica**	**161.37**	**335**	*e*P	**PKPdf**	**21 57 58.0**	**+0.1**
	comp=Z,12nm,1.3s						
MYKA				*e*P	**PKPab**	**21 58 41.1**	**-1.0**
	comp=Z,46nm,1.4s,SNR=6.0						
WATA	**Walderalm**	**161.43**	**340**	*e*P	**PKPab**	**21 58 42.3**	**-0.1**
	comp=Z,109nm,1.3s,SNR=17						
WTTA	**Wattenberg**	**161.48**	**340**	*e*P	**PKPdf**	**21 57 58.4**	**+0.2**
	comp=Z,19nm,1.5s						
WTTA				*i* P	**PKPab**	**21 58 42.8**	**+0.2**
	comp=Z,97nm,1.1s,SNR=12						
WTTA				*e*P	**PP**	**22 02 25.4**	**-0.2**
	comp=Z,13nm,1.4s						
OHR	**Ohrid**	**161.52**	**311**	*i* P	**PKPab**	**21 58 42.3**	**-0.6**
UBR	**Ueberruh**	**161.52**	**343**	*e*PKPab	**PKPab**	**21 58 42.3**	**-0.3**
	baz=19,slow=4.3						
LJU	**Ljubljana**	**161.52**	**333**	*i* PKPab	**PKPab**	**21 58 42.2**	**-0.5**
RETA	**Reutte**	**161.53**	**342**	*i* P	**PKPab**	**21 58 42.9**	**+0.2**
	comp=Z,112nm,1.3s,SNR=20						
RETA				*e*P	**PP**	**22 02 25.4**	**-0.2**
	comp=Z,14nm,1.6s						
MOTA	**Moosalm**	**161.56**	**341**	*e*P	**PKPdf**	**21 57 58.3**	**+0.1**
	comp=Z,9.6nm,1.4s						
MOTA				*e*P	**PKPab**	**21 58 43.1**	**+0.2**
	comp=Z,120nm,1.0s,SNR=19						
MOTA				*i* P	**PP**	**22 02 25.5**	**-0.5**
	comp=Z,13nm,1.4s						
SQTA	**Sankt Quirin**	**161.65**	**341**	*e*P	**PKPdf**	**21 57 58.4**	**+0.2**
	comp=Z,8.7nm,1.6s						
SQTA				*e*P	**PKPab**	**21 58 43.5**	**+0.2**
	comp=Z,98nm,1.0s,SNR=14						
GBAS	**Gorenja Brezov**	**161.65**	**332**	*i* PKPab	**PKPab**	**21 58 42.5**	**-0.7**
BOJS	**Bojanci**	**161.66**	**330**	*i* PKPdf	**PKPdf**	**21 57 57.9**	**-0.2**
ABTA	**Abfaltersbach**	**161.66**	**337**	*i* P	**PKPdf**	**21 57 58.1**	**-0.2**
	comp=Z,14nm,1.2s						
ABTA				*e*P	**PKPab**	**21 58 42.3**	**-1.0**
	comp=Z,42nm,1.1s,SNR=7.0						
PDG	**Podgorica**	**161.75**	**317**	PKPdf	**PKPdf**	**21 57 57.5**	**-0.8**
PDG				PKPab	**PKPab**	**21 58 42.3**	**-1.5**
DAVA	**Damuels**	**161.94**	**343**	*e*P	**PKPdf**	**21 57 57.8**	**-0.8**
	comp=Z,15nm,1.3s						
DAVA				*i* P	**PKPab**	**21 58 44.6**	**0.0**
	comp=Z,96nm,1.1s,SNR=10						
FETA	**Feichten**	**161.96**	**341**	*e*P	**PKPdf**	**21 57 57.0**	**-1.7**
	comp=Z,16nm,1.3s						
FETA				*e*P	**PKPab**	**21 58 44.8**	**+0.1**
	comp=Z,57nm,1.2s,SNR=9.1						
CIMO	**Cimolais**	**162.07**	**337**		**PKPdf**	**21 57 58.1**	**-0.4**
CIMO					**PKPab**	**21 58 43.6**	**-1.4**
ITM	**Ithomi**	**162.32**	**299**	PKPdf	**PKPdf**	**21 57 58.2**	**-0.9**
FUORN	**Ofenpass-Fuorn**	**162.46**	**342**	PKPab	**PKPab**	**21 58 47.6**	**+0.6**
TOA0	**Torodi Ar. Sit**	**163.07**	**178**	P	**PKPdf**	**21 58 00.3**	**-0.2**
	SNR=5.4						
TOA0	**Torodi Ar. Sit**	**163.07**	**178**		**PKPdf**	**21 58 01.1**	**+0.6**
TOA0				PKPab	**PKPab**	**21 58 50.8**	**+0.8**
TORD	**Torodi Ar. Bea**	**163.07**	**178**	PKP	**PKPdf**	**21 58 01.0**	**+0.5**
	comp=Z,13nm,1.1s,baz=303,slow=0.5,SNR=29						
TORD				PKPab	**PKPab**	**21 58 51.3**	**+1.3**
	comp=Z,18nm,1.1s,baz=183,slow=2.8,SNR=12						
TORD	**Torodi Ar. Bea**	**163.07**	**178**		**PKPdf**	**21 58 00.6**	**+0.2**
TORD					**PKPab**	**21 58 50.9**	**+0.9**
KOWA	**Kowa**	**163.33**	**158**		**PKPdf**	**21 58 01.6**	**+0.9**
SSB	**Saint Sauveur**	**164.80**	**354**	PKP2	**PKPab**	**21 58 56.9**	**-0.2**
SSB	**Saint Sauveur**	**164.80**	**354**	PKPab	**PKPab**	**21 58 56.9**	**-0.2**
TIP	**Timpagrande**	**165.16**	**311**		**PKPdf**	**21 58 02.5**	**+0.7**
TIP				PKPab	**PKPab**	**21 58 58.5**	**-0.5**
PBRG	**Braganca**	**166.22**	**30**	*e*PKPdf	**PKPdf**	**21 58 06.3**	**+3.8**
PBRG	**Braganca**	**166.22**	**30**	*e*PKPab	**PKPab**	**21 59 03.8**	**+0.3**
PVIS	**Viseu**	**166.53**	**36**	*e*PKPdf	**PKPdf**	**21 58 03.9**	**+1.1**
PVIS	**Viseu**	**166.53**	**36**	*e*PKPab	**PKPab**	**21 59 05.5**	**+0.6**
MVO	**Moncorvo**	**166.61**	**32**	*e*PKPdf	**PKPdf**	**21 58 04.8**	**+1.9**
MVO	**Moncorvo**	**166.61**	**32**	*e*PKPab	**PKPab**	**21 59 05.8**	**+0.6**
MTE	**Manteigas**	**166.95**	**36**	*e*PKPdf	**PKPdf**	**21 58 05.7**	**+2.6**
PCBR	**Castelo Branco**	**167.39**	**37**	*e*PKPdf	**PKPdf**	**21 58 05.1**	**+1.7**
PMRV	**Marv??o**	**167.74**	**38**	*e*PKPab	**PKPab**	**21 59 10.2**	**0.0**
PNCL	**Nicolau / Gran**	**167.96**	**46**	*e*PKPdf	**PKPdf**	**21 58 06.2**	**+2.4**
EVO	**Evora**	**168.00**	**43**	*e*PKPdf	**PKPdf**	**21 58 03.1**	**-0.8**
EVO	**Evora**	**168.00**	**43**	*e*PKPab	**PKPab**	**21 59 11.7**	**+0.3**
PBEJ	**Beja**	**168.42**	**45**	*e*PKPdf	**PKPdf**	**21 58 06.1**	**+1.9**
PBEJ	**Beja**	**168.42**	**45**	*e*PKPab	**PKPab**	**21 59 13.4**	**+0.1**
PCVE	**Castro Verde**	**168.56**	**47**	*e*PKPdf	**PKPdf**	**21 58 06.5**	**+2.2**
PBDV	**Barranco-do-Ve**	**168.86**	**48**	*e*PKPdf	**PKPdf**	**21 58 06.5**	**+2.0**
PAB	**San Pablo**	**169.11**	**29**	PKIKP	**PKPdf**	**21 58 06.5**	**+1.8**
PAB	**San Pablo**	**169.11**	**29**		**PKPdf**	**21 58 06.5**	**+1.8**
ESDC	**Sonseca Array**	**169.16**	**27**	PKP	**PKPdf**	**21 58 05.5**	**+0.8**
	comp=Z,9.6nm,1.0s,baz=346,slow=3.1,SNR=24						
ESDC				PKPab	**PKPab**	**21 59 16.8**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=311,slow=4.7,SNR=6.3						
ESDC				PP	**PP**	**22 03 05.4**	**-0.1**
	comp=Z,3.3nm,1.2s,baz=331,slow=4.8,SNR=5.9						
ESDC	**Sonseca Array**	**169.16**	**27**		**PKPdf**	**21 58 05.4**	**+0.8**
ESDC				PKPab	**PKPab**	**21 59 16.3**	**-0.2**
OUK	**Oukaimeden**	**171.09**	**81**	P	**PKPdf**	**21 58 10.0**	**+3.6**
	SNR=7.6						
KEST	**Kesra**	**171.94**	**315**	PKP	**PKPdf**	**21 58 06.5**	**+0.2**
	comp=Z,8.1nm,0.9s,baz=216,slow=3.4,SNR=4.2						
OUZM	**OUZ**	**172.05**	**82**	P	**PKPdf**	**21 58 09.0**	**+2.4**
	SNR=7.0						
TAM	**Tamanrasset**	**172.16**	**202**	PKIKP	**PKPdf**	**21 58 07.7**	**+0.8**
TAM	**Tamanrasset**	**172.16**	**202**		**PKPdf**	**21 58 07.7**	**+0.8**
TAM				PKPab	**PKPab**	**21 59 32.3**	**+2.0**
ZGR	**Zagora**	**173.04**	**88**	P	**PKPdf**	**21 58 09.2**	**+2.1**
	SNR=8.3						
TZRR	**Tazzarine**	**173.08**	**83**	P	**PKPdf**	**21 58 10.0**	**+3.0**
	SNR=9.4						
MDT	**Midelt**	**173.44**	**64**	P	**PKPdf**	**21 58 09.2**	**+2.1**
	SNR=12						
GOLM	**Goulmima**	**173.49**	**74**	P	**PKPdf**	**21 58 10.0**	**+2.8**
	SNR=9.7						
EBNR	**Beni Rached**	**173.83**	**7**	P	**PKPab**	**21 59 38.6**	**+1.4**
ECHA	**Ech Chlef**	**173.95**	**8**	P	**PKPab**	**21 59 39.4**	**+1.8**
JBK	**JBK**	**174.07**	**44**	P	**PKPdf**	**21 58 09.5**	**+2.1**
	SNR=11						
EANR	**'Ain N'Sour**	**174.11**	**10**	P	**PKPab**	**21 59 40.1**	**+1.6**
ARF	**Arif**	**174.16**	**76**	P	**PKPdf**	**21 58 08.8**	**+1.4**
	SNR=7.5						
ETRT	**Tiaret**	**174.69**	**10**	P	**PKPab**	**21 59 42.8**	**+1.6**
FIGM	**Figuig**	**176.28**	**57**	P	**PKPdf**	**21 58 10.1**	**+2.1**
	SNR=16						

IDC ***10*** *21:44:52.3±1.5, 60.70N×146.78W, h0km, mb4.0/6, mb1 4.1/8, mb1mx3.7/63, mbtmp4.0/8, ML3.9/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/58, Error ellipse: s-maj=40.2km s-min=20.6km az=96.0*

ANF ***10*** *21:44:56.0±0.5, 61.15N×146.89W, h0km, ML4.0/16, Error ellipse: s-maj=5.0km s-min=2.9km az=156.0*

*AEIC

L26K	**Log Cabin Wild**	**2.49**	**42**	P	**Pn**	**21 45 39.2**	**+1.1**
	baz=226,SNR=65						
L26K				Sb	**Sg**	**21 46 15.4**	**-1.6**
	baz=226						
L26K	**Log Cabin Wild**	**2.49**	**42**		**Pn**	**21 45 39.2**	**+1.1**
SPCN	**Chakachatna No**	**2.51**	**272**		**Pn**	**21 45 39.2**	**+1.0**
SPCR	**Spurr Chakacha**	**2.52**	**272**		**Pn**	**21 45 39.0**	**+0.6**
SPBG	**Spurr Blockage**	**2.59**	**273**		**Pn**	**21 45 40.2**	**+0.7**
BARN	**Barnard Glacie**	**2.60**	**91**	Pn	**Pn**	**21 45 40.7**	**+1.1**
GRNC	**Granite Creek**	**2.61**	**99**		**Pn**	**21 45 40.8**	**+1.0**
MCK	**McKinley**	**2.67**	**341**	P	**Pn**	**21 45 41.9**	**+1.4**
	baz=160,SNR=117						
MCK				S	**Sn**	**21 46 16.4**	**+3.3**
	baz=160						
MCK	**McKinley**	**2.67**	**341**		**Pn**	**21 45 41.8**	**+1.3**
MESA	**MESA**	**2.70**	**111**	Pn	**Pn**	**21 45 41.0**	**0.0**
CNPM	**China Poot**	**2.71**	**233**		**Pn**	**21 45 40.8**	**-0.1**
TRF	**Thorofare Moun**	**2.71**	**327**	Pn	**Pn**	**21 45 42.4**	**+1.2**
RIDG	**Independent Ri**	**2.72**	**21**	Pn	**Pn**	**21 45 43.5**	**+2.4**
YAH	**Yahtse**	**2.72**	**106**	Pn	**Pn**	**21 45 41.8**	**+0.5**
CTGM	**Chitina Glacie**	**2.77**	**93**	Pn	**Pn**	**21 45 43.3**	**+1.4**
DOT	**Dot Lake**	**2.79**	**28**	Pn	**Pn**	**21 45 43.8**	**+1.7**
DFR	**Drift River**	**2.85**	**260**		**Pn**	**21 45 44.0**	**+1.1**
RSO	**Redoubt South**	**2.92**	**257**	Pn	**Pn**	**21 45 44.3**	**+0.3**
LOGN	**Logan Glacier**	**2.95**	**95**		**Pn**	**21 45 45.5**	**+1.1**
RDWB	**Redoubt West**	**2.95**	**258**		**Pn**	**21 45 44.7**	**+0.3**
PPLA	**Purkeypile**	**2.96**	**307**	Pn	**Pn**	**21 45 45.6**	**+1.0**
KTH	**Kantishna Hill**	**2.96**	**324**	Pn	**Pn**	**21 45 46.0**	**+1.4**
NCT	**North Crescent**	**2.97**	**260**		**Pn**	**21 45 45.2**	**+0.6**
TABL	**Table Mountain**	**2.98**	**103**	Pn	**Pn**	**21 45 45.6**	**+0.8**
BC03		**3.07**	**51**		**Pn**	**21 45 47.5**	**+1.7**
BCAR	**Beaver Creek A**	**3.07**	**51**	Pn	**Pn**	**21 45 47.2**	**+1.3**
SCRK	**Sand Creek**	**3.10**	**25**	P	**Pn**	**21 45 47.8**	**+1.5**
	baz=208,SNR=31						
SCRK	**Sand Creek**	**3.10**	**25**		**Pn**	**21 45 47.9**	**+1.5**
CHX	**Chaix Hills**	**3.12**	**109**		**Pn**	**21 45 47.6**	**+0.9**
BVCY	**Beaver Creek**	**3.15**	**65**		**Pn**	**21 45 48.2**	**+1.1**
BWN	**Browne**	**3.17**	**340**	Pn	**Pn**	**21 45 48.5**	**+1.2**
HDA	**Harding Lake**	**3.20**	**0**	P	**Pn**	**21 45 49.6**	**+1.9**
	baz=181,SNR=167						
HDA				S	**Sn**	**21 46 29.9**	**+3.8**
	baz=181						
HDA				S	**Sn**	**21 46 29.9**	**+3.8**
	baz=181						
HDA	**Harding Lake**	**3.20**	**0**	Pn	**Pn**	**21 45 49.3**	**+1.6**
IVE	**Iliamna Volcan**	**3.20**	**250**		**Pn**	**21 45 47.6**	**-0.2**
CAST	**Castle Rocks**	**3.24**	**315**		**Pn**	**21 45 50.6**	**+2.4**
WRH	**Wood River Hil**	**3.30**	**352**	Pn	**Pn**	**21 45 50.3**	**+1.3**
BPAW	**Bear Paw Mtn.**	**3.42**	**329**	Pn	**Pn**	**21 45 51.7**	**+1.0**
CCB	**Clear Creek Bu**	**3.46**	**354**	Pn	**Pn**	**21 45 52.5**	**+1.3**
PCA	**Pinnacle**	**3.51**	**106**	Pn	**Pn**	**21 45 52.6**	**+0.6**
NEA2	**Nenana**	**3.51**	**345**	P	**Pn**	**21 45 52.8**	**+0.9**
	baz=164,SNR=33						
NEA2				S	**Sn**	**21 46 35.2**	**+1.5**
	baz=164						
NEA2	**Nenana**	**3.51**	**345**		**Pn**	**21 45 52.9**	**+0.9**
IL31		**3.56**	**1**	Pn	**Pn**	**21 45 53.5**	**+0.9**
ILAR	**Eielson Array**	**3.56**	**1**	Pn	**Pn**	**21 45 54.8**	**+2.1**
	26nm,0.3s,baz=187,slow=14,SNR=542						
ILAR				Sn	**Sb**	**21 46 40.1**	**-3.6**
	12nm,0.3s,baz=184,slow=19,SNR=22						
ILAR				LR	LR	21 47 12.2	
	comp=Z,53nm,21.8s,baz=174,slow=34						
ILAR	**Eielson Array**	**3.56**	**1**	Pn	**Pn**	**21 45 53.8**	**+1.1**
K27K	**Chicken**	**3.62**	**37**	Pn	**Pn**	**21 45 55.1**	**+1.7**
COLA	**College**	**3.68**	**354**	Pn	**Pn**	**21 45 55.5**	**+1.2**
TCOL	**CIGO, UAF Yank**	**3.68**	**354**	P	**Pn**	**21 45 55.7**	**+1.4**
	baz=174,SNR=24						
TCOL				S	**Sn**	**21 46 42.2**	**+4.2**
	baz=174						
TCOL	**CIGO, UAF Yank**	**3.68**	**354**	Pn	**Pn**	**21 45 56.0**	**+1.7**
MDM	**Murphy Dome**	**3.79**	**352**	Pn	**Pn**	**21 45 57.2**	**+1.4**
BCPM	**Bancas Point**	**3.85**	**106**	Pn	**Pn**	**21 45 56.9**	**+0.3**
POKR	**Poker Plat Res**	**3.91**	**357**	P	**Pn**	**21 45 58.5**	**+1.0**
	baz=177,SNR=19						
POKR				S	**Sn**	**21 46 46.7**	**+3.1**
	baz=177						
POKR	**Poker Plat Res**	**3.91**	**357**	Pn	**Pn**	**21 45 58.2**	**+0.7**
I23K	**Minto, Yukon-K**	**4.08**	**346**	P	**Pn**	**21 46 00.9**	**+1.2**
	baz=164,SNR=34						
I23K				S	**Sn**	**21 46 50.7**	**+3.0**
	baz=164						
I23K	**Minto, Yukon-K**	**4.08**	**346**	Pn	**Pn**	**21 46 00.6**	**+0.8**
SVW2	**Sparrevohn**	**4.16**	**272**	Pn	**Pn**	**21 46 00.6**	**-0.3**
MLY	**Manley**	**4.18**	**338**	P	**Pn**	**21 46 02.3**	**+1.1**
	baz=154,SNR=62						
MLY				S	**Sn**	**21 46 51.3**	**+1.0**
	baz=154						
MLY	**Manley**	**4.18**	**338**		**Pn**	**21 46 02.2**	**+1.0**
PRP	**Porcupine Dome**	**4.36**	**8**	Pn	**Pn**	**21 46 05.6**	**+1.8**
EGAK	**Eagle**	**4.45**	**34**	Pn	**Pn**	**21 46 07.6**	**+2.7**
KDAK	**Kodiak Island**	**4.47**	**222**	Pn	**Pn**	**21 46 04.7**	**-0.5**
DAWY	**Dawson**	**4.52**	**48**	Pn	**Pn**	**21 46 07.9**	**+2.0**
TT01	**Tatalina**	**4.56**	**296**		**Pn**	**21 46 06.2**	**-0.2**
TTA	**Tatalina**	**4.57**	**296**	Pn	**Pn**	**21 46 06.4**	**-0.1**
HYT	**Haines Junctio**	**4.64**	**91**	Pn	**Pn**	**21 46 09.2**	**+1.7**
OHAK	**Old Harbor**	**5.15**	**222**	Pn	**Pn**	**21 46 13.3**	**-1.1**
FYU	**Fort Yukon**	**5.42**	**8**	Pn	**Pn**	**21 46 19.7**	**+1.6**
IM03		**5.64**	**331**		**Pn**	**21 46 22.4**	**+1.2**
IMAR	**Indian Mountai**	**5.64**	**331**	Pn	**Pn**	**21 46 21.6**	**+0.4**
WHY	**Whitehorse**	**5.94**	**90**	Pn	**Pn**	**21 46 25.5**	**+0.2**
SKAG	**Skagway**	**6.06**	**102**	Pn	**Pn**	**21 46 28.3**	**+1.3**
COLD	**Coldfoot**	**6.19**	**348**	P	**Pn**	**21 46 30.0**	**+1.4**
	baz=166,SNR=23						
COLD	**Coldfoot**	**6.19**	**348**		**Pn**	**21 46 29.2**	**+0.6**
BM03	**Burnt Mountain**	**6.31**	**8**		**Pn**	**21 46 32.0**	**+1.6**
BMAR	**Burnt Mountain**	**6.32**	**9**	Pn	**Pn**	**21 46 31.2**	**+0.7**
BESE	**Bessie Mountai**	**6.66**	**108**	Pn	**Pn**	**21 46 36.0**	**+0.7**
JIS	**Juneau Island**	**7.03**	**109**	Pn	**Pn**	**21 46 41.3**	**+1.1**
TOLK	**Toolik Lake Re**	**7.53**	**353**	P	**Pn**	**21 46 48.9**	**+1.8**
	baz=170,SNR=8.4						
TOLK	**Toolik Lake Re**	**7.53**	**353**	Pn	**Pn**	**21 46 49.8**	**+2.7**
INK	**Inuvik**	**9.12**	**33**	Pn	**Pn**	**21 47 10.9**	**+2.0**
	0.3nm,0.3s,baz=229,slow=8.4,SNR=6.4						
INK				Lg	Lg	21 49 43.7	
	0.0nm,0.3s,baz=258,slow=2.4,SNR=3.2						
INK	**Inuvik**	**9.12**	**33**	Pn	**Pn**	**21 47 10.4**	**+1.5**
A21K	**Barrow**	**10.83**	**343**	Pn	**Pn**	**21 47 32.1**	**-0.1**
JMIC	**Jan Mayen**	**44.92**	**18**	LR	LR	22 14 19.1	
	comp=Z,58nm,19.3s,baz=342,slow=39						
ARCES	**ARCESS Array B**	**49.42**	**3**	P	**P**	**21 53 45.4**	**-1.4**
	1.7nm,0.7s,baz=1.9,slow=8.1,SNR=6.1						
SONM	**Songino Array**	**56.39**	**309**	P	**P**	**21 54 39.3**	**+0.5**
	0.8nm,0.7s,baz=57,slow=9.5,SNR=3.6						
FINES	**FINESS Array B**	**57.54**	**4**	P	**P**	**21 54 45.5**	**-1.0**
	5.0nm,1.1s,baz=353,slow=8.4,SNR=14						
MKAR	**Makanchi Array**	**65.22**	**325**	P	**P**	**21 55 37.2**	**-1.6**
	0.4nm,0.6s,baz=22,slow=5.9,SNR=1.7						
AKASG	**Malin Array Be**	**68.39**	**3**	P	**P**	**21 55 57.7**	**-1.1**
	1.3nm,0.5s,baz=2.2,slow=7.3,SNR=5.2						
ESDC	**Sonseca Array**	**75.04**	**29**	P	**P**	**21 56 39.3**	**+0.2**
	0.8nm,0.7s,baz=346,slow=4.9,SNR=6.3						

*IDC **10** 21:47:07.8±1.6, 7°.23N×93°.95E, h0km, mb3.9/6, mb1 3.9/8, mb1mx3.7/57, mbtmp3.8/8, ML3.8/2, MS3.5/1, Ms1 3.5/1, ms1mx3.0/50, Error ellipse: s-maj=56.4km s-min=19.4km az=58.0*
*NEIC **10** 21:47:12.7±2.9, 7°.4N±0°.1×94°.40E±0°.08, h10km±1km, mb4.4/23, Error ellipse: s-maj=22.0km s-min=4.1km az=214.0*

ISC 10 21:47:12.2±0.6, 7°.39N±0°.08×94°.40E±0°.09, h10km, n46, σ1°90/44, mb4.2/19, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.32**	**130**	Pn	**Pn**	**21 48 04.5**	**+0.3**
LHMI				Sn	**Sn**	**21 48 44.9**	**+1.1**
PSI	**Prapat**	**6.41**	**135**	Pn	**Pn**	**21 48 49.6**	**+2.8**
	1.5nm,0.3s,baz=360,slow=23,SNR=6.1						
PSI				LR	LR	21 51 39.4	
	comp=Z,388nm,21.3s,baz=276,slow=41						
RPSI	**Rantau Prapat**	**6.48**	**136**	Pn	**Pn**	**21 48 49.2**	**+1.5**
RPSI	**Rantau Prapat**	**6.48**	**136**		**Pn**	**21 48 49.6**	**+1.9**
KULM	**Kulim**	**6.55**	**108**	Pn	**Pn**	**21 48 47.7**	**-1.0**
IPM	**Ipoh**	**7.20**	**113**	Pn	**Pn**	**21 48 55.8**	**-1.8**
CMAR	**Chiang Mai Arr**	**11.86**	**21**	Pn	**Pn**	**21 50 01.8**	**+0.2**
	0.2nm,0.3s,baz=217,slow=14,SNR=6.1						
SHL	**Shillong**	**18.24**	**353**	P	**P**	**21 51 28.8**	**+2.8**
LSA	**Lhasa**	**22.41**	**353**	P	**P**	**21 52 10.4**	**-1.1**
LSA				IAmb	IAmb	21 52 16.9	
	comp=Z,7.4nm,0.9s						
H08S3	**Diego Garcia H**	**26.45**	**236**	T	T	22 19 30.9	
	baz=62						
H08S2	**Diego Garcia H**	**26.46**	**236**	T	T	22 19 27.3	
	baz=62						
H08S1	**Diego Garcia H**	**26.47**	**236**	T	T	22 19 21.2	
	baz=62						
LZH	**Lanzhou**	**29.85**	**15**	*eP*	**P**	**21 53 21.9**	**+2.0**
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
GTA	**Gaotai**	**32.26**	**8**	*eP*	**P**	**21 53 44.0**	**+2.9**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NIL	**Nilore**	**32.64**	**326**	P	**P**	**21 53 45.8**	**+1.3**
KBL	**Kabul**	**35.71**	**323**	P	**P**	**21 54 12.9**	**+1.6**
KBL				IAmb	IAmb	21 54 14.6	
	comp=Z,2.1nm,0.7s						
HHC	**Hu-ho-hao-te**	**36.67**	**22**	*eP*	**P**	**21 54 19.5**	**+0.2**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.2s						
WMQ	**Urumqi**	**36.77**	**352**	*eP*	**P**	**21 54 22.3**	**+2.3**
BTK	**Batken**	**38.78**	**331**	P	**P**	**21 54 35.5**	**-1.7**
MK31	**Makanchi Array**	**40.62**	**347**	P	**P**	**21 54 49.2**	**-3.1**
MKAR	**Makanchi Array**	**40.62**	**347**	P	**P**	**21 54 48.6**	**-3.6**
	comp=Z,1.8nm,0.8s,baz=162,slow=7.6,SNR=13						
MKAR	**Makanchi Array**	**40.62**	**347**	P	**P**	**21 54 48.7**	**-3.5**
MAKZ	**Makanchi**	**40.70**	**347**	P	**P**	**21 54 49.6**	**-3.3**
MAKZ				IAmb	IAmb	21 54 55.1	
	comp=Z,3.8nm,0.7s						
KK31	**Karatay Array**	**41.31**	**333**	P	**P**	**21 54 59.0**	**+1.0**
KKAR	**Karatay Array**	**41.31**	**333**	P	**P**	**21 54 59.1**	**+1.1**
SONM	**Songino Array**	**41.58**	**12**	P	**P**	**21 55 01.3**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=188,slow=7.3,SNR=5.1						
SONM	**Songino Array**	**41.58**	**12**	P	**P**	**21 55 00.8**	**+0.5**
GYA1	**ALIBECK ARRAY**	**44.73**	**318**	P	**P**	**21 55 25.5**	**-0.4**
GYA1				IAmb	IAmb	21 55 29.9	
	comp=Z,4.2nm,0.6s						
GEYT	**Alibeck**	**44.73**	**318**	P	**P**	**21 55 22.6**	**-3.2**
	comp=Z,2.3nm,0.7s,baz=116,slow=9.8,SNR=3.6						
GEYT	**Alibeck**	**44.73**	**318**	P	**P**	**21 55 27.3**	**+1.5**
GYA2	**ALIBECK ARRAY**	**44.73**	**318**	P	**P**	**21 55 27.5**	**+1.6**
GYA2				IAmb	IAmb	21 55 29.6	
	comp=Z,4.4nm,0.8s						
KURK	**Kurchatov**	**45.14**	**346**	P	**P**	**21 55 28.5**	**-0.3**
KURK				IAmb	IAmb	21 55 33.0	
	comp=Z,5.2nm,0.8s						
ZAA0	**Zalesovo Array**	**47.07**	**352**	P	**P**	**21 55 43.3**	**-0.7**
ZAA0				IAmb	IAmb	21 55 47.0	
	comp=Z,4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**47.07**	**352**	P	**P**	**21 55 41.4**	**-2.6**
	comp=Z,4.7nm,0.8s,baz=182,slow=9.1,SNR=15						
WB0	**Warramunga Arr**	**47.73**	**125**	P	**P**	**21 55 48.5**	**-1.2**
WB0				IAmb	IAmb	21 55 57.9	
	comp=Z,8.1nm,1.4s						
WRA	**Warramunga Arr**	**47.77**	**125**	P	**P**	**21 55 48.0**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=305,slow=8.9,SNR=1.8						
ASAR	**Alice Springs**	**49.41**	**130**	P	**P**	**21 56 01.4**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=304,slow=7.8,SNR=4.3						
ASAR	**Alice Springs**	**49.41**	**130**	P	**P**	**21 55 59.6**	**-3.0**
RAYN	**Ar Rayn**	**49.52**	**295**	P	**P**	**21 56 02.2**	**-1.3**
RAYN				IAmb	IAmb	21 56 08.4	
	comp=Z,3.4nm,0.8s						
ABKAR	**Akbulak array**	**50.78**	**331**	P	**P**	**21 56 13.9**	**+1.3**
ARU	**Arti**	**56.44**	**337**	P	**P**	**21 56 55.0**	**+1.2**
KMBO	**Kilima Mbogo**	**57.62**	**264**	P	**P**	**21 57 02.8**	**-0.5**
KMBO				IAmb	IAmb	21 57 08.4	
	comp=Z,2.9nm,1.1s						
KARP	**Karpathos**	**67.24**	**305**	P	**P**	**21 58 06.3**	**-0.9**
BOSA	**Boshof**	**75.54**	**238**	P	**P**	**21 58 56.5**	**-1.0**
MAW	**Mawson**	**78.11**	**192**	P	**P**	**21 59 11.5**	**+0.5**
SPA0	**Spitsbergen Ar**	**80.36**	**348**	P	**P**	**21 59 24.0**	**+0.7**

*IDC **10** 21:54:25.6±1.7, 13°.58N×90°.54W, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.7/61, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=141.8km s-min=22.4km az=46.0*
*NEIC **10** 21:54:31.4±2.5, 13°.2N±0°.1×90°.86W±0°.08, h45km±7km, mb4.1/5, Error ellipse: s-maj=18.7km s-min=7.7km az=209.0*
*SNET **10** 21:54:36.6±1.3, 13°.41N×90°.32W, h29km±6km, ML2.6*
*UCR **10** 21:54:37.0±1.2, 13°.43N×90°.31W, h29km±5km, ML2.7, mb4.1(NEIC)*
*GCG **10** 21:54:37.3±0.4, 14°.10N×91°.12W, h72km±11km, MD3.9*

ISC 10 21:54:29.5±0.8, 13°.28N±0°.08×90°.80W±0°.05, h35km, n56, σ2°00/58, mb4.1/5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**1.12**	**10**	*eP*	**Pn**	**21 54 51.7**	**+2.7**
FUG	**Fuego 3**	**1.16**	**358**	*eP*	**Pn**	**21 54 50.5**	**+1.0**
NUBE	**Las Nubes**	**1.17**	**58**	*eP*	**Pn**	**21 54 50.4**	**+0.8**
NUBE				IAML		21 55 28.4	
	comp=Z,253nm,0.5s						
NUBE	**Las Nubes**	**1.17**	**58**	*eP*	**Pn**	**21 54 50.4**	**+0.8**
NUBE				IAML		21 55 28.4	
	comp=Z,253nm,0.5s						
SBLS	**San Blas**	**1.27**	**64**	*eP*	**Pn**	**21 54 52.3**	**+1.3**
SBLS	**San Blas**	**1.27**	**64**	*eP*	**Pn**	**21 54 52.3**	**+1.3**
RTR	**El Retiro**	**1.28**	**61**	*eP*	**Pn**	**21 54 52.4**	**+1.3**
RTR	**El Retiro**	**1.28**	**61**	*eP*	**Pn**	**21 54 52.4**	**+1.3**
SNJE	**San Jose**	**1.30**	**63**	*eP*	**Pn**	**21 54 52.5**	**+1.1**
SNJE	**San Jose**	**1.30**	**63**	*eP*	**Pn**	**21 54 52.5**	**+1.1**
NBG	**Las Nubes**	**1.37**	**19**	*eP*	**Pn**	**21 54 55.5**	**+3.1**
ERG	**Entre ros, C**	**1.38**	**327**	*eP*	**Pn**	**21 54 50.9**	**-1.3**
RTAL	**Retalhuleu**	**1.51**	**325**	Pn	**Pn**	**21 54 58.6**	**+4.4**
BOQS	**Boqueron**	**1.55**	**73**	*eP*	**Pn**	**21 54 55.9**	**+1.1**
BOQS	**Boqueron**	**1.55**	**73**	*eP*	**Pn**	**21 54 55.9**	**+1.1**
TACO	**Tacachico**	**1.57**	**64**	*eP*	**Pn**	**21 54 56.5**	**+1.6**
TACO				*eS*	**Sn**	**21 55 10.9**	**-3.1**
TACO	**Tacachico**	**1.57**	**64**	*eP*	**Pn**	**21 54 56.5**	**+1.6**
TACO				*eS*	**Sn**	**21 55 10.9**	**-3.1**
SNET	**Serv Nac Est T**	**1.58**	**75**		**Pn**	**21 54 56.8**	**+1.7**
STG3	**Santiaguito 3,**	**1.61**	**332**	*eP*	**Pn**	**21 54 53.4**	**-2.2**
LFRS	**El Faro**	**1.73**	**78**	*eP*	**Pn**	**21 54 58.6**	**+1.4**
LFRS	**El Faro**	**1.73**	**78**	*eP*	**Pn**	**21 54 58.6**	**+1.4**
MTO3	**Montecristo**	**1.79**	**51**	*eP*	**Pn**	**21 55 00.1**	**+2.0**
MTO3	**Montecristo**	**1.79**	**51**	*eP*	**Pn**	**21 55 00.1**	**+2.0**
MTO3	**Montecristo**	**1.79**	**51**	Pn	**Pn**	**21 54 60.0**	**+1.9**
ESQI	**Esquipulas**	**1.91**	**48**	*eP*	**Pn**	**21 55 02.8**	**+3.1**
ESQI	**Esquipulas**	**1.91**	**48**	Pn	**Pn**	**21 55 02.8**	**+3.1**
MRL	**Marmol**	**2.09**	**31**	*eP*	**Pn**	**21 55 05.0**	**+2.7**
MRL	**Marmol**	**2.09**	**31**	*eP*	**Pn**	**21 55 05.0**	**+2.7**
MRL	**Marmol**	**2.09**	**31**	*eP*	**Pn**	**21 55 05.9**	**+3.6**
HUEH	**Huehuetenango**	**2.14**	**342**	Pn	**Pn**	**21 55 03.2**	**+0.2**
TECA	**Tecapa**	**2.25**	**84**	*eP*	**Pn**	**21 55 05.0**	**+0.6**
TECA	**Tecapa**	**2.25**	**84**	*eP*	**Pn**	**21 55 05.0**	**+0.6**
PACA	**Pacayal**	**2.42**	**85**	*eP*	**Pn**	**21 55 08.7**	**+2.0**
PACA	**Pacayal**	**2.42**	**85**	*eP*	**Pn**	**21 55 08.7**	**+2.0**
CSGN	**Cosiguina Volc**	**3.17**	**95**	Pn	**Pn**	**21 55 19.7**	**+2.7**
CCIG	**Comitan**	**3.25**	**337**	Pn	**Pn**	**21 55 21.4**	**+3.2**
TGUH	**Tegucigalpa,Un**	**3.52**	**77**	Pn	**Pn**	**21 55 24.8**	**+3.0**
CRIN	**San Cristobal**	**3.70**	**99**	Pn	**Pn**	**21 55 28.0**	**+3.7**
MATN	**Matagalpa**	**4.76**	**94**	Pn	**Pn**	**21 55 38.8**	**-0.2**
CMIG	**Matias Romero**	**5.47**	**314**	Pn	**Pn**	**21 55 46.7**	**-1.9**
	comp=Z,1.2nm,0.3s,baz=134,slow=11,SNR=15						
CMIG				Sn	**Sn**	**21 56 51.5**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=100,slow=17,SNR=2.1						
TEIG	**Tepich**	**7.32**	**19**	Pn	Pn	21 56 20.2	+6.2
TXAR	**Lajitas Array**	**19.94**	**325**	P	**P**	**21 58 59.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=149,slow=13,SNR=8.4						
TXAR	**Lajitas Array**	**19.94**	**325**	P	**P**	**21 58 58.3**	**-0.4**
TX31	**Lajitas Ar. Si**	**19.95**	**325**	P	**Pn**	**21 59 00.2**	**-0.4**
TX31				IAmb	IAmb	21 59 09.5	
	comp=Z,17nm,1.4s						
TX32	**Lajitas Array**	**19.95**	**325**	P	**Pn**	**21 59 00.2**	**-0.3**
S39A	**Bolivar**	**24.42**	**355**	P	**P**	**21 59 43.9**	**-0.9**
S39A				IAmb	IAmb	21 59 45.6	
	comp=Z,5.2nm,0.8s						
BNM	**Barren Site**	**25.27**	**328**	P	**P**	**21 59 53.9**	**+1.0**
NVAR	**Mina Array Bea**	**34.96**	**321**	P	**P**	**22 01 20.4**	**+1.8**
	comp=Z,2.9nm,0.8s,baz=138,slow=8.6,SNR=7.9						
SAML	**Samuel**	**35.21**	**127**	P	**P**	**22 01 18.8**	**-2.0**
SAML				IAmb	IAmb	22 01 20.2	
	comp=Z,3.3nm,1.3s						
BCYI	**Bear Canyon**	**36.47**	**332**	P	**P**	**22 01 32.9**	**+1.4**
MCMT	**McKenzie Canyo**	**36.63**	**333**	P	**P**	**22 01 33.2**	**+0.3**
SIV	**San Ignacio**	**41.35**	**134**	P	**P**	**22 02 13.6**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=305,slow=7.5,SNR=4.5						
RES	**Resolute Bay**	**61.44**	**359**	P	**P**	**22 04 39.6**	**-2.4**
ILAR	**Eielson Array**	**63.96**	**337**	P	**P**	**22 04 58.1**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=132,slow=4.9,SNR=5.9						
ILAR	**Eielson Array**	**63.96**	**337**	P	**P**	**22 04 58.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**147.03**	**343**	PKPbc	**PKPbc**	**22 14 10.3**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=337,slow=4.7,SNR=4.7						

*IDC **10** 22:01:09.8±2.1, 31°.79S×178°.04W, h0km, mb4.5/3, mb1 4.6/4, mb1mx4.0/36, mbtmp4.4/4, ML3.5/1, Error ellipse: s-maj=53.0km s-min=32.5km az=129.0*
*NEIC **10** 22:01:22.8±0.9, 32°.0S±0°.2×178°.3W±0°.2, h100km±14km, mb4.4/12, Error ellipse: s-maj=33.5km s-min=16.5km az=121.0*

ISC 10 22:01:15.2±1.8, 31°.7S±0°.1×178°.1W±0°.3, h35km, n33, σ1°18/27, mb4.5/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**6.55**	**206**	Pn	**Pn**	**22 02 51.7**	**+2.6**
MXZ				Sn	**Sn**	**22 04 02.3**	**-0.3**
URZ	**Urewera**	**7.63**	**210**	Pn	**Pn**	**22 03 02.3**	**-1.6**
	0.7nm,0.3s,baz=156,slow=17,SNR=2.1						
URZ				Sn	**Sn**	**22 04 26.8**	**-2.3**
	3.1nm,0.3s,baz=239,slow=21,SNR=9.1						
URZ	**Urewera**	**7.63**	**210**	Pn	**Pn**	**22 03 05.7**	**+1.8**
OUZ	**Omahuta**	**7.79**	**241**	Pn	Pn	22 03 12.0	+5.9
BKZ	**Black Stump Fm**	**8.65**	**209**	Pn	**Pn**	**22 03 20.6**	**+2.6**
MSWZ	**Moikau Station**	**11.07**	**207**	Pn	Pn	22 03 55.5	+4.5
WHZ	**Wether Hill Ro**	**17.82**	**213**	P	**P**	**22 05 20.0**	**-0.9**
WHZ				IAmb	IAmb	22 05 20.9	
	comp=Z,14nm,0.9s						
CTA	**Charters Tower**	**33.97**	**281**	P	**P**	**22 07 56.5**	**+0.9**
	comp=Z,4.7nm,0.8s,baz=109,slow=12,SNR=3.7						
CTAO	**Charters Tower**	**33.97**	**281**	P	**P**	**22 07 57.2**	**+1.6**
CTAO				IAmb	IAmb	22 08 01.7	
	comp=Z,7.1nm,0.9s						
STKA	**Stephens Creek**	**34.14**	**259**	P	**P**	**22 07 56.9**	**-0.1**
BBOO	**Buckleboo**	**38.57**	**256**	P	**P**	**22 08 34.4**	**-0.4**
BBOO				IAmb	IAmb	22 08 50.1	
	comp=Z,7.1nm,1.1s						
AS31	**Alice Springs**	**42.99**	**268**	P	**P**	**22 09 11.4**	**0.0**
ASAR	**Alice Springs**	**42.99**	**268**	P	**P**	**22 09 10.9**	**-0.5**
	comp=Z,4.5nm,0.7s,baz=105,slow=7.4,SNR=46						
ASAR	**Alice Springs**	**42.99**	**268**	P	**P**	**22 09 10.8**	**-0.6**
WR0	**Warramunga Arr**	**43.92**	**274**	P	**P**	**22 09 18.5**	**-0.4**
WR0				IAmb	IAmb	22 09 19.2	
	comp=Z,5.8nm,0.8s						
WC3	**Warramunga Arr**	**44.06**	**274**	P	**P**	**22 09 19.7**	**-0.4**
WB2	**Warramunga Arr**	**44.09**	**274**	P	**P**	**22 09 19.9**	**-0.3**
WRAB	**Tennant Creek**	**44.09**	**274**	P	**P**	**22 09 20.4**	**+0.1**
WRAB				IAmb	IAmb	22 09 20.5	
	comp

az=52.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.97**	**199**	P	Pn	22 09 12.2	+0.3
WMGZ				S	Sn	22 09 38.9	0.0
PKGZ	**Pakihiroa**	**2.13**	**205**	P	Pn	22 09 13.8	-0.2
HAZ	**Te Kaha**	**2.14**	**213**	P	Pn	22 09 13.9	0.0
HAZ				S	Sn	22 09 42.5	+0.2
PUZ	**Puketiti**	**2.25**	**200**	P	Pn	22 09 14.9	-0.3
PUZ				S	Sn	22 09 44.7	-0.1
RUGZ	**Raukumara Rang**	**2.36**	**212**	P	Pn	22 09 16.8	+0.2
TWGZ	**Tauwhareparae**	**2.43**	**204**	P	Pn	22 09 17.6	+0.1
TWGZ				S	Sn	22 09 50.5	+1.8
WHRZ	**Whale Island**	**2.62**	**223**	P	Pn	22 09 20.6	+0.9
CNGZ	**Carnagh Statio**	**2.65**	**198**	P	Pn	22 09 20.1	+0.1
MWZ	**Matawai**	**2.73**	**209**	P	Pn	22 09 21.0	-0.2
MWZ				S	Sn	22 09 56.3	+0.9
URZ	**Urewera**	**2.85**	**216**	P	Pn	22 09 22.1	-0.5
URZ				S	Sn	22 09 57.2	-0.7
OPRZ	**Ohinepanea**	**2.85**	**228**	P	Pn	22 09 22.6	-0.1
RAGZ	**Rawiri**	**2.92**	**209**	P	Pn	22 09 23.4	-0.1
RAGZ				S	Sn	22 09 59.8	+0.2
RIGZ	**Rimuhau**	**2.98**	**203**	P	Pn	22 09 24.1	-0.2
RIGZ				S	Sn	22 10 02.0	+1.1
PRGZ	**Paritu Road**	**3.15**	**200**	P	Pn	22 09 26.2	-0.1
PRGZ				S	Sn	22 10 04.8	+0.1
MUGZ	**Murupara**	**3.19**	**217**	P	Pn	22 09 26.2	-0.7
MUGZ				S	Sn	22 10 06.0	+0.4
SNGZ	**Shannon Statio**	**3.19**	**208**	P	Pn	22 09 27.1	+0.1
SNGZ				S	Sn	22 10 06.7	+1.0
RTZ	**Ruatahuna**	**3.20**	**214**	P	Pn	22 09 26.5	-0.6
KNZ	**Kokohu**	**3.30**	**202**	P	Pn	22 09 26.9	-1.4
MHGZ	**Mahia Peninsul**	**3.35**	**198**	P	Pn	22 09 28.3	-0.7
RAHZ	**Arahi**	**3.41**	**210**	P	Pn	22 09 29.6	-0.1
RAHZ				S	Sn	22 10 12.3	+1.6
MTHZ	**Maungataniwha**	**3.46**	**213**	P	Pn	22 09 30.2	-0.2
TOZ	**Tahuroa Road**	**3.48**	**238**	P	Pn	22 09 31.3	+0.7
MRHZ	**Matea Rd**	**3.64**	**217**	P	Pn	22 09 32.1	-0.6
ARHZ	**Aropaoanui**	**3.74**	**208**	P	Pn	22 09 33.5	-0.5
ARHZ				S	Sn	22 10 18.1	-0.3
KWHZ	**Kaweka Forest**	**4.11**	**212**	P	Pn	22 09 35.2	-3.7
CTZ	**Chatham Island**	**8.39**	**159**	P	Pn	22 10 38.5	+3.0
CTZ				S	Sn	22 12 07.8	-1.0

BGS ***10*** *22:39:58.3±3.4, 64.6°N×17.7°W, h5km, MS4.7*
REY ***10*** *22:39:58.8, 64.6°N×17.4°W, h4km*
BJI ***10*** *22:39:59.0±0.0, 64.7°N×17.8°W, h5km, mB5.3/21, mb4.6/35, Ms4.9/11, Ms7 4.7/11*
BGR ***10*** *22:40:00.5±0.0, 64.8°N×18.6°W, h33km, mb4.8*
IDC ***10*** *22:40:01.2±0.5, 64.8°N×17.7°W, h0km, mb4.3/23, mb1 4.5/27, mb1mx4.3/46, mbtmp4.3/27, ML3.8/4, MS4.2/21, Ms1 4.2/21, ms1mx4.0/51, Error ellipse: s-maj=15.2km s-min=8.3km az=15.0*
MOS ***10*** *22:40:01.7±0.9, 64.6°N×17.6°W, h13km, mb4.9/34, MS4.3/8, Error ellipse: s-maj=9.4km s-min=6.5km az=106.8*
NEIC ***10*** *22:40:02.8±2.2, 64.6°N±0.07°×17.8W±0.1, h9km±2km, mb4.8/124, Error ellipse: s-maj=11.0km s-min=7.5km az=194.0*
GCMT ***10*** *22:40:03.8±0.2, 64.60N±0.03°×17.30W±0.03, h15km±1km, MW5.0/95, Moment Tensor Solution. s34,c38; s95,c150; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~3.00±.22; Mθθ0.45±.13; Mϕϕ2.55±.13; Mrθ-2.60±.35; Mrϕ-1.05±.07; Mθϕ~0.94±.22; Best double couple: M☉3.81600×10^16 NP1:ϕs3.00000°, δ51.00000°, λ-49.00000°. NP2: ϕs129.00000°, δ54.00000°, λ-129.00000°. Principal axes: T 2.9900, Plg2.0000°, Azm246.0000°; N 1.6550, Plg31.0000°, Azm154.0000°; P -4.6410, Plg59.0000°, Azm339.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DNK ***10*** *22:40:05.7±5.5, 64.92N×16.66W, h0km±121km, ML2.8*

ISC 10 22:40:02.1±0.6, 64.64N±0.03°×17.70W±0.03, h5km±3km, n415, σ2s01/395, mb4.8/144, MS4.3/37, 22C-9D, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.05**	**326**	P	**Pg**	**22 40 01.8**	**-1.7**
	baz=274						
IDYN	**Dyngjuhals**	**0.21**	**42**	P	Pg	22 40 01.6	-4.7
	baz=9.2						
ISKR	**Skrokkalda**	**0.31**	**256**	P	**Pg**	**22 40 07.3**	**-0.7**
	baz=256						
IHUS	**Husbondi**	**0.34**	**177**	P	**Pg**	**22 40 06.2**	**-2.5**
	baz=196						
IJOK	**Jokulheimar**	**0.40**	**216**	P	**Pg**	**22 40 07.8**	**-1.9**
	baz=225						
IJOK				S	**Sg**	**22 40 15.3**	**+0.4**
	baz=225						
IVOT	**Vottur**	**0.43**	**149**	P	Pg	22 40 06.4	-4.0
	baz=166						
THOR	**Thorvaldshraun**	**0.53**	**55**	P	Pg	22 40 06.6	-5.7
	baz=49						
THOR				S	**Sg**	**22 40 12.8**	**-6.3**
	baz=49						
IIEY	**Innrieyrar**	**0.57**	**199**	P	**Pg**	**22 40 10.3**	**-2.7**
	baz=209						
IMKO	**Mokollar**	**0.68**	**59**	P	Pg	22 40 09.0	-6.0
	baz=55						
IMKO				S	**Sg**	**22 40 17.1**	**-6.7**
	baz=55						
IKAL	**Kalfafell**	**0.69**	**180**	P	**Pg**	**22 40 11.8**	**-3.5**
	baz=190						
IKSK	**Karasker**	**0.71**	**131**	P	Pg	22 40 10.2	-5.6
	baz=141						
ISVA	**Svartarkot**	**0.73**	**15**	P	Pg	22 40 10.8	-5.3
	baz=5.7						
IHVE	**Hveravellir**	**0.84**	**287**	P	**Pg**	**22 40 15.7**	**-2.4**
	baz=284						
IHVE				S	**Sg**	**22 40 28.8**	**-0.1**
	baz=284						
IVSH	**V-Sauoahnukur**	**0.86**	**78**	P	Pg	22 40 11.9	-6.7
	baz=78						
ISNB	**Snabyli**	**0.99**	**205**	P	**Pg**	**22 40 17.5**	**-3.6**
	baz=210						
IMEL	**Melhnausar**	**1.04**	**25**	P	Pg	22 40 15.5	-6.4
	baz=19						
IFED	**Fedgar**	**1.06**	**236**	P	**Pg**	**22 40 19.7**	**-2.7**
	baz=238						
IREN	**Reynihlio**	**1.07**	**18**	P	Pg	22 40 16.2	-6.3
	baz=12						
IRJU	**Rjupnafell**	**1.11**	**203**	P	**Pg**	**22 40 19.8**	**-3.5**
	baz=208						
IMJO	**Mjoaskard**	**1.11**	**232**	P	**Pg**	**22 40 20.7**	**-2.7**
	baz=234						
IGYG	**Gygjarholskot**	**1.15**	**253**	P	**Pg**	**22 40 21.3**	**-2.7**
	baz=254						
IHAU	**Haukadalur**	**1.20**	**237**	P	**Pb**	**22 40 21.9**	**-3.2**
	baz=239						
IGRS	**Grimsstaoir**	**1.21**	**33**	P	Pb	22 40 19.0	-6.3
	baz=29						
IHVO	**Lagu-Hvolar**	**1.22**	**205**	P	**Pb**	**22 40 21.6**	**-4.0**
	baz=210						
ISKI	**Skildingahlsh**	**1.27**	**12**	P	Pn	22 40 19.7	-6.7
	baz=7.5						
IGHA	**Grjothals**	**1.29**	**19**	P	Pn	22 40 19.6	-7.1
	baz=15						
IGRA	**Granastaoir**	**1.29**	**2**	P	Pn	22 40 20.1	-6.5
	baz=357						
IHLA	**Hella**	**1.35**	**348**	P	Pn	22 40 21.7	-5.7
	baz=343						
ISAU	**Saurbar**	**1.35**	**243**	P	**Pn**	**22 40 23.9**	**-3.5**
	baz=244						
IESK	**Eystri-Skogar**	**1.36**	**215**	P	**Pn**	**22 40 23.9**	**-3.6**
	baz=219						
IDIM	**Dimmadalss**	**1.37**	**13**	P	Pn	22 40 21.2	-6.6
	baz=8.6						
IMID	**Miomork**	**1.37**	**225**	P	**Pn**	**22 40 25.1**	**-2.7**
	baz=228						
IBRE	**Brettingsstaoi**	**1.50**	**357**	P	Pn	22 40 23.6	-5.8
	baz=352						
IASM	**Asmuli**	**1.51**	**239**	P	**Pn**	**22 40 26.5**	**-3.1**
	baz=241						
IGIL	**Gilhagi**	**1.55**	**21**	P	Pn	22 40 23.9	-6.4
	baz=17						
BORG	**Borgarnes**	**1.56**	**276**	Pg	**Pn**	**22 40 27.2**	**-3.2**
	125nm,0.3s,baz=98,slow=9.5,SNR=195						
BORG				Lg	Lg	22 40 49.6	
	52nm,0.3s,baz=65,slow=22,SNR=11						
BORG	**Borgarnes**	**1.56**	**276**	Pn	**Pn**	**22 40 26.9**	**-3.5**
ISIG	**Siglufjorour**	**1.59**	**342**	P	Pn	22 40 25.5	-5.2
	baz=338						
IHEI	**Heioarbar**	**1.60**	**256**	P	**Pn**	**22 40 28.3**	**-2.6**
	baz=256						
ILEI	**Leirhofn**	**1.85**	**15**	P	Pn	22 40 28.6	-5.7
	baz=12						
SCO	**Scoresbysund**	**6.09**	**346**	*e*	Pn	22 41 24.6	-8.0
	baz=163,slow=6.2						
SCO				*i* P	**Pn**	**22 41 31.2**	**-1.4**
SCO				*i* S	**Sn**	**22 42 45.0**	**+2.5**
SCO				IAML		22 42 51.9	
	comp=Z,5.0nm,0.5s						
JMIC	**Jan Mayen**	**7.26**	**24**	Pn	**Pn**	**22 41 47.7**	**-0.8**
	baz=128,slow=18,SNR=1.9						
JMIC				LR	LR	22 43 53.1	
	comp=Z,646nm,19.6s,baz=201,slow=32						
LEWI	**Lewis, Hebride**	**8.32**	**136**	*e*P	**Pn**	**22 42 00.8**	**-2.3**
LEWI				IAMs_20	IAMs_20	22 46 46.2	
	comp=Z,8μm,11.3s						
LINV	**Loch Inver, As**	**8.83**	**132**	*e*P	**Pn**	**22 42 08.2**	**-1.9**
LINV				IAMs_20	IAMs_20	22 46 15.8	
	comp=Z,6μm,12.6s						
KAC	**Achnashellach**	**9.33**	**134**	*e*P	**Pn**	**22 42 14.5**	**-2.4**
KPL	**Plockton**	**9.35**	**136**	*e*P	**Pn**	**22 42 14.1**	**-3.1**
MDO	**Dochfour**	**9.67**	**132**	*e*P	**Pn**	**22 42 19.3**	**-2.4**
DBG	**Daneborg**	**9.76**	**356**	*e*P	Pn	22 42 30.9	+8.1
INVG	**Invergeldie, C**	**10.60**	**135**	*e*P	**Pn**	**22 42 32.0**	**-2.4**
INVG				IAMs_20	IAMs_20	22 47 26.7	
	comp=Z,7μm,11.0s						
EAB	**Aberfoyle**	**10.71**	**136**	*e*P	**Pn**	**22 42 35.2**	**-0.7**
SUMG	**Summit**	**10.92**	**326**	*e*P	Pn	22 42 46.0	+7.0
SUMG	**Summit**	**10.92**	**326**	*i* P	Pn	22 42 46.0	+7.0
SUMG	**Summit**	**10.92**	**326**	*e*P	Pn	22 42 46.1	+7.1
PGBU	**Glenifferbraes**	**10.99**	**137**	*e*P	Pn	22 42 34.5	-5.2
EDI	**Edinburgh**	**11.29**	**134**	*e*P	**Pn**	**22 42 40.2**	**-3.5**
EDI				IAMs_20	IAMs_20	22 47 43.8	
	comp=Z,5μm,10.0s						
EBL	**Broad Law**	**11.46**	**134**	*e*P	**Pn**	**22 42 43.8**	**-2.3**
ESY	**Stoneypath**	**11.47**	**133**	*e*P	Pn	22 42 42.3	-4.0
EKA	**Eskdalemuir Ar**	**11.79**	**135**	Pn	**Pn**	**22 42 48.5**	**-2.2**
	baz=329,slow=13,SNR=24						
ESK	**Eskdalemuir**	**11.79**	**136**	*e*P	Pn	22 42 44.6	-6.1
ESK				IAMs_20	IAMs_20	22 48 17.6	
	comp=Z,6μm,10.7s						
ESK	**Eskdalemuir**	**11.79**	**136**	P	**Pn**	**22 42 49.8**	**-0.9**
ESK	**Eskdalemuir**	**11.79**	**136**	Pn	**Pn**	**22 42 49.8**	**-0.9**
DAG	**Danmarks Havn**	**12.20**	**359**	*i* P	**Pn**	**22 42 58.3**	**+2.2**
DAG	**Danmarks Havn**	**12.20**	**359**	*i* P	**Pn**	**22 42 58.3**	**+2.2**
DAG	**Danmarks Havn**	**12.20**	**359**	*i* P	**Pn**	**22 42 58.4**	**+2.2**
SFJD	**Kangerlussuaq**	**13.60**	**295**	LR	LR	22 47 50.4	
	comp=Z,2μm,21.1s,baz=42,slow=34						
SFJD	**Kangerlussuaq**	**13.60**	**295**	P	**Pn**	**22 43 12.2**	**-3.1**
SFJD	**Kangerlussuaq**	**13.60**	**295**	Pn	**Pn**	**22 43 12.2**	**-3.1**
NOA	**NORSAR Array B**	**13.62**	**92**	Pn	Pn	22 43 11.3	-4.2
	comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=3.6						
NOA				LR	LR	22 48 29.8	
	comp=Z,725nm,20.1s,baz=300,slow=37						
HFS	**Hagfors**	**15.13**	**93**	Pn	**P**	**22 43 40.6**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=308,slow=7.2,SNR=10.0						
MUD	**Monsted U'grnd**	**15.43**	**109**	*e*P	**Pn**	**22 43 40.6**	**+0.5**
MUD	**Monsted U'grnd**	**15.43**	**109**	*i* P	**Pn**	**22 43 40.6**	**+0.5**
MUD	**Monsted U'grnd**	**15.43**	**109**	*e*P	**Pn**	**22 43 40.6**	**+0.5**
ARC5	**ARCESS Array S**	**17.20**	**55**		**P**	**22 44 06.3**	**+2.0**
ARCES	**ARCESS Array B**	**17.20**	**54**	P	**Pn**	**22 44 03.0**	**+0.3**
	baz=283,slow=6.1,SNR=10						
SNF	**Seneffe**	**18.27**	**130**	Pn	**P**	**22 44 16.8**	**+0.7**
BEBN	**Eben Emael**	**18.49**	**127**	Pn	**Pn**	**22 44 19.4**	**+0.8**
BEBN				PnPn	**PnPn**	**22 44 30.5**	**+0.5**
BMRD	**Maredsous**	**18.60**	**130**	Pn	**P**	**22 44 20.5**	**+0.7**
BSTI	**Sart Tilman**	**18.63**	**128**	Pn	**P**	**22 44 20.0**	**-0.1**
BSTI	**Sart Tilman**	**18.63**	**128**	P	**Pn**	**22 44 27.0**	**+6.6**
BCLA	**Clavier**	**18.68**	**129**	Pn	**P**	**22 44 21.0**	**+0.3**
	comp=Z,34nm,1.9s						
BCLA				pP	**sP**	**22 44 30.6**	**+7.0**
DOU	**Dourbes**	**18.73**	**130**	Pn	**P**	**22 44 21.6**	**+0.4**
DOU				sPn	**pP**	**22 44 25.1**	**+2.0**
MEM	**Membach**	**18.76**	**127**	Pn	**P**	**22 44 21.7**	**+0.1**
MEM				pPn	**pP**	**22 44 24.1**	**+0.6**
MEM	**Membach**	**18.76**	**127**	P	**Pn**	**22 44 28.7**	**+6.8**
MEM				PnPn	**PnPn**	**22 44 34.0**	**+0.3**
BTNL	**Ternell**	**18.82**	**127**	Pn	**P**	**22 44 22.7**	**+0.4**
BTNL				PnPn	**PnPn**	**22 44 35.0**	**+0.4**
BHOU	**Houvegnez**	**18.98**	**128**	Pn	**P**	**22 44 24.5**	**+0.6**
MSF	**Maaselka**	**19.24**	**65**	P	**P**	**22 44 26.2**	**-0.5**
FINES	**FINESS Array B**	**19.79**	**79**	P	**P**	**22 44 33.3**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=272,slow=17,SNR=8.2						
CLF	**Chambon-Foret**	**19.83**	**138**	P	**Pn**	**22 44 36.0**	**+1.2**
TULEG	**Thule**	**19.83**	**327**	P	**P**	**22 44 33.6**	**+0.5**
RUE	**Ruedersdorf**	**20.17**	**112**	*e*P	**P**	**22 44 37.2**	**+0.4**
APA	**Apatity**	**20.42**	**59**	*i*P	Pn	22 44 45.7	+4.1
APA				*i* S	**S**	**22 48 24.0**	**-4.1**
APA				pmax	pmax		
	comp=Z,14nm,0.8s						
APA				MLR	MLR		
	comp=Z,900nm,14.0s						
MFF	**Saint Martin d**	**20.48**	**144**	*e*P	Pn	22 44 42.2	-0.2
MFF				pmax	pmax		
	comp=Z,54nm,1.3s						
CLL	**Collm**	**20.77**	**115**	*i* P	**P**	**22 44 43.2**	**-0.2**
	comp=Z,61nm,1.4s						
CLL				*i*		22 44 52.5	
CLL				*e*PPP	PPP	22 45 08.0	
CLL				*e*		22 46 29.0	
CLL				*e*S	**S**	**22 48 38.0**	**+2.7**
CLL				*e*SSS	SSS	22 49 06.0	
CLL				LmH		22 54 00.0	
	comp=Z,600nm,18.5s						
CLL	**Collm**	**20.77**	**115**	*i* P	**P**	**22 44 43.2**	**-0.2**
CLL				*i*		22 44 52.5	
CLL				*e*S	**S**	**22 48 38.0**	**+2.7**
CLL				pmax	pmax		
	comp=Z,61nm,1.4s						
CLL	**Collm**	**20.77**	**115**	P	**P**	**22 44 43.8**	**+0.3**
CLL				IAmb	IAmb	22 44 46.6	
	comp=Z,39nm,1.1s						
SSF	**Saint Saulge**	**21.07**	**137**	*e*P	**P**	**22 44 46.1**	**-0.6**
SSF				pmax	pmax		
	comp=Z,75nm,1.3s						
ECH	**Echery**	**21.20**	**129**	P	**P**	**22 44 48.0**	**-0.2**
ECH				pmax	pmax		
	comp=Z,35nm,1.1s						
ECH	**Echery**	**21.20**	**129**	P	**P**	**22 44 48.0**	**-0.2**
ECH				IAmb	IAmb	22 44 51.3	
	comp=Z,35nm,1.1s						
GRA1	**Grafenberg Arr**	**21.39**	**121**	P	**P**	**22 44 51.3**	**+1.1**
GRA1				IAmb	IAmb	22 45 05.0	
	comp=Z,81nm,1.3s						
GRF	**Grafenberg Arr**	**21.39**	**121**	P	**P**	**22 44 51.3**	**+1.1**
GRF				pmax	pmax		
	comp=Z,81nm,1.3s						
GRF	**Grafenberg Arr**	**21.39**	**121**	*e*P	**P**	**22 44 49.0**	**-1.2**
	comp=Z,62nm,1.5s,baz=324,slow=11						
NKC	**Novy Kostel**	**21.41**	**118**	*e*P	**P**	**22 44 50.8**	**+0.4**
NKC				AMS	AMS	22 57 10.0	
	comp=Z,2μm,9.0s						
STU	**Stuttgart**	**21.42**	**125**	P	**P**	**22 44 51.3**	**+0.8**
STU				pmax	pmax		
	comp=Z,56nm,1.0s						
STU	**Stuttgart**	**21.42**	**125**	P	**P**	**22 44 51.3**	**+0.8**
STU				IAmb	IAmb	22 44 53.8	
	comp=Z,56nm,1.0s						
BFO	**Black Forest**	**21.50**	**127**	P	**P**	**22 44 51.9**	**+0.6**
BFO				pmax	pmax		
	comp=Z,45nm,1.2s						
BFO	**Black Forest**	**21.50**	**127**	P	**P**	**22 44 51.9**	**+0.6**
BFO				IAmb	IAmb	22 44 54.6	
	comp=Z,45nm,1.2s						
VSU	**Vasula**	**21.65**	**86**	*e*P	**P**	**22 44 53.1**	**+0.3**
VSU	**Vasula**	**21.65**	**86**	*i* P	**P**	**22 44 54.0**	**+1.1**
VSU				pmax	pmax		
	comp=Z,119nm,1.2s						
FRB	**Frobisher Bay**	**21.68**	**291**	LR	LR	22 52 35.1	
	comp=Z,620nm,21.1s,baz=66,slow=35						
PVCC	**Panska Ves**	**21.99**	**115**	*e*P	**P**	**22 44 58.0**	**+1.4**
PVCC				*e*S	**S**	**22 49 05.2**	**+5.8**
PVCC				AMS	AMS	22 57 30.0	
	comp=Z,1μm,11.5s						
LFF	**La Frestale**	**22.25**	**144**	*e*P	**P**	**22 45 00.6**	**+1.2**
LFF				pmax	pmax		
	comp=Z,73nm,1.1s						
PABE	**Paberze**	**22.29**	**94**	*e*P	**P**	**22 44 59.3**	**-0.4**
PRA	**Prague**	**22.30**	**115**	AMS	AMS	22 57 30.0	
	comp=Z,800nm,11.9s						
PRU	**Pruhonice**	**22.41**	**115**	*e*P	**P**	**22 45 01.9**	**+0.8**
PRU				*e*S	**S**	**22 49 04.7**	**-2.7**
PRU				AMS	AMS	22 58 10.0	
	comp=Z,2μm,10.7s						
PBCC	**Pribram**	**22.44**	**117**	*e*P	**P**	**22 45 04.1**	**+2.6**
PUL	**Pulkovo**	**22.45**	**80**	*i* P	**P**	**22 45 00.6**	**-0.8**
PUL				pmax	pmax		
	comp=Z,41nm,0.6s						
CHVC	**Chvalec**	**22.53**	**112**	*e*P	**P**	**22 45 03.2**	**+0.8**
CHVC				*e*S	**S**	**22 49 11.6**	**+1.9**
UPC	**Upice**	**22.58**	**113**	*e*P	**P**	**22 45 04.3**	**+1.4**
UPC				*e*S	**S**	**22 49 12.7**	**+2.2**
UPC				AMS	AMS	22 58 30.0	
	comp=Z,1μm,11.0s						
CAF	**Calviac**	**22.61**	**141**	*e*P	**P**	**22 45 03.6**	**+0.3**
CAF				pmax	pmax		
	comp=Z,136nm,1.9s						
OSTC	**Ostas**	**22.62**	**112**	*e*P	**P**	**22 45 04.9**	**+1.5**
OSTC				AMS	AMS	22 58 00.0	
	comp=Z,1μm,8.9s						
KHC	**Kasperske Hory**	**22.73**	**118**	*e*P	**P**	**22 45 03.5**	**-1.1**
KHC				*e*S	**S**	**22 49 17.6**	**+4.2**
KHC				AMS	AMS	22 57 10.0	
	comp=Z,2μm,9.7s						
DPC	**Dobruska-Polom**	**22.83**	**113**	*e*P	**P**	**22 45 05.6**	**+0.1**
DPC				*e*S	**S**	**22 49 17.2**	**+2.1**
DPC				AMS	AMS	22 58 30.0	
	comp=Z,1μm,10.6s						
SENIN	**Lac Senin/Sane**	**22.87**	**131**	P	**P**	**22 45 08.4**	**+2.2**
SENIN				IAmb	IAmb	22 45 23.1	
	comp=Z,66nm,1.4s						
DAVA	**Damuels**	**22.93**	**126**	*e*P	**P**	**22 45 08.2**	**+1.5**
	comp=Z,32nm,1.3s						
SUW	**Suwalki**	**22.96**	**98**	P	**P**	**22 45 06.5**	**-0.3**
SUW				pmax	pmax		
	comp=Z,89nm,1.4s						
SUW	**Suwalki**	**22.96**	**98**	P	**P**	**22 45 06.5**	**-0.3**
SSB	**Saint Sauveur**	**22.98**	**137**	P	**P**	**22 45 07.5**	**+0.3**
SSB				pmax	pmax		
	comp=Z,33nm,1.4s						
SSB	**Saint Sauveur**	**22.98**	**137**	P	**P**	**22 45 07.5**	**+0.3**
SSB				IAmb	IAmb	22 45 20.3	
	comp=Z,32nm,1.4s						
GEC2	**GERESS Array S**	**23.02**	**118**	P	**P**	**22 45 07.8**	**+0.3**
GERES	**GERESS Array B**	**23.02**	**118**	P	**P**	**22 45 07.4**	**-0.2**
	comp=Z,7.9nm,1.1s,baz=330,slow=7.7,SNR=23						
GERES	**GERESS Array B**	**23.02**	**118**	P	**P**	**22 45 07.2**	**-0.3**
RETA	**Reutte**	**23.07**	**124**	*e*P	**P**	**22 45 09.4**	**+1.3**
	comp=Z,17nm,1.2s						
IZAR	**Zarasai**	**23.11**	**92**	*e*P	**P**	**22 45 08.2**	**-0.2**
ISAL	**Salakas**	**23.18**	**92**	*e*P	**P**	**22 45 08.8**	**-0.3**
KRLC	**Kraliky**	**23.23**	**112**	*e*P	**P**	**22 45 08.8**	**-0.9**
KRLC				AMS	AMS	22 59 00.0	
	comp=Z,1μm,10.3s						
MOTA	**Moosalm**	**23.31**	**124**	*e*P	**P**	**22 45 11.6**	**+0.9**
	comp=Z,82nm,1.4s						
TREC	**Trest**	**23.34**	**115**	*e*P	**P**	**22 45 10.2**	**-0.6**
TREC				*e*S	**S**	**22 49 28.7**	**+5.0**
TREC				AMS	AMS	22 58 50.0	
	comp=Z,2μm,8.3s						
PGAV	**Gavieira, Arco**	**23.35**	**162**	*e*S	**S**	**22 49 28.7**	**+4.6**
PGAV				*e*LR	LR	22 51 41.7	
	comp=Z,1μm,18.0s						
IIGN	**Ignalina**	**23.36**	**93**	*e*P	**P**	**22 45 10.4**	**-0.5**
DAVOX	**Davos/Dischmat**	**23.37**	**127**	P	**P**	**22 45 10.9**	**-0.4**
	comp=Z,4.7nm,1.0s,baz=332,slow=17,SNR=4.3						
TMCR	**Tamitsa**	**23.44**	**66**	*e*P	**P**	**22 45 09.9**	**-1.7**
TMCR				*e*S	**S**	**22 49 24.6**	**-0.4**
TMCR				pmax	pmax		
	comp=Z,71nm,1.5s						
TUE	**Stuetta**	**23.45**	**128**	P	**P**	**22 45 12.7**	**+0.5**
FETA	**Feichten**	**23.46**	**125**	*e*P	**P**	**22 45 13.7**	**+1.5**
	comp=Z,32nm,1.4s						
SQTA	**Sankt Quirin**	**23.46**	**124**	*e*P	**P**	**22 45 13.2**	**+1.1**
	comp=Z,54nm,1.4s						
WATA	**Walderalm**	**23.49**	**123**	P	**P**	**22 45 13.3**	**+0.9**
	comp=Z,52nm,1.3s						
WTTA	**Wattenberg**	**23.57**	**123**	*e*P	**P**	**22 45 12.6**	**-0.7**
	comp=Z,35nm,1.4s						
IDID	**Didziasalis**	**23.61**	**92**	*e*P	**P**	**22 45 12.1**	**-1.3**
FUORN	**Ofenpass-Fuorn**	**23.64**	**126**	P	**P**	**22 45 15.0**	**+1.0**
FUORN				IAmb	IAmb	22 45 34.2	
	comp=Z,27nm,1.4s						
VRAC	**Vranov**	**23.76**	**114**	P	**P**	**22 45 14.5**	**-0.4**
	comp=Z,9.2nm,1.1s,baz=321,slow=12,SNR=7.9						
VRAC	**Vranov**	**23.76**	**114**	*e*P	**P**	**22 45 14.2**	**-0.7**
VRAC				*e*S	**S**	**22 49 39.6**	**+9.1**
MORC	**Moravsky Berou**	**23.76**	**112**	*e*P	**P**	**22 45 14.2**	**-0.8**
MORC				*e*S	**S**	**22 49 38.6**	**+8.0**
MORC	**Moravsky Berou**	**23.76**	**112**	P	**P**	**22 45 13.9**	**-1.1**
MORC				pmax	pmax		
	comp=Z,21nm,1.4s						
MORC	**Moravsky Berou**	**23.76**	**112**	P	**P**	**22 45 13.9**	**-1.1**
BNI	**Bardonecchia**	**23.84**	**134**	P	**P**	**22 45 16.3**	**+0.4**
BNI				pmax	pmax		
	comp=Z,43nm,1.5s						
BNI	**Bardonecchia**	**23.84**	**134**	P	**P**	**22 45 16.3**	**+0.4**
BNI				IAmb	IAmb	22 45 34.9	
	comp=Z,43nm,1.5s						
KRUC	**Moravsky**	**23.88**	**114**	*e*P	**P**	**22 45

VYHS **Vyhne** 25.30 112 *e*P P 22 45 29.9 +0.8
SOKA **Soboth** 25.31 119 *e*P P 22 45 28.8 -0.5
comp=Z,16nm,1.3s
PCBR **Castelo Branco** 25.54 162 *e*P P 22 45 34.3 +3.0
comp=Z,32nm,1.5s
KLMR **Klimovskoe** 25.69 72 *e*P P 22 45 32.9 +0.5
KLMR pmax pmax
comp=Z,37nm,1.5s
KLMR MLR MLR
comp=Z,557nm,16.0s
KLMR **Klimovskoe** 25.69 72 *e*P P 22 45 33.0 +0.5
KLMR *e*P P 22 45 33.0 +0.5
KLMR *e*P P 22 45 33.0 +0.5
KLMR AMP 22 45 36.1
comp=Z,37nm,1.5s
KLMR LQ LQ 22 49 41.3
KLMR LQ LQ 22 49 41.3
KLMR LR LR 22 50 03.6
KLMR AMP 22 56 48.9
comp=Z,557nm,15.9s
SCHQ **Schefferville** 25.95 271 P P 22 45 35.6 +0.6
comp=Z,9.7nm,0.7s,baz=41,slow=8.0,SNR=7.1
SCHQ LR LR 22 55 01.6
comp=Z,512nm,18.6s,baz=15,slow=35
SCHQ **Schefferville** 25.95 271 P P 22 45 34.6 -0.3
SCHQ IAmb IAmb 22 45 38.8
comp=Z,17nm,0.9s
PMRV **Marv??o** 25.96 162 *e*P P 22 45 30.4 -4.7
comp=Z,36nm,1.8s
PMRV *e*LR LR 22 53 25.8
comp=Z,1µm,20.0s
KWP **Kalwaria Pacla** 25.98 106 P P 22 45 36.6 +1.4
KWP pmax pmax
comp=Z,58nm,1.1s
KWP **Kalwaria Pacla** 25.98 106 P P 22 45 36.6 +1.4
CRVS **Cervenica-Dubn** 26.04 108 *e*P P 22 45 35.4 -0.4
CRVS pmax pmax
comp=Z,110nm,1.9s
CRVS **Cervenica-Dubn** 26.04 108 *e*P P 22 45 35.4 -0.4
PSZ **Piszkesteto** 26.18 112 ⇑P P 22 45 39.2 +2.0
PSZ **Piszkesteto** 26.18 112 P P 22 45 37.1 -0.1
PSZ pmax pmax
comp=Z,63nm,1.5s
PSZ **Piszkesteto** 26.18 112 P P 22 45 37.0 -0.1
ESDC **Sonseca Array** 26.26 156 P P 22 45 37.1 -0.8
comp=Z,4.1nm,0.9s,baz=346,slow=9.0,SNR=14
ESDC **Sonseca Array** 26.26 156 P P 22 45 37.6 -0.3
KOLS **Kolonicke sedl** 26.34 107 *e*P P 22 45 39.0 +0.5
KOLS pmax pmax
comp=Z,51nm,1.5s
KOLS **Kolonicke sedl** 26.34 107 *e*P P 22 45 39.0 +0.5
LVV **L'vov** 26.39 104 *e*P P 22 45 39.5 +0.6
LVV *e* 22 46 34.4
LVV *e*S S 22 50 08.9 -3.4
LVV pmax pmax
comp=Z,120nm,1.2s
LVV MLR MLR
comp=E,800nm,15.0s
LVV MLR MLR
comp=N,600nm,12.0s
LVV MLR MLR
comp=Z,700nm,14.0s
RES **Resolute Bay** 26.44 324 LR LR 22 55 59.2
comp=Z,740nm,18.1s,baz=44,slow=36
UZH **Uzhgorod** 26.59 108 *e*P P 22 45 41.9 +1.2
UZH *e* 22 45 43.7
UZH *i* 22 45 49.9
UZH *e* 22 46 28.6
UZH *i*S S 22 50 15.2 -0.3
UZH MLR MLR
comp=N,300nm,12.0s
UZH MLR MLR
comp=E,200nm,12.0s
UZH MLR MLR
comp=Z,70nm,12.0s
PVAQ **Vaqueiros** 27.91 163 *e*S S 22 50 45.2 +8.8
PVAQ *e*LR LR 22 53 45.0
comp=Z,823nm,18.0s
AKASG **Malin Array Be** 27.92 97 P P 22 45 52.2 -0.5
comp=Z,1.2nm,0.5s,baz=325,slow=9.6,SNR=10.0
AKASG **Malin Array Be** 27.92 97 *i*P P 22 45 53.2 +0.6
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB **Malin Array Si** 27.92 97 *ce*P P 22 45 51.8 -0.8
OBN **Obninsk** 27.97 84 P P 22 45 54.2 +1.2
comp=Z,2.3nm,0.4s,baz=329,slow=14,SNR=4.5
OBN LR LR 22 57 56.0
comp=Z,183nm,19.9s,baz=24,slow=38
OBN **Obninsk** 27.97 84 *ce*P P 22 45 52.6 -0.4
OBN *e* 22 46 37.1
OBN *e*S S 22 50 40.7 +3.6
OBN *e*SS SnSn 22 51 56.0 +5.5
OBN pmax pmax
comp=Z,40nm,1.3s
OBN MLR MLR
comp=Z,588nm,15.0s
OBN **Obninsk** 27.97 84 P P 22 45 53.6 +0.6
MOS **Moscow** 28.01 82 *e*P P 22 45 51.0 -2.4
MOS *e*PPP PPP 22 46 49.7
MOS *e*S S 22 50 34.9 -2.8
MOS *e*SS SnSn 22 51 57.8 +6.4
MOS *e* 22 56 44.5
MOS pmax pmax
comp=Z,900nm,13.0s
MOS MLR MLR
comp=N,1µm,13.0s
BURAR **Bucovina Array** 28.60 106 P P 22 45 60.0 +1.1
BZS **Buzias** 28.75 112 ⇑P P 22 46 02.0 +2.0
BZS **Buzias** 28.75 112 ⇑P P 22 46 02.1 +2.0
DIVS **Divibare** 29.37 116 IAmb IAmb 22 46 16.7
comp=Z,18nm,1.5s
GZR **Gura Zlata** 29.39 111 ⇑P P 22 46 07.1 +1.2
GZR **Gura Zlata** 29.39 111 ⇑P P 22 46 07.1 +1.2
HERR **Herculane** 29.67 112 ⇑P P 22 46 09.1 +0.9
OZUR 30.05 107 ⇑P P 22 46 13.1 +1.5
VOIR 30.28 109 ⇓P P 22 46 18.4 +4.7
VOIR 30.28 109 ⇓P P 22 46 18.4 +4.7
PDG **Podgorica** 30.51 119 ⇑P P 22 46 13.1 -2.6
PDG **Podgorica** 30.51 119 IAmb IAmb 22 46 18.3
comp=Z,18nm,1.2s
PLOR **Plostina** 30.60 106 ⇑P P 22 46 18.0 +1.5
PLOR **Plostina** 30.60 106 ⇑P P 22 46 18.0 +1.5
MLR **Muntele Rosu** 30.60 108 P P 22 46 18.1 +1.4
comp=Z,8.1nm,1.1s,baz=11,slow=5.8,SNR=5.9
MLR **Muntele Rosu** 30.60 108 ⇑P P 22 46 18.6 +2.0
MLR **Muntele Rosu** 30.60 108 P P 22 46 18.0 +1.4
MLR pmax pmax
comp=Z,27nm,1.4s
MLR **Muntele Rosu** 30.60 108 P P 22 46 18.0 +1.4
MLR IAmb IAmb 22 46 33.5
comp=Z,27nm,1.4s
VRI **Vrincioaia** 30.62 106 ⇓P P 22 46 21.0 +4.3
VRI **Vrincioaia** 30.62 106 ⇓P P 22 46 21.0 +4.3
LPSR **Galich'ya Gora** 30.72 86 *e*P P 22 46 16.5 -0.9
LPSR pmax pmax
comp=Z,9.0nm,1.0s
KIRV **Kirov** 31.07 69 *i*P P 22 46 21.2 +0.8
CFR **Carcaliu** 31.76 105 ⇓P P 22 46 24.5 -2.2
CFR **Carcaliu** 31.76 105 ⇓P P 22 46 24.5 -2.2
VSR **Storozhevoye** 31.82 87 *e*P P 22 46 26.4 -0.7
VSR pmax pmax
comp=Z,10.0nm,1.4s
TPGR **Topolog** 32.14 106 ⇓P P 22 46 30.5 +0.5
TIRR **Tirgusor** 32.46 106 ⇑P P 22 46 32.9 +0.1
TIRR **Tirgusor** 32.46 106 ⇑P P 22 46 32.9 +0.1
TIRR **Tirgusor** 32.46 106 IAmb IAmb 22 46 34.8
comp=Z,20nm,1.3s
MDT **Midelt** 32.86 159 P P 22 46 36.9 +0.4
comp=Z,16nm,1.2s,baz=358,slow=12,SNR=8.0
VRH **Novokhopyorsk** 32.93 85 *e*P P 22 46 35.3 -1.5
VRH pmax pmax
comp=Z,10.0nm,0.7s
ALN **Alexandroupoli** 34.46 112 P P 22 46 50.7 +0.4
ALN pmax pmax
comp=Z,27nm,1.4s
ALN **Alexandroupoli** 34.46 112 P P 22 46 50.7 +0.4
ALN IAmb IAmb 22 46 53.9
comp=Z,27nm,1.4s
ARU **Arti** 36.17 66 *d*/*i*P P 22 47 03.9 -0.9
ARU S S 22 52 43.5 -1.2
ARU pmax pmax
comp=Z,19nm,2.4s
ARU **Arti** 36.17 66 P P 22 47 04.6 -0.3
NRIK **Noril'sk** 36.53 35 P P 22 47 07.2 -0.6
comp=Z,2.3nm,0.9s,baz=356,slow=4.1,SNR=5.1
NRIK LR LR 23 03 48.0
comp=Z,298nm,18.4s,baz=199,slow=39
ILGA **Ilgaz** 37.48 104 IAmb IAmb 22 47 19.9
comp=Z,16nm,1.3s
SOC **Sochi** 37.95 95 *e*P P 22 47 19.9 -0.2
SOC *e*S S 22 53 12.2 +0.2
SOC pmax pmax
comp=Z,7.0nm,0.6s
SOC MLR MLR
comp=Z,661nm,16.0s
GOF **Gofitskoye** 38.20 91⇑ *e*P P 22 47 22.6 +0.4
GOF pmax pmax
comp=Z,70nm,1.4s
BR131 **Keskin Array S** 38.55 105 *i*P P 22 47 26.6 +1.2
BRTR **Keskin Array B** 38.55 105 P P 22 47 25.7 +0.3
comp=Z,5.2nm,0.9s,baz=324,slow=5.5,SNR=13
BRTR **Keskin Array B** 38.55 105 P P 22 47 26.0 +0.6
BRTR **Keskin Array B** 38.55 105 P P 22 47 26.0 +0.6
SADO **Sadowa** 38.73 270 P P 22 47 25.8 -0.9
SADO IAmb IAmb 22 47 31.2
comp=Z,27nm,1.1s
IDI **Anoyia** 38.88 118 IAmb IAmb 22 47 32.6
comp=Z,25nm,1.1s
KIV **Kislovodsk** 38.92 92 *e*P P 22 47 29.8 +1.4
KIV pmax pmax
comp=Z,25nm,1.1s
KIV **Kislovodsk** 38.92 92 P P 22 47 30.2 +1.8
KVAR **Kislovodsk Arr** 38.93 92 LR LR 23 03 36.3
comp=Z,867nm,20.1s,baz=267,slow=36
YKA **Yellowknife Ar** 39.17 313 LR LR 23 03 30.2
comp=Z,268nm,18.7s,baz=0.0,slow=36
KBZ **Khabaz** 39.20 92 P P 22 47 32.4 +1.9
comp=Z,8.7nm,1.0s
KBZ LR LR 23 05 01.4
comp=Z,681nm,18.0s,baz=239,slow=38
KBZ **Khabaz** 39.20 92 *ce*P P 22 47 31.4 +0.9
KBZ pmax pmax
comp=Z,9.0nm,1.0s
INK **Inuvik** 39.82 328 P P 22 47 36.9 +1.4
comp=Z,3.3nm,1.0s,baz=16,slow=8.9,SNR=4.9
INK **Inuvik** 39.82 328 P P 22 47 36.7 +1.2
INK pmax pmax
comp=Z,9.0nm,1.3s
INK **Inuvik** 39.82 328 P P 22 47 36.6 +1.2
AKAS **Kas** 39.89 112 P P 22 47 37.7 +1.2
AKAS IAmb IAmb 22 47 50.5
comp=Z,26nm,1.2s
ZEI **Tsey** 40.39 92 *e*P P 22 47 42.0 +1.2
ZEI pmax pmax
comp=Z,7.0nm,1.1s
AKH **Akhalkalaki** 41.34 94 P P 22 47 50.1 +1.5
AKH pmax pmax
comp=Z,38nm,1.0s
AKH **Akhalkalaki** 41.34 94 P P 22 47 50.1 +1.5
A21K **Barrow** 41.43 341 P P 22 47 49.0 +0.3
ULM **Lac du Bonnet** 41.53 289 LR LR 23 03 38.9
comp=Z,250nm,20.7s,baz=40,slow=34
MAK **Makhachkala** 41.80 89 *e*P P 22 47 48.5 -3.6
MAK *e*S S 22 54 03.5 -6.2
MAK *e*SS SS 22 57 11.6 -3.5
MAK MLR MLR
comp=Z,620nm,17.0s
ABKAR **Akbulak array** 42.08 73 P P 22 47 53.0 -1.3
ABKAR **Akbulak array** 42.08 73 P P 22 47 55.1 +0.8
ABKAR IAmb IAmb 22 47 57.1
comp=Z,7.8nm,1.2s
TIXI **Tiksi** 42.08 15 *ce*P P 22 47 53.1 -1.0
TIXI **Tiksi** 42.08 15 P P 22 47 54.6 +0.5
GAZ **Gaziantep** 42.20 103 IAmb IAmb 22 48 00.1
comp=Z,17nm,1.2s
N53A **Lisbon** 42.67 268 IAmb IAmb 22 48 03.9
comp=Z,30nm,1.4s
TOLK **Toolik Lake Re** 42.74 336 P P 22 47 59.7 +0.2
TOLK IAmb IAmb 22 48 12.7
comp=Z,26nm,1.3s
GNI **Garni** 42.91 94 *ce*P P 22 48 03.0 +1.6
GNI pmax pmax
comp=Z,35nm,1.7s
GNI **Garni** 42.91 94 P P 22 48 03.9 +2.5
G40A **Rib Lake** 43.08 280 IAmb IAmb 22 48 06.6
comp=Z,26nm,1.4s
BRVK **Borovoye** 43.22 62 *ce*P P 22 48 01.7 -1.8
BRVK pmax pmax
comp=Z,17nm,2.5s
BRVK **Borovoye** 43.22 62 P P 22 48 02.8 -0.8
MARD **Mardin** 43.59 100 P P 22 48 07.9 +1.1
P53A **Whipple** 44.00 267 P P 22 48 08.7 -1.2
P53A IAmb IAmb 22 48 15.4
comp=Z,16nm,0.9s
TAM **Tamanrasset** 44.53 149 P P 22 48 15.2 +0.7
TAM pmax pmax
comp=Z,10.0nm,1.2s
TAM **Tamanrasset** 44.53 149 P P 22 48 15.2 +0.7
DAWY **Dawson** 44.68 328 IAmb IAmb 22 48 27.6
comp=Z,14nm,1.5s
Q51A **Peebles** 45.23 268 P P 22 48 20.9 +1.1
K27K **Chicken** 45.32 329 IAmb IAmb 22 48 24.8
comp=Z,12nm,1.4s
ILAR **Eielson Array** 45.67 332 P P 22 48 23.8 +0.8
comp=Z,5.6nm,1.2s,baz=26,slow=6.1,SNR=18
ILAR PcP PcP 22 50 00.1 -0.7
comp=Z,1.5nm,0.9s,baz=357,slow=3.2,SNR=6.8
ILAR LR LR 23 09 57.2
comp=Z,294nm,18.4s,baz=37,slow=39
ILAR **Eielson Array** 45.67 332 P P 22 48 22.4 -0.7
MDM **Murphy Dome** 45.77 333 P P 22 48 23.8 0.0
MDM IAmb IAmb 22 48 29.1
comp=Z,16nm,1.3s
COLA **College** 45.77 333 *i*P P 22 48 25.1 +1.4
COLA pmax pmax
comp=Z,8.0nm,1.2s
IMAR **Indian Mountai** 45.85 337 P P 22 48 24.1 -0.3
BCAR **Beaver Creek A** 46.09 328 P P 22 48 26.9 +0.5
BRZS **Berezniki** 46.57 63 *e*P P 22 48 30.3 0.0
comp=Z,5.4nm,2.1s,baz=63
BRZS *e*S S 22 55 18.2 -0.9
baz=63
BRZS **Berezniki** 46.57 63 *e*P P 22 48 30.2 0.0
BRZS *e*S S 22 55 18.2 -0.9
BRZS pmax pmax
comp=Z,5.0nm,2.1s
WCI **Wyandotte Cave** 47.16 270 P P 22 48 34.8 -0.2
WCI pmax pmax
comp=Z,12nm,0.9s
WCI **Wyandotte Cave** 47.16 270 P P 22 48 34.8 -0.2
ZALV **Zalesovo Beam** 47.72 51 P P 22 48 40.6 +1.5
comp=Z,1.5nm,0.6s,baz=335,slow=8.2,SNR=7.8
ZALV **Zalesovo Beam** 47.72 51 *i*P P 22 48 40.5 +1.4
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV **Zalesovo Beam** 47.72 51 P P 22 48 39.8 +0.6
KURK **Kurchatov** 48.20 58 P P 22 48 41.6 -1.3
KURK pmax pmax
comp=Z,7.0nm,0.9s
KURK **Kurchatov** 48.20 58 P P 22 48 41.5 -1.3
KURK IAmb IAmb 22 48 45.6
comp=Z,7.1nm,0.8s
EGMT **Eagleton** 48.81 297 P P 22 48 48.6 +0.8
CCM **Cathedral Cave** 49.44 275 P P 22 48 52.2 -0.3
CCM pmax pmax
comp=Z,9.0nm,0.9s
CCM **Cathedral Cave** 49.44 275 P P 22 48 52.2 -0.3
CCM IAmb IAmb 22 48 53.5
comp=Z,8.6nm,0.9s
GEYT **Alibeck** 50.51 83 P P 22 49 01.5 +0.7
comp=Z,3.2nm,0.9s,baz=303,slow=14,SNR=5.6
GEYT **Alibeck** 50.51 83 P P 22 49 02.6 +1.8
HRY **Holter Researc** 50.69 298 P P 22 49 02.5 +0.4
KOWA **Kowa** 50.96 163 P P 22 49 04.5 +0.2
KOWA IAmb IAmb 22 49 07.8
comp=Z,9.3nm,1.0s
RLMT **Red Lodge** 51.02 294 P P 22 49 04.8 0.0
RLMT IAmb IAmb 22 49 08.8
comp=Z,18nm,1.4s
KK31 **Karatay Array** 51.37 70 IAmb IAmb 22 49 23.3
comp=Z,11nm,1.3s
KKAR **Karatay Array** 51.37 70 P P 22 49 07.0 -0.1
KKAR **Karatay Array** 51.37 70 P P 22 49 07.0 -0.1
KKAR **Karatay Array** 51.37 70 IAmb IAmb 22 49 23.3
comp=Z,11nm,1.3s
BOZ **Bozeman (W)** 51.55 297 P P 22 49 08.9 +0.3
BOZ pmax pmax
comp=Z,19nm,1.4s
BOZ **Bozeman (W)** 51.55 297 P P 22 49 08.9 +0.3
BOZ IAmb IAmb 22 49 12.2
comp=Z,19nm,1.4s
DZA **Taraz** 51.87 69 *e*P P 22 49 11.4 +0.4
baz=70
DZA **Taraz** 51.87 69 *e*P P 22 49 11.3 +0.4
IUG **Iuzhnay** 51.97 71 *e*P P 22 49 12.6 +0.8
comp=Z,4.5nm,1.2s,baz=71
IUG **Iuzhnay** 51.97 71 *e*P P 22 49 12.5 +0.8
IUG pmax pmax
comp=Z,4.0nm,1.2s
MAKZ **Makanchi** 52.69 58 P P 22 49 17.0 +0.1
MAKZ pmax pmax
comp=Z,7.0nm,1.3s
MAKZ **Makanchi** 52.69 58 P P 22 49 17.0 +0.1
SGDS **Sogindy** 52.72 66 *e*P P 22 49 17.7 +0.5
baz=66
SGDS **Sogindy** 52.72 66 *e*P P 22 49 17.7 +0.5
MK31 **Makanchi Array** 52.81 58 *ce*P P 22 49 18.5 +0.7
MKAR **Makanchi Array** 52.81 58 P P 22 49 16.9 -1.0
comp=Z,2.0nm,0.8s,baz=306,slow=6.6,SNR=13
MKAR **Makanchi Array** 52.81 58 P P 22 49 17.1 -0.7
MKAR **Makanchi Array** 52.81 58 P P 22 49 17.1 -0.7
TDK **Taldyqorghan** 52.88 62 *e*P P 22 49 19.2 +0.9
baz=63
TDK *e*S S 22 56 47.5 +0.2
baz=63
TDK **Taldyqorghan** 52.88 62 *e*P P 22 49 19.2 +0.9
TDK *e*S S 22 56 47.5 +0.2
KUU **Kurty** 53.02 65 *e*P P 22 49 18.4 -0.9
baz=65
BW06 **Boulder Array** 53.11 293 IAmb IAmb 22 49 23.7
comp=Z,14nm,1.1s
PD31 **Pinedale Array** 53.11 293 IAmb IAmb 22 49 23.7
comp=Z,10nm,0.9s
PDAR **Pinedale Array** 53.11 293 P P 22 49 19.8 -0.6
comp=Z,5.4nm,0.8s,baz=60,slow=5.4,SNR=18
PDAR LR LR 23 11 22.8
comp=Z,335nm,18.4s,baz=30,slow=35
PDAR **Pinedale Array** 53.11 293 P P 22 49 19.2 -1.1
REDW **Red Top Meadow** 53.12 294 IAmb IAmb 22 49 30.2
comp=Z,12nm,1.3s
TOA0 **Torodi Ar. Sit** 53.15 156 P P 22 49 19.0 -1.5
TOA0 IAmb IAmb 22 49 23.4
comp=Z,14nm,1.1s
TORD **Torodi Ar. Bea** 53.15 156 P P 22 49 19.9 -0.6
comp=Z,9.2nm,1.0s,baz=342,slow=7.1,SNR=15
TORD **Torodi Ar. Bea** 53.15 156 P P 22 49 19.2 -1.4
ZSN **Zaisan** 53.19 56 *e*P P 22 49 20.6 0.0
comp=Z,2.2nm,0.8s,baz=56
ZSN **Zaisan** 53.19 56 *e*P P 22 49 20.5 0.0
ZSN pmax pmax
comp=Z,2.0nm,0.8s
N23A **Red Feather La** 53.23 289 IAmb IAmb 22 49 31.1
comp=Z,16nm,1.1s
AAA **Alma-Ata** 53.82 65 *e*P P 22 49 25.5 +0.2
comp=Z,157nm,12.0s,baz=65
AAA LR LR 23 10 51.2
comp=Z,136nm,12.2s,baz=65
AAA **Alma-Ata** 53.82 65 *e*P P 22 49 25.5 +0.2
AAA pmax pmax
comp=Z,157nm,12.0s
AAA MLR MLR
comp=Z,136nm,12.0s
MDOK **Medeo** 53.91 64 *e*P P 22 49 26.6 +0.5
baz=65
MDOK LR LR 23 10 56.8
comp=Z,218nm,12.9s,baz=65
MDOK **Medeo** 53.91 64 *e*P P 22 49 26.6 +0.5
MDOK MLR MLR
comp=Z,218nm,13.0s
BTK **Batken** 54.05 71 IAmb IAmb 22 49 30.2
comp=Z,15nm,1.0s
KPKS **Kokpek** 54.28 63 *e*P P 22 49 29.3 +0.5
comp=Z,4.5nm,1.2s,baz=63
SATY **Saty** 54.52 64 *e*P P 22 49 31.1 +0.5
comp=Z,2.8nm,1.0s,baz=64
SATY **Saty** 54.52 64 *e*P P 22 49 31.0 +0.5
SATY pmax pmax
comp=Z,3.0nm,1.0s
O20A **White River Ci** 54.81 290 IAmb IAmb 22 49 39.1
comp=Z,16nm,1.3s
SHLS **Shalkode** 54.84 63 *e*P P 22 49 34.0 +1.1
comp=Z,5.3nm,1.4s,baz=63
SHLS **Shalkode** 54.84 63 *e*P P 22 49 33.9 +1.1
SHLS pmax pmax
comp=Z,5.0nm,1.4s
HWUT **Hardware Ranch** 54.89 294 IAmb IAmb 22 49 37.9
comp=Z,11nm,1.1s
TLY **Talaya** 55.48 40 *i*P P 22 49 36.6 -0.6
TLY pmax pmax
comp=Z,5.0nm,0.8s
PV22 **Blue Mesa, Par** 56.39 290 P P 22 49 44.9 +0.7
DUG **Dugway, Tooele** 56.58 294 P P 22 49 46.1 +0.7
DUG pmax pmax
comp=Z,5.0nm,1.1s
DUG **Dugway, Tooele** 56.58 294 P P 22 49 46.1 +0.7
KSH **Kashi** 56.59 68 P P 22 49 47.9 +2.5
KSH S S 22 57 39.2 +1.7
KSH sS sS 22 57 48.3 +7.1
KSH pmax pmax
comp=Z,16nm,0.7s
KSH pmax pmax
comp=Z,490nm,4.4s
KSH LR LR
comp=Z,650nm,11.5s
KSH LR LR
comp=Z,780nm,7.6s
KSH LR LR
comp=Z,520nm,10.3s
PV14 **Lion Creek, Pa** 56.63 290 IAmb IAmb 22 49 48.6
comp=Z,9.3nm,0.9s
PV01 **Paradox Valley** 56.65 289 IAmb IAmb 22 49 50.1
comp=Z,11nm,1.1s
PV03 **Paradox Valley** 56.66 290 IAmb IAmb 22 49 50.0
comp=Z,8.5nm,1.0s
PV18 **Skein Mesa, Pa** 56.69 290 IAmb IAmb 22 49 50.3
comp=Z,10.0nm,0.9s
WMQ **Urumqi** 57.32 56 *e*P P 22 49 51.1 +0.6
WMQ sP sP 22 50 02.6 +9.0
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ pmax pmax
comp=Z,150nm,4.5s
MSU **Marysvale** 57.77 292 P P 22 49 54.7 +0.7
MSU **Marysvale** 57.77 292 P P 22 49 54.6 +0.7
ANMO **Albuquerque** 58.52 286 *ce*P P 22 50 01.3 +2.1
ANMO pmax pmax
comp=Z,12nm,2.5s
ANMO **Albuquerque** 58.52 286 P P 22 49 60.0 +0.8
DBIC **Dimbokro** 58.58 165 P P 22 50 00.0 +0.5
DBIC pmax pmax
comp=Z,24nm,1.2s
DBIC **Dimbokro** 58.58 165 P P 22 50 00.0 +0.5
TIC **Toumodi** 58.59 165 *e*P P 22 49 58.5 -1.1
KIC **Kosan Boka** 58.90 165 *e*P P 22 50 00.8 -0.9
comp=Z,51nm,1.3s
LIC **Lamto** 59.00 165 *e*P P 22 50 01.4 -1.0
comp=Z,22nm,0.6s
R11A **Troy Canyon, C** 59.26 295 IAmb IAmb 22 50 08.9
comp=Z,5.9nm,1.1s
LCMT **Little Creek M** 59.49 292 P P 22 50 06.9 +1.1
U15A **North Rim** 59.62 291 IAmb IAmb 22 50 10.3
comp=Z,8.1nm,1.1s
SONM **Songino Array** 59.72 40 P P 22 50 07.3 +0.1
comp=Z,0.8nm,0.8s,baz=337,slow=9.4,SNR=3.7
SONM LR LR 23 18 15.1
comp=Z,244nm,20.2s,baz=334,slow=38
SONM **Songino Array** 59.72 40 P P 22 50 08.7 +1.5
SONM pmax pmax
comp=Z,2.0nm,1.1s
SONM **Songino Array** 59.72 40 P P 22 50 08.7 +1.5
NVAR **Mina Array Bea** 60.24 297 P P 22 50 12.3 +1.3
comp=Z,0.2nm,0.3s,baz=60,slow=4.4,SNR=4.8
NVAR LR LR 23 15 07.8
comp=Z,458nm,21.2s,baz=32,slow=35
NVAR **Mina Array Bea** 60.24 297 P P 22 50 11.5 +0.4
NIL **Nilore** 60.54 73 P P 22 50 14.4 +1.5
NIL pmax pmax
comp=Z,14nm,1.0s
NIL **Nilore** 60.54 73 P P 22 50 14.4 +1.5
X16A **Lo Mia Camp, P** 61.02 289 IAmb IAmb 22 50 21.0
comp=Z,7.0nm,1.0s
TXAR **Lajitas Array** 62.21 280 P P 22 50 24.6 +0.3
comp=Z,1.5nm,0.9s,baz=33,slow=12,SNR=7.4
TXAR LR LR 23 16 16.5
comp=Z,387nm,20.9s,baz=0.0,slow=35

TXAR	**Lajitas Array**	**62.21**	**280**	P	**P**	**22 50 24.4**	**+0.1**
PETK	**Petropavlovsk-**	**62.54**	**3**	LR	LR	23 18 47.2	
	comp=Z,99nm,18.0s,baz=321,slow=37						
319A	**Douglas**	**62.78**	**286**	P	**P**	**22 50 28.8**	**+0.6**
GTA	**Gaotai**	**65.38**	**49**	P	**P**	**22 50 45.0**	**-0.2**
GTA				pP	pP	22 50 48.7	+1.2
GTA				sP	sP	22 50 51.3	+3.1
GTA				sS	sS	22 59 37.4	+4.0
GTA				pmax	pmax		
	comp=Z,3.0nm,2.1s						
GTA				pmax	pmax		
	comp=Z,110nm,5.8s						
GTA				LR	LR		
	comp=Z,150nm,20.0s						
GTA				LR	LR		
	comp=Z,130nm,21.3s						
GTA				LR	LR		
	comp=Z,130nm,18.3s						
SPX	**San Pedro Mart**	**65.61**	**291**	P	**P**	**22 50 49.2**	**+2.3**
SPX				IAmb	IAmb	22 50 52.2	
	comp=Z,9.4nm,1.4s						
HHC	**Hu-ho-hao-te**	**67.59**	**39**	*e*P	**P**	**22 51 00.2**	**+1.0**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,5.7s						
BJI	**Beijing**	**69.57**	**36**	P	**P**	**22 51 12.2**	**+0.8**
BJI				S	**S**	**23 00 20.8**	**+1.3**
BJI				pmax	pmax		
	comp=Z,6.0nm,1.8s						
BJI				LR	LR		
	comp=Z,96nm,13.5s						
BJI				LR	LR		
	comp=Z,260nm,20.4s						
BJI				LR	LR		
	comp=Z,260nm,40.8s						
LZH	**Lanzhou**	**69.71**	**47**	*e*P	**P**	**22 51 11.8**	**-0.8**
LZH				pP	pP	22 51 16.6	+1.8
LZH				sP	sP	22 51 18.8	+3.2
LZH				PP	**PP**	**22 53 48.6**	**+2.5**
LZH				pmax	pmax		
	comp=Z,14nm,1.6s						
LZH				pmax	pmax		
	comp=Z,350nm,8.1s						
LZH				LR	LR		
	comp=Z,250nm,17.9s						
LZH				LR	LR		
	comp=Z,180nm,12.5s						
LZH				LR	LR		
	comp=Z,220nm,10.8s						
ROSC	**El Rosal**	**71.83**	**241**	LR	LR	23 20 45.4	
	comp=Z,69nm,19.5s,baz=36,slow=34						
KSRS	**Korea Array**	**74.72**	**28**	LR	LR	23 27 33.1	
	comp=Z,151nm,18.0s,baz=328,slow=38						
MJAR	**Matsushiro Arr**	**77.39**	**20**	LR	LR	23 25 01.3	
	comp=Z,44nm,21.5s,baz=125,slow=35						
NJ2	**Nanjing**	**77.81**	**37**	*e*P	**P**	**22 51 59.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
SAML	**Samuel**	**80.86**	**226**	P	**P**	**22 52 16.5**	**-0.2**
SAML				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SAML	**Samuel**	**80.86**	**226**	P	**P**	**22 52 16.5**	**-0.2**
CHTO	**Chiang Mai**	**83.89**	**58**	P	**P**	**22 52 31.1**	**-1.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CHTO	**Chiang Mai**	**83.89**	**58**	P	**P**	**22 52 31.1**	**-1.6**
CMAR	**Chiang Mai Arr**	**84.22**	**59**	P	**P**	**22 52 33.4**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=318,slow=7.6,SNR=8.9						
CMAR	**Chiang Mai Arr**	**84.22**	**59**	P	**P**	**22 52 32.8**	**-1.5**
ASAR	**Alice Springs**	**135.04**	**38**	PKP	**PKPdf**	**22 59 20.7**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=325,slow=1.5,SNR=3.9						
STKA	**Stephens Creek**	**144.79**	**31**	PKP	**PKPdf**	**22 59 38.9**	**-0.3**
	comp=Z,3.3nm,0.8s,baz=208,slow=3.5,SNR=5.7						
STKA	**Stephens Creek**	**144.79**	**31**	PKIKP	**PKPdf**	**22 59 39.2**	**+0.1**
STKA	**Stephens Creek**	**144.79**	**31**		**PKPdf**	**22 59 39.2**	**+0.1**

ATH 10 22:45:11.7,41.09N×23.88E,h22km±2km,ML1.5/10,Error ellipse: s-maj=2.7km s-min=0.9km az=321.0, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRS	**Serrai**	**0.22**	**278**	P	Pb	22 45 17.2	-0.4
SRS				S	Sb	22 45 21.0	-0.7
SRS				AML	AML	22 45 22.2	
	comp=N,178μm,0.2s						
SRS				AML	AML	22 45 22.2	
	comp=E,297μm,0.3s						
NVR	**Nevrokopi**	**0.26**	**357**	P	Pb	22 45 18.0	0.0
NVR				S	Sb	22 45 22.8	+0.4
NVR				AML	AML	22 45 23.5	
	comp=E,117μm,0.2s						
NVR				AML	AML	22 45 24.3	
	comp=N,90μm,0.2s						
KVLA	**Kavala**	**0.41**	**111**	P	Pb	22 45 20.3	+0.1
SOH	**Sokhos**	**0.48**	**237**	P	Pb	22 45 21.3	-0.2
SOH				S	Sb	22 45 28.7	+0.5
SOH				AML	AML	22 45 34.3	
	comp=N,101μm,0.3s						
SOH				AML	AML	22 45 35.2	
	comp=E,126μm,0.3s						
KAVA	**Kavala**	**0.49**	**100**	P	Pb	22 45 21.2	-0.4
KAVA				S	Sb	22 45 28.4	+0.2
KAVA				AML	AML	22 45 30.5	
	comp=E,156μm,0.2s						
KAVA				AML	AML	22 45 30.6	
	comp=N,130μm,0.1s						
MMB	**Musomiste**	**0.52**	**347**	*e*P	Pb	22 45 22.2	0.0
KNT	**Kendrikon**	**0.75**	**276**	P	Pb	22 45 26.5	+0.4
KNT				AML	AML	22 45 42.6	
	comp=N,47μm,0.2s						
KNT				AML	AML	22 45 42.7	
	comp=E,66μm,0.2s						
OUR	**Ouranopolis**	**0.76**	**174**	P	Pb	22 45 26.5	+0.4
OUR				AML	AML	22 45 39.3	
	comp=E,160μm,0.2s						
OUR				AML	AML	22 45 39.8	
	comp=N,158μm,0.2s						
HORT	**Hortiatis**	**0.77**	**231**	P	Pb	22 45 26.9	+0.4
HORT				S	Sn	22 45 37.7	-0.6
HORT				AML	AML	22 45 42.8	
	comp=E,50μm,0.2s						
HORT				AML	AML	22 45 43.1	
	comp=N,46μm,0.1s						
PLG	**Polygyros**	**0.79**	**205**	P	Pn	22 45 27.4	-0.2
PLG				S	Sn	22 45 38.2	-0.5
PLG				AML	AML	22 45 43.1	
	comp=N,70μm,0.4s						
PLG				AML	AML	22 45 43.8	
	comp=E,58μm,0.2s						
THAS	**Thassos island**	**0.80**	**127**	P	Pb	22 45 27.2	+0.3
THAS				AML	AML	22 45 41.2	
	comp=N,130μm,0.2s						
THAS				AML	AML	22 45 41.3	
	comp=E,124μm,0.3s						
RZN	**Rozhen**	**0.87**	**46**	*e*P	Pn	22 45 30.6	+1.8
KKB	**Krupnik**	**0.98**	**323**	*e*P	Pn	22 45 30.6	+0.3
VAY	**Valandovo**	**1.02**	**284**	*i* Pn	Pn	22 45 33.5	+2.8
PAIG	**Paliouri**	**1.17**	**188**	P	Pb	22 45 34.0	+0.7
RDO	**Rodhopi**	**1.25**	**87**	P	Pb	22 45 35.9	+1.3
RDO				AML	AML	22 45 55.5	
	comp=N,65μm,0.5s						
RDO				AML	AML	22 45 56.7	
	comp=E,51μm,0.2s						
SMTH	**Samothraki Isl**	**1.40**	**116**	P	Pb	22 45 37.4	+0.3
STIP	**Stip**	**1.41**	**296**	*i* Pn	Pb	22 45 37.0	-0.4
ALN	**Alexandroupoli**	**1.65**	**96**	P	Pb	22 45 41.3	-0.1

ROM 10 22:45:27.2±0.2,38.450N±0.009×15.51E±0.02, h133km±1km,ML2.6/1,13C-3D,Error ellipse: s-maj=1.5km s-min=0.7km az=119.0,Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSRU	**Castanea**	**0.19**	**181**	*i*P	Pn	22 45 45.3	-0.2
MSRU				S	Sn	22 45 59.1	-0.1
MILZ	**Milazzo**	**0.28**	**231**	*i*P	Pn	22 45 45.7	0.0
MILZ				S	Sn	22 45 59.6	+0.1
MSCL	**Scilla**	**0.31**	**135**	*i*P	Pn	22 45 45.8	-0.1
MSCL				S	Sn	22 45 59.6	-0.3
MSCL				AML	AML		
	comp=N,599μm,0.6s						
MSCL				AML	AML		
	comp=E,540μm,0.9s						
JOPP	**Joppolo**	**0.33**	**62**	P	Pn	22 45 45.9	0.0
JOPP				S	Sn	22 45 59.5	-0.5
JOPP				AML	AML		
	comp=E,253μm,0.2s						
JOPP				AML	AML		
	comp=N,362μm,0.6s						
JOPP				AML	AML		
	comp=E,254μm,0.2s						
CEL	**Celeste**	**0.35**	**122**	P	Pn	22 45 46.1	+0.1
CEL				S	Sn	22 45 59.7	-0.5
CEL				AML	AML		
	comp=E,138μm,1.0s						
CEL				AML	AML		
	comp=N,182μm,0.2s						
VPL	**Vulcano Piano**	**0.42**	**261**	*i*P	Pn	22 45 46.5	+0.3
VPL				AML	AML		
	comp=E,842μm,1.6s						
VPL				AML	AML		
	comp=N,872μm,0.9s						
VPL				AML	AML		
	comp=E,842μm,1.6s						
MCSR	**Castroreale**	**0.44**	**208**	*i*P	Pn	22 45 46.9	+0.4
MCSR				AML	AML		
	comp=E,224μm,1.4s						
MCSR				AML	AML		
	comp=N,263μm,0.4s						
MTTG	**Motta San Giov**	**0.47**	**162**	*i*P	Pn	22 45 47.1	+0.6
AIO	**Antillo**	**0.53**	**205**	P	Pn	22 45 47.5	+0.7
SOI	**Samo**	**0.57**	**131**	*i*P	Pn	22 45 47.4	+0.3
SOI				S	Sn	22 46 01.8	-0.2
SOI				AML	AML		
	comp=E,167μm,0.4s						
SOI				AML	AML		
	comp=N,188μm,0.3s						
MPAZ	**Palizzi**	**0.63**	**142**	*e*P	Pn	22 45 47.8	+0.3
MPAZ				S	Sn	22 46 02.8	0.0
MPAZ				AML	AML		
	comp=E,158μm,0.9s						
MPAZ				AML	AML		
	comp=N,371μm,0.3s						
MPAZ				AML	AML		
	comp=E,158μm,0.9s						
MUCR	**Ucria**	**0.65**	**231**	*i*P	Pn	22 45 47.9	+0.2
MUCR				AML	AML		
	comp=E,57μm,0.6s						
MUCR				AML	AML		
	comp=N,69μm,0.7s						
PLAC	**Placanica**	**0.73**	**90**	*i*P	Pn	22 45 48.5	+0.4
PLAC				S	Sn	22 46 04.0	0.0
PLAC				AML	AML		
	comp=E,201μm,0.5s						
PLAC				AML	AML		
	comp=N,286μm,1.6s						
PLAC				AML	AML		
	comp=N,227μm,0.4s						
PLAC				AML	AML		
	comp=E,275μm,0.7s						
GRI	**Girifalco**	**0.80**	**62**	P	Pn	22 45 49.2	+0.5
GRI				S	Sn	22 46 05.3	+0.3
EPZF	**Pizzo Felice**	**0.81**	**220**	P	Pn	22 45 50.2	+1.3
MSFR	**San Fratello**	**0.84**	**240**	P	Pn	22 45 49.5	+0.4
CAR1	**CAROLEI**	**0.97**	**34**	P	Pn	22 45 50.1	-0.1
CAR1				S	Sn	22 46 06.8	-0.8
CAR1				AML	AML		
	comp=N,276μm,0.7s						
CAR1				AML	AML		
	comp=E,269μm,0.5s						
CAR1				AML	AML		
	comp=N,276μm,0.7s						
ESML	**S. M. di Licod**	**0.97**	**211**	P	Pn	22 45 51.5	+1.4
SERS	**Sersale**	**1.09**	**57**	*e*P	Pn	22 45 51.8	+0.4
SERS				S	Sn	22 46 09.7	0.0
SERS				AML	AML		
	comp=E,82μm,0.9s						
SERS				AML	AML		
	comp=N,93μm,0.4s						
SERS				AML	AML		
	comp=E,82μm,0.9s						
CET2	**Cetraro**	**1.13**	**18**	P	Pn	22 45 52.0	+0.3
CET2				S	Sn	22 46 09.5	-0.9
CET2				AML	AML		
	comp=E,588μm,0.4s						
CET2				AML	AML		
	comp=N,760μm,0.4s						
CAGR	**Agira**	**1.15**	**224**	P	Pn	22 45 54.0	+2.2
HAGA	**Augusta**	**1.20**	**194**	P	Pn	22 45 51.8	-0.5
HLNI	**Lentini**	**1.21**	**205**	*e*P	Pn	22 45 52.2	-0.3
AGST	**Augusta-Monte**	**1.21**	**191**	P	Pn	22 45 52.0	-0.5
TIP	**Timpagrande**	**1.22**	**53**	*i*P	Pn	22 45 52.4	-0.1
TIP	**Timpagrande**	**1.22**	**53**	*i*P	Pn	22 45 52.9	+0.4
TIP				S	Sn	22 46 11.6	-0.2
TIP				AML	AML		
	comp=E,42μm,0.8s						
TIP				AML	AML		
	comp=N,63μm,0.4s						
HCRL	**Carlentini**	**1.23**	**198**	P	Pn	22 45 52.7	+0.1
CELI	**Celico**	**1.23**	**39**	P	Pn	22 45 53.4	+0.6
CELI				S	Sn	22 46 13.0	+0.8
CELI				AML	AML		
	comp=E,128μm,0.8s						
CELI				AML	AML		
	comp=N,143μm,0.3s						
T0702	**Acquaformosa (**	**1.34**	**19**	*i*P	Pn	22 45 54.0	+0.1
T0702				S	Sn	22 46 13.4	-0.9
TDS	**Terranova Siba**	**1.37**	**28**	P	Pn	22 45 54.2	+0.2
TDS				S	Sn	22 46 14.4	-0.2
PIPA	**Pietrapaola**	**1.45**	**44**	P	Pn	22 45 55.4	+0.5
HAVL	**Avola**	**1.52**	**192**	P	Pn	22 45 55.4	-0.4
T0721	**Laino Castello**	**1.53**	**14**	P	Pn	22 45 56.5	+0.7
CUC	**Castrocucco**	**1.56**	**9**	P	Pn	22 45 56.6	+0.4
CUC				S	Sn	22 46 17.5	-0.9
CUC				AML	AML		
	comp=E,47μm,0.3s						
CUC				AML	AML		
	comp=N,30μm,1.6s						
CUC				AML	AML		
	comp=E,47μm,0.3s						
CUC				AML	AML		
	comp=N,30μm,1.6s						
SALB	**San Lorenzo Be**	**1.57**	**24**	P	Pn	22 45 57.5	+1.1
SALB				S	Sn	22 46 19.9	+1.3
SALB				AML	AML		
	comp=N,28μm,0.3s						
SALB				AML	AML		
	comp=E,60μm,0.3s						
SALB				AML	AML		
	comp=N,28μm,0.3s						
MGR	**Morigerati**	**1.69**	**1**	P	Pn	22 45 58.3	+0.7
SIRI	**Monte Sirino -**	**1.75**	****	*e*P	Pn	22 45 58.5	+0.1
ORI	**Oriolo Calabro**	**1.77**	**24**	P	Pn	22 45 59.8	+1.2
MTSN	**Montesano sull**	**1.82**	**6**	P	Pn	22 45 59.5	+0.1
MCEL	**Monticello**	**1.89**	**7**	P	Pn	22 46 00.3	+0.3
AMUR	**Altamura**	**2.59**	**19**	AML	AML		
	comp=N,56μm,0.9s						
AMUR				AML	AML		
	comp=E,47μm,0.4s						
NOCI	**Noci**	**2.63**	**27**	AML	AML		
	comp=N,63μm,0.9s						
NOCI				AML	AML		
	comp=E,51μm,1.2s						

ROM 10 22:47:18.6±0.1,42.388N±0.004×13.034E±0.006, h9km,ML1.6/1,Error ellipse: s-maj=0.4km s-min=0.3km az=64.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RM33	**Pellescritta (**	**0.18**	**48**	S	Pg	22 47 23.0	+0.6
RM33	**Pellescritta (**	**0.18**	**48**	P	Pg	22 47 23.3	+0.8
RM33				S	Sg	22 47 26.3	+1.2
RM33				AML	AML		
	comp=E,896μm,0.3s						
RM33				AML	AML		
	comp=N,802μm,0.4s						
RM33				AML	AML		
	comp=E,896μm,0.3s						
RM33				AML	AML		
	comp=N,802μm,0.4s						
LNSS	**Leonessa**	**0.21**	**1**	S	Pg	22 47 24.0	+0.9
LNSS	**Leonessa**	**0.21**	**1**	P	Pg	22 47 23.5	+0.5
LNSS				S	Sg	22 47 27.2	+1.1
LNSS				AML	AML		
	comp=E,435μm,0.2s						
LNSS				AML	AML		
	comp=N,262μm,0.8s						
LNSS				AML	AML		
	comp=E,434μm,0.2s						
LNSS				AML	AML		
	comp=N,262μm,0.8s						
AQU	**L'Aquila**	**0.28**	**97**	P	Pb	22 47 25.0	-0.8
AQU				S	Sb	22 47 29.6	-0.9
AQU				AML	AML		
	comp=E,158μm,1.2s						
AQU				AML	AML		
	comp=N,206μm,1.2s						
CAMP	**Campotosto**	**0.32**	**62**	S	Pb	22 47 26.0	-0.5
CAMP	**Campotosto**	**0.32**	**62**	P	Pb	22 47 25.7	-0.8
CAMP				S	Sb	22 47 30.6	-1.2
CAMP				AML	AML		
	comp=E,66μm,1.3s						
CAMP				AML	AML		
	comp=N,85μm,1.2s						
CAMP				AML	AML		
	comp=N,84μm,1.2s						
CAMP				AML	AML		
	comp=E,66μm,1.3s						
SMA1	**SAN MARTINO**	**0.33**	**42**	S	Pb	22 47 27.0	+0.3
SMA1	**SAN MARTINO**	**0.33**	**42**	P	Pb	22 47 26.1	-0.7
SMA1				S	Sb	22 47 31.5	-0.7
SMA1				AML	AML		
	comp=E,240μm,1.4s						
SMA1				AML	AML		
	comp=N,194μm,0.3s						
SMA1				AML	AML		
	comp=N,193μm,0.3s						
SMA1				AML	AML		
	comp=E,242μm,1.4s						
CESX	**Cesi**	**0.40**	**304**	S	Pg	22 47 28.0	+1.5
CESX	**Cesi**	**0.40**	**304**	P	Pg	22 47 27.1	+0.6
CESX				S	Sb	22 47 33.2	-1.0
CESX				AML	AML		
	comp=E,67μm,1.5s						
CESX				AML	AML		
	comp=N,85μm,0.4s						
CESX				AML	AML		
	comp=E,67μm,1.5s						
MTCE	**Montecelio**	**0.42**	**211**	P	Pb	22 47 27.7	-0.6
FAGN	**Fagnano**	**0.43**	**106**	P	Pg	22 47 27.1	+0.2
CERT	**Cerreto**	**0.44**	**185**	P	Pb	22 47 27.9	-0.6
NRCA	**Norcia**	**0.45**	**8**	S	Pg	22 47 28.0	+0.6
NRCA	**Norcia**	**0.45**	**8**	P	Pg	22 47 27.6	+0.2
NRCA				S	Sb	22 47 34.6	-1.0
NRCA				AML	AML		
	comp=E,164μm,0.4s						
NRCA				AML	AML		
	comp=N,116μm,0.1s						
PTQR	**Pietraquaria**	**0.46**	**143**	P	Pg	22 47 28.0	+0.5
PTQR				S	Sb	22 47 35.0	-0.8
CESI	**CESI - Serrava**	**0.62**	**351**	S	Pg	22 47 32.0	+1.3
CESI	**CESI - Serrava**	**0.62**	**351**	P	Pg	22 47 30.9	+0.2
CESI				S	Sb	22 47 40.4	-0.2
CESI				AML	AML		
	comp=E,12μm,0.4s						
CESI				AML	AML		
	comp=N,27μm,1.4s						
FDMO	**Fiordimonte**	**0.65**	**3**	S	Pg	22 47 31.0	-0.2
FDMO	**Fiordimonte**	**0.65**	**3**	P	Pg	22 47 31.1	0.0
FDMO				S	Sb	22 47 41.3	0.0
ASSB	**Assisi San Ben**	**0.71**	**337**	S	Pb	22 47 33.0	-0.2
ASSB	**Assisi San Ben**	**0.71**	**337**	P	Pb	22 47 32.8	-0.4

IDC 10 22:55:22.6±1.8,16.69S×178.23W,h0km,mb4.2/4, mb1 4.5/4,mb1mx3.9/32,mbtmp4.2/4,Error ellipse: s-maj=156.0km s-min=31.4km az=155.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.37**	**240**	P	P	23 02 54.4	+0.3
	2.2nm,0.5s,baz=90,slow=9.8,SNR=5.7						
WRA	**Warramunga Arr**	**45.03**	**258**	P	P	23 03 40.2	-0.2
	1.2nm,0.5s,baz=94,slow=7.3,SNR=61						
ASAR	**Alice Springs**	**45.29**	**253**	P	P	23 03 42.2	-0.4
	8.3nm,0.5s,baz=88,slow=8.5,SNR=72						
TXAR	**Lajitas Array**	**85.20**	**58**	P	P	23 08 01.5	0.0
	0.3nm,0.7s,baz=232,slow=4.4,SNR=4.3						

IDC 10 23:30:12.9±11.0,7.20N×93.99E,h0km,mb3.6/3, mb1 3.7/3,mb1mx3.3/41,mbtmp3.6/3,Error ellipse: s-maj=535.9km s-min=32.2km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.02**	**236**	T	T	00 02 39.4	
	baz=54						
H08S2	**Diego Garcia H**	**26.02**	**236**	T	T	00 02 40.4	
	baz=54						
H08S1	**Diego Garcia H**	**26.04**	**236**	T	T	00 02 34.0	
	baz=54						
MKAR	**Makanchi Array**	**40.71**	**348**	P	P	23 37 55.0	-0.3
	0.5nm,0.5s,baz=167,slow=8.3,SNR=9.9						
ZALV	**Zalesovo Beam**	**47.20**	**353**	P	P	23 38 47.4	+0.1
	1.3nm,0.6s,baz=164,slow=7.5,SNR=4.3						
WRA	**Warramunga Arr**	**48.00**	**125**	P	P	23 38 54.0	-0.1
	0.2nm,0.7s,baz=304,slow=8.9,SNR=2.1						

IDC 10 23:36:21.1±9.2,7.53N×94.47E,h0km,mb3.5/3,mb1 3.7/3, mb1mx3.4/40,mbtmp3.5/3,Error ellipse: s-maj=443.5km s-min=31.9km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.59**	**236**	T	T	00 08 42.6	
	baz=53						
H08S2	**Diego Garcia H**	**26.59**	**236**	T	T	00 08 51.8	
	baz=53						
H08S1	**Diego Garcia H**	**26.61**	**236**	T	T	00 08 53.1	
	baz=53						
MKAR	**Makanchi Array**	**40.50**	**347**	P	P	23 44 01.5	-0.2
	0.7nm,0.6s,baz=159,slow=8.0,SNR=12						
ZALV	**Zalesovo Beam**	**46.94**	**352**	P	P	23 44 53.5	+0.1
	0.7nm,0.6s,baz=186,slow=8.0,SNR=4.2						
WRA	**Warramunga Arr**	**47.80**	**125**	P	P	23 45 00.5	-0.1
	0.3nm,0.9s,baz=305,slow=8.8,SNR=2.7						

WEL 10 23:40:33.1±0.8,35.5S±11.1×177.9E±1.8,h274km±11km, M3.9/30,mb4.5/11,MLv4.2/30,Mw(mB)3.7/11,Error ellipse: s-maj=0.8km s-min=0.0km az=115.9,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.86**	**188**	P	Pn	23 41 25.3	-0.2
MXZ				S	S	23 42 04.6	-2.7
WMGZ	**Waiomatatini S**	**3.10**	**186**	P	Pn	23 41 28.5	+0.4
WMGZ				S	S	23 42 11.4	-0.5
HAZ	**Te Kaha**	**3.14**	**195**	P	Pn	23 41 28.9	+0.5
HAZ				S	S	23 42 12.7	+0.2
PKGZ	**Pakihiroa**	**3.21**	**191**	P	Pn	23 41 30.4	+1.1
PKGZ				S	S	23 42 14.0	-0.1
RUGZ	**Raukumara Rang**	**3.36**	**196**	P	Pn	23 41 31.1	+0.1
RUGZ				S	S	23 42 15.3	-1.8
PUZ	**Puketiti**	**3.37**	**188**	P	Pn	23 41 32.0	+1.0
PUZ				S	S	23 42 16.4	-0.6
TWGZ	**Tauwhareparae**	**3.51**	**191**	S	S	23 42 20.7	+0.9
MWZ	**Matawai**	**3.75**	**196**	P	Pn	23 41 35.9	+0.8
MWZ				S	S	23 42 24.6	0.0
CNGZ	**Carnagh Statio**	**3.78**	**187**	P	Pn	23 41 36.9	+1.4
URZ	**Urewera**	**3.79**	**201**	P	Pn	23 41 35.8	+0.4
URZ				S	S	23 42 26.1	+0.8
TKGZ	**Te Karaka**	**3.79**	**192**	P	Pn	23 41 35.3	-0.2
TKGZ				S	S	23 42 26.7	+1.3
KMRZ	**Kaimai**	**3.89**	**216**	P	Pn	23 41 34.5	-2.2
TOZ	**Tahuroa Road**	**4.03**	**221**	P	Pn	23 41 36.7	-1.4
MUGZ	**Murupara**	**4.09**	**203**	P	Pn	23 41 39.6	+0.7
RTZ	**Ruatahuna**	**4.15**	**200**	P	Pn	23 41 40.3	+0.5
MTHZ	**Maungataniwha**	**4.41**	**201**	P	Pn	23 41 44.2	+1.5
MTHZ				S	S	23 42 39.4	+1.0
ARHZ	**Aropaoanui**	**4.76**	**197**	P	Pn	23 41 47.2	+0.5
ARHZ				S	S	23 42 46.8	+1.2
BKZ	**Black Stump Fm**	**4.81**	**202**	P	Pn	23 41 48.2	+0.9

BKZ			S	S	23 42 46.5	-0.3	
MCHZ	**McNeill Hill**	**5.01 199**	P	Pn	23 41 50.7	+1.0	
MCHZ			S	S	23 42 53.9	+2.9	
CKHZ	**Cape Kidnapper**	**5.12 195**	P	Pn	23 41 51.1	+0.1	
CKHZ			S	S	23 42 53.9	+0.5	
NGZ	**Ngauruhoe**	**5.13 209**	P	Pn	23 41 52.1	+0.7	
FWVZ	**Far West T-bar**	**5.22 209**	P	Pn	23 41 53.7	+1.2	
KRHZ	**Kereru**	**5.28 201**	P	Pn	23 41 52.9	-0.1	
KRHZ			S	S	23 42 57.7	+0.6	
KAHZ	**Kahuranaki**	**5.29 196**	P	Pn	23 41 53.2	+0.1	
KAHZ			S	S	23 43 00.2	+3.0	
PXZ	**Pawanui**	**5.52 196**	P	Pn	23 41 55.8	0.0	
PXZ			S	S	23 43 03.3	+1.2	
PNHZ	**Pukenui**	**5.58 201**	P	Pn	23 41 56.3	-0.4	
PNHZ			S	S	23 43 03.1	-0.6	
TSZ	**Takapari Road**	**5.79 202**	P	Pn	23 41 58.9	-0.2	
TSZ			S	S	23 43 07.9	-0.2	
PRHZ	**Porangahau**	**5.80 197**	P	Pn	23 41 56.9	-2.2	
POWZ	**Post Office Ro**	**6.15 202**	P	Pn	23 42 03.5	-0.1	
BFZ	**Birch Farm**	**6.29 198**	P	Pn	23 42 05.3	+0.2	
BFZ			S	S	23 43 18.1	-1.0	
MRZ	**Mangatainoka R**	**6.46 203**	P	Pn	23 42 06.6	-0.7	
CPWZ	**Castlepoint**	**6.51 198**	P	Pn	23 42 07.1	-0.8	
HOWZ	**Holdsworth Sta**	**6.69 202**	P	Pn	23 42 09.2	-1.0	
OGWZ	**Otaki Gorge**	**6.73 204**	P	Pn	23 42 10.0	-0.7	
TMWZ	**Te Maipa**	**6.78 199**	P	Pn	23 42 10.9	-0.3	
KIW	**Kapiti Island**	**6.86 206**	P	Pn	23 42 11.5	-0.8	
CAW	**Cannon Point**	**7.03 204**	P	Pn	23 42 13.1	-1.1	
TRWZ	**Traveller**	**7.10 199**	P	Pn	23 42 14.8	-0.5	
PAWZ	**Paruwai Farm**	**7.16 201**	P	Pn	23 42 14.8	-1.2	
PLWZ	**Palliser**	**7.39 201**	P	Pn	23 42 17.4	-1.4	

*IDC **10** 23:49:44.8±0.4, 58°.78S×25°.70W, h0km, mb4.7/18, mb1 4.8/19, mb1mx4.7/29, mbtmp4.8/19, ML5.4/1, MS4.3/20, Ms1 4.3/20, ms1mx4.3/23, Error ellipse: s-maj=18.0km s-min=12.9km az=60.0*

*NEIC **10** 23:49:51.4±2.1, 58°.85S±0°.08×25°.5W±0°.2, h45km±4km, mb5.0/55, Error ellipse: s-maj=13.4km s-min=9.8km az=225.0*

*GCMT **10** 23:49:55.4±0.2, 59°.00S±0°.02×25°.07W±0°.02, h50km, MW5.2/109, Moment Tensor Solution. s80,c121; s109,c163; Duration: 1ᵗ0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.61±.02; Mθθ0.22±.02; Mϕϕ-0.83±.01; Mrθ-0.08±.01; Mθϕ0.05±.01; Mϕr0.20±.01; Best double couple: M0.75200×10¹⁷ NP1:ϕ₁187.00000°, δ38.00000°, λ105.00000°. NP2:ϕ₂349.00000°, δ53.00000°, λ79.00000°. Principal axes: T 0.6450, Plg78.0000°, Azm217.0000°; N 0.2140, Plg9.0000°, Azm356.0000°; P -0.8600, Plg8.0000°, Azm87.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 23:49:50.1±0.3, 58°.89S±0°.06×25°.51W±0°.07, h35km, n252, σ1ᵗ26/230, mb5.0/43, MS4.5/28, 2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.61**	**303**		**Pn**	**23 51 40.8**	**+2.4**
VNA1	**Neumayer--Stat**	**13.82**	**156**	P	**Pn**	**23 53 05.0**	**+1.9**
VNA3	**Neumayer Olymp**	**14.01**	**159**	P	**Pn**	**23 53 07.1**	**+1.3**
VNA2	**Neumayer--Watz**	**14.22**	**155**	P	**Pn**	**23 53 10.7**	**+2.1**
	baz=318,slow=15						
SNAA	**Sanae**	**15.78**	**153**	P	**P**	**23 53 30.9**	**-1.9**
SNAA	**Sanae**	**15.78**	**153**	Pn	**P**	**23 53 31.0**	**-1.9**
	16nm,0.3s,baz=312,slow=14,SNR=383						
SNAA				Sn	**Sn**	**23 56 14.0**	**-8.8**
	3.4nm,0.3s,baz=346,slow=22,SNR=2.8						
SNAA				LR	LR	23 58 15.3	
	comp=Z,1μm,21.8s,baz=328,slow=32						
SNAA	**Sanae**	**15.78**	**153**	Pn	**Pn**	**23 53 30.6**	**+1.3**
PMSA	**Palmer Station**	**18.88**	**236**	Pn	**P**	**23 54 07.1**	**+0.2**
PMSA	**Palmer Station**	**18.88**	**236**	P	**P**	**23 54 06.5**	**-0.5**
PMSA				IAmb	IAmb	23 54 18.9	
	comp=Z,49nm,0.8s						
BELA	**Belgrano 2**	**19.32**	**186**	P	**Pn**	**23 54 12.8**	**-0.2**
EFI	**East Falkland**	**19.74**	**277**	P	**Pn**	**23 54 18.2**	**+0.1**
EFI				IAmb	IAmb	23 54 37.3	
	comp=Z,107nm,1.1s						
MG01	**Puerto William**	**23.05**	**261**	P	**P**	**23 54 51.9**	**+0.1**
MG01				IAmb	IAmb	23 55 11.7	
	comp=Z,84nm,0.8s						
GO09	**Cerro Castillo**	**27.36**	**265**	P	**P**	**23 55 31.7**	**+0.2**
GO09				IAmb	IAmb	23 55 44.7	
	comp=Z,44nm,1.1s						
SYO	**Syowa Base**	**28.84**	**137**	*e*P	**P**	**23 55 43.6**	**-0.9**
SYO	**Syowa Base**	**28.84**	**137**	*e*pP	pP	23 55 52.0	-1.8
QSPA	**South Pole Qui**	**31.36**	**180**	P	**P**	**23 56 08.7**	**+1.7**
	comp=Z,14nm,0.7s,baz=205,slow=3.8,SNR=51						
QSPA	**South Pole Qui**	**31.36**	**180**	P	**P**	**23 56 09.2**	**+2.1**
QSPA				IAmb	IAmb	23 56 11.7	
	comp=Z,20nm,0.8s						
PLTB	**Pedras Altas**	**33.08**	**313**	*e*P	**P**	**23 56 21.5**	**-0.7**
PLCA	**Paso Flores**	**33.45**	**283**	P	**P**	**23 56 24.9**	**-0.6**
	comp=Z,9.4nm,0.9s,baz=147,slow=8.3,SNR=16						
PLCA				LR	LR	00 10 00.4	
	comp=Z,437nm,18.8s,baz=139,slow=36						
PLCA	**Paso Flores**	**33.45**	**283**	P	**P**	**23 56 24.9**	**-0.6**
PLCA				IAmb	IAmb	23 56 41.0	
	comp=Z,21nm,0.9s						
PLCA	**Paso Flores**	**33.45**	**283**	*e*P	**P**	**23 56 24.0**	**-1.5**
CPSB	**Cacapava Do Su**	**34.23**	**314**	*e*P	**P**	**23 56 31.9**	**-0.3**
CNLB	**Canela**	**34.30**	**318**	*e*P	**P**	**23 56 32.6**	**-0.3**
LC01	**Cunco**	**35.51**	**283**	P	**P**	**23 56 41.2**	**-2.0**
LC01				IAmb	IAmb	23 57 00.5	
	comp=Z,20nm,0.6s						
ITQB	**Itaqui**	**36.12**	**310**	*e*P	**P**	**23 56 47.0**	**-1.5**
ITAB	**Concordia**	**36.64**	**318**	*e*P	**P**	**23 56 52.9**	**-0.1**
BI02	**San Fabin de**	**36.93**	**286**	P	**P**	**23 56 56.7**	**+1.2**
BI02				IAmb	IAmb	23 57 11.7	
	comp=Z,12nm,0.7s						
MAW	**Mawson**	**37.35**	**141**	P	**P**	**23 56 59.0**	**+0.5**
	comp=Z,5.0nm,0.6s,baz=221,slow=9.1,SNR=17						
MAW				LR	LR	00 10 23.2	
	comp=Z,744nm,20.3s,baz=248,slow=33						
MAW	**Mawson**	**37.35**	**141**	P	**P**	**23 56 59.8**	**+1.3**
BI03	**Tigo**	**37.67**	**284**	P	**P**	**23 57 00.7**	**-0.9**
BO02	**Sierra Bellavi**	**38.17**	**289**	P	**P**	**23 57 06.6**	**+0.6**
BO02				IAmb	IAmb	23 57 20.7	
	comp=Z,20nm,0.7s						
MAN01	**Angra dos Reis**	**38.32**	**332**	*e*P	**P**	**23 57 07.5**	**+0.2**
AAGR	**Agrelo**	**38.60**	**293**	*i* P	**P**	**23 57 11.4**	**+1.8**
ARCO	**CERRO ARCO**	**38.85**	**293**	*i* P	**P**	**23 57 12.1**	**+0.3**
PTGB	**Pitanga**	**38.94**	**320**	*e*P	**P**	**23 57 11.0**	**-1.5**
VAO	**Valinhos**	**38.98**	**328**	*e*P	**P**	**23 57 12.2**	**-0.6**
ASAL	**Salagasta**	**39.01**	**293**	*i* P	**P**	**23 57 13.2**	**+0.2**
MT05	**Renca**	**39.28**	**290**	P	**P**	**23 57 14.7**	**-0.5**
CPUP	**Villa Florida**	**39.38**	**312**	P	**P**	**23 57 14.0**	**-2.1**
	comp=Z,4.5nm,0.9s,baz=161,slow=7.7,SNR=8.3						
CPUP				LR	LR	00 13 41.0	
	comp=Z,260nm,19.9s,baz=159,slow=37						
CPUP	**Villa Florida**	**39.38**	**312**	P	**P**	**23 57 13.4**	**-2.6**
PEL	**Peldehue**	**39.45**	**291**	P	**P**	**23 57 16.6**	**0.0**
PEL	**Peldehue**	**39.45**	**291**	*i* P	**P**	**23 57 16.5**	**-0.2**
RTCV	**Cerro Valdivia**	**39.47**	**294**	*i* P	**P**	**23 57 17.6**	**+0.7**
AUSP	**Uspallata**	**39.58**	**293**	*i* P	**P**	**23 57 19.4**	**+1.3**
MT02	**Curacav**	**39.58**	**290**	P	**P**	**23 57 17.3**	**-0.4**
VA03	**San Esteban**	**39.70**	**291**	P	**P**	**23 57 20.1**	**+1.4**
ROC1	**El Roble**	**39.75**	**290**	P	**P**	**23 57 20.1**	**+0.7**
ROC1	**El Roble**	**39.75**	**290**	*i* P	**P**	**23 57 20.9**	**+1.5**
ZON	**Zonda**	**39.80**	**294**	IAmb	IAmb	23 57 36.6	
	comp=Z,28nm,0.7s						
ZON	**Zonda**	**39.80**	**294**	*i* P	**P**	**23 57 19.3**	**-0.3**
RTLL	**Cerro Villicun**	**39.88**	**295**	*i* P	**P**	**23 57 19.6**	**-0.7**
RTLS	**Leoncito**	**39.88**	**293**	*i* P	**P**	**23 57 20.4**	**-0.1**
SUR	**Sutherland**	**40.63**	**70**	LR	LR	00 10 14.6	
	comp=Z,718nm,21.8s,baz=204,slow=30						
ACLC	**CERRO LA CRUZ**	**40.77**	**298**	*i* P	**P**	**23 57 27.0**	**-0.8**
ACCO	**Cerro Coronel**	**40.78**	**295**	*i* P	**P**	**23 57 28.1**	**+0.1**
RIB01	**Linhares ES**	**40.98**	**338**	*e*P	**P**	**23 57 29.8**	**+0.4**
CO02	**Combarbal**	**41.19**	**292**	P	**P**	**23 57 31.8**	**+0.6**
CO02				IAmb	IAmb	23 57 50.3	
	comp=Z,43nm,0.9s						
BB19B	**Bebedouro**	**41.26**	**326**	*e*P	**P**	**23 57 31.0**	**-0.7**
CO03	**El Pedregal**	**41.34**	**293**	P	**P**	**23 57 33.2**	**+0.8**
BSFB	**Barra de Sao F**	**41.54**	**338**	*e*P	**P**	**23 57 33.9**	**0.0**
PCMB	**Pacaembu**	**41.57**	**322**	*e*P	**P**	**23 57 31.6**	**-2.6**
SJMB	**Sao Joao De Ma**	**41.73**	**337**	*e*P	**P**	**23 57 34.5**	**-1.0**
CO01	**Juntas del Tor**	**41.78**	**294**	P	**P**	**23 57 37.7**	**+1.5**
GO04	**Tololo Observa**	**41.95**	**293**	P	**P**	**23 57 37.4**	**-0.1**
GO04				IAmb	IAmb	23 57 56.1	
	comp=Z,36nm,0.9s						
LCO	**Las Campanas**	**42.87**	**294**	P	**P**	**23 57 46.3**	**+1.2**
LCO				IAmb	IAmb	23 58 01.9	
	comp=Z,24nm,0.8s						
ITRB	**Iturama**	**43.08**	**325**	*e*P	**P**	**23 57 45.7**	**-0.8**
AC04	**Llanos de Chal**	**43.73**	**294**	*e*P	**P**	**23 57 52.8**	**+1.1**
VNDA	**Vanda**	**43.77**	**182**	P	**P**	**23 57 53.6**	**+2.2**
	comp=Z,12nm,0.8s,baz=190,slow=6.3,SNR=108						
VNDA				LR	LR	00 15 14.3	
	comp=Z,156nm,21.9s,baz=180,slow=35						
VNDA	**Vanda**	**43.77**	**182**	P	**P**	**23 57 53.9**	**+2.4**
IPMB	**Ipameri, GO**	**44.09**	**328**	*e*P	**P**	**23 57 54.2**	**-0.5**
AQDB	**Aquidauana**	**44.11**	**317**	*e*P	**P**	**23 57 53.3**	**-1.4**
GO02	**Mina Guanaco**	**45.62**	**298**	IAmb	IAmb	23 58 21.7	
	comp=Z,24nm,1.0s						
BOSA	**Boshof**	**45.90**	**72**	P	**P**	**23 58 09.5**	**+0.4**
	comp=Z,10nm,0.9s,baz=204,slow=7.7,SNR=13						
BOSA				LR	LR	00 13 55.4	
	comp=Z,254nm,18.4s,baz=232,slow=32						
BOSA	**Boshof**	**45.90**	**72**	P	**P**	**23 58 09.1**	**0.0**
BOSA				IAmb	IAmb	23 58 21.2	
	comp=Z,16nm,0.9s						
JANB	**Januaria**	**45.93**	**334**	*e*P	**P**	**23 58 08.9**	**-0.4**
BDFB	**Brasilia**	**46.28**	**329**	P	**P**	**23 58 12.0**	**-0.1**
	comp=Z,5.4nm,0.7s,baz=157,slow=5.0,SNR=7.8						
BDFB				LR	LR	00 14 53.9	
	comp=Z,219nm,19.9s,baz=152,slow=33						
BDFB	**Brasilia**	**46.28**	**329**	P	**P**	**23 58 11.4**	**-0.7**
GDU01	**Guandu, BA**	**46.30**	**341**	*e*P	**P**	**23 58 11.0**	**-1.1**
ARAG	**Araguaiana, MT**	**47.29**	**324**	*e*P	**P**	**23 58 18.9**	**-1.0**
SDBA	**SAO DESIDERIO**	**48.62**	**334**	*e*P	**P**	**23 58 29.8**	**-0.5**
LBTB	**Lobatse**	**49.06**	**69**	P	**P**	**23 58 33.7**	**0.0**
LBTB				IAmb	IAmb	23 58 50.6	
	comp=Z,17nm,1.0s						
PTLB	**Pontes e Lacer**	**49.97**	**316**	*e*P	**P**	**23 58 38.6**	**-1.9**
SIV	**San Ignacio**	**50.19**	**313**	P	**P**	**23 58 40.2**	**-2.0**
	comp=Z,2.7nm,0.5s,baz=173,slow=7.6,SNR=17						
GO01	**Chusmiza**	**50.22**	**302**	P	**P**	**23 58 43.7**	**+0.7**
GO01				IAmb	IAmb	23 59 02.9	
	comp=Z,9.0nm,0.7s						
TSUM	**Tsumeb**	**50.37**	**57**	P	**P**	**23 58 44.2**	**+0.5**
TSUM				IAmb	IAmb	23 58 56.3	
	comp=Z,14nm,1.0s						
SNDB	**Serra Nova Dou**	**50.68**	**327**	*e*P	**P**	**23 58 44.5**	**-1.3**
MNMC	**Minye Minye**	**50.87**	**302**	P	**P**	**23 58 47.6**	**-0.1**
CASY	**Casey**	**50.93**	**159**	P	**P**	**23 58 48.8**	**+1.6**
CASY				IAmb	IAmb	23 59 00.0	
	comp=Z,14nm,1.1s						
H10N1	**ASCENSION HYDR**	**51.62**	**14**	T	T	00 54 36.4	
	baz=180,slow=72,SNR=78						
H10N3	**ASCENSION HYDR**	**51.62**	**14**	T	T	00 54 29.0	
	baz=180,slow=72,SNR=369						
H10N2	**ASCENSION HYDR**	**51.64**	**14**	T	T	00 54 36.3	
	baz=180,slow=72,SNR=274						
VILB	**Vilhena**	**52.66**	**316**	*e*P	**P**	**23 58 58.9**	**-1.7**
SMTB	**Santa Maria do**	**52.68**	**332**	*e*P	**P**	**23 59 01.0**	**+0.2**
LPAZ	**La Paz**	**52.76**	**305**	P	**P**	**23 59 01.5**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=143,slow=6.2,SNR=13						
LPAZ				LR	LR	00 23 37.2	
	comp=Z,153nm,19.7s,baz=150,slow=39						
LPAZ	**La Paz**	**52.76**	**305**	P	**P**	**23 59 01.2**	**-0.9**
LPAZ	**La Paz**	**52.76**	**305**	*e*P	**P**	**23 59 01.0**	**-1.1**
RCBR	**Riachuelo**	**53.53**	**347**	*e*P	**P**	**23 59 07.2**	**0.0**
PRPB	**Parauapebas**	**55.82**	**330**	*e*P	**P**	**23 59 21.3**	**-1.8**
NPGB	**Novo Progresso**	**56.55**	**324**	*e*P	**P**	**23 59 27.5**	**+1.4**
NBMO	**Morrinhos-CE**	**56.57**	**343**	*e*P	**P**	**23 59 28.9**	**-0.1**
SAML	**Samuel**	**57.44**	**314**	P	**P**	**23 59 33.0**	**-2.2**
SAML				IAmb	IAmb	23 59 51.2	
	comp=Z,6.7nm,0.6s						
SAML	**Samuel**	**57.44**	**314**	*e*P	**P**	**23 59 32.5**	**-2.7**
ROSB	**Rosrio**	**57.70**	**338**	*e*P	**P**	**23 59 34.8**	**-2.1**
ETMB	**Extrema**	**57.81**	**311**	*e*P	**P**	**23 59 34.8**	**-3.0**
LSZ	**Lusaka**	**58.63**	**66**	P	**P**	**23 59 44.0**	**+0.3**
LSZ				IAmb	IAmb	23 59 45.1	
	comp=Z,10nm,0.8s						
TMAB	**Tom-Au,PA,Br**	**59.06**	**333**	*e*P	**P**	**23 59 47.1**	**+0.6**
ITTB	**Itaituba**	**59.20**	**324**	*e*P	**P**	**23 59 46.2**	**-1.2**
MALB	**Monte Alegre**	**61.15**	**327**	*e*P	**P**	**23 59 59.9**	**-0.9**
MCPB	**Macapa, AP**	**61.97**	**330**	*e*P	**P**	**00 00 06.5**	**+0.2**
CZSB	**Cruzeiro do Su**	**62.36**	**305**	*e*P	**P**	**00 00 09.3**	**+0.3**
LIC	**Lamto**	**66.95**	**22**	*e*P	**P**	**00 00 38.6**	**-0.2**
	comp=Z,45nm,0.8s						
KIC	**Kosan Boka**	**67.14**	**22**	*e*P	**P**	**00 00 39.7**	**-0.3**
	comp=Z,20nm,0.7s						
TIC	**Toumodi**	**67.36**	**22**	*e*P	**P**	**00 00 41.2**	**-0.2**
MDP	**Montagnes des**	**67.36**	**331**	P	**P**	**00 00 40.0**	**-1.4**
	comp=Z,11nm,0.8s,baz=190,slow=6.2,SNR=5.8						
DBIC	**Dimbokro**	**67.41**	**22**	P	**P**	**00 00 42.0**	**+0.3**
	comp=Z,7.6nm,0.6s,baz=172,slow=5.6,SNR=22						
DBIC				LR	LR	00 25 23.6	
	comp=Z,115nm,18.6s,baz=145,slow=32						
DBIC	**Dimbokro**	**67.41**	**22**	P	**P**	**00 00 42.4**	**+0.6**
MBAR	**Mbarara**	**72.70**	**61**	P	**P**	**00 01 16.9**	**+2.4**
MBO	**M'Bour**	**73.35**	**9**	P	**P**	**00 01 17.7**	**-0.2**
ROSC	**El Rosal**	**74.39**	**309**	LR	LR	00 34 29.5	
	comp=Z,318nm,21.9s,baz=179,slow=36						
TOA0	**Torodi Ar. Sit**	**75.12**	**27**	IAmb	IAmb	00 01 41.2	
	comp=Z,34nm,1.0s						
TORD	**Torodi Ar. Bea**	**75.12**	**27**	P	**P**	**00 01 28.5**	**+0.2**
	comp=Z,18nm,0.5s,baz=200,slow=6.1,SNR=109						
TORD				LR	LR	00 28 54.8	
	comp=Z,164nm,20.0s,baz=175,slow=31						
TORD	**Torodi Ar. Bea**	**75.12**	**27**	P	**P**	**00 01 28.5**	**+0.2**
KOWA	**Kowa**	**75.20**	**22**	P	**P**	**00 01 28.8**	**0.0**
	comp=Z,3.3nm,0.6s,baz=183,slow=7.4,SNR=9.9						
KOWA	**Kowa**	**75.20**	**22**	P	**P**	**00 01 29.0**	**+0.3**
KMBO	**Kilima Mbogo**	**75.27**	**67**	P	**P**	**00 01 31.8**	**+2.2**
	comp=Z,2.9nm,0.8s,baz=196,slow=6.7,SNR=6.4						
KMBO				LR	LR	00 31 50.7	
	comp=Z,470nm,18.9s,baz=246,slow=34						
MLZ	**Mavora Lakes**	**75.50**	**190**	P	**P**	**00 01 32.6**	**+2.3**
MLZ				IAmb	IAmb	00 01 43.2	
	comp=Z,29nm,1.1s						
PLCV	**Puerto La Cruz**	**75.70**	**320**	P	**P**	**00 01 32.6**	**+1.0**
PCRV	**Puerto La Cruz**	**75.72**	**320**	P	**P**	**00 01 32.6**	**+0.8**
	comp=Z,6.6nm,0.6s,baz=169,slow=10,SNR=2.1						
SDV	**Santo Domingo**	**76.65**	**314**	*e*P	**P**	**00 01 36.8**	**-0.5**
TAU	**Tasmania Unive**	**78.39**	**175**	P	**P**	**00 01 47.7**	**+1.2**
PLWZ	**Palliser**	**78.43**	**196**	P	**P**	**00 01 45.2**	**-1.7**
THZ	**Tophouse**	**78.55**	**194**	P	**P**	**00 01 47.9**	**+0.4**
RKT	**Rikitea**	**79.96**	**242**	*e*LR	LR	00 26 56.5	
	comp=Z,548nm,25.2s						
PDPR	**Patillas Dam,**	**83.52**	**322**	P	**P**	**00 02 12.7**	**-1.2**
PDPR				IAmb	IAmb	00 02 13.7	
	comp=Z,17nm,0.9s						
TOO	**Toolangi**	**83.61**	**173**	P	**P**	**00 02 15.0**	**+0.5**
TOO				IAmb	IAmb	00 02 16.4	
	comp=Z,11nm,0.9s						
BANI	**BANI**	**85.32**	**318**	P	**P**	**00 02 22.1**	**-1.1**
TAM	**Tamanrasset**	**85.33**	**29**	P	**P**	**00 02 23.7**	**+0.5**
TBI	**Tubuai**	**85.97**	**230**	*e*LR	LR	00 29 49.2	
	comp=Z,335nm,24.0s						
CAN	**Canberra**	**86.03**	**175**	P	**P**	**00 02 27.1**	**+0.3**
CAN				IAmb	IAmb	00 02 28.5	
	comp=Z,9.3nm,0.9s						
BBOO	**Buckleboo**	**87.36**	**165**	P	**P**	**00 02 33.3**	**0.0**
BBOO				IAmb	IAmb	00 02 48.8	
	comp=Z,14nm,1.0s						
FORT	**Forrest**	**88.00**	**157**	P	**P**	**00 02 36.6**	**+0.3**
STKA	**Stephens Creek**	**88.94**	**169**	P	**P**	**00 02 41.5**	**+0.8**
	comp=Z,7.5nm,0.7s,baz=150,slow=4.7,SNR=15						
STKA				LR	LR	00 40 49.6	
	comp=Z,288nm,19.3s,baz=205,slow=34						
STKA	**Stephens Creek**	**88.94**	**169**	P	**P**	**00 02 41.4**	**+0.6**
PPT2	**Papeete2**	**91.19**	**232**	*e*LR	LR	00 32 10.3	
	comp=Z,300nm,24.0s						
PPT	**Papeete**	**91.21**	**232**	LR	LR	00 34 48.3	
	comp=Z,119nm,21.2s,baz=180,slow=30						
RAR	**Rarotonga**	**91.76**	**222**	LR	LR	00 36 53.4	
	comp=Z,70nm,18.8s,baz=214,slow=31						
MDT	**Midelt**	**93.00**	**18**	P	**P**	**00 03 01.0**	**+1.6**
	comp=Z,2.7nm,0.8s,baz=185,slow=4.0,SNR=7.4						
TAOE	**Nuku Hiva Isla**	**94.78**	**244**	*e*LR	LR	00 33 45.6	
	comp=Z,687nm,27.1s						
PSA00	**Pilbara Seismi**	**94.89**	**148**	P	**P**	**00 03 06.2**	**-2.2**
PSA00				IAmb	IAmb	00 03 18.5	
	comp=Z,7.1nm,1.0s						
ASAR	**Alice Springs**	**96.00**	**161**	P	**P**	**00 03 13.3**	**-0.2**
	comp=Z,5.3nm,0.7s,baz=183,slow=3.9,SNR=54						
ASAR				PKKP	**PKKPbc**	**00 19 59.5**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=6.1,slow=2.5,SNR=8.8						
ASAR				LR	LR	00 43 12.0	
	comp=Z,299nm,21.8s,baz=192,slow=33						
ASAR	**Alice Springs**	**96.00**	**161**	P	**P**	**00 03 12.9**	**-0.6**
KEST	**Kesra**	**98.64**	**28**	LR	LR	00 43 31.5	
	comp=Z,83nm,18.9s,baz=206,slow=33						
DZM	**Mont Dzumac**	**98.74**	**191**	*e*LR	LR	00 35 41.9	
	comp=Z,307nm,22.6s						
WRA	**Warramunga Arr**	**99.72**	**161**	PKKP		00 19 49.2	
	comp=Z,1.0nm,0.6s,baz=354,slow=2.9,SNR=8.9						
WRA				LR	LR	00 46 55.8	
	comp=Z,282nm,19.4s,baz=195,slow=34						
ESDC	**Sonseca Array**	**99.83**	**17**	LR	LR	00 43 13.6	
	comp=Z,88nm,21.8s,baz=290,slow=32						
CLL	**Collm**	**114.22**	**25**	*e*PS	PS	00 18 57.0	-0.7
CLL				*e*SS	SS	00 25 30.0	+20
CLL				*e*		00 28 54.0	
CLL				*e*SSS	SSS	00 30 06.0	
CLL				Lm	MLR	00 49 00.0	
	comp=Z,200nm,21.8s						
ECSD	**EROS Data Cent**	**117.83**	**309**	P	**PKPdf**	**00 08 31.1**	**-0.6**
	baz=146						
AKASG	**Malin Array Be**	**117.96**	**36**	PKP	**PKPdf**	**00 08 30.6**	**-1.0**
	comp=Z,1.9nm,0.6s,baz=233,slow=1.1,SNR=6.2						
PDMCI	**Parker Dam,Lak**	**117.98**	**290**	P	**PKiKP**	**00 08 32.9**	**+0.6**
	baz=144						
BELC	**Belle Mtn. Jos**	**118.64**	**289**	P	**PKiKP**	**00 08 34.5**	**+0.7**
	baz=144						
EDW2	**Edwards Air Fo**	**120.33**	**288**	P	**PKiKP**	**00 08 37.8**	**+0.8**
	baz=143						
MPMC	**Manual Prospec**	**121.02**	**289**	P	**PKiKP**	**00 08 38.9**	**+0.4**
	baz=143						
TPNV	**Topopah Spring**	**121.12**	**291**	P	**PKiKP**	**00 08 39.2**	**+0.7**
	baz=143						
RSSD	**Black Hills**	**121.23**	**304**	P	**PKPdf**	**00 08 37.7**	**-0.7**
	baz=144						
RSSD	**Black Hills**	**121.23**	**304**	PKPdf	**PKPdf**	**00 08 37.6**	**-0.9**
CWC	**Cottonwood Cre**	**121.61**	**289**	P	**PKiKP**	**00 08 40.2**	**+0.7**
	baz=143						
R11A	**Troy Canyon, C**	**121.91**	**292**	P	**PKiKP**	**00 08 40.7**	**+0.6**
	baz=142						
DUG	**Dugway, Tooele**	**122.05**	**295**	P	**PKiKP**	**00 08 40.7**	**+0.4**
	baz=142						
MHMT	**Maesarieng**	**122.48**	**110**	P	**PKiKP**	**00 08 45.0**	**+3.4**
PDAR	**Pinedale Array**	**122.58**	**300**	PKP	**PKPdf**	**00 08 40.7**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=116,slow=5.5,SNR=6.7						
SUKH	**Sukhothai**	**122.71**	**112**	P	**PKiKP**	**00 08 42.0**	**0.0**
ULM	**Lac du Bonnet**	**122.90**	**314**	PKP	**PKPdf**	**00 08 39.6**	**-1.6**
	comp=Z,7.6nm,0.6s,baz=168,slow=2.0,SNR=11						
NB2	**NORSAR Subarra**	**122.95**	**20**	PKPdf	**PKPdf**	**00 08 40.3**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=202,slow=1.9						
NOA	**NORSAR Array B**	**122.95**	**20**	PKP	**PKPdf**	**00 08 40.4**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=199,slow=1.8,SNR=4.7						
CM13	**Chiang Mai Arr**	**123.17**	**111**	P	**PKiKP**	**00 08 43.2**	**+0.3**
CM05	**Chiang Mai Arr**	**123.17**	**111**	P	**PKiKP**	**00 08 43.0**	**+0.1**
CM04	**Chiang Mai Arr**	**123.18**	**111**	P	**PKiKP**	**00 08 43.0**	**0.0**
CM01	**Chiang Mai Arr**	**123.19**	**111**	P	**PKiKP**	**00 08 43.0**	**0.0**
CM02	**Chiang Mai Arr**	**123.20**	**111**	P	**PKiKP**	**00 08 43.4**	**+0.4**
CM15	**Chiang Mai Arr**	**123.20**	**

baz=106
ILAR Eielson Array 152.62 307 PKPbc PKPbc 00 09 40.5 -0.6
comp=Z,11nm,0.8s,baz=154,slow=2.1,SNR=70
ILAR Eielson Array 152.62 307 PKPbc 00 09 39.9 -1.2
RC01 Rabbit Creek A 152.73 299 P PKiKP 00 09 41.6 -0.1
baz=110
MCK McKinley 153.20 305 P PKiKP 00 09 43.2 +0.5
baz=106
CUT Chulitna 153.40 301 P PKiKP 00 09 43.9 +0.9
baz=108
NEA2 Nenana 153.49 306 P PKiKP 00 09 43.2 0.0
baz=104
I23K Minto, Yukon-K 153.74 308 P PKPbc 00 09 43.3 -0.3
baz=103
MLY Manley 154.28 307 P PKiKP 00 09 45.6 +0.7
baz=102
TOLK Toolik Lake Re 154.39 315 P PKiKP 00 09 45.0 0.0
baz=96
COLD Coldfoot 154.46 312 P PKiKP 00 09 45.6 +0.5
baz=98

*SFS **10** 23:56:39.0,34.67N×4.21W,h77km,ML2.8,TAHAR SOUK (MARRUECOS)*
*CNRM **10** 23:56:40.2±0.3,34.91N×4.33W,h11km,Error ellipse: s-maj=3.7km s-min=2.7km az=132.0*
*MDD **10** 23:56:41.5±1.2,34.97N×4.21W,h9km±4km,mbLg2.1/15, Error ellipse: s-maj=9.8km s-min=5.4km az=9.0,PRXIMO*
*INMG **10** 23:56:42.6±1.1,34.96N×4.22W,h21km±7km,ML2.0,Error ellipse: s-maj=3.2km s-min=2.6km az=97.0*
ISC 10 23:56:41.4±0.9,34°98N±0.02×4°32W±0.02,h16km±6km, n53,σ1°976/96,Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVLZ	Peæn de	0.19	5	P	Pg	23 56 45.5	-0.5
PVLZ				S	Sg	23 56 49.1	+0.1
PVLZ	Peæn de	0.19	5	eP	Pg	23 56 45.5	-0.5
PVLZ				i S	Sg	23 56 49.1	+0.1
PALE	Palemas	0.39	53	P	Pg	23 56 48.5	-0.9
PALE				S	Sb	23 56 56.8	+1.0
SMIR	Smir Dam	1.11	309	P	Pb	23 57 02.4	+0.2
SMIR				S	Sg	23 57 19.1	+1.7
GOG	Mont Gurugu	1.11	77	P	Pb	23 57 01.3	-1.0
GOG				S	Sb	23 57 17.0	+0.4
MELI	Melilla	1.18	74	P	Pn	23 57 01.5	-1.7
	10.0nm,0.2s,SNR=4.0						
MELI				S	Sb	23 57 17.1	-1.2
	15nm,0.1s,SNR=4.0						
MELI	Melilla	1.18	74	eP	Pg	23 57 07.5	+3.4
MELI				eS	Sg	23 57 26.7	+7.1
CEU	Ceuta	1.25	317	eP	Pn	23 57 01.1	-3.1
CEU				eS	Sb	23 57 17.3	-3.2
ECEU	Ceuta	1.25	317	P	Pn	23 57 04.9	+0.7
	14nm,0.4s						
ECEU				S	Sg	23 57 23.5	+1.6
	12nm,0.1s,SNR=7.0						
EALB	Alboran	1.42	47	P	Pn	23 57 04.8	-1.7
	6.9nm,0.5s,SNR=7.9						
EALB				S	Sn	23 57 22.5	-2.4
	15nm,0.2s,SNR=7.9						
JBK	JBK	1.58	114	P	Pn	23 57 07.5	-1.5
JBK				S	Sn	23 57 28.0	-1.3
EMAL	Malaga-Limoner	1.78	357	P	Pn	23 57 09.8	-1.6
EMAL				S	Sn	23 57 31.0	-2.7
EMAL	Malaga-Limoner	1.78	357	eP	Pn	23 57 09.8	-1.6
EMAL				eS	Sn	23 57 31.0	-2.7
ELGU	Los Guajares,	1.96	17	P	Pn	23 57 12.6	-1.4
	1.4nm,0.7s,SNR=7.9						
ELGU				S	Sn	23 57 36.7	-1.7
	9.0nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	2.13	5	P	Pn	23 57 16.3	-0.1
	2.1nm,0.3s,SNR=7.9						
EGOR				S	Sn	23 57 43.0	+0.4
	2.3nm,0.3s,SNR=7.9						
MD31	MD31	2.14	190	P	Pn	23 57 15.5	-1.0
MD31				S	Sn	23 57 41.0	-1.8
MDT	Midelt	2.18	186	P	Pn	23 57 16.4	-0.6
MDT				S	Sn	23 57 43.4	-0.3
EBER	Berja	2.24	31	P	Pn	23 57 16.3	-1.7
	4.7nm,0.7s,SNR=11						
EBER				S	Sn	23 57 42.9	-2.4
	6.2nm,0.3s,SNR=100						
EQUE	Quentar	2.33	18	P	Pn	23 57 18.9	-0.2
	2.0nm,0.4s,SNR=7.9						
EQUE				S	Sn	23 57 46.1	-1.4
	1.5nm,0.2s,SNR=5.2						
ZHG	ZHG	2.46	232	P	Pn	23 57 20.2	-0.6
ZHG				S	Sb	23 57 54.7	-0.6
ENIJ	Nijar	2.62	40	P	Pn	23 57 22.0	-1.1
	2.1nm,0.4s,SNR=7.9						
ENIJ				S	Sn	23 57 51.0	-3.7
	6.9nm,0.4s,SNR=7.9						
GORA	Gorafe	2.70	22	S	Sn	23 58 00.1	+3.5
	4.8nm,0.3s,SNR=7.9						
EQES	Quesada	2.99	19	P	Pn	23 57 29.3	+1.1
	2.0nm,0.3s,SNR=14						
EQES				S	Sn	23 58 05.2	+1.3
	2.1nm,0.2s						
EADA	Adamuz	3.18	356	P	Pn	23 57 31.7	+0.8
	5.0nm,0.6s,SNR=7.9						
EADA				S	Sn	23 58 08.5	0.0
	0.5nm,0.1s,SNR=7.9						
ECAB	El Cabril	3.21	344	P	Pn	23 57 31.9	+0.7
	0.2nm,0.3s,SNR=7.9						
ECAB				S	Sn	23 58 07.7	-1.4
	2.3nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.36	326	P	Pn	23 57 34.4	+1.1
	4.6nm,0.9s,SNR=6.9						
EMIN				S	Sn	23 58 11.3	-1.5
	0.3nm,0.1s,SNR=7.9						
SESP	Santiago Espad	3.44	24	P	Pn	23 57 37.1	+2.6
	2.8nm,0.4s,SNR=7.9						
SESP				S	Sn	23 58 16.4	+1.4
	3.5nm,0.2s,SNR=7.9						
ARF	Arif	3.54	179	P	Pn	23 57 33.3	-2.5
ARF				S	Sn	23 58 17.5	+0.1
EGRO	El Granado	3.61	316	P	Pn	23 57 37.2	+0.6
	2.9nm,0.4s,SNR=7.9						
EGRO				S	Sn	23 58 18.1	-0.7
	2.2nm,0.4s,SNR=7.9						
PVAQ	Vaqueiros	3.66	312	P	Pn	23 57 37.6	+0.3
PVAQ				S	Sn	23 58 19.7	-0.4
	4.6nm,0.6s						
PVAQ	Vaqueiros	3.66	312	ePn	Pn	23 57 37.6	+0.3
PVAQ				eSn	Sn	23 58 19.7	-0.4
PVAQ				A	A	23 58 26.4	
	4.6nm,0.6s						
PBDV	Barranco-do-Ve	3.69	309	P	Pn	23 57 38.5	+0.7
PBDV				S	Sn	23 58 21.3	+0.3
PBDV	Barranco-do-Ve	3.69	309	ePn	Pn	23 57 38.5	+0.7
PBDV				eSn	Sn	23 58 21.3	+0.3
EMUR	La Murta	3.78	40	S	Sn	23 58 20.9	-2.4
	4.9nm,0.5s,SNR=7.9						
FIGM	Figuig	3.82	137	P	Pn	23 57 38.1	-1.6
FIGM				S	Sn	23 58 23.5	-0.9
PCVE	Castro Verde	4.00	312	P	Pn	23 57 43.0	+1.0
PCVE				S	Sn	23 58 28.5	0.0
PCVE	Castro Verde	4.00	312	ePn	Pn	23 57 43.0	+1.0
PCVE				eSn	Sn	23 58 28.5	0.0
TZRR	Tazzarine	4.32	194	P	Pn	23 57 46.1	-0.4
TZRR				S	Sn	23 58 35.9	-0.6
OUZM	OUZ	4.55	207	P	Pn	23 57 49.9	+0.2
OUZM				S	Sn	23 58 47.2	+4.9
PAB	San Pablo	4.55	360	P	Pn	23 57 50.3	+0.6
	2.1nm,0.4s,SNR=4.0						
PAB				S	Sn	23 58 39.4	-3.0
	0.3nm,0.2s,SNR=7.9						
PNCL	Nicolau / Gran	4.61	314	P	Pn	23 57 51.8	+1.5
PNCL				S	Sn	23 58 42.1	-1.4
PNCL	Nicolau / Gran	4.61	314	ePn	Pn	23 57 51.8	+1.5
PNCL				eSn	Sn	23 58 42.1	-1.4
EVO	Evora	4.62	321	P	Pn	23 57 50.2	-0.3
EVO	Evora	4.62	321	ePn	Pn	23 57 50.2	-0.3
ESDC	Sonseca Array	4.69	3	P	Pn	23 57 52.2	+0.7
	0.2nm,0.3s,baz=182,slow=12,SNR=3.7						
ESDC				S	Sn	23 58 45.1	-0.6
	0.3nm,0.2s,baz=187,slow=23,SNR=7.9						
AFON	Font Roja	4.76	38	P	Pn	23 57 50.6	-2.0
	SNR=7.9						
OUK	Oukaimeden	4.80	219	P	Pn	23 57 52.3	-1.0
OUK				S	Sn	23 58 47.8	-0.9
ZGR	Zagora	4.97	193	P	Pn	23 57 52.3	-3.2
ZGR				S	Sn	23 58 50.2	-2.5
PMRV	Marv??o	5.07	332	P	Pn	23 57 57.9	+1.2
PMRV	Marv??o	5.07	332	ePn	Pn	23 57 57.9	+1.2
PMTG	Montargil	5.13	324	S	Sn	23 58 55.9	-0.6
PMTG	Montargil	5.13	324	eSn	Sn	23 58 55.9	-0.6
ETOR	Torete	6.10	16	P	Pn	23 58 10.9	+0.1
	SNR=7.9						

IDC 10 23:56:44.8±2.1,7°91S×127°17E,h0km,mb3.4/1, mb1 3.4/3,mb1mx3.2/26,mbtmp3.3/3,ML3.5/2,Error ellipse: s-maj=274.1km s-min=32.9km az=62.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.83	151	Pn	Pn	00 00 01.1	-1.2
	0.3nm,0.3s,baz=326,slow=14,SNR=23						
WRA				Sn	Sn	00 02 22.9	-14
	0.4nm,0.3s,baz=330,slow=23,SNR=8.4						
ASAR	Alice Springs	16.94	158	Pn	P	00 00 44.7	-0.9
	0.1nm,0.3s,baz=339,slow=10,SNR=2.5						
MKAR	Makanchi Array	67.49	328	P	P	00 07 42.7	0.0
	0.2nm,0.5s,baz=112,slow=7.3,SNR=5.0						

*IDC **11** 00:05:12.8±0.7,4.10S×134.41E,h0km,mb4.1/10, mb1 4.3/14,mb1mx4.0/36,mbtmp4.2/14,ML4.4/4,MS3.6/15, Ms1 3.6/15,ms1mx3.4/40,Error ellipse: s-maj=34.7km s-min=15.3km az=63.0*
*DJA **11** 00:05:17.8±0.5,4°S±2°×13°4E±°,h16km±4km,M4.7/15, mb4.6/15,mB5.1/2,MLv4.7/6,Mw(mB)4.4/2,Mwp6.2/1*
*NEIC **11** 00:05:19.6±2.4,4.22S±0.08×134.1E±0.1,h46km±7km, mb4.6/27,Error ellipse: s-maj=15.6km s-min=10.9km az=75.0*
ISC 11 00:05:14.3±0.5,4°23S±0.05×134°34E±0.06,h10km,n82, σ1°960/79,mb4.6/21,MS3.5/9,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	2.46	302	P	Pn	00 05 54.8	+0.2
FAKI				S	Sn	00 06 24.7	+0.1
FAKI	Fak Fak	2.46	302	P	Pn	00 05 54.7	+0.2
BAKI	Biak	3.50	30	P	Pn	00 06 09.8	+0.9
BNDI	Bandanaira	4.43	266	P	Pn	00 06 24.3	+2.7
BNDI				S	Sn	00 07 14.0	+0.7
SIJI	Sorong	4.53	317	Pn	Pn	00 06 24.2	+1.1
	4.8nm,0.3s,baz=119,slow=18,SNR=13						
SIJI				Pg	Pg	00 06 41.0	-0.3
	9.0nm,0.3s,baz=108,slow=11,SNR=11						
SIJI				Sn	Sn	00 07 13.7	-2.3
	6.3nm,0.3s,baz=154,slow=22,SNR=2.3						
SIJI				Lg	Lg	00 07 44.0	
	1.5nm,0.3s,baz=150,slow=23,SNR=2.2						
SIJI				LR	LR	00 08 33.1	
	comp=Z,896nm,18.3s,baz=140,slow=45						
MTN	Manton Dam	9.12	200	Pn	Pn	00 07 27.9	+1.7
SOEI	Soe	11.40	241	P	Pn	00 07 59.3	+1.8
	56nm,0.9s						
SOEI	Soe	11.40	241	Pn	Pn	00 07 58.0	+0.5
BATI	Baumata	12.13	240	Pn	Pn	00 08 08.5	+1.0
	4.1nm,0.3s,baz=78,slow=12,SNR=2.1						
BATI				Sn	Sn	00 10 20.3	-2.7
	2.0nm,0.3s,baz=68,slow=18,SNR=4.0						
BATI	Baumata	12.13	240	P	Pn	00 08 09.7	+2.2
	23nm,0.6s						
GTOI	Gorontalo	12.31	293	P	Pn	00 08 11.9	+2.1
	14nm,1.2s						
KNRA	Kununurra	12.62	205	Pn	Pn	00 08 13.6	-0.5
APSI	Ampana	13.10	284	P	Pn	00 08 23.0	+2.4
	744nm31nm,0.6s						
EDFI	Ende, Flores	13.34	250	P	Pn	00 08 27.3	+3.3
	9.5nm,1.3s						
PMG	Port Moresby	13.73	113	LR	LR	00 14 09.0	
	comp=Z,226nm,20.6s,baz=298,slow=39						
SPSI	Sidrap Palu	14.53	271	P	Pn	00 08 42.4	+2.2
	14nm,1.1s						
MPSI	Mapaga	15.12	287	P	Pn	00 08 50.0	+1.8
	12nm,1.1s						
WB0	Warramunga Arr	15.44	180	Pn	Pn	00 08 54.4	+1.9
WB0				lAmb	lAmb	00 09 03.2	
	comp=Z,46nm,1.2s						
WRAB	Tennant Creek	15.61	180	Pn	Pn	00 08 55.6	+1.1
WRAB				lAmb	lAmb	00 09 05.2	
	comp=Z,39nm,1.1s						
WB2	Warramunga Arr	15.62	180	Pn	Pn	00 08 56.9	+2.2
WB2				lAmb	lAmb	00 09 05.3	
	comp=Z,58nm,1.2s						
WRA	Warramunga Arr	15.62	180	Pn	Pn	00 08 52.1	-2.6
	comp=Z,0.2nm,0.3s,baz=8.2,slow=13,SNR=10						
WRA				Sn	Sn	00 11 34.5	-13
	baz=4.1,slow=23,SNR=2.8						
WRA				Lg	Lg	00 13 22.1	
	baz=15,slow=30,SNR=1.7						
WRA				LR	LR	00 15 34.8	
	comp=Z,298nm,18.4s,baz=0.0,slow=40						
WRA	Warramunga Arr	15.62	180		Pn	00 08 57.2	+2.5
WR0	Warramunga Arr	15.63	179	Pn	Pn	00 08 56.8	+1.9
FITZ	Fitzroy Crossi	16.20	211	Pn	Pn	00 09 01.1	-1.1
	comp=Z,0.9nm,0.3s,baz=39,slow=11,SNR=25						
FITZ				Sn	Sn	00 11 52.5	-9.5
	comp=Z,0.3nm,0.3s,baz=124,slow=9.9,SNR=3.7						
FITZ				LR	LR	00 15 14.1	
	comp=Z,102nm,20.4s,baz=11,slow=37						
FITZ	Fitzroy Crossi	16.20	211	P	Pn	00 09 02.6	+0.4
FITZ					Sn	00 11 54.1	-7.9
KRVT	Keravat (AS076	17.64	91	LR	LR	00 16 31.5	
	comp=Z,79nm,19.3s,baz=258,slow=39						
MYLDM	Lahad Datu	18.37	300	P	Pn	00 09 28.7	-0.8
AS31	Alice Springs	19.32	181	P	Pn	00 09 41.9	+0.9
ASAR	Alice Springs	19.33	181	P	Pn	00 09 42.3	+1.3
	comp=Z,2.2nm,0.3s,baz=5.0,slow=11,SNR=108						
ASAR				S	Sn	00 13 12.6	-5.2
	comp=Z,0.1nm,0.3s,baz=6.6,slow=27,SNR=2.4						
ASAR				Lg	Lg	00 15 26.3	
	baz=10,slow=31,SNR=2.3						
ASAR				LR	LR	00 17 51.0	
	comp=Z,315nm,18.3s,baz=356,slow=39						
ASAR	Alice Springs	19.33	181	P	Pn	00 09 42.7	+1.7
CTA	Charters Tower	19.58	145	P	Pn	00 09 44.0	0.0
	comp=Z,0.9nm,0.3s,baz=319,slow=13,SNR=11						
CTA				Lg	Lg	00 15 30.5	
	comp=Z,0.1nm,0.3s,baz=45,slow=0.3,SNR=6.3						
CTAO	Charters Tower	19.58	145	P	Pn	00 09 45.2	+1.2
CTAO				lAmb	lAmb	00 09 48.3	
	comp=Z,39nm,1.4s						
GUMO	Guam	20.56	30	LR	LR	00 17 12.2	
	comp=Z,73nm,18.7s,baz=108,slow=35						
PSA00	Pilbara Seismi	22.25	218	P	P	00 10 12.1	+0.6
PSA00				lAmb	lAmb	00 10 20.9	
	comp=Z,16nm,0.8s						
HNR	Honiara	25.94	103	LR	LR	00 21 58.9	
	comp=Z,83nm,20.2s,baz=312,slow=39						
FORT	Forrest	27.06	192	P	P	00 10 56.6	-0.5
FORT				lAmb	lAmb	00 11 10.4	
	comp=Z,17nm,0.8s						
STKA	Stephens Creek	28.33	167	P	P	00 11 09.7	+1.2
	comp=Z,1.6nm,0.7s,baz=351,slow=15,SNR=2.9						
STKA				LR	LR	00 23 39.4	
	comp=Z,171nm,19.6s,baz=342,slow=39						
STKA	Stephens Creek	28.33	167	lAmb	lAmb	00 11 11.9	
	comp=Z,1.4nm,1.2s						
NJ2	Nanjing	38.97	339	eP	P	00 12 42.4	+1.5
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
MJAR	Matsushiro Arr	40.72	5	LR	LR	00 26 37.6	
	comp=Z,47nm,20.5s,baz=320,slow=32						
CMAR	Chiang Mai Arr	41.53	304	P	P	00 13 02.0	-0.3
	comp=Z,0.9nm,0.5s,baz=125,slow=7.5,SNR=6.0						
KSRS	Korea Array	41.90	352	LR	LR	00 27 18.5	
	comp=Z,67nm,21.6s,baz=192,slow=32						
LZH	Lanzhou	49.22	327	eP	P	00 14 05.3	+2.0
LZH				pmax	pmax		
	comp=Z,14nm,1.4s						
HHC	Hu-ho-hao-te	49.47	337	eP	P	00 14 05.5	+0.5
HHC				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.5s						
KLR	Kul'dur	53.29	358	LR	LR	00 36 39.9	
	comp=Z,34nm,19.1s,baz=178,slow=36						
SONM	Songino Array	57.35	338	P	P	00 15 02.4	-0.5
	comp=Z,0.4nm,0.5s,baz=139,slow=6.8,SNR=2.6						
SONM	Songino Array	57.35	338	P	P	00 15 01.4	-1.4
WMQ	Urumqi	63.57	324	eP	P	00 15 46.8	+1.4
MK31	Makanchi Array	68.40	324	P	P	00 16 16.2	-0.2
MK31				lAmb	lAmb	00 16 18.1	
	comp=Z,6.2nm,1.1s						
MKAR	Makanchi Array	68.40	324	P	P	00 16 17.0	+0.6
	comp=Z,4.3nm,0.8s,baz=124,slow=8.1,SNR=27						
MKAR	Makanchi Array	68.40	324	P	P	00 16 16.6	+0.3
MAKZ	Makanchi	68.59	324	P	P	00 16 17.6	+0.1
MAKZ				lAmb	lAmb	00 16 19.2	
	comp=Z,8.9nm,1.0s						
KSH	Kashi	69.01	315	eP	P	00 16 22.7	+2.2
KSH				pmax	pmax		
	comp=Z,220nm,5.1s						
ZALV	Zalesovo Beam	71.12	332	P	P	00 16 31.9	-1.1
	comp=Z,1.3nm,0.8s,baz=108,slow=4.8,SNR=7.0						
ZALV	Zalesovo Beam	71.12	332	P	P	00 16 32.0	-0.9
KURK	Kurchatov	72.51	327	P	P	00 16 41.1	-0.3
KURK				lAmb	lAmb	00 16 42.6	
	comp=Z,5.4nm,1.0s						
BTK	Batken	72.88	314	P	P	00 16 44.0	0.0
BTK				lAmb	lAmb	00 16 45.9	
	comp=Z,12nm,1.4s						
KKAR	Karatay Array	74.20	317	P	P	00 16 51.9	+0.4
VNDA	Vanda	74.69	174	P	P	00 16 54.5	+0.7
	comp=Z,0.6nm,0.8s,baz=295,slow=7.0,SNR=4.4						
VNDA				LR	LR	00 48 06.7	
	comp=Z,70nm,20.1s,baz=248,slow=34						
BVAR	Borovoye Array	78.10	326	P	P	00 17 13.3	-0.3
	comp=Z,2.6nm,0.9s,baz=240,slow=26,SNR=11						
BRVK	Borovoye	78.17	326	P	P	00 17 13.8	-0.1
BRVK				lAmb	lAmb	00 17 15.1	
	comp=Z,5.0nm,0.9s						
CNBA	Chernabura Isl	79.96	32	P	P	00 17 23.4	-0.2
NRIK	Noril'sk	79.99	345	LR	LR	00 55 16.6	
	comp=Z,65nm,18.9s,baz=197,slow=38						
UOSS	Minazif	81.06	296	P	P	00 17 28.2	-2.0
UOSS				lAmb	lAmb	00 17 32.6	
	comp=Z,9.8nm,1.4s						
GEYT	Alibeck	81.78	309	P	P	00 17 33.2	-0.7
	comp=Z,3.6nm,0.7s,baz=99,slow=4.7,SNR=7.2						
GEYT				LR	LR	00 59 49.3	
	comp=Z,162nm,19.2s,baz=205,slow=40						
GEYT	Alibeck	81.78	309	P	P	00 17 33.9	0.0
GYA0B	ALIBECK ARRAY	81.78	309	P	P	00 17 33.3	-0.5
ABKAR	Akbulak array	83.08	321	P	P	00 17 39.1	-1.2
ABKAR	Akbulak array	83.08	321	P	P	00 17 39.9	-0.4
SVW2	Sparrevohn	84.20	27	P	P	00 17 45.7	-0.1
AKTO	Aktyubinsk	84.58	321	P	P	00 17 47.9	0.0
	comp=Z,2.1nm,0.9s,baz=111,slow=10,SNR=4.1						
IMAR	Indian Mountai	86.57	23	P	P	00 17 56.0	-1.5
BWN	Browne	87.80	25	P	P	00 18 04.4	+0.9
ILAR	Eielson Array	89.03	25	P	P	00 18 09.1	-0.2
	comp=Z,0.5nm,0.7s,baz=274,slow=3.7,SNR=5.4						
BMAR	Burnt Mountain	90.45	22	P	P	00 18 11.2	-4.8
CTGM	Chitina Glacie	90.91	29	P	P	00 18 17.1	-1.3
YKU2	Yakutat	91.58	31	P	P	00 18 18.7	-2.6
TORD	Torodi Ar. Bea	132.43	284	PKP	PKPdf	00 24 28.3	-1.8
	comp=Z,0.5nm,0.8s,baz=90,slow=2.9,SNR=2.2						
CPUP	Villa Florida	147.59	160	PKPbc	PKPbc	00 24 59.2	-0.5
	comp=Z,1.8nm,0.8s,baz=173,slow=0.7,SNR=4.0						
LPAZ	La Paz	149.84	133	PKPbc	PKPbc	00 25 06.5	-0.1
	comp=Z,3.5nm,1.1s,baz=229,slow=1.2,SNR=7.2						
LPAZ	La Paz	149.84	133		PKiKP	00 25 08.8	+1.2
ROSC	El Rosal	151.43	88	PKPbc	PKPbc	00 25 09.6	-0.6
	comp=Z,11nm,0.7s,baz=18,slow=11,SNR=4.3						

*ISK **11** 00:31:26.1,38.64N×43.18E,h5km,ML2.3/16*
*ATA **11** 00:31:26.7±0.8,38.61N×43.18E,h10km±9km,ML2.0, MW3.6*
*DDA **11** 00:31:27.3,38.62N×43.19E,h7km±3km,ML2.3*
ISC 11 00:31:27.7±0.9,38°61N±0.02×43°20E±0.02,h15km±7km, n39,σ0°86/57,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.15	95	PG	Pg	00 31 31.6	0.0
VANB				SG	Sb	00 31 35.5	+0.2
TVAN	Van	0.18	116	eP	Pg	00 31 31.6	-0.6
TVAN				eS	Sb	00 31 35.3	-1.0
TVAN				IAML		00 31 35.9	
	comp=Z,562nm,0.3s						
TVAN	Van	0.18	116	i P	Pg	00 31 31.6	-0.6
TVAN				IAML		00 31 35.0	
	comp=E,2µm,0.4s						
TVAN				i S	Sg	00 31 35.1	0.0
TVAN				IAML		00 31 36.0	
	comp=N,1µm,0.4s						
GEVA	Gevas	0.32	201	eP	Pg	00 31 34.3	-0.1
GEVA				IAML		00 31 43.3	
	comp=Z,348nm,0.6s						
GEVA	Gevas	0.32	201	i P	Pg	00 31 34.4	+0.1
GEVA				i S	Sb	00 31 41.0	+0.8
GEVA				IAML		00 31 42.0	
	comp=N,598nm,0.6s						
GEVA				IAML		00 31 42.0	
	comp=E,438nm,0.4s						
AKDM	Akdamar-Van	0.33	212	PG	Pg	00 31 34.2	-0.4
ADCV	BITLIS_Adilcev	0.42	298	i P	Pg	00 31 35.3	-1.0
ADCV				i S	Sg	00 31 42.4	+0.3
ADCV				IAML		00 31 44.0	
	comp=N,389nm,0.2s						
ADCV				IAML		00 31 45.0	
	comp=E,279nm,0.2s						
VMUR	Van-Muradiye	0.48	37	i P	Pg	00 31 36.9	-0.4
VMUR				i S	Sb	00 31 44.6	-0.3
VMUR				IAML		00 31 46.0	
	comp=E,394nm,0.6s						
VMUR				IAML		00 31 46.0	
	comp=N,458nm,0.3s						
MLAZ	Malazgirt-MUS	0.74	316	PG	Pg	00 31 40.9	-1.2
CLDR	Caldiran	0.77	46	PG	Pg	00 31 41.8	-1.0
CLDR				SG	Sb	00 31 53.8	+0.3
CLDR	Caldiran	0.77	46	i P	Pg	00 31 41.1	-1.7
CLDR				i S	Sb	00 31 53.3	-0.2
CLDR				IAML		00 31 55.0	
	comp=E,63nm,0.3s						
CLDR				IAML		00 31 56.0	
	comp=N,52nm,0.3s						
BASK	Baskale_VAN	0.84	131	eP	Pg	00 31 43.4	-0.6
BASK				eS	Sn	00 31 56.6	-0.8
BASK				IAML		00 32 00.6	
	comp=Z,25nm,0.4s						
BASK	Baskale_VAN	0.84	131	i P	Pg	00 31 42.8	-1.2
BLIS	Bitlis-Merkez	0.88	258	i P	Pg	00 31 43.4	-1.3
BLIS				eS	Sg	00 31 56.4	+0.2
BLIS				IAML		00 31 59.0	
	comp=Z,59nm,0.3s						
BLIS	Bitlis-Merkez	0.88	258	i P	Pg	00 31 43.8	-0.9
BLIS				i S	Sg	00 31 55.0	-1.2

GNI	**Garni**	**1.95**	**37**	PN	**Pn**	**00 32 01.1 +0.7**
BNGB	**Bingl**	**2.01**	**282**	PN	**Pn**	**00 32 02.1 +0.9**
KARS	**Kars**	**2.02**	**357**	PN	**Pn**	**00 32 01.9 +0.5**
SENK	**Senkaya-Erzuru**	**2.06**	**342**	PN	**Pn**	**00 32 02.3 +0.3**
YEDI	**Yedisu-Bingol**	**2.23**	**293**	PN	**Pn**	**00 32 05.1 +0.8**

*IDC **11** 00:34:01.3±14.0, 20°.01S×175°.61W, h118km±122km, mb3.8/7, mb1 4.1/7, mb1mx3.6/37, mbtmp4.1/7, Error ellipse: s-maj=55.6km s-min=33.4km az=140.0*
*NEIC **11** 00:34:05.1±1.3, 20°.1S×175°.61W±0°.07, h152km±7km, mb4.4/19, Error ellipse: s-maj=15.8km s-min=8.9km az=159.0*

ISC 11 00:34:05.0±0.5, **20°.07S**±0°.08×**175°.59W**±0°.06, **h150**km, **n41**, σ0**s93**/40, **mb4.3**/14, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.43**	**80**		**Pn**	**00 35 26.4**	**+2.2**
NIUE				Sn	**Sn**	**00 36 24.9**	**-1.1**
MSVF	**Nonsavu**	**6.45**	**290**	Pn	**Pn**	**00 35 38.5**	**+0.6**
AFI	**Afiamalu**	**7.13**	**31**	Pn	**Pn**	**00 35 47.1**	**+0.1**
RAO	**Raoul Island**	**9.38**	**193**	Pn	**Pn**	**00 36 17.0**	**+0.1**
FUNA	**Funafuti**	**12.54**	**336**	Pn	**Pn**	**00 36 59.4**	**+1.1**
RAR	**Rarotonga**	**14.85**	**97**		**P**	**00 37 29.2**	**-0.5**
DZM	**Mont Dzumac**	**16.89**	**260**	P	**Pn**	**00 37 55.3**	**+2.6**
	2.4nm,0.3s,baz=78,slow=20,SNR=29						
DZM	**Mont Dzumac**	**16.89**	**260**	P	**P**	**00 37 51.4**	**-0.9**
SANVU	**Saraoutou**	**17.02**	**283**	P	**P**	**00 37 52.2**	**-1.4**
SANVU				IAmb	IAmb	00 38 00.2	
	comp=Z,25nm,0.8s						
MXZ	**Matakaoa Point**	**18.22**	**196**	P	**P**	**00 38 06.8**	**+0.1**
URZ	**Urewera**	**19.20**	**198**	P	**P**	**00 38 17.1**	**-0.1**
URZ				IAmb	IAmb	00 38 30.7	
	comp=Z,11nm,1.0s						
BKZ	**Black Stump Fm**	**20.22**	**198**	P	**P**	**00 38 28.3**	**-0.1**
MSWZ	**Moikau Station**	**22.66**	**198**	P	**P**	**00 38 51.7**	**-1.9**
THZ	**Tophouse**	**23.73**	**202**	P	**P**	**00 39 03.9**	**+0.5**
THZ				IAmb	IAmb	00 39 07.9	
	comp=Z,12nm,1.1s						
RPZ	**Rata Peaks**	**26.09**	**202**	P	**P**	**00 39 24.1**	**-0.7**
FOZ	**Fox Glacier**	**26.40**	**204**	P	**P**	**00 39 28.3**	**+0.8**
EIDS	**Eidsvold**	**31.14**	**254**	P	**P**	**00 40 10.1**	**+0.3**
EIDS				IAmb	IAmb	00 40 11.0	
	comp=Z,4.5nm,0.8s						
CTA	**Charters Tower**	**35.78**	**263**	P	**P**	**00 40 49.6**	**-0.4**
	comp=Z,4.3nm,0.5s,baz=80,slow=10,SNR=8.9						
CTAO	**Charters Tower**	**35.78**	**263**	P	**P**	**00 40 49.9**	**-0.2**
CTAO				IAmb	IAmb	00 40 52.0	
	comp=Z,4.7nm,0.7s						
BBOO	**Buckleboo**	**44.76**	**243**	P	**P**	**00 42 03.4**	**-0.3**
BBOO				IAmb	IAmb	00 42 13.6	
	comp=Z,14nm,1.1s						
WR0	**Warramunga Arr**	**46.71**	**261**	P	**P**	**00 42 18.9**	**-0.4**
AS31	**Alice Springs**	**46.82**	**256**	P	**P**	**00 42 20.2**	**+0.1**
AS31				IAmb	IAmb	00 42 21.3	
	comp=Z,2.9nm,0.7s						
ASAR	**Alice Springs**	**46.82**	**256**	P	**P**	**00 42 19.7**	**-0.4**
	comp=Z,11nm,0.7s,baz=89,slow=8.4,SNR=101						
ASAR				PcP	**PcP**	**00 43 50.8**	**0.0**
	comp=Z,0.3nm,0.4s,baz=86,slow=3.6,SNR=2.4						
ASAR	**Alice Springs**	**46.82**	**256**	P	**P**	**00 42 19.4**	**-0.6**
WB0	**Warramunga Arr**	**46.88**	**261**	P	**P**	**00 42 19.8**	**-0.7**
WB0				IAmb	IAmb	00 42 20.6	
	comp=Z,4.5nm,0.7s						
WB2	**Warramunga Arr**	**46.89**	**261**	P	**P**	**00 42 19.5**	**-1.1**
WRA	**Warramunga Arr**	**46.90**	**261**	P	**P**	**00 42 19.4**	**-1.4**
	comp=Z,2.2nm,0.6s,baz=95,slow=5.3,SNR=53						
WRA	**Warramunga Arr**	**46.90**	**261**	P	**P**	**00 42 19.1**	**-1.6**
MTN	**Manton Dam**	**51.42**	**269**	P	**P**	**00 42 54.7**	**-0.4**
MTN				IAmb	IAmb	00 42 55.2	
	comp=Z,8.8nm,0.8s						
KNRA	**Kununurra**	**52.95**	**265**	P	**P**	**00 43 06.1**	**-0.3**
KNRA				IAmb	IAmb	00 43 12.9	
	comp=Z,7.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**55.33**	**261**	P	**P**	**00 43 22.9**	**-0.7**
NVAR	**Mina Array Bea**	**79.17**	**42**	P	**P**	**00 45 53.4**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=220,slow=8.3,SNR=3.8						
H03S2	**Juan Fernandez**	**84.36**	**124**	T	T	02 19 07.7	
	baz=248,slow=75,SNR=6.5						
H03S1	**Juan Fernandez**	**84.37**	**124**	T	T	02 19 08.5	
	baz=248,slow=75,SNR=6.5						
H03S3	**Juan Fernandez**	**84.38**	**124**	T	T	02 19 09.5	
	baz=248,slow=75,SNR=3.5						
ILAR	**Eielson Array**	**87.41**	**12**	P	**P**	**00 46 34.6**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=213,slow=5.0,SNR=5.2						
SNAA	**Sanae**	**88.36**	**178**	P	**P**	**00 46 39.8**	**+0.2**
	comp=Z,0.9nm,1.0s,baz=160,slow=8.0,SNR=2.0						
CMAR	**Chiang Mai Arr**	**92.11**	**289**	P	**P**	**00 46 58.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=92,slow=2.1,SNR=4.7						
ARCES	**ARCESS Array B**	**128.89**	**351**	PKP	**PKPdf**	**00 52 53.7**	**-0.4**
	comp=Z,2.6nm,1.0s,baz=7.0,slow=5.0,SNR=4.2						
CLL	**Collm**	**148.10**	**350**	*e*PKPbc	**PKPbc**	**00 53 32.0**	**-0.9**
GERES	**GERESS Array B**	**150.33**	**348**	PKPbc	**PKPbc**	**00 53 38.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=48,slow=2.0,SNR=6.0						

*NNC **11** 00:41:01.5±0.5, 43°.16N×70°.19E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=4.0km s-min=1.7km az=168.0*
*SOME **11** 00:41:01.0, 43°.18N×70°.18E, h15km*
*KRNET **11** 00:41:03.2±0.1, 42°.73N×70°.33E, h13km, mb3.1*

ISC 11 00:41:02.1±0.9, **43°.10N**±0°.04×**70°.21E**±0°.03, **h15**km±5km, **n65**, σ2**s27**/107, **39C-21D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK08	**Karatay Array**	**0.20**	**88**	⇑P	**Pg**	**00 41 06.4**	**-0.5**
KK08				⇑S	**Sg**	**00 41 09.4**	**-0.7**
KK03	**Karatay Array**	**0.21**	**89**	⇑P	**Pg**	**00 41 06.5**	**-0.5**
KK03				⇓S	**Sg**	**00 41 09.6**	**-0.8**
KK07	**Karatay Array**	**0.21**	**93**	⇑P	**Pg**	**00 41 06.6**	**-0.5**
KK07				⇑S	**Sg**	**00 41 09.7**	**-0.7**
KK09	**Karatay Array**	**0.21**	**84**	⇑P	**Pg**	**00 41 06.5**	**-0.5**
KK09				⇓S	**Sg**	**00 41 09.6**	**-0.8**
KK01	**Karatay Array**	**0.22**	**88**	⇑P	**Pg**	**00 41 06.6**	**-0.5**
KK01				⇓S	**Sg**	**00 41 09.7**	**-0.8**
KK04	**Karatay Array**	**0.22**	**87**	⇑P	**Pg**	**00 41 06.6**	**-0.5**
KK04				⇑S	**Sg**	**00 41 09.6**	**-0.9**
KK02	**Karatay Array**	**0.22**	**89**	⇑P	**Pg**	**00 41 06.7**	**-0.5**
KK02				⇓S	**Sg**	**00 41 09.7**	**-0.9**
KK31	**Karatay Array**	**0.22**	**89**	⇑P	**Pg**	**00 41 06.7**	**-0.5**
	9.2nm,0.2s,baz=269,slow=16,SNR=3820						
KK31				⇓S	**Sg**	**00 41 09.7**	**-0.9**
	153nm,0.2s						
KK05	**Karatay Array**	**0.23**	**85**	⇑P	**Pg**	**00 41 06.8**	**-0.5**
KK05				⇑S	**Sg**	**00 41 10.0**	**-0.9**
KK06	**Karatay Array**	**0.23**	**91**	⇑P	**Pg**	**00 41 06.8**	**-0.5**
KK06				⇑S	**Sg**	**00 41 10.0**	**-0.9**
BRLS	**Borolday**	**0.28**	**256**	*e*P	**Pn**	**00 41 11.1**	**-0.7**
	baz=79						
BRLS				*e*S	**Sn**	**00 41 18.0**	**+0.2**
	baz=79						
BRLS	**Borolday**	**0.28**	**256**	*e*P	**Pn**	**00 41 11.1**	**-0.7**
	12nm,0.2s						
BRLS				*e*S	**Sn**	**00 41 18.0**	**+0.2**
	214nm,0.2s						
BRLS	**Borolday**	**0.28**	**256**	P	**Pn**	**00 41 11.1**	**-0.7**
	12nm,0.2s						
BRLS				S	**Sn**	**00 41 18.0**	**+0.2**
	214nm,0.2s						
DZA	**Taraz**	**0.85**	**104**	*e*P	**Pg**	**00 41 17.8**	**-0.8**
	baz=77						
DZA				*e*S	**Sg**	**00 41 30.0**	**+0.2**
	baz=77						
DZA	**Taraz**	**0.85**	**104**	*e*P	**Pg**	**00 41 17.8**	**-0.8**
	58nm,0.1s						
DZA				*e*S	**Sg**	**00 41 30.0**	**+0.2**
	306nm,0.2s						
DZA	**Taraz**	**0.85**	**104**	P	**Pg**	**00 41 17.8**	**-0.8**
	58nm,0.1s						
DZA				S	**Sg**	**00 41 30.0**	**+0.2**
	306nm,0.2s						
CHM	**Chimkent**	**0.90**	**210**	*e*P	**Pg**	**00 41 19.5**	**-0.1**
	5.5nm,0.5s						
CHM				*e*S	**Sb**	**00 41 32.9**	**+1.6**
	244nm,0.4s						
IUG	**Iuzhnay**	**0.96**	**188**	*e*P	**Pb**	**00 41 20.4**	**-0.1**
	17nm,0.3s						
IUG				*e*S	**Sg**	**00 41 34.6**	**+1.3**
	125nm,0.2s						
IUG	**Iuzhnay**	**0.96**	**188**	P	**Pb**	**00 41 20.4**	**-0.1**
	17nm,0.3s						
IUG				S	**Sg**	**00 41 34.6**	**+1.3**
	125nm,0.2s						
MNAS	**Manas**	**1.80**	**109**	⇑*i*P	**Pn**	**00 41 33.7**	**+1.0**
	baz=98						
MNAS				⇑*i*S	**Sn**	**00 41 56.8**	**+1.5**
	baz=98						
MRKS	**Merke**	**2.25**	**98**	*e*P	**Pb**	**00 41 42.2**	**-0.2**
	9.9nm,0.1s						
MRKS				*e*S	**Sb**	**00 42 12.4**	**+2.4**
	18nm,0.3s						
MRKS	**Merke**	**2.25**	**98**	Pg	**Pb**	**00 41 42.2**	**-0.2**
	9.9nm,0.1s						
MRKS				Lg	Lg	00 42 12.4	
	18nm,0.3s						
EKS2	**Erkin-Say**	**2.66**	**98**	⇑*i*P	**Pb**	**00 41 48.0**	**-1.5**
	baz=90						
EKS2				⇑*i*S	**Sb**	**00 42 20.9**	**-1.1**
	baz=90						
EKS2	**Erkin-Say**	**2.66**	**98**	P	**Pb**	**00 41 50.2**	**+0.7**
	SNR=20						
ARSB	**Arslanbob**	**2.72**	**130**	⇓*i*P	**Pn**	**00 41 46.2**	**+0.8**
	baz=24						
ARSB				⇓*i*S	**Sn**	**00 42 17.3**	**-0.8**
	baz=24						
AML	**Almayashu**	**2.75**	**109**	⇓*i*P	**Pn**	**00 41 48.7**	**+2.7**
	baz=2.0						
AML				⇓*i*S	**Sn**	**00 42 22.0**	**+2.8**
	baz=2.0						
AML	**Almayashu**	**2.75**	**109**	P	**Pb**	**00 41 52.5**	**+1.3**
	SNR=9.2						
BTK	**Batken**	**3.07**	**171**	⇑*i*P	**Pn**	**00 41 49.8**	**-0.4**
	baz=72						
BTK				⇑*i*S	**Sn**	**00 42 24.6**	**-2.1**
	baz=72						
USP	**Ospenovka**	**3.14**	**85**	⇓*i*P	**Pb**	**00 41 55.6**	**-2.1**
	baz=79						
USP				⇓*i*S	**Sb**	**00 42 33.8**	**-2.0**
	baz=79						
USP	**Ospenovka**	**3.14**	**85**	P	**Pb**	**00 41 58.3**	**+0.6**
	SNR=13						
AAK	**Ala-Archa**	**3.18**	**97**	⇓*i*P	**Pb**	**00 41 55.2**	**-3.3**
	baz=90						
AAK				⇓*i*S	**Sn**	**00 42 33.6**	**+4.0**
	baz=90						
AAK	**Ala-Archa**	**3.18**	**97**	P	**Pb**	**00 41 59.0**	**+0.5**
	SNR=8.8						
AAK	**Ala-Archa**	**3.18**	**97**	⇑Pg	**Pb**	**00 41 58.9**	**+0.5**
	3.6nm,0.5s						
AAK				⇓Lg	Lg	00 42 42.6	
	19nm,0.6s						
OHH	**Osh**	**3.21**	**142**	⇑*i*P	**Pn**	**00 41 52.0**	**-0.1**
	baz=39						
OHH				⇑*i*S	**Sn**	**00 42 29.0**	**-1.2**
	baz=39						
SGDS	**Sogindy**	**3.25**	**82**	Pg	**Pb**	**00 41 59.7**	**+0.1**
	3.7nm,0.2s						
SGDS				Lg	Lg	00 42 42.4	
	11nm,0.4s						
FRU1	**Bishkek**	**3.26**	**94**	⇑*i*P	**Pb**	**00 41 56.4**	**-3.3**
	baz=87						
FRU1				⇑*i*S	**Sb**	**00 42 35.6**	**-3.6**
	baz=87						
ARLS	**Aral**	**3.29**	**111**	⇑*i*P	**Pn**	**00 41 55.3**	**+2.1**
	baz=5.0						
ARLS				⇑*i*S	**Sn**	**00 42 34.2**	**+2.1**
	baz=5.0						
UCH	**Uchtor**	**3.29**	**104**	⇑*e*P	**Pn**	**00 41 56.5**	**+2.9**
	baz=98						
UCH				⇑*i*S	**Sn**	**00 42 35.7**	**+3.1**
	baz=98						
CHMS	**Chumysh**	**3.33**	**90**	⇑*i*P	**Pb**	**00 41 57.7**	**-3.2**
	baz=84						
CHMS				⇑*i*S	**Sb**	**00 42 37.5**	**-3.8**
	baz=84						
CHMS	**Chumysh**	**3.33**	**90**	P	**Pb**	**00 42 02.1**	**+1.2**
	SNR=8.9						
KBK	**Karagaybulak**	**3.51**	**96**	⇓*i*P	**Pn**	**00 41 59.7**	**+3.4**
	baz=90						
KBK				⇓*i*S	**Sn**	**00 42 41.7**	**+4.0**
	baz=90						
KBK	**Karagaybulak**	**3.51**	**96**	P	**Pg**	**00 42 06.9**	**-2.5**
	SNR=5.6						
SFK	**Sufi-Kurgan**	**3.95**	**140**	⇑*e*P	**Pn**	**00 42 02.7**	**+0.3**
	baz=37						
SFK				⇑*i*S	**Sn**	**00 42 46.9**	**-1.7**
	baz=37						
TKM2	**Tokmak 2**	**3.96**	**91**	⇑*i*P	**Pn**	**00 42 06.3**	**+3.8**
	baz=85						
TKM2				⇑*i*S	**Sn**	**00 42 53.0**	**+4.3**
	baz=85						
TKM2	**Tokmak 2**	**3.96**	**91**	P	**Pb**	**00 42 11.0**	**-0.7**
	SNR=9.7						
TKM2	**Tokmak 2**	**3.96**	**91**	⇑Pg	**Pb**	**00 42 14.2**	**+2.5**
	3.9nm,0.5s						
TKM2				⇓Lg	Lg	00 43 08.2	
	6.2nm,0.6s						
KRBS	**Karabastau**	**4.03**	**80**	*e*P	**Pb**	**00 42 14.7**	**+1.9**
	9.0nm,0.5s						
KRBS				*e*S	**Sg**	**00 43 07.3**	**-4.2**
	16nm,0.4s						
KRBS	**Karabastau**	**4.03**	**80**	Pg	**Pb**	**00 42 14.7**	**+1.9**
	9.0nm,0.5s						
KRBS				Lg	Lg	00 43 07.3	
	16nm,0.4s						
DGS	**Degeres**	**4.07**	**86**	*e*P	**Pb**	**00 42 14.8**	**+1.2**
	2.5nm,0.4s						
DGS				*e*S	**Sb**	**00 43 07.5**	**+4.9**
	8.1nm,0.6s						
KST	**Kastek**	**4.22**	**89**	*e*P	**Pb**	**00 42 17.6**	**+1.5**
	3.4nm,0.4s						
KST				*e*S	**Sg**	**00 43 12.7**	**-4.8**
	11nm,0.6s						
KST	**Kastek**	**4.22**	**89**	Pg	**Pb**	**00 42 17.6**	**+1.5**
	3.4nm,0.4s						
KST				Lg	Lg	00 43 12.7	
	11nm,0.6s						
BOOM	**Boomskoye usch**	**4.26**	**96**	⇓*i*P	**Pn**	**00 42 10.4**	**+3.8**
	baz=91						
BOOM				⇓*i*S	**Sn**	**00 42 59.8**	**+3.6**
	baz=91						
KUU	**Kurty**	**4.53**	**78**	*e*P	**Pb**	**00 42 24.4**	**+3.1**
	4.5nm,0.3s						
KUU				*e*S	**Sg**	**00 43 23.8**	**-3.7**
	14nm,0.5s						
KUU	**Kurty**	**4.53**	**78**	Pg	**Pb**	**00 42 24.4**	**+3.1**
	4.5nm,0.3s						
KUU				Lg	Lg	00 43 23.8	
	14nm,0.5s						
IZV	**Izvestkoviy**	**4.69**	**89**	*e*P	**Pb**	**00 42 26.0**	**+1.8**
	0.8nm,0.3s						
IZV				*e*S	**Sg**	**00 43 27.2**	**-5.6**
	11nm,0.6s						
IZV	**Izvestkoviy**	**4.69**	**89**	Pg	**Pg**	**00 42 30.6**	**-1.4**
	3.7nm,0.4s						
IZV				Lg	Lg	00 43 34.5	
	11nm,0.6s						
KTBS	**Karatobe**	**4.76**	**80**	*e*P	**Pb**	**00 42 27.5**	**+2.3**
	1.6nm,0.4s						
KTBS				*e*S	**Sg**	**00 43 29.3**	**-5.5**
	15nm,0.7s						
TNSS	**Tian-Shan**	**4.94**	**88**	*e*P	**Pb**	**00 42 32.2**	**+3.7**
	2.5nm,0.4s						
TNSS				*e*S	**Sg**	**00 43 37.5**	**-3.2**
	3.5nm,0.7s						
TNSS	**Tian-Shan**	**4.94**	**88**	Pg	**Pb**	**00 42 32.2**	**+3.7**
	2.5nm,0.4s						
TNSS				Lg	Lg	00 43 37.4	
	3.5nm,0.7s						
MDOK	**Medeo**	**5.01**	**87**	*e*P	**Pb**	**00 42 33.2**	**+3.7**
	4.9nm,0.8s						
MDOK				*e*S	**Sg**	**00 43 40.5**	**-2.4**
	6.9nm,0.6s						
MDOK	**Medeo**	**5.01**	**87**	Pg	**Pg**	**00 42 34.0**	**-4.0**
	4.9nm,0.8s						
MDOK				Lg	Lg	00 43 40.5	
	6.9nm,0.6s						
PDGK	**Podgornoye**	**6.79**	**85**	⇓Lg	Lg	00 44 36.5	
	5.5nm,1.0s						
MK31	**Makanchi Array**	**9.33**	**63**	⇑Pn	**Pn**	**00 43 16.8**	**+0.8**
	0.2nm,0.5s,baz=246,slow=14,SNR=5.1						
MK31				⇓Lg	Lg	00 45 56.2	
	3.8nm,1.1s						
AB31	**Akbulak array**	**9.41**	**314**	Pn	**Pn**	**00 43 16.1**	**-0.9**
	0.2nm,0.4s,baz=123,slow=14,SNR=5.9						
KURBB	**Kurchatov Arra**	**9.44**	**34**	⇑Lg	Lg	00 46 02.0	
	10nm,1.1s						

*NIC **11** 00:49:21.6±0.0, 34°.65N×33°.43E, h17km±1km, Ml2.6/6*
*DDA **11** 00:49:23.1, 34°.85N×33°.41E, h34km±1km, ML2.1*

*GII **11** 00:49:24.5±0.0, 34°.58N×33°.35E, h40km, Mm2.1/2*

ISC 11 00:49:21.9±1.1, **34°.68N**±0°.03×**33°.44E**±0°.03, **h17**km±8km, **n34**, σ1**s01**/50, **5D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASGA	**Asgata**	**0.19**	**305**	⇓P	**Pb**	**00 49 26.8**	**-0.1**
ASGA				AML	AML	00 49 30.1	
	11nm,0.3s						
ASGA				AML	AML	00 49 30.1	
	11nm,0.3s						
ASGA				S	**Sb**	**00 49 30.3**	**0.0**
ASGA				AML	AML	00 49 30.9	
	7.3nm,0.4s						
ASGA				AML	AML	00 49 30.9	
	7.3nm,0.4s						
CSS	**Mathiatis**	**0.30**	**343**	⇓P	**Pg**	**00 49 28.4**	**+0.1**
CSS				S	**Sg**	**00 49 33.2**	**+0.4**
MVOU	**Mavrovouni**	**0.38**	**25**	P	**Pg**	**00 49 30.0**	**+0.3**
MVOU				AML	AML	00 49 39.3	
	1.3nm,0.5s						
MVOU				AML	AML	00 49 39.6	
	1.6nm,0.5s						
ATHAL	**Athalassa**	**0.47**	**356**	P	**Pb**	**00 49 32.0**	**+0.4**
ATHAL				S	**Sb**	**00 49 39.0**	**+0.8**
SZAC	**Souni**	**0.47**	**280**	⇓P	**Pg**	**00 49 31.0**	**-0.3**
SZAC				S	**Sb**	**00 49 38.3**	**+0.1**
SZAC				AML	AML	00 49 39.4	
	1.2nm,0.2s						
SZAC				AML	AML	00 49 39.4	
	1.2nm,0.2s						
SZAC				AML	AML	00 49 39.5	
	2.0nm,0.3s						
SZAC				AML	AML	00 49 39.5	
	2.0nm,0.3s						
LEF	**Lefka**	**0.63**	**315**	*i* P	**Pb**	**00 49 34.5**	**+0.1**
LEF				*i* S	**Sb**	**00 49 43.4**	**+0.4**
LEF				IAML		00 49 50.0	
	comp=N,87nm,0.6s						
LEF				IAML		00 49 56.0	
	comp=E,89nm,0.6s						
NATA	**Nata**	**0.72**	**278**	⇓P	**Pg**	**00 49 36.0**	**0.0**
NATA				S	**Sn**	**00 49 47.3**	**-0.6**
NATA				AML	AML	00 49 51.1	
	comp=E,0.8nm,0.3s						
NATA				AML	AML	00 49 51.1	
	comp=E,0.8nm,0.3s						
NATA				AML	AML	00 49 51.2	
	comp=E,1.5nm,1.0s						
NATA				AML	AML	00 49 51.2	
	comp=E,1.5nm,1.0s						
ALFC	**Alefka**	**0.84**	**305**	P	**Pb**	**00 49 37.8**	**-0.2**
ALFC				S	**Sn**	**00 49 50.6**	**-0.3**
ALFC				AML	AML	00 49 50.8	
	comp=E,1.1nm,0.4s						
ALFC				AML	AML	00 49 50.8	
	comp=E,1.1nm,0.4s						
ALFC				AML	AML	00 49 53.0	
	comp=E,1.2nm,0.3s						
ALFC				AML	AML	00 49 53.0	
	comp=E,1.2nm,0.3s						
AKMS	**Akamas**	**0.97**	**291**	⇓P	**Pb**	**00 49 39.8**	**-0.4**
AKMS				S	**Sn**	**00 49 54.7**	**+0.7**
AKMS				AML	AML	00 49 57.6	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	00 49 57.6	
	comp=E,0.4nm,0.5s						
AKMS				AML	AML	00 50 00.2	
	comp=E,0.7nm,0.3s						
AKMS				AML	AML	00 50 00.2	
	comp=E,0.7nm,0.3s						
GULN	**MERSIN_Gulnar**	**1.51**	**3**	*i* P	**Pn**	**00 49 47.8**	**-0.2**
GULN				*i* S	**Sn**	**00 50 06.6**	**-0.6**
GAZI	**Gazipasa**	**1.81**	**330**	*i* P	**Pn**	**00 49 52.6**	**+0.4**
GAZI				*i* S	**Sn**	**00 50 12.8**	**-1.8**
GAZI				IAML		00 50 16.0	
	comp=N,20nm,0.8s						
ERMK	**Ermenek**	**2.01**	**348**	*i* P	**Pb**	**00 49 57.1**	**-0.9**
OSC1	**CSNet OBS 1**	**2.14**	**237**	P	**Pn**	**00 49 56.1**	**-0.7**
HNTI	**Hanita**	**2.15**	**137**	Pn	**Pn**	**00 49 57.4**	**+0.6**
HNTI				Sn	**Sn**	**00 50 23.1**	**0.0**
MMA0B	**Mount Meron ar**	**2.33**	**135**	Pn	**Pn**	**00 49 59.8**	**+0.4**
MMA0B				Sn	**Sn**	**00 50 27.7**	**+0.1**
GEM	**Giv'at Ha'Em**	**2.36**	**128**	Pn	**Pn**	**00 50 00.7**	**+1.0**
GEM				Sn	**Sn**	**00 50 28.6**	**+0.4**
NATI	**Neve Ativ**	**2.37**	**126**	Pn	**Pn**	**00 50 01.3**	**+1.4**
DED	**Mersin**	**2.54**	**25**	*i* P	**Pn**	**00 50 03.6**	**+1.4**
KEPZ	**Antalya-Kepez**	**2.67**	**327**	*i* P	**Pn**	**00 50 05.3**	**+1.1**
KEPZ				*i* S	**Sn**	**00 50 36.1**	**-0.1**
SHMJ	**Saham**	**2.75**	**134**	Pn	**Pn**	**00 50 06.5**	**+1.4**
MMLI	**Mount Malkishu**	**2.78**	**143**	Pn	**Pn**	**00 50 06.3**	**+0.7**
MMLI				Sn	**Sn**	**00 50 39.1**	**+0.4**
KERG	**Konya-Eregli**	**2.79**	**11**	*i* P	**Pb**	**00 50 08.8**	**-2.4**
KERG				*i* S	**Sb**	**00 50 43.5**	**-1.7**
KERG				IAML		00 50 46.0	
	comp=E,9.3nm,0.8s						
KERG				IAML		00 50 50.0	
	comp=N,14nm,0.4s						
GULE	**Gulek**	**2.82**	**22**	*i* P	**Pb**	**00 50 09.5**	**-2.3**
HMDT	**Nahal Hemdat**	**2.98**	**144**	Pn	**Pn**	**00 50 09.4**	**+1.1**
HMDT				Sn	**Sn**	**00 50 43.9**	**+0.3**
DSI	**Dead Sea**	**3.50**	**152**	Pn	**Pn**	**00 50 16.0**	**+0.6**
YTIR	**Yattir**	**3.59**	**156**	Pn	**Pn**	**00 50 18.1**	**+1.3**
DOGA	**KONYA_Doganhis**	**3.71**	**338**	*i* P	**Pn**	**00 50 21.0**	**+2.5**
YAHY	**KAYSERI_Yahyal**	**3.75**	**24**	*i* P	**Pn**	**00 50 21.2**	**+2.2**
KARJ	**KARJ**	**4.00**	**152**	Pn	Pn	00 50 12.8	-10
ZFRI	**Zfri**	**4.36**	**160**	Pn	**Pn**	**00 50 27.6**	**+0.3**
PRNI	**Paran**	**4.51**	**163**	Pn	**Pn**	**00 50 30.1**	**+0.7**
KRMI	**Paran Flat**	**4.67**	**166**	Pn	**Pn**	**00 50 32.1**	**+0.5**
MBRI	**Mt Berech**	**5.03**	**165**	Pn	**Pn**	**00 50 36.3**	**-0.2**
EIL	**Elat**	**5.15**	**165**	Pn	**Pn

IHUS **Husbondi** 0.24 181 P Pg 01 49 57.8 +0.3
baz=170 / baz=199
IDYN **Dyngjuhals** 0.28 25 P Pg 01 49 53.2 -5.0
baz=1.2
ISKR **Skrokkalda** 0.32 275 P Pb 01 49 58.9 -1.5
baz=257
IVOT **Vottur** 0.33 143 P Pg 01 49 57.9 -1.3
baz=168 / IVOT S Sg 01 50 04.2 +0.6
baz=168
IJOK **Jokulheimar** 0.34 229 P Pg 01 49 59.4 +0.2
baz=227
IIEY **Innrieyrar** 0.49 206 P Pb 01 50 02.0 -1.2
baz=210 / IIEY S Sb 01 50 11.0 +0.6
baz=210
THOR **Thorvaldshraun** 0.58 46 P Pg 01 49 58.1 -5.6
baz=47 / THOR S Sg 01 50 04.1 -7.2
baz=47
IKAL **Kalfafell** 0.59 182 P Pb 01 50 03.6 -1.3
baz=191 / IKAL S Sb 01 50 13.4 +0.2
baz=191
IKSK **Karasker** 0.63 126 P Pg 01 50 01.4 -3.4
baz=142 / IKSK S Sg 01 50 10.9 -2.1
baz=142
IVAT **Vatnsfell** 0.66 238 P Pb 01 50 05.2 -0.8
baz=235 / IVAT S Sn 01 50 16.0 -2.3
baz=235
IMKO **Mokollar** 0.71 51 P Pg 01 50 00.5 -5.8
baz=54 / IMKO S Sg 01 50 08.4 -7.3
baz=54
ISVA **Svartarkot** 0.82 11 P Pg 01 50 02.5 -5.9
baz=4.2 / ISVA S Sg 01 50 12.3 -6.8
baz=4.2
IVSH **V-Sauoahnukur** 0.87 71 P Pg 01 50 03.3 -5.9
baz=78 / IVSH S Sg 01 50 13.4 -7.1
baz=78
IHVE **Hveravellir** 0.89 293 P Pg 01 50 06.8 -2.9
baz=284
ISNB **Snabyli** 0.91 209 P Pb 01 50 09.6 -0.8
baz=211
IRJU **Rjupnafell** 1.03 207 P Pn 01 50 11.8 -1.2
baz=209
IFED **Fedgar** 1.03 241 P Pb 01 50 11.2 -1.2
baz=239
IMJO **Mjoaskard** 1.07 237 P Pn 01 50 12.3 -1.4
baz=235
IMEL **Melhnausar** 1.12 21 P Pb 01 50 07.1 -6.9
baz=18
IHVO **Lagu-Hvolar** 1.14 208 P Pn 01 50 13.4 -1.1
baz=210
IGYG **Gygjarholskot** 1.15 258 P Pg 01 50 12.4 -2.1
baz=254
IREN **Reynihlio** 1.16 15 P Pn 01 50 07.9 -6.9
baz=11
IHAU **Haukadalur** 1.16 242 P Pn 01 50 14.2 -0.6
baz=240
IKVO **Krokottuvotn** 1.23 15 P Pn 01 50 09.0 -6.8
baz=11
IALF **Alftagrof** 1.25 214 P Pg 01 50 15.1 -1.3
baz=215
IGRS **Grimsstaoir** 1.28 29 P Pn 01 50 10.6 -5.9
baz=28
IESK **Eystri-Skogar** 1.29 219 P Pg 01 50 15.6 -1.6
baz=220
IMID **Miomork** 1.32 229 P Pg 01 50 16.3 -1.5
baz=229
ISAU **Saurbar** 1.33 247 P Pn 01 50 15.3 -1.7
baz=244
ISKI **Skildingahlsh** 1.37 11 P Pn 01 50 11.4 -6.2
baz=6.7 / ISKI S Sn 01 50 27.6 -8.1
baz=6.7
IGHA **Grjothals** 1.38 17 P Pn 01 50 11.3 -6.5
baz=14 / IGHA S Sn 01 50 27.5 -8.6
baz=14
IGRA **Granastaoir** 1.39 1 P Pn 01 50 11.9 -6.0
baz=356
IHLA **Hella** 1.45 348 P Pn 01 50 13.5 -5.2
baz=342
IDIM **Dimmadalss** 1.46 11 P Pn 01 50 12.8 -6.2
baz=7.9
IASM **Asmuli** 1.48 243 P Pb 01 50 18.6 -1.5
baz=241
IHED **Heoinshofoi** 1.56 5 P Pn 01 50 14.6 -5.7
baz=1.0
ISOL **Solvholt** 1.57 249 P Pn 01 50 19.1 -1.2
baz=246
IKRO **Krokur** 1.58 255 P Pn 01 50 19.8 -0.7
baz=252
IBRE **Brettingsstaoi** 1.60 356 P Pn 01 50 15.6 -5.2
baz=352
IHEI **Heioarbar** 1.60 259 P Pn 01 50 19.6 -1.2
baz=256
BORG **Borgarnes** 1.60 279 Pg Pn 01 50 19.6 -1.2
15nm,0.3s,baz=95,slow=9.4,SNR=88 / BORG Lg Lg 01 50 43.2
16nm,0.3s,baz=248,slow=22,SNR=9.9
IVME **Vestmannaeyjar** 1.61 228 P Pb 01 50 21.2 -1.1
baz=227
IGIL **Gilhagi** 1.64 19 P Pn 01 50 15.4 -6.0
baz=16
ISIG **Siglufjorour** 1.69 342 P Pn 01 50 17.5 -4.5
baz=337
IHRN **Hraun** 1.89 328 P Pn 01 50 21.7 -3.2
baz=323
ILEI **Leirhofn** 1.94 14 P Pn 01 50 20.3 -5.2
baz=11
SCO **Scoresbysund** 6.20 346 Pn Pn 01 51 24.0 +0.1
SCO **Scoresbysund** 6.20 346 *e* Pn 01 51 20.5 -3.4
baz=153,slow=8.6
SCO *i* P Pn 01 51 23.2 -0.7
SCO *i* S Sn 01 52 39.5 +4.8
EKA **Eskdalemuir Ar** 11.71 135 Pn Pn 01 52 39.0 -0.4
baz=322,slow=14,SNR=7.6
ESK **Eskdalemuir** 11.71 135 Pn Pn 01 52 39.5 +0.2
NOA **NORSAR Array B** 13.59 92 Pn Pn 01 53 01.1 -4.0
0.0nm,0.3s,baz=300,slow=13,SNR=3.1 / NOA LR LR 01 57 39.1
comp=Z,50nm,21.1s,baz=295,slow=35
SFJD **Kangerlussuaq** 13.66 295 LR LR 01 57 57.1
comp=Z,395nm,18.0s,baz=63,slow=36
ARCES **ARCESS Array B** 17.25 54 LR LR 01 59 12.0
comp=Z,105nm,18.7s,baz=285,slow=33
FINES **FINESS Array B** 19.79 79 P P 01 54 22.3 -0.3
0.1nm,0.3s,baz=296,slow=14,SNR=2.0 / FINES LR LR 02 01 18.0
comp=Z,96nm,20.7s,baz=80,slow=35
CLL **Collm** 20.70 115 *i* P P 01 54 32.3 -0.2
comp=Z,18nm,1.5s
CLL **Collm** 20.70 115 P 01 54 30.6 -1.9
PBUR **Paburge** 21.05 95 *e*P P 01 54 35.3 -0.9
GRF **Grafenberg Arr** 21.32 120 *e*P P 01 54 39.9 +0.7
comp=Z,15nm,1.4s,baz=324,slow=10
NKC **Novy Kostel** 21.34 118 *e*P P 01 54 42.7 +3.2
VSU **Vasula** 21.64 85 *e*P P 01 54 41.6 -0.9
PABE **Paberze** 22.26 94 *e*P P 01 54 48.8 -0.4
CHVC **Chvalec** 22.47 112 *e*P P 01 54 50.7 -0.9
CHVC *ex* x 01 55 03.2
OSTC **Ostas** 22.56 112 *e*P P 01 54 39.0 -14
OSTC *ex* P 01 54 53.4 +0.8
KHC **Kasperske Hory** 22.67 118 *e*P P 01 54 56.2 +2.5
KHC *ex* x 01 55 00.7
DPC **Dobruska-Polom** 22.77 112 *e*P P 01 54 54.2 -0.5
DAVA **Damuels** 22.85 126 *e*P P 01 54 57.3 +1.5
comp=Z,8.2nm,1.4s
GERES **GERESS Array B** 22.95 118 P P 01 54 57.3 +0.6
comp=Z,1.5nm,0.9s,baz=308,slow=6.6,SNR=6.8
GERES **GERESS Array B** 22.95 118 P P 01 54 54.9 -1.8
RETA **Reutte** 22.99 124 *e*P P 01 54 56.4 -0.7
comp=Z,7.8nm,1.4s
ISAL **Salakas** 23.15 92 *e*P P 01 54 57.0 -1.6
MOTA **Moosalm** 23.24 124 *e*P P 01 55 00.2 +0.4
comp=Z,5.6nm,0.9s
TREC **Trest** 23.27 115 *e*P P 01 55 00.3 +0.4
IIGN **Ignalina** 23.34 92 *e*P P 01 54 59.8 -0.7
FETA **Feichten** 23.38 125 *e*P P 01 55 00.9 -0.3
comp=Z,7.5nm,1.3s

SQTA **Sankt Quirin** 23.38 124 *e*P P 01 55 03.0 +1.9
comp=Z,12nm,1.2s
WATA **Walderalm** 23.41 123 *e*P P 01 55 01.9 +0.4
comp=Z,7.1nm,1.2s
WTTA **Wattenberg** 23.50 123 *e*P P 01 55 03.5 +1.1
comp=Z,12nm,1.3s
IDID **Didziasalis** 23.58 92 *e*P P 01 55 02.2 -0.7
NACGM **Naroch** 23.87 93 *e* P 01 55 11.0 +5.3
MOIA **Molln** 23.98 119 *e*P P 01 55 07.3 +0.5
comp=Z,5.9nm,1.3s
ABTA **Abfaltersbach** 24.25 123 *e*P P 01 55 10.4 +0.9
comp=Z,8.9nm,1.2s
KBA **Koelnbreinsper** 24.28 121 *e*P P 01 55 10.3 +0.5
comp=Z,6.3nm,1.1s
CONA **Conrad Observa** 24.53 117 *e*P P 01 55 12.1 +0.2
comp=Z,4.0nm,1.0s
SMOL **Smolenice** 24.66 114 *e*P P 01 55 14.4 +1.3
ARSA **Arzberg** 24.95 118 *e*P P 01 55 17.0 +1.3
comp=Z,4.3nm,1.1s
LANS **Liptovska Anna** 24.98 110 *e*P P 01 55 17.7 +1.8
VYHS **Vyhne** 25.24 112 *e*P P 01 55 19.1 +0.8
SOKA **Soboth** 25.25 119 *e*P P 01 55 19.8 +1.4
comp=Z,6.1nm,1.1s
SCHQ **Schefferville** 25.98 272 P P 01 55 24.7 -0.2
comp=Z,3.7nm,0.8s,baz=44,slow=18,SNR=2.0
ESDC **Sonseca Array** 26.16 156 P P 01 55 27.2 +0.5
comp=Z,1.5nm,0.9s,baz=349,slow=8.8,SNR=7.4
ESDC **Sonseca Array** 26.16 156 P P 01 55 27.3 +0.5
KOLS **Kolonicke sedl** 26.29 107 *e*P P 01 55 28.6 +0.7
AKASG **Malin Array Be** 27.89 97 P P 01 55 40.4 -1.7
comp=Z,0.1nm,0.3s,baz=322,slow=10,SNR=4.6
AKH **Akhalkalaki** 41.31 94 P P 01 57 37.3 -0.8
A21K **Barrow** 41.53 341 P P 01 57 38.9 -0.4
TIXI **Tiksi** 42.18 15 P P 01 57 43.9 -0.6
TIXI IAmb IAmb 01 57 48.2
comp=Z,14nm,1.4s
TOLK **Toolik Lake Re** 42.84 336 P P 01 57 50.0 -0.1
TOLK IAmb IAmb 01 57 57.1
comp=Z,17nm,1.4s
FYU **Fort Yukon** 43.86 333 P P 01 57 58.7 +0.4
IL31 45.77 332 P P 01 58 13.7 +0.2
IL31 IAmb IAmb 01 58 18.2
comp=Z,9.0nm,1.4s
ILAR **Eielson Array** 45.77 332 P P 01 58 13.9 +0.4
comp=Z,2.6nm,1.1s,baz=23,slow=6.6,SNR=15
ILAR PcP PcP 01 59 51.0 +0.1
comp=Z,1.0nm,0.9s,baz=20,slow=2.9,SNR=7.9
ILAR **Eielson Array** 45.77 332 P P 01 58 15.3 +1.8
ILAR PcP 01 59 51.6 +0.7
MDM **Murphy Dome** 45.87 333 P P 01 58 16.4 +2.1
MDM IAmb IAmb 01 58 19.8
comp=Z,9.4nm,1.2s
ZALV **Zalesovo Beam** 47.76 51 P P 01 58 29.1 -0.1
comp=Z,0.7nm,0.6s,baz=336,slow=6.5,SNR=2.8
ZALV **Zalesovo Beam** 47.76 51 P P 01 58 28.3 -0.9
YMP **Mirror Lake Pl** 51.75 295 P P 01 59 02.0 +1.9
MKAR **Makanchi Array** 52.85 58 P P 01 59 06.4 -1.4
comp=Z,1.4nm,0.9s,baz=324,slow=7.5,SNR=7.8
TORD **Torodi Ar. Bea** 53.05 156 P P 01 59 09.5 0.0
comp=Z,1.8nm,1.1s,baz=338,slow=8.1,SNR=5.4
PD31 **Pinedale Array** 53.17 293 P P 01 59 11.2 +0.7
PDAR **Pinedale Array** 53.17 293 P P 01 59 10.7 +0.1
comp=Z,1.1nm,0.9s,baz=53,slow=6.1,SNR=15
PDAR **Pinedale Array** 53.17 293 P P 01 59 11.3 +0.8
N23A **Red Feather La** 53.29 289 P P 01 59 10.8 -0.7
N23A IAmb IAmb 01 59 15.8
comp=Z,7.4nm,1.1s
TCUT **Toone Canyon** 55.30 294 P P 01 59 25.4 -0.7
KSH **Kashi** 56.61 68 *e*P P 01 59 37.2 +1.9
KSH pmax pmax
comp=Z,190nm,4.9s
PV13 **Radium Mtn., P** 56.78 290 P P 01 59 37.7 +1.0
WMQ **Urumqi** 57.36 56 *e*P P 01 59 44.8 +4.3
R11A **Troy Canyon, C** 59.32 295 P P 01 59 55.1 +0.7
R11A IAmb IAmb 01 59 58.1
comp=Z,9.4nm,1.9s
NVAR **Mina Array Bea** 60.31 297 P P 02 00 02.1 +0.9
comp=Z,0.4nm,0.8s,baz=32,slow=5.3,SNR=3.7
NVAR **Mina Array Bea** 60.31 297 P P 02 00 01.1 -0.2
TXAR **Lajitas Array** 62.25 280 P P 02 00 15.2 +0.9
comp=Z,0.6nm,0.9s,baz=69,slow=4.9,SNR=6.9
TXAR **Lajitas Array** 62.25 280 P P 02 00 14.8 +0.4
HHC **Hu-ho-hao-te** 67.65 39 *e*P P 02 00 53.1 +3.7
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,130nm,5.6s
LZH **Lanzhou** 69.76 47 *e*P P 02 01 02.4 -0.3
LZH pP pP 02 01 07.0 +0.6
LZH sP sP 02 01 09.4 +1.6
LZH pmax pmax
comp=Z,17nm,1.5s
NJ2 **Nanjing** 77.88 37 *e*P P 02 01 51.1 +1.0
NJ2 pmax pmax
comp=Z,16nm,0.6s
CMAR **Chiang Mai Arr** 84.25 59 P P 02 02 23.8 -0.4
comp=Z,1.0nm,0.3s,baz=316,slow=6.2,SNR=1.8
BOSA **Boshof** 98.69 143 LR LR 02 49 58.6
comp=Z,56nm,18.0s,baz=244,slow=37
ASAR **Alice Springs** 135.11 38 PKP PKPdf 02 09 12.4 +0.8
comp=Z,0.4nm,0.9s,baz=321,slow=2.4,SNR=2.2

RSNC ***11*** *01:53:19.9±3.8, 0.79N×77.95W, h0km±4km, ML3.5, Mw4.5*
IDC ***11*** *01:53:21.2±0.8, 0.73N×78.01W, h0km, mb3.8/7,*
mb1 4.1/12, mb1mx4.0/30, mbtmp4.0/12, ML3.4/5, MS3.8/14,
Ms1 3.8/14, ms1mx3.5/29, Error ellipse: s-maj=22.7km
s-min=15.0km az=72.0
NEIC ***11*** *01:53:25.3±0.5, 0.71N±0.07×77.8W±0.1, h32km±6km,*
mb4.4/45, Error ellipse: s-maj=14.9km s-min=10.5km
az=97.0
VAO ***11*** *01:53:39.1±1.6, 0.02N×76.62W, h10km, mb4.1*
ISC 11 01:53:21.8±0.4, 0.81N±0.03×77.95W±0.03, h10km, n124,
σ2s 07/147, mb4.4/26, MS3.8/10, 6C-6D,
Colombia-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMBC	**Cumbal**	0.18	42	*e*P		Pg	01 53 23.0	-3.0
CMBC				*e*S		Sg	01 53 26.9	-2.0
CUSE	**Cuicocha Este**	0.67	222	*e*P		Pg	01 53 31.3	-3.7
CUSE				*e*S		Sg	01 53 41.9	-2.1
CCUFI	**Cufio, Nario**	0.73	55	*e*P		Pg	01 53 33.8	-2.3
CCUFI				*e*S		Sg	01 53 44.2	-1.5
CPAS1	**Pasto**	0.73	59	*e*P		Pg	01 53 33.6	-2.5
CPAS1	**Pasto**	0.73	59	*e*S		Sg	01 53 44.2	-1.5
GCUF	**Volcan Galeras**	0.73	55	*e*P		Pg	01 53 33.5	-2.6
GCUF				*e*S		Sb	01 53 47.9	+0.7
GCUF				*i*			01 53 54.8	
comp=Z,654nm,0.7s								
CPAS2	**Pasto**	0.81	59	*e*P		Pg	01 53 35.0	-2.5
CPAS2	**Pasto**	0.81	59	*e*S		Sg	01 53 46.5	-1.6
PAC1	**Pacto, Paraso**	1.00	238	*e*P		Pg	01 53 37.0	-4.2
PAC1				*e*S		Sg	01 53 50.6	-3.7
CRUC	**La Cruz**	1.25	53	*e*P		Pb	01 53 43.3	-2.8
CTUM2	**Tumaco**	1.28	322	*e*P		Pn	01 53 43.1	-2.7
CTUM2				*e*S		Sb	01 54 02.2	-0.3
TUMC	**Tumaco**	1.28	322	*e*P		Pn	01 53 43.7	-2.0
TUMC				*e*S		Sb	01 54 00.5	-2.1
TUMC				*i*			01 54 22.3	
comp=Z,851nm,0.6s								
PUAC	**Puerto Asis, P**	1.40	100	*e*P		Pn	01 53 45.3	-2.2
PUAC				*i*			01 53 51.6	
comp=Z,885nm,0.8s								
PUAC				*e*S		Sb	01 54 03.4	-2.6
SOTA	**Rioblanco**	1.88	45	*e*P		Pn	01 53 54.0	-0.5
SOTA				*e*S		Sn	01 54 18.3	-0.2
POPC	**Popayan, Colom**	2.14	36	*e*P		Pn	01 53 57.1	-0.8
POPC				*e*S		Sn	01 54 25.5	+0.9
PCON	**Cinco Dias**	2.16	46	*i*P		Pn	01 53 58.8	+0.4
PCON				*i*			01 54 08.9	
comp=Z,272nm,0.6s								
PCON				*e*S		Sb	01 54 27.8	-0.8
GR1C	**Gorgona, Isla**	2.19	354	*e*P		Pn	01 53 55.8	-2.6
GR1C				*e*S		Sn	01 54 22.9	-2.7
FLOC	**Florencia**	2.42	71	*e*P		Pn	01 54 01.7	+0.2
FLOC				*e*S		Sb	01 54 34.3	-1.1
FLOC				*i*			01 54 40.7	
comp=Z,180nm,0.4s								
GARC	**Garzon, Huila**	2.81	61	*e*P		Pn	01 54 10.0	+2.9
GARC				*i*			01 54 14.8	
comp=Z,294nm,0.3s								
GARC				*e*S		Sn	01 54 35.8	-5.3

BETC **Betania** 3.12 53 *e*P Pb 01 54 18.0 +0.5
BETC *e*S Sg 01 55 00.8 -1.4
PTLC **Puerto Leguiza** 3.21 101 *e*P Pn 01 54 12.1 -0.3
PTLC *e*S Sn 01 54 52.0 +1.2
PTLC *i* 01 55 11.9
comp=Z,160nm,0.4s
MALC **Bahia Malaga** 3.24 11 *e*P Pn 01 54 13.8 +0.9
MALC *i* 01 54 18.8
comp=Z,78nm,0.3s
MALC *e*S Sn 01 54 50.4 -1.2
YOTC **Yotoco, Valle** 3.54 27 *e*P Pn 01 54 18.0 +1.0
YOTC *e*S Sn 01 54 56.6 -2.4
ORTC **Ortega, Tolima** 4.09 41 *e*P Pn 01 54 26.3 +1.7
ORTC *i* 01 54 34.3
comp=Z,63nm,0.7s
ORTC *e*S Sn 01 55 10.3 -2.4
PRAC **Prado** 4.21 47 *e*P Pn 01 54 30.3 +4.2
PRAC *i* 01 54 58.4
comp=Z,31nm,0.6s
PRAC *e*S Sb 01 55 24.3 -2.6
MACC **Macarena, Meta** 4.31 72 *e*P Pn 01 54 29.4 +1.9
MACC *i* 01 54 42.0
comp=Z,137nm,0.6s
MACC *e*S Sn 01 55 15.1 -2.7
ANIL **Santa Ana** 4.45 35 *e*P Pn 01 54 32.5 +2.7
TOLC **Tolima** 4.58 35 *e*P Pn 01 54 34.6 +3.0
TOLC *e*S Sn 01 55 24.5 -0.5
RREF **El Recreo** 4.82 32 *e*P Pn 01 54 35.8 +0.7
RREF *e*S Sn 01 55 35.7 +4.3
GUY2C **Guyana, Caldas** 5.09 30 *e*P Pn 01 54 41.8 +3.2
GUY2C *i* 01 54 45.7
comp=Z,23nm,0.6s
GUY2C *e*S Sn 01 55 36.4 -1.4
CBOC **Ciudad Bolivar** 5.38 21 *e*P Pn 01 54 43.6 +1.2
CBOC *e*S Sn 01 55 42.7 -1.9
CBOC *i* 01 56 05.5
comp=Z,13nm,0.7s
ROSC **El Rosal** 5.40 42 Pn Pn 01 54 45.5 +2.7
comp=Z,10nm,0.3s,baz=199,slow=3.6,SNR=21
ROSC Lg Lg 01 56 17.4
comp=Z,2.5nm,0.3s,baz=274,slow=21,SNR=1.1
ROSC LR LR 01 57 11.3
comp=Z,5μm,18.5s,baz=230,slow=42
ROSC **El Rosal** 5.40 42 *e*P Pn 01 54 45.2 +2.3
ROSC *i* 01 54 51.8
comp=Z,35nm,0.6s
ROSC *e*S Sn 01 55 45.0 -0.4
ROSC **El Rosal** 5.40 42 Pn Pn 01 54 44.3 +1.5
ROSC Sn Sn 01 55 46.6 +1.3
NORC **Norcasia** 5.63 33 *e*P Pn 01 54 48.8 +3.0
NORC *i* 01 54 51.6
comp=Z,13nm,0.5s
NORC *e*S Sn 01 55 50.4 -0.3
CHIC **Chingaza** 5.67 48 *e*P Pn 01 54 51.4 +4.8
CHIC *i* 01 55 01.3
comp=Z,44nm,0.6s
CHIC *e*S Sn 01 55 51.2 -0.8
HELC **Santa Helena** 5.87 24 *e*P Pn 01 54 52.0 +2.7
HELC *i* 01 54 58.0
comp=Z,12nm,0.4s
HELC *e*S Sn 01 55 54.4 -2.5
SPBC **San Pablo de B** 6.17 39 *e*P Pn 01 54 55.1 +1.9
SPBC *e*S Sn 01 56 01.5 -2.5
DBBC **Dabeiba** 6.41 16 *e*P Pn 01 55 00.4 +3.9
DBBC *i* 01 55 17.3
comp=Z,38nm,0.7s
PTBC **PUERTO BERRIO,** 6.67 31 *e*P Pn 01 55 02.3 +2.2
PTBC *i* 01 55 04.2
comp=Z,17nm,0.6s
PTBC *e*S Sn 01 56 13.5 -2.8
RUSC **La Rusia** 7.00 44 *e*P Pn 01 55 08.5 +3.5
RUSC *i* 01 55 31.2
comp=Z,9.5nm,0.7s
RUSC *e*S Sn 01 56 33.5 +8.5
BARC **Barichara** 7.46 39 *e*P Pn 01 55 13.0 +2.0
BRRC **Barranca, Sant** 7.55 34 *e*P Pn 01 55 14.8 +2.7
BRRC *e*S Sn 01 56 39.4 +1.6
ATAH **Atahualpa** 7.90 183 Pn Pn 01 55 17.3 0.0
comp=Z,0.8nm,0.3s,baz=352,slow=9.2,SNR=8.5
ATAH Lg Lg 01 57 35.7
comp=Z,0.2nm,0.3s,baz=2.9,slow=23,SNR=1.1
PAMC **Pamplona, Colo** 8.34 39 *e*P Pn 01 55 26.0 +2.7
CZSB **Cruzeiro do Su** 9.96 148 *e*P Pn 01 55 44.6 -0.5
SDV **Santo Domingo** 10.84 42 Pn Pn 01 55 58.1 +0.8
comp=Z,0.8nm,0.3s,baz=212,slow=13,SNR=14
SDV Lg Lg 01 59 02.0
comp=Z,0.2nm,0.3s,baz=91,slow=14,SNR=1.2
SDV **Santo Domingo** 10.84 42 Pn Pn 01 55 57.9 +0.5
JTS **Las Juntas de** 11.72 324 LR LR 02 00 18.0
comp=Z,268nm,18.0s,baz=210,slow=36
NNA **Nana** 12.76 175 Pn Pn 01 56 23.7 +0.1
comp=Z,0.8nm,0.3s,baz=0.0,slow=14,SNR=2.5
NNA LR LR 02 01 30.9
comp=Z,1μm,20.9s,baz=346,slow=39
NNA **Nana** 12.76 175 Pn Pn 01 56 23.5 -0.1
MATN **Matagalpa** 14.41 327 Pn Pn 01 56 48.4 +2.3
ETMB **Extrema** 15.74 132 *e*P Pn 01 57 00.9 -2.9
SAML **Samuel** 17.61 124 Pn Pn 01 57 25.6 -2.0
LPAZ **La Paz** 19.55 151 P P 01 57 51.3 +0.7
comp=Z,0.1nm,0.3s,baz=351,slow=10,SNR=11
LPAZ Lg Lg 02 03 33.0
comp=Z,0.0nm,0.3s,baz=140,slow=11,SNR=2.1
LPAZ LR LR 02 07 04.2
comp=Z,421nm,19.7s,baz=297,slow=42
LPAZ **La Paz** 19.55 151 P P 01 57 49.1 -1.5
LPAZ **La Paz** 19.55 151 *e*P Pn 01 57 52.0 +0.1
PB16 **IPOC Station P** 20.75 157 P P 01 58 02.4 -1.2
PB16 IAmb IAmb 01 58 11.8
comp=Z,16nm,1.0s
MNMC **Minye Minye** 21.44 158 P P 01 58 09.9 -0.9
GO01 **Chusmiza** 22.08 158 P P 01 58 16.8 -1.1
GO01 IAmb IAmb 01 58 25.6
comp=Z,13nm,1.0s
VILB **Vilhena** 22.29 128 *e*P P 01 58 19.9 +0.3
ITTB **Itaituba** 22.78 103 *e*P P 01 58 25.8 +0.9
CMIG **Matias Romero** 23.23 315 P P 01 58 30.4 +0.9
comp=Z,2.0nm,0.9s,baz=144,slow=17,SNR=2.3
SIV **San Ignacio** 23.59 136 P P 01 58 33.0 0.0
comp=Z,6.3nm,0.8s,baz=326,slow=10.0,SNR=23
NPGB **Novo Progresso** 23.85 109 *e*P P 01 58 37.3 +1.7
PB09 **IPOC Station P** 24.02 160 P P 01 58 37.8 +0.5
PB09 IAmb IAmb 01 58 51.3
comp=Z,25nm,1.0s
PTLB **Pontes e Lacer** 24.63 132 *e*P P 01 58 44.3 +1.6
LVC **Limon Verde** 24.89 160 *e*P P 01 58 51.7 +6.3
CLDB **Colider** 24.89 118 *e*P P 01 58 47.7 +2.5
GO03 **Copiap** 29.19 166 P P 01 59 22.8 -0.9
GO03 IAmb IAmb 01 59 32.7
comp=Z,9.5nm,1.1s
TMAB **Tom-Au,PA,Br** 30.01 96 *e*P P 01 59 37.0 +5.8
AQDB **Aquidauana** 30.36 135 *e*P P 01 59 38.9 +4.7
ZAIG **Zacatecas** 32.40 314 P P 01 59 51.8 -0.6
BDFB **Brasilia** 33.79 120 LR LR 02 14 31.0
comp=Z,190nm,21.6s,baz=324,slow=38
VA03 **San Esteban** 34.11 169 P P 02 00 06.0 -1.0
TXAR **Lajitas Array** 37.50 321 P P 02 00 36.6 +0.5
comp=Z,0.5nm,0.8s,baz=138,slow=8.3,SNR=6.1
TXAR PcP PcP 02 02 55.8 +1.2
comp=Z,0.3nm,0.7s,baz=157,slow=4.9,SNR=3.1
TXAR **Lajitas Array** 37.50 321 P P 02 00 36.9 +0.8
U40A **Yelville** 37.98 340 P P 02 00 40.1 +0.1
LPIG **La Paz** 38.97 309 LR LR 02 13 08.9
comp=Z,139nm,20.1s,baz=99,slow=30
MNTX **Cornudas Mount** 40.20 323 P P 02 00 59.4 +0.6
MNTX IAmb IAmb 02 01 01.3
comp=Z,6.8nm,1.1s
MSTX **Muleshoe** 40.36 327 P P 02 01 00.4 +0.3
PLCA **Paso Flores** 41.89 172 P P 02 01 13.1 +0.5
comp=Z,1.8nm,0.9s,baz=327,slow=6.2,SNR=2.9
PLCA LR LR 02 16 39.6
comp=Z,88nm,19.2s,baz=358,slow=33
PLCA **Paso Flores** 41.89 172 P P 02 01 12.7 +0.1
121A **Cookes Peak, D** 42.26 321 P P 02 01 17.2 +1.4
121A IAmb IAmb 02 01 23.4
comp=Z,12nm,1.1s
ANMO **Albuquerque** 43.13 325 LR LR 02 21 08.1
comp=Z,36nm,19.2s,baz=163,slow=39
ANMO **Albuquerque** 43.13 325 P P 02 01 24.3 +1.4
ANMO IAmb IAmb 02 01 26.5
comp=Z,6.9nm,0.9s
T25A **Trinidad** 43.64 329 P P 02 01 28.4 +1.4
T25A IAmb IAmb 02 01 31.7
comp=Z,5.9nm,1.1s
TUC **Tucson** 44.04 319 P P 02 01 31.7 +1.5

SDCO	**Great Sand Dun**	**44.66**	**329**	P	**P**	**02 01 36.5 +1.2**
SDCO				IAmb	IAmb	02 01 42.1
	comp=Z,6.0nm,1.1s					
214A	**Organ Pipe Nat**	**45.19**	**317**	P	**P**	**02 01 40.9 +1.6**
S22A	**4UR Ranch, Cre**	**45.37**	**327**	P	**P**	**02 01 42.1 +1.2**
X16A	**Lo Mia Camp, P**	**45.80**	**320**	P	**P**	**02 01 45.6 +1.4**
WUAZ	**Wupatki**	**46.46**	**322**	P	**P**	**02 01 50.8 +1.4**
PV02	**Paradox Valley**	**46.74**	**326**	P	**P**	**02 01 53.0 +1.3**
PV13	**Radium Mtn., P**	**46.75**	**326**	P	**P**	**02 01 52.9 +1.2**
PV13				IAmb	IAmb	02 02 05.7
	comp=Z,5.5nm,0.9s					
PV03	**Paradox Valley**	**46.84**	**326**	P	**P**	**02 01 53.8 +1.4**
PV03				IAmb	IAmb	02 01 54.9
	comp=Z,5.9nm,1.2s					
ESJX	**Sierra Juarez**	**47.41**	**315**	P	**P**	**02 01 57.9 +1.0**
U15A	**North Rim**	**47.62**	**322**	P	**P**	**02 01 59.8 +1.2**
U15A				IAmb	IAmb	02 02 03.3
	comp=Z,3.5nm,1.0s					
W13A	**Hualapai Mount**	**47.79**	**319**	P	**P**	**02 02 01.2 +1.3**
W13A				IAmb	IAmb	02 02 03.3
	comp=Z,5.0nm,1.1s					
KNB	**Kanab**	**48.32**	**322**	P	**P**	**02 02 05.4 +1.5**
LCMT	**Little Creek M**	**48.58**	**322**	P	**P**	**02 02 07.2 +1.4**
SZCU	**Shurtz Canyon**	**48.86**	**323**	P	**P**	**02 02 09.5 +1.4**
RSSD	**Black Hills**	**48.97**	**335**	P	**P**	**02 02 10.2 +1.4**
CCUT	**Cedar City**	**48.99**	**322**	P	**P**	**02 02 10.5 +1.3**
GSC	**Goldstone, Bar**	**49.84**	**318**	P	**P**	**02 02 16.8 +1.3**
GSC				IAmb	IAmb	02 02 18.7
	comp=Z,5.6nm,1.1s					
PDAR	**Pinedale Array**	**50.47**	**330**	P	**P**	**02 02 21.3 +1.0**
	comp=Z,0.9nm,1.1s,baz=134,slow=6.4,SNR=4.0					
R11A	**Troy Canyon, C**	**50.86**	**322**	P	**P**	**02 02 24.6 +1.4**
ULM	**Lac du Bonnet**	**51.58**	**345**	LR	LR	02 25 49.9
	comp=Z,52nm,18.5s,baz=90,slow=38					
NV11	**Mina Array Sit**	**52.53**	**320**	P	**P**	**02 02 37.1 +1.4**
NV11				IAmb	IAmb	02 02 38.8
	comp=Z,5.4nm,1.1s					
OMMB	**Old Mammoth Mi**	**52.61**	**319**	P	**P**	**02 02 37.6 +1.1**
OMMB				IAmb	IAmb	02 02 40.0
	comp=Z,6.6nm,1.2s					
NVAR	**Mina Array Bea**	**52.62**	**320**	P	**P**	**02 02 37.7 +1.2**
	comp=Z,3.2nm,0.9s,baz=134,slow=6.9,SNR=20					
NVAR				PcP	**PcP**	**02 03 47.4 +0.9**
	comp=Z,0.3nm,0.6s,baz=120,slow=5.5,SNR=1.8					
LHV	**Little Huntoon**	**52.65**	**320**	P	**P**	**02 02 37.9 +1.6**
LHV				IAmb	IAmb	02 02 39.9
	comp=Z,8.7nm,1.2s					
MDPB	**Devils Postpil**	**52.67**	**319**	P	**P**	**02 02 38.0 +1.1**
MDPB				IAmb	IAmb	02 02 40.4
	comp=Z,5.8nm,1.1s					
BOZ	**Bozeman (W)**	**53.55**	**331**	P	**P**	**02 02 44.5 +1.4**
MFID	**Camas Ranch**	**54.22**	**327**	P	**P**	**02 02 49.5 +1.4**
MFID				IAmb	IAmb	02 02 50.5
	comp=Z,4.9nm,1.1s					
ORV	**Oroville**	**55.31**	**320**	P	**P**	**02 02 57.4 +1.5**
ORV				IAmb	IAmb	02 02 59.1
	comp=Z,5.1nm,0.9s					
PTCN	**Pitcairn Islan**	**56.60**	**239**	P	**P**	**02 03 03.8 -1.5**
PPT	**Papeete**	**72.76**	**251**	LR	LR	02 29 29.9
	comp=Z,42nm,18.9s,baz=356,slow=30					
PFVI	**Vila Bisbo**	**72.95**	**51**	P	**P**	**02 04 49.6 -2.2**
DBIC	**Dimbokro**	**73.11**	**83**	LR	LR	02 34 50.4
	comp=Z,48nm,18.3s,baz=262,slow=34					
TORD	**Torodi Ar. Bea**	**79.73**	**77**	LR	LR	02 38 37.1
	comp=Z,54nm,21.8s,baz=285,slow=34					
ILAR	**Eielson Array**	**80.41**	**336**	P	**P**	**02 05 34.1 +0.7**
	comp=Z,0.5nm,0.9s,baz=127,slow=5.3,SNR=3.5					
ILAR				PP	**PP**	**02 08 35.8 -0.6**
	comp=Z,1.5nm,1.2s,baz=113,slow=6.9,SNR=5.1					
NOA	**NORSAR Array B**	**88.89**	**29**	LR	LR	02 43 08.2
	comp=Z,16nm,20.9s,baz=280,slow=34					
FINES	**FINESS Array B**	**95.98**	**28**	LR	LR	02 45 26.4
	comp=Z,32nm,20.3s,baz=258,slow=32					

*IDC **11** 02:09:01.6±1.3, 40.92N×35.64E, h0km, mb3.3/1, mb1 3.5/2, mb1mx3.1/44, mbtmp3.3/2, ML2.8/1, Error ellipse: s-maj=90.4km s-min=9.8km az=146.0*
*DDA **11** 02:09:03.4, 40.58N×35.81E, h6km±3km, MW3.6*
*ISK **11** 02:09:03.1, 40.55N×35.83E, h4km, ML3.6/33*

ISC 11 02:09:03.5±1.1, 40.59N±0.02×35.83E±0.02, h3km±10km, n76, σ0.976/99, 5C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUPE	**Kupecik-Ladik(**	**0.33**	**30**	PG		**Pb**		**02 09 11.1**	**-1.0**
KUPE				SG		**Sb**		**02 09 16.5**	**-1.3**
KAYA	**Kayacik-Havza(**	**0.36**	**350**	PG		**Pb**		**02 09 11.9**	**-0.7**
HAVZ	**Havza**	**0.49**	**350**	*i* P		**Pb**		**02 09 14.4**	**-0.4**
HAVZ				*i* S		**Sb**		**02 09 20.8**	**-1.6**
HAVZ				IAML				02 09 23.0	
	comp=N,3μm,0.2s								
HAVZ				IAML				02 09 23.0	
	comp=E,3μm,0.2s								
KVT	**Kavak**	**0.51**	**18**	PG		**Pb**		**02 09 14.8**	**-0.4**
KVT				SG		**Sb**		**02 09 22.6**	**-0.5**
TOKA	**Tokat**	**0.56**	**118**	*i* P		**Pg**		**02 09 14.7**	**+0.4**
TOKA				*i* S		**Sb**		**02 09 23.4**	**-1.1**
TOKA				IAML				02 09 25.0	
	comp=N,2μm,0.3s								
TOKT	**Tokat**	**0.61**	**116**	PG		**Pg**		**02 09 15.5**	**+0.3**
TOKT				SG		**Sg**		**02 09 24.1**	**+1.0**
ERBA	**Erbaa**	**0.71**	**83**	*i* P		**Pg**		**02 09 17.1**	**0.0**
COAL	**Corum-Alaca**	**0.73**	**243**	*i* P		**Pg**		**02 09 16.7**	**-0.8**
COAL				*i* S		**Sg**		**02 09 27.9**	**+0.9**
COAL				IAML				02 09 30.0	
	comp=E,1μm,0.4s								
COAL				IAML				02 09 31.0	
	comp=N,1μm,0.5s								
CTAK	**Corum_Osmancik**	**0.79**	**274**	*i* P		**Pg**		**02 09 18.5**	**-0.3**
CTAK				*i* S		**Sg**		**02 09 30.3**	**+1.3**
CTAK				IAML				02 09 33.0	
	comp=N,2μm,0.5s								
CTAK				IAML				02 09 33.0	
	comp=E,938nm,0.6s								
CORM	**Corum**	**1.01**	**246**	PG		**Pg**		**02 09 22.3**	**-0.5**
SVSK	**Karacayir**	**1.12**	**127**	PN		**Pg**		**02 09 24.2**	**-0.8**
DIKM	**Dikmen**	**1.14**	**338**	PN		**Pb**		**02 09 25.9**	**0.0**
RSDY	**Resadiye-TOKAT**	**1.16**	**99**	PN		**Pg**		**02 09 25.3**	**-0.4**
KAGI	**orum-Kargı**	**1.16**	**298**	*i* P		**Pg**		**02 09 24.9**	**-0.9**
CUSAR	**Sarkisla-SIVAS**	**1.22**	**165**	*i* P		**Pg**		**02 09 26.8**	**0.0**
CUSAR				*i* S		**Sb**		**02 09 43.5**	**+0.1**
CUSAR				IAML				02 09 45.0	
	comp=E,801nm,0.6s								
CUSAR				IAML				02 09 50.0	
	comp=N,827nm,0.5s								
SCER	**sogukcermik**	**1.23**	**126**	*i* P		**Pg**		**02 09 26.4**	**-0.7**
SCER				IAML				02 09 45.0	
	comp=N,1μm,0.5s								
SCER				IAML				02 09 45.0	
	comp=E,672nm,0.5s								
SIRC	**Yozgat**	**1.36**	**203**	*i* P		**Pn**		**02 09 28.0**	**-1.5**
SIRC				*i* S		**Sg**		**02 09 45.8**	**-1.4**
SIRC				IAML				02 09 49.0	
	comp=N,418nm,0.3s								
SIRC				IAML				02 09 49.0	
	comp=E,432nm,0.7s								
TOS	**Tosya**	**1.44**	**288**	PN		**Pn**		**02 09 30.8**	**+0.2**
CUALT	**Altinyayla-SIV**	**1.50**	**151**	*i* P		**Pb**		**02 09 32.1**	**+0.1**
CUALT				IAML				02 09 54.0	
	comp=N,703nm,0.7s								
SINO	**SINOP_Merkez**	**1.50**	**342**	*i* P		**Pg**		**02 09 32.3**	**0.0**
SINO				*i* P		**Pb**		**02 09 32.6**	**+0.6**
SINO				*i* S		**Sg**		**02 09 52.4**	**+0.7**
SINO				*i* S		**Sn**		**02 09 52.6**	**+1.2**
SINO				IAML				02 09 54.0	
	comp=N,726nm,0.6s								
SINO				IAML				02 09 54.0	
	comp=N,699nm,0.6s								
SINO				IAML				02 09 58.0	
	comp=E,657nm,0.4s								
SINO				IAML				02 09 58.0	
	comp=E,656nm,0.4s								
SNOP	**Sinop**	**1.50**	**342**	PN		**Pb**		**02 09 31.9**	**-0.1**
DELI	**KIRIKKALE**	**1.58**	**248**	*i* P		**Pn**		**02 09 32.3**	**-0.2**
DELI				*i* S		**Sn**		**02 09 52.5**	**-0.9**
DELI				IAML				02 09 57.0	
	comp=N,345nm,0.7s								
DELI				IAML				02 09 57.0	
	comp=E,311nm,0.5s								
ORDU	**Ordu-Boztepe**	**1.59**	**75**	*i* P		**Pb**		**02 09 32.9**	**-0.6**
ORDU				*i* S		**Sn**		**02 09 53.4**	**-0.2**
ORDU				IAML				02 09 56.0	
	comp=N,504nm,0.4s								
ORDU				IAML				02 09 58.0	
	comp=E,514nm,0.8s								
CUZAR	**Zara_SIVAS**	**1.64**	**115**	*i* P		**Pb**		**02 09 34.3**	**-0.3**
CUZAR				IAML				02 09 59.0	
	comp=N,408nm,0.7s								
CUZAR				IAML				02 10 07.0	
	comp=E,278nm,0.6s								
ILGA	**Ilgaz**	**1.67**	**287**	*i* P		**Pb**		**02 09 35.0**	**-0.1**
ILGA				*i* S		**Sg**		**02 09 57.6**	**+0.5**
ILGA				IAML				02 09 59.0	
	comp=E,468nm,0.4s								
ILGA				IAML				02 10 01.0	
	comp=N,266nm,0.7s								
CANT	**Cankiri**	**1.68**	**271**	PN		**Pn**		**02 09 34.2**	**+0.3**
GUNE	**Kayseri**	**1.70**	**185**	*i* P		**Pn**		**02 09 34.9**	**+0.8**
KMON	**Kastamonu**	**1.73**	**297**	PN		**Pn**		**02 09 35.0**	**+0.4**
BNN	**Bunyan**	**1.74**	**180**	PN		**Pn**		**02 09 34.6**	**-0.1**
CUKAN	**kangal_SIVAS**	**1.79**	**135**	*i* P		**Pn**		**02 09 36.2**	**+0.7**
CUKAN				IAML				02 10 06.0	
	comp=N,230nm,0.6s								
CUKAN				IAML				02 10 06.0	
	comp=E,186nm,0.3s								
BRTR	**Keskin Array B**	**1.89**	**243**	Pg		**Pn**		**02 09 37.5**	**+0.6**
	comp=E,15nm,0.3s,baz=51,slow=14,SNR=128								
BRTR				Lg		Lg		02 10 03.9	
	comp=E,15nm,0.3s,baz=84,slow=25,SNR=12								
AVNS	**Nevsehir-Avano**	**1.94**	**203**	*i* P		**Pn**		**02 09 37.7**	**+0.2**
AVNS				*i* S		**Sb**		**02 10 03.9**	**-0.3**
BZK	**Bozkurt**	**1.94**	**315**	PN		**Pn**		**02 09 38.2**	**+0.8**
KIRS	**Kırehir-Merke**	**2.07**	**226**	*i* P		**Pn**		**02 09 39.6**	**+0.3**
KIRS				*i* S		**Sb**		**02 10 07.6**	**-0.4**
KIRS				IAML				02 10 14.0	
	comp=N,164nm,0.7s								
KIRS				IAML				02 10 15.0	
	comp=E,174nm,0.5s								
CUGUR	**Gurin_SVAS**	**2.17**	**149**	*i* P		**Pb**		**02 09 42.7**	**-0.9**
CUGUR				*i* S		**Sg**		**02 10 15.6**	**+2.3**
CUGUR				IAML				02 10 16.0	
	comp=N,508nm,0.8s								
ESPY	**Espiye-Giresun**	**2.22**	**81**	PN		**Pn**		**02 09 42.2**	**+0.9**
SARI	**SarD1z-Kayseri**	**2.23**	**168**	PN		**Pn**		**02 09 41.8**	**+0.3**
BBAL	**Bala**	**2.33**	**244**	*i* P		**Pb**		**02 09 46.4**	**+0.2**
BBAL				*i* S		**Sg**		**02 10 18.8**	**+0.5**
BBAL				IAML				02 10 21.0	
	comp=E,144nm,0.9s								
BBAL				IAML				02 10 26.0	
	comp=N,137nm,1.0s								
HEKM	**Malatya_Hekimh**	**2.37**	**136**	*i* P		**Pb**		**02 09 46.5**	**-0.5**
HEKM				IAML				02 10 22.0	
	comp=E,145nm,0.7s								
DARE	**Darende-Malaty**	**2.39**	**147**	PN		**Pn**		**02 09 44.1**	**+0.5**
SERE	**Sereflikochisa**	**2.40**	**227**	PN		**Pn**		**02 09 44.3**	**+0.5**
AFSR	**Afar-Bala (An**	**2.41**	**243**	PN		**Pn**		**02 09 44.1**	**+0.2**
KEMA	**Kemaliye**	**2.44**	**122**	*i* P		**Pb**		**02 09 47.3**	**-0.7**
KEMA				IAML				02 10 25.0	
	comp=N,160nm,0.6s								
KEMA				IAML				02 10 26.0	
	comp=E,100nm,0.5s								
ARPR	**Arapgir-MALATY**	**2.44**	**127**	PN		**Pn**		**02 09 44.5**	**+0.1**
LOD	**Lodumlu**	**2.45**	**254**	PN		**Pn**		**02 09 45.1**	**+0.6**
AKSY	**AKSARAY - Alti**	**2.52**	**220**	*i* P		**Pb**		**02 09 48.0**	**-1.4**
AKSY				*i* S		**Sb**		**02 10 20.3**	**-0.5**
AKSY				IAML				02 10 25.0	
	comp=N,120nm,1.0s								
AKSY				IAML				02 10 26.0	
	comp=E,104nm,0.6s								
REFA	**Refahiye_ERZN**	**2.55**	**117**	*i* P		**Pn**		**02 09 44.0**	**-2.0**
REFA				*i* S		**Sn**		**02 10 18.8**	**+1.3**
CMDR	**Camlidere-ANKA**	**2.56**	**269**	*i* P		**Pb**		**02 09 50.3**	**+0.1**
CMDR				IAML				02 10 35.0	
	comp=N,94nm,1.1s								
CMDR				IAML				02 10 35.0	
	comp=E,89nm,1.0s								
GULA	**Gulagac**	**2.56**	**209**	PN		**Pn**		**02 09 46.1**	**+0.1**
KURC	**Kurucasile-Bar**	**2.65**	**299**	PN		**Pn**		**02 09 47.9**	**+0.8**
KELT	**Kelkit**	**2.65**	**99**	*i* P		**Pb**		**02 09 51.6**	**-0.2**
KELT				*i* S		**Sg**		**02 10 28.0**	**-0.7**
KKUL	**Konya-Kulu**	**2.65**	**239**	*i* P		**Pb**		**02 09 51.2**	**-0.5**
KKUL				*i* S		**Sb**		**02 10 26.2**	**+1.4**
KKUL				IAML				02 10 32.0	
	comp=N,145nm,0.8s								
KKUL				IAML				02 10 33.0	
	comp=E,190nm,0.9s								
BCAM	**Yenicaga**	**2.87**	**276**	*i* P		**Pb**		**02 09 55.7**	**+0.2**
BTIN	**Bartın**	**2.90**	**292**	*i* P		**Pn**		**02 09 49.9**	**-0.7**
SULT	**Sultanhani-AKS**	**2.99**	**218**	PN		**Pn**		**02 09 52.5**	**+0.6**
CMRD	**Camardi-Nigde**	**3.00**	**193**	PN		**Pn**		**02 09 52.6**	**+0.5**
KTUT	**Trabzon**	**3.01**	**81**	PN		**Pn**		**02 09 52.8**	**+0.7**
CHBY	**Cihanbeyli**	**3.03**	**229**	PN		**Pn**		**02 09 52.4**	**-0.1**
MALT	**Malatya**	**3.04**	**138**	PN		**Pn**		**02 09 52.6**	**0.0**
KOZT	**Kozan**	**3.11**	**180**	PN		**Pn**		**02 09 54.2**	**+0.7**
YUVA	**Yuva-Kibriscik**	**3.17**	**268**	PN		**Pn**		**02 09 55.2**	**+0.8**
PTK	**Pertek**	**3.23**	**121**	PN		**Pn**		**02 09 56.0**	**+0.7**
YESY	**Yesilyurt**	**3.24**	**211**	PN		**Pn**		**02 09 55.9**	**+0.5**
BAYT	**Aydintepe-Bayb**	**3.29**	**92**	PN		**Pn**		**02 09 56.1**	**+0.8**
SVRC	**Sivrice-ELAZID**	**3.48**	**128**	PN		**Pn**		**02 09 59.4**	**+0.7**
KBZ	**Khabaz**	**6.11**	**57**	Pn		**Pn**		**02 10 34.7**	**0.0**
	comp=E,0.2nm,0.3s,baz=248,slow=19,SNR=11								
TIRR	**Tirgusor**	**6.70**	**308**	⇑P		**Pn**		**02 10 42.5**	**-0.3**
TLCR		**6.90**	**314**	⇓P		**Pn**		**02 10 46.8**	**+1.3**
TPGR	**Topolog**	**6.92**	**310**	⇑P		**Pn**		**02 10 45.5**	**-0.3**
CFR	**Carcaliu**	**7.27**	**312**	⇓P		**Pn**		**02 10 50.0**	**-0.6**
VRI	**Vrincioaia**	**8.48**	**311**	⇓P		**Pn**		**02 11 07.4**	**+0.2**
NEHR	**Nehoiu**	**8.49**	**308**	⇓P		**Pn**		**02 11 08.8**	**+1.4**
MLR	**Muntele Rosu**	**8.74**	**307**	⇑P		**Pn**		**02 11 10.1**	**-0.7**
TESR	**Tescani**	**8.91**	**315**	⇑P		**Pn**		**02 11 12.7**	**-0.4**
BURAR	**Bucovina Array**	**10.36**	**316**	⇑P		**Pn**		**02 11 32.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**40.49**	**237**	P		**P**		**02 16 43.8**	**+0.1**
	comp=E,0.4nm,0.9s,baz=38,slow=8.5,SNR=1.9								

*SNET **11** 02:18:59.3±1.1, 13.32N×90.64W, h22km±5km, ML3.2*
*GCG **11** 02:19:05.1±0.7, 14.68N×91.31W, h55km±24km, MD4.1*

ISC 11 02:18:52.5±3.4, 13.1N±0.2×91.1W±0.1, h35km, n16, σ2.945/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.37**	**10**	*eP*		**Pn**		**02 19 17.5**	**+2.2**
ERG	**Entre ros, C**	**1.42**	**341**	*eP*		**Pn**		**02 19 15.2**	**-0.6**
NUBE	**Las Nubes**	**1.50**	**57**	*eS*		**Sn**		**02 19 31.9**	**-3.6**
SBLS	**San Blas**	**1.60**	**62**	*eP*		**Pn**		**02 19 19.0**	**+0.5**
SNJE	**San Jose**	**1.63**	**62**	*eP*		**Pn**		**02 19 20.3**	**+1.4**
NBG	**Las Nubes**	**1.65**	**26**	*eP*		**Pn**		**02 19 22.4**	**+3.2**
STG3	**Santiaguito 3,**	**1.68**	**344**	*eP*		Pn		02 19 15.0	-4.5
CEDA	**San Andres**	**1.79**	**67**	IAML				02 19 52.1	
	comp=Z,1μm,0.3s								
TACO	**Tacachico**	**1.90**	**62**	*eP*		**Pn**		**02 19 23.4**	**+1.1**
TACO				*eS*		**Sn**		**02 19 42.1**	**-3.0**
LFRS	**El Faro**	**2.04**	**75**	*eP*		**Pn**		**02 19 25.9**	**+1.5**
MTO3	**Montecristo**	**2.12**	**52**	*eP*		**Pn**		**02 19 27.1**	**+1.4**
MTO3				*eS*		**Sn**		**02 19 49.1**	**-1.8**
PAVA	**Las Pavas**	**2.18**	**73**	*eP*		**Pn**		**02 19 28.5**	**+2.2**
PAVA				IAML				02 19 59.1	
	comp=Z,141nm,0.5s								
COEG	**Centro de Oper**	**2.21**	**76**	IAML				02 20 03.4	
	comp=Z,233nm,0.4s								
ESQI	**Esquipulas**	**2.23**	**49**	*eP*		**Pn**		**02 19 29.6**	**+2.5**
MRL	**Marmol**	**2.40**	**34**	*eP*		**Pn**		**02 19 31.7**	**+2.2**
MRL	**Marmol**	**2.40**	**34**	*eP*		**Pn**		**02 19 32.4**	**+2.9**

IDC 11 02:28:45.6±3.9, 6.41S×148.75E, h0km, mb3.1/1, mb1 3.4/3, mb1mx3.3/28, mbtmp3.3/3, ML3.4/1, Error ellipse: s-maj=128.0km s-min=37.8km az=110.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.36**	**208**	Pn		Pn		02 29 41.1	+1.7
	4.0nm,0.3s,baz=60,slow=7.7,SNR=7.6								
PMG				Sn		Sn		02 30 19.7	-0.5
	8.4nm,0.3s,baz=360,slow=16,SNR=6.8								
WRA	**Warramunga Arr**	**19.41**	**225**	P		P		02 33 13.4	-0.1
	0.1nm,0.3s,baz=52,slow=11,SNR=6.0								
ASAR	**Alice Springs**	**22.32**	**218**	P		P		02 33 44.9	-0.1
	0.4nm,0.3s,baz=48,slow=9.7,SNR=5.7								
TORD	**Torodi Ar. Bea**	**146.87**	**284**	PKPbc		PKPdf		02 48 29.9	+0.7
	0.5nm,0.8s,baz=62,slow=2.9,SNR=1.1								

*IDC **11** 02:29:42.7±6.3, 49.64N×156.19E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.3/37, mbtmp3.3/3, ML2.6/1, Error ellipse: s-maj=150.9km s-min=45.5km az=85.0*
*MOS **11** 02:29:50.6±0.8, 49.96N×156.98E, h33km, mb3.8/1, Error ellipse: s-maj=35.0km s-min=5.0km az=80.0*
MOS Felt (II) at Severo-Kuril'sk.
*KRSC **11** 02:29:53.6±1.4, 50.34N×156.99E, h46km±18km, ML4.2, FELT [II] at Severo-Kurilsk.*

ISC 11 02:29:52.4±1.7, 50.1N±0.1×156.90E±0.06, h35km, n51, σ1.956/58, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.76**	**319**	*i* P		**Pn**		**02 30 07.2**	**+0.6**
SKR				*eS*		**Sn**		**02 30 16.1**	**-0.8**
SKR	**Severo-Kuril's**	**0.76**	**319**	PN		**Pn**		**02 30 07.2**	**+0.6**
SKR				S		**Sn**		**02 30 16.1**	**-0.8**
PAU	**Pauzhetka**	**1.36**	**358**	*eP*		**Pn**		**02 30 15.1**	**+0.3**
PAU				*eS*		**Sn**		**02 30 29.9**	**-1.7**
PAU	**Pauzhetka**	**1.36**	**358**	PN		**Pn**		**02 30 15.1**	**+0.3**
KDTR	**Khodutka, Kamc**	**1.85**	**23**	*eP*		**Pn**		**02 30 22.1**	**+0.4**
KDTR				*eS*		**Sn**		**02 30 42.2**	**-1.6**
KDTR	**Khodutka, Kamc**	**1.85**	**23**	PN		**Pn**		**02 30 22.1**	**+0.4**
RUS	**Russkaya**	**2.53**	**23**	*eP*		**Pn**		**02 30 31.1**	**+0.1**
RUS				*eS*		**Sn**		**02 30 58.5**	**-2.1**
RUS	**Russkaya**	**2.53**	**23**	PN		**Pn**		**02 30 31.1**	**+0.1**
GRL	**Gorelyy**	**2.55**	**16**	*eP*		**Pn**		**02 30 32.6**	**+1.2**
GRL				*eS*		**Sn**		**02 31 00.5**	**-0.7**
GRL	**Gorelyy**	**2.55**	**16**	PN		**Pn**		**02 30 32.6**	**+1.2**
APC	**Apacha**	**2.82**	**3**	*eP*		**Pn**		**02 30 35.9**	**+0.9**
APC	**Apacha**	**2.82**	**3**	PN		**Pn**		**02 30 35.9**	**+0.9**
KRMR	**Karymshinskiy**	**2.83**	**15**	*eP*		**Pn**		**02 30 36.4**	**+1.4**
KRMR				*eS*		**Sn**		**02 31 07.3**	**-0.5**
KRMR	**Karymshinskiy**	**2.83**	**15**	PN		**Pn**		**02 30 36.4**	**+1.4**
PETK	**Petropavlovsk-**	**3.04**	**9**	Pn		**Pn**		**02 30 39.5**	**+1.4**
	2.5nm,0.3s,baz=195,slow=11,SNR=35								
PETK				Sn		Sn		02 31 24.7	+12
	1.5nm,0.3s,baz=136,slow=16,SNR=1.1								
PET	**Petropavlovsk**	**3.11**	**20**	*eP*		**Pn**		**02 30 40.1**	**+1.1**
PET				*eS*		**Sn**		**02 31 13.8**	**-1.1**
PET	**Petropavlovsk**	**3.11**	**20**	PN		**Pn**		**02 30 40.1**	**+1.1**
DALK	**Dalny**	**3.14**	**21**	*eP*		**Pn**		**02 30 40.4**	**+1.0**
DALK				*eS*		**Sn**		**02 31 14.6**	**-1.0**
DALK	**Dalny**	**3.14**	**21**	PN		**Pn**		**02 30 40.4**	**+1.0**
UGLR	**Uglovaya**	**3.32**	**20**	*eP*		**Pn**		**02 30 43.9**	**+1.9**
UGLR				*eS*		**Sn**		**02 31 21.0**	**+0.7**
UGLR	**Uglovaya**	**3.32**	**20**	PN		**Pn**		**02 30 43.9**	**+1.9**
AVH	**Avacha**	**3.36**	**19**	*eP*		**Pn**		**02 30 44.6**	**+2.2**
AVH	**Avacha**	**3.36**	**19**	PN		**Pn**		**02 30 44.6**	**+2.2**
KOK	**Koryaka**	**3.36**	**18**	*eP*		**Pn**		**02 30 45.1**	**+2.6**
KOK	**Koryaka**	**3.36**	**18**	PN		**Pn**		**02 30 45.1**	**+2.6**
SMAR	**Somma**	**3.37**	**20**	*eP*		**Pn**		**02 30 45.1**	**+2.4**
SMAR	**Somma**	**3.37**	**20**	PN		**Pn**		**02 30 45.1**	**+2.4**
KRER	**Koryakskii**	**3.40**	**19**	*eP*		**Pn**		**02 30 45.1**	**+2.0**
KRER	**Koryakskii**	**3.40**	**19**	PN		**Pn**		**02 30 45.1**	**+2.0**
SDLR	**Sedlovina**	**3.40**	**20**	*eP*		**Pn**		**02 30 45.4**	**+2.3**
SDLR	**Sedlovina**	**3.40**	**20**	PN		**Pn**		**02 30 45.4**	**+2.3**
NLC	**Nalytchevo**	**3.42**	**25**	*eP*		**Pn**		**02 30 43.0**	**-0.2**
NLC	**Nalytchevo**	**3.42**	**25**	PN		**Pn**		**02 30 43.0**	**-0.2**
KRX	**Arik**	**3.43**	**18**	*eP*		**Pn**		**02 30 45.9**	**+2.5**
KRX				*eS*		**Sn**		**02 31 22.6**	**-0.3**
KRX	**Arik**	**3.43**	**18**	PN		**Pn**		**02 30 45.9**	**+2.5**
SPN	**Mys Shipunski**	**3.57**	**32**	*eP*		**Pn**		**02 30 46.0**	**+0.8**
SPN				*eS*

ANAF					AML	AML	03 06 10.2		
	comp=N,6882μm,0.4s								
ANAF	**Anafi Island**	**1.35**	**215**	P	**Pn**	**Pn**	**03 05 44.7**	**-0.4**	
ANAF				S	**Sn**	**Sn**	**03 06 03.5**	**+0.6**	
	comp=N,3μm,0.5s								
MRSB	**Marmaris-Mugla**	**1.40**	**122**	PN	**Pn**	**Pn**	**03 05 46.1**	**+0.2**	
TURN	**Turunc**	**1.40**	**119**	PN	**Pn**	**Pn**	**03 05 45.3**	**-0.6**	
THR8	**Santorini-Mono**	**1.46**	**224**	P	**Pn**	**Pn**	**03 05 46.1**	**-0.5**	
THT2	**Imerovigli**	**1.47**	**226**	PN	**Pn**	**Pn**	**03 05 46.8**	**0.0**	
THR3	**Thira Island,**	**1.50**	**225**	P	**Pn**	**Pn**	**03 05 47.6**	**+0.4**	
ZEDA	**zmir-Bergama**	**1.52**	**10**	*i* P	**Pn**	**Pn**	**03 05 46.9**	**-0.7**	
ZEDA				*i* S	**Sn**	**Sn**	**03 06 06.8**	**-0.4**	
DKL	**Dikili**	**1.61**	**5**	PN	**Pn**	**Pn**	**03 05 48.1**	**-0.6**	
AKHS	**Akhisar**	**1.65**	**31**	*i* P	**Pg**	**Pg**	**03 05 52.0**	**-0.4**	
DALY	**Dalyan (Mula)**	**1.68**	**112**	PN	**Pn**	**Pn**	**03 05 50.1**	**+0.5**	
DALY	**Dalyan (Mula)**	**1.68**	**112**	*i* P	**Pg**	**Pg**	**03 05 53.4**	**+0.5**	
ARG	**Arkhangelos**	**1.68**	**138**	P	**Pn**	**Pn**	**03 05 49.5**	**-0.3**	
ARG				AML	AML	AML	03 06 20.8		
	comp=E,1235μm,0.5s								
ARG				AML	AML	AML	03 06 25.1		
	comp=N,1360μm,0.9s								
ARG	**Arkhangelos**	**1.68**	**138**	PN	**Pn**	**Pn**	**03 05 49.5**	**-0.3**	
ARG	**Arkhangelos**	**1.68**	**138**	P	**Pn**	**Pn**	**03 05 49.3**	**-0.5**	
ARG				S	**Sn**	**Sn**	**03 06 11.0**	**-0.2**	
TAVA	**DENIZLI_Tavas**	**1.74**	**89**	*i* P	**Pb**	**Pb**	**03 05 53.0**	**+0.5**	
TAVA				*i* S	**Sg**	**Sg**	**03 06 16.2**	**-0.6**	
MANT	**Manisa**	**1.77**	**54**	*i* P	**Pg**	**Pg**	**03 05 55.0**	**+0.2**	
PRK	**Paraskevi**	**1.81**	**349**	P	**Pn**	**Pn**	**03 05 51.9**	**+0.4**	
PRK				AML	AML	AML	03 06 31.4		
	comp=E,1306μm,1.0s								
PRK				AML	AML	AML	03 06 36.8		
	comp=N,1113μm,0.8s								
AYVA	**Ayvalik**	**1.84**	**359**	*i* P	**Pg**	**Pg**	**03 05 55.2**	**-0.8**	
AYVA				*i* S	**Sg**	**Sg**	**03 06 21.2**	**+1.5**	
AYVA				IAML			03 06 25.0		
	comp=N,265nm,0.7s								
KULA	**Kula-Manisa**	**1.85**	**55**	PN	**Pn**	**Pn**	**03 05 52.0**	**-0.2**	
SIGR	**SIGRI**	**1.87**	**339**	P	**Pn**	**Pn**	**03 05 51.8**	**-0.4**	
SIGR				AML	AML	AML	03 06 28.9		
	comp=E,267μm,0.6s								
SIGR				AML	AML	AML	03 06 31.1		
	comp=N,329μm,0.8s								
SIGR	**SIGRI**	**1.87**	**339**	PN	**Pn**	**Pn**	**03 05 52.0**	**-0.3**	
SIGR	**SIGRI**	**1.87**	**339**	P	**Pn**	**Pn**	**03 05 51.9**	**-0.4**	
KARP	**Karpathos**	**1.95**	**169**	P	**Pn**	**Pn**	**03 05 52.9**	**-0.6**	
KARP				AML	AML	AML	03 06 33.8		
	comp=N,554μm,1.1s								
KARP				AML	AML	AML	03 06 35.1		
	comp=E,651μm,0.9s								
KARP	**Karpathos**	**1.95**	**169**	PN	**Pn**	**Pn**	**03 05 52.8**	**-0.7**	
KARP	**Karpathos**	**1.95**	**169**	P	**Pn**	**Pn**	**03 05 52.9**	**-0.6**	
MHLA	**Plaka, Milos I**	**1.98**	**249**	P	**Pn**	**Pn**	**03 05 54.1**	**+0.3**	
STEP	**BALIKESIR_Sava**	**2.06**	**22**	*i* P	**Pg**	**Pg**	**03 05 59.2**	**-1.0**	
FETY	**Fethiye**	**2.06**	**113**	PN	**Pn**	**Pn**	**03 05 55.8**	**+0.7**	
FETY	**Fethiye**	**2.06**	**113**	*i* P	**Pb**	**Pb**	**03 05 57.2**	**-0.8**	
FETY				*i* S	**Sn**	**Sn**	**03 06 21.2**	**+0.6**	
FETY	**Fethiye**	**2.06**	**113**	P	**Pn**	**Pn**	**03 05 54.6**	**-0.5**	
FETY				S	**Sn**	**Sn**	**03 06 21.3**	**+0.6**	
CAME	**Cameli-Denizli**	**2.13**	**104**	PN	**Pn**	**Pn**	**03 05 56.4**	**+0.4**	
BAYC	**CANAKKALE_Bayr**	**2.27**	**357**	*i* P	**Pb**	**Pb**	**03 06 02.7**	**+1.1**	
DION	**Dionisos Attik**	**2.29**	**286**	P	**Pn**	**Pn**	**03 05 58.7**	**+0.5**	
DION				AML	AML	AML	03 06 35.3		
	comp=E,498μm,0.9s								
DION				AML	AML	AML	03 06 50.7		
	comp=N,570μm,0.9s								
DION	**Dionisos Attik**	**2.29**	**286**	P	**Pn**	**Pn**	**03 05 58.7**	**+0.5**	
STIA	**Sitia Lasithi**	**2.32**	**193**	P	**Pn**	**Pn**	**03 05 58.5**	**0.0**	
BALB	**Balikesir**	**2.35**	**22**	PN	**Pn**	**Pn**	**03 05 59.2**	**+0.3**	
VLY	**Voula,Athens**	**2.35**	**280**	P	**Pn**	**Pn**	**03 05 59.8**	**+0.8**	
EZN	**Ezine**	**2.37**	**353**	PN	**Pn**	**Pn**	**03 05 59.4**	**+0.1**	
BALY	**Balya**	**2.37**	**17**	*i* P	**Pg**	**Pg**	**03 06 05.3**	**-0.9**	
BALY				*i* S	**Sg**	**Sg**	**03 06 35.4**	**-1.6**	
BALY				IAML			03 06 41.0		
	comp=N,274nm,0.7s								
BALY				IAML			03 06 43.0		
	comp=E,136nm,0.8s								
NPS	**Neapolis**	**2.38**	**202**	P	**Pn**	**Pn**	**03 05 58.7**	**-0.6**	
NPS				AML	AML	AML	03 06 41.0		
	comp=N,468μm,0.7s								
NPS				AML	AML	AML	03 06 41.4		
	comp=E,660μm,0.7s								
NPS	**Neapolis**	**2.38**	**202**	P	**Pn**	**Pn**	**03 05 58.7**	**-0.6**	
ZKR	**Zakros**	**2.38**	**190**	P	**Pn**	**Pn**	**03 05 59.3**	**-0.1**	
ZKR	**Zakros**	**2.38**	**190**	PN	**Pn**	**Pn**	**03 05 59.7**	**+0.3**	
ZKR	**Zakros**	**2.38**	**190**	P	**Pn**	**Pn**	**03 05 59.1**	**-0.3**	
SIMA	**Simav-Kutahya**	**2.40**	**47**	PN	**Pn**	**Pn**	**03 05 59.9**	**+0.2**	
BOZC	**Bozcaada**	**2.43**	**348**	PN	**Pn**	**Pn**	**03 05 59.4**	**-0.6**	
LAST	**Lasithi**	**2.51**	**204**	P	**Pn**	**Pn**	**03 06 01.2**	**-0.1**	
LAST				AML	AML	AML	03 06 47.2		
	comp=N,289μm,0.5s								
LAST				AML	AML	AML	03 06 54.4		
	comp=E,304μm,1.3s								
HRKL	**Herakleio**	**2.52**	**212**	PN	**Pn**	**Pn**	**03 06 01.7**	**+0.4**	
AKAS	**Kas**	**2.62**	**117**	PN	**Pn**	**Pn**	**03 06 03.5**	**+0.7**	
AKAS	**Kas**	**2.62**	**117**	*i* P	**Pn**	**Pn**	**03 06 04.1**	**+1.3**	
IDI	**Anoyia**	**2.63**	**215**	P	**Pn**	**Pn**	**03 06 02.8**	**-0.1**	
IDI				AML	AML	AML	03 06 47.7		
	comp=E,226μm,0.6s								
IDI				AML	AML	AML	03 06 51.3		
	comp=N,208μm,1.1s								
IDI	**Anoyia**	**2.63**	**215**	PN	**Pn**	**Pn**	**03 06 03.3**	**+0.4**	
IDI	**Anoyia**	**2.63**	**215**	P	**Pn**	**Pn**	**03 06 03.0**	**+0.1**	
ELL	**Elmali**	**2.65**	**105**	PN	**Pn**	**Pn**	**03 06 03.9**	**+0.7**	
KSL	**Kastellorizon**	**2.65**	**119**	P	**Pn**	**Pn**	**03 06 03.8**	**+0.7**	
BRDR	**BURDUR-Merkez**	**2.66**	**84**	*i* P	**Pn**	**Pn**	**03 06 04.5**	**+1.2**	
GDZ	**Gediz**	**2.71**	**52**	*i* P	**Pg**	**Pg**	**03 06 11.2**	**-1.4**	
LIA	**Limnos Island**	**2.71**	**334**	P	**Pn**	**Pn**	**03 06 04.1**	**+0.2**	
LIA	**Limnos Island**	**2.71**	**334**	P	**Pn**	**Pn**	**03 06 04.1**	**+0.2**	
GOKA	**anakkale-Gk**	**2.79**	**347**	*i* P	**Pn**	**Pn**	**03 06 04.1**	**-0.9**	
GADA	**Gvkgeada**	**2.79**	**347**	P	**Pn**	**Pn**	**03 06 04.8**	**-0.2**	
KZIL	**AFYON_Kizioren**	**2.82**	**73**	*i* P	**Pg**	**Pg**	**03 06 13.8**	**-0.9**	
KORT	**Korkueli**	**2.93**	**98**	*i* P	**Pn**	**Pn**	**03 06 07.9**	**+0.8**	
AKUM	**Antalya-Kumluc**	**3.12**	**110**	*i* P	**Pn**	**Pn**	**03 06 12.1**	**+2.5**	
SMTH	**Samothraki Isl**	**3.14**	**343**	P	**Pn**	**Pn**	**03 06 09.6**	**-0.2**	
ULDT	**Uludag**	**3.27**	**35**	*i* P	**Pb**	**Pb**	**03 06 20.4**	**+1.8**	
ENEZ	**Enez**	**3.29**	**352**	P	**Pn**	**Pn**	**03 06 12.2**	**+0.3**	
KESN	**Edirne-Kesan**	**3.35**	**359**	*i* P	**Pn**	**Pn**	**03 06 12.9**	**-0.1**	
IGD	**Bursa**	**3.40**	**34**	*i* P	**Pg**	**Pg**	**03 06 24.6**	**-1.2**	
ALN	**Alexandroupoli**	**3.46**	**351**	P	**Pn**	**Pn**	**03 06 14.1**	**-0.1**	
THAS	**Thassos island**	**3.50**	**334**	P	**Pn**	**Pn**	**03 06 14.7**	**0.0**	
RDO	**Rodhopi**	**3.79**	**346**	P	**Pn**	**Pn**	**03 06 18.9**	**+0.2**	

IDC ***11*** *03:20:48.5±0.5,4.˚83S×29.˚32E, h0km, mb4.4/21, mb1 4.6/25, mb1mx4.5/34, mbtmp4.5/25, ML2.5/1, MS4.3/34, Ms1 4.3/34, ms1mx4.2/44, Error ellipse: s-maj=17.9km s-min=12.3km az=96.0*

NEIC ***11*** *03:20:49.3± 1.1, 4.˚92S±0.˚05×29.˚43E±0.˚09, h14km±4km, mb4.8/51, Error ellipse: s-maj=13.5km s-min=7.4km az=101.0*

BGR ***11*** *03:20:49.2± 0.0, 5.˚36S×28.˚56E, h33km, mb5.1*

GCMT ***11*** *03:20:53.3± 0.2, 4.˚84S±0.˚02×29.˚15E±0.˚01, h19km, MW5.0/102, Moment Tensor Solution. s51,c65; s102,c159; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=-3.37±.14; Mθθ-0.52±.08; Mϕϕ3.88±.10; Mrθ-1.65±.21; Mθϕ-0.41±.07; Mϕr1.29±.18; Best double couple: Mo4.23100×10¹⁶ NP1:ϕs16.00000°, δ38.00000°, λ-55.00000°. NP2:ϕs154.00000°, δ60.00000°, λ-114.00000°. Principal axes: T 4.2100, Plg11.0000°, Azm261.0000°; N 0.0320, Plg21.0000°, Azm167.0000°; P -4.2510, Plg66.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 03:20:49.6±5.5, 4.˚87S×29.˚43E, h10km±137km, n38, ML5.3, 26C-10D, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**4.44**	**17**	Op Pn		**Pn**	**03 21 57.7**	**+0.5**
	58nm,0.3s,baz=179,slow=0.9,SNR=62							
MBAR				Lg		Lg	03 23 05.8	
	1μm,0.3s,baz=180,slow=20,SNR=9.8							
MBAR				LR		LR	03 23 53.3	
	comp=Z,5μm,20.6s,baz=189,slow=42							
MBAR	**Mbarara**	**4.44**	**17**	*i* P		**Pn**	**03 22 00.8**	**+3.6**
MBAR	**Mbarara**	**4.44**	**17**	P		**Pn**	**03 21 57.4**	**+0.2**
MBAR				S		Sn	03 22 40.6	-8.5
MBAR	**Mbarara**	**4.44**	**17**	Pn		**Pn**	**03 21 57.0**	**-0.2**
MBAR				S		**Sn**	**03 22 47.4**	**-1.6**
MBAR	**Mbarara**	**4.44**	**17**	*e*P		**Pn**	**03 21 58.3**	**+1.1**
MBAR				*e*S		**Sb**	**03 23 02.3**	**+0.8**
MBAR	**Mbarara**	**4.44**	**17**	*i* P		**Pn**	**03 21 59.4**	**+2.2**
MBAR				IAML			03 23 28.9	
	comp=Z,6μm,0.2s							
TEBE	**Entebbe**	**5.76**	**32**	*i* P		**Pn**	**03 22 18.9**	**+3.6**
TEBE				*i* S		**Sn**	**03 23 18.1**	**-3.5**
MZUN	**Kiwira**	**5.88**	**137**	*i* P		Pb	03 22 26.6	-5.9
MZUN				*i* S		**Sn**	**03 23 32.0**	**+7.3**
MZUN				IAML			03 24 07.1	
	comp=Z,7μm,0.4s							
PR61	**Kiloki Boma**	**6.11**	**72**	*i* P		**Pn**	**03 22 21.4**	**+1.1**
PR61				*i* S		**Sn**	**03 23 28.2**	**-2.2**
PR61				IAML			03 24 04.8	
	comp=Z,6μm,0.4s							
NG56	**Ngoile bomas**	**6.22**	**74**	*i* P		**Pn**	**03 22 23.1**	**+1.4**
NG56				*i* S		**Sn**	**03 23 30.8**	**-2.3**
NG56				IAML			03 24 16.1	
	comp=Z,14μm,1.7s							
PR62	**Oldupai Boma**	**6.22**	**73**	*i* P		**Pn**	**03 22 23.0**	**+1.2**
PR62				*i* S		**Sn**	**03 23 32.9**	**-0.2**
PR62				IAML			03 24 06.8	
	comp=Z,16μm,0.8s							
NG54	**Nasera Bomas**	**6.29**	**70**	*i* P		**Pn**	**03 22 24.0**	**+1.2**
NG54				*i* S		**Sn**	**03 23 30.4**	**-4.5**
NG54				IAML			03 24 16.1	
	comp=Z,3μm,2.0s							
KOND	**Kondoa**	**6.34**	**91**	*i* P		**Pn**	**03 22 24.2**	**+0.8**
KOND				*i* S		**Sn**	**03 23 35.2**	**-0.8**
PR63	**Meshili Boma**	**6.34**	**73**	*i* P		**Pn**	**03 22 24.6**	**+1.1**
PR63				*i* S		**Sn**	**03 23 35.3**	**-0.8**
PR63				IAML			03 24 16.2	
	comp=Z,8μm,0.7s							
MAKE	**Makete**	**6.37**	**134**	*i* P		Pn	03 22 29.4	+5.5
MW44	**Karatu Welwel**	**6.40**	**77**	*i* P		**Pn**	**03 22 25.4**	**+1.1**
MW44				*i* S		**Sn**	**03 23 35.7**	**-1.8**
MW44				IAML			03 24 19.9	
	comp=Z,5μm,0.4s							
LL66	**Piyaya bomas**	**6.45**	**70**	*i* P		**Pn**	**03 22 25.7**	**+0.8**
LL66				*i* S		**Sn**	**03 23 33.6**	**-5.0**
LL65	**Arash bomas**	**6.47**	**68**	*i* P		**Pn**	**03 22 26.6**	**+1.4**
LL65				*i* S		**Sn**	**03 23 36.8**	**-2.5**
NG55	**Lemala Gate**	**6.47**	**75**	*i* P		**Pn**	**03 22 27.2**	**+1.8**
PR52	**Alailelai Boma**	**6.54**	**73**	*i* P		**Pn**	**03 22 27.8**	**+1.5**
LL22	**Malambo SS**	**6.58**	**69**	*i* P		**Pn**	**03 22 28.0**	**+1.3**
PR53	**Nayobi Boma**	**6.70**	**73**	*i* P		**Pn**	**03 22 28.0**	**-0.5**
LL21	**Loliondo SS**	**6.72**	**66**	*i* P		**Pn**	**03 22 30.0**	**+1.4**
LL23	**Sali PS**	**6.75**	**68**	*i* P		**Pn**	**03 22 30.1**	**+1.1**
LN26	**Engaresero PS**	**6.82**	**71**	*i* P		**Pn**	**03 22 30.6**	**+0.7**
LL24	**Masusu PS**	**6.87**	**68**	*i* P		**Pn**	**03 22 32.0**	**+1.4**
PR31	**Engaruka Boma**	**6.88**	**74**	*i* P		**Pn**	**03 22 32.4**	**+1.6**
LN35	**Magadini PS**	**6.93**	**72**	*i* P		**Pn**	**03 22 34.3**	**+2.9**
LN34	**Lwondulwo boma**	**6.93**	**73**	*i* P		**Pn**	**03 22 33.1**	**+1.6**
LLBB	**Lubumbashi**	**6.99**	**196**	*i* P		**Pn**	**03 22 32.2**	**+0.9**
PR33	**Engutoto Boma**	**6.99**	**73**	*i* P		**Pn**	**03 22 33.8**	**+1.5**
PR32	**Iloiriento PS**	**7.02**	**74**	*i* P		**Pn**	**03 22 34.4**	**+1.6**
LN15	**Lekule Girls S**	**7.10**	**72**	*i* P		**Pn**	**03 22 35.0**	**+1.2**
PR11	**Kitumbeine SS**	**7.15**	**74**	*i* P		**Pn**	**03 22 35.6**	**+1.1**
KEN4	**Ngurumani**	**7.29**	**65**	*i* P		**Pn**	**03 22 37.5**	**+1.1**
LN16	**Kitarini PS**	**7.37**	**73**	*i* P		**Pn**	**03 22 37.8**	**+0.2**
LN14	**Matela PS**	**7.38**	**71**	*i* P		**Pn**	**03 22 41.5**	**+3.9**
KEN2	**Magadi Soda Va**	**7.45**	**67**	*i* P		**Pn**	**03 22 39.5**	**+0.9**
LN46	**New Vision PS**	**7.46**	**76**	*i* P		**Pn**	**03 22 39.3**	**+0.5**
I32KE	**NAIROBI INFRAS**	**8.22**	**64**	Lg		Lg	03 25 04.0	
	baz=228,slow=38,SNR=1.6							
KMBO	**Kilima Mbogo**	**8.65**	**65**	Pn		**Pn**	**03 22 55.9**	**+0.7**
	comp=Z,5.5nm,0.3s,baz=232,slow=16,SNR=69							
KMBO				Sn		**Sn**	**03 24 28.6**	**-4.5**
	comp=Z,15nm,0.3s,baz=236,slow=13,SNR=5.6							
KMBO				Lg		Lg	03 25 22.2	
	comp=Z,55nm,0.3s,baz=329,slow=22,SNR=15							
KMBO	**Kilima Mbogo**	**8.65**	**65**	P		**Pn**	**03 22 55.5**	**+0.3**
KMBO				S		**Sn**	**03 24 26.2**	**-6.9**
KMBO	**Kilima Mbogo**	**8.65**	**65**	Pn		**Pn**	**03 22 54.1**	**-1.1**
KMBO				Sn		**Sn**	**03 24 29.9**	**-3.1**
KMBO	**Kilima Mbogo**	**8.65**	**65**	*i* P		**Pn**	**03 22 55.8**	**+0.6**
KIBK	**Kibwezi**	**8.96**	**74**	P		**Pn**	**03 23 00.5**	**+1.1**
	SNR=14							
KIBK				S		**Sn**	**03 24 36.3**	**-4.1**
LODK	**Lodwar**	**10.15**	**36**	P		**Pn**	**03 23 14.1**	**-1.5**
	SNR=29							
LSZ	**Lusaka**	**10.41**	**187**	Pn		**Pn**	**03 23 18.5**	**-0.7**
	comp=Z,3.0nm,0.3s,baz=11,slow=11,SNR=95							
LSZ				Sn		**Sn**	**03 25 10.2**	**-6.0**
	comp=Z,6.3nm,0.3s,baz=57,slow=19,SNR=3.8							
LSZ				Lg		Lg	03 26 16.4	
	comp=Z,12nm,0.3s,baz=55,slow=15,SNR=5.7							
LSZ				LR		LR	03 27 37.6	
	comp=Z,3μm,20.9s,baz=12,slow=39							
LSZ	**Lusaka**	**10.41**	**187**	*i* P		**Pn**	**03 23 18.0**	**-1.3**
LSZ				*i* S		**Sn**	**03 25 14.2**	**-2.0**
LSZ	**Lusaka**	**10.41**	**187**	Pn		**Pn**	**03 23 18.1**	**-1.2**
LSZ				Sn		**Sn**	**03 25 14.1**	**-2.1**
LSZ	**Lusaka**	**10.41**	**187**	*i* P		**Pn**	**03 23 18.0**	**-1.3**
LSZ				*i* S		**Sn**	**03 25 14.2**	**-2.0**
LSZ	**Lusaka**	**10.41**	**187**	*i* P		**Pn**	**03 23 20.3**	**+1.1**
BLWY	**Bulawayo**	**15.20**	**183**	*i* P		**Pn**	**03 24 23.4**	**-1.3**
BLWY	**Bulawayo**	**15.20**	**183**	*i* P		**Pn**	**03 24 23.4**	**-1.3**
MATP	**Matopo**	**15.49**	**183**	Pn		**Pn**	**03 24 26.1**	**-2.4**
	comp=Z,1.0nm,0.3s,baz=12,slow=14,SNR=15							
MATP				Sn		**Sn**	**03 27 14.3**	**-6.0**
	comp=Z,1.8nm,0.3s,baz=21,slow=17,SNR=1.8							
MATP				Lg		Lg	03 28 54.7	
	comp=Z,5.5nm,0.3s,baz=276,slow=20,SNR=4.8							
FURI	**Furi**	**16.49**	**34**	*e*P		**P**	**03 24 43.9**	**-0.4**
FURI	**Furi**	**16.49**	**34**	*e*P		**P**	**03 24 43.9**	**-0.4**
AAE	**Adis Abeba**	**16.65**	**34**	*e*P		**Pn**	**03 24 43.9**	**+0.3**
AAE	**Adis Abeba**	**16.65**	**34**	*e*P		**Pn**	**03 24 43.9**	**+0.3**
TSUM	**Tsumeb**	**18.34**	**218**	P		**Pn**	**03 25 02.3**	**-2.2**
	comp=Z,1.0nm,0.3s,baz=38,slow=14,SNR=15							
TSUM				S		Sn	03 28 17.5	-12
	comp=Z,2.4nm,0.3s,baz=81,slow=13,SNR=1.9							
TSUM				Lg		Lg	03 30 24.1	
	comp=Z,1.8nm,0.3s,baz=279,slow=14,SNR=2.1							
TSUM				LR		LR	03 32 18.9	
	comp=Z,1μm,20.7s,baz=37,slow=38							
TSUM	**Tsumeb**	**18.34**	**218**	*i* P		**Pn**	**03 25 02.9**	**-1.5**
TSUM	**Tsumeb**	**18.34**	**218**	P		**Pn**	**03 25 01.7**	**-2.8**
TSUM	**Tsumeb**	**18.34**	**218**	*i* P		**Pn**	**03 25 02.9**	**-1.5**
TSUM	**Tsumeb**	**18.34**	**218**	*i* P		**Pn**	**03 25 03.2**	**-1.3**
LBTB	**Lobatse**	**20.37**	**190**	P		**P**	**03 25 26.4**	**-0.2**
	comp=Z,8.8nm,0.8s,baz=12,slow=13,SNR=13							
LBTB				Lg		Lg	03 31 22.7	
	comp=Z,25nm,0.9s,baz=138,slow=23,SNR=2.3							
LBTB				LR		LR	03 33 35.5	
	comp=Z,2μm,21.8s,baz=12,slow=38							
LBTB	**Lobatse**	**20.37**	**190**	*i* P		Pn	03 25 27.1	-1.6
LBTB	**Lobatse**	**20.37**	**190**	P		**P**	**03 25 25.7**	**-1.0**
LBTB	**Lobatse**	**20.37**	**190**	*i* P		Pn	03 25 27.1	-1.6
LBTB	**Lobatse**	**20.37**	**190**	*i* P		Pn	03 25 32.8	+4.1
ATD	**Arta Tunnel**	**21.06**	**39**	Lg		Lg	03 31 54.0	
	comp=Z,3.8nm,0.3s,baz=161,slow=23,SNR=1.7							
ATD				LR		LR	03 32 36.5	
	comp=Z,424nm,21.0s,baz=212,slow=34							
ATD	**Arta Tunnel**	**21.06**	**39**	*e*P		**P**	**03 25 36.2**	**+2.0**
ATD	**Arta Tunnel**	**21.06**	**39**	*e*P		**P**	**03 25 36.2**	**+2.0**
OPO	**Ambohidratompo**	**22.05**	**130**	P		**P**	**03 25 46.6**	**+1.7**
	comp=Z,3.2nm,0.7s,baz=292,slow=19,SNR=2.0							
OPO				LR		LR	03 33 12.5	
	comp=Z,657nm,19.6s,baz=182,slow=34							
BOSA	**Boshof**	**23.95**	**189**	P		**P**	**03 26 04.7**	**+0.4**
	comp=Z,11nm,0.9s,baz=7.5,slow=10,SNR=14							
BOSA				Lg		Lg	03 33 22.6	
	comp=Z,17nm,0.8s,baz=58,slow=4.5,SNR=1.8							
BOSA				LR		LR	03 35 43.5	
	comp=Z,2μm,19.8s,baz=16,slow=37							
BOSA	**Boshof**	**23.95**	**189**	*i* P		**P**	**03 26 05.9**	**+1.6**
BOSA	**Boshof**	**23.95**	**189**	P		**P**	**03 26 03.2**	**-1.1**
BOSA				IAmb		IAmb	03 26 14.9	
	comp=Z,15nm,0.7s							
BOSA	**Boshof**	**23.95**	**189**	*i* P		**P**	**03 26 05.9**	**+1.6**
BOSA	**Boshof**	**23.95**	**189**	*i* P		**P**	**03 26 06.3**	**+2.1**
FOMA	**Nahampoana Res**	**26.15**	**142**	P		P	03 26 38.4	+14
SUR	**Sutherland**	**28.53**	**195**	LR		LR	03 38 33.4	
	comp=Z,1μm,20.6s,baz=20,slow=37							
SUR	**Sutherland**	**28.53**	**195**	*i* P		**P**	**03 26 46.7**	**+0.9**
SUR	**Sutherland**	**28.53**	**195**	*i* P		**P**	**03 26 46.7**	**+0.9**
RAYN	**Ar Rayn**	**32.29**	**28**	P		**P**	**03 27 17.9**	**-1.0**
ABTO	**Aybut**	**32.30**	**46**	P		**P**	**03 27 21.2**	**+2.1**
TOA0	**Torodi Ar. Sit**	**32.85**	**303**	P		**P**	**03 27 23.0**	**-0.9**
TOA0				IAmb		IAmb	03 27 37.9	
	comp=Z,7.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**32.85**	**303**	P		**P**	**03 27 23.1**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=113,slow=7.9,SNR=20							
TORD				Lg		Lg	03 37 57.9	
	comp=Z,2.0nm,1.1s,baz=127,slow=19,SNR=3.9							
TORD				LR		LR	03 41 22.9	
	comp=Z,1μm,20.8s,baz=95,slow=38							
TORD	**Torodi Ar. Bea**	**32.85**	**303**	P		**P**	**03 27 23.1**	**-0.8**
EIL	**Elat**	**34.75**	**8**	LR		LR	03 41 55.0	
	comp=Z,536nm,18.6s,baz=178,slow=36							
KIC	**Kosan_Boka**	**35.89**	**288**	*e*P		**P**	**03 27 52.3**	**+2.0**
	comp=Z,76nm,1.5s							
TAM	**Tamanrasset**	**36.08**	**321**	P		**P**	**03 27 51.7**	**-0.3**
TAM						**S**	**03 33 29.5**	**-2.1**
DBIC	**Dimbokro**	**36.09**	**288**	P		**P**	**03 27 51.5**	**-0.5**
	comp=Z,2.7nm,0.9s,baz=90,slow=12,SNR=1.6							
DBIC				LR		LR	03 43 00.2	
	comp=Z,424nm,18.3s,baz=84,slow=37							
LIC	**Lamto**	**36.12**	**287**	*e*P		**P**	**03 27 54.1**	**+1.8**
	comp=Z,15nm,0.6s							
TIC	**Toumodi**	**36.24**	**288**	*e*P		**P**	**03 27 52.6**	**-0.7**
MMAI	**Mount Meron Ar**	**38.10**	**8**	LR		LR	03 42 51.0	
	comp=Z,359nm,18.9s,baz=200,slow=35							
KOWA	**Kowa**	**38.34**	**301**	P		**P**	**03 28 10.4**	**-0.7**
BSY	**Bisya**	**38.60**	**44**	P		**P**	**03 28 15.9**	**+2.6**
BSY				P		**P**	**03 28 15.9**	**+2.6**
SOHO	**SOHO**	**39.10**	**41**	P		**P**	**03 28 20.4**	**+3.1**
HOQ	**Hoqain**	**39.24**	**43**	P		**P**	**03 28 20.9**	**+2.3**
HATD	**Hatta, Dubai**	**39.32**	**40**	P		**P**	**03 28 22.2**	**+3.0**
	SNR=6.9							
SMDO	**Samad**	**39.40**	**44**	P		**P**	**03 28 22.3**	**+2.3**
UOSS	**Minazif**	**39.45**	**40**	P		**P**	**03 28 22.7**	**+2.4**
UOSS	**Minazif**	**39.45**	**40**	P		**P**	**03 28 18.7**	**-1.6**
UOSS				IAmb		IAmb	03 28 24.7	
	comp=Z,18nm,1.1s							
MDH	**Madha**	**39.76**	**40**	P		**P**	**03 28 25.3**	**+2.4**
	SNR=9.2							
KARP	**Karpathos**	**40.26**

MOA	**Mollin**	**54.16**	**347**	*e*P		**P**	**03 30 16.3**	**+1.2**
	comp=Z,14nm,1.0s									
SMOL	**Smolenice**	**54.19**	**350**	*e*P		**P**	**03 30 15.6**	**+0.3**
WTTA	**Wattenberg**	**54.23**	**345**	*e*P		**P**	**03 30 16.9**	**+1.0**
	comp=Z,11nm,1.0s									
FETA	**Feichten**	**54.25**	**344**	*e*P		**P**	**03 30 17.2**	**+1.3**
	comp=Z,6.6nm,0.9s									
DAVOX	**Davos/Dischmat**	**54.26**	**344**	LR		LR	03 54 13.6			
	comp=Z,258nm,20.4s,baz=105,slow=37									
SQTA	**Sankt Quirin**	**54.31**	**345**	*e*P		**P**	**03 30 17.6**	**+1.3**
	comp=Z,7.7nm,0.8s									
WATA	**Walderalm**	**54.32**	**345**	*e*P		**P**	**03 30 17.1**	**+0.7**
	comp=Z,12nm,1.1s									
MOTA	**Moosalm**	**54.45**	**345**	*e*P		**P**	**03 30 18.0**	**+0.7**
	comp=Z,12nm,1.0s									
JAVC	**Velka Javorina**	**54.48**	**350**	*e*P		**P**	**03 30 18.5**	**+1.0**
LANS	**Liptovska Anna**	**54.49**	**352**	*e*P		**P**	**03 30 18.9**	**+1.4**
KWP	**Kalwaria Pacla**	**54.59**	**355**	*e*P		**P**	**03 30 19.6**	**+1.4**
NIE	**Niedzica**	**54.65**	**353**	*e*P		**P**	**03 30 20.1**	**+1.5**
RETA	**Reute**	**54.67**	**345**	*e*P		**P**	**03 30 18.8**	**-0.1**
	comp=Z,25nm,1.7s									
DAVA	**Damuels**	**54.73**	**344**	*i* P		**P**	**03 30 19.5**	**+0.1**
	comp=Z,17nm,0.9s,SNR=8.9									
KRUC	**Moravsky**	**54.90**	**350**	*e*P		**P**	**03 30 20.4**	**0.0**
VRAC	**Vranov**	**55.10**	**350**	LR		LR	03 56 37.4			
	comp=Z,70nm,18.7s,baz=190,slow=39									
VRAC	**Vranov**	**55.10**	**350**	⇑P		**P**	**03 30 22.3**	**+0.4**
VRAC	**Vranov**	**55.10**	**350**	*e*P		**P**	**03 30 21.8**	**-0.1**
GEC2	**GERESS Array S**	**55.23**	**347**	IAmb		IAmb	03 30 23.8			
	comp=Z,8.6nm,1.0s									
GERES	**GERESS Array B**	**55.23**	**347**	P		**P**	**03 30 23.5**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=156,slow=7.0,SNR=37									
GERES				LR		LR	03 56 47.6			
	comp=Z,283nm,18.9s,baz=173,slow=39									
GERES	**GERESS Array B**	**55.23**	**347**	P		**P**	**03 30 22.4**	**-0.6**
AKASG	**Malin Array Be**	**55.35**	**360**	P		**P**	**03 30 23.5**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=186,slow=6.7,SNR=34									
AKASG				LR		LR	03 56 40.1			
	comp=Z,91nm,18.2s,baz=145,slow=39									
AKASG	**Malin Array Be**	**55.35**	**360**	P		**P**	**03 30 23.4**	**-0.1**
AKBB	**Malin Array Si**	**55.35**	**360**	P		**P**	**03 30 23.8**	**+0.2**
AKBB				IAmb		IAmb	03 30 24.1			
	comp=Z,9.9nm,0.9s									
MORC	**Moravsky Berou**	**55.39**	**351**	⇑P		**P**	**03 30 24.6**	**+0.6**
MORC	**Moravsky Berou**	**55.39**	**351**	*e*P		**P**	**03 30 24.1**	**+0.1**
MORC	**Moravsky Berou**	**55.39**	**351**	P		**P**	**03 30 22.9**	**-1.2**
MORC				IAmb		IAmb	03 30 25.1			
	comp=Z,9.3nm,1.0s									
OJC	**Ojcow**	**55.50**	**353**	*e*P		**P**	**03 30 25.1**	**+0.4**
KHC	**Kasperske Hory**	**55.52**	**347**	*e*P		**P**	**03 30 24.7**	**-0.3**
PBCC	**Pribram**	**55.96**	**348**	*e*P		**P**	**03 30 27.5**	**-0.6**
PRU	**Pruhonice**	**56.14**	**348**	*e*P		**P**	**03 30 29.3**	**0.0**
DPC	**Dobruska-Polom**	**56.15**	**350**	*e*P		**P**	**03 30 29.5**	**0.0**
PRA	**Prague**	**56.24**	**348**	*e*P		**P**	**03 30 30.0**	**0.0**
OSTC	**Ostas**	**56.37**	**350**	*e*P		**P**	**03 30 30.2**	**-0.8**
NIL	**Nilore**	**56.41**	**44**	P		**P**	**03 30 31.1**	**-0.6**
NIL				IAmb		IAmb	03 30 35.1			
	comp=Z,14nm,0.8s									
CHVC	**Chvalec**	**56.43**	**350**	*e*P		**P**	**03 30 31.7**	**+0.3**
GRF	**Grafenberg Arr**	**56.59**	**346**	*e*P		**P**	**03 30 32.5**	**-0.1**
	comp=Z,20nm,1.1s,baz=155,slow=7.2									
PVCC	**Panska Ves**	**56.65**	**349**	*e*P		**P**	**03 30 32.8**	**-0.1**
NKC	**Novy Kostel**	**56.81**	**347**	*e*P		**P**	**03 30 34.5**	**+0.4**
CLL	**Collm**	**57.70**	**348**	*e*P		**P**	**03 30 41.0**	**+0.6**
CLL				Lm		MLR	03 58 00.0			
	comp=N,200nm,19.7s									
CLL				Lm		MLR	03 58 00.0			
	comp=E,200nm,18.3s									
CLL				Lm		MLR	03 58 00.0			
	comp=Z,200nm,18.6s									
RUE	**Ruedersdorf**	**58.66**	**349**	*e*P		**P**	**03 30 47.7**	**+0.7**
BTK	**Batken**	**58.69**	**36**	P		**P**	**03 30 46.6**	**-1.0**
BTK				IAmb		IAmb	03 30 49.5			
	comp=Z,6.6nm,1.1s									
SUW	**Suwalki**	**58.90**	**356**	*e*P		**P**	**03 30 49.2**	**+0.5**
IDID	**Didziasalis**	**60.01**	**358**	*e*P		**P**	**03 30 56.8**	**+0.4**
IIGN	**Ignalina**	**60.07**	**358**	*e*P		**P**	**03 30 57.0**	**+0.3**
ABKAR	**Akbulak array**	**60.08**	**23**	P		**P**	**03 30 57.0**	**0.0**
ISAL	**Salakas**	**60.29**	**358**	*e*P		**P**	**03 30 58.4**	**+0.1**
PABE	**Paberze**	**60.33**	**356**	*e*P		**P**	**03 30 58.7**	**+0.2**
IZAR	**Zarasai**	**60.46**	**358**	*e*P		**P**	**03 30 59.3**	**-0.1**
KK31	**Karatay Array**	**60.48**	**34**	P		**P**	**03 30 59.0**	**-0.8**
KK31				IAmb		IAmb	03 31 02.1			
	comp=Z,8.7nm,1.0s									
KKAR	**Karatay Array**	**60.48**	**34**	P		**P**	**03 31 00.7**	**+0.8**
KKAR	**Karatay Array**	**60.48**	**34**	IAmb		IAmb	03 31 02.1			
	comp=Z,8.7nm,1.0s									
VSU	**Vasula**	**63.16**	**358**	*e*P		**P**	**03 31 18.2**	**+0.7**
SYO	**Syowa Base**	**64.40**	**176**	⇓*e*pP		pP	03 31 27.5	-1.6
SYO	**Syowa Base**	**64.40**	**176**	*e*PcP		**PcP**	**03 31 58.1**	**-1.8**
ARU	**Arti**	**65.58**	**17**	P		**P**	**03 31 33.8**	**+0.4**
KLMR	**Klimovskoe**	**66.00**	**5**	*e*P		**P**	**03 31 34.4**	**-1.6**
KLMR				AMP			03 31 37.3			
	comp=Z,25nm,1.2s									
FINES	**FINESS Array B**	**66.17**	**358**	P		**P**	**03 31 37.8**	**+0.6**
	comp=Z,7.2nm,0.8s,baz=134,slow=5.5,SNR=13									
FINES				LR		LR	04 04 33.0			
	comp=Z,90nm,18.1s,baz=240,slow=40									
MAW	**Mawson**	**66.64**	**167**	P		**P**	**03 31 42.4**	**+2.4**
	comp=Z,3.9nm,0.9s,baz=320,slow=7.9,SNR=5.9									
MAW				LR		LR	03 56 41.3			
	comp=Z,228nm,21.8s,baz=32,slow=32									
MAW	**Mawson**	**66.64**	**167**			pP	03 31 43.7	+0.1
BRVK	**Borovoye**	**67.19**	**25**	P		**P**	**03 31 44.3**	**+0.5**
NB2	**NORSAR Subarra**	**67.23**	**351**	P		**P**	**03 31 44.0**	**0.0**
	comp=Z,37nm,2.0s,baz=162,slow=5.6									
NB2	**NORSAR Subarra**	**67.23**	**351**	P		**P**	**03 31 44.0**	**0.0**
	baz=162,slow=5.6									
NOA	**NORSAR Array B**	**67.23**	**351**	P		**P**	**03 31 43.7**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=163,slow=5.9,SNR=7.9									
NOA				LR		LR	04 03 40.8			
	comp=Z,128nm,20.2s,baz=175,slow=38									
MAKZ	**Makanchi**	**69.21**	**36**	P		**P**	**03 31 55.8**	**-0.9**
MAKZ				IAmb		IAmb	03 31 58.6			
	comp=Z,8.8nm,0.8s									
MK31	**Makanchi Array**	**69.39**	**36**	IAmb		IAmb	03 31 59.6			
	comp=Z,9.5nm,0.9s									
MKAR	**Makanchi Array**	**69.39**	**36**	P		**P**	**03 31 58.9**	**+1.0**
	comp=Z,9.8nm,0.8s,baz=235,slow=5.8,SNR=56									
MKAR				LR		LR	04 06 10.4			
	comp=Z,405nm,18.6s,baz=242,slow=39									
MKAR	**Makanchi Array**	**69.39**	**36**	P		**P**	**03 31 58.3**	**+0.5**
KURK	**Kurchatov**	**69.58**	**31**	P		**P**	**03 31 59.9**	**+1.1**
KURK				IAmb		IAmb	03 32 01.0			
	comp=Z,12nm,0.9s									
VNA2	**Neumayer--Watz**	**70.01**	**192**	P		**P**	**03 32 03.3**	**+2.1**
VNA3	**Neumayer Olymp**	**70.73**	**192**	P		**P**	**03 32 08.7**	**+3.1**
WMQ	**Urumqi**	**71.27**	**41**	*e*P		**P**	**03 32 10.3**	**+0.9**
WMQ				pmax		pmax				
	comp=Z,24nm,0.7s									
WMQ				pmax		pmax				
	comp=Z,130nm,5.5s									
CMAR	**Chiang Mai Arr**	**72.27**	**69**	P		**P**	**03 32 17.4**	**+1.5**
	comp=Z,12nm,0.4s,baz=205,slow=8.8,SNR=5.5									
ARCES	**ARCESS Array B**	**74.29**	**359**	P		**P**	**03 32 27.2**	**+0.4**
	comp=Z,6.5nm,0.8s,baz=185,slow=5.6,SNR=11									
ARCES				LR		LR	04 07 44.2			
	comp=Z,33nm,19.2s,baz=210,slow=38									
ZALV	**Zalesovo Beam**	**74.54**	**30**	P		**P**	**03 32 28.5**	**0.0**
	comp=Z,5.8nm,0.8s,baz=253,slow=5.2,SNR=19									
BDFB	**Brasilia**	**76.62**	**255**	P		**P**	**03 32 42.6**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=73,slow=7.9,SNR=4.1									
BDFB				LR		LR	04 01 25.8			
	comp=Z,97nm,19.5s,baz=124,slow=32									
GTA	**Gaotai**	**78.12**	**48**	*e*P		**P**	**03 32 51.6**	**+2.2**
GTA				pP		sP	03 32 56.0	+1.8
GTA				sP		PcP	03 32 58.8	-0.2
GTA				pmax		pmax				
	comp=Z,4.0nm,1.1s									
GTA				pmax		pmax				
	comp=Z,61nm,4.4s									
GTA				LR		LR				
	comp=Z,130nm,16.4s									
GTA				LR		LR				
	comp=Z,210nm,17.1s									
GTA				LR		LR				
	comp=Z,190nm,17.8s									
LZH	**Lanzhou**	**80.36**	**52**	*e*P		**P**	**03 33 01.8**	**0.0**
LZH				pP		sP	03 33 06.6	0.0
LZH				sP		PcP	03 33 08.8	-0.1
LZH				pmax		pmax				
	comp=Z,18nm,1.4s									
GYA	**Guiyang**	**80.79**	**62**	⇓P		**P**	**03 33 05.9**	**+1.7**
GYA				pmax		pmax				
	comp=Z,9.0nm,0.5s									
GYA				pmax		pmax				
	comp=Z,150nm,3.7s									
GYA				LR		LR				
	comp=Z,260nm,13.2s									
NRIK	**Noril'sk**	**83.81**	**18**	P		**P**	**03 33 18.1**	**-0.8**
	comp=Z,6.8nm,0.9s,baz=193,slow=3.2,SNR=11									
SONM	**Songino Array**	**84.89**	**41**	P		**P**	**03 33 26.6**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=258,slow=7.3,SNR=4.7									
SONM				LR		LR	04 15 34.9			
	comp=Z,324nm,18.7s,baz=245,slow=39									
SONM	**Songino Array**	**84.89**	**41**	P		**P**	**03 33 24.5**	**-0.5**
CPUP	**Villa Florida**	**84.96**	**244**	LR		LR	04 08 43.5			
	comp=Z,193nm,18.4s,baz=86,slow=34									
HHC	**Hu-ho-hao-te**	**87.22**	**49**	*e*P		**P**	**03 33 36.0**	**-0.7**
HHC				PP		**PP**	**03 37 02.4**	**+1.7**
HHC				S		**S**	**03 44 13.4**	**-3.5**
HHC				SS		**SS**	**03 50 00.5**	**-0.5**
HHC				pmax		pmax				
	comp=Z,12nm,1.2s									
HHC				pmax		pmax				
	comp=Z,66nm,6.6s									
HHC				LR		LR				
	comp=Z,200nm,14.0s									
HHC				LR		LR				
	comp=Z,290nm,14.4s									
HHC				LR		LR				
	comp=Z,190nm,16.7s									
NJ2	**Nanjing**	**92.07**	**58**	*e*P		**P**	**03 33 59.2**	**-0.3**
NJ2				pmax		pmax				
	comp=Z,8.0nm,0.5s									
VNDA	**Vanda**	**93.67**	**171**	LR		LR	04 16 04.0			
	comp=Z,196nm,18.5s,baz=219,slow=35									
PLCA	**Paso Flores**	**94.38**	**229**	LR		LR	04 13 44.9			
	comp=Z,242nm,18.4s,baz=95,slow=34									
FITZ	**Fitzroy Crossi**	**94.39**	**108**	LR		LR	04 14 50.1			
	comp=Z,46nm,18.9s,baz=296,slow=34									
LPAZ	**La Paz**	**95.88**	**253**	LR		LR	04 16 17.6			
	comp=Z,134nm,18.3s,baz=104,slow=35									
KSRS	**Korea Array**	**99.68**	**53**	LR		LR	04 21 47.8			
	comp=Z,92nm,19.0s,baz=286,slow=37									
ILAR	**Eielson Array**	**120.16**	**358**	PKP		**PKPdf**	**03 39 40.3**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=318,slow=2.0,SNR=4.4									
PDAR	**Pinedale Array**	**127.64**	**322**	PKP		**PKPdf**	**03 39 54.6**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=58,slow=3.7,SNR=5.4									
PDAR	**Pinedale Array**	**127.64**	**322**			**PKiKP**	**03 39 56.0**	**-0.4**
TXAR	**Lajitas Array**	**129.46**	**304**	PKP		**PKiKP**	**03 40 00.0**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=118,slow=2.7,SNR=7.2									
DZM	**Mont Dzumac**	**130.14**	**124**	*e*LR		LR	04 21 07.3			
	comp=Z,226nm,25.6s									
NVAR	**Mina Array Bea**	**135.56**	**323**	PKP		**PKiKP**	**03 40 11.9**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=182,slow=0.8,SNR=3.8									
TBI	**Tubuai**	**151.93**	**182**	*e*LR		LR	04 31 07.6			
	comp=Z,145nm,23.2s									
PPT2	**Papeete2**	**157.66**	**182**	*e*LR		LR	04 33 46.9			
	comp=Z,123nm,22.5s									
TAOE	**Nuku Hiva Isla**	**162.86**	**217**	*e*LR		LR	04 36 11.1			
	comp=Z,111nm,22.1s									

*IDC **11** 03:26:05.0±0.9,53.75N×167.30E,h0km,mb3.9/8, mb1 4.1/9,mb1mx3.6/45,mbtmp3.9/9,ML3.3/1,MS2.8/1, Ms1 2.8/1,ms1mx2.3/41,Error ellipse: s-maj=52.1km s-min=18.5km az=140.0*

*KRSC **11** 03:26:10.9±1.7,53.84N×166.76E,h79km±35km,ML4.6*

*NEIC **11** 03:26:10.5±0.8,53.8N±0.3×167.2E±0.2,h38km±9km, mb4.2/7,Error ellipse: s-maj=48.1km s-min=16.1km az=170.0*

*MOS **11** 03:26:12.0±0.8,53.91N×166.84E,h76km,mb4.2/1,Error ellipse: s-maj=9.0km s-min=6.2km az=21.9*

ISC 11 03:26:09.8±0.7,53.78N±0.05×167.09E±0.06,h35km,n107, σ1ş54/161,mb4.0/13,1C,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.56**	**336**	*e*P		**Pn**		**03 26 36.4**	**+1.4**
BKI				*e*S		**Sn**		**03 26 54.7**	**+0.7**
BKI	**Bering**	**1.56**	**336**	PN		**Pn**		**03 26 36.4**	**+1.4**
BKI				S		**Sn**		**03 26 54.7**	**+0.7**
MKZ	**Mys Kozlova**	**3.24**	**286**	*e*P		**Pn**		**03 26 59.0**	**+1.0**
MKZ				*e*S		**Sn**		**03 27 33.9**	**-1.4**
MKZ	**Mys Kozlova**	**3.24**	**286**	PN		**Pn**		**03 26 59.0**	**+1.0**
MKZ				S		**Sn**		**03 27 33.9**	**-1.4**
KBTR	**Krutoberegovo**	**3.46**	**316**	*e*P		**Pn**		**03 27 00.1**	**-0.9**
KBTR				*e*S		**Sn**		**03 27 39.3**	**-1.3**
KBTR	**Krutoberegovo**	**3.46**	**316**	PN		**Pn**		**03 27 00.1**	**-0.9**
KBTR				S		**Sn**		**03 27 39.3**	**-1.3**
KBG	**Krutoberegovo**	**3.53**	**316**	*e*S		**Sn**		**03 27 41.5**	**-1.0**
KZV	**Kizimen**	**4.18**	**291**	*e*P		**Pn**		**03 27 12.3**	**+1.2**
KZV				*e*S		**Sn**		**03 27 57.1**	**-1.7**
KZV	**Kizimen**	**4.18**	**291**	PN		**Pn**		**03 27 12.3**	**+1.2**
KZV				S		**Sn**		**03 27 57.1**	**-1.7**
ZLN	**Zelenaya**	**4.26**	**304**	*e*P		**Pn**		**03 27 14.4**	**+2.2**
ZLN				*e*S		**Sn**		**03 28 00.1**	**-0.5**
ZLN	**Zelenaya**	**4.26**	**304**	PN		**Pn**		**03 27 14.4**	**+2.2**
ZLN				S		**Sn**		**03 28 00.1**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**4.28**	**303**	*e*P		**Pn**		**03 27 13.8**	**+1.4**
BZGR				*e*S		**Sn**		**03 28 01.5**	**+0.4**
BZGR	**Bezymyannyi-Gr**	**4.28**	**303**	PN		**Pn**		**03 27 13.8**	**+1.4**
BZGR				S		**Sn**		**03 28 01.5**	**+0.4**
SPN	**Mys Shipunski**	**4.28**	**264**	*e*P		**Pn**		**03 27 13.6**	**+1.3**
SPN				*e*S		**Sn**		**03 27 59.2**	**-1.7**
SPN	**Mys Shipunski**	**4.28**	**264**	PN		**Pn**		**03 27 13.6**	**+1.3**
SPN				S		**Sn**		**03 27 59.2**	**-1.7**
TUMR	**Tumrok**	**4.31**	**293**	*e*P		**Pn**		**03 27 14.6**	**+1.7**
TUMR				*e*S		**Sn**		**03 28 01.3**	**-0.6**
TUMR	**Tumrok**	**4.31**	**293**	PN		**Pn**		**03 27 14.6**	**+1.7**
TUMR				S		**Sn**		**03 28 01.3**	**-0.6**
CIRR	**Tsirk**	**4.34**	**305**	*e*S		**Sn**		**03 28 03.3**	**+0.7**
LGNR	**Loginova**	**4.35**	**305**	*e*P		**Pn**		**03 27 15.7**	**+2.2**
LGNR	**Loginova**	**4.35**	**305**	PN		**Pn**		**03 27 15.7**	**+2.2**
BZWR	**Bezymyannyi-We**	**4.39**	**303**	*e*P		**Pn**		**03 27 15.7**	**+1.7**
BZWR				*e*S		**Sn**		**03 28 03.1**	**-0.8**
BZWR	**Bezymyannyi-We**	**4.39**	**303**	PN		**Pn**		**03 27 15.7**	**+1.7**
BZWR				S		**Sn**		**03 28 03.1**	**-0.8**
KMNR	**Kamenistaya**	**4.43**	**299**	*e*P		**Pn**		**03 27 16.1**	**+1.6**
KMNR				*e*S		**Sn**		**03 28 04.3**	**-0.5**
KMNR	**Kamenistaya**	**4.43**	**299**	PN		**Pn**		**03 27 16.1**	**+1.6**
KMNR				S		**Sn**		**03 28 04.3**	**-0.5**
SRKR	**Sorokina**	**4.44**	**313**	*e*P		**Pn**		**03 27 15.5**	**+0.9**
SRKR				*e*S		**Sn**		**03 28 03.3**	**-1.8**
SRKR	**Sorokina**	**4.44**	**313**	PN		**Pn**		**03 27 15.5**	**+0.9**
SRKR				S		**Sn**		**03 28 03.3**	**-1.8**
KIRR	**Kirishev**	**4.46**	**302**	*e*P		**Pn**		**03 27 16.6**	**+1.7**
KIRR	**Kirishev**	**4.46**	**302**	PN		**Pn**		**03 27 16.6**	**+1.7**
KRSR	**Krestovskiy**	**4.48**	**306**	*e*P		**Pn**		**03 27 16.1**	**+1.0**
KRSR				*e*S		**Sn**		**03 28 05.1**	**-0.9**
KRSR	**Krestovskiy**	**4.48**	**306**	PN		**Pn**		**03 27 16.1**	**+1.0**
KRSR				S		**Sn**		**03 28 05.1**	**-0.9**
KLY	**Klyuchi**	**4.48**	**307**	*e*P		**Pn**		**03 27 15.7**	**+0.6**
KLY	**Klyuchi**	**4.48**	**307**	PN		**Pn**		**03 27 15.7**	**+0.6**
KII	**Karymskiy**	**4.52**	**276**	*e*P		**Pn**		**03 27 17.4**	**+1.7**
KII				*e*S		**Sn**		**03 28 07.2**	**+0.1**
KII	**Karymskiy**	**4.52**	**276**	PN		**Pn**		**03 27 17.4**	**+1.7**
KII				S		**Sn**		**03 28 07.2**	**+0.1**
NLC	**Nalytchevo**	**4.67**	**266**	*e*P		**Pn**		**03 27 19.0**	**+1.4**
NLC				*e*S		**Sn**		**03 28 08.5**	**-1.9**
NLC	**Nalytchevo**	**4.67**	**266**	PN		**Pn**		**03 27 19.0**	**+1.4**
NLC				S		**Sn**		**03 28 08.5**	**-1.9**
SDLR	**Sedlovina**	**4.92**	**267**	*e*P		**Pn**		**03 27 23.1**	**+1.9**
SDLR				*e*S		**Sn**		**03 28 15.9**	**-1.0**
SDLR	**Sedlovina**	**4.92**	**267**	PN		**Pn**		**03 27 23.1**	**+1.9**
SDLR				S		**Sn**		**03 28 15.9**	**-1.0**
SRDR	**Sredinnyy**	**4.94**	**304**	*e*P		**Pn**		**03 27 23.2**	**+1.8**
SRDR	**Sredinnyy**	**4.94**	**304**	PN		**Pn**		**03 27 23.2**	**+1.8**
UGLR	**Uglovaya**	**4.97**	**267**	*e*P		**Pn**		**03 27 23.9**	**+2.0**
UGLR				*e*S		**Sn**		**03 28 17.8**	**-0.3**
UGLR	**Uglovaya**	**4.97**	**267**	PN		**Pn**		**03 27 23.9**	**+2.0**
UGLR				S		**Sn**		**03 28 17.8**	**-0.3**
SMAR	**Somma**	**4.97**	**267**	*e*P		**Pn**		**03 27 24.0**	**+2.0**
SMAR				*e*S		**Sn**		**03 28 16.5**	**-1.8**
SMAR	**Somma**	**4.97**	**267**	PN		**Pn**		**03 27 24.0**	**+2.0**
SMAR				S		**Sn**		**03 28 16.5**	**-1.8**
KRER	**Koryakskii**	**5.00**	**268**	*e*P		**Pn**		**03 27 24.3**	**+2.0**
KRER				*e*S		**Sn**		**03 28 17.7**	**-1.2**
KRER	**Koryakskii**	**5.00**	**268**	PN		**Pn**		**03 27 24.3**	**+2.0**
KRER				S		**Sn**		**03 28 17.7**	**-1.2**
AVH	**Avacha**	**5.01**	**267**	*e*P		**Pn**		**03 27 24.7**	**+2.3**
AVH				*e*S		**Sn**		**03 28 19.4**	**+0.4**
AVH	**Avacha**	**5.01**	**267**	PN		**Pn**		**03 27 24.7**	**+2.3**
AVH				S		**Sn**		**03 28 19.4**	**+0.4**
DALK	**Dalny**	**5.04**	**265**	*e*P		**Pn**		**03 27 25.1**	**+2.3**
DALK				*e*S		**Sn**		**03 28 19.0**	**-0.7**
DALK	**Dalny**	**5.04**	**265**	PN		**Pn**		**03 27 25.1**	**+2.3**
DALK				S		**Sn**		**03 28 19.0**	**-0.7**
KRX	**Arik**	**5.05**	**269**	*e*P		**Pn**		**03 27 24.7**	**+1.7**
KRX				*e*S		**Sn**		**03 28 19.6**	**-0.5**
KRX	**Arik**	**5.05**	**269**	PN		**Pn**		**03 27 24.7**	**+1.7**
KRX				S		**Sn**		**03 28 19.6**	**-0.5**
KOK	**Koryaka**	**5.06**	**268**	*e*P		**Pn**		**03 27 24.9**	**+1.7**
KOK	**Koryaka**	**5.06**	**268**	PN		**Pn**		**03 27 24.9**	**+1.7**
PET	**Petropavlovsk**	**5.10**	**265**	*e*P		**Pn**		**03 27 25.8**	**+2.2**
PET				*e*S		**Sn**		**03 28 21.2**	**0.0**
PET	**Petropavlovsk**	**5.10**	**265**	PN		**Pn**		**03 27 25.8**	**+2.2**
PET				S		**Sn**		**03 28 21.2**	**0.0**
PET	**Petropavlovsk**	**5.10**	**265**	P		**Pn**		**03 27 25.6**	**+2.0**
PET				Sn		**Sn**		**03 28 22.5**	**+1.3**
ESO	**Esso**	**5.30**	**297**	*e*P		**Pn**		**03 27 26.9**	**+0.6**
ESO	**Esso**	**5.30**	**297**	PN		**Pn**		**03 27 26.9**	**+0.6**
RUS	**Russkaya**	**5.34**	**259**	*e*P		**Pn**		**03 27 28.3**	**+1.5**
RUS				*e*S		**Sn**		**03 28 24.8**	**-2.2**
RUS	**Russkaya**	**5.34**	**259**	PN		**Pn**		**03 27 28.3**	**+1.5**
RUS				S		**Sn**		**03 28 24.8**	**-2.2**
GNL	**Ganaly**	**5.43**	**273**	*e*P		**Pn**		**03 27 30.7**	**+2.5**
GNL				*e*S		**Sn**		**03 28 27.7**	**-1.7**
GNL	**Ganaly**	**5.43**	**273**	PN		**Pn**		**03 27 30.7**	**+2.5**
GNL				S		**Sn**		**03 28 27.7**	**-1.7**
KRMR	**Karymshinskiy**	**5.45**	**264**	*e*P		**Pn**		**03 27 31.7**	**+3.3**
KRMR				*e*S		**Sn**		**03 28 28.6**	**-1.3**
KRMR	**Karymshinskiy**	**5.45**	**264**	PN		**Pn**		**03 27 31.7**	**+3.3**
KRMR				S		**Sn**		**03 28 28.6**	**-1.3**
GRL	**Gorelyy**	**5.56**	**261**	*e*P		**Pn**		**03 27 32.6**	**+2.6**
GRL				*e*S		**Sn**		**03 28 31.7**	**-1.0**
GRL	**Gorelyy**	**5.56**	**261**	PN		**Pn**		**03 27 32.6**	**+2.6**
GRL				S		**Sn**		**03 28 31.7**	**-1.0**
PEA0B	**Petropavlovsk-**	**5.65**	**267**	PN		**Pn**		**03 27 32.8**	**+1.6**
PEA0B								03 28 37.0	
PEA0B	**Petropavlovsk-**	**5.65**	**267**			**Pn**		**03 27 32.8**	**+1.6**
PEA0B						**Sn**		**03 28 37.0**	**+2.2**
PETK	**Petropavlovsk-**	**5.65**	**267**	Pn		**Pn**		**03 27 33.9**	**+2.7**
	4.1nm,0.3s,baz=103,slow=19,SNR=78								
PETK				Sn		**Sn**		**03 28 36.0**	**+1.2**
	7.0nm,0.3s,baz=105,slow=23,SNR=3.6								
PETK	**Petropavlovsk-**	**5.65**	**267**	PN		**Pn**		**03 27 33.4**	**+2.2**
PETK								03 28 36.

ISKR	**Skrokkalda**	0.41	254	P		Pg	03 40 00.0	-0.4
	baz=255							
IVOT	**Vottur**	0.43	163	P		Pg	03 40 00.1	-0.6
	baz=164							
IJOK	**Jokulheimar**	0.49	222	P		Pg	03 40 01.4	-0.5
	baz=224							
IJOK				S		Sg	03 40 08.4	+0.3
	baz=224							
IMKO	**Mokollar**	0.57	58	P		Pg	03 40 02.7	-0.8
	baz=56							
IMKO				S		Sg	03 40 11.2	+0.3
	baz=56							
IIEY	**Innrieyrar**	0.65	206	P		Pg	03 40 04.0	-0.9
	baz=207							
IIEY				S		Sg	03 40 13.1	-0.3
	baz=207							
ISVA	**Svartarkot**	0.67	8	P		Pg	03 40 04.4	-1.0
	baz=7.0							
ISVA				S		Sg	03 40 14.1	0.0
	baz=7.0							
IKSK	**Karasker**	0.68	140	P		Pg	03 40 03.6	-1.9
	baz=140							
IKSK				S		Sg	03 40 13.5	-0.7
	baz=140							
IKAL	**Kalfafell**	0.74	187	P		Pg	03 40 05.5	-1.2
	baz=188							
IKAL				S		Sg	03 40 15.8	-0.4
	baz=188							
IVSH	**V-Sauoahnukur**	0.76	79	P		Pg	03 40 05.5	-1.6
	baz=79							
IVSH				S		Sg	03 40 16.0	-1.0
	baz=79							
IVAT	**Vatnsfell**	0.80	232	P		Pg	03 40 06.8	-1.0
	baz=233							
IVAT				S		Sg	03 40 17.4	-0.7
	baz=233							
IHVE	**Hveravellir**	0.92	283	P		Pg	03 40 08.2	-1.9
	baz=283							
IHVE				S		Sg	03 40 21.0	-0.9
	baz=283							
IMEL	**Melhnausar**	0.96	21	P		Pg	03 40 09.1	-1.8
	baz=20							
IREN	**Reynihlio**	1.00	14	P		Pg	03 40 09.9	-1.9
	baz=13							
IKVO	**Krokottuvotn**	1.07	13	P		Pg	03 40 10.9	-2.1
	baz=13							
ISNB	**Snabyli**	1.07	209	P		Pg	03 40 11.2	-1.9
	baz=209							
ISLY	**Slysaalda**	1.12	221	P		Pg	03 40 12.1	-1.8
	baz=221							
IGRS	**Grimsstaoir**	1.12	30	P		Pg	03 40 12.6	-1.4
	baz=29							
IFED	**Fedgar**	1.17	237	P		Pg	03 40 13.0	-1.8
	baz=237							
IRJU	**Rjupnafell**	1.19	207	P		Pg	03 40 13.2	-2.1
	baz=207							
ISKI	**Skildingahlsh**	1.21	9	P		Pg	03 40 13.3	-2.4
	baz=8.2							
IMJO	**Mjoaskard**	1.22	233	P		Pg	03 40 14.0	-1.8
	baz=234							
IGHA	**Grjothals**	1.22	16	P		Pg	03 40 13.2	-2.7
	baz=15							
IGRA	**Granastaoir**	1.25	358	P		Pg	03 40 13.7	-2.7
	baz=358							
IGYG	**Gyngjarholskot**	1.25	253	P		Pg	03 40 13.9	-2.7
	baz=253							
IHVO	**Lagu-Hvolar**	1.30	208	P		Pg	03 40 15.2	-2.3
	baz=209							
IDIM	**Dimmadalss**	1.31	10	P		Pg	03 40 14.8	-2.8
	baz=9.3							
IALF	**Alftagrof**	1.41	213	P		Pn	03 40 16.7	-2.5
	baz=214							
IHED	**Heoinshofoi**	1.41	3	P		Pn	03 40 16.4	-2.9
	baz=2.3							
IESK	**Eystri-Skogar**	1.45	218	P		Pn	03 40 17.3	-2.4
	baz=218							
ISAU	**Saurbar**	1.46	243	P		Pn	03 40 17.1	-2.8
	baz=243							
IBRE	**Brettingsstaoi**	1.46	353	P		Pn	03 40 17.3	-2.7
	baz=353							
IMID	**Miomork**	1.47	227	P		Pn	03 40 18.1	-1.9
	baz=228							
IGIL	**Gilhagi**	1.48	18	P		Pn	03 40 17.2	-3.0
	baz=18							
ISIG	**Siglufjorour**	1.58	338	P		Pn	03 40 19.2	-2.4
	baz=338							
IASM	**Asmuli**	1.61	240	P		Pn	03 40 19.8	-2.2
	baz=240							
BORG	**Borgarnes**	1.66	274	Pg		Pn	03 40 20.2	-2.4
	21nm,0.3s,baz=96,slow=10,SNR=67							
BORG				Lg		Lg	03 40 43.1	
	9.5nm,0.3s,baz=31,slow=19,SNR=8.8							
IKRO	**Krokur**	1.69	251	P		Pn	03 40 21.1	-1.9
	baz=252							
ISOL	**Solvholt**	1.69	245	P		Pn	03 40 20.8	-2.2
	baz=246							
IHEI	**Heioarbar**	1.70	255	P		Pn	03 40 21.1	-2.1
	baz=256							
ILEI	**Leirhofn**	1.79	13	P		Pn	03 40 22.2	-2.1
	baz=12							
IHRN	**Hraun**	1.82	324	P		Pn	03 40 22.7	-2.1
	baz=323							
IBJA	**Bjarnastaoir**	1.82	248	P		Pn	03 40 23.1	-1.8
	baz=248							
SCO	**Scoresbysund**	6.08	346	*e*		Pn	03 41 22.4	-0.9
	baz=169,slow=9.3							
SCO				*i* P		Pn	03 41 24.1	+0.9
SCO				*i* S		Sn	03 42 37.3	+4.0
SCO				IAML			03 42 45.5	
	comp=Z,1.8nm,0.4s							
EKA	**Eskdalemuir Ar**	11.76	136	Pn		Pn	03 42 37.8	-3.4
	baz=324,slow=13,SNR=8.3							
ESK	**Eskdalemuir**	11.76	136	P		Pn	03 42 41.7	+0.6
ESK	**Eskdalemuir**	11.76	136	Pn		Pn	03 42 41.7	+0.6
DAG	**Danmarks Havn**	12.16	359	*i* P		Pn	03 42 45.4	-1.1
DAG	**Danmarks Havn**	12.16	359	*i* P		Pn	03 42 45.4	-1.1
DAG	**Danmarks Havn**	12.16	359	*i* P		Pn	03 42 45.4	-1.1
NOA	**NORSAR Array B**	13.52	92	Pn		Pn	03 43 02.4	-2.8
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.4							
HFS	**Hagfors**	15.04	93	Pn		Pn	03 43 23.2	-2.6
	comp=Z,0.1nm,0.3s,baz=303,slow=11,SNR=1.6							
FINES	**FINESS Array B**	19.69	79	P		P	03 44 22.6	0.0
	comp=Z,0.1nm,0.3s,baz=297,slow=6.1,SNR=1.6							
CLL	**Collm**	20.70	116	*e*P		P	03 44 34.0	+0.3
	comp=Z,10.0nm,1.3s							
CLL	**Collm**	20.70	116	*e*P		P	03 44 34.0	+0.3
CLL				pmax		pmax		
	comp=Z,10.0nm,1.3s							
CLL	**Collm**	20.70	116	P		P	03 44 34.4	+0.7
LOR	**Lormes**	20.95	136	*e*P		P	03 44 36.8	+0.3
LOR				pmax		pmax		
	comp=Z,18nm,1.3s							
CDF	**Champ du Feu**	21.02	129	*e*P		P	03 44 32.4	-4.9
CDF				pmax		pmax		
	comp=Z,23nm,1.6s							
SSF	**Saint Saulge**	21.03	137	*e*P		P	03 44 37.6	+0.3
SSF				pmax		pmax		
	comp=Z,38nm,1.5s							
AVF	**Avril sur Loir**	21.23	138	*e*P		P	03 44 39.6	+0.1
AVF				pmax		pmax		
	comp=Z,12nm,1.1s							
BGF	**Bois d'Agland**	21.30	139	*e*P		P	03 44 40.3	+0.1
BGF				pmax		pmax		
	comp=Z,10.0nm,1.0s							
TCF	**Toulx Ste Croi**	21.37	140	*e*P		P	03 44 41.4	+0.4
TCF				pmax		pmax		
	comp=Z,14nm,1.0s							
SMF	**Signal de Mont**	21.50	137	*e*P		P	03 44 42.7	+0.3
SMF				pmax		pmax		
	comp=Z,21nm,1.2s							
VSU	**Vasula**	21.55	86	*i* P		P	03 44 43.0	+0.2
VSU				pmax		pmax		
	comp=Z,50nm,1.0s							
PRU	**Pruhonice**	22.34	116	*e*P		P	03 44 54.1	+2.7
CHVC	**Chvalec**	22.46	113	*e*P		P	03 44 54.4	+1.7
OSTC	**Ostas**	22.55	113	*e*P		P	03 44 52.7	-0.9
CAF	**Calviac**	22.58	142	*e*P		P	03 44 54.1	+0.1
CAF				pmax		pmax		
	comp=Z,13nm,1.3s							
KHC	**Kasperske Hory**	22.67	118	*e*P		P	03 44 55.7	+0.8
DPC	**Dobruska-Polom**	22.75	113	*e*P		P	03 44 57.5	+1.7
SUW	**Suwalki**	22.88	98	P		P	03 44 57.4	+0.4
SUW				pmax		pmax		
	comp=Z,14nm,0.9s							
SUW	**Suwalki**	22.88	98	P		P	03 44 57.4	+0.4
SUW				IAmb		IAmb	03 45 02.8	
	comp=Z,14nm,0.9s							

DAVA	**Damuels**	22.88	126	*e*P		P	03 44 58.6	+1.4
	comp=Z,6.5nm,1.1s							
GEC2	**GERESS Array S**	22.95	119	P		P	03 44 57.9	-0.1
GERES	**GERESS Array B**	22.95	119	P		P	03 44 57.5	-0.5
	comp=Z,1.6nm,0.9s,baz=331,slow=8.1,SNR=9.4							
GERES	**GERESS Array B**	22.95	119	P		P	03 44 58.7	+0.8
GERES	**GERESS Array B**	22.95	119	P		P	03 44 58.7	+0.8
RETA	**Reutte**	23.02	125	*e*P		P	03 44 59.3	+0.7
	comp=Z,8.5nm,1.8s							
MOTA	**Moosalm**	23.26	125	*e*P		P	03 45 02.3	+1.2
	comp=Z,4.5nm,0.9s							
LPL	**La Plagne**	23.40	133	*e*P		P	03 45 00.9	-1.8
LPL				pmax		pmax		
	comp=Z,4.0nm,0.6s							
SQTA	**Sankt Quirin**	23.40	125	*e*P		P	03 45 05.2	+2.6
	comp=Z,3.4nm,1.1s							
LPG	**La Plagne**	23.42	133	*e*P		P	03 45 03.5	+0.5
LPG				pmax		pmax		
	comp=Z,15nm,1.3s							
WATA	**Walderalm**	23.43	124	*e*P		P	03 45 03.5	+0.6
	comp=Z,5.8nm,1.1s							
WTTA	**Wattenberg**	23.52	124	*e*P		P	03 45 05.4	+1.6
	comp=Z,5.2nm,1.0s							
ABTA	**Abfaltersbach**	24.27	123	*e*P		P	03 45 11.8	+0.9
	comp=Z,7.6nm,1.3s							
CONA	**Conrad Observa**	24.53	117	*e*P		P	03 45 13.9	+0.7
	comp=Z,4.6nm,1.2s							
SMOL	**Smolenice**	24.66	114	*e*P		P	03 45 15.5	+1.2
SMOL	**Smolenice**	24.66	114	*e*P		P	03 45 15.5	+1.2
MYKA	**Terra Mystica**	24.78	122	*e*P		P	03 45 15.5	0.0
	comp=Z,9.8nm,2.0s							
LANS	**Liptovska Anna**	24.96	111	*e*P		P	03 45 19.3	+2.2
LANS				pmax		pmax		
	comp=Z,3.0nm,0.7s							
LANS	**Liptovska Anna**	24.96	111	*e*P		P	03 45 19.3	+2.2
VYHS	**Vyhne**	25.23	112	*e*P		P	03 45 20.9	+1.4
VYHS				pmax		pmax		
	comp=Z,10.0nm,1.4s							
VYHS	**Vyhne**	25.23	112	*e*P		P	03 45 20.9	+1.4
LMR	**La Mourre**	25.30	136	*e*P		P	03 45 21.7	+1.5
LMR				pmax		pmax		
	comp=Z,75nm,1.9s							
KLMR	**Klimovskoe**	25.59	72	*e*P		P	03 45 22.5	-0.1
KLMR				pmax		pmax		
	comp=Z,16nm,1.4s							
KLMR	**Klimovskoe**	25.59	72	*e*P		P	03 45 22.5	-0.1
KLMR				AMP			03 45 24.8	
	comp=Z,16nm,1.4s							
ESDC	**Sonseca Array**	26.26	156	P		P	03 45 28.1	-0.9
	comp=Z,1.6nm,0.9s,baz=350,slow=9.0,SNR=6.7							
KOLS	**Kolonicke sedl**	26.27	108	*e*P		P	03 45 30.9	+2.0
KOLS				pmax		pmax		
	comp=Z,15nm,1.5s							
KOLS	**Kolonicke sedl**	26.27	108	*e*P		P	03 45 30.9	+2.0
AKASG	**Malin Array Be**	27.83	98	P		P	03 45 42.4	-0.5
	comp=Z,0.2nm,0.2s,baz=324,slow=9.2,SNR=2.1							
OBN	**Obninsk**	27.87	84	*e*P		P	03 45 43.8	+0.6
OBN				*PP		sP	03 45 47.0	+2.5
OBN				pmax		pmax		
	comp=Z,9.0nm,1.1s							
OBN				MLR		MLR		
	comp=Z,118nm,15.0s							
AGG	**Agios Georgios**	34.56	118	P		P	03 46 42.7	+0.4
AGG				pmax		pmax		
	comp=Z,8.0nm,1.0s							
AGG	**Agios Georgios**	34.56	118	P		P	03 46 42.6	+0.4
AGG				IAmb		IAmb	03 46 44.1	
	comp=Z,8.1nm,1.0s							
NRIK	**Noril'sk**	36.44	35	P		P	03 46 59.1	+1.0
	comp=Z,1.5nm,0.5s,baz=307,slow=10,SNR=1.7							
NRIK	**Noril'sk**	36.44	35	*i* P		P	03 46 57.6	-0.5
NRIK				pmax		pmax		
	comp=Z,3.0nm,1.0s							
BRTR	**Keskin Array B**	38.47	105	P		P	03 47 17.4	+1.6
	comp=Z,1.8nm,0.8s,baz=267,slow=5.3,SNR=3.8							
KBZ	**Khabaz**	39.10	92	P		P	03 47 21.4	+0.7
	comp=Z,3.3nm,0.9s,baz=236,slow=24,SNR=6.4							
KBZ	**Khabaz**	39.10	92	*i* P		P	03 47 21.5	+0.7
KBZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
ABKAR	**Akbulak array**	41.98	73	P		P	03 47 44.7	+0.2
TIXI	**Tiksi**	42.02	15	*i* P		P	03 47 43.3	-1.3
TIXI	**Tiksi**	42.02	15	P		P	03 47 45.1	+0.5
TIXI				IAmb		IAmb	03 47 48.3	
	comp=Z,7.6nm,1.1s							
TOLK	**Toolik Lake Re**	42.74	336	P		P	03 47 51.2	+0.6
TOLK				IAmb		IAmb	03 47 53.9	
	comp=Z,9.4nm,1.2s							
GNI	**Garni**	42.82	94	*i* P		P	03 47 53.6	+1.9
GNI				pmax		pmax		
	comp=Z,2.0nm,0.7s							
BMAR	**Burnt Mountain**	42.89	333	P		P	03 47 52.0	+0.2
BRVK	**Borovoye**	43.12	62	*i* P		P	03 47 54.1	+0.3
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.9s							
BRVK	**Borovoye**	43.12	62	P		P	03 47 54.0	+0.3
ILAR	**Eielson Array**	45.68	332	P		P	03 48 15.5	+1.4
	comp=Z,1.8nm,1.0s,baz=27,slow=5.3,SNR=12							
ILAR				PcP		PcP	03 49 52.5	+0.6
	comp=Z,0.8nm,1.0s,baz=2.8,slow=4.1,SNR=4.8							
ILAR	**Eielson Array**	45.68	332	P		P	03 48 15.9	+1.8
ILAR						PcP	03 49 51.9	0.0
COLA	**College**	45.78	333	*i* P		P	03 48 14.1	-0.8
COLA				pmax		pmax		
	comp=Z,4.0nm,1.1s							
IMAR	**Indian Mountai**	45.85	337	P		P	03 48 15.3	-0.1
BCAR	**Beaver Creek A**	46.10	329	P		P	03 48 17.6	0.0
KURK	**Kurchatov**	48.10	58	P		P	03 48 33.4	+0.2
KURK				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KURK	**Kurchatov**	48.10	58	P		P	03 48 33.4	+0.2
KURK				IAmb		IAmb	03 48 34.9	
	comp=Z,5.3nm,0.9s							
KKAR	**Karatay Array**	51.26	70	P		P	03 48 57.8	+0.4
KKAR	**Karatay Array**	51.26	70	P		P	03 48 57.8	+0.4
BOZ	**Bozeman (W)**	51.61	297	P		P	03 48 59.5	-0.7
BOZ				pmax		pmax		
	comp=Z,10.0nm,1.4s							
BOZ	**Bozeman (W)**	51.61	297	P		P	03 48 59.5	-0.7
BOZ				IAmb		IAmb	03 49 02.4	
	comp=Z,9.9nm,1.4s							
YMP	**Mirror Lake Pl**	51.76	295	P		P	03 49 00.2	-1.3
MK31	**Makanchi Array**	52.71	58	*i* P		P	03 49 09.0	+0.8
MKAR	**Makanchi Array**	52.71	58	P		P	03 49 08.7	+0.5
	comp=Z,1.5nm,0.9s,baz=309,slow=5.8,SNR=6.8							
MKAR	**Makanchi Array**	52.71	58	*i* P		P	03 49 08.8	+0.6
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
MKAR	**Makanchi Array**	52.71	58	P		P	03 49 08.8	+0.6
TORD	**Torodi Ar. Bea**	53.15	156	P		P	03 49 09.9	-1.7
	comp=Z,1.6nm,1.0s,baz=348,slow=8.3,SNR=5.1							
TORD	**Torodi Ar. Bea**	53.15	156	P		P	03 49 11.5	-0.2
BW06	**Boulder Array**	53.18	293	P		P	03 49 11.6	-0.4
BW06				IAmb		IAmb	03 49 13.2	
	comp=Z,5.8nm,1.2s							
PD31	**Pinedale Array**	53.18	293	P		P	03 49 11.2	-0.7
PDAR	**Pinedale Array**	53.18	293	P		P	03 49 12.2	+0.2
	comp=Z,1.9nm,0.9s,baz=58,slow=5.3,SNR=11							
PDAR	**Pinedale Array**	53.18	293	P		P	03 49 11.2	-0.7
AAK	**Ala-Archa**	53.24	67	*i* P		P	03 49 12.2	-0.1
AAK				pmax		pmax		
	comp=Z,7.0nm,1.0s							
BTK	**Batken**	53.95	72	P		P	03 49 18.1	+0.7
BTK				pmax		pmax		
	comp=Z,9.0nm,1.2s							
BTK	**Batken**	53.95	72	P		P	03 49 18.1	+0.7
HWUT	**Hardware Ranch**	54.96	294	P		P	03 49 23.8	-1.1
HWUT				IAmb		IAmb	03 49 27.4	
	comp=Z,4.5nm,1.1s							
KSH	**Kashi**	56.48	68	P		P	03 49 40.0	+4.2
KSH				pmax		pmax		
	comp=Z,10.0nm,0.6s							
KSH				pmax		pmax		
	comp=Z,300nm,6.2s							
PV01	**Paradox Valley**	56.72	289	P		P	03 49 36.4	-1.2
WMQ	**Urumqi**	57.22	56	*e*P		P	03 49 44.1	+3.3
ANMO	**Albuquerque**	58.60	286	*i* P		P	03 49 48.6	-2.2
ANMO				pmax		pmax		
	comp=Z,1.0nm,1.4s							
HIA	**Hailar**	61.62	30	*i* P		P	03 50 11.1	0.0
HIA				pmax		pmax		
	comp=Z,3.0nm,1.1s							
TXAR	**Lajitas Array**	62.29	280	P		P	03 50 16.6	+0.6
	comp=Z,0.9nm,1.0s,baz=64,slow=2.9,SNR=6.7							
TXAR	**Lajitas Array**	62.29	280	P		P	03 50 15.4	-0.6

319A	**Douglas**	62.86	286	P		P	03 50 18.5	-1.3
HHC	**Hu-ho-hao-te**	67.50	40	*e*P		P	03 50 53.6	+3.8
HHC				pmax		pmax		
	comp=Z,12nm,0.9s							
HHC				pmax		pmax		
	comp=Z,59nm,6.8s							
LZH	**Lanzhou**	69.61	48	*e*P		P	03 51 02.5	-0.6
LZH				pP		sP	03 51 07.0	+2.5
LZH				sP		pP	03 51 09.6	+5.5
LZH				pmax		pmax		
	comp=Z,17nm,1.3s							
LZH				LR		LR		
	comp=N,260nm,17.3s							
LZH				LR		LR		
	comp=E,130nm,17.3s							
LZH				LR		LR		
	comp=Z,150nm,18.2s							
NJ2	**Nanjing**	77.72	37	*e*P		P	03 51 50.6	0.0
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.6s							
CMAR	**Chiang Mai Arr**	84.12	59	P		P	03 52 25.4	+0.5
	comp=Z,1.0nm,0.3s,baz=318,slow=6.2,SNR=5.3							

NDI ***11*** *03:48:07.8±4.4, 7.°07N×94.°76E, h20km±80km, mb4.2, ML4.6, mb4.4(NEIC)*
IDC ***11*** *03:48:08.8±0.7, 7.°52N×94.°51E, h0km, mb4.0/15, mb1 4.2/16, mb1mx3.9/44, mbtmp4.0/16, ML4.5/1, MS3.6/10, Ms1 3.6/10, ms1mx3.3/46, Error ellipse: s-maj=28.4km s-min=15.9km az=54.0*
NEIC ***11*** *03:48:09.6±0.6, 7.40N±0.°06×94.°4E±0.°1, h10km±1km, mb4.4/11, Error ellipse: s-maj=22.0km s-min=7.5km az=246.0*

ISC 11 03:48:10.4±0.4, 7.°48N±0.°05×94.°51E±0.°05, h10km, n73, σ1°27/70, mb4.3/21, MS3.7/9, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	0.74	231	*i* Pg		**Pg**		03 48 24.6	-0.1
CMBY				*e*S		**Sg**		03 48 34.3	0.0
CMBY				IAML				03 48 36.9	
	comp=E,17μm,0.2s								
CMBY				IAML				03 48 37.0	
	comp=N,23μm,0.2s								
LHMI	**Lhok Sumawe**	3.30	132	P		**Pb**		03 49 10.2	+1.1
	comp=N,4μmcomp=N,5μmcomp=N,164nm,1.1s								
MLSI	**Meulaboh, Aceh**	3.71	149	P		**Pb**		03 49 12.6	-3.5
	comp=N,2μmcomp=N,15μmcomp=N,115nm,1.0s								
TPTI		4.96	147	P		Pn		03 49 30.5	+5.4
	comp=N,40μmcomp=N,25nm,0.7s								
KCSI	**Kotacane, Aceh**	5.10	140	P		Pn		03 49 32.9	+5.9
	comp=N,29nm,0.9s								
DGPR	**DIGLIPUR**	5.87	345	*e*P		**Pn**		03 49 41.2	+3.7
DGPR				*ex*		x		03 50 17.6	
PSI	**Prapat**	6.40	136	Pn		**Pn**		03 49 49.1	+4.1
	comp=N,2.1nm,0.3s,baz=358,slow=9.9,SNR=3.4								
PSI				Sn		**Sn**		03 51 00.7	+2.5
	comp=N,0.5nm,0.3s,baz=359,slow=12,SNR=1.4								
RPSI	**Rantau Prapat**	6.48	137			**Pn**		03 49 45.7	-0.2
RPSI				Sn		**Sn**		03 50 59.5	-0.4
KULM	**Kulim**	6.48	109	Pn		**Pn**		03 49 46.6	+0.6
KULM				Sn		**Sn**		03 51 00.8	+0.7
IPM	**Ipoh**	7.14	114	Pn		**Pn**		03 49 56.8	+1.8
IPM						**Sn**		03 51 17.2	+1.0
MNSI	**Mandailing Nat**	8.35	142	P		Pb		03 50 25.1	-10
PBSI	**Pulau Batu**	8.38	153	P		Pn		03 50 04.3	-7.7
	comp=N,68nm,1.6s								
CMAR	**Chiang Mai Arr**	11.74	21	Pn		**Pn**		03 50 57.9	-0.1
	comp=N,0.9nm,0.3s,baz=215,slow=14,SNR=1.7								
PALK	**Pallekele**	13.69	270	Sn		Sn		03 53 41.4	-16
	comp=N,0.5nm,0.3s,baz=37,slow=20,SNR=1.6								
PALK				LR		LR		03 56 11.1	
	comp=N,361nm,20.0s,baz=194,slow=35								
KOHI	**KOHIMA**	18.15	359	*e*P		**Pn**		03 52 21.1	-1.7
KOHI				IAmb		IAmb		03 52 25.4	
	comp=Z,8.5nm,0.5s								
BOK	**Bokaro**	18.21	334	*e*P		**P**		03 52 25.4	+1.7
RAMN	**Ramite**	20.77	340	*e*P		**P**		03 52 52.5	+0.5
	comp=Z,40nm,0.7s								
TAPN	**Taplejung**	20.79	343	*e*P		**P**		03 52 52.8	+0.6
PKI	**Pulchoki**	21.77	338	*e*P		**P**		03 53 02.6	-0.1
	comp=Z,23nm,0.8s								
PKIN	**Phulchoki**	21.77	338	*e*P		**P**		03 53 02.5	-0.3
	comp=Z,23nm,0.8s								
GUN	**Gumba**	21.90	339	*e*P		**P**		03 53 03.0	-1.2
	comp=Z,57nm,1.0s								
DMN	**Daman**	21.91	337	*e*P		**P**		03 53 04.0	-0.3
LSA	**Lhasa**	22.33	352	P		**P**		03 53 08.5	-0.4
LSA				IAmb		IAmb		03 53 12.5	
	comp=Z,9.7nm,0.7s								
GKN	**Gorkha**	22.45	337	*e*P		**P**		03 53 08.7	-1.2
	comp=Z,29nm,0.8s								
KOLN	**Koldanda**	22.67	334	*e*P		**P**		03 53 11.4	-0.9
	comp=Z,29nm,1.0s								
BHPL	**Bhopal**	22.69	316	*e*P		**P**		03 53 14.9	+2.4
DANN	**Dangsing**	23.11	335	*e*P		**P**		03 53 15.7	-1.3
	comp=Z,22nm,0.6s								
PYUN	**Piuthan**	23.22	333	*e*P		**P**		03 53 17.8	-0.3
	comp=Z,17nm,0.6s								
BATI	**Baumata**	33.94	121	LR		LR		04 11 22.6	
	comp=Z,228nm,18.4s,baz=250,slow=41								
WSAR	**Wadi Sarin**	37.83	299	P		**P**		03 55 26.8	-0.8
	comp=Z,32nm,1.0s,baz=76,slow=20,SNR=9.2								
MK31	**Makanchi Array**	40.55	347	P		**P**		03 55 49.5	-0.5
MKAR	**Makanchi Array**	40.55	347	P		**P**		03 55 49.5	-0.5
	comp=Z,4.5nm,0.7s,baz=167,slow=8.2,SNR=41								
MKAR	**Makanchi Array**	40.55	347

GERES	**GERESS Array B**	**78.36**	**318**	P		**P**	**04 00 10.8**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=76,slow=5.6,SNR=6.0							
GERES	**GERESS Array B**	**78.36**	**318**	P		**P**	**04 00 10.1**	**-1.2**
NB2	**NORSAR Subarra**	**80.25**	**331**	P		**P**	**04 00 20.0**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=97,slow=5.1							
NOA	**NORSAR Array B**	**80.25**	**331**	P		**P**	**04 00 19.7**	**-1.6**
	comp=Z,0.9nm,0.7s,baz=98,slow=5.4,SNR=5.0							
NOA				LR		LR	04 40 60.0	
	comp=Z,12nm,18.4s,baz=315,slow=40							
TORD	**Torodi Ar. Bea**	**91.04**	**283**	LR		LR	04 42 18.4	
	comp=Z,25nm,18.4s,baz=90,slow=36							
ESDC	**Sonseca Array**	**91.75**	**310**	P		**P**	**04 01 20.3**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=62,slow=4.6,SNR=1.7							
IMAR	**Indian Mountai**	**91.86**	**22**	P		**P**	**04 01 17.6**	**-1.0**
ILAR	**Eielson Array**	**94.97**	**22**	P		**P**	**04 01 34.0**	**+1.0**
	comp=Z,0.4nm,1.0s,baz=310,slow=4.2,SNR=2.5							
NVAR	**Mina Array Bea**	**125.07**	**31**	PKP		**PKiKP**	**04 07 12.3**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=318,slow=1.2,SNR=1.9							
PDAR	**Pinedale Array**	**125.40**	**22**	PKP		**PKiKP**	**04 07 13.9**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=204,slow=2.0,SNR=1.9							
TXAR	**Lajitas Array**	**139.43**	**25**	PKP		**PKPdf**	**04 07 39.2**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=212,slow=3.2,SNR=2.3							
PLCA	**Paso Flores**	**144.30**	**200**	PKP		**PKPdf**	**04 07 46.5**	**-0.8**
	comp=Z,1.4nm,0.9s,baz=162,slow=20,SNR=3.2							
CPUP	**Villa Florida**	**147.31**	**232**	PKPbc		**PKPdf**	**04 07 53.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=172,slow=16,SNR=2.9							

UPA ***11*** *04:10:57.2±0.7, 10°.31N×83°.25W, h18km±2km, MW3.5*
UCR ***11*** *04:10:58.8±1.6, 10°.21N×83°.30W, h20km±4km, MW3.7*

ISC 11 04:10:55.3±2.0, 10°.32N±0°.06×83°.23W±0°.06, h6km±12km, n33, σ0°55/42, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATAN	**Batan**	**0.26**	**212**	⇓*i* P		**Pb**	**04 11 02.9**	**+0.4**
BATAN				*e*S		**Sb**	**04 11 07.6**	**+0.3**
BATAN	**Batan**	**0.26**	**212**	*e*P		**Pb**	**04 11 02.9**	**+0.4**
BATAN				*e*S		**Sb**	**04 11 07.3**	**0.0**
CVTR	**Volcan Turrial**	**0.60**	**240**	*e*P		**Pb**	**04 11 08.5**	**0.0**
CVTR				*e*S		**Sb**	**04 11 16.8**	**-0.5**
RIMA	**Rio Macho**	**0.83**	**228**	*e*P		**Pb**	**04 11 11.9**	**-0.4**
HDC	**Heredia**	**0.92**	**250**	*e*P		**Pb**	**04 11 13.9**	**+0.1**
HDC				*e*S		**Sb**	**04 11 26.6**	**+0.2**
HDC	**Heredia**	**0.92**	**250**	*e*P		**Pb**	**04 11 13.9**	**+0.1**
LCR2	**La Lucha 2**	**0.95**	**233**	*e*P		**Pb**	**04 11 13.9**	**-0.4**
LCR2				*e*S		**Sg**	**04 11 26.1**	**0.0**
PEZE	**Perez Zeledon,**	**1.03**	**205**	*e*P		**Pg**	**04 11 15.1**	**0.0**
DRK0	**Durika**	**1.05**	**181**	*e*P		**Pg**	**04 11 15.2**	**-0.3**
DRK0				*e*S		**Sg**	**04 11 29.9**	**+0.7**
DRK0	**Durika**	**1.05**	**181**	*e*P		**Pg**	**04 11 15.3**	**-0.3**
EDLM	**Las Mercedes**	**1.09**	**199**	*e*P		**Pg**	**04 11 16.0**	**-0.3**
EDLM				*e*S		**Sg**	**04 11 29.7**	**-0.9**
COVE	**Coope Vega, Sa**	**1.22**	**289**	*e*P		**Pn**	**04 11 19.3**	**+0.4**
EDDO	**Dominical**	**1.23**	**210**	*e*P		**Pb**	**04 11 19.2**	**+0.2**
EDPN	**Palmar Norte**	**1.37**	**189**	*e*P		**Pb**	**04 11 21.9**	**+0.5**
CEDE	**Laguna Cedeo**	**1.46**	**277**	*e*P		**Pg**	**04 11 23.9**	**+0.7**
ARE1	**Arenal 1**	**1.47**	**275**	*e*P		**Pg**	**04 11 23.6**	**+0.2**
CASO	**Castillo**	**1.48**	**274**	*i* P		**Pg**	**04 11 23.5**	**-0.3**
JACO	**JACO, Garabito**	**1.55**	**245**	*e*P		**Pb**	**04 11 24.2**	**-0.3**
BRU2	**Volcan**	**1.61**	**161**	*e*P		**Pn**	**04 11 24.4**	**-0.1**
BRU2				*e*S		**Sn**	**04 11 44.9**	**-0.7**
BRU2	**Volcan**	**1.61**	**161**	*e*P		**Pn**	**04 11 24.6**	**+0.1**
BC3P	**Paso Ancho**	**1.62**	**158**	*e*S		**Sn**	**04 11 44.9**	**-1.1**
RIOS	**Rincon, Osa**	**1.64**	**190**	*e*P		**Pn**	**04 11 25.0**	**+0.3**
JTS	**Las Juntas de**	**1.69**	**269**	*e*P		**Pb**	**04 11 26.5**	**-0.4**
BCO2	**Palmira**	**1.74**	**156**	*e*P		**Pn**	**04 11 26.4**	**+0.1**
BCO2				*e*S		**Sn**	**04 11 48.4**	**-0.4**
CDITO	**Canoas**	**1.77**	**168**	*e*S		**Sb**	**04 11 51.3**	**+0.4**
PTAR3	**Potrerillos Ar**	**1.78**	**156**	*e*S		**Sn**	**04 11 49.9**	**+0.2**
PTJ1	**Puerto Jimnez**	**1.78**	**182**	*e*S		**Sb**	**04 11 51.6**	**+0.8**
ACAL	**Aguas Claras**	**1.80**	**280**	*i* P		**Pb**	**04 11 28.6**	**-0.2**
CUI	**Cuipilapa**	**1.93**	**280**	*i* P		**Pb**	**04 11 30.6**	**-0.3**
HORNC	**Hornillas**	**1.95**	**282**	*i* P		**Pb**	**04 11 31.1**	**-0.3**
BUEV	**Buena Vista**	**2.19**	**283**	*i* P		**Pb**	**04 11 34.7**	**-0.7**
LAPC	**Finca la Perla**	**2.21**	**282**	*i* P		**Pn**	**04 11 33.9**	**+1.3**
GUAI	**GUAI**	**2.24**	**269**	*i* P		**Pb**	**04 11 34.8**	**-1.5**

IDC ***11*** *04:30:14.4±1.6, 33°.88N×32°.24E, h0km, mb3.6/6, mb1 3.8/12, mb1mx3.6/42, mbtmp3.7/12, ML3.7/6, MS2.8/1, Ms1 2.8/1, ms1mx2.1/51, Error ellipse: s-maj=33.1km s-min=15.4km az=39.0*
HLW ***11*** *04:30:15.9, 33°.95N×32°.27E, h31km±40km, Md3.9*
NIC ***11*** *04:30:17.3±0.0, 33°.80N×32°.12E, h48km±5km, Ml4.0/9*
GII ***11*** *04:30:17.4±0.0, 33°.78N×32°.19E, h25km±1km, mb4.1/1, MD3.6/8, Mm3.4/13*
SGS ***11*** *04:30:21.8, 33°.28N×31°.60E, h25km, Ml3.5*

ISC 11 04:30:17.0±1.2, 33°.80N±0°.02×32°.16E±0°.03, h23km±11km, n99, σ1§12/135, mb3.9/5, 5C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OSC2	**CSNet OBS 4**	**0.72**	**173**	⇑P		**Pb**	**04 30 31.4**	**+0.5**
OSC2				S		**Sn**	**04 30 43.4**	**+1.3**
OSC1	**CSNet OBS 1**	**0.80**	**249**	P		**Pb**	**04 30 32.0**	**-0.2**
OSC1				S		**Sb**	**04 30 42.7**	**+0.2**
NATA	**Nata**	**1.04**	**19**	⇑P		**Pb**	**04 30 36.2**	**-0.1**
NATA				S		**Sn**	**04 30 49.8**	**-0.2**
NATA				AML	AML	04 30 54.2		
	20nm,0.3s							
NATA				AML	AML	04 30 54.2		
	20nm,0.3s							
NATA				AML	AML	04 30 58.6		
	18nm,0.5s							
NATA				AML	AML	04 30 58.6		
	18nm,0.5s							
SZAC	**Souni**	**1.13**	**32**	⇑P		**Pn**	**04 30 37.2**	**-0.2**
SZAC				S		**Sb**	**04 30 52.4**	**+0.3**
SZAC				AML	AML	04 30 54.5		
	36nm,0.5s							
SZAC				AML	AML	04 30 54.5		
	36nm,0.5s							
SZAC				AML	AML	04 30 56.6		
	24nm,0.3s							
SZAC				AML	AML	04 30 56.6		
	24nm,0.3s							
AKMS	**Akamas**	**1.23**	**7**	⇑P		**Pn**	**04 30 37.9**	**-0.9**
AKMS				S		**Sn**	**04 30 54.4**	**-0.3**
AKMS				AML	AML	04 30 56.5		
	5.1nm,0.2s							
AKMS				AML	AML	04 30 56.5		
	5.1nm,0.2s							
AKMS				AML	AML	04 30 57.3		
	5.9nm,0.2s							
AKMS				AML	AML	04 30 57.3		
	5.9nm,0.2s							
ASGA	**Asgata**	**1.33**	**42**	⇑P		**Pn**	**04 30 39.9**	**-0.3**
ASGA				S		**Sb**	**04 30 57.4**	**-0.7**
ASGA				AML	AML	04 30 59.2		
	30nm,0.4s							
ASGA				AML	AML	04 30 59.2		
	30nm,0.4s							
ASGA				AML	AML	04 30 59.3		
	48nm,0.4s							
ASGA				AML	AML	04 30 59.3		
	48nm,0.4s							
ALFC	**Alefka**	**1.41**	**15**	P		**Pn**	**04 30 40.6**	**-0.6**
ALFC				S		**Sn**	**04 30 58.8**	**-0.3**
ALFC				AML	AML	04 31 02.2		
	13nm,0.3s							
ALFC				AML	AML	04 31 02.2		
	13nm,0.3s							
ALFC				AML	AML	04 31 03.2		
	5.8nm,0.2s							
ALFC				AML	AML	04 31 03.2		
	5.8nm,0.2s							
CSS	**Mathiatis**	**1.51**	**39**	P		**Pn**	**04 30 42.7**	**0.0**
CSS	**Mathiatis**	**1.51**	**39**	Pn		**Pn**	**04 30 42.2**	**-0.5**
CSS	**Mathiatis**	**1.51**	**39**	P		**Pn**	**04 30 42.3**	**-0.5**
CSS				S		**Sb**	**04 31 02.8**	**-0.4**
CSS				AML	AML	04 31 05.4		
	3.1nm,0.6s							
CSS				AML	AML	04 31 05.4		
	3.1nm,0.6s							
CSS				AML	AML	04 31 08.0		
	2.4nm,0.3s							
CSS				AML	AML	04 31 08.0		
	2.4nm,0.3s							
ATHAL	**Athalassa**	**1.69**	**37**	P		**Pb**	**04 30 46.2**	**-1.1**
ATHAL				S		**Sb**	**04 31 09.7**	**+1.6**
ATHAL				AML	AML	04 31 19.0		
	10nm,0.7s							
ATHAL				AML	AML	04 31 19.5		
	9.9nm,0.7s							
ATHAL				AML	AML	04 31 19.5		
	9.9nm,0.7s							
MVOU	**Mavrovouni**	**1.72**	**44**	P		**Pn**	**04 30 45.9**	**+0.4**
MVOU				S		**Sn**	**04 31 06.9**	**+0.1**
MVOU				AML	AML	04 31 12.2		
	4.5nm,0.5s							
MVOU				AML	AML	04 31 12.2		
	4.5nm,0.5s							
MVOU				AML	AML	04 31 12.5		
	3.6nm,0.5s							
MVOU				AML	AML	04 31 12.5		
	3.6nm,0.5s							
PARAL	**Paralimni**	**1.96**	**52**	P		**Pn**	**04 30 48.9**	**+0.1**
PARAL				S		**Sn**	**04 31 12.4**	**-0.3**
PARAL				AML	AML	04 31 17.4		
	2.2nm,0.8s							
PARAL				AML	AML	04 31 17.4		
	2.2nm,0.8s							
PARAL				AML	AML	04 31 26.8		
	2.3nm,0.6s							
PARAL				AML	AML	04 31 26.8		
	2.3nm,0.6s							
HNTI	**Hanita**	**2.62**	**105**	Pn		**Pn**	**04 30 57.4**	**-0.5**
HNTI				Sn		**Sn**	**04 31 28.2**	**-0.7**
OFRI	**`Ofer**	**2.64**	**116**	P		**Pn**	**04 30 58.0**	**-0.2**
OFRI	**`Ofer**	**2.64**	**116**	Pn		**Pn**	**04 30 57.6**	**-0.6**
OFRI				Sn		**Sn**	**04 31 29.1**	**-0.4**
BLGI	**Bet Lehem HaGe**	**2.75**	**112**	Pn		**Pn**	**04 30 59.6**	**-0.1**
MMA0B	**Mount Meron ar**	**2.82**	**105**	Pn		**Pn**	**04 31 00.1**	**-0.6**
MMA0B				Sn		**Sn**	**04 31 34.1**	**+0.1**
MMAI	**Mount Meron Ar**	**2.82**	**105**	Pn		**Pn**	**04 31 00.2**	**-0.5**
	30nm,0.3s,baz=304,slow=12,SNR=85							
MMAI				Sn		**Sn**	**04 31 33.8**	**-0.2**
	95nm,0.3s,baz=295,slow=10.0,SNR=6.2							
DQRL	**Deir Qamar**	**2.84**	**91**	*e*P		**Pn**	**04 31 00.5**	**-0.5**
SLTI	**Sal'it**	**2.87**	**122**	P		**Pn**	**04 31 00.9**	**-0.5**
SLTI	**Sal'it**	**2.87**	**122**	Pn		**Pn**	**04 31 00.7**	**-0.7**
SLTI				Sn		**Sn**	**04 31 34.9**	**-0.3**
BHL	**Bhannes**	**2.91**	**87**	*e*P		**Pn**	**04 31 00.1**	**-1.8**
QRWL	**Qaraoun**	**2.94**	**94**	*e*P		**Pn**	**04 31 01.6**	**-0.8**
GEM	**Giv'at Ha'Em**	**2.98**	**100**	Pn		**Pn**	**04 31 02.5**	**-0.4**
GEM				Sn		**Sn**	**04 31 37.5**	**-0.4**
NATI	**Neve Ativ**	**3.03**	**99**	P		**Pn**	**04 31 03.7**	**+0.2**
NATI	**Neve Ativ**	**3.03**	**99**	Pn		**Pn**	**04 31 03.3**	**-0.2**
NATI				Sn		**Sn**	**04 31 39.5**	**+0.4**
MMLI	**Mount Malkishu**	**3.05**	**115**	Pn		**Pn**	**04 31 03.4**	**-0.5**
RCY	**Rachaya**	**3.08**	**95**	*e*P		**Pn**	**04 31 03.8**	**-0.6**
SHMJ	**Saham**	**3.20**	**108**	P		**Pn**	**04 31 06.5**	**+0.6**
HMDT	**Nahal Hemdat**	**3.22**	**118**	P		**Pn**	**04 31 07.1**	**+1.0**
HMDT	**Nahal Hemdat**	**3.22**	**118**	Pn		**Pn**	**04 31 06.6**	**+0.5**
HMDT				Sn		**Sn**	**04 31 43.6**	**-0.1**
AMAZ	**Amatzia**	**3.24**	**133**	P		**Pn**	**04 31 06.8**	**+0.4**
AMAZ	**Amatzia**	**3.24**	**133**	Pn		**Pn**	**04 31 06.6**	**+0.2**
AMAZ				Sn		**Sn**	**04 31 44.2**	**0.0**
AMAZ	**Amatzia**	**3.24**	**133**	P		**Pn**	**04 31 06.9**	**+0.4**
AMAZ				S		**Sn**	**04 31 44.4**	**+0.2**
UJAP	**Al Uja**	**3.33**	**123**	P		**Pn**	**04 31 08.0**	**+1.0**
UJAP	**Al Uja**	**3.33**	**123**	Pn		**Pn**	**04 31 07.6**	**0.0**
UJAP				Sn		**Sn**	**04 31 46.3**	**-0.1**
KZIT	**Kziot**	**3.44**	**146**	Pn		**Pn**	**04 31 09.4**	**+0.1**
KZIT				Sn		**Sn**	**04 31 48.8**	**-0.6**
YTIR	**Yattir**	**3.48**	**133**	P		**Pn**	**04 31 10.4**	**+0.6**
YTIR	**Yattir**	**3.48**	**133**	Pn		**Pn**	**04 31 10.1**	**+0.3**
YTIR				Sn		**Sn**	**04 31 50.2**	**-0.1**
DSI	**Dead Sea**	**3.50**	**128**	P		**Pn**	**04 31 10.6**	**+0.5**
DSI	**Dead Sea**	**3.50**	**128**	Pn		**Pn**	**04 31 10.0**	**-0.1**
DSI				Sn		**Sn**	**04 31 50.3**	**-0.5**
MDBI	**Mazsada**	**3.66**	**132**	P		**Pn**	**04 31 12.8**	**+0.6**
WALJ	**Wala**	**3.80**	**125**	P		**Pn**	**04 31 15.1**	**+1.0**
WALJ	**Wala**	**3.80**	**125**	P		**Pn**	**04 31 15.1**	**+1.0**
GHAJ	**Ghor Haditha**	**3.80**	**130**	P		**Pn**	**04 31 14.7**	**+0.6**
GHAJ	**Ghor Haditha**	**3.80**	**130**	Pn		**Pn**	**04 31 14.3**	**+0.2**
DAMI2	**DAM2**	**3.81**	**132**	Pn		**Pn**	**04 31 15.4**	**+1.2**
HHAG	**Hagoal**	**3.83**	**181**	P		**Pn**	**04 31 14.7**	**0.0**
	baz=183							
HHAG				S		**Sn**	**04 31 57.4**	**-1.6**
	baz=183							
KOT	**Kottamia**	**3.87**	**184**	P		**Pn**	**04 31 15.5**	**+0.4**
	baz=186							
KOT				S		**Sn**	**04 31 58.2**	**-1.6**
	baz=186							
RMNI	**Mount Ramon**	**3.88**	**145**	Pn		**Pn**	**04 31 15.3**	**0.0**
SUZ	**Suez**	**3.98**	**172**	P		**Pn**	**04 31 17.1**	**+0.4**
	baz=173							
ARG	**Arkhangelos**	**4.10**	**307**	P		**Pn**	**04 31 18.0**	**-0.2**
ZFRI	**Zfri**	**4.12**	**141**	P		**Pn**	**04 31 18.7**	**+0.2**
ZFRI	**Zfri**	**4.12**	**141**	Pn		**Pn**	**04 31 18.3**	**-0.2**
HMYD	**Mayadein**	**4.15**	**197**	P		**Pn**	**04 31 19.8**	**+0.8**
	baz=198							
PRNI	**Paran**	**4.20**	**144**	Pn		**Pn**	**04 31 19.9**	**+0.3**
ISP	**Isparta**	**4.23**	**342**	Pn		**Pn**	**04 31 21.5**	**+1.3**
JDRJ	**Daraweish**	**4.26**	**135**	P		**Pn**	**04 31 22.1**	**+1.5**
KRMI	**Paran Flat**	**4.26**	**149**	P		**Pn**	**04 31 20.7**	**+0.1**
KRMI	**Paran Flat**	**4.26**	**149**	Pn		**Pn**	**04 31 20.3**	**-0.3**
ASF	**Jabal al Asfar**	**4.29**	**111**	Pn		**Pn**	**04 31 21.9**	**+0.9**
	1.2nm,0.3s,baz=254,slow=19,SNR=56							
ASF				Sn		**Sn**	**04 32 11.0**	**+0.5**
	1.0nm,0.3s,baz=252,slow=20,SNR=2.5							
HNAT	**Natroun**	**4.35**	**198**	P		**Pn**	**04 31 22.8**	**+1.0**
	baz=199							
HNAT				S		**Sn**	**04 32 10.9**	**-0.9**
	baz=199							
HRFI	**Mount Harif**	**4.47**	**146**	Pn		**Pn**	**04 31 23.6**	**+0.2**
HRFI				Sn		**Sn**	**04 32 13.9**	**-0.9**
MBRI	**Mt Berech**	**4.62**	**149**	Pn		**Pn**	**04 31 25.7**	**+0.1**
MBRI				Sn		**Sn**	**04 32 18.5**	**-0.1**
HSNJ	**Maan**	**4.63**	**139**	P		**Pn**	**04 31 25.6**	**0.0**
AQBJ	**Aqaba**	**4.74**	**148**	P		**Pn**	**04 31 28.0**	**+0.9**
AQBJ	**Aqaba**	**4.74**	**148**	P		**Pn**	**04 31 27.6**	**+0.5**
EIL	**Elat**	**4.75**	**149**	Pn		**Pn**	**04 31 27.4**	**+0.2**
	13nm,0.3s,baz=343,slow=5.1,SNR=128							
EIL				Sn		**Sn**	**04 32 19.8**	**-1.7**
	68nm,0.3s,baz=288,slow=21,SNR=36							
EIL	**Elat**	**4.75**	**149**	P		**Pn**	**04 31 27.7**	**+0.5**
EIL	**Elat**	**4.75**	**149**	Pn		**Pn**	**04 31 27.4**	**+0.2**
EIL				Sn		**Sn**	**04 32 20.1**	**-1.4**
MATC	**Matruh**	**4.83**	**241**	P		**Pn**	**04 31 28.6**	**+0.3**
	baz=240							
RYAN	**Fayoum**	**4.97**	**199**	P		**Pn**	**04 31 30.5**	**+0.3**
	baz=200							
HBST	**Basata**	**5.06**	**154**	P		**Pn**	**04 31 31.7**	**+0.2**
	baz=155							
QREAT	**Al Qurrayyat**	**5.10**	**115**	P		**Pn**	**04 31 32.7**	**+0.6**
HQLS		**5.12**	**150**	P		**Pn**	**04 31 32.7**	**+0.4**
HQLS				S		**Sn**	**04 32 26.0**	**-4.7**
NBNS	**Bani Suef**	**5.21**	**188**	P		**Pn**	**04 31 33.3**	**-0.3**
	baz=190							
HAQS	**Haql**	**5.28**	**153**	S		**Sn**	**04 32 28.6**	**-6.1**
HAQS				P		**Pn**	**04 31 34.8**	**+0.2**
GRB	**Gharib**	**5.53**	**174**	P		**Pn**	**04 31 37.4**	**-0.6**
	baz=175							
JLOS		**5.79**	**150**	P		**Pn**	**04 31 41.7**	**0.0**
BDAS	**Al Bad`**	**5.91**	**154**	P		**Pn**	**04 31 42.7**	**-0.5**
RSHS		**5.92**	**157**	P		**Pn**	**04 31 42.8**	**-0.6**
BRTR	**Keskin Array B**	**6.04**	**11**	Pn		**Pn**	**04 31 46.0**	**+1.0**
	0.4nm,0.3s,baz=187,slow=16,SNR=9.8							
IDI	**Anoyia**	**6.18**	**286**	Pn		**Pn**	**04 31 48.5**	**+1.5**
	0.9nm,0.3s,baz=82,slow=13,SNR=15							
IDI				Sn		**Sn**	**04 32 53.7**	**-3.2**
	1.7nm,0.3s,baz=123,slow=9.4,SNR=2.0							
KRABS	**KRABS**	**6.26**	**154**	P		**Pn**	**04 31 47.5**	**-0.6**
SLUM	**Salum**	**6.30**	**251**	P		**Pn**	**04 31 48.5**	**+0.1**
	baz=250							
WTBKS	**WTBKS**	**6.54**	**150**	P		**Pn**	**04 31 52.2**	**+0.3**
HHRG	**Al Ghardaqah**	**6.67**	**169**	P		**Pn**	**04 31 55.5**	**+2.0**
	baz=170							
MWLHS	**Almuwaylih**	**6.68**	**154**	P		**Pn**	**04 31 53.1**	**-0.6**
SHQRE	**Shigry**	**6.81**	**149**	P		**Pn**	**04 31 56.6**	**+0.9**
DESA	**DESA**	**7.15**	**150**	P		**Pn**	**04 32 00.8**	**+0.6**
AKASG	**Malin Array Be**	**17.03**	**354**	Pn		**Pn**	**04 34 10.5**	**-3.0**
	0.5nm,0.3s,baz=176,slow=9.7,SNR=2.6							
VYHS	**Vyhne**	**17.75**	**330**	*e*P		**P**	**04 34 28.0**	**+4.8**
GERES	**GERESS Array B**	**20.37**	**323**	P		**P**	**04 34 51.5**	**-0.5**
	0.7nm,0.8s,baz=135,slow=9.8,SNR=2.5							
GERES				LR		LR	04 44 03.0	
	comp=Z,30nm,20.5s,baz=52,slow=41							
GEYT	**Alibeck**	**21.41**	**71**	P		**P**	**04 35 03.2**	**-0.1**
	1.7nm,0.3s,baz=260,slow=17,SNR=1.5							
FINES	**FINESS Array B**	**27.94**	**354**	P		**P**	**04 36 04.2**	**-1.1**
	2.3nm,0.8s,baz=157,slow=12,SNR=5.3							
NOA	**NORSAR Array B**	**30.44**	**340**	P		**P**	**04 36 27.2**	**-0.4**
	0.6nm,0.9s,baz=140,slow=9.0,SNR=1.7							
ARCES	**ARCESS Array B**	**35.98**	**356**	P		**P**	**04 37 17.3**	**+1.6**
	2.6nm,0.8s,baz=165,slow=5.0,SNR=5.6							
MKAR	**Makanchi Array**	**39.73**	**56**	P		**P**	**04 37 47.9**	**+0.2**
	0.2nm,0.5s,baz=267,slow=7.3,SNR=1.9							

IDC ***11*** *04:46:10.6±0.8, 37°.13N×28°.85E, h0km, mb3.7/9, mb1 3.9/17, mb1mx3.8/54, mbtmp3.8/17, ML3.9/8, MS2.9/6, Ms1 2.9/6, ms1mx2.6/46, Error ellipse: s-maj=16.9km s-min=13.6km az=158.0*
ATH ***11*** *04:46:10.1, 37°.24N×28°.74E, h14km±2km, ML3.7/8, Error ellipse: s-maj=2.7km s-min=1.3km az=213.0*
NIC ***11*** *04:46:10.1±0.0, 37°.21N×28°.75E, h0km±3km, Ml4.0/3*
THE ***11*** *04:46:10.5, 37°.15N×28°.78E, h1km±1km, ML3.8/7, Error ellipse: s-maj=3.9km s-min=0.5km az=31.0*
DDA ***11*** *04:46:10.7, 37°.13N×28°.74E, h8km±2km, MW3.9*
ISK ***11*** *04:46:10.9, 37°.13N×28°.75E, h7km, ML3.8/21*
MOS ***11*** *04:46:11.3±1.2, 37°.14N×28°.78E, h12km, mb4.1/4, Error ellipse: s-maj=6.8km s-min=5.0km az=97.6*
NEIC ***11*** *04:46:11.7±1.9, 37°.15N±0°.04×28°.78E±0°.02, h8km±6km, Error ellipse: s-maj=5.1km s-min=2.5km az=191.0*
GII ***11*** *04:46:16.4±0.0, 36°.70N×29°.02E, h1km, mb4.2/1, MD4.0/1, Mm4.0/3*
HLW ***11*** *04:46:26.1, 36°.18N×28°.86E, h30km±36km, Ml4.3*

ISC 11 04:46:11.4±1.0, 37°.15N±0°.02×28°.77E±0°.01, h8km±7km, n213, σ1§28/254, mb3.6/16, 18C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TAVA	**DENIZLI_Tavas**	**0.34**	**19**	*i* P		**Pg**	**04 46 17.6**	**-0.5**
TAVA					IAML		04 46 24.0	
	comp=N,8µm,0.2s							
TAVA					IAML		04 46 25.0	
	comp=E,9µm,0.4s							
DALY	**Dalyan (Mula)**	**0.34**	**196**	PG		**Pg**	**04 46 17.6**	**-0.5**
DALY	**Dalyan (Mula)**	**0.34**	**196**	*i* P		**Pg**	**04 46 17.9**	**-0.2**
DALY					IAML		04 46 27.0	
	comp=E,4µm,0.5s							
DALY					IAML		04 46 29.0	
	comp=N,7µm,0.6s							
DALY	**Dalyan (Mula)**	**0.34**	**196**	Pg		**Pg**	**04 46 17.9**	**-0.2**
YER	**Yerkesik**	**0.39**	**269**	PG		**Pg**	**04 46 18.8**	**-0.3**
YER				SG		**Sg**	**04 46 24.5**	**+0.2**
YER	**Yerkesik**	**0.39**	**269**	P		**Pg**	**04 46 18.8**	**-0.3**
YER	**Yerkesik**	**0.39**	**269**	Pg		**Pg**	**04 46 18.8**	**-0.3**
YER	**Yerkesik**	**0.39**	**269**	P		**Pg**	**04 46 18.7**	**-0.3**
YER				S		**Sg**	**04 46 24.9**	**+0.6**
CAME	**Cameli-Denizli**	**0.47**	**115**	PG		**Pg**	**04 46 20.6**	**+0.1**
CAME				SG		**Sb**	**04 46 27.8**	**-1.4**
CAME	**Cameli-Denizli**	**0.47**	**115**	Pg		**Pb**	**04 46 20.7**	**-1.3**
CAME				Sg		**Sb**	**04 46 28.1**	**-1.1**
TURN	**Turunc**	**0.56**	**229**	PG		**Pg**	**04 46 21.6**	**-0.7**
TURN	**Turunc**	**0.56**	**229**	*i* P		**Pg**	**04 46 21.3**	**-1.0**
TURN					IAML		04 46 35.0	
	comp=N,2µm,0.5s							
TURN					IAML		04 46 35.0	
	comp=E,3µm,0.3s							
FETY	**Fethiye**	**0.57**	**154**	PG		**Pg**	**04 46 21.9**	**-0.4**
FETY	**Fethiye**	**0.57**	**154**	*i* P		**Pg**	**04 46 21.9**	**-0.4**
FETY					IAML		04 46 33.0	
	comp=E,1µm,0.8s							
FETY	**Fethiye**	**0.57**	**154**	Pg		**Pg**	**04 46 22.1**	**-0.3**
FETY	**Fethiye**	**0.57**	**154**	P		**Pg**	**04 46 22.1**	**-0.3**
FETY				S		**Sb**	**04 46 30.7**	**-1.2**
MRSB	**Marmaris-Mugla**	**0.63**	**227**	PG		**Pg**	**04 46 23.1**	**-0.5**
MRSB	**Marmaris-Mugla**	**0.63**	**227**	Pg		**Pb**	**04 46 23.7**	**-1.0**
GOLH	**Golhisar**	**0.64**	**81**	*i* P		**Pg**	**04 46 23.3**	**-0.4**
GOLH				*i* S		**Sb**	**04 46 33.9**	**0.0**
GOLH					IAML		04 46 40.0	
	comp=N,3µm,0.4s							
MLSB	**Milas**	**0.81**	**281**	PG		**Pb**	**04 46 27.0**	**-0.8**
MLSB	**Milas**	**0.81**	**281**	Pg		**Pb**	**

BCK	**Bucak**	**1.48**	**77**	P		**Pg**	**04 46 39.7**	**-0.1**
KOSK	**Kos Island**	**1.49**	**255**	PN		**Pb**	**04 46 38.9**	**-0.5**
KOSK	**Kos Island**	**1.49**	**255**	P		**Pn**	**04 46 37.8**	**-0.7**
KOSK				S		**Sb**	**04 46 58.3**	**-0.2**
	comp=N,3μm,0.6s							
AKUM	**Antalya-Kumluc**	**1.50**	**123**	*i* P		**Pg**	**04 46 41.4**	**+1.1**
AKUM				IAML			04 47 13.0	
	comp=N,450nm,0.7s							
AKUM				IAML			04 47 13.0	
	comp=E,732nm,0.5s							
ISP	**Isparta**	**1.55**	**64**	PN		**Pb**	**04 46 39.9**	**-0.5**
ISP	**Isparta**	**1.55**	**64**	P		**Pb**	**04 46 40.2**	**-0.2**
ISP	**Isparta**	**1.55**	**64**	Pn		**Pb**	**04 46 40.2**	**-0.2**
KZIL	**AFYON_Kizioren**	**1.55**	**44**	*i* P		**Pb**	**04 46 39.8**	**-0.7**
KZIL				IAML			04 47 09.0	
	comp=N,614nm,0.7s							
KZIL				IAML			04 47 10.0	
	comp=E,542nm,0.7s							
USAK	**Uak-Merkez**	**1.58**	**7**	*i* P		**Pn**	**04 46 39.7**	**-0.1**
SMG	**Samos**	**1.64**	**291**	P		**Pn**	**04 46 40.0**	**-0.6**
SMG				S		**Sn**	**04 47 01.3**	**-0.6**
SMG				AML	AML		04 47 12.5	
	comp=E,3051μm,0.5s							
SMG				AML	AML		04 47 14.8	
	comp=N,2483μm,0.6s							
SMG	**Samos**	**1.64**	**291**	P		**Pn**	**04 46 40.0**	**-0.6**
GOMA	**Golmarmara-Man**	**1.70**	**337**	PN		**Pb**	**04 46 41.9**	**-1.1**
DGB	**zmir**	**1.75**	**302**	*i* P		**Pg**	**04 46 44.9**	**-0.2**
DGB				IAML			04 47 13.0	
	comp=N,322nm,0.6s							
DGB				IAML			04 47 13.0	
	comp=E,235nm,0.6s							
BAGO	**Egridir - ISPA**	**1.81**	**62**	*i* P		**Pb**	**04 46 43.9**	**-1.0**
BLCB	**Balcova**	**1.85**	**313**	P		**Pn**	**04 46 42.5**	**-1.0**
AKHS	**Akhisar**	**1.89**	**337**	*i* P		**Pn**	**04 46 44.5**	**+0.5**
GDZ	**Gediz**	**2.02**	**16**	*i* P		**Pg**	**04 46 49.2**	**-0.9**
KARP	**Karpathos**	**2.06**	**220**	P		**Pb**	**04 46 47.5**	**-1.6**
KARP				AML	AML		04 47 21.5	
	comp=E,2823μm,0.4s							
KARP				AML	AML		04 47 27.1	
	comp=N,4030μm,0.5s							
KARP	**Karpathos**	**2.06**	**220**	⇑P		**Pb**	**04 46 47.4**	**-1.7**
KARP				S		**Sb**	**04 47 14.9**	**0.0**
KARP				AML	AML		04 47 20.9	
	comp=N,2.8nm,0.3s							
KARP				AML	AML		04 47 20.9	
	comp=N,2.8nm,0.3s							
KARP				AML	AML		04 47 26.7	
	comp=N,4.0nm,0.5s							
KARP				AML	AML		04 47 26.7	
	comp=N,4.0nm,0.5s							
KARP	**Karpathos**	**2.06**	**220**	Pn		**Pb**	**04 46 47.3**	**-1.8**
KARP	**Karpathos**	**2.06**	**220**	P		**Pn**	**04 46 46.4**	**0.0**
KARP				S		**Sn**	**04 47 10.8**	**-1.5**
	comp=N,2μm,0.4s							
ZEDA	**zmir-Bergama**	**2.26**	**324**	*i* P		**Pn**	**04 46 49.0**	**-0.1**
ZEDA				*i* S		**Sn**	**04 47 17.4**	**+0.2**
ZEDA				IAML			04 47 30.0	
	comp=E,197nm,0.5s							
KEPZ	**Antalya-Kepez**	**2.28**	**95**	*i* P		**Pg**	**04 46 53.7**	**-1.3**
KEPZ				IAML			04 47 39.0	
	comp=E,122nm,0.6s							
KEPZ				IAML			04 47 40.0	
	comp=N,209nm,0.9s							
AMGA	**Amorgos Island**	**2.33**	**263**	P		**Pn**	**04 46 50.0**	**0.0**
AMGA				AML	AML		04 47 31.0	
	comp=N,1880μm,2.1s							
AMGA				AML	AML		04 47 34.3	
	comp=E,1487μm,0.8s							
AMGA	**Amorgos Island**	**2.33**	**263**	P		**Pn**	**04 46 49.9**	**-0.2**
DOGA	**KONYA_Doganhis**	**2.49**	**66**	*i* P		**Pb**	**04 46 54.3**	**-2.2**
ANAF	**Anafi Island**	**2.54**	**253**	P		**Pn**	**04 46 53.1**	**+0.2**
AUKIR	**Kırka- Seyitga**	**2.54**	**32**	*i* P		**Pg**	**04 46 59.3**	**-0.8**
APE	**Apeiranthos**	**2.59**	**269**	⇑P		**Pn**	**04 46 54.9**	**+1.1**
APE				⇓S		**Sb**	**04 47 29.2**	**-1.1**
APE	**Apeiranthos**	**2.59**	**269**	*i* P		**Pn**	**04 46 53.9**	**+0.1**
APE	**Apeiranthos**	**2.59**	**269**	⇑P		**Pn**	**04 46 53.9**	**+0.1**
APE	**Apeiranthos**	**2.59**	**269**	P		**Pn**	**04 46 53.4**	**-0.4**
BALY	**Balya**	**2.75**	**341**	*i* P		**Pn**	**04 46 56.7**	**+0.9**
ZKR	**Zakros**	**2.90**	**226**	P		**Pn**	**04 46 58.7**	**+0.8**
ZKR				AML	AML		04 47 41.1	
	comp=N,711μm,0.7s							
ZKR				AML	AML		04 47 46.7	
	comp=E,1529μm,0.6s							
ZKR	**Zakros**	**2.90**	**226**	P		**Pn**	**04 46 58.3**	**+0.4**
ZKR				S		**Sn**	**04 47 32.4**	**-0.5**
	comp=E,560nm,0.6s							
NPS	**Neapolis**	**3.17**	**235**	P		**Pn**	**04 47 03.3**	**+1.6**
NPS	**Neapolis**	**3.17**	**235**	P		**Pn**	**04 47 03.9**	**+2.2**
EDC	**Edincik**	**3.27**	**348**	P		**Pb**	**04 47 06.4**	**-3.4**
EZN	**Ezine**	**3.29**	**325**	P		**Pn**	**04 47 04.6**	**+1.3**
LAST	**Lasithi**	**3.32**	**234**	P		**Pn**	**04 47 05.2**	**+1.5**
LAST				AML	AML		04 48 00.7	
	comp=E,414μm,0.6s							
LAST				AML	AML		04 48 02.0	
	comp=N,575μm,0.5s							
AKMS	**Akamas**	**3.58**	**125**	P		**Pn**	**04 47 08.1**	**+0.8**
AKMS				AML	AML		04 47 59.7	
	comp=N,0.7nm,0.8s							
AKMS				AML	AML		04 48 10.1	
	comp=N,0.6nm,0.5s							
IDI	**Anoyia**	**3.65**	**241**	Pn		**Pn**	**04 47 10.9**	**+2.7**
	comp=N,26nm,0.3s,baz=59,slow=14,SNR=268							
IDI				Sn		**Sn**	**04 47 53.2**	**+1.7**
	comp=N,4.3nm,0.3s,baz=353,slow=19,SNR=1.9							
IDI				LR		LR	04 48 40.8	
	comp=N,148nm,18.4s,baz=66,slow=41							
IDI	**Anoyia**	**3.65**	**241**	P		**Pn**	**04 47 09.1**	**+0.8**
IDI	**Anoyia**	**3.65**	**241**	⇑P		**Pn**	**04 47 09.7**	**+1.4**
IDI				⇑S		**Sn**	**04 47 54.3**	**+2.8**
IDI	**Anoyia**	**3.65**	**241**	Pn		**Pn**	**04 47 09.6**	**+1.4**
IDI						**Sn**	**04 47 53.7**	**+2.2**
ALFC	**Alefka**	**3.68**	**122**	⇑P		**Pn**	**04 47 09.8**	**+1.1**
ALFC				AML	AML		04 48 00.9	
	comp=N,0.5nm,0.7s							
ALFC				AML	AML		04 48 13.4	
	comp=N,0.7nm,0.8s							
GADA	**Gvkgeada**	**3.78**	**324**	P		**Pn**	**04 47 09.5**	**-0.5**
GADA				S		**Sn**	**04 47 53.5**	**-1.2**
	comp=N,162nm,0.4s							
MDUB	**Mudurnu**	**3.82**	**29**	Pn		**Pn**	**04 47 11.7**	**+1.0**
NATA	**Nata**	**3.88**	**126**	P		**Pn**	**04 47 12.7**	**+1.3**
LEF	**Lefka**	**3.90**	**120**	⇑P		**Pn**	**04 47 11.8**	**+0.1**
LIA	**Limnos Island**	**3.94**	**315**	P		**Pn**	**04 47 12.0**	**-0.1**
SZAC	**Souni**	**4.10**	**124**	⇑P		**Pn**	**04 47 15.0**	**+0.6**
OSC1	**CSNet OBS 1**	**4.17**	**150**	P		**Pn**	**04 47 16.0**	**+0.6**
SMTH	**Samothraki Isl**	**4.18**	**324**	P		**Pn**	**04 47 15.4**	**-0.1**
CSS	**Mathiatis**	**4.29**	**119**	Pn		**Pn**	**04 47 18.4**	**+1.4**
CSS	**Mathiatis**	**4.29**	**119**	⇑P		**Pn**	**04 47 18.0**	**+1.0**
CSS	**Mathiatis**	**4.29**	**119**	Pn		**Pn**	**04 47 17.2**	**+0.2**
ALN	**Alexandroupoli**	**4.31**	**331**	P		**Pn**	**04 47 18.5**	**+1.3**
ALN	**Alexandroupoli**	**4.31**	**331**	Pn		**Pn**	**04 47 18.5**	**+1.3**
ASGA	**Asgata**	**4.33**	**122**	P		**Pn**	**04 47 18.7**	**+1.1**
BR131	**Keskin Array S**	**4.61**	**55** *c*	*i* P		**Pn**	**04 47 23.0**	**+1.5**
BR131	**Keskin Array S**	**4.61**	**55**	Pn		**Pn**	**04 47 22.2**	**+0.8**
BRTR	**Keskin Array B**	**4.61**	**55**	Pn		**Pn**	**04 47 23.1**	**+1.7**
	comp=N,10nm,0.3s,baz=238,slow=17,SNR=204							
BRTR				Sn		**Sn**	**04 48 15.5**	**+0.2**
	comp=N,1.7nm,0.3s,baz=227,slow=26,SNR=4.6							
BRTR				LR		LR	04 49 44.8	
	comp=N,146nm,18.2s,baz=240,slow=47							
BRTR	**Keskin Array B**	**4.61**	**55**	*i* P		**Pn**	**04 47 23.2**	**+1.7**
BRTR				pmax		pmax		
	comp=Z,47nm,0.5s							
BRTR	**Keskin Array B**	**4.61**	**55**	Pn		**Pn**	**04 47 22.3**	**+0.8**
THAS	**Thassos island**	**4.69**	**319**	P		**Pn**	**04 47 21.9**	**-0.5**
OUR	**Ouranopolis**	**4.92**	**312**	P		**Pn**	**04 47 27.6**	**+2.0**
OSC2	**CSNet OBS 4**	**4.97**	**144**	P		**Pn**	**04 47 27.0**	**+0.7**
KDZ	**Kurdzhali**	**5.20**	**331**	P		**Pn**	**04 47 31.5**	**+2.0**
KDZ	**Kurdzhali**	**5.20**	**331**	*e*P		**Pn**	**04 47 30.2**	**+0.7**
AGG	**Agios Georgios**	**5.42**	**292**	P		**Pn**	**04 47 34.5**	**+2.0**
AGG	**Agios Georgios**	**5.42**	**292**	Pn		**Pn**	**04 47 34.5**	**+2.0**
ITM	**Ithomi**	**5.47**	**272**			**Pn**	**04 47 35.9**	**+2.7**
ILGA	**Ilgaz**	**5.48**	**43**	Pn		**Pn**	**04 47 34.3**	**+0.8**
DIM	**Dimitrovgrad**	**5.50**	**334**	*e*P		**Pn**	**04 47 34.2**	**+0.6**
RZN	**Rozhen**	**5.52**	**327**	*e*P		**Pn**	**04 47 36.0**	**+1.9**
SOH	**Sokhos**	**5.59**	**313**	P		**Pn**	**04 47 38.2**	**+3.2**
SRS	**Serrai**	**5.65**	**316**	P		**Pn**	**04 47 37.3**	**+1.5**
SRS				pmax		pmax		
	comp=Z,7.0nm,0.8s							
PLD	**Plovdiv**	**5.87**	**329**	P		**Pn**	**04 47 40.9**	**+2.3**
PLD				pmax		pmax		
	comp=Z,1.0nm,0.8s							
MMB	**Musomiste**	**5.91**	**320**	*e*P		**Pn**	**04 47 40.9**	**+1.5**
KNT	**Kendrikon**	**6.08**	**313**	P		**Pn**	**04 47 45.5**	**+3.9**
KNT				pmax		pmax		
	comp=Z,8.0nm,0.6s							
NEF	**NEVSHA**	**6.22**	**350**	*e*P		**Pn**	**04 47 44.2**	**+0.7**
BZK	**Bozkurt**	**6.28**	**38**	⇑P		**Pn**	**04 47 43.9**	**-0.4**
SLUM	**Salum**	**6.36**	**209**	P		**Pn**	**04 47 46.7**	**+1.2**
	baz=214							
SLUM				AMP			04 48 00.0	
	baz=214							
VAY	**Valandovo**	**6.37**	**313**	*i* Pn		**Pn**	**04 47 48.6**	**+3.0**
DIKM	**Dikmen**	**6.74**	**46**	⇑P		**Pn**	**04 47 50.7**	**0.0**
MMA0B	**Mount Meron ar**	**6.82**	**125**	Pn		**Pn**	**04 47 52.0**	**+0.1**
MMA0B				Sn		**Sn**	**04 49 07.9**	**-1.8**
MMAI	**Mount Meron Ar**	**6.82**	**125**	Pn		**Pn**	**04 47 51.6**	**-0.3**
	comp=Z,11nm,0.3s,baz=315,slow=12,SNR=16							
MMAI				Sn		**Sn**	**04 49 06.0**	**-3.7**
	comp=Z,4.2nm,0.3s,baz=308,slow=19,SNR=1.2							
STIP	**Stip**	**6.83**	**314**	*i* Pn		**Pn**	**04 47 52.7**	**+0.8**
GEM	**Giv'at Ha'Em**	**6.87**	**123**	Pn		**Pn**	**04 47 53.2**	**+0.7**
NATI	**Neve Ativ**	**6.89**	**122**	Pn		**Pn**	**04 47 52.7**	**0.0**
NATI				Sn		**Sn**	**04 49 09.1**	**-2.2**
MMLI	**Mount Malkishu**	**7.21**	**129**	Pn		**Pn**	**04 47 57.3**	**+0.2**
SHMJ	**Saham**	**7.24**	**125**	Pn		**Pn**	**04 47 58.2**	**+0.7**
TIRR	**Tirgusor**	**7.31**	**358**	⇑P		**Pn**	**04 47 59.4**	**+0.9**
TIRR	**Tirgusor**	**7.31**	**358**	P		**Pn**	**04 47 59.5**	**+1.0**
TIRR							04 49 21.6	
TIRR	**Tirgusor**	**7.31**	**358**	Pn		**Pn**	**04 47 59.5**	**+1.0**
TIRR						**Sn**	**04 49 21.6**	**0.0**
HMDT	**Nahal Hemdat**	**7.40**	**129**	Pn		**Pn**	**04 48 00.1**	**+0.4**
HMYD	**Mayadein**	**7.52**	**166**	P		**Pn**	**04 48 01.4**	**-0.1**
	baz=165							
KOT	**Kottamia**	**7.64**	**160**	P		**Pn**	**04 48 03.3**	**+0.3**
	baz=157							
KOT				AMP			04 49 00.0	
	baz=157							
TPGR	**Topolog**	**7.71**	**358**	⇓P		**Pn**	**04 48 04.9**	**+0.9**
DSI	**Dead Sea**	**7.79**	**134**	Pn		**Pn**	**04 48 05.0**	**-0.2**
GLL	**Jalalah**	**7.94**	**161**	P		**Pn**	**04 48 07.0**	**-0.2**
	baz=159							
SUZ	**Suez**	**8.03**	**154**	P		**Pn**	**04 48 08.8**	**+0.3**
	baz=151							
CFR	**Carcaliu**	**8.04**	**357**	⇑P		**Pn**	**04 48 09.3**	**+0.9**
CFR	**Carcaliu**	**8.04**	**357**	P		**Pn**	**04 48 10.0**	**+1.5**
CFR				pmax		pmax		
	comp=Z,5.0nm,0.7s							
RYAN	**Fayoum**	**8.14**	**171**	P		**Pn**	**04 48 09.3**	**-0.6**
	baz=170							
RYAN				AMP			04 49 00.0	
	baz=170							
RMNI	**Mount Ramon**	**8.21**	**141**	Pn		**Pn**	**04 48 11.4**	**+0.4**
SEV	**Sevastopol'**	**8.27**	**25**	*e*P		**Pn**	**04 48 12.1**	**+0.5**
SEV				*e*S		**Sn**	**04 49 40.9**	**-4.3**
SEV				pmax		pmax		
	comp=Z,8.0nm,0.4s							
SEV				smax		smax		
	comp=N,4.0nm,0.6s							
SEV				smax		smax		
	comp=E,6.0nm,0.5s							
ASF	**Jabal al Asfar**	**8.33**	**124**	Pn		**Pn**	**04 48 13.6**	**+1.1**
	comp=E,0.2nm,0.3s,baz=292,slow=5.9,SNR=3.2							
SWA2		**8.36**	**200**	P		**Pn**	**04 48 14.2**	**+1.4**
	baz=204							
SWA2				AMP			04 50 00.0	
	baz=204							
YAL	**Yalta**	**8.39**	**27**	*e*P		**Pn**	**04 48 15.3**	**+2.0**
YAL				*e*S		**Sn**	**04 49 44.4**	**-3.8**
ZFRI	**Zfri**	**8.46**	**139**	Pn		**Pn**	**04 48 14.5**	**+0.2**
PRNI	**Paran**	**8.53**	**141**	Pn		**Pn**	**04 48 15.7**	**+0.4**
MLR	**Muntele Rosu**	**8.61**	**347**	Pn		**Pn**	**04 48 18.5**	**+2.1**
	comp=E,0.5nm,0.3s,baz=193,slow=6.1,SNR=7.1							
MLR				LR		LR	04 52 04.7	
	comp=E,56nm,18.6s,baz=68,slow=41							
MLR	**Muntele Rosu**	**8.61**	**347**	Pn		**Pn**	**04 48 18.2**	**+1.8**
NBNS	**Bani Suef**	**8.76**	**165**	P		**Pn**	**04 48 17.5**	**-0.9**
	baz=164							
VRI	**Vrincioaia**	**8.85**	**351**	⇑P		**Pn**	**04 48 19.9**	**+0.2**
VRI	**Vrincioaia**	**8.85**	**351**	P		**Pn**	**04 48 19.8**	**+0.2**
MBRI	**Mt Berech**	**8.94**	**143**	Pn		**Pn**	**04 48 21.0**	**0.0**
MBRI				Sn		**Sn**	**04 49 57.7**	**-4.3**
EIL	**Elat**	**9.07**	**144**	Pn		**Pn**	**04 48 22.7**	**+0.1**
	comp=E,2.3nm,0.3s,baz=340,slow=4.0,SNR=11							
EIL				Sn		**Sn**	**04 50 00.5**	**-4.4**
	comp=E,0.8nm,0.3s,baz=0.0,slow=20,SNR=2.2							
EIL	**Elat**	**9.07**	**144**	Pn		**Pn**	**04 48 23.6**	**+1.0**
EIL				Sn		**Sn**	**04 49 59.9**	**-5.0**
GRB	**Gharib**	**9.47**	**158**	P		**Pn**	**04 48 28.9**	**+0.7**
	baz=156							
TAMRE	**El Minia**	**9.61**	**169**	P		**Pn**	**04 48 29.3**	**-0.8**
	baz=167							
BURAB	**Bucovina Array**	**10.79**	**347**	⇑P		**Pn**	**04 48 47.5**	**+1.2**
BURAR	**Bucovina Array**	**10.79**	**347**	P		**Pn**	**04 48 47.4**	**+1.2**
BURAR	**Bucovina Array**	**10.79**	**347**	Pn		**Pn**	**04 48 48.0**	**+1.7**
BUR08	**Bucovina Ar. S**	**10.82**	**347**	Pn		**Pn**	**04 48 48.6**	**+2.0**
KIV	**Kislovodsk**	**12.57**	**53**	*i* P		**Pn**	**04 49 11.2**	**+0.6**
KIV				pmax		pmax		
	comp=Z,16nm,1.0s							
KBZ	**Khabaz**	**12.60**	**54**	LR		LR	04 54 33.1	
	comp=Z,56nm,20.8s,baz=145,slow=40							
KEST	**Kesra**	**15.70**	**271**	Pn		**P**	**04 49 56.0**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=100,slow=11,SNR=3.1							
GERES	**GERESS Array B**	**16.04**	**322**	Pn		**P**	**04 49 59.6**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=128,slow=11,SNR=7.1							
GERES	**GERESS Array B**	**16.04**	**322**			**P**	**04 49 59.2**	**-1.6**
FIA1	**FINESS Array S**	**24.38**	**357**	P		**P**	**04 51 31.1**	**+1.2**
FIA1				IAmb		IAmb	04 51 50.5	
	comp=Z,9.4nm,1.1s							
FINES	**FINESS Array B**	**24.38**	**357**	P		**P**	**04 51 31.1**	**+1.3**
	comp=Z,2.3nm,0.6s,baz=148,slow=11,SNR=7.9							
FINES	**FINESS Array B**	**24.38**	**357**	P		**P**	**04 51 31.0**	**+1.1**
AKTO	**Aktyubinsk**	**24.75**	**48**	P		**P**	**04 51 33.6**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=265,slow=17,SNR=3.6							
HFS	**Hagfors**	**24.95**	**342**	P		**P**	**04 51 35.6**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=148,slow=17,SNR=1.7							
HFS				LR		LR	05 02 15.3	
	comp=Z,38nm,20.7s,baz=329,slow=39							
ESDC	**Sonseca Array**	**25.70**	**286**	P		**P**	**04 51 43.1**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=78,slow=9.7,SNR=8.3							
ARU	**Arti**	**27.72**	**36**	LR		LR	05 05 13.3	
	comp=Z,32nm,18.0s,baz=258,slow=41							
BRVK	**Borovoye**	**32.80**	**48**	*i* P		**P**	**04 52 46.9**	**+1.9**
BRVK				pmax		pmax		
	comp=Z,3.0nm,1.5s							
TOA0	**Torodi Ar. Sit**	**34.01**	**232**	P		**P**	**04 52 55.0**	**-0.9**
TOA0				IAmb		IAmb	04 52 56.8	
	comp=Z,3.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**34.01**	**232**	P		**P**	**04 52 55.5**	**-0.4**
	comp=Z,3.2nm,0.5s,baz=35,slow=8.9,SNR=49							
TORD				PcP		**PcP**	**04 55 33.5**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=28,slow=1.7,SNR=1.2							
TORD	**Torodi Ar. Bea**	**34.01**	**232**	P		**P**	**04 52 55.6**	**-0.4**
AAK	**Ala-Archa**	**35.17**	**67**	*i* P		**P**	**04 53 08.9**	**+3.0**
AAK				pmax		pmax		
	comp=Z,6.0nm,1.2s							
KOWA	**Kowa**	**36.85**	**241**	P		**P**	**04 53 19.6**	**-0.8**
KOWA				IAmb		IAmb	04 53 27.4	
	comp=Z,0.9nm,0.9s							
KURBB	**Kurchatov Arra**	**37.60**	**53**	P		**P**	**04 53 25.6**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=276,slow=8.9,SNR=2.4							
KURBB				PcP		**PcP**	**04 55 44.5**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=274,slow=4.3,SNR=2.6							
KURK	**Kurchatov**	**37.66**	**53**	*i* P		**P**	**04 53 28.1**	**+1.3**
KURK				pmax		pmax		
	comp=Z,1.0nm,1.3s							
MKAR	**Makanchi Array**	**40.24**	**59**	P		**P**	**04 53 49.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=296,slow=6.6,SNR=3.5							
MKAR				PcP		**PcP**	**04 55 51.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=300,slow=4.1,SNR=3.2							
ZALV	**Zalesovo Beam**	**41.51**	**48**	P		**P**	**04 53 58.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=291,slow=9.1,SNR=1.4							
NRIK	**Noril'sk**	**44.84**	**25**	*i* P		**P**	**04 54 27.0**	**+1.4**
NRIK				pmax		pmax		
	comp=Z,1.0nm,0.9s							
ILAR	**Eielson Array**	**78.36**	**358**	P		**P**	**04 58 12.0**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=350,slow=4.9,SNR=2.2							

IDC ***11*** *04:57:19.6±1.7, 7.6°N×93.9°E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.6/44, mbtmp3.8/7, ML3.9/2, Error ellipse: s-maj=72.7km s-min=20.3km az=57.0*
NEIC ***11*** *04:57:22.8±1.1, 7.6°N±0.2°×94.5°E±0.2, h10km±2km, mb4.2/6, Error ellipse: s-maj=34.9km s-min=16.3km az=222.0*
ISC 11 04:57:22.7±1.1, 7.6°N±0.2°×94.5°E±0.2°, h10km, n22,
σ1§06/19, mb4.1/8, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.38**	**134**	Pn	**Pn**	**04 58 16.7**	**+1.1**
PSI	**Prapat**	**6.49**	**137**	Pn	**Pn**	**04 59 00.5**	**+2.0**
	0.6nm,0.3s,baz=352,slow=7.1,SNR=2.5						
KULM	**Kulim**	**6.53**	**110**		**Pn**	**04 58 58.9**	**0.0**
RPSI	**Rantau Prapat**	**6.56**	**138**	Pn	**Pn**	**04 58 58.5**	**-0.9**
IPM	**Ipoh**	**7.19**	**115**		**Pn**	**04 59 08.3**	**+0.3**
IPM				Sn	**Sn**	**05 00 30.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**11.64**	**21**	Pn	Pn	05 00 15.3	+6.3
	0.6nm,0.3s,baz=220,slow=13,SNR=1.3						
H08S3	**Diego Garcia H**	**26.65**	**236**	T	T	05 29 40.1	
	baz=59,SNR=34						
H08S2	**Diego Garcia H**	**26.65**	**236**	T	T	05 29 38.4	
	baz=59						
H08S1	**Diego Garcia H**	**26.67**	**236**	T	T	05 29 40.1	
	baz=59						
MK31	**Makanchi Array**	**40.44**	**347**	P	**P**	**05 05 01.8**	**+0.5**
MKAR	**Makanchi Array**	**40.44**	**347**	P	**P**	**05 05 01.8**	**+0.5**
	1.4nm,0.6s,baz=169,slow=7.7,SNR=15						
MKAR	**Makanchi Array**	**40.44**	**347**	P	**P**	**05 05 01.4**	**+0.1**
KURK	**Kurchatov**	**44.97**	**346**	P	**P**	**05 05 38.7**	**+0.7**
KURK				IAmb	IAmb	05 05 44.7	
	comp=Z,4.3nm,1.1s						
ZAA0	**Zalesovo Array**	**46.88**	**352**	P	**P**	**05 05 52.8**	**-0.2**
ZALV	**Zalesovo Beam**	**46.88**	**352**	P	**P**	**05 05 54.4**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=176,slow=8.3,SNR=8.1						
ZALV	**Zalesovo Beam**	**46.88**	**352**	P	**P**	**05 05 53.7**	**+0.7**
WRA	**Warramunga Arr**	**47.81**	**126**	P	**P**	**05 06 01.1**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=307,slow=8.6,SNR=4.9						
WRA	**Warramunga Arr**	**47.81**	**126**	P	**P**	**05 05 59.4**	**-1.5**
WR0	**Warramunga Arr**	**47.98**	**125**	P	**P**	**05 06 00.5**	**-1.6**
WR0				IAmb	IAmb	05 06 05.0	
	comp=Z,1.8nm,1.0s						
BRVK	**Borovoye**	**49.43**	**341**	P	**P**	**05 06 13.2**	**+0.5**
BRVK				IAmb	IAmb	05 06 19.1	
	comp=Z,1.8nm,0.8s						
ASAR	**Alice Springs**	**49.47**	**130**	P	**P**	**05 06 11.8**	**-1.8**
	comp=Z,0.3nm,0.8s,baz=296,slow=7.1,SNR=1.9						
FINES	**FINESS Array B**	**73.12**	**332**	P	**P**	**05 08 52.9**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=152,slow=5.4,SNR=6.3						

IDC ***11*** *05:04:40.7±0.4, 7.58°N×94.35°E, h0km, mb4.3/26, mb1 4.4/29, mb1mx4.3/48, mbtmp4.3/29, ML4.1/3, MS4.1/31, Ms1 4.1/31, ms1mx4.1/39, Error ellipse: s-maj=18.5km s-min=11.2km az=62.0*
BJI ***11*** *05:04:41.4±0.0, 7.49°N×94.06°E, h10km, mB4.9/40, mb4.6/53, Ms4.8/51, Ms7 4.5/49*
NEIC ***11*** *05:04:42.2±1.7, 7.58°N±0.08°×94.36°E±0.01°, h10km±1km, mb5.1/52, Error ellipse: s-maj=18.2km s-min=9.5km az=232.0*
NDI ***11*** *05:04:46.3±3.8, 7.65°N×94.05°E, h10km, mb4.8, mb5.1(NEIC)*
KLM ***11*** *05:04:47.0, 7.35°N×94.29°E, h37km, mb4.9*
GCMT ***11*** *05:04:48.2±0.2, 7.52°N±0.01°×94.38°E±0.01, h22km±1km, MW5.1/123, Moment Tensor Solution. s52,c60; s123,c184; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.34±.16; Mθθ-4.93±.13; Mφφ5.27±.14; Mrθ-1.59±.23; Mθφ2.44±.12; Mrφ-0.89±.22; Best double couple: M±5.94400×10¹⁶ NP1:φs148.00000°, δ72.00000°, λ-178.00000°. NP2:φs57.00000°,

MDRS IAmb IAmb 05 08 23.5
comp=Z,18nm,0.5s
BWNR Bhubaneshwar 15.13 328 *e*P **Pn** **05 08 14.2 -2.4**
BWNR IAmb IAmb 05 08 29.9
comp=Z,33nm,1.2s
SKHT Srikalahasti 15.66 294 *e*P **Pn** **05 08 22.2 -1.3**
PVM Polavaram 15.73 309 *e*P **Pn** **05 08 23.8 -0.6**
KLSI 15.97 139 P **P** **05 08 29.9 -1.2**
comp=Z,15nm,1.1s
MYLAV Mylavaram 16.23 305 *e*P **Pn** **05 08 29.7 -1.2**
ADKI Addanki 16.32 302 *e*P **Pn** **05 08 31.3 -0.8**
SLVN Son La 16.48 33 Pn **Pn** **05 08 33.0 -1.1**
KSM Kuching 16.98 110 Pn **Pn** **05 08 40.0 -0.5**
KSM Kuching 16.98 110 P **Pn** **05 08 39.0 -1.5**
NJS Nagarjunasagar 17.22 303 *e*P **Pn** **05 08 42.5 -1.0**
CUPL Choutuppal 17.91 304 *e*P **Pn** **05 08 51.1 -1.0**
CGJI Cibinong 18.05 141 P **P** **05 09 01.0 +6.9**
comp=Z,33nm,0.8s
SHL Shillong 18.05 353 *e*P **P** **05 08 56.3 +2.0**
SHL Shillong 18.05 353 **Pn** **05 08 53.2 -0.6**
BOK Bokaro 18.07 334 *e*P **P** **05 08 56.5 +2.1**
BOK IAmb IAmb 05 09 02.9
comp=Z,58nm,1.3s
HYB Hyderabad 18.28 304 *i* P **P** **05 08 57.0 +0.3**
HYBB Hyderabad (bro 18.28 304 *e*P **Pn** **05 08 54.2 -2.3**
RPR Rampur 18.46 309 *e*P **P** **05 08 57.8 -0.9**
SBUM Sibu 18.48 105 P **P** **05 08 58.5 -0.4**
SBUM Sibu 18.48 105 P **P** **05 08 57.0 -1.9**
MOKO MOKOCHONG 18.65 0 *e*P **Pn** **05 09 01.6 +0.6**
QIZ Qiongzhong 18.85 51 P **P** **05 09 00.4 -2.5**
QIZ S **Sn** **05 12 28.5 -6.1**
QIZ LR LR
comp=N,5μm,12.0s
QIZ LR LR
comp=E,2μm,12.9s
QIZ LR LR
comp=Z,900nm,10.4s
TEZP TEZPUR 19.00 356 *e*P **Pn** **05 09 07.7 +2.5**
KMI Kunming 19.19 24 ⇑P **Pn** **05 09 11.1 +3.3**
KMI pP pwP 05 09 18.4 +6.8
KMI sP sP 05 09 22.1 +12
KMI PP **PnPn** **05 09 31.0 +10**
KMI S **Sn** **05 12 41.5 -1.6**
KMI sS pS 05 12 56.3 -2.1
KMI pmax pmax
comp=Z,29nm,1.1s
KMI pmax pmax
comp=Z,260nm,5.4s
KMI LR LR
comp=Z,960nm,7.9s
KMI LR LR
comp=Z,1μm,8.4s
KMI LR LR
comp=Z,1μm,8.0s
LEM Lembang 19.46 137 LR LR 05 17 50.1
comp=Z,1μm,18.4s,baz=287,slow=40
NGP Nagpur 20.04 314 *e*P Pn 05 09 18.0 +0.2
NGP IAmb IAmb 05 09 28.6
comp=Z,12nm,0.0s
KLRI Killari 20.22 303 *e*P **P** **05 09 17.6 -0.3**
ODAN Odare 20.30 342 *e*P Pn 05 09 20.6 -0.4
GTK Tadong 20.39 345 *e*P Pn 05 09 21.9 -0.1
GTK IAmb IAmb 05 09 27.6
comp=Z,30nm,0.5s
RAMN Ramite 20.64 340 *e*P **P** **05 09 23.6 +0.9**
comp=Z,264nm,1.1s
TAPN Taplejung 20.66 343 *e*P **P** **05 09 23.3 +0.3**
comp=Z,125nm,0.7s
SMRI Semarang 21.62 132 P P 05 09 50.6 +18
SMRI Semarang 21.62 132 P **P** **05 09 34.9 +1.8**
SMRI IAmb IAmb 05 10 03.1
comp=Z,110nm,1.1s
PKI Pulchoki 21.63 338 *e*P **P** **05 09 35.5 +2.0**
comp=Z,201nm,1.3s
PKIN Phulchoki 21.64 338 *e*P **P** **05 09 35.0 +1.5**
GUN Gumba 21.77 339 *e*P **P** **05 09 34.4 -0.6**
comp=Z,310nm,1.2s
DMN Daman 21.78 337 *e*P **P** **05 09 37.9 +2.9**
KAD Karad 21.95 298 ⇓*i*P **P** **05 09 40.6 +3.9**
GYA Guiyang 22.12 30 ⇓P **P** **05 09 42.7 +4.2**
GYA SS Sn 05 14 25.4 +32
GYA pmax pmax
comp=Z,10.0nm,1.1s
GYA pmax pmax
comp=Z,290nm,4.0s
GYA LR LR
comp=Z,1μm,12.9s
GYA LR LR
comp=Z,2μm,13.2s
GYA LR LR
comp=Z,1μm,12.8s
SPMM Sapulut 22.14 96 P **P** **05 09 36.0 -2.7**
LSA Lhasa 22.22 353 P **P** **05 09 41.6 +1.7**
LSA pP **pwP** **05 09 48.0 +3.1**
LSA S **S** **05 13 39.8 -5.2**
LSA pmax pmax
comp=Z,53nm,1.1s
LSA LR LR
comp=Z,870nm,21.4s
LSA LR LR
comp=Z,580nm,22.8s
LSA LR LR
comp=Z,2μm,26.3s
LSA Lhasa 22.22 353 P **P** **05 09 40.5 +0.6**
LSA IAmb IAmb 05 09 58.7
comp=Z,37nm,0.9s
GKN Gorkha 22.32 337 *e*P **P** **05 09 40.4 -0.2**
KOLN Koldanda 22.54 334 *e*P **P** **05 09 42.5 -0.5**
comp=Z,112nm,1.0s
BHPL Bhopal 22.54 316 *e*P **P** **05 09 43.2 +0.2**
DANN Dangsing 22.98 335 *e*P **P** **05 09 47.3 -0.5**
comp=Z,185nm,1.0s
PYUN Piuthan 23.09 334 *e*P **P** **05 09 48.7 -0.1**
comp=Z,237nm,1.3s
BBKI Banjar Baru 23.17 118 P P 05 09 57.8 +8.2
PWJI Pagerwojo 23.27 131 P P 05 10 06.5 +16
MYLDM Lahad Datu 24.08 94 P **P** **05 10 00.1 +1.5**
MYLDM IAmb IAmb 05 10 15.5
comp=Z,133nm,1.4s
BLJI Banyuglugur 24.46 128 P P 05 10 10.5 +8.5
CD2 Chengdu 24.82 19 P **P** **05 10 05.6 +0.5**
CD2 S **S** **05 14 28.0 +0.1**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,180nm,5.1s
CD2 LR LR
comp=Z,1μm,11.4s
CD2 LR LR
comp=Z,3μm,11.0s
CD2 LR LR
comp=Z,1μm,11.0s
SRBI Singaraja 25.94 126 P P 05 10 24.2 +8.8
MPSI Mapaga 26.43 105 P **P** **05 10 23.2 +3.3**
comp=Z,2μmcomp=Z,20nm,0.8s
H08S3 Diego Garcia H 26.55 236 T T 05 37 03.6
baz=57,slow=74
H08S2 Diego Garcia H 26.55 236 T T 05 37 12.8
baz=57,slow=74
H08S1 Diego Carcia H 26.57 236 T T 05 37 15.9
baz=57,slow=74
APSI Ampana 28.47 106 P P 05 10 55.4 +17
GTOI Gorontalo 29.36 102 P **P** **05 10 47.7 +1.7**
comp=Z,258nmcomp=Z,25nm,1.2s
XAN Xi'an 29.56 25 P **P** **05 10 51.6 +3.9**
XAN pP pwP 05 10 56.8 +4.2
XAN sP sP 05 10 58.7 +7.5
XAN PP **PP** **05 11 49.0 -5.5**
XAN S **S** **05 15 47.8 +5.0**
XAN sS sS 05 15 55.9 +9.5
XAN pmax pmax
comp=Z,6.0nm,0.6s
XAN pmax pmax
comp=Z,110nm,4.1s
XAN LR LR
comp=Z,2μm,14.4s
XAN LR LR
comp=Z,2μm,14.4s
XAN LR LR
comp=Z,2μm,13.6s
XAN Xi'an 29.56 25 P **P** **05 10 49.9 +2.2**
XAN IAmb IAmb 05 11 02.8
comp=Z,14nm,0.7s
LZH Lanzhou 29.67 16 *e*P **P** **05 10 50.2 +1.4**
LZH pP pwP 05 10 55.5 +1.8
LZH sP sP 05 10 59.2 +6.9
LZH SS SS 05 17 16.7 -34
LZH pmax pmax
comp=Z,17nm,1.5s
LZH pmax pmax
comp=Z,190nm,6.5s
LZH LR LR
comp=Z,740nm,17.9s
LZH LR LR
comp=Z,1μm,18.4s
LZH LR LR
comp=Z,890nm,19.5s
DAV Davao City (W) 30.94 89 LR LR 05 25 32.1
comp=Z,334nm,19.1s,baz=302,slow=40
GTA Gaotai 32.07 8 *e*P **P** **05 11 07.2 -2.7**
GTA pP pP 05 11 10.6 -1.8
GTA sP sP 05 11 13.6 +0.2
GTA S **S** **05 16 18.0 -4.2**
GTA sS sS 05 16 28.8 +2.6
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,31nm,4.4s
GTA LR LR
comp=N,350nm,17.1s
GTA LR LR
comp=E,550nm,13.8s
GTA LR LR
comp=Z,370nm,18.5s
NIL Nilore 32.48 326 P **P** **05 11 12.2 -1.3**
NIL IAmb IAmb 05 11 18.7
comp=Z,31nm,0.7s
NJ2 Nanjing 33.34 40 *e*P **P** **05 11 19.9 -1.1**
NJ2 pmax pmax
comp=Z,11nm,0.5s
NJ2 LR LR
comp=Z,1μm,10.9s
NJ2 LR LR
comp=Z,860nm,9.9s
NJ2 LR LR
comp=Z,720nm,10.4s
SSE Sheshan 34.27 43 P P 05 11 37.2 +8.1
SSE S **S** **05 17 01.5 +5.2**
SSE pmax pmax
comp=Z,9.0nm,0.5s
SSE pmax pmax
comp=Z,42nm,5.6s
SSE LR LR
comp=Z,510nm,14.8s
SSE LR LR
comp=Z,520nm,12.4s
TIA Tai'an 35.27 33 P P 05 11 44.2 +6.6
TIA S **S** **05 17 12.4 +0.9**
TIA pmax pmax
comp=Z,8.0nm,1.3s
TIA LR LR
comp=Z,680nm,10.4s
TIA LR LR
comp=Z,680nm,13.7s
TIA LR LR
comp=Z,770nm,11.8s
BTO Baotou 35.73 21 *e*P P 05 11 46.6 +4.9
GIRL Giralia 35.77 148 P **P** **05 11 41.9 -0.2**
HHC Hu-ho-hao-te 36.50 22 *e*P **P** **05 11 48.2 -0.1**
HHC PP **PP** **05 13 11.0 -0.4**
HHC S **S** **05 17 27.1 -3.5**
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,120nm,7.1s
HHC LR LR
comp=Z,690nm,11.4s
HHC LR LR
comp=Z,940nm,14.3s
HHC LR LR
comp=Z,420nm,11.3s
WMQ Urumqi 36.58 352 *e*P **P** **05 11 51.2 +2.4**
WMQ pP pwP 05 11 54.6 +0.7
WMQ sP sP 05 12 00.1 +7.8
WMQ pmax pmax
comp=Z,25nm,1.1s
WMQ pmax pmax
comp=Z,240nm,4.5s
WMQ LR LR
comp=Z,580nm,15.7s
WMQ LR LR
comp=Z,580nm,20.7s
WMQ LR LR
comp=Z,670nm,19.1s
BJI Beijing 37.76 28 P P 05 12 03.7 +4.9
BJI S **S** **05 17 50.6 +1.2**
BJI pmax pmax
comp=Z,6.0nm,0.9s
BJI LR LR
comp=Z,400nm,11.2s
BJI LR LR
comp=Z,540nm,13.3s
BJI LR LR
comp=Z,220nm,22.8s
SHLS Shalkode 37.79 342 *e*P **P** **05 11 57.4 -1.8**
baz=342
KPKS Kokpek 38.31 341 *e*P **P** **05 12 02.7 -0.9**
baz=341
BOOM Boomskoye usch 38.40 338 P **P** **05 12 06.6 +2.2**
TNSS Tian-Shan 38.51 339 *e*P **P** **05 12 04.6 -1.0**
baz=339
MDOK Medeo 38.59 340 *e*P **P** **05 12 05.9 -0.1**
baz=340
MDOK LR LR 05 28 30.7
comp=Z,106nm,14.0s,baz=340
BTK Batken 38.61 331 P **P** **05 12 06.3 +0.2**
BTK IAmb IAmb 05 12 15.6
comp=Z,28nm,1.1s
KUU Kurty 39.47 339 *e*P **P** **05 12 12.7 -0.5**
comp=Z,3.7nm,1.2s,baz=339
SGDS Sogindy 39.72 337 *e*P **P** **05 12 14.6 -0.7**
baz=337
FITZ Fitzroy Crossi 40.03 130 P **P** **05 12 19.6 +1.5**
comp=Z,4.5nm,1.1s,baz=338,slow=9.5,SNR=3.1
FITZ Fitzroy Crossi 40.03 130 P **P** **05 12 18.2 0.0**
baz=40,SNR=5.0
FITZ Fitzroy Crossi 40.03 130 P **P** **05 12 17.3 -0.9**
MK31 Makanchi Array 40.43 347 P **P** **05 12 20.6 -0.6**
MKAR Makanchi Array 40.43 347 P **P** **05 12 20.4 -0.8**
comp=Z,9.0nm,0.8s,baz=165,slow=8.1,SNR=28
MKAR LR LR 05 32 16.7
comp=Z,140nm,19.4s,baz=164,slow=41
MAKZ Makanchi 40.52 347 P **P** **05 12 21.3 -0.6**
MAKZ IAmb IAmb 05 12 36.9
comp=Z,12nm,0.7s
ZSN Zaisan 40.56 350 *e*P **P** **05 12 21.8 -0.4**
baz=350
DZA Taraz 40.61 334 *e*P **P** **05 12 22.2 -0.5**
baz=334
IUG Iuzhnay 40.61 332 *e*P **P** **05 12 22.2 -0.6**
baz=332
KK31 Karatay Array 41.14 333 P **P** **05 12 27.0 0.0**
KKAR Karatay Array 41.14 333 P **P** **05 12 26.9 -0.1**
KKAR Karatay Array 41.14 333 P **P** **05 12 26.7 -0.3**
SONM Songino Array 41.40 12 P **P** **05 12 30.4 +1.2**
comp=Z,2.9nm,0.7s,baz=190,slow=6.6,SNR=6.4
SONM LR LR 05 31 57.5
comp=Z,244nm,18.4s,baz=178,slow=40
SONM Songino Array 41.40 12 P **P** **05 12 29.9 +0.6**
KSRS Korea Array 42.53 41 P **P** **05 12 39.5 +1.1**
comp=Z,0.9nm,0.5s,baz=231,slow=9.6,SNR=2.0
KDU Kakadu 42.87 118 P **P** **05 12 40.0 -1.5**
baz=43
GEYT Alibeck 44.58 318 P **P** **05 12 54.8 -0.3**
comp=Z,5.5nm,0.5s,baz=139,slow=12,SNR=8.9
KURBB Kurchatov Arra 44.90 346 P **P** **05 12 57.0 -0.3**
comp=Z,9.1nm,0.8s,baz=168,slow=7.1,SNR=38
KURK Kurchatov 44.96 346 P **P** **05 12 57.6 -0.2**
KURK IAmb IAmb 05 13 13.7
comp=Z,43nm,1.1s
CN2 Changchun 45.16 32 *e*P P 05 13 07.1 +7.6
CN2 *e*S **S** **05 19 38.5 -0.6**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,500nm,12.0s
CN2 LR LR
comp=Z,400nm,14.0s
NWAO Narrogin (SRO) 45.77 153 P **P** **05 13 04.5 0.0**
comp=Z,6.0nm,0.8s,baz=315,slow=13,SNR=2.2
NWAO Narrogin (SRO) 45.77 153 P **P** **05 13 04.2 -0.3**
NWAO IAmb IAmb 05 13 45.6
comp=Z,70nm,1.7s
BRZS Berezniki 46.00 341 *e*P **P** **05 13 05.6 -0.5**
baz=341
H01W3 Cape Leeuwin H 46.17 157 T T 06 03 04.5
baz=328
H01W2 Cape Leeuwin H 46.18 157 T T 06 02 58.0
baz=328
H01W1 Cape Leeuwin H 46.18 157 T T 06 03 01.8
baz=328
WRKA Warakurna 46.27 136 P **P** **05 13 08.9 +0.3**
baz=46,SNR=4.7
ZAA0 Zalesovo Array 46.88 352 IAmb IAmb 05 13 21.4
comp=Z,24nm,1.1s
ZALV Zalesovo Beam 46.88 352 P **P** **05 13 12.9 -0.1**
comp=Z,8.0nm,0.4s,baz=178,slow=8.0,SNR=19
ZALV LR LR 05 37 18.3
comp=Z,218nm,18.4s,baz=182,slow=42
WB0 Warramunga Arr 47.84 125 P **P** **05 13 20.0 -1.0**
WB0 IAmb IAmb 05 13 37.7
comp=Z,6.2nm,0.8s
WRA Warramunga Arr 47.89 125 P **P** **05 13 19.5 -1.8**
comp=Z,1.2nm,0.7s,baz=305,slow=8.9,SNR=13
WRA PcP **PcP** **05 14 48.8 -1.2**
comp=Z,0.7nm,0.5s,baz=314,slow=2.9,SNR=1.8
WRA LR LR 05 35 08.0
comp=Z,316nm,21.2s,baz=300,slow=38
WRA Warramunga Arr 47.89 125 P **P** **05 13 20.1 -1.2**
WRAB Tennant Creek 47.90 125 P **P** **05 13 21.4 +0.1**
WRAB IAmb IAmb 05 13 36.6
comp=Z,46nm,2.0s
WB2 Warramunga Arr 47.90 125 P **P** **05 13 20.3 -1.1**
baz=48
WB2 Warramunga Arr 47.90 125 P **P** **05 13 20.0 -1.4**
WB2 IAmb IAmb 05 14 11.1
comp=Z,5.7nm,0.8s
MDJ Mudanjiang 47.92 34 P **P** **05 13 19.5 -1.7**
MDJ ScP **ScP** **05 18 44.2 -0.1**
MDJ PcS **PcS** **05 18 45.4 +0.3**
MDJ S **S** **05 20 17.7 -1.0**
MDJ ScS **ScS** **05 23 12.8 -2.1**
MDJ pmax pmax
comp=Z,6.0nm,1.7s
MDJ pmax pmax
comp=Z,100nm,6.3s
MDJ LR LR
comp=Z,440nm,11.5s
MDJ LR LR
comp=Z,500nm,13.0s
MDJ LR LR
comp=Z,490nm,12.1s
WR0 Warramunga Arr 48.06 125 P **P** **05 13 24.0 +1.4**
WR0 IAmb IAmb 05 13 40.0
comp=Z,16nm,1.3s
USRK Ussuriysk Ar. 49.02 36 LR LR 05 35 05.3
comp=Z,259nm,19.0s,baz=211,slow=37
MJAR Matsushiro Arr 49.19 47 LR LR 05 36 40.7
comp=Z,183nm,18.7s,baz=220,slow=39
RAYN Ar Rayn 49.43 294 P **P** **05 13 33.0 -0.2**
RAYN IAmb IAmb 05 13 41.4
comp=Z,11nm,0.7s
ASAR Alice Springs 49.54 130 P **P** **05 13 33.5 -0.5**
comp=Z,1.0nm,0.8s,baz=296,slow=7.2,SNR=10
ASAR PcP **PcP** **05 14 56.0 +0.2**
comp=Z,1.0nm,0.6s,baz=318,slow=4.0,SNR=1.4
ASAR LR LR 05 36 28.8
comp=Z,222nm,20.5s,baz=296,slow=38
ASAR Alice Springs 49.54 130 P **P** **05 13 34.7 +0.7**
FORT Forrest 49.95 141 P **P** **05 13 36.0 -0.9**
ABKAR Akbulak array 50.61 331 P **P** **05 13 41.0 -0.7**
ABKAR Akbulak array 50.61 331 IAmb IAmb 05 13 48.2
comp=Z,29nm,1.4s
OPO Ambohidratompo 53.30 240 P **P** **05 14 03.2 +0.7**
comp=Z,1.2nm,0.5s,baz=111,slow=14,SNR=1.7
BBOO Buckleboo 56.43 138 P **P** **05 14 24.1 -0.5**
BBOO IAmb IAmb 05 16 03.3
comp=Z,28nm,1.4s
KBZ Khabaz 57.47 318 P **P** **05 14 33.0 +1.1**
comp=Z,4.9nm,1.1s,baz=53,slow=20,SNR=3.7
KBZ LR LR 05 42 28.9
comp=Z,80nm,18.4s,baz=124,slow=40
KMBO Kilima Mbogo 57.63 264 LR LR 05 37 10.3
comp=Z,204nm,18.1s,baz=94,slow=34
KRVT Keravat (AS076 58.71 100 LR LR 05 42 56.7
comp=Z,54nm,18.1s,baz=263,slow=39
STKA Stephens Creek 59.73 134 P **P** **05 14 47.0 -0.8**
comp=Z,1.6nm,0.8s,baz=344,slow=14,SNR=3.2
STKA LR LR 05 45 17.9
comp=Z,194nm,18.4s,baz=296,slow=41
NRIK Noril'sk 61.85 357 P **P** **05 15 01.2 -0.5**
comp=Z,4.1nm,0.5s,baz=146,slow=5.2,SNR=5.4
NRIK LR LR 05 46 40.7
comp=Z,170nm,18.6s,baz=199,slow=41
BRTR Keskin Array B 62.81 311 P **P** **05 15 06.5 -2.2**
comp=Z,0.8nm,0.5s,baz=132,slow=6.6,SNR=3.5
BRTR LR LR 05 45 10.6
comp=Z,58nm,20.7s,baz=116,slow=39
KLMR Klimovskoe 66.83 334 *e*P **P** **05 15 35.0 +0.6**
KLMR AMP 05 15 41.7
comp=Z,30nm,1.5s
KARP Karpathos 67.12 305 P **P** **05 15 35.8 -1.0**
TIXI Tiksi 67.48 11 P **P** **05 15 36.8 -1.5**
PETK Petropavlovsk- 68.11 35 LR LR 05 46 44.3
comp=Z,110nm,21.1s,baz=240,slow=37
AKASG Malin Array Be 68.54 322 P **P** **05 15 45.2 -0.1**
comp=Z,2.4nm,0.7s,baz=90,slow=4.9,SNR=6.8
IDI Anoyia 68.94 305 P **P** **05 15 46.9 -1.3**
MLR Muntele Rosu 69.55 316 P **P** **05 15 52.8 +0.8**
BURAR Bucovina Array 70.43 318 P **P** **05 15 56.1 -1.2**
BUR08 Bucovina Ar. S 70.45 318 P **P** **05 15 56.0 -1.4**
NACGM Naroch 71.03 326 *e* **P** **05 16 03.0 +2.4**
IDID Didziasalis 71.16 326 *e*P **P** **05 16 02.7 +1.3**
IIGN Ignalina 71.45 326 *e*P **P** **05 16 03.2 0.0**
ITM Ithomi 71.49 307 P **P** **05 16 03.5 -0.3**
ITM IAmb IAmb 05 16 13.9
comp=Z,44nm,1.9s
IZAR Zarasai 71.54 326 *e*P **P** **05 16 04.9 +1.2**
ISAL Salakas 71.56 326 *e*P **P** **05 16 04.3 +0.5**
VSU Vasula 71.97 329 *e*P **P** **05 16 07.4 +1.2**
KWP Kalwaria Pacla 72.42 320 IAmb IAmb 05 18 04.1
comp=Z,37nm,1.6s
PABE Paberze 72.74 326 *e*P **P** **05 16 11.5 +0.7**
FIA1 FINESS Array S 73.09 332 P **P** **05 16 11.8 -1.0**
FIA1 IAmb IAmb 05 16 25.7
comp=Z,21nm,1.1s
FINES FINESS Array B 73.09 332 P **P** **05 16 11.6 -1.2**
comp=Z,4.9nm,0.5s,baz=94,slow=5.8,SNR=19
FINES LR LR 05 52 41.7
comp=Z,136nm,19.0s,baz=102,slow=39
FINES FINESS Array B 73.09 332 P **P** **05 16 12.0 -0.9**
CRVS Cervenica-Dubn 73.11 319 *e*P **P** **05 16 15.4 +2.1**
OJC Ojcow 74.36 320 P **P** **05 16 21.8 +1.2**
OJC IAmb IAmb 05 16 27.4
comp=Z,8.4nm,0.9s
VYHS Vyhne 74.79 318 *e*P **P** **05 16 25.0 +1.9**
ARD3 ARCESS Array S 75.61 340 P **P** **05 16 27.2 -0.2**
ARD4 ARCESS Array S 75.62 340 P **P** **05 16 27.4 -0.1**
ARC3 ARCESS Array S 75.62 340 P **P** **05 16 27.0 -0.5**
ARCES ARCESS Array B 75.63 340 P **P** **05 16 26.7 -0.9**
comp=Z,1.9nm,0.6s,baz=94,slow=6.0,SNR=8.4
ARCES LR LR 05 52 25.4
comp=Z,274nm,20.5s,baz=125,slow=38
BOSA Boshof 75.63 238 P **P** **05 16 28.2 -0.3**
comp=Z,2.9nm,0.9s,baz=47,slow=4.7,SNR=6.5
BOSA LR LR 05 45 14.2
comp=Z,79nm,19.4s,baz=67,slow=32
BOSA Boshof 75.63 238 P **P** **05 16 27.8 -0.7**
BOSA IAmb IAmb 05 16 35.1
comp=Z,39nm,1.5s
ARB4 ARCESS Array S 75.63 340 P **P** **05 16 27.5 -0.1**
MORC Moravsky Berou 75.76 319 *e*P **P** **05 16 30.3 +1.6**
DZM Mont Dzumac 76.45 115 *e*LR LR 05 39 16.4
comp=Z,300nm,30.4s
KRUC Moravsky 76.45 319 *e*P **P** **05 16 33.8 +1.2**
DPC Dobruska-Polom 76.59 320 *e*P **P** **05 16 34.8 +1.3**
OSTC Ostas 76.67 320 *e*P **P** **05 16 32.9 -1.0**
CONA Conrad Observa 76.73 317 *e*P **P** **05 16 35.3 +1.0**
comp=Z,3.3nm,0.9s
CHVC Chvalec 76.78 320 *e*P **P** **05 16 36.9 +2.4**
ARSA Arzberg 76.92 317 *e*P **P** **05 16 37.0 +1.6**
comp=Z,5.9nm,1.2s
SOKA Soboth 77.23 316 *e*P **P** **05 16 38.9 +1.8**

comp=Z,4.9nm,0.9s
OBKA Obir 77.55 316 *e*P P **05 16 40.5 +1.5**
comp=Z,3.3nm,0.6s
MOA Molln 77.80 317 *e*P P **05 16 42.4 +2.2**
comp=Z,3.8nm,1.1s
PBCC Pribram 78.05 319 *e*P P **05 16 43.5 +1.9**
MYKA Terra Mystica 78.18 316 *e*P P **05 16 43.6 -0.2**
comp=Z,1.8nm,0.5s
GERES GERESS Array B 78.21 318 P P **05 16 41.9 -0.8**
comp=Z,3.2nm,0.9s,baz=77,slow=5.9,SNR=13
GERES LR LR 05 55 49.1
comp=Z,52nm,20.6s,baz=80,slow=39
MAW Mawson 78.29 192 P P **05 16 43.3 +1.0**
comp=Z,2.4nm,0.7s,baz=86,slow=3.3,SNR=6.2
MAW LR LR 05 46 17.3
comp=Z,95nm,19.2s,baz=54,slow=32
MAW Mawson 78.29 192 P P **05 16 43.2 +0.8**
KHC Kasperske Hory 78.30 319 *e*P P **05 16 47.0 +4.0**
KBA Koelnbreinsper 78.40 316 *e*P P **05 16 44.6 +0.8**
comp=Z,5.2nm,1.2s
ABTA Abfaltersbach 78.96 316 *e*P P **05 16 48.2 +1.4**
comp=Z,7.3nm,1.3s
WTTA Wattenberg 79.57 317 *e*P P **05 16 51.8 +1.6**
comp=Z,7.8nm,1.0s
WATA Walderalm 79.61 317 *e*P P **05 16 50.5 +0.1**
comp=Z,7.9nm,1.1s
SQTA Sankt Quirin 79.86 317 *e*P P **05 16 51.9 +0.2**
comp=Z,7.7nm,1.2s
NC405 NORSAR Array S 79.87 331 P P **05 16 50.7 -0.6**
MOTA Moosalm 79.93 317 *e*P P **05 16 52.6 +0.4**
comp=Z,7.4nm,0.9s
NC602 NORSAR Array S 79.94 330 P P **05 16 49.7 -2.0**
NC303 NORSAR Array S 80.04 331 P P **05 16 50.5 -1.7**
NB2 NORSAR Subarra 80.11 331 P P **05 16 51.2 -1.5**
comp=Z,7.3nm,0.9s,baz=93,slow=5.3
NOA NORSAR Array B 80.11 331 P P **05 16 51.4 -1.3**
comp=Z,3.5nm,0.8s,baz=95,slow=5.1,SNR=8.7
NOA LR LR 05 56 08.0
comp=Z,68nm,18.5s,baz=125,slow=38
RETA Reutte 80.16 317 *e*P P **05 16 54.0 +0.7**
comp=Z,7.1nm,0.8s
SPA0 Spitsbergen Ar 80.18 348 P P **05 16 52.0 -0.8**
SPA0 IAmb IAmb 05 16 56.9
comp=Z,53nm,1.4s
FETA Feichten 80.19 316 *e*P P **05 16 55.1 +1.5**
comp=Z,7.4nm,1.1s
DAVA Damuels 80.76 317 *e*P P **05 16 56.1 -0.5**
comp=Z,12nm,1.2s
KEST Kesra 81.61 305 LR LR 05 58 29.6
comp=Z,49nm,19.0s,baz=324,slow=40
SYO Syowa Base 85.19 197⁇ *e*P P **05 17 19.4 +0.6**
TORD Torodi Ar. Bea 90.90 283 P P **05 17 48.7 +1.3**
comp=Z,2.2nm,1.0s,baz=90,slow=2.7,SNR=5.0
TORD LR LR 05 59 00.1
comp=Z,87nm,18.6s,baz=85,slow=36
ESDC Sonseca Array 91.59 310 P P **05 17 49.9 -0.4**
comp=Z,1.9nm,1.0s,baz=64,slow=4.4,SNR=5.4
ESDC LR LR 06 03 02.8
comp=Z,52nm,19.3s,baz=175,slow=38
ESDC Sonseca Array 91.59 310 P P **05 17 50.3 +0.1**
IMAR Indian Mountai 91.82 22 P P **05 17 51.0 +0.4**
VNDA Vanda 92.59 168 LR LR 05 56 38.5
comp=Z,72nm,18.4s,baz=326,slow=34
BPAW Bear Paw Mtn. 93.66 24 P P **05 18 00.4 +1.2**
BPAW IAmb IAmb 05 18 06.0
comp=Z,11nm,1.1s
ILAR Eielson Array 94.93 22 P P **05 18 04.0 -0.9**
comp=Z,0.3nm,0.8s,baz=289,slow=2.8,SNR=2.3
ILAR LR LR 06 03 44.4
comp=Z,84nm,19.6s,baz=319,slow=37
QSPA South Pole Qui 97.48 180 P Pdif 05 18 16.9 +0.3
comp=Z,0.4nm,0.8s,baz=296,slow=1.2,SNR=1.1
DBIC Dimbokro 98.22 278 LR LR 06 02 58.6
comp=Z,158nm,18.1s,baz=66,slow=36
TBI Tubuai 116.95 112 *e*LR LR 05 57 57.6
comp=Z,143nm,35.8s
PPT2 Papeete2 117.03 106 *e*LR LR 05 58 00.0
comp=Z,183nm,32.2s
NVAR Mina Array Bea 125.05 31 PKP **PKPdf 05 23 43.3 -0.7**
comp=Z,0.1nm,0.4s,baz=290,slow=2.7,SNR=2.2
PDAR Pinedale Array 125.36 21 PKP **PKPdf 05 23 44.1 -0.4**
comp=Z,0.6nm,0.9s,baz=345,slow=4.6,SNR=4.1
BCOK Bluff Creek, N 135.54 14 PKPpre 05 23 48.1
OK025 Westminster Rd 135.68 14 **PKPdf 05 24 01.9 -2.0**
WMOK Wichita Mounta 136.12 16 PKPdf **PKPdf 05 24 03.0 -1.8**
TXAR Lajitas Array 139.40 25 PKhKP PKPpre 05 24 03.8
comp=Z,0.1nm,0.6s,baz=310,slow=1.4,SNR=1.3
TXAR PKP **PKPdf 05 24 11.3 +0.2**
comp=Z,0.4nm,0.8s,baz=194,slow=2.6,SNR=3.6
TXAR Lajitas Array 139.40 25 **PKPdf 05 24 08.0 -3.1**
BDFB Brasilia 142.35 254 PKP **PKPdf 05 24 14.9 -1.8**
comp=Z,0.9nm,0.4s,baz=141,slow=6.6,SNR=1.8
PLCA Paso Flores 144.35 200 PKP **PKPab 05 24 17.2 -0.3**
comp=Z,3.3nm,0.7s,baz=168,slow=4.2,SNR=5.0
LC01 Cunco 146.44 200 **PKPdf 05 24 23.2 +0.1**
CPUP Villa Florida 147.27 232 PKPbc **PKPdf 05 24 25.8 +0.9**
comp=Z,3.5nm,0.9s,baz=108,slow=2.3,SNR=9.1
CPUP Villa Florida 147.27 232 PKPbc **PKPdf 05 24 25.3 +0.5**
HUMP Col San Antoni 147.85 323 PKPbc **PKPbc 05 24 28.2 -0.7**
VA03 San Esteban 151.29 207 PKPdf **PKPdf 05 24 32.9 +1.6**

DJA 11 05:32:38.4±0.4,9°**S**:4°×**12°6E**±°,**h10**km,**M4.0**/7,**mB4.8**/1,
mb4.5/4,**MLv3.6**/7,**Mw(mB)4.1**/1,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.57**	**250**	P	Pn	05 33 06.3	-0.2
SOEI				S	Sn	05 33 27.2	+0.2
BATI	**Baumata**	**2.29**	**245**	P	Pn	05 33 16.4	+0.1
EDFI	**Ende, Flores**	**4.06**	**276**	P	Pn	05 33 40.4	-0.3
BASI	**Baing, Sumba**	**5.21**	**259**	P	Pn	05 33 56.5	0.0
	0.2nm61nm,0.8s						
SAUI	**Saumlaki**	**5.61**	**78**	P	Pn	05 34 01.5	-0.4
	1.0nm124nm,0.9s						

IDC ***11*** *05:38:40.8±0.8, 7.53N×94.24E, h0km, mb4.1/10, mb1 4.2/12, mb1mx3.9/48, mbtmp4.0/12, ML4.0/2, MS3.6/24, Ms1 3.6/24, ms1mx3.4/45, Error ellipse: s-maj=43.1km s-min=16.2km az=56.0*
NEIC ***11*** *05:38:41.4±2.6, 7.59N±0.10×94.39E±0.09, h10km±1km, mb4.6/13, Error ellipse: s-maj=17.4km s-min=13.8km az=214.0*
NDI ***11*** *05:38:45.9±2.8, 7.56N×94.37E, h10km, mb4.4, mb4.6(NEIC)*
DJA ***11*** *05:38:59.6±0.4, 7°N±4°×9°E±°, h10km, M4.5/11, mB5.3/4, mb4.3/7, MLv4.5/11, Mw(mB)4.8/4*
ISC 11 05:38:41.9±0.5,**7.49N**±0.08×**94.41E**±0.10,**h10**km,**n67,**
σ1s96/46,mb4.4/17,MS3.6/21,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.38**	**132**	P	**Pb**	**05 39 41.9**	**0.0**
LHMI	**Lhok Sumawe**	**3.38**	**132**	Pn	**Pn**	**05 39 37.6**	**+2.8**
MLSI	**Meulaboh, Aceh**	**3.77**	**148**	P	**Pb**	**05 39 50.0**	**+1.4**
TPTI		**5.03**	**147**	P	**Pb**	**05 40 05.6**	**-4.5**
SNSI	**Sinabang, Aceh**	**5.40**	**159**	P	**Pb**	**05 40 14.9**	**-1.5**
DGPR	**DIGLIPUR**	**5.84**	**346**	*e*P	**Pn**	**05 40 11.9**	**+3.4**
PSI	**Prapat**	**6.47**	**136**	Pn	**Pn**	**05 40 22.2**	**+4.8**
	0.8nm,0.3s,baz=281,slow=0.8,SNR=1.9						
PSI				LR	LR	05 43 13.1	
	comp=Z,646nm,18.4s,baz=252,slow=41						
RPSI	**Rantau Prapat**	**6.55**	**136**		**Pn**	**05 40 22.2**	**+3.8**
KULM	**Kulim**	**6.58**	**109**		**Pn**	**05 40 20.1**	**+1.3**
GSI	**Gunungsitoli**	**6.91**	**153**	P	Pb	05 40 34.3	-7.8
	0.3nm19nm,0.7s						
IPM	**Ipoh**	**7.23**	**114**		**Pn**	**05 40 27.7**	**-0.1**
MNSI	**Mandailing Nat**	**8.41**	**142**	P	Pn	05 40 51.4	+7.4
PBSI	**Pulau Batu**	**8.43**	**153**	P	Pn	05 40 53.6	+9.4
	0.4nm56nm,2.1s						
CMAR	**Chiang Mai Arr**	**11.76**	**22**	Pn	**Pn**	**05 41 32.3**	**+2.4**
	0.7nm,0.3s,baz=225,slow=15,SNR=6.2						
CMAR				LR	LR	05 45 57.7	
	comp=Z,242nm,19.4s,baz=248,slow=37						
CMAR	**Chiang Mai Arr**	**11.76**	**22**		**Pn**	**05 41 31.0**	**+1.1**
SAIH	**SAIHA**	**14.98**	**355**	*e*P	**Pn**	**05 42 16.8**	**+2.9**
BOK	**Bokaro**	**18.16**	**334**	*e*P	**P**	**05 42 57.4**	**+2.7**
LEM	**Lembang**	**19.39**	**137**	LR	LR	05 50 27.6	
	comp=Z,288nm,18.7s,baz=238,slow=36						
BHPL	**Bhopal**	**22.62**	**316**	*e*P	**P**	**05 43 46.3**	**+3.2**
BHPL				IAmb	IAmb	05 43 49.9	
	comp=Z,13nm,1.1s						
H08S3	**Diego Garcia H**	**26.52**	**236**	T	T	06 11 05.9	
	baz=54,slow=74,SNR=114						
H08S2	**Diego Garcia H**	**26.52**	**236**	T	T	06 11 05.2	
	baz=54,slow=74,SNR=6.1						
H08S1	**Diego Garcia H**	**26.54**	**236**	T	T	06 11 07.0	
	baz=54,slow=74,SNR=3.0						
KAPI	**Kappang**	**28.17**	**115**	LR	LR	05 55 37.5	
	comp=Z,120nm,21.3s,baz=298,slow=36						
GTOI	**Gorontalo**	**29.32**	**102**	P	P	05 44 52.2	+7.2
DAV	**Davao City (W)**	**30.92**	**89**	LR	LR	05 59 05.7	
	comp=Z,67nm,18.7s,baz=346,slow=39						
MK31	**Makanchi Array**	**40.52**	**347**	P	**P**	**05 46 19.7**	**-1.5**
MKAR	**Makanchi Array**	**40.52**	**347**	P	**P**	**05 46 20.8**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=168,slow=7.5,SNR=13						
MKAR				LR	LR	06 05 06.8	
	comp=Z,52nm,21.1s,baz=168,slow=39						
MAKZ	**Makanchi**	**40.60**	**347**	P	**P**	**05 46 21.3**	**-0.6**
JNU	**Nakatsue**	**42.30**	**48**	LR	LR	06 04 44.0	
	comp=Z,97nm,20.9s,baz=236,slow=37						
KSRS	**Korea Array**	**42.58**	**40**	LR	LR	06 07 27.4	
	comp=Z,53nm,19.8s,baz=226,slow=40						
GEYT	**Alibeck**	**44.66**	**318**	P	**P**	**05 46 56.0**	**+1.0**
	comp=Z,3.0nm,0.5s,baz=157,slow=8.0,SNR=4.4						
GEYT				LR	LR	06 08 40.1	
	comp=Z,63nm,18.1s,baz=220,slow=40						
KURBB	**Kurchatov Arra**	**44.98**	**346**	P	**P**	**05 46 57.4**	**+0.1**
	comp=Z,4.8nm,1.0s,baz=174,slow=7.1,SNR=4.2						
KURK	**Kurchatov**	**45.05**	**346**	P	**P**	**05 46 57.7**	**-0.1**
KURK				IAmb	IAmb	05 47 05.4	
	comp=Z,10nm,1.1s						
ZAA0	**Zalesovo Array**	**46.97**	**352**	P	**P**	**05 47 09.7**	**-3.3**
ZAA0				IAmb	IAmb	05 47 23.4	
	comp=Z,4.3nm,1.0s						
ZALV	**Zalesovo Beam**	**46.97**	**352**	P	**P**	**05 47 12.3**	**-0.6**
	comp=Z,1.2nm,0.3s,baz=175,slow=7.1,SNR=5.2						
ZALV				LR	LR	06 11 29.8	
	comp=Z,51nm,20.1s,baz=201,slow=42						
ZALV	**Zalesovo Beam**	**46.97**	**352**	P	**P**	**05 47 10.6**	**-2.3**
WB0	**Warramunga Arr**	**47.78**	**125**	P	**P**	**05 47 19.8**	**0.0**
WB0				IAmb	IAmb	05 47 22.6	
	comp=Z,7.2nm,1.4s						
WRA	**Warramunga Arr**	**47.82**	**125**	P	**P**	**05 47 20.8**	**+0.7**
	comp=Z,2.1nm,1.1s,baz=307,slow=8.3,SNR=9.2						
WRA				LR	LR	06 10 23.7	
	comp=Z,77nm,18.3s,baz=305,slow=40						
WRA	**Warramunga Arr**	**47.82**	**125**	P	**P**	**05 47 20.2**	**+0.1**
WB2	**Warramunga Arr**	**47.83**	**125**	P	**P**	**05 47 20.7**	**+0.5**
WR0	**Warramunga Arr**	**47.99**	**125**	P	**P**	**05 47 21.4**	**-0.1**
WR0				IAmb	IAmb	05 47 39.3	
	comp=Z,4.4nm,1.1s						
JGF	**Kuroka**	**48.20**	**48**	P	**P**	**05 47 20.3**	**-2.6**
MJAR	**Matsushiro Ar**	**49.22**	**47**	LR	LR	06 10 58.4	
	comp=Z,62nm,18.0s,baz=195,slow=39						
ASAR	**Alice Springs**	**49.47**	**130**	P	**P**	**05 47 34.9**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=297,slow=6.6,SNR=7.2						
ASAR				PcP	**PcP**	**05 48 55.7**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=317,slow=3.0,SNR=4.5						
ASAR				LR	LR	06 10 25.9	
	comp=Z,54nm,19.3s,baz=324,slow=38						
RAYN	**Ar Rayn**	**49.48**	**295**	P	**P**	**05 47 32.6**	**-0.4**
RAYN				IAmb	IAmb	05 47 41.1	
	comp=Z,8.4nm,1.2s						
GUMO	**Guam**	**49.91**	**79**	LR	LR	06 08 37.7	
	comp=Z,19nm,21.2s,baz=244,slow=36						
ABKAR	**Akbulak array**	**50.69**	**331**	P	**P**	**05 47 41.2**	**-0.4**
ABKAR				IAmb	IAmb	05 47 49.2	
	comp=Z,12nm,1.5s						
STKA	**Stephens Creek**	**59.65**	**134**	LR	LR	06 19 25.9	
	comp=Z,50nm,18.1s,baz=252,slow=41						
BRTR	**Keskin Array B**	**62.88**	**311**	LR	LR	06 20 33.9	
	comp=Z,21nm,18.2s,baz=108,slow=40						
TIXI	**Tiksi**	**67.56**	**11**	P	**P**	**05 49 38.0**	**-0.2**
IDI	**Anoyia**	**69.00**	**305**	P	**P**	**05 49 46.9**	**-1.1**
FINES	**FINESS Array B**	**73.17**	**332**	P	**P**	**05 50 11.7**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=121,slow=7.1,SNR=8.8						
FINES	**FINESS Array B**	**73.17**	**332**	P	**P**	**05 50 11.3**	**-1.3**
BOSA	**Boshof**	**75.61**	**238**	LR	LR	06 19 54.4	
	comp=Z,33nm,18.6s,baz=32,slow=33						
ARCES	**ARCESS Array B**	**75.71**	**340**	P	**P**	**05 50 27.0**	**-0.4**
	comp=Z,1.7nm,0.9s,baz=97,slow=5.6,SNR=1.2						
ARCES				LR	LR	06 26 55.1	
	comp=Z,77nm,19.0s,baz=100,slow=38						
MAW	**Mawson**	**78.22**	**192**	LR	LR	06 19 12.5	
	comp=Z,32nm,19.4s,baz=266,slow=31						
GERES	**GERESS Array B**	**78.29**	**318**	P	**P**	**05 50 42.4**	**0.0**
	comp=Z,0.6nm,0.6s,baz=70,slow=6.2,SNR=4.0						
GERES	**GERESS Array B**	**78.29**	**318**	P	**P**	**05 50 40.0**	**-2.4**
NB2	**NORSAR Subarra**	**80.19**	**331**	P	**P**	**05 50 51.5**	**-1.0**
	comp=Z,1.5nm,0.8s,baz=93,slow=5.3						
NOA	**NORSAR Array B**	**80.19**	**331**	P	**P**	**05 50 51.8**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=95,slow=5.2,SNR=4.3						
NOA				LR	LR	06 28 32.0	
	comp=Z,27nm,19.9s,baz=255,slow=37						
KEST	**Kesra**	**81.68**	**305**	LR	LR	06 32 02.3	
	comp=Z,24nm,20.2s,baz=256,slow=39						
TORD	**Torodi Ar. Bea**	**90.94**	**283**	LR	LR	06 32 10.7	
	comp=Z,31nm,18.6s,baz=285,slow=35						
ESDC	**Sonseca Array**	**91.67**	**310**	LR	LR	06 36 43.0	
	comp=Z,26nm,19.7s,baz=5.0,slow=38						
VNDA	**Vanda**	**92.50**	**168**	LR	LR	06 27 15.1	
	comp=Z,28nm,20.1s,baz=354,slow=32						
PLCA	**Paso Flores**	**144.28**	**200**	PKP	**PKPdf**	**05 58 18.0**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=63,slow=6.8,SNR=2.9						
CPUP	**Villa Florida**	**147.24**	**232**	PKPbc	**PKPab**	**05 58 26.4**	**-1.7**
	comp=Z,1.4nm,0.7s,baz=54,slow=3.7,SNR=4.1						
CPUP	**Villa Florida**	**147.24**	**232**		**PKPbc**	**05 58 25.1**	**-1.3**

IDC 11 05:48:44.7±2.2,**7.31N**×**94.07E**,**h0**km,**mb3.6/5,mb1 3.8/6,**
mb1mx3.5/53,mbtmp3.6/6,ML4.5/1,Error ellipse:
s-maj=88.4km s-min=23.2km az=61.0,Nicobar Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**12.05**	**23**	Pn	Pn	05 51 38.1	+0.2
	0.8nm,0.3s,baz=215,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**40.62**	**348**	P	P	05 56 25.8	-0.6
	1.6nm,0.7s,baz=162,slow=8.4,SNR=9.6						
KURBB	**Kurchatov Arra**	**45.07**	**346**	P	P	05 57 02.6	+0.2
	comp=Z,4.8nm,1.0s,baz=171,slow=7.1,SNR=11						
ZALV	**Zalesovo Beam**	**47.10**	**353**	P	P	05 57 18.6	+0.2
	0.4nm,0.4s,baz=165,slow=6.0,SNR=2.1						
WRA	**Warramunga Arr**	**47.99**	**125**	P	P	05 57 25.4	-0.4
	0.2nm,0.7s,baz=307,slow=8.6,SNR=1.4						
ASAR	**Alice Springs**	**49.61**	**130**	P	P	05 57 38.4	+0.1
	0.2nm,0.5s,baz=300,slow=7.4,SNR=2.0						

JMA ***11*** *05:50:13.2, 34.02N×137.43E, h381km, M3.1*
IDC ***11*** *05:50:16.3±1.4, 34.01N×137.50E, h340km±30km, mb2.6/2, mb1 2.8/4, mb1mx2.6/57, mbtmp3.3/4, Error ellipse: s-maj=56.7km s-min=27.4km az=45.0*
ISC 11 05:50:16.8±1.1,**34.1N**±0.1×**137.38E**±0.09,**h348**km±10km,
n19,σ0s73/21,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO4	**TONANKAI O.B.S**	**0.14**	**112**	P	**Pn**	**05 51 00.9**	**+0.9**
TK02	**Tokai 2**	**0.34**	**110**	P	**Pn**	**05 51 01.1**	**+0.9**
TTO2	**TONANKAI O.B.S**	**0.44**	**222**	P	**Pn**	**05 51 01.2**	**+0.9**
TTO1	**TONANKAI O.B.S**	**0.66**	**228**	P	**Pn**	**05 51 01.5**	**+0.7**
JWY	**Kouya**	**1.49**	**276**	P	**Pn**	**05 51 04.8**	**+0.1**
JTNC	**Tanabenakahech**	**1.49**	**261**	P	**Pn**	**05 51 04.6**	**-0.1**
JYTA	**Yamagatataniai**	**1.62**	**341**	P	**Pn**	**05 51 05.7**	**+0.4**
JOD2	**Odawara 2**	**1.85**	**49**	P	**Pn**	**05 51 07.3**	**+0.5**
JWT	**Wachi**	**2.03**	**307**	P	**Pn**	**05 51 08.1**	**+0.1**
JRY	**Ryogami san**	**2.32**	**32**	*e*S	**S**	**05 51 53.4**	**+0.3**
JAI	**Aioi**	**2.45**	**264**	P	**Pn**	**05 51 10.9**	**-0.3**
MJAR	**Matsushiro Arr**	**2.56**	**15**	P	**Pn**	**05 51 12.6**	**+0.4**
	0.2nm,0.3s,baz=188,slow=10.0,SNR=4.3						
MJAR				S	**S**	**05 51 55.3**	**-1.4**
	0.0nm,0.3s,baz=190,slow=18,SNR=2.2						
JAG	**Ashikaga**	**2.91**	**35**	P	**Pn**	**05 51 14.3**	**-0.7**
JMN	**Monobe**	**2.93**	**264**	P	**Pn**	**05 51 14.8**	**-0.6**
BSO1	**Boso 1**	**3.04**	**78**	P	**Pn**	**05 51 14.9**	**-0.7**
BSO1				*e*S	**S**	**05 52 02.0**	**-1.0**
JHS	**Saijyo**	**3.64**	**286**	P	**Pn**	**05 51 22.1**	**+0.1**
KSRS	**Korea Array**	**8.40**	**296**	P	**Pn**	**05 52 16.1**	**+0.6**
	0.4nm,0.3s,baz=107,slow=12,SNR=5.6						
MKAR	**Makanchi Array**	**42.98**	**304**	P	**P**	**05 57 43.6**	**+0.7**
	0.2nm,0.5s,baz=99,slow=7.4,SNR=1.8						
WRA	**Warramunga Arr**	**53.78**	**184**	P	**P**	**05 59 04.3**	**-0.4**
	0.2nm,0.3s,baz=359,slow=7.6,SNR=5.7						

IDC 11 06:29:15.7±2.5,**54.14N**×**86.47E**,**h0**km,**mb1 3.0**/2,
mb1mx2.9/44,**mbtmp3.0**/2,**ML2.8**/2,**Error ellipse:**
s-maj=20.5km s-min=12.3km az=58.0,Southwestern
Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.99**	**260**	*i*		06 34 53.3	
	baz=79,slow=336,SNR=0.7						
ZALV	**Zalesovo Beam**	**0.99**	**260**	Pg	Pg	06 29 33.5	-1.3
	1.1nm,0.3s,baz=79,slow=17,SNR=11						
ZALV				Lg	Lg	06 29 48.9	
	2.1nm,0.3s,baz=76,slow=30,SNR=11						
KURBB	**Kurchatov Arra**	**6.00**	**237**	Pn	Pn	06 30 46.8	+1.1
	0.1nm,0.3s,baz=55,slow=14,SNR=7.0						
KURBB				Lg	Lg	06 32 28.8	
	0.0nm,0.3s,baz=58,slow=32,SNR=1.1						
MKAR	**Makanchi Array**	**7.82**	**202**	Pn	Pn	06 31 11.8	+1.2
	0.3nm,0.3s,baz=18,slow=13,SNR=10						
MKAR				Sn	Sn	06 32 38.1	-1.8
	0.0nm,0.3s,baz=19,slow=27,SNR=2.4						
MKAR				Lg	Lg	06 33 21.4	
	0.1nm,0.3s,baz=19,slow=30,SNR=2.7						

PRU ***11*** *06:34:46.9±0.0, 50.26N×18.98E, h0km*
IDC ***11*** *06:34:50.0±3.3, 50.30N×18.74E, h0km, mb1 3.4/3, mb1mx3.1/49, mbtmp3.2/3, ML2.5/3, Error ellipse: s-maj=65.3km s-min=13.1km az=136.0*
ISC 11 06:34:46.7±0.8,**50.25N**±0.05×**19.02E**±0.03,**h0**km,**n17,**
σ0s92/30,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.50**	**93**	*e*Pg	**Pg**	**06 34 56.7**	**+0.4**
OJC				*e*Sg	**Sg**	**06 35 04.3**	**+1.5**
OKC	**Ostrava-Krasne**	**0.69**	**234**	*e*SG	**Sg**	**06 35 09.4**	**+0.5**
	comp=Z,29nm,1.0s						
MORC	**Moravsky Berou**	**1.06**	**244**	*e*PG	**Pg**	**06 35 07.0**	**0.0**
MORC				*e*SG	**Sg**	**06 35 21.2**	**+0.5**
NIE	**Niedzica**	**1.17**	**134**	*e*Pg	**Pg**	**06 35 09.4**	**+0.3**
NIE				*e*Sg	**Sb**	**06 35 25.3**	**-0.3**
KRLC	**Kraliky**	**1.45**	**264**	*e*PG	**Pn**	**06 35 13.3**	**-0.8**
KRLC				*e*SG	**Sg**	**06 35 32.5**	**-0.6**
	comp=Z,19nm,0.3s						
DPC	**Dobruska-Polom**	**1.73**	**274**	*e*PG	**Pn**	**06 35 17.9**	**-0.1**
DPC				*e*SG	**Sb**	**06 35 42.1**	**+0.5**
	comp=Z,19nm,0.7s						
VYHS	**Vyhne**	**1.76**	**184**	*e*PN	**Pn**	**06 35 17.8**	**-0.6**
VYHS				*e*SN	**Sn**	**06 35 41.5**	**0.0**
OSTC	**Ostas**	**1.82**	**281**	*e*PG	**Pn**	**06 35 20.0**	**+0.8**
OSTC				*e*SG	**Sg**	**06 35 45.2**	**+0.2**
	comp=Z,8.7nm,0.9s						
VRAC	**Vranov**	**1.83**	**240**	*e*PN	**Pn**	**06 35 19.9**	**+0.5**
VRAC				*e*SG	**Sb**	**06 35 43.8**	**-0.6**
KSP	**Ksiaz**	**1.84**	**290**	*e*Pb	**Pn**	**06 35 19.9**	**+0.5**
KSP				*e*Pg	**Pg**	**06 35 22.3**	**+0.5**
KSP				*e*Sg	**Sg**	**06 35 46.5**	**+0.8**
CHVC	**Chvalec**	**1.92**	**281**	*e*PG	**Pn**	**06 35 21.1**	**+0.4**
CHVC				*e*SG	**Sg**	**06 35 48.8**	**+0.3**
	comp=Z,9.6nm,0.7s						
UPC	**Upice**	**1.94**	**279**	*e*SG	**Sg**	**06 35 49.6**	**+0.6**
	comp=Z,10nm,0.5s						
PRU	**Pruhonice**	**2.89**	**267**	*e*SG	**Sg**	**06 36 18.6**	**-0.9**
	comp=Z,5.8nm,0.7s						
KHC	**Kasperske Hory**	**3.70**	**255**	*e*PN	**Pn**	**06 35 46.0**	**+0.9**
KHC				*e*SG	**Sg**	**06 36 43.6**	**-1.9**
	comp=Z,5.1nm,0.5s						
GERES	**GERESS Array B**	**3.73**	**250**	Pn	**Pn**	**06 35 46.7**	**+1.1**
	0.1nm,0.3s,baz=61,slow=13,SNR=2.4						
GERES				Pg	**Pb**	**06 35 55.2**	**+1.7**
	0.3nm,0.3s,baz=61,slow=17,SNR=5.3						
GERES				Lg	Lg	06 36 42.8	
	0.7nm,0.3s,baz=68,slow=29,SNR=3.5						
FINES	**FINESS Array B**	**11.89**	**17**	Pn	**Pn**	**06 37 35.0**	**-2.3**
	0.2nm,0.3s,baz=200,slow=12,SNR=5.0						
ARCES	**ARCESS Array B**	**19.60**	**7**	Pn	**P**	**06 39 15.6**	**-0.5**
	baz=188,slow=12,SNR=1.8						

IDC 11 06:42:29.2±19.0,**18.72S**×**178.14W**,**h561**km±247km,
mb2.6/3,mb1 2.9/3,mb1mx2.6/30,mbtmp3.5/3,Error
ellipse: s-maj=252.8km s-min=60.5km az=170.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.74**	**260**	P	P	06 49 52.8	-0.8
	0.1nm,0.3s,baz=98,slow=7.7,SNR=6.0						
ASAR	**Alice Springs**	**44.83**	**255**	P	P	06 49 54.4	+0.3
	0.9nm,0.5s,baz=90,slow=8.1,SNR=18						
TXAR	**Lajitas Array**	**86.21**	**57**	P	P	06 54 12.1	0.0
	0.1nm,0.6s,baz=203,slow=5.9,SNR=2.3						
GERES	**GERESS Array B**	**148.45**	**345**	PKPbc	PKPbc	07 01 12.4	-0.7
	0.2nm,0.3s,baz=6.5,slow=3.5,SNR=3.9						

IDC ***11*** *06:49:02.8±0.6, 37.34N×143.76E, h0km, mb4.2/19, mb1 4.4/23, mb1mx4.3/36, mbtmp4.3/23, ML4.2/3, MS3.2/10, Ms1 3.3/10, ms1mx2.9/37, Error ellipse: s-maj=17.3km s-min=13.9km az=101.0*
NEIC ***11*** *06:49:04.5±2.5, 37.47N±0.06×143.72E±0.09, h10km±1

JHJ				Sn	**Sn**	**06 51 18.9**	**-7.1**
	32nm,0.3s,baz=72,slow=20,SNR=2.1						
JGF	**Kuroka**	**5.36**	**251**		**Pn**	**06 50 24.9**	**-1.0**
JEW	**Eniwo**	**5.61**	**344**	Pn	**Pn**	**06 50 29.5**	**+0.3**
INU	**Inuyama**	**5.71**	**250**	Pn	**Pn**	**06 50 30.5**	**-0.2**
ASAJ	**Asahikawa**	**6.68**	**354**	Pn	**Pn**	**06 50 43.7**	**-0.2**
	7.8nm,0.3s,baz=178,slow=9.6,SNR=16						
ASAJ				Sn	**Sn**	**06 51 53.3**	**-5.5**
	4.9nm,0.3s,baz=229,slow=30,SNR=8.1						
JKA	**Kamikawa-asahi**	**6.68**	**354**	Pn	**Pn**	**06 50 43.4**	**-0.5**
JKA	**Kamikawa-asahi**	**6.68**	**354**		**Sn**	**06 51 53.3**	**-5.4**
JWT	**Wachi**	**6.96**	**254**		**Pn**	**06 50 48.0**	**+0.1**
JMN	**Monobe**	**8.75**	**248**	Pn	**Pn**	**06 51 12.1**	**-0.3**
JHS	**Saijyo**	**8.82**	**257**	Pn	**Pn**	**06 51 13.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**11.06**	**311**	Pn	**Pn**	**06 51 45.9**	**+1.9**
	baz=116,slow=13,SNR=9.1						
USRK				LR	LR	06 55 55.6	
	comp=Z,144nm,19.4s,baz=103,slow=37						
USRK	**Ussuriysk Ar.**	**11.06**	**311**	Pn	**Pn**	**06 51 43.5**	**-0.4**
KSRS	**Korea Array**	**12.45**	**275**	Pn	**Pn**	**06 52 06.5**	**+3.5**
	0.0nm,0.3s,baz=88,slow=13,SNR=8.1						
KSRS				LR	LR	06 57 04.6	
	comp=Z,64nm,19.3s,baz=52,slow=38						
KLR	**Kul'dur**	**14.55**	**328**	Pn	**Pn**	**06 52 29.9**	**-1.7**
	0.5nm,0.3s,baz=133,slow=12,SNR=11						
KLR				LR	LR	06 58 35.1	
	comp=Z,93nm,18.9s,baz=145,slow=39						
GUMO	**Guam**	**23.81**	**177**	LR	LR	07 01 06.3	
	comp=Z,27nm,21.0s,baz=84,slow=31						
SEY	**Seymchan**	**26.05**	**9**	P	**P**	**06 54 39.7**	**+1.6**
	6.6nm,0.8s,baz=172,slow=24,SNR=3.2						
H11N2	**WAKE ISLAND Hy**	**26.92**	**125**	T	T	07 22 55.1	
	baz=316,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**26.93**	**125**	T	T	07 23 03.3	
	baz=316,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**26.94**	**125**	T	T	07 23 02.4	
	baz=316,slow=75,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**27.68**	**127**	T	T	07 23 54.1	
	baz=318,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**27.68**	**127**	T	T	07 23 56.0	
	baz=318,slow=76,SNR=4.7						
H11S2	**WAKE ISLAND Hy**	**27.70**	**127**	T	T	07 23 57.5	
	baz=318,slow=76,SNR=5.2						
SONM	**Songino Array**	**29.00**	**303**	P	**P**	**06 55 05.9**	**+1.0**
	1.6nm,0.6s,baz=102,slow=8.5,SNR=2.5						
ZAA0	**Zalesovo Array**	**42.91**	**312**	P	**P**	**06 57 02.4**	**-0.9**
ZAA0				IAmb	IAmb	06 57 18.0	
	comp=Z,6.2nm,1.0s						
ZALV	**Zalesovo Beam**	**42.91**	**312**	P	**P**	**06 57 03.8**	**+0.5**
	comp=Z,2.0nm,0.4s,baz=90,slow=7.4,SNR=9.5						
ZALV				PcP	**PcP**	**06 58 53.6**	**+0.1**
	comp=Z,2.4nm,0.5s,baz=109,slow=2.7,SNR=5.6						
ZALV				LR	LR	07 15 28.4	
	comp=Z,34nm,19.0s,baz=47,slow=37						
ZALV	**Zalesovo Beam**	**42.91**	**312**	P	**P**	**06 57 04.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**43.29**	**257**	P	**P**	**06 57 08.2**	**+1.3**
	comp=Z,1.3nm,0.3s,baz=46,slow=6.6,SNR=8.2						
CMAR				LR	LR	07 17 57.4	
	comp=Z,24nm,19.4s,baz=185,slow=40						
MK31	**Makanchi Array**	**45.36**	**302**	P	**P**	**06 57 22.4**	**-0.7**
MKAR	**Makanchi Array**	**45.36**	**302**	P	**P**	**06 57 24.0**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=83,slow=9.9,SNR=9.9						
MKAR	**Makanchi Array**	**45.36**	**302**	P	**P**	**06 57 23.5**	**+0.4**
MAKZ	**Makanchi**	**45.57**	**302**	P	**P**	**06 57 24.5**	**-0.3**
MAKZ				IAmb	IAmb	06 57 41.3	
	comp=Z,4.8nm,0.9s						
POKR	**Poker Plat Res**	**47.96**	**32**	P	**P**	**06 57 43.9**	**+0.7**
IL31		**48.19**	**33**	P	**P**	**06 57 45.0**	**+0.1**
IL31				IAmb	IAmb	06 57 46.3	
	comp=Z,5.0nm,0.7s						
ILAR	**Eielson Array**	**48.19**	**33**	P	**P**	**06 57 45.5**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=260,slow=6.1,SNR=38						
K27K	**Chicken**	**50.32**	**33**	P	**P**	**06 58 02.6**	**+1.4**
K27K				IAmb	IAmb	06 58 05.1	
	comp=Z,6.5nm,1.2s						
CTGM	**Chitina Glacie**	**51.04**	**37**	P	**P**	**06 58 08.4**	**+1.5**
INK	**Inuvik**	**53.20**	**27**	P	**P**	**06 58 23.5**	**+0.9**
	comp=Z,2.9nm,0.5s,baz=285,slow=6.8,SNR=24						
INK	**Inuvik**	**53.20**	**27**	IAmb	IAmb	06 58 24.6	
	comp=Z,3.0nm,0.6s						
KKAR	**Karatay Array**	**54.41**	**300**	P	**P**	**06 58 32.5**	**+0.6**
ARU	**Arti**	**57.18**	**319**	P	**P**	**06 58 52.7**	**+1.2**
WB2	**Warramunga Arr**	**57.77**	**190**	P	**P**	**06 58 55.0**	**-1.0**
WB2				IAmb	IAmb	06 58 55.5	
	comp=Z,5.7nm,0.8s						
WRA	**Warramunga Arr**	**57.77**	**190**	P	**P**	**06 58 54.3**	**-1.7**
	comp=Z,3.4nm,0.6s,baz=10.0,slow=7.4,SNR=53						
WRA	**Warramunga Arr**	**57.77**	**190**	P	**P**	**06 58 54.8**	**-1.2**
ABKAR	**Akbulak array**	**58.98**	**311**	P	**P**	**06 59 04.6**	**+0.4**
AS31	**Alice Springs**	**61.49**	**190**	P	**P**	**06 59 21.3**	**-0.3**
ASAR	**Alice Springs**	**61.49**	**190**	P	**P**	**06 59 20.8**	**-0.9**
	comp=Z,1.6nm,0.5s,baz=7.9,slow=6.6,SNR=26						
ASAR	**Alice Springs**	**61.49**	**190**	P	**P**	**06 59 19.6**	**-2.0**
ARCES	**ARCESS Array B**	**61.49**	**340**	P	**P**	**06 59 40.2**	**+1.2**
	comp=Z,3.7nm,1.0s,baz=59,slow=8.8,SNR=2.1						
ARCES				LR	LR	07 30 15.5	
	comp=Z,24nm,18.3s,baz=250,slow=38						
GEYT	**Alibeck**	**65.14**	**300**	P	**P**	**06 59 46.4**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=61,slow=12,SNR=2.0						
STKA	**Stephens Creek**	**69.02**	**182**	P	**P**	**07 00 09.6**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=355,slow=10,SNR=4.4						
FINES	**FINESS Array B**	**69.23**	**333**	P	**P**	**07 00 11.4**	**+0.2**
	comp=Z,6.4nm,0.8s,baz=49,slow=8.8,SNR=8.6						
FINES				LR	LR	07 33 31.4	
	comp=Z,47nm,18.5s,baz=249,slow=38						
KBZ	**Khabaz**	**71.92**	**311**	P	**P**	**07 00 29.2**	**+1.2**
	comp=Z,3.7nm,0.9s,baz=53,slow=20,SNR=5.8						
NOA	**NORSAR Array B**	**74.44**	**338**	P	**P**	**07 00 43.0**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=38,slow=6.0,SNR=3.4						
NOA				LR	LR	07 37 43.1	
	comp=Z,28nm,18.9s,baz=240,slow=39						
AKASG	**Malin Array Be**	**75.00**	**323**	P	**P**	**07 00 46.4**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=45,slow=6.1,SNR=6.5						
PDAR	**Pinedale Array**	**76.11**	**47**	P	**P**	**07 00 53.2**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=0.0,slow=1.5,SNR=4.3						
CLL	**Collm**	**81.57**	**331**	*i* P	**P**	**07 01 23.5**	**+1.2**
	comp=Z,7.0nm,0.9s						
GERES	**GERESS Array B**	**83.24**	**329**	P	**P**	**07 01 31.8**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=38,slow=6.8,SNR=6.2						
TXAR	**Lajitas Array**	**88.47**	**54**	P	**P**	**07 01 57.9**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=295,slow=3.2,SNR=6.3						
QSPA	**South Pole Qui**	**127.22**	**180**	PKP	**PKiKP**	**07 08 07.5**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=58,slow=1.6,SNR=3.1						
LPAZ	**La Paz**	**144.96**	**62**	PKP	**PKPdf**	**07 08 42.5**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=355,slow=4.3,SNR=5.9						
CPUP	**Villa Florida**	**159.10**	**64**	PKPab	**PKPab**	**07 09 37.0**	**-2.8**
	comp=Z,1.9nm,0.5s,baz=210,slow=8.1,SNR=8.1						

***IDC* 11 07:25:01.4±16.0, 7.02N×94.45E, *h*0km, mb4.1/3, mb1 4.2/4, mb1mx3.6/55, mbtmp4.1/4, ML4.4/1, MS3.1/3, Ms1 3.1/3, ms1mx2.7/47, Error ellipse: s-maj=311.5km s-min=92.9km az=146.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.18**	**21**	Pn	Pn	07 27 56.6	+0.2
	0.7nm,0.3s,baz=210,slow=15,SNR=1.5						
CMAR				LR	LR	07 32 20.6	
	comp=Z,60nm,18.5s,baz=211,slow=36						
LEM	**Lembang**	**19.02**	**136**	LR	LR	07 38 06.3	
	comp=Z,83nm,18.8s,baz=250,slow=41						
DAV	**Davao City (W)**	**30.90**	**88**	LR	LR	07 46 45.6	
	comp=Z,21nm,18.5s,baz=282,slow=42						
MKAR	**Makanchi Array**	**40.98**	**347**	P	P	07 32 45.2	-0.9
	1.2nm,0.7s,baz=164,slow=7.9,SNR=5.8						
KURBB	**Kurchatov Arra**	**45.44**	**346**	P	P	07 33 22.8	+0.7
	2.0nm,0.8s,baz=164,slow=6.6,SNR=4.8						
ZALV	**Zalesovo Beam**	**47.44**	**352**	P	P	07 33 37.6	-0.1
	1.2nm,0.5s,baz=165,slow=9.2,SNR=2.1						

JMA ***11*** *07:27:00.0±0.1, 42.01N×141.56E, h85km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs151.00000°, δ79.00000°, λ7.00000°. NP2:φs60.00000°, δ83.00000°, λ169.00000°. Principal axes: T Plg13.0000°, Azm15.0000°; N Plg77.0000°, Azm209.0000°; P Plg3.0000°, Azm106.0000°;*

JMA Felt I J1.

NIED ***11*** *07:27:00.0, 42.02N×141.56E, h85km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr0.64; Mθθ2.80; Mφφ-3.44; Mrθ1.77; Mθφ-4.06; Mrφ0.56; Fault plane solution: M05.46000×10¹⁴ NP1:φs70.00000°, δ86.00000°, λ159.00000°. NP2:φs162.00000°, δ70.00000°, λ4.00000°.*

IDC ***11*** *07:27:01.5±1.4, 42.13N×141.67E, h96km±11km, mb3.6/8, mb1 3.6/13, mb1mx3.4/53, mbtmp3.9/13, MS2.1/1, Ms1 2.1/1, ms1mx1.7/49 Error ellipse: s-maj=22.6km s-min=10.3km az=126.0*

SKHL ***11*** *07:27:03.7±0.8, 42.10N×141.82E, h100km±4km, mb5.1/2, msh6.0/3*

ISC 11 07:27:00.4±0.7, 42.02N±0.04×141.59E±0.04, h88km±6km, n44, σ1s43/56, mb4.0/9, 9C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKB	**Kayabe**	**0.44**	**252**	⇓P	**Pn**	**07 27 13.5**	**-0.9**
JKB				*e*S	**Sn**	**07 27 23.8**	**-1.0**
JNB	**Noboribetsu**	**0.61**	**318**	⇓P	**Pn**	**07 27 14.9**	**-0.9**
JNB				*e*S	**Sn**	**07 27 26.2**	**-1.1**
JIAM	**Iburiatsuma**	**0.65**	**22**	⇑P	**Pn**	**07 27 16.1**	**-0.1**
JIAM				*e*S	**Sn**	**07 27 28.4**	**+0.5**
JOT	**Ohata**	**0.76**	**213**	⇑P	**Pn**	**07 27 16.7**	**-0.6**
JOT				*e*S	**Sn**	**07 27 29.4**	**-0.4**
JEW	**Eniwo**	**0.82**	**353**	⇑P	**Pn**	**07 27 17.7**	**-0.3**
JEW				*e*S	**Sn**	**07 27 30.8**	**-0.3**
JNBK	**Urakawa-nobuka**	**0.90**	**73**	P	**Pn**	**07 27 18.2**	**-0.6**
JYM2	**Yakumo 2**	**0.92**	**276**	P	**Pn**	**07 27 18.3**	**-0.7**
JYM2				*e*S	**Sn**	**07 27 32.3**	**-0.5**
JBT2	**Biratori 2**	**0.95**	**37**	⇑P	**Pn**	**07 27 19.1**	**-0.2**
JBT2				*e*S	**Sn**	**07 27 33.4**	**-0.1**
JSR	**Shiriuchi**	**1.01**	**241**	⇑P	**Pn**	**07 27 19.5**	**-0.5**
JSR				*e*S	**Sn**	**07 27 34.2**	**-0.5**
JEM	**Erimo**	**1.17**	**90**	P	**Pn**	**07 27 21.9**	**0.0**
JISS	**Ishikarishitsu**	**1.26**	**354**	⇑P	**Pn**	**07 27 23.0**	**0.0**
JISS				*e*S	**Sn**	**07 27 40.2**	**+0.2**
JOMM	**Oshimamatsumae**	**1.29**	**248**	⇑P	**Pn**	**07 27 23.3**	**0.0**
JFR	**Furan**	**1.36**	**33**	*e*S	**Sn**	**07 27 43.0**	**+0.7**
JCH	**Churui**	**1.44**	**65**	*e*S	**Sn**	**07 27 44.1**	**0.0**
JSK	**Shakotan**	**1.56**	**329**	⇓P	**Pn**	**07 27 26.9**	**+0.1**
JOSM	**Okushiri--Mats**	**1.58**	**273**	⇓P	**Pn**	**07 27 26.6**	**-0.4**
JOSM				*e*S	**Sn**	**07 27 46.9**	**-0.3**
JANG	**Nango**	**1.65**	**182**	⇑P	**Pn**	**07 27 26.9**	**-1.1**
JANG				*e*S	**Sn**	**07 27 47.6**	**-1.2**
JHR	**Hokuryu**	**1.72**	**3**	⇑P	**Pn**	**07 27 29.5**	**+0.6**
JHR				*e*S	**Sn**	**07 27 51.6**	**+1.1**
ASAJ	**Asahikawa**	**2.22**	**19**	P	**Pn**	**07 27 35.2**	**-0.3**
	27nm,0.3s,baz=222,slow=13,SNR=61						
ASAJ				S	**Sn**	**07 28 01.5**	**-0.7**
	23nm,0.3s,baz=274,slow=33,SNR=4.6						
ASAJ				LR	LR	07 28 45.6	
	comp=Z,46nm,20.4s,baz=174,slow=50						
GLVR	**Golovnino**	**3.36**	**58**	*e*P	**Pn**	**07 27 51.9**	**+1.2**
GLVR				*e*S	**Sn**	**07 28 28.6**	**-0.9**
GLVR				A	A	07 28 34.0	
	419nm,0.3s						
GLVR				A	A	07 28 34.0	
	756nm,0.3s						
GRPR	**Tuman**	**3.64**	**56**	*e*P	**Pn**	**07 27 55.9**	**+1.4**
GRPR				*e*S	**Sn**	**07 28 34.4**	**-2.0**
GRPR				A	A	07 28 41.0	
	582nm,0.3s						
GRPR				A	A	07 28 41.0	
	198nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.72**	**56**	*e*P	**Pn**	**07 27 56.9**	**+1.3**
YUK				AMB	AMB	07 27 59.0	
	157nm,0.2s						
YUK				*e*S	**Sn**	**07 28 36.9**	**-1.4**
YUK				A	A	07 28 40.0	
	316nm,0.4s						
YUK				A	A	07 28 40.0	
	471nm,0.4s						
YSS	**Yuzh-Sakhalins**	**5.00**	**9**	*e*P	**Pn**	**07 28 14.1**	**+1.1**
YSS				AMB	AMB	07 28 15.5	
	30nm,0.4s						
MAT	**Matsushiro**	**6.07**	**207**	P	**Pn**	**07 28 30.9**	**+3.3**
MAT				*e*S	**Sn**	**07 29 32.7**	**-2.9**
MJAR	**Matsushiro Arr**	**6.07**	**207**	P	**Pn**	**07 28 30.6**	**+3.0**
	0.4nm,0.3s,baz=67,slow=13,SNR=9.3						
MJAR				S	**Sn**	**07 29 40.5**	**+4.8**
	baz=15,slow=25,SNR=1.2						
USRK	**Ussuriysk Ar.**	**7.36**	**290**	P	**Pn**	**07 28 45.5**	**+0.4**
	baz=94,slow=14,SNR=9.5						
KLR	**Kul'dur**	**9.97**	**320**	P	**Pn**	**07 29 22.5**	**+1.9**
	0.1nm,0.3s,baz=130,slow=13,SNR=7.1						
KSRS	**Korea Array**	**11.47**	**251**	P	**Pn**	**07 29 44.0**	**+2.9**
	0.2nm,0.3s,baz=66,slow=15,SNR=1.5						
PETK	**Petropavlovsk-**	**15.49**	**39**	P	**Pn**	**07 30 35.1**	**+1.4**
	0.2nm,0.3s,baz=212,slow=8.2,SNR=1.2						
SEY	**Seymchan**	**21.89**	**13**	P	**P**	**07 31 42.5**	**-3.4**
	1.6nm,0.2s,baz=157,slow=15,SNR=4.6						
SONM	**Songino Array**	**25.43**	**295**	P	**P**	**07 32 19.6**	**-0.4**
	0.5nm,0.4s,baz=90,slow=8.9,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**30.86**	**128**	T	T	08 05 44.0	
	baz=322,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**30.88**	**128**	T	T	08 05 44.8	
	baz=322,slow=75,SNR=51						
H11N3	**WAKE ISLAND Hy**	**30.88**	**128**	T	T	08 05 45.4	
	baz=322,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**31.71**	**130**	T	T	08 06 44.9	
	baz=323,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**31.72**	**130**	T	T	08 06 47.6	
	baz=323,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**31.73**	**130**	T	T	08 06 46.2	
	baz=323,slow=76,SNR=34						
ZALV	**Zalesovo Beam**	**38.80**	**308**	P	**P**	**07 34 16.8**	**+0.4**
	1.6nm,0.5s,baz=82,slow=9.2,SNR=6.8						
MKAR	**Makanchi Array**	**41.76**	**297**	P	**P**	**07 34 41.0**	**+0.1**
	1.1nm,0.7s,baz=87,slow=9.2,SNR=7.3						
ILAR	**Eielson Array**	**45.27**	**35**	P	**P**	**07 35 07.7**	**-1.1**
	0.8nm,0.9s,baz=267,slow=7.7,SNR=7.2						
INK	**Inuvik**	**49.92**	**29**	P	**P**	**07 35 44.0**	**-0.7**
	0.6nm,0.3s,baz=274,slow=5.1,SNR=13						
RES	**Resolute Bay**	**57.75**	**15**	P	**P**	**07 36 40.5**	**-1.1**
	1.5nm,0.7s,baz=280,slow=4.4,SNR=4.5						
YKA	**Yellowknife Ar**	**59.46**	**32**	P	**P**	**07 36 53.2**	**-0.5**
	0.7nm,0.8s,baz=310,slow=5.4,SNR=5.5						
FINES	**FINESS Array B**	**64.49**	**331**	P	**P**	**07 37 26.8**	**-0.5**
	1.6nm,0.7s,baz=52,slow=7.2,SNR=4.7						

IDC ***11*** *07:34:11.7±3.2, 4.12S×134.48E, h0km, mb3.6/1, mb1 3.8/5, mb1mx3.5/35, mbtmp3.7/5, ML3.9/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/37, Error ellipse: s-maj=103.3km s-min=27.1km az=76.0*

ISC 11 07:34:15.1±1.6, 4.39S±0.08×133.9E±0.2, h10km, n6, σ1s14/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPI	**Kaimana, Papua**	**0.76**	**343**	P	**Pn**	**07 34 32.8**	**+1.0**
	18μm2μm,0.6s						
SIJI	**Sorong**	**4.39**	**323**	Pn	**Pn**	**07 35 22.6**	**+0.8**
	2.9nm,0.3s,baz=152,slow=23,SNR=1.8						
SIJI				Sn	**Sn**	**07 36 12.8**	**-0.3**
	1.6nm,0.3s,baz=125,slow=23,SNR=1.2						
WRA	**Warramunga Arr**	**15.46**	**179**	Pn	**Pn**	**07 37 52.8**	**-0.7**
	baz=360,slow=12,SNR=1.9						
WRA				Sn	Sn	07 40 34.1	-11
	0.1nm,0.3s,baz=3.4,slow=23,SNR=2.2						
WRA				Lg	Lg	07 42 24.7	
	baz=3.4,slow=29,SNR=1.5						
FITZ	**Fitzroy Crossi**	**15.85**	**210**	Pn	**P**	**07 38 02.0**	**-0.2**
	0.3nm,0.3s,baz=31,slow=12,SNR=2.0						
FITZ				Sn	**Sn**	**07 40 54.6**	**+0.3**
	0.2nm,0.3s,baz=100,slow=16,SNR=3.0						
ASAR	**Alice Springs**	**19.16**	**180**	P	**Pn**	**07 38 41.2**	**+1.5**
	0.7nm,0.3s,baz=6.3,slow=11,SNR=15						
ASAR				LR	LR	07 46 56.4	
	comp=Z,72nm,19.7s,baz=68,slow=39						
MKAR	**Makanchi Array**	**68.28**	**325**	P	**P**	**07 45 14.9**	**-1.4**
	0.3nm,0.4s,baz=120,slow=7.7,SNR=1.5						

MEX ***11*** *07:37:05.8±0.7, 14.64N×91.60W, h113km±7km, MD3.5*

GCG ***11*** *07:37:08.1±0.3, 14.62N×91.59W, h84km±5km, MD3.3*

ISC 11 07:37:06.6±2.6, 14.6N±0.2×91.74W±0.09, h99km±14km, n10, σ1s09/17, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.20**	**125**	*e*P	**Pn**	**07 37 20.3**	**-0.3**
ERG	**Entre ros, C**	**0.20**	**125**	*e*P	**Pn**	**07 37 20.2**	**-0.4**
STG3	**Santiaguito 3,**	**0.22**	**46**	*e*P	**Pn**	**07 37 20.7**	**-0.2**
STG3				*e*S	**Sn**	**07 37 31.0**	**-0.7**
STG3	**Santiaguito 3,**	**0.22**	**46**	*e*P	**Pn**	**07 37 20.8**	**-0.2**
STG3				*e*S	**Sn**	**07 37 31.8**	**+0.1**
THIG		**0.62**	**305**	*e*P	**Pn**	**07 37 23.1**	**-0.1**
THIG				*i* S	**Sn**	**07 37 37.0**	**+1.3**
FUG	**Fuego 3**	**0.87**	**97**	*e*P	**Pn**	**07 37 25.1**	**-0.7**
FUG				*e*S	**Sn**	**07 37 38.5**	**-1.6**
FUG	**Fuego 3**	**0.87**	**97**	*e*P	**Pn**	**07 37 25.0**	**-0.7**
FUG				*e*S	**Sn**	**07 37 41.4**	**+1.3**
PCG	**Pacaya**	**1.10**	**98**	*e*P	**Pn**	**07 37 27.9**	**-0.5**
PCG				*e*S	**Sn**	**07 37 47.4**	**+2.7**
PCIG		**1.83**	**309**	*i* P	**Pn**	**07 37 36.6**	**-0.4**
PCIG				*i* S	**Sn**	**07 38 00.1**	**0.0**
MRL	**Marmol**	**2.05**	**75**	*e*P	**Pn**	**07 37 39.8**	**-0.2**

IDC ***11*** *07:41:43.3±0.5, 7.46N×94.26E, h0km, mb4.1/21, mb1 4.2/23, mb1mx4.1/43, mbtmp4.1/23, ML4.2/2, Error ellipse: s-maj=23.0km s-min=13.0km az=59.0*

NEIC ***11*** *07:41:45.0±1.9, 7.70N±0.06×94.52E±0.07, h10km±1km, mb4.7/38, Error ellipse: s-maj=15.9km s-min=3.9km az=229.0*

BJI ***11*** *07:41:44.8±0.0, 7.70N×94.40E, h10km, mB4.7/26, mb4.5/37, Ms4.8/9, Ms7 4.5/9*

KLM ***11*** *07:41:46.0, 7.59N×94.27E, h10km, mb4.8*

DJA ***11*** *07:41:49.2±1.6, 7.1N±4.9×9.4E±7, h27km±13km, M4.6/21, mb4.7/21, mB5.0/11, MLv5.0/10, Mw(mB)4.4/11*

NDI ***11*** *07:41:52.4±2.3, 7.97N×94.28E, h10km, mb4.4, mb4.7(NEIC)*

ISC 11 07:41:45.1±0.3, 7.60N±0.04×94.41E±0.04, h10km, n171, σ1s96/153, mb4.6/52, 1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.45**	**133**	P	**Pb**	**07 42 43.2**	**-3.1**
LHMI	**Lhok Sumawe**	**3.45**	**133**	Pn	**Pn**	**07 42 39.3**	**+0.4**
LHMI				Sn	**Sn**	**07 43 20.6**	**+0.7**
MLSI	**Meulaboh, Aceh**	**3.86**	**149**	P	**Pn**	**07 42 48.2**	**+3.6**
PKDT	**Phuket**	**3.90**	**86**	P	**Pn**	**07 42 48.1**	**+3.0**
PBA	**Port Blair**	**4.35**	**338**	Pn	Pn	07 42 51.1	-0.1
SURT	**Suratani**	**4.54**	**72**	P	**Pb**	**07 43 07.0**	**+2.1**
TPTI		**5.12**	**147**	P	**Pn**	**07 43 05.0**	**+3.1**
	0.4nm1μm86nm,1.0s						
TRTT	**Trang**	**5.24**	**87**	P	**Pn**	**07 43 05.0**	**+1.5**
	0.5nm2μm125nm,0.7s						
KCSI	**Kotacane, Aceh**	**5.25**	**140**	P	**Pn**	**07 43 07.9**	**+4.1**
	0.7nm2μm97nm,0.7s						
SNSI	**Sinabang, Aceh**	**5.50**	**160**	P	**Pn**	**07 43 09.2**	**+2.0**
	0.8nm274nm,1.0s						
TSI	**Tuntungan**	**5.80**	**134**	P	Pn	07 43 17.2	+5.9
	1.2nm7μm207nm,0.5s						
KULM	**Kulim**	**6.61**	**110**		**Pn**	**07 43 22.6**	**+0.2**
KULM				Sn	**Sn**	**07 44 36.0**	**-1.8**
KULM	**Kulim**	**6.61**	**110**	P	**Pn**	**07 43 23.0**	**+0.6**
RPSI	**Rantau Prapat**	**6.63**	**137**	Pn	**Pn**	**07 43 22.7**	**0.0**
GSI	**Gunungsitoli**	**7.01**	**153**	P	**Pn**	**07 43 30.6**	**+2.7**
	0.6nm32nm,0.7s						
GSI	**Gunungsitoli**	**7.01**	**153**	Pn	**Pn**	**07 43 27.3**	**-0.5**
IPM	**Ipoh**	**7.27**	**115**	Pn	**Pn**	**07 43 31.1**	**-0.4**
IPM				Sn	**Sn**	**07 44 52.4**	**-1.8**
IPM	**Ipoh**	**7.27**	**115**	P	**Pn**	**07 43 32.0**	**+0.5**
PHET	**Kaeng Krachan**	**7.36**	**44**	P	**Pn**	**07 43 36.6**	**+4.0**
	0.3nm790nm83nm,0.7s						
MNSI	**Mandailing Nat**	**8.50**	**142**	P	**Pn**	**07 43 52.8**	**+4.4**
	3μm27nm,0.5s						
PBSI	**Pulau Batu**	**8.53**	**153**	P	**Pn**	**07 43 52.8**	**+4.0**
	59nm,0.8s						
UTHA	**Uthaitani**	**9.31**	**31**	P	Pn	07 44 04.7	+5.2
	291nm29nm,0.8s						
BKNI	**Bangkinang**	**9.79**	**137**	Pn	**Pn**	**07 44 05.5**	**-0.6**
SRAK	**Srakaew**	**9.83**	**49**	P	Pn	07 44 18.0	+11
	2μm131nm,0.6s						
MHMT	**Maesarieng**	**11.05**	**18**	P	Pn	07 44 30.0	+6.6
	926nm25nm,1.1s						
CHAI	**Chaiyaphum**

GYA pmax pmax
comp=Z,82nm,3.5s
GYA LR LR
comp=Z,640nm,14.0s
GYA LR LR
comp=Z,1μm,13.7s
GYA LR LR
comp=Z,520nm,11.6s
LSA Lhasa 22.19 352 P **P** **07 46 46.1 +4.0**
LSA pmax pmax
comp=Z,93nm,1.3s
LSA Lhasa 22.19 352 P **P** **07 46 40.3 -1.9**
LSA IAmb IAmb 07 46 52.8
comp=Z,22nm,0.9s
GKN Gorkha 22.30 337 *e*P **P** **07 46 42.8 -0.2**
comp=Z,103nm,1.0s
KOLN Koldanda 22.52 334 *e*P **P** **07 46 46.0 +0.6**
comp=Z,108nm,1.2s
BHPL Bhopal 22.54 315 *e*P **P** **07 46 49.2 +3.7**
NGJI Ngawi 22.59 131 P P 07 47 05.1 +19
DANN Dangsing 22.96 335 *e*P **P** **07 46 50.2 +0.1**
comp=Z,145nm,1.2s
MYLDM **Lahad Datu 24.06 94** P **P** **07 46 59.2 -1.5**
BLJI Banyuglugur 24.46 128 P P 07 47 13.0 +8.5
CD2 Chengdu 24.78 19 *e*P **P** **07 47 05.8 -1.5**
CD2 S **S** **07 51 26.1 -3.7**
CD2 pmax pmax
comp=Z,10.0nm,0.7s
CD2 pmax pmax
comp=Z,170nm,6.0s
CD2 LR LR
comp=Z,690nm,9.6s
CD2 LR LR
comp=Z,990nm,9.4s
CD2 LR LR
comp=Z,750nm,10.0s
MPSI Mapaga 26.41 105 P **P** **07 47 27.2 +5.0**
comp=Z,27nm,1.1s
H08S3 Diego Garcia H 26.59 236 T T 08 14 08.0
baz=55,slow=74
H08S2 Diego Garcia H 26.59 236 T T 08 14 06.6
baz=55,slow=74
H08S1 Diego Garcia H 26.61 236 T T 08 14 07.8
baz=55
BKSI Bulukumba 28.68 116 P P 07 47 51.8 +9.2
GTOI Gorontalo 29.33 102 P **P** **07 47 51.5 +3.1**
comp=Z,262nmcomp=Z,16nm,1.3s
XAN Xi'an 29.52 25 P **P** **07 47 49.8 0.0**
XAN pmax pmax
comp=Z,6.0nm,0.9s
XAN pmax pmax
comp=Z,65nm,5.2s
LZH Lanzhou 29.63 16 *e*P **P** **07 47 52.1 +1.1**
LZH pP pwP 07 48 01.8 +5.0
LZH sP sP 07 48 05.7 +12
LZH pmax pmax
comp=Z,18nm,1.6s
GTA Gaotai 32.04 8 P **P** **07 48 14.0 +1.9**
GTA pP pwP 07 48 21.2 +3.2
GTA sP sP 07 48 25.5 +10
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA pmax pmax
comp=Z,45nm,5.3s
GTA LR LR
comp=Z,490nm,17.8s
GTA LR LR
comp=Z,230nm,14.9s
GTA LR LR
comp=Z,500nm,14.5s
NIL Nilore 32.47 326 P **P** **07 48 15.2 -0.7**
NJ2 Nanjing 33.30 40 *e*P **P** **07 48 22.5 -0.6**
NJ2 pmax pmax
comp=Z,14nm,0.6s
KBL Kabul 35.55 323 P **P** **07 48 43.1 +0.2**
KBL IAmb IAmb 07 48 58.8
comp=Z,5.8nm,0.9s
KSH Kashi 35.83 335 P **P** **07 48 44.7 -0.4**
KSH S **S** **07 54 18.6 -4.2**
KSH SS **SnSn** **07 56 38.6 -7.0**
KSH pmax pmax
comp=Z,8.0nm,0.8s
KSH pmax pmax
comp=Z,330nm,4.7s
KSH LR LR
comp=Z,660nm,8.7s
KSH LR LR
comp=Z,1μm,12.8s
KSH LR LR
comp=Z,1μm,16.0s
HHC Hu-ho-hao-te 36.46 22 *e*P **P** **07 48 49.5 -1.0**
HHC pmax pmax
comp=Z,18nm,1.0s
HHC pmax pmax
comp=Z,37nm,5.8s
WMQ Urumqi 36.55 352 *e*P **P** **07 48 51.7 +0.6**
PSAD2 Pilbara Seismi 38.37 140 P **P** **07 49 06.1 -0.6**
PSAD2 IAmb IAmb 07 49 07.5
comp=Z,14nm,1.1s
BTK Batken 38.60 330 P **P** **07 49 08.0 -0.5**
BTK IAmb IAmb 07 49 27.5
comp=Z,14nm,0.9s
AAK Ala-Archa 39.06 336 P **P** **07 49 10.4 -2.0**
FITZ Fitzroy Crossi 40.03 130 P **P** **07 49 20.6 -0.1**
comp=Z,2.3nm,1.1s,baz=301,slow=5.9,SNR=2.3
MK31 Makanchi Array 40.41 347 P **P** **07 49 22.9 -0.6**
MKAR Makanchi Array 40.41 347 P **P** **07 49 23.7 +0.3**
comp=Z,11nm,0.9s,baz=165,slow=7.9,SNR=48
MKAR Makanchi Array 40.41 347 P **P** **07 49 23.0 -0.5**
MAKZ Makanchi 40.49 347 P **P** **07 49 23.9 -0.3**
MAKZ IAmb IAmb 07 49 25.7
comp=Z,6.7nm,0.7s
KK06 Karatay Array 41.11 333 P **P** **07 49 29.0 -0.3**
KK07 Karatay Array 41.12 333 P **P** **07 49 29.3 -0.1**
KKAR Karatay Array 41.12 333 P **P** **07 49 29.5 +0.1**
KKAR Karatay Array 41.12 333 P **P** **07 49 28.9 -0.6**
KKAR IAmb IAmb 07 49 36.2
comp=Z,10nm,1.4s
SONM Songino Array 41.37 12 P **P** **07 49 33.7 +2.2**
comp=Z,2.5nm,1.0s,baz=184,slow=10,SNR=4.5
SONM Songino Array 41.37 12 P **P** **07 49 31.5 0.0**
GYB1 ALIBECK ARRAY 44.57 318 P **P** **07 49 56.6 -0.9**
GYB1 IAmb IAmb 07 50 05.6
comp=Z,10nm,0.8s
GYA1 ALIBECK ARRAY 44.58 318 P **P** **07 49 57.3 -0.3**
GYA1 IAmb IAmb 07 50 05.6
comp=Z,9.8nm,0.8s
GEYT Alibeck 44.58 318 P **P** **07 49 57.7 +0.1**
comp=Z,4.5nm,0.7s,baz=134,slow=8.6,SNR=8.1
GEYT Alibeck 44.58 318 P **P** **07 49 56.7 -0.9**
GYA0B ALIBECK ARRAY 44.58 318 P **P** **07 49 56.8 -0.8**
GYA0B IAmb IAmb 07 50 05.6
comp=Z,9.4nm,0.7s
KURK Kurchatov 44.94 346 P **P** **07 50 00.5 +0.4**
KURK IAmb IAmb 07 50 07.6
comp=Z,20nm,1.1s
H01W3 Cape Leeuwin H 46.19 157 T T 08 39 49.5
baz=329
H01W2 Cape Leeuwin H 46.20 157 T T 08 39 56.8
baz=329
H01W1 Cape Leeuwin H 46.20 157 T T 08 39 40.8
baz=329
ZAA0 Zalesovo Array 46.86 352 P **P** **07 50 15.9 +0.7**
ZAA0 IAmb IAmb 07 50 24.6
comp=Z,12nm,0.9s
ZALV Zalesovo Beam 46.86 352 P **P** **07 50 16.0 +0.8**
comp=Z,6.1nm,0.6s,baz=175,slow=7.4,SNR=20
ZALV Zalesovo Beam 46.86 352 P **P** **07 50 15.0 -0.2**
WB0 Warramunga Arr 47.84 125 P **P** **07 50 23.1 -0.3**
WB0 IAmb IAmb 07 50 47.5
comp=Z,6.5nm,1.1s
WRA Warramunga Arr 47.88 126 P **P** **07 50 23.2 -0.6**
comp=Z,3.1nm,1.0s,baz=305,slow=8.7,SNR=11
WRA PcP **PcP** **07 51 52.9 +0.4**
comp=Z,0.4nm,0.6s,baz=313,slow=2.8,SNR=1.1
WRA Warramunga Arr 47.88 126 P **P** **07 50 22.6 -1.2**
WRAB Tennant Creek 47.89 126 P **P** **07 50 22.7 -1.1**
WRAB IAmb IAmb 07 50 40.5
comp=Z,7.3nm,0.8s
WB2 Warramunga Arr 47.90 126 P **P** **07 50 22.8 -1.1**
WB2 IAmb IAmb 07 50 40.4
comp=Z,7.9nm,0.9s
BRVK Borovoye 49.39 341 P **P** **07 50 35.0 +0.2**
BRVK IAmb IAmb 07 50 36.3
comp=Z,5.1nm,0.9s
RAYN Ar Rayn 49.44 294 P **P** **07 50 36.7 +0.8**

ASAR Alice Springs 49.54 130 P **P** **07 50 35.6 -0.9**
comp=Z,2.3nm,0.8s,baz=304,slow=7.4,SNR=12
ASAR PcP **PcP** **07 51 58.6 +0.3**
comp=Z,0.8nm,0.7s,baz=306,slow=3.0,SNR=1.6
ASAR Alice Springs 49.54 130 P **P** **07 50 37.0 +0.5**
FORT Forrest 49.96 141 P **P** **07 50 40.6 +1.1**
ABKAR **Akbulak array 50.60 331** P **P** **07 50 44.6 +0.5**
ABKAR IAmb IAmb 07 50 52.0
comp=Z,9.3nm,1.0s
AB04 Akbulak array 50.60 331 P **P** **07 50 45.1 +1.0**
AB05 Akbulak array 50.61 331 P **P** **07 50 44.4 +0.2**
KMBO Kilima Mbogo 57.66 264 P **P** **07 51 36.4 -0.2**
KMBO IAmb IAmb 07 51 44.8
comp=Z,9.4nm,0.8s
STKA Stephens Creek 59.73 134 P **P** **07 51 49.1 -1.2**
comp=Z,1.1nm,0.7s,baz=299,slow=12,SNR=2.0
NRIK Noril'sk 61.82 357 P **P** **07 52 04.1 +0.1**
comp=Z,3.4nm,0.6s,baz=176,slow=6.6,SNR=3.7
BRTR Keskin Array B 62.81 311 P **P** **07 52 09.5 -1.8**
comp=Z,1.8nm,0.6s,baz=130,slow=6.7,SNR=4.0
BRTR Keskin Array B 62.81 311 P **P** **07 52 10.3 -1.0**
ANTO Ankara 63.48 311 P **P** **07 52 14.6 -1.1**
TIXI Tiksi 67.44 11 P **P** **07 52 40.2 -0.4**
AKASG **Malin Array Be 68.53 322** P **P** **07 52 46.9 -0.9**
comp=Z,0.6nm,0.4s,baz=90,slow=4.9,SNR=1.2
LSZ Lusaka 69.43 251 P **P** **07 52 55.0 +0.8**
LSZ IAmb IAmb 07 53 01.4
comp=Z,6.8nm,0.7s
MLR Muntele Rosu 69.55 316 P **P** **07 52 54.9 +0.4**
BURAR **Bucovina Array 70.43 318** P **P** **07 52 59.8 0.0**
FIA1 FINESS Array S 73.07 332 P **P** **07 53 14.2 -1.1**
FINES FINESS Array B 73.07 332 P **P** **07 53 15.0 -0.3**
comp=Z,4.0nm,0.7s,baz=67,slow=5.5,SNR=10
FINES FINESS Array B 73.07 332 P **P** **07 53 14.7 -0.6**
CRVS Cervenica-Dubn 73.11 319 *e*P P 07 53 21.2 +5.4
VYHS Vyhne 74.79 318 *e*P P 07 53 31.6 +6.0
ARCES **ARCESS Array B 75.61 340** P **P** **07 53 30.2 +0.2**
comp=Z,2.4nm,0.8s,baz=96,slow=8.4,SNR=2.0
BOSA Boshof 75.67 238 P **P** **07 53 31.6 +0.3**
comp=Z,2.0nm,0.7s,baz=78,slow=3.6,SNR=2.0
SOKA Soboth 77.22 316 *e*P P 07 53 44.9 +5.3
comp=Z,7.3nm,1.4s
OBKA Obir 77.55 316 *e*P P 07 53 48.0 +6.5
comp=Z,5.4nm,0.8s
GERES **GERESS Array B 78.21 318** P **P** **07 53 45.2 +0.1**
comp=Z,0.9nm,0.6s,baz=90,slow=4.7,SNR=7.9
GERES **GERESS Array B 78.21 318** P **P** **07 53 44.3 -0.9**
MAW Mawson 78.33 192 P **P** **07 53 43.7 -1.4**
comp=Z,0.7nm,0.5s,baz=42,slow=12,SNR=1.6
MAW Mawson 78.33 192 P **P** **07 53 47.0 +1.9**
NB2 NORSAR Subarra 80.10 331 P **P** **07 53 54.6 -0.5**
comp=Z,12nm,1.2s,baz=96,slow=5.1
NOA NORSAR Array B 80.10 331 P **P** **07 53 55.0 -0.2**
comp=Z,1.2nm,0.6s,baz=112,slow=9.5,SNR=4.9
RETA Reutte 80.16 317 *e*P P 07 54 00.5 +4.7
comp=Z,3.9nm,0.6s
FETA Feichten 80.18 316 *e*P P 07 54 01.6 +5.5
comp=Z,5.3nm,1.1s
TORD Torodi Ar. Bea 90.92 283 P **P** **07 54 49.3 -0.7**
comp=Z,0.2nm,0.4s,baz=96,slow=6.7,SNR=2.3
ESDC Sonseca Array 91.60 310 P **P** **07 54 52.4 -0.4**
comp=Z,0.7nm,0.7s,baz=58,slow=4.9,SNR=2.8
IMAR Indian Mountai 91.78 22 P **P** **07 54 52.8 -0.1**
VNDA Vanda 92.61 168 P **P** **07 54 56.9 +0.4**
comp=Z,0.2nm,0.5s,baz=264,slow=5.1,SNR=1.2
BWN Browne 94.19 23 P **P** **07 55 02.5 -1.6**
ILAR Eielson Array 94.89 22 P **P** **07 55 08.4 +1.1**
comp=Z,0.5nm,1.0s,baz=292,slow=4.8,SNR=2.6
NVAR Mina Array Bea 125.01 31 PKP **PKiKP** **08 00 48.8 +2.0**
comp=Z,0.2nm,0.3s,baz=298,slow=1.9,SNR=2.8
PDAR Pinedale Array 125.32 22 PKP **PKiKP** **08 00 48.2 +0.9**
comp=Z,0.1nm,0.4s,baz=303,slow=4.2,SNR=2.3
TXAR Lajitas Array 139.36 25 PKP **PKPdf** **08 01 13.9 +0.4**
comp=Z,0.2nm,0.7s,baz=237,slow=1.4,SNR=2.5
BDFB Brasilia 142.39 254 PKP **PKPdf** **08 01 18.9 -0.4**
comp=Z,0.8nm,0.3s,baz=76,slow=4.2,SNR=1.8
PLCA Paso Flores 144.39 200 PKP **PKPdf** **08 01 21.4 -0.8**
comp=Z,4.8nm,1.0s,baz=195,slow=2.2,SNR=3.7
CPUP Villa Florida 147.31 232 PKP **PKPdf** **08 01 26.5 -0.9**
comp=Z,0.7nm,0.5s,baz=56,slow=4.0,SNR=2.0
CPUP PKPbc **PKPbc** **08 01 29.4 -0.3**
comp=Z,0.6nm,0.5s,baz=56,slow=4.0,SNR=2.9
CPUP Villa Florida 147.31 232 **PKPbc** **08 01 29.1 -0.6**
SIV San Ignacio 154.62 249 PKPbc **PKPbc** **08 01 44.7 -2.7**
comp=Z,0.7nm,1.0s,baz=145,slow=5.7,SNR=4.1

NDI ***11*** *07:50:04.3±3.4, 7.°15N×94.°74E, h10km, mb5.1, mb5.1(NEIC)*

NEIC ***11*** *07:50:07.7±1.8, 7.°46N±0.°06×94.°30E±0.°07, h8km±1km, mb5.4/144, Ms_20 5.0/248, Mwb5.3/22, Mwc5.5(GCMT), Error ellipse: s-maj=13.4km s-min=8.3km az=234.0*

IDC ***11*** *07:50:07.2±0.4, 7.°52N×94.°25E, h0km, mb4.8/39, mb1 4.8/43, mb1mx4.8/49, mbtmp4.8/43, ML5.0/3, MS4.8/46, Ms1 4.8/46, ms1mx4.7/56, Error ellipse: s-maj=12.8km s-min=9.3km az=59.0*

BJI ***11*** *07:50:09.7±0.0, 7.°28N×94.°06E, h43km, mB5.2/62, mb5.1/77, Ms5.4/86, Ms7 5.2/81*

NEIC ***11*** *07:50:09.2, 7.°44N×94.°33E, h8km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.44; Mθθ=6.14; Mϕϕ 6.58; Mrθ=-2.37; Mθϕ 6.80; Mϕr 0.47; Fault plane solution: Mo 9.63000×10¹⁶ NP1:ϕs159.34000°, δ77.71000°, λ-171.92000°. NP2:ϕs67.61000°, δ82.10000°, λ-12.40000°. Principal axes: T 9.5581, Plg3.0000°, Azm114.0000°; N 0.1383, Plg75.0000°, Azm216.0000°; P -9.6964, Plg14.0000°, Azm23.0000°;*

MOS ***11*** *07:50:09.7±1.0, 7.°53N×94.°27E, h29km, mb5.5/90, MS5.0/38 Error ellipse: s-maj=6.8km s-min=3.5km az=115.7*

KLM ***11*** *07:50:11.0, 7.°51N×94.°32E, h10km, mb5.3*

DJA ***11*** *07:50:12.0±0.1, 8.°N±2.°×9.°4E±.°, h10km, M5.2/70, mb5.2/70, mB5.7/40, MLv5.4/13, Mw(mB)5.2/40, Mwp5.4/8*

GCMT ***11*** *07:50:12.1±0.1, 7.°54N±0.°01×94.°34E±0.°01, h17km, MW5.4/145, Moment Tensor Solution. s118,c178; s145,c274; Duration: 1ŝ3 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.15±.02; Mθθ-1.10±.02; Mϕϕ 1.24±.02; Mrθ-0.82±.07; Mϕϕ 1.15±.02; Mϕr 0.06±.05; Best double couple: Mo1.83200×10¹⁷ NP1:ϕs160.00000°, δ67.00000°, λ-168.00000°. NP2:ϕs65.00000°, δ79.00000°, λ-23.00000°. Principal axes: T 1.7480, Plg8.0000°, Azm114.0000°; N 0.1640, Plg64.0000°, Azm222.0000°; P -1.9170, Plg24.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***11*** *07:50:13, 7.°55N×94.°30E, h22km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.21; Mθθ-1.51; Mϕϕ 1.31; Mrθ-0.26; Mθϕ 1.27; Mϕr 0.04; Fault plane solution: Mo1.92000×10¹⁷ NP1:ϕs156.00000°, δ84.00000°, λ-177.00000°. NP2:ϕs66.00000°, δ87.00000°, λ-6.00000°. Principal axes: T 1.7976, Plg2.0000°, Azm111.0000°; N 0.2315, Plg83.0000°, Azm220.0000°; P -2.0292, Plg7.0000°, Azm21.0000°;*

BGR ***11*** *07:50:14.1±0.0, 8.°52N×94.°19E, h33km, mb5.4*

ISC 11 07:50:11.6±0.4, 7.°54N±0.°03×94.°36E±0.°03, h26km±2km, h27km:pP-P,n861,σ1ŝ88/818,mb5.2/221,MS5.0/208, 28C-19D,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
LHMI	**Lhok Sumawe**	**3.44**	**132**	P	**Pn**	**07 51 05.4**	**+1.8**
LHMI	**Lhok Sumawe**	**3.44**	**132**	Pn	**Pn**	**07 51 04.0**	**+0.4**
LHMI				Sn	**Sn**	**07 51 45.6**	**+2.1**
MLSI	**Meulaboh, Aceh**	**3.83**	**148**	P	**Pn**	**07 51 12.8**	**+3.9**
PKDT	**Phuket**	**3.95**	**85**	P	**Pn**	**07 51 11.4**	**+0.8**
PKDT	**Phuket**	**3.95**	**85**	P	**Pn**	**07 51 11.2**	**+0.6**
PBA	**Port Blair**	**4.39**	**339**	*e*P	Pn	07 51 19.6	+3.0
PBA				*e*S	Sn	07 52 08.7	+1.7
PBA	**Port Blair**	**4.39**	**339**	Pn	Pn	07 51 18.4	+1.7
PBA				Sn	Sn	07 52 06.8	-0.2
SURT	**Suratani**	**4.61**	**72**	P	**Pn**	**07 51 22.2**	**+2.5**
KRAB	**Krabi**	**4.84**	**82**	P	**Pn**	**07 51 24.4**	**+1.7**
TPTI		**5.09**	**146**	P	**Pn**	**07 51 29.9**	**+3.6**
	1.6nm5μm328nm,1.4s						
KCSI	**Kotacane, Aceh**	**5.24**	**139**	P	**Pn**	**07 51 31.6**	**+3.3**
	2.7nm8μm547nm,1.0s						
TRTT	**Trang**	**5.29**	**86**	P	**Pn**	**07 51 29.7**	**+0.7**
SNSI	**Sinabang, Aceh**	**5.46**	**159**	P	**Pn**	**07 51 34.5**	**+3.2**
	2.7nm8μm624nm,0.8s						

DGPR DIGLIPUR 5.78 346 *e*P **Pn** **07 51 38.6 +2.9**
DGPR *e*S **Sn** **07 52 46.9 +5.7**
TSI Tuntungan 5.79 134 P **Pn** **07 51 39.0 +3.1**
4.8nm16μm556nm,1.3s
PSI Prapat 6.54 136 Pn **Pn** **07 51 46.8 +0.5**
7.0nm,0.3s,baz=360,slow=9.6,SNR=37
PSI LR LR 07 54 40.0
comp=Z,22μm,18.9s,baz=275,slow=41
RPSI Rantau Prapat 6.62 136 Pn **Pn** **07 51 47.8 +0.6**
RPSI Rantau Prapat 6.62 136 P **Pn** **07 51 46.8 -0.4**
KULM Kulim 6.63 109 Pn **Pn** **07 51 46.7 -0.8**
KULM Kulim 6.63 109 P **Pn** **07 51 47.0 -0.5**
GSI Gunungsitoli 6.97 153 P **Pn** **07 51 56.1 +4.0**
1.1nm3μm196nm,1.1s
GSI Gunungsitoli 6.97 153 Pn **Pn** **07 51 51.2 -0.9**
IPM Ipoh 7.29 114 Pn **Pn** **07 51 54.7 -1.8**
IPM Ipoh 7.29 114 P **Pn** **07 51 55.0 -1.5**
PHET Kaeng Krachan 7.44 44 P **Pn** **07 51 58.7 +0.1**
1.6nm5μm443nm,0.5s
SRDT SRDT 8.22 34 P **Pn** **07 52 10.9 +1.6**
0.6nm103nm,0.7s
SRDT S **Sn** **07 53 36.6 -4.9**
0.6nm103nm,0.7s
PATY Pattaya 8.34 50 P **Pn** **07 52 10.4 -0.5**
0.6nm102nm,0.7s
PATY Pattaya 8.34 50 P **PKiKP** **08 06 47.0 +3.1**
MNSI Mandailing Nat 8.48 142 P **Pn** **07 52 13.8 +1.0**
9μm16μm151nm,0.9s
PBSI Pulau Batu 8.49 152 P **Pn** **07 52 16.1 +3.1**
178nm,1.2s
BKNI Bangkinang 9.78 137 P **Pn** **07 52 34.9 +4.2**
6μm332nm,1.2s
BKNI Bangkinang 9.78 137 Pn **Pn** **07 52 29.8 -0.9**
SRAK Srakaew 9.91 49 P Pn 07 52 40.0 +7.5
SISI Saibi 9.99 152 P Pn 07 52 38.4 +4.9
1μm80nm,1.1s
SDSI Sungai Dareh 10.97 140 P **Pn** **07 52 50.9 +3.8**
91nm,1.1s
MYKOM **Kota Tinggi 11.04 121** Pn **Pn** **07 52 46.3 -1.7**
MYKOM **Kota Tinggi 11.04 121** P **Pn** **07 52 50.0 +2.0**
MHMT Maesarieng 11.13 18 P **Pn** **07 52 52.2 +3.0**
2μm162nm,1.2s
SUKH Sukhothai 11.14 27 P **Pn** **07 52 50.6 +1.3**
66nm,0.7s
CM05 Chiang Mai Arr 11.68 22 P **Pn** **07 52 58.7 +1.9**
616nm62nm,0.9s
CM13 Chiang Mai Arr 11.69 22 P **Pn** **07 52 57.9 +1.1**
CM04 Chiang Mai Arr 11.70 22 P **Pn** **07 52 58.8 +1.9**
778nm95nm,1.2s
CM01 Chiang Mai Arr 11.71 22 P **Pn** **07 52 58.9 +1.9**
986nm111nm,1.3s
CM02 Chiang Mai Arr 11.71 22 P **Pn** **07 52 58.9 +1.7**
746nm81nm,1.2s
CM15 Chiang Mai Arr 11.72 22 P **Pn** **07 52 58.9 +1.6**
3μm74nm,0.8s
CM31 Chiang Mai Arr 11.73 22 Pn **Pn** **07 52 59.6 +2.1**
CMAR Chiang Mai Arr 11.73 22 Pn **Pn** **07 52 57.7 +0.2**
5.7nm,0.3s,baz=214,slow=14,SNR=43
CMAR LR LR 07 57 33.2
comp=Z,8μm,19.1s,baz=256,slow=38
CMAR Chiang Mai Arr 11.73 22 **Pn** **07 52 57.8 +0.4**
CM09 Chiang Mai Arr 11.74 22 P **Pn** **07 52 59.2 +1.6**
873nm90nm,1.1s
UTTA Uttaradit 11.80 30 P **Pn** **07 53 00.2 +1.8**
2μm179nm,0.8s
KRJI Kerinci 11.90 143 P **Pn** **07 53 02.9 +3.1**
25μm275nm,0.5s
CHTO Chiang Mai 12.06 21 P **Pn** **07 53 03.5 +1.6**
CHTO Chiang Mai 12.06 21 Pn **Pn** **07 53 03.5 +1.6**
LAMP Lampang 12.06 25 P **Pn** **07 53 04.5 +2.5**
770nm76nm,0.8s
PAYA Payao 12.91 24 P **Pn** **07 53 16.1 +2.5**
1μm,1.1s
DSRI Dabo 12.93 128 P **Pn** **07 53 16.0 +2.2**
1μm57nm,1.2s
MASI Maura Aman, Be 13.20 143 P **Pn** **07 53 21.2 +3.6**
247nm,1.1s
PALK Pallekele 13.55 270 Pn **Pn** **07 53 21.2 -1.1**
0.3nm,0.3s,baz=179,slow=13,SNR=2.3
PALK Sn Sn 07 55 38.0 -14
2.5nm,0.3s,baz=114,slow=20,SNR=6.5
PALK LR LR 07 57 58.2
comp=Z,7μm,21.9s,baz=192,slow=35
PALK Pallekele 13.55 270 P **Pn** **07 53 22.1 -0.2**
PALK Pallekele 13.55 270 Pn **Pn** **07 53 22.1 -0.2**
KSI Kapahiang 13.82 143 P **Pn** **07 53 27.8 +1.8**
141nm,0.9s
CRAI Chiangrai 13.90 24 P **Pn** **07 53 30.3 +3.2**
CRAI S **Sn** **07 55 58.2 -2.4**
LHSI Lahat 14.53 141 P **Pn** **07 53 35.6 0.0**
MNAI Manna 14.60 144 P P 07 53 54.5 +12
MNAI Manna 14.60 144 Pn **Pn** **07 53 34.8 -1.9**
SAIH SAIHA 14.93 355 *e*P **Pn** **07 53 39.8 -1.4**
SAIH IAmb IAmb 07 53 46.4
comp=Z,64nm,0.9s
MDRS Chennai 14.93 293 *e*P **Pn** **07 53 42.4 +1.3**
MDRS *ex* x 07 56 08.5
BWNR Bhubaneshwar 15.15 328 *ex* x 07 53 41.3
BWNR *e*P **Pn** **07 53 45.0 +1.0**
PPBI Pangkal Pinang 15.19 129 P **Pn** **07 53 46.3 +1.7**
comp=Z,12μmcomp=Z,96nm,1.2s
MDSI Maura Dua 15.45 140 P **Pn** **07 53 45.9 -2.0**
LWLI Liwa 15.78 142 P **P** **07 54 01.4 +5.3**
KLSI 15.95 139 P **Pn** **07 53 53.3 -1.2**
KASI Kota Agung 16.45 142 P **P** **07 54 05.4 +2.1**
comp=Z,120nm,0.9s
SLVN Son La 16.53 33 **P** **07 54 03.6 -0.6**
TPI Tanjungpandan 16.75 127 P **P** **07 54 06.6 0.0**
comp=Z,2μmcomp=Z,75nm,1.3s
KSM Kuching 16.99 110 P **P** **07 54 10.2 +0.9**
KSM Kuching 16.99 110 P **P** **07 54 13.0 +3.6**
TRD Trivandrum 17.26 274 IAmb IAmb 07 54 15.7
comp=Z,64nm,0.9s
KOHI KOHIMA 18.09 359 *ex* **Pn** **07 54 19.3 -2.0**
KOHI IAmb IAmb 07 54 23.0
comp=Z,216nm,1.2s
SHL Shillong 18.09 353 *ex* **Pn** **07 54 16.9 -4.4**
SHL IAmb IAmb 07 54 23.5
comp=Z,68nm,1.1s
SHL *ex* **Sn** **07 57 40.2 -2.4**
SHL Shillong 18.09 353 P **Pn** **07 54 16.3 -5.0**
SHL pmax pmax
comp=Z,72nm,0.8s
SHL Shillong 18.09 353 Pn **Pn** **07 54 16.3 -5.0**
BOK Bokaro 18.10 334 *e*P **P** **07 54 21.5 0.0**
BOK IAmb IAmb 07 54 29.4
comp=Z,193nm,1.0s
HYB Hyderabad 18.28 304 *i* P **P** **07 54 22.0 -1.6**
HYB *e*S **Sn** **07 57 46.0 -1.1**
SBUM Sibu 18.49 105 P **P** **07 54 24.4 -1.5**
SBUM Sibu 18.49 105 P **Pn** **07 54 29.0 +2.9**
DBJI Dramaga 18.67 138 P **Pn** **07 54 28.8 +0.4**
MOKO MOKOČHONG 18.68 0 *ex* **P** **07 54 26.6 -1.5**
GUWA GUWAHATI 18.73 353 *ex* **Pn** **07 54 26.9 -2.0**
GUWA IAmb IAmb 07 54 28.8
comp=Z,35nm,0.7s
QIZ Qiongzhong 18.89 51 P **P** **07 54 30.2 0.0**
QIZ pP **sP** **07 54 39.4 -0.4**
QIZ S **S** **07 58 03.2 -0.3**
QIZ sS **pS** **07 58 19.0 -4.0**
QIZ pmax pmax
comp=Z,21nm,1.7s
QIZ pmax pmax
comp=Z,650nm,3.1s
QIZ LR LR
comp=Z,12μm,12.7s
QIZ LR LR
comp=Z,6μm,9.4s
QIZ LR LR
comp=Z,5μm,10.8s
QIZ Qiongzhong 18.89 51 P **P** **07 54 25.7 -4.6**
KMI Kunming 19.23 24 ||P **Pn** **07 54 38.1 +2.8**
KMI pP pwP 07 54 47.6 +3.3
KMI sP sP 07 54 52.0 +8.0
KMI S **S** **07 58 14.1 +3.4**
KMI sS pS 07 58 31.3 +2.1
KMI pmax pmax
comp=Z,170nm,1.2s
KMI pmax pmax
comp=Z,830nm,4.7s
KMI LR LR
comp=Z,5μm,10.8s
KMI LR LR
comp=Z,4μm,10.0s
KMI LR LR

comp=Z,5μm,10.9s
KMI Kunming 19.23 24 P P 07 54 31.1 -3.1
KMI pmax pmax
comp=Z,201nm,1.1s
KMI Kunming 19.23 24 P 07 54 31.1 -3.1
KMI IAmb IAmb 07 54 44.4
comp=Z,201nm,1.1s
LEM Lembang 19.45 137 P P 07 54 37.0 +0.4
comp=Z,9.8nm,0.3s,baz=300,slow=20,SNR=1.9
LEM Lembang 19.45 137 P P 07 54 37.0 +0.4
COCO West Island 19.75 173 P P 07 54 36.0 -3.7
COCO pmax pmax
comp=Z,345nm,1.2s
COCO West Island 19.75 173 P P 07 54 36.0 -3.7
COCO IAmb IAmb 07 54 48.0
comp=Z,345nm,1.1s
NGP Nagpur 20.05 314 *e*P **P 07 54 43.4 +0.5**
NGP *ex* x 07 58 18.4
CISI Cisompet, Garu 20.12 138 P **P 07 54 40.4 -3.4**
CISI IAMs_20 IAMs_20 08 03 30.0
comp=Z,6μm,19.0s
ODAN Odare 20.33 342 *e*P **P 07 54 45.4 -0.8**
comp=Z,190nm,0.7s
GTK Tadong 20.42 345 *e*P **P 07 54 46.3 -0.8**
GTK IAmb IAmb 07 54 51.8
comp=Z,278nm,1.2s
RAMN Ramite 20.67 340 *e*P **P 07 54 49.7 -0.2**
comp=Z,344nm,0.7s
TAPN Taplejung 20.69 343 *e*P **P 07 54 49.2 -1.0**
comp=Z,956nm,1.1s
KPJI Karang Pucung 20.72 135 P Pn 07 54 56.8 +4.1
comp=Z,60nm,1.2s
XMIS Christmas Isla 21.14 148 P **P 07 54 52.8 -1.9**
XMIS IAmb IAmb 07 55 08.2
comp=Z,243nm,1.4s
GOA Goa 21.61 293 *e*P **P 07 55 00.5 +0.7**
GOA IAmb IAmb 07 55 04.3
comp=Z,68nm,0.9s
SMRI Semarang 21.61 132 P **P 07 55 05.5 +5.6**
comp=Z,7μmcomp=Z,284nm,0.9s
SMRI Semarang 21.61 132 P **P 07 55 01.1 +1.3**
PKI Pulchoki 21.66 338 *e*P **P 07 54 59.4 -1.2**
comp=Z,628nm,1.3s
PKIN Phulchoki 21.67 338 *e*P **P 07 54 59.3 -1.3**
comp=Z,269nm,0.8s
GUN Gumba 21.80 339 *e*P **P 07 55 00.7 -1.4**
comp=Z,464nm,0.9s
DMN Daman 21.81 337 *e*P **P 07 55 01.1 -1.0**
comp=Z,517nm,0.9s
KKN Kakani 21.90 338 *e*P **P 07 55 01.2 -1.9**
comp=Z,294nm,0.8s
KAD Karad 21.95 298⇑ *i*P **P 07 55 03.4 -0.1**
MTKI Muara Teweh, K 22.14 112 P **P 07 55 09.3 +3.7**
comp=Z,57nm,0.9s
GYA Guiyang 22.16 30 ⇓P **P 07 55 07.5 +1.7**
GYA S **S 07 59 11.5 +2.8**
GYA pmax pmax
comp=Z,41nm,1.4s
GYA pmax pmax
comp=Z,570nm,3.5s
GYA LR LR
comp=Z,5μm,14.3s
GYA LR LR
comp=Z,4μm,15.5s
GYA LR LR
comp=Z,4μm,17.0s
UGM Wanagama 22.25 133 IAMs_20 IAMs_20 08 03 58.8
comp=Z,6μm,22.0s
LSA Lhasa 22.25 353 P **P 07 55 06.2 -0.9**
LSA pP **sP 07 55 21.3 +4.4**
LSA S **S 07 59 06.2 -4.9**
LSA pmax pmax
comp=Z,270nm,1.2s
LSA LR LR
comp=Z,2μm,16.4s
LSA LR LR
comp=Z,2μm,13.5s
LSA LR LR
comp=Z,5μm,17.8s
LSA Lhasa 22.25 353 P **P 07 55 08.8 +1.7**
LSA Lhasa 22.25 353 P **P 07 55 05.7 -1.4**
LSA pmax pmax
comp=Z,136nm,0.7s
LSA MLR MLR
comp=Z,2μm,22.0s
LSA Lhasa 22.25 353 P **P 07 55 05.7 -1.4**
LSA IAmb IAmb 07 55 16.9
comp=Z,136nm,0.7s
GKN Gorkha 22.34 337 *e*P **P 07 55 06.4 -1.4**
comp=Z,568nm,1.0s
WOJI Wonogiri, Jawa 22.49 132 P P 07 55 17.2 +7.9
TBJI Tambak Boyo 22.53 129 P P 07 55 17.4 +7.7
BHPL Bhopal 22.55 316 *e*P **P 07 55 10.2 +0.3**
BHPL IAmb IAmb 07 55 19.4
comp=Z,217nm,1.3s
KOLN Koldanda 22.56 334 *e*P **P 07 55 09.3 -0.8**
comp=Z,638nm,1.2s
NGJI Ngawi 22.58 131 P **P 07 55 16.9 +6.6**
comp=Z,4μmcomp=Z,269nm,1.2s
POO Poona 22.75 301 IAmb IAmb 07 55 17.2
comp=Z,24nm,0.8s
DANN Dangsing 23.00 335 *e*P **P 07 55 13.4 -1.5**
comp=Z,401nm,0.9s
GRJI Gresik 23.08 128 P P 07 55 29.2 +14
PYUN Piuthan 23.11 334 *e*P **P 07 55 15.4 -0.5**
comp=Z,408nm,0.9s
BBKI Banjar Baru 23.17 117 P **P 07 55 19.4 +3.0**
comp=Z,16μmcomp=Z,85nm,1.2s
PWJI Pagerwojo 23.26 131 P P 07 55 25.0 +7.7
HKPS Hong Kong Po S 24.04 50 P **P 07 55 25.7 +1.0**
MYLDM Lahad Datu 24.10 94 P **P 07 55 25.9 +0.5**
MYLDM IAMs_20 IAMs_20 08 05 35.5
comp=Z,5μm,22.0s
BKB Balikpapan 24.12 110 P **P 07 55 19.5 -6.0**
BKB IAmb IAmb 07 55 31.0
comp=Z,136nm,0.9s
BKB IAMs_20 IAMs_20 08 06 11.1
comp=Z,7μm,18.0s
KBKI Kotabaru 24.27 116 P P 07 55 45.8 +19
KMMI Kalianget 24.34 126 P P 07 55 36.6 +9.1
BLJI Banyuglugur 24.46 128 P **P 07 55 33.6 +5.0**
comp=Z,3μmcomp=Z,160nm,0.9s
GMJI Gumukmas 24.67 129 P P 07 55 48.6 +18
CD2 Chengdu 24.86 19 P **P 07 55 32.7 +0.5**
CD2 S **S 07 59 56.1 +2.4**
CD2 pmax pmax
comp=Z,80nm,1.1s
CD2 pmax pmax
comp=Z,730nm,9.9s
CD2 LR LR
comp=Z,5μm,15.5s
CD2 LR LR
comp=Z,6μm,11.0s
CD2 LR LR
comp=Z,6μm,11.1s
ABJI Asem Bagus 24.99 127 P **P 07 55 39.2 +5.7**
comp=Z,5μmcomp=Z,184nm,1.0s
JAGI Jajag, Banyuwa 25.34 128 P P 07 55 52.2 +16
JAGI Jajag, Banyuwa 25.34 128 P **P 07 55 34.6 -2.0**
SRBI Singaraja 25.94 126 P **P 07 55 48.2 +6.1**
comp=Z,2μmcomp=Z,170nm,1.3s
MPSI Mapaga 26.44 105 P **P 07 55 49.5 +2.8**
comp=Z,6μmcomp=Z,103nm,1.1s
H08S3 Diego Garcia H 26.51 236 T T 08 22 33.4
baz=54,slow=75,SNR=827
H08S2 Diego Garcia H 26.51 236 T T 08 22 38.5
baz=54,slow=75,SNR=74
H08S1 Diego Carcia H 26.53 236 T T 08 22 39.7
baz=54,slow=75,SNR=35
NDI New Delhi 26.54 325 *e*P **P 07 55 46.0 -1.4**
ENH Enshi 26.70 30 P **P 07 55 48.7 -0.1**
ENH IAmb IAmb 07 55 55.4
comp=Z,152nm,1.2s
ENH IAMs_20 IAMs_20 08 06 47.8
comp=Z,4μm,20.0s
KAPI Kappang 28.23 115 LR LR 08 07 27.0
comp=Z,1μm,20.5s,baz=297,slow=37
KAPI Kappang 28.23 115 P **P 07 56 02.0 -0.7**
KAPI pmax pmax
comp=Z,31nm,1.1s
KAPI Kappang 28.23 115 P **P 07 56 02.0 -0.7**
APSI Ampana 28.48 106 P P 07 56 10.3 +5.4
comp=Z,769nmcomp=Z,54nm,1.5s
BKSI Bulukumba 28.70 116 P **P 07 56 09.0 +2.1**
comp=Z,693nmcomp=Z,50nm,0.9s
GTOI Gorontalo 29.37 102 P **P 07 56 14.2 +1.4**
comp=Z,760nmcomp=Z,63nm,1.8s
WHN Wuhan 29.57 37⇑ P **P 07 56 16.4 +2.0**
WHN S **S 08 01 14.3 +6.3**
WHN pmax pmax
comp=Z,150nm,0.9s
WHN LR LR
comp=Z,10μm,10.7s
WHN LR LR
comp=Z,6μm,14.5s
WHN LR LR
comp=Z,11μm,13.3s
LUWI Luwuk 29.59 106 P P 07 56 29.0 +14
LUWI Luwuk 29.59 106 P **P 07 56 13.2 -1.6**
XAN Xi'an 29.60 25 P **P 07 56 15.5 +0.8**
XAN PP **PnPn 07 57 09.3 -0.8**
XAN S **S 08 01 04.5 -4.0**
XAN pmax pmax
comp=Z,43nm,1.0s
XAN pmax pmax
comp=Z,190nm,4.0s
XAN LR LR
comp=Z,6μm,14.6s
XAN LR LR
comp=Z,5μm,13.6s
XAN LR LR
comp=Z,8μm,14.4s
XAN Xi'an 29.60 25 P **P 07 56 14.7 0.0**
XAN pmax pmax
comp=Z,61nm,1.0s
XAN MLR MLR
comp=Z,6μm,20.0s
XAN Xi'an 29.60 25 P **P 07 56 14.7 0.0**
XAN IAmb IAmb 07 56 24.4
comp=Z,61nm,1.0s
TPUB Ta-pu 29.69 55 IAMs_20 IAMs_20 08 06 54.3
comp=Z,3μm,20.0s
LZH Lanzhou 29.71 16 *e*P **P 07 56 16.2 +0.4**
LZH pP pwP 07 56 25.0 -0.6
LZH sP sP 07 56 32.6 +6.5
LZH PP **PP 07 57 18.2 -5.0**
LZH S **S 08 01 05.9 -4.5**
LZH sS sS 08 01 31.9 +10
LZH SS **ScP 08 02 53.7 -6.3**
LZH pmax pmax
comp=Z,39nm,1.8s
LZH pmax pmax
comp=Z,290nm,4.3s
LZH LR LR
comp=Z,4μm,15.6s
LZH LR LR
comp=Z,3μm,14.1s
LZH LR LR
comp=Z,4μm,16.9s
DHRM DHARAMSHALA 29.78 328 IAmb IAmb 07 56 23.6
comp=Z,34nm,0.7s
TWG Pinlang 29.84 56 P **P 07 56 13.4 -3.5**
TWG IAmb IAmb 07 56 25.4
comp=Z,70nm,1.2s
TWG IAMs_20 IAMs_20 08 08 26.3
comp=Z,3μm,20.0s
SSLB Suanglung 30.18 55 IAMs_20 IAMs_20 08 07 21.3
comp=Z,3μm,21.0s
NACB Ninganchiao 30.88 55 IAMs_20 IAMs_20 08 08 13.8
comp=Z,3μm,20.0s
YHNB Yeheng 30.94 53 IAMs_20 IAMs_20 08 08 16.3
comp=Z,4μm,19.0s
TATO Taipei 31.18 53 IAMs_20 IAMs_20 08 08 52.8
comp=Z,4μm,18.0s
EDFI Ende, Flores 31.68 120 P P 07 56 38.4 +5.0
comp=Z,10nm,0.9s
GTA Gaotai 32.11 8 P **P 07 56 37.2 +0.3**
GTA pP sP 07 56 47.7 +0.6
GTA sP pwP 07 56 52.0 +5.1
GTA S **S 08 01 46.0 -1.9**
GTA pmax pmax
comp=Z,21nm,0.9s
GTA pmax pmax
comp=Z,110nm,5.5s
GTA LR LR
comp=Z,2μm,19.3s
GTA LR LR
comp=Z,1μm,16.0s
GTA LR LR
comp=Z,3μm,20.4s
YOJ Yonaguni jima 32.16 55 IAMs_20 IAMs_20 08 09 19.8
comp=Z,3μm,19.0s
NIL Nilore 32.50 326 P **P 07 56 38.7 -1.6**
NIL pmax pmax
comp=Z,75nm,0.9s
NIL MLR MLR
comp=Z,3μm,18.0s
NIL Nilore 32.50 326 P **P 07 56 38.7 -1.6**
NIL Nilore 32.50 326 IAMs_20 IAMs_20 08 11 09.5
comp=Z,3μm,18.0s
NJ2 Nanjing 33.38 40⇑ *i*P **P 07 56 50.3 +2.3**
NJ2 pP **sP 07 56 57.9 0.0**
NJ2 S **S 08 02 08.3 +0.7**
NJ2 sS **sS 08 02 24.3 +5.1**
NJ2 pmax pmax
comp=Z,35nm,1.0s
NJ2 pmax pmax
comp=Z,190nm,3.6s
NJ2 LR LR
comp=Z,4μm,12.3s
NJ2 LR LR
comp=Z,3μm,11.4s
NJ2 LR LR
comp=Z,4μm,14.7s
BATI Baumata 34.09 121 LR LR 08 12 16.0
comp=Z,4μm,20.5s,baz=292,slow=39
SSE Sheshan 34.31 43 P **P 07 56 56.4 +0.3**
SSE S **S 08 02 21.2 -0.8**
SSE pmax pmax
comp=Z,14nm,0.7s
SSE LR LR
comp=Z,2μm,14.4s
SSE LR LR
comp=Z,2μm,13.3s
SSE Sheshan 34.31 43 IAMs_20 IAMs_20 08 11 52.6
comp=Z,3μm,18.0s
SOEI Soe 34.38 120 P P 07 57 12.2 +15
SOEI Soe 34.38 120 P **P 07 56 55.1 -2.0**
SOEI IAmb IAmb 07 57 23.5
comp=Z,46nm,0.9s
SOEI IAMs_20 IAMs_20 08 12 57.1
comp=Z,4μm,20.0s
TIA Tai'an 35.31 33 P **P 07 57 05.3 +0.6**
TIA PP **PP 07 58 25.6 +0.5**
TIA S **S 08 02 41.0 +3.7**
TIA pmax pmax
comp=Z,43nm,1.3s
TIA pmax pmax
comp=Z,230nm,6.9s
TIA LR LR
comp=Z,2μm,12.3s
TIA LR LR
comp=Z,2μm,14.2s
TIA LR LR
comp=Z,4μm,14.2s
KBL Kabul 35.57 323 P **P 07 57 07.5 +0.3**
SNR=11
KBL P **P 07 57 07.5 +0.3**
SNR=11
KBL Kabul 35.57 323 P **P 07 57 06.0 -1.2**
KBL pmax pmax
comp=Z,24nm,0.9s
KBL MLR MLR
comp=Z,2μm,20.0s
KBL Kabul 35.57 323 P **P 07 57 06.0 -1.2**
BTO Baotou 35.77 21 *e*P **P 07 57 06.9 -1.8**
BTO S S 08 02 34.9 -10
KSH Kashi 35.87 335 P **P 07 57 07.2 -2.4**
KSH S **S 08 02 42.8 -3.2**
KSH pmax pmax
comp=Z,22nm,0.6s
KSH pmax pmax
comp=Z,490nm,5.2s
KSH LR LR
comp=Z,1μm,12.8s
KSH LR LR
comp=Z,3μm,13.7s
KSH LR LR
comp=Z,4μm,20.1s
HHC Hu-ho-hao-te 36.55 22 *e*P **P 07 57 16.8 +1.5**
HHC PP **PP 07 58 41.8 +3.0**
HHC S **S 08 02 56.9 +0.6**
HHC SS **SnSn 08 05 24.2 -2.4**
HHC pmax pmax
comp=Z,31nm,1.3s
HHC pmax pmax
comp=Z,260nm,7.0s
HHC LR LR
comp=Z,2μm,12.0s
HHC LR LR
comp=Z,5μm,15.2s
HHC LR LR
comp=Z,780nm,19.6s
WMQ Urumqi 36.61 352 *e*P **P 07 57 16.3 +0.5**
WMQ pP sP 07 57 26.4 +0.4
WMQ sP pwP 07 57 30.1 +4.2
WMQ PP **PP 07 58 40.1 +0.7**
WMQ S **S 08 02 57.5 +0.4**
WMQ sS sS 08 03 12.0 +2.9
WMQ ScS **ScS 08 07 27.6 -2.7**
WMQ pmax pmax
comp=Z,74nm,0.9s
WMQ pmax pmax
comp=Z,300nm,5.7s
WMQ LR LR
comp=Z,2μm,17.3s
WMQ LR LR
comp=Z,3μm,19.5s
WMQ LR LR
comp=Z,3μm,25.3s
WMQ Urumqi 36.61 352 P **P 07 57 15.6 -0.2**
WMQ pmax pmax
comp=Z,58nm,1.0s
WMQ MLR MLR
comp=Z,1μm,18.0s
WMQ Urumqi 36.61 352 P **P 07 57 15.6 -0.2**
WMQ IAmb IAmb 07 57 21.5
comp=Z,58nm,1.0s
JLN Jalan Bani Buh 36.66 297 P **P 07 57 19.1 +2.7**
JLN P **P 07 57 19.1 +2.7**
WBK Wadi Bani Khal 37.19 298 P **P 07 57 23.4 +2.5**
WBK P **P 07 57 23.4 +2.5**
MHTO MHTO 37.61 295 P **P 07 57 27.5 +3.1**
MHTO P **P 07 57 27.5 +3.1**
KDJ Kajisay 37.66 339 P **P 07 57 22.2 -2.6**
KDJ pmax pmax
comp=Z,47nm,1.0s
KDJ MLR MLR
comp=Z,2μm,19.0s
KDJ Kajisay 37.66 339 P **P 07 57 22.1 -2.6**
KDJ IAmb IAmb 07 57 30.0
comp=Z,47nm,0.9s
KDJ IAMs_20 IAMs_20 08 15 21.6
comp=Z,2μm,19.0s
WSAR Wadi Sarin 37.68 299 LR LR 08 13 27.1
comp=Z,2μm,18.8s,baz=114,slow=37
WSAR Wadi Sarin 37.68 299 P **P 07 57 27.3 +2.2**
DQM DQM 37.73 293 P **P 07 57 27.8 +2.3**
DQM P **P 07 57 27.8 +2.3**
SIJI Sorong 37.74 101 LR LR 08 15 15.5
comp=Z,564nm,20.6s,baz=246,slow=40
BJT Baijiatuau 37.78 28 P **P 07 57 24.6 -1.0**
BJT pmax pmax
comp=Z,56nm,1.2s
BJT MLR MLR
comp=Z,1μm,21.0s
BJT Baijiatuau 37.78 28 P **P 07 57 24.6 -1.0**
BJT IAmb IAmb 07 57 37.3
comp=Z,56nm,1.2s
BJI Beijing 37.80 28 P **P 07 57 28.6 +2.8**
BJI S **S 08 03 19.0 +3.9**
BJI pmax pmax
comp=Z,23nm,1.2s
BJI LR LR
comp=Z,1μm,17.6s
BJI LR LR
comp=Z,2μm,16.7s
BJI LR LR
comp=Z,2μm,21.1s
SHLS Shalkode 37.82 342 *e*P **P 07 57 24.8 -1.3**
comp=Z,43nm,1.7s,baz=343
SHLS LR LR 08 13 38.8
comp=Z,177nm,13.8s,baz=343
SHLS Shalkode 37.82 342 *e*P **P 07 57 24.8 -1.3**
SHLS pmax pmax
comp=Z,43nm,1.7s
SHLS MLR MLR
comp=Z,177nm,14.0s
JMDO Jabal Madar 37.88 297 P **P 07 57 29.9 +3.2**
JMDO P **P 07 57 29.9 +3.2**
PDGK Podgornoye 37.97 342 P **P 07 57 26.4 -1.0**
SATY Saty 38.06 341 *e*P **P 07 57 27.6 -0.6**
comp=Z,23nm,1.6s,baz=341
SATY *e*S **S 08 03 21.9 +2.6**
baz=341
SATY Saty 38.06 341 *e*P **P 07 57 27.6 -0.6**
SATY *e*S **S 08 03 21.9 +2.6**
SATY pmax pmax
comp=Z,23nm,1.6s
SMDO Samad 38.13 298 P **P 07 57 32.0 +3.0**
SMDO P **P 07 57 32.0 +3.0**
PSAD1 Pilbara Seismi 38.14 140 IAMs_20 IAMs_20 08 14 23.6
comp=Z,2μm,19.0s
PSAC1 Pilbara Seismi 38.19 140 IAMs_20 IAMs_20 08 14 46.8
comp=Z,2μm,22.0s
BIDO Bidbid 38.21 299 P **P 07 57 32.4 +2.9**
SNR=10
PSAA1 Pilbara Seismi 38.23 140 IAMs_20 IAMs_20 08 14 14.0
comp=Z,2μm,18.0s
PSA00 Pilbara Seismi 38.24 140 P **P 07 57 28.4 -1.3**
PSA00 Pilbara Seismi 38.24 140 P **P 07 57 27.7 -2.0**
PSAB3 Pilbara Seismi 38.26 140 IAMs_20 IAMs_20 08 12 34.7
comp=Z,2μm,22.0s
KPKS Kokpek 38.34 342 *e*P **P 07 57 29.8 -0.7**
comp=Z,53nm,2.0s,baz=342
KPKS Kokpek 38.34 342 *e*P **P 07 57 29.7 -0.7**
KPKS pmax pmax
comp=Z,53nm,2.0s
PSAD2 Pilbara Seismi 38.35 140 IAMs_20 IAMs_20 08 15 34.0
comp=Z,3μm,21.0s
BOOM Boomskoye usch 38.42 338 P **P 07 57 29.8 -1.5**
BOOM pmax pmax
comp=Z,29nm,1.0s
BOOM MLR MLR
comp=Z,2μm,22.0s
BOOM Boomskoye usch 38.42 338 P **P 07 57 29.8 -1.5**
TNSS Tian-Shan 38.53 339 *e*P **P 07 57 31.4 -1.1**
baz=340
TNSS Tian-Shan 38.53 339 *e*P **P 07 57 31.3 -1.1**
MDOK Medeo 38.61 340 *i* P **P 07 57 32.3 -0.6**
baz=340
MDOK *e*PP **PP 07 59 01.0 -0.4**
baz=340
MDOK *e*S **S 08 03 30.6 +2.9**
baz=340
MDOK LR LR 08 13 13.6
comp=Z,650nm,18.2s,baz=340
MDOK Medeo 38.61 340 *i* P **P 07 57 32.2 -0.6**
MDOK *e* 07 59 01.0
MDOK *e*S **S 08 03 30.6 +2.9**
MDOK MLR MLR
comp=Z,650nm,18.0s
BTK Batken 38.63 331 P **P 07 57 32.4 -0.6**
BTK pmax pmax
comp=Z,55nm,0.9s
BTK MLR MLR
comp=Z,2μm,20.0s
BTK Batken 38.63 331 P **P 07 57 32.4 -0.6**
BTK IAmb IAmb 07 57 48.5
comp=Z,55nm,0.8s
BTK IAMs_20 IAMs_20 08 14 28.3
comp=Z,2μm,20.0s
AAA Alma-Ata 38.70 339 *e*P **P 07 57 33.4 0.0**
baz=340
AAA LR LR 08 13 48.4
comp=Z,707nm,17.1s,baz=340
AAA Alma-Ata 38.70 339 *e*P **P 07 57 33.4 0.0**
AAA MLR MLR
comp=Z,707nm,17.0s
UCH Uchtor 38.75 336 P **P 07 57 34.9 +0.6**
SNR=6.1
BSY Bisya 38.78 297 P **P 07 57 36.6 +2.2**
SNR=9.8
BSY P **P 07 57 36.6 +2.2**
SNR=9.8
TKM2 Tokmak 2 38.92 338 P **P 07 57 39.7 +4.2**
SNR=13
TKM2 Tokmak 2 38.92 338 P **P 07 57 34.3 -1.2**

HOQ Hoqain 38.94 298 P **P** 07 57 37.9 +2.2
SNR=9.0
HOQ P **P** 07 57 37.9 +2.2
SNR=9.0
KBK Karagaybulak 38.94 337 P **P** 07 57 35.8 +0.1
SNR=10
AML Almayashu 39.00 335 P **P** 07 57 36.1 -0.3
SNR=21
AAK Ala-Archa 39.10 337 P **P** 07 57 37.2 +0.3
SNR=14
AAK Ala-Archa 39.10 337 *i* P **P** 07 57 36.9 0.0
SNR=28
AAK Ala-Archa 39.10 337 P **P** 07 57 37.0 0.0
AAK P **P** 07 57 37.0 0.0
AAK Ala-Archa 39.10 337 *ce*P **P** 07 57 37.2 +0.3
AAK pmax pmax
comp=Z,170nm,1.7s
AAK Ala-Archa 39.10 337 P **P** 07 57 36.8 -0.2
AAK Ala-Archa 39.10 337 IAms_20 IAms_20 08 14 60.0
comp=Z,3µm,21.0s
SHAO Shalim 39.11 289 P **P** 07 57 41.3 +4.2
FRU1 Bishkek 39.20 337 P **P** 07 57 37.5 -0.1
FRU1 pmax pmax
comp=Z,40nm,0.8s
FRU1 MLR MLR
comp=Z,3µm,21.0s
FRU1 Bishkek 39.20 337 P **P** 07 57 37.5 -0.1
FRU1 IAms_20 IAms_20 08 15 16.4
comp=Z,3µm,21.0s
EKS2 Erkin-Say 39.41 336 P **P** 07 57 39.8 +0.3
SNR=12
KUU Kurty 39.50 339 *e*P **P** 07 57 38.6 -1.5
comp=Z,53nm,2.3s,baz=340
KUU Kurty 39.50 339 *e*P **P** 07 57 38.6 -1.5
KUU pmax pmax
comp=Z,53nm,2.3s
ARQ Araqi 39.55 298 P **P** 07 57 43.8 +2.9
ARQ P **P** 07 57 43.8 +2.9
USP Ospenovka 39.63 337 P **P** 07 57 40.6 -0.6
SNR=14
DMTO DMTO 39.69 289 P **P** 07 57 46.0 +4.0
DL2 Dalian 39.72 34 *e*P **P** 07 57 44.2 +2.2
DL2 PP **PnPn** 07 59 19.2 +2.5
DL2 S **S** 08 03 49.2 +5.0
DL2 SS **SS** 08 06 37.6 -2.8
DL2 pmax pmax
comp=Z,94nm,1.1s
DL2 pmax pmax
comp=Z,520nm,5.1s
DL2 LR LR
comp=Z,2µm,11.1s
DL2 LR LR
comp=Z,2µm,11.4s
DL2 LR LR
comp=Z,2µm,12.4s
SGDS Sogindy 39.74 337 *e*P **P** 07 57 41.1 -1.0
comp=Z,12nm,1.7s,baz=338
SGDS LR LR 08 14 37.0
comp=Z,269nm,15.8s,baz=338
SGDS Sogindy 39.74 337 *e*P **P** 07 57 41.1 -1.0
SGDS pmax pmax
comp=Z,12nm,1.7s
SGDS MLR MLR
comp=Z,269nm,16.0s
SOHO SOHO 39.79 299 *i* P **P** 07 57 44.5 +1.8
SNR=7.4
SOHO SOHO 39.79 299 P **P** 07 57 45.2 +2.5
TDK Taldyqorghan 39.81 342 *i* P **P** 07 57 41.5 -1.2
baz=342
TDK *e*S **S** 08 03 47.6 +2.2
baz=342
TDK LR LR 08 14 06.6
comp=Z,564nm,16.9s,baz=342
TDK Taldyqorghan 39.81 342 *i* P **P** 07 57 41.4 -1.2
TDK *e*S **S** 08 03 47.6 +2.2
TDK MLR MLR
comp=Z,565nm,17.0s
HRA Herat 39.85 317 P **P** 07 57 42.6 -0.8
SOCY Socotra 40.02 280 IAms_20 IAms_20 08 11 18.1
comp=Z,2µm,20.0s
FITZ Fitzroy Crossi 40.03 130 P **P** 07 57 43.4 -1.3
comp=Z,14nm,1.2s,baz=324,slow=5.2,SNR=7.7
FITZ LR LR 08 16 51.3
comp=Z,1µm,19.0s,baz=299,slow=40
FITZ Fitzroy Crossi 40.03 130 P **P** 07 57 44.5 -0.2
baz=40,SNR=5.9
FITZ Fitzroy Crossi 40.03 130 P **P** 07 57 44.2 -0.5
UOSS Minazif 40.33 300 P **P** 07 57 47.0 -0.2
UOSS Minazif 40.33 300 P **P** 07 57 50.8 +3.6
UOSS P **P** 07 57 50.8 +3.6
UOSS Minazif 40.33 300 P **P** 07 57 46.3 -0.9
HATD Hatta, Dubai 40.35 300 *i* P **P** 07 57 49.2 +1.8
SNR=14
HATD Hatta, Dubai 40.35 300 P **P** 07 57 50.7 +3.2
SNR=16
HATD P **P** 07 57 50.7 +3.2
SNR=16
ALNE Al Ain 40.44 298 *i* P **P** 07 57 51.1 +2.9
SNR=8.7
MK31 Makanchi Array 40.46 347 *d* iP **P** 07 57 47.1 -0.9
MK31 Makanchi Array 40.46 347 P **P** 07 57 47.4 -0.6
MK31 IAmb IAmb 07 57 53.1
comp=Z,65nm,0.9s
MKAR Makanchi Array 40.46 347 P **P** 07 57 47.1 -1.0
comp=Z,22nm,0.7s,baz=168,slow=7.6,SNR=161
MKAR LR LR 08 18 12.5
comp=Z,618nm,18.9s,baz=162,slow=42
MKAR Makanchi Array 40.46 347 P **P** 07 57 47.0 -1.1
MAKZ Makanchi 40.55 347 P **P** 07 57 47.4 -1.3
MAKZ pmax pmax
comp=Z,59nm,0.9s
MAKZ MLR MLR
comp=Z,800nm,22.0s
MAKZ Makanchi 40.55 347 P **P** 07 57 47.4 -1.3
MAKZ IAmb IAmb 07 57 53.6
comp=Z,59nm,0.9s
ZSN Zaisan 40.59 350 *e*P **P** 07 57 49.0 -0.1
comp=Z,14nm,0.9s,baz=350
ZSN *e*S **S** 08 04 00.8 +3.8
baz=350
ZSN Zaisan 40.59 350 *e*P **P** 07 57 49.0 -0.1
ZSN *e*S **S** 08 04 00.7 +3.8
ZSN pmax pmax
comp=Z,14nm,0.9s
IUG Iuzhnay 40.63 332 *e*P **P** 07 57 49.1 -0.5
comp=Z,11nm,1.2s,baz=332
IUG LR LR 08 14 57.0
comp=Z,368nm,14.8s,baz=332
IUG Iuzhnay 40.63 332 *e*P **P** 07 57 49.0 -0.5
IUG pmax pmax
comp=Z,11nm,1.2s
IUG MLR MLR
comp=Z,368nm,15.0s
DZA Taraz 40.63 334 *e*P **P** 07 57 48.5 -1.0
baz=334
DZA LR LR 08 14 53.5
comp=Z,267nm,15.1s,baz=334
DZA Taraz 40.63 334 *e*P **P** 07 57 48.5 -1.0
DZA MLR MLR
comp=Z,267nm,15.0s
ASUD Al Ashush, Dub 40.98 299 *i* P **P** 07 57 55.0 +2.4
SNR=8.7
KNRA Kununurra 41.15 124 IAms_20 IAms_20 08 16 36.0
comp=Z,2µm,21.0s
KK31 Karatay Array 41.16 333 *i* P **P** 07 57 53.1 -0.7
KK31 Karatay Array 41.16 333 P **P** 07 57 53.4 -0.4
KKAR Karatay Array 41.16 333 P **P** 07 57 53.7 -0.1
KKAR pmax pmax
comp=Z,22nm,1.0s
KKAR Karatay Array 41.16 333 P **P** 07 57 53.7 -0.1
KKAR Karatay Array 41.16 333 P **P** 07 57 52.7 -1.1
ABTO Aybut 41.19 288 P **P** 07 57 57.4 +3.0
ABTO P **P** 07 57 57.4 +3.0
JSU Suzuyama 41.23 50 IAms_20 IAms_20 08 17 12.8
comp=Z,2µm,18.0s
SONM Songino Array 41.44 12 P **P** 07 57 56.0 -0.3
comp=Z,6.5nm,0.9s,baz=191,slow=8.8,SNR=14
SONM PcP **PcP** 07 59 55.0 +1.2
comp=Z,3.3nm,0.8s,baz=204,slow=3.2,SNR=2.5
SONM LR LR 08 16 29.4
comp=Z,2µm,19.2s,baz=184,slow=38
SONM Songino Array 41.44 12 P **P** 07 57 56.1 -0.1
SONM pmax pmax
comp=Z,22nm,0.9s
SONM Songino Array 41.44 12 P **P** 07 57 56.1 -0.1
TJN Taejon 41.58 41 *ce*P **P** 07 57 58.5 +1.1

ULN Ulaanbaatar 41.61 13 *ce*P **P** 07 57 57.4 -0.2
ULN pmax pmax
comp=Z,31nm,1.7s
ULN Ulaanbaatar 41.61 13 P **P** 07 57 57.2 -0.5
INCN Inchon 41.77 40 P **P** 07 57 57.2 -1.7
INCN pmax pmax
comp=Z,91nm,1.3s
INCN MLR MLR
comp=Z,3µm,18.0s
INCN Inchon 41.77 40 P **P** 07 57 57.2 -1.7
INCN IAmb IAmb 07 58 05.7
comp=Z,91nm,1.2s
JTU Tsushima 41.95 45 IAms_20 IAms_20 08 16 51.7
comp=Z,2µm,18.0s
JNU Nakatsue 42.31 48 P **P** 07 58 04.7 +1.3
comp=Z,22nm,0.8s,baz=204,slow=1.1,SNR=8.9
JNU LR LR 08 16 34.8
comp=Z,1µm,19.5s,baz=250,slow=37
JNU Nakatsue 42.31 48 P **P** 07 58 03.8 +0.4
JNU IAms_20 IAms_20 08 15 50.3
comp=Z,2µm,20.0s
KS19 Wonju Array Si 42.57 40 P **P** 07 58 04.2 -1.2
KS19 IAmb IAmb 07 58 12.4
comp=Z,55nm,1.1s
KSRS Korea Array 42.57 41 P **P** 07 58 06.3 +0.9
comp=Z,24nm,1.1s,baz=231,slow=8.8,SNR=21
KSRS LR LR 08 17 35.0
comp=Z,3µm,18.1s,baz=228,slow=39
SNY Shenyang 42.84 32 iP **P** 07 58 09.0 +1.5
SNY S **S** 08 04 34.5 +4.2
SNY pmax pmax
comp=Z,25nm,1.6s
SNY pmax pmax
comp=Z,120nm,2.6s
SNY LR LR
comp=Z,1µm,15.7s
SNY LR LR
comp=Z,2µm,16.4s
SNY LR LR
comp=Z,3µm,15.0s
ZAK Zakamensk 43.35 8 *e*P **P** 07 58 11.1 -0.6
ZAK *e* 08 00 00.4
ZAK pmax pmax
comp=Z,16nm,1.6s
ZAK pmax pmax
comp=Z,14nm,1.7s
GEYT Alibeck 44.60 318 P **P** 07 58 21.5 -0.3
comp=Z,28nm,0.8s,baz=145,slow=8.8,SNR=39
GEYT Alibeck 44.60 318 P **P** 07 58 21.5 -0.3
GYA0 ALIBECK ARRAY 44.60 318 P **P** 07 58 21.7 -0.1
GYA0B ALIBECK ARRAY 44.60 318 P **P** 07 58 22.1 +0.3
GYA0B IAmb IAmb 07 58 28.8
comp=Z,46nm,0.8s
GYA0B IAms_20 IAms_20 08 19 55.6
comp=Z,2µm,19.0s
TLY Talaya 44.67 8 P **P** 07 58 22.4 +0.3
comp=Z,8.0nm,0.8s,baz=186,slow=8.0,SNR=3.6
TLY LR LR 08 18 21.7
comp=Z,2µm,21.2s,baz=180,slow=38
TLY Talaya 44.67 8 *e*P **P** 07 58 23.2 +1.1
TLY *e*S **S** 08 04 58.2 +1.3
TLY *e*SS **ScS** 08 08 21.3 +3.2
TLY pmax pmax
comp=Z,31nm,1.5s
TLY MLR MLR
comp=Z,4µm,16.0s
TLY Talaya 44.67 8 IAms_20 IAms_20 08 18 09.5
comp=Z,2µm,21.0s
JHS Saijyo 44.83 47 IAms_20 IAms_20 08 17 51.2
comp=Z,2µm,18.0s
KURBB Kurchatov Arra 44.92 346 P **P** 07 58 23.6 -0.6
comp=Z,55nm,0.9s,baz=167,slow=7.1,SNR=151
KURBB Kurchatov Arra 44.92 346 P **P** 07 58 23.7 -0.4
KURK Kurchatov 44.99 346 P **P** 07 58 23.2 -1.4
KURK P **P** 07 58 23.2 -1.4
KURK Kurchatov 44.99 346 *ce*P **P** 07 58 24.1 -0.5
KURK pmax pmax
comp=Z,95nm,1.3s
KURK Kurchatov 44.99 346 P **P** 07 58 22.6 -2.0
KURK Kurchatov 44.99 346 IAms_20 IAms_20 08 19 56.1
comp=Z,2µm,21.0s
CN2 Changchun 45.20 32 *e*P **P** 07 58 27.8 +1.4
CN2 *e*S **S** 08 05 08.6 +3.9
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,6.8s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,2µm,15.0s
NWAO Narrogin (SRO) 45.75 153 P **P** 07 58 31.1 +0.2
comp=Z,15nm,0.8s,baz=313,slow=8.4,SNR=5.4
NWAO LR LR 08 16 38.9
comp=Z,1µm,21.1s,baz=338,slow=35
NWAO Narrogin (SRO) 45.75 153 P **P** 07 58 29.6 -1.3
NWAO IAmb IAmb 07 58 45.2
comp=Z,39nm,1.1s
BRZS Berezniki 46.03 341 *e*P **P** 07 58 32.3 -0.7
comp=Z,8.0nm,1.8s,baz=341
BRZS *e*S **S** 08 05 19.6 +3.0
baz=341
BRZS Berezniki 46.03 341 *e*P **P** 07 58 32.2 -0.7
BRZS *e*S **S** 08 05 19.6 +3.0
BRZS pmax pmax
comp=Z,8.0nm,1.8s
H01W3 Cape Leeuwin H 46.14 157 T T 08 48 20.8
baz=330,slow=76,SNR=2.8
H01W2 Cape Leeuwin H 46.16 157 T T 08 48 34.5
baz=330,slow=76,SNR=6.4
H01W1 Cape Leeuwin H 46.16 157 T T 08 48 37.4
baz=330,slow=76,SNR=2.5
WRKA Warakurna 46.26 136 P **P** 07 58 35.1 0.0
baz=46,SNR=8.2
KMBL Kambalda 46.79 147 P **P** 07 58 39.2 +0.1
baz=47,SNR=4.5
ZAA0 Zalesovo Array 46.92 352 P **P** 07 58 39.2 -0.6
ZALV Zalesovo Beam 46.92 352 P **P** 07 58 39.5 -0.3
comp=Z,58nm,0.8s,baz=180,slow=7.8,SNR=89
ZALV LR LR 08 23 03.9
comp=Z,858nm,18.1s,baz=181,slow=42
ZALV Zalesovo Beam 46.92 352 P **P** 07 58 39.0 -0.8
WB0 Warramunga Arr 47.84 125 P **P** 07 58 45.8 -1.8
WB0 IAmb IAmb 07 59 06.2
comp=Z,40nm,1.5s
WB0 IAms_20 IAms_20 08 20 33.4
comp=Z,1µm,20.0s
INU Inuyama 47.84 48 P **P** 07 58 46.5 -0.9
INU IAmb IAmb 07 58 54.5
comp=Z,55nm,1.1s
INU IAms_20 IAms_20 08 20 58.2
comp=Z,2µm,18.0s
WB8 Warramunga Arr 47.86 125 IAms_20 IAms_20 08 20 43.7
comp=Z,1µm,20.0s
WC1 Warramunga Arr 47.88 125 IAms_20 IAms_20 08 20 33.3
comp=Z,1µm,21.0s
WB4 Warramunga Arr 47.88 125 IAms_20 IAms_20 08 20 43.5
comp=Z,1µm,21.0s
WRA Warramunga Arr 47.89 125 P **P** 07 58 46.8 -1.1
comp=Z,9.8nm,1.0s,baz=304,slow=9.0,SNR=30
WRA LR LR 08 20 55.5
comp=Z,1µm,19.9s,baz=295,slow=38
WRA Warramunga Arr 47.89 125 P **P** 07 58 46.9 -1.0
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRA Warramunga Arr 47.89 125 P **P** 07 58 46.9 -1.0
WB3 Warramunga Arr 47.89 125 IAms_20 IAms_20 08 20 33.7
comp=Z,1µm,20.0s
WRAB Tennant Creek 47.89 125 *i* P **P** 07 58 46.6 -1.3
WRAB pmax pmax
comp=Z,9.0nm,0.6s
WRAB Tennant Creek 47.89 125 IAms_20 IAms_20 08 20 34.9
comp=Z,1µm,20.0s
WB2 Warramunga Arr 47.90 125 P **P** 07 58 46.2 -1.8
WB2 IAms_20 IAms_20 08 20 33.8
comp=Z,1µm,20.0s
WC2 Warramunga Arr 47.90 125 IAms_20 IAms_20 08 20 34.9
comp=Z,1µm,20.0s
WB1 Warramunga Ar. 47.90 125 IAms_20 IAms_20 08 20 44.0
comp=Z,1µm,20.0s
WC3 Warramunga Arr 47.92 125 IAms_20 IAms_20 08 20 43.5
comp=Z,1µm,19.0s
WR3 Warramunga Arr 47.93 125 IAms_20 IAms_20 08 20 44.7
comp=Z,1µm,19.0s

WR4 Warramunga Arr 47.95 125 IAms_20 IAms_20 08 20 45.1
comp=Z,2µm,20.0s
MDJ Mudanjiang 47.96 34 P **P** 07 58 49.4 +1.3
MDJ ScP **ScP** 08 04 09.9 +0.9
MDJ S **S** 08 05 47.5 +3.2
MDJ pmax pmax
comp=Z,22nm,1.7s
MDJ pmax pmax
comp=Z,230nm,5.1s
MDJ LR LR
comp=Z,3µm,14.1s
MDJ LR LR
comp=Z,1µm,12.1s
MDJ LR LR
comp=Z,3µm,16.0s
MDJ Mudanjiang 47.96 34 P **P** 07 58 49.5 +1.3
MDJ IAms_20 IAms_20 08 22 08.7
comp=Z,2µm,18.0s
WR5 Warramunga Arr 47.97 125 IAms_20 IAms_20 08 20 36.7
comp=Z,1µm,21.0s
WR6 Warramunga Arr 47.99 125 IAms_20 IAms_20 08 20 48.2
comp=Z,1µm,20.0s
WR7 Warramunga Arr 48.00 125 IAms_20 IAms_20 08 20 48.7
comp=Z,1µm,20.0s
WR8 Warramunga Arr 48.02 125 IAms_20 IAms_20 08 20 48.2
comp=Z,1µm,20.0s
WR0 Warramunga Arr 48.06 125 P **P** 07 58 47.2 -2.0
WR0 IAmb IAmb 07 59 09.5
comp=Z,19nm,0.8s
WR0 IAms_20 IAms_20 08 20 31.1
comp=Z,1µm,21.0s
JGF Kuroka 48.20 48 P **P** 07 58 50.3 +0.1
JGF IAmb IAmb 07 58 57.4
comp=Z,51nm,1.0s
JGF IAms_20 IAms_20 08 21 09.4
comp=Z,1µm,18.0s
JSG Sagara 48.44 50 IAms_20 IAms_20 08 20 14.8
comp=Z,2µm,21.0s
USA0B Ussuriysk Arra 49.06 36 *i* P **P** 07 58 58.0 +1.5
USA0B Ussuriysk Arra 49.06 36 P **P** 07 58 56.2 -0.3
USA0B IAms_20 IAms_20 08 20 28.6
comp=Z,2µm,19.0s
USRK Ussuriysk Ar. 49.06 36 P **P** 07 58 57.4 +0.9
comp=Z,14nm,1.0s,baz=225,slow=5.1,SNR=19
USRK PP **PP** 08 00 56.2 +5.9
comp=Z,1.8nm,0.8s,baz=214,slow=8.9,SNR=4.5
USRK LR LR 08 20 39.5
comp=Z,2µm,19.5s,baz=214,slow=37
USRK Ussuriysk Ar. 49.06 36 P **P** 07 58 56.6 +0.1
MAJO Matsushiro 49.22 47 P **P** 07 58 57.7 -0.3
MAJO pmax pmax
comp=Z,40nm,1.5s
MAJO MLR MLR
comp=Z,1µm,18.0s
MAJO Matsushiro 49.22 47 P **P** 07 58 57.7 -0.3
MAJO IAmb IAmb 07 59 06.2
comp=Z,40nm,1.4s
MAJO Matsushiro 49.22 47 IAms_20 IAms_20 08 21 52.4
comp=Z,1µm,18.0s
MAT Matsushiro 49.22 47 P **P** 07 58 59.5 +1.5
MAT S **S** 08 06 01.4 -1.0
MJAR Matsushiro Arr 49.22 47 P **P** 07 58 58.9 +0.9
comp=Z,7.6nm,0.7s,baz=242,slow=8.5,SNR=10
MJAR PcP **PcP** 08 00 21.9 +1.0
comp=Z,8.3nm,0.9s,baz=253,slow=4.4,SNR=8.6
MJAR LR LR 08 21 55.6
comp=Z,1µm,18.2s,baz=240,slow=39
MJAR Matsushiro Arr 49.22 47 P **P** 07 58 57.6 -0.4
BVAR Borovoye Array 49.38 341 P **P** 07 58 57.5 -1.3
comp=Z,35nm,1.0s,baz=65,slow=14,SNR=24
RAYN Ar Rayn 49.42 294 P **P** 07 58 58.9 -0.9
RAYN pmax pmax
comp=Z,31nm,0.8s
RAYN Ar Rayn 49.42 294 P **P** 07 58 58.9 -0.9
RAYN IAmb IAmb 07 59 01.8
comp=Z,31nm,0.8s
BRVK Borovoye 49.44 341 *ce*P **P** 07 58 58.2 -1.1
BRVK pmax pmax
comp=Z,51nm,1.0s
BRVK Borovoye 49.44 341 P **P** 07 58 57.9 -1.4
BRVK IAmb IAmb 07 59 04.3
comp=Z,49nm,0.8s
BRVK Borovoye 49.44 341 IAms_20 IAms_20 08 23 02.6
comp=Z,1µm,18.0s
ASAR Alice Springs 49.53 130 P **P** 07 58 59.9 -0.7
comp=Z,7.4nm,1.0s,baz=309,slow=7.6,SNR=25
ASAR PcP **PcP** 08 00 22.8 +0.5
comp=Z,3.3nm,0.7s,baz=310,slow=3.2,SNR=1.8
ASAR LR LR 08 22 16.7
comp=Z,1µm,20.3s,baz=295,slow=39
ASAR Alice Springs 49.53 130 P **P** 07 59 00.2 -0.3
ASAR Alice Springs 49.53 130 P **P** 07 59 00.2 -0.3
AS31 Alice Springs 49.53 130 P **P** 07 58 59.1 -1.4
JSD Sado 49.90 46 P **P** 07 59 02.8 -0.3
JSD IAmb IAmb 07 59 09.8
comp=Z,42nm,0.9s
JSD IAms_20 IAms_20 08 18 21.4
comp=Z,1µm,22.0s
FORT Forrest 49.94 141 P **P** 07 59 04.4 +1.0
baz=50,SNR=12
FORT Forrest 49.94 141 P **P** 07 59 01.3 -2.1
FORT IAms_20 IAms_20 08 23 32.9
comp=Z,1µm,20.0s
GUMO Guam 49.94 79 LR LR 08 17 21.9
comp=Z,338nm,21.2s,baz=270,slow=33
AB31 Akbulak array 50.63 331 *i* P **P** 07 59 08.3 -0.1
ABKAR Akbulak array 50.63 331 P **P** 07 59 07.7 -0.7
ABKAR IAmb IAmb 07 59 14.2
comp=Z,91nm,1.4s
ABKAR Akbulak array 50.63 331 P **P** 07 59 07.2 -1.2
ATD Arta Tunnel 50.91 279 LR LR 08 17 22.2
comp=Z,1µm,22.0s,baz=88,slow=32
JMM Marumori 51.65 47 P **P** 07 59 17.1 +0.8
JMM IAms_20 IAms_20 08 23 43.6
comp=Z,1µm,18.0s
KLR Kul'dur 52.06 30 P **P** 07 59 20.7 +1.5
comp=Z,7.6nm,0.9s,baz=270,slow=12,SNR=8.0
KLR Kul'dur 52.06 30 *ce*P **P** 07 59 20.0 +0.9
AKTO Aktyubinsk 52.35 331 LR LR 08 23 57.0
comp=Z,602nm,18.7s,baz=144,slow=39
AKTO Aktyubinsk 52.35 331 P **P** 07 59 19.5 -1.8
BOD Bodaibo 52.42 13 *e*P **P** 07 59 21.6 -0.1
BOD pmax pmax
comp=Z,65nm,1.2s
QIS Mount Isa 52.50 123 P **P** 07 59 23.7 +0.8
baz=53,SNR=4.9
JTM Tenmabayashi 53.05 44 IAms_20 IAms_20 08 21 52.7
comp=Z,1µm,19.0s
ZEA Zeya 53.17 24 *e*P P 07 59 34.8 +7.5
ZEA pmax pmax
comp=Z,30nm,1.0s
ZEA MLR MLR
comp=E,600nm,13.0s
ABPO Ambohimpanom 53.42 240 IAms_20 IAms_20 08 21 11.4
comp=Z,1µm,18.0s
MAK Makhachkala 54.11 319 *e*P **P** 07 59 34.4 0.0
MAK *e* 08 01 34.5
MAK *e*PPP PPP 08 02 47.4
MAK *e*S **S** 08 07 09.3 -0.1
MAK *e*SS **SS** 08 10 52.5 +1.2
MAK pmax pmax
comp=Z,165nm,0.8s
MAK MLR MLR
comp=Z,642nm,15.0s
JEW Eniwo 54.21 42 IAms_20 IAms_20 08 23 30.2
comp=Z,1µm,19.0s
GNI Garni 54.83 314 P **P** 07 59 40.1 +0.2
GNI Garni 54.83 314 *ce*P **P** 07 59 39.6 -0.3
GNI pmax pmax
comp=Z,61nm,1.7s
GNI Garni 54.83 314 P **P** 07 59 39.8 -0.1
GNI IAmb IAmb 07 59 47.9
comp=Z,67nm,1.3s
ERM Erimo 55.00 43 IAms_20 IAms_20 08 25 17.1
comp=Z,1µm,19.0s
JEM Erimo 55.00 43 IAms_20 IAms_20 08 25 10.9
comp=Z,1µm,19.0s
PMG Port Moresby 55.22 107 P **P** 07 59 42.6 -0.2
comp=Z,6.2nm,0.5s,baz=264,slow=6.9,SNR=2.0
GRNR Gornyy 55.38 31 iP **P** 07 59 45.0 +1.5
GRNR pmax pmax
comp=Z,3.0nm,1.2s
GRNR MLR MLR
comp=E,790nm,14.0s
GRNR MLR MLR
comp=N,720nm,13.0s

GRNR MLR MLR
comp=Z,1µm,13.0s
ASAJ Asahikawa 55.52 41 P **P 07 59 44.9 +0.3**
comp=Z,5.6nm,0.8s,baz=263,slow=22,SNR=2.3
JKA Kamikawa-asahi 55.53 41 P **P 07 59 44.8 +0.2**
JKA IAmb IAmb 07 59 56.5
comp=Z,85nm,1.4s
JKA IAMs_20 IAMs_20 08 25 09.9
comp=Z,1µm,18.0s
SVE Sverdlovsk 55.79 338⇓*e*P **P 07 59 46.4 +0.1**
SVE *e*S **S 08 07 30.9 -0.7**
SVE pmax pmax
comp=Z,153nm,1.0s
SVE MLR MLR
comp=Z,2µm,21.0s
AKH Akhalkalaki 56.19 315 ⇓P **P 07 59 49.2 -0.4**
AKH Akhalkalaki 56.19 315 P **P 07 59 48.0 -1.6**
AKH pmax pmax
comp=Z,20nm,1.2s
AKH MLR MLR
comp=Z,2µm,21.0s
AKH Akhalkalaki 56.19 315 P **P 07 59 48.0 -1.6**
ARU Arti 56.28 337*d i*P **P 07 59 49.0 -0.8**
ARU 08 01 54.8
ARU S **S 08 07 41.2 +3.1**
ARU SS **SS 08 11 29.5 +4.4**
ARU pmax pmax
comp=Z,63nm,1.1s
ARU MLR MLR
comp=Z,2µm,21.0s
ARU Arti 56.28 337 P **P 07 59 49.2 -0.5**
BBOO Buckleboo 56.42 138 P **P 07 59 50.8 -0.3**
baz=57,SNR=5.2
BBOO Buckleboo 56.42 138 IAMs_20 IAMs_20 08 20 28.7
comp=Z,2µm,22.0s
ZEI Tsey 56.44 317 *e*P **P 07 59 49.2 -2.2**
ZEI pmax pmax
comp=Z,20nm,1.0s
MARD Mardin 56.77 310 IAMs_20 IAMs_20 08 27 41.8
comp=Z,960nm,20.0s
YSS Yuzh-Sakhalins 56.91 38 *e*P **P 07 59 56.5 +2.1**
YSS *e*S **S 08 07 46.2 -0.5**
YSS *e*PS **PnS 08 08 01.5 +2.1**
YSS *e*SS **SS 08 11 42.0 +6.7**
YSS pmax pmax
comp=Z,50nm,1.2s
YSS Yuzh-Sakhalins 56.91 38 IAMs_20 IAMs_20 08 26 59.7
comp=Z,1µm,19.0s
KIBK Kibwezi 57.03 262 P **P 07 59 58.8 +2.8**
SNR=8.1
KBZ Khabaz 57.48 318 P **P 07 59 57.2 -1.3**
comp=Z,12nm,1.0s,baz=146,slow=2.6
KBZ LR LR 08 27 56.0
comp=Z,440nm,20.8s,baz=228,slow=40
KMBO Kilima Mbogo 57.60 264 P **P 07 59 59.5 -0.7**
comp=Z,11nm,1.0s,baz=108,slow=20,SNR=3.6
KMBO LR LR 08 21 34.7
comp=Z,1µm,19.4s,baz=92,slow=33
KMBO Kilima Mbogo 57.60 264 *i* P **P 08 00 02.2 +2.0**
SNR=10
KMBO Kilima Mbogo 57.60 264 P **P 08 00 02.4 +2.2**
KMBO P **P 08 00 02.4 +2.2**
KMBO Kilima Mbogo 57.60 264 P **P 07 59 58.9 -1.3**
KMBO Kilima Mbogo 57.60 264 IAMs_20 IAMs_20 08 21 21.3
comp=Z,2µm,20.0s
YUK Yuzh-Kuril'sk 57.63 42 P P 07 59 47.7 -12
YUK *e*S **S 08 07 54.4 -1.8**
YUK MLR MLR
comp=N,726nm,15.0s
YUK MLR MLR
comp=Z,656nm,15.0s
KVAR Kislovodsk Arr 57.71 318 LR LR 08 27 09.1
comp=Z,300nm,20.2s,baz=189,slow=38
KIV Kislovodsk 57.71 318 ⇓P **P 07 59 59.1 -1.2**
KIV Kislovodsk 57.71 318 P **P 07 59 59.2 -1.2**
KIV Kislovodsk 57.71 318 *e*P **P 07 59 58.7 -1.6**
KIV pmax pmax
comp=Z,86nm,1.0s
KIV MLR MLR
comp=Z,1µm,17.0s
KIV Kislovodsk 57.71 318 P **P 07 59 58.4 -1.9**
KIV IAmb IAmb 08 00 03.3
comp=Z,36nm,1.1s
CTA Charters Tower 57.95 119 P **P 08 00 02.4 +0.1**
comp=Z,4.2nm,1.0s,baz=328,slow=8.6,SNR=3.6
CTA LR LR 08 28 59.5
comp=Z,725nm,18.1s,baz=298,slow=40
CTAO Charters Tower 57.95 119 IAMs_20 IAMs_20 08 28 55.6
comp=Z,869nm,18.0s
HTT Hallett 58.71 137 P **P 08 00 09.7 +2.4**
baz=59,SNR=5.4
TYV Tymovskoe 58.75 34 *e*P P 08 00 14.0 +6.8
TYV *e* 08 08 28.3
TYV pmax pmax
comp=Z,11nm,1.5s
TYV pmax pmax
comp=Z,100nm,3.7s
MALT Malatya 58.85 310 P **P 08 00 08.1 -0.2**
GAZ Gaziantep 59.47 309 IAMs_20 IAMs_20 08 27 39.2
comp=Z,1µm,21.0s
SOC Sochi 59.58 317 *e*P **P 08 00 10.7 -2.4**
SOC *e* 08 02 18.9
SOC *e*PPP PPP 08 03 44.2
SOC *e*S **S 08 08 23.4 +1.8**
SOC pmax pmax
comp=Z,10.0nm,0.4s
SOC MLR MLR
comp=Z,436nm,18.0s
STKA Stephens Creek 59.72 134 P **P 08 00 13.5 -0.8**
comp=Z,6.2nm,1.0s,baz=307,slow=9.1,SNR=8.1
STKA LR LR 08 28 47.0
comp=Z,868nm,20.6s,baz=295,slow=39
STKA Stephens Creek 59.72 134 P **P 08 00 13.8 -0.5**
baz=60,SNR=5.7
STKA Stephens Creek 59.72 134 P **P 08 00 13.7 -0.5**
STKA pmax pmax
comp=Z,3.0nm,1.1s
STKA MLR MLR
comp=Z,200nm,20.0s
STKA Stephens Creek 59.72 134 P **P 08 00 13.7 -0.5**
YAK Yakutsk 60.24 18 P **P 08 00 15.8 -1.5**
comp=Z,34nm,0.7s,baz=124,slow=0.8,SNR=14
YAK Yakutsk 60.24 18 *e*P **P 08 00 17.0 -0.3**
YAK *e**PP **sP 08 00 27.8 -0.1**
YAK *e* 08 01 06.6
YAK *e* 08 02 29.7
YAK *e*S **S 08 08 27.3 -2.2**
YAK *e**SS sS 08 08 58.2 +16
YAK pmax pmax
comp=Z,78nm,0.9s
YAK pmax pmax
comp=N,51nm,1.3s
YAK pmax pmax
comp=E,50nm,1.5s
YAK pmax pmax
comp=Z,8.0nm,0.6s
YAK smax smax
comp=E,82nm,12.8s
YAK MLR MLR
comp=Z,2µm,14.0s
YAK MLR MLR
comp=E,1µm,13.0s
YAK MLR MLR
comp=N,985nm,12.0s
YAK Yakutsk 60.24 18 P **P 08 00 16.4 -0.9**
YAK IAMs_20 IAMs_20 08 27 36.8
comp=Z,920nm,21.0s
VRH Novokhopyorsk 61.33 325 *e*P **P 08 00 23.1 -1.8**
VRH pmax pmax
comp=Z,130nm,1.9s
VRH MLR MLR
comp=Z,1µm,19.0s
KIRV Kirov 61.41 335 P **P 08 00 25.2 -0.1**
comp=Z,32nm,0.8s,baz=115,slow=6.1,SNR=17
KIRV Kirov 61.41 335 *i* P **P 08 00 25.5 +0.2**
ANN Anapa 61.53 317 *e*P **P 08 00 23.6 -2.8**
ANN pmax pmax
comp=Z,28nm,1.2s
ANN MLR MLR
comp=Z,1µm,20.0s
NRIK Noril'sk 61.89 357 P **P 08 00 27.8 -0.6**
comp=Z,9.2nm,0.6s,baz=157,slow=6.3,SNR=28
NRIK LR LR 08 31 32.8
comp=Z,1µm,20.2s,baz=192,slow=40
NRIK Noril'sk 61.89 357*ce*P **P 08 00 27.6 -0.8**
NRIK pmax pmax
comp=Z,10.0nm,0.8s
CSS Mathiatis 62.05 306 IAMs_20 IAMs_20 08 29 41.3
comp=Z,1µm,20.0s
DIKM Dikmen 62.11 313 ⇓P **P 08 00 28.7 -1.7**
CMSA Cobar Meteorol 62.54 131 P **P 08 00 33.8 +0.4**
baz=63,SNR=8.2
VORD Divnogorie 62.62 324 *e*P **P 08 00 31.2 -2.4**
VORD pmax pmax
comp=Z,30nm,0.5s
RMQ Roma 62.64 125 P **P 08 00 35.5 +1.3**
baz=63,SNR=7.3
VSR Storozhevoye 62.79 325 *e*P **P 08 00 32.5 -2.3**
VSR pmax pmax
comp=Z,30nm,0.9s
VSR MLR MLR
comp=Z,780nm,19.0s
BR131 Keskin Array S 62.81 311 *i* P **P 08 00 33.1 -2.2**
BR131 Keskin Array S 62.81 311 P **P 08 00 32.9 -2.5**
BRTR Keskin Array B 62.81 311 P **P 08 00 33.1 -2.2**
comp=Z,5.4nm,0.8s,baz=120,slow=7.3,SNR=23
BRTR LR LR 08 30 35.1
comp=Z,273nm,21.6s,baz=121,slow=39
BRTR Keskin Array B 62.81 311 P **P 08 00 32.0 -3.4**
ILGA Ilgaz 63.08 312 P **P 08 00 35.6 -1.6**
ILGA IAmb IAmb 08 00 45.0
comp=Z,28nm,1.1s
ILGA IAMs_20 IAMs_20 08 30 54.6
comp=Z,978nm,21.0s
BZK Bozkurt 63.09 313 ⇓P **P 08 00 35.9 -1.0**
LPSR Galich'ya Gora 63.49 326 *e*P **P 08 00 37.5 -1.9**
LPSR pmax pmax
comp=Z,40nm,0.9s
LPSR MLR MLR
comp=Z,580nm,19.0s
MBAR Mbarara 63.95 266 P **P 08 00 45.3 +1.9**
MBAR Mbarara 63.95 266 IAMs_20 IAMs_20 08 24 51.6
comp=Z,1µm,21.0s
EIDS Eidsvold 64.11 123 IAMs_20 IAMs_20 08 33 08.4
comp=Z,1µm,18.0s
MDUB Mudurnu 64.81 311 IAMs_20 IAMs_20 08 31 59.4
comp=Z,1µm,19.0s
ELL Elmali 65.10 307 P **P 08 00 49.0 -1.4**
ELL pmax pmax
comp=Z,169nm,1.0s
ELL MLR MLR
comp=Z,2µm,20.0s
ELL Elmali 65.10 307 P **P 08 00 49.0 -1.4**
TOO Toolangi 65.46 137 P **P 08 00 53.6 +1.0**
baz=66,SNR=6.8
MOS Moscow 65.48 329 *e*P **P 08 00 51.2 -1.1**
MOS *e*S **S 08 09 31.9 -3.5**
MOS pmax pmax
comp=Z,132nm,1.1s
MOS MLR MLR
comp=Z,1µm,20.0s
OBN Obninsk 65.78 328⇑ *e*P **P 08 00 53.5 -0.8**
OBN *i* *SP **pP 08 00 58.1 -3.8**
OBN *e* 08 01 08.9
OBN *e*S **S 08 09 38.2 -0.8**
OBN *e*SSS SSS 08 16 52.9
OBN pmax pmax
comp=Z,50nm,1.0s
OBN MLR MLR
comp=Z,960nm,20.0s
OBN Obninsk 65.78 328 IAMs_20 IAMs_20 08 32 47.4
comp=Z,1µm,21.0s
MANT Manisa 66.44 309 IAMs_20 IAMs_20 08 31 01.7
comp=Z,2µm,22.0s
ARMA Armidale 66.58 128 IAMs_20 IAMs_20 08 33 07.6
comp=Z,991nm,21.0s
KLMR Klimovskoe 66.85 334 *e*P **P 08 00 58.5 -2.5**
KLMR pmax pmax
comp=Z,71nm,1.1s
KLMR Klimovskoe 66.85 334 *e*P **P 08 00 58.6 -2.5**
KLMR *e*P **P 08 00 58.6 -2.5**
KLMR *e*P **P 08 00 58.6 -2.5**
KLMR AMP 08 01 10.2
comp=Z,71nm,1.1s
KLMR LQ LQ 08 24 30.1
KLMR LQ LQ 08 24 30.1
KLMR LR LR 08 25 53.4
KLMR AMP 08 36 45.6
comp=Z,245nm,16.1s
MA2 Magadan 66.96 27 IAMs_20 IAMs_20 08 34 23.9
comp=Z,772nm,20.0s
KARP Karpathos 67.12 305 P **P 08 01 01.8 -1.6**
KARP IAMs_20 IAMs_20 08 35 04.7
comp=Z,902nm,21.0s
HNR Honiara 67.47 103 LR LR 08 33 17.8
comp=Z,159nm,19.7s,baz=268,slow=38
TIXI Tiksi 67.52 11*d i*P **P 08 01 04.1 -1.0**
TIXI Tiksi 67.52 11 P **P 08 01 03.9 -1.1**
TIXI IAMs_20 IAMs_20 08 33 19.4
comp=Z,892nm,21.0s
TIRR Tirgusor 67.65 315 P **P 08 01 04.5 -1.9**
TIRR Tirgusor 67.65 315 P **P 08 01 04.5 -1.9**
CFR Carcaliu 67.99 316 ⇑P **P 08 01 07.5 -1.1**
CFR Carcaliu 67.99 316 P **P 08 01 07.4 -1.1**
PRD Provadia 68.12 314 *e*P **P 08 01 08.5 -0.9**
PEA0B Petropavlovsk- 68.15 35 IAMs_20 IAMs_20 08 31 46.7
comp=Z,897nm,20.0s
PETK Petropavlovsk- 68.15 35 LR LR 08 32 19.1
comp=Z,646nm,19.5s,baz=235,slow=37
SORM Soroca 68.48 319 ⇑P **P 08 01 10.3 -1.3**
SORM Soroca 68.48 319 P **P 08 01 10.2 -1.3**
AKASG Malin Array Be 68.55 322 P **P 08 01 09.9 -2.0**
comp=Z,3.7nm,0.8s,baz=88,slow=5.0,SNR=23
AKASG LR LR 08 35 55.0
comp=Z,518nm,18.4s,baz=110,slow=40
AKASG Malin Array Be 68.55 322 P **P 08 01 09.7 -2.2**
AKBB Malin Array Si 68.55 322*ce*P **P 08 01 10.3 -1.7**
AKBB Malin Array Si 68.55 322 P **P 08 01 10.1 -1.9**
AKBB IAMs_20 IAMs_20 08 35 24.6
comp=Z,739nm,20.0s
KIEV Kiev 68.56 322 P **P 08 01 09.0 -3.0**
ALN Alexandroupoli 68.74 311 P **P 08 01 12.0 -1.3**
ALN pmax pmax
comp=Z,17nm,1.0s
ALN Alexandroupoli 68.74 311 P **P 08 01 12.0 -1.3**
ALN IAmb IAmb 08 01 22.0
comp=Z,16nm,1.0s
RAZG Razgrad 68.83 314 ⇑P **P 08 01 12.6 -1.3**
IDI Anoyia 68.94 305 ⇑P **P 08 01 13.4 -1.4**
IDI Anoyia 68.94 305 P **P 08 01 13.3 -1.5**
IDI IAmb IAmb 08 01 17.4
comp=Z,17nm,0.8s
TMCR Tamitsa 69.02 337 *e*P **P 08 01 14.2 -0.4**
TMCR pmax pmax
comp=Z,59nm,1.0s
BISRR Bisoca 69.05 316 ⇓P **P 08 01 14.1 -1.2**
VRI Vrincioaia 69.09 316 ⇑P **P 08 01 14.9 -0.7**
VRI Vrincioaia 69.09 316 P **P 08 01 14.8 -0.7**
SEY Seymchan 69.14 25 P **P 08 01 15.7 +0.3**
comp=Z,12nm,1.0s,baz=274,slow=7.4,SNR=8.6
PLOR Plostina 69.14 316 ⇑P **P 08 01 14.9 -0.9**
PLOR Plostina 69.14 316 P **P 08 01 14.9 -0.9**
TESR Tescani 69.27 317 ⇑P **P 08 01 15.2 -1.3**
KDZ Kurdzhali 69.32 312 *e*P **P 08 01 15.8 -1.2**
LSZ Lusaka 69.36 251 P **P 08 01 18.7 +0.9**
LSZ P **P 08 01 18.7 +0.9**
LSZ Lusaka 69.36 251 P **P 08 01 17.8 0.0**
LSZ pmax pmax
comp=Z,28nm,1.2s
LSZ Lusaka 69.36 251 P **P 08 01 17.8 0.0**
LSZ IAmb IAmb 08 01 25.3
comp=Z,28nm,1.1s
MLR Muntele Rosu 69.56 316 ⇑P **P 08 01 17.4 -1.1**
MLR Muntele Rosu 69.56 316 P **P 08 01 17.5 -1.1**
MLR pmax pmax
comp=Z,58nm,1.1s
MLR MLR MLR
comp=Z,700nm,20.0s
MLR Muntele Rosu 69.56 316 P **P 08 01 17.5 -1.1**
MLR IAMs_20 IAMs_20 08 37 12.3
comp=Z,744nm,20.0s
BIZ Bicaz 69.72 317 ⇓P **P 08 01 18.5 -0.9**
KMPD K-Podol'skiy 69.81 319 P **P 08 01 18.0 -1.8**
RZN Rozhen 69.84 312 *e*P **P 08 01 18.8 -1.6**
HORU Horodok 69.97 320 P **P 08 01 18.9 -1.9**
DOPR Dopca 70.03 316 ⇓P **P 08 01 20.0 -1.3**
VOIR 70.18 316 ⇑P **P 08 01 20.7 -1.5**
VOIR 70.18 316 P **P 08 01 20.7 -1.5**
MICGM Minsk 70.33 325 *e* **P 08 01 23.0 +0.1**
MNK Minsk 70.33 325 *e*P **P 08 01 23.0 +0.1**
BURAR Bucovina Array 70.44 318 ⇑P **P 08 01 23.1 -0.8**
BURAR Bucovina Array 70.44 318 P **P 08 01 23.1 -0.8**
BURAR Bucovina Array 70.44 318 P **P 08 01 22.9 -1.0**
ARR Arges 70.45 315 ⇑P **P 08 01 22.9 -1.1**
BUR08 Bucovina Ar. S 70.46 318 P **P 08 01 22.5 -1.5**
MMB Musomiste 70.56 311 *e*P **P 08 01 24.6 0.0**
KSV Kosov 70.67 319 P **P 08 01 23.1 -2.0**
NACGM Naroch 71.05 326 *e* **P 08 01 26.0 -1.2**
NACGM *e*LR LR 08 37 42.0
VTS Vitosha 71.06 312 *e*P **P 08 01 26.1 -1.7**
KKB Krupnik 71.08 312 *e*P **P 08 01 25.7 -2.0**
IDID Didziasalis 71.17 326 *e*P **P 08 01 27.5 -0.5**
LIT Litokhoron 71.32 310 P **P 08 01 27.2 -2.1**
LIT pmax pmax
comp=Z,25nm,0.9s
LIT Litokhoron 71.32 310 P **P 08 01 27.2 -2.1**
LIT IAmb IAmb 08 01 33.5
comp=Z,25nm,0.9s
VAY Valandovo 71.39 311 *i* P **P 08 01 27.7 -1.9**
IIGN Ignalina 71.47 326 *e*P **P 08 01 28.4 -1.4**
IZAR Zarasai 71.55 326 *e*P **P 08 01 29.5 -0.7**
ISAL Salakas 71.58 326 *e*P **P 08 01 29.0 -1.4**
MORS Morshin 71.58 319 P **P 08 01 29.7 -0.9**
LVV L'vov 71.61 320 *e*P **P 08 01 28.6 -2.2**
STIP Stip 71.72 311 *i* P **P 08 01 28.7 -2.9**
HERR Herculane 71.94 315 ⇑P **P 08 01 31.2 -1.6**
VSU Vasula 71.99 329 *e*P **P 08 01 32.9 0.0**
APA Apatity 72.24 339⇓ *i*P **P 08 01 33.5 -0.7**
APA *i* 08 01 57.0
APA pmax pmax
comp=Z,27nm,0.9s
KWP Kalwaria Pacla 72.43 320 *e*P **P 08 01 36.1 +0.4**
KWP Kalwaria Pacla 72.43 320 P **P 08 01 34.0 -1.7**
KWP pmax pmax
comp=Z,56nm,1.2s
KWP Kalwaria Pacla 72.43 320 P **P 08 01 34.0 -1.7**
KWP IAmb IAmb 08 01 42.0
comp=Z,56nm,1.2s
UZH Uzhgorod 72.54 319 *e*P **P 08 01 39.2 +2.8**
SIRR Siria 72.64 316 ⇓P **P 08 01 35.7 -1.4**
OHR Ohrid 72.70 311 *i* P P 08 01 29.9 -7.7
PABE Paberze 72.76 326 *e*P **P 08 01 36.6 -0.9**
SUW Suwalki 72.91 324 *e*P **P 08 01 37.5 -0.9**
SUW Suwalki 72.91 324 P **P 08 01 36.6 -1.8**
SUW pmax pmax
comp=Z,150nm,1.2s
SUW MLR MLR
comp=Z,900nm,18.0s
SUW Suwalki 72.91 324 P **P 08 01 36.6 -1.8**
SUW IAMs_20 IAMs_20 08 38 56.8
comp=Z,937nm,18.0s
FIA1 FINESS Array S 73.11 332 P **P 08 01 38.6 -0.8**
FIA1 IAmb IAmb 08 01 50.0
comp=Z,37nm,0.9s
FINES FINESS Array B 73.11 332 P **P 08 01 38.5 -1.0**
comp=Z,18nm,0.8s,baz=97,slow=7.9,SNR=28
FINES LR LR 08 38 06.0
comp=Z,622nm,20.3s,baz=111,slow=39
FINES FINESS Array B 73.11 332 P **P 08 01 38.9 -0.6**
FINES FINESS Array B 73.11 332 P **P 08 01 38.9 -0.6**
CRVS Cervenica-Dubn 73.13 319 *e*P **P 08 01 39.1 -0.8**
CRVS pmax pmax
comp=Z,84nm,1.3s
CRVS Cervenica-Dubn 73.13 319 *e*P **P 08 01 39.1 -0.8**
DIVS Divibare 73.57 314 P **P 08 01 40.4 -2.3**
KECS Kecovo 73.71 318 *e*P **P 08 01 42.5 -0.8**
KECS pmax pmax
comp=Z,6.0nm,1.0s
KECS Kecovo 73.71 318 *e*P **P 08 01 42.5 -0.8**
NIE Niedzica 73.95 319 *e*P **P 08 01 44.6 -0.1**
PDG Podgorica 73.96 312 ⇓P **P 08 01 43.6 -1.3**
PDG Podgorica 73.96 312 P **P 08 01 43.4 -1.5**
PBUR Paburge 73.99 326 *e*P **P 08 01 43.7 -1.1**
PSZ Piszkesteto 74.04 318 P **P 08 01 44.2 -1.1**
PSZ pmax pmax
comp=Z,33nm,1.4s
PSZ Piszkesteto 74.04 318 P **P 08 01 44.2 -1.1**
PSZ IAmb IAmb 08 01 56.2
comp=Z,33nm,1.4s
OJC Ojcow 74.37 320 *e*P **P 08 01 46.6 -0.6**
OJC Ojcow 74.37 320 P **P 08 01 44.9 -2.2**
OJC pmax pmax
comp=Z,25nm,0.9s
OJC Ojcow 74.37 320 P **P 08 01 44.9 -2.2**
OJC IAmb IAmb 08 01 56.4
comp=Z,25nm,0.9s
CASY Casey 74.57 173 IAMs_20 IAMs_20 08 28 01.5
comp=Z,578nm,19.0s
VYHS Vyhne 74.80 318 *e*P **P 08 01 48.8 -0.9**
VYHS pmax pmax
comp=Z,25nm,1.4s
VYHS Vyhne 74.80 318 *e*P **P 08 01 48.8 -0.9**
KEV Kevo 75.22 341 P **P 08 01 50.8 -0.8**
KEV pmax pmax
comp=Z,80nm,1.5s
KEV MLR MLR
comp=Z,2µm,20.0s
KEV Kevo 75.22 341 P **P 08 01 50.8 -0.8**
KEV IAmb IAmb 08 01 57.4
comp=Z,80nm,1.5s
BOSA Boshof 75.59 238 P **P 08 01 54.7 0.0**
comp=Z,9.8nm,0.8s,baz=92,slow=6.2,SNR=13
BOSA LR LR 08 33 04.5
comp=Z,275nm,18.0s,baz=75,slow=34
BOSA Boshof 75.59 238 P **P 08 01 54.7 0.0**
BOSA pmax pmax
comp=Z,48nm,1.4s
BOSA Boshof 75.59 238 P **P 08 01 54.7 0.0**
BOSA IAmb IAmb 08 02 23.9
comp=Z,48nm,1.4s
JAVC Velka Javorina 75.61 318 *e*P **P 08 01 54.8 +0.4**
ARD3 ARCESS Array S 75.64 340 P **P 08 01 52.2 -1.9**
ARD3 IAmb IAmb 08 02 03.5
comp=Z,68nm,1.4s
ARD4 ARCESS Array S 75.64 340 P **P 08 01 53.0 -1.1**
ARC3 ARCESS Array S 75.65 340 P **P 08 01 53.0 -1.1**
ARD5 ARCESS Array S 75.65 340 P **P 08 01 55.9 +1.7**
ARC2 ARCESS Array S 75.65 340 P **P 08 01 52.8 -1.4**
ARC2 IAmb IAmb 08 02 03.5
comp=Z,64nm,1.3s
ARC4 ARCESS Array S 75.65 340 P **P 08 01 53.2 -0.9**
ARB2 ARCESS Array S 75.65 340 P **P 08 01 53.0 -1.1**
ARB3 ARCESS Array S 75.65 340 P **P 08 01 53.0 -1.1**
ARA2 ARCESS Array S 75.65 340 P **P 08 01 53.0 -1.1**
ARA0 ARCESS Array S 75.66 340 P **P 08 01 53.5 -0.7**
ARA1 ARCESS Array S 75.66 340 P **P 08 01 53.0 -1.2**
ARA1 IAmb IAmb 08 02 03.5
comp=Z,70nm,1.4s
ARCES ARCESS Array B 75.66 340 P **P 08 01 53.8 -0.4**
comp=Z,31nm,1.1s,baz=97,slow=7.8,SNR=13
ARCES LR LR 08 37 51.8
comp=Z,2µm,21.1s,baz=105,slow=38
SMOL Smolenice 75.74 318 *e*P **P 08 01 55.0 -0.1**
SMOL Smolenice 75.74 318 *e*P **P 08 01 55.0 -0.1**
MORC Moravsky Berou 75.77 319 ⇓P **P 08 01 54.8 -0.6**
MORC Moravsky Berou 75.77 319 *e*P **P 08 01 54.7 -0.6**
MORC Moravsky Berou 75.77 319 P **P 08 01 54.5 -0.8**
MORC pmax pmax
comp=Z,46nm,1.3s
MORC Moravsky Berou 75.77 319 P **P 08 01 54.5 -0.8**
MORC IAmb IAmb 08 02 02.0
comp=Z,46nm,1.3s
MODS Modra-Piesok 75.83 318 *e*P **P 08 01 54.2 -1.4**
MODS pmax pmax
comp=Z,61nm,1.6s
MODS Modra-Piesok 75.83 318 *e*P **P 08 01 54.2 -1.4**
ZST Bratislava 75.93 318 *e*P **P 08 01 55.3 -0.8**
ZST pmax pmax
comp=Z,193nm,1.6s
ZST Bratislava 75.93 318 *e*P **P 08 01 55.3 -0.8**
KRLC Kraliky 76.29 320 *e*P **P 08 01 58.2 0.0**
KRLC *e*pP **pwP 08 02 07.4 -1.3**
BILL Bilibino 76.32 22*d i*P **P 08 01 58.9 +0.9**
BILL *e* 08 02 11.6
BILL SSS SSS 08 19 57.0
BILL pmax pmax
comp=Z,9.0nm,1.0s
BILL MLR MLR
comp=Z,3µm,18.0s
VRAC Vranov 76.35 319 *e*P **P 08 01 59.4 +0.9**
DZM Mont Dzumac 76.45 115 *e*S **S 08 11 40.5 -3.6**
comp=Z,132nm,25.4s
DZM *e*SS **SS 08 16 38.4 -1.0**

comp=Z,389nm,32.3s
DZM eLR LR 08 25 38.7
comp=Z,1µm,29.4s
KRUC Moravsky 76.46 319 *e*P **P 08 01 58.3 -0.9**
DPC Dobruska-Polom 76.60 320 *e*P **P 08 02 00.1 +0.1**
DPC *e*x x 08 02 06.5
KSP Ksiaz 76.66 320 *e*P **P 08 02 00.2 0.0**
KSP Ksiaz 76.66 320 P **P 08 02 00.5 +0.3**
KSP pmax pmax
comp=Z,33nm,1.5s
OSTC Ostas 76.69 320 *e*P **P 08 02 00.2 -0.2**
OSTC *e*pP **pP 08 02 06.6 -1.6**
CONA Conrad Observa 76.74 317 *e*P **P 08 02 00.2 -0.6**
comp=Z,18nm,1.8s
CHVC Chvalec 76.79 320 *e*P **P 08 02 00.7 -0.3**
CHVC *e*x x 08 02 06.5
UPC Upice 76.81 320 *e*P **P 08 02 01.1 0.0**
UPC *e*pP **pP 08 02 08.2 -0.7**
ARSA Arzberg 76.93 317 *e*P **P 08 02 01.6 -0.3**
comp=Z,29nm,1.4s
SOKA Soboth 77.24 316 *e*P **P 08 02 03.3 -0.4**
comp=Z,16nm,1.0s
OBKA Obir 77.56 316 *e*P **P 08 02 05.2 -0.3**
comp=Z,35nm,1.3s
PRU Pruhonice 77.72 319 *e*P **P 08 02 06.3 +0.1**
MOA Molln 77.81 317 *e*P **P 08 02 06.2 -0.6**
comp=Z,14nm,1.1s
PBCC Pribram 78.06 319 *e*P **P 08 02 07.6 -0.5**
PBCC *e*x x 08 02 14.1
BRG Berggiesshubel 78.15 320 *e*P **P 08 02 08.8 +0.2**
comp=Z,28nm,1.7s
BRG *i* 08 02 14.1
comp=Z,55nm,1.6s
BRG Berggiesshubel 78.15 320 *e*P **P 08 02 08.8 +0.2**
BRG *i* 08 02 14.1
BRG pmax pmax
comp=Z,28nm,1.7s
BRG pmax pmax
comp=Z,55nm,1.6s
MYKA Terra Mystica 78.19 316 *e*P **P 08 02 08.2 -0.9**
comp=Z,7.0nm,0.8s
GEC2 GERESS Array S 78.22 318 P **P 08 02 08.0 -1.2**
GEC2 IAmb IAmb 08 02 16.6
comp=Z,19nm,0.9s
GERES GERESS Array B 78.22 318 P **P 08 02 08.3 -0.9**
comp=Z,7.8nm,0.9s,baz=86,slow=5.6,SNR=38
GERES LR LR 08 43 06.9
comp=Z,234nm,18.1s,baz=79,slow=41
GERES GERESS Array B 78.22 318 P **P 08 02 08.0 -1.2**
PRED Cave del Predi 78.24 316 P **P 08 02 08.2 -1.1**
PRED IAmb IAmb 08 02 18.1
comp=Z,26nm,1.0s
MAW Mawson 78.25 192 P **P 08 02 09.6 +0.9**
comp=Z,6.1nm,0.7s,baz=42,slow=4.0,SNR=17
MAW LR LR 08 32 03.2
comp=Z,631nm,18.9s,baz=44,slow=32
MAW Mawson 78.25 192 P **P 08 02 10.5 +1.8**
baz=78,SNR=8.8
MAW Mawson 78.25 192 P **P 08 02 07.1 -1.5**
KHC Kasperske Hory 78.31 319 *e*P **P 08 02 08.4 -1.2**
KHC *e*pP **PcP 08 02 19.1 +0.2**
ZOU Zoufplan 78.65 316 P **P 08 02 10.1 -1.6**
ZOU IAmb IAmb 08 02 27.4
comp=Z,28nm,1.1s
CLL Collm 78.76 321 *i* P **P 08 02 11.7 -0.2**
comp=Z,48nm,1.7s
CLL *i* (PcP) **pP 08 02 16.8 -2.9**
comp=Z,48nm,1.7s
CLL *e*PP **PP 08 05 04.0 -6.2**
CLL *e*S **S 08 12 09.0 +1.1**
CLL *e*SS **SS 08 17 12.0 -0.5**
CLL *e*SSS SSS 08 20 42.0
CLL *e*(SSSS) 08 22 30.0
CLL LmV 08 43 00.0
comp=Z,600nm,18.6s
CLL Collm 78.76 321 *i* P **P 08 02 11.7 -0.2**
CLL *i* 08 02 16.8
CLL *e*S **S 08 12 09.0 +1.1**
CLL pmax pmax
comp=Z,48nm,1.7s
CLL MLR MLR
comp=Z,600nm,18.6s
CLL Collm 78.76 321 P **P 08 02 10.3 -1.7**
CLL IAmb IAmb 08 02 18.3
comp=Z,32nm,1.4s
CLL IAMs_20 IAMs_20 08 43 07.6
comp=Z,584nm,21.0s
WET Wettzell 78.77 319 P **P 08 02 12.2 +0.1**
STAL STALIGIAL 78.83 316 P **P 08 02 10.6 -1.9**
ABTA Abfaltersbach 78.97 316 *e*P **P 08 02 12.2 -1.1**
comp=Z,26nm,1.6s
CIMO Cimolais 79.02 316 P **P 08 02 12.2 -1.3**
CIMO IAmb IAmb 08 02 22.8
comp=Z,45nm,1.1s
NKC Novy Kostel 79.08 320 *e*P **P 08 02 13.7 -0.1**
CTI Castel Tesino 79.57 315 P **P 08 02 15.8 -0.8**
CTI pmax pmax
comp=Z,42nm,1.1s
CTI Castel Tesino 79.57 315 P **P 08 02 15.8 -0.8**
CTI IAmb IAmb 08 02 23.9
comp=Z,42nm,1.1s
WTTA Wattenberg 79.58 317 *i* P **P 08 02 15.5 -1.2**
comp=Z,14nm,1.1s,SNR=6.5
WATA Walderalm 79.62 317 *e*P **P 08 02 15.9 -1.0**
comp=Z,46nm,1.5s
GRA1 Grafenberg Arr 79.86 319 P **P 08 02 17.6 -0.5**
GRA1 IAmb IAmb 08 02 45.2
comp=Z,28nm,1.0s
GRF Grafenberg Arr 79.86 319 P **P 08 02 17.6 -0.5**
GRF pmax pmax
comp=Z,28nm,1.0s
GRF Grafenberg Arr 79.86 319 *e*P **P 08 02 18.3 +0.3**
comp=Z,55nm,1.4s,baz=101,slow=4.9
SQTA Sankt Quirin 79.87 317 *e*P **P 08 02 17.0 -1.2**
comp=Z,13nm,1.0s
NC405 NORSAR Array S 79.89 331 P **P 08 02 17.2 -0.7**
MOTA Moosalm 79.94 317 *e*P **P 08 02 17.3 -1.4**
comp=Z,20nm,1.0s
NC602 NORSAR Array S 79.96 330 P **P 08 02 17.1 -1.1**
NC602 IAmb IAmb 08 02 25.2
comp=Z,52nm,0.9s
NORES NORESS Array B 79.96 330 P **P 08 02 18.1 -0.2**
NORES pmax pmax
comp=Z,17nm,0.9s
ZCCA Zocca 80.06 314 P **P 08 02 18.5 -0.8**
ZCCA IAmb IAmb 08 02 40.4
comp=Z,51nm,1.0s
NC303 NORSAR Array S 80.06 331 P **P 08 02 18.4 -0.4**
NB201 NORSAR Array S 80.09 331 P P 08 02 11.4 -7.7
TSUM Tsumeb 80.11 249 IAMs_20 IAMs_20 08 34 15.9
comp=Z,1µm,20.0s
NB2 NORSAR Subarra 80.13 331 P **P 08 02 18.1 -1.2**
comp=Z,29nm,1.1s,baz=92,slow=5.9
NB2 NORSAR Subarra 80.13 331 P **P 08 02 18.1 -1.2**
comp=Z,29nm,1.1s,baz=92,slow=5.9
NOA NORSAR Array B 80.13 331 P **P 08 02 18.1 -1.2**
comp=Z,9.5nm,1.0s,baz=93,slow=5.5,SNR=23
NOA LR LR 08 41 34.4
comp=Z,584nm,19.7s,baz=115,slow=38
RETA Reutte 80.17 317 *e*P **P 08 02 18.9 -1.0**
comp=Z,64nm,1.6s
FETA Feichten 80.20 316 *i* P **P 08 02 18.7 -1.3**
comp=Z,13nm,0.9s,SNR=8.0
SPA0 Spitsbergen Ar 80.21 348 P **P 08 02 17.7 -1.7**
SPA0 IAmb IAmb 08 02 25.6
comp=Z,71nm,1.1s
NAO01 NORSAR Array S 80.28 330 P **P 08 02 18.4 -1.6**
NAO01 IAmb IAmb 08 02 28.8
comp=Z,67nm,1.2s
SUR Sutherland 80.32 235 P **P 08 02 22.4 +1.3**
NBO00 NORSAR Array S 80.34 331 P **P 08 02 21.1 +0.8**
NBO00 IAmb IAmb 08 02 31.8
comp=Z,81nm,1.4s
NC204 NORSAR Array S 80.36 331 P **P 08 02 20.7 +0.2**
FUORN Ofenpass-Fuorn 80.52 316 P **P 08 02 20.5 -1.4**
DAVA Damuels 80.77 317 *e*P **P 08 02 22.6 -0.5**
comp=Z,58nm,1.9s
KONO Kongsberg 80.90 329 P **P 08 02 22.7 -0.7**
KONO pmax pmax
comp=Z,56nm,1.4s
KONO Kongsberg 80.90 329 P **P 08 02 22.6 -0.7**
KONO IAmb IAmb 08 02 44.0
comp=Z,56nm,1.4s
MUD Monsted U'grnd 81.11 326 *i* P P 08 02 32.0 +7.5
MUD pmax pmax
comp=Z,16nm,0.9s
MUD Monsted U'grnd 81.11 326 *i* P P 08 02 32.0 +7.5
comp=Z,16nm,0.9s
MUD Monsted U'grnd 81.11 326 *i* P P 08 02 32.0 +7.5
MUD IAmb IAmb 08 02 32.7
comp=Z,16nm,0.9s
TUE Stuetta 81.16 316 P **P 08 02 24.4 -0.9**
TUE IAmb IAmb 08 02 41.9
comp=Z,21nm,0.9s
KBS Kingsbay 81.19 349 IAMs_20 IAMs_20 08 42 23.1
comp=Z,795nm,20.0s
KEST Kesra 81.61 305 P **P 08 02 27.9 +0.2**
comp=Z,6.6nm,0.8s,baz=37,slow=9.2,SNR=2.8
KEST LR LR 08 43 55.7
comp=Z,320nm,19.5s,baz=354,slow=40
KEST Kesra 81.61 305 IAMs_20 IAMs_20 08 41 33.8
comp=Z,759nm,19.0s
BFO Black Forest 81.79 318 P **P 08 02 25.1 -3.3**
BFO pmax pmax
comp=Z,12nm,1.1s
BFO Black Forest 81.79 318 P **P 08 02 25.1 -3.3**
CDF Champ du Feu 82.49 318 *e*P **P 08 02 31.4 -0.7**
CDF pmax pmax
comp=Z,32nm,1.7s
SENIN Lac Senin/Sane 82.58 316 P **P 08 02 31.0 -1.8**
SENIN IAmb IAmb 08 02 41.0
comp=Z,23nm,1.1s
SBF Sospel 82.62 313 *e*P **P 08 02 32.5 -0.4**
SBF pmax pmax
comp=Z,25nm,0.8s
LPG La Plagne 83.01 315 *e*P **P 08 02 34.9 -0.2**
LPG pmax pmax
comp=Z,16nm,0.9s
LPL La Plagne 83.02 315 *e*P **P 08 02 34.9 -0.2**
LPL pmax pmax
comp=Z,31nm,0.9s
BNI Bardonecchia 83.09 314 P **P 08 02 33.6 -1.8**
BNI pmax pmax
comp=Z,18nm,1.0s
BNI Bardonecchia 83.09 314 P **P 08 02 33.6 -1.8**
BNI IAmb IAmb 08 02 45.8
comp=Z,18nm,1.0s
HAU Haudompre 83.13 317 *e*P **P 08 02 34.8 -0.6**
HAU pmax pmax
comp=Z,22nm,1.0s
CABF La Chapelle 83.40 316 *e*P **P 08 02 36.8 -0.1**
CABF pmax pmax
comp=Z,72nm,1.7s
ORIF Oris-en-Rattie 83.67 314 *e*P **P 08 02 40.6 +2.3**
ORIF pmax pmax
comp=Z,21nm,1.2s
BAIF Baives 84.38 320 *e*P **P 08 02 41.8 +0.1**
BAIF pmax pmax
comp=Z,76nm,1.6s
VIVF Saint-Julien-l 84.53 314 *e*P **P 08 02 42.3 -0.3**
VIVF pmax pmax
comp=Z,38nm,1.5s
LOR Lormes 84.87 317 *e*P **P 08 02 43.8 -0.4**
LOR pmax pmax
comp=Z,29nm,1.2s
SMF Signal de Mont 84.94 316 *e*P **P 08 02 44.1 -0.5**
SMF pmax pmax
comp=Z,34nm,1.3s
SSF Saint Saulge 85.13 317 *e*P **P 08 02 45.3 -0.2**
SSF pmax pmax
comp=Z,62nm,1.6s
SYO Syowa Base 85.15 197 *e*P **P 08 02 45.0 0.0**
SYO Syowa Base 85.15 197 *e*pP **P 08 02 47.6 +2.6**
AVF Avril sur Loir 85.26 316 *e*P **P 08 02 45.7 -0.5**
AVF pmax pmax
comp=Z,35nm,1.4s
RPZ Rata Peaks 85.66 135 LR LR 08 40 33.0
comp=Z,660nm,21.8s,baz=282,slow=35
TAM Tamanrasset 86.06 292 IAMs_20 IAMs_20 08 42 26.6
comp=Z,809nm,20.0s
TCF Toulx Ste Croi 86.10 316 *e*P **P 08 02 50.3 -0.1**
TCF pmax pmax
comp=Z,60nm,1.7s
MTLF Montolieu 86.44 313 *e*P **P 08 02 52.1 0.0**
MTLF pmax pmax
comp=Z,27nm,1.3s
RJF Les Rejaudoux 86.70 315 *e*P **P 08 02 52.7 -0.7**
RJF pmax pmax
comp=Z,48nm,1.6s
DAG Danmarks Havn 87.85 348 *i* P **P 08 02 57.0 -1.3**
DAG pmax pmax
comp=Z,6.0nm,1.0s
DAG Danmarks Havn 87.85 348 *i* P **P 08 02 57.0 -1.3**
comp=Z,6.2nm,1.0s
DAG Danmarks Havn 87.85 348 *i* P **P 08 02 57.0 -1.3**
DAG IAmb IAmb 08 02 58.6
comp=Z,6.2nm,1.0s
EKA Eskdalemuir Ar 88.12 325 P **P 08 02 59.8 -0.2**
EKA pmax pmax
comp=Z,2.0nm,0.9s
ETSF Etsaut 88.52 313 *e*P **P 08 03 05.1 +2.9**
ETSF pmax pmax
comp=Z,21nm,1.2s
A21K Barrow 88.90 18 P **P 08 03 04.2 +0.9**
baz=290
A21K Barrow 88.90 18 P **P 08 03 02.8 -0.4**
URZ Urewera 88.96 129 IAMs_20 IAMs_20 08 45 57.0
comp=Z,710nm,18.0s
SJPF Ste Jean 88.97 313 *e*P **P 08 03 04.8 +0.5**
SJPF pmax pmax
comp=Z,20nm,1.2s
TOC2 Torodi Ar. Sit 90.86 283 IAMs_20 IAMs_20 08 44 04.1
comp=Z,613nm,19.0s
TOC3 Torodi Ar. Sit 90.86 283 IAMs_20 IAMs_20 08 44 04.1
comp=Z,638nm,19.0s
TOC1 Torodi Ar. Sit 90.88 283 IAMs_20 IAMs_20 08 44 03.5
comp=Z,658nm,19.0s
TOB3 Torodi Ar. Sit 90.88 283 IAMs_20 IAMs_20 08 44 04.5
comp=Z,606nm,19.0s
TOA2 Torodi Ar. Sit 90.88 283 IAMs_20 IAMs_20 08 44 03.6
comp=Z,657nm,19.0s
TOC4 Torodi Ar. Sit 90.89 283 IAMs_20 IAMs_20 08 44 04.7
comp=Z,618nm,19.0s
TOA0 Torodi Ar. Sit 90.89 283 P **P 08 03 13.5 -0.3**
TOA0 IAMs_20 IAMs_20 08 44 04.7
comp=Z,584nm,19.0s
TOB1 Torodi Ar. Sit 90.89 283 IAMs_20 IAMs_20 08 43 16.7
comp=Z,566nm,19.0s
TORD Torodi Ar. Bea 90.89 283 P **P 08 03 13.9 +0.2**
comp=Z,3.7nm,0.9s,baz=84,slow=5.4,SNR=12
TORD PP **PP 08 06 50.9 +1.0**
comp=Z,1.4nm,0.9s,baz=81,slow=9.2,SNR=4.2
TORD LR LR 08 44 25.4
comp=Z,480nm,18.4s,baz=85,slow=36
TORD Torodi Ar. Bea 90.89 283 P **P 08 03 12.1 -1.7**
TOA3 Torodi Ar. Sit 90.89 283 IAMs_20 IAMs_20 08 44 04.8
comp=Z,578nm,19.0s
TOB4 Torodi Ar. Sit 90.90 283 IAMs_20 IAMs_20 08 44 33.1
comp=Z,569nm,20.0s
TOB5 Torodi Ar. Sit 90.90 283 IAMs_20 IAMs_20 08 43 17.1
comp=Z,613nm,20.0s
TOC7 Torodi Ar. Sit 90.90 283 IAMs_20 IAMs_20 08 43 17.1
comp=Z,614nm,20.0s
TOC5 Torodi Ar. Sit 90.91 283 IAMs_20 IAMs_20 08 43 16.3
comp=Z,689nm,20.0s
ES12 SONSECA Array 91.59 310 IAMs_20 IAMs_20 08 39 45.3
comp=Z,547nm,22.0s
ESDC Sonseca Array 91.60 310 P **P 08 03 16.4 -0.3**
comp=Z,4.4nm,0.9s,baz=67,slow=4.4,SNR=13
ESDC LR LR 08 48 28.6
comp=Z,296nm,20.4s,baz=70,slow=38
ESDC Sonseca Array 91.60 310 P **P 08 03 16.0 -0.6**
IMAR Indian Mountai 91.86 22 P **P 08 03 17.6 +0.3**
TTA Tatalina 92.09 26 IAMs_20 IAMs_20 08 47 28.0
comp=Z,783nm,21.0s
TOLK Toolik Lake Re 92.20 19 P **P 08 03 19.9 +1.0**
baz=297
TOLK Toolik Lake He 92.20 19 P **P 08 03 16.5 -2.3**
TOLK IAmb IAmb 08 03 25.1
comp=Z,21nm,0.9s
VNDA Vanda 92.56 168 P **P 08 03 20.1 0.0**
comp=Z,0.6nm,0.7s,baz=313,slow=4.6,SNR=4.0
VNDA LR LR 08 42 14.8
comp=Z,454nm,18.2s,baz=306,slow=34
COLD Coldfoot 92.62 21 P **P 08 03 21.9 +1.2**
baz=296
COLD Coldfoot 92.62 21 P **P 08 03 18.2 -2.5**
COLD IAmb IAmb 08 03 31.9
comp=Z,28nm,1.5s
BPAW Bear Paw Mtn. 93.70 24 P **P 08 03 25.1 -0.8**
I23K Minto, Yukon-K 93.86 22 IAMs_20 IAMs_20 08 47 50.6
comp=Z,690nm,20.0s
SKT Skwentna 94.38 26 P **P 08 03 25.9 -3.1**
BMAR Burnt Mountain 94.43 19 P **P 08 03 30.1 +1.0**
MCK McKinley 94.68 24 P **P 08 03 31.0 +0.8**
baz=297
SUA Susitna One 94.94 26 P **P 08 03 31.7 +0.1**
ILAR Eielson Array 94.97 22 P **P 08 03 30.6 -0.9**
comp=Z,1.1nm,0.8s,baz=292,slow=4.5,SNR=13
ILAR PP **PP 08 07 24.6 +4.2**
comp=Z,1.6nm,1.0s,baz=304,slow=7.0,SNR=5.2
ILAR LR LR 08 48 45.4
comp=Z,541nm,20.4s,baz=308,slow=37
ILAR Eielson Array 94.97 22 P **P 08 03 28.7 -2.9**
PRP Porcupine Dome 95.10 21 P **P 08 03 28.7 -3.6**
PRP IAmb IAmb 08 03 40.7
comp=Z,23nm,1.3s
RC01 Rabbit Creek A 95.54 26 P **P 08 03 35.0 +0.7**
baz=296
PMR Palmer 95.58 25 P **P 08 03 34.1 -0.2**
PMR pmax pmax
comp=Z,22nm,1.0s
PMR Palmer 95.58 25 P **P 08 03 34.1 -0.2**
GHO Glory Hole Cre 95.58 25 IAMs_20 IAMs_20 08 53 04.3
comp=Z,688nm,19.0s
SML Sawmill 95.82 25 P **P 08 03 33.8 -1.8**
SML pmax pmax
comp=Z,38nm,1.0s
SML Sawmill 95.82 25 P **P 08 03 33.8 -1.8**
KOWA Kowa 96.17 285 IAMs_20 IAMs_20 08 47 20.7
comp=Z,743nm,20.0s
RIDG Independent Ri 96.26 23 IAMs_20 IAMs_20 08 50 11.0
comp=Z,623nm,22.0s
SCRK Sand Creek 96.46 22 P **P 08 03 39.3 +0.8**
baz=302
MENT Mentasta 97.12 23 P Pdif 08 03 41.7 +0.2
MENT IAmb IAmb 08 03 48.0
comp=Z,9.3nm,0.9s
K27K Chicken 97.14 22 P Pdif 08 03 42.8 +1.2
K27K IAmb IAmb 08 03 54.9
comp=Z,15nm,1.4s
INK Inuvik 97.25 16 LR LR 08 53 49.1
comp=Z,867nm,18.2s,baz=290,slow=39
INK Inuvik 97.25 16 P Pdif 08 03 43.2 +1.3
INK pmax pmax
comp=Z,18nm,1.3s
INK Inuvik 97.25 16 P Pdif 08 03 43.2 +1.3
INK IAmb IAmb 08 03 57.2
comp=Z,18nm,1.2s
BCAR Beaver Creek A 97.79 22 P Pdif 08 03 45.0 +0.5
DBIC Dimbokro 98.21 278 LR LR 08 48 06.5
comp=Z,690nm,18.9s,baz=66,slow=36
SNAA Sanae 99.38 199 IAMs_20 IAMs_20 08 43 52.4
comp=Z,526nm,18.0s
TBI Tubuai 116.96 112 *e*SP SP 08 19 43.4 -1.4
comp=Z,116nm,31.0s
TBI Tubuai 116.96 112 *e*LR LR 08 44 15.9
comp=Z,535nm,24.5s
PPT2 Papeete2 117.04 106 *e*SP SP 08 19 43.8 -2.1
comp=Z,95nm,24.8s
PPT2 Papeete2 117.04 106 *e*LR LR 08 44 20.4
comp=Z,687nm,33.5s
F10A Beach Ranch, E 119.71 25 IAMs_20 IAMs_20 08 58 17.3
comp=Z,343nm,19.0s
EGMT Eagleton 120.72 19 P **PKiKP 08 09 02.3 +0.6**
baz=332
N02D Trinity Center 120.92 32 P **PKiKP 08 09 02.8 +0.5**
baz=316
ULM Lac du Bonnet 121.77 8 PKP **PKPdf 08 09 03.1 -0.3**
comp=Z,3.1nm,0.7s,baz=77,slow=2.9,SNR=2.3
BOZ Bozeman (W) 122.20 21 P **PKiKP 08 09 05.4 +0.6**
baz=329
HLID Hailey 122.84 25 P **PKiKP 08 09 07.2 +1.1**
baz=326
HLID Hailey 122.84 25 PKPdf **PKiKP 08 09 06.2 +0.1**
PNTR Pine Nut 123.93 32 PKPdf 08 09 07.6 -0.6
REDW Red Top Meadow 124.41 22 PKPdf 08 09 08.8 -0.3
NVAR Mina Array Bea 125.09 31 PKP **PKiKP 08 09 11.3 +0.5**
comp=Z,1.3nm,0.7s,baz=266,slow=2.0,SNR=11
NVAR Mina Array Bea 125.09 31 PKPdf **PKiKP 08 09 10.8 0.0**
NV11 Mina Array Sit 125.17 31 PKPdf 08 09 10.5 0.0
MDPB Devils Postpil 125.28 32 IAMs_20 IAMs_20 09 13 53.7
comp=Z,396nm,20.0s
E57A Chemin Saint G 125.32 350 P **PKiKP 08 09 10.7 -0.1**
baz=14
E56A St. Veronique 125.34 351 P **PKiKP 08 09 10.9 +0.1**
baz=13
BW06 Boulder Array 125.40 21 P **PKiKP 08 09 11.2 -0.1**
baz=330
BW06 Boulder Array 125.40 21 PKPdf 08 09 10.2 -0.8
PD31 Pinedale Array 125.40 21 PKiKP 08 09 11.6 +0.3
PDAR Pinedale Array 125.40 21 PKP **PKPdf 08 09 10.2 -0.7**
comp=Z,3.5nm,0.9s,baz=17,slow=1.5,SNR=14
PDAR Pinedale Array 125.40 21 PKPdf **PKPdf 08 09 10.9 -0.1**
DUG Dugway, Tooele 126.29 26 P **PKiKP 08 09 13.5 +0.4**
baz=326
R11A Troy Canyon, C 126.51 29 P **PKiKP 08 09 14.2 +0.7**
baz=322
R11A Troy Canyon, C 126.51 29 PKPdf **PKiKP 08 09 14.0 +0.4**
ECSD EROS Data Cent 128.01 10 P **PKiKP 08 09 17.0 +0.8**
baz=346
ECSD EROS Data Cent 128.01 10 PKPdf **PKPdf 08 09 15.1 -0.5**
O20A White River Ci 128.18 22 P **PKiKP 08 09 17.5 +0.7**
baz=331
O20A White River Ci 128.18 22 PKPdf 08 09 16.4 +0.2
GMRC Granite Mounta 129.24 32 P **PKiKP 08 09 20.5 +1.4**
baz=320
PV22 Blue Mesa, Par 129.35 24 IAMs_20 IAMs_20 09 04 52.4
comp=Z,303nm,19.0s
PV03 Paradox Valley 129.57 24 IAMs_20 IAMs_20 08 47 34.2
comp=Z,306nm,21.0s
RMX La Rumorosa 130.66 34 IAMs_20 IAMs_20 08 48 08.2
comp=Z,328nm,20.0s
CBKS Cedar Bluff 132.06 15 IAMs_20 IAMs_20 08 55 10.1
comp=Z,365nm,22.0s
SFX San Felipe 132.53 35 IAMs_20 IAMs_20 09 08 15.8
comp=Z,381nm,19.0s
TX31 Lajitas Ar. Si 139.44 25 PKPdf 08 09 36.3 -1.2
TX32 Lajitas Array 139.44 25 PKPdf 08 09 36.8 -0.7
TXAR Lajitas Array 139.44 25 PKhKP PKPpre 08 09 29.3
comp=Z,0.2nm,0.6s,baz=281,slow=0.5,SNR=2.4
TXAR PKP **PKPdf 08 09 38.0 +0.4**
comp=Z,0.5nm,0.6s,baz=314,slow=0.5,SNR=6.0
TXAR PP **PP 08 12 33.5 +3.1**
comp=Z,1.4nm,1.0s,baz=353,slow=4.2,SNR=5.3
TXAR Lajitas Array 139.44 25 PKIKP **PKPdf 08 09 36.3 -1.2**
TXAR Lajitas Array 139.44 25 PKPdf **PKPdf 08 09 36.3 -1.2**
HPIG 140.61 29 PKPdf **PKPdf 08 09 38.9 -0.9**
BDFB Brasilia 142.32 254 PKhKP **PKPdf 08 09 38.3 -4.7**
comp=Z,2.6nm,0.4s,baz=100,slow=5.6,SNR=5.0
BDFB Brasilia 142.32 254 PKIKP **PKPdf 08 09 38.7 -4.3**
BDFB Brasilia 142.32 254 PKPdf 08 09 38.7 -4.3
ITAB Concordia 142.69 234 *e*P **PKiKP 08 09 47.1 +0.7**
PTGB Pitanga 143.66 238 *e*P **PKiKP 08 09 49.3 +0.8**
ITRB Iturama 143.73 247 *e*P **PKiKP 08 09 49.2 +0.4**
PCMB Pacaembu 144.02 243 *e*P **PKiKP 08 09 49.9 +0.7**
PLCA Paso Flores 144.31 200 PKP PKPbc 08 09 44.1 0.0
comp=Z,8.6nm,0.9s,baz=169,slow=5.3,SNR=12
PLCA Paso Flores 144.31 200 PKPdf **PKPab 08 09 43.4 -0.3**
PRPB Parauapebas 144.41 270 *e*P **PKiKP 08 09 50.4 +0.1**
TRCB Terra Rica 144.84 241 *e*P **PKiKP 08 09 49.6 -1.3**
MCPB Macapa, AP 145.77 280 *e*P **PKiKP 08 09 51.6 -1.6**
SNDB Serra Nova Dou 145.88 260 *e*P **PKiKP 08 09 52.1 -1.1**
ARAG Araguaiana, MT 145.93 253 *e*P **PKPab 08 09 51.7 +1.4**
FDF Fort de France 147.15 312 PKP2 **PKPdf 08 09 50.8 -0.5**
FDF Fort de France 147.15 312 PKPdf 08 09 50.8 -0.5
CPUP Villa Florida 147.23 232 PKPbc **PKPbc 08 09 52.4 -1.0**
comp=Z,7.4nm,0.9s,baz=122,slow=4.6,SNR=11
CPUP Villa Florida 147.23 232 PKPdf 08 09 51.5 +0.4
CPUP Villa Florida 147.23 232 *e*P **PKPab 08 09 54.5 -0.6**
MTP Monte Pirata 147.72 322 PKPbc 08 09 54.5 -0.5
HUMP Col San Antoni 147.87 323 PKPbc 08 09 55.6 +0.3
PDPR Patillas Dam, 148.06 323 PKPbc 08 09 56.2 +0.4
BI02 San Fabin de 148.19 202 PKPbc 08 09 55.0 -0.7
MALB Monte Alegre 148.24 279 *e*P **PKPbc 08 09 56.4 -0.1**
AQDB Aquidauana 148.31 243 *e*P **PKPbc 08 09 56.9 +0.4**
OBIP Obispado Ponce 148.39 324 PKPbc 08 09 56.0 -0.7
MLPR Magueyes Islan 148.71 324 PKPbc 08 09 57.3 -0.2
BO02 Sierra Bellavi 149.62 205 PKPbc 08 09 59.5 0.0
NPGB Novo Progresso 149.96 269 *e*P **PKPbc 08 09 59.8 -1.0**
ITTB Itaituba 150.10 274 *e*P **PKPbc 08 09 59.5 -1.6**
CLDB Colider 150.37 261 *e*P **PKPbc 08 09 59.5 -2.2**
GTBY Guantanamo Bay 150.81 339 PKPab 08 10 07.1 -2.5
VA03 San Esteban 151.25 207 PKPbc 08 10 02.3 -1.2
ZON Zonda 151.35 211 PKIKP **PKPbc 08 10 02.7 -1.0**
ZON Zonda 151.35 211 PKPbc 08 10 02.7 -1.0

PTLB	Pontes e Lacer	152.89	251	*e*P	PKPdf	08 10 03.5 +3.3
CO03	El Pedregal	152.92	209		PKPbc	08 10 06.7 -0.6
VILB	Vilhena	154.41	256	*e*P	PKPdf	08 10 05.7 +3.2
AC02	Maricunga	155.22	217		PKPdf	08 10 11.4 +7.5
SAML	Samuel	157.73	265	*e*P	PKPdf	08 10 10.5 +3.6
MTO3	Montecristo	157.90	10	IAMs_20	IAMs_20	09 18 01.9
	comp=Z,236nm,20.0s					
ETMB	Extrema	160.67	262	*e*P	PKPdf	08 10 13.8 +3.5
LPAZ	La Paz	160.80	241	PKP	PKPdf	08 10 11.1 -0.1
	comp=Z,1.4nm,0.8s,baz=68,slow=4.6,SNR=7.8					
LPAZ	La Paz	160.80	241	PKPdf	PKPdf	08 10 12.3 +1.1
LPAZ	La Paz	160.80	241	*e*P	PKPdf	08 10 12.8 +1.7

IDC ***11*** *07:58:33.5±1.4, 7.58N×94.33E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/45, mbtmp3.8/7, Error ellipse: s-maj=91.5km s-min=20.8km az=52.0*

ISC 11 07:58:37.3±1.3, 7.6N±0.4×94.4E±0.5, h24km, n7, σ0.52/8, mb3.8/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.38**	**347**	P	**P**	**08 06 13.0**	**-0.4**
	1.6nm,0.8s,baz=168,slow=8.5,SNR=7.2						
GEYT	**Alibeck**	**44.55**	**318**	P	**P**	**08 06 47.5**	**+0.1**
	1.3nm,0.6s,baz=123,slow=5.3,SNR=1.9						
KURBB	**Kurchatov Arra**	**44.84**	**346**	P	**P**	**08 06 50.1**	**+0.7**
	2.5nm,0.7s,baz=166,slow=7.6,SNR=6.7						
WRA	**Warramunga Arr**	**47.92**	**126**	P	**P**	**08 07 13.9**	**-0.2**
	0.4nm,0.8s,baz=305,slow=8.9,SNR=2.6						
ASAR	**Alice Springs**	**49.57**	**130**	P	**P**	**08 07 26.6**	**-0.3**
	0.5nm,0.8s,baz=322,slow=7.2,SNR=4.3						
ASAR				PcP	**PcP**	**08 08 49.1**	**+0.8**
	0.8nm,0.9s,baz=305,slow=3.3,SNR=5.0						
FINES	**FINESS Array B**	**73.04**	**332**	P	**P**	**08 10 04.9**	**-0.2**
	2.7nm,1.0s,baz=106,slow=10,SNR=1.5						
GERES	**GERESS Array B**	**78.17**	**318**	P	**P**	**08 10 34.6**	**-0.3**
	0.3nm,0.5s,baz=104,slow=5.6,SNR=2.0						

NDI ***11*** *08:04:34.0±2.7, 7.18N×94.50E, h10km, mb4.8, mb5.1(NEIC)*

BJI ***11*** *08:04:34.4±0.0, 7.33N×94.20E, h11km, mB5.3/31, mb4.7/53, Ms5.0/25, Ms7 4.7/27*

NEIC ***11*** *08:04:35.7±1.5, 7.45N±0.04×94.20E±0.05, h10km±1km, mb5.1/75, Error ellipse: s-maj=9.8km s-min=6.1km az=124.0*

GCMT ***11*** *08:04:38.7±0.2, 7.55N±0.01×94.39E±0.01, h27km, MW5.3/120, Moment Tensor Solution. s46,c56; s120,c190; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; Mrr=0.09±.03; Mθθ=0.41±.02; Mφφ=0.50±.02; Mrθ=0.47±.05; Mrφ=0.73±.02; Mθφ=-0.22±.04; Best double couple: M=1.00700×10^{17} NP1:φs163.00000°, δ59.00000°, λ-179.00000°. NP2:φs73.00000°, δ89.00000°, λ-31.00000°. Principal axes: T 1.0710, Plg21.0000°, Azm122.0000°; N -0.1260, Plg59.0000°, Azm251.0000°; P -0.9440, Plg22.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***11*** *08:04:38.9±5.3, 7.36N×94.10E, h33km±39km, mb4.2/30, mb1 4.3/32, mb1mx4.2/54, mbtmp4.4/32, ML4.6/2, MS4.6/18, Ms1 4.6/18, ms1mx4.3/55 Error ellipse: s-maj=19.3km s-min=10.7km az=51.0*

DJA ***11*** *08:04:39.8±0.7, 7.7N±3.9×97.4E±, h32km±5km, M5.3/43, mB6.1/7, mb5.0/43, MLv5.1/8, Mw(mB)5.7/7, Mwp6.0/1*

KLM ***11*** *08:04:42.0, 7.64N×94.22E, h20km, mb4.8*

BGR ***11*** *08:04:55.0±0.0, 9.74N×94.69E, h33km, mb5.1*

ISC 11 08:04:37.9±0.3, 7.47N±0.04×94.21E±0.04, h20km, n336, σ1.72/329, mb4.9/104, MS4.6/19, 12C-5D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.52**	**129**	P	**Pn**	**08 05 32.3**	**+0.8**
LHMI	**Lhok Sumawe**	**3.52**	**129**	Pn	**Pn**	**08 05 31.3**	**-0.2**
PKDT	**Phuket**	**4.11**	**84**	P	**Pn**	**08 05 39.0**	**-0.7**
PBA	**Port Blair**	**4.40**	**341**	*e*P	Pn	08 05 44.9	+1.3
PBA	**Port Blair**	**4.40**	**341**	Pn	Pn	08 05 43.3	-0.3
SURT	**Suratani**	**4.77**	**72**	P	**Pn**	**08 05 53.5**	**+4.7**
TPTI		**5.12**	**145**	P	**Pn**	**08 05 55.3**	**+1.7**
	1.1nm4μm256nm,1.4s						
KCSI	**Kotacane, Aceh**	**5.29**	**138**	P	**Pn**	**08 05 57.1**	**+1.2**
	2.0nm3μm253nm,0.8s						
TRTT	**Trang**	**5.45**	**86**	P	**Pn**	**08 05 57.3**	**-0.7**
	1.1nm4μm297nm,0.6s						
DGPR	**DIGLIPUR**	**5.81**	**348**	*e*P	**Pn**	**08 06 06.7**	**+3.7**
PSI	**Prapat**	**6.60**	**134**	Pn	**Pn**	**08 06 16.6**	**+2.6**
	5.5nm,0.3s,baz=359,slow=12,SNR=12						
PSI				LR	LR	08 09 08.1	
	comp=Z,8μm,19.6s,baz=271,slow=40						
RPSI	**Rantau Prapat**	**6.67**	**135**	Pn	**Pn**	**08 06 15.2**	**+0.3**
RPSI				Sn	**Sn**	**08 07 29.4**	**-1.0**
KULM	**Kulim**	**6.76**	**108**	Pn	**Pn**	**08 06 14.3**	**-1.8**
KULM				Sn	**Sn**	**08 07 31.5**	**-1.1**
KULM	**Kulim**	**6.76**	**108**	P	**Pn**	**08 06 15.0**	**-1.1**
GSI	**Gunungsitoli**	**6.99**	**151**	P	**Pn**	**08 06 18.7**	**-0.5**
	0.6nm103nm,1.2s						
GSI	**Gunungsitoli**	**6.99**	**151**	Pn	**Pn**	**08 06 19.1**	**-0.1**
IPM	**Ipoh**	**7.40**	**113**	Pn	**Pn**	**08 06 22.6**	**-2.3**
IPM	**Ipoh**	**7.40**	**113**	P	**Pn**	**08 06 23.0**	**-1.9**
PHET	**Kaeng Krachan**	**7.59**	**44**	P	**Pn**	**08 06 26.9**	**-0.7**
	0.6nm2μm160nm,1.0s						
SRDT	**SRDT**	**8.37**	**35**	P	**Pn**	**08 06 38.9**	**+0.8**
	0.3nm27nm,0.9s						
MNSI	**Mandailing Nat**	**8.52**	**141**	P	**Pn**	**08 06 42.2**	**+1.9**
	62nm,0.6s						
UTHA	**Uthaitani**	**9.53**	**32**	P	**Pn**	**08 06 54.0**	**-0.2**
	562nm69nm,0.9s						
BKNI	**Bangkinang**	**9.84**	**136**	P	**Pn**	**08 06 59.1**	**+0.8**
	144nm,0.6s						
BKNI	**Bangkinang**	**9.84**	**136**	Pn	**Pn**	**08 06 58.0**	**-0.4**
SRAK	**Srakaew**	**10.07**	**49**	P	Pn	08 07 08.3	+6.8
	6μm312nm,0.6s						
SDSI	**Sungai Dareh**	**11.03**	**139**	P	Pn	08 07 28.7	+14
MYKOM	**Kota Tinggi**	**11.14**	**120**	Pn	**Pn**	**08 07 15.8**	**-0.4**
MYKOM	**Kota Tinggi**	**11.14**	**120**	P	**Pn**	**08 07 18.0**	**+1.8**
MHMT	**Maesarieng**	**11.24**	**18**	P	**Pn**	**08 07 20.7**	**+3.1**
	66nm,1.1s						
SUKH	**Sukhothai**	**11.27**	**27**	P	**Pn**	**08 07 19.2**	**+1.2**
	29nm,0.8s						
CHAI	**Chaiyaphum**	**11.32**	**42**	P	**Pn**	**08 07 21.1**	**+2.5**
	562nm52nm,1.0s						
PHIT	**Phitsanulok**	**11.40**	**32**	P	**Pn**	**08 07 21.1**	**+1.4**
	274nm,0.8s						
CM05	**Chiang Mai Arr**	**11.80**	**23**	P	**Pn**	**08 07 28.1**	**+2.8**
	267nm33nm,1.3s						
CM13	**Chiang Mai Arr**	**11.81**	**22**	P	**Pn**	**08 07 28.0**	**+2.7**
	267nm28nm,0.9s						
CM04	**Chiang Mai Arr**	**11.81**	**23**	P	**Pn**	**08 07 28.0**	**+2.6**
	378nm45nm,1.0s						
CM01	**Chiang Mai Arr**	**11.82**	**23**	P	**Pn**	**08 07 28.0**	**+2.4**
	372nm47nm,1.1s						
CM02	**Chiang Mai Arr**	**11.83**	**22**	P	**Pn**	**08 07 28.6**	**+2.9**
	340nm45nm,0.9s						
CM15	**Chiang Mai Arr**	**11.84**	**22**	P	Pn	08 07 31.0	+5.2
	26nm,1.1s						
CM31	**Chiang Mai Arr**	**11.85**	**22**	P	**Pn**	**08 07 29.8**	**+3.8**
	878nm,0.9s						
CM31	**Chiang Mai Arr**	**11.85**	**22**	Pn	**Pn**	**08 07 24.7**	**-1.3**
CMAR	**Chiang Mai Arr**	**11.85**	**22**	Pn	**Pn**	**08 07 26.6**	**+0.7**
	1.7nm,0.3s,baz=212,slow=14,SNR=34						
CMAR				LR	LR	08 12 00.1	
	comp=Z,3μm,18.5s,baz=256,slow=37						
CMAR	**Chiang Mai Arr**	**11.85**	**22**		**Pn**	**08 07 25.9**	**0.0**
CM09	**Chiang Mai Arr**	**11.86**	**23**	P	**Pn**	**08 07 28.0**	**+2.0**
	370nm49nm,0.9s						
UTTA	**Uttaradit**	**11.94**	**31**	P	**Pn**	**08 07 28.2**	**+1.1**
	458nm57nm,0.9s						
CM36	**Chiang Mai Arr**	**11.97**	**23**	P	**Pn**	**08 07 30.0**	**+2.5**
CM32	**Chiang Mai Arr**	**12.00**	**22**	P	**Pn**	**08 07 31.0**	**+3.1**
CM35	**Chiang Mai Arr**	**12.13**	**23**	P	**Pn**	**08 07 33.0**	**+3.2**
CHTO	**Chiang Mai**	**12.18**	**22**	Pn	**Pn**	**08 07 29.3**	**-1.1**
CM33	**Chiang Mai Arr**	**12.18**	**22**	P	**Pn**	**08 07 32.0**	**+1.5**
CM34	**Chiang Mai Arr**	**12.29**	**23**	P	**Pn**	**08 07 36.0**	**+4.1**
DSRI	**Dabo**	**13.01**	**127**	P	**Pn**	**08 07 43.8**	**+2.0**
	28nm,1.0s						
PAYA	**Payao**	**13.03**	**24**	P	**Pn**	**08 07 46.0**	**+3.9**
	6μm592nm,1.4s						
PALK	**Pallekele**	**13.40**	**270**	Sn	Sn	08 10 05.5	-10
	0.7nm,0.3s,baz=277,slow=23,SNR=2.4						
PALK				LR	LR	08 12 35.8	
	comp=Z,3μm,21.0s,baz=193,slow=36						
UBPT	**Khong Chiam**	**13.49**	**54**	P	**Pn**	**08 07 52.0**	**+3.7**
	9.8nm,1.4s						
NONG	**Nongkai**	**13.66**	**39**	P	**Pn**	**08 07 53.3**	**+2.7**
KSI	**Kapahiang**	**13.86**	**143**	P	**Pn**	**08 07 54.3**	**+0.9**
	96nm,1.0s						
LHSI	**Lahat**	**14.57**	**140**	P	**Pn**	**08 08 02.5**	**-0.6**
	71nm,1.0s						
MDRS	**Chennai**	**14.82**	**293**	*ex*	**P**	**08 08 15.9**	**+3.7**
MDRS				IAmb	IAmb	08 08 18.0	
	comp=Z,36nm,0.8s						
SAIH	**SAIHA**	**14.98**	**356**	*e*P	**Pn**	**08 08 06.5**	**-2.2**
SAIH				IAmb	IAmb	08 08 10.7	
	comp=Z,15nm,0.4s						
BWNR	**Bhubaneshwar**	**15.13**	**328**	*e*P	**Pn**	**08 08 07.6**	**-3.0**
BWNR				IAmb	IAmb	08 08 20.7	
	comp=Z,72nm,1.1s						
PPBI	**Pangkal Pinang**	**15.27**	**128**	P	**Pn**	**08 08 13.0**	**+0.5**
MDSI	**Maura Dua**	**15.49**	**140**	P	**Pn**	**08 08 14.3**	**-1.1**
	comp=Z,35nm,0.9s						
LWLI	**Liwa**	**15.83**	**141**	P	**Pn**	**08 08 18.6**	**-1.3**
	comp=Z,104nm,0.9s						
KLSI		**16.00**	**139**	P	**Pn**	**08 08 21.5**	**-0.6**
	comp=Z,14nm,0.9s						
SLVN	**Son La**	**16.66**	**33**	P	**P**	**08 08 32.3**	**-0.5**
KSM	**Kuching**	**17.11**	**110**		**Pn**	**08 08 34.5**	**-1.6**
KSM	**Kuching**	**17.11**	**110**	P	**P**	**08 08 41.0**	**+3.3**
BOK	**Bokaro**	**18.09**	**335**	*e*P	**P**	**08 08 50.4**	**+2.0**
BOK				IAmb	IAmb	08 08 57.8	
	comp=Z,59nm,0.8s						
SHL	**Shillong**	**18.13**	**353**	*e*P	**P**	**08 08 49.3**	**+0.2**
SHL				IAmb	IAmb	08 08 58.1	
	comp=Z,142nm,1.7s						
SHL	**Shillong**	**18.13**	**353**	P	**Pn**	**08 08 48.2**	**-0.7**
KOHI	**KOHIMA**	**18.15**	**360**	*e*P	**P**	**08 08 49.5**	**+0.2**
KOHI				IAmb	IAmb	08 08 55.7	
	comp=Z,76nm,0.6s						
HYB	**Hyderabad**	**18.19**	**304**	*i* P	**P**	**08 08 51.0**	**+1.4**
HYB				*e*S	**Sn**	**08 12 12.0**	**-0.1**
SBUM	**Sibu**	**18.62**	**105**		**P**	**08 08 52.5**	**-1.8**
DBJI	**Dramaga**	**18.72**	**138**	P	**Pn**	**08 08 56.7**	**+0.7**
	comp=Z,20μmcomp=Z,68nm,1.0s						
MOKO	**MOKOCHONG**	**18.75**	**1**	*e*P	**Pn**	**08 08 58.0**	**+1.7**
MOKO				IAmb	IAmb	08 09 02.5	
	comp=Z,35nm,0.6s						
GUWA	**GUWAHATI**	**18.77**	**353**	*e*P	**Pn**	**08 08 57.5**	**+1.0**
GUWA				IAmb	IAmb	08 09 03.0	
	comp=Z,15nm,0.6s						
QIZ	**Qiongzhong**	**19.05**	**51**	P	**Pn**	**08 08 59.9**	**0.0**
QIZ				S	**S**	**08 12 34.2**	**-0.3**
QIZ				LR	LR		
	comp=Z,6μm,12.2s						
QIZ				LR	LR		
	comp=Z,3μm,12.4s						
QIZ				LR	LR		
	comp=Z,2μm,11.8s						
TEZP	**TEZPUR**	**19.09**	**356**	*e*P	**P**	**08 08 59.7**	**+0.3**
TEZP				IAmb	IAmb	08 09 09.8	
	comp=Z,75nm,1.5s						
KMI	**Kunming**	**19.36**	**24**	⇓P	**Pn**	**08 09 06.7**	**+3.0**
KMI				pP	sP	08 09 09.1	-1.1
KMI				sP	pwP	08 09 10.8	+0.8
KMI				PP	**PnPn**	**08 09 23.0**	**+5.9**
KMI				pmax	pmax		
	comp=Z,35nm,1.1s						
KMI				pmax	pmax		
	comp=Z,880nm,6.8s						
KMI				LR	LR		
	comp=Z,740nm,9.9s						
KMI				LR	LR		
	comp=Z,2μm,13.5s						
KMI				LR	LR		
	comp=Z,2μm,10.3s						
KMI	**Kunming**	**19.36**	**24**	P	**P**	**08 09 02.1**	**-0.5**
KMI				IAmb	IAmb	08 09 16.0	
	comp=Z,104nm,1.2s						
LEM	**Lembang**	**19.51**	**136**	LR	LR	08 17 54.9	
	comp=Z,3μm,18.4s,baz=286,slow=41						
NGP	**Nagpur**	**19.99**	**314**	*e*P	**Pn**	**08 09 14.3**	**+3.2**
NGP				IAmb	IAmb	08 09 19.3	
	comp=Z,44nm,1.1s						
ODAN	**Odare**	**20.34**	**342**	*e*P	**P**	**08 09 13.7**	**+0.3**
	comp=Z,100nm,0.6s						
GTK	**Tadong**	**20.45**	**346**	*ex*	**P**	**08 09 20.0**	**+5.7**
RAMN	**Ramite**	**20.68**	**340**	*e*P	**P**	**08 09 17.9**	**+0.9**
	comp=Z,259nm,0.7s						
TAPN	**Taplejung**	**20.71**	**343**	*e*P	**P**	**08 09 17.2**	**-0.2**
	comp=Z,416nm,1.0s						
KPJI	**Karang Pucung**	**20.78**	**135**	P	Pn	08 09 19.7	-0.7
	comp=Z,28nm,0.8s						
PKI	**Pulchoki**	**21.66**	**338**	*e*P	**P**	**08 09 28.7**	**+1.0**
PKIN	**Phulchoki**	**21.67**	**338**	*e*P	**P**	**08 09 29.0**	**+1.3**
GUN	**Gumba**	**21.81**	**340**	*e*P	**P**	**08 09 29.3**	**0.0**
	comp=Z,212nm,0.8s						
DMN	**Daman**	**21.81**	**338**	*e*P	**P**	**08 09 29.9**	**+0.7**
KAD	**Kanad**	**21.84**	**298**	⇑*i*P	**P**	**08 09 31.5**	**+2.1**
KKN	**Kakani**	**21.91**	**338**	*e*P	**P**	**08 09 30.7**	**+0.5**
	comp=Z,147nm,0.8s						
GYA	**Guiyang**	**22.29**	**31**	⇑P	**P**	**08 09 36.3**	**+2.0**
GYA				pmax	pmax		
	comp=Z,23nm,1.4s						
GYA				LR	LR		
	comp=Z,2μm,14.3s						
GYA				LR	LR		
	comp=Z,2μm,11.6s						
GYA				LR	LR		
	comp=Z,2μm,21.2s						
LSA	**Lhasa**	**22.30**	**353**		**P**	**08 09 35.1**	**+0.5**
LSA				IAmb	IAmb	08 09 43.4	
	comp=Z,64nm,0.7s						
GKN	**Gorkha**	**22.34**	**337**	*e*P	**P**	**08 09 33.9**	**-0.9**
	comp=Z,139nm,0.6s						
KOLN	**Koldanda**	**22.55**	**335**	*e*P	**P**	**08 09 37.4**	**+0.3**
	comp=Z,130nm,0.7s						
WOJI	**Wonogiri, Jawa**	**22.56**	**132**	P	**P**	**08 09 36.7**	**-0.4**
	comp=Z,63nm,1.2s						
NGJI	**Ngawi**	**22.66**	**130**	P	**P**	**08 09 39.7**	**+1.6**
	comp=Z,144nm,1.1s						
DANN	**Dangsing**	**23.00**	**336**	*e*P	**P**	**08 09 40.9**	**-1.0**
	comp=Z,242nm,0.9s						
PYUN	**Piuthan**	**23.10**	**334**	*e*P	**P**	**08 09 43.1**	**+0.2**
BBKI	**Banjar Baru**	**23.28**	**117**	P	**P**	**08 09 45.9**	**+1.3**
	comp=Z,36nm,0.9s						
PWJI	**Pagerwojo**	**23.34**	**131**	P	**P**	**08 09 44.8**	**-0.3**
	comp=Z,55nm,1.4s						
MYLDM	**Lahad Datu**	**24.25**	**94**		**P**	**08 09 52.8**	**-1.1**
MYLDM				IAmb	IAmb	08 10 04.0	
	comp=Z,76nm,1.1s						
BLJI	**Banyuglugur**	**24.54**	**128**	P	**P**	**08 09 58.1**	**+1.6**
	comp=Z,150nm,0.9s						
CD2	**Chengdu**	**24.97**	**20**	P	**P**	**08 10 01.9**	**+1.6**
CD2				S	**S**	**08 14 26.9**	**+3.7**
CD2				pmax	pmax		
	comp=Z,50nm,1.2s						
CD2				LR	LR		
	comp=Z,2μm,13.3s						
CD2				LR	LR		
	comp=Z,2μm,10.9s						
CD2				LR	LR		
	comp=Z,2μm,11.1s						
SRBI	**Singaraja**	**26.02**	**126**	P	**P**	**08 10 10.7**	**+0.7**
	comp=Z,101nm,1.3s						
H08S3	**Diego Garcia H**	**26.35**	**236**	T	T	08 36 57.7	
	baz=56,slow=75,SNR=366						
H08S2	**Diego Garcia H**	**26.35**	**236**	T	T	08 37 05.4	
	baz=56,slow=75,SNR=26						
H08S1	**Diego Garcia H**	**26.36**	**236**	T	T	08 36 59.1	
	baz=56,slow=75,SNR=15						
NDI	**New Delhi**	**26.50**	**325**	*e*P	**P**	**08 10 15.0**	**+0.8**
MPSI	**Mapaga**	**26.57**	**104**	P	**P**	**08 10 16.5**	**+1.5**
	comp=Z,69nm,1.0s						
ENH	**Enshi**	**26.83**	**30**	P	**P**	**08 10 17.5**	**+0.3**
ENH				IAmb	IAmb	08 10 36.1	
	comp=Z,44nm,1.0s						
TTSI	**Tana Toraja**	**27.61**	**111**	P	**P**	**08 10 23.9**	**-0.4**
	comp=Z,13nm,0.9s						
KAPI	**Kappang**	**28.34**	**115**	LR	LR	08 21 57.0	
	comp=Z,710nm,20.3s,baz=293,slow=37						
APSI	**Ampana**	**28.61**	**106**	P	**P**	**08 10 34.1**	**+0.9**
LUWI	**Luwuk**	**29.72**	**105**	P	**P**	**08 10 43.8**	**+0.7**
	comp=Z,11μmcomp=Z,108nm,0.9s						
XAN	**Xi'an**	**29.73**	**25**	P	**P**	**08 10 43.4**	**+0.4**
XAN				pP	pP	08 10 48.1	-0.4
XAN				S	**S**	**08 15 32.0**	**-6.2**
XAN				pmax	pmax		
	comp=Z,15nm,0.9s						
XAN				LR	LR		
	comp=Z,3μm,13.0s						
XAN				LR	LR		
	comp=Z,2μm,12.5s						
XAN				LR	LR		
	comp=Z,3μm,13.8s						
XAN	**Xi'an**	**29.73**	**25**		**P**	**08 10 42.6**	**-0.4**
XAN				IAmb	IAmb	08 10 48.6	
	comp=Z,17nm,0.8s						
LZH	**Lanzhou**	**29.82**	**16**	*e*P	**P**	**08 10 46.4**	**+2.5**
LZH				pP	sP	08 10 50.9	-0.8
LZH				sP	pwP	08 10 53.4	+1.4
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
DAV	**Davao City (W)**	**31.12**	**89**	LR	LR	08 25 09.6	
	comp=Z,1μm,18.2s,baz=242,slow=39						
SGSI	**Sangihe**	**31.39**	**95**	P	**P**	**08 10 58.8**	**+0.9**
GTA	**Gaotai**	**32.20**	**8**	*e*P	**P**	**08 11 05.8**	**+1.0**
GTA				pP	pP	08 11 10.9	+0.6
GTA				sP	pwP	08 11 13.9	+0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GTA				LR	LR		
	comp=Z,810nm,19.3s						
GTA				LR	LR		
	comp=Z,860nm,14.9s						
GTA				LR	LR		
	comp=Z,890nm,18.2s						
NIL	**Nilore**	**32.47**	**326**	P	**P**	**08 11 05.4**	**-1.8**
NIL				IAmb	IAmb	08 11 18.7	
	comp=Z,38nm,0.8s						
NJ2	**Nanjing**	**33.53**	**40**	*e*P	**P**	**08 11 17.5**	**+1.1**
NJ2				pP	**pP**	**08 11 20.1**	**-1.8**
NJ2				sP	**sP**	**08 11 22.0**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KBL	**Kabul**	**35.53**	**323**	P	**P**	**08 11 33.7**	**-0.3**
KSH	**Kashi**	**35.87**	**336**	*e*P	**P**	**08 11 39.9**	**+3.2**
KSH				pmax	pmax		
	comp=Z,19nm,0.5s						
KSH				pmax	pmax		
	comp=Z,750nm,5.8s						
WMQ	**Urumqi**	**36.65**	**352**	*e*P	**P**	**08 11 44.7**	**+1.4**
WMQ				pP	pP	08 11 48.5	-0.3
WMQ				sP	sP	08 11 51.0	0.0
WMQ				pmax	pmax		
	comp=Z,51nm,0.9s						
WMQ	**Urumqi**	**36.65**	**352**	P	**P**	**08 11 42.8**	**-0.5**
WMQ				IAmb	IAmb	08 11 50.5	
	comp=Z,63nm,1.4s						
HHC	**Hu-ho-hao-te**	**36.66**	**22**	*e*P	**P**	**08 11 43.5**	**+0.1**
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.0s						
WSAR	**Wadi Sarin**	**37.58**	**299**	P	**P**	**08 11 50.7**	**-0.6**
	comp=Z,6.2nm,0.9s,baz=115,slow=5.8,SNR=2.1						
KDJ	**Kajisay**	**37.66**	**339**	P	**P**	**08 11 51.5**	**-0.5**
KDJ				IAmb	IAmb	08 11 58.6	
	comp=Z,21nm,0.9s						
SHLS	**Shalkode**	**37.84**	**342**	*e*P	**P**	**08 11 52.6**	**-0.7**
	baz=343						
SIJI	**Sorong**	**37.88**	**101**	LR	LR	08 28 57.1	
	comp=Z,396nm,18.9s,baz=290,slow=38						
BJI	**Beijing**	**37.93**	**28**	P	**P**	**08 11 57.4**	**+3.4**
BJI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SATY	**Saty**	**38.08**	**341**	*e*P	**P**	**08 11 55.6**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=341						
SATY				*e*S	**S**	**08 17 49.1**	**+1.9**
	baz=341						
KPKS	**Kokpek**	**38.35**	**342**	*e*P	**P**	**08 11 57.9**	**+0.2**
	comp=Z,4.7nm,1.1s,baz=342						
TNSS	**Tian-Shan**	**38.54**	**340**	*e*P	**P**	**08 11 59.4**	**-0.3**
	baz=340						
BTK	**Batken**	**38.62**	**331**	P	**P**	**08 12 00.4**	**+0.4**
BTK				IAmb	IAmb	08 12 07.8	
	comp=Z,28nm,0.9s						
MDOK	**Medeo**	**38.62**	**340**	*e*P	**P**	**08 12 00.5**	**+0.4**
	baz=340						
AAA	**Alma-Ata**	**38.70**	**340**	*e*P	**P**	**08 12 01.1**	**+0.4**
	baz=340						
KUU	**Kurty**	**39.51**	**340**	*e*P	**P**	**08 12 07.0**	**-0.3**
	baz=340						
SGDS	**Sogindy**	**39.74**	**338**	*e*P	**P**	**08 12 09.8**	**+0.4**
	baz=338						
TDK	**Taldyqorghan**	**39.83**	**342**	*e*P	**P**	**08 12 10.9**	**+0.9**
	baz=343						
SOCY	**Socotra**	**39.88**	**280**	P	**P**	**08 12 10.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**40.10**	**130**	P	**P**	**08 12 10.7**	**-1.8**
	comp=Z,2.2nm,0.7s,baz=350,slow=9.7,SNR=3.5						
FITZ				LR	LR	08 31 19.7	
	comp=Z,641nm,18.9s,baz=300,slow=40						
FITZ	**Fitzroy Crossi**	**40.10**	**130**	P	**P**	**08 12 13.1**	**+0.6**
	baz=40,SNR=4.1						
FITZ	**Fitzroy Crossi**	**40.10**	**130**	P	**P**	**08 12 11.3**	**-1.2**
MKAR	**Makanchi Array**	**40.49**	**347**	P	**P**	**08 12 14.3**	**-1.1**
	comp=Z,11nm,0.7s,baz=172,slow=9.7,SNR=22						
MKAR	**Makanchi Array**	**40.49**	**347**	P	**P**	**08 12 14.5**	**-1.0**
IUG	**Iuzhnay**	**40.62**	**332**	*e*P	**P**	**08 12 16.9**	**+0.3**
	baz=332						
DZA	**Taraz**	**40.62**	**334**	*e*P	**P**	**08 12 17.2**	**+0.6**
	baz=334						
ZSN	**Zaisan**	**40.63**	**350**	*e*P	**P**	**08 12 17.6**	**+1.1**
	comp=Z,7.9nm,1.1s,baz=350						
KK31	**Karatay Array**	**41.15**	**333**	P	**P**	**08 12 20.5**	**-0.4**
KKAR	**Karatay Array**	**41.15**	**333**	P	**P**	**08 12 21.2**	**+0.3**
SONM	**Songino Array**	**41.54**	**12

comp=Z,15nm,1.4s
WRA Warramunga Arr 47.97 125 P **P** **08 13 14.0 -1.7**
comp=Z,1.6nm,0.5s,baz=306,slow=8.8,SNR=17
WRA PcP **PcP** **08 14 43.3 -0.6**
comp=Z,1.2nm,0.8s,baz=310,slow=2.8,SNR=2.1
WRA Warramunga Arr 47.97 125 P **P** **08 13 14.5 -1.2**
WRAB Tennant Creek 47.98 125 P **P** **08 13 15.3 -0.5**
WB2 Warramunga Arr 47.98 125 P **P** **08 13 15.2 -0.6**
baz=48
WB2 Warramunga Arr 47.98 125 P **P** **08 13 15.2 -0.6**
WB2 IAmb IAmb 08 13 32.9
comp=Z,13nm,1.1s
INU Inuyama 48.00 48 P **P** **08 13 15.0 -0.7**
INU IAmb IAmb 08 13 23.1
comp=Z,22nm,1.1s
WC3 Warramunga Arr 48.01 125 P **P** **08 13 15.1 -0.9**
baz=48
MDJ Mudanjiang 48.10 34 P **P** **08 13 14.9 -1.4**
MDJ S **S** **08 20 13.9 -0.1**
MDJ pmax pmax
comp=Z,5.0nm,1.6s
MDJ pmax pmax
comp=Z,83nm,3.6s
MDJ LR LR
comp=Z,3μm,14.8s
MDJ LR LR
comp=Z,1μm,11.4s
MDJ LR LR
comp=Z,3μm,15.7s
MDJ Mudanjiang 48.10 34 P **P** **08 13 15.2 -1.1**
MDJ IAmb IAmb 08 13 25.3
comp=Z,28nm,1.3s
WR0 Warramunga Arr 48.15 125 P **P** **08 13 15.3 -1.7**
WR0 IAmb IAmb 08 13 25.7
comp=Z,23nm,1.3s
JGF Kuroka 48.36 48 P **P** **08 13 17.9 -0.7**
JGF IAmb IAmb 08 13 25.8
comp=Z,17nm,1.0s
USA0B Ussuriysk Arra 49.20 36 P **P** **08 13 25.6 +0.8**
USRK Ussuriysk Ar. 49.20 36 P **P** **08 13 26.1 +1.3**
comp=Z,1.4nm,0.7s,baz=170,slow=7.0,SNR=4.6
USRK LR LR 08 35 07.2
comp=Z,725nm,21.0s,baz=219,slow=37
USRK Ussuriysk Ar. 49.20 36 P **P** **08 13 24.3 -0.5**
RAYN Ar Rayn 49.31 295 P **P** **08 13 24.9 -1.2**
RAYN IAmb IAmb 08 13 37.6
comp=Z,32nm,1.1s
MAT Matsushiro 49.38 47 P **P** **08 13 27.0 +0.6**
MJAR Matsushiro Arr 49.38 47 P **P** **08 13 28.1 +1.7**
comp=Z,5.1nm,0.8s,baz=234,slow=7.9,SNR=9.1
MJAR LR LR 08 36 32.7
comp=Z,516nm,18.9s,baz=230,slow=39
MJAR Matsushiro Arr 49.38 47 P **P** **08 13 25.4 -0.9**
BVAR Borovoye Array 49.39 341 P **P** **08 13 25.4 -0.7**
comp=Z,6.2nm,0.8s,baz=218,slow=28,SNR=14
BRVK Borovoye 49.45 341 P **P** **08 13 25.6 -1.0**
BRVK IAmb IAmb 08 13 32.8
comp=Z,16nm,0.9s
AS31 Alice Springs 49.61 130 P **P** **08 13 27.9 -0.3**
ASAR Alice Springs 49.61 130 P **P** **08 13 26.9 -1.4**
comp=Z,3.3nm,0.8s,baz=301,slow=6.6,SNR=15
ASAR PcP **PcP** **08 14 49.3 -0.5**
comp=Z,2.3nm,0.8s,baz=312,slow=4.6,SNR=4.6
ASAR Alice Springs 49.61 130 P **P** **08 13 27.0 -1.2**
FORT Forrest 49.98 141 P **P** **08 13 32.1 +1.2**
baz=50
FORT Forrest 49.98 141 P **P** **08 13 30.3 -0.6**
ABKAR Akbulak array 50.62 331 P **P** **08 13 35.2 -0.2**
ABKAR IAmb IAmb 08 13 42.6
comp=Z,38nm,1.4s
ABKAR Akbulak array 50.62 331 P **P** **08 13 35.0 -0.4**
AB02 Akbulak array 50.62 331 P **P** **08 13 35.3 -0.1**
AB05 Akbulak array 50.63 332 P **P** **08 13 35.7 +0.1**
AKTO Aktyubinsk 52.33 332 P **P** **08 13 47.4 -0.9**
comp=Z,2.2nm,0.6s,baz=113,slow=8.9,SNR=7.1
QIS Mount Isa 52.60 123 P **P** **08 13 50.6 -0.2**
baz=53,SNR=3.9
OPO Ambohidratompo 53.10 240 P **P** **08 13 57.7 +3.0**
comp=Z,1.9nm,0.6s,baz=25,slow=17,SNR=2.4
ABPO Ambohimpanom 53.26 240 P **P** **08 13 54.3 -1.6**
ABPO IAmb IAmb 08 14 14.1
comp=Z,18nm,1.2s
ARU Arti 56.28 337 P **P** **08 14 17.1 +0.1**
comp=Z,3.0nm,0.2s,baz=144,slow=4.8,SNR=6.3
ARU LR LR 08 40 31.6
comp=Z,970nm,20.4s,baz=143,slow=38
ARU Arti 56.28 337 P **P** **08 14 16.6 -0.4**
BBOO Buckleboo 56.47 138 P **P** **08 14 17.0 -1.7**
BBOO IAmb IAmb 08 14 32.9
comp=Z,17nm,1.4s
KBZ Khabaz 57.43 318 P **P** **08 14 24.9 -0.4**
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 57.45 264 P **P** **08 14 24.9 -1.4**
comp=Z,1.0nm,0.3s,baz=103,slow=24,SNR=1.5
KMBO LR LR 08 36 11.0
comp=Z,608nm,19.0s,baz=93,slow=33
KMBO Kilima Mbogo 57.45 264 P **P** **08 14 24.9 -1.4**
KIV Kislovodsk 57.66 318 P **P** **08 14 26.7 -0.4**
KIV IAmb IAmb 08 14 34.4
comp=Z,18nm,1.1s
STKA Stephens Creek 59.78 134 P **P** **08 14 40.8 -1.2**
comp=Z,1.6nm,0.6s,baz=313,slow=12,SNR=4.9
STKA Stephens Creek 59.78 134 P **P** **08 14 40.0 -1.9**
YAK Yakutsk 60.35 18 P **P** **08 14 45.9 +0.6**
comp=Z,9.3nm,0.3s,baz=206,slow=1.7,SNR=2.3
YAK Yakutsk 60.35 18 P **P** **08 14 45.2 -0.1**
KIRV Kirov 61.40 335 P **P** **08 14 51.0 -1.4**
comp=Z,12nm,0.6s,baz=82,slow=7.6,SNR=2.4
NRIK Noril'sk 61.95 357 P **P** **08 14 54.7 -1.3**
comp=Z,3.9nm,0.6s,baz=154,slow=5.4,SNR=8.1
BRTR Keskin Array B 62.74 311 P **P** **08 15 00.1 -2.0**
comp=Z,2.3nm,0.7s,baz=134,slow=7.1,SNR=8.2
BRTR Keskin Array B 62.74 311 P **P** **08 15 00.6 -1.4**
ELL Elmali 65.02 307 P **P** **08 15 16.8 -0.3**
CRZF Crozet Islands 65.57 211 P **P** **08 15 18.7 -1.5**
OBN Obninsk 65.75 328 P **P** **08 15 25.2 +4.0**
comp=Z,4.3nm,0.4s,baz=157,slow=7.2,SNR=6.9
OBN Obninsk 65.75 328 P **P** **08 15 19.6 -1.6**
KLMR Klimovskoe 66.84 334 *eP* **P** **08 15 27.0 -1.2**
KLMR AMP 08 15 37.8
comp=Z,48nm,1.5s
KARP Karpathos 67.04 305 P **P** **08 15 29.8 -0.2**
TIRR Tirgusor 67.59 315 ⇑P **P** **08 15 36.5 +3.3**
TIRR Tirgusor 67.59 315 P **P** **08 15 32.9 -0.3**
TIRR IAmb IAmb 08 15 37.1
comp=Z,9.4nm,0.8s
TIXI Tiksi 67.61 11 P **P** **08 15 32.0 -0.9**
SORM Soroca 68.43 319 ⇓P **P** **08 15 40.1 +1.6**
AKASG Malin Array Be 68.51 322 P **P** **08 15 38.0 -1.0**
comp=Z,2.1nm,0.6s,baz=90,slow=4.8,SNR=8.9
AKASG Malin Array Be 68.51 322 P **P** **08 15 37.4 -1.5**
IDI Anoyia 68.85 305 ⇑P **P** **08 15 41.9 +0.4**
IDI Anoyia 68.85 305 P **P** **08 15 40.9 -0.6**
IDI IAmb IAmb 08 15 49.8
comp=Z,12nm,0.7s
BISRR Bisoca 68.99 316 ⇓P **P** **08 15 44.2 +2.1**
VRI Vrincioaia 69.04 316 ⇑P **P** **08 15 43.5 +1.2**
TESR Tescani 69.22 317 ⇑P **P** **08 15 44.7 +1.2**
SEY Seymchan 69.26 25 LR LR 08 48 01.7
comp=Z,522nm,21.2s,baz=244,slow=38
MLR Muntele Rosu 69.50 316 ⇑P **P** **08 15 46.4 +1.0**
MLR Muntele Rosu 69.50 316 P **P** **08 15 45.3 -0.1**
DOPR Dopca 69.97 316 ⇑P **P** **08 15 49.7 +1.6**
BURAR Bucovina Array 70.39 318 ⇑P **P** **08 15 51.0 +0.3**
BURAR Bucovina Array 70.39 318 P **P** **08 15 50.8 0.0**
ARR Arges 70.39 315 ⇑P **P** **08 15 52.2 +1.5**
BUR08 Bucovina Ar. S 70.41 318 P **P** **08 15 50.4 -0.5**
NACGM Naroch 71.02 326 *e* **P** **08 15 58.0 +3.7**
LIT Litokhoron 71.25 310 P **P** **08 15 54.3 -1.8**
LIT IAmb IAmb 08 15 59.4
comp=Z,11nm,0.7s
GZR Gura Zlata 71.69 315 ⇓P **P** **08 15 57.4 -1.2**
HERR Herculane 71.87 315 ⇑P **P** **08 15 59.3 -0.4**
LVZ Lovozero 71.96 340 P **P** **08 15 57.9 -1.9**
KWP Kalwaria Pacla 72.38 320 P **P** **08 16 01.9 -0.7**
KWP IAmb IAmb 08 16 21.2
comp=Z,12nm,0.8s
SUW Suwalki 72.87 324 P **P** **08 16 04.0 -1.4**
CRVS Cervenica-Dubn 73.08 319 *eP* **P** **08 16 07.7 +0.9**
FIA1 FINESS Array S 73.10 332 P **P** **08 16 04.9 -1.7**
FIA1 IAmb IAmb 08 16 20.2
comp=Z,13nm,0.8s
FINES FINESS Array B 73.10 332 P **P** **08 16 05.9 -0.7**
comp=Z,5.9nm,0.7s,baz=102,slow=5.2,SNR=20
FINES FINESS Array B 73.10 332 P **P** **08 16 05.2 -1.4**

LBTB Lobatse 74.11 241 P **P** **08 16 13.4 0.0**
VYHS Vyhne 74.75 318 *eP* **P** **08 16 18.9 +2.3**
KEV Kevo 75.24 341 P **P** **08 16 18.9 -0.1**
KEV IAmb IAmb 08 16 29.5
comp=Z,29nm,1.2s
BOSA Boshof 75.43 238 P **P** **08 16 22.2 +1.2**
comp=Z,3.8nm,0.8s,baz=70,slow=5.6,SNR=8.3
BOSA LR LR 08 47 07.6
comp=Z,163nm,18.5s,baz=54,slow=34
BOSA Boshof 75.43 238 P **P** **08 16 21.2 +0.2**
BOSA IAmb IAmb 08 16 38.0
comp=Z,29nm,1.4s
ARD4 ARCESS Array S 75.65 340 P **P** **08 16 20.2 -1.1**
ARD4 IAmb IAmb 08 16 32.1
comp=Z,21nm,1.1s
ARCES ARCESS Array B 75.67 340 P **P** **08 16 20.6 -0.8**
comp=Z,2.0nm,0.7s,baz=95,slow=7.3,SNR=7.9
MORC Moravsky Berou 75.72 319 ⇓P **P** **08 16 17.8 -4.4**
MORC Moravsky Berou 75.72 319 *eP* **P** **08 16 23.6 +1.4**
MORC Moravsky Berou 75.72 319 P **P** **08 16 22.0 -0.2**
MORC IAmb IAmb 08 16 30.4
comp=Z,18nm,1.2s
KRLC Kraliky 76.24 320 *eP* **P** **08 16 28.7 +3.5**
VRAC Vranov 76.30 319 *eP* **P** **08 16 29.1 +3.6**
KRUC Moravsky 76.41 319 *eP* **P** **08 16 28.2 +2.1**
DPC Dobruska-Polom 76.56 320 *eP* **P** **08 16 27.2 +0.3**
OSTC Ostas 76.64 320 *eP* P 08 16 34.2 +6.8
CONA Conrad Observa 76.69 317 *eP* **P** **08 16 27.6 -0.2**
comp=Z,6.0nm,1.4s
CHVC Chvalec 76.75 320 *eP* P 08 16 35.8 +7.8
ARSA Arzberg 76.87 317 *eP* **P** **08 16 28.3 -0.5**
comp=Z,12nm,1.0s
SOKA Soboth 77.18 316 *eP* **P** **08 16 30.6 0.0**
comp=Z,13nm,1.1s
OBKA Obir 77.51 316 *eP* **P** **08 16 31.7 -0.7**
comp=Z,4.2nm,0.6s
MOA Molln 77.75 317 *eP* **P** **08 16 35.3 +1.6**
comp=Z,9.6nm,1.5s
BRG Berggiesshubel 78.10 320 *eP* **P** **08 16 36.6 +1.1**
comp=Z,29nm,1.7s
comp=N,563nm,14.6s
comp=E,919nm,21.9s
comp=Z,943nm,21.0s
MYKA Terra Mystica 78.14 316 *eP* **P** **08 16 37.2 +1.3**
comp=Z,7.8nm,0.9s
MAW Mawson 78.16 192 P **P** **08 16 37.4 +2.1**
comp=Z,2.1nm,0.6s,baz=23,slow=5.3,SNR=9.0
MAW LR LR 08 47 08.5
comp=Z,257nm,18.2s,baz=54,slow=33
MAW Mawson 78.16 192 P **P** **08 16 34.4 -0.9**
GERES GERESS Array B 78.17 318 P **P** **08 16 35.8 -0.3**
comp=Z,2.9nm,0.6s,baz=90,slow=5.3,SNR=12
GERES GERESS Array B 78.17 318 P **P** **08 16 35.0 -1.1**
PRED Cave del Predi 78.18 316 P **P** **08 16 36.2 +0.1**
PRED IAmb IAmb 08 16 46.0
comp=Z,14nm,0.9s
KHC Kasperske Hory 78.26 319 *eP* **P** **08 16 40.6 +4.1**
CLL Collm 78.71 321 *eP* **P** **08 16 39.0 +0.1**
CLL *i* (PcP) **pP** **08 16 45.2 +0.5**
ABTA Abfaltersbach 78.92 316 *eP* **P** **08 16 39.5 -0.7**
comp=Z,2.1nm,0.6s
CIMO Cimolais 78.96 316 P **P** **08 16 39.2 -1.2**
CIMO IAmb IAmb 08 16 50.4
comp=Z,22nm,1.1s
CTI Castel Tesino 79.51 315 P **P** **08 16 42.2 -1.3**
CTI IAmb IAmb 08 16 53.1
comp=Z,15nm,0.9s
WTTA Wattenberg 79.52 317 *eP* **P** **08 16 42.4 -1.3**
comp=Z,11nm,0.9s
WATA Walderalm 79.56 317 *eP* **P** **08 16 42.8 -1.0**
comp=Z,12nm,0.8s
SQTA Sankt Quirin 79.81 317 *eP* **P** **08 16 44.4 -0.7**
comp=Z,8.7nm,0.6s
GRF Grafenberg Arr 79.81 319 *eP* P 08 16 52.6 +7.6
comp=Z,27nm,1.7s,baz=102,slow=4.7
NC405 NORSAR Array S 79.87 331 P **P** **08 16 42.9 -2.1**
NC405 IAmb IAmb 08 16 50.4
comp=Z,20nm,0.8s
MOTA Moosalm 79.88 317 *eP* **P** **08 16 45.5 -0.1**
comp=Z,6.6nm,0.9s
NC602 NORSAR Array S 79.94 330 P **P** **08 16 43.7 -1.7**
NB2 NORSAR Subarra 80.11 331 P **P** **08 16 45.2 -1.2**
comp=Z,9.8nm,0.9s,baz=95,slow=5.1
NOA NORSAR Array B 80.11 331 P **P** **08 16 45.2 -1.2**
comp=Z,2.0nm,0.6s,baz=93,slow=5.6,SNR=13
RETA Reutte 80.11 317 *eP* **P** **08 16 46.0 -0.7**
comp=Z,10nm,0.6s
FETA Feichten 80.14 316 *eP* **P** **08 16 46.0 -1.0**
comp=Z,10.0nm,1.1s
SPB1 Spitsbergen Ar 80.24 348 P **P** **08 16 45.4 -1.4**
DAVA Damuels 80.72 317 *eP* **P** **08 16 48.9 -1.2**
comp=Z,4.1nm,0.4s
SYO Syowa Base 85.04 197 *eP* **P** **08 17 12.6 +0.9**
A21K Barrow 89.01 18 P **P** **08 17 30.1 -1.0**
ESDC Sonseca Array 91.53 310 P **P** **08 17 42.5 -1.0**
comp=Z,0.9nm,0.6s,baz=62,slow=3.7,SNR=5.9
ESDC Sonseca Array 91.53 310 P **P** **08 17 42.7 -0.9**
IMAR Indian Mountai 91.97 22 P **P** **08 17 44.9 -0.1**
VNDA Vanda 92.52 168 P **P** **08 17 47.1 -0.1**
comp=Z,0.7nm,0.9s,baz=295,slow=4.3,SNR=2.3
BWN Browne 94.39 23 P **P** **08 17 55.9 -0.3**
ILAR Eielson Array 95.09 22 P **P** **08 17 59.4 0.0**
comp=Z,0.7nm,0.7s,baz=284,slow=4.7,SNR=4.7
ILAR Eielson Array 95.09 22 P P **08 17 57.6 -1.8**
F10A Beach Ranch, E 119.83 25 **PKPdf** **08 23 25.6 -1.6**
ULM Lac du Bonnet 121.85 8 PKP **PKPdf** **08 23 29.9 -1.0**
comp=Z,1.7nm,0.6s,baz=342,slow=3.2,SNR=1.7
ULM Lac du Bonnet 121.85 8 **PKPdf** **08 23 29.4 -1.5**
NVAR Mina Array Bea 125.23 31 PKP **PKPdf** **08 23 36.4 -1.6**
comp=Z,0.6nm,0.8s,baz=165,slow=3.7,SNR=2.5
PDAR Pinedale Array 125.52 21 PKP **PKPdf** **08 23 37.3 -1.1**
comp=Z,0.8nm,0.8s,baz=336,slow=1.8,SNR=6.2
PDAR Pinedale Array 125.52 21 **PKPdf** **08 23 38.0 -0.4**
TXAR Lajitas Array 139.56 24 PKP **PKPdf** **08 24 03.5 -1.5**
comp=Z,2.2nm,0.5s,baz=224,slow=0.8,SNR=4.7
TXAR Lajitas Array 139.56 24 **PKPdf** **08 24 04.4 -0.6**
JCT Junction City 139.94 19 PKPdf **PKPdf** **08 24 05.1 -0.5**
BDFB Brasilia 142.16 254 PKP **PKPdf** **08 24 06.1 -3.9**
comp=Z,0.8nm,0.3s,baz=140,slow=7.9,SNR=1.5
PLCA Paso Flores 144.19 200 PKP PKPbc 08 24 11.3 +0.3
comp=Z,3.1nm,0.8s,baz=3.6,slow=4.1,SNR=6.5
PLCA Paso Flores 144.19 200 **PKPdf** **08 24 12.7 -0.3**
CPUP Villa Florida 147.07 232 PKPbc **PKPdf** **08 24 18.2 +0.1**
comp=Z,1.6nm,0.5s,baz=60,slow=1.9,SNR=2.9
LPAZ La Paz 160.64 242 PKP **PKPdf** **08 24 40.0 +1.7**
comp=Z,1.0nm,0.9s,baz=270,slow=5.1,SNR=2.3

DDA 11 08:08:57.5, 37.10N×28.74E, h7km±3km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.28**	**194**	*i* P	Pb	08 09 04.2	-0.7
DALY				*i* S	Sg	08 09 08.2	+1.3
DALY				IAML		08 09 15.0	
	comp=N,21nm,0.4s						
TAVA	**DENIZLI_Tavas**	**0.40**	**21**	*i* P	Pg	08 09 05.5	+0.3
TAVA				*i* S	Sg	08 09 10.6	+0.1
TAVA				IAML		08 09 12.0	
	comp=N,37nm,0.4s						
TAVA				IAML		08 09 12.0	
	comp=E,37nm,0.4s						
FETY	**Fethiye**	**0.54**	**149**	*i* P	Pb	08 09 08.9	-0.4
FETY				*i* S	Sg	08 09 15.7	+0.9
GOLH	**Golhisar**	**0.67**	**78**	*i* P	Pg	08 09 09.4	-1.1
GOLH				*i* S	Sb	08 09 20.5	-0.7
GOLH				IAML		08 09 34.0	
	comp=N,9.8nm,0.3s						

ATH 11 08:09:08.9, 36.85N×26.40E, h32km±1km, ML1.5/1, Error ellipse: s-maj=1.8km s-min=1.1km az=158.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMGA	**Amorgos Island**	**0.41**	**267**	P	Pb	08 09 18.3	+0.2
AMGA				S	Sn	08 09 25.1	0.0
AMGA				AML	AML	08 09 26.8	
	comp=N,140μm,0.1s						
AMGA				AML	AML	08 09 27.1	
	comp=E,148μm,0.3s						
NISR	**Nisiros**	**0.63**	**112**	P	Pn	08 09 22.0	+0.5
NIS1	**Nisyros Isl.**	**0.67**	**112**	P	Pb	08 09 22.5	+0.3
ANAF	**Anafi Island**	**0.71**	**226**	P	Pb	08 09 23.2	+0.3
ANAF				S	Sn	08 09 33.8	+1.3
APE	**Apeiranthos**	**0.73**	**287**	P	Pb	08 09 23.9	+0.7
APE				S	Sn	08 09 34.8	+1.6
SMG	**Samos**	**0.92**	**22**	P	Pb	08 09 26.6	+0.2
SMG				S	Sb	08 09 39.5	+1.2

IDC 11 08:09:50.9±1.7, 51.20N×81.64E, h0km, mb1 2.5/2, mb1mx2.5/48, mbtmp2.5/2, ML2.0/2, Error ellipse: s-maj=16.8km s-min=13.9km az=17.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.05**	**255**	Pg	Pb	08 10 27.8	-1.2
	0.2nm,0.3s,baz=71,slow=18,SNR=4.2						
KURBB				Lg	Lg	08 10 56.9	
	0.2nm,0.3s,baz=73,slow=30,SNR=6.9						
ZALV	**Zalesovo Beam**	**3.37**	**34**	Pn	Pn	08 10 43.9	-0.8
	0.6nm,0.3s,baz=220,slow=15,SNR=6.1						
ZALV				Sn	Sn	08 11 28.3	+2.9
	0.7nm,0.3s,baz=220,slow=25,SNR=6.5						
I46RU	**ZALESOVO INFRA**	**3.37**	**34**	*i*		08 28 20.0	
	baz=216,slow=326,SNR=1.0						
MKAR	**Makanchi Array**	**4.43**	**174**	Pn	Pn	08 11 00.4	+1.1
	0.1nm,0.3s,baz=6.9,slow=12,SNR=12						
MKAR				Lg	Lg	08 12 09.0	
	0.2nm,0.3s,baz=4.8,slow=27,SNR=4.4						

*NEIC **11** 08:11:57.7±1.4, 5.47S±0.07×152.5E±0.1, h48km±5km, mb4.6/15, Error ellipse: s-maj=18.0km s-min=9.2km az=109.0*
*IDC **11** 08:12:01.3±2.4, 5.34S×152.08E, h66km±14km, mb3.8/9, mb1 4.1/10, mb1mx3.7/36, mbtmp4.2/10, Error ellipse: s-maj=45.0km s-min=10.6km az=119.0*
ISC 11 08:11:56.7±0.8, 5.48S±0.07×152.5E±0.1, h40km, n32, σ1°33/34, mb4.2/15, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.25**	**339**	P	**Pn**	**08 12 18.2**	**+0.5**
	1μm,0.3s,baz=154,slow=2.4,SNR=364						
KRVT				S	**Sn**	**08 12 34.2**	**+0.9**
	1μm,0.3s,baz=38,slow=22,SNR=16						
RABL	**Rabaul**	**1.32**	**346**	Pn	**Pn**	**08 12 19.7**	**+1.0**
RABL				Sn	**Sn**	**08 12 33.7**	**-1.3**
PMG	**Port Moresby**	**6.56**	**233**	P	**Pn**	**08 13 32.3**	**+1.6**
	7.5nm,0.3s,baz=59,slow=11,SNR=10.0						
PMG				S	**Sn**	**08 14 42.5**	**-1.8**
	25nm,0.3s,baz=335,slow=22,SNR=9.1						
PMG	**Port Moresby**	**6.56**	**233**		**Pn**	**08 13 31.7**	**+0.9**
WB0	**Warramunga Arr**	**22.61**	**229**	P	**P**	**08 16 53.6**	**-0.7**
WR0	**Warramunga Arr**	**22.62**	**229**	P	**P**	**08 16 54.9**	**+0.5**
WB2	**Warramunga Arr**	**22.75**	**229**	P	**P**	**08 16 56.4**	**+0.7**
WB2				IAmb	IAmb	08 17 03.9	
	comp=Z,8.5nm,1.0s						
WRA	**Warramunga Arr**	**22.76**	**229**	P	**P**	**08 16 56.7**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=51,slow=9.9,SNR=18						
WRA	**Warramunga Ar**	**22.76**	**229**	P	**P**	**08 16 53.9**	**-1.9**
KNRA	**Kununurra**	**25.39**	**245**	P	**P**	**08 17 20.5**	**-0.1**
KNRA				IAmb	IAmb	08 17 30.7	
	comp=Z,17nm,0.7s						
AS31	**Alice Springs**	**25.43**	**223**	P	**P**	**08 17 21.1**	**+0.1**
ASAR	**Alice Springs**	**25.43**	**223**	P	**P**	**08 17 23.6**	**+2.6**
	comp=Z,3.4nm,0.8s,baz=55,slow=9.5,SNR=18						
ASAR	**Alice Springs**	**25.43**	**223**	P	**P**	**08 17 22.0**	**+1.0**
FITZ	**Fitzroy Crossi**	**29.05**	**242**	P	**P**	**08 17 52.3**	**-1.2**
	comp=Z,2.6nm,0.4s,baz=74,slow=7.2,SNR=13						
FITZ	**Fitzroy Crossi**	**29.05**	**242**	P	**P**	**08 17 52.7**	**-0.8**
FITZ				IAmb	IAmb	08 18 13.6	
	comp=Z,6.2nm,1.1s						
SONM	**Songino Array**	**66.72**	**328**	P	**P**	**08 22 44.0**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=134,slow=8.3,SNR=2.8						
SONM	**Songino Array**	**66.72**	**328**	IAmb	IAmb	08 22 45.7	
	comp=Z,1.0nm,0.7s						
NIKH	**Nikolski High**	**66.76**	**24**	P	**P**	**08 22 43.3**	**-0.5**
OHAK	**Old Harbor**	**76.30**	**27**	P	**P**	**08 23 41.9**	**+0.7**
CNPM	**China Poot**	**78.46**	**26**	P	**P**	**08 23 52.1**	**-1.3**
PMR	**Palmer**	**80.43**	**24**	P	**P**	**08 24 04.7**	**+0.7**
PMR				IAmb	IAmb	08 24 06.9	
	comp=Z,17nm,1.3s						
GHO	**Glory Hole Cre**	**80.61**	**24**	P	**P**	**08 24 05.6**	**+0.6**
GHO				IAmb	IAmb	08 24 22.5	
	comp=Z,17nm,1.2s						
MKAR	**Makanchi Array**	**80.62**	**319**	P	**P**	**08 24 05.4**	**0.0**
	comp=Z,0.4nm,0.5s,baz=111,slow=6.6,SNR=4.0						
KTH	**Kantishna Hill**	**80.76**	**22**	P	**P**	**08 24 03.8**	**-2.0**
KTH				IAmb	IAmb	08 24 08.3	
	comp=Z,6.9nm,1.1s						
IMAR	**Indian Mountai**	**81.13**	**20**	P	**P**	**08 24 07.2**	**-0.5**
ZALV	**Zalesovo Beam**	**81.54**	**326**	P	**P**	**08 24 09.4**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=102,slow=6.1,SNR=1.2						
ILAR	**Eielson Array**	**82.91**	**22**	P	**P**	**08 24 18.1**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=251,slow=6.1,SNR=18						
ILAR	**Eielson Array**	**82.91**	**22**	P		**08 24 17.0**	**0.0**
NRIK	**Noril'sk**	**86.50**	**341**	P	**P**	**08 24 34.8**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=198,slow=6.4,SNR=1.8						
NVAR	**Mina Array Bea**	**92.75**	**52**	P	**P**	**08 25 08.7**	**+3.2**
	comp=Z,0.5nm,0.7s,baz=238,slow=5.2,SNR=2.7						
GSC	**Goldstone, Bar**	**93.71**	**55**	P	**P**	**08 25 06.8**	**-3.0**
GSC				IAmb	IAmb	08 25 26.7	
	comp=Z,4.2nm,1.5s						
TORD	**Torodi Ar. Bea**	**150.20**	**287**	PKPbc	**PKPbc**	**08 31 44.5**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=52,slow=2.8,SNR=9.3						

IDC 11 08:30:54.8±2.6, 27.86N×87.81E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/50, mbtmp3.4/4, Error ellipse: s-maj=92.9km s-min=28.4km az=73.0, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**23.80**	**345**	P	P	08 36 08.8	-0.3
	0.2nm,0.3s,baz=160,slow=8.0,SNR=2.5						
SONM	**Songino Array**	**24.64**	**31**	P	P	08 36 17.5	+0.4
	2.2nm,0.9s,baz=213,slow=10,SNR=4.0						
WRA	**Warramunga Ar**	**65.45**	**131**	P	P	08 41 40.0	+0.2
	0.2nm,0.5s,baz=326,slow=6.6,SNR=6.5						
ASAR	**Alice Springs**	**67.83**	**134**	P	P	08 41 54.6	-0.4
	0.3nm,0.7s,baz=309,slow=6.1,SNR=2.5						

*REN **11** 08:35:31.7±2.2, 40.37N±0.02×121.52W±0.04, h0km±6km, Error ellipse: s-maj=4.0km s-min=3.4km az=64.0*
*IDC **11** 08:35:32.7±0.9, 40.61N×121.27W, h0km, mb3.9/2, mb1 3.7/5, mb1mx3.5/49, mbtmp3.4/5, ML3.2/3, Error ellipse: s-maj=18.3km s-min=5.2km az=37.0*
*NEIC **11** 08:35:32.8±2.6, 40.36N±0.03×121.52W±0.04, h9km±7km, Error ellipse: s-maj=4.2km s-min=3.8km az=54.0*
*NEIC **11** 08:35:32, 40.40N×121.49W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-5.70; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$ 5.72; $M_{r\theta}$ 0.45; $M_{\theta\phi}$-2.73; $M_{\phi r}$-3.97; Fault plane solution: M_0 7.49000×10^{14} NP1:ϕ_s146.95000°, δ30.10000°, λ-108.06000°. NP2:ϕ_s347.60000°, δ61.53000°, λ-79.81000°. Principal axes: T 7.9113, Plg16.0000°, Azm70.0000°; N -0.9404, Plg9.0000°, Azm163.0000°; P -6.9709, Plg72.0000°, Azm281.0000°;*
*NCEDC **11** 08:35:32.3±2.1, 40.40N±0.03×121.48W±0.03, h6km±6km, Mwr3.9/5, ML3.8/4(REN) Error ellipse: s-maj=4.1km s-min=2.4km az=207.0*
*ANF **11** 08:35:34.2±1.0, 40.47N×121.68W, h1km, ML3.5/10, Error ellipse: s-maj=10.6km s-min=3.9km az=89.0*
ISC 11 08:35:32.1±1.0, 40.39N±0.02×121.49W±0.02, h7km±8km, n108, σ1°37/117, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMEM	**Manzanita Entr**	**0.16**	**337**		**Pg**	**08 35 35.8**	**+0.4**
LCMM	**Colby Mountain**	**0.25**	**185**		**Pg**	**08 35 37.7**	**+0.7**
O03E	**Paynes Creek**	**0.26**	**247**	P	**Pg**	**08 35 37.6**	**+0.4**
	baz=67						
O03E				S	**Sg**	**08 35 41.4**	**+0.7**
	baz=67						
HATC	**Hat Creek Radi**	**0.42**	**3**		**Pg**	**08 35 40.8**	**+0.4**
LTCM	**Tuscan Springs**	**0.52**	**249**		**Pg**	**08 35 42.8**	**+0.6**
WDC	**Whiskeytown Da**

N02D	**Trinity Center**	**1.09**	**302**	P	**Pg**	**08 35 51.8**	**-1.2**
	baz=121,SNR=139						
N02D				S	**Sg**	**08 36 05.4**	**-1.8**
	baz=121						
SUTB	**Sutter Butte**	**1.19**	**191**		**Pb**	**08 35 53.8**	**-1.1**
GASB	**Alder Springs**	**1.20**	**232**		**Pg**	**08 35 53.9**	**-1.2**
LHEM	**Herd Peak**	**1.35**	**336**		**Pn**	**08 35 56.9**	**-0.7**
M04C	**Macdoel**	**1.41**	**349**	P	**Pn**	**08 35 58.4**	**0.0**
	baz=169						
M02C	**Callahan**	**1.44**	**314**	P	**Pn**	**08 35 57.4**	**-1.2**
	baz=133,SNR=88						
M02C				S	**Sn**	**08 36 16.9**	**-0.9**
	baz=133						
GWKM	**Walker Ridge**	**1.55**	**210**		**Pn**	**08 35 59.9**	**-0.2**
YBH	**Yreka Blue Hor**	**1.62**	**326**	Pg	**Pn**	**08 36 01.3**	**0.0**
	8.0nm,0.3s,baz=154,slow=10,SNR=75						
YBH				Lg	Lg	08 36 22.4	
	22nm,0.3s,baz=222,slow=3.7,SNR=11						
YBH	**Yreka Blue Hor**	**1.62**	**326**		**Pn**	**08 36 00.9**	**-0.3**
YBH				Sn	**Sn**	**08 36 23.2**	**+0.7**
KBSM	**Bell Springs**	**1.68**	**254**		**Pb**	**08 36 02.8**	**-0.6**
MNRC	**McLaughlin Min**	**1.68**	**206**		**Pb**	**08 36 03.5**	**+0.1**
RUBR	**Rubicon Trail**	**1.69**	**142**		**Pn**	**08 36 02.7**	**+0.4**
RUBR				Sn	**Sn**	**08 36 23.9**	**-0.3**
KMRM	**Mail Ridge**	**1.71**	**265**		**Pn**	**08 36 02.8**	**+0.5**
KOMM	**Orleans Mounta**	**1.73**	**301**		**Pn**	**08 36 03.2**	**+0.5**
KCPM	**Cahto Peak**	**1.75**	**247**		**Pn**	**08 36 03.6**	**+0.5**
MOD	**Modoc Plateau**	**1.75**	**30**		**Pn**	**08 36 04.0**	**+0.9**
MOD	**Modoc Plateau**	**1.75**	**30**	Pn	**Pn**	**08 36 03.6**	**+0.5**
PAHR	**Pah Rah Range**	**1.76**	**112**	Pn	**Pn**	**08 36 03.4**	**+0.3**
PAHR				Sn	**Sn**	**08 36 25.9**	**+0.1**
KHMM	**Horse Mountain**	**1.77**	**286**		**Pn**	**08 36 03.8**	**+0.5**
KCRM	**Chalk Rock**	**1.78**	**272**		**Pn**	**08 36 04.2**	**+0.8**
VCNR	**Virginia City**	**1.79**	**127**		**Pn**	**08 36 03.8**	**+0.1**
VCNR					**Sn**	**08 36 27.0**	**+0.2**
GSQM	**Seigler Mounta**	**1.79**	**212**		**Pn**	**08 36 03.2**	**-0.2**
HOPS	**Hopland Field**	**1.86**	**222**		**Pn**	**08 36 04.4**	**+0.1**
HOPS	**Hopland Field**	**1.86**	**222**		**Pb**	**08 36 05.4**	**-0.9**
HOPS				Sn	**Sn**	**08 36 25.3**	**-2.7**
GCRM	**Castle Rock Sp**	**1.88**	**211**		**Pn**	**08 36 04.4**	**-0.2**
GDXM	**Geysers**	**1.88**	**213**		**Pn**	**08 36 05.1**	**+0.4**
L04D	**Klamath Falls**	**1.92**	**342**	P	**Pn**	**08 36 06.5**	**+1.1**
	baz=161,SNR=74						
PNTR	**Pine Nut**	**1.96**	**131**		**Pb**	**08 36 07.9**	**-0.3**
JCC	**Jacoby Creek,**	**1.98**	**283**		**Pn**	**08 36 06.7**	**+0.7**
JCC	**Jacoby Creek,**	**1.98**	**283**	Pn	**Pn**	**08 36 06.3**	**+0.3**
GNAM	**Navarro Ridge**	**2.04**	**235**		**Pn**	**08 36 06.8**	**0.0**
KSMM	**Slide Mountain**	**2.06**	**265**		**Pn**	**08 36 07.7**	**+0.4**
KRMB	**Red Mountain**	**2.15**	**302**		**Pn**	**08 36 08.8**	**+0.3**
CVS	**Carmenet Viney**	**2.18**	**200**		**Pn**	**08 36 08.0**	**-0.8**
K04D	**Chiloquin, OR**	**2.24**	**355**	P	**Pb**	**08 36 12.4**	**-0.6**
	baz=175,SNR=7.2						
K05A	**Summer Lake**	**2.37**	**11**	Pn	**Pn**	**08 36 11.9**	**+0.3**
L02E	**Cave Junction**	**2.38**	**319**	P	**Pb**	**08 36 14.5**	**-0.7**
	baz=137,SNR=22						
BDM	**Black Diamond**	**2.45**	**187**		**Pn**	**08 36 13.8**	**+1.3**
WAKR	**Walker**	**2.47**	**139**		**Pn**	**08 36 13.8**	**+0.8**
HUMO	**Hull Mountain**	**2.47**	**334**		**Pn**	**08 36 14.3**	**+1.4**
HUMO	**Hull Mountain**	**2.47**	**334**	Pn	**Pn**	**08 36 13.5**	**+0.7**
MCCM	**Marconi Confer**	**2.49**	**206**		**Pn**	**08 36 12.7**	**-0.4**
MCCM	**Marconi Confer**	**2.49**	**206**	Pn	**Pn**	**08 36 12.0**	**-1.0**
CMB	**Columbia Colle**	**2.51**	**160**		**Pn**	**08 36 14.4**	**+1.0**
CMB	**Columbia Colle**	**2.51**	**160**	Pn	**Pn**	**08 36 14.1**	**+0.7**
BRIB	**Briones**	**2.52**	**192**		**Pn**	**08 36 14.5**	**+1.0**
BKS	**Berkeley--Byer**	**2.58**	**193**		**Pn**	**08 36 15.2**	**+0.9**
VAK	**Adit at Lawren**	**2.58**	**193**		**Pn**	**08 36 15.6**	**+1.3**
BL67	**Building 67, L**	**2.58**	**194**		**Pn**	**08 36 16.1**	**+1.7**
KBO	**Bosley Butte**	**2.75**	**312**	Pg	**Pb**	**08 36 21.8**	**+0.2**
WENL	**Wente Vineyard**	**2.78**	**184**		**Pn**	**08 36 19.3**	**+2.3**
K02D	**Willamette Mer**	**2.82**	**325**	P	**Pn**	**08 36 20.8**	**+3.1**
	baz=144,SNR=17						
J05D	**Fort Rock, OR**	**2.90**	**4**	P	**Pn**	**08 36 20.8**	**+2.1**
	baz=184,SNR=21						
RYN	**Ryan**	**2.90**	**127**		**Pn**	**08 36 19.8**	**+1.0**
LHV	**Little Huntoon**	**3.15**	**132**		**Pn**	**08 36 24.3**	**+2.1**
NVAR	**Mina Array Bea**	**3.15**	**127**	Pn	**Pn**	**08 36 23.5**	**+1.1**
	4.5nm,0.3s,baz=303,slow=14,SNR=78						
NVAR				Lg	Lg	08 37 13.2	
	14nm,0.3s,baz=318,slow=28,SNR=7.8						
NVAR	**Mina Array Bea**	**3.15**	**127**		**Pn**	**08 36 23.7**	**+1.3**
NV11	**Mina Array Sit**	**3.24**	**126**		**Pn**	**08 36 24.6**	**+1.1**
KEBM	**Edson Butte**	**3.27**	**320**		**Pn**	**08 36 26.6**	**+2.8**
MDPB	**Devils Postpil**	**3.34**	**145**		**Pn**	**08 36 27.7**	**+2.7**
OMMB	**Old Mammoth Mi**	**3.39**	**144**		**Pn**	**08 36 27.5**	**+1.9**
PINE	**Pine Mountain**	**3.42**	**7**		**Pn**	**08 36 27.0**	**+1.0**
I03D	**Drain, OR**	**3.58**	**338**	P	**Pn**	**08 36 31.2**	**+3.2**
	baz=156,SNR=8.6						
SAO	**San Andreas Ge**	**3.62**	**179**		**Pn**	**08 36 30.0**	**+1.4**
J08A	**Circle Bar Ran**	**3.72**	**36**		**Pn**	**08 36 30.5**	**+0.5**
I07A	**Izee**	**3.97**	**21**		**Pn**	**08 36 36.4**	**+2.9**
TPH	**Tonopah**	**4.04**	**124**		**Pn**	**08 36 35.5**	**+0.9**
PMPB	**Monarch Peak**	**4.21**	**172**		**Pn**	**08 36 36.6**	**+3.9**
COR	**Corvallis**	**4.40**	**343**		**Pn**	**08 36 39.2**	**0.0**
PAGB	**Antelope Grade**	**4.76**	**168**	Pn	**Pn**	**08 36 46.5**	**+2.2**
ELK	**Elko**	**4.77**	**84**	Pn	**Pn**	**08 36 43.8**	**-0.9**
	0.2nm,0.3s,baz=271,slow=13,SNR=6.6						
ELK				Pg	**Pb**	**08 36 53.0**	**-3.2**
	0.3nm,0.3s,baz=284,slow=12,SNR=9.8						
ELK				Lg	Lg	08 37 59.1	
	1.8nm,0.3s,baz=40,slow=15,SNR=3.1						
R11A	**Troy Canyon, C**	**5.01**	**112**		**Pn**	**08 36 48.8**	**+0.9**
MFID	**Camas Ranch**	**5.19**	**53**	Pn	**Pn**	**08 36 51.8**	**+1.5**
G08A	**Pilot Rock**	**5.24**	**20**	Pn	**Pn**	**08 36 49.9**	**-1.0**
ISA	**Isabella, Lake**	**5.29**	**152**	Pn	**Pn**	08 36 57.4	+5.8
TPNV	**Topopah Spring**	**5.35**	**128**		**Pn**	**08 36 53.1**	**+0.5**
BMO	**Blue Mountains**	**5.42**	**33**	Pn	**Pn**	**08 36 53.0**	**-0.4**
F04A	**Amboy**	**5.58**	**353**	Pn	**Pn**	**08 36 55.3**	**-0.2**
F07A	**Phinny Hill Vi**	**5.62**	**11**	Pn	**Pn**	**08 36 55.5**	**-0.4**
SPR3	**Spring Creek 3**	**5.70**	**102**	Pn	**Pn**	**08 36 59.3**	**+1.9**
PRN	**Pahroc Range**	**5.84**	**119**		**Pn**	**08 36 59.8**	**+0.5**
HLID	**Hailey**	**6.15**	**57**	Pn	**Pn**	**08 37 03.5**	**0.0**
HAWA	**Hanford**	**6.16**	**13**	Pn	Pn	08 37 08.4	+4.9
PLID	**Pearl Lake**	**6.19**	**39**	Pn	**Pn**	**08 37 04.9**	**+0.8**
PSUT	**Pine Spring**	**6.19**	**105**	Pn	**Pn**	**08 37 06.3**	**+2.1**
E07A	**Sunnyside**	**6.28**	**10**	Pn	**Pn**	**08 37 08.6**	**+3.5**
SHPR	**Sheep Range**	**6.30**	**126**		**Pn**	**08 37 08.6**	**+2.9**
DUG	**Dugway, Tooele**	**6.64**	**89**		**Pn**	**08 37 10.3**	**+0.2**
D08A	**Wollman Farm,**	**6.92**	**15**		**Pn**	**08 37 14.4**	**+0.6**
MVU	**Marysvale**	**7.42**	**102**	Pn	**Pn**	**08 37 23.8**	**+2.7**
MSU	**Marysvale**	**7.45**	**102**	Pn	**Pn**	**08 37 24.1**	**+2.7**
KNB	**Kanab**	**7.57**	**114**	Pn	**Pn**	**08 37 24.8**	**+1.8**
HWUT	**Hardware Ranch**	**7.61**	**78**	Pn	**Pn**	**08 37 26.1**	**+2.6**
PFO	**Pinyon Flats O**	**7.87**	**148**	Lg	Lg	08 39 44.2	
	0.1nm,0.3s,baz=254,slow=23,SNR=5.7						
BOZ	**Bozeman (W)**	**8.90**	**51**	Pn	**Pn**	**08 37 41.1**	**-0.1**
PDAR	**Pinedale Array**	**9.25**	**71**	Pn	**Pn**	**08 37 45.5**	**-0.7**
	0.1nm,0.3s,baz=230,slow=7.0,SNR=2.1						
PDAR	**Pinedale Array**	**9.25**	**71**		**Pn**	**08 37 45.7**	**-0.4**
ILAR	**Eielson Array**	**28.49**	**337**	P	**P**	**08 41 29.5**	**+1.9**
	0.9nm,0.9s,baz=153,slow=7.7,SNR=8.9						
INK	**Inuvik**	**28.72**	**351**	P	**P**	**08 41 30.0**	**+0.4**
	2.5nm,1.0s,baz=142,slow=6.4,SNR=4.6						

*NEIC **11** 08:40:18.2±1.1, 7°.8N±0°.1×94°.6E±0°.2, h10km±1km, mb4.4/15, Error ellipse: s-maj=31.5km s-min=15.6km az=230.0*

*IDC **11** 08:40:24.6±4.6, 7°.59N×94°.41E, h59km±41km, mb3.5/7, mb1 3.7/9, mb1mx3.5/53, mbtmp3.8/9, ML3.8/2, MS3.7/6, Ms1 3.7/6, ms1mx3.3/36, Error ellipse: s-maj=56.1km s-min=17.7km az=61.0*

ISC 11 08:40:22.2±0.7, 7°.9N±0°.1×94°.8E±0°.1, h35km, n45, σ0°98/37, mb4.2/15, MS3.8/3, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LHMI	**Lhok Sumawe**	**3.40**	**140**	Pn	**Pn**	**Pn**	**08 41 11.4**	**-1.4**
KULM	**Kulim**	**6.38**	**113**		**Pn**	**Pn**	**08 41 53.8**	**0.0**
PSI	**Prapat**	**6.52**	**140**	P	**Pn**	**Pn**	**08 41 59.5**	**+3.7**
	1.1nm,0.3s,baz=180,slow=17,SNR=1.7							
PSI					LR	LR	08 44 49.8	
	comp=Z,399nm,18.3s,baz=266,slow=40							
RPSI	**Rantau Prapat**	**6.60**	**141**	Pn	**Pn**	**Pn**	**08 41 56.1**	**-0.8**
IPM	**Ipoh**	**7.08**	**118**	Pn	**Pn**	**Pn**	**08 42 02.8**	**-0.7**
CMAR	**Chiang Mai Arr**	**11.29**	**21**	P	**Pn**	Pn	08 43 08.8	+7.7
	0.2nm,0.3s,baz=205,slow=13,SNR=5.8							
CMAR					LR	LR	08 47 21.5	
	comp=Z,228nm,19.3s,baz=268,slow=36							
PALK	**Pallekele**	**13.95**	**269**	LR	LR	LR	08 48 06.7	
	comp=Z,283nm,19.0s,baz=193,slow=34							
SBUM	**Sibu**	**18.20**	**106**	P	**Pn**	**Pn**	**08 44 32.4**	**+0.2**
SBUM					IAmb	IAmb	08 44 42.3	
	comp=Z,21nm,1.4s							
LSA	**Lhasa**	**21.98**	**352**	P	**P**	**P**	**08 45 14.1**	**+0.3**
LSA					IAmb	IAmb	08 45 24.6	
	comp=Z,8.4nm,0.8s							
H08S3	**Diego Garcia H**	**27.02**	**236**	T	T	T	09 12 40.8	
	baz=50,SNR=40							
H08S2	**Diego Garcia H**	**27.02**	**236**	T	T	T	09 12 40.9	
	baz=50							
H08S1	**Diego Garcia H**	**27.04**	**236**	T	T	T	09 12 43.1	
	baz=50							
NIL	**Nilore**	**32.45**	**325**	P	**P**	**P**	**08 46 49.2**	**-0.1**
NIL					IAmb	IAmb	08 46 57.6	
	comp=Z,12nm,1.1s							
MK31	**Makanchi Array**	**40.23**	**347**	P	**P**	**P**	**08 47 55.8**	**+0.2**
MKAR	**Makanchi Array**	**40.23**	**347**	P	**P**	**P**	**08 47 56.2**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=153,slow=8.2,SNR=12							
MKAR	**Makanchi Array**	**40.23**	**347**	P	**P**		**08 47 56.0**	**+0.4**
MAKZ	**Makanchi**	**40.32**	**346**	P	**P**		**08 47 57.9**	**+1.7**
KKAR	**Karatay Array**	**41.05**	**333**	P	**P**		**08 48 02.8**	**+0.5**
JNU	**Nakatsue**	**41.79**	**48**	LR	LR		09 09 26.1	
	comp=Z,76nm,18.6s,baz=304,slow=41							
TLY	**Talaya**	**44.29**	**8**	P	**P**		**08 48 28.9**	**+0.4**
TLY					IAmb	IAmb	08 48 32.1	
	comp=Z,6.5nm,0.7s							
GEYT	**Alibeck**	**44.62**	**318**	P	**P**		**08 48 31.0**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=106,slow=9.7,SNR=2.0							
KURK	**Kurchatov**	**44.77**	**345**	P	**P**		**08 48 32.4**	**+0.1**
KURK					IAmb	IAmb	08 48 39.5	
	comp=Z,12nm,1.2s							
ZAA0	**Zalesovo Array**	**46.65**	**352**	P	**P**		**08 48 47.0**	**0.0**
ZAA0					IAmb	IAmb	08 48 56.6	
	comp=Z,4.6nm,1.0s							
ZALV	**Zalesovo Beam**	**46.65**	**352**	P	**P**		**08 48 49.0**	**+2.0**
	comp=Z,2.7nm,0.6s,baz=160,slow=9.1,SNR=9.4							
ZALV	**Zalesovo Beam**	**46.65**	**352**	P	**P**		**08 48 47.2**	**+0.1**
WB0	**Warramunga Arr**	**47.71**	**126**	P	**P**		**08 48 55.4**	**-0.5**
WB0					IAmb	IAmb	08 49 02.0	
	comp=Z,2.9nm,1.1s							
WRA	**Warramunga Arr**	**47.76**	**126**	P	**P**		**08 48 56.9**	**+0.6**
	comp=Z,0.7nm,1.0s,baz=304,slow=8.9,SNR=3.8							
BRVK	**Borovoye**	**49.26**	**341**	P	**P**		**08 49 07.5**	**+0.2**
BRVK					IAmb	IAmb	08 49 17.7	
	comp=Z,4.1nm,1.2s							
ASAR	**Alice Springs**	**49.44**	**130**	P	**P**		**08 49 09.8**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=317,slow=7.2,SNR=5.1							
ASAR	**Alice Springs**	**49.44**	**130**	P	**P**		**08 49 08.6**	**-0.6**
AB07	**Akbulak array**	**50.52**	**331**	P	**P**		**08 49 17.1**	**+0.2**
AB06	**Akbulak array**	**50.52**	**331**	P	**P**		**08 49 17.7**	**+0.7**
AB08	**Akbulak array**	**50.53**	**331**	P	**P**		**08 49 17.5**	**+0.4**
ABKAR	**Akbulak array**	**50.53**	**331**	P	**P**		**08 49 17.3**	**+0.2**
ABKAR	**Akbulak array**	**50.53**	**331**	P	**P**		**08 49 18.2**	**+1.1**
ABKAR					IAmb	IAmb	08 49 28.1	
	comp=Z,4.6nm,1.4s							
LSZ	**Lusaka**	**69.85**	**251**	LR	LR	LR	09 18 59.5	
	comp=Z,81nm,18.1s,baz=256,slow=33							
BURAR	**Bucovina Array**	**70.47**	**318**	P	**P**		**08 51 32.3**	**-1.1**
MATP	**Matopo**	**70.92**	**245**	LR	LR		09 18 41.0	
	comp=Z,51nm,19.4s,baz=355,slow=33							
ARC2	**ARCESS Array S**	**75.48**	**340**	P	**P**		**08 52 01.2**	**-1.2**
ARB2	**ARCESS Array S**	**75.48**	**340**	P	**P**		**08 52 01.4**	**-1.1**
GERES	**GERESS Array B**	**78.24**	**318**	P	**P**		**08 52 18.4**	**-0.2**
	comp=Z,0.2nm,0.2s,baz=48,slow=1.5,SNR=1.8							
SPB2	**Spitsbergen Ar**	**79.97**	**348**	P	**P**		**08 52 26.9**	**-0.4**
NOA	**NORSAR Array B**	**80.04**	**331**	P	**P**		**08 52 28.4**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=92,slow=5.8,SNR=2.7							
PLCA	**Paso Flores**	**144.75**	**200**	PKP		**PKPab**	**08 59 54.3**	**-0.4**
	comp=Z,2.7nm,1.1s,baz=243,slow=9.0,SNR=3.0							
CPUP	**Villa Florida**	**147.74**	**232**	PKPbc		**PKPdf**	**09 00 01.3**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=12,slow=1.3,SNR=2.0							

*IDC **11** 08:54:52.4±1.1, 38°.96N×105°.88E, h0km, mb3.6/6, mb1 3.6/8, mb1mx3.4/50, mbtmp3.5/8, ML3.3/1, Error ellipse: s-maj=37.3km s-min=17.2km az=60.0*

ISC 11 08:54:53.9±1.2, 39°.0N±0°.2×105°.9E±0°.2, h10km, n8, σ1s02/8, mb3.6/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SONM	**Songino Array**	**8.88**	**2**	Pn	**Pn**	**Pn**	**08 57 02.1**	**-0.3**
	0.3nm,0.3s,baz=181,slow=15,SNR=2.6							
SONM				Pg	Pg		08 57 35.9	-7.9
	0.4nm,0.3s,baz=181,slow=18,SNR=2.7							
SONM				Lg	Lg		08 59 31.9	
	0.2nm,0.3s,baz=199,slow=30,SNR=2.8							
MKAR	**Makanchi Array**	**18.92**	**302**	P	**P**		**08 59 13.5**	**-1.2**
	baz=94,slow=8.7,SNR=0.5							
ZALV	**Zalesovo Beam**	**20.74**	**323**	P	**P**		**08 59 35.0**	**+0.5**
	0.7nm,0.3s,baz=118,slow=11,SNR=3.7							
KURBB	**Kurchatov Arra**	**22.49**	**310**	P	**P**		**08 59 53.0**	**-0.4**
	0.4nm,0.6s,baz=104,slow=13,SNR=3.4							
BVAR	**Borovoye Array**	**28.04**	**312**	P	**P**		**09 00 46.8**	**+1.7**
	0.5nm,0.5s,baz=62,slow=13,SNR=2.7							
GEYT	**Alibeck**	**27.07**	**284**	P	**P**		**09 02 03.8**	**-0.3**
	1.9nm,0.6s,baz=78,slow=7.5,SNR=2.0							
WRA	**Warramunga Arr**	**64.38**	**150**	P	**P**		**09 05 29.6**	**-0.5**
	0.3nm,0.6s,baz=345,slow=6.8,SNR=1.8							
ASAR	**Alice Springs**	**67.61**	**152**	P	**P**		**09 05 51.1**	**+0.4**
	0.6nm,0.5s,baz=338,slow=6.4,SNR=20							

*IDC **11** 09:08:05.9±2.6, 24°.68S×70°.21E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/38, mbtmp3.9/5, MS3.4/3, Ms1 3.3/3, ms1mx2.9/48, Error ellipse: s-maj=90.0km s-min=31.3km az=44.0*

*NEIC **11** 09:08:06.5±0.6, 24°.7S±0°.1×70°.1E±0°.2, h10km±1km, mb4.5/10, Error ellipse: s-maj=28.7km s-min=12.5km az=297.0*

ISC 11 09:08:06.7±0.9, 24°.8S±0°.2×70°.1E±0°.2, h10km, n26, σ0s67/20, mb4.3/10, MS3.4/3, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
H08S1	**Diego Garcia H**	**17.17**	**8**	T	T	T	09 29 53.4	
	baz=188,slow=76,SNR=5.7							
H08S2	**Diego Garcia H**	**17.17**	**8**	T	T	T	09 29 50.3	
	baz=188,slow=76,SNR=13							
H08S3	**Diego Garcia H**	**17.19**	**8**	T	T	T	09 29 52.9	
	baz=188,slow=76,SNR=76							
PALK	**Pallekele**	**33.47**	**19**	LR	LR	LR	09 24 52.4	
	comp=Z,78nm,21.9s,baz=308,slow=30							
LEM	**Lembang**	**40.06**	**70**	LR	LR	LR	09 28 19.7	
	comp=Z,26nm,20.5s,baz=293,slow=30							
BOSA	**Boshof**	**40.09**	**254**	LR	LR	LR	09 28 14.5	
	comp=Z,72nm,19.3s,baz=34,slow=30							
FITZ	**Fitzroy Crossi**	**51.83**	**94**	P	**P**	**P**	**09 17 14.8**	**-0.5**
ASAR	**Alice Springs**	**57.70**	**103**	P	**P**	**P**	**09 17 58.4**	**+0.4**
	0.3nm,0.7s,baz=256,slow=6.7,SNR=4.2							
WRA	**Warramunga Arr**	**59.13**	**99**	P	**P**	**P**	**09 18 07.9**	**-0.1**
	1.3nm,0.9s,baz=256,slow=6.8,SNR=6.8							
WRA	**Warramunga Arr**	**59.13**	**99**	P	**P**	**P**	**09 18 07.3**	**-0.7**
WRAB	**Tennant Creek**	**59.14**	**99**	P	**P**	**P**	**09 18 08.0**	**-0.1**
WRAB					IAmb	IAmb	09 18 15.9	
	comp=Z,8.7nm,1.4s							
WC3	**Warramunga Arr**	**59.16**	**99**	P	**P**	**P**	**09 18 09.2**	**+1.0**
WC3					IAmb	IAmb	09 18 10.3	
	comp=Z,4.2nm,1.1s							
WB0	**Warramunga Arr**	**59.23**	**99**	P	**P**	**P**	**09 18 08.2**	**-0.4**
WR0	**Warramunga Arr**	**59.31**	**99**	P	**P**	**P**	**09 18 08.8**	**-0.4**
WR0					IAmb	IAmb	09 18 21.1	
	comp=Z,6.5nm,1.4s							
QSPA	**South Pole Qui**	**65.36**	**180**	P	**P**	**P**	**09 18 49.0**	**-0.1**
QSPA					IAmb	IAmb	09 19 01.3	
	comp=Z,4.4nm,1.3s							
MK31	**Makanchi Array**	**72.07**	**9**	P	**P**	**P**	**09 19 30.4**	**-0.5**
MKAR	**Makanchi Array**	**72.07**	**9**	P	**P**	**P**	**09 19 30.8**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=190,slow=6.0,SNR=16							
ABKAR	**Akbulak array**	**74.24**	**353**	P	**P**	**P**	**09 19 43.0**	**-0.6**
AB04	**Akbulak array**	**74.24**	**353**	P	**P**	**P**	**09 19 42.2**	**-1.4**
KURK	**Kurchatov**	**75.52**	**6**	P	**P**	**P**	**09 19 50.6**	**-0.4**
KURK					IAmb	IAmb	09 19 54.3	
	comp=Z,3.2nm,1.1s							
DBIC	**Dimbokro**	**79.27**	**282**	P	**P**	**P**	**09 20 12.9**	**+0.1**
SONM	**Songino Array**	**79.28**	**24**	P	**P**	**P**	**09 20 13.8**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=234,slow=9.9,SNR=2.2							
ZAA0	**Zalesovo Array**	**79.41**	**9**	P	**P**	**P**	**09 20 12.6**	**-0.1**
ZALV	**Zalesovo Beam**	**79.41**	**9**	P	**P**	**P**	**09 20 12.5**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=200,slow=6.2,SNR=6.2							
ZALV	**Zalesovo Beam**	**79.41**	**9**	P	**P**	**P**	**09 20 12.7**	**+0.1**
TXAR	**Lajitas Array**	**172.82**	**311**	PKPab		**PKPab**	**09 29 43.5**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=38,slow=6.0,SNR=2.1							

IDC 11 09:24:13.1±3.1, 54°.20N×87°.30E, h0km, mb1 2.9/2, mb1mx2.8/41, mbtmp2.9/2, ML2.5/2, 3C-2D, Error ellipse: s-maj=25.7km s-min=17.0km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.48**	**261**	*i*			09 31 50.0	
	baz=76,slow=328,SNR=1.3							
ZAA0	**Zalesovo Array**	**1.48**	**261**	⇓P	Pn		09 24 39.0	-2.1
	0.3nm,0.3s							
ZAA0				⇑S	Sg		09 24 58.0	-2.7
	2.3nm,0.8s							
ZAA0				⇓Rg	Rg		09 25 03.8	
ZALV	**Zalesovo Beam**	**1.48**	**261**	Pg	Pn		09 24 38.6	-2.4
	1.6nm,0.3s,baz=82,slow=16,SNR=13							
ZALV				Lg	Lg		09 25 01.9	
	2.0nm,0.3s,baz=82,slow=23,SNR=7.2							
KURBB	**Kurchatov Arra**	**6.45**	**240**	Pn	Pn		09 25 50.0	+0.8
	0.1nm,0.3s,baz=51,slow=13,SNR=4.4							
KURBB				Lg	Lg		09 27 33.6	
	0.0nm,0.3s,baz=55,slow=35,SNR=1.7							
MK31	**Makanchi Array**	**8.07**	**205**	Pn	Pn		09 26 11.6	0.0
	0.2nm,0.4s,baz=28,slow=14,SNR=5.9							
MK31				⇑Sn	Sn		09 27 43.3	-0.1
	1.2nm,0.8s,baz=31,slow=28,SNR=4.2							
MK31				⇑Lg	Lg		09 28 27.3	
	2.6nm,0.9s							
MKAR	**Makanchi Array**	**8.07**	**205**	Pn	Pn		09 26 13.2	+1.7
	0.1nm,0.3s,baz=27,slow=14,SNR=5.8							
MKAR				Sn	Sn		09 27 42.6	-0.8
	0.1nm,0.3s,baz=26,slow=28,SNR=5.9							
MKAR				Lg	Lg		09 28 28.3	
	0.1nm,0.3s,baz=26,slow=25,SNR=1.8							

*ATA **11** 09:25:26.7±0.9, 38°.85N×39°.40E, h3km±70km, ML1.2, MW4.4*

*ISK **11** 09:25:27.1, 38°.84N×39°.39E, h3km, ML1.9/5*

*DDA **11** 09:25:27.4, 38°.83N×39°.42E, h7km±3km, ML1.7*

ISC 11 09:25:27.1±1.1, 38°.83N±0°.03×39°.39E±0°.04, h4km±9km, n13, σ0s51/22, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PTK	**Pertek**	**0.06**	**2**	PG	**Pg**	**Pg**	**09 25 28.7**	**-0.1**
PTK				SG	**Sg**	**Sg**	**09 25 29.9**	**0.0**
TNCL	**Tunceli-Merkez**	**0.31**	**23**	*eP*	**Pg**	**Pg**	**09 25 32.9**	**-0.3**
TNCL				*eS*	**Sg**	**Sg**	**09 25 37.6**	**+0.3**
TNCL				IAML			09 25 42.9	
	comp=

0.1nm,0.3s,baz=29,slow=31,SNR=5.7

s-min=55.7km az=157.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.75**	**321**	T	T	09 58 30.5	
	baz=151						
H01W2	**Cape Leeuwin H**	**16.75**	**321**	T	T	09 58 28.7	
	baz=151						
H01W3	**Cape Leeuwin H**	**16.77**	**321**	T	T	09 58 30.7	
	baz=151						
STKA	**Stephens Creek**	**20.15**	**39**	P	P	09 40 15.8	+0.1
	1.7nm,0.8s,baz=198,slow=6.4,SNR=3.9						
STKA				LR	LR	09 46 55.9	
	comp=Z,82nm,21.6s,baz=206,slow=34						
ASAR	**Alice Springs**	**25.61**	**15**	P	P	09 41 11.1	0.0
	0.9nm,0.9s,baz=187,slow=8.4,SNR=7.8						
ASAR				LR	LR	09 50 34.2	
	comp=Z,88nm,21.9s,baz=170,slow=35						
WRA	**Warramunga Arr**	**29.33**	**14**	P	P	09 41 44.3	-0.1
	0.7nm,1.0s,baz=192,slow=7.8,SNR=1.6						
WRA				LR	LR	09 53 00.9	
	comp=Z,85nm,20.6s,baz=255,slow=36						
FITZ	**Fitzroy Crossi**	**30.57**	**358**	LR	LR	09 53 31.0	
	comp=Z,95nm,20.9s,baz=174,slow=35						
VNDA	**Vanda**	**31.84**	**166**	LR	LR	09 53 00.1	
	comp=Z,78nm,19.0s,baz=314,slow=33						
MAW	**Mawson**	**36.57**	**215**	LR	LR	09 55 34.7	
	comp=Z,66nm,19.0s,baz=240,slow=33						
BATI	**Baumata**	**38.49**	**355**	LR	LR	09 58 57.4	
	comp=Z,93nm,19.2s,baz=206,slow=36						
SNAA	**Sanae**	**54.77**	**197**	LR	LR	10 07 10.6	
	comp=Z,124nm,19.3s,baz=174,slow=34						
CMAR	**Chiang Mai Arr**	**71.39**	**332**	P	P	09 47 01.9	+0.1
	1.1nm,0.3s,baz=177,slow=4.5,SNR=4.0						

*IDC **11** 09:38:12.7±1.6,28.7°0S×71.7°3W,h0km,mb3.4/2, mb1 3.7/5,mb1mx3.6/23,mbtmp3.4/5,ML3.5/3,Error ellipse: s-maj=45.8km s-min=27.5km az=124.0*

*GUC **11** 09:38:19.8±0.8,28.6°9S×71.3°9W,h60km±5km,ML3.8*

ISC 11 09:38:16.3±1.6,28.6°7S±0.0°7×71.8°2W±0.0°7,h28km±13km, n23,σ2°17/35,8C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.81**	**55** ⇑	*i*P	**Pb**	**09 38 32.4**	**+0.6**
AC04				*i* S	**Sb**	**09 38 41.5**	**-0.9**
AC04				IAML		09 38 42.5	
	comp=E,6μm,0.3s						
AC05	**El Transito**	**1.37**	**97** ⇑	*i*P	**Pn**	**09 38 39.7**	**-0.1**
AC05				*i* S	**Sn**	**09 38 54.0**	**-3.1**
AC05				IAML		09 38 55.2	
	comp=N,2μm,0.4s						
GO04	**Tololo Observa**	**1.74**	**149** ⇑	*i*P	**Pn**	**09 38 45.8**	**+0.8**
GO04				*i* S	**Sn**	**09 39 05.3**	**-1.1**
GO04				IAML		09 39 06.6	
	comp=E,5μm,0.3s						
GO03	**Copiap**	**1.77**	**53** ⇑	*i*P	**Pn**	**09 38 45.9**	**+0.7**
GO03				*i* S	**Sn**	**09 39 05.3**	**-1.5**
GO03				IAML		09 39 07.3	
	comp=E,1μm,0.4s						
CO01	**Juntas del Tor**	**1.99**	**131** ⇑	*i*P	**Pn**	**09 38 49.5**	**+1.0**
CO01				*i* S	**Sn**	**09 39 11.7**	**-0.9**
CO01				IAML		09 39 13.2	
	comp=E,2μm,0.4s						
CO03	**El Pedregal**	**2.37**	**156** ⇑	*i*P	**Pn**	**09 38 54.6**	**+1.1**
CO03				*i* S	**Sn**	**09 39 20.9**	**-0.8**
CO03				IAML		09 39 21.8	
	comp=E,2μm,0.5s						
CO02	**Combarbal**	**2.62**	**164** ⇑	*i*P	**Pn**	**09 38 58.1**	**+1.2**
CO02				*i* S	**Sn**	**09 39 27.2**	**-0.7**
AC02	**Maricunga**	**3.01**	**53** ⇑	*i*P	**Pn**	**09 39 04.2**	**+1.5**
AC02				*i* S	**Sn**	**09 39 37.8**	**-0.3**
AC02				IAML		09 39 59.5	
	comp=N,290nm,0.3s						
LVC	**Limon Verde**	**6.59**	**24**	Pn	**Pn**	**09 39 51.2**	**-0.5**
	comp=N,0.3nm,0.3s,baz=170,slow=12,SNR=1.3						
LVC				Sn	**Sn**	**09 41 04.2**	**-1.8**
	comp=N,1.1nm,0.3s,baz=190,slow=19,SNR=1.8						
LVC				Lg	Lg	09 41 40.0	
	comp=N,2.7nm,0.3s,baz=65,slow=13,SNR=4.5						
H03N1	**Juan Fernandez**	**7.71**	**230**	Pn	**Pn**	**09 40 09.5**	**+2.9**
	baz=111,slow=17,SNR=19						
H03N1				Sn	**Sn**	**09 41 33.0**	**+0.1**
	baz=174,slow=78,SNR=9.8						
H03N1				T	T	09 48 20.4	
	baz=59,slow=72,SNR=365						
H03N2	**Juan Fernandez**	**7.73**	**230**	Pn	**Pn**	**09 40 09.8**	**+3.0**
	baz=111,slow=17,SNR=15						
H03N2				Sn	**Sn**	**09 41 32.6**	**-0.6**
	baz=174,slow=78,SNR=8.8						
H03N2				T	T	09 48 21.8	
	baz=59,slow=72,SNR=278						
H03N3	**Juan Fernandez**	**7.73**	**230**	Pn	**Pn**	**09 40 09.5**	**+2.7**
	baz=111,slow=17,SNR=23						
H03N3				Sn	**Sn**	**09 41 31.9**	**-1.5**
	baz=174,slow=78,SNR=6.7						
H03N3				T	T	09 48 18.4	
	baz=59,slow=72,SNR=281						
H03S3	**Juan Fernandez**	**7.95**	**228**	Pn	**Pn**	**09 40 07.2**	**-2.6**
	baz=242,slow=74,SNR=11						
H03S3				Sn	**Sn**	**09 41 34.2**	**-4.3**
	baz=242,slow=75,SNR=10						
H03S1	**Juan Fernandez**	**7.95**	**228**	Pn	**Pn**	**09 40 08.0**	**-1.9**
	baz=242,slow=74,SNR=11						
H03S1				Sn	**Sn**	**09 41 34.4**	**-4.3**
	baz=242,slow=75,SNR=7.2						
H03S2	**Juan Fernandez**	**7.96**	**228**	Pn	**Pn**	**09 40 07.3**	**-2.6**
	baz=242,slow=74,SNR=9.6						
H03S2				Sn	**Sn**	**09 41 33.8**	**-5.2**
	baz=242,slow=75,SNR=11						
CPUP	**Villa Florida**	**13.08**	**83**	Pn	**Pn**	**09 41 20.8**	**+0.5**
	comp=N,0.2nm,0.3s,baz=285,slow=12,SNR=1.6						
SIV	**San Ignacio**	**16.06**	**40**	Pn	**Pn**	**09 41 58.1**	**-2.2**
	comp=N,0.1nm,0.3s,baz=211,slow=12,SNR=3.7						
TXAR	**Lajitas Array**	**65.22**	**330**	P	**P**	**09 48 56.8**	**+1.4**
	comp=N,0.2nm,0.8s,baz=142,slow=6.4,SNR=2.7						
PDAR	**Pinedale Array**	**79.12**	**333**	P	**P**	**09 50 20.3**	**+1.9**
	comp=N,0.2nm,0.4s,baz=111,slow=5.0,SNR=2.4						
WRA	**Warramunga Arr**	**125.46**	**211**	PKP	**PKPdf**	**09 57 15.4**	**-0.1**
	comp=N,0.3nm,0.6s,baz=162,slow=1.9,SNR=7.0						
H11S2	**WAKE ISLAND Hyd**	**25.86**	**273**	T	T	12 16 20.4	
	baz=115,slow=75,SNR=4.6						
H11S1	**WAKE ISLAND Hyd**	**25.87**	**273**	T	T	12 16 15.6	
	baz=115,slow=75,SNR=6.2						
H11S3	**WAKE ISLAND Hyd**	**25.88**	**273**	T	T	12 16 14.5	
	baz=115,slow=75,SNR=4.9						

*NNC **11** 09:44:17.6±2.6,53.4°5N×87.6°3E,h0km,mb2.9,mpv2.6, Error ellipse: s-maj=21.2km s-min=9.6km az=63.0, Suspected Mining explosion.*

IDC 11 09:44:09.1±2.7,54.3°2N×85.9°8E,h0km,mb1 2.9/2, mb1mx2.8/51,mbtmp2.9/2,ML2.6/2,6C-2D,Error ellipse: s-maj=20.5km s-min=10.8km az=55.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.78**	**242**	*i*		09 48 48.2	
	baz=60,slow=335,SNR=1.0						
ZAA0	**Zalesovo Array**	**0.78**	**242**	⇑Pg	Sn	09 44 49.1	+9.5
	0.8nm,0.6s						
ZAA0				⇑Lg	Lg	09 45 13.2	
	2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**0.78**	**242**	Pg	Pg	09 44 22.5	-1.4
	0.7nm,0.3s,baz=59,slow=17,SNR=9.9						
ZALV				Lg	Lg	09 44 35.6	
	1.2nm,0.3s,baz=63,slow=28,SNR=5.1						
KURBB	**Kurchatov Arra**	**5.87**	**234**	Pn	Pn	09 45 38.2	+1.1
	0.1nm,0.3s,baz=52,slow=13,SNR=6.6						
KURBB	**Kurchatov Arra**	**5.87**	**234**	⇑Pn	Pb	09 45 53.3	+1.2
	1.8nm,0.6s						
KURBB				⇑Sn	Sb	09 47 04.4	+1.5
	3.8nm,0.7s						
KURBB				⇑Lg	Lg	09 47 37.4	
	3.1nm,0.6s						
MK31	**Makanchi Array**	**7.89**	**199**	⇑Pn	Pn	09 46 07.4	+2.4
	0.1nm,0.4s,baz=26,slow=14						
MK31				⇓Sn	Sn	09 47 35.0	0.0
	0.3nm,0.5s						
MK31				⇓Lg	Lg	09 48 16.8	
	0.8nm,0.7s,baz=349,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**7.89**	**199**	Pn	Pn	09 46 06.0	+0.9
	0.2nm,0.3s,baz=27,slow=15,SNR=5.6						
MKAR				Lg	Lg	09 48 18.5	

ISC 11 10:05:44.1±0.7,27.8°8N±0.0°2×55.9°6E±0.0°3,h19km±2km, n680,σ1°1§14/706,mb5.0/215,MS3.5/14,23C-17D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.51**	**159**	*e*Pg	**Pb**	**10 05 52.6**	**-1.9**
BNDS	**Bandar-Abbas**	**0.51**	**159**	Pg	Pb	10 05 52.0	-2.6
GENO	**Geno**	**0.51**	**159**	*e*Pg	**Pb**	**10 05 52.7**	**-1.9**
GENO				*e*Sg	**Sb**	**10 06 01.9**	**+0.2**
GENO	**Geno**	**0.51**	**159**	Pg	**Pb**	**10 05 52.7**	**-1.9**
GENO				Sg	**Sb**	**10 06 01.8**	**+0.1**
LAR1	**LAR**	**1.42**	**262**	*e*Pg	**Pb**	**10 06 10.3**	**+0.2**
LAR1				*e*		10 06 43.1	
LAR1	**LAR**	**1.42**	**262**		**Pb**	**10 06 10.3**	**+0.2**
KHNJ	**Kahnooj**	**1.54**	**87**	*e*Pg	**Pb**	**10 06 11.6**	**-0.5**
KHNJ	**Kahnooj**	**1.54**	**87**		**Pb**	**10 06 11.5**	**-0.5**
SHME	**Shamm**	**1.83**	**175**	*e*P	**Pn**	**10 06 15.7**	**+1.2**
	SNR=98						
SHME				S	**Sg**	**10 06 42.6**	**-0.6**
SHME	**Shamm**	**1.83**	**175**	*e*Pn	**Pb**	**10 06 16.0**	**-1.0**
NGRK	**Negar Kerman**	**1.88**	**21**	*e*Pn	**Pn**	**10 06 16.3**	**+0.7**
NGRK				*e*		10 06 55.5	
BANOM	**Banah**	**1.97**	**171**	*e*P	**Pn**	**10 06 18.0**	**+1.5**
	SNR=144						
BANOM				S	**Sg**	**10 06 46.6**	**-1.1**
BANOM	**Banah**	**1.97**	**171**	P	**Pn**	**10 06 18.1**	**+1.6**
	SNR=144						
BANOM				S	**Sg**	**10 06 46.4**	**-1.2**
BANOM	**Banah**	**1.97**	**171**	*e*Pn	**Pb**	**10 06 18.3**	**-1.1**
JHRM	**Jahrom**	**2.20**	**287**	*e*Pn	**Pn**	**10 06 20.8**	**+1.1**
JHRM				*e*		10 07 24.1	
KRBR	**Kerman**	**2.21**	**18**	*e*Pg	**Pb**	**10 06 22.4**	**-1.1**
KRBR	**Kerman**	**2.21**	**18**	Pg	**Pb**	**10 06 22.0**	**-1.6**
TVBK	**TV Kerman**	**2.21**	**18**	*e*Pn	**Pb**	**10 06 22.0**	**-1.7**
TVBK				*e*		10 06 57.8	
UMQ	**Umm Al-Quwin**	**2.36**	**187**	*e*P	**Pb**	**10 06 25.0**	**-1.1**
	SNR=8.6						
UMQ	**Umm Al-Quwin**	**2.36**	**187**	P	**Pb**	**10 06 24.9**	**-1.1**
	SNR=8.6						
UMQ	**Umm Al-Quwin**	**2.36**	**187**	*e*Pn	**Pb**	**10 06 24.9**	**-1.1**
CHMN	**Cheshme madani**	**2.41**	**35**	*e*Pn	**Pb**	**10 06 25.2**	**-1.8**
CHMN				*e*		10 07 17.2	
CHMN	**Cheshme madani**	**2.41**	**35**	Pn	**Pb**	**10 06 25.1**	**-1.9**
MSFE	**Esma-Masafi**	**2.52**	**176**	*e*P	**Pn**	**10 06 26.2**	**+2.2**
	SNR=86						
MSFE	**Esma-Masafi**	**2.52**	**176**	*e*Pn	**Pn**	**10 06 26.3**	**+2.3**
KBAM	**BAM**	**2.52**	**60**	*e*Pn	**Pb**	**10 06 26.4**	**-2.4**
KHGB	**Koh Gabri**	**2.53**	**10**	*e*Pn	**Pn**	**10 06 25.9**	**+1.6**
KHGB				*e*		10 07 15.5	
KHGB	**Koh Gabri**	**2.53**	**10**	Pn	**Pn**	**10 06 25.9**	**+1.6**
LMD1	**Lamerd**	**2.54**	**258**	*e*Pn	**Pn**	**10 06 26.0**	**+1.7**
LMD1				*e*		10 07 37.8	
MDH	**Madha**	**2.59**	**173**	*e*P	**Pn**	**10 06 26.3**	**+1.4**
	SNR=61						
MDH	**Madha**	**2.59**	**173**	P	**Pn**	**10 06 26.4**	**+1.4**
	SNR=61						
MDH	**Madha**	**2.59**	**173**	*e*Pn	**Pn**	**10 06 26.5**	**+1.5**
QIR1	**Qir**	**2.65**	**284**	*e*Pn	**Pn**	**10 06 27.3**	**+1.5**
QIR1				*e*		10 07 27.2	
GHIR	**Ghir-Karzin**	**2.66**	**279**	*e*Pn	**Pb**	**10 06 30.9**	**-0.3**
GHIR				IAML		10 07 20.9	
	comp=E,2μm,0.5s						
GHIR	**Ghir-Karzin**	**2.66**	**279**	Pn	**Pb**	**10 06 30.0**	**-1.2**
NAZ	**Nazwa, Dubai**	**2.89**	**185**	*e*P	**Pn**	**10 06 31.8**	**+2.7**
	SNR=43						
NAZ	**Nazwa, Dubai**	**2.89**	**185**	P	**Pn**	**10 06 31.9**	**+2.7**
	SNR=43						
NAZ	**Nazwa, Dubai**	**2.89**	**185**	*e*Pn	**Pn**	**10 06 31.9**	**+2.7**
UOSS	**Minazif**	**2.93**	**176**	*i*P	**Pn**	**10 06 31.4**	**+1.7**
	SNR=89						
UOSS	**Minazif**	**2.93**	**176**	P	**Pn**	**10 06 31.6**	**+1.9**
UOSS	**Minazif**	**2.93**	**176**	*e*Pn	**Pn**	**10 06 31.3**	**+1.6**
UOSS	**Minazif**	**2.93**	**176**	Pn	**Pn**	**10 06 31.4**	**+1.7**
UOSS				Sn	**Sn**	**10 07 08.0**	**+3.6**
HATD	**Hatta, Dubai**	**3.05**	**177**	*i*P	**Pn**	**10 06 33.3**	**+2.1**
	SNR=85						
HATD	**Hatta, Dubai**	**3.05**	**177**	P	**Pn**	**10 06 33.3**	**+2.1**
	SNR=85						
HATD	**Hatta, Dubai**	**3.05**	**177**	*e*Pn	**Pn**	**10 06 33.4**	**+2.1**
FAQ	**Al Faqa, Dubai**	**3.14**	**186**	*i*P	**Pn**	**10 06 34.9**	**+2.4**
	SNR=61						
FAQ	**Al Faqa, Dubai**	**3.14**	**186**	P	**Pn**	**10 06 35.0**	**+2.4**
	SNR=61						
FAQ	**Al Faqa, Dubai**	**3.14**	**186**	*e*Pn	**Pn**	**10 06 35.1**	**+2.6**
ASUD	**Al Ashush, Dub**	**3.29**	**190**	*i*P	**Pn**	**10 06 37.5**	**+2.9**
	SNR=107						
ASUD	**Al Ashush, Dub**	**3.29**	**190**	P	**Pn**	**10 06 37.7**	**+3.1**
	SNR=107						
ASUD	**Al Ashush, Dub**	**3.29**	**190**	*e*Pn	**Pn**	**10 06 37.0**	**+2.4**
AJN	**Ajban**	**3.42**	**195**	*i*P	**Pn**	**10 06 38.8**	**+2.5**
	SNR=7.1						
AJN	**Ajban**	**3.42**	**195**	P	**Pn**	**10 06 39.1**	**+2.8**
	SNR=7.1						
AJN	**Ajban**	**3.42**	**195**	*e*Pn	**Pn**	**10 06 38.9**	**+2.5**
SHI	**Shiraz**	**3.50**	**301**	P	**Pn**	**10 06 38.8**	**+1.1**
SHI	**Shiraz**	**3.50**	**301**	*e*Pn	**Pn**	**10 06 38.7**	**+1.1**
IMEH	**Mehriz**	**3.69**	**342**	*e*Pn	**Pn**	**10 06 42.3**	**+2.0**
IBAF	**Bafgh**	**3.71**	**355**	*e*Pn	**Pn**	**10 06 42.8**	**+2.2**
SOHO	**SOHO**	**3.77**	**172**	*i*P	**Pn**	**10 06 41.6**	**+0.5**
	SNR=17						
SOHO	**SOHO**	**3.77**	**172**	P	**Pn**	**10 06 41.7**	**+0.5**
SOHO	**SOHO**	**3.77**	**172**	*e*Pn	**Pn**	**10 06 41.7**	**+0.5**
ALNE	**Al Ain**	**3.81**	**183**	*i*P	**Pn**	**10 06 43.2**	**+1.4**
	SNR=12						
ALNE	**Al Ain**	**3.81**	**183**	*e*Pn	**Pn**	**10 06 43.3**	**+1.4**
KAZ1	**Kazerun**	**4.18**	**296**	*e*Pn	**Pn**	**10 06 47.5**	**+0.6**
ISAD	**Sadrabad**	**4.48**	**334**	*e*Pn	**Pn**	**10 06 53.2**	**+2.0**
ICHK	**Chekchek**	**4.55**	**343**	*e*Pn	**Pn**	**10 06 54.4**	**+2.2**
SZD1	**Zahaedan-tmp**	**4.59**	**68**	*e*Pn	**Pn**	**10 06 55.3**	**+2.6**
YZKH	**Yazd**	**4.65**	**346**	*e*Pn	**Pn**	**10 06 55.9**	**+2.5**
YZKH	**Yazd**	**4.65**	**346**	Pn	**Pn**	**10 06 55.0**	**+1.6**
BIDO	**Bidbid**	**4.76**	**155**	*e*Pn	**Pn**	**10 06 55.2**	**+0.4**
KLNJ	**Kolanjah**	**4.92**	**310**	*e*Pn	**Pn**	**10 06 58.1**	**+0.7**
NHDN	**Nehbandan**	**4.99**	**44**	*e*Pn	**Pn**	**10 07 00.7**	**+2.6**
IRAM	**Ramesheh**	**5.00**	**322**	*e*Pn	**Pn**	**10 06 59.6**	**+1.3**
TPRV	**Parvadeh(Tabas**	**5.17**	**7**	*e*Pn	**Pn**	**10 07 02.6**	**+2.1**
UMZA	**Um Al Zommool**	**5.20**	**188**	*e*Pn	**Pn**	**10 07 02.3**	**+1.5**
WSAR	**Wadi Sarin**	**5.21**	**152**	Pn	**Pn**	**10 07 02.1**	**+1.1**
	comp=E,42nm,0.3s,baz=348,slow=10,SNR=310						
WSAR				Sn	**Sn**	**10 08 01.9**	**+1.3**
	comp=E,14nm,0.3s,baz=344,slow=23,SNR=10						
WSAR				LR	LR	10 09 37.5	
	comp=E,143nm,21.7s,baz=338,slow=44						
IKOO	**Kooshah**	**5.24**	**29**	*e*Pn	**Pn**	**10 07 04.2**	**+2.6**
SLWR	**Sila**	**5.40**	**226**	*e*Pn	**Pn**	**10 07 04.2**	**+0.6**
ITEG	**Tejag**	**5.55**	**25**	*e*Pn	**Pn**	**10 07 07.2**	**+1.4**
ANAR	**Anarak**	**5.63**	**341**	*e*Pn	**Pn**	**10 07 08.2**	**+1.3**
IGAR	**Gharneh**	**5.64**	**324**	*e*Pn	**Pn**	**10 07 08.4**	**+1.2**
TKDS	**Koohdasht(Taba**	**5.80**	**10**	*e*Pn	**Pn**	**10 07 10.3**	**+1.1**
TABS	**Tabas**	**5.83**	**10**	*e*Pn	**Pn**	**10 07 10.9**	**+1.3**
TABS	**Tabas**	**5.83**	**10**	Pn	**Pn**	**10 07 10.0**	**+0.3**
IDAH	**Dahanechah**	**5.90**	**34**	*e*Pn	Pn	10 07 15.7	+5.0
IZEF	**Zefreh**	**5.90**	**329**	*e*Pn	**Pn**	**10 07 11.2**	**+0.4**
TNSJ	**Nastanj**	**6.09**	**5**	*e*Pn	**Pn**	**10 07 15.0**	**+1.8**
AFRZ	**Afriz**	**6.12**	**25**	*e*Pn	**Pn**	**10 07 15.7**	**+2.1**
ROKH	**ROKH**	**6.17**	**317**	*e*Pn	**Pn**	**10 07 15.8**	**+1.4**
IMON	**Monand**	**6.18**	**30**	*e*Pn	Pn	10 07 19.2	+4.6
IPIR	**Pirpir**	**6.49**	**319**	*e*Pn	**Pn**	**10 07 19.2**	**+0.3**
IKLH	**Kolahrood**	**6.61**	**326**	*e*Pn	**Pn**	**10 07 21.9**	**+1.5**
KRSH	**Karshahi**	**6.90**	**332**	*e*Pn	**Pn**	**10 07 26.3**	**+1.9**
QAM	**Ghamsar**	**7.03**	**328**	*e*Pn	**Pn**	**10 07 27.2**	**+1.0**
IANJ	**Anjilo**	**7.76**	**348**	*e*Pn	**Pn**	**10 07 37.0**	**+0.7**
IVRN	**Varamin**	**7.96**	**334**	*e*Pn	**Pn**	**10 07 40.4**	**+1.5**
IFIR	**Firoozkooh**	**8.21**	**341**	*e*Pn	**Pn**	**10 07 43.7**	**+1.3**
ISHM	**Shahmirzad**	**8.22**	**345**	*e*Pn	**Pn**	**10 07 44.6**	**+2.0**
IDMV	**Damavand**	**8.37**	**337**	*e*Pn	**Pn**	**10 07 45.9**	**+1.2**
HRA	**Herat**	**8.43**	**38**	Pn	**Pn**	**10 07 48.6**	**+3.2**
BMDN	**Meydan**	**8.43**	**315**	*e*Pn	**Pn**	**10 07 45.4**	**+0.1**
SBZV	**Sabzevar**	**8.60**	**9**	*e*Pn	**Pn**	**10 07 49.9**	**+2.2**
IALA	**Alasht**	**8.61**	**343**	*e*Pn	**Pn**	**10 07 50.2**	**+2.3**
IKMR	**Kamar-syah**	**8.61**	**313**	*e*Pn	**Pn**	**10 07 47.1**	**-0.6**
IGLO	**Ghaloghah**	**8.78**	**349**	*e*Pn	**Pn**	**10 07 53.0**	**+2.7**
JRKH	**Jarkhoshk**	**8.83**	**24**	*e*Pn	**Pn**	**10 07 54.2**	**+3.4**
IPRN	**Peran**	**8.88**	**341**	*e*Pn	**Pn**	**10 07 53.1**	**+1.5**
IDOB	**Doab**	**8.91**	**313**	*e*Pn	**Pn**	**10 07 50.8**	**-1.2**
IPAY	**Payeh**	**8.92**	**16**	*e*Pn	**Pn**	**10 07 54.6**	**+2.4**
HSAM	**Samen**	**8.93**	**317**	*e*Pn	**Pn**	**10 07 50.5**	**-1.7**
IKFM	**Kafar-mosalman**	**8.97**	**311**	*e*Pn	**Pn**	**10 07 51.8**	**-0.8**
IAKL	**Akhelmad**	**9.01**	**14**	*e*Pn	**Pn**	**10 07 55.9**	**+2.5**
IRAZ	**Razeghan**	**9.09**	**327**	*e*Pn	**Pn**	**10 07 54.6**	**+0.1**
IKRD	**Kardeh**	**9.13**	**13**	*e*Pn	Pn	10 08 02.3	+7.3
ISFR	**Sfrayin**	**9.31**	**10**	*e*Pn	**Pn**	**10 07 59.5**	**+2.0**
QABG	**Abgarm-Qazvin**	**9.50**	**327**	*e*Pn	**Pn**	**10 08 00.2**	**0.0**
IBZA	**Bozab**	**9.55**	**315**	*e*Pn	**Pn**	**10 07 59.8**	**-1.1**
IKOM	**Komasi**	**9.59**	**313**	*e*Pn	**Pn**	**10 08 00.6**	**-0.6**
IALM	**Almabolaq**	**9.63**	**318**	*e*Pn	**Pn**	**10 08 00.4**	**-1.5**
QALM	**Alamut, Qazvin**	**9.64**	**333**	*e*Pn	**Pn**	**10 08 03.8**	**+1.8**
SHAO	**Shalim**	**9.82**	**182**	*i*P	**Pn**	**10 08 05.4**	**+1.1**
	SNR=82						
HSRG	**Sareghieh**	**9.84**	**320**	*e*Pn	**Pn**	**10 08 04.5**	**-0.3**
KCHF	**Cheshme Sefid,**	**9.96**	**312**	*e*Pn	**Pn**	**10 08 05.7**	**-0.6**
KER	**Kermanshah**	**9.96**	**313**	*e*Pn	**Pn**	**10 08 06.0**	**-0.3**
GYB5	**ALIBECK ARRAY**	**10.17**	**10**	Pn	**Pn**	**10 08 10.1**	**+1.0**
GYB1	**ALIBECK ARRAY**	**10.18**	**10**	Pn	**Pn**	**10 08 09.6**	**+0.5**
GYA1	**ALIBECK ARRAY**	**10.18**	**10**	Pn	**Pn**	**10 08 10.7**	**+1.5**
GEYT	**Alibeck**	**10.18**	**10**	Pn	**Pn**	**10 08 11.4**	**+2.2**
	comp=E,0.5nm,0.3s,baz=200,slow=16,SNR=11						
GEYT				Lg	Lg	10 11 06.8	
	baz=202,slow=32,SNR=1.1						
GEYT	**Alibeck**	**10.18**	**10**	Pn	**Pn**	**10 08 11.6**	**+2.4**
GYA0B	**ALIBECK ARRAY**	**10.18**	**10**	Pn	**Pn**	**10 08 10.4**	**+1.1**
IVIS	**Veis**	**10.23**	**313**	*e*Pn	**Pn**	**10 08 07.8**	**-2.2**
IGHG	**Ghaleghazi**	**10.30**	**311**	*e*Pn	**Pn**	**10 08 09.8**	**-1.3**
QSDN	**Sirdan**	**10.34**	**328**	*e*Pn	**Pn**	**10 08 12.3**	**+0.7**
RAYN	**Ar Rayn**	**10.38**	**248**	P	**Pn**	**10 08 09.5**	**-2.6**
RAYN	**Ar Rayn**	**10.38**	**248**	Pn	**Pn**	**10 08 09.5**	**-2.6**
ILIN	**Lien**	**10.41**	**315**	*e*Pn	**Pn**	**10 08 11.2**	**-1.3**
IDHR	**Dehrash**	**10.64**	**312**	*e*Pn	**Pn**	**10 08 14.3**	**-1.4**
GNI	**Garni**	**15.36**	**326**	*i*P	**Pn**	**10 09 20.3**	**+0.4**
ZKTA	**Zakatala**	**15.71**	**333**	P	**Pn**	**10 09 25.6**	**+1.3**
SOCY	**Socotra**	**15.72**	**187**	Pn	**Pn**	**10 09 20.9**	**-3.8**
SOCY				IAmb	IAmb	10 09 23.3	
	comp=Z,36nm,0.8s						
NIL	**Nilore**	**15.93**	**65**	P	**Pn**	**10 09 27.1**	**-0.1**
NIL				pmax	pmax		
	comp=Z,17nm,0.8s						
NIL	**Nilore**	**15.93**	**65**		**Pn**	**10 09 27.1**	**-0.1**
LAD	**Lagodekhi**	**16.03**	**333**	P	**P**	**10 09 31.3**	**-0.5**
GAR	**Garm**	**16.30**	**43**	Pn	**Pn**	**10 09 30.6**	**-1.5**
KZRT	**Kazreti**	**16.47**	**328**	P	**P**	**10 09 37.9**	**+1.1**
MAK	**Makhachkala**	**16.54**	**338**	*e*P	**Pn**	**10 09 35.6**	**+0.8**
MAK				*e*S	**Sn**	**10 12 39.7**	**+1.8**
MAK				pmax	pmax		
	comp=Z,249nm,1.2s						
MAK				MLR	MLR		
	comp=Z,103nm,17.0s						
KARS	**Kars**	**16.56**	**323**	P	**P**	**10 09 39.1**	**+1.2**
AKH	**Akhalkalaki**	**16.93**	**326**	P	**Pn**	**10 09 39.9**	**-0.1**
AKH				pmax	pmax		
	comp=Z,28nm,0.8s						
AKH	**Akhalkalaki**	**16.93**	**326**		**Pn**	**10 09 39.9**	**-0.1**
BTK	**Batken**	**17.27**	**42**	P	**Pn**	**10 09 43.1

AAK pmax pmax
comp=Z,63nm,1.3s
AAK Ala-Archa 21.05 41 P **P 10 10 27.6 +0.6**
AB31 Akbulak array 21.56 7 *i* P **P 10 10 32.0 -0.3**
ABKAR Akbulak array 21.56 7 P **P 10 10 32.2 -0.1**
AB04 Akbulak array 21.56 7 P **P 10 10 32.2 -0.1**
AB09 Akbulak array 21.57 7 P **P 10 10 32.1 -0.2**
SGDS Sogindy 21.64 39 *eP* **P 10 10 33.4 +0.1**
comp=Z,5.3nm,0.9s,baz=40
SGDS Sogindy 21.64 39 *eP* **P 10 10 33.4 +0.1**
SGDS pmax pmax
comp=Z,5.0nm,0.9s
DIKM Dikmen 21.79 314 ⇑P **P 10 10 35.4 +0.6**
BOOM Boomskoye usch 21.81 43 P **P 10 10 36.4 +1.1**
BOOM pmax pmax
comp=Z,19nm,1.1s
BOOM Boomskoye usch 21.81 43 P **P 10 10 36.4 +1.1**
TKM2 Tokmak 2 21.86 42 P **P 10 10 35.5 -0.3**
BR131 Keskin Array S 21.93 308 *i* P **P 10 10 36.9 +0.4**
BR131 Keskin Array S 21.93 308 P **P 10 10 36.6 +0.1**
BR131 lAmb lAmb 10 10 40.3
comp=Z,38nm,0.9s
BRTR Keskin Array B 21.93 308 P **P 10 10 36.6 +0.1**
comp=Z,45nm,0.8s,baz=129,slow=12,SNR=53
BRTR PcP **PcP 10 14 35.5 +0.3**
comp=Z,2.4nm,0.7s,baz=140,slow=5.6,SNR=4.0
BRTR LR LR 10 20 31.6
comp=Z,158nm,18.9s,baz=126,slow=40
BRTR Keskin Array B 21.93 308 P **P 10 10 36.0 -0.5**
ANN Anapa 22.45 324 *eP* **P 10 10 43.5 +1.6**
ANN *eS* **S 10 14 50.9 +3.5**
ANN pmax pmax
comp=Z,58nm,0.9s
ILGA Ilgaz 22.48 312 P **P 10 10 41.7 -0.9**
AKTO Aktyubinsk 22.58 3 P **P 10 10 43.4 +0.2**
comp=Z,24nm,0.9s,baz=189,slow=10,SNR=47
AKTO LR LR 10 21 38.2
comp=Z,154nm,18.9s,baz=169,slow=42
AKTO Aktyubinsk 22.58 3 P **P 10 10 42.6 -0.6**
TNSS Tian-Shan 22.73 43 *eP* **P 10 10 45.3 -0.1**
baz=43
TNSS Tian-Shan 22.73 43 *eP* **P 10 10 45.3 -0.1**
BZK Bozkurt 22.75 314 ⇓P **P 10 10 46.1 +1.0**
AAA Alma-Ata 22.81 42 *eP* **P 10 10 45.7 -0.2**
baz=43
AAA Alma-Ata 22.81 42 *eP* **P 10 10 45.6 -0.2**
MDOK Medeo 22.86 43 *eP* **P 10 10 46.4 -0.1**
baz=43
MDOK Medeo 22.86 43 *eP* **P 10 10 46.4 -0.1**
KUU Kurty 22.88 40 *eP* **P 10 10 45.7 -0.8**
comp=Z,12nm,1.0s,baz=41
KUU Kurty 22.88 40 *eP* **P 10 10 45.6 -0.8**
KUU pmax pmax
comp=Z,12nm,1.0s
SATY Saty 23.63 44 *eP* **P 10 10 54.2 -0.1**
comp=Z,3.8nm,1.0s,baz=44
SATY Saty 23.63 44 *eP* **P 10 10 54.1 -0.1**
SATY pmax pmax
comp=Z,4.0nm,1.0s
ELL Elmali 23.67 299 P **P 10 10 54.7 +0.1**
ELL pmax pmax
comp=Z,59nm,0.8s
ELL Elmali 23.67 299 P **P 10 10 54.7 +0.1**
AKAS Kas 23.79 297 P **P 10 10 56.2 +0.4**
MDUB Mudurnu 23.94 308 P **P 10 10 55.8 -1.3**
KPKS Kokpek 24.02 44 *eP* **P 10 10 58.1 +0.2**
comp=Z,13nm,1.1s,baz=44
KPKS Kokpek 24.02 44 *eP* **P 10 10 58.1 +0.2**
KPKS pmax pmax
comp=Z,13nm,1.1s
SHLS Shalkode 24.34 45 *eP* **P 10 11 03.6 +2.7**
comp=Z,15nm,0.6s,baz=46
SHLS Shalkode 24.34 45 *eP* **P 10 11 03.6 +2.7**
SHLS pmax pmax
comp=Z,15nm,0.6s
PDGK Podgornoye 24.45 45 P **P 10 11 02.0 +0.2**
TDK Taldyqorghan 24.73 40 *eP* **P 10 11 03.9 -0.4**
comp=Z,18nm,0.5s,baz=40
TDK Taldyqorghan 24.73 40 *eP* **P 10 11 03.8 -0.4**
TDK pmax pmax
comp=Z,18nm,0.5s
MANT Manisa 25.17 302 P **P 10 11 08.7 +0.2**
BRZS Berezniki 25.50 26 *eP* **P 10 11 11.0 -0.1**
comp=Z,16nm,1.3s,baz=26
BRZS Berezniki 25.50 26 *eP* **P 10 11 11.0 -0.1**
BRZS pmax pmax
comp=Z,16nm,1.3s
KARP Karpathos 25.60 295 P **P 10 11 13.2 +1.0**
VRH Novokhopyorsk 25.66 339 *eP* **P 10 11 12.2 -0.3**
VRH pmax pmax
comp=Z,110nm,0.7s
VORD Divnogorie 26.29 336 *eP* **P 10 11 18.9 +0.7**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 26.54 336 *eP* **P 10 11 19.3 -1.2**
VSR pmax pmax
comp=Z,20nm,1.0s
EZN Ezine 27.22 304 P **P 10 11 27.2 +0.5**
BRVK Borovoye 27.30 19 P **P 10 11 27.3 0.0**
BRVK pmax pmax
comp=Z,21nm,0.9s
BRVK Borovoye 27.30 19 P **P 10 11 27.3 0.0**
BRVK lAmb lAmb 10 11 29.0
comp=Z,21nm,0.8s
BVAR Borovoye Array 27.30 19 P **P 10 11 27.1 -0.3**
comp=Z,8.0nm,0.8s,baz=244,slow=31,SNR=46
BVAR PcP **PcP 10 14 46.3 -0.2**
comp=Z,1.2nm,0.5s,baz=41,slow=4.7,SNR=5.2
IDI Anoyia 27.40 293 P **P 10 11 29.5 +0.9**
comp=Z,18nm,0.7s,baz=100,slow=10.0,SNR=18
IDI Anoyia 27.40 293 ⇑P **P 10 11 28.9 +0.3**
IDI Anoyia 27.40 293 P **P 10 11 29.2 +0.7**
IDI lAmb lAmb 10 11 30.5
comp=Z,22nm,0.8s
TIRR Tirgusor 27.54 314 ⇓P **P 10 11 29.3 -0.2**
TIRR Tirgusor 27.54 314 P **P 10 11 29.0 -0.5**
TIRR pmax pmax
comp=Z,27nm,0.8s
TIRR Tirgusor 27.54 314 P **P 10 11 29.0 -0.5**
TIRR lAmb lAmb 10 11 30.6
comp=Z,27nm,0.8s
ALN Alexandroupoli 27.75 306 P **P 10 11 30.6 -0.9**
ALN pmax pmax
comp=Z,13nm,1.0s
ALN Alexandroupoli 27.75 306 P **P 10 11 30.6 -0.9**
LPSR Galich'ya Gora 27.77 337 *eP* **P 10 11 30.8 -0.7**
LPSR pmax pmax
comp=Z,30nm,1.0s
MAKZ Makanchi 27.81 40 P **P 10 11 31.9 -0.1**
MAKZ Makanchi 27.81 40 P **P 10 11 31.2 -0.8**
HARR Harsova 27.95 314 ⇑P **P 10 11 32.9 -0.3**
MK31 Makanchi Array 27.98 41 *i* P **P 10 11 33.7 +0.2**
MK31 Makanchi Array 27.98 41 P **P 10 11 33.3 -0.2**
MKAR Makanchi Array 27.98 41 P **P 10 11 33.8 +0.3**
comp=Z,3.0nm,0.6s,baz=229,slow=7.9,SNR=31
MKAR PcP **PcP 10 14 48.0 -0.3**
comp=Z,1.0nm,0.5s,baz=230,slow=0.8,SNR=4.4
MKAR Makanchi Array 27.98 41 P **P 10 11 32.9 -0.6**
MKAR PcP **PcP 10 14 47.6 -0.8**
CFR Carcaliu 28.05 315 P **P 10 11 34.9 +0.8**
CFR pmax pmax
comp=Z,9.0nm,1.0s
KURBB Kurchatov Arra 28.44 31 P **P 10 11 38.0 +0.4**
comp=Z,3.0nm,0.5s,baz=231,slow=8.8,SNR=34
KURBB PcP **PcP 10 14 49.6 +0.2**
comp=Z,1.4nm,0.7s,baz=226,slow=3.3,SNR=7.1
KURBB Kurchatov Arra 28.44 31 P **P 10 11 37.3 -0.3**
KURK Kurchatov 28.55 31 *ceP* **P 10 11 38.2 -0.3**
KURK pmax pmax
comp=Z,14nm,1.7s
KURK Kurchatov 28.55 31 P **P 10 11 38.6 +0.1**
KURK **PcP 10 14 50.1 +0.5**
ARU Arti 28.59 3 P **P 10 11 39.9 +1.1**
comp=Z,3.0nm,0.2s,baz=306,slow=6.4,SNR=4.4
ARU Arti 28.59 3 P **P 10 11 38.8 0.0**
ARU 10 12 27.2
ARU S **S**
ARU SS **SnSn 10 17 46.9 +0.8**
ARU Arti 28.59 3 P **P 10 11 40.1 +1.4**
DION Dionisos Attik 28.61 299 P **P 10 11 39.7 +0.5**
ANKY Antikythira Is 28.76 294 P **P 10 11 41.7 +1.2**
AOS Alonnisos 28.88 301 P **P 10 11 42.1 +0.5**
SEM Semipalatinsk 29.10 33 *eP* **P 10 11 43.2 -0.5**
comp=Z,7.5nm,1.4s,baz=33
SEM Semipalatinsk 29.10 33 *eP* **P 10 11 43.2 -0.5**
SEM pmax pmax
comp=Z,7.0nm,1.4s
PAIG Paliouri 29.21 303 P **P 10 11 46.1 +1.6**
VRI Vrincioaia 29.25 316 ⇓P **P 10 11 44.2 -0.7**
VRI Vrincioaia 29.25 316 P **P 10 11 44.1 -0.7**
ATAL Atalanti 29.43 300 P **P 10 11 46.0 -0.5**
XOR Xorichti 29.44 301 P **P 10 11 46.6 0.0**
SORM Soroca 29.45 321 ⇑P **P 10 11 45.6 -0.9**
SORM Soroca 29.45 321 P **P 10 11 45.5 -0.9**
COPA Copaceanca 29.47 312 ⇓P **P 10 11 47.6 +0.8**
PLG Polygyros 29.49 303 P **P 10 11 47.5 +0.4**
MLR Muntele Rosu 29.57 315 P **P 10 11 49.2 +1.5**
comp=Z,15nm,0.8s,baz=22,slow=3.7,SNR=23
MLR PcP **PcP 10 14 52.2 -0.2**
comp=Z,3.1nm,0.7s,baz=131,slow=0.9,SNR=3.3
MLR Muntele Rosu 29.57 315 ⇓P **P 10 11 47.8 0.0**
MLR Muntele Rosu 29.57 315 P **P 10 11 49.2 +1.5**
MLR lAmb lAmb 10 11 51.4
comp=Z,16nm,0.8s
MLR **PcP 10 14 51.8 -0.6**
SRS Serrai 29.59 305 P **P 10 11 48.4 +0.5**
SRS pmax pmax
comp=Z,29nm,1.0s
SRS Serrai 29.59 305 P **P 10 11 47.9 0.0**
TESR Tescani 29.60 317 ⇑P **P 10 11 48.2 +0.3**
SOH Sokhos 29.68 304 P **P 10 11 49.4 +0.7**
SOH pmax pmax
comp=Z,31nm,0.9s
SOH Sokhos 29.68 304 P **P 10 11 49.1 +0.4**
VLX Vlachokerasia 29.70 297 P **P 10 11 48.1 -0.9**
HORT Hortiatis 29.81 304 P **P 10 11 49.9 0.0**
TRIP Tripoli 29.81 297 P **P 10 11 49.4 -0.5**
GUR Goura 29.82 298 P **P 10 11 49.8 -0.2**
ZSN Zaisan 29.82 41 *eP* **P 10 11 49.4 -0.5**
comp=Z,2.1nm,1.1s,baz=41
ZSN Zaisan 29.82 41 *eP* **P 10 11 49.4 -0.5**
ZSN pmax pmax
comp=Z,2.0nm,1.1s
OZUR 29.94 315 ⇓P **P 10 11 51.1 +0.2**
KLV Kalavryta, Ach 29.98 298 P **P 10 11 51.0 -0.5**
WMQ Urumqi 30.01 50 *eP* **P 10 11 53.3 +1.6**
WMQ pP sP 10 12 03.9 +3.5
WMQ sP pP 10 12 10.9 +13
WMQ pmax pmax
comp=Z,30nm,0.7s
WMQ pmax pmax
comp=Z,180nm,4.3s
ITM Ithomi 30.03 297 P **P 10 11 51.0 -0.8**
ITM lAmb lAmb 10 11 53.8
comp=Z,18nm,0.7s
KALE Kalithea 30.05 299 P **P 10 11 51.3 -0.8**
KNT Kendrikon 30.10 305 P **P 10 11 53.1 +0.7**
KNT pmax pmax
comp=Z,9.0nm,0.9s
VOIR 30.11 314 ⇓P **P 10 11 53.1 +0.6**
VOIR 30.11 314 P **P 10 11 53.1 +0.6**
DOPR Dopca 30.13 315 ⇓P **P 10 11 52.9 +0.3**
PYL PYLOS 30.13 296 P **P 10 11 51.1 -1.6**
BIZ Bicaz 30.14 317 ⇓P **P 10 11 52.9 +0.2**
LIT Litokhoron 30.14 303 P **P 10 11 51.9 -0.9**
LIT pmax pmax
comp=Z,13nm,0.9s
LIT Litokhoron 30.14 303 P **P 10 11 51.9 -0.9**
LIT lAmb lAmb 10 11 53.6
comp=Z,13nm,0.9s
DRO Drossia 30.31 298 P **P 10 11 54.4 +0.1**
ARR Arges 30.35 313 ⇓P **P 10 11 54.9 +0.3**
VAY Valandovo 30.38 305 P **P 10 11 55.2 +0.3**
AKASG Malin Array Be 30.49 326 P **P 10 11 54.8 -0.9**
comp=Z,26nm,0.8s,baz=127,slow=8.0,SNR=57
AKASG PcP **PcP 10 14 54.1 -0.4**
comp=Z,2.6nm,0.5s,baz=93,slow=2.1,SNR=12
AKASG Malin Array Be 30.49 326 *i* P **P 10 11 54.7 -1.0**
AKASG pmax pmax
comp=Z,26nm,0.8s
AKASG Malin Array Be 30.49 326 P **P 10 11 54.1 -1.5**
AKASG **PcP 10 14 54.0 -0.6**
AKBB Malin Array Si 30.49 326 *ceP* **P 10 11 54.9 -0.8**
AKBB Malin Array Si 30.49 326 P **P 10 11 54.8 -0.8**
OBN Obninsk 30.63 338 P **P 10 11 56.8 -0.1**
comp=Z,6.6nm,0.5s,baz=143,slow=20,SNR=11
OBN Obninsk 30.63 338 ⇓*i* P **P 10 11 57.4 +0.5**
OBN *e* 10 12 08.3
OBN pmax pmax
comp=Z,66nm,1.3s
OBN MLR MLR
comp=Z,70nm,19.0s
OBN Obninsk 30.63 338 P **P 10 11 57.0 +0.2**
KMPD K-Podol'skiy 30.74 320 P **P 10 11 58.0 +0.1**
STIP Stip 30.76 306 *i* P **P 10 11 56.6 -1.6**
MOS Moscow 30.81 340 *eP* **P 10 11 58.9 +0.4**
MOS pmax pmax
comp=Z,64nm,1.0s
PDO Prodromos 30.83 299 P **P 10 11 58.2 -0.6**
BURAR Bucovina Array 30.99 318 ⇑P **P 10 12 00.4 +0.1**
BURAR Bucovina Array 30.99 318 P **P 10 12 00.4 +0.1**
BURAR Bucovina Array 30.99 318 P **P 10 12 00.0 -0.3**
BURAR **PcP 10 14 57.0 +0.9**
BUR08 Bucovina Ar. S 31.01 318 P **P 10 12 00.1 -0.4**
KIRV Kirov 31.03 353 P **P 10 12 00.8 +0.5**
comp=Z,24nm,0.6s,baz=126,slow=7.2,SNR=13
KIRV Kirov 31.03 353 *ceP* **P 10 12 00.0 -0.3**
SKO Skopje 31.37 306 P **P 10 12 05.0 +1.4**
GZR Gura Zlata 31.56 313 ⇑P **P 10 12 04.8 -0.6**
HERR Herculane 31.61 311 ⇑P **P 10 12 05.0 -0.6**
OHR Ohrid 31.62 304 *i* P **P 10 12 05.7 -0.2**
OHR Ohrid 31.62 304 P **P 10 12 05.8 -0.2**
OHR pmax pmax
comp=Z,147nm,0.9s
IGT Igoumenitsa 31.64 301 P **P 10 12 08.1 +2.1**
IGT pmax pmax
comp=Z,15nm,1.0s
PHP Peshkopia 32.02 305 P **P 10 12 09.3 -0.1**
MDVR Moldovita 32.04 311 ⇓P **P 10 12 09.7 +0.1**
TIR Tirane 32.36 304 P **P 10 12 11.9 -0.4**
TIR pmax pmax
comp=Z,35nm,0.7s
TIR Tirane 32.36 304 P **P 10 12 11.9 -0.4**
BZS Buzias 32.40 312 ⇓P **P 10 12 12.9 +0.3**
BZS Buzias 32.40 312 P **P 10 12 12.6 0.0**
BZS pmax pmax
comp=Z,33nm,0.9s
SIRR Siria 32.62 314 ⇑P **P 10 12 14.3 -0.2**
DIVS Divibare 32.99 309 P **P 10 12 15.8 -1.1**
PDG Podgorica 33.06 306 ⇑P **P 10 12 17.7 -0.7**
PDG Podgorica 33.06 306 P **P 10 12 16.8 -1.6**
PDG lAmb lAmb 10 12 19.8
comp=Z,11nm,0.8s
KWP Kalwaria Pacla 33.41 320 P **P 10 12 21.1 -0.3**
KWP pmax pmax
comp=Z,16nm,1.0s
KWP Kalwaria Pacla 33.41 320 P **P 10 12 21.1 -0.3**
KWP lAmb lAmb 10 12 23.3
comp=Z,16nm,1.0s
ZAA0 Zalesovo Array 33.54 31 P **P 10 12 22.2 -0.2**
ZAA0 lAmb lAmb 10 12 23.7
comp=Z,14nm,0.6s
ZALV Zalesovo Beam 33.54 31 P **P 10 12 22.2 -0.2**
comp=Z,13nm,0.4s,baz=236,slow=9.4,SNR=41
ZALV PcP **PcP 10 15 02.1 -0.7**
comp=Z,2.4nm,0.5s,baz=246,slow=2.9,SNR=3.8
KMBO Kilima Mbogo 33.98 215 LR LR 10 27 11.4
comp=Z,72nm,21.9s,baz=93,slow=38
NACGM Naroch 34.30 330 *e* **P 10 12 29.0 0.0**
TIP Timpagrande 34.33 299 ⇑P **P 10 12 29.2 -0.3**
TIP Timpagrande 34.33 299 P **P 10 12 29.4 -0.2**
PSZ Piszkesteto 34.36 315 ⇓P **P 10 12 30.0 +0.2**
PSZ Piszkesteto 34.36 315 P **P 10 12 29.7 0.0**
PSZ pmax pmax
comp=Z,16nm,1.0s
PSZ Piszkesteto 34.36 315 P **P 10 12 29.7 0.0**
PSZ lAmb lAmb 10 12 31.0
comp=Z,16nm,1.0s
IDID Didziasalis 34.58 331 *eP* **P 10 12 31.9 +0.5**
BUD Budapest 34.74 314 P **P 10 12 33.8 +0.8**
BUD pmax pmax
comp=Z,48nm,0.9s
KLMR Klimovskoe 34.79 346 *eP* **P 10 12 31.4 -1.7**
KLMR pmax pmax
comp=Z,21nm,1.3s
KLMR Klimovskoe 34.79 346 *eP* **P 10 12 31.5 -1.7**
KLMR AMP 10 12 36.0
comp=Z,21nm,1.3s
IIGN Ignalina 34.83 330 *eP* **P 10 12 33.9 +0.3**
ISAL Salakas 35.02 330 *eP* **P 10 12 35.6 +0.4**
IZAR Zarasai 35.08 331 *eP* **P 10 12 36.3 +0.5**
VYHS Vyhne 35.23 316 *eP* **P 10 12 36.8 -0.4**
VYHS pmax pmax
comp=Z,11nm,1.1s
VYHS Vyhne 35.23 316 *eP* **P 10 12 36.8 -0.4**
OJC Ojcow 35.35 319 *eP* **P 10 12 37.7 -0.5**
OJC Ojcow 35.35 319 P **P 10 12 38.1 -0.1**
OJC 10 15 08.5
OJC pmax pmax
comp=Z,17nm,1.0s
OJC Ojcow 35.35 319 P **P 10 12 38.1 -0.1**
OJC lAmb lAmb 10 12 38.9
comp=Z,17nm,1.0s
OJC **PcP 10 15 08.5 +0.4**
SUW Suwalki 35.44 327 *eP* **P 10 12 38.0 -0.8**
SUW Suwalki 35.44 327 P **P 10 12 38.1 -0.8**
SUW 10 15 08.2
SUW pmax pmax
comp=Z,107nm,1.0s
SUW Suwalki 35.44 327 P **P 10 12 38.1 -0.8**
SUW **PcP 10 15 08.2 0.0**
PABE Paberze 35.94 329 *eP* **P 10 12 43.2 +0.1**
JAVC Velka Javorina 36.09 316 *eP* **P 10 12 44.9 +0.3**
SMOL Smolenice 36.11 315 *eP* **P 10 12 44.6 -0.2**
SMOL pmax pmax
comp=Z,7.0nm,0.8s
SMOL Smolenice 36.11 315 *eP* **P 10 12 44.6 -0.2**
MODS Modra-Piesok 36.16 315 *eP* **P 10 12 43.9 -1.3**
MODS pmax pmax
comp=Z,21nm,1.1s
MODS Modra-Piesok 36.16 315 *eP* **P 10 12 43.9 -1.3**
KOGS Kog 36.21 312 *i* P **P 10 12 45.4 -0.2**
ZST Bratislava 36.21 315 *eP* **P 10 12 45.0 -0.5**
ZST pmax pmax
comp=Z,41nm,1.0s
ZST Bratislava 36.21 315 *eP* **P 10 12 45.0 -0.5**
PAOL Paolisi 36.24 302 P **P 10 12 44.7 -1.3**
PAOL lAmb lAmb 10 12 46.6
comp=Z,38nm,1.1s
SOP Sopron 36.38 314 P **P 10 12 47.0 0.0**
SOP pmax pmax
comp=Z,65nm,0.9s
GCIS Gornji Cirnik 36.46 310 *i* P **P 10 12 47.7 -0.1**
MORC Moravsky Berou 36.51 317 *eP* **P 10 12 47.2 -1.0**
MORC Moravsky Berou 36.51 317 P **P 10 12 46.9 -1.3**
MORC pmax pmax
comp=Z,9.0nm,0.9s
MORC Moravsky Berou 36.51 317 P **P 10 12 46.9 -1.3**
BOJS Bojanci 36.62 310 *i* P **P 10 12 48.8 -0.3**
VSU Vasula 36.70 335 *eP* **P 10 12 49.3 -0.3**
INTR Introdacqua 36.87 304 P **P 10 12 51.2 -0.2**
CONA Conrad Observa 36.91 314 *i* P **P 10 12 51.1 -0.6**
comp=Z,18nm,0.9s,SNR=6.0
VRAC Vranov 36.91 316 ⇓P **P 10 12 51.7 +0.2**
VRAC Vranov 36.91 316 *eP* **P 10 12 51.0 -0.5**
VRAC Vranov 36.91 316 P **P 10 12 51.6 +0.1**
VRAC pmax pmax
comp=Z,28nm,0.9s
ARSA Arzberg 36.92 313 *i* P **P 10 12 51.4 -0.3**
comp=Z,17nm,1.0s,SNR=7.3
KRUC Moravsky 36.94 316 *eP* **P 10 12 51.2 -0.6**
KRUC Moravsky 36.94 316 P **P 10 12 51.9 +0.1**
KRUC pmax pmax
comp=Z,19nm,0.8s
KRLC Kraliky 37.07 318 *eP* **P 10 12 52.2 -0.8**
SOKA Soboth 37.08 312 *eP* **P 10 12 52.8 -0.3**
comp=Z,12nm,1.1s
PBUR Paburge 37.17 329 *eP* **P 10 12 53.9 +0.3**
MBAR Mbarara 37.26 225 *ceP* **P 10 12 57.3 +2.3**
MBAR pmax pmax
comp=Z,8.0nm,1.0s
MBAR Mbarara 37.26 225 P **P 10 12 56.6 +1.6**
AQU L'Aquila 37.29 304 P **P 10 12 58.4 +3.4**
AQU pmax pmax
comp=Z,74nm,0.8s
OBKA Obir 37.35 311 *eP* **P 10 12 55.5 0.0**
comp=Z,4.8nm,0.7s
DPC Dobruska-Polom 37.45 318 *eP* **P 10 12 55.0 -1.2**
NRCA Norcia 37.58 305 P **P 10 12 57.5 +0.1**
NRCA lAmb lAmb 10 12 58.5
comp=Z,21nm,0.8s
OSTC Ostas 37.59 318 *eP* **P 10 12 57.1 -0.2**
OSTC *ex* x 10 13 03.3
UPC Upice 37.69 318 *eP* **P 10 12 57.6 -0.6**
CHVC Chvalec 37.70 318 *eP* **P 10 12 57.6 -0.6**
MOA Molln 37.91 313 *i* P **P 10 12 59.6 -0.5**
comp=Z,34nm,0.8s,SNR=10
GTA Gaotai 37.94 61 P **P 10 13 01.9 +1.4**
GTA pP sP 10 13 11.3 +2.0
GTA sP pP 10 13 15.2 +8.4
GTA pmax pmax
comp=Z,12nm,1.5s
GTA pmax pmax
comp=Z,99nm,5.5s
GTA LR LR
comp=Z,100nm,14.5s
GTA LR LR
comp=Z,79nm,13.5s
GTA LR LR
comp=Z,120nm,16.4s
MYKA Terra Mystica 37.99 311 *eP* **P 10 13 00.6 -0.3**
comp=Z,7.2nm,0.9s
PRED Cave del Predi 37.99 311 P **P 10 13 00.6 -0.3**
PRED lAmb lAmb 10 13 01.3
comp=Z,15nm,0.8s
TMCR Tamitsa 38.08 347 *eP* **P 10 13 00.1 -1.1**
TMCR pmax pmax
comp=Z,23nm,0.7s
PRU Pruhonice 38.40 317 *eP* **P 10 13 03.7 -0.4**
STAL STALIGIAL 38.53 310 P **P 10 13 04.4 -0.9**
STAL lAmb lAmb 10 13 05.6
comp=Z,16nm,0.8s
GEC2 GERESS Array S 38.56 315 P **P 10 13 04.8 -0.8**
GEC2 lAmb lAmb 10 13 06.2
comp=Z,16nm,0.9s
GEC2B GERESS ARRAY S 38.56 315 P **P 10 13 04.3 -1.3**
GERES GERESS Array B 38.56 315 P **P 10 13 05.0 -0.6**
comp=Z,10nm,0.8s,baz=112,slow=8.8,SNR=55
GERES PcP **PcP 10 15 18.0 0.0**
comp=Z,2.5nm,0.8s,baz=116,slow=3.1,SNR=6.8
GERES GERESS Array B 38.56 315 P **P 10 13 04.2 -1.4**
GERES **PcP 10 15 17.5 -0.5**
PBCC Pribram 38.63 316 *eP* **P 10 13 05.2 -0.9**
PBCC *ex* x 10 13 10.8
KHC Kasperske Hory 38.72 315 *eP* **P 10 13 05.8 -1.1**
KHC *ex* x 10 13 10.1
CIMO Cimolais 38.72 310 P **P 10 13 06.3 -0.7**
ABTA Abfaltersbach 38.77 311 *i* P **P 10 13 06.9 -0.5**
comp=Z,30nm,0.9s,SNR=8.6
FIA1 FINESS Array S 39.04 338 P **P 10 13 08.6 -0.7**
FIA1 lAmb lAmb 10 13 09.9
comp=Z,19nm,0.8s
FINES FINESS Array B 39.04 338 P **P 10 13 09.0 -0.3**
comp=Z,14nm,0.8s,baz=139,slow=8.8,SNR=38
FINES FINESS Array B 39.04 338 P **P 10 13 08.7 -0.6**
BRG Berggiesshubel 39.05 318 *eP* **P 10 13 08.8 -0.8**
comp=Z,11nm,0.9s
BRG Berggiesshubel 39.05 318 *eP* **P 10 13 08.8 -0.8**
BRG pmax pmax
comp=Z,11nm,0.9s
CTI Castel Tesino 39.20 310 P **P 10 13 10.7 -0.3**
CTI pmax pmax
comp=Z,15nm,0.8s
CTI Castel Tesino 39.20 310 P **P 10 13 10.7 -0.3**
ZCCA Zocca 39.36 307 P **P 10 13 13.2 +0.9**
ZCCA lAmb lAmb 10 13 18.4
comp=Z,32nm,0.8s
WTTA Wattenberg 39.48 312 *i* P **P 10 13 12.4 -1.0**
comp=Z,57nm,0.9s,SNR=15
WTTA Wattenberg 39.48 312 P **P 10 13 12.4 -1.0**
WATA Walderalm 39.53 312 *i* P **P 10 13 12.7 -1.1**
comp=Z,56nm,1.4s,SNR=10.0
SQTA Sankt Quirin 39.75 311 *i* P **P 10 13 14.4 -1.2**
comp=Z,30nm,0.6s,SNR=14
NKC Novy Kostel 39.75 316 *eP* **P 10 13 15.6 +0.1**
CLL Collm 39.76 318 *i* P **P 10 13 15.0 -0.5**
comp=Z,17nm,0.9s
CLL Collm 39.76 318 *i* P **P 10 13 15.0 -0.5**
CLL pmax pmax
comp=Z,17nm,0.9s
CLL Collm 39.76 318 P **P 10 13 15.4 -0.1**

MOTA Moosalm 39.85 312 *i* P **P** **10 13 15.3 -1.2**
comp=Z,46nm,1.0s,SNR=15
FETA Feichten 40.03 311 *i* P **P** **10 13 17.1 -0.9**
comp=Z,50nm,0.9s,SNR=16
VSL Villasalto 40.06 299 P **P** **10 13 18.7 +0.5**
KEST Kesra 40.08 293 P **P** **10 13 20.0 +1.5**
comp=Z,16nm,0.9s,baz=169,slow=24,SNR=9.0
KEST Kesra 40.08 293 P **P** **10 13 19.8 +1.3**
KEST IAmb IAmb 10 13 20.9
comp=Z,22nm,1.0s
RETA Reutte 40.10 312 *e*P **P** **10 13 17.1 -1.4**
comp=Z,24nm,1.0s
BSD Bornholm Skovb 40.16 324 *i* P **P** **10 13 17.0 -1.7**
BSD pmax pmax
comp=Z,34nm,0.8s
BSD Bornholm Skovb 40.16 324 *i* P **P** **10 13 17.0 -1.7**
comp=Z,34nm,0.8s
BSD Bornholm Skovb 40.16 324 *i* P **P** **10 13 17.0 -1.7**
BSD IAmb IAmb 10 13 18.1
comp=Z,34nm,0.8s
FUORN Ofenpass-Fuorn 40.26 310 P **P** **10 13 18.5 -1.5**
GRA1 Grafenberg Arr 40.35 315 P **P** **10 13 19.9 -0.6**
GRF Grafenberg Arr 40.35 315 P **P** **10 13 19.9 -0.6**
GRF pmax pmax
comp=Z,49nm,0.9s
GRF Grafenberg Arr 40.35 315 *e*P **P** **10 13 19.9 -0.6**
comp=Z,25nm,0.9s,baz=112,slow=9.1
CMAR Chiang Mai Arr 40.44 94 P **P** **10 13 23.2 +1.7**
comp=Z,0.8nm,0.3s,baz=292,slow=8.8,SNR=4.8
CMAR PcP **PcP** **10 15 24.2 -0.1**
comp=Z,2.0nm,0.6s,baz=283,slow=5.2,SNR=8.1
CMAR LR LR 10 33 21.9
comp=Z,71nm,19.4s,baz=332,slow=41
CMAR Chiang Mai Arr 40.44 94 P **P** **10 13 23.2 +1.7**
CMAR 10 15 24.6
CMAR Chiang Mai Arr 40.44 94 P **P** **10 13 23.1 +1.7**
CMAR **PcP** **10 15 24.6 +0.2**
DAVA Damuels 40.65 311 *i* P **P** **10 13 22.0 -1.1**
comp=Z,71nm,0.8s,SNR=16
TUE Stuetta 40.85 310 P **P** **10 13 23.4 -1.4**
TUE IAmb IAmb 10 13 24.8
comp=Z,19nm,1.0s
LZH Lanzhou 41.09 66 *e*P **P** **10 13 27.6 +0.7**
LZH pP sP 10 13 40.0 +4.2
LZH sP pP 10 13 45.3 +12
LZH pmax pmax
comp=Z,21nm,1.4s
SBF Sospel 41.82 306 *e*P **P** **10 13 31.1 -1.6**
SBF pmax pmax
comp=Z,52nm,0.9s
SENIN Lac Senin/Sane 42.23 309 P **P** **10 13 35.1 -1.1**
MBDF Montbardon 42.39 307 *e*P **P** **10 13 36.1 -1.3**
MBDF pmax pmax
comp=Z,12nm,1.0s
BNI Bardonecchia 42.49 307 P **P** **10 13 36.5 -1.7**
BNI pmax pmax
comp=Z,15nm,0.8s
BNI Bardonecchia 42.49 307 P **P** **10 13 36.5 -1.7**
BNI IAmb IAmb 10 13 37.8
comp=Z,15nm,0.8s
LPG La Plagne 42.49 308 *e*P **P** **10 13 36.3 -2.1**
LPG pmax pmax
comp=Z,13nm,0.7s
LPL La Plagne 42.51 308 *e*P **P** **10 13 36.4 -2.0**
LPL pmax pmax
comp=Z,34nm,1.1s
CDF Champ du Feu 42.59 312 *e*P **P** **10 13 36.4 -2.5**
CDF pmax pmax
comp=Z,8.0nm,0.9s
ECH Echery 42.63 312 P **P** **10 13 37.7 -1.5**
ECH pmax pmax
comp=Z,30nm,1.0s
ECH Echery 42.63 312 P **P** **10 13 37.7 -1.5**
ECH IAmb IAmb 10 13 39.2
comp=Z,30nm,1.0s
TLY Talaya 42.69 43 LR LR 10 33 08.2
comp=Z,95nm,22.0s,baz=254,slow=38
HINF Hinteralfeld 42.76 311 *e*P **P** **10 13 38.1 -2.2**
HINF pmax pmax
comp=Z,9.0nm,0.9s
CABF La Chapelle 43.09 310 *e*P **P** **10 13 41.5 -1.5**
CABF pmax pmax
comp=Z,22nm,0.8s
HAU Haudompre 43.13 312 *e*P **P** **10 13 40.9 -2.3**
HAU pmax pmax
comp=Z,11nm,0.7s
WLF Walferdange 43.55 314 P **P** **10 13 45.8 -0.7**
comp=Z,24nm,1.0s
WLF Walferdange 43.55 314 P **P** **10 13 45.9 -0.7**
WLF pmax pmax
comp=Z,21nm,0.8s
WLF Walferdange 43.55 314 P **P** **10 13 45.9 -0.7**
WLF IAmb IAmb 10 13 47.2
comp=Z,21nm,0.8s
SONM Songino Array 43.64 49 P **P** **10 13 48.6 +1.1**
comp=Z,3.3nm,0.9s,baz=253,slow=8.5,SNR=12
SONM Songino Array 43.64 49 P **P** **10 13 48.1 +0.6**
SONM pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 43.64 49 P **P** **10 13 48.1 +0.6**
VIVF Saint-Julien-l 43.89 307 *e*P **P** **10 13 47.2 -2.2**
VIVF pmax pmax
comp=Z,13nm,0.8s
SSB Saint Sauveur 44.02 307 P **P** **10 13 49.0 -1.4**
SSB pmax pmax
comp=Z,7.0nm,0.8s
SSB Saint Sauveur 44.02 307 P **P** **10 13 49.0 -1.4**
ULN Ulaanbaatar 44.09 49*ce*P **P** **10 13 51.7 +0.6**
ULN pmax pmax
comp=Z,6.0nm,1.3s
ULN Ulaanbaatar 44.09 49 P **P** **10 13 51.5 +0.4**
BSTI Sart Tilman 44.10 315 P P 10 13 55.7 +4.7
BCLA Clavier 44.23 315 ||P **P** **10 13 52.5 +0.4**
comp=Z,20nm,1.1s
NC602 NORSAR Array S 44.29 330 P **P** **10 13 51.8 -0.5**
NC602 IAmb IAmb 10 13 52.6
comp=Z,20nm,0.9s
NC602 NORSAR Array S 44.29 330 *e*P **P** **10 13 51.9 -0.5**
NORES NORESS Array B 44.29 330 P **P** **10 13 51.4 -0.9**
NORES pmax pmax
comp=Z,1.0nm,0.3s
OSL Oslo 44.30 329 *e*P **P** **10 13 52.1 -0.2**
BGES Gesves 44.36 315 P **P** **10 13 53.2 +0.1**
comp=Z,23nm,1.2s
BGES pP **sP** **10 14 04.2 +2.4**
BGES PcP **PcP** **10 15 36.9 +0.1**
NC605 NORSAR Array S 44.37 331 P **P** **10 13 51.8 -1.1**
NC605 IAmb IAmb 10 13 53.6
comp=Z,19nm,0.9s
NC405 NORSAR Array S 44.39 331 P **P** **10 13 52.2 -0.9**
GIVF Givet 44.48 314 *e*P **P** **10 13 53.4 -0.6**
GIVF pmax pmax
comp=Z,29nm,1.1s
NB201 NORSAR Array S 44.55 331 P **P** **10 13 53.6 -0.8**
BMRD Maredsous 44.55 315 P **P** **10 13 54.7 +0.1**
BMRD PcP **PcP** **10 15 34.5 -2.9**
NB2 NORSAR Subarra 44.57 331 P **P** **10 13 53.5 -1.2**
comp=Z,15nm,0.9s,baz=118,slow=7.9
NB2 NORSAR Subarra 44.57 331 P **P** **10 13 53.5 -1.2**
comp=Z,15nm,0.9s,baz=118,slow=7.9
NOA NORSAR Array B 44.57 331 P **P** **10 13 53.7 -1.0**
comp=Z,10nm,0.8s,baz=116,slow=7.9,SNR=42
NOA PcP **PcP** **10 15 36.5 -0.9**
comp=Z,2.5nm,0.8s,baz=103,slow=4.0,SNR=4.8
NC303 NORSAR Array S 44.59 331 P **P** **10 13 53.7 -1.1**
DOU Dourbes 44.62 314 P **P** **10 13 54.8 -0.3**
NAO01 NORSAR Array S 44.63 330 P **P** **10 13 54.1 -1.0**
SMF Signal de Mont 44.63 309 *e*P **P** **10 13 53.5 -1.8**
SMF pmax pmax
comp=Z,38nm,1.0s
HOMB Homborsund 44.67 326 *e*P **P** **10 13 55.9 +0.6**
KONO Kongsberg 44.69 328 P **P** **10 13 54.4 -1.1**
KONO pmax pmax
comp=Z,13nm,0.9s
KONO Kongsberg 44.69 328 P **P** **10 13 54.4 -1.1**
KONO IAmb IAmb 10 13 56.6
comp=Z,13nm,0.9s
KONO Kongsberg 44.69 328 *e*P **P** **10 13 53.6 -1.9**
LOR Lormes 44.69 310 *e*P **P** **10 13 53.8 -2.0**
LOR pmax pmax
comp=Z,16nm,1.0s
NBO00 NORSAR Array S 44.76 331 P **P** **10 13 55.1 -1.0**
NBO00 IAmb IAmb 10 13 56.1
comp=Z,31nm,1.0s
BAIF Baives 44.86 314 *e*P **P** **10 13 56.6 -0.4**
BAIF pmax pmax
comp=Z,42nm,1.0s
NC204 NORSAR Array S 44.88 331 P **P** **10 13 56.6 -0.5**
SNF Seneffe 44.89 315 P **P** **10 13 57.7 +0.5**
SSF Saint Saulge 44.91 310 *e*P **P** **10 13 55.9 -1.6**
SSF pmax pmax
comp=Z,32nm,1.0s
AVF Avril sur Loir 44.98 309 *e*P **P** **10 13 56.4 -1.7**
AVF pmax pmax
comp=Z,20nm,1.2s
KEV Kevo 45.11 346 P **P** **10 13 58.9 +0.1**
KEV pmax pmax
comp=Z,59nm,1.1s
KEV Kevo 45.11 346 P **P** **10 13 58.9 +0.1**
ARD4 ARCESS Array S 45.25 345 P **P** **10 13 59.4 -0.5**
ARD4 IAmb IAmb 10 14 01.1
comp=Z,30nm,1.1s
ARD5 ARCESS Array S 45.25 345 P **P** **10 13 59.7 -0.2**
ARD3 ARCESS Array S 45.26 345 P **P** **10 13 59.7 -0.2**
ARD3 IAmb IAmb 10 14 01.1
comp=Z,29nm,1.1s
ARC4 ARCESS Array S 45.26 345 P **P** **10 14 00.1 +0.2**
ARC4 IAmb IAmb 10 14 01.1
comp=Z,20nm,1.0s
ARB3 ARCESS Array S 45.26 345 P **P** **10 14 00.1 +0.1**
ARB3 IAmb IAmb 10 14 01.1
comp=Z,18nm,0.9s
ARA2 ARCESS Array S 45.26 345 P **P** **10 13 59.5 -0.5**
ARA2 IAmb IAmb 10 14 01.2
comp=Z,18nm,0.9s
ARB2 ARCESS Array S 45.26 345 P **P** **10 14 00.3 +0.4**
ARB2 IAmb IAmb 10 14 01.1
comp=Z,26nm,1.1s
ARC2 ARCESS Array S 45.26 345 P **P** **10 14 00.6 +0.6**
ARC2 IAmb IAmb 10 14 01.2
comp=Z,26nm,1.1s
ARA0 ARCESS Array S 45.27 345 P **P** **10 13 59.8 -0.2**
ARA0 IAmb IAmb 10 14 01.2
comp=Z,18nm,0.9s
ARA0 ARCESS Array S 45.27 345 *e*P **P** **10 14 00.9 +0.9**
ARB4 ARCESS Array S 45.27 345 P **P** **10 13 60.0 0.0**
ARB4 IAmb IAmb 10 14 01.1
comp=Z,16nm,0.9s
ARCES ARCESS Array B 45.27 345 P **P** **10 13 60.0 0.0**
comp=Z,12nm,0.9s,baz=148,slow=9.0,SNR=35
ARCES LR LR 10 36 34.1
comp=Z,87nm,18.9s,baz=170,slow=41
ARCES ARCESS Array B 45.27 345 P **P** **10 14 00.0 0.0**
ARA1 ARCESS Array S 45.27 345 P **P** **10 13 59.8 -0.2**
ARA1 IAmb IAmb 10 14 01.1
comp=Z,20nm,1.0s
ARA3 ARCESS Array S 45.27 345 P **P** **10 14 00.1 +0.1**
ARA3 IAmb IAmb 10 14 01.2
comp=Z,17nm,0.9s
ARB1 ARCESS Array S 45.27 345 P **P** **10 13 59.9 -0.1**
ARB1 IAmb IAmb 10 14 01.2
comp=Z,20nm,1.0s
ARB5 ARCESS Array S 45.27 345 P **P** **10 14 00.1 0.0**
ARB5 IAmb IAmb 10 14 01.1
comp=Z,18nm,0.9s
ARC6 ARCESS Array S 45.27 345 P **P** **10 14 00.1 +0.1**
ARC6 IAmb IAmb 10 14 01.2
comp=Z,16nm,0.9s
ARD2 ARCESS Array S 45.27 345 P **P** **10 14 00.9 +0.9**
ARD2 IAmb IAmb 10 14 01.2
comp=Z,20nm,0.9s
ARC1 ARCESS Array S 45.27 345 P **P** **10 14 00.5 +0.5**
ARC1 IAmb IAmb 10 14 01.2
comp=Z,19nm,1.0s
ARD7 ARCESS Array S 45.27 345 P **P** **10 13 59.9 -0.1**
ARD7 IAmb IAmb 10 14 01.7
comp=Z,24nm,1.1s
ARC7 ARCESS Array S 45.27 345 P **P** **10 14 00.1 +0.1**
ARC7 IAmb IAmb 10 14 01.2
comp=Z,15nm,0.9s
ARD1 ARCESS Array S 45.27 345 P **P** **10 14 00.3 +0.2**
ARD1 IAmb IAmb 10 14 01.2
comp=Z,17nm,0.9s
ARD8 ARCESS Array S 45.28 345 P **P** **10 14 00.6 +0.5**
ARD8 IAmb IAmb 10 14 01.7
comp=Z,14nm,0.8s
ARD9 ARCESS Array S 45.28 345 P **P** **10 14 00.2 +0.1**
ARD9 IAmb IAmb 10 14 01.2
comp=Z,15nm,0.9s
NRIK Noril'sk 45.37 15 P **P** **10 14 01.3 +0.5**
comp=Z,4.3nm,0.7s,baz=196,slow=5.0,SNR=7.7
NRIK Noril'sk 45.37 15*ce*P **P** **10 14 00.5 -0.3**
NRIK pmax pmax
comp=Z,4.0nm,0.6s
KTK1 Kautokeino 45.39 344 *e*P **P** **10 14 01.0 0.0**
TAM Tamanrasset 45.62 275 P **P** **10 14 03.9 +0.3**
TAM pmax pmax
comp=Z,7.0nm,0.8s
TAM Tamanrasset 45.62 275 P **P** **10 14 03.9 +0.3**
SKAR Skarslia 45.70 329 *e*P **P** **10 14 03.6 -0.1**
TCF Toulx Ste Croi 45.73 309 *e*P **P** **10 14 02.5 -1.5**
TCF pmax pmax
comp=Z,21nm,1.0s
CAF Calviac 45.74 307 *e*P **P** **10 14 02.8 -1.4**
CAF pmax pmax
comp=Z,11nm,0.7s
DOMB Dombas 45.95 331 *e*P **P** **10 14 05.4 -0.1**
MOR8 Moi Rana 46.03 338 *e*P **P** **10 14 05.2 -0.9**
RJF Les Rejaudoux 46.15 307 *e*P **P** **10 14 06.3 -1.0**
RJF pmax pmax
comp=Z,29nm,1.0s
ODD1 Odda 46.18 328 *e*P **P** **10 14 08.2 +0.9**
FAUS Fauske 46.48 340 *e*P **P** **10 14 09.3 -0.2**
HAMF Hammerfest 46.52 346 *e*P **P** **10 14 10.3 +0.4**
KONS Konsvik 46.65 338 *e*P **P** **10 14 10.8 -0.1**
STEI Steigen 46.83 340 *e*P **P** **10 14 11.6 -0.6**
HYA Hoyanger 46.84 330 *e*P **P** **10 14 12.7 +0.2**
TRO Tromso 46.91 343 *e*P **P** **10 14 13.4 +0.5**
HHC Hu-ho-hao-te 46.96 59 *e*P **P** **10 14 15.6 +1.7**
HHC pmax pmax
comp=Z,20nm,1.1s
HHC pmax pmax
comp=Z,92nm,5.4s
ASK Askoy 47.05 328 *e*P **P** **10 14 13.6 -0.5**
LDF La Druitiere 47.49 312 *e*P **P** **10 14 15.6 -2.1**
LDF pmax pmax
comp=Z,37nm,1.1s
ETSF Etsaut 47.60 304 *e*P **P** **10 14 20.2 +1.4**
ETSF pmax pmax
comp=Z,14nm,0.9s
FLN La Foliniere 47.74 312 *e*P **P** **10 14 17.7 -2.0**
FLN pmax pmax
comp=Z,31nm,0.9s
TIY Taiyuan 47.84 63 *e*P **P** **10 14 21.5 +0.7**
TIY pmax pmax
comp=Z,20nm,0.6s
GRR Gorron 47.96 311 *e*P **P** **10 14 19.7 -1.7**
GRR pmax pmax
comp=Z,23nm,1.0s
SJPF Ste Jean 48.08 304 *e*P **P** **10 14 21.5 -1.0**
SJPF pmax pmax
comp=Z,15nm,0.8s
SGMF Saint Gilles 49.08 311 *e*P **P** **10 14 28.4 -1.7**
SGMF pmax pmax
comp=Z,150nm,1.8s
BOD Bodaibo 49.93 36 *e*P **P** **10 14 36.0 -0.4**
BOD pmax pmax
comp=Z,27nm,1.1s
EKA Eskdalemuir Ar 50.11 320 P **P** **10 14 37.0 -0.8**
ESDC Sonseca Array 50.35 300 P **P** **10 14 39.6 -0.3**
comp=Z,6.1nm,0.8s,baz=64,slow=7.8,SNR=25
ESDC PcP **PcP** **10 15 57.9 -0.5**
comp=Z,2.4nm,0.8s,baz=55,slow=3.9,SNR=5.9
ESDC Sonseca Array 50.35 300 P **P** **10 14 38.5 -1.5**
PAB San Pablo 50.66 300 P **P** **10 14 41.9 -0.4**
PAB pmax pmax
comp=Z,17nm,0.9s
PAB San Pablo 50.66 300 P **P** **10 14 41.9 -0.4**
PAB IAmb IAmb 10 14 42.7
comp=Z,17nm,0.9s
TIA Tai'an 51.76 64 P **P** **10 14 50.6 +0.1**
TIA pmax pmax
comp=Z,15nm,1.0s
TOA0 Torodi Ar. Sit 52.50 265 P **P** **10 14 55.2 -1.1**
TORD Torodi Ar. Bea 52.50 265 P **P** **10 14 55.6 -0.6**
comp=Z,50nm,0.7s,baz=59,slow=7.1,SNR=108
TORD LR LR 10 37 46.4
comp=Z,74nm,18.7s,baz=175,slow=37
TORD Torodi Ar. Bea 52.50 265 P **P** **10 14 54.7 -1.6**
MVO Moncorvo 52.52 302 *e*P **P** **10 14 56.1 -0.1**
comp=Z,60nm,1.8s
PMRV Marv??o 53.01 300 *e*P **P** **10 14 59.5 -0.2**
PCBR Castelo Branco 53.02 300 *e*P **P** **10 15 00.1 +0.3**
comp=Z,51nm,1.6s
PVRL Vila Real 53.02 302 *e*P **P** **10 14 59.9 +0.1**
comp=Z,69nm,1.6s
POLO Lamas de Olo 53.07 302 *e*P **P** **10 15 00.4 +0.1**
comp=Z,34nm,1.5s
PVIS Viseu 53.22 302 *e*P **P** **10 15 01.6 +0.3**
comp=Z,36nm,1.3s
PBEJ Beja 53.58 298 *e*P **P** **10 15 03.6 -0.4**
comp=Z,44nm,1.8s
EVO Evora 53.62 299 *e*P **P** **10 15 04.1 -0.1**
comp=Z,44nm,1.7s
NJ2 Nanjing 53.97 69 *e*P **P** **10 15 07.3 +0.4**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
KOWA Kowa 57.00 270 P **P** **10 15 28.2 -0.7**
ZEA Zeya 57.12 42 *e*P **P** **10 15 29.0 -0.2**
ZEA pmax pmax
comp=Z,10.0nm,0.8s
YAK Yakutsk 58.18 32 *e*P **P** **10 15 35.8 -0.7**
YAK pmax pmax
comp=Z,13nm,0.8s
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,9.0nm,1.4s
YAK Yakutsk 58.18 32 P **P** **10 15 35.9 -0.6**
YAK IAmb IAmb 10 15 36.6
comp=Z,22nm,1.0s
TIXI Tiksi 58.42 21*ce*P **P** **10 15 37.4 -0.6**
TIXI Tiksi 58.42 21 P **P** **10 15 37.6 -0.4**
TIXI IAmb IAmb 10 15 39.5
comp=Z,7.6nm,0.5s
DAG Danmarks Havn 59.55 345 *i* P **P** **10 15 45.0 -0.8**
DAG pmax pmax
comp=Z,16nm,0.9s
DAG Danmarks Havn 59.55 345 *i* P **P** **10 15 45.0 -0.8**
comp=Z,16nm,0.9s
DAG Danmarks Havn 59.55 345 *i* P **P** **10 15 45.0 -0.8**
DAG IAmb IAmb 10 15 46.4
comp=Z,16nm,0.9s
DBG Daneborg 59.66 342 *i* P **P** **10 15 47.5 +0.9**
DBG IAmb IAmb 10 15 48.6
comp=Z,6.0nm,0.9s
TSUM Tsumeb 59.75 223 P **P** **10 15 47.8 -0.3**
TSUM IAmb IAmb 10 15 49.7
comp=Z,6.4nm,1.0s
STKI Sintang 59.88 108 P P 10 15 54.4 +5.4
KSAR Wonju Array Be 59.98 61 P **P** **10 15 49.3 -0.1**
KSAR Wonju Array Be 59.98 61 P **P** **10 15 49.3 -0.1**
KSRS Korea Array 60.01 61 P **P** **10 15 49.2 -0.3**
comp=Z,5.5nm,0.8s,baz=274,slow=6.8,SNR=20
LBTB Lobatse 60.18 212 P **P** **10 15 51.3 +0.4**
LBTB pmax pmax
comp=Z,6.0nm,0.9s
LBTB Lobatse 60.18 212 P **P** **10 15 51.2 +0.4**
LBTB IAmb IAmb 10 15 54.2
comp=Z,6.1nm,0.8s
KLR Kul'dur 60.41 47 P **P** **10 15 51.7 -0.5**
comp=Z,4.5nm,0.9s,baz=284,slow=7.9,SNR=10
KLR Kul'dur 60.41 47*ce*P **P** **10 15 51.5 -0.7**
DBIC Dimbokro 61.16 262 P **P** **10 15 57.0 -0.7**
comp=Z,19nm,0.7s,baz=40,slow=6.8,SNR=25
DBIC LR LR 10 45 28.2
comp=Z,45nm,18.9s,baz=40,slow=39
DBIC Dimbokro 61.16 262 P **P** **10 15 57.1 -0.7**
DBIC pmax pmax
comp=Z,24nm,1.0s
DBIC Dimbokro 61.16 262 P **P** **10 15 57.1 -0.7**
KIC Kosan Boka 61.20 262 *e*P **P** **10 15 57.3 -0.8**
comp=Z,51nm,0.9s
TIC Toumodi 61.31 262 *e*P **P** **10 15 57.6 -1.2**
USRK Ussuriysk Ar. 61.51 53 P **P** **10 15 59.3 -0.4**
comp=Z,1.5nm,0.7s,baz=283,slow=9.2,SNR=7.7
USRK Ussuriysk Ar. 61.51 53 P **P** **10 15 58.5 -1.3**
LIC Lamto 61.52 262 *e*P **P** **10 15 59.4 -0.8**
comp=Z,80nm,0.8s
BOSA Boshof 63.41 210 P **P** **10 16 12.7 0.0**
comp=Z,4.5nm,0.7s,baz=23,slow=6.0,SNR=12
BOSA LR LR 10 46 44.4
comp=Z,24nm,18.9s,baz=40,slow=39
BOSA Boshof 63.41 210 P **P** **10 16 12.4 -0.3**
BOSA IAmb IAmb 10 16 15.4
comp=Z,8.3nm,1.1s
SUMG Summit 64.97 341 P **P** **10 16 22.8 +0.1**
SUMG pmax pmax
comp=Z,20nm,0.9s
SUMG Summit 64.97 341 P **P** **10 16 22.8 +0.1**
SUMG Summit 64.97 341 *i* P **P** **10 16 23.0 +0.3**
comp=Z,55nm,1.0s
SUMG Summit 64.97 341 *i* P **P** **10 16 23.0 +0.3**
SUMG IAmb IAmb 10 16 26.0
comp=Z,55nm,1.0s
SMKI Samarinda 65.02 105 P **P** **10 16 27.0 +3.6**
YSS Yuzh-Sakhalins 68.11 47*ce*P **P** **10 16 41.7 -0.9**
YSS pmax pmax
comp=Z,28nm,1.0s
YSS Yuzh-Sakhalins 68.11 47 P **P** **10 16 41.8 -0.8**
SEY Seymchan 68.38 29 P **P** **10 16 44.3 +0.2**
comp=Z,19nm,0.7s,baz=260,slow=6.9,SNR=20
SEY Seymchan 68.38 29 *i* P **P** **10 16 45.0 +0.9**
TULEG Thule 70.49 348 P **P** **10 16 56.6 -0.2**
TULEG Thule 70.49 348 *i* P **P** **10 16 56.7 -0.2**
TULEG IAmb IAmb 10 16 57.4
comp=Z,28nm,0.8s
BILL Bilibino 71.61 22*de*P **P** **10 17 04.7 +0.9**
BILL *e*SP **pP** **10 17 10.0 -0.4**
BILL *e* 10 17 21.4
BILL pmax pmax
comp=Z,14nm,0.9s
BILL MLR MLR
comp=Z,70nm,16.0s
BILL Bilibino 71.61 22 P **P** **10 17 04.2 +0.3**
BILL IAmb IAmb 10 17 05.4
comp=Z,13nm,0.9s
RES Resolute Bay 75.94 352 P **P** **10 17 28.1 -0.9**
comp=Z,4.0nm,0.9s,baz=36,slow=14,SNR=5.4
RES Resolute Bay 75.94 352 P **P** **10 17 28.9 -0.2**
RES pmax pmax
comp=Z,3.0nm,0.8s
RES Resolute Bay 75.94 352 P **P** **10 17 28.9 -0.2**
A21K Barrow 78.46 10 P **P** **10 17 44.2 +0.9**
A21K IAmb IAmb 10 17 45.7
comp=Z,12nm,0.7s
FITZ Fitzroy Crossi 81.44 116 P **P** **10 18 00.9 +0.7**
comp=Z,2.1nm,0.7s,baz=347,slow=9.4,SNR=5.7
FITZ Fitzroy Crossi 81.44 116 P **P** **10 18 00.0 -0.2**
TOLK Toolik Lake Re 81.94 9 P **P** **10 18 02.8 +0.6**
TOLK IAmb IAmb 10 18 03.9
comp=Z,18nm,0.8s
COLD Coldfoot 83.16 10 P **P** **10 18 08.6 +0.1**
COLD IAmb IAmb 10 18 10.5
comp=Z,13nm,0.9s
IMAR Indian Mountai 83.70 12 P **P** **10 18 11.6 +0.3**
BMAR Burnt Mountain 83.73 8 P **P** **10 18 13.0 +1.5**
INK Inuvik 83.84 4 P **P** **10 18 11.6 -0.4**
comp=Z,7.3nm,0.8s,baz=8.1,slow=6.6,SNR=32
INK Inuvik 83.84 4 P **P** **10 18 12.1 +0.1**
INK IAmb IAmb 10 18 12.9
comp=Z,8.2nm,0.8s
SCHQ Schefferville 84.15 331 P **P** **10 18 13.7 -0.2**
comp=Z,14nm,0.8s,baz=54,slow=6.7,SNR=8.1
SCHQ Schefferville 84.15 331 P **P** **10 18 13.4 -0.5**
PRP Porcupine Dome 85.43 9 P **P** **10 18 19.8 -0.4**
PRP IAmb IAmb 10 18 21.9
comp=Z,11nm,1.0s
POKR Poker Flat Res 85.54 10 P **P** **10 18 19.4 -1.2**
MDM Murphy Dome 85.57 10 P **P** **10 18 21.1 +0.3**
TCOL CIGO, UAF Yank 85.70 10 P **P** **10 18 21.6 +0.2**
TCOL IAmb IAmb 10 18 22.4
comp=Z,12nm,0.8s
COLA College 85.71 10 P **P** **10 18 21.6 +0.2**
COLA pmax pmax
comp=Z,13nm,0.9s
COLA College 85.71 10 P **P** **10 18 21.6 +0.2**
COLA IAmb IAmb 10 18 22.4
comp=Z,13nm,0.9s
BPAW Bear Paw Mtn. 85.91 12 P **P** **10 18 22.8 +0.3**
CCB Clear Creek Bu 85.93 10 P **P** **10 18 21.2 -1.3**
CCB IAmb IAmb 10 18 22.8
comp=Z,6.0nm,0.8s
IL31 85.95 10 P **P** **10 18 21.9 -0.7**
IL31 IAmb IAmb 10 18 22.8

comp=Z,6.4nm,0.8s
ILAR Eielson Array 85.95 10 P P 10 18 22.1 -0.5
comp=Z,6.1nm,0.8s,baz=327,slow=4.1,SNR=64
ILAR PKKPbc **PKKPbc 10 36 22.4 -1.6**
comp=Z,0.4nm,0.7s,baz=181,slow=2.7,SNR=5.3
ILAR Eielson Array 85.95 10 P P 10 18 21.5 -1.1
HDA Harding Lake 86.28 10 P P 10 18 23.6 -0.7
HDA IAmb IAmb 10 18 24.1
comp=Z,10nm,0.8s
KTH Kantishna Hill 86.42 12 P P 10 18 25.0 -0.1
KTH IAmb IAmb 10 18 26.4
comp=Z,12nm,0.8s
TRF Thorofare Moun 86.63 11 P P 10 18 26.4 +0.2
EGAK Eagle 86.69 7 P P 10 18 26.4 +0.1
RND Reindeer 86.92 11 P P 10 18 27.0 -0.5
RND pmax pmax
comp=Z,9.0nm,0.8s
RND Reindeer 86.92 11 P P 10 18 27.0 -0.5
RND IAmb IAmb 10 18 27.6
comp=Z,9.5nm,0.8s
K27K Chicken 87.30 8 P P 10 18 29.7 +0.4
DHY Denali Highway 87.47 10 P P 10 18 29.7 -0.6
DHY IAmb IAmb 10 18 31.3
comp=Z,12nm,0.9s
DAWY Dawson 87.57 7 P P 10 18 30.6 -0.1
SKT Skwentna 87.75 13 P P 10 18 30.4 -1.1
MENT Mentasta 88.14 9 P P 10 18 33.7 +0.3
MENT IAmb IAmb 10 18 34.8
comp=Z,9.7nm,0.9s
SUA Susitna One 88.38 12 P P 10 18 35.0 +0.3
GHO Glory Hole Cre 88.43 12 P P 10 18 34.9 +0.1
SML Sawmill 88.50 11 P P 10 18 34.3 -0.8
SML pmax pmax
comp=Z,19nm,0.8s
SML Sawmill 88.50 11 P P 10 18 34.3 -0.8
WRA Warramunga Arr 89.42 113 P P 10 18 39.4 -0.6
comp=Z,1.2nm,0.7s,baz=317,slow=4.0,SNR=14
WRA Warramunga Arr 89.42 113 P P 10 18 39.9 -0.1
YKA Yellowknife Ar 89.62 356 P P 10 18 40.8 +0.5
comp=Z,10nm,0.9s,baz=360,slow=5.0,SNR=9.0
ASAR Alice Springs 90.92 116 P P 10 18 47.2 +0.2
comp=Z,0.9nm,0.8s,baz=288,slow=4.2,SNR=8.1
ASAR Alice Springs 90.92 116 P P 10 18 47.5 +0.4
HYT Haines Junctio 90.93 7 P P 10 18 47.9 +1.3
DLBC Dease Lake 93.87 3 P P 10 19 01.6 +1.5
comp=Z,4.1nm,1.0s,baz=322,slow=3.7,SNR=6.4
DLBC Dease Lake 93.87 3 P P 10 19 01.4 +1.3
DLBC IAmb IAmb 10 19 01.8
comp=Z,6.0nm,1.1s
LONY Lake Ozonia 94.89 327 P P 10 19 04.5 -0.6
NVAR Mina Array Bea 113.82 355 PKiKP PKiKP 10 24 22.4 +0.3
comp=Z,0.7nm,0.6s,baz=8.6,slow=2.5,SNR=7.4
QSPA South Pole Qui 117.72 180 PKPdf 10 24 28.1 -0.2
TXAR Lajitas Array 119.86 339 PKP PKPdf 10 24 33.3 -0.4
comp=Z,0.7nm,0.7s,baz=160,slow=1.1,SNR=12
TXAR Lajitas Array 119.86 339 PKPdf 10 24 33.5 -0.3
VNDA Vanda 120.45 166 PKP PKPdf 10 24 32.9 -0.3
comp=Z,0.4nm,0.6s,baz=331,slow=7.2,SNR=6.3
CPUP Villa Florida 121.29 255 PKP PKPdf 10 24 35.3 -1.0
comp=Z,0.5nm,0.5s,baz=162,slow=3.6,SNR=3.0
CPUP Villa Florida 121.29 255 PKPdf 10 24 33.8 -2.5
LPAZ La Paz 127.32 270 PKP PKPdf 10 24 48.7 -0.2
comp=Z,1.1nm,0.7s,baz=188,slow=2.5,SNR=7.1
LPAZ La Paz 127.32 270 PKPdf 10 24 48.9 0.0
PLCA Paso Flores 134.64 230 PKP PKiKP 10 25 02.0 -0.8
comp=Z,1.1nm,0.8s,baz=11,slow=3.9,SNR=3.1

*NEIC **11** 10:06:41.6±2.0, 5.9N±0.1×127.4E±0.2, h35km±2km, mb4.1/11, Error ellipse: s-maj=34.1km s-min=11.0km az=52.0*
*MAN **11** 10:06:42.6, 5.64N×126.84E, h0km, MS3.6*
*IDC **11** 10:06:43.2±2.6, 6.00N×127.47E, h46km±24km, mb3.6/9, mb1 3.8/11, mb1mx3.5/55, mbtmp3.9/11, ML4.1/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/39, Error ellipse: s-maj=40.6km s-min=12.0km az=55.0*

ISC 11 10:06:41.1±1.6, 5.89N±0.06×127.17E±0.07, h28km±12km, n36, σ2s29/43, mb4.1/15, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.39**	**319**	*e*P		**Pb**		**10 07 08.7**	**+2.3**
MATI				*e*S		**Sb**		**10 07 29.1**	**+5.3**
DDMP	**Don Marcelino,**	**1.47**	**279**	*e*P		**Pn**		**10 07 05.4**	**-0.3**
DDMP				*e*S		**Sn**		**10 07 24.0**	**+0.1**
DAV	**Davao City (W)**	**1.97**	**307**	P		**Pb**		**10 07 16.7**	**+0.4**
	52nm,0.3s,baz=169,slow=2.0,SNR=6.3								
DAV				S		**Sb**		**10 07 43.2**	**+2.7**
	71nm,0.3s,baz=282,slow=21,SNR=10								
DAV				LR		LR		10 08 48.1	
	comp=Z,590nm,18.7s,baz=140,slow=58								
DAV	**Davao City (W)**	**1.97**	**307**			**Pb**		**10 07 14.4**	**-1.9**
KCP	**Kidapawan**	**2.35**	**298**	⇓*i*P		**Pb**		**10 07 21.3**	**-1.4**
KCP				*i*S		**Sn**		**10 07 38.8**	**-7.1**
SKMP	**Bagumbayan, Su**	**2.69**	**284**	*e*P		**Pn**		**10 07 24.4**	**+1.9**
SKMP				*e*S		**Sb**		**10 07 58.3**	**-2.8**
BUKP	**Musuan**	**2.88**	**314**	*e*P		**Pb**		**10 07 29.4**	**-2.4**
BUKP				*e*S		**Sb**		**10 08 06.1**	**-0.6**
CGP	**Cagayan de Oro**	**3.54**	**316**	⇑*e*P		**Pb**		**10 07 45.1**	**+2.0**
CGP				*e*S		**Sb**		**10 08 24.5**	**-1.2**
GLSP	**General Luna,**	**4.01**	**345**	*e*P		**Pb**		**10 07 49.4**	**-1.6**
GLSP				*e*S		**Sb**		**10 08 38.1**	**-1.0**
PAGZ	**Pagadian**	**4.24**	**298**	*e*P		Pn		10 07 48.3	+4.5
TNTI	**Ternate**	**5.08**	**178**	Pn		**Pn**		**10 07 54.2**	**-1.2**
SIJI	**Sorong**	**7.86**	**149**	P		**Pn**		**10 08 32.7**	**-0.9**
	3.1nm,0.3s,baz=334,slow=18,SNR=6.5								
FAKI	**Fak Fak**	**10.11**	**150**	Pn		**Pn**		**10 09 00.3**	**-4.2**
KAPI	**Kappang**	**13.12**	**215**	LR		LR		10 15 08.7	
	comp=Z,54nm,20.4s,baz=38,slow=38								
SBUM	**Sibu**	**15.29**	**258**	Pn		**P**		**10 10 18.7**	**-1.0**
KNRA	**Kununurra**	**21.48**	**176**	P		**P**		**10 11 26.4**	**-1.2**
FITZ	**Fitzroy Crossi**	**23.88**	**184**	P		**P**		**10 11 58.8**	**+6.4**
WB0	**Warramunga Arr**	**26.46**	**165**	P		**P**		**10 12 17.3**	**+1.3**
WB0				IAmb		IAmb		10 12 34.6	
	comp=Z,4.1nm,0.8s								
WRA	**Warramunga Arr**	**26.62**	**165**	P		**P**		**10 12 16.9**	**-0.4**
	comp=Z,1.7nm,0.9s,baz=343,slow=10,SNR=10								
WRA				LR		LR		10 24 56.8	
	comp=Z,37nm,18.2s,baz=150,slow=41								
WRA	**Warramunga Arr**	**26.62**	**165**	P		**P**		**10 12 16.4**	**-1.0**
WB2	**Warramunga Arr**	**26.62**	**165**	P		**P**		**10 12 18.8**	**+1.4**
WB2				IAmb		IAmb		10 12 41.2	
	comp=Z,5.9nm,1.2s								
WR0	**Warramunga Arr**	**26.69**	**164**	P		**P**		**10 12 16.7**	**-1.3**
WR0				IAmb		IAmb		10 12 42.6	
	comp=Z,4.5nm,0.9s								
ASAR	**Alice Springs**	**30.10**	**168**	P		**P**		**10 12 50.7**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=353,slow=8.3,SNR=1.9								
ASAR				PcP		**PcP**		**10 15 49.0**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=355,slow=2.0,SNR=5.0								
CMAR	**Chiang Mai Arr**	**30.23**	**297**	P		**P**		**10 12 50.3**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=99,slow=5.6,SNR=1.4								
USRK	**Ussuriysk Ar.**	**38.40**	**6**	P		**P**		**10 13 59.4**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=190,slow=6.6,SNR=1.8								
BBOO	**Buckleboo**	**39.40**	**168**	P		**P**		**10 14 08.5**	**-0.1**
STKA	**Stephens Creek**	**39.99**	**161**	P		**P**		**10 14 14.5**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=321,slow=13,SNR=3.0								
MK31	**Makanchi Array**	**56.06**	**324**	P		**P**		**10 16 17.9**	**+0.3**
MK31				IAmb		IAmb		10 16 18.6	
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**56.06**	**324**	P		**P**		**10 16 18.0**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=116,slow=7.8,SNR=8.3								
KURK	**Kurchatov**	**60.18**	**327**	P		**P**		**10 16 45.5**	**-0.9**
KURK				IAmb		IAmb		10 16 50.2	
	comp=Z,2.6nm,0.7s								
KURBB	**Kurchatov Arra**	**60.18**	**327**	P		**P**		**10 16 46.1**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=128,slow=7.0,SNR=9.7								
KK31	**Karatay Array**	**61.98**	**316**	P		**P**		**10 16 59.6**	**+0.8**
KK31				IAmb		IAmb		10 17 14.8	
	comp=Z,3.4nm,1.4s								
KKAR	**Karatay Array**	**61.98**	**316**	P		**P**		**10 16 59.5**	**+0.7**
BVAR	**Borovoye Array**	**65.77**	**326**	P		**P**		**10 17 24.3**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=74,slow=11,SNR=2.6								
ABKAR	**Akbulak array**	**70.78**	**320**	P		**P**		**10 17 54.3**	**-0.6**
AKTO	**Aktyubinsk**	**72.26**	**321**	P		**P**		**10 18 04.9**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=87,slow=7.5,SNR=4.0								

*IDC **11** 10:14:25.9±2.6, 39.30N×142.17E, h84km±23km, mb3.4/3, mb1 3.3/6, mb1mx3.1/43, mbtmp3.6/6, Error ellipse: s-maj=38.4km s-min=17.9km az=100.0*
*JMA **11** 10:14:25.8, 39.26N×141.82E, h65km±1km, M3.3*
JMA Felt I J1.

ISC 11 10:14:25.3±1.1, 39.26N±0.04×141.92E±0.08, h64km±7km, n25, σ1s30/29, mb3.7/3, 1C-9D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.26**	**229**	⇓P		**Pn**		**10 14 35.9**	**+0.4**
OFUJ				S		**Sn**		**10 14 43.2**	**+0.2**
MIYJ	**Miyakonagasawa**	**0.33**	**346**	⇑P		**Pn**		**10 14 36.6**	**+0.6**
MIYJ				S		**Sn**		**10 14 44.3**	**+0.4**
JOM	**Ohasama**	**0.54**	**294**	⇓P		**Pn**		**10 14 37.8**	**-0.1**
JOM				S		**Sn**		**10 14 46.7**	**-0.5**
JKMT	**Kesennumamotoy**	**0.57**	**219**	⇓P		**Pn**		**10 14 38.3**	**+0.1**
JKMT				*e*S		**Sn**		**10 14 47.5**	**-0.2**
JMK	**Ichinoseki**	**0.63**	**241**	⇓P		**Pn**		**10 14 38.8**	**-0.1**
JMK				*e*S		**Sn**		**10 14 48.5**	**-0.4**
JTH	**Tanohata**	**0.69**	**356**	P		**Pn**		**10 14 40.2**	**+0.6**
JTH				S		**Sn**		**10 14 50.7**	**+0.6**
JIO	**Ouri**	**0.92**	**210**	⇓P		**Pn**		**10 14 42.4**	**0.0**
JIO				S		**Sn**		**10 14 54.5**	**-0.5**
JRG	**Rokugo**	**1.01**	**278**	⇓P		**Pn**		**10 14 43.1**	**-0.5**
JRG				S		**Sn**		**10 14 55.8**	**-1.4**
JANG	**Nango**	**1.16**	**344**	P		**Pn**		**10 14 45.6**	**0.0**
JYK	**Kaneyama**	**1.26**	**255**	⇓P		**Pn**		**10 14 46.7**	**-0.2**
JOU	**Okura**	**1.33**	**228**	⇓P		**Pn**		**10 14 47.6**	**-0.2**
JAH	**Hinai**	**1.36**	**314**	⇓P		**Pn**		**10 14 48.3**	**+0.1**
MJAR	**Matsushiro Arr**	**4.00**	**228**	P		**Pn**		**10 15 26.4**	**+2.3**
	0.1nm,0.3s,baz=35,slow=11,SNR=16								
MAT	**Matsushiro**	**4.00**	**229**	P		**Pn**		**10 15 25.9**	**+1.8**
MAT				*e*S		**Sn**		**10 16 13.3**	**+3.6**
ASAJ	**Asahikawa**	**4.88**	**6**	P		**Pn**		**10 15 36.7**	**+0.6**
	0.9nm,0.3s,baz=212,slow=9.8,SNR=8.9								
ASAJ				S		**Sn**		**10 16 30.6**	**-0.8**
	0.6nm,0.3s,baz=223,slow=32,SNR=1.5								
USRK	**Ussuriysk Ar.**	**8.92**	**307**	P		**Pn**		**10 16 34.9**	**+3.6**
	baz=121,slow=15,SNR=5.8								
H11N2	**WAKE ISLAND Hy**	**29.01**	**125**	T		T		10 50 48.3	
	baz=318,slow=76,SNR=58								
H11N1	**WAKE ISLAND Hy**	**29.02**	**125**	T		T		10 50 49.0	
	baz=318,slow=76,SNR=72								
H11N3	**WAKE ISLAND Hy**	**29.03**	**125**	T		T		10 50 51.2	
	baz=318,slow=76,SNR=55								
H11S1	**WAKE ISLAND Hy**	**29.80**	**127**	T		T		10 51 51.7	
	baz=318,slow=76,SNR=26								
H11S3	**WAKE ISLAND Hy**	**29.80**	**127**	T		T		10 51 51.8	
	baz=318,slow=76,SNR=33								
H11S2	**WAKE ISLAND Hy**	**29.81**	**127**	T		T		10 51 53.4	
	baz=318,slow=76,SNR=23								
MKAR	**Makanchi Array**	**43.32**	**300**	P		**P**		**10 22 20.2**	**-0.6**
	0.3nm,0.6s,baz=81,slow=9.5,SNR=6.4								
KURBB	**Kurchatov Arra**	**44.98**	**306**	P		**P**		**10 22 33.5**	**-0.5**
	0.7nm,0.4s,baz=83,slow=8.8,SNR=6.5								
WRA	**Warramunga Arr**	**59.31**	**188**	P		**P**		**10 24 19.4**	**-1.1**
	0.5nm,0.7s,baz=6.4,slow=7.6,SNR=5.4								

*IDC **11** 10:25:51.1±1.1, 36.78N×139.47E, h123km±9km, mb3.5/6, mb1 3.6/10, mb1mx3.4/36, mbtmp4.0/10, MS2.7/1, Ms1 2.7/1, ms1mx2.2/44, Error ellipse: s-maj=21.5km s-min=10.5km az=76.0*
*NEIC **11** 10:25:51.1±2.1, 36.84N±0.04×139.43E±0.05, h119km±6km, mb4.6/26, Error ellipse: s-maj=7.5km s-min=4.7km az=223.0*
*NIED **11** 10:25:51.0, 36.81N×139.44E, h124km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.52; Mθθ-0.24; Mφφ0.76; Mrθ0.78; Mθφ-0.49; Mφr-0.22; Fault plane solution: M₀1.16000×10¹⁵ NP1: φs303.00000°, δ73.00000°, λ-127.00000°. NP2: φs192.00000°, δ40.00000°, λ-27.00000°.*
*JMA **11** 10:25:51.0±0.1, 36.81N×139.44E, h124km±1km, M3.5*

ISC 11 10:25:51.4±0.7, 36.81N±0.04×139.44E±0.05, h123km±5km, n84, σ0s97/95, mb4.4/20, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JKT	**Katashina**	**0.16**	**253**	P		**Pn**		**10 26 08.2**	**-0.2**
JKT				S		**Sn**		**10 26 21.0**	**-0.1**
JAG	**Ashikaga**	**0.39**	**178**	P		**Pn**		**10 26 09.0**	**-0.1**
JAG				S		**Sn**		**10 26 22.4**	**+0.1**
JHK	**Hiroka**	**0.55**	**322**	P		**Pn**		**10 26 09.3**	**-0.6**
JHK				S		**Sn**		**10 26 23.8**	**-0.2**
JFY	**Yanaizu**	**0.63**	**20**	P		**Pn**		**10 26 10.4**	**-0.1**
JFY				*e*S		**Sn**		**10 26 24.9**	**-0.1**
JYT	**Yasato**	**0.84**	**134**	Pn		**Pn**		**10 26 11.8**	**-0.4**
JRY	**Ryogami san**	**0.90**	**209**	P		**Pn**		**10 26 13.1**	**+0.3**
JRY				S		**Sn**		**10 26 29.7**	**+0.7**
JFT	**Otama**	**1.01**	**45**	P		**Pn**		**10 26 14.0**	**+0.3**
JFT				S		**Sn**		**10 26 31.5**	**+0.9**
JNS	**Sasagawa**	**1.01**	**355**	P		**Pn**		**10 26 13.3**	**-0.4**
JNS				*e*S		**Sn**		**10 26 30.3**	**-0.4**
MJAR	**Matsushiro Arr**	**1.02**	**255**	P		**Pn**		**10 26 13.6**	**-0.3**
	27nm,0.3s,baz=62,slow=7.6,SNR=1346								
MJAR				S		**Sn**		**10 26 30.9**	**-0.1**
	5.8nm,0.3s,baz=100,slow=21,SNR=4.9								
MJAR	**Matsushiro Arr**	**1.02**	**255**			**Pn**		**10 26 12.6**	**-1.3**
MAJO	**Matsushiro**	**1.02**	**255**	Pn		**Pn**		**10 26 13.8**	**-0.1**
MAT	**Matsushiro**	**1.02**	**255**	P		**Pn**		**10 26 13.8**	**-0.1**
MAT				S		**Sn**		**10 26 31.0**	**0.0**
MAT	**Matsushiro**	**1.02**	**255**	P		**Pn**		**10 26 13.8**	**-0.1**
MAT				S		**Sn**		**10 26 31.0**	**0.0**
MJB9	**Matsu-Tunnel**	**1.03**	**255**	Pn		**Pn**		**10 26 13.6**	**-0.4**
JYN	**Shimob**	**1.50**	**209**	P		**Pn**		**10 26 19.3**	**+0.2**
JYN				S		**Sn**		**10 26 40.5**	**+0.4**
JMM	**Marumori**	**1.51**	**45**	Pn		**Pn**		**10 26 19.1**	**+0.1**
JSD	**Sado**	**1.54**	**323**	P		**Pn**		**10 26 18.7**	**-0.8**
JSD				S		**Sn**		**10 26 39.5**	**-1.3**
JSD	**Sado**	**1.54**	**323**			**Pn**		**10 26 18.6**	**-0.8**
JOD2	**Odawara 2**	**1.57**	**190**	P		**Pn**		**10 26 19.1**	**-0.8**
JOD2				*e*S		**Sn**		**10 26 40.9**	**-0.6**
JAW	**Awa shima**	**1.65**	**355**	P		**Pn**		**10 26 20.5**	**-0.2**
JAW				*e*S		**Sn**		**10 26 43.0**	**0.0**
JGF	**Kuroka**	**2.07**	**235**			**Pn**		**10 26 26.4**	**+0.5**
JSG	**Sagara**	**2.36**	**206**	Pn		**Pn**		**10 26 31.1**	**+1.5**
INU	**Inuyama**	**2.44**	**234**			**Pn**		**10 26 30.8**	**+0.2**
JWT	**Wachi**	**3.61**	**246**	Pn		**Pn**		**10 26 46.6**	**+0.8**
JHJ	**Hachijo jima 2**	**3.70**	**175**	P		**Pn**		**10 26 46.8**	**-0.2**
	254nm,0.3s,baz=17,slow=4.3,SNR=28								
JHJ				S		**Sn**		**10 27 29.4**	**-0.6**
	48nm,0.3s,baz=259,slow=24,SNR=1.5								
JHJ2	**Mitsune**	**3.71**	**175**			**Pn**		**10 26 46.6**	**-0.5**
JTM	**Tenmabayashi**	**4.17**	**17**	Pn		**Pn**		**10 26 52.7**	**-0.5**
JHS	**Saijyo**	**5.44**	**252**	Pn		**Pn**		**10 27 11.0**	**+0.6**
JMN	**Monobe**	**5.49**	**238**	Pn		**Pn**		**10 27 10.8**	**-0.2**
ERM	**Erimo**	**5.94**	**28**	Pn		**Pn**		**10 27 14.1**	**-2.9**
JEW	**Eniwo**	**6.22**	**14**	Pn		**Pn**		**10 27 19.9**	**-0.8**
ASAJ	**Asahikawa**	**7.68**	**17**	P		**Pn**		**10 27 37.2**	**-3.3**
	3.5nm,0.3s,baz=220,slow=12,SNR=36								
ASAJ				S		**Sn**		**10 29 02.1**	**-3.8**
	0.9nm,0.3s,baz=294,slow=32,SNR=1.8								
JKA	**Kamikawa-asahi**	**7.68**	**17**	Pn		**Pn**		**10 27 38.5**	**-2.0**
JNU	**Nakatsue**	**7.93**	**245**	P		**Pn**		**10 27 44.1**	**+0.2**
	1.6nm,0.3s,baz=186,slow=1.1,SNR=14								
JNU				LR		LR		10 31 10.7	
	comp=Z,50nm,18.9s,baz=15,slow=40								
JNU	**Nakatsue**	**7.93**	**245**	Pn		**Pn**		**10 27 44.8**	**+0.8**
KSRS	**Korea Array**	**9.22**	**277**	P		**Pn**		**10 28 03.6**	**+2.4**
	0.2nm,0.3s,baz=95,slow=14,SNR=5.8								
USRK	**Ussuriysk Ar.**	**9.30**	**325**	P		**Pn**		**10 28 03.4**	**+1.0**
	baz=144,slow=12,SNR=8.6								
USRK				S		**Sn**		**10 29 43.8**	**-1.3**
	baz=132,slow=37,SNR=2.7								
USRK	**Ussuriysk Ar.**	**9.30**	**325**			**Pn**		**10 28 03.1**	**+0.8**
PEA0B	**Petropavlovsk-**	**20.70**	**32**	P		**P**		**10 30 22.9**	**+1.3**
PEA0B				IAmb		IAmb		10 30 40.0	
	comp=Z,46nm,1.2s								
PETK	**Petropavlovsk-**	**20.70**	**32**	P		**P**		**10 30 22.9**	**+1.3**
H11N2	**WAKE ISLAND Hy**	**29.42**	**118**	T		T		11 02 09.3	
	baz=314,slow=74,SNR=8.1								
H11N1	**WAKE ISLAND Hy**	**29.43**	**118**	T		T		11 02 08.9	
	baz=314,slow=74,SNR=9.3								
H11N3	**WAKE ISLAND Hy**	**29.44**	**118**	T		T		11 02 29.6	
	baz=314,slow=74,SNR=7.1								
H11S1	**WAKE ISLAND Hy**	**30.10**	**120**	T		T		11 03 01.5	
	baz=314,slow=76,SNR=8.4								
H11S3	**WAKE ISLAND Hy**	**30.10**	**120**	T		T		11 02 60.0	
	baz=314,slow=76,SNR=5.2								
H11S2	**WAKE ISLAND Hy**	**30.11**	**120**	T		T		11 03 00.9	
	baz=314,slow=76,SNR=5.1								
FAKI	**Fak Fak**	**40.09**	**191**	P		**P**		**10 33 15.1**	**+0.1**
FAKI				IAmb		IAmb		10 33 26.1	
	comp=Z,33nm,1.3s								
ZALV	**Zalesovo Beam**	**40.90**	**313**	P		**P**		**10 33 20.5**	**-0.7**
MK31	**Makanchi Array**	**42.89**	**302**	P		**P**		**10 33 37.5**	**-0.1**
MKAR	**Makanchi Array**	**42.89**	**302**	P		**P**		**10 33 37.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=87,slow=11,SNR=4.1								
MKAR	**Makanchi Array**	**42.89**	**302**	P		**P**		**10 33 36.7**	**-0.9**
IMAR	**Indian Mountai**	**47.65**	**31**	P		**P**		**10 34 15.2**	**+0.4**
KDAK	**Kodiak Island**	**48.32**	**42**	P		**P**		**10 34 20.7**	**+0.6**
BRVK	**Borovoye**	**49.60**	**312**	P		**P**		**10 34 29.7**	**-0.3**
BRVK				IAmb		IAmb		10 34 38.6	
	comp=Z,5.1nm,0.8s								
PMR	**Palmer**	**49.74**	**36**	P		**P**		**10 34 30.9**	**0.0**
PMR				IAmb		IAmb		10 34 54.8	
	comp=Z,19nm,1.4s								
GHO	**Glory Hole Cre**	**49.83**	**36**	P		**P**		**10 34 31.0**	**-0.6**
GHO				IAmb		IAmb		10 34 57.1	
	comp=Z,15nm,1.3s								
MDM	**Murphy Dome**	**49.94**	**32**	P		**P**		**10 34 32.9**	**+0.5**
MDM				IAmb		IAmb		10 34 43.3	
	comp=Z,4.7nm,1.3s								
MTN	**Manton Dam**	**50.01**	**191**	P		**P**		**10 34 33.1**	**-0.2**
IL31		**50.53**	**32**	P		**P**		**10 34 37.0**	**+0.3**
ILAR	**Eielson Array**	**50.53**	**32**	P		**P**		**10 34 36.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=262,slow=4.5,SNR=11								
ILAR	**Eielson Array**	**50.53**	**32**	P		**P**		**10 34 35.9**	**-0.8**
GSI	**Gunungsitoli**	**52.34**	**237**	P		**P**		**10 34 50.2**	**-0.7**
K27K	**Chicken**	**52.68**	**33**	P		**P**		**10 34 53.7**	**+0.9**
EGAK	**Eagle**	**52.97**	**32**	P		**P**		**10 34 54.8**	**-0.1**
EGAK				IAmb		IAmb		10 34 54.8	
	comp=Z,4.2nm,1.1s								
BCAR	**Beaver Creek A**	**52.97**	**34**	P		**P**		**10 34 56.1**	**+1.2**
KNRA	**Kununurra**	**53.17**	**193**	P		**P**		**10 34 57.1**	**+0.3**
EPYK	**Eagle Plains**	**54.50**	**29**	P		**P**		**10 35 06.9**	**+0.9**
EPYK				IAmb		IAmb		10 35 22.4	
	comp=Z,15nm,1.5s								
INK	**Inuvik**	**55.30**	**27**	P		**P**		**10 35 11.8**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=302,slow=7.8,SNR=10.0								
INK	**Inuvik**	**55.30**	**27**	P		**P**		**10 35 11.7**	**0.0**
FITZ	**Fitzroy Crossi**	**56.15**	**196**	P		**P**		**10 35 18.4**	**+0.1**
FITZ				IAmb		IAmb		10 35 19.5	
	comp=Z,5.8nm,1.1s								
WB0	**Warramunga Arr**	**56.48**	**186**	P		**P**		**10 35 19.8**	**-0.8**
WRAB	**Tennant Creek**	**56.64**	**186**	P		**P**		**10 35 20.9**	**-0.8**
WRAB				IAmb		IAmb		10 35 21.4	
	comp=Z,6.6nm,0.9s								
WB2	**Warramunga Arr**	**56.65**	**186**	P		**P**		**10 35 21.0**	**-0.8**
WB2				IAmb		IAmb		10 35 21.5	
	comp=Z,6.6nm,0.6s								
WRA	**Warramunga Arr**	**56.65**	**186**	P		**P**		**10 35 20.8**	**-1.1**
	comp=Z,7.6nm,0.5s,baz=1.0,slow=7.6,SNR=307								
WRA	**Warramunga Arr**	**56.65**	**186**	P		**P**		**10 35 20.2**	**-1.7**
WR0	**Warramunga Arr**	**56.65**	**186**	P		**P**		**10 35 21.1**	**-0.8**
ABKAR	**Akbulak array**	**56.87**	**310**	P		**P**		**10 35 22.0**	**-1.1**
AS31	**Alice Springs**	**60.38**	**186**	P		**P**		**10 35 47.2**	**-0.5**
AS31				IAmb		IAmb		10 35 51.0	
	comp=Z,1.3nm,0.4s								
ASAR	**Alice Springs**	**60.38**	**186**	P		**P**		**10 35 46.9**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=355,slow=4.3,SNR=54								
ASAR	**Alice Springs**	**60.38**	**186**	P		**P**		**10 35 47.0**	**-0.7**
FORT	**Forrest**	**68.08**	**191**	P		**P**		**10 36 37.6**	**-0.1**
FORT				IAmb		IAmb		10 36 38.4	
	comp=Z,11nm,0.7s								
STKA	**Stephens Creek**	**68.36**	**178**	P		**P**		**10 36 40.0**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=343,slow=6.8,SNR=4.3								
STKA	**Stephens Creek**	**68.36**	**178**	P		**P**		**10 36 39.8**	**+0.4**
TXAR	**Lajitas Array**	**91.50**	**51**	P		**P**		**10 38 46.5**	**+2.1**
	comp=Z,0.2nm,0.8s,baz=291,slow=3.5,SNR=3.4			

NEIC ***11*** *10:42:47.7±2.8, 3.42S±0.06×130.77E±0.08, h47km±6km, mb4.3/27, Error ellipse: s-maj=11.7km s-min=8.9km az=99.0*

IDC ***11*** *10:42:47.6±3.1, 3.30S×130.88E, h38km±28km, mb3.9/12, mb1 4.0/13, mb1mx3.9/29, mbtmp4.1/13, ML4.1/2, MS3.2/10, Ms1 3.2/10, ms1mx2.9/40, Error ellipse: s-maj=28.9km s-min=13.2km az=86.0*

DJA ***11*** *10:42:48.5±0.3, 3.5S×13.1E±°, h55km±5km, M4.3/8, mB5.0/2, mb4.7/7, MLv4.1/8, Mw(mB)4.3/2*

ISC 11 10:42:45.5±0.5, 3.45S±0.04×130.89E±0.05, h30km, n77, σ2°03/73, mb4.3/19, MS3.3/5, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.45**	**69**	P	**Pb**	**10 43 13.4**	**+1.5**
FAKI	**Fak Fak**	**1.45**	**69**		**Pb**	**10 43 13.1**	**+1.2**
BNDI	**Bandanaira**	**1.46**	**223**	P	**Pb**	**10 43 13.8**	**+1.8**
MSAI	**Masohi**	**1.96**	**273**	P	**Pb**	**10 43 20.0**	**-0.6**
SIJI	**Sorong**	**2.59**	**8**	Pn	**Pn**	**10 43 25.2**	**-0.1**
	12nm,0.3s,baz=134,slow=6.1,SNR=57						
SIJI				Sn	**Sn**	**10 43 51.7**	**-4.1**
	36nm,0.3s,baz=250,slow=23,SNR=6.3						
SIJI				LR	LR	10 44 56.5	
	comp=Z,455nm,20.0s,baz=202,slow=53						
AAI	**Ambon**	**2.70**	**265**	P	**Pn**	**10 43 28.8**	**+1.8**
NLAI	**Namlea**	**3.79**	**273**	P	**Pn**	**10 43 44.4**	**+2.5**
SOEI	**Soe**	**9.09**	**226**	P	Pn	10 45 00.4	+5.6
	30nm,0.9s						
SOEI	**Soe**	**9.09**	**226**	Pn	**Pn**	**10 44 56.0**	**+1.1**
MTN	**Manton Dam**	**9.34**	**179**	Pn	**Pn**	**10 45 00.3**	**+2.1**
APSI	**Ampana**	**9.57**	**285**	P	**Pn**	**10 45 01.8**	**+0.4**
	392nm32nm,0.5s						
BATI	**Baumata**	**9.83**	**227**	Pn	**Pn**	**10 45 09.5**	**+4.6**
	6.7nm,0.3s,baz=202,slow=2.5,SNR=5.6						
BKSI	**Bulukumba**	**10.90**	**260**	P	Pn	10 45 41.0	+21
KAPI	**Kappang**	**11.22**	**262**	LR	LR	10 51 21.2	
	comp=Z,34nm,18.7s,baz=44,slow=46						
KNRA	**Kununurra**	**12.33**	**190**	Pn	**Pn**	**10 45 38.6**	**-0.6**
KNRA					**Sn**	**10 47 51.2**	**-4.6**
FITZ	**Fitzroy Crossi**	**15.45**	**199**	Pn	**Pn**	**10 46 19.8**	**-1.6**
	0.8nm,0.3s,baz=36,slow=11,SNR=10						
FITZ				Sn	**Sn**	**10 49 04.3**	**-7.3**
	0.5nm,0.3s,baz=258,slow=18,SNR=2.3						
FITZ				LR	LR	10 53 04.6	
	comp=Z,93nm,21.4s,baz=37,slow=40						
FITZ	**Fitzroy Crossi**	**15.45**	**199**	Pn	**Pn**	**10 46 20.4**	**-1.0**
WB0	**Warramunga Arr**	**16.58**	**168**	Pn	**Pn**	**10 46 34.9**	**-1.0**
WRAB	**Tennant Creek**	**16.73**	**169**	Pn	**Pn**	**10 46 37.4**	**-0.5**
WRAB				IAmb	IAmb	10 46 55.6	
	comp=Z,9.7nm,0.6s						
WRA	**Warramunga Arr**	**16.74**	**169**	Pn	**Pn**	**10 46 36.9**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=354,slow=13,SNR=10						
WRA				Sn	**Sn**	**10 49 34.8**	**-8.4**
	comp=Z,1.1nm,0.3s,baz=352,slow=25,SNR=5.6						
WRA				LR	LR	10 54 27.9	
	comp=Z,53nm,21.4s,baz=195,slow=42						
WRA	**Warramunga Arr**	**16.74**	**169**	Pn	**Pn**	**10 46 35.7**	**-2.2**
WB2	**Warramunga Arr**	**16.74**	**169**	Pn	**Pn**	**10 46 36.3**	**-1.7**
WB2				IAmb	IAmb	10 46 55.7	
	comp=Z,12nm,0.6s						
WC3	**Warramunga Arr**	**16.76**	**169**	Pn	**Pn**	**10 46 36.6**	**-1.7**
WR0	**Warramunga Arr**	**16.80**	**168**	Pn	**Pn**	**10 46 39.8**	**+1.2**
PMG	**Port Moresby**	**17.21**	**111**	LR	LR	10 55 59.7	
	comp=Z,52nm,19.1s,baz=192,slow=46						
ASAR	**Alice Springs**	**20.31**	**172**	P	Pn	10 47 22.6	+1.2
	comp=Z,45nm,0.5s,baz=351,slow=11,SNR=947						
ASAR				S	**S**	**10 51 02.5**	**-3.1**
	comp=Z,2.0nm,0.7s,baz=358,slow=26,SNR=4.1						
ASAR	**Alice Springs**	**20.31**	**172**	P	Pn	10 47 21.1	-0.4
PSAD1	**Pilbara Seismi**	**20.88**	**210**	P	**P**	**10 47 25.5**	**+0.1**
PSAD1				IAmb	IAmb	10 47 26.6	
	comp=Z,12nm,0.6s						
PSAC2	**Pilbara Seismi**	**20.94**	**210**	P	**P**	**10 47 25.6**	**-0.4**
PSAD2	**Pilbara Seismi**	**20.95**	**210**	P	**P**	**10 47 26.2**	**0.0**
PSAC1	**Pilbara Seismi**	**20.96**	**210**	P	**P**	**10 47 25.7**	**-0.6**
PSAC1				IAmb	IAmb	10 47 27.5	
	comp=Z,17nm,0.8s						
PSA00	**Pilbara Seismi**	**20.98**	**210**	P	**P**	**10 47 26.9**	**+0.5**
PSA00				IAmb	IAmb	10 47 27.7	
	comp=Z,19nm,0.8s						
KRVT	**Keravat (AS076**	**21.10**	**93**	LR	LR	10 58 10.2	
	comp=Z,46nm,18.5s,baz=230,slow=44						
KSM	**Kuching**	**21.15**	**283**	P	**P**	**10 47 29.7**	**+1.3**
KSM				IAmb	IAmb	10 47 30.3	
	comp=Z,11nm,0.8s						
FORT	**Forrest**	**27.32**	**185**	P	**P**	**10 48 29.9**	**+2.2**
BBOO	**Buckleboo**	**29.61**	**171**	P	**P**	**10 48 49.1**	**+0.9**
STKA	**Stephens Creek**	**30.02**	**162**	P	**P**	**10 48 53.5**	**+1.6**
	comp=Z,1.1nm,0.4s,baz=353,slow=9.6,SNR=6.0						
STKA				LR	LR	11 02 06.0	
	comp=Z,57nm,18.8s,baz=1.7,slow=38						
STKA	**Stephens Creek**	**30.02**	**162**	P	**P**	**10 48 52.1**	**+0.3**
NWAO	**Narrogin (SRO)**	**32.00**	**202**	P	**P**	**10 49 09.8**	**+0.6**
	comp=Z,5.7nm,0.5s,baz=38,slow=9.3,SNR=8.1						
NWAO	**Narrogin (SRO)**	**32.00**	**202**	P	**P**	**10 49 10.4**	**+1.2**
NWAO	**Narrogin (SRO)**	**32.00**	**202**	P	**P**	**10 49 10.7**	**+1.5**
JNU	**Nakatsue**	**36.37**	**360**	LR	LR	11 02 08.1	
	comp=Z,56nm,21.8s,baz=239,slow=32						
CMAR	**Chiang Mai Arr**	**38.26**	**306**	P	**P**	**10 50 03.6**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=131,slow=6.7,SNR=9.1						
CHTO	**Chiang Mai**	**38.45**	**306**	P	**P**	**10 50 05.3**	**+0.4**
CHTO				IAmb	IAmb	10 50 06.3	
	comp=Z,2.8nm,0.7s						
MJAR	**Matsushiro Arr**	**40.36**	**9**	P	**P**	**10 50 18.5**	**-2.2**
	comp=Z,2.5nm,0.7s,baz=186,slow=8.7,SNR=6.7						
KSRS	**Korea Array**	**40.78**	**356**	P	**P**	**10 50 24.2**	**+0.1**
	comp=Z,2.1nm,0.6s,baz=175,slow=9.2,SNR=12						
USA0B	**Ussuriysk Arra**	**47.44**	**1**	P	**P**	**10 51 17.9**	**+0.6**
USA0B				IAmb	IAmb	10 51 18.5	
	comp=Z,2.9nm,0.7s						
USRK	**Ussuriysk Ar.**	**47.44**	**1**	P	**P**	**10 51 17.6**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=185,slow=5.8,SNR=10						
USRK	**Ussuriysk Ar.**	**47.44**	**1**	P	**P**	**10 51 17.9**	**+0.6**
ASAJ	**Asahikawa**	**48.50**	**11**	LR	LR	11 08 59.6	
	comp=Z,39nm,21.2s,baz=192,slow=32						
TAPN	**Taplejung**	**51.67**	**309**	*eP*	**P**	**10 51 49.9**	**-0.5**
ODAN	**Odare**	**51.68**	**308**	*eP*	**P**	**10 51 50.3**	**-0.1**
RAMN	**Ramite**	**52.35**	**308**	*eP*	**P**	**10 51 55.4**	**+0.1**
	comp=Z,36nm,0.6s						
GUN	**Gumba**	**53.37**	**309**	*eP*	**P**	**10 52 02.5**	**-0.4**
	comp=Z,24nm,0.7s						
GKN	**Gorkha**	**54.38**	**308**	*eP*	**P**	**10 52 09.8**	**-0.3**
	comp=Z,21nm,0.7s						
KOLN	**Koldanda**	**55.09**	**307**	*eP*	**P**	**10 52 15.3**	**-0.1**
	comp=Z,30nm,0.8s						
ULN	**Ulaanbaatar**	**55.20**	**341**	P	**P**	**10 52 14.0**	**-1.7**
DANN	**Dangsing**	**55.23**	**308**	*eP*	**P**	**10 52 16.0**	**-0.4**
	comp=Z,20nm,0.7s						
SONM	**Songino Array**	**55.40**	**340**	P	**P**	**10 52 17.8**	**+0.7**
	comp=Z,2.2nm,0.9s,baz=142,slow=7.5,SNR=6.3						
SONM	**Songino Array**	**55.40**	**340**	P	**P**	**10 52 15.7**	**-1.4**
PYUN	**Piuthan**	**55.72**	**308**	*eP*	**P**	**10 52 19.9**	**0.0**
MK31	**Makanchi Array**	**65.78**	**326**	P	**P**	**10 53 24.7**	**-3.2**
MK31				IAmb	IAmb	10 53 29.1	
	comp=Z,3.0nm,0.8s						
MKAR	**Makanchi Array**	**65.78**	**326**	P	**P**	**10 53 27.9**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=119,slow=7.7,SNR=21						
MKAR	**Makanchi Array**	**65.78**	**326**	P	**P**	**10 53 27.2**	**-0.6**
MAKZ	**Makanchi**	**65.97**	**325**	P	**P**	**10 53 27.1**	**-2.0**
MAKZ				IAmb	IAmb	10 53 30.1	
	comp=Z,4.2nm,1.0s						
ZAA0	**Zalesovo Array**	**68.83**	**333**	P	**P**	**10 53 46.8**	**-0.2**
ZAA0				IAmb	IAmb	10 53 47.4	
	comp=Z,3.7nm,0.9s						
ZALV	**Zalesovo Beam**	**68.83**	**333**	P	**P**	**10 53 46.6**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=108,slow=13,SNR=4.8						
ZALV	**Zalesovo Beam**	**68.83**	**333**	P	**P**	**10 53 46.5**	**-0.5**
KURK	**Kurchatov**	**69.99**	**328**	P	**P**	**10 53 54.4**	**+0.3**
KURK				IAmb	IAmb	10 53 55.4	
	comp=Z,5.1nm,0.9s						
KK31	**Karatay Array**	**71.30**	**318**	P	**P**	**10 54 02.9**	**+0.5**
KKAR	**Karatay Array**	**71.30**	**318**	P	**P**	**10 54 02.4**	**+0.1**
VNDA	**Vanda**	**75.85**	**173**	P	**P**	**10 54 31.2**	**+2.8**
	comp=Z,0.3nm,0.7s,baz=283,slow=7.4,SNR=2.3						
GEYT	**Alibeck**	**78.63**	**310**	P	**P**	**10 54 45.3**	**+0.5**
	comp=Z,2.5nm,0.5s,baz=214,slow=13,SNR=4.7						
GEYT	**Alibeck**	**78.63**	**310**	P	**P**	**10 54 46.2**	**+1.3**
ILAR	**Eielson Array**	**89.77**	**25**	P	**P**	**10 55 41.5**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=248,slow=5.2,SNR=6.6						
ILAR				LR	LR	11 33 37.8	
	comp=Z,28nm,19.7s,baz=184,slow=34						
ILAR	**Eielson Array**	**89.77**	**25**	P	**P**	**10 55 41.3**	**+0.4**
LPAZ	**La Paz**	**152.83**	**137**	PKPbc	**PKiKP**	**11 02 43.8**	**+2.1**
	comp=Z,0.9nm,0.8s,baz=226,slow=2.9,SNR=3.5						

ATH ***11*** *10:45:02.7, 37.50N×26.71E, h20km±8km, ML2.7/4, Error ellipse: s-maj=8.9km s-min=1.2km az=3.0*

THE ***11*** *10:45:03.4, 37.48N×26.77E, h12km±1km, ML2.6/5, Error ellipse: s-maj=1.3km s-min=0.4km az=76.0*

ISK ***11*** *10:45:03.4, 37.49N×26.81E, h7km, ML2.9/8*

ISC 11 10:45:03.2±0.9, 37.48N±0.02×26.75E±0.03, h15km±7km, n21, σ0°45/38, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.24**	**17**	P	**Pg**	**10 45 08.4**	**-0.1**
SMG				S	**Sg**	**10 45 12.1**	**+0.1**
SMG				AML	AML	10 45 12.6	
	comp=E,6721μm,0.2s						
SMG				AML	AML	10 45 12.8	
	comp=N,6005μm,0.2s						
SMG	**Samos**	**0.24**	**17**	P	**Pg**	**10 45 08.3**	**-0.1**
SMG				S	**Sg**	**10 45 12.2**	**+0.1**
	comp=N,3μm,0.2s						
GCAM	**G?zelcaml?**	**0.44**	**61**	PG	**Pg**	**10 45 11.9**	**-0.1**
GCAM				SG	**Sb**	**10 45 18.4**	**-0.7**
YKAV	**Yalikavak-Bodr**	**0.56**	**130**	PG	**Pg**	**10 45 13.9**	**-0.2**
YKAV				SG	**Sg**	**10 45 21.1**	**-0.4**
BODT	**Bodrum**	**0.61**	**133**	PG	**Pg**	**10 45 14.8**	**-0.5**
BODT				SG	**Sb**	**10 45 24.1**	**0.0**
BODT	**Bodrum**	**0.61**	**133**	P	**Pg**	**10 45 14.8**	**-0.5**
BODT				S	**Sb**	**10 45 24.0**	**0.0**
KOSK	**Kos Island**	**0.75**	**166**	PG	**Pb**	**10 45 18.3**	**+0.4**
KOSK				SG	**Sb**	**10 45 29.5**	**+1.5**
KOSK	**Kos Island**	**0.75**	**166**	P	**Pb**	**10 45 18.3**	**+0.4**
KOSK				S	**Sb**	**10 45 28.4**	**+0.4**
	comp=N,302nm,0.4s						
MLSB	**Milas**	**0.84**	**103**	PG	**Pg**	**10 45 19.2**	**-0.3**
MLSB				SG	**Sb**	**10 45 30.6**	**0.0**
URLA	**Izmir**	**0.88**	**352**	PG	**Pg**	**10 45 20.3**	**-0.1**
URLA				SG	**Sn**	**10 45 33.6**	**0.0**
BLCB	**Balcova**	**0.93**	**14**	PG	**Pg**	**10 45 20.9**	**-0.3**
BLCB	**Balcova**	**0.93**	**14**	P	**Pg**	**10 45 20.8**	**-0.4**
BLCB				S	**Sb**	**10 45 33.8**	**+0.7**
AMGA	**Amorgos Island**	**0.94**	**227**	P	**Pg**	**10 45 20.8**	**-0.6**
AMGA				S	**Sg**	**10 45 33.7**	**-0.1**
AMGA				AML	AML	10 45 37.3	
	comp=N,998μm,0.3s						
AMGA				AML	AML	10 45 37.4	
	comp=E,761μm,0.2s						
AMGA	**Amorgos Island**	**0.94**	**227**	P	**Pg**	**10 45 21.2**	**-0.2**
AMGA				S	**Sg**	**10 45 34.5**	**+0.7**
	comp=E,435nm,0.4s						
NIS1	**Nisyros Isl.**	**0.94**	**159**	P	**Pg**	**10 45 21.2**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.02**	**63**	PG	**Pb**	**10 45 22.5**	**0.0**
APE	**Apeiranthos**	**1.06**	**247**	P	**Pb**	**10 45 22.7**	**-0.4**
APE				S	**Sb**	**10 45 36.6**	**-0.2**
APE				AML	AML	10 45 41.0	
	comp=N,298μm,0.2s						
APE				AML	AML	10 45 41.1	
	comp=E,206μm,0.2s						
APE	**Apeiranthos**	**1.06**	**247**	P	**Pb**	**10 45 22.6**	**-0.5**
APE				S	**Sg**	**10 45 38.1**	**+0.7**
	comp=E,130nm,0.1s						
ANAF	**Anafi Island**	**1.37**	**215**	P	**Pn**	**10 45 27.9**	**+0.2**
ANAF				S	**Sg**	**10 45 47.6**	**+0.2**
ANAF				AML	AML	10 45 52.0	
	comp=E,990μm,0.2s						
ANAF				AML	AML	10 45 53.5	
	comp=N,1436μm,0.4s						
ANAF	**Anafi Island**	**1.37**	**215**	P	**Pn**	**10 45 27.6**	**-0.1**
ANAF				S	**Sn**	**10 45 45.3**	**-0.3**
	comp=N,615nm,0.3s						
DKL	**Dikili**	**1.59**	**4**	PN	**Pb**	**10 45 32.5**	**+0.3**

VAO ***11*** *10:49:25.1±0.4, 21.96S×67.37W, h180km, mb3.9*

GUC ***11*** *10:49:25.9±0.8, 21.95S×67.71W, h193km±7km, ML3.8*

ISC 11 10:49:24.8±0.9, 21.99S±0.06×67.5W±0.1, h196km±14km, n23, σ0°89/37, 10C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.41**	**244**	*eP*	**Pn**	**10 49 58.5**	**+0.7**
LVC				*eS*	**S**	**10 50 22.9**	**-0.4**
LVC	**Limon Verde**	**1.41**	**244**	*eP*	**Pn**	**10 49 58.5**	**+0.7**
LVC				*eS*	**S**	**10 50 23.0**	**-0.3**
PB09	**IPOC Station P**	**1.59**	**277**	*iP*	**Pn**	**10 50 00.2**	**+1.0**
PB09				*eS*	**S**	**10 50 25.2**	**-0.6**
PB09				IAML		10 50 31.9	
	comp=E,212nm,0.4s						
PB06	**IPOC Station P**	**2.01**	**249**	*iP*	**Pn**	**10 50 03.9**	**+0.6**
PB06				*i* S	**S**	**10 50 33.5**	**+0.3**
PB06				IAML		10 50 34.9	
	comp=E,770nm,0.1s						
PB01	**IPOC Station P**	**2.04**	**297**	*iP*	**Pn**	**10 50 04.1**	**+0.5**
PB01				*i* S	**S**	**10 50 33.1**	**-0.6**
PB01				IAML		10 50 34.2	
	comp=N,592nm,0.5s						
PB03	**IPOC Station P**	**2.06**	**268**	*iP*	**Pn**	**10 50 04.2**	**+0.4**
PB03				*i* S	**S**	**10 50 33.1**	**-0.9**
PB03				IAML		10 50 35.0	
	comp=N,640nm,0.2s						
PB15	**IPOC Station P**	**2.16**	**236**	*iP*	**Pn**	**10 50 05.8**	**+0.9**
PB15				*i* S	**S**	**10 50 36.5**	**+0.4**
PB07	**IPOC Station P**	**2.20**	**276**	*iP*	**Pn**	**10 50 05.9**	**+0.6**
PB07				*i* S	**S**	**10 50 36.0**	**-0.8**
PB07				IAML		10 50 37.0	
	comp=N,810nm,0.3s						
PB08	**IPOC Station P**	**2.38**	**320**	*iP*	**Pn**	**10 50 08.7**	**+1.2**
PB08				*i* S	**S**	**10 50 40.8**	**0.0**
PB08				IAML		10 50 44.2	
	comp=N,70nm,0.3s						
PB04	**IPOC Station P**	**2.44**	**262**	*iP*	**Pn**	**10 50 08.7**	**+0.7**
PB04				*i* S	**S**	**10 50 40.6**	**-0.9**
PB04				IAML		10 50 42.2	
	comp=N,545nm,0.1s						
PB05	**IPOC Station P**	**2.61**	**250**	*iP*	**Pn**	**10 50 10.5**	**+0.7**
PB05				*i* S	**S**	**10 50 43.5**	**-1.4**
PB05				IAML		10 50 44.9	
	comp=N,174nm,0.3s						
PB10	**IPOC Station P**	**3.17**	**241**	*iP*	**Pn**	**10 50 16.6**	**+0.4**
PB10				*i* S	**S**	**10 50 54.3**	**-2.1**
PB10				IAML		10 50 57.1	
	comp=N,125nm,0.5s						
LPAZ	**La Paz**	**5.70**	**354**	*eP*	**Pn**	**10 50 48.5**	**-0.3**
LPAZ				*eS*	**S**	**10 51 53.6**	**-1.4**
PTLB	**Pontes e Lacer**	**10.28**	**52**	*eP*	**Pn**	**10 51 46.0**	**-1.8**
VILB	**Vilhena**	**11.39**	**39**	*eP*	**Pn**	**10 52 01.6**	**-0.5**
CLDB	**Colider**	**15.77**	**47**	*eP*	**Pn**	**10 52 56.2**	**-0.5**
SNDB	**Serra Nova Dou**	**18.44**	**60**	*eP*	**P**	**10 53 25.7**	**0.0**
ITTB	**Itaituba**	**20.93**	**35**	*eP*	**P**	**10 53 52.2**	**-0.2**
JANB	**Januaria**	**23.06**	**77**	*eP*	**P**	**10 54 12.9**	**-0.3**
SMTB	**Santa Maria do**	**23.20**	**59**	*eP*	**P**	**10 54 15.5**	**+1.0**
MALB	**Monte Alegre**	**23.82**	**35**	*eP*	**P**	**10 54 21.5**	**+1.4**
GDU01	**Guandu, BA**	**27.82**	**78**	*eP*	**P**	**10 54 56.0**	**0.0**

IDC ***11*** *10:54:29.2±1.8, 7.10N×93.67E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/45, mbtmp3.8/7, ML4.2/1, MS2.8/2, Ms1 3.0/2, ms1mx2.6/41, Error ellipse: s-maj=75.2km s-min=21.4km az=59.0*

NEIC ***11*** *10:54:31.3±2.4, 7.30N±0.09×94.0E±0.2, h10km±2km, mb4.3/7, Error ellipse: s-maj=29.4km s-min=3.3km az=239.0*

ISC 11 10:54:33.4±1.2, 7.8N±0.2×94.5E±0.2, h10km, n27, σ1°19/21, mb4.1/10, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.55**	**136**	Pn	**Pn**	**10 55 29.0**	**+0.4**
LHMI				Sn	**Sn**	**10 56 11.8**	**+1.2**
KULM	**Kulim**	**6.63**	**112**		**Pn**	**10 56 11.6**	**+0.6**
RPSI	**Rantau Prapat**	**6.74**	**139**	Pn	**Pn**	**10 56 13.3**	**+0.9**
IPM	**Ipoh**	**7.31**	**116**	Pn	**Pn**	**10 56 19.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**11.45**	**22**	Pn	Pn	10 57 27.9	+11
	0.4nm,0.3s,baz=219,slow=14,SNR=4.5						
CMAR				LR	LR	11 02 04.9	
	comp=Z,52nm,18.4s,baz=150,slow=37						
CMAR	**Chiang Mai Arr**	**11.45**	**22**		Pn	10 57 26.9	+10
PALK	**Pallekele**	**13.66**	**269**	LR	LR	11 01 43.4	
	comp=Z,37nm,18.4s,baz=218,slow=34						
H08S3	**Diego Garcia H**	**26.74**	**236**	T	T	11 27 00.3	
	baz=53,SNR=19						
H08S2	**Diego Garcia H**	**26.75**	**236**	T	T	11 26 53.6	
	baz=53						
H08S1	**Diego Garcia H**	**26.76**	**236**	T	T	11 27 01.4	
	baz=53						
MKAR	**Makanchi Array**	**40.23**	**347**	P	**P**	**11 02 11.2**	**+0.9**
	1.2nm,0.7s,baz=165,slow=7.5,SNR=11						
MKAR	**Makanchi Array**	**40.23**	**347**	P	**P**	**11 02 11.0**	**+0.6**
MK31	**Makanchi Array**	**40.23**	**347**	P	**P**	**11 02 10.9**	**+0.6**
KURBB	**Kurchatov Arra**	**44.70**	**346**	P	**P**	**11 02 47.4**	**+0.9**
	1.1nm,0.7s,baz=167,slow=6.9,SNR=16						
KURK	**Kurchatov**	**44.76**	**346**	P	**P**	**11 02 47.2**	**+0.2**
KURK				IAmb	IAmb	11 02 54.2	
	comp=Z,2.2nm,0.8s						
ZAA0	**Zalesovo Array**	**46.67**	**352**	P	**P**	**11 03 03.8**	**+1.7**
ZAA0				IAmb	IAmb	11 03 11.3	
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**46.67**	**352**	P	**P**	**11 03 04.0**	**+1.8**
	comp=Z,1.1nm,0.4s,baz=175,slow=9.6,SNR=4.5						
ZALV	**Zalesovo Beam**	**46.67**	**352**	P	**P**	**11 03 02.7**	**+0.6**
WB0	**Warramunga Arr**	**47.91**	**125**	P	**P**	**11 03 11.2**	**-1.1**
WB0				IAmb	IAmb	11 03 28.9	
	comp=Z,6.3nm,1.5s						
WRA	**Warramunga Arr**	**47.95**	**126**	P	**P**	**11 03 12.0**	**-0.7**
	comp=Z,0.8nm,1.2s,baz=305,slow=8.6,SNR=4.7						
WRA	**Warramunga Arr**	**47.95**	**126**	P	**P**	**11 03 10.3**	**-2.4**
WRAB	**Tennant Creek**	**47.96**	**126**	P	P	11 03 08.7	-4.0
WRAB				IAmb	IAmb	11 03 14.9	
	comp=Z,4.1nm,1.2s						
WB2	**Warramunga Arr**	**47.96**	**126**	P	**P**	**11 03 11.4**	**-1.4**
ASAR	**Alice Springs**	**49.62**	**130**	P	**P**	**11 03 23.7**	**-1.7**
	comp=Z,0.1nm,0.4s,baz=306,slow=7.7,SNR=4.7						
ASAR	**Alice Springs**	**49.62**	**130**	P	**P**	**11 03 24.4**	**-1.0**
FINES	**FINESS Array B**	**72.93**	**332**	P	**P**	**11 06 02.4**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=151,slow=12,SNR=1.3						
FINES	**FINESS Array B**	**72.93**	**332**	P	**P**	**11 06 02.2**	**-0.5**

NEIC ***11*** *10:58:29.7±0.9, 24.1S±0.2×180.0W±0.2, h491km±14km, mb4.3/15, Error ellipse: s-maj=27.9km s-min=23.2km az=222.0*

IDC ***11*** *10:58:32.3±4.2, 23.00S×179.65E, h501km±35km, mb3.3/5, mb1 3.6/5, mb1mx3.1/35, mbtmp4.1/5, Error ellipse: s-maj=154.9km s-min=23.8km az=161.0*

ISC 11 10:58:30.4±0.9, 24.1S±0.2×179.9W±0.1, h500km, n23, σ0°76/23, mb4.2/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.45**	**161**	P	**P**	**11 00 00.8**	**-0.6**
MSVF	**Nonsavu**	**6.60**	**343**	P	P	11 00 11.5	-1.3
EIDS	**Eidsvold**	**26.33**	**261**	P	**P**	**11 03 27.3**	**+1.6**
EIDS				IAmb	IAmb	11 03 27.5	
	comp=Z,11nm,1.3s						
CTAO	**Charters Tower**	**31.53**	**271**	P	**P**	**11 04 12.1**	**+1.0**
CTAO				IAmb	IAmb	11 04 12.3	
	comp=Z,8.0nm,0.6s						
BBOO	**Buckleboo**	**39.42**	**247**	P	**P**	**11 05 15.3**	**-1.3**
AS31	**Alice Springs**	**42.06**	**261**	P	**P**	**11 05 38.0**	**+0.1**
ASAR	**Alice Springs**	**42.06**	**261**	P	**P**	**11 05 37.9**	**0.0**
	comp=Z,2.3nm,0.8s,baz=98,slow=7.2,SNR=33						
ASAR				ScP	**ScP**	**11 10 24.1**	**0.0**
	comp=Z,0.6nm,0.8s,baz=111,slow=4.1,SNR=6.0						
ASAR	**Alice Springs**	**42.06**	**261**	P	**P**	**11 05 37.7**	**-0.2**
WR0	**Warramunga Arr**	**42.26**	**266**	P	**P**	**11 05 39.1**	**-0.4**
WR0				IAmb	IAmb	11 06 29.5	
	comp=Z,25nm,1.9s						
WC3	**Warramunga Arr**	**42.41**	**266**	P	**P**	**11 05 40.2**	**-0.5**
WC3				IAmb	IAmb	11 05 40.8	
	comp=Z,5.6nm,0.6s						
WB2	**Warramunga Arr**	**42.44**	**266**	P	**P**	**11 05 40.5**	**-0.4**
WB2				IAmb	IAmb	11 05 41.0	
	comp=Z,4.5nm,0.7s						
WRAB	**Tennant Creek**	**42.44**	**266**	P	**P**	**11 05 40.5**	**-0.4**
WB0	**Warramunga Arr**	**42.44**	**267**	P	**P**	**11 05 40.4**	**-0.5**
WB0				IAmb	IAmb	11 05 41.1	
	comp=Z,5.6nm,0.7s						
WRA	**Warramunga Arr**	**42.45**	**266**	P	**P**	**11 05 40.4**	**-0.6**
	comp=Z,4.3nm,0.5s,baz=96,slow=8.3,SNR=109						
WRA	**Warramunga Arr**	**42.45**	**266**	P	**P**	**

WRA	**Warramunga Arr**	**28.04**	**248**	P	**P**	**11 33 38.4**	**-0.8**	
	comp=Z,1.1nm,0.6s,baz=77,slow=9.1,SNR=11							
WRA				LR	LR	11 44 49.1		
	comp=Z,202nm,18.4s,baz=75,slow=36							
WRA	**Warramunga Arr**	**28.04**	**248**	P	**P**	**11 33 37.4**	**-1.8**	
STKA	**Stephens Creek**	**28.06**	**219**	P	**P**	**11 33 39.8**	**+0.5**	
	comp=Z,1.5nm,0.7s,baz=54,slow=14,SNR=4.3							
STKA				LR	LR	11 44 46.9		
	comp=Z,271nm,18.3s,baz=25,slow=36							
STKA	**Stephens Creek**	**28.06**	**219**	P	**P**	**11 33 39.8**	**+0.5**	
ASAR	**Alice Springs**	**29.54**	**241**	P	**P**	**11 33 51.2**	**-1.4**	
	comp=Z,0.5nm,0.5s,baz=69,slow=9.4,SNR=7.3							
ASAR				LR	LR	11 44 28.0		
	comp=Z,128nm,21.8s,baz=52,slow=34							
TOO	**Toolangi**	**30.37**	**206**	P	**P**	**11 34 01.3**	**+1.5**	
TOO				IAmb	IAmb	11 34 01.5		
	comp=Z,9.5nm,1.1s							
TUWZ	**Tuamarina**	**32.16**	**163**	P	**P**	**11 34 14.7**	**-0.6**	
BBOO	**Buckleboo**	**32.25**	**224**	P	**P**	**11 34 16.4**	**+0.1**	
BBOO				IAmb	IAmb	11 34 37.9		
	comp=Z,16nm,1.4s							
FITZ	**Fitzroy Crossi**	**35.81**	**254**	P	**P**	**11 34 46.4**	**-1.0**	
SOEI	**Soe**	**37.06**	**268**	P	**P**	**11 34 56.7**	**-1.6**	
KAPI	**Kappang**	**42.16**	**275**	LR	LR	11 55 42.8		
	comp=Z,19nm,18.7s,baz=138,slow=40							
PPT	**Papeete**	**47.35**	**104**	LR	LR	11 55 05.5		
	comp=Z,32nm,18.4s,baz=355,slow=34							
PPT2	**Papeete2**	**47.35**	**104**	*e*LR	LR	11 50 09.5		
	comp=Z,48nm,23.5s							
KSRS	**Korea Array**	**57.74**	**328**	LR	LR	12 00 49.4		
	comp=Z,23nm,19.7s,baz=154,slow=34							
KSAR	**Wonju Array Be**	**57.76**	**328**	P	**P**	**11 37 36.9**	**-1.7**	
USA0B	**Ussuriysk Arra**	**61.24**	**336**	P	**P**	**11 38 02.5**	**0.0**	
USA0B				IAmb	IAmb	11 38 03.6		
	comp=Z,5.5nm,0.9s							
USRK	**Ussuriysk Ar.**	**61.24**	**336**	P	**P**	**11 38 02.5**	**-0.1**	
	comp=Z,2.4nm,0.9s,baz=179,slow=8.6,SNR=4.4							
USRK	**Ussuriysk Ar.**	**61.24**	**336**	P	**P**	**11 38 02.2**	**-0.3**	
PETK	**Petropavlovsk-**	**63.89**	**357**	LR	LR	12 00 42.0		
	comp=Z,36nm,21.5s,baz=139,slow=31							
VNDA	**Vanda**	**66.57**	**180**	P	**P**	**11 38 38.3**	**+1.1**	
	comp=Z,2.1nm,0.8s,baz=345,slow=6.2,SNR=14							
VNDA				LR	LR	12 03 39.4		
	comp=Z,44nm,18.7s,baz=354,slow=32							
VNDA	**Vanda**	**66.57**	**180**	P	**P**	**11 38 38.4**	**+1.1**	
VNDA				IAmb	IAmb	11 38 39.1		
	comp=Z,3.3nm,0.9s							
CMAR	**Chiang Mai Arr**	**68.66**	**295**	P	**P**	**11 38 51.4**	**+0.1**	
	comp=Z,0.5nm,0.3s,baz=135,slow=5.9,SNR=4.3							
CMAR	**Chiang Mai Arr**	**68.66**	**295**	P	**P**	**11 38 49.3**	**-2.0**	
SONM	**Songino Array**	**76.36**	**325**	P	**P**	**11 39 35.5**	**-1.6**	
	comp=Z,1.4nm,0.7s,baz=140,slow=9.4,SNR=4.3							
SONM	**Songino Array**	**76.40**	**325**	P	**P**	**11 39 35.5**	**-1.6**	
QSPA	**South Pole Qui**	**79.07**	**180**	P	**P**	**11 39 52.4**	**+0.8**	
QSPA				IAmb	IAmb	11 40 04.1		
	comp=Z,6.6nm,1.5s							
IMAR	**Indian Mountai**	**83.36**	**17**	P	**P**	**11 40 13.9**	**-0.1**	
MAW	**Mawson**	**83.41**	**202**	LR	LR	12 14 13.8		
	comp=Z,32nm,18.2s,baz=62,slow=33							
ILAR	**Eielson Array**	**84.63**	**20**	P	**P**	**11 40 20.9**	**+0.3**	
	comp=Z,0.9nm,0.7s,baz=236,slow=5.1,SNR=8.1							
ILAR	**Eielson Array**	**84.63**	**20**	P	**P**	**11 40 19.1**	**-1.5**	
K27K	**Chicken**	**85.83**	**21**	P	**P**	**11 40 27.6**	**+0.9**	
K27K				IAmb	IAmb	11 40 30.4		
	comp=Z,5.7nm,1.1s							
EGAK	**Eagle**	**86.59**	**21**	P	**P**	**11 40 30.4**	**+0.1**	
DAWY	**Dawson**	**86.83**	**22**	P	**P**	**11 40 31.5**	**-0.1**	
NVAR	**Mina Array Bea**	**88.83**	**51**	P	**P**	**11 40 43.5**	**+1.6**	
	comp=Z,0.9nm,0.7s,baz=240,slow=7.1,SNR=9.7							
NVAR	**Mina Array Bea**	**88.83**	**51**	P	**P**	**11 40 42.5**	**+0.6**	
MKAR	**Makanchi Array**	**90.90**	**317**	P	**P**	**11 40 51.0**	**-0.2**	
	comp=Z,0.6nm,0.7s,baz=99,slow=5.7,SNR=5.2							
MKAR	**Makanchi Array**	**90.90**	**317**	P	**P**	**11 40 50.5**	**-0.7**	
PRN	**Pahroc Range**	**91.08**	**52**	P	**P**	**11 40 52.9**	**+0.5**	
PRN				IAmb	IAmb	11 40 55.7		
	comp=Z,3.6nm,0.9s							
TXAR	**Lajitas Array**	**99.06**	**62**	LR	LR	12 21 55.9		
	comp=Z,23nm,18.5s,baz=0.0,slow=33							

UPP 11 11:31:41.3±0.5,**63.76N**×**20.08E**,**h2**km±3km,**ML2.4,**
Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMAU	**Umeaa**	**0.29**	**65**	P	Pg	11 31 46.8	-0.1
UMAU				S	Sg	11 31 50.9	+0.2
HUSU	**Husum**	**0.57**	**223**	P	Pg	11 31 52.0	-0.2
ODEU	**Stanfors**	**0.71**	**23**	P	Pg	11 31 54.4	-0.4
ODEU				S	Sg	11 32 03.6	-0.4
BURU	**Burvik**	**1.00**	**34**	P	Pg	11 32 00.1	-0.4
SOLU	**Sollefteaa**	**1.37**	**249**	P	Pn	11 32 06.5	-0.9
HEMU	**Hemsoen**	**1.43**	**221**	P	Pn	11 32 06.9	-1.4
LILU	**Lilltraesk**	**1.53**	**356**	P	Pn	11 32 09.3	-0.4
SJUU	**Sjulsmark**	**1.87**	**20**	P	Pn	11 32 15.2	+0.9

ATH ***11*** *11:47:50.0,37.37N×28.79E,h11km±3km,ML3.3/8,Error ellipse: s-maj=5.6km s-min=1.5km az=217.0*
ISK ***11*** *11:47:51.4,37.14N×28.75E,h5km,ML3.3/16*
DDA ***11*** *11:47:52.1,37.15N×28.73E,h11km±3km,MW3.5*
THE ***11*** *11:47:53.3,37.14N×28.69E,h1km±1km,ML3.4/3,Error ellipse: s-maj=2.0km s-min=1.1km az=26.0*
ISC 11 11:47:52.8±1.0,**37.16N**±0.02×**28.72E**±0.02,**h6**km±9km,
n58,σ0**99/82**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.34**	**189**	PG	**Pg**	**11 47 59.3**	**-0.2**
DALY				SG	**Sg**	**11 48 04.5**	**+0.5**
DALY	**Dalyan (Mula)**	**0.34**	**189**	*i* P	**Pg**	**11 47 59.3**	**-0.2**
DALY				*i* S	**Sg**	**11 48 04.8**	**+0.9**
DALY				IAML		11 48 06.0	
	comp=E,1μm,0.6s						
DALY				IAML		11 48 10.0	
	comp=N,2μm,0.3s						
TAVA	**DENIZLI_Tavas**	**0.34**	**26**	*i* P	**Pg**	**11 47 58.9**	**-0.6**
TAVA				*i* S	**Sg**	**11 48 04.2**	**0.0**
TAVA				IAML		11 48 06.0	
	comp=E,1μm,0.4s						
TAVA				IAML		11 48 07.0	
	comp=N,2μm,0.3s						
YER	**Yerkesik**	**0.35**	**267**	PG	**Pg**	**11 48 00.0**	**+0.3**
YER				SG	**Sb**	**11 48 06.6**	**-0.8**
YER	**Yerkesik**	**0.35**	**267**	P	**Pg**	**11 48 00.0**	**+0.3**
YER				S	**Sg**	**11 48 05.8**	**+1.5**
CAME	**Cameli-Denizli**	**0.51**	**114**	PG	**Pg**	**11 48 01.7**	**-1.0**
TURN	**Turunc**	**0.54**	**225**	PG	**Pg**	**11 48 02.7**	**-0.5**
TURN	**Turunc**	**0.54**	**225**	*i* P	**Pg**	**11 48 02.7**	**-0.5**
TURN				*i* S	**Sb**	**11 48 11.6**	**-1.1**
TURN				IAML		11 48 15.0	
	comp=E,808nm,0.4s						
TURN				IAML		11 48 16.0	
	comp=N,1μm,0.7s						
FETY	**Fethiye**	**0.60**	**151**	PG	**Pg**	**11 48 03.5**	**-0.8**
FETY	**Fethiye**	**0.60**	**151**	*i* P	**Pg**	**11 48 03.6**	**-0.7**
FETY				*i* S	**Sg**	**11 48 11.9**	**-0.1**
FETY				IAML		11 48 15.0	
	comp=E,411nm,0.8s						
MRSB	**Marmaris-Mugla**	**0.61**	**224**	PG	**Pg**	**11 48 04.5**	**0.0**
GOLH	**Golhisar**	**0.68**	**83**	*i* P	**Pg**	**11 48 04.7**	**-1.1**
GOLH				*i* S	**Sb**	**11 48 15.4**	**-1.4**
GOLH				IAML		11 48 17.0	
	comp=N,749nm,0.8s						
BDRM	**Kayabasi**	**1.02**	**265**	*i* P	**Pn**	**11 48 13.9**	**+0.1**
BDRM				IAML		11 48 32.0	
	comp=E,305nm,0.5s						
AYDB	**Zeytinkoy-Aydi**	**1.03**	**320**	PG	**Pg**	**11 48 12.4**	**-0.2**
ELL	**Elmali**	**1.03**	**113**	PG	**Pg**	**11 48 12.6**	**-0.1**
ARG	**Arkhangelos**	**1.05**	**207**	P	**Pn**	**11 48 13.9**	**-0.2**
ARG				AML	AML	11 48 34.3	
	comp=N,2203μm,0.4s						
ARG				AML	AML	11 48 34.7	
	comp=E,3844μm,0.4s						
ARG	**Arkhangelos**	**1.05**	**207**	PG	**Pg**	**11 48 12.5**	**-0.5**
ARG	**Arkhangelos**	**1.05**	**207**	P	**Pg**	**11 48 12.6**	**-0.5**
ARG				S	**Sn**	**11 48 28.0**	**-1.1**
	comp=E,2μm,0.4s						
BODT	**Bodrum**	**1.13**	**266**	PN	**Pg**	**11 48 14.5**	**-0.1**
BODT	**Bodrum**	**1.13**	**266**	P	**Pg**	**11 48 14.4**	**-0.1**
BODT				S	**Sn**	**11 48 31.3**	**+0.2**
AKAS	**Kas**	**1.16**	**142**	PN	**Pg**	**11 48 14.8**	**-0.4**
AKAS	**Kas**	**1.16**	**142**	*i* P	**Pg**	**11 48 14.9**	**-0.3**
AKAS				*i* S	**Sn**	**11 48 34.5**	**+2.4**
AKAS				IAML		11 48 39.0	
	comp=E,472nm,0.4s						
BRDR	**BURDUR-Merkez**	**1.20**	**63**	*i* P	**Pb**	**11 48 15.4**	**-0.6**
BRDR				*i* S	**Sn**	**11 48 33.7**	**+0.9**
BRDR				IAML		11 48 37.0	
	comp=E,240nm,0.7s						
BRDR				IAML		11 48 39.0	
	comp=N,323nm,0.5s						
KSL	**Kastellorizon**	**1.22**	**145**	P	**Pb**	**11 48 15.8**	**-0.5**
KSL				S	**Sn**	**11 48 34.9**	**+1.6**
KSL				AML	AML	11 48 40.0	
	comp=N,2369μm,0.6s						
KSL				AML	AML	11 48 40.9	
	comp=E,2371μm,0.6s						
KSL	**Kastellorizon**	**1.22**	**145**	P	**Pb**	**11 48 15.8**	**-0.5**
KSL				S	**Sn**	**11 48 33.8**	**+0.5**
	comp=E,1μm,0.6s						
BASM	**Basmaki-Afyon**	**1.30**	**54**	PN	**Pb**	**11 48 17.5**	**-0.3**
GCAM	**G?zelcaml?**	**1.30**	**295**	PN	**Pb**	**11 48 17.5**	**-0.2**
GCAM	**G?zelcaml?**	**1.30**	**295**	*i* P	**Pb**	**11 48 17.6**	**-0.1**
GCAM				*i* S	**Sg**	**11 48 36.7**	**+2.0**
GCAM				IAML		11 48 41.0	
	comp=E,215nm,0.6s						
GCAM				IAML		11 48 42.0	
	comp=N,267nm,0.5s						
KORT	**Korkueli**	**1.31**	**96**	PN	**Pn**	**11 48 17.3**	**-0.6**
KORT	**Korkueli**	**1.31**	**96**	*i* P	**Pb**	**11 48 17.6**	**-0.3**
KORT				*i* S	**Sn**	**11 48 37.7**	**+1.9**
KORT				IAML		11 48 40.0	
	comp=N,245nm,0.5s						
KORT				IAML		11 48 40.0	
	comp=E,327nm,1.0s						
MANT	**Manisa**	**1.34**	**355**	*i* P	**Pn**	**11 48 17.2**	**-1.1**
MANT				*i* S	**Sn**	**11 48 37.7**	**+1.1**
MANT				IAML		11 48 42.0	
	comp=N,117nm,0.4s						
MANT				IAML		11 48 49.0	
	comp=E,135nm,0.9s						
NIS1	**Nisyros Isl.**	**1.35**	**246**	P	**Pb**	**11 48 18.5**	**-0.1**
NIS1	**Nisyros Isl.**	**1.35**	**246**	PN	**Pg**	**11 48 18.9**	**+0.1**
NIS1	**Nisyros Isl.**	**1.35**	**246**	P	**Pb**	**11 48 18.6**	**0.0**
NIS1				S	**Sg**	**11 48 36.5**	**+0.1**
	comp=E,3μm,0.6s						
KULA	**Kula-Manisa**	**1.36**	**358**	P	**Pn**	**11 48 17.7**	**-0.7**
KULA				S	**Sg**	**11 48 36.6**	**+0.1**
NISR	**Nisiros**	**1.39**	**247**	P	**Pn**	**11 48 18.6**	**-0.1**
NISR				AML	AML	11 48 50.0	
	comp=E,2481μm,0.9s						
NISR				AML	AML	11 48 55.6	
	comp=N,1285μm,0.8s						
NISR	**Nisiros**	**1.39**	**247**	P	**Pn**	**11 48 18.6**	**-0.1**
KOSK	**Kos Island**	**1.45**	**254**	PN	**Pg**	**11 48 20.6**	**-0.1**
BCK	**Bucak**	**1.52**	**78**	PN	**Pb**	**11 48 21.2**	**-0.3**
AKUM	**Antalya-Kumluc**	**1.55**	**122**	*i* P	**Pg**	**11 48 22.1**	**-0.3**
AKUM				*i* S	**Sg**	**11 48 46.2**	**+3.7**
AKUM				IAML		11 48 50.0	
	comp=N,157nm,0.5s						
AKUM				IAML		11 48 56.0	
	comp=E,152nm,0.7s						
USAK	**Uak-Merkez**	**1.57**	**8**	*i* P	**Pn**	**11 48 21.1**	**-0.3**
USAK				*i* S	**Sn**	**11 48 41.3**	**-0.8**
USAK				IAML		11 48 53.0	
	comp=E,78nm,0.6s						
KZIL	**AFYON_Kizioren**	**1.57**	**45**	*i* P	**Pn**	**11 48 21.1**	**-0.3**
KZIL				*i* S	**Sg**	**11 48 45.7**	**+2.3**
KZIL				IAML		11 48 51.0	
	comp=N,210nm,1.0s						
KZIL				IAML		11 48 54.0	
	comp=E,198nm,0.8s						
ISP	**Isparta**	**1.58**	**65**	PN	**Pn**	**11 48 21.5**	**0.0**
SMG	**Samos**	**1.60**	**291**	P	**Pn**	**11 48 20.1**	**-1.6**
SMG				AML	AML	11 48 53.2	
	comp=E,700μm,0.5s						
SMG				AML	AML	11 48 53.3	
	comp=N,719μm,0.7s						
DGB	**zmir**	**1.71**	**302**	*i* P	**Pn**	**11 48 22.8**	**-0.4**
DGB				IAML		11 48 59.0	
	comp=N,79nm,0.7s						
DGB				IAML		11 49 00.0	
	comp=E,94nm,0.7s						
BLCB	**Balcova**	**1.81**	**313**	PN	**Pn**	**11 48 24.7**	**+0.1**
BLCB	**Balcova**	**1.81**	**313**	P	**Pn**	**11 48 24.7**	**+0.1**
BAGO	**Egridir - ISPA**	**1.84**	**62**	*i* P	**Pn**	**11 48 25.1**	**0.0**
BAGO				*i* S	**Sg**	**11 48 53.4**	**+1.4**
AKHS	**Akhisar**	**1.86**	**338**	*i* P	**Pn**	**11 48 25.2**	**-0.1**
AKHS				IAML		11 49 02.0	
	comp=E,59nm,0.8s						
GDZ	**Gediz**	**2.02**	**17**	*i* P	**Pn**	**11 48 27.9**	**+0.3**
GDZ				*i* S	**Sg**	**11 48 58.2**	**+0.4**
KARP	**Karpathos**	**2.04**	**219**	P	**Pb**	**11 48 29.4**	**-0.9**
KARP				AML	AML	11 49 02.9	
	comp=E,680μm,0.5s						
KARP				AML	AML	11 49 03.6	
	comp=N,937μm,0.6s						
KARP	**Karpathos**	**2.04**	**219**	PN	**Pb**	**11 48 28.9**	**-1.4**
URLA	**Izmir**	**2.07**	**306**	PN	**Pn**	**11 48 28.2**	**0.0**
AMGA	**Amorgos Island**	**2.29**	**263**	P	**Pn**	**11 48 30.9**	**-0.2**
AMGA				AML	AML	11 49 15.5	
	comp=E,478μm,0.7s						
AMGA				AML	AML	11 49 16.1	
	comp=N,483μm,1.1s						
BALY	**Balya**	**2.72**	**342**	*i* P	**Pn**	**11 48 37.5**	**+0.4**
BALY				IAML		11 49 26.0	
	comp=E,33nm,1.0s						
BALY				IAML		11 49 36.0	
	comp=N,40nm,0.7s						
ZKR	**Zakros**	**2.87**	**226**	P	**Pb**	**11 48 41.6**	**-2.9**
ZKR				AML	AML	11 49 27.4	
	comp=E,402μm,0.7s						
ZKR				AML	AML	11 49 30.6	
	comp=N,318μm,0.6s						
LAST	**Lasithi**	**3.29**	**234**	P	**Pn**	**11 48 46.3**	**+1.2**
LAST				AML	AML	11 49 40.4	
	comp=E,184μm,0.8s						
LAST				AML	AML	11 49 45.0	
	comp=N,241μm,0.8s						
IDI	**Anoyia**	**3.62**	**240**	P	**Pn**	**11 48 51.4**	**+2.0**

TAP ***11*** *11:48:21.6,24.93N×122.39E,h12km,ML2.8,C*
JMA ***11*** *11:48:22.3±0.2,24.88N×122.46E,h32km,M1.7*
ISC 11 11:48:21.5±1.0,**24.90N**±0.03×**122.43E**±0.03,**h16**km±8km,
n54,σ0**50/96**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.42**	**285**	*i* P	**Pg**	**11 48 29.8**	**-0.2**
	baz=282						
TWB1				*i* S	**Sg**	**11 48 35.6**	**-0.1**
	baz=282						
NTC	**Toucheng**	**0.55**	**266**	P	**Pg**	**11 48 32.7**	**+0.3**
	baz=274						
NTC				S	**Sb**	**11 48 40.9**	**+0.6**
	baz=274						
TIPB	**Shuangxi**	**0.56**	**278**	*i* P	**Pg**	**11 48 32.7**	**+0.2**
	baz=274						
TIPB				*i* S	**Sb**	**11 48 40.8**	**+0.2**
	baz=274						
TWC	**Suao**	**0.60**	**242**	*i* P	**Pg**	**11 48 33.0**	**-0.4**
	baz=237						
TWC				*i* S	**Sb**	**11 48 41.8**	**-0.1**
	baz=237						
NWF	**Wu-fen Shan**	**0.61**	**286**	*i* P	**Pb**	**11 48 34.2**	**+0.2**
	baz=284						
NWF				S	**Sb**	**11 48 42.6**	**+0.3**
	baz=284						
WFSB	**Wu-fen Shan**	**0.61**	**286**	P	**Pb**	**11 48 34.1**	**+0.2**
	baz=284						
WFSB				S	**Sb**	**11 48 43.3**	**+1.1**
	baz=284						
JYNG	**Yonagunijimaku**	**0.65**	**133**	P	**Pg**	**11 48 34.3**	**+0.1**
JYNG				*e*S	**Sg**	**11 48 43.1**	**+0.3**
YOJ	**Yonaguni jima**	**0.68**	**129**	P	**Pb**	**11 48 35.2**	**+0.1**
	baz=129						
YOJ	**Yonaguni jima**	**0.68**	**129**	P	**Pb**	**11 48 34.9**	**-0.1**
YOJ				*e*S	**Sg**	**11 48 43.5**	**-0.5**
TWE	**Neicheng**	**0.72**	**256**	*i* P	**Pb**	**11 48 35.4**	**-0.2**
	baz=241						
TWE				*i* S	**Sb**	**11 48 45.1**	**-0.1**
	baz=241						
ENAH	**Nanao**	**0.72**	**232**	*i* P	**Pg**	**11 48 36.1**	**+0.5**
	baz=228						
ENAH				S	**Sb**	**11 48 45.5**	**+0.3**
	baz=228						
PCYT	**Pengchaiyu**	**0.80**	**336**	*i* P	**Pb**	**11 48 36.3**	**-0.7**
	baz=319						
PCYT				S	**Sn**	**11 48 49.2**	**-0.5**
	baz=319						
YM08	**YM08**	**0.82**	**291**	P	**Pb**	**11 48 36.9**	**-0.5**
	baz=289						
YM08				S	**Sb**	**11 48 48.0**	**0.0**
	baz=289						
YM01	**YM01**	**0.82**	**288**	P	**Pb**	**11 48 37.2**	**-0.2**
	baz=286						
YM01				S	**Sg**	**11 48 49.2**	**+0.8**
	baz=286						
YM11	**YM11**	**0.82**	**289**	P	**Pg**	**11 48 37.9**	**+0.3**
	baz=287						
NHDH	**Xindian Distri**	**0.82**	**275**	P	**Pg**	**11 48 37.8**	**+0.2**
	baz=272						
NHDH				S	**Sn**	**11 48 50.0**	**-0.3**
	baz=272						
YM05	**YM05**	**0.83**	**289**	P	**Pb**	**11 48 37.2**	**-0.4**
	baz=287						
YM10	**YM10**	**0.83**	**288**	P	**Pb**	**11 48 37.4**	**-0.2**
	baz=287						
TWY	**Chenhua**	**0.84**	**297**	*i* P	**Pg**	**11 48 38.3**	**+0.4**
	baz=282						
TWY				S	**Sn**	**11 48 50.1**	**-0.6**
	baz=282						
YM04	**YM04**	**0.85**	**288**	P	**Pb**	**11 48 37.8**	**-0.1**
	baz=286						
NWLT	**Wulai**	**0.85**	**262**	*i* P	**Pb**	**11 48 38.1**	**+0.1**
	baz=259						
NWLT				*i* S	**Sg**	**11 48 49.7**	**+0.3**
	baz=259						
YM03	**YM03**	**0.86**	**289**	P	**Pg**	**11 48 38.6**	**+0.4**
	baz=288						
TATO	**Taipei**	**0.86**	**275**	P	**Pn**	**11 48 38.8**	**-0.1**
	baz=273						
TATO				S	**Sn**	**11 48 50.5**	**-0.6**
	baz=273						
ANP	**Anpu**	**0.88**	**289**	*i* P	**Pg**	**11 48 38.7**	**+0.2**
	baz=288						
NDT	**Datong Townshi**	**0.89**	**251**	*i* P	**Pb**	**11 48 38.7**	**+0.2**
	baz=248						
NDT				S	**Sg**	**11 48 50.8**	**+0.4**
	baz=248						
YHNB	**Yeheng**	**0.99**	**257**	*i* P	**Pb**	**11 48 40.0**	**-0.3**
	baz=270						
YHNB				S	**Sg**	**11 48 53.2**	**-0.4**
	baz=270						
NSK	**Sanguang**	**1.00**	**257**	*i* P	**Pb**	**11 48 40.4**	**0.0**
	baz=271						
NSK				S	**Sg**	**11 48 54.0**	**-0.1**
	baz=271						
NACB	**Ninganchiao**	**1.05**	**227**	P	**Pb**	**11 48 41.4**	**+0.1**
	baz=224						
NACB				S	**Sb**	**11 48 54.9**	**+0.2**
	baz=224						
NNSB	**Datong**	**1.06**	**244**	P	**Pn**	**11 48 41.9**	**+0.1**
	baz=241						
NNSB				S	**Sb**	**11 48 55.3**	**0.0**
	baz=241						
NNSH	**Datong**	**1.06**	**244**	*i* P	**Pg**	**11 48 42.1**	**0.0**
	baz=241						
NNSH				S	**Sg**	**11 48 55.6**	**-0.4**
	baz=241						
NNS	**Nan Shan**	**1.06**	**245**	*i* P	**Pn**	**11 48 42.0**	**+0.2**
	baz=242						
NNS				*i* S	**Sg**	**11 48 55.6**	**-0.5**
	baz=242						
ETLH	**Xiulin Townshi**	**1.10**	**232**	P	**Pn**	**11 48 42.5**	**+0.2**
	baz=229						
ETLH				S	**Sg**	**11 48 57.5**	**+0.1**
	baz=229						
TWD	**Chiawan**	**1.11**	**223**	*i* P	**Pn**	**11 48 42.8**	**+0.4**
	baz=230						
TWD				S	**Sg**	**11 48 58.2**	**+0.6**
	baz=230						
WHF	**Hehuan Shan**	**1.30**	**235**	*i* P	**Pg**	**11 48 46.4**	**-0.3**
	baz=232						
WHF				*i* S	**Sg**	**11 49 03.4**	**-0.3**
	baz=232						
LIOB	**Emei**	**1.31**	**259**	P	**Pn**	**11 48 45.2**	**+0.1**
	baz=257						
LIOB				S	**Sg**	**11 49 04.2**	**+0.3**
	baz=257						
TDCB	**Techi**	**1.32**	**241**	S	**Sg**	**11 49 04.5**	**+0.1**
	baz=229						
NSTT	**Nanjuang**	**1.33**	**259**	P	**Pg**	**11 48 46.9**	**-0.2**
	baz=256						
NSTT				S	**Sg**	**11 49 03.6**	**-0.9**
	baz=256						
ESL	**Shilin**	**1.41**	**220**	P	**Pb**	**11 48 47.7**	**+0.2**
	baz=217						
ESL				*e*S	**Sg**	**11 49 06.7**	**-0.5**
	baz=217						
CHGB	**Renai**	**1.42**	**234**	P	**Pg**	**11 48 48.7**	**-0.1**
	baz=231						
CHGB				S	**Sg**	**11 49 07.4**	**0.0**
	baz=231						
WHP	**Taichung City**	**1.49**	**246**	*i* P	**Pg**	**11 48 50.4**	**+0.2**
	baz=229						
WHP				*i* S	**Sg**	**11 49 08.4**	**-1.2**
	baz=229						
HGSD	**Ruisui**	**1.67**	**214**	*e*P	**Pn**	**11 48 51.1**	**+1.0**
	baz=197						
EHY	**Hungye**	**1.72**	**216**	*e*P	**Pn**	**11 48 51.3**	**+0.6**
	baz=214						
EHY				*e*S	**Sb**	**11 49 13.5**	**-0.5**
	baz=214						
SMLT	**Sun Moon Lake**	**1.72**	**234**	P	**Pb**	**11 48 53.0**	**+0.2**
	baz=232						
SMLT				*e*S	**Sg**	**11 49 15.9**	**-1.2**
	baz=232						
SSLB	**Suanglung**	**1.74**	**231**	P	**Pb**	**11 48 54.1**	**+1.0**
	baz=241						
SSLB				S	**Sb**	**11 49 15.1**	**+0.4**
	baz=241						
YULB	**Yu-li**	**1.82**	**215**	P	**Pb**	**11 48 53.6**	**-0.9**
	baz=212						
YULB				*e*S	**Sn**	**11 49 15.3**	**+0.4**
	baz=212						
TWF1	**Yuli**	**1.85**	**214**	*e*P	**Pb**	**11 48 54.0**	**-1.0**
	baz=212						
WJS	**Zhushan**	**1.89**	**236**	*e*P	**Pb**	**11 48 56.2**	**+0.6**
	baz=233						
WJS				*e*S	**Sg**	**11 49 22.0**	**-0.3**
	baz=233						
FULB	**Fuli**	**1.98**	**212**	*e*P	**Pn**	**11 48 54.8**	**+0.4**
	baz=194						
ALS	**Alishan**	**2.03**	**227**	P	**Pb**	**11

	baz=170								
IHUS	**Husbondi**	**0.40**	**198**	P		**Pg**	**11 53 09.9**	**-0.1**	
	baz=198								
IHUS				S		**Sg**	**11 53 16.1**	**+0.6**	
	baz=198								
IVOT	**Vottur**	**0.41**	**169**	P		**Pg**	**11 53 09.9**	**-0.3**	
	baz=168								
IVOT				S		**Sg**	**11 53 16.3**	**+0.4**	
	baz=168								
ISKR	**Skrokkalda**	**0.46**	**256**	P		**Pg**	**11 53 10.9**	**-0.1**	
	baz=256								
IJOK	**Jokulheimar**	**0.52**	**226**	P		**Pg**	**11 53 11.8**	**-0.3**	
	baz=226								
IJOK				S		**Sg**	**11 53 19.7**	**+0.6**	
	baz=226								
IMKO	**Mokollar**	**0.53**	**55**	P		**Pg**	**11 53 12.3**	**-0.1**	
	baz=55								
IMKO				S		**Sg**	**11 53 20.1**	**+0.6**	
	baz=55								
IKSK	**Karasker**	**0.65**	**143**	P		**Pg**	**11 53 13.6**	**-0.9**	
	baz=142								
IKSK				S		**Sg**	**11 53 22.7**	**-0.4**	
	baz=142								
ISVA	**Svartarkot**	**0.67**	**4**	P		**Pg**	**11 53 14.2**	**-0.6**	
	baz=4.5								
ISVA				S		**Sg**	**11 53 24.3**	**+0.7**	
	baz=4.5								
IIEY	**Innrieyrar**	**0.67**	**210**	P		**Pg**	**11 53 14.1**	**-0.9**	
	baz=210								
IVSH	**V-Sauoahnukur**	**0.71**	**79**	P		**Pg**	**11 53 15.1**	**-0.7**	
	baz=78								
IVSH				S		**Sg**	**11 53 25.1**	**-0.1**	
	baz=78								
IKAL	**Kalfafell**	**0.74**	**191**	P		**Pg**	**11 53 15.1**	**-1.2**	
	baz=191								
IKAL				S		**Sg**	**11 53 26.1**	**0.0**	
	baz=191								
IVAT	**Vatnsfell**	**0.83**	**235**	P		**Pg**	**11 53 17.3**	**-0.7**	
	baz=235								
IVAT				S		**Sg**	**11 53 29.1**	**+0.2**	
	baz=235								
IREN	**Reynihlio**	**0.99**	**11**	P		**Pg**	**11 53 19.8**	**-1.2**	
	baz=11								
IREN				S		**Sg**	**11 53 34.3**	**+0.3**	
	baz=11								
IKVO	**Krokottuvotn**	**1.06**	**11**	P		**Pg**	**11 53 20.9**	**-1.4**	
	baz=11								
ISNB	**Snabyli**	**1.09**	**211**	P		**Pg**	**11 53 21.6**	**-1.3**	
	baz=211								
IGRS	**Grimsstaoir**	**1.10**	**28**	P		**Pg**	**11 53 22.4**	**-0.6**	
	baz=28								
ISLY	**Slysaalda**	**1.15**	**223**	P		**Pg**	**11 53 22.1**	**-1.9**	
	baz=223								
ISLY				S		**Sg**	**11 53 37.9**	**-1.0**	
	baz=223								
IFED	**Fedgar**	**1.21**	**238**	P		**Pn**	**11 53 23.5**	**-0.7**	
	baz=238								
ISKI	**Skildingahlsh**	**1.21**	**7**	P		**Pn**	**11 53 23.2**	**-1.0**	
	baz=6.9								
ISKI				S		**Sb**	**11 53 40.1**	**+0.3**	
	baz=6.9								
IGRA	**Granastoir**	**1.25**	**356**	P		**Pn**	**11 53 24.1**	**-0.6**	
	baz=356								
IMJO	**Mjoaskard**	**1.25**	**234**	P		**Pn**	**11 53 24.2**	**-0.6**	
	baz=234								
IGYG	**Gygjarholskot**	**1.30**	**253**	P		**Pn**	**11 53 24.8**	**-0.6**	
	baz=254								
IDIM	**Dimmadalss**	**1.30**	**8**	P		**Pn**	**11 53 24.9**	**-0.6**	
	baz=8.0								
IHVO	**Lagu-Hvolar**	**1.33**	**210**	P		**Pn**	**11 53 25.6**	**-0.2**	
	baz=210								
IHAU	**Haukadalur**	**1.34**	**239**	P		**Pn**	**11 53 25.6**	**-0.4**	
	baz=239								
IHLA	**Hella**	**1.34**	**342**	P		**Pn**	**11 53 25.8**	**-0.2**	
	baz=342								
IHED	**Heoinshofoi**	**1.41**	**1**	P		**Pn**	**11 53 26.3**	**-0.6**	
	baz=1.1								
IALF	**Alftagrof**	**1.43**	**215**	P		**Pn**	**11 53 27.1**	**-0.2**	
	baz=215								
IBRE	**Brettingsstaoi**	**1.47**	**351**	P		**Pn**	**11 53 27.8**	**0.0**	
	baz=352								
IESK	**Eystri-Skogar**	**1.48**	**219**	P		**Pn**	**11 53 27.7**	**-0.1**	
	baz=219								
ISAU	**Saurbar**	**1.50**	**244**	P		**Pn**	**11 53 27.8**	**-0.3**	
	baz=244								
IMID	**Miomork**	**1.50**	**228**	P		**Pn**	**11 53 28.5**	**+0.3**	
	baz=228								
ISIG	**Siglufjorour**	**1.60**	**337**	P		**Pn**	**11 53 29.4**	**-0.2**	
	baz=337								
IASM	**Asmuli**	**1.65**	**241**	P		**Pn**	**11 53 30.8**	**+0.5**	
	baz=241								
BORG	**Borgarnes**	**1.70**	**274**	Pg		**Pn**	**11 53 32.0**	**+1.0**	
	19nm,0.3s,baz=91,slow=6.4,SNR=11								
BORG				Lg		Lg	11 53 54.3		
	14nm,0.3s,baz=248,slow=21,SNR=3.2								
ISOL	**Solvholt**	**1.73**	**246**	P		**Pn**	**11 53 31.6**	**+0.2**	
	baz=246								
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn		Pn	11 55 50.4	+2.0	
	baz=325,slow=14,SNR=6.0								
HFS	**Hagfors**	**14.99**	**93**	Pn		P	11 56 43.8	+5.5	
	0.1nm,0.3s,baz=289,slow=9.2,SNR=4.7								
ARCES	**ARCESS Array B**	**17.07**	**55**	LR		LR	12 03 03.8		
	comp=Z,61nm,18.2s,baz=195,slow=34								
FINES	**FINESS Array B**	**19.65**	**79**	P		Pn	11 57 37.2	+6.2	
	0.1nm,0.3s,baz=324,slow=5.5,SNR=4.0								
BRG	**Berggiesshubel**	**21.36**	**115**	*eP*		P	11 57 52.6	+4.3	
	9.1nm,1.1s								
BRG				*e*			11 58 00.4		
	6.9nm,0.7s								
GERES	**GERESS Array B**	**22.91**	**119**	P		P	11 58 08.9	+4.0	
	0.2nm,0.3s,baz=307,slow=4.9,SNR=3.5								
GERES				LR		LR	12 07 27.2		
	comp=Z,93nm,18.1s,baz=283,slow=38								
DAVOX	**Davos/Dischmat**	**23.28**	**127**	LR		LR	12 07 36.2		
	comp=Z,76nm,21.6s,baz=78,slow=38								
ESDC	**Sonseca Array**	**26.24**	**156**	P		**P**	**11 58 38.0**	**+1.9**	
	1.8nm,0.9s,baz=348,slow=9.1,SNR=4.8								
RES	**Resolute Bay**	**26.49**	**324**	LR		LR	12 09 12.7		
	comp=Z,74nm,21.9s,baz=32,slow=36								
AKASG	**Malin Array Be**	**27.79**	**98**	P		P	11 58 53.6	+3.8	
	0.7nm,0.5s,baz=318,slow=9.4,SNR=1.6								
BRTR	**Keskin Array B**	**38.43**	**105**	P		P	12 00 28.2	+5.5	
	0.7nm,0.7s,baz=335,slow=8.2,SNR=5.0								
ILAR	**Eielson Array**	**45.70**	**332**	P		P	12 01 28.7	+7.2	
	1.8nm,1.1s,baz=26,slow=6.8,SNR=12								
TORD	**Torodi Ar. Bea**	**53.13**	**157**	P		P	12 02 21.2	+2.5	
	0.7nm,0.8s,baz=345,slow=7.2,SNR=2.0								
PDAR	**Pinedale Array**	**53.23**	**293**	P		P	12 02 23.9	+4.5	
	1.5nm,0.8s,baz=57,slow=7.5,SNR=11								

SOME ***11*** *12:00:14.7, 44.70N×82.12E, h5km*
NNC ***11*** *12:00:16.9±1.0, 44.70N×82.06E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=12.3km s-min=4.1km az=125.0*

ISC 11 12:00:10.5±1.5, 44°59N±0.05×82°53E±0.07, h4km±14km, n20, σ0°79/33, 2C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.94**	**235**	*eP*	**Pg**	**12 00 48.5**	**+0.7**
	1.5nm,0.1s						
KTMS				*eS*	**Sg**	**12 01 12.7**	**-0.2**
	26nm,0.2s						
KTMS	**Ketmen**	**1.94**	**235**	P	**Pg**	**12 00 48.5**	**+0.7**
	1.5nm,0.1s						
KTMS				S	**Sg**	**12 01 12.7**	**-0.2**
	26nm,0.2s						
DJR	**Jarkent**	**1.98**	**263**	*eP*	**Pg**	**12 00 48.0**	**-0.4**
	8.8nm,0.4s						
DJR				*eS*	**Sb**	**12 01 11.9**	**-0.2**
	17nm,0.3s						
DJR	**Jarkent**	**1.98**	**263**	P	**Pg**	**12 00 48.0**	**-0.4**
	8.8nm,0.4s						
DJR				S	**Sb**	**12 01 12.0**	**-0.2**
	17nm,0.3s						
MK31	**Makanchi Array**	**2.21**	**356**	⇓P	**Pg**	**12 00 53.8**	**+0.9**
	5.7nm,0.3s,baz=187,slow=16,SNR=146						
MK31				S	**Sg**	**12 01 21.2**	**-0.3**
	36nm,0.4s,baz=184,slow=27,SNR=31						
MAKZ	**Makanchi**	**2.25**	**350**	⇑P	**Pg**	**12 00 53.9**	**+0.2**
	2.4nm,0.3s						
MAKZ				⇓S	**Sg**	**12 01 21.7**	**-1.2**
PDGK	**Podgornoye**	**2.53**	**241**	⇓Pn	**Pb**	**12 00 57.0**	**+0.4**
	1.4nm,0.4s						
PDGK				⇑Lg	Lg	12 01 29.0	
	20nm,0.5s						
SHLS	**Shalkode**	**2.64**	**238**	*eP*	**Pb**	**12 00 56.4**	**-2.0**
	5.9nm,0.2s						
SHLS				*eS*	**Sn**	**12 01 26.4**	**-0.1**
	46nm,0.3s						
SHLS	**Shalkode**	**2.64**	**238**	Pg	**Pb**	**12 00 56.4**	**-2.0**
	5.9nm,0.2s						
SHLS				Lg	Lg	12 01 26.4	
	46nm,0.3s						
TDK	**Taldyqorghan**	**2.96**	**279**	*eP*	**Pb**	**12 01 03.9**	**+0.1**
	59nm,0.4s						
TDK				*eS*	**Sb**	**12 01 39.5**	**-0.9**
	60nm,0.5s						
TDK	**Taldyqorghan**	**2.96**	**279**	Pg	**Pb**	**12 01 03.9**	**+0.1**
	59nm,0.4s						
TDK				Lg	Lg	12 01 39.5	
	60nm,0.5s						
KPKS	**Kokpek**	**2.99**	**249**	*eP*	**Pb**	**12 01 05.4**	**+1.0**
	7.4nm,0.2s						
KPKS				*eS*	**Sb**	**12 01 42.1**	**+0.8**
	34nm,0.4s						
MNBS	**Baschi**	**3.00**	**262**	*eP*	**Pb**	**12 01 04.7**	**0.0**
	5.1nm,0.3s						
MNBS				*eS*	**Sb**	**12 01 40.9**	**-0.8**
	25nm,0.5s						
MNBS	**Baschi**	**3.00**	**262**	Pg	**Pb**	**12 01 04.7**	**0.0**
	5.1nm,0.3s						
MNBS				Lg	Lg	12 01 40.9	
	25nm,0.5s						
ZSN	**Zaisan**	**3.29**	**29**	*eP*	**Pg**	**12 01 13.7**	**+0.1**
	3.9nm,0.2s						
ZSN				*eS*	**Sg**	**12 01 56.2**	**-0.1**
	5.5nm,0.3s						
ZSN	**Zaisan**	**3.29**	**29**	Pg	**Pg**	**12 01 13.7**	**+0.1**
	3.9nm,0.2s						
ZSN				Lg	Lg	12 01 56.2	
	5.5nm,0.3s						
ARXS	**Arharly**	**3.39**	**265**	*eP*	**Pb**	**12 01 11.8**	**+0.6**
	4.6nm,0.3s						
ARXS				*eS*	**Sb**	**12 01 53.2**	**+0.5**
	14nm,0.2s						
ARXS	**Arharly**	**3.39**	**265**	Pg	**Pb**	**12 01 11.8**	**+0.6**
	4.6nm,0.3s						
ARXS				Lg	Lg	12 01 53.2	
	14nm,0.2s						
KTBS	**Karatobe**	**4.30**	**260**	*eP*	**Pb**	**12 01 27.4**	**+0.7**
	1.5nm,0.4s						
KTBS				*eS*	**Sb**	**12 02 19.7**	**+0.8**
	5.6nm,0.4s						
KTBS	**Karatobe**	**4.30**	**260**	Pg	**Pb**	**12 01 27.4**	**+0.7**
	1.5nm,0.4s						
KTBS				Lg	Lg	12 02 19.7	
	5.6nm,0.4s						

IDC ***11*** *12:07:54.9±1.0, 38.54N×143.23E, h0km, mb3.4/6, mb1 3.6/8, mb1mx3.4/61, mbtmp3.4/8, ML3.0/2, MS2.5/2, Ms1 2.5/2, ms1mx2.1/43, Error ellipse: s-maj=29.3km s-min=21.0km az=114.0*
JMA ***11*** *12:07:58.6±0.1, 38.64N×143.00E, h32km, M3.5*
NIED ***11*** *12:07:58.6, 38.64N×143.00E, h32km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr4.33; Mθθ-5.02; Mφφ0.70; Mrθ0.39; Mθφ-0.18; Mφr-0.82; Fault plane solution: M₀4.78000×10¹⁴ NP1: φs=100.00000°, δ49.00000°, λ107.00000°. NP2: φs=256.00000°, δ44.00000°, λ72.00000°*

ISC 11 12:07:58.7±0.9, 38°65N±0.06×143°01E±0.07, h23km, n28, σ0°96/26, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**1.13**	**293**	P	**Pn**	**12 08 18.7**	**-0.4**
OFUJ				*eS*	**Sb**	**12 08 32.9**	**-1.0**
JKMT	**Kesennumamotoy**	**1.21**	**278**	P	**Pn**	**12 08 19.7**	**-0.5**
JIKH	**Ishinomakikobu**	**1.26**	**255**	P	**Pn**	**12 08 20.2**	**-0.7**
JIO	**Ouri**	**1.32**	**262**	P	**Pn**	**12 08 21.2**	**-0.5**
JMK	**Ichinoseki**	**1.43**	**283**	P	**Pn**	**12 08 23.2**	**-0.1**
JMK				S	**Sn**	**12 08 41.0**	**-0.4**
JOM	**Ohasama**	**1.57**	**302**	P	**Pn**	**12 08 25.2**	**0.0**
JOU	**Okura**	**1.86**	**262**	P	**Pn**	**12 08 29.3**	**+0.1**
JMM	**Marumori**	**1.91**	**247**	P	**Pn**	**12 08 29.4**	**-0.5**
JRG	**Rokugo**	**2.00**	**293**	P	**Pn**	**12 08 31.5**	**+0.5**
JANG	**Nango**	**2.08**	**327**	P	**Pn**	**12 08 31.6**	**-0.5**
JYK	**Kaneyama**	**2.09**	**278**	P	**Pn**	**12 08 33.6**	**+1.3**
JFK	**Kawauchi**	**2.12**	**233**	P	**Pn**	**12 08 31.9**	**-0.9**
JFT	**Otama**	**2.40**	**243**	P	**Pn**	**12 08 37.1**	**+0.6**
JFT				*eS*	**Sn**	**12 09 05.0**	**-0.1**
MJAR	**Matsushiro Arr**	**4.36**	**243**	Pn	**Pn**	**12 09 05.5**	**+2.0**
	0.1nm,0.3s,baz=53,slow=11,SNR=6.6						
MJAR				Sn	**Sn**	**12 09 56.0**	**+2.5**
	0.0nm,0.3s,baz=84,slow=33,SNR=1.0						
MJAR				LR	LR	12 11 00.1	
	comp=Z,57nm,20.2s,baz=80,slow=42						
ASAJ	**Asahikawa**	**5.47**	**357**	Pn	**Pn**	**12 09 20.1**	**+1.3**
	0.9nm,0.3s,baz=207,slow=11,SNR=12						
ASAJ				Sn	**Sn**	**12 10 21.2**	**+0.3**
	0.3nm,0.3s,baz=270,slow=20,SNR=1.3						
KSRS	**Korea Array**	**11.96**	**269**	LR	LR	12 15 04.7	
	comp=Z,21nm,19.6s,baz=190,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.97**	**126**	T	T	12 43 05.5	
	baz=318,slow=74,SNR=16						
H11N1	**WAKE ISLAND Hy**	**27.98**	**126**	T	T	12 43 06.0	
	baz=318,slow=74,SNR=15						
H11N3	**WAKE ISLAND Hy**	**27.99**	**126**	T	T	12 43 08.5	
	baz=318,slow=74,SNR=17						
H11S1	**WAKE ISLAND Hy**	**28.76**	**128**	T	T	12 44 04.1	
	baz=319,slow=76,SNR=3.5						
H11S3	**WAKE ISLAND Hy**	**28.76**	**128**	T	T	12 44 08.5	
	baz=319,slow=76,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**28.77**	**128**	T	T	12 44 07.8	
	baz=319,slow=76,SNR=5.9						
MKAR	**Makanchi Array**	**44.35**	**301**	P	**P**	**12 16 08.1**	**+1.1**
	0.2nm,0.6s,baz=88,slow=10,SNR=2.3						
KURBB	**Kurchatov Arra**	**46.02**	**307**	P	**P**	**12 16 20.6**	**+0.4**
	0.3nm,0.5s,baz=82,slow=8.2,SNR=2.4						
ILAR	**Eielson Array**	**47.45**	**33**	P	**P**	**12 16 30.4**	**-0.8**
	0.3nm,0.8s,baz=254,slow=8.4,SNR=2.2						
WRA	**Warramunga Arr**	**58.85**	**190**	P	**P**	**12 17 54.4**	**-1.1**
	0.9nm,0.8s,baz=7.7,slow=7.0,SNR=8.4						
ASAR	**Alice Springs**	**62.57**	**189**	P	**P**	**12 18 20.2**	**-0.7**
	0.4nm,0.7s,baz=9.6,slow=6.1,SNR=3.2						
PDAR	**Pinedale Array**	**75.64**	**46**	P	**P**	**12 19 42.3**	**+0.2**
	0.3nm,0.7s,baz=64,slow=3.4,SNR=3.9						

NEIC ***11*** *12:12:31.9±2.0, 11.29S±0.09×166.29E±0.07, h92km±8km, mb4.2/15, Error ellipse: s-maj=15.9km s-min=3.4km az=216.0*
IDC ***11*** *12:12:32.6±3.5, 11.30S×166.24E, h97km±28km, mb3.6/8, mb1 3.7/10, mb1mx3.4/46, mbtmp4.0/10, MS3.1/4, Ms1 3.1/4, ms1mx2.7/35, Error ellipse: s-maj=28.1km s-min=20.5km az=67.0*

ISC 11 12:12:32.9±0.7, 11°39S±0.07×166°17E±0.09, h100km, n36, σ1°31/41, mb4.0/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**4.16**	**166**	Pn	**Pn**	**12 13 33.2**	**-1.1**
SANVU				Sn	**Sn**	**12 14 20.5**	**-1.4**
HNR	**Honiara**	**6.43**	**287**	P	**Pn**	**12 14 05.7**	**+0.7**
	8.1nm,0.3s,baz=151,slow=21,SNR=4.6						
HNR				S	**Sn**	**12 15 18.3**	**+1.3**
	8.9nm,0.3s,baz=166,slow=19,SNR=1.5						
HNR				LR	LR	12 15 58.9	
	comp=Z,59nm,19.9s,baz=92,slow=32						
HNR	**Honiara**	**6.43**	**287**		**Pn**	**12 14 05.2**	**+0.1**
HNR				Sn	**Sn**	**12 15 16.1**	**-0.9**
DZM	**Mont Dzumac**	**10.63**	**179**	P	**Pn**	**12 15 03.2**	**+0.8**
	1.6nm,0.3s,baz=358,slow=5.6,SNR=45						
DZM				S	**Sn**	**12 16 58.1**	**-1.4**
	1.0nm,0.3s,baz=139,slow=24,SNR=6.6						
DZM	**Mont Dzumac**	**10.63**	**179**		**Pn**	**12 15 04.5**	**+2.2**
DZM				Sn	**Sn**	**12 16 59.2**	**-0.3**
KRVT	**Keravat (AS076**	**15.67**	**296**	LR	LR	12 21 00.8	
	comp=Z,33nm,20.8s,baz=61,slow=32						
EIDS	**Eidsvold**	**19.93**	**224**	P	**Pn**	**12 17 00.0**	**+0.4**
EIDS				IAmb	IAmb	12 17 00.6	
	comp=Z,9.0nm,0.8s						
BKZ	**Black Stump Fm**	**29.15**	**163**	P	**P**	**12 18 24.7**	**0.0**
STKA	**Stephens Creek**	**30.49**	**224**	P	**P**	**12 18 38.1**	**+1.5**
MSWZ	**Moikau Station**	**30.96**	**167**	P	**P**	**12 18 40.4**	**-0.2**
WR0	**Warramunga Arr**	**31.58**	**250**	P	**P**	**12 18 46.8**	**+0.5**
WR0				IAmb	IAmb	12 19 13.3	
	comp=Z,4.3nm,1.2s						
WB0	**Warramunga Arr**	**31.68**	**251**	P	**P**	**12 18 47.3**	**+0.1**
LTZ	**Lake Taylor**	**31.73**	**171**	P	**P**	**12 18 48.9**	**+1.6**
WB2	**Warramunga Arr**	**31.75**	**250**	P	**P**	**12 18 48.6**	**+0.7**
WB2				IAmb	IAmb	12 19 16.4	
	comp=Z,5.0nm,1.4s						
WRA	**Warramunga Arr**	**31.76**	**251**	P	**P**	**12 18 48.2**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=83,slow=9.0,SNR=3.8						
WRA				PcP	**PcP**	**12 21 37.7**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=79,slow=3.0,SNR=5.5						
WRA				S	**S**	**12 23 45.3**	**-5.6**
	comp=Z,0.1nm,0.3s,baz=80,slow=14,SNR=8.1						
AS31	**Alice Springs**	**33.02**	**244**	P	**P**	**12 19 01.1**	**+2.2**
ASAR	**Alice Springs**	**33.02**	**244**	P	**P**	**12 18 59.0**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=72,slow=9.8,SNR=4.7						
ASAR				PcP	**PcP**	**12 21 41.0**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=74,slow=2.5,SNR=7.5						
VNDA	**Vanda**	**66.16**	**181**	P	**P**	**12 23 09.9**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=338,slow=5.6,SNR=5.0						
VNDA	**Vanda**	**66.16**	**181**	P	**P**	**12 23 10.1**	**+0.8**
VNDA				IAmb	IAmb	12 23 11.6	
	comp=Z,3.1nm,1.2s						
CMAR	**Chiang Mai Arr**	**72.63**	**294**	LR	LR	12 54 54.3	
	comp=Z,8.9nm,20.2s,baz=80,slow=35						
QSPA	**South Pole Qui**	**78.62**	**180**	P	**P**	**12 24 23.2**	**-0.4**
SONM	**Songino Array**	**79.19**	**324**	P	**P**	**12 24 27.4**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=104,slow=4.6,SNR=2.6						
SONM	**Songino Array**	**79.19**	**324**	P	**P**	**12 24 27.2**	**+0.1**
IMAR	**Indian Mountai**	**82.64**	**15**	P	**P**	**12 24 44.7**	**-0.1**
CCB	**Clear Creek Bu**	**83.33**	**18**	P	**P**	**12 24 48.2**	**-0.2**
CCB				IAmb	IAmb	12 25 04.9	
	comp=Z,4.9nm,1.4s						
MDM	**Murphy Dome**	**83.42**	**18**	P	**P**	**12 24 48.7**	**-0.2**
MDM				IAmb	IAmb	12 25 03.8	
	comp=Z,5.6nm,1.4s						
HDA	**Harding Lake**	**83.43**	**19**	P	**P**	**12 24 48.6**	**-0.3**
HDA				IAmb	IAmb	12 24 49.2	
	comp=Z,3.6nm,0.8s						
IL31		**83.70**	**18**	P	**P**	**12 24 48.8**	**-1.4**
IL31				IAmb	IAmb	12 24 56.9	
	comp=Z,6.6nm,1.4s						
ILAR	**Eielson Array**	**83.70**	**18**	P	**P**	**12 24 49.5**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=261,slow=5.0,SNR=11						
ILAR	**Eielson Array**	**83.70**	**18**	P	**P**	**12 24 48.7**	**-1.6**
DLBC	**Dease Lake**	**86.51**	**28**	LR	LR	13 03 09.0	
	comp=Z,47nm,18.2s,baz=310,slow=35						
INK	**Inuvik**	**90.08**	**19**	P	**P**	**12 25 20.3**	**-0.8**
	comp=Z,0.9nm,1.0s,baz=211,slow=5.9,SNR=1.3						
MKAR	**Makanchi Array**	**94.06**	**317**	P	**P**	**12 25 40.2**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=91,slow=6.4,SNR=15						
ZALV	**Zalesovo Beam**	**94.08**	**324**	P	**P**	**12 25 39.7**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=108,slow=4.7,SNR=3.9						
ZALV	**Zalesovo Beam**	**94.08**	**324**	P	**P**	**12 25 39.1**	**-0.8**
ARCES	**ARCESS Array B**	**116.77**	**346**	PKP	**PKPdf**	**12 31 04.3**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=76,slow=3.8,SNR=5.3						

REY ***11*** *12:25:38.3, 64.67N×17.44W, h3km*
IDC ***11*** *12:25:39.0±0.7, 64.65N×17.63W, h0km, mb3.7/10, mb1 4.0/12, mb1mx3.7/51, mbtmp3.8/12, ML3.5/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/54, Error ellipse: s-maj=23.6km s-min=10.6km az=11.0*
NEIC ***11*** *12:25:40.1±1.8, 64.61N±0.10×17.6W±0.1, h8km±4km, mb4.4/10, Error ellipse: s-maj=13.9km s-min=8.7km az=189.0*

ISC 11 12:25:39.5±0.4, 64°68N±0.02×17°50W±0.02, h10km, n87, σ2°04/104, mb3.9/14, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.11**	**265**	P	**Pg**	**12 25 41.2**	**-1.2**
	baz=272						
IVON				S	**Sg**	**12 25 43.7**	**-0.7**
	baz=272						
IDYN	**Dyngjuhals**	**0.12**	**27**	P	**Pg**	**12 25 41.2**	**-1.3**
	baz=14						
IGRF	**Grimsfjall**	**0.29**	**160**	P	**Pg**	**12 25 43.7**	**-1.8**
	baz=164						
IHUS	**Husbondi**	**0.40**	**190**	P	**Pg**	**12 25 46.0**	**-1.4**
	baz=194						
IHUS				S	**Sg**	**12 25 51.4**	**-1.2**
	baz=194						
ISKR	**Skrokkalda**	**0.40**	**253**	P	**Pb**	**12 25 46.1**	**-2.7**
	baz=255						
ISKR				S	**Sb**	**12 25 52.6**	**-2.5**
	baz=255						
IVOT	**Vottur**	**0.44**	**162**	P	**Pg**	**12 25 46.3**	**-1.8**
	baz=164						
IVOT				S	**Sg**	**12 25 52.3**	**-1.6**
	baz=164						
IJOK	**Jokulheimar**	**0.49**	**221**	P	**Pg**	**12 25 47.5**	**-1.5**
	baz=224						
IJOK				S	**Sb**	**12 25 54.3**	**-3.1**
	baz=224						
IMKO	**Mokollar**	**0.58**	**59**	P	**Pg**	**12 25 48.6**	**-2.1**
	baz=56						
IMKO				S	**Sg**	**12 25 56.5**	**-1.8**
	baz=56						
IIEY	**Innrieyrar**	**0.65**	**205**	P	**Pg**	**12 25 50.1**	**-2.0**
	baz=208						
IIEY				S	**Sg**	**12 25 59.3**	**-1.3**
	baz=208						
ISVA	**Svartarkot**	**0.67**	**9**	P	**Pg**	**12 25 50.4**	**-2.0**
	baz=6.6						
ISVA				S	**Sg**	**12 25 59.8**	**-1.3**
	baz=6.6						
IKSK	**Karasker**	**0.69**	**139**	P	**Pg**	**12 25 49.7**	**-3.1**
	baz=140						
IKAL	**Kalfafell**	**0.74**	**187**	P	**Pg**	**12 25 51.6**	**-2.2**
	baz=189						
IVSH	**V-Sauoahnukur**	**0.77**	**80**	P	**Pg**	**12 25 51.6**	**-2.8**
	baz=78		

baz=17
ISIG Siglufjorour 1.57 338 P **Pn** **12 26 05.3 -2.1**
baz=338
ISIG S **Sb** **12 26 26.7 -1.9**
baz=338
IASM Asmuli 1.61 239 P **Pn** **12 26 06.3 -1.6**
baz=240
BORG Borgarnes 1.65 274 Pg **Pn** **12 26 06.5 -1.9**
17nm,0.3s,baz=99,slow=13,SNR=68
BORG Lg Lg 12 26 31.0
14nm,0.3s,baz=240,slow=23,SNR=10
BORG Borgarnes 1.65 274 Pn **Pn** **12 26 06.9 -1.6**
BORG Sn **Sg** **12 26 30.4 -2.0**
IKRO Krokur 1.68 251 P **Pn** **12 26 06.8 -2.1**
baz=252
ISOL Solvholt 1.68 245 P **Pn** **12 26 06.9 -2.0**
baz=246
IHEI Heioarbar 1.69 255 P **Pn** **12 26 07.2 -1.9**
baz=256
ILEI Leirhofn 1.78 13 P **Pn** **12 26 08.3 -2.0**
baz=12
IHRN Hraun 1.81 324 P **Pn** **12 26 08.7 -2.0**
baz=323
SCO Scoresbysund 6.07 346 Pn **Pn** **12 27 08.2 -1.0**
SCO Scoresbysund 6.07 346 *e* **Pn** **12 27 07.3 -1.9**
baz=168,slow=7.4
SCO *i* P **Pn** **12 27 10.0 +0.9**
SCO *i* S **Sn** **12 28 22.9 +4.3**
SCO IAML 12 28 31.4
comp=Z,1.1nm,0.4s
ANGG Ammassalik, Gr 8.53 285 Pn **Pn** **12 27 43.8 +0.9**
EKA Eskdalemuir Ar 11.77 136 Pn **Pn** **12 28 27.9 +0.6**
baz=324,slow=13,SNR=5.5
HFS Hagfors 15.05 93 Pn **P** **12 29 18.9 +1.6**
comp=Z,0.1nm,0.3s,baz=284,slow=9.0,SNR=7.9
HFS LR LR 12 35 21.0
comp=Z,60nm,18.1s,baz=275,slow=38
ARD9 ARCESS Array S 17.10 55 P **Pn** **12 29 38.2 0.0**
ARD9 IAmb IAmb 12 29 39.2
comp=Z,19nm,1.1s
FINES FINESS Array B 19.70 79 P **Pn** **12 30 11.7 +1.7**
comp=Z,0.2nm,0.3s,baz=313,slow=12,SNR=3.2
CLL Collm 20.71 116 *eP* **P** **12 30 20.0 +0.4**
BRG Berggiesshubel 21.42 115 *eP* **P** **12 30 28.3 +1.0**
comp=Z,5.9nm,1.2s
GERES GERESS Array B 22.96 119 P **P** **12 30 45.1 +1.2**
comp=Z,0.3nm,0.3s,baz=317,slow=9.4,SNR=5.2
GERES GERESS Array B 22.96 119 P **P** **12 30 44.1 +0.2**
ESDC Sonseca Array 26.27 156 P **P** **12 31 16.7 +2.0**
comp=Z,1.0nm,0.9s,baz=354,slow=8.8,SNR=2.8
LATE Laterza 27.64 129 P **P** **12 31 25.6 -1.4**
LATE IAmb IAmb 12 31 48.5
comp=Z,21nm,1.5s
BR131 Keskin Array S 38.48 105 P **P** **12 33 03.7 +2.1**
BRTR Keskin Array B 38.48 105 P **P** **12 33 03.6 +2.0**
comp=Z,1.3nm,0.8s,baz=316,slow=6.9,SNR=5.4
BRTR Keskin Array B 38.48 105 P **P** **12 33 03.4 +1.8**
BMAR Burnt Mountain 42.88 333 P **P** **12 33 39.2 +1.8**
ILAR Eielson Array 45.67 332 P **P** **12 34 01.2 +1.5**
comp=Z,1.7nm,1.1s,baz=24,slow=6.4,SNR=9.4
IMAR Indian Mountai 45.84 337 P **P** **12 34 03.8 +2.7**
BCAR Beaver Creek A 46.09 329 P **P** **12 34 05.5 +2.3**
ZALV Zalesovo Beam 47.62 51 P **P** **12 34 16.6 +1.5**
comp=Z,0.5nm,0.4s,baz=330,slow=8.3,SNR=2.1
ZALV Zalesovo Beam 47.62 51 P **P** **12 34 16.5 +1.3**
KURK Kurchatov 48.10 58 P **P** **12 34 19.9 +1.0**
KURK IAmb IAmb 12 34 21.1
comp=Z,3.6nm,0.9s
MK31 Makanchi Array 52.71 58 P **P** **12 34 54.5 +0.7**
MKAR Makanchi Array 52.71 58 P **P** **12 34 54.8 +0.9**
comp=Z,1.0nm,0.8s,baz=301,slow=5.4,SNR=6.6
MKAR Makanchi Array 52.71 58 P **P** **12 34 54.4 +0.5**
TORD Torodi Ar. Bea 53.16 156 P **P** **12 34 57.5 +0.2**
comp=Z,1.5nm,1.0s,baz=342,slow=7.4,SNR=5.4
TORD Torodi Ar. Bea 53.16 156 P **P** **12 34 57.0 -0.4**
PD31 Pinedale Array 53.17 293 P **P** **12 34 58.2 +0.6**
PD31 IAmb IAmb 12 34 59.3
comp=Z,4.2nm,1.1s
PDAR Pinedale Array 53.17 293 P **P** **12 34 58.1 +0.5**
comp=Z,1.7nm,0.9s,baz=57,slow=6.2,SNR=9.7
PDAR Pinedale Array 53.17 293 P **P** **12 34 58.4 +0.9**
BW06 Boulder Array 53.17 293 P **P** **12 34 58.5 +0.9**
BW06 IAmb IAmb 12 34 59.3
comp=Z,4.2nm,1.1s
BTK Batken 53.95 72 P **P** **12 35 04.7 +1.5**
GAR Garm 54.64 73 P **P** **12 35 10.3 +2.1**
TXAR Lajitas Array 62.28 280 P **P** **12 36 01.9 +0.3**
comp=Z,0.5nm,0.9s,baz=82,slow=2.8,SNR=4.5
TXAR Lajitas Array 62.28 280 P **P** **12 36 02.9 +1.3**
CMAR Chiang Mai Arr 84.12 59 P **P** **12 38 11.7 +1.2**
comp=Z,1.1nm,1.1s,baz=309,slow=6.7,SNR=6.4
CMAR Chiang Mai Arr 84.12 59 P **P** **12 38 11.6 +1.1**
ASAR Alice Springs 134.95 38 PKP **PKiKP** **12 44 58.1 -1.7**
comp=Z,0.5nm,0.9s,baz=264,slow=1.1,SNR=4.2
ASAR Alice Springs 134.95 38 **PKPdf** **12 44 57.7 -0.7**

*NEIC **11** 12:26:21.1±2.1, 7°.36S±0°.06×128°.82E±0°.03, h146km±6km, mb4.1/18, Error ellipse: s-maj=8.9km s-min=4.0km az=169.0*
*DJA **11** 12:26:21.7±0.2, 7°.S±2°×12°.9E±°, h174km±7km, M4.2/13, mb4.1/9, mB4.8/5, MLv4.2/13, Mw(mB)4.0/5*
*IDC **11** 12:26:21.5±2.2, 7°.33S×128°.84E, h144km±20km, mb3.7/9, mb1 3.8/12, mb1mx3.5/36, mbtmp4.2/12, Error ellipse: s-maj=24.3km s-min=12.7km az=86.0*
ISC 11 12:26:20.0±0.4, **7°.44S**±0°.04×**128°.83E**±0°.05, **h131**km, **n76,** σ2**s06/83, mb4.0**/18, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.50**	**103**	P	**Pn**	**12 27 03.3**	**+3.0**
SAUI				S	**Sn**	**12 27 36.4**	**+5.1**
SAUI	**Saumlaki**	**2.50**	**103**	Pn	**Pn**	**12 27 03.9**	**+3.6**
SAUI				Sn	**Sn**	**12 27 35.6**	**+4.4**
BNDI	**Bandanaira**	**3.09**	**20**	P	Pn	12 27 11.7	+3.9
BNDI				S	**Sn**	**12 27 51.0**	**+6.2**
AAI	**Ambon**	**3.78**	**350**	P	**Pn**	**12 27 20.4**	**+3.4**
MSAI	**Masohi**	**4.07**	**1**	P	**Pn**	**12 27 24.1**	**+3.4**
NLAI	**Namlea**	**4.52**	**337**	P	Pn	12 27 30.6	+3.9
SOEI	**Soe**	**5.07**	**243**	P	**Pn**	**12 27 37.4**	**+3.2**
0.7nm1μm41nm,0.5s							
SOEI	**Soe**	**5.07**	**243**	Pn	**Pn**	**12 27 37.2**	**+3.0**
SOEI				Sn	**Sn**	**12 28 33.2**	**+1.3**
FAKI	**Fak Fak**	**5.63**	**37**	P	**Pn**	**12 27 42.4**	**+0.7**
0.2nm16nm,0.7s							
FAKI	**Fak Fak**	**5.63**	**37**	Pn	**Pn**	**12 27 42.0**	**+0.3**
FAKI				Sn	**Sn**	**12 28 43.1**	**-2.3**
BATI	**Baumata**	**5.80**	**241**	P	**Pn**	**12 27 46.6**	**+2.7**
20nm,0.3s,baz=62,slow=7.1,SNR=11							
BATI				S	**Sn**	**12 28 50.0**	**+0.6**
40nm,0.3s,baz=64,slow=14,SNR=9.8							
BATI	**Baumata**	**5.80**	**241**	P	**Pn**	**12 27 46.8**	**+2.9**
MTN	**Manton Dam**	**5.83**	**157**	Pn	**Pn**	**12 27 46.7**	**+2.5**
MTN				Sn	**Sn**	**12 28 49.8**	**-0.2**
SIJI	**Sorong**	**6.96**	**20**	P	**Pn**	**12 27 59.8**	**+0.2**
2.1nm,0.3s,baz=180,slow=18,SNR=20							
SIJI				S	**Sn**	**12 29 15.6**	**-1.9**
2.7nm,0.3s,baz=53,slow=22,SNR=6.5							
EDFI	**Ende, Flores**	**7.19**	**259**	P	**Pn**	**12 28 04.7**	**+2.0**
0.0nm5.1nm,0.9s							
KNRA	**Kununurra**	**8.19**	**180**	Pn	**Pn**	**12 28 17.3**	**+1.3**
LUWI	**Luwuk**	**8.77**	**316**	Pn	**Pn**	**12 28 24.4**	**+0.6**
WBSI	**Waikabubak, Su**	**9.59**	**256**	P	**Pn**	**12 28 35.8**	**+0.8**
20nm,1.0s							
FITZ	**Fitzroy Crossi**	**11.04**	**196**	P	**Pn**	**12 28 53.2**	**-1.1**
2.0nm,0.3s,baz=28,slow=10,SNR=77							
FITZ				S	Sn	12 30 48.6	-7.5
2.4nm,0.3s,baz=249,slow=12,SNR=7.7							
FITZ	**Fitzroy Crossi**	**11.04**	**196**	Pn	**Pn**	**12 28 52.2**	**-2.1**
WB00	**Warramunga Arr**	**13.39**	**157**	Pn	**Pn**	**12 29 23.4**	**-1.5**
WRAB	**Tennant Creek**	**13.52**	**157**		**Pn**	**12 29 25.2**	**-1.4**
WRA	**Warramunga Arr**	**13.53**	**157**	P	**Pn**	**12 29 25.4**	**-1.3**
2.2nm,0.3s,baz=330,slow=13,SNR=96							
WRA				S	**Sn**	**12 31 49.8**	**-6.4**
1.7nm,0.3s,baz=340,slow=22,SNR=6.1							
WRA	**Warramunga Arr**	**13.53**	**157**		**Pn**	**12 29 24.0**	**-2.7**
WB2	**Warramunga Arr**	**13.53**	**157**	Pn	**Pn**	**12 29 25.7**	**-1.1**
WC3	**Warramunga Arr**	**13.55**	**157**	Pn	**Pn**	**12 29 25.7**	**-1.4**
WR0	**Warramunga Arr**	**13.62**	**157**	Pn	**Pn**	**12 29 26.4**	**-1.6**
MTKI	**Muara Teweh, K**	**15.32**	**294**	P	**P**	**12 29 55.9**	**+4.7**
PSA00	**Pilbara Seismi**	**16.52**	**211**		**P**	**12 30 07.0**	**+2.6**
AS31	**Alice Springs**	**16.85**	**164**	P	**Pn**	**12 30 09.1**	**+0.9**
AS31				IAmb	IAmb	12 30 14.9	
comp=Z,3.9nm,0.5s							
ASAR	**Alice Springs**	**16.85**	**164**	P	**Pn**	**12 30 09.6**	**+1.4**
comp=Z,1.7nm,0.3s,baz=340,slow=9.7,SNR=169							
ASAR				S	**Sn**	**12 33 12.3**	**-3.9**
comp=Z,0.6nm,0.3s,baz=350,slow=25,SNR=4.1							
ASAR	**Alice Springs**	**16.85**	**164**	P	**P**	**12 30 08.4**	**+0.3**
FORT	**Forrest**	**23.23**	**182**	P	**P**	**12 31 15.8**	**+0.2**
FORT				IAmb	IAmb	12 31 28.2	
comp=Z,12nm,0.8s							
MORW	**Morawa**	**24.66**	**208**	P	**P**	**12 31 29.3**	**+0.6**
MORW				IAmb	IAmb	12 31 31.5	
comp=Z,9.5nm,0.6s							
BBOO	**Buckleboo**	**26.12**	**166**	P	**P**	**12 31 42.7**	**+0.9**
STKA	**Stephens Creek**	**27.07**	**156**	P	**P**	**12 31 51.2**	**+0.9**
comp=Z,1.0nm,0.5s,baz=318,slow=7.7,SNR=5.9							
STKA	**Stephens Creek**	**27.07**	**156**	P	**P**	**12 31 50.6**	**+0.2**
NWAO	**Narrogin (SRO)**	**27.51**	**201**	P	**P**	**12 31 55.5**	**+0.9**
comp=Z,6.5nm,0.8s,baz=55,slow=8.8,SNR=5.9							
NWAO	**Narrogin (SRO)**	**27.55**	**201**	P	**P**	**12 31 55.4**	**+0.7**
BSI	**Banda Aceh**	**35.84**	**290**	P	P	12 32 56.7	-11
CMAR	**Chiang Mai Arr**	**39.14**	**311**	P	**P**	**12 33 35.2**	**+0.1**
comp=Z,0.5nm,0.5s,baz=148,slow=6.2,SNR=5.2							
CMAR	**Chiang Mai Arr**	**39.14**	**311**	P	**P**	**12 33 34.6**	**-0.5**
KSRS	**Korea Array**	**44.67**	**359**	P	**P**	**12 34 19.0**	**-0.7**
comp=Z,0.8nm,0.6s,baz=178,slow=8.5,SNR=2.2							
TUWZ	**Tuamarina**	**52.33**	**138**	P	**P**	**12 35 19.6**	**+1.2**
BKZ	**Black Stump Fm**	**53.12**	**134**	P	**P**	**12 35 25.5**	**+1.2**
PEA0B	**Petropavlovsk-**	**65.10**	**19**	P	**P**	**12 36 46.2**	**-0.3**
PETK	**Petropavlovsk-**	**65.10**	**19**	P	**P**	**12 36 45.9**	**-0.6**
comp=Z,3.1nm,0.7s,baz=179,slow=2.8,SNR=6.5							
PETK	**Petropavlovsk-**	**65.10**	**19**	P	**P**	**12 36 46.3**	**-0.2**
MK31	**Makanchi Array**	**67.97**	**327**	P	**P**	**12 37 04.5**	**-0.4**
MK31				IAmb	IAmb	12 37 04.7	
comp=Z,2.1nm,1.1s							
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**12 37 04.1**	**-0.7**
comp=Z,1.6nm,0.5s,baz=121,slow=7.8,SNR=26							
MAKZ	**Makanchi**	**68.14**	**327**	P	**P**	**12 37 05.5**	**-0.5**
MAKZ				IAmb	IAmb	12 37 05.6	
comp=Z,1.3nm,0.6s							
AAK	**Ala-Archa**	**70.14**	**320**	P	**P**	**12 37 19.2**	**+0.7**
ZAA0	**Zalesovo Array**	**71.47**	**334**	P	**P**	**12 37 24.3**	**-1.8**
ZAA0				IAmb	IAmb	12 37 46.2	
comp=Z,4.3nm,1.4s							
ZALV	**Zalesovo Beam**	**71.47**	**334**	P	**P**	**12 37 24.5**	**-1.6**
comp=Z,0.9nm,0.5s,baz=141,slow=5.3,SNR=4.3							
ZALV	**Zalesovo Beam**	**71.47**	**334**	P	**P**	**12 37 24.7**	**-1.5**
VNDA	**Vanda**	**72.16**	**173**	P	**P**	**12 37 30.5**	**+0.5**
comp=Z,0.3nm,0.3s,baz=323,slow=6.5,SNR=9.8							
VNDA	**Vanda**	**72.16**	**173**	P	**P**	**12 37 29.9**	**0.0**
KURK	**Kurchatov**	**72.29**	**329**	P	**P**	**12 37 29.9**	**-1.3**
KURK				IAmb	IAmb	12 37 30.8	
comp=Z,1.7nm,0.7s							
KKAR	**Karatay Array**	**72.91**	**319**	P	**P**	**12 37 34.8**	**-0.2**
KKAR				IAmb	IAmb	12 37 35.5	
comp=Z,3.6nm,1.2s							
KK04	**Karatay Array**	**72.92**	**319**	P	**P**	**12 37 33.8**	**-1.3**
KK09	**Karatay Array**	**72.93**	**319**	P	**P**	**12 37 34.4**	**-0.8**
MAW	**Mawson**	**74.12**	**201**	P	**P**	**12 37 42.5**	**+0.9**
comp=Z,1.3nm,0.5s,baz=108,slow=6.4,SNR=2.5							
MAW	**Mawson**	**74.12**	**201**	P	**P**	**12 37 41.9**	**+0.3**
TIXI	**Tiksi**	**78.92**	**0**	P	**P**	**12 38 07.2**	**-1.3**
TIXI				IAmb	IAmb	12 38 07.3	
comp=Z,1.7nm,0.6s							
AB07	**Akbulak array**	**82.12**	**322**	P	**P**	**12 38 23.8**	**-2.2**
AB03	**Akbulak array**	**82.13**	**322**	P	**P**	**12 38 24.4**	**-1.7**
ABKAR	**Akbulak array**	**82.14**	**322**	P	**P**	**12 38 24.8**	**-1.3**
AB09	**Akbulak array**	**82.15**	**322**	P	**P**	**12 38 24.3**	**-1.9**
QSPA	**South Pole Qui**	**82.54**	**180**	P	**P**	**12 38 27.2**	**-0.9**
QSPA				IAmb	IAmb	12 38 35.0	
comp=Z,5.5nm,1.3s							
TXAR	**Lajitas Array**	**126.14**	**59**	PKP	**PKPdf**	**12 45 07.1**	**-0.7**
comp=Z,0.2nm,0.5s,baz=200,slow=2.9,SNR=4.8							
TXAR	**Lajitas Array**	**126.14**	**59**		**PKPdf**	**12 45 07.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**127.76**	**281**	PKP	**PKPdf**	**12 45 10.6**	**-0.4**
comp=Z,0.4nm,0.6s,baz=64,slow=0.6,SNR=1.9							
TORD	**Torodi Ar. Bea**	**127.76**	**281**		**PKPdf**	**12 45 09.8**	**-1.2**
CPUP	**Villa Florida**	**145.90**	**170**	PKPbc	**PKPbc**	**12 45 44.9**	**0.0**
comp=Z,1.4nm,0.6s,baz=209,slow=3.1,SNR=5.5							
LPAZ	**La Paz**	**151.06**	**145**	PKPbc	**PKiKP**	**12 45 59.9**	**-0.1**
comp=Z,0.7nm,0.3s,baz=65,slow=3.7,SNR=3.8							
LPAZ	**La Paz**	**151.06**	**145**		**PKPbc**	**12 45 59.4**	**0.0**

*BER **11** 12:41:48.4±1.0, 71°.44N×10°.25W, h16km±26km, ML2.4, ML2.5(DNK), Confirmed Earthquake*
ISC 11 12:41:44.3±1.3, **71°.5N**±0°.1×**10°.3W**±0°.1, **h10**km, **n11,** σ1**s76**/17, **3C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.78**	**131**	*iP*	**Pn**	**12 42 01.2**	**-0.1**
JNW				*eS*	**Sb**	**12 42 10.2**	**-0.4**
JNW				IAML		12 42 13.0	
comp=Z,386nm,0.3s							
JMI	**Jan Mayen**	**0.79**	**141**	*iP*	**Pn**	**12 42 01.3**	**-0.1**
JMI				*eS*	**Sb**	**12 42 10.8**	**+0.1**
JMI				IAML		12 42 11.3	
comp=Z,307nm,0.3s							
JMIC	**Jan Mayen**	**0.79**	**134**	*eP*	**Pn**	**12 42 01.1**	**-0.3**
JMIC				*eS*	**Sb**	**12 42 11.1**	**+0.2**
JMIC				IAML		12 42 14.0	
comp=Z,246nm,0.5s							
JNE	**Jan Mayen East**	**0.84**	**131**	*iP*	**Pn**	**12 42 01.8**	**-0.3**
JNE				*eS*	**Sb**	**12 42 11.8**	**-0.4**
JNE				IAML		12 42 13.4	
comp=Z,409nm,0.6s							
DBG	**Daneborg**	**4.04**	**318**	*eP*	**Pn**	**12 42 48.5**	**+2.4**
DBG				*eS*	**Sn**	**12 43 31.3**	**-2.0**
DBG				IAML		12 43 33.8	
comp=Z,3.7nm,0.4s							
DBG	**Daneborg**	**4.04**	**318**	*iP*	**Pn**	**12 42 48.3**	**+2.2**
DBG				*iS*	**Sn**	**12 43 31.1**	**-2.2**
DBG				IAML		12 43 33.8	
comp=Z,3.7nm,0.4s							
DAG	**Danmarks Havn**	**5.73**	**340**	*e*	**Pn**	**12 43 11.9**	**+2.8**
baz=148,slow=18							
DAG				*iP*	**Pn**	**12 43 12.4**	**+3.3**
DAG				*iS*	**Sn**	**12 44 12.7**	**-2.2**
DAG				IAML		12 44 15.8	
comp=Z,4.4nm,0.4s							
HSPB	**Hornsund (broa**	**8.79**	**40**	*e*	Pn	12 43 56.7	+5.5
BRBB	**Barentsburg B**	**9.08**	**33**	*eP*	**Pn**	**12 43 55.0**	**0.0**
BRBB				*e*		12 43 59.9	
KBS	**Kingsbay**	**9.23**	**27**	*e*	Pn	12 44 02.6	+5.5
KBS				*e*		12 45 50.1	
SPA0	**Spitsbergen Ar**	**9.51**	**34**	*eP*	**Pn**	**12 44 00.6**	**-0.3**
SPA0				*e*		12 44 06.9	

*UPP **11** 13:01:12.7±0.1, 60°.28N×15°.84E, h0km, ML1.5, Explosion*
HEL 11 13:01:13.4±0.1, **60°.28N**×**15°.84E, h0**km, **ML1.5**(UPP), **Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FALU	**Falun**	**0.21**	**359**	P	Pg	13 01 17.1	-0.4
FALU				S	Sg	13 01 20.1	-0.1
FALU	**Falun**	**0.21**	**359**	*iP*	Pg	13 01 17.1	-0.4
FALU				*iS*	Sg	13 01 20.1	-0.1
OSTU	**Oestervaala**	**0.65**	**94**	P	Pg	13 01 24.5	-1.3
OSTU				S	Sg	13 01 33.4	-0.8
OSTU	**Oestervaala**	**0.65**	**94**	*iP*	Pg	13 01 24.5	-1.3
OSTU				*iS*	Sg	13 01 33.4	-0.8
BACU	**Backbrunna**	**0.77**	**123**	P	Pg	13 01 26.8	-1.2
BACU	**Backbrunna**	**0.77**	**123**	*iP*	Pg	13 01 26.8	-1.2
NRAU	**Nora**	**0.82**	**210**	P	Pg	13 01 28.1	-1.0
NRAU	**Nora**	**0.82**	**210**	*iP*	Pg	13 01 28.1	-1.0
FIBU	**Brunna**	**0.85**	**116**	P	Pg	13 01 28.8	-0.8
FIBU	**Brunna**	**0.85**	**116**	*iP*	Pg	13 01 28.8	-0.8
IGGU	**Iggoen**	**0.94**	**50**	P	Pg	13 01 30.0	-1.4
IGGU	**Iggoen**	**0.94**	**50**	*eP*	Pg	13 01 30.0	-1.4
HFC2	**Hagfors New Ar**	**1.08**	**263**	*eP*	Pg	13 01 32.6	-1.4
ESKU	**Eskilstuna**	**1.09**	**165**	P	Pg	13 01 33.0	-1.3
ESKU	**Eskilstuna**	**1.09**	**165**	*eP*	Pg	13 01 33.0	-1.3
UDD	**Uddeholm**	**1.13**	**261**	P	Pg	13 01 33.5	-1.6
UDD	**Uddeholm**	**1.13**	**261**	*eP*	Pg	13 01 33.5	-1.6
ROTU	**Roteberg**	**1.14**	**359**	P	Pg	13 01 33.9	-1.3
ROTU	**Roteberg**	**1.14**	**359**	*eP*	Pg	13 01 33.9	-1.3
GRAU	**Graesoe**	**1.35**	**87**	P	Pg	13 01 37.6	-1.6
GRAU	**Graesoe**	**1.35**	**87**	*eP*	Pg	13 01 37.6	-1.6
ASKU	**Askersund**	**1.48**	**201**	P	Pn	13 01 40.0	-1.3
ASKU	**Askersund**	**1.48**	**201**	*eP*	Pn	13 01 40.0	-1.3
NRTU	**Norrtaelje**	**1.53**	**112**	P	Pn	13 01 41.2	-0.7
NRTU	**Norrtaelje**	**1.53**	**112**	*eP*	Pn	13 01 41.2	-0.7
ARNU	**Arnoeviken**	**1.60**	**27**	P	Pn	13 01 42.1	-0.8
ARNU	**Arnoeviken**	**1.60**	**27**	*eP*	Pn	13 01 42.1	-0.8
NYNU	**Nynaeshamn**	**1.69**	**138**	P	Pn	13 01 43.4	-0.7
NYNU	**Nynaeshamn**	**1.69**	**138**	*eP*	Pn	13 01 43.4	-0.7
AAL	**Aland**	**2.08**	**91**	*eP*	Pn	13 01 49.1	-0.3
AAL				*eS*	Sn	13 02 16.3	+0.4
HEMU	**Hemsoen**	**2.62**	**23**	*eSB*	Sn	13 02 30.7	+1.3
RAF	**Rauma**	**3.01**	**73**	*eSB*	Sb	13 02 42.2	-2.9

BER 11 13:01:22.1±1.0, **60°.87N**×**5°.09E, h0**km, **ML0.9, 1C, Suspected explosion, Southern Norway**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SUE	**Sulen**	**0.25**	**320**	*iP*	Pg	13 01 26.0	-0.8
SUE				*eS*	Sg	13 01 29.9	-0.1
SUE				IAML		13 01 34.5	
comp=Z,12nm,0.4s							
ASK	**Askoy**	**0.39**	**172**	*eP*	Pg	13 01 28.5	-1.0
ASK				*eS*	Sg	13 01 34.9	+0.3
ASK				IAML		13 01 36.9	
comp=Z,4.4nm,0.4s							
HYA	**Hoyanger**	**0.61**	**60**	*eP*	Pg	13 01 32.6	-1.3
HYA				*eS*	Sg	13 01 40.7	-1.1
HYA				IAML		13 01 43.0	
comp=Z,6.0nm,0.4s							
FOO	**Floro**	**0.73**	**358**	*eP*	Pg	13 01 35.0	-1.1
FOO				*eS*	Sg	13 01 44.9	-0.7
FOO				IAML		13 01 46.2	
comp=Z,4.0nm,0.1s							
ODD1	**Odda**	**1.23**	**141**	*eP*	Pg	13 01 43.5	-2.0
ODD1				*eS*	Sg	13 02 00.3	-1.2
ODD1				IAML		13 02 02.7	
comp=Z,4.2nm,0.5s							
SKAR	**Skarslia**	**1.59**	**95**	*eP*	Pn	13 01 50.3	-1.3
SKAR				*eS*	Sn	13 02 09.7	-3.0
SKAR				IAML		13 02 13.7	
comp=Z,4.5nm,0.1s							
AKN	**Aaknes**	**1.60**	**34**	*eP*	Pn	13 01 50.0	-1.7
AKN				*eS*	Sn	13 02 10.8	-2.2
AKN				IAML		13 02 14.1	
comp=Z,5.4nm,0.1s							
BLS5	**Blasjo**	**1.60**	**154**	*eP*	Pn	13 01 49.6	-2.1
BLS5				*eS*	Sn	13 02 10.3	-2.7
BLS5				IAML		13 02 15.0	
comp=Z,2.0nm,0.6s							

TAP 11 13:07:42.9, 23°.23N×121°.56E, h37km, **ML2.3, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.23**	**233**	*i* P	Pn	13 07 49.8	-1.9
baz=224							
CHKT				*i* S	Sn	13 07 55.3	-4.7
baz=224							
FULB	**Fuli**	**0.25**	**262**	*i* P	Pn	13 07 50.3	-1.1
baz=259							
FULB				S	Sn	13 07 56.6	-2.5
baz=259							
EYUL	**Yuli**	**0.25**	**297**	P	Pn	13 07 50.9	-0.4
baz=298							
TWF1	**Yuli**	**0.27**	**296**	*i* P	Pn	13 07 50.8	-0.4
baz=297							
TWF1				S	Sn	13 07 56.7	-2.0
baz=297							
HGSD	**Ruisui**	**0.29**	**334**	P	Pn	13 07 50.7	-0.4
baz=335							
YULB	**Yu-li**	**0.29**	**303**	P	Pn	13 07 50.8	-0.3
baz=304							
YULB				S	Sn	13 07 56.8	-1.6
baz=304							
EHY	**Hungye**	**0.35**	**321**	*i* P	Pn	13 07 51.4	0.0
baz=311							
EHY				*i* S	Sn	13 07 57.4	-0.9
baz=311							
ELDTW	**Lidau**	**0.50**	**265**	*i* P	Pn	13 07 53.2	-0.5
baz=258							
ELDTW				S	Sn	13 08 00.2	-1.0
baz=258							
ESL	**Shilin**	**0.59**	**349**	*i* P	Pn	13 07 55.2	+0.2
baz=339							
ESL				*i* S	Sn	13 08 02.9	-0.4
baz=339							
STYT	**Tauyuan**	**0.74**	**265**	P	Pn	13 07 57.6	+0.7
baz=263							
STYT				*i* S	Sn	13 08 07.4	+0.4
baz=263							
ALS	**Alishan**	**0.75**	**292**	*i* P	Pn	13 07 58.0	+0.8
baz=292							
ALS				*i* S	Sn	13 08 08.9	+1.5
baz=292							
SSLB	**Suanglung**	**0.78**	**315**	P	Pn	13 07 57.7	+0.2
baz=316							
SSLB				S	Sn	13 08 07.7	-0.3
baz=316							
WHYT	**Xinyi Township**	**0.80**	**305**	*eP*	Pn	13 07 58.3	+0.6
baz=310							
WHYT				S	Sn	13 08 09.4	+1.1
baz=310							
ECL	**Taimali**	**0.85**	**222**	*eS*	Sn	13 08 08.6	-0.9
baz=219							
TPUB	**Ta-pu**	**0.86**	**275**	P	Pn	13 07 59.8	+1.2
baz=274							
TPUB				S	Sn	13 08 12.0	+2.1
baz=274							
WTP	**Ta-pu**	**0.87**	**271**	*i* P	Pn	13 08 00.0	+1.4
baz=270							
WTP				*i* S

	baz=310							
WDLH	**Douliu**	**1.04 296**	*e*S		Sn	13 08 18.1	+3.9
	baz=307							
MASBT	**Mashibuluo**	**1.06 234**	*e*S		Sn	13 08 15.8	+1.2
	baz=227							
EAST	**Anshuo**	**1.07 218**	P		Pn	13 08 00.2	-1.2
	baz=216							
WHP	**Taichung City**	**1.18 332**	*i* P		Pn	13 08 05.0	+2.0
	baz=339							
WHP			*e*S		Sn	13 08 19.9	+2.0
	baz=339							
NNSB	**Datong**	**1.20 352**	P		Pn	13 08 04.2	+0.9
	baz=4.0							
NNSB			S		Sn	13 08 18.4	+0.1
	baz=4.0							
NNSH	**Datong**	**1.20 352**	P		Pn	13 08 03.5	+0.2
	baz=2.0							
NNSH			S		Sn	13 08 18.5	+0.1
	baz=2.0							
NNS	**Nan Shan**	**1.21 352**	*e*S		Sn	13 08 18.8	+0.1
	baz=4.0							
TWQ1	**Liyutan**	**1.32 327**	P		Pn	13 08 07.5	+2.6
	baz=329							
TWQ1			*e*S		Sn	13 08 24.9	+3.7
	baz=329							
YHNB	**Yeheng**	**1.44 353**	P		Pn	13 08 07.8	+1.3
	baz=356							
YHNB			S		Sn	13 08 24.4	+0.1
	baz=356							
NSK	**Sanguang**	**1.45 353**	S		Sn	13 08 24.7	+0.3
	baz=355							
NSTT	**Nanjuang**	**1.48 340**	*e*S		Sn	13 08 28.4	+3.2
	baz=342							
LIOB	**Emei**	**1.49 341**	S		Sn	13 08 28.6	+3.2
	baz=343							

*IDC **11** 13:09:18.5±5.5, 11°.75N×125°.90E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/44, mbtmp3.5/3, MS3.1/9, Ms1 3.1/9, ms1mx2.8/40, Error ellipse: s-maj=450.2km s-min=29.3km az=65.0*

*MAN **11** 13:09:20.2, 11°.37N×124°.57E, h19km, MS3.6*

MAN Intensity II - Leyte, Leyte; Busay, Cebu.

ISC 11 13:09:20.7±0.8, 11°.30N±0°.05×124°.55E±0°.04, h10km, n23, σ2§18/23, mb3.6/3, MS2.9/7, 3C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.92**	**71**	*e*P		**Pg**	**13 09 36.9**	**-1.6**
BESP				*e*S		**Sb**	**13 09 50.0**	**-1.1**
LLP	**Lapu-Lapu**	**1.13 210**	⇑	*i* P		**Pb**	**13 09 41.0**	**-1.4**
LLP				*i* S		**Sb**	**13 09 57.5**	**+0.3**
MSLP	**Maasin**	**1.20 165**		*e*P		**Pn**	**13 09 41.7**	**-1.8**
MSLP				*e*S		**Sn**	**13 10 04.0**	**+4.1**
GUIM	**Jordan**	**2.04 251**		*e*P		**Pn**	**13 09 54.9**	**-0.2**
GUIM				*e*S		**Sb**	**13 10 24.1**	**+0.9**
CNOP	**Candoni, Negro**	**2.38 232**		*e*P		**Pn**	**13 09 59.1**	**-0.7**
CNOP				*e*S		**Sn**	**13 10 29.7**	**+0.6**
JAP	**San Jose, Anti**	**2.61 258**	⇓	*e*P		**Pn**	**13 10 02.9**	**-0.1**
CGP	**Cagayan de Oro**	**2.83 177**	⇓	*e*P		**Pn**	**13 10 07.7**	**+1.6**
CGP				*e*S		**Sb**	**13 10 46.8**	**+0.7**
BUKP	**Musuan**	**3.44 171**		*e*P		**Pn**	**13 10 15.7**	**+1.3**
BUKP				*e*S		**Sn**	**13 10 57.4**	**+2.1**
PAGZ	**Pagadian**	**3.62 199**		*e*P		**Pn**	**13 10 16.6**	**-0.3**
PAGZ				*e*S		**Sn**	**13 10 54.8**	**-4.9**
LQP	**Lukban**	**4.05 314**	⇑	*e*P		**Pn**	**13 10 23.8**	**+0.8**
KCP	**Kidapawan**	**4.30 173**	⇑	*e*P		**Pb**	**13 10 33.0**	**-3.4**
DDMP	**Don Marcelino,**	**5.29 167**		*e*P		**Pn**	**13 10 43.8**	**+4.0**
KAPI	**Kappang**	**16.90 197**		LR		LR	13 20 16.8	
	comp=Z,41nm,21.4s,baz=74,slow=37							
GUMO	**Guam**	**19.97 81**		LR		LR	13 19 58.1	
	comp=Z,52nm,21.8s,baz=253,slow=34							
BATI	**Baumata**	**21.39 182**		LR		LR	13 24 04.1	
	comp=Z,81nm,18.0s,baz=94,slow=40							
JNU	**Nakatsue**	**22.48 14**		LR		LR	13 23 15.1	
	comp=Z,34nm,18.6s,baz=92,slow=38							
CMAR	**Chiang Mai Arr**	**25.73 289**		LR		LR	13 24 05.0	
	comp=Z,31nm,20.6s,baz=140,slow=33							
KSRS	**Korea Array**	**26.22 6**		LR		LR	13 24 50.4	
	comp=Z,37nm,20.1s,baz=205,slow=36							
MJAR	**Matsushiro Arr**	**27.99 24**		LR		LR	13 25 16.2	
	comp=Z,24nm,20.2s,baz=265,slow=35							
WRA	**Warramunga Arr**	**32.51 163**		P		**P**	**13 15 51.9**	**+0.1**
	0.3nm,0.5s,baz=344,slow=6.8,SNR=3.0							
ASAR	**Alice Springs**	**35.94 165**		P		**P**	**13 16 21.8**	**+0.1**
	0.6nm,0.7s,baz=349,slow=7.4,SNR=5.9							
NWAO	**Narrogin (SRO)**	**44.53 189**		LR		LR	13 37 19.5	
	comp=Z,16nm,20.4s,baz=46,slow=37							
MKAR	**Makanchi Array**	**50.19 323**		P		**P**	**13 18 19.4**	**+2.7**
	0.6nm,0.7s,baz=132,slow=6.4,SNR=4.0							
MKAR				LR		LR	13 41 52.0	
	comp=Z,42nm,18.8s,baz=2.0,slow=39							

*NEIC **11** 13:11:46.9±1.7, 23°.05S±0°.2×175°.82W±0°.03, h14km±8km, mb4.5/11, Error ellipse: s-maj=26.7km s-min=3.7km az=180.0*

*IDC **11** 13:11:56.7±2.5, 22°.88S×177°.35W, h0km, mb4.1/7, mb1 4.4/7, mb1mx4.0/35, mbtmp4.1/7, MS3.4/2, Ms1 3.4/2, ms1mx2.8/34, Error ellipse: s-maj=167.6km s-min=24.1km az=161.0*

ISC 11 13:11:45.8±1.0, 23°.1S×175°.8W±0°.1, h10km, n28, σ1§05/20, mb4.3/10, MS3.2/3, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.77**	**55**			**Pn**	**13 13 24.2**	**-1.0**
MSVF	**Nonsavu**	**7.88**	**312**	Pn		**Pn**	**13 13 39.5**	**-1.1**
AFI	**Afiamalu**	**9.89**	**23**	Pn		**Pn**	**13 14 07.7**	**-0.6**
URZ	**Urewera**	**16.30**	**200**	LR		LR	13 21 32.5	
	comp=Z,104nm,18.3s,baz=31,slow=36							
URZ	**Urewera**	**16.30**	**200**	Pn		**Pn**	**13 15 33.4**	**-1.4**
DZM	**Mont Dzumac**	**16.46**	**270**	*e*LR		LR	13 19 20.3	
	comp=Z,152nm,24.0s							
TBI	**Tubuai**	**24.17**	**96**	*e*LR		LR	13 22 45.4	
	comp=Z,78nm,28.0s							
PPT2	**Papeete2**	**25.15**	**82**	*e*LR		LR	13 23 31.8	
	comp=Z,89nm,22.2s,baz=247							
PPT	**Papeete**	**25.15**	**82**	LR		LR	13 25 27.7	
	comp=Z,78nm,19.2s,baz=222,slow=30							
CTA	**Charters Tower**	**35.37**	**267**	P		**P**	**13 18 43.7**	**+1.8**
	2.3nm,0.3s,baz=94,slow=12,SNR=13							
CTAO	**Charters Tower**	**35.37**	**267**	P		**P**	**13 18 42.1**	**+0.2**
AS31	**Alice Springs**	**45.99**	**259**	P		**P**	**13 20 09.1**	**-0.6**
ASAR	**Alice Springs**	**45.99**	**259**	P		**P**	**13 20 10.2**	**+0.5**
	1.7nm,1.0s,baz=89,slow=8.3,SNR=8.8							
ASAR	**Alice Springs**	**45.99**	**259**	P		**P**	**13 20 09.9**	**+0.3**
WR0	**Warramunga Arr**	**46.15**	**264**	P		**P**	**13 20 10.6**	**-0.3**
WR0				IAmb		IAmb	13 20 32.6	
	comp=Z,8.2nm,1.4s							
WB2	**Warramunga Arr**	**46.33**	**264**	P		**P**	**13 20 12.7**	**+0.3**
WB0	**Warramunga Arr**	**46.33**	**264**	P		**P**	**13 20 11.8**	**-0.5**
WB0				IAmb		IAmb	13 20 13.6	
	comp=Z,3.3nm,0.8s							
WRAB	**Tennant Creek**	**46.33**	**264**	P		**P**	**13 20 12.5**	**+0.1**
WRAB				IAmb		IAmb	13 20 13.5	
	comp=Z,5.7nm,1.0s							
WRA	**Warramunga Arr**	**46.34**	**264**	P		**P**	**13 20 12.5**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=100,slow=8.0,SNR=23							
WRA	**Warramunga Arr**	**46.34**	**264**	P		**P**	**13 20 11.8**	**-0.7**
KNRA	**Kununurra**	**52.59**	**268**			**P**	**13 21 01.5**	**+1.4**
FITZ	**Fitzroy Crossi**	**54.77**	**264**	P		**P**	**13 21 17.9**	**+1.8**
	comp=Z,1.7nm,0.9s,baz=97,slow=11,SNR=2.8							
FITZ	**Fitzroy Crossi**	**54.77**	**264**	P		**P**	**13 21 16.5**	**+0.4**
FITZ				IAmb		IAmb	13 21 28.9	
	comp=Z,8.6nm,1.5s							
MDPB	**Devils Postpil**	**80.55**	**42**	P		**P**	**13 24 00.7**	**+2.0**
NVAR	**Mina Array Bea**	**81.52**	**42**	P		P	13 24 21.4	+18
	comp=Z,0.7nm,0.9s,baz=214,slow=9.3,SNR=4.5							
TXAR	**Lajitas Array**	**96.74**	**56**	P		P	13 24 47.9	+17
	comp=Z,0.7nm,1.0s,baz=187,slow=6.3,SNR=5.1							
CMAR	**Chiang Mai Arr**	**92.92**	**289**	P		P	13 25 05.2	+5.6
	comp=Z,1.1nm,0.4s,baz=139,slow=3.2,SNR=10							
CMAR	**Chiang Mai Arr**	**92.92**	**289**	P		**P**	**13 24 59.2**	**-0.5**

TAP 11 13:13:50.1, 24°.83N×122°.02E, h6km±1km, ML1.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.08**	**278**	P		Pg	13 13 52.2	+0.3
	baz=277							
NTC	**Toucheng**	**0.17**	**277**	P		Pg	13 13 54.2	+0.7
	baz=276							
NTC				S		Sg	13 13 57.1	+1.3
	baz=276							
TWB1	**Santiao Chiao**	**0.18**	**351**	*i* P		Pg	13 13 54.4	+0.8
	baz=354							
TWB1				S		Sg	13 13 56.8	+0.7
	baz=354							
TIPB	**Shuangxi**	**0.22**	**308**	*i* P		Pg	13 13 55.4	+0.9
	baz=307							
TIPB				*i* S		Sg	13 13 58.4	+0.9
	baz=307							
WFSB	**Wu-fen Shan**	**0.32**	**318**	S		Sg	13 14 01.7	+1.1
	baz=317							

*SOF **11** 13:16:22.9, 41°.38N×22°.63E, h1km, MD2.8*

*SKO **11** 13:16:22.2, 41°.32N×22°.63E, h15km*

*ATH **11** 13:16:24.3, 41°.35N×22°.69E, h22km±2km, ML2.3/7, Error ellipse: s-maj=3.9km s-min=1.4km az=135.0*

*BEO **11** 13:16:24.5±0.4, 41°.41N×22°.58E, h0km, ML2.4/10*

*THE **11** 13:16:25.1, 41°.32N×22°.71E, h9km±1km, ML2.3/6, Error ellipse: s-maj=1.7km s-min=1.1km az=156.0*

ISC 11 13:16:22.9±0.8, 41°.39N±0°.02×22°.66E±0°.03, h10km±6km, n33, σ0§66/55, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.09**	**226**	*e*Pg		**Pg**	**13 16 25.5**	**+0.1**
VAY				*e*Sg		**Sg**	**13 16 27.1**	**-0.2**
VAY	**Valandovo**	**0.09**	**226**	⇑ *i* Pg		**Pg**	**13 16 25.6**	**+0.1**
VAY				*i* Sg		**Sg**	**13 16 27.1**	**-0.2**
VAY				*e*Lg		Lg	13 16 27.2	
	comp=E,2μm,0.5s							
STIP	**Stip**	**0.47**	**311**	⇑ *i* Pg		**Pg**	**13 16 31.0**	**-1.1**
STIP				*i* Sg		**Sg**	**13 16 36.9**	**-1.5**
STIP				*e*Lg		Lg	13 16 38.8	
	comp=E,290nm,0.3s							
KKB	**Krupnik**	**0.57**	**33**	*i* P		**Pg**	**13 16 34.7**	**+0.6**
SRS	**Serrai**	**0.75**	**111**	P		**Pb**	**13 16 38.4**	**+0.3**
SRS				S		**Sb**	**13 16 48.3**	**-0.1**
SRS				AML		AML	13 16 49.9	
	comp=E,221μm,0.1s							
SRS				AML		AML	13 16 52.4	
	comp=N,220μm,0.1s							
SRS	**Serrai**	**0.75**	**111**	P		**Pb**	**13 16 38.3**	**+0.3**
SRS				S		**Sb**	**13 16 48.1**	**-0.3**
	comp=N,172nm,0.2s							
SOH	**Sokhos**	**0.77**	**137**	P		**Pb**	**13 16 38.5**	**+0.1**
SOH				S		**Sb**	**13 16 48.9**	**-0.1**
SOH				AML		AML	13 16 52.2	
	comp=N,1371μm,0.4s							
SOH				AML		AML	13 16 52.4	
	comp=E,1219μm,0.4s							
SOH	**Sokhos**	**0.77**	**137**	P		**Pb**	**13 16 38.3**	**-0.1**
SOH				S		**Sb**	**13 16 48.8**	**-0.1**
	comp=E,520nm,0.4s							
THE	**Thessaloniki**	**0.79**	**163**	P		**Pb**	**13 16 38.6**	**-0.1**
THE				S		**Sb**	**13 16 49.3**	**-0.1**
THE				AML		AML	13 16 50.7	
	comp=E,504μm,0.4s							
THE				AML		AML	13 16 51.6	
	comp=N,407μm,0.4s							
THE	**Thessaloniki**	**0.79**	**163**	P		**Pb**	**13 16 38.7**	**+0.1**
THE				S		**Sg**	**13 16 48.7**	**+0.3**
	comp=N,165nm,0.4s							
MMB	**Musomiste**	**0.83**	**75**	*i* P		**Pn**	**13 16 40.0**	**-0.6**
HORT	**Hortiatis**	**0.85**	**157**	P		**Pb**	**13 16 40.0**	**+0.1**
HORT				S		**Sb**	**13 16 51.6**	**+0.2**
HORT				AML		AML	13 16 54.3	
	comp=N,408μm,0.4s							
HORT				AML		AML	13 16 54.5	
	comp=E,405μm,0.3s							
HORT	**Hortiatis**	**0.85**	**157**	P		**Pb**	**13 16 40.0**	**+0.1**
HORT				S		**Sb**	**13 16 51.8**	**+0.4**
	comp=E,205nm,0.3s							
NVR	**Nevrokopi**	**0.91**	**92**	P		**Pn**	**13 16 41.4**	**-0.3**
NVR				S		**Sn**	**13 16 53.6**	**-1.2**
NVR				AML		AML	13 16 57.9	
	comp=E,356μm,0.3s							
NVR				AML		AML	13 16 59.0	
	comp=N,338μm,0.3s							
NVR	**Nevrokopi**	**0.91**	**92**	P		**Pn**	**13 16 41.3**	**-0.3**
KTI	**Kastanea**	**1.07**	**203**	P		**Pn**	**13 16 44.3**	**+0.2**
BOSS	**Bosilegrad**	**1.12**	**353**	*e*Pg		**Pn**	**13 16 44.8**	**+0.2**
BOSS				*e*Sg		**Sb**	**13 16 57.9**	**-1.0**
PLG	**Polygyros**	**1.17**	**149**	P		**Pg**	**13 16 46.0**	**+0.6**
PLG				AML		AML	13 17 03.7	
	comp=N,218μm,0.3s							
PLG				AML		AML	13 17 05.7	
	comp=E,359μm,0.4s							
PLG	**Polygyros**	**1.17**	**149**	P		**Pg**	**13 16 45.8**	**+0.4**
PLG				S		**Sn**	**13 17 02.0**	**+0.6**
	comp=E,145nm,0.3s							
PRVS	**Prvonek**	**1.20**	**339**	*e*Pg		**Pn**	**13 16 45.5**	**-0.3**
PRVS				*e*Sg		**Sb**	**13 17 00.6**	**-0.8**
LIT	**Litokhoron**	**1.29**	**186**	P		**Pg**	**13 16 48.0**	**+0.4**
LIT	**Litokhoron**	**1.29**	**186**	P		**Pn**	**13 16 47.2**	**0.0**
VTS	**Vitosha**	**1.30**	**19**	*i* P		**Pg**	**13 16 48.9**	**+0.9**
KAVA	**Kavala**	**1.45**	**105**	P		**Pg**	**13 16 51.0**	**+0.3**
KAVA				AML		AML	13 17 13.4	
	comp=E,392μm,0.5s							
KAVA				AML		AML	13 17 14.4	
	comp=N,256μm,0.4s							
KAVA	**Kavala**	**1.45**	**105**	P		**Pg**	**13 16 50.9**	**+0.1**
KAVA				S		**Sb**	**13 17 08.8**	**+0.3**
	comp=N,130nm,0.4s							
OUR	**Ouranopolis**	**1.45**	**136**	P		**Pg**	**13 16 50.7**	**-0.1**
THAS	**Thassos island**	**1.74**	**116**	P		**Pb**	**13 16 54.6**	**-0.3**
ZAPS	**Zavoj**	**1.89**	**359**	*e*Pg		**Pg**	**13 16 58.8**	**-0.3**
ZAPS				*e*Sg		**Sg**	**13 17 23.4**	**-0.1**
SELS	**Selova**	**2.16**	**329**	*e*Pg		**Pb**	**13 17 03.4**	**+1.3**
SELS				*e*Sg		**Sb**	**13 17 30.4**	**+1.5**
BOVS	**Bovan**	**2.36**	**343**	*e*Pg		**Pb**	**13 17 06.3**	**+0.9**
BOVS				*e*Sg		**Sg**	**13 17 38.5**	**-0.1**
ZAGS	**Zajecar**	**2.44**	**353**	*e*Pg		**Pb**	**13 17 08.2**	**+1.3**
ZAGS				*e*Sg		**Sg**	**13 17 40.7**	**-0.8**
IVAS	**Ivanjica**	**2.87**	**321**	*e*Pg		**Pb**	**13 17 14.2**	**0.0**
IVAS				*e*Sg		**Sg**	**13 17 55.7**	**+0.6**
GRUS	**Gruza**	**2.88**	**331**	*e*Pg		**Pb**	**13 17 15.6**	**+1.2**
GRUS				*e*Sg		**Sg**	**13 17 53.9**	**-1.6**

*IDC **11** 13:42:20.3±1.5, 7°.41N×93°.97E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/46, mbtmp3.7/8, ML3.8/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/42, Error ellipse: s-maj=58.7km s-min=21.4km az=60.0*

*NEIC **11** 13:42:21.7±1.1, 7°.52N±0°.05×94°.3E±0°.2, h10km±2km, mb4.4/9, Error ellipse: s-maj=25.7km s-min=8.2km az=260.0*

ISC 11 13:42:23.4±1.1, 7°.5N±0°.1×94°.2E±0°.2, h20km, n33, σ0§80/24, mb4.0/11, MS3.3/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**3.53**	**129**	Pn		**Pn**	**13 43 17.7**	**+0.6**
KULM	**Kulim**	**6.77**	**108**			**Pn**	**13 44 00.4**	**-1.3**
IPM	**Ipoh**	**7.42**	**113**			**Pn**	**13 44 09.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**11.87**	**22**	Pn		**Pn**	**13 45 12.8**	**+1.2**
	0.2nm,0.3s,baz=218,slow=16,SNR=5.3							
CMAR				LR		LR	13 49 35.1	
	comp=Z,71nm,19.3s,baz=206,slow=36							
LEM	**Lembang**	**19.52**	**136**	LR		LR	13 55 42.9	
	comp=Z,96nm,20.2s,baz=314,slow=41							
LSA	**Lhasa**	**22.30**	**353**	P		**P**	**13 47 19.4**	**-0.8**
LSA				IAmb		IAmb	13 47 23.5	
	comp=Z,7.3nm,0.6s							
H08S3	**Diego Garcia H**	**26.33**	**236**	T		T	14 14 51.0	
	baz=54,slow=74,SNR=47							
H08S2	**Diego Garcia H**	**26.33**	**236**	T		T	14 14 48.7	
	baz=54,slow=74,SNR=2.3							
H08S1	**Diego Carcia H**	**26.35**	**236**	T		T	14 14 50.8	
	baz=54,slow=74,SNR=8.4							
FITZ	**Fitzroy Crossi**	**40.11**	**130**	LR		LR	14 08 44.4	
	comp=Z,28nm,19.2s,baz=296,slow=39							
MK31	**Makanchi Array**	**40.50**	**347**	P		**P**	**13 50 00.3**	**-0.6**
MKAR	**Makanchi Array**	**40.50**	**347**	P		**P**	**13 50 00.7**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=166,slow=8.1,SNR=20							
MKAR	**Makanchi Array**	**40.50**	**347**	P		**P**	**13 49 59.7**	**-1.2**
MAKZ	**Makanchi**	**40.58**	**347**	P		**P**	**13 50 00.5**	**-1.1**
SONM	**Songino Array**	**41.55**	**12**	P		**P**	**13 50 10.5**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=193,slow=5.9,SNR=2.8							
ZAA0	**Zalesovo Array**	**46.97**	**352**	P		**P**	**13 50 53.3**	**+0.5**
ZAA0				IAmb		IAmb	13 50 54.2	
	comp=Z,2.9nm,0.8s							
ZALV	**Zalesovo Beam**	**46.97**	**352**	P		**P**	**13 50 53.1**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=172,slow=7.7,SNR=11							
ZALV	**Zalesovo Beam**	**46.97**	**352**	P		**P**	**13 50 52.5**	**-0.3**
WB0	**Warramunga Arr**	**47.94**	**125**	P		**P**	**13 51 01.1**	**+0.1**
WB0				IAmb		IAmb	13 51 11.6	
	comp=Z,5.1nm,1.2s							
WRA	**Warramunga Arr**	**47.98**	**125**	P		**P**	**13 51 02.3**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=305,slow=8.7,SNR=4.7							
WRA	**Warramunga Arr**	**47.98**	**125**	P		**P**	**13 51 00.5**	**-0.8**
WB2	**Warramunga Arr**	**47.99**	**125**	P		**P**	**13 51 01.0**	**-0.3**
WR0	**Warramunga Arr**	**48.16**	**125**	P		**P**	**13 51 02.8**	**+0.2**
MJAR	**Matsushiro Arr**	**49.40**	**47**	LR		LR	14 13 59.4	
	comp=Z,23nm,19.8s,baz=300,slow=38							
ASAR	**Alice Springs**	**49.62**	**130**	P		**P**	**13 51 14.8**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=302,slow=7.8,SNR=5.4							
ABKAR	**Akbulak array**	**50.61**	**332**	P		**P**	**13 51 20.3**	**-0.6**
ARU	**Arti**	**56.28**	**337**	LR		LR	14 17 33.4	
	comp=Z,46nm,19.5s,baz=245,slow=38							
STKA	**Stephens Creek**	**59.79**	**134**	LR		LR	14 21 11.7	
	comp=Z,22nm,18.7s,baz=28,slow=39							
TIXI	**Tiksi**	**67.62**	**11**	P		**P**	**13 53 18.2**	**-0.2**
TIXI				IAmb		IAmb	13 53 25.2	
	comp=Z,1.9nm,0.8s							
FINES	**FINESS Array B**	**73.09**	**332**	P		**P**	**13 53 52.0**	**0.0**
	comp=Z,0.5nm,0.4s,baz=155,slow=11,SNR=4.0							
FINES	**FINESS Array B**	**73.09**	**332**	P		**P**	**13 53 52.5**	**+0.5**
ARCES	**ARCESS Array B**	**75.67**	**340**	LR		LR	14 30 01.6	
	comp=Z,46nm,18.4s,baz=260,slow=38							
NOA	**NORSAR Array B**	**80.11**	**331**	P		**P**	**13 54 31.9**	**0.0**
	comp=Z,0.5nm,0.7s,baz=98,slow=5.2,SNR=2.2							

*TAP **11** 13:48:12.6, 24°.85N×122°.00E, h7km, ML2.8, B*

*JMA **11** 13:48:12.6±0.1, 24°.90N×121°.95E, h18km, MS2.2*

ISC 11 13:48:12.7±0.8, 24°.87N±0°.02×121°.99E±0°.02, h12km±5km, n89, σ0§70/138, 4C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.06**	**249**	P		**Pg**	**13 48 14.1**	**-0.9**
	baz=257							
TWB1	**Santiao Chiao**	**0.14**	**359**	⇑ *i* P		**Pg**	**13 48 16.3**	**+0.2**
	baz=1.0							
TWB1				*i* S		**Sg**	**13 48 18.6**	**0.0**
	baz=1.0							
NTC	**Toucheng**	**0.15**	**266**	*i* P		**Pb**	**13 48 16.5**	**-0.8**
	baz=279							
NTC				*i* S		**Sb**	**13 48 19.1**	**+0.5**
	baz=279							
TIPB	**Shuangxi**	**0.18**	**306**	⇑ *i* P		**Pb**	**13 48 17.3**	**-0.7**
	baz=307							
TIPB				*i* S		**Sb**	**13 48 20.2**	**+0.6**
	baz=307							
ILA	**Ilan**	**0.24**	**246**	*e*P		**Pb**	**13 48 18.5**	**-0.5**
	baz=248							
ILA				S		**Sb**	**13 48 22.2**	**+1.1**
	baz=248							
NWF	**Wu-fen Shan**	**0.28**	**317**	⇑ *i* P		**Pb**	**13 48 19.3**	**-0.4**
	baz=304							
NWF				*i* S		**Sb**	**13 48 24.0**	**-0.4**
	baz=304							
WFSB	**Wu-fen Shan**	**0.28**	**317**	P		**Pb**	**13 48 19.3**	**-0.3**
	baz=317							
WFSB				S		**Sb**	**13 48 23.9**	**-0.4**
	baz=317							
TWC	**Suao**	**0.28**	**207**	⇑ *i* P		**Pg**	**13 48 18.6**	**0.0**
	baz=208							
TWC				S		**Sg**	**13 48 22.0**	**-0.4**
	baz=208							
TWE	**Neicheng**	**0.33**	**244**	⇓ *i* P		**Pg**	**13 48 19.5**	**+0.2**
	baz=245							
TWE				S		**Sg**	**13 48 24.3**	**+0.6**
	baz=245							
TWA	**Mucha**	**0.39**	**287**	*i* P		**Pb**	**13 48 21.3**	**-0.2**
	baz=288							
TWA				*i* S		**Sb**	**13 48 26.8**	**-0.6**
	baz=288							
NHDH	**Xindian Distri**	**0.43**	**283**	P		**Pb**	**13 48 22.3**	**0.0**
	baz=284							
NHDH				S		**Sb**	**13 48 28.2**	**-0.5**
	baz=284							
ENAH	**Nanao**	**0.45**	**202**	*i* P		**Pg**	**13 48 21.3**	**-0.2**
	baz=211							
ENAH				*e*S		**Sg**	**13 48 27.4**	**0.0**
	baz=211							
NWRT	**Kuosheng**	**0.45**	**318**	P		**Pb**	**13 48 22.6**	**0.0**
	baz=318							
NWLT	**Wulai**	**0.45**	**259**	*i* P		**Pb**	**13 48 21.9**	**-0.7**
	baz=260							
NWLT				*i* S		**Sb**	**13 48 28.5**	**-0.8**
	baz=260							
TAP1	**Taipei**	**0.46**	**292**	S		**Sb**	**13 48 29.5**	**0.0**
	baz=292							
TATO	**Taipei**	**0.47**	**284**	P		**Pb**	**13 48 23.0**	**+0.1**
	baz=275							
TATO				S		**Sb**	**13 48 29.2**	**-0.6**
	baz=275							
TAP	**Taipei**	**0.47**	**292**	*e*P		**Pb**	**13 48 23.3**	**+0.4**
	baz=292							
TAP				S		**Sb**	**13 48 29.8**	**0.0**
	baz=292							
YM01	**YM01**	**0.47**	**306**	P		**Pb**	**13 48 23.3**	**+0.3**
	baz=306							
YM01				*e*S		**Sb**	**13 48 30.8**	**+0.8**
	baz=306							
YM11	**YM11**	**0.48**	**309**	P

	baz=197						
TWD				*e*S	**Sg**	**13 48 40.5**	**0.0**
	baz=197						
LIOB	**Emei**	**0.91**	**256**	P	**Pn**	**13 48 31.4**	**+0.1**
	baz=249						
LIOB				*e*S	**Sn**	**13 48 43.4**	**-1.1**
	baz=249						
SBCB	**Hsinchu**	**0.92**	**266**	*e*S	**Sn**	**13 48 45.8**	**+1.3**
	baz=266						
NSTT	**Nanjuang**	**0.93**	**256**	*i* P	**Pn**	**13 48 31.5**	**-0.1**
	baz=256						
NSTT				*e*S	**Sn**	**13 48 44.5**	**-0.3**
	baz=256						
JYNG	**Yonaguni jima**	**0.96**	**115**	P	**Pb**	**13 48 31.4**	**+0.1**
JYNG				*e*S	**Sb**	**13 48 44.5**	**+0.6**
TDCB	**Techi**	**0.97**	**231**	P	**Pg**	**13 48 31.3**	**-0.2**
	baz=228						
TDCB				S	**Sb**	**13 48 44.4**	**0.0**
	baz=228						
WHF	**Hehuan Shan**	**0.97**	**223**	P	**Pg**	**13 48 31.4**	**-0.1**
	baz=224						
YOJ	**Yonaguni jima**	**1.01**	**113**	P	**Pb**	**13 48 31.7**	**-0.4**
	baz=114						
YOJ				S	**Sg**	**13 48 46.0**	**+0.6**
	baz=114						
YOJ	**Yonaguni jima**	**1.01**	**113**	P	**Pb**	**13 48 31.7**	**-0.4**
YOJ				*e*S	**Sb**	**13 48 45.7**	**+0.3**
CHGB	**Renai**	**1.09**	**223**	P	**Pn**	**13 48 33.8**	**-0.3**
	baz=211						
WHP	**Taichung City**	**1.12**	**239**	*i* P	**Pg**	**13 48 34.2**	**0.0**
	baz=240						
WHP				*e*S	**Sn**	**13 48 49.1**	**-0.4**
	baz=240						
NMLH	**Miaoli**	**1.14**	**254**	*e*P	**Pg**	**13 48 35.8**	**+1.2**
	baz=255						
ESL	**Shilin**	**1.16**	**206**	P	**Pb**	**13 48 34.4**	**-0.3**
	baz=208						
TWQ1	**Liyutan**	**1.22**	**245**	P	**Pg**	**13 48 37.0**	**+0.8**
	baz=246						
TWQ1				*e*S	**Sg**	**13 48 53.5**	**+1.4**
	baz=246						
DPDB	**Guoxing**	**1.27**	**230**	*i* P	**Pb**	**13 48 36.7**	**0.0**
	baz=240						
DPDB				*e*S	**Sg**	**13 48 53.6**	**-0.2**
	baz=240						
EGFH	**Guangfu**	**1.30**	**203**	*e*P	**Pn**	**13 48 36.5**	**-0.1**
	baz=211						
SMLT	**Sun Moon Lake**	**1.39**	**226**	P	**Pg**	**13 48 39.5**	**0.0**
	baz=227						
SMLT				*e*S	**Sg**	**13 48 57.7**	**+0.1**
	baz=227						
TYC	**Yuchr**	**1.41**	**227**	P	**Pg**	**13 48 39.4**	**-0.4**
	baz=221						
TYC				S	**Sg**	**13 48 57.9**	**-0.1**
	baz=221						
SSLB	**Suanglung**	**1.43**	**222**	P	**Pg**	**13 48 40.1**	**0.0**
	baz=224						
HGSD	**Ruisui**	**1.46**	**201**	P	**Pg**	**13 48 40.8**	**+0.1**
	baz=217						
HGSD				*e*S	**Sg**	**13 49 00.4**	**+0.7**
	baz=217						
EHY	**Hungye**	**1.48**	**204**	*i* P	**Pb**	**13 48 40.1**	**-0.1**
	baz=218						
EHY				*e*S	**Sb**	**13 48 59.7**	**+0.7**
	baz=218						
WNT	**Mingjian**	**1.54**	**231**	*e*S	**Sg**	**13 49 04.8**	**+2.4**
	baz=220						
WJS	**Zhushan**	**1.55**	**228**	*e*P	**Pg**	**13 48 42.5**	**+0.1**
	baz=220						
WHYT	**Xinyi Township**	**1.56**	**222**	*e*P	**Pb**	**13 48 41.8**	**+0.3**
	baz=224						
WHYT				*e*S	**Sg**	**13 49 02.0**	**-0.8**
	baz=224						
YULB	**Yu-li**	**1.60**	**203**	P	**Pn**	**13 48 41.1**	**+0.3**
	baz=205						
TWF1	**Yuli**	**1.63**	**203**	*i* P	**Pn**	**13 48 41.7**	**+0.5**
	baz=216						
IRIF	**Iriomote-Funau**	**1.67**	**108**	P	**Pn**	**13 48 41.3**	**-0.4**
ALS	**Alishan**	**1.73**	**219**	*i* P	**Pg**	**13 48 45.8**	**-0.1**
	baz=221						
ALS				S	**Sg**	**13 49 08.3**	**-0.1**
	baz=221						
CHN5	**Tsauling**	**1.74**	**224**	*i* P	**Pg**	**13 48 46.5**	**+0.5**
	baz=226						
CHN5				S	**Sg**	**13 49 09.9**	**+1.2**
	baz=226						
FULB	**Fuli**	**1.78**	**201**	P	**Pb**	**13 48 44.7**	**-0.5**
	baz=218						
ELDTW	**Lidau**	**1.89**	**208**	*i* P	**Pb**	**13 48 46.9**	**-0.3**
	baz=211						
JKRS	**Kuro-shima**	**1.94**	**108**	P	**Pn**	**13 48 46.1**	**+0.6**
CHN4	**Tsaushan**	**1.98**	**221**	P	**Pg**	**13 48 49.7**	**-0.9**
	baz=223						
CHN4				*e*S	**Sg**	**13 49 16.0**	**-0.2**
	baz=223						
TPUB	**Ta-pu**	**1.99**	**219**	P	**Pb**	**13 48 49.1**	**+0.2**
	baz=209						
TPUB				*e*S	**Sg**	**13 49 15.6**	**-1.2**
	baz=209						
JIJ	**Ishigaki jima**	**2.02**	**104**	P	**Pn**	**13 48 47.2**	**+0.6**
JIJ				*e*S	**Sb**	**13 49 13.7**	**-0.8**
STYT	**Tauyuan**	**2.04**	**214**	*e*P	**Pb**	**13 48 50.2**	**+0.6**
	baz=205						
WTP	**Ta-pu**	**2.04**	**218**	P	**Pb**	**13 48 50.0**	**+0.2**
	baz=210						
WTP				*e*S	**Sg**	**13 49 17.7**	**-0.7**
	baz=210						
TWK	**Hsinying**	**2.10**	**221**	P	**Pb**	**13 48 50.2**	**-0.5**
	baz=223						
TWK				*e*S	**Sg**	**13 49 19.0**	**-1.2**
	baz=223						
PTTC	**Pingtan**	**2.11**	**288**	*e*P	**Pn**	**13 48 48.0**	**+0.2**
	baz=286						
CHN1	**Nanshi**	**2.14**	**219**	*i* P	**Pb**	**13 48 51.8**	**+0.4**
	baz=211						
CHN1				*e*S	**Sb**	**13 49 19.5**	**+1.5**
	baz=211						
SGST	**Jiashian**	**2.19**	**216**	P	**Pb**	**13 48 53.3**	**+1.0**
	baz=207						
SLGT	**Liugui**	**2.23**	**214**	P	**Pb**	**13 48 52.6**	**-0.4**
	baz=208						
SLGT				*e*S	**Sb**	**13 49 21.3**	**+0.7**
	baz=208						
MATB	**Ma-tsu**	**2.25**	**305**	*e*P	**Pn**	**13 48 50.4**	**+0.7**
	baz=303						
VWUC	**VWUC**	**2.31**	**274**	*e*P	**Pn**	**13 48 51.2**	**+0.7**
	baz=272						
MASBT	**Mashibuluo**	**2.56**	**209**	*e*P	**Pb**	**13 48 58.0**	**-0.7**
	baz=215						
PTMZ	**Houxiangcun**	**2.61**	**274**	*e*P	**Pn**	**13 48 56.0**	**+1.4**
	baz=271						
PTMZ				*e*S	**Sn**	**13 49 27.0**	**+0.7**
	baz=271						
XPSS	**Dashiqiu**	**2.62**	**322**	P	**Pn**	**13 48 56.0**	**+1.3**
	baz=321						
LYJJ	**Jianjiangzhen**	**2.62**	**310**	*e*P	**Pn**	**13 48 56.7**	**+1.9**
	baz=309						
EAST	**Anshuo**	**2.68**	**203**	*e*P	**Pn**	**13 48 57.1**	**+1.4**
	baz=197						

*TAP **11** 13:49:40.3, 24°.85N× 121°.99E, h7km, ML2.5, C*
*JMA **11** 13:49:41.7±0.2, 24°.81N× 121°.91E, h30km*
ISC 11 13:49:41.0±0.9**, 24°.84N**±0°.02×**121°.97E**±0°.02**, h19**km±1km**, n61**, σ0°70/94**, 3C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.03**	**284**	P	**Pg**	**13 49 41.8**	**-2.6**
	baz=259						
NTC	**Toucheng**	**0.13**	**278**	*i* P	**Pg**	**13 49 44.2**	**-0.9**
	baz=280						
NTC				*i* S	**Sg**	**13 49 47.0**	**-0.9**
	baz=280						
TWB1	**Santiao Chiao**	**0.17**	**6⇑**	*i* P	**Pb**	**13 49 44.1**	**-0.4**
	baz=2.0						
TWB1				*i* S	**Sb**	**13 49 46.4**	**-0.3**
	baz=2.0						
TIPB	**Shuangxi**	**0.19**	**316⇑**	*i* P	**Pb**	**13 49 45.1**	**0.0**
	baz=308						
TIPB				*i* S	**Sb**	**13 49 47.9**	**+0.3**
	baz=308						
ILA	**Ilan**	**0.21**	**251**	*i* P	**Pb**	**13 49 45.0**	**-0.7**
	baz=248						
ILA				*i* S	**Sg**	**13 49 50.0**	**+0.2**
	baz=248						
TWC	**Suao**	**0.25**	**206⇑**	*i* P	**Pb**	**13 49 46.3**	**-0.5**
	baz=208						
TWC				S	**Sb**	**13 49 49.8**	**-0.7**
	baz=208						
NWF	**Wu-fen Shan**	**0.29**	**324**	*i* P	**Pg**	**13 49 47.1**	**-0.4**
	baz=305						
NWF				*i* S	**Sg**	**13 49 51.8**	**-0.2**
	baz=305						
WFSB	**Wu-fen Shan**	**0.29**	**324**	P	**Pg**	**13 49 47.1**	**-0.3**
	baz=318						
WFSB				S	**Sb**	**13 49 51.9**	**-0.1**
	baz=318						
TWE	**Neicheng**	**0.30**	**247**	*i* P	**Pg**	**13 49 47.3**	**-0.3**
	baz=245						
TWE				*i* S	**Sb**	**13 49 52.0**	**-0.2**
	baz=245						
TWA	**Mucha**	**0.38**	**292**	*i* P	**Pb**	**13 49 49.5**	**+0.3**
	baz=288						
TWA				*i* S	**Sb**	**13 49 54.6**	**-0.2**
	baz=288						
ENAH	**Nanao**	**0.41**	**201**	*i* P	**Pg**	**13 49 49.2**	**-0.4**
	baz=211						
ENAH				*i* S	**Sg**	**13 49 54.7**	**-0.6**
	baz=211						
NHDH	**Xindian Distri**	**0.42**	**287**	P	**Pb**	**13 49 50.0**	**+0.1**
	baz=284						
NHDH				S	**Sb**	**13 49 56.0**	**0.0**
	baz=284						
NWLT	**Wulai**	**0.43**	**262**	*i* P	**Pg**	**13 49 49.6**	**-0.2**
	baz=260						
NWLT				S	**Sb**	**13 49 55.5**	**-0.6**
	baz=260						
TAP1	**Taipei**	**0.45**	**297**	*e*P	**Pg**	**13 49 49.6**	**-0.6**
	baz=292						
TAP1				*e*S	**Sb**	**13 49 57.5**	**+0.8**
	baz=292						
TATO	**Taipei**	**0.46**	**288**	P	**Pb**	**13 49 50.9**	**+0.4**
	baz=276						
TATO				S	**Sb**	**13 49 56.5**	**-0.5**
	baz=276						
YM01	**YM01**	**0.47**	**311**	P	**Pb**	**13 49 51.0**	**+0.1**
	baz=307						
NDT	**Datong Townshi**	**0.48**	**241**	*i* P	**Pb**	**13 49 50.6**	**-0.2**
	baz=241						
NDT				*e*S	**Sb**	**13 49 57.5**	**+0.1**
	baz=241						
YM11	**YM11**	**0.48**	**313**	P	**Pb**	**13 49 51.1**	**+0.1**
	baz=309						
YM10	**YM10**	**0.49**	**311**	P	**Pb**	**13 49 51.0**	**0.0**
	baz=307						
YM05	**YM05**	**0.49**	**312**	P	**Pb**	**13 49 51.3**	**+0.2**
	baz=308						
YM08	**YM08**	**0.49**	**316**	P	**Pg**	**13 49 50.9**	**-0.1**
	baz=312						
YM04	**YM04**	**0.50**	**309**	P	**Pb**	**13 49 51.4**	**+0.1**
	baz=305						
YM03	**YM03**	**0.52**	**311**	P	**Pb**	**13 49 52.0**	**+0.5**
	baz=308						
ANP	**Anpu**	**0.54**	**311**	*i* P	**Pg**	**13 49 51.7**	**-0.2**
	baz=308						
TWY	**Chenhua**	**0.55**	**323**	*i* P	**Pb**	**13 49 52.2**	**+0.3**
	baz=319						
YHNB	**Yeheng**	**0.56**	**253**	P	**Pg**	**13 49 51.9**	**-0.4**
	baz=263						
TWS1	**Kuangyinshan**	**0.56**	**298**	P	**Pn**	**13 49 53.2**	**-0.9**
	baz=295						
TWS1				S	**Sn**	**13 50 01.6**	**-1.3**
	baz=295						
NTST	**Danshui**	**0.57**	**305**	P	**Pn**	**13 49 53.2**	**-0.9**
	baz=301						
NTST				*e*S	**Sn**	**13 50 01.7**	**-1.3**
	baz=301						
NSK	**Sanguang**	**0.58**	**254**	*i* P	**Pb**	**13 49 52.0**	**-0.4**
	baz=253						
NSK				S	**Sb**	**13 50 00.7**	**+0.4**
	baz=253						
NNSH	**Datong**	**0.67**	**233**	*i* P	**Pg**	**13 49 54.0**	**-0.3**
	baz=234						
NNS	**Nan Shan**	**0.67**	**234**	*i* P	**Pg**	**13 49 54.1**	**-0.3**
	baz=241						
NNSB	**Datong**	**0.67**	**233**	P	**Pb**	**13 49 54.0**	**-0.2**
	baz=233						
NNSB				*e*S	**Sn**	**13 50 04.1**	**-1.5**
	baz=233						
NCU	**National Centr**	**0.72**	**281**	*e*P	**Pn**	**13 49 56.9**	**+0.7**
	baz=268						
NCU				*e*S	**Sn**	**13 50 07.1**	**+0.3**
	baz=268						
NACB	**Ninganchiao**	**0.74**	**207**	P	**Pg**	**13 49 55.4**	**-0.2**
	baz=210						
NACB				S	**Sg**	**13 50 05.9**	**+0.4**
	baz=210						
ETLH	**Xiulin Townshi**	**0.77**	**215**	P	**Pg**	**13 49 55.8**	**-0.3**
	baz=217						
ETLH				*e*S	**Sn**	**13 50 06.9**	**-1.1**
	baz=217						
PCYT	**Pengchaiyu**	**0.80**	**7**	*i* P	**Pb**	**13 49 56.0**	**-0.2**
	baz=5.0						
PCYT				*e*S	**Sg**	**13 50 07.6**	**+0.4**
	baz=5.0						
LIOB	**Emei**	**0.89**	**258**	P	**Pn**	**13 49 59.0**	**+0.5**
	baz=249						
LIOB				*e*S	**Sn**	**13 50 11.3**	**+0.4**
	baz=249						
SBCB	**Hsinchu**	**0.90**	**267**	*e*S	**Sn**	**13 50 13.0**	**+2.0**
	baz=266						
NSTT	**Nanjuang**	**0.90**	**257**	*i* P	**Pn**	**13 49 59.1**	**+0.4**
	baz=256						
NSTT				S	**Sn**	**13 50 12.0**	**+0.8**
	baz=256						
TDCB	**Techi**	**0.94**	**232**	P	**Pb**	**13 49 58.6**	**-0.1**
	baz=226						
TDCB				*e*S	**Sn**	**13 50 11.8**	**-0.5**
	baz=226						
WHF	**Hehuan Shan**	**0.94**	**223**	*e*P	**Pn**	**13 49 59.7**	**+0.1**
	baz=224						
WHF				*e*S	**Sn**	**13 50 12.7**	**-0.1**
	baz=224						
JYNG	**Yonagunijimaku**	**0.97**	**113**	P	**Pb**	**13 49 59.6**	**+0.4**
JYNG				*e*S	**Sb**	**13 50 12.3**	**+0.7**
CHGB	**Renai**	**1.06**	**223**	P	**Pg**	**13 50 01.9**	**+0.3**
	baz=224						
CHGB				*e*S	**Sn**	**13 50 15.8**	**+0.4**
	baz=224						
WHP	**Taichung City**	**1.08**	**239**	*i* P	**Pg**	**13 50 02.2**	**+0.1**
	baz=240						
WHP				*e*S	**Sg**	**13 50 16.8**	**+0.4**
	baz=240						
NMLH	**Miaoli**	**1.11**	**255**	*e*P	**Pg**	**13 50 04.0**	**+1.4**
	baz=254						
ESL	**Shilin**	**1.13**	**206**	P	**Pb**	**13 50 02.0**	**+0.1**
	baz=207						
TWQ1	**Liyutan**	**1.19**	**246**	P	**Pg**	**13 50 05.3**	**+1.2**
	baz=246						
TWQ1				S	**Sg**	**13 50 20.9**	**+1.1**
	baz=246						
SMLT	**Sun Moon Lake**	**1.36**	**226**	*e*P	**Pg**	**13 50 07.2**	**-0.1**
	baz=216						
TYC	**Yuchr**	**1.38**	**228**	P	**Pg**	**13 50 08.0**	**+0.5**
	baz=221						
TYC				S	**Sg**	**13 50 25.2**	**-0.4**
	baz=221						
SSLB	**Suanglung**	**1.40**	**222**	P	**Pb**	**13 50 06.7**	**+0.2**
	baz=214						
SSLB				*e*S	**Sg**	**13 50 25.2**	**-1.0**
	baz=214						
HGSD	**Ruisui**	**1.43**	**201**	*e*P	**Pg**	**13 50 08.3**	**-0.3**
	baz=191						
EHY	**Hungye**	**1.45**	**204**	P	**Pg**	**13 50 08.0**	**-1.0**
	baz=207						
YULB	**Yu-li**	**1.56**	**203**	*e*P	**Pb**	**13 50 08.8**	**-0.5**
	baz=207						
ALS	**Alishan**	**1.69**	**219**	*e*P	**Pg**	**13 50 13.2**	**-0.5**
	baz=207						
CHN5	**Tsauling**	**1.71**	**224**	P	**Pg**	**13 50 14.5**	**+0.6**
	baz=217						
CHN4	**Tsaushan**	**1.94**	**221**	P	**Pg**	**13 50 16.8**	**-1.5**
	baz=224						
JKRS	**Kuro-shima**	**1.95**	**107**	P	**Pn**	**13 50 14.1**	**+1.0**
TPUB	**Ta-pu**	**1.96**	**219**	*e*P	**Pb**	**13 50 16.9**	**+0.8**
	baz=222						
JIJ	**Ishigaki jima**	**2.03**	**103**	P	**Pn**	**13 50 15.3**	**+1.1**
TWK	**Hsinying**	**2.07**	**221**	P	**Pb**	**13 50 17.9**	**-0.1**
	baz=224						
SLGT	**Liugui**	**2.20**	**214**	*e*P	**Pb**	**13 50 20.9**	**+0.7**
	baz=219						

*IDC **11** 13:56:36.5±2.6, 23°.56N× 144°.21E, h0km, mb3.8/6,*
mb1 4.0/7, mb1mx3.6/63, mbtmp3.9/7, ML3.3/1, MS2.9/2,
Ms1 2.9/2, ms1mx2.5/37, Error ellipse: s-maj=80.0km s-min=20.6km az=75.0
*NEIC **11** 13:56:40.7±0.8, 23°.61N±0°.2× 144°.4E±0°.4, h35km±18km, mb4.6/7, Error ellipse: s-maj=60.5km s-min=15.9km az=67.0*
ISC 11 13:56:40.3±1.5**, 23°.7N**±0°.1×**144°.5E**±0°.3**, h35**km**, n22, σ0°52/19, mb4.3/9, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**4.03**	**329**	Pn	**Pn**	**13 57 40.0**	**+0.4**
MJAR	**Matsushiro Arr**	**13.96**	**338**	Pn	**Pn**	**13 59 56.1**	**+0.5**
	0.1nm,0.3s,baz=158,slow=13,SNR=5.9						
MJAR	**Matsushiro Arr**	**13.96**	**338**		**Pn**	**13 59 55.9**	**+0.3**
MAJO	**Matsushiro**	**13.96**	**338**	Pn	**Pn**	**13 59 56.0**	**+0.4**
JMM	**Marumori**	**14.53**	**348**	Pn	**Pn**	**14 00 02.3**	**-1.0**
DAV	**Davao City (W)**	**24.56**	**231**	LR	LR	14 11 37.7	
	comp=Z,25nm,19.8s,baz=126,slow=37						
PETK	**Petropavlovsk-**	**31.06**	**15**	LR	LR	14 13 48.4	
	comp=Z,28nm,21.2s,baz=106,slow=33						
PMG	**Port Moresby**	**32.96**	**175**	P	**P**	**14 03 12.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**42.73**	**272**	P	**P**	**14 04 33.8**	**-0.6**
	0.9nm,0.6s,baz=62,slow=7.7,SNR=9.0						
WRAB	**Tennant Creek**	**44.45**	**194**	P	**P**	**14 04 48.2**	**+0.1**
WRAB				IAmb	IAmb	14 05 36.9	
	comp=Z,7.6nm,1.4s						
WB2	**Warramunga Arr**	**44.45**	**194**	P	**P**	**14 04 48.4**	**+0.2**
WB2				IAmb	IAmb	14 05 35.6	
	comp=Z,16nm,1.8s						
WRA	**Warramunga Arr**	**44.46**	**194**	P	**P**	**14 04 48.0**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=14,slow=8.0,SNR=22						
WRA	**Warramunga Arr**	**44.46**	**194**	P	**P**	**14 04 47.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**45.41**	**206**	P	**P**	**14 04 55.2**	**-0.5**
	comp=Z,2.6nm,1.0s,baz=34,slow=9.8,SNR=2.5						
FITZ	**Fitzroy Crossi**	**45.41**	**206**	P	**P**	**14 04 54.6**	**-1.1**
FITZ				IAmb	IAmb	14 05 00.5	
	comp=Z,27nm,2.0s						
ASAR	**Alice Springs**	**48.16**	**193**	P	**P**	**14 05 17.1**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=16,slow=14,SNR=12						
ASAR	**Alice Springs**	**48.16**	**193**	P	**P**	**14 05 17.0**	**-0.2**
MK31	**Makanchi Array**	**54.32**	**312**	P	**P**	**14 06 03.2**	**-0.1**
MKAR	**Makanchi Array**	**54.32**	**312**	P	**P**	**14 06 03.4**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=89,slow=8.9,SNR=16						
KURK	**Kurchatov**	**56.92**	**316**	P	**P**	**14 06 22.2**	**+0.4**
KURK	**Kurchatov**	**56.92**	**316**	IAmb	IAmb	14 06 38.4	
	comp=Z,3.4nm,0.4s						
KURBB	**Kurchatov Arra**	**56.97**	**316**	P	**P**	**14 06 22.2**	**0.0**
	comp=Z,1.5nm,0.4s,baz=91,slow=7.8,SNR=8.4						

*IDC **11** 14:02:41.7±0.7, 1°.67S× 78°.17W, h144km±6km, mb4.2/25, mb1 4.3/31, mb1mx4.2/48, mbtmp4.6/31, MS3.1/3, Ms1 3.1/3, ms1mx2.9/28, Error ellipse: s-maj=15.2km s-min=8.4km az=53.0*
*IGQ **11** 14:02:42.2±0.5, 2°.5S±2°.×7°.8W°., h142km, M4.6*
*NEIC **11** 14:02:43.1±1.1, 1°.70S±0°.07×78°.1W±0°.1, h155km±5km, mb4.7/237, Error ellipse: s-maj=15.8km s-min=10.2km az=77.0*
*GCMT **11** 14:02:43.1±0.5, 2°.00S±0°.04×78°.23W±0°.04, h163km±5km, MW4.8/84, Moment Tensor Solution. s10,c10; s84,c94; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-1.82±.09; Mθθ0.34±.16; Mϕϕ1.47±.20; Mrθ0.07±.09; Mrϕ-1.14±.13; Mθϕ-0.79±.10; Best double couple: Mo2.15900×10^16^ NP1:ϕs135.00000°, δ37.00000°, λ-110.00000°. NP2: ϕs340.00000°, δ56.00000°, λ-76.00000°. Principal axes: T 2.3010, Plg10.0000°, Azm59.0000°; N -0.2900, Plg12.0000°, Azm152.0000°; P -2.0170, Plg75.0000°, Azm290.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*VAO **11** 14:02:44.4±0.5, 1°.79S× 77°.85W, h143km±3km, mb4.8*
ISC 11 14:02:41.5±0.4**, 1°.81S**±0°.04×**78°.22W**±0°.05**, h146**km±3km**, h147**km**; pP-P, n536,** σ**1°07/555, mb4.7/124, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANGA	**Volcan Sangay**	**0.28**	**212**	P	**Pn**	**14 03 02.3**	**+0.2**
PAT1	**Patacocha**	**0.37**	**324**	P	**Pn**	**14 03 02.4**	**0.0**
PUYO	**Puyo, Santa Ro**	**0.37**	**32**	P	**Pn**	**14 03 02.4**	**+0.4**
RETU	**Refugio**	**0.42**	**328**	P	**Pn**	**14 03 02.2**	**-0.4**
RUN5	**Runtun**	**0.44**	**333**	P	**Pn**	**14 03 02.5**	**0.0**
VCES	**Cotopaxi**	**1.01**	**350**	P	**Pn**	**14 03 07.5**	**+0.8**
VCES				S	**Sn**	**14 03 25.8**	**0.0**
BMOR	**Cotopaxi Volca**	**1.09**	**348**	P	**Pn**	**14 03 07.2**	**-0.2**
TAMB	**Tambo**	**1.11**	**352**	P	**Pn**	**14 03 07.8**	**+0.3**
BTAM	**Cotopaxi Volca**	**1.14**	**351**	P	**Pn**	**14 03 07.9**	**+0.1**
BREF	**Cotopaxi Volca**	**1.15**	**349**	P	**Pn**	**14 03 09.1**	**+1.1**
BNAS	**Cotopaxi Volca**	**1.16**	**347**	P	**Pn**	**14 03 07.9**	**0.0**
VC1	**Cotopaxi 1**	**1.17**	**351**	P	**Pn**	**14 03 08.2**	**+0.2**
ILLI	**Illinizas Sur**	**1.20**	**335**	P	**Pn**	**14 03 07.9**	**-0.4**
COHC	**Cochancay**	**1.22**	**238**	P	**Pn**	**14 03 06.9**	**-1.0**
ANTM	**Antisana-La Mi**	**1.26**	**360**	P	**Pn**	**14 03 09.0**	**+0.1**
ANTG	**Antisana-Guama**	**1.29**	**359**	P	**Pn**	**14 03 09.3**	**0.0**
ANTS	**Antisana-Sarah**	**1.30**	**2**	P	**Pn**	**14 03 09.8**	**+0.4**
ANTI	**Antisana**	**1.35**	**3**	P	**Pn**	**14 03 10.1**	**+0.2**
BOSC	**San Juan Bosco**	**1.36**	**192**	P	**Pn**	**14 03 10.5**	**+1.0**
GGPC	**Guagua Pichinc**	**1.66**	**347**	P	**Pn**	**14 03 12.9**	**-0.3**
TERV	**Terraza Guagua**	**1.67**	**347**	P	**Pn**	**14 03 13.1**	**0.0**
PINO	**Pino**	**1.68**	**347**	P	**Pn**	**14 03 13.0**	**-0.4**
GYE3	**Ecuador-Guayaq**	**1.71**	**258**	P	**Pn**	**14 03 10.6**	**-2.5**
AGUAY	**Guayaquil**	**1.75**	**262**	P	**Pn**	**14 03 10.8**	**-2.6**
ASDO	**Santo Domingo**	**1.78**	**330**	P	**Pn**	**14 03 13.7**	**-0.2**
REVS	**Reventador Sur**	**1.79**	**20**	P	**Pn**	**14 03 15.0**	**+0.7**
PULU	**Pululahua**	**1.84**	**351**	P	**Pn**	**14 03 14.4**	**-0.5**
APR2	**Miler**	**2.01**	**338**	P	**Pn**	**14 03 16.7**	**+0.1**
IMBA	**Imbabura, San**	**2.07**	**1**	P	**Pn**	**14 03 18.6**	**+1.0**
CUSW	**Cuicocha Oeste**	**2.08**	**356**	P	**Pn**	**14 03 18.0**	**+0.3**
CUIC	**Cuicocha-Domo**	**2.10**	**356**	P	**Pn**	**14 03 18.2**	**+0.2**
CUSE	**Cuicocha Este**	**2.10**	**355**	*e*P	**Pn**	**14 03 18.1**	**0.0**
CUSE	**Cuicocha Este**	**2.10**	**355**	P	**Pn**	**14 03 18.5**	**+0.4**
PAC1	**Pacto, Paraso**	**2.14**	**345**	*e*P	**Pn**	**14 03 17.9**	**-0.2**
PAC1	**Pacto, Paraso**	**2.14**	**345**	P	**Pn**	**14 03 18.4**	**+0.2**
ACH2	**Ecuador-Machal**	**2.15**	**228**	P	**Pn**	**14 03 16.1**	**-2.1**
YAHU	**Yahuarcocha**	**2.17**	**4**	P	**Pn**	**14 03 19.4**	**+0.6**
URCU	**Urcuqui**	**2.23**	**359**	P	**Pn**	**14 03 20.0**	**+0.5**
ISPG	**Isla Puna-Puer**	**2.26**	**239**	P	**Pn**	**14 03 18.2**	**-1.3**
MORR	**Playas El Morr**	**2.27**	**249**	P	**Pn**	**14 03 17.7**	**-1.9**
MAG1	**Magdalena**	**2.32**	**318**	P	**Pn**	**14 03 19.2**	**-1.1**
JAMA	**Jama**	**2.51**	**308**	P	**Pn**	**14 03 19.9**	**-2.7**
ARNL	**Arenillas**	**2.53**	**227**	P	**Pn**	**14 03 19.9**	**-2.8**
LNGL	**El Angel-Carch**	**2.54**	**5**	P

CZSB Cruzeiro do Su 8.05 137 eP Pn 14 04 36.1 +0.5
CZSB eS Sn 14 06 01.2 -4.1
NORC Norcasia 8.05 25 eP Pn 14 04 29.1 -6.6
SPBC San Pablo de B 8.49 29 eP Pn 14 04 39.3 -2.3
PTGC Puerto Gaitan, 8.52 46 eP Pn 14 04 41.7 -0.2
PTAC Punta Ardita, 8.90 3 eP Pn 14 04 41.2 -5.8
PTBC PUERTO BERRIO, 9.10 24 eP Pn 14 04 45.2 -4.5
RUSC La Rusia 9.21 34 eP Pn 14 04 53.3 +1.8
NNA Nana 10.21 172 P Pn 14 05 07.3 +2.9
9.2nm,0.3s,baz=343,slow=11,SNR=13
NNA Nana 10.21 172 Pn Pn 14 05 07.5 +3.1
TAMC Tame, Arauca 10.40 38 eP Pn 14 05 09.6 +2.6
PAMC Pamplona, Colo 10.63 31 eP Pn 14 05 11.3 +0.9
OCAC Ocana 11.11 26 eP Pn 14 05 13.6 -2.9
SJCC San Jacinto, C 12.02 15 eP Pn 14 05 24.0 -4.2
SDV Santo Domingo 13.04 35 P Pn 14 05 40.6 -1.0
1.6nm,0.3s,baz=250,slow=7.8,SNR=12
SDV Santo Domingo 13.04 35 Pn Pn 14 05 40.8 -0.8
SDV Santo Domingo 13.04 35 eP Pn 14 05 41.0 -0.7
JTS Las Juntas de 13.76 331 P Pn 14 05 51.6 +0.9
baz=226,slow=18,SNR=2.7
JTS LR LR 14 10 16.0
comp=Z,72nm,21.9s,baz=223,slow=33
JTS Las Juntas de 13.76 331 Pn Pn 14 05 52.5 +1.9
ETMB Extrema 14.35 124 eP Pn 14 05 55.5 -2.5
ACON Acoyapa 15.33 333 Pn Pn 14 06 10.1 -0.2
MATN Matagalpa 16.52 333 P Pn 14 06 24.8 -0.1
SAML Samuel 16.56 116 eP P 14 06 23.4 -1.9
SAML eS S 14 09 26.9 -2.9
LPAZ La Paz 17.49 146 P Pn 14 06 37.4 +0.3
0.2nm,0.3s,baz=335,slow=15,SNR=6.5
LPAZ La Paz 17.49 146 Pn 14 06 36.9 -0.2
LPAZ La Paz 17.49 146 eP Pn 14 06 37.1 0.0
MACA Manacapuru-AM 17.57 95 eP P 14 06 34.5 -2.0
TGUH Tegucigalpa,Un 18.14 331 P P 14 06 41.9 -0.9
TGUH IAmb IAmb 14 06 47.2
comp=Z,47nm,1.0s
PB16 IPOC Station P 18.52 153 Pn 14 06 50.2 +1.0
MNMC Minye Minye 19.18 154 P Pn 14 06 56.7 0.0
MTO3 Montecristo 19.52 326 P P 14 06 59.0 +1.1
ESQI Esquipulas 19.64 326 P P 14 06 58.8 -0.3
PB11 IPOC Station P 19.71 155 P Pn 14 07 01.8 -1.1
GO01 Chusmiza 19.83 154 P Pn 14 07 03.9 -0.6
MTDJ Mount Denham 19.92 2 P P 14 07 03.0 +0.9
MTDJ IAmb IAmb 14 07 07.8
comp=Z,36nm,1.0s
PB08 IPOC Station P 20.26 155 P P 14 07 05.2 -0.8
PB08 IAmb IAmb 14 07 24.7
comp=Z,32nm,0.8s
PB01 IPOC Station P 20.93 157 P P 14 07 14.9 +2.0
VILB Vilhena 21.00 123 eP P 14 07 13.9 +0.3
VILB eS S 14 10 58.5 -1.1
SDDR Presa de Saban 21.75 18 P P 14 07 18.9 -2.7
SDDR IAmb IAmb 14 07 44.7
comp=Z,35nm,0.9s
TOSP Speyside 21.88 53 P P 14 07 22.4 -0.6
SIV San Ignacio 22.00 131 P P 14 07 25.8 +1.6
comp=Z,4.4nm,0.7s,baz=326,slow=11,SNR=17
DR12 Loma Pena Alta 22.24 23 P P 14 07 26.4 -0.1
PB06 IPOC Station P 22.41 159 P P 14 07 30.0 +1.7
PB06 IAmb IAmb 14 07 54.6
comp=Z,24nm,0.7s
LVC Limon Verde 22.57 157 P P 14 07 30.8 +0.7
comp=Z,9.9nm,0.8s,baz=322,slow=9.4,SNR=6.2
LVC Limon Verde 22.57 157 P P 14 07 31.1 +1.0
LVC Limon Verde 22.57 157 eP P 14 07 32.5 +2.4
ITTB Itaituba 22.60 97 eP P 14 07 29.9 -0.1
CCIG Comitan 22.63 323 P P 14 07 31.2 +0.7
AOPR Arecibo Observ 22.99 29 P P 14 07 33.8 +0.2
PDPR Patillas Dam, 23.07 31 P P 14 07 33.6 -0.8
PDPR IAmb IAmb 14 07 45.2
comp=Z,25nm,1.1s
SJG San Juan 23.09 30 P P 14 07 33.9 -0.6
SJG IAmb IAmb 14 07 37.7
comp=Z,16nm,0.8s
PTLB Pontes e Lacer 23.20 127 eP P 14 07 36.7 +1.1
EMPR Esperanza - Ma 23.21 29 P P 14 07 35.9 +0.3
CBYP Canovanas 23.37 31 P P 14 07 37.8 +0.6
NPGB Novo Progresso 23.37 104 eP P 14 07 36.9 -0.4
MALB Monte Alegre 23.95 90 eP P 14 07 42.7 +0.3
TEIG Tepich 24.01 336 P P 14 07 43.5 +0.6
TEIG IAmb IAmb 14 07 44.5
comp=Z,21nm,0.7s
CLDB Colider 24.02 113 eP P 14 07 41.1 -1.9
GO02 Mina Guanaco 24.67 161 P P 14 07 51.9 +2.6
GO02 IAmb IAmb 14 08 18.8
comp=Z,18nm,0.8s
CMIG Matias Romero 24.95 319 P P 14 07 51.5 -0.1
comp=Z,15nm,0.8s,baz=123,slow=6.0,SNR=22
MCPB Macapa, AP 26.20 87 eP P 14 08 02.3 -0.6
MDP Montagnes des 26.46 75 P P 14 08 04.3 -0.9
comp=Z,5.3nm,0.5s,baz=243,slow=7.2,SNR=8.3
TLIG Tlapa 27.79 315 P P 14 08 18.3 +1.1
SNDB Serra Nova Dou 28.54 112 eP P 14 08 24.5 +0.7
PRPB Parauapebas 28.66 100 eP P 14 08 24.4 -0.5
AQDB Aquidauana 28.77 132 eP P 14 08 26.9 +1.2
ARAG Araguaiana, MT 29.47 119 eP P 14 08 32.8 +0.8
TMAB Tom-Au,PA,Br 30.11 92 eP P 14 08 38.2 +0.6
SMTB Santa Maria do 31.27 104 eP P 14 08 48.4 +0.4
PEXB Peixe 31.37 110 eP P 14 08 49.3 +0.5
CPUP Villa Florida 31.59 142 LR LR 14 24 49.8
comp=Z,47nm,18.9s,baz=27,slow=42
VA03 San Esteban 31.63 168 P P 14 08 53.4 +2.6
VA03 IAmb IAmb 14 09 04.5
comp=Z,17nm,1.1s
ROC1 El Roble 31.74 168 P P 14 08 54.2 +2.2
BDFB Brasilia 32.80 117 P P 14 09 02.2 +0.9
comp=Z,1.2nm,0.4s,baz=294,slow=23,SNR=3.8
BDFB Brasilia 32.80 117 P P 14 09 02.2 +0.9
IPMB Ipameri, GO 33.55 121 eP P 14 09 08.7 +0.9
IPMB epP pP 14 09 39.2 -0.1
545A Edgard 33.77 341 P P 14 09 09.5 +0.1
ROSB Rosrio 34.09 92 eP P 14 09 12.3 0.0
SDBA SAO DESIDERIO 34.65 109 eP P 14 09 17.6 +0.3
LRAL Lakeview Retre 35.63 347 P P 14 09 24.9 -0.5
baz=165
LRAL Lakeview Retre 35.63 347 P P 14 09 24.5 -0.8
JANB Januaria 35.96 113 eP P 14 09 28.6 +0.1
JANB epP pP 14 09 59.6 -0.6
833A Chaparral WMA, 36.20 327 P P 14 09 31.6 +1.3
baz=142
833A Chaparral WMA, 36.20 327 P P 14 09 31.3 +1.0
833A IAmb IAmb 14 09 32.1
comp=Z,20nm,0.9s
LC01 Cunco 37.37 172 P P 14 09 41.7 +1.7
CPCT Cooper Cave 37.53 352 P P 14 09 41.2 -0.2
CPCT IAmb IAmb 14 09 42.3
comp=Z,15nm,1.0s
SWET Sewanee 37.53 350 P P 14 09 40.2 -1.3
237A Washetta, Mont 37.53 335 P P 14 09 42.0 +0.6
PLAL Pickwick Lake 37.74 347 P P 14 09 42.0 -1.2
JCT Junction City 38.13 329 P P 14 09 47.7 +1.1
baz=143,SNR=5.7
JCT Junction City 38.13 329 P P 14 09 47.1 +0.5
JCT IAmb IAmb 14 09 48.5
comp=Z,20nm,1.1s
V48A Smith Brothers 38.21 349 P P 14 09 46.0 -1.0
V48A IAmb IAmb 14 09 47.0
comp=Z,24nm,0.9s
WVT Waverly 38.79 348 P P 14 09 49.8 -2.1
baz=164
WVT Waverly 38.79 348 P P 14 09 49.7 -2.3
PLCA Paso Flores 39.37 171 P P 14 09 58.5 +1.7
comp=Z,12nm,0.7s,baz=344,slow=10.0,SNR=25
PLCA Paso Flores 39.37 171 P P 14 09 58.5 +1.7
PLCA IAmb IAmb 14 09 59.5
comp=Z,15nm,0.8s
PLCA Paso Flores 39.37 171 eP P 14 09 58.6 +1.7
TX31 Lajitas Ar. Si 39.39 324 P P 14 09 57.6 +0.4
TX31 IAmb IAmb 14 09 58.9
comp=Z,22nm,1.1s
TX32 Lajitas Array 39.39 324 P P 14 09 57.8 +0.6
TXAR Lajitas Array 39.39 324 P P 14 09 57.1 -0.1
comp=Z,4.9nm,0.9s,baz=148,slow=8.8,SNR=37
TXAR LR LR 14 27 05.0
comp=Z,23nm,19.2s,baz=0.0,slow=37
TXAR Lajitas Array 39.39 324 P P 14 09 57.6 +0.4
T47A Sharon Grove 39.47 349 P P 14 09 56.2 -1.4
T47A IAmb IAmb 14 09 56.4
comp=Z,11nm,0.8s
LCAR Lake Charles 39.57 343 P P 14 09 57.1 -1.2
LCAR IAmb IAmb 14 09 57.8
comp=Z,12nm,0.9s

W39A Magazine 39.59 340 P P 14 09 58.4 -0.2
X37A Clayton 39.62 338 P P 14 09 58.8 -0.1
X37A IAmb IAmb 14 09 59.7
comp=Z,11nm,0.8s
ABTX Abilene, Hawle 39.79 331 P P 14 10 01.0 +0.7
baz=145
ABTX Abilene, Hawle 39.79 331 P P 14 10 00.6 +0.2
SLBS Sierra La Lagu 39.92 311 P P 14 10 03.0 +1.3
SLBS IAmb IAmb 14 10 03.6
comp=Z,20nm,1.1s
U40A Yellville 40.34 342 P P 14 10 03.6 -1.3
baz=157,SNR=6.4
U40A Yellville 40.34 342 P P 14 10 03.7 -1.1
U40A IAmb IAmb 14 10 04.8
comp=Z,17nm,0.8s
R49A Shelbyville 40.41 352 P P 14 10 03.9 -1.4
T42A Van Buren 40.45 344 P P 14 10 03.6 -2.0
WCI Wyandotte Cave 40.53 350 P P 14 10 05.1 -1.2
baz=167
Q53A Leroy 40.58 356 P P 14 10 06.7 -0.1
baz=175
LL01 San Ignacio de 40.73 173 P P 14 10 09.2 +1.4
LL01 IAmb IAmb 14 10 09.8
comp=Z,11nm,0.8s
MGMO Mountain Grove 40.90 343 P P 14 10 08.2 -1.2
MGMO IAmb IAmb 14 10 09.1
comp=Z,16nm,0.9s
P57A Homestead Farm 41.09 0 P P 14 10 11.5 +0.6
baz=180
WMOK Wichita Mounta 41.15 334 P P 14 10 11.5 0.0
baz=148,SNR=5.8
FVM French Village 41.17 345 P P 14 10 10.4 -1.1
FVM IAmb IAmb 14 10 11.0
comp=Z,14nm,0.8s
CCM Cathedral Cave 41.45 344 P P 14 10 12.0 -1.9
baz=160
CCM Cathedral Cave 41.45 344 P P 14 10 12.0 -1.9
MNTX Cornudas Mount 42.13 325 P P 14 10 19.8 +0.3
baz=137,SNR=11
MNTX Cornudas Mount 42.13 325 P P 14 10 19.6 +0.1
O49A Covington 42.17 353 P P 14 10 19.4 -0.3
O49A IAmb IAmb 14 10 26.3
comp=Z,46nm,1.5s
MSTX Muleshoe 42.43 329 P P 14 10 22.4 +0.4
baz=142,SNR=9.8
MSTX Muleshoe 42.43 329 P P 14 10 22.1 +0.1
AMTX Amarillo 42.61 331 P P 14 10 23.8 +0.3
baz=144
AMTX Amarillo 42.61 331 P P 14 10 23.8 +0.3
121A Cookes Peak, D 44.14 323 P P 14 10 37.4 +1.5
baz=135,SNR=9.6
121A Cookes Peak, D 44.14 323 P P 14 10 37.3 +1.5
121A IAmb IAmb 14 10 38.5
comp=Z,29nm,1.1s
QUA2 Belchertown 44.20 6 P P 14 10 37.2 +1.3
319A Douglas 44.27 321 P P 14 10 37.9 +1.1
319A IAmb IAmb 14 10 39.0
comp=Z,28nm,1.0s
BNM Barren Site 44.63 326 P P 14 10 40.6 +0.8
LENM Lemitar 44.84 326 P P 14 10 41.3 -0.1
ANMO Albuquerque 45.13 327 P P 14 10 44.2 +0.6
comp=Z,24nm,0.8s,baz=139,slow=9.1,SNR=71
ANMO Albuquerque 45.13 327 P P 14 10 44.6 +0.9
baz=138
ANMO Albuquerque 45.13 327 P P 14 10 44.3 +0.6
ANMO IAmb IAmb 14 10 45.7
comp=Z,30nm,0.9s
T25A Trinidad 45.74 330 P P 14 10 49.6 +1.1
baz=142,SNR=9.0
T25A Trinidad 45.74 330 P P 14 10 49.6 +1.1
T25A IAmb IAmb 14 10 50.8
comp=Z,26nm,1.0s
JFWS Jewell Farm 45.82 348 P P 14 10 46.9 -1.8
baz=163
JFWS Jewell Farm 45.82 348 P P 14 10 47.1 -1.7
JFWS IAmb IAmb 14 10 47.5
comp=Z,20nm,0.8s
TUC Tucson 45.84 321 P P 14 10 49.9 +0.7
baz=131
TUC Tucson 45.84 321 P P 14 10 49.6 +0.4
TUC IAmb IAmb 14 10 50.9
comp=Z,15nm,0.9s
SDCO Great Sand Dun 46.76 330 P P 14 10 57.5 +1.0
baz=141,SNR=34
SDCO Great Sand Dun 46.76 330 P P 14 10 57.4 +0.9
SDCO IAmb IAmb 14 10 58.5
comp=Z,23nm,0.9s
214A Organ Pipe Nat 46.92 319 P P 14 10 58.6 +1.0
baz=129
214A Organ Pipe Nat 46.92 319 P P 14 10 58.3 +0.7
214A IAmb IAmb 14 10 59.6
comp=Z,16nm,0.9s
W18A Petrified Fore 47.11 324 P P 14 11 00.4 +1.2
baz=135,SNR=15
W18A Petrified Fore 47.11 324 P P 14 11 00.1 +0.9
S22A 4UR Ranch, Cre 47.43 329 P P 14 11 02.7 +1.0
baz=139,SNR=10
S22A 4UR Ranch, Cre 47.43 329 P P 14 11 02.4 +0.7
Q24A Divide 47.54 331 P P 14 11 03.0 +0.4
baz=142
Q24A Divide 47.54 331 P P 14 11 02.4 -0.1
X16A Lo Mia Camp, P 47.65 322 P P 14 11 04.7 +1.3
X16A IAmb IAmb 14 11 05.5
comp=Z,13nm,0.8s
MVCO Mesa Verde 47.91 327 P P 14 11 06.0 +0.6
baz=137,SNR=6.8
MVCO Mesa Verde 47.91 327 P P 14 11 05.7 +0.3
MVCO IAmb IAmb 14 11 09.2
comp=Z,21nm,1.4s
K31A O'Neill 47.95 340 P P 14 11 04.8 -0.6
E57A Chemin Saint G 48.15 4 P P 14 11 06.8 +0.1
baz=185
SPX San Pedro Mart 48.17 316 P P 14 11 08.6 +1.0
ECSD EROS Data Cent 48.25 342 P P 14 11 05.9 -1.6
baz=155
ECSD EROS Data Cent 48.25 342 P P 14 11 06.1 -1.5
Y14A Wickenburg 48.31 321 P P 14 11 09.0 +0.7
WUAZ Wupatki 48.35 323 P P 14 11 10.1 +1.4
baz=133,SNR=15
WUAZ Wupatki 48.35 323 P P 14 11 09.5 +0.8
ISCO Idaho Springs 48.42 332 P P 14 11 09.9 +0.6
baz=142,SNR=11
ISCO Idaho Springs 48.42 332 P P 14 11 09.7 +0.4
SMCO Snowmass 48.59 330 P P 14 11 11.7 +0.9
PV01 Paradox Valley 48.63 328 P P 14 11 11.9 +1.0
PV01 IAmb IAmb 14 11 12.8
comp=Z,16nm,1.1s
PV15 Paradox Valley 48.74 328 P P 14 11 13.0 +1.3
PV02 Paradox Valley 48.77 328 P P 14 11 12.8 +0.8
PV13 Radium Mtn., P 48.78 328 P P 14 11 12.6 +0.6
E62A Clayton Lake 48.83 8 P P 14 11 14.2 +2.3
baz=191
PV03 Paradox Valley 48.87 328 P P 14 11 13.1 +0.5
PV12 Saucer Basin, 48.89 328 P P 14 11 13.4 +0.6
PV18 Skein Mesa, Pa 48.89 328 P P 14 11 13.5 +0.6
PV07 Paradox Valley 48.90 328 P P 14 11 13.9 +1.1
PV07 IAmb IAmb 14 11 14.8
comp=Z,16nm,1.0s
PV11 David Mesa, Pa 48.91 328 P P 14 11 13.6 +0.7
PV11 IAmb IAmb 14 11 15.4
comp=Z,23nm,1.0s
GLA Glamis 48.94 318 P P 14 11 14.0 +0.9
baz=128
GLA Glamis 48.94 318 P P 14 11 14.0 +0.9
PV16 Nyswonger Mesa 48.94 328 P P 14 11 13.9 +0.7
PV16 IAmb IAmb 14 11 14.8
comp=Z,21nm,1.0s
PV17 East Wray Mesa 48.94 328 P P 14 11 13.9 +0.7
PV19 Morning Glory 48.98 328 P P 14 11 14.1 +0.6
PV19 IAmb IAmb 14 11 15.0
comp=Z,16nm,1.0s
PV20 West Nyswonger 48.99 328 P P 14 11 14.1 +0.5
PV20 IAmb IAmb 14 11 15.1
comp=Z,22nm,1.2s
PV04 Paradox Valley 49.00 328 P P 14 11 14.0 +0.4
PV04 IAmb IAmb 14 11 15.9
comp=Z,18nm,1.1s
PV14 Lion Creek, Pa 49.05 328 P P 14 11 14.7 +0.6
PV14 IAmb IAmb 14 11 15.5
comp=Z,19nm,1.2s
PV10 Paradox Valley 49.06 328 P P 14 11 14.5 +0.3
PV10 IAmb IAmb 14 11 15.1
comp=Z,17nm,0.9s
ESJX Sierra Juarez 49.07 317 P P 14 11 14.5 +0.3
PV23 Carpenter Ridg 49.10 328 P P 14 11 15.2 +0.8

PDMCI Parker Dam,Lak 49.27 320 P P 14 11 16.0 +0.5
baz=129
D62A Allapoint, All 49.35 8 P P 14 11 16.6 +0.8
baz=192
N23A Red Feather La 49.44 332 P P 14 11 17.4 +0.4
baz=142,SNR=7.3
N23A Red Feather La 49.44 332 P P 14 11 17.5 +0.4
N23A IAmb IAmb 14 11 18.5
comp=Z,16nm,1.1s
U15A North Rim 49.52 324 P P 14 11 18.7 +1.0
PHWY Pilot Hill 49.53 333 P P 14 11 18.1 +0.3
PHWY IAmb IAmb 14 11 19.1
comp=Z,12nm,0.7s
IKP In-Ko-Pah, Jac 49.56 317 P P 14 11 19.0 +1.1
baz=126
W13A Hualapai Mount 49.61 321 P P 14 11 19.3 +0.9
W13A IAmb IAmb 14 11 20.6
comp=Z,14nm,0.9s
BC3 Big Chuckawall 49.72 319 P P 14 11 19.9 +0.8
baz=128
CBX Cerro Bola 49.74 316 P P 14 11 19.8 +0.5
IRM Iron Mountain 49.83 319 P P 14 11 20.7 +0.9
baz=128,SNR=6.4
TKX Tecate 49.85 317 P P 14 11 20.2 +0.2
TKX IAmb IAmb 14 11 20.9
comp=Z,20nm,1.2s
MONP2 Monument Peak 49.91 317 P P 14 11 21.4 +0.7
baz=126,SNR=7.1
O20A White River Ci 49.96 330 P P 14 11 21.3 +0.5
baz=139
O20A White River Ci 49.96 330 P P 14 11 21.5 +0.6
BAR Barrett 49.96 317 P P 14 11 21.7 +0.9
KNB Kanab 50.23 324 P P 14 11 24.2 +1.3
BELC Belle Mtn. Jos 50.29 319 P P 14 11 24.6 +1.1
baz=127,SNR=7.5
PFO Pinyon Flats O 50.37 318 P P 14 11 24.0 0.0
comp=Z,6.5nm,1.0s,baz=112,slow=4.7,SNR=7.7
PFO Pinyon Flats O 50.37 318 P P 14 11 25.1 +1.1
baz=126,SNR=5.4
PFO Pinyon Flats O 50.37 318 P P 14 11 25.0 +1.0
109C Camp Elliot, M 50.38 317 P P 14 11 25.0 +1.1
109C IAmb IAmb 14 11 25.7
comp=Z,21nm,1.1s
SRU San Rafael Swe 50.39 327 P P 14 11 24.4 +0.3
LCMT Little Creek M 50.48 323 P P 14 11 25.9 +1.2
GMRC Granite Mounta 50.55 320 P P 14 11 26.3 +1.0
baz=128,SNR=10.0
MTPU Mount Pierson 50.55 325 P P 14 11 26.2 +0.6
MTPU pP pP 14 12 02.9 +2.6
RWWY Rawlins 50.65 332 P P 14 11 26.6 +0.5
RWWY IAmb IAmb 14 11 27.6
comp=Z,26nm,1.1s
P17A Butcher Ranch, 50.76 328 P P 14 11 27.8 +0.9
SZCU Shurtz Canyon 50.77 324 P P 14 11 27.9 +0.8
MURC Murrieta 50.85 317 P P 14 11 28.7 +1.2
baz=126
MSU Marysvale 50.88 326 P P 14 11 28.6 +0.7
MVU Marysvale 50.89 326 P P 14 11 28.9 +1.0
CCUT Cedar City 50.91 324 P P 14 11 29.2 +1.1
HEC Hector,Ludlow 51.01 319 P P 14 11 30.1 +1.4
baz=127
BBRC Big Bear Solar 51.06 318 P P 14 11 30.9 +1.6
baz=126
K22A Casper 51.09 333 P P 14 11 29.8 +0.5
baz=142,SNR=5.8
K22A Casper 51.09 333 P P 14 11 29.7 +0.5
K22A IAmb IAmb 14 11 30.6
comp=Z,18nm,1.1s
TCRU Three Creeks R 51.10 326 P P 14 11 30.8 +1.3
TUQ Turquoise Moun 51.12 320 P P 14 11 30.5 +0.9
baz=128
RSSD Black Hills 51.22 336 P P 14 11 31.2 +0.9
baz=146
RSSD Black Hills 51.22 336 P P 14 11 31.2 +0.9
RSSD IAmb IAmb 14 11 32.0
comp=Z,13nm,0.9s
SHPR Sheep Range 51.31 322 P P 14 11 32.2 +1.2
SHPR IAmb IAmb 14 11 33.2
comp=Z,18nm,1.2s
SCI2 San Clemente I 51.43 316 P P 14 11 32.7 +1.0
baz=124
BFSC Mount Baldy Ra 51.54 318 P P 14 11 33.6 +0.8
baz=126,SNR=6.7
GSC Goldstone, Bar 51.61 319 P P 14 11 34.5 +1.3
baz=127,SNR=15
GSC Goldstone, Bar 51.61 319 P P 14 11 34.0 +0.8
GSC IAmb IAmb 14 11 35.3
comp=Z,12nm,0.9s
SHOC Shoshone, Teco 51.63 320 P P 14 11 34.2 +1.0
baz=128
MPU Maple Canyon 51.63 327 P P 14 11 34.1 +0.6
MWC Mount Wilson 51.80 318 P P 14 11 35.4 +0.6
MWC IAmb IAmb 14 11 36.7
comp=Z,33nm,1.4s
PRN Pahroc Range 51.82 323 P P 14 11 35.7 +0.9
PSUT Pine Spring 51.85 324 P P 14 11 35.7 +0.6
PASC Pasadena Art C 51.85 317 P P 14 11 36.1 +1.1
PASC IAmb IAmb 14 11 36.9
comp=Z,22nm,1.2s
JLU Jordanelle 51.95 328 P P 14 11 36.6 +0.8
E28A Huff 52.09 340 P P 14 11 36.5 0.0
EDW2 Edwards Air Fo 52.14 318 P P 14 11 37.8 +0.7
baz=126,SNR=18
CTU Camp Tracy 52.18 328 P P 14 11 38.0 +0.6
AGMN Agassiz Nation 52.21 345 P P 14 11 36.4 -0.9
baz=157
AGMN Agassiz Nation 52.21 345 P P 14 11 36.4 -0.9
AGMN IAmb IAmb 14 11 36.9
comp=Z,17nm,0.9s
TPNV Topopah Spring 52.27 321 P P 14 11 39.7 +1.6
baz=129,SNR=20
TPNV Topopah Spring 52.27 321 P P 14 11 39.3 +1.2
TPNV IAmb IAmb 14 11 40.5
comp=Z,16nm,0.9s
LRMC Laurel Mtn Rad 52.29 319 P P 14 11 39.4 +1.1
baz=126,SNR=8.4
TCUT Toone Canyon 52.30 328 P P 14 11 38.8 +0.4
FURC Furnace Creek, 52.35 321 P P 14 11 39.8 +1.3
baz=128,SNR=7.1
DUG Dugway, Tooele 52.40 327 P P 14 11 40.0 +1.0
baz=134,SNR=10
DUG Dugway, Tooele 52.40 327 P P 14 11 39.8 +0.8
DUG IAmb IAmb 14 11 41.8
comp=Z,9.3nm,0.8s
MPMC Manual Prospec 52.51 320 P P 14 11 40.5 +0.5
baz=127,SNR=7.0
PD31 Pinedale Array 52.59 331 P P 14 11 40.4 -0.1
PDAR Pinedale Array 52.59 331 P P 14 11 40.1 -0.4
comp=Z,3.3nm,0.9s,baz=140,slow=9.5,SNR=17
PDAR Pinedale Array 52.59 331 P P 14 11 40.3 -0.2
BW06 Boulder Array 52.59 331 P P 14 11 40.3 -0.3
baz=139,SNR=5.5
BW06 Boulder Array 52.59 331 P P 14 11 40.5 0.0
R11A Troy Canyon, C 52.75 323 P P 14 11 42.8 +1.1
baz=130,SNR=19
R11A Troy Canyon, C 52.75 323 P P 14 11 42.6 +0.9
ARVC Arvin 52.84 318 P P 14 11 43.9 +1.7
baz=125
MDND Maddock 52.86 342 P P 14 11 42.1 0.0
baz=153
MDND Maddock 52.86 342 P P 14 11 42.0 -0.1
ISA Isabella, Lake 52.91 319 P P 14 11 43.8 +1.0
baz=126,SNR=7.0
ISA Isabella, Lake 52.91 319 P P 14 11 43.7 +0.9
ISA IAmb IAmb 14 11 44.9
comp=Z,17nm,1.4s
SPUT South Promonto 52.99 328 P P 14 11 44.3 +0.9
BGU Big Grassy Mou 53.03 327 P P 14 11 44.1 +0.4
CWC Cottonwood Cre 53.12 320 P P 14 11 45.3 +0.9
baz=127
AHID Auburn Hatcher 53.35 330 P P 14 11 46.1 +0.1
AHID IAmb IAmb 14 11 46.9
comp=Z,9.4nm,0.8s
PKM Mcpherson Peak 53.37 317 P P 14 11 47.1 +0.8
baz=124,SNR=7.8
VES Vestal, Richgr 53.42 319 P P 14 11 47.7 +1.3
baz=125,SNR=6.0
HVU Hansel Valley 53.49 328 P P 14 11 47.0 0.0
TPH Tonopah 53.57 322 P P 14 11 48.4 +0.7
REDW Red Top Meadow 53.67 331 P P 14 11 48.2 -0.2
REDW IAmb IAmb 14 11 49.7
comp=Z,25nm,1.4s
ECR Eagle Creek 53.69 330 P P 14 11 48.7 +0.1
SNOW Snow King Moun 53.69 331 P P 14 11 48.9 +0.3
SNOW IAmb IAmb 14 11 50.0

	comp=Z,10.0nm,0.7s							
SMMC	**Simmler**	**53.73**	**317**	P	**P**	**14 11 50.0**	**+1.2**
	baz=124,SNR=7.5							
TPAW	**Teton Pass**	**53.81**	**331**	P	**P**	**14 11 49.1**	**-0.3**
TPAW				IAmb	IAmb	14 11 55.2		
	comp=Z,16nm,1.4s							
ULM	**Lac du Bonnet**	**54.02**	**346**	P	**P**	**14 11 49.1**	**-1.4**
	comp=Z,6.2nm,0.6s,baz=164,slow=8.4,SNR=7.8							
ULM	**Lac du Bonnet**	**54.02**	**346**	P	**P**	**14 11 49.2**	**-1.4**
ULM				IAmb	IAmb	14 11 49.7		
	comp=Z,9.9nm,0.8s							
IMW	**Indian Meadow**	**54.11**	**331**	P	**P**	**14 11 51.3**	**-0.3**
IMW				IAmb	IAmb	14 11 53.9		
	comp=Z,9.6nm,0.8s							
ELK	**Elko**	**54.13**	**326**	P	**P**	**14 11 51.6**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=123,slow=5.5,SNR=24							
ELK				PcP	**PcP**	**14 12 54.6**	**0.0**	
	comp=Z,1.3nm,0.8s,baz=88,slow=0.5,SNR=4.6							
ELK	**Elko**	**54.13**	**326**	P	**P**	**14 11 52.0**	**+0.3**
ELK					**PcP**	**14 12 54.6**	**0.0**	
FLWY	**Flagg Ranch**	**54.13**	**331**	P	**P**	**14 11 52.0**	**+0.3**
PAGB	**Antelope Grade**	**54.14**	**318**	P	**P**	**14 11 51.1**	**-0.6**
PAGB				IAmb	IAmb	14 11 53.5		
	comp=Z,16nm,1.2s							
LAO	**LASA Array**	**54.21**	**337**	P	**P**	**14 11 51.8**	**-0.2**
	baz=145							
LAO	**LASA Array**	**54.21**	**337**	P	**P**	**14 11 51.6**	**-0.4**
LAO				IAmb	IAmb	14 11 53.7		
	comp=Z,16nm,1.4s							
RLMT	**Red Lodge**	**54.26**	**333**	P	**P**	**14 11 52.5**	**-0.1**
	baz=140,SNR=13							
RLMT	**Red Lodge**	**54.26**	**333**	P	**P**	**14 11 52.6**	**0.0**
RLMT				IAmb	IAmb	14 11 53.4		
	comp=Z,12nm,0.8s							
NV11	**Mina Array Sit**	**54.37**	**322**	P	**P**	**14 11 54.1**	**+0.6**
NV11				IAmb	IAmb	14 11 55.5		
	comp=Z,18nm,1.2s							
OMMB	**Old Mammoth Mi**	**54.41**	**320**	P	**P**	**14 11 54.6**	**+0.6**
OMMB				IAmb	IAmb	14 11 55.8		
	comp=Z,14nm,1.0s							
NVAR	**Mina Array Bea**	**54.46**	**322**	P	**P**	**14 11 54.5**	**+0.3**
	comp=Z,8.9nm,1.0s,baz=134,slow=6.7,SNR=35							
NVAR				PcP	**PcP**	**14 12 55.7**	**-0.2**	
	comp=Z,1.5nm,0.7s,baz=147,slow=5.1,SNR=4.2							
NVAR	**Mina Array Bea**	**54.46**	**322**	P	**P**	**14 11 54.4**	**+0.2**
MDPB	**Devils Postpil**	**54.47**	**320**	P	**P**	**14 11 54.8**	**+0.5**
MDPB				IAmb	IAmb	14 11 56.1		
	comp=Z,11nm,0.9s							
LHV	**Little Huntoon**	**54.48**	**321**	P	**P**	**14 11 55.2**	**+1.2**
LHV				IAmb	IAmb	14 11 56.5		
	comp=Z,12nm,1.0s							
YNE	**Yellowstone No**	**54.51**	**333**	P	**P**	**14 11 54.2**	**-0.2**
YNR	**Norris Junctio**	**54.60**	**332**	P	**P**	**14 11 55.8**	**+0.7**
YMR	**Madison River**	**54.70**	**332**	P	**P**	**14 11 56.0**	**+0.2**
YHH	**Holmes Hill**	**54.73**	**332**	P	**P**	**14 11 57.0**	**+0.9**
YHL	**Hebgen Lake**	**54.94**	**332**	P	**P**	**14 11 58.9**	**+1.3**
YHL				pP	**pP**	**14 12 34.5**	**+1.8**	
GCMT	**Greycliff**	**54.95**	**334**	P	**P**	**14 11 57.9**	**+0.4**
QLMT	**Earthquake Lak**	**55.04**	**332**	P	**P**	**14 11 59.2**	**+1.0**
WAKR	**Walker**	**55.22**	**321**	P	**P**	**14 12 01.0**	**+1.4**
WAKR				IAmb	IAmb	14 12 01.7		
	comp=Z,9.4nm,1.0s							
CMB	**Columbia Colle**	**55.54**	**320**	P	**P**	**14 12 02.3**	**+0.5**
HLID	**Hailey**	**55.61**	**329**	P	**P**	**14 12 02.9**	**+0.6**
	baz=134,SNR=9.9							
HLID	**Hailey**	**55.61**	**329**	P	**P**	**14 12 02.6**	**+0.3**
HLID					**pP**	**14 12 39.6**	**+2.3**	
BCYI	**Bear Canyon**	**55.62**	**330**	P	**P**	**14 12 03.3**	**+0.9**
PNTR	**Pine Nut**	**55.67**	**321**	P	**P**	**14 12 03.8**	**+1.0**
PNTR				IAmb	IAmb	14 12 04.8		
	comp=Z,7.6nm,0.9s							
BOZ	**Bozeman (W)**	**55.70**	**332**	P	**P**	**14 12 03.5**	**+0.6**
	baz=138,SNR=25							
BOZ	**Bozeman (W)**	**55.70**	**332**	P	**P**	**14 12 03.2**	**+0.3**
BOZ					**pP**	**14 12 39.8**	**+1.8**	
MCMT	**McKenzie Canyo**	**55.72**	**331**	P	**P**	**14 12 03.3**	**+0.1**
VCNR	**Virginia City**	**55.82**	**322**	P	**P**	**14 12 04.8**	**+0.9**
VCNR				IAmb	IAmb	14 12 05.9		
	comp=Z,11nm,1.1s							
PAHR	**Pah Rah Range**	**55.91**	**322**	P	**P**	**14 12 05.2**	**+0.7**
DLMT	**Dillon**	**55.99**	**331**	P	**P**	**14 12 05.5**	**+0.6**
DLMT				IAmb	IAmb	14 12 06.3		
	comp=Z,10nm,1.2s							
MFID	**Camas Ranch**	**56.25**	**328**	P	**P**	**14 12 07.2**	**+0.4**
MFID				pP	**pP**	**14 12 44.5**	**+2.7**	
LRM	**Limekiln Ridge**	**56.26**	**332**	P	**P**	**14 12 07.3**	**+0.3**
BEKR	**Beckworth**	**56.60**	**322**	P	**P**	**14 12 09.3**	**-0.2**
HRY	**Holter Researc**	**56.63**	**333**	P	**P**	**14 12 09.4**	**0.0**
EGMT	**Eagleton**	**56.72**	**335**	P	**P**	**14 12 10.2**	**+0.2**
	baz=141							
EGMT	**Eagleton**	**56.72**	**335**	P	**P**	**14 12 10.4**	**+0.4**
EGMT				IAmb	IAmb	14 12 10.9		
	comp=Z,6.6nm,0.7s							
ORV	**Oroville**	**57.13**	**321**	P	**P**	**14 12 14.2**	**+1.3**
PLID	**Pearl Lake**	**57.48**	**329**	P	**P**	**14 12 15.2**	**-0.4**
PLID				IAmb	IAmb	14 12 16.3		
	comp=Z,12nm,1.2s							
J08A	**Circle Bar Ran**	**57.66**	**326**	P	**P**	**14 12 17.1**	**+0.4**
J08A				IAmb	IAmb	14 12 18.0		
	comp=Z,24nm,1.4s							
MSO	**Missoula**	**57.70**	**332**	P	**P**	**14 12 17.3**	**+0.4**
	baz=136,SNR=11							
MSO	**Missoula**	**57.70**	**332**	P	**P**	**14 12 16.7**	**-0.1**
MSO				IAmb	IAmb	14 12 18.3		
	comp=Z,14nm,1.0s							
O03E	**Paynes Creek**	**57.75**	**321**	P	**P**	**14 12 17.2**	**-0.1**
	baz=125							
MOD	**Modoc Plateau**	**57.80**	**324**	P	**P**	**14 12 17.7**	**0.0**
MOD				IAmb	IAmb	14 12 19.8		
	comp=Z,20nm,1.5s							
BMO	**Blue Mountains**	**58.01**	**328**	P	**P**	**14 12 18.8**	**-0.2**
WDC	**Whiskeytown Da**	**58.37**	**321**	P	**P**	**14 12 20.5**	**-1.1**
WDC				IAmb	IAmb	14 12 20.9		
	comp=Z,6.9nm,0.7s							
M04C	**Macdoel**	**58.64**	**323**	P	**P**	**14 12 23.9**	**+0.3**
	baz=126,SNR=11							
K05A	**Summer Lake**	**58.64**	**324**	P	**P**	**14 12 24.9**	**+1.2**
I07A	**Izee**	**58.70**	**326**	P	**P**	**14 12 24.4**	**+0.5**
I07A				IAmb	IAmb	14 12 26.4		
	comp=Z,15nm,1.1s							
N02D	**Trinity Center**	**58.70**	**322**	P	**P**	**14 12 22.7**	**-1.2**
	baz=125							
F10A	**Beach Ranch, E**	**58.72**	**329**	P	**P**	**14 12 24.5**	**+0.5**
F10A				IAmb	IAmb	14 12 27.2		
	comp=Z,12nm,1.0s							
M02C	**Callahan**	**59.03**	**322**	P	**P**	**14 12 25.3**	**-0.9**
	baz=125							
YBH	**Yreka Blue Hor**	**59.14**	**322**	P	**P**	**14 12 26.0**	**-1.0**
	comp=Z,8.0nm,0.8s,baz=108,slow=6.0,SNR=18							
YBH	**Yreka Blue Hor**	**59.14**	**322**	P	**P**	**14 12 26.4**	**-0.6**
YBH				IAmb	IAmb	14 12 27.4		
	comp=Z,9.5nm,0.8s							
G08A	**Pilot Rock**	**59.17**	**328**	P	**P**	**14 12 27.6**	**+0.4**
G08A				pP	**pP**	**14 13 03.3**	**+0.7**	
L04D	**Klamath Falls**	**59.18**	**323**	P	**P**	**14 12 27.4**	**+0.1**
	baz=126,SNR=5.5							
J05D	**Fort Rock, OR**	**59.18**	**325**	P	**P**	**14 12 28.0**	**+0.7**
	baz=127,SNR=13							
WALA	**Waterton Lakes**	**59.31**	**333**	P	**P**	**14 12 28.1**	**+0.1**
WALA				IAmb	IAmb	14 12 29.1		
	comp=Z,9.3nm,0.9s							
PINE	**Pine Mountain**	**59.32**	**325**	P	**P**	**14 12 29.2**	**+0.8**
E09A	**Wood Farm, Sta**	**59.55**	**329**	P	**P**	**14 12 30.0**	**+0.4**
E09A				IAmb	IAmb	14 12 30.3		
	comp=Z,7.9nm,0.7s							
J04D	**Umpqua Nationa**	**59.67**	**324**	P	**P**	**14 12 31.3**	**+0.6**
	baz=126							
I05D	**Terrebonne, OR**	**59.89**	**325**	P	**P**	**14 12 33.0**	**+1.0**
	baz=128,SNR=5.1							
L02E	**Cave Junction**	**59.93**	**322**	P	**P**	**14 12 32.6**	**+0.3**
	baz=125							
E08A	**Dider Farm, El**	**60.01**	**329**	P	**P**	**14 12 33.0**	**+0.3**
I04A	**Tendick Farm,**	**60.17**	**324**	P	**P**	**14 12 33.8**	**-0.2**
	baz=126							
HAWA	**Hanford**	**60.20**	**328**	P	**P**	**14 12 34.1**	**+0.1**
HAWA				IAmb	IAmb	14 12 35.1		
	comp=Z,7.6nm,0.7s							
NEW	**Newport**	**60.23**	**331**	P	**P**	**14 12 34.0**	**-0.3**
	comp=Z,13nm,0.9s,baz=127,slow=8.3,SNR=15							
NEW	**Newport**	**60.23**	**331**	P	**P**	**14 12 34.3**	**0.0**
	baz=134,SNR=8.1							
NEW	**Newport**	**60.23**	**331**	P	**P**	**14 12 34.2**	**0.0**
K02D	**Willamette Mer**	**60.27**	**323**	P	**P**	**14 12 35.3**	**+0.5**
	baz=125,SNR=5.9							
D08A	**Wollman Farm,**	**60.31**	**329**	P	**P**	**14 12 35.5**	**+0.8**
G05D	**Wamic, OR**	**60.43**	**326**	P	**P**	**14 12 37.1**	**+1.4**
	baz=128							
E07A	**Sunnyside**	**60.47**	**328**	P	**P**	**14 12 36.5**	**+0.6**
E07A				IAmb	IAmb	14 12 37.6		
	comp=Z,13nm,0.8s							
C09A	**Chrisman Ranch**	**60.48**	**330**	P	**P**	**14 12 36.7**	**+0.8**
C09A				IAmb	IAmb	14 12 38.8		
	comp=Z,8.5nm,1.0s							
J01E	**Myrtle Point**	**60.70**	**323**	P	**P**	**14 12 38.6**	**+1.1**
	baz=125							
LTY	**Liberty**	**61.35**	**328**	P	**P**	**14 12 42.8**	**+0.9**
LTY				IAmb	IAmb	14 12 43.5		
	comp=Z,14nm,1.0s							
B08A	**Colville Reser**	**61.38**	**330**	P	**P**	**14 12 42.1**	**+0.1**
B08A				IAmb	IAmb	14 12 43.2		
	comp=Z,9.2nm,0.8s							
F04A	**Amboy**	**61.47**	**326**	P	**P**	**14 12 43.0**	**+0.5**
F04A				IAmb	IAmb	14 12 43.3		
	comp=Z,13nm,0.8s							
LON	**Longmire**	**61.64**	**327**	P	**P**	**14 12 44.2**	**+0.4**
LON				IAmb	IAmb	14 12 45.0		
	comp=Z,13nm,0.9s							
D05A	**Enumclaw**	**62.01**	**328**	P	**P**	**14 12 47.0**	**+0.9**
E03A	**Lebam**	**62.47**	**326**	P	**P**	**14 12 50.3**	**+1.1**
B06A	**Marblemount**	**62.58**	**329**	P	**P**	**14 12 50.1**	**+0.2**
B05A	**Bryant**	**62.73**	**329**	P	**P**	**14 12 50.7**	**-0.2**
	baz=129							
D03D	**Eldon**	**62.81**	**327**	P	**P**	**14 12 52.2**	**+0.7**
	baz=128							
BBB	**Bella Bella**	**68.17**	**330**	P	**P**	**14 13 25.9**	**+0.1**
	comp=Z,10nm,0.7s,baz=113,slow=6.1,SNR=4.4							
YKA	**Yellowknife Ar**	**69.77**	**343**	P	**P**	**14 13 34.5**	**-1.0**
	comp=Z,3.2nm,0.8s,baz=132,slow=6.4,SNR=7.8							
DLBC	**Dease Lake**	**72.64**	**334**	P	**P**	**14 13 53.9**	**+0.9**
DLBC				IAmb	IAmb	14 13 54.7		
	comp=Z,12nm,0.9s							
LIC	**Lamto**	**73.50**	**83**	*e*PKIKP	**P**	**14 14 00.3**	**+1.4**
	comp=Z,34nm,1.4s							
LIC	**Lamto**	**73.50**	**83**	*e*PKIKP	pP	14 14 33.3	-1.6	
	comp=Z,50nm,1.5s							
TIC	**Toumodi**	**73.54**	**83**	*e*PKIKP	**P**	**14 13 59.7**	**+0.6**
TIC	**Toumodi**	**73.54**	**83**	*e*PKIKP	pP	14 14 33.4	-1.7	
DBIC	**Dimbokro**	**73.70**	**83**	P	**P**	**14 13 59.8**	**-0.2**
	comp=Z,6.4nm,0.9s,baz=294,slow=2.9,SNR=5.9							
DBIC	**Dimbokro**	**73.70**	**83**	P	**P**	**14 14 00.7**	**+0.7**
DBIC				IAmb	IAmb	14 14 01.7		
	comp=Z,32nm,1.5s							
KIC	**Kosan Boka**	**73.80**	**83**	*e*PKIKP	**P**	**14 14 00.3**	**-0.3**
	comp=Z,8.2nm,0.6s							
KIC	**Kosan Boka**	**73.80**	**83**	*e*PKIKP	pP	14 14 32.9	-3.7	
	comp=Z,77nm,1.5s							
KOWA	**Kowa**	**75.18**	**75**	P	**P**	**14 14 08.6**	**0.0**
ESDC	**Sonseca Array**	**79.08**	**49**	P	**P**	**14 14 29.6**	**-0.3**
	comp=Z,3.4nm,1.1s,baz=269,slow=6.9,SNR=6.8							
ESDC	**Sonseca Array**	**79.08**	**49**	P	**P**	**14 14 29.4**	**-0.5**
DAWY	**Dawson**	**79.41**	**337**	P	**P**	**14 14 31.4**	**+0.2**
BELA	**Belgrano 2**	**79.42**	**171**	P	**P**	**14 14 31.9**	**+0.9**
INK	**Inuvik**	**79.49**	**342**	P	**P**	**14 14 31.2**	**-0.2**
	comp=Z,18nm,0.9s,baz=99,slow=6.1,SNR=44							
INK	**Inuvik**	**79.49**	**342**	P	**P**	**14 14 31.9**	**+0.5**
INK				IAmb	IAmb	14 14 32.8		
	comp=Z,20nm,0.9s							
EPYK	**Eagle Plains**	**79.52**	**340**	P	**P**	**14 14 32.1**	**+0.4**
	baz=120							
EGAK	**Eagle**	**80.41**	**337**	P	**P**	**14 14 36.9**	**+0.4**
EGAK				IAmb	IAmb	14 14 37.7		
	comp=Z,19nm,0.9s							
K27K	**Chicken**	**80.46**	**336**	P	**P**	**14 14 37.7**	**+1.0**
	baz=114							
L26K	**Log Cabin Wild**	**80.57**	**335**	P	**P**	**14 14 37.6**	**+0.2**
	baz=113							
TOA0	**Torodi Ar. Sit**	**80.60**	**76**	P	**P**	**14 14 38.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**80.60**	**76**	P	**P**	**14 14 38.2**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=280,slow=4.9,SNR=7.9							
TORD				pP	**pP**	**14 15 12.6**	**-2.5**	
	comp=Z,1.6nm,0.7s,baz=264,slow=5.7,SNR=3.2							
TORD	**Torodi Ar. Bea**	**80.60**	**76**	P	**P**	**14 14 38.0**	**-0.5**
SCRK	**Sand Creek**	**81.21**	**336**	P	**P**	**14 14 40.9**	**0.0**
	baz=113							
M24K	**Tolsona, Glenn**	**81.44**	**334**	P	**P**	**14 14 42.8**	**+0.7**
	baz=110							
PAX	**Paxson**	**81.44**	**335**	P	**P**	**14 14 41.8**	**-0.3**
VNA3	**Neumayer Olymp**	**81.50**	**162**	P	**P**	**14 14 43.2**	**+1.0**
VNA1	**Neumayer--Stat**	**81.74**	**162**	P	**P**	**14 14 44.9**	**+1.5**
VNA2	**Neumayer--Watz**	**82.10**	**162**	P	**P**	**14 14 46.3**	**+1.0**
	baz=289,slow=4.2							
HDA	**Harding Lake**	**82.57**	**336**	P	**P**	**14 14 47.7**	**-0.1**
	baz=110							
HDA	**Harding Lake**	**82.57**	**336**	P	**P**	**14 14 47.7**	**-0.1**
HDA				IAmb	IAmb	14 14 48.3		
	comp=Z,12nm,0.8s							
IL18	**Eielson Array**	**82.62**	**336**	P	**P**	**14 14 47.9**	**-0.2**
IL31		**82.67**	**336**	P	**P**	**14 14 48.1**	**-0.2**
ILAR	**Eielson Array**	**82.67**	**336**	P	**P**	**14 14 47.8**	**-0.6**
	comp=Z,5.6nm,0.9s,baz=124,slow=3.9,SNR=40							
ILAR				pP	**pP**	**14 15 24.7**	**-1.2**	
	comp=Z,0.1nm,0.5s,baz=149,slow=41,SNR=1.2							
ILAR				PP	**PP**	**14 17 59.5**	**-0.7**	
	comp=Z,0.8nm,1.0s,baz=134,slow=4.9,SNR=4.1							
ILAR	**Eielson Array**	**82.67**	**336**	P	**P**	**14 14 48.2**	**-0.2**
ILAR					**PP**	**14 17 59.1**	**-1.0**	
FYU	**Fort Yukon**	**82.68**	**338**	P	**P**	**14 14 48.9**	**+0.6**
RC01	**Rabbit Creek A**	**82.73**	**332**	P	**P**	**14 14 48.9**	**+0.2**
	baz=107							
EKB4	**Eskdalemuir Ar**	**83.02**	**34**	P	**P**	**14 14 49.8**	**-0.5**
EKA	**Eskdalemuir Ar**	**83.02**	**34**	P	**P**	**14 14 50.6**	**+0.2**
	comp=Z,4.8nm,0.9s,baz=260,slow=5.0,SNR=4.4							
RND	**Reindeer**	**83.04**	**335**	P	**P**	**14 14 50.8**	**+0.5**
RND				IAmb	IAmb	14 14 51.5		
	comp=Z,13nm,0.9s							
MCK	**McKinley**	**83.17**	**335**	P	**P**	**14 14 50.8**	**-0.2**
	baz=108							
MDM	**Murphy Dome**	**83.28**	**336**	P	**P**	**14 14 51.0**	**-0.5**
MDM				IAmb	IAmb	14 14 52.4		
	comp=Z,17nm,1.1s							
CUT	**Chulitna**	**83.35**	**334**	P	**P**	**14 14 52.0**	**+0.1**
	baz=107							
NEA2	**Nenana**	**83.50**	**336**	P	**P**	**14 14 52.7**	**+0.1**
	baz=108							
BWN	**Browne**	**83.53**	**335**	P	**P**	**14 14 53.0**	**+0.2**
SNAA	**Sanae**	**83.71**	**162**	P	**P**	**14 14 54.6**	**+0.8**
SNAA	**Sanae**	**83.71**	**162**	P	**P**	**14 14 54.5**	**+0.8**
I23K	**Minto, Yukon-K**	**83.79**	**336**	P	**P**	**14 14 54.3**	**+0.2**
	baz=108							
I23K	**Minto, Yukon-K**	**83.79**	**336**	P	**P**	**14 14 54.3**	**+0.2**
I23K				IAmb	IAmb	14 14 55.0		
	comp=Z,13nm,0.8s							
SKT	**Skwentna**	**83.80**	**333**	P	**P**	**14 14 54.2**	**0.0**
KTH	**Kantishna Hill**	**83.97**	**335**	P	**P**	**14 14 55.1**	**0.0**
KTH				IAmb	IAmb	14 14 56.2		
	comp=Z,16nm,0.9s							
BPAW	**Bear Paw Mtn.**	**84.15**	**335**	P	**P**	**14 14 55.4**	**-0.5**
BPAW				pP	**pP**	**14 15 33.6**	**+0.1**	
MLY	**Manley**	**84.31**	**336**	P	**P**	**14 14 57.0**	**+0.2**
	baz=106							
PPLA	**Purkeypile**	**84.34**	**334**	P	**P**	**14 14 57.1**	**0.0**
COLD	**Coldfoot**	**84.75**	**338**	P	**P**	**14 14 59.6**	**+0.7**
	baz=107							
TAM	**Tamanrasset**	**84.93**	**67**	P	**P**	**14 14 59.9**	**-1.0**
TAM				IAmb	IAmb	14 15 03.6		
	comp=Z,11nm,0.8s							
TOLK	**Toolik Lake Re**	**84.95**	**340**	P	**P**	**14 15 00.0**	**+0.1**
	baz=108							
TOLK	**Toolik Lake Re**	**84.95**	**340**	P	**P**	**14 15 00.2**	**+0.2**
DOU	**Dourbes**	**86.76**	**40**	PcP	**PcP**	**14 15 10.3**	**-0.9**
A21K	**Barrow**	**87.99**	**342**	P	**P**	**14 15 15.2**	**+0.7**
	baz=101							
A21K	**Barrow**	**87.99**	**342**	P	**P**	**14 15 15.2**	**+0.7**
QSPA	**South Pole Qui**	**88.26**	**180**	P	**P**	**14 15 17.2**	**+1.1**
QSPA					**pP**	**14 15 55.3**	**+1.6**	
DAVOX	**Davos/Dischmat**	**90.00**	**43**	P	**P**	**14 15 25.7**	**+0.9**
	comp=Z,4.9nm,0.7s,baz=306,slow=7.4,SNR=5.4							
GERES	**GERESS Array B**	**92.62**	**41**	P	**P**	**14 15 37.8**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=235,slow=4.7,SNR=3.8							
BRG	**Berggiesshubel**	**92.76**	**39**	*e*P	**P**	**14 15 39.1**	**+1.9**
	comp=Z,12nm,1.3s							
ZALV	**Zalesovo Beam**	**126.18**	**12**	PKP	**PKPdf**	**14 21 26.4**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=318,slow=2.0,SNR=12							
ZALV				pPKP	**pPKPdf**	**14 22 04.7**	**-1.5**	
	comp=Z,0.9nm,0.5s,baz=251,slow=4.5,SNR=2.4							
ZALV	**Zalesovo Beam**	**126.18**	**12**		**PKPdf**	**14 21 26.6**	**0.0**
ZALV					**pPKPdf**	**14 22 05.9**	**-0.3**	
KURK	**Kurchatov**	**127.47**	**18**		**PKiKP**	**14 21 29.6**	**-0.1**
KURBB	**Kurchatov Arra**	**127.53**	**18**	PKP	**PKPdf**	**14 21 29.5**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=319,slow=2.3,SNR=12							
STKA	**Stephens Creek**	**129.54**	**225**	PKP	**PKPdf**	**14 21 33.7**	**0.0**
	comp=Z,3.0nm,0.7s,baz=131,slow=4.9,SNR=9.0							
STKA	**Stephens Creek**	**129.54**	**225**		**PKPdf**	**14 21 34.1**	**+0.4**
USRK	**Ussuriysk Ar.**	**130.02**	**332**	PKP	**PKPdf**	**14 21 34.2**	**0.0**
	comp=Z,2.7nm,0.8s,baz=49,slow=3.6,SNR=6.2							
USRK	**Ussuriysk Ar.**	**130.02**	**332**	PKPdf	**PKPdf**	**14 21 33.8**	**-0.4**
MKAR	**Makanchi Array**	**132.08**	**18**	PKP	**PKPdf**	**14 21 37.9**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=264,slow=3.0,SNR=8.7							
MKAR				pPKP	**pPKPdf**	**14 22 16.6**	**-1.2**	
	comp=Z,0.7nm,0.7s,baz=7.4,slow=3.8,SNR=3.6							
MKAR	**Makanchi Array**	**132.08**	**18**		**PKPdf**	**14 21 37.7**	**-0.4**
MKAR					**pPKPdf**	**14 22 16.3**	**-1.4**	
SONM	**Songino Array**	**133.98**	**356**	PKP	**PKPdf**	**14 21 41.8**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=357,slow=4.2,SNR=5.1							
SONM	**Songino Array**	**133.98**	**356**		**PKPdf**	**14 21 41.3**	**-0.4**
WMQ	**Urumqi**	**136.33**	**15**	*e*PKP	**PKPdf**	**14 21 45.8**	**-0.4**
KSRS	**Korea Array**	**137.14**	**329**	PKP	**PKPdf**	**14 21 47.7**	**0.0**
	comp=Z,4.8nm,1.0s,baz=1.4,slow=1.7,SNR=8.4							
ASAR	**Alice Springs**	**139.78**	**229**	PKhKP	PKPpre	14 21 45.1		
	comp=Z,1.2nm,0.8s,baz=124,slow=3.4,SNR=16							
HHC	**Hu-ho-hao-te**	**140.14**	**348**	*e*PKP	**PKPdf**	**14 21 52.4**	**-0.9**
WRA	**Warramunga Arr**	**141.43**	**234**	PKhKP	PKPpre	14 21 48.9		
	comp=Z,1.8nm,0.8s,baz=117,slow=2.9,SNR=25							
WRA	**Warramunga Arr**	**141.43**	**234**		PKPpre	14 21 49.4		
GTA	**Gaotai**	**142.53**	**3**	*e*PKP	**PKPdf**	**14 21 54.6**	**-3.1**
LZH	**Lanzhou**	**145.84**	**357**	*e*PKPbc	**PKPdf**	**14 22 02.8**	**-0.8**
LZH				pPKP	pPKPab	14 22 44.4	+1.1	
LZH				sPKP		14 23 02.1		
NJ2	**Nanjing**	**145.88**	**334**	*e*PKPbc	**PKPdf**	**14 22 03.2**	**-0.3**
XAN	**Xi'an**	**147.25**	**349**	PKPbc	**PKPdf**	**14 22 05.9**	**0.0**
CMAR	**Chiang Mai Arr**	**163.22**	**9**	PKP	**PKPdf**	**14 22 26.9**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=310,slow=2.2,SNR=7.3							
CMAR				pPKP	**pPKPdf**	**14 23 06.8**	**-0.7**	
	comp=Z,0.4nm,0.3s,baz=320,slow=1.5,SNR=2.3							
CMAR				PKPab	**PKPab**	**14 23 17.1**	**-1.2**	
	comp=Z,1.3nm,0.9s,baz=325,slow=5.4,SNR=6.5							
CMAR	**Chiang Mai Arr**	**163.22**	**9**		**PKPdf**	**14 22 27.3**	**-0.3**
CMAR					**pPKPdf**	**14 23 07.8**	**+0.4**

TUL ***11*** *14:09:41.9±0.7,36.76N±0.03×97.57W±0.06,h5km±7km, ML3.5,Error ellipse: s-maj=7.0km s-min=2.7km az=67.0 ANF* ***11*** *14:09:42.9±0.7,36.79N×97.59W,h12km±5km,ML4.2/9, Error ellipse: s-maj=2.8km s-min=2.1km az=50.0*

ISC 11 14:09:42.0±1.1,36.76N±0.02×97.54W±0.02,h5km±10km, n78,σ0.86/92,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN13	**South Haven SW**	**0.26**	**12**		**Pg**	**14 09 47.6**	**+0.5**
KAN13				Sg	**Sg**	**14 09 51.5**	**+0.8**
GC02	**Grant County #**	**0.27**	**291**		**Pg**	**14 09 47.3**	**0.0**
GC02				Sg	**Sg**	**14 09 51.1**	**+0.3**
KAN09	**Caldwell North**	**0.39**	**351**	Pg	**Pg**	**14 09 49.7**	**+0.2**
KAN09				Sg	**Sb**	**14 09 55.2**	**-2.6**
KAN14	**Manchester OK**	**0.39**	**301**		**Pg**	**14 09 49.6**	**0.0**
KAN14				Sg	**Sg**	**14 09 54.9**	**+0.2**
CROK	**Carrier**	**0.43**	**235**		**Pg**	**14 09 50.3**	**-0.1**
CROK				Sg	**Sg**	**14 09 56.3**	**+0.3**
KAN05	**Bluff City Nor**	**0.44**	**323**	Pg	**Pg**	**14 09 50.7**	**+0.2**
KAN10	**Anthony SW Sta

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.43**	**118**	⇑*i*P	**Pg**	**14 18 48.1**	**-0.2**
	baz=98						
BTK				⇑*i*S	**Sb**	**14 18 57.1**	**+1.0**
	baz=98						
OHH	**Osh**	**1.90**	**81**	⇑*i*P	**Pn**	**14 19 11.4**	**-1.0**
	baz=79						
OHH				⇑*i*S	**Sn**	**14 19 37.8**	**+1.4**
	baz=79						
ARSB	**Arslanbob**	**2.28**	**61**	⇓*i*P	**Pn**	**14 19 16.4**	**-1.3**
	baz=62						
ARSB				⇓*i*S	**Sn**	**14 19 47.3**	**+1.4**
	baz=62						
MNAS	**Manas**	**2.76**	**36**	⇓*i*P	**Pn**	**14 19 22.9**	**-1.5**
	baz=38						
MNAS				⇓*i*S	**Sn**	**14 19 57.9**	**0.0**
	baz=38						
KK31	**Karatay Array**	**2.84**	**3**	⇓Pg	**Pn**	**14 19 25.8**	**+0.4**
	0.3nm,0.2s,baz=187,slow=17,SNR=12						
KK31				Lg	Lg	14 20 01.4	
	1.3nm,0.2s,baz=185,slow=29,SNR=16						
AML	**Almayashu**	**3.16**	**53**	⇑*i*P	**Pn**	**14 19 28.7**	**-1.3**
	baz=54						
AML				⇑*i*S	**Sn**	**14 20 08.2**	**+0.3**
	baz=54						
ARLS	**Aral**	**3.42**	**61**	⇑*i*P	**Pn**	**14 19 32.6**	**-0.8**
	baz=61						
ARLS				⇑*i*S	**Sn**	**14 20 14.7**	**+0.6**
	baz=61						
EKS2	**Erkin-Say**	**3.53**	**46**	⇑*e*P	**Pn**	**14 19 34.2**	**-0.7**
	baz=47						
EKS2				⇑*i*S	**Sn**	**14 20 16.9**	**+0.1**
	baz=47						
AAK	**Ala-Archa**	**3.93**	**51**	⇑Pn	**Pn**	**14 19 40.1**	**-0.3**
	0.8nm,0.5s						
AAK				⇑Sn	**Sn**	**14 20 27.7**	**+1.0**
	3.4nm,0.8s						
AAK				⇓Lg	Lg	14 20 41.2	
	4.0nm,0.8s						
TKM2	**Tokmak 2**	**4.76**	**54**	⇑Lg	Lg	14 21 08.7	
	1.7nm,0.5s						

BGR ***11*** *14:33:50.4±0.0,51.96N×153.01E,h33km,mb5.3*
KRSC ***11*** *14:34:37.7±1.3,52.38N×153.26E,h525km±23km,ML5.6*
BJI ***11*** *14:34:38.4±0.0,52.55N×152.97E,h498km,mB4.7/44, mb5.2/63*
MOS ***11*** *14:34:39.1±0.7,52.53N×152.94E,h499km,mb5.0/110, Error ellipse: s-maj=6.9km s-min=4.6km az=58.3*
SKHL ***11*** *14:34:39.4±0.4,52.39N×153.15E,h530km±9km,mb5.2/4, msh5.3/6*
NEIC ***11*** *14:34:41.5±1.2,52.66N±0.09×152.7E±0.1,h505km±1km, mb4.7/345,Error ellipse: s-maj=14.9km s-min=11.5km az=136.0*
IDC ***11*** *14:34:41.4±0.5,52.66N×152.73E,h504km±4km,mb4.0/32, mb1 4.2/37,mb1mx4.2/41,mbtmp5.0/37,Error ellipse: s-maj=8.3km s-min=5.5km az=141.0*

ISC 11 14:34:40.1±0.3,52.51N±0.04×152.94E±0.03,h499km±3km, h497km:pP-P,n1171,σ1.31/1350,mb4.8/339,30C-89D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**2.60**	**79**	*i*P	**P**	**14 35 47.6**	**-0.6**
APC				*e*S	**S**	**14 36 42.1**	**-1.7**
APC	**Apacha**	**2.60**	**79**	PN	**P**	**14 35 47.6**	**-0.6**
APC				S	**S**	**14 36 42.1**	**-1.7**
PAU	**Pauzhetka**	**2.61**	**112**	*i*P	**P**	**14 35 48.1**	**-0.2**
PAU				*e*S	**S**	**14 36 43.4**	**-0.5**
PAU	**Pauzhetka**	**2.61**	**112**	*e*P	**P**	**14 35 47.9**	**-0.4**
PAU				AMB	AMB	14 35 48.9	
	698nm,0.7s						
PAU				*e*S	**S**	**14 36 43.5**	**-0.5**
PAU				A	A	14 37 40.3	
	1μm,0.9s						
PAU				A	A	14 37 40.3	
	1μm,0.9s						
PAU	**Pauzhetka**	**2.61**	**112**	PN	**P**	**14 35 48.1**	**-0.2**
PAU				S	**S**	**14 36 43.4**	**-0.5**
SKR	**Severo-Kuril's**	**2.69**	**131**	*i*P	**P**	**14 35 48.1**	**-0.8**
SKR				*e*S	**S**	**14 36 42.1**	**-2.8**
SKR	**Severo-Kuril's**	**2.69**	**131**	*e*P	**P**	**14 35 48.0**	**-0.8**
SKR				AMB	AMB	14 35 48.9	
	3μm,0.8s						
SKR				AMB	AMB	14 35 50.2	
	1μm,4.7s						
SKR				*e*S	**S**	**14 36 42.2**	**-2.7**
SKR				A	A	14 36 45.2	
	966nm,0.7s						
SKR				A	A	14 36 45.2	
	1μm,0.7s						
SKR	**Severo-Kuril's**	**2.69**	**131**	⇓*i*PN	**P**	**14 35 48.2**	**-0.7**
SKR				*e*S	**S**	**14 36 41.8**	**-3.1**
SKR				pmax	pmax		
	comp=Z,3μm,0.8s						
SKR				pmax	pmax		
	comp=Z,1μm,4.7s						
SKR				pmax	pmax		
	comp=Z,100nm,1.3s						
SKR				smax	smax		
	comp=E,1μm,0.7s						
SKR				smax	smax		
	comp=N,966nm,0.7s						
PEA0B	**Petropavlovsk-**	**2.95**	**76**	*d*iPN	**P**	**14 35 49.9**	**-0.5**
PEA0B	**Petropavlovsk-**	**2.95**	**76**	P	**P**	**14 35 50.1**	**-0.3**
PETK	**Petropavlovsk-**	**2.95**	**76**	P	**P**	**14 35 50.3**	**-0.1**
	comp=N,77nm,0.3s,baz=217,slow=3.8,SNR=788						
PETK				S	**S**	**14 36 46.5**	**-1.5**
	baz=264,slow=40,SNR=0.7						
PETK	**Petropavlovsk-**	**2.95**	**76**	PN	**P**	**14 35 49.9**	**-0.6**
PETK	**Petropavlovsk-**	**2.95**	**76**	P	**P**	**14 35 49.9**	**-0.6**
ASAK	**Asacha**	**3.04**	**90**	*e*P	**P**	**14 35 51.2**	**+0.1**
ASAK				*e*S	**S**	**14 36 48.6**	**-0.6**
ASAK	**Asacha**	**3.04**	**90**	PN	**P**	**14 35 51.2**	**+0.1**
ASAK				S	**S**	**14 36 48.6**	**-0.6**
GRL	**Gorelyy**	**3.13**	**87**	*i*P	**P**	**14 35 52.2**	**+0.3**
GRL				*e*S	**S**	**14 36 51.6**	**+1.1**
GRL	**Gorelyy**	**3.13**	**87**	PN	**P**	**14 35 52.2**	**+0.3**
GRL				S	**S**	**14 36 51.6**	**+1.1**
KRMR	**Karymshinskiy**	**3.17**	**82**	*i*P	**P**	**14 35 52.8**	**+0.8**
KRMR				*e*S	**S**	**14 36 50.2**	**-0.5**
KRMR	**Karymshinskiy**	**3.17**	**82**	PN	**P**	**14 35 52.8**	**+0.8**
KRMR				S	**S**	**14 36 50.2**	**-0.5**
KDTR	**Khodutka, Kamc**	**3.24**	**100**	*i*P	**P**	**14 35 51.0**	**-1.4**
KDTR				*e*S	**S**	**14 36 47.1**	**-4.4**
KDTR	**Khodutka, Kamc**	**3.24**	**100**	PN	**P**	**14 35 51.0**	**-1.4**
KDTR				S	**S**	**14 36 47.1**	**-4.4**
GNL	**Ganaly**	**3.24**	**66**	*e*P	**P**	**14 35 52.1**	**-0.5**
GNL				*e*S	**S**	**14 36 51.1**	**-0.7**
GNL	**Ganaly**	**3.24**	**66**	PN	**P**	**14 35 52.1**	**-0.5**
GNL				S	**S**	**14 36 51.1**	**-0.7**
RUS	**Russkaya**	**3.41**	**89**	*i*P	**P**	**14 35 52.6**	**-1.0**
RUS				*e*S	**S**	**14 36 50.4**	**-3.3**
RUS	**Russkaya**	**3.41**	**89**	PN	**P**	**14 35 52.6**	**-1.0**
RUS				S	**S**	**14 36 50.4**	**-3.3**
PET	**Petropavlovsk**	**3.51**	**79**	*i*P	**P**	**14 35 53.9**	**-0.4**
PET				*i*S	**S**	**14 36 52.4**	**-2.7**
PET	**Petropavlovsk**	**3.51**	**79**	*e*P	**P**	**14 35 53.7**	**-0.6**
PET				*e*S	**S**	**14 36 53.2**	**-1.9**
PET				A	A	14 36 54.6	
	comp=N,300nm,0.6s						
PET	**Petropavlovsk**	**3.51**	**79**κ	*i*PN	**P**	**14 35 54.0**	**-0.4**
PET				*e*S	**S**	**14 36 52.3**	**-2.8**
PET				pmax	pmax		
	comp=Z,6μm,1.1s						
PET				pmax	pmax		
	comp=Z,4μm,0.7s						
PET				smax	smax		
	comp=N,1μm,0.6s						
PET				smax	smax		
	comp=E,956nm,0.6s						
PET	**Petropavlovsk**	**3.51**	**79**	P	**P**	**14 35 53.8**	**-0.4**
KOK	**Koryaka**	**3.54**	**75**	*e*P	**P**	**14 35 55.0**	**+0.3**
KOK				*e*S	**S**	**14 36 55.4**	**-0.3**
KOK	**Koryaka**	**3.54**	**75**	*e*P	**P**	**14 35 55.0**	**+0.3**
KOK	**Koryaka**	**3.54**	**75**	PN	**P**	**14 35 55.0**	**+0.3**
KOK				S	**S**	**14 36 55.4**	**-0.3**
KRX	**Arik**	**3.56**	**74**	*i*P	**P**	**14 35 54.9**	**0.0**
KRX				*e*S	**S**	**14 36 57.4**	**+1.3**
KRX	**Arik**	**3.56**	**74**	PN	**P**	**14 35 54.9**	**0.0**
KRX				S	**S**	**14 36 57.4**	**+1.3**
DALK	**Dalny**	**3.57**	**79**	*i*P	**P**	**14 35 54.4**	**-0.4**
DALK				*e*S	**S**	**14 36 52.5**	**-3.4**
DALK	**Dalny**	**3.57**	**79**	PN	**P**	**14 35 54.4**	**-0.4**
DALK				S	**S**	**14 36 52.5**	**-3.4**
AVH	**Avacha**	**3.59**	**76**	*e*P	**P**	**14 35 55.2**	**+0.1**
AVH	**Avacha**	**3.59**	**76**	*e*P	**P**	**14 35 55.2**	**+0.1**
AVH	**Avacha**	**3.59**	**76**	PN	**P**	**14 35 55.2**	**+0.1**
KRER	**Koryakskii**	**3.60**	**75**	*e*P	**P**	**14 35 55.4**	**0.0**
KRER				*e*S	**S**	**14 36 55.4**	**-1.5**
KRER	**Koryakskii**	**3.60**	**75**	PN	**P**	**14 35 55.4**	**0.0**
KRER				S	**S**	**14 36 55.4**	**-1.5**
SMAR	**Somma**	**3.63**	**76**	*e*P	**P**	**14 35 55.4**	**-0.2**
SMAR				*e*S	**S**	**14 36 55.4**	**-1.8**
SMAR	**Somma**	**3.63**	**76**	PN	**P**	**14 35 55.4**	**-0.2**
SMAR				S	**S**	**14 36 55.4**	**-1.8**
UGLR	**Uglovaya**	**3.63**	**77**	*i*P	**P**	**14 35 55.7**	**+0.2**
UGLR				*e*S	**S**	**14 36 56.5**	**-0.6**
UGLR	**Uglovaya**	**3.63**	**77**	PN	**P**	**14 35 55.7**	**+0.2**
UGLR				S	**S**	**14 36 56.5**	**-0.6**
SDLR	**Sedlovina**	**3.68**	**76**	*i*P	**P**	**14 35 55.6**	**-0.2**
SDLR				*e*S	**S**	**14 36 55.9**	**-1.9**
SDLR	**Sedlovina**	**3.68**	**76**	PN	**P**	**14 35 55.6**	**-0.2**
SDLR				S	**S**	**14 36 55.9**	**-1.9**
KII	**Karymskiy**	**4.19**	**66**	*e*P	**P**	**14 36 00.0**	**+0.1**
KII				*e*S	**S**	**14 37 04.4**	**-0.8**
KII	**Karymskiy**	**4.19**	**66**	PN	**P**	**14 36 00.0**	**+0.1**
KII				S	**S**	**14 37 04.4**	**-0.8**
SPN	**Mys Shipunski**	**4.34**	**79**	*e*P	**P**	**14 35 59.3**	**-1.7**
SPN				*i*S	**S**	**14 37 00.3**	**-6.9**
SPN	**Mys Shipunski**	**4.34**	**79**	*e*P	**P**	**14 35 59.3**	**-1.7**
SPN	**Mys Shipunski**	**4.34**	**79**	PN	**P**	**14 35 59.3**	**-1.7**
SPN				S	**S**	**14 37 00.3**	**-6.9**
ESO	**Esso**	**4.81**	**42**	*i*P	**P**	**14 36 05.5**	**+0.5**
ESO				*e*S	**S**	**14 37 13.7**	**-1.0**
ESO	**Esso**	**4.81**	**42**	PN	**P**	**14 36 05.5**	**+0.5**
ESO				S	**S**	**14 37 13.7**	**-1.0**
KZV	**Kizimen**	**5.08**	**56**	*e*P	**P**	**14 36 08.6**	**+1.0**
KZV	**Kizimen**	**5.08**	**56**	PN	**P**	**14 36 08.6**	**+1.0**
TUMR	**Tumrok**	**5.09**	**54**	*e*P	**P**	**14 36 08.3**	**+0.6**
TUMR				*e*S	**S**	**14 37 19.0**	**-0.4**
TUMR	**Tumrok**	**5.09**	**54**	PN	**P**	**14 36 08.3**	**+0.6**
TUMR				S	**S**	**14 37 19.0**	**-0.4**
KMNR	**Kamenistaya**	**5.38**	**50**	*e*P	**P**	**14 36 10.7**	**+0.4**
KMNR				*e*S	**S**	**14 37 24.6**	**+0.3**
KMNR	**Kamenistaya**	**5.38**	**50**	PN	**P**	**14 36 10.7**	**+0.4**
KMNR				S	**S**	**14 37 24.6**	**+0.3**
KOZ	**Kozyrevsk**	**5.40**	**46**	*e*P	**P**	**14 36 11.2**	**+0.8**
KOZ				*e*S	**S**	**14 37 23.6**	**-0.8**
KOZ	**Kozyrevsk**	**5.40**	**46**	PN	**P**	**14 36 11.2**	**+0.8**
KOZ				S	**S**	**14 37 23.6**	**-0.8**
SRDR	**Sredinnyy**	**5.50**	**43**	*e*P	**P**	**14 36 11.6**	**+0.3**
SRDR				*e*S	**S**	**14 37 26.2**	**0.0**
SRDR	**Sredinnyy**	**5.50**	**43**	PN	**P**	**14 36 11.6**	**+0.3**
SRDR				S	**S**	**14 37 26.2**	**0.0**
KIRR	**Kirishev**	**5.54**	**49**	*e*P	**P**	**14 36 11.4**	**-0.5**
KIRR				*e*S	**S**	**14 37 25.7**	**-1.5**
KIRR	**Kirishev**	**5.54**	**49**	PN	**P**	**14 36 11.4**	**-0.5**
KIRR				S	**S**	**14 37 25.7**	**-1.5**
BZWR	**Bezymyannyi-We**	**5.62**	**49**	*e*P	**P**	**14 36 12.8**	**+0.1**
BZWR				*e*S	**S**	**14 37 28.6**	**+0.1**
BZWR	**Bezymyannyi-We**	**5.62**	**49**	PN	**P**	**14 36 12.8**	**+0.1**
BZWR				S	**S**	**14 37 28.6**	**+0.1**
MKZ	**Mys Kozlova**	**5.63**	**65**	*e*P	**P**	**14 36 10.6**	**-1.9**
MKZ				*e*S	**S**	**14 37 20.9**	**-7.4**
MKZ	**Mys Kozlova**	**5.63**	**65**	PN	**P**	**14 36 10.6**	**-1.9**
MKZ				S	**S**	**14 37 20.9**	**-7.4**
BZGR	**Bezymyannyi-Gr**	**5.70**	**50**	*e*P	**P**	**14 36 13.5**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**5.70**	**50**	PN	**P**	**14 36 13.5**	**+0.2**
LGNR	**Loginova**	**5.78**	**49**	*e*P	**P**	**14 36 14.8**	**+0.5**
LGNR	**Loginova**	**5.78**	**49**	PN	**P**	**14 36 14.8**	**+0.5**
ZLN	**Zelenaya**	**5.79**	**50**	*e*P	**P**	**14 36 14.8**	**+0.6**
ZLN	**Zelenaya**	**5.79**	**50**	PN	**P**	**14 36 14.8**	**+0.6**
KRSR	**Krestovskiy**	**5.80**	**47**	*e*P	**P**	**14 36 13.8**	**-0.5**
KRSR				*e*S	**S**	**14 37 30.2**	**-1.3**
KRSR	**Krestovskiy**	**5.80**	**47**	PN	**P**	**14 36 13.8**	**-0.5**
KRSR				S	**S**	**14 37 30.2**	**-1.3**
CIRR	**Tsirk**	**5.82**	**49**	*e*P	**P**	**14 36 14.8**	**+0.3**
CIRR				*e*S	**S**	**14 37 31.0**	**-1.0**
CIRR	**Tsirk**	**5.82**	**49**	PN	**P**	**14 36 14.8**	**+0.3**
CIRR				S	**S**	**14 37 31.0**	**-1.0**
KLY	**Klyuchi**	**5.90**	**47**	*e*P	**P**	**14 36 16.3**	**+1.3**
KLY				*e*S	**S**	**14 37 33.6**	**+0.6**
KLY	**Klyuchi**	**5.90**	**47**	PN	**P**	**14 36 16.3**	**+1.3**
KLY				S	**S**	**14 37 33.6**	**+0.6**
OKH	**Okha**	**6.13**	**284**	*e*P	**P**	**14 36 18.6**	**+1.2**
OKH				AMB	AMB	14 36 19.5	
	comp=E,1μm,0.8s						
OKH	**Okha**	**6.13**	**284**	*de*PN	**P**	**14 36 20.7**	**+3.3**
OKH				*e*S	**S**	**14 37 38.0**	**+0.9**
OKH				smax	smax		
	comp=E,600nm,9.5s						
OKH				smax	smax		
	comp=N,400nm,11.7s						
OKH				MLR	MLR		
	comp=Z,100nm,13.0s						
OKH				MLR	MLR		
	comp=N,200nm,12.0s						
BDR	**Baidarnaya**	**6.30**	**46**	*e*P	**P**	**14 36 18.9**	**-0.2**
BDR				*e*S	**S**	**14 37 39.3**	**-1.0**
BDR	**Baidarnaya**	**6.30**	**46**	PN	**P**	**14 36 18.9**	**-0.2**
BDR				S	**S**	**14 37 39.3**	**-1.0**
SRKR	**Sorokina**	**6.33**	**46**	*e*P	**P**	**14 36 18.9**	**-0.5**
SRKR				*e*S	**S**	**14 37 39.8**	**-1.1**
SRKR	**Sorokina**	**6.33**	**46**	PN	**P**	**14 36 18.9**	**-0.5**
SRKR				S	**S**	**14 37 39.8**	**-1.1**
SMKR	**Semkarok**	**6.42**	**47**	*e*P	**P**	**14 36 21.7**	**+1.4**
SMKR				*i*S	**S**	**14 37 42.0**	**-0.5**
SMKR	**Semkarok**	**6.42**	**47**	PN	**P**	**14 36 21.7**	**+1.4**
SMKR				S	**S**	**14 37 42.0**	**-0.5**
TYV	**Tymovskoe**	**6.61**	**260**	*e*P	**P**	**14 36 23.5**	**+1.4**
TYV				AMB	AMB	14 36 24.0	
	comp=N,200nm,1.6s						
TYV				AMB	AMB	14 36 24.0	
	comp=N,136nm,0.6s						
TYV				*e*S	**S**	**14 37 46.4**	**+0.6**
TYV				A	A	14 37 48.0	
	comp=N,4μm,3.5s						
TYV				A	A	14 37 48.0	
	comp=N,402nm,1.1s						
TYV	**Tymovskoe**	**6.61**	**260**	*e*PN	**P**	**14 36 23.7**	**+1.6**
TYV				*e*S	**S**	**14 37 47.0**	**+1.2**
TYV				pmax	pmax		
	comp=Z,200nm,1.6s						
TYV				pmax	pmax		
	comp=Z,136nm,0.6s						
TYV				smax	smax		
	comp=N,4μm,3.5s						
TYV				smax	smax		
	comp=N,402nm,1.1s						
KBG	**Krutoberegovo**	**6.83**	**53**	*e*P	**P**	**14 36 21.7**	**-2.5**
KBG				*e*S	**S**	**14 37 44.0**	**-5.6**
KBG	**Krutoberegovo**	**6.83**	**53**	PN	**P**	**14 36 21.7**	**-2.5**
KBG				S	**S**	**14 37 44.0**	**-5.6**
KBTR	**Krutoberegovo**	**6.86**	**53**	*e*P	**P**	**14 36 21.7**	**-2.8**
KBTR				*e*S	**S**	**14 37 43.9**	**-6.4**
KBTR	**Krutoberegovo**	**6.86**	**53**	PN	**P**	**14 36 21.7**	**-2.8**
KBTR				S	**S**	**14 37 43.9**	**-6.4**
MA2	**Magadan**	**7.19**	**351**	S	**S**	**14 37 54.3**	**-2.0**
	baz=228,slow=20,SNR=2.2						
MA2	**Magadan**	**7.19**	**351**	*e*P	**P**	**14 36 27.6**	**-0.2**
MA2	**Magadan**	**7.19**	**351**	PN	**P**	**14 36 27.6**	**-0.2**
MA2	**Magadan**	**7.19**	**351**	P	**P**	**14 36 27.6**	**-0.2**
NKL	**Nikolayevsk**	**7.46**	**280**	*e*P	**P**	**14 36 31.5**	**+0.8**
NKL				AMB	AMB	14 36 32.0	
	comp=N,494nm,0.7s						
NKL				*e*S	**S**	**14 38 03.2**	**+1.7**
NKL				A	A	14 38 07.0	
	comp=N,14nm,3.2s						
NKL				A	A	14 38 07.0	
	comp=N,83nm,3.2s						
NKL	**Nikolayevsk**	**7.46**	**280**	*e*PN	**P**	**14 36 29.1**	**-1.6**
NKL				pmax	pmax		
	comp=E,39nm,0.8s						
NKL				pmax	pmax		
	comp=N,7.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,495nm,0.7s						
PALN	**Palana**	**7.69**	**28**	*e*P	**P**	**14 36 32.7**	**-0.2**
PALN	**Palana**	**7.69**	**28**	PN	**P**	**14 36 32.7**	**-0.2**
UGL	**Uglegorsk**	**7.70**	**248**	*i*P	**P**	**14 36 34.5**	**+1.3**
UGL				AMB	AMB	14 36 35.5	
	comp=Z,1μm,0.9s						
UGL				AMB	AMB	14 36 35.7	
	comp=Z,818nm,0.8s						
UGL				*e*S	**S**	**14 38 05.9**	**-0.2**
UGL				A	A	14 38 07.4	
	comp=Z,2μm,3.4s						
UGL				A	A	14 38 09.9	
	comp=Z,255nm,1.6s						
UGL				A	A	14 38 09.9	
	comp=Z,467nm,1.6s						
UGL	**Uglegorsk**	**7.70**	**248**	⇑*i*PN	**P**	**14 36 35.0**	**+1.8**
UGL				pmax	pmax		
	comp=Z,1μm,0.9s						
UGL				pmax	pmax		
	comp=Z,818nm,0.8s						
KUR	**Kuril'sk**	**8.01**	**207**	*i*P	**P**	**14 36 36.0**	**-0.5**
KUR				AMB	AMB	14 36 39.3	
	comp=Z,2μm,1.0s						
KUR				*i*S	**S**	**14 38 10.5**	**-1.5**
KUR				A	A	14 38 18.4	
	comp=Z,190nm,0.7s						
KUR				A	A	14 38 18.4	
	comp=Z,100nm,0.7s						
KUR				A	A	14 38 23.0	
	comp=Z,332nm,1.1s						
KUR				A	A	14 38 23.0	
	comp=Z,294nm,1.1s						
KUR	**Kuril'sk**	**8.01**	**207**	*c*iPN	**P**	**14 36 35.8**	**-0.7**
KUR				*i*S	**S**	**14 38 09.5**	**-2.5**
KUR				pmax	pmax		
	comp=Z,470μm,0.5s						
KUR				pmax	pmax		
	comp=N,81μm,0.3s						
KUR				smax	smax		
	comp=N,332nm,1.1s						
KUR				smax	smax		
	comp=E,294nm,0.8s						
BKI	**Bering**	**8.16**	**66**	*e*P	**P**	**14 36 38.5**	**+0.7**
BKI				*e*S	**S**	**14 38 10.4**	**-4.2**
BKI	**Bering**	**8.16**	**66**	PN	**P**	**14 36 38.5**	**+0.7**
BKI				S	**S**	**14 38 10.4**	**-4.2**
YSS	**Yuzh-Sakhalins**	**8.62**	**234**	*i*P	**P**	**14 36 44.2**	**+1.4**
YSS				AMB	AMB	14 36 45.0	
	comp=E,320nm,0.6s						
YSS				AMB	AMB	14 36 45.6	
	comp=E,700nm,3.5s						
YSS				*e*S	**S**	**14 38 23.7**	**0.0**
YSS				A	A	14 38 26.5	
	comp=E,2μm,3.5s						
YSS				A	A	14 38 26.5	
	comp=E,2μm,3.5s						
YSS				A	A	14 38 27.2	
	comp=E,60nm,0.9s						
YSS				A	A	14 38 27.2	
	comp=E,30nm,0.9s						
YSS	**Yuzh-Sakhalins**	**8.62**	**234**α	*i*PN	**P**	**14 36 44.3**	**+1.4**
YSS				*e*S	**S**	**14 38 24.0**	**+0.3**
YSS				pmax	pmax		
	comp=Z,410nm,0.7s						
YSS				pmax	pmax		
	comp=N,200nm,0.6s						
YSS				pmax	pmax		
	comp=E,190nm,0.7s						
YSS				pmax	pmax		
	comp=Z,700nm,3.5s						
YSS				smax	smax		
	comp=N,2μm,3.5s						
YSS				smax	smax		
	comp=E,2μm,4.7s						
YSS				smax	smax		
	comp=N,60nm,0.9s						
YSS				smax	smax		
	comp=E,30nm,1.1s						
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
YSS	**Yuzh-Sakhalins**	**8.62**	**234**	P	**P**	**14 36 44.2**	**+1.4**
OSSR	**Ossora**	**8.82**	**36**	*e*P	**P**	**14 36 45.6**	**+1.0**
OSSR	**Ossora**	**8.82**	**36**	PN	**P**	**14 36 45.6**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**9.70**	**212**	*e*P	**P**	**14 36 53.6**	**-0.6**
YUK				AMB	AMB	14 36 58.0	
	comp=Z,478nm,0.6s						
YUK				*i*S	**S**	**14 38 41.3**	**-3.2**
YUK				A	A	14 38 48.0	
	comp=Z,2μm,1.2s						
YUK				A	A	14 38 48.0	
	comp=Z,1μm,1.2s						
YUK	**Yuzh-Kuril'sk**	**9.70**	**212**	*e*PN	**P**	**14 36 52.9**	**-1.3**
YUK				*i*S	**S**	**14 38 41.1**	**-3.4**
YUK				pmax	pmax		
	comp=Z,479μm,0.6s						
YUK				pmax	pmax		
	comp=E,281μm,0.4s						
YUK				pmax	pmax		
	comp=N,254μm,0.5s						
YUK				smax	smax		
	comp=E,1428μm,1.2s						
YUK				smax	smax		
	comp=N,1681μm,1.1s						
GRPR	**Tuman**	**9.77**	**212**	*e*P	**P**	**14 36 54.0**	**-0.9**
GRPR				AMB	AMB	14 36 58.0	
	comp=N,359nm,0.7s						
GRPR				*i*S	**S**	**14 38 43.0**	**-2.8**
GRPR	**Tuman**	**9.77**	**212**	*e*PN	**P**	**14 36 54.0**	**-0.9**
GRPR				*i*S	**S**	**14 38 43.3**	**-2.5**
GRPR				pmax	pmax		
	comp=Z,359nm,0.7s						
GRPR				pmax	pmax		
	comp=N,177nm,0.2s						
GRPR				pmax	pmax		
	comp=E,336nm,0.5s						
GLVR	**Golovnino**	**10.07**	**212**	*e*P	**P**	**14 36 57.8**	**-0.3**
GLVR				AMB	AMB	14 36 59.8	
	comp=E,379nm,0.6s						
GLVR				*i*S	**S**	**14 38 49.0**	**-2.8**
GLVR	**Golovnino**	**10.07**	**212**	*e*PN	**P**	**14 36 57.8**	**-0.3**
GLVR				*i*S	**S**	**14 38 49.2**	**-2.6**
GLVR				pmax	pmax		
	comp=Z,379nm,0.6s						
NMR	**Nemuro--Hokkai**	**10.34**	**211**	*e*P	**P**	**14 36 57.0**	**-4.0**
NMR	**Nemuro--Hokkai**	**10.34**	**211**	*e*PN	**P**	**14 36 57.7**	**-3.3**
GRNR	**Gornyy**	**10.42**	**267**	*e*P	**P**	**14 37 02.9**	**+1.2**
GRNR				AMB	AMB	14 37 03.3	
	comp=Z,30nm,0.8s						
GRNR				AMB	AMB	14 37 03.3	
	comp=Z,110nm,0.8s						
GRNR				AMB	AMB	14 37 03.3	
	comp=Z,150nm,0.8s						
GRNR	**Gornyy**	**10.42**	**267**	⇓*i*PN	**P**	**14 37 02.9**	**+1.2**
GRNR				*e*S	**S**	**14 38 56.8**	**-1.5**
GRNR				pmax	pmax		
	comp=E,110nm,0.7s						
GRNR				pmax	pmax		
	comp=Z,150nm,0.7s						
GRNR				pmax	pmax		
	comp=N,30nm,1.0s						
GRNR				smax	smax		
	comp=N,90nm,1.0s						
GRNR				MLR	MLR		
	comp=E,40nm,15.0s						
GRNR				MLR	MLR		
	comp=N,70nm,10.0s

KMSK Kamenskaya 12.24 30 PN **P** **14 37 20.9 +0.2**
JEW Eniwo 12.38 223 P **P** **14 37 20.7 -1.8**
ERM Erimo 12.41 216 *ce* PN **P** **14 37 20.8 -2.2**
ERM pmax pmax
comp=Z,789nm,1.0s
ERM Erimo 12.41 216 P **P** **14 37 20.7 -2.2**
TEY Ternei 13.10 242 *i* P **P** **14 37 31.2 +1.1**
TEY AMB AMB 14 37 31.9
comp=Z,40nm,0.9s
TEY Ternei 13.10 242 ⇑*i* PN **P** **14 37 31.2 +1.1**
TEY pmax pmax
comp=E,30nm,1.0s
TEY pmax pmax
comp=N,20nm,0.8s
TEY pmax pmax
comp=Z,40nm,0.9s
KLR Kul'dur 13.77 265 P **P** **14 37 37.4 +0.2**
comp=Z,4.2nm,0.3s,baz=69,slow=7.0,SNR=64
JTM Tenmabayashi 14.26 219 P **P** **14 37 39.8 -2.6**
ZEA Zeya 15.45 285 *eP* **P** **14 37 53.4 -1.3**
ZEA AMB AMB 14 37 54.7
comp=Z,40nm,0.8s
ZEA AMB AMB 14 37 54.7
comp=Z,80nm,0.8s
ZEA AMB AMB 14 37 54.7
comp=Z,200nm,0.8s
ZEA Zeya 15.45 285 *de* P **P** **14 37 53.4 -1.3**
ZEA *e* S **S** **14 40 34.4 -0.9**
ZEA pmax pmax
comp=Z,300nm,1.4s
ZEA pmax pmax
comp=E,80nm,0.8s
ZEA pmax pmax
comp=N,40nm,0.5s
ZEA pmax pmax
comp=Z,200nm,1.6s
ZEA smax smax
comp=N,200nm,2.8s
ZEA smax smax
comp=E,500nm,3.3s
ZEA smax smax
comp=N,30nm,1.5s
ZEA smax smax
comp=E,40nm,1.0s
KROS Kirovskiy 15.56 287 *eP* **P** **14 37 55.0 -0.8**
KROS AMB AMB 14 37 56.9
comp=E,210nm,0.4s
KROS AMB AMB 14 37 56.9
comp=E,160nm,0.4s
KROS AMB AMB 14 37 56.9
comp=E,290nm,0.4s
YAK Yakutsk 15.70 317 P **P** **14 37 55.3 -1.8**
comp=E,2.9nm,0.3s,baz=292,slow=1.8,SNR=84
YAK S **S** **14 40 35.9 -3.8**
comp=E,0.0nm,0.3s,baz=59,slow=23,SNR=8.2
YAK Yakutsk 15.70 317 *eP* **P** **14 37 55.1 -2.0**
YAK Yakutsk 15.70 317 *d i* P **P** **14 37 55.3 -1.8**
YAK *e* S **S** **14 40 35.7 -4.0**
YAK pmax pmax
comp=N,315nm,1.0s
YAK pmax pmax
comp=E,120nm,1.2s
YAK smax smax
comp=N,297nm,2.0s
YAK smax smax
comp=E,73nm,0.9s
YAK Yakutsk 15.70 317 P **P** **14 37 55.0 -2.0**
USA0B Ussuriysk Arra 16.18 247 *i* P **P** **14 38 02.4 0.0**
USA0B Ussuriysk Arra 16.18 247 P **P** **14 38 01.2 -1.2**
USA0B IAmb IAmb 14 38 03.6
comp=Z,17nm,1.0s
USRK Ussuriysk Ar. 16.18 247 P **P** **14 38 01.5 -0.9**
baz=54,slow=12,SNR=26
USRK ScP **ScP** **14 45 12.3 +1.0**
baz=32,slow=2.4,SNR=4.5
USRK Ussuriysk Ar. 16.18 247 P **P** **14 38 00.7 -1.7**
AMKA Amchitka 16.26 83 P **P** **14 38 03.7 +0.4**
BILL Bilibino 16.85 17 *eP* **P** **14 38 07.7 -1.4**
BILL Bilibino 16.85 17 *c i* P **P** **14 38 07.5 -1.7**
BILL *i* S **S** **14 40 58.9 -1.7**
BILL pmax pmax
comp=Z,83nm,0.6s
BILL Bilibino 16.85 17 P **P** **14 38 07.5 -1.7**
JMM Marumori 16.93 215 P **P** **14 38 09.7 -0.6**
MDJ Mudanjiang 17.30 252 P **P** **14 38 12.4 -1.5**
MDJ S **S** **14 41 06.9 -1.8**
MDJ sS 14 41 09.0
MDJ pmax pmax
comp=Z,41nm,0.7s
MDJ pmax pmax
comp=Z,110nm,3.8s
MDJ Mudanjiang 17.30 252 P **P** **14 38 12.2 -1.6**
MDJ IAmb IAmb 14 38 13.9
comp=Z,28nm,0.8s
JSD Sado 17.73 221 P **P** **14 38 17.5 -0.5**
JYT Yasato 18.61 214 P **P** **14 38 26.1 +0.1**
MAJO Matsushiro 19.05 219 *c i* P **P** **14 38 30.9 +0.8**
MAJO pmax pmax
comp=Z,187nm,0.6s
MAJO Matsushiro 19.05 219 P **P** **14 38 30.3 +0.2**
MAT Matsushiro 19.05 219 P **P** **14 38 30.4 +0.3**
MAT S **S** **14 41 38.7 +1.3**
MJAR Matsushiro Arr 19.05 219 P **P** **14 38 31.3 +1.3**
comp=Z,3.0nm,0.3s,baz=19,slow=10,SNR=246
MJAR S **S** **14 41 38.0 +0.6**
baz=21,slow=16,SNR=13
MJAR ScP **ScP** **14 45 18.0 +0.4**
comp=Z,0.0nm,0.3s,baz=54,slow=3.8,SNR=6.2
MJAR Matsushiro Arr 19.05 219 P **P** **14 38 30.6 +0.5**
MJAR **ScP** **14 45 17.6 0.0**
JGF Kuroka 20.20 219 P **P** **14 38 41.1 +0.5**
CN2 Changchun 20.20 255 *eP* **P** **14 38 39.6 -0.8**
CN2 *e* S **S** **14 41 52.4 -3.4**
CN2 pmax pmax
comp=Z,50nm,0.8s
CN2 pmax pmax
comp=Z,70nm,6.0s
INU Inuyama 20.55 220 P **P** **14 38 43.6 -0.1**
JSG Sagara 20.71 216 P **P** **14 38 46.0 +0.8**
HIA Hailar 21.09 274 P **P** **14 38 47.6 -0.8**
HIA pmax pmax
comp=Z,182nm,0.7s
HIA Hailar 21.09 274 P **P** **14 38 47.6 -0.8**
JWT Wachi 21.26 223 P **P** **14 38 50.3 +0.2**
JWT IAmb IAmb 14 38 51.2
comp=Z,26nm,0.6s
TIXI Tiksi 21.96 340 *eP* **P** **14 38 55.6 -0.3**
TIXI Tiksi 21.96 340 *d i* P **P** **14 38 55.6 -0.3**
TIXI Tiksi 21.96 340 P **P** **14 38 55.6 -0.3**
TIXI IAmb IAmb 14 38 56.8
comp=Z,35nm,1.1s
JHS Saijyo 22.49 227 P **P** **14 39 02.1 +0.9**
JHS IAmb IAmb 14 39 06.9
comp=Z,19nm,0.8s
BOD Bodaibo 22.63 299 *eP* **P** **14 39 01.3 -0.8**
BOD pmax pmax
comp=Z,89nm,1.0s
KSRS Korea Array 23.07 239 P **P** **14 39 07.7 +1.3**
comp=Z,10nm,0.8s,baz=43,slow=9.3,SNR=24
KSRS PcP **PcP** **14 42 38.0 +0.8**
comp=Z,4.1nm,0.7s,baz=27,slow=1.6,SNR=9.3
KSRS ScP **ScP** **14 45 29.6 +2.0**
comp=Z,5.1nm,1.0s,baz=57,slow=0.6,SNR=11
KSAR Wonju Array Be 23.10 239 P **P** **14 39 06.7 +0.1**
KSAR Wonju Array Be 23.10 239 P **P** **14 39 06.7 +0.1**
JMN Monobe 23.24 224 P **P** **14 39 08.2 +0.2**
JMN IAmb IAmb 14 39 25.5
comp=Z,31nm,1.1s
TNA Tin City 23.52 41 P **P** **14 39 10.6 +0.7**
ANM Nome 24.36 44 P **P** **14 39 19.0 +1.6**
ANM pmax pmax
comp=Z,116nm,1.4s
ANM Nome 24.36 44 P **P** **14 39 19.0 +1.6**
JNU Nakatsue 25.07 228 P **P** **14 39 25.0 +0.8**
comp=Z,13nm,0.8s,baz=127,slow=0.9,SNR=8.2
JNU Nakatsue 25.07 228 P **P** **14 39 24.6 +0.4**
JNU IAmb IAmb 14 39 29.9
comp=Z,20nm,1.0s
JSU Suzuyama 26.62 227 P **P** **14 39 39.0 +1.0**
JSU IAmb IAmb 14 39 39.4
comp=Z,21nm,1.0s
JCJ Chichijima 26.63 202 P **P** **14 39 39.4 +1.4**
CNBA Chernabura Isl 27.80 66 P **P** **14 39 49.6 +1.7**
BJI Beijing 27.99 258 P **P** **14 39 50.5 +0.8**
BJI PcP **PcP** **14 42 49.1 +0.4**
BJI S **S** **14 43 57.1 -1.2**
BJI ScS **ScS** **14 49 36.0 +0.7**
BJI pmax pmax
comp=Z,13nm,0.7s
BJT Baijiatuau 28.00 258 P **P** **14 39 50.4 +0.5**
BJT pmax pmax
comp=Z,10.0nm,0.6s
BJT Baijiatuau 28.00 258 P **P** **14 39 50.4 +0.5**
BJT IAmb IAmb 14 39 52.1
comp=Z,10.0nm,0.6s
TTA Tatalina 28.41 48 P **P** **14 39 54.1 +0.8**
TTA pmax pmax
comp=Z,41nm,0.8s
TTA Tatalina 28.41 48 P **P** **14 39 54.1 +0.8**
TTA IAmb IAmb 14 39 55.1
comp=Z,41nm,0.8s
SVW2 Sparrevohn 28.75 52 P **P** **14 39 57.6 +1.5**
SVW2 IAmb IAmb 14 39 58.7
comp=Z,29nm,1.0s
A21K Barrow 28.99 31 P **P** **14 39 58.4 +0.2**
baz=257,SNR=96
A21K S **S** **14 44 11.9 -1.2**
baz=257
A21K Barrow 28.99 31 P **P** **14 39 58.3 +0.2**
ULN Ulaanbaatar 29.36 280 *eP* **P** **14 40 01.8 0.0**
ULN Ulaanbaatar 29.36 280 *d i* P **P** **14 40 01.8 0.0**
ULN pmax pmax
comp=Z,27nm,0.8s
ULN Ulaanbaatar 29.36 280 P **P** **14 40 01.6 -0.2**
ULN IAmb IAmb 14 40 02.9
comp=Z,23nm,0.8s
SONM Songino Array 29.77 280 P **P** **14 40 05.1 -0.1**
comp=Z,7.8nm,0.7s,baz=61,slow=8.0,SNR=27
SONM PcP **PcP** **14 42 53.5 +0.1**
comp=Z,7.3nm,0.7s,baz=69,slow=1.6,SNR=11
SONM ScP **ScP** **14 45 47.7 +0.1**
comp=Z,4.6nm,1.1s,baz=64,slow=3.4,SNR=7.3
SONM Songino Array 29.77 280 P **P** **14 40 05.2 -0.1**
SONM 14 42 52.7
SONM pmax pmax
comp=Z,5.0nm,0.8s
SONM Songino Array 29.77 280 P **P** **14 40 05.2 -0.1**
SONM **PcP** **14 42 52.7 -0.7**
SONM ScP **ScP** **14 45 45.5 -2.1**
TLY Talaya 29.83 288 P **P** **14 40 06.4 +0.6**
comp=Z,38nm,0.7s,baz=56,slow=5.7,SNR=28
TLY PcP **PcP** **14 42 53.4 +0.1**
comp=Z,9.1nm,0.8s,baz=60,slow=3.6,SNR=4.6
TLY Talaya 29.83 288 *d i* P **P** **14 40 06.4 +0.6**
TLY pmax pmax
comp=Z,83nm,1.0s
TLY Talaya 29.83 288 P **P** **14 40 06.3 +0.6**
TLY **PcP** **14 42 53.2 -0.1**
PPLA Purkeypile 30.16 48 P **P** **14 40 10.2 +1.7**
PPLA IAmb IAmb 14 40 13.0
comp=Z,38nm,0.9s
RSO Redoubt South 30.21 53 P **P** **14 40 10.8 +1.7**
ZAK Zakamensk 30.54 286 *eP* **P** **14 40 12.2 +0.3**
ZAK Zakamensk 30.54 286 *eP* **P** **14 40 12.2 +0.3**
ZAK pmax pmax
comp=Z,71nm,1.1s
SKT Skwentna 30.57 50 P **P** **14 40 12.7 +0.8**
SKT IAmb IAmb 14 40 15.0
comp=Z,25nm,1.1s
BPAW Bear Paw Mtn. 30.58 46 P **P** **14 40 13.2 +1.1**
BPAW IAmb IAmb 14 40 14.1
comp=Z,34nm,0.9s
OHAK Old Harbor 30.61 60 P **P** **14 40 13.1 +0.8**
OHAK IAmb IAmb 14 40 13.4
comp=Z,45nm,0.8s
MLY Manley 30.63 44 P **P** **14 40 13.5 +1.1**
baz=274,SNR=11
KTH Kantishna Hill 30.66 47 P **P** **14 40 14.0 +1.2**
COLD Coldfoot 30.78 40 P **P** **14 40 14.5 +0.8**
baz=270,SNR=108
COLD Coldfoot 30.78 40 P **P** **14 40 14.4 +0.8**
KDAK Kodiak Island 30.84 58 P **P** **14 40 14.8 +0.5**
KDAK pmax pmax
comp=Z,32nm,0.9s
KDAK Kodiak Island 30.84 58 P **P** **14 40 14.8 +0.5**
KDAK IAmb IAmb 14 40 14.9
comp=Z,32nm,0.9s
TRF Thorofare Moun 30.95 47 P **P** **14 40 16.5 +1.1**
SUA Susitna One 31.01 51 P **P** **14 40 16.5 +0.6**
SUA IAmb IAmb 14 40 17.4
comp=Z,46nm,1.0s
TOLK Toolik Lake Re 31.04 37 P **P** **14 40 16.6 +0.7**
baz=268,SNR=37
TOLK S **S** **14 44 44.7 -0.3**
baz=268
TOLK Toolik Lake Re 31.04 37 P **P** **14 40 16.4 +0.4**
CUT Chulitna 31.09 49 P **P** **14 40 17.3 +0.9**
baz=278
CNPM China Poot 31.14 55 P **P** **14 40 17.3 +0.5**
I23K Minto, Yukon-K 31.20 44 P **P** **14 40 18.5 +1.2**
baz=274,SNR=34
I23K Minto, Yukon-K 31.20 44 P **P** **14 40 18.3 +1.0**
BWN Browne 31.24 45 P **P** **14 40 19.4 +1.8**
BRLK Bradley Lake 31.26 54 P **P** **14 40 18.6 +0.7**
BRLK IAmb IAmb 14 40 18.9
comp=Z,42nm,1.1s
NEA2 Nenana 31.37 45 P **P** **14 40 19.9 +1.1**
baz=276,SNR=5.2
MCK McKinley 31.52 46 P **P** **14 40 21.3 +1.1**
baz=277,SNR=25
RC01 Rabbit Creek A 31.56 51 P **P** **14 40 21.2 +0.8**
baz=281
RND Reindeer 31.60 47 P **P** **14 40 21.4 +0.5**
RND pmax pmax
comp=Z,56nm,1.0s
RND Reindeer 31.60 47 P **P** **14 40 21.4 +0.5**
RND IAmb IAmb 14 40 22.2
comp=Z,56nm,1.0s
O22K Cooper Landing 31.68 53 P **P** **14 40 21.3 -0.2**
baz=282
O22K Cooper Landing 31.68 53 P **P** **14 40 22.1 +0.6**
MDM Murphy Dome 31.70 44 P **P** **14 40 22.2 +0.6**
MDM IAmb IAmb 14 40 24.2
comp=Z,44nm,0.9s
TIY Taiyuan 31.72 258 *eP* **P** **14 40 22.7 +0.5**
PMR Palmer 31.75 50 P **P** **14 40 22.7 +0.7**
PMR pmax pmax
comp=Z,15nm,0.8s
PMR Palmer 31.75 50 P **P** **14 40 22.7 +0.7**
PMR IAmb IAmb 14 40 36.7
comp=Z,15nm,0.8s
WRH Wood River Hil 31.81 45 P **P** **14 40 23.7 +1.2**
GHO Glory Hole Cre 31.82 50 P **P** **14 40 23.8 +1.0**
TCOL CIGO, UAF Yank 31.86 44 P **P** **14 40 24.1 +1.2**
baz=276,SNR=35
TCOL CIGO, UAF Yank 31.86 44 P **P** **14 40 24.2 +1.2**
COLA College 31.86 44 *c i* P **P** **14 40 24.1 +1.2**
COLA pmax pmax
comp=Z,83nm,0.8s
COLA College 31.86 44 P **P** **14 40 24.1 +1.2**
SEW Seward 31.89 53 P **P** **14 40 24.0 +0.7**
SEW IAmb IAmb 14 40 24.5
comp=Z,50nm,1.0s
CCB Clear Creek Bu 31.91 44 P **P** **14 40 24.3 +1.0**
POKR Poker Plat Res 32.02 44 P **P** **14 40 25.5 +1.2**
baz=276,SNR=18
POKR Poker Plat Res 32.02 44 P **P** **14 40 25.4 +1.1**
NJ2 Nanjing 32.02 244 ⇓P **P** **14 40 24.9 +0.1**
NJ2 pmax pmax
comp=Z,37nm,0.8s
SML Sawmill 32.09 50 P **P** **14 40 25.9 +0.9**
KNK Knik Glacier 32.10 51 P **P** **14 40 25.9 +0.8**
IL31 32.29 44 P **P** **14 40 27.3 +0.7**
IL31 IAmb IAmb 14 40 28.2
comp=Z,46nm,0.9s
ILAR Eielson Array 32.29 44 P **P** **14 40 26.9 +0.3**
comp=Z,32nm,0.8s,baz=281,slow=11,SNR=357
ILAR S **S** **14 45 02.1 -1.9**
comp=Z,0.9nm,1.0s,baz=293,slow=4.1,SNR=2.0
ILAR ScP **ScP** **14 45 54.8 -0.9**
comp=Z,1.7nm,0.9s,baz=287,slow=4.1,SNR=4.7
ILAR Eielson Array 32.29 44 P **P** **14 40 27.2 +0.6**
HDA Harding Lake 32.31 45 P **P** **14 40 27.0 +0.3**
baz=278,SNR=18
HDA Harding Lake 32.31 45 P **P** **14 40 27.3 +0.5**
HDA IAmb IAmb 14 40 29.8
comp=Z,39nm,0.9s
DHY Denali Highway 32.31 47 P **P** **14 40 27.6 +0.6**
SCM Sheep Creek Mo 32.55 50 P **P** **14 40 29.8 +0.8**
SCM pmax pmax
comp=Z,76nm,0.9s
SCM Sheep Creek Mo 32.55 50 P **P** **14 40 29.8 +0.8**
PRP Porcupine Dome 32.77 43 P **P** **14 40 32.1 +1.3**
FYU Fort Yukon 32.77 41 P **P** **14 40 32.0 +1.4**
GLI Glacier Island 32.86 51 P **P** **14 40 32.1 +0.6**
M24K Tolsona, Glenn 33.03 49 P **P** **14 40 34.6 +1.5**
baz=282,SNR=7.3
M24K Tolsona, Glenn 33.03 49 P **P** **14 40 34.5 +1.5**
M24K IAmb IAmb 14 40 35.1
comp=Z,40nm,0.8s
FID Port Fidalgo 33.19 51 P **P** **14 40 34.9 +0.6**
FID IAmb IAmb 14 40 38.6
comp=Z,26nm,0.8s
PAX Paxson 33.19 47 P **P** **14 40 35.8 +1.4**
PAX pmax pmax
comp=Z,15nm,0.8s
PAX Paxson 33.19 47 P **P** **14 40 35.8 +1.4**
PAX IAmb IAmb 14 40 38.5
comp=Z,15nm,0.8s
KLU Klutina 33.28 50 P **P** **14 40 36.1 +0.9**
EYAK Cordova Ski Ar 33.58 52 P **P** **14 40 38.9 +1.3**
EYAK IAmb IAmb 14 40 39.8
comp=Z,30nm,0.9s
SCRK Sand Creek 33.65 45 P **P** **14 40 38.4 +0.1**
baz=281,SNR=54
DOT Dot Lake 33.68 46 P **P** **14 40 38.0 -0.5**
N25K Chitina, Valde 33.87 50 P **P** **14 40 41.5 +1.4**
baz=284,SNR=14
N25K Chitina, Valde 33.87 50 P **P** **14 40 41.4 +1.2**
N25K IAmb IAmb 14 40 42.5
comp=Z,23nm,0.8s
NRIK Noril'sk 33.87 325 P **P** **14 40 39.6 -0.4**
comp=Z,15nm,0.6s,baz=96,slow=9.2,SNR=22
NRIK Noril'sk 33.87 325 *d i* P **P** **14 40 39.6 -0.4**
NRIK pmax pmax
comp=Z,38nm,1.1s
MENT Mentasta 33.98 47 P **P** **14 40 41.9 +0.9**
MENT IAmb IAmb 14 40 44.5
comp=Z,24nm,0.8s
L26K Log Cabin Wild 34.12 47 P **P** **14 40 43.2 +1.0**
baz=283,SNR=8.6
RAGM Ragged Mountai 34.14 52 P **P** **14 40 44.0 +1.6**
RAGM IAmb IAmb 14 40 46.7
comp=Z,29nm,0.8s
GLB Gilahina Butte 34.28 50 P **P** **14 40 45.1 +1.6**
GLB IAmb IAmb 14 40 46.8
comp=Z,25nm,1.0s
K27K Chicken 34.47 45 P **P** **14 40 46.1 +1.0**
baz=282
K27K Chicken 34.47 45 P **P** **14 40 46.0 +1.0**
VRDI Verde Repeater 34.50 50 P **P** **14 40 47.0 +1.4**
VRDI IAmb IAmb 14 40 47.9
comp=Z,28nm,0.8s
MCARA McCarthy VSAT 34.66 50 P **P** **14 40 48.3 +1.6**
MCARA IAmb IAmb 14 40 55.4
comp=Z,29nm,0.9s
EGAK Eagle 34.71 43 P **P** **14 40 47.5 +0.5**
CRQM Cirque 34.77 51 P **P** **14 40 49.5 +1.7**
TGL Tana Glacier 34.92 51 P **P** **14 40 50.6 +1.6**
TGL IAmb IAmb 14 40 52.4
comp=Z,39nm,1.1s
BALM Baldy 35.07 50 P **P** **14 40 51.7 +1.4**
ISLE Juniper Island 35.19 51 P **P** **14 40 52.8 +1.5**
ISLE IAmb IAmb 14 40 53.6
comp=Z,37nm,0.8s
BARN Barnard Glacie 35.38 50 P **P** **14 40 54.6 +1.7**
MESA MESA 35.50 51 P **P** **14 40 56.1 +2.2**
YAH Yahtse 35.54 51 P **P** **14 40 56.1 +1.8**
CTGM Chitina Glacie 35.56 50 P **P** **14 40 56.0 +1.6**
DAWY Dawson 35.61 44 P **P** **14 40 55.1 +0.5**
DAWY IAmb IAmb 14 40 59.7
comp=Z,9.4nm,0.7s
WHN Wuhan 35.67 247 ⇑P **P** **14 40 55.7 +0.2**
WHN pmax pmax
comp=Z,66nm,0.7s
TABL Table Mountain 35.81 51 P **P** **14 40 57.9 +1.4**
EPYK Eagle Plains 36.18 40 P **P** **14 41 00.4 +1.1**
baz=283
EPYK Eagle Plains 36.18 40 P **P** **14 41 00.1 +0.9**
EPYK IAmb IAmb 14 41 01.4
comp=Z,42nm,0.8s
XAN Xi'an 36.30 257 P **P** **14 41 00.4 -0.4**
XAN pmax pmax
comp=Z,23nm,0.7s
XAN pmax pmax
comp=Z,77nm,4.6s
PCA Pinnacle 36.33 51 P **P** **14 41 02.3 +1.6**
INK Inuvik 36.95 36 P **P** **14 41 06.3 +0.7**
comp=Z,20nm,0.5s,baz=293,slow=6.6,SNR=175
INK S **S** **14 46 12.6 -1.6**
comp=Z,4.3nm,1.1s,baz=42,slow=28,SNR=7.3
INK Inuvik 36.95 36 P **P** **14 41 06.4 +0.8**
INK IAmb IAmb 14 41 06.9
comp=Z,28nm,0.6s
HYT Haines Junctio 37.39 49 P **P** **14 41 11.5 +2.0**
YULB Yu-li 37.77 232 P **P** **14 41 13.2 +0.3**
YULB IAmb IAmb 14 41 18.8
comp=Z,16nm,0.7s
LZH Lanzhou 37.97 264 *eP* **P** **14 41 15.5 +0.8**
LZH pP pP 14 42 45.8 +2.8
LZH sP sP 14 43 42.5 +3.0
LZH pmax pmax
comp=Z,89nm,1.3s
LZH pmax pmax
comp=Z,210nm,4.5s
TPUB Ta-pu 38.17 233 P **P** **14 41 16.4 +0.2**
TPUB IAmb IAmb 14 41 36.6
comp=Z,42nm,1.4s
GTA Gaotai 38.32 272 ⇓P **P** **14 41 17.8 +0.4**
GTA PcP **PcP** **14 43 19.1 +0.6**
GTA sP sP 14 43 43.5 +1.2
GTA ScP **ScP** **14 46 19.2 +0.8**
GTA S **S** **14 46 34.7 -0.8**
GTA PcS **PcS** **14 47 08.8 +0.2**
GTA ScS **ScS** **14 50 28.3 -2.0**
GTA pmax pmax
comp=Z,55nm,1.2s
GTA pmax pmax
comp=Z,130nm,4.6s
WHY Whitehorse 38.65 49 P **P** **14 41 21.7 +1.9**
WHY IAmb IAmb 14 41 22.7
comp=Z,29nm,0.8s
ENH Enshi 38.66 252 P **P** **14 41 19.7 -0.5**
SKAG Skagway 38.89 51 P **P** **14 41 22.6 +1.0**
SKAG IAmb IAmb 14 41 24.8
comp=Z,15nm,1.1s
ZAA0 Zalesovo Array 39.38 300 P **P** **14 41 25.1 -0.5**
ZAA0 IAmb IAmb 14 41 25.8
comp=Z,34nm,0.9s
ZALV Zalesovo Beam 39.38 300 P **P** **14 41 24.9 -0.7**
comp=Z,28nm,0.7s,baz=60,slow=7.2,SNR=88
ZALV PcP **PcP** **14 43 20.9 -0.5**
comp=Z,11nm,0.8s,baz=60,slow=3.6,SNR=7.5
ZALV ScP **ScP** **14 46 20.8 -1.2**
comp=Z,2.6nm,0.8s,baz=38,slow=5.6,SNR=4.6
ZALV Zalesovo Beam 39.38 300 P **P** **14 41 24.6 -1.0**
ZALV **ScP** **14 46 21.1 -0.9**
BESE Bessie Mountai 39.46 52 P **P** **14 41 28.6 +2.4**
BESE IAmb IAmb 14 41 29.3
comp=Z,21nm,0.9s
JIS Juneau Island 39.81 52 P **P** **14 41 31.6 +2.6**
JIS IAmb IAmb 14 41 32.3
comp=Z,22nm,1.0s
C36M Paulatuk 39.96 33 P **P** **14 41 30.5 +0.5**
baz=289
C36M Paulatuk 39.96 33 P **P** **14 41 30.9 +0.9**
C36M IAmb IAmb 14 41 31.4
comp=Z,46nm,0.8s
CD2 Chengdu 41.59 259 P **P** **14 41 43.8 +0.1**
CD2 S **S** **14 47 22.5 -0.7**
CD2 SS **SS** **14 50 43.5 -4.1**
CD2 pmax pmax
comp=Z,100nm,0.8s
CD2 pmax pmax
comp=Z,70nm,6.6s
WRAK Wrangell Islan 41.62 54 P **P** **14 41 44.5 +1.1**
WRAK IAmb IAmb 14 41 47.1
comp=Z,27nm,0.9s
DLBC Dease Lake 41.82 50 P **P** **14 41 47.5 +2.4**
comp=Z,20nm,0.8s,baz=295,slow=7.4,SNR=33
DLBC ScP **ScP** **14 46 33.2 +1.5**
comp=Z,1.2nm,0.9s,baz=254,slow=5.5,SNR=3.1
DLBC Dease Lake 41.82 50 P **P** **14 41 47.0 +1.9**
DLBC IAmb IAmb 14 41 48.7
comp=Z,25nm,0.9s

ZSN Zaisan 42.60 292⇓ *i*P **P 14 41 51.8 +0.4**
comp=Z,19nm,0.9s,baz=292
ZSN *e*S **S 14 47 38.0 +0.7**
baz=292
ZSN Zaisan 42.60 292 *d i*P **P 14 41 51.7 +0.4**
ZSN *e*S **S 14 47 37.9 +0.7**
ZSN pmax pmax
comp=Z,19nm,0.9s
WMQ Urumqi 43.00 285 *e*P **P 14 41 56.1 +1.4**
WMQ pP PcP 14 43 32.9 -0.8
WMQ pmax pmax
comp=Z,160nm,0.9s
WMQ pmax pmax
comp=Z,270nm,3.7s
WMQ Urumqi 43.00 285 P **P 14 41 55.6 +0.9**
WMQ pmax pmax
comp=Z,101nm,0.9s
WMQ Urumqi 43.00 285 P **P 14 41 55.6 +0.9**
DIB Dawson Inlet, 43.11 58 P **P 14 41 57.4 +2.2**
DIB IAmb IAmb 14 41 57.8
comp=Z,15nm,0.9s
GYA Guiyang 43.16 251⇓ P **P 14 41 56.1 -0.1**
GYA pP PcP 14 43 32.1 -2.5
GYA S **S 14 47 44.1 -1.9**
GYA sS sS 14 50 38.3 +6.1
GYA SS **SS 14 51 09.6 -3.8**
GYA pmax pmax
comp=Z,62nm,0.9s
GYA pmax pmax
comp=Z,65nm,3.5s
EUNU Eureka 43.51 13 P **P 14 41 58.1 0.0**
EUNU IAmb IAmb 14 41 59.2
comp=Z,17nm,0.9s
SEM Semipalatinsk 43.57 298⇓ *i*P **P 14 41 58.4 -0.8**
comp=Z,36nm,0.8s,baz=298
SEM Semipalatinsk 43.57 298 *d i*P **P 14 41 58.3 -0.8**
SEM pmax pmax
comp=Z,36nm,0.8s
KURK Kurchatov 44.28 299 *e*P **P 14 42 04.3 -0.1**
KURK Kurchatov 44.28 299 *d i*P **P 14 42 04.3 -0.1**
KURK pmax pmax
comp=Z,316nm,1.4s
KURK Kurchatov 44.28 299 P **P 14 42 04.1 -0.3**
KURBB Kurchatov Arra 44.38 299 P **P 14 42 04.8 -0.3**
MK31 Makanchi Array 44.42 292 *d i*P **P 14 42 05.4 -0.2**
MK31 Makanchi Array 44.42 292 P **P 14 42 05.3 -0.2**
MKAR Makanchi Array 44.42 292 P **P 14 42 05.5 -0.2**
comp=Z,54nm,0.8s,baz=57,slow=6.7,SNR=291
MKAR PcP **PcP 14 43 38.0 -0.5**
comp=Z,1.6nm,0.5s,baz=72,slow=4.0,SNR=1.2
MKAR ScP **ScP 14 46 41.8 -0.7**
comp=Z,2.2nm,0.9s,baz=59,slow=4.7,SNR=3.7
MAKZ Makanchi 44.59 292 P **P 14 42 06.4 -0.5**
MAKZ pmax pmax
comp=Z,60nm,0.9s
MAKZ Makanchi 44.59 292 P **P 14 42 06.4 -0.5**
RES Resolute Bay 45.43 20 P **P 14 42 13.0 +0.1**
comp=Z,7.3nm,0.5s,baz=316,slow=4.4,SNR=30
RES Resolute Bay 45.43 20 P **P 14 42 12.7 -0.2**
RES pmax pmax
comp=Z,24nm,1.2s
RES Resolute Bay 45.43 20 P **P 14 42 12.7 -0.2**
RES IAmb IAmb 14 42 13.8
comp=Z,24nm,1.1s
YKA Yellowknife Ar 46.46 40 P **P 14 42 21.6 +0.6**
comp=Z,15nm,0.7s,baz=309,slow=6.3,SNR=46
KMI Kunming 46.46 254⇓ P **P 14 42 22.1 +0.3**
KMI pmax pmax
comp=Z,55nm,1.1s
KMI Kunming 46.46 254 P **P 14 42 21.8 0.0**
KMI pmax pmax
comp=Z,42nm,0.8s
KMI Kunming 46.46 254 P **P 14 42 21.8 0.0**
KMI IAmb IAmb 14 42 23.1
comp=Z,42nm,0.8s
SPA0 Spitsbergen Ar 46.93 349 P **P 14 42 23.9 -0.4**
SPA0 IAmb IAmb 14 42 25.3
comp=Z,36nm,1.1s
SPA0 Spitsbergen Ar 46.93 349⇑ *i*P **P 14 42 22.2 -2.1**
SPITS Spitsbergen Ar 46.93 349 P **P 14 42 23.6 -0.7**
SPITS pmax pmax
comp=Z,1.0nm,0.2s
BRVK Borovoye 47.30 305 *e*P **P 14 42 27.2 -0.2**
BRVK Borovoye 47.30 305 *d i*P **P 14 42 27.2 -0.2**
BRVK pmax pmax
comp=Z,106nm,0.7s
BRVK Borovoye 47.30 305 P **P 14 42 27.1 -0.2**
TDK Taldyqorghan 47.67 292 *i*P **P 14 42 31.0 +0.6**
comp=Z,127nm,0.9s,baz=292
TDK Taldyqorghan 47.67 292 *i*P **P 14 42 30.9 +0.6**
TDK pmax pmax
comp=Z,127nm,0.9s
BRZS Berezniki 47.84 301⇓ *i*P **P 14 42 31.3 -0.3**
comp=Z,47nm,0.6s,baz=301
BRZS Berezniki 47.84 301 *d i*P **P 14 42 31.2 -0.3**
BRZS pmax pmax
comp=Z,47nm,0.6s
PDGK Podgornoye 48.07 290 P **P 14 42 33.3 -0.3**
SHLS Shalkode 48.20 290⇓ *i*P **P 14 42 32.8 -1.6**
comp=Z,24nm,0.5s,baz=290
SHLS Shalkode 48.20 290 *d i*P **P 14 42 32.8 -1.6**
SHLS pmax pmax
comp=Z,23nm,0.5s
KPKS Kokpek 48.45 291⇓ *i*P **P 14 42 36.5 +0.2**
comp=Z,31nm,0.7s,baz=291
KPKS Kokpek 48.45 291 *d i*P **P 14 42 36.5 +0.2**
KPKS pmax pmax
comp=Z,31nm,0.7s
SLVN Son La 48.71 250 P **P 14 42 39.1 +0.6**
SLVN IAmb IAmb 14 42 40.3
comp=Z,34nm,0.8s
SATY Saty 48.86 290⇓ *i*P **P 14 42 39.8 +0.4**
comp=Z,32nm,1.3s,baz=290
SATY *e*S **S 14 49 06.2 +0.8**
baz=290
SATY Saty 48.86 290 *d i*P **P 14 42 39.8 +0.4**
SATY *e*S **S 14 49 06.2 +0.8**
SATY pmax pmax
comp=Z,32nm,1.3s
KUU Kurty 49.52 292⇓ *i*P **P 14 42 43.6 -0.6**
comp=Z,55nm,0.7s,baz=292
KUU Kurty 49.52 292 *d i*P **P 14 42 43.5 -0.6**
KUU pmax pmax
comp=Z,55nm,0.7s
MDOK Medeo 49.58 291 *i*P **P 14 42 44.9 +0.1**
baz=291
MDOK Medeo 49.58 291 *i*P **P 14 42 44.8 +0.1**
AAA Alma-Ata 49.62 291⇓ *i*P **P 14 42 45.4 +0.4**
baz=291
AAA Alma-Ata 49.62 291 *e*P **P 14 42 45.3 +0.4**
AAA Alma-Ata 49.62 291 *d i*P **P 14 42 45.3 +0.4**
SVE Sverdlovsk 49.64 314 *e*P **P 14 42 44.8 0.0**
SVE Sverdlovsk 49.64 314 *ce*P **P 14 42 44.8 0.0**
SVE pmax pmax
comp=Z,103nm,0.9s
TNSS Tian-Shan 49.71 291 *e*P **P 14 42 46.0 0.0**
baz=291
TNSS Tian-Shan 49.71 291 *e*P **P 14 42 46.0 0.0**
BTLS Baital 50.09 295⇓ *i*P **P 14 42 48.1 -0.3**
comp=Z,16nm,0.8s,baz=295
BTLS Baital 50.09 295 *d i*P **P 14 42 48.0 -0.3**
BTLS pmax pmax
comp=Z,16nm,0.8s
LSA Lhasa 50.10 268 P **P 14 42 50.2 +1.1**
LSA pmax pmax
comp=Z,240nm,1.0s
LSA Lhasa 50.10 268 *i*P **P 14 42 50.2 +1.1**
SNR=20
LSA Lhasa 50.10 268 P **P 14 42 50.2 +1.1**
LSA pmax pmax
comp=Z,45nm,0.7s
LSA Lhasa 50.10 268 P **P 14 42 50.2 +1.1**
LSA IAmb IAmb 14 42 51.4
comp=Z,46nm,0.7s
KDJ Kajisay 50.15 290 P **P 14 42 49.5 +0.4**
KDJ pmax pmax
comp=Z,106nm,1.0s
KDJ Kajisay 50.15 290 P **P 14 42 49.5 +0.4**
TKM2 Tokmak 2 50.55 292 P **P 14 42 52.1 +0.2**
SNR=44
TKM2 Tokmak 2 50.55 292 P **P 14 42 51.9 -0.1**
ULHL Ulahol 50.62 291 P **P 14 42 52.5 0.0**
SNR=7.1
BOOM Boomskoye usch 50.63 291 P **P 14 42 53.0 +0.5**
BOOM pmax pmax
comp=Z,56nm,0.8s
BOOM Boomskoye usch 50.63 291 P **P 14 42 53.0 +0.5**
BOOM IAmb IAmb 14 42 54.2
comp=Z,56nm,0.8s
SGDS Sogindy 50.76 293⇓ *i*P **P 14 42 53.7 +0.3**
comp=Z,39nm,1.5s,baz=293
SGDS Sogindy 50.76 293 *d i*P **P 14 42 53.6 +0.3**
SGDS pmax pmax
comp=Z,39nm,1.5s
ARU Arti 50.79 314 *e*P **P 14 42 52.7 -0.5**
ARU Arti 50.79 314 *d i*P **P 14 42 52.7 -0.5**
ARU 14 44 00.2
ARU *PP **pP 14 44 28.9 +0.3**
ARU S **S 14 49 32.0 +1.0**
ARU SS **SS 14 53 09.6 -3.5**
ARU pmax pmax
comp=Z,139nm,0.8s
ARU Arti 50.79 314 P **P 14 42 52.5 -0.7**
DAG Danmarks Havn 50.88 358 P **P 14 42 53.1 -0.5**
DAG pmax pmax
comp=Z,8.0nm,2.2s
USP Ospenovka 50.95 293 P **P 14 42 55.3 +0.6**
SNR=40
CHMS Chumysh 50.98 292 P **P 14 42 55.3 +0.4**
SNR=26
KBK Karagaybulak 51.09 292 P **P 14 42 56.2 +0.3**
SNR=35
FRU1 Bishkek 51.17 292 P **P 14 42 56.9 +0.6**
FRU1 pmax pmax
comp=Z,136nm,0.6s
FRU1 Bishkek 51.17 292 P **P 14 42 56.9 +0.6**
D03D Eldon 51.27 60 P **P 14 42 59.0 +2.1**
baz=309
B05A Bryant 51.34 58 P **P 14 42 58.7 +1.4**
baz=309
AAK Ala-Archa 51.36 292 P **P 14 42 58.2 +0.5**
SNR=55
AAK Ala-Archa 51.36 292 *i*P **P 14 42 58.1 +0.3**
SNR=62
AAK Ala-Archa 51.36 292 *e*P **P 14 42 58.1 +0.3**
AAK Ala-Archa 51.36 292 *d i*P **P 14 42 58.1 +0.3**
AAK pmax pmax
comp=Z,136nm,0.6s
B06A Marblemount 51.50 58 P **P 14 42 59.6 +1.1**
B06A IAmb IAmb 14 43 00.6
comp=Z,24nm,1.2s
NONG Nongkai 51.74 248 P **P 14 43 01.9 +1.2**
comp=Z,49nm,1.0s
EKS2 Erkin-Say 51.75 293 P **P 14 43 01.2 +0.6**
SNR=31
HAMF Hammerfest 51.89 341⇑ *i*P **P 14 42 59.9 -1.1**
KEV Kevo 51.90 339 P **P 14 43 00.1 -0.9**
KEV pmax pmax
comp=Z,31nm,1.1s
KEV Kevo 51.90 339 P **P 14 43 00.1 -0.9**
KEV IAmb IAmb 14 43 01.1
comp=Z,30nm,1.1s
D05A Enumclaw 52.07 59 P **P 14 43 04.7 +2.1**
D05A IAmb IAmb 14 43 18.0
comp=Z,24nm,1.2s
AML Almayashu 52.14 292 P **P 14 43 04.3 +0.6**
SNR=21
E04D Cinebar 52.17 60 P **P 14 43 05.5 +2.2**
baz=310
ARD2 ARCESS Array S 52.38 339 P **P 14 43 04.0 -0.6**
ARD2 IAmb IAmb 14 43 04.9
comp=Z,25nm,1.0s
ARD1 ARCESS Array S 52.38 339 P **P 14 43 04.0 -0.6**
ARD1 IAmb IAmb 14 43 04.9
comp=Z,30nm,0.9s
ARD3 ARCESS Array S 52.39 339 P **P 14 43 04.0 -0.6**
ARD3 IAmb IAmb 14 43 04.3
comp=Z,66nm,1.5s
ARC2 ARCESS Array S 52.39 339 P **P 14 43 04.1 -0.5**
ARC2 IAmb IAmb 14 43 05.0
comp=Z,28nm,1.0s
ARC1 ARCESS Array S 52.39 339 P **P 14 43 04.1 -0.5**
ARC1 IAmb IAmb 14 43 05.0
comp=Z,26nm,0.9s
ARD9 ARCESS Array S 52.39 339 P **P 14 43 04.1 -0.6**
ARD9 IAmb IAmb 14 43 04.9
comp=Z,28nm,0.9s
ARB1 ARCESS Array S 52.39 339 P **P 14 43 04.1 -0.5**
ARB1 IAmb IAmb 14 43 05.0
comp=Z,28nm,0.9s
ARB2 ARCESS Array S 52.39 339 P **P 14 43 04.1 -0.5**
ARB2 IAmb IAmb 14 43 05.0
comp=Z,30nm,0.9s
ARC3 ARCESS Array S 52.39 339 P **P 14 43 04.0 -0.6**
ARC3 IAmb IAmb 14 43 05.0
comp=Z,25nm,1.0s
ARA1 ARCESS Array S 52.40 339 P **P 14 43 04.2 -0.4**
ARA1 IAmb IAmb 14 43 05.0
comp=Z,28nm,0.9s
ARC7 ARCESS Array S 52.40 339 P **P 14 43 04.1 -0.5**
ARC7 IAmb IAmb 14 43 05.0
comp=Z,27nm,0.9s
ARA0 ARCESS Array S 52.40 339 P **P 14 43 04.1 -0.5**
ARA0 IAmb IAmb 14 43 05.0
comp=Z,28nm,0.9s
ARA0 ARCESS Array S 52.40 339 *e*P **P 14 43 04.0 -0.7**
ARCES ARCESS Array B 52.40 339 P **P 14 43 04.1 -0.6**
comp=Z,10nm,0.5s,baz=32,slow=7.7,SNR=63
ARD4 ARCESS Array S 52.40 339 P **P 14 43 04.0 -0.6**
ARD4 IAmb IAmb 14 43 04.4
comp=Z,24nm,0.9s
ARA2 ARCESS Array S 52.40 339 P **P 14 43 04.2 -0.4**
ARA2 IAmb IAmb 14 43 05.0
comp=Z,28nm,0.9s
ARA3 ARCESS Array S 52.40 339 P **P 14 43 04.2 -0.5**
ARA3 IAmb IAmb 14 43 05.0
comp=Z,29nm,0.9s
ARB3 ARCESS Array S 52.40 339 P **P 14 43 04.1 -0.6**
ARB3 IAmb IAmb 14 43 04.4
comp=Z,23nm,0.8s
ARB5 ARCESS Array S 52.40 339 P **P 14 43 04.2 -0.5**
ARB5 IAmb IAmb 14 43 05.0
comp=Z,27nm,0.9s
ARB4 ARCESS Array S 52.40 339 P **P 14 43 04.2 -0.5**
ARB4 IAmb IAmb 14 43 05.0
comp=Z,26nm,0.9s
ARC4 ARCESS Array S 52.40 339 P **P 14 43 04.1 -0.6**
ARC4 IAmb IAmb 14 43 04.4
comp=Z,24nm,0.9s
ARC6 ARCESS Array S 52.40 339 P **P 14 43 04.2 -0.5**
ARC6 IAmb IAmb 14 43 05.0
comp=Z,29nm,0.9s
ARD8 ARCESS Array S 52.40 339 P **P 14 43 04.2 -0.5**
ARD8 IAmb IAmb 14 43 05.0
comp=Z,30nm,0.8s
ARC5 ARCESS Array S 52.40 339 P **P 14 43 04.1 -0.6**
ARC5 IAmb IAmb 14 43 05.0
comp=Z,26nm,0.9s
ARD5 ARCESS Array S 52.41 339 P **P 14 43 04.2 -0.6**
ARD5 IAmb IAmb 14 43 04.5
comp=Z,22nm,0.9s
ARD7 ARCESS Array S 52.41 339 P **P 14 43 04.2 -0.5**
ARD7 IAmb IAmb 14 43 05.0
comp=Z,27nm,0.8s
ARD6 ARCESS Array S 52.41 339 P **P 14 43 04.2 -0.5**
ARD6 IAmb IAmb 14 43 05.1
comp=Z,27nm,0.9s
KSH Kashi 52.54 288⇓ *i*P **P 14 43 10.1 +3.8**
KSH pmax pmax
comp=Z,140nm,1.1s
KSH pmax pmax
comp=Z,330nm,4.9s
PAYA Payao 52.59 252 P **P 14 43 08.0 +1.2**
comp=Z,5μmcomp=Z,763nm,0.8s
SHL Shillong 52.64 264 P **P 14 43 07.2 -0.1**
SHL pmax pmax
comp=Z,152nm,1.0s
SHL Shillong 52.64 264 P **P 14 43 07.2 -0.1**
F04A Amboy 52.65 61 P **P 14 43 08.3 +1.5**
UBPT Khong Chiam 52.70 243 P **P 14 43 09.0 +1.4**
comp=Z,15nm,0.9s
UBPT Khong Chiam 52.70 243 P **P 14 43 08.1 +0.5**
UBPT IAmb IAmb 14 43 09.7
comp=Z,41nm,1.3s
B08A Colville Reser 52.71 57 P **P 14 43 08.4 +1.1**
LTY Liberty 52.72 59 P **P 14 43 08.4 +1.0**
DZA Taraz 52.97 294⇓ *i*P **P 14 43 09.1 -0.1**
baz=294
DZA Taraz 52.97 294 *d i*P **P 14 43 09.1 -0.1**
TMCR Tamitsa 53.23 330 *e*P **P 14 43 10.0 -0.6**
TMCR pmax pmax
comp=Z,49nm,0.6s
KK31 Karatay Array 53.29 295 *i*P **P 14 43 10.9 -0.6**
KK31 Karatay Array 53.29 295 P **P 14 43 11.2 -0.2**
KK31 IAmb IAmb 14 43 12.2
comp=Z,33nm,0.7s
KKAR Karatay Array 53.29 295 P **P 14 43 11.1 -0.4**
KKAR pmax pmax
comp=Z,33nm,0.7s
KKAR Karatay Array 53.29 295 P **P 14 43 11.1 -0.4**
KKAR IAmb IAmb 14 43 12.2
comp=Z,33nm,0.7s
KKAR Karatay Array 53.29 295 P **P 14 43 11.1 -0.4**
KTK1 Kautokeino 53.30 340⇑ *i*P **P 14 43 10.7 -0.5**
KHON Khomkaen 53.31 247 P **P 14 43 14.5 +2.6**
LAMP Lampang 53.39 251 P **P 14 43 14.0 +1.5**
comp=Z,728nmcomp=Z,85nm,0.9s
CM34 Chiang Mai Arr 53.41 252 P **P 14 43 13.0 +0.4**
UTTA Uttaradit 53.47 250 P **P 14 43 14.1 +1.1**
comp=Z,478nmcomp=Z,67nm,0.9s
CM35 Chiang Mai Arr 53.54 252 P **P 14 43 14.0 +0.4**
CM33 Chiang Mai Arr 53.55 252 P **P 14 43 14.0 +0.3**
CMMT Chiang Mai 53.56 252 P **P 14 43 14.3 +0.7**
comp=Z,377nmcomp=Z,34nm,0.9s
CHTO Chiang Mai 53.56 252 P **P 14 43 14.2 +0.5**
CHTO pmax pmax
comp=Z,49nm,0.8s
CHTO Chiang Mai 53.56 252 P **P 14 43 14.2 +0.5**
CHTO IAmb IAmb 14 43 15.5
comp=Z,49nm,0.8s
E07A Sunnyside 53.60 59 P **P 14 43 14.9 +1.3**
C09A Chrisman Ranch 53.61 57 P **P 14 43 14.9 +1.3**
TRO Tromso 53.65 342 *e*P **P 14 43 12.6 -0.9**
G05D Wamic, OR 53.69 61 P **P 14 43 16.4 +2.1**
baz=311
CM36 Chiang Mai Arr 53.70 252 P **P 14 43 15.0 +0.3**
CM32 Chiang Mai Arr 53.74 252 P **P 14 43 16.0 +1.0**
D08A Wollman Farm, 53.76 58 P **P 14 43 15.5 +0.7**
CM09 Chiang Mai Arr 53.82 252 P **P 14 43 16.7 +1.1**
comp=Z,278nmcomp=Z,40nm,0.9s
CM31 Chiang Mai Arr 53.84 252 P **P 14 43 16.9 +1.3**
comp=Z,7μmcomp=Z,946nm,0.8s
CM31 Chiang Mai Arr 53.84 252 P **P 14 43 17.0 +1.3**
CM31 IAmb IAmb 14 43 17.8
comp=Z,34nm,0.8s
CM31 **PcP 14 44 14.2 +0.7**
CMAR Chiang Mai Arr 53.84 252 P **P 14 43 16.8 +1.1**
comp=Z,26nm,0.8s,baz=24,slow=6.8,SNR=173
CMAR PcP **PcP 14 44 14.3 +0.8**
comp=Z,11nm,0.7s,baz=11,slow=2.9,SNR=19
CMAR ScP **ScP 14 47 22.9 -0.3**
comp=Z,2.3nm,0.9s,baz=15,slow=4.5,SNR=7.3
CMAR Chiang Mai Arr 53.84 252 P **P 14 43 16.5 +0.8**
CMAR 14 44 14.6
CM15 Chiang Mai Arr 53.85 252 P **P 14 43 17.0 +1.2**
comp=Z,285nmcomp=Z,38nm,0.9s
CM02 Chiang Mai Arr 53.85 252 P **P 14 43 17.0 +1.2**
comp=Z,334nmcomp=Z,50nm,0.9s
CM01 Chiang Mai Arr 53.86 252 P **P 14 43 16.9 +1.1**
comp=Z,317nmcomp=Z,44nm,0.9s
CM04 Chiang Mai Arr 53.86 252 P **P 14 43 16.0 +0.1**
comp=Z,324nmcomp=Z,46nm,0.9s
HAWA Hanford 53.88 59 P **P 14 43 17.0 +1.4**
CM05 Chiang Mai Arr 53.88 252 P **P 14 43 17.1 +1.1**
comp=Z,244nmcomp=Z,34nm,0.9s
TAPN Taplejung 53.88 269 *e*P **P 14 43 16.9 +0.6**
CM13 Chiang Mai Arr 53.89 252 P **P 14 43 17.0 +1.0**
comp=Z,253nmcomp=Z,38nm,0.8s
NEW Newport 53.89 56 P **P 14 43 16.7 +1.0**
NEW pmax pmax
comp=Z,11nm,1.1s
NEW Newport 53.89 56 P **P 14 43 16.7 +1.0**
baz=311,SNR=5.4
NEW Newport 53.89 56 P **P 14 43 16.7 +1.0**
PHIT Phitsanulok 53.99 250 P **P 14 43 18.9 +2.2**
comp=Z,89nm,1.0s
F07A Phinny Hill Vi 53.99 60 P **P 14 43 17.9 +1.5**
F07A IAmb IAmb 14 43 19.2
comp=Z,16nm,0.7s
I04A Tendick Farm, 54.05 63 P **P 14 43 18.9 +2.0**
baz=312
E08A Dider Farm, El 54.06 59 P **P 14 43 18.1 +1.3**
K02D Willamette Mer 54.08 65 P **P 14 43 19.6 +2.3**
baz=312
CHAI Chaiyaphum 54.13 247 P **P 14 43 18.8 +1.1**
comp=Z,25nm,1.1s
IUG Iuzhnay 54.18 294⇓ *i*P **P 14 43 18.5 +0.6**
comp=Z,40nm,0.5s,baz=294
IUG Iuzhnay 54.18 294 *d i*P **P 14 43 18.5 +0.6**
IUG pmax pmax
comp=Z,40nm,0.5s
SUKH Sukhothai 54.21 251 P **P 14 43 19.7 +1.4**
comp=Z,25nm,0.8s
ODAN Odare 54.43 269 *e*P **P 14 43 20.3 +0.2**
comp=Z,97nm,0.6s
J04D Umpqua Nationa 54.58 63 P **P 14 43 23.4 +2.5**
baz=312
GUN Gumba 54.60 271 *e*P **P 14 43 21.6 +0.2**
comp=Z,173nm,0.7s
MHMT Maesarieng 54.65 253 P **P 14 43 22.0 +0.6**
comp=Z,721nmcomp=Z,61nm,1.0s
AB31 Akbulak array 54.77 307 *i*P **P 14 43 21.3 -0.5**
ABKAR Akbulak array 54.77 307 P **P 14 43 21.5 -0.2**
ABKAR Akbulak array 54.77 307 P **P 14 43 21.3 -0.4**
PINE Pine Mountain 54.84 62 P **P 14 43 25.0 +2.3**
PINE IAmb IAmb 14 43 26.2
comp=Z,22nm,0.9s
RAMN Ramite 54.85 269 *e*P **P 14 43 23.4 +0.4**
comp=Z,429nm,0.5s
G08A Pilot Rock 54.91 60 P **P 14 43 24.6 +1.6**
SUMG Summit 54.96 4 P **P 14 43 23.1 -0.2**
SUMG pmax pmax
comp=Z,9.0nm,1.1s
SUMG Summit 54.96 4 P **P 14 43 23.1 -0.2**
WALA Waterton Lakes 54.97 53 P **P 14 43 24.4 +1.1**
J05D Fort Rock, OR 55.02 63 P **P 14 43 26.6 +2.7**
baz=312,SNR=11
KKN Kakani 55.05 271 *e*P **P 14 43 25.0 +0.6**
comp=Z,237nm,0.5s
PKI Pulchoki 55.13 271 *e*P **P 14 43 25.3 +0.2**
comp=Z,236nm,0.8s
PKIN Phulchoki 55.13 271 *e*P **P 14 43 25.2 +0.2**
comp=Z,193nm,0.8s
BTK Batken 55.14 292 P **P 14 43 24.9 +0.2**
BTK pmax pmax
comp=Z,88nm,0.8s
BTK Batken 55.14 292 P **P 14 43 24.9 +0.2**
TAS Tashkent 55.14 294 P **P 14 43 24.9 +0.3**
TAS pmax pmax
comp=Z,109nm,1.1s
TAS Tashkent 55.14 294 P **P 14 43 24.9 +0.3**
L04D Klamath Falls 55.15 64 P **P 14 43 27.1 +2.3**
baz=312
KLMR Klimovskoe 55.17 327 *e*P **P 14 43 21.3 -3.1**
KLMR *e* 14 45 31.7
KLMR pmax pmax
comp=Z,49nm,0.7s
KLMR Klimovskoe 55.17 327 *e*P **P 14 43 21.4 -3.0**
KLMR AMP 14 43 24.9
comp=Z,49nm,0.7s
KLMR *e*PP **PP 14 45 31.7 -2.5**
YBH Yreka Blue Hor 55.26 65 P **P 14 43 28.1 +2.6**
comp=Z,3.8nm,0.8s,baz=59,slow=0.6,SNR=7.2
YBH Yreka Blue Hor 55.26 65 P **P 14 43 28.0 +2.6**
YBH pmax pmax
comp=Z,7.0nm,1.0s
YBH Yreka Blue Hor 55.26 65 P **P 14 43 28.0 +2.6**
DMN Daman 55.29 271 *e*P **P 14 43 26.9 +0.8**
comp=Z,357nm,0.8s
GKN Gorkha 55.29 272 *e*P **P 14 43 26.4 +0.4**
comp=Z,382nm,1.0s
F10A Beach Ranch, E 55.35 58 P **P 14 43 27.7 +1.6**
I07A Izee 55.42 61 P **P 14 43 28.4 +1.8**
DANN Dangsing 55.58 273 *e*P **P 14 43 28.7 +0.6**
comp=Z,275nm,0.7s
K05A Summer Lake 55.59 63 P **P 14 43 30.4 +2.5**
SRAK Srakaew 55.63 246 P **P 14 43 27.3 -1.0**
comp=Z,2μmcomp=Z,233nm,1.0s
N2IH Innhavet 55.65 342 *e*P **P 14 43 26.6 -1.0**
N2VI Vinje 55.66 343 *e*P **P 14 43 27.4 -0.3**
M04C Macdoel 55.70 64 P **P 14 43 31.2 +2.6**
baz=313
N02D Trinity Center 55.77 66 P **P 14 43 31.2 +2.2**
baz=313
STEI Steigen 55.81 342⇑ *i*P **P 14 43 27.6 -1.2**

UTHA Uthaitani 55.85 249 P P 14 43 31.2 +1.5
comp=Z,270nmcomp=Z,32nm,1.0s
OUL Oulu 55.88 336 P P 14 43 30.9 +1.7
OUL pmax pmax
comp=Z,36nm,1.0s
LOF Lofoten 55.95 343 eP P 14 43 29.3 -0.4
BMO Blue Mountains 56.07 59 P P 14 43 32.8 +1.7
BMO pmax pmax
comp=Z,8.0nm,1.0s
BMO Blue Mountains 56.07 59 P P 14 43 32.8 +1.7
KOLN Koldanda 56.09 272 eP P 14 43 32.1 +0.5
GAR Garm 56.14 291 P P 14 43 31.9 +0.2
N2TV TVrnvik 56.15 342 eP P 14 43 30.7 -0.4
JOF Joensuu 56.15 332 P P 14 43 30.9 -0.3
JOF pmax pmax
comp=Z,40nm,0.9s
PYUN Piuthan 56.23 273 eP P 14 43 33.0 +0.5
FAUS Fauske 56.28 342 ⇑iP P 14 43 31.4 -0.6
NBB08 Skaug oppvekst 56.40 342 eP P 14 43 32.5 -0.3
MSO Missoula 56.45 55 P P 14 43 35.0 +1.3
baz=313,SNR=9.8
MSO Missoula 56.45 55 P P 14 43 35.0 +1.3
J08A Circle Bar Ran 56.46 61 P P 14 43 36.1 +2.2
MOD Modoc Plateau 56.46 63 P P 14 43 36.1 +2.2
RABL Rabaul 56.49 181 P P 14 43 36.1 +1.9
RABL IAmb IAmb 14 43 36.9
comp=Z,41nm,0.9s
PLID Pearl Lake 56.59 58 P P 14 43 36.3 +1.4
PLID IAmb IAmb 14 43 37.2
comp=Z,16nm,0.8s
O03E Paynes Creek 56.73 66 P P 14 43 37.3 +1.5
baz=314
NBB05 Inndyr 56.82 342 eP P 14 43 35.5 -0.3
NBB30 Finnes 56.94 342 eP P 14 43 35.5 -1.0
NBB17 Glomfjord BYr 57.03 342 eP P 14 43 36.2 -1.0
CHGR Chuyangaron 57.03 292 P P 14 43 37.7 -0.1
ORV Oroville 57.41 66 P P 14 43 41.6 +1.3
ORV pmax pmax
comp=Z,5.0nm,0.9s
ORV Oroville 57.41 66 P P 14 43 41.6 +1.3
MOR8 Moi Rana 57.51 341 ⇑iP P 14 43 38.6 -1.9
HRY Holter Researc 57.59 54 P P 14 43 43.2 +1.7
EGMT Eagleton 57.69 52 P P 14 43 43.2 +1.0
baz=314
EGMT Eagleton 57.69 52 P P 14 43 43.0 +0.9
MFID Camas Ranch 57.83 59 P P 14 43 45.1 +1.9
BEKR Beckworth 57.83 65 P P 14 43 45.1 +1.8
PHET Kaeng Krachan 57.88 247 P P 14 43 45.4 +1.7
comp=Z,666nmcomp=Z,52nm,0.8s
LRM Limekiln Ridge 57.90 55 P P 14 43 45.4 +1.6
DLMT Dillon 58.14 56 P P 14 43 47.0 +1.7
NIL Nilore 58.15 285 P P 14 43 46.0 +0.6
NIL pmax pmax
comp=Z,219nm,0.9s
NIL Nilore 58.15 285 P P 14 43 46.0 +0.6
MCMT McKenzie Canyo 58.39 56 P P 14 43 48.5 +1.3
HLID Hailey 58.47 58 P P 14 43 49.6 +2.0
baz=314
HLID Hailey 58.47 58 P P 14 43 49.4 +1.8
BOZ Bozeman (W) 58.47 55 P P 14 43 49.0 +1.5
BOZ pmax pmax
comp=Z,11nm,0.9s
BOZ Bozeman (W) 58.47 55 P P 14 43 49.2 +1.6
baz=315,SNR=15
BOZ Bozeman (W) 58.47 55 P P 14 43 49.0 +1.5
PAHR Pah Rah Range 58.48 65 P P 14 43 49.6 +1.8
PNTR Pine Nut 58.79 65 P P 14 43 52.4 +2.5
FIA1 FINESS Array S 58.81 333 P P 14 43 48.7 -0.6
FIA1 IAmb IAmb 14 43 49.6
comp=Z,37nm,1.0s
FINES FINESS Array B 58.81 333 P P 14 43 48.8 -0.6
comp=Z,24nm,0.7s,baz=38,slow=7.9,SNR=92
FINES PcP PcP 14 44 31.4 -1.0
comp=Z,3.5nm,0.6s,baz=31,slow=2.7,SNR=4.9
FINES FINESS Array B 58.81 333 P P 14 43 48.6 -0.7
FINES PcP 14 44 31.8 -0.7
CMB Columbia Colle 59.09 67 P P 14 43 53.6 +1.9
CMB pmax pmax
comp=Z,12nm,1.4s
CMB Columbia Colle 59.09 67 P P 14 43 53.6 +1.9
QLMT Earthquake Lak 59.11 56 P P 14 43 53.5 +1.6
YHL Hebgen Lake 59.22 55 P P 14 43 54.6 +1.9
YHB Horse Butte 59.28 56 P P 14 43 54.4 +1.3
WAKR Walker 59.29 66 P P 14 43 55.7 +2.4
GCMT Greycliff 59.31 54 P P 14 43 55.1 +1.9
YHH Holmes Hill 59.43 55 P P 14 43 55.5 +1.2
NSS Namsos 59.45 342 eP P 14 43 52.3 -1.3
YMR Madison River 59.45 55 P P 14 43 55.7 +1.4
MOS Moscow 59.68 324 eP P 14 43 53.9 -1.4
YNE Yellowstone No 59.69 55 P P 14 43 57.7 +1.8
RYN Ryan 59.72 65 P P 14 43 58.2 +2.1
NVAR Mina Array Bea 59.98 65 P P 14 44 00.0 +2.1
comp=Z,3.9nm,0.8s,baz=296,slow=6.8,SNR=31
NVAR pP pP 14 45 40.0 +1.7
comp=Z,1.8nm,0.8s,baz=293,slow=7.5,SNR=7.1
NVAR Mina Array Bea 59.98 65 P P 14 43 59.6 +1.8
KBL Kabul 59.98 289 P P 14 43 56.7 -1.2
KBL pmax pmax
comp=Z,61nm,0.8s
KBL Kabul 59.98 289 P P 14 43 56.7 -1.2
RLMT Red Lodge 59.98 54 P P 14 43 59.9 +2.1
baz=316,SNR=7.8
RLMT Red Lodge 59.98 54 P P 14 43 59.4 +1.6
DGMT Dagmar 59.99 49 P P 14 43 58.6 +1.1
baz=317
DGMT Dagmar 59.99 49 P P 14 43 58.6 +1.1
DGMT IAmb IAmb 14 43 59.5
comp=Z,20nm,1.1s
LHV Little Huntoon 59.99 65 P P 14 44 00.1 +2.4
ELK Elko 60.01 61 P P 14 44 00.1 +2.0
ELK Elko 60.01 61 P P 14 44 00.1 +2.0
NV11 Mina Array Sit 60.06 65 P P 14 44 00.4 +2.1
MDPB Devils Postpil 60.11 66 P P 14 44 01.0 +2.2
SBUM Sibu 60.24 229 P P 14 44 01.5 +1.9
SBUM IAmb IAmb 14 44 02.8
comp=Z,42nm,0.9s
SBUM Sibu 60.24 229 P P 14 44 02.0 +2.4
TPAW Teton Pass 60.30 56 P P 14 44 02.3 +2.3
LAO LASA Array 60.33 51 P P 14 44 01.5 +1.6
baz=316
LAO LASA Array 60.33 51 P P 14 44 01.3 +1.4
REDW Red Top Meadow 60.44 56 P P 14 44 03.1 +2.2
OBN Obninsk 60.54 324 eP P 14 43 59.9 -1.0
OBN Obninsk 60.54 324 diP P 14 44 00.0 -1.0
OBN 14 44 39.0
OBN e 14 46 21.2
OBN S S 14 51 43.0 +5.5
OBN SSS SSS 14 58 48.0
OBN pmax pmax
comp=Z,74nm,1.5s
OBN Obninsk 60.54 324 P P 14 44 00.5 -0.5
OBN IAmb IAmb 14 44 01.0
comp=Z,33nm,0.7s
VSU Vasula 61.09 331 eP P 14 44 04.0 -0.5
VSU Vasula 61.09 331 iP P 14 44 04.0 -0.5
VSU pmax pmax
comp=Z,69nm,0.8s
SMMC Simmler 61.24 69 P P 14 44 08.8 +2.7
baz=316
HWUT Hardware Ranch 61.33 58 P P 14 44 08.6 +1.8
HWUT pP pP 14 45 49.6 +1.8
CWC Cottonwood Cre 61.52 67 P P 14 44 09.9 +1.9
baz=316
BW06 Boulder Array 61.53 56 P P 14 44 09.4 +1.3
baz=317,SNR=10
BW06 Boulder Array 61.53 56 P P 14 44 08.8 +0.7
BW06 pP pP 14 45 51.5 +2.3
PD31 Pinedale Array 61.53 56 P P 14 44 09.1 +1.0
PD31 pP pP 14 45 50.8 +1.6
PDAR Pinedale Array 61.53 56 P P 14 44 09.3 +1.3
comp=Z,5.5nm,0.8s,baz=322,slow=2.4,SNR=38
PDAR pP pP 14 45 50.1 +0.9
comp=Z,3.6nm,1.0s,baz=323,slow=2.2,SNR=7.7
PDAR Pinedale Array 61.53 56 P P 14 44 09.1 +1.0
PDAR pP pP 14 45 48.9 -0.3
R11A Troy Canyon, C 61.53 63 P P 14 44 09.7 +1.7
baz=316,SNR=6.4
R11A Troy Canyon, C 61.53 63 P P 14 44 09.5 +1.4
R11A pP pP 14 45 49.4 +0.3
VRH Novokhopyorsk 61.58 318 eP P 14 44 06.4 -1.5
VRH pmax pmax
comp=Z,70nm,0.5s
LPSR Galich'ya Gora 61.61 321 eP P 14 44 06.9 -1.2
LPSR pmax pmax
comp=Z,50nm,0.6s
DUG Dugway, Tooele 61.70 60 P P 14 44 11.4 +2.3
baz=316,SNR=5.8
DUG Dugway, Tooele 61.70 60 P P 14 44 10.9 +1.9
DUG pP pP 14 45 51.8 +1.5
SPR3 Spring Creek 3 61.74 62 pP pP 14 45 52.3 +1.6
ISA Isabella, Lake 61.85 67 P P 14 44 11.4 +1.3
ISA Isabella, Lake 61.85 67 P P 14 44 11.2 +1.1
baz=316
ISA Isabella, Lake 61.85 67 P P 14 44 11.4 +1.3
KSM Kuching 61.98 230 P P 14 44 12.4 +1.3
KSM IAmb IAmb 14 44 13.8
comp=Z,32nm,0.8s
KSM Kuching 61.98 230 P P 14 44 13.0 +1.9
TRTT Trang 62.00 244 P P 14 44 12.6 +1.5
MOL Molde 62.06 343 eP P 14 44 10.3 -0.6
MTKI Muara Teweh, K 62.07 224 P P 14 44 12.3 +0.7
comp=Z,2µmcomp=Z,26nm,1.1s
MPMC Manual Prospec 62.12 66 P P 14 44 13.6 +1.6
baz=316,SNR=5.5
TPNV Topopah Spring 62.17 65 P P 14 44 14.0 +1.7
TPNV *PP pP 14 45 54.3 +0.6
TPNV pmax pmax
comp=Z,8.0nm,0.9s
TPNV Topopah Spring 62.17 65 P P 14 44 14.2 +2.0
baz=317,SNR=7.8
TPNV Topopah Spring 62.17 65 P P 14 44 14.0 +1.7
TPNV pP 14 45 54.3 +0.6
FURC Furnace Creek, 62.18 66 P P 14 44 14.3 +2.2
baz=317
NLU North Lily Min 62.26 60 P P 14 44 14.2 +1.3
DOMB Dombas 62.27 342 ⇑iP P 14 44 11.8 -0.5
ULM Lac du Bonnet 62.29 43 P P 14 44 12.4 -0.2
comp=Z,2.7nm,0.5s,baz=316,slow=7.1,SNR=4.8
ULM Lac du Bonnet 62.29 43 P P 14 44 11.2 -1.4
ULM pmax pmax
comp=Z,22nm,1.5s
ULM Lac du Bonnet 62.29 43 P P 14 44 11.2 -1.4
ULM IAmb IAmb 14 44 31.1
comp=Z,22nm,1.5s
PSUT Pine Spring 62.34 62 P P 14 44 13.4 0.0
LRMC Laurel Mtn Rad 62.43 67 P P 14 44 15.6 +1.6
baz=317
MPU Maple Canyon 62.45 60 P P 14 44 15.2 +1.1
PRN Pahroc Range 62.50 64 P P 14 44 15.0 +0.6
AKN Aaknes 62.53 343 eP P 14 44 13.7 -0.2
NC303 NORSAR Array S 62.55 340 P P 14 44 13.4 -0.7
NC303 IAmb IAmb 14 44 14.6
comp=Z,76nm,1.3s
NC405 NORSAR Array S 62.58 340 P P 14 44 13.1 -1.3
VSR Storozhevoye 62.59 320 eP P 14 44 12.9 -1.6
VSR pmax pmax
comp=Z,20nm,0.4s
NC204 NORSAR Array S 62.63 341 P P 14 44 13.8 -0.9
EDW2 Edwards Air Fo 62.69 68 P P 14 44 17.4 +1.8
baz=317
NB201 NORSAR Array S 62.73 340 P P 14 44 14.3 -1.0
VORD Divnogorie 62.74 319 eP P 14 44 14.4 -1.0
VORD pmax pmax
comp=Z,40nm,0.7s
NB2 NORSAR Subarra 62.75 340 P P 14 44 15.1 -0.4
comp=Z,9.3nm,0.6s,baz=25,slow=6.5
NB2 NORSAR Subarra 62.75 340 P P 14 44 10.6 -4.9
NB2 pmax pmax
comp=Z,12nm,0.6s
NB2 NORSAR Subarra 62.75 340 P P 14 44 15.1 -0.4
baz=25,slow=6.5
NOA NORSAR Array B 62.75 340 P P 14 44 14.9 -0.6
comp=Z,18nm,0.7s,baz=25,slow=6.6,SNR=76
NBO00 NORSAR Array S 62.85 340 P P 14 44 14.9 -1.1
NBO00 IAmb IAmb 14 44 36.7
comp=Z,23nm,1.2s
SPSI Sidrap Palu 62.87 218 P P 14 44 18.3 +1.5
comp=Z,8.1nm,0.6s
NC602 NORSAR Array S 62.96 340 P P 14 44 15.9 -0.8
NC602 NORSAR Array S 62.96 340 eP P 14 44 15.8 -1.0
NORES NORESS Array B 62.96 340 P P 14 44 16.2 -0.5
NORES pmax pmax
comp=Z,5.0nm,0.3s
NAO01 NORSAR Array S 63.00 340 P P 14 44 15.9 -1.1
NAO01 IAmb IAmb 14 44 17.9
comp=Z,45nm,1.2s
GSC Goldstone, Bar 63.05 67 P P 14 44 19.2 +1.3
GSC pmax pmax
comp=Z,4.0nm,0.9s
GSC Goldstone, Bar 63.05 67 P P 14 44 19.8 +1.9
baz=317
GSC Goldstone, Bar 63.05 67 P P 14 44 19.2 +1.3
SLIT Slitere, Latvi 63.07 333 eP P 14 44 17.1 -0.4
SHPR Sheep Range 63.10 65 P P 14 44 19.6 +1.3
RDMU Red Mountain 63.12 58 P P 14 44 19.3 +0.9
RDMU pP pP 14 46 00.8 +0.5
K22A Casper 63.14 54 P P 14 44 18.8 +0.4
BNSI Bone 63.14 217 P P 14 44 19.7 +1.2
comp=Z,18nm,1.2s
TMUT Trail Mountain 63.20 60 P P 14 44 20.5 +1.5
MVU Marysvale 63.24 61 P P 14 44 21.1 +1.9
MSU Marysvale 63.26 61 P P 14 44 21.5 +2.2
MSU *PP pP 14 46 02.2 +1.1
MSU Marysvale 63.26 61 P P 14 44 21.5 +2.2
MSU pP 14 46 02.2 +1.1
RSSD Black Hills 63.26 52 P P 14 44 19.7 +0.4
RSSD pmax pmax
comp=Z,13nm,1.0s
RSSD Black Hills 63.26 52 P P 14 44 20.3 +1.1
baz=318
RSSD Black Hills 63.26 52 P P 14 44 19.7 +0.4
RSSD IAmb IAmb 14 44 21.2
comp=Z,13nm,0.9s
P17A Butcher Ranch, 63.32 59 P P 14 44 21.1 +1.5
BFSC Mount Baldy Ra 63.35 68 P P 14 44 21.3 +1.4
baz=317
TUQ Turquoise Moun 63.45 66 P P 14 44 22.6 +2.0
baz=317
IZAR Zarasai 63.49 330 eP P 14 44 20.0 -0.2
KULM Kulim 63.59 242 P P 14 44 21.8 +0.3
KULM IAmb IAmb 14 44 23.1
comp=Z,15nm,0.6s
KULM Kulim 63.59 242 P P 14 44 23.0 +1.5
HYA Hoyanger 63.61 343 ⇑iP P 14 44 20.6 -0.3
GEYT Alibeck 63.65 298 P P 14 44 22.1 +0.4
comp=Z,37nm,0.7s,baz=60,slow=2.8,SNR=90
GEYT pP PP 14 46 50.0 +0.7
comp=Z,7.3nm,0.8s,baz=20,slow=4.7,SNR=6.6
GEYT Alibeck 63.65 298 P P 14 44 21.9 +0.2
GYA0 ALIBECK ARRAY 63.65 298 P P 14 44 21.8 +0.1
GYA0B ALIBECK ARRAY 63.65 298 P P 14 44 21.6 -0.1
HEC Hector,Ludlow 63.66 67 P P 14 44 23.8 +2.0
baz=317
SKAR Skarslia 63.67 341 iP P 14 44 21.6 +0.2
ISAL Salakas 63.68 330 eP P 14 44 21.2 -0.2
SRU San Rafael Swe 63.70 60 P P 14 44 23.9 +1.8
SRU pmax pmax
comp=Z,7.0nm,0.8s
SRU San Rafael Swe 63.70 60 P P 14 44 23.9 +1.8
IDID Didziasalis 63.70 329 eP P 14 44 21.4 -0.2
LCMT Little Creek M 63.78 63 P P 14 44 24.3 +1.7
IIGN Ignalina 63.84 329 eP P 14 44 22.3 -0.2
SUE Sulen 63.97 343 ⇑iP P 14 44 23.0 -0.1
HRA Herat 63.98 293 P P 14 44 23.8 -0.2
HRA IAmb IAmb 14 44 25.2
comp=Z,28nm,0.8s
BKSI Bulukumba 63.99 217 P P 14 44 25.1 +1.2
comp=Z,12nm,0.8s
KNB Kanab 64.00 63 P P 14 44 25.6 +1.5
KNB pmax pmax
comp=Z,5.0nm,1.1s
KNB Kanab 64.00 63 P P 14 44 25.6 +1.5
NACGM Naroch 64.04 329 e P 14 44 23.0 -0.7
IPM Ipoh 64.07 241 P P 14 44 24.8 +0.2
IPM IAmb IAmb 14 44 25.9
comp=Z,21nm,0.7s
IPM Ipoh 64.07 241 P P 14 44 25.0 +0.4
GMRC Granite Mounta 64.07 66 P P 14 44 26.4 +1.9
baz=318
O20A White River Ci 64.13 57 P P 14 44 26.0 +1.1
baz=318,SNR=5.9
O20A White River Ci 64.13 57 P P 14 44 25.6 +0.8
O20A IAmb IAmb 14 44 27.0
comp=Z,10nm,0.9s
KONO Kongsberg 64.36 340 eP P 14 44 26.0 +0.4
BBKI Banjar Baru 64.36 223 P P 14 44 27.9 +1.5
comp=Z,15nm,1.1s
PABE Paberze 64.40 331 eP P 14 44 25.6 -0.4
ASK Askoy 64.43 343 ⇑iP P 14 44 26.1 0.0
BER Bergen 64.50 343 eP P 14 44 25.5 -1.0
PBUR Paburge 64.55 332 eP P 14 44 26.7 -0.3
ODD1 Odda 64.70 342 ⇑iP P 14 44 27.8 -0.2
U15A North Rim 64.72 63 P P 14 44 29.5 +0.7
W13A Hualapai Mount 64.83 65 P P 14 44 30.9 +1.5
MYKOM Kota Tinggi 64.87 237 P P 14 44 30.7 +1.1
MYKOM IAmb IAmb 14 44 32.0
comp=Z,16nm,0.7s
PV23 Carpenter Ridg 64.98 59 P P 14 44 32.0 +1.7
PV23 IAmb IAmb 14 44 32.8
comp=Z,8.8nm,0.8s
PV14 Lion Creek, Pa 65.03 59 P P 14 44 32.2 +1.5
PV22 Blue Mesa, Par 65.03 59 P P 14 44 32.0 +1.3
PBKI Pangkalan Bun 65.05 227 P P 14 44 32.2 +1.5
comp=Z,4µmcomp=Z,126nm,1.1s
PV04 Paradox Valley 65.08 59 P P 14 44 32.1 +1.2
PV20 West Nyswonger 65.08 59 P P 14 44 32.4 +1.5
PV19 Morning Glory 65.10 59 P P 14 44 32.3 +1.3
PV17 East Wray Mesa 65.13 59 P P 14 44 32.5 +1.2
PV17 IAmb IAmb 14 44 33.6
comp=Z,11nm,0.9s
BLS5 Blasjo 65.19 342 eP P 14 44 30.9 -0.1
PV05 Paradox Valley 65.21 59 P P 14 44 32.7 +0.9
PV03 Paradox Valley 65.21 59 P P 14 44 32.9 +1.1
PDMCI Parker Dam,Lak 65.27 66 P P 14 44 33.9 +2.0
baz=318
MAK Makhachkala 65.29 309 eP P 14 44 30.5 -1.4
MAK e*PP pP 14 46 16.0 +2.0
MAK e 14 47 02.2
MAK e*SP sP 14 47 07.0 +0.3
MAK eS S 14 52 35.2 -0.6
MAK eSS SS 14 57 02.0 +2.3
MAK pmax pmax
comp=Z,243nm,1.1s
PV13 Radium Mtn., P 65.30 59 P P 14 44 33.1 +0.8
PV15 Paradox Valley 65.34 59 P P 14 44 33.1 +0.6
SMCO Snowmass 65.49 57 P P 14 44 35.0 +1.2
ISCO Idaho Springs 65.72 56 P P 14 44 36.7 +1.7
ISCO pmax pmax
comp=Z,7.0nm,1.3s
ISCO Idaho Springs 65.72 56 P P 14 44 36.8 +1.7
baz=319
ISCO Idaho Springs 65.72 56 P P 14 44 36.6 +1.7
GOF Gofitskoye 65.74 313 ⇓iP P 14 44 34.8 +0.1
GOF pmax pmax
comp=Z,136nm,0.8s
WUAZ Wupatki 65.90 63 P P 14 44 38.3 +2.3
baz=318
SUW Suwalki 65.91 330 eP P 14 44 34.7 -0.9
SUW Suwalki 65.91 330 P P 14 44 34.5 -1.1
SUW pmax pmax
comp=Z,66nm,1.1s
SUW Suwalki 65.91 330 P P 14 44 34.5 -1.1
ESJX Sierra Juarez 65.96 68 P P 14 44 37.3 +0.8
SNART Snartemo 66.05 341 ⇑iP P 14 44 36.6 +0.2
MVCO Mesa Verde 66.17 60 P P 14 44 39.3 +1.4
baz=319
MVCO Mesa Verde 66.17 60 P P 14 44 39.0 +1.2
Y14A Wickenburg 66.18 65 P P 14 44 39.6 +1.9
PSI Prapat 66.60 242 P P 14 44 41.0 +0.4
PSI pmax pmax
comp=Z,11nm,0.7s
X16A Lo Mia Camp, P 66.68 64 P P 14 44 43.1 +2.2
RPSI Rantau Prapat 66.69 242 P P 14 44 41.0 0.0
RPSI IAmb IAmb 14 44 41.9
comp=Z,11nm,0.7s
ZKTA Zakatala 66.73 308 P P 14 44 40.9 0.0
AKASG Malin Array Be 66.73 325 P P 14 44 39.5 -1.2
comp=Z,14nm,0.5s,baz=33,slow=6.4,SNR=52
AKASG Malin Array Be 66.73 325 P P 14 44 39.5 -1.2
AKBB Malin Array Si 66.73 325 ceP P 14 44 39.7 -1.0
AKBB Malin Array Si 66.73 325 P P 14 44 39.5 -1.2
AKBB IAmb IAmb 14 44 40.6
comp=Z,34nm,1.1s
KIEV Kiev 66.74 325 P P 14 44 39.0 -1.8
LGD Lagodekhi 66.76 309 P P 14 44 40.7 -0.4
KIV Kislovodsk 66.76 312 ⇓P P 14 44 41.5 +0.3
KIV Kislovodsk 66.76 312 eP P 14 44 41.0 -0.2
KIV Kislovodsk 66.76 312 eP P 14 44 41.0 -0.2
KIV pmax pmax
comp=Z,79nm,0.9s
KIV Kislovodsk 66.76 312 P P 14 44 41.1 0.0
KIV IAmb IAmb 14 44 44.9
comp=Z,23nm,0.7s
SEKA Sheki 66.78 308 P P 14 44 40.9 -0.4
KBZ Khabaz 66.84 312 P P 14 44 41.8 +0.2
comp=Z,38nm,0.8s,baz=56,slow=24,SNR=72
KBZ Khabaz 66.84 312 iP P 14 44 41.7 +0.2
KBZ pmax pmax
comp=Z,51nm,0.9s
HYB Hyderabad 66.89 269 iP P 14 44 41.0 -1.3
ECSD EROS Data Cent 67.02 48 P P 14 44 42.9 +0.2
baz=322,SNR=5.0
ECSD EROS Data Cent 67.02 48 P P 14 44 43.0 +0.4
ECSD IAmb IAmb 14 44 43.7
comp=Z,8.8nm,0.8s
ZEI Tsey 67.12 311 eP P 14 44 41.9 -1.6
ZEI pmax pmax
comp=Z,19nm,0.9s
PPBI Pangkal Pinang 67.14 232 P P 14 44 45.0 +1.2
comp=Z,24nm,0.9s
SDCO Great Sand Dun 67.33 57 P P 14 44 46.5 +1.5
baz=320
ONI Oni 67.48 311 P P 14 44 46.2 +0.6
BKNI Bangkinang 67.57 238 P P 14 44 47.9 +1.5
GANJ Ganja 67.64 308 P P 14 44 46.4 -0.1
MTN Manton Dam 67.75 203 P P 14 44 48.9 +1.5
MTN IAmb IAmb 14 44 49.7
comp=Z,11nm,0.7s
LKRN Lenkeran, Azer 67.92 305 P P 14 44 48.3 +0.1
KZRT Kazreti 67.98 310 P P 14 44 48.8 +0.2
CHVG Ch'k'valeri 68.00 312 ⇓P P 14 44 48.7 0.0
SCHQ Schefferville 68.05 24 P P 14 44 48.0 -0.9
comp=Z,3.9nm,0.6s,baz=313,slow=4.3,SNR=7.6
SCHQ Schefferville 68.05 24 P P 14 44 48.3 -0.5
GKP Gorka Klasztor 68.28 333 eP P 14 44 50.1 -0.1
SOC Sochi 68.38 314 diP P 14 44 50.3 -0.6
SOC e*PP pP 14 46 34.5 +0.2
SOC e 14 47 31.5
SOC ePPP PPP 14 49 16.4
SOC eS S 14 53 12.1 0.0
SOC eSS SS 14 57 48.9 +2.0
SOC pmax pmax
comp=Z,19nm,0.6s
AKH Akhalkalaki 68.38 310 ⇓P P 14 44 52.0 +0.8
AKH Akhalkalaki 68.38 310 P P 14 44 51.8 +0.5
AKH pmax pmax
comp=Z,29nm,0.8s
AKH Akhalkalaki 68.38 310 P P 14 44 51.8 +0.5
AKH IAmb IAmb 14 44 52.9
comp=Z,29nm,0.8s
ANN Anapa 68.39 316 eP P 14 44 49.2 -1.7
ANN e*PP pP 14 46 30.8 -3.5
ANN eS S 14 53 19.9 +7.8
ANN pmax pmax
comp=Z,27nm,1.1s
BEL Belsk 68.52 330 eP P 14 44 52.0 +0.4
GSI Gunungsitoli 68.58 242 P P 14 44 53.4 +0.8
comp=Z,45nm,0.6s
GSI Gunungsitoli 68.58 242 P P 14 44 53.4 +0.8
GNI Garni 68.78 309 P P 14 44 54.8 +1.1
GNI Garni 68.78 309 P P 14 44 54.6 +0.9
GNI pmax pmax
comp=Z,79nm,1.5s
GNI Garni 68.78 309 P P 14 44 54.6 +0.9
BATM Batumi 69.06 312 ⇓P P 14 44 54.7 -0.4
BATM Batumi 69.06 312 P P 14 44 54.7 -0.4
NAX Nakhchivan 69.18 308 P P 14 44 56.0 0.0
SORM Soroca 69.20 324 ⇓P P 14 44 54.7 -1.1
SORM Soroca 69.20 324 P P 14 44 54.7 -1.1
KRJI Kerinci 69.41 237 P P 14 44 58.4 +0.7
comp=Z,192nm,0.8s
BNM Barren Site 69.48 61 P P 14 45 00.3 +2.2
KMPD K-Podol'skiy 69.50 325 P P 14 44 57.0 -0.6
PWJI Pagerwojo 69.75 224 P P 14 44 59.6 +0.1
comp=Z,49nm,1.1s
KWP Kalwaria Pacla 69.84 328 eP P 14 44 59.9 +0.2
KWP Kalwaria Pacla 69.84 328 P P 14 44 59.6 -0.1
KWP pmax pmax
comp=Z,80nm,1.0s
KWP Kalwaria Pacla 69.84 328 P P 14 44 59.6 -0.1

LHSI Lahat 69.86 234 P P 14 45 00.7 +0.5
KLSI 70.02 232 P P 14 45 01.5 +0.3
comp=Z,7.4nm,0.9s
MDSI Maura Dua 70.11 233 P P 14 45 01.5 -0.2
comp=Z,1µmcomp=Z,16nm,1.0s
OJC Ojcow 70.24 330 eP P 14 45 02.1 0.0
OJC Ojcow 70.24 330 P P 14 45 01.8 -0.3
OJC pmax pmax
comp=Z,44nm,1.1s
OJC Ojcow 70.24 330 P P 14 45 01.8 -0.3
OJC IAmb IAmb 14 45 03.0
comp=Z,44nm,1.1s
LWLI Liwa 70.63 233 P P 14 45 04.2 -0.8
comp=Z,8µmcomp=Z,52nm,0.4s
KSP Ksiaz 70.72 333 eP P 14 45 04.7 -0.1
KSP Ksiaz 70.72 333 P P 14 45 04.6 -0.2
EKA Eskdalemuir Ar 70.72 346 P P 14 45 04.1 -0.7
EKA pmax pmax
comp=Z,1.0nm,0.4s
BUR08 Bucovina Ar. S 70.73 325 P P 14 45 04.5 -0.6
BUR08 IAmb IAmb 14 45 05.6
comp=Z,18nm,0.8s
BURAR Bucovina Array 70.75 325 ⇓P P 14 45 04.9 -0.4
BURAR Bucovina Array 70.75 325 P P 14 45 04.8 -0.4
BURAR Bucovina Array 70.75 325 P P 14 45 05.5 +0.2
NIE Niedzica 70.80 329 eP P 14 45 06.0 +0.6
UZH Uzhgorod 70.85 328 eP P 14 45 04.1 -1.5
KOPT Kop Dagi 70.87 311 P P 14 45 07.5 +1.2
KOPT IAmb IAmb 14 45 09.7
comp=Z,24nm,0.8s
CRVS Cervenica-Dubn 70.88 328 eP P 14 45 05.6 -0.3
CRVS pmax pmax
comp=Z,70nm,1.9s
CRVS Cervenica-Dubn 70.88 328 eP P 14 45 05.6 -0.3
VLDQ Val d'Or 70.95 33 P P 14 45 05.1 -1.1
VLDQ IAmb IAmb 14 45 06.8
comp=Z,11nm,0.8s
OSTC Ostas 71.00 332 eP P 14 45 06.5 0.0
CHVC Chvalec 71.01 333 eP P 14 45 06.5 -0.1
BIZ Bicaz 71.02 325 ⇓P P 14 45 06.0 -0.7
GEVA Gevas 71.03 309 P P 14 45 08.0 +0.8
GEVA IAmb IAmb 14 45 08.6
comp=Z,17nm,1.1s
UPC Upice 71.10 333 eP P 14 45 07.2 +0.1
DPC Dobruska-Polom 71.15 332 eP P 14 45 07.7 +0.2
TESR Tescani 71.19 324 ⇓P P 14 45 07.0 -0.7
CLL Collm 71.19 335 iP P 14 45 06.8 -0.8
comp=Z,38nm,0.9s
CLL Collm 71.19 335 iP P 14 45 06.8 -0.8
CLL pmax pmax
comp=Z,38nm,0.9s
CLL Collm 71.19 335 P P 14 45 06.5 -1.0
CLL IAmb IAmb 14 45 08.1
comp=Z,33nm,0.9s
KRLC Kraliky 71.27 332 eP P 14 45 07.8 -0.4
LANS Liptovska Anna 71.29 330 eP P 14 45 09.1 +0.8
LANS pmax pmax
comp=Z,25nm,0.9s
LANS Liptovska Anna 71.29 330 eP P 14 45 09.1 +0.8
MORC Moravsky Berou 71.31 331 ⇓P P 14 45 08.8 +0.3
MORC Moravsky Berou 71.31 331 eP P 14 45 08.5 0.0
MORC Moravsky Berou 71.31 331 P P 14 45 08.4 0.0
MORC pmax pmax
comp=Z,38nm,0.9s
MORC Moravsky Berou 71.31 331 P P 14 45 08.4 0.0
MORC IAmb IAmb 14 45 09.6
comp=Z,38nm,0.9s
BRG Berggiesshubel 71.33 334 iP P 14 45 07.9 -0.6
comp=Z,14nm,1.2s
BRG Berggiesshubel 71.33 334 iP P 14 45 07.9 -0.6
BRG pmax pmax
comp=Z,14nm,1.2s
TLCR 71.52 322 ⇓P P 14 45 09.0 -0.6
TLCR 71.52 322 P P 14 45 09.0 -0.6
KECS Kecovo 71.56 329 eP P 14 45 09.8 0.0
KECS pmax pmax
comp=Z,10.0nm,1.0s
KECS Kecovo 71.56 329 eP P 14 45 09.8 0.0
VRI Vrincioaia 71.71 324 ⇓P P 14 45 10.7 -0.1
VRI Vrincioaia 71.71 324 P P 14 45 10.7 -0.1
CFR Carcaliu 71.78 322 ⇓P P 14 45 10.2 -1.0
CFR Carcaliu 71.78 322 P P 14 45 10.1 -1.0
JUR Jurilovca 71.85 322 ⇓P P 14 45 12.2 -0.3
OZUR 71.85 324 ⇓P P 14 45 12.1 +0.5
DIKM Dikmen 71.87 316 ⇓P P 14 45 12.1 +0.3
PRU Pruhonice 71.97 333 eP P 14 45 12.0 -0.2
KVT Kavak 72.00 315 P P 14 45 13.4 +0.8
VRAC Vranov 72.01 332 ⇓P P 14 45 13.1 +0.6
VRAC Vranov 72.01 332 eP P 14 45 12.7 +0.2
VRAC Vranov 72.01 332 P P 14 45 13.0 +0.6
VYHS Vyhne 72.06 330 eP P 14 45 13.0 +0.2
VYHS pmax pmax
comp=Z,19nm,0.9s
VYHS Vyhne 72.06 330 eP P 14 45 13.0 +0.2
CJR Cluj-Napoca 72.08 326 ⇓P P 14 45 13.2 +0.2
CJR Cluj-Napoca 72.08 326 P P 14 45 13.2 +0.2
JAVC Velka Javorina 72.09 331 eP P 14 45 14.1 +1.1
PSZ Piszkesteto 72.24 329 ⇓P P 14 45 14.1 +0.2
PSZ Piszkesteto 72.24 329 P P 14 45 13.8 -0.1
PSZ pmax pmax
comp=Z,20nm,1.0s
PSZ Piszkesteto 72.24 329 P P 14 45 13.8 -0.1
PSZ IAmb IAmb 14 45 15.3
comp=Z,20nm,1.0s
HARR Harsova 72.27 322 ⇓P P 14 45 13.5 -0.5
HARR Harsova 72.27 322 P P 14 45 13.5 -0.5
TIRR Tirgusor 72.28 322 ⇓P P 14 45 13.0 -1.1
TIRR Tirgusor 72.28 322 ⇓P P 14 45 13.0 -1.1
TIRR Tirgusor 72.28 322 P P 14 45 13.8 -0.3
TIRR pmax pmax
comp=Z,36nm,0.8s
TIRR Tirgusor 72.28 322 P P 14 45 13.8 -0.3
TIRR IAmb IAmb 14 45 15.0
comp=Z,36nm,0.8s
KRUC Moravsky 72.28 332 eP P 14 45 14.3 +0.2
MLR Muntele Rosu 72.31 324 ⇓P P 14 45 14.9 +0.4
MLR Muntele Rosu 72.31 324 P P 14 45 14.3 -0.1
MLR pmax pmax
comp=Z,22nm,0.8s
MLR Muntele Rosu 72.31 324 P P 14 45 14.3 -0.1
MLR IAmb IAmb 14 45 16.0
comp=Z,22nm,0.8s
NKC Novy Kostel 72.31 335 eP P 14 45 14.3 +0.1
TREC Trest 72.34 332 eP P 14 45 14.7 +0.3
PBCC Pribram 72.40 333 eP P 14 45 14.7 0.0
ISR Istrita 72.42 323 ⇓P P 14 45 15.0 0.0
ISR Istrita 72.42 323 P P 14 45 14.9 0.0
SMOL Smolenice 72.47 331 eP P 14 45 15.7 +0.5
SMOL pmax pmax
comp=Z,16nm,1.0s
SMOL Smolenice 72.47 331 eP P 14 45 15.7 +0.5
MODS Modra-Piesok 72.64 331 eP P 14 45 15.9 -0.3
MODS pmax pmax
comp=Z,30nm,1.0s
MODS Modra-Piesok 72.64 331 eP P 14 45 15.9 -0.3
VOIR 72.68 324 ⇓P P 14 45 16.8 +0.2
VOIR 72.68 324 P P 14 45 16.7 +0.2
ICOR Ion Corvin 72.81 322 ⇓P P 14 45 17.3 +0.2
ZST Bratislava 72.85 331 eP P 14 45 18.0 +0.7
ZST pmax pmax
comp=Z,62nm,1.1s
ZST Bratislava 72.85 331 eP P 14 45 18.0 +0.7
ARR Arges 72.89 325 ⇓P P 14 45 18.2 +0.5
KHC Kasperske Hory 73.02 333 eP P 14 45 18.2 -0.1
KHC ex x 14 45 25.1
ILGA Ilgaz 73.02 316 P P 14 45 19.6 +0.9
ILGA IAmb IAmb 14 45 20.6
comp=Z,47nm,0.9s
SIRR Siria 73.13 327 ⇓P P 14 45 18.8 -0.2
GRA1 Grafenberg Arr 73.13 335 P P 14 45 19.5 +0.6
GRA1 IAmb IAmb 14 45 20.2
comp=Z,38nm,0.8s
GRF Grafenberg Arr 73.13 335 P P 14 45 19.5 +0.6
GRF pmax pmax
comp=Z,38nm,0.8s
GRF Grafenberg Arr 73.13 335 eP P 14 45 19.0 0.0
comp=Z,27nm,0.9s,baz=23,slow=5.1
MALT Malatya 73.19 312 P P 14 45 20.3 +0.7
GEC2 GERESS Array S 73.24 333 P P 14 45 19.5 -0.2
GERES GERESS Array B 73.24 333 P P 14 45 19.2 -0.5
comp=Z,6.9nm,0.6s,baz=33,slow=5.1,SNR=42
GERES GERESS Array B 73.24 333 P P 14 45 19.3 -0.4
CONA Conrad Observa 73.46 331 iP P 14 45 21.2 +0.2
comp=Z,26nm,1.2s,SNR=10
PALK Pallekele 73.47 260 P P 14 45 21.6 +0.2
PALK pmax pmax
comp=Z,32nm,1.0s
PALK Pallekele 73.47 260 P P 14 45 21.6 +0.2
PALK IAmb IAmb 14 45 22.4
comp=Z,32nm,0.9s
SOP Sopron 73.48 331 P P 14 45 22.4 +1.5
SOP pmax pmax
comp=Z,33nm,1.0s
GZR Gura Zlata 73.51 326 ⇓iP P 14 45 20.8 -0.5
BTNL Ternell 73.52 339 P P 14 45 21.2 0.0
MEM Membach 73.52 339 P P 14 45 21.2 +0.1
BSTI Sat Tilman 73.64 339 P P 14 45 21.8 0.0
SHME Shamm 73.71 291 iP P 14 45 22.1 -0.5
SNR=20
BZS Buzias 73.71 327 ⇓P P 14 45 21.6 -0.6
BZS Buzias 73.71 327 P P 14 45 21.7 -0.6
BZS pmax pmax
comp=Z,42nm,1.0s
WB0 Warramunga Arr 73.76 198 P P 14 45 24.2 +1.4
WB0 IAmb IAmb 14 45 24.8
comp=Z,9.6nm,0.8s
BCLA Clavier 73.86 339 ⇑P P 14 45 23.1 +0.1
WR0 Warramunga Arr 73.92 198 P P 14 45 25.0 +1.3
WRAB Tennant Creek 73.93 198 P P 14 45 25.2 +1.4
WRAB pmax pmax
comp=Z,10.0nm,0.8s
WRAB Tennant Creek 73.93 198 P P 14 45 25.2 +1.4
WRAB IAmb IAmb 14 45 26.2
comp=Z,10nm,0.8s
BGES Gesves 73.94 339 ⇑P P 14 45 23.4 -0.1
WB2 Warramunga Arr 73.94 198 P P 14 45 25.0 +1.2
WB2 IAmb IAmb 14 45 26.3
comp=Z,12nm,0.8s
WRA Warramunga Arr 73.94 198 P P 14 45 25.0 +1.1
comp=Z,9.9nm,0.8s,baz=15,slow=5.8,SNR=98
WRA Warramunga Arr 73.94 198 P P 14 45 24.6 +0.8
WRA Warramunga Arr 73.94 198 P P 14 45 24.6 +0.8
MOA Molln 73.99 332 eP P 14 45 24.0 +0.1
comp=Z,11nm,0.8s
SNF Seneffe 73.99 340 ⇑P P 14 45 22.5 -1.3
BMRD Maredsous 74.08 339 P P 14 45 24.5 +0.2
HERR Herculane 74.08 326 ⇓P P 14 45 23.8 -0.6
MORH Mrgy, Hungar 74.15 329 ⇓iP P 14 45 23.6 -1.2
BR131 Keskin Array S 74.15 316 P P 14 45 24.7 -0.4
BR131 pmax pmax
comp=Z,14nm,1.0s
BR131 Keskin Array S 74.15 316 P P 14 45 24.6 -0.4
BR131 IAmb IAmb 14 45 25.9
comp=Z,14nm,0.9s
BRTR Keskin Array B 74.15 316 P P 14 45 24.9 -0.2
comp=Z,13nm,0.8s,baz=46,slow=3.6,SNR=65
BRTR PP PP 14 48 20.1 +1.5
comp=Z,0.9nm,0.4s,baz=35,slow=4.5,SNR=3.5
BRTR Keskin Array B 74.15 316 P P 14 45 24.6 -0.5
BRTR Keskin Array B 74.15 316 P P 14 45 24.6 -0.5
ARSA Arzberg 74.17 331 iP P 14 45 25.2 +0.3
comp=Z,19nm,1.2s,SNR=5.3
FITZ Fitzroy Crossi 74.20 207 P P 14 45 26.7 +1.4
MSFE Esma-Masafi 74.23 291 iP P 14 45 24.9 -0.7
SNR=10
GIVF Givet 74.26 339 eP P 14 45 24.7 -0.6
GIVF pmax pmax
comp=Z,14nm,1.0s
DOU Dourbes 74.31 339 ⇑P P 14 45 25.6 0.0
FVM French Village 74.42 47 P P 14 45 26.8 +0.3
FVM pmax pmax
comp=Z,8.0nm,1.3s
FVM French Village 74.42 47 P P 14 45 26.8 +0.3
BAIF Baives 74.43 340 eP P 14 45 25.8 -0.5
BAIF pmax pmax
comp=Z,21nm,1.0s
D62A Allapoint, All 74.49 28 P P 14 45 27.4 +0.7
UOSS Minazif 74.52 291 iP P 14 45 26.8 -0.5
SNR=8.4
UOSS Minazif 74.52 291 P P 14 45 26.4 -0.9
MDUB Mudurnu 74.55 318 P P 14 45 27.4 +0.1
U40A Yellville 74.64 50 P P 14 45 27.8 0.0
baz=325
U40A Yellville 74.64 50 P P 14 45 27.8 0.0
HATD Hatta, Dubai 74.66 291 iP P 14 45 28.0 -0.1
SNR=32
GAZ Gaziantep 74.68 312 P P 14 45 28.6 +0.5
GAZ IAmb IAmb 14 45 29.6
comp=Z,33nm,1.2s
FRGS Fruska Gora 74.72 328 ⇓iP P 14 45 27.3 -0.7
NAZ Nazwa, Dubai 74.80 291 iP P 14 45 28.4 -0.4
SNR=12
TX31 Lajitas Ar. Si 74.80 62 P P 14 45 30.2 +1.3
TX31 pP pP 14 47 16.9 +1.8
TX32 Lajitas Array 74.80 62 P P 14 45 30.2 +1.3
TX32 pP 14 47 16.4 +1.4
TXAR Lajitas Array 74.80 62 P P 14 45 30.5 +1.6
comp=Z,0.6nm,0.5s,baz=283,slow=4.4,SNR=6.1
TXAR pP pP 14 47 16.1 +1.1
comp=Z,1.2nm,0.6s,baz=300,slow=5.1,SNR=7.2
TXAR Lajitas Array 74.80 62 P P 14 45 30.3 +1.4
TXAR *PP pP 14 47 16.2 +1.2
SOKA Soboth 74.83 331 iP P 14 45 29.0 +0.3
comp=Z,33nm,1.3s,SNR=8.9
PERS Pernice 74.85 331 iP P 14 45 28.9 +0.1
KBA Koelnbreinsper 74.95 333 iP P 14 45 30.2 +0.7
comp=Z,53nm,0.7s,SNR=31
KBA Koelnbreinsper 74.95 333 P P 14 45 30.2 +0.7
FAQ Al Faqa, Dubai 75.03 291 iP P 14 45 29.4 -0.7
SNR=10
BFO Black Forest 75.11 336 P P 14 45 29.9 -0.3
BFO pmax pmax
comp=Z,18nm,0.8s
BFO Black Forest 75.11 336 P P 14 45 29.9 -0.3
BFO IAmb IAmb 14 45 31.0
comp=Z,18nm,0.8s
OBKA Obir 75.13 332 eP P 14 45 30.6 +0.1
comp=Z,16nm,0.7s
WATA Walderalm 75.20 334 iP P 14 45 31.3 +0.4
comp=Z,31nm,1.2s,SNR=6.7
WTTA Wattenberg 75.25 334 iP P 14 45 31.8 +0.5
comp=Z,38nm,0.8s,SNR=10
WTTA Wattenberg 75.25 334 P P 14 45 31.7 +0.5
ASUD Al Ashush, Dub 75.27 291 iP P 14 45 31.2 -0.2
SNR=10.0
MYKA Terra Mystica 75.28 332 eP P 14 45 30.8 -0.4
comp=Z,8.9nm,0.7s
RETA Reutte 75.28 335 eP P 14 45 31.3 +0.1
comp=Z,16nm,1.1s
H58A Gabriels 75.29 33 P P 14 45 31.2 -0.1
baz=333
CDF Champ du Feu 75.29 337 eP P 14 45 30.7 -0.6
CDF pmax pmax
comp=Z,29nm,0.8s
MOTA Moosalm 75.32 334 iP P 14 45 32.0 +0.5
comp=Z,43nm,1.0s,SNR=9.0
GCIS Gornji Cirnik 75.39 331 iP P 14 45 31.6 -0.2
SQTA Sankt Quirin 75.41 334 iP P 14 45 32.3 +0.3
comp=Z,57nm,1.8s,SNR=8.8
PRED Cave del Predi 75.47 332 P P 14 45 31.8 -0.5
PRED IAmb IAmb 14 45 33.1
comp=Z,33nm,0.8s
ALNE Al Ain 75.47 290 iP P 14 45 32.2 -0.4
SNR=10
CRES Cresnjev 75.48 331 eP P 14 45 31.3 -1.0
ABTA Abfaltersbach 75.49 333 iP P 14 45 32.5 +0.1
comp=Z,33nm,1.1s,SNR=6.5
ECH Echery 75.50 337 P P 14 45 31.8 -0.6
ECH pmax pmax
comp=Z,24nm,0.9s
ECH Echery 75.50 337 P P 14 45 31.8 -0.6
ECH IAmb IAmb 14 45 33.1
comp=Z,24nm,0.9s
ZOU Zoufplan 75.53 333 P P 14 45 32.9 +0.1
ZOU IAmb IAmb 14 45 36.3
comp=Z,21nm,1.3s
DIVS Divibare 75.59 327 ⇓iP P 14 45 32.2 -0.8
DIVS Divibare 75.59 327 P P 14 45 32.2 -0.8
DIVS IAmb IAmb 14 45 33.4
comp=Z,32nm,0.9s
PLD Plovdiv 75.69 323 P P 14 45 34.0 +0.5
PLD pmax pmax
comp=Z,100nm,1.0s
DAVA Damuels 75.69 335 iP P 14 45 33.8 +0.2
comp=Z,33nm,1.1s,SNR=5.5
FETA Feichten 75.72 334 iP P 14 45 34.0 +0.3
comp=Z,18nm,0.8s,SNR=6.0
STAL STALIGIAL 75.88 333 P P 14 45 33.6 -0.9
HAU Haudompre 75.89 338 eP P 14 45 33.9 -0.7
HAU pmax pmax
comp=Z,18nm,0.9s
CIMO Cimolais 75.91 333 P P 14 45 33.9 -0.8
BLY Banja Luka 75.92 329 eP P 14 45 30.8 -3.9
HAPS Han Pijesak,Bl 75.95 328 eP P 14 45 33.8 -1.3
HINF Hinteralfeld 75.95 337 eP P 14 45 33.9 -1.0
HINF pmax pmax
comp=Z,46nm,1.6s
BBLS Lazići 76.00 327 ⇓iP P 14 45 35.1 -0.2
TRI Trieste 76.08 332 P P 14 45 34.8 -0.8
TRI pmax pmax
comp=Z,69nm,1.5s
TRI Trieste 76.08 332 P P 14 45 34.8 -0.8
TRI IAmb IAmb 14 45 35.0
comp=Z,69nm,1.5s
FUORN Ofenpass-Fuorn 76.21 335 P P 14 45 37.0 +0.4
FUORN IAmb IAmb 14 45 38.1
comp=Z,21nm,0.8s
RDO Rodhopi 76.21 322 P P 14 45 36.3 -0.1
RUDO Rudo 76.23 327 eP P 14 45 34.6 -1.9
ALN Alexandroupoli 76.23 321 P P 14 45 36.1 -0.4
ALN pmax pmax
comp=Z,33nm,1.2s
ALN Alexandroupoli 76.23 321 P P 14 45 36.1 -0.4
ALN IAmb IAmb 14 45 37.1
comp=Z,33nm,1.2s
CTI Castel Tesino 76.37 333 P P 14 45 36.8 -0.5
CTI pmax pmax
comp=Z,17nm,0.9s
CTI Castel Tesino 76.37 333 P P 14 45 36.8 -0.5
CTI IAmb IAmb 14 45 37.5
comp=Z,17nm,0.9s
TUE Stuetta 76.59 335 P P 14 45 39.0 +0.4
TUE IAmb IAmb 14 45 40.0
comp=Z,52nm,0.9s
FLN La Foliniere 76.60 342 eP P 14 45 37.8 -0.6
FLN pmax pmax
comp=Z,51nm,1.0s
LDF La Druitiere 76.70 342 eP P 14 45 38.2 -0.7
LDF pmax pmax
comp=Z,12nm,0.6s
UPM Unac-Piva 76.75 327 eP P 14 45 38.7 -0.9
SRS Serrai 76.96 323 P P 14 45 40.2 -0.3
SRS pmax pmax
comp=Z,48nm,0.9s
SRS Serrai 76.96 323 P P 14 45 40.3 -0.3
STIP Stip 76.96 324 iP P 14 45 39.2 -1.3
TEOL Teolo 76.99 333 P P 14 45 40.6 0.0
GRR Gorron 77.03 342 eP P 14 45 40.4 -0.4
GRR pmax pmax
comp=Z,47nm,0.8s
BRY Bratogost 77.14 327 P P 14 45 41.0 -0.7
BRY Bratogost 77.14 327 eP P 14 45 40.4 -1.3
LOR Lormes 77.15 339 eP P 14 45 40.9 -0.6
LOR pmax pmax
comp=Z,38nm,0.9s
VAY Valandovo 77.15 324 iP P 14 45 41.7 +0.2
VAY Valandovo 77.15 324 P P 14 45 42.0 +0.4
VAY pmax pmax
comp=Z,39nm,1.0s
KNT Kendrikon 77.17 324 P P 14 45 41.7 0.0
KNT Kendrikon 77.17 324 P P 14 45 41.7 0.0
SENIN Lac Senin/Sane 77.20 336 P P 14 45 42.2 +0.2
CABF La Chapelle 77.26 337 eP P 14 45 41.9 -0.3
CABF pmax pmax
comp=Z,19nm,1.0s
SOH Sokhos 77.31 323 P P 14 45 42.4 -0.1
MANT Manisa 77.31 318 P P 14 45 42.6 -0.2
PDG Podgorica 77.32 327 ⇓P P 14 45 41.8 -0.6
PDG Podgorica 77.32 327 ⇓iP P 14 45 41.6 -0.9
PDG Podgorica 77.32 327 P P 14 45 41.6 -0.9
PDG IAmb IAmb 14 45 42.6
comp=Z,33nm,0.8s
TREB Trebinje 77.37 327 eP P 14 45 39.0 -3.7
SSF Saint Saulge 77.42 339 eP P 14 45 42.4 -0.5
SSF pmax pmax
comp=Z,16nm,0.8s
SGMF Saint Gilles 77.47 344 eP P 14 45 42.8 -0.3
SGMF pmax pmax
comp=Z,36nm,0.8s
OUR Ouranopolis 77.50 322 P P 14 45 42.8 -0.6
OUR Ouranopolis 77.50 322 P P 14 45 42.8 -0.6
ROSF Rostrenen 77.51 344 eP P 14 45 43.1 -0.3
ROSF pmax pmax
comp=Z,51nm,0.9s
HCY Herceg Novi 77.56 327 eP P 14 45 42.5 -1.3
DRME Dracevica, Mon 77.56 327 ⇓iP P 14 45 43.0 -0.8
AS31 Alice Springs 77.65 198 P P 14 45 46.2 +1.8
ASAR Alice Springs 77.65 198 P P 14 45 46.1 +1.8
comp=Z,9.5nm,0.6s,baz=9.0,slow=5.4,SNR=258
ASAR Alice Springs 77.65 198 P P 14 45 45.9 +1.5
ASAR Alice Springs 77.65 198 P P 14 45 45.9 +1.5
PLG Polygyros 77.66 323 P P 14 45 43.5 -0.9
PLG Polygyros 77.66 323 P P 14 45 43.5 -0.9
AVF Avril sur Loir 77.71 339 eP P 14 45 44.1 -0.4
AVF pmax pmax
comp=Z,26nm,0.8s
SMF Signal de Mont 77.74 339 eP P 14 45 44.3 -0.4
SMF pmax pmax
comp=Z,27nm,1.0s
QUIF Quistinic 77.90 344 eP P 14 45 45.0 -0.5
QUIF pmax pmax
comp=Z,38nm,1.0s
OHR Ohrid 77.97 325 iP P 14 45 45.3 -0.7
PAIG Paliouri 77.97 323 P P 14 45 45.1 -0.9
PAIG Paliouri 77.97 323 P P 14 45 45.1 -0.9
TIR Tirane 78.08 326 ⇓P P 14 45 46.3 -0.2
TIR Tirane 78.08 326 P P 14 45 46.4 -0.2
TIR pmax pmax
comp=Z,52nm,0.7s
TIR Tirane 78.08 326 P P 14 45 46.4 -0.2
LPL La Plagne 78.13 336 eP P 14 45 47.3 +0.2
LPL pmax pmax
comp=Z,32nm,0.7s
LPG La Plagne 78.15 336 eP P 14 45 43.5 -3.8
LPG pmax pmax
comp=Z,33nm,0.7s
ELL Elmali 78.24 317 P P 14 45 47.2 -0.5
ELL pmax pmax
comp=Z,59nm,0.8s
ELL Elmali 78.24 317 P P 14 45 47.2 -0.5
ELL IAmb IAmb 14 45 48.0
comp=Z,59nm,0.8s
CSS Mathiatis 78.26 313 P P 14 45 47.4 -0.3
CSS IAmb IAmb 14 45 48.4
comp=Z,39nm,0.9s
TCF Toulx Ste Croi 78.44 340 eP P 14 45 48.2 -0.3
TCF pmax pmax
comp=Z,15nm,0.8s
NEST Nestorio 78.49 325 P P 14 45 48.0 -1.0
BNI Bardonecchia 78.58 336 P P 14 45 49.8 +0.4
BNI pmax pmax
comp=Z,18nm,0.7s
BNI Bardonecchia 78.58 336 P P 14 45 49.8 +0.4
BNI IAmb IAmb 14 45 50.9
comp=Z,18nm,0.7s
XOR Xorichti 78.64 323 P P 14 45 48.4 -1.3
PENT Pentalofos 78.66 324 P P 14 45 49.0 -0.8
NEO Neokhori 78.68 323 P P 14 45 48.6 -1.3
SWET Sewanee 78.72 46 P P 14 45 50.3 +0.1
OSSC Osservatorio P 78.80 333 P P 14 45 50.3 -0.1
OSSC IAmb IAmb 14 45 51.0
comp=Z,20nm,0.8s
MBDF Montbardon 78.86 336 eP P 14 45 50.5 -0.4
MBDF pmax pmax
comp=Z,12nm,0.7s
SSB Saint Sauveur 78.88 338 P P 14 45 51.0 +0.2
SSB pmax pmax
comp=Z,21nm,0.8s
SSB Saint Sauveur 78.88 338 P P 14 45 51.0 +0.2
SSB IAmb IAmb 14 45 52.1
comp=Z,21nm,0.8s
LSK Leskovik 78.89 325 P P 14 45 50.8 -0.3
NRCA Norcia 78.90 331 P P 14 45 51.3 +0.2
NRCA IAmb IAmb 14 45 52.4
comp=Z,60nm,1.0s
ORIF Oris-en-Rattie 78.90 337 eP P 14 45 51.3 +0.2
ORIF pmax pmax
comp=Z,24nm,0.8s
SGRT San Giovanni R 79.08 329 P P 14 45 51.3 -0.7
SGRT IAmb IAmb 14 45 52.0
comp=Z,24nm,0.8s
JAN Janina 79.24 324 P P 14 45 52.8 -0.1

JAN	**Janina**	**79.24 324**	P	**P**	**14 45 52.8**	**-0.1**
VIVF	**Saint-Julien-l**	**79.25 338**	*e*P	**P**	**14 45 52.9**	**+0.1**
VIVF			pmax	pmax		
	comp=Z,22nm,0.8s					
ATAL	**Atalanti**	**79.29 322**	P	**P**	**14 45 51.5**	**-1.6**
KARY	**Karystos**	**79.33 321**	P	**P**	**14 45 52.3**	**-1.1**
LKR	**Lokris**	**79.34 322**	P	**P**	**14 45 51.4**	**-2.0**
MAKR	**Makrakomi, Fth**	**79.34 323**	P	**P**	**14 45 51.8**	**-1.6**
INTR	**Introdacqua**	**79.41 330**	P	**P**	**14 45 53.1**	**-0.7**
INTR			IAmb	IAmb	14 45 54.8	
	comp=Z,28nm,0.8s					
ARG	**Arkhangelos**	**79.44 318**	P	**P**	**14 45 53.2**	**-0.7**
ARG	**Arkhangelos**	**79.44 318**	P	**P**	**14 45 53.2**	**-0.7**
NIS1	**Nisyros Isl.**	**79.49 318**	P	**P**	**14 45 52.8**	**-1.4**
SBF	**Sospel**	**79.51 335**	*e*P	**P**	**14 45 55.1**	**+0.8**
SBF			pmax	pmax		
	comp=Z,49nm,1.1s					
RJF	**Les Rejaudoux**	**79.52 340**	*e*P	**P**	**14 45 54.5**	**+0.3**
RJF			pmax	pmax		
	comp=Z,21nm,1.0s					
IGT	**Igoumenitsa**	**79.53 325**	P	**P**	**14 45 53.7**	**-0.7**
IGT			pmax	pmax		
	comp=Z,26nm,1.2s					
IGT	**Igoumenitsa**	**79.53 325**	P	**P**	**14 45 53.5**	**-0.9**
EVR	**Evrytania**	**79.55 323**	P	**P**	**14 45 53.1**	**-1.5**
KEK	**Kerkira**	**79.56 325**	P	**P**	**14 45 53.4**	**-1.1**
ATHU	**Athens Univers**	**79.64 321**	P	**P**	**14 45 53.4**	**-1.6**
VILL	**Villia**	**79.65 322**	P	**P**	**14 45 53.0**	**-2.1**
DSF	**Desfina**	**79.72 323**	P	**P**	**14 45 53.2**	**-2.3**
ANX	**Ano Chora**	**79.79 323**	P	**P**	**14 45 54.5**	**-1.4**
KALE	**Kalithea**	**79.89 323**	P	**P**	**14 45 54.5**	**-1.8**
PDO	**Prodromos**	**80.05 324**	P	**P**	**14 45 56.1**	**-1.0**
LKD2	**Lefkada island**	**80.07 324**	P	**P**	**14 45 55.9**	**-1.4**
KLV	**Kalavryta, Ach**	**80.19 323**	P	**P**	**14 45 56.4**	**-1.5**
EPID	**Epidavros**	**80.20 322**	P	**P**	**14 45 55.3**	**-2.7**
GUR	**Goura**	**80.21 322**	P	**P**	**14 45 55.5**	**-2.6**
EVGI	**Lefkada island**	**80.22 324**	P	**P**	**14 45 57.0**	**-1.0**
LMR	**La Mourre**	**80.24 336**	*e*P	**P**	**14 45 57.6**	**-0.4**
LMR			pmax	pmax		
	comp=Z,52nm,1.3s					
KARP	**Karpathos**	**80.41 318**	P	**P**	**14 45 57.5**	**-1.5**
KARP			IAmb	IAmb	14 45 59.2	
	comp=Z,55nm,0.9s					
KARP	**Karpathos**	**80.41 318**	P	**P**	**14 45 57.4**	**-1.7**
DRO	**Drossia**	**80.43 323**	P	**P**	**14 45 58.3**	**-0.9**
TRIP	**Tripoli**	**80.60 322**	P	**P**	**14 45 58.6**	**-1.5**
VLS	**Valsamata**	**80.64 324**	P	**P**	**14 45 59.1**	**-1.1**
VLX	**Vlachokerasia**	**80.70 322**	P	**P**	**14 45 58.8**	**-1.8**
ITM	**Ithomi**	**81.03 322**	P	**P**	**14 46 00.8**	**-1.5**
ITM	**Ithomi**	**81.03 322**	P	**P**	**14 46 00.8**	**-1.5**
TIP	**Timpagrande**	**81.07 327**	P	**P**	**14 46 02.0**	**-0.5**
TIP			IAmb	IAmb	14 46 03.4	
	comp=Z,22nm,1.0s					
STIA	**Sitia Lasithi**	**81.14 318**	P	**P**	**14 46 01.7**	**-1.1**
ZKR	**Zakros**	**81.17 318**	P	**P**	**14 46 01.3**	**-1.7**
NPS	**Neapolis**	**81.28 319**	P	**P**	**14 46 01.3**	**-2.3**
NPS	**Neapolis**	**81.28 319**	P	**P**	**14 46 01.3**	**-2.3**
KTHA	**Kythira Island**	**81.42 321**	P	**P**	**14 46 02.2**	**-2.1**
LAST	**Lasithi**	**81.43 319**	P	**P**	**14 46 02.8**	**-1.6**
IDI	**Anoyia**	**81.55 319**	⇓P	**P**	**14 46 02.8**	**-2.3**
IDI	**Anoyia**	**81.55 319**	P	**P**	**14 46 02.8**	**-2.3**
IDI			IAmb	IAmb	14 46 04.1	
	comp=Z,13nm,0.7s					
IDI	**Anoyia**	**81.55 319**	P	**P**	**14 46 02.7**	**-2.3**
SIVA	**Sivas**	**81.82 319**	P	**P**	**14 46 05.2**	**-1.1**
EPF	**Esparros**	**81.94 340**	*e*P	**P**	**14 46 07.1**	**+0.2**
EPF			pmax	pmax		
	comp=Z,8.0nm,0.8s					
STKA	**Stephens Creek**	**84.61 190**	P	**P**	**14 46 20.7**	**+0.6**
	comp=Z,2.3nm,0.7s,baz=326,slow=7.6,SNR=8.1					
STKA	**Stephens Creek**	**84.61 190**	P	**P**	**14 46 21.4**	**+1.3**
FORT	**Forrest**	**85.74 201**	P	**P**	**14 46 26.9**	**+1.3**
FORT			IAmb	IAmb	14 46 27.6	
	comp=Z,17nm,0.7s					
ESDC	**Sonseca Array**	**86.03 342**	P	**P**	**14 46 26.0**	**-1.1**
	comp=Z,6.1nm,1.0s,baz=360,slow=4.4,SNR=16					
ESDC	**Sonseca Array**	**86.03 342**	P	**P**	**14 46 26.2**	**-0.9**
KEST	**Kesra**	**86.57 331**	P	**P**	**14 46 29.2**	**-0.6**
	comp=Z,9.0nm,0.6s,baz=181,slow=1.0,SNR=11					
KEST	**Kesra**	**86.57 331**	P	**P**	**14 46 30.1**	**+0.2**
KEST			IAmb	IAmb	14 46 52.2	
	comp=Z,21nm,1.1s					
TORD	**Torodi Ar. Bea**	**110.07 330**	PP	PP	14 52 48.9	-7.8
	comp=Z,2.6nm,0.8s,baz=6.1,slow=7.1,SNR=6.3					
DBIC	**Dimbokro**	**118.09 335**	PKP	**PKPdf**	**14 52 29.1**	**-0.9**
	comp=Z,3.0nm,0.6s,baz=342,slow=5.2,SNR=16					
DBIC	**Dimbokro**	**118.09 335**		**PKPdf**	**14 52 29.2**	**-0.8**
LSZ	**Lusaka**	**122.92 289**	PKIKP	**PKPdf**	**14 52 39.4**	**0.0**
LSZ	**Lusaka**	**122.92 289**		**PKPdf**	**14 52 39.4**	**0.0**
MACA	**Manacapuru-AM**	**123.47 42**	*e*P	**PKPdf**	**14 52 40.0**	**-0.4**
SAML	**Samuel**	**127.59 47**	PKIKP	**PKiKP**	**14 52 48.7**	**-0.2**
SAML	**Samuel**	**127.59 47**		**PKiKP**	**14 52 48.7**	**-0.2**
NPGB	**Novo Progresso**	**129.09 37**	*e*P	**PKiKP**	**14 52 53.5**	**+1.6**
LPAZ	**La Paz**	**131.54 57**	PKP	**PKiKP**	**14 52 57.1**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=19,slow=4.2,SNR=4.5					
LPAZ			SKPbc	**SKPbc**	**14 55 34.4**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=13,slow=10,SNR=9.9					
LPAZ	**La Paz**	**131.54 57**		**SKPbc**	**14 55 35.0**	**+0.1**
BOSA	**Boshof**	**134.88 281**	PKhKP	PKPpre	14 52 55.2	
	comp=Z,1.5nm,0.6s,baz=222,slow=2.8,SNR=4.2					
BOSA			PKP	**PKPdf**	**14 53 01.8**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=22,slow=1.6,SNR=7.4					
MAW	**Mawson**	**137.00 214**	PKP	**PKiKP**	**14 53 05.8**	**-0.3**
	comp=Z,3.9nm,0.8s,baz=349,slow=3.4,SNR=5.3					
MAW	**Mawson**	**137.00 214**		**PKiKP**	**14 53 06.5**	**+0.3**
QSPA	**South Pole Qui**	**142.25 180**		**PKPdf**	**14 53 10.3**	**-3.6**
ZON	**Zonda**	**143.34 72**	PKIKP	**PKPdf**	**14 53 16.3**	**-0.6**
ZON	**Zonda**	**143.34 72**		**PKPdf**	**14 53 16.3**	**-0.6**
CPUP	**Villa Florida**	**145.38 53**	PKPbc	**PKPbc**	**14 53 22.0**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=308,slow=1.7,SNR=6.2					
CPUP			pKPPbc	**pPKPdf**	**14 55 18.2**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=333,slow=4.6,SNR=4.9					
CPUP	**Villa Florida**	**145.38 53**	PKP2	**PKPbc**	**14 53 21.3**	**-0.3**
CPUP	**Villa Florida**	**145.38 53**		**PKPbc**	**14 53 21.3**	**-0.3**
CPUP				**pPKPdf**	**14 55 19.6**	**+1.0**
SYO	**Syowa Base**	**145.65 216**⇑	*e*X	**PKPdf**	**14 53 19.8**	**+0.2**
SYO	**Syowa Base**	**145.65 216**⇓	*e*X	PKiKP	14 53 34.6	+11
PTGB	**Pitanga**	**146.39 44**	*e*P	**PKPbc**	**14 53 24.0**	**-0.7**
PLCA	**Paso Flores**	**148.37 86**	PKPbc	**PKPbc**	**14 53 30.0**	**+0.7**
	comp=Z,6.6nm,0.7s,baz=318,slow=2.6,SNR=13					
PLCA			pPKPbc	**pPKPab**	**14 55 27.8**	**+0.2**
	comp=Z,9.7nm,1.0s,baz=249,slow=2.8,SNR=8.3					
PLCA	**Paso Flores**	**148.37 86**	PKP2	**PKiKP**	**14 53 30.1**	**-0.4**
PLCA	**Paso Flores**	**148.37 86**		**PKiKP**	**14 53 30.1**	**-0.4**
PLCA				**pPKPbc**	**14 55 26.3**	**+0.3**

WEL 11 14:49:47.9,44°S±1°×17°3E±°, h9km±2km, M2.1/6, ML2.2/6, MLv2.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=3.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.11**	**175**	P	Pg	14 49 51.9	+1.3
OKCZ	**Okains Bay**	**0.33**	**113**	P	Pb	14 49 55.9	0.0
AKCZ	**Akaroa Harbour**	**0.34**	**145**	P	Pb	14 49 56.2	+0.1
RACZ	**Rakaia**	**0.39**	**250**	P	Pb	14 49 57.6	+0.7
AMCZ	**Amberley**	**0.42**	**1**	P	Pb	14 49 57.5	+0.1
OXZ	**Oxford**	**0.52**	**301**	P	Pb	14 49 59.1	0.0
WACZ	**Wakanui South**	**0.68**	**239**	P	Pn	14 50 04.3	+0.6
GVZ	**Greta Valley S**	**0.69**	**25**	P	Pb	14 50 02.6	+0.6
MHCZ	**Mount Hutt**	**0.78**	**274**	P	Pn	14 50 04.6	-0.5
LTZ	**Lake Taylor**	**0.86**	**341**	P	Pn	14 50 05.6	-0.5
ARCZ	**Arundel**	**1.12**	**251**	P	Pn	14 50 10.8	+1.1
INZ	**Inchbonnie**	**1.23**	**314**	P	Pg	14 50 12.6	+1.0
ODZ	**Otahua Downs**	**2.04**	**224**	P	Pg	14 50 27.3	+0.4
BFZ	**Birch Farm**	**3.96**	**44**	P	Pn	14 50 50.5	+1.7
MUGZ	**Murupara**	**5.99**	**33**	P	Pn	14 51 20.4	+3.7
NGRZ	**Ngongotaha**	**6.11**	**27**	P	Pn	14 51 17.2	-1.2

*MOS **11** 14:59:05.8±0.6, 52°.27N×153°.53E, h540km, mb3.9/5, Error ellipse: s-maj=14.6km s-min=10.3km az=47.7*
*KRSC **11** 14:59:07.1±2.1, 52°.11N×154°.54E, h554km±25km, ML4.5*
*IDC **11** 14:59:08.2±1.2, 52°.61N×152°.83E, h491km±16km, mb2.9/10, mb1 3.2/14, mb1mx3.0/35, mbtmp3.9/14, Error ellipse: s-maj=19.3km s-min=11.9km az=151.0*
*NEIC **11** 14:59:09.1±1.0, 52°.7N±0°.2×152°.8E±0°.2, h496km±12km, mb4.1/39, Error ellipse: s-maj=24.9km s-min=16.7km az=156.0*
ISC 11 14:59:08.4±0.5, 52°.55N±0°.08×153°.23E±0°.07, h500km,

n125, σ1§84/139, mb4.0/34, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**2.42**	**79**	*e*P	**P**	**15 00 15.9**	**+0.4**
APC	**Apacha**	**2.42**	**79**	P	**P**	**15 00 15.9**	**+0.4**
PAU	**Pauzhetka**	**2.46**	**115**	*e*P	**P**	**15 00 15.5**	**-0.4**
PAU	**Pauzhetka**	**2.46**	**115**	P	**P**	**15 00 15.5**	**-0.4**
SKR	**Severo-Kuril's**	**2.59**	**135**	*e*S	**S**	**15 01 13.7**	**+1.4**
PEA0B	**Petropavlovsk-**	**2.77**	**77**	P	**P**	**15 00 18.1**	**+0.4**
PEA0B	**Petropavlovsk-**	**2.77**	**77**	P	**P**	**15 00 18.1**	**+0.4**
PETK	**Petropavlovsk-**	**2.77**	**77**	P	**P**	**15 00 17.8**	**+0.1**
	4.2nm,0.3s,baz=247,slow=2.0,SNR=117						
GRL	**Gorelyy**	**2.96**	**88**	*e*P	**P**	**15 00 20.3**	**+1.2**
GRL	**Gorelyy**	**2.96**	**88**	P	**P**	**15 00 20.3**	**+1.2**
KRMR	**Karymshinskiy**	**3.00**	**83**	*e*P	**P**	**15 00 20.1**	**+0.9**
KRMR	**Karymshinskiy**	**3.00**	**83**	P	**P**	**15 00 20.1**	**+0.9**
GNL	**Ganaly**	**3.06**	**66**	*e*P	**P**	**15 00 20.4**	**+0.6**
GNL				*e*S	**S**	**15 01 19.4**	**+1.3**
GNL	**Ganaly**	**3.06**	**66**	P	**P**	**15 00 20.4**	**+0.6**
GNL				S	**S**	**15 01 19.4**	**+1.3**
KDTR	**Khodutka, Kamc**	**3.08**	**102**	*e*P	**P**	**15 00 18.8**	**-0.9**
KDTR				*e*S	**S**	**15 01 15.1**	**-2.9**
KDTR	**Khodutka, Kamc**	**3.08**	**102**	P	**P**	**15 00 18.8**	**-0.9**
KDTR				S	**S**	**15 01 15.1**	**-2.9**
RUS	**Russkaya**	**3.23**	**90**	*e*P	**P**	**15 00 20.5**	**-0.3**
RUS	**Russkaya**	**3.23**	**90**	P	**P**	**15 00 20.5**	**-0.3**
PET	**Petropavlovsk**	**3.33**	**80**	*e*P	**P**	**15 00 19.8**	**-1.7**
PET	**Petropavlovsk**	**3.33**	**80**	P	**P**	**15 00 19.8**	**-1.7**
KOK	**Koryaka**	**3.36**	**75**	*e*P	**P**	**15 00 23.6**	**+1.8**
KOK	**Koryaka**	**3.36**	**75**	P	**P**	**15 00 23.6**	**+1.8**
KRX	**Arik**	**3.38**	**74**	*e*P	**P**	**15 00 22.3**	**+0.3**
KRX	**Arik**	**3.38**	**74**	P	**P**	**15 00 22.3**	**+0.3**
DALK	**Dalny**	**3.39**	**80**	*e*P	**P**	**15 00 22.0**	**+0.1**
DALK				*e*S	**S**	**15 01 20.6**	**-1.4**
DALK	**Dalny**	**3.39**	**80**	P	**P**	**15 00 22.0**	**+0.1**
DALK				S	**S**	**15 01 20.6**	**-1.4**
AVH	**Avacha**	**3.41**	**76**	*e*P	**P**	**15 00 23.4**	**+1.2**
AVH	**Avacha**	**3.41**	**76**	P	**P**	**15 00 23.4**	**+1.2**
KRER	**Koryakskii**	**3.43**	**75**	*e*P	**P**	**15 00 23.7**	**+1.2**
KRER	**Koryakskii**	**3.43**	**75**	P	**P**	**15 00 23.7**	**+1.2**
SMAR	**Somma**	**3.45**	**76**	*e*P	**P**	**15 00 23.4**	**+0.8**
SMAR	**Somma**	**3.45**	**76**	P	**P**	**15 00 23.4**	**+0.8**
UGLR	**Uglovaya**	**3.46**	**77**	*e*P	**P**	**15 00 23.7**	**+1.1**
UGLR	**Uglovaya**	**3.46**	**77**	P	**P**	**15 00 23.7**	**+1.1**
SDLR	**Sedlovina**	**3.50**	**76**	*e*P	**P**	**15 00 23.2**	**+0.3**
SDLR	**Sedlovina**	**3.50**	**76**	P	**P**	**15 00 23.2**	**+0.3**
NLC	**Nalytchevo**	**3.76**	**78**	*e*P	**P**	**15 00 26.1**	**+1.4**
NLC	**Nalytchevo**	**3.76**	**78**	P	**P**	**15 00 26.1**	**+1.4**
SPN	**Mys Shipunski**	**4.16**	**80**	*e*P	**P**	**15 00 26.6**	**-1.3**
SPN				*e*S	**S**	**15 01 27.7**	**-5.3**
SPN	**Mys Shipunski**	**4.16**	**80**	P	**P**	**15 00 26.6**	**-1.3**
SPN				S	**S**	**15 01 27.7**	**-5.3**
ESO	**Esso**	**4.66**	**41**	*e*P	**P**	**15 00 33.8**	**+1.6**
ESO	**Esso**	**4.66**	**41**	P	**P**	**15 00 33.8**	**+1.6**
KZV	**Kizimen**	**4.91**	**56**	*e*P	**P**	**15 00 36.9**	**+2.4**
KZV	**Kizimen**	**4.91**	**56**	P	**P**	**15 00 36.9**	**+2.4**
TUMR	**Tumrok**	**4.92**	**53**	*e*P	**P**	**15 00 37.2**	**+2.6**
TUMR	**Tumrok**	**4.92**	**53**	P	**P**	**15 00 37.2**	**+2.6**
SRDR	**Sredinnyy**	**5.35**	**42**	*e*P	**P**	**15 00 40.0**	**+1.6**
SRDR	**Sredinnyy**	**5.35**	**42**	P	**P**	**15 00 40.0**	**+1.6**
MKZ	**Mys Kozlova**	**5.45**	**65**	*e*P	**P**	**15 00 38.9**	**-0.4**
MKZ				*e*S	**S**	**15 01 48.3**	**-5.4**
MKZ	**Mys Kozlova**	**5.45**	**65**	P	**P**	**15 00 38.9**	**-0.4**
MKZ				S	**S**	**15 01 48.3**	**-5.4**
KBG	**Krutoberegovo**	**6.66**	**52**	*e*P	**P**	**15 00 50.3**	**-0.6**
KBG				*e*S	**S**	**15 02 12.1**	**-3.0**
KBG	**Krutoberegovo**	**6.66**	**52**	P	**P**	**15 00 50.3**	**-0.6**
KBG				S	**S**	**15 02 12.1**	**-3.0**
KBTR	**Krutoberegovo**	**6.70**	**53**	*e*P	**P**	**15 00 50.5**	**-0.8**
KBTR				*e*S	**S**	**15 02 12.2**	**-3.5**
KBTR	**Krutoberegovo**	**6.70**	**53**	P	**P**	**15 00 50.5**	**-0.8**
KBTR				S	**S**	**15 02 12.2**	**-3.5**
YSS	**Yuzh-Sakhalins**	**8.79**	**235**	P	**P**	**15 01 12.0**	**-0.9**
YSS	**Yuzh-Sakhalins**	**8.79**	**235**	P	**P**	**15 01 12.0**	**-0.9**
SEY	**Seymchan**	**10.43**	**358**	P	**P**	**15 01 30.1**	**+0.2**
	2.2nm,0.3s,baz=178,slow=9.5,SNR=48						
ERM	**Erimo**	**12.54**	**217**	P	**P**	**15 01 48.8**	**-3.8**
ERM	**Erimo**	**12.54**	**217**	P	**P**	**15 01 48.8**	**-3.8**
YAK	**Yakutsk**	**15.79**	**316**	P	**P**	**15 02 25.1**	**-1.2**
	0.2nm,0.3s,baz=122,slow=3.5,SNR=10						
JMM	**Marumori**	**17.06**	**216**	P	**P**	**15 02 40.9**	**+1.0**
MJAR	**Mashiro Arr**	**19.19**	**219**	P	**P**	**15 02 59.2**	**-0.4**
	0.1nm,0.3s,baz=16,slow=9.3,SNR=7.1						
A21K	**Barrow**	**28.87**	**31**	P	**P**	**15 04 25.6**	**+0.3**
A21K				IAmb	IAmb	15 04 26.8	
	comp=Z,8.1nm,0.9s						
IMAR	**Indian Mountai**	**29.21**	**42**	P	**P**	**15 04 29.6**	**+1.3**
SONM	**Songino Array**	**29.93**	**280**	P	**P**	**15 04 33.6**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=60,slow=8.7,SNR=2.3						
OHAK	**Old Harbor**	**30.44**	**60**	P	**P**	**15 04 40.2**	**+1.1**
KTH	**Kantishna Hill**	**30.51**	**47**	P	**P**	**15 04 40.2**	**+0.5**
COLD	**Coldfoot**	**30.64**	**40**	P	**P**	**15 04 42.1**	**+1.4**
COLD				IAmb	IAmb	15 04 43.3	
	comp=Z,3.4nm,0.9s						
KDAK	**Kodiak Island**	**30.67**	**58**	P	**P**	**15 04 42.8**	**+1.7**
KDAK				pmax	pmax		
	comp=Z,80nm,1.4s						
KDAK	**Kodiak Island**	**30.67**	**58**	P	**P**	**15 04 42.8**	**+1.7**
TOLK	**Toolik Lake Re**	**30.91**	**37**	P	**P**	**15 04 44.3**	**+1.3**
TOLK				IAmb	IAmb	15 04 45.2	
	comp=Z,7.0nm,1.2s						
CNPM	**China Poot**	**30.97**	**55**	P	**P**	**15 04 44.6**	**+0.9**
I23K	**Minto, Yukon-K**	**31.05**	**44**	P	**P**	**15 04 46.0**	**+1.7**
I23K				IAmb	IAmb	15 05 11.2	
	comp=Z,6.6nm,1.4s						
MDM	**Murphy Dome**	**31.55**	**44**	P	**P**	**15 04 50.3**	**+1.8**
CCB	**Clear Creek Bu**	**31.76**	**44**	P	**P**	**15 04 52.0**	**+1.7**
CCB				IAmb	IAmb	15 04 52.2	
	comp=Z,2.4nm,0.6s						
POKR	**Poker Plat Res**	**31.87**	**44**	P	**P**	**15 04 53.0**	**+1.8**
POKR				IAmb	IAmb	15 04 54.6	
	comp=Z,4.1nm,0.7s						
IL31		**32.14**	**44**	P	**P**	**15 04 54.8**	**+1.3**
ILAR	**Eielson Array**	**32.14**	**44**	P	**P**	**15 04 54.9**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=283,slow=12,SNR=43						
HDA	**Harding Lake**	**32.16**	**45**	P	**P**	**15 04 54.8**	**+1.1**
HDA				IAmb	IAmb	15 05 14.2	
	comp=Z,12nm,1.5s						
PRP	**Porcupine Dome**	**32.62**	**43**	P	**P**	**15 04 59.8**	**+2.0**
PRP				IAmb	IAmb	15 05 00.9	
	comp=Z,5.8nm,1.0s						
FYU	**Fort Yukon**	**32.63**	**41**	P	**P**	**15 04 59.6**	**+2.0**
FYU				IAmb	IAmb	15 05 05.8	
	comp=Z,9.9nm,1.3s						
BMAR	**Burnt Mountain**	**32.81**	**39**	P	**P**	**15 05 01.1**	**+1.8**
DOT	**Dot Lake**	**33.53**	**46**	P	**P**	**15 05 06.2**	**+0.8**
DOT				IAmb	IAmb	15 05 19.2	
	comp=Z,7.1nm,1.0s						
GLB	**Gilahina Butte**	**34.12**	**50**	P	**P**	**15 05 12.7**	**+2.3**
GLB				IAmb	IAmb	15 05 17.7	
	comp=Z,16nm,1.4s						
K27K	**Chicken**	**34.32**	**45**	P	**P**	**15 05 13.8**	**+1.7**
K27K				IAmb	IAmb	15 05 14.4	
	comp=Z,3.2nm,0.8s						
EGAK	**Eagle**	**34.56**	**43**	P	**P**	**15 05 15.3**	**+1.3**
EGAK				IAmb	IAmb	15 05 16.1	
	comp=Z,3.5nm,0.8s						
BCAR	**Beaver Creek A**	**34.66**	**47**	P	**P**	**15 05 17.0**	**+2.0**
BALM	**Baldy**	**34.91**	**50**	P	**P**	**15 05 19.2**	**+2.0**
BARN	**Barnard Glacie**	**35.23**	**50**	P	**P**	**15 05 21.8**	**+1.9**
YAH	**Yahtse**	**35.38**	**51**	P	**P**	**15 05 23.4**	**+2.2**
CTGM	**Chitina Glacie**	**35.40**	**50**	P	**P**	**15 05 23.8**	**+2.5**
CTGM				IAmb	IAmb	15 05 43.7	
	comp=Z,15nm,1.3s						
DAWY	**Dawson**	**35.46**	**44**	P	**P**	**15 05 23.1**	**+1.4**
EPYK	**Eagle Plains**	**36.03**	**40**	P	**P**	**15 05 27.9**	**+1.6**
EPYK				IAmb	IAmb	15 05 29.5	
	comp=Z,7.8nm,1.4s						
INK	**Inuvik**	**36.82**	**36**	P	**P**	**15 05 34.1**	**+1.4**
INK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
INK	**Inuvik**	**36.82**	**36**	P	**P**	**15 05 34.1**	**+1.4**
INK				IAmb	IAmb	15 05 34.4	
	comp=Z,4.0nm,0.4s						
HYT	**Haines Junctio**	**37.23**	**49**	P	**P**	**15 05 38.9**	**+2.5**
HYT				IAmb	IAmb	15 05 49.1	
	comp=Z,7.8nm,1.3s						
WHY	**Whitehorse**	**38.49**	**49**	P	**P**	**15 05 49.7**	**+3.0**
ZALV	**Zalesovo Beam**	**39.51**	**300**	P	**P**	**15 05 52.6**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=50,slow=5.2,SNR=2.2						
KURK	**Kurchatov**	**44.41**	**299**	P	**P**	**15 06 32.3**	**-1.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**44.41**	**299**	P	**P**	**15 06 32.3**	**-1.3**
KURK				IAmb	IAmb	15 06 32.4	
	comp=Z,3.2nm,0.6s						
MK31	**Makanchi Array**	**44.57**	**292**	P	**P**	**15 06 33.3**	**-1.7**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MK31	**Makanchi Array**	**44.57**	**292**	P	**P**	**15 06 33.3**	**-1.7**
MKAR	**Makanchi Array**	**44.57**	**292**	P	**P**	**15 06 33.1**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=63,slow=8.1,SNR=8.1						
MAKZ	**Makanchi**	**44.74**	**292**	P	**P**	**15 06 34.4**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MAKZ	**Makanchi**	**44.74**	**292**	P	**P**	**15 06 34.4**	**-1.8**
RES	**Resolute Bay**	**45.34**	**20**	P	**P**	**15 06 40.4**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=304,slow=2.7,SNR=6.5						
RES	**Resolute Bay**	**45.34**	**20**	P	**P**	**15 06 41.0**	**+0.6**
RES				pmax	pmax		
	comp=Z,7.0nm,1.2s						
RES	**Resolute Bay**	**45.34**	**20**	P	**P**	**15 06 41.0**	**+0.6**
RES				IAmb	IAmb	15 07 03.9	
	comp=Z,6.9nm,1.2s						
YKA	**Yellowknife Ar**	**46.32**	**40**	P	**P**	**15 06 49.2**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=310,slow=5.8,SNR=11						
BRVK	**Borovoye**	**47.42**	**306**	P	**P**	**15 06 54.8**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BRVK	**Borovoye**	**47.42**	**306**	P	**P**	**15 06 54.8**	**-1.7**
KKAR	**Karatay Array**	**53.43**	**295**	P	**P**	**15 07 39.1**	**-1.6**
KKAR	**Karatay Array**	**53.43**	**295**	P	**P**	**15 07 39.1**	**-1.6**
ABKAR	**Akbulak array**	**54.88**	**307**	P	**P**	**15 07 49.4**	**-1.4**
ABKAR	**Akbulak array**	**54.88**	**307**	P	**P**	**15 07 49.3**	**-1.5**
PLID	**Pearl Lake**	**56.42**	**58**	P	**P**	**15 08 03.9**	**+2.1**
NVAR	**Mina Array Bea**	**59.80**	**65**	P	**P**	**15 08 27.2**	**+2.3**
	comp=Z,0.4nm,0.5s,baz=304,slow=6.3,SNR=4.2						
NVAR	**Mina Array Bea**	**59.80**	**65**	P	**P**	**15 08 27.4**	**+2.5**
PDAR	**Pinedale Array**	**61.36**	**56**	P	**P**	**15 08 36.8**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=314,slow=2.7,SNR=6.6						
PDAR	**Pinedale Array**	**61.36**	**56**	P	**P**	**15 08 36.0**	**+0.9**
MGMO	**Mountain Grove**	**74.11**	**49**	P	**P**	**15 09 52.2**	**-0.7**
TXAR	**Lajitas Array**	**74.63**	**62**	P	**P**	**15 09 58.2**	**+2.1**
	comp=Z,0.4nm,0.5s,baz=301,slow=5.7,SNR=4.5						
W41B	**Gary Mavity, V**	**75.73**	**50**		**P**	**15 10 01.4**	**-0.6**
W41B				IAmb	IAmb	15 10 02.4	
	comp=Z,7.1nm,0.7s						
X40A	**Basin Creek Fa**	**76.02**	**51**	P	**P**	**15 10 05.3**	**+1.7**
X40A				IAmb	IAmb	15 10 16.2	
	comp=Z,13nm,1.3s						
ASAR	**Alice Springs**	**77.74**	**198**	P	**P**	**15 10 13.7**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=12,slow=6.2,SNR=5.0						

*BUT

comp=N,0.1nm,0.3s,baz=43,slow=11,SNR=6.1
NVAR Lg Lg 15 19 53.9
comp=N,0.1nm,0.3s,baz=136,slow=41,SNR=1.4
ANMO Albuquerque 8.66 150 Pn Pn 15 18 31.7 -3.9
comp=N,0.1nm,0.3s,baz=88,slow=10,SNR=1.8
ANMO Lg Lg 15 20 53.1
comp=N,0.2nm,0.3s,baz=236,slow=22,SNR=2.6
TXAR Lajitas Array 14.73 152 Pn Pn 15 19 55.2 -3.4
comp=N,0.1nm,0.3s,baz=350,slow=15,SNR=1.9

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*BJI **11** 15:24:32.5±0.0, 7.20N×94.19E, h16km, mB4.7/16, mb4.4/25, Ms4.3/12, Ms7 4.0/11*
*IDC **11** 15:24:32.4±0.5, 7.49N×94.28E, h0km, mb4.1/20, mb1 4.2/22, mb1mx4.1/39, mbtmp4.1/22, ML4.0/2, MS3.8/25, Ms1 3.8/25, ms1mx3.6/37, Error ellipse: s-maj=21.0km s-min=13.0km az=58.0*
*DJA **11** 15:24:33.5±0.6, 7.N±4.×9.4E±., h10km, M4.5/17, mb4.5/17, mB4.9/5, MLv4.7/7, Mw(mB)4.2/5*
*NDI **11** 15:24:34.6±3.1, 7.55N×94.55E, h10km, mb4.5*
*KLM **11** 15:24:35.0, 7.41N×94.15E, h10km, mb4.8*
*NEIC **11** 15:24:37.0±1.5, 7.62N±0.08×94.47E±0.10, h26km±5km, mb4.6/41, Error ellipse: s-maj=15.1km s-min=10.9km az=61.0*

ISC 11 15:24:36.7±0.4, 7.51N±0.05×94.30E±0.05, h24km, n155, σ1s51/135, mb4.5/44, MS3.8/27, 1C-2D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.47**	**131**	P	**Pn**	**15 25 29.2**	**-0.1**
LHMI				S	**Sn**	**15 26 12.5**	**+2.9**
LHMI	**Lhok Sumawe**	**3.47**	**131**	Pn	**Pn**	**15 25 29.6**	**+0.3**
PKDT	**Phuket**	**4.02**	**84**	P	**Pn**	**15 25 37.3**	**+0.6**
SURT	**Suratani**	**4.67**	**72**	P	Pb	15 25 52.6	-5.4
	0.0nm42nm2.6nm,1.0s						
TPTI		**5.10**	**146**	P	**Pn**	**15 25 51.5**	**-0.2**
	0.3nm811nm52nm,0.9s						
TRTT	**Trang**	**5.35**	**86**	P	**Pn**	**15 25 55.4**	**+0.2**
	0.8nm2μm256nm,0.8s						
RPSI	**Rantau Prapat**	**6.64**	**136**	Pn	**Pn**	**15 26 12.3**	**-0.5**
KULM	**Kulim**	**6.68**	**109**	Pn	**Pn**	**15 26 11.7**	**-1.8**
KULM	**Kulim**	**6.68**	**109**	P	**Pn**	**15 26 13.0**	**-0.5**
GSI	**Gunungsitoli**	**6.97**	**152**	P	**Pn**	**15 26 15.9**	**-1.6**
	0.2nm32nm,0.8s						
GSI	**Gunungsitoli**	**6.97**	**152**	Pn	**Pn**	**15 26 15.8**	**-1.7**
IPM	**Ipoh**	**7.33**	**114**	Pn	**Pn**	**15 26 20.0**	**-2.4**
IPM	**Ipoh**	**7.33**	**114**	P	**Pn**	**15 26 21.0**	**-1.4**
PHET	**Kaeng Krachan**	**7.50**	**44**	P	**Pn**	**15 26 26.0**	**+1.3**
	0.2nm728nm520nm,0.9s						
MNSI	**Mandailing Nat**	**8.49**	**141**	P	**Pn**	**15 26 39.0**	**+0.7**
	30nm,0.5s						
UTHA	**Uthaitani**	**9.45**	**32**	P	**Pn**	**15 26 54.7**	**+3.3**
	187nm12nm,0.7s						
SRAK	**Srakaew**	**9.98**	**49**	P	Pn	15 27 08.0	+9.3
	2μm104nm,0.9s						
MYKOM	**Kota Tinggi**	**11.08**	**120**		**Pn**	**15 27 12.6**	**-1.2**
MHMT	**Maesariang**	**11.18**	**18**	P	**Pn**	**15 27 19.0**	**+3.9**
	800nm22nm,0.8s						
CHAI	**Chaiyaphum**	**11.23**	**41**	P	Pn	15 27 22.5	+6.7
	12nm,0.8s						
CM05	**Chiang Mai Arr**	**11.73**	**22**	P	Pn	15 27 27.6	+4.9
	79nm9.4nm,0.8s						
CM13	**Chiang Mai Arr**	**11.74**	**22**	P	Pn	15 27 30.6	+7.8
	84nm6.9nm,0.8s						
CM04	**Chiang Mai Arr**	**11.74**	**22**	P	Pn	15 27 28.4	+5.5
	114nm12nm,0.8s						
CM01	**Chiang Mai Arr**	**11.76**	**22**	P	Pn	15 27 32.9	+10
	90nm14nm,1.0s						
CM02	**Chiang Mai Arr**	**11.76**	**22**	P	Pn	15 27 32.0	+8.9
	90nm12nm,1.0s						
CM15	**Chiang Mai Arr**	**11.77**	**22**	P	Pn	15 27 30.0	+6.7
	7.6nm,0.7s						
CMAR	**Chiang Mai Arr**	**11.78**	**22**	Pn	**Pn**	**15 27 24.4**	**+1.0**
	0.4nm,0.3s,baz=213,slow=15,SNR=12						
CMAR				LR	LR	15 31 59.2	
	comp=Z,432nm,18.2s,baz=254,slow=38						
CMAR	**Chiang Mai Arr**	**11.78**	**22**	Pn	**Pn**	**15 27 23.0**	**-0.5**
UTTA	**Uttaradit**	**11.86**	**30**	P	Pn	15 27 29.0	+4.6
	11nm,0.8s						
CHTO	**Chiang Mai**	**12.11**	**21**	Pn	**Pn**	**15 27 27.4**	**-0.5**
CMMT	**Chiang Mai**	**12.11**	**21**	P	**Pn**	**15 27 31.9**	**+4.0**
	4.1nm,0.9s						
PALK	**Pallekele**	**13.49**	**270**	Pn	**Pn**	**15 27 46.9**	**+0.1**
	0.3nm,0.3s,baz=157,slow=19,SNR=2.1						
PALK				Sn	Sn	15 30 02.8	-13
	2.4nm,0.3s,baz=300,slow=23,SNR=7.0						
PALK	**Pallekele**	**13.49**	**270**		**Pn**	**15 27 45.8**	**-1.0**
NONG	**Nongkai**	**13.57**	**39**	P	**P**	**15 27 54.0**	**-2.7**
BWNR	**Bhubaneshwar**	**15.14**	**328**	*e*P	**Pn**	**15 28 08.6**	**-0.6**
BWNR				IAmb	IAmb	15 28 20.6	
	comp=Z,19nm,0.5s						
PPBI	**Pangkal Pinang**	**15.22**	**129**	P	**Pn**	**15 28 10.2**	**-0.1**
	comp=Z,9.9nm,1.2s						
MDSI	**Maura Dua**	**15.46**	**140**	P	**Pn**	**15 28 10.6**	**-2.8**
	comp=Z,13nm,1.0s						
KLSI		**15.97**	**139**	P	**Pn**	**15 28 18.3**	**-1.7**
	comp=Z,6.1nm,1.2s						
SLVN	**Son La**	**16.58**	**33**	Pn	**Pn**	**15 28 24.6**	**-3.2**
KSM	**Kuching**	**17.04**	**110**	P	**Pn**	**15 28 33.5**	**-0.1**
KSM				IAmb	IAmb	15 28 45.6	
	comp=Z,48nm,1.2s						
KSM	**Kuching**	**17.04**	**110**	P	**P**	**15 28 39.0**	**+3.7**
BOK	**Bokaro**	**18.09**	**334**	*e*P	**P**	**15 28 48.4**	**+1.6**
SHL	**Shillong**	**18.11**	**353**		**Pn**	**15 28 44.7**	**-2.2**
KOHI	**KOHIMA**	**18.11**	**359**	*e*P	**Pn**	**15 28 45.4**	**-1.5**
KOHI				IAmb	IAmb	15 28 51.6	
	comp=Z,23nm,1.1s						
HYB	**Hyderabad**	**18.24**	**304**	*i* P	**P**	**15 28 50.0**	**+1.4**
SBUM	**Sibu**	**18.54**	**105**		**P**	**15 28 49.9**	**-2.0**
SBUM	**Sibu**	**18.54**	**105**	P	**Pn**	**15 28 55.0**	**+2.9**
QIZ	**Qiongzhong**	**18.95**	**51**	P	**P**	**15 28 54.7**	**-1.6**
QIZ				S	**Sn**	**15 32 27.5**	**-1.2**
QIZ				LR	LR		
	comp=Z,1μm,12.4s						
QIZ				LR	LR		
	comp=Z,550nm,12.7s						
QIZ				LR	LR		
	comp=Z,320nm,12.1s						
KMI	**Kunming**	**19.28**	**24**	⇑P	**Pn**	**15 29 05.0**	**+3.8**
KMI				pP	pwP	15 29 09.3	+0.4
KMI				sP	sP	15 29 12.3	+3.3
KMI				S	**S**	**15 32 43.0**	**+5.8**
KMI				sS	pS	15 32 51.8	-3.2
KMI				pmax	pmax		
	comp=Z,18nm,1.1s						
KMI				pmax	pmax		
	comp=Z,110nm,3.5s						
KMI				LR	LR		
	comp=Z,300nm,15.4s						
KMI				LR	LR		
	comp=Z,380nm,14.8s						
KMI				LR	LR		
	comp=Z,370nm,15.7s						
LEM	**Lembang**	**19.47**	**137**	LR	LR	15 38 10.8	
	comp=Z,420nm,18.6s,baz=296,slow=42						
ODAN	**Odare**	**20.34**	**342**	*e*P	Pn	15 29 13.3	-0.4
RAMN	**Ramite**	**20.67**	**340**	*e*P	Pn	15 29 16.1	-1.6
	comp=Z,66nm,1.0s						
TAPN	**Taplejung**	**20.70**	**343**	*e*P	**P**	**15 29 15.9**	**+0.3**
	comp=Z,90nm,1.2s						
PKI	**Pulchoki**	**21.66**	**338**	*e*P	**P**	**15 29 26.5**	**+0.5**
PKIN	**Phulchoki**	**21.67**	**338**	*e*P	**P**	**15 29 26.6**	**+0.6**
	comp=Z,23nm,0.7s						
GUN	**Gumba**	**21.80**	**340**	*e*P	**P**	**15 29 27.0**	**-0.5**
	comp=Z,111nm,1.1s						
KAD	**Karad**	**21.91**	**298**	⇓*i*P	**P**	**15 29 29.9**	**+1.5**
KKN	**Kakani**	**21.91**	**338**	*e*P	**P**	**15 29 29.0**	**+0.5**
	comp=Z,48nm,1.1s						
MTKI	**Muara Teweh, K**	**22.19**	**111**	P	**P**	**15 29 32.7**	**+1.2**
	comp=Z,13nm,0.6s						
GYA	**Guiyang**	**22.21**	**31**	⇓P	**P**	**15 29 33.5**	**+1.8**
GYA				S	**S**	**15 33 38.1**	**+2.8**
GYA				SS	SnSn	15 34 18.4	+15
GYA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GYA				pmax	pmax		
	comp=Z,54nm,3.5s						
GYA				LR	LR		
	comp=Z,390nm,13.8s						
GYA				LR	LR		
	comp=Z,570nm,15.6s						
GYA				LR	LR		
	comp=Z,320nm,12.6s						
LSA	**Lhasa**	**22.27**	**353**	P	**P**	**15 29 30.5**	**-2.2**
LSA				IAmb	IAmb	15 29 47.1	
	comp=Z,16nm,0.9s						
GKN	**Gorkha**	**22.34**	**337**	*e*P	**P**	**15 29 32.9**	**-0.2**
BHPL	**Bhopal**	**22.53**	**316**	*e*P	**P**	**15 29 36.8**	**+1.7**
BHPL				IAmb	IAmb	15 29 41.5	
	comp=Z,14nm,0.9s						
KOLN	**Koldanda**	**22.56**	**335**	*e*P	**P**	**15 29 35.1**	**-0.4**
	comp=Z,30nm,0.9s						
NGJI	**Ngawi**	**22.61**	**130**	P	**P**	**15 29 36.9**	**+1.0**
	comp=Z,31nm,1.0s						
DANN	**Dangsing**	**23.00**	**336**	*e*P	**P**	**15 29 39.6**	**-0.6**
	comp=Z,28nm,0.8s						
PYUN	**Piuthan**	**23.11**	**334**	*e*P	**P**	**15 29 41.9**	**+0.7**
	comp=Z,42nm,0.9s						
MYLDM	**Lahad Datu**	**24.16**	**94**	P	**P**	**15 29 51.5**	**+0.2**
MYLDM				IAmb	IAmb	15 30 11.1	
	comp=Z,32nm,1.2s						
BLJI	**Banyuglugur**	**24.49**	**128**	P	**P**	**15 29 53.4**	**-0.9**
	comp=Z,56nm,0.7s						
CD2	**Chengdu**	**24.91**	**20**	*e*P	**P**	**15 29 59.8**	**+1.8**
SRBI	**Singaraja**	**25.97**	**126**	P	**P**	**15 30 06.6**	**-1.2**
	comp=Z,32nm,0.8s						
H08S3	**Diego Garcia H**	**26.45**	**236**	T	T	15 56 57.7	
	baz=54,slow=74,SNR=563						
H08S2	**Diego Garcia H**	**26.45**	**236**	T	T	15 56 58.7	
	baz=54,slow=74,SNR=15						
H08S1	**Diego Garcia H**	**26.46**	**236**	T	T	15 56 59.0	
	baz=54,slow=74,SNR=36						
MPSI	**Mapaga**	**26.50**	**104**	P	**P**	**15 30 13.8**	**+1.3**
TGY	**Tagaytay City**	**26.95**	**74**	LR	LR	15 40 38.6	
	comp=Z,211nm,19.8s,baz=97,slow=36						
KAPI	**Kappang**	**28.28**	**115**	LR	LR	15 41 52.0	
	comp=Z,139nm,20.5s,baz=284,slow=37						
XAN	**Xi'an**	**29.65**	**25**	P	**P**	**15 30 41.1**	**+0.5**
XAN				pP	pwP	15 30 49.9	0.0
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN				LR	LR		
	comp=Z,560nm,14.4s						
XAN				LR	LR		
	comp=Z,560nm,14.1s						
XAN				LR	LR		
	comp=Z,510nm,14.4s						
GTA	**Gaotai**	**32.15**	**8**	*e*P	**P**	**15 31 02.1**	**-0.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,63nm,5.1s						
GTA				LR	LR		
	comp=Z,110nm,14.5s						
GTA				LR	LR		
	comp=Z,150nm,12.4s						
NIL	**Nilore**	**32.49**	**326**	P	**P**	**15 31 05.7**	**+0.1**
KBL	**Kabul**	**35.56**	**323**	P	**P**	**15 31 32.3**	**-0.2**
KBL				IAmb	IAmb	15 31 42.8	
	comp=Z,3.9nm,0.7s						
WMQ	**Urumqi**	**36.63**	**352**	*e*P	**P**	**15 31 44.5**	**+3.2**
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.6s						
WMQ				LR	LR		
	comp=Z,230nm,6.3s						
WMQ				LR	LR		
	comp=Z,340nm,15.1s						
WMQ	**Urumqi**	**36.63**	**352**	P	**P**	**15 31 41.8**	**+0.4**
WMQ				IAmb	IAmb	15 31 55.0	
	comp=Z,7.4nm,0.5s						
GAR	**Garm**	**38.07**	**329**	P	**P**	**15 31 53.0**	**-0.6**
CHGR	**Chuyangaron**	**38.42**	**328**	P	**P**	**15 31 54.6**	**-1.9**
BTK	**Batken**	**38.63**	**331**	P	**P**	**15 31 59.1**	**+0.8**
BTK				IAmb	IAmb	15 32 08.8	
	comp=Z,8.4nm,0.9s						
FITZ	**Fitzroy Crossi**	**40.06**	**130**	P	**P**	**15 32 09.5**	**-0.9**
	comp=Z,2.6nm,1.0s,baz=236,slow=23,SNR=3.1						
MK31	**Makanchi Array**	**40.48**	**347**	P	**P**	**15 32 13.1**	**-0.5**
MKAR	**Makanchi Array**	**40.48**	**347**	P	**P**	**15 32 13.2**	**-0.3**
	comp=Z,3.8nm,0.5s,baz=166,slow=8.0,SNR=42						
MKAR				LR	LR	15 52 28.5	
	comp=Z,51nm,20.0s,baz=164,slow=41						
MKAR	**Makanchi Array**	**40.48**	**347**	P	**P**	**15 32 13.0**	**-0.6**
MAKZ	**Makanchi**	**40.56**	**347**	P	**P**	**15 32 13.5**	**-0.7**
MAKZ				IAmb	IAmb	15 32 14.7	
	comp=Z,5.0nm,0.7s						
KK31	**Karatay Array**	**41.16**	**333**	P	**P**	**15 32 19.5**	**+0.3**
KKAR	**Karatay Array**	**41.16**	**333**	P	**P**	**15 32 19.1**	**-0.1**
KKAR	**Karatay Array**	**41.16**	**333**	P	**P**	**15 32 18.8**	**-0.5**
KKAR				IAmb	IAmb	15 32 34.4	
	comp=Z,3.9nm,1.0s						
SONM	**Songino Array**	**41.48**	**12**	P	**P**	**15 32 21.9**	**0.0**
	comp=Z,1.7nm,0.9s,baz=185,slow=8.8,SNR=8.9						
SONM				LR	LR	15 50 45.3	
	comp=Z,71nm,20.6s,baz=172,slow=38						
SONM	**Songino Array**	**41.48**	**12**	P	**P**	**15 32 21.0**	**-0.9**
KSRS	**Korea Array**	**42.63**	**41**	P	**P**	**15 32 30.9**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=149,slow=29,SNR=3.2						
KSRS				LR	LR	15 52 10.0	
	comp=Z,123nm,18.4s,baz=220,slow=39						
GEYT	**Alibeck**	**44.58**	**318**	P	**P**	**15 32 47.5**	**+0.4**
	comp=Z,7.0nm,0.6s,baz=148,slow=8.7,SNR=18						
GEYT	**Alibeck**	**44.58**	**318**	P	**P**	**15 32 48.1**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**44.58**	**318**	P	**P**	**15 32 47.6**	**+0.6**
GYA0B				IAmb	IAmb	15 32 49.1	
	comp=Z,9.6nm,0.8s						
KURK	**Kurchatov**	**45.00**	**346**	P	**P**	**15 32 50.0**	**-0.1**
ZAA0	**Zalesovo Array**	**46.94**	**352**	P	**P**	**15 33 05.6**	**+0.3**
ZAA0				IAmb	IAmb	15 33 06.6	
	comp=Z,5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**46.94**	**352**	P	**P**	**15 33 05.2**	**-0.2**
	comp=Z,2.6nm,0.4s,baz=176,slow=8.3,SNR=21						
ZALV				LR	LR	15 57 31.2	
	comp=Z,78nm,18.9s,baz=213,slow=42						
WRA	**Warramunga Arr**	**47.92**	**125**	P	**P**	**15 33 12.5**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=305,slow=8.7,SNR=25						
WRA				LR	LR	15 54 58.3	
	comp=Z,101nm,20.3s,baz=320,slow=38						
WRA	**Warramunga Arr**	**47.92**	**125**	P	**P**	**15 33 13.0**	**-0.6**
WB2	**Warramunga Arr**	**47.93**	**125**	P	**P**	**15 33 13.0**	**-0.6**
WB2				IAmb	IAmb	15 33 26.4	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**48.09**	**125**	P	**P**	**15 33 13.6**	**-1.3**
WR0				IAmb	IAmb	15 33 16.1	
	comp=Z,9.2nm,1.3s						
MJAR	**Matsushiro Arr**	**49.29**	**47**	LR	LR	15 56 33.3	
	comp=Z,68nm,19.3s,baz=115,slow=39						
RAYN	**Ar Rayn**	**49.38**	**295**	P	**P**	**15 33 26.3**	**+1.5**
BRVK	**Borovoye**	**49.45**	**341**	P	**P**	**15 33 24.8**	**0.0**
ASAR	**Alice Springs**	**49.56**	**130**	P	**P**	**15 33 25.2**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=298,slow=7.9,SNR=16						
ASAR				PcP	**PcP**	**15 34 47.7**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=305,slow=3.7,SNR=4.8						
ASAR				LR	LR	15 57 01.4	
	comp=Z,68nm,20.0s,baz=311,slow=39						
AS31	**Alice Springs**	**49.56**	**130**	P	**P**	**15 33 25.4**	**-0.7**
FORT	**Forrest**	**49.96**	**141**	P	**P**	**15 33 28.7**	**-0.3**
ABKAR	**Akbulak array**	**50.63**	**331**	P	**P**	**15 33 34.0**	**+0.2**
ABKAR				IAmb	IAmb	15 33 35.3	
	comp=Z,4.7nm,0.9s						
ABKAR	**Akbulak array**	**50.63**	**331**	P	**P**	**15 33 33.5**	**-0.2**
ARU	**Arti**	**56.29**	**337**	LR	LR	16 00 19.4	
	comp=Z,121nm,20.1s,baz=148,slow=38						
ARU	**Arti**	**56.29**	**337**	P	**P**	**15 34 14.8**	**-0.4**
ARU				IAmb	IAmb	15 34 16.9	
	comp=Z,10nm,1.2s						
KBZ	**Khabaz**	**57.46**	**318**	LR	LR	16 02 53.2	
	comp=Z,46nm,19.1s,baz=57,slow=40						
KMBO	**Kilima Mbogo**	**57.54**	**264**	P	**P**	**15 34 27.9**	**+2.7**
	comp=Z,2.6nm,0.5s,baz=56,slow=11,SNR=10						
KMBO				LR	LR	15 56 08.6	
	comp=Z,88nm,18.9s,baz=91,slow=33						
KMBO	**Kilima Mbogo**	**57.54**	**264**	P	**P**	**15 34 26.8**	**+1.6**
KMBO				IAmb	IAmb	15 34 34.9	
	comp=Z,4.8nm,0.9s						
KVAR	**Kislovodsk Arr**	**57.69**	**318**	LR	LR	16 01 59.2	
	comp=Z,61nm,18.6s,baz=91,slow=39						
STKA	**Stephens Creek**	**59.74**	**134**	P	**P**	**15 34 39.4**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=322,slow=5.0,SNR=3.9						
STKA				LR	LR	16 05 08.9	
	comp=Z,63nm,18.4s,baz=298,slow=41						
EIL	**Elat**	**59.74**	**300**	LR	LR	16 02 11.8	
	comp=Z,61nm,18.7s,baz=106,slow=38						
MMAI	**Mount Meron Ar**	**59.95**	**304**	LR	LR	16 04 04.1	
	comp=Z,58nm,18.0s,baz=20,slow=40						
YAK	**Yakutsk**	**60.29**	**18**	P	**P**	**15 34 41.2**	**-1.9**
KIRV	**Kirov**	**61.41**	**335**	LR	LR	16 04 00.6	
	comp=Z,76nm,19.6s,baz=130,slow=38						
NRIK	**Noril'sk**	**61.91**	**357**	P	**P**	**15 34 53.2**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=151,slow=2.9,SNR=2.1						
NRIK				LR	LR	16 05 49.7	
	comp=Z,79nm,20.3s,baz=201,slow=40						
BRTR	**Keskin Array B**	**62.79**	**311**	P	**P**	**15 34 59.0**	**-1.6**
	comp=Z,1.7nm,0.7s,baz=108,slow=7.9,SNR=6.6						
KLMR	**Klimovskoe**	**66.85**	**334**	*e*P	**P**	**15 35 25.7**	**-0.8**
KLMR				AMP		15 35 37.6	
	comp=Z,10.0nm,1.4s						
TIXI	**Tiksi**	**67.56**	**11**	P	**P**	**15 35 30.3**	**-0.4**
AKASG	**Malin Array Be**	**68.54**	**322**	P	**P**	**15 35 35.8**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=90,slow=4.1,SNR=4.7						
AKASG				LR	LR	16 09 52.2	
	comp=Z,41nm,18.7s,baz=300,slow=40						
AKASG	**Malin Array Be**	**68.54**	**322**	P	**P**	**15 35 36.0**	**-1.3**
IDI	**Anoyia**	**68.91**	**305**	P	**P**	**15 35 38.8**	**-1.2**
IDI				IAmb	IAmb	15 35 42.5	
	comp=Z,7.3nm,0.9s						
MLR	**Muntele Rosu**	**69.54**	**316**	P	**P**	**15 35 43.6**	**-0.3**
MLR				IAmb	IAmb	15 35 45.4	
	comp=Z,5.5nm,1.1s						
BURAR	**Bucovina Array**	**70.42**	**318**	P	**P**	**15 35 48.5**	**-0.7**
FINES	**FINESS Array B**	**73.11**	**332**	P	**P**	**15 36 03.0**	**-1.8**
	comp=Z,2.0nm,0.5s,baz=83,slow=4.5,SNR=20						
FINES				LR	LR	16 10 23.0	
	comp=Z,102nm,18.1s,baz=114,slow=38						
FINES	**FINESS Array B**	**73.11**	**332**	P	**P**	**15 36 04.8**	**-0.1**
VYHS	**Vyhne**	**74.78**	**318**	*e*P	**P**	**15 36 15.8**	**+0.8**
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**15 36 18.7**	**-1.1**
	comp=Z,3.0nm,0.6s,baz=120,slow=1.6,SNR=6.7						
BOSA				LR	LR	16 04 54.9	
	comp=Z,38nm,18.7s,baz=45,slow=32						
BOSA	**Boshof**	**75.53**	**238**	P	**P**	**15 36 21.7**	**+1.9**
ARCES	**ARCESS Array B**	**75.66**	**340**	P	**P**	**15 36 18.8**	**-0.9**
	comp=Z,3.8nm,1.0s,baz=91,slow=6.3,SNR=5.3						
ARCES				LR	LR	16 12 27.7	
	comp=Z,108nm,19.8s,baz=285,slow=38						
GERES	**GERESS Array B**	**78.20**	**318**	P	**P**	**15 36 34.4**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=96,slow=5.4,SNR=9.2						
GERES	**GERESS Array B**	**78.20**	**318**	P	**P**	**15 36 34.7**	**+0.2**
MAW	**Mawson**	**78.21**	**192**	P	**P**	**15 36 34.6**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=335,slow=0.6,SNR=4.3						
MAW	**Mawson**	**78.21**	**192**	P	**P**	**15 36 36.7**	**+2.8**
CIMO	**Cimolais**	**79.00**	**316**	P	**P**	**15 36 39.0**	**+0.1**
CIMO				IAmb	IAmb	15 36 40.1	
	comp=Z,7.7nm,1.0s						
NB2	**NORSAR Subarra**	**80.12**	**331**	P	**P**	**15 36 44.1**	**-0.6**
	comp=Z,3.1nm,0.8s,baz=97,slow=5.1						
NOA	**NORSAR Array B**	**80.12**	**331**	P	**P**	**15 36 44.6**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=95,slow=5.3,SNR=6.8						
NOA				LR	LR	16 16 11.1	
	comp=Z,34nm,18.0s,baz=270,slow=39						
ESDC	**Sonseca Array**	**91.57**	**310**	P	**P**	**15 37 42.4**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=58,slow=4.3,SNR=5.0						
ESDC	**Sonseca Array**	**91.57**	**310**	P	**P**	**15 37 42.3**	**+0.3**
IMAR	**Indian Mountai**	**91.91**	**22**	P	**P**	**15 37 43.7**	**+0.8**
ILAR	**Eielson Array**	**95.02**	**22**	P	**P**	**15 37 56.2**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=312,slow=5.4,SNR=1.7						
PDAR	**Pinedale Array**	**125.45**	**21**	PKP	**PKPdf**	**15 43 35.2**	**-1.3**
	comp=Z,2.2nm,0.4s,baz=297,slow=4.0,SNR=2.0						
CPUP	**Villa Florida**	**147.16**	**232**	PKPbc	**PKPbc**	**15 44 18.5**	**-0.1**
	comp=Z,2.9nm,0.8s,baz=153,slow=3.1,SNR=6.9						
CPUP	**Villa Florida**	**147.16**	**232**		**PKPab**	**15 44 19.0**	**-1.3**

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*KRNET **11** 15:33:49.1±0.1, 39.96N×69.70E, mb3.1*
*SOME **11** 15:33:50.3, 40.00N×69.88E, h10km*
*NNC **11** 15:33:54.7±2.5, 40.16N×69.91E, h0km, mb3.6, mpv3.6, Error ellipse: s-maj=18.9km s-min=12.1km az=27.0*
*ISU **11** 15:34:51.7, 40.05N×69.82E, h5km*

ISC 11 15:33:50.8±2.0, 40.01N±0.07×69.92E±0.05, h6km±11km, n37, σ3s05/64, 27C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**0.69**	**86**	⇓*i*P	**Pn**	**15 34 06.4**	**-0.8**
	baz=83						
BTK				⇓*i*S	**Sn**	**15 34 17.4**	**-0.9**
	baz=83						
BTK	**Batken**	**0.69**	**86**	*e*P	**Pn**	**15 34 06.4**	**-0.8**
BTK				*e*S	**Sn**	**15 34 17.3**	**-1.0**
CHMI	**Chimion**	**1.25**	**78**	*i* P	**Pn**	**15 34 12.6**	**-2.4**
CHMI				*i* S	**Sb**	**15 34 25.0**	**-6.4**
TAS	**Tashkent**	**1.39**	**340**	⇑*i*P	**Pn**	**15 34 15.5**	**-1.3**
	baz=48						
TAS				⇑*i*S	**Sg**	**15 34 35.0**	**-0.6**
	baz=48						
TAS	**Tashkent**	**1.39**	**340**	*i* S	**Sg**	**15 34 39.8**	**+4.2**
CHMG	**Chimgan**	**1.54**	**3**	*e*P	**Pg**	**15 34 21.6**	**+1.3**
CHMG				*e*S	**Sg**	**15 34 42.6**	**+2.4**
NAM	**Namangan**	**1.65**	**53**	*e*P	**Pg**	**15 34 23.0**	**+0.6**
NAM				*e*S	**Sg**	**15 34 46.5**	**+2.8**
ANR	**Andizhan**	**2.01**	**68**	*e*P	**Pg**	**15 34 31.2**	**+2.0**

	baz=52								
AAK				⇑	*i*	S	**Sb**	**15 35 53.8**	**-6.1**
	baz=52								
AAK	**Ala-Archa**	**4.33**	**51**	⇑		Pn	**Pn**	**15 35 01.3**	**+4.0**
	3.6nm,0.8s								
AAK				⇑		Pg	**Pg**	**15 35 14.0**	**+0.3**
	3.0nm,0.5s								
AAK				⇓		Sn	**Sb**	**15 35 54.3**	**-5.6**
	5.8nm,0.8s								
AAK				⇓		Lg	Lg	15 36 11.2	
	5.4nm,0.6s								
KBK	**Karagaybulak**	**4.62**	**53**	⇑	*i*	P	**Pn**	**15 35 05.0**	**+3.7**
	baz=54								
KBK				⇑	*i*	S	**Sn**	**15 36 00.4**	**+5.1**
	baz=54								
CHMS	**Chumysh**	**4.70**	**49**	⇓	*i*	P	**Pn**	**15 35 05.9**	**+3.7**
	baz=50								
CHMS				⇓	*i*	S	**Sn**	**15 36 01.9**	**+4.8**
	baz=50								
SGDS	**Sogindy**	**4.92**	**44**			Pg	**Pb**	**15 35 19.8**	**+2.3**
	5.0nm,0.5s								
SGDS						Lg	Lg	15 36 24.5	
	9.0nm,0.4s								
TKM2	**Tokmak 2**	**5.16**	**54**	⇑		Pn	**Pn**	**15 35 12.4**	**+3.6**
	1.7nm,0.5s								
TKM2				⇑		Pg	**Pg**	**15 35 29.3**	**-0.4**
	2.0nm,0.6s								
TKM2				⇓		Lg	Lg	15 36 37.3	
	3.7nm,0.5s								
DGS	**Degeres**	**5.44**	**52**		*e*	P	**Pb**	**15 35 29.6**	**+3.3**
	2.2nm,0.4s								
DGS					*e*	S	**Sg**	**15 36 41.4**	**-4.2**
	4.9nm,0.4s								
DGS	**Degeres**	**5.44**	**52**			Pg	**Pb**	**15 35 29.6**	**+3.3**
	2.2nm,0.4s								
DGS						Lg	Lg	15 36 41.4	
	4.9nm,0.4s								
KST	**Kastek**	**5.45**	**54**		*e*	P	**Pb**	**15 35 29.8**	**+3.3**
	2.7nm,0.2s								
KST					*e*	S	**Sg**	**15 36 41.8**	**-4.1**
	9.5nm,0.4s								
KST	**Kastek**	**5.45**	**54**			Pg	**Pb**	**15 35 29.8**	**+3.3**
	2.7nm,0.2s								
KST						Lg	Lg	15 36 41.8	
	9.5nm,0.4s								
BTLS	**Baital**	**5.88**	**30**		*e*	P	Pg	15 35 38.3	-5.1
	2.0nm,0.2s								
BTLS					*e*	S	**Sg**	**15 36 56.3**	**-3.1**
	4.9nm,0.5s								
BTLS	**Baital**	**5.88**	**30**			Pg	Pg	15 35 38.3	-5.1
	2.0nm,0.2s								
BTLS						Lg	Lg	15 36 56.3	
	4.9nm,0.5s								

RSNC ***11*** *15:52:59.1±1.2, 7°.24N×77°.88W, h0km±4km, ML2.7*
UPA ***11*** *15:52:59.2±1.6, 7°.20N×77°.86W, h5km±4km, MW3.7*
ISC 11 15:52:58.4±1.6,**7°.25N**±0°.05×**77°.89W**±0°.06,**h1**km±12km,
n18,σ1§01/30,**1C,Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.13**	**143**	⇑	*e*P	**Pg**	**15 53 01.4**	**+0.6**
PTAC					*e*S	**Sg**	**15 53 02.9**	**+0.4**
PTAC	**Punta Ardita,**	**0.13**	**143**		*i* P	**Pg**	**15 53 01.4**	**+0.6**
PTAC					*e*S	**Sg**	**15 53 02.5**	**+0.1**
SOLC	**Bahia Solano**	**1.12**	**155**		*e*P	**Pg**	**15 53 19.2**	**-0.7**
SOLC					*e*S	**Sb**	**15 53 34.3**	**-1.3**
SOLC					*i*		15 53 37.3	
	comp=Z,176nm,0.3s							
SOLC	**Bahia Solano**	**1.12**	**155**		*e*P	**Pg**	**15 53 19.3**	**-0.6**
SOLC					*e*S	**Sb**	**15 53 34.5**	**-1.1**
UPD2	**Meteti**	**1.30**	**354**		*e*P	**Pn**	**15 53 22.6**	**-1.0**
UPD2					*e*S	**Sn**	**15 53 43.0**	**+1.3**
UPD2	**Meteti**	**1.30**	**354**		*e*P	**Pn**	**15 53 24.3**	**+0.6**
UPD2					*e*S	**Sn**	**15 53 43.9**	**+2.2**
CAPC	**Capurgana**	**1.48**	**21**		*e*P	**Pn**	**15 53 25.2**	**-1.0**
CAPC					*e*S	**Sn**	**15 53 45.4**	**-0.7**
CAPC					*i*		15 53 48.0	
	comp=Z,78nm,0.2s							
CAP2	**Capurgana**	**1.49**	**20**		*e*P	**Pn**	**15 53 25.4**	**-0.9**
CAP2					*e*S	**Sn**	**15 53 45.8**	**-0.6**
DBBC	**Dabeiba**	**1.68**	**98**		*e*P	**Pn**	**15 53 27.8**	**-1.2**
DBBC					*e*S	**Sg**	**15 53 51.8**	**-0.6**
DBBC					*i*		15 53 52.3	
	comp=Z,125nm,0.5s							
DBBC	**Dabeiba**	**1.68**	**98**		*e*P	**Pn**	**15 53 27.7**	**-1.2**
CHPO	**Chepo, Panama**	**2.26**	**328**		*e*P	**Pn**	**15 53 36.8**	**-0.1**
HELC	**Santa Helena**	**2.57**	**114**		*e*P	**Pn**	**15 53 41.4**	**0.0**
HELC					*e*S	**Sn**	**15 54 14.7**	**+1.1**
HELC					*i*		15 54 18.6	
	comp=Z,14nm,0.6s							
MONA	**Monteria**	**2.67**	**55**		*e*P	**Pn**	**15 53 42.6**	**-0.1**
MONA					*e*S	**Sn**	**15 54 16.2**	**+0.4**
MOTC	**Monteria, Cord**	**2.67**	**55**		*e*P	**Pn**	**15 53 42.1**	**-0.5**
MOTC					*e*S	**Sn**	**15 54 15.7**	**0.0**
PTBC	**PUERTO BERRIO,**	**3.48**	**101**		*e*P	**Pn**	**15 53 54.5**	**+0.8**
SJCC	**San Jacinto, C**	**3.75**	**45**		*e*P	**Pn**	**15 53 58.5**	**+1.0**
RUSC	**La Rusia**	**4.96**	**105**		*e*P	**Pn**	**15 54 16.2**	**+1.7**
PAMC	**Pamplona, Colo**	**5.15**	**89**		*e*P	**Pn**	**15 54 18.2**	**+1.2**

SOME ***11*** *15:54:11.2,41°.15N×71°.73E, h0km*
KRNET ***11*** *15:54:12.5±0.1,41°.10N×71°.75E, h17km, mb2.4*
NNC ***11*** *15:54:13.3±1.2,41°.14N×71°.75E, h0km, mb3.5,mpv3.2,*
Error ellipse: s-maj=10.5km s-min=3.1km az=175.0
ISC 11 15:54:11.2±1.4,**41°.12N**±0°.03×**71°.75E**±0°.03,**h6**km±16km,
n24,σ1§52/40,**17C-10D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.95**	**77**	⇑	*i* P	**Pb**	**15 54 30.6**	**+0.4**
	baz=76							
ARSB				⇑	*i* S	**Sg**	**15 54 43.8**	**+2.0**
	baz=76							
OHH	**Osh**	**0.98**	**127**	⇑	*i* P	**Pb**	**15 54 30.6**	**-0.1**
	baz=26							
OHH				⇑	*i* S	**Sg**	**15 54 44.3**	**+1.4**
	baz=26							
BTK	**Batken**	**1.28**	**214**	⇑	*i* P	**Pb**	**15 54 35.7**	**0.0**
	baz=15							
BTK				⇑	*i* S	**Sg**	**15 54 53.4**	**+1.2**
	baz=15							
MNAS	**Manas**	**1.48**	**22**	⇑	*i* P	**Pb**	**15 54 40.3**	**+1.1**
	baz=22							
MNAS				⇑	*i* S	**Sg**	**15 55 00.4**	**+1.7**
	baz=22							
IUG	**Iuzhnay**	**1.65**	**309**		*e*P	**Pb**	**15 54 42.6**	**+0.5**
	35nm,0.2s							
IUG					*e*S	**Sg**	**15 55 05.3**	**+1.1**
	91nm,0.4s							
IUG	**Iuzhnay**	**1.65**	**309**		P	**Pb**	**15 54 42.6**	**+0.5**
	35nm,0.2s							
IUG					S	**Sg**	**15 55 05.3**	**+1.1**
	91nm,0.4s							
AML	**Almayashu**	**1.77**	**55**	⇓	*i* P	**Pb**	**15 54 45.1**	**+0.8**
	baz=54							
AML				⇓	*i* S	**Sg**	**15 55 09.5**	**+1.3**
	baz=54							
MRKS	**Merke**	**1.96**	**34**		*e*P	**Pb**	**15 54 48.8**	**+1.4**
	3.2nm,0.2s							
MRKS				⇑	*i* S	**Sg**	**15 55 15.7**	**+1.5**
	12nm,0.2s							
MRKS	**Merke**	**1.96**	**34**		Pg	**Pb**	**15 54 48.8**	**+1.4**
	3.2nm,0.2s							
MRKS					Lg	Lg	15 55 15.7	
	12nm,0.2s							
ARLS	**Aral**	**2.07**	**68**	⇑	*i* P	**Pb**	**15 54 49.7**	**+0.4**
	baz=67							
ARLS				⇑	*i* S	**Sb**	**15 55 17.2**	**+1.9**
	baz=67							
EKS2	**Erkin-Say**	**2.16**	**44**	⇑	*e*P	**Pb**	**15 54 51.2**	**+0.4**
	baz=43							
EKS2				⇑	*i* S	**Sb**	**15 55 18.9**	**+1.0**
	baz=43							
KK31	**Karatay Array**	**2.19**	**335**	⇓	Pn	**Pb**	**15 54 51.4**	**+0.2**
	0.9nm,0.2s,baz=143,slow=13,SNR=18							
KK31				⇑	Sn	**Sb**	**15 55 20.2**	**+1.6**
	3.2nm,0.3s,baz=152,slow=29,SNR=11							
UCH	**Uchtor**	**2.35**	**61**	⇓	*i* P	**Pb**	**15 54 54.0**	**-0.2**
	baz=61							
UCH				⇓	*i* S	**Sb**	**15 55 23.7**	**+0.1**
	baz=61							
BRLS	**Boroldav**	**2.38**	**324**		*e*P	**Pb**	**15 54 54.0**	**-0.5**
	8.0nm,0.2s							
BRLS					*e*S	**Sb**	**15 55 24.6**	**+0.4**
	20nm,0.3s							
BRLS	**Boroldav**	**2.38**	**324**		Pg	**Pb**	**15 54 54.0**	**-0.5**
	8.0nm,0.2s							
BRLS					Lg	Lg	15 55 24.5	
	20nm,0.3s							
AAK	**Ala-Archa**	**2.55**	**53**	⇓	*i* P	**Pb**	**15 54 56.4**	**-1.0**
	baz=52							
AAK				⇓	*i* S	**Sb**	**15 55 28.5**	**-0.6**
	baz=52							
AAK	**Ala-Archa**	**2.55**	**53**	⇓	Lg	Lg	15 55 33.1	
	4.0nm,0.8s							
KBK	**Karagaybulak**	**2.84**	**56**	⇑	*e*P	**Pb**	**15 55 00.7**	**-1.7**
	baz=56							
KBK				⇑	*i* S	**Sb**	**15 55 35.2**	**-2.2**
	baz=56							
USP	**Ospenovka**	**2.96**	**43**	⇓	*e*P	**Pb**	**15 55 02.1**	**-2.3**
	baz=42							
USP				⇓	*i* S	**Sb**	**15 55 38.0**	**-2.9**
	baz=42							
TKM2	**Tokmak 2**	**3.38**	**57**	⇑	Lg	Lg	15 56 00.3	
	2.7nm,0.6s							
DGS	**Degeres**	**3.66**	**53**		*e*P	**Pb**	**15 55 19.6**	**+3.2**
	1.7nm,0.7s							
DGS					*e*S	**Sg**	**15 56 08.8**	**-0.1**
	2.2nm,0.6s							
DGS	**Degeres**	**3.66**	**53**		Pg	**Pb**	**15 55 19.6**	**+3.2**
	1.7nm,0.7s							
DGS					Lg	Lg	15 56 08.8	
	2.2nm,0.6s							
BTLS	**Baital**	**4.26**	**22**		*e*P	**Pg**	**15 55 31.0**	**-1.9**
	2.5nm,0.5s							
BTLS					*e*S	**Sg**	**15 56 28.0**	**-0.1**
	3.8nm,0.3s							
BTLS	**Baital**	**4.26**	**22**		Pg	**Pg**	**15 55 31.0**	**-1.9**
	2.5nm,0.5s							
BTLS					Lg	Lg	15 56 28.0	
	3.8nm,0.3s							

ATH ***11*** *15:55:18.4,37°.27N×28°.78E, h12km±2km, ML3.7/4, Error ellipse: s-maj=3.2km s-min=1.8km az=227.0*
ISK ***11*** *15:55:18.6,37°.15N×28°.76E, h9km, ML3.7/27*
DDA ***11*** *15:55:18.7,37°.16N×28°.69E, h6km×3km, MW3.8*
NIC ***11*** *15:55:19.4±0.0,37°.17N×28°.75E, h4km±2km, Ml3.9/4*
THE ***11*** *15:55:19.5,37°.14N×28°.76E, h1km±1km, ML3.6/5, Error ellipse: s-maj=1.5km s-min=0.8km az=54.0*
HLW ***11*** *15:55:21.1,37°.09N×28°.89E, h13km±13km, Ml4.1*
IDC ***11*** *15:55:24.4±1.4,36°.92N×28°.90E, h58km±19km, mb3.6/6, mb1 3.8/11,mb1mx3.4/43,mbtmp3.9/11, ML4.0/5, MS3.3/2, Ms1 3.3/2,ms1mx2.6/41, Error ellipse: s-maj=16.3km s-min=9.0km az=160.0*
GII ***11*** *15:55:27.4±0.0,36°.79N×29°.35E, h5km, Mm3.9/2*
ISC 11 15:55:19.7±0.9,**37°.14N**±0°.02×**28°.76E**±0°.02,**h12**km±7km,
n132,σ1§59/166,**mb3.7**/6,**11C-6D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	**0.33**	**195**		PG	**Pg**	**15 55 26.1**	**-0.4**
DALY	**Dalyan (Mula)**	**0.33**	**195**		*i* P	**Pg**	**15 55 25.9**	**-0.5**
DALY					IAML		15 55 32.0	
	comp=E,3μm,0.6s							
DALY					*i* S	**Sb**	**15 55 32.3**	**-0.6**
DALY					IAML		15 55 37.0	
	comp=N,4μm,1.1s							
TAVA	**DENIZLI_Tavas**	**0.35**	**21**		*i* P	**Pg**	**15 55 25.8**	**-1.0**
TAVA					*i* S	**Sg**	**15 55 31.4**	**-0.1**
TAVA					IAML		15 55 32.0	
	comp=N,5μm,0.5s							
TAVA					IAML		15 55 33.0	
	comp=E,5μm,0.4s							
YER	**Yerkesik**	**0.38**	**269**		PG	**Pg**	**15 55 26.7**	**-0.7**
YER					SG	**Sg**	**15 55 32.7**	**+0.2**
YER	**Yerkesik**	**0.38**	**269**		P	**Pg**	**15 55 26.7**	**-0.7**
YER					S	**Sg**	**15 55 33.0**	**+0.5**
CAME	**Cameli-Denizli**	**0.48**	**114**		PG	**Pg**	**15 55 28.5**	**-0.7**
TURN	**Turunc**	**0.55**	**229**		PG	**Pg**	**15 55 29.4**	**-1.1**
TURN	**Turunc**	**0.55**	**229**		*i* P	**Pg**	**15 55 29.4**	**-1.1**
TURN					*i* S	**Sb**	**15 55 40.0**	**+0.9**
TURN					IAML		15 55 42.0	
	comp=E,3μm,0.5s							
TURN					IAML		15 55 43.0	
	comp=N,3μm,0.9s							
FETY	**Fethiye**	**0.57**	**153**		PG	**Pg**	**15 55 30.1**	**-0.7**
FETY					SG	**Sg**	**15 55 38.9**	**+0.5**
FETY	**Fethiye**	**0.57**	**153**		*i* P	**Pg**	**15 55 30.1**	**-0.7**
FETY					*i* S	**Sb**	**15 55 39.3**	**-0.4**
FETY					IAML		15 55 41.0	
	comp=E,976nm,0.9s							
FETY	**Fethiye**	**0.57**	**153**		P	**Pg**	**15 55 29.9**	**-0.9**
FETY					S	**Sb**	**15 55 39.1**	**-0.6**
MRSB	**Marmaris-Mugla**	**0.62**	**227**		PG	**Pg**	**15 55 31.2**	**-0.6**
GOLH	**Golhisar**	**0.65**	**81**		*i* P	**Pg**	**15 55 31.5**	**-0.9**
GOLH					*i* S	**Sb**	**15 55 43.0**	**+0.9**
GOLH					IAML		15 55 54.0	
	comp=N,3μm,0.8s							
MLSB	**Milas**	**0.80**	**281**		PG	**Pg**	**15 55 34.4**	**-0.8**
DATC	**Datca-Mugla**	**0.96**	**247**		PG	**Pg**	**15 55 37.7**	**-0.5**
ELL	**Elmali**	**1.00**	**113**		PG	**Pg**	**15 55 38.5**	**-0.6**
ELL	**Elmali**	**1.00**	**113**		P	**Pn**	**15 55 40.1**	**+0.4**
ELL					S	**Sn**	**15 55 55.6**	**+1.9**
ARG	**Arkhangelos**	**1.05**	**209**		P	**Pb**	**15 55 40.4**	**+0.5**
ARG					AML	AML	15 56 01.1	
	comp=N,3946μm,0.5s							
ARG					AML	AML	15 56 02.1	
	comp=E,6727μm,0.5s							
ARG	**Arkhangelos**	**1.05**	**209**		PG	**Pg**	**15 55 38.7**	**-1.3**
ARG	**Arkhangelos**	**1.05**	**209**	⇑	P	**Pg**	**15 55 40.2**	**+0.1**
ARG					S	**Sn**	**15 55 56.2**	**+1.3**
ARG	**Arkhangelos**	**1.05**	**209**		P	**Pg**	**15 55 39.0**	**-1.0**
ARG					S	**Sb**	**15 55 54.8**	**+1.2**
	comp=E,3μm,0.5s							
AYDB	**Zeytinkoy-Aydi**	**1.06**	**320**		PG	**Pg**	**15 55 39.4**	**-0.8**
AKAS	**Kas**	**1.13**	**143**		PN	**Pg**	**15 55 41.2**	**-0.4**
AKAS	**Kas**	**1.13**	**143**		*i* P	**Pb**	**15 55 41.3**	**0.0**
AKAS					IAML		15 56 04.0	
	comp=E,1μm,0.6s							
BODT	**Bodrum**	**1.16**	**267**		PN	**Pb**	**15 55 40.9**	**-0.8**
BODT	**Bodrum**	**1.16**	**267**		P	**Pb**	**15 55 41.2**	**-0.5**
BODT					S	**Sn**	**15 55 58.6**	**+1.0**
BRDR	**BURDUR-Merkez**	**1.18**	**61**		*i* P	**Pb**	**15 55 41.4**	**-0.7**
BRDR					*i* S	**Sn**	**15 56 02.0**	**+3.9**
BRDR					IAML		15 56 02.0	
	comp=E,853nm,0.5s							
BRDR					IAML		15 56 06.0	
	comp=N,1μm,0.6s							
YKAV	**Yalikavak-Bodr**	**1.18**	**270**		PN	**Pb**	**15 55 41.4**	**-0.7**
KSL	**Kastellorizon**	**1.19**	**146**		P	**Pg**	**15 55 42.7**	**0.0**
KSL					AML	AML	15 56 06.8	
	comp=N,5260μm,0.6s							
KSL					AML	AML	15 56 07.1	
	comp=E,6275μm,0.8s							
KSL	**Kastellorizon**	**1.19**	**146**	⇑	P	**Pg**	**15 55 42.6**	**0.0**
KSL					S	**Sn**	**15 56 00.8**	**+2.6**
KSL	**Kastellorizon**	**1.19**	**146**		P	**Pn**	**15 55 42.3**	**+0.1**
KSL					S	**Sn**	**15 55 59.1**	**+0.8**
	comp=E,3μm,0.8s							
KORT	**Korkueli**	**1.28**	**96**		PN	**Pn**	**15 55 43.2**	**-0.4**
KORT	**Korkueli**	**1.28**	**96**		*i* P	**Pg**	**15 55 44.3**	**-0.1**
KORT					IAML		15 56 07.0	
	comp=N,894nm,0.6s							
KORT					IAML		15 56 11.0	
	comp=E,1μm,0.7s							
BASM	**Basmaki-Afyon**	**1.29**	**52**		PN	**Pn**	**15 55 43.1**	**-0.5**
GCAM	**G?zelcami?**	**1.34**	**295**		PN	**Pn**	**15 55 43.6**	**-0.6**
GCAM	**G?zelcami?**	**1.34**	**295**		*i* P	**Pn**	**15 55 44.2**	**0.0**
GCAM					IAML		15 56 08.0	
	comp=E,686nm,0.6s							
GCAM					IAML		15 56 09.0	
	comp=N,677nm,0.5s							
MANT	**Manisa**	**1.36**	**353**		*i* P	**Pn**	**15 55 44.5**	**-0.2**
MANT					*i* S	**Sg**	**15 56 03.2**	**-0.3**
MANT					IAML		15 56 09.0	
	comp=N,495nm,0.5s							
MANT					IAML		15 56 09.0	
	comp=E,646nm,0.6s							
KULA	**Kula-Manisa**	**1.37**	**357**		PN	**Pn**	**15 55 43.8**	**-1.0**
KULA	**Kula-Manisa**	**1.37**	**357**		P	**Pn**	**15 55 44.4**	**-0.4**
KULA					S	**Sn**	**15 56 03.2**	**+0.3**
NIS1	**Nisyros Isl.**	**1.38**	**247**		P	**Pb**	**15 55 45.9**	**+0.5**
NIS1					AML	AML	15 56 13.2	
	comp=N,11586μm,0.5s							
NIS1					AML	AML	15 56 14.0	
	comp=E,15538μm,0.8s							
NIS1	**Nisyros Isl.**	**1.38**	**247**		PN	**Pn**	**15 55 44.7**	**-0.1**
NISR	**Nisiros**	**1.41**	**248**		P	**Pb**	**15 55 46.2**	**+0.3**
NISR	**Nisiros**	**1.41**	**248**		P	**Pn**	**15 55 45.4**	**+0.2**
KOSK	**Kos Island**	**1.48**	**255**		PN	**Pn**	**15 55 46.3**	**+0.1**
KOSK	**Kos Island**	**1.48**	**255**		P	**Pn**	**15 55 46.2**	**+0.1**
BCK	**Bucak**	**1.49**	**77**		PN	**Pn**	**15 55 46.5**	**+0.1**
AKUM	**Antalya-Kumluc**	**1.51**	**122**		*i* P	**Pg**	**15 55 49.4**	**+0.6**
AKUM					IAML		15 56 17.0	
	comp=N,391nm,0.5s							
AKUM					IAML		15 56 23.0	
	comp=E,473nm,0.7s							
ISP	**Isparta**	**1.56**	**64**		PN	**Pn**	**15 55 47.3**	**-0.1**
USAK	**Uak-Merkez**	**1.58**	**7**		*i* P	**Pn**	**15 55 47.8**	**+0.2**
USAK					IAML		15 56 15.0	
	comp=E,256nm,0.7s							
SMG	**Samos**	**1.63**	**291**		P	**Pn**	**15 55 48.4**	**+0.1**
SMG					AML	AML	15 56 17.4	
	comp=E,1684μm,0.6s							
SMG					AML	AML	15 56 20.1	
	comp=N,1693μm,0.8s							
SMG	**Samos**	**1.63**	**291**		P	**Pn**	**15 55 48.0**	**-0.3**
SMG					S	**Sn**	**15 56 09.9**	**+0.7**
	comp=N,1μm,0.5s							
DGB	**zmir**	**1.75**	**302**		*i* P	**Pn**	**15 55 49.6**	**-0.2**
DGB					IAML		15 56 20.0	
	comp=N,224nm,0.9s							
DGB					IAML		15 56 27.0	
	comp=E,254nm,1.2s							
BAGO	**Egridir - ISPA**	**1.82**	**62**		*i* P	**Pb**	**15 55 52.0**	**-1.0**
BLCB	**Balcova**	**1.84**	**313**		PN	**Pn**	**15 55 51.5**	**+0.4**
BLCB	**Balcova**	**1.84**	**313**		P	**Pn**	**15 55 50.9**	**-0.2**
BLCB					S	**Sn**	**15 56 14.8**	**+0.4**
AKHS	**Akhisar**	**1.89**	**337**		*i* P	**Pn**	**15 55 52.8**	**+1.0**
AKHS					IAML		15 56 29.0	
	comp=E,212nm,0.7s							
SHAP	**Saphane-Kutahy**	**1.91**	**11**		PN	**Pn**	**15 55 52.3**	**+0.1**
SIMA	**Simav-Kutahya**	**1.95**	**5**		PN	**Pn**	**15 55 52.4**	**-0.3**
GEDZ	**Gediz**	**1.97**	**15**		PN	**Pn**	**15 55 52.7**	**-0.3**
SHUT	**Suhut-Afyon**	**2.00**	**45**		PN	**Pn**	**15 55 53.6**	**+0.2**
KARP	**Karpathos**	**2.05**	**220**		P	**Pb**	**15 55 56.3**	**-0.6**
KARP	**Karpathos**	**2.05**	**220**		PN	**Pn**	**15 55 54.5**	**+0.5**
KARP	**Karpathos**	**2.05**	**220**	⇑	P	**Pn**	**15 55 55.0**	**+1.0**
KARP					S	**Sb**	**15 56 22.2**	**0.0**
KARP					AML	AML	15 56 27.7	
	comp=E,2.2nm,0.7s							
KARP					AML	AML	15 56 27.7	
	comp=E,2.2nm,0.7s							
KARP					AML	AML	15 56 29.5	
	comp=E,1.8nm,0.5s							
KARP					AML	AML	15 56 29.5	
	comp=E,1.8nm,0.5s							
KARP	**Karpathos**	**2.05**	**220**		P	**Pn**	**15 55 55.2**	**+1.2**
KARP					S	**Sn**	**15 56 21.3**	**+1.8**
	comp=E,1μm,0.7s							
URLA	**Izmir**	**2.10**	**306**		PN	**Pn**	**15 55 54.8**	**0.0**
AMGA	**Amorgos Island**	**2.31**	**263**		P	**Pn**	**15 55 58.7**	**+1.1**
TVSB	**Tavsanli**	**2.37**	**13**		PN	**Pn**	**15 55 57.9**	**-0.6**
SEYD	**Seydisehir-KON**	**2.47**	**83**		PN	**Pn**	**15 56 00.1**	**+0.2**
DOGA	**KONYA_Doganhis**	**2.50**	**66**		*i* P	**Pg**	**15 56 07.8**	**+0.1**
DOGA					IAML		15 56 50.0	
	comp=N,138nm,0.8s							
DOGA					IAML		15 56 56.0	
	comp=E,130nm,0.9s							
ANAF	**Anafi Island**	**2.52**	**253**		P	**Pn**	**15 56 02.8**	**+2.3**
ANAF	**Anafi Island**	**2.52**	**253**		P	**Pn**	**15 56 01.6**	**+1.1**
APE	**Apeiranthos**	**2.58**	**269**		P	**Pn**	**15 56 02.6**	**+1.2**
APE	**Apeiranthos**	**2.58**	**269**	⇓	P	**Pb**	**15 56 06.7**	**+0.7**
APE				⇓	S	**Sn**	**15 56 34.6**	**+1.9**
APE	**Apeiranthos**	**2.58**	**269**		PN	**Pn**	**15 56 01.3**	**-0.1**
APE	**Apeiranthos**	**2.58**	**269**	⇑	P	**Pn**	**15 56 01.8**	**+0.4**
SNT5	**Nea Kammeni, S**	**2.80**	**256**		P	**Pn**	**15 56 06.3**	**+2.0**
ZKR	**Zakros**	**2.88**	**226**		P	**Pn**	**15 56 08.4**	**+2.9**
ZKR	**Zakros**	**2.88**	**226**		PN	**Pn**	**15 56 06.0**	**+0.7**
ZKR	**Zakros**	**2.88**	**226**		P	**Pn**	**15 56 07.0**	**+1.5**
STIA	**Sitia Lasithi**	**2.90**	**229**		P	**Pn**	**15 56 07.0**	**+1.3**
KDHN	**Kadinhani**	**3.00**	**62**		*i* P	**Pn**	**15 56 08.7**	**+1.6**
SIGR	**SIGRI**	**3.08**	**313**		P	**Pn**	**15 56 08.4**	**+0.2**
SIGR	**SIGRI**	**3.08**	**313**		P	**Pn**	**15 56 08.8**	**+0.6**
NPS	**Neapolis**	**3.16**	**235**		P	**Pn**	**15 56 12.1**	**+2.8**
NPS	**Neapolis**	**3.16**	**235**		P	**Pn**	**15 56 10.6**	**+1.3**
NPS					S	**Sn**	**15 56 49.0**	**+2.1**
	comp=E,495nm,0.9s							
LAST	**Lasithi**	**3.31**	**234**		P	**Pn**	**15 56 13.4**	**+2.1**
LAST	**Lasithi**	**3.31**	**234**		P	**Pn**	**15 56 12.7**	**+1.3**
AKMS	**Akamas**	**3.59**	**125**		P	**Pn**	**15 56 16.6**	**+1.4**
AKMS					AML	AML	15 57 06.4	
	comp=E,0.5nm,0.9s							
AKMS					AML	AML	15 57 07.1	
	comp=E,0.5nm,0.7s							
IDI	**Anoyia**	**3.63**	**241**		P	**Pn**	**15 56 19.1**	**+3.3**
	comp=E,17nm,0.3s,baz=62,slow=14,SNR=168							
IDI					S	**Sn**	**15 57 00.7**	**+2.0**
	comp=E,8.7nm,0.3s,baz=301,slow=20,SNR=9.3							
IDI	**Anoyia**	**3

OBN	**Obninsk**	**18.75**	**14**	LR	LR	16 06 39.6	
	comp=E,26nm,21.1s,baz=156,slow=36						
FINES	**FINESS Array B**	**24.38**	**357**	P	**P**	**16 00 38.8**	**+1.3**
	comp=E,1.6nm,0.6s,baz=152,slow=8.4,SNR=4.9						
AKTO	**Aktyubinsk**	**24.77**	**48**	P	**P**	**16 00 41.6**	**+0.5**
	comp=E,0.9nm,0.6s,baz=252,slow=11,SNR=3.9						
ESDC	**Sonseca Array**	**25.69**	**286**	P	**P**	**16 00 50.4**	**+0.7**
	comp=E,0.4nm,0.5s,baz=85,slow=12,SNR=1.7						
MDT	**Midelt**	**27.59**	**271**	P	**P**	**16 01 06.0**	**-0.9**
	comp=E,6.9nm,0.9s,baz=232,slow=12,SNR=4.7						
TORD	**Torodi Ar. Bea**	**34.00**	**232**	P	**P**	**16 02 03.1**	**-0.3**
	comp=E,2.0nm,0.5s,baz=37,slow=8.9,SNR=6.0						
MKAR	**Makanchi Array**	**40.26**	**59**	P	**P**	**16 02 55.9**	**-0.4**
	comp=E,0.2nm,0.6s,baz=246,slow=9.3,SNR=1.6						
ULM	**Lac du Bonnet**	**80.25**	**328**	LR	LR	16 46 33.1	
	comp=E,56nm,19.1s,baz=338,slow=38						

*PRE **11** 15:59:09.5±0.9,26°.40S×27°.58E,h2km,ML2.9*
*EAF **11** 15:59:15.5±1.3,26°.18S×27°.15E,h10km,MD3.8*

ISC 11 15:59:08.8±0.8,26°.40S±0°.04×27°.41E±0°.03,h17km±4km, n16,σ1°64/30,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WDLM	**Western Deep L**	**0.03**	**155**	*e*P	**Pb**	**15 59 12.3**	**+0.2**
WDLM				*e*S	**Sg**	**15 59 14.9**	**+0.5**
WDLM				AML	AML	15 59 16.4	
	comp=Z,5μm,0.5s						
KSR	**Koster**	**0.71**	**320**	*e*P	**Pn**	**15 59 24.6**	**+0.3**
KSR				*e*S	**Sn**	**15 59 37.3**	**+2.3**
KSR				AML	AML	15 59 42.0	
	comp=Z,942nm,0.6s						
ERPM	**east rand prop**	**0.75**	**86**	*e*P	**Pg**	**15 59 21.6**	**-1.9**
ERPM				*e*S	**Sg**	**15 59 30.5**	**-2.9**
ERPM				AML	AML	15 59 40.4	
	comp=Z,184nm,0.7s						
SWZ	**Schweizer**	**2.01**	**247**	*e*P	**Pg**	**15 59 47.1**	**-0.5**
SWZ				*e*S	**Sg**	**16 00 14.2**	**+0.4**
SWZ				AML	AML	16 00 16.9	
	comp=Z,161nm,0.6s						
LBTB	**Lobatse**	**2.14**	**310**	*i* P	**Pb**	**15 59 46.5**	**-0.7**
LBTB	**Lobatse**	**2.14**	**310**	*e*P	**Pg**	**15 59 48.0**	**-1.9**
LBTB				*e*S	**Sg**	**16 00 16.3**	**-1.4**
LBTB				AML	AML	16 00 20.2	
	comp=Z,278nm,0.3s						
LBTB	**Lobatse**	**2.14**	**310**	*i* P	**Pb**	**15 59 46.5**	**-0.7**
BOSA	**Boshof**	**2.92**	**220**	*i* P	**Pb**	**15 59 59.7**	**-0.8**
BOSA				*i* S	**Sb**	**16 00 36.8**	**+0.9**
BOSA	**Boshof**	**2.92**	**220**	*e*P	**Pb**	**15 59 58.7**	**-1.8**
BOSA				*e*S	**Sb**	**16 00 35.4**	**-0.6**
BOSA				AML	AML	16 00 43.0	
	comp=Z,50nm,0.3s						
BOSA	**Boshof**	**2.92**	**220**	*i* P	**Pb**	**15 59 59.7**	**-0.8**
BOSA				*i* S	**Sb**	**16 00 36.8**	**+0.9**
POGA	**Pongola**	**3.95**	**105**	*i* P	**Pb**	**16 00 18.5**	**+0.4**
POGA				*i* S	**Sb**	**16 01 07.2**	**+1.6**
POGA	**Pongola**	**3.95**	**105**	*e*P	**Pn**	**16 00 09.8**	**+1.1**
POGA				*e*S	**Sn**	**16 00 53.9**	**-0.8**
POGA				AML	AML	16 01 13.1	
	comp=Z,38nm,0.5s						
POGA	**Pongola**	**3.95**	**105**	*i* P	**Pb**	**16 00 18.5**	**+0.4**
POGA				*i* S	**Sb**	**16 01 07.2**	**+1.6**
MOPA	**Mopani**	**4.62**	**52**	*e*P	**Pn**	**16 00 19.0**	**+1.1**
MOPA				*e*S	**Sn**	**16 01 10.3**	**-0.8**
MOPA				AML	AML	16 01 40.0	
	comp=Z,22nm,0.4s						
BLWY	**Bulawayo**	**6.33**	**10**	*i* P	**Pn**	**16 00 45.2**	**+3.7**
BLWY				*i* S	**Sn**	**16 01 52.4**	**-1.1**
BLWY	**Bulawayo**	**6.33**	**10**	*i* P	**Pn**	**16 00 45.2**	**+3.7**
BLWY				*i* S	**Sn**	**16 01 52.4**	**-1.1**

*IDC **11** 16:25:14.9±0.7,55°.99S×27°.12W,h90km±6km,mb4.2/9, mb1 4.2/10,mb1mx4.0/21,mbtmp4.5/10,MS3.3/5, Ms1 3.2/5,ms1mx3.0/17,Error ellipse: s-maj=21.7km s-min=13.2km az=73.0*
*NEIC **11** 16:25:16.0±1.0,56°.11S±0°.10×27°.2W±0°.2,h102km±5km, mb4.8/31,Error ellipse: s-maj=15.0km s-min=14.1km az=71.0*

ISC 11 16:25:15.5±0.6,56°.12S±0°.08×27°.22W±0°.09,h99km±6km, h99km:pP-P,n69,σ1°30/69,mb4.8/23,2C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.62**	**285**	Pn	**Pn**	**16 26 35.0**	**-1.4**
VNA1	**Neumayer--Stat**	**16.74**	**158**	P	**P**	**16 29 07.2**	**+3.2**
VNA3	**Neumayer Olymp**	**16.93**	**160**	P	**Pn**	**16 29 05.9**	**+0.1**
VNA2	**Neumayer--Watz**	**17.13**	**158**	P	**P**	**16 29 09.3**	**+0.8**
	baz=316,slow=10						
SNAA	**Sanae**	**18.68**	**156**	P	**P**	**16 29 25.6**	**+0.1**
SNAA	**Sanae**	**18.68**	**156**	P	**P**	**16 29 25.7**	**+0.2**
	1.2nm,0.3s,baz=290,slow=12,SNR=37						
SNAA				S	**S**	**16 32 45.0**	**-7.7**
	0.1nm,0.3s,baz=336,slow=13,SNR=2.3						
SNAA				LR	LR	16 34 48.5	
	comp=Z,69nm,19.4s,baz=8.0,slow=30						
SNAA	**Sanae**	**18.68**	**156**	P	**P**	**16 29 25.5**	**0.0**
BELA	**Belgrano 2**	**22.00**	**184**	P	**P**	**16 30 00.8**	**-0.3**
SYO	**Syowa Base**	**31.54**	**141**	*e*X	**P**	**16 31 29.1**	**+1.4**
SYO	**Syowa Base**	**31.54**	**141**	*e*P	pP	16 31 46.1	-3.0
PLCA	**Paso Flores**	**32.00**	**280**	LR	LR	16 42 45.6	
	comp=Z,52nm,21.6s,baz=155,slow=33						
QSPA	**South Pole Qui**	**34.13**	**180**	P	**P**	**16 31 51.9**	**+1.4**
	5.6nm,0.6s,baz=201,slow=2.0,SNR=60						
QSPA				pP	**pP**	**16 32 14.2**	**+1.8**
	7.7nm,0.6s,baz=178,slow=2.4,SNR=8.1						
QSPA	**South Pole Qui**	**34.13**	**180**	P	**P**	**16 31 51.5**	**+1.0**
QSPA					**pP**	**16 32 12.5**	**0.0**
QSPA				IAmb	IAmb	16 32 15.4	
	comp=Z,8.7nm,0.7s						
CPUP	**Villa Florida**	**36.84**	**311**	P	**P**	**16 32 12.9**	**-1.0**
	comp=Z,2.4nm,0.5s,baz=166,slow=7.4,SNR=8.0						
CPUP	**Villa Florida**	**36.84**	**311**	P	**P**	**16 32 13.7**	**-0.2**
MT02	**Curacav**	**37.79**	**288**	P	**P**	**16 32 21.4**	**-0.4**
CO02	**Combarbal**	**39.32**	**291**	P	**P**	**16 32 34.6**	**-0.3**
CO02				IAmb	IAmb	16 32 46.4	
	comp=Z,31nm,1.3s						
GO04	**Tololo Observa**	**40.04**	**292**	P	**P**	**16 32 41.5**	**+0.6**
GO04				IAmb	IAmb	16 32 42.9	
	comp=Z,26nm,1.2s						
MAW	**Mawson**	**40.10**	**143**	P	**P**	**16 32 42.0**	**+1.3**
	comp=Z,1.8nm,0.6s,baz=198,slow=9.9,SNR=2.3						
MAW				LR	LR	16 47 33.2	
	comp=Z,25nm,19.2s,baz=243,slow=33						
GO02	**Mina Guanaco**	**43.51**	**298**	P	**P**	**16 33 09.3**	**+0.1**
GO02				IAmb	IAmb	16 33 11.2	
	comp=Z,12nm,0.8s						
LVC	**Limon Verde**	**45.32**	**300**	P	**P**	**16 33 24.5**	**+0.7**
LVC				IAmb	IAmb	16 33 27.1	
	comp=Z,13nm,0.8s						
PB06	**IPOC Station P**	**45.56**	**299**	P	**P**	**16 33 25.6**	**+0.1**
PB06				IAmb	IAmb	16 33 53.0	
	comp=Z,20nm,1.2s						
BOSA	**Boshof**	**46.01**	**76**	P	**P**	**16 33 28.5**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=219,slow=4.2,SNR=4.7						
BOSA				LR	LR	16 51 35.5	
	comp=Z,30nm,18.1s,baz=205,slow=34						
BOSA	**Boshof**	**46.01**	**76**	P	**P**	**16 33 28.3**	**-0.6**
PB04	**IPOC Station P**	**46.16**	**299**	P	**P**	**16 33 30.4**	**+0.2**
PB09	**IPOC Station P**	**46.17**	**300**	P	**P**	**16 33 31.5**	**+1.2**
VNDA	**Vanda**	**46.50**	**183**	P	**P**	**16 33 33.5**	**+1.6**
	comp=Z,3.0nm,0.8s,baz=189,slow=5.6,SNR=28						
VNDA				pP	**pP**	**16 33 55.2**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=178,slow=6.2,SNR=3.9						
VNDA	**Vanda**	**46.50**	**183**	P	**P**	**16 33 33.5**	**+1.6**
PB07	**IPOC Station P**	**46.54**	**300**	P	**P**	**16 33 33.1**	**-0.1**
PB01	**IPOC Station P**	**46.93**	**301**	P	**P**	**16 33 36.5**	**+0.4**
PB08	**IPOC Station P**	**47.54**	**302**	P	**P**	**16 33 42.1**	**+0.9**
PB08				IAmb	IAmb	16 33 42.9	
	comp=Z,11nm,0.5s						
GO01	**Chusmiza**	**47.97**	**302**	P	**P**	**16 33 45.3**	**+0.7**
GO01				IAmb	IAmb	16 33 46.4	
	comp=Z,14nm,0.6s						
H10S2	**ASCENSION HYDR**	**48.07**	**17**	T	T	17 26 32.2	
	baz=189,slow=74,SNR=16						
H10S3	**ASCENSION HYDR**	**48.08**	**17**	T	T	17 26 32.7	
	baz=31,slow=74,SNR=22						
PB11	**IPOC Station P**	**48.11**	**301**	P	**P**	**16 33 45.5**	**+0.2**
PB11				IAmb	IAmb	16 33 47.5	
	comp=Z,10.0nm,0.6s						
PSGCX	**Pisagua**	**48.47**	**301**	P	**P**	**16 33 48.2**	**+0.2**
PSGCX				IAmb	IAmb	16 33 48.4	
	comp=Z,10.0nm,0.7s						
MNMC	**Minye Minye**	**48.62**	**302**	P	**P**	**16 33 49.9**	**+0.5**
LBTB	**Lobatse**	**49.05**	**73**	P	**P**	**16 33 52.5**	**+0.1**
LBTB				IAmb	IAmb	16 33 53.3	
	comp=Z,8.7nm,0.8s						
H10N1	**ASCENSION HYDR**	**49.19**	**17**	T	T	17 27 56.4	
	SNR=6.7						
H10N3	**ASCENSION HYDR**	**49.19**	**17**	T	T	17 27 56.3	
	SNR=18						
H10N2	**ASCENSION HYDR**	**49.21**	**17**	T	T	17 27 57.7	
	SNR=16						
PB16	**IPOC Station P**	**49.26**	**302**	P	**P**	**16 33 55.3**	**+0.6**
TSUM	**Tsumeb**	**49.73**	**61**	P	**P**	**16 33 58.0**	**+0.3**
TSUM				IAmb	IAmb	16 33 58.8	
	comp=Z,9.9nm,1.1s						
LPAZ	**La Paz**	**50.40**	**305**	P	**P**	**16 34 03.9**	**+0.6**
	comp=Z,4.5nm,0.3s,baz=116,slow=3.5,SNR=29						
LPAZ				pP	**pP**	**16 34 26.9**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=240,slow=4.5,SNR=2.5						
LPAZ	**La Paz**	**50.40**	**305**	P	**P**	**16 34 03.7**	**+0.4**
LPAZ				IAmb	IAmb	16 34 04.5	
	comp=Z,7.0nm,0.5s						
LPAZ					**pP**	**16 34 26.7**	**0.0**
SAML	**Samuel**	**54.84**	**315**	P	**P**	**16 34 35.1**	**-0.2**
LSZ	**Lusaka**	**58.42**	**69**	P	**P**	**16 35 00.8**	**+0.1**
LSZ				IAmb	IAmb	16 35 01.8	
	comp=Z,11nm,1.0s						
LIC	**Lamto**	**64.77**	**25**	*e*P	**P**	**16 35 43.1**	**-0.1**
	comp=Z,29nm,0.8s						
KIC	**Kosan Boka**	**64.97**	**25**	*e*P	**P**	**16 35 44.1**	**-0.4**
	comp=Z,29nm,1.0s						
TIC	**Toumodi**	**65.18**	**24**	*e*P	**P**	**16 35 45.7**	**-0.2**
DBIC	**Dimbokro**	**65.24**	**25**	P	**P**	**16 35 46.5**	**+0.2**
	comp=Z,6.0nm,0.7s,baz=159,slow=7.9,SNR=9.5						
DBIC				LR	LR	16 56 50.0	
	comp=Z,37nm,19.4s,baz=114,slow=29						
DBIC	**Dimbokro**	**65.24**	**25**	P	**P**	**16 35 46.5**	**+0.2**
DBIC				IAmb	IAmb	16 35 47.2	
	comp=Z,7.5nm,0.8s						
TOA0	**Torodi Ar. Sit**	**73.13**	**29**	P	**P**	**16 36 35.1**	**+0.2**
TORD	**Torodi Ar. Bea**	**73.13**	**29**	P	**P**	**16 36 35.1**	**+0.1**
	comp=Z,4.3nm,0.4s,baz=202,slow=6.3,SNR=12						
TORD	**Torodi Ar. Bea**	**73.13**	**29**	P	**P**	**16 36 35.4**	**+0.4**
TEIG	**Tepich**	**91.73**	**305**	P	**P**	**16 38 12.2**	**+0.6**
ASAR	**Alice Springs**	**98.93**	**163**	P	**P**	**16 38 44.8**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=182,slow=3.5,SNR=8.4						
ASAR				pP	**pP**	**16 39 07.5**	**-2.7**
	comp=Z,0.3nm,0.7s,baz=183,slow=4.3,SNR=2.5						
ASAR	**Alice Springs**	**98.93**	**163**	P	Pdif	16 38 45.0	+0.4
FINES	**FINESS Array B**	**124.45**	**28**	PKP	**PKPdf**	**16 44 00.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=236,slow=0.7,SNR=7.8						
FINES	**FINESS Array B**	**124.45**	**28**		**PKPdf**	**16 44 00.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**125.06**	**111**	PKP	**PKPdf**	**16 44 03.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=221,slow=3.3,SNR=5.1						
ABKAR	**Akbulak array**	**127.43**	**55**	PKPdf	**PKPdf**	**16 44 06.3**	**-1.2**
YKA	**Yellowknife Ar**	**136.21**	**318**	PKP	**PKPdf**	**16 44 24.1**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=160,slow=1.8,SNR=4.5						
LZH	**Lanzhou**	**141.61**	**100**	*e*PKP	**PKPdf**	**16 44 34.5**	**-0.1**
LZH				sPKP		16 45 12.0	
NRIK	**Noril'sk**	**149.08**	**39**	PKPbc	**PKPbc**	**16 44 50.3**	**0.0**
	comp=Z,2.2nm,0.9s,baz=98,slow=0.6,SNR=5.1						
ILAR	**Eielson Array**	**150.15**	**312**	PKPbc	**PKPbc**	**16 44 52.8**	**-0.3**
	comp=Z,7.7nm,0.9s,baz=128,slow=1.6,SNR=60						
ILAR				pPKPbc	**pPKPdf**	**16 45 16.5**	**+1.6**
	comp=Z,6.4nm,1.0s,baz=127,slow=1.8,SNR=5.6						
ILAR	**Eielson Array**	**150.15**	**312**		**PKPbc**	**16 44 52.3**	**-0.8**
SONM	**Songino Array**	**150.75**	**87**	PKPbc	**PKPbc**	**16 44 54.7**	**-0.5**
	comp=Z,3.7nm,1.0s,baz=223,slow=2.2,SNR=15						
SONM	**Songino Array**	**150.75**	**87**		**PKPbc**	**16 44 54.4**	**-0.9**

TAP 11 16:31:39.0,23°.94N×120°.99E,h7km,ML1.8,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMLT	**Sun Moon Lake**	**0.10**	**233**	*i* P	Pg	16 31 41.9	+0.5
	baz=228						
SMLT				*i* S	Sg	16 31 43.7	+0.8
	baz=228						
DPDB	**Guoxing**	**0.11**	**329**	P	Pg	16 31 42.2	+0.7
	baz=338						
DPDB				*e*S	Sg	16 31 44.2	+1.0
	baz=338						
TYC	**Yuchr**	**0.12**	**252**	*i* P	Pg	16 31 42.2	+0.5
	baz=250						
TYC				*i* S	Sg	16 31 44.1	+0.6
	baz=250						
SSLB	**Suanglung**	**0.16**	**191**	*e*P	Pg	16 31 42.5	+0.2
	baz=190						
SSLB				S	Sg	16 31 45.0	+0.5
	baz=190						
CHGB	**Renai**	**0.21**	**56**	*e*P	Pg	16 31 44.1	+0.8
	baz=56						
CHGB				*e*S	Sg	16 31 47.2	+1.0
	baz=56						
WJS	**Zhushan**	**0.27**	**243**	P	Pb	16 31 45.2	-0.9
	baz=242						
WJS				S	Sb	16 31 49.9	-1.0
	baz=242						
WHYT	**Xinyi Township**	**0.27**	**206**	*e*P	Pg	16 31 44.9	+0.4
	baz=201						
WHYT				S	Sb	16 31 50.5	-0.6
	baz=201						
WNT	**Mingjian**	**0.28**	**257**	P	Pb	16 31 46.4	-0.1
	baz=256						
WNT				*e*S	Sb	16 31 51.5	+0.1
	baz=256						
WHF	**Hehuan Shan**	**0.33**	**52**	P	Pg	16 31 46.3	+0.7
	baz=53						
WHF				S	Sg	16 31 51.3	+1.3
	baz=53						
WHP	**Taichung City**	**0.34**	**354**	P	Pg	16 31 46.2	+0.6
	baz=3.0						
WHP				*e*S	Sg	16 31 51.2	+1.0
	baz=3.0						
TDCB	**Techi**	**0.35**	**27**	*e*P	Pg	16 31 46.2	+0.3
	baz=28						
TDCB				S	Sg	16 31 50.4	-0.2
	baz=28						
ESL	**Shilin**	**0.43**	**107**	*i* P	Pb	16 31 48.1	-0.8
	baz=107						
ESL				S	Sb	16 31 54.4	-1.2
	baz=107						
CHN5	**Tsauling**	**0.44**	**219**	P	Pb	16 31 49.2	-0.1
	baz=219						
CHN5				S	Sb	16 31 56.2	+0.1
	baz=219						
ALS	**Alishan**	**0.46**	**201**	*e*P	Pg	16 31 48.7	+0.7
	baz=199						
ALS				*e*S	Sb	16 31 56.0	-0.8
	baz=199						
EGFH	**Guangfu**	**0.49**	**124**	S	Sg	16 31 55.9	+1.1
	baz=132						
ETLH	**Xin Townshi**	**0.52**	**60**	*e*P	Pg	16 31 49.8	+0.6
	baz=52						
ETLH				S	Sg	16 31 56.0	0.0
	baz=52						
EHY	**Hungye**	**0.53**	**145**	*e*P	Pg	16 31 49.6	+0.3
	baz=136						
EHY				S	Sg	16 31 57.2	+0.9
	baz=136						
HGSD	**Ruisui**	**0.60**	**138**	*e*P	Pg	16 31 51.2	+0.5
	baz=138						
HGSD				*e*S	Sg	16 31 59.1	+0.6
	baz=138						
NACB	**Ninganchiao**	**0.60**	**67**	*e*P	Pg	16 31 50.6	-0.1
	baz=60						
NACB				S	Sg	16 31 58.3	-0.3
	baz=60						
NNSB	**Datong**	**0.60**	**37**	*e*P	Pg	16 31 50.7	0.0
	baz=45						
NNSB				S	Sg	16 31 58.1	-0.6
	baz=45						
NNSH	**Datong**	**0.60**	**37**	P	Pg	16 31 50.2	-0.5
	baz=44						
NNSH				S	Sg	16 31 57.7	-1.0
	baz=44						
NNS	**Nan Shan**	**0.61**	**35**	*e*P	Pg	16 31 50.6	-0.2
	baz=44						
NNS				*e*S	Sg	16 31 59.3	+0.5
	baz=44						
YULB	**Yu-li**	**0.62**	**152**	*e*P	Pg	16 31 50.1	-0.8
	baz=144						
YULB				S	Sg	16 31 58.4	-0.6
	baz=144						
TWF1	**Yuli**	**0.65**	**154**	*e*P	Pb	16 31 52.8	+0.1
	baz=144						
TWF1				S	Sb	16 32 01.1	-1.0
	baz=144						
NSTT	**Nanjuang**	**0.69**	**1**	*e*P	Pb	16 31 54.0	+0.7
	baz=3.0						
LIOB	**Emei**	**0.70**	**2**	*e*P	Pb	16 31 53.9	+0.3
	baz=3.0						
LIOB				S	Sb	16 32 04.8	+1.3
	baz=3.0						
TPUB	**Ta-pu**	**0.72**	**207**	*e*P	Pb	16 31 54.0	+0.1
	baz=206						
TPUB				*e*S	Sb	16 32 04.5	+0.5
	baz=206						
ELDTW	**Lidau**	**0.75**	**178**	*e*P	Pb	16 31 54.4	-0.1
	baz=176						
ELDTW				*e*S	Sb	16 32 05.5	+0.5
	baz=176						
WSF	**Szhu**	**0.76**	**247**	*e*S	Sb	16 32 05.7	+0.5
	baz=246						
WTP	**Ta-pu**	**0.77**	**206**	*e*P	Pb	16 31 55.2	+0.4
	baz=205						
WTP				S	Sb	16 32 06.9	+1.4
	baz=205						
WLGB	**Puzi**	**0.78**	**234**	*e*P	Pb	16 31 55.0	0.0
	baz=233						
WLGB				*e*S	Sb	16 32 06.4	+0.7
	baz=233						
FULB	**Fuli**	**0.79**	**159**	*e*P	Pn	16 31 56.0	-0.6
	baz=158						
FULB				*e*S	Sb	16 32 07.0	+0.9
	baz=158						
NSK	**Sanguang**	**0.81**	**25**	*e*P	Pg	16 31 54.5	-0.1
	baz=18						
NSK				*e*S	Sg	16 32 04.4	-0.6
	baz=18						
YHNB	**Yeheng**	**0.81**	**26**	*e*P	Pg	16 31 54.0	-0.6
	baz=19						
YHNB				S	Sg	16 32 04.4	-0.7
	baz=19						
TWK	**Hsinying**	**0.81**	**214**	*e*P	Pb	16 31 55.3	-0.2
	baz=212						
TWK				S	Sb	16 32 07.8	+1.1
	baz=212						
NDT	**Datong Townshi**	**0.81**	**36**	*e*P	Pg	16 31 54.0	-0.7
	baz=37						
NDT				S	Sb	16 32 07.2	+0.5
	baz=37						
CHN1	**Nanshi**	**0.86**	**209**	P	Pb	16 31 56.2	-0.1
	baz=208						
CHN1				S	Sb	16 32 09.0	+0.9
	baz=208						
SLGT	**Liugui**	**0.99**	**198**	*e*P	Pb	16 31 59.0	+0.4
	baz=196						

NNC 11 16:53:49.8±1.6,37°.11N×79°.04E,h0km,mb4.1,mpv3.8, 7C-2D,Error ellipse: s-maj=13.6km s-min=10.4km az=72.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**5.96**	**356**	Pg	Pb	16 55 37.5	+2.8
	11nm,1.4s						
SATY				Lg	Lg	16 56 59.0	
	21nm,0.6s						
UZB	**Uzynbulak**	**6.03**	**360**	Pg	Pb	16 55 37.6	+1.7
	6.0nm,1.1s						
UZB				Lg	Lg	16 56 59.4	
	7.2nm,0.6s						
SHLS	**Shalkode**	**6.05**	**3**	Pg	Pb	16 55 39.5	+3.3
	10nm,0.5s						
SHLS				Lg	Lg	16 57 02.7	
	22nm,0.4s						
TNSS	**Tian-Shan**	**6.14**	**345**	Pg	Pb	16 55 41.4	+3.6
	4.3nm,1.0s						
TNSS				Lg	Lg	16 57 06.0	
	9.6nm,0.4s						
IZV	**Izvestkoviy**	**6.21**	**343**	Pg	Pb	16 55 42.8	+4.0
	5.2nm,0.5s						
IZV				Lg	Lg	16 57 08.7	
	17nm,0.6s						
PDGK	**Podgornoye**	**6.22**	**3**	Pg	Pb	16 55 42.3	+3.2
	2.7nm,0.4s						
PDGK				Lg	Lg	16 57 07.8	
	4.9nm,0.6s						
PDGK	**Podgornoye**	**6.22**	**3**	⇑Pg	Pb	16 55 43.7	+4.7
	3.4nm,0.5s						
PDGK				⇑Lg	Lg	16 57 08.1	
	21nm,0.8s						
MDOK	**Medeo**	**6.24**	**346**	Pg	Pb	16 55 43.0	+3.7
	7.0nm,1.1s						
MDOK				Lg	Lg	16 57 08.8	
	15nm,0.7s						
KOTS	**Kotyrbulak**	**6.29**	**347**	Pg	Pb	16 55 44.2	+3.9
	6.6nm,0.6s						
KOTS				Lg	Lg	16 57 11.1	
	48nm,0.4s						
KNDC	**Almaty**	**6.31**	**346**	⇓Lg	Lg	16 57 09.0	
	32nm,0.6s						
TKM2	**Tokmak 2**	**6.38**	**337**	⇑Pg	Pg	16 55 48.1	-3.9
	1.5nm,0.5s						
TKM2				⇓Lg	Lg	16 57 11.5	
	5.7nm,0.6s						
KST	**Kastek**	**6.38**	**339**	Pg	Pb	16 55 45.9	+4.2
	7.8nm,0.8s						
KST				Lg	Lg	16 57 14.0	
	6.2nm,0.7s						
KURS	**Kuram**	**6.41**	**354**	Pg	Pb	16 55 46.1	+3.9
	7.7nm,0.7s						
KURS				Lg	Lg	16 57 14.1	
	6.4nm,1.3s						
AAK	**Ala-Archa**	**6.54**	**329**	⇑Pg	Pg	16 55 50.4	-4.6
	3.0nm,0.7s						
AAK				⇑Lg	Lg	16 57 17.1	
	22nm,0.9s						
KTBS	**Karatobe**	**6.84**	**345**	Pg	Pb	16 55 53.5	+4.0
	2.5nm,0.9s						
KTBS				Lg	Lg	16 57 27.5	
	22nm,0.4s						
MNBS	**Baschi**	**6.98**	**356**	Pg	Pb	16 55 56.5	+4.6
	3.2nm,0.6s						
MNBS				Lg	Lg	16 57 32.8	
	8.9nm,0.2s						
ARXS	**Arharly**	**7.16**	**353**	Pg	Pb	16 55 59.2	+4.3
	5.5nm,0.4s						
ARXS				Lg	Lg	16 57 37.7	
	8.7nm,0.5s						
DJR	**Jarkent**	**7.24**	**4**	Pg	Pb	16 56 01.5	+5.1
	3.4nm,0.7s						
DJR				Lg	Lg	16 57 41.6	
	4.1nm,0.4s						
MK31	**Makanchi Array**	**9.98**	**13**	⇑Pn

TURN				IAML		17 00 27.0	
	comp=N,865nm,0.9s						
TURN				IAML		17 00 28.0	
	comp=E,670nm,0.6s						
FETY	**Fethiye**	**0.58**	**153**	PG	**Pg**	**17 00 14.7**	**0.0**
FETY	**Fethiye**	**0.58**	**153**	*i* P	**Pg**	**17 00 14.5**	**-0.1**
FETY				*i* S	**Sb**	**17 00 24.3**	**-1.1**
FETY	**Fethiye**	**0.58**	**153**	P	**Pg**	**17 00 14.6**	**-0.1**
FETY				S	**Sg**	**17 00 21.9**	**-0.4**
MRSB	**Marmaris-Mugla**	**0.63**	**226**	PG	**Pg**	**17 00 15.6**	**-0.1**
GOLH	**Golhisar**	**0.65**	**83**	*i* P	**Pg**	**17 00 15.8**	**-0.2**
GOLH				*i* S	**Sb**	**17 00 26.4**	**-1.0**
GOLH				IAML		17 00 28.0	
	comp=N,750nm,0.4s						
MLSB	**Milas**	**0.80**	**280**	PG	**Pb**	**17 00 19.9**	**-0.3**
DATC	**Datca-Mugla**	**0.96**	**246**	PG	**Pg**	**17 00 22.5**	**+0.5**
ELL	**Elmali**	**1.01**	**114**	PG	**Pg**	**17 00 22.9**	**0.0**
ELL	**Elmali**	**1.01**	**114**	P	**Pg**	**17 00 22.3**	**-0.6**
ELL				S	**Sn**	**17 00 40.3**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**319**	PG	**Pb**	**17 00 24.1**	**-0.5**
ARG	**Arkhangelos**	**1.07**	**209**	P	**Pg**	**17 00 24.1**	**+0.1**
ARG				S	**Sn**	**17 00 40.7**	**-0.5**
ARG				AML	AML	17 00 45.6	
	comp=N,1981µm,0.7s						
ARG				AML	AML	17 00 46.5	
	comp=E,2847µm,0.3s						
ARG	**Arkhangelos**	**1.07**	**209**	PG	**Pg**	**17 00 23.8**	**-0.2**
ARG	**Arkhangelos**	**1.07**	**209**	⇑P	**Pg**	**17 00 23.8**	**-0.2**
ARG				S	**Sn**	**17 00 42.0**	**+0.9**
ARG	**Arkhangelos**	**1.07**	**209**	P	**Pg**	**17 00 23.6**	**-0.4**
ARG				S	**Sn**	**17 00 40.3**	**-0.9**
	comp=E,1µm,0.5s						
AKAS	**Kas**	**1.15**	**143**	PN	**Pg**	**17 00 25.8**	**+0.3**
BODT	**Bodrum**	**1.16**	**266**	PN	**Pg**	**17 00 25.8**	**0.0**
BODT	**Bodrum**	**1.16**	**266**	P	**Pg**	**17 00 26.1**	**+0.3**
BODT				S	**Sn**	**17 00 43.5**	**0.0**
BRDR	**BURDUR-Merkez**	**1.17**	**62**	*i* P	**Pb**	**17 00 26.1**	**-0.6**
BRDR				*i* S	**Sn**	**17 00 47.0**	**+3.2**
BRDR				IAML		17 00 48.0	
	comp=N,403nm,0.8s						
BRDR				IAML		17 00 48.0	
	comp=E,346nm,1.2s						
KSL	**Kastellorizon**	**1.21**	**146**	P	**Pb**	**17 00 27.0**	**-0.2**
KSL	**Kastellorizon**	**1.21**	**146**	⇑P	**Pb**	**17 00 27.0**	**-0.2**
KSL				S	**Sn**	**17 00 46.3**	**+1.8**
KSL	**Kastellorizon**	**1.21**	**146**	P	**Pg**	**17 00 26.3**	**-0.3**
KSL				S	**Sn**	**17 00 43.8**	**-0.8**
	comp=E,940nm,0.8s						
BASM	**Basmaki-Afyon**	**1.28**	**53**	PN	**Pg**	**17 00 27.2**	**-0.9**
KORT	**Korkueli**	**1.28**	**97**	PN	**Pn**	**17 00 28.4**	**-0.4**
KORT	**Korkueli**	**1.28**	**97**	*i* P	**Pn**	**17 00 29.1**	**+0.3**
KORT				IAML		17 00 52.0	
	comp=N,309nm,0.7s						
KORT				IAML		17 00 55.0	
	comp=E,668nm,0.7s						
GCAM	**G?zelcaml?**	**1.33**	**295**	PN	**Pb**	**17 00 29.1**	**-0.2**
GCAM	**G?zelcaml?**	**1.33**	**295**	*i* P	**Pg**	**17 00 30.4**	**+1.3**
MANT	**Manisa**	**1.34**	**353**	*i* P	**Pn**	**17 00 29.1**	**-0.6**
MANT				*i* S	**Sb**	**17 00 46.8**	**-0.6**
MANT				IAML		17 00 54.0	
	comp=E,295nm,0.8s						
MANT				IAML		17 00 57.0	
	comp=N,172nm,0.6s						
KULA	**Kula-Manisa**	**1.36**	**357**	PN	**Pb**	**17 00 29.4**	**-0.5**
KULA	**Kula-Manisa**	**1.36**	**357**	P	**Pn**	**17 00 29.2**	**-0.6**
KULA				S	**Sn**	**17 00 49.0**	**+0.5**
NIS1	**Nisyros Isl.**	**1.38**	**247**	P	**Pg**	**17 00 30.7**	**+0.7**
NIS1				AML	AML	17 00 57.5	
	comp=N,4514µm,0.6s						
NIS1				AML	AML	17 00 59.0	
	comp=E,5524µm,0.8s						
NIS1	**Nisyros Isl.**	**1.38**	**247**	PN	**Pg**	**17 00 30.2**	**+0.2**
NIS1	**Nisyros Isl.**	**1.38**	**247**	P	**Pb**	**17 00 29.9**	**-0.3**
NISR	**Nisiros**	**1.42**	**248**	P	**Pg**	**17 00 31.5**	**+0.8**
NISR				AML	AML	17 01 00.1	
	comp=N,1748µm,0.8s						
NISR				AML	AML	17 01 01.7	
	comp=E,2321µm,0.7s						
KOSK	**Kos Island**	**1.48**	**255**	PN	**Pb**	**17 00 31.8**	**-0.1**
KOSK	**Kos Island**	**1.48**	**255**	P	**Pb**	**17 00 31.5**	**-0.4**
BCK	**Bucak**	**1.49**	**78**	PN	**Pb**	**17 00 31.8**	**-0.3**
AKUM	**Antalya-Kumluc**	**1.52**	**123**	*i* P	**Pg**	**17 00 34.7**	**+2.0**
ISP	**Isparta**	**1.55**	**64**	PN	**Pb**	**17 00 32.9**	**-0.3**
SMG	**Samos**	**1.62**	**290**	P	**Pn**	**17 00 33.3**	**-0.1**
SMG				AML	AML	17 01 00.4	
	comp=E,692µm,0.6s						
SMG				AML	AML	17 01 02.8	
	comp=N,962µm,0.5s						
SMG	**Samos**	**1.62**	**290**	P	**Pn**	**17 00 33.1**	**-0.3**
DGB	**zmir**	**1.74**	**302**	*i* P	**Pg**	**17 00 37.1**	**+0.2**
DGB				IAML		17 01 09.0	
	comp=N,170nm,0.8s						
DGB				IAML		17 01 12.0	
	comp=E,97nm,1.2s						
BAGO	**Egridir - ISPA**	**1.82**	**62**	*i* P	**Pb**	**17 00 36.4**	**-1.3**
BLCB	**Balcova**	**1.83**	**313**	PN	**Pn**	**17 00 36.3**	**+0.1**
BLCB	**Balcova**	**1.83**	**313**	P	**Pn**	**17 00 36.4**	**+0.2**
SIMA	**Simav-Kutahya**	**1.93**	**5**	PN	**Pn**	**17 00 37.6**	**-0.1**
GEDZ	**Gediz**	**1.95**	**15**	PN	**Pb**	**17 00 38.6**	**-1.4**
KARP	**Karpathos**	**2.06**	**219**	P	**Pb**	**17 00 40.6**	**-1.2**
KARP	**Karpathos**	**2.06**	**219**	⇑P	**Pn**	**17 00 40.0**	**+0.6**
KARP				S	**Sb**	**17 01 07.0**	**-0.9**
KARP				AML	AML	17 01 14.7	
	comp=E,1.0nm,0.8s						
KARP				AML	AML	17 01 14.7	
	comp=E,1.0nm,0.8s						
KARP				AML	AML	17 01 17.5	
	comp=E,1.2nm,0.7s						
KARP				AML	AML	17 01 17.5	
	comp=E,1.2nm,0.7s						
KARP	**Karpathos**	**2.06**	**219**	P	**Pn**	**17 00 39.6**	**+0.2**
KARP				S	**Sn**	**17 01 05.1**	**-0.6**
	comp=E,530nm,0.7s						
AMGA	**Amorgos Island**	**2.31**	**263**	P	**Pn**	**17 00 42.8**	**-0.1**
DOGA	**KONYA_Doganhis**	**2.50**	**67**	*i* P	**Pg**	**17 00 52.3**	**+0.9**
APE	**Apeiranthos**	**2.58**	**269**	P	**Pn**	**17 00 47.0**	**+0.5**
APE	**Apeiranthos**	**2.58**	**269**	⇑P	**Pn**	**17 00 46.8**	**+0.2**
APE	**Apeiranthos**	**2.58**	**269**	P	**Pn**	**17 00 47.0**	**+0.5**
PRK	**Paraskevi**	**2.86**	**318**	P	**Pn**	**17 00 51.0**	**+0.7**
ZKR	**Zakros**	**2.90**	**226**	P	**Pn**	**17 00 52.4**	**+1.6**
SIGR	**SIGRI**	**3.07**	**313**	P	**Pn**	**17 00 54.0**	**+0.7**
NPS	**Neapolis**	**3.17**	**234**	P	**Pn**	**17 00 56.4**	**+1.8**
LAST	**Lasithi**	**3.32**	**234**	P	**Pn**	**17 00 58.1**	**+1.4**
LAST	**Lasithi**	**3.32**	**234**	P	**Pn**	**17 00 56.7**	**0.0**
AKMS	**Akamas**	**3.60**	**125**	P	**Pn**	**17 01 00.7**	**+0.2**
AKMS				AML	AML	17 01 49.8	
	comp=E,0.3nm,0.9s						
AKMS				AML	AML	17 01 50.7	
	comp=E,0.2nm,0.8s						
IDI	**Anoyia**	**3.64**	**240**	P	**Pn**	**17 01 01.7**	**+0.6**
ALFC	**Alefka**	**3.69**	**122**	P	**Pn**	**17 01 02.4**	**+0.5**
ALFC				AML	AML	17 01 48.0	
	comp=E,0.3nm,0.7s						
ALFC				AML	AML	17 01 48.6	
	comp=E,0.2nm,0.7s						
NATA	**Nata**	**3.90**	**126**	P	**Pn**	**17 01 05.1**	**+0.5**
LIA	**Limnos Island**	**3.92**	**315**	P	**Pn**	**17 01 05.8**	**+1.0**
SZAC	**Souni**	**4.12**	**124**	⇑P	**Pn**	**17 01 07.8**	**+0.1**
BBAL	**Bala**	**4.18**	**54**	*i* P	**Pn**	**17 01 11.2**	**+2.6**
OSC1	**CSNet OBS 1**	**4.19**	**150**	P	**Pn**	**17 01 08.5**	**-0.1**
CSS	**Mathiatis**	**4.30**	**119**	P	**Pn**	**17 01 11.0**	**+0.8**
ASGA	**Asgata**	**4.34**	**122**	P	**Pn**	**17 01 11.3**	**+0.6**
MVOU	**Mavrovouni**	**4.49**	**117**	⇑P	**Pn**	**17 01 14.2**	**+1.5**
OSC2	**CSNet OBS 4**	**4.99**	**144**	P	**Pn**	**17 01 20.6**	**+1.0**

BJI **11** *17:36:25.0±0.0, 11°.80N×146°.00E, h10km, mB4.9/32, mb4.6/51, Ms4.2/15, Ms7 3.9/17*
DJA **11** *17:36:27.8±0.5, 12°.N±3°.×14°.6E±°, h55km±6km, M5.0/22, mb4.9/22, mB5.4/7, MLv5.1/1, Mw(mB)4.8/7, Mwp5.7/1*
NEIC **11** *17:36:27.4±1.8, 11°.79N±0°.06×146°.02E±0°.08, h32km±3km, mb4.9/102, Error ellipse: s-maj=12.2km s-min=8.0km az=75.0*
IDC **11** *17:36:27.8±2.2, 11°.87N×146°.02E, h40km±19km, mb4.0/23, mb1 4.1/25, mb1mx4.1/42, mbtmp4.2/25, ML4.4/3, MS3.6/31, Ms1 3.6/31, ms1mx3.6/38, Error ellipse: s-maj=19.2km s-min=9.2km az=80.0*
ISC 11 17:36:27.7±0.3, 11.75N±0°.04×145.99E±0°.06, h35km, n229, σ1§24/200, mb4.8/93, MS3.7/38, 2C-2D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.13**	**329**	P	**Pn**	**17 37 00.4**	**-0.4**
	749nm,0.3s,baz=144,slow=12,SNR=574						
GUMO				S	**Sn**	**17 37 24.1**	**-1.9**
	2µm,0.3s,baz=74,slow=23,SNR=14						
GUMO				LR	LR	17 38 11.3	
	comp=Z,2µm,20.0s,baz=264,slow=51						
GUMO	**Guam**	**2.13**	**329**	Pn	**Pn**	**17 37 00.6**	**-0.3**
GUMO				Sn	**Sn**	**17 37 24.6**	**-1.4**
PATS	**Pohnpei**	**13.11**	**111**	Pn	**Pn**	**17 39 29.2**	**-2.2**
MANU	**Manus Island**	**13.77**	**174**		**Pn**	**17 39 38.6**	**-1.9**
JCJ	**Chichijima**	**15.68**	**347**	P	**Pn**	**17 40 07.6**	**+1.5**
BAKI	**Biak**	**16.17**	**218**	P	**P**	**17 40 15.1**	**-0.2**
	37nm,1.1s						
RABL	**Rabaul**	**16.98**	**158**	P	**Pn**	**17 40 21.9**	**-0.8**
RABL				IAmb	IAmb	17 40 30.4	
	comp=Z,130nm,1.5s						
KRVT	**Keravat (AS076**	**17.04**	**159**	P	**P**	**17 40 25.6**	**+0.7**
	comp=Z,1.2nm,0.3s,baz=12,slow=20,SNR=7.5						
KRVT				LR	LR	17 46 22.0	
	comp=Z,144nm,18.2s,baz=348,slow=35						
SIJI	**Sorong**	**19.26**	**230**	P	**Pn**	**17 40 50.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=27,slow=12,SNR=5.1						
JMZ	**Minamidaito 2**	**19.75**	**317**		**P**	**17 40 55.1**	**+0.4**
FAKI	**Fak Fak**	**19.97**	**224**	P	**P**	**17 40 56.2**	**-0.9**
DAV	**Davao City (W)**	**20.66**	**259**	LR	LR	17 48 43.4	
	comp=Z,154nm,20.4s,baz=56,slow=36						
DDMP	**Don Marcelino,**	**20.79**	**256**	*e*P	**P**	**17 41 05.9**	**-0.2**
MSLP	**Maasin**	**20.80**	**268**	*e*P	Pn	17 41 08.1	-0.7
BUKP	**Musuan**	**20.97**	**261**	*e*P	**P**	**17 41 08.8**	**+0.8**
PMG	**Port Moresby**	**21.05**	**177**	P	**P**	**17 41 09.7**	**+1.0**
	comp=Z,9.1nm,0.5s,baz=92,slow=23,SNR=5.9						
PMG				LR	LR	17 48 42.3	
	comp=Z,136nm,19.1s,baz=330,slow=35						
PMG	**Port Moresby**	**21.05**	**177**	P	**P**	**17 41 09.9**	**+1.1**
H11S3	**WAKE ISLAND Hy**	**21.07**	**69**	T	T	18 02 13.9	
	baz=253,slow=74,SNR=56						
H11S2	**WAKE ISLAND Hy**	**21.09**	**69**	T	T	18 02 14.7	
	baz=253,slow=74,SNR=54						
H11S1	**WAKE ISLAND Hy**	**21.09**	**69**	T	T	18 02 17.0	
	baz=253,slow=74,SNR=12						
KCP	**Kidapawan**	**21.14**	**259**	⇓*i*P	**P**	**17 41 10.6**	**+0.7**
CGP	**Cagayan de Oro**	**21.21**	**263**	⇓*e*P	**P**	**17 41 16.4**	**+5.8**
PVCP	**Virac**	**21.38**	**277**	*e*P	**P**	**17 41 12.0**	**-0.3**
KWAJ	**Kwajalein Atol**	**21.48**	**96**	P	**P**	**17 41 12.8**	**-0.7**
H11N1	**WAKE ISLAND Hy**	**21.61**	**66**	T	T	18 02 58.9	
	baz=250,slow=74,SNR=10.0						
H11N2	**WAKE ISLAND Hy**	**21.62**	**66**	T	T	18 02 58.2	
	baz=250,slow=74,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**21.63**	**66**	T	T	18 03 00.0	
	baz=250,slow=74,SNR=29						
SKMP	**Bagumbayan, Su**	**21.79**	**258**	*e*P	**P**	**17 41 17.6**	**+0.8**
JHJ	**Hachijo jima 2**	**22.02**	**346**	LR	LR	17 49 37.0	
	comp=Z,111nm,20.0s,baz=166,slow=36						
PAGZ	**Pagadian**	**22.60**	**262**	*e*P	**P**	**17 41 31.9**	**+6.4**
CNOP	**Candoni, Negro**	**23.01**	**268**	*e*P	**P**	**17 41 31.0**	**+1.2**
LQP	**Lukban**	**23.94**	**278**	⇑*i*P	**P**	**17 41 39.0**	**-0.1**
CAUP	**Cauayan**	**23.96**	**285**	*e*P	**P**	**17 41 39.3**	**+0.3**
CUYO	**Cuyo Island**	**24.50**	**270**	*e*P	**P**	**17 41 43.4**	**-0.5**
KMSI	**Cibinong**	**24.50**	**245**	P	**P**	**17 41 43.4**	**-0.6**
	comp=Z,58nm,1.0s						
JMN	**Monobe**	**24.52**	**335**	P	**P**	**17 41 47.0**	**+3.0**
TGY	**Tagaytay City**	**24.52**	**278**	P	**P**	**17 41 44.0**	**-0.2**
	comp=Z,182nm,0.5s,baz=347,slow=0.8,SNR=13						
TGY				LR	LR	17 52 43.5	
	comp=Z,127nm,18.2s,baz=108,slow=40						
INU	**Inuyama**	**24.87**	**342**	P	**P**	**17 41 51.2**	**+4.1**
SMPP	**San Manuel, Pa**	**24.94**	**283**	*e*P	**P**	**17 41 45.5**	**-2.5**
JGF	**Kuroka**	**25.00**	**343**	P	**P**	**17 41 51.0**	**+2.7**
HNR	**Honiara**	**25.21**	**146**	LR	LR	17 50 56.6	
	comp=Z,310nm,19.9s,baz=357,slow=34						
BUSP	**Coron**	**25.23**	**273**	*e*P	**P**	**17 41 50.7**	**+0.1**
JWT	**Wachi**	**25.32**	**339**	P	**P**	**17 41 52.7**	**+1.5**
JNU	**Nakatsue**	**25.39**	**329**	P	**P**	**17 41 51.0**	**-0.9**
	comp=Z,20nm,1.0s,baz=172,slow=7.2,SNR=5.1						
JNU				LR	LR	17 51 03.9	
	comp=Z,67nm,19.1s,baz=104,slow=35						
JNU	**Nakatsue**	**25.39**	**329**	P	**P**	**17 41 51.7**	**-0.1**
JNU				IAmb	IAmb	17 42 00.8	
	comp=Z,28nm,0.9s						
MJAR	**Matsushiro Arr**	**25.66**	**345**	P	**P**	**17 41 52.2**	**-2.1**
	comp=Z,1.4nm,0.9s,baz=165,slow=10,SNR=2.2						
MJAR				LR	LR	17 52 39.7	
	comp=Z,86nm,19.6s,baz=135,slow=38						
MJAR	**Matsushiro Arr**	**25.66**	**345**	P	**P**	**17 41 54.0**	**-0.3**
MAJO	**Matsushiro**	**25.66**	**345**	P	**P**	**17 41 54.0**	**-0.3**
MAT	**Matsushiro**	**25.67**	**345**	P	**P**	**17 41 53.6**	**-0.7**
COEN	**Coen**	**25.69**	**186**	P	**P**	**17 41 55.0**	**+0.3**
JHS	**Saijyo**	**25.93**	**335**	P	**P**	**17 41 57.1**	**+0.3**
ENPP	**El Nido**	**26.03**	**272**	*e*P	**P**	**17 41 57.6**	**-0.3**
TWG	**Pinlang**	**26.17**	**298**	P	**P**	**17 41 58.2**	**-0.8**
TWG				IAmb	IAmb	17 42 06.5	
	comp=Z,43nm,1.2s						
YULB	**Yu-li**	**26.18**	**300**	P	**P**	**17 41 58.4**	**-0.7**
YULB				IAmb	IAmb	17 42 01.3	
	comp=Z,54nm,1.1s						
NACB	**Ninganchiao**	**26.23**	**301**	P	**P**	**17 41 58.0**	**-1.6**
NACB				IAmb	IAmb	17 42 15.4	
	comp=Z,27nm,1.0s						
LUWI	**Luwuk**	**26.33**	**243**	P	**P**	**17 41 58.1**	**-2.5**
	comp=Z,2µmcomp=Z,60nm,0.8s						
LUWI	**Luwuk**	**26.33**	**243**	P	**P**	**17 42 00.3**	**-0.2**
LUWI				IAmb	IAmb	17 42 19.4	
	comp=Z,41nm,0.8s						
YHNB	**Yeheng**	**26.62**	**302**	P	**P**	**17 42 03.7**	**+0.5**
YHNB				IAmb	IAmb	17 42 26.0	
	comp=Z,32nm,1.1s						
SSLB	**Suanglung**	**26.62**	**300**	P	**P**	**17 42 02.6**	**-0.6**
TPUB	**Ta-pu**	**26.72**	**299**	P	**P**	**17 42 02.1**	**-1.9**
TPUB				IAmb	IAmb	17 42 06.6	
	comp=Z,35nm,0.9s						
JSD	**Sado**	**27.08**	**347**	P	**P**	**17 42 09.0**	**+2.0**
MYLDM	**Lahad Datu**	**27.94**	**259**	P	**P**	**17 42 16.2**	**+1.1**
MYLDM				IAmb	IAmb	17 42 18.9	
	comp=Z,44nm,1.4s						
KSRS	**Korea Array**	**30.30**	**331**	P	**P**	**17 42 34.8**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=136,slow=10,SNR=3.2						
KSAR	**Wonju Array Be**	**30.30**	**331**	P	**P**	**17 42 34.7**	**-1.1**
KAPI	**Kappang**	**30.95**	**239**	LR	LR	17 53 32.4	
	comp=Z,54nm,20.1s,baz=72,slow=33						
KAPI	**Kappang**	**30.95**	**239**	P	**P**	**17 42 40.3**	**-1.5**
BATI	**Baumata**	**31.11**	**226**	LR	LR	17 54 16.9	
	comp=Z,90nn,18.6s,baz=52,slow=34						
CTAO	**Charters Tower**	**31.64**	**180**	P	**P**	**17 42 48.1**	**+0.4**
NJ2	**Nanjing**	**32.12**	**313**	*e*P	**P**	**17 42 52.4**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
JKA	**Kamikawa-asahi**	**32.38**	**355**	P	**P**	**17 42 53.9**	**-0.1**
JKA				IAmb	IAmb	17 43 14.2	
	comp=Z,14nm,0.9s						
WB0	**Warramunga Arr**	**33.33**	**200**	P	**P**	**17 43 02.9**	**+0.4**
WB0				IAmb	IAmb	17 43 19.1	
	comp=Z,16nm,1.4s						
WR0	**Warramunga Arr**	**33.46**	**200**	P	**P**	**17 43 04.6**	**+1.0**
WRAB	**Tennant Creek**	**33.50**	**200**	P	**P**	**17 43 04.8**	**+0.8**
WRAB				IAmb	IAmb	17 43 19.0	
	comp=Z,14nm,1.2s						
WB2	**Warramunga Arr**	**33.51**	**200**	P	**P**	**17 43 04.6**	**+0.5**
WB2				IAmb	IAmb	17 43 19.1	
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**33.51**	**200**	P	**P**	**17 43 04.5**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=22,slow=9.6,SNR=36						
WRA				LR	LR	17 57 48.5	
	comp=Z,103nm,18.2s,baz=45,slow=38						
WRA	**Warramunga Arr**	**33.51**	**200**	P	**P**	**17 43 04.6**	**+0.5**
WC3	**Warramunga Arr**	**33.52**	**200**	P	**P**	**17 43 04.5**	**+0.3**
SANVU	**Saraoutou**	**34.23**	**142**	P	**P**	**17 43 11.7**	**+1.4**
USA0B	**Ussuriysk Arra**	**34.51**	**342**	P	**P**	**17 43 13.2**	**+0.7**
USRK	**Ussuriysk Ar.**	**34.51**	**342**	P	**P**	**17 43 12.6**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=153,slow=9.7,SNR=2.1						
USRK				LR	LR	17 57 40.5	
	comp=Z,69nm,18.5s,baz=141,slow=37						
USRK	**Ussuriysk Ar.**	**34.51**	**342**	P	**P**	**17 43 13.3**	**+0.8**
SBUM	**Sibu**	**34.72**	**257**	P	**P**	**17 43 15.0**	**+0.3**
SBUM				IAmb	IAmb	17 43 16.5	
	comp=Z,16nm,1.3s						
MDJ	**Mudanjiang**	**35.65**	**340**	P	**P**	**17 43 20.8**	**-1.6**
MDJ				S	**S**	**17 48 57.0**	**+0.6**
MDJ				ScP	**ScP**	**17 49 35.7**	**+1.8**
MDJ				PcS	**PcS**	**17 49 37.9**	**+0.4**
MDJ				ScS	**ScS**	**17 53 42.1**	**+3.5**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,30nm,2.6s						
MDJ				LR	LR		
	comp=Z,210nm,19.4s						
FITZ	**Fitzroy Crossi**	**35.81**	**214**	P	**P**	**17 43 25.3**	**+1.3**
KSM	**Kuching**	**36.83**	**257**	P	**P**	**17 43 33.7**	**+0.9**
KSM				IAmb	IAmb	17 43 33.8	
	comp=Z,36nm,1.7s						
AS31	**Alice Springs**	**37.12**	**199**	P	**P**	**17 43 35.8**	**+0.5**
ASAR	**Alice Springs**	**37.13**	**199**	P	**P**	**17 43 35.6**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=20,slow=7.1,SNR=27						
ASAR				LR	LR	17 58 07.2	
	comp=Z,122nm,21.4s,baz=12,slow=35						
ASAR	**Alice Springs**	**37.13**	**199**	P	**P**	**17 43 35.8**	**+0.6**
EIDS	**Eidsvold**	**37.22**	**172**	P	**P**	**17 43 37.0**	**+1.0**
ENH	**Enshi**	**38.51**	**304**	P	**P**	**17 43 47.0**	**+0.1**
ENH				IAmb	IAmb	17 43 56.2	
	comp=Z,20nm,0.8s						
BJT	**Baijiatuau**	**38.55**	**322**	P	**P**	**17 43 45.8**	**-1.3**
BJI	**Beijing**	**38.56**	**322**	P	**P**	**17 43 46.7**	**-0.4**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FUNA	**Funafuti**	**38.68**	**120**	P	**P**	**17 43 47.9**	**-0.5**
DZM	**Mont Dzumac**	**39.15**	**149**	P	**P**	**17 43 53.3**	**+1.0**
	comp=Z,25nm,1.0s,baz=344,slow=11,SNR=10						
DZM	**Mont Dzumac**	**39.15**	**149**	*e*P	**P**	**17 43 53.4**	**+1.1**
	comp=Z,64nm,1.1s						
DZM	**Mont Dzumac**	**39.15**	**149**	*e*LR	LR	17 54 28.4	
	comp=Z,275nm,23.1s						
DZM	**Mont Dzumac**	**39.15**	**149**	P	**P**	**17 43 54.0**	**+1.7**
DZM				IAmb	IAmb	17 43 54.8	
	comp=Z,22nm,0.9s						
KLR	**Kul'dur**	**39.19**	**345**	P	**P**	**17 43 51.5**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=146,slow=7.3,SNR=2.5						
GYA	**Guiyang**	**39.75**	**297**	*e*P	P	17 44 03.0	+5.5
GYA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GYA				pmax	pmax		
	comp=Z,110nm,6.3s						
XAN	**Xi'an**	**40.39**	**309**	P	**P**	**17 44 02.2**	**-0.4**
XAN				pP	sP	17 44 13.9	-0.6
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				LR	LR		
	comp=Z,110nm,16.8s						
XAN				LR	LR		
	comp=Z,180nm,15.2s						
XAN				LR	LR		
	comp=Z,55nm,17.2s						
TPI	**Tanjungpandan**	**40.74**	**252**	P	**P**	**17 44 03.0**	**-2.6**
	comp=Z,5µmcomp=Z,17nm,1.5s						
PSAD2	**Pilbara Seismi**	**41.86**	**218**	P	**P**	**17 44 15.8**	**+1.2**
PSAD2				IAmb	IAmb	17 44 18.1	
	comp=Z,32nm,1.0s						
HHC	**Hu-ho-hao-te**	**41.87**	**320**	*e*P	**P**	**17 44 15.8**	**+1.1**
HHC				PP	**PnPn**	**17 45 56.4**	**-0.7**
HHC				S	**S**	**17 50 34.4**	**+3.8**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,82nm,6.9s						
HHC				LR	LR		
	comp=Z,150nm,20.2s						
HHC				LR	LR		
	comp=Z,200nm,15.9s						
HHC				LR	LR		
	comp=Z,140nm,17.7s						
ARMA	**Armidale**	**42.27**	**173**	P	**P**	**17 44 19.0**	**+1.0**
ARMA				IAmb	IAmb	17 44 20.4	
	comp=Z,33nm,1.2s						
PETK	**Petropavlovsk-**	**42.31**	**10**	P	**P**	**17 44 17.9**	**0.0**
	comp=Z,3.4nm,1.0s,baz=94,slow=40,SNR=1.8						
PETK				LR	LR	17 59 37.1	
	comp=Z,60nm,21.6s,baz=189,slow=33						
KMI	**Kunming**	**42.94**	**294**	⇓P	**P**	**17 44 22.4**	**-1.4**
KMI				pP	pP	17 44 27.9	-4.4
KMI				sP	sP	17 44 30.7	-5.1
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				LR	LR		
	comp=Z,79nm,16.4s						
KMI				LR	LR		
	comp=Z,110nm,13.0s						
KMI				LR	LR		
	comp=Z,180nm,34.4s						
CD2	**Chengdu**	**43.39**	**303**	P	**P**	**17 44 26.8**	**-0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
STKA	**Stephens Creek**	**43.58**

ZALV				LR	LR	18 16 20.8			
	comp=Z,37nm,18.4s,baz=84,slow=38								
MAKZ	**Makanchi**	**63.78**	**317**	P	**P**	**17 46 56.1**	**-0.2**		
MAKZ				IAmb	IAmb	17 47 06.5			
	comp=Z,14nm,0.8s								
SHLS	**Shalkode**	**64.95**	**312**	*e*P	P	17 47 10.3	+6.1		
	comp=Z,3.8nm,1.1s,baz=312								
KPKS	**Kokpek**	**65.56**	**312**	*e*P	P	17 47 16.2	+8.2		
	comp=Z,5.5nm,1.4s,baz=312								
SATY	**Saty**	**65.71**	**312**	*e*P	P	17 47 16.8	+7.7		
	comp=Z,15nm,2.0s,baz=312								
TDK	**Taldygorghan**	**65.95**	**314**	*e*P	P	17 47 19.4	+9.0		
	comp=Z,24nm,0.7s,baz=314								
KDJ	**Kajisay**	**66.51**	**311**	P	**P**	**17 47 15.8**	**+1.5**		
KURK	**Kurchatov**	**66.69**	**320**	P	**P**	**17 47 14.2**	**-0.8**		
MDOK	**Medeo**	**66.71**	**312**	*e*P	P	17 47 23.9	+8.4		
	baz=312								
MDOK				*e*S	S	17 56 19.7	+14		
	baz=312								
TNSS	**Tian-Shan**	**66.77**	**312**	*e*P	P	17 47 24.6	+8.3		
	baz=312								
AAA	**Alma-Ata**	**66.81**	**312**	*e*P	P	17 47 24.9	+8.9		
	comp=Z,26nm,1.3s,baz=312								
PPLA	**Purkeypile**	**66.95**	**26**	P	**P**	**17 47 17.1**	**+0.5**		
KSH	**Kashi**	**67.22**	**308**	P	P	17 47 30.9	+12		
KSH				pmax	pmax				
	comp=Z,24nm,0.9s								
KSH				pmax	pmax				
	comp=Z,270nm,4.5s								
KUU	**Kurty**	**67.29**	**313**	*e*P	P	17 47 27.0	+7.9		
	comp=Z,28nm,1.0s,baz=313								
IMAR	**Indian Mountai**	**67.46**	**23**	P	**P**	**17 47 19.4**	**-0.2**		
GHO	**Glory Hole Cre**	**68.03**	**28**	P	**P**	**17 47 23.2**	**-0.3**		
NRIK	**Noril'sk**	**68.22**	**341**	LR	LR	18 15 52.4			
	comp=Z,51nm,21.7s,baz=200,slow=35								
MLY	**Manley**	**68.28**	**24**	P	**P**	**17 47 24.9**	**0.0**		
	baz=250								
SGDS	**Sogindy**	**68.49**	**312**	*e*P	P	17 47 34.6	+7.9		
	comp=Z,2.2nm,0.9s,baz=312								
I23K	**Minto, Yukon-K**	**68.87**	**24**	P	**P**	**17 47 28.7**	**+0.2**		
	baz=252								
I23K	**Minto, Yukon-K**	**68.87**	**24**	P	**P**	**17 47 28.3**	**-0.2**		
I23K				IAmb	IAmb	17 47 42.5			
	comp=Z,11nm,1.0s								
BTLS	**Baital**	**69.03**	**314**	*e*P	P	17 47 38.1	+8.2		
	comp=Z,8.7nm,1.1s,baz=314								
DHY	**Denali Highway**	**69.09**	**27**	P	**P**	**17 47 29.7**	**-0.5**		
DHY				IAmb	IAmb	17 47 48.9			
	comp=Z,34nm,1.8s								
COLD	**Coldfoot**	**69.23**	**22**	P	**P**	**17 47 31.0**	**+0.3**		
	baz=250								
COLD	**Coldfoot**	**69.23**	**22**	P	**P**	**17 47 30.6**	**-0.1**		
COLD				IAmb	IAmb	17 47 49.5			
	comp=Z,7.6nm,1.0s								
NIL	**Nilore**	**69.27**	**302**	P	**P**	**17 47 30.8**	**-0.9**		
MDM	**Murphy Dome**	**69.27**	**25**	P	**P**	**17 47 31.7**	**+0.7**		
MDM				IAmb	IAmb	17 47 50.4			
	comp=Z,7.3nm,0.8s								
KLU	**Klutina**	**69.34**	**28**	P	**P**	**17 47 32.6**	**+0.9**		
KLU				IAmb	IAmb	17 47 50.3			
	comp=Z,27nm,1.2s								
M24K	**Tolsona, Glenn**	**69.38**	**28**	P	**P**	**17 47 32.1**	**+0.3**		
IL31		**69.76**	**25**	P	**P**	**17 47 32.4**	**-1.6**		
IL31				IAmb	IAmb	17 47 50.9			
	comp=Z,6.1nm,0.5s								
ILAR	**Eielson Array**	**69.76**	**25**	P	**P**	**17 47 31.8**	**-2.3**		
	comp=Z,1.7nm,0.7s,baz=255,slow=5.7,SNR=22								
ILAR				LR	LR	18 13 40.9			
	comp=Z,37nm,21.0s,baz=194,slow=32								
ILAR	**Eielson Array**	**69.76**	**25**	P	**P**	**17 47 32.5**	**-1.6**		
IL18	**Eielson Array**	**69.81**	**25**	P	**P**	**17 47 32.8**	**-1.6**		
HMT	**Hamilton**	**69.88**	**30**	P	**P**	**17 47 34.8**	**-0.1**		
PAX	**Paxson**	**69.90**	**27**	P	**P**	**17 47 35.2**	**+0.1**		
PAX				IAmb	IAmb	17 48 00.4			
	comp=Z,9.5nm,1.0s								
TOLK	**Toolik Lake Re**	**69.94**	**21**	P	**P**	**17 47 35.5**	**+0.3**		
TOLK				IAmb	IAmb	17 47 57.2			
	comp=Z,10nm,1.1s								
PPT	**Papeete**	**69.98**	**114**	LR	LR	18 11 14.1			
	comp=Z,87nm,19.6s,baz=346,slow=30								
PPT2	**Papeete2**	**69.98**	**114**	*e*LR	LR	18 08 49.1			
	comp=Z,212nm,27.8s								
N25K	**Chitina, Valde**	**69.99**	**28**	P	**P**	**17 47 35.7**	**+0.1**		
GLB	**Gilahina Butte**	**70.32**	**29**	P	**P**	**17 47 37.7**	**+0.1**		
GLB				IAmb	IAmb	17 47 55.8			
	comp=Z,15nm,1.0s								
BRZS	**Berezniki**	**70.36**	**319**	*e*P	P	17 47 46.3	+8.2		
	comp=Z,11nm,1.2s,baz=319								
VRDI	**Verde Repeater**	**70.45**	**29**	P	**P**	**17 47 37.8**	**-0.7**		
VRDI				IAmb	IAmb	17 48 02.1			
	comp=Z,31nm,1.4s								
L26K	**Log Cabin Wild**	**70.86**	**27**	P	**P**	**17 47 41.1**	**+0.2**		
	baz=258								
FYU	**Fort Yukon**	**70.90**	**23**	P	**P**	**17 47 39.8**	**-1.2**		
FYU				IAmb	IAmb	17 47 55.9			
	comp=Z,26nm,1.2s								
BMAR	**Burnt Mountain**	**71.37**	**22**	P	**P**	**17 47 43.9**	**0.0**		
CTGM	**Chitina Glacie**	**71.41**	**29**	P	**P**	**17 47 44.6**	**+0.3**		
CTGM				IAmb	IAmb	17 48 03.3			
	comp=Z,19nm,0.9s								
KK06	**Karatay Array**	**71.47**	**312**	P	**P**	**17 47 44.8**	**-0.1**		
KK02	**Karatay Array**	**71.48**	**312**	P	**P**	**17 47 44.6**	**-0.4**		
KK31	**Karatay Array**	**71.48**	**312**	P	**P**	**17 47 45.0**	**0.0**		
KK31				IAmb	IAmb	17 47 55.1			
	comp=Z,15nm,1.1s								
KKAR	**Karatay Array**	**71.48**	**312**	P	**P**	**17 47 45.0**	**0.0**		
KKAR				IAmb	IAmb	17 47 55.1			
	comp=Z,15nm,1.1s								
KKAR	**Karatay Array**	**71.48**	**312**	P	**P**	**17 47 44.4**	**-0.6**		
BCAR	**Beaver Creek A**	**71.57**	**27**	P	**P**	**17 47 44.8**	**-0.4**		
K27K	**Chicken**	**71.62**	**26**	P	**P**	**17 47 44.9**	**-0.5**		
K27K				IAmb	IAmb	17 48 23.4			
	comp=Z,37nm,1.9s								
IUG	**Iuzhnay**	**71.82**	**311**	*e*P	P	17 47 55.5	+8.4		
	comp=Z,9.4nm,1.4s,baz=311								
BCPM	**Bancas Point**	**72.09**	**31**	P	**P**	**17 47 48.8**	**+0.5**		
BRVK	**Borovoye**	**72.11**	**322**	P	**P**	**17 47 48.0**	**-0.5**		
BRVK				IAmb	IAmb	17 47 58.6			
	comp=Z,26nm,1.2s								
TBI	**Tubuai**	**72.12**	**119**	*e*LR	LR	18 09 44.3			
	comp=Z,78nm,27.5s								
EGAK	**Eagle**	**72.15**	**25**	P	**P**	**17 47 49.9**	**+1.4**		
EGAK				IAmb	IAmb	17 48 09.0			
	comp=Z,18nm,1.3s								
DAWY	**Dawson**	**72.79**	**26**	P	**P**	**17 47 53.1**	**+0.6**		
HYT	**Haines Junctio**	**73.25**	**30**	P	**P**	**17 47 55.8**	**+0.5**		
HYT				IAmb	IAmb	17 48 22.8			
	comp=Z,12nm,0.8s								
SKAG	**Skagway**	**74.22**	**31**	P	**P**	**17 48 00.9**	**+0.1**		
SKAG				IAmb	IAmb	17 48 23.1			
	comp=Z,12nm,1.1s								
WHY	**Whitehorse**	**74.52**	**30**	P	**P**	**17 48 02.9**	**+0.2**		
INK	**Inuvik**	**75.64**	**22**	P	**P**	**17 48 07.7**	**-1.2**		
	comp=Z,1.2nm,0.9s,baz=266,slow=14,SNR=5.1								
INK	**Inuvik**	**75.64**	**22**	P	**P**	**17 48 08.5**	**-0.4**		
HRA	**Herat**	**78.34**	**303**		**P**	**17 48 24.5**	**-0.6**		
ABKAR	**Akbulak array**	**78.63**	**318**	P	**P**	**17 48 25.2**	**-0.9**		
ABKAR				IAmb	IAmb	17 48 43.7			
	comp=Z,6.6nm,0.6s								
ABKAR	**Akbulak array**	**78.63**	**318**	P	**P**	**17 48 25.7**	**-0.3**		
ARU	**Arti**	**78.89**	**326**		**P**	**17 48 27.4**	**0.0**		
ARU				IAmb	IAmb	17 48 38.3			
	comp=Z,11nm,0.9s								
GEYT	**Alibeck**	**81.22**	**307**	P	**P**	**17 48 39.3**	**-1.1**		
	comp=Z,1.0nm,0.6s,baz=114,slow=3.6,SNR=1.7								
GEYT				LR	LR	18 26 20.6			
	comp=Z,37nm,21.7s,baz=235,slow=37								
YKA	**Yellowknife Ar**	**83.98**	**27**	P	**P**	**17 48 52.6**	**-1.6**		
	comp=Z,1.7nm,0.7s,baz=284,slow=4.2,SNR=3.1								
YKA				LR	LR	18 22 32.0			
	comp=Z,28nm,21.3s,baz=0.0,slow=33								
J05D	**Fort Rock, OR**	**84.06**	**47**	P	**P**	**17 48 55.3**	**+0.1**		
	baz=280								
NVAR	**Mina Array Bea**	**87.21**	**51**	P	**P**	**17 49 09.9**	**-1.1**		
	comp=Z,1.5nm,0.9s,baz=268,slow=5.9,SNR=8.5								
NVAR	**Mina Array Bea**	**87.21**	**51**	P	**P**	**17 49 10.2**	**-0.8**		
CWC	**Cottonwood Cre**	**87.82**	**53**	P	**P**	**17 49 14.4**	**+0.4**		
	baz=283								
MPMC	**Manual Prospec**	**88.38**	**54**	P	**P**	**17 49 16.7**	**+0.1**		
	baz=283								
FURC	**Furnace Creek,**	**88.77**	**53**	P	**P**	**17 49 18.9**	**+0.7**		
	baz=284								
HLID	**Hailey**	**88.84**	**46**	P	**P**	**17 49 19.0**	**+0.3**		
	baz=285								
ELK	**Elko**	**88.97**	**49**	P	**P**	**17 49 18.7**	**-0.7**		
GSC	**Goldstone, Bar**	**89.09**	**54**	P	**P**	**17 49 20.3**	**+0.4**		
	baz=284								
TPNV	**Topopah Spring**	**89.14**	**53**	P	**P**	**17 49 20.3**	**+0.1**		
	baz=284								
ARCES	**ARCESS Array B**	**89.16**	**342**	P	**P**	**17 49 17.6**	**-1.8**		
	comp=Z,2.3nm,0.8s,baz=37,slow=9.1,SNR=1.6								
ARCES				LR	LR	18 34 01.0			
	comp=Z,36nm,18.4s,baz=290,slow=39								
VNDA	**Vanda**	**89.57**	**177**	P	**P**	**17 49 20.6**	**-0.4**		
	comp=Z,1.1nm,0.9s,baz=305,slow=4.8,SNR=7.4								
VNDA	**Vanda**	**89.57**	**177**	P	**P**	**17 49 21.4**	**+0.5**		
VNDA				IAmb	IAmb	17 49 38.7			
	comp=Z,9.2nm,1.8s								
TPFO	**Pinon Flats**	**89.78**	**56**	P	**P**	**17 49 23.3**	**+0.1**		
	baz=284								
MONP2	**Monument Peak**	**89.97**	**57**	P	**P**	**17 49 24.2**	**0.0**		
	baz=284								
GMRC	**Granite Mounta**	**90.13**	**55**	P	**P**	**17 49 25.1**	**+0.3**		
	baz=284								
PSUT	**Pine Spring**	**90.57**	**51**	P	**P**	**17 49 26.5**	**-0.4**		
PDAR	**Pinedale Array**	**92.48**	**46**	LR	LR	18 26 07.7			
	comp=Z,43nm,19.7s,baz=310,slow=32								
FINES	**FINESS Array B**	**93.28**	**335**	P	**P**	**17 49 38.0**	**-0.6**		
	comp=Z,1.7nm,0.8s,baz=186,slow=33,SNR=1.8								
FINES				LR	LR	18 33 57.0			
	comp=Z,62nm,18.4s,baz=44,slow=37								
AKASG	**Malin Array Be**	**97.14**	**325**	LR	LR	18 36 39.5			
	comp=Z,70nm,18.2s,baz=45,slow=37								
MAW	**Mawson**	**98.16**	**203**	LR	LR	18 29 57.7			
	comp=Z,35nm,21.1s,baz=52,slow=33								
BRTR	**Keskin Array B**	**99.11**	**314**	LR	LR	18 39 13.2			
	comp=Z,16nm,21.1s,baz=18,slow=38								
NOA	**NORSAR Array B**	**99.15**	**340**	LR	LR	18 38 22.3			
	comp=Z,28nm,18.1s,baz=260,slow=38								
BANI	**BANI**	**133.28**	**51**		PKPpre	17 55 27.4			
DBIC	**Dimbokro**	**145.71**	**301**	PKPbc	**PKPab**	**17 56 05.1**	**+0.8**		
	comp=Z,10nm,1.1s,baz=202,slow=7.4,SNR=3.0								

NNC 11 17:48:47.4±2.0, 36°94N×71°07E, h127km±49km, mb2.8, mpv3.5, 2C-3D, Error ellipse: s-maj=19.6km s-min=14.8km az=43.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.17**	**356**	⇓P		Pn		17 50 16.6	+0.5
	1.5nm,0.2s,baz=165,slow=12,SNR=43								
KK31				S		Sn		17 51 25.8	+0.3
	2.1nm,0.5s,baz=176,slow=17,SNR=11								
AAK	**Ala-Archa**	**6.27**	**24**	⇓P		Pn		17 50 17.4	-0.2
AAK	2.2nm,0.3s			⇓S		Sn		17 51 28.9	+0.8
	3.2nm,0.6s								
TKM2	**Tokmak 2**	**6.92**	**29**	⇑P		Pn		17 50 26.0	-0.3
	1.2nm,0.6s								
AB31	**Akbulak array**	**14.73**	**330**	⇑P		Pn		17 52 09.3	0.0
	0.3nm,0.5s,baz=148,slow=12,SNR=9.5								

*IDC **11** 18:35:39.6±1.8, 22°.96N×92°.99E, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/33, mbtmp3.6/7, ML4.1/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/33, Error ellipse: s-maj=81.2km s-min=17.4km az=62.0*

*NEIC **11** 18:35:50.4±1.4, 23°.6N±0°.1×94°.1E±0°.2, h72km±10km, mb4.7/14, Error ellipse: s-maj=24.9km s-min=9.8km az=49.0*

*NDI **11** 18:35:50.9±2.2, 23°.66N×93°.95E, h100km±29km, ML4.0, mb4.7(NEIC)*

ISC 11 18:35:50.3±0.6, 23°.63N±0°.05×93°.96E±0°.05, h73km, n65, σ2S19/69, mb4.2/13, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**1.45**	**218**	*i* Pg		**Pn**		**18 36 16.3**	**+1.4**
SAIH				*i* Sg		**Sn**		**18 36 35.5**	**+2.1**
SILR	**SILCHAR**	**1.56**	**317**	*e*S		**Sn**		**18 36 39.0**	**+3.3**
SILR				IAML				18 36 46.7	
	comp=E,2μm,0.3s								
SILR				IAML				18 36 47.1	
	comp=N,2μm,0.4s								
KOHI	**KOHIMA**	**2.08**	**4**	*i* P		**Pn**		**18 36 23.3**	**0.0**
KOHI				AMP				18 36 58.2	
	comp=N,8μm,0.4s								
SHL	**Shillong**	**2.70**	**316**	*e*P		**Pn**		**18 36 33.3**	**+1.7**
SHL				*e*S		**Sn**		**18 37 02.5**	**-0.9**
SHL				IAML				18 37 04.1	
	comp=N,893nm,0.1s								
SHL	**Shillong**	**2.70**	**316**			**Pn**		**18 36 33.7**	**+2.0**
SHL					Sn	**Sn**		**18 37 02.6**	**-0.9**
MOKO	**MOKOCHONG**	**2.72**	**10**	*e*P		**Pn**		**18 36 34.3**	**+2.3**
MOKO				IAML				18 37 16.7	
	comp=N,331nm,0.3s								
JORH	**JORHAT**	**3.11**	**5**	*ex*		x		18 37 24.3	
JORH				IAML				18 37 26.4	
	comp=E,459nm,0.2s								
JORH				IAML				18 37 26.4	
	comp=N,452nm,0.4s								
TEZP	**TEZPUR**	**3.15**	**341**	*e*P		**Pn**		**18 36 37.1**	**-0.5**
GUWA	**GUWAHATI**	**3.28**	**321**	*e*P		**Pn**		**18 36 39.4**	**+0.1**
GUWA				*e*S		**Sn**		**18 37 14.3**	**-2.9**
ZIRO	**ZIRO**	**3.88**	**359**	*e*P		**Pn**		**18 36 46.5**	**-1.2**
ZIRO				IAML				18 37 40.9	
	comp=N,561nm,0.6s								
ZIRO				IAML				18 37 41.8	
	comp=E,244nm,0.4s								
LKP	**Lekhapani**	**4.06**	**24**	*e*S		**Sn**		**18 37 33.3**	**-2.9**
TAWA	**Tawang**	**4.37**	**335**	*e*P		**Pn**		**18 36 55.4**	**+0.8**
TAWA				*e*S		**Sn**		**18 37 41.2**	**-3.3**
TAWA				IAML				18 37 44.9	
	comp=E,549nm,0.2s								
TAWA				IAML				18 37 46.3	
	comp=N,695nm,0.4s								
GTK	**Tadong**	**6.08**	**308**	*e*P		**Pn**		**18 37 17.3**	**-0.4**
GTK				*e*S		**Sn**		**18 38 22.0**	**-3.9**
LSA	**Lhasa**	**6.54**	**338**			**Pn**		**18 37 24.3**	**-0.1**
LSA					Sn	**Sn**		**18 38 38.1**	**+0.3**
MHMT	**Maesarieng**	**6.58**	**145**	P		Pn		18 37 29.0	+4.6
	comp=N,623nmcomp=N,16nm,0.6s								
CHTO	**Chiang Mai**	**6.68**	**135**			**Pn**		**18 37 25.0**	**-0.8**
CMMT	**Chiang Mai**	**6.68**	**135**	P		**Pn**		**18 37 26.0**	**+0.1**
	comp=N,185nmcomp=N,2.8nm,0.8s								
CM32	**Chiang Mai Arr**	**6.73**	**136**	P		**Pn**		**18 37 29.0**	**+2.4**
TAPN	**Taplejung**	**6.75**	**305**	*e*Pn		**Pn**		**18 37 28.1**	**+1.0**
TAPN				*e*Sn		**Sn**		**18 38 40.3**	**-2.4**
	comp=N,102nm,0.4s								
ODAN	**Odare**	**6.76**	**300**	*e*Pn		**Pn**		**18 37 27.8**	**+0.6**
ODAN				*e*Sn		**Sn**		**18 38 40.6**	**-2.3**
	comp=N,190nm,0.4s								
CM15	**Chiang Mai Arr**	**6.93**	**137**	P		Pn		18 37 36.2	+6.9
	comp=N,6.7nm,0.5s								
CM31	**Chiang Mai Arr**	**6.94**	**137**	P		**Pn**		**18 37 30.0**	**+0.6**
	comp=N,5μmcomp=N,313nm,0.5s								
CM31	**Chiang Mai Arr**	**6.94**	**137**			**Pn**		**18 37 28.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**6.94**	**137**	Pn		**Pn**		**18 37 27.7**	**-1.7**
	comp=N,0.9nm,0.3s,baz=310,slow=13,SNR=18								
CMAR					Sn	**Sn**		**18 38 44.0**	**-2.9**
	baz=309,slow=30,SNR=1.7								
CMAR					Lg	Lg		18 39 22.2	
	comp=N,0.2nm,0.3s,baz=313,slow=29,SNR=1.7								
CMAR	**Chiang Mai Arr**	**6.94**	**137**			**Pn**		**18 37 28.3**	**-1.1**
CM13	**Chiang Mai Arr**	**6.94**	**137**	P		**Pn**		**18 37 30.0**	**+0.5**
	comp=N,61nmcomp=N,5.0nm,0.6s								
PAYA	**Payao**	**6.95**	**127**	P		**Pn**		**18 37 29.0**	**-0.6**
	comp=N,5μmcomp=N,361nm,0.5s								
CM02	**Chiang Mai Arr**	**6.96**	**137**	P		Pn		18 37 36.0	+6.3
	comp=N,107nmcomp=N,6.7nm,0.7s								
CM01	**Chiang Mai Arr**	**6.98**	**137**	P		**Pn**		**18 37 33.6**	**+3.7**
	comp=N,101nmcomp=N,10nm,0.6s								
CM09	**Chiang Mai Arr**	**6.98**	**137**	P		Pn		18 37 40.0	+10
CM05	**Chiang Mai Arr**	**6.98**	**137**	P		Pn		18 37 37.0	+7.0
	comp=N,68nmcomp=N,7.5nm,0.6s								
CM36	**Chiang Mai Arr**	**6.99**	**136**	P		Pn		18 37 38.0	+7.9
CM04	**Chiang Mai Arr**	**7.00**	**137**	P		Pn		18 37 37.0	+6.7
BOK	**Bokaro**	**7.41**	**273**	*ex*		**Sn**		**18 38 56.3**	**-2.0**
RAMN	**Ramite**	**7.44**	**298**	*e*Pn		**Pn**		**18 37 37.4**	**+1.0**
GUN	**Gumba**	**8.44**	**302**	*e*Pn		**Pn**		**18 37 50.4**	**+0.2**
GUN				*e*Sn		**Sn**		**18 39 19.7**	**-4.4**
	comp=N,103nm,0.5s								
PKI	**Pulchoki**	**8.66**	**299**	*e*Pn		**Pn**		**18 37 52.9**	**-0.3**
PKIN	**Phulchoki**	**8.67**	**299**	*e*Pn		**Pn**		**18 37 52.8**	**-0.5**
DMN	**Daman**	**8.92**	**298**	*e*Pn		**Pn**		**18 37 57.0**	**+0.3**
GKN	**Gorkha**	**9.46**	**299**	*e*Pn		**Pn**		**18 38 03.6**	**-0.4**
GKN				*e*Sn		**Sn**		**18 39 44.3**	**-4.5**
	comp=N,104nm,0.4s								
SLVN	**Son La**	**9.47**	**102**	Pn		**Pn**		**18 38 01.8**	**-2.2**
KOLN	**Koldanda**	**10.21**	**296**	*e*Pn		**Pn**		**18 38 13.3**	**-1.0**
KOLN				*e*Sn		**Sn**		**18 40 01.4**	**-5.8**
	comp=N,48nm,0.4s								
DANN	**Dangsing**	**10.31**	**299**	*e*Pn		**Pn**		**18 38 14.8**	**-0.9**
PYUN	**Piuthan**	**10.84**	**297**	*e*Pn		**Pn**		**18 38 21.2**	**-1.6**
PYUN				*e*Sn		**Sn**		**18 40 16.8**	**-5.6**
	comp=N,46nm,0.3s								
PALK	**Pallekele**	**20.66**	**220**	LR		LR		18 49 08.1	
	comp=N,15nm,21.2s,baz=152,slow=41								
MK31	**Makanchi Array**	**24.94**	**341**	P		**P**		**18 41 06.4**	**-0.4**
MKAR	**Makanchi Array**	**24.94**	**341**	P		**P**		**18 41 08.4**	**+1.7**
	comp=N,1.3nm,0.7s,baz=144,slow=12,SNR=14								
MAKZ	**Makanchi**	**25.05**	**340**			**P**		**18 41 09.8**	**+2.1**
SONM	**Songino Array**	**26.11**	**19**	P		**P**		**18 41 23.4**	**+6.0**
	comp=N,0.3nm,0.3s,baz=207,slow=9.5,SNR=3.7								
KURBB	**Kurchatov Arra**	**29.49**	**340**	P		**P**		**18 41 49.0**	**+1.5**
	comp=N,0.5nm,0.7s,baz=152,slow=8.3,SNR=5.9								
KURK	**Kurchatov**	**29.55**	**340**	P		**P**		**18 41 49.0**	**+1.1**
KURK	**Kurchatov**	**29.55**	**340**	IAmb		IAmb		18 41 56.6	
	comp=Z,8.9nm,1.7s								
ZALV	**Zalesovo Beam**	**31.05**	**350**	P		**P**		**18 42 02.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=165,slow=6.0,SNR=1.9								
ABKAR	**Akbulak array**	**36.95**	**322**	P		**P**		**18 42 53.6**	**+1.4**
SOEI	**Soe**	**44.49**	**135**	P		**P**		**18 43 51.8**	**-3.1**
FITZ	**Fitzroy Crossi**	**51.74**	**140**	P		**P**		**18 44 49.2**	**-1.3**
FITZ				IAmb		IAmb		18 46 41.0	
	comp=Z,14nm,1.6s								
KNRA	**Kununurra**	**51.80**	**136**	P		**P**		**18 44 50.5**	**-0.5**
KARP	**Karpathos**	**58.31**	**298**	P		**P**		**18 45 40.8**	**+2.9**
WB0	**Warramunga Arr**	**58.44**	**134**	P		**P**		**18 45 38.0**	**-0.9**
WB0				IAmb		IAmb		18 46 17.1	
	comp=Z,13nm,1.6s								
WRA	**Warramunga Arr**	**58.52**	**134**	P		**P**		**18 45 38.8**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=322,slow=7.5,SNR=30								
WRAB	**Tennant Creek**	**58.53**	**134**	P		**P**		**18 45 38.9**	**-0.5**
WRAB				IAmb		IAmb		18 46 40.8	
	comp=Z,15nm,1.8s								
WB2	**Warramunga Arr**	**58.53**	**134**	P		**P**		**18 45 38.6**	**-0.9**
WB2				IAmb		IAmb		18 47 30.8	
	comp=Z,20nm,1.8s								
WC3	**Warramunga Arr**	**58.56**	**134**	P		**P**		**18 45 39.0**	**-0.6**
WC3				IAmb		IAmb		18 47 36.2	
	comp=Z,12nm,1.6s								
WR0	**Warramunga Arr**	**58.67**	**134**	P		**P**		**18 45 39.9**	**-0.5**
WR0				IAmb		IAmb		18 47 02.8	
	comp=Z,11nm,1.7s								
ASAR	**Alice Springs**	**60.95**	**138**	P		**P**		**18 45 55.6**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=321,slow=6.8,SNR=13								

*IDC **11** 19:21:58.2±3.4, 18°.04S×178°.13W, h589km±39km, mb3.5/18, mb1 3.7/19, mb1mx3.6/37, mbtmp4.5/19, Error ellipse: s-maj=18.6km s-min=16.4km az=104.0*

*NEIC **11** 19:21:58.5±1.6, 18°.1S±0°.1×178°.1W±0°.1, h591km±7km, mb4.5/54, Error ellipse: s-maj=16.3km s-min=14.9km az=128.0*

ISC 11 19:21:59.1±0.4, 18°.13S±0°.07×178°.18W±0°.07, h600km, n155, σ0S89/158, mb4.4/46, 1C-18D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.61**	**276**	P		**P**		**19 23 22.5**	**+0.4**
MSVF				S		**S**		**19 24 27.2**	**-2.4**
NIUE	**Niue**	**7.89**	**98**			**P**		**19 23 58.5**	**+1.1**
FUNA	**Funafuti**	**9.88**	**345**	P		**P**		**19 24 17.9**	**+1.1**
SANVU	**Saraoutou**	**14.24**	**279**	P		**P**		**19 24 59.7**	**-0.7**
DZM	**Mont Dzumac**	**14.96**	**252**	P		**P**		**19 25 06.6**	**-0.5**
	0.3nm,0.3s,baz=96,sl

VNDA	Vanda	60.25	185	P		P		19 31 10.5	+0.5
MJAR	Matsushiro Arr	68.21	323	P		P		19 32 00.3	-0.7
	comp=Z,4.6nm,0.6s,baz=156,slow=5.9,SNR=15								
MJAR	Matsushiro Arr	68.21	323	P		P		19 32 00.9	0.0
MAJO	Matsushiro	68.21	323	P		P		19 32 01.4	+0.4
MAT	Matsushiro	68.21	323	P		P		19 32 01.0	0.0
JWT	Wachi	68.99	321	P		P		19 32 05.8	+0.1
JWT				IAmb		IAmb		19 32 17.6	
	comp=Z,23nm,1.6s								
KKM	Kota Kinabalu	69.00	284	P		P		19 32 07.0	+0.7
JSD	Sado	69.24	324	P		P		19 32 08.1	+1.0
JSD				IAmb		IAmb		19 32 08.5	
	comp=Z,26nm,1.6s								
UGM	Wanagama	69.85	268	P		P		19 32 11.7	+0.3
JHS	Saijyo	70.20	319	P		P		19 32 14.3	+1.4
JHS				IAmb		IAmb		19 32 14.5	
	comp=Z,13nm,0.8s								
QSPA	South Pole Qui	71.93	180			P		19 32 22.9	+0.2
QSPA				IAmb		IAmb		19 32 23.8	
	comp=Z,8.0nm,0.8s								
YULB	Yu-li	72.07	303	P		P		19 32 24.0	-0.1
YULB				IAmb		IAmb		19 32 38.7	
	comp=Z,31nm,1.2s								
UNV	Unalaska Valle	72.38	7	P		P		19 32 24.3	-0.8
CISI	Cisompet, Garu	72.53	268	P		P		19 32 26.6	-0.3
SSLB	Suanglung	72.53	303	P		P		19 32 26.6	-0.2
TPUB	Ta-pu	72.56	302	P		P		19 32 26.4	-0.5
KSM	Kuching	72.92	277	P		P		19 32 30.3	+1.1
KSM				IAmb		IAmb		19 32 31.2	
	comp=Z,14nm,0.8s								
PETK	Petropavlovsk-	73.94	345	P		P		19 32 34.1	+0.1
	comp=Z,7.0nm,0.7s,baz=132,slow=8.8,SNR=8.2								
KSRS	Korea Array	75.01	318	P		P		19 32 40.1	-0.2
	comp=Z,1.5nm,0.8s,baz=136,slow=6.4,SNR=3.0								
USRK	Ussuriysk Ar.	76.92	326	P		P		19 32 50.9	+0.2
	comp=Z,1.2nm,0.7s,baz=84,slow=3.8,SNR=4.3								
NJ2	Nanjing	78.24	309	*eP*		P		19 32 59.4	+1.3
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.6s								
NJ2				pmax		pmax			
	comp=Z,8.0nm,0.8s								
MDJ	Mudanjiang	78.49	325	P		P		19 33 00.3	+1.2
NVAR	Mina Array Bea	79.43	44	P		P		19 33 04.1	-0.5
	comp=Z,1.6nm,0.7s,baz=223,slow=9.3,SNR=9.3								
PINE	Pine Mountain	80.83	38	P		P		19 33 12.1	+0.4
PRN	Pahroc Range	81.07	46	P		P		19 33 13.2	+0.2
BELA	Belgrano 2	81.92	173	P		P		19 33 15.7	-0.9
TRF	Thorofare Moun	84.18	12			P		19 33 26.9	-1.1
TRF				IAmb		IAmb		19 33 28.7	
	comp=Z,13nm,0.9s								
RND	Reindeer	84.43	13			P		19 33 28.4	-0.7
RND				IAmb		IAmb		19 33 29.3	
	comp=Z,15nm,0.9s								
ENH	Enshi	84.57	304	P		P		19 33 31.5	+1.0
ENH				IAmb		IAmb		19 33 32.8	
	comp=Z,11nm,0.9s								
GYA	Guiyang	85.33	300	⇑P		P		19 33 35.8	+1.4
GYA				pmax		pmax			
	comp=Z,5.0nm,0.6s								
CCB	Clear Creek Bu	85.75	13	P		P		19 33 34.2	-1.1
CCB				IAmb		IAmb		19 33 36.1	
	comp=Z,20nm,1.6s								
TXAR	Lajitas Array	85.93	58	P		P		19 33 37.6	+0.4
	comp=Z,1.0nm,0.7s,baz=219,slow=5.8,SNR=8.1								
IL31		86.05	13	P		P		19 33 35.8	-0.9
ILAR	Eielson Array	86.05	13	P		P		19 33 35.6	-1.2
	comp=Z,1.1nm,0.4s,baz=218,slow=5.0,SNR=27								
XAN	Xi'an	86.56	307	P		P		19 33 41.8	+1.8
XAN				pmax		pmax			
	comp=Z,14nm,0.9s								
XAN				pmax		pmax			
	comp=Z,120nm,4.1s								
PDAR	Pinedale Array	87.36	43	P		P		19 33 43.6	-0.1
	comp=Z,1.1nm,0.8s,baz=229,slow=3.1,SNR=6.5								
PDAR	Pinedale Array	87.36	43	P		P		19 33 43.4	-0.4
HHC	Hu-ho-hao-te	87.58	314	*eP*		P		19 33 43.7	-0.9
HHC				pmax		pmax			
	comp=Z,20nm,0.9s								
HHC				pmax		pmax			
	comp=Z,66nm,6.8s								
COLD	Coldfoot	87.59	11			P		19 33 44.2	+0.2
COLD				IAmb		IAmb		19 33 44.8	
	comp=Z,5.6nm,0.9s								
CM31	Chiang Mai Arr	89.16	290	P		P		19 33 54.1	+1.7
CM31				IAmb		IAmb		19 33 55.0	
	comp=Z,3.7nm,1.0s								
CMAR	Chiang Mai Arr	89.16	290	P		P		19 33 52.9	+0.5
	comp=Z,2.2nm,0.9s,baz=112,slow=2.8,SNR=19								
CMAR	Chiang Mai Arr	89.16	290	P		P		19 33 53.7	+1.4
CHTO	Chiang Mai	89.28	290	P		P		19 33 54.1	+1.2
CHTO				IAmb		IAmb		19 33 55.1	
	comp=Z,3.2nm,0.8s								
SNAA	Sanae	90.38	179	P		P		19 33 56.1	-0.9
VNA3	Neumayer Olymp	90.51	176	P		P		19 33 57.1	-0.5
VNA2	Neumayer--Watz	90.95	177	P		P		19 33 59.3	-0.4
	baz=182,slow=4.1								
LZH	Lanzhou	91.19	308	*eP*		P		19 34 01.5	-0.1
LZH				pP		pP		19 36 12.4	+0.9
LZH				sP		sP		19 37 11.2	+0.1
LZH	Lanzhou	91.19	308	SS		SS		19 50 39.0	+5.0
LZH				pmax		pmax			
	comp=Z,18nm,1.4s								
LZH				pmax		pmax			
	comp=Z,86nm,9.2s								
LZH				LR		LR			
	comp=N,140nm,16.3s								
LZH				LR		LR			
	comp=E,110nm,16.8s								
LZH				LR		LR			
	comp=Z,95nm,18.7s								
INK	Inuvik	92.04	15	P		P		19 34 03.5	-1.0
	comp=Z,3.7nm,1.0s,baz=219,slow=6.7,SNR=5.4								
INK	Inuvik	92.04	15	IAmb		IAmb		19 34 04.4	
	comp=Z,3.2nm,0.9s								
MKAR	Makanchi Array	109.44	314	PKiKP		PKiKP		19 39 19.9	-2.4
	comp=Z,0.3nm,0.6s,baz=99,slow=2.8,SNR=2.8								
ARCES	ARCESS Array B	126.57	350	PKP		PKPdf		19 39 54.2	-0.2
	comp=Z,0.5nm,0.4s,baz=58,slow=1.4,SNR=5.0								
AKASG	Malin Array Be	140.85	332	PKhKP		PKPpre		19 40 15.7	
	comp=Z,0.6nm,0.3s,baz=42,slow=4.1,SNR=6.7								
SORM	Soroca	143.09	330	P		PKPab		19 40 23.1	-0.4
GAZ	Gaziantep	143.64	309			PKPdf		19 40 26.9	-0.1
OJC	Ojcow	144.89	340			PKPdf		19 40 28.9	+0.2
BUR08	Bucovina Ar. S	144.89	332			PKPdf		19 40 29.2	+0.3
BURAR	Bucovina Array	144.91	332	⇓P		PKPbc		19 40 29.9	+0.2
BURAR	Bucovina Array	144.91	332			PKPab		19 40 30.2	-0.5
GHRR		145.00	328	⇓P		PKPab		19 40 30.8	-0.1
BIZ	Bicaz	145.00	331	⇓P		PKPab		19 40 30.5	-0.5
TESR	Tescani	145.05	330	⇓P		PKPab		19 40 30.7	-0.5
BRTR	Keskin Array B	145.09	315	PKPbc		PKPbc		19 40 30.6	+0.1
	comp=Z,2.8nm,0.7s,baz=127,slow=4.0,SNR=10								
BRTR	Keskin Array B	145.09	315			PKPdf		19 40 29.7	+0.2
TPGR	Topolog	145.30	326	⇓P		PKPbc		19 40 31.0	+0.1
KSP	Ksiaz	145.38	344	*e*PKP		PKPbc		19 40 31.5	+0.7
VRI	Vrincioaia	145.47	329	⇓P		PKPbc		19 40 31.4	+0.1
PLOR	Plostina	145.53	329	⇓P		PKPbc		19 40 31.4	-0.1
BMR	Baia Mare	145.60	334	⇓P		PKiKP		19 40 38.0	+3.7
OSTC	Ostas	145.66	344	*e*PKP		PKPbc		19 40 32.2	+0.5
CHVC	Chvalec	145.67	344	*e*PKP		PKPbc		19 40 32.2	+0.5
CLL	Collm	145.72	348	*i* PKPbc		PKPbc		19 40 31.7	-0.1
	comp=Z,16nm,0.8s								
CLL	Collm	145.72	348			PKPbc		19 40 31.5	-0.2
UPC	Upice	145.76	344	*e*PKP		PKPbc		19 40 32.2	+0.3
OZUR		145.77	330	⇓P		PKPbc		19 40 32.3	+0.2
DPC	Dobruska-Polom	145.82	343	*e*PKP		PKPbc		19 40 32.6	+0.4
BRG	Berggiesshubel	145.93	346	*i* PKP		PKPbc		19 40 32.4	0.0
	comp=Z,6.5nm,0.8s								
KRLC	Kraliky	145.94	343	*e*PKP		PKPbc		19 40 32.3	-0.2
MORC	Moravsky Berou	145.99	342	⇓P		PKPbc		19 40 32.8	+0.2
MORC	Moravsky Berou	145.99	342	*e*PKP		PKPbc		19 40 32.9	+0.2
MLR	Muntele Rosu	146.13	329	⇓P		PKPbc		19 40 33.1	-0.2
MLR	Muntele Rosu	146.13	329			PKPbc		19 40 32.8	-0.5
VOIR		146.60	330	⇓P		PKPbc		19 40 35.1	+0.6
PRU	Pruhonice	146.61	345	*e*PKP		PKPbc		19 40 34.6	+0.3
VRAC	Vranov	146.68	342	⇓P		PKPab		19 40 38.1	+0.6
JAVC	Velka Javorina	146.76	341	*e*PKP		PKiKP		19 40 36.3	-0.4
JAVC				*e*				19 40 39.3	
ARR	Arges	146.85	330	⇓P		PKiKP		19 40 36.4	-0.7
KRUC	Moravsky	146.96	342	*e*PKP		PKPbc		19 40 35.4	+0.2
KRUC				*e*				19 40 38.7	
SIRR	Siria	147.49	334	⇓P		PKPbc		19 40 36.9	+0.2
KHC	Kasperske Hory	147.64	346	*e*PKP		PKPbc		19 40 37.1	0.0
KHC				*ex*		x		19 40 41.9	
GZR	Gura Zlata	147.69	332	⇓P		PKPbc		19 40 37.2	-0.2
GERES	GERESS Array B	147.88	345	PKPbc		PKPbc		19 40 37.5	-0.2
	comp=Z,2.8nm,0.7s,baz=28,slow=3.2,SNR=20								
BZS	Buzias	148.02	333	⇓P		PKPbc		19 40 37.7	-0.4
CONA	Conrad Observa	148.14	342	*i* P		PKPbc		19 40 38.8	+0.4
	comp=Z,11nm,1.4s,SNR=4.9								
SOKA	Soboth	149.51	342	*e*P		PKPbc		19 40 41.9	+0.1
	comp=Z,8.8nm,1.4s								
KBA	Koelnbreinsper	149.61	344	*e*P		PKPbc		19 40 41.5	-0.6
	comp=Z,3.6nm,0.7s								
OBKA	Obir	149.80	342	*e*P		PKPdf		19 40 37.1	+0.1
	comp=Z,13nm,1.4s								
RETA	Reutte	149.81	348	*e*P		PKPbc		19 40 41.4	-1.0
	comp=Z,4.8nm,1.0s								
WTTA	Wattenberg	149.84	347	*i* P		PKPbc		19 40 42.6	0.0
	comp=Z,6.8nm,0.6s,SNR=6.3								
MOTA	Moosalm	149.88	347	*e*P		PKPbc		19 40 42.6	-0.1
	comp=Z,5.5nm,0.9s								
SQTA	Sankt Quirin	149.97	347	*e*P		PKPbc		19 40 43.1	+0.2
	comp=Z,5.3nm,0.7s								
ABTA	Abfaltersbach	150.12	345	*i* P		PKPbc		19 40 42.3	-0.9
	comp=Z,7.2nm,0.8s,SNR=5.0								
DAVA	Damuels	150.17	349	*e*P		PKiKP		19 40 44.0	0.0
	comp=Z,4.1nm,0.6s								
FETA	Feichten	150.26	348	*e*P		PKPbc		19 40 43.4	-0.2
	comp=Z,8.4nm,1.1s								
DAVOX	Davos/Dischmat	150.66	349	PKPbc		PKPbc		19 40 44.5	-0.1
	comp=Z,3.6nm,0.6s,baz=39,slow=4.1,SNR=7.4								
FUORN	Ofenpass-Fuorn	150.74	348			PKPbc		19 40 45.0	+0.2

IDC ***11*** *19:22:14.7±1.2, 7.60N×93.81E, h0km, mb3.7/9, mb1 3.9/10, mb1mx3.6/52, mbtmp3.7/10, ML4.3/1, MS3.1/5, Ms1 3.1/5, ms1mx2.9/41, Error ellipse: s-maj=46.2km s-min=22.2km az=55.0*

NEIC ***11*** *19:22:17.3±1.6, 7.33N±0.06×94.36E±0.09, h25km±7km, mb4.2/8, Error ellipse: s-maj=13.0km s-min=7.5km az=108.0*

ISC 11 19:22:14.5±0.8, **7.35N**±0.10×**94.30E**±0.09, **h10**km, **n32, s**13**34/26, mb3.9**/13, **MS3.1**/4, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
LHMI	Lhok Sumawe	3.37	129	Pn		Pn	19 23 05.7	-1.6
KULM	Kulim	6.64	108			Pn	19 23 52.9	+0.7
KULM				Sn		Sn	19 25 06.4	-1.6
GSI	Gunungsitoli	6.84	151	Pn		Pn	19 23 56.0	+1.0
IPM	Ipoh	7.27	113			Pn	19 24 00.8	-0.2
IPM				Sn		Sn	19 25 22.4	-1.3
CM31	Chiang Mai Arr	11.93	22			Pn	19 25 06.8	+2.0
CMAR	Chiang Mai Arr	11.93	22	Pn		Pn	19 25 05.1	+0.3
	0.5nm,0.3s,baz=211,slow=14,SNR=17							
CMAR				LR		LR	19 29 48.3	
	comp=Z,56nm,19.0s,baz=214,slow=38							
CMAR	Chiang Mai Arr	11.93	22			Pn	19 25 06.3	+1.5
CHTO	Chiang Mai	12.26	21	Pn		Pn	19 25 10.3	+1.0
LSA	Lhasa	22.43	353	P		P	19 27 15.3	+1.2
LSA				IAmb		IAmb	19 27 22.4	
	comp=Z,8.8nm,1.3s							
H08S3	Diego Garcia H	26.35	236	T		T	19 54 35.3	
	baz=54,slow=74							
H08S2	Diego Garcia H	26.36	236	T		T	19 54 39.8	
	baz=54,slow=74							
H08S1	Diego Carcia H	26.37	236	T		T	19 54 35.4	
	baz=54							
FITZ	Fitzroy Crossi	39.96	130	LR		LR	19 47 42.8	
	comp=Z,32nn,18.4s,baz=31,slow=38							
MK31	Makanchi Array	40.63	347	P		P	19 29 53.5	-1.2
MKAR	Makanchi Array	40.63	347	P		P	19 29 53.7	-1.0
	comp=Z,0.9nm,0.7s,baz=166,slow=7.9,SNR=10.0							
MKAR	Makanchi Array	40.63	347	P		P	19 29 53.4	-1.3
SONM	Songino Array	41.64	12	P		P	19 30 03.1	0.0
	comp=Z,0.2nm,0.4s,baz=183,slow=8.5,SNR=1.9							
SONM	Songino Array	41.64	12	IAmb		IAmb	19 30 10.8	
	comp=Z,1.1nm,1.1s							
KSRS	Korea Array	42.76	40	LR		LR	19 48 48.9	
	comp=Z,14nn,19.3s,baz=190,slow=37							
GEYT	Alibeck	44.69	318	P		P	19 30 25.7	-2.2
	comp=Z,1.4nm,0.6s,baz=134,slow=10,SNR=2.1							
GEYT				LR		LR	19 49 26.4	
	comp=Z,18nn,20.3s,baz=350,slow=37							
KURK	Kurchatov	45.15	346	P		P	19 30 32.4	+1.1
KURK				IAmb		IAmb	19 30 38.5	
	comp=Z,4.0nm,1.1s							
ZAA0	Zalesovo Array	47.09	352	P		P	19 30 47.6	+1.1
ZAA0				IAmb		IAmb	19 30 53.2	
	comp=Z,3.0nm,1.1s							
ZALV	Zalesovo Beam	47.09	352	P		P	19 30 46.5	0.0
	comp=Z,1.1nm,0.4s,baz=171,slow=6.4,SNR=6.1							
ZALV				LR		LR	19 52 01.1	
	comp=Z,49nn,18.2s,baz=73,slow=38							
WRA	Warramunga Arr	47.83	125	P		P	19 30 58.7	+5.9
	comp=Z,0.4nm,0.5s,baz=305,slow=8.7,SNR=3.6							
RAYN	Ar Rayn	49.44	295	P		P	19 31 06.5	+1.2
RAYN				IAmb		IAmb	19 31 13.0	
	comp=Z,3.8nm,0.7s							
ASAR	Alice Springs	49.46	130	P		P	19 31 11.0	+5.7
	comp=Z,0.4nm,0.5s,baz=304,slow=7.6,SNR=3.0							
AB01	Akbulak array	50.76	331	P		P	19 31 14.0	-0.7
ABKAR	Akbulak array	50.76	331	P		P	19 31 15.0	+0.2
BBOO	Buckleboo	56.32	138	P		P	19 31 58.4	+2.6
FINES	FINESS Array B	73.24	332	P		P	19 33 44.4	-1.3
	comp=Z,1.1nm,0.9s,baz=101,slow=7.2,SNR=1.1							
GERES	GERESS Array B	78.32	318	P		P	19 34 13.6	-1.5
	comp=Z,0.1nm,0.3s,baz=96,slow=6.0,SNR=1.5							
NOA	NORSAR Array B	80.26	331	P		P	19 34 25.2	-0.2
	comp=Z,0.2nm,0.4s,baz=91,slow=5.7,SNR=2.0							

NEIC ***11*** *19:24:24.0±2.5, 60.60N±0.06×57.78W±0.1, h8km±3km, mb4.3/32, ML4.1(OTT), Error ellipse: s-maj=11.3km s-min=8.0km az=121.0*

IDC ***11*** *19:24:23.1±0.7, 60.64N×57.58W, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.8/44, mbtmp3.9/16, ML3.9/4, MS3.1/4, Ms1 3.1/4, ms1mx2.7/43, Error ellipse: s-maj=18.3km s-min=13.1km az=162.0*

OTT ***11*** *19:24:24.1±0.8, 60.58N×57.91W, h18km, ML4.1/7, 381km east from Killiniq, Qc LAlbertaRADOR Sea Seismic Zone.*

DNK ***11*** *19:24:27.1±3.8, 60.93N×57.39W, h0km±96km, ML3.2*

ISC 11 19:24:23.2±0.4, **60.54N**±0.05×**57.83W**±0.05, **h10**km, **n102, s**3**03**/112, **mb4.0**/16, **Davis Strait**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
NANL	Nain	4.49	208	PN		Pn	19 25 31.3	+0.1
NANL				SN		Sn	19 26 20.1	-3.3
NANL				SN		Sn	19 26 20.7	-2.7
NANL				Trac			19 26 25.3	
	comp=Z,19nm,0.1s							
KAJQ	Kangiqsualujju	4.51	249	PN		Pn	19 25 31.9	+0.5
KAJQ				SN		Sn	19 26 21.1	-2.8
KAJQ				Trac			19 26 23.9	
	comp=Z,48nm,0.2s							
NUUK	Nuuk	4.63	35	*i* P		Pn	19 25 33.1	0.0
NUUK				*i* S		Sn	19 26 19.9	-6.9
NUUK				IAML			19 26 25.0	
	comp=Z,71nm,0.3s							
FRB	Frobisher Bay	5.97	307	Pn		Pn	19 25 51.1	-0.3
	comp=Z,3.0nm,0.3s,baz=128,slow=11,SNR=16							
FRB				Sn		Sn	19 26 51.3	-8.4
	comp=Z,7.8nm,0.3s,baz=237,slow=22,SNR=11							
FRB	Frobisher Bay	5.97	307	PN		Pn	19 25 50.8	-0.6
FRB				SN		Sn	19 26 52.7	-7.0
FRB				Trac			19 26 56.0	
	comp=Z,18nm,0.2s							
NRS	Narsarsuaq	6.10	79	Pn		Pn	19 25 54.8	+1.6
NRS	Narsarsuaq	6.10	79	*i* P		Pn	19 25 54.1	+0.9
NRS				*i* S		Sn	19 26 58.7	-4.2
NRS	Narsarsuaq	6.10	79	*i* P		Pn	19 25 54.2	+0.9
NRS				*i* S		Sn	19 26 58.8	-4.2
NRS				IAML			19 27 14.2	
	comp=Z,17nm,0.4s							
NWRL	North West Riv	7.14	191	SN		Sn	19 27 25.2	-3.5
SFJD	Kangerlussuaq	7.22	23	Pn		Pn	19 26 08.5	-0.2
	comp=Z,16nm,0.3s,baz=199,slow=15,SNR=237							
SFJD				Sn		Sn	19 27 21.6	-9.1
	comp=Z,13nm,0.3s,baz=278,slow=19,SNR=23							
SFJD				LR		LR	19 28 37.4	
	comp=Z,114nm,21.7s,baz=200,slow=36							
SFJD	Kangerlussuaq	7.22	23	*i* P		Pn	19 26 08.6	0.0
SFJD				*i* S		Sn	19 27 20.4	-10
SFJD	Kangerlussuaq	7.22	23	*i* P		Pn	19 26 08.7	0.0
SFJD				*i* S		Sn	19 27 20.4	-10
SFJD				IAML			19 27 30.5	
	comp=Z,2.5nm,0.3s							
SCHQ	Schefferville	7.48	224	Pn		Pn	19 26 13.4	+1.1
	comp=Z,13nm,0.3s,baz=42,slow=8.8,SNR=162							
SCHQ				Sn		Sn	19 27 31.6	-5.4
	comp=Z,2.3nm,0.3s,baz=254,slow=19,SNR=1.5							
SCHQ				LR		LR	19 28 41.2	
	comp=Z,62nm,19.0s,baz=336,slow=34							
SCHQ	Schefferville	7.48	224	PN		Pn	19 26 13.2	+0.9
SCHQ				SN		Sn	19 27 33.0	-4.0
SCHQ				Trac			19 27 44.9	
	comp=Z,324nm,2.1s							
SCHQ	Schefferville	7.48	224			Pn	19 26 13.3	+1.0
SCHQ				Sn		Sn	19 27 43.8	+6.8
ILULI	Ilulissat	9.16	15	Pn		Pn	19 26 34.7	-0.5
ANGG	Ammassalik, Gr	10.45	52	Pn		Pn	19 26 52.3	-0.5
NATG	Natashquan Que	10.65	198	PN		Pn	19 26 54.4	-1.2
NATG				SN		Sn	19 28 46.0	-8.8
LG4Q	La Grande 4	11.21	239	PN		Pn	19 27 00.7	-2.6
LG4Q				SN		Sn	19 28 59.3	-9.3
LG4Q				Trac			19 29 09.4	
	comp=Z,23nm,0.4s							
DRLN	Deer Lake	11.31	179	PN		Pn	19 27 03.8	-0.9
DRLN				SN		Sn	19 29 00.8	-10
DRLN	Deer Lake	11.31	179	Pn		Pn	19 27 03.3	-1.3
SMQ	Clarke City	11.49	210	PN		Pn	19 27 05.0	-2.1
SMQ				SN		Sn	19 29 03.1	-12
SMQ				Trac			19 29 16.6	
	comp=Z,8.8nm,0.3s							
MNQ	Manicouagan	11.77	216	PN		Pn	19 27 08.9	-2.1
MNQ				SN		Sn	19 29 13.3	-8.9
MNQ				Trac			19 29 44.1	
	comp=Z,10nm,0.4s							
KJKQ	Kuujjuarapik	11.81	252	PN		Pn	19 27 09.1	-2.3
KJKQ				SN		Sn	19 29 10.8	-12
ICQ	Pointe Anglais	12.28	210	PN		Pn	19 27 14.9	-3.0
ICQ				SN		Sn	19 29 21.9	-13
CNQ	Baie Comeau	12.68	212	PN		Pn	19 27 21.1	-2.4
CNQ				Trac			19 29 47.7	
	comp=Z,5.1nm,0.3s							
GSQ	Grosses Roches	12.81	209	PN		Pn	19 27 23.1	-2.1
GSQ				SN		Sn	19 29 33.8	-14
NMSQ	Nemaska Statio	13.41	237	PN		Pn	19 27 29.4	-4.0
NMSQ				SN		Sn	19 29 47.8	-15
CHEG	Cheticamp, Nov	13.85	188	PN		Pn	19 27 37.2	-2.2
CHEG				SN		Sn	19 30 01.8	-11
BATG	Bathurst New B	14.12	204	PN		Pn	19 27 40.3	-2.8
BATG				SN		Sn	19 30 08.8	-11
BATG	Bathurst New B	14.12	204			Pn	19 27 40.3	-2.8
DMCQ	Dolbeau-Mistas	14.17	221	PN		Pn	19 27 39.3	-4.5
SUMG	Summit	14.22	24	Pn		Pn	19 27 42.1	-2.5
SUMG	Summit	14.22	24	*i* P		Pn	19 27 42.0	-2.7
SUMG				*i*			19 30 06.2	
SUMG	Summit	14.22	24	*i* P		Pn	19 27 42.9	-2.7
SUMG				*i*			19 30 06.2	
SUMG				IAML			19 30 13.6	
	comp=Z,6.6nm,0.4s							
D63A	Stockholm	14.80	209	P		Pn	19 27 49.3	-3.0
	baz=20							
D62A	Allapoint, All	14.99	211	P		Pn	19 27 51.8	-3.0
	baz=22							
D62A	Allapoint, All	14.99	211	Pn		Pn	19 27 51.9	-3.0
D62A				IAmb		IAmb	19 28 00.1	
	comp=Z,22nm,1.3s							
PQI	Presque Isle	15.12	208	Pn		Pn	19 27 53.2	-3.4
D61A	St Aubert, Com	15.18	214	P		Pn	19 27 53.6	-3.8
	baz=24							
LMN	Caledonia Moun	15.28	199	Pn		Pn	19 27 55.0	-3.8
LMN				IAmb		IAmb	19 28 03.8	
	comp=Z,15nm,1.1s							
GBN	Guysborough	15.31	190	Pn		Pn	19 27 56.7	-2.5
GBN				IAmb		IAmb	19 28 15.6	
	comp=Z,26nm,1.5s							
E64A	Bridgewater	15.31	207	P		Pn	19 27 56.0	-3.2
	baz=19							
E63A	Oxbow	15.45	209	P		Pn	19 27 57.8	-3.2
	baz=20							
E63A	Oxbow	15.45	209	Pn		Pn	19 27 57.8	-3.2
E63A				IAmb		IAmb	19 28 04.2	
	comp=Z,20nm,1.4s							
E62A	Clayton Lake	15.54	211	P

comp=Z,0.4nm,0.5s,baz=62,slow=8.0,SNR=4.3
TXAR Lajitas Array 43.58 245 P P 19 32 30.3 +3.0
AKASG Malin Array Be 46.61 61 P P 19 32 51.5 +0.5
comp=Z,1.2nm,0.4s,baz=321,slow=8.1,SNR=7.3
BURAR Bucovina Array 47.11 66 P P 19 32 57.8 +2.7
ABKAR Akbulak array 59.62 42 P P 19 34 26.9 +0.1
AB03 Akbulak array 59.62 42 P P 19 34 28.9 +2.1
KOWA Kowa 60.07 116 P P 19 34 32.4 +2.1
ZALV Zalesovo Beam 62.04 24 P P 19 34 43.4 +0.2
comp=Z,0.5nm,0.5s,baz=356,slow=8.8,SNR=3.8
TOA0 Torodi Ar. Sit 63.85 111 P 19 34 56.7 +0.9
TORD Torodi Ar. Bea 63.85 111 P P 19 34 56.2 +0.5
comp=Z,1.7nm,0.6s,baz=324,slow=7.2,SNR=13
TORD Torodi Ar. Bea 63.85 111 P P 19 34 56.4 +0.7
DBIC Dimbokro 66.67 120 P P 19 35 15.3 +1.4
comp=Z,1.5nm,0.5s,baz=331,slow=4.3,SNR=5.0
MAKZ Makanchi 68.14 29 P P 19 35 24.1 +1.2
MAKZ IAmb IAmb 19 35 24.4
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 68.23 28 P P 19 35 24.4 +0.9
comp=Z,0.9nm,0.8s,baz=357,slow=5.5,SNR=6.5
WRA Warramunga Arr 138.54 343 PKP PKiKP 19 43 50.4 -0.5
comp=Z,0.2nm,0.7s,baz=358,slow=2.6,SNR=5.0
ASAR Alice Springs 142.26 342 PKhKP PKPdf 19 43 52.2 -3.3
comp=Z,0.9nm,0.7s,baz=6.6,slow=2.3,SNR=9.4

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*VAO **11** 19:33:34.8±0.7, 33°.56S×75°.91W, h10km, mb4.5*
*SJA **11** 19:33:44.1±0.5, 33°.43S×72°.24W, h18km±3km, ML4.4, MW4.4*
*NEIC **11** 19:33:46.4±1.8, 33°.57S±0°.01×72°.06W±0°.07, h27km±6km, mb4.4/9, ML3.8(GUC), Error ellipse: s-maj=8.5km s-min=1.2km az=83.0*
*GUC **11** 19:33:46.6±0.7, 33°.64S×71°.98W, h28km±4km, ML3.8*
*IDC **11** 19:33:50.9±3.2, 33°.52S×71°.86W, h58km±28km, mb3.7/2, mb1 3.8/7, mb1mx3.5/32, mbtmp3.8/7, ML3.8/5, Error ellipse: s-maj=43.0km s-min=25.9km az=93.0*
ISC 11 19:33:45.8±1.1, 33°.63S±0°.03×72°.05W±0°.05, h26km±8km, n89, σ1°.60/93, mb4.4/7, 8C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA05	**Santo Domingo**	**0.37**	**94**	*e*P		**Pb**	**19 33 54.0**	**+0.1**
VA05				*e*S		**Sb**	**19 33 58.8**	**-0.6**
VA01	**Torpederas**	**0.69**	**29**	*i*P		**Pb**	**19 33 59.2**	**0.0**
VA01				*e*S		**Sb**	**19 34 08.8**	**+0.4**
VA01				IAML			19 34 10.6	
	comp=E,8μm,0.3s							
VA01	**Torpederas**	**0.69**	**29**			**Pb**	**19 33 59.1**	**-0.2**
VA01				Sn		**Sb**	**19 34 08.9**	**+0.4**
MT02	**Curacav**	**0.85**	**64**	*e*P		**Pb**	**19 34 01.4**	**-0.5**
MT02				*e*S		**Sb**	**19 34 12.0**	**-1.0**
MT02				IAML			19 34 22.1	
	comp=E,9μm,0.5s							
MT02	**Curacav**	**0.85**	**64**			**Pb**	**19 34 01.5**	**-0.4**
MT02				Sn		**Sb**	**19 34 10.8**	**+0.1**
BO03	**Pichilemu**	**0.87**	**175**	*i*P		**Pb**	**19 34 01.8**	**-0.4**
BO03				*e*S		**Sb**	**19 34 13.6**	**+0.1**
MT09	**Talagante**	**0.90**	**100**	*e*P		**Pb**	**19 34 01.9**	**-0.9**
MT09				*e*S		**Sb**	**19 34 13.8**	**-0.7**
MT09				IAML			19 34 14.9	
	comp=N,6μm,0.5s							
ROC1	**El Roble**	**1.09**	**53**			**Pn**	**19 34 05.5**	**-0.1**
ROC1	**El Roble**	**1.09**	**53**	*e*P		**Pn**	**19 34 05.7**	**+0.1**
ROC1				*e*S		**Sn**	**19 34 21.7**	**+1.8**
ROCH	**El Roble**	**1.09**	**53**	*i*P		**Pn**	**19 34 05.4**	**-0.2**
ROCH				*e*S		**Sb**	**19 34 20.0**	**-0.1**
ROCH				IAML			19 34 24.3	
	comp=N,5μm,0.2s							
MT05	**Renca**	**1.12**	**78**	*i*P		**Pn**	**19 34 05.8**	**-0.2**
MT05				*e*S		**Sn**	**19 34 19.8**	**-0.8**
MT05				IAML			19 34 23.1	
	comp=E,3μm,0.3s							
MT05	**Renca**	**1.12**	**78**			**Pn**	**19 34 05.5**	**-0.4**
PEL	**Peldehue**	**1.24**	**67**	*e*P		**Pn**	**19 34 07.8**	**+0.2**
PEL				*e*S		**Sn**	**19 34 23.4**	**-0.2**
PEL				IAML			19 34 31.5	
	comp=E,3μm,0.5s							
PEL	**Peldehue**	**1.24**	**67**			**Pb**	**19 34 08.2**	**-0.5**
PEL				Sn		**Sb**	**19 34 25.2**	**+0.9**
PEL	**Peldehue**	**1.24**	**67**	*e*P		**Pb**	**19 34 08.2**	**-0.5**
PEL				*e*S		**Sb**	**19 34 28.3**	**+4.1**
FSR	**Penalolen**	**1.28**	**84**	*e*P		**Pn**	**19 34 08.6**	**+0.5**
FSR				*i*S		**Sn**	**19 34 24.7**	**+0.2**
MT03	**Universidad Ad**	**1.29**	**84**	*i*P		**Pn**	**19 34 08.3**	**0.0**
MT03				*e*S		**Sn**	**19 34 24.9**	**0.0**
MT03				IAML			19 34 30.2	
	comp=E,5μm,0.3s							
VA03	**San Esteban**	**1.53**	**56**	*i*P		**Pn**	**19 34 12.0**	**+0.5**
VA03	**San Esteban**	**1.53**	**56**	Pn		**Pn**	**19 34 12.5**	**+1.0**
LMEL	**Las Melosas**	**1.56**	**99**	*i*P		**Pn**	**19 34 12.0**	**+1.0**
LMEL				IAML			19 34 39.0	
	comp=E,3μm,0.5s							
BO02	**Sierra Bellavi**	**1.57**	**138**	*i*P		**Pn**	**19 34 12.4**	**+0.3**
BO02	**Sierra Bellavi**	**1.57**	**138**	Pn		**Pn**	**19 34 12.8**	**+0.8**
CO02	**Combarbal**	**2.58**	**20**			**Pn**	**19 34 26.1**	**+0.1**
AUSP	**Uspallata**	**2.64**	**59**	*e*P		**Pb**	**19 34 29.9**	**-2.7**
AUSP				*e*S		**Sb**	**19 35 03.5**	**-1.3**
LAMA	**Las Malvinas**	**2.69**	**120**	*e*P		**Pb**	**19 34 30.6**	**-2.6**
ARCO	**CERRO ARCO**	**2.73**	**74**	*e*P		**Pb**	**19 34 32.4**	**-1.7**
ARCO				IAML			19 35 37.6	
	comp=Z,1μm,1.4s							
AAGR	**Agrelo**	**2.75**	**80**	*e*P		**Pb**	**19 34 32.2**	**-2.2**
AAGR				*e*S		**Sn**	**19 34 56.6**	**-4.3**
AAGR				IAML			19 35 34.9	
	comp=Z,859nm,0.5s							
ASAL	**Salagasta**	**2.89**	**70**	*e*P		**Pb**	**19 34 36.5**	**-0.3**
ASAL				IAML			19 35 40.3	
	comp=Z,1μm,0.7s							
RTLS	**Leoncito**	**2.96**	**53**	*e*P		**Pn**	**19 34 34.2**	**+2.8**
RTLS				IAML			19 35 41.4	
	comp=Z,1μm,0.6s							
CO03	**El Pedregal**	**3.01**	**23**			**Pn**	**19 34 32.2**	**+0.2**
EDS3	**Malargue**	**3.06**	**135**	*e*P		**Pb**	**19 34 37.9**	**-1.7**
BI02	**San Fabin de**	**3.09**	**168**			**Pn**	**19 34 35.4**	**+2.3**
RFA	**San Rafael**	**3.18**	**112**	*e*P		**Pn**	**19 34 37.8**	**+3.5**
RFA				IAML			19 35 50.0	
	comp=Z,369nm,0.9s							
BI03	**Tigo**	**3.30**	**194**	Pn		**Pn**	**19 34 35.5**	**-0.3**
RTCV	**Cerro Valdivia**	**3.44**	**60**	*e*P		**Pn**	**19 34 40.5**	**+2.6**
RTCV				IAML			19 35 55.5	
	comp=Z,460nm,2.9s							
ZON	**Zonda**	**3.53**	**55**			**Pn**	**19 34 42.3**	**+3.3**
ZON	**Zonda**	**3.53**	**55**	*e*P		**Pb**	**19 34 43.3**	**-4.3**
ZON				IAML			19 36 04.5	
	comp=Z,481nm,2.6s							
GO04	**Tololo Observa**	**3.61**	**18**			**Pn**	**19 34 39.9**	**-0.4**
GO04	**Tololo Observa**	**3.61**	**18**	*e*P		**Pn**	**19 34 40.3**	**0.0**
RTLL	**Cerro Villicun**	**3.79**	**54**	*e*P		**Pn**	**19 34 45.5**	**+2.8**
RTLL				IAML			19 36 04.4	
	comp=Z,622nm,0.5s							
ACCO	**Cerro Coronel**	**3.95**	**41**	*e*P		**Pn**	**19 34 47.6**	**+2.5**
ACCO				IAML			19 36 14.0	
	comp=Z,469nm,0.5s							
CO01	**Juntas del Tor**	**4.00**	**25**			**Pn**	**19 34 46.8**	**+1.0**
AROD	**Rodeo**	**4.09**	**33**	*e*P		**Pn**	**19 34 48.2**	**+1.2**
AC05	**El Transito**	**5.01**	**18**			**Pn**	**19 34 59.9**	**+0.4**
AGUA	**GUANDACOL**	**5.13**	**37**	*e*P		**Pn**	**19 35 03.0**	**+1.9**
AGUA				IAML			19 36 47.4	
	comp=Z,365nm,0.6s							
LC01	**Cunco**	**5.26**	**178**			**Pn**	**19 35 05.7**	**+3.0**
MRA	**San Martin**	**5.46**	**79**	*e*P		**Pn**	**19 35 08.5**	**+2.9**
MRA				IAML			19 36 57.9	
	comp=Z,172nm,0.6s							
AC04	**Llanos de Chal**	**5.47**	**9**			**Pn**	**19 35 05.4**	**-0.3**
H03S1	**Juan Fernandez**	**5.71**	**266**	T		T	19 41 28.5	
	baz=87,slow=75,SNR=7731							
H03S3	**Juan Fernandez**	**5.72**	**266**	T		T	19 41 25.9	
	baz=87,slow=75,SNR=8586							
H03N1	**Juan Fernandez**	**5.73**	**270**	T		T	19 41 45.1	
	baz=94							
H03S2	**Juan Fernandez**	**5.73**	**266**	T		T	19 41 22.7	
	baz=87,slow=75,SNR=6278							
H03N3	**Juan Fernandez**	**5.74**	**270**	T		T	19 41 30.4	
	baz=94,slow=74							
H03N2	**Juan Fernandez**	**5.75**	**270**	T		T	19 41 34.4	
	baz=94,slow=74							
ACLC	**CERRO LA CRUZ**	**6.04**	**47**	*e*P		**Pn**	**19 35 14.4**	**+0.7**
ACLC				IAML			19 36 57.4	
	comp=Z,261nm,0.8s							
GO03	**Copiap**	**6.22**	**15**	Pn		**Pn**	**19 35 15.1**	**-0.9**
TCA	**Tanti**	**6.70**	**72**	*e*P		**Pn**	**19 35 23.2**	**+0.5**
TCA				IAML			19 37 42.1	
	comp=Z,177nm,0.9s							
PLCA	**Paso Flores**	**7.19**	**171**	P		Pn	19 35 34.2	+4.9
	comp=Z,0.7nm,0.3s,baz=327,slow=11,SNR=7.0							
PLCA	**Paso Flores**	**7.19**	**171**			**Pn**	**19 35 31.0**	**+1.6**
PLCA	**Paso Flores**	**7.19**	**171**	*e*P		Pn	19 35 34.9	+5.5
AC01	**Pan de Azucar**	**7.56**	**10**	Pn		**Pn**	**19 35 31.1**	**-3.3**
LVC	**Limon Verde**	**11.32**	**15**	P		**Pn**	**19 36 29.8**	**+3.5**
	comp=Z,0.3nm,0.3s,baz=202,slow=11,SNR=1.8							
LVC	**Limon Verde**	**11.32**	**15**	*e*P		Pn	19 36 33.5	+7.2
MNMC	**Minye Minye**	**14.61**	**9**	P		**Pn**	**19 37 08.5**	**-2.6**
CPUP	**Villa Florida**	**14.68**	**64**	P		**Pn**	**19 37 12.5**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=50,slow=17,SNR=2.1							
PB16	**IPOC Station P**	**15.40**	**9**	P		**Pn**	**19 37 23.4**	**+1.5**
LPAZ	**La Paz**	**17.63**	**13**	P		**Pn**	**19 37 50.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=174,slow=6.3,SNR=11							
LPAZ	**La Paz**	**17.63**	**13**	P		**Pn**	**19 37 50.3**	**+0.1**
LPAZ	**La Paz**	**17.63**	**13**	*e*P		**P**	**19 37 51.7**	**+0.6**
SIV	**San Ignacio**	**20.17**	**32**	P		**P**	**19 38 17.7**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=198,slow=8.7,SNR=5.8							
EFI	**East Falkland**	**20.70**	**155**	P		Pn	19 38 25.2	-1.0
ETMB	**Extrema**	**24.30**	**14**	*e*P		**P**	**19 39 02.2**	**+0.9**
SAML	**Samuel**	**25.89**	**20**	P		**P**	**19 39 15.7**	**0.0**
SAML				IAmb		IAmb	19 39 18.5	
	comp=Z,4.6nm,0.9s							
SAML	**Samuel**	**25.89**	**20**	*e*P		**P**	**19 39 16.0**	**+0.3**
PMSA	**Palmer Station**	**31.56**	**173**	*e*P		**P**	**19 40 02.3**	**-3.4**
SNAA	**Sanae**	**51.93**	**158**			**P**	**19 42 52.8**	**+0.7**
SNAA				IAmb		IAmb	19 42 53.7	
	comp=Z,2.3nm,1.0s							
TXAR	**Lajitas Array**	**69.41**	**331**	P		**P**	**19 44 52.5**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=154,slow=8.0,SNR=4.7							
TXAR	**Lajitas Array**	**69.41**	**331**	P		**P**	**19 44 51.0**	**-0.6**
TX31	**Lajitas Ar. Si**	**69.41**	**331**	P		**P**	**19 44 51.6**	**0.0**
TX31				IAmb		IAmb	19 44 53.6	
	comp=Z,10nm,1.5s							
WVT	**Waverly**	**70.95**	**347**	P		**P**	**19 45 01.5**	**+0.7**
W39A	**Magazine**	**71.43**	**341**	P		**P**	**19 45 05.2**	**+1.6**
LCAR	**Lake Charles**	**71.60**	**344**	P		**P**	**19 45 04.9**	**+0.2**
LCAR				IAmb		IAmb	19 45 14.7	
	comp=Z,6.4nm,1.2s							
TOA0	**Torodi Ar. Sit**	**84.09**	**70**	P		**P**	**19 46 15.3**	**+0.6**
TOA0				IAmb		IAmb	19 46 15.7	
	comp=Z,4.1nm,0.9s							
TORD	**Torodi Ar. Bea**	**84.09**	**70**	P		**P**	**19 46 14.8**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=254,slow=5.1,SNR=8.6							
H11S2	**WAKE ISLAND Hyl**	**25.76**	**269**	T		T	22 12 01.4	
	baz=118,slow=74,SNR=31							
H11S1	**WAKE ISLAND Hyl**	**25.78**	**269**	T		T	22 11 60.0	
	baz=118,slow=74,SNR=51							
H11S3	**WAKE ISLAND Hyl**	**25.78**	**269**	T		T	22 12 04.8	
	baz=118,slow=74,SNR=20							
ZALV	**Zalesovo Beam**	**153.92**	**32**	PKPbc		**PKiKP**	**19 53 42.8**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=307,slow=3.2,SNR=5.2							
MKAR	**Makanchi Array**	**156.53**	**18**	PKPab		**PKPab**	**19 54 07.3**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=331,slow=1.4,SNR=4.0							

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*NEIC **11** 19:34:05.9±2.2, 33°.56S±0°.04×72°.09W±0°.04, h28km±5km, mb4.8/15, ML4.2(GUC), Error ellipse: s-maj=7.7km s-min=2.1km az=146.0*
*GUC **11** 19:34:05.9±0.6, 33°.66S×72°.03W, h20km±3km, ML4.2*
*IDC **11** 19:34:11.3±2.6, 33°.48S×71°.77W, h64km±22km, mb4.0/5, mb1 4.0/10, mb1mx3.8/32, mbtmp4.2/10, MS3.2/1, Ms1 3.2/1, ms1mx2.9/18, Error ellipse: s-maj=30.5km s-min=14.8km az=98.0*
ISC 11 19:34:05.5±0.7, 33°.56S±0°.03×72°.06W±0°.05, h22km±4km, n86, σ1°.45/101, mb4.6/11, 1C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA05	**Santo Domingo**	**0.39**	**105**	*i*P		**Pb**	**19 34 13.3**	**-0.3**
VA05				*i*S		**Sb**	**19 34 18.6**	**-0.5**
VA05				IAML			19 34 19.9	
	comp=E,45μm,0.2s							
VA01	**Torpederas**	**0.64**	**33**	*i*P		**Pn**	**19 34 18.9**	**-0.3**
VA01				*i*S		**Sn**	**19 34 28.9**	**+0.3**
VA01				IAML			19 34 30.2	
	comp=E,22μm,0.4s							
VA01	**Torpederas**	**0.64**	**33**	Pn		**Pn**	**19 34 19.2**	**0.0**
VA01				Sn		**Sn**	**19 34 28.8**	**+0.2**
MT02	**Curacav**	**0.83**	**69**	*i*P		**Pn**	**19 34 21.4**	**-0.4**
MT02				*i*S		**Sn**	**19 34 32.6**	**-0.8**
MT02				IAML			19 34 34.3	
	comp=E,13μm,0.5s							
MT02	**Curacav**	**0.83**	**69**	Pn		**Pn**	**19 34 21.4**	**-0.4**
MT02				Sn		**Sn**	**19 34 32.6**	**-0.8**
MT09	**Talagante**	**0.92**	**104**	*i*P		**Pn**	**19 34 33.1**	**-0.8**
MT09				*i*S		**Sb**	**19 34 33.9**	**-0.8**
MT09				IAML			19 34 36.5	
	comp=N,17μm,0.3s							
BO03	**Pichilemu**	**0.94**	**175**	*i*S		**Sb**	**19 34 32.6**	**-2.5**
ROC1	**El Roble**	**1.05**	**57**	Pn		**Pn**	**19 34 24.3**	**-0.8**
ROC1				Sn		**Sn**	**19 34 40.0**	**+0.8**
ROCH	**El Roble**	**1.06**	**57**	*e*P		**Pb**	**19 34 26.5**	**+1.3**
ROCH				*i*S		**Sn**	**19 34 40.1**	**+0.7**
ROCH				IAML			19 34 42.0	
	comp=N,12μm,0.5s							
MT05	**Renca**	**1.12**	**82**	*e*P		**Pn**	**19 34 25.4**	**-0.5**
MT05				*i*S		**Sn**	**19 34 40.6**	**-0.1**
MT05				IAML			19 34 54.1	
	comp=E,10μm,0.4s							
MT05	**Renca**	**1.12**	**82**	Pn		**Pb**	**19 34 26.3**	**+0.1**
PEL	**Peldehue**	**1.22**	**71**	*i*S		**Sb**	**19 34 44.3**	**+1.0**
PEL				IAML			19 34 51.4	
	comp=N,12μm,0.2s							
PEL	**Peldehue**	**1.22**	**71**	Pn		**Pb**	**19 34 27.7**	**-0.2**
PEL				Sn		**Sb**	**19 34 44.9**	**+1.6**
MT03	**Universidad Ad**	**1.30**	**88**	*e*P		**Pn**	**19 34 28.5**	**+0.1**
MT03				*i*S		**Sb**	**19 34 45.5**	**0.0**
MT03				IAML			19 34 50.1	
	comp=N,13μm,0.2s							
VA03	**San Esteban**	**1.49**	**58**	*i*P		**Pb**	**19 34 32.6**	**0.0**
VA03				*i*S		**Sb**	**19 34 52.5**	**+1.4**
VA03	**San Esteban**	**1.49**	**58**	Pn		**Pb**	**19 34 31.8**	**-0.8**
VA03						**Sb**	**19 34 52.4**	**+1.2**
VA03	**San Esteban**	**1.49**	**58**	*e*S		**Pn**	**19 34 31.4**	**+0.4**
LMEL	**Las Melosas**	**1.58**	**101**	*e*P		**Pn**	**19 34 32.1**	**-0.1**
LMEL				*i*S		**Sb**	**19 34 53.1**	**-0.5**
LMEL				IAML			19 34 59.9	
	comp=N,6μm,0.2s							
LMEL	**Las Melosas**	**1.58**	**101**	*e*S		**Pn**	**19 34 31.7**	**-0.6**
BO02	**Sierra Bellavi**	**1.63**	**140**	*e*P		**Pn**	**19 34 32.7**	**-0.2**
BO02				*i*S		**Sn**	**19 34 53.4**	**+0.2**
BO02	**Sierra Bellavi**	**1.63**	**140**	Pn		**Pn**	**19 34 33.0**	**+0.1**
BO02	**Sierra Bellavi**	**1.63**	**140**	*e*S		**Pn**	**19 34 32.7**	**-0.2**
CO02	**Combarbal**	**2.51**	**21**	*e*P		**Pb**	**19 34 49.0**	**-1.0**
CO02				*i*S		**Sb**	**19 35 21.5**	**+1.0**
BI02	**San Fabin de**	**3.17**	**168**	IAML			19 35 48.3	
	comp=E,359nm,0.5s							
BI03	**Tigo**	**3.37**	**193**			**Pn**	**19 34 56.0**	**-0.8**
CO01	**Juntas del Tor**	**3.94**	**26**	Pn		**Pn**	**19 35 06.5**	**+1.6**
AC05	**El Transito**	**4.95**	**19**	Pn		**Pn**	**19 35 20.0**	**+1.4**
LC01	**Cunco**	**5.33**	**178**	Pn		**Pn**	**19 35 25.5**	**+1.7**
GO03	**Copiap**	**6.15**	**15**	Pn		**Pn**	**19 35 35.2**	**+0.1**
PLCA	**Paso Flores**	**7.26**	**171**	P		Pn	19 35 55.2	+4.9
	comp=E,1.4nm,0.3s,baz=328,slow=12,SNR=7.7							
PLCA				S		**Sn**	**19 37 18.8**	**+6.6**
	comp=E,0.2nm,0.3s,baz=278,slow=22,SNR=1.0							
PLCA	**Paso Flores**	**7.26**	**171**			**Pn**	**19 35 49.2**	**-1.2**
AC01	**Pan de Azucar**	**7.49**	**10**	Pn		**Pn**	**19 35 51.9**	**-1.6**
GO02	**Mina Guanaco**	**8.64**	**15**	Pn		**Pn**	**19 36 10.1**	**+0.6**
PB14	**IPOC Station P**	**9.02**	**10**			**Pn**	**19 36 13.4**	**-1.3**
PB10	**IPOC Station P**	**10.09**	**8**	Pn		**Pn**	**19 36 29.2**	**0.0**
PB15	**IPOC Station P**	**10.56**	**13**			**Pn**	**19 36 34.5**	**-1.2**
PB06	**IPOC Station P**	**11.03**	**12**	Pn		**Pn**	**19 36 41.6**	**-0.5**
LVC	**Limon Verde**	**11.25**	**15**	P		**Pn**	**19 36 47.9**	**+2.6**
	comp=E,0.5nm,0.3s,baz=179,slow=11,SNR=2.1							
LVC				S		**Sn**	**19 38 50.4**	**-0.2**
	comp=E,0.6nm,0.3s,baz=162,slow=21,SNR=2.3							
LVC	**Limon Verde**	**11.25**	**15**			**Pn**	**19 36 44.7**	**-0.7**
PB07	**IPOC Station P**	**11.94**	**10**	Pn		**Pn**	**19 36 53.0**	**-1.6**
PB09	**IPOC Station P**	**11.98**	**13**	Pn		**Pn**	**19 36 53.3**	**-1.8**
PB01	**IPOC Station P**	**12.67**	**11**	Pn		**Pn**	**19 37 05.7**	**+1.2**
ITQB	**Itaqui**	**13.71**	**78**	*e*P		**P**	**19 37 31.3**	**+4.2**
PB11	**IPOC Station P**	**13.91**	**9**	P		**P**	**19 37 26.9**	**-2.6**
GO01	**Chusmiza**	**14.07**	**11**	Pn		**Pn**	**19 37 25.3**	**+1.4**
MNMC	**Minye Minye**	**14.54**	**9**			**Pn**	**19 37 30.6**	**+0.5**
CPUP	**Villa Florida**	**14.65**	**64**	P		**Pn**	**19 37 31.6**	**+0.2**
	comp=E,0.2nm,0.3s,baz=256,slow=5.3,SNR=3.3							
CPUP				S		**Sn**	**19 40 11.7**	**-1.6**
	comp=E,0.2nm,0.3s,baz=244,slow=20,SNR=2.0							
CPUP	**Villa Florida**	**14.65**	**64**	*e*P		**Pn**	**19 37 40.5**	**+2.9**
PB16	**IPOC Station P**	**15.33**	**9**	P		**Pn**	**19 37 43.0**	**+1.9**
PLTB	**Pedras Altas**	**15.65**	**88**	*e*P		**P**	**19 37 54.0**	**+5.3**
LPAZ	**La Paz**	**17.56**	**13**	P		**P**	**19 38 10.8**	**+0.3**
	comp=E,0.4nm,0.3s,baz=188,slow=6.1,SNR=12							
LPAZ	**La Paz**	**17.56**	**13**	P		**P**	**19 38 10.6**	**+0.1**
AQDB	**Aquidauana**	**19.52**	**52**	*e*P		**P**	**19 38 31.5**	**+0.2**
SIV	**San Ignacio**	**20.11**	**32**	P		**P**	**19 38 37.0**	**-0.9**
	comp=E,0.6nm,0.3s,baz=231,slow=12,SNR=8.4							
EFI	**East Falkland**	**20.77**	**155**	P		**P**	**19 38 43.6**	**-1.1**
EFI				IAmb		IAmb	19 38 47.5	
	comp=Z,144nm,1.5s							
TIJ01	**Guaruva-PR**	**21.66**	**74**	*e*P		**P**	**19 38 57.1**	**+2.4**
PCMB	**Pacaembu**	**21.90**	**62**	*e*P		**P**	**19 38 56.3**	**-0.8**
SPB	**Sao Paulo**	**23.75**	**72**	P		**P**	**19 39 15.6**	**-0.6**
SPB				IAmb		IAmb	19 39 51.1	
	comp=Z,39nm,1.0s							
SPB	**Sao Paulo**	**23.75**	**72**	*e*P		**P**	**19 39 16.0**	**-0.3**
BB19B	**Bebedouro**	**24.27**	**65**	*e*P		**P**	**19 39 19.6**	**-1.6**
VAO	**Valinhos**	**24.42**	**71**	*e*P		**P**	**19 39 21.6**	**-1.0**
SAML	**Samuel**	**25.82**	**20**	P		**P**	**19 39 35.4**	**+0.2**
SAML				IAmb		IAmb	19 39 38.4	
	comp=Z,9.6nm,0.8s							
ATAH	**Atahualpa**	**26.94**	**346**	LR		LR	19 48 57.4	
	comp=Z,48nm,20.6s,baz=176,slow=33							
BSCB	**Bom Sucesso**	**27.20**	**70**	*e*P		**P**	**19 39 46.3**	**-1.4**
VAS01	**Vassouras-RJ**	**27.58**	**73**	*e*P		**P**	**19 39 50.2**	**-1.0**
BDFB	**Brasilia**	**28.10**	**56**	P		**P**	**19 39 54.6**	**-1.3**
	comp=Z,3.7nm,0.7s,baz=180,slow=4.9,SNR=4.3							
BDFB	**Brasilia**	**28.10**	**56**	P		**P**	**19 39 55.2**	**-0.7**
BDFB				IAmb		IAmb	19 39 55.5	
	comp=Z,4.9nm,0.8s							
SJMB	**Sao Joao De Ma**	**31.28**	**70**	*e*P		**P**	**19 40 21.9**	**-2.0**
BSFB	**Barra de Sao F**	**31.47**	**70**	*e*P		**P**	**19 40 23.9**	**-1.7**
SKI	**Saint Kitts**	**51.38**	**11**	P		**P**	**19 43 08.7**	**+0.1**
MLPR	**Magueyes Islan**	**51.46**	**6**	P		**P**	**19 43 08.5**	**-0.7**
SNAA	**Sanae**	**52.00**	**158**	P		**P**	**19 43 13.0**	**+0.2**
SNAA				IAmb		IAmb	19 43 25.7	
	comp=Z,7.0nm,0.8s							
553A	**Crawfordville**	**64.47**	**348**	P		**P**	**19 44 41.4**	**+1.2**
SYO	**Syowa Base**	**66.28**	**159**	*e*PcP		**PcP**	**19 45 19.4**	**-2.0**
TXAR	**Lajitas Array**	**69.34**	**331**	P		**P**	**19 45 12.8**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=158,slow=8.3,SNR=5.9							
TX31	**Lajitas Ar. Si**	**69.34**	**331**	P		**P**	**19 45 12.2**	**+0.8**
TX31				IAmb		IAmb	19 45 48.4	
	comp=Z,11nm,1.4s							
TX32	**Lajitas Array**	**69.34**	**331**	P		**P**	**19 45 11.8**	**+0.4**
WVT	**Waverly**	**70.88**	**347**	P		**P**	**19 45 21.2**	**+0.6**
WVT				IAmb		IAmb	19 45 21.8	
	comp=Z,10.0nm,0.8s							
W39A	**Magazine**	**71.36**	**341**	P		**P**	**19 45 23.6**	**+0.2**
W39A				IAmb		IAmb	19 45 26.0	
	comp=Z,12nm,0.9s							
MAW	**Mawson**	**73.61**	**164**	P		**P**	**19 45 36.3**	**-0.2**
	comp=Z,2.2nm,0.7s,baz=241,slow=10,SNR=2.6							
DBIC	**Dimbokro**	**75.06**	**71**	P		**P**	**19 45 44.8**	**-1.1**
	comp=Z,2.6nm,0.7s,baz=225,slow=5.7,SNR=2.1							
DBIC	**Dimbokro**	**75.06**	**71

IRJU	**Rjupnafell**	**1.18**	**205**	P		**Pb**	**19 40 08.6**	**-3.1**
	baz=206							
IMJO	**Mjoaskard**	**1.20**	**232**	P		**Pb**	**19 40 09.0**	**-3.0**
	baz=232							
ISKI	**Skildingahlsh**	**1.21**	**10**	P		**Pb**	**19 40 08.7**	**-3.5**
	baz=9.5							
IGHA	**Grjothals**	**1.22**	**17**	P		**Pn**	**19 40 08.8**	**-3.5**
	baz=17							
IGHA				S		**Sb**	**19 40 24.6**	**-3.5**
	baz=17							
IGYG	**Gygjarholskot**	**1.23**	**252**	P		**Pn**	**19 40 09.9**	**-2.4**
	baz=252							
IGRA	**Granastoir**	**1.24**	**359**	P		**Pn**	**19 40 09.2**	**-3.3**
	baz=359							
IHAU	**Haukadalur**	**1.28**	**237**	P		**Pn**	**19 40 10.7**	**-2.4**
	baz=237							
IHVO	**Lagu-Hvolar**	**1.30**	**207**	P		**Pn**	**19 40 10.9**	**-2.5**
	baz=207							
IDIM	**Dimmadalss**	**1.31**	**11**	P		**Pn**	**19 40 10.3**	**-3.2**
	baz=10							
IHLA	**Hella**	**1.31**	**345**	P		**Pn**	**19 40 10.6**	**-3.0**
	baz=344							
IALF	**Alftagrof**	**1.40**	**212**	P		**Pn**	**19 40 12.6**	**-2.1**
	baz=212							
IHED	**Heoinshofoi**	**1.41**	**4**	P		**Pn**	**19 40 12.0**	**-2.8**
	baz=3.4							
ISAU	**Saurbar**	**1.43**	**242**	P		**Pn**	**19 40 11.9**	**-3.2**
	baz=243							
IESK	**Eystri-Skogar**	**1.44**	**217**	P		**Pn**	**19 40 12.5**	**-2.7**
	baz=217							
IBRE	**Brettingsstaoi**	**1.45**	**354**	P		**Pn**	**19 40 12.7**	**-2.7**
	baz=354							
IMID	**Miomork**	**1.46**	**226**	P		**Pn**	**19 40 13.5**	**-2.0**
	baz=226							
IGIL	**Gilhagi**	**1.48**	**19**	P		**Pn**	**19 40 12.9**	**-3.0**
	baz=19							
ISIG	**Siglufjorour**	**1.56**	**339**	P		**Pn**	**19 40 14.3**	**-2.6**
	baz=339							
ISIG				S		**Sb**	**19 40 36.4**	**-1.6**
	baz=339							
IASM	**Asmuli**	**1.59**	**239**	P		**Pn**	**19 40 15.7**	**-1.6**
	baz=239							
BORG	**Borgarnes**	**1.63**	**274**	Pg		**Pn**	**19 40 15.9**	**-1.9**
	17nm,0.3s,baz=84,slow=8.1,SNR=59							
BORG				Lg		Lg	19 40 39.0	
	13nm,0.3s,baz=36,slow=23,SNR=12							
BORG	**Borgarnes**	**1.63**	**274**			**Pn**	**19 40 15.1**	**-2.7**
BORG				Sn		**Sg**	**19 40 39.8**	**-1.6**
IKRO	**Krokur**	**1.66**	**251**	P		**Pn**	**19 40 15.8**	**-2.5**
	baz=251							
ISOL	**Solvholt**	**1.67**	**244**	P		**Pn**	**19 40 16.2**	**-2.2**
	baz=245							
IHEI	**Heioarbar**	**1.68**	**255**	P		**Pn**	**19 40 16.7**	**-1.9**
	baz=255							
ILEI	**Leirhofn**	**1.78**	**14**	P		**Pn**	**19 40 17.5**	**-2.5**
	baz=13							
IHRN	**Hraun**	**1.79**	**324**	P		**Pn**	**19 40 18.8**	**-1.3**
	baz=324							
SCO	**Scoresbysund**	**6.06**	**346**	Pn		**Pn**	**19 41 17.1**	**-1.6**
SCO				Sn		**Sn**	**19 42 31.9**	**+3.9**
SCO	**Scoresbysund**	**6.06**	**346**	*e*		Pn	19 41 13.8	-4.9
	baz=176,slow=9.3							
SCO				*i* P		**Pn**	**19 41 19.0**	**+0.3**
SCO				IAML			19 42 10.3	
	comp=Z,3.2nm,0.5s							
SCO				eS		**Sn**	**19 42 33.9**	**+5.9**
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn		**Pn**	**19 42 35.9**	**-1.2**
	baz=326,slow=13,SNR=6.6							
ESK	**Eskdalemuir**	**11.78**	**136**	Pn		**Pn**	**19 42 38.2**	**+1.1**
NRS	**Narsarsuaq**	**13.12**	**267**	Pn		**Pn**	**19 42 51.9**	**-3.4**
NOA	**NORSAR Array B**	**13.55**	**92**	Pn		**Pn**	**19 42 59.7**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=295,slow=16,SNR=2.2							
KONO	**Kongsberg**	**13.57**	**99**	Pn		**Pn**	**19 43 02.6**	**+1.1**
HFS	**Hagfors**	**15.06**	**93**	Pn		**P**	**19 43 23.5**	**-3.6**
	comp=Z,0.0nm,0.3s,baz=296,slow=7.2,SNR=2.4							
FINES	**FINESS Array B**	**19.72**	**79**	P		**Pn**	**19 44 20.7**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=292,slow=7.4,SNR=2.9							
FINES	**FINESS Array B**	**19.72**	**79**	P		**Pn**	**19 44 21.5**	**+1.6**
CLL	**Collm**	**20.73**	**116**	*i* P		Pn	19 44 31.2	-0.6
	comp=Z,10.0nm,1.2s							
BRG	**Berggiesshubel**	**21.44**	**115**	*e*P		**P**	**19 44 38.3**	**+1.2**
	comp=Z,8.3nm,1.0s							
KHC	**Kasperske Hory**	**22.70**	**118**	*e*P		**P**	**19 44 53.1**	**+2.4**
DPC	**Dobruska-Polom**	**22.78**	**113**	*e*P		**P**	**19 44 54.2**	**+2.6**
GERES	**GERESS Array B**	**22.98**	**119**	P		**P**	**19 44 55.8**	**+2.1**
	comp=Z,0.9nm,0.8s,baz=322,slow=8.5,SNR=5.2							
GERES	**GERESS Array B**	**22.98**	**119**	P		**P**	**19 44 55.1**	**+1.5**
EUNU	**Eureka**	**23.65**	**336**	P		**P**	**19 45 03.5**	**+3.4**
EUNU				IAmb		IAmb	19 45 06.1	
	comp=Z,31nm,1.7s							
VYHS	**Vyhne**	**25.26**	**112**	*e*P		**P**	**19 45 16.2**	**+1.1**
KLMR	**Klimovskoe**	**25.61**	**72**	*e*P		**P**	**19 45 18.7**	**+0.5**
ESDC	**Sonseca Array**	**26.28**	**156**	P		**P**	**19 45 25.4**	**+0.9**
	comp=Z,1.0nm,1.0s,baz=344,slow=8.7,SNR=2.5							
AKASG	**Malin Array Be**	**27.86**	**98**	P		**P**	**19 45 39.5**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=320,slow=9.7,SNR=2.2							
AKASG	**Malin Array Be**	**27.86**	**98**	IAmb		IAmb	19 45 40.4	
	comp=Z,1.1nm,1.2s							
BRTR	**Keskin Array B**	**38.50**	**105**	P		**P**	**19 47 12.1**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=320,slow=6.2,SNR=1.8							
ABKAR	**Akbulak array**	**42.00**	**73**	P		**P**	**19 47 41.8**	**+1.7**
ABKAR	**Akbulak array**	**42.00**	**73**	P		**P**	**19 47 41.6**	**+1.5**
ABKAR				IAmb		IAmb	19 47 42.7	
	comp=Z,1.9nm,1.0s							
TIXI	**Tiksi**	**42.02**	**15**	P		**P**	**19 47 41.4**	**+1.4**
ILAR	**Eielson Array**	**45.66**	**332**	P		**P**	**19 48 11.1**	**+1.8**
	comp=Z,1.0nm,1.0s,baz=22,slow=7.1,SNR=7.0							
ZAA0	**Zalesovo Array**	**47.63**	**51**	P		**P**	**19 48 25.9**	**+1.0**
ZAA0				IAmb		IAmb	19 48 26.6	
	comp=Z,1.8nm,0.8s							
ZALV	**Zalesovo Beam**	**47.63**	**51**	P		**P**	**19 48 26.2**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=324,slow=9.8,SNR=3.8							
KURK	**Kurchatov**	**48.12**	**58**	P		**P**	**19 48 29.4**	**+0.7**
KURK				IAmb		IAmb	19 48 31.1	
	comp=Z,3.3nm,0.9s							
MKAR	**Makanchi Array**	**52.73**	**58**	P		**P**	**19 49 04.4**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=319,slow=7.2,SNR=5.5							
MKAR	**Makanchi Array**	**52.73**	**58**	P		**P**	**19 49 04.0**	**+0.3**
BW06	**Boulder Array**	**53.15**	**293**	P		**P**	**19 49 06.3**	**-0.7**
BW06				IAmb		IAmb	19 49 09.3	
	comp=Z,6.3nm,1.3s							
PD31	**Pinedale Array**	**53.15**	**293**	P		**P**	**19 49 06.2**	**-0.9**
PD31				IAmb		IAmb	19 49 09.3	
	comp=Z,4.9nm,1.2s							
PDAR	**Pinedale Array**	**53.15**	**293**	P		**P**	**19 49 07.7**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=56,slow=8.0,SNR=7.9							
PDAR	**Pinedale Array**	**53.15**	**293**	P		**P**	**19 49 06.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P		**P**	**19 49 07.5**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=343,slow=8.2,SNR=3.2							
BTK	**Batken**	**53.97**	**72**	P		**P**	**19 49 14.4**	**+1.5**
GAR	**Garm**	**54.66**	**73**	P		**P**	**19 49 19.5**	**+1.5**
WMQ	**Urumqi**	**57.24**	**56**	*e*P		P	19 49 40.6	+4.3
TXAR	**Lajitas Array**	**62.26**	**280**	P		**P**	**19 50 12.7**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=77,slow=4.0,SNR=3.7							
HHC	**Hu-ho-hao-te**	**67.51**	**40**	*e*P		P	19 50 48.5	+3.4
HHC				PP		PP	19 53 19.3	+6.0
HHC				S		**S**	**19 59 45.0**	**+3.8**
HHC				pmax		pmax		
	comp=Z,8.0nm,1.2s							
HHC				pmax		pmax		
	comp=Z,63nm,7.4s							
HHC				LR		LR		
	comp=N,370nm,16.3s							
HHC				LR		LR		
	comp=E,170nm,19.8s							
HHC				LR		LR		
	comp=Z,100nm,17.3s							
LZH	**Lanzhou**	**69.63**	**48**	*e*P		**P**	**19 50 58.3**	**-0.2**
LZH				pP		sP	19 51 03.0	-0.6
LZH				sP		pP	19 51 05.4	+3.2
LZH				pmax		pmax		
	comp=Z,17nm,1.4s							
NJ2	**Nanjing**	**77.73**	**37**	*e*P		**P**	**19 51 45.9**	**0.0**
NJ2				pmax		pmax		
	comp=Z,11nm,0.9s							
CMAR	**Chiang Mai Arr**	**84.14**	**59**	P		**P**	**19 52 21.1**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=312,slow=5.8,SNR=5.8							
WRA	**Warramunga Arr**	**131.52**	**36**	PKP		**PKiKP**	**19 59 03.6**	**+1.0**
	comp=Z,1.0nm,1.2s,baz=5.1,slow=3.8,SNR=3.3							

*REY **11** 19:54:44.9, 64.66N×17.40W, h8km*
*NEIC **11** 19:54:46.6±2.2, 64.46N±0.08×17.8W±0.2, h4km±5km, mb4.4/5, Error ellipse: s-maj=13.5km s-min=10.3km az=222.0*

*IDC **11** 19:54:46.4±0.8, 64.42N×17.69W, h0km, mb3.6/6, mb1 3.8/10, mb1mx3.5/40, mbtmp3.6/10, ML2.6/3, MS3.2/6, Ms1 3.2/6, ms1mx2.8/52, Error ellipse: s-maj=27.4km s-min=11.0km az=18.0*

ISC 11 19:54:45.0±0.5, 64.69N±0.02×17.51W±0.02, h10km, n79, σ1s89/89, mb3.9/9, MS3.2/4, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.11**	**261**	P		P	**Pg**	**19 54 48.1**	**+0.2**
	baz=276								
IVON				S		S	**Sg**	**19 54 50.9**	**+1.1**
	baz=276								
IDYN	**Dyngjuhals**	**0.12**	**31**	P		P	**Pg**	**19 54 47.9**	**-0.2**
	baz=6.4								
IGRF	**Grimsfjall**	**0.30**	**160**	P		P	**Pg**	**19 54 49.8**	**-1.4**
	baz=167								
IKVE	**Kverkfjoll**	**0.36**	**92**	P		P	**Pg**	**19 54 51.2**	**-1.0**
	baz=86								
ISKR	**Skrokkalda**	**0.40**	**251**	P		P	**Pb**	**19 54 53.1**	**-1.2**
	baz=257								
ISKR				S		S	**Sb**	**19 54 59.8**	**-0.6**
	baz=257								
IHUS	**Husbondi**	**0.40**	**189**	P		P	**Pb**	**19 54 52.4**	**-1.9**
	baz=197								
IHUS				S		S	**Sg**	**19 54 57.7**	**-0.6**
	baz=197								
THOR	**Thorvaldshraun**	**0.43**	**55**	P		P	**Pg**	**19 54 52.7**	**-0.8**
	baz=48								
THOR				S		S	**Sg**	**19 54 58.8**	**-0.5**
	baz=48								
IVOT	**Vottur**	**0.44**	**161**	P		P	**Pg**	**19 54 52.4**	**-1.3**
	baz=166								
IJOK	**Jokulheimar**	**0.49**	**220**	P		P	**Pb**	**19 54 54.0**	**-1.7**
	baz=226								
IJOK				S		S	**Sb**	**19 55 01.2**	**-1.7**
	baz=226								
IMKO	**Mokollar**	**0.58**	**59**	P		P	**Pg**	**19 54 55.1**	**-1.1**
	baz=54								
IMKO				S		S	**Sg**	**19 55 03.0**	**-0.9**
	baz=54								
IIEY	**Innrieyrar**	**0.65**	**204**	P		P	**Pg**	**19 54 56.5**	**-1.2**
	baz=209								
IIEY				S		S	**Sb**	**19 55 06.1**	**-1.6**
	baz=209								
ISVA	**Svartarkot**	**0.66**	**9**	P		P	**Pb**	**19 54 57.0**	**-1.6**
	baz=5.2								
ISVA				S		S	**Sb**	**19 55 06.8**	**-1.0**
	baz=5.2								
IKSK	**Karasker**	**0.69**	**139**	P		P	**Pg**	**19 54 55.8**	**-2.7**
	baz=141								
IKSK				S		S	**Sg**	**19 55 05.5**	**-2.0**
	baz=141								
IKAL	**Kalfafell**	**0.75**	**186**	P		P	**Pg**	**19 54 57.8**	**-1.6**
	baz=190								
IKAL				S		S	**Sg**	**19 55 08.0**	**-1.2**
	baz=190								
IVSH	**V-Sauoahnukur**	**0.77**	**80**	P		P	**Pg**	**19 54 57.9**	**-2.0**
	baz=78								
IVSH				S		S	**Sg**	**19 55 08.0**	**-2.0**
	baz=78								
IVAT	**Vatnsfell**	**0.79**	**231**	P		P	**Pb**	**19 54 59.5**	**-1.4**
	baz=235								
IFAG	**Fagurholsmyri**	**0.90**	**155**	P		P	**Pg**	**19 55 00.0**	**-2.3**
	baz=157								
IFAG				S		S	**Sg**	**19 55 12.1**	**-1.9**
	baz=157								
IHVE	**Hveravellir**	**0.90**	**283**	P		P	**Pb**	**19 55 01.3**	**-1.4**
	baz=284								
IHVE				S		S	**Sn**	**19 55 14.6**	**-2.2**
	baz=284								
IMEL	**Melhnausar**	**0.95**	**22**	P		P	**Pg**	**19 55 01.7**	**-1.7**
	baz=19								
IREN	**Reynihlio**	**0.99**	**15**	P		P	**Pg**	**19 55 02.5**	**-1.7**
	baz=12								
IKVO	**Krokottuvotn**	**1.06**	**14**	P		P	**Pg**	**19 55 03.5**	**-1.9**
	baz=12								
IKVO				S		S	**Sb**	**19 55 18.2**	**-1.2**
	baz=12								
ISNB	**Snabyli**	**1.08**	**208**	P		P	**Pg**	**19 55 04.2**	**-1.5**
	baz=211								
ISNB				S		S	**Sb**	**19 55 18.5**	**-1.3**
	baz=211								
IGRS	**Grimsstaoir**	**1.12**	**31**	P		P	**Pg**	**19 55 05.2**	**-1.3**
	baz=28								
ISLY	**Slysaalda**	**1.12**	**220**	P		P	**Pb**	**19 55 05.1**	**-1.4**
	baz=223								
ISLY				S		S	**Sn**	**19 55 20.5**	**-1.7**
	baz=223								
IFED	**Fedgar**	**1.16**	**236**	P		P	**Pn**	**19 55 06.2**	**-1.2**
	baz=238								
IRJU	**Rjupnafell**	**1.19**	**206**	P		P	**Pn**	**19 55 06.2**	**-1.5**
	baz=209								
ISKI	**Skildingahlsh**	**1.20**	**9**	P		P	**Pb**	**19 55 06.0**	**-1.9**
	baz=7.2								
IMJO	**Mjoaskard**	**1.21**	**232**	P		P	**Pg**	**19 55 06.9**	**-1.4**
	baz=235								
IGHA	**Grjothals**	**1.21**	**17**	P		P	**Pb**	**19 55 06.2**	**-1.9**
	baz=14								
IGHA				S		S	**Sb**	**19 55 22.2**	**-1.6**
	baz=14								
IGRA	**Granastoir**	**1.23**	**359**	P		P	**Pn**	**19 55 06.5**	**-1.8**
	baz=357								
IGYG	**Gygjarholskot**	**1.24**	**252**	P		P	**Pb**	**19 55 07.0**	**-1.6**
	baz=254								
IHAU	**Haukadalur**	**1.29**	**237**	P		P	**Pb**	**19 55 08.0**	**-1.3**
	baz=239								
IDIM	**Dimmadalss**	**1.30**	**10**	P		P	**Pn**	**19 55 07.4**	**-1.8**
	baz=8.3								
IHVO	**Lagu-Hvolar**	**1.31**	**207**	P		P	**Pn**	**19 55 08.2**	**-1.2**
	baz=210								
IHLA	**Hella**	**1.31**	**344**	P		P	**Pb**	**19 55 08.2**	**-1.5**
	baz=343								
IHLA				S		S	**Sg**	**19 55 27.3**	**+0.1**
	baz=343								
IHED	**Heoinshofoi**	**1.40**	**3**	P		P	**Pn**	**19 55 09.2**	**-1.4**
	baz=1.5								
IALF	**Alftagrof**	**1.41**	**212**	P		P	**Pb**	**19 55 09.9**	**-1.5**
	baz=215								
IESK	**Eystri-Skogar**	**1.45**	**217**	P		P	**Pb**	**19 55 10.6**	**-1.4**
	baz=219								
ISAU	**Saurbar**	**1.45**	**242**	P		P	**Pn**	**19 55 09.9**	**-1.3**
	baz=244								
IBRE	**Brettingsstaoi**	**1.45**	**354**	P		P	**Pn**	**19 55 10.0**	**-1.3**
	baz=352								
IMID	**Miomork**	**1.47**	**226**	P		P	**Pb**	**19 55 11.0**	**-1.4**
	baz=228								
IGIL	**Gilhagi**	**1.48**	**19**	P		P	**Pn**	**19 55 10.1**	**-1.6**
	baz=17								
ISIG	**Siglufjorour**	**1.56**	**339**	P		P	**Pb**	**19 55 12.2**	**-1.8**
	baz=338								
ISIG				S		S	**Sg**	**19 55 33.6**	**-1.7**
	baz=338								
IASM	**Asmuli**	**1.61**	**239**	P		P	**Pb**	**19 55 13.4**	**-1.3**
	baz=241								
BORG	**Borgarnes**	**1.64**	**274**	Pg		P	**Pg**	**19 55 14.3**	**-2.2**
	10nm,0.3s,baz=89,slow=7.3,SNR=58								
BORG				Lg		Lg		19 55 37.8	
	6.5nm,0.3s,baz=255,slow=21,SNR=9.0								
BORG	**Borgarnes**	**1.64**	**274**			P	**Pb**	**19 55 13.8**	**-1.5**
IKRO	**Krokur**	**1.68**	**251**	P		P	**Pb**	**19 55 13.7**	**-2.2**
	baz=252								
ISOL	**Solvholt**	**1.68**	**245**	P		P	**Pb**	**19 55 13.7**	**-2.3**
	baz=246								
ILEI	**Leirhofn**	**1.78**	**13**	P		P	**Pn**	**19 55 14.9**	**-0.9**
	baz=12								
SCO	**Scoresbysund**	**6.06**	**346**			Pn		19 56 18.4	+3.9
SCO	**Scoresbysund**	**6.06**	**346**	*e*		P	**Pn**	**19 56 10.1**	**-4.5**
	baz=177,slow=6.2								
SCO				*i* P		Pn		19 56 19.4	+4.8
SCO				*i* S		Sb		19 57 33.6	-9.5
SCO				IAML				19 57 41.4	
	comp=Z,0.8nm,0.6s								
EKB10	**Eskdalemuir Ar**	**11.75**	**136**	Pn			**Pn**	**19 57 32.9**	**+0.4**
EKB	**Eskdalemuir**	**11.77**	**136**	Pn			**Pn**	**19 57 33.7**	**+1.0**
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn			**Pn**	**19 57 33.5**	**+0.6**
	baz=321,slow=14,SNR=8.6								
NC204	**NORSAR Array S**	**13.23**	**92**	Pn			**Pn**	**19 57 52.0**	**-0.8**
NOA	**NORSAR Array B**	**13.54**	**92**	Pn			**Pn**	**19 57 59.0**	**+2.1**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=1.5								
HFS	**Hagfors**	**15.05**	**93**	Pn			**P**	**19 58 19.7**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=306,slow=10,SNR=2.5								
HFS				LR			LR	20 04 36.3	
	comp=Z,33nm,19.8s,baz=280,slow=39								
ARCES	**ARCESS Array B**	**17.11**	**55**	LR			LR	20 03 54.6	
	comp=Z,68nm,19.6s,baz=265,slow=32								
FINES	**FINESS Array B**	**19.70**	**79**	P			**Pn**	**19 59 19.1**	**+3.5**
	comp=Z,0.1nm,0.3s,baz=312,slow=10,SNR=1.6								

CLL	**Collm**	**20.72**	**116**	*e*P		Pn	19 59 27.0	-0.6
	comp=Z,34nm,2.2s							
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P		**P**	**19 59 34.8**	**+1.9**
	comp=Z,8.9nm,1.4s							
KHC	**Kasperske Hory**	**22.69**	**118**	*e*P		**P**	**19 59 50.4**	**+4.0**
DPC	**Dobruska-Polom**	**22.77**	**113**	*e*P		**P**	**19 59 50.4**	**+3.1**
GERES	**GERESS Array B**	**22.97**	**119**	P		**P**	**19 59 51.8**	**+2.3**
	comp=Z,0.8nm,0.8s,baz=335,slow=9.0,SNR=2.9							
PSZ	**Piszkesteto**	**26.13**	**112**	P		**P**	**20 00 21.8**	**+2.8**
PSZ				IAmb		IAmb	20 00 23.6	
	comp=Z,9.1nm,1.1s							
ESDC	**Sonseca Array**	**26.28**	**156**	P		**P**	**20 00 22.0**	**+1.7**
	comp=Z,1.1nm,0.9s,baz=347,slow=11,SNR=4.3							
RES	**Resolute Bay**	**26.45**	**324**	LR		LR	20 10 19.9	
	comp=Z,54nm,21.4s,baz=98,slow=35							
KBZ	**Khabaz**	**39.12**	**92**	LR		LR	20 18 56.4	
	comp=Z,54nm,19.3s,baz=132,slow=37							
AKH	**Akhalkalaki**	**41.26**	**94**	P		**P**	**20 02 33.5**	**+3.4**
TIXI	**Tiksi**	**42.01**	**15**	P		P	20 02 40.4	+4.6
TIXI				IAmb		IAmb	20 02 42.8	
	comp=Z,9.4nm,1.4s							
GNI	**Garni**	**42.84**	**94**	LR		LR	20 20 09.5	
	comp=Z,23nm,21.6s,baz=336,slow=36							
ILAR	**Eielson Array**	**45.66**	**332**	P		P	20 03 10.6	+5.4
	comp=Z,1.6nm,1.1s,baz=32,slow=6.0,SNR=9.0							
ILAR				PcP		**PP**	**20 04 48.3**	**-3.4**
	comp=Z,0.4nm,0.8s,baz=28,slow=4.4,SNR=3.3							
BCAR	**Beaver Creek A**	**46.09**	**329**	P		P	20 03 14.1	+5.5
MKAR	**Makanchi Array**	**52.72**	**58**	P		**P**	**20 04 01.9**	**+2.5**
	comp=Z,0.8nm,0.9s,baz=343,slow=6.3,SNR=5.1							
PD31	**Pinedale Array**	**53.16**	**293**	P		**P**	**20 04 06.1**	**+3.1**
PDAR	**Pinedale Array**	**53.16**	**293**	P		**P**	**20 04 05.5**	**+2.4**
	comp=Z,1.4nm,0.9s,baz=57,slow=5.5,SNR=9.6							
PDAR	**Pinedale Array**	**53.16**	**293**	P		**P**	**20 04 05.6**	**+2.6**
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P		**P**	**20 04 03.7**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=345,slow=7.7,SNR=3.3							
ELK	**Elko**	**57.10**	**296**	LR		LR	20 26 56.5	
	comp=Z,59nm,20.5s,baz=22,slow=34							

*NNC **11** 20:09:46.7±0.4, 44.79N×81.03E, h0km, mb4.7, mpv4.5, Error ellipse: s-maj=5.2km s-min=2.0km az=125.0*
*IDC **11** 20:09:47.2±2.2, 44.96N×81.00E, h0km, mb1 3.5/6, mb1mx3.2/45, mbtmp3.5/6, ML3.1/6, Error ellipse: s-maj=20.8km s-min=15.1km az=175.0*
*SOME **11** 20:09:47.6, 44.72N×80.97E, h20km, MS3.4*
*BJI **11** 20:09:48.2±0.0, 44.74N×81.11E, h10km, mb4.1/4, ML3.7/9*
*NEIC **11** 20:09:52.7±1.8, 45.14N±0.05×80.64E±0.09, h26km±7km, mb4.3/5, Error ellipse: s-maj=10.7km s-min=4.9km az=121.0*
*MOS **11** 20:09:53.3±3.0, 45.07N×80.74E, h77km, mb4.6/1, Error ellipse: s-maj=8.6km s-min=4.6km az=53.8*

ISC 11 20:09:49.4±1.2, 44.73N±0.03×81.08E±0.03, h28km±12km, n141, σ1s83/182, mb4.3/4, 13C-12D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.01**	**247**	*e*P		**Pn**		**20 10 06.8**	**-0.9**
	123nm,0.3s								
DJR				*e*S		**Sn**		**20 10 20.3**	**-0.7**
	1μm,0.3s								
DJR	**Jarkent**	**1.01**	**247**	P		**Pn**		**20 10 06.8**	**-0.9**
	123nm,0.3s								
DJR				S		**Sn**		**20 10 20.3**	**-0.7**
	1μm,0.3s								
DJR	**Jarkent**	**1.01**	**247**	*e*P		**Pn**		**20 10 06.8**	**-0.9**
DJR				*e*S		**Sn**		**20 10 20.3**	**-0.7**
KTMS	**Ketmen**	**1.39**	**202**	*e*P		**Pb**		**20 10 13.5**	**-1.3**
	200nm,0.2s								
KTMS				*e*S		**Sb**		**20 10 31.5**	**-0.7**
	1μm,0.2s								
KTMS	**Ketmen**	**1.39**	**202**	P		**Pb**		**20 10 13.5**	**-1.3**
	200nm,0.2s								
KTMS				S		**Sb**		**20 10 31.5**	**-0.7**
	1μm,0.2s								
KTMS	**Ketmen**	**1.39**	**202**	*e*PN		**Pb**		**20 10 13.5**	**-1.3**
PDGK	**Podgornoye**	**1.81**	**220**	⇓Pn		**Pn**		**20 10 20.0**	**+1.1**
	110nm,0.3s								
PDGK				⇑Sn		**Sb**		**20 10 44.8**	**+0.5**
	3μm,0.7s								
PDGK	**Podgornoye**	**1.81**	**220**	PN		**Pn**		**20 10 19.9**	**+1.1**
TDK	**Taldyqorghan**	**1.92**	**279**	*e*P		**Pb**		**20 10 22.3**	**-1.4**
	2μm,0.4s								
TDK				*e*S		**Sb**		**20 10 46.6**	**-0.6**
	3μm,0.3s								
TDK	**Taldyqorghan**	**1.92**	**279**	P		**Pb**		**20 10 22.3**	**-1.4**
	2μm,0.4s								
TDK				S		**Sb**		**20 10 46.6**	**-0.6**
	3μm,0.3s								

comp=Z,296nm,0.5s
KURS Kuram 2.44 240 *e*PN **Pb 20 10 32.2 -0.4**
ZHN Zhinishke 2.47 232 *e*P **Pb 20 10 32.7 -0.5**
comp=Z,268nm,0.2s
ZHN *e*S **Sb 20 11 04.4 +1.2**
comp=Z,700nm,0.1s
ZHN Zhinishke 2.47 232 Pg **Pb 20 10 32.7 -0.5**
comp=Z,268nm,0.2s
ZHN Lg Lg 20 11 04.4
comp=Z,700nm,0.1s
ZHN Zhinishke 2.47 232 *e*PN **Pb 20 10 32.7 -0.5**
ZHN *e*S **Sb 20 11 04.4 +1.2**
SATY Saty 2.56 230 *e*P **Pb 20 10 34.2 -0.4**
comp=Z,181nm,0.3s
SATY *e*S **Sb 20 11 07.5 +1.8**
comp=Z,2μm,0.3s
SATY Saty 2.56 230 Pg **Pb 20 10 34.2 -0.4**
comp=Z,181nm,0.3s
SATY Lg Lg 20 11 07.5
comp=Z,2μm,0.3s
SATY Saty 2.56 230 *e*PN **Pb 20 10 34.3 -0.4**
SATY *e*S **Sb 20 11 07.5 +1.8**
PRZ Przheval'sk 2.98 222 PN **Pb 20 10 41.1 -0.7**
PRZ Przheval'sk 2.98 222 Pb 20 10 41.1 -0.7
KOTS Kotyrbulak 3.23 244 *e*P **Pb 20 10 44.9 -1.3**
comp=Z,172nm,0.3s
KOTS *e*S **Sb 20 11 26.5 +1.4**
comp=Z,2μm,0.4s
KOTS Kotyrbulak 3.23 244 Pg **Pb 20 10 44.9 -1.3**
comp=Z,172nm,0.3s
KOTS Lg Lg 20 11 26.5
comp=Z,2μm,0.4s
KOTS Kotyrbulak 3.23 244 *e*PN **Pb 20 10 44.9 -1.3**
KOTS *e*S **Sb 20 11 26.5 +1.4**
MDOK Medeo 3.31 243 *e*P **Pb 20 10 46.6 -0.8**
comp=Z,65nm,0.3s
MDOK *e*S **Sb 20 11 28.8 +1.5**
comp=Z,367nm,0.4s
MDOK Medeo 3.31 243 Pg **Pb 20 10 46.6 -0.8**
comp=Z,65nm,0.3s
MDOK Lg Lg 20 11 28.8
comp=Z,367nm,0.4s
MDOK Medeo 3.31 243 *e*PN **Pb 20 10 46.6 -0.8**
MDOK *e*S **Sb 20 11 28.8 +1.5**
KTBS Karatobe 3.32 254 *e*P **Pb 20 10 47.4 -0.3**
comp=Z,68nm,0.3s
KTBS *e*S **Sb 20 11 30.6 +3.0**
comp=Z,696nm,0.7s
KTBS Karatobe 3.32 254 Pg **Pb 20 10 47.3 -0.3**
comp=Z,68nm,0.3s
KTBS Lg Lg 20 11 30.6
comp=Z,696nm,0.7s
KTBS Karatobe 3.32 254 *e*PN **Pb 20 10 47.4 -0.3**
KNDC Almaty 3.33 244 ⇑Pg **Pb 20 10 48.5 +0.7**
comp=Z,58nm,0.4s
KNDC ⇑Lg Lg 20 11 32.7
comp=Z,314nm,0.6s
KNDC Almaty 3.33 244 PN **Pb 20 10 48.5 +0.7**
AAA Alma-Ata 3.37 245 *e*P **Pb 20 10 48.1 -0.3**
comp=Z,72nm,0.3s
AAA *e*S **Sb 20 11 31.1 +2.1**
comp=Z,21nm,0.2s
AAA Alma-Ata 3.37 245 Pg **Pb 20 10 48.1 -0.3**
comp=Z,72nm,0.3s
AAA Lg Lg 20 11 31.1
comp=Z,21nm,0.2s
AAA Alma-Ata 3.37 245 *e*PN **Pb 20 10 48.1 -0.3**
AAA *e*S **Sb 20 11 31.2 +2.1**
TNSS Tian-Shan 3.44 242 *e*P **Pb 20 10 49.6 -0.2**
comp=Z,46nm,0.4s
TNSS *e*S **Sb 20 11 33.8 +2.6**
comp=Z,92nm,0.3s
TNSS Tian-Shan 3.44 242 Pg **Pb 20 10 49.6 -0.2**
comp=Z,46nm,0.4s
TNSS Lg Lg 20 11 33.8
comp=Z,92nm,0.3s
TNSS Tian-Shan 3.44 242 *e*PN **Pb 20 10 49.6 -0.2**
TNSS *e*S **Sb 20 11 33.8 +2.6**
KUU Kurty 3.51 258 *e*P **Pb 20 10 49.9 -0.8**
comp=Z,76nm,0.3s
KUU *e*S **Sb 20 11 35.3 +2.4**
comp=Z,278nm,0.5s
KUU Kurty 3.51 258 Pg **Pb 20 10 49.9 -0.8**
comp=Z,76nm,0.3s
KUU Lg Lg 20 11 35.3
comp=Z,278nm,0.5s
KUU Kurty 3.51 258 *e*PN **Pb 20 10 49.9 -0.8**
IZV Izvestkoviy 3.65 244 *e*P **Pb 20 10 52.8 -0.4**
comp=Z,59nm,0.3s
IZV *e*S **Sb 20 11 40.0 +2.9**
comp=Z,275nm,0.4s
IZV Izvestkoviy 3.65 244 Pg **Pb 20 10 52.8 -0.4**
comp=Z,59nm,0.3s
IZV Lg Lg 20 11 40.0
comp=Z,275nm,0.4s
IZV Izvestkoviy 3.65 244 *e*PN **Pb 20 10 52.8 -0.4**
IZV *e*S **Sb 20 11 40.0 +2.9**
MTBS Maitube 3.72 246 ⇓*i*P **Pb 20 10 53.5 -0.9**
comp=Z,43nm,0.2s
MTBS *e*S **Sb 20 11 41.5 +2.3**
comp=Z,424nm,0.3s
MTBS Maitube 3.72 246 Pg **Pb 20 10 53.5 -0.9**
comp=Z,43nm,0.2s
MTBS Lg Lg 20 11 41.5
comp=Z,424nm,0.3s
MTBS Maitube 3.72 246 ⇓*i*PN **Pb 20 10 53.5 -0.9**
MTBS *e*S **Sb 20 11 41.5 +2.3**
ZSN Zaisan 3.78 43 *e*P **Pb 20 10 55.5 0.0**
comp=Z,34nm,0.3s
ZSN *e*S **Sb 20 11 43.9 +3.1**
comp=Z,261nm,0.5s
ZSN Zaisan 3.78 43 Pg **Pb 20 10 55.5 0.0**
comp=Z,34nm,0.3s
ZSN Lg Lg 20 11 43.9
comp=Z,261nm,0.5s
ZSN Zaisan 3.78 43 *e*PN **Pb 20 10 55.5 0.0**
KRBS Karabastau 4.02 257 *e*P **Pb 20 10 59.4 -0.1**
comp=Z,41nm,0.3s
KRBS *e*S **Sb 20 11 50.5 +2.8**
comp=Z,115nm,0.4s
KRBS Karabastau 4.02 257 Pg **Pb 20 10 59.4 -0.1**
comp=Z,41nm,0.3s
KRBS Lg Lg 20 11 50.5
comp=Z,115nm,0.4s
KRBS Karabastau 4.02 257 *e*PN **Pb 20 10 59.4 -0.1**
KST Kastek 4.07 247 *e*P **Pb 20 11 00.7 +0.4**
comp=Z,59nm,0.4s
KST *e*S **Sb 20 11 54.0 +4.9**
comp=Z,192nm,0.5s
KST Kastek 4.07 247 Pg **Pb 20 11 00.7 +0.4**
comp=Z,59nm,0.4s
KST Lg Lg 20 11 54.0
comp=Z,192nm,0.5s
KST Kastek 4.07 247 *e*PN **Pb 20 11 00.7 +0.4**
DGS Degeres 4.11 251 *e*P **Pb 20 11 01.4 +0.3**
comp=Z,62nm,0.5s
DGS *e*S **Sb 20 11 55.1 +4.8**
comp=Z,246nm,0.3s
DGS Degeres 4.11 251 Pg **Pb 20 11 01.4 +0.3**
comp=Z,62nm,0.5s
DGS Lg Lg 20 11 55.1
comp=Z,246nm,0.3s
DGS Degeres 4.11 251 *e*PN **Pb 20 11 01.4 +0.3**
BOOM Boomskoye usch 4.36 241 PN **Pn 20 10 56.9 +3.0**
BOOM Boomskoye usch 4.36 241 Pn **Pn 20 10 56.9 +3.0**
TKM2 Tokmak 2 4.36 247 ⇓Pn **Pn 20 10 54.7 +0.6**
comp=Z,3.5nm,0.8s
TKM2 ⇓Pg **Pb 20 11 05.8 +0.4**
comp=Z,15nm,0.4s
TKM2 ⇑Lg Lg 20 12 05.4
comp=Z,110nm,0.7s
TKM2 Tokmak 2 4.36 247 PN **Pn 20 10 54.6 +0.6**
SGDS Sogindy 4.82 257 Pg **Pb 20 11 14.1 +0.9**
comp=Z,14nm,0.3s
SGDS Lg Lg 20 12 17.2
comp=Z,120nm,0.5s
WMQ Urumqi 4.84 99 *e*Pn **Pn 20 11 03.8 +3.4**
WMQ Sn **Sn 20 11 58.4 +2.9**
WMQ smax smax
comp=Z,130nm,0.7s
WMQ smax smax
comp=Z,120nm,0.9s
WMQ Urumqi 4.84 99 PN **Pb 20 11 09.4 -4.0**
WMQ Urumqi 4.84 99 Pb 20 11 09.3 -4.0
BTLS Baital 5.01 276 *e*P **Pb 20 11 18.6 +2.4**
comp=Z,12nm,0.4s
BTLS *e*S **Sb 20 12 24.0 +8.0**
comp=Z,12nm,0.7s
BTLS Baital 5.01 276 Pg **Pb 20 11 18.6 +2.4**
comp=Z,12nm,0.4s
BTLS Lg Lg 20 12 24.0
comp=Z,12nm,0.7s
FRU1 Bishkek 5.05 250 PN **Pn 20 11 06.4 +3.1**
FRU1 Bishkek 5.05 250 Pn 20 11 06.4 +3.1
AAK Ala-Archa 5.22 249 ⇓Pn **Pn 20 11 05.5 -0.2**
comp=Z,1.7nm,0.4s
AAK ⇑Pg **Pb 20 11 21.6 +1.7**
comp=Z,8.2nm,0.4s
AAK ⇑Lg Lg 20 12 32.6
comp=Z,92nm,0.7s
AAK Ala-Archa 5.22 249 *i* PN **Pn 20 11 06.7 +1.0**
SEM Semipalatinsk 5.71 355 *e*P Pb 20 11 33.8 +5.5
comp=Z,9.1nm,0.3s
SEM *e*S Sb 20 12 49.0 +13
comp=Z,72nm,0.5s
SEM Semipalatinsk 5.71 355 Pg Pb 20 11 33.8 +5.5
comp=Z,9.1nm,0.3s
SEM Lg Lg 20 12 49.0
comp=Z,72nm,0.5s
MRKS Merke 6.03 253 *e*P **Pb 20 11 37.5 +3.8**
comp=Z,14nm,0.4s
MRKS *e*S Sb 20 12 56.3 +11
comp=Z,38nm,0.5s
MRKS Merke 6.03 253 Pg **Pb 20 11 37.5 +3.8**
comp=Z,14nm,0.4s
MRKS Lg Lg 20 12 56.3
comp=Z,38nm,0.5s
KURBB Kurchatov Arra 6.14 345 Pn **Pn 20 11 16.2 -1.9**
comp=Z,0.2nm,0.3s,baz=162,slow=14,SNR=4.7
KURBB Sn **Sn 20 12 23.8 -3.6**
comp=Z,0.8nm,0.3s,baz=168,slow=32,SNR=3.3
KURBB Lg Lg 20 12 53.8
comp=Z,1.4nm,0.3s,baz=168,slow=23,SNR=6.1
KURBB Kurchatov Arra 6.14 345 ⇓Pn **Pn 20 11 17.7 -0.4**
comp=Z,5.1nm,0.5s
KURBB ⇑Lg Lg 20 12 58.7
comp=Z,162nm,0.7s
KURBB Kurchatov Arra 6.14 345 PN **Pn 20 11 17.7 -0.4**
KURK Kurchatov 6.21 345 *i* PN **Pn 20 11 18.7 -0.4**
KURK Kurchatov 6.21 345 Pn **Pn 20 11 18.7 -0.4**
DZA Taraz 7.29 259 Pg Pb 20 12 02.2 +7.0
comp=Z,24nm,0.1s
DZA Lg Lg 20 13 38.1
comp=Z,117nm,0.4s
BRZS Berezniki 7.75 316 Pg Pb 20 12 10.9 +8.0
comp=Z,3.1nm,0.3s
BRZS Lg Lg 20 13 53.4
comp=Z,36nm,0.9s
KK31 Karatay Array 7.80 262 ⇓Pn **Pn 20 11 41.1 +0.1**
comp=Z,1.5nm,0.4s,baz=72,slow=14,SNR=16
KK31 ⇑Pg Pb 20 12 08.6 +4.8
comp=Z,2.9nm,0.5s,baz=72,slow=17,SNR=9.4
KK31 ⇑Lg Lg 20 13 53.1
comp=Z,14nm,0.5s,baz=59,slow=29,SNR=2.6
KK31 Karatay Array 7.80 262 P **Pn 20 11 41.3 +0.2**
KK31 Karatay Array 7.80 262 Pn 20 11 41.3 +0.2
KKAR Karatay Array 7.80 262 P **Pn 20 11 41.2 +0.1**
KKAR Karatay Array 7.80 262 Pn 20 11 41.1 +0.1
KKAR Karatay Array 7.80 262 Pn 20 11 40.9 -0.1
BRLS Borolday 8.30 262 Pg Pb 20 12 23.1 +11
comp=Z,10.0nm,0.3s
BRLS Lg Lg 20 14 14.3
comp=Z,21nm,0.6s
IUG Iuzhnay 8.45 256 Pg Pb 20 12 21.6 +6.8
comp=Z,8.2nm,0.5s
IUG Lg Lg 20 14 12.8
comp=Z,60nm,1.1s
ZAA0 Zalesovo Array 9.54 13 ⇑Pn **Pn 20 12 04.2 -0.5**
comp=Z,1.0nm,0.9s
ZAA0 ⇑Sn **Sn 20 13 51.6 +0.7**
comp=Z,0.9nm,0.6s
ZAA0 ⇓Lg Lg 20 14 48.7
comp=Z,4.0nm,0.8s
ZAA0 Zalesovo Array 9.54 13 Pn **Pn 20 12 02.9 -1.8**
ZALV Zalesovo Beam 9.54 13 Pn **Pn 20 12 03.2 -1.5**
comp=Z,0.8nm,0.3s,baz=200,slow=13,SNR=15
ZALV Sn **Sn 20 13 45.9 -5.0**
comp=Z,0.7nm,0.3s,baz=193,slow=22,SNR=2.6
ZALV Lg Lg 20 14 43.0
comp=Z,0.4nm,0.3s,baz=193,slow=25,SNR=3.8
ZALV Zalesovo Beam 9.54 13 *i* P **Pn 20 12 03.9 -0.8**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
GAR Garm 9.86 238 Pn **Pn 20 12 12.5 +3.2**
CHGR Chuyangaron 10.78 240 Pn Pn 20 12 26.6 +4.7
BVAR Borovoye Array 10.87 324 Pn **Pn 20 12 20.2 -2.8**
comp=Z,0.3nm,0.3s,baz=129,slow=14,SNR=2.1
BVAR Lg Lg 20 15 26.2
comp=Z,1.0nm,0.3s,baz=195,slow=17,SNR=8.4
BRVK Borovoye 10.94 323 ⇓Lg Lg 20 15 31.1
comp=Z,53nm,0.9s
BRVK Borovoye 10.94 323 *i* P **Pn 20 12 22.3 -1.6**
BRVK Borovoye 10.94 323 Pn **Pn 20 12 20.7 -3.2**
AB31 Akbulak array 15.10 295 P **Pn 20 13 17.9 -2.7**
ABKAR Akbulak array 15.10 295 Pn 20 13 16.7 -4.0
AKTO Aktyubinsk 16.54 298 Pn **Pn 20 13 35.5 -3.7**
comp=Z,0.1nm,0.3s,baz=110,slow=9.0,SNR=2.3
AKTO Lg Lg 20 18 24.1
comp=Z,0.3nm,0.3s,baz=126,slow=20,SNR=1.9
SONM Songino Array 17.75 71 P **P 20 13 55.3 +0.2**
comp=Z,0.1nm,0.3s,baz=268,slow=11,SNR=2.2
SONM Lg Lg 20 19 10.0
comp=Z,0.0nm,0.3s,baz=272,slow=33,SNR=3.0
SONM Songino Array 17.75 71 P **P 20 13 58.8 +3.7**
SONM pmax pmax
comp=Z,2.0nm,1.4s
SONM Songino Array 17.75 71 Pn **P 20 13 58.8 +3.7**
ULN Ulaanbaatar 18.19 71 *i* P **P 20 14 03.2 +3.3**
ULN pmax pmax
comp=Z,2.0nm,1.1s
ARU Arti 18.38 318 Lg Lg 20 19 23.5
comp=Z,0.0nm,0.3s,baz=23,slow=12,SNR=5.0
HHC Hu-ho-hao-te 22.64 89 *e*P P 20 14 55.9 +7.7
HHC pmax pmax
comp=Z,12nm,1.2s
KMI Kunming 26.28 131 P P 20 15 30.9 +8.2
KMI Kunming 26.28 131 P P 20 15 30.9 +8.2
KIV Kislovodsk 27.30 282 *e*P **P 20 15 31.4 -0.2**
KIV pmax pmax
comp=Z,8.0nm,1.1s
KIV Kislovodsk 27.30 282 P **P 20 15 30.1 -1.4**
GEVA Gevas 28.99 271 P **P 20 15 45.6 -1.2**
GEVA IAmb IAmb 20 15 53.0
comp=Z,6.7nm,1.0s
KOPT Kop Dagi 30.12 275 P **P 20 15 54.1 -2.8**
KOPT IAmb IAmb 20 15 57.9
comp=Z,4.2nm,0.7s
HSPB Hornsund (broa 8.64 38 Pn **Pn 20 13 06.3 +1.3**
comp=Z,1.5nm,0.4s
HSPB Hornsund (broa 8.64 38 *e*P **Pn 20 13 06.3 +1.3**
BRBB Barentsburg B 9.01 31 Pn **Pn 20 13 13.7 +3.7**
BRBB Barentsburg B 9.01 31 Pn **Pn 20 13 13.7 +3.7**
KBS Kingsbay 9.22 25 Pn **Pn 20 13 14.0 +1.2**
KBS Sn **Sn 20 14 53.4 -3.1**
KBS Kingsbay 9.22 25 *e*P **Pn 20 13 14.0 +1.2**
KBS *e*S **Sn 20 14 53.3 -3.1**
KBS Kingsbay 9.22 25 *i* P **Pn 20 13 13.6 +0.7**
SPA0 Spitsbergen Ar 9.42 32 Pn **Pn 20 13 18.0 +2.4**
baz=224,slow=16
SPA0 Spitsbergen Ar 9.42 32 *e*P **Pn 20 13 18.0 +2.4**
HOPEN Hopen 10.51 45 *e*P **Pn 20 13 32.5 +1.9**

NAO ***11*** *20:11:00.9±3.3, 71°.15N×7°.88W, ML3.3*
BER ***11*** *20:11:01.3±0.4, 71°.14N×8°.22W, h16km±9km, ML3.5, ML3.3(NAO), Confirmed Earthquake*
ISC 11 20:11:00.1±1.0,**71°.28N**±0°.05×**8°.5W**±0°.1,**h10**km,**n18,**
σ1§**81**/25,**2C-1D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.26**	**176**	⇑*i*P	**Pg**	**20 11 05.5**	**+0.2**
JNW				*e*S	**Sg**	**20 11 08.5**	**-0.2**
JNW				IAML		20 11 10.5	
	comp=Z,10μm,0.3s						
JMIC	**Jan Mayen**	**0.30**	**181**	Pg	**Pg**	**20 11 06.0**	**-0.1**
JMIC				Lg	Lg	20 11 09.4	
JMIC	**Jan Mayen**	**0.30**	**181**	*e*P	**Pg**	**20 11 05.9**	**-0.2**
JMIC				*e*S	**Sg**	**20 11 09.4**	**-0.7**
JMIC				IAML		20 11 12.4	
	comp=Z,5μm,0.5s						
JNE	**Jan Mayen East**	**0.30**	**168**	⇑*i*P	**Pg**	**20 11 05.7**	**-0.5**
JNE				*e*S	**Sg**	**20 11 08.8**	**-1.3**
JNE				IAML		20 11 09.8	
	comp=Z,5μm,0.3s						
JMI	**Jan Mayen**	**0.36**	**193**	⇓*i*P	**Pg**	**20 11 07.4**	**+0.1**
JMI				*e*S	**Sg**	**20 11 12.0**	**-0.2**
JMI				IAML		20 11 12.9	
	comp=Z,4μm,0.2s						
DBG	**Daneborg**	**4.62**	**317**	*e*P	**Pn**	**20 12 10.3**	**+0.5**
DBG	**Daneborg**	**4.62**	**317**	*i* P	**Pn**	**20 12 10.2**	**+0.4**
DBG				IAML		20 13 03.2	
	comp=Z,1.5nm,0.3s						
DAG	**Danmarks Havn** baz=145,slow=18	**6.18**	**338**	*e*	**Pn**	**20 12 31.0**	**-0.2**
DAG				*i* P	**Pn**	**20 12 32.2**	**+0.9**
DAG				IAML		20 13 42.0	

WEL 11 20:11:28.4, 44°S±7°×**16°9E**±°,**h5**km±5km,**M2.7**/7,**ML2.7**/6,
MLv2.7/7,**Error ellipse: s-maj=0.0km s-min=0.0km**
az=63.5,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCZ	**Jackson Bay**	**0.41**	**263**	P	Pb	20 11 38.0	-0.2
FOZ	**Fox Glacier**	**0.60**	**34**	P	Pb	20 11 41.1	-0.2
LBZ	**Lake Benmore**	**0.70**	**121**	P	Pb	20 11 43.4	+0.4
WKZ	**Wanaka**	**0.84**	**197**	P	Pg	20 11 44.8	+0.4
GCSZ	**Gaunt Creek Bo**	**1.00**	**45**	P	Pb	20 11 48.5	+0.4
RPZ	**Rata Peaks**	**1.27**	**76**	P	Pn	20 11 54.6	+1.9
ARCZ	**Arundel**	**1.32**	**87**	P	Pg	20 11 55.0	+1.4
ODZ	**Otahua Downs**	**1.37**	**138**	P	Pg	20 11 55.0	+0.3
MLZ	**Mavora Lakes**	**1.60**	**213**	P	Pg	20 11 59.1	0.0
TUZ	**Tuapeka**	**1.94**	**174**	P	Pb	20 12 03.6	-0.5
WHZ	**Wether Hill Ro**	**2.12**	**208**	P	Pb	20 12 07.5	+0.3
LTZ	**Lake Taylor**	**2.46**	**61**	P	Pg	20 12 15.1	-0.4
SYZ	**Scrubby Hill**	**2.52**	**183**	P	Pb	20 12 14.6	+0.6

NNC ***11*** *20:21:17.0±1.6, 52°.77N×80°.11E, h13km±9km, mb3.2, mpv3.1, Error ellipse: s-maj=21.7km s-min=5.7km az=122.0*
SOME ***11*** *20:21:21.6, 52°.77N×80°.07E, h15km*
ASRS ***11*** *20:21:21.6±0.3, 53°N±2°×8°.1E±°, h10km, MLh3.6/9, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed OriginPublished*
ISC 11 20:21:23.8±1.0,**52°.59N**±0°.03×**80°.73E**±0°.05,**h10**km,**n28,**
σ2§**51**/40,**12C-3D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SEM	**Semipalatinsk** 63nm,0.2s	**2.21**	**188**	*e*P	**Pg**	**20 22 09.4**	**+3.4**
SEM				*e*S	**Sg**	**20 22 39.3**	**+4.7**
	198nm,0.1s						
SEM	**Semipalatinsk** 63nm,0.2s	**2.21**	**188**	Pg	**Pg**	**20 22 09.8**	**+3.7**
SEM				Lg	Lg	20 22 36.7	
	202nm,0.1s						
KURK	**Kurchatov**	**2.29**	**216**	P	**Pn**	**20 21 59.6**	**-2.0**
KURK				S	**Sn**	**20 22 25.3**	**-4.6**
KURBB	**Kurchatov Arra** 6.3nm,0.3s	**2.40**	**216**	⇑Pg	**Pn**	**20 21 59.9**	**-3.2**
KURBB				⇑Lg	Lg	20 22 31.1	
	170nm,0.5s						
ALXA	**Alekseevka, NS**	**2.59**	**24**	P	**Pn**	**20 22 04.1**	**-1.5**
ALXA				S	**Sn**	**20 22 37.6**	**+0.6**
NHES	**Novosibirsk, N**	**2.64**	**30**	S	**Sn**	**20 22 39.5**	**+1.1**
KHAR	**Kharino, NSO,**	**2.65**	**39**	P	**Pn**	**20 22 07.1**	**+0.7**
KHAR				S	**Sn**	**20 22 41.2**	**+2.7**
NVS	**Novosibirsk**	**2.70**	**32**	P	**Pn**	**20 22 05.1**	**-2.0**
NVS				S	**Sn**	**20 22 38.5**	**-1.4**
NVSII	**Novosibirsk**	**2.70**	**32**	P	**Pn**	**20 22 05.4**	**-1.8**
NVSII				S	**Sn**	**20 22 37.8**	**-2.1**
ZAA0	**Zalesovo Array** 0.1nm,0.3s	**2.80**	**59**	⇓Pn	**Pn**	**20 22 05.6**	**-3.0**
ZAA0				⇑Pg	**Pb**	**20 22 11.9**	**-1.9**
	0.6nm,0.5s						
ZAA0				⇑Sn	**Sn**	**20 22 42.4**	**0.0**
	0.6nm,0.3s						
ZAA0				⇑Lg	Lg	20 22 53.7	
	6.2nm,0.6s						
UKR	**Ust'-Kan**	**3.01**	**122**	P	**Pn**	**20 22 10.1**	**-1.4**
UKR				S	**Sn**	**20 22 48.0**	**+0.4**
ELT	**Eltsovka**	**3.40**	**76**	P	**Pn**	**20 22 16.2**	**-0.6**
ELT				S	**Sn**	**20 22 56.7**	**-0.4**
SALR	**Pechorkino, Sa**	**3.48**	**56**	S	**Sn**	**20 22 58.4**	**-0.8**
POMOR	**Pomortsevo, Ku**	**3.91**	**60**	S	**Sn**	**20 23 12.4**	**+2.7**
ARTR	**Artybash**	**4.11**	**99**	S	**Sn**	**20 23 13.5**	**-1.1**
CHBI	**Chibit, Altay**	**4.81**	**116**	P	**Pn**	**20 22 35.6**	**-0.7**
CHBI				S	**Sn**	**20 23 32.5**	**+0.4**
AKAR	**Aktash**	**4.87**	**115**	P	**Pn**	**20 22 35.8**	**-1.3**
AKAR				S	**Sn**	**20 23 30.2**	**-3.3**
ULGR	**Ulagan, Altay**	**4.92**	**111**	P	**Pn**	**20 22 35.2**	**-2.6**
ULGR				S	**Sn**	**20 23 36.0**	**+1.3**
BRZS	**Berezniki** 1.5nm,0.1s	**5.69**	**246**	Pg	**Pn**	**20 22 46.4**	**-1.9**
BRZS				Lg	Lg	20 23 41.8	
	3.9nm,0.1s						
ZSN	**Zaisan** 2.6nm,0.4s	**5.79**	**151**	*e*P	**Pb**	**20 23 08.5**	**+3.6**
ZSN				*e*S	**Sg**	**20 24 24.3**	**-5.4**
	14nm,0.5s						
ZSN	**Zaisan** 4.4nm,2.0s	**5.79**	**151**	Pg	Pn	20 22 55.0	+5.2
ZSN				Lg	Lg	20 23 57.2	
	14nm,0.5s						
VEH	**Verkhnyaya Baz**	**5.84**	**80**	P	**Pn**	**20 22 47.9**	**-2.4**
VEH				S	**Sn**	**20 23 55.6**	**-1.7**
MAKZ	**Makanchi** 1.4nm,0.9s	**5.85**	**172**	⇑Pn	**Pn**	**20 22 47.6**	**-2.8**
MAKZ				⇑Sn	**Sn**	**20 23 57.6**	**+0.1**
	1.1nm,0.3s						
MAKZ				⇑Lg	Lg	20 24 28.5	
	9.0nm,0.8s						
MK31	**Makanchi Array** 0.2nm,0.2s,baz=359,slow=10,SNR=21	**5.89**	**170**	⇑Pn	**Pn**	**20 22 47.9**	**-3.1**
MK31				⇑Sn	**Sn**	**20 23 56.2**	**-2.4**
	1.7nm,0.6s,baz=351,slow=29,SNR=3.7						
MK31				⇑Lg	Lg	20 24 30.6	
	3.4nm,0.5s,baz=356,slow=27,SNR=8.3						
KUU	**Kurty** 6.3nm,0.3s	**9.18**	**200**	Lg	Lg	20 25 06.1	
PDGK	**Podgornoye** 4.1nm,0.8s	**9.31**	**186**	⇓Lg	Lg	20 26 13.9	
TKM2	**Tokmak 2** 6.2nm,1.1s	**10.27**	**202**	⇓Lg	Lg	20 26 43.2	
AAK	**Ala-Archa** 4.6nm,1.1s	**10.81**	**205**	⇑Lg	Lg	20 27 00.6	

IPEC ***11*** *20:21:27.2±0.2, 51°.52N×16°.19E, h0km, ML2.1/3, Error ellipse: s-maj=1.7km s-min=0.8km az=32.0*
PRU ***11*** *20:21:28.9±0.0, 51°.43N×16°.06E, h0km*
VIE ***11*** *20:21:29.4±0.5, 51°.38N×15°.92E, h0km, ml2.6/4, Error ellipse: s-maj=3.5km s-min=3.0km az=3.0 82 km WNW of Wroclaw Suspected Mining induced.*
ISC 11 20:21:26.4±0.9,**51°.55N**±0°.03×**16°.14E**±0°.03,**h0**km,**n31,**
σ1§**10**/58,**Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	**Pg**	**20 21 40.5**	**+0.5**
KSP				*e*Sg	**Sg**	**20 21 49.0**	**-0.3**
CHVC	**Chvalec**	**0.96**	**183**	*e*PG	**Pg**	**20 21 45.3**	**+0.5**
CHVC				*e*SG	**Sg**	**20 21 56.3**	**-1.0**
	comp=Z,18nm,0.3s						
OSTC	**Ostas**	**0.99**	**177**	*e*PG	**Pg**	**20 21 45.7**	**+0.3**
OSTC				*e*SG	**Sg**	**20 21 57.5**	**-0.8**
	comp=Z,34nm,0.2s						
UPC	**Upice**	**1.04**	**184**	*e*PG	**Pg**	**20 21 46.6**	**+0.2**
UPC				*e*SG	**Sg**	**20 21 59.1**	**-0.8**
	comp=Z,47nm,0.2s						
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**20 21 49.2**	**-0.2**
DPC				*e*SG	**Sg**	**20 22 04.2**	**-0.9**
	comp=Z,18nm,0.5s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	**Pg**	**20 21 53.9**	**+0.3**
PVCC				*e*SG	**Sg**	**20 22 11.8**	**-0.2**
	comp=Z,116nm,0.2s						
KRLC	**Kraliky**	**1.53**	**164**	*e*PG	**Pn**	**20 21 55.7**	**+0.7**
KRLC				*e*SG	**Sg**	**20 22 13.8**	**-1.7**
	comp=Z,28nm,0.3s						
BRG	**Berggiesshubel**	**1.54**	**245**	PG	**Pb**	**20 21 56.1**	**+0.4**
BRG				SG	**Sn**	**20 22 16.2**	**+0.5**

	52nm,0.3s								
PRA	**Prague**	**1.83**	**217**	*e*SG		**Sb**	**20**	**22**	**23.5 -0.7**
	comp=Z,12nm,0.9s								
PRU	**Pruhonice**	**1.86**	**214**	*e*PG		**Pn**	**20**	**22**	**00.6 +1.1**
PRU				*e*SG		**Sb**	**20**	**22**	**24.2 -0.8**
	comp=Z,14nm,0.3s								
CLL	**Collm**	**1.98**	**264**	*e*Pg		**Pb**	**20**	**22**	**04.0 +0.8**
CLL				*i* Sg		**Sg**	**20**	**22**	**30.3 +0.5**
	comp=Z,13nm,0.3s								
MORC	**Moravsky Berou**	**1.99**	**153**	*e*PN		**Pn**	**20**	**22**	**01.2 -0.1**
MORC				*e*SG		**Sb**	**20**	**22**	**28.0 -0.7**
MORC	**Moravsky Berou**	**1.99**	**153**	*e*Pn		**Pn**	**20**	**22**	**01.1 -0.2**
	baz=334								
MORC				*e*Sg		**Sb**	**20**	**22**	**28.0 -0.7**
	comp=Z,17nm,0.3s,baz=334								
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*PG		**Pb**	**20**	**22**	**06.7 +0.8**
OKC				*e*SG		**Sg**	**20**	**22**	**34.1 -0.9**
	comp=Z,23nm,0.9s								
VRAC	**Vranov**	**2.26**	**172**	*e*PN		**Pn**	**20**	**22**	**05.9 +0.9**
VRAC				*e*SG		**Sb**	**20**	**22**	**36.8 +0.2**
VRAC	**Vranov**	**2.26**	**172**	*e*Pn		**Pn**	**20**	**22**	**05.9 +0.9**
	baz=354								
VRAC				*e*Sg		**Sb**	**20**	**22**	**36.7 +0.2**
	comp=Z,7.6nm,0.2s,baz=354								
PBCC	**Pribram**	**2.31**	**217**	*e*SG		**Sg**	**20**	**22**	**39.1 -1.4**
KRUC	**Moravsky**	**2.50**	**176**	*e*PG		**Pb**	**20**	**22**	**11.7 -0.3**
KRUC				*e*SG		**Sg**	**20**	**22**	**44.8 -1.7**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pg		**Pb**	**20**	**22**	**11.7 -0.3**
	baz=357								
KRUC				*e*Sg		**Sg**	**20**	**22**	**44.7 -1.7**
	comp=Z,7.1nm,0.3s,baz=357								
OJC	**Ojcow**	**2.67**	**118**	*e*Pg		**Pg**	**20**	**22**	**18.4 +0.9**
OJC				*e*Sg		**Sg**	**20**	**22**	**53.4 +1.2**
NKC	**Novy Kostel**	**2.68**	**242**	*e*PG		**Pb**	**20**	**22**	**16.0 +0.8**
NKC				*e*SG		**Sg**	**20**	**22**	**51.5 -0.9**
	comp=Z,22nm,0.3s								
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN		**Pn**	**20**	**22**	**14.6 +0.5**
KHC				*e*PG		**Pb**	**20**	**22**	**19.6 +0.3**
KHC				*e*SN		**Sn**	**20**	**22**	**48.0 -1.9**
KHC				*e*SG		**Sg**	**20**	**22**	**58.1 -2.1**
	comp=Z,7.7nm,0.3s								
LANS	**Liptovska Anna**	**3.21**	**137**	*e*SG		**Sg**	**20**	**23**	**09.7 +0.2**
MODS	**Modra-Piesok**	**3.26**	**166**	*e*SG		**Sg**	**20**	**23**	**09.9 -1.2**
VYHS	**Vyhne**	**3.52**	**149**	*e*PG		**Pg**	**20**	**22**	**34.4 +0.6**
CONA	**Conrad Observa**	**3.63**	**183**	*e*Pn		**Pn**	**20**	**22**	**23.7 -0.2**
	comp=Z,0.1nm,0.1s								
CONA				*e*Sn		**Sn**	**20**	**23**	**07.6 +0.2**
	comp=Z,5.8nm,0.4s								
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P		**Pn**	**20**	**22**	**24.8 +0.8**
BSD				*i* S		**Sn**	**20**	**23**	**05.0 -2.6**
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P		**Pn**	**20**	**22**	**24.9 +0.8**
BSD				*i* S		**Sn**	**20**	**23**	**05.0 -2.6**
BSD				IAML			20	23	06.5
	comp=Z,1.4nm,0.6s								
MOA	**Molln**	**3.90**	**199**	*e*Sg		**Sg**	**20**	**23**	**30.9 -0.6**
	comp=Z,1.9nm,0.2s								
ARSA	**Arzberg**	**4.32**	**186**	*e*Pn		**Pn**	**20**	**22**	**33.9 +0.5**
	comp=Z,0.9nm,0.3s								
ARSA				*e*Sn		**Sn**	**20**	**23**	**23.7 -0.7**
	comp=Z,0.4nm,0.3s								
KBA	**Koelnbreinsper**	**4.83**	**203**	*e*Pn		**Pn**	**20**	**22**	**42.3 +1.8**
	comp=Z,0.7nm,0.3s								
KBA				*e*Sn		**Sn**	**20**	**23**	**40.2 +3.0**
	comp=Z,1.9nm,0.3s								

IDC 11 20:30:47.2±2.5, 5°63'S×130°62'E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.2/33, mbtmp3.2/3, ML3.3/2, Error ellipse: s-maj=148.7km s-min=31.7km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
FITZ	**Fitzroy Crossi**	**13.31**	**201**	Sn	Sn	20 36 20.8		-5.7
	0.1nm,0.3s,baz=132,slow=21,SNR=1.3							
WRA	**Warramunga Arr**	**14.68**	**166**	Pn	Pn	20 34 14.5		-1.8
	0.1nm,0.3s,baz=349,slow=13,SNR=14							
WRA				Sn	Sn	20 36 47.8		-12
	0.1nm,0.3s,baz=346,slow=23,SNR=2.1							
ASAR	**Alice Springs**	**18.21**	**170**	P	P	20 35 02.5		+0.6
	0.1nm,0.3s,baz=353,slow=11,SNR=6.6							
MKAR	**Makanchi Array**	**67.43**	**326**	P	P	20 41 44.8		0.0
	0.2nm,0.4s,baz=119,slow=7.9,SNR=5.1							

NAO 11 20:38:28.3±1.5, 71°09'N×7°72'W, ML3.5
DNK 11 20:38:29.0±1.9, 71°13'N×9°22'W, h15km±171km, ML2.6
BER 11 20:38:30.4±2.5, 71°07'N×8°65'W, h22km±8km, ML3.0, ML3.5(NAO), Confirmed Earthquake

ISC 11 20:38:27.8±0.9, 71°13'N±0°09'×8°66'W±0°09, h30km±8km, n40, σ1°43/48, 3D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
JNW	**Jan Mayen West**	**0.12**	**143**	*i*P	**Pb**	**20**	**38**	**33.3 0.0**
JNW				*e*S	**Sb**	**20**	**38**	**35.8 -1.3**
JNW				IAML		20	38	38.9
	comp=Z,10μm,0.7s							
JMIC	**Jan Mayen**	**0.15**	**161**	Pg	**Pb**	**20**	**38**	**33.8 +0.2**
JMIC				Lg	**Lg**	20	38	37.4
JMIC	**Jan Mayen**	**0.15**	**161**	*i*P	**Pb**	**20**	**38**	**33.8 +0.2**
JMIC				*e*S	**Sb**	**20**	**38**	**37.3 -0.2**
JMIC				IAML		20	38	40.3
	comp=Z,9μm,0.4s							
JNE	**Jan Mayen East**	**0.18**	**139**	*e*P	**Pb**	**20**	**38**	**33.4 -0.5**
JNE				IAML		20	38	37.7
	comp=Z,8μm,0.7s							
JMI	**Jan Mayen**	**0.20**	**187**	*i*P	**Pn**	**20**	**38**	**35.2 +0.5**
JMI				*e*S	**Sb**	**20**	**38**	**39.2 +0.9**
JMI				IAML		20	38	40.0
	comp=Z,4μm,0.3s							
DBG	**Daneborg**	**4.69**	**318**	*i* P	**Pn**	**20**	**39**	**37.8 +1.4**
DBG				IAML		20	40	17.8
	comp=Z,2.3nm,0.4s							
DBG				*i* S	**Sn**	**20**	**40**	**29.1 -0.6**
DBG	**Daneborg**	**4.69**	**318**	*i* P	**Pn**	**20**	**39**	**37.8 +1.4**
DBG				IAML		20	40	17.8
	comp=Z,2.3nm,0.4s							
DBG				*i* S	**Sn**	**20**	**40**	**29.1 -0.6**
DAG	**Danmarks Havn**	**6.30**	**339**	*e*P	**Pn**	**20**	**39**	**59.9 +1.5**
DAG				*i* S	**Sn**	**20**	**41**	**06.3 -2.9**
DAG				IAML		20	41	10.3
	comp=Z,4.7nm,0.4s							
DAG	**Danmarks Havn**	**6.30**	**339**	*e*	**Pn**	**20**	**39**	**59.4 +1.0**
	baz=143,slow=18							
DAG				*i* P	**Pn**	**20**	**40**	**00.1 +1.7**
DAG				*i* S	**Sn**	**20**	**41**	**06.3 -2.9**
DAG				IAML		20	41	10.3
	comp=Z,4.7nm,0.4s							
N2RO	**R st**	**8.17**	**106**	*e*P	**Pn**	**20**	**40**	**23.2 -0.8**
N2VA	**Vr y**	**8.26**	**104**	*e*P	**Pn**	**20**	**40**	**24.2 -1.1**
LOF	**Lofoten**	**8.28**	**101**	*e*P	**Pn**	**20**	**40**	**24.8 -0.7**
N2VI	**Vinje**	**8.39**	**99**	*e*P	**Pn**	**20**	**40**	**26.2 -0.9**
BJO1	**Bjornoya**	**8.79**	**55**	Pn	**Pn**	**20**	**40**	**34.3 +1.7**
HSPB	**Hornsund (broa**	**8.80**	**37**	*e*P	**Pn**	**20**	**40**	**34.0 +1.3**
STEI	**Steigen**	**8.93**	**99**	*e*P	**Pn**	**20**	**40**	**33.7 -0.7**
NBB30	**Finnes**	**9.00**	**107**	*e*P	**Pn**	**20**	**40**	**33.8 -1.6**
NBB08	**Skaug oppvekst**	**9.04**	**103**	*e*P	**Pn**	**20**	**40**	**35.0 -0.9**
NBB05	**Inndyr**	**9.05**	**106**	*e*P	**Pn**	**20**	**40**	**34.0 -2.1**
NBB40	**Tonnes**	**9.06**	**110**	*e*P	**Pn**	**20**	**40**	**36.2 -0.1**
N2TV	**T rnvik**	**9.09**	**102**	*e*P	**Pn**	**20**	**40**	**35.7 -1.0**
KONS	**Konsvik**	**9.11**	**110**	*e*P	**Pn**	**20**	**40**	**36.5 -0.4**
N2IH	**Innhavet**	**9.13**	**98**	*e*P	**Pn**	**20**	**40**	**36.9 -0.3**
BRBB	**Barentsburg B**	**9.17**	**30**	Pn	**Pn**	**20**	**40**	**38.8 +1.1**
BRBB	**Barentsburg B**	**9.17**	**30**	*e*P	**Pn**	**20**	**40**	**39.8 +2.1**
STOK	**Stokkvaagen**	**9.19**	**111**	*e*P	**Pn**	**20**	**40**	**37.7 -0.2**
FAUS	**Fauske**	**9.25**	**102**	*e*P	**Pn**	**20**	**40**	**37.5 -1.3**
KBS	**Kingsbay**	**9.38**	**25**	Pn	**Pn**	**20**	**40**	**42.2 +1.6**
KBS	**Kingsbay**	**9.38**	**25**	*e*P	**Pn**	**20**	**40**	**42.0 +1.4**
KBS				*i* P		20	40	42.7
KBS	**Kingsbay**	**9.38**	**25**	*i* P	**Pn**	**20**	**40**	**42.7 +2.0**
SPA0	**Spitsbergen Ar**	**9.58**	**32**	Pn	**Pn**	**20**	**40**	**45.8 +2.4**
	baz=225,slow=14							
SPA0	**Spitsbergen Ar**	**9.58**	**32**	Pn	**Pn**	**20**	**40**	**45.8 +2.4**
	baz=225,slow=14							
MOR8	**Moi Rana**	**9.73**	**109**	*e*P	**Pn**	**20**	**40**	**45.4 0.0**
NSS	**Namsos**	**10.17**	**120**	*e*P	**Pn**	**20**	**40**	**51.3 -0.1**
HOPEN	**Hopen**	**10.66**	**45**	Pn	**Pn**	**20**	**41**	**00.4 +2.2**
HOPEN	**Hopen**	**10.66**	**45**	*e*P	**Pn**	**20**	**40**	**60.0 +1.8**
AKN	**Aaknes**	**10.87**	**138**	*e*P	**Pn**	**20**	**40**	**58.6 -2.5**
ARA0	**ARCESS Array S**	**11.52**	**82**	Pn	**Pn**	**20**	**41**	**10.1 +0.2**
	baz=292,slow=12							
ARA0	**ARCESS Array S**	**11.52**	**82**	Pn	**Pn**	**20**	**41**	**10.1 +0.2**
	baz=292,slow=12							
NOD	**Norderasen**	**11.82**	**119**	*e*P	**Pn**	**20**	**41**	**14.3 +0.3**

IDC 11 20:42:18.8±3.3, 55°35'N×166°70'E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.3/39, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=95.2km s-min=25.1km az=158.0
KRSC 11 20:42:22.0±2.8, 55°36'N×166°20'E, h39km±38km, ML3.7

ISC 11 20:42:22.5±1.5, 55°47'N±0°09'×166°5'E±0°1, h20km, n26, σ1°34/23, mb3.4/4, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
KBTR	**Krutoberegovo**	**2.18**	**291**	*e*P	**Pn**	**20**	**43**	**55.5 -2.1**
KBTR				*e*S	**Sn**	**20**	**43**	**22.3 -1.7**
MKZ	**Mys Kozlova**	**2.87**	**253**	*e*P	**Pn**	**20**	**43**	**05.6 -1.5**
SRKR	**Sorokina**	**3.19**	**294**	*e*P	**Pn**	**20**	**43**	**11.0 -0.6**
ZLN	**Zelenaya**	**3.24**	**282**	*e*P	**Pn**	**20**	**43**	**12.8 +0.5**
BZWR	**Bezymyannyi-We**	**3.41**	**281**	*e*P	**Pn**	**20**	**43**	**16.1 +1.5**
TUMR	**Tumrok**	**3.60**	**270**	*e*P	**Pn**	**20**	**43**	**18.0 +0.7**
SRDR	**Sredinnyy**	**3.89**	**285**	*e*P	**Pn**	**20**	**43**	**21.6 +0.5**
SPN	**Mys Shipunski**	**4.46**	**240**	*e*P	**Pn**	**20**	**43**	**27.2 -1.7**
SPN				*e*S	**Sn**	**20**	**44**	**17.1 -3.0**
SMAR	**Somma**	**4.99**	**247**	*e*P	**Pn**	**20**	**43**	**36.3 -0.2**
UGLR	**Uglovaya**	**5.01**	**246**	*e*P	**Pn**	**20**	**43**	**36.7 +0.1**
KRX	**Arik**	**5.03**	**248**	*e*P	**Pn**	**20**	**43**	**36.6 -0.3**
GNL	**Ganaly**	**5.26**	**254**	*e*P	**Pn**	**20**	**43**	**40.9 +0.8**
KRMR	**Karymshinskiy**	**5.56**	**245**	*e*P	**Pn**	**20**	**43**	**46.0 +1.9**
RUS	**Russkaya**	**5.59**	**240**	*e*P	**Pn**	**20**	**43**	**43.9 -0.5**
PETK	**Petropavlovsk-**	**5.65**	**249**	Pn	**Pn**	**20**	**43**	**45.6 +0.3**
	2.3nm,0.3s,baz=63,slow=17,SNR=43							
PETK				Sn	**Sn**	**20**	**44**	**50.8 +1.3**
	0.5nm,0.3s,baz=14,slow=31,SNR=1.2							
GRL	**Gorelyy**	**5.74**	**243**	*e*P	**Pn**	**20**	**43**	**47.7 +1.0**
ILAR	**Eielson Array**	**24.46**	**49**	P	**P**	**20**	**47**	**38.8 -0.9**
	1.1nm,1.0s,baz=256,slow=8.9,SNR=5.7							
H11N2	**WAKE ISLAND Hy**	**35.68**	**179**	T	T	21	27	01.3
	baz=0.4,slow=76,SNR=35							
H11N3	**WAKE ISLAND Hy**	**35.70**	**179**	T	T	21	27	00.4
	baz=0.4,slow=76,SNR=23							
H11N1	**WAKE ISLAND Hy**	**35.70**	**179**	T	T	21	26	40.0
	baz=0.4,slow=76,SNR=26							
H11S1	**WAKE ISLAND Hy**	**36.90**	**180**	T	T	21	28	11.3
	baz=1.1							
H11S3	**WAKE ISLAND Hy**	**36.91**	**180**	T	T	21	28	03.0
	baz=1.1							
H11S2	**WAKE ISLAND Hy**	**36.92**	**180**	T	T	21	28	10.5
	baz=1.1							
SONM	**Songino Array**	**36.97**	**284**	P	**P**	**20**	**49**	**31.6 +1.4**
	0.2nm,0.4s,baz=58,slow=9.6,SNR=2.1							
KURBB	**Kurchatov Arra**	**49.70**	**303**	P	**P**	**20**	**51**	**13.4 +0.8**
	0.3nm,0.4s,baz=52,slow=8.5,SNR=1.6							
MKAR	**Makanchi Array**	**50.43**	**298**	P	**P**	**20**	**51**	**18.4 +0.1**
	0.2nm,0.4s,baz=50,slow=5.7,SNR=4.4							

IDC 11 20:42:43.2±1.9, 55°65'N×166°54'E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/38, mbtmp3.5/6, ML3.1/1, Error ellipse: s-maj=70.4km s-min=22.8km az=170.0

ISC 11 20:42:45.9±1.4, 55°5'N±0°3'×166°5'E±0°2, h20km, n6, σ0°63/7, mb3.5/5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
PETK	**Petropavlovsk-**	**5.71**	**249**	Pn	**Pn**	**20**	**44**	**09.3 -0.1**
	2.4nm,0.3s,baz=49,slow=23,SNR=9.9							
PETK				Sn	**Sn**	**20**	**45**	**14.2 -0.1**
	baz=247,slow=15,SNR=1.6							
ILAR	**Eielson Array**	**24.40**	**49**	P	**P**	**20**	**48**	**02.1 -0.4**
	1.6nm,1.1s,baz=258,slow=9.8,SNR=4.7							
SONM	**Songino Array**	**37.00**	**284**	P	**P**	**20**	**49**	**54.6 +0.7**
	0.2nm,0.5s,baz=54,slow=7.3,SNR=2.8							
KURBB	**Kurchatov Arra**	**49.70**	**303**	P	**P**	**20**	**51**	**36.2 +0.1**
	0.6nm,0.6s,baz=54,slow=8.3,SNR=2.0							
MKAR	**Makanchi Array**	**50.44**	**298**	P	**P**	**20**	**51**	**40.9 -0.9**
	0.2nm,0.4s,baz=51,slow=5.7,SNR=4.8							
TXAR	**Lajitas Array**	**66.26**	**73**	P	**P**	**20**	**53**	**32.8 +0.3**
	0.2nm,0.5s,baz=303,slow=5.3,SNR=4.0							

IDC 11 20:45:47.3±2.1, 8°25'N×93°42'E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/37, mbtmp3.6/6, ML3.4/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/51, Error ellipse: s-maj=83.3km s-min=22.5km az=61.0

ISC 11 20:45:48.8±1.9, 8°3'N±0°2'×93°4'E±0°3, h10km, n15, σ0°42/6, mb3.6/5, MS3.4/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
CMAR	**Chiang Mai Arr**	**11.48**	**27**	Pn	**Pn**	**20**	**48**	**33.0 +0.1**
	0.1nm,0.3s,baz=212,slow=11,SNR=2.0							
CMAR				LR	LR	20	53	13.7
	comp=Z,66nm,18.4s,baz=218,slow=39							
PALK	**Pallekele**	**12.63**	**266**	LR	LR	20	53	28.5
	comp=Z,94nm,20.9s,baz=216,slow=36							
H08S3	**Diego Garcia H**	**26.15**	**233**	T	T	21	17	59.2
	baz=52							
H08S2	**Diego Garcia H**	**26.16**	**233**	T	T	21	18	08.2
	baz=52							
H08S1	**Diego Garcia H**	**26.17**	**233**	T	T	21	18	01.4
	baz=52							
KAPI	**Kappang**	**29.39**	**116**	LR	LR	21	03	40.8
	comp=Z,26nm,19.6s,baz=260,slow=36							
BATI	**Baumata**	**35.26**	**121**	LR	LR	21	09	46.1
	comp=Z,60nm,18.1s,baz=292,slow=41							
MKAR	**Makanchi Array**	**39.57**	**348**	P	**P**	**20**	**53**	**19.8 -0.5**
	0.9nm,0.8s,baz=163,slow=8.9,SNR=7.2							
KSRS	**Korea Array**	**42.66**	**42**	LR	LR	21	11	28.3
	comp=Z,13nm,19.4s,baz=220,slow=36							
GEYT	**Alibeck**	**43.45**	**318**	LR	LR	21	13	25.3
	comp=Z,57nm,20.2s,baz=200,slow=38							
KURBB	**Kurchatov Arra**	**44.01**	**346**	P	**P**	**20**	**53**	**57.0 +0.5**
	0.5nm,0.4s,baz=166,slow=6.5,SNR=6.6							
TLY	**Talaya**	**44.11**	**9**	LR	LR	21	14	04.1
	comp=Z,41nm,18.8s,baz=208,slow=38							
ZALV	**Zalesovo Beam**	**46.10**	**353**	P	**P**	**20**	**54**	**12.8 -0.1**
	0.9nm,0.6s,baz=170,slow=9.0,SNR=5.6							
WRA	**Warramunga Arr**	**49.06**	**125**	P	**P**	**20**	**54**	**36.5 -0.1**
	0.6nm,0.9s,baz=295,slow=7.9,SNR=5.1							
ASAR	**Alice Springs**	**50.70**	**130**	P	**P**	**20**	**54**	**49.1 +0.1**
	0.2nm,0.6s,baz=307,slow=7.6,SNR=1.6							

IDC 11 21:01:21.2±3.0, 4°13'S×134°29'E, h0km, mb3.3/1, mb1 3.4/5, mb1mx3.2/43, mbtmp3.3/5, ML2.9/4, Error ellipse: s-maj=98.1km s-min=26.9km az=76.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
SIJI	**Sorong**	**4.43**	**317**	Pn	Pn	21	02	28.0 -1.7
	0.5nm,0.3s,baz=229,slow=19,SNR=1.4							
SIJI				Sn	Sn	21	03	19.9 -2.1
	0.2nm,0.3s,baz=145,slow=23,SNR=1.2							
WRA	**Warramunga Arr**	**15.72**	**180**	Pn	Pn	21	05	02.1 -2.0
	0.0nm,0.3s,baz=1.1,slow=12,SNR=2.2							
WRA				Sn	Sn	21	07	47.0 -12
	0.0nm,0.3s,baz=356,slow=24,SNR=1.7							
FITZ	**Fitzroy Crossi**	**16.27**	**211**	Pn	Pn	21	05	11.4 +0.2
	0.1nm,0.3s,baz=38,slow=12,SNR=1.8							
ASAR	**Alice Springs**	**19.43**	**181**	P	P	21	05	49.8 +0.5
	0.1nm,0.3s,baz=4.9,slow=11,SNR=12							
MKAR	**Makanchi Array**	**68.29**	**324**	P	P	21	12	24.8 +0.6
	0.2nm,0.6s,baz=113,slow=6.9,SNR=2.0							

NEIC 11 21:06:41.7±1.7, 32°52N±0°04'×47°84E±0°07, h5km±6km, Error ellipse: s-maj=8.3km s-min=5.8km az=96.0
IDC 11 21:06:41.0±1.4, 32°46N×47°80E, h0km, mb3.7/10, mb1 3.8/14, mb1mx3.5/61, mbtmp3.7/14, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/48, Error ellipse: s-maj=28.2km s-min=18.0km az=164.0
TEH 11 21:06:42.8, 32°57'N×47°88E, h8km, ML4.0
THR 11 21:06:45.9±0.3, 32°61N×47°96E, h15km±5km, ML3.8
OMAN 11 21:06:52.5±0.3, 31°83N×47°95E, h78km±1km, mb4.6/10, Error ellipse: s-maj=19.1km s-min=3.3km az=276.0

ISC 11 21:06:42.3±0.5, 32°42N±0°05'×47°81E±0°04, h10km, n119, σ1°59/123, mb3.9/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
IKFM	**Kafar-mosalman**	**1.10**	**2**	*e*Pg	**Pb**	**21**	**07**	**01.0 -2.4**
IKFM	**Kafar-mosalman**	**1.10**	**2**	Pg	**Pb**	**21**	**07**	**01.0 -2.4**
IKMR	**Kamar-syah**	**1.20**	**23**	*e*Pg	**Pn**	**21**	**07**	**02.4 -2.6**
IKMR				*e*		21	07	26.1

IKMR	**Kamar-syah**	**1.20**	**23**	Pg	**Pn**	**21**	**07**	**02.3 -2.7**
AHWZ	**Ahwaz**	**1.30**	**147**	*e*Pg	**Pg**	**21**	**07**	**09.9 +2.8**
AHWZ	**Ahwaz**	**1.30**	**147**		**Pg**	**21**	**07**	**09.8 +2.7**
IDOB	**Doab**	**1.40**	**13**	*e*Pg	**Pn**	**21**	**07**	**06.2 -1.9**
IDOB	**Doab**	**1.40**	**13**		**Pn**	**21**	**07**	**06.1 -2.0**
BMDN	**Meydan**	**1.51**	**34**	*e*		21	07	40.2
BMDN				*e*Pg	**Pn**	**21**	**07**	**09.4 -0.2**
BMDN	**Meydan**	**1.51**	**34**		**Pn**	**21**	**07**	**09.3 -0.3**
IKOM	**Komasi**	**1.77**	**352**	*e*Pg	**Pn**	**21**	**07**	**14.2 +1.1**
IKOM				*e*		21	07	16.2
IKOM	**Komasi**	**1.77**	**352**		**Pn**	**21**	**07**	**14.2 +1.1**
HSAM	**Samen**	**1.91**	**20**	*e*Pg	**Pn**	**21**	**07**	**16.5 +1.4**
HSAM				*e*		21	07	45.2
HSAM	**Samen**	**1.91**	**20**	Pg	**Pn**	**21**	**07**	**16.5 +1.4**
KCHF	**Cheshme Sefid,**	**1.96**	**341**	*e*Pg	**Pn**	**21**	**07**	**16.9 +1.1**
KCHF				*e*		21	07	48.5
KER	**Kermanshah**	**2.04**	**344**	*e*Pn	**Pn**	**21**	**07**	**18.0 +1.2**
IBZA	**Bozab**	**2.05**	**1**	*e*Pg	**Pn**	**21**	**07**	**18.4 +1.4**
IGHG	**Ghaleghazi**	**2.17**	**332**	*e*Pn	**Pn**	**21**	**07**	**20.3 +1.6**
IGHG				*e*		21	08	02.7
KHMZ	**Khomeyn**	**2.23**	**53**	*e*Pg	**Pb**	**21**	**07**	**23.0 +0.1**
KHMZ				*e*Sg	**Sn**	**21**	**07**	**50.0 +2.7**
KHMZ	**Khomeyn**	**2.23**	**53**	*e*Pg	**Pb**	**21**	**07**	**23.0 +0.1**
IVIS	**Veis**	**2.25**	**339**	*e*Pn	**Pn**	**21**	**07**	**20.7 +1.0**
IVIS				*e*		21	07	58.6
IALM	**Almabolaq**	**2.45**	**7**	*e*Pn	**Pn**	**21**	**07**	**24.2 +1.6**
IDHR	**Dehrash**	**2.57**	**333**	*e*Pn	**Pn**	**21**	**07**	**25.4 +1.3**
IDHR				*e*		21	07	30.2
ILIN	**Lien**	**2.59**	**344**	*e*Pn	**Pn**	**21**	**07**	**24.4 -0.1**
ILIN				*e*		21	07	31.4
IPIR	**Pirpir**	**2.62**	**83**	*e*Pn	**Pn**	**21**	**07**	**26.5 +1.6**
IPIR				*e*		21	08	09.8
ROKH	**ROKH**	**2.73**	**91**	*e*Pn	**Pn**	**21**	**07**	**28.2 +1.8**
ASAO	**Ashtian**	**2.82**	**40**	*e*Pn	**Pn**	**21**	**07**	**29.6 +2.0**
ASAO				IAML		21	08	15.1
	comp=E,333nm,0.6s							
ASAO				IAML		21	08	17.0
	comp=N,298nm,0.6s							
ASAO	**Ashtian**	**2.82**	**40**	*e*Pn	**Pn**	**21**	**07**	**29.6 +2.0**
HSRG	**Sareghieh**	**2.84**	**8**	*e*Pn	**Pn**	**21**	**07**	**29.7 +1.7**
HSRG				*e*		21	08	12.3
IKLH	**Kolahrood**	**3.30**	**73**	*e*Pn	**Pn**	**21**	**07**	**36.4 +2.2**
IKLH				*e*		21	08	47.1
IRAZ	**Razeghan**	**3.46**	**30**	*e*Pn	**Pn**	**21**	**07**	**38.5 +2.1**
KLNJ	**Kolanjah**	**3.52**	**113**	*e*Pn	**Pn**	**21**	**07**	**39.4 +2.1**
KLNJ				*e*		21	08	48.2
GHVR	**GHOM**	**3.57**	**54**	*e*Pn	**Pn**	**21**	**07**	**39.5 +1.8**
GHVR	**GHOM**	**3.57**	**54**	*e*Pn	**Pn**	**21**	**07**	**39.5 +1.8**
IGAR	**Gharneh**	**3.58**	**89**	*e*Pn	**Pn**	**21**	**07**	**39.9 +1.9**
QABG	**Abgarm-Qazvin**	**3.60**	**24**	*e*Pn	**Pn**	**21**	**07**	**39.6 +1.3**
IQOM	**Qom**	**3.64**	**47**	*e*Pn	**Pn**	**21**	**07**	**40.0 +1.1**
IZEF	**Zefreh**	**3.84**	**82**	*e*Pn	**Pn**	**21**	**07**	**43.3 +1.6**
IRAM	**Ramesheh**	**3.93**	**98**

KWP	Kalwaria Pacla	25.40 320	P	P	21 12 09.6	-0.2	
PSZ	Piszkesteto	26.17 314	P	P	21 12 16.6	-0.2	
PSZ			IAmb	IAmb	21 12 21.5		
	comp=Z,5.2nm,1.0s						
BVAR	Borovoye Array	26.24 32	P	P	21 12 17.7	+0.3	
	comp=Z,0.3nm,0.5s,baz=242,slow=12,SNR=5.3						
MK31	Makanchi Array	29.93 51	P	P	21 12 50.1	-0.2	
MKAR	Makanchi Array	29.93 51	P	P	21 12 50.6	+0.3	
	comp=Z,0.9nm,0.8s,baz=247,slow=7.7,SNR=7.2						
MKAR	Makanchi Array	29.93 51	P	P	21 12 50.2	-0.2	
GERES	GERESS Array B	30.33 313	P	P	21 12 54.4	+0.4	
FINES	FINESS Array B	32.28 341	P	P	21 13 10.4	-0.5	
	comp=Z,0.7nm,0.3s,baz=144,slow=8.2,SNR=11						
FINES	FINESS Array B	32.28 341	P	P	21 13 10.2	-0.7	
FIA1	FINESS Array S	32.28 341	P	P	21 13 10.2	-0.7	
ZALV	Zalesovo Beam	33.95 40	P	P	21 13 26.3	+0.8	
	comp=Z,0.5nm,0.4s,baz=233,slow=8.7,SNR=2.9						
NOA	NORSAR Array B	37.20 331	P	P	21 13 53.3	-0.2	
	comp=Z,0.5nm,0.9s,baz=121,slow=8.8,SNR=1.4						
ARCES	ARCESS Array B	39.23 348	P	P	21 14 10.2	-0.2	
	comp=Z,12nm,1.3s,baz=134,slow=6.9,SNR=4.6						
ESDC	Sonseca Array	42.00 295	P	P	21 14 34.1	+0.4	
	comp=Z,0.9nm,0.9s,baz=77,slow=8.5,SNR=6.4						
EKA	Eskdalemuir Ar	42.08 319	P	P	21 14 33.9	-0.3	
	comp=Z,0.9nm,0.5s,baz=108,slow=8.4,SNR=4.8						
TOA0	Torodi Ar. Sit	46.23 256	P	P	21 15 09.5	+1.6	
TORD	Torodi Ar. Bea	46.23 256	P	P	21 15 08.1	+0.2	
	comp=Z,0.4nm,0.3s,baz=68,slow=7.0,SNR=5.3						
SONM	Songino Array	46.27 53	P	P	21 15 08.4	+0.5	

IDC 11 21:09:29.2±5.4, 25°.31N×109°.62W, h0^{km}, mb3.1/1, mb1 3.4/4, mb1mx3.4/44, mbtmp2.9/4, ML3.5/3, MS2.8/2, Ms1 2.8/2, ms1mx2.5/15, Error ellipse: s-maj=75.5km s-min=26.7km az=168.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**6.64**	**52**	Pn	Pn	21 11 09.3	+1.1
	0.1nm,0.3s,baz=225,slow=15,SNR=2.4						
TXAR				Lg	Lg	21 12 57.5	
	0.0nm,0.3s,baz=235,slow=28,SNR=2.6						
TXAR				LR	LR	21 14 04.2	
	comp=Z,55nm,19.3s,baz=0.0,slow=41						
NVAR	**Mina Array Bea**	**15.01**	**333**	Pn	P	21 13 06.5	-2.0
	0.1nm,0.3s,baz=152,slow=10,SNR=3.5						
ELK	**Elko**	**16.09**	**344**	LR	LR	21 18 43.2	
	comp=Z,55nm,20.0s,baz=347,slow=34						
PDAR	**Pinedale Array**	**17.42**	**0**	P	P	21 13 35.1	-0.2
	0.1nm,0.3s,baz=173,slow=12,SNR=2.3						
ILAR	**Eielson Array**	**46.15**	**339**	P	P	21 17 54.1	-1.1
	0.2nm,0.6s,baz=148,slow=7.3,SNR=1.9						

*BJI **11** 21:22:20.9±0.0, 7°.11S×129°.77E, h165^{km}, mB4.8/45, mb4.9/66*

*KLM **11** 21:22:24.0, 6°.85S×129°.78E, h159^{km}, mb5.4*

*GCMT **11** 21:22:25.6±0.3, 6°.91S±0°.02×129°.49E±0°.03, h174^{km}±2^{km}, MW4.9/94, Moment Tensor Solution. s27,c32; s94,c128; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.51±.09; M$_{\theta\theta}$-2.59±.11; M$_{\phi\phi}$0.08±.12; M$_{r\theta}$1.00±.09; M$_{r\phi}$-0.18±.12; M$_{\theta\phi}$1.09±.10; Best double couple: M$_o$2.94800×10^{16} NP1:ϕ_s283.00000°, δ36.00000°, λ120.00000°. NP2: ϕ_s67.00000°, δ59.00000°, λ70.00000°. Principal axes: T 3.0640, Plg69.0000°, Azm295.0000°; N -0.2270, Plg17.0000°, Azm78.0000°; P -2.8320, Plg12.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **11** 21:22:25.6±1.6, 6°.78S±0°.05×129°.49E±0°.05, h160^{km}±4^{km}, mb5.1/127 Error ellipse: s-maj=9.1km s-min=4.6km az=130.0*

*IDC **11** 21:22:25.8±0.8, 6°.79S×129°.45E, h160^{km}±6^{km}, mb4.6/23, mb1 4.7/28, mb1mx4.7/32, mbtmp5.1/28, MS3.8/9, Ms1 3.8/9, ms1mx3.3/32, Error ellipse: s-maj=12.2km s-min=7.9km az=79.0*

*DJA **11** 21:22:25.8±0.1, 7°.5S×13°.0E±°, h158^{km}±2^{km}, M4.9/97, mb5.2/97, mB5.4/54, MLv5.7/15, Mw(mB)4.8/54, Mwp5.1/5*

ISC 11 21:22:24.6±0.4, 6°.86S±0°.03×129°.52E±0°.03, h155^{km}±4^{km}, n590, σ1°29/623, mb5.1/137, 4C-5D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.09**	**122**	P	Pn	21 23 03.7	+2.7
SAUI				S	Sn	21 23 30.0	+0.9
SAUI	**Saumlaki**	**2.09**	**122**		Pn	21 23 03.5	+2.5
BNDI	**Bandanaira**	**2.35**	**9**	P	Pn	21 23 07.2	+3.0
BNDI				S	Sn	21 23 38.7	+3.9
MSAI	**Masohi**	**3.54**	**350**	P	Pn	21 23 22.5	+3.4
NLAI	**Namlea**	**4.33**	**326**	P	Pn	21 23 32.5	+3.2
FAKI	**Fak Fak**	**4.76**	**35**	P	Pn	21 23 34.2	-0.8
FAKI				S	Sn	21 24 24.5	-5.5
FAKI	**Fak Fak**	**4.76**	**35**	Pn	Pn	21 23 34.2	-0.8
KMPI	**Kaimana, Papua**	**5.24**	**53**	P	Pn	21 23 41.4	+0.1
	34nm80µm1µm,0.5s						
KMPI				S	Sn	21 24 38.0	-3.2
	34nm80µm1µm,0.5s						
SOEI	**Soe**	**5.94**	**241**	P	Pn	21 23 52.5	+1.8
	6.6nm2µm6µm601nm,0.7s						
SOEI				S	Sn	21 24 58.7	+0.5
	6.6nm2µm6µm601nm,0.7s						
SOEI	**Soe**	**5.94**	**241**	Pn	Pn	21 23 52.4	+1.6
MTN	**Manton Dam**	**6.16**	**165**	P	Pn	21 23 53.3	-0.1
	baz=6.2,SNR=1000						
MTN				S	Sn	21 25 00.4	-2.7
	baz=6.2						
MTN	**Manton Dam**	**6.16**	**165**	Pn	Pn	21 23 53.4	-0.1
SIJI	**Sorong**	**6.20**	**16**	P	Pn	21 23 52.8	-1.2
	73nm,0.3s,baz=201,slow=10,SNR=117						
SIJI				S	Sn	21 24 59.4	-4.7
	195nm,0.3s,baz=260,slow=23,SNR=25						
KDU	**Kakadu**	**6.48**	**154**	P	Pn	21 23 57.7	0.0
	baz=6.5,SNR=1000						
KDU				S	Sn	21 25 06.9	-3.9
	baz=6.5						
BATI	**Baumata**	**6.68**	**240**	P	Pn	21 24 01.8	+1.3
	197nm,0.3s,baz=75,slow=1.4,SNR=178						
BATI				S	Sn	21 25 12.3	-3.4
	148nm,0.3s,baz=329,slow=21,SNR=11						
BATI				LR	LR	21 26 36.2	
	comp=Z,383nm,18.1s,baz=313,slow=38						
BATI	**Baumata**	**6.68**	**240**	P	Pn	21 24 01.6	+1.1
	2.4nm1µm7µm666nm,0.6s						
BATI				S	Sn	21 25 12.5	-3.2
	2.4nm1µm7µm666nm,0.6s						
MMRI	**Maumere**	**7.43**	**256**	P	Pn	21 24 12.0	+1.5
	0.6nm3µm146nm,0.7s						
MMRI	**Maumere**	**7.43**	**256**	Pn	Pn	21 24 11.9	+1.4
TNTI	**Ternate**	**7.88**	**344**	P	Pn	21 24 18.2	+1.8
	2.7nm6µm745nm,0.8s						
TNTI	**Ternate**	**7.88**	**344**		Pn	21 24 17.9	+1.5
EDFI	**Ende, Flores**	**7.98**	**256**	P	Pn	21 24 19.0	+1.1
	0.3nm782nm83nm,1.0s						
SRPI	**Serui, Papua**	**8.33**	**54**	P	Pn	21 24 22.6	+0.2
	278nm,0.5s						
BAKI	**Biak**	**8.65**	**50**	P	Pn	21 24 27.9	+1.2
	10µm1µm,0.7s						
KNRA	**Kununurra**	**8.80**	**185**	P	Pn	21 24 27.6	-1.0
	baz=8.8,SNR=582						
KNRA				S	Sn	21 26 00.7	-5.8
	baz=8.8						
KNRA	**Kununurra**	**8.80**	**185**	Pn	Pn	21 24 27.4	-1.2
LUWI	**Luwuk**	**8.87**	**310**	P	Pn	21 24 33.5	+3.9
	3µm312nm,1.1s						
LUWI	**Luwuk**	**8.87**	**310**		Pn	21 24 32.8	+3.1
BSSI	**Bau Bau, Buton**	**9.00**	**274**	P	Pn	21 24 33.5	+2.1
	526nm43nm,0.8s						
KMSI	**Cibinong**	**9.22**	**323**	P	Pn	21 24 37.1	+2.8
	4µm415nm,1.0s						
BASI	**Baing, Sumba**	**9.45**	**249**	P	Pn	21 24 37.4	0.0
	2µm164nm,0.7s						
BKSI	**Bulukumba**	**9.47**	**279**	P	Pn	21 24 39.5	+1.9
	560nm46nm,0.6s						
WAMI	**Wamena**	**9.61**	**73**	P	Pn	21 24 43.0	+3.5
	5µm437nm,0.7s						
BNSI	**Bone**	**9.68**	**284**	P	Pn	21 24 45.7	+5.3
	1µm144nm,0.9s						
APSI	**Ampana**	**9.83**	**307**	P	Pn	21 24 46.4	+4.1
	1µm138nm,1.1s						
GTOI	**Gorontalo**	**9.88**	**319**	P	Pn	21 24 48.5	+5.5
	1µm157nm,0.9s						
KAPI	**Kappang**	**9.89**	**280**	P	Pn	21 24 43.5	+0.4
	1.1nm,0.3s,baz=170,slow=17,SNR=5.3						
KAPI	**Kappang**	**9.89**	**280**	Pn	Pn	21 24 41.4	-1.8
SPSI	**Sidrap Palu**	**10.13**	**286**	P	Pn	21 24 49.4	+3.1
	715nm71nm,0.5s						
SMPI	**Sarmi**	**10.36**	**63**	P	Pn	21 24 51.1	+1.8
	26nm,0.8s						
TTSI	**Tana Toraja**	**10.38**	**291**	P	P	21 24 56.9	-2.1
	1µm112nm,0.9s						
WBSI	**Waikabubak, Su**	**10.40**	**254**	P	Pn	21 24 49.4	-0.5
	2µm220nm,0.7s						
SGSI	**Sangihe**	**11.21**	**339**	P	Pn	21 25 01.4	+0.9
	10µm979nm,0.6s						
GENI	**Genyem**	**11.42**	**69**	P	Pn	21 25 05.6	+2.3
	2µm141nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.79**	**198**	P	Pn	21 25 05.5	-2.6
	11nm,0.3s,baz=32,slow=12,SNR=246						
FITZ				S	Sn	21 27 08.3	-10
	18nm,0.3s,baz=92,slow=20,SNR=6.5						
PLAI	**Plampang**	**11.80**	**260**	P	Pn	21 25 06.4	-1.8
	2µm142nm,0.5s						
MPSI	**Mapaga**	**11.97**	**306**	P	P	21 25 16.6	-0.3
	538nm49nm,1.0s						
TWSI	**Taliwang, Sumb**	**12.66**	**261**	P	Pn	21 25 18.2	-1.2
	30nm,0.5s						
BKB	**Balikpapan**	**13.76**	**293**	P	P	21 25 39.2	+2.4
	3µm262nm,1.2s						
BKB	**Balikpapan**	**13.76**	**293**		P	21 25 37.3	+0.5
KBKI	**Kotabaru**	**13.76**	**284**	P	P	21 25 39.2	+2.4
	68nm,0.9s						
WRA	**Warramunga Arr**	**13.82**	**161**	P	Pn	21 25 30.3	-3.8
	17nm,0.3s,baz=335,slow=13,SNR=501						
WRA				S	Sn	21 27 56.9	-11
	15nm,0.3s,baz=337,slow=22,SNR=11						
WRA				LR	LR	21 31 44.0	
	comp=Z,984nm,18.9s,baz=335,slow=40						
WRA	**Warramunga Arr**	**13.82**	**161**		Pn	21 25 30.5	-3.6
WR0	**Warramunga Ar**	**13.90**	**160**		Pn	21 25 32.0	-3.1
SKMP	**Bagumbayan, Su**	**14.19**	**339**	eP	Pn	21 25 38.1	-0.6
KCP	**Kidapawan**	**14.47**	**342**	I/P	Pn	21 25 43.1	+0.8
BBKI	**Banjar Baru**	**15.00**	**282**	P	P	21 25 52.4	+1.8
	3µm320nm,0.9s						
COEN	**Coen**	**15.16**	**119**	P	Pn	21 25 49.6	-1.3
BUKP	**Musuan**	**15.30**	**343**	eP	P	21 25 55.1	+1.2
JAGI	**Jajag, Banyuwa**	**15.32**	**263**	Pn	Pn	21 25 52.5	-0.3
JAGI				IAmb	IAmb	21 25 56.0	
	comp=Z,97nm,0.7s						
KMMI	**Kalianget**	**15.44**	**268**	P	P	21 25 57.2	+1.7
	comp=Z,81nm,0.8s						
MTKI	**Muara Teweh, K**	**15.73**	**291**	P	P	21 26 00.8	+2.2
	comp=Z,3µmcomp=Z,320nm,0.9s						
BLJI	**Banyuglugur**	**15.82**	**266**	P	P	21 26 00.6	+0.9
	comp=Z,2µmcomp=Z,158nm,0.6s						
PAGZ	**Pagadian**	**15.84**	**337**	eP	P	21 26 03.6	+3.7
GMJI	**Gumukmas**	**16.00**	**264**	P	P	21 26 02.4	+0.8
	comp=Z,74nm,0.8s						
MYLDM	**Lahad Datu**	**16.25**	**317**	P	P	21 26 06.2	+1.8
MYLDM				IAmb	IAmb	21 26 20.1	
	comp=Z,106nm,1.1s						
QIS	**Mount Isa**	**16.76**	**145**	P	Pn	21 26 10.3	-0.1
	baz=17,SNR=161						
GLSP	**General Luna,**	**16.88**	**348**	eP	Pn	21 26 12.4	+0.6
GRJI	**Gresik**	**16.92**	**269**	P	Pn	21 26 14.0	+1.6
	comp=Z,1µmcomp=Z,116nm,1.1s						
AS31	**Alice Springs**	**17.23**	**166**		Pn	21 26 16.4	+0.3
ASAR	**Alice Springs**	**17.23**	**166**	P	P	21 26 15.2	0.0
	comp=Z,24nm,0.3s,baz=352,slow=12,SNR=1352						
ASAR				S	S	21 29 18.4	-8.6
	comp=Z,3.6nm,0.3s,baz=341,slow=25,SNR=5.8						
ASAR				LR	LR	21 33 38.0	
	comp=Z,646nm,20.6s,baz=346,slow=39						
ASAR				ScP	ScP	21 34 09.3	-1.6
	baz=337,slow=2.1,SNR=3.5						
ASAR	**Alice Springs**	**17.23**	**166**	P	P	21 26 15.6	+0.3
PSA00	**Pilbara Seismi**	**17.36**	**212**	P	P	21 26 16.7	+0.1
SPMM	**Sapulut**	**17.38**	**311**	P	Pn	21 26 21.0	+3.1
MSLP	**Maasin**	**17.51**	**345**	eP	Pn	21 26 20.7	+1.4
PWJI	**Pagerwojo**	**17.61**	**265**	P	P	21 26 19.2	-0.1
	comp=Z,68nm,0.7s						
PMG	**Port Moresby**	**17.64**	**99**	P	Pn	21 26 21.4	+0.5
	comp=Z,3.6nm,0.3s,baz=277,slow=8.9,SNR=24						
PMG				S	S	21 29 31.1	-4.2
	comp=Z,3.8nm,0.3s,baz=207,slow=23,SNR=9.6						
PMG	**Port Moresby**	**17.64**	**99**		Pn	21 26 21.5	+0.5
PMG				IAmb	IAmb	21 26 25.4	
	comp=Z,88nm,0.8s						
CNOP	**Candoni, Negro**	**17.94**	**337**	eP	P	21 26 23.0	+0.1
WRKA	**Warakurna**	**18.11**	**184**	P	Pn	21 26 25.8	-0.7
	baz=18,SNR=646						
PBKI	**Pangkalan Bun**	**18.26**	**282**	P	Pn	21 26 28.0	-0.3
	comp=Z,7µmcomp=Z,786nm,1.0s						
MTSU	**Mount Surprise**	**18.26**	**129**	P	Pn	21 26 28.4	+0.1
	baz=18,SNR=195						
MANU	**Manus Island**	**18.42**	**76**	P	Pn	21 26 30.9	+0.7
KKM	**Kota Kinabalu**	**18.46**	**314**	P	Pn	21 26 29.8	-0.9
KKM				IAmb	IAmb	21 26 40.0	
	comp=Z,84nm,0.8s						
WOJI	**Wonogiri, Jawa**	**18.47**	**266**	P	P	21 26 27.7	-1.1
	comp=Z,67nm,1.0s						
GUIM	**Jordan**	**18.69**	**338**	eP	Pn	21 26 32.3	-1.0
BESP	**Borongan**	**18.78**	**347**	eP	P	21 26 32.8	+0.7
UGM	**Wanagama**	**18.87**	**266**	P	P	21 26 32.0	-1.2
SMRI	**Semarang**	**18.94**	**268**	P	Pn	21 26 37.6	+1.3
	comp=Z,129nm,0.7s						
SMRI	**Semarang**	**18.94**	**268**	P	Pn	21 26 35.9	-0.5
SMRI				IAmb	IAmb	21 26 39.1	
	comp=Z,81nm,0.6s						
BATP	**Bataraza**	**19.45**	**323**	eP	Pn	21 26 44.5	+2.2
CUYO	**Cuyo Island**	**19.52**	**334**	eP	Pn	21 26 42.5	-0.6
SBUM	**Sibu**	**19.59**	**298**	P	Pn	21 26 42.9	-1.1
SBUM	**Sibu**	**19.59**	**298**	P	Pn	21 26 44.0	+0.1
KPJI	**Karang Pucung**	**20.44**	**267**	P	P	21 26 49.3	-0.7
	comp=Z,94nm,0.7s						
OTRP	**Odiongan**	**20.50**	**339**	eP	Pn	21 26 54.0	-0.6
ENPP	**El Nido**	**20.57**	**331**	eP	P	21 26 51.5	+0.2
KSM	**Kuching**	**20.89**	**293**	P	P	21 26 53.5	-1.3
KSM				IAmb	IAmb	21 26 58.4	
	comp=Z,111nm,0.9s						
KSM	**Kuching**	**20.89**	**293**	P	Pn	21 26 58.0	-1.4
CTA	**Charters Tower**	**20.89**	**131**	P	P	21 26 56.5	+1.7
	comp=Z,61nm,0.8s,baz=301,slow=12,SNR=42						
CTA				S	S	21 30 40.5	+1.3
	comp=Z,15nm,0.8s,baz=117,slow=15,SNR=3.7						
CTAO	**Charters Tower**	**20.89**	**131**	P	P	21 26 56.3	+1.5
CTAO				IAmb	IAmb	21 27 00.2	
	comp=Z,85nm,0.9s						
BUSP	**Coron**	**20.91**	**334**	eP	P	21 26 57.0	+2.1
SJMP	**San Jose**	**20.93**	**336**	eP	Pn	21 26 57.6	-2.3
PVCP	**Virac**	**21.01**	**345**	eP	P	21 26 58.8	+2.7
JCJI	**Jatiwangi**	**21.11**	**270**	P	P	21 26 59.4	+2.2
	comp=Z,216nm,0.6s						
GIRL	**Giralia**	**21.52**	**222**	P	P	21 27 03.0	+1.5
	baz=22,SNR=8.9						
GIRL	**Giralia**	**21.52**	**222**	P	P	21 27 02.6	+1.1
CISI	**Cisompet, Garu**	**21.55**	**267**	P	P	21 27 01.3	-0.7
	comp=Z,3µmcomp=Z,341nm,0.7s						
CISI	**Cisompet, Garu**	**21.55**	**267**	P	P	21 26 59.4	-2.6
BOAC	**Boac**	**21.58**	**339**	eP	P	21 27 03.1	+1.0
LEM	**Lembang**	**21.75**	**269**	P	P	21 27 03.3	-0.9
	comp=Z,121nm,0.7s,baz=6.7,slow=7.2,SNR=19						
PGP	**Puerto Galera**	**21.95**	**337**	eP	P	21 27 07.7	+1.7
JCNP	**Jose Panganiba**	**22.07**	**342**	eP	P	21 27 05.7	-1.5
TPI	**Tanjungpandan**	**22.16**	**280**	P	P	21 27 08.0	-0.2
	comp=Z,820nmcomp=Z,80nm,1.2s						
MEEK	**Meekatharra**	**22.24**	**207**	P	P	21 27 09.3	+0.4
	baz=22,SNR=8.3						
LQP	**Lukban**	**22.29**	**339**	eP	P	21 27 10.1	+0.4
LUBP	**Lubang**	**22.44**	**336**	eP	P	21 27 11.3	+0.6
TGY	**Tagaytay City**	**22.50**	**338**	P	P	21 27 11.8	+0.4
	comp=Z,382nm,0.6s,baz=176,slow=4.2,SNR=12						
CBJI	**Citeko**	**22.52**	**270**	P	P	21 27 08.7	-3.0
	comp=Z,185nm,0.7s						
DBJI	**Dramaga**	**22.62**	**269**	P	P	21 27 11.5	-1.1
	comp=Z,90nm,0.7s						
RABL	**Rabaul**	**22.69**	**84**	P	P	21 27 13.1	-0.2
RABL				IAmb	IAmb	21 27 16.6	
	comp=Z,34nm,0.6s						
POLP	**Polillo Island**	**22.73**	**341**	eP	P	21 27 12.4	-1.1
SKJI	**Sukabumi**	**22.80**	**268**	P	P	21 27 12.9	-1.3
	comp=Z,242nm,0.6s						
PPBI	**Pangkal Pinang**	**23.77**	**280**	P	P	21 27 23.8	+0.7
	comp=Z,96nm,0.9s						
BALP	**Baler**	**23.79**	**341**	eP	P	21 27 23.1	-0.1
FORT	**Forrest**	**23.84**	**183**	P	P	21 27 24.5	+1.0
	baz=24,SNR=17						
FORT	**Forrest**	**23.84**	**183**	P	P	21 27 24.3	+0.7
XMIS	**Christmas Isla**	**23.87**	**260**	P	P	21 27 22.2	-1.8
XMIS				IAmb	IAmb	21 27 25.7	
	comp=Z,90nm,0.9s						
QLP	**Quilpie**	**24.10**	**146**	P	P	21 27 27.4	+1.4
	baz=24,SNR=48						
SMPP	**San Manuel, Pa**	**24.48**	**339**	eP	P	21 27 29.3	-0.2
KLSI		**24.76**	**274**	P	P	21 27 34.7	+2.6
	comp=Z,9.0nm,0.8s						
CAUP	**Cauayan**	**24.84**	**342**	eP	P	21 27 33.3	+0.5
KASI	**Kota Agung**	**24.91**	**272**	P	P	21 27 31.8	-1.7
	comp=Z,67nm,1.0s						
PMBI	**Palembang**	**24.96**	**278**	P	P	21 27 36.1	+2.2
MDSI	**Maura Dua**	**25.33**	**274**	P	P	21 27 37.2	-0.1
	comp=Z,20nm,1.1s						
KMBL	**Kambalda**	**25.41**	**195**	P	P	21 27 38.6	+0.8
	baz=26,SNR=26						
MORW	**Morawa**	**25.49**	**208**	P	P	21 27 39.7	+1.1
	baz=26,SNR=4.1						
MORW	**Morawa**	**25.49**	**208**	P	P	21 27 37.3	-1.3
MORW				IAmb	IAmb	21 28 21.3	
	comp=Z,54nm,1.1s						
LHSI	**Lahat**	**26.06**	**275**	P	P	21 27 46.0	+2.2
	comp=Z,57nm,0.9s						
BLDU	**Ballidu**	**26.52**	**205**	P	P	21 27 48.8	+1.1
	baz=27,SNR=11						
BBOO	**Buckleboo**	**26.53**	**168**	P	P	21 27 48.4	+0.5
	baz=27,SNR=86						
BBOO	**Buckleboo**	**26.53**	**168**	P	P	21 27 48.2	+0.4
RMQ	**Roma**	**26.77**	**139**	P	P	21 27 51.6	+1.5
	baz=27,SNR=7.6						
KLBR	**Kellerberrin**	**26.95**	**203**	P	P	21 27 52.9	+1.2
	baz=27,SNR=11						
STKA	**Stephens Creek**	**27.32**	**157**	P	P	21 27 55.6	+0.7
	comp=Z,63nm,0.7s,baz=328,slow=9.5,SNR=169						
STKA				LR	LR	21 40 19.8	
	comp=Z,499nm,18.1s,baz=344,slow=39						
STKA	**Stephens Creek**	**27.32**	**157**	P	P	21 27 56.0	+1.0
	baz=27,SNR=113						
STKA	**Stephens Creek**	**27.32**	**157**	P	P	21 27 55.7	+0.7
EIDS	**Eidsvold**	**27.63**	**134**	P	P	21 27 58.3	+0.6
	baz=28,SNR=4.1						
EIDS	**Eidsvold**	**27.63**	**134**	P	P	21 27 58.2	+0.5
HTT	**Hallett**	**27.84**	**163**	P	P	21 28 00.5	+0.9
	baz=28,SNR=19						
MUN	**Mundaring**	**27.91**	**205**	P	P	21 28 01.3	+1.1
	baz=28,SNR=4.0						
NWAO	**Narrogin (SRO)**	**28.34**	**202**	P	P	21 28 04.8	+0.8
	comp=Z,14nm,1.0s,baz=40,slow=7.0,SNR=7.5						
NWAO	**Narrogin (SRO)**	**28.34**	**202**	P	P	21 28 05.0	+0.9
	baz=28,SNR=5.2						
NWAO	**Narrogin (SRO)**	**28.34**	**202**	P	P	21 28 04.7	+0.7
NWAO				IAmb	IAmb	21 29 02.7	
	comp=Z,36nm,1.0s						
SDSI	**Sungai Dareh**	**28.63**	**281**	P	P	21 28 09.0	+2.2
	comp=Z,783nmcomp=Z,41nm,1.3s						
CMSA	**Cobar Meteorol**	**28.83**	**150**	P	P	21 28 09.7	+1.4
	baz=29,SNR=119						
BKNI	**Bangkinang**	**29.30**	**283**	P	P	21 28 13.0	+0.3
	comp=Z,72nm,0.8s						
BKNI	**Bangkinang**	**29.30**	**283**	P	P	21 28 12.1	-0.6
BKNI				IAmb	IAmb	21 28 18.1	
	comp=Z,55nm,0.8s						
IPM	**Ipoh**	**30.59**	**291**	P	P	21 28 23.3	-0.9
IPM	**Ipoh**	**30.59**	**291**	P	P	21 28 26.0	+1.8
MNSI	**Mandailing Nat**	**30.83**	**283**	P	P	21 28 25.9	-0.3
	comp=Z,103nm,0.9s						
KULM	**Kulim**	**31.24**	**292**	P	P	21 28 29.0	-0.9
KULM				IAmb	IAmb	21 28 32.9	
	comp=Z,29nm,0.9s						
KULM	**Kulim**	**31.24**	**292**	P	P	21 28 32.0	+2.2
ARMA	**Armidale**	**31.30**	**141**	P	P	21 28 32.3	+2.0
	baz=31,SNR=16						
ARMA	**Armidale**	**31.30**	**141**	P	P	21 28 32.2	+1.9
ARMA				IAmb	IAmb	21 28 33.3	
	comp=Z,32nm,0.9s						
ARPS	**Mount Arapiles**	**31.83**	**161**	P	P	21 28 36.5	+1.8
	baz=32,SNR=145						
RPSI	**Rantau Prapat**	**31.98**	**286**	P	P	21 28 35.7	-0.6
YHNB	**Yeheng**	**32.33**	**346**	P	P	21 28 38.4	-0.9
YHNB				IAmb	IAmb	21 29 04.3	
	comp=Z,109nm,1.9s						
YNG	**Young**	**32.40**	**150**	P	P	21 28 41.8	+2.0
	baz=32,SNR=19						
UBPT	**Khong Chiam**	**32.43**	**313**	P	P	21 28 40.5	+0.2
	comp=Z,30nm,1.1s						
UBPT	**Khong Chiam**	**32.43**	**313**	P	P	21 28 40.1	-0.1
UBPT				IAmb	IAmb	21 28 41.2	
	comp=Z,42nm,0.9s						
GSI	**Gunungsitoli**	**32.90**	**283**	P	P	21 28 45.1	+0.8
	comp=Z,108nm,0.9s						
GSI	**Gunungsitoli**	**32.90**	**283**	P	P	21 28 42.5	-1.8
MGCD	**Mangole Creek**	**32.99**	**146**	P	P	21 28 47.5	+2.6
	baz=33,SNR=13						
TRTT	**Trang**	**33.14**	**296**	P	P	21 28 47.2	+0.8
	comp=Z,62nm,0.9s						
CNB	**Canberra Magne**	**33.68**	**150**	P	P	21 28 53.1	+2.1
	baz=34,SNR=14						
TPTI		**33.81**	**286**	P	P	21 28 53.2	+0.9
	comp=Z,18nm,0.6s						
TOO

CM15 Chiang Mai Arr 39.29 310 P **P** **21 29 38.0 -0.6**
comp=Z,516nmcomp=Z,60nm,0.8s
CM34 Chiang Mai Arr 39.36 311 P **P** **21 29 39.0 -0.2**
CM32 Chiang Mai Arr 39.47 310 P **P** **21 29 40.0 -0.1**
CMMT Chiang Mai 39.49 311 P **P** **21 29 40.2 0.0**
comp=Z,476nmcomp=Z,49nm,0.8s
CHTO Chiang Mai 39.49 311 P **P** **21 29 40.7 +0.4**
CHTO Chiang Mai 39.49 311 P **P** **21 29 40.2 -0.1**
CM33 Chiang Mai Arr 39.49 311 P **P** **21 29 39.0 -1.3**
JNU Nakatsue 39.78 2 P **P** **21 29 42.2 -0.3**
JNU IAmb IAmb 21 29 43.1
comp=Z,27nm,0.9s
GYA Guiyang 39.86 327 ⇓P **P** **21 29 43.3 0.0**
GYA PcP **PcP** **21 31 46.9 +0.7**
GYA S **S** **21 35 30.6 -6.0**
GYA sS sS 21 36 38.9 +5.2
GYA pmax pmax
comp=Z,15nm,0.8s
GYA pmax pmax
comp=Z,120nm,3.5s
MHMT Maesarieng 39.89 309 P **P** **21 29 43.7 +0.2**
comp=Z,602nmcomp=Z,42nm,0.8s
WHN Wuhan 39.93 339 ⇓P **P** **21 29 44.6 +0.9**
WHN pmax pmax
comp=Z,66nm,0.8s
KMI Kunming 41.11 322 ⇑P **P** **21 29 54.1 +0.3**
KMI pP pwP 21 30 30.5 -2.2
KMI sP sP 21 30 47.8 +4.5
KMI pmax pmax
comp=Z,24nm,0.8s
KMI LR LR
comp=Z,110nm,14.7s
KMI LR LR
comp=Z,92nm,18.7s
KMI LR LR
comp=Z,140nm,13.5s
KMI Kunming 41.11 322 P **P** **21 29 52.9 -0.9**
ENH Enshi 41.62 334 P **P** **21 29 56.8 -0.8**
JHS Saijyo 41.77 4 P **P** **21 29 59.0 +0.3**
JHS IAmb IAmb 21 30 45.5
comp=Z,78nm,1.5s
JWT Wachi 42.28 7 P **P** **21 30 03.0 +0.2**
MAJO Matsushiro 43.93 10 P **P** **21 30 15.1 -1.0**
MAT Matsushiro 43.93 10 P **P** **21 30 14.8 -1.3**
MAT eS S 21 36 26.4 -10
MJAR Matsushiro Arr 43.93 10 P **P** **21 30 14.8 -1.3**
comp=Z,26nm,0.8s,baz=189,slow=9.4,SNR=47
MJAR pP **pP** **21 30 51.1 +1.6**
comp=Z,6.0nm,1.0s,baz=195,slow=9.9,SNR=2.2
KSAR Wonju Array Be 44.10 358 P **P** **21 30 17.2 -0.2**
KSRS Korea Array 44.11 358 P **P** **21 30 17.9 +0.4**
comp=Z,6.1nm,0.6s,baz=174,slow=9.2,SNR=20
KS19 Wonju Array Si 44.16 358 P **P** **21 30 16.9 -1.0**
KS19 IAmb IAmb 21 31 15.9
comp=Z,64nm,1.5s
CD2 Chengdu 44.93 328 P **P** **21 30 23.3 -0.9**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,180nm,6.4s
XAN Xi'an 45.11 336 P **P** **21 30 24.4 -1.2**
XAN pmax pmax
comp=Z,43nm,0.8s
XAN pmax pmax
comp=Z,96nm,5.2s
XAN Xi'an 45.11 336 P **P** **21 30 24.5 -1.0**
XAN IAmb IAmb 21 30 25.4
comp=Z,27nm,0.7s
JSD Sado 45.40 10 P **P** **21 30 27.7 0.0**
JSD IAmb IAmb 21 30 28.0
comp=Z,19nm,0.5s
JMM Marumori 45.72 12 P **P** **21 30 30.4 +0.2**
JMM IAmb IAmb 21 30 31.0
comp=Z,35nm,0.7s
TIY Taiyuan 47.12 341 *e*P **P** **21 30 41.1 -0.1**
TIY pmax pmax
comp=Z,37nm,0.9s
BJT Baijiatuau 48.25 346 P **P** **21 30 49.0 -0.7**
BJI Beijing 48.27 346 P **P** **21 30 49.6 -0.3**
BJI PcP **PcP** **21 32 15.4 +1.0**
BJI pmax pmax
comp=Z,28nm,1.0s
JTM Tenmabayashi 48.59 12 P **P** **21 30 52.1 -0.2**
JTM IAmb IAmb 21 30 53.4
comp=Z,30nm,0.9s
SHL Shillong 48.76 313 P **P** **21 30 53.5 -0.6**
SNR=16
SHL Shillong 48.76 313 P **P** **21 30 53.1 -1.1**
SHL IAmb IAmb 21 30 55.2
comp=Z,43nm,0.8s
LZH Lanzhou 49.06 332 *e*P **P** **21 30 57.3 +1.1**
LZH pP pwP 21 31 33.6 -2.3
LZH sP sP 21 31 51.7 +5.0
LZH pmax pmax
comp=Z,18nm,1.3s
HHC Hu-ho-hao-te 50.26 342 *e*P **P** **21 31 05.3 +0.1**
HHC pmax pmax
comp=Z,20nm,0.9s
HHC pmax pmax
comp=Z,57nm,7.2s
DCZ Deep Cove 50.38 146 P **P** **21 31 07.5 +1.6**
CN2 Changchun 50.56 356 *e*P **P** **21 31 06.8 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
PALK Pallekele 50.68 285 P **P** **21 31 07.6 -1.1**
PALK Pallekele 50.68 285 P **P** **21 31 07.5 -1.3**
PALK IAmb IAmb 21 31 11.5
comp=Z,24nm,0.8s
MLZ Mavora Lakes 50.86 145 P **P** **21 31 11.0 +1.4**
USRK Ussuriysk Ar. 50.87 2 P **P** **21 31 09.7 +0.2**
comp=Z,18nm,0.7s,baz=179,slow=7.0,SNR=50
USRK pP **pwP** **21 31 47.3 -2.0**
comp=Z,5.4nm,0.8s,baz=188,slow=8.5,SNR=3.4
USRK Ussuriysk Ar. 50.87 2 P **P** **21 31 09.5 0.0**
USA0B Ussuriysk Arra 50.87 2 P **P** **21 31 09.6 +0.1**
MDJ Mudanjiang 51.24 0 P **P** **21 31 12.1 -0.2**
LBZ Lake Benmore 51.48 143 P **P** **21 31 15.1 +0.9**
LBZ IAmb IAmb 21 31 23.4
comp=Z,73nm,1.4s
RPZ Rata Peaks 51.63 142 P **P** **21 31 17.4 +2.0**
RPZ IAmb IAmb 21 31 20.5
comp=Z,65nm,1.1s
LSA Lhasa 51.77 317 P **P** **21 31 17.6 +0.5**
LSA pmax pmax
comp=Z,62nm,1.3s
LSA Lhasa 51.77 317 P **P** **21 31 17.5 +0.4**
LSA Lhasa 51.77 317 P **P** **21 31 17.6 +0.5**
LSA Lhasa 51.77 317 P **P** **21 31 17.3 +0.2**
JKA Kamikawa-asahi 52.10 12 P **P** **21 31 19.0 +0.4**
KHZ Kahutara 52.52 140 P **P** **21 31 22.5 +0.7**
ODAN Odare 52.81 311 *e*P **P** **21 31 24.4 -0.1**
comp=Z,58nm,0.6s
TAPN Taplejung 52.84 312 *e*P **P** **21 31 24.7 -0.1**
RAMN Ramite 53.45 311 *e*P **P** **21 31 29.4 +0.2**
comp=Z,111nm,0.6s
GTA Gaotai 53.62 332 ⇑P **P** **21 31 30.2 +0.1**
GTA pP pwP 21 32 08.6 -1.7
GTA sP sP 21 32 24.0 +3.0
GTA PcP **PcP** **21 32 35.5 +0.9**
GTA ScP **ScP** **21 36 17.3 -0.6**
GTA pmax pmax
comp=Z,24nm,0.9s
GTA pmax pmax
comp=Z,91nm,4.9s
GTA LR LR
comp=Z,63nm,17.1s
GTA LR LR
comp=Z,78nm,15.3s
GTA LR LR
comp=Z,80nm,18.2s
GUN Gumba 54.50 311 *e*P **P** **21 31 36.8 -0.2**
comp=Z,90nm,0.6s
PKI Pulchoki 54.67 311 *e*P **P** **21 31 37.6 -0.6**
comp=Z,26nm,0.5s
PKIN Phulchoki 54.69 311 *e*P **P** **21 31 37.6 -0.6**
comp=Z,23nm,0.5s
YSS Yuzh-Sakhalins 54.85 11 P **P** **21 31 38.8 +0.1**
YSS IAmb IAmb 21 31 39.5
comp=Z,20nm,0.7s
KKN Kakani 54.89 311 *e*P **P** **21 31 39.2 -0.4**
DMN Daman 54.92 311 *e*P **P** **21 31 39.7 -0.2**
GKN Gorkha 55.48 311 *e*P **P** **21 31 43.6 -0.2**
HYB Hyderabad 55.83 296 *i*P **P** **21 31 44.0 -2.3**
KOLN Koldanda 56.15 310 *e*P **P** **21 31 48.5 -0.1**
DANN Dangsing 56.32 311 *e*P **P** **21 31 49.6 -0.3**

DGAR Diego Garcia 56.60 266 P **P** **21 31 52.1 +0.4**
PYUN Piuthan 56.78 310 *e*P **P** **21 31 52.9 -0.1**
comp=Z,44nm,0.4s
ULN Ulaanbaatar 57.99 342 P **P** **21 32 01.7 +0.7**
ULN Ulaanbaatar 57.99 342 P **P** **21 32 01.4 +0.4**
ULN IAmb IAmb 21 32 02.8
comp=Z,23nm,0.8s
SONM Songino Array 58.16 342 P **P** **21 32 02.8 +0.6**
comp=Z,7.6nm,0.7s,baz=156,slow=6.0,SNR=58
SONM PcP **PcP** **21 32 52.4 +0.4**
comp=Z,3.6nm,0.8s,baz=153,slow=5.5,SNR=4.5
SONM Songino Array 58.16 342 P **P** **21 32 02.3 0.0**
TLY Talaya 62.39 342 P **P** **21 32 31.0 +0.2**
WMQ Urumqi 63.02 327 *e*P **P** **21 32 35.7 +0.5**
WMQ pP PcP 21 33 12.5 +0.9
WMQ sP sP 21 33 28.3 +1.5
WMQ pmax pmax
comp=Z,65nm,0.9s
WMQ pmax pmax
comp=Z,240nm,5.3s
WMQ Urumqi 63.02 327 P **P** **21 32 35.6 +0.4**
WMQ IAmb IAmb 21 32 37.6
comp=Z,34nm,0.7s
PEA0B Petropavlovsk- 64.34 18 P **P** **21 32 44.0 +0.5**
PEA0B IAmb IAmb 21 34 15.0
comp=Z,51nm,1.3s
PETK Petropavlovsk- 64.34 18 P **P** **21 32 44.1 +0.6**
comp=Z,12nm,0.8s,baz=182,slow=5.6,SNR=11
PETK PcP **PcP** **21 33 16.5 -0.2**
comp=Z,3.7nm,0.5s,baz=205,slow=3.5,SNR=5.1
PETK LR LR 21 56 57.2
comp=Z,32nm,21.7s,baz=191,slow=32
NIL Nilore 66.77 311 P **P** **21 32 59.6 0.0**
NIL Nilore 66.77 311 P **P** **21 32 59.1 -0.5**
NIL IAmb IAmb 21 33 02.0
comp=Z,29nm,0.7s
ZSN Zaisan 66.91 329 *i*P **P** **21 32 59.9 -0.3**
comp=Z,3.2nm,0.9s,baz=329
SHLS Shalkode 67.32 323 *i*P **P** **21 33 01.5 -1.5**
comp=Z,16nm,0.8s,baz=322
SHLS *e*PcP **PcP** **21 33 28.4 -1.1**
baz=322
KSH Kashi 67.59 318 P **P** **21 33 05.6 +0.8**
KSH PcP **PcP** **21 33 32.1 +1.3**
KSH pmax pmax
comp=Z,41nm,0.9s
KSH pmax pmax
comp=Z,210nm,4.6s
MK31 Makanchi Array 67.85 327 P **P** **21 33 06.2 +0.1**
MK31 IAmb IAmb 21 33 07.4
comp=Z,17nm,0.6s
MKAR Makanchi Array 67.85 327 P **P** **21 33 06.4 +0.3**
comp=Z,28nm,0.5s,baz=116,slow=8.1,SNR=359
MKAR Makanchi Array 67.85 327 P **P** **21 33 06.2 +0.1**
SATY Saty 67.91 322 *i*P **P** **21 33 06.8 +0.1**
comp=Z,15nm,0.8s,baz=322
KPKS Kokpek 67.96 322 *e*P **P** **21 33 06.8 -0.2**
comp=Z,14nm,0.6s,baz=322
KPKS *e*PcP **PcP** **21 33 31.7 -0.5**
baz=322
MAKZ Makanchi 68.03 327 P **P** **21 33 07.2 0.0**
MAKZ IAmb IAmb 21 33 08.4
comp=Z,17nm,0.6s
KDJ Kajisay 68.16 321 P **P** **21 33 08.0 -0.4**
KDJ IAmb IAmb 21 33 11.0
comp=Z,19nm,0.7s
MA2 Magadan 68.35 11 P **P** **21 33 09.5 +0.6**
comp=Z,18nm,0.9s,baz=169,slow=18,SNR=3.3
MA2 Magadan 68.35 11 P **P** **21 33 08.9 0.0**
YAK Yakutsk 68.69 0 P **P** **21 33 10.8 -0.1**
comp=Z,54nm,0.6s,baz=161,slow=0.1,SNR=12
YAK Yakutsk 68.69 0 P **P** **21 33 11.0 +0.1**
TNSS Tian-Shan 68.79 321 *e*P **P** **21 33 12.7 +0.2**
baz=321
MDOK Medeo 68.80 322 *e*P **P** **21 33 12.3 +0.1**
baz=321
AAA Alma-Ata 68.90 321 *e*P **P** **21 33 12.6 -0.2**
comp=Z,7.8nm,0.6s,baz=321
AAA *e*S **S** **21 42 04.9 +0.3**
baz=321
TDK Taldyqorghan 68.99 324 *i*P **P** **21 33 13.1 -0.1**
comp=Z,8.4nm,0.8s,baz=324
TDK *e*PcP **PcP** **21 33 36.0 -0.3**
baz=324
BOOM Boomskoye usch 69.14 320 P **P** **21 33 14.7 +0.3**
TKM2 Tokmak 2 69.57 321 P **P** **21 33 17.6 +0.5**
SNR=16
KUU Kurty 69.62 322 *i*P **P** **21 33 17.0 -0.1**
comp=Z,28nm,0.7s,baz=322
KBK Karagaybulak 69.85 320 P **P** **21 33 19.5 +0.8**
SNR=12
UCH Uchtor 69.91 320 P **P** **21 33 20.8 +1.3**
SNR=5.5
AAK Ala-Archa 70.13 320 P **P** **21 33 21.3 +0.9**
SNR=14
AAK Ala-Archa 70.13 320 *i*P **P** **21 33 21.3 +0.9**
SNR=18
AAK Ala-Archa 70.13 320 P **P** **21 33 21.4 +0.9**
AAK Ala-Archa 70.13 320 P **P** **21 33 21.3 +0.9**
CHMS Chumysh 70.15 320 P **P** **21 33 20.6 +0.2**
SNR=7.5
KBL Kabul 70.31 310 P **P** **21 33 22.4 +0.6**
SNR=5.8
KBL Kabul 70.31 310 P **P** **21 33 22.0 +0.2**
AML Almayashu 70.39 319 P **P** **21 33 23.0 +0.7**
SNR=23
USP Ospenovka 70.44 321 P **P** **21 33 22.6 +0.4**
SNR=18
SGDS Sogindy 70.45 321 *i*P **P** **21 33 22.0 -0.3**
comp=Z,3.2nm,0.5s,baz=321
EKS2 Erkin-Say 70.60 320 P **P** **21 33 24.2 +1.0**
SNR=18
GAR Garm 71.23 315 P **P** **21 33 26.9 -0.3**
GAR IAmb IAmb 21 33 30.1
comp=Z,21nm,0.8s
ZAA0 Zalesovo Array 71.25 334 P **P** **21 33 26.1 -0.6**
ZAA0 IAmb IAmb 21 33 27.1
comp=Z,66nm,1.3s
ZALV Zalesovo Beam 71.25 334 P **P** **21 33 26.1 -0.6**
comp=Z,20nm,0.6s,baz=122,slow=5.2,SNR=99
ZALV pP **pP** **21 34 05.1 +1.9**
comp=Z,5.8nm,0.9s,baz=141,slow=5.5,SNR=1.9
ZALV Zalesovo Beam 71.25 334 P **P** **21 33 25.9 -0.8**
BTK Batken 71.35 316 P **P** **21 33 28.1 +0.4**
BTLS Baital 71.62 322 *i*P **P** **21 33 28.8 -0.3**
baz=322
SEY Seymchan 71.76 11 P **P** **21 33 30.5 +1.0**
comp=Z,44nm,0.8s,baz=200,slow=4.7,SNR=90
CHGR Chuyangaron 71.90 314 P **P** **21 33 30.9 -0.3**
CHGR IAmb IAmb 21 33 32.5
comp=Z,28nm,0.6s
KURK Kurchatov 72.15 329 P **P** **21 33 32.5 +0.3**
KURK Kurchatov 72.15 329 P **P** **21 33 32.3 +0.1**
KURK IAmb IAmb 21 33 33.4
comp=Z,42nm,0.9s
DZA Taraz 72.29 319 *i*P **P** **21 33 33.2 -0.1**
comp=Z,5.3nm,0.7s,baz=319
RER Riviere de l'E 72.45 250 P **P** **21 33 36.4 +1.7**
RER Riviere de l'E 72.45 250 P **P** **21 33 35.6 +0.8**
RER IAmb IAmb 21 33 38.1
comp=Z,61nm,1.1s
VNDA Vanda 72.64 173 P **P** **21 33 35.5 +0.9**
comp=Z,1.7nm,0.5s,baz=320,slow=7.0,SNR=30
VNDA LR LR 22 04 47.0
comp=Z,106nm,19.4s,baz=340,slow=35
VNDA Vanda 72.64 173 P **P** **21 33 35.6 +0.9**
IUG Iuzhnay 72.81 318 *e*P **P** **21 33 36.1 -0.3**
comp=Z,4.5nm,0.7s,baz=318
KK31 Karatay Array 72.92 319 P **P** **21 33 37.1 +0.1**
KKAR Karatay Array 72.92 319 P **P** **21 33 37.1 +0.2**
KKAR Karatay Array 72.92 319 P **P** **21 33 37.0 0.0**
JLN Jalan Bani Buh 74.41 295 P **P** **21 33 44.0 -2.1**
MAW Mawson 74.91 201 P **P** **21 33 49.1 +1.1**
comp=Z,6.4nm,0.6s,baz=89,slow=4.8,SNR=14
MAW LR LR 22 05 12.2
comp=Z,36nm,18.0s,baz=39,slow=34
MAW Mawson 74.91 201 P **P** **21 33 49.4 +1.4**
baz=75,SNR=9.1
MAW Mawson 74.91 201 P **P** **21 33 49.5 +1.4**
WBK Wadi Bani Khal 74.92 296 P **P** **21 33 46.6 -2.4**
BRZS Berezniki 74.93 326 *i*P **P** **21 33 48.2 -0.3**
comp=Z,9.2nm,0.8s,baz=326
MHTO MHTO 75.44 294 P **P** **21 33 51.3 -0.7**
HRA Herat 75.49 308 P **P** **21 33 52.6 +0.3**
JMDO Jabal Madar 75.64 295 P **P** **21 33 50.9 -2.2**
SMDO Samad 75.85 296 P **P** **21 33 51.3 -3.2**

BIDO Bidbid 75.89 296 P **P** **21 33 54.9 +0.3**
SNR=12
HON Honolulu 76.36 66 P **P** **21 33 58.7 +1.5**
HOQ Hoqain 76.64 296 P **P** **21 33 58.9 +0.2**
SNR=7.3
SOCY Socotra 77.43 284 P **P** **21 34 02.9 -0.5**
SOCY IAmb IAmb 21 34 03.7
comp=Z,26nm,0.7s
DMTO DMTO 77.53 290 P **P** **21 34 02.9 -0.9**
BRVK Borovoye 77.76 328 P **P** **21 34 04.3 -0.1**
BRVK IAmb IAmb 21 34 05.4
comp=Z,28nm,0.8s
UOSS Minazif 77.94 297 *i*P **P** **21 34 05.8 -0.1**
SNR=6.9
UOSS Minazif 77.94 297 P **P** **21 34 05.9 -0.1**
HATD Hatta, Dubai 77.97 297 *i*P **P** **21 34 07.9 +1.7**
SNR=9.3
HATD Hatta, Dubai 77.97 297 P **P** **21 34 05.8 -0.3**
SNR=5.9
MSFE Esma-Masafi 78.07 298 *i*P **P** **21 34 07.5 +0.7**
SNR=16
BANOM Banah 78.08 298 P **P** **21 34 07.3 +0.5**
SNR=8.4
RBK Rabkut 78.19 289 P **P** **21 34 07.2 -0.4**
SHME Shamm 78.25 298 *i*P **P** **21 34 08.1 +0.4**
SNR=19
HMH Humu'ula Sheep 78.30 68 P **P** **21 34 09.1 +0.6**
TIXI Tiksi 78.35 360 P **P** **21 34 06.8 -0.4**
NAZ Nazwa, Dubai 78.43 297 *i*P **P** **21 34 09.3 +0.7**
SNR=6.1
FAQ Al Faqa, Dubai 78.43 297 *i*P **P** **21 34 08.7 0.0**
SNR=17
FAQ Al Faqa, Dubai 78.43 297 P **P** **21 34 08.7 0.0**
ASUD Al Ashush, Dub 78.64 297 *i*P **P** **21 34 10.3 +0.5**
SNR=6.7
WHFO Wadi Hawf 78.67 290 P **P** **21 34 09.3 -0.8**
ABTO Aybut 79.01 289 P **P** **21 34 11.9 -0.1**
GEYT Alibeck 79.76 310 P **P** **21 34 16.1 +0.4**
comp=Z,10.0nm,0.7s,baz=152,slow=4.4,SNR=22
GEYT Alibeck 79.76 310 P **P** **21 34 15.8 +0.2**
GYA0B ALIBECK ARRAY 79.76 310 P **P** **21 34 15.7 0.0**
ABPO Ambohimpanom 80.54 252 P **P** **21 34 20.6 +0.2**
UNV Unalaska Valle 80.64 33 P **P** **21 34 20.2 +0.3**
UNV IAmb IAmb 21 34 21.6
comp=Z,32nm,0.8s
NRIK Noril'sk 81.31 346 P **P** **21 34 22.9 -0.2**
comp=Z,18nm,0.7s,baz=131,slow=5.8,SNR=25
NRIK LR LR 22 13 03.8
comp=Z,34nm,19.5s,baz=15,slow=37
ABKAR Akbulak array 82.10 322 P **P** **21 34 27.6 -0.1**
ABKAR IAmb IAmb 21 34 30.0
comp=Z,21nm,0.7s
ABKAR Akbulak array 82.10 322 P **P** **21 34 27.4 -0.4**
QSPA South Pole Qui 83.12 180 LR LR 22 10 24.7
comp=Z,54nm,20.1s,baz=343,slow=35
QSPA South Pole Qui 83.12 180 P **P** **21 34 33.1 +0.2**
SYO Syowa Base 83.62 201⇓*e*P **P** **21 34 34.6 -0.6**
SYO Syowa Base 83.62 201⇑*e*PcP **PcP** **21 34 38.8 -0.3**
SDPT Sand Point 84.46 33 P **P** **21 34 39.5 -0.2**
CNBA Chernabura Isl 84.76 33 P **P** **21 34 40.8 -0.4**
ARU Arti 85.34 328 P **P** **21 34 43.1 -0.9**
ARU IAmb IAmb 21 34 44.7
comp=Z,47nm,0.9s
RAYN Ar Rayn 87.25 294 P **P** **21 34 54.5 +0.3**
RAYN IAmb IAmb 21 34 55.4
comp=Z,25nm,0.8s
RDOG Red Dog Mine 88.14 20 P **P** **21 34 56.7 -0.7**
GNI Garni 90.40 310 P **P** **21 35 08.9 +0.1**
GNI IAmb IAmb 21 35 26.6
comp=Z,13nm,0.9s
IMAR Indian Mountai 90.86 23 P **P** **21 35 09.8 -0.3**
A21K Barrow 91.34 18 P **P** **21 35 12.2 -0.1**
baz=253
A21K Barrow 91.34 18 P **P** **21 35 12.1 -0.1**
A21K IAmb IAmb 21 35 13.0
comp=Z,12nm,0.9s
GEVA Gevas 91.44 308 P **P** **21 35 13.8 +0.2**
GEVA IAmb IAmb 21 35 15.2
comp=Z,28nm,1.0s
AKH Akhalkalaki 91.52 311 P **P** **21 35 14.7 +0.7**
AKH IAmb IAmb 21 35 15.9
comp=Z,20nm,1.0s
MLY Manley 91.85 25 P **P** **21 35 14.2 -0.6**
baz=258
KMBO Kilima Mbogo 92.12 269 P **P** **21 35 19.0 +1.5**
comp=Z,2.8nm,0.8s,baz=11,slow=1.4,SNR=5.9
KMBO Kilima Mbogo 92.12 269 P **P** **21 35 17.9 +0.4**
KBZ Khabaz 92.25 314 P **P** **21 35 16.5 -0.5**
comp=Z,3.8nm,0.8s,baz=56,slow=24,SNR=12
MCK McKinley 92.36 26 P **P** **21 35 16.4 -0.8**
baz=260,SNR=6.3
I23K Minto, Yukon-K 92.45 25 P **P** **21 35 17.5 0.0**
baz=259,SNR=10
NEA2 Nenana 92.47 25 P **P** **21 35 17.9 +0.3**
baz=259
COLD Coldfoot 92.52 23 P **P** **21 35 18.0 +0.2**
baz=258
COLD Coldfoot 92.52 23 P **P** **21 35 18.0 +0.2**
COLD IAmb IAmb 21 35 18.8
comp=Z,9.9nm,0.9s
CCB Clear Creek Bu 93.01 25 P **P** **21 35 19.0 -1.1**
CCB IAmb IAmb 21 35 19.6
comp=Z,15nm,0.8s
TOLK Toolik Lake Re 93.03 21 P **P** **21 35 20.3 +0.1**
baz=259
MARD Mardin 93.11 307 P **P** **21 35 21.2 -0.1**
MARD IAmb IAmb 21 35 22.2
comp=Z,13nm,0.6s
IL31 93.42 25 P **P** **21 35 20.4 -1.6**
ILAR Eielson Array 93.42 25 P **P** **21 35 19.9 -2.1**
comp=Z,5.2nm,0.7s,baz=251,slow=4.6,SNR=49
ILAR PKKP **PKKPdf** **21 52 27.8 -1.3**
comp=Z,0.4nm,0.7s,baz=130,slow=0.6,SNR=5.4
ILAR Eielson Array 93.42 25 P **P** **21 35 20.1 -1.9**
KOPT Kop Dagi 93.61 310 P **P** **21 35 24.5 +0.6**
KOPT IAmb IAmb 21 35 27.7
comp=Z,25nm,1.3s
FYU Fort Yukon 94.35 24 P **P** **21 35 26.6 +0.4**
FYU IAmb IAmb 21 35 27.6
comp=Z,21nm,1.0s
SCRK Sand Creek 94.57 26 P **P** **21 35 27.1 -0.3**
baz=264
BMAR Burnt Mountain 94.70 23 P **P** **21 35 28.2 +0.3**
L26K Log Cabin Wild 94.76 27 P **P** **21 35 28.4 +0.2**
baz=264
BELA Belgrano 2 94.93 183 P **P** **21 35 29.0 +0.2**
K27K Chicken 95.41 26 P **P** **21 35 32.0 +0.9**
baz=266
K27K Chicken 95.41 26 P **P** **21 35 32.1 +0.9**
BCAR Beaver Creek A 95.47 27 P **P** **21 35 31.5 0.0**
SNAA Sanae 95.69 194 P **P** **21 35 33.2 +0.8**
EGAK Eagle 95.86 26 P **P** **21 35 33.2 +0.1**
EGAK IAmb IAmb 21 35 33.8
comp=Z,9.5nm,1.0s
KLMR Klimovskoe 95.94 331 *e*P **P** **21 35 30.9 -2.7**
KLMR AMP 21 35 36.7
comp=Z,14nm,1.4s
KLMR *es*P **sP** **21 36 24.7 -2.9**
DAWY Dawson 96.59 26 P **P** **21 35 36.8 +0.2**
VNA2 Neumayer--Watz 97.26 193 P Pdif 21 35 40.3 +0.8
baz=128,slow=4.1
EPYK Eagle Plains 97.75 24 P **P** **21 35 41.2 -0.5**
baz=271
BRTR Keskin Array B 98.86 309 P **P** **21 35 46.3 -1.1**
comp=Z,1.6nm,0.7s,baz=130,slow=3.9,SNR=5.7
BRTR Keskin Array B 98.86 309 P **P** **21 35 46.1 -1.3**
INK Inuvik 98.91 22 P **P** **21 35 45.8 -0.9**
comp=Z,2.4nm,0.8s,baz=261,slow=3.4,SNR=5.5
INK Inuvik 98.91 22 **P** **21 35 46.2 -0.5**
INK IAmb IAmb 21 35 46.9
comp=Z,14nm,1.4s
LSZ Lusaka 99.05 253 **Pdif** **21 35 49.0 +0.2**
ARCES ARCESS Array B 101.28 340 P **Pdif** **21 35 55.8 -1.6**
comp=Z,3.6nm,0.7s,baz=77,slow=5.4,SNR=12
ARCES PKiKP **PKiKP** **21 40 20.5 -0.5**
comp=Z,3.4nm,1.0s,baz=108,slow=1.1,SNR=7.5
AKASG Malin Array Be 101.80 320 P **Pdif** **21 35 58.2 -1.8**
comp=Z,0.8nm,0.4s,baz=67,slow=5.1,SNR=6.9
FINES FINESS Array B 102.41 331 P **Pdif** **21 36 00.8 -1.7**
comp=Z,0.7nm,0.5s,baz=42,slow=5.9,SNR=5.2
FINES PKiKP **PKiKP** **21 40 22.9 -0.4**
comp=Z,1.2nm,0.5s,baz=88,slow=2.9,SNR=9.8
KOLS Kolonicke sedl 106.46 319 *e*PDIFF **Pdif** **21 36 22.5 +1.7**
VYHS Vyhne 108.78 319 *e*PDIFF **Pdif** **21 36 32.6 +1.4**
NB2 NORSAR Subarra109.44 333 PKPdf **Pdif** **21 36 32.3 -1.6**

comp=Z,2.2nm,1.1s,baz=68,slow=1.9
NOA NORSAR Array B 109.44 333 Pdiff **Pdif 21 36 32.6 -1.3**
comp=Z,0.6nm,0.7s,baz=68,slow=4.6,SNR=4.1
NOA PKiKP **PKiKP 21 40 35.6 -0.7**
comp=Z,1.5nm,0.8s,baz=63,slow=2.2,SNR=4.3
OSTC Ostas 110.00 321 *e*PKP **PKiKP 21 40 37.6 -0.1**
PRU Pruhonice 111.18 321 *e*PKP **PKiKP 21 40 40.0 +0.1**
NVAR Mina Array Bea 111.58 51 PKiKP **PKiKP 21 40 42.1 +0.8**
comp=Z,0.9nm,0.7s,baz=235,slow=2.1,SNR=7.2
NVAR PKKPbc **PKKPab 21 51 46.2 +0.7**
comp=Z,1.0nm,0.8s,baz=98,slow=1.8,SNR=7.0
GERES GERESS Array B 112.01 320 PKiKP **PKiKP 21 40 41.2 -0.4**
comp=Z,2.6nm,0.6s,baz=63,slow=2.2,SNR=27
KHC Kasperske Hory 112.01 320 *e*PKP **PKiKP 21 40 40.8 -0.7**
CWC Cottonwood Cre 112.04 54 P **PKiKP 21 40 43.2 +1.0**
baz=278
OBKA Obir 112.05 318 *e*P **PKiKP 21 40 42.1 +0.3**
comp=Z,14nm,1.0s
MPMC Manual Prospec 112.57 54 P **PKiKP 21 40 44.3 +1.1**
baz=278
MYKA Terra Mystica 112.62 318 *e*P **PKiKP 21 40 43.5 +0.6**
comp=Z,6.6nm,0.9s
KBA Koelnbreinsper 112.70 318 *e*P **PKiKP 21 40 42.3 -0.8**
comp=Z,6.7nm,1.3s
GSC Goldstone, Bar 113.22 55 P **PKiKP 21 40 45.5 +1.1**
baz=278
ABTA Abfaltersbach 113.34 318 *e*P **PKiKP 21 40 43.2 -1.0**
comp=Z,7.4nm,0.8s
TPNV Topopah Spring 113.42 53 P **PKiKP 21 40 45.5 +0.7**
baz=280
HLID Hailey 113.49 45 P **PKiKP 21 40 45.9 +1.2**
baz=284
WTTA Wattenberg 113.78 319 *e*P **PKiKP 21 40 44.9 -0.3**
comp=Z,12nm,0.5s
WATA Walderalm 113.80 319 *e*P **PKiKP 21 40 44.3 -0.8**
comp=Z,4.9nm,0.6s
MONP2 Monument Peak 113.87 57 P **PKiKP 21 40 47.3 +1.5**
baz=278
SQTA Sankt Quirin 114.07 319 *e*P PKPdf 21 40 45.6 -0.1
comp=Z,4.1nm,0.9s
BELC Belle Mtn. Jos 114.07 56 P **PKiKP 21 40 47.5 +1.4**
baz=278
MOTA Moosalm 114.10 319 *e*P PKPdf 21 40 45.0 -0.7
comp=Z,4.3nm,0.5s
GMRC Granite Mounta 114.23 55 P **PKiKP 21 40 47.9 +1.5**
baz=279
RETA Reutte 114.28 319 *e*P PKPdf 21 40 45.6 -0.4
comp=Z,2.8nm,0.6s
FETA Feichten 114.44 319 *e*P PKPdf 21 40 46.2 -0.3
comp=Z,2.0nm,0.7s
BC3 Big Chuckawall 114.57 56 P **PKiKP 21 40 48.4 +1.4**
baz=278
IRM Iron Mountain 114.75 56 P **PKiKP 21 40 49.0 +1.7**
baz=279
DAVA Damuels 114.91 319 *e*P **PKiKP 21 40 46.8 -0.6**
EGMT Eagleton 115.37 40 P **PKPdf 21 40 48.4 +0.3**
baz=289
DUG Dugway, Tooele 115.43 49 P **PKPdf 21 40 49.4 +0.9**
baz=283
DUG Dugway, Tooele 115.43 49 PKPdf 21 40 49.5 +0.9
LCMT Little Creek M 115.77 52 PKiKP 21 40 50.7 +1.4
IMW Indian Meadow 115.84 44 PKiKP 21 40 50.6 +1.2
TPAW Teton Pass 115.94 45 PKiKP 21 40 50.4 +0.8
MSU Marysvale 116.29 50 PKPdf **PKiKP 21 40 51.3 +1.0**
BW06 Boulder Array 117.13 45 P **PKiKP 21 40 52.2 +0.3**
baz=287
PD31 Pinedale Array 117.13 45 PKPdf 21 40 51.8 0.0
PDAR Pinedale Array 117.13 45 PKP **PKiKP 21 40 52.0 +0.2**
comp=Z,2.1nm,0.7s,baz=249,slow=1.1,SNR=22
PDAR PKKPbc **PKKPbc 21 51 17.0 -1.2**
comp=Z,0.5nm,0.6s,baz=112,slow=5.8,SNR=4.5
PDAR Pinedale Array 117.13 45 PKPdf **PKPdf 21 40 51.5 -0.4**
WUAZ Wupatki 117.56 54 P **PKiKP 21 40 54.0 +1.2**
baz=282
WUAZ Wupatki 117.56 54 PKPdf **PKiKP 21 40 53.9 +1.1**
LAO LASA Array 118.09 40 P **PKiKP 21 40 54.5 +1.1**
baz=292
LAO LASA Array 118.09 40 PKiKP 21 40 54.3 +0.9
KEST Kesra 118.36 307 PKP **PKiKP 21 40 54.8 +0.5**
comp=Z,6.0nm,0.8s,baz=342,slow=3.6,SNR=10
KEST Kesra 118.36 307 PKiKP 21 40 54.5 +0.3
TUC Tucson 118.66 57 P **PKiKP 21 40 56.1 +1.2**
baz=281
TUC Tucson 118.66 57 PKiKP 21 40 55.9 +0.9
PV23 Carpenter Ridg 118.71 50 PKiKP 21 40 55.6 +0.5
O20A White River Ci 118.83 48 P **PKiKP 21 40 56.1 +0.9**
baz=287
RWWY Rawlins 119.11 46 PKPdf **PKiKP 21 40 56.3 +0.5**
K22A Casper 119.29 45 P **PKPdf 21 40 55.9 0.0**
baz=289
K22A Casper 119.29 45 PKPdf **PKPdf 21 40 55.3 -0.6**
MVCO Mesa Verde 119.42 51 P **PKiKP 21 40 57.6 +1.1**
baz=285
MVCO Mesa Verde 119.42 51 PKPdf **PKiKP 21 40 57.3 +0.8**
319A Douglas 120.09 58 PKiKP 21 40 58.7 +0.9
N23A Red Feather La 120.27 46 P **PKiKP 21 40 58.5 +0.4**
baz=289
RSSD Black Hills 120.47 42 P **PKPdf 21 40 58.1 -0.1**
baz=292
RSSD Black Hills 120.47 42 PKPdf **PKPdf 21 40 57.9 -0.3**
S22A 4UR Ranch, Cre 120.56 50 P **PKiKP 21 41 00.1 +1.4**
baz=286
ISCO Idaho Springs 120.86 47 P **PKiKP 21 41 00.0 +0.7**
baz=288
121A Cookes Peak, D 121.10 56 P **PKiKP 21 41 01.0 +1.2**
baz=283
121A Cookes Peak, D 121.10 56 PKPdf **PKiKP 21 41 00.6 +0.8**
SDCO Great Sand Dun 121.57 50 P **PKiKP 21 41 01.9 +1.1**
baz=287
SDCO Great Sand Dun 121.57 50 PKPdf **PKiKP 21 41 01.7 +0.9**
ANMO Albuquerque 121.60 53 P **PKiKP 21 41 01.9 +1.1**
baz=285
ANMO Albuquerque 121.60 53 PKPdf **PKiKP 21 41 01.6 +0.9**
T25A Trinidad 122.58 50 P **PKiKP 21 41 03.7 +1.0**
baz=288
ULM Lac du Bonnet 122.59 33 PKP **PKPdf 21 41 00.8 -1.0**
comp=Z,6.6nm,0.6s,baz=350,slow=3.1,SNR=8.0
MNTX Cornudas Mount 123.27 57 P **PKiKP 21 41 04.8 +0.9**
baz=284
MNTX Cornudas Mount 123.27 57 PKPdf **PKiKP 21 41 04.5 +0.5**
KSCO Kaye Shedlock' 123.30 47 P **PKiKP 21 41 04.6 +0.6**
baz=290
TAM Tamanrasset 123.92 293 PKPdf **PKiKP 21 41 06.6 +1.0**
MSTX Muleshoe 124.80 53 P **PKiKP 21 41 07.6 +0.6**
baz=287
MSTX Muleshoe 124.80 53 PKiKP 21 41 07.3 +0.3
TX31 Lajitas Ar. Si 125.26 59 PKPdf **PKiKP 21 41 08.3 +0.2**
TXAR Lajitas Array 125.26 59 PKP **PKiKP 21 41 08.2 +0.2**
comp=Z,3.7nm,0.7s,baz=229,slow=1.3,SNR=27
CBKS Cedar Bluff 125.47 47 P **PKiKP 21 41 08.5 +0.4**
baz=293
ECSD EROS Data Cent 125.48 40 P **PKPdf 21 41 07.7 +0.1**
baz=299
ECSD EROS Data Cent 125.48 40 PKPdf **PKPdf 21 41 07.3 -0.3**
BGNE Belgrade 125.53 43 P **PKiKP 21 41 08.4 +0.3**
baz=296
R32A Long Quarter, 126.36 47 PKiKP 21 41 10.2 +0.3
ESDC Sonseca Array 127.07 315 PKP **PKiKP 21 41 11.2 -0.1**
comp=Z,1.8nm,1.0s,baz=48,slow=3.7,SNR=5.0
ESDC Sonseca Array 127.07 315 PKPdf 21 41 10.9 +0.1
WMOK Wichita Mounta 127.68 51 P **PKiKP 21 41 12.9 +0.3**
baz=291
WMOK Wichita Mounta 127.68 51 PKiKP 21 41 12.4 -0.3
ABTX Abilene, Hawle 127.70 54 P **PKiKP 21 41 13.1 +0.3**
baz=288
JCT Junction City 128.21 56 P **PKiKP 21 41 14.1 +0.3**
baz=287
JCT Junction City 128.21 56 PKPdf PKPdf 21 41 13.5 +0.3
TOA0 Torodi Ar. Sit 128.32 281 PKPdf PKPdf 21 41 13.8 0.0
TORD Torodi Ar. Bea 128.32 281 PKP **PKPdf 21 41 13.3 -0.4**
comp=Z,6.4nm,0.6s,baz=73,slow=1.8,SNR=25
TORD SKPbc SKPbc 21 44 18.9
comp=Z,2.1nm,0.8s,baz=56,slow=2.8,SNR=3.4
TORD Torodi Ar. Bea 128.32 281 PKPdf **PKPdf 21 41 13.5 -0.2**
PLCA Paso Flores 129.17 160 PKP **PKiKP 21 41 15.5 -0.1**
comp=Z,3.4nm,0.7s,baz=224,slow=1.9,SNR=8.1
PLCA SKPbc SKPbc 21 44 21.9 0.0
comp=Z,1.8nm,0.8s,baz=223,slow=4.5,SNR=4.1
PLCA Paso Flores 129.17 160 PKiKP 21 41 15.4 -0.2
P38A Dawn 129.47 43 PKPdf 21 41 15.4 +0.1
U38A Gravette 130.32 47 PKPdf 21 41 17.2 +0.2
S39A Bolivar 130.52 45 PKPdf **PKPdf 21 41 17.6 +0.2**
R40A Maddies Statio 130.98 44 PKPdf 21 41 18.3 +0.2
W39A Magazine 131.29 48 P **PKiKP 21 41 19.7 -0.1**
baz=295
U40A Yellville 131.46 47 P **PKiKP 21 41 19.9 -0.3**
baz=297
U40A Yellville 131.46 47 PKPdf **PKPdf 21 41 19.4 +0.2**
CCM Cathedral Cave 131.80 44 P **PKPdf 21 41 19.6 -0.2**
baz=300
KOWA Kowa 133.79 283 PKPdf **PKiKP 21 41 25.1 -0.3**
L48A N Adams 133.90 35 PKiKP 21 41 24.6 -0.3
KIC Kosan Boka 134.58 272 *e*PKIKP **PKPdf 21 41 26.0 +0.4**
comp=Z,16nm,0.8s
DBIC Dimbokro 134.71 273 PKP **PKPdf 21 41 25.8 0.0**
comp=Z,5.1nm,0.6s,baz=77,slow=2.7,SNR=12
DBIC SKPbc **SKPbc 21 44 39.2 -2.6**
comp=Z,7.0nm,0.8s,baz=49,slow=3.4,SNR=5.6
DBIC Dimbokro 134.71 273 PKPdf 21 41 26.0 +0.1
LIC Lamto 134.85 272 *e*PKIKP **PKPdf 21 41 26.4 +0.3**
comp=Z,21nm,0.6s
TIC Toumodi 134.87 273 *e*PKIKP **PKPdf 21 41 25.8 -0.4**
WVT Waverly 135.12 44 P **PKPdf 21 41 25.9 -0.2**
baz=302
P53A Whipple 137.26 36 P **PKiKP 21 41 32.1 +0.3**
baz=312
LRAL Lakeview Retre 137.28 47 P **PKiKP 21 41 31.8 -0.2**
baz=300
J59A Piesco 137.87 26 P **PKiKP 21 41 32.9 0.0**
baz=323
Q54A Coxs Mills 137.91 36 P **PKiKP 21 41 32.9 -0.3**
baz=312
L57A Andrews Acres 137.92 30 P **PKiKP 21 41 33.2 +0.1**
baz=319
N56A West Decatur 137.98 32 P **PKiKP 21 41 33.2 -0.1**
baz=316
I60A Shoreham 138.08 25 P **PKiKP 21 41 32.9 -0.4**
baz=325
M57A Sunshine Farm, 138.27 30 P **PKiKP 21 41 33.8 -0.1**
baz=318
Q55A Buckhannon 138.34 35 P **PKiKP 21 41 34.0 -0.1**
baz=313
T55A Pulaski 139.16 38 P **PKiKP 21 41 36.0 +0.2**
baz=310
BLA Blacksburg 139.32 38 P **PKiKP 21 41 36.0 -0.1**
baz=311
T56A Rocky Mt 139.67 38 P **PKiKP 21 41 36.4 -0.5**
baz=311
T59A Double "B" Far 141.18 36 P **PKiKP 21 41 39.5 -0.3**
baz=314
MATN Matagalpa 144.59 77 PKPdf **PKPdf 21 41 43.7 -0.1**
PB15 IPOC Station P 144.82 149 PKPdf 21 41 45.5 +1.3
PB06 IPOC Station P 145.18 148 PKPab 21 41 46.3 +1.5
ACON Acoyapa 145.40 79 PKPab 21 41 46.0 +0.2
LVC Limon Verde 145.60 149 PKPbc **PKPab 21 41 47.6 +0.9**
comp=Z,19nm,0.8s,baz=276,slow=5.6,SNR=11
LVC Limon Verde 145.60 149 PKPab 21 41 47.3 +0.6
JTS Las Juntas de 145.75 82 PKPab **PKPab 21 41 47.8 +0.7**
PB07 IPOC Station P 145.80 147 PKPab 21 41 47.3 +0.1
ESPN Las Esperanzas 146.25 78 PKPbc 21 41 48.3 +0.4
MBO M'Bour 146.25 286 PKPab 21 41 48.8 -0.1
CPUP Villa Florida 146.34 169 PKPbc **PKPbc 21 41 48.1 +0.2**
comp=Z,22nm,0.8s,baz=195,slow=2.2,SNR=43
CPUP Villa Florida 146.34 169 PKPbc 21 41 47.6 -0.3
CPUP Villa Florida 146.34 169 *e*P **PKPbc 21 41 47.3 -0.6**
TA01 Diego Aracena 146.57 145 PKPbc 21 41 49.1 +0.5
PB01 IPOC Station P 146.57 146 PKPbc 21 41 48.8 0.0
PB02 IPOC Station P 147.48 146 PKPbc 21 41 50.7 -1.1
PB11 IPOC Station P 147.50 145 PKPdf 21 41 50.0 +1.3
NNA Nana 147.78 125 PKPbc **PKiKP 21 41 53.4 -0.8**
comp=Z,23nm,0.6s,baz=250,slow=8.0,SNR=9.1
GO01 Chusmiza 147.84 145 PKPbc 21 41 51.3 -1.5
MNMC Minye Minye 148.03 144 PKPbc 21 41 51.9 -1.2
PB16 IPOC Station P 148.71 143 PKPbc 21 41 53.4 -1.8
CBCY The Bluff, Cay 148.83 63 PKPbc 21 41 53.9 -0.8
ATAH Atahualpa 148.88 116 PKP **PKPdf 21 41 51.8 +0.2**
comp=Z,24nm,0.7s,baz=228,slow=2.8,SNR=5.6
ATAH PKPbc **PKiKP 21 41 58.0 +1.1**
comp=Z,15nm,0.6s,baz=198,slow=3.1,SNR=7.2
TRCB Terra Rica 150.45 176 *e*P **PKPdf 21 41 53.5 +0.2**
LPAZ La Paz 151.12 143 PKP **PKPdf 21 41 56.5 +1.3**
comp=Z,6.1nm,1.0s,baz=238,slow=0.2,SNR=12
LPAZ PKPbc **PKPbc 21 42 01.3 +0.2**
comp=Z,22nm,1.0s,baz=182,slow=3.5,SNR=26
LPAZ La Paz 151.12 143 *e*P **PKPdf 21 41 54.9 -0.4**
MTDJ Mount Denham 151.32 64 PKPbc 21 42 00.7 -0.2
AQDB Aquidauana 152.36 169 *e*P **PKPdf 21 41 56.7 +0.5**
SIV San Ignacio 154.99 155 PKP **PKPdf 21 42 00.8 +0.7**
comp=Z,2.7nm,0.7s,baz=218,slow=2.0,SNR=13
SIV PKPab **PKPab 21 42 25.8 +1.0**
comp=Z,5.8nm,0.6s,baz=216,slow=3.7,SNR=15
SAML Samuel 159.83 141 PKPdf **PKPdf 21 42 06.4 +0.3**
SDV Santo Domingo 159.93 83 PKPdf **PKPdf 21 42 06.2 -0.3**

IDC 11 21:43:50.8±10.0, 7.76N×94.72E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.2/41, mbtmp3.4/3, Error ellipse: s-maj=531.1km s-min=32.5km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
MKAR	**Makanchi Array**	**40.33**	**347**	P		P	21 51 30.5	+0.4
	0.4nm,0.6s,baz=160,slow=6.9,SNR=5.5							
ZALV	**Zalesovo Beam**	**46.75**	**352**	P		P	21 52 20.9	-0.8
	0.6nm,0.7s,baz=157,slow=7.9,SNR=3.8							
WRA	**Warramunga Arr**	**47.73**	**126**	P		P	21 52 29.7	-0.1
	0.3nm,0.9s,baz=304,slow=8.9,SNR=1.9							

*IDC **11** 21:50:07.8±3.8, 28.35N×53.61E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.3/44, mbtmp3.8/3, MS3.4/2, Ms1 3.4/2, ms1mx2.6/43, Error ellipse: s-maj=101.2km s-min=37.2km az=143.0*
*TEH **11** 21:50:10.7, 28.57N×53.51E, h8km, ML2.9*
ISC 11 21:50:10.8±1.6, 28.48N±0.07×53.41E±0.05, h6km±11km, n14, σ1°63/13, mb3.9/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
JHRM	**Jahrom**	**0.15**	**79**	*e*Pg		**Pg**	**21 50 12.9**	**-1.0**
QIR1	**Qir**	**0.32**	**270**	*e*Pg		**Pb**	**21 50 19.3**	**+0.3**
QIR1				*e*			21 50 33.9	
LAR1	**LAR**	**1.17**	**133**	*e*Pg		**Pn**	**21 50 34.2**	**+0.4**
LAR1				*e*Sg		**Sn**	**21 50 53.4**	**+3.3**
LAR1				*e*			21 51 01.2	
SHI	**Shiraz**	**1.40**	**326**	*e*Pg		**Pg**	**21 50 37.8**	**+0.1**
SHI				*e*			21 51 08.0	
KLNJ	**Kolanjah**	**2.98**	**328**	*e*Pn		**Pn**	**21 50 59.8**	**+0.9**
KLNJ				*e*			21 52 06.5	
IMEH	**Mehriz**	**3.08**	**19**	*e*Pn		**Pn**	**21 51 01.4**	**+1.1**
NGRK	**Negar Kerman**	**3.13**	**67**	*e*		**Sg**	**21 51 53.2**	**+1.8**
KHGB	**Koh Gabri**	**3.27**	**54**	*e*Pn		**Pn**	**21 51 02.8**	**-0.1**
KHGB				*e*			21 52 05.7	
IRAM	**Ramesheh**	**3.44**	**345**	*e*			21 51 20.5	
IRAM				*e*Pn		**Pn**	**21 51 06.3**	**+1.2**
OBN	**Obninsk**	**29.27**	**340**	LR		LR	22 10 22.9	
	comp=Z,15nm,19.0s,baz=169,slow=41							
ZALV	**Zalesovo Beam**	**34.23**	**33**	P		**P**	**21 56 55.2**	**-2.0**
	0.4nm,0.5s,baz=246,slow=9.3,SNR=1.9							
FINES	**FINESS Array B**	**37.65**	**339**	P		**P**	**21 57 25.7**	**-0.6**
	1.8nm,0.8s,baz=141,slow=9.0,SNR=3.4							
TORD	**Torodi Ar. Bea**	**50.32**	**263**	P		**P**	**21 59 07.7**	**-1.0**
	0.9nm,0.6s,baz=63,slow=7.2,SNR=4.4							
SADO	**Sadowa**	**95.23**	**328**	LR		LR	22 47 32.5	
	comp=Z,64nm,18.8s,baz=304,slow=36							

*IDC **11** 22:00:16.9±3.9, 37.26N×72.15E, h179km±35km, mb3.2/8, mb1 3.3/13, mb1mx3.1/47, mbtmp3.8/13, Error ellipse: s-maj=27.0km s-min=17.8km az=174.0*
*NNC **11** 22:00:22.6±2.8, 37.76N×72.13E, h196km±26km, mb3.0, mpv4.0, Error ellipse: s-maj=27.0km s-min=14.8km az=3.0*
ISC 11 22:00:18.5±0.6, 37.44N±0.05×72.05E±0.06, h200km, n43, σ1°56/49, mb3.5/8, 7C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
CEP	**Cherat**	**3.61**	**182**	P		**Pn**	**22 01 16.4**	**+0.7**
CEP				S		**Sn**	**22 02 00.0**	**-0.4**
THW	**Thamme Wali**	**4.64**	**183**	P		**Pn**	**22 01 28.7**	**+0.3**
AML	**Almayashu**	**4.85**	**15**	P		**Pn**	**22 01 31.2**	**-0.1**
	SNR=235							
UCH	**Uchtor**	**5.14**	**21**	P		**Pn**	**22 01 35.0**	**-0.1**
	SNR=25							
EKS2	**Erkin-Say**	**5.38**	**14**	P		**Pn**	**22 01 38.1**	**+0.3**
	SNR=15							
AAK	**Ala-Archa**	**5.52**	**19**	P		**Pn**	**22 01 39.9**	**+0.2**
	SNR=34							
AAK	**Ala-Archa**	**5.52**	**19**	⇑P		**Pn**	**22 01 39.9**	**+0.2**
	19nm,0.4s							
AAK				⇓S		**Sn**	**22 02 41.1**	**-2.7**
	65nm,0.8s							
KBK	**Karagaybulak**	**5.67**	**22**	P		**Pn**	**22 01 42.2**	**+0.7**
	SNR=12							
KK31	**Karatay Array**	**5.78**	**349**	⇑P		**Pn**	**22 01 43.2**	**+0.4**
	3.3nm,0.2s,baz=160,slow=11,SNR=110							
KK31				S		**Sn**	**22 02 46.3**	**-3.3**
	38nm,0.4s,baz=152,slow=18,SNR=24							
ULHL	**Ulahol**	**5.78**	**33**	P		**Pn**	**22 01 42.4**	**-0.7**
	SNR=18							
CHMS	**Chumysh**	**5.92**	**20**	P		**Pn**	**22 01 44.7**	**-0.1**
	SNR=8.8							
TKM2	**Tokmak 2**	**6.11**	**25**	P		**Pn**	**22 01 47.4**	**+0.1**
	SNR=7.8							
TKM2	**Tokmak 2**	**6.11**	**25**	⇑P		**Pn**	**22 01 46.7**	**-0.6**
	4.1nm,0.5s							
TKM2				⇓S		**Sn**	**22 02 54.6**	**-3.0**
	9.9nm,0.7s							
USP	**Ospenovka**	**6.11**	**17**	P		**Pn**	**22 01 47.6**	**+0.4**
	SNR=9.8							
GEYT	**Alibeck**	**11.06**	**277**	P		**Pn**	**22 02 51.7**	**+0.3**
	0.4nm,0.3s,baz=114,slow=16,SNR=1.6							
GEYT				S		**Sn**	**22 04 49.6**	**-5.0**
	0.3nm,0.3s,baz=80,slow=19,SNR=1.7							
MAKZ	**Makanchi**	**11.90**	**35**	⇓P		**Pn**	**22 03 00.5**	**-1.5**
	2.1nm,0.7s							
MK31	**Makanchi Array**	**12.04**	**36**	P		**Pn**	**22 03 04.2**	**+0.5**
	0.4nm,0.3s,baz=205,slow=10,SNR=31							
MKAR	**Makanchi Array**	**12.04**	**36**	P		**Pn**	**22 03 03.8**	**0.0**
	0.4nm,0.3s,baz=212,slow=9.4,SNR=12							
PYUN	**Piuthan**	**13.08**	**132**	*e*P		**Pn**	**22 03 14.7**	**-2.5**
	12nm,0.3s							
DANN	**Dangsing**	**13.36**	**129**	*e*P		**Pn**	**22 03 19.2**	**-1.6**
	7.2nm,0.3s							
KURBB	**Kurchatov Arra**	**13.97**	**17**	P		**Pn**	**22 03 26.3**	**-1.6**
	0.3nm,0.3s,baz=201,slow=11,SNR=30							
KURBB	**Kurchatov Arra**	**13.97**	**17**	⇓P		**P**	**22 03 30.5**	**+0.7**
	6.9nm,0.7s							
GKN	**Gorkha**	**14.15**	**128**	*e*P		**Pn**	**22 03 29.8**	**-0.7**
	25nm,0.4s							
AB31	**Akbulak array**	**14.71**	**327**	⇑P		**Pn**	**22 03 38.3**	**+1.4**
	1.5nm,0.4s,baz=261,slow=35,SNR=42							
DMN	**Daman**	**14.73**	**128**	*e*P		**Pn**	**22 03 36.7**	**-0.9**
PKIN	**Phulchoki**	**14.93**	**127**	*e*P		**P**	**22 03 40.3**	**-0.6**
	4.3nm,0.3s							
GUN	**Gumba**	**15.01**	**125**	*e*P		**P**	**22 03 41.0**	**-0.9**
	8.3nm,0.5s							
BVAR	**Borovoye Array**	**15.63**	**356**	P		**Pn**	**22 03 49.1**	**+0.9**
	0.6nm,0.3s,baz=118,slow=12,SNR=9.4							
BRVK	**Borovoye**	**15.67**	**356**	⇑P		**Pn**	**22 03 49.6**	**+1.1**
	2.1nm,0.7s							
RAMN	**Ramite**	**16.14**	**126**	*e*P		**Pn**	**22 03 54.5**	**-0.2**
AKTO	**Aktyubinsk**	**16.42**	**327**	P		**Pn**	**22 03 59.5**	**+1.8**
	1.4nm,0.3s,baz=133,slow=9.0,SNR=9.8							
AKTO				S		**S**	**22 06 55.3**	**-3.2**
	0.2nm,0.3s,baz=176,slow=19,SNR=3.1							
AKTO	**Aktyubinsk**	**16.42**	**327**	⇑P		**Pn**	**22 03 59.5**	**+1.8**
	3.5nm,0.5s							
ZAA0	**Zalesovo Array**	**18.71**	**24**	⇑P		**P**	**22 04 22.0**	**+0.2**
	2.9nm,0.8s							
ZALV	**Zalesovo Beam**	**18.71**	**24**	P		**P**	**22 04 22.4**	**+0.6**
	2.9nm,0.3s,baz=221,slow=9.9,SNR=78							
ARU	**Arti**	**21.04**	**339**	P		**P**	**22 04 48.0**	**+1.4**
	0.6nm,0.5s,baz=163,slow=10,SNR=4.6							
SONM	**Songino Array**	**27.11**	**57**	P		**P**	**22 05 44.2**	**+1.3**
	0.6nm,0.4s,baz=259,slow=8.7,SNR=4.6							
FINES	**FINESS Array B**	**37.19**	**325**	P		**P**	**22 07 11.9**	**+1.9**
	0.6nm,0.3s,baz=111,slow=10,SNR=5.6							
ARCES	**ARCESS Array B**	**40.61**	**337**	P		**P**	**22 07 40.3**	**+2.0**
	0.7nm,0.4s,baz=111,slow=8.2,SNR=14							
NB2	**NORSAR Subarra**	**44.15**	**322**	P		**P**	**22 08 08.6**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=93,slow=7.9							
NOA	**NORSAR Array B**	**44.15**	**322**	P		**P**	**22 08 08.7**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=92,slow=7.8,SNR=4.3							
TORD	**Torodi Ar. Bea**	**66.58**	**269**	P		**P**	**22 10 48.4**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=46,slow=5.7,SNR=7.2							
ILAR	**Eielson Array**	**73.64**	**16**	P		**P**	**22 11 30.7**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=316,slow=5.0,SNR=2.6							
WRA	**Warramunga Arr**	**81.78**	**123**	P		**P**	**22 12 14.8**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=328,slow=4.8,SNR=2.2							

IDC 11 22:17:27.8±9.4, 22.87N×142.34E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.2/40, mbtmp3.3/3, Error ellipse: s-maj=363.0km s-min=32.0km az=74.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
SONM	**Songino Array**	**37.94**	**320**	P		P	22 24 47.3	+0.1
	0.3nm,0.4s,baz=128,slow=9.3,SNR=2.3							
WRA	**Warramunga Arr**	**43.26**	**191**	P		P	22 25 31.1	-0.2
	0.2nm,0.8s,baz=9.6,slow=7.9,SNR=4.7							
MKAR	**Makanchi Array**	**53.33**	**312**	P		P	22 26 48.6	-0.2
	0.2nm,0.4s,baz=92,slow=7.9,SNR=5.4							

*IDC **11** 22:23:34.8±1.2, 38.26N×20.40E, h0km, mb3.6/5, mb1 3.6/10, mb1mx3.4/59, mbtmp3.5/10, ML3.1/5, Error ellipse: s-maj=22.6km s-min=19.4km az=106.0*
*THE **11** 22:23:35.9, 38.07N×20.35E, h0km±3km, ML3.4/14, Error ellipse: s-maj=3.3km s-min=1.0km az=242.0*
*ATH **11** 22:23:35.7, 38.08N×20.41E, h17km, ML3.1/26, Error ellipse: s-maj=1.6km s-min=0.8km az=59.0*
*BEO **11** 22:23:35.6±0.7, 38.02N×20.21E, h16km±4km, ML3.4/12*
ISC 11 22:23:35.8±0.8, 38.09N±0.02×20.37E±0.03, h14km±5km, n151, σ1°22/197, mb3.7/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
DMLN	**Damoulianata-K**	**0.15**	**0**	P		**Pb**	**22 23 40.2**	**-0.2**
DMLN				S		**Sb**	**22 23 43.1**	**-0.4**
DMLN	**Damoulianata-K**	**0.15**	**0**	P		**Pg**	**22 23 40.0**	**+0.4**
DMLN				S		**Sb**	**22 23 43.1**	**-0.4**
	53μm,0.1s							
PSDA	**Pessada-Kefalo**	**0.17**	**82**	P		**Pg**	**22 23 39.7**	**-0.2**
PSDA				S		**Sg**	**22 23 42.4**	**-0.3**
PSDA	**Pessada-Kefalo**	**0.17**	**82**	P		**Pg**	**22 23 39.7**	**-0.2**
PSDA				S		**Sg**	**22 23 42.3**	**-0.3**
	7μm,0.3s							
KEF4	**Livadi, Kephal**	**0.17**	**14**	P		**Pg**	**22 23 40.2**	**+0.2**
KEF4				S		**Sb**	**22 23 43.7**	**-0.4**
KEF4	**Livadi, Kephal**	**0.17**	**14**	P		**Pg**	**22 23 40.2**	**+0.2**
KEF4				S		**Sb**	**22 23 43.5**	**-0.6**
VLS	**Valsamata**	**0.19**	**63**	P		**Pg**	**22 23 40.0**	**-0.3**
VLS				S		**Sg**	**22 23 43.0**	**-0.4**
VLS				AML		AML	22 23 43.1	
VLS				AML		AML	22 23 43.2	
	comp=E,42011μm,0.1s							
VLS	**Valsamata**	**0.19**	**63**	P		**Pg**	**22 23 40.0**	**-0.3**
VLS				S		**Sg**	**22 23 42.9**	**-0.4**
	comp=E,37μm,0.2s							
KEF5	**Kardakata, Kep**	**0.20**	**22**	P		**Pg**	**22 23 40.6**	**+0.1**
KEF5				S

MGNA S **Sb** 22 23 57.7 -0.3
MGNA AML AML 22 24 01.5
comp=E,5539µm,0.4s
MGNA AML AML 22 24 01.7
comp=N,4898µm,0.2s
NYDR Nydri-Lefkada 0.67 22 P **Pg** **22 23 48.2 -0.8**
NYDR S **Sb** **22 23 58.9 +0.4**
NYDR Nydri-Lefkada 0.67 22 P **Pg** **22 23 48.0 -1.0**
LKD2 Lefkada island 0.73 18 P **Pg** **22 23 49.4 -0.7**
LKD2 AML AML 22 24 06.7
comp=E,4733µm,0.3s
LKD2 AML AML 22 24 10.1
comp=N,3117µm,0.6s
LKD2 Lefkada island 0.73 18 P **Pg** **22 23 49.6 -0.5**
TSLK Tsoukalades, L 0.77 17 P **Pg** **22 23 50.5 -0.3**
TSLK S **Sb** **22 24 00.9 -0.3**
TSLK AML AML 22 24 08.1
comp=E,7825µm,0.5s
TSLK AML AML 22 24 09.4
comp=N,5371µm,0.5s
TSLK Tsoukalades, L 0.77 17 P **Pg** **22 23 50.3 -0.4**
PDO Prodromos 0.81 51 P **Pb** **22 23 50.8 -1.0**
PDO Prodromos 0.81 51 P **Pb** **22 23 50.6 -1.2**
RLS Riolos of Patr 0.86 92 P **Pb** **22 23 51.5 -1.1**
RLS S **Sb** **22 24 02.9 -1.2**
RLS AML AML 22 24 10.0
comp=N,1526µm,0.4s
RLS AML AML 22 24 11.4
comp=E,963µm,0.4s
RLS Riolos of Patr 0.86 92 P **Pb** **22 23 51.7 -0.9**
RLS S **Sg** **22 24 03.9 0.0**
comp=E,650nm,0.5s
DRO Drossia 1.07 97 P **Pb** **22 23 55.4 -0.6**
DRO S **Sn** **22 24 10.9 -0.1**
DRO AML AML 22 24 14.3
comp=N,2748µm,0.3s
DRO AML AML 22 24 19.4
comp=E,1565µm,0.5s
DRO Drossia 1.07 97 P **Pb** **22 23 55.4 -0.6**
DRO S **Sn** **22 24 13.1 +2.1**
comp=E,1µm,0.4s
AMT Artemida-Makis 1.20 117 P **Pg** **22 23 58.2 -0.7**
AMT AML AML 22 24 27.1
comp=N,2721µm,0.8s
AMT AML AML 22 24 29.1
comp=E,1958µm,0.7s
AMT Artemida-Makis 1.20 117 P **Pg** **22 23 58.4 -0.5**
EFP Efpalio 1.25 74 P **Pn** **22 23 58.3 -0.7**
EFP S **Sg** **22 24 16.8 +0.5**
EFP AML AML 22 24 24.5
comp=E,972µm,0.6s
EFP AML AML 22 24 26.3
comp=N,1005µm,0.6s
EFP Efpalio 1.25 74 P **Pn** **22 23 58.0 -0.9**
EFP S **Sg** **22 24 20.2 +3.9**
comp=N,560nm,0.5s
LAKA Lakka 1.27 83 P **Pb** **22 23 59.0 -0.7**
ANX Ano Chora 1.32 67 P **Pn** **22 23 59.2 -0.7**
ANX AML AML 22 24 32.5
comp=E,1437µm,0.5s
ANX AML AML 22 24 32.7
comp=N,2275µm,0.5s
ANX Ano Chora 1.32 67 P **Pb** **22 23 59.7 -0.7**
ANX S **Sg** **22 24 22.1 +3.7**
comp=N,1µm,0.5s
TRIZ Trizonia 1.37 78 P **Pb** **22 24 00.2 -1.0**
TRIZ Trizonia 1.37 78 P **Pb** **22 24 00.2 -1.0**
ALIK Aliki, Aigiali 1.38 82 P **Pg** **22 24 01.9 -0.5**
EVR Evrytania 1.40 53 P **Pb** **22 24 01.0 -0.7**
EVR AML AML 22 24 25.6
comp=N,662µm,0.5s
EVR AML AML 22 24 30.8
comp=E,847µm,0.8s
EVR Evrytania 1.40 53 P **Pb** **22 24 01.3 -0.5**
KLV Kalavryta, Ach 1.41 91 P **Pb** **22 24 01.2 -0.7**
KLV S **Sg** **22 24 20.2 -0.9**
KLV AML AML 22 24 29.4
comp=E,460µm,0.4s
KLV AML AML 22 24 38.0
comp=N,439µm,0.4s
KLV Kalavryta, Ach 1.41 91 P **Pb** **22 24 01.0 -0.9**
KALE Kalithea 1.42 77 P **Pn** **22 24 01.1 -0.2**
KALE AML AML 22 24 31.6
comp=N,1039µm,0.4s
KALE AML AML 22 24 35.0
comp=E,605µm,0.4s
KALE Kalithea 1.42 77 P **Pn** **22 24 01.0 -0.3**
IGT Igoumenitsa 1.44 359 *e*Pg **Pb** **22 24 02.4 -0.1**
IGT *e*Sg **Sg** **22 24 24.2 +1.9**
IGT Igoumenitsa 1.44 359 P **Pb** **22 24 02.1 -0.3**
IGT S **Sg** **22 24 23.0 +0.8**
IGT AML AML 22 24 28.4
comp=N,982µm,0.3s
IGT AML AML 22 24 28.5
comp=E,1192µm,0.4s
IGT Igoumenitsa 1.44 359 P **Pb** **22 24 02.3 -0.2**
IGT S **Sg** **22 24 22.9 +0.6**
comp=E,538nm,0.3s
ITM Ithomi 1.53 126 P **Pb** **22 24 04.0 -0.1**
ITM Ithomi 1.53 126 P **Pb** **22 24 03.9 -0.1**
GUR Goura 1.56 95 P **Pb** **22 24 03.5 -1.1**
GUR AML AML 22 24 30.7
comp=N,1754µm,0.4s
GUR AML AML 22 24 33.7
comp=E,1405µm,0.4s
GUR Goura 1.56 95 P **Pb** **22 24 03.9 -0.7**
GUR S **Sg** **22 24 27.3 +1.1**
comp=E,818nm,0.4s
TRIP Tripoli 1.60 110 P **Pg** **22 24 06.1 -0.5**
TRIP AML AML 22 24 36.9
comp=N,472µm,0.5s
TRIP AML AML 22 24 49.3
comp=E,542µm,0.6s
TRIP Tripoli 1.60 110 P **Pg** **22 24 06.0 -0.7**
JAN Janina 1.61 13 P **Pb** **22 24 05.3 0.0**
JAN S **Sg** **22 24 27.3 -0.4**
JAN AML AML 22 24 32.6
comp=E,967µm,0.4s
JAN AML AML 22 24 37.9
comp=N,1149µm,0.4s
JAN Janina 1.61 13 P **Pb** **22 24 05.4 +0.1**
PYL PYLOS 1.62 137 P **Pb** **22 24 04.7 -0.7**
MAKR Makrakomi, Fth 1.66 56 P **Pb** **22 24 06.3 +0.1**
MAKR AML AML 22 24 41.3
comp=E,334µm,0.3s
MAKR AML AML 22 24 46.2
comp=N,368µm,0.6s
MAKR Makrakomi, Fth 1.66 56 P **Pg** **22 24 07.5 -0.2**
KEK Kerkira 1.68 345 P **Pn** **22 24 05.4 +0.6**
KEK Kerkira 1.68 345 P **Pb** **22 24 05.6 -0.9**
KASA Kassiopi 1.69 349 P **Pb** **22 24 06.0 -0.7**
KASA S **Sg** **22 24 29.7 -0.5**
KASA AML AML 22 24 40.6
comp=E,1133µm,0.3s
KASA AML AML 22 24 43.7
comp=N,664µm,0.5s
VLX Vlachokerasia 1.75 114 P **Pg** **22 24 08.4 -0.9**
AGG Agios Georgios 1.79 58 P **Pb** **22 24 08.5 0.0**
AGG Agios Georgios 1.79 58 P **Pb** **22 24 08.7 +0.2**
THAL Thalero 1.81 91 P **Pb** **22 24 07.1 -1.6**
THAL AML AML 22 24 49.5
comp=N,1133µm,0.4s
THAL AML AML 22 25 00.5
comp=E,1447µm,0.6s
THAL Thalero 1.81 91 P **Pg** **22 24 09.8 -0.8**
SRN Sarande 1.81 351 P **Pn** **22 24 07.3 +0.7**
AXAR Agios Charalam 1.92 69 P **Pb** **22 24 10.7 +0.1**
AXAR AML AML 22 24 48.9
comp=E,936µm,0.9s
AXAR AML AML 22 25 03.0
comp=N,992µm,0.6s
AXAR Agios Charalam 1.92 69 P **Pb** **22 24 10.6 0.0**
THL Klokotos Trika 1.95 41 P **Pb** **22 24 11.1 -0.1**
LTK Loutraki 2.05 91 P **Pb** **22 24 11.3 -1.6**
LTK Loutraki 2.05 91 P **Pb** **22 24 11.4 -1.4**
LOUT Loutraki 2.06 92 P **Pn** **22 24 10.6 +0.6**
LOUT AML AML 22 25 09.0
comp=E,51µm,0.8s
LOUT AML AML 22 25 10.8
comp=N,65µm,0.6s
LSK Leskovik 2.06 5 P **Pb** **22 24 11.9 -1.2**
LKR Lokris 2.14 74 P **Pb** **22 24 13.3 -1.1**
LKR Lokris 2.14 74 P **Pb** **22 24 12.9 -1.5**
ATAL Atalanti 2.17 73 P **Pb** **22 24 13.2 -1.6**

ATAL AML AML 22 24 56.8
comp=N,270µm,0.8s
ATAL AML AML 22 24 59.4
comp=E,201µm,0.9s
PENT Pentalofos 2.19 16 P **Pb** **22 24 14.5 -0.8**
EPID Epidavros 2.23 101 P **Pb** **22 24 14.2 -1.6**
EPID Epidavros 2.23 101 P **Pb** **22 24 15.1 -0.7**
VIL2 Platees 2.29 86 P **Pb** **22 24 14.8 -2.0**
VIL2 AML AML 22 25 10.7
comp=E,258µm,0.7s
VIL2 AML AML 22 25 14.1
comp=N,202µm,0.5s
NEST Nestorio 2.38 13 P **Pb** **22 24 17.3 -1.2**
NEST Nestorio 2.38 13 P **Pb** **22 24 17.3 -1.2**
KZN Kozani 2.47 26 P **Pb** **22 24 17.7 -2.3**
KZN S **Sb** **22 24 49.0 -1.2**
KZN AML AML 22 24 56.1
comp=N,178µm,0.6s
KZN AML AML 22 25 04.9
comp=E,284µm,0.4s
XOR Xorichti 2.55 59 P **Pb** **22 24 18.8 -2.5**
ATHU Athens Univers 2.70 92 P **Pn** **22 24 19.1 +0.3**
ATHU S **Sn** **22 24 51.6 +0.4**
DION Dionisos Attik 2.81 89 P **Pn** **22 24 21.2 +0.8**
DION Dionisos Attik 2.81 89 P **Pn** **22 24 21.4 +1.0**
KTHA Kythira Island 2.82 130 P **Pb** **22 24 23.6 -2.4**
AOS Alonnisos 2.95 67 P **Pn** **22 24 24.1 +1.8**
KYMI Kymi, Euboea I 2.98 78 P **Pn** **22 24 23.6 +1.0**
OHR Ohrid 3.04 6 *i* Pn **Pn** **22 24 25.8 +2.3**
PLG Polygyros 3.30 45 P **Pn** **22 24 28.2 +1.1**
VAY Valandovo 3.65 27 *e*Pn **Pn** **22 24 32.9 +1.1**
VAY Valandovo 3.65 27 *i* Pn **Pn** **22 24 34.9 +3.1**
STIP Stip 3.86 21 *i* Pn **Pn** **22 24 38.3 +3.5**
SRS Serrai 3.92 38 *e*Pn **Pn** **22 24 36.9 +1.4**
SRS *e*Sn **Sn** **22 25 22.2 +0.9**
DRME Dracevica, Mon 4.19 348 *e*Pn **Pn** **22 24 39.8 +0.5**
PDG Podgorica 4.42 349 *e*Pn **Pn** **22 24 41.8 -0.6**
HCY Herceg Novi 4.58 342 *e*Pn **Pn** **22 24 43.0 -1.7**
IDI Anoyia 4.58 126 Pn **Pn** **22 24 48.1 +3.4**
comp=E,0.3nm,0.3s,baz=303,slow=18,SNR=1.5
IDI Sn **Sn** **22 25 37.2 -0.6**
comp=E,1.8nm,0.3s,baz=290,slow=18,SNR=8.5
PRVS Prvonek 4.60 16 *e*Pn **Pn** **22 24 46.0 +1.0**
PRVS *e*Sn **Sn** **22 25 37.5 -0.7**
BOSS Bosilegrad 4.69 19 *e*Pn **Pn** **22 24 46.9 +0.8**
VAE Valguarnera 4.76 264 Pn **Pn** **22 24 49.2 +2.0**
comp=E,0.9nm,0.3s,baz=74,slow=19,SNR=1.6
VAE Sn **Sn** **22 25 41.9 -0.4**
comp=E,0.8nm,0.3s,baz=118,slow=17,SNR=2.0
TREB Trebinje 4.87 342 *e*Pn **Pn** **22 24 47.5 -1.2**
BRY Bratogost 5.00 344 *e*Pn **Pn** **22 24 50.1 -0.5**
SELS Selova 5.16 6 *e*Pn **Pn** **22 24 53.3 +0.7**
SJES Sjenica 5.17 357 *e*Pn **Pn** **22 24 53.9 +1.0**
SJES *e*Sn **Sn** **22 25 52.1 -0.4**
STON Ston 5.19 338 *e*Pn **Pn** **22 24 51.9 -1.1**
STON Ston 5.19 338 *e*Pn **Pn** **22 24 52.5 -0.6**
STON Sn **Sn** **22 25 47.2 -5.5**
LSTV Lastovo 5.37 331 *e*Pn **Pn** **22 24 55.1 -0.4**
IVAS Ivanjica 5.48 358 *e*Pn **Pn** **22 24 56.7 -0.4**
IVAS *e*Sn **Sn** **22 25 57.5 -2.5**
BOVS Bovan 5.63 10 *e*Pn **Pn** **22 24 58.7 -0.4**
MAKA Makarska 5.78 335 *e*Pn **Pn** **22 25 01.1 -0.1**
BLKB Belogradchik 5.80 17 *e*Pn **Pn** **22 25 02.2 +0.8**
GRUS Gruza 5.80 2 *e*Pn **Pn** **22 25 01.1 -0.3**
GRUS *e*Sn **Sn** **22 26 07.2 -0.5**
BBLS Lazići 5.82 353 *e*Pn **Pn** **22 25 01.6 -0.1**
BBLS *e*Sn **Sn** **22 26 06.5 -1.7**
BBLS Lazići 5.82 353 *e*Pn **Pn** **22 25 01.3 -0.4**
RICI Ricice 5.93 337 *e*Pn **Pn** **22 25 03.0 -0.3**
DIVS Divibare 6.01 357 *e*Pn **Pn** **22 25 04.2 -0.2**
DIVS *e*Sn **Sn** **22 26 10.4 -2.6**
DIVS Divibare 6.01 357 *e*Pn **Pn** **22 25 02.8 -1.6**
HAPS Han Pijesak,Bl 6.09 350 *e*Pn **Pn** **22 25 02.6 -2.8**
TRUS Trudelj 6.13 0 *e*Sn **Sn** **22 26 15.2 -0.6**
KIJV Kijevo 6.62 334 *e*Pn **Pn** **22 25 13.2 +0.5**
MORI Morici 6.76 330 *e*Pn **Pn** **22 25 14.8 +0.2**
MGRS Mrkonjic Grad 6.79 340 *e*Pn Pb 22 25 28.3 -5.3
BLY Banja Luka 7.07 341 *e*Pn **Pn** **22 25 16.5 -2.3**
FRGS Fruska Gora 7.07 357 *e*Pn **Pn** **22 25 18.4 -0.5**
FRGS *e*Sn **Sn** **22 26 35.2 -3.9**
FRGS Fruska Gora 7.07 357 *e*Pn **Pn** **22 25 17.8 -1.1**
DUGI Dugi Otok 7.13 327 *e*Pn **Pn** **22 25 20.1 +0.4**
NVLJ Novalja 7.68 329 *e*Pn **Pn** **22 25 27.3 +0.2**
MLR Muntele Rosu 8.48 28 Pn **Pn** **22 25 38.3 -0.1**
comp=E,0.0nm,0.3s,baz=240,slow=13,SNR=2.0
CRES Cresnjev 8.55 336 *e*Pn **Pn** **22 25 37.9 -1.3**
CEY Cerknica 8.83 332 *e*Pn **Pn** **22 25 43.4 +0.4**
LJU Ljubljana 9.05 333 *e*Pn **Pn** **22 25 45.9 -0.2**
SOKA Soboth 9.44 337 *e*Pn **Pn** **22 25 50.9 -0.6**
comp=E,3.3nm,0.4s
ARSA Arzberg 9.82 340 *e*Pn **Pn** **22 25 55.7 -0.9**
comp=E,1.2nm,0.3s
MOA Molln 10.73 337 *e*Pn **Pn** **22 26 09.5 +0.5**
comp=E,1.1nm,0.2s
WTTA Wattenberg 11.19 328 *e*Pn **Pn** **22 26 16.9 +1.4**
comp=E,1.6nm,0.4s
SQTA Sankt Quirin 11.34 326 *e*Pn **Pn** **22 26 20.2 +2.8**
comp=E,1.3nm,0.4s
MOTA Moosalm 11.48 327 *e*Pn **Pn** **22 26 21.2 +1.8**
comp=E,1.1nm,0.4s
GERES GERESS Array B 11.79 338 Pn **Pn** **22 26 22.8 -0.7**
comp=E,0.2nm,0.3s,baz=157,slow=13,SNR=5.6
DAVA Damuels 11.99 323 *e*Pn **Pn** **22 26 28.0 +1.6**
comp=E,0.2nm,0.1s
MMAI Mount Meron Ar 13.24 108 Pn **Pn** **22 26 43.7 +0.2**
comp=E,0.3nm,0.3s,baz=309,slow=13,SNR=1.5
HFS Hagfors 22.47 351 P **P** **22 28 35.1 +0.7**
comp=E,1.9nm,0.7s,baz=165,slow=12,SNR=2.5
FINES FINESS Array B 23.65 7 P **P** **22 28 46.0 -0.4**
comp=E,2.2nm,1.1s,baz=170,slow=8.5,SNR=5.6
TORD Torodi Ar. Bea 29.89 219 P **P** **22 29 45.4 +2.2**
comp=E,2.5nm,1.1s,baz=24,slow=11,SNR=7.2
MKAR Makanchi Array 45.45 58 P **P** **22 31 53.6 -0.7**
comp=E,0.2nm,0.4s,baz=275,slow=7.7,SNR=2.3
ZALV Zalesovo Beam 45.84 48 P **P** **22 31 57.4 +0.2**
comp=E,0.4nm,0.5s,baz=267,slow=7.7,SNR=2.4

CNRM ***11*** *22:25:16.6± 1.2, 36.°55N× 7.°60W, h70km± 30km, Error ellipse: s-maj=11.3km s-min=7.4km az=177.0*
LDG ***11*** *22:25:17.6± 0.4, 36.°55N× 7.°42W, h20km, Ml2.8/3, Error ellipse: s-maj=8.4km s-min=4.4km az=24.0*
MDD ***11*** *22:25:19.0± 0.8, 36.°56N× 7.°59W, h22km± 7km, mbLg2.7/23, Error ellipse: s-maj=7.8km s-min=3.4km az=32.0, PRXIMO*
INMG ***11*** *22:25:18.6± 1.5, 36.°52N× 7.°59W, h18km± 4km, ML2.3, Error ellipse: s-maj=3.0km s-min=2.5km az=43.0*
IGIL ***11*** *22:25:18.9, 36.°52N× 7.°61W, h24km*
SFS ***11*** *22:25:19.0, 36.°54N× 7.°59W, h25km, ML2.6, GOLFO DE CADIZ*

ISC 11 22:25:17.0± 1.2, 36.°50N± 0.°04× 7.°56W± 0.°03, h32km± 11km, n87, σ1.°58/140, 1C-2D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
PBDV	**Barranco-do-Ve**	**0.80**	**338**	P	**Pb**	**22 25 33.0**	**+0.5**
PBDV				S	**Sb**	**22 25 43.1**	**+0.1**
	42nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.80**	**338**	*e*P	**Pb**	**22 25 33.0**	**+0.5**
PBDV				*e*S	**Sb**	**22 25 43.1**	**+0.1**
PBDV				A	A	22 25 47.4	
	42nm,0.3s						
PVAQ	**Vaqueiros**	**0.91**	**352**	P	**Pb**	**22 25 34.5**	**+0.2**
PVAQ				S	**Sb**	**22 25 46.0**	**-0.1**
	73nm,0.2s						
PVAQ	**Vaqueiros**	**0.91**	**352**	P	**Pb**	**22 25 34.8**	**+0.5**
PVAQ				S	**Sb**	**22 25 45.8**	**-0.4**
PVAQ	**Vaqueiros**	**0.91**	**352**	*e*P	**Pb**	**22 25 34.5**	**+0.2**
PVAQ				*e*S	**Sb**	**22 25 46.0**	**-0.1**
PVAQ				A	A	22 25 47.1	
	73nm,0.2s						
EGRO	**El Granado**	**1.03**	**3**	P	**Pb**	**22 25 36.5**	**+0.2**
	2.7nm,0.1s,SNR=32						
EGRO				S	**Sb**	**22 25 49.1**	**-0.5**
	40nm,0.1s,SNR=7.9						
MORF	**Marmelete**	**1.19**	**313**	*e*P	**Pn**	**22 25 37.9**	**+0.5**
MORF	**Marmelete**	**1.19**	**313**	P	**Pn**	**22 25 37.9**	**+0.5**
MORF	**Marmelete**	**1.19**	**313**	*e*P	**Pn**	**22 25 37.9**	**+0.5**
MORF				A	A	22 25 57.7	
	45nm,0.1s						
PCVE	**Castro Verde**	**1.19**	**341**	P	**Pn**	**22 25 38.8**	**+1.3**
PCVE				S	**Sb**	**22 25 53.4**	**-0.7**
	44nm,0.6s						
PFVI	**Vila Bisbo**	**1.20**	**302**	P	**Pn**	**22 25 38.1**	**+0.6**
	2.3nm,0.1s,SNR=13						
PFVI				S	**Sb**	**22 25 51.9**	**-2.3**
	31nm,0.1s,SNR=5.9						
PFVI	**Vila Bisbo**	**1.20**	**302**	P	**Pn**	**22 25 37.9**	**+0.4**
PFVI				S	**Sb**	**22 25 50.9**	**-3.3**
PFVI	**Vila Bisbo**	**1.20**	**302**	*e*P	**Pn**	**22 25 38.1**	**+0.6**
PFVI				*e*S	**Sb**	**22 25 52.1**	**-2.1**
PFVI				A	A	22 26 02.9	
	33nm,0.4s						
PTEO	**Sao Teotonio**	**1.40**	**319**	P	**Pn**	**22 25 41.2**	**+0.9**
PTEO				S	**Sn**	**22 25 57.8**	**+0.1**
PTEO	**Sao Teotonio**	**1.40**	**319**	*e*Pn	**Pn**	**22 25 41.2**	**+0.9**
PTEO				*e*Sn	**Sn**	**22 25 57.8**	**+0.1**
ESPR	**Espera**	**1.42**	**74**	⇓P	**Pn**	**22 25 42.0**	**+1.5**
	28nm,0.2s,SNR=18						
ESPR				S	**Sn**	**22 25 59.8**	**+1.6**
	46nm,0.3s,SNR=6.8						
EMIN	**Mina Concepcio**	**1.45**	**29**	P	**Pn**	**22 25 42.0**	**+1.0**
	1.1nm,0.0s,SNR=44						
EMIN				S	**Sn**	**22 25 58.6**	**-0.4**
	19nm,0.1s,SNR=8.1						
PBEJ	**Beja**	**1.54**	**351**	P	**Pn**	**22 25 43.5**	**+1.2**
PBEJ	**Beja**	**1.54**	**351**	*e*Pn	**Pn**	**22 25 43.5**	**+1.2**
PBEJ				A	A	22 26 17.5	
	14nm,0.5s						
PBAR	**Barrancos**	**1.72**	**14**	P	**Pn**	**22 25 46.3**	**+1.5**
PBAR	**Barrancos**	**1.72**	**14**	*e*Pn	**Pn**	**22 25 46.3**	**+1.5**
PBAR				A	A	22 26 12.4	
	27nm,0.5s						
PNCL	**Nicolau / Gran**	**1.79**	**335**	P	**Pn**	**22 25 46.6**	**+1.0**
PNCL				S	**Sn**	**22 26 07.8**	**+0.6**
	11nm,1.2s						
PNCL	**Nicolau / Gran**	**1.79**	**335**	*e*Pn	**Pn**	**22 25 46.6**	**+1.0**
PNCL				*e*Sn	**Sn**	**22 26 07.8**	**+0.6**
PNCL				A	A	22 26 21.2	
	11nm,1.2s						
ECEU	**Ceuta**	**1.87**	**108**	⇓P	**Pn**	**22 25 49.0**	**+2.3**
	8.5nm,0.1s,SNR=18						
SMIR	**Smir Dam**	**1.94**	**114**	P	**Pn**	**22 25 49.6**	**+1.8**
SMIR				S	**Sn**	**22 26 13.8**	**+2.6**
EVO	**Evora**	**2.06**	**350**	P	**Pn**	**22 25 50.9**	**+1.5**
EVO				S	**Sn**	**22 26 14.5**	**+0.5**
	11nm,0.1s						
EVO	**Evora**	**2.06**	**350**	*e*P	**Pn**	**22 25 51.9**	**+2.5**
EVO				*e*S	**Sn**	**22 26 14.5**	**+0.5**
EVO	**Evora**	**2.06**	**350**	*e*Pn	**Pn**	**22 25 50.9**	**+1.5**
EVO				*e*Sn	**Sn**	**22 26 14.5**	**+0.5**
EVO				A	A	22 26 23.7	
	11nm,0.1s						
HORN	**Hornachuelos**	**2.28**	**53**	P	**Pn**	**22 25 53.3**	**+0.9**
HORN				S	**Sn**	**22 26 18.1**	**-1.3**
ECAB	**El Cabril**	**2.32**	**47**	⇑P	**Pn**	**22 25 54.1**	**+1.1**
	0.4nm,0.1s,SNR=18						
ECAB				S	**Sn**	**22 26 19.2**	**-1.3**
	6.6nm,0.2s,SNR=6.5						
PMTG	**Montargil**	**2.62**	**349**	P	**Pn**	**22 25 58.5**	**+1.4**
PMTG				S	**Sn**	**22 26 27.7**	**-0.1**
	7.5nm,0.6s						
PMTG	**Montargil**	**2.62**	**349**	*e*Pn	**Pn**	**22 25 58.5**	**+1.4**
PMTG				*e*Sn	**Sn**	**22 26 27.7**	**-0.1**
PMTG				A	A	22 26 53.5	
	7.5nm,0.6s						
PMAFR	**Mafra**	**2.81**	**331**	P	**Pn**	**22 26 01.7**	**+2.1**
	0.5nm,0.0s,SNR=4.0						
PMAFR				S	**Sn**	**22 26 32.6**	**+0.2**
	41nm,0.2s,SNR=4.0						
PMAFR	**Mafra**	**2.81**	**331**	*e*Pn	**Pn**	**22 26 01.6**	**+1.9**
PMAFR				*e*Sn	**Sn**	**22 26 32.9**	**+0.5**
PMAFR				A	A	22 26 33.7	
	20nm,0.3s						
EADA	**Adamuz**	**2.90**	**54**	P	**Pn**	**22 26 02.4**	**+1.4**
	2.1nm,0.1s,SNR=46						
EADA				S	**Sn**	**22 26 34.3**	**-0.5**
	16nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**2.93**	**3**	P	**Pn**	**22 26 02.5**	**+1.2**
PMRV				S	**Sn**	**22 26 35.1**	**-0.3**
	6.4nm,0.3s						
PMRV	**Marv??o**	**2.93**	**3**	*e*Pn	**Pn**	**22 26 02.5**	**+1.2**
PMRV				*e*Sn	**Sn**	**22 26 35.1**	**-0.3**
PMRV				A	A	22 26 36.3	
	6.4nm,0.3s						
PSBE	**So Bento**	**3.16**	**342**	*e*Pn	**Pn**	**22 26 06.6**	**+2.0**
PSBE				*e*Sn	**Sn**	**22 26 41.4**	**+0.1**
PSBE				A	A	22 26 50.4	
	6.3nm,0.7s						
ELGU	**Los Guajares,**	**3.18**	**82**	P	**Pn**	**22 26 06.6**	**+1.7**
	2.5nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**22 26 42.3**	**+0.4**
	9.2nm,0.2s,SNR=7.9						
PALE	**Palemas**	**3.21**	**112**	P	**Pn**	**22 26 05.5**	**+0.3**
PALE				S	**Sn**	**22 26 40.7**	**-1.7**
PCBR	**Castelo Branco**	**3.34**	**1**	P	**Pn**	**22 26 07.9**	**+1.0**
PCBR				S	**Sn**	**22 26 44.7**	**-0.8**
	3.7nm,0.2s						
PCBR	**Castelo Branco**	**3.34**	**1**	*e*Pn	**Pn**	**22 26 07.9**	**+1.0**
PCBR				*e*Sn	**Sn**	**22 26 44.7**	**-0.8**
PCBR				A	A	22 26 46.2	
	7.4nm,0.2s						
EQUE	**Quentar**	**3.38**	**77**	P	**Pn**	**22 26 09.7**	**+2.1**
	1.0nm,0.1s,SNR=23						
EQUE				S	**Sn**	**22 26 46.9**	**+0.1**
	5.9nm,0.3s,SNR=7.9						
IFR	**Ifrane**	**3.58**	**145**	*e*P	**Pn**	**22 26 11.9**	**+1.3**
IFR				*e*S	**Sn**	**22 26 48.7**	**-3.2**
PCAS	**Casmilo, Conde**	**3.62**	**349**	S	**Sn**	**22 26 53.5**	**+0.9**
PCAS	**Casmilo, Conde**	**3.62**	**349**	*e*Sn	**Sn**	**22 26 53.5**	**+0.9**
EPLA	**Plasencia**	**3.75**	**18**	P	**Pn**	**22 26 13.5**	**+0.9**
	0.6nm,0.1s,SNR=9.1						
EPLA				S	**Sn**	**22 26 54.2**	**-1.4**
	8.6nm,0.2s,SNR=4.0						
GORA	**Gorafe**	**3.75**	**74**	P	**Pn**	**22 26 15.7**	**+3.0**
	3.5nm,0.1s,SNR=4.0						
GORA				S	**Sn**	**22 26 57.3**	**+1.5**
	8.5nm,0.3s,SNR=7.9						
EBER	**Berja**	**3.77**	**83**	P	**Pn**	**22 26 15.7**	**+2.5**
	1.4nm,0.2s,SNR=8.0						
EBER				S	**Sn**	**22 26 57.8**	**+1.2**
	2.4nm,0.3s,SNR=7.9						
EQES	**Quesada**	**3.82**	**69**	P	**Pn**	**22 26 14.8**	**+1.1**
	0.6nm,0.1s,SNR=9.7						
EQES				S	**Sn**	**22 26 56.7**	**-0.8**
	3.3nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**3.89**	**0**	P	**Pn**	**22 26 15.8**	**+1.1**
MTE				S	**Sn**	**22 26 58.3**	**-1.0**
	3.4nm,0.3s						
MTE	**Manteigas**	**3.89**	**0**	*e*Pn	**Pn**	**22 26 15.8**	**+1.1**
MTE				*e*Sn	**Sn**	**22 26 58.3**	**-1.0**
MTE				A	A	22 26 59.7	
	6.8nm,0.3s						
PAB	**San Pablo**	**3.96**	**39**	P	**Pn**	**22 26 17.0**	**+1.4**
	1.6nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**22 26 57.6**	**-3.4**
	2.6nm,0.3s,SNR=7.9						
PVIS	**Viseu**	**4.22**	**357**	S	**Sn**	**22 27 06.9**	**-0.4**
	1.5nm,0.5s						
PVIS	**Viseu**	**4.22**	**357**	*e*Sn	**Sn**	**22 27 06.9**	**-0.4**
PVIS				A	A	22 27 10.4	
	3.0nm,0.5s						
ESDC	**Sonseca Array**	**4.25**	**41**	P	**Pn**	**22 26 21.1**	**+1.5**
	1.0nm,0.3s,baz=225,slow=14,SNR=21						
ESDC				S	**Sn**	**22 27 04.1**	**-4.1**
	0.4nm,0.3s,baz=226,slow=23,SNR=4.4						
MD31	**MD31**	**4.30**	**147**	P	**Pn**	**22 26 20.7**	**+0.4**
ENIJ	**Nijar**	**4.33**	**82**	S	**Sn**	**22 27 10.1**	**+0.2**
	4.6nm,0.5s,SNR=7.9						
MDT	**Midelt**	**4.41**	**146**	P	**Pn**	**22 26 21.8**	**0.0**
TAF	**Taforalt**	**4.52**	**110**	P	**Pn**	**22 26 22.3**	**-1.0**
MVO	**Moncorvo**	**4.68**	**5**	P	**Pn**	**22 26 26.6**	**+1.2**
	0.9nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**22 27 16.3**	**-2.4**
	9.7nm,0.5s,SNR=4.0						
MVO	**Moncorvo**	**4.68**	**5**	*e*Pn	**Pn**	**22 26 26.6**	**+1.2**
MVO				*e*Sn	**Sn**	**22 27 16.2**	**-2.4**
MVO				A	A	22 27 18.5	
	7.8nm,0.4s						
PVRL	**Vila Real**	**4.77**	**359**	S	**Sn**	**22 27 19.2**	**-1.7**
	2.5nm,0.3s						
PVRL	**Vila Real**	**4.77**	**359**	*e*Sn	**Sn**	**22 27 19.2**	**-1.7**
PVRL				A	A	22 27 21.6	
	4.9nm,0.3s						

POLO	**Lamas de Olo**	**4.87**	**358**	S		**Sn**	**22 27 21.8**	**-1.6**
	3.0nm,0.3s								
POLO	**Lamas de Olo**	**4.87**	**358**	*e*Sn		**Sn**	**22 27 21.8**	**-1.6**
POLO				A		A	22 27 23.1		
	3.0nm,0.3s								
UCM	**Universidad Co**	**5.09**	**40**	*e*P		**Pn**	**22 26 33.4**	**+2.2**
UCM				*e*S		**Sn**	**22 27 27.0**	**-1.9**
EMUR	**La Murta**	**5.22**	**73**	P		**Pn**	**22 26 34.6**	**+1.7**
	0.1nm,0.1s,SNR=4.0								
EMUR				S		**Sn**	**22 27 30.3**	**-1.8**
	3.5nm,0.4s,SNR=4.0								
ETOB	**Tobarra**	**5.24**	**64**	P		**Pn**	**22 26 33.7**	**+0.6**
	3.8nm,0.1s,SNR=7.9								
ETOB				S		**Sn**	**22 27 30.0**	**-2.4**
	3.3nm,0.3s,SNR=7.9								
OUK	**Oukaimeden**	**5.29**	**183**	P		**Pn**	**22 26 34.5**	**+0.5**
PBRG	**Braganca**	**5.34**	**7**	S		**Sn**	**22 27 31.9**	**-2.9**
	1.9nm,0.9s								
PBRG	**Braganca**	**5.34**	**7**	*e*Sn		**Sn**	**22 27 31.9**	**-2.9**
PBRG				A		A	22 27 32.5		
	3.8nm,0.9s								
ELOB	**Lobios**	**5.38**	**356**	S		**Sn**	**22 27 33.7**	**-2.2**
	4.0nm,0.3s,SNR=4.0								
ECAL	**Calabor**	**5.47**	**6**	S		**Sn**	**22 27 35.3**	**-2.9**
	6.2nm,0.4s,SNR=7.9								
OUZM	**OUZ**	**5.62**	**173**	P		**Pn**	**22 26 38.7**	**+0.3**
ETOR	**Torete**	**6.10**	**43**	P		**Pn**	**22 26 46.6**	**+1.7**
	12nm,0.2s,SNR=7.9								
ETOR				S		**Sn**	**22 27 50.1**	**-3.5**
	14nm,0.4s,SNR=7.9								
EBEN2	**Beniarda presa**	**6.24**	**67**	P		**Pn**	**22 26 47.3**	**+0.4**
	1.1nm,0.2s,SNR=7.9								
EBEN2				S		**Sn**	**22 27 54.2**	**-3.0**
	0.5nm,0.2s,SNR=7.9								
EMOS	**Mosqueruela**	**6.77**	**53**	P		**Pn**	**22 26 56.2**	**+1.9**
	0.5nm,0.1s,SNR=7.9								
EMOS				S		**Sn**	**22 28 06.0**	**-4.4**
	1.1nm,0.3s,SNR=7.9								
EORO	**Oroz-Betelu**	**8.00**	**35**	P		**Pn**	**22 27 13.2**	**+2.1**
	0.6nm,0.1s,SNR=5.8								
SJPF	**Ste Jean**	**8.21**	**34**	*e*P		**Pn**	**22 27 16.0**	**+2.2**
SJPF				*e*Sn		Sn	22 28 37.6	-7.9	
	1.7nm,0.5s								
ETSF	**Etsaut**	**8.36**	**38**	*e*P		**Pn**	**22 27 17.9**	**+1.9**
ETSF				*e*Sn		Sn	22 28 41.4	-7.9	
	0.8nm,0.3s								
EPF	**Esparros**	**8.92**	**41**	*e*P		**Pn**	**22 27 25.6**	**+2.0**
EPF				*e*Sn		Sn	22 28 54.9	-8.0	
	0.5nm,0.3s								
LFF	**La Frestale**	**10.52**	**34**	*e*P		**Pn**	**22 27 46.7**	**+1.2**
CAF	**Calviac**	**11.14**	**38**	*e*P		**Pn**	**22 27 55.0**	**+1.0**
RJF	**Les Rejaudoux**	**11.15**	**35**	*e*P		**Pn**	**22 27 54.6**	**+0.4**
LASF	**Ste Croix**	**11.54**	**46**	*e*P		**Pn**	**22 28 02.0**	**+2.6**

DNK ***11*** *22:31:42.2±1.5,51.°10N×15.°54E,h40km±22km,ML2.3*
IPEC ***11*** *22:31:43.9±0.2,51.°51N×16.°18E,h1km,ML2.8/3,Error ellipse: s-maj=1.6km s-min=0.8km az=33.0*
PRU ***11*** *22:31:44.4±0.0,51.°50N×16.°11E,h0km*
VIE ***11*** *22:31:44.3±0.5,51.°46N×16.°07E,h0km,mb2.8/16, ml3.0/16,ms3.4/1,Error ellipse: s-maj=3.8km s-min=2.0km az=25.0 77 km WNW of Wroclaw Suspected Mining induced.*
IDC ***11*** *22:31:45.0±0.6,51.°46N×16.°01E,h0km,mb3.5/1, mb1 3.4/10,mb1mx3.3/58,mbtmp3.4/10,ML3.1/9,MS3.2/1, Ms1 3.2/1,ms1mx2.3/48,Error ellipse: s-maj=11.1km s-min=6.5km az=106.0*
BGR ***11*** *22:31:46.2±0.6,51.°40N×16.°08E,h1km,ML3.1/7,Error ellipse: s-maj=10.0km s-min=3.3km az=15.0*

ISC 11 22:31:42.5±0.6,51.°54N±0.°03×16.°17E±0.°02,h0km,n72, σ1§62/135,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**174**	*i* Pg	**Pg**	**22 31 57.1**	**+1.1**
KSP				*e*Sg	**Sg**	**22 32 05.7**	**+0.5**
KSP	**Ksiaz**	**0.71**	**174**	*e*Pg	**Pg**	**22 31 57.1**	**+1.1**
CHVC	**Chvalec**	**0.96**	**185**	*e*PG	**Pg**	**22 32 01.8**	**+0.9**
CHVC				*e*SG	**Sg**	**22 32 13.3**	**0.0**
	comp=Z,117nm,0.6s						
OSTC	**Ostas**	**0.99**	**178**	*e*PG	**Pg**	**22 32 02.4**	**+1.0**
OSTC				*e*SG	**Sg**	**22 32 14.2**	**0.0**
	comp=Z,86nm,0.4s						
UPC	**Upice**	**1.04**	**186**	*e*PG	**Pg**	**22 32 03.3**	**+0.9**
UPC				*e*SG	**Sg**	**22 32 15.6**	**-0.3**
	comp=Z,251nm,0.5s						
DPC	**Dobruska-Polom**	**1.20**	**175**	*e*PG	**Pg**	**22 32 05.8**	**+0.4**
DPC				*e*SG	**Sg**	**22 32 20.5**	**-0.5**
	comp=Z,118nm,0.8s						
PVCC	**Panska Ves**	**1.44**	**226**	*e*PG	**Pn**	**22 32 10.6**	**+0.8**
PVCC				*e*SG	**Sg**	**22 32 29.2**	**+0.6**
	comp=Z,327nm,0.3s						
KRLC	**Kraliky**	**1.52**	**165**	*e*PG	**Pn**	**22 32 11.6**	**+0.6**
KRLC				*e*SG	**Sg**	**22 32 30.0**	**-1.3**
	comp=Z,177nm,0.9s						
BRG	**Berggiesshubel**	**1.56**	**245**	PN	**Pn**	**22 32 11.6**	**+0.2**
BRG				PG	**Pb**	**22 32 13.2**	**+1.0**
BRG				SG	**Sn**	**22 32 33.0**	**+0.8**
	190nm,0.5s						
BRG	**Berggiesshubel**	**1.56**	**245**	*e*Pn	**Pn**	**22 32 11.5**	**+0.2**
BRG				*e*Sg	**Sn**	**22 32 32.8**	**+0.6**
PRA	**Prague**	**1.84**	**217**	*e*PG	**Pn**	**22 32 16.0**	**+0.7**
PRA				*e*SG	**Sb**	**22 32 41.2**	**+0.6**
	comp=Z,46nm,0.9s						
PRU	**Pruhonice**	**1.87**	**214**	*e*PG	**Pn**	**22 32 17.1**	**+1.4**
PRU				*e*SG	**Sn**	**22 32 41.2**	**+1.2**
	comp=Z,72nm,0.6s						
FBE	**Freiberg**	**1.88**	**252**	*e*Sg	**Sb**	**22 32 42.6**	**+1.0**
MORC	**Moravsky Berou**	**1.97**	**153**	*e*PN	**Pn**	**22 32 18.0**	**+0.8**
MORC				*e*SG	**Sb**	**22 32 44.4**	**0.0**
MORC	**Moravsky Berou**	**1.97**	**153**	*e*Pn	**Pn**	**22 32 17.9**	**+0.7**
MORC				*e*Sg	**Sb**	**22 32 44.8**	**+0.4**
MORC	**Moravsky Berou**	**1.97**	**153**	*e*Pn	**Pn**	**22 32 18.0**	**+0.8**
	baz=334						
MORC				*e*Sg	**Sb**	**22 32 44.4**	**0.0**
	45nm,0.3s,baz=334						
CLL	**Collm**	**2.00**	**264**	*e*Pn	**Pn**	**22 32 18.0**	**+0.5**
CLL				*e*Pg	**Pb**	**22 32 20.0**	**+0.3**
CLL				*e*		22 32 25.0	
CLL				*e*		22 32 36.0	
CLL				*e*Sg	**Sb**	**22 32 47.0**	**+1.9**
	comp=Z,50nm,0.8s						
CLL	**Collm**	**2.00**	**264**	*e*Pn	**Pn**	**22 32 17.9**	**+0.5**
OKC	**Ostrava-Krasne**	**2.12**	**143**	*e*PG	**Pb**	**22 32 22.6**	**+0.8**
OKC				*e*SG	**Sg**	**22 32 50.1**	**-0.5**
	comp=Z,134nm,0.8s						
VRAC	**Vranov**	**2.25**	**173**	Pn	**Pn**	**22 32 22.1**	**+1.1**
	comp=Z,3.9nm,0.3s,baz=338,slow=14,SNR=32						
VRAC				Lg	Lg	22 32 53.2	
	comp=Z,4.9nm,0.3s,baz=295,slow=11,SNR=4.0						
VRAC	**Vranov**	**2.25**	**173**	*e*PN	**Pn**	**22 32 22.1**	**+1.1**
VRAC				*e*SG	**Sb**	**22 32 52.7**	**+0.2**
VRAC	**Vranov**	**2.25**	**173**	*e*Pn	**Pn**	**22 32 22.1**	**+1.1**
	baz=353						
VRAC				*e*Sg	**Sb**	**22 32 52.7**	**+0.2**
	comp=Z,44nm,0.5s,baz=353						
TREC	**Trest**	**2.29**	**191**	*e*PN	**Pn**	**22 32 22.7**	**+1.1**
TREC				*e*PG	**Pb**	**22 32 25.8**	**+1.1**
TREC				*e*SG	**Sb**	**22 32 54.4**	**+0.8**
	comp=Z,54nm,0.5s						
PBCC	**Pribram**	**2.32**	**218**	*e*PN	**Pn**	**22 32 22.3**	**+0.4**
PBCC				*e*PG	**Pb**	**22 32 26.0**	**+0.8**
PBCC				*e*SG	**Sb**	**22 32 56.0**	**+1.6**
KRUC	**Moravsky**	**2.49**	**177**	*e*PN	**Pn**	**22 32 25.4**	**+1.2**
KRUC				*e*PG	**Pb**	**22 32 29.0**	**+1.0**
KRUC				*e*SG	**Sb**	**22 33 00.3**	**+1.0**
KRUC	**Moravsky**	**2.49**	**177**	*e*Pn	**Pn**	**22 32 25.4**	**+1.2**
	baz=357						
KRUC	**Moravsky**	**2.49**	**177**	*e*Pg	**Pb**	**22 32 29.0**	**+1.0**
	baz=357						
KRUC				*e*Sg	**Sb**	**22 33 00.2**	**+1.0**
	comp=Z,67nm,0.7s,baz=357						
TANN	**Tannenbergstha**	**2.60**	**246**	*e*Pn	**Pn**	**22 32 26.7**	**+0.8**
OJC	**Ojcow**	**2.65**	**119**	*e*Pn	**Pn**	**22 32 26.4**	**0.0**
OJC				*e*Pg	**Pg**	**22 32 36.0**	**+2.7**
OJC				*e*Sn	**Sn**	**22 32 57.0**	**-2.3**
OJC				*e*Sg	**Sg**	**22 33 11.0**	**+3.4**
NKC	**Novy Kostel**	**2.70**	**242**	*e*PN	**Pn**	**22 32 28.3**	**+1.1**
NKC				*e*PG	**Pb**	**22 32 33.2**	**+1.5**
NKC				*e*SG	**Sg**	**22 33 08.9**	**-0.3**
	comp=Z,103nm,0.8s						
JAVC	**Velka Javorina**	**2.85**	**160**	*e*PN	**Pb**	**22 32 32.6**	**-1.7**
KHC	**Kasperske Hory**	**2.93**	**216**	*e*PN	**Pn**	**22 32 31.3**	**+0.9**
KHC				*e*PG	**Pb**	**22 32 36.7**	**+1.1**
KHC				*e*SN	**Sn**	**22 33 05.7**	**-0.6**
KHC				*e*SG	**Sg**	**22 33 15.8**	**-0.8**
	comp=Z,35nm,0.5s						
MOX	**Moxa**	**3.01**	**254**	*e*Pn	**Pn**	**22 32 32.4**	**+1.0**
MOX				*e*Sg	**Sb**	**22 33 18.0**	**+3.7**
MANZ	**Manzenberg**	**3.02**	**240**	*e*Pn	**Pn**	**22 32 32.5**	**+1.0**
ROTZ	**Rotzenmuhle**	**3.09**	**236**	*e*Pn	**Pn**	**22 32 33.3**	**+0.8**
GEC2	**GERESS Array S**	**3.13**	**211**	*e*Pn	**Pn**	**22 32 34.3**	**+1.1**
GERES	**GERESS Array B**	**3.13**	**211**	Pn	**Pn**	**22 32 33.9**	**+0.7**
	comp=Z,1.8nm,0.3s,baz=28,slow=13,SNR=48						
GERES				Pg	**Pb**	**22 32 40.4**	**+1.3**
	comp=Z,6.3nm,0.3s,baz=30,slow=17,SNR=35						
GERES				Lg	Lg	22 33 19.2	
	comp=Z,5.0nm,0.3s,baz=31,slow=27,SNR=5.1						
SMOL	**Smolenice**	**3.14**	**165**	*e*PN	**Pn**	**22 32 33.2**	**0.0**
SMOL				*e*PG	**Pg**	**22 32 43.3**	**+0.7**
SMOL				*e*SG	**Sg**	**22 33 24.6**	**+1.3**
SMOL				*e*LG	Lg	22 33 37.6	
LANS	**Liptovska Anna**	**3.19**	**137**	*e*PN	**Pn**	**22 32 35.4**	**+1.4**
LANS				*e*PG	**Pg**	**22 32 43.7**	**+0.1**
LANS				*e*SG	**Sg**	**22 33 25.3**	**+0.3**
LANS				*e*LG	Lg	22 33 32.6	
WET	**Wettzell**	**3.20**	**223**	*e*Pn	**Pn**	**22 32 34.4**	**+0.4**
MODS	**Modra-Piesok**	**3.25**	**167**	*e*PN	**Pn**	**22 32 33.6**	**-1.2**
MODS				*e*PG	**Pg**	**22 32 44.4**	**-0.4**
MODS				*e*SG	**Sg**	**22 33 27.9**	**+1.0**
MODS				*e*LG	Lg	22 33 31.6	
NIE	**Niedzica**	**3.39**	**127**	*e*P	**Pg**	**22 32 48.1**	**+0.8**
NIE				*e*S	**Sg**	**22 33 31.9**	**+0.7**
ZST	**Bratislava**	**3.41**	**169**	*e*SG	**Sg**	**22 33 31.4**	**-0.4**
VYHS	**Vyhne**	**3.50**	**150**	*e*PN	**Pn**	**22 32 38.3**	**+0.1**
VYHS				*e*PG	**Pg**	**22 32 49.5**	**-0.1**
CLZ	**Clausthal**	**3.62**	**277**	*e*Pn	**Pn**	**22 32 41.9**	**+2.0**
CONA	**Conrad Observa**	**3.62**	**183**	Pn	**Pn**	**22 32 41.2**	**+1.3**
	comp=Z,2.7nm,0.4s,SNR=10						
CONA				*e*Sn	**Sn**	**22 33 24.1**	**+0.7**
	comp=Z,3.6nm,0.3s						
BSD	**Bornholm Skovb**	**3.66**	**349**	*e*	**Pn**	**22 32 40.7**	**+0.5**
	baz=179,slow=12						
BSD				*i* P	Pb	22 32 41.7	-6.2
BSD				*i* S	**Sn**	**22 33 24.7**	**+0.7**
BSD				IAML		22 33 33.1	
	comp=Z,3.1nm,0.4s						
GRF	**Grafenberg Arr**	**3.66**	**241**	*e*Pn	**Pn**	**22 32 41.7**	**+1.4**
MOA	**Molln**	**3.90**	**199**	Pn	**Pn**	**22 32 44.5**	**+0.9**
	comp=Z,3.3nm,0.3s,SNR=9.5						
MOA				*e*Sn	**Sn**	**22 33 29.7**	**-0.4**
	comp=Z,14nm,0.4s						
ARSA	**Arzberg**	**4.32**	**186**	*e*Pn	**Pn**	**22 32 50.9**	**+1.5**
	comp=Z,2.1nm,0.3s						
ARSA				*e*Sn	**Sn**	**22 33 42.3**	**+1.8**
	comp=Z,9.9nm,0.5s						
KOLS	**Kolonicke sedl**	**4.71**	**121**	*e*PN	**Pn**	**22 32 56.0**	**+1.3**
KBA	**Koelnbreinsper**	**4.84**	**204**	*e*Pn	**Pn**	**22 32 56.0**	**-0.7**
	comp=Z,0.4nm,0.1s						
KBA				*e*Sn	**Sn**	**22 33 53.0**	**-0.5**
	comp=Z,4.4nm,0.3s						
SOKA	**Soboth**	**4.93**	**189**	*e*Pn	**Pn**	**22 32 57.4**	**-0.4**
	comp=Z,1.8nm,0.6s						
SOKA				*e*Sn	**Sn**	**22 33 53.6**	**-2.0**
	comp=Z,4.1nm,0.5s						
OBKA	**Obir**	**5.15**	**193**	*e*Pn	**Pn**	**22 33 02.3**	**+1.4**
	comp=Z,2.1nm,0.4s						
OBKA				*e*Sg	**Sg**	**22 34 23.3**	**-4.6**
	comp=Z,13nm,0.6s						
WATA	**Walderalm**	**5.17**	**217**	*e*Sg	**Sg**	**22 34 25.6**	**-2.9**
	comp=Z,5.5nm,0.4s						
MYKA	**Terra Mystica**	**5.19**	**200**	*e*Pn	**Pn**	**22 33 01.9**	**+0.5**
	comp=Z,0.4nm,0.2s						
MYKA				*e*Sg	**Sg**	**22 34 26.3**	**-2.9**
	comp=Z,9.1nm,0.7s						
WTTA	**Wattenberg**	**5.21**	**216**	*e*Pn	**Pn**	**22 33 02.4**	**+0.7**
	comp=Z,1.4nm,0.3s						
WTTA				*e*Sg	**Sg**	**22 34 26.7**	**-3.0**
	comp=Z,7.7nm,0.6s						
MOTA	**Moosalm**	**5.35**	**220**	*e*Pn	**Pn**	**22 33 03.4**	**-0.3**
	comp=Z,1.5nm,0.4s						
MOTA				*e*Sg	**Sg**	**22 34 30.1**	**-4.1**
	comp=Z,6.8nm,0.6s						
ABTA	**Abfaltersbach**	**5.37**	**208**	*e*Pn	**Pn**	**22 33 04.0**	**+0.1**
	comp=Z,2.4nm,0.5s						
ABTA				*e*Sg	**Sg**	**22 34 32.4**	**-2.4**
	comp=Z,12nm,0.7s						
RETA	**Reutte**	**5.38**	**223**	Pn	**Pn**	**22 33 04.2**	**+0.3**
	comp=Z,0.5nm,0.2s,SNR=5.6						
RETA				*e*Sg	**Sg**	**22 34 34.4**	**-0.7**
	comp=Z,4.7nm,0.5s						
SQTA	**Sankt Quirin**	**5.41**	**219**	Pn	**Pn**	**22 33 05.6**	**+1.2**
	comp=Z,1.6nm,0.2s,SNR=6.3						
SQTA				*e*Sg	**Sb**	**22 34 28.6**	**+5.3**
	comp=Z,2.8nm,0.3s						
FETA	**Feichten**	**5.76**	**220**	*e*Pn	**Pn**	**22 33 10.3**	**+1.0**
	comp=Z,0.9nm,0.4s						
FETA				*e*Sg	**Sg**	**22 34 41.5**	**-5.9**
	comp=Z,1.9nm,0.5s						
DAVA	**Damuels**	**5.92**	**226**	*e*Pn	**Pn**	**22 33 11.8**	**+0.3**
	comp=Z,1.5nm,0.2s						
DAVA				*e*Sg	**Sg**	**22 34 52.0**	**-0.5**
	comp=Z,7.3nm,0.6s						
DAVOX	**Davos/Dischmat**	**6.30**	**223**	Pn	**Pn**	**22 33 18.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=75,slow=16,SNR=2.1						
DAVOX				Sn	**Sn**	**22 34 26.5**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=163,slow=19,SNR=1.0						
DAVOX				Lg	Lg	22 35 01.3	
	comp=Z,0.3nm,0.3s,baz=218,slow=18,SNR=1.9						
AKASG	**Malin Array Be**	**8.26**	**91**	Pn	**Pn**	**22 33 44.3**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=278,slow=12,SNR=3.6						
AKASG				Sn	**Sn**	**22 35 14.0**	**-3.3**
	comp=Z,1.2nm,0.3s,baz=277,slow=23,SNR=3.1						
AKASG				Lg	Lg	22 36 11.4	
	comp=Z,0.5nm,0.3s,baz=278,slow=27,SNR=1.6						
HFS	**Hagfors**	**8.72**	**352**	Pn	**Pn**	**22 33 51.3**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=155,slow=14,SNR=5.3						
HFS				Sn	**Sn**	**22 35 26.0**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=167,slow=27,SNR=1.4						
NOA	**NORSAR Array B**	**9.91**	**346**	Pn	**Pn**	**22 34 05.8**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=156,slow=19,SNR=4.8						
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**22 34 25.7**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=210,slow=11,SNR=13						
FINES				Sn	**Sn**	**22 36 25.7**	**-6.5**
	comp=Z,0.2nm,0.3s,baz=234,slow=24,SNR=1.7						
EKA	**Eskdalemuir Ar**	**12.13**	**296**	Pn	**Pn**	**22 34 37.5**	**+1.1**
	baz=103,slow=12,SNR=1.9						
ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	**P**	**22 35 59.1**	**-1.7**
	baz=193,slow=12,SNR=13						
ARU	**Arti**	**25.09**	**62**	LR	LR	22 47 56.0	
	comp=Z,52nm,18.2s,baz=271,slow=38						
TORD	**Torodi Ar. Bea**	**40.05**	**202**	P	**P**	**22 39 20.3**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=7.1,slow=8.3,SNR=1.9						

BUT ***11*** *22:33:23.5±1.2,47.°95N±0.°06×114.°90W±0.°06,h9km±7km, Md3.7,Error ellipse: s-maj=8.3km s-min=4.3km az=203.0*
NEIC ***11*** *22:33:23.1±1.1,47.°96N±0.°05×114.°91W±0.°06,h6km±8km, Error ellipse: s-maj=7.7km s-min=5.4km az=202.0*
IDC ***11*** *22:33:24.1±1.2,48.°04N×114.°86W,h0km,mb1 3.6/4, mb1mx3.3/56,mbtmp3.2/4,ML3.4/4,Error ellipse: s-maj=14.6km s-min=7.5km az=29.0*
ANF ***11*** *22:33:25.1±1.5,47.°92N×114.°89W,h18km±11km,ML3.9/6, Error ellipse: s-maj=7.6km s-min=3.7km az=26.0*

ISC 11 22:33:22.5±0.8,47.°96N±0.°04×114.°93W±0.°04,h4km,n66, σ1§02/69,Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTMT	**Jette**	**0.48**	**116**		**Pg**	**22 33 32.3**	**+0.5**
JTMT				Sg	**Sg**	**22 33 37.6**	**-0.5**
WALA	**Waterton Lakes**	**1.29**	**31**	Pn	**Pg**	**22 33 47.5**	**+0.3**
MSO	**Missoula**	**1.32**	**149**	P	**Pg**	**22 33 47.2**	**-0.6**
	baz=330						
MSO				S	**Sg**	**22 34 04.7**	**-0.2**
	baz=330						
MSO	**Missoula**	**1.32**	**149**		**Pg**	**22 33 47.6**	**-0.1**
NEW	**Newport**	**1.50**	**282**	Pg	**Pn**	**22 33 51.7**	**+1.4**
	99nm,0.3s,baz=100,slow=13,SNR=975						
NEW				Lg	Lg	22 34 12.1	
	382nm,0.3s,baz=7.5,slow=18,SNR=22						
NEW	**Newport**	**1.50**	**282**	P	**Pn**	**22 33 50.9**	**+0.6**
	baz=101						
NEW				S	**Sg**	**22 34 12.5**	**+1.8**
	baz=101						
NEW	**Newport**	**1.50**	**282**	Pn	**Pn**	**22 33 51.2**	**+0.9**
C09A	**Chrisman Ranch**	**2.26**	**267**	Pn	**Pn**	**22 34 01.1**	**+0.5**
HRY	**Holter Researc**	**2.45**	**120**		**Pn**	**22 34 04.2**	**+0.8**
F10A	**Beach Ranch, E**	**2.54**	**219**		**Pn**	**22 34 05.8**	**+1.2**
E09A	**Wood Farm, Sta**	**2.63**	**238**		**Pn**	**22 34 06.8**	**+1.1**
LRM	**Limekiln Ridge**	**2.73**	**141**	Pn	**Pn**	**22 34 07.8**	**+0.5**
D08A	**Wollman Farm,**	**2.86**	**253**		**Pn**	**22 34 09.9**	**+1.1**
PLID	**Pearl Lake**	**2.97**	**195**		**Pn**	**22 34 11.1**	**+0.5**
B08A	**Colville Reser**	**2.98**	**279**	Pn	**Pn**	**22 34 10.8**	**+0.2**
DLMT	**Dillon**	**3.06**	**148**		**Pn**	**22 34 12.6**	**+0.8**
E08A	**Dider Farm, El**	**3.18**	**244**	Pn	**Pn**	**22 34 14.1**	**+0.9**
BOZ	**Bozeman (W)**	**3.28**	**135**	P	**Pn**	**22 34 15.3**	**+0.6**
	baz=318						
BOZ				S	**Sn**	**22 34 54.1**	**-0.1**
	baz=318						
BOZ	**Bozeman (W)**	**3.28**	**135**		**Pn**	**22 34 14.8**	**+0.1**
MCMT	**McKenzie Canyo**	**3.45**	**155**	Pn	**Pn**	**22 34 18.3**	**+1.1**
EGMT	**Eagleton**	**3.47**	**87**	Pb	**Pb**	**22 34 25.3**	**+0.7**
	baz=271						
EGMT				Sb	**Sb**	**22 35 09.7**	**+2.6**
	baz=271						
EGMT	**Eagleton**	**3.47**	**87**	Pn	**Pn**	**22 34 17.8**	**+0.4**
HAWA	**Hanford**	**3.51**	**245**	Pn	**Pn**	**22 34 17.9**	**+0.1**
BMO	**Blue Mountains**	**3.52**	**209**		**Pn**	**22 34 19.0**	**+0.9**
E07A	**Sunnyside**	**3.64**	**249**	Pn	**Pn**	**22 34 19.7**	**+0.1**
BCYI	**Bear Canyon**	**3.80**	**163**		**Pn**	**22 34 22.3**	**+0.2**
G08A	**Pilot Rock**	**3.86**	**228**	Pn	**Pn**	**22 34 22.6**	**-0.1**
LTY	**Liberty**	**3.95**	**262**		**Pn**	**22 34 23.8**	**-0.1**
QLMT	**Earthquake Lak**	**3.96**	**141**		**Pn**	**22 34 24.4**	**+0.3**
F07A	**Phinny Hill Vi**	**4.00**	**241**		**Pn**	**22 34 24.9**	**+0.3**
YHL	**Hebgen Lake**	**4.05**	**139**		**Pn**	**22 34 25.7**	**+0.2**
YHB	**Horse Butte**	**4.12**	**140**	Pn	**Pn**	**22 34 26.7**	**+0.3**
GCMT	**Greycliff**	**4.21**	**119**		**Pn**	**22 34 28.7**	**+1.1**
YHH	**Holmes Hill**	**4.25**	**137**	Pn	**Pn**	**22 34 28.9**	**+0.7**
YMR	**Madison River**	**4.29**	**139**		**Pn**	**22 34 29.5**	**+0.8**
YNR	**Norris Junctio**	**4.38**	**136**		**Pn**	**22 34 30.0**	**0.0**
HLID	**Hailey**	**4.42**	**175**	P	**Pn**	**22 34 31.4**	**+0.9**
	baz=356						
HLID				S	**Sn**	**22 35 22.0**	**-0.4**
	baz=356						
HLID	**Hailey**	**4.42**	**175**	Pn	**Pn**	**22 34 31.2**	**+0.8**
B06A	**Marblemount**	**4.42**	**280**	Pn	**Pn**	**22 34 30.8**	**+0.5**
YNE	**Yellowstone No**	**4.50**	**129**		**Pn**	**22 34 31.7**	**0.0**
MFID	**Camas Ranch**	**4.59**	**188**	Pn	**Pn**	**22 34 33.2**	**+0.3**
YMP	**Mirror Lake Pl**	**4.61**	**133**		**Pn**	**22 34 33.5**	**+0.2**
YPP	**Pitchstone Pla**	**4.67**	**141**	Pn	**Pn**	**22 34 34.5**	**+0.4**
RLMT	**Red Lodge**	**4.83**	**124**	P	**Pn**	**22 34 38.0**	**+1.9**
	baz=308						
RLMT	**Red Lodge**	**4.83**	**124**	Pn	**Pn**	**22 34 36.2**	**+0.1**
D05A	**Enumclaw**	**4.84**	**263**	Pn	**Pn**	**22 34 36.8**	**+0.7**
FLWY	**Flagg Ranch**	**4.87**	**141**		**Pn**	**22 34 37.8**	**+1.0**
IMW	**Indian Meadow**	**4.93**	**144**		**Pn**	**22 34 38.3**	**+0.7**
I07A	**Izee**	**5.02**	**221**		**Pn**	**22 34 40.7**	**+1.9**
J08A	**Circle Bar Ran**	**5.24**	**210**	Pn	**Pn**	**22 34 41.2**	**-0.4**
TPAW	**Teton Pass**	**5.27**	**147**	Pn	**Pn**	**22 34 42.4**	**+0.2**
REDW	**Red Top Meadow**	**5.41**	**147**	Pn	**Pn**	**22 34 46.0**	**+1.8**
ECR	**Eagle Creek**	**5.51**	**152**	Pn	**Pn**	**22 34 45.7**	**0.0**
PINE	**Pine Mountain**	**5.92**	**227**	Pn	**Pn**	**22 34 50.7**	**-0.4**
H04A	**Detroit Lake**	**6.00**	**240**	Pn	**Pn**	**22 34 51.1**	**-1.0**
LAO	**LASA Array**	**6.05**	**99**	Pn	**Pn**	**22 34 53.1**	**+0.3**
PD31	**Pinedale Array**	**6.42**	**142**	Pn	**Pn**	**22 34 58.3**	**+0.2**
PDAR	**Pinedale Array**	**6.42**	**142**	Pn	**Pn**	22 35 03.0	+5.0
	0.2nm,0.3s,baz=327,slow=9.8,SNR=2.7						
PDAR				Lg	Lg	22 36 41.8	
	0.2n

s-min=8.6km az=109.0
IDC ***11*** *23:23:48.5±0.7,43˙.06N×138˙.29E,h238km±6km,mb4.0/30, mb1 4.1/39,mb1mx4.1/48,mbtmp4.6/39,Error ellipse: s-maj=8.2km s-min=7.0km az=146.0*
NIED ***11*** *23:23:48.7,43˙.01N×138˙.32E,h249km,MW4.6,Moment Tensor Solution. s3 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28; $M_{\theta\theta}$0.71; $M_{\phi\phi}$-0.44; $M_{r\theta}$-0.11; $M_{\theta\phi}$-0.79; $M_{\phi r}$-0.17; Fault plane solution: $M_0$1.01000×10^{16} NP1: ϕ_s73.00000°,δ78.00000°,λ-166.00000°. NP2: ϕ_s340.00000°,δ77.00000°,λ-13.00000°.*
MOS ***11*** *23:23:48.0±0.9,43˙.04N×138˙.32E,h249km,mb4.6/40 Error ellipse: s-maj=5.8km s-min=4.2km az=118.0*
JMA ***11*** *23:23:48.7±0.2,43˙.01N×138˙.32E,h249km±2km,M4.6*
SKHL ***11*** *23:23:49.3±0.8,43˙.09N×138˙.34E,h262km±6km,mb5.5/2, msh5.5/1,msh5.1/2*
ISC 11 23:23:48.8±0.5, 43˙.04N±0˙.04×138˙.33E±0˙.03, h244km±4km, n514,σ1$28/585, mb4.5/139, 20C-37D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**1.28**	**138**	P		**Pn**	**23 24 25.3**	**+0.3**
JOSM				*e*S		**S**	**23 24 53.8**	**+0.5**
JHST	**Hiyamasetana**	**1.30**	**118**	P		**Pn**	**23 24 25.6**	**+0.5**
JHST				*e*S		**S**	**23 24 54.9**	**+1.4**
JSH	**Shimam**	**1.32**	**107**	P		**Pn**	**23 24 25.5**	**+0.3**
JSH				*e*S		**S**	**23 24 54.6**	**+0.8**
JSK	**Shakotan**	**1.60**	**78**	P		**Pn**	**23 24 27.8**	**+0.5**
JSK				*e*S		**S**	**23 24 57.9**	**+0.4**
JYM2	**Yakumo 2**	**1.77**	**121**	P		**Pn**	**23 24 29.2**	**+0.5**
JOMM	**Oshimamatsumae**	**1.96**	**140**	P		**Pn**	**23 24 30.7**	**+0.3**
JOMM				*e*S		**S**	**23 25 03.2**	**+0.1**
JEW	**Eniwo**	**2.30**	**94**	P		**Pn**	**23 24 34.5**	**+0.9**
JEW				*e*S		**S**	**23 25 10.6**	**+1.8**
JEW	**Eniwo**	**2.30**	**94**			**Pn**	**23 24 34.0**	**+0.4**
JEW				S		**S**	**23 25 09.3**	**+0.4**
JKB	**Kayabe**	**2.31**	**119**	P		**Pn**	**23 24 33.8**	**+0.1**
TEY	**Ternei**	**2.35**	**329**	*e*P		**Pn**	**23 24 34.8**	**+0.8**
TEY				AMB		AMB	23 24 35.3	
	450nm,0.6s							
TEY				AMB		AMB	23 24 35.3	
	330nm,0.6s							
TEY				AMB		AMB	23 24 35.3	
	800nm,0.6s							
TEY				AMB		AMB	23 24 35.4	
	500nm,0.9s							
TEY				AMB		AMB	23 24 35.4	
	500nm,0.9s							
TEY				AMB		AMB	23 24 35.4	
	900nm,0.9s							
TEY				*e*S		**S**	**23 25 10.1**	**+0.4**
TEY				A		A	23 25 10.5	
	310nm,0.9s							
TEY				A		A	23 25 10.5	
	720nm,0.9s							
TEY	**Ternei**	**2.35**	**329**	⇑*i*P		**Pn**	**23 24 34.9**	**+0.9**
TEY				*i* S		**S**	**23 25 10.1**	**+0.4**
TEY				pmax		pmax		
	comp=N,450nm,0.6s							
TEY				pmax		pmax		
	comp=E,330nm,0.6s							
TEY				pmax		pmax		
	comp=Z,800nm,0.5s							
TEY				pmax		pmax		
	comp=E,500nm,0.9s							
TEY				pmax		pmax		
	comp=Z,900nm,0.9s							
TEY				pmax		pmax		
	comp=N,500nm,0.7s							
TEY				smax		smax		
	comp=E,720nm,0.9s							
TEY				smax		smax		
	comp=N,310nm,2.4s							
JHR	**Hokuryu**	**2.57**	**73**	P		**Pn**	**23 24 37.6**	**+1.3**
JHR				*e*S		**S**	**23 25 15.1**	**+1.4**
JOT	**Ohata**	**2.61**	**129**	P		**Pn**	**23 24 36.4**	**-0.4**
JYG	**Yagishiri**	**2.64**	**57**	P		**Pn**	**23 24 37.0**	**+0.1**
JTM	**Tenmabayashi**	**3.04**	**137**			**Pn**	**23 24 40.5**	**-0.9**
JRBN	**Rebuntou**	**3.09**	**39**	P		**Pn**	**23 24 42.6**	**+0.8**
JRBN				*e*S		**S**	**23 25 23.8**	**+0.2**
JFR	**Furan**	**3.12**	**86**	P		**Pn**	**23 24 42.8**	**+0.5**
JFR				*e*S		**S**	**23 25 23.7**	**-0.8**
ASAJ	**Asahikawa**	**3.28**	**69**	P		**Pn**	**23 24 44.8**	**+0.8**
	comp=N,28nm,0.3s,baz=251,slow=9.3,SNR=70							
ASAJ				S		**S**	**23 25 26.8**	**-0.8**
	comp=N,10nm,0.3s,baz=47,slow=24,SNR=40							
ASAJ	**Asahikawa**	**3.28**	**69**	P		**Pn**	**23 24 44.8**	**+0.8**
ASAJ				S		**S**	**23 25 28.0**	**+0.4**
JKA	**Kamikawa-asahi**	**3.28**	**69**	*e*P		**Pn**	**23 24 44.8**	**+0.8**
JKA	**Kamikawa-asahi**	**3.28**	**69**			**Pn**	**23 24 44.8**	**+0.8**
JKA				S		**S**	**23 25 28.0**	**+0.3**
JKK2	**Kamakawa 2**	**3.32**	**74**	P		**Pn**	**23 24 45.4**	**+0.9**
JKK2				*e*S		**S**	**23 25 28.9**	**+0.5**
JNBK	**Urakawa-nobuka**	**3.35**	**102**	P		**Pn**	**23 24 44.1**	**-0.7**
JNBK				*e*S		**S**	**23 25 28.8**	**-0.2**
JWK2	**Keihoku**	**3.43**	**47**	P		**Pn**	**23 24 47.6**	**+2.0**
JWK2				*e*S		**S**	**23 25 33.0**	**+2.5**
JANG	**Nango**	**3.58**	**137**	P		**Pn**	**23 24 45.8**	**-1.6**
JSE	**Soyaes**	**3.62**	**57**	P		**Pn**	**23 24 48.7**	**+0.9**
JSE				*e*S		**S**	**23 25 35.1**	**+0.6**
JEM	**Erimo**	**3.71**	**104**			**Pn**	**23 24 48.5**	**-0.5**
ERM	**Erimo**	**3.71**	**104**	*ce*P		**Pn**	**23 24 48.7**	**-0.2**
ERM				pmax		pmax		
	comp=Z,1μm,0.5s							
ERM	**Erimo**	**3.71**	**104**	Pn		**Pn**	**23 24 48.7**	**-0.2**
JCH	**Churui**	**3.73**	**95**	P		**Pn**	**23 24 47.7**	**-1.4**
JCH				*e*S		**S**	**23 25 32.2**	**-4.6**
JAR	**Ashorobuto**	**3.99**	**84**	P		**Pn**	**23 24 51.7**	**-0.4**
JAR				*e*S		**S**	**23 25 39.7**	**-2.6**
JTKR	**Abashiri--Toko**	**4.16**	**75**	P		**Pn**	**23 24 54.7**	**+0.5**
JTKR				*e*S		**S**	**23 25 45.1**	**-0.9**
JOM	**Ohasama**	**4.21**	**147**	P		**Pn**	**23 24 53.5**	**-1.3**
JYK	**Kaneyama**	**4.40**	**159**	P		**Pn**	**23 24 56.6**	**-0.5**
JYK				*e*S		**S**	**23 25 51.3**	**0.0**
JMK	**Ichinoseki**	**4.63**	**151**	P		**Pn**	**23 24 58.3**	**-1.7**
JAK	**Akkeshi**	**4.67**	**88**	P		**Pn**	**23 24 58.7**	**-1.6**
JAK				*e*S		**S**	**23 25 52.3**	**-4.8**
VLA	**Vladivostok**	**4.72**	**273**	*e*P		**Pn**	**23 25 01.8**	**+0.9**
VLA	**Vladivostok**	**4.72**	**273**	*d* iP		**Pn**	**23 25 01.8**	**+0.9**
USA0B	**Ussuriysk Arra**	**4.75**	**286**	*d* iP		**Pn**	**23 25 01.6**	**+0.3**
USA0B	**Ussuriysk Arra**	**4.75**	**286**			**Pn**	**23 25 01.0**	**-0.3**
USRK	**Ussuriysk Ar.**	**4.75**	**286**	P		**Pn**	**23 25 01.5**	**+0.3**
	baz=94,slow=12,SNR=426							
USRK	**Ussuriysk Ar.**	**4.75**	**286**	Pn		**Pn**	**23 25 01.0**	**-0.3**
JSD	**Sado**	**5.00**	**181**	Pn		**Pn**	**23 25 04.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**5.01**	**37**	*e*P		**Pn**	**23 25 05.7**	**+1.3**
YSS				AMB		AMB	23 25 06.9	
	comp=Z,900nm,0.6s							
YSS				*e*S		**S**	**23 26 04.3**	**-0.4**
YSS				A		A	23 26 05.0	
	comp=Z,1μm,4.6s							
YSS				A		A	23 26 05.0	
	comp=Z,800nm,4.6s							
YSS				A		A	23 26 06.0	
	comp=Z,50nm,0.7s							
YSS				A		A	23 26 06.0	
	comp=Z,160nm,0.7s							
YSS	**Yuzh-Sakhalins**	**5.01**	**37**	*e*P		**Pn**	**23 25 05.5**	**+1.1**
YSS				*e*S		**S**	**23 26 03.7**	**-1.0**
YSS				pmax		pmax		
	comp=Z,1μm,1.2s							
YSS				smax		smax		
	comp=N,1μm,4.6s							
YSS				smax		smax		
	comp=E,800nm,4.8s							
YSS				smax		smax		
	comp=N,230nm,1.0s							
YSS				smax		smax		
	comp=E,100nm,0.9s							
YSS	**Yuzh-Sakhalins**	**5.01**	**37**	Pn		**Pn**	**23 25 04.7**	**+0.2**
GLVR	**Golovnino**	**5.28**	**80**	*e*P		**Pn**	**23 25 07.6**	**-0.2**
GLVR				AMB		AMB	23 25 17.0	
	comp=E,430nm,0.5s							
GLVR				*i* S		**S**	**23 26 08.8**	**-2.0**
GLVR				A		A	23 26 16.7	
	comp=E,1μm,0.3s							
GLVR				A		A	23 26 16.7	
	comp=E,2μm,0.3s							
GLVR	**Golovnino**	**5.28**	**80**	*e*P		**Pn**	**23 25 07.6**	**-0.2**
GLVR				*i* S		**S**	**23 26 08.8**	**-2.0**
GLVR				pmax		pmax		
	comp=Z,430nm,0.5s							
GLVR				pmax		pmax		
	comp=N,308nm,0.3s							
GLVR				smax		smax		
	comp=N,15μm,0.3s							
GLVR				smax		smax		
	comp=E,2μm,0.3s							
NMR	**Nemuro--Hokkai**	**5.42**	**84**	⇓*i*P		**Pn**	**23 25 07.4**	**-2.1**
NMR				*i* S		**S**	**23 26 07.4**	**-6.3**
GRPR	**Tuman**	**5.49**	**78**	*e*P		**Pn**	**23 25 10.7**	**+0.3**
GRPR				AMB		AMB	23 25 14.4	
	comp=E,527nm,0.3s							
GRPR				*i* S		**S**	**23 26 14.4**	**-1.1**
GRPR				A		A	23 26 20.5	
	comp=E,1μm,0.4s							
GRPR				A		A	23 26 20.5	
	comp=E,765nm,0.4s							
GRPR	**Tuman**	**5.49**	**78**	*e*P		**Pn**	**23 25 10.7**	**+0.3**
GRPR				*i* S		**S**	**23 26 14.4**	**-1.1**
GRPR				pmax		pmax		
	comp=N,346nm,0.3s							
GRPR				pmax		pmax		
	comp=E,162nm,0.3s							
GRPR				pmax		pmax		
	comp=Z,527nm,0.3s							
GRPR				smax		smax		
	comp=N,1μm,0.4s							
GRPR				smax		smax		
	comp=E,765nm,0.4s							
JMM	**Marumori**	**5.50**	**159**	Pn		**Pn**	**23 25 09.2**	**-1.5**
YUK	**Yuzh-Kuril'sk**	**5.56**	**77**	*i* P		**Pn**	**23 25 11.5**	**+0.2**
YUK				AMB		AMB	23 25 14.9	
	comp=E,1μm,0.4s							
YUK				*i* S		**S**	**23 26 16.1**	**-0.9**
YUK				A		A	23 26 26.5	
	comp=E,1μm,0.4s							
YUK				A		A	23 26 26.5	
	comp=E,960nm,0.4s							
YUK	**Yuzh-Kuril'sk**	**5.56**	**77**	*c i* P		**Pn**	**23 25 11.7**	**+0.4**
YUK				*i* S		**S**	**23 26 15.0**	**-2.0**
YUK				pmax		pmax		
	comp=Z,368μm,0.5s							
YUK				pmax		pmax		
	comp=N,177μm,0.4s							
YUK				pmax		pmax		
	comp=E,250μm,0.3s							
YUK				smax		smax		
	comp=N,1μm,0.4s							
YUK				smax		smax		
	comp=E,960nm,0.4s							
MAJO	**Matsushiro**	**6.49**	**181**	*d* iP		**Pn**	**23 25 22.5**	**-0.6**
MAJO	**Matsushiro**	**6.49**	**181**	Pn		**Pn**	**23 25 22.3**	**-0.8**
MAT	**Matsushiro**	**6.49**	**181**	P		**Pn**	**23 25 22.7**	**-0.4**
MAT				S		**S**	**23 26 37.0**	**-1.5**
MJAR	**Matsushiro Arr**	**6.49**	**181**	P		**Pn**	**23 25 23.1**	**0.0**
	comp=E,2.7nm,0.3s,baz=358,slow=12,SNR=115							
MJAR				S		**S**	**23 26 38.2**	**-0.3**
	baz=61,slow=28,SNR=0.8							
MDJ	**Mudanjiang**	**6.51**	**287**	P		**Pn**	**23 25 24.2**	**+1.0**
MDJ				S		**S**	**23 26 39.7**	**+1.0**
MDJ				sS			23 26 42.1	
MDJ				pmax		pmax		
	comp=E,510nm,0.8s							
MDJ	**Mudanjiang**	**6.51**	**287**	Pn		**Pn**	**23 25 23.6**	**+0.4**
UGL	**Uglegorsk**	**6.57**	**22**	*e*P		**Pn**	**23 25 24.4**	**+0.6**
UGL				AMB		AMB	23 25 25.9	
	comp=E,270nm,0.8s							
UGL				*e*S		**S**	**23 26 38.0**	**-1.9**
UGL				A		A	23 26 39.0	
	comp=E,70nm,0.3s							
UGL				A		A	23 26 39.0	
	comp=E,110nm,0.3s							
UGL	**Uglegorsk**	**6.57**	**22**	*e*P		**Pn**	**23 25 24.4**	**+0.6**
UGL				S		**S**	**23 26 33.7**	**-6.2**
UGL				pmax		pmax		
	comp=Z,411nm,0.9s							
UGL				smax		smax		
	comp=E,151nm,0.4s							
KUR	**Kuril'sk**	**7.20**	**69**	*e*P		**Pn**	**23 25 33.7**	**+1.9**
KUR				AMB		AMB	23 25 34.7	
	comp=E,80nm,0.5s							
KUR				*i* S		**S**	**23 26 54.8**	**+0.3**
KUR	**Kuril'sk**	**7.20**	**69**	*e*P		**Pn**	**23 25 34.0**	**+2.2**
KUR				*i* S		**S**	**23 26 54.8**	**+0.3**
KUR				pmax		pmax		
	comp=E,34nm,0.5s							
KUR				pmax		pmax		
	comp=Z,74nm,0.5s							
KUR				pmax		pmax		
	comp=N,32nm,0.2s							
JGF	**Kuroka**	**7.47**	**186**			**Pn**	**23 25 34.4**	**-1.1**
KLR	**Kul'dur**	**7.69**	**326**	P		**Pn**	**23 25 38.3**	**+0.3**
	comp=N,4.7nm,0.3s,baz=134,slow=12,SNR=92							
INU	**Inuyama**	**7.75**	**188**	Pn		**Pn**	**23 25 38.4**	**-0.6**
GRNR	**Gornyy**	**7.84**	**351**	*e*P		**Pn**	**23 25 40.3**	**+0.4**
GRNR				AMB		AMB	23 25 41.5	
	comp=N,30nm,0.7s							
GRNR				AMB		AMB	23 25 41.5	
	comp=N,40nm,0.7s							
GRNR	**Gornyy**	**7.84**	**351**	⇑*i*P		**Pn**	**23 25 40.3**	**+0.4**
GRNR				*e*S		**S**	**23 27 08.8**	**-0.4**
GRNR				pmax		pmax		
	comp=N,30nm,0.7s							
GRNR				pmax		pmax		
	comp=Z,40nm,0.6s							
GRNR				smax		smax		
	comp=N,8.0nm,0.8s							
GRNR				MLR		MLR		
	comp=E,130nm,10.0s							
GRNR				MLR		MLR		
	comp=N,120nm,15.0s							
GRNR				MLR		MLR		
	comp=Z,140nm,16.0s							
JWT	**Wachi**	**8.08**	**197**	Pn		**Pn**	**23 25 42.8**	**-0.3**
TYV	**Tymovskoe**	**8.36**	**19**	*e*P		**Pn**	**23 25 47.6**	**+1.1**
TYV				AMB		AMB	23 25 48.0	
	comp=Z,400nm,3.1s							
TYV				AMB		AMB	23 25 49.0	
	comp=Z,95nm,0.9s							
TYV				*e*S		**S**	**23 27 21.0**	**-0.3**
TYV				A		A	23 27 22.0	
	comp=Z,7.0nm,0.5s							
TYV				A		A	23 27 22.0	
	comp=Z,12nm,0.5s							
TYV				A		A	23 27 24.0	
	comp=Z,500nm,4.0s							
TYV	**Tymovskoe**	**8.36**	**19**	*e*P		**Pn**	**23 25 47.9**	**+1.4**
TYV				*e*S		**S**	**23 27 22.1**	**+0.8**
TYV				pmax		pmax		
	comp=Z,400nm,3.1s							
TYV				pmax		pmax		
	comp=Z,95nm,0.9s							
TYV				smax		smax		
	comp=N,14nm,1.4s							
TYV				smax		smax		
	comp=N,500nm,3.9s							
JHS	**Saijyo**	**9.00**	**209**	Pn		**Pn**	**23 25 55.1**	**+0.3**
CN2	**Changchun**	**9.41**	**279**	*e*P		**Pn**	**23 26 00.1**	**+0.2**
CN2				*e*S		**S**	**23 27 43.1**	**-2.8**
CN2				pmax		pmax		
	comp=N,30nm,0.9s							
CN2				pmax		pmax		
	comp=N,100nm,3.0s							
CN2				LR		LR		
	comp=N,200nm,10.0s							
CN2				LR		LR		
	comp=N,200nm,10.0s							
CN2				LR		LR		
	comp=N,100nm,10.0s							
KSRS	**Korea Array**	**9.72**	**238**	P		**Pn**	**23 26 04.9**	**+1.1**
	comp=N,1.2nm,0.3s,baz=52,slow=12,SNR=55							
KS19	**Wonju Array Si**	**9.72**	**239**			**Pn**	**23 26 03.9**	**0.0**
KSAR	**Wonju Array Be**	**9.75**	**238**	P		**Pn**	**23 26 04.0**	**-0.3**
KSAR	**Wonju Array Be**	**9.75**	**238**			**Pn**	**23 26 04.0**	**-0.3**
JMN	**Monobe**	**9.93**	**202**	Pn		**Pn**	**23 26 07.1**	**+0.4**
JHJ	**Hachijo jima 2**	**9.97**	**173**	P		**Pn**	**23 26 04.1**	**-3.1**
	comp=N,65nm,0.3s,baz=95,slow=20,SNR=15							
JHJ				S		S	23 27 46.2	-13
	comp=N,55nm,0.3s,baz=188,slow=23,SNR=8.5							
JHJ2	**Mitsune**	**9.98**	**173**	Pn		**Pn**	**23 26 04.4**	**-2.9**
EKMR	**Ekimchan**	**10.66**	**342**	*e*P		**Pn**	**23 26 17.1**	**+1.6**
EKMR				AMB		AMB	23 26 43.9	
	comp=N,7.0nm,0.8s							
OKH	**Okha**	**10.95**	**15**	*e*P		**Pn**	**23 26 20.6**	**+1.4**
OKH				AMB		AMB	23 26 21.2	
	comp=N,330nm,0.8s							
JNU	**Nakatsue**	**11.51**	**213**	P		**Pn**	**23 26 26.3**	**-0.2**
	comp=N,5.5nm,0.3s,baz=49,slow=4.8,SNR=14							
JNU	**Nakatsue**	**11.51**	**213**	Pn		**Pn**	**23 26 26.0**	**-0.5**
ZEA	**Zeya**	**12.97**	**329**	*e*P		**Pn**	**23 26 44.2**	**-0.1**
ZEA				AMB		AMB	23 26 47.3	
	comp=N,60nm,0.9s							
ZEA				AMB		AMB	23 26 47.3	
	comp=N,40nm,0.9s							
ZEA				AMB		AMB	23 26 47.3	
	comp=N,100nm,0.9s							
ZEA	**Zeya**	**12.97**	**329**	*e*P		**Pn**	**23 26 44.2**	**-0.1**
ZEA				pmax		pmax		
	comp=N,60nm,1.0s							
ZEA				pmax		pmax		
	comp=E,40nm,1.0s							
ZEA				pmax		pmax		
	comp=Z,100nm,0.8s							
JSU	**Suzuyama**	**13.10**	**211**	Pn		**Pn**	**23 26 45.5**	**-0.7**
BMKR	**Bomnak**	**13.23**	**335**	*e*P		**P**	**23 26 49.8**	**+0.7**
BMKR				AMB		AMB	23 26 51.8	
	comp=Z,28nm,0.4s							
KROS	**Kirovskiy**	**13.62**	**331**	*e*P		**P**	**23 26 52.9**	**-0.6**
KROS				AMB		AMB	23 26 54.9	
	comp=Z,11nm,0.4s							
KROS				AMB		AMB	23 26 54.9	
	comp=Z,8.0nm,0.4s							
KROS				AMB		AMB	23 26 54.9	
	comp=Z,23nm,0.4s							
HIA	**Hailar**	**14.29**	**302**	P		**Pn**	**23 27 00.5**	**-0.1**
HIA	**Hailar**	**14.29**	**302**			**Pn**	**23 27 00.5**	**-0.1**
SKR	**Severo-Kuril's**	**14.34**	**52**	*e*P		**P**	**23 27 02.7**	**+1.2**
SKR				AMB		AMB	23 27 05.4	
	comp=Z,179nm,0.4s							
SKR	**Severo-Kuril's**	**14.34**	**52**	*e*P		**Pn**	**23 26 59.6**	**-1.5**
SKR				*e*S		**S**	**23 29 33.7**	**-6.0**
SKR				pmax		pmax		
	comp=Z,100nm,1.4s							
SKR				pmax		pmax		
	comp=Z,179nm,0.6s							
SKR				smax		smax		
	comp=N,70nm,0.7s							
SKR				smax		smax		
	comp=E,37nm,0.9s							
SKR				MLR		MLR		
	comp=Z,200nm,13.0s							
SKR				MLR		MLR		
	comp=Z,100nm,12.0s							
PAU	**Pauzhetka**	**15.08**	**50**	*e*P		**P**	**23 27 08.8**	**-0.9**
PAU				AMB		AMB	23 27 10.9	
	comp=Z,70nm,0.7s							
JCJ	**Chichijima**	**16.22**	**168**	P		**P**	**23 27 21.6**	**-0.8**
PEA0B	**Petropavlovsk-**	**16.35**	**45**	P		**P**	**23 27 23.2**	**-0.4**
PEA0B				pmax		pmax		
	comp=Z,74nm,1.5s							
PEA0B	**Petropavlovsk-**	**16.35**	**45**	P		**P**	**23 27 23.2**	**-0.4**
PETK	**Petropavlovsk-**	**16.35**	**45**	P		**P**	**23 27 22.9**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=216,slow=8.0,SNR=7.4							
PETK	**Petropavlovsk-**	**16.35**	**45**	P		**P**	**23 27 22.7**	**-0.9**
BJI	**Beijing**	**16.85**	**267**	P		**P**	**23 27 29.4**	**+0.2**
BJI				S		**S**	**23 30 35.7**	**+3.4**
BJI				pmax		pmax		
	comp=Z,36nm,0.9s							
BJT	**Baijiatuau**	**16.86**	**267**	P		**P**	**23 27 29.0**	**-0.3**
BJT				pmax		pmax		
	comp=Z,29nm,0.8s							
BJT	**Baijiatuau**	**16.86**	**267**	P		**P**	**23 27 29.0**	**-0.3**
MA2	**Magadan**	**18.23**	**21**	P		**P**	**23 27 42.7**	**-1.3**
	comp=Z,5.1nm,0.3s,baz=207,slow=11,SNR=10							
MA2	**Magadan**	**18.23**	**21**	*e*P		**P**	**23 27 43.7**	**-0.3**
MA2	**Magadan**	**18.23**	**21**	*ce*P		**P**	**23 27 43.7**	**-0.3**
MA2				pmax		pmax		
	comp=Z,125nm,2.5s							
MA2	**Magadan**	**18.23**	**21**	P		**P**	**23 27 43.9**	**-0.1**
NJ2	**Nanjing**	**18.90**	**241**	*e*P		**P**	**23 27 51.9**	**+0.5**
NJ2				pmax		pmax		
	comp=Z,30nm,0.9s							
NJ2				pmax		pmax		
	comp=Z,170nm,3.6s							
YAK	**Yakutsk**	**19.70**	**348**	P		**P**	**23 27 58.4**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=79,slow=2.2,SNR=5.1							
YAK	**Yakutsk**	**19.70**	**348**	*e*P		**P**	**23 27 57.2**	**-2.4**
YAK	**Yakutsk**	**19.70**	**348**	*e*P		**P**	**23 27 57.2**	**-2.4**
YAK				*e*S		**S**	**23 31 22.6**	**-5.5**
YAK				pmax		pmax		
	comp=Z,16nm,0.8s							
YAK				pmax		pmax		
	comp=N,6.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,2.0nm,0.7s							
YAK				smax		smax		
	comp=E,142nm,1.6s							
YAK				smax		smax		
	comp=N,316nm,1.8s							
YAK	**Yakutsk**	**19.70**	**348**	P		**P**	**23 27 58.3**	**-1.4**
YAK				IAmb		IAmb	23 27 59.6	
	comp=Z,22nm,0.9s							
HHC	**Hu-ho-hao-te**	**20.00**	**273**	*e*P		**P**	**23 28 05.0**	**+1.7**
HHC				pmax		pmax		
	comp=Z,14nm,0.8s							
HHC				pmax		pmax		
	comp=Z,130nm,7.3s							
BOD	**Bodaibo**	**21.25**	**323**	*e*P		**P**	**23 28 12.4**	**-3.5**
BOD				pmax		pmax		
	comp=Z,17nm,0.9s							
SEY	**Seymchan**	**21.55**	**18**	P		**P**	**23 28 17.7**	**-1.1**
	comp=Z,22nm,0.7s,baz=212,slow=9.5,SNR=29							
SEY	**Seymchan**	**21.55**	**18**	*e*P		**P**	**23 28 16.9**	**-1.8**
SEY	**Seymchan**	**21.55**	**18**	*i* P		**P**	**23 28 16.9**	**-1.8**
ULN	**Ulaanbaatar**	**22.38**	**293**	*e*P		**P**	**23 28 25.2**	**-1.5**
ULN	**Ulaanbaatar**	**22.38**	**293**	*ce*P		**P**	**23 28 25.2**	**-1.5**
ULN				pmax		pmax		
	comp=Z,32nm,0.8s							
ULN	**Ulaanbaatar**	**22.38**	**293**	P		**P**	**23 28 25.6**	**-1.2**
SONM	**Songino Array**	**22.82**	**293**	P		**P**	**23 28 29.6**	**-1.2**
	comp=Z,13nm,0.5s,baz=90,slow=7.5,SNR=69							
SONM				ScP		**ScP**	**23 35 27.1**	**-0.7**
	comp=Z,2.1nm,1.0s,baz=122,slow=2.8,SNR=6.6							
SONM	**Songino Array**	**22.82**	**293**	P		**P**	**23 28 29.5**	**-1.2**
XAN	**Xi'an**	**24.60**	**258**	P		**P**	**23 28 47.3**	**+0.4**
XAN				pmax		pmax		
	comp=Z,13nm,0.5s							
XAN				pmax		pmax		
	comp=Z,77nm,4.3s							
XAN	**Xi'an**	**24.60**	**258**	P		**P**	**23 28 46.8**	**-0.1**
XAN				pmax		pmax		
	comp=Z,8.0nm,0.6s							
XAN	**Xi'an**	**24.60**	**258**	P		**P**	**23 28 46.8**	**-0.1**
XAN				IAmb		IAmb	23 28 47.7	
	comp=Z,7.9nm,0.6s							
TLY	**Talaya**	**24.84**	**302**	P		**P**	**23 28 48.5**	**-0.4**
	comp=Z,17nm,0.7s,baz=122,slow=2.5,SNR=12							
TLY	**Talaya**	**24.84**	**302**	*e*P		**P**	**23 28 47.5**	**-1.3**

comp=Z,27nm,0.4s,baz=89,slow=8.7,SNR=138
ZALV PcP **PcP** **23 32 48.1 +0.2**
comp=Z,5.8nm,0.6s,baz=75,slow=3.2,SNR=9.0
ZALV ScP **ScP** **23 36 10.6 0.0**
comp=Z,2.3nm,0.7s,baz=90,slow=3.7,SNR=9.3
ZALV Zalesovo Beam 36.27 307 P **P** **23 30 29.0 +0.3**
ZALV 23 32 47.4
ZALV Zalesovo Beam 36.27 307 P **P** **23 30 29.0 +0.3**
ZALV PcP **PcP** **23 32 47.4 -0.5**
WMQ Urumqi 36.31 289 *eP* **P** **23 30 29.4 +0.1**
WMQ pP pP 23 31 17.3 -0.6
WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ pmax pmax
comp=Z,200nm,3.9s
NRIK Noril'sk 36.84 333 P **P** **23 30 32.5 -0.7**
comp=Z,3.4nm,0.5s,baz=108,slow=9.8,SNR=11
NRIK Noril'sk 36.84 333*ce*P **P** **23 30 32.3 -1.0**
ZSN Zaisan 37.28 296 *eP* **P** **23 30 37.0 -0.4**
comp=Z,7.5nm,0.5s,baz=296
ZSN Zaisan 37.28 296 *eP* **P** **23 30 36.9 -0.4**
ZSN pmax pmax
comp=Z,8.0nm,0.5s
ANM Nome 37.90 36 P **P** **23 30 44.4 +2.2**
ANM pmax pmax
comp=Z,47nm,1.1s
ANM Nome 37.90 36 P **P** **23 30 44.4 +2.2**
MK31 Makanchi Array 39.15 295*ce*P **P** **23 30 52.7 -0.2**
MK31 Makanchi Array 39.15 295 P **P** **23 30 52.5 -0.4**
MK31 IAmb IAmb 23 30 53.8
comp=Z,18nm,0.6s
MKAR Makanchi Array 39.15 295 P **P** **23 30 52.6 -0.3**
comp=Z,14nm,0.5s,baz=91,slow=9.1,SNR=258
MKAR ScP **ScP** **23 36 22.5 +0.7**
comp=Z,0.6nm,0.8s,baz=106,slow=1.6,SNR=3.2
MKAR Makanchi Array 39.15 295*ce*P **P** **23 30 52.5 -0.3**
MKAR pmax pmax
comp=Z,15nm,0.5s
MAKZ Makanchi 39.35 296 P **P** **23 30 53.8 -0.8**
MAKZ pmax pmax
comp=Z,22nm,0.7s
MAKZ Makanchi 39.35 296 P **P** **23 30 53.8 -0.8**
RDOG Red Dog Mine 39.36 30 P **P** **23 30 54.9 +0.6**
RDOG IAmb IAmb 23 30 55.8
comp=Z,11nm,0.6s
KURK Kurchatov 40.53 302 *eP* **P** **23 31 03.9 -0.2**
KURK Kurchatov 40.53 302*ce*P **P** **23 31 03.9 -0.2**
KURK pmax pmax
comp=Z,63nm,0.8s
KURK Kurchatov 40.53 302 P **P** **23 31 03.7 -0.4**
KURBB Kurchatov Arra 40.61 302 P **P** **23 31 04.6 -0.1**
comp=Z,52nm,0.7s,baz=78,slow=8.8,SNR=260
KURBB PcP **PcP** **23 33 01.0 -0.6**
comp=Z,2.8nm,0.5s,baz=93,slow=3.0,SNR=5.8
KURBB ScP **ScP** **23 36 27.2 -0.1**
comp=Z,0.5nm,1.0s,baz=94,slow=3.4,SNR=4.1
CHTO Chiang Mai 41.00 246 P **P** **23 31 08.0 -0.3**
CHTO pmax pmax
comp=Z,7.0nm,0.6s
CHTO Chiang Mai 41.00 246 P **P** **23 31 08.0 -0.3**
CMAR Chiang Mai Arr 41.25 246 P **P** **23 31 10.2 -0.1**
comp=Z,1.2nm,0.7s,baz=35,slow=7.2,SNR=8.5
A21K Barrow 41.97 26 P **P** **23 31 15.9 +0.4**
A21K IAmb IAmb 23 31 17.2
comp=Z,30nm,0.9s
SHLS Shalkode 42.19 291 *eP* **P** **23 31 15.0 -2.9**
comp=Z,8.6nm,0.4s,baz=291
SHLS Shalkode 42.19 291 *eP* **P** **23 31 14.9 -2.9**
SHLS pmax pmax
comp=Z,9.0nm,0.4s
TDK Taldyqorghan 42.27 294 *eP* **P** **23 31 18.3 0.0**
comp=Z,66nm,0.6s,baz=294
TDK *eS* **S** **23 37 20.2 +0.1**
baz=294
TDK Taldyqorghan 42.27 294 *eP* **P** **23 31 18.3 0.0**
TDK *eS* **S** **23 37 20.2 +0.1**
TDK pmax pmax
comp=Z,66nm,0.6s
KPKS Kokpek 42.62 292 *eP* **P** **23 31 20.9 -0.3**
comp=Z,19nm,0.6s,baz=292
KPKS Kokpek 42.62 292 *eP* **P** **23 31 20.9 -0.3**
KPKS pmax pmax
comp=Z,19nm,0.6s
IMAR Indian Mountai 42.84 34 P **P** **23 31 22.8 +0.3**
SATY Saty 42.95 291 *eP* **P** **23 31 23.8 -0.1**
comp=Z,7.3nm,0.7s,baz=291
SATY Saty 42.95 291 *eP* **P** **23 31 23.8 -0.1**
SATY pmax pmax
comp=Z,7.0nm,0.7s
TAPN Taplejung 43.57 266 *eP* **P** **23 31 29.1 -0.2**
comp=Z,23nm,0.3s
MDOK Medeo 43.84 292 *eP* **P** **23 31 31.0 -0.1**
baz=292
MDOK *eS* **S** **23 37 42.8 -0.4**
baz=292
MDOK Medeo 43.84 292 *eP* **P** **23 31 30.9 -0.1**
MDOK *eS* **S** **23 37 42.7 -0.4**
AAA Alma-Ata 43.91 292 *eP* **P** **23 31 31.4 -0.2**
comp=Z,15nm,0.5s,baz=292
AAA *eS* **S** **23 37 44.4 +0.4**
baz=292
AAA Alma-Ata 43.91 292 *eP* **P** **23 31 31.3 -0.2**
AAA Alma-Ata 43.91 292 *eP* **P** **23 31 31.3 -0.2**
AAA *eS* **S** **23 37 44.4 +0.4**
AAA pmax pmax
comp=Z,15nm,0.5s
KUU Kurty 44.05 293 *eP* **P** **23 31 31.9 -0.7**
comp=Z,30nm,0.5s,baz=293
KUU Kurty 44.05 293 *eP* **P** **23 31 31.8 -0.7**
KUU pmax pmax
comp=Z,30nm,0.5s
KDJ Kajisay 44.14 291 P **P** **23 31 32.7 -0.7**
KDJ pmax pmax
comp=Z,36nm,0.9s
KDJ Kajisay 44.14 291 P **P** **23 31 32.7 -0.7**
KDJ IAmb IAmb 23 31 34.8
comp=Z,36nm,0.8s
COLD Coldfoot 44.18 32 P **P** **23 31 34.0 +0.8**
KTH Kantishna Hill 44.25 37 P **P** **23 31 34.7 +0.9**
KTH IAmb IAmb 23 31 36.6
comp=Z,22nm,1.2s
TOLK Toolik Lake Re 44.33 30 P **P** **23 31 34.8 +0.4**
BRZS Berezniki 44.40 303 *eP* **P** **23 31 34.9 -0.3**
comp=Z,12nm,0.5s,baz=303
BRZS Berezniki 44.40 303 *eP* **P** **23 31 34.9 -0.3**
BRZS pmax pmax
comp=Z,12nm,0.5s
GUN Gumba 44.60 268 *eP* **P** **23 31 37.4 0.0**
comp=Z,54nm,0.3s
RAMN Ramite 44.61 266 *eP* **P** **23 31 36.9 -0.5**
comp=Z,35nm,0.7s
I23K Minto, Yukon-K 44.72 35 P **P** **23 31 38.8 +1.3**
BWN Browne 44.80 36 P **P** **23 31 39.4 +1.3**
BWN IAmb IAmb 23 31 42.7
comp=Z,52nm,1.2s
BOOM Boomskoye usch 44.85 292 P **P** **23 31 39.3 +0.3**
BOOM pmax pmax
comp=Z,49nm,0.8s
BOOM Boomskoye usch 44.85 292 P **P** **23 31 39.3 +0.3**
BVAR Borovoye Array 44.90 308 P **P** **23 31 39.2 +0.1**
comp=Z,10nm,0.4s,baz=206,slow=23,SNR=192
BVAR ScP **ScP** **23 36 45.3 +0.6**
comp=Z,0.2nm,0.4s,baz=98,slow=6.1,SNR=2.1
TKM2 Tokmak 2 44.91 292 P **P** **23 31 40.4 +0.8**
SNR=121
BRVK Borovoye 44.96 308 *eP* **P** **23 31 39.8 +0.3**
BRVK Borovoye 44.96 308*ce*P **P** **23 31 39.8 +0.3**
BRVK pmax pmax
comp=Z,22nm,0.6s
BRVK Borovoye 44.96 308 P **P** **23 31 39.5 0.0**
KKN Kakani 45.10 268 *eP* **P** **23 31 40.8 -0.5**
comp=Z,31nm,0.6s
PKI Pulchoki 45.13 268 *eP* **P** **23 31 41.1 -0.5**
PKIN Phulchoki 45.14 268 *eP* **P** **23 31 41.0 -0.6**
BTLS Baital 45.16 296 *eP* **P** **23 31 40.7 -0.5**
comp=Z,9.8nm,0.8s,baz=296
BTLS Baital 45.16 296 *eP* **P** **23 31 40.6 -0.6**
BTLS pmax pmax
comp=Z,10.0nm,0.8s
MDM Murphy Dome 45.22 35 P **P** **23 31 42.5 +1.1**
DMN Daman 45.33 268 *eP* **P** **23 31 42.7 -0.4**
comp=Z,17nm,0.3s
WRH Wood River Hil 45.35 36 P **P** **23 31 43.1 +0.6**
SGDS Sogindy 45.36 293 *eP* **P** **23 31 42.5 -0.5**
comp=Z,12nm,0.9s,baz=293
SGDS Sogindy 45.36 293 *eP* **P** **23 31 42.4 -0.5**
SGDS pmax pmax
comp=Z,12nm,0.9s
COLA College 45.39 35 *i* P **P** **23 31 44.2 +1.5**
COLA pmax pmax
comp=Z,10.0nm,0.9s
COLA College 45.39 35 P **P** **23 31 43.6 +0.9**
COLA IAmb IAmb 23 31 45.9
comp=Z,17nm,0.6s
GHO Glory Hole Cre 45.44 40 P **P** **23 31 43.2 0.0**
GHO IAmb IAmb 23 31 45.6
comp=Z,42nm,0.9s
CCB Clear Creek Bu 45.45 35 P **P** **23 31 43.8 +0.6**
GKN Gorkha 45.45 269 *eP* **P** **23 31 43.6 -0.3**
comp=Z,34nm,0.3s
CHMS Chumysh 45.46 293 P **P** **23 31 43.9 +0.3**
SNR=6.9
KBK Karagaybulak 45.46 292 P **P** **23 31 44.6 +0.8**
SNR=76
USP Ospenovka 45.52 293 P **P** **23 31 44.6 +0.4**
SNR=20
POKR Poker Plat Res 45.53 35 P **P** **23 31 45.1 +1.2**
AAK Ala-Archa 45.77 292 P **P** **23 31 46.9 +0.6**
SNR=7.7
AAK Ala-Archa 45.77 292 *i* P **P** **23 31 46.9 +0.6**
SNR=12
AAK Ala-Archa 45.77 292 *eP* **P** **23 31 45.7 -0.5**
AAK Ala-Archa 45.77 292*ce*P **P** **23 31 45.7 -0.5**
AAK pmax pmax
comp=Z,92nm,1.3s
IL31 45.82 35 P **P** **23 31 46.2 +0.2**
ILAR Eielson Array 45.82 35 P **P** **23 31 46.8 +0.7**
comp=Z,6.0nm,0.7s,baz=277,slow=6.0,SNR=56
ILAR ScP **ScP** **23 36 46.2 -2.0**
comp=Z,0.1nm,0.5s,baz=70,slow=14,SNR=1.4
HDA Harding Lake 45.85 36 P **P** **23 31 46.9 +0.5**
HDA IAmb IAmb 23 31 49.8
comp=Z,28nm,1.4s
DHY Denali Highway 45.90 38 P **P** **23 31 47.3 +0.4**
DHY IAmb IAmb 23 31 49.9
comp=Z,42nm,1.4s
DANN Dangsing 45.91 270 *eP* **P** **23 31 48.0 +0.4**
KSH Kashi 46.04 288 P **P** **23 31 52.3 +3.9**
KSH pmax pmax
comp=Z,29nm,0.8s
KSH pmax pmax
comp=Z,360nm,4.7s
LUWI Luwuk 46.06 202 P **P** **23 31 47.1 -1.4**
LUWI IAmb IAmb 23 31 48.2
comp=Z,64nm,1.5s
FYU Fort Yukon 46.20 33 P **P** **23 31 50.5 +1.4**
EKS2 Erkin-Say 46.25 293 P **P** **23 31 50.3 +0.4**
SNR=33
PRP Porcupine Dome 46.26 34 P **P** **23 31 50.8 +1.1**
PRP IAmb IAmb 23 31 53.0
comp=Z,17nm,0.5s
BMAR Burnt Mountain 46.32 31 P **P** **23 31 50.7 +0.7**
KOLN Koldanda 46.34 269 *eP* **P** **23 31 50.9 0.0**
AML Almayashu 46.52 292 P **P** **23 31 53.2 +0.9**
SNR=17
PYUN Piuthan 46.61 270 *eP* **P** **23 31 53.3 +0.3**
comp=Z,37nm,0.3s
KLU Klutina 46.90 40 P **P** **23 31 55.1 +0.6**
KLU IAmb IAmb 23 31 57.4
comp=Z,38nm,1.2s
N25K Chitina, Valde 47.49 39 P **P** **23 32 00.5 +1.4**
DZA Taraz 47.80 294 *eP* **P** **23 32 01.6 -0.2**
comp=Z,19nm,0.7s,baz=294
DZA Taraz 47.80 294 *eP* **P** **23 32 01.5 -0.2**
DZA pmax pmax
comp=Z,19nm,0.7s
K27K Chicken 48.02 36 P **P** **23 32 04.3 +1.3**
K27K IAmb IAmb 23 32 05.3
comp=Z,19nm,0.6s
VRDI Verde Repeater 48.12 40 P **P** **23 32 05.5 +1.4**
VRDI IAmb IAmb 23 32 06.6
comp=Z,14nm,0.8s
EGAK Eagle 48.22 35 P **P** **23 32 05.2 +0.7**
KK31 Karatay Array 48.26 295 P **P** **23 32 05.3 +0.1**
KK31 pmax pmax
comp=Z,27nm,1.0s
KK31 Karatay Array 48.26 295 P **P** **23 32 05.3 +0.1**
KK31 IAmb IAmb 23 32 06.3
comp=Z,27nm,1.0s
KKAR Karatay Array 48.26 295 P **P** **23 32 05.2 0.0**
KKAR pmax pmax
comp=Z,27nm,1.0s
KKAR Karatay Array 48.26 295 P **P** **23 32 05.4 +0.1**
KKAR IAmb IAmb 23 32 06.3
comp=Z,27nm,1.0s
KKAR Karatay Array 48.26 295 P **P** **23 32 05.2 0.0**
MCARA McCarthy VSAT 48.27 39 P **P** **23 32 07.3 +2.3**
MCARA IAmb IAmb 23 32 08.0
comp=Z,28nm,0.9s
BCAR Beaver Creek A 48.38 37 P **P** **23 32 07.5 +1.6**
TGL Tana Glacier 48.54 40 P **P** **23 32 08.7 +1.5**
TGL IAmb IAmb 23 32 09.8
comp=Z,16nm,1.0s
ISLE Juniper Island 48.81 40 P **P** **23 32 10.8 +1.5**
ISLE IAmb IAmb 23 32 11.4
comp=Z,22nm,1.0s
IUG luzhnay 48.98 294 *eP* **P** **23 32 10.6 -0.3**
comp=Z,4.4nm,0.6s,baz=294
IUG luzhnay 48.98 294 *eP* **P** **23 32 10.5 -0.3**
IUG pmax pmax
comp=Z,4.0nm,0.6s
BARN Barnard Glacie 49.00 39 P **P** **23 32 12.0 +1.3**
BARN IAmb IAmb 23 32 13.3
comp=Z,18nm,0.6s
DAWY Dawson 49.15 35 P **P** **23 32 13.3 +1.6**
SVE Sverdlovsk 49.16 315*c* *i*P **P** **23 32 12.8 +1.0**
SVE pmax pmax
comp=Z,43nm,0.9s
CTGM Chitina Glacie 49.18 39 P **P** **23 32 13.4 +1.3**
BTK Batken 49.37 291 P **P** **23 32 13.3 -0.5**
BTK pmax pmax
comp=Z,22nm,1.1s
BTK Batken 49.37 291 P **P** **23 32 13.3 -0.5**
BTK IAmb IAmb 23 32 14.9
comp=Z,22nm,1.1s
EPYK Eagle Plains 49.58 32 P **P** **23 32 15.8 +0.9**
INK Inuvik 50.20 29 P **P** **23 32 20.5 +1.1**
comp=Z,22nm,0.4s,baz=285,slow=6.1,SNR=94
INK Inuvik 50.20 29 P **P** **23 32 20.0 +0.6**
INK pmax pmax
comp=Z,26nm,0.5s
INK Inuvik 50.20 29 P **P** **23 32 20.0 +0.6**
GAR Garm 50.20 290 P **P** **23 32 19.5 -0.5**
ARU Arti 50.37 315 *eP* **P** **23 32 21.3 +0.4**
ARU Arti 50.37 315*d* *i*P **P** **23 32 21.3 +0.4**
ARU *PP **pP** **23 33 12.1 -1.0**
ARU 23 33 33.1
ARU 23 34 16.1
ARU S **S** **23 39 17.2 +2.7**
ARU 23 41 44.3
ARU SS **SS** **23 42 51.6 +0.7**
ARU pmax pmax
comp=Z,25nm,0.9s
ARU Arti 50.37 315 P **P** **23 32 21.2 +0.4**
ARU IAmb IAmb 23 32 22.4
comp=Z,21nm,0.8s
ARU PcP **PcP** **23 33 35.7 +0.1**
KAPI Kappang 50.71 204 P **P** **23 32 23.8 -0.1**
KAPI pmax pmax
comp=Z,15nm,0.7s
KAPI Kappang 50.71 204 P **P** **23 32 23.8 -0.1**
KAPI IAmb IAmb 23 32 25.1
comp=Z,14nm,0.7s
NIL Nilore 50.74 282 P **P** **23 32 24.1 0.0**
NIL pmax pmax
comp=Z,47nm,0.9s
NIL Nilore 50.74 282 P **P** **23 32 24.1 0.0**
HYT Haines Junctio 51.00 39 P **P** **23 32 27.6 +1.9**
HYT IAmb IAmb 23 32 29.2
comp=Z,16nm,0.9s
CHGR Chuyangaron 51.16 290 P **P** **23 32 26.6 -0.5**
ABKAR Akbulak array 52.38 306 P **P** **23 32 35.9 0.0**
KBL Kabul 53.28 286 P **P** **23 32 42.2 -0.7**
KBL pmax pmax
comp=Z,18nm,0.8s
KBL Kabul 53.28 286 P **P** **23 32 42.2 -0.7**
KIRV Kirov 54.08 320*ce*P **P** **23 32 48.5 +0.5**
SBSI Sibolga 54.25 231 P **P** **23 32 47.3 -2.6**
comp=Z,45nm,0.5s
KBS Kingsbay 54.33 349 *eP* **P** **23 32 49.7 +0.2**
EUNU Eureka 54.60 9 P **P** **23 32 52.1 +0.5**
HSPB Hornsund (broa 55.07 347 *eP* **P** **23 32 55.5 +0.6**
KRJI Kerinci 55.84 226 P **P** **23 32 59.3 -2.0**
comp=Z,70nm,0.9s
GMJI Gumukmas 55.88 210 P **P** **23 32 56.6 -4.7**
SMRI Semarang 55.93 214 P **P** **23 32 58.6 -3.2**
comp=Z,66nm,0.6s
PWJI Pagerwojo 56.27 212 P P 23 32 57.8 -6.3
comp=Z,3μmcomp=Z,98nm,0.6s
TMCR Tamitsa 56.36 329 *eP* **P** **23 33 04.1 -0.1**
TMCR pmax pmax
comp=Z,23nm,0.9s
RES Resolute Bay 57.38 15 P **P** **23 33 11.3 +0.1**
comp=Z,2.8nm,0.5s,baz=313,slow=4.5,SNR=15
RES Resolute Bay 57.38 15 P **P** **23 33 11.4 +0.3**
RES IAmb IAmb 23 33 13.4
comp=Z,15nm,1.4s
KLMR Klimovskoe 57.45 325 *eP* **P** **23 33 11.4 -0.4**
KLMR pmax pmax
comp=Z,39nm,1.5s
KLMR Klimovskoe 57.45 325 *eP* **P** **23 33 11.4 -0.4**
KLMR AMP 23 33 13.0
comp=Z,39nm,1.5s
ARA0 ARCESS Array S 57.55 337 *eP* **P** **23 33 16.1 +3.6**
ARCES ARCESS Array B 57.55 337 P **P** **23 33 12.4 0.0**
comp=Z,3.5nm,0.5s,baz=56,slow=5.0,SNR=28
HRA Herat 58.12 289 P **P** **23 33 17.2 0.0**
HRA IAmb IAmb 23 33 18.2
comp=Z,6.4nm,0.7s
KTK1 Kautokeino 58.51 338 *eP* **P** **23 33 19.3 +0.3**
GEYT Alibeck 59.01 295 P **P** **23 33 23.1 0.0**
comp=Z,9.1nm,0.6s,baz=9.5,slow=1.8,SNR=14
GEYT Alibeck 59.01 295 P **P** **23 33 23.2 +0.1**
GYA0B ALIBECK ARRAY 59.01 295 P **P** **23 33 23.4 +0.3**
GYA0B IAmb IAmb 23 33 27.7
comp=Z,12nm,0.7s
KNRA Kununurra 59.09 191 P **P** **23 33 23.4 -0.2**
KNRA IAmb IAmb 23 33 24.6
comp=Z,10nm,0.8s
TRO Tromso 59.27 339 *eP* **P** **23 33 24.7 +0.4**
YKA Yellowknife Ar 59.84 31 P **P** **23 33 27.9 -0.4**
comp=Z,2.3nm,0.6s,baz=316,slow=5.7,SNR=8.3
OUL Oulu 60.16 333 P **P** **23 33 30.9 +0.5**
OUL pmax pmax
comp=Z,29nm,1.2s
STEI Steigen 61.42 339 *eP* **P** **23 33 39.2 +0.4**
SUF Sumiainen 61.57 331 P **P** **23 33 40.1 +0.2**
SUF pmax pmax
comp=Z,26nm,0.8s
VRH Novokhopyorsk 61.60 315 *eP* **P** **23 33 38.8 -1.5**
VRH pmax pmax
comp=Z,10.0nm,0.5s
FAUS Fauske 61.80 338 *eP* **P** **23 33 41.5 +0.2**
OBN Obninsk 61.91 320 *eP* **P** **23 33 42.1 -0.2**
OBN Obninsk 61.91 320*ce*P **P** **23 33 42.1 -0.2**
OBN *e* 23 35 59.6
OBN *SS **SKSac** **23 43 00.0 -9.2**
OBN pmax pmax
comp=Z,18nm,1.7s
OBN Obninsk 61.91 320 P **P** **23 33 41.8 -0.5**
OBN IAmb IAmb 23 33 43.2
comp=Z,15nm,0.9s
LPSR Galich'ya Gora 62.23 317 *eP* **P** **23 33 43.3 -1.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
FIA1 FINESS Array S 62.42 330 P **P** **23 33 45.6 +0.1**
FINES FINESS Array B 62.42 330 P **P** **23 33 45.6 +0.1**
comp=Z,15nm,0.7s,baz=29,slow=10.0,SNR=61
FINES FINESS Array B 62.42 330 P **P** **23 33 45.0 -0.5**
WB0 Warramunga Arr 62.60 184 P **P** **23 33 46.2 -1.0**
WRAB Tennant Creek 62.77 184*ce*P **P** **23 33 47.5 -0.8**
WRAB pmax pmax
comp=Z,12nm,2.5s
WRAB Tennant Creek 62.77 184 P **P** **23 33 48.2 -0.1**
WB2 Warramunga Arr 62.78 184 P **P** **23 33 48.0 -0.4**
WRA Warramunga Arr 62.78 184 P **P** **23 33 47.9 -0.5**
comp=Z,2.3nm,0.4s,baz=1.3,slow=7.1,SNR=111
WRA Warramunga Arr 62.78 184 P **P** **23 33 46.7 -1.7**
WR0 Warramunga Ar 62.78 184 P **P** **23 33 47.7 -0.7**
WR0 IAmb IAmb 23 33 48.3
comp=Z,4.1nm,0.5s
MOR8 Moi Rana 62.91 338 *eP* **P** **23 33 47.8 -0.9**
VSR Storozhevoye 62.92 316 *eP* **P** **23 33 48.8 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VORD Divnogorie 63.00 316 *eP* **P** **23 33 49.5 0.0**
VORD pmax pmax
comp=Z,10.0nm,1.4s
VSU Vasula 64.10 327 *eP* **P** **23 33 56.9 +0.3**
VSU Vasula 64.10 327 *i* P **P** **23 33 57.3 +0.7**
SEKA Sheki 64.19 303 P **P** **23 33 57.8 +0.2**
ZKTA Zakatala 64.29 304 P **P** **23 33 58.6 +0.4**
GOF Gofitskoye 64.41 309 ⇓ *i*P **P** **23 33 59.6 +0.7**
GOF pmax pmax
comp=Z,37nm,0.6s
MNGR Mingechevir, A 64.51 303 P **P** **23 33 59.9 +0.4**
NSS Namsos 64.83 337 *eP* **P** **23 34 01.8 +0.6**
GANJ Ganja 65.06 303 P **P** **23 34 03.5 +0.4**
GUDG Gudauri 65.10 306 P **P** **23 34 04.7 +1.1**
ZEI Tsey 65.25 306 *eP* **P** **23 34 03.1 -1.5**
ZEI pmax pmax
comp=Z,8.0nm,1.0s
KIV Kislovodsk 65.27 308 ⇓ P **P** **23 34 05.3 +0.8**
KIV Kislovodsk 65.27 308 *i* P **P** **23 34 05.8 +1.3**
SNR=17
KIV Kislovodsk 65.27 308 *eP* **P** **23 34 05.2 +0.7**
KIV Kislovodsk 65.27 308 *eP* **P** **23 34 05.2 +0.7**
KIV pmax pmax
comp=Z,102nm,1.1s
KIV Kislovodsk 65.27 308 P **P** **23 34 04.9 +0.4**
KBZ Khabaz 65.28 307 P **P** **23 34 05.2 +0.7**
comp=Z,6.8nm,0.6s
KBZ Khabaz 65.28 307 *eP* **P** **23 34 05.9 +1.5**
KBZ Khabaz 65.28 307*ce*P **P** **23 34 05.9 +1.5**
ONI Oni 65.64 306 P **P** **23 34 08.4 +1.6**
IZAR Zarasai 66.10 325 *eP* **P** **23 34 09.8 +0.4**
IDID Didziasalis 66.19 324 *eP* **P** **23 34 10.6 +0.6**
ISAL Salakas 66.27 325 *eP* **P** **23 34 11.3 +0.7**
AKH Akhalkalaki 66.32 305 ⇓ P **P** **23 34 12.8 +1.4**
AKH Akhalkalaki 66.32 305 P **P** **23 34 12.4 +1.0**
AKH pmax pmax
comp=Z,21nm,0.9s
AKH Akhalkalaki 66.32 305 P **P** **23 34 12.4 +1.0**
GNI Garni 66.32 303*ce*P **P** **23 34 11.7 +0.3**
GNI pmax pmax
comp=Z,16nm,1.3s
GNI Garni 66.32 303 P **P** **23 34 12.1 +0.7**
GNI IAmb IAmb 23 34 21.1
comp=Z,15nm,1.1s
BGD Bogdanovka 66.34 305 P **P** **23 34 13.7 +2.1**
IIGN Ignalina 66.38 325 *eP* **P** **23 34 11.8 +0.6**
SLIT Slitere, Latvi 66.41 328 *eP* **P** **23 34 11.5 +0.2**
NAX Nakhchivan 66.44 302 P **P** **23 34 12.1 +0.1**
ASAR Alice Springs 66.50 184 P **P** **23 34 12.3 -0.1**
comp=Z,0.9nm,0.6s,baz=4.0,slow=4.1,SNR=12
ASAR Alice Springs 66.50 184 P **P** **23 34 12.5 +0.2**
ASAR 23 34 47.3
ASAR Alice Springs 66.50 184 P **P** **23 34 12.5 +0.2**
ASAR PcP **PcP** **23 34 47.3 +7.5**
KARS Kars 67.04 305 P **P** **23 34 18.1 +2.2**
PABE Paberze 67.22 326 *eP* **P** **23 34 17.0 +0.5**
BANOM Banah 67.22 285 P **P** **23 34 17.5 +0.4**
SHME Shamm 67.25 285 P **P** **23 34 17.5 +0.3**
NC405 NORSAR Array S 67.53 335 P **P** **23 34 18.3 -0.1**
DOMB Dombas 67.59 337 *eP* **P** **23 34 19.2 +0.3**
PBUR Paburge 67.68 327 *eP* **P** **23 34 19.9 +0.5**
NC204 NORSAR Array S 67.69 336 P **P** **23 34 19.8 +0.3**
NB201 NORSAR Array S 67.71 335 P **P** **23 34 19.4 -0.1**
NB2 NORSAR Subarra 67.74 335 P **P** **23 34 19.6 -0.2**
comp=Z,3.9nm,0.5s,baz=37,slow=6.5
NB2 NORSAR Subarra 67.74 335 P **P** **23 34 19.6 -0.2**
baz=37,slow=6.5
NOA NORSAR Array B 67.74 335 P **P** **23 34 19.8 0.0**
comp=Z,7.9nm,0.8s,baz=39,slow=6.2,SNR=26
NORES NORESS Array B 67.88 335 P **P** **23 34 20.3 -0.2**
NORES pmax pmax
comp=Z,2.0nm,0.2s
NC602 NORSAR Array S 67.88 335 *eP* **P** **23 34 20.5 -0.1**
UOSS Minazif 67.89 284 P **P** **23 34 21.6 +0.4**
UOSS Minazif 67.89 284 P **P** **23 34 21.4 +0.1**
UOSS IAmb IAmb 23 34 22.2
comp=Z,11nm,0.8s
HATD Hatta, Dubai 68.01 284 *i* P **P** **23 34 22.9 +0.8**
SNR=7.0

AKASG	**Malin Array Be**	**68.14**	**320**	P		**P**	**23 34 22.3**	**-0.1**	
	comp=Z,4.4nm,0.4s,baz=45,slow=6.3,SNR=46								
AKASG	**Malin Array Be**	**68.14**	**320**	P		**P**	**23 34 22.3**	**-0.1**	
AKASG				pmax		pmax			
	comp=Z,2.0nm,0.6s								
AKASG	**Malin Array Be**	**68.14**	**320**	P		**P**	**23 34 22.3**	**-0.1**	
AKBB	**Malin Array Si**	**68.14**	**320**	*ce*P		**P**	**23 34 21.8**	**-0.6**	
AKBB	**Malin Array Si**	**68.14**	**320**	P		**P**	**23 34 21.4**	**-1.0**	
AKBB				IAmb		IAmb	23 34 23.1		
	comp=Z,12nm,0.8s								
SOHO	**SOHO**	**68.16**	**283**	P		**P**	**23 34 23.3**	**+0.5**	
PINE	**Pine Mountain**	**68.27**	**50**	P		**P**	**23 34 25.0**	**+1.4**	
PINE				IAmb		IAmb	23 34 26.5		
	comp=Z,5.3nm,0.7s								
FAQ	**Al Faqa, Dubai**	**68.45**	**284**	P		**P**	**23 34 24.6**	**-0.1**	
ASUD	**Al Ashush, Dub**	**68.71**	**284**	P		**P**	**23 34 26.9**	**+0.6**	
ALNE	**Al Ain**	**68.76**	**283**	P		**P**	**23 34 27.1**	**+0.4**	
SKAR	**Skarslia**	**68.90**	**336**	*e*P		**P**	**23 34 28.1**	**+1.2**	
SORM	**Soroca**	**70.30**	**318**	⇓P		**P**	**23 34 35.5**	**-0.1**	
SORM	**Soroca**	**70.30**	**318**	⇓P		**P**	**23 34 35.5**	**-0.1**	
BLS5	**Blasjo**	**70.47**	**336**	*e*P		**P**	**23 34 37.2**	**+0.8**	
MARD	**Mardin**	**70.51**	**303**	P		**P**	**23 34 37.5**	**+0.2**	
TOKA	**Tokat**	**71.14**	**308**	P		**P**	**23 34 42.1**	**+1.2**	
LVV	**L'vov**	**71.17**	**321**	*e*P		**P**	**23 34 41.6**	**+0.8**	
MALT	**Malatya**	**71.30**	**305**	P		**P**	**23 34 43.6**	**+1.7**	
KWP	**Kalwaria Pacla**	**71.91**	**322**	*e*P		**P**	**23 34 46.6**	**+1.3**	
KWP	**Kalwaria Pacla**	**71.91**	**322**	P		**P**	**23 34 45.9**	**+0.7**	
KWP				pmax		pmax			
	comp=Z,18nm,0.7s								
KWP	**Kalwaria Pacla**	**71.91**	**322**	P		**P**	**23 34 45.9**	**+0.7**	
BUR08	**Bucovina Ar. S**	**72.16**	**319**	P		**P**	**23 34 47.7**	**+0.7**	
BUR08				IAmb		IAmb	23 34 48.4		
	comp=Z,6.4nm,0.8s								
BURAR	**Bucovina Array**	**72.18**	**319**	⇓P		**P**	**23 34 47.5**	**+0.5**	
BURAR	**Bucovina Array**	**72.18**	**319**	⇓P		**P**	**23 34 47.5**	**+0.5**	
BURAR	**Bucovina Array**	**72.18**	**319**	P		**P**	**23 34 47.6**	**+0.6**	
BIZ	**Bicaz**	**72.22**	**318**	⇓P		**P**	**23 34 48.1**	**+0.9**	
ILGA	**Ilgaz**	**72.24**	**310**	P		**P**	**23 34 48.4**	**+0.7**	
TESR	**Tescani**	**72.25**	**318**	⇑P		**P**	**23 34 47.7**	**+0.4**	
WAKR	**Walker**	**72.55**	**53**	P		**P**	**23 34 52.5**	**+0.8**	
WAKR				PcP		**PcP**	**23 35 06.5**	**+0.8**	
KOLS	**Kolonicke sedl**	**72.61**	**322**	*e*P		**P**	**23 34 49.8**	**+0.4**	
KOLS	**Kolonicke sedl**	**72.61**	**322**	*e*P		**P**	**23 34 49.8**	**+0.4**	
VRI	**Vrincioaia**	**72.67**	**317**	⇓P		**P**	**23 34 51.7**	**+1.9**	
VRI	**Vrincioaia**	**72.67**	**317**	⇓P		**P**	**23 34 51.7**	**+1.9**	
PLOR	**Plostina**	**72.72**	**317**	⇓P		**P**	**23 34 50.7**	**+0.6**	
PLOR	**Plostina**	**72.72**	**317**	⇓P		**P**	**23 34 50.7**	**+0.6**	
OJC	**Ojcow**	**72.77**	**324**	P		**P**	**23 34 51.2**	**+0.9**	
OJC				pmax		pmax			
	comp=Z,22nm,0.9s								
OJC	**Ojcow**	**72.77**	**324**	P		**P**	**23 34 51.2**	**+0.9**	
GAZ	**Gaziantep**	**72.77**	**305**	P		**P**	**23 34 51.3**	**+0.7**	
GAZ				IAmb		IAmb	23 34 52.7		
	comp=Z,9.2nm,0.8s								
OZUR		**72.97**	**318**	⇓P		**P**	**23 34 52.9**	**+1.3**	
KVN	**Kaiserville**	**72.97**	**52**	P		**P**	**23 34 53.0**	**+1.1**	
KVN							23 35 07.2		
KVN	**Kaiserville**	**72.97**	**52**	P		**P**	**23 34 53.0**	**+1.1**	
KVN				PcP		**PcP**	**23 35 07.2**	**-0.3**	
KVN				IAmb		IAmb	23 35 07.5		
	comp=Z,4.6nm,0.6s								
CRVS	**Cervenica-Dubn**	**73.00**	**322**	*e*P		**P**	**23 34 52.3**	**+0.6**	
CRVS				pmax		pmax			
	comp=Z,7.0nm,0.9s								
CRVS	**Cervenica-Dubn**	**73.00**	**322**	*e*P		**P**	**23 34 52.3**	**+0.6**	
NIE	**Niedzica**	**73.14**	**323**	*e*P		**P**	**23 34 53.8**	**+1.3**	
BRTR	**Keskin Array B**	**73.17**	**309**	P		**P**	**23 34 53.5**	**+0.4**	
	comp=Z,2.5nm,0.7s,baz=57,slow=7.5,SNR=11								
BRTR	**Keskin Array B**	**73.17**	**309**	P		**P**	**23 34 53.3**	**+0.3**	
NVAR	**Mina Array Bea**	**73.27**	**53**	P		**P**	**23 34 54.7**	**+1.0**	
	comp=Z,1.1nm,0.7s,baz=298,slow=6.1,SNR=9.1								
NVAR	**Mina Array Bea**	**73.27**	**53**	P		**P**	**23 34 54.5**	**+0.7**	
MLR	**Muntele Rosu**	**73.32**	**317**	⇓P		**P**	**23 34 54.2**	**+0.4**	
MLR	**Muntele Rosu**	**73.32**	**317**	⇓P		**P**	**23 34 54.2**	**+0.4**	
CJR	**Cluj-Napoca**	**73.59**	**319**	⇓P		**P**	**23 34 56.3**	**+1.1**	
CJR	**Cluj-Napoca**	**73.59**	**319**	⇓P		**P**	**23 34 56.3**	**+1.1**	
LANS	**Liptovska Anna**	**73.70**	**323**	*e*P		**P**	**23 34 56.6**	**+0.8**	
LANS				pmax		pmax			
	comp=Z,5.0nm,0.9s								
LANS	**Liptovska Anna**	**73.70**	**323**	*e*P		**P**	**23 34 56.6**	**+0.8**	
OKC	**Ostrava-Krasne**	**73.76**	**324**	*e*P		**P**	**23 34 55.6**	**-0.5**	
KSP	**Ksiaz**	**73.78**	**326**	*e*P		**P**	**23 34 57.1**	**+0.9**	
VOIR		**73.80**	**318**	⇓P		**P**	**23 34 57.6**	**+1.1**	
VOIR		**73.80**	**318**	⇓P		**P**	**23 34 57.6**	**+1.1**	
MORC	**Moravsky Berou**	**74.07**	**325**	⇓P		**P**	**23 34 58.2**	**+0.3**	
MORC	**Moravsky Berou**	**74.07**	**325**	*e*P		**P**	**23 34 59.0**	**+1.1**	
MORC	**Moravsky Berou**	**74.07**	**325**	⇓P		**P**	**23 34 58.2**	**+0.3**	
MORC	**Moravsky Berou**	**74.07**	**325**	P		**P**	**23 34 58.5**	**+0.6**	
MORC				IAmb		IAmb	23 34 59.8		
	comp=Z,9.9nm,0.7s								
CHVC	**Chvalec**	**74.07**	**326**	*e*P		**P**	**23 34 58.6**	**+0.7**	
DPC	**Dobruska-Polom**	**74.14**	**326**	*e*P		**P**	**23 34 59.4**	**+1.1**	
UPC	**Upice**	**74.15**	**326**	*e*P		**P**	**23 34 59.2**	**+0.9**	
KRLC	**Kraliky**	**74.16**	**325**	*e*P		**P**	**23 34 59.4**	**+1.0**	
VYHS	**Vyhne**	**74.47**	**323**	*e*P		**P**	**23 35 00.7**	**+0.5**	
VYHS				pmax		pmax			
	comp=Z,4.0nm,0.8s								
VYHS	**Vyhne**	**74.47**	**323**	*e*P		**P**	**23 35 00.7**	**+0.5**	
STKA	**Stephens Creek**	**74.61**	**177**	P		**P**	**23 35 01.8**	**+0.8**	
	comp=Z,1.3nm,0.6s,baz=8.9,slow=4.9,SNR=4.2								
STKA	**Stephens Creek**	**74.61**	**177**	P		**P**	**23 35 01.6**	**+0.6**	
STKA				pmax		pmax			
	comp=Z,1.0nm,1.4s								
STKA	**Stephens Creek**	**74.61**	**177**	P		**P**	**23 35 01.6**	**+0.6**	
BRG	**Berggiesshubel**	**74.70**	**327**	*i* PKP		**P**	**23 35 02.2**	**+0.7**	
	comp=Z,5.6nm,0.8s								
BRG	**Berggiesshubel**	**74.70**	**327**	*i* P		**P**	**23 35 02.2**	**+0.7**	
BRG				pmax		pmax			
	comp=Z,6.0nm,0.8s								
JAVC	**Velka Javorina**	**74.71**	**324**	*e*P		**P**	**23 35 03.7**	**+2.1**	
PVCC	**Panska Ves**	**74.72**	**327**	*e*P		**P**	**23 35 02.7**	**+1.1**	
CLL	**Collm**	**74.73**	**328**	⇓*i*P		**P**	**23 35 01.9**	**+0.3**	
	comp=Z,12nm,0.6s								
CLL	**Collm**	**74.73**	**328**	⇓*i*P		**P**	**23 35 01.9**	**+0.3**	
CLL				pmax		pmax			
	comp=Z,12nm,0.6s								
CLL	**Collm**	**74.73**	**328**	P		**P**	**23 35 01.5**	**-0.1**	
VRAC	**Vranov**	**74.82**	**325**	⇓P		**P**	**23 35 03.4**	**+1.2**	
VRAC	**Vranov**	**74.82**	**325**	*e*P		**P**	**23 35 03.6**	**+1.4**	
VRAC	**Vranov**	**74.82**	**325**	⇓P		**P**	**23 35 03.4**	**+1.2**	
GZR	**Gura Zlata**	**74.94**	**319**	⇓P		**P**	**23 35 03.6**	**+0.5**	
GZR	**Gura Zlata**	**74.94**	**319**	⇓P		**P**	**23 35 03.6**	**+0.5**	
SMOL	**Smolenice**	**75.07**	**324**	*e*P		**P**	**23 35 04.7**	**+1.1**	
SMOL				pmax		pmax			
	comp=Z,5.0nm,0.8s								
SMOL	**Smolenice**	**75.07**	**324**	*e*P		**P**	**23 35 04.7**	**+1.1**	
KRUC	**Moravsky**	**75.10**	**325**	*e*P		**P**	**23 35 04.9**	**+1.1**	
PD31	**Pinedale Array**	**75.11**	**45**	P		**P**	**23 35 05.3**	**+1.0**	
PDAR	**Pinedale Array**	**75.11**	**45**	P		**P**	**23 35 05.2**	**+1.0**	
	comp=Z,0.7nm,0.5s,baz=321,slow=1.5,SNR=9.5								
PDAR	**Pinedale Array**	**75.11**	**45**	P		**P**	**23 35 04.3**	**+0.1**	
PRA	**Prague**	**75.13**	**326**	*e*P		**P**	**23 35 05.0**	**+1.1**	
PRU	**Pruhonice**	**75.15**	**326**	*e*P		**P**	**23 35 04.4**	**+0.4**	
BZS	**Buzias**	**75.34**	**320**	⇓P		**P**	**23 35 05.7**	**+0.5**	
BZS	**Buzias**	**75.34**	**320**	⇓P		**P**	**23 35 05.7**	**+0.5**	
ULM	**Lac du Bonnet**	**75.75**	**32**	P		**P**	**23 35 07.5**	**+0.1**	
	comp=Z,3.0nm,0.4s,baz=330,slow=6.3,SNR=8.8								
ULM	**Lac du Bonnet**	**75.75**	**32**	P		**P**	**23 35 06.7**	**-0.7**	
ULM				pmax		pmax			
	comp=Z,12nm,1.4s								
ULM	**Lac du Bonnet**	**75.75**	**32**	P		**P**	**23 35 06.7**	**-0.7**	
ULM				IAmb		IAmb	23 35 22.1		
	comp=Z,12nm,1.4s								
CONA	**Conrad Observa**	**76.19**	**324**	*e*P		**P**	**23 35 11.5**	**+1.4**	
	comp=Z,3.3nm,0.8s								
KHC	**Kasperske Hory**	**76.21**	**326**	*e*P		**P**	**23 35 10.7**	**+0.6**	
RAYN	**Ar Rayn**	**76.31**	**289**	P		**P**	**23 35 10.9**	**-0.2**	
RAYN				pmax		pmax			
	comp=Z,6.0nm,1.1s								
RAYN	**Ar Rayn**	**76.31**	**289**	P		**P**	**23 35 10.9**	**-0.2**	
GERES	**GERESS Array B**	**76.39**	**326**	P		**P**	**23 35 11.6**	**+0.4**	
	comp=Z,2.0nm,0.6s,baz=41,slow=6.2,SNR=20								
GERES	**GERESS Array B**	**76.39**	**326**	P		**P**	**23 35 11.4**	**+0.2**	
GERES	**GERESS Array B**	**76.39**	**326**	P		**P**	**23 35 11.4**	**+0.2**	
GRF	**Grafenberg Arr**	**76.71**	**326**	*e*P		**P**	**23 35 13.9**	**+1.0**	
	comp=Z,9.4nm,1.0s,baz=35,slow=4.6								
ARSA	**Arzberg**	**76.86**	**324**	*e*P		**P**	**23 35 14.7**	**+0.9**	
	comp=Z,1.6nm,0.6s								
MOA	**Molln**	**76.93**	**325**	*e*P		**P**	**23 35 15.1**	**+1.0**	
	comp=Z,0.5nm,0.4s								
SOKA	**Soboth**	**77.52**	**324**	*e*P		**P**	**23 35 18.3**	**+0.8**	
	comp=Z,3.1nm,0.6s								
WATA	**Walderalm**	**78.45**	**326**	*e*P		**P**	**23 35 23.7**	**+1.0**	
	comp=Z,0.8nm,0.3s								
WTTA	**Wattenberg**	**78.49**	**326**	*e*P		**P**	**23 35 23.4**	**+0.5**	
	comp=Z,1.1nm,0.3s								
MOTA	**Moosalm**	**78.64**	**326**	*e*P		**P**	**23 35 24.4**	**+0.7**	
	comp=Z,4.7nm,0.7s								
RETA	**Reutte**	**78.66**	**327**	*e*P		**P**	**23 35 24.5**	**+0.8**	
	comp=Z,3.7nm,0.6s								
SQTA	**Sankt Quirin**	**78.70**	**326**	*e*P		**P**	**23 35 20.9**	**-3.1**	
	comp=Z,0.5nm,0.2s								
PDG	**Podgorica**	**78.85**	**319**	⇓P		**P**	**23 35 25.0**	**+0.2**	
DAVA	**Damuels**	**79.18**	**327**	*e*P		**P**	**23 35 26.9**	**+0.3**	
	comp=Z,2.7nm,0.5s								
DSB	**Dublin**	**79.40**	**339**	P		**P**	**23 35 28.1**	**+0.6**	
FUORN	**Ofenpass-Fuorn**	**79.56**	**327**	P		**P**	**23 35 29.4**	**+0.6**	
KARP	**Karpathos**	**79.76**	**309**	P		**P**	**23 35 30.2**	**+0.4**	
KARP				IAmb		IAmb	23 35 32.1		
	comp=Z,15nm,1.0s								
SCHQ	**Schefferville**	**80.17**	**14**	P		**P**	**23 35 32.2**	**+0.6**	
	comp=Z,2.8nm,0.8s,baz=209,slow=15,SNR=1.4								
SDCO	**Great Sand Dun**	**80.89**	**46**	P		**P**	**23 35 35.7**	**-0.5**	
SDCO				PcP		**PcP**	**23 35 43.4**	**+1.4**	
IDI	**Anoyia**	**81.23**	**311**	⇓P		**P**	**23 35 37.2**	**-0.4**	
IDI	**Anoyia**	**81.23**	**311**	P		**P**	**23 35 37.4**	**-0.3**	
TXAR	**Lajitas Array**	**88.23**	**50**	P		**P**	**23 36 13.4**	**+0.8**	
	comp=Z,0.3nm,0.5s,baz=273,slow=2.4,SNR=4.3								
TXAR	**Lajitas Array**	**88.23**	**50**	P		**P**	**23 36 12.9**	**+0.3**	
TXAR	**Lajitas Array**	**88.23**	**50**	P		**P**	**23 36 12.9**	**+0.3**	
ESDC	**Sonseca Array**	**90.87**	**332**	P		**P**	**23 36 24.7**	**0.0**	
	comp=Z,1.0nm,0.9s,baz=23,slow=4.1,SNR=4.9								
ESDC	**Sonseca Array**	**90.87**	**332**	P		**P**	**23 36 24.2**	**-0.5**	
VNDA	**Vanda**	**121.17**	**174**	PKP		**PKiKP**	**23 42 11.2**	**+0.1**	
	comp=Z,0.5nm,0.8s,baz=284,slow=11,SNR=2.6								
SDV	**Santo Domingo**	**121.97**	**34**	*e*P		**PKiKP**	**23 42 19.0**	**+4.1**	
BELA	**Belgrano 2**	**144.94**	**183**			PKPbc	23 42 55.0	-0.2	
LPAZ	**La Paz**	**145.07**	**48**	PKPbc		**PKPab**	**23 42 58.9**	**+0.5**	
	comp=Z,0.9nm,0.6s,baz=318,slow=5.7,SNR=4.7								
LPAZ	**La Paz**	**145.07**	**48**	PKP2		**PKPab**	**23 42 58.4**	**+0.1**	
LPAZ	**La Paz**	**145.07**	**48**			**PKPab**	**23 42 58.4**	**+0.1**	
SNAA	**Sanae**	**145.67**	**201**	PKPdf		**PKPdf**	**23 42 57.3**	**+0.5**	
MNMC	**Minye Minye**	**146.51**	**53**	PKPbc		**PKPab**	**23 43 02.8**	**-0.6**	
VNA2	**Neumayer--Watz**	**147.29**	**200**	PKPdf		**PKPbc**	**23 43 02.4**	**+0.2**	
VNA3	**Neumayer Olymp**	**147.63**	**199**	PKPdf		**PKPbc**	**23 43 02.9**	**-0.2**	
BDFB	**Brasilia**	**152.16**	**13**	PKPbc		**PKiKP**	**23 43 16.0**	**0.0**	
	comp=Z,1.8nm,0.5s,baz=44,slow=2.0,SNR=4.8								
RCLB	**Rio Claro- Sao**	**158.87**	**15**	*e*P		**PKPdf**	**23 43 23.1**	**+5.5**	
FRTB	**Fartura**	**159.29**	**21**	*e*P		**PKPdf**	**23 43 23.4**	**+5.4**	

IDC 11 23:29:41.9±42.0, 9°44S×111°60E, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.4/37, mbtmp3.9/3, Error ellipse: s-maj=928.0km s-min=205.9km az=157.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SONM	**Songino Array**	**57.21**	**356**	P		P	23 39 30.9		-0.1
	0.3nm,0.5s,baz=167,slow=7.7,SNR=3.5								
MKAR	**Makanchi Array**	**61.79**	**338**	P		P	23 40 02.5		0.0
	0.6nm,0.3s,baz=150,slow=7.1,SNR=20								
ZALV	**Zalesovo Beam**	**67.10**	**343**	P		P	23 40 37.1		0.0
	0.5nm,0.3s,baz=153,slow=6.6,SNR=5.6								

IDC 11 23:41:51.5±2.4, 37°.16N×142°.51E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.4/52, mbtmp3.6/5, ML3.2/2, Error ellipse: s-maj=45.4km s-min=30.6km az=62.0
JMA 11 23:41:57.4±0.2, 36°.96N×142°.12E, h30km, M3.4
ISC 11 23:41:55.8±2.1, 36°.92N±0°.05×142°.08E±0°.08, h16km±12km, n23, σ0s98/26, mb3.3/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
ONAJ	**Iwakimizuishiy**	**1.04**	**280**	P		**Pg**	**23 42 16.5**	**+0.5**	
ONAJ				*e*S		**Sn**	**23 42 30.6**	**+0.6**	
JFK	**Kawauchi**	**1.06**	**295**	P		**Pg**	**23 42 16.4**	**+0.1**	
JFK				*e*S		**Sb**	**23 42 30.1**	**+0.7**	
JFFD	**Fukushimafurud**	**1.23**	**278**	P		**Pg**	**23 42 19.4**	**-0.1**	
JFFD				*e*S		**Sb**	**23 42 34.9**	**+0.7**	
JMST	**Minamisoumatoc**	**1.24**	**311**	P		**Pb**	**23 42 19.0**	**+0.1**	
JMST				*e*S		**Sb**	**23 42 34.7**	**0.0**	
JHO	**Hitachi**	**1.25**	**256**	P		**Pb**	**23 42 19.7**	**+0.7**	
JMM	**Marumori**	**1.39**	**313**	P		**Pb**	**23 42 21.0**	**-0.5**	
JFT	**Otama**	**1.51**	**294**	P		**Pb**	**23 42 24.0**	**+0.5**	
JFT				*e*S		**Sb**	**23 42 43.1**	**+0.6**	
JIO	**Ouri**	**1.64**	**340**	P		**Pn**	**23 42 24.2**	**+0.2**	
JOU	**Okura**	**1.83**	**323**	P		**Pb**	**23 42 27.9**	**-1.0**	
JFY	**Yanaizu**	**1.96**	**285**	P		**Pb**	**23 42 31.3**	**+0.2**	
JMK	**Ichinoseki**	**2.14**	**342**	P		**Pn**	**23 42 31.9**	**+1.0**	
JMK				*e*S		**Sn**	**23 42 57.6**	**+0.5**	
MJAR	**Matsushiro Arr**	**3.13**	**264**	Pn		**Pb**	**23 42 48.4**	**-2.7**	
	0.9nm,0.3s,baz=89,slow=15,SNR=19								
MJAR				Sn		**Sb**	**23 43 28.6**	**-0.5**	
	0.3nm,0.3s,baz=90,slow=14,SNR=5.3								
MAT	**Matsushiro**	**3.13**	**264**	P		**Pb**	**23 42 48.9**	**-2.2**	
MAT				*e*S		**Sb**	**23 43 29.0**	**-0.1**	
JHJ	**Hachijo jima 2**	**4.23**	**207**	Pn		**Pn**	**23 43 01.0**	**+1.3**	
	9.2nm,0.3s,baz=53,slow=22,SNR=2.1								
JHJ				Sn		**Sn**	**23 43 49.0**	**+0.2**	
	12nm,0.3s,baz=251,slow=24,SNR=1.6								
H11N2	**WAKE ISLAND Hy**	**27.64**	**122**	T		T	00 16 52.6		
	baz=314,slow=75,SNR=10								
H11N1	**WAKE ISLAND Hy**	**27.64**	**122**	T		T	00 16 46.2		
	baz=314,slow=75,SNR=8.9								
H11N3	**WAKE ISLAND Hy**	**27.65**	**122**	T		T	00 16 46.9		
	baz=314,slow=75,SNR=7.7								
SONM	**Songino Array**	**28.29**	**304**	P		**P**	**23 47 47.5**	**-1.1**	
	0.4nm,0.6s,baz=102,slow=8.6,SNR=3.0								
H11S1	**WAKE ISLAND Hy**	**28.35**	**124**	T		T	00 17 39.0		
	baz=316,slow=76,SNR=6.3								
H11S3	**WAKE ISLAND Hy**	**28.35**	**124**	T		T	00 17 39.7		
	baz=316,slow=76,SNR=3.8								
H11S2	**WAKE ISLAND Hy**	**28.37**	**124**	T		T	00 17 39.8		
	baz=316,slow=76,SNR=4.1								
MKAR	**Makanchi Array**	**44.63**	**302**	P		**P**	**23 50 06.8**	**-0.6**	
	0.3nm,0.7s,baz=82,slow=9.0,SNR=2.1								
WRA	**Warramunga Arr**	**57.02**	**189**	P		**P**	**23 51 41.4**	**+0.4**	
	0.3nm,1.0s,baz=7.7,slow=6.9,SNR=4.9								

KRSC 11 23:49:20.9±1.6, 52°.71N×160°.78E, h34km±17km, ML4.3
MOS 11 23:49:24.4±0.9, 52°.80N×160°.49E, h55km, mb4.3/4, Error ellipse: s-maj=7.1km s-min=4.1km az=94.8
NEIC 11 23:49:25.1±1.2, 52°.7N±0°.2×160°.5E±0°.1, h46km±9km, mb4.4/12, Error ellipse: s-maj=22.0km s-min=12.2km az=187.0
IDC 11 23:49:26.7±3.8, 52°.83N×160°.50E, h61km±29km, mb3.6/15, mb1 3.8/16, mb1mx3.5/56, mbtmp3.9/16, ML3.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/37, Error ellipse: s-maj=27.7km s-min=19.5km az=90.0
ISC 11 23:49:24.5±1.0, 52°.82N±0°.04×160°.61E±0°.04, h40km±9km, n149, σ1s56/160, mb4.0/21, 6C-1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SPN	**Mys Shipunski**	**0.46**	**309**	*i* P		Pn	23 49 32.8		-1.8
SPN				*e*S		**Sn**	**23 49 40.4**		**-1.4**
SPN	**Mys Shipunski**	**0.46**	**309**	PN		Pn	23 49 32.8		-1.8
SPN				S		**Sn**	**23 49 40.4**		**-1.4**
NLC	**Nalytchevo**	**0.84**	**296**	*i* P		**Pn**	**23 49 38.7**		**-1.2**
NLC				*e*S		**Sn**	**23 49 50.9**		**-0.2**
NLC	**Nalytchevo**	**0.84**	**296**	PN		**Pn**	**23 49 38.7**		**-1.2**
NLC				S		**Sn**	**23 49 50.9**		**-0.2**
SDLR	**Sedlovina**	**1.14**	**295**	*i* P		**Pn**	**23 49 43.5**		**-0.6**
SDLR	**Sedlovina**	**1.14**	**295**	PN		**Pn**	**23 49 43.5**		**-0.6**
DALK	**Dalny**	**1.15**	**282**	*e*P		**Pn**	**23 49 43.3**		**-0.7**
DALK	**Dalny**	**1.15**	**282**	PN		**Pn**	**23 49 43.3**		**-0.7**
UGLR	**Uglovaya**	**1.15**	**291**	*e*P		**Pn**	**23 49 43.8**		**-0.4**
UGLR	**Uglovaya**	**1.15**	**291**	PN		**Pn**	**23 49 43.8**		**-0.4**
SMAR	**Somma**	**1.18**	**293**	*e*P		**Pn**	**23 49 43.8**		**-0.9**
SMAR	**Somma**	**1.18**	**293**	PN		**Pn**	**23 49 43.8**		**-0.9**
PET	**Petropavlovsk**	**1.20**	**281**	*i* P		**Pn**	**23 49 44.3**		**-0.5**
PET				*e*S		**Sn**	**23 50 00.6**		**+0.7**
PET	**Petropavlovsk**	**1.20**	**281**	⇓*i*PN		**Pn**	**23 49 44.2**		**-0.5**
PET				*e*S		**Sn**	**23 50 01.0**		**+1.1**
PET				pmax		pmax			
	comp=Z,560nm,0.5s								
PET				smax		smax			
	comp=N,2μm,0.6s								
PET				smax		smax			
	comp=E,2μm,0.6s								
PET				smax		smax			
	comp=E,3μm,0.6s								

PET	**Petropavlovsk**	**1.20**	**281**			Pn	**23 49 44.3**		**-0.5**
AVH	**Avacha**	**1.22**	**292**	*e*P		Pn	**23 49 44.9**		**-0.2**
AVH	**Avacha**	**1.22**	**292**	PN		Pn	**23 49 44.9**		**-0.2**
KRER	**Koryakskii**	**1.23**	**294**	*e*P		Pn	**23 49 45.1**		**-0.2**
KRER	**Koryakskii**	**1.23**	**294**	PN		Pn	**23 49 45.1**		**-0.2**
KOK	**Koryaka**	**1.28**	**293**	*e*P		Pn	**23 49 46.0**		**0.0**
KOK	**Koryaka**	**1.28**	**293**	PN		Pn	**23 49 46.0**		**0.0**
KRX	**Arik**	**1.30**	**296**	*e*P		Pn	**23 49 46.0**		**-0.3**
KRX	**Arik**	**1.30**	**296**	PN		Pn	**23 49 46.0**		**-0.3**
RUS	**Russkaya**	**1.33**	**254**	*i* P		Pn	**23 49 46.0**		**-0.6**
RUS	**Russkaya**	**1.33**	**254**	PN		Pn	**23 49 46.0**		**-0.6**
KII	**Karymskiy**	**1.41**	**331**	*e*P		Pn	**23 49 47.9**		**+0.2**
KII	**Karymskiy**	**1.41**	**331**	PN		Pn	**23 49 47.9**		**+0.2**
KRMR	**Karymshinskiy**	**1.51**	**272**	*e*P		Pn	**23 49 49.7**		**+0.8**
KRMR				*e*S		**Sn**	**23 50 10.0**		**+2.7**
KRMR	**Karymshinskiy**	**1.51**	**272**	PN		Pn	**23 49 49.7**		**+0.8**
KRMR				S		**Sn**	**23 50 10.0**		**+2.7**
GRL	**Gorelyy**	**1.57**	**261**	*e*P		Pn	**23 49 50.2**		**+0.3**
GRL	**Gorelyy**	**1.57**	**261**	PN		Pn	**23 49 50.2**		**+0.3**
ASAK	**Asacha**	**1.71**	**256**	*e*P		Pn	**23 49 52.2**		**+0.4**
ASAK	**Asacha**	**1.71**	**256**	PN		Pn	**23 49 52.2**		**+0.4**
PEA0B	**Petropavlovsk-**	**1.79**	**281**	*ce*PN		Pn	**23 49 53.1**		**+0.2**
PEA0B	**Petropavlovsk-**	**1.79**	**281**	Pn		Pn	**23 49 53.0**		**+0.2**
PETK	**Petropavlovsk-**	**1.79**	**281**	P		**Pn**	**23 49 53.1**		**+0.3**
	comp=E,123nm,0.3s,baz=106,slow=13,SNR=357								
PETK				S		**Sn**	**23 50 15.7**		**+1.4**
	comp=E,66nm,0.3s,baz=193,slow=6.1,SNR=12								
PETK	**Petropavlovsk-**	**1.79**	**281**	Pn		**Pn**	**23 49 52.9**		**+0.1**
GNL	**Ganaly**	**1.83**	**300**	*e*P		Pn	**23 49 54.7**		**+1.2**
GNL	**Ganaly**	**1.83**	**300**	PN		Pn	**23 49 54.7**		**+1.2**
KDTR	**Khodutka, Kamc**	**1.85**	**238**	*e*P		**Pn**	**23 49 53.6**		**-0.1**
KDTR				*e*S		**Sn**	**23 50 17.5**		**+1.6**
KDTR	**Khodutka, Kamc**	**1.85**	**238**	PN		**Pn**	**23 49 53.6**		**-0.1**
KDTR				S		**Sn**	**23 50 17.5**		**+1.6**
MKZ	**Mys Kozlova**	**1.87**	**20**	*e*P		**Pn**	**23 49 53.1**		**-0.8**
MKZ				*e*S		**Sn**	**

ARCES					pmax	pmax			
	comp=Z,3.0nm,1.0s								
SUMG	**Summit**	**54.20**	**7**	P	**P**		**23 58 46.4**	**+0.7**	
SUMG	**Summit**	**54.20**	**7**	P	**P**		**23 58 46.4**	**+0.7**	
KKAR	**Karatay Array**	**57.29**	**299**	P	**P**		**23 59 06.7**	**-1.1**	
KKAR	**Karatay Array**	**57.29**	**299**	P	**P**		**23 59 06.7**	**-1.1**	
FIA1	**FINESS Array S**	**60.50**	**337**	P	**P**		**23 59 30.1**	**+0.4**	
FIA1					IAmb	IAmb	23 59 46.0		
	comp=Z,11nm,1.2s								
FINES	**FINESS Array B**	**60.50**	**337**	P	**P**		**23 59 29.5**	**-0.3**	
	comp=Z,3.5nm,0.5s,baz=40,slow=8.5,SNR=32								
FINES	**FINESS Array B**	**60.50**	**337**	*eP*	**P**		**23 59 29.9**	**+0.2**	
FINES					pmax	pmax			
	comp=Z,4.0nm,0.5s								
FINES	**FINESS Array B**	**60.50**	**337**	P	**P**		**23 59 30.0**	**+0.2**	
NC405	**NORSAR Array S**	**63.74**	**344**	P	**P**		**23 59 51.8**	**+0.3**	
NB2	**NORSAR Subarra**	**63.90**	**344**	P	**P**		**23 59 52.5**	**-0.1**	
	comp=Z,0.3nm,0.3s,baz=20,slow=6.9								
NOA	**NORSAR Array B**	**63.90**	**344**	P	**P**		**23 59 52.4**	**-0.1**	
	comp=Z,0.3nm,0.4s,baz=28,slow=6.0,SNR=6.7								
HFS	**Hagfors**	**64.31**	**342**	P	**P**		**23 59 55.1**	**-0.1**	
	comp=Z,1.0nm,0.6s,baz=37,slow=7.6,SNR=5.8								
AMTX	**Amarillo**	**67.32**	**62**	P	**P**		**00 00 15.9**	**+0.8**	
AKASG	**Malin Array Be**	**69.01**	**329**	P	**P**		**00 00 25.1**	**-0.3**	
	comp=Z,3.0nm,0.4s,baz=29,slow=6.4,SNR=7.6								
AKBB	**Malin Array Si**	**69.01**	**329**	*ce*	**P**		**00 00 22.7**	**-2.6**	
KBZ	**Khabaz**	**69.95**	**317**	P	**P**		**00 00 31.6**	**+0.3**	
	comp=Z,2.3nm,0.8s								
KBZ	**Khabaz**	**69.95**	**317**	*ce*	**P**		**00 00 31.9**	**+0.7**	
KBZ					pmax	pmax			
	comp=Z,2.0nm,0.8s								
TXAR	**Lajitas Array**	**70.46**	**67**	P	**P**		**00 00 35.3**	**+0.6**	
	comp=Z,0.2nm,0.5s,baz=222,slow=3.0,SNR=2.5								
TXAR	**Lajitas Array**	**70.46**	**67**	P	**P**		**00 00 35.1**	**+0.4**	
TXAR	**Lajitas Array**	**70.46**	**67**	P	**P**		**00 00 35.1**	**+0.4**	
BUR08	**Bucovina Ar. S**	**72.95**	**330**	P	**P**		**00 00 50.0**	**+0.6**	
BUR08					IAmb	IAmb	00 00 50.5		
	comp=Z,2.1nm,1.1s								
BURAR	**Bucovina Array**	**72.97**	**330**	P	**P**		**00 00 49.8**	**+0.2**	
MLR	**Muntele Rosu**	**74.65**	**329**	P	**P**		**00 01 00.3**	**+0.9**	
	comp=Z,1.1nm,0.5s,baz=322,slow=7.3,SNR=4.0								
MLR	**Muntele Rosu**	**74.65**	**329**	P	**P**		**00 01 00.7**	**+1.3**	
MLR					IAmb	IAmb	00 01 08.0		
	comp=Z,4.6nm,1.3s								
GERES	**GERESS Array B**	**74.89**	**338**	P	**P**		**00 01 00.1**	**-0.6**	
	comp=Z,0.3nm,0.5s,baz=46,slow=7.6,SNR=3.9								
GERES	**GERESS Array B**	**74.89**	**338**	P	**P**		**00 01 00.5**	**-0.3**	
WRA	**Warramunga Arr**	**75.96**	**205**	P	**P**		**00 01 07.1**	**+0.1**	
	comp=Z,0.4nm,0.8s,baz=26,slow=6.5,SNR=3.0								
WRA	**Warramunga Arr**	**75.96**	**205**	P	**P**		**00 01 06.5**	**-0.4**	
WRA	**Warramunga Arr**	**75.96**	**205**	P	**P**		**00 01 06.5**	**-0.4**	
ASAR	**Alice Springs**	**79.63**	**205**	P	**P**		**00 01 27.6**	**+0.3**	
	comp=Z,0.4nm,0.6s,baz=12,slow=4.1,SNR=4.3								

ROM 12 00:08:59.4±0.4, 36°31N±0°02×14°28E±0°02, h10km, ML2.8/5, 2C-2D, Error ellipse: s-maj=2.9km s-min=1.4km az=336.0, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
HMDC	**Modica**	**0.77**	**32**	*eP*		Pg	00 09 13.7		-0.5
HMDC				S		Sb	00 09 25.0		-0.4
HMDC				AML		AML			
	comp=E,896μm,0.6s								
HMDC				AML		AML			
	comp=N,1150μm,0.7s								
HMDC				AML		AML			
	comp=E,895μm,0.6s								
HPAC	**Pachino**	**0.78**	**60**	*eP*		Pg	00 09 14.0		-0.4
HPAC				AML		AML			
	comp=E,798μm,1.0s								
HPAC				AML		AML			
	comp=E,798μm,1.0s								
HPAC				AML		AML			
	comp=N,883μm,1.0s								
CLTA	**Licata**	**0.89**	**343**	*eP*		Pg	00 09 16.3		-0.3
HAVL	**Avola**	**0.94**	**46**	*eP*		Pg	00 09 16.8		-0.8
HAVL				S		Sb	00 09 30.5		0.0
HAVL				AML		AML			
	comp=E,694μm,1.3s								
HAVL				AML		AML			
	comp=N,515μm,1.4s								
FAVR	**Favara**	**1.08**	**333**	P		Pg	00 09 20.0		-0.2
HCRL	**Carlentini**	**1.15**	**32**	P		Pb	00 09 19.9		-1.5
HCRL				S		Sb	00 09 35.6		-0.7
HCRL				AML		AML			
	comp=N,590μm,0.2s								
HCRL				AML		AML			
	comp=E,492μm,1.1s								
GALF	**Gagliano Caste**	**1.42**	**9**	P		Pn	00 09 25.2		-0.2
GALF				AML		AML			
	comp=E,207μm,0.5s								
GALF				AML		AML			
	comp=N,179μm,0.7s								
CLTB	**Caltabellotta**	**1.53**	**326**	P		Pn	00 09 26.7		-0.2
IACL	**Alicudi**	**2.22**	**2**	AML		AML			
IACL	comp=E,374μm,1.3s			AML		AML			
	comp=N,536μm,0.2s								

IDC 12 00:30:26.7±57.0, 17°05S×176°16E, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/34, mbtmp4.1/3, Error ellipse: s-maj=998.8km s-min=139.3km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
STKA	**Stephens Creek**	**34.58**	**238**	P		P	00 37 18.0		+0.6
	0.7nm,0.3s,baz=73,slow=11,SNR=6.4								
WRA	**Warramunga Arr**	**39.70**	**259**	P		P	00 38 00.4		-0.6
	0.9nm,0.8s,baz=96,slow=8.2,SNR=14								
ASAR	**Alice Springs**	**40.05**	**253**	P		P	00 38 03.8		-0.2
	3.0nm,0.4s,baz=84,slow=8.9,SNR=42								

IDC ***12*** *00:35:51.1±1.0, 52.79N×171.44E, h0km, mb3.9/16, mb1 4.2/17, mb1mx4.0/37, mbtmp3.9/17, ML2.7/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/50, Error ellipse: s-maj=30.1km s-min=15.5km az=176.0*

NEIC ***12*** *00:35:55.7±1.9, 52.6N±0.1×171.3E±0.1, h35km±4km, mb4.4/57, Error ellipse: s-maj=15.2km s-min=9.2km az=198.0*

MOS ***12*** *00:35:58.7±0.9, 52.75N×170.88E, h78km, mb4.5/7, Error ellipse: s-maj=12.2km s-min=6.5km az=38.2*

KRSC ***12*** *00:35:58.1±1.9, 52.62N×170.49E, h36km±93km, ML4.3*

ISC 12 00:35:55.6±0.6, 52.59N±0.09×171.20E±0.05, h35km, n149, σ1§61/161, mb4.3/44, Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
MKZ	**Mys Kozlova**	**5.98**	**293**	P		**Pn**	**00 37 21.5**		**+0.1**
MKZ				S		**Sn**	**00 38 25.9**		**-2.6**
MKZ	**Mys Kozlova**	**5.98**	**293**	P		**Pn**	**00 37 22.0**		**+0.6**
MKZ				S		**Sn**	**00 38 27.8**		**-0.7**
KBTR	**Krutoberegovo**	**6.09**	**310**	P		**Pn**	**00 37 22.9**		**-0.1**
KBTR	**Krutoberegovo**	**6.09**	**310**	P		**Pn**	**00 37 23.1**		**+0.1**
ZLN	**Zelenaya**	**6.98**	**304**	P		**Pn**	**00 37 36.8**		**+1.4**
ZLN				S		**Sn**	**00 38 51.7**		**-1.8**
ZLN	**Zelenaya**	**6.98**	**304**	P		**Pn**	**00 37 36.8**		**+1.4**
ZLN				S		**Sn**	**00 38 53.0**		**-0.5**
BZGR	**Bezymyannyi-Gr**	**7.01**	**303**	*eP*		**Pn**	**00 37 37.2**		**+1.5**
BZGR				S		**Sn**	**00 38 52.0**		**-2.1**
BZGR	**Bezymyannyi-Gr**	**7.01**	**303**	P		**Pn**	**00 37 37.2**		**+1.5**
BZGR				S		**Sn**	**00 38 52.0**		**-2.1**
CIRR	**Tsirk**	**7.05**	**304**	*eP*		**Pn**	**00 37 36.8**		**+0.4**
CIRR				S		**Sn**	**00 38 52.8**		**-2.5**
CIRR	**Tsirk**	**7.05**	**304**	P		**Pn**	**00 37 36.8**		**+0.4**
CIRR				S		**Sn**	**00 38 52.8**		**-2.5**
TUMR	**Tumrok**	**7.06**	**297**	P		**Pn**	**00 37 38.9**		**+2.5**
TUMR	**Tumrok**	**7.06**	**297**	P		**Pn**	**00 37 38.8**		**+2.4**
TUMR				S		**Sn**	**00 38 56.3**		**+0.8**
LGNR	**Loginova**	**7.07**	**304**	P		**Pn**	**00 37 40.0**		**+3.3**
LGNR	**Loginova**	**7.07**	**304**	P		**Pn**	**00 37 40.0**		**+3.3**
LGNR				S		**Sn**	**00 38 56.1**		**+0.2**
BZWR	**Bezymyannyi-We**	**7.12**	**303**	*eP*		**Pn**	**00 37 40.4**		**+3.1**
BZWR	**Bezymyannyi-We**	**7.12**	**303**	P		**Pn**	**00 37 40.4**		**+3.1**
BZWR				S		**Sn**	**00 38 57.6**		**+0.7**
KRSR	**Krestovskiy**	**7.19**	**305**	P		**Pn**	**00 37 41.7**		**+3.5**
KRSR	**Krestovskiy**	**7.19**	**305**	P		**Pn**	**00 37 40.0**		**+1.8**
KIRR	**Kirishev**	**7.19**	**302**	P		**Pn**	**00 37 41.1**		**+2.8**
KIRR	**Kirishev**	**7.19**	**302**	P		**Pn**	**00 37 40.3**		**+2.0**
SDLR	**Sedlovina**	**7.48**	**280**	P		**Pn**	**00 37 43.3**		**+1.1**
SDLR	**Sedlovina**	**7.48**	**280**	P		**Pn**	**00 37 43.8**		**+1.6**
SDLR				S		**Sn**	**00 39 02.8**		**-2.9**
UGLR	**Uglovaya**	**7.51**	**280**	P		**Pn**	**00 37 43.7**		**+1.0**
UGLR	**Uglovaya**	**7.51**	**280**	P		**Pn**	**00 37 44.1**		**+1.4**
SMAR	**Somma**	**7.53**	**280**	P		**Pn**	**00 37 43.7**		**+0.8**
SMAR	**Somma**	**7.53**	**280**	P		**Pn**	**00 37 43.9**		**+1.0**
KRER	**Koryakskii**	**7.56**	**280**	P		**Pn**	**00 37 45.1**		**+1.7**
KRER	**Koryakskii**	**7.56**	**280**	P		**Pn**	**00 37 45.7**		**+2.3**
KRER				S		**Sn**	**00 39 06.7**		**-1.1**
AVH	**Avacha**	**7.57**	**280**	P		**Pn**	**00 37 45.9**		**+2.6**
AVH	**Avacha**	**7.57**	**280**	P		**Pn**	**00 37 45.9**		**+2.6**
AVH				S		**Sn**	**00 39 08.0**		**+0.2**
KRX	**Arik**	**7.62**	**281**	P		**Pn**	**00 37 45.4**		**+1.3**
KRX				S		**Sn**	**00 39 05.9**		**-3.3**
KRX	**Arik**	**7.62**	**281**	P		**Pn**	**00 37 45.5**		**+1.3**
KRX				S		**Sn**	**00 39 07.8**		**-1.4**
PET	**Petropavlovsk**	**7.62**	**278**	P		**Pn**	**00 37 43.9**		**-0.1**
PET	**Petropavlovsk**	**7.62**	**278**	Pn		**Pn**	**00 37 43.9**		**-0.1**
SRDR	**Sredinnyy**	**7.66**	**304**	P		**Pn**	**00 37 47.4**		**+2.8**
SRDR	**Sredinnyy**	**7.66**	**304**	P		**Pn**	**00 37 45.3**		**+0.7**
RUS	**Russkaya**	**7.75**	**274**	P		**Pn**	**00 37 47.0**		**+1.3**
RUS				S		**Sn**	**00 39 08.8**		**-3.3**
RUS	**Russkaya**	**7.75**	**274**	P		**Pn**	**00 37 47.1**		**+1.3**
RUS				S		**Sn**	**00 39 08.7**		**-3.3**
GSTR	**Great Sitkin T**	**7.82**	**89**	Pn		Pn	00 37 41.1		-5.7
GRL	**Gorelyy**	**8.00**	**275**	*eP*		**Pn**	**00 37 51.3**		**+1.9**
GRL	**Gorelyy**	**8.00**	**275**	P		**Pn**	**00 37 51.3**		**+1.9**
GNL	**Ganaly**	**8.05**	**283**	*eP*		**Pn**	**00 37 52.5**		**+2.5**
GNL	**Ganaly**	**8.05**	**283**	P		**Pn**	**00 37 52.5**		**+2.5**
GNL				S		**Sn**	**00 39 19.0**		**-0.8**
ASAK	**Asacha**	**8.12**	**274**	*eS*		**Sn**	**00 39 17.9**		**-3.7**
PEA0B	**Petropavlovsk-**	**8.19**	**279**	P		**Pn**	**00 37 53.7**		**+1.8**
PEA0B	**Petropavlovsk-**	**8.19**	**279**	Pn		**Pn**	**00 37 53.7**		**+1.8**
PETK	**Petropavlovsk-**	**8.19**	**279**	Pn		**Pn**	**00 37 54.0**		**+2.1**
	0.5nm,0.3s,baz=88,slow=16,SNR=3.1								
PETK						Sn	**00 39 20.6**		**-2.6**
	0.3nm,0.3s,baz=78,slow=21,SNR=1.7								
PETK	**Petropavlovsk-**	**8.19**	**279**	P		**Pn**	**00 37 53.1**		**+1.2**
PETK	**Petropavlovsk-**	**8.19**	**279**	Pn		**Pn**	**00 37 53.1**		**+1.2**
MA2	**Magadan**	**13.34**	**310**	LR		LR	00 43 54.1		
	comp=Z,29nm,19.8s,baz=140,slow=36								
OHAK	**Old Harbor**	**20.77**	**63**			**P**	**00 40 31.4**		**-1.8**
OHAK						IAmb	IAmb	00 40 38.1	
	comp=Z,23nm,1.0s								
PPLA	**Purkeypile**	**21.77**	**47**	P		**P**	**00 40 47.8**		**+3.7**
PPLA						IAmb	IAmb	00 40 57.9	
	comp=Z,17nm,1.3s								
IMAR	**Indian Mountai**	**21.97**	**39**	P		**P**	**00 40 47.4**		**+1.4**
SUA	**Susitna One**	**22.23**	**51**	P		**P**	**00 40 50.7**		**+1.8**
SUA						IAmb	IAmb	00 40 56.3	
	comp=Z,14nm,1.2s								
KTH	**Kantishna Hill**	**22.47**	**46**	P		**P**	**00 40 53.4**		**+2.0**
BPAW	**Bear Paw Mtn.**	**22.55**	**45**	P		**P**	**00 40 55.0**		**+2.7**
GHO	**Glory Hole Cre**	**23.12**	**51**	P		**P**	**00 41 00.7**		**+2.4**
GHO						IAmb	IAmb	00 41 13.2	
	comp=Z,13nm,1.2s								
BWN	**Browne**	**23.22**	**45**	P		**P**	**00 41 00.4**		**+1.2**
BWN						IAmb	IAmb	00 41 03.4	
	comp=Z,22nm,1.1s								
RND	**Reindeer**	**23.36**	**47**	P		**P**	**00 41 01.8**		**+1.2**
RND						pmax	pmax		
	comp=Z,8.0nm,1.4s								
RND	**Reindeer**	**23.36**	**47**	P		**P**	**00 41 01.8**		**+1.2**
I23K	**Minto, Yukon-K**	**23.48**	**42**	P		**P**	**00 41 02.3**		**+0.7**
A21K	**Barrow**	**23.59**	**25**	P		**P**	**00 41 00.2**		**-2.4**
A21K						IAmb	IAmb	00 41 03.3	
	comp=Z,6.4nm,0.6s								
COLD	**Coldfoot**	**23.73**	**37**	P		**P**	**00 41 03.8**		**-0.3**
SCM	**Sheep Creek Mo**	**23.88**	**51**	P		**P**	**00 41 04.7**		**-0.9**
SCM						pmax	pmax		
	comp=Z,37nm,1.4s								
SCM	**Sheep Creek Mo**	**23.88**	**51**	P		**P**	**00 41 04.7**		**-0.9**
SCM						IAmb	IAmb	00 41 15.6	
	comp=Z,37nm,1.4s								
MDM	**Murphy Dome**	**23.90**	**43**	P		**P**	**00 41 05.5**		**-0.2**
CCB	**Clear Creek Bu**	**24.02**	**44**	P		**P**	**00 41 05.5**		**-1.2**
POKR	**Poker Plat Res**	**24.27**	**43**	P		**P**	**00 41 09.9**		**+0.9**
POKR						IAmb	IAmb	00 41 11.3	
	comp=Z,5.8nm,0.7s								
HDA	**Harding Lake**	**24.34**	**45**	P		**P**	**00 41 10.0**		**+0.3**
IL31		**24.43**	**44**	P		**P**	**00 41 09.0**		**-1.4**
ILAR	**Eielson Array**	**24.43**	**44**	P		**P**	**00 41 07.9**		**-2.6**
	comp=Z,1.5nm,0.6s,baz=252,slow=7.3,SNR=16								
ILAR	**Eielson Array**	**24.43**	**44**	P		**P**	**00 41 09.3**		**-1.2**
TOLK	**Toolik Lake Re**	**24.44**	**34**	P		**P**	**00 41 09.8**		**-0.9**
TOLK						IAmb	IAmb	00 41 12.6	
	comp=Z,5.2nm,0.6s								
PAX	**Paxson**	**24.83**	**48**	P		**P**	**00 41 15.5**		**+1.3**
PAX						pmax	pmax		
	comp=Z,14nm,1.5s								
PAX	**Paxson**	**24.83**	**48**	P		**P**	**00 41 15.5**		**+1.3**
PAX						IAmb	IAmb	00 41 16.0	
	comp=Z,14nm,1.5s								
KLR	**Kul'dur**	**24.88**	**278**	P		**P**	**00 41 16.5**		**+1.7**
	comp=Z,1.4nm,0.6s,baz=59,slow=7.6,SNR=7.2								
N25K	**Chitina, Valde**	**25.17**	**52**	P		**P**	**00 41 19.0**		**+1.7**
N25K						IAmb	IAmb	00 41 23.1	
	comp=Z,18nm,1.5s								
GLB	**Gilahina Butte**	**25.55**	**52**	P		**P**	**00 41 21.7**		**+1.0**
GLB						IAmb	IAmb	00 41 24.8	
	comp=Z,21nm,1.4s								
BMAR	**Burnt Mountain**	**25.88**	**38**	P		**P**	**00 41 23.0**		**-0.7**
MCARA	**McCarthy VSAT**	**25.93**	**52**	P		**P**	**00 41 26.8**		**+2.7**
MCARA						IAmb	IAmb	00 41 40.2	
	comp=Z,26nm,1.5s								
K27K	**Chicken**	**26.42**	**46**	P		**P**	**00 41 28.3**		**-0.3**
BCAR	**Beaver Creek A**	**26.51**	**48**	P		**P**	**00 41 29.2**		**-0.3**
TIXI	**Tiksi**	**26.57**	**332**	P		**P**	**00 41 27.1**		**-2.7**
TIXI						pmax	pmax		
	comp=Z,3.0nm,1.1s								
TIXI	**Tiksi**	**26.57**	**332**	P		**P**	**00 41 27.1**		**-2.7**
BARN	**Barnard Glacie**	**26.60**	**53**	P		**P**	**00 41 30.0**		**-0.4**
BARN						IAmb	IAmb	00 41 44.2	
	comp=Z,16nm,1.3s								
EGAK	**Eagle**	**26.87**	**44**	P		**P**	**00 41 31.9**		**-0.6**
EGAK						IAmb	IAmb	00 41 34.2	
	comp=Z,9.0nm,1.2s								
DAWY	**Dawson**	**27.60**	**46**	P		**P**	**00 41 39.8**		**+0.6**
H11N2	**WAKE ISLAND Hy**	**32.97**	**187**	T		T	01 17 57.2		
	baz=5.1,slow=76,SNR=89								
H11N3	**WAKE ISLAND Hy**	**32.98**	**187**	T		T	01 17 57.8		
	baz=5.1,slow=76,SNR=76								
H11N1	**WAKE ISLAND Hy**	**32.98**	**187**	T		T	01 17 57.8		
	baz=5.1,slow=76,SNR=102								
H11S1	**WAKE ISLAND Hy**	**34.19**	**188**	T		T	01 19 25.9		
	baz=5.3,slow=76,SNR=133								
H11S3	**WAKE ISLAND Hy**	**34.21**	**188**	T		T	01 19 27.8		
	baz=5.3,slow=76,SNR=91								
H11S2	**WAKE ISLAND Hy**	**34.21**	**188**	T		T	01 19 27.4		
	baz=5.3,slow=76,SNR=78								
YKA	**Yellowknife Ar**	**38.84**	**45**	P		**P**	**00 43 16.0**		**-0.7**
	comp=Z,1.0nm,0.6s,baz=265,slow=8.8,SNR=7.0								
SONM	**Songino Array**	**40.49**	**290**	P		**P**	**00 43 33.1**		**+2.2**
	comp=Z,0.8nm,0.6s,baz=63,slow=7.9,SNR=6.2								
SONM	**Songino Array**	**40.49**	**290**	P		**P**	**00 43 32.9**		**+2.0**
SONM						pmax	pmax		
	comp=Z,1.0nm,0.6s								
SONM	**Songino Array**	**40.49**	**290**	P		**P**	**00 43 32.9**		**+2.0**
EUNU	**Eureka**	**40.75**	**15**	P		**P**	**00 43 32.4**		**-0.1**
NVAR	**Mina Array Bea**	**49.43**	**77**	P		**P**	**00 44 41.8**		**-0.3**
	comp=Z,0.3nm,0.7s,baz=292,slow=9.5,SNR=2.3								
LAO	**LASA Array**	**51.02**	**61**	P		**P**	**00 44 54.4**		**+0.5**
PDAR	**Pinedale Array**	**51.69**	**67**	P		**P**	**00 44 57.8**		**-1.3**
	comp=Z,0.3nm,0.6s,baz=261,slow=2.8,SNR=4.3								
PDAR	**Pinedale Array**	**51.69**	**67**	P		**P**	**00 44 58.4**		**-0.7**
MK31	**Makanchi Array**	**54.29**	**302**	P		**P**	**00 45 17.8**		**-0.2**
MK31						pmax	pmax		
	comp=Z,4.0nm,1.5s								
MK31	**Makanchi Array**	**54.29**	**302**	P		**P**	**00 45 17.8**		**-0.2**
MK31						IAmb	IAmb	00 45 31.6	
	comp=Z,4.0nm,1.5s								
MKAR	**Makanchi Array**	**54.29**	**302**	P		**P**	**00 45 17.9**		**-0.1**
	comp=Z,0.4nm,0.5s,baz=60,slow=6.1,SNR=7.0								
ARD1	**ARCESS Array S**	**55.62**	**346**	P		**P**	**00 45 27.8**		**+0.6**
ARCES	**ARCESS Array B**	**55.63**	**346**	P		**P**	**00 45 26.5**		**-0.8**
	comp=Z,2.2nm,0.8s,baz=41,slow=7.6,SNR=12								
EYMN	**Ely**	**57.70**	**52**	P		**P**	**00 45 41.8**		**-0.5**
ARU	**Arti**	**58.11**	**323**	P		**P**	**00 45 45.3**		**+0.3**
ARU						pmax	pmax		
	comp=Z,4.0nm,0.6s								
ARU	**Arti**	**58.11**	**323**	P		**P**	**00 45 45.3**		**+0.3**
ARU						IAmb	IAmb	00 45 45.9	
	comp=Z,3.8nm,0.6s								
E38A	**The Farm, Brul**	**58.61**	**53**	P		**P**	**00 45 47.8**		**-0.9**
MNTX	**Cornudas Mount**	**61.71**	**74**	P		**P**	**00 46 10.9**		**+0.7**
MNTX						IAmb	IAmb	00 46 11.2	
	comp=Z,1.9nm,0.8s								
I42A	**Draeger Farm,**	**61.86**	**54**	P		**P**	**00 46 10.4**		**-0.6**
E46A	**Sault Ste Mari**	**62.23**	**49**	P		**P**	**00 46 12.6**		**-0.8**
SCHQ	**Schefferville**	**62.65**	**34**	P		**P**	**00 46 15.3**		**-0.8**
	comp=Z,4.0nm,0.6s,baz=4.3,slow=5.9,SNR=6.0								
SCHQ	**Schefferville**	**62.65**	**34**	P		**P**	**00 46 15.5**		**-0.6**
KKAR	**Karatay Array**	**62.83**	**306**	P		**P**	**00 46 17.8**		**+0.3**
KKAR	**Karatay Array**	**62.83**	**306**	P		**P**	**00 46 17.8**		**+0.3**
FIA1	**FINESS Array S**	**62.97**	**342**	P		**P**	**00 46 18.0**		**-0.1**
FINES	**FINESS Array B**	**62.98**	**342**	P		**P**	**00 46 17.9**		**-0.2**
	comp=Z,1.9nm,0.7s,baz=5.2,slow=6.3,SNR=8.7								
FINES	**FINESS Array B**	**62.98**	**342**	P		**P**	**00 46 18.2**		**+0.1**
ABKAR	**Akbulak array**	**63.02**	**317**	P		**P**	**00 46 19.2**		**+0.6**
ABKAR						IAmb	IAmb	00 46 31.6	
	comp=Z,2.6nm,1.3s								
TX31	**Lajitas Ar. Si**	**64.44**	**75**	P		**P**	**00 46 28.4**		**0.0**
TX32	**Lajitas Array**	**64.44**	**75**	P		**P**	**00 46 28.6**		**+0.2**
TX32						IAmb	IAmb	00 46 28.9	
	comp=Z,1.6nm,0.6s								
TXAR	**Lajitas Array**	**64.44**	**75**	P		**P**	**00 46 28.4**		**0.0**
	comp=Z,1.6nm,0.5s,baz=306,slow=4.7,SNR=20								
NC204	**NORSAR Array S**	**65.41**	**350**	P		**P**	**00 46 34.2**		**0.0**
NB2	**NORSAR Subarra**	**65.60**	**349**	P		**P**	**00 46 35.3**		**0.0**
	comp=Z,1.6nm,0.6s,baz=12,slow=6.9								
NOA	**NORSAR Array B**	**65.60**	**349**	P		**P**	**00 46 35.0**		**-0.3**
	comp=Z,2.6nm,0.7s,baz=14,slow=6.5,SNR=12								
CHGR	**Chuyangaron**	**66.84**	**304**	P		**P**	**00 46 44.7**		**+1.0**
CHGR						IAmb	IAmb	00 46 45.0	
	comp=Z,3.5nm,0.5s								
237A	**Washetta, Mont**	**66.99**	**67**	P		**P**	**00 46 43.8**		**-0.9**
WVT	**Waverly**	**68.21**	**59**	P		**P**	**00 46 52.0**		**-0.3**
WVT						pmax	pmax		
	comp=Z,11nm,1.5s								
WVT	**Waverly**	**68.21**	**59**	P		**P**	**00 46 52.0**		**-0.3**
WVT						IAmb	IAmb	00 47 07.4	
	comp=Z,11nm,1.5s								
L56A	**Greenwood**	**68.58**	**48**	P		**P**	**00 46 54.3**		**-0.3**
L56A						IAmb	IAmb	00 47 11.9	
	comp=Z,2.4nm,0.8s								
BATG	**Bathurst New B**	**69.17**	**38**	P		**P**	**00 46 57.3**		**-0.8**
CPCT	**Cooper Cave**	**70.45**	**57**	P		**P**	**00 47 05.7**		**-0.4**
LMN	**Caledonia Moun**	**70.83**	**38**	P		**P**	**00 47 07.3**		**-1.0**
T57A	**Hurt**	**71.86**	**53**	P		**P**	**00 47 14.0**		**-0.7**
T57A						IAmb	IAmb	00 47 14.6	
	comp=Z,12nm,1.3s								
AKASG	**Malin Array Be**	**72.19**	**336**	P		**P**	**00 47 16.4**		**+0.1**
	comp=Z,2.1nm,0.6s,baz=26,slow=6.1,SNR=5.2								
BUR08	**Bucovina Ar. S**	**76.01**	**337**	P		**P**	**00 47 40.0**		**+1.1**
BURAR	**Bucovina Array**	**76.04**	**337**	P		**P**	**00 47 40.2**		**+1.1**
GEC2	**GERESS Array S**	**77.14**	**345**	P		**P**	**00 47 46.2**		**+1.0**
GEC2						IAmb	IAmb	00 48 00.0	
	comp=Z,5.0nm,1.3s								
GERES	**GERESS Array B**

MAJO Matsushiro 1.59 285 Pn Pn 00 53 55.1 +1.0
MAT Matsushiro 1.59 285 P Pn 00 53 54.8 +0.8
MAT S Sn 00 54 14.7 +0.9
MJB9 Matsu-Tunnel 1.60 285 Pn 00 53 55.7 +1.6
JMM Marumori 1.79 17 Pn Pn 00 53 58.4 +1.7
JSG Sagara 2.16 228 Pn 00 54 03.5 +1.9
JGF Kuroka 2.31 257 Pn 00 54 05.6 +1.9
JSD Sado 2.40 322 Pn Pn 00 54 06.2 +1.4
INU Inuyama 2.65 253 Pn Pn 00 54 09.7 +1.5
JHJ Hachijo jima 2 3.04 185 P Pn 00 54 14.4 +0.8
190nm,0.3s,baz=305,slow=19,SNR=32
JHJ S Sn 00 54 48.4 -0.4
807nm,0.3s,baz=82,slow=23,SNR=8.1
JHJ LR LR 00 55 07.9
comp=Z,871nm,20.6s,baz=47,slow=33
JHJ2 Mitsune 3.04 185 Pn Pn 00 54 13.7 +0.1
JWT Wachi 3.94 259 Pn Pn 00 54 26.9 +1.1
JTM Tenmabayashi 4.69 9 Pn Pn 00 54 38.0 +2.0
JMN Monobe 5.67 247 Pn Pn 00 54 50.5 +1.0
JHS Saijyo 5.82 261 Pn Pn 00 54 53.3 +1.6
ERM Erimo 6.31 21 ceP Pn 00 54 57.8 -0.4
ERM pmax pmax
comp=Z,67nm,0.7s
ERM Erimo 6.31 21 Pn Pn 00 54 57.9 -0.4
JEW Eniwo 6.76 8 Pn Pn 00 55 06.5 +2.1
ASAJ Asahikawa 8.18 13 P Pn 00 55 23.7 -0.1
comp=Z,3.4nm,0.3s,baz=198,slow=15,SNR=9.5
ASAJ S Sn 00 56 52.5 -2.1
comp=Z,7.1nm,0.3s,baz=270,slow=29,SNR=7.0
ASAJ LR LR 00 59 16.0
comp=Z,224nm,21.2s,baz=212,slow=42
ASAJ Asahikawa 8.18 13 P Pn 00 55 24.1 +0.3
JKA Kamikawa-asahi 8.18 13 Pn Pn 00 55 24.1 +0.3
JNU Nakatsue 8.19 251 P Pn 00 55 25.8 +1.7
comp=Z,5.9nm,0.3s,baz=28,slow=6.8,SNR=58
JNU LR LR 00 58 54.7
comp=Z,1μm,19.0s,baz=66,slow=40
JNU Nakatsue 8.19 251 Pn Pn 00 55 24.8 +0.7
NMR Nemuro--Hokkai 8.40 29 eP Pn 00 55 24.5 -2.3
NMR i S Sn 00 56 52.6 -7.4
GRPR Tuman 8.95 27 eP Pn 00 55 32.0 -2.3
GRPR i S Sn 00 57 06.4 -7.0
GRPR pmax pmax
comp=Z,135nm,0.4s
GRPR pmax pmax
comp=N,160nm,0.3s
JCJ Chichijima 9.20 168 Pn Pn 00 55 34.3 -3.5
TEY Ternei 9.27 344⇑ eP Pn 00 55 44.5 +5.8
TEY pmax pmax
comp=Z,40nm,0.9s
TEY pmax pmax
comp=E,20nm,0.9s
TEY pmax pmax
comp=N,40nm,0.8s
KSRS Korea Array 9.87 281 P Pn 00 55 50.3 +3.4
comp=N,3.2nm,0.3s,baz=93,slow=14,SNR=21
KSRS LR LR 00 59 30.0
comp=N,871nm,19.8s,baz=102,slow=36
KS19 Wonju Array Si 9.92 281 Pn 00 55 48.7 +1.1
USA0B Ussuriysk Arra 10.16 325 i P Pn 00 55 53.1 +2.3
USA0B Ussuriysk Arra 10.16 325 Pn Pn 00 55 52.2 +1.3
USRK Ussuriysk Ar. 10.16 325 P Pn 00 55 53.0 +2.2
baz=141,slow=12,SNR=24
USRK LR LR 00 59 21.2
comp=N,634nm,22.0s,baz=128,slow=34
USRK Ussuriysk Ar. 10.16 325 P Pn 00 55 53.7 +2.8
USRK Ussuriysk Ar. 10.16 325 Pn Pn 00 55 53.7 +2.8
KUR Kuril'sk 10.81 31 i P Pn 00 55 58.9 -0.7
YSS Yuzh-Sakhalins 10.97 10 eP Pn 00 56 02.5 +0.6
YSS eS Sn 00 58 00.5 -2.3
YSS pmax pmax
comp=Z,40nm,0.7s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS MLR MLR
comp=E,200nm,14.0s
YSS Yuzh-Sakhalins 10.97 10 Pn Pn 00 56 02.0 +0.1
MDJ Mudanjiang 11.65 320 P Pn 00 56 12.4 +1.2
MDJ sP 00 56 32.0
MDJ S Sn 00 58 21.1 +1.6
MDJ pmax pmax
comp=E,49nm,0.9s
MDJ pmax pmax
comp=E,32nm,3.6s
MDJ LR LR
comp=E,530nm,14.2s
MDJ LR LR
comp=E,520nm,15.0s
MDJ LR LR
comp=E,780nm,19.2s
MDJ Mudanjiang 11.65 320 Pn Pn 00 56 14.1 +2.9
CN2 Changchun 13.59 309 eP Pn 00 56 38.2 +0.8
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 LR LR
comp=E,600nm,16.0s
CN2 LR LR
comp=E,400nm,16.0s
CN2 LR LR
comp=E,400nm,17.0s
SNY Shenyang 14.05 299 ⇓P Pn 00 56 43.8 +0.2
SNY S Sn 00 59 11.8 -6.1
SNY pmax pmax
comp=E,41nm,1.3s
SNY pmax pmax
comp=E,120nm,4.3s
SNY LR LR
comp=E,500nm,11.0s
SNY LR LR
comp=E,550nm,13.7s
SNY LR LR
comp=E,530nm,13.7s
KLR Kul'dur 14.44 337 P Pn 00 56 47.9 -0.6
comp=E,0.6nm,0.3s,baz=141,slow=13,SNR=11
KLR Kul'dur 14.44 337 ceP Pn 00 56 48.1 -0.4
TYV Tymovskoe 14.82 6 eP Pn 00 56 51.0 -2.5
TYV eS Sn 00 59 33.2 -3.2
TYV pmax pmax
comp=Z,15nm,1.0s
TYV smax smax
comp=N,17nm,1.3s
TYV MLR MLR
comp=N,900nm,13.0s
GRNR Gornyy 14.85 351⇑ iP Pn 00 56 49.9 -4.1
GRNR eS Sn 00 59 31.4 -5.9
GRNR pmax pmax
comp=Z,6.0nm,0.9s
GRNR smax smax
comp=N,4.0nm,0.7s
GRNR MLR MLR
comp=E,280nm,12.0s
GRNR MLR MLR
comp=N,190nm,11.0s
DL2 Dalian 14.93 286 P P 00 56 59.2 +0.2
DL2 sP Pn 00 57 21.4 +26
DL2 eS Sn 00 59 43.4 +4.2
DL2 pmax pmax
comp=N,120nm,0.8s
DL2 pmax pmax
comp=N,220nm,6.6s
DL2 LR LR
comp=N,720nm,14.4s
DL2 LR LR
comp=N,680nm,17.2s
DL2 LR LR
comp=N,640nm,16.9s
OKH Okha 17.51 6 deP Pn 00 57 25.5 -1.7
OKH eS Sn 01 00 29.2 -12
OKH smax smax
comp=E,100nm,10.8s
OKH MLR MLR
comp=Z,100nm,14.0s
NJ2 Nanjing 18.07 263 eP P 00 57 33.2 -0.7
NJ2 pmax pmax
comp=Z,38nm,0.8s
NJ2 LR LR
comp=Z,250nm,17.0s
NJ2 LR LR
comp=Z,590nm,14.2s
NJ2 LR LR
comp=Z,410nm,16.6s
SKR Severo-Kuril's 18.54 33 eP Pn 00 57 41.1 +1.4
SKR eS S 01 01 05.6 -0.6
SKR pmax pmax
comp=Z,43nm,1.4s
SKR MLR MLR
comp=Z,100nm,21.0s
TIA Tai'an 18.56 277 P P 00 57 38.3 -0.9
TIA pmax pmax
comp=Z,38nm,1.2s
BJI Beijing 19.23 289 P P 00 57 44.6 -1.8
BJI S Sn 01 01 19.7 -3.3
BJI pmax pmax
comp=Z,52nm,1.0s
BJI LR LR
comp=Z,100nm,5.3s
BJI LR LR
comp=Z,180nm,16.8s
BJI LR LR
comp=Z,190nm,17.1s
BJT Baijiatuau 19.23 289 P P 00 57 45.5 -1.0
BJT pmax pmax
comp=Z,53nm,0.9s
BJT Baijiatuau 19.23 289 P P 00 57 45.5 -1.0
BJT IAmb IAmb 00 57 53.9
comp=Z,53nm,0.9s
ZEA Zeya 19.75 337 eP Pn 00 57 52.4 -1.7
ZEA pmax pmax
comp=N,50nm,0.8s
ZEA pmax pmax
comp=E,30nm,0.8s
ZEA pmax pmax
comp=Z,70nm,0.7s
YHNB Yeheng 19.77 240 P 00 57 51.7 -0.9
HIA Hailar 19.82 318 P P 00 57 52.1 -0.8
HIA pmax pmax
comp=Z,15nm,0.7s
HIA Hailar 19.82 318 P P 00 57 52.1 -0.8
SSLB Suanglung 20.63 239 P P 00 57 59.7 -2.1
SSLB IAmb IAmb 00 58 09.3
comp=Z,58nm,1.3s
YULB Yu-li 20.66 237 P P 00 58 00.6 -1.6
PETK Petropavlovsk- 20.97 31 P P 00 58 06.4 +1.1
comp=Z,3.9nm,0.8s,baz=207,slow=9.3,SNR=4.7
PETK LR LR 01 05 59.5
comp=Z,122nm,20.2s,baz=223,slow=36
PETK Petropavlovsk- 20.97 31 P P 00 58 06.0 +0.8
TPUB Ta-pu 21.18 238 P P 00 58 07.3 -0.4
TPUB IAmb IAmb 00 58 13.1
comp=Z,90nm,1.0s
TWG Pinlang 21.20 236 P P 00 58 05.6 -2.3
TWG IAmb IAmb 00 58 12.1
comp=Z,53nm,0.7s
WHN Wuhan 22.21 263 ⇓P P 00 58 17.5 -1.2
WHN S S 01 02 16.3 -2.8
WHN LR LR
comp=Z,630nm,16.6s
WHN LR LR
comp=Z,650nm,11.5s
WHN LR LR
comp=Z,980nm,15.3s
HHC Hu-ho-hao-te 22.79 291 eP P 00 58 24.9 0.0
HHC PP PnPn 00 58 57.1 +5.3
HHC S S 01 02 24.3 -4.5
HHC SS SnSn 01 03 12.8 +7.5
HHC pmax pmax
comp=Z,41nm,1.2s
HHC pmax pmax
comp=Z,130nm,6.5s
HHC LR LR
comp=Z,180nm,10.0s
HHC LR LR
comp=Z,170nm,11.4s
HHC LR LR
comp=Z,260nm,14.4s
BTO Baotou 23.95 290 eP P 00 58 32.9 -3.0
MA2 Magadan 24.44 13 P P 00 58 41.1 +1.2
comp=Z,19nm,0.5s,baz=202,slow=12,SNR=4.3
MA2 Magadan 24.44 13 P P 00 58 41.2 +1.2
MA2 pmax pmax
comp=Z,34nm,0.7s
MA2 Magadan 24.44 13 P P 00 58 41.2 +1.2
MA2 IAmb IAmb 00 58 48.6
comp=Z,34nm,0.7s
XAN Xi'an 25.56 274 P P 00 58 49.2 -1.3
XAN pP pP 00 59 03.7 -2.9
XAN PP PnPn 00 59 30.8 +1.2
XAN S S 01 03 08.4 -5.0
XAN SS SnSn 01 04 20.2 +7.1
XAN pmax pmax
comp=Z,61nm,0.8s
XAN pmax pmax
comp=Z,200nm,4.1s
XAN LR LR
comp=Z,200nm,15.5s
XAN LR LR
comp=Z,290nm,13.3s
XAN LR LR
comp=Z,260nm,14.9s
XAN Xi'an 25.56 274 IAmb IAmb 00 58 51.6
comp=Z,38nm,0.8s
YAK Yakutsk 26.72 349 P P 00 59 00.3 -0.2
comp=Z,21nm,0.6s,baz=66,slow=1.4,SNR=6.5
YAK Yakutsk 26.72 349 eP P 00 59 00.1 -0.4
YAK e*PP pP 00 59 17.6 +0.9
YAK eS S 01 03 29.2 -1.8
YAK pmax pmax
comp=Z,25nm,0.6s
YAK pmax pmax
comp=N,17nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK smax smax
comp=E,44nm,1.6s
YAK smax smax
comp=N,25nm,1.4s
YAK Yakutsk 26.72 349 P P 00 58 59.9 -0.7
YAK IAmb IAmb 00 59 02.3
comp=Z,42nm,0.7s
ULN Ulaanbaatar 27.01 306 ceP P 00 59 03.4 -0.1
ULN pmax pmax
comp=Z,24nm,1.3s
ULN Ulaanbaatar 27.01 306 P P 00 59 02.6 -1.0
SONM Songino Array 27.43 306 P P 00 59 06.8 -0.5
comp=Z,12nm,0.6s,baz=106,slow=8.6,SNR=47
SONM LR LR 01 10 10.0
comp=Z,284nm,20.5s,baz=109,slow=36
SONM Songino Array 27.43 306 P P 00 59 06.0 -1.3
BOD Bodaibo 27.74 330 eP P 00 59 04.8 -5.0
BOD pmax pmax
comp=Z,35nm,0.8s
SEY Seymchan 27.86 12 P P 00 59 12.2 +1.5
comp=Z,3.8nm,0.7s,baz=198,slow=5.3,SNR=5.5
SEY Seymchan 27.86 12 i P P 00 59 09.9 -0.9
H11N2 WAKE ISLAND Hy 28.62 118 T T 01 29 30.1
baz=310,slow=75,SNR=76
H11N1 WAKE ISLAND Hy 28.63 118 T T 01 29 34.9
baz=310,slow=75,SNR=73
H11N3 WAKE ISLAND Hy 28.64 118 T T 01 29 28.9
baz=310,slow=75,SNR=87
LZH Lanzhou 29.20 281 eP P 00 59 22.2 -1.0
LZH pP pP 00 59 41.8 +2.3
LZH SS SS 01 05 43.8 -33
LZH pmax pmax
comp=Z,25nm,0.7s
LZH pmax pmax
comp=Z,110nm,4.3s
LZH LR LR
comp=Z,180nm,13.7s
LZH LR LR
comp=Z,330nm,13.8s
LZH LR LR
comp=Z,230nm,15.7s
H11S1 WAKE ISLAND Hy 29.29 120 T T 01 30 15.9
baz=314,slow=76,SNR=77
H11S3 WAKE ISLAND Hy 29.29 120 T T 01 30 14.2
baz=314,slow=76,SNR=62
H11S2 WAKE ISLAND Hy 29.30 120 T T 01 30 13.1
baz=314,slow=76,SNR=80
ZAK Zakamensk 30.02 310 eP P 00 59 29.0 -1.2
ZAK pmax pmax
comp=Z,5.0nm,1.1s
GYA Guiyang 30.05 261 ⇓P P 00 59 29.8 -0.9
GYA S S 01 04 17.1 -7.2
GYA pmax pmax
comp=Z,110nm,0.9s
GYA pmax pmax
comp=Z,130nm,4.1s
GYA LR LR
comp=Z,240nm,18.3s
TLY Talaya 30.14 313 eP P 00 59 32.3 +1.1
TLY eS S 01 04 31.1 +6.0
TLY pmax pmax
comp=Z,26nm,0.9s
TLY MLR MLR
comp=Z,387nm,15.0s
TLY Talaya 30.14 313 P P 00 59 31.5 +0.3
CD2 Chengdu 30.64 271 P P 00 59 33.9 -1.9
CD2 pmax pmax
comp=Z,60nm,0.9s
CD2 pmax pmax
comp=Z,200nm,4.7s
CD2 LR LR
comp=Z,260nm,12.2s
CD2 LR LR
comp=Z,380nm,16.1s
CD2 LR LR
comp=Z,370nm,20.1s
QIZ Qiongzhong 31.62 245 P P 00 59 44.4 0.0
QIZ pP pP 01 00 00.1 -0.7
QIZ S S 01 04 47.4 -1.3
QIZ sS sS 01 05 15.9 -0.8
QIZ LR LR
comp=Z,190nm,11.2s
QIZ LR LR
comp=Z,190nm,9.0s
GTA Gaotai 31.84 288 P P 00 59 46.0 -0.4
GTA pP pP 01 00 04.4 +1.6
GTA sP sP 01 00 14.2 +3.5
GTA pmax pmax
comp=Z,12nm,1.1s
GTA pmax pmax
comp=Z,43nm,4.6s
GTA LR LR
comp=Z,150nm,18.5s
GTA LR LR
comp=Z,100nm,18.5s
GTA LR LR
comp=Z,250nm,18.9s
DAV Davao City (W) 31.86 208 LR LR 01 10 04.1
comp=Z,130nm,20.4s,baz=12,slow=31
KMI Kunming 33.80 262 ⇓eP P 01 00 03.0 -0.8
KMI pP pP 01 00 23.2 +3.0
KMI sP sP 01 00 28.3 +0.2
KMI pmax pmax
comp=Z,78nm,1.0s
KMI LR LR
comp=Z,170nm,22.0s
KMI LR LR
comp=Z,190nm,15.2s
KMI LR LR
comp=Z,230nm,14.3s
SLVN Son La 34.80 255 P P 01 00 12.1 -0.1
SLVN IAmb IAmb 01 00 12.9
comp=Z,16nm,1.1s
BILL Bilibino 35.17 17 eP P 01 00 15.3 +0.5
BILL e 01 01 34.6
BILL e 01 02 43.6
BILL pmax pmax
comp=Z,7.0nm,1.1s
BILL MLR MLR
comp=Z,172nm,22.0s
TIXI Tiksi 36.05 354 ceP P 01 00 21.0 -1.3
TIXI pmax pmax
comp=Z,41nm,1.0s
TIXI Tiksi 36.05 354 P P 01 00 22.1 -0.2
UBPT Khong Chiam 37.22 245 P P 01 00 33.4 +0.5
comp=Z,14nm,1.2s
UBPT Khong Chiam 37.22 245 P P 01 00 33.3 +0.5
NONG Nongkai 37.24 251 P P 01 00 33.0 0.0
comp=Z,85nm,0.8s
SIJI Sorong 37.74 195 LR LR 01 12 42.1
comp=Z,101nm,21.5s,baz=332,slow=31
KHON Khomkaen 38.52 249 P P 01 00 44.4 +0.6
comp=Z,68nm,1.0s
PAYA Payao 39.04 256 P P 01 00 52.0 +3.8
comp=Z,8μmcomp=Z,141nm,0.9s
UTTA Uttaradit 39.42 253 P P 01 00 51.0 -0.3
comp=Z,20nm,0.9s
CHAI Chaiyaphum 39.42 249 P P 01 00 51.0 -0.4
comp=Z,582nmcomp=Z,68nm,1.0s
FAKI Fak Fak 39.56 192 P P 01 00 51.6 -0.8
comp=Z,25nm,0.9s
FAKI Fak Fak 39.56 192 P P 01 00 52.4 0.0
FAKI IAmb IAmb 01 01 00.1
comp=Z,18nm,0.7s
LAMP Lampang 39.69 255 P P 01 00 57.0 +3.4
comp=Z,1μmcomp=Z,48nm,0.7s
CM34 Chiang Mai Arr 39.88 256 P P 01 00 55.0 -0.2
CM33 Chiang Mai Arr 40.06 256 P P 01 00 56.0 -0.7
CMMT Chiang Mai 40.06 256 P P 01 00 56.6 -0.1
comp=Z,5.7nm,1.0s
CHTO Chiang Mai 40.07 256 P P 01 00 55.9 -0.8
CHTO pmax pmax
comp=Z,11nm,1.1s
CHTO Chiang Mai 40.07 256 P P 01 00 55.9 -0.8
CM32 Chiang Mai Arr 40.23 256 P P 01 00 58.0 -0.1
CM31 Chiang Mai Arr 40.27 255 P P 01 00 59.0 +0.6
CMAR Chiang Mai Arr 40.27 255 P P 01 00 58.0 -0.3
comp=Z,4.0nm,0.6s,baz=48,slow=6.4,SNR=15
CMAR PcP PcP 01 03 02.2 +1.2
comp=Z,2.1nm,0.8s,baz=39,slow=2.7,SNR=7.1
CMAR LR LR 01 19 24.6
comp=Z,131nm,18.2s,baz=94,slow=39
CMAR Chiang Mai Arr 40.27 255 P P 01 00 57.4 -1.0
CMAR PcP 01 03 02.2 +1.2
CM01 Chiang Mai Arr 40.27 255 P P 01 01 00.4 +2.0
comp=Z,92nmcomp=Z,12nm,0.9s
WMQ Urumqi 40.32 298 eP P 01 00 59.8 +1.2
WMQ pP pP 01 01 17.2 +1.8
WMQ sP sP 01 01 22.3 -1.0
WMQ pmax pmax
comp=Z,79nm,0.9s
WMQ pmax pmax
comp=Z,260nm,3.7s
WMQ LR LR
comp=Z,320nm,26.5s
WMQ LR LR
comp=Z,290nm,22.5s
SRAK Srakaew 40.56 247 P P 01 00 57.5 -3.3
comp=Z,2μmcomp=Z,185nm,1.2s
MHMT Maesarieng 41.22 256 P P 01 01 08.4 +2.3
comp=Z,2μmcomp=Z,21nm,1.3s
LSA Lhasa 41.26 276 P P 01 01 07.8 +0.8
LSA pmax pmax
comp=Z,230nm,1.6s
LSA Lhasa 41.26 276 P P 01 01 08.2 +1.2
UTHA Uthaitani 41.57 251 P P 01 01 09.7 +0.6
comp=Z,18nm,1.0s
ZAA0 Zalesovo Array 41.75 313 P P 01 01 09.7 -0.4
ZALV Zalesovo Beam 41.75 313 P P 01 01 10.4 +0.3
comp=Z,22nm,0.8s,baz=90,slow=6.9,SNR=111
ZALV PcP PcP 01 03 05.5 +0.2
comp=Z,4.3nm,0.7s,baz=100,slow=3.1,SNR=4.7
ZALV LR LR 01 18 55.2
comp=Z,60nm,20.6s,baz=81,slow=36
ZALV Zalesovo Beam 41.75 313 P P 01 01 09.4 -0.7
KRVT Keravat (AS076 41.76 162 LR LR 01 17 35.1
comp=Z,37nm,19.4s,baz=350,slow=35
ZSN Zaisan 41.89 303 eP P 01 01 11.5 +0.1
comp=Z,34nm,1.0s,baz=303
ZSN Zaisan 41.89 303 eP P 01 01 11.5 +0.1
ZSN pmax pmax
comp=Z,34nm,1.0s
SHL Shillong 42.36 269 P P 01 01 14.5 -1.1
SHL pmax pmax
comp=Z,18nm,0.7s
SHL Shillong 42.36 269 P P 01 01 14.5 -1.1
SHL IAmb IAmb 01 01 16.5
comp=Z,18nm,0.7s
PHET Kaeng Krachan 43.07 248 P P 01 01 22.1 +0.8
NRIK Noril'sk 43.64 336 P P 01 01 25.1 -0.1
comp=Z,12nm,0.9s,baz=119,slow=7.9,SNR=20
NRIK PcP PcP 01 03 12.0 +0.7
comp=Z,5.2nm,0.8s,baz=139,slow=4.2,SNR=3.8
NRIK Noril'sk 43.64 336 ceP P 01 01 25.3 +0.1
NRIK pmax pmax
comp=Z,16nm,1.0s
MK31 Makanchi Array 43.71 303 ceP P 01 01 26.6 +0.4
MKAR Makanchi Array 43.71 303 P P 01 01 26.8 +0.6
comp=Z,29nm,0.8s,baz=91,slow=10.0,SNR=150
MKAR PcP PcP 01 03 12.0 0.0
comp=Z,2.8nm,0.8s,baz=71,slow=6.2,SNR=2.8
MKAR Makanchi Array 43.71 303 P P 01 01 26.3 +0.1
MAKZ Makanchi 43.92 303 P P 01 01 28.2 +0.3
MAKZ pmax pmax
comp=Z,44nm,0.9s

MAKZ **Makanchi** 43.92 303 P **P** **01 01 28.2 +0.3**
KSM **Kuching** 44.19 225 P **P** **01 01 30.0 -0.3**
BNSI **Bone** 44.48 209 P **P** **01 01 33.6 +1.1**
comp=Z,24nm,1.1s
TAPN **Taplejung** 44.97 274 *eP* **P** **01 01 37.1 +0.4**
comp=Z,26nm,0.4s
KAPI **Kappang** 45.18 209 P **P** **01 01 36.9 -1.2**
KAPI pmax pmax
comp=Z,26nm,1.1s
KAPI **Kappang** 45.18 209 P **P** **01 01 36.9 -1.2**
KAPI IAmb IAmb 01 01 49.9
comp=Z,26nm,1.1s
ODAN **Odare** 45.43 274 *eP* **P** **01 01 40.2 -0.2**
comp=Z,14nm,0.3s
KURK **Kurchatov** 45.66 309 P **P** **01 01 41.3 -0.2**
KURK **Kurchatov** 45.66 309 *ceP* **P** **01 01 41.3 -0.2**
KURK pmax pmax
comp=Z,111nm,1.0s
KURK **Kurchatov** 45.66 309 P **P** **01 01 41.4 -0.2**
KURBB **Kurchatov Arra** 45.73 309 P **P** **01 01 41.8 -0.3**
RAMN **Ramite** 46.03 274 *eP* **P** **01 01 45.0 -0.1**
comp=Z,154nm,0.8s
GUN **Gumba** 46.21 276 *eP* **P** **01 01 46.8 +0.2**
PDGK **Podgornoye** 46.27 298 P **P** **01 01 46.6 -0.1**
SHLS **Shalkode** 46.33 298 *eP* **P** **01 01 44.2 -2.9**
comp=Z,36nm,1.6s,baz=298
SHLS **Shalkode** 46.33 298 *eP* **P** **01 01 44.2 -2.9**
SHLS pmax pmax
comp=Z,36nm,1.6s
TDK **Taldyqorghan** 46.69 301 *eP* **P** **01 01 49.6 -0.1**
comp=Z,19nm,0.7s,baz=301
TDK **Taldyqorghan** 46.69 301 *eP* **P** **01 01 49.6 -0.1**
TDK pmax pmax
comp=Z,19nm,0.7s
PKI **Pulchoki** 46.73 276 *eP* **P** **01 01 50.5 -0.2**
comp=Z,64nm,0.9s
PKIN **Phulchoki** 46.74 276 *eP* **P** **01 01 50.5 -0.2**
comp=Z,54nm,0.8s
KKN **Kakani** 46.74 276 *eP* **P** **01 01 50.9 +0.3**
comp=Z,131nm,1.0s
KPKS **Kokpek** 46.82 299 *eP* **P** **01 01 50.3 -0.6**
comp=Z,12nm,0.8s,baz=298
KPKS **Kokpek** 46.82 299 *eP* **P** **01 01 50.3 -0.6**
KPKS pmax pmax
comp=Z,12nm,0.8s
PBKI **Pangkalan Bun** 46.90 221 P **P** **01 01 50.4 -1.2**
comp=Z,317nm,0.6s
DMN **Daman** 46.96 276 *eP* **P** **01 01 52.5 +0.1**
SATY **Saty** 47.11 298 *eP* **P** **01 01 53.0 -0.2**
comp=Z,6.4nm,0.9s,baz=298
SATY **Saty** 47.11 298 *eP* **P** **01 01 53.0 -0.2**
SATY pmax pmax
comp=Z,6.0nm,0.9s
GKN **Gorkha** 47.17 277 *eP* **P** **01 01 54.1 +0.2**
comp=Z,227nm,0.8s
PRZ **Przheval'sk** 47.25 297 P **P** **01 01 54.7 +0.3**
PRZ pmax pmax
comp=Z,48nm,0.9s
PRZ **Przheval'sk** 47.25 297 P **P** **01 01 54.6 +0.3**
A21K **Barrow** 47.68 23 IAmb IAmb 01 02 16.1
comp=Z,15nm,0.9s
DANN **Dangsing** 47.73 277 *eP* **P** **01 01 58.9 +0.5**
comp=Z,367nm,0.9s
IPM **Ipoh** 47.79 238 P **P** **01 01 58.0 -0.7**
MYKOM **Kota Tinggi** 47.90 233 P **P** **01 01 58.0 -1.4**
SOEI **Soe** 48.04 201 P **P** **01 01 59.5 -1.1**
KOLN **Koldanda** 48.10 277 *eP* **P** **01 02 01.3 +0.1**
AAA **Alma-Ata** 48.13 299 *eP* **P** **01 02 01.3 +0.3**
baz=299
AAA **Alma-Ata** 48.13 299 *eP* **P** **01 02 01.3 +0.3**
KDJ **Kajisay** 48.21 297 IAmb IAmb 01 02 06.5
comp=Z,17nm,0.8s
KUU **Kurty** 48.37 300 *eP* **P** **01 02 02.3 -0.5**
baz=300
KUU **Kurty** 48.37 300 *eP* **P** **01 02 02.3 -0.5**
PYUN **Piuthan** 48.45 277 *eP* **P** **01 02 04.4 +0.5**
comp=Z,481nm,1.1s
BOOM **Boomskoye usch** 49.01 298 P **P** **01 02 07.8 -0.1**
BOOM pmax pmax
comp=Z,16nm,0.8s
BOOM **Boomskoye usch** 49.01 298 P **P** **01 02 07.8 -0.1**
BOOM IAmb IAmb 01 02 19.2
comp=Z,16nm,0.8s
BPAW **Bear Paw Mtn.** 49.03 33 P **P** **01 02 08.2 +0.6**
TKM2 **Tokmak 2** 49.14 299 P **P** **01 02 10.1 +1.1**
SNR=37
TKM2 **Tokmak 2** 49.14 299 P **P** **01 02 09.6 +0.6**
MTN **Manton Dam** 49.46 192 P **P** **01 02 11.5 +0.2**
MTN IAmb IAmb 01 02 17.6
comp=Z,27nm,1.1s
BRZS **Berezniki** 49.54 308 *eP* **P** **01 02 10.7 -1.0**
comp=Z,8.5nm,1.2s,baz=308
BRZS **Berezniki** 49.54 308 *eP* **P** **01 02 10.6 -1.0**
BRZS pmax pmax
comp=Z,9.0nm,1.2s
KBK **Karagaybulak** 49.67 299 P **P** **01 02 13.9 +0.9**
SNR=42
SGDS **Sogindy** 49.68 300 *eP* **P** **01 02 12.7 -0.3**
comp=Z,11nm,1.1s,baz=300
SGDS **Sogindy** 49.68 300 *eP* **P** **01 02 12.6 -0.3**
SGDS pmax pmax
comp=Z,11nm,1.1s
CHMS **Chumysh** 49.72 299 P **P** **01 02 13.7 +0.5**
SNR=13
TOLK **Toolik Lake Re** 49.73 27 IAmb IAmb 01 03 19.2
comp=Z,19nm,1.4s
KSH **Kashi** 49.82 294 P **P** **01 02 18.4 +4.3**
KSH sP sP 01 02 49.7 +11
KSH pmax pmax
comp=Z,28nm,0.8s
KSH pmax pmax
comp=Z,350nm,5.2s
USP **Ospenovka** 49.82 299 P **P** **01 02 14.5 +0.5**
SNR=14
AAK **Ala-Archa** 50.00 299 P **P** **01 02 16.1 +0.7**
SNR=13
AAK **Ala-Archa** 50.00 299 *i* P **P** **01 02 15.8 +0.4**
SNR=16
AAK **Ala-Archa** 50.00 299 P **P** **01 02 15.6 +0.2**
AAK **Ala-Archa** 50.00 299 *ceP* **P** **01 02 16.1 +0.7**
AAK pmax pmax
comp=Z,39nm,1.0s
MDM **Murphy Dome** 50.21 32 P **P** **01 02 17.9 +1.4**
MDM IAmb IAmb 01 02 19.7
comp=Z,18nm,0.8s
BRVK **Borovoye** 50.46 313 P **P** **01 02 18.7 +0.2**
BRVK **Borovoye** 50.46 313 *ceP* **P** **01 02 17.9 -0.6**
BRVK pmax pmax
comp=Z,14nm,1.0s
BRVK **Borovoye** 50.46 313 P **P** **01 02 17.9 -0.6**
BRVK IAmb IAmb 01 02 22.4
comp=Z,12nm,0.9s
EKS2 **Erkin-Say** 50.50 299 P **P** **01 02 19.8 +0.6**
SNR=9.0
POKR **Poker Plat Res** 50.55 31 P **P** **01 02 21.0 +2.0**
AML **Almayashu** 50.71 298 P **P** **01 02 22.2 +1.1**
SNR=47
HDA **Harding Lake** 50.79 32 IAmb IAmb 01 02 22.8
comp=Z,11nm,0.8s
IL31 **50.79 32** P **P** **01 02 21.7 +0.8**
IL31 IAmb IAmb 01 02 39.6
comp=Z,16nm,1.0s
ILAR **Eielson Array** 50.79 32 P **P** **01 02 21.9 +1.0**
comp=Z,7.9nm,0.8s,baz=271,slow=6.3,SNR=71
ILAR **Eielson Array** 50.79 32 P **P** **01 02 21.6 +0.7**
BMAR **Burnt Mountain** 51.60 28 P **P** **01 02 29.6 +2.6**
DZA **Taraz** 52.16 300 *eP* **P** **01 02 31.2 -0.3**
baz=300
DZA **Taraz** 52.16 300 *eP* **P** **01 02 31.1 -0.3**
MENT **Mentasta** 52.35 34 P **P** **01 02 33.4 +0.9**
MENT IAmb IAmb 01 02 57.0
comp=Z,15nm,0.8s
KLSI **52.42 227** P **P** **01 02 32.4 -1.2**
comp=Z,5.7nm,0.8s
GSI **Gunungsitoli** 52.45 238 P **P** **01 02 33.9 0.0**
MDSI **Maura Dua** 52.58 227 P **P** **01 02 33.5 -1.3**
comp=Z,14nm,0.9s
KNRA **Kununurra** 52.65 194 P **P** **01 02 35.5 +0.3**
KK31 **Karatay Array** 52.67 300 P **P** **01 02 35.6 +0.4**
KK31 pmax pmax
comp=Z,28nm,1.1s
KK31 **Karatay Array** 52.67 300 P **P** **01 02 35.6 +0.4**
KKAR **Karatay Array** 52.67 300 P **P** **01 02 35.6 +0.4**
KKAR pmax pmax
comp=Z,28nm,1.1s
KKAR **Karatay Array** 52.67 300 P **P** **01 02 35.6 +0.4**

NDI **New Delhi** 52.82 281 *eP* **P** **01 02 36.0 -0.5**
K27K **Chicken** 52.94 33 IAmb IAmb 01 02 53.9
comp=Z,7.8nm,0.9s
BCAR **Beaver Creek A** 53.21 34 P **P** **01 02 40.6 +1.7**
EGAK **Eagle** 53.24 32 P **P** **01 02 40.4 +1.4**
EGAK IAmb IAmb 01 02 59.6
comp=Z,13nm,1.1s
IUG **Iuzhnay** 53.30 299 *eP* **P** **01 02 40.2 +0.1**
comp=Z,45nm,2.1s,baz=299
IUG **Iuzhnay** 53.30 299 *eP* **P** **01 02 40.1 +0.1**
IUG pmax pmax
comp=Z,45nm,2.1s
BTK **Batken** 53.41 297 IAmb IAmb 01 02 47.4
comp=Z,32nm,1.4s
NIL **Nilore** 53.90 288 P **P** **01 02 44.9 +0.4**
NIL **Nilore** 53.90 288 P **P** **01 02 45.1 +0.7**
NIL pmax pmax
comp=Z,18nm,0.8s
NIL **Nilore** 53.90 288 P **P** **01 02 45.1 +0.7**
NIL IAmb IAmb 01 02 52.6
comp=Z,18nm,0.8s
SVE **Sverdlovsk** 55.12 319⇓ *eP* **P** **01 02 53.2 +0.4**
SVE pmax pmax
comp=Z,16nm,0.8s
INK **Inuvik** 55.64 27 P **P** **01 02 58.1 +1.7**
INK pmax pmax
comp=Z,10.0nm,1.4s
INK **Inuvik** 55.64 27 IAmb IAmb 01 02 58.9
comp=Z,7.2nm,0.8s
FITZ **Fitzroy Crossi** 55.67 197 IAmb IAmb 01 02 58.9
comp=Z,17nm,1.2s
WB0 **Warramunga Arr** 55.88 187 IAmb IAmb 01 03 05.1
comp=Z,19nm,1.1s
WRAB **Tennant Creek** 56.04 187 *ceP* **P** **01 02 59.3 -0.5**
WRAB pmax pmax
comp=Z,14nm,1.3s
WRAB **Tennant Creek** 56.04 187 P **P** **01 02 59.0 -0.8**
WRAB IAmb IAmb 01 03 06.5
comp=Z,17nm,1.1s
WR0 **Warramunga Arr** 56.05 186 IAmb IAmb 01 03 07.0
comp=Z,12nm,0.6s
WB2 **Warramunga Arr** 56.05 187 IAmb IAmb 01 03 06.5
comp=Z,20nm,1.1s
WRA **Warramunga Arr** 56.05 187 P **P** **01 02 59.5 -0.4**
comp=Z,6.4nm,0.4s,baz=1.8,slow=7.6,SNR=312
WRA ScP **ScP** **01 07 50.0 -0.5**
comp=Z,0.4nm,0.8s,baz=9.1,slow=4.2,SNR=2.9
WRA LR LR 01 26 52.8
comp=Z,36nm,20.1s,baz=25,slow=36
WRA **Warramunga Arr** 56.05 187 P **P** **01 02 58.4 -1.5**
ARU **Arti** 56.33 319 *ci* P **P** **01 03 01.4 -0.1**
ARU *PP **pP** **01 03 20.1 +1.0**
ARU 01 03 57.4
ARU 01 05 02.1
ARU S **S** **01 10 49.0 +2.5**
ARU SS **SS** **01 14 33.1 -0.5**
ARU pmax pmax
comp=Z,27nm,0.7s
ARU **Arti** 56.33 319 P **P** **01 03 01.0 -0.5**
KBL **Kabul** 56.76 291 P **P** **01 03 04.8 -0.4**
SNR=7.1
KBL **Kabul** 56.76 291 P **P** **01 03 04.9 -0.3**
KBL pmax pmax
comp=Z,13nm,0.9s
KBL **Kabul** 56.76 291 P **P** **01 03 04.9 -0.3**
KBL IAmb IAmb 01 03 11.2
comp=Z,13nm,0.9s
HYB **Hyderabad** 57.14 268 *i* P **P** **01 03 07.0 -0.8**
ABKAR **Akbulak array** 57.71 310 P **P** **01 03 11.0 -0.4**
C36M **Paulatuk** 58.66 24 P **P** **01 03 18.3 +0.6**
AS31 **Alice Springs** 59.78 187 P **P** **01 03 25.8 -0.1**
ASAR **Alice Springs** 59.78 187 P **P** **01 03 25.7 -0.2**
comp=Z,1.1nm,0.3s,baz=1.3,slow=6.8,SNR=16
ASAR LR LR 01 28 59.6
comp=Z,41nm,20.9s,baz=5.5,slow=36
ASAR PKP2bc 01 33 03.8
comp=Z,1.3nm,0.9s,baz=131,slow=1.8,SNR=9.0
ASAR **Alice Springs** 59.78 187 P **P** **01 03 25.2 -0.7**
DLBC **Dease Lake** 59.96 37 P **P** **01 03 27.7 +0.8**
DLBC IAmb IAmb 01 03 48.1
comp=Z,20nm,1.2s
KIRV **Kirov** 60.32 323 *ceP* **P** **01 03 29.0 -0.2**
PSA00 **Pilbara Seismi** 60.53 202 P **P** **01 03 30.1 -0.9**
SPA0 **Spitsbergen Ar** 61.19 349 *eP* **P** **01 03 36.4 +1.5**
SPITS **Spitsbergen Ar** 61.19 349 P **P** **01 03 36.2 +1.3**
EUNU **Eureka** 61.21 8 P **P** **01 03 35.2 +0.1**
EUNU IAmb IAmb 01 03 36.7
comp=Z,11nm,0.8s
KBS **Kingsbay** 61.35 350 P **P** **01 03 37.4 +1.5**
KBS pmax pmax
comp=Z,31nm,1.1s
KBS **Kingsbay** 61.35 350 P **P** **01 03 37.4 +1.5**
HRA **Herat** 61.92 294 P **P** **01 03 40.7 -0.1**
EIDS **Eidsvold** 62.06 169 P **P** **01 03 40.9 -0.4**
EIDS IAmb IAmb 01 04 41.7
comp=Z,16nm,1.5s
HSPB **Hornsund (broa** 62.09 348 *eP* **P** **01 03 42.0 +1.0**
TMCR **Tamitsa** 63.02 331 *eP* **P** **01 03 47.3 0.0**
TMCR pmax pmax
comp=Z,35nm,0.9s
DZM **Mont Dzumac** 63.03 153 *eP* **P** **01 03 51.7 +3.7**
comp=Z,34nm,1.5s
DZM **Mont Dzumac** 63.03 153 *e* LR LR 01 22 37.9
comp=Z,256nm,32.9s
GEYT **Alibeck** 63.35 299 P **P** **01 03 49.7 -0.3**
comp=Z,9.5nm,0.9s,baz=44,slow=4.5,SNR=16
GEYT LR LR 01 32 35.8
comp=Z,24nm,19.9s,baz=30,slow=37
GEYT **Alibeck** 63.35 299 P **P** **01 03 49.9 -0.1**
GYA0B **ALIBECK ARRAY** 63.35 299 P **P** **01 03 50.1 0.0**
GYA0B IAmb IAmb 01 03 51.5
comp=Z,9.5nm,0.9s
KLMR **Klimovskoe** 63.95 328 *eP* **P** **01 03 49.4 -4.0**
KLMR pmax pmax
comp=Z,26nm,0.9s
KLMR **Klimovskoe** 63.95 328 *eP* **P** **01 03 49.4 -4.0**
KLMR AMP 01 03 53.9
comp=Z,26nm,0.9s
HAMF **Hammerfest** 64.31 341 *eP* **P** **01 03 56.1 +0.4**
ARCES **ARCESS Array B** 64.45 339 P **P** **01 03 57.1 +0.4**
comp=Z,8.9nm,0.8s,baz=59,slow=6.8,SNR=30
ARCES LR LR 01 35 36.0
comp=Z,77nm,19.1s,baz=280,slow=39
YKA **Yellowknife Ar** 65.09 30 P **P** **01 04 01.3 +0.4**
comp=Z,4.9nm,0.8s,baz=305,slow=7.2,SNR=5.7
KTK1 **Kautokeino** 65.42 339 *eP* **P** **01 04 03.4 +0.5**
TRO **Tromso** 66.21 341 *eP* **P** **01 04 07.3 -0.6**
DAG **Danmarks Havn** 66.56 355 *i* P **P** **01 04 10.0 -0.1**
DAG pmax pmax
comp=Z,17nm,0.9s
DAG **Danmarks Havn** 66.56 355 *i* P **P** **01 04 10.0 -0.1**
comp=Z,17nm,0.9s
DAG **Danmarks Havn** 66.56 355 *i* P **P** **01 04 10.0 -0.1**
DAG IAmb IAmb 01 04 11.4
comp=Z,17nm,0.9s
DAG **Danmarks Havn** 66.56 355 *i* P **P** **01 04 10.0 -0.1**
DAG IAmb IAmb 01 04 11.4
comp=Z,17nm,0.9s
MOS **Moscow** 67.34 323 *eP* **P** **01 04 14.8 -0.6**
MOS *e* 01 06 39.7
MOS pmax pmax
comp=Z,41nm,1.0s
VRH **Novokhopyorsk** 67.53 318 *eP* **P** **01 04 15.9 -0.8**
VRH pmax pmax
comp=Z,30nm,0.8s
STKA **Stephens Creek** 67.69 179 P **P** **01 04 17.6 -0.2**
comp=Z,1.6nm,0.3s,baz=358,slow=6.8,SNR=4.9
STKA **Stephens Creek** 67.69 179 P **P** **01 04 18.2 +0.4**
STKA pmax pmax
comp=Z,5.0nm,1.9s
STKA **Stephens Creek** 67.69 179 P **P** **01 04 18.1 +0.4**
OBN **Obninsk** 68.18 323 *eP* **P** **01 04 20.8 +0.2**
OBN *e* 01 04 40.9
OBN *e* 01 06 50.9
OBN pmax pmax
comp=Z,44nm,1.3s
OBN MLR MLR
comp=Z,113nm,20.0s
OBN **Obninsk** 68.18 323 P **P** **01 04 20.6 0.0**
MAK **Makhachkala** 68.18 308 *eP* **P** **01 04 19.1 -1.8**
MAK *eP **pP** **01 04 37.6 -1.4**
MAK *eSP **PcP** **01 04 45.1 -1.3**
MAK *e* 01 06 47.2
MAK *ePPP PPP 01 08 30.0
MAK *eSS **S** **01 13 13.2 -2.6**

MAK *eSS **sS** **01 13 46.0 -1.0**
MAK *eSS **SS** **01 17 42.9 +3.9**
MAK pmax pmax
comp=Z,410nm,1.6s
MAK MLR MLR
comp=Z,88nm,15.0s
LPSR **Galich'ya Gora** 68.31 320 *eP* **P** **01 04 21.2 -0.3**
LPSR pmax pmax
comp=Z,50nm,0.9s
STEI **Steigen** 68.36 341 *eP* **P** **01 04 21.8 +0.3**
DBC **Dubki** 68.58 308⇓ *eP* P 01 04 30.6 +7.1
DBC pmax pmax
comp=Z,13nm,0.4s
BBOO **Buckleboo** 68.71 184 P **P** **01 04 24.0 -0.1**
FAUS **Fauske** 68.73 340 *eP* **P** **01 04 23.8 -0.1**
GNBR **Gunib** 68.81 308⇑ *eP* P 01 04 41.2 +16
GNBR *e* 01 04 54.6
GNBR pmax pmax
comp=Z,10.0nm,0.9s
VSR **Storozhevoye** 68.91 319 *eP* **P** **01 04 24.5 -0.8**
VSR pmax pmax
comp=Z,50nm,1.0s
FIA1 **FINESS Array S** 69.11 332 P **P** **01 04 25.9 -0.5**
FINES **FINESS Array B** 69.11 332 P **P** **01 04 26.4 +0.1**
comp=Z,23nm,0.8s,baz=61,slow=6.7,SNR=54
FINES LR LR 01 35 43.7
comp=Z,112nm,18.6s,baz=69,slow=37
FINES **FINESS Array B** 69.11 332 P **P** **01 04 25.9 -0.5**
GROC **Groznyy** 69.14 309 P **P** **01 04 27.8 +0.9**
GROC pmax pmax
comp=Z,7.0nm,0.2s
BTLR **Botlikh** 69.15 308⇑ *iP* **P** **01 04 31.3 +4.2**
BTLR pmax pmax
comp=Z,16nm,0.7s
MOR8 **Moi Rana** 69.83 339 *eP* **P** **01 04 29.0 -1.7**
GOF **Gofitskoye** 69.90 311⇑ *eP* **P** **01 04 32.2 +0.6**
GOF pmax pmax
comp=Z,30nm,1.0s
BANOM **Banah** 70.50 288 P **P** **01 04 35.9 +0.3**
BANOM **Banah** 70.50 288 P **P** **01 04 35.4 -0.2**
ZEI **Tsey** 70.55 309 *eP* **P** **01 04 34.5 -1.3**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
SHME **Shamm** 70.56 288 *i* P **P** **01 04 36.4 +0.4**
SNR=8.0
SMDO **Samad** 70.64 285 P **P** **01 04 34.1 -2.5**
VSU **Vasula** 70.68 329 *eP* **P** **01 04 36.6 +0.5**
VSU **Vasula** 70.68 329 *iP* **P** **01 04 36.5 +0.5**
KBZ **Khabaz** 70.68 310 P **P** **01 04 36.3 0.0**
comp=Z,17nm,1.0s,baz=146,slow=0.1
KBZ LR LR 01 37 35.7
comp=Z,69nm,18.7s,baz=58,slow=37
KBZ **Khabaz** 70.68 310 *ceP* **P** **01 04 36.7 +0.4**
KBZ pmax pmax
comp=Z,24nm,1.0s
KIV **Kislovodsk** 70.69 311 ⇑P **P** **01 04 37.8 +1.3**
KIV **Kislovodsk** 70.69 311 *iP* **P** **01 04 37.3 +0.7**
SNR=20
KIV **Kislovodsk** 70.69 311 *eP* **P** **01 04 37.1 +0.6**
KIV pmax pmax
comp=Z,128nm,1.1s
KIV MLR MLR
comp=Z,177nm,18.0s
KIV **Kislovodsk** 70.69 311 P **P** **01 04 37.2 +0.6**
MDH **Madha** 70.83 288 P **P** **01 04 36.9 -0.7**
E07A **Sunnyside** 70.86 46 P **P** **01 04 38.5 +1.1**
MSFE **Esma-Masafi** 70.90 288 P **P** **01 04 38.7 +0.7**
JMDO **Jabal Madar** 70.96 284 P **P** **01 04 37.3 -1.1**
SNR=6.6
UOSS **Minazif** 71.08 287 *iP* **P** **01 04 39.4 +0.3**
SNR=6.8
UOSS **Minazif** 71.08 287 P **P** **01 04 39.7 +0.6**
UOSS **Minazif** 71.08 287 P **P** **01 04 39.4 +0.3**
UOSS IAmb IAmb 01 04 40.0
comp=Z,11nm,0.9s
C09A **Chrisman Ranch** 71.09 44 P **P** **01 04 39.9 +1.1**
HATD **Hatta, Dubai** 71.20 287 *iP* **P** **01 04 40.6 +0.8**
SNR=9.9
HATD **Hatta, Dubai** 71.20 287 P **P** **01 04 40.6 +0.8**
SNR=9.9
SOHO **SOHO** 71.25 287 P **P** **01 04 40.1 0.0**
SOHO **SOHO** 71.25 287 P **P** **01 04 39.8 -0.4**
GNI **Garni** 71.39 306 P **P** **01 04 42.2 +1.3**
GNI **Garni** 71.39 306 *ceP* **P** **01 04 42.5 +1.5**
GNI pmax pmax
comp=Z,25nm,1.3s
GNI **Garni** 71.39 306 P **P** **01 04 41.6 +0.7**
GNI IAmb IAmb 01 04 49.2
comp=Z,22nm,1.1s
BSY **Bisya** 71.47 285 P **P** **01 04 41.2 -0.3**
AKH **Akhalkalaki** 71.53 308 ⇑P **P** **01 04 42.6 +0.8**
AKH **Akhalkalaki** 71.53 308 P **P** **01 04 42.6 +0.8**
AKH **Akhalkalaki** 71.53 308 IAmb IAmb 01 04 43.8
comp=Z,13nm,1.0s
SUMG **Summit** 71.56 360 P **P** **01 04 42.5 +0.8**
SUMG pmax pmax
comp=Z,24nm,0.9s
SUMG **Summit** 71.56 360 P **P** **01 04 42.5 +0.8**
SUMG IAmb IAmb 01 04 44.5
comp=Z,24nm,0.9s
SUMG **Summit** 71.56 360 *iP* **P** **01 04 42.0 +0.3**
comp=Z,54nm,0.8s
SUMG **Summit** 71.56 360 *iP* **P** **01 04 42.0 +0.3**
SUMG IAmb IAmb 01 04 43.8
comp=Z,54nm,0.8s
SUMG **Summit** 71.56 360 *iP* **P** **01 04 42.0 +0.3**
SUMG IAmb IAmb 01 04 43.8
comp=Z,54nm,0.8s
FAQ **Al Faqa, Dubai** 71.66 288 P **P** **01 04 42.9 +0.3**
ARQ **Araqi** 71.68 286 P **P** **01 04 43.6 +0.8**
SNR=6.3
CHVG **Ch'k'valeri** 71.72 310 ⇑P **P** **01 04 42.8 +0.1**
NSS **Namsos** 71.74 339 *eP* **P** **01 04 42.7 +0.4**
MHTO **MHTO** 71.80 283 P **P** **01 04 43.6 +0.2**
SNR=5.8
ALNE **Al Ain** 71.90 287 P **P** **01 04 44.4 +0.4**
ASUD **Al Ashush, Dub** 71.93 288 P **P** **01 04 44.7 +0.5**
ASUD **Al Ashush, Dub** 71.93 288 P **P** **01 04 44.6 +0.5**
IZAR **Zarasai** 72.59 327 *eP* **P** **01 04 48.2 +0.6**
IDID **Didziasalis** 72.65 327 *eP* **P** **01 04 48.5 +0.6**
SOC **Sochi** 72.71 312 *eP* **P** **01 04 47.7 -0.8**
SOC *e* 01 07 29.8
SOC *ePPP PPP 01 09 15.8
SOC *eS **S** **01 14 09.3 +0.8**
SOC *eSS **SS** **01 18 52.1 +3.7**
SOC pmax pmax
comp=Z,17nm,0.9s
ISAL **Salakas** 72.75 327 *eP* **P** **01 04 49.2 +0.6**
IIGN **Ignalina** 72.85 327 *eP* **P** **01 04 49.8 +0.7**
SLIT **Slitere, Latvi** 73.03 330 *eP* **P** **01 04 50.2 +0.1**
TBLU **Trondheim** 73.20 339 *eP* **P** **01 04 50.1 -1.0**
ANN **Anapa** 73.39 314 *eP* **P** **01 04 50.2 -2.3**
ANN *eSS **SS** **01 18 55.5 -3.2**
ANN pmax pmax
comp=Z,43nm,1.3s
PABE **Paberze** 73.74 328 *eP* **P** **01 04 54.9 +0.6**
KOPT **Kop Dagi** 74.20 308 IAmb IAmb 01 05 03.1
comp=Z,28nm,1.5s
PBUR **Paburge** 74.25 329 *eP* **P** **01 04 57.7 +0.4**
AKASG **Malin Array Be** 74.35 322 P **P** **01 04 57.8 -0.2**
comp=Z,18nm,0.6s,baz=48,slow=6.2,SNR=101
AKASG LR LR 01 40 19.3
comp=Z,191nm,18.1s,baz=45,slow=38
AKASG **Malin Array Be** 74.35 322 P **P** **01 04 57.2 -0.8**
AKBB **Malin Array Si** 74.35 322 *ceP* **P** **01 04 57.6 -0.4**
DOMB **Dombas** 74.49 338 *eP* **P** **01 04 58.8 +0.2**
MOL **Molde** 74.52 339 *eP* **P** **01 04 59.4 +0.6**
NB2 **NORSAR Subarra** 74.59 337 P **P** **01 04 59.2 -0.1**
comp=Z,26nm,0.8s,baz=41,slow=5.9
NB2 **NORSAR Subarra** 74.59 337 P **P** **01 04 59.2 -0.1**
baz=41,slow=5.9
NOA **NORSAR Array B** 74.59 337 P **P** **01 04 59.5 +0.2**
comp=Z,16nm,0.7s,baz=40,slow=5.8,SNR=76
NOA LR LR 01 41 05.7
comp=Z,73nm,19.2s,baz=45,slow=38
NC602 **NORSAR Array S** 74.72 337 *eP* **P** **01 05 00.0 0.0**
NORES **NORESS Array B** 74.72 337 P **P** **01 05 00.0 0.0**
AKN **Aaknes** 74.98 339 *eP* **P** **01 05 02.1 +0.6**
FFC **Flin Flon** 75.01 32 P **P** **01 05 01.8 +0.1**
FFC pmax pmax
comp=Z,15nm,1.2s

FFC	**Flin Flon**	**75.01**	**32**	P		**P**		**01 05 01.8 +0.1**
FFC				IAmb		IAmb	01 05 22.2	
	comp=Z,15nm,1.2s							
SUW	**Suwalki**	**75.07**	**327**	*e*P		**P**		**01 05 01.8 -0.3**
OSL	**Oslo**	**75.59**	**336**	*e*P		**P**		**01 05 05.3 +0.3**
EGMT	**Eagleton**	**75.62**	**41**	IAmb		IAmb	01 05 17.8	
	comp=Z,30nm,1.6s							
HLID	**Hailey**	**75.73**	**46**	P		**P**		**01 05 08.2 +1.8**
SKAR	**Skarslia**	**75.78**	**338**	*e*P		**P**		**01 05 06.5 +0.4**
FOO	**Floro**	**76.03**	**340**	*e*P		**P**		**01 05 06.8 -0.4**
HYA	**Hoyanger**	**76.03**	**339**	*e*P		**P**		**01 05 07.1 -0.3**
NVAR	**Mina Array Bea**	**76.35**	**52**	P		**P**		**01 05 11.8 +1.8**
	comp=Z,4.4nm,0.9s,baz=279,slow=5.9,SNR=24							
SORM	**Soroca**	**76.41**	**320**	⇑P		**P**		**01 05 09.3 -0.5**
WHFO	**Wadi Hawf**	**76.78**	**283**	P		**P**		**01 05 12.0 -0.6**
	SNR=18							
ASK	**Askoy**	**76.87**	**339**	*e*P		**P**		**01 05 12.8 +0.6**
ODD1	**Odda**	**76.90**	**338**	*e*P		**P**		**01 05 12.8 +0.3**
BER	**Bergen**	**76.91**	**339**	*e*P		**P**		**01 05 11.9 -0.5**
MILM	**Milestii Mici**	**76.94**	**319**	⇑P		**P**		**01 05 12.6 -0.3**
BLS5	**Blasjo**	**77.34**	**338**	*e*P		**P**		**01 05 15.5 +0.5**
IAS	**Iasi**	**77.42**	**320**	⇑P		**P**		**01 05 15.8 +0.2**
IAS	**Iasi**	**77.42**	**320**	P		**P**		**01 05 15.7 +0.2**
ABTO	**Aybut**	**77.47**	**282**	P		**P**		**01 05 16.0 -0.4**
	SNR=12							
LVV	**L'vov**	**77.47**	**323**	*e*P		P	01 05 10.0	-5.8
IMW	**Indian Meadow**	**77.53**	**44**	P		**P**		**01 05 17.6 +0.9**
BSD	**Bornholm Skovb**	**77.72**	**331**	*i*P		**P**		**01 05 17.6 +0.5**
BSD	**Bornholm Skovb**	**77.72**	**331**	*i*P		**P**		**01 05 17.6 +0.5**
BSD	**Bornholm Skovb**	**77.72**	**331**	*i*P		**P**		**01 05 17.6 +0.5**
ILGA	**Ilgaz**	**77.80**	**312**	IAmb		IAmb	01 05 20.3	
	comp=Z,18nm,0.9s							
GAZ	**Gaziantep**	**77.94**	**307**	IAmb		IAmb	01 05 21.1	
	comp=Z,28nm,1.0s							
BIR	**Birlad**	**77.98**	**319**	⇑P		**P**		**01 05 19.3 +0.5**
BIR	**Birlad**	**77.98**	**319**	P		**P**		**01 05 19.2 +0.5**
PRAR	**RASCA**	**78.00**	**321**	⇑P		**P**		**01 05 18.7 -0.1**
TLCR		**78.04**	**318**	⇑P		**P**		**01 05 19.3 +0.2**
TLCR		**78.04**	**318**	P		**P**		**01 05 19.2 +0.2**
VARL	**Varlezi**	**78.10**	**319**	⇑P		**P**		**01 05 20.0 +0.6**
KWP	**Kalwaria Pacla**	**78.23**	**324**	*e*P		**P**		**01 05 20.9 +0.8**
KWP	**Kalwaria Pacla**	**78.23**	**324**	P		**P**		**01 05 20.9 +0.8**
TESR	**Tescani**	**78.34**	**320**	⇑P		**P**		**01 05 20.8 +0.1**
BUR08	**Bucovina Ar. S**	**78.34**	**321**	IAmb		IAmb	01 05 22.3	
	comp=Z,14nm,0.8s							
BIZ	**Bicaz**	**78.34**	**320**	⇑P		**P**		**01 05 21.1 +0.3**
BURAR	**Bucovina Array**	**78.35**	**321**	⇑P		**P**		**01 05 21.1 +0.2**
BURAR	**Bucovina Array**	**78.35**	**321**	P		**P**		**01 05 21.1 +0.2**
CFR	**Carcaliu**	**78.41**	**318**	⇓P		**P**		**01 05 21.2 +0.1**
CFR	**Carcaliu**	**78.41**	**318**	P		**P**		**01 05 21.2 +0.1**
TPGR	**Topolog**	**78.46**	**318**	⇑P		**P**		**01 05 21.9 +0.5**
ODBI	**Odobesti**	**78.61**	**319**	⇑P		**P**		**01 05 24.0 +1.8**
BR131	**Keskin Array S**	**78.65**	**311**	P		**P**		**01 05 23.3 +0.6**
BR131				pmax		pmax		
	comp=Z,15nm,1.0s							
BR131	**Keskin Array S**	**78.65**	**311**	P		**P**		**01 05 23.3 +0.6**
BR131				IAmb		IAmb	01 05 24.3	
	comp=Z,16nm,1.0s							
BRTR	**Keskin Array B**	**78.65**	**311**	P		**P**		**01 05 23.4 +0.6**
	comp=Z,4.9nm,0.7s,baz=107,slow=4.1,SNR=18							
BRTR	**Keskin Array B**	**78.65**	**311**	P		**P**		**01 05 22.6 -0.1**
VRI	**Vrincioaia**	**78.72**	**319**	⇑P		**P**		**01 05 24.1 +1.3**
VRI	**Vrincioaia**	**78.72**	**319**	P		**P**		**01 05 24.1 +1.3**
PLOR	**Plostina**	**78.77**	**318**	⇑P		**P**		**01 05 23.4 +0.2**
PLOR	**Plostina**	**78.77**	**318**	P		**P**		**01 05 23.3 +0.2**
HARR	**Harsova**	**78.84**	**318**	⇑P		**P**		**01 05 24.4 +0.9**
HARR	**Harsova**	**78.84**	**318**	P		**P**		**01 05 24.3 +0.9**
TLBR	**Topalu**	**78.87**	**318**	⇑P		**P**		**01 05 24.1 +0.5**
KOLS	**Kolonicke sedl**	**78.92**	**324**	*e*P		**P**		**01 05 24.4 +0.5**
KOLS				pmax		pmax		
	comp=Z,9.0nm,0.9s							
KOLS	**Kolonicke sedl**	**78.92**	**324**	*e*P		**P**		**01 05 24.4 +0.5**
BISRR	**Bisoca**	**78.94**	**319**	⇑P		**P**		**01 05 24.7 +0.6**
PDAR	**Pinedale Array**	**79.03**	**45**	P		**P**		**01 05 25.9 +1.0**
	comp=Z,1.8nm,0.9s,baz=262,slow=2.7,SNR=10							
PDAR	**Pinedale Array**	**79.03**	**45**	P		**P**		**01 05 25.6 +0.7**
OZUR		**79.06**	**320**	⇑P		**P**		**01 05 26.0 +1.2**
ARCR	**ARCALIA**	**79.14**	**321**	⇑P		**P**		**01 05 26.4 +1.3**
OJC	**Ojcow**	**79.19**	**326**	*e*P		**P**		**01 05 25.9 +0.6**
ICOR	**Ion Corvin**	**79.28**	**317**	⇑P		**P**		**01 05 26.9 +1.0**
CRVS	**Cervenica-Dubn**	**79.33**	**324**	*e*P		**P**		**01 05 26.9 +0.8**
CRVS				pmax		pmax		
	comp=Z,18nm,0.9s							
CRVS	**Cervenica-Dubn**	**79.33**	**324**	*e*P		**P**		**01 05 26.9 +0.8**
DOPR	**Dopca**	**79.36**	**320**	⇑P		**P**		**01 05 27.4 +1.1**
MLR	**Muntele Rosu**	**79.38**	**319**	⇑P		**P**		**01 05 26.8 +0.2**
NIE	**Niedzica**	**79.52**	**325**	*e*P		**P**		**01 05 28.3 +1.1**
SULR		**79.75**	**318**	⇑P		**P**		**01 05 29.1 +0.7**
CJR	**Cluj-Napoca**	**79.78**	**321**	⇑P		**P**		**01 05 29.2 +0.6**
SOCY	**Socotra**	**79.83**	**278**	P		**P**		**01 05 26.4 -3.0**
VOIR		**79.89**	**320**	⇑P		**P**		**01 05 30.3 +1.0**
VOIR		**79.89**	**320**	P		**P**		**01 05 30.3 +1.0**
RAYN	**Ar Rayn**	**80.02**	**292**	P		**P**		**01 05 29.8 -0.6**
RAYN				pmax		pmax		
	comp=Z,17nm,1.0s							
RAYN	**Ar Rayn**	**80.02**	**292**	P		**P**		**01 05 29.8 -0.6**
RAYN				IAmb		IAmb	01 05 31.5	
	comp=Z,17nm,0.9s							
KECS	**Kecovo**	**80.08**	**324**	*e*P		**P**		**01 05 30.7 +0.5**
KECS				pmax		pmax		
	comp=Z,4.0nm,0.8s							
KECS	**Kecovo**	**80.08**	**324**	*e*P		**P**		**01 05 30.7 +0.5**
LANS	**Liptovska Anna**	**80.09**	**325**	*e*P		**P**		**01 05 32.0 +1.7**
LANS				pmax		pmax		
	comp=Z,7.0nm,0.8s							
LANS	**Liptovska Anna**	**80.09**	**325**	*e*P		**P**		**01 05 32.0 +1.7**
ARR	**Arges**	**80.15**	**320**	⇓P		**P**		**01 05 32.2 +1.5**
OKC	**Ostrava-Krasne**	**80.21**	**326**	*e*P		**P**		**01 05 31.5 +0.7**
KSP	**Ksiaz**	**80.30**	**328**	*e*P		**P**		**01 05 31.9 +0.6**
KSP	**Ksiaz**	**80.30**	**328**	P		**P**		**01 05 31.8 +0.6**
PFO	**Pinyon Flats O**	**80.39**	**55**	P		**P**		**01 05 33.5 +1.2**
PFO				pmax		pmax		
	comp=Z,7.0nm,1.1s							
PFO	**Pinyon Flats O**	**80.39**	**55**	P		**P**		**01 05 33.5 +1.2**
MORC	**Moravsky Berou**	**80.52**	**326**	⇑P		**P**		**01 05 33.2 +0.6**
MORC	**Moravsky Berou**	**80.52**	**326**	*e*P		**P**		**01 05 33.0 +0.4**
MORC	**Moravsky Berou**	**80.52**	**326**	P		**P**		**01 05 33.1 +0.6**
MORC	**Moravsky Berou**	**80.52**	**326**	IAmb		IAmb	01 05 34.2	
	comp=Z,18nm,1.0s							
OSTC	**Ostas**	**80.54**	**328**	*e*P		**P**		**01 05 33.4 +0.8**
CHVC	**Chvalec**	**80.59**	**328**	*e*P		**P**		**01 05 33.5 +0.6**
KRLC	**Kraliky**	**80.64**	**327**	*e*P		**P**		**01 05 33.8 +0.6**
DPC	**Dobruska-Polom**	**80.65**	**327**	*e*P		**P**		**01 05 33.9 +0.7**
UPC	**Upice**	**80.67**	**328**	*e*P		**P**		**01 05 33.9 +0.6**
COPA	**Copaceanca**	**80.67**	**319**	⇑P		**P**		**01 05 34.1 +0.8**
KNB	**Kanab**	**80.67**	**51**	P		**P**		**01 05 35.9 +2.1**
KNB				pmax		pmax		
	comp=Z,27nm,1.7s							
KNB	**Kanab**	**80.67**	**51**	P		**P**		**01 05 35.9 +2.1**
PSZ	**Piszkesteto**	**80.76**	**324**	⇑P		**P**		**01 05 35.0 +1.1**
PSZ	**Piszkesteto**	**80.76**	**324**	P		**P**		**01 05 34.9 +1.0**
PSZ				pmax		pmax		
	comp=Z,27nm,1.0s							
PSZ	**Piszkesteto**	**80.76**	**324**	IAmb		IAmb	01 05 35.8	
	comp=Z,22nm,0.9s							
ULM	**Lac du Bonnet**	**80.81**	**33**	LR		LR	01 42 47.3	
	comp=Z,34nm,19.1s,baz=6.5,slow=37							
VYHS	**Vyhne**	**80.85**	**325**	*e*P		**P**		**01 05 35.2 +0.9**
VYHS				pmax		pmax		
	comp=Z,13nm,1.0s							
VYHS	**Vyhne**	**80.85**	**325**	*e*P		**P**		**01 05 35.2 +0.9**
ZIMR		**80.91**	**318**	⇑P		**P**		**01 05 35.3 +0.7**
CBX	**Cerro Bola**	**81.04**	**57**	P		**P**		**01 05 36.1 +0.4**
GZR	**Gura Zlata**	**81.09**	**321**	⇑P		**P**		**01 05 35.7 0.0**
JAVC	**Velka Javorina**	**81.13**	**326**	*e*P		**P**		**01 05 37.5 +1.7**
PVCC	**Panska Ves**	**81.27**	**328**	*e*P		**P**		**01 05 37.1 +0.6**
BRG	**Berggiesshubel**	**81.28**	**329**	*e*P		**P**		**01 05 36.7 +0.2**
	comp=Z,11nm,0.9s							
BRG	**Berggiesshubel**	**81.28**	**329**	*e*P		**P**		**01 05 36.7 +0.2**
BRG				pmax		pmax		
	comp=Z,11nm,0.9s							
VRAC	**Vranov**	**81.29**	**326**	⇑P		**P**		**01 05 37.3 +0.6**
VRAC	**Vranov**	**81.29**	**326**	*e*P		**P**		**01 05 37.2 +0.6**
VRAC	**Vranov**	**81.29**	**326**	P		**P**		**01 05 37.2 +0.6**
CLL	**Collm**	**81.34**	**330**	*i*P		**P**		**01 05 36.8 0.0**
	comp=Z,27nm,0.9s							
CLL	**Collm**	**81.34**	**330**	*i*P		**P**		**01 05 36.8 0.0**
CLL				pmax		pmax		
	comp=Z,27nm,0.9s							
CLL	**Collm**	**81.34**	**330**	IAmb		IAmb	01 05 37.9	
	comp=Z,23nm,0.8s							
SMOL	**Smolenice**	**81.49**	**326**	*e*P		**P**		**01 05 39.0 +1.3**
SMOL				pmax		pmax		
	comp=Z,10.0nm,0.9s							
SMOL	**Smolenice**	**81.49**	**326**	*e*P		**P**		**01 05 39.0 +1.3**
BZS	**Buzias**	**81.53**	**321**	P		**P**		**01 05 38.4 +0.5**
KRUC	**Moravsky**	**81.56**	**326**	*e*P		**P**		**01 05 38.5 +0.5**
SRO2	**Moca**	**81.58**	**325**	*e*P		**P**		**01 05 38.2 +0.1**
SRO2				pmax		pmax		
	comp=Z,14nm,0.8s							
SRO2	**Moca**	**81.58**	**325**	*e*P		**P**		**01 05 38.2 +0.1**
SRO	**Srobarova**	**81.59**	**325**	*e*P		**P**		**01 05 39.2 +1.0**
SRO				pmax		pmax		
	comp=Z,18nm,0.7s							
SRO	**Srobarova**	**81.59**	**325**	*e*P		**P**		**01 05 39.2 +1.0**
HERR	**Herculane**	**81.63**	**320**	⇑P		**P**		**01 05 38.3 -0.2**
MODS	**Modra-Piesok**	**81.66**	**326**	*e*P		**P**		**01 05 38.8 +0.2**
MODS				pmax		pmax		
	comp=Z,14nm,1.0s							
MODS	**Modra-Piesok**	**81.66**	**326**	*e*P		**P**		**01 05 38.8 +0.2**
PRA	**Prague**	**81.67**	**328**	*e*P		**P**		**01 05 39.4 +0.8**
PRU	**Pruhonice**	**81.68**	**328**	*e*P		**P**		**01 05 39.2 +0.5**
CSS	**Mathiatis**	**81.78**	**307**	IAmb		IAmb	01 05 42.1	
	comp=Z,12nm,0.8s							
PUNG	**Punghina**	**81.78**	**320**	⇑P		**P**		**01 05 39.7 +0.4**
TREC	**Trest**	**81.79**	**327**	*e*P		**P**		**01 05 40.1 +0.8**
PBCC	**Pribram**	**82.15**	**328**	*e*P		**P**		**01 05 40.3 -0.8**
PV20	**West Nyswonger**	**82.20**	**48**	P		**P**		**01 05 43.1 +1.3**
NKC	**Novy Kostel**	**82.38**	**329**	*e*P		**P**		**01 05 42.9 +0.5**
MANT	**Manisa**	**82.50**	**313**	P		**P**		**01 05 43.5 0.0**
SOP	**Sopron**	**82.50**	**325**	P		**P**		**01 05 45.5 +2.6**
SOP				pmax		pmax		
	comp=Z,19nm,1.2s							
MORH	**Mrgy, Hungar**	**82.58**	**323**	*e*P		**P**		**01 05 41.1 -2.3**
CONA	**Conrad Observa**	**82.63**	**326**	*i*P		**P**		**01 05 44.9 +1.1**
	comp=Z,10nm,0.9s,SNR=6.5							
KHC	**Kasperske Hory**	**82.74**	**328**	*e*P		**P**		**01 05 44.6 +0.3**
FRGS	**Fruska Gora**	**82.76**	**322**	*e*P		**P**		**01 05 43.4 -1.0**
GEC2B	**GERESS ARRAY**	**S82.91**	**328**	P		**P**		**01 05 44.6 -0.6**
GERES	**GERESS Array B**	**82.91**	**328**	P		**P**		**01 05 45.1 -0.1**
	comp=Z,3.8nm,0.8s,baz=46,slow=5.8,SNR=28							
GERES	**GERESS Array B**	**82.91**	**328**	P		**P**		**01 05 44.8 -0.4**
EZN	**Ezine**	**82.92**	**315**	P		**P**		**01 05 46.1 +0.8**
MVCO	**Mesa Verde**	**83.22**	**48**	IAmb		IAmb	01 05 49.9	
	comp=Z,28nm,1.9s							
ARSA	**Arzberg**	**83.29**	**326**	*e*P		**P**		**01 05 47.3 +0.2**
	comp=Z,6.5nm,0.9s							
GRA1	**Grafenberg Arr**	**83.31**	**329**	IAmb		IAmb	01 05 49.0	
	comp=Z,24nm,0.9s							
GRF	**Grafenberg Arr**	**83.31**	**329**	*e*P		**P**		**01 05 47.6 +0.5**
	comp=Z,18nm,1.0s,baz=46,slow=4.8							
MOA	**Molln**	**83.41**	**327**	*e*P		**P**		**01 05 48.5 +0.8**
	comp=Z,8.1nm,1.0s							
DIVS	**Divibare**	**83.42**	**321**	*e*P		**P**		**01 05 46.6 -1.3**
DIVS	**Divibare**	**83.42**	**321**	IAmb		IAmb	01 05 48.8	
	comp=Z,10nm,1.0s							
YER	**Yerkesik**	**83.54**	**312**	P		**P**		**01 05 49.9 +1.2**
SRS	**Serrai**	**83.59**	**317**	P		**P**		**01 05 48.6 -0.2**
SRS				pmax		pmax		
	comp=Z,19nm,1.1s							
BBLS	**Lazići**	**83.88**	**321**	*e*P		**P**		**01 05 50.9 +0.6**
GROS	**Grobnik**	**83.88**	**325**	*i*P		**P**		**01 05 50.1 -0.1**
SOH	**Sokhos**	**83.92**	**317**	P		**P**		**01 05 50.8 +0.3**
PERS	**Pernice**	**83.93**	**325**	*i*P		**P**		**01 05 50.6 +0.2**
SOKA	**Soboth**	**83.94**	**325**	*i*P		**P**		**01 05 51.1 +0.6**
	comp=Z,20nm,0.9s,SNR=8.3							
HAPS	**Han Pijesak,Bl**	**83.95**	**322**	*e*P		**P**		**01 05 49.5 -1.2**
STIP	**Stip**	**83.96**	**318**	*i*P		**P**		**01 05 50.4 -0.3**
VAY	**Valandovo**	**84.01**	**318**	*i*P		**P**		**01 05 51.7 +0.8**
VAY	**Valandovo**	**84.01**	**318**	P		**P**		**01 05 51.4 +0.5**
VAY				pmax		pmax		
	comp=Z,45nm,1.0s							
RUDO	**Rudo**	**84.08**	**321**	*e*P		**P**		**01 05 51.1 -0.1**
SKO	**Skopje**	**84.17**	**319**	*i*P		**P**		**01 05 52.8 +1.1**
SKO	**Skopje**	**84.17**	**319**	P		**P**		**01 05 53.2 +1.5**
SKO				pmax		pmax		
	comp=Z,60nm,1.0s							
OBKA	**Obir**	**84.29**	**326**	*e*P		**P**		**01 05 52.3 0.0**
	comp=Z,6.1nm,0.8s							
BLY	**Banja Luka**	**84.35**	**323**	*e*P		**P**		**01 05 51.0 -1.5**
GRG	**Griva**	**84.35**	**318**	P		**P**		**01 05 52.9 +0.2**
PAIG	**Paliouri**	**84.36**	**316**	P		**P**		**01 05 53.3 +0.7**
CRES	**Cresnjev**	**84.38**	**325**	*e*P		**P**		**01 05 51.4 -1.3**
KBA	**Koeinbreinsper**	**84.40**	**327**	*e*P		**P**		**01 05 53.3 +0.4**
	comp=Z,9.0nm,0.8s							
BTNL	**Ternell**	**84.60**	**333**	P		**P**		**01 05 53.2 -0.5**
MYKA	**Terra Mystica**	**84.61**	**326**	*e*P		**P**		**01 05 53.6 -0.3**
	comp=Z,2.9nm,0.5s							
UPM	**Unac-Piva**	**84.61**	**321**	*e*P		**P**		**01 05 53.0 -1.1**
MGRS	**Mrkonjic Grad**	**84.64**	**323**	*e*P		P	01 06 09.2	+15
LJU	**Ljubljana**	**84.65**	**325**	*i*P		**P**		**01 05 53.8 -0.3**
LJU	**Ljubljana**	**84.65**	**325**	*e*P		**P**		**01 05 53.7 -0.3**
BOJS	**Bojanci**	**84.71**	**325**	*i*P		**P**		**01 05 54.3 0.0**
PRED	**Cave del Predi**	**84.78**	**326**	IAmb		IAmb	01 05 57.1	
	comp=Z,8.0nm,0.8s							
PMOR	**Pomariorio Ree**	**84.79**	**113**	*e*T		T	02 38 38.4	
	comp=Z,4.3nm,0.2s							
STU	**Stuttgart**	**84.86**	**330**	P		**P**		**01 05 54.8 -0.2**
STU				pmax		pmax		
	comp=Z,19nm,1.1s							
STU	**Stuttgart**	**84.86**	**330**	P		**P**		**01 05 54.8 -0.2**
STU				IAmb		IAmb	01 05 56.2	
	comp=Z,19nm,1.1s							
CEY	**Cerknica**	**84.92**	**325**	⇑*i*P		**P**		**01 05 54.4 -1.0**
TUC	**Tucson**	**84.94**	**53**	P		**P**		**01 05 57.6 +1.8**
TUC				pmax		pmax		
	comp=Z,5.0nm,0.9s							
WATA	**Walderalm**	**84.98**	**328**	*e*P		**P**		**01 05 54.0 -1.8**
	comp=Z,4.1nm,0.6s							
PDG	**Podgorica**	**84.99**	**320**	⇑P		**P**		**01 05 56.1 +0.3**
PDG	**Podgorica**	**84.99**	**320**	⇑*i*P		**P**		**01 05 55.9 +0.2**
WTTA	**Wattenberg**	**85.01**	**328**	*e*P		**P**		**01 05 56.4 +0.4**
	comp=Z,3.5nm,0.6s							
BRY	**Bratogost**	**85.01**	**321**	P		**P**		**01 05 57.0 +0.9**
BRY	**Bratogost**	**85.01**	**321**	*e*P		**P**		**01 05 55.6 -0.5**
ABTA	**Abfaltersbach**	**85.02**	**327**	*e*P		**P**		**01 05 55.8 -0.2**
	comp=Z,6.8nm,1.0s							
OHR	**Ohrid**	**85.11**	**319**	*i*P		**P**		**01 05 56.8 +0.3**
OHR	**Ohrid**	**85.11**	**319**	P		**P**		**01 05 57.3 +0.8**
OHR				pmax		pmax		
	comp=Z,45nm,0.9s							
MOTA	**Moosalm**	**85.18**	**328**	*e*P		**P**		**01 05 55.7 -1.1**
	comp=Z,11nm,2.0s							
PPT	**Papeete**	**85.18**	**116**	LR		LR	01 35 13.6	
	comp=Z,42nm,21.6s,baz=348,slow=29							
PPT2	**Papeete2**	**85.19**	**116**	*e*LR		LR	01 32 39.5	
	comp=Z,370nm,32.0s							
DRME	**Dracevica, Mon**	**85.20**	**320**	⇑*i*P		**P**		**01 05 56.9 +0.1**
RETA	**Reutte**	**85.21**	**328**	*e*P		**P**		**01 05 57.2 +0.3**
	comp=Z,9.0nm,0.8s							
SQTA	**Sankt Quirin**	**85.23**	**328**	*e*P		**P**		**01 05 55.8 -1.3**
	comp=Z,3.4nm,1.1s							
BMRD	**Maredsous**	**85.33**	**333**	P		**P**		**01 05 56.8 -0.5**
HCY	**Herceg Novi**	**85.36**	**321**	*e*P		**P**		**01 05 55.9 -1.8**
BFO	**Black Forest**	**85.56**	**330**	P		**P**		**01 05 58.1 -0.4**
BFO				pmax		pmax		
	comp=Z,20nm,1.0s							
BFO	**Black Forest**	**85.56**	**330**	P		**P**		**01 05 58.1 -0.4**
BFO				IAmb		IAmb	01 05 59.7	
	comp=Z,20nm,1.0s							
FETA	**Feichten**	**85.59**	**328**	*e*P		**P**		**01 05 59.0 +0.1**
	comp=Z,7.0nm,0.9s							
T25A	**Trinidad**	**85.70**	**46**	IAmb		IAmb	01 06 02.2	
	comp=Z,8.1nm,0.9s							
DAVA	**Damuels**	**85.74**	**329**	*e*P		**P**		**01 05 59.8 +0.1**
	comp=Z,12nm,1.1s							
ANMO	**Albuquerque**	**85.95**	**49**	P		**P**		**01 06 02.1 +1.1**
ANMO				pmax		pmax		
	comp=Z,3.0nm,1.0s							
ANMO	**Albuquerque**	**85.95**	**49**	P		**P**		**01 06 02.1 +1.1**
FUORN	**Ofenpass-Fuorn**	**86.10**	**328**	IAmb		IAmb	01 06 02.9	
	comp=Z,10nm,0.8s							
SCHQ	**Schefferville**	**86.47**	**15**	P		**P**		**01 06 03.5 +0.7**
	comp=Z,7.1nm,0.9s,baz=360,slow=5.1,SNR=3.6							
IDI	**Anoyia**	**86.82**	**312**	⇑P		**P**		**01 06 04.4 -0.7**
IDI	**Anoyia**	**86.82**	**312**	IAmb		IAmb	01 06 05.2	
	comp=Z,9.1nm,0.7s							
NRCA	**Norcia**	**87.74**	**324**	IAmb		IAmb	01 06 10.7	
	comp=Z,15nm,0.9s							
AQU	**L'Aquila**	**87.96**	**324**	P		**P**		**01 06 11.9 +1.5**
AQU				pmax		pmax		
	comp=Z,53nm,1.0s							
AQU	**L'Aquila**	**87.96**	**324**	*e*P		**P**		**01 06 08.6 -1.8**
TBI	**Tubuai**	**88.98**	**120**	*e*LR		LR	01 34 14.8	
	comp=Z,186nm,33.0s,baz=312							
TXAR	**Lajitas Array**	**91.48**	**52**	P		**P**		**01 06 28.5 +1.3**
	comp=Z,1.7nm,0.7s,baz=303,slow=3.4,SNR=15							
TXAR				LR		LR	01 48 53.6	
	comp=Z,24nm,18.1s,baz=0.0,slow=36							
TXAR	**Lajitas Array**	**91.48**	**52**	P		**P**		**01 06 27.8 +0.6**
U40A	**Yellville**	**92.68**	**40**	P		**P**		**01 06 32.2 -0.3**
U40A				IAmb		IAmb	01 06 34.2	
	comp=Z,6.9nm,0.8s							
TORD	**Torodi Ar. Bea**	**117.20**	**313**	PKP		**PKPdf**		**01 12 05.2 -0.7**
	comp=Z,1.1nm,0.9s,baz=35,slow=3.5,SNR=9.1							
TORD	**Torodi Ar. Bea**	**117.20**	**313**			**PKPdf**		**01 12 05.8 -0.1**
SNAA	**Sanae**	**139.60**	**197**	PKIKP		**PKPdf**		**01 12 46.5 -0.2**
SNAA	**Sanae**	**139.60**	**197**	PKPdf		**PKPdf**		**01 12 46.5 -0.2**
NPGB	**Novo Progresso**	**147.75**	**30**	*e*P		**PKPab**		**01 13 12.7 +4.8**
H03N2	**Juan Fernandez**	**147.96**	**97**	T		T	03 58 26.5	
	baz=291,slow=76,SNR=26							
H03N3	**Juan Fernandez**	**147.97**	**97**	T		T	03 58 26.6	
	baz=291,slow=76,SNR=29							
H03N1	**Juan Fernandez**	**147.98**	**97**	T		T	03 58 29.3	
	baz=291,slow=76,SNR=23							
PB11	**IPOC Station P**	**149.21**	**66**	PKPbc		**PKPbc**		**01 13 09.5 +0.2**
GO01	**Chusmiza**	**149.49**	**65**	PKPbc		**PKPbc**		**01 13 11.7 +1.4**
PB08	**IPOC Station P**	**149.81**	**66**	PKPbc		**PKPbc**		**01 13 11.5 +0.5**

CNRM ***12*** *00:57:56.7*±*1.2, 36°.29N*×*9°.02W, h72*^{km}*±22*^{km}*, Error ellipse: s-maj=14.1km s-min=5.9km az=123.0*
INMG ***12*** *00:57:57.2*±*1.3, 36°.24N*×*8°.87W, h5*^{km}*, ML2.4, Error ellipse: s-maj=5.1km s-min=2.6km az=77.0*
MDD ***12*** *00:57:57.8*±*1.2, 36°.27N*×*8°.80W, h8*^{km}*±5*^{km}*, mbLg2.6/5, Error ellipse: s-maj=10.1km s-min=6.6km az=59.0, PRXIMO*
SFS ***12*** *00:57:59.0, 36°.34N*×*8°.68W, h6*^{km}*, ML2.6, GOLFO DE CADIZ*

ISC 12 00:57:56.6±1.6**, 36°.27N**±0°.04×**8°.80W**±0°.05**, h17**^{km}±9^{km}**, n60,σ1°.916/101, 1C, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.87**	**359**	Pg	**Pn**	**00 58 13.9**	**0.0**
	29nm,0.1s,SNR=56						
PFVI				Lg	Lg	00 58 25.2	
	194nm,0.1s,SNR=19						
PFVI	**Vila Bisbo**	**0.87**	**359**	P	**Pn**	**00 58 14.0**	**0.0**
PFVI				S	**Sn**	**00 58 25.9**	**-0.3**
PFVI	**Vila Bisbo**	**0.87**	**359**⇑	*e*P	**Pn**	**00 58 13.9**	**0.0**

	9.8nm,0.4s								
PCBR	**Castelo Branco**	**3.72**	**16**	Sn	**Sn**	**00 59 36.1**	**-0.4**
PCBR				Lg	Lg	00 59 54.3	
	2.8nm,0.3s						
PCBR	**Castelo Branco**	**3.72**	**16**	*e*Sn	**Sn**	**00 59 36.1**	**-0.4**
PCBR				*e*Sg	**Sg**	**00 59 54.3**	**-1.7**
PCBR				A	A	00 59 57.8	
	5.5nm,0.3s						
PCAS	**Casmilo, Conde**	**3.79**	**4**	Pn	**Pn**	**00 58 55.6**	**+1.5**
PCAS				Sn	**Sn**	**00 59 37.0**	**-1.3**
	6.5nm,0.7s						
PCAS	**Casmilo, Conde**	**3.79**	**4**	*e*Pn	**Pn**	**00 58 55.6**	**+1.5**
PCAS				*e*Sn	**Sn**	**00 59 37.0**	**-1.3**
PCAS				A	A	01 00 01.2	
	6.5nm,0.7s						
EGOR	**Sierra Gorda,**	**3.86**	**76**	Pn	**Pn**	**00 58 57.3**	**+2.0**
	0.5nm,0.2s,SNR=7.9						
EGOR				Sn	**Sn**	**00 59 36.7**	**-3.6**
	1.1nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**3.87**	**59**	Pn	**Pn**	**00 58 56.0**	**+0.7**
	1.2nm,0.1s,SNR=16						
EADA				Sn	**Sn**	**00 59 38.8**	**-1.5**
	0.8nm,0.1s,SNR=7.9						
EADA				Lg	Lg	00 59 58.0	
	1.7nm,0.1s,SNR=4.0						
IFR	**Ifrane**	**4.08**	**131**	*e*S	**Sn**	**00 59 45.2**	**-0.5**
ELGU	**Los Guajares,**	**4.21**	**80**	Pn	**Pn**	**00 59 02.3**	**+2.4**
	0.7nm,0.1s,SNR=7.9						
ELGU				Sn	**Sn**	**00 59 50.1**	**+1.4**
	2.0nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**4.24**	**13**	Sn	**Sn**	**00 59 48.7**	**-0.9**
	2.4nm,0.6s						
MTE	**Manteigas**	**4.24**	**13**	*e*Sn	**Sn**	**00 59 48.7**	**-0.9**
MTE				A	A	01 00 15.8	
	4.8nm,0.6s						
EPLA	**Plasencia**	**4.36**	**29**	Sn	**Sn**	**00 59 50.8**	**-1.5**
	1.4nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	01 00 10.8	
	1.0nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.41**	**76**	Pn	**Pn**	**00 59 03.8**	**+1.1**
	0.5nm,0.3s,SNR=5.6						
EQUE				Sn	**Sn**	**00 59 52.7**	**-1.0**
	0.4nm,0.3s,SNR=7.9						
PVIS	**Viseu**	**4.50**	**9**	Sn	**Sn**	**00 59 55.2**	**-0.7**
	1.8nm,0.8s						
PVIS	**Viseu**	**4.50**	**9**	*e*Sn	**Sn**	**00 59 55.2**	**-0.7**
PVIS				A	A	00 59 57.4	
	3.5nm,0.8s						
MD31	**MD31**	**4.75**	**134**	P	**Pn**	**00 59 07.6**	**+0.1**
PAB	**San Pablo**	**4.81**	**46**	Pn	**Pn**	**00 59 08.6**	**+0.4**
	0.2nm,0.2s,SNR=7.9						
PAB				Sn	**Sn**	**01 00 00.5**	**-3.0**
	0.2nm,0.2s,SNR=7.9						
PAB				Lg	Lg	01 00 27.2	
	0.5nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.83**	**70**	Pn	**Pn**	**00 59 09.6**	**+1.0**
	0.2nm,0.1s,SNR=7.9						
EQES				Sn	**Sn**	**01 00 04.6**	**+0.4**
	0.3nm,0.1s,SNR=7.9						
MDT	**Midelt**	**4.88**	**134**	P	**Pn**	**00 59 09.8**	**+0.5**
MVO	**Moncorvo**	**5.08**	**15**	*e*Sn	**Sn**	**01 00 08.2**	**-2.1**
OUK	**Oukaimeden**	**5.11**	**171**	P	**Pn**	**00 59 12.3**	**-0.3**
ESDC	**Sonseca Array**	**5.12**	**47**	Pn	**Pn**	**00 59 13.1**	**+0.6**
	0.3nm,0.2s,baz=235,slow=12,SNR=7.9						
ESDC				Sn	**Sn**	**01 00 08.7**	**-2.4**
	0.1nm,0.3s,baz=232,slow=23,SNR=7.9						
ESDC				Lg	Lg	01 00 39.7	
	0.8nm,0.3s,baz=236,slow=28,SNR=7.9						
POLO	**Lamas de Olo**	**5.16**	**8**	Sn	**Sn**	**01 00 10.8**	**-1.4**
POLO	**Lamas de Olo**	**5.16**	**8**	*e*Sn	**Sn**	**01 00 10.8**	**-1.4**
OUZM	**OUZ**	**5.61**	**162**	P	**Pn**	**00 59 19.9**	**+0.6**
ELOB	**Lobios**	**5.62**	**6**	Sn	**Sn**	**01 00 20.1**	**-3.5**
	0.9nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**6.24**	**65**	Pn	**Pn**	**00 59 27.6**	**-0.3**
	0.2nm,0.1s,SNR=7.9						
ETOB				Sn	**Sn**	**01 00 36.2**	**-2.6**
	0.3nm,0.1s,SNR=7.9						

IDC ***12*** *01:07:48.4±1.1, 11°.87S×73°.69W, h0km, mb3.7/5, mb1 4.0/9, mb1mx3.8/43, mbtmp3.8/9, ML3.6/4, MS2.9/6, Ms1 2.9/6, ms1mx2.7/33, Error ellipse: s-maj=33.5km s-min=19.9km az=37.0*

ISC 12 01:07:53.5±0.7, 11°.93S±0°.09×73°.8W±0°.1, h35km, n24, σ2s81/21, mb3.6/5, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.00**	**269**	Pn	**Pn**	**01 08 39.1**	**+0.5**
	45nm,0.3s,baz=98,slow=11,SNR=58						
NNA				Lg	Lg	01 09 20.9	
	24nm,0.3s,baz=137,slow=12,SNR=6.1						
NNA				LR	LR	01 09 36.7	
	comp=Z,65nm,21.4s,baz=54,slow=35						
ATAH	**Atahualpa**	**6.58**	**316**	Pn	**Pn**	**01 09 28.1**	**-0.2**
	0.9nm,0.3s,baz=138,slow=12,SNR=3.1						
ATAH				Lg	Lg	01 11 12.1	
	1.2nm,0.3s,baz=118,slow=17,SNR=1.8						
ATAH				LR	LR	01 11 41.3	
	comp=Z,31nm,19.5s,baz=138,slow=35						
LPAZ	**La Paz**	**6.99**	**129**	Pn	**Pn**	**01 09 33.6**	**-0.5**
	0.3nm,0.3s,baz=310,slow=8.9,SNR=8.7						
LPAZ				Lg	Lg	01 11 21.4	
	0.6nm,0.3s,baz=291,slow=3.8,SNR=2.3						
LPAZ				LR	LR	01 12 33.8	
	comp=Z,120nm,18.6s,baz=34,slow=41						
LPAZ	**La Paz**	**6.99**	**129**	*e*P	**Pn**	**01 09 33.5**	**-0.5**
PUAC	**Puerto Asis, P**	**12.70**	**347**	*e*P	**Pn**	**01 10 55.0**	**+3.2**
SIV	**San Ignacio**	**12.98**	**110**	Pn	**Pn**	**01 10 54.6**	**-1.0**
	0.4nm,0.3s,baz=288,slow=5.8,SNR=5.7						
SIV				Lg	Lg	01 14 29.1	
	1.5nm,0.3s,baz=19,slow=21,SNR=6.7						
SIV				LR	LR	01 16 07.6	
	comp=Z,58nm,19.6s,baz=88,slow=39						
FLOC	**Florencia**	**13.55**	**352**	*e*P	**P**	**01 11 10.8**	**-1.2**
MACC	**Macarena, Meta**	**13.98**	**360**	*e*P	**Pn**	**01 11 07.6**	**-1.7**
GARC	**Garzon, Huila**	**14.13**	**353**	*e*P	**P**	**01 11 22.1**	**+3.5**
PCON	**Cinco Dias**	**14.40**	**349**	*e*P	**Pn**	**01 11 11.5**	**-4.0**
POPC	**Popayan, Colom**	**14.66**	**349**	*e*P	**Pn**	**01 11 15.3**	**-3.4**
ORTC	**Ortega, Tolima**	**15.80**	**355**	*e*P	**Pn**	**01 11 32.8**	**-0.7**
CPUP	**Villa Florida**	**21.10**	**135**	P	**P**	**01 12 32.5**	**-2.7**
	2.8nm,0.9s,baz=329,slow=10,SNR=5.4						
CPUP				LR	LR	01 22 40.7	
	comp=Z,55nm,19.1s,baz=302,slow=42						
CPSB	**Cacapava Do Su**	**26.34**	**137**	*e*P	P	01 13 39.8	+14
TIJ01	**Guaruva-PR**	**26.93**	**123**	*e*P	**P**	**01 13 38.7**	**+6.9**
MDP	**Montagnes des**	**26.99**	**52**	LR	LR	01 24 42.8	
	comp=Z,54nm,21.1s,baz=209,slow=38						
CNLB	**Canela**	**27.47**	**132**	*e*P	**P**	**01 13 41.2**	**+4.6**
PET01	**Itanhaem-SP**	**27.97**	**120**	*e*P	**P**	**01 13 38.5**	**-2.5**
PLCA	**Paso Flores**	**28.83**	**175**	P	**P**	**01 13 49.8**	**+1.2**
	0.7nm,0.5s,baz=315,slow=7.1,SNR=2.0						
TXAR	**Lajitas Array**	**50.15**	**325**	P	**P**	**01 16 45.0**	**-0.8**
	0.3nm,0.7s,baz=131,slow=11,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.89**	**74**	P	**P**	**01 19 54.0**	**+0.1**
	1.7nm,0.8s,baz=270,slow=5.0,SNR=5.7						
VNDA	**Vanda**	**85.40**	**190**	P	**P**	**01 20 27.2**	**+0.4**
	0.8nm,0.9s,baz=90,slow=2.6,SNR=4.7						
WRA	**Warramunga Arr**	**137.94**	**221**	PKhKP	PKPpre	01 27 12.8	
	0.3nm,0.8s,baz=150,slow=1.8,SNR=2.1						
SONM	**Songino Array**	**144.21**	**360**	PKP	**PKPdf**	**01 27 27.1**	**+1.1**
	0.3nm,0.7s,baz=0.0,slow=2.9,SNR=2.1						

IDC ***12*** *01:10:02.9±2.2, 28°.79S×111°.29W, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.8/37, mbtmp3.7/3, MS3.9/6, Ms1 3.8/6, ms1mx3.6/20, Error ellipse: s-maj=106.6km s-min=64.5km az=93.0*

ISC 12 01:10:03.7±1.2, 28°.7S±0°.2×112°.4W±0°.8, h10km, n22, σ1s86/9, MS4.1/10, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03N2	**Juan Fernandez**	**28.95**	**108**	T	T	01 46 13.0	
	baz=274,slow=74,SNR=242						
H03N3	**Juan Fernandez**	**28.95**	**108**	T	T	01 46 14.2	
	baz=274,slow=74,SNR=302						
H03N1	**Juan Fernandez**	**28.96**	**108**	T	T	01 46 12.4	
	baz=274,slow=74,SNR=496						
TAOE	**Nuku Hiva Isla**	**32.75**	**302**	*e*LR	LR	01 25 00.1	
	comp=Z,254nm,24.7s						
TBI	**Tubuai**	**33.66**	**270**	*e*LQ	LQ	01 23 43.4	
	475nm,29.2s						
TBI				*e*LR	LR	01 25 05.3	
	comp=Z,488nm,27.5s,baz=115						
PPT2	**Papeete2**	**35.82**	**280**	*e*LQ	LQ	01 24 40.4	
	430nm,26.0s						
PPT2				*e*LR	LR	01 26 09.8	
	comp=Z,463nm,28.0s,baz=111						
PLCA	**Paso Flores**	**36.08**	**121**	LR	LR	01 27 07.2	
	comp=Z,72nm,18.5s,baz=276,slow=29						
LPAZ	**La Paz**	**42.47**	**83**	LR		01 31 38.1	
	comp=Z,135nm,20.0s,baz=264,slow=31						
CPUP	**Villa Florida**	**48.50**	**101**	LR	LR	01 35 24.8	
	comp=Z,60nm,18.3s,baz=276,slow=32						
ROSC	**El Rosal**	**49.52**	**54**	LR	LR	01 35 52.9	
	comp=Z,192nm,20.8s,baz=235,slow=32						
TXAR	**Lajitas Array**	**58.32**	**9**	P	**P**	**01 19 57.9**	**-1.1**
	0.3nm,0.7s,baz=155,slow=8.9,SNR=2.1						
RPZ	**Rata Peaks**	**61.51**	**233**	LR	LR	01 42 05.7	
	comp=Z,143nm,18.9s,baz=72,slow=31						
NVAR	**Mina Array Bea**	**67.03**	**355**	P	**P**	**01 21 00.5**	**+3.4**
	6.1nm,1.0s,baz=173,slow=8.2,SNR=9.9						
VNA3	**Neumayer Olymp**	**67.06**	**160**	P	**P**	**01 20 57.6**	**+0.8**
VNA2	**Neumayer--Watz**	**67.86**	**160**	P	**P**	**01 21 02.8**	**+1.0**
	baz=132,slow=2.2						
SNAA	**Sanae**	**68.87**	**161**	P	**P**	**01 21 08.1**	**-0.1**
PDAR	**Pinedale Array**	**71.18**	**2**	P	**P**	**01 21 22.9**	**+0.1**
	0.2nm,0.5s,baz=152,slow=6.9,SNR=2.2						
DZM	**Mont Dzumac**	**72.34**	**254**	*e*LR	LR	01 42 52.4	
	comp=Z,300nm,23.9s						
MAW	**Mawson**	**83.91**	**178**	LR	LR	01 56 14.4	
	comp=Z,74nm,18.7s,baz=252,slow=33						
SONM	**Songino Array**	**144.56**	**313**	PKPbc	**PKiKP**	**01 29 41.7**	**-2.4**
	2.0nm,0.9s,baz=94,slow=1.8,SNR=7.0						
BRTR	**Keskin Array B**	**149.99**	**60**	PKPbc	**PKPbc**	**01 29 54.3**	**-0.4**
	0.4nm,0.5s,baz=244,slow=2.2,SNR=1.3						
ZALV	**Zalesovo Beam**	**151.83**	**338**	PKPbc	**PKiKP**	**01 29 58.1**	**-0.6**
	0.5nm,0.3s,baz=64,slow=3.4,SNR=2.2						

IDC ***12*** *01:13:56.2±0.6, 34°.25N×135°.65E, h58km±5km, mb3.6/14, mb1 4.0/20, mb1mx3.7/62, mbtmp4.0/20, MS3.1/5, Ms1 3.1/5, ms1mx2.7/49, Error ellipse: s-maj=12.8km s-min=11.5km az=82.0*

JMA ***12*** *01:13:56.1, 34°.24N×135°.70E, h61km±1km, M4.3 Broadband fault plane solution: P waves. NP1: φs47.00000°, δ69.00000°, λ167.00000°. NP2: φs142.00000°, δ78.00000°, λ22.00000°. Principal axes: T Plg24.0000°, Azm6.0000°; N Plg65.0000°, Azm170.0000°; P Plg6.0000°, Azm273.0000°;*

JMA Felt II J1.

NIED ***12*** *01:13:56.1, 34°.24N×135°.70E, h61km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-0.56; Mθθ2.22; Mφφ-1.66; Mrθ0.98; Mθφ-0.26; Mφr-0.96; Fault plane solution: Mo2.41000×10¹⁵ NP1: φs314.00000°, δ82.00000°, λ-38.00000°. NP2:φs50.00000°, δ53.00000°, λ-170.00000°.*

NEIC ***12*** *01:13:57.2±2.5, 34°.26N±0°.04×135°.60E±0°.04, h62km±7km, mb4.6/18 Error ellipse: s-maj=7.7km s-min=1.9km az=140.0*

ISC 12 01:13:56.4±0.5, 34°.25N±0°.03×135°.68E±0°.03, h58km±4km, n94, σ1s10/114, mb4.3/24, 4C-11D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWY	**Kouya**	**0.08**	**249**	↑P	**Pn**	**01 14 05.5**	**+0.3**
JWY				S	**Sn**	**01 14 11.8**	**+0.2**
JNTK	**Naratenkawa**	**0.17**	**82**	↓P	**Pn**	**01 14 05.5**	**-0.1**
JNTK				S	**Sn**	**01 14 12.1**	**-0.1**
JHE	**Heguri**	**0.41**	**0**	↓P	**Pn**	**01 14 07.2**	**-0.1**
JHE				S	**Sn**	**01 14 15.0**	**-0.1**
JTNC	**Tanabenakahech**	**0.43**	**188**	↑P	**Pn**	**01 14 07.2**	**-0.3**
JTNC				S	**Sn**	**01 14 15.5**	**0.0**
JWM	**Minabe**	**0.48**	**215**	↑P	**Pn**	**01 14 07.7**	**-0.3**
JWM				S	**Sn**	**01 14 15.9**	**-0.5**
JKN2	**Miekihoku**	**0.49**	**91**	↓P	**Pn**	**01 14 08.0**	**-0.1**
JKN2				S	**Sn**	**01 14 16.5**	**-0.1**
JAWN	**Awajishima-nag**	**0.69**	**291**	↓P	**Pn**	**01 14 10.4**	**0.0**
JAWN				S	**Sn**	**01 14 20.8**	**+0.2**
TSUJ	**Tsu 2**	**0.77**	**53**	↓P	**Pn**	**01 14 11.1**	**-0.2**
TSUJ				S	**Sn**	**01 14 21.7**	**-0.5**
JIE	**Ise**	**0.86**	**80**	↓P	**Pn**	**01 14 12.4**	**-0.1**
JIE				S	**Sn**	**01 14 24.5**	**+0.1**
JKS	**Kasai**	**1.01**	**317**	↓P	**Pn**	**01 14 14.4**	**-0.1**
JKS				S	**Sn**	**01 14 27.7**	**-0.1**
JWT	**Wachi**	**1.06**	**347**	↑P	**Pn**	**01 14 15.0**	**-0.1**
JWT				S	**Sn**	**01 14 28.9**	**-0.1**
JWT	**Wachi**	**1.06**	**347**	Pn	**Pn**	**01 14 15.2**	**0.0**
JWT				Sn	**Sn**	**01 14 29.1**	**0.0**
TTO1	**TONANKAI O.B.S**	**1.11**	**124**	↓P	**Pn**	**01 14 15.5**	**0.0**
JAI	**Aioi**	**1.12**	**246**	↓P	**Pn**	**01 14 16.0**	**+0.1**
JAI				S	**Sn**	**01 14 30.4**	**0.0**
TTO2	**TONANKAI O.B.S**	**1.23**	**114**	↓P	**Pn**	**01 14 17.1**	**0.0**
JAD	**Aida**	**1.43**	**299**	↓P	**Pn**	**01 14 19.7**	**-0.3**
JAD				S	**Sn**	**01 14 37.5**	**-0.3**
INU	**Inuyama**	**1.55**	**45**	Pn	**Pn**	**01 14 22.4**	**+0.7**
INU				Sn	**Sn**	**01 14 44.1**	**+3.2**
JMN	**Monobe**	**1.58**	**251**	Pn	**Pn**	**01 14 22.4**	**+0.2**
JMN				Sn	**Sn**	**01 14 42.1**	**+0.4**
JGF	**Kuroka**	**1.93**	**45**	Pn	**Pn**	**01 14 26.2**	**-0.7**
JSG	**Sagara**	**2.11**	**78**	Pn	Pn	01 14 34.5	+5.2
JHS	**Saijyo**	**2.25**	**290**	Pn	**Pn**	**01 14 31.3**	**+0.1**
MAJO	**Matsushiro**	**3.08**	**41**	Pn	**Pn**	**01 14 42.8**	**+0.2**
MAT	**Matsushiro**	**3.08**	**41**	P	**Pn**	**01 14 42.7**	**+0.1**
MAT				eS	**Sn**	**01 15 18.9**	**+0.6**
MJAR	**Matsushiro Arr**	**3.08**	**41**	P	**Pn**	**01 14 43.0**	**+0.4**
	3.8nm,0.3s,baz=234,slow=14,SNR=84						
MJAR				S	**Sn**	**01 15 12.5**	**-5.8**
	7.7nm,0.3s,baz=222,slow=17,SNR=6.3						
MJAR				LR	LR	01 16 13.8	
	comp=Z,204nm,21.1s,baz=160,slow=44						
MJAR	**Matsushiro Arr**	**3.08**	**41**	Pn	**Pn**	**01 14 42.4**	**-0.2**
JHJ	**Hachijo jima 2**	**3.60**	**107**	P	**Pn**	**01 14 49.8**	**+0.1**
	66nm,0.3s,baz=28,slow=6.0,SNR=12						
JHJ				S	**Sn**	**01 15 28.4**	**-2.6**
	37nm,0.3s,baz=208,slow=19,SNR=2.3						
JHJ2	**Mitsune**	**3.63**	**107**	Pn	**Pn**	**01 14 48.8**	**-1.2**
JNU	**Nakatsue**	**4.16**	**256**	P	**Pn**	**01 14 58.4**	**+1.0**
	30nm,0.3s,baz=54,slow=4.3,SNR=209						
JNU				S	**Sn**	**01 15 41.0**	**-3.7**
	2.1nm,0.3s,baz=22,slow=19,SNR=1.4						
JNU	**Nakatsue**	**4.16**	**256**	Pn	**Pn**	**01 14 57.8**	**+0.5**
JSD	**Sado**	**4.32**	**28**	Pn	**Pn**	**01 14 59.8**	**+0.2**
JSU	**Suzuyama**	**5.18**	**240**	Pn	**Pn**	**01 15 12.3**	**+1.0**
JTU	**Tsushima**	**5.20**	**275**	Pn	**Pn**	**01 15 11.4**	**-0.2**
KSRS	**Korea Array**	**7.07**	**299**	P	**Pn**	**01 15 38.7**	**+1.5**
	6.9nm,0.3s,baz=120,slow=14,SNR=40						
KSRS				S	**Sn**	**01 16 54.4**	**-1.7**
	1.7nm,0.3s,baz=114,slow=24,SNR=12						
KSAR	**Wonju Array Be**	**7.09**	**299**	Pn	**Pn**	**01 15 38.2**	**+0.7**
KS19	**Wonju Array Si**	**7.13**	**299**	Pn	**Pn**	**01 15 39.0**	**+1.1**
INCN	**Inchon**	**8.02**	**296**	Pn	**Pn**	**01 15 51.8**	**+1.5**
JMZ	**Minamidaito 2**	**9.24**	**206**	Pn	**Pn**	**01 16 08.8**	**+1.8**
ERM	**Erimo**	**9.73**	**35**	Pn	**Pn**	**01 16 15.9**	**+2.4**
USA0B	**Ussuriysk Arra**	**10.34**	**345**	Pn	**Pn**	**01 16 23.9**	**+2.0**
USRK	**Ussuriysk Ar.**	**10.34**	**345**	P	**Pn**	**01 16 22.3**	**+0.4**
	baz=161,slow=12,SNR=11						
USRK				S	**Sn**	**01 18 15.9**	**-0.3**
	baz=175,slow=26,SNR=2.7						
USRK				LR	LR	01 20 07.4	
	comp=Z,83nm,18.9s,baz=169,slow=36						
USRK	**Ussuriysk Ar.**	**10.34**	**345**	Pn	**Pn**	**01 16 25.0**	**+3.1**
ASAJ	**Asahikawa**	**11.22**	**26**	LR	LR	01 21 10.2	
	comp=Z,62nm,19.1s,baz=149,slow=39						
KLR	**Kul'dur**	**15.25**	**350**	P	**P**	**01 17 29.9**	**-1.9**
	0.5nm,0.3s,baz=140,slow=10,SNR=24						
KLR				LR	LR	01 22 39.8	
	comp=Z,71nm,21.1s,baz=171,slow=34						
SSLB	**Suanglung**	**16.55**	**235**	P	**P**	**01 17 46.4**	**0.0**
PETK	**Petropavlovsk-**	**24.51**	**33**	P	**P**	**01 19 09.6**	**-0.4**
	8.2nm,0.9s,baz=213,slow=6.9,SNR=5.9						
PETK	**Petropavlovsk-**	**24.51**	**33**	P	**P**	**01 19 10.7**	**+0.6**
SONM	**Songino Array**	**25.75**	**311**	P	**P**	**01 19 21.8**	**+0.2**
	0.4nm,0.3s,baz=122,slow=9.5,SNR=3.6						
SONM				pP	**pP**	**01 19 34.6**	**-1.3**
	0.4nm,0.3s,baz=124,slow=10,SNR=2.8						
SONM	**Songino Array**	**25.75**	**311**	P	**P**	**01 19 22.4**	**+0.8**
H11N2	**WAKE ISLAND Hy**	**31.20**	**110**	T	T	01 52 46.4	
	baz=303,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**31.20**	**110**	T	T	01 52 47.2	
	baz=303,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**31.22**	**110**	T	T	01 52 48.7	
	baz=303,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	**31.74**	**112**	T	T	01 53 29.7	
	baz=304,slow=75,SNR=63						
H11S1	**WAKE ISLAND Hy**	**31.74**	**112**	T	T	01 53 29.7	
	baz=304,slow=75,SNR=64						
H11S2	**WAKE ISLAND Hy**	**31.76**	**112**	T	T	01 53 29.7	
	baz=304,slow=75,SNR=51						
CMAR	**Chiang Mai Arr**	**36.26**	**254**	P	**P**	**01 20 55.2**	**+1.1**
	6.7nm,0.3s,baz=49,slow=8.7,SNR=4.5						
TIXI	**Tiksi**	**37.64**	**356**	P	**P**	**01 21 04.3**	**-0.9**
TIXI				IAmb	IAmb	01 21 04.9	
	comp=Z,5.7nm,0.6s						
SHL	**Shillong**	**38.70**	**269**	P	**P**	**01 21 14.5**	**-0.5**
MKAR	**Makanchi Array**	**41.72**	**304**	P	**P**	**01 21 39.9**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=88,slow=11,SNR=4.1						
MKAR	**Makanchi Array**	**41.72**	**304**	P	**P**	**01 21 39.5**	**0.0**
KNRA	**Kununurra**	**50.08**	**189**	P	**P**	**01 22 45.5**	**0.0**
KKAR	**Karatay Array**	**50.49**	**301**	P	**P**	**01 22 48.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**52.92**	**192**	P	**P**	**01 23 07.0**	**+0.3**
GHO	**Glory Hole Cre**	**53.69**	**35**	P	**P**	**01 23 13.0**	**+1.0**
MDM	**Murphy Dome**	**53.72**	**31**	P	**P**	**01 23 13.1**	**+0.9**
MDM				IAmb	IAmb	01 23 22.9	
	comp=Z,5.3nm,1.3s						
WB0	**Warramunga Arr**	**53.73**	**182**	P	**P**	**01 23 12.1**	**-0.5**
WB0				IAmb	IAmb	01 23 12.8	
	comp=Z,3.5nm,0.8s						
WRAB	**Tennant Creek**	**53.89**	**182**	P	**P**	**01 23 13.3**	**-0.6**
WRAB				IAmb	IAmb	01 23 13.6	
	comp=Z,3.0nm,0.8s						
WB2	**Warramunga Arr**	**53.90**	**182**	P	**P**	**01 23 13.5**	**-0.4**
WB2				IAmb	IAmb	01 23 14.1	
	comp=Z,4.4nm,0.8s						
WRA	**Warramunga Arr**	**53.90**	**182**	P	**P**	**01 23 13.3**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=356,slow=7.9,SNR=69						
WRA				pP	**pP**	**01 23 28.4**	**-1.1**
	comp=Z,2.1nm,0.9s,baz=0.9,slow=7.8,SNR=7.5						
WRA	**Warramunga Arr**	**53.90**	**182**	P	**P**	**01 23 13.4**	**-0.5**
WR0	**Warramunga Arr**	**53.91**	**181**	P	**P**	**01 23 13.6**	**-0.3**
WR0				IAmb	IAmb	01 23 14.2	
	comp=Z,5.9nm,0.8s						
ILAR	**Eielson Array**	**54.31**	**31**	P	**P**	**01 23 16.2**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=261,slow=5.7,SNR=9.8						
ILAR				pP	**pP**	**01 23 31.6**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=278,slow=5.9,SNR=2.3						
BMAR	**Burnt Mountain**	**54.99**	**28**	P	**P**	**01 23 23.1**	**+1.8**
K27K	**Chicken**	**56.48**	**32**	P	**P**	**01 23 33.0**	**+1.0**
K27K				IAmb	IAmb	01 23 35.0	
	comp=Z,8.1nm,1.4s						
BCAR	**Beaver Creek A**	**56.79**	**33**	P	**P**	**01 23 35.2**	**+1.0**
ASAR	**Alice Springs**	**57.62**	**182**	P	**P**	**01 23 40.0**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=14,slow=7.6,SNR=13						
ASAR				pP	**pP**	**01 23 55.4**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=14,slow=8.0,SNR=6.9						
ASAR	**Alice Springs**	**57.62**	**182**	P	**P**	**01 23 41.1**	**+0.6**
EPYK	**Eagle Plains**	**58.22**	**28**	P	**P**	**01 23 45.4**	**+1.1**
INK	**Inuvik**	**58.95**	**26**	P	**P**	**01 23 49.4**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=97,slow=10,SNR=4.8						
INK	**Inuvik**	**58.95**	**26**	P	**P**	**01 23 49.8**	**+0.5**
C36M	**Paulatuk**	**61.87**	**23**	P	**P**	**01 24 09.8**	**+0.7**
C36M				IAmb	IAmb	01 24 10.1	
	comp=Z,5.1nm,0.7s						
EUNU	**Eureka**	**63.59**	**7**	P	**P**	**01 24 20.1**	**-0.4**
ARCES	**ARCESS Array B**	**64.92**	**339**	P	**P**	**01 24 28.2**	**-1.1**
	comp=Z,3.4nm,0.9s,baz=67,slow=9.5,SNR=5.1						
RES	**Resolute Bay**	**66.41**	**13**	P	**P**	**01 24 38.4**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=315,slow=2.9,SNR=2.8						
RES	**Resolute Bay**	**66.41**	**13**	P	**P**	**01 24 38.7**	**0.0**
FINES	**FINESS Array B**	**69.04**	**331**	P	**P**	**01 24 54.7**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=62,slow=5.2,SNR=7.6						
FINES	**FINESS Array B**	**69.04**	**331**	P	**P**	**01 24 54.9**	**-0.6**
NOA	**NORSAR Array B**	**74.86**	**335**	P	**P**	**01 25 28.8**	**-1.7**
	comp=Z,0.5nm,0.7s,ba

SLTI	**Sal'it**	**2.88 146**	Sn	**Sn**	01 23 05.5	**-0.6**
MMLI	**Mount Malkishu**	**2.91 138**	Pn	**Pn**	01 22 32.2	**0.0**
MMLI			Sn	**Sn**	01 23 06.8	**-0.3**
SEYD	**Seydisehir-KON**	**2.95 340**	PN	**Pn**	01 22 33.6	**+0.7**
TAHT	**Tahtakopru-Hat**	**3.03 54**	PN	**Pn**	01 22 35.8	**+2.0**
KARA	**Karaisali**	**3.04 30**	PN	**Pn**	01 22 35.7	**+1.7**
HMDT	**Nahal Hemdat**	**3.11 139**	Pn	**Pn**	01 22 35.4	**+0.5**
HMDT			Sn	**Sn**	01 23 12.2	**+0.3**
YESY	**Yesilyurt**	**3.17 9**	PN	**Pn**	01 22 36.9	**+1.0**
KORT	**Korkueli**	**3.27 317**	PN	**Pn**	01 22 38.5	**+1.3**
UJAP	**Al Uja**	**3.32 143**	Pn	**Pn**	01 22 37.3	**-0.4**
UJAP			Sn	**Sn**	01 23 17.1	**+0.2**
CMRD	**Camardi-Nigde**	**3.37 26**	PN	**Pn**	01 22 40.2	**+1.6**
AMAZ	**Amatzia**	**3.44 154**	Pn	**Pn**	01 22 39.8	**+0.3**
AMAZ			Sn	**Sn**	01 23 20.2	**+0.1**
DSI	**Dead Sea**	**3.60 148**	Pn	**Pn**	01 22 41.9	**+0.3**
DSI			Sn	**Sn**	01 23 24.2	**+0.3**
YTIR	**Yattir**	**3.67 152**	Pn	**Pn**	01 22 43.2	**+0.5**
YTIR			Sn	**Sn**	01 23 26.2	**+0.4**
MDBI	**Mazsada**	**3.81 150**	Pn	**Pn**	01 22 44.9	**+0.5**
MDBI	**Mazsada**	**3.81 150**	Pn	**Pn**	01 22 45.0	**+0.5**
MDBI			Sn	**Sn**	01 23 29.0	**-0.1**
MDBI			Sn	**Sn**	01 23 29.2	**+0.1**
KZIT	**Kziot**	**3.87 164**	Pn	**Pn**	01 22 45.5	**+0.1**
KZIT			Sn	**Sn**	01 23 30.5	**-0.3**
RMNI	**Mount Ramon**	**4.26 161**	Pn	**Pn**	01 22 50.8	**0.0**
ZFRI	**Zfri**	**4.43 157**	Pn	**Pn**	01 22 53.2	**+0.2**
ZFRI			Sn	**Sn**	01 23 43.7	**-0.6**
PRNI	**Paran**	**4.56 159**	Pn	**Pn**	01 22 54.8	**-0.1**
PRNI			Sn	**Sn**	01 23 47.7	**0.0**
KRMI	**Paran Flat**	**4.71 163**	Pn	**Pn**	01 22 57.0	**+0.1**
HRFI	**Mount Harif**	**4.87 160**	Pn	**Pn**	01 22 59.2	**+0.1**
MBRI	**Mt Berech**	**5.06 162**	Pn	**Pn**	01 23 01.9	**0.0**
MBRI			Sn	**Sn**	01 24 00.4	**+0.2**
EIL	**Elat**	**5.19 162**	Pn	**Pn**	01 23 03.6	**+0.1**

IDC ***12*** *01:37:12.6±1.0, 19°.76S×173°.35E, h0km, mb4.5/13, mb1 4.6/14, mb1mx4.3/39, mbtmp4.5/14, ML2.7/1, MS3.6/12, Ms1 3.6/12, ms1mx3.4/30, Error ellipse: s-maj=28.6km s-min=20.0km az=140.0*

NEIC ***12*** *01:37:17.7±2.0, 19.6S±0°.1×173°.48E±0°.06, h42km±7km, mb4.6/19, Error ellipse: s-maj=17.7km s-min=4.4km az=155.0*

BGR ***12*** *01:37:20.6±0.0, 18°.97S×173°.01E, h33km*

ISC 12 01:37:17.1±0.5**, 19°.85S**±0°.09×**173°.51E**±0°.08**, h35**km**, n104, σ0°.96/93, mb4.7/24, MS3.6**/13**, 1D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.79**	**65**	Pn	**Pn**	**01 38 26.6**	**-0.2**
DZM	**Mont Dzumac**	**6.96**	**250**	Pn	**Pn**	**01 38 55.4**	**-1.4**
	0.1nm,0.3s,baz=75,slow=16,SNR=8.5						
DZM	**Mont Dzumac**	**6.96**	**250**	*e*Pn	**Pn**	**01 38 58.2**	**+1.4**
	100nm,1.4s						
DZM				*e*LR	LR	01 40 34.8	
	comp=Z,1μm,25.6s						
DZM	**Mont Dzumac**	**6.96**	**250**	Pn	**Pn**	**01 38 57.8**	**+1.0**
RAO	**Raoul Island**	**12.18**	**142**	Pn	**P**	**01 40 17.0**	**-3.3**
AFI	**Afiamalu**	**15.26**	**70**	LR	LR	01 45 36.7	
	comp=Z,323nm,20.7s,baz=249,slow=33						
HNR	**Honiara**	**16.70**	**306**	LR	LR	01 46 31.7	
	comp=Z,280nm,19.9s,baz=136,slow=34						
EIDS	**Eidsvold**	**21.41**	**251**	P	**P**	**01 42 03.0**	**+0.9**
ARMA	**Armidale**	**22.39**	**238**	P	**P**	**01 42 14.3**	**+1.6**
ARMA				IAmb	IAmb	01 42 16.6	
	comp=Z,20nm,1.2s						
RAR	**Rarotonga**	**25.05**	**98**	LR	LR	01 52 38.8	
	comp=Z,93nm,18.0s,baz=265,slow=37						
KRVT	**Keravat (AS076**	**26.02**	**304**	LR	LR	01 51 51.1	
	comp=Z,185nm,21.6s,baz=134,slow=34						
PMG	**Port Moresby**	**27.49**	**288**	P	**P**	**01 43 00.1**	**-0.3**
	comp=Z,15nm,0.8s,baz=146,slow=1.9,SNR=4.6						
PMG				LR	LR	01 52 07.7	
	comp=Z,163nm,20.2s,baz=106,slow=33						
PMG	**Port Moresby**	**27.49**	**288**	P	**P**	**01 42 60.0**	**-0.4**
STKA	**Stephens Creek**	**31.00**	**241**	P	**P**	**01 43 32.7**	**+1.3**
	comp=Z,4.8nm,0.9s,baz=73,slow=10,SNR=7.5						
STKA	**Stephens Creek**	**31.00**	**241**	P	**P**	**01 43 32.1**	**+0.7**
TBI	**Tubuai**	**34.55**	**103**	*e*LR	LR	01 53 25.0	
	comp=Z,264nm,30.2s						
PPT2	**Papeete2**	**34.99**	**93**	*e*LR	LR	01 53 37.0	
	comp=Z,291nm,26.0s,baz=267						
PPT	**Papeete**	**34.99**	**92**	LR	LR	01 54 59.5	
	comp=Z,90nm,19.8s,baz=228,slow=30						
BBOO	**Buckleboo**	**35.78**	**241**	P	**P**	**01 44 12.9**	**-0.1**
WB0	**Warramunga Arr**	**36.75**	**263**	P	**P**	**01 44 20.4**	**-1.1**
WB0				IAmb	IAmb	01 44 22.1	
	comp=Z,8.8nm,1.4s						
WB2	**Warramunga Arr**	**36.77**	**263**	P	**P**	**01 44 20.9**	**-0.7**
WB2				IAmb	IAmb	01 44 23.0	
	comp=Z,12nm,1.2s						
WRAB	**Tennant Creek**	**36.77**	**263**	P	**P**	**01 44 21.0**	**-0.7**
WRAB				IAmb	IAmb	01 44 22.9	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**36.78**	**263**	P	**P**	**01 44 20.5**	**-1.3**
	comp=Z,3.3nm,1.2s,baz=97,slow=8.5,SNR=9.7						
WRA	**Warramunga Arr**	**36.78**	**263**	P	**P**	**01 44 20.4**	**-1.3**
AS31	**Alice Springs**	**36.90**	**257**	P	**P**	**01 44 22.2**	**-0.6**
ASAR	**Alice Springs**	**36.90**	**257**	P	**P**	**01 44 22.4**	**-0.4**
	comp=Z,5.6nm,0.9s,baz=82,slow=8.7,SNR=42						
ASAR				PcP	**PcP**	**01 46 44.2**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=91,slow=3.7,SNR=3.0						
ASAR	**Alice Springs**	**36.90**	**257**	P	**P**	**01 44 22.0**	**-0.8**
MTN	**Manton Dam**	**41.17**	**273**		**P**	**01 44 57.6**	**-0.9**
MTN				IAmb	IAmb	01 45 09.3	
	comp=Z,17nm,1.4s						
GUMO	**Guam**	**43.57**	**317**	LR	LR	02 01 51.7	
	comp=Z,61nm,21.3s,baz=120,slow=34						
FITZ	**Fitzroy Crossi**	**45.19**	**264**	P	**P**	**01 45 28.9**	**-2.0**
	comp=Z,8.5nm,1.0s,baz=106,slow=7.1,SNR=12						
FITZ	**Fitzroy Crossi**	**45.19**	**264**	P	**P**	**01 45 30.8**	**-0.1**
FITZ				IAmb	IAmb	01 45 32.5	
	comp=Z,14nm,1.1s						
SIJI	**Sorong**	**45.42**	**289**	P	**P**	**01 45 31.0**	**-1.9**
	comp=Z,3.5nm,0.3s,baz=104,slow=8.9,SNR=6.7						
TAOE	**Nuku Hiva Isla**	**46.07**	**83**	*e*LR	LR	01 58 47.4	
	comp=Z,104nm,23.6s						
BATI	**Baumata**	**48.93**	**274**	P	**P**	**01 46 00.1**	**-0.3**
	comp=Z,9.4nm,0.3s,baz=46,slow=2.8,SNR=5.0						
DAV	**Davao City (W)**	**54.22**	**295**	LR	LR	02 09 02.7	
	comp=Z,344nm,18.6s,baz=127,slow=35						
VNDA	**Vanda**	**58.00**	**183**	P	**P**	**01 47 07.2**	**+1.4**
	comp=Z,1.2nm,1.0s,baz=351,slow=5.6,SNR=4.5						
VNDA				LR	LR	02 09 43.6	
	comp=Z,27nm,18.5s,baz=344,slow=34						
VNDA	**Vanda**	**58.00**	**183**	P	**P**	**01 47 08.0**	**+2.1**
LEM	**Lembang**	**65.06**	**272**	LR	LR	02 15 43.8	
	comp=Z,106nm,19.4s,baz=126,slow=36						
MJAR	**Matsushiro Arr**	**65.25**	**329**	P	**P**	**01 47 54.9**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=158,slow=6.9,SNR=8.9						
QSPA	**South Pole Qui**	**70.21**	**180**	P	**P**	**01 48 27.0**	**+0.6**
QSPA				IAmb	IAmb	01 48 28.9	
	comp=Z,9.4nm,1.2s						
NJ2	**Nanjing**	**73.49**	**314**	*e*P	**P**	**01 48 45.2**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CN2	**Changchun**	**77.13**	**326**	*e*P	**P**	**01 49 07.5**	**+0.5**
MAW	**Mawson**	**79.36**	**201**	LR	LR	02 21 47.5	
	comp=Z,21nm,18.4s,baz=235,slow=34						
BELA	**Belgrano 2**	**81.12**	**174**	P	**P**	**01 49 29.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**82.44**	**293**	P	**P**	**01 49 37.8**	**+1.4**
	comp=Z,1.1nm,0.4s,baz=120,slow=3.7,SNR=14						
CMAR	**Chiang Mai Arr**	**82.44**	**293**	P	**P**	**01 49 36.8**	**+0.5**
CHTO	**Chiang Mai**	**82.58**	**293**	P	**P**	**01 49 37.8**	**+0.7**
HHC	**Hu-ho-hao-te**	**83.34**	**318**	*e*P	**P**	**01 49 39.3**	**-1.4**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,5.7s						
SEY	**Seymchan**	**84.17**	**350**	P	**P**	**01 49 44.9**	**+0.7**
	comp=Z,8.6nm,1.0s,baz=191,slow=6.6,SNR=6.0						
ISA	**Isabella, Lake**	**84.77**	**49**	P	**P**	**01 49 50.0**	**+1.9**
ISA				IAmb	IAmb	01 49 51.8	
	comp=Z,6.2nm,1.1s						
LZH	**Lanzhou**	**86.16**	**310**	*e*P	**P**	**01 49 53.7**	**-1.4**
LZH				pP	pwP	01 50 10.5	+1.5
LZH				sP	sP	01 50 17.6	+8.8
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
NVAR	**Mina Array Bea**	**86.22**	**47**	P	**P**	**01 49 57.1**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=271,slow=16,SNR=5.4						
SNAA	**Sanae**	**88.69**	**181**	P	**P**	**01 50 06.9**	**+0.3**
SNAA	**Sanae**	**88.69**	**181**	P	**P**	**01 50 06.7**	**+0.1**
VNA3	**Neumayer Olymp**	**89.12**	**179**	P	**P**	**01 50 08.0**	**-0.6**
VNA2	**Neumayer--Watz**	**89.47**	**180**	P	**P**	**01 50 10.8**	**+0.6**
	baz=172,slow=5.0						
VNA1	**Neumayer--Stat**	**89.74**	**179**	P	**P**	**01 50 11.6**	**+0.2**
SONM	**Songino Array**	**90.16**	**322**	P	**P**	**01 50 13.9**	**+0.1**
	comp=Z,1.5nm,1.0s,baz=103,slow=3.2,SNR=7.1						
SONM	**Songino Array**	**90.16**	**322**	P	**P**	**01 50 13.2**	**-0.7**
GTA	**Gaotai**	**90.50**	**312**	*e*P	**P**	**01 50 16.6**	**+1.0**
GTA				pP	sP	01 50 28.1	-1.3
GTA				sP	pwP	01 50 33.1	+3.5
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TXAR	**Lajitas Array**	**93.54**	**60**	LR	LR	02 24 07.5	
	comp=Z,49nm,21.3s,baz=0.0,slow=30						
WMQ	**Urumqi**	**100.55**	**313**	*e*P	**Pdif**	**01 50 59.9**	**-1.3**
OSTC	**Ostas**	**144.47**	**335**	*e*PKP	**PKPdf**	**01 56 49.4**	**-0.3**
CHVC	**Chvalec**	**144.51**	**335**	*e*PKP	**PKPdf**	**01 56 48.9**	**-0.8**
MORC	**Moravsky Berou**	**144.52**	**333**	*e*PKP	**PKPdf**	**01 56 50.7**	**+0.9**
DPC	**Dobruska-Polom**	**144.59**	**335**	*e*PKP	**PKPdf**	**01 56 49.5**	**-0.4**
UPC	**Upice**	**144.59**	**335**	*e*PKP	**PKPdf**	**01 56 49.2**	**-0.7**
CLL	**Collm**	**145.06**	**339**	*i* PKPdf	**PKPdf**	**01 56 50.4**	**-0.2**
	comp=Z,24nm,1.2s						
CLL				*i* PKiKP	**PKiKP**	**01 56 54.5**	**0.0**
CLL	**Collm**	**145.06**	**339**	*e*PKPbc	**PKPdf**	**01 56 50.2**	**-0.4**
	baz=32,slow=3.2						
BRG	**Berggiesshubel**	**145.08**	**337**	*e*PKP	**PKPdf**	**01 56 50.7**	**0.0**
	comp=Z,16nm,1.0s						
BRG				*e*		01 57 02.6	
	comp=Z,21nm,1.4s						
BRG	**Berggiesshubel**	**145.08**	**337**	*e*PKPbc	**PKPdf**	**01 56 50.9**	**+0.2**
	baz=32,slow=3.2						
PVCC	**Panska Ves**	**145.13**	**336**	*e*PKP	**PKPdf**	**01 56 51.3**	**+0.5**
JAVC	**Velka Javorina**	**145.15**	**332**	*e*PKP	**PKPdf**	**01 56 52.3**	**+1.4**
FBE	**Freiberg**	**145.25**	**338**	*e*PKPbc	**PKPdf**	**01 56 51.5**	**+0.6**
	baz=32,slow=3.2						
VRAC	**Vranov**	**145.28**	**333**	*e*PKP	**PKPdf**	**01 56 51.7**	**+0.6**
WIMM	**Wimmelburg**	**145.37**	**340**	*e*PKPbc	**PKPab**	**01 56 51.7**	**+0.5**
	baz=32,slow=3.2						
ABG1	**Leinawald**	**145.49**	**339**	*e*PKPbc	**PKPab**	**01 56 52.2**	**+0.5**
	baz=32,slow=3.2						
MODW	**Modelwitz**	**145.55**	**339**	*e*PKPbc	**PKPab**	**01 56 52.4**	**+0.6**
	baz=32,slow=3.2						
KRUC	**Moravsky**	**145.55**	**333**	*e*PKP	**PKPab**	**01 56 52.4**	**+0.4**
NEUB	**Neuenburg**	**145.55**	**340**	*e*PKPbc	**PKPab**	**01 56 52.4**	**+0.5**
	baz=32,slow=3.2						
PRU	**Pruhonice**	**145.58**	**336**	*e*PKP	**PKPab**	**01 56 52.3**	**+0.3**
HKWD	**Heukewalde**	**145.71**	**339**	*e*PKPbc	**PKPab**	**01 56 52.5**	**0.0**
	baz=32,slow=3.2						
TAUT	**Tautenburg**	**145.77**	**339**	*e*PKPbc	**PKPab**	**01 56 52.9**	**+0.2**
	baz=32,slow=3.2						
MLFH	**Mildenfurth**	**145.81**	**339**	*e*PKPbc	**PKPab**	**01 56 53.2**	**+0.4**
	baz=32,slow=3.2						
TANN	**Tannenbergstha**	**145.99**	**338**	*e*PKPbc	**PKPab**	**01 56 53.9**	**+0.3**
	baz=32,slow=3.2						
GUNZ	**Gunzen**	**146.08**	**338**	*e*PKPbc	**PKPab**	**01 56 54.2**	**+0.2**
	baz=32,slow=3.2						
WERN	**Wernitzgruen**	**146.13**	**338**	*e*PKPbc	**PKPab**	**01 56 54.3**	**+0.1**
	baz=32,slow=3.2						
ROHR	**Rohrbach**	**146.19**	**338**	*e*PKPbc	**PKPab**	**01 56 54.4**	**0.0**
	baz=32,slow=3.2						
VITZ	**Vitzeroda**	**146.37**	**341**	*e*PKPbc	**PKPab**	**01 56 54.8**	**-0.2**
	baz=32,slow=3.2						
KHC	**Kasperske Hory**	**146.64**	**336**	*e*PKP	**PKPab**	**01 56 55.6**	**-0.6**
KHC				*ex*	x	01 56 59.4	
CONA	**Conrad Observa**	**146.64**	**332**	*e*P	**PKPab**	**01 56 55.9**	**-0.3**
	comp=Z,13nm,1.3s						
GEC2	**GERESS Array S**	**146.82**	**335**	*e*PKPbc	**PKPab**	**01 56 56.1**	**-0.8**
	baz=32,slow=3.2						
GERES	**GERESS Array B**	**146.82**	**335**	PKPbc	**PKPbc**	**01 56 55.9**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=45,slow=2.6,SNR=16						
GERES	**GERESS Array B**	**146.82**	**335**		**PKPbc**	**01 56 55.2**	**-0.4**
ARSA	**Arzberg**	**147.31**	**332**	*e*P	**PKPbc**	**01 56 56.6**	**-0.4**
	comp=Z,2.1nm,0.7s						
MOA	**Molln**	**147.39**	**334**	*e*P	**PKPdf**	**01 56 53.5**	**-1.3**
	comp=Z,5.8nm,1.3s						
SOKA	**Soboth**	**147.96**	**332**	*e*P	**PKPbc**	**01 56 59.5**	**+0.6**
	comp=Z,6.4nm,1.3s						
WTTA	**Wattenberg**	**148.91**	**336**	*e*P	**PKPbc**	**01 57 01.2**	**-0.2**
	comp=Z,8.5nm,1.2s						
MOTA	**Moosalm**	**149.05**	**336**	*e*P	**PKPdf**	**01 56 59.4**	**+1.8**
	comp=Z,7.2nm,1.2s						
RETA	**Reutte**	**149.06**	**337**	*e*P	**PKPdf**	**01 56 59.0**	**+1.5**
	comp=Z,12nm,1.9s						
SQTA	**Sankt Quirin**	**149.12**	**336**	*e*P	**PKPbc**	**01 57 02.0**	**+0.1**
	comp=Z,5.3nm,1.1s						
DAVA	**Damuels**	**149.55**	**338**	*e*P	**PKPab**	**01 57 08.7**	**+0.7**
	comp=Z,9.7nm,1.2s						
ESDC	**Sonseca Array**	**160.12**	**354**	PKPab	**PKPab**	**01 57 52.5**	**-0.4**
	comp=Z,1.5nm,1.0s,baz=348,slow=5.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**169.71**	**231**	PKPab	**PKPab**	**01 58 34.2**	**-1.6**
	comp=Z,1.6nm,1.1s,baz=141,slow=3.3,SNR=4.4						

TEH ***12*** *01:40:33.2, 35°.47N×54°.47E, h7km, ML3.7*

THR ***12*** *01:40:37.4±0.7, 35°.35N×54°.25E, h14km±7km, ML3.5*

ISC 12 01:40:34.6±0.9**, 35°.49N**±0°.04×**54°.48E**±0°.03**, h10**km**, n49, σ1°.32/50, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IANJ	**Anjilo**	**0.46**	**267**	*e*Pg	**Pg**	**01 40 42.2**	**-1.4**
IKIA	**Kiasar**	**0.96**	**318**	*e*Pg	**Pg**	**01 40 51.5**	**-1.6**
ISHM	**Shahmirzad**	**1.01**	**288**	*e*Pg	**Pg**	**01 40 52.3**	**-1.8**
ISHM				*e*		01 41 10.5	
IGLO	**Ghaloghah**	**1.14**	**333**	*e*Pg	**Pb**	**01 40 54.9**	**-1.6**
IGLO				*e*		01 41 16.6	
ILAS	**Lasjerd**	**1.24**	**265**	*e*Pg	**Pb**	**01 40 57.4**	**-0.9**
ILAS				*e*		01 41 18.2	
IFIR	**Firoozkooh**	**1.41**	**277**	*e*Pg	**Pn**	**01 41 00.1**	**-0.5**
IALA	**Alasht**	**1.48**	**294**	*e*Pg	**Pn**	**01 41 01.9**	**+0.4**
IALA				*e*		01 41 26.1	
IPRN	**Peran**	**1.89**	**294**	*e*Pn	**Pn**	**01 41 07.9**	**+0.8**
IMND	**Minoodasht**	**1.92**	**23**	*e*		01 41 36.8	
IMND				*e*Pn	**Pn**	**01 41 08.3**	**+1.0**
IDMV	**Damavand**	**2.00**	**273**	*e*		01 41 46.1	
IDMV				*e*Pn	**Pn**	**01 41 09.4**	**+0.8**
DAMV	**Damavand**	**2.05**	**275**	*e*Pg	**Pb**	**01 41 11.7**	**-0.3**
DAMV	**Damavand**	**2.05**	**275**	*e*Pg	**Pb**	**01 41 11.7**	**-0.3**
TNSJ	**Nastanj**	**2.33**	**130**	*e*Pn	**Pn**	**01 41 13.3**	**+0.3**
ANAR	**Anarak**	**2.38**	**195**	*e*Pn	**Pn**	**01 41 14.1**	**+0.4**
KRSH	**Karshahi**	**2.45**	**232**	*e*Pn	**Pn**	**01 41 15.3**	**+0.5**
SBZV	**Sabzevar**	**2.70**	**70**	*e*Pn	**Pn**	**01 41 19.3**	**+1.1**
CHTH	**Charan**	**2.76**	**280**	*e*Pn	**Pn**	**01 41 21.5**	**+2.4**
CHTH	**Charan**	**2.76**	**280**	*e*Pn	**Pn**	**01 41 21.5**	**+2.4**
GHVR	**GHOM**	**2.80**	**250**	*e*Pn	**Pn**	**01 41 21.4**	**+1.9**
GHVR				IAML		01 42 17.9	
	comp=N,130nm,0.7s						
GHVR	**GHOM**	**2.80**	**250**	*e*Pn	**Pn**	**01 41 21.4**	**+1.9**
TABS	**Tabas**	**2.85**	**129**	*e*Pn	**Pb**	**01 41 25.2**	**-0.5**
TKDS	**Koohdasht(Taba**	**2.88**	**130**	*e*Pn	**Pn**	**01 41 21.3**	**+0.7**
TKDS				*e*		01 42 11.9	
THKV	**Tehran--Karaj**	**2.96**	**279**	*e*Pn	**Pn**	**01 41 24.0**	**+2.2**
THKV				IAML		01 42 10.8	
	comp=N,234nm,0.7s						
THKV	**Tehran--Karaj**	**2.96**	**279**	*e*Pn	**Pn**	**01 41 24.0**	**+2.2**
NASN	**Na'in**	**3.02**	**208**	*e*Sg	**Sb**	**01 42 05.7**	**0.0**
QAM	**Ghamsar**	**3.04**	**236**	*e*Pn	**Pn**	**01 41 23.3**	**+0.4**
TPRV	**Parvadeh(Tabas**	**3.06**	**143**	*e*Pn	**Pn**	**01 41 23.7**	**+0.6**
TPRV				*e*		01 42 18.6	
IMHD	**Mahdasht**	**3.11**	**275**	*e*	**Sg**	**01 42 16.3**	**+1.8**
IZEF	**Zefreh**	**3.14**	**215**	*e*Pn	**Pn**	**01 41 25.3**	**+0.9**
IKLH	**Kolahrood**	**3.23**	**229**	*e*Pn	**Pn**	**01 41 26.2**	**+0.6**
ICHK	**Chekchek**	**3.24**	**181**	*e*Pn	**Pn**	**01 41 26.3**	**+0.6**
ISFR	**Sfrayin**	**3.25**	**60**	*e*Pn	**Pn**	**01 41 27.6**	**+1.8**
ISFR				*e*		01 41 39.7	
IAKL	**Akhelmad**	**3.64**	**71**	*e*Pn	**Pn**	**01 41 32.5**	**+1.2**
IRAZ	**Razeghan**	**3.71**	**270**	*e*Pn	**Pn**	**01 41 33.5**	**+1.3**
ASAO	**Ashtian**	**3.77**	**257**	*e*Pn	**Pn**	**01 41 35.0**	**+1.9**
ASAO				*e*Sg	**Sb**	**01 42 27.9**	**+0.6**
ASAO	**Ashtian**	**3.77**	**257**	*e*Pn	**Pn**	**01 41 35.0**	**+1.9**
IPAY	**Payeh**	**3.79**	**74**	*e*Pn	**Pn**	**01 41 34.4**	**+1.2**
QABG	**Abgarm-Qazvin**	**3.99**	**275**	*e*Pn	**Pn**	**01 41 37.1**	**+1.0**
IBAF	**Bafgh**	**4.00**	**167**	*e*Pn	**Pn**	**01 41 36.7**	**+0.7**
IMOG	**Moghan**	**4.00**	**80**	*e*Pn	**Pn**	**01 41 37.6**	**+1.4**
IRAM	**Ramesheh**	**4.07**	**206**	*e*Pn	**Pn**	**01 41 37.9**	**+0.8**
IMEH	**Mehriz**	**4.09**	**178**	*e*Pn	**Pn**	**01 41 38.2**	**+0.8**
AFRZ	**Afriz**	**4.28**	**117**	*e*Pn	**Pn**	**01 41 41.2**	**+1.3**
ITEG	**Tejag**	**4.38**	**125**	*e*Pn	**Pn**	**01 41 42.7**	**+1.3**
IKOO	**Kooshah**	**4.85**	**128**	*e*Pn	**Pn**	**01 41 48.7**	**+0.9**
IMON	**Monand**	**4.87**	**117**	*e*Pn	**Pn**	**01 41 49.5**	**+1.4**
HSRG	**Sareghieh**	**5.07**	**269**	*e*Pn	**Pn**	**01 41 52.2**	**+1.3**
IDAH	**Dahanechah**	**5.25**	**120**	*e*Pn	**Pn**	**01 41 54.8**	**+1.5**
KHGB	**Koh Gabri**	**5.37**	**161**	*e*Pn	**Pn**	**01 41 56.2**	**+1.2**

MOS ***12*** *01:42:24.6±1.2, 43°.76N×145°.22E, h132km, mb3.9/4, Error ellipse: s-maj=11.1km s-min=9.7km az=66.2*

JMA ***12*** *01:42:25.6±0.1, 43°.76N×145°.29E, h123km±1km, M3.6*

JMA Felt I J1.

NEIC ***12*** *01:42:25.6±1.0, 43°.77N±0°.08×145°.1E±0°.1, h122km±8km, mb4.2/35, Error ellipse: s-maj=14.1km s-min=11.1km az=106.0*

NIED ***12*** *01:42:25.7, 43°.76N×145°.29E, h123km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr3.28; Mθθ0.11; Mϕϕ-3.39; Mrθ1.21; Mϕθ-1.97; Mϕr-2.58; Fault plane solution: Mo4.81000×10¹⁴ NP1: ϕs177.00000°, δ64.00000°, λ0.00000°. NP2:ϕs50.00000°, δ38.00000°, λ136.00000°.*

SKHL ***12*** *01:42:25.9±0.7, 43°.75N×145°.27E, h124km±5km, mb4.7/6, msh5.8/4*

IDC ***12*** *01:42:27.4±1.5, 43°.86N×145°.10E, h140km±13km, mb3.5/11, mb1 3.6/15, mb1mx3.5/49, mbtmp3.8/15, MS3.5/2, Ms1 3.5/2, ms1mx2.5/36, Error ellipse: s-maj=20.8km s-min=14.9km az=148.0*

ISC 12 01:42:25.5±0.6**, 43°.73N**±0°.05×**145°.23E**±0°.04**, h123**km±5km**, n118, σ0°.93/129, mb4.0**/31**, 3C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNSB	**Nemuroshibetsu**	**0.17**	**285**	P	**Pn**	**01 42 42.9**	**+0.5**
JNSB				*e*S	**Sn**	**01 42 56.0**	**+0.9**
GLVR	**Golovnino**	**0.21**	**88**	*e*P	**Pn**	**01 42 43.0**	**+0.6**
GLVR				AMB	AMB	01 42 44.0	
	778nm,0.2s						
GLVR				*i* S	**Sn**	**01 42 56.0**	**+0.7**
GLVR				A	A	01 42 58.0	
	4μm,0.3s						
GLVR				A	A	01 42 58.0	
	1μm,0.3s						
GLVR	**Golovnino**	**0.21**	**88**	*e*PN	**Pn**	**01 42 43.2**	**+0.8**
GLVR				*i* S	**Sn**	**01 42 56.7**	**+1.4**
GLVR				pmax	pmax		
	comp=E,524nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,778nm,0.2s						
GLVR				pmax	pmax		
	comp=N,462nm,0.1s						
GLVR				smax	smax		
	comp=N,4μm,0.2s						
GLVR				smax	smax		
	comp=E,11μm,0.3s						
JRA	**Rausu**	**0.22**	**340**	P	**Pn**	**01 42 42.6**	**+0.1**
JRA				*e*S	**Sn**	**01 42 55.4**	**0.0**
JNK	**Nakash**	**0.40**	**249**	P	**Pn**	**01 42 43.6**	**+0.4**
JNK				*e*S	**Sn**	**01 42 57.2**	**+0.6**
GRPR	**Tuman**	**0.47**	**56**	*e*P	**Pn**	**01 42 44.0**	**+0.4**
GRPR				AMB	AMB	01 42 46.0	
	comp=E,333nm,0.3s						
GRPR				*i* S	**S

H11N1	**WAKE ISLAND Hy 30.04**	**136**	T		T		02 19 38.8	
	baz=328,slow=76,SNR=269							
H11N3	**WAKE ISLAND Hy 30.05**	**136**	T		T		02 19 39.9	
	baz=328,slow=76,SNR=186							
H11S1	**WAKE ISLAND Hy 30.96**	**138**	T		T		02 20 46.8	
	baz=329,slow=76,SNR=556							
H11S3	**WAKE ISLAND Hy 30.97**	**138**	T		T		02 20 49.2	
	baz=329,slow=76,SNR=374							
H11S2	**WAKE ISLAND Hy 30.98**	**138**	T		T		02 20 48.1	
	baz=329,slow=76,SNR=272							
NRIK	**Noril'sk**	**38.59**	**331**	LR		LR	02 08 12.3	
	comp=N,38nm,18.2s,baz=358,slow=40							
IMAR	**Indian Mountai**	**39.44**	**34**	P		**P**	**01 49 42.7**	**-0.4**
ZALV	**Zalesovo Beam**	**39.90**	**307**	PcP		**PcP**	**01 51 48.9**	**-1.1**
	comp=N,0.4nm,0.3s,baz=82,slow=2.3,SNR=2.3							
KTH	**Kantishna Hill**	**40.62**	**38**	P		**P**	**01 49 53.7**	**+0.8**
COLD	**Coldfoot**	**40.91**	**32**	P		**P**	**01 49 54.6**	**-0.5**
COLD				IAmb		IAmb	01 50 09.2	
	comp=Z,4.9nm,1.4s							
TOLK	**Toolik Lake Re**	**41.20**	**30**	P		**P**	**01 49 58.0**	**+0.4**
TOLK				IAmb		IAmb	01 50 03.0	
	comp=Z,1.9nm,0.6s							
GHO	**Glory Hole Cre**	**41.67**	**41**	P		**P**	**01 50 01.7**	**+0.2**
MDM	**Murphy Dome**	**41.74**	**36**	P		**P**	**01 50 02.3**	**+0.3**
MDM				IAmb		IAmb	01 50 05.2	
	comp=Z,5.3nm,1.4s							
CCB	**Clear Creek Bu**	**41.94**	**36**	P		**P**	**01 50 03.5**	**0.0**
CCB				IAmb		IAmb	01 50 21.9	
	comp=Z,5.3nm,1.2s							
IL31		**42.33**	**36**	P		**P**	**01 50 06.0**	**-0.6**
IL31				IAmb		IAmb	01 50 07.0	
	comp=Z,3.1nm,0.7s							
ILAR	**Eielson Array**	**42.33**	**36**	P		**P**	**01 50 06.3**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=252,slow=5.8,SNR=17							
ILAR	**Eielson Array**	**42.33**	**36**	P		**P**	**01 50 06.6**	**-4.0**
ILAR	**Eielson Array**	**42.33**	**36**	P		**P**	**01 50 06.0**	**-0.7**
M24K	**Tolsona, Glenn**	**42.92**	**40**	P		**P**	**01 50 12.5**	**+0.9**
BMAR	**Burnt Mountain**	**43.09**	**32**	P		**P**	**01 50 13.2**	**+0.3**
KLU	**Klutina**	**43.12**	**41**	P		**P**	**01 50 13.9**	**+0.6**
MK31	**Makanchi Array**	**43.35**	**297**	P		**P**	**01 50 14.7**	**-0.6**
MK31				pmax		pmax		
	comp=Z,2.0nm,1.2s							
MK31	**Makanchi Array**	**43.35**	**297**	P		**P**	**01 50 14.7**	**-0.6**
MKAR	**Makanchi Array**	**43.35**	**297**	P		**P**	**01 50 14.0**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=87,slow=4.7,SNR=7.8							
MKAR	**Makanchi Array**	**43.35**	**297**	*e*P		**P**	**01 50 14.5**	**-0.8**
MKAR	**Makanchi Array**	**43.35**	**297**	P		**P**	**01 50 14.5**	**-0.8**
MKAR	**Makanchi Array**	**43.35**	**297**	P		**P**	**01 50 14.5**	**-0.8**
K27K	**Chicken**	**44.49**	**37**	P		**P**	**01 50 24.3**	**+0.3**
K27K				IAmb		IAmb	01 50 25.2	
	comp=Z,3.2nm,0.7s							
EGAK	**Eagle**	**44.76**	**36**	P		**P**	**01 50 26.4**	**+0.3**
EGAK				IAmb		IAmb	01 50 38.0	
	comp=Z,5.0nm,1.2s							
BCAR	**Beaver Creek A**	**44.78**	**38**	P		**P**	**01 50 27.0**	**+0.6**
ISLE	**Juniper Island**	**45.00**	**42**	P		**P**	**01 50 30.5**	**+2.2**
CTGM	**Chitina Glacie**	**45.40**	**41**	P		**P**	**01 50 32.0**	**+0.5**
CTGM				IAmb		IAmb	01 50 33.2	
	comp=Z,11nm,1.3s							
EPYK	**Eagle Plains**	**46.30**	**33**	P		**P**	**01 50 38.7**	**+0.4**
INK	**Inuvik**	**47.12**	**30**	P		**P**	**01 50 44.0**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=278,slow=6.0,SNR=6.2							
INK	**Inuvik**	**47.12**	**30**	P		**P**	**01 50 44.3**	**-0.3**
INK				pmax		pmax		
	comp=Z,4.0nm,1.4s							
INK	**Inuvik**	**47.12**	**30**	P		**P**	**01 50 44.3**	**-0.3**
INK				IAmb		IAmb	01 50 52.2	
	comp=Z,4.0nm,1.4s							
HYT	**Haines Junctio**	**47.25**	**41**	P		**P**	**01 50 47.5**	**+1.6**
HYT				IAmb		IAmb	01 50 47.8	
	comp=Z,4.7nm,0.7s							
DLBC	**Dease Lake**	**51.63**	**42**	P		**P**	**01 51 21.2**	**+2.2**
DLBC				IAmb		IAmb	01 51 26.5	
	comp=Z,4.4nm,1.1s							
KK31	**Karatay Array**	**52.48**	**297**	P		**P**	**01 51 25.1**	**-0.5**
KK31				pmax		pmax		
	comp=Z,2.0nm,1.3s							
KK31	**Karatay Array**	**52.48**	**297**	P		**P**	**01 51 25.1**	**-0.5**
KKAR	**Karatay Array**	**52.48**	**297**	P		**P**	**01 51 25.3**	**-0.3**
KKAR	**Karatay Array**	**52.48**	**297**	P		**P**	**01 51 25.3**	**-0.3**
KAPI	**Kappang**	**53.69**	**212**	LR		LR	02 12 10.0	
	comp=Z,66nm,21.4s,baz=108,slow=33							
ABKAR	**Akbulak array**	**55.98**	**308**	P		**P**	**01 51 49.4**	**-1.3**
ABKAR				IAmb		IAmb	01 51 58.8	
	comp=Z,2.5nm,1.4s							
WRA	**Warramunga Arr**	**64.14**	**191**	P		**P**	**01 52 47.1**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=7.5,slow=6.0,SNR=5.6							
WRA	**Warramunga Arr**	**64.14**	**191**	P		**P**	**01 52 47.5**	**+0.9**
WRA	**Warramunga Arr**	**64.14**	**191**	P		**P**	**01 52 47.5**	**+0.9**
FINES	**FINESS Array B**	**64.25**	**332**	P		**P**	**01 52 45.5**	**-1.4**
	comp=Z,1.1nm,0.8s,baz=45,slow=6.5,SNR=6.1							
FINES	**FINESS Array B**	**64.25**	**332**	P		**P**	**01 52 45.2**	**-1.6**
EGMT	**Eagleton**	**67.39**	**45**	P		**P**	**01 53 08.3**	**+0.9**
LRM	**Limekiln Ridge**	**67.40**	**48**	P		**P**	**01 53 08.3**	**+0.6**
ASAR	**Alice Springs**	**67.87**	**191**	P		**P**	**01 53 11.4**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=4.0,slow=4.0,SNR=2.0							
BOZ	**Bozeman (W)**	**67.99**	**48**	P		**P**	**01 53 12.1**	**+0.8**
BOZ				pmax		pmax		
	comp=Z,2.0nm,0.6s							
BOZ	**Bozeman (W)**	**67.99**	**48**	P		**P**	**01 53 12.1**	**+0.8**
BOZ				IAmb		IAmb	01 53 12.2	
	comp=Z,1.8nm,0.6s							
KVN	**Kaiserville**	**68.49**	**56**	P		**P**	**01 53 15.5**	**+0.9**
KVN				pmax		pmax		
	comp=Z,1.0nm,0.6s							
KVN	**Kaiserville**	**68.49**	**56**	P		**P**	**01 53 15.5**	**+0.9**
LHV	**Little Huntoon**	**68.75**	**57**	P		**P**	**01 53 17.4**	**+1.5**
LHV				IAmb		IAmb	01 53 18.7	
	comp=Z,9.0nm,1.4s							
NVAR	**Mina Array Bea**	**68.76**	**57**	P		**P**	**01 53 17.1**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=291,slow=6.0,SNR=9.1							
NVAR	**Mina Array Bea**	**68.76**	**57**	P		**P**	**01 53 17.3**	**+1.0**
NOA	**NORSAR Array B**	**69.11**	**338**	P		**P**	**01 53 16.7**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=31,slow=6.3,SNR=3.8							
R11A	**Troy Canyon, C**	**70.45**	**55**	P		**P**	**01 53 27.1**	**+0.5**
TPNV	**Topopah Spring**	**70.96**	**57**	P		**P**	**01 53 30.3**	**+0.6**
TPNV				pmax		pmax		
	comp=Z,6.0nm,1.5s							
TPNV	**Topopah Spring**	**70.96**	**57**	P		**P**	**01 53 30.2**	**+0.6**
TPNV				IAmb		IAmb	01 53 41.4	
	comp=Z,5.5nm,1.4s							
BW06	**Boulder Array**	**70.98**	**49**	P		**P**	**01 53 30.0**	**+0.2**
PD31	**Pinedale Array**	**70.98**	**49**	P		**P**	**01 53 30.0**	**+0.2**
PDAR	**Pinedale Array**	**70.98**	**49**	P		**P**	**01 53 30.0**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=284,slow=1.8,SNR=15							
PDAR	**Pinedale Array**	**70.98**	**49**	P		**P**	**01 53 29.8**	**0.0**
RDMU	**Red Mountain**	**72.45**	**50**	P		**P**	**01 53 39.5**	**+0.8**
SRU	**San Rafael Swe**	**72.90**	**52**	P		**P**	**01 53 42.0**	**+0.7**
SRU				pmax		pmax		
	comp=Z,5.0nm,1.1s							
SRU	**San Rafael Swe**	**72.90**	**52**	P		**P**	**01 53 42.0**	**+0.7**
PV14	**Lion Creek, Pa**	**74.26**	**52**	P		**P**	**01 53 50.0**	**+0.7**
PV14				IAmb		IAmb	01 53 59.5	
	comp=Z,4.0nm,1.2s							
BURAR	**Bucovina Array**	**74.81**	**323**	P		**P**	**01 53 52.5**	**+0.3**
TX31	**Lajitas Ar. Si**	**83.81**	**55**	P		**P**	**01 54 42.3**	**+1.1**
TX31				IAmb		IAmb	01 54 42.5	
	comp=Z,2.7nm,0.6s							
TX32	**Lajitas Array**	**83.81**	**55**	P		**P**	**01 54 42.2**	**+0.9**
TXAR	**Lajitas Array**	**83.81**	**55**	P		**P**	**01 54 41.8**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=298,slow=3.3,SNR=12							

IDC ***12*** *01:43:00.0±3.5, 19°.92S×173°.34E, h0km, mb4.1/7, mb1 4.2/8, mb1mx4.0/34, mbtmp4.1/8, ML2.7/1, Error ellipse: s-maj=102.3km s-min=29.5km az=132.0*

ISC 12 01:43:04.7±2.4, 20°.0S±0°.4×173°.4E±0°.4, h35km, n13, σ1§01/12, mb4.1/7, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.84**	**251**	Pn		**Pn**	**01 44 41.8**	**-0.9**
	0.1nm,0.3s,baz=143,slow=20,SNR=2.5							
DZM	**Mont Dzumac**	**6.84**	**251**	*e*Pn		**Pn**	**01 44 44.0**	**+1.3**
	39nm,1.3s							
DZM				*e*LR		LR	01 46 17.3	
	comp=Z,434nm,24.5s							
STKA	**Stephens Creek**	**30.86**	**241**	P		**P**	**01 49 17.1**	**-0.6**
	2.0nm,0.8s,baz=56,slow=9.4,SNR=6.2							
TBI	**Tubuai**	**34.59**	**102**	*e*LR		LR	01 59 21.1	
	comp=Z,71nm,26.2s							
PPT2	**Papeete2**	**35.06**	**92**	*e*LR		LR	01 59 31.9	
	comp=Z,110nm,26.8s							
WRA	**Warramunga Arr**	**36.68**	**263**	P		**P**	**01 50 06.9**	**-1.6**
	0.2nm,0.8s,baz=98,slow=8.9,SNR=4.7							
ASAR	**Alice Springs**	**36.79**	**257**	P		**P**	**01 50 09.6**	**+0.2**
	3.3nm,0.9s,baz=82,slow=8.9,SNR=24							
FITZ	**Fitzroy Crossi**	**45.09**	**264**	P		**P**	**01 51 18.4**	**+0.6**
	3.9nm,0.9s,baz=95,slow=6.0,SNR=6.9							
MJAR	**Matsushiro Arr**	**65.34**	**329**	P		**P**	**01 53 42.6**	**-0.9**
	0.9nm,0.3s,baz=156,slow=9.5,SNR=4.5							
CMAR	**Chiang Mai Arr**	**82.42**	**293**	P		**P**	**01 55 25.2**	**+1.3**
	0.8nm,0.6s,baz=119,slow=2.9,SNR=5.6							
SONM	**Songino Array**	**90.22**	**322**	P		**P**	**01 56 02.4**	**+0.6**
	0.3nm,0.3s,baz=149,slow=3.4,SNR=1.2							
CLL	**Collm**	**145.17**	**338**	*i* PKPbc		**PKPab**	**02 02 37.8**	**-0.3**
	comp=Z,11nm,1.1s							
CLL				*e*(PKPab)		**PKiKP**	**02 02 42.0**	**-0.3**
GERES	**GERESS Array B**	**146.93**	**335**	PKPbc		**PKPbc**	**02 02 43.5**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=82,slow=2.8,SNR=7.7							

IDC 12 01:46:20.2±1.8, 19°.21N×145°.90E, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.5/42, mbtmp3.5/4, MS3.5/1, Ms1 3.5/1, ms1mx2.4/34, Error ellipse: s-maj=171.3km s-min=24.8km az=114.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PETK	**Petropavlovsk-**	**35.05**	**12**	LR		LR	02 06 51.1	
	comp=Z,77nm,19.8s,baz=109,slow=35							
WRA	**Warramunga Arr**	**40.53**	**197**	P		P	01 54 01.8	+0.5
	0.8nm,0.7s,baz=19,slow=9.2,SNR=16							
ASAR	**Alice Springs**	**44.20**	**196**	P		P	01 54 29.9	-1.2
	0.2nm,0.5s,baz=16,slow=7.7,SNR=1.8							
ILAR	**Eielson Array**	**63.10**	**26**	P		P	01 56 49.0	-0.2
	0.6nm,0.8s,baz=265,slow=5.3,SNR=5.3							
NVAR	**Mina Array Bea**	**82.67**	**52**	P		P	01 58 46.5	+0.3
	0.2nm,0.5s,baz=252,slow=6.1,SNR=3.9							

AUST ***12*** *02:00:21.8±0.5, 18°.29S×125°.67E, h18km±4km, Error ellipse: s-maj=5.9km s-min=3.5km az=120.0*

IDC ***12*** *02:00:23.2±1.1, 18°.21S×125°.82E, h0km, mb3.5/1, mb1 4.1/4, mb1mx3.7/27, mbtmp4.0/4, ML4.3/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/26, Error ellipse: s-maj=53.0km s-min=6.4km az=31.0*

ISC 12 02:00:21.7±1.6, 18°.32S±0°.06×125°.77E±0°.08, h7km±14km, n27, σ2§00/30, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**0.25**	**332**	Pg		**Pg**	**02 00 27.5**	**+0.8**
	3µm,0.3s,baz=313,slow=18							
FITZ				Lg		Lg	02 00 29.6	
	3µm,0.3s,baz=90,slow=20,SNR=191							
FITZ	**Fitzroy Crossi**	**0.25**	**332**	P		**Pg**	**02 00 27.0**	**+0.2**
	baz=0.2,SNR=1000							
FITZ				S		**Sg**	**02 00 29.5**	**-0.6**
	baz=0.2							
KNRA	**Kununurra**	**3.89**	**48**	P		**Pn**	**02 01 22.4**	**+0.4**
	baz=3.9,SNR=101							
KNRA				S		**Sn**	**02 02 07.5**	**-0.4**
	baz=3.9							
WRKA	**Warakurna**	**7.08**	**161**	P		**Pn**	**02 02 09.9**	**+4.0**
	baz=7.2,SNR=77							
WRKA				S		**Sn**	**02 03 27.6**	**+0.8**
	baz=7.2							
MTN	**Manton Dam**	**7.51**	**44**	P		**Pn**	**02 02 10.6**	**-1.1**
	baz=7.6,SNR=3.9							
WRA	**Warramunga Arr**	**8.26**	**103**	Pn		**Pn**	**02 02 24.0**	**+1.9**
	2.9nm,0.3s,baz=281,slow=12,SNR=129							
WRA				Sn		**Sn**	**02 03 51.9**	**-3.9**
	15nm,0.3s,baz=284,slow=24,SNR=17							
WRA				Lg		Lg	02 04 44.9	
	6.5nm,0.3s,baz=282,slow=29,SNR=18							
WB2	**Warramunga Arr**	**8.27**	**103**	P		**Pn**	**02 02 23.6**	**+1.4**
	baz=8.4							
KDU	**Kakadu**	**8.55**	**50**	P		**Pn**	**02 02 24.9**	**-1.2**
	baz=8.6,SNR=25							
SOEI	**Soe**	**8.64**	**350**	P		**Pn**	**02 02 26.5**	**-0.9**
	baz=8.6							
ASAR	**Alice Springs**	**9.27**	**126**	Pn		**Pn**	**02 02 39.5**	**+3.6**
	1.7nm,0.3s,baz=307,slow=14,SNR=24							
ASAR				Sn		**Sn**	**02 04 20.3**	**-0.4**
	3.8nm,0.3s,baz=300,slow=20,SNR=10.0							
ASAR				Lg		Lg	02 05 16.9	
	2.8nm,0.3s,baz=309,slow=32,SNR=6.6							
MEEK	**Meekatharra**	**10.59**	**217**	P		**Pn**	**02 02 54.2**	**+0.2**
	baz=11,SNR=10							
GIRL	**Giralia**	**11.63**	**246**	P		**Pn**	**02 03 06.8**	**-1.4**
	baz=12,SNR=4.8							
GIRL				S		Sn	02 05 07.4	-11
	baz=12							
FORT	**Forrest**	**12.57**	**171**	P		**Pn**	**02 03 20.8**	**-0.3**
	baz=13,SNR=13							
OOD	**Oodnadatta**	**13.12**	**138**	P		**Pn**	**02 03 30.1**	**+1.6**
	baz=13,SNR=81							
QIS	**Mount Isa**	**13.24**	**102**	P		**Pn**	**02 03 31.2**	**+0.9**
	baz=13,SNR=5.4							
KMBL	**Kambalda**	**13.46**	**194**	P		**Pn**	**02 03 31.4**	**-1.8**
	baz=14,SNR=14							
MORW	**Morawa**	**13.91**	**218**	P		**Pn**	**02 03 37.1**	**-2.3**
	baz=14,SNR=5.1							
MORW				S		Sn	02 06 01.3	-13
	baz=14							
MULG	**Mulgathing**	**14.09**	**149**	P		**Pn**	**02 03 42.5**	**+0.6**
	baz=14,SNR=8.8							
BLDU	**Ballidu**	**14.75**	**212**	P		**Pn**	**02 03 48.1**	**-2.7**
	baz=15,SNR=7.4							
KLBR	**Kellerberrin**	**15.07**	**207**	P		**Pn**	**02 03 53.8**	**-1.4**
	baz=15,SNR=7.4							
NWAO	**Narrogin (SRO)**	**16.44**	**206**	Pn		**Pn**	**02 04 09.2**	**-3.8**
	0.5nm,0.3s,baz=74,slow=15,SNR=1.6							
NWAO				Sn		Sn	02 06 59.8	-16
	1.6nm,0.3s,baz=114,slow=12,SNR=2.5							
LCRK	**Leigh Creek**	**16.54**	**139**	P		**Pn**	**02 04 14.1**	**-0.2**
	baz=17,SNR=3.5							
BBOO	**Buckleboo**	**17.14**	**149**	P		**Pn**	**02 04 20.5**	**-1.3**
	baz=17,SNR=6.1							
STKA	**Stephens Creek**	**19.65**	**136**	P		**P**	**02 04 52.6**	**+1.4**
	0.9nm,0.3s,baz=306,slow=12,SNR=15							
STKA				S		S	02 08 22.1	-11
	0.3nm,0.3s,baz=263,slow=7.8,SNR=3.8							
JHJ	**Hachijo jima 2**	**52.88**	**15**	LR		LR	02 29 43.1	
	comp=Z,47nm,20.5s,baz=110,slow=33							
MKAR	**Makanchi Array**	**75.73**	**331**	P		**P**	**02 12 10.5**	**+2.5**
	0.2nm,0.5s,baz=124,slow=7.6,SNR=1.8							
PPT	**Papeete**	**79.74**	**105**	LR		LR	02 45 44.6	
	comp=Z,15nm,19.2s,baz=1.5,slow=34							

JMA ***12*** *02:16:21.2±0.1, 22°.93N×121°.94E, h34km±4km, M4.1*

NIED ***12*** *02:16:21.3, 22°.93N×121°.94E, h34km, MW3.8, Moment Tensor Solution. s2 Moment tensor: Scale 10^14Nm; Mrr-4.00; Mθθ6.02; Mφφ-2.01; Mrθ 0.44; Mθφ-0.68; Mφr-3.15; Fault plane solution: M06.22000×10^14 NP1: φs306.00000°, δ59.00000°, λ-47.00000°. NP2:φs64.00000°, δ51.00000°, λ-139.00000°.*

TAP ***12*** *02:16:22.3, 22°.91N×121°.92E, h36km, ML4.4, D*

ISC 12 02:16:21.5±1.1, 22°.93N±0°.02×121°.95E±0°.02, h31km±12km, n142, σ1§09/260, 1C-15D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHKT	**Chengkung**	**0.56**	**288**	*i* P		**Pn**	**02 16 32.7**	**-0.7**
	baz=290							
CHKT				S		**Sn**	**02 16 39.8**	**-1.8**
	baz=290							
EDH	**Donghe**	**0.59**	**275**	*i* P		**Pn**	**02 16 33.1**	**-0.6**
	baz=276							
FULB	**Fuli**	**0.66**	**294**	*i* P		**Pn**	**02 16 34.0**	**-0.7**
	baz=296							
FULB				S		**Sn**	**02 16 42.3**	**-1.8**
	baz=296							
EYUL	**Yuli**	**0.71**	**306**	P		**Pn**	**02 16 35.2**	**-0.3**
	baz=316							
EYUL				*e*S		**Sn**	**02 16 43.9**	**-1.5**
	baz=316							
TWF1	**Yuli**	**0.73**	**305**	P		**Pn**	**02 16 35.4**	**-0.3**
	baz=315							
TWF1				*e*S		**Sn**	**02 16 45.5**	**-0.4**
	baz=315							
HGSD	**Ruisui**	**0.74**	**320**	*i* P		**Pn**	**02 16 35.1**	**-0.7**
	baz=329							
HGSD				S		**Sn**	**02 16 44.2**	**-1.8**
	baz=329							
LONT	**Longtian**	**0.75**	**269**	*i* P		**Pn**	**02 16 35.4**	**-0.6**
	baz=263							
TTN	**Taitung**	**0.76**	**257**	*e*P		**Pn**	**02 16 35.8**	**-0.2**
	baz=250							
TTN				*e*S		**Sn**	**02 16 45.9**	**-0.5**
	baz=250							
YULB	**Yu-li**	**0.76**	**308**	*i* P		**Pn**	**02 16 35.9**	**-0.2**
	baz=315							
YULB				*e*S		**Sn**	**02 16 46.2**	**-0.3**
	baz=315							
TWGBT	**Beinan**	**0.81**	**263**	*i* P		**Pn**	**02 16 36.2**	**-0.5**
	baz=262							
TWGBT				*e*S		**Sn**	**02 16 47.0**	**-0.7**
	baz=262							
TWG	**Pinlang**	**0.81**	**263**	P		**Pn**	**02 16 36.3**	**-0.5**
	baz=262							
TWG				*e*S		**Sn**	**02 16 47.1**	**-0.8**
	baz=262							
EHY	**Hungye**	**0.82**	**315**	P		**Pn**	**02 16 36.5**	**-0.4**
	baz=317							
EHY				*e*S		**Sn**	**02 16 46.6**	**-1.2**
	baz=317							
EGFH	**Guangfu**	**0.88**	**327**	P		**Pn**	**02 16 38.0**	**+0.3**
	baz=335							
EGFH				*e*S		**Sn**	**02 16 49.1**	**-0.4**
	baz=335							
ELDTW	**Lidau**	**0.90**	**287**	*i* P		**Pn**	**02 16 37.5**	**-0.5**
	baz=288							
ELDTW				*e*S		**Sn**	**02 16 48.9**	**-1.1**
	baz=288							
LAY	**Lan-yu**	**0.96**	**203**	*i* P		**Pn**	**02 16 37.7**	**-1.0**
	baz=200							
LAY				*e*S		**Sn**	**02 16 50.1**	**-1.2**
	baz=200							
ECL	**Taimali**	**0.97**	**251**	*i* P		**Pn**	**02 16 38.4**	**-0.6**
	baz=249							
ECL				*e*S		**Sn**	**02 16 50.1**	**-1.6**
	baz=249							
ESL	**Shilin**	**1.00**	**332**	P		**Pn**	**02 16 39.6**	**+0.2**
	baz=342							
ESL				S		**Sn**	**02 16 51.5**	**-1.0**
	baz=342							
HWA	**Hwalien**	**1.09**	**343**	*e*P		**Pn**	**02 16 40.8**	**+0.2**
	baz=354							
HWA				*e*S		**Sn**	**02 16 55.0**	**+0.3**
	baz=354							
STYT	**Tauyuan**	**1.12**	**282**	*i* P		**Pn**	**02 16 41.5**	**+0.4**
	baz=282							
STYT				*e*S		**Sn**	**02 16 54.7**	**-0.8**
	baz=282							
TAW	**Tawu**	**1.12**	**240**	P		**Pn**	**02 16 40.7**	**-0.3**
	baz=238							
TAW				*e*S		**Sn**	**02 16 53.5**	**-1.9**
	baz=238							
EAST	**Anshuo**	**1.15**	**242**	P		**Pn**	**02 16 41.2**	**-0.2**
	baz=241							
EAST				*e*S		**Sn**	**02 16 53.8**	**-2.4**
	baz=241							
TWD	**Chiawan**	**1.19**	**344**	*e*P		**Pn**	**02 16 42.1**	**+0.1**
	baz=346							
TWD				*e*S		**Sn**	**02 16 56.5**	**-0.7**
	baz=346							
ALS	**Alishan**	**1.20**	**299**	P		**Pb**	**02 16 43.7**	**-0.1**
	baz=294							
ALS				*e*S		**Sb**	**02 16 59.0**	**-0.2**
	baz=294							
SLGT	**Liugui**	**1.20**	**273**	*i* P		**Pb**	**02 16 43.0**	**-0.7**
	baz=271							
SLGT				*e*S		**Sn**	**02 16 57.2**	**-0.2**
	baz=271							
TSMG	**Majia**	**1.22**	**260**	P		**Pn**	**02 16 42.7**	**+0.3**
	baz=253							
SSD	**Sandimen**	**1.23**	**262**	P		**Pn**	**02 16 42.5**	**+0.1**
	baz=261							
SSD				*e*S		**Sn**	**02 16 57.8**	**-0.2**
	baz=261							
MASBT	**Mashibuluo**	**1.25**	**256**	P		**Pn**	**02 16 42.9**	**+0.1**
	baz=250							
MASBT				*e*S		**Sn**	**02 16 56.7**	**-1.9**
	baz=250							
SSLB	**Suanglung**	**1.25**	**313**	*i* P		**Pn**	**02 16 43.5**	**+0.6**
	baz=321							
SSLB				S		**Sn**	**02 16 58.4**	**-0.3**
	baz=321							
WHYT	**Xinyi Township**	**1.27**	**308**	P		**Pb**	**02 16 44.5**	**-0.2**
	baz=314							
WHYT				*e*S		**Sb**	**02 17 00.4**	**-0.3**
	baz=314							
SGST	**Jiashian**	**1.27**	**277**	*i* P		**Pn**	**02 16 43.6**	**+0.6**
	baz=277							
SGST				*e*S		**Sb**	**02 17 00.0**	**-0.7**
	baz=277							
WTP	**Ta-pu**	**1.27**	**285**	*i* P		**Pb**	**02 16 44.8**	**0.0**
	baz=284							
WTP				S		**Sb**	**02 17 01.3**	**+0.5**
	baz=284							
TPUB	**Ta-pu**	**1.27**	**287**	*i* P		**Pb**	**02 16 44.6**	**-0.2**
	baz=287							
TPUB				*e*S		**Sb**	**02 17 01.1**	**+0.3**
	baz=287							
SLIU	**Shizi**	**1.27**	**237**	*i* P		**Pn**	**02 16 43.1**	**-0.1**
	baz=235							
NACB	**Ninganchiao**	**1.28**	**345**	P		**Pn**	**02 16 43.2**	**-0.1**
	baz=355							
NACB				*e*S		**Sn

TWKBT	**Hengchun**	**1.44**	**227**	P	**Pn**	**02 16 46.0**	**+0.7**
	baz=225							
TWKBT				*eS*	**Sb**	**02 17 04.7**	**-0.9**
	baz=225							
TWK1	**Hengchun**	**1.44**	**227**	*eP*	**Pn**	**02 16 46.3**	**+0.9**
	baz=225							
TWK1				*eS*	**Sn**	**02 17 03.9**	**+0.6**
	baz=225							
HEN	**Hengchun**	**1.45**	**231**	*eP*	**Pb**	**02 16 46.6**	**-1.2**
	baz=240							
HEN				*eS*	**Sb**	**02 17 04.4**	**-1.4**
	baz=240							
DPDB	**Guoxing**	**1.45**	**320**	*eP*	**Pb**	**02 16 47.0**	**-0.8**
	baz=327							
DPDB				*eS*	**Sn**	**02 17 04.5**	**+1.0**
	baz=327							
CHN3	**Shinhua**	**1.47**	**276**	*eP*	**Pb**	**02 16 49.2**	**+1.1**
	baz=275							
CHN3				*eS*	**Sb**	**02 17 09.8**	**+3.4**
	baz=275							
FUSS	**Fushou**	**1.47**	**334**	P	**Pn**	**02 16 46.9**	**+0.9**
	baz=344							
WGK	**Gukeng**	**1.48**	**301**	P	**Pb**	**02 16 48.6**	**+0.2**
	baz=313							
WGK				*eS*	**Sb**	**02 17 08.0**	**+1.2**
	baz=313							
CHN2	**Minshiung**	**1.48**	**294**	*eP*	**Pb**	**02 16 48.6**	**+0.2**
	baz=294							
CHN2				*eS*	**Sb**	**02 17 08.0**	**+1.1**
	baz=294							
SNJT	**Kaohsiung City**	**1.50**	**264**	*eP*	**Pb**	**02 16 49.5**	**+0.8**
	baz=262							
SNJT				*eS*	**Sb**	**02 17 10.2**	**+3.0**
	baz=262							
TWT	**Tachien**	**1.50**	**332**	*eP*	**Pb**	**02 16 48.0**	**-0.8**
	baz=341							
TWT				S	**Sn**	**02 17 04.9**	**-0.1**
	baz=341							
WDLH	**Douliu**	**1.50**	**301**	P	**Pb**	**02 16 48.8**	**+0.1**
	baz=312							
WDLH				*eS*	**Sb**	**02 17 08.6**	**+1.2**
	baz=312							
TDCB	**Techi**	**1.51**	**331**	P	**Pn**	**02 16 47.8**	**+1.3**
	baz=341							
TDCB				S	**Sn**	**02 17 04.5**	**-0.7**
	baz=341							
CHY	**Chiayi**	**1.51**	**292**	*eP*	**Pb**	**02 16 48.8**	**-0.1**
	baz=292							
CHY				*eS*	**Sb**	**02 17 08.4**	**+0.7**
	baz=292							
ENAH	**Nanao**	**1.52**	**355**	*eP*	**Pn**	**02 16 47.7**	**+1.1**
	baz=356							
ENAH				*eS*	**Sn**	**02 17 05.7**	**+0.4**
	baz=356							
KAU	**Kaohsiung**	**1.56**	**257**	*eP*	**Pn**	**02 16 48.1**	**+1.1**
	baz=255							
KAU				*eS*	**Sb**	**02 17 12.5**	**+3.6**
	baz=255							
WLCH	**Liuqiu**	**1.56**	**249**	*eP*	**Pb**	**02 16 50.9**	**+1.2**
	baz=234							
WLCH				*eS*	**Sb**	**02 17 09.9**	**+0.9**
	baz=234							
TWP	**Hsiaoliuchiu**	**1.57**	**249**	P	**Pb**	**02 16 50.9**	**+0.9**
	baz=234							
TWP				*eS*	**Sb**	**02 17 10.9**	**+1.4**
	baz=234							
NNSB	**Datong**	**1.58**	**341**	*eP*	**Pn**	**02 16 48.5**	**+1.0**
	baz=342							
NNSB				*eS*	**Sn**	**02 17 06.5**	**-0.4**
	baz=342							
NNSH	**Datong**	**1.58**	**341**	*eP*	**Pn**	**02 16 48.5**	**+1.0**
	baz=342							
NNSH				*eS*	**Sn**	**02 17 06.7**	**-0.3**
	baz=342							
ICHU	**Yijhu**	**1.60**	**286**	*eP*	**Pb**	**02 16 49.6**	**-0.7**
	baz=299							
ICHU				*eS*	**Sb**	**02 17 10.1**	**0.0**
	baz=299							
NNS	**Nan Shan**	**1.60**	**341**	*eP*	**Pn**	**02 16 48.9**	**+1.2**
	baz=342							
NNS				*eS*	**Sn**	**02 17 07.3**	**0.0**
	baz=342							
WTK	**Tuku**	**1.62**	**298**	*eP*	**Pb**	**02 16 49.9**	**-0.9**
	baz=298							
WHP	**Taichung City**	**1.63**	**326**	*eP*	**Pn**	**02 16 49.4**	**+1.3**
	baz=333							
WHP				*eS*	**Sb**	**02 17 09.6**	**-1.6**
	baz=333							
SCLT	**Jiali**	**1.63**	**279**	*eP*	**Pb**	**02 16 50.1**	**-0.8**
	baz=278							
CHN8	**Yiju**	**1.65**	**285**	*eP*	**Pb**	**02 16 50.5**	**-0.8**
	baz=284							
CHN8				*eS*	**Sb**	**02 17 10.8**	**-0.9**
	baz=284							
TWC	**Suao**	**1.68**	**357**	P	**Pn**	**02 16 50.0**	**+1.3**
	baz=358							
TWC				*eS*	**Sn**	**02 17 10.1**	**+1.0**
	baz=358							
TCU	**Taichung**	**1.69**	**316**	*eP*	**Pb**	**02 16 51.6**	**-0.2**
	baz=316							
TCU				*eS*	**Sb**	**02 17 12.4**	**-0.3**
	baz=316							
NDT	**Datong Townshi**	**1.72**	**347**	*eP*	**Pn**	**02 16 50.5**	**+1.2**
	baz=348							
NDT				*eS*	**Sn**	**02 17 10.2**	**0.0**
	baz=348							
WCHH	**Zhanghua**	**1.72**	**312**	P	**Pb**	**02 16 52.1**	**-0.3**
	baz=312							
WCHH				*eS*	**Sb**	**02 17 13.1**	**-0.4**
	baz=312							
JYNG	**Yonagunijimaku**	**1.77**	**31**	P	**Pn**	**02 16 51.0**	**+1.0**
JYNG				S	**Sn**	**02 17 12.4**	**+0.9**
TWQ1	**Liyutan**	**1.78**	**323**	*eP*	**Pb**	**02 16 53.3**	**-0.2**
	baz=334							
TWQ1				*eS*	**Sb**	**02 17 15.3**	**-0.1**
	baz=334							
WTCT	**Ta-ch'eng**	**1.79**	**302**	*eP*	**Pb**	**02 16 52.5**	**-1.2**
	baz=301							
WTCT				*eS*	**Sb**	**02 17 14.2**	**-1.6**
	baz=301							
TWE	**Neicheng**	**1.81**	**352**	P	**Pn**	**02 16 52.0**	**+1.5**
	baz=353							
TWE				*eS*	**Sn**	**02 17 12.9**	**+0.6**
	baz=353							
YOJ	**Yonaguni jima**	**1.81**	**32**	*eP*	**Pn**	**02 16 51.7**	**+1.2**
	baz=34							
YOJ				*eS*	**Sn**	**02 17 14.2**	**+1.7**
	baz=34							
YOJ	**Yonaguni jima**	**1.81**	**32**	P	**Pn**	**02 16 51.8**	**+1.3**
YOJ				*eS*	**Sn**	**02 17 13.5**	**+1.0**
YHNB	**Yeheng**	**1.81**	**343**	*eP*	**Pn**	**02 16 52.1**	**+1.5**
	baz=344							
YHNB				*eS*	**Sn**	**02 17 12.4**	**-0.2**
	baz=344							
NSK	**Sanguang**	**1.82**	**343**	*eP*	**Pn**	**02 16 52.2**	**+1.4**
	baz=344							
NSK				*eS*	**Sn**	**02 17 12.7**	**-0.2**
	baz=344							
NSY	**Sanyi**	**1.84**	**324**	*eP*	**Pb**	**02 16 53.8**	**-0.6**
	baz=337							
NSY				S	**Sb**	**02 17 17.2**	**+0.1**
	baz=337							
ILA	**Ilan**	**1.84**	**354**	*eP*	**Pn**	**02 16 52.6**	**+1.7**
	baz=356							
ILA				*eS*	**Sb**	**02 17 16.5**	**-0.7**
	baz=356							
WDJ	**Dajia District**	**1.85**	**320**	*eP*	**Pb**	**02 16 54.5**	**-0.2**
	baz=333							
WDJ				*eS*	**Sb**	**02 17 17.6**	**+0.1**
	baz=333							
NWLT	**Wulai**	**1.89**	**348**	*eP*	**Pn**	**02 16 53.0**	**+1.4**
	baz=339							
NWLT				*eS*	**Sn**	**02 17 14.6**	**+0.2**
	baz=339							
NSTT	**Nanjuang**	**1.91**	**333**	*eP*	**Pb**	**02 16 55.0**	**-0.6**
	baz=340							
NSTT				*eS*	**Sn**	**02 17 16.5**	**+1.7**
	baz=340							
LIOB	**Emei**	**1.91**	**334**	*eP*	**Pb**	**02 16 55.1**	**-0.7**
	baz=334							
LIOB				*eS*	**Sb**	**02 17 18.2**	**-1.1**
	baz=334							
NMLH	**Miaoli**	**1.92**	**327**	*eP*	**Pb**	**02 16 55.6**	**-0.2**
	baz=340							
NMLH				*eS*	**Sb**	**02 17 18.9**	**-0.5**
	baz=340							
NTC	**Toucheng**	**1.92**	**357**	*eP*	**Pn**	**02 16 53.9**	**+1.8**
	baz=358							
NTC				*eS*	**Sn**	**02 17 16.4**	**+1.2**
	baz=358							
HATJ	**Hateruma jima**	**2.04**	**56**	P	**Pn**	**02 16 54.6**	**+0.9**
HATJ				S	**Sn**	**02 17 18.4**	**+0.3**
SBCB	**Hsinchu**	**2.06**	**335**	*eP*	**Pb**	**02 16 56.3**	**-1.9**
	baz=335							
NHDH	**Xindian Distri**	**2.06**	**349**	*eP*	**Pn**	**02 16 55.8**	**+1.8**
	baz=350							
NHDH				*eS*	**Sn**	**02 17 20.2**	**+1.5**
	baz=350							
HSN	**Hsinchu**	**2.07**	**335**	*eS*	**Sb**	**02 17 22.4**	**-1.3**
	baz=324							
TWA	**Mucha**	**2.07**	**351**	*eP*	**Pn**	**02 16 55.5**	**+1.4**
	baz=352							
TWA				*eS*	**Sn**	**02 17 20.1**	**+1.1**
	baz=352							
TWB1	**Santiao Chiao**	**2.07**	**1**	*eP*	**Pn**	**02 16 55.8**	**+1.6**
	baz=13							
TWB1				*eS*	**Sn**	**02 17 18.9**	**0.0**
	baz=13							
TATO	**Taipei**	**2.08**	**348**	*eP*	**Pn**	**02 16 56.0**	**+1.8**
	baz=350							
TATO				*eS*	**Sn**	**02 17 19.6**	**+0.5**
	baz=350							
WDGT	**Dungji**	**2.13**	**279**	P	**Pn**	**02 16 55.9**	**+0.9**
	baz=277							
WDGT				*eS*	**Sn**	**02 17 19.4**	**-1.0**
	baz=277							
NWF	**Wu-fen Shan**	**2.14**	**356**	*eP*	**Pb**	**02 16 57.8**	**-1.9**
	baz=357							
NWF				*eS*	**Sn**	**02 17 22.2**	**+1.5**
	baz=357							
WFSB	**Wu-fen Shan**	**2.14**	**356**	*eP*	**Pb**	**02 16 57.6**	**-2.0**
	baz=357							
WFSB				*eS*	**Sn**	**02 17 21.9**	**+1.4**
	baz=357							
NCUH	**Zhongli**	**2.15**	**341**	*eP*	**Pb**	**02 16 57.6**	**-2.1**
	baz=355							
NCUH				*eS*	**Sb**	**02 17 24.2**	**-1.8**
	baz=355							
NCU	**National Centr**	**2.15**	**341**	*eP*	**Pb**	**02 16 57.8**	**-1.9**
	baz=354							
NCU				*eS*	**Sb**	**02 17 24.2**	**-1.9**
	baz=354							
IRIF	**Iriomote-Funau**	**2.15**	**49**	P	**Pn**	**02 16 56.5**	**+1.3**
IRIF				S	**Sn**	**02 17 22.0**	**+1.1**
TWS1	**Kuangyinshan**	**2.22**	**347**	*eP*	**Pb**	**02 16 58.9**	**-2.0**
	baz=359							
TWS1				*eS*	**Sn**	**02 17 24.6**	**+2.1**
	baz=359							
YM01	**YM01**	**2.24**	**351**	*eP*	**Pn**	**02 16 57.9**	**+1.5**
	baz=352							
YM01				*eS*	**Sn**	**02 17 23.7**	**+0.7**
	baz=352							
YM10	**YM10**	**2.25**	**351**	*eP*	**Pn**	**02 16 58.1**	**+1.5**
	baz=352							
YM10				*eS*	**Sn**	**02 17 24.9**	**+1.6**
	baz=352							
YM04	**YM04**	**2.25**	**350**	P	**Pn**	**02 16 58.2**	**+1.6**
	baz=351							
YM04				*eS*	**Sn**	**02 17 24.7**	**+1.4**
	baz=351							
YM11	**YM11**	**2.26**	**351**	*eP*	**Pn**	**02 16 58.0**	**+1.3**
	baz=341							
YM11				*eS*	**Sn**	**02 17 25.0**	**+1.5**
	baz=341							
PHUB	**P'eng-hu**	**2.26**	**285**	⇓*iP*	**Pn**	**02 16 58.0**	**+1.2**
	baz=283							
PHUB				*eS*	**Sn**	**02 17 24.6**	**+1.1**
	baz=283							
NTST	**Danshui**	**2.27**	**349**	*eP*	**Pb**	**02 16 59.7**	**-2.2**
	baz=360							
NTST				*eS*	**Sb**	**02 17 26.9**	**-2.7**
	baz=360							
YM08	**YM08**	**2.28**	**352**	P	**Pn**	**02 16 58.2**	**+1.3**
	baz=341							
YM08				*eS*	**Sn**	**02 17 24.0**	**0.0**
	baz=341							
ANP	**Anpu**	**2.29**	**350**	*eP*	**Pn**	**02 16 58.2**	**+1.1**
	baz=351							
PNG	**Penghu**	**2.29**	**287**	P	**Pn**	**02 16 58.5**	**+1.4**
	baz=285							
PNG				*eS*	**Sn**	**02 17 25.3**	**+1.0**
	baz=285							
JKRS	**Kuro-shima**	**2.30**	**55**	P	**Pn**	**02 16 58.5**	**+1.3**
JKRS				*eS*	**Sn**	**02 17 24.2**	**-0.2**
VCHM	**Qimei**	**2.34**	**277**	*eP*	**Pn**	**02 16 58.9**	**+1.2**
	baz=275							
VCHM				*eS*	**Sn**	**02 17 27.8**	**+2.4**
	baz=275							
TWY	**Chenhua**	**2.36**	**352**	*eP*	**Pb**	**02 17 01.9**	**-1.4**
	baz=341							
TWY				*eS*	**Sb**	**02 17 29.7**	**-2.4**
	baz=341							
JIJ	**Ishigaki jima**	**2.47**	**54**	P	**Pn**	**02 17 00.5**	**+0.9**
JIJ				S	**Sn**	**02 17 28.2**	**-0.5**
PCYT	**Pengchaiyu**	**2.69**	**2**	*eP*	**Pn**	**02 17 04.5**	**+1.8**
	baz=4.0							
PCYT				*eS*	**Sn**	**02 17 35.1**	**+0.9**
	baz=4.0							
JISG	**Ishigakijimahi**	**2.72**	**52**	P	**Pn**	**02 17 03.4**	**+0.3**
JISG				S	**Sn**	**02 17 34.2**	**-0.8**
JTJ	**Tarama**	**3.05**	**55**	P	**Pn**	**02 17 08.1**	**+0.6**
JTJ				S	**Sn**	**02 17 43.3**	**+0.4**
VWUC	**VWUC**	**3.08**	**312**	*eP*	**Pn**	**02 17 08.6**	**+0.7**
	baz=312							
PTTC	**Pingtan**	**3.24**	**323**	*eP*	**Pn**	**02 17 11.8**	**+1.6**
	baz=323							
PTMZ	**Houxiangcun**	**3.33**	**310**	*eP*	**Pn**	**02 17 12.4**	**+0.9**
	baz=298							
JIRB	**Irabujima**	**3.51**	**57**	P	**Pn**	**02 17 14.8**	**+1.0**
JIRB				S	**Sn**	**02 17 53.5**	**-0.8**
KNM	**Kinmen**	**3.55**	**295**	*eP*	**Pn**	**02 17 16.1**	**+1.7**
	baz=292							
JMJ2	**Miyako jima3**	**3.58**	**59**	P	**Pn**	**02 17 15.9**	**+1.0**
JMJ2				*eS*	**Sn**	**02 17 57.2**	**+1.0**
JMJ	**Miyako jima 2**	**3.59**	**58**	*eP*	**Pn**	**02 17 15.5**	**+0.5**
	baz=59							
KNMB	**Chin-men Tao**	**3.60**	**296**	*eP*	**Pn**	**02 17 15.6**	**+0.4**
	baz=294							
JIKM	**Ikemajima**	**3.62**	**56**	P	**Pn**	**02 17 16.3**	**+1.0**
JIKM				*eS*	**Sn**	**02 17 57.2**	**+0.2**
MATB	**Ma-tsu**	**3.69**	**331**	*eP*	**Pn**	**02 17 16.9**	**+0.5**
	baz=332							
ZPLA	**Ao Xicun**	**3.98**	**285**	*eP*	**Pn**	**02 17 21.6**	**+1.3**
	baz=283							
LYJJ	**Jianjiangzhen**	**4.12**	**332**	*eP*	**Pn**	**02 17 23.0**	**+0.7**
	baz=333							
MHZQ	**Yeshan**	**4.13**	**321**	*eP*	**Pn**	**02 17 23.9**	**+1.5**
	baz=321							
AXDP	**Jialang**	**4.14**	**299**	*eP*	**Pn**	**02 17 23.2**	**+0.7**
	baz=297							
ZZJH	**Jiuhuzhen**	**4.25**	**292**	*eP*	**Pn**	**02 17 24.8**	**+0.8**
	baz=290							
XPSS	**Dashiqiu**	**4.29**	**339**	*eP*	**Pn**	**02 17 25.4**	**+0.7**
	baz=350							

*KRSC **12** 02:24:56.5±2.5, 48°.41N×152°.98E, h568km±25km, ML4.6*
*IDC **12** 02:25:00.5±1.5, 50°.09N×149°.93E, h451km±20km, mb2.7/6, mb1 2.9/10, mb1mx2.8/38, mbtmp3.6/10, Error ellipse: s-maj=25.7km s-min=15.9km az=133.0*

ISC 12 02:24:60.0±0.8, 49°.9N±0°.1×150°.26E±0°.09, h450km, n36, σ2°39/46, mb3.1/6, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**5.31**	**66**	*eP*		**P**		**02 26 27.1**	**-0.1**
KDTR				*eS*		**S**		**02 27 34.1**	**-4.4**
ASAK	**Asacha**	**5.42**	**60**	*eP*		**P**		**02 26 28.4**	**0.0**
GRL	**Gorelyy**	**5.59**	**58**	*eP*		**P**		**02 26 32.2**	**+2.1**
GRL				*eS*		**S**		**02 27 43.5**	**-0.3**
PETK	**Petropavlovsk-**	**5.66**	**52**	P		**P**		**02 26 31.1**	**+0.4**
	0.6nm,0.3s,baz=212,slow=9.7,SNR=14								
KRMR	**Karymshinskiy**	**5.74**	**56**	*eS*		**S**		**02 27 49.7**	**+3.3**
RUS	**Russkaya**	**5.79**	**61**	*eP*		**P**		**02 26 31.9**	**0.0**
RUS				*eS*		**S**		**02 27 44.8**	**-2.3**
GNL	**Ganaly**	**6.10**	**48**	*eP*		**P**		**02 26 35.5**	**+0.2**
KOK	**Koryaka**	**6.24**	**54**	*eP*		**P**		**02 26 37.7**	**+1.1**
AVH	**Avacha**	**6.28**	**54**	*eP*		**P**		**02 26 40.1**	**+3.1**
AVH				*eS*		**S**		**02 27 59.6**	**+3.1**
KRX	**Arik**	**6.28**	**53**	*eP*		**P**		**02 26 37.1**	**0.0**
UGLR	**Uglovaya**	**6.29**	**55**	*eP*		**P**		**02 26 39.0**	**+1.8**
UGLR				*eS*		**S**		**02 27 57.1**	**+0.2**
KRER	**Koryakskii**	**6.30**	**54**	*eP*		**P**		**02 26 40.1**	**+2.7**
KRER				*eS*		**S**		**02 28 00.1**	**+2.9**
SMAR	**Somma**	**6.31**	**54**	*eP*		**P**		**02 26 37.6**	**+0.1**
SMAR				*eS*		**S**		**02 28 00.0**	**+2.7**
SDLR	**Sedlovina**	**6.36**	**54**	*eP*		**P**		**02 26 38.5**	**+0.6**
SDLR				*eS*		**S**		**02 27 58.3**	**+0.2**
SPN	**Mys Shipunski**	**6.89**	**58**	*eP*		**P**		**02 26 42.7**	**-0.7**
SPN				*eS*		**S**		**02 28 02.1**	**-6.0**
ASAJ	**Asahikawa**	**7.79**	**225**	P		**P**		**02 26 53.7**	**+0.6**
	0.7nm,0.3s,baz=54,slow=19,SNR=6.0								
TUMR	**Tumrok**	**8.09**	**44**	*eP*		**P**		**02 26 58.3**	**+2.1**
TUMD	**Tumrok D**	**8.15**	**45**	*eP*		**P**		**02 26 58.4**	**+1.6**
MKZ	**Mys Kozlova**	**8.45**	**52**	*eP*		**P**		**02 26 59.4**	**-0.6**
MKZ				*eS*		**S**		**02 28 33.3**	**-5.4**
SRDR	**Sredinnyy**	**8.59**	**38**	*eP*		**P**		**02 27 03.9**	**+2.3**
KIRR	**Kirishev**	**8.60**	**41**	*eP*		**P**		**02 27 05.6**	**+3.8**
BZWR	**Bezymyannyi-We**	**8.67**	**42**	*eP*		**P**		**02 27 05.5**	**+2.9**
BZGR	**Bezymyannyi-Gr**	**8.74**	**42**	*eP*		**P**		**02 27 06.0**	**+2.7**
LGNR	**Loginova**	**8.83**	**41**	*eP*		**P**		**02 27 06.8**	**+2.3**
ZLN	**Zelenaya**	**8.84**	**42**	*eP*		**P**		**02 27 07.7**	**+3.4**
CIRR	**Tsirk**	**8.88**	**41**	*eP*		**P**		**02 27 07.0**	**+2.2**
SRKR	**Sorokina**	**9.41**	**40**	*eP*		**P**		**02 27 13.9**	**+3.4**
KBTR	**Krutoberegovo**	**9.85**	**45**	*eP*		**P**		**02 27 13.9**	**-1.3**
KLR	**Kul'dur**	**12.04**	**274**	P		**P**		**02 27 38.8**	**-0.4**
	0.2nm,0.3s,baz=90,slow=14,SNR=2.5								
SEY	**Seymchan**	**13.13**	**4**	P		**P**		**02 27 49.6**	**-1.1**
	0.2nm,0.3s,baz=186,slow=17,SNR=4.9								
ILAR	**Eielson Array**	**35.36**	**41**	P		**P**		**02 31 16.1**	**+0.5**
	0.5nm,0.6s,baz=261,slow=8.2,SNR=7.6								
MKAR	**Makanchi Array**	**43.88**	**293**	P		**P**		**02 32 22.8**	**-2.0**
	0.3nm,0.7s,baz=53,slow=8.1,SNR=2.1								
FINES	**FINESS Array B**	**60.38**	**333**	P		**P**		**02 34 21.7**	**-2.1**
	1.7nm,1.0s,baz=12,slow=7.1,SNR=1.6								
PDAR	**Pinedale Array**	**64.42**	**53**	P		**P**		**02 34 51.8**	**+1.0**
	0.2nm,0.5s,baz=30,slow=2.4,SNR=2.5								
WRA	**Warramunga Arr**	**70.94**	**196**	P		**P**		**02 35 31.3**	**+0.6**
	0.2nm,0.4s,baz=16,slow=6.3,SNR=1.7								
ASAR	**Alice Springs**	**74.65**	**196**	P		**P**		**02 35 53.8**	**+1.7**
	0.4nm,0.6s,baz=6.6,slow=4.7,SNR=5.1								

NNC 12 02:36:47.6±5.2, 37°.63N×71°.60E, h0km, mb3.8, mpv3.6, 4C-1D, Error ellipse: s-maj=48.2km s-min=32.4km az=148.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.47**	**23**	⇑P		Pn		02 38 11.4	+0.9
	2.9nm,0.4s								
AAK				⇑S		Sn		02 39 16.1	+1.8
	5.8nm,0.7s								
KK31	**Karatay Array**	**5.53**	**352**	P		Pn		02 38 12.4	+1.3
	3.9nm,0.3s,baz=174,slow=12,SNR=111								
KK31				⇑S		Sn		02 39 17.1	+1.7
	1.7nm,0.3s,baz=172,slow=15,SNR=9.4								
TKM2	**Tokmak 2**	**6.11**	**29**	⇑P		Pn		02 38 19.0	-0.2
	1.2nm,0.5s								
TKM2				⇓S		Sn		02 39 29.4	-0.5
	1.2nm,0.7s								
AB31	**Akbulak array**	**14.36**	**328**	P		Pn		02 40 07.7	-4.3
	0.3nm,0.4s,baz=162,slow=9.6,SNR=18								

*MEX **12** 02:38:31.9±0.5, 14°.51N×91°.97W, h81km±6km, MD3.7*
*GCG **12** 02:38:33.8±0.5, 14°.56N×92°.03W, h68km±8km, MD3.7*

ISC 12 02:38:34.1±1.9, 14°.6N±0°.1×92°.06W±0°.07, h68km±12km, n8, σ0°95/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		**0.34**	**323**	*i* P		**Pn**		**02 38 44.3**	**-1.1**
THIG				*i* S		**Sn**		**02 38 54.5**	**+0.9**
STG3	**Santiaguito 3,**	**0.48**	**81**	*eP*		**Pn**		**02 38 46.6**	**-0.2**
STG3				*eS*		**Sn**		**02 38 57.0**	**+1.0**
ERG	**Entre ros, C**	**0.51**	**113**	*eP*		**Pn**		**02 38 46.0**	**-0.9**
FUG	**Fuego 3**	**1.19**	**99**	*eP*		**Pn**		**02 38 55.0**	**-0.2**
FUG				*eS*		**Sn**		**02 39 11.0**	**+0.2**
PCIG		**1.54**	**314**	*i* P		**Pn**		**02 38 58.9**	**-0.7**
PCIG				*i* S		**Sn**		**02 39 19.1**	**+0.2**
CCIG	**Comitan**	**1.64**	**357**	*i* P		**Pn**		**02 38 59.5**	**-1.5**
CCIG				*i* S		**Sn**		**02 39 22.2**	**+0.8**
TGIG		**2.36**	**334**	*i* P		**Pn**		**02 39 10.3**	**-0.4**
TGIG				*i* S		**Sn**		**02 39 39.9**	**+1.1**
CMIG	**Matias Romero**	**3.65**	**312**	*i* P		**Pn**		**02 39 28.1**	**-0.2**
CMIG				*i* S		**Sn**		**02 40 11.2**	**+1.0**

*IDC **12** 02:44:45.1±1.0, 32°.04N×104°.55E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/46, mbtmp3.6/8, Error ellipse: s-maj=95.3km s-min=19.3km az=59.0*
*BJI **12** 02:44:49.6±0.0, 31°.81N×104°.14E, h18km, ML3.5/16*

ISC 12 02:44:48.3±0.7, 31°.91N±0°.04×104°.26E±0°.06, h15km, n13, σ2°68/21, mb3.7/7, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.09**	**203**	Pg		**Pb**		**02 45 08.0**	**-0.8**
CD2				Sg		**Sb**		**02 45 21.2**	**-1.6**
CD2				smax		smax			
	comp=N,920nm,0.4s								
CD2				smax		smax			
	comp=E,2μm,0.6s								
LZH	**Lanzhou**	**4.18**	**355**	Pn		**Pn**		**02 45 55.0**	**+3.3**
LZH				Pg		**Pg**		**02 46 05.9**	**-2.5**
LZH				Sn		**Sn**		**02 46 45.6**	**+5.2**
LZH				Sg		**Sg**		**02 47 01.8**	**-0.7**
LZH				smax		smax			
	comp=N,51nm,1.0s								
LZH				smax		smax			
	comp=E,83nm,1.1s								
XAN	**Xi'an**	**4.46**	**60**	Pn		**Pn**		**02 45 57.4**	**+2.0**
XAN				Pg		**Pg**		**02 46 10.6**	**-3.1**
XAN				Sn		**Sn**		**02 46 52.0**	**+5.0**
XAN				Sg		**Sg**		**02 47 09.6**	**-1.8**
XAN				smax		smax			
	comp=N,120nm,0.5s								
XAN				smax		smax			
	comp=E,80nm,0.6s								
GYA	**Guiyang**	**5.83**	**158**	⇓Pn		Pn		02 46 19.6	+5.3
GYA				Sn		**Sn**		**02 47 26.1**	**+5.2**
GYA				Sg		**Sg**		**02 47 56.0**	**+0.7**
GYA				smax		smax			
	comp=N,30nm,0.7s								
GYA				smax		smax			
	comp=E,60nm,0.9s								
SONM	**Songino Array**	**15.99**	**5**	P

JMA 12 03:05:18.0±0.1, 38°.88N×142°.06E, h46km±1km, M4.1
JMA Felt III J1.
NEIC 12 03:05:18.5±1.1, 38°.85N±0°.03×142°.1E±0°.1, h54km±8km, mb4.5/14, Error ellipse: s-maj=12.3km s-min=2.1km az=107.0
NIED 12 03:05:18.1, 38°.88N×142°.06E, h46km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr1.05; Mθθ-0.05; Mφφ-1.00; Mrθ1.50; Mθφ-0.93; Mφr0.89; Fault plane solution: M0 2.22000×10^15 NP1:θ55.00000°, δ74.00000°, λ111.00000°. NP2:θ182.00000°, δ26.00000°, λ40.00000°.

ISC 12 03:05:18.0±1.0, 38°.85N±0°.04×142°.06E±0°.08, h46km±8km, n85, σ0°.83/90, mb4.2/27, MS3.5/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OFUJ	**Ofunato**	**0.38**	**307**	P		**Pn**	**03 05 27.6**	**+0.1**
OFUJ				S		**Sn**	**03 05 34.1**	**-0.2**
JKMT	**Kesennumamotoy**	**0.46**	**265**	P		**Pn**	**03 05 28.5**	**+0.1**
JKMT				S		**Sn**	**03 05 35.6**	**-0.2**
JMK	**Ichinoseki**	**0.66**	**279**	P		**Pn**	**03 05 31.1**	**+0.1**
JMK				*e*S		**Sn**	**03 05 40.3**	**-0.1**
JIO	**Ouri**	**0.68**	**234**	P		**Pn**	**03 05 31.4**	**+0.1**
JIO				S		**Sn**	**03 05 40.6**	**-0.3**
JOM	**Ohasama**	**0.86**	**316**	P		**Pn**	**03 05 33.7**	**0.0**
JOM				*e*S		**Sn**	**03 05 45.0**	**-0.1**
JOU	**Okura**	**1.19**	**246**	P		**Pn**	**03 05 38.6**	**+0.4**
JOU				*e*S		**Sn**	**03 05 54.0**	**+0.7**
JRG	**Rokugo**	**1.23**	**297**	P		**Pn**	**03 05 38.9**	**+0.2**
JYK	**Kaneyama**	**1.32**	**273**	P		**Pn**	**03 05 40.4**	**+0.4**
JMM	**Marumori**	**1.40**	**226**	P		**Pn**	**03 05 41.0**	**0.0**
JMM	**Marumori**	**1.40**	**226**	Pn		**Pn**	**03 05 41.2**	**+0.2**
JMM				Sn		**Sn**	**03 05 59.2**	**+0.9**
JANG	**Nango**	**1.57**	**345**	P		**Pn**	**03 05 43.0**	**-0.4**
JTM	**Tenmabayashi**	**2.08**	**339**			**Pn**	**03 05 50.6**	**+0.3**
JYT	**Yasato**	**3.01**	**210**	Pn		**Pn**	**03 06 04.0**	**+0.9**
JYT				Sn		**Sn**	**03 06 38.9**	**+1.0**
JSD	**Sado**	**3.09**	**256**			**Pn**	**03 06 04.6**	**+0.4**
ERM	**Erimo**	**3.27**	**15**	Pn		**Pn**	**03 06 06.5**	**-0.2**
MJAR	**Matsushiro Arr**	**3.83**	**234**	P		**Pn**	**03 06 15.7**	**+1.4**
	1.3nm,0.3s,baz=35,slow=12,SNR=38							
MJAR				S		**Sn**	**03 06 58.3**	**+0.2**
	0.5nm,0.3s,baz=59,slow=11,SNR=5.7							
MJAR				LR		LR	03 08 00.1	
	comp=Z,111nm,20.1s,baz=55,slow=43							
MJAR	**Matsushiro Arr**	**3.83**	**234**			**Pn**	**03 06 15.8**	**+1.4**
MJAR				Sn		**Sn**	**03 06 56.8**	**-1.2**
MAJO	**Matsushiro**	**3.83**	**234**			**Pn**	**03 06 15.5**	**+1.1**
MAT	**Matsushiro**	**3.83**	**234**	P		**Pn**	**03 06 16.6**	**+2.3**
MAT				*e*S		**Sn**	**03 07 02.1**	**+4.0**
ASAJ	**Asahikawa**	**5.27**	**4**	P		**Pn**	**03 06 35.1**	**+0.9**
	3.3nm,0.3s,baz=205,slow=13,SNR=15							
ASAJ				S		**Sn**	**03 07 35.5**	**+1.9**
	3.1nm,0.3s,baz=336,slow=6.7,SNR=2.2							
JKA	**Kamikawa-asahi**	**5.27**	**4**			**Pn**	**03 06 35.3**	**+1.2**
JKA						**Sn**	**03 07 33.9**	**+0.3**
INU	**Inuyama**	**5.33**	**231**			**Pn**	**03 06 36.2**	**+1.1**
JHJ	**Hachijo jima 2**	**6.01**	**199**	P		**Pn**	**03 06 45.4**	**+1.0**
	21nm,0.3s,baz=324,slow=21,SNR=5.1							
JHJ				S		**Sn**	**03 07 49.9**	**-2.0**
	22nm,0.3s,baz=187,slow=4.7,SNR=1.8							
JWT	**Wachi**	**6.40**	**230**	Pn		**Pn**	**03 06 50.7**	**+1.0**
USA0B	**Ussuriysk Arra**	**9.24**	**309**	Pn		**Pn**	**03 07 29.8**	**+1.2**
USRK	**Ussuriysk Ar.**	**9.24**	**309**	P		**Pn**	**03 07 30.2**	**+1.6**
	baz=129,slow=15,SNR=20							
USRK				LR		LR	03 10 54.6	
	comp=Z,178nm,19.2s,baz=102,slow=36							
USRK	**Ussuriysk Ar.**	**9.24**	**309**	Pn		**Pn**	**03 07 29.8**	**+1.2**
KSRS	**Korea Array**	**11.22**	**267**	P		**Pn**	**03 07 55.5**	**0.0**
	baz=81,slow=15,SNR=0.8							
KSRS				LR		LR	03 11 12.1	
	comp=Z,52nm,19.8s,baz=103,slow=32							
JCJ	**Chichijima**	**11.73**	**179**	Pn		**Pn**	**03 08 02.3**	**-0.3**
KLR	**Kul'dur**	**12.74**	**328**	P		**Pn**	**03 08 16.4**	**+0.1**
	0.1nm,0.3s,baz=128,slow=18,SNR=4.7							
PETK	**Petropavlovsk-comp=Z,53nm,19.6s,baz=255,slow=38**	**17.87**	**32**	LR		LR	03 16 35.5	
YAK	**Yakutsk**	**24.42**	**346**	P		**P**	**03 10 31.3**	**-0.5**
	5.8nm,0.3s,baz=3.1,slow=4.3,SNR=5.5							
YAK	**Yakutsk**	**24.42**	**346**	P		**P**	**03 10 31.3**	**-0.5**
SEY	**Seymchan**	**24.91**	**11**	P		**P**	**03 10 36.8**	**+0.5**
	9.9nm,0.9s,baz=217,slow=7.4,SNR=13							
GUMO	**Guam**	**25.29**	**174**	LR		LR	03 20 22.4	
	comp=Z,19nm,21.4s,baz=50,slow=36							
SONM	**Songino Array**	**27.24**	**301**	P		**P**	**03 10 58.0**	**+0.3**
	1.0nm,0.7s,baz=98,slow=7.3,SNR=6.3							
SONM	**Songino Array**	**27.24**	**301**	P		**P**	**03 10 57.5**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**28.70**	**125**	T		T	03 41 35.4	
	baz=317,slow=76,SNR=4260							
H11N1	**WAKE ISLAND Hy**	**28.71**	**125**	T		T	03 41 35.6	
	baz=317,slow=76,SNR=3715							
H11N3	**WAKE ISLAND Hy**	**28.72**	**125**	T		T	03 41 36.2	
	baz=317,slow=76,SNR=3708							
H11S1	**WAKE ISLAND Hy**	**29.48**	**126**	T		T	03 42 33.0	
	baz=319,slow=76,SNR=586							
H11S3	**WAKE ISLAND Hy**	**29.48**	**127**	T		T	03 42 33.6	
	baz=319,slow=76,SNR=704							
H11S2	**WAKE ISLAND Hy**	**29.49**	**126**	T		T	03 42 34.6	
	baz=319,slow=76,SNR=296							
TLY	**Talaya**	**29.56**	**308**	LR		LR	03 23 49.7	
	comp=Z,56nm,18.4s,baz=126,slow=38							
ZAA0	**Zalesovo Array**	**41.09**	**311**	P		**P**	**03 12 56.9**	**-0.1**
ZAA0				IAmb		IAmb	03 12 57.7	
	comp=Z,6.3nm,0.9s							
ZALV	**Zalesovo Beam**	**41.09**	**311**	P		**P**	**03 12 57.1**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=78,slow=7.7,SNR=13							
ZALV				PcP		**PcP**	**03 14 56.1**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=10,slow=3.2,SNR=2.0							
ZALV				LR		LR	03 30 44.5	
	comp=Z,54nm,18.4s,baz=72,slow=37							
ZALV	**Zalesovo Beam**	**41.09**	**311**	P		**P**	**03 12 56.8**	**-0.2**
ZALV				PcP		**PcP**	**03 14 55.6**	**-0.2**
NRIK	**Noril'sk**	**41.84**	**334**	LR		LR	03 31 12.3	
	comp=Z,111nm,18.6s,baz=204,slow=37							
MK31	**Makanchi Array**	**43.61**	**301**	P		**P**	**03 13 17.4**	**-0.3**
MKAR	**Makanchi Array**	**43.61**	**301**	P		**P**	**03 13 17.7**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=87,slow=9.3,SNR=16							
MKAR	**Makanchi Array**	**43.61**	**301**	P		**P**	**03 13 17.3**	**-0.3**
MAKZ	**Makanchi**	**43.81**	**301**	P		**P**	**03 13 19.0**	**-0.3**
MAKZ				IAmb		IAmb	03 13 21.0	
	comp=Z,7.7nm,1.0s							
KURK	**Kurchatov**	**45.23**	**307**	P		**P**	**03 13 30.5**	**0.0**
ILAR	**Eielson Array**	**47.69**	**33**	P		**P**	**03 13 50.2**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=267,slow=6.6,SNR=18							
ILAR	**Eielson Array**	**47.69**	**33**	P		**P**	**03 13 49.8**	**+0.2**
BRVK	**Borovoye**	**49.79**	**311**	P		**P**	**03 14 05.8**	**0.0**
BRVK				IAmb		IAmb	03 14 06.8	
	comp=Z,3.7nm,0.8s							
INK	**Inuvik**	**52.54**	**28**	P		**P**	**03 14 27.1**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=280,slow=5.5,SNR=2.8							
KK31	**Karatay Array**	**52.67**	**299**	P		**P**	**03 14 27.0**	**-0.6**
KKAR	**Karatay Array**	**52.67**	**299**	P		**P**	**03 14 27.2**	**-0.3**
KKAR				IAmb		IAmb	03 14 28.3	
	comp=Z,2.8nm,0.8s							
KKAR	**Karatay Array**	**52.67**	**299**	P		**P**	**03 14 27.0**	**-0.6**
ARU	**Arti**	**55.34**	**318**	P		**P**	**03 14 46.8**	**-0.1**
ABKAR	**Akbulak array**	**57.17**	**309**	P		**P**	**03 14 59.8**	**-0.2**
ABKAR				IAmb		IAmb	03 15 00.5	
	comp=Z,4.1nm,0.8s							
FITZ	**Fitzroy Crossi**	**58.70**	**198**	P		**P**	**03 15 11.1**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=346,slow=7.8,SNR=5.2							
FITZ	**Fitzroy Crossi**	**58.70**	**198**	P		**P**	**03 15 10.4**	**-0.5**
WRA	**Warramunga Arr**	**58.93**	**188**	P		**P**	**03 15 12.1**	**-0.4**
	comp=Z,1.8nm,0.4s,baz=6.2,slow=7.1,SNR=28							
WRA	**Warramunga Arr**	**58.93**	**188**	P		**P**	**03 15 12.1**	**-0.4**
ARCES	**ARCESS Array B**	**62.48**	**339**	P		**P**	**03 15 35.9**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=69,slow=7.8,SNR=1.4							
ASAR	**Alice Springs**	**62.66**	**188**	P		**P**	**03 15 37.9**	**0.0**
	comp=Z,0.8nm,0.6s,baz=2.3,slow=6.0,SNR=16							
ASAR				LR		LR	03 42 28.3	
	comp=Z,21nm,19.6s,baz=9.0,slow=36							
ASAR	**Alice Springs**	**62.66**	**188**	P		**P**	**03 15 37.5**	**-0.4**
GEYT	**Alibeck**	**63.41**	**298**	P		**P**	**03 15 42.3**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=55,slow=5.5,SNR=2.0							
FINES	**FINESS Array B**	**67.44**	**332**	P		**P**	**03 16 07.8**	**-0.7**
	comp=Z,4.5nm,0.8s,baz=55,slow=7.3,SNR=9.3							
FINES				LR		LR	03 50 48.3	
	comp=Z,66nm,19.0s,baz=259,slow=40							
FINES	**FINESS Array B**	**67.44**	**332**	P		**P**	**03 16 08.6**	**+0.2**
KIV	**Kislovodsk**	**70.10**	**311**	P		**P**	**03 16 25.1**	**-0.3**
KIV				IAmb		IAmb	03 16 27.5	
	comp=Z,9.6nm,1.0s							
KBZ	**Khabaz**	**70.11**	**310**	P		**P**	**03 16 25.8**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=146,slow=4.9							
NOA	**NORSAR Array B**	**72.71**	**337**	P		**P**	**03 16 40.7**	**0.0**
	comp=Z,1.4nm,0.9s,baz=37,slow=5.6,SNR=3.7							
NOA				LR		LR	03 52 17.6	
	comp=Z,34nm,18.2s,baz=265,slow=39							
AKASG	**Malin Array Be**	**73.17**	**322**	P		**P**	**03 16 43.2**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=45,slow=6.0,SNR=8.2							
PDAR	**Pinedale Array**	**76.03**	**46**	P		**P**	**03 17 01.2**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=270,slow=2.3,SNR=3.7							
PDAR	**Pinedale Array**	**76.03**	**46**	P		**P**	**03 17 00.2**	**-0.5**
BRTR	**Keskin Array B**	**78.03**	**312**	P		**P**	**03 17 11.9**	**0.0**
	comp=Z,0.4nm,0.5s,baz=67,slow=3.7,SNR=2.0							
BRTR	**Keskin Array B**	**78.03**	**312**	P		**P**	**03 17 11.1**	**-0.7**
CLL	**Collm**	**79.77**	**330**	*e*P		**P**	**03 17 21.0**	**0.0**
MMAI	**Mount Meron Ar**	**81.33**	**305**	P		**P**	**03 17 31.0**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=336,slow=3.2,SNR=1.5							
GERES	**GERESS Array B**	**81.43**	**328**	P		**P**	**03 17 29.6**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=40,slow=6.6,SNR=3.5							
PPT	**Papeete**	**85.00**	**117**	LR		LR	03 46 47.4	
	comp=Z,22nm,21.4s,baz=325,slow=29							
TXAR	**Lajitas Array**	**88.61**	**53**	P		**P**	**03 18 06.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=298,slow=2.7,SNR=3.6							

DDA 12 03:20:44.6, 38°.62N×40°.88E, h7km±3km, ML2.3
ATA 12 03:20:44.8±0.3, 38°.49N×40°.80E, h27km±18km, ML2.0, MW3.9
ISK 12 03:20:44.4, 38°.60N×40°.91E, h10km, ML2.6/21

ISC 12 03:20:44.5±1.2, 38°.59N±0°.02×40°.89E±0°.02, h9km±10km, n36, σ0°.56/49, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HANI	**Diyarbakir_Han**	**0.42**	**246**	*i* P		**Pb**	**03 20 53.6**	**-0.5**
HANI				*i* S		**Sb**	**03 20 59.9**	**-0.8**
HANI				IAML			03 21 00.0	
	comp=N,154nm,0.5s							
HANI				IAML			03 21 04.0	
	comp=E,243nm,0.7s							
BNGB	**Bingl**	**0.44**	**338**	PG		**Pg**	**03 20 53.4**	**+0.3**
BNGB				SG		**Sb**	**03 21 00.1**	**-1.1**
SVAN	**Silvan-Diyarba**	**0.50**	**151**	PG		**Pb**	**03 20 55.3**	**-0.2**
SVAN	**Silvan-Diyarba**	**0.50**	**151**	*i* P		**Pb**	**03 20 55.4**	**-0.2**
SVAN				*i* S		**Sb**	**03 21 02.5**	**-0.4**
SVAN				IAML			03 21 04.0	
	comp=E,213nm,0.2s							
SVAN				IAML			03 21 07.0	
	comp=N,185nm,0.3s							
MUSM	**Mu-Merkez**	**0.51**	**74**	*i* P		**Pg**	**03 20 54.2**	**-0.2**
MUSM				*i* S		**Sg**	**03 21 01.6**	**+0.5**
VRTB	**Varto-Mus**	**0.72**	**38**	PG		**Pg**	**03 20 58.4**	**-0.1**
VRTB				SG		**Sb**	**03 21 09.1**	**-0.4**
VRTB	**Varto-Mus**	**0.72**	**38**	*i* P		**Pg**	**03 20 58.7**	**+0.2**
VRTB				*i* S		**Sb**	**03 21 09.9**	**+0.4**
VRTB				IAML			03 21 11.0	
	comp=E,208nm,0.5s							
VRTB				IAML			03 21 11.0	
	comp=N,160nm,0.4s							
KARO	**Karliova-Bingo**	**0.73**	**10**	PG		**Pg**	**03 20 58.6**	**-0.1**
KARO				SG		**Sb**	**03 21 09.4**	**-0.4**
BTMN	**Batman**	**0.76**	**156**	*i* P		**Pb**	**03 21 00.2**	**+0.3**
BTMN				*i* S		**Sb**	**03 21 11.6**	**+1.2**
BTMN				IAML			03 21 14.0	
	comp=E,150nm,0.7s							
BTMN				IAML			03 21 15.0	
	comp=N,165nm,0.4s							
DYBB	**Diyarbakir**	**0.86**	**223**	PG		**Pb**	**03 21 02.4**	**+0.7**
YEDI	**Yedisu-Bingol**	**0.89**	**343**	PG		**Pg**	**03 21 01.4**	**-0.3**
DIYA	**Diyarbakir**	**0.90**	**223**	*i* P		**Pn**	**03 21 03.0**	**-0.4**
DIYA				*i* S		**Sn**	**03 21 15.9**	**-0.6**
DIYA				IAML			03 21 16.0	
	comp=N,182nm,0.3s							
DIYA				IAML			03 21 16.0	
	comp=E,166nm,0.2s							
GURO	**Guroymak-BITLI**	**0.90**	**92**	PG		**Pg**	**03 21 01.4**	**-0.4**
BLIS	**Bitlis-Merkez**	**0.98**	**100**	*i* P		**Pg**	**03 21 03.0**	**-0.3**
BLIS				*i* S		**Sn**	**03 21 18.2**	**-0.4**
BLIS				IAML			03 21 19.0	
	comp=E,58nm,0.3s							
BLIS				IAML			03 21 21.0	
	comp=N,62nm,0.7s							
TNCL	**Tunceli-Merkez**	**1.18**	**297**	*i* P		**Pg**	**03 21 06.4**	**-0.7**
TNCL				*i* S		**Sn**	**03 21 23.2**	**-0.2**
TNCL				IAML			03 21 24.0	
	comp=N,49nm,0.4s							
TNCL				IAML			03 21 28.0	
	comp=E,57nm,0.7s							
MAZI	**Mazidag**	**1.18**	**197**	PN		**Pg**	**03 21 06.9**	**-0.2**
PTK	**Pertek**	**1.21**	**285**	PN		**Pg**	**03 21 07.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.26**	**261**	PN		**Pn**	**03 21 08.8**	**+0.3**
MARD	**Mardin**	**1.27**	**184**	*i* P		**Pg**	**03 21 08.8**	**-0.2**
MARD				*i* S		**Sn**	**03 21 26.7**	**+0.8**
MARD				IAML			03 21 28.0	
	comp=E,79nm,0.6s							
MARD				IAML			03 21 28.0	
	comp=N,120nm,0.5s							
ERZN	**Erzincan**	**1.35**	**318**	PN		**Pn**	**03 21 09.9**	**+0.2**
MLAZ	**Malazgirt-MUS**	**1.41**	**66**	PN		**Pn**	**03 21 10.4**	**-0.1**
EUZM	**Uzumlu**	**1.45**	**321**	*e*P		**Pg**	**03 21 12.6**	**+0.2**
EUZM				IAML			03 21 41.7	
	comp=Z,4.3nm,0.6s							
KOPR	**Koprukoy-ERZUR**	**1.59**	**28**	PN		**Pn**	**03 21 13.6**	**+0.6**
SIRN	**Sirnak**	**1.62**	**132**	*i* P		**Pn**	**03 21 13.9**	**+0.5**
SIRN				*i* S		**Sg**	**03 21 33.5**	**-0.4**
SIRT	**Sirnak**	**1.64**	**131**	PN		**Pn**	**03 21 13.0**	**-0.6**
AKDM	**Akdamar-Van**	**1.66**	**98**	PN		**Pn**	**03 21 14.3**	**+0.3**
GEVA	**Gevas**	**1.73**	**98**	*e*P		**Pg**	**03 21 17.1**	**-0.5**
GEVA				IAML			03 21 46.6	
	comp=Z,17nm,0.5s							
KRIK	**Erzurum-spir**	**1.75**	**1**	*e*P		**Pg**	**03 21 18.2**	**+0.1**
BAYT	**Aydıntepe-Bayb**	**1.90**	**342**	PN		**Pn**	**03 21 17.7**	**+0.5**
AGRB	**Hanur-Agry**	**1.91**	**58**	PN		**Pn**	**03 21 17.9**	**+0.4**
MALT	**Malatya**	**1.95**	**263**	PN		**Pn**	**03 21 18.9**	**+1.0**
KEMA	**Kemaliye**	**1.99**	**291**	*e*P		**Pn**	**03 21 19.5**	**+1.1**
KEMA				IAML			03 22 01.4	
	comp=Z,1.7nm,0.6s							
URFA	**Urfa**	**1.99**	**236**	PN		**Pn**	**03 21 19.3**	**+0.8**
KELT	**Kelkit**	**2.01**	**321**	*e*P		**Pb**	**03 21 21.0**	**-0.4**
KELT				IAML			03 22 02.0	
	comp=Z,4.7nm,2.0s							
ARPR	**Arapgir-MALATY**	**2.06**	**285**	PN		**Pn**	**03 21 20.4**	**+1.0**
CUKT	**Cukurca**	**2.53**	**121**	PN		**Pn**	**03 21 26.7**	**+0.8**

BGR 12 03:40:47.6±0.0, 24°.28S×176°.37W, h33km
NEIC 12 03:41:48.3±0.9, 22°.9S±0°.1×179°.8E±0°.1, h523km±3km, mb4.3/23, Error ellipse: s-maj=19.1km s-min=15.6km az=119.0
IDC 12 03:41:48.5±1.8, 22°.88S×179°.76E, h518km±18km, mb3.3/13, mb1 3.5/16, mb1mx3.5/25, mbtmp4.2/16, Error ellipse: s-maj=17.4km s-min=13.6km az=120.0

ISC 12 03:41:50.8±0.4, 22°.84S±0°.06×179°.67E±0°.07, h550km, n120, σ1°.65/130, mb4.1/21, 7C-4D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**6.75**	**162**	P		**P**	**03 43 37.6**	**+1.3**
GLKZ				S		**S**	**03 45 06.4**	**+3.6**
NIUE	**Niue**	**10.41**	**71**	P		**P**	**03 44 10.0**	**-3.1**
AFI	**Afiamalu**	**12.03**	**44**	P		**P**	**03 44 26.6**	**-3.2**
	4.8nm,0.3s,baz=264,slow=10,SNR=7.7							
AFI	**Afiamalu**	**12.03**	**44**	P		**P**	**03 44 26.5**	**-3.4**
DZM	**Mont Dzumac**	**12.26**	**271**	P		**P**	**03 44 30.2**	**-1.9**
	0.1nm,0.3s,baz=79,slow=20,SNR=2.0							
DZM	**Mont Dzumac**	**12.26**	**271**	P		**P**	**03 44 33.5**	**+1.4**
WCZ	**Waipu Caves**	**13.85**	**198**	P		**P**	**03 44 41.7**	**-6.6**
URZ	**Urewera**	**15.53**	**188**	P		**P**	**03 45 02.9**	**-2.7**
	2.4nm,0.3s,baz=327,slow=3.1,SNR=8.1							
URZ				S		**S**	**03 47 40.8**	**-4.4**
	0.7nm,0.3s,baz=71,slow=22,SNR=8.9							
URZ	**Urewera**	**15.53**	**188**	P		**P**	**03 45 03.5**	**-2.0**
URZ				S		**S**	**03 47 38.7**	**-6.4**
URZ	**Urewera**	**15.53**	**188**	P		**P**	**03 45 03.0**	**-2.5**
BKZ	**Black Stump Fm**	**16.50**	**189**	P		**P**	**03 45 13.4**	**-1.5**
DUWZ	**D'Urville Isla**	**18.56**	**194**	P		**P**	**03 45 33.9**	**+0.3**
DUWZ				S		**S**	**03 48 39.5**	**+4.7**
TCW	**Tory Channel**	**18.87**	**193**	P		**P**	**03 45 36.8**	**+0.3**
MSWZ	**Moikau Station**	**18.89**	**190**	P		**P**	**03 45 35.4**	**-1.3**
QRZ	**Quartz Range**	**18.92**	**197**	P		**P**	**03 45 38.1**	**+1.2**
PLWZ	**Palliser**	**19.04**	**190**	P		**P**	**03 45 37.9**	**-0.2**
PLWZ	**Palliser**	**19.04**	**190**	P		**P**	**03 45 36.8**	**-1.2**
NNZ	**Nelson**	**19.08**	**195**	P		**P**	**03 45 38.5**	**+0.2**
THZ	**Tophouse**	**19.71**	**195**	P		**P**	**03 45 44.0**	**-0.1**
THZ				S		**S**	**03 48 49.6**	**-3.8**
DSZ	**Denniston Nort**	**19.98**	**197**	P		**P**	**03 45 47.4**	**+0.8**
KHZ	**Kahutara**	**20.18**	**193**	P		**P**	**03 45 47.4**	**-1.0**
KHZ				S		**S**	**03 49 02.2**	**+1.4**
KHZ	**Kahutara**	**20.18**	**193**	P		**P**	**03 45 47.3**	**-1.1**
GVZ	**Greta Valley S**	**20.82**	**194**	P		**P**	**03 45 53.1**	**-1.1**
LTZ	**Lake Taylor**	**20.82**	**195**	P		**P**	**03 45 53.4**	**-0.8**
INZ	**Inchbonnie**	**20.98**	**197**	P		**P**	**03 45 55.2**	**-0.4**
OXZ	**Oxford**	**21.39**	**195**	P		**P**	**03 45 58.5**	**-0.8**
RPZ	**Rata Peaks**	**22.01**	**197**	P		**P**	**03 46 04.0**	**-0.8**
	7.3nm,0.5s,baz=112,slow=11,SNR=1.5							
RPZ	**Rata Peaks**	**22.01**	**197**	P		**P**	**03 46 03.6**	**-1.2**
RPZ				IAmb		IAmb	03 46 05.0	
	comp=Z,19nm,1.2s							
MLZ	**Mavora Lakes**	**24.37**	**200**	P		**P**	**03 46 26.9**	**+1.0**
ARMA	**Armidale**	**26.13**	**247**	P		**P**	**03 46 43.7**	**+1.9**
ARMA				IAmb		IAmb	03 46 44.4	
	comp=Z,9.6nm,0.8s							
EIDS	**Eidsvold**	**26.20**	**259**	P		**P**	**03 46 43.5**	**+1.2**
EIDS				IAmb		IAmb	03 46 49.9	
	comp=Z,6.2nm,1.1s							
CTA	**Charters Tower**	**31.18**	**269**	P		**P**	**03 47 26.0**	**+0.3**
	comp=Z,3.4nm,0.7s,baz=95,slow=10,SNR=2.9							
CTAO	**Charters Tower**	**31.18**	**269**	P		**P**	**03 47 26.6**	**+0.9**
CTAO				IAmb		IAmb	03 47 26.7	
	comp=Z,3.4nm,0.8s							
TOO	**Toolangi**	**32.78**	**236**	P		**P**	**03 47 37.3**	**-1.7**
TOO				IAmb		IAmb	03 47 41.1	
	comp=Z,9.8nm,0.8s							
STKA	**Stephens Creek**	**34.85**	**247**	P		**P**	**03 47 57.1**	**+0.7**
	comp=Z,4.8nm,0.6s,baz=80,slow=9.1,SNR=17							
STKA	**Stephens Creek**	**34.85**	**247**	P		**P**	**03 47 56.0**	**-0.5**
BBOO	**Buckleboo**	**39.59**	**246**	P		**P**	**03 48 35.2**	**0.0**
BBOO				IAmb		IAmb	03 48 35.7	
	comp=Z,7.2nm,0.8s							
AS31	**Alice Springs**	**41.92**	**260**	P		**P**	**03 48 53.5**	**-0.4**
ASAR	**Alice Springs**	**41.92**	**260**	P		**P**	**03 48 54.1**	**+0.2**
	comp=Z,4.5nm,0.6s,baz=92,slow=8.0,SNR=72							
ASAR				PcP		**PcP**	**03 50 36.6**	**0.0**
	comp=Z,0.5nm,0.6s,baz=98,slow=5.1,SNR=2.6							
ASAR				ScP		**ScP**	**03 53 38.2**	**+3.4**
	comp=Z,0.1nm,0.4s,baz=101,slow=4.8,SNR=2.4							
ASAR				S		**S**	**03 54 30.4**	**-2.5**
	comp=Z,0.8nm,0.8s,baz=102,slow=14,SNR=6.4							
ASAR	**Alice Springs**	**41.92**	**260**	P		**P**	**03 48 53.6**	**-0.3**
ASAR						**PcP**	**03 50 36.4**	**-0.1**
WR0	**Warramunga Arr**	**42.00**	**265**	P		**P**	**03 48 54.6**	**+0.1**
WB0	**Warramunga Arr**	**42.17**	**265**	P		**P**	**03 48 55.3**	**-0.6**
WB2	**Warramunga Arr**	**42.18**	**265**	P		**P**	**03 48 55.4**	**-0.5**
WB2				IAmb		IAmb	03 48 56.4	
	comp=Z,4.3nm,0.8s							
WRA	**Warramunga Arr**	**42.19**	**265**	P		**P**	**03 48 55.6**	**-0.4**
	comp=Z,1.6nm,0.2s,baz=96,slow=8.4,SNR=85							
WRA				PcP		**pwP**	**03 50 38.2**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=108,slow=3.2,SNR=3.4							
WRA				ScP

KHC	**Kasperske Hory**	**151.54**	**341**	*e*PKP	**PKPbc**	**04 00 42.9**	**0.0**
KHC				*ex*	x	04 00 57.5	
GERES	**GERESS Array B**	**151.76**	**340**	PKPbc	**PKiKP**	**04 00 44.0**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=21,slow=1.9,SNR=7.1						
CONA	**Conrad Observa**	**151.81**	**337**	*e*P	**PKPdf**	**04 00 39.2**	**+2.5**
	comp=Z,2.7nm,0.7s						
SOKA	**Soboth**	**153.17**	**336**	*e*P	**PKPdf**	**04 00 39.9**	**+1.3**
	comp=Z,8.8nm,1.5s						
OBKA	**Obir**	**153.49**	**337**	*e*P	**PKPdf**	**04 00 43.4**	**+4.3**
	comp=Z,4.7nm,0.7s						
WTTA	**Wattenberg**	**153.80**	**341**	*e*P	**PKPbc**	**04 00 45.1**	**-3.0**
	comp=Z,8.1nm,1.7s						
DAVOX	**Davos/Dischmat**	**154.73**	**343**	PKPab	**PKPab**	**04 01 08.4**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=40,slow=20,SNR=2.8						
ESDC	**Sonseca Array**	**162.93**	**10**	PKPab	**PKPab**	**04 01 44.1**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=341,slow=4.5,SNR=2.3						
TORD	**Torodi Ar. Bea**	**170.17**	**192**	PKPab	**PKPab**	**04 02 15.6**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=174,slow=3.0,SNR=3.9						

THE ***12*** *03:58:56.7,40.41N×26.05E,h17km±1km, ML2.3/12, Error ellipse: s-maj=1.2km s-min=0.5km az=94.0*
ATH ***12*** *03:58:56.4,40.41N×26.03E,h22km±3km, ML2.3/5, Error ellipse: s-maj=3.8km s-min=1.2km az=308.0*
DDA ***12*** *03:58:57.3,40.36N×26.13E,h7km±2km, ML2.4*
ISK 12 03:58:56.3, 40.41N×26.08E, h15km, ML2.6/31, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GOKA	**anakkale-Gk**	**0.25**	**211**	*i* P	Pb	03 59 02.4	-0.1
GOKA				*i* S	Sb	03 59 06.8	+0.1
GOKA				IAML		03 59 08.0	
	comp=N,1μm,0.2s						
GOKA				IAML		03 59 08.0	
	comp=E,1μm,0.2s						
GADA	**Gvkgeada**	**0.25**	**213**	PG	Pb	03 59 02.2	-0.4
GADA				SG	Sb	03 59 06.6	-0.2
GADA	**Gvkgeada**	**0.25**	**213**	P	Pb	03 59 02.3	-0.3
GADA				S	Sb	03 59 06.6	-0.2
GELI	**Tayfur-Gelibol**	**0.30**	**91**	PG	Pb	03 59 03.2	-0.2
GELI				SG	Sb	03 59 07.9	-0.3
ENEZ	**Enez**	**0.34**	**10**	PG	Pb	03 59 03.9	-0.1
ENEZ				SG	Sb	03 59 09.1	-0.1
ENEZ	**Enez**	**0.34**	**10**	P	Pb	03 59 03.9	-0.1
ENEZ				S	Sb	03 59 09.2	0.0
SMTH	**Samothraki Isl**	**0.42**	**279**	P	Pg	03 59 04.8	0.0
SMTH				S	Sg	03 59 10.7	+0.2
SMTH				AML	AML	03 59 11.3	
	comp=N,2176μm,0.3s						
SMTH				AML	AML	03 59 12.0	
	comp=E,1523μm,0.1s						
SMTH	**Samothraki Isl**	**0.42**	**279**	P	Pg	03 59 04.9	+0.1
SMTH				S	Sg	03 59 11.0	+0.4
	comp=E,928nm,0.3s						
ERIK	**Erikli-Kesan**	**0.42**	**51**	PG	Pb	03 59 05.3	-0.2
ERIK				SG	Sb	03 59 11.4	-0.4
ALN	**Alexandroupoli**	**0.49**	**357**	P	Pb	03 59 06.5	-0.2
ALN				S	Sg	03 59 13.2	+0.5
ALN				AML	AML	03 59 13.7	
	comp=N,563μm,0.4s						
ALN				AML	AML	03 59 14.0	
	comp=E,654μm,0.4s						
ALN	**Alexandroupoli**	**0.49**	**357**	PG	Pb	03 59 06.5	-0.2
ALN	**Alexandroupoli**	**0.49**	**357**	P	Pb	03 59 06.5	-0.2
ALN				S	Sb	03 59 13.4	-0.3
	comp=E,442nm,0.2s						
LPK	**Lapseki**	**0.52**	**93**	PG	Pb	03 59 07.3	+0.1
BOZC	**Bozcaada**	**0.56**	**182**	PG	Pb	03 59 07.7	-0.2
BOZC	**Bozcaada**	**0.56**	**182**	*i* P	Pg	03 59 07.6	+0.2
BOZC				*i* S	Sb	03 59 15.9	+0.2
BOZC				IAML		03 59 17.0	
	comp=E,249nm,0.3s						
EZN	**Ezine**	**0.61**	**162**	PG	Pb	03 59 08.5	-0.1
EZN	**Ezine**	**0.61**	**162**	P	Pb	03 59 08.6	0.0
EZN				S	Sb	03 59 17.0	0.0
KESN	**Edirne-Kesan**	**0.62**	**47**	*i* P	Pg	03 59 08.5	-0.1
KESN				IAML		03 59 21.0	
	comp=N,317nm,0.2s						
KESN				IAML		03 59 22.0	
	comp=E,319nm,0.2s						
BAYC	**CANAKKALE_Bayr**	**0.75**	**151**	*i* P	Pb	03 59 11.3	+0.1
BAYC				IAML		03 59 22.0	
	comp=E,138nm,0.4s						
BAYC				*i* S	Sb	03 59 22.3	+1.1
BAYC				IAML		03 59 23.0	
	comp=N,124nm,0.3s						
UKOP	**Uzunkopru-Edir**	**0.84**	**30**	PG	Pg	03 59 13.0	+0.4
RDO	**Rodhopi**	**0.85**	**331**	P	Pb	03 59 12.6	-0.1
RDO				S	Sg	03 59 23.5	-0.3
RDO	**Rodhopi**	**0.85**	**331**	PG	Pb	03 59 12.5	-0.2
RDO	**Rodhopi**	**0.85**	**331**	P	Pb	03 59 12.6	-0.1
RDO				S	Sg	03 59 23.5	-0.4
	comp=N,168nm,0.2s						
LIA	**Limnos Island**	**0.85**	**234**	P	Pb	03 59 12.6	-0.2
LIA				S	Sg	03 59 23.9	-0.1
LIA	**Limnos Island**	**0.85**	**234**	P	Pb	03 59 12.6	-0.2
LIA				S	Sb	03 59 24.4	+0.4
	comp=N,138nm,0.2s						
RKY	**Sarkoy-Tekirda**	**0.89**	**71**	PG	Pg	03 59 13.6	+0.1
THAS	**Thassos island**	**1.05**	**281**	P	Pb	03 59 16.3	+0.1
THAS				S	Sg	03 59 30.2	-0.2
THAS				AML	AML	03 59 32.1	
	comp=E,290μm,0.3s						
THAS				AML	AML	03 59 32.7	
	comp=N,354μm,0.2s						
THAS	**Thassos island**	**1.05**	**281**	P	Pn	03 59 16.6	0.0
THAS				S	Sb	03 59 29.6	-0.3
	comp=N,162nm,0.2s						
PRK	**Paraskevi**	**1.17**	**173**	P	Pg	03 59 19.6	+0.8
PRK	**Paraskevi**	**1.17**	**173**	P	Pg	03 59 19.7	+0.9
PRK				S	Sg	03 59 35.3	+1.3
	comp=N,512nm,0.5s						
MRMT	**Marmara Adasi**	**1.17**	**80**	PN	Pn	03 59 18.2	-0.1
AYVA	**Ayvalik**	**1.19**	**157**	*i* P	Pg	03 59 19.7	+0.4
AYVA				*i* S	Sg	03 59 34.9	0.0
AYVA				IAML		03 59 36.0	
	comp=E,71nm,0.4s						
AYVA				IAML		03 59 38.0	
	comp=N,150nm,0.4s						
EFSA	**Agios Efstrati**	**1.20**	**224**	P	Pb	03 59 18.7	0.0
SIGR	**SIGRI**	**1.20**	**188**	P	Pb	03 59 18.7	-0.1
SIGR				S	Sn	03 59 34.9	+0.2
SIGR				AML	AML	03 59 36.7	
	comp=N,600μm,0.3s						
SIGR				AML	AML	03 59 36.8	
	comp=E,408μm,0.4s						
SIGR	**SIGRI**	**1.20**	**188**	PN	Pn	03 59 18.6	0.0
SIGR	**SIGRI**	**1.20**	**188**	P	Pb	03 59 18.8	0.0
SIGR				S	Sn	03 59 34.9	+0.2
	comp=E,240nm,0.4s						
TKR	**Tekirdag**	**1.25**	**62**	PN	Pb	03 59 19.8	+0.2
GONE	**Gonen-Balikesi**	**1.28**	**106**	PN	Pb	03 59 20.4	+0.3
KAVA	**Kavala**	**1.33**	**297**	P	Pb	03 59 20.7	-0.2
KAVA				AML	AML	03 59 42.1	
	comp=E,114μm,0.2s						
KAVA				AML	AML	03 59 43.3	
	comp=N,134μm,0.2s						
KAVA	**Kavala**	**1.33**	**297**	P	Pn	03 59 20.4	+0.1
KAVA				S	Sn	03 59 37.2	-0.5
	comp=N,48nm,0.2s						
KDZ	**Kurdzhali**	**1.34**	**338**	PN	Pb	03 59 21.2	0.0
BALY	**Balya**	**1.36**	**119**	*i* P	Pg	03 59 22.3	-0.1
BALY				*i* S	Sg	03 59 40.2	+0.1
BALY				IAML		03 59 42.0	
	comp=N,44nm,0.4s						
BALY				IAML		03 59 42.0	
	comp=E,49nm,0.2s						
EDC	**Edincik**	**1.36**	**92**	PN	Pb	03 59 21.5	-0.1
KVLA	**Kavala**	**1.39**	**293**	P	Pg	03 59 22.8	-0.3
CRLT	**Corlu**	**1.45**	**60**	PN	Pb	03 59 22.9	-0.2
DKL	**Dikili**	**1.48**	**154**	PN	Pb	03 59 23.1	-0.3
EDRB	**Edirne**	**1.53**	**19**	PN	Pn	03 59 23.1	0.0
EDRB	**Edirne**	**1.53**	**19**	P	Pn	03 59 23.4	+0.3
EDRB				S	Sb	03 59 43.1	-0.4
BALB	**Balikesir**	**1.58**	**118**	PN	Pn	03 59 24.2	+0.4
OUR	**Ouranopolis**	**1.60**	**268**	PN	Pn	03 59 23.3	-0.8
OUR	**Ouranopolis**	**1.60**	**268**	P	Pn	03 59 23.5	-0.6
OUR				S	Sn	03 59 44.8	+0.3
	comp=E,118nm,0.2s						
SLVT	**Silivri**	**1.82**	**62**	PN	Pn	03 59 27.6	+0.6
NVR	**Nevrokopi**	**1.93**	**300**	P	Pn	03 59 28.8	+0.2
NVR				S	Sn	03 59 50.9	-1.7
CTYL	**Yalikoy Yolu**	**1.99**	**57**	PN	Pn	03 59 30.2	+0.8
PLD	**Plovdiv**	**1.99**	**329**	PN	Pn	03 59 30.1	+0.7
PLG	**Polygyros**	**2.01**	**270**	P	Pn	03 59 29.5	-0.3
PLG				S	Sn	03 59 55.2	+0.5
	comp=E,50nm,0.5s						
SRS	**Serrai**	**2.02**	**291**	P	Pn	03 59 30.3	+0.4
SRS	**Serrai**	**2.02**	**291**	P	Pn	03 59 29.6	-0.2
SRS				S	Sn	03 59 53.2	-1.6
	comp=E,32nm,0.4s						
CTKS	**Kestanelik-??a**	**2.02**	**65**	PN	Pn	03 59 30.2	+0.4
URLA	**Izmir**	**2.08**	**169**	PN	Pn	03 59 31.2	+0.5
AOS	**Alonnisos**	**2.10**	**235**	PN	Pn	03 59 32.0	+1.1
SOH	**Sokhos**	**2.12**	**282**	P	Pn	03 59 31.4	+0.2
SOH				S	Sn	03 59 55.9	-1.4
	comp=E,40nm,0.4s						
ARMT	**Armutlu**	**2.13**	**85**	PN	Pn	03 59 32.5	+1.1
MDNY	**Mudanya-Bursa**	**2.14**	**90**	PN	Pn	03 59 32.4	+0.9
BLCB	**Balcova**	**2.15**	**159**	PN	Pn	03 59 32.3	+0.7
BGKT	**Bogazkoy**	**2.19**	**68**	PN	Pn	03 59 32.5	+0.4
HORT	**Hortiatis**	**2.28**	**276**	PN	Pn	03 59 34.5	+1.0
ISK	**Istanbul-Kandi**	**2.36**	**73**	PN	Pn	03 59 35.3	+0.8
TRML	**Termal-Yalova**	**2.37**	**84**	PN	Pn	03 59 34.8	+0.2
KLYT	**Kilyos**	**2.40**	**68**	PN	Pn	03 59 35.7	+0.6
KNT	**Kendrikon**	**2.53**	**288**	PN	Pn	03 59 37.7	+0.8
SIMA	**Simav-Kutahya**	**2.60**	**120**	PN	Pn	03 59 38.7	+0.8
STIP	**Stip**	**3.21**	**295**	*i* Pn	Pn	03 59 44.9	-1.3

SOME ***12*** *04:39:33.2,40.38N×72.52E,h10km*
NNC ***12*** *04:39:34.3±1.5,40.45N×72.53E,h0km, mb3.2, mpv2.9, Error ellipse: s-maj=11.9km s-min=5.3km az=171.0*
KRNET ***12*** *04:39:37.0±0.1,40.53N×72.56E,h18km, mb2.2*
ISC 12 04:39:36.2±1.0, 40.53N±0.04×72.56E±0.03, h15km±7km, n20, σ1s40/34, 17C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.17**	**93**	⇑*i* P	**Pg**	**04 39 40.5**	**0.0**
OHH				⇑*i* S	**Sg**	**04 39 42.9**	**-0.5**
	baz=90						
ARSB	**Arslanbob**	**0.85**	**22**	⇑*i* P	**Pn**	**04 39 53.6**	**-0.2**
ARSB				⇑*i* S	**Sg**	**04 40 05.3**	**+1.2**
	baz=22						
SFK	**Sufi-Kurgan**	**0.89**	**125**	⇑*i* P	**Pn**	**04 39 54.3**	**-0.1**
SFK				⇑*i* S	**Sn**	**04 40 06.1**	**-0.9**
	baz=25						
BTK	**Batken**	**1.42**	**251**	⇓*i* P	**Pg**	**04 40 03.1**	**-0.4**
BTK				⇓*i* S	**Sg**	**04 40 22.9**	**+1.0**
	baz=51						
AML	**Almayashu**	**1.81**	**28**	⇑*i* P	**Pg**	**04 40 10.4**	**-0.7**
AML				⇑*i* S	**Sg**	**04 40 35.4**	**+0.8**
	baz=28						
ARLS	**Aral**	**1.88**	**44**	⇑*i* P	**Pg**	**04 40 11.9**	**-0.4**
ARLS				⇑*i* S	**Sg**	**04 40 37.0**	**+0.3**
	baz=44						
MNAS	**Manas**	**1.95**	**359**	⇓*i* P	**Pg**	**04 40 12.7**	**-1.1**
MNAS				⇓*i* S	**Sb**	**04 40 39.1**	**+3.3**
	baz=59						
UCH	**Uchtor**	**2.24**	**40**	⇑*i* P	**Pb**	**04 40 15.8**	**-0.9**
UCH				⇑*i* S	**Sb**	**04 40 46.0**	**+1.6**
	baz=40						
MRKS	**Merke**	**2.27**	**12**	*e*P	**Pb**	**04 40 17.4**	**+0.6**
MRKS	2.6nm,0.3s			*e*S	**Sg**	**04 40 49.4**	**+0.3**
	4.9nm,0.3s						
MRKS	**Merke**	**2.27**	**12**	Pg	**Pb**	**04 40 17.4**	**+0.6**
MRKS	2.6nm,0.3s			Lg	Lg	04 40 49.9	
	4.9nm,0.3s						
EKS2	**Erkin-Say**	**2.31**	**23**	⇑*i* P	**Pb**	**04 40 16.7**	**-1.0**
EKS2				⇑*i* S	**Sb**	**04 40 47.6**	**+1.4**
	baz=23						
IUG	**Iuzhnay**	**2.50**	**311**	*e*P	**Pb**	**04 40 20.5**	**-0.3**
IUG	3.1nm,0.2s			*e*S	**Sg**	**04 40 54.7**	**-1.8**
	7.2nm,0.5s						
IUG	**Iuzhnay**	**2.50**	**311**	Pg	**Pb**	**04 40 20.4**	**-0.4**
IUG	3.1nm,0.2s			Lg	Lg	04 40 54.7	
	7.2nm,0.5s						
AAK	**Ala-Archa**	**2.56**	**34**	⇑*e*P	**Pb**	**04 40 20.0**	**-1.8**
AAK	baz=34			⇑*i* S	**Sb**	**04 40 53.4**	**+0.3**
	baz=34						
AAK	**Ala-Archa**	**2.56**	**34**	⇓Pg	**Pb**	**04 40 22.9**	**+1.1**
AAK	1.1nm,0.3s			⇑Lg	Lg	04 40 57.6	
	3.2nm,0.5s						
SGDS	**Sogindy**	**3.30**	**27**	Pg	**Pb**	**04 40 36.6**	**+2.1**
SGDS	1.1nm,0.2s			Lg	Lg	04 41 22.3	
	1.0nm,0.4s						
KST	**Kastek**	**3.57**	**44**	*e*P	**Pg**	**04 40 41.6**	**-3.0**
KST	0.8nm,0.1s			*e*S	**Sg**	**04 41 30.9**	**0.0**
	1.5nm,0.3s						
KST	**Kastek**	**3.57**	**44**	Pg	**Pb**	**04 40 41.4**	**+2.3**
KST	0.8nm,0.1s			Lg	Lg	04 41 30.9	
	1.5nm,0.3s						
DGS	**Degeres**	**3.62**	**40**	*e*P	**Pb**	**04 40 41.2**	**+1.3**
DGS	0.4nm,0.3s			*e*S	**Sg**	**04 41 30.0**	**-2.3**
	1.8nm,0.5s						
DGS	**Degeres**	**3.62**	**40**	Pg	**Pb**	**04 40 40.8**	**+0.9**
DGS	0.4nm,0.3s			Lg	Lg	04 41 30.0	
	1.8nm,0.5s						

TIR ***12*** *05:41:43.8,41.39N×20.32E,h10km±2km, Md2.6*
SKO ***12*** *05:41:43.0,41.43N×20.30E,h20km*
BEO ***12*** *05:41:44.0±0.4,41.35N×20.35E,h7km±3km, ML2.0/6*
ISC 12 05:41:44.4±1.0, 41.41N±0.02×20.33E±0.02, h9km±9km, n23, σ1s22/42, 1D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.29**	**17**	P	**Pg**	**05 41 50.2**	**0.0**
PHP				S	**Sb**	**05 41 55.3**	**-1.5**
	baz=16						
TIR	**Tirane**	**0.35**	**260**	*e*Pg	**Pg**	**05 41 50.6**	**-0.7**
TIR				*e*Sg	**Sg**	**05 41 56.0**	**+0.1**
TIR	**Tirane**	**0.35**	**260**	P	**Pg**	**05 41 50.6**	**-0.7**
	baz=263						
TIR				S	**Sb**	**05 41 56.9**	**-1.6**
	baz=263						
OHR	**Ohrid**	**0.46**	**129**	⇓*i* Pg	**Pg**	**05 41 53.3**	**-0.1**
OHR				*i* Sg	**Sg**	**05 41 59.6**	**+0.1**
OHR				*e*Lg	Lg	05 41 60.0	
	comp=N,115nm,0.4s						
PUK	**Puka**	**0.71**	**333**	P	**Pg**	**05 41 57.9**	**-0.3**
	baz=334						
PUK				S	**Sb**	**05 42 09.1**	**+0.1**
	baz=334						
BCI	**Bajram Curri**	**0.98**	**349**	P	**Pn**	**05 42 03.8**	**-0.5**
	baz=350						
BCI				S	**Sn**	**05 42 18.1**	**-0.2**
	baz=350						
SKO	**Skopje**	**1.01**	**56**	*e*Pg	**Pg**	**05 42 02.4**	**-1.3**
SKO				*e*Sg	**Sb**	**05 42 16.9**	**-0.5**
SKO	**Skopje**	**1.01**	**56**	*i* Pg	**Pg**	**05 42 03.0**	**-0.8**
SKO				*i* Sg	**Sb**	**05 42 17.1**	**-0.2**
SKO				*e*Lg	Lg	05 42 20.2	
	comp=N,13nm,0.3s						
LSK	**Leskovik**	**1.27**	**170**	P	**Pg**	**05 42 09.2**	**+0.4**
	baz=170						
LSK				S	**Sn**	**05 42 27.0**	**+1.3**
	baz=170						
PDG	**Podgorica**	**1.30**	**322**	*e*Pg	**Pb**	**05 42 08.5**	**-0.4**
PDG				*e*Sg	**Sg**	**05 42 27.4**	**+1.3**
STIP	**Stip**	**1.43**	**78**	*i* Pn	**Pg**	**05 42 11.9**	**+0.1**
STIP				*e*Sn	**Sg**	**05 42 35.5**	**+5.3**
STIP				*e*Lg	Lg	05 42 37.9	
	comp=N,9.1nm,0.4s						
SRN	**Sarande**	**1.54**	**189**	P	**Pg**	**05 42 13.2**	**-0.8**
	baz=190						
SRN				S	**Sg**	**05 42 35.0**	**+0.9**
	baz=190						
VAY	**Valandovo**	**1.69**	**92**	*e*Pg	**Pb**	**05 42 14.6**	**-1.0**
VAY				*e*Sg	**Sg**	**05 42 37.7**	**-1.0**
VAY	**Valandovo**	**1.69**	**92**	*i* Pn	**Pb**	**05 42 14.8**	**-0.9**
PRVS	**Prvonek**	**1.71**	**49**	*e*Pg	**Pg**	**05 42 16.2**	**-0.9**
PRVS				*e*Sg	**Sb**	**05 42 37.9**	**+0.4**
SJES	**Sjenica**	**1.87**	**352**	*e*Pg	**Pb**	**05 42 18.8**	**0.0**
SJES				*e*Sg	**Sg**	**05 42 45.5**	**+1.0**
SELS	**Selova**	**1.91**	**18**	*e*Pn	**Pn**	**05 42 17.6**	**+0.6**
SELS				*e*Sg	**Sg**	**05 42 45.3**	**-0.3**
BOSS	**Bosilegrad**	**1.94**	**55**	*e*Pn	**Pn**	**05 42 17.3**	**-0.2**
IVAS	**Ivanjica**	**2.17**	**357**	*e*Pn	**Pn**	**05 42 20.4**	**-0.4**
IVAS				*e*Sg	**Sg**	**05 42 56.0**	**+1.9**
STON	**Ston**	**2.44**	**308**	*e*Pn	**Pn**	**05 42 25.5**	**+1.2**
STON				Sn	**Sb**	**05 42 59.8**	**+1.3**
ZAPS	**Zavoj**	**2.53**	**42**	*e*Pn	**Pn**	**05 42 24.9**	**-0.8**
ZAPS				*e*Sg	**Sg**	**05 43 05.0**	**-0.7**
ZAGS	**Zajecar**	**2.79**	**30**	*e*Pn	**Pn**	**05 42 30.5**	**+1.4**
RICI	**Ricice**	**3.15**	**313**	*e*Pn	**Pn**	**05 42 33.7**	**-0.4**

IDC 12 05:43:54.8±11.0, 4.52S×145.65E, h0km, mb3.5/3, mb1 3.8/5, mb1mx3.6/25, mbtmp3.6/5, ML3.1/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/25, Error ellipse: s-maj=169.1km s-min=49.4km az=27.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.08**	**163**	Pn	Pn	05 45 13.1	+0.8
	4.8nm,0.3s,baz=144,slow=2.7,SNR=4.2						
PMG				Sn	Sn	05 46 06.6	-5.1
	8.3nm,0.3s,baz=152,slow=22,SNR=8.9						
HNR	**Honiara**	**15.00**	**110**	LR	LR	05 52 40.5	
	comp=Z,32nm,18.1s,baz=334,slow=35						
WRA	**Warramunga Arr**	**18.88**	**215**	P	P	05 48 16.0	-0.9
	0.2nm,0.3s,baz=30,slow=9.9,SNR=19						
ASAR	**Alice Springs**	**22.16**	**210**	P	P	05 48 52.2	-0.3
	0.4nm,0.5s,baz=46,slow=8.0,SNR=6.6						
FITZ	**Fitzroy Crossi**	**23.78**	**234**	P	P	05 49 09.9	+0.6
	0.8nm,0.4s,baz=50,slow=10,SNR=9.1						
STKA	**Stephens Creek**	**27.48**	**187**	P	P	05 49 42.6	-0.3
	0.6nm,0.4s,baz=0.3,slow=12,SNR=3.8						

REY ***12*** *06:01:15.7,64.68N×17.46W,h7km*
IDC ***12*** *06:01:16.6±0.8,64.52N×17.68W,h0km, mb3.8/8, mb1 4.1/10, mb1mx3.8/50, mbtmp3.8/10, ML3.3/2, Error ellipse: s-maj=26.5km s-min=11.2km az=18.0*
ISC 12 06:01:16.5±0.5, 64.69N±0.02×17.52W±0.02, h10km, n59, σ2s11/71, mb3.8/8, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.10**	**261**	P	**Pg**	**06 01 18.3**	**-0.9**
	baz=266						
IDYN	**Dyngjuhals**	**0.12**	**33**	P	**Pg**	**06 01 18.5**	**-1.1**
	baz=21						
IGRF	**Grimsfjall**	**0.30**	**158**	P	**Pg**	**06 01 21.2**	**-1.5**
	baz=163						
IGRF				S	**Sg**	**06 01 25.7**	**-1.0**
	baz=163						
IKVE	**Kverkfjoll**	**0.36**	**91**	P	**Pg**	**06 01 22.5**	**-1.3**
	baz=90						
IKVE				S	**Sg**	**06 01 27.2**	**-1.4**
	baz=90						
ISKR	**Skrokkalda**	**0.39**	**251**	P	**Pb**	**06 01 23.7**	**-1.9**
	baz=253						
ISKR				S	**Sb**	**06 01 29.6**	**-2.1**
	baz=253						
IHUS	**Husbondi**	**0.40**	**188**	P	**Pb**	**06 01 23.4**	**-2.3**
	baz=192						
IVOT	**Vottur**	**0.45**	**160**	P	**Pg**	**06 01 24.0**	**-1.2**
	baz=163						
IJOK	**Jokulheimar**	**0.48**	**219**	P	**Pb**	**06 01 24.9**	**-2.2**
	baz=222						
IJOK				S	**Sb**	**06 01 31.9**	**-2.3**
	baz=222						
IMKO	**Mokollar**	**0.58**	**60**	P	**Pg**	**06 01 25.9**	**-1.9**
	baz=58						
IIEY	**Innrieyrar**	**0.65**	**204**	P	**Pg**	**06 01 27.4**	**-1.7**
	baz=206						
IIEY				S	**Sb**	**06 01 36.8**	**-2.3**
	baz=206						
ISVA	**Svartarkot**	**0.66**	**10**	P	**Pg**	**06 01 27.6**	**-1.7**
	baz=7.6						
ISVA				S	**Sb**	**06 01 37.2**	**-2.2**
	baz=7.6						
IKSK	**Karasker**	**0.70**	**139**	P	**Pg**	**06 01 27.1**	**-2.9**
	baz=140						
IKAL	**Kalfafell**	**0.75**	**186**	P	**Pg**	**06 01 29.0**	**-1.9**
	baz=188						
IKAL				S	**Sg**	**06 01 39.5**	**-1.1**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.78**	**80**	P	**Pg**	**06 01 29.0**	**-2.5**
	baz=80						
IVSH				S	**Sg**	**06 01 39.6**	**-2.2**
	baz=80						
IVAT	**Vatnsfell**	**0.79**	**231**	P	**Pb**	**06 01 30.4**	**-1.8**
	baz=232						
IHVE	**Hveravellir**	**0.89**	**283**	P	**Pg**	**06 01 31.8**	**-1.9**
	baz=283						
IFAG	**Fagurholsmyri**	**0.90**	**155**	P	**Pg**	**06 01 31.1**	**-2.7**
	baz=156						
IMEL	**Melhnausar**	**0.96**	**22**	P	**Pg**	**06 01 32.5**	**-2.5**
	baz=21						
IREN	**Reynihlio**	**1.00**	**15**	P	**Pg**	**06 01 33.1**	**-2.6**
	baz=13						
IKVO	**Krokottuvotn**	**1.06**	**14**	P	**Pg**	**06 01 34.4**	**-2.6**
	baz=13						
ISNB	**Snabyli**	**1.07**	**207**	P	**Pg**	**06 01 34.6**	**-2.5**
	baz=209						
ISLY	**Slysaalda**	**1.11**	**219**	P	**Pb**	**06 01 35.6**	**-2.2**
	baz=221						
IGRS	**Grimsstaoir**	**1.12**	**31**	P	**Pb**	**06 01 35.9**	**-2.1**
	baz=30						
IFED	**Fedgar**	**1.15**	**236**	P	**Pn**	**06 01 37.0**	**-1.7**
	baz=237						
IMJO	**Mjoaskard**	**1.21**	**232**	P	**Pb**	**06 01 37.5**	**-2.0**
	baz=233						
IGHA	**Grjothals**	**1.22**	**17**	P	**Pn**	**06 01 36.8**	**-2.8**
	baz=16						
IGRA	**Granastaoir**	**1.23**	**359**	P	**Pn**	**06 01 37.2**	**-2.5**
	baz=358						
IGRA				S	**Sn**	**06 01 55.1**	**-1.4**
	baz=358						
IGYG	**Gygjarholskot**	**1.23**	**252**	P	**Pn**	**06 01 37.8**	**-2.0**
	baz=253						
IHAU	**Haukadalur**	**1.28**	**237**	P	**Pg**	**06 01 39.2**	**-2.0**
	baz

baz=323
SCO **Scoresbysund** 6.06 346 *e* Pn 06 02 43.4 -2.7
baz=188,slow=7.4
SCO *i* P Pn 06 02 47.0 +1.0
SCO *i* S Sn 06 04 00.6 +5.3
EKA **Eskdalemuir Ar** 11.78 136 Pn Pn 06 04 04.7 +0.3
baz=328,slow=14,SNR=6.3
FINES **FINESS Array B** 19.71 79 P Pn 06 05 48.6 +1.4
0.1nm,0.3s,baz=270,slow=9.7,SNR=4.2
KHC **Kasperske Hory** 22.70 118 *eP* P 06 06 20.4 +2.4
DPC **Dobruska-Polom** 22.78 113 *eP* P 06 06 20.7 +1.8
GERES **GERESS Array B** 22.98 119 P P 06 06 21.6 +0.6
3.1nm,1.2s,baz=328,slow=7.3,SNR=5.4
ESDC **Sonseca Array** 26.28 156 P P 06 06 53.1 +1.3
2.7nm,1.2s,baz=349,slow=8.8,SNR=5.5
BRTR **Keskin Array B** 38.50 105 P P 06 08 40.6 +2.0
1.1nm,0.7s,baz=318,slow=8.0,SNR=2.7
ILAR **Eielson Array** 45.66 332 P P 06 09 39.7 +3.1
2.0nm,1.1s,baz=26,slow=7.1,SNR=8.7
ILAR PcP PcP 06 11 16.2 +1.8
1.1nm,1.2s,baz=38,slow=1.6,SNR=4.5
ZALV **Zalesovo Beam** 47.63 51 P P 06 09 54.2 +2.0
0.3nm,0.3s,baz=325,slow=7.4,SNR=1.5
PDAR **Pinedale Array** 53.16 293 P P 06 10 36.0 +1.5
1.4nm,0.9s,baz=59,slow=7.1,SNR=10
TORD **Torodi Ar. Bea** 53.17 156 P P 06 10 34.7 +0.2
1.5nm,1.0s,baz=338,slow=9.5,SNR=4.2
TXAR **Lajitas Array** 62.27 280 P P 06 11 40.7 +2.2
0.7nm,1.0s,baz=84,slow=5.2,SNR=4.3

IDC **12** *06:01:36.5± 1.1, 0.˚92N× 97.˚04E, h0km, mb3.9/9, mb1 4.0/11, mb1mx3.7/53, mbtmp3.9/11, ML3.8/2, Error ellipse: s-maj=23.2km s-min=18.1km az=84.0*
DJA **12** *06:01:41.0± 1.7, 1.˚N× 9.˚7E× 1.˚2, h32km± 8km, M4.0/7, mb4.5/1, MLv3.8/7*
ISC 12 06:01:40.9± 1.1, **1.˚11N**± 0.˚09× **97.˚1E**± 0.˚1, **h25**km, **n21,**
σ **0**s **97**/**17**, **mb4.1**/**9**, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.47**	**65**	P	**Pn**	**06 01 51.7**	**-0.5**
GSI				S	**Sn**	**06 02 00.0**	**+0.3**
TPTI		**2.14**	**1**	P	**Pn**	**06 02 14.6**	**-0.5**
TPTI				S	**Sn**	**06 02 40.4**	**-0.5**
PSI	**Prapat**	**2.45**	**47**	Pn	**Pn**	**06 02 19.4**	**-0.1**
	3.0nm,0.3s,baz=360,slow=11,SNR=7.3						
PSI				Lg	Lg	06 02 59.5	
	6.6nm,0.3s,baz=182,slow=1.5,SNR=5.2						
MNSI	**Mandailing Nat**	**2.45**	**97**	P	**Pn**	**06 02 18.7**	**-0.7**
KCSI	**Kotacane, Aceh**	**2.48**	**15**	P	**Pn**	**06 02 17.4**	**-2.4**
CMAR	**Chiang Mai Arr**	**17.34**	**6**	P	**Pn**	**06 05 41.5**	**+0.2**
	0.4nm,0.3s,baz=197,slow=11,SNR=6.2						
H08S2	**Diego Garcia H**	**26.08**	**250**	T	T	06 34 11.0	
	baz=71,slow=75,SNR=192						
H08S3	**Diego Garcia H**	**26.08**	**250**	T	T	06 34 11.1	
	baz=71,slow=75,SNR=1342						
H08S1	**Diego Carcia H**	**26.10**	**250**	T	T	06 34 12.2	
	baz=71,slow=75,SNR=81						
H01W3	**Cape Leeuwin H**	**39.18**	**158**	T	T	06 50 25.5	
	baz=333,slow=76,SNR=16						
H01W2	**Cape Leeuwin H**	**39.19**	**158**	T	T	06 50 25.9	
	baz=333,slow=76,SNR=20						
H01W1	**Cape Leeuwin H**	**39.19**	**158**	T	T	06 50 27.5	
	baz=333,slow=76,SNR=19						
WRA	**Warramunga Arr**	**42.03**	**122**	P	**P**	**06 09 29.7**	**-1.1**
	0.3nm,0.5s,baz=301,slow=9.0,SNR=9.6						
ASAR	**Alice Springs**	**43.38**	**127**	P	**P**	**06 09 40.5**	**-1.2**
	0.4nm,0.6s,baz=307,slow=8.4,SNR=4.3						
KSRS	**Korea Array**	**45.96**	**35**	P	**P**	**06 10 02.1**	**+0.2**
	2.2nm,0.6s,baz=220,slow=11,SNR=4.1						
SONM	**Songino Array**	**47.23**	**8**	P	**P**	**06 10 12.9**	**+0.9**
	1.3nm,0.6s,baz=188,slow=9.9,SNR=9.3						
MKAR	**Makanchi Array**	**47.32**	**346**	P	**P**	**06 10 13.8**	**+1.2**
	0.9nm,0.5s,baz=161,slow=9.4,SNR=5.5						
USRK	**Ussuriysk Ar.**	**52.88**	**31**	P	**P**	**06 10 55.3**	**+0.5**
	2.0nm,0.8s,baz=201,slow=7.7,SNR=3.3						
STKA	**Stephens Creek**	**53.33**	**132**	P	**P**	**06 10 58.4**	**0.0**
	0.4nm,0.2s,baz=282,slow=9.3,SNR=2.9						
ZALV	**Zalesovo Beam**	**53.64**	**351**	P	**P**	**06 11 01.1**	**+0.9**
	1.4nm,0.5s,baz=180,slow=5.9,SNR=6.6						
ARCES	**ARCESS Array B**	**82.61**	**340**	P	**P**	**06 14 01.8**	**+0.1**
	1.8nm,0.7s,baz=94,slow=5.1,SNR=4.1						

REY **12** *06:06:15.0, 64.˚67N× 17.˚46W, h1km*
IDC **12** *06:06:17.8± 1.0, 64.˚49N× 17.˚86W, h0km, mb3.6/5, mb1 4.0/7, mb1mx3.6/55, mbtmp3.7/7, ML3.5/2, MS2.8/1, Ms1 2.9/1, ms1mx2.3/47, Error ellipse: s-maj=32.5km s-min=12.0km az=22.0*
ISC 12 06:06:16.8± 0.6, **64.˚68N**± 0.˚02× **17.˚49W**± 0.˚03, **h10**km, **n57,**
σ **2**s **53**/**65**, **mb3.7**/**5**, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.11**	**267**	P	**Pg**	**06 06 17.9**	**-1.7**
	baz=272						
IVON				S	**Sg**	**06 06 20.6**	**-1.0**
	baz=272						
IDYN	**Dyngjuhals**	**0.12**	**25**	P	**Pg**	**06 06 18.2**	**-1.6**
	baz=17						
IGRF	**Grimsfjall**	**0.29**	**160**	P	**Pg**	**06 06 20.9**	**-1.8**
	baz=163						
IGRF				S	**Sg**	**06 06 25.2**	**-1.4**
	baz=163						
IKVE	**Kverkfjoll**	**0.35**	**90**	S	**Sg**	**06 06 27.0**	**-1.4**
	baz=88						
IKVE				P	**Pg**	**06 06 21.9**	**-1.9**
	baz=88						
IVOT	**Vottur**	**0.43**	**162**	P	**Pg**	**06 06 23.4**	**-1.8**
	baz=163						
IVOT				S	**Sg**	**06 06 29.5**	**-1.4**
	baz=163						
IJOK	**Jokulheimar**	**0.48**	**221**	P	**Pg**	**06 06 24.4**	**-1.7**
	baz=224						
IMKO	**Mokollar**	**0.58**	**58**	P	**Pg**	**06 06 25.7**	**-2.3**
	baz=56						
IMKO				S	**Sg**	**06 06 34.3**	**-1.3**
	baz=56						
IIEY	**Innrieyrar**	**0.65**	**205**	P	**Pg**	**06 06 26.9**	**-2.4**
	baz=207						
IIEY				S	**Sg**	**06 06 36.0**	**-1.7**
	baz=207						
ISVA	**Svartarkot**	**0.67**	**8**	P	**Pg**	**06 06 27.4**	**-2.3**
	baz=7.1						
ISVA				S	**Sg**	**06 06 37.0**	**-1.5**
	baz=7.1						
IKSK	**Karasker**	**0.68**	**139**	P	**Pg**	**06 06 26.7**	**-3.3**
	baz=140						
IKSK				S	**Sg**	**06 06 37.1**	**-1.7**
	baz=140						
IKAL	**Kalfafell**	**0.74**	**187**	P	**Pg**	**06 06 28.2**	**-2.8**
	baz=188						
IKAL				S	**Sg**	**06 06 38.9**	**-1.7**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**79**	P	**Pg**	**06 06 28.5**	**-3.0**
	baz=78						
IVAT	**Vatnsfell**	**0.79**	**232**	P	**Pg**	**06 06 29.9**	**-2.1**
	baz=233						
IFAG	**Fagurholsmyri**	**0.89**	**155**	P	**Pg**	**06 06 30.7**	**-3.1**
	baz=156						
IHVE	**Hveravellir**	**0.91**	**283**	P	**Pg**	**06 06 31.8**	**-2.5**
	baz=284						
IMEL	**Melhnausar**	**0.96**	**21**	P	**Pg**	**06 06 32.2**	**-3.1**
	baz=20						
IREN	**Reynihlio**	**1.00**	**14**	P	**Pg**	**06 06 32.9**	**-3.1**
	baz=13						
ISNB	**Snabyli**	**1.07**	**208**	P	**Pg**	**06 06 34.0**	**-3.3**
	baz=209						
IKVO	**Krokottuvotn**	**1.07**	**14**	P	**Pg**	**06 06 34.0**	**-3.3**
	baz=13						
ISLY	**Slysaalda**	**1.11**	**220**	P	**Pb**	**06 06 35.0**	**-3.1**
	baz=221						
IGRS	**Grimsstaoir**	**1.12**	**30**	P	**Pb**	**06 06 35.7**	**-2.5**
	baz=29						
IFED	**Fedgar**	**1.16**	**237**	P	**Pb**	**06 06 36.7**	**-2.2**
	baz=238						
IRJU	**Rjupnafell**	**1.19**	**206**	P	**Pb**	**06 06 36.2**	**-3.1**
	baz=207						
IMJO	**Mjoaskard**	**1.21**	**233**	P	**Pb**	**06 06 37.3**	**-2.5**
	baz=234						
ISKI	**Skildingahlsh**	**1.21**	**9**	P	**Pn**	**06 06 36.3**	**-3.4**
	baz=8.3						
IGHA	**Grjothals**	**1.22**	**16**	P	**Pn**	**06 06 36.5**	**-3.4**
	baz=15						
IGRA	**Granastaoir**	**1.25**	**358**	P	**Pn**	**06 06 36.7**	**-3.5**
	baz=358						
IGYG	**Gygjarholskot**	**1.25**	**253**	P	**Pn**	**06 06 37.3**	**-2.8**
	baz=253						
IHAU	**Haukadalur**	**1.29**	**238**	P	**Pn**	**06 06 37.3**	**-3.5**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.30**	**208**	P	**Pn**	**06 06 38.6**	**-2.3**
	baz=209						
IDIM	**Dimmadalss**	**1.31**	**10**	P	**Pn**	**06 06 37.9**	**-3.2**
	baz=9.4						
IHLA	**Hella**	**1.33**	**344**	P	**Pn**	**06 06 38.4**	**-2.9**
	baz=343						
IALF	**Alftagrof**	**1.41**	**213**	P	**Pn**	**06 06 40.2**	**-2.2**
	baz=214						
IHED	**Heoinshofoi**	**1.41**	**3**	P	**Pn**	**06 06 39.6**	**-2.8**
	baz=2.4						
IESK	**Eystri-Skogar**	**1.44**	**218**	P	**Pn**	**06 06 40.5**	**-2.4**
	baz=218						
ISAU	**Saurbar**	**1.45**	**243**	P	**Pn**	**06 06 40.1**	**-2.8**
	baz=244						
IBRE	**Brettingsstaoi**	**1.46**	**353**	P	**Pn**	**06 06 40.2**	**-2.9**
	baz=353						
IMID	**Miomork**	**1.47**	**227**	P	**Pn**	**06 06 41.4**	**-1.8**
	baz=228						
IGIL	**Gilhagi**	**1.48**	**18**	P	**Pn**	**06 06 40.3**	**-3.1**
	baz=18						
ISIG	**Siglufjorour**	**1.58**	**338**	P	**Pn**	**06 06 42.1**	**-2.6**
	baz=338						
IASM	**Asmuli**	**1.61**	**240**	P	**Pn**	**06 06 43.5**	**-1.6**
	baz=240						
BORG	**Borgarnes**	**1.65**	**274**	Pg	**Pn**	**06 06 44.2**	**-1.5**
	51nm,0.3s,baz=91,slow=7.9,SNR=69						
BORG				Lg	Lg	06 07 07.7	
	30nm,0.3s,baz=242,slow=24,SNR=13						
IKRO	**Krokur**	**1.68**	**251**	P	**Pn**	**06 06 44.0**	**-2.1**
	baz=252						
ISOL	**Solvholt**	**1.68**	**245**	P	**Pn**	**06 06 44.1**	**-2.0**
	baz=246						
IHEI	**Heioarbar**	**1.69**	**255**	P	**Pn**	**06 06 44.5**	**-1.8**
	baz=256						
ILEI	**Leirhofn**	**1.79**	**13**	P	**Pn**	**06 06 45.2**	**-2.4**
	baz=12						
SCO	**Scoresbysund**	**6.07**	**346**	*i* P	**Pn**	**06 07 46.0**	**-0.4**
SCO	**Scoresbysund**	**6.07**	**346**	*i* P	**Pn**	**06 07 46.0**	**-0.4**
EKA	**Eskdalemuir Ar**	**11.77**	**136**	Pn	**Pn**	**06 09 05.9**	**+1.5**
	baz=324,slow=13,SNR=11						
NOA	**NORSAR Array B**	**13.53**	**92**	LR	LR	06 15 12.4	
	comp=Z,38nm,19.8s,baz=345,slow=39						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**06 10 51.4**	**+4.1**
	0.1nm,0.3s,baz=302,slow=8.0,SNR=3.8						
KHC	**Kasperske Hory**	**22.68**	**118**	*eP*	**P**	**06 11 20.5**	**+2.5**
GERES	**GERESS Array B**	**22.96**	**119**	P	**P**	**06 11 25.1**	**+4.1**
	0.3nm,0.2s,baz=302,slow=8.0,SNR=3.6						
ESDC	**Sonseca Array**	**26.26**	**156**	P	**P**	**06 11 54.5**	**+2.6**
	1.1nm,0.9s,baz=346,slow=9.3,SNR=3.2						
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**06 14 40.1**	**+3.1**
	0.8nm,0.9s,baz=22,slow=6.9,SNR=7.6						
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P	**P**	**06 15 35.3**	**+0.8**
	0.7nm,0.7s,baz=343,slow=8.0,SNR=5.0						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**06 15 36.2**	**+1.4**
	1.3nm,0.9s,baz=46,slow=6.6,SNR=8.4						

BJI **12** *06:11:53.3± 0.0, 10.˚89S× 165.˚56E, h45km, mB5.0/18, mb4.9/22, Ms5.0/5, Ms7 4.7/2*
NEIC **12** *06:11:54.7± 1.6, 10.˚86S± 0.˚07× 165.˚70E± 0.˚08, h50km± 5km, mb4.9/60, Error ellipse: s-maj=13.0km s-min=8.6km az=49.0*
IDC **12** *06:11:55.5± 3.1, 10.˚85S× 165.˚67E, h50km± 26km, mb4.4/18, mb1 4.6/20, mb1mx4.3/38, mbtmp4.6/20, ML5.0/2, MS4.1/19, Ms1 4.1/19, ms1mx3.9/29, Error ellipse: s-maj=18.7km s-min=13.5km az=70.0*
ISC 12 06:11:52.9± 0.4, **10.˚86S**± 0.˚05× **165.˚67E**± 0.˚06, **h30**km, **n123,**
σ **1**s **37**/**122**, **mb4.9**/**49**, **MS4.2**/**20**, **1C**, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**4.80**	**162**	P	**Pn**	**06 13 04.0**	**+0.8**
SANVU				S	**Sn**	**06 13 59.3**	**+1.5**
HNR	**Honiara**	**5.81**	**284**	P	**Pn**	**06 13 19.1**	**+2.0**
	36nm,0.3s,baz=160,slow=4.6,SNR=5.3						
HNR				S	**Sn**	**06 14 25.6**	**+2.8**
	28nm,0.3s,baz=299,slow=9.1,SNR=1.2						
HNR				LR	LR	06 15 40.0	
	comp=Z,4μm,19.7s,baz=119,slow=39						
HNR	**Honiara**	**5.81**	**284**	Pn	**Pn**	**06 13 18.5**	**+1.4**
DZM	**Mont Dzumac**	**11.18**	**176**	P	**Pn**	**06 14 32.7**	**+1.9**
	11nm,0.3s,baz=340,slow=12,SNR=81						
DZM				S	**Sn**	**06 16 33.4**	**-1.4**
	8.6nm,0.3s,baz=132,slow=22,SNR=8.1						
DZM				LR	LR	06 18 58.0	
	comp=Z,1μm,18.0s,baz=24,slow=38						
DZM	**Mont Dzumac**	**11.18**	**176**	*e*Pn	**Pn**	**06 14 32.0**	**+1.2**
	94nm,1.1s						
DZM				*e*Sn	Sn	06 16 23.7	-11
	78nm,0.8s						
DZM				*e*LR	LR	06 16 59.3	
	comp=Z,2μm,25.6s						
DZM	**Mont Dzumac**	**11.18**	**176**	Pn	**Pn**	**06 14 31.8**	**+0.9**
DZM				Sn	**Sn**	**06 16 36.6**	**+1.8**
KRVT	**Keravat (AS076**	**15.01**	**295**	P	**P**	**06 15 27.0**	**-1.1**
	3.8nm,0.3s,baz=129,slow=6.5,SNR=6.3						
KRVT				S	**Sn**	**06 18 05.6**	**-2.8**
	7.2nm,0.3s,baz=257,slow=11,SNR=2.4						
PMG	**Port Moresby**	**18.28**	**273**	LR	LR	06 22 57.9	
	comp=Z,2μm,19.6s,baz=116,slow=36						
PATS	**Pohnpei**	**19.04**	**337**	P	**P**	**06 16 12.5**	**-0.3**
PATS				IAmb	IAmb	06 16 19.3	
	comp=Z,121nm,1.3s						
EIDS	**Eidsvold**	**19.99**	**222**		**Pn**	**06 16 23.9**	**-1.0**
EIDS				IAmb	IAmb	06 16 26.4	
	comp=Z,81nm,0.9s						
MANU	**Manus Island**	**20.17**	**294**	P	Pn	06 16 26.4	-0.7
MANU				IAmb	IAmb	06 16 29.1	
	comp=Z,61nm,1.0s						
CTA	**Charters Tower**	**20.82**	**242**	P	Pn	06 16 33.6	-1.2
	comp=Z,66nm,1.0s,baz=72,slow=12,SNR=23						
CTAO	**Charters Tower**	**20.82**	**242**	P	**P**	**06 16 33.2**	**+1.0**
CTAO				IAmb	IAmb	06 16 38.5	
	comp=Z,81nm,1.0s						
COEN	**Coen**	**22.18**	**260**	P	**P**	**06 16 46.6**	**-0.3**
ARMA	**Armidale**	**23.44**	**212**	P	**P**	**06 17 00.2**	**+0.3**
ARMA				IAmb	IAmb	06 17 03.3	
	comp=Z,46nm,1.1s						
CAN	**Canberra**	**28.69**	**209**	P	**P**	**06 17 47.0**	**-0.4**
URZ	**Urewera**	**29.15**	**161**	P	**P**	**06 17 51.8**	**+0.4**
	comp=Z,14nm,0.8s,baz=358,slow=10,SNR=1.7						
URZ	**Urewera**	**29.15**	**161**	P	**P**	**06 17 50.9**	**-0.5**
URZ				IAmb	IAmb	06 18 04.3	
	comp=Z,33nm,1.1s						
BKZ	**Black Stump Fm**	**29.80**	**163**	P	**P**	**06 17 57.0**	**-0.2**
BKZ				IAmb	IAmb	06 18 04.7	
	comp=Z,23nm,0.6s						
STKA	**Stephens Creek**	**30.53**	**223**	P	**P**	**06 18 04.2**	**+0.5**
	comp=Z,10.0nm,0.8s,baz=32,slow=7.7,SNR=28						
STKA				PcP	**PcP**	**06 21 02.4**	**0.0**
	comp=Z,0.8nm,0.3s,baz=0.0,slow=3.0,SNR=3.9						
STKA				LR	LR	06 29 55.8	
	comp=Z,657nm,18.7s,baz=28,slow=35						
STKA	**Stephens Creek**	**30.53**	**223**	P	**P**	**06 18 04.5**	**+0.7**
BFZ	**Birch Farm**	**31.14**	**164**	P	**P**	**06 18 08.2**	**-0.7**
WR0	**Warramunga Arr**	**31.30**	**249**	P	**P**	**06 18 09.9**	**-0.8**
TUWZ	**Tuamarina**	**31.31**	**168**	P	**P**	**06 18 10.7**	**+0.3**
WB0	**Warramunga Arr**	**31.39**	**250**	P	**P**	**06 18 11.2**	**-0.4**
WB0				IAmb	IAmb	06 18 12.5	
	comp=Z,24nm,0.7s						
THZ	**Tophouse**	**31.43**	**170**	P	**P**	**06 18 10.7**	**-0.9**
WB2	**Warramunga Arr**	**31.47**	**250**	P	**P**	**06 18 11.9**	**-0.2**
WB2				IAmb	IAmb	06 18 13.2	
	comp=Z,19nm,0.9s						
WRAB	**Tennant Creek**	**31.47**	**250**	P	**P**	**06 18 12.0**	**-0.2**
WRAB				IAmb	IAmb	06 18 13.0	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**31.48**	**250**	P	**P**	**06 18 11.9**	**-0.5**
	comp=Z,15nm,0.8s,baz=81,slow=9.0,SNR=90						
WRA				PcP	**PcP**	**06 21 05.5**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=78,slow=3.5,SNR=7.1						
WRA				LR	LR	06 31 08.9	
	comp=Z,719nm,18.1s,baz=80,slow=37						
WRA	**Warramunga Arr**	**31.48**	**250**	P	**P**	**06 18 11.8**	**-0.5**
MSWZ	**Moikau Station**	**31.58**	**166**	P	**P**	**06 18 11.9**	**-1.0**
PLWZ	**Palliser**	**31.73**	**166**	P	**P**	**06 18 13.0**	**-1.2**
KHZ	**Kahutara**	**32.18**	**169**	P	**P**	**06 18 17.7**	**-0.4**
TOO	**Toolangi**	**32.20**	**211**	P	**P**	**06 18 18.3**	**-0.1**
TOO				IAmb	IAmb	06 18 20.5	
	comp=Z,21nm,0.8s						
LTZ	**Lake Taylor**	**32.32**	**171**	P	**P**	**06 18 18.3**	**-1.1**
AS31	**Alice Springs**	**32.81**	**243**	P	**P**	**06 18 23.8**	**-0.2**
ASAR	**Alice Springs**	**32.81**	**243**	P	**P**	**06 18 23.4**	**-0.6**
	comp=Z,20nm,0.8s,baz=73,slow=9.6,SNR=185						
ASAR				PcP	**PcP**	**06 21 08.7**	**0.0**
	comp=Z,3.3nm,0.9s,baz=67,slow=2.7,SNR=9.1						
ASAR				LR	LR	06 30 45.4	
	comp=Z,466nm,19.7s,baz=68,slow=34						
ASAR	**Alice Springs**	**32.81**	**243**	P	**P**	**06 18 23.3**	**-0.7**
ASAR					**PcP**	**06 21 08.1**	**-0.6**
RPZ	**Rata Peaks**	**33.07**	**173**	P	**P**	**06 18 26.5**	**+0.7**
	comp=Z,18nm,0.9s,baz=1.3,slow=13,SNR=6.6						
RPZ	**Rata Peaks**	**33.07**	**173**	P	**P**	**06 18 25.0**	**-0.9**
MQZ	**McQueen's Vall**	**33.28**	**171**	P	**P**	**06 18 27.5**	**-0.2**
MQZ				IAmb	IAmb	06 18 38.1	
	comp=Z,25nm,0.9s						
FAKI	**Fak Fak**	**34.08**	**281**	P	**P**	**06 18 37.3**	**+2.3**
	comp=Z,16nm,1.2s						
BBOO	**Buckleboo**	**34.90**	**227**	P	**P**	**06 18 41.6**	**-0.4**
KNRA	**Kununurra**	**36.21**	**258**	P	**P**	**06 18 53.0**	**-0.4**
KNRA				IAmb	IAmb	06 19 08.9	
	comp=Z,11nm,0.9s						
FITZ	**Fitzroy Crossi**	**39.36**	**255**	P	**P**	**06 19 19.4**	**-0.6**
FITZ				IAmb	IAmb	06 19 21.5	
	comp=Z,14nm,0.8s						
FORT	**Forrest**	**40.09**	**235**	P	**P**	**06 19 23.5**	**-2.5**
FORT				IAmb	IAmb	06 19 29.1	
	comp=Z,21nm,0.8s						
PPT	**Papeete**	**43.81**	**104**	LR	LR	06 34 12.3	
	comp=Z,209nm,19.2s,baz=259,slow=30						
PPT2	**Papeete2**	**43.81**	**104**	*e*S	**S**	**06 26 33.2**	**+7.3**
	comp=Z,43nm,26.5s						
PPT2				*e*LQ	LQ	06 30 32.2	
	comp=Z,401nm,28.0s						
PPT2				*e*LR	LR	06 32 31.5	
	comp=Z,324nm,22.2s,baz=276						
TBI	**Tubuai**	**44.47**	**112**	*e*LQ	LQ	06 30 46.3	
	comp=Z,407nm,33.5s						
TBI				*e*LR	LR	06 32 47.0	
	comp=Z,501nm,26.0s,baz=281						
PSA00	**Pilbara Seismi**	**45.12**	**250**	P	**P**	**06 20 07.3**	**+0.3**
BNSI	**Bone**	**45.57**	**274**	P	**P**	**06 20 09.9**	**-0.7**
	comp=Z,39nm,1.1s						
MPSI	**Mapaga**	**46.84**	**281**	P	**P**	**06 20 19.2**	**-1.4**
	comp=Z,13nm,0.9s						
NWAO	**Narrogin (SRO)**	**49.51**	**236**	P	**P**	**06 20 38.1**	**-2.9**
MORW	**Morawa**	**49.65**	**241**	P	**P**	**06 20 42.6**	**+0.4**
TAOE	**Nuku Hiva Isla**	**53.36**	**93**	*e*LR	LR	06 36 58.7	
	comp=Z,2μm,36.7s						
MJAR	**Matsushiro Arr**	**53.77**	**333**	P	**P**	**06 21 12.7**	**0.0**
	comp=Z,4.6nm,0.8s,baz=165,slow=8.4,SNR=8.3						
MJAR	**Matsushiro Arr**	**53.77**	**333**	P	**P**	**06 21 11.3**	**-1.4**
KSRS	**Korea Array**	**59.68**	**326**	LR	LR	06 47 08.9	
	comp=Z,56nm,18.4s,baz=145,slow=35						
NJ2	**Nanjing**	**61.84**	**315**	*e*P	**P**	**06 22 11.3**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
QIZ	**Qiongzhong**	**62.53**	**298**	P	**P**	**06 22 14.4**	**+0.1**
QIZ				S	**S**	**06 30 41.2**	**+0.8**
QIZ				sS	**sS**	**06 31 01.5**	**+6.7**
USRK	**Ussuriysk Ar.**	**62.75**	**333**	P	**P**	**06 22 15.5**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=154,slow=10.0,SNR=5.5						
USRK				LR	LR	06 46 42.9	
	comp=Z,46nm,21.6s,baz=140,slow=33						
USRK	**Ussuriysk Ar.**	**62.75**	**333**	P	**P**	**06 22 15.6**	**+0.4**
PETK	**Petropavlovsk-**	**64.08**	**355**	LR	LR	06 45 06.0	
	comp=Z,104nm,20.8s,baz=147,slow=31						
PETK	**Petropavlovsk-**	**64.08**	**355**	P	**P**	**06 22 23.3**	**-0.6**
CN2	**Changchun**	**65.54**	**329**	*e*P	**P**	**06 22 33.6**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CASY	**Casey**	**66.53**	**201**	P	**P**	**06 22 38.6**	**-1.0**
CASY				IAmb	IAmb	06 23 02.2	
	comp=Z,23nm,1.1s						
VNDA	**Vanda**	**66.68**	**181**	P	**P**	**06 22 40.8**	**+0.3**
	comp=Z,3.3nm,1.1s,baz=341,slow=8.1,SNR=8.0						
VNDA				LR	LR	06 48 29.2	
	comp=Z,145nm,20.0s,baz=0.5,slow=33						
VNDA	**Vanda**	**66.68**	**181**	P	**P**	**06 22 40.7**	**+0.3**
XAN	**Xi'an**	**69.94**	**312**	P	**P**	**06 23 00.5**	**-1.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,100nm,8.9s						
HHC	**Hu-ho-hao-te**	**71.64**	**320**	*e*P	**P**	**06 23 13.1**	**+1.2**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,88nm,7.6s						
CMAR	**Chiang Mai Arr**	**71.97**	**294**	P	**P**	**06 23 14.7**	**+0.5**
	comp=Z,1.0nm,0.3s,baz=111,slow=3.8,SNR=10.0						
CMAR				LR	LR	06 56 51.7	
	comp=Z,40nm,18.3s,baz=172,slow=38						
CMAR	**Chiang Mai Arr**	**71.97**	**294**	P	**P**	**06 23 12.9**	**-1.3**
CD2	**Chengdu**	**72.43**	**307**	*e*P	**P**	**06 23 17.4**	**+0.6**
LZH	**Lanzhou**	**74.58**	**312**	*e*P	**P**	**06 23 31.2**	**+1.7**
LZH				pP	PcP	06 23 44.6	+0.8
LZH				sP	sP	06 23 49.6	+7.4
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
ULN	**Ulaanbaatar**	**78.11**	**324**	P	**P**	**06 23 47.7**	**-1.5**
ULN				IAmb	IAmb

U15A	**North Rim**	**90.05**	**53**	P	**P**	**06 24 50.2**	**-0.3**
U15A				IAmb	IAmb	06 24 51.9	
	comp=Z,5.8nm,1.1s						
HLID	**Hailey**	**90.20**	**46**	P	**P**	**06 24 50.8**	**-0.1**
HLID				IAmb	IAmb	06 24 52.1	
	comp=Z,7.3nm,1.4s						
BELA	**Belgrano 2**	**90.68**	**176**	P	**P**	**06 24 51.3**	**-1.0**
SYO	**Syowa Base**	**91.94**	**197**	*e*pP	pP	06 25 13.8	+6.5
MKAR	**Makanchi Array**	**93.34**	**317**	P	**P**	**06 25 04.8**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=94,slow=6.2,SNR=14						
ZALV	**Zalesovo Beam**	**93.36**	**324**	P	**P**	**06 25 04.2**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=97,slow=5.1,SNR=7.2						
ZALV	**Zalesovo Beam**	**93.36**	**324**	P	**P**	**06 25 03.7**	**-1.3**
PDAR	**Pinedale Array**	**93.48**	**47**	P	**P**	**06 25 05.6**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=270,slow=1.5,SNR=5.7						
PDAR				LR	LR	07 00 13.4	
	comp=Z,55nm,21.2s,baz=300,slow=31						
YKA	**Yellowknife Ar**	**94.84**	**27**	LR	LR	07 02 13.1	
	comp=Z,108nm,19.8s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**95.80**	**61**	P	**P**	**06 25 18.0**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=232,slow=3.0,SNR=2.3						
TXAR				LR	LR	07 00 58.0	
	comp=Z,125nm,20.2s,baz=0.0,slow=31						
NRIK	**Noril'sk**	**95.92**	**340**	LR	LR	07 08 19.5	
	comp=Z,76nm,19.8s,baz=21,slow=35						
SNAA	**Sanae**	**97.30**	**184**	P	**P**	**06 25 22.4**	**-0.4**
VNA2	**Neumayer--Watz**	**98.27**	**182**	P	**P**	**06 25 26.9**	**-0.3**
ARCES	**ARCESS Array B**	**116.14**	**345**	PKP	**PKiKP**	**06 30 30.6**	**-2.0**
	comp=Z,1.8nm,0.6s,baz=73,slow=1.8,SNR=11						
LPAZ	**La Paz**	**120.33**	**116**	PKP	**PKPdf**	**06 30 42.2**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=280,slow=2.9,SNR=4.2						
LPAZ	**La Paz**	**120.33**	**116**		**PKPdf**	**06 30 40.0**	**-3.0**
BOSA	**Boshof**	**125.20**	**223**	PKP	**PKiKP**	**06 30 51.7**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=156,slow=5.1,SNR=4.3						
GERES	**GERESS Array B**	**135.50**	**334**	PKP	**PKiKP**	**06 31 11.4**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=20,slow=4.3,SNR=5.0						
GERES	**GERESS Array B**	**135.50**	**334**		**PKPdf**	**06 31 09.4**	**-0.9**
KEST	**Kesra**	**147.22**	**323**	PKPbc	**PKPbc**	**06 31 33.0**	**-0.9**
	comp=Z,6.6nm,0.9s,baz=74,slow=2.1,SNR=5.0						
ESDC	**Sonseca Array**	**149.86**	**344**	PKPbc	**PKPbc**	**06 31 40.2**	**-0.4**
	comp=Z,1.6nm,1.0s,baz=30,slow=3.2,SNR=6.0						
ESDC	**Sonseca Array**	**149.86**	**344**		**PKPbc**	**06 31 40.6**	**0.0**
TORD	**Torodi Ar. Bea**	**164.16**	**280**	PKP	**PKPdf**	**06 31 52.3**	**-2.1**
	comp=Z,1.1nm,1.1s,baz=108,slow=3.3,SNR=3.1						
TORD				PKPab	**PKPab**	**06 32 49.0**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=84,slow=3.6,SNR=4.3						

SOME ***12*** *06:13:09.0,40.48N×80.27E,h10km*
NNC ***12*** *06:13:13.1±1.6,40.67N×80.22E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=10.4km s-min=9.9km az=130.0*
KRNET ***12*** *06:13:17.1±0.1,40.64N×80.70E,mb3.0*

ISC 12 06:13:14.7±3.5,40.8N±0.1×80.23E±0.0,h4km±20km,n34, σ0s98/53,8C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**2.20**	**322**	⇑*i*P	**Pg**	**06 13 58.2**	**+1.4**
	baz=18						
PRZ				⇑*i*S	**Sg**	**06 14 28.2**	**+2.8**
	baz=18						
SHLS	**Shalkode**	**2.46**	**347**	*e*P	**Pb**	**06 13 59.3**	**-0.3**
	6.9nm,0.2s						
SHLS				*e*S	**Sg**	**06 14 34.5**	**+0.8**
	32nm,0.3s						
SHLS	**Shalkode**	**2.46**	**347**	Pg	**Pb**	**06 13 59.3**	**-0.3**
	6.9nm,0.2s						
SHLS				Lg	Lg	06 14 34.5	
	32nm,0.3s						
UZB	**Uzynbulak**	**2.55**	**340**	*e*P	**Pb**	**06 14 00.1**	**-1.0**
	5.4nm,0.4s						
UZB				*e*S	**Sg**	**06 14 35.8**	**-0.7**
	33nm,0.5s						
UZB	**Uzynbulak**	**2.55**	**340**	Pg	**Pb**	**06 14 00.1**	**-1.0**
	5.4nm,0.4s						
UZB				Lg	Lg	06 14 35.8	
	33nm,0.5s						
PDGK	**Podgornoye**	**2.62**	**348**	Pg	**Pb**	**06 14 01.8**	**-0.6**
	0.9nm,0.3s						
PDGK				Lg	Lg	06 14 38.8	
	6.2nm,0.2s						
PDGK	**Podgornoye**	**2.62**	**348**	⇓Pg	**Pg**	**06 14 05.8**	**+0.8**
	3.8nm,0.5s						
PDGK				⇓Lg	Lg	06 14 38.6	
	17nm,0.7s						
SATY	**Saty**	**2.67**	**330**	*e*P	**Pb**	**06 14 02.9**	**-0.2**
	2.4nm,0.4s						
SATY				*e*S	**Sg**	**06 14 40.8**	**+0.4**
	40nm,0.3s						
SATY	**Saty**	**2.67**	**330**	Pg	**Pb**	**06 14 02.9**	**-0.2**
	2.4nm,0.4s						
SATY				Lg	Lg	06 14 40.8	
	40nm,0.3s						
KDJ	**Kajisay**	**2.67**	**302**	⇑*i*P	**Pg**	**06 14 05.5**	**-0.3**
	baz=0.0						
KDJ				⇑*i*S	**Sg**	**06 14 40.6**	**+0.1**
	baz=0.0						
KTMS	**Ketmen**	**2.68**	**2**	*e*P	**Pb**	**06 14 03.0**	**-0.3**
	3.3nm,0.2s						
KTMS				*e*S	**Sg**	**06 14 40.8**	**-0.1**
	16nm,0.2s						
KTMS	**Ketmen**	**2.68**	**2**	Pg	**Pb**	**06 14 03.0**	**-0.3**
	3.3nm,0.2s						
KTMS				Lg	Lg	06 14 40.6	
	16nm,0.2s						
ZHN	**Zhinishke**	**2.75**	**331**	*e*P	**Pb**	**06 14 04.9**	**+0.3**
	2.6nm,0.2s						
ZHN				*e*S	**Sg**	**06 14 43.8**	**+0.7**
	34nm,0.4s						
ZHN	**Zhinishke**	**2.75**	**331**	Pg	**Pb**	**06 14 04.9**	**+0.3**
	2.6nm,0.2s						
ZHN				Lg	Lg	06 14 43.8	
	34nm,0.4s						
ANVS	**Anan'yevo**	**2.79**	**317**	⇑*e*P	**Pg**	**06 14 06.8**	**-1.2**
	baz=14						
ANVS				⇑*i*S	**Sg**	**06 14 42.9**	**-1.2**
	baz=14						
KPKS	**Kokpek**	**2.94**	**337**	*e*P	**Pb**	**06 14 07.9**	**+0.2**
	8.9nm,0.2s						
KPKS				*e*S	**Sg**	**06 14 49.2**	**+0.2**
	43nm,0.4s						
TNSS	**Tian-Shan**	**3.34**	**314**	*e*P	**Pb**	**06 14 15.3**	**+0.5**
	0.9nm,0.2s						
TNSS				*e*S	**Sg**	**06 15 01.8**	**-0.2**
	15nm,0.4s						
TNSS	**Tian-Shan**	**3.34**	**314**	Pg	**Pb**	**06 14 15.3**	**+0.5**
	0.9nm,0.2s						
TNSS				Lg	Lg	06 15 01.8	
	15nm,0.4s						
ULHL	**Ulahol**	**3.34**	**298**	⇓*i*P	**Pb**	**06 14 14.7**	**0.0**
	baz=97						
ULHL				⇓*i*S	**Sb**	**06 14 56.5**	**+0.7**
	baz=97						
MDOK	**Medeo**	**3.38**	**316**	*e*P	**Pb**	**06 14 15.5**	**+0.4**
	2.2nm,0.5s						
MDOK				*e*S	**Sg**	**06 15 02.2**	**-0.8**
	13nm,0.6s						
MDOK	**Medeo**	**3.38**	**316**	Pg	**Pb**	**06 14 15.3**	**+0.2**
	2.2nm,0.5s						
MDOK				Lg	Lg	06 15 02.3	
	13nm,0.6s						
KOTS	**Kotyrbulak**	**3.39**	**318**	*e*P	**Pb**	**06 14 16.6**	**+1.1**
	3.7nm,0.4s						
KOTS				*e*S	**Sg**	**06 15 03.7**	**0.0**
	27nm,0.5s						
KOTS	**Kotyrbulak**	**3.39**	**318**	Pg	**Pb**	**06 14 16.6**	**+1.1**
	3.7nm,0.4s						
KOTS				Lg	Lg	06 15 03.7	
	27nm,0.5s						
MNBS	**Baschi**	**3.58**	**338**	*e*P	**Pb**	**06 14 19.3**	**+0.6**
MNBS				*e*S	**Sg**	**06 15 08.4**	**-1.3**
	0.3nm,0.2s						
MNBS	**Baschi**	**3.58**	**338**	Pg	**Pb**	**06 14 19.3**	**+0.6**
MNBS				Lg	Lg	06 15 08.4	
	0.3nm,0.2s						
DJR	**Jarkent**	**3.58**	**355**	*e*P	**Pb**	**06 14 19.1**	**+0.4**
	3.6nm,0.3s						
DJR				*e*S	**Sg**	**06 15 08.4**	**-1.3**
	5.7nm,0.5s						
DJR	**Jarkent**	**3.58**	**355**	Pg	**Pb**	**06 14 19.1**	**+0.4**
	3.6nm,0.3s						
DJR				Lg	Lg	06 15 08.4	
	5.7nm,0.5s						
BOOM	**Boomskoye usch**	**3.65**	**300**	⇑*i*P	**Pb**	**06 14 19.0**	**-0.9**
	baz=99						
BOOM				⇑*i*S	**Sb**	**06 15 03.8**	**-0.8**
	baz=99						
KST	**Kastek**	**3.92**	**307**	*e*P	**Pb**	**06 14 25.7**	**+1.3**
	1.9nm,0.2s						
KST				*e*S	**Sg**	**06 15 19.3**	**-1.2**
	19nm,0.6s						
KST	**Kastek**	**3.92**	**307**	Pg	**Pb**	**06 14 25.7**	**+1.3**
	1.9nm,0.2s						
KST				Lg	Lg	06 15 19.3	
	19nm,0.6s						
KTBS	**Karatobe**	**3.95**	**319**	*e*P	**Pb**	**06 14 26.0**	**+1.0**
	1.1nm,0.3s						
KTBS				*e*S	**Sg**	**06 15 19.8**	**-1.9**
	22nm,0.5s						
KTBS	**Karatobe**	**3.95**	**319**	Pg	**Pb**	**06 14 26.0**	**+1.0**
	1.1nm,0.3s						
KTBS				Lg	Lg	06 15 19.8	
	22nm,0.5s						
KUU	**Kurty**	**4.26**	**319**	*e*P	**Pb**	**06 14 31.2**	**+1.1**
	0.7nm,0.1s						
KUU				*e*S	**Sg**	**06 15 28.8**	**-2.5**
	12nm,0.4s						
KUU	**Kurty**	**4.26**	**319**	Pg	**Pb**	**06 14 31.0**	**+0.9**
	0.7nm,0.1s						
KUU				Lg	Lg	06 15 28.8	
	12nm,0.4s						

BEO ***12*** *06:31:31.2±1.0,37.54N×20.02E,h89km±7km,ML4.1/18*
MOS ***12*** *06:31:35.4±1.3,38.21N×20.23E,h14km,mb4.4/10,Error ellipse: s-maj=7.8km s-min=4.1km az=67.8*
PDG ***12*** *06:31:36.6±0.4,38.29N×20.32E,h11km,ML3.9/13,Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
ATH ***12*** *06:31:37.5,38.29N×20.47E,h14km±1km,ML4.1/11,Error ellipse: s-maj=2.0km s-min=0.7km az=257.0*
NEIC ***12*** *06:31:37.7±2.1,38.34N±0.05×20.39E±0.06,h10km±1km, Error ellipse: s-maj=9.7km s-min=7.3km az=224.0*
HLW ***12*** *06:31:37.9,38.21N×20.92E,h10km±19km,Ml4.6*
MED_RC ***12*** *06:31:38.0±0.6,38.30N×20.46E,h20km±3km,MW4.2/7, Moment Tensor Solution.Mantle waves: s7,c10; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr1.61±.84; Mθθ0.47±.73; Mφφ-2.08±.39; Mrθ1.04±.67; Mθφ1.71±.26; Mφr-0.09±.32; Best double couple: Mo2.70000×10^15 NP1:ϕs122.00000°,δ63.00000°,λ45.00000°. Principal axes: T 2.4000, Plg50.0000°, Azm340.0000°; N 0.6000, Plg39.0000°, Azm146.0000°; P -3.0000, Plg7.0000°, Azm242.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
THE ***12*** *06:31:38.0,38.30N×20.46E,h10km,ML4.0/8 Error ellipse: s-maj=0.9km s-min=0.4km az=272.0*
TIR ***12*** *06:31:38.6,38.42N×20.90E,h25km,Md4.3*
IDC ***12*** *06:31:40.6±3.0,38.45N×20.40E,h31km±23km,mb4.0/13, mb1 4.0/23,mb1mx3.9/46,mbtmp4.0/23,ML3.8/10,MS3.0/5, Ms1 3.0/5,ms1mx2.7/52,Error ellipse: s-maj=14.0km s-min=12.4km az=19.0*

ISC 12 06:31:37.7±0.6,38.29N±0.02×20.42E±0.02,h13km±3km, n311,σ1s36/374,mb4.3/22,22C-11D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.03**	**173**	P	**Pg**	**06 31 39.9**	**0.0**
KEF4				S	**Sg**	**06 31 41.5**	**-0.1**
KEF4	**Livadi, Kephal**	**0.03**	**173**	P	**Pg**	**06 31 40.0**	**0.0**
KEF4				S	**Sg**	**06 31 41.6**	**0.0**
KEF5	**Kardakata, Kep**	**0.04**	**110**	P	**Pg**	**06 31 39.7**	**-0.4**
KEF5				S	**Sg**	**06 31 40.8**	**-0.9**
KEF5	**Kardakata, Kep**	**0.04**	**110**	P	**Pg**	**06 31 39.7**	**-0.4**
KEF5				S	**Sg**	**06 31 40.8**	**-0.9**
DMLN	**Damoulianata-K**	**0.07**	**214**	P	**Pg**	**06 31 40.4**	**+0.2**
DMLN				S	**Sg**	**06 31 42.3**	**+0.2**
DMLN	**Damoulianata-K**	**0.07**	**214**	P	**Pg**	**06 31 40.5**	**+0.2**
DMLN				S	**Sg**	**06 31 42.5**	**+0.4**
	529μm,0.5s						
ARGA	**Argostoli. Kep**	**0.12**	**158**	P	**Pg**	**06 31 40.8**	**-0.1**
ARGA				S	**Sg**	**06 31 43.1**	**-0.1**
VSK1	**VASILIKIADES**	**0.16**	**44**	P	**Pg**	**06 31 41.3**	**-0.2**
VSK1				S	**Sg**	**06 31 44.0**	**-0.2**
VLS	**Valsamata**	**0.18**	**130**	P	**Pg**	**06 31 41.4**	**-0.3**
VLS				S	**Sg**	**06 31 44.0**	**-0.5**
VLS	**Valsamata**	**0.18**	**130**	P	**Pg**	**06 31 41.4**	**-0.3**
VLS				S	**Sg**	**06 31 44.1**	**-0.5**
VLS	**Valsamata**	**0.18**	**130**	P	**Pg**	**06 31 41.4**	**-0.3**
VLS				S	**Sg**	**06 31 44.1**	**-0.5**
FSK	**Fiskardo**	**0.20**	**34**	P	**Pg**	**06 31 41.9**	**-0.2**
FSK				S	**Sg**	**06 31 44.9**	**-0.3**
FSK				AML	AML	06 31 45.7	
FSK				AML	AML	06 31 46.7	
FSK	**Fiskardo**	**0.20**	**34**	P	**Pg**	**06 31 41.9**	**-0.2**
FSK				S	**Sg**	**06 31 45.1**	**-0.1**
	75μm,0.6s						
PSDA	**Pessada-Kefalo**	**0.22**	**144**	P	**Pg**	**06 31 42.2**	**-0.2**
PSDA				S	**Sg**	**06 31 45.4**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.22**	**144**	P	**Pg**	**06 31 42.3**	**-0.2**
PSDA				S	**Sg**	**06 31 45.5**	**-0.2**
	16μm,0.2s						
EVGI	**Lefkada island**	**0.38**	**29**	P	**Pg**	**06 31 45.2**	**-0.1**
EVGI				S	**Sg**	**06 31 50.6**	**+0.2**
EVGI	**Lefkada island**	**0.38**	**29**	P	**Pg**	**06 31 45.1**	**-0.1**
EVGI				S	**Sg**	**06 31 50.9**	**+0.5**
	20μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.46**	**155**	P	**Pg**	**06 31 46.5**	**-0.2**
VLMS				S	**Sg**	**06 31 53.3**	**+0.4**
VLMS				AML	AML	06 31 54.3	
VLMS				AML	AML	06 31 55.6	
VLMS	**Volimes, Zakyn**	**0.46**	**155**	P	**Pg**	**06 31 46.5**	**-0.2**
VLMS				S	**Sb**	**06 31 53.6**	**-0.7**
	59μm,0.3s						
MGNA	**Meganis**	**0.47**	**39**	P	**Pg**	**06 31 46.4**	**-0.5**
MGNA				S	**Sg**	**06 31 53.3**	**+0.2**
MGNA				AML	AML	06 31 53.9	
	comp=N,93716μm,0.3s						
MGNA				AML	AML	06 31 54.0	
	comp=E,91715μm,0.3s						
NYDR	**Nydri-Lefkada**	**0.47**	**27**	P	**Pg**	**06 31 46.6**	**-0.4**
NYDR				S	**Sg**	**06 31 53.4**	**0.0**
NYDR	**Nydri-Lefkada**	**0.47**	**27**	P	**Pg**	**06 31 46.6**	**-0.4**
NYDR				S	**Sg**	**06 31 53.5**	**+0.1**
	comp=E,24μm,0.5s						
LKD2	**Lefkada island**	**0.53**	**21**	P	**Pg**	**06 31 47.7**	**-0.4**
LKD2				AML	AML	06 32 02.1	
	comp=E,21372μm,0.3s						
LKD2				AML	AML	06 32 05.1	
	comp=N,33655μm,0.5s						
LKD2	**Lefkada island**	**0.53**	**21**	P	**Pg**	**06 31 47.6**	**-0.4**
	baz=333						
LKD2				S	**Sg**	**06 31 54.8**	**-0.4**
	baz=333						
LKD2	**Lefkada island**	**0.53**	**21**	P	**Pg**	**06 31 47.5**	**-0.6**
LKD2				S	**Sg**	**06 31 55.1**	**-0.1**
	comp=N,14μm,0.4s						
TSLK	**Tsoukalades, L**	**0.56**	**19**	P	**Pg**	**06 31 48.2**	**-0.5**
TSLK				S	**Sg**	**06 31 56.2**	**0.0**
TSLK	**Tsoukalades, L**	**0.56**	**19**	P	**Pg**	**06 31 48.3**	**-0.4**
TSLK				S	**Sg**	**06 31 56.5**	**+0.3**
	comp=N,20μm,0.5s						
PDO	**Prodromos**	**0.67**	**63**	P	**Pg**	**06 31 50.0**	**-0.8**
PDO	**Prodromos**	**0.67**	**63**	P	**Pg**	**06 31 49.9**	**-0.9**
PDO				S	**Sg**	**06 31 59.4**	**-0.3**
KRI1	**kERI**	**0.70**	**153**	P	**Pg**	**06 31 50.6**	**-0.7**
KRI1				S	**Sb**	**06 32 01.9**	**+0.5**
RLS	**Riolos of Patr**	**0.86**	**105**	P	**Pg**	**06 31 53.2**	**-1.1**
RLS	**Riolos of Patr**	**0.86**	**105**	P	**Pg**	**06 31 53.2**	**-1.1**
DRO	**Drossia**	**1.07**	**108**	P	**Pb**	**06 31 57.1**	**-1.0**
DRO				AML	AML	06 32 20.8	
	comp=N,29899μm,0.5s						
DRO				AML	AML	06 32 21.6	
	comp=E,24190μm,0.6s						
DRO	**Drossia**	**1.07**	**108**	P	**Pb**	**06 31 57.1**	**-1.0**
EFP	**Efpalio**	**1.18**	**83**	P	**Pb**	**06 31 58.3**	**-1.5**
EFP				AML	AML	06 32 22.8	
	comp=N,22509μm,0.5s						
EFP				AML	AML	06 32 23.3	
	comp=E,21288μm,0.5s						
EFP	**Efpalio**	**1.18**	**83**	P	**Pb**	**06 31 58.4**	**-1.5**
ANX	**Ano Chora**	**1.22**	**75**	P	**Pn**	**06 31 59.4**	**-1.1**
ANX				AML	AML	06 32 23.9	
	comp=E,34596μm,0.7s						
ANX				AML	AML	06 32 26.3	
	comp=N,39069μm,0.6s						
ANX	**Ano Chora**	**1.22**	**75**	P	**Pn**	**06 31 59.6**	**-0.9**
IGT	**Igoumenitsa**	**1.24**	**357**	*e*Sn	**Sg**	**06 32 18.5**	**+0.8**
IGT	**Igoumenitsa**	**1.24**	**357**	P	**Pb**	**06 32 01.0**	**0.0**
IGT				AML	AML	06 32 21.6	
	comp=E,5121μm,0.4s						
IGT				AML	AML	06 32 24.9	
	comp=N,5375μm,0.4s						
IGT	**Igoumenitsa**	**1.24**	**357**	P	**Pn**	**06 32 00.8**	**0.0**
IGT	**Igoumenitsa**	**1.24**	**357**	P	**Pb**	**06 32 01.2**	**+0.2**
	baz=339						
IGT	**Igoumenitsa**	**1.24**	**357**	P	**Pn**	**06 32 00.8**	**0.0**
EVR	**Evrytania**	**1.25**	**60**	P	**Pn**	**06 31 59.8**	**-1.2**
AMT	**Artemida-Makis**	**1.27**	**126**	P	**Pb**	**06 32 01.6**	**+0.1**
AMT				AML	AML	06 32 33.7	
	comp=E,16066μm,0.7s						
AMT				AML	AML	06 32 34.1	
	comp=N,13462μm,0.6s						
AMT	**Artemida-Makis**	**1.27**	**126**	P	**Pb**	**06 32 01.6**	**+0.1**
TRIZ	**Trizonia**	**1.30**	**86**	P	**Pn**	**06 32 00.5**	**-1.1**
TRIZ	**Trizonia**	**1.30**	**86**	P	**Pn**	**06 32 00.5**	**-1.1**
ALIK	**Aliki, Aigiali**	**1.33**	**91**	P	**Pn**	**06 32 01.3**	**-0.7**
KALE	**Kalithea**	**1.36**	**85**	P	**Pn**	**06 32 01.4**	**-1.0**
KALE	**Kalithea**	**1.36**	**85**	P	**Pn**	**06 32 01.4**	**-1.0**
KLV	**Kalavryta, Ach**	**1.39**	**100**	P	**Pn**	**06 32 02.1**	**-0.7**
KLV				AML	AML	06 32 25.8	
	comp=N,6276μm,0.3s						
KLV				AML	AML	06 32 29.5	
	comp=E,5565μm,0.4s						
KLV	**Kalavryta, Ach**	**1.39**	**100**	P	**Pn**	**06 32 02.2**	**-0.7**
JAN	**Janina**	**1.40**	**14**	P	**Pg**	**06 32 04.4**	**-0.3**
JAN	**Janina**	**1.40**	**14**	P	**Pg**	**06 32 04.4**	**-0.3**
JAN	**Janina**	**1.40**	**14**	P	**Pg**	**06 32 04.4**	**-0.3**
KEK	**Kerkira**	**1.50**	**341**	P	**Pb**	**06 32 05.0**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.52**	**61**	P	**Pb**	**06 32 05.3**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.52**	**61**	P	**Pn**	**06 32 05.1**	**+0.5**
SRN	**Sarande**	**1.62**	**349**	P	**Pg**	**06 32 08.2**	**-0.6**
	baz=335						
SRN				S	**Sg**	**06 32 30.0**	**+0.3**
	baz=335						
ITM	**Ithomi**	**1.63**	**132**		**Pb**	**06 32 07.6**	**-0.1**
ITM	**Ithomi**	**1.63**	**132**	P	**Pb**	**06 32 07.1**	**-0.5**
AGG	**Agios Georgios**	**1.66**	**63**	P	**Pb**	**06 32 07.7**	**-0.5**
AGG				AML	AML	06 32 38.2	
	comp=N,8873μm,0.5s						
AGG				AML	AML	06 32 43.5	
	comp=E,7318μm,0.7s						
AGG	**Agios Georgios**	**1.66**	**63**	P	**Pb**	**06 32 07.9**	**-0.3**
AGG	**Agios Georgios**	**1.66**	**63**	Pn	**Pb**	**06 32 07.9**	**-0.3**
AGG	**Agios Georgios**	**1.66**	**63**	P	**Pb**	**06 32 07.5**	**-0.7**
THL	**Klokotos Trika**	**1.78**	**44**	P	**Pb**	**06 32 09.9**	**-0.2**
THAL	**Thalero**	**1.79**	**97**	P	**Pb**	**06 32 10.2**	**-0.1**
VLX	**Vlachokerasia**	**1.80**	**120**	P	**Pg**	**06 32 12.1**	**-0.2**
LSK	**Leskovik**	**1.86**	**4**	P	**Pb**	**06 32 10.8**	**-0.8**
	baz=353						
LSK	**Leskovik**	**1.86**	**4**	P	**Pn**	**06 32 10.7**	**-0.9**
LTK	**Loutraki**	**2.03**	**97**	P	**Pb**	**06 32 13.0**	**-1.4**
LOUT	**Loutraki**	**2.04**	**98**	P	**Pb**	**06 32 13.3**	**-1.3**
LKR	**Lokris**	**2.06**	**79**	P	**Pb**	**06 32 14.0**	**-0.9**
ATAL	**Atalanti**	**2.08**	**78**	P	**Pb**	**06 32 14.3**	**-1.0**
EPID	**Epidavros**	**2.24**	**107**	P	**Pb**	**06 32 16.5**	**-1.5**
KZN	**Kozani**	**2.27**	**27**	P	**Pb**	**06 32 17.2**	**-1.4**
KZN	**Kozani**	**2.27**	**27**	P	**Pb**	**06 32 17.2**	**-1.4**
SCTE	**Santa Cesarea**	**2.34**	**320**	Pn	**Pn**	**06 32 15.6**	**-0.2**
KRND	**KRANIDI**	**2.34**	**112**	P	**Pb**	**06 32 18.4**	**-1.4**
LIT	**Litokhoron**	**2.42**	**41**	P	**Pb**	**06 32 18.7**	**+1.7**
LIT	**Litokhoron**	**2.42**	**41**	Pn	**Pn**	**06 32 18.7**	**+1.7**
ATH	**Athens Observa**	**2.62**	**96**	P	**Pn**	**06 32 21.3**	**+1.6**
ATH	**Athens Observa**	**2.62**	**96**	P	**Pn**	**06 32 21.3**	**+1.6**
ATHU	**Athens Univers**	**2.67**	**96**	P	**Pn**	**06 32 21.8**	**+1.3**
DION	**Dionisos Attik**	**2.78**	**93**	P	**Pn**	**06 32 23.3**	**+1.4**
OHR	**Ohrid**	**2.83**	**6**	*i*Pn	**Pn**	**06 32 24.9**	**+2.2**
OHR	**Ohrid**	**2.83**	**6**	P	**Pn**	**06 32 24.7**	**+2.0**
AOS	**Alonnisos**	**2.84**	**71**	P	**Pn**	**06 32 24.6**	**+1.8**
KTHA	**Kythira Island**	**2.93**	**133**	P	**Pb**	**06 32 27.3**	**-2.4**
TIP	**Timpagrande**	**3.00**	**288**	⇑P	**Pn**	**06 32 25.0**	**+0.1**
TIP	**Timpagrande**	**3.00**	**288**	Pn	**Pn**	**06 32 25.9**	**+1.0**
THE	**Thessaloniki**	**3.06**	**39**	P	**Pn**	**06 32 28.7**	**+3.0**
GRG	**Giva**	**3.07**	**29**	P	**Pn**	**06 32 27.1**	**+1.2**
TIR	**Tirane**	**3.08**	**352**	⇓P	**Pn**	**06 32 26.7**	**+0.6**
TIR	**Tirane**	**3.08**	**352**	P	**Pn**	**06 32 26.5**	**+0.5**
TIR	**Tirane**	**3.08**	**352**	Pn	**Pn**	**06 32 26.5**	**+0.5**
TIR	**Tirane**	**3.08**	**352**	P	**Pn**	**06 32 27.8**	**+1.8**
	baz=346						
TAR1	**Taranto**	**3.30**	**314**	*e*Pn	**Pn**	**06 32 30.7**	**+1.7**
PHP	**Peshkopia**	**3.39**	**0**	P	**Pn**	**06 32 31.8**	**+1.5**
	baz=354						
PHP				S	**Sn**	**06 33 12.5**	**+2.1**
	baz=354						
SOH	**Sokhos**	**3.40**	**41**	P	**Pn**	**06 32 32.4**	**+2.0**
VAY	**Valandovo**	**3.45**	**28**	*e*Pn	**Pn**	**06 32 31.7**	**+0.6**
VAY	**Valandovo**	**3.45**	**28**	*i*Pn	**Pn**	**06 32 32.2**	**+1.1**
VAY	**Valandovo**	**3.45**	**28**	P	**Pn**	**06 32 33.8**	**+2.7**
CEL	**Celeste**	**3.56**	**271**	Pn	**Pn**	**06 32 33.3**	**+0.6**
STIP	**Stip**	**3.66**	**21**	*i*Pn	**Pn**	**06 32 36.6**	**+2.6**
MATE	**Matera**	**3.71**	**310**	⇑P	**Pn**	**06 32 33.8**	**+0.9**
SRS	**Ser

STON Sn **Sn** 06 33 47.9 -2.6
UPM Unac-Piva 5.04 347 i Pn **Pn** 06 32 53.4 +0.3
UPM i Sn **Sn** 06 33 51.5 +0.2
UPM Unac-Piva 5.04 347 e Pn **Pn** 06 32 53.0 -0.1
ALN Alexandroupoli 5.07 57 P **Pn** 06 32 54.9 +1.6
ALN Alexandroupoli 5.07 57 Pn **Pn** 06 32 54.9 +1.6
PLE Plјevlja 5.09 352 ⇑ i Pn **Pn** 06 32 54.5 +0.7
PLE i Sn **Sn** 06 33 53.2 +0.7
LSTV Lastovo 5.22 330 e Pn **Pn** 06 32 54.6 -0.7
ZAPS Zavoj 5.25 18 e Pn **Pn** 06 32 57.4 +1.5
ZAPS eSn **Sn** 06 33 54.7 -1.7
PAOL Paolisi 5.28 303 Pn **Pn** 06 32 57.4 +1.1
IVAS Ivanjica 5.28 358 e Pn **Pn** 06 32 55.9 -0.5
IVAS eSn **Sn** 06 33 54.8 -2.3
BOVS Bovan 5.43 10 e Pn **Pn** 06 32 57.7 -0.6
BOVS eSn **Sn** 06 33 59.1 -1.5
GRUS Gruza 5.60 2 e Pn **Pn** 06 33 00.5 -0.1
GRUS eSn **Sn** 06 34 02.1 -2.6
MAKA Makarska 5.62 334 e Pn **Pn** 06 33 00.5 -0.4
BBLS Lazići 5.62 352 e Pn **Pn** 06 33 00.8 -0.2
BBLS eSn **Sn** 06 34 02.5 -3.0
BBLS Lazići 5.62 352 e Pn **Pn** 06 33 00.3 -0.7
CORL Corleone 5.63 268 Pn **Pn** 06 33 02.0 +1.0
ZAGS Zajecar 5.68 13 e Pn **Pn** 06 33 01.8 0.0
CLTB Caltabellotta 5.74 265 Pn **Pn** 06 33 03.2 +0.6
RICI Ricice 5.76 335 e Pn **Pn** 06 33 02.5 -0.4
DIVS Divibare 5.81 357 e Pn **Pn** 06 33 03.0 -0.6
DIVS eSn **Sn** 06 34 07.5 -2.7
DIVS Divibare 5.81 357 e Pn **Pn** 06 33 02.8 -0.8
DIVS Divibare 5.81 357 Pn **Pn** 06 33 03.1 -0.6
HAPS Han Pijesak,BI 5.89 350 e Pn **Pn** 06 33 03.4 -1.4
HAPS eSn **Sn** 06 34 07.5 -4.8
HAPS Han Pijesak,BI 5.89 350 e Pn **Pn** 06 33 02.8 -2.0
TRUS Trudelj 5.93 360 e Pn **Pn** 06 33 05.1 0.0
TRUS eSn **Sn** 06 34 10.4 -2.5
KARP Karpathos 6.06 115 Pn **Pn** 06 33 11.1 +4.1
INTR Introdacqua 6.22 309 Pn **Pn** 06 33 09.9 +0.7
TEKS Tekeris 6.29 354 e Pn **Pn** 06 33 09.6 -0.5
TEKS Tekeris 6.29 354 e Pn Pn 06 33 03.8 -6.3
KIJV Kijevo 6.46 333 e Pn **Pn** 06 33 12.7 +0.2
MORI Morici 6.61 329 e Pn **Pn** 06 33 14.7 +0.3
MGRS Mrkonjic Grad 6.61 339 e Pn **Pb** 06 33 28.9 -3.6
HERR Herculane 6.75 12 ⇑ P **Pn** 06 33 16.1 -0.3
FRGS Fruska Gora 6.88 356 e Pn **Pn** 06 33 17.4 -0.8
FRGS Fruska Gora 6.88 356 e Pn **Pn** 06 33 16.0 -2.2
BLY Banja Luka 6.89 340 e Pn **Pn** 06 33 18.1 -0.3
DUGI Dugi Otok 6.98 326 e Pn **Pn** 06 33 19.5 -0.2
NRCA Norcia 7.17 312 Pn **Pn** 06 33 24.2 +1.8
GZR Gura Zlata 7.31 13 ⇑ P **Pn** 06 33 24.5 +0.3
BZS Buzias 7.37 7 ⇑ P **Pn** 06 33 25.2 +0.1
BZS Buzias 7.37 7 P **Pn** 06 33 25.1 +0.1
NVLJ Novalja 7.52 328 e Pn **Pn** 06 33 26.8 -0.2
LOT Lotru 7.57 18 ⇑ P **Pn** 06 33 29.4 +1.6
AKAS Kas 7.61 103 Pn **Pn** 06 33 31.7 +3.3
MURB Monte Urbino 7.78 312 Pn **Pn** 06 33 31.4 +0.8
SLUM Salum 7.84 148 P **Pn** 06 33 29.1 -2.3
baz=151
SLUM AMP 06 34 00.0
baz=151
VOIR 7.93 24 ⇓ P **Pn** 06 33 33.9 +1.2
VOIR 7.93 24 P **Pn** 06 33 34.3 +1.6
VOIR pmax pmax
comp=Z,7.0nm,0.7s
MORH Mrgy, Hungar 8.03 351 e Pn **Pn** 06 33 33.3 -0.6
BOJS Bojanci 8.17 334 i Pn **Pn** 06 33 35.9 0.0
BOJS eSn **Sn** 06 35 04.0 -4.1
MLR Muntele Rosu 8.29 28 Pn **Pn** 06 33 40.3 +2.7
comp=Z,0.5nm,0.3s,baz=234,slow=5.6,SNR=7.1
MLR LR LR 06 38 10.7
comp=Z,68nm,20.0s,baz=203,slow=48
MLR Muntele Rosu 8.29 28 ⇓ P **Pn** 06 33 38.6 +1.0
MLR Muntele Rosu 8.29 28 P **Pn** 06 33 38.7 +1.0
MLR Muntele Rosu 8.29 28 Pn **Pn** 06 33 38.6 +1.0
RIY Rijeka 8.31 330 e Pn **Pn** 06 33 37.7 -0.1
GBRS Gornja Briga 8.35 332 i Pn **Pn** 06 33 38.6 +0.2
GBRS eSn **Sn** 06 35 08.5 -4.2
CRES Cresnjev 8.38 335 e Pn **Pn** 06 33 37.9 -0.9
CEY Cerknica 8.67 331 i Pn **Pn** 06 33 42.6 -0.3
CEY Cerknica 8.67 331 e Pn **Pn** 06 33 42.3 -0.5
GBAS Gorenja Brezov 8.83 332 e Pn **Pn** 06 33 44.1 -0.9
GBAS eSn **Sn** 06 35 19.7 -4.7
PLOR Plostina 8.86 30 ⇑ P **Pn** 06 33 46.9 +1.4
PLOR Plostina 8.86 30 P **Pn** 06 33 46.8 +1.4
LJU Ljubljana 8.89 332 e Pn **Pn** 06 33 44.4 -1.4
VRI Vrincioaia 8.90 30 ⇑ P **Pn** 06 33 46.8 +0.8
VRI Vrincioaia 8.90 30 P **Pn** 06 33 48.5 +2.5
VRI pmax pmax
comp=Z,14nm,0.7s
PERS Pernice 9.21 337 i Pn **Pn** 06 33 49.0 -1.2
KEST Kesra 9.22 257 Pn **Pn** 06 33 50.9 +0.5
comp=Z,0.5nm,0.3s,baz=58,slow=16,SNR=2.2
KEST Sn **Sn** 06 35 31.4 -2.7
comp=Z,0.2nm,0.3s,baz=13,slow=22,SNR=1.6
SOKA Soboth 9.27 336 Pn **Pn** 06 33 50.2 -0.9
comp=Z,15nm,0.5s,SNR=6.7
OBKA Obir 9.29 334 e Pn **Pn** 06 33 50.7 -0.6
comp=Z,5.1nm,0.2s
CADS Cadrg 9.35 330 i Pn **Pn** 06 33 51.3 -0.8
TEOL Teolo 9.61 320 Pn **Pn** 06 33 55.5 -0.2
ARSA Arzberg 9.65 340 e Pn **Pn** 06 33 56.3 +0.1
comp=Z,2.5nm,0.4s
MYKA Terra Mystica 9.72 331 e Pn **Pn** 06 33 56.8 -0.4
comp=Z,3.6nm,0.4s
ZOU Zoufplan 9.92 329 **Pn** 06 33 59.2 -0.9
SWA2 9.95 154 P **Pn** 06 33 58.0 -2.3
baz=155
SWA2 AMP 06 35 00.0
baz=155
SWA2 S Sn **Sn** 06 35 40.8 -11
baz=155
CIMO Cimolais 9.95 326 Pn **Pn** 06 33 59.8 -0.6
CTI Castel Tesino 10.12 323 P **Pn** 06 34 01.9 -0.8
CTI Castel Tesino 10.12 323 Pn **Pn** 06 34 01.9 -0.8
KBA Koelnbreinsper 10.20 332 Pn **Pn** 06 34 03.3 -0.6
comp=Z,1.1nm,0.3s,SNR=4.2
KBA Koelnbreinsper 10.20 332 P **Pn** 06 34 04.1 +0.1
KBA pmax pmax
comp=Z,7.0nm,0.7s
ABTA Abfaltersbach 10.26 328 e Pn **Pn** 06 34 04.4 -0.3
comp=Z,0.5nm,0.2s
BRTR Keskin Array B 10.39 78 Pn **Pn** 06 34 10.8 +4.3
comp=Z,0.3nm,0.3s,baz=262,slow=12,SNR=2.1
BRTR LR LR 06 38 10.8
comp=Z,29nm,19.4s,baz=266,slow=38
MOA Molln 10.55 337 e Pn **Pn** 06 34 09.4 +0.7
comp=Z,4.8nm,0.3s
WTTA Wattenberg 11.04 327 e Pn **Pn** 06 34 15.3 -0.1
comp=Z,2.7nm,0.4s
WATA Walderalm 11.12 327 e Pn **Pn** 06 34 17.1 +0.7
comp=Z,3.5nm,0.3s
SQTA Sankt Quirin 11.19 326 e Pn **Pn** 06 34 18.0 +0.5
comp=Z,3.3nm,0.4s
FUORN Ofenpass-Fuorn 11.20 321 Pn **Pn** 06 34 17.1 -0.6
FETA Feichten 11.26 324 e Pn **Pn** 06 34 18.7 +0.3
comp=Z,1.0nm,0.4s
MOTA Moosalm 11.33 326 Pn **Pn** 06 34 20.2 +0.8
comp=Z,5.0nm,0.6s,SNR=4.9
VRAC Vranov 11.35 347 LR LR 06 38 52.3
comp=Z,89nm,18.3s,baz=108,slow=38
DAVOX Davos/Dischmat 11.50 321 Pn **Pn** 06 34 21.9 +0.3
comp=Z,0.5nm,0.3s,baz=128,slow=19,SNR=4.0
DAVOX Sn **Sn** 06 36 26.2 -3.8
comp=Z,0.2nm,0.3s,baz=134,slow=19,SNR=1.7
DAVOX Davos/Dischmat 11.50 321 P **Pn** 06 34 22.0 +0.3
TUE Stuetta 11.56 319 Pn **Pn** 06 34 22.1 -0.5
RETA Reutte 11.59 326 e Pn **Pn** 06 34 23.9 +1.1
comp=Z,0.8nm,0.2s
GERES GERESS Array B 11.61 337 Pn **Pn** 06 34 21.6 -1.6
comp=Z,0.5nm,0.3s,baz=154,slow=15,SNR=10
GERES Sn **Sn** 06 36 26.0 -6.7
comp=Z,0.4nm,0.3s,baz=149,slow=25,SNR=3.2
KHC Kasperske Hory 11.90 338 e P **Pn** 06 34 25.2 -1.9
SENIN Lac Senin/Sane 12.61 314 Pn **Pn** 06 34 37.0 +0.1
GLL Jalalah 12.77 130 P **Pn** 06 34 36.7 -2.4
baz=130
HFRF Wahat Farafira 12.94 147 P **Pn** 06 34 39.5 -1.8
baz=148
MMAI Mount Meron Ar 13.27 109 Pn **Pn** 06 34 47.3 +1.5
comp=Z,1.7nm,0.3s,baz=297,slow=16,SNR=2.3
AKASG Malin Array Be 13.89 24 Pn **Pn** 06 34 51.6 -2.6
comp=Z,0.6nm,0.3s,baz=209,slow=12,SNR=4.5
AKBB Malin Array Si 13.89 24 ⇓ e P **Pn** 06 34 55.4 +1.2
CLL Collm 14.03 340 i PP **P** 06 35 05.6 +1.7
comp=Z,12nm,1.0s
CLL Collm 14.03 340 i P **P** 06 35 05.6 +1.7
ANN Anapa 14.29 58 e P **Pn** 06 34 58.3 -1.4
ANN e S **Sn** 06 37 38.5 +0.5
ANN pmax pmax
comp=Z,10.0nm,0.5s
EIL Elat 14.79 121 Pn **P** 06 35 13.1 +0.6
comp=Z,0.8nm,0.3s,baz=315,slow=14,SNR=6.1
EIL Sn Sn 06 37 39.5 -11
comp=Z,0.7nm,0.3s,baz=54,slow=17,SNR=2.7
KIV Kislovodsk 17.68 64 e P **P** 06 35 47.0 +2.4
KIV pmax pmax
comp=Z,20nm,1.0s
KBZ Khabaz 17.79 65 ⇓ e P **P** 06 35 47.7 +2.0
KBZ pmax pmax
comp=Z,9.0nm,1.3s
ZEI Tsey 18.39 68 e P **P** 06 35 55.1 +2.6
ZEI pmax pmax
comp=Z,6.0nm,1.1s
GNI Garni 18.93 77 ⇑ e P **Pn** 06 36 00.0 +1.0
GNI pmax pmax
comp=Z,17nm,1.2s
ESDC Sonseca Array 19.00 282 P **Pn** 06 35 59.6 -0.2
comp=Z,0.1nm,0.3s,baz=78,slow=12,SNR=4.5
LPSR Galich'ya Gora 19.24 36 e P **P** 06 36 01.9 +0.4
LPSR pmax pmax
comp=Z,10.0nm,0.9s
VRH Novokhopyorsk 19.80 42 e P **Pn** 06 36 09.8 +0.6
VRH pmax pmax
comp=Z,30nm,1.2s
OBN Obninsk 20.06 28 e P Pn 06 36 12.3 +0.1
OBN e 06 36 27.4
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN MLR MLR
comp=Z,103nm,16.0s
VSU Vasula 20.60 9 c e P **P** 06 36 16.0 -0.2
VSU pmax pmax
comp=Z,81nm,0.8s
HFS Hagfors 22.27 351 P **P** 06 36 33.7 -0.6
comp=Z,12nm,0.8s,baz=158,slow=13,SNR=10
NC602 NORSAR Array S 23.15 349 P **P** 06 36 42.7 -0.8
NC602 IAmb IAmb 06 36 46.5
comp=Z,8.8nm,0.8s
NORES NORESS Array B 23.15 349 P **P** 06 36 44.7 +1.2
NORES pmax pmax
comp=Z,6.0nm,0.4s
EKA Eskdalemuir Ar 23.29 325 P **P** 06 36 44.7 -0.3
comp=Z,6.1nm,1.0s,baz=119,slow=9.7,SNR=4.8
NA001 NORSAR Array S 23.36 348 P **P** 06 36 45.1 -0.5
FINES FINESS Array B 23.44 7 P **P** 06 36 44.8 -1.6
comp=Z,4.1nm,0.6s,baz=172,slow=9.5,SNR=21
FINES PcP **PcP** 06 40 32.3 +0.2
comp=Z,1.5nm,0.7s,baz=159,slow=4.2,SNR=3.9
FINES FINESS Array B 23.44 7 P **P** 06 36 44.5 -1.9
FIA1 FINESS Array S 23.44 7 P **P** 06 36 45.1 -1.4
FIA1 IAmb IAmb 06 36 47.0
comp=Z,8.4nm,0.8s
NC405 NORSAR Array S 23.49 349 P **P** 06 36 45.8 -1.1
NB201 NORSAR Array S 23.49 349 P **P** 06 36 46.7 -0.2
NB2 NORSAR Subarra 23.49 349 P **P** 06 36 46.3 -0.7
comp=Z,11nm,1.4s,baz=162,slow=9.3
NOA NORSAR Array B 23.49 348 P **P** 06 36 46.6 -0.3
comp=Z,1.0nm,0.5s,baz=153,slow=9.1,SNR=8.5
NOA LR LR 06 48 05.4
comp=Z,31nm,22.0s,baz=355,slow=42
NBO00 NORSAR Array S 23.55 348 P **P** 06 36 46.3 -1.3
NC303 NORSAR Array S 23.64 349 P **P** 06 36 48.2 -0.2
NC303 IAmb IAmb 06 36 58.0
comp=Z,10.0nm,0.8s
NC204 NORSAR Array S 23.79 348 P **P** 06 36 49.8 0.0
KLMR Klimovskoe 25.56 22 e P **P** 06 37 04.9 -1.1
KLMR pmax pmax
comp=Z,14nm,1.2s
KLMR Klimovskoe 25.56 22 e P **P** 06 37 05.0 -1.1
KLMR AMP 06 37 08.9
comp=Z,14nm,1.2s
AKTO Aktyubinsk 29.18 53 P **P** 06 37 38.9 +0.3
comp=Z,0.8nm,0.4s,baz=277,slow=11,SNR=2.6
GEYT Alibeck 29.53 79 P **P** 06 37 41.9 0.0
comp=Z,2.0nm,0.4s,baz=270,slow=9.8,SNR=2.8
TOA0 Torodi Ar. Sit 30.07 219 P **P** 06 37 47.2 +0.5
TORD Torodi Ar. Bea 30.07 219 P **P** 06 37 47.3 +0.5
comp=Z,2.7nm,0.9s,baz=28,slow=8.9,SNR=8.7
TORD Torodi Ar. Bea 30.07 219 P **P** 06 37 47.2 +0.4
ABKAR Akbulak array 30.25 56 P **P** 06 37 48.8 +0.8
ARC6 ARCESS Array S 31.42 3 P **P** 06 37 56.9 -1.4
ARCES ARCESS Array B 31.42 3 P **P** 06 37 57.2 -1.0
comp=Z,0.7nm,0.4s,baz=185,slow=12,SNR=14
ARCES PcP **PcP** 06 40 51.0 -0.2
comp=Z,2.8nm,0.9s,baz=190,slow=2.1,SNR=6.8
ARCES ARCESS Array B 31.42 3 e P **P** 06 37 56.5 -1.7
ARCES pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 37.04 50 ⇓ e P **P** 06 38 50.3 +3.2
BRVK pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 40.78 66 c e P **P** 06 39 17.1 -1.7
KURK Kurchatov 42.27 53 ⇑ e P **P** 06 39 30.2 -0.4
MK31 Makanchi Array 45.31 58 ⇑ e P **P** 06 39 53.9 -1.3
MK31 Makanchi Array 45.31 58 P **P** 06 39 54.2 -0.9
MK31 IAmb IAmb 06 40 00.6
comp=Z,6.1nm,1.4s
MKAR Makanchi Array 45.31 58 P **P** 06 39 54.1 -1.0
comp=Z,2.3nm,0.4s,baz=276,slow=7.4,SNR=11
ZAA0 Zalesovo Array 45.67 48 P **P** 06 39 57.0 -0.9
ZALV Zalesovo Beam 45.67 48 P **P** 06 39 56.8 -1.1
comp=Z,2.9nm,0.5s,baz=282,slow=7.5,SNR=11
ZALV Zalesovo Beam 45.67 48 P **P** 06 39 57.3 -0.6
EUNU Eureka 55.38 348 P **P** 06 41 11.7 +0.7
EUNU IAmb IAmb 06 41 25.6
comp=Z,4.6nm,1.3s
SCHQ Schefferville 58.32 317 P **P** 06 41 32.6 +0.5
comp=Z,3.6nm,0.7s,baz=53,slow=4.8,SNR=3.8
SCHQ Schefferville 58.32 317 IAmb IAmb 06 41 35.0
comp=Z,8.9nm,1.1s
ZEA Zeya 68.83 38 e P P 06 42 34.6 -6.9
ILAR Eielson Array 76.79 354 P **P** 06 43 29.2 +0.6
comp=Z,0.6nm,0.8s,baz=350,slow=3.3,SNR=5.9
ILAR Eielson Array 76.79 354 e P **P** 06 43 29.6 +1.0
ILAR pmax pmax
comp=Z,1.0nm,0.8s
USRK Ussuriysk Ar. 77.25 43 P **P** 06 43 30.6 -0.9
comp=Z,2.0nm,0.8s,baz=310,slow=6.0,SNR=4.4
YSS Yuzh-Sakhalins 80.72 36 e P **P** 06 43 50.7 +0.2
YSS pmax pmax
comp=Z,20nm,0.7s
MJAR Matsushiro Arr 85.96 46 LR LR 07 25 38.8
comp=Z,28nm,18.7s,baz=70,slow=38
WRA Warramunga Arr 120.62 92 PKP **PKPdf** 06 50 28.9 -0.7
comp=Z,0.2nm,0.5s,baz=323,slow=2.0,SNR=10.0
WRA Warramunga Arr 120.62 92 e PKIKP **PKPdf** 06 50 29.4 -0.2
ASAR Alice Springs 122.27 96 PKP **PKPdf** 06 50 32.2 -0.5
comp=Z,0.3nm,0.4s,baz=297,slow=1.6,SNR=6.2

RSPR ***12*** *07:10:28.7, 19.27N×68.56W, h131km±4km, MD3.7/10*
NEIC ***12*** *07:10:31.5±1.9, 19.4N±0.2×68.45W±0.07, h58km±77km,*
Error ellipse: s-maj=30.0km s-min=6.9km az=194.0
ISC 12 07:10:28.1±1.3, 19.4N±0.1×68.47W±0.04, h10km, n44,
σ0s73/56, 4C-9D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**1.05**	**235**			**Pg**	**07 10 47.4**	**-1.0**
AGPR	**Aguadilla, PR**	**1.59**	**126**	⇓ e	P	**Pn**	**07 10 56.4**	**0.0**
AGPR	**Aguadilla, PR**	**1.59**	**126**			**Pn**	**07 10 56.4**	**0.0**
SDD	**Santo Domingo**	**1.66**	**236**	Pn		**Pn**	**07 10 57.7**	**+0.5**
MPR	**Mayaguez**	**1.73**	**133**	Pn		**Pn**	**07 10 58.4**	**+0.1**
MPR						**Sn**	**07 11 20.3**	**-0.2**
LSP	**Las Mesas**	**1.79**	**133**	⇓ e	P	**Pn**	**07 10 59.8**	**+0.6**
LSP	**Las Mesas**	**1.79**	**133**			**Pn**	**07 10 59.8**	**+0.6**
AOPR	**Arecibo Observ**	**1.94**	**123**	⇓ e	P	**Pn**	**07 11 01.6**	**+0.4**
AOPR	**Arecibo Observ**	**1.94**	**123**	e S		**Sb**	**07 11 27.6**	**-0.2**
AOPR	**Arecibo Observ**	**1.94**	**123**			**Pn**	**07 11 01.6**	**+0.4**
AOPR						**Sb**	**07 11 27.6**	**-0.2**
MLPR	**Magueyes Islan**	**1.96**	**136**	⇓ e	P	**Pn**	**07 11 01.9**	**+0.3**
MLPR	**Magueyes Islan**	**1.96**	**136**	e S		**Sn**	**07 11 27.4**	**+1.2**
MLPR	**Magueyes Islan**	**1.96**	**136**			**Pn**	**07 11 01.9**	**+0.3**
MLPR						**Sn**	**07 11 27.4**	**+1.2**
BANI	**BANI**	**2.05**	**241**	Pn		**Pn**	**07 11 03.2**	**+0.4**
EMPR	**Esperanza - Ma**	**2.06**	**116**	⇓ e	P	**Pn**	**07 11 03.8**	**+1.0**
EMPR	**Esperanza - Ma**	**2.06**	**116**	e S		**Sb**	**07 11 31.0**	**-0.2**
EMPR	**Esperanza - Ma**	**2.06**	**116**			**Pn**	**07 11 03.8**	**+1.0**
EMPR						**Sb**	**07 11 31.0**	**-0.2**
GBPR Guanica, Bosqu 2.07 133 ⇓ e P **Pn** 07 11 03.1 +0.1
GBPR Guanica, Bosqu 2.07 133 e S **Sn** 07 11 30.1 +1.2
GBPR Guanica, Bosqu 2.07 133 **Pn** 07 11 03.1 +0.1
GBPR **Sn** 07 11 30.1 +1.2
SC01 Santiago de lo 2.13 271 Pn **Pb** 07 11 05.9 -0.9
OBIP Obispado Ponce 2.23 127 ⇑ e P **Pn** 07 11 05.3 +0.2
OBIP Obispado Ponce 2.23 127 e S **Sn** 07 11 34.0 +1.3
OBIP Obispado Ponce 2.23 127 **Pn** 07 11 05.3 +0.2
OBIP **Sn** 07 11 34.0 +1.3
CELP Cerrillos 2.23 126 ⇓ e P **Pn** 07 11 05.5 +0.4
CELP Cerrillos 2.23 126 e S **Sn** 07 11 33.9 +1.1
CELP Cerrillos 2.23 126 **Pn** 07 11 05.5 +0.4
CELP **Sn** 07 11 33.9 +1.1
SJG San Juan 2.55 120 Pn **Pn** 07 11 09.7 +0.1
SDDR Presa de Saban 2.69 262 **Pn** 07 11 13.4 +1.8
PDPR Patillas Dam, 2.70 120 ⇓ e P **Pn** 07 11 11.6 0.0
PDPR Patillas Dam, 2.70 120 e S **Sn** 07 11 45.4 +1.0
PDPR Patillas Dam, 2.70 120 **Pn** 07 11 11.6 0.0
PDPR **Sn** 07 11 45.4 +1.0
CBYP Canovanas 2.72 114 ⇓ e P **Pn** 07 11 12.2 +0.2
CBYP Canovanas 2.72 114 e S **Sn** 07 11 45.9 +0.9
CBYP Canovanas 2.72 114 **Pn** 07 11 12.2 +0.2
CBYP **Sn** 07 11 45.9 +0.9
HUMP Col San Antoni 2.78 116 ⇑ e P **Pn** 07 11 13.0 +0.2
HUMP Col San Antoni 2.78 116 e S **Sn** 07 11 46.7 +0.3
HUMP Col San Antoni 2.78 116 **Pn** 07 11 13.0 +0.2
HUMP **Sn** 07 11 46.7 +0.3
MTP Monte Pirata 3.06 115 ⇑ e P **Pn** 07 11 16.5 0.0
MTP Monte Pirata 3.06 115 e S **Sn** 07 11 53.9 +0.7
MTP Monte Pirata 3.06 115 **Pn** 07 11 16.5 0.0
MTP **Sn** 07 11 53.9 +0.7
CUPR Culebra, Puert 3.21 109 ⇑ e P **Pn** 07 11 18.5 -0.2
CUPR Culebra, Puert 3.21 109 e S **Sn** 07 11 58.0 +1.0
CUPR Culebra, Puert 3.21 109 **Pn** 07 11 18.5 -0.2
CUPR **Sn** 07 11 58.0 +1.0

KRSC ***12*** *07:11:09.4±2.1, 48.18N×156.13E, h16km±32km, ML4.0*
IDC ***12*** *07:11:12.5±5.8, 48.33N×154.32E, h66km±43km, mb3.4/5,*
mb1 3.7/7, mb1mx3.3/46, mbtmp3.7/7, ML2.5/2, MS2.7/3,
Ms1 2.7/3, ms1mx2.5/31, Error ellipse: s-maj=66.3km
s-min=28.2km az=173.0
ISC 12 07:11:04.9±1.2, 48.2N±0.1×154.5E±0.1, h10km, n36,
σ2s56/26, mb3.8/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.74**	**22**	e	P	**Pn**	**07 11 50.8**	**+1.9**
ALID	**Alaid**	**2.80**	**14**	e	P	**Pb**	**07 11 53.3**	**-1.6**
PAU	**Pauzhetka**	**3.64**	**23**	e	P	**Pn**	**07 12 04.3**	**+3.1**
KDTR	**Khodutka, Kamc**	**4.33**	**31**	e	P	**Pn**	**07 12 11.6**	**+1.0**
KDTR				e	S	**Sn**	**07 12 58.1**	**-3.0**
MIPR	**Malaya Ipel'ka**	**4.37**	**18**	e	P	**Pn**	**07 12 14.3**	**+3.0**
ASAK	**Asacha**	**4.76**	**26**	e	P	**Pn**	**07 12 19.3**	**+2.6**
GRL	**Gorelyy**	**4.96**	**26**	e	P	**Pn**	**07 12 22.1**	**+2.6**
RUS	**Russkaya**	**5.00**	**29**	e	P	**Pn**	**07 12 21.4**	**+1.6**
PETK	**Petropavlovsk-** 1.1nm,0.3s,baz=176,slow=10,SNR=14	**5.36**	**21**	P		**Pn**	**07 12 28.2**	**+3.3**
PETK				LR		LR	07 14 40.3	
	comp=Z,68nm,20.9s,baz=159,slow=40							
DALK	**Dalny**	**5.58**	**27**	e	P	**Pn**	**07 12 30.0**	**+2.1**
UGLR	**Uglovaya**	**5.76**	**27**	e	P	**Pn**	**07 12 33.7**	**+3.3**
KOK	**Koryaka**	**5.78**	**25**	e	P	**Pn**	**07 12 34.3**	**+3.6**
AVH	**Avacha**	**5.78**	**26**	e	P	**Pn**	**07 12 32.9**	**+2.2**
SMAR	**Somma**	**5.80**	**26**	e	P	**Pn**	**07 12 35.0**	**+3.9**
KRER	**Koryakskii**	**5.82**	**26**	e	P	**Pn**	**07 12 34.2**	**+2.9**
KRX	**Arik**	**5.84**	**25**	e	P	**Pn**	**07 12 34.7**	**+3.1**
GNL	**Ganaly**	**5.96**	**20**	e	P	**Pn**	**07 12 37.3**	**+4.1**
SPN	**Mys Shipunski**	**6.07**	**33**	e	P	**Pn**	**07 12 35.8**	**+1.2**
MKZ	**Mys Kozlova**	**7.84**	**32**	e	P	**Pn**	**07 12 58.7**	**-0.2**
MA2	**Magadan** comp=Z,28nm,18.6s,baz=168,slow=41	**11.65**	**351**	LR		LR	07 19 02.3	
KLR	**Kul'dur** comp=Z,40nm,18.2s,baz=296,slow=36	**15.06**	**283**	LR		LR	07 20 14.1	
USRK	**Ussuriysk Ar.** baz=81,slow=13,SNR=2.8	**16.07**	**264**	P		**P**	**07 14 52.9**	**-1.3**
H11N2	**WAKE ISLAND Hy** baz=343,slow=76,SNR=56	**30.08**	**156**	T		T	07 49 28.2	
H11N1	**WAKE ISLAND Hy** baz=343,slow=76,SNR=89	**30.09**	**156**	T		T	07 48 58.8	
H11N3	**WAKE ISLAND Hy** baz=343,slow=76,SNR=50	**30.09**	**156**	T		T	07 48 57.5	
H11S1	**WAKE ISLAND Hy** baz=344,slow=76,SNR=367	**31.20**	**157**	T		T	07 50 19.4	
H11S3	**WAKE ISLAND Hy** baz=344,slow=76,SNR=346	**31.20**	**157**	T		T	07 50 14.6	
H11S2	**WAKE ISLAND Hy** baz=344,slow=76,SNR=268	**31.21**	**157**	T		T	07 50 17.6	
ILAR	**Eielson Array** 0.6nm,1.0s,baz=276,slow=8.9,SNR=2.6	**34.87**	**40**	P		**P**	**07 17 56.7**	**+0.9**
NVAR	**Mina Array Bea** 0.5nm,0.7s,baz=294,slow=6.8,SNR=4.7	**60.96**	**64**	P		**P**	**07 21 19.1**	**+0.8**
FINES	**FINESS Array B** 1.0nm,0.7s,baz=18,slow=4.8,SNR=1.9	**63.17**	**335**	P		**P**	**07 21 31.0**	**-1.5**
TXAR	**Lajitas Array** 0.6nm,0.7s,baz=321,slow=6.9,SNR=5.7	**75.99**	**62**	P		**P**	**07 22 52.5**	**+0.2**
BRTR	**Keskin Array B** 0.8nm,0.6s,baz=86,slow=4.3,SNR=2.6	**78.00**	**317**	P		**P**	**07 23 03.2**	**-0.3**
H03N2	**Juan Fernandez** baz=309,slow=77,SNR=16	**137.81**	**90**	T		T	10 03 40.9	
H03N1	**Juan Fernandez** baz=309,slow=77,SNR=23	**137.82**	**90**	T		T	10 03 42.8	
H03N3	**Juan Fernandez** baz=309,slow=77,SNR=15	**137.83**	**90**	T		T	10 03 39.6	

JMA ***12*** *07:25:08.0±0.1, 43.52N×142.00E, h188km±2km, M3.5*
NIED ***12*** *07:25:08.1, 43.52N×142.00E, h188km, MW3.7, Moment*
Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm;
Mrr-2.01; Mθθ3.51; Mφφ-1.49; Mrθ0.70; Mrφ1.50; Mθφ1.55;
Fault plane solution: M₀3.74000×10¹⁴ NP1:
φs222.00000°, δ67.00000°, λ-135.00000°. NP2:
φs110.00000°, δ49.00000°, λ-31.00000°.
IDC ***12*** *07:25:11.8±15.0, 43.53N×141.98E, h222km±149km,*
mb3.1/9, mb1 3.3/9, mb1mx3.1/30, mbtmp3.6/9 Error
ellipse: s-maj=29.6km s-min=19.0km az=119.0
ISC 12 07:25:08.1±0.7, 43.49N±0.04×141.99E±0.05, h187km±5km,
n27, σ0s80/43, mb3.4/9, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAB	**Ashibetsu**	**0.17**	**85**	P		**Pn**	**07 25 33.1**	**+0.2**
JAB				e	S	**Sn**	**07 25 52.1**	**+0.2**
JHR	**Hokuryu**	**0.32**	**323**	P		**Pn**	**07 25 33.5**	**+0.4**
JHR				e	S	**Sn**	**07 25 53.1**	**+0.5**
JISS	**Ishikarishitsu**	**0.47**	**243**	P		**Pn**	**07 25 34.1**	**+0.5**
JISS				e	S	**Sn**	**07 25 53.7**	**+0.5**
JFR	**Furan**	**0.55**	**126**	P		**Pn**	**07 25 34.1**	**+0.1**
JFR				e	S	**Sn**	**07 25 53.5**	**-0.4**
JKK2	**Kamakawa 2**	**0.67**	**55**	P		**Pn**	**07 25 34.6**	**+0.1**
JKK2				e	S	**Sn**	**07 25 54.7**	**-0.3**
JEW	**Eniwo**	**0.76**	**211**	P		**Pn**	**07 25 35.4**	**+0.3**
JEW				e	S	**Sn**	**07 25 55.6**	**-0.2**
ASAJ	**Asahikawa**	**0.77**	**35**	P		**Pn**	**07 25 34.9**	**-0.1**
ASAJ				e	S	**Sn**	**07 25 55.3**	**

ILAR	**Eielson Array**	**43.90**	**36**	P	**P**	**07 32 55.4**	**-0.3**
	0.5nm,0.9s,baz=272,slow=5.9,SNR=4.9							
FINES	**FINESS Array B**	**63.34**	**331**	P	**P**	**07 35 16.4**	**-0.4**
	0.9nm,0.7s,baz=52,slow=9.9,SNR=4.6							
WRA	**Warramunga Arr**	**63.51**	**188**	P	**P**	**07 35 18.2**	**-0.1**
	0.2nm,0.5s,baz=6.6,slow=6.8,SNR=6.9							
ASAR	**Alice Springs**	**67.24**	**188**	P	**P**	**07 35 43.1**	**+0.9**
	0.2nm,0.5s,baz=30,slow=9.6,SNR=1.9							
NVAR	**Mina Array Bea**	**70.85**	**55**	P	**P**	**07 36 05.1**	**+0.4**
	0.3nm,0.6s,baz=316,slow=3.8,SNR=2.7							
PDAR	**Pinedale Array**	**72.88**	**47**	P	**P**	**07 36 16.9**	**+0.2**
	0.3nm,0.4s,baz=260,slow=0.5,SNR=7.0							

*IDC **12** 07:41:16.0±1.4,53.86N×90.90E,h0km,mb3.5/1, mb1 3.5/7,mb1mx3.3/44,mbtmp3.4/7,ML3.3/5,Error ellipse: s-maj=19.1km s-min=13.2km az=150.0*
*NNC **12** 07:41:21.4±2.8,53.72N×90.36E,h0km,mb4.1,mpv3.8, Error ellipse: s-maj=28.5km s-min=19.2km az=174.0, Suspected Mining explosion.*

ISC 12 07:41:15.7±1.0,53.89N±0.09×90.86E±0.07,h0km,n11, σ1ᵍ45/17,4C-4D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**3.57**	**273**	Pn	**Pn**	**07 42 14.2**	**+1.8**
	0.6nm,0.3s,baz=102,slow=12,SNR=5.3						
ZALV				Pg	**Pb**	**07 42 20.5**	**+0.8**
	4.5nm,0.3s,baz=84,slow=18,SNR=26						
ZALV				Sn	**Sn**	**07 42 55.6**	**+0.4**
	3.0nm,0.3s,baz=92,slow=14,SNR=5.6						
ZALV				Lg	Lg	07 43 10.9	
	8.1nm,0.3s,baz=86,slow=28,SNR=11						
TLY	**Talaya**	**8.06**	**101**	Lg	Lg	07 45 20.1	
	0.0nm,0.3s,baz=263,slow=17,SNR=5.8						
KURK	**Kurchatov**	**8.15**	**252**	⇓Pn	**Pn**	**07 43 16.6**	**+1.5**
	4.3nm,0.8s						
KURK				⇓Sn	**Sn**	**07 44 45.6**	**-2.3**
	22nm,0.8s						
KURK				⇑Lg	Lg	07 45 33.4	
	54nm,1.0s						
KURBB	**Kurchatov Arra**	**8.24**	**252**	Pn	**Pn**	**07 43 17.3**	**+0.9**
	0.3nm,0.3s,baz=66,slow=15,SNR=16						
KURBB				Sn	**Sn**	**07 44 47.7**	**-2.5**
	0.1nm,0.3s,baz=66,slow=25,SNR=4.9						
KURBB				Lg	Lg	07 45 36.9	
	0.1nm,0.3s,baz=66,slow=30,SNR=11						
KURBB	**Kurchatov Arra**	**8.24**	**252**	⇓Pn	**Pn**	**07 43 17.9**	**+1.5**
	3.4nm,0.4s						
KURBB				⇑Sn	**Sn**	**07 44 48.2**	**-2.0**
	64nm,0.8s						
KURBB				⇑Lg	Lg	07 45 35.6	
	113nm,0.8s						
MK31	**Makanchi Array**	**8.97**	**221**	Pn	**Pn**	**07 43 27.2**	**+0.8**
	1.3nm,0.5s,baz=31,slow=13,SNR=35						
MK31				⇑Sn	**Sn**	**07 45 08.2**	**+0.1**
	4.4nm,0.7s,baz=40,slow=24,SNR=4.6						
MK31				⇓Lg	Lg	07 45 55.0	
	38nm,1.1s,baz=52,slow=31,SNR=4.6						
MKAR	**Makanchi Array**	**8.97**	**221**	Pn	**Pn**	**07 43 27.3**	**+0.8**
	1.1nm,0.3s,baz=36,slow=12,SNR=20						
MKAR				Sn	**Sn**	**07 45 06.7**	**-1.4**
	0.4nm,0.3s,baz=33,slow=25,SNR=4.7						
MKAR				Lg	Lg	07 45 56.3	
	0.5nm,0.3s,baz=36,slow=30,SNR=3.7						
SONM	**Songino Array**	**11.53**	**115**	Pn	**Pn**	**07 44 01.1**	**-0.4**
	0.4nm,0.3s,baz=352,slow=32,SNR=1.2						
SONM				Lg	Lg	07 47 14.1	
	0.1nm,0.3s,baz=299,slow=28,SNR=10						
BVAR	**Borovoye Array**	**12.23**	**274**	Pn	**Pn**	**07 44 10.3**	**-0.7**
	0.1nm,0.3s,baz=140,slow=51,SNR=1.7						
NRIK	**Noril'sk**	**15.58**	**356**	Pn	**Pn**	**07 44 55.2**	**-1.0**
	0.0nm,0.3s,baz=166,slow=13,SNR=1.7						
ILAR	**Eielson Array**	**53.64**	**27**	P	**P**	**07 50 38.3**	**0.0**
	0.6nm,0.9s,baz=319,slow=5.2,SNR=4.7						

WEL 12 07:44:15.4,38.S±2.×17.6E±.,h164km±2km,M2.9/54, MLv2.9/54,Error ellipse: s-maj=0.0km s-min=0.0km az=120.3,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WPRZ	**Whakapapatarin**	**0.16**	**126**	P	Pn	07 44 37.4	+0.1
ALRZ	**Allen Road**	**0.31**	**117**	P	Pn	07 44 37.8	+0.2
WATZ	**Wairara**	**0.35**	**216**	P	Pn	07 44 38.1	+0.3
HATZ	**Hinemaiaia**	**0.47**	**171**	P	Pn	07 44 38.1	-0.1
HATZ				S	Sn	07 44 54.5	-1.4
RATZ	**Rangitukua**	**0.47**	**201**	P	Pn	07 44 38.3	0.0
MRHZ	**Matea Rd**	**0.53**	**141**	P	Pn	07 44 38.4	-0.1
MRHZ				S	Sn	07 44 55.5	-0.8
RITZ	**Rihia Road**	**0.56**	**191**	P	Pn	07 44 39.2	+0.6
KATZ	**Kakaramea**	**0.60**	**203**	P	Pn	07 44 39.3	+0.3
MUGZ	**Murupara**	**0.61**	**95**	P	Pn	07 44 38.7	-0.2
MUGZ				S	Sn	07 44 56.4	-0.4
KRVZ	**Karewarewa**	**0.72**	**202**	P	Pn	07 44 39.9	+0.2
TMVZ	**Te Maari**	**0.73**	**198**	P	Pn	07 44 39.9	+0.2
ETVZ	**East Tongariro**	**0.74**	**197**	P	Pn	07 44 40.0	+0.2
WTVZ	**West Tongariro**	**0.76**	**205**	P	Pn	07 44 39.9	+0.1
WTVZ				S	Sn	07 44 58.0	-0.8
TWVZ	**Taurewa**	**0.78**	**214**	P	Pn	07 44 40.0	0.0
OTVZ	**Oturere**	**0.78**	**199**	P	Pn	07 44 40.5	+0.4
MTHZ	**Maungataniwha**	**0.79**	**123**	P	Pn	07 44 40.3	+0.3
MTHZ				S	Sn	07 44 58.0	-0.9
TOZ	**Tahuroa Road**	**0.80**	**331**	P	Pn	07 44 40.2	+0.2
RTZ	**Ruatahuna**	**0.80**	**104**	P	Pn	07 44 40.1	+0.1
RTZ				S	Sn	07 44 58.2	-0.8
NGZ	**Ngauruhoe**	**0.81**	**202**	P	Pn	07 44 40.4	+0.2
NGZ				S	Sn	07 44 58.6	-0.8
BKZ	**Black Stump Fm**	**0.84**	**152**	P	Pn	07 44 40.2	+0.1
BKZ				S	Sn	07 44 57.9	-1.7
URZ	**Urewera**	**0.89**	**80**	P	Pn	07 44 40.3	-0.3
URZ				S	Sn	07 44 58.2	-1.8
FWVZ	**Far West T-bar**	**0.90**	**202**	P	Pn	07 44 41.0	0.0
HIZ	**Hauiti**	**0.90**	**264**	P	Pn	07 44 41.1	+0.4
DRZ	**Dome Shelter**	**0.91**	**201**	P	Pn	07 44 41.3	+0.1
WHVZ	**Whangaehu Hut**	**0.91**	**200**	P	Pn	07 44 41.1	0.0
NMHZ	**Naumai**	**0.92**	**137**	P	Pn	07 44 42.0	+1.0
NMHZ				S	Sn	07 45 01.1	+0.4
WNVZ	**Wahianoa**	**0.95**	**199**	P	Pn	07 44 41.3	0.0
RAHZ	**Arahi**	**0.98**	**120**	P	Pn	07 44 42.1	+0.8
RAHZ				S	Sn	07 45 01.0	-0.4
MOVZ	**Moawhango**	**1.00**	**191**	P	Pn	07 44 41.2	-0.3
MOVZ				S	Sn	07 44 59.4	-2.4
PKVZ	**Pokaka**	**1.00**	**210**	P	Pn	07 44 41.6	0.0
PKVZ				S	Sn	07 45 01.0	-0.8
MTVZ	**Mangateitei**	**1.04**	**203**	P	Pn	07 44 42.0	+0.1
KWHZ	**Kaweka Forest**	**1.05**	**162**	P	Pn	07 44 42.3	+0.3
BHHZ	**Black Hill Sta**	**1.06**	**177**	P	Pn	07 44 41.9	-0.2
BHHZ				S	Sn	07 45 00.5	-2.2
SNGZ	**Shannon Statio**	**1.11**	**109**	P	Pn	07 44 43.0	+0.6
SNGZ				S	Sn	07 45 02.3	-0.9
RAGZ	**Rawiri**	**1.12**	**94**	P	Pn	07 44 42.9	+0.4
RAGZ				S	Sn	07 45 02.7	-0.7
ARHZ	**Aropaoanui**	**1.15**	**137**	P	Pn	07 44 43.4	+0.7
ARHZ				S	Sn	07 45 03.5	-0.2
MCHZ	**McNeill Hill**	**1.16**	**152**	P	Pn	07 44 43.6	+0.9
MCHZ				S	Sn	07 45 04.0	0.0
VRZ	**Vera Road**	**1.19**	**234**	P	Pn	07 44 43.3	+0.2
VRZ				S	Sn	07 45 05.3	+0.9
MWZ	**Matawai**	**1.21**	**86**	P	Pn	07 44 43.4	+0.1
MWZ				S	Sn	07 45 03.3	-1.4
KRHZ	**Kereru**	**1.25**	**167**	P	Pn	07 44 43.8	+0.2
KRHZ				S	Sn	07 45 04.1	-1.4
RUGZ	**Raukumara Rang**	**1.40**	**71**	P	Pn	07 44 44.4	-0.8
RUGZ				S	Sn	07 45 05.4	-2.7
RIGZ	**Rimuhau**	**1.41**	**102**	P	Pn	07 44 45.6	+0.4
RIGZ				S	Sn	07 45 07.2	-0.9
KNZ	**Kokohu**	**1.44**	**115**	P	Pn	07 44 45.7	+0.3
KNZ				S	Sn	07 45 07.5	-1.0
MKAZ	**Moumakai**	**1.48**	**333**	P	Pn	07 44 46.0	+0.2
CKHZ	**Cape Kidnapper**	**1.49**	**146**	P	Pn	07 44 46.5	+0.6
CKHZ				S	Sn	07 45 08.4	-1.1
PNHZ	**Pukenui**	**1.50**	**174**	P	Pn	07 44 45.7	-0.2
PNHZ				S	Sn	07 45 08.0	-1.7
KAHZ	**Kahuranaki**	**1.53**	**154**	P	Pn	07 44 46.8	+0.5
WAZ	**Wanganui**	**1.54**	**210**	P	Pn	07 44 46.3	-0.1
PRGZ	**Paritu Road**	**1.56**	**109**	P	Pn	07 44 46.9	+0.3
HAZ	**Te Kaha**	**1.56**	**65**	P	Pn	07 44 46.1	-0.5
HAZ				S	Sn	07 45 08.0	-2.7
TWGZ	**Tauwhareparae**	**1.58**	**82**	P	Pn	07 44 47.3	+0.5
TSZ	**Takapari Road**	**1.63**	**181**	P	Pn	07 44 47.1	-0.3
MHGZ	**Mahia Peninsul**	**1.66**	**117**	P	Pn	07 44 48.2	+0.5
WPHZ	**Waipukurau**	**1.67**	**168**	P	Pn	07 44 47.6	-0.1
KUZ	**Kuaotunu**	**1.69**	**353**	P	Pn	07 44 47.6	-0.3
PREZ	**Palmer Road**	**1.70**	**237**	P	Pn	07 44 48.5	+0.4
NEZ	**North Egmont**	**1.71**	**240**	P	Pn	07 44 48.7	+0.5
PKGZ	**Pakihiroa**	**1.73**	**73**	P	Pn	07 44 48.5	+0.1
CNGZ	**Carnagh Statio**	**1.74**	**93**	P	Pn	07 44 49.3	+0.8
PXZ	**Pawanui**	**1.74**	**157**	P	Pn	07 44 48.6	+0.2
WIAZ	**Waiheke Island**	**1.77**	**337**	P	Pn	07 44 49.0	+0.2
KHEZ	**Kahui Hut**	**1.77**	**240**	P	Pn	07 44 49.1	+0.2
PUZ	**Puketiti**	**1.82**	**79**	P	Pn	07 44 49.1	-0.2
MBAZ	**Motutapu North**	**1.87**	**332**	P	Pn	07 44 50.0	+0.1
DVHZ	**Dannevirke**	**1.88**	**176**	P	Pn	07 44 49.3	-0.6
PRHZ	**Porangahau**	**1.91**	**165**	P	Pn	07 44 50.1	-0.2
POWZ	**Post Office Ro**	**1.97**	**185**	P	Pn	07 44 50.3	-0.7
WMGZ	**Waiomatatini S**	**2.00**	**73**	P	Pn	07 44 51.4	0.0
ANWZ	**Angora Road**	**2.07**	**170**	P	Pn	07 44 51.8	-0.2
PRWZ	**Pori Road**	**2.13**	**180**	P	Pn	07 44 52.3	-0.5
MRZ	**Mangatainoka R**	**2.25**	**188**	P	Pn	07 44 53.1	-1.1
BFZ	**Birch Farm**	**2.26**	**175**	P	Pn	07 44 53.4	-0.9
TIWZ	**Tintock**	**2.35**	**182**	P	Pn	07 44 54.3	-1.0
OGWZ	**Otaki Gorge**	**2.47**	**195**	P	Pn	07 44 55.5	-1.2
CPWZ	**Castlepoint**	**2.49**	**176**	P	Pn	07 44 56.4	-0.6
HOWZ	**Holdsworth Sta**	**2.50**	**188**	P	Pn	07 44 55.5	-1.6
KIW	**Kapiti Island**	**2.57**	**199**	P	Pn	07 44 56.3	-1.7
TMWZ	**Te Maipa**	**2.68**	**182**	P	Pn	07 44 57.8	-1.6
MTW	**Mount Morrison**	**2.76**	**188**	P	Pn	07 44 58.3	-1.9
CAW	**Cannon Point**	**2.77**	**195**	P	Pn	07 44 58.7	-1.8
DUWZ	**D'Urville Isla**	**2.86**	**213**	P	Pn	07 44 59.5	-2.0
TRWZ	**Traveller**	**2.98**	**184**	P	Pn	07 45 01.2	-1.8
PAWZ	**Paruwai Farm**	**2.98**	**188**	P	Pn	07 45 01.0	-2.0
WEL	**Wellington**	**3.01**	**198**	P	Pn	07 45 01.3	-2.0
MSWZ	**Moikau Station**	**3.04**	**191**	P	Pn	07 45 01.6	-2.1
TCW	**Tory Channel**	**3.08**	**205**	P	Pn	07 45 02.0	-2.2
BHW	**Baring Head**	**3.10**	**196**	P	Pn	07 45 02.2	-2.2
PLWZ	**Palliser**	**3.19**	**190**	P	Pn	07 45 03.2	-2.4
TUWZ	**Tuamarina**	**3.39**	**207**	P	Pn	07 45 05.8	-2.3
NNZ	**Nelson**	**3.44**	**215**	P	Pn	07 45 06.3	-2.4
QRZ	**Quartz Range**	**3.59**	**227**	P	Pn	07 45 07.6	-3.1
BSWZ	**Blackbirch Sta**	**3.67**	**206**	P	Pn	07 45 09.4	-2.2
THZ	**Tophouse**	**4.09**	**214**	P	Pn	07 45 14.4	-2.7
KHZ	**Kahutara**	**4.41**	**204**	P	Pn	07 45 18.4	-2.7
GVZ	**Greta Valley S**	**5.06**	**205**	P	Pn	07 45 26.6	-3.1
LTZ	**Lake Taylor**	**5.19**	**212**	P	Pn	07 45 28.6	-2.9
OKCZ	**Okains Bay**	**5.74**	**202**	P	Pn	07 45 35.1	-3.6
MQZ	**McQueen's Vall**	**5.85**	**205**	P	Pn	07 45 35.7	-4.4

IDC 12 07:59:46.2±2.6,54.16N×86.52E,h0km,mb1 3.1/2, mb1mx3.0/56,mbtmp3.1/2,ML2.8/2,Error ellipse: s-maj=21.1km s-min=12.5km az=59.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.02**	**259**	*i*		08 05 10.0	
	baz=78,slow=336,SNR=2.6						
ZALV	**Zalesovo Beam**	**1.02**	**259**	Pg	Pg	08 00 04.4	-1.4
	1.2nm,0.3s,baz=76,slow=16,SNR=9.0						
ZALV				Lg	Lg	08 00 20.5	
	2.6nm,0.3s,baz=76,slow=28,SNR=15						
KURBB	**Kurchatov Arra**	**6.04**	**237**	Pn	Pn	08 01 17.5	+0.8
	0.1nm,0.3s,baz=54,slow=13,SNR=11						
KURBB				Lg	Lg	08 02 58.7	
	0.0nm,0.3s,baz=57,slow=32,SNR=2.4						
MKAR	**Makanchi Array**	**7.85**	**202**	Pn	Pn	08 01 42.8	+1.1
	0.3nm,0.3s,baz=24,slow=14,SNR=8.5						
MKAR				Sn	Sn	08 03 10.7	-0.5
	0.1nm,0.3s,baz=25,slow=24,SNR=2.1						

*GCG **12** 08:10:58.3±0.6,13.50N×91.84W,h38km,MD3.8*
*IDC **12** 08:11:01.4±2.6,13.64N×91.38W,h0km,mb3.5/1, mb1 3.8/3,mb1mx3.5/31,mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=154.0km s-min=32.1km az=41.0*
*SNET **12** 08:11:03.4±1.0,13.73N×91.24W,h13km±9km,ML3.6*
*UCR **12** 08:11:03.3±1.0,13.74N×91.23W,h11km±9km,ML3.5*
*INET **12** 08:11:10.5,13.23N×90.88W,h15km,MW3.0*

ISC 12 08:11:01.3±1.2,13.59N±0.08×91.37W±0.06,h10km,n34, σ1ᵍ15/41,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTAL	**Retalhuleu**	**0.98**	**341**	*e*P	**Pg**	**08 11 19.5**	**-0.8**
FUG	**Fuego 3**	**1.00**	**31**	*e*P	**Pn**	**08 11 21.3**	**-0.3**
PCG	**Pacaya**	**1.09**	**43**	*e*P	**Pn**	**08 11 22.8**	**-0.1**
NBG	**Las Nubes**	**1.41**	**45**	*e*P	**Pg**	**08 11 28.2**	**-0.2**
NBG				*e*S	**Sg**	**08 11 51.0**	**+4.4**
NUBE	**Las Nubes**	**1.58**	**78**	*e*P	**Pn**	**08 11 28.0**	**-1.5**
NUBE				*e*S	**Sn**	**08 11 47.8**	**-2.4**
NUBE				IAML		08 11 57.3	
	comp=Z,221nm,0.3s						
NUBE	**Las Nubes**	**1.58**	**78**	*e*P	**Pn**	**08 11 28.0**	**-1.5**
NUBE				*e*S	**Sn**	**08 11 47.8**	**-2.4**
NUBE				IAML		08 11 57.3	
	comp=Z,221nm,0.3s						
RTR	**El Retiro**	**1.71**	**79**	*e*P	**Pn**	**08 11 30.8**	**-0.5**
RTR	**El Retiro**	**1.71**	**79**	*e*P	**Pn**	**08 11 30.8**	**-0.5**
SBLS	**San Blas**	**1.72**	**81**	*e*P	**Pn**	**08 11 30.5**	**-1.1**
SBLS	**San Blas**	**1.72**	**81**	*e*P	**Pn**	**08 11 30.5**	**-1.1**
CEDA	**San Andres**	**1.93**	**83**	*e*P	**Pn**	**08 11 33.7**	**-0.6**
CEDA				IAML		08 12 10.7	
	comp=Z,797nm,0.5s						
CEDA	**San Andres**	**1.93**	**83**	*e*P	**Pn**	**08 11 33.7**	**-0.6**
CEDA				IAML		08 12 10.7	
	comp=Z,797nm,0.5s						
TACO	**Tacachico**	**2.00**	**79**	*e*P	**Pn**	**08 11 34.7**	**-0.5**
TACO	**Tacachico**	**2.00**	**79**	*e*P	**Pn**	**08 11 34.7**	**-0.5**
SNET	**Serv Nac Est T**	**2.08**	**87**	*e*P	**Pn**	**08 11 36.2**	**-0.2**
SNET				*e*S	**Sn**	**08 12 01.1**	**-1.4**
SNET				IAML		08 12 07.0	
	comp=Z,765nm,0.2s						
SNET	**Serv Nac Est T**	**2.08**	**87**	*e*P	**Pn**	**08 11 36.2**	**-0.2**
SNET				*e*S	**Sn**	**08 12 01.1**	**-1.4**
SNET				IAML		08 12 07.0	
	comp=Z,765nm,0.2s						
MTO3	**Montecristo**	**2.11**	**67**	*e*P	**Pn**	**08 11 36.8**	**-0.2**
MTO3	**Montecristo**	**2.11**	**67**	*e*P	**Pn**	**08 11 36.8**	**-0.2**
ESQI	**Esquipulas**	**2.19**	**64**	*e*P	**Pn**	**08 11 37.9**	**-0.1**
MRL	**Marmol**	**2.21**	**48**	*e*P	**Pb**	**08 11 40.7**	**-0.8**
LFRS	**El Faro**	**2.25**	**89**	*e*P	**Pn**	**08 11 38.9**	**+0.1**
LFRS				*e*S	**Sn**	**08 12 06.2**	**-0.4**
LFRS	**El Faro**	**2.25**	**89**	*e*P	**Pn**	**08 11 38.9**	**+0.1**
LFRS				*e*S	**Sn**	**08 12 06.2**	**-0.4**
PAVA	**Las Pavas**	**2.37**	**87**	*e*P	**Pn**	**08 11 40.3**	**-0.1**
PAVA	**Las Pavas**	**2.37**	**87**	*e*P	**Pn**	**08 11 40.3**	**-0.1**
COEG	**Centro de Oper**	**2.42**	**89**	*e*P	**Pn**	**08 11 41.0**	**-0.1**
COEG				IAML		08 12 19.0	
	comp=Z,433nm,0.3s						
COEG	**Centro de Oper**	**2.42**	**89**	*e*P	**Pn**	**08 11 41.0**	**-0.1**
COEG				IAML		08 12 19.0	
	comp=Z,433nm,0.3s						
COEB	**Comit de Eme**	**2.77**	**92**	*e*P	**Pn**	**08 11 45.6**	**-0.2**
COEB	**Comit de Eme**	**2.77**	**92**	*e*P	**Pn**	**08 11 45.6**	**-0.2**
LCND	**La Caada**	**3.40**	**94**	*e*P	**Pn**	**08 11 54.7**	**+0.2**
LCND	**La Caada**	**3.40**	**94**	*e*P	**Pn**	**08 11 54.7**	**+0.2**
JTS	**Las Juntas de**	**7.09**	**117**	Pn	**Pn**	**08 12 46.8**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=318,slow=19,SNR=1.5						
TXAR	**Lajitas Array**	**19.37**	**326**	P	**Pn**	**08 15 28.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=149,slow=13,SNR=6.8						
NVAR	**Mina Array Bea**	**34.37**	**321**	P	**P**	**08 17 50.2**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=128,slow=8.4,SNR=5.7						
WRA	**Warramunga Arr**	**135.88**	**255**	PKP	**PKiKP**	**08 30 24.7**	**-0.2**
	comp=Z,0.4nm,1.0s,baz=91,slow=3.4,SNR=2.2						

NNC 12 08:11:09.3±9.6,53.13N×89.03E,h0km,mb3.6,mpv3.3, 6C-3D,Error ellipse: s-maj=81.4km s-min=60.2km az=14.0,Suspected Mining explosion.,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.88**	**254**	⇓Pn	Pn	08 12 51.2	-0.1
	1.1nm,0.8s						
KURK				⇓Sn	Sn	08 14 09.3	-0.9
	1.5nm,0.6s						
KURK				⇑Lg	Lg	08 14 51.7	
	2.3nm,0.6s						
KURBB	**Kurchatov Arra**	**6.97**	**253**	⇑Pn	Pn	08 12 53.2	+0.7
	2.2nm,0.5s						
KURBB				⇑Sn	Sn	08 14 11.0	-1.5
	5.6nm,0.6s						
KURBB				⇑Lg	Lg	08 14 54.8	
	5.9nm,0.7s						
MK31	**Makanchi Array**	**7.69**	**217**	⇑Pn	Pn	08 13 04.9	+2.5
	0.6nm,0.6s,baz=36,slow=12,SNR=14						
MK31				⇓Sn	Sn	08 14 33.9	+3.7
	0.8nm,0.5s,baz=38,slow=26,SNR=7.8						
MK31				⇑Lg	Lg	08 15 18.6	
	0.5nm,0.6s						

IDC 12 08:24:09.2±10.0,15.50S×176.94W,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.6/22,mbtmp3.7/3,Error ellipse: s-maj=458.3km s-min=37.6km az=140.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.50**	**257**	P	P	08 32 38.5	-0.3
	0.1nm,0.3s,baz=84,slow=6.9,SNR=23						
ASAR	**Alice Springs**	**46.84**	**252**	P	P	08 32 41.4	0.0
	1.7nm,0.5s,baz=86,slow=7.9,SNR=39						
ILAR	**Eielson Array**	**83.24**	**12**	P	P	08 36 37.2	0.0
	0.6nm,1.1s,baz=220,slow=6.0,SNR=4.0						

ROM 12 08:29:53.2±0.1,43.462N±0.002×12.513E±0.004, h9km,ML1.8/16,16C-14D,Error ellipse: s-maj=0.3km s-min=0.2km az=297.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIEI	**Pieia**	**0.08**	**12**	⇑*e*P	Pg	08 29 55.7	+0.3
PIEI				S	Sg	08 29 57.4	+0.3
PIEI				AML	AML		
	comp=N,1690μm,0.1s						
PIEI				AML	AML		
	comp=E,1955μm,0.4s						
PIEI	**Pieia**	**0.08**	**12**	⇑P	Pg	08 29 55.7	+0.3
PIEI				AML	AML		
	comp=E,1955μm,0.4s						
PIEI				AML	AML		
	comp=N,1690μm,0.1s						
PIEI				AML	AML		
	comp=E,1955μm,0.4s						
PIEI				AML	AML		
	comp=N,1690μm,0.1s						
ATPI	**Pietralunga -**	**0.08**	**262**	P	Pg	08 29 55.8	+0.3
ATPI				S	Sg	08 29 57.5	+0.4
ATPI				AML	AML		
	comp=N,890μm,0.3s						
ATPI				AML	AML		
	comp=E,612μm,1.5s						
ATPI	**Pietralunga -**	**0.08**	**262**	AML	AML		
	comp=N,890μm,0.3s						
ATPI				AML	AML		
	comp=E,612μm,1.5s						
ATPI				AML	AML		
	comp=N,890μm,0.3s						
ATPI				AML	AML		
	comp=E,612μm,1.5s						
ATFO	**Monte Foce - G**	**0.10**	**156**	⇓*e*P	Pg	08 29 56.2	+0.4
ATFO				S	Sg	08 29 58.2	+0.6
ATFO				AML	AML		
	comp=E,908μm,0.3s						
ATFO				AML	AML		
	comp=N,916μm,0.5s						
ATFO	**Monte Foce - G**	**0.10**	**156**	⇓P	Pg	08 29 56.2	+0.4
ATFO				AML	AML		
	comp=E,908μm,0.3s						
ATFO				AML	AML		
	comp=N,916μm,0.5s						
ATFO				AML	AML		
	comp=N,916μm,0.5s						
ATFO				AML	AML		
	comp=E,908μm,0.3s						
ATVO	**AVT- Monte Val**	**0.11**	**224**	⇓*e*P	Pg	08 29 56.3	+0.4
ATVO				S	Sg	08 29 58.4	+0.7
ATVO				AML	AML		
	comp=E,771μm,0.2s						
ATVO				AML	AML		
	comp=N,693μm,0.2s						
ATVO	**AVT- Monte Val**	**0.11**	**224**	⇓P	Pg	08 29 56.3	+0.5
ATVO				AML	AML		
	comp=E,771μm,0.2s						
ATVO				AML	AML		
	comp=N,693μm,0.2s						
ATVO				AML	AML		
	comp=N,693μm,0.2s						
ATVO				AML	AML		
	comp=E,771μm,0.2s						
NARO	**Abbazia di Nar**	**0.16**	**18**	⇑*e*P	Pg	08 29 57.0	+0.5
NARO				S	Sg	08 29 59.7	+0.8
NARO				AML	AML		
	comp=E,486μm,0.2s						
NARO				AML	AML		
	comp=N,332μm,1.5s						
NARO	**Abbazia di Nar**	**0.16**	**18**	⇓P	Pg	08 29 57.1	+0.5
NAR

	comp=N,950μm,1.0s								
MURB					AML	AML			
	comp=N,853μm,1.0s								
MURB					AML	AML			
	comp=E,1265μm,0.4s								
MURB					AML	AML			
	comp=E,1160μm,0.2s								
PE3	**Peglio**	**0.23**	**357**	⇑*e*	P	Pg	08 29 59.1	+1.1	
PE3					S	Sg	08 30 03.5	+2.3	
PE3	**Peglio**	**0.23**	**357**	⇓	P	Pg	08 29 59.1	+1.2	
MPAG	**Monte Paganucc**	**0.24**	**47**	⇓*e*	P	Pg	08 29 58.8	+0.6	
MPAG					S	Sg	08 30 03.0	+1.5	
MPAG					AML	AML			
	comp=N,170μm,1.2s								
MPAG					AML	AML			
	comp=E,174μm,1.0s								
MPAG	**Monte Paganucc**	**0.24**	**47**	⇑	P	Pg	08 29 58.8	+0.6	
MPAG					AML	AML			
	comp=E,174μm,1.0s								
MPAG					AML	AML			
	comp=N,170μm,1.2s								
MPAG					AML	AML			
	comp=N,170μm,1.2s								
MPAG					AML	AML			
	comp=E,174μm,1.0s								
FOSV	**Fossato di Vic**	**0.25**	**133**	⇓*e*	P	Pg	08 29 58.6	+0.4	
FOSV					S	Sg	08 30 03.3	+1.8	
FOSV	**Fossato di Vic**	**0.25**	**133**	P		Pg	08 29 57.5	-0.7	
ATTE	**AVT- Monte Tez**	**0.29**	**204**	⇑*e*	P	Pg	08 29 59.5	+0.6	
ATTE					S	Sb	08 30 04.2	-1.3	
ATTE					AML	AML			
	comp=E,93μm,1.1s								
ATTE					AML	AML			
	comp=N,61μm,0.3s								
ATTE	**AVT- Monte Tez**	**0.29**	**204**	⇓	P	Pg	08 29 59.6	+0.7	
ATTE					AML	AML			
	comp=E,93μm,1.1s								
ATTE					AML	AML			
	comp=N,61μm,0.3s								
ATTE					AML	AML			
	comp=E,93μm,1.1s								
ATTE					AML	AML			
	comp=N,61μm,0.3s								
ATCC	**AVT- Casa Cast**	**0.29**	**161**	⇑*e*	P	Pb	08 29 59.9	-0.7	
ATCC					S	Sb	08 30 05.0	-0.5	
ATCC					AML	AML			
	comp=E,282μm,0.6s								
ATCC					AML	AML			
	comp=N,258μm,0.2s								
ATCC	**AVT- Casa Cast**	**0.29**	**161**	P		Pb	08 29 59.9	-0.7	
ATCC					AML	AML			
	comp=E,282μm,0.6s								
ATCC					AML	AML			
	comp=N,258μm,0.2s								
ATCC					AML	AML			
	comp=E,282μm,0.6s								
ATCC					AML	AML			
	comp=N,258μm,0.2s								
FSSB	**Fossombrone**	**0.30**	**40**	⇑*e*	P	Pg	08 29 59.7	+0.5	
FSSB					S	Sb	08 30 04.9	-1.0	
FSSB					AML	AML			
	comp=N,472μm,0.4s								
FSSB					AML	AML			
	comp=E,335μm,0.5s								
FSSB	**Fossombrone**	**0.30**	**40**	⇓	P	Pg	08 29 59.8	+0.6	
FSSB					AML	AML			
	comp=E,335μm,0.5s								
FSSB					AML	AML			
	comp=N,472μm,0.4s								
FSSB					AML	AML			
	comp=N,472μm,0.4s								
FSSB					AML	AML			
	comp=E,335μm,0.5s								
ARVD	**Arcevia**	**0.31**	**83**	⇑*e*	P	Pg	08 30 00.1	+0.6	
ARVD					S	Sb	08 30 05.4	-0.9	
ARVD					AML	AML			
	comp=E,88μm,0.5s								
ARVD					AML	AML			
	comp=N,97μm,0.3s								
ARVD	**Arcevia**	**0.31**	**83**	⇑	P	Pg	08 30 00.1	+0.7	
ARVD					AML	AML			
	comp=E,88μm,0.5s								
ARVD					AML	AML			
	comp=N,97μm,0.3s								
ARVD					AML	AML			
	comp=E,88μm,0.5s								
ARVD					AML	AML			
	comp=N,97μm,0.3s								
SNTG	**Esanatoglia**	**0.37**	**123**	⇑*e*	P	Pb	08 30 01.5	-0.5	
SNTG					S	Sb	08 30 07.5	-0.4	
SNTG					AML	AML			
	comp=N,64μm,1.3s								
SNTG					AML	AML			
	comp=E,55μm,1.5s								
SNTG	**Esanatoglia**	**0.37**	**123**	P		Pb	08 30 01.7	-0.3	
SNTG					AML	AML			
	comp=E,55μm,1.5s								
SNTG					AML	AML			
	comp=N,64μm,1.3s								
SNTG					AML	AML			
	comp=E,55μm,1.5s								
SNTG					AML	AML			
	comp=N,64μm,1.3s								
CAFI	**Castiglion Fio**	**0.42**	**252**	⇑	P	Pb	08 30 02.2	-0.6	
ASSB	**Assisi San Ben**	**0.43**	**166**	⇑*e*	P	Pg	08 30 02.1	+0.5	
ASSB					S	Sb	08 30 09.0	-0.6	
ASSB					AML	AML			
	comp=N,81μm,0.9s								
ASSB					AML	AML			
	comp=E,82μm,0.3s								
ASSB	**Assisi San Ben**	**0.43**	**166**	P		Pg	08 30 02.1	+0.5	
ASSB					AML	AML			
	comp=E,82μm,0.3s								
ASSB					AML	AML			
	comp=N,81μm,0.9s								
ASSB					AML	AML			
	comp=E,82μm,0.3s								
ASSB					AML	AML			
	comp=N,81μm,0.9s								
EL6	**Elcito**	**0.45**	**107**	S		Sb	08 30 10.0	-0.2	
MGAB	**Montegabbione**	**0.62**	**208**	S		Sg	08 30 14.0	+0.6	
MCIV	**Monte Civitell**	**0.92**	**222**	⇑	P	Pg	08 30 08.4	-2.4	
MCIV					AML	AML			
	comp=E,78μm,0.1s								
MCIV					AML	AML			
	comp=N,58μm,0.9s								

ROM 12 08:30:08.2±0.3, 42°82N±0.02×11°95E±0.02, h21km±2km, ML1.2/1, Error ellipse: s-maj=2.3km s-min=1.3km az=330.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACS	**San Casciano d**	**0.04**	**314**	P	Pb	08 30 11.8	-0.3
SACS				S	Sb	08 30 15.2	+0.4
MGAB	**Montegabbione**	**0.15**	**52**	P	Pb	08 30 12.9	-1.3
MGAB				S	Sb	08 30 16.6	-1.8
MCIV	**Monte Civitell**	**0.21**	**259**	P	Pb	08 30 13.9	-0.3
MCIV				S	Sb	08 30 17.7	-0.6
MCIV				AML	AML		
	comp=N,58μm,0.9s						
MCIV				AML	AML		
	comp=E,78μm,0.1s						
LATE	**Laterza**	**0.23**	**208**	P	Pb	08 30 14.3	0.0
LATE				S	Sb	08 30 18.3	-0.2

IDC 12 08:59:58.5±2.4, 52°36N×35°36E, h0km, mb1 3.5/5, mb1mx3.2/48, mbtmp3.4/5, ML2.8/5, Error ellipse: s-maj=29.1km s-min=10.6km az=125.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBN	**Obninsk**	**2.85**	**14**	Pn	Pn	09 00 45.2	-0.1
	3.1nm,0.3s,baz=129,slow=6.5,SNR=2.4						
OBN				Lg	Lg	09 01 22.9	
	2.3nm,0.3s,baz=164,slow=24,SNR=11						
AKASG	**Malin Array Be**	**4.17**	**249**	Pn	Pn	09 01 01.8	-1.6
	1.1nm,0.3s,baz=60,slow=14,SNR=2.5						
AKASG				Pg	Pb	09 01 11.2	-1.5
	2.9nm,0.3s,baz=59,slow=16,SNR=10						
AKASG				Sn	Sn	09 01 51.5	-1.3
	3.5nm,0.3s,baz=60,slow=20,SNR=8.9						
AKASG				Lg	Lg	09 02 07.8	
	3.0nm,0.3s,baz=66,slow=30,SNR=7.4						
I43RU	**DUBNA INFRASON 4.51**	**13**	*i*			09 26 20.0	
	baz=182,slow=308,SNR=2.0						
FINES	**FINESS Array B**	**10.41**	**335**	Pn	Pn	09 02 24.9	-9.4 0.0
	0.2nm,0.3s,baz=150,slow=11,SNR=6.7						
FINES				Sn	Sn	09 04 16.6	-10
	0.3nm,0.3s,baz=151,slow=23,SNR=6.0						
NOA	**NORSAR Array B**	**15.77**	**313**	Pn	Pn	09 03 32.4	-9.3
	0.0nm,0.3s,baz=103,slow=12,SNR=4.2						
ARCES	**ARCESS Array B**	**17.84**	**349**	P	Pn	09 04 06.2	-1.6
	baz=167,slow=12,SNR=9.6						

JMA 12 09:02:32.4±0.1, 33°.74N×140°.63E, h47km±5km, M3.1
IDC 12 09:02:36.1±8.3, 33°.65N×140°.14E, h81km±112km, mb3.0/2, mb1 3.2/3, mb1mx3.0/45, mbtmp3.2/3, ML2.4/1, Error ellipse: s-maj=121.6km s-min=69.7km az=58.0
ISC 12 09:02:32.5±1.2, 33°.71N±0°.04×140°.64E±0°.07, h53km±14km, n15, σ0s63/26, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMKN	**Mikurajimanish**	**0.89**	**282**	P	Pn	09 02 48.8	-0.1
JMKN				S	Sn	09 03 00.5	-0.4
JHJ2	**Mitsune**	**0.91**	**229**	P	Pn	09 02 49.3	+0.2
JHJ2				S	Sn	09 03 01.6	+0.4
JHCJ	**Hachijojimakas**	**0.94**	**228**	P	Pn	09 02 49.6	0.0
JHCJ				S	Sn	09 03 01.5	-0.6
BSO1	**Boso 1**	**0.99**	**17**	P	Pn	09 02 49.5	-0.2
BSO1				*e*S	Sn	09 03 02.6	+0.2
BSO3	**Boso 3**	**1.10**	**355**	P	Pn	09 02 51.6	+0.2
BSO3				S	Sn	09 03 05.6	+0.2
BSO4	**Boso 4**	**1.30**	**349**	P	Pn	09 02 54.6	+0.3
JKO	**Kozu shima**	**1.33**	**291**	P	Pn	09 02 55.1	+0.3
JKO				*e*S	Sn	09 03 11.7	+0.2
JTHY	**Toshimahigashi**	**1.38**	**307**	P	Pn	09 02 55.8	+0.3
JAOM	**Aogashimamukai**	**1.44**	**211**	P	Pn	09 02 56.9	+0.6
JAOM				*e*S	Sn	09 03 14.1	0.0
JIZS	**Izushimoda**	**1.77**	**305**	P	Pn	09 03 01.3	+0.5
JIZS				*e*S	Sn	09 03 22.3	+0.1
JOD2	**Odawara 2**	**2.01**	**321**	P	Pn	09 03 04.1	0.0
JOD2				S	Sn	09 03 26.4	-1.7
MJAR	**Matsushiro Arr**	**3.46**	**326**	P	Pn	09 03 24.6	+0.8
	0.4nm,0.3s,baz=149,slow=12,SNR=11						
MJAR				S	Sn	09 04 03.5	-0.1
	0.1nm,0.3s,baz=141,slow=12,SNR=4.2						
MAT	**Matsushiro**	**3.46**	**326**	P	Pn	09 03 25.7	+1.8
MAT				S	Sn	09 04 03.3	-0.4
WRA	**Warramunga Arr**	**53.69**	**187**	P	P	09 11 49.0	-0.1
	0.2nm,0.3s,baz=2.2,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**57.41**	**187**	P	P	09 12 15.2	-0.5
	0.1nm,0.4s,baz=3.4,slow=6.4,SNR=2.0						

UCR 12 09:03:28.6±1.1, 13°.89N×90°.76W, h77km±7km, ML4.3, mb4.4(NEIC)
SSS 12 09:03:28.4, 13°.86N×90°.77W, h78km, ML4.5
NEIC 12 09:03:28.3±1.7, 13°.86N±0°.08×90°.78W±0°.03, h88km±6km, mb4.4/65, Md4.5(SNET), Error ellipse: s-maj=11.6km s-min=3.4km az=197.0
SNET 12 09:03:28.4±0.7, 13°.86N×90°.77W, h78km±5km, ML4.5
INET 12 09:03:29.7, 13°.81N×90°.69W, h18km, MW4.7
GCG 12 09:03:31.7±0.5, 14°.10N×90°.79W, h68km±8km, MD4.3
IDC 12 09:03:33.0±2.9, 14°.04N×90°.42W, h128km±26km, mb3.8/11, mb1 3.9/13, mb1mx3.7/39, mbtmp4.1/13, MS2.9/1, Ms1 2.9/1, ms1mx2.6/27, Error ellipse: s-maj=26.8km s-min=14.0km az=57.0
ISC 12 09:03:28.5±0.7, 13°91N±0°.05×90°76W±0°.04, h91km±6km, n195, σ1s07/196, mb4.3/33, 5C-23D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.50**	**17**	⇓*e*P	Pn	09 03 43.7	0.0
FUG	**Fuego 3**	**0.54**	**351**	*e*P	Pn	09 03 43.7	-0.2
NBG	**Las Nubes**	**0.78**	**31**	⇓*e*P	Pn	09 03 47.2	+1.0
ERG	**Entre ros, C**	**0.95**	**304**	*e*P	Pn	09 03 48.0	+0.3
NUBE	**Las Nubes**	**0.95**	**90**	⇓*i*P	Pn	09 03 47.2	-0.7
NUBE				*e*S	Sn	09 04 01.7	-0.7
NUBE	**Las Nubes**	**0.95**	**90**	⇓*i*P	Pn	09 03 47.2	-0.7
NUBE				*e*S	Sn	09 04 01.7	-0.7
RTR	**El Retiro**	**1.08**	**91**	*e*P	Pn	09 03 49.0	-0.3
RTR	**El Retiro**	**1.08**	**91**	*e*P	Pn	09 03 49.0	-0.3
RTAL	**Retalhuleu**	**1.09**	**304**	⇓*i*P	Pn	09 03 48.6	-0.8
RTAL				*e*S	Sn	09 04 04.8	-0.2
RTAL				IAML		09 04 07.0	
	comp=Z,4μm,0.3s						
RTAL	**Retalhuleu**	**1.09**	**304**		Pn	09 03 48.6	-0.8
RTAL					Sn	09 04 04.1	-0.9
SBLS	**San Blas**	**1.10**	**94**	*e*P	Pn	09 03 49.2	-0.6
SBLS	**San Blas**	**1.10**	**94**	*e*P	Pn	09 03 49.2	-0.6
CEDA	**San Andres**	**1.33**	**95**	*e*P	Pn	09 03 51.7	-0.5
CEDA				IAML		09 04 21.3	
	comp=Z,8μm,0.4s						
CEDA	**San Andres**	**1.33**	**95**	*e*P	Pn	09 03 51.7	-0.5
CEDA				IAML		09 04 21.3	
	comp=Z,8μm,0.4s						
TACO	**Tacachico**	**1.36**	**87**	⇓*i*P	Pn	09 03 52.0	-0.7
TACO	**Tacachico**	**1.36**	**87**	⇓*i*P	Pn	09 03 52.0	-0.7
MTO3	**Montecristo**	**1.44**	**70**	⇓*i*P	Pn	09 03 53.4	-0.4
MTO3	**Montecristo**	**1.44**	**70**	⇓*i*P	Pn	09 03 53.4	-0.4
MTO3	**Montecristo**	**1.44**	**70**		Pn	09 03 53.4	-0.4
MTO3				Sn	Sn	09 04 12.7	-0.1
BOQS	**Boqueron**	**1.45**	**97**	*e*P	Pn	09 03 53.5	-0.3
BOQS	**Boqueron**	**1.45**	**97**	*e*P	Pn	09 03 53.5	-0.3
SNET	**Serv Nac Est T**	**1.50**	**98**	⇓*e*P	Pn	09 03 54.0	-0.4
SNET				*e*S	Sn	09 04 14.0	+0.1
SNET				IAML		09 04 17.5	
	comp=Z,6μm,0.3s						
SNET	**Serv Nac Est T**	**1.50**	**98**	⇓*e*P	Pn	09 03 54.0	-0.4
SNET				*e*S	Sn	09 04 14.0	+0.1
SNET				IAML		09 04 17.5	
	comp=Z,6μm,0.3s						
SNET	**Serv Nac Est T**	**1.50**	**98**	Pn	Pn	09 03 54.0	-0.4
ESQI	**Esquipulas**	**1.52**	**65**	⇓*i*P	Pn	09 03 54.7	+0.1
ESQI	**Esquipulas**	**1.52**	**65**		Pn	09 03 54.8	+0.1
ESQI				Sn	Sn	09 04 13.5	-0.8
OPAM	**Oficina de Pla**	**1.53**	**97**	*e*P	Pn	09 03 54.5	-0.2
OPAM	**Oficina de Pla**	**1.53**	**97**	*e*P	Pn	09 03 54.5	-0.2
MRL	**Marmol**	**1.56**	**42**	⇑*i*P	Pn	09 03 55.8	+0.4
MRL	**Marmol**	**1.56**	**42**	⇑*i*P	Pn	09 03 55.8	+0.4
MRL	**Marmol**	**1.56**	**42**	⇑*i*P	Pn	09 03 56.7	+1.4
MRL				*e*S	Sn	09 04 16.4	+0.8
HUEH	**Huehuetenango**	**1.57**	**333**	⇓*i*P	Pn	09 03 56.2	+0.8
HUEH	**Huehuetenango**	**1.57**	**333**		Pn	09 03 56.2	+0.8
LFU	**La Fuente**	**1.60**	**96**	⇑*i*P	Pn	09 03 55.7	0.0
LFU	**La Fuente**	**1.60**	**96**	⇑*i*P	Pn	09 03 55.7	0.0
LFRS	**El Faro**	**1.67**	**100**	⇓*e*P	Pn	09 03 56.2	-0.4
LFRS	**El Faro**	**1.67**	**100**	⇓*e*P	Pn	09 03 56.2	-0.4
LBRS	**Las Brisas**	**1.67**	**96**	⇓*i*P	Pn	09 03 56.5	-0.1
LBRS	**Las Brisas**	**1.67**	**96**	⇓*i*P	Pn	09 03 56.5	-0.1
PAVA	**Las Pavas**	**1.78**	**96**	*i* P	Pn	09 03 57.9	-0.1
PAVA	**Las Pavas**	**1.78**	**96**	*i* P	Pn	09 03 57.9	-0.1
COEG	**Centro de Oper**	**1.85**	**99**	*e*P	Pn	09 03 58.7	-0.1
COEG	**Centro de Oper**	**1.85**	**99**	*e*P	Pn	09 03 58.7	-0.1
COEB	**Comit de Eme**	**2.20**	**100**	⇓*e*P	Pn	09 04 03.5	0.0
COEB				IAML		09 04 05.5	
	comp=Z,2μm,0.3s						
COEB	**Comit de Eme**	**2.20**	**100**	⇓*e*P	Pn	09 04 03.5	0.0
COEB				IAML		09 04 05.5	
	comp=Z,2μm,0.3s						
ALJI	**Alcalda de J**	**2.20**	**105**	⇓*e*P	Pn	09 04 03.4	0.0
ALJI				IAML		09 04 04.5	
	comp=Z,4μm,0.3s						
ALJI	**Alcalda de J**	**2.20**	**105**	⇓*e*P	Pn	09 04 03.4	0.0
ALJI				IAML		09 04 04.5	
	comp=Z,4μm,0.3s						
TECA	**Tecapa**	**2.23**	**100**	*e*P	Pn	09 04 04.1	+0.1
TECA	**Tecapa**	**2.23**	**100**	*e*P	Pn	09 04 04.1	+0.1
PACA	**Pacayal**	**2.41**	**100**	*e*P	Pn	09 04 06.7	+0.5
PACA	**Pacayal**	**2.41**	**100**	*e*P	Pn	09 04 06.7	+0.5
LCY	**Lacayo**	**2.44**	**101**	*e*P	Pn	09 04 07.2	+0.4
LCY	**Lacayo**	**2.44**	**101**	*e*P	Pn	09 04 07.2	+0.4
LCND	**La Caada**	**2.85**	**102**	⇓*e*P	Pn	09 04 12.2	+0.1
LCND	**La Caada**	**2.85**	**102**	⇓*e*P	Pn	09 04 12.2	+0.1
PETF	**Flores**	**3.11**	**16**		Pn	09 04 17.3	+1.7
CSGN	**Cosiguina Volc**	**3.25**	**106**		Pn	09 04 17.3	-0.2
TGUH	**Tegucigalpa,Un**	**3.39**	**87**	Pn	Pn	09 04 19.6	+0.1
CRIN	**San Cristobal**	**3.81**	**108**		Pn	09 04 25.7	+0.7
MATN	**Matagalpa**	**4.80**	**101**	Pn	Pn	09 04 38.5	-0.1

CMIG	**Matias Romero**	**5.08**	**309**	P		Pn	09 04 42.0	-0.3	
	comp=Z,30nm,0.3s,baz=131,slow=8.5,SNR=459								
CMIG				S		Sn	09 05 40.0	+0.3	
	comp=Z,24nm,0.3s,baz=73,slow=20,SNR=1.9								
ACON	**Acoyapa**	**5.78**	**109**			Pn	09 04 50.9	-0.9	
HZTE	**Horizontes, Gu**	**5.96**	**122**	*e*P		Pn	09 04 56.1	+1.8	
GBS3	**Finca Las Img**	**6.04**	**120**	*e*P		Pn	09 04 56.7	+1.3	
LAPC	**Finca la Perla**	**6.07**	**120**	*e*P		Pn	09 04 56.0	+0.2	
GB1A	**Borinquen Arri**	**6.07**	**120**	*e*P		Pn	09 04 56.9	+1.1	
BUEV	**Buena Vista**	**6.08**	**120**	*e*P		Pn	09 04 56.8	+0.9	
BUAI	**Buenos Aires**	**6.10**	**119**	*e*P		Pn	09 04 55.8	-0.4	
GPS3	**Bodega del ICE**	**6.13**	**120**	*e*P		Pn	09 04 57.7	+1.0	
GPS1	**Guardaparques**	**6.13**	**120**	*e*P		Pn	09 04 57.9	+1.1	
GPS2	**Hotel Rincn d**	**6.14**	**120**	*e*P		Pn	09 04 58.0	+1.2	
LIM1	**Limonal**	**6.26**	**120**	*e*P		Pn	09 04 59.5	+1.2	
ORTG	**Ortega, Santa**	**6.27**	**124**	*e*P		Pn	09 04 59.8	+1.3	
GUAB	**Guayabo de Bag**	**6.27**	**120**	*e*P		Pn	09 04 59.3	+0.8	
GUAI	**GUAI**	**6.28**	**125**	*i* P		Pn	09 05 00.1	+1.5	
HORNC	**Hornillas**	**6.31**	**120**	*e*P		Pn	09 04 59.7	+0.5	
COLC	**Colonia**	**6.31**	**120**	*e*P		Pn	09 05 00.3	+1.1	
CUI	**Cuipilapa**	**6.35**	**120**	*e*P		Pn	09 05 01.0	+1.3	
DUNO	**Dulce Nombre,**	**6.41**	**126**	*e*P		Pn	09 05 01.4	+1.1	
ACAL	**Aguas Claras**	**6.47**	**120**	*e*P		Pn	09 05 02.2	+0.8	
TEIG	**Tepich**	**6.71**	**20**	Pn		Pn	09 05 06.1	+1.6	
JTS	**Las Juntas de**	**6.72**	**122**	P		Pn	09 05 05.5	+0.8	
	comp=Z,22nm,0.3s,baz=176,slow=22,SNR=46								
JTS				S		Sn	09 06 16.6	-3.2	
	baz=217,slow=20,SNR=1.0								
JTS	**Las Juntas de**	**6.72**	**122**	*e*P		Pn	09 05 05.4	+0.8	
JTS	**Las Juntas de**	**6.72**	**122**	Pn		Pn	09 05 05.7	+1.0	
ARE1	**Arenal 1**	**6.83**	**119**	*e*P		Pn	09 05 07.8	+1.7	
CEDE	**Laguna Cedeo**	**6.83**	**119**	*e*P		Pn	09 05 07.3	+1.2	
CASO	**Castillo**	**6.83**	**120**	*e*P		Pn	09 05 07.0	+0.9	
FORC	**Fortuna**	**6.87**	**119**	*e*P		Pn	09 05 07.5	+0.9	
JACO	**JACO, Garabito**	**7.31**	**125**	*e*P		Pn	09 05 14.2	+1.5	
HDC	**Heredia**	**7.57**	**120**			Pn	09 05 15.1	-1.3	
LCR2	**La Lucha 2**	**7.80**	**121**	*e*P		Pn	09 05 20.6	+1.0	
CVTR	**Volcan Turrial**	**7.86**	**119**	*e*P		Pn	09 05 21.5	+0.9	
PEZE	**Perez Zeledon,**	**8.27**	**122**	*e*P		Pn	09 05 27.5	+1.7	
TLIG	**Tlapa**	**8.35**	**297**	Pn		Pn	09 05 28.7	+1.8	
EDLM	**Las Mercedes**	**8.40**	**122**	*e*P		Pn	09 05 29.7	+2.2	
EDPN	**Palmar Norte**	**8.68**	**124**	*e*P		Pn	09 05 33.4	+2.0	
DRKO	**Durika**	**8.69**	**121**	*e*P		Pn	09 05 33.4	+1.7	
EDBA	**Buenos Aires**	**8.72**	**122**	*e*P		Pn	09 05 33.1	+1.2	
EDSV	**San Vito**	**9.16**	**123**	*e*P		Pn	09 05 41.1	+3.1	
UNM	**Universidad Na**	**9.70**	**305**	Pn		Pn	09 05 44.3	-1.2	
MOIG	**Morelia**	**11.52**	**301**	Pn		Pn	09 06 10.7	+0.6	
PAYG	**Puerto Ayora**	**14.50**	**178**	Pn		Pn	09 06 48.1	-1.3	
YOTC	**Yotoco, Valle**	**17.31**	**123**	*e*P		P	09 07 26.1	+1.4	
POPC	**Popayan, Colom**	**17.92**	**128**	*e*P		Pn	09 07 34.8	+2.5	
352A	**Blakely**	**18.29**	**16**	P		P	09 07 36.2	+0.9	
352A				IAmb		IAmb	09 07 40.4		
	comp=Z,32nm,1.1s								
ROSC	**El Rosal**	**18.54**	**118**	LR		LR	09 14 25.1		
	comp=Z,43nm,21.4s,baz=237,slow=36								
PRAC	**Prado**	**18.66**	**121**	*e*P		Pn	09 07 41.4	+0.5	
WHTX	**Lake Whitney,**	**19.01**	**342**	P		P	09 07 43.6	+0.4	
HPIG		**19.03**	**315**	P		P	09 07 43.5	-0.1	
FLOC	**Florencia**	**19.32**	**128**	*e*P		Pn	09 07 50.0	+1.4	
PUAC	**Puerto Asis, P**	**19.32**	**132**	*e*P		Pn	09 07 50.0	+1.3	
LRAL	**Lakeview Retre**	**19.34**	**10**	P		P	09 07 47.0	+0.3	
LRAL				IAmb		IAmb	09 07 50.0		
	comp=Z,22nm,1.4s								
Z47A	**Carrollton**	**19.36**	**7**	P		P	09 07 47.6	+0.7	
Z47A				IAmb		IAmb	09 08 00.3		
	comp=Z,20nm,1.0s								
TXAR	**Lajitas Array**	**19.45**	**324**	P		P	09 07 50.4	+2.2	
	comp=Z,0.2nm,0.3s,baz=151,slow=1,SNR=7.6								
TXAR				PcP		PcP	09 12 05.8	-0.1	
	comp=Z,0.1nm,0.3s,baz=157,slow=2.5,SNR=4.7								
TXAR	**Lajitas Array**	**19.45**	**324**	P		P	09 07 48.7	+0.6	
TX31	**Lajitas Ar. Si**	**19.45**	**324**	P		P	09 07 49.3	+1.1	
TX32	**Lajitas Array**	**19.45**	**324**	P		P	09 07 49.3	+1.1	
152A	**Waverly Hall**	**19.47**	**15**	P		P	09 07 48.7	+0.5	
152A				IAmb		IAmb	09 07 50.5		
	comp=Z,9.1nm,0.7s								
WLAR	**White Oak Lake**	**19.80**	**354**	P		P	09 07 51.0	-0.8	
WLAR				IAmb		IAmb	09 07 55.2		
	comp=Z,16nm,0.8s								
Y45A	**Yeager Farm, C**	**19.90**	**3**	P		P	09 07 50.6	-2.2	
Y45A				IAmb		IAmb	09 08 00.2		
	comp=Z,18nm,0.8s								
Z51A	**Franklin**	**19.98**	**14**	P		P	09 07 54.8	+1.1	
Y49A	**Blount Mountai**	**20.25**	**10**	P		P	09 07 58.3	+1.7	
Y49A				IAmb		IAmb	09 07 59.3		
	comp=Z,14nm,0.7s								
MACC	**Macarena, Meta**	**20.40**	**123**	*e*P		P	09 08 00.2	+1.8	
GOGA	**Godfrey**	**20.51**	**18**	P		P	09 08 01.4	+2.0	
GOGA				IAmb		IAmb	09 08 03.2		
	comp=Z,16nm,0.6s								
OXF	**Oxford**	**20.55**	**3**	P		P	09 08 00.3	+0.5	
X48A	**Hartselle**	**20.73**	**9**	P		P	09 08 02.5

K58A					IAmb	IAmb	09 10 05.5	
	comp=Z,14nm,1.2s							
J57A	**Williamstown**	**32.02**	**21**	P		**P**	**09 09 45.8**	**-0.5**
SADO	**Sadowa**	**32.31**	**16**	P		**P**	**09 09 47.9**	**-0.9**
	comp=Z,10nm,0.4s,baz=221,slow=9.9,SNR=9.1							
SADO	**Sadowa**	**32.31**	**16**	P		**P**	**09 09 48.1**	**-0.7**
PDAR	**Pinedale Array**	**33.01**	**334**	P		**P**	**09 09 56.1**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=126,slow=10,SNR=2.4							
PDAR				PcP		**PcP**	**09 12 36.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=120,slow=5.3,SNR=6.4							
LONY	**Lake Ozonia**	**33.57**	**21**	P		**P**	**09 09 59.0**	**-0.8**
LONY				IAmb		IAmb	09 10 16.9	
	comp=Z,9.6nm,1.3s							
SNOW	**Snow King Moun**	**34.09**	**334**	IAmb		IAmb	09 10 07.7	
	comp=Z,3.9nm,0.7s							
NVAR	**Mina Array Bea**	**34.50**	**320**	P		**P**	**09 10 10.8**	**+2.5**
	comp=Z,1.5nm,0.7s,baz=133,slow=8.6,SNR=18							
NVAR				PcP		**PcP**	**09 12 42.5**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=131,slow=2.7,SNR=14							
NVAR	**Mina Array Bea**	**34.50**	**320**	P		**P**	**09 10 11.5**	**+3.2**
LHV	**Little Huntoon**	**34.52**	**320**	P		**P**	**09 10 12.2**	**+4.1**
LHV				IAmb		IAmb	09 10 12.3	
	comp=Z,3.5nm,0.9s							
VLDQ	**Val d'Or**	**35.84**	**15**	P		**P**	**09 10 18.8**	**-0.6**
ULM	**Lac du Bonnet**	**36.48**	**354**	P		**P**	**09 10 22.3**	**-2.4**
	comp=Z,1.8nm,0.5s,baz=169,slow=8.8,SNR=5.5							
ULM	**Lac du Bonnet**	**36.48**	**354**	IAmb		IAmb	09 10 51.3	
	comp=Z,10nm,1.4s							
SIV	**San Ignacio**	**41.76**	**134**	P		**P**	**09 11 09.4**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=324,slow=8.0,SNR=13							
SIV				PcP		**PcP**	**09 13 02.9**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=4.0,slow=8.2,SNR=5.0							
SCHQ	**Schefferville**	**44.90**	**19**	P		**P**	**09 11 32.6**	**-1.3**
	comp=Z,9.8nm,0.6s,baz=216,slow=5.9,SNR=31							
SCHQ	**Schefferville**	**44.90**	**19**	IAmb		IAmb	09 11 33.3	
	comp=Z,28nm,1.4s							
YKA	**Yellowknife Ar**	**51.39**	**346**	P		**P**	**09 12 22.9**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=148,slow=8.1,SNR=2.1							
SFJD	**Kangerlussuaq**	**59.24**	**17**	P		**P**	**09 13 20.3**	**+0.3**
	comp=Z,11nm,0.9s,baz=130,slow=3.6,SNR=3.8							
SFJD	**Kangerlussuaq**	**59.24**	**17**	IAmb		IAmb	09 13 20.9	
	comp=Z,23nm,1.1s							
ILAR	**Eielson Array**	**63.40**	**337**	P		**P**	**09 13 47.1**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=118,slow=5.1,SNR=8.3							
ESDC	**Sonseca Array**	**78.82**	**52**	P		P	09 15 18.8	-3.1
	comp=Z,0.4nm,0.4s,baz=288,slow=5.2,SNR=1.8							
TORD	**Torodi Ar. Bea**	**89.22**	**77**	P		**P**	**09 16 12.5**	**-2.6**
	comp=Z,0.2nm,0.4s,baz=291,slow=4.2,SNR=2.1							
MKAR	**Makanchi Array**	**119.25**	**5**	PKP		**PKPdf**	**09 22 05.8**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=288,slow=5.9,SNR=2.1							
MKAR	**Makanchi Array**	**119.25**	**5**			**PKPdf**	**09 22 06.4**	**-1.0**
WRA	**Warramunga Arr**	**136.54**	**256**	PKP		**PKPdf**	**09 22 41.6**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=356,slow=0.8,SNR=8.9							
WRA	**Warramunga Arr**	**136.54**	**256**			**PKPdf**	**09 22 42.4**	**+1.5**
ASAR	**Alice Springs**	**136.77**	**250**	PKP		**PKPdf**	**09 22 41.5**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=99,slow=3.0,SNR=5.9							
ASAR	**Alice Springs**	**136.77**	**250**			**PKPdf**	**09 22 42.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**146.44**	**343**	PKPbc		**PKPdf**	**09 22 59.5**	**+0.8**
	comp=Z,3.5nm,0.4s,baz=331,slow=3.0,SNR=16							
CMAR	**Chiang Mai Arr**	**146.44**	**343**			**PKPdf**	**09 23 00.6**	**+1.9**

KRSC 12 09:12:43.2±2.6, 55°98N×164°42E, h17km±39km, ML4.1, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.92**	**285**	*e*P	Pb	09 12 59.8	-0.9
SMKR	**Semkarok**	**1.75**	**291**	*e*P	Pn	09 13 12.8	0.0
BDR	**Baidarnaya**	**1.88**	**290**	*e*P	Pn	09 13 15.4	+0.7
SRKR	**Sorokina**	**1.93**	**292**	*e*P	Pn	09 13 15.6	+0.3
ZLN	**Zelenaya**	**2.03**	**273**	*e*P	Pb	09 13 18.4	-1.2
CIRR	**Tsirk**	**2.06**	**275**	*e*P	Pb	09 13 18.9	-1.3
BZGR	**Bezymyannyi-Gr**	**2.09**	**270**	*e*P	Pb	09 13 19.6	-1.1
LGNR	**Loginova**	**2.09**	**274**	*e*P	Pb	09 13 19.5	-1.4
MKZ	**Mys Kozlova**	**2.10**	**228**	*e*P	Pb	09 13 19.9	-0.8
MKZ				*e*S	Sb	09 13 46.4	-0.1
KLY	**Klyuchi**	**2.13**	**281**	*e*P	Pn	09 13 17.7	-0.3
KLY				*e*S	Sn	09 13 43.6	-0.5
KRSR	**Krestovskiy**	**2.17**	**278**	*e*P	Pn	09 13 19.8	+1.2
BZWR	**Bezymyannyi-We**	**2.20**	**271**	*e*P	Pb	09 13 21.9	-0.8
BZMR	**Bezymyannaya**	**2.21**	**270**	*e*P	Pb	09 13 21.5	-1.2
KIRR	**Kirishev**	**2.29**	**271**	*e*P	Pb	09 13 22.8	-1.3
KMNR	**Kamenistaya**	**2.37**	**266**	*e*P	Pb	09 13 24.1	-1.3
TUMD	**Tumrok D**	**2.41**	**253**	*e*P	Pb	09 13 24.4	-1.7
TUMR	**Tumrok**	**2.52**	**256**	*e*P	Pb	09 13 26.5	-1.5
KOZ	**Kozyrevsk**	**2.55**	**274**	*e*P	Pn	09 13 24.5	+0.7
SRDR	**Sredinnyy**	**2.65**	**279**	*e*P	Pn	09 13 27.3	+2.1
ESO	**Esso**	**3.21**	**271**	*e*P	Pb	09 13 37.7	-2.1
SPN	**Mys Shipunski**	**3.86**	**223**	*e*P	Pn	09 13 43.1	+1.4
SPN				*e*S	Sn	09 14 27.5	+0.9
NLC	**Nalytchevo**	**4.08**	**228**	*e*S	Sn	09 14 35.8	+3.8
SDLR	**Sedlovina**	**4.20**	**232**	*e*P	Pn	09 13 50.4	+3.8
SDLR				*e*S	Sn	09 14 39.9	+4.6
KRER	**Koryakskii**	**4.25**	**233**	*e*P	Pb	09 13 52.4	-5.1
SMAR	**Somma**	**4.25**	**232**	*e*P	Pn	09 13 51.1	+3.8
KRX	**Arik**	**4.25**	**234**	*e*P	Pn	09 13 52.3	+5.0
KRX				*e*S	Sn	09 14 42.3	+5.7
UGLR	**Uglovaya**	**4.28**	**232**	*e*P	Pn	09 13 51.4	+3.8
UGLR				*e*S	Sn	09 14 41.7	+4.6
AVH	**Avacha**	**4.28**	**233**	*e*P	Pn	09 13 52.0	+4.5
KOK	**Koryaka**	**4.30**	**234**	*e*P	Pn	09 13 52.4	+4.5
GNL	**Ganaly**	**4.39**	**241**	*e*P	Pn	09 13 54.0	+4.9
RUS	**Russkaya**	**4.96**	**227**	*e*P	Pn	09 14 00.3	+3.4
ASAK	**Asacha**	**5.26**	**229**	*e*P	Pn	09 14 06.2	+5.2

*AEIC **12** 09:17:10.0±1.4, 63.06N±0.05×150.43W±0.08, h99km±5km, ML2.2, Error ellipse: s-maj=8.0km s-min=4.9km az=163.0*
*IDC **12** 09:17:11.0±6.5, 63.12N×150.28W, h77km±60km, mb3.2/3, mb1 3.5/4, mb1mx3.2/38, mbtmp3.4/4, ML2.5/1, Error ellipse: s-maj=53.7km s-min=17.4km az=43.0*
*NEIC **12** 09:17:10.0±1.1, 63.12N±0.05×150.51W±0.08, h110km±6km, Error ellipse: s-maj=7.9km s-min=5.0km az=172.0*

ISC 12 09:17:11.4±1.0, 63°10N±0.04×150°43W±0.05, h100km, n42, σ1°43/43, mb3.3/3, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.36**	**10**		**Pn**	**09 17 26.0**	**-0.5**
KTH	**Kantishna Hill**	**0.51**	**334**		**Pn**	**09 17 26.7**	**-0.6**
RND	**Reindeer**	**0.78**	**66**		**Pn**	**09 17 28.9**	**-0.7**
PPLA	**Purkeypile**	**0.83**	**257**		**Pn**	**09 17 29.6**	**-0.6**
BWN	**Browne**	**1.16**	**21**		**Pn**	**09 17 31.1**	**-2.6**
SKT	**Skwentna**	**1.23**	**205**		**Pn**	**09 17 33.0**	**-1.5**
DHY	**Denali Highway**	**1.39**	**90**		**Pn**	**09 17 35.7**	**-0.8**
GHO	**Glory Hole Cre**	**1.50**	**152**		**Pn**	**09 17 37.3**	**-0.5**
SML	**Sawmill**	**1.62**	**142**	Pn	**Pn**	**09 17 38.4**	**-0.8**
PMR	**Palmer**	**1.63**	**158**		**Pn**	**09 17 39.0**	**-0.2**
WRH	**Wood River Hil**	**1.73**	**36**		**Pn**	**09 17 39.8**	**-0.7**
SCM	**Sheep Creek Mo**	**1.92**	**130**		**Pn**	**09 17 42.4**	**-0.6**
KNK	**Knik Glacier**	**1.93**	**150**		**Pn**	**09 17 42.4**	**-0.7**
HDA	**Harding Lake**	**2.03**	**48**		**Pn**	**09 17 43.6**	**-0.8**
MDM	**Murphy Dome**	**2.11**	**26**		**Pn**	**09 17 44.7**	**-0.7**
I23K	**Minto, Yukon-K**	**2.11**	**12**		**Pn**	**09 17 44.8**	**-0.6**
TCOL	**CIGO, UAF Yank**	**2.11**	**31**		**Pn**	**09 17 44.9**	**-0.5**
COLA	**College**	**2.12**	**31**		**Pn**	**09 17 44.4**	**-1.1**
M24K	**Tolsona, Glenn**	**2.21**	**115**	Pn	**Pn**	**09 17 46.8**	**+0.1**
PAX	**Paxson**	**2.27**	**91**		**Pn**	**09 17 47.5**	**0.0**
IL31		**2.30**	**41**		**Pn**	**09 17 47.1**	**-0.7**
ILAR	**Eielson Array**	**2.30**	**41**	P	**Pn**	**09 17 46.9**	**-1.0**
	1.2nm,0.3s,baz=223,slow=13,SNR=41						
ILAR				S	**Sn**	**09 18 13.1**	**-2.6**
	0.8nm,0.3s,baz=215,slow=16,SNR=9.3						
ILAR	**Eielson Array**	**2.30**	**41**		**Pn**	**09 17 47.1**	**-0.7**
POKR	**Poker Plat Res**	**2.42**	**32**	Pn	**Pn**	**09 17 48.9**	**-0.5**
TTA	**Tatalina**	**2.55**	**269**	Pn	**Pn**	**09 17 50.0**	**-1.2**
KLU	**Klutina**	**2.65**	**125**	Pn	**Pn**	**09 17 54.4**	**+1.8**
DOT	**Dot Lake**	**2.92**	**76**		**Pn**	**09 17 56.0**	**-0.1**
FID	**Port Fidalgo**	**3.01**	**140**	Pn	**Pn**	**09 17 55.6**	**-1.6**
SEW	**Seward**	**3.04**	**171**	Pn	**Pn**	**09 17 55.3**	**-2.3**
MENT	**Mentasta**	**3.06**	**90**	Pn	**Pn**	**09 17 57.6**	**-0.4**
GLB	**Gilahina Butte**	**3.51**	**115**	Pn	**Pn**	**09 18 03.0**	**-1.0**
CNPM	**China Poot**	**3.60**	**187**	Pn	**Pn**	**09 18 04.3**	**-1.0**
K27K	**Chicken**	**3.85**	**72**		**Pn**	**09 18 07.6**	**-0.9**
BCAR	**Beaver Creek A**	**3.93**	**87**	Pn	**Pn**	**09 18 08.0**	**-1.6**
FYU	**Fort Yukon**	**4.13**	**30**	Pn	**Pn**	**09 18 11.8**	**-0.4**
EGAK	**Eagle**	**4.42**	**64**	Pn	**Pn**	**09 18 16.3**	**0.0**
CTGM	**Chitina Glacie**	**4.79**	**112**	Pn	**Pn**	**09 18 16.9**	**-4.5**
BMAR	**Burnt Mountain**	**4.99**	**27**	Pn	**Pn**	**09 18 22.6**	**-1.4**
DAWY	**Dawson**	**5.03**	**74**	Pn	**Pn**	**09 18 22.1**	**-2.3**

PDAR	**Pinedale Array**	**31.15**	**111**	P		**P**	**09 23 23.6**	**+3.0**
	0.1nm,0.4s,baz=335,slow=4.1,SNR=3.2							
NVAR	**Mina Array Bea**	**31.37**	**127**	P		**P**	**09 23 22.8**	**+0.1**
	0.4nm,0.6s,baz=316,slow=7.7,SNR=2.5							
ZALV	**Zalesovo Beam**	**55.59**	**324**	P		**P**	**09 26 37.6**	**+1.5**
	0.5nm,0.4s,baz=44,slow=6.4,SNR=2.1							

*NEIC **12** 09:20:34.5±1.5, 44.80S±0.04×81.0W±0.2, h10km±1km, mb4.7/23, Error ellipse: s-maj=19.9km s-min=7.2km az=275.0*
*IDC **12** 09:20:36.1±0.8, 45.28S×80.36W, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.2/26, mbtmp4.1/12, ML4.4/1, MS4.4/13, Ms1 4.3/13, ms1mx4.2/17, Error ellipse: s-maj=30.3km s-min=17.8km az=106.0*
*GCMT **12** 09:20:37.5±0.1, 44.98S±0.01×81.27W±0.01, h20km, MW5.3/135, Moment Tensor Solution. s91,c144; s135,c243; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr0.03±.02; Mθθ0.36±.02; Mφφ-0.39±.02; Mrθ0.09±.03; Mθφ-1.00±.02; Mφr-0.11±.04; Best double couple: Mo1.07600×10^17 NP1:θ,φ79.00000°, δ83.00000°, λ176.00000°. NP2:θ,φ170.00000°, δ86.00000°, λ7.00000°. Principal axes: T 1.0690, Plg8.0000°, Azm35.0000°; N 0.0120, Plg82.0000°, Azm200.0000°; P -1.0820, Plg2.0000°, Azm304.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 09:20:34.6±0.5, 44.79S±0.07×80.88W±0.08, h10km, n66, σ1°92/52, mb4.3/14, MS4.3/14, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LL01	**San Ignacio de**	**6.61**	**72**		**Pn**	**09 22 13.1**	**+1.4**
PLCA	**Paso Flores**	**8.61**	**66**	Pn	**Pn**	**09 22 40.9**	**+1.5**
	1.0nm,0.3s,baz=234,slow=9.5,SNR=46						
PLCA				Sn	**Sn**	**09 24 09.2**	**-7.4**
	baz=232,slow=19,SNR=1.6						
PLCA				LR	LR	09 25 41.1	
	comp=Z,2μm,20.4s,baz=239,slow=36						
PLCA	**Paso Flores**	**8.61**	**66**		**Pn**	**09 22 41.3**	**+1.9**
GO09	**Cerro Castillo**	**8.65**	**142**		**Pn**	**09 22 40.0**	**+0.3**
BI03	**Tigo**	**9.92**	**40**	Pn	**Pn**	**09 22 57.9**	**+0.7**
BI02	**San Fabin de**	**10.90**	**45**	Pn	**Pn**	**09 23 11.1**	**+0.3**
H03S1	**Juan Fernandez**	**11.04**	**9**	T	T	09 34 52.6	
	baz=185,slow=73,SNR=517						
H03S2	**Juan Fernandez**	**11.04**	**9**	T	T	09 34 50.7	
	baz=185,slow=73,SNR=564						
H03S3	**Juan Fernandez**	**11.05**	**9**	T	T	09 34 51.8	
	baz=185,slow=73,SNR=536						
BO02	**Sierra Bellavi**	**12.64**	**41**	Pn	**Pn**	**09 23 34.5**	**0.0**
USHA	**Ushuaia**	**12.85**	**146**	Pn	**Pn**	**09 23 39.0**	**+1.8**
	1.5nm,0.3s,baz=317,slow=9.7,SNR=7.1						
USHA				LR	LR	09 28 15.8	
	comp=Z,2μm,18.0s,baz=320,slow=38						
MT02	**Curacav**	**13.77**	**37**		**Pn**	**09 23 50.1**	**+0.2**
MT05	**Renca**	**13.83**	**38**	Pn	**Pn**	**09 23 51.5**	**+0.8**
PEL	**Peldehue**	**14.06**	**38**	Pn	**Pn**	**09 23 56.4**	**+2.5**
ROC1	**El Roble**	**14.06**	**36**		**Pn**	**09 23 55.1**	**+1.0**
VA03	**San Esteban**	**14.45**	**37**		**Pn**	**09 23 59.7**	**+0.5**
CO02	**Combarbal**	**15.62**	**33**	Pn	**Pn**	**09 24 15.9**	**+0.9**
CO02				IAmb	IAmb	09 24 19.4	
	comp=Z,83nm,1.5s						
CO03	**El Pedregal**	**16.07**	**33**		**Pn**	**09 24 21.1**	**+0.4**
CO03				IAmb	IAmb	09 24 29.3	
	comp=Z,60nm,1.3s						
ZON	**Zonda**	**16.31**	**40**	P	**P**	**09 24 26.3**	**-0.5**
GO04	**Tololo Observa**	**16.62**	**32**	P	**Pn**	**09 24 29.6**	**+1.7**
GO04				IAmb	IAmb	09 24 36.5	
	comp=Z,122nm,1.4s						
CO01	**Juntas del Tor**	**17.07**	**34**	P	**P**	**09 24 36.1**	**+0.7**
AC05	**El Transito**	**18.02**	**31**	P	**P**	**09 24 47.4**	**+1.6**
AC05				IAmb	IAmb	09 24 54.8	
	comp=Z,68nm,1.5s						
AC02	**Maricunga**	**20.25**	**32**	P	Pn	09 25 13.2	+0.6
AC02				IAmb	IAmb	09 25 18.8	
	comp=Z,76nm,1.4s						
GO02	**Mina Guanaco**	**21.62**	**29**	P	**P**	**09 25 25.2**	**+0.1**
GO02				IAmb	IAmb	09 25 37.8	
	comp=Z,36nm,1.4s						
PB14	**IPOC Station P**	**21.85**	**26**	P	**P**	**09 25 27.1**	**-0.5**
PB14				IAmb	IAmb	09 25 45.9	
	comp=Z,48nm,1.2s						
PMSA	**Palmer Station**	**22.11**	**161**	P	**P**	**09 25 29.4**	**-0.4**
PB15	**IPOC Station P**	**23.47**	**27**	P	**P**	**09 25 46.1**	**+1.6**
PB15				IAmb	IAmb	09 26 11.9	
	comp=Z,23nm,1.0s						
LVC	**Limon Verde**	**24.21**	**28**	P	**P**	**09 25 56.2**	**+4.4**
	comp=Z,6.5nm,0.8s,baz=144,slow=0.8,SNR=3.6						
LVC				LR	LR	09 33 13.0	
	comp=Z,900nm,21.0s,baz=202,slow=31						
LVC	**Limon Verde**	**24.21**	**28**	P	**P**	**09 25 51.6**	**-0.2**
LVC				IAmb	IAmb	09 26 11.2	
	comp=Z,33nm,1.1s						
PB09	**IPOC Station P**	**24.86**	**26**	P	**P**	**09 25 58.4**	**+0.9**
CPUP	**Villa Florida**	**26.42**	**54**	P	**P**	**09 26 14.0**	**+2.5**
	comp=Z,10nm,0.9s,baz=231,slow=9.8,SNR=14						
CPUP				LR	LR	09 37 05.1	
	comp=Z,751nm,19.4s,baz=221,slow=37						
CPUP	**Villa Florida**	**26.42**	**54**	P	**P**	**09 26 12.4**	**+1.0**
CPUP				IAmb	IAmb	09 26 19.7	
	comp=Z,29nm,1.1s						
RPN	**Rapa Nui**	**28.79**	**298**	P	**P**	**09 26 32.6**	**-0.1**
HOPE	**Hope Point**	**29.88**	**125**	P	**P**	**09 26 41.4**	**-0.6**
LPAZ	**La Paz**	**30.38**	**25**	P	P	09 26 53.1	+5.6
	comp=Z,2.7nm,0.9s,baz=171,slow=1.4,SNR=11						
LPAZ	**La Paz**	**30.38**	**25**	P	**P**	**09 26 46.5**	**-1.0**
NNA	**Nana**	**32.87**	**7**	P	**P**	**09 27 07.9**	**-0.9**
BELA	**Belgrano 2**	**37.78**	**166**	P	**P**	**09 27 49.7**	**-0.8**
SAML	**Samuel**	**38.86**	**29**	P	**P**	**09 27 58.6**	**-1.5**
BDFB	**Brasilia**	**40.15**	**54**	P	**P**	**09 28 14.3**	**+3.3**
	comp=Z,6.0nm,0.9s,baz=211,slow=15,SNR=1.7						
VNA3	**Neumayer Olymp**	**42.39**	**153**	P	**P**	**09 28 29.7**	**+0.9**
VNA1	**Neumayer--Stat**	**42.87**	**152**	P	**P**	**09 28 33.9**	**+1.3**
VNA2	**Neumayer--Watz**	**43.15**	**153**	P	**P**	**09 28 35.6**	**+0.8**
	baz=273,slow=8.0						
SNAA	**Sanae**	**44.54**	**154**	P	**P**	**09 28 47.0**	**+0.9**
SNAA	**Sanae**	**44.54**	**154**	P	**P**	**09 28 44.5**	**-1.6**
	comp=Z,2.5nm,1.0s,baz=257,slow=6.8,SNR=6.2						
SNAA	**Sanae**	**44.54**	**154**	P	**P**	**09 28 46.6**	**+0.5**
SNAA				IAmb	IAmb	09 28 56.7	
	comp=Z,8.2nm,1.1s						
QSPA	**South Pole Qui**	**45.45**	**180**	P	**P**	**09 28 52.1**	**-1.5**
	comp=Z,4.0nm,1.1s,baz=189,slow=3.0,SNR=6.2						
QSPA	**South Pole Qui**	**45.45**	**180**	P	**P**	**09 28 52.5**	**-1.0**
QSPA				IAmb	IAmb	09 29 03.1	
	comp=Z,18nm,1.4s						
ROSC	**El Rosal**	**49.76**	**9**	LR	LR	09 48 15.5	
	comp=Z,1μm,20.1s,baz=217,slow=33						
VNDA	**Vanda**	**52.09**	**194**	P	**P**	**09 29 43.9**	**-0.3**
	comp=Z,1.9nm,1.0s,baz=120,slow=7.2,SNR=3.9						
VNDA				LR	LR	09 49 14.0	
	comp=Z,224nm,18.7s,baz=128,slow=33						
VNDA	**Vanda**	**52.09**	**194**	P	**P**	**09 29 44.3**	**+0.1**
TBI	**Tubuai**	**58.95**	**267**	*e*S	**S**	**09 38 38.8**	**-1.7**
	comp=Z,352nm,27.2s						
TBI				*e*LQ	LQ	09 45 20.0	
	comp=Z,1μm,31.8s						
TBI				*e*LR	LR	09 47 42.5	
	comp=Z,315nm,28.2s,baz=126						
PPT2	**Papeete2**	**62.76**	**272**	*e*S	**S**	**09 39 26.5**	**-2.9**
	comp=Z,388nm,25.2s						
PPT2				*e*LQ	LQ	09 46 56.1	
	comp=Z,1μm,36.8s						
PPT2				*e*LR	LR	09 49 26.2	
	comp=Z,349nm,25.8s,baz=131						
PPT	**Papeete**	**62.78**	**272**	LR	LR	09 49 56.9	
	comp=Z,151nm,21.9s,baz=115,slow=28						
MAW	**Mawson**	**64.63**	**165**	LR	LR	09 56 47.6	
	comp=Z,371nm,19.9s,baz=212,slow=34						
TXAR	**Lajitas Array**	**76.64**	**340**	P	P	09 32 31.5	+6.0
	comp=Z,0.4nm,0.6s,baz=169,slow=10,SNR=2.7						
BOSA	**Boshof**	**80.76**	**121**	LR	LR	10 05 26.4	
	comp=Z,185nm,18.1s,baz=222,slow=34						
DBIC	**Dimbokro**	**84.85**	**75**	LR	LR	10 04 31.7	
	comp=Z,138nm,21.4s,baz=203,slow=31						
NVAR	**Mina Array Bea**	**89.45**	**331**	P	P	09 33 37.4	+5.8
	comp=Z,0.7nm,0.8s,baz=156,slow=2.5,SNR=4.5						
NVAR				LR	LR	10 04 43.5	
	comp=Z,82nm,21.2s,baz=162,slow=29						
NVAR	**Mina Array Bea**	**89.45**	**331**	P	**P**	**09 33 33.0**	**+1.3**
DZM	**Mont Dzumac**	**89.56**	**239**	*e*LR	LR	10 01 54.7	
	comp=Z,311nm,26.4s						

PDAR	**Pinedale Array**	**90.86**	**339**	P		P	09 33 44.0	+5.9
	comp=Z,0.4nm,0.9s,baz=126,slow=3.9,SNR=2.6							
TORD	**Torodi Ar. Bea**	**93.96**	**76**	P		**P**	**09 33 55.2**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=224,slow=4.0,SNR=2.3							
TORD				LR		LR	10 09 48.2	
	comp=Z,91nm,21.6s,baz=240,slow=32							
STKA	**Stephens Creek**	**94.46**	**215**	LR		LR	10 08 51.9	
	comp=Z,222nm,19.4s,baz=190,slow=31							
SEY	**Seymchan**	**145.00**	**320**	PKPbc		**PKiKP**	**09 40 16.2**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=0.0,slow=20,SNR=2.9							
LZH	**Lanzhou**	**170.59**	**204**	*e*PKP		**PKPdf**	**09 40 38.2**	**-4.6**
LZH				pPKP		sPKPdf	09 40 49.2	+3.4
LZH				sPKP			09 40 52.9	

*KRNET **12** 09:37:43.1±0.1, 40.92N×74.83E, h17km, mb2.5*
*SOME **12** 09:37:43.4, 40.88N×74.82E, h15km*
*NNC **12** 09:37:45.8±2.2, 40.94N×74.88E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=15.6km s-min=11.4km az=165.0*

ISC 12 09:37:42.6±1.9, 40.89N±0.07×74.86E±0.03, h8km±17km, n39, σ0°90/62, 28C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**1.05**	**337**	⇑*i*P	**Pb**	**09 38 02.8**	**-0.3**
	baz=39						
ARLS				⇑*i*S	**Sg**	**09 38 16.9**	**+0.5**
	baz=39						
UCH	**Uchtor**	**1.36**	**349**	⇑*e*P	**Pb**	**09 38 08.5**	**-0.1**
	baz=50						
UCH				⇑*i*S	**Sg**	**09 38 27.0**	**+0.6**
	baz=50						
UCH	**Uchtor**	**1.36**	**349**	P	**Pg**	**09 38 09.5**	**+0.8**
	SNR=7.3						
ARSB	**Arslanbob**	**1.48**	**287**	⇓*i*P	**Pb**	**09 38 10.3**	**-0.2**
	baz=87						
ARSB				⇓*i*S	**Sg**	**09 38 30.5**	**+0.2**
	baz=87						
AML	**Almayashu**	**1.52**	**325**	⇑*i*P	**Pb**	**09 38 11.2**	**0.0**
	baz=25						
AML				⇑*i*S	**Sg**	**09 38 31.8**	**+0.4**
	baz=25						
AML	**Almayashu**	**1.52**	**325**	P	**Pg**	**09 38 11.7**	**0.0**
	SNR=10						
ULHL	**Ulahol**	**1.70**	**37**	⇑*i*P	**Pb**	**09 38 14.8**	**+0.5**
	baz=38						
ULHL				⇑*i*S	**Sg**	**09 38 37.9**	**+0.5**
	baz=38						
KBK	**Karagaybulak**	**1.76**	**2**	⇑*i*P	**Pb**	**09 38 15.7**	**+0.4**
	baz=3.0						
KBK				⇑*i*S	**Sg**	**09 38 39.6**	**+0.3**
	baz=3.0						
KBK	**Karagaybulak**	**1.76**	**2**	P	**Pg**	**09 38 16.7**	**+0.2**
	SNR=16						
AAK	**Ala-Archa**	**1.76**	**351**	⇓*e*P	**Pb**	**09 38 15.6**	**+0.3**
	baz=52						
AAK				⇓*i*S	**Sg**	**09 38 39.4**	**0.0**
	baz=52						
AAK	**Ala-Archa**	**1.76**	**351**	⇓Pn	**Pg**	**09 38 16.2**	**-0.2**
	1.7nm,0.3s						
AAK				⇑Sn	**Sg**	**09 38 43.1**	**+3.7**
	4.8nm,0.3s						
BOOM	**Boomskoye usch**	**1.79**	**27**	⇑*e*P	**Pb**	**09 38 16.2**	**+0.5**

0.7nm,0.3s,baz=119,slow=29,SNR=5.2

MAN ***12*** *09:57:02.8, 17°.01N× 121°.49E, h28km, mb4.6, ML3.5, MS3.4*
IDC ***12*** *09:57:12.9±1.9, 16°.99N× 121°.71E, h134km±21km, mb3.3/9, mb1 3.5/9, mb1mx3.3/41, mbtmp3.7/9, MS3.2/2, Ms1 3.2/2, ms1mx2.7/17, Error ellipse: s-maj=29.3km s-min=13.2km az=80.0*

ISC 12 09:57:04.0±1.0, 17°.05N±0°.03× 121°.53E±0°.05, h40km±11km, n32, σ2.803/32, mb3.7/9, 3C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.30**	**110**	*eP*	**Pn**	**09 57 11.7**	**-0.5**
CVP	**Callao Caves**	**0.71**	**23**	⇑*P*	**Pn**	**09 57 16.7**	**-0.9**
CVP				*i* S	**Sn**	**09 57 26.9**	**-0.4**
APYP	**Conner**	**0.86**	**341**	*eP*	**Pn**	**09 57 18.4**	**-1.2**
APYP				*eS*	**Sn**	**09 57 31.8**	**+0.9**
ABRA	**Dolores**	**0.98**	**308**	*eP*	**Pn**	**09 57 20.4**	**-0.9**
ABRA				*eS*	**Sn**	**09 57 34.6**	**+0.5**
BCP	**Baguio City**	**1.08**	**235**	⇓*eP*	**Pn**	**09 57 21.6**	**-1.2**
BCP				*eS*	**Sn**	**09 57 37.7**	**+1.0**
SMPP	**San Manuel, Pa**	**1.21**	**223**	*eP*	**Pn**	**09 57 22.4**	**-2.0**
SMPP				*eS*	**Sn**	**09 57 37.7**	**-1.9**
SGCP	**Mt. Cagua**	**1.29**	**22**	*eP*	**Pn**	**09 57 25.7**	**+0.2**
BALP	**Baler**	**1.30**	**178**	*eP*	**Pn**	**09 57 24.2**	**-1.5**
BALP				*eS*	**Sn**	**09 57 40.6**	**-1.2**
SIPP	**Brgy, Tapao**	**1.34**	**311**	⇓*eP*	**Pn**	**09 57 27.3**	**+1.0**
SIPP				*i* S	Sn	09 57 59.3	+16
BOLP	**Bolinao**	**1.69**	**247**	*eP*	**Pn**	**09 57 30.6**	**-0.3**
POLP	**Polilio Island**	**2.34**	**170**	*eP*	**Pn**	**09 57 40.5**	**+0.5**
POLP				*eS*	**Sn**	**09 58 08.0**	**+0.5**
LQP	**Lukban**	**2.92**	**180**	⇑*eP*	Pn	09 57 53.0	+4.9
LQP				*i* S	**Sn**	**09 58 30.5**	**+8.5**
JCNP	**Jose Panganiba**	**2.96**	**158**	*eP*	**Pn**	**09 57 49.2**	**+0.7**
JCNP				*eS*	**Sn**	**09 58 23.1**	**+0.2**
TGY	**Tagaytay City**	**2.98**	**191**	P	Pn	09 57 58.9	+10
	125nm,0.3s,baz=226,slow=1.6,SNR=7.8						
TGY				S	Sn	09 58 36.3	+13
	58nm,0.3s,baz=136,slow=22,SNR=2.0						
GQP	**Guinayangan**	**3.25**	**164**	⇑*eP*	**Pn**	**09 57 53.1**	**+0.7**
GQP				*eS*	**Sn**	**09 58 28.8**	**-1.0**
DAV	**Davao City (W)**	**10.68**	**158**	LR	LR	10 04 06.2	
	comp=Z,59nm,19.7s,baz=357,slow=39						
KSRS	**Korea Array**	**21.10**	**14**	P	**P**	**10 01 45.2**	**+0.3**
	2.3nm,0.4s,baz=196,slow=11,SNR=12						
CMAR	**Chiang Mai Arr**	**21.56**	**277**	P	**P**	**10 01 53.4**	**+3.3**
	0.7nm,0.4s,baz=80,slow=10,SNR=1.3						
SONM	**Songino Array**	**33.13**	**341**	P	**P**	**10 03 37.3**	**+0.9**
	0.6nm,0.5s,baz=156,slow=11,SNR=2.3						
KRVT	**Keravat (AS076**	**36.85**	**122**	LR	LR	10 16 37.1	
	comp=Z,64nm,20.7s,baz=169,slow=32						
WRA	**Warramunga Arr**	**36.85**	**161**	P	**P**	**10 04 23.2**	**-2.2**
	0.8nm,0.6s,baz=343,slow=9.2,SNR=8.1						
ASAR	**Alice Springs**	**42.23**	**163**	P	**P**	**10 04 51.7**	**-1.7**
	1.0nm,0.6s,baz=344,slow=7.1,SNR=24						
H11S3	**WAKE ISLAND Hy**	**42.94**	**81**	T	T	10 50 22.6	
	baz=276,slow=75,SNR=65						
H11S1	**WAKE ISLAND Hy**	**42.95**	**81**	T	T	10 50 18.0	
	baz=276,slow=75,SNR=33						
H11S2	**WAKE ISLAND Hy**	**42.96**	**81**	T	T	10 50 14.9	
	baz=276,slow=75,SNR=34						
H11N1	**WAKE ISLAND Hy**	**43.03**	**79**	T	T	10 50 19.4	
	baz=274,slow=74,SNR=30						
H11N2	**WAKE ISLAND Hy**	**43.04**	**79**	T	T	10 50 19.6	
	baz=274,slow=74,SNR=26						
H11N3	**WAKE ISLAND Hy**	**43.05**	**79**	T	T	10 50 20.6	
	baz=274,slow=74,SNR=22						
MKAR	**Makanchi Array**	**43.88**	**321**	P	**P**	**10 05 07.3**	**+0.8**
	0.3nm,0.5s,baz=114,slow=7.9,SNR=2.9						
PETK	**Petropavlovsk-**	**45.73**	**30**	P	**P**	**10 05 21.1**	**0.0**
	1.0nm,0.6s,baz=243,slow=4.5,SNR=4.1						
STKA	**Stephens Creek**	**52.31**	**158**	P	**P**	**10 06 10.8**	**-1.0**
	1.3nm,0.7s,baz=321,slow=4.8,SNR=6.1						
ILAR	**Eielson Array**	**75.41**	**26**	P	**P**	**10 08 42.5**	**-0.8**
	0.3nm,0.6s,baz=264,slow=4.6,SNR=6.4						

IDC ***12*** *10:08:02.2±0.7, 14°.02S× 167°.03E, h111km±4km, mb4.1/16, mb1 4.2/20, mb1mx4.1/31, mbtmp4.5/20, MS3.3/7, Ms1 3.3/7, ms1mx3.1/24, Error ellipse: s-maj=14.4km s-min=12.2km az=123.0*
NEIC ***12*** *10:08:02.0±1.8, 14°.07S±0°.07× 167°.1E±0°.1, h112km±6km, mb4.5/24, Error ellipse: s-maj=20.1km s-min=10.4km az=79.0*

ISC 12 10:08:01.0±0.4, 14°.03S±0°.06× 167°.12E±0°.08, h100km, n71, σ1.931/84, mb4.5/21, 2C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**1.41**	**177**	Pn	**Pn**	**10 08 28.5**	**+2.4**
DZM	**Mont Dzumac**	**8.02**	**185**	P	**Pn**	**10 09 57.1**	**+2.1**
	13nm,0.3s,baz=32,slow=15,SNR=151						
DZM				S	**Sn**	**10 11 23.7**	**-0.4**
	5.6nm,0.3s,baz=143,slow=20,SNR=1.9						
DZM	**Mont Dzumac**	**8.02**	**185**	*e*Pn	**Pn**	**10 09 57.0**	**+2.1**
	92nm,0.3s						
DZM				*e*Sn	**Sn**	**10 11 23.2**	**-0.9**
	90nm,0.3s						
DZM				*e*LR	LR	10 11 47.7	
	comp=Z,501nm,28.9s						
HNR	**Honiara**	**8.38**	**302**	P	**Pn**	**10 10 01.5**	**+1.8**
	45nm,0.3s,baz=165,slow=2.8,SNR=19						
HNR				S	**Sn**	**10 11 32.2**	**-0.5**
	26nm,0.3s,baz=55,slow=21,SNR=6.1						
HNR				LR	LR	10 13 33.2	
	comp=Z,64nm,18.4s,baz=123,slow=40						
HNR	**Honiara**	**8.38**	**302**		**Pn**	**10 10 02.5**	**+2.8**
KRVT	**Keravat (AS076**	**17.75**	**302**	P	**P**	**10 12 01.2**	**0.0**
	2.4nm,0.3s,baz=27,slow=2.3,SNR=2.0						
PMG	**Port Moresby**	**20.07**	**281**	P	**P**	**10 12 26.6**	**0.0**
	0.5nm,0.3s,baz=135,slow=14,SNR=1.7						
AFI	**Afiamalu**	**20.48**	**92**	P	**P**	**10 12 33.4**	**+2.4**
	31nm,0.8s,baz=272,slow=21,SNR=4.5						
AFI	**Afiamalu**	**20.48**	**92**	IAmb	IAmb	10 12 44.1	
	comp=Z,41nm,1.0s						
CTA	**Charters Tower**	**20.83**	**250**	P	**P**	**10 12 34.1**	**-0.6**
	comp=Z,8.2nm,0.7s,baz=81,slow=11,SNR=11						
CTAO	**Charters Tower**	**20.83**	**250**	P	**P**	**10 12 35.9**	**+1.1**
CTAO				IAmb	IAmb	10 12 51.4	
	comp=Z,12nm,0.8s						
ARMA	**Armidale**	**21.68**	**219**	P	**P**	**10 12 45.2**	**+1.4**
ARMA				IAmb	IAmb	10 12 47.6	
	comp=Z,31nm,1.0s						
COEN	**Coen**	**23.23**	**267**	P	**P**	**10 12 59.3**	**-0.4**
LTZ	**Lake Taylor**	**28.99**	**172**	P	**P**	**10 13 50.3**	**-1.0**
STKA	**Stephens Creek**	**29.34**	**228**	P	**P**	**10 13 54.8**	**+0.4**
	comp=Z,6.4nm,0.5s,baz=48,slow=8.7,SNR=30						
STKA				pP	**pP**	**10 14 19.4**	**+3.2**
	comp=Z,4.1nm,0.7s,baz=40,slow=9.5,SNR=2.6						
STKA				PcP	**PcP**	**10 16 57.8**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=22,slow=3.3,SNR=3.4						
STKA				LR	LR	10 24 23.3	
	comp=Z,53nm,20.6s,baz=96,slow=34						
STKA	**Stephens Creek**	**29.34**	**228**	P	**P**	**10 13 55.4**	**+0.9**
TOO	**Toolangi**	**30.33**	**215**	P	**P**	**10 14 04.0**	**+0.8**
WB0	**Warramunga Arr**	**31.80**	**255**	P	**P**	**10 14 15.2**	**-1.0**
WB0				IAmb	IAmb	10 14 15.5	
	comp=Z,5.7nm,0.5s						
WB2	**Warramunga Arr**	**31.85**	**255**	P	**P**	**10 14 15.3**	**-1.4**
WB2				IAmb	IAmb	10 14 16.1	
	comp=Z,7.6nm,1.2s						
WRA	**Warramunga Arr**	**31.86**	**255**	P	**P**	**10 14 15.3**	**-1.5**
	comp=Z,2.3nm,0.5s,baz=85,slow=9.4,SNR=82						
WRA				pP	**pP**	**10 14 41.4**	**+3.4**
	comp=Z,1.4nm,0.5s,baz=86,slow=9.2,SNR=3.8						
WRA				PcP	**PcP**	**10 17 04.8**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=82,slow=2.4,SNR=5.5						
WRA				ScP	**ScP**	**10 20 38.0**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=90,slow=3.5,SNR=6.7						
WRA				LR	LR	10 26 55.7	
	comp=Z,55nm,19.7s,baz=165,slow=36						
WRA	**Warramunga Arr**	**31.86**	**255**	IAmb	IAmb	10 14 21.5	
	comp=Z,0.3nm,1.5s						
AS31	**Alice Springs**	**32.79**	**248**	P	**P**	**10 14 23.7**	**-1.3**
ASAR	**Alice Springs**	**32.79**	**248**	P	**P**	**10 14 23.6**	**-1.4**
	comp=Z,1.8nm,0.4s,baz=74,slow=9.5,SNR=67						
ASAR				pP	**pP**	**10 14 47.6**	**+1.3**
	comp=Z,2.1nm,0.6s,baz=73,slow=9.5,SNR=4.5						
ASAR				PcP	**PcP**	**10 17 06.1**	**-2.0**
	comp=Z,1.4nm,0.8s,baz=72,slow=2.6,SNR=6.5						
ASAR				ScP	**ScP**	**10 20 41.4**	**-1.8**
	comp=Z,0.9nm,1.0s,baz=147,slow=2.5,SNR=4.0						
ASAR				LR	LR	10 28 11.1	
	comp=Z,99nm,18.1s,baz=168,slow=37						
BBOO	**Buckleboo**	**33.90**	**231**	P	**P**	**10 14 35.0**	**+0.6**
BBOO				IAmb	IAmb	10 14 36.1	
	comp=Z,11nm,0.9s						
KNRA	**Kununurra**	**37.08**	**263**	P	**P**	**10 15 01.1**	**-0.8**
FORT	**Forrest**	**39.53**	**238**	P	**P**	**10 15 21.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**40.01**	**259**	P	**P**	**10 15 25.7**	**-0.6**
PPT2	**Papeete2**	**41.75**	**101**	*e*LR	LR	10 27 30.5	
	comp=Z,149nm,31.5s						
PPT	**Papeete**	**41.75**	**101**	LR	LR	10 28 55.3	
	comp=Z,48nm,21.8s,baz=242,slow=30						
MJAR	**Matsushiro Arr**	**57.22**	**332**	P	**P**	**10 17 37.2**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=218,slow=6.7,SNR=6.7						
MJAR	**Matsushiro Arr**	**57.22**	**332**	IAmb	IAmb	10 17 39.9	
	comp=Z,6.0nm,1.4s						
KSRS	**Korea Array**	**63.08**	**326**	P	**P**	**10 18 16.8**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=161,slow=7.7,SNR=2.9						
VNDA	**Vanda**	**63.55**	**181**	P	**P**	**10 18 20.3**	**-0.2**
	comp=Z,2.3nm,1.0s,baz=358,slow=4.3,SNR=7.1						
VNDA				LR	LR	10 42 19.1	
	comp=Z,21nm,19.0s,baz=340,slow=32						
VNDA	**Vanda**	**63.55**	**181**	P	**P**	**10 18 19.9**	**-0.5**
VNDA				IAmb	IAmb	10 18 23.1	
	comp=Z,6.1nm,1.4s						
USRK	**Ussuriysk Ar.**	**66.20**	**333**	P	**P**	**10 18 37.8**	**-0.3**
	comp=Z,4.8nm,1.0s,baz=116,slow=6.0,SNR=7.3						
PETK	**Petropavlovsk-**	**67.35**	**354**	P	**P**	**10 18 45.7**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=142,slow=7.5,SNR=7.3						
PETK				pP	**PcP**	**10 19 12.8**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=169,slow=8.3,SNR=3.5						
ENH	**Enshi**	**70.81**	**309**	P	**P**	**10 19 05.6**	**-1.5**
XAN	**Xi'an**	**73.11**	**312**	P	**P**	**10 19 21.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**74.54**	**294**	P	**P**	**10 19 30.1**	**+0.7**
	comp=Z,9.5nm,0.8s,baz=127,slow=4.5,SNR=29						
CMAR				pP	**pwP**	**10 19 57.4**	**+0.3**
	comp=Z,5.0nm,0.9s,baz=129,slow=2.0,SNR=1.8						
QSPA	**South Pole Qui**	**75.99**	**180**	P	**P**	**10 19 37.1**	**+0.1**
QSPA				IAmb	IAmb	10 19 39.4	
	comp=Z,11nm,1.2s						
ULN	**Ulaanbaatar**	**81.49**	**324**	P	**P**	**10 20 06.8**	**-0.6**
ULN				IAmb	IAmb	10 20 08.7	
	comp=Z,6.7nm,0.8s						
SONM	**Songino Array**	**81.85**	**324**	P	**P**	**10 20 07.5**	**-1.8**
	comp=Z,1.6nm,0.8s,baz=137,slow=6.4,SNR=8.9						
SONM				pP	**pwP**	**10 20 38.1**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=153,slow=7.3,SNR=2.9						
SONM	**Songino Array**	**81.85**	**324**	P	**P**	**10 20 08.2**	**-1.1**
IMAR	**Indian Mountai**	**84.93**	**15**	P	**P**	**10 20 25.5**	**+1.0**
YBH	**Yreka Blue Hor**	**85.03**	**45**	LR	LR	10 52 03.0	
	comp=Z,32nm,18.7s,baz=347,slow=31						
ILAR	**Eielson Array**	**85.91**	**18**	P	**P**	**10 20 28.8**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=239,slow=5.2,SNR=17						
ILAR				pP	**pP**	**10 20 57.5**	**+2.4**
	comp=Z,1.4nm,0.6s,baz=246,slow=4.9,SNR=4.8						
NVAR	**Mina Array Bea**	**86.93**	**49**	P	**P**	**10 20 35.1**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=232,slow=5.5,SNR=2.7						
NVAR				pP	**pP**	**10 21 05.1**	**+3.6**
	comp=Z,0.5nm,0.8s,baz=233,slow=8.4,SNR=2.3						
BELA	**Belgrano 2**	**87.43**	**176**	P	**P**	**10 20 35.2**	**-1.6**
SYO	**Syowa Base**	**89.33**	**197**	⇑*eP*	P	10 20 41.6	-4.2
SYO	**Syowa Base**	**89.33**	**197**	⇑*eP*	**P**	**10 20 44.2**	**-1.6**
SNAA	**Sanae**	**94.23**	**183**	P	**P**	**10 21 08.3**	**-0.3**
SNAA				IAmb	IAmb	10 21 10.5	
	comp=Z,3.3nm,0.9s						
VNA3	**Neumayer Olymp**	**94.91**	**181**	P	**P**	**10 21 10.2**	**-1.4**
VNA2	**Neumayer--Watz**	**95.17**	**182**	P	**P**	**10 21 11.8**	**-1.0**
	baz=151,slow=5.3						
MKAR	**Makanchi Array**	**96.60**	**316**	P	**P**	**10 21 19.3**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=97,slow=6.4,SNR=16						
MKAR				pP	**pwP**	**10 21 48.1**	**0.0**
	comp=Z,1.4nm,0.7s,baz=114,slow=5.4,SNR=5.1						
MKAR	**Makanchi Array**	**96.60**	**316**	P	**P**	**10 21 19.1**	**-0.6**
ZALV	**Zalesovo Beam**	**96.75**	**324**	P	**P**	**10 21 18.0**	**-2.1**
	comp=Z,0.6nm,0.3s,baz=108,slow=4.2,SNR=4.0						
ZALV	**Zalesovo Beam**	**96.75**	**324**	P	**P**	**10 21 18.8**	**-1.3**
ARCES	**ARCESS Array B**	**119.54**	**345**	PKP	**PKPdf**	**10 26 37.9**	**-0.6**
	comp=Z,3.1nm,0.5s,baz=64,slow=2.1,SNR=37						
BOSA	**Boshof**	**123.81**	**221**	PKP	**PKPdf**	**10 26 47.4**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=181,slow=5.8,SNR=4.4						
FINES	**FINESS Array B**	**125.02**	**338**	PKP	**PKPdf**	**10 26 48.6**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=42,slow=2.3,SNR=13						
FINES	**FINESS Array B**	**125.02**	**338**		**PKPdf**	**10 26 48.1**	**-1.1**
NOA	**NORSAR Array B**	**129.91**	**345**	PKP	**PKPdf**	**10 26 58.4**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=31,slow=2.0,SNR=5.3						
AKASG	**Malin Array Be**	**130.08**	**326**	PKP	**PKPdf**	**10 26 58.5**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=56,slow=3.5,SNR=2.3						
AKASG	**Malin Array Be**	**130.08**	**326**		**PKPdf**	**10 26 58.2**	**-0.9**
GERES	**GERESS Array B**	**138.96**	**333**	PKP	**PKPdf**	**10 27 16.4**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=48,slow=2.0,SNR=7.3						
GERES				SKPbc	**SKPbc**	**10 30 41.4**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=10,slow=6.0,SNR=4.2						
KEST	**Kesra**	**150.58**	**321**	PKPbc	**PKPbc**	**10 27 41.6**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=244,slow=2.7,SNR=11						
KEST	**Kesra**	**150.58**	**321**		**PKPbc**	**10 27 42.4**	**+0.6**
ESDC	**Sonseca Array**	**153.28**	**345**	PKPbc	**PKPbc**	**10 27 46.8**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=31,slow=2.2,SNR=7.9						
ESDC	**Sonseca Array**	**153.28**	**345**		**PKPbc**	**10 27 47.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**165.80**	**268**	PKP	**PKPdf**	**10 27 54.3**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=79,slow=0.5,SNR=6.6						
TORD				PKPab	**PKPab**	**10 28 54.7**	**-0.4**
	comp=Z,1.9nm,1.0s,baz=57,slow=2.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**165.80**	**268**		**PKPdf**	**10 27 54.5**	**-0.5**
TORD					**PKPab**	**10 28 55.0**	**-0.1**

JMA 12 10:08:40.6, 37°.10N× 140°.60E, h9km±1km, M3.7, 5C-3D
Broadband fault plane solution: P waves. NP1: ϕ_s274.00000°, δ73.00000°, λ-165.00000°. **NP2:** ϕ_s179.00000°, δ76.00000°, λ-17.00000°. **Principal axes:** T Plg2.0000°, Azm227.0000°; N Plg68.0000°, Azm322.0000°; P Plg22.0000°, Azm136.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	**0.03**	**254**	⇓*P*	Pg	10 08 42.3	0.0
JFFD				S	Sg	10 08 43.4	-0.2
ONAJ	**Iwakimizuishiy**	**0.16**	**89**	⇑*P*	Pg	10 08 44.3	+0.3
ONAJ				S	Sg	10 08 46.9	+0.5
JFK	**Kawauchi**	**0.34**	**39**	⇑*P*	Pg	10 08 47.4	0.0
JFK				*eS*	Sg	10 08 52.2	+0.2
JFT	**Otama**	**0.47**	**333**	⇓*P*	Pg	10 08 50.0	+0.3
JFT				S	Sg	10 08 56.5	+0.6
JHO	**Hitachi**	**0.49**	**183**	⇑*P*	Pg	10 08 49.9	-0.2
JHO				S	Sg	10 08 56.6	+0.1
JSB	**Shiboa**	**0.56**	**257**	⇑*P*	Pb	10 08 52.1	-0.5
JSB				S	Sb	10 09 00.0	-0.7
JFY	**Yanaizu**	**0.78**	**293**	⇓*P*	Pg	10 08 55.6	0.0
JFY				S	Sg	10 09 05.6	-0.1
JMM	**Marumori**	**0.78**	**11**	⇑*P*	Pg	10 08 55.0	-0.6
JMM				*eS*	Sg	10 09 05.1	-0.7
MAT	**Matsushiro**	**2.00**	**255**	P	Pn	10 09 15.4	+0.8
MAT				S	Sb	10 09 42.4	+0.3

OSPL ***12*** *10:15:39.7±0.9, 17°.36N× 68°.46W, h124km±26km, ML2.8*
NEIC ***12*** *10:15:39.7±0.9, 18°.2N±0°.2× 68°.49W±0°.07, h150km±13km, Error ellipse: s-maj=34.8km s-min=8.8km az=186.0*
RSPR ***12*** *10:15:40.2, 18°.22N× 68°.43W, h152km±1km, MD3.7/11*

ISC 12 10:15:39.5±1.3, 18°.1N±0°.2× 68°.50W±0°.04, h150km, n47, σ0.971/52, 6C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**1.06**	**309**		**Pn**	**10 16 03.2**	**-1.6**
LSP	**Las Mesas**	**1.35**	**88**	⇓*eP*	**Pn**	**10 16 07.2**	**-0.3**
LSP	**Las Mesas**	**1.35**	**88**		**Pn**	**10 16 07.2**	**-0.3**
AGPR	**Aguadilla, PR**	**1.36**	**75**	⇑*eP*	**Pn**	**10 16 07.5**	**-0.1**
AGPR	**Aguadilla, PR**	**1.36**	**75**	*eS*	**Sn**	**10 16 28.9**	**-0.3**
AGPR	**Aguadilla, PR**	**1.36**	**75**	Pn	**Pn**	**10 16 08.2**	**+0.5**
AGPR	**Aguadilla, PR**	**1.36**	**75**	*i* P	**Pn**	**10 16 08.4**	**+0.7**
AGPR				*eS*	**Sn**	**10 16 29.5**	**+0.3**
AGPR				IAML		10 16 32.9	
	comp=Z,67nm,0.1s						
MLPR	**Magueyes Islan**	**1.40**	**96**	⇑*eP*	**Pn**	**10 16 07.8**	**-0.2**
MLPR	**Magueyes Islan**	**1.40**	**96**	*eS*	**Sn**	**10 16 29.8**	**+0.1**
MLPR	**Magueyes Islan**	**1.40**	**96**		**Pn**	**10 16 07.7**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.55**	**95**	⇓*eP*	**Pn**	**10 16 09.9**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.55**	**95**	*eS*	**Sn**	**10 16 33.1**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.55**	**95**		**Pn**	**10 16 09.9**	**+0.3**
GBPR					**Sn**	**10 16 33.1**	**+0.5**
AOPR	**Arecibo Observ**	**1.68**	**82**	⇑*eP*	**Pn**	**10 16 10.8**	**-0.2**
AOPR	**Arecibo Observ**	**1.68**	**82**	*eS*	**Sn**	**10 16 35.0**	**-0.1**
AOPR	**Arecibo Observ**	**1.68**	**82**		**Pn**	**10 16 11.0**	**0.0**
BANI	**BANI**	**1.78**	**279**		**Pn**	**10 16 12.5**	**+0.3**
OBIP	**Obispado Ponce**	**1.81**	**92**	⇑*eP*	**Pn**	**10 16 12.6**	**+0.2**
OBIP	**Obispado Ponce**	**1.81**	**92**	*eS*	**Sn**	**10 16 37.5**	**-0.1**
OBIP	**Obispado Ponce**	**1.81**	**92**		**Pn**	**10 16 12.2**	**-0.2**
CELP	**Cerrillos**	**1.83**	**91**	⇓*eP*	**Pn**	**10 16 12.9**	**+0.2**
CELP	**Cerrillos**	**1.83**	**91**	*eS*	**Sn**	**10 16 38.1**	**0.0**
CELP	**Cerrillos**	**1.83**	**91**		**Pn**	**10 16 12.9**	**+0.2**
CELP					**Sn**	**10 16 38.1**	**0.0**
EMPR	**Esperanza - Ma**	**1.91**	**79**	⇓*eP*	**Pn**	**10 16 13.1**	**-0.4**
EMPR	**Esperanza - Ma**	**1.91**	**79**	*eS*	**Sn**	**10 16 39.7**	**0.0**
EMPR	**Esperanza - Ma**	**1.91**	**79**		**Pn**	**10 16 13.0**	**-0.5**
SJG	**San Juan**	**2.24**	**90**	Pn	**Pn**	**10 16 17.3**	**-0.1**
IGPR	**InterUniversit**	**2.29**	**94**	⇓*eP*	**Pn**	**10 16 18.4**	**+0.4**
GCPR	**Guaynabo City**	**2.31**	**85**	⇓*eP*	**Pn**	**10 16 18.4**	**+0.2**
GCPR	**Guaynabo City**	**2.31**	**85**	*eS*	**Sn**	**10 16 47.9**	**-0.2**
PDPR	**Patillas Dam,**	**2.36**	**92**	⇓*eP*	**Pn**	**10 16 19.1**	**+0.2**
PDPR	**Patillas Dam,**	**2.36**	**92**	*eS*	**Sn**	**10 16 49.6**	**+0.4**
PDPR	**Patillas Dam,**	**2.36**	**92**	Pn	**Pn**	**10 16 19.0**	**+0.2**
LOBA1	**Barahona**	**2.45**	**270**	*i* P	**Pn**	**10 16 19.9**	**-0.1**
LOBA1				*eS*	**Sn**	**10 16 48.4**	**-2.8**
CBYP	**Canovanas**	**2.52**	**86**	⇓*eP*	**Pn**	**10 16 20.5**	**-0.4**
CBYP	**Canovanas**	**2.52**	**86**	*eS*	**Sn**	**10 16 52.5**	**-0.3**
CBYP	**Canovanas**	**2.52**	**86**		**Pn**	**10 16 19.8**	**-1.1**
HUMP	**Col San Antoni**	**2.52**	**89**	⇓*eP*	**Pn**	**10 16 21.3**	**+0.4**
HUMP	**Col San Antoni**	**2.52**	**89**	*eS*	**Sn**	**10 16 52.6**	**-0.2**
SDDR	**Presa de Saban**	**2.78**	**288**		**Pn**	**10 16 24.7**	**+0.6**
SDDR	**Presa de Saban**	**2.78**	**288**	*i* P	**Pn**	**10 16 25.6**	**+1.5**
SDDR				*eS*	**Sn**	**10 17 00.8**	**+2.2**
SDDR				IAML		10 17 03.4	
	comp=Z,27nm,0.4s						
MTP	**Monte Pirata**	**2.81**	**90**	⇑*eP*	**Pn**	**10 16 25.1**	**+0.6**
MTP	**Monte Pirata**	**2.81**	**90**	*eS*	**Sn**	**10 16 59.1**	**+0.1**
MTP	**Monte Pirata**	**2.81**	**90**		**Pn**	**10 16 24.9**	**+0.5**
CUPR	**Culebra, Puert**	**3.07**	**86**	⇓*eP*	**Pn**	**10 16 27.6**	**-0.1**
CUPR	**Culebra, Puert**	**3.07**	**86**	*eS*	**Sn**	**10 17 04.8**	**-0.1**
CUPR	**Culebra, Puert**	**3.07**	**86**	Pn	**Pn**	**10 16 26.5**	**-1.1**

ATH ***12*** *10:36:03.4, 38°.22N× 20°.43E, h17km, ML2.8/10, Error ellipse: s-maj=1.4km s-min=0.8km az=261.0*
THE ***12*** *10:36:04.0, 38°.22N× 20°.44E, h14km, ML3.0/14, Error ellipse: s-maj=0.7km s-min=0.3km az=260.0*

ISC 12 10:36:03.6±0.8, 38°.23N±0°.02× 20°.43E±0°.04, h16km±4km, n54, σ0.861/79, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.03**	**354**	P	**Pg**	**10 36 06.5**	**+0.1**
KEF4				S	**Sg**	**10 36 08.5**	**+0.2**
KEF4	**Livadi,

KEK	**Kerkira**	**1.56**	**342**	P	**Pn**	**10 36 31.6**	**+1.0**
ITM	**Ithomi**	**1.59**	**131**	P	**Pb**	**10 36 33.0**	**+0.5**
TRIP	**Tripoli**	**1.62**	**115**	P	**Pg**	**10 36 34.8**	**+0.1**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pg**	**10 36 35.4**	**-0.6**
AGG				AML	AML	10 37 07.9	
	comp=N,240μm,0.5s						
AGG				AML	AML	10 37 08.0	
	comp=E,232μm,0.7s						
PYL	**PYLOS**	**1.69**	**142**	P	**Pb**	**10 36 35.0**	**+0.7**
AXAR	**Agios Charalam**	**1.83**	**72**	P	**Pb**	**10 36 37.6**	**+0.9**
VIL2	**Platees**	**2.24**	**90**	P	**Pb**	**10 36 42.8**	**-0.8**
STON	**Ston**	**5.08**	**337**	Sn	**Sn**	**10 38 13.7**	**-3.5**
STON	**Ston**	**5.08**	**337**	*e*Pn	**Pn**	**10 37 17.9**	**-1.0**
LSTV	**Lastovo**	**5.27**	**330**	*e*Pn	**Pn**	**10 37 20.9**	**-0.7**
RICI	**Ricice**	**5.82**	**336**	*e*Pn	**Pn**	**10 37 29.1**	**-0.1**
KIJV	**Kijevo**	**6.52**	**334**	*e*Pn	**Pn**	**10 37 39.1**	**+0.4**
MORI	**Morici**	**6.66**	**329**	*e*Pn	**Pn**	**10 37 41.4**	**+0.7**
NVLJ	**Novalja**	**7.58**	**328**	*e*Pn	**Pn**	**10 37 53.9**	**+0.6**

BUC 12 10:38:27.3±0.4, 45°23N×25°09E, h2km, ml0.1/2, 14C-4D, Error ellipse: s-maj=3.5km s-min=1.4km az=12.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTUR	**Matau**	**0.02**	**259**	↑P	Pg	10 38 27.2	-0.8
MTUR	**Matau**	**0.02**	**259**	↑P	Pg	10 38 27.2	-0.8
VOIR		**0.21**	**353**	↑P	Pg	10 38 30.8	-0.6
VOIR				↓S	Sg	10 38 34.7	+0.5
VOIR		**0.21**	**353**	↑P	Pg	10 38 30.8	-0.6
VOIR				↓S	Sg	10 38 34.7	+0.5
ARR	**Arges**	**0.35**	**293**	↓P	Pg	10 38 34.4	+0.3
ARR				↑S	Sg	10 38 39.5	+0.9
ARR	**Arges**	**0.35**	**293**	↓P	Pg	10 38 34.4	+0.3
ARR				↑S	Sg	10 38 39.5	+0.9
MLR	**Muntele Rosu**	**0.66**	**66**	↑P	Pg	10 38 40.5	+0.5
MLR				↑S	Sg	10 38 49.5	+1.0
MLR	**Muntele Rosu**	**0.66**	**66**	↑P	Pg	10 38 40.5	+0.5
MLR				↑S	Sg	10 38 49.5	+1.0
SECR		**0.72**	**105**	↑S	Sg	10 38 51.2	+0.8
SECR		**0.72**	**105**	↑S	Sg	10 38 51.2	+0.8
NEHR	**Nehoiu**	**0.87**	**77**	↑S	Sg	10 38 56.0	+0.6
NEHR	**Nehoiu**	**0.87**	**77**	↑S	Sg	10 38 56.0	+0.6

*RSNC **12** 10:42:26.6±1.7, 7°.20N×75°.50W, h0km±6km, ML3.8, Mw4.0, Fault plane solution: NP1:φs120.00000°, δ37.00000°, λ-82.00000°.*
*IDC **12** 10:42:31.9±1.9, 7°.35N×75°.48W, h62km±18km, mb3.2/7, mb1 3.7/11, mb1mx3.5/34, mbtmp3.7/11, MS3.1/5, Ms1 3.1/5, ms1mx2.9/21, Error ellipse: s-maj=16.9km s-min=12.4km az=94.0*
ISC 12 10:42:25.1±1.3, 7°.23N±0°.02×75°.57W±0°.03, h3km±10km, n48, σ1s86/66, mb3.5/7, 2C-6D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UREC	**San Jos de Ur**	**0.52**	**4**	*e*P	**Pg**	**10 42 34.6**	**-0.5**
UREC				*e*S	**Sg**	**10 42 41.9**	**+0.1**
UREC				*i*		10 42 44.8	
	comp=Z,5μm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.30**	**122**	↓*i*P	**Pn**	**10 42 47.9**	**-2.3**
PTBC				*e*S	**Sb**	**10 43 04.7**	**-2.7**
PTBC				*i*		10 43 07.0	
	comp=Z,3μm,0.3s						
MOTC	**Monteria, Cord**	**1.54**	**356**	↑*e*P	**Pn**	**10 42 54.0**	**+0.6**
MOTC				*e*S	**Sg**	**10 43 16.2**	**+1.6**
MOTC				*i*		10 43 18.9	
	comp=Z,1μm,0.7s						
NORC	**Norcasia**	**1.80**	**157**	↑*e*P	**Pn**	**10 42 56.2**	**-0.9**
NORC				*e*S	**Sn**	**10 43 18.3**	**-2.2**
NORC				*i*		10 43 21.7	
	comp=Z,2μm,0.3s						
LCBC	**Los crdobas,**	**1.80**	**334**	↓*e*P	**Pb**	**10 42 58.3**	**-0.3**
LCBC				*e*S	**Sg**	**10 43 23.2**	**+0.2**
LCBC				*i*		10 43 36.0	
	comp=Z,273nm,0.5s						
BRRC	**Barranca, Sant**	**1.85**	**94**	*e*P	**Pn**	**10 42 57.9**	**+0.2**
BRRC				*e*S	**Sn**	**10 43 22.2**	**+0.7**
BRRC				*i*		10 43 28.1	
	comp=Z,923nm,0.5s						
SOLC	**Bahia Solano**	**2.08**	**241**	*e*P	**Pn**	**10 43 01.9**	**+1.0**
SOLC				*e*S	**Sg**	**10 43 30.9**	**-1.2**
SOLC				*i*		10 43 36.2	
	comp=Z,404nm,0.4s						
SPBC	**San Pablo de B**	**2.16**	**136**	*e*P	**Pn**	**10 43 03.2**	**+1.1**
SPBC				*e*S	**Sn**	**10 43 31.6**	**+2.1**
SPBC				*i*		10 43 37.0	
	comp=Z,390nm,0.6s						
PTAC	**Punta Ardita,**	**2.22**	**268**	*e*P	**Pn**	**10 43 04.1**	**+1.3**
PTAC				*e*S	**Sb**	**10 43 32.5**	**-1.3**
PTAC				*i*		10 43 39.9	
	comp=Z,583nm,0.2s						
CAPC	**Capurgana**	**2.25**	**308**	*e*P	**Pn**	**10 43 02.7**	**-0.5**
OCAC	**Ocana**	**2.44**	**66**	↓*e*P	**Pn**	**10 43 07.5**	**+1.4**
OCAC				*e*S	**Sb**	**10 43 40.6**	**+0.1**
OCAC				*i*		10 43 45.9	
	comp=Z,1μm,0.5s						
BARC	**Barichara**	**2.45**	**105**	↓*e*P	**Pn**	**10 43 07.8**	**+1.5**
BARC				*e*S	**Sn**	**10 43 39.7**	**+2.8**
BARC				*i*		10 43 46.9	
	comp=Z,563nm,0.6s						
TOLC	**Tolima**	**2.64**	**175**	*e*P	**Pb**	**10 43 11.7**	**-1.5**
TOLC				*e*S	**Sb**	**10 43 47.6**	**+1.4**
TOLC				*i*		10 43 57.3	
	comp=Z,1μm,0.7s						
SJCC	**San Jacinto, C**	**2.68**	**8**	*e*P	**Pn**	**10 43 09.9**	**+0.7**
SJCC				*i*		10 43 57.5	
	comp=Z,148nm,0.5s						
ROSC	**El Rosal**	**2.68**	**152**	P	**Pb**	**10 43 12.9**	**-1.0**
	comp=Z,43nm,0.3s,baz=217,slow=5.5,SNR=27						
ROSC				S	**Sb**	**10 43 47.1**	**-0.3**
	comp=Z,58nm,0.3s,baz=232,slow=22,SNR=9.8						
ROSC	**El Rosal**	**2.68**	**152**	*e*P	**Pb**	**10 43 13.2**	**-0.8**
ROSC				*e*S	**Sb**	**10 43 48.3**	**+0.9**
ROSC				*i*		10 43 57.0	
	comp=Z,449nm,0.5s						
ANIL	**Santa Ana**	**2.73**	**177**	*e*P	**Pb**	**10 43 13.3**	**-1.4**
ANIL				*e*S	**Sb**	**10 43 46.7**	**-2.0**
RUSC	**La Rusia**	**2.81**	**118**	↓*e*P	**Pn**	**10 43 12.7**	**+1.4**
RUSC				*e*S	**Sn**	**10 43 47.6**	**+1.7**
RUSC				*i*		10 43 59.3	
	comp=Z,397nm,0.5s						
PAMC	**Pamplona, Colo**	**2.85**	**88**	*e*P	**Pn**	**10 43 13.9**	**+2.0**
PAMC				*e*S	**Sn**	**10 43 50.1**	**+3.1**
PAMC				*i*		10 43 57.9	
	comp=Z,604nm,0.7s						
ARGC	**Ariguani, Magd**	**2.92**	**27**	*e*P	**Pb**	**10 43 17.7**	**-0.2**
ARGC				*e*S	**Sb**	**10 43 53.6**	**-0.4**
ARGC				*i*		10 44 15.1	
	comp=Z,107nm,0.4s						
CHIC	**Chingaza**	**3.17**	**145**	*e*P	**Pn**	**10 43 19.3**	**+3.1**
CHIC				*e*S	**Sb**	**10 44 01.4**	**-0.1**
CHIC				*i*		10 44 09.8	
	comp=Z,196nm,0.4s						
YOTC	**Yotoco, Valle**	**3.32**	**193**	↓*e*P	**Pn**	**10 43 20.0**	**+2.0**
YOTC				*e*S	**Sb**	**10 44 03.8**	**-1.8**
PRAC	**Prado**	**3.56**	**169**	*e*P	**Pn**	**10 43 24.8**	**+3.5**
PRAC				*i*		10 44 24.5	
	comp=Z,382nm,0.5s						
SMRC	**Santa Marta, M**	**4.13**	**19**	*e*P	**Pn**	**10 43 31.0**	**+1.9**
MARP	**Paez Belalcaza**	**4.38**	**185**	*e*P	**Pn**	**10 43 36.7**	**+4.0**
POPC	**Popayan, Colom**	**4.79**	**193**	*e*P	**Pn**	**10 43 42.4**	**+4.1**
PCON	**Cinco Dias**	**4.94**	**190**	*e*P	**Pn**	**10 43 45.4**	**+4.7**
GARC	**Garzon, Huila**	**5.01**	**179**	*e*P	**Pn**	**10 43 43.8**	**+2.3**
SDV	**Santo Domingo**	**5.16**	**71**	P	**Pn**	**10 43 45.0**	**+1.6**
	comp=Z,5.7nm,0.3s,baz=232,slow=12,SNR=12						
SDV				S	**Sn**	**10 44 43.1**	**-0.5**
	comp=Z,13nm,0.3s,baz=218,slow=14,SNR=3.3						
SDV				LR	LR	10 46 04.5	
	comp=Z,152nm,21.9s,baz=213,slow=42						
SDV	**Santo Domingo**	**5.16**	**71**	*e*P	**Pn**	**10 43 44.9**	**+1.5**
SOTA	**Rioblanco**	**5.17**	**192**	*e*P	Pb	10 43 51.1	-5.4
MACC	**Macarena, Meta**	**5.34**	**161**	*e*P	**Pn**	**10 43 48.3**	**+2.5**
FLOC	**Florencia**	**5.61**	**181**	*e*P	**Pn**	**10 43 51.9**	**+2.4**
URIC	**Uribia, Colomb**	**5.67**	**38**	*e*P	**Pn**	**10 43 50.5**	**+0.1**
JTS	**Las Juntas de**	**9.76**	**289**	P	**Pn**	**10 44 49.7**	**+3.2**
	comp=Z,0.2nm,0.3s,baz=202,slow=7.1,SNR=4.8						
JTS				LR	LR	10 48 52.5	
	comp=Z,149nm,19.1s,baz=176,slow=39						
PCRV	**Puerto La Cruz**	**11.20**	**74**	P	**Pn**	**10 45 08.2**	**+2.0**
	comp=Z,0.8nm,0.3s,baz=146,slow=3.6,SNR=2.0						
PCRV				S	**Sn**	**10 47 11.9**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=163,slow=19,SNR=1.6						
ATAH	**Atahualpa**	**14.55**	**191**	LR	LR	10 52 14.4	
	comp=Z,78nm,19.2s,baz=142,slow=40						
NNA	**Nana**	**19.13**	**184**	LR	LR	10 55 20.5	
	comp=Z,62nm,19.9s,baz=23,slow=40						
MDP	**Montagnes des**	**22.89**	**94**	LR	LR	10 56 39.1	
	comp=Z,49nm,19.4s,baz=225,slow=37						
LPAZ	**La Paz**	**24.50**	**163**	P	**P**	**10 47 47.1**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=331,slow=5.2,SNR=4.2						
SIV	**San Ignacio**	**27.17**	**148**	P	**P**	**10 48 09.6**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=337,slow=11,SNR=5.9						
PDAR	**Pinedale Array**	**46.34**	**325**	P	**P**	**10 50 51.6**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=143,slow=9.1,SNR=2.6						
NVAR	**Mina Array Bea**	**49.48**	**315**	P	**P**	**10 51 16.4**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=125,slow=7.8,SNR=2.2						
INK	**Inuvik**		**71.83**	**341**	P	**P**	**10 53 47.6**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=134,slow=1.7,SNR=3.9						
ILAR	**Eielson Array**	**75.57**	**335**	P	**P**	**10 54 09.8**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=122,slow=6.7,SNR=1.5						
TORD	**Torodi Ar. Bea**	**76.03**	**78**	P	**P**	**10 54 12.1**	**-2.4**
	comp=Z,0.3nm,0.4s,baz=282,slow=7.1,SNR=4.7						
ASAR	**Alice Springs**	**147.34**	**237**	PKPbc	**PKPdf**	**11 02 09.4**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=114,slow=3.7,SNR=8.9						
WRA	**Warramunga Arr**	**148.37**	**243**	PKPbc	**PKPdf**	**11 02 12.5**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=104,slow=2.9,SNR=20						

*JMA **12** 10:46:54.4, 24°.11N×122°.46E, h42km±2km, M3.4*
*TAP **12** 10:46:55.0, 24°.19N×122°.47E, h39km, ML4.1, B*
ISC 12 10:46:55.5±4.7, 24°.18N±0°.03×122°.49E±0°.02, h39km±11km, n137, σ1s25/215, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.50**	**57**	P	**Pn**	**10 47 05.9**	**-0.3**
JYNG				*e*S	**Sn**	**10 47 14.2**	**+0.5**
YOJ	**Yonaguni jima**	**0.56**	**59**	↓*i*P	**Pn**	**10 47 06.9**	**-0.2**
	baz=60						
YOJ				S	**Sn**	**10 47 15.6**	**+0.4**
	baz=60						
YOJ	**Yonaguni jima**	**0.56**	**59**	P	**Pn**	**10 47 06.9**	**-0.2**
YOJ				S	**Sn**	**10 47 15.3**	**+0.2**
ENAH	**Nanao**	**0.67**	**294**	*e*P	**Pn**	**10 47 08.1**	**-0.5**
	baz=293						
TWC	**Suao**	**0.72**	**307**	P	**Pn**	**10 47 08.8**	**-0.5**
	baz=307						
TWC				*e*S	**Sn**	**10 47 18.4**	**-0.7**
	baz=307						
NACB	**Ninganchiao**	**0.81**	**270**	*e*P	**Pn**	**10 47 09.8**	**-0.6**
	baz=256						
NACB				*e*S	**Sn**	**10 47 20.8**	**-0.6**
	baz=256						
TWD	**Chiawan**	**0.82**	**263**	P	**Pn**	**10 47 09.8**	**-0.8**
	baz=251						
TWD				*e*S	**Sn**	**10 47 20.6**	**-0.8**
	baz=251						
HWA	**Hwalien**	**0.83**	**256**	P	**Pn**	**10 47 10.4**	**-0.3**
	baz=254						
EGS		**0.83**	**323**	*e*P	**Pn**	**10 47 10.8**	**+0.1**
	baz=314						
EGS				*e*S	**Sn**	**10 47 22.0**	**+0.1**
	baz=314						
ILA	**Ilan**	**0.89**	**311**	*e*P	**Pn**	**10 47 12.3**	**+0.7**
	baz=312						
ILA				S	**Sn**	**10 47 24.1**	**+0.8**
	baz=312						
NTC	**Toucheng**	**0.90**	**319**	P	**Pn**	**10 47 11.6**	**0.0**
	baz=319						
NTC				*e*S	**Sn**	**10 47 23.3**	**-0.2**
	baz=319						
ETLH	**Xiulin Townshi**	**0.92**	**272**	*e*P	**Pn**	**10 47 11.4**	**-0.6**
	baz=271						
ETLH				*e*S	**Sn**	**10 47 23.4**	**-0.6**
	baz=271						
TWE	**Neicheng**	**0.92**	**306**	P	**Pn**	**10 47 12.1**	**+0.2**
	baz=307						
TWE				*e*S	**Sn**	**10 47 25.1**	**+1.1**
	baz=307						
TWB1	**Santiao Chiao**	**0.94**	**331**	P	**Pn**	**10 47 12.0**	**-0.3**
	baz=345						
TWB1				*e*S	**Sn**	**10 47 24.0**	**-0.5**
	baz=345						
NDT	**Datong Townshi**	**0.98**	**296**	*e*P	**Pn**	**10 47 13.1**	**+0.3**
	baz=295						
NDT				S	**Sn**	**10 47 26.2**	**+0.7**
	baz=295						
TIPB	**Shuangxi**	**0.99**	**323**	P	**Pn**	**10 47 12.9**	**-0.1**
	baz=335						
TIPB				*e*S	**Sn**	**10 47 25.3**	**-0.6**
	baz=335						
ESL	**Shilin**	**1.03**	**250**	*e*P	**Pn**	**10 47 12.4**	**-1.1**
	baz=238						
ESL				*e*S	**Sn**	**10 47 25.5**	**-1.1**
	baz=238						
NNSB	**Datong**	**1.04**	**284**	P	**Pn**	**10 47 13.4**	**-0.3**
	baz=284						
NNSB				S	**Sn**	**10 47 27.1**	**+0.1**
	baz=284						
NNSH	**Datong**	**1.04**	**284**	P	**Pn**	**10 47 13.4**	**-0.2**
	baz=284						
NNSH				S	**Sn**	**10 47 27.0**	**0.0**
	baz=284						
NNS	**Nan Shan**	**1.05**	**285**	*e*P	**Pn**	**10 47 13.5**	**-0.3**
	baz=284						
NNS				S	**Sn**	**10 47 27.6**	**+0.3**
	baz=284						
NWLT	**Wulai**	**1.08**	**304**	P	**Pn**	**10 47 14.5**	**+0.4**
	baz=315						
NWLT				*e*S	**Sn**	**10 47 28.6**	**+0.8**
	baz=315						
EGFH	**Guangfu**	**1.09**	**243**	*e*P	**Pn**	**10 47 13.6**	**-0.7**
	baz=241						
EGFH				*e*S	**Sn**	**10 47 27.7**	**-0.5**
	baz=241						
NWF	**Wu-fen Shan**	**1.10**	**324**	P	**Pn**	**10 47 14.3**	**-0.1**
	baz=324						
WFSB	**Wu-fen Shan**	**1.10**	**324**	*e*P	**Pn**	**10 47 14.3**	**-0.1**
	baz=324						
WHF	**Hehuan Shan**	**1.11**	**269**	*e*P	**Pn**	**10 47 14.4**	**-0.6**
	baz=255						
WHF				S	**Sn**	**10 47 29.3**	**-0.1**
	baz=255						
YHNB	**Yeheng**	**1.12**	**296**	*e*P	**Pn**	**10 47 15.0**	**+0.2**
	baz=296						
YHNB				*e*S	**Sn**	**10 47 29.3**	**+0.2**
	baz=296						
FUSS	**Fushou**	**1.14**	**274**	P	**Pn**	**10 47 14.9**	**-0.2**
	baz=273						
FUSS				*e*S	**Sn**	**10 47 29.6**	**-0.1**
	baz=273						
NSK	**Sanguang**	**1.14**	**296**	P	**Pn**	**10 47 15.1**	**+0.1**
	baz=296						
NSK				*e*S	**Sn**	**10 47 29.6**	**+0.1**
	baz=296						
TWA	**Mucha**	**1.15**	**314**	*e*P	**Pn**	**10 47 15.7**	**+0.6**
	baz=330						
TWA				*e*S	**Sn**	**10 47 29.7**	**+0.2**
	baz=330						
IRIF	**Iriomote-Funau**	**1.15**	**82**	P	**Pn**	**10 47 14.9**	**-0.2**
IRIF				*e*S	**Sn**	**10 47 29.5**	**0.0**
NHDH	**Xindian Distri**	**1.17**	**312**	*e*P	**Pn**	**10 47 16.4**	**+1.0**
	baz=325						
HGSD	**Ruisui**	**1.19**	**235**	P	**Pn**	**10 47 14.8**	**-0.8**
	baz=233						
TWT	**Tachien**	**1.20**	**274**	P	**Pn**	**10 47 16.3**	**+0.4**
	baz=263						
CHGB	**Renai**	**1.20**	**265**	*e*P	**Pn**	**10 47 15.8**	**-0.3**
	baz=254						
TATO	**Taipei**	**1.21**	**311**	*e*P	**Pn**	**10 47 16.4**	**+0.6**
	baz=326						
TATO				*e*S	**Sn**	**10 47 32.5**	**+1.4**
	baz=326						
HATJ	**Hateruma jima**	**1.21**	**95**	P	**Pn**	**10 47 16.4**	**+0.5**
HATJ				S	**Sn**	**10 47 32.1**	**+1.0**
TDCB	**Techi**	**1.21**	**274**	*e*P	**Pn**	**10 47 16.2**	**+0.1**
	baz=264						
EHY	**Hungye**	**1.26**	**238**	*e*P	**Pn**	**10 47 15.8**	**-0.8**
	baz=249						
YM01	**YM01**	**1.27**	**319**	*e*P	**Pn**	**10 47 17.0**	**+0.2**
	baz=319						
YM10	**YM10**	**1.29**	**319**	*e*P	**Pn**	**10 47 16.7**	**-0.3**
	baz=319						
YM11	**YM11**	**1.29**	**320**	*e*P	**Pn**	**10 47 17.4**	**+0.3**
	baz=320						
YM08	**YM08**	**1.29**	**321**	*e*P	**Pn**	**10 47 16.6**	**-0.5**
	baz=321						
YM04	**YM04**	**1.30**	**319**	P	**Pn**	**10 47 16.9**	**-0.3**
	baz=318						
YM03	**YM03**	**1.32**	**319**	*e*P	**Pn**	**10 47 18.7**	**+1.2**
	baz=319						
ANP	**Anpu**	**1.33**	**319**	*e*P	**Pn**	**10 47 18.7**	**+0.9**
	baz=319						
TWS1	**Kuangyinshan**	**1.34**	**314**	*e*P	**Pn**	**10 47 18.6**	**+0.9**
	baz=328						
YULB	**Yu-li**	**1.34**	**235**	P	**Pn**	**10 47 17.0**	**-0.7**
	baz=246						
EYUL	**Yuli**	**1.35**	**233**	*e*P	**Pn**	**10 47 17.5**	**-0.3**
	baz=221						
EYUL				*e*S	**Sn**	**10 47 34.2**	**-0.3**
	baz=221						
TWY	**Chenhua**	**1.36**	**324**	*e*P	**Pn**	**10 47 16.0**	**-1.9**
	baz=324						
TWF1	**Yuli**	**1.36**	**233**	P	**Pn**	**10 47 17.5**	**-0.5**
	baz=231						
JKRS	**Kuro-shima**	**1.39**	**87**	P	**Pn**	**10 47 18.9**	**+0.5**
JKRS				*e*S	**Sn**	**10 47 36.5**	**+0.9**
WHP	**Taichung City**	**1.41**	**274**	P	**Pn**	**10 47 19.4**	**+0.7**
	baz=264						
LIOB	**Emei**	**1.42**	**290**	P	**Pn**	**10 47 19.7**	**+0.9**
	baz=289						
LIOB				*e*S	**Sn**	**10 47 38.2**	**+2.0**
	baz=289						
NCUH	**Zhongli**	**1.42**	**304**	*e*P	**Pn**	**10 47 19.2**	**+0.3**
	baz=304						
NCUH				*e*S	**Sn**	**10 47 37.1**	**+0.8**
	baz=304						
NSTT	**Nanjuang**	**1.43**	**289**	P	**Pn**	**10 47 19.7**	**+0.8**
	baz=288						
NSTT				*e*S	**Sn**	**10 47 38.2**	**+1.7**
	baz=288						
DPDB	**Guoxing**	**1.43**	**265**	*e*P	**Pn**	**10 47 19.3**	**+0.3**
	baz=263						
SSLB	**Suanglung**	**1.45**	**255**	P	**Pn**	**10 47 19.2**	**-0.1**
	baz=243						
FULB	**Fuli**	**1.46**	**229**	*e*P	**Pn**	**10 47 18.4**	**-1.0**
	baz=216						
FULB				*e*S	**Sn**	**10 47 35.9**	**-1.5**
	baz=216						
SMLT	**Sun Moon Lake**	**1.48**	**259**	P	**Pn**	**10 47 20.0**	**+0.3**
	baz=258						
SMLT				S	**Sn**	**10 47 37.7**	**-0.2**
	baz=258						
CHKT	**Chengkung**	**1.48**	**224**	*e*P	**Pn**	**10 47 18.5**	**-1.2**
	baz=213						
CHKT				*e*S	**Sn**	**10 47 35.3**	**-2.5**
	baz=213						
PCYT	**Pengchaiyu**	**1.49**	**346**	*e*P	**Pn**	**10 47 19.6**	**-0.2**
	baz=346						
SBCB	**Hsinchu**	**1.50**	**294**	*e*P	**Pn**	**10 47 21.0**	**+1.1**
	baz=294						
TYC	**Yuchr**	**1.51**	**260**	P	**Pn**	**10 47 20.4**	**+0.3**
	baz=259						
JIJ	**Ishigaki jima**	**1.52**	**83**	P	**Pn**	**10 47 19.9**	**-0.3**
JIJ				S	**Sn**	**10 47 38.1**	**-0.8**
WHYT	**Xinyi Township**	**1.57**	**253**	*e*P	**Pn**	**10 47 21.7**	**+0.8**
	baz=245						
NMLH	**Miaoli**	**1.59**	**283**	*e*P	**Pn**	**10 47 22.1**	**+1.0**
	baz=283						
NMLH				*e*S	**Sn**	**10 47 43.0**	**+2.6**
	baz=283						
NSY	**Sanyi**	**1.59**	**279**	P	**Pn**	**10 47 22.5**	**+1.3**
	baz=278						
EDH	**Donghe**	**1.62**	**222**	*e*P	**Pn**	**10 47 20.1**	**-1.4**
	baz=213						
EDH				*e*S	**Sn**	**10 47 38.6**	**-2.5**
	baz=213						
WJS	**Zhushan**	**1.65**	**258**	P	**Pn**	**10 47 23.4**	**+1.4**
	baz=257						
TCU	**Taichung**	**1.65**	**269**	P	**Pn**	**10 47 23.3**	**+1.3**
	baz=268						
TCU				S	**Sn**	**10 47 44.3**	**+2.3**
	baz=268						
ELDTW	**Lidau**	**1.67**	**234**	P	**Pn**	**10 47 21.6**	**-0.7**
	baz=232						
ELDTW				*e*S	**Sn**	**10 47 40.7**	**-1.8**
	baz=232						
WNT	**Mingjian**	**1.67**	**260**	P	**Pn**	**10 47 23.8**	**+1.5**
	baz=259						
WNT				*e*S	**Sn**	**10 47 44.6**	**+2.1**
	baz=259						
ALS	**Alishan**	**1.68**	**247**	P	**Pn**	**10 47 23.2**	**+0.6**
	baz=246						
ALS				S	**Sn**	**10 47 43.2**	**+0.2**
	baz=246						
WDJ	**Dajia District**	**1.69**	**276**	P	**Pn**	**10 47 23.4**	**+0.8**
	baz=275						
WDJ				*e*S	**Sn**	**10 47 44.7**	**+1.7**
	baz=275						
JISG	**Ishigakijimahi**	**1.71**	**76**	P	**Pn**	**10 47 22.4**	**-0.5**
JISG				S	**Sn**	**10 47 43.1**	**-0.4**
CHN5	**Tsauling**	**1.75**	**251**	P	**Pn**	**10 47 24.4**	**+1.0**
	baz=250						
CHN5				S	**Sn**	**10 47 45.8**	**+1.2**
	baz=250						
LDUT	**Ludao**	**1.76**	**212**	*e*P	**Pn**	**10 47 22.1**	**-1.4**
	baz=210						
LDUT				*e*S	**Sn**	**10 47 41.9**	**-2.8**
	baz=210						
WCHH	**Zhanghua**	**1.76**	**267**	*e*P	**Pn**	**10 47 24.6**	**+1.1**
	baz=266						
WCHH				*e*S	**Sn**	**10 47 47.0**	**+2.2**
	baz=266						
LONT	**Longtian**	**1.77**	**225**	P	**Pn**	**10 47 22.9**	**-0.8**
	baz=235						
LONT				*e*S	**Sn**	**10 47 43.2**	**-1.8**
	baz=235						
WGK	**Gukeng**	**1.83**	**255**	P	**Pn**	**10 47 25.8**	**+1.4**
	baz=254						
WDLH	**Douliu**	**1.85**	**255**	P	**Pn**	**10 47 25.9**	**+1.3**
	baz=254						
WDLH				*e*S	**Sn**	**10 47 49.4**	**+2.6**
	baz=254						
TWGBT	**Beinan**	**1.87**	**224**	P	**Pn**	**10 47 24.0**	**-1.0**
	baz=233						
TWG	**Pinlang**	**1.87**	**224**	*e*P	**Pn**	**10 47 24.0**	**-1.1**
	baz=233						
STYT	**Tauyuan**	**1.88**	**238**	P	**Pn**	**10 47 25.8**	**+0.6**
	baz=226						
TPUB	**Ta-pu**	**1.91**	**243**	*

	baz=230							
WLGB	**Puzi**	**2.12**	**251**	*e*P		**Pn**	**10 47 26.9**	**-1.5**
	baz=250							
WSF	**Szhu**	**2.14**	**256**	*e*P		**Pn**	**10 47 30.0**	**+1.3**
	baz=268							
WSF				*e*S		**Sn**	**10 47 56.7**	**+2.7**
	baz=268							
SSD	**Sandimen**	**2.22**	**230**	*e*P		**Pn**	**10 47 31.4**	**+1.6**
	baz=225							
SSD				*e*S		**Sn**	**10 47 58.7**	**+2.7**
	baz=225							
CHN3	**Shinhua**	**2.23**	**241**	*e*S		**Sn**	**10 47 59.8**	**+3.5**
	baz=240							
TSMG	**Majia**	**2.24**	**229**	*e*P		**Pn**	**10 47 31.9**	**+1.8**
	baz=220							
CHN8	**Yiju**	**2.24**	**249**	*e*P		**Pn**	**10 47 31.1**	**+1.1**
	baz=248							
CHN8				*e*S		**Sn**	**10 47 58.6**	**+2.1**
	baz=248							
LAY	**Lan-yu**	**2.29**	**202**	*e*P		**Pn**	**10 47 29.1**	**-1.8**
	baz=200							
MASBT	**Mashibuluo**	**2.31**	**228**	*e*P		**Pn**	**10 47 31.4**	**+0.4**
	baz=219							
TWM1	**Shoushan**	**2.32**	**235**	*e*P		**Pn**	**10 47 34.6**	**+3.3**
	baz=234							
TAW	**Tawu**	**2.33**	**219**	*e*P		**Pn**	**10 47 30.8**	**-0.5**
	baz=226							
TAW				*e*S		**Sn**	**10 47 56.9**	**-1.7**
	baz=226							
EAST	**Anshuo**	**2.33**	**220**	*e*P		**Pn**	**10 47 30.7**	**-0.8**
	baz=218							
SSPT	**Xinbi**	**2.44**	**227**	*e*P		**Pn**	**10 47 34.2**	**+1.4**
	baz=220							
SCZT	**Fangliau**	**2.48**	**224**	*e*P		**Pn**	**10 47 36.2**	**+2.7**
	baz=218							
SLIU	**Shizi**	**2.49**	**219**	*e*P		**Pn**	**10 47 33.0**	**-0.6**
	baz=217							
JIRB	**Irabujima**	**2.53**	**75**	P		**Pn**	**10 47 34.3**	**+0.2**
JIRB				S		**Sn**	**10 48 03.6**	**-0.1**
JIKM	**Ikemajima**	**2.62**	**73**	P		**Pn**	**10 47 35.8**	**+0.4**
JIKM				*e*S		**Sn**	**10 48 06.3**	**+0.3**
JMJ	**Miyako jima 2**	**2.64**	**75**	*i* P		**Pn**	**10 47 36.8**	**+1.3**
	baz=77							
JMJ				*e*S		**Sn**	**10 48 07.4**	**+1.1**
	baz=77							
JMJ2	**Miyako jima3**	**2.65**	**77**	P		**Pn**	**10 47 36.6**	**+0.9**
HEN	**Hengchun**	**2.69**	**217**	*e*P		**Pn**	**10 47 38.8**	**+2.5**
	baz=221							
TSEB	**Hengchuen, Pin**	**2.70**	**213**	*e*P		**Pn**	**10 47 37.7**	**+1.3**
	baz=212							
TWKBT	**Hengchun**	**2.71**	**215**	*e*P		**Pn**	**10 47 36.7**	**+0.2**
	baz=213							
TWKBT				*e*S		**Sn**	**10 48 06.8**	**-1.2**
	baz=213							
TWK1	**Hengchun**	**2.71**	**215**	*e*P		**Pn**	**10 47 37.7**	**+1.2**
	baz=213							
JOGS	**Gusukube**	**2.73**	**77**	P		**Pn**	**10 47 38.1**	**+1.3**
WDGT	**Dungji**	**2.75**	**251**	*e*P		**Pn**	**10 47 37.4**	**+0.4**
	baz=250							
WDGT				*e*S		**Sn**	**10 48 09.0**	**+0.1**
	baz=250							
PHUB	**P'eng-hu**	**2.75**	**257**	*e*P		**Pn**	**10 47 36.8**	**-0.2**
	baz=269							
PHUB				*e*S		**Sn**	**10 48 09.2**	**+0.1**
	baz=269							
PNG	**Penghu**	**2.75**	**258**	*e*P		**Pn**	**10 47 37.0**	**-0.1**
	baz=256							
PNG				*e*S		**Sn**	**10 48 09.2**	**+0.1**
	baz=256							
PTTC	**Pingtan**	**2.80**	**299**	*e*P		**Pn**	**10 47 36.7**	**-1.0**
	baz=298							
PTTC				*e*S		**Sn**	**10 48 07.5**	**-2.7**
	baz=298							
VWUC	**VWUC**	**2.88**	**287**	*e*P		**Pn**	**10 47 38.2**	**-0.7**
	baz=286							
VWUC				*e*S		**Sn**	**10 48 09.4**	**-2.9**
	baz=286							
VCHM	**Qimei**	**2.96**	**252**	*e*P		**Pn**	**10 47 40.3**	**+0.3**
	baz=250							
VCHM				*e*S		**Sn**	**10 48 14.3**	**0.0**
	baz=250							
MATB	**Ma-tsu**	**3.03**	**311**	*e*P		**Pn**	**10 47 40.2**	**-0.7**
	baz=320							
MATB				*e*S		**Sn**	**10 48 13.3**	**-2.6**
	baz=320							
PTMZ	**Houxiangcun**	**3.18**	**286**	*e*P		**Pn**	**10 47 42.2**	**-0.8**
	baz=285							
PTMZ				*e*S		**Sn**	**10 48 16.2**	**-3.5**
	baz=285							
LYJJ	**Jianjiangzhen**	**3.41**	**314**	*e*P		**Pn**	**10 47 45.6**	**-0.6**
	baz=322							
LYJJ				*e*S		**Sn**	**10 48 23.2**	**-2.2**
	baz=322							
XPSS	**Dashiqiu**	**3.44**	**323**	*e*P		**Pn**	**10 47 45.6**	**-1.0**
	baz=322							
MHZQ	**Yeshan**	**3.67**	**302**	*e*P		**Pn**	**10 47 48.9**	**-0.9**
	baz=301							
KNM	**Kinmen**	**3.70**	**275**	*e*P		**Pn**	**10 47 51.3**	**+1.1**
	baz=263							
KNMB	**Chin-men Tao**	**3.75**	**275**	*e*P		**Pn**	**10 47 49.9**	**-0.9**
	baz=263							
AXDP	**Jialang**	**4.17**	**281**	*e*P		**Pn**	**10 47 56.2**	**-0.5**
	baz=279							
ZPLA	**Ao Xicun**	**4.33**	**268**	*e*P		**Pn**	**10 47 58.4**	**-0.5**
	baz=267							
ZZJH	**Jiuhuzhen**	**4.44**	**275**	*e*P		**Pn**	**10 48 00.2**	**-0.1**
	baz=264							

GUC 12 10:46:57.4±0.7, 27°80S×71°23W, h21km±15km, ML2.8, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AC04	**Llanos de Chal**	**0.43**	**161**	⇑*i*P	Pb	10 47 05.8	-0.4
AC04				*i* S	Sb	10 47 11.2	-1.0
AC04				IAML		10 47 11.6	
	comp=E,4μm,0.4s						
GO03	**Copiap**	**0.91**	**77**	*i* S	Sb	10 47 26.2	+0.1
GO03				IAML		10 47 33.3	
	comp=E,465nm,0.1s						
AC05	**El Transito**	**1.34**	**141**	*e*P	Pn	10 47 21.1	+0.1
AC05				*i* S	Sn	10 47 36.8	-1.4
AC05				IAML		10 47 44.4	
	comp=E,207nm,0.7s						
AC01	**Pan de Azucar**	**1.74**	**19**	*e*P	Pb	10 47 27.8	-0.8
AC01	**Pan de Azucar**	**1.74**	**19**	⇑*i*P	Pb	10 47 27.8	-0.8
AC01				*i* S	Sb	10 47 48.9	-1.0
AC01				IAML		10 47 58.3	
	comp=E,55nm,0.3s						
AC02	**Maricunga**	**2.10**	**63**	⇑*e*P	Pb	10 47 35.4	+0.3
AC02				*i* S	Sb	10 48 02.9	+2.0
AC02				IAML		10 48 07.0	
	comp=E,176nm,0.2s						
CO01	**Juntas del Tor**	**2.39**	**156**	IAML		10 48 15.3	
	comp=N,61nm,0.2s						
GO04	**Tololo Observa**	**2.40**	**171**	*e*P	Pn	10 47 36.7	+1.0
GO04				*i* S	Sn	10 48 05.6	+1.0
VCA	**Vinchina**	**2.83**	**110**	*e*P	Pb	10 47 47.7	+0.4
VCA				⇓*i* S	Sb	10 48 28.5	+7.0
VCA				IAML		10 48 32.9	
	comp=N,63nm,0.7s						
GO02	**Mina Guanaco**	**3.01**	**30**	*e*P	Pn	10 47 46.5	+2.4
GO02				IAML		10 48 40.2	
	comp=N,58nm,0.3s						
CO03	**El Pedregal**	**3.07**	**171**	⇓*e*P	Pn	10 47 46.0	+1.2
CO03				IAML		10 48 42.2	
	comp=N,57nm,0.4s						
CO02	**Combarbal**	**3.40**	**177**	*e*P	Pn	10 47 50.7	+1.3
CO02				*i* S	Sn	10 48 31.1	+1.9

IDC 12 10:50:13.2±2.1, 0°36N×125°92E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/48, mbtmp3.3/3, Error ellipse: s-maj=166.6km s-min=28.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.80**	**158**	P	P	10 55 06.6	-0.5
	0.5nm,0.5s,baz=337,slow=12,SNR=10						
ASAR	**Alice Springs**	**25.11**	**163**	P	P	10 55 40.4	+0.4
	0.2nm,0.4s,baz=343,slow=9.1,SNR=5.9						
MKAR	**Makanchi Array**	**59.88**	**327**	P	P	11 00 20.9	-0.1
	0.4nm,0.7s,baz=119,slow=6.8,SNR=2.6						

IDC 12 10:52:57.8±2.0, 0°14N×125°70E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/49, mbtmp3.3/3, Error ellipse: s-maj=179.4km s-min=28.2km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.68**	**158**	P	P	10 57 49.3	-1.1
	0.8nm,0.6s,baz=335,slow=12,SNR=8.6						
ASAR	**Alice Springs**	**24.97**	**162**	P	P	10 58 24.4	+1.1
	0.2nm,0.4s,baz=348,slow=15,SNR=2.6						
MKAR	**Makanchi Array**	**59.95**	**327**	P	P	11 03 05.9	-0.1
	0.3nm,0.6s,baz=136,slow=7.4,SNR=3.8						

*GCG **12** 10:55:26.3±0.5, 13°.79N×90°.90W, h79km±23km, MD3.5*
*SNET **12** 10:55:26.9±0.5, 14°.29N×90°.78W, h26km±7km, ML2.3*

ISC 12 10:55:25.1±4.7, 13°5N±0°2×90°9W±0°2, h35km, n5, σ0°39/8, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.94**	**20**	*e*P	**Pn**	**10 55 42.1**	**0.0**
PCG				*e*S	**Sn**	**10 55 55.0**	**+0.6**
FUG	**Fuego 3**	**0.95**	**5**	*e*P	**Pn**	**10 55 42.2**	**+0.1**
FUG				*e*S	**Sn**	**10 55 54.1**	**-0.4**
NUBE	**Las Nubes**	**1.19**	**70**	*e*P	**Pn**	**10 55 45.8**	**+0.4**
NUBE				*e*S	**Sn**	**10 56 00.3**	**-0.2**
NUBE				IAML		10 56 02.7	
	comp=Z,45nm,0.3s						
NBG	**Las Nubes**	**1.22**	**28**	*e*P	**Pn**	**10 55 45.7**	**-0.3**
TACO	**Tacachico**	**1.61**	**73**	*e*P	**Pn**	**10 55 50.8**	**-0.2**

*BJI **12** 11:04:39.3±0.0, 32°.91N×141°.44E, h57km, mB4.7/37, mb4.8/57, Ms4.1/29, Ms7 4.0/28*
*MOS **12** 11:04:47.3±1.0, 33°.03N×140°.57E, h68km, mb5.2/71, MS4.1/5, Error ellipse: s-maj=7.5km s-min=4.2km az=115.4*
*NEIC **12** 11:04:48.9±2.1, 33°.02N±0°.06×140°.66E±0°.07, h66km±4km, mb5.1/269, Error ellipse: s-maj=8.5km s-min=7.8km az=146.0*
*JMA **12** 11:04:49.0±0.1, 33°.10N×140°.70E, h64km±3km, M4.9*
JMA Felt II J1.
*GCMT **12** 11:04:49.9±0.4, 33°.29N±0°.03×140°.65E±0°.03, h90km±4km, MW4.8/69, Moment Tensor Solution. s23,c26; s69,c96; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 0.79±.11; Mθθ 0.74±.15; Mϕϕ -0.05±.14; Mrθ 0.09±.08; Mϕr -1.54±.09; Mθr -1.12±.06; Best double couple: M₀2.05000×10¹⁶ NP1: ϕs 90.00000°, δ52.00000°, λ158.00000°. NP2: ϕs 194.00000°, δ73.00000°, λ40.00000°. Principal axes: T 1.9770, Plg40.0000°, Azm59.0000°; N 0.1450, Plg47.0000°, Azm213.0000°; P -2.1230, Plg13.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **12** 11:04:49.2±0.3, 33°.03N×140°.53E, h69km±2km, mb4.4/31, mb1 4.6/33, mb1mx4.4/50, mbtmp4.8/33, MS3.6/13, Ms1 3.6/13, ms1mx3.4/39 Error ellipse: s-maj=7.7km s-min=6.7km az=12.0*
*NIED **12** 11:04:49.1, 33°.10N×140°.70E, h64km, MW4.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr 0.87; Mθθ -0.39; Mϕϕ -0.47; Mrθ -0.02; Mθϕ -0.80; Mϕr -0.92; Fault plane solution: M₀1.43000×10¹⁶ NP1: ϕs 196.00000°, δ68.00000°, λ61.00000°. NP2: ϕs 72.00000°, δ36.00000°, λ140.00000°.*

ISC 12 11:04:49.0±0.3, 33°06N±0°03×140°66E±0°04, h68km±2km, h68km:pP-P, n675, σ1°41/655, mb5.0/228, 28C-48D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.71**	**275**	⇑P	**Pn**	**11 05 04.3**	**+0.5**
JHJ2				S	**Sn**	**11 05 15.2**	**+0.4**
JHJ2	**Mitsune**	**0.71**	**275**		**Pn**	**11 05 04.4**	**+0.5**
JHJ2				Sn	**Sn**	**11 05 15.2**	**+0.4**
JHCJ	**Hachijojimakas**	**0.72**	**272**	⇑P	**Pn**	**11 05 04.3**	**+0.3**
JHCJ				S	**Sn**	**11 05 14.7**	**-0.4**
JHJ	**Hachijo jima 2**	**0.74**	**275**	P	**Pn**	**11 05 04.1**	**-0.1**
	14μm,0.3s,baz=136,slow=5.4,SNR=3286						
JHJ				S	**Sn**	**11 05 15.0**	**-0.4**
	25μm,0.3s,baz=334,slow=10,SNR=28						
JAOM	**Aogashimamukai**	**0.96**	**232**	⇑P	**Pn**	**11 05 07.6**	**+0.7**
JMKN	**Mikurajimanish**	**1.22**	**313**	⇓P	**Pn**	**11 05 10.3**	**+0.1**
JMKN				*e*S	**Sn**	**11 05 25.3**	**-0.8**
BSO1	**Boso 1**	**1.62**	**9**	P	**Pn**	**11 05 14.7**	**-0.2**
JKO	**Kozu shima**	**1.70**	**312**	⇓P	**Pn**	**11 05 17.2**	**+0.7**
JKO				*e*S	**Sn**	**11 05 37.9**	**+0.5**
BSO3	**Boso 3**	**1.75**	**356**	⇓P	**Pn**	**11 05 16.9**	**0.0**
BSO3				S	**Sn**	**11 05 37.8**	**-0.3**
JTHY	**Toshimahigashi**	**1.86**	**322**	P	**Pn**	**11 05 19.3**	**+0.6**
JTHY				S	**Sn**	**11 05 41.4**	**+0.2**
JIM2	**Oshima 3**	**1.95**	**329**	⇓P	**Pn**	**11 05 20.0**	**+0.1**
JIZS	**Izushimoda**	**2.22**	**319**	⇓P	**Pn**	**11 05 24.5**	**+0.9**
JIZS				*e*S	**Sn**	**11 05 50.2**	**+0.1**
JOD2	**Odawara 2**	**2.56**	**330**	⇓P	**Pn**	**11 05 28.5**	**+0.3**
JOD2				S	**Sn**	**11 05 57.0**	**-1.2**
TK02	**Tokai 2**	**2.58**	**291**	⇓P	**Pn**	**11 05 29.9**	**+1.6**
JSG	**Sagara**	**2.62**	**309**		**Pn**	**11 05 30.9**	**+2.0**
TK04	**Tokai 4**	**2.67**	**301**	⇓P	**Pn**	**11 05 31.4**	**+1.8**
JFNN	**Fujinakano**	**2.69**	**323**	⇓P	**Pn**	**11 05 31.5**	**+1.6**
SHZ3	**Shizuoka 3**	**2.86**	**315**	P	**Pn**	**11 05 34.2**	**+1.9**
JYN	**Shimob**	**3.00**	**325**	⇓P	**Pn**	**11 05 35.8**	**+1.6**
TTO2	**TONANKAI O.B.S**	**3.11**	**284**	⇓P	**Pn**	**11 05 37.1**	**+1.7**
TTO2				*e*S	**Sn**	**11 06 13.7**	**+2.4**
JYT	**Yasato**	**3.19**	**353**		**Pn**	**11 05 36.4**	**-0.3**
JYT				Sn	**Sn**	**11 06 14.8**	**+1.3**
JGF	**Kuroka**	**3.73**	**314**		**Pn**	**11 05 46.4**	**+2.2**
INU	**Inuyama**	**3.79**	**308**	Pn	**Pn**	**11 05 46.9**	**+2.0**
INU				Sn	**Sn**	**11 06 30.9**	**+2.7**
MJAR	**Matsushiro Arr**	**4.02**	**331**	P	**Pn**	**11 05 48.7**	**+0.6**
	9.4nm,0.3s,baz=179,slow=16,SNR=273						
MJAR				S	**Sn**	**11 06 34.3**	**+0.4**
	4.4nm,0.3s,baz=46,slow=54,SNR=1.0						
MJAR	**Matsushiro Arr**	**4.02**	**331**		**Pn**	**11 05 48.1**	**0.0**
MAJO	**Matsushiro**	**4.02**	**331**	*d* iP	**Pn**	**11 05 49.1**	**+1.0**
MAJO	**Matsushiro**	**4.02**	**331**		**Pn**	**11 05 49.2**	**+1.1**
MAJO				Sn	**Sn**	**11 06 34.9**	**+0.9**
MAT	**Matsushiro**	**4.02**	**331**	P	**Pn**	**11 05 48.8**	**+0.7**
MAT				S	**Sn**	**11 06 34.9**	**+0.9**
MJB9	**Matsu-Tunnel**	**4.03**	**331**	Pn	**Pn**	**11 05 49.3**	**+1.2**
MJB9				Sn	**Sn**	**11 06 35.2**	**+1.1**
JMM	**Marumori**	**4.80**	**1**		**Pn**	**11 05 57.3**	**-1.5**
JWT	**Wachi**	**4.89**	**298**		**Pn**	**11 06 02.0**	**+2.1**
JSD	**Sado**	**5.34**	**339**		**Pn**	**11 06 05.2**	**-0.9**
JMN	**Monobe**	**5.71**	**279**	Pn	**Pn**	**11 06 13.4**	**+2.2**
JCJ	**Chichijima**	**6.08**	**167**	Pn	**Pn**	**11 06 13.6**	**-2.8**
JHS	**Saijyo**	**6.56**	**289**	Pn	**Pn**	**11 06 25.1**	**+2.4**
JTM	**Tenmabayashi**	**7.72**	**2**	Pn	**Pn**	**11 06 36.8**	**-1.9**
JNU	**Nakatsue**	**8.21**	**273**	P	**Pn**	**11 06 48.0**	**+2.6**
	11nm,0.3s,baz=90,slow=3.9,SNR=106						
JNU	**Nakatsue**	**8.21**	**273**	Pn	**Pn**	**11 06 47.8**	**+2.4**
ERM	**Erimo**	**9.16**	**12**	⇓*e*P	**Pn**	**11 06 56.4**	**-1.9**
ERM	**Erimo**	**9.16**	**12**		**Pn**	**11 06 54.9**	**-3.4**
NMR	**Nemuro--Hokkai**	**11.04**	**20**	*e*P	Pn	11 07 19.2	-4.7
ASAJ	**Asahikawa**	**11.15**	**7**	P	**Pn**	**11 07 21.9**	**-3.5**
	7.2nm,0.3s,baz=210,slow=13,SNR=102						
ASAJ				S	Sn	11 09 18.4	-10
	0.9nm,0.3s,baz=102,slow=19,SNR=2.5						
ASAJ	**Asahikawa**	**11.15**	**7**	P	**Pn**	**11 07 22.2**	**-3.2**
JKA	**Kamikawa-asahi**	**11.15**	**7**	Pn	**Pn**	**11 07 22.2**	**-3.2**
KSRS	**Korea Array**	**11.30**	**296**	P	**Pn**	**11 07 30.9**	**+3.4**
	0.8nm,0.3s,baz=106,slow=13,SNR=19						
KSRS				LR	LR	11 11 59.2	
	comp=Z,360nm,19.0s,baz=112,slow=38						
KSAR	**Wonju Array Be**	**11.32**	**296**	P	**Pn**	**11 07 27.3**	**-0.5**
KSAR	**Wonju Array Be**	**11.32**	**296**		**Pn**	**11 07 27.3**	**-0.5**
GLVR	**Golovnino**	**11.32**	**18**	*e*P	**Pn**	**11 07 23.8**	**-4.0**
GLVR				pmax	pmax		
	comp=E,173nm,0.7s						
GLVR				pmax	pmax		
	comp=Z,198nm,0.7s						
KS19	**Wonju Array Si**	**11.36**	**297**		**Pn**	**11 07 30.7**	**+2.4**
TJN	**Taejon**	**11.43**	**291**	⇓*i*P	**Pn**	**11 07 33.6**	**+4.3**
GRPR	**Tuman**	**11.63**	**19**	*e*P	**Pn**	**11 07 28.9**	**-3.1**
GRPR				pmax	pmax		
	comp=Z,89nm,0.4s						
GRPR				pmax	pmax		
	comp=N,62nm,0.2s						
GRPR				pmax	pmax		
	comp=E,52nm,0.2s						
USRK	**Ussuriysk Ar.**	**13.02**	**331**	P	**Pn**	**11 07 48.3**	**-2.6**
	baz=140,slow=12,SNR=16						
USRK				LR	LR	11 13 15.4	
	comp=E,163nm,18.3s,baz=143,slow=39						
USRK	**Ussuriysk Ar.**	**13.02**	**331**	P	**Pn**	**11 07 50.8**	**-0.1**
USRK	**Ussuriysk Ar.**	**13.02**	**331**	Pn	**Pn**	**11 07 50.8**	**-0.1**
KUR	**Kuril'sk**	**13.38**	**23**	P	**Pn**	**11 07 54.5**	**-1.2**
YSS	**Yuzh-Sakhalins**	**13.97**	**6**	*e*P	**Pn**	**11 08 01.2**	**-2.4**
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
YSS	**Yuzh-Sakhalins**	**13.97**	**6**		**Pn**	**11 08 00.2**	**-3.4**
CN2	**Changchun**	**16.01**	**316**	*e*P	**Pn**	**11 08 29.4**	**-0.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,300nm,15.0s						
CN2				LR	LR		
	comp=Z,400nm,18.0s						
UGL	**Uglegorsk**	**16.04**	**3**	*e*P	**P**	**11 08 32.8**	**+0.4**
UGL				S	**Sn**	**11 11 31.1**	**+4.0**
UGL				pmax	pmax		
	comp=Z,400nm,1.8s						
UGL				pmax	pmax		
	comp=Z,151nm,1.1s						
UGL				smax	smax		
	comp=N,72nm,1.5s						
UGL				smax	smax		
	comp=N,600nm,5.4s						
DL2	**Dalian**	**16.46**	**296**	P	**Pn**	**11 08 35.3**	**-0.3**
DL2				*e*pP	**pP**	**11 08 46.3**	**-4.7**
DL2				*e*S	**Sn**	**11 11 36.7**	**-0.8**
DL2				pmax	pmax		
	comp=N,90nm,1.3s						
DL2				LR	LR		
	comp=N,590nm,18.0s						
DL2				LR	LR		
	comp=N,600nm,18.9s						
DL2				LR	LR		
	comp=N,400nm,15.4s						
KLR	**Kul'dur**	**17.48**	**340**	P	**Pn**	**11 08 44.5**	**-3.6**
	comp=N,1.5nm,0.3s,baz=141,slow=12,SNR=50						
KLR				ScP	**ScP**	**11 16 51.7**	**-2.5**
	comp=N,0.1nm,0.3s,baz=347,slow=8.1,SNR=4.4						
KLR	**Kul'dur**	**17.48**	**340**	⇓*i*P	**Pn**	**11 08 44.4**	**-3.6**
KLR				pmax	pmax		
	comp=Z,27nm,0.8s						
YOJ	**Yonaguni jima**	**17.67**	**246**	P	**Pn**	**11 08 50.4**	**-0.1**
YOJ				pmax	pmax		
	comp=Z,259nm,1.4s						
YOJ	**Yonaguni jima**	**17.67**	**246**		**Pn**	**11 08 50.4**	**-0.1**
YOJ				IAmb	IAmb	11 09 37.6	
	comp=Z,259nm,1.4s						
TYV	**Tymovskoe**	**17.86**	**4**	*e*P	**P**	**11 08 51.5**	**-0.9**
TYV				*e*S	**Sn**	**11 12 06.6**	**-4.3**
TYV				pmax	pmax		
	comp=Z,26nm,1.1s						
TYV				smax	smax		
	comp=E,10.0nm,1.1s						
GRNR	**Gornyy**	**17.97**	**351**	⇓*i*P	**P**	**11 08 50.5**	**-3.3**
GRNR				*e*S	**Sn**	**11 12 05.6**	**-8.2**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GRNR				smax	smax		
	comp=N,700nm,0.7s						
GRNR				MLR	MLR		
	comp=N,700nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,120nm,13.0s						
NJ2	**Nanjing**	**18.41**	**273**	*e*P	**Pn**	**11 08 59.1**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YHNB	**Yeheng**	**18.82**	**249**	P	**P**	**11 09 02.9**	**-0.5**
YHNB				IAmb	IAmb	11 09 20.7	
	comp=Z,79nm,1.0s						
YULB	**Yu-li**	**19.56**	**245**	P	**P**	**11 09 11.8**	**+0.5**
SSLB	**Suanglung**	**19.61**	**247**	P	**P**	**11 09 11.6**	**-0.3**
SSLB				IAmb	IAmb	11 09 29.6	
	comp=Z,104nm,1.0s						
TIA	**Tai'an**	**19.61**	**286**	P	**P**	**11 09 12.3**	**+0.5**
TIA				pmax	pmax		
	comp=Z,17nm,0.5s						
GUMO	**Guam**	**19.75**	**168**	P	**Pn**	**11 09 15.6**	**+0.1**
	comp=Z,10nm,0.3s,baz=202,slow=13,SNR=7.0						
GUMO				LR	LR	11 16 27.0	
	comp=Z,167nm,18.5s,baz=344,slow=35						
GUMO	**Guam**	**19.75**	**168**	P	**Pn**	**11 09 15.1**	**-0.4**
TWG	**Pinlang**	**20.05**	**244**	P	**P**	**11 09 16.5**	**-0.2**
TWG				IAmb	IAmb	11 09 35.7	
	comp=Z,66nm,0.8s						
BJI	**Beijing**	**20.83**	**297**	P	**P**	**11 09 25.6**	**+0.6**
BJI				S	**S**	**11 13 17.6**	**+4.1**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJT	**Baijiatuau**	**20.83**	**296**	P	**P**	**11 09 25.6**	**+0.6**
BJT				pmax	pmax		
	comp=Z,16nm,0.9s						
BJT	**Baijiatuau**	**20.83**	**296**	P	**P**	**11 09 25.6**	**+0.6**
SKR	**Severo-Kuril's**	**20.97**	**28**	*e*P	**P**	**11 09 27.7**	**+1.4**
SKR				*e*S	**S**	**11 13 17.9**	**+2.0**
SKR				pmax	pmax		
	comp=Z,48nm,1.0s						
SKR				MLR	MLR		
	comp=Z,100nm,21.0s						
HIA	**Hailar**	**22.47**	**322**	P	**P**	**11 09 38.9**	**-3.6**
HIA				pmax	pmax		
	comp=Z,43nm,0.8s						
HIA	**Hailar**	**22.47**	**322**	P	**P**	**11 09 38.9**	**-3.6**
HIA				IAmb	IAmb	11 09 44.0	
	comp=Z,43nm,0.8s						
WHN	**Wuhan**	**22.48**	**271**	⇑P	**P**	**11 09 43.3**	**+0.5**
ZEA	**Zeya**	**22.78**	**339**	*e*P	**P**	**11 09 44.7**	**-1.0**
ZEA				*e**PP	**pP**	**11 10 01.8**	**+1.9**
ZEA				*e*S	**S**	**11 13 47.4**	**-2.0**
ZEA				smax	smax		
	comp=N,400nm,11.9s						
TIY	**Taiyuan**	**23.43**	**289**	*e*P	**P**	**11 09 52.1**	**-0.2**
TIY				pmax	pmax		
	comp=N,30nm,0.8s						
PETK	**Petropavlovsk-**	**23.48**	**26**	P	**P**	**11 09 52.1**	**-0.4**
	comp=N,1.2nm,0.7s,baz=258,slow=4.2,SNR=3.5						
PETK

comp=Z,67nm,19.0s,baz=240,slow=40
MA2 Magadan 27.37 11⇓ *e*P P 11 10 23.7 -3.8
MA2 pmax pmax
comp=Z,35nm,1.3s
H11S3 WAKE ISLAND Hy 27.46 115 T T 11 40 06.1
baz=306,slow=76
H11S1 WAKE ISLAND Hy 27.46 115 T T 11 39 56.5
baz=306,slow=76
H11S2 WAKE ISLAND Hy 27.48 115 T T 11 40 10.9
baz=306,slow=76
ULN Ulaanbaatar 29.27 310*d* iP P **11 10 45.1 +0.3**
ULN pmax pmax
comp=Z,29nm,1.0s
ULN Ulaanbaatar 29.27 310 P P **11 10 45.8 +1.0**
DAV Davao City (W) 29.40 212 LR LR 11 20 13.6
comp=Z,79nm,21.7s,baz=358,slow=32
SONM Songino Array 29.68 310 P P **11 10 48.6 +0.3**
comp=Z,6.8nm,0.6s,baz=119,slow=8.6,SNR=40
SONM PcP **PcP 11 13 51.7 +0.6**
comp=Z,1.3nm,0.8s,baz=107,slow=3.2,SNR=2.5
SONM ScP **ScP 11 17 25.9 -1.1**
comp=Z,2.3nm,0.8s,baz=136,slow=3.5,SNR=9.5
SONM LR LR 11 23 19.1
comp=Z,294nm,18.4s,baz=156,slow=38
SONM Songino Array 29.68 310 P P **11 10 48.7 +0.3**
SONM pmax pmax
comp=Z,10.0nm,1.0s
SONM Songino Array 29.68 310 P P **11 10 48.6 +0.3**
YAK Yakutsk 29.84 350 P P **11 10 48.2 -1.2**
comp=Z,7.0nm,0.4s,baz=222,slow=0.8,SNR=2.1
YAK LR LR 11 23 06.0
comp=Z,122nm,20.0s,baz=96,slow=37
YAK Yakutsk 29.84 350⇑ *e*P P 11 10 48.2 -1.2
YAK pmax pmax
comp=Z,22nm,0.7s
YAK Yakutsk 29.84 350 P P **11 10 48.2 -1.2**
YAK IAmb IAmb 11 10 55.3
comp=Z,24nm,0.5s
LZH Lanzhou 30.35 286 *e*P P 11 10 56.3 +1.8
LZH pmax pmax
comp=Z,19nm,1.5s
LZH pmax pmax
comp=Z,66nm,6.0s
LZH LR LR
comp=Z,250nm,14.0s
LZH LR LR
comp=Z,330nm,14.1s
LZH LR LR
comp=Z,360nm,16.6s
BOD Bodaibo 30.65 332 *e*P P 11 10 56.6 -0.1
BOD pmax pmax
comp=Z,40nm,0.9s
SEY Seymchan 30.81 10 P P **11 10 56.6 -1.3**
comp=Z,2.0nm,0.9s,baz=17,slow=19,SNR=2.0
QIZ Qiongzhong 30.88 251 P P **11 10 59.0 -0.1**
QIZ S S **11 16 00.7 +2.4**
QIZ sS sS **11 16 23.9 -1.7**
QIZ LR LR
comp=Z,230nm,10.6s
CD2 Chengdu 31.27 276 *e*P P 11 11 02.4 -0.1
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,90nm,5.3s
CD2 LR LR
comp=Z,330nm,11.4s
CD2 LR LR
comp=Z,320nm,18.1s
CD2 LR LR
comp=Z,400nm,17.5s
ZAK Zakamensk 32.41 314 *e*P P 11 11 12.6 +0.3
ZAK pmax pmax
comp=Z,16nm,1.2s
TLY Talaya 32.62 316 *e*P P 11 11 15.2 +1.2
TLY pmax pmax
comp=Z,71nm,0.9s
TLY MLR MLR
comp=Z,361nm,17.0s
TLY Talaya 32.62 316 P P **11 11 15.0 +1.0**
TLY IAmb IAmb 11 11 16.6
comp=Z,26nm,0.9s
GTA Gaotai 33.34 293 P P **11 11 19.7 -0.9**
GTA pP pP 11 11 37.4 +0.5
GTA ScP **ScP 11 17 38.4 -1.2**
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA pmax pmax
comp=Z,62nm,6.1s
GTA LR LR
comp=Z,150nm,18.2s
GTA LR LR
comp=Z,140nm,17.4s
GTA LR LR
comp=Z,120nm,18.2s
MOY Mondy 34.17 315 *e*P P 11 11 28.0 +0.3
MOY pmax pmax
comp=Z,21nm,1.5s
SIJI Sorong 34.89 197 P P **11 11 32.4 -1.7**
comp=Z,11nm,0.6s,baz=219,slow=23,SNR=5.0
GENI Genyem 35.46 181 P P **11 11 36.2 -2.7**
comp=Z,31nm,0.9s
GTOI Gorontalo 36.27 211 P P **11 11 46.0 +0.1**
comp=Z,9.7nm,1.1s
NONG Nongkai 36.77 255 P P **11 11 50.2 0.0**
BILL Bilibino 38.01 15⇓ *e*P P 11 12 00.6 +0.5
BILL pmax pmax
comp=Z,11nm,1.0s
BILL Bilibino 38.01 15 P P **11 12 01.2 +1.0**
APSI Ampana 38.25 212 P P **11 12 03.0 +0.4**
comp=Z,3µmcomp=Z,31nm,0.6s
CHAI Chaiyaphum 38.86 253 P P **11 12 06.6 -1.2**
comp=Z,29nm,0.5s
UTTA Uttaradit 39.05 257 P P **11 12 08.8 -0.6**
comp=Z,19nm,0.8s
TIXI Tiksi 39.17 354⇑ *e*P P 11 12 09.5 -0.2
TIXI pmax pmax
comp=Z,46nm,1.7s
TIXI Tiksi 39.17 354 P P **11 12 09.5 -0.2**
TIXI IAmb IAmb 11 12 29.6
comp=Z,29nm,0.7s
CM35 Chiang Mai Arr 39.73 259 P P **11 12 14.0 -1.1**
CMMT Chiang Mai 39.84 260 P P **11 12 15.0 -1.0**
comp=Z,4.0nm,1.1s
CHTO Chiang Mai 39.84 260 P P **11 12 14.3 -1.7**
CHTO pmax pmax
comp=Z,10.0nm,1.2s
CHTO Chiang Mai 39.84 260 P P **11 12 14.3 -1.7**
SRAK Srakaew 39.87 251 P P **11 12 11.8 -4.4**
comp=Z,249nm,0.8s
CM04 Chiang Mai Arr 40.02 259 P P **11 12 17.6 +0.2**
comp=Z,5.4nm,1.0s
CMAR Chiang Mai Arr 40.02 259 P P **11 12 15.8 -1.7**
comp=Z,1.7nm,0.4s,baz=45,slow=7.7,SNR=13
CMAR pP **pP 11 12 34.1 +0.1**
comp=Z,1.1nm,0.5s,baz=40,slow=6.7,SNR=2.1
CMAR ScP **ScP 11 18 04.6 +0.1**
comp=Z,0.4nm,0.4s,baz=16,slow=4.2,SNR=4.0
CMAR LR LR 11 29 35.0
comp=Z,92nm,20.1s,baz=104,slow=37
CMAR Chiang Mai Arr 40.02 259 *i* P P **11 12 16.7 -0.7**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR Chiang Mai Arr 40.02 259 P P **11 12 14.9 -2.5**
CM01 Chiang Mai Arr 40.02 259 P P 11 12 23.8 +6.3
comp=Z,193nmcomp=Z,5.3nm,0.8s
CM02 Chiang Mai Arr 40.02 259 P P **11 12 17.6 +0.1**
comp=Z,6.7nm,0.8s
CM05 Chiang Mai Arr 40.04 259 P P 11 12 23.0 +5.3
comp=Z,2.9nm,0.9s
CM13 Chiang Mai Arr 40.06 259 P P 11 12 23.0 +5.2
comp=Z,54nmcomp=Z,4.0nm,0.6s
NIKH Nikolski High 40.93 45 P P **11 12 25.1 +0.5**
WMQ Urumqi 42.21 301 *e*P P 11 12 35.6 +0.4
WMQ pP pP 11 12 53.1 +1.2
WMQ pmax pmax
comp=Z,40nm,1.1s
WMQ pmax pmax
comp=Z,200nm,5.1s
WMQ Urumqi 42.21 301 P P **11 12 35.7 +0.4**
WMQ pmax pmax
comp=Z,33nm,1.1s
WMQ Urumqi 42.21 301 P P **11 12 35.7 +0.4**
WMQ IAmb IAmb 11 12 37.4
comp=Z,33nm,1.1s
PHET Kaeng Krachan 42.42 252 P P **11 12 37.0 -0.1**
comp=Z,21nm,1.0s

UNV Unalaska Valle 42.45 44 P P **11 12 37.3 +0.4**
PMG Port Moresby 42.68 171 P P **11 12 37.9 -1.2**
comp=Z,12nm,0.8s,baz=0.0,slow=6.1,SNR=2.4
PMG pP **pwP 11 12 57.2 -0.9**
comp=Z,11nm,0.5s,baz=312,slow=9.2,SNR=2.9
PMG Port Moresby 42.68 171 P P **11 12 38.7 -0.4**
PMG pmax pmax
comp=Z,25nm,1.1s
PMG Port Moresby 42.68 171 P P **11 12 38.7 -0.4**
PMG IAmb IAmb 11 12 58.8
comp=Z,25nm,1.1s
KAPI Kappang 42.74 212 P P **11 12 39.4 -0.3**
comp=Z,6.3nm,0.6s,baz=107,slow=14,SNR=1.6
ZAA0 Zalesovo Array 44.23 315 P P **11 12 50.4 -0.9**
ZAA0 IAmb IAmb 11 12 52.5
comp=Z,41nm,1.7s
ZALV Zalesovo Beam 44.23 315 P P **11 12 50.5 -0.7**
comp=Z,5.9nm,0.7s,baz=101,slow=6.6,SNR=23
ZALV pP **pP 11 13 09.9 +1.9**
comp=Z,5.0nm,0.7s,baz=117,slow=7.4,SNR=3.2
ZALV PcP **PcP 11 14 34.4 -0.3**
comp=Z,8.6nm,0.5s,baz=106,slow=3.0,SNR=13
ZALV ScP **ScP 11 18 19.1 -1.5**
comp=Z,5.6nm,0.9s,baz=66,slow=3.6,SNR=11
ZALV LR LR 11 32 04.0
comp=Z,94nm,18.6s,baz=85,slow=37
ZALV Zalesovo Beam 44.23 315 *i* P P **11 12 50.9 -0.3**
ZALV pmax pmax
comp=Z,6.0nm,0.7s
ZALV Zalesovo Beam 44.23 315 P P **11 12 50.4 -0.8**
TNA Tin City 44.64 28 P P **11 12 55.8 +1.4**
baz=249
SOEI Soe 45.35 203 P P **11 12 58.8 -1.9**
comp=Z,27nm,1.1s
SOEI Soe 45.35 203 P P **11 13 01.1 +0.4**
SOEI IAmb IAmb 11 13 36.8
comp=Z,28nm,0.9s
SURT Suratani 45.42 248 P P **11 13 03.3 +2.1**
MK31 Makanchi Array 45.81 305*d* iP P **11 13 03.4 -0.6**
MK31 Makanchi Array 45.81 305 P P **11 13 03.7 -0.3**
MK31 IAmb IAmb 11 13 04.7
comp=Z,18nm,0.8s
MKAR Makanchi Array 45.81 305 P P **11 13 03.8 -0.2**
comp=Z,17nm,0.8s,baz=90,slow=9.6,SNR=102
MKAR pP **pP 11 13 21.4 +0.6**
comp=Z,7.5nm,0.7s,baz=91,slow=11,SNR=5.6
MKAR PcP **PcP 11 14 40.9 +0.5**
comp=Z,1.9nm,0.7s,baz=94,slow=5.8,SNR=1.5
MKAR ScP **ScP 11 18 25.7 -1.8**
comp=Z,2.1nm,0.6s,baz=79,slow=6.3,SNR=8.9
MKAR LR LR 11 32 27.8
comp=Z,136nm,22.0s,baz=90,slow=36
MKAR Makanchi Array 45.81 305 P P **11 13 03.2 -0.7**
MAKZ Makanchi 46.02 305 P P **11 13 05.6 -0.1**
MAKZ pmax pmax
comp=Z,62nm,1.6s
MAKZ Makanchi 46.02 305 P P **11 13 05.6 -0.1**
MTN Manton Dam 46.54 193 P P **11 13 09.2 -0.7**
MTN IAmb IAmb 11 13 42.1
comp=Z,13nm,0.7s
NRIK Noril'sk 46.65 337 P P **11 13 09.8 -0.4**
comp=Z,4.1nm,0.3s,baz=114,slow=9.2,SNR=12
NRIK LR LR 11 33 27.7
comp=Z,146nm,20.2s,baz=208,slow=37
NRIK Noril'sk 46.65 337*d* iP P **11 13 09.7 -0.4**
NRIK pmax pmax
comp=Z,22nm,1.3s
COEN Coen 46.81 177 P P **11 13 12.6 +0.6**
COEN IAmb IAmb 11 13 13.7
comp=Z,16nm,0.7s
SEM Semipalatinsk 46.96 310 *e*P P **11 13 12.0 -1.1**
comp=Z,6.2nm,0.9s,baz=310
SEM Semipalatinsk 46.96 310 *e*P P **11 13 12.0 -1.1**
SEM pmax pmax
comp=Z,6.0nm,0.9s
RDOG Red Dog Mine 47.34 25 IAmb IAmb 11 13 18.5
comp=Z,12nm,0.8s
KURK Kurchatov 47.98 311*d* iP P **11 13 20.1 -0.7**
KURK pmax pmax
comp=Z,33nm,0.8s
KURK Kurchatov 47.98 311 P P **11 13 20.2 -0.5**
SHLS Shalkode 48.23 301 *e*P P **11 13 19.9 -3.1**
comp=Z,10.0nm,0.6s,baz=300
SHLS Shalkode 48.23 301 *e*P P **11 13 19.9 -3.1**
SHLS pmax pmax
comp=Z,10.0nm,0.6s
TDK Taldyqorghan 48.70 303 *e*P P **11 13 26.4 -0.1**
comp=Z,14nm,0.6s,baz=303
TDK Taldyqorghan 48.70 303 *e*P P **11 13 26.4 -0.1**
TDK pmax pmax
comp=Z,14nm,0.6s
KPKS Kokpek 48.74 301 *e*P P **11 13 26.4 -0.5**
comp=Z,16nm,0.7s,baz=301
KPKS Kokpek 48.74 301 *e*P P **11 13 26.4 -0.5**
KPKS pmax pmax
comp=Z,15nm,0.7s
SATY Saty 49.01 301 *i* P P **11 13 28.6 -0.4**
comp=Z,6.4nm,0.7s,baz=300
SATY Saty 49.01 301 *i* P P **11 13 28.6 -0.4**
SATY pmax pmax
comp=Z,6.0nm,0.7s
PRZ Przheval'sk 49.12 300 P P **11 13 30.7 +0.8**
PRZ pmax pmax
comp=Z,56nm,0.7s
PRZ Przheval'sk 49.12 300 P P **11 13 30.7 +0.8**
PWJI Pagerwojo 49.22 219 P P **11 13 32.0 +1.4**
comp=Z,26µmcomp=Z,21nm,1.3s
PSI Prapat 49.28 241 P P **11 13 29.3 -2.1**
PSI pmax pmax
comp=Z,8.0nm,0.6s
RPSI Rantau Prapat 49.36 241 P P **11 13 29.3 -2.5**
RPSI IAmb IAmb 11 13 35.5
comp=Z,7.7nm,0.6s
KNRA Kununurra 49.77 195 P P **11 13 34.4 -0.3**
KNRA IAmb IAmb 11 13 36.0
comp=Z,16nm,0.8s
MDOK Medeo 49.97 301 *e*P P **11 13 36.3 -0.1**
baz=301
MDOK Medeo 49.97 301 *e*P P **11 13 36.3 -0.1**
AAA Alma-Ata 50.06 301 *e*P P **11 13 37.1 +0.1**
comp=Z,32nm,0.6s,baz=301
AAA Alma-Ata 50.06 301 *e*P P **11 13 37.0 +0.1**
AAA pmax pmax
comp=Z,32nm,0.6s
KDJ Kajisay 50.08 300 IAmb IAmb 11 13 37.9
comp=Z,13nm,0.7s
KUU Kurty 50.34 302⇓ *i*P P **11 13 38.3 -0.7**
comp=Z,41nm,0.8s,baz=302
KUU Kurty 50.34 302*d* iP P **11 13 38.3 -0.7**
KUU pmax pmax
comp=Z,41nm,0.8s
A21K Barrow 50.36 22 P P **11 13 40.2 +1.6**
baz=256
IMAR Indian Mountai 50.41 29 P P **11 13 40.4 +1.3**
KDAK Kodiak Island 50.51 40 P P **11 13 41.2 +1.2**
KDAK pmax pmax
comp=Z,77nm,0.9s
KDAK Kodiak Island 50.51 40 P P **11 13 41.2 +1.2**
PPLA Purkeypile 50.81 33 IAmb IAmb 11 13 44.9
comp=Z,17nm,0.7s
BOOM Boomskoye usch 50.90 300 IAmb IAmb 11 13 47.4
comp=Z,14nm,1.1s
TKM2 Tokmak 2 51.06 301 P P **11 13 44.8 +0.1**
SNR=27
GSI Gunungsitoli 51.28 241 P P **11 13 44.7 -1.7**
BPAW Bear Paw Mtn. 51.41 31 IAmb IAmb 11 13 48.9
comp=Z,17nm,1.3s
KTH Kantishna Hill 51.41 32 IAmb IAmb 11 13 49.5
comp=Z,16nm,1.2s
SUA Susitna One 51.44 35 IAmb IAmb 11 13 48.7
comp=Z,34nm,1.1s
KSH Kashi 51.55 297 *e*P P **11 13 51.7 +3.5**
KSH pmax pmax
comp=Z,40nm,0.8s
MLY Manley 51.57 30 P P **11 13 49.5 +1.6**
baz=267,SNR=7.6
KBK Karagaybulak 51.59 301 P P **11 13 48.6 +0.1**
SNR=24
SGDS Sogindy 51.65 302⇓ *i*P P **11 13 48.5 -0.4**
comp=Z,7.0nm,0.8s,baz=302
SGDS Sogindy 51.65 302*d* iP P **11 13 48.4 -0.4**
SGDS pmax pmax
comp=Z,7.0nm,0.8s
CHMS Chumysh 51.66 301 P P **11 13 49.0 +0.2**
SNR=6.3
BTLS Baital 51.74 304⇓ *i*P P **11 13 49.1 -0.3**

comp=Z,24nm,0.9s,baz=304
BTLS Baital 51.74 304*d* iP P **11 13 49.1 -0.3**
BTLS pmax pmax
comp=Z,23nm,0.9s
USP Ospenovka 51.78 302 P P **11 13 49.6 -0.2**
SNR=11
BRZS Berezniki 51.84 310⇓ *i*P P **11 13 49.5 -0.6**
comp=Z,3nm,1.3s,baz=310
BRZS Berezniki 51.84 310*d* iP P **11 13 49.5 -0.6**
BRZS pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 51.92 301 P P **11 13 50.8 -0.2**
SNR=12
AAK Ala-Archa 51.92 301 *i* P P **11 13 50.8 -0.2**
SNR=13
AAK Ala-Archa 51.92 301*d* iP P **11 13 50.5 -0.5**
AAK pmax pmax
comp=Z,52nm,0.8s
RC01 Rabbit Creek A 51.92 35 P P **11 13 52.2 +1.7**
baz=271
COLD Coldfoot 51.94 28 P P **11 13 52.2 +1.7**
baz=265
COLD Coldfoot 51.94 28 IAmb IAmb 11 14 42.0
comp=Z,32nm,1.9s
I23K Minto, Yukon-K 52.16 30 P P **11 13 53.8 +1.7**
baz=268,SNR=5.2
I23K Minto, Yukon-K 52.16 30 IAmb IAmb 11 15 05.3
comp=Z,81nm,0.7s
NEA2 Nenana 52.26 31 P P **11 13 54.4 +1.4**
baz=268,SNR=8.8
TOLK Toolik Lake Re 52.30 26 P P **11 13 55.1 +1.9**
baz=265
TOLK Toolik Lake Re 52.30 26 P P **11 13 55.0 +1.7**
TOLK IAmb IAmb 11 13 56.1
comp=Z,32nm,1.1s
MCK McKinley 52.30 32 P P **11 13 54.2 +0.8**
baz=269,SNR=6.3
GHO Glory Hole Cre 52.31 34 P P **11 13 54.6 +1.1**
RND Reindeer 52.34 32 P P **11 13 52.9 -0.7**
RND pmax pmax
comp=Z,18nm,0.8s
RND Reindeer 52.34 32 P P **11 13 52.9 -0.7**
RND IAmb IAmb 11 13 55.3
comp=Z,18nm,0.8s
EKS2 Erkin-Say 52.43 301 P P **11 13 54.2 -0.5**
SNR=13
SML Sawmill 52.59 34 P P **11 13 55.0 -0.5**
SML pmax pmax
comp=Z,25nm,0.8s
SML Sawmill 52.59 34 P P **11 13 56.0 +0.5**
SML IAmb IAmb 11 13 57.5
comp=Z,26nm,0.8s
AML Almayashu 52.61 301 P P **11 13 56.9 +0.5**
SNR=24
WRH Wood River Hil 52.68 31 IAmb IAmb 11 13 59.3
comp=Z,11nm,0.7s
TCOL CIGO, UAF Yank 52.78 31 P P **11 13 58.3 +1.5**
baz=269
TCOL CIGO, UAF Yank 52.78 31 P P **11 13 56.0 -0.8**
TCOL IAmb IAmb 11 14 00.4
comp=Z,12nm,0.8s
COLA College 52.79 31 P P **11 13 57.2 +0.4**
COLA pmax pmax
comp=Z,13nm,0.9s
COLA College 52.79 31 P P **11 13 57.2 +0.4**
COLA IAmb IAmb 11 14 00.5
comp=Z,13nm,0.8s
CCB Clear Creek Bu 52.81 31 P P **11 13 57.8 +0.8**
FITZ Fitzroy Crossi 52.85 198 P P **11 13 59.0 +1.2**
WB0 Warramunga Arr 52.87 187 P P **11 13 57.1 -0.7**
BRVK Borovoye 52.91 315*de* P P **11 13 57.7 -0.2**
BRVK pmax pmax
comp=Z,22nm,1.0s
BRVK Borovoye 52.91 315 P P **11 13 57.2 -0.7**
BRVK IAmb IAmb 11 13 58.8
comp=Z,20nm,1.0s
POKR Poker Plat Res 52.97 30 P P **11 13 59.3 +1.1**
baz=270,SNR=10
POKR Poker Plat Res 52.97 30 IAmb IAmb 11 14 01.0
comp=Z,27nm,1.2s
WRAB Tennant Creek 53.03 187*c* iP P **11 13 58.7 -0.4**
WRAB pmax pmax
comp=Z,28nm,0.6s
WRAB Tennant Creek 53.03 187 P P **11 13 58.7 -0.4**
WR0 Warramunga Arr 53.04 187 P P **11 13 58.7 -0.5**
WRA Warramunga Arr 53.04 187 P P **11 13 58.7 -0.5**
comp=Z,38nm,0.4s,baz=5.1,slow=7.6,SNR=1658
WRA pP **pP 11 14 16.9 +0.8**
comp=Z,14nm,0.5s,baz=4.1,slow=7.4,SNR=5.6
WRA PcP **PcP 11 15 07.6 +0.6**
comp=Z,6.2nm,0.7s,baz=0.2,slow=3.5,SNR=4.5
WRA ScP **ScP 11 18 57.4 -1.1**
comp=Z,2.5nm,0.9s,baz=0.6,slow=4.4,SNR=6.6
CTAO Charters Tower 53.11 173 P P **11 14 00.1 +0.4**
CTAO pmax pmax
comp=Z,12nm,1.1s
CTAO Charters Tower 53.11 173 P P **11 14 00.1 +0.4**
HDA Harding Lake 53.18 31 P P **11 14 00.2 +0.4**
baz=270,SNR=7.3
HDA Harding Lake 53.18 31 P P **11 14 00.1 +0.3**
HDA IAmb IAmb 11 14 01.1
comp=Z,18nm,0.9s
IL31 53.20 31 P P **11 14 00.1 +0.3**
IL31 IAmb IAmb 11 14 01.4
comp=Z,12nm,0.8s
ILAR Eielson Array 53.20 31 P P **11 13 59.9 0.0**
comp=Z,9.0nm,0.8s,baz=268,slow=6.2,SNR=47
ILAR pP **pwP 11 14 19.4 -0.2**
comp=Z,4.3nm,0.7s,baz=272,slow=6.7,SNR=3.9
ILAR Eielson Array 53.20 31 P P **11 13 59.0 -0.9**
IL18 Eielson Array 53.25 31 P P **11 14 00.5 +0.2**
M24K Tolsona, Glenn 53.60 34 P P **11 14 04.5 +1.6**
baz=273
M24K Tolsona, Glenn 53.60 34 P P **11 14 05.0 +2.0**
KLU Klutina 53.75 35 IAmb IAmb 11 14 06.0
comp=Z,19nm,0.8s
DZA Taraz 54.12 302 *e*P P **11 14 06.6 -0.5**
comp=Z,11nm,0.6s,baz=302
DZA Taraz 54.12 302 *e*P P **11 14 06.5 -0.5**
DZA pmax pmax
comp=Z,11nm,0.6s
BMAR Burnt Mountain 54.13 27 P P **11 14 09.0 +2.4**
N25K Chitina, Valde 54.38 35 P P **11 14 10.2 +1.6**
baz=275
N25K Chitina, Valde 54.38 35 IAmb IAmb 11 14 11.7
comp=Z,9.4nm,0.8s
DOT Dot Lake 54.48 32 IAmb IAmb 11 15 17.1
comp=Z,24nm,1.2s
SCRK Sand Creek 54.49 32 P P **11 14 10.0 +0.5**
baz=273,SNR=11
SANVU Saraoutou 54.49 148 P P **11 14 10.1 +0.3**
KKAR Karatay Array 54.66 302 P P **11 14 10.3 -0.6**
KKAR Karatay Array 54.66 302 P P **11 14 10.2 -0.6**
KKAR Karatay Array 54.66 302 IAmb IAmb 11 14 11.6
comp=Z,47nm,0.9s
MENT Mentasta 54.68 33 IAmb IAmb 11 14 13.6
comp=Z,14nm,0.7s
L26K Log Cabin Wild 54.84 33 P P **11 14 13.2 +1.3**
baz=275,SNR=11
IUG Iuzhnay 55.24 301⇓ *i*P P **11 14 15.2 0.0**
comp=Z,34nm,0.8s,baz=301
IUG Iuzhnay 55.24 301*d* iP P **11 14 15.2 0.0**
IUG pmax pmax
comp=Z,35nm,0.8s
K27K Chicken 55.32 31 P P **11 14 17.0 +1.7**
baz=275
K27K Chicken 55.32 31 IAmb IAmb 11 14 18.1
comp=Z,22nm,1.1s
NIL Nilore 55.35 291 P P **11 14 15.7 -0.3**
NIL pmax pmax
comp=Z,20nm,0.8s
NIL Nilore 55.35 291 P P **11 14 15.7 -0.3**
NIL IAmb IAmb 11 14 16.6
comp=Z,20nm,0.8s
EGAK Eagle 55.65 31 P P **11 14 18.4 +0.7**
MESA MESA 55.82 36 P P **11 14 18.1 -1.1**
BARN Barnard Glacie 55.84 35 IAmb IAmb 11 14 21.3
comp=Z,9.1nm,0.7s
DAWY Dawson 56.49 31 P P **11 14 25.3 +1.6**
AS31 Alice Springs 56.77 187 IAmb IAmb 11 14 27.4
comp=Z,12nm,0.6s
ASAR Alice Springs 56.77 187 P P **11 14 25.9 -0.2**
comp=Z,14nm,0.5s,baz=3.2,slow=6.5,SNR=237
ASAR pP **pP 11 14 42.0 -1.0**
comp=Z,3.7nm,0.5s,baz=13,slow=9.0,SNR=3.5
ASAR PcP **PcP 11 15 22.5 +1.2**

comp=Z,4.6nm,0.7s,baz=7.1,slow=3.7,SNR=4.8
ASAR Alice Springs 56.77 187 P **P** **11 14 25.7 -0.4**
EPYK Eagle Plains 57.30 28 P **P** **11 14 31.2 +1.8**
baz=278
HYB Hyderabad 57.55 271 *i* P **P** **11 14 30.0 -1.8**
SVE Sverdlovsk 57.76 320⇓ *e*P **P** **11 14 33.0 +0.3**
SVE pmax pmax
comp=Z,27nm,0.8s
HYT Haines Junctio 57.88 35 IAmb IAmb 11 14 39.3
comp=Z,15nm,0.8s
INK Inuvik 58.21 26 P **P** **11 14 36.5 +0.8**
comp=Z,16nm,0.6s,baz=297,slow=6.1,SNR=111
KBL Kabul 58.33 293 P **P** **11 14 36.7 -0.6**
KBL pmax pmax
comp=Z,19nm,0.9s
EIDS Eidsvold 58.94 169 IAmb IAmb 11 15 01.7
comp=Z,24nm,1.0s
ARU Arti 58.97 320 P **P** **11 14 40.8 -0.3**
comp=Z,9.1nm,0.5s,baz=82,slow=4.0,SNR=44
ARU Arti 58.97 320 *d i*P **P** **11 14 40.5 -0.6**
ARU 11 15 26.2
ARU 11 16 50.2
ARU S **S** **11 22 43.5 +1.4**
ARU pmax pmax
comp=Z,30nm,0.6s
ARU Arti 58.97 320 P **P** **11 14 40.5 -0.6**
WHY Whitehorse 59.18 35 IAmb IAmb 11 14 45.8
comp=Z,20nm,0.9s
JIS Juneau Island 60.01 37 IAmb IAmb 11 14 51.4
comp=Z,23nm,0.9s
ABKAR Akbulak array 60.07 312 P **P** **11 14 48.5 -0.4**
ABKAR Akbulak array 60.07 312 P **P** **11 14 48.3 -0.6**
DZM Mont Dzumac 60.09 152 P **P** **11 14 51.5 +2.2**
DZM IAmb IAmb 11 15 11.5
comp=Z,16nm,1.1s
AKTO Aktyubinsk 60.91 313 P **P** **11 14 54.0 -0.6**
comp=Z,12nm,0.6s,baz=94,slow=8.2,SNR=38
AKTO Aktyubinsk 60.91 313 P **P** **11 14 54.0 -0.6**
C36M Paulatuk 61.30 24 P **P** **11 14 57.8 +0.9**
baz=288
C36M Paulatuk 61.30 24 P **P** **11 14 57.9 +1.0**
DLBC Dease Lake 62.16 36 P **P** **11 15 04.5 +1.6**
comp=Z,10nm,0.9s,baz=291,slow=9.7,SNR=12
DLBC Dease Lake 62.16 36 P **P** **11 15 05.6 +2.6**
DLBC IAmb IAmb 11 15 06.2
comp=Z,24nm,1.1s
KIRV Kirov 63.07 324 P **P** **11 15 08.9 +0.1**
comp=Z,85nm,0.7s,baz=122,slow=1.1,SNR=21
KIRV Kirov 63.07 324 *d i*P **P** **11 15 08.8 0.0**
HRA Herat 63.60 295 IAmb IAmb 11 15 14.0
comp=Z,9.7nm,0.7s
ARMA Armidale 63.98 169 IAmb IAmb 11 15 17.5
comp=Z,22nm,0.8s
EUNU Eureka 64.20 8 IAmb IAmb 11 15 20.8
comp=Z,10nm,0.7s
SPITS Spitsbergen Ar 64.30 349 P **P** **11 15 18.1 +1.4**
comp=Z,5.3nm,0.9s,baz=61,slow=3.6,SNR=1.3
STKA Stephens Creek 64.59 179 P **P** **11 15 19.4 +0.4**
comp=Z,12nm,0.6s,baz=352,slow=7.1,SNR=39
STKA LR LR 11 42 40.5
comp=Z,41nm,21.0s,baz=22,slow=35
STKA Stephens Creek 64.59 179 P **P** **11 15 19.5 +0.4**
STKA pmax pmax
comp=Z,3.0nm,0.7s
STKA Stephens Creek 64.59 179 P **P** **11 15 19.5 +0.4**
FORT Forrest 64.60 192 P **P** **11 15 19.7 +0.6**
GEYT Alibeck 65.26 300 P **P** **11 15 23.9 +0.2**
comp=Z,9.9nm,0.9s,baz=49,slow=4.5,SNR=10
GEYT Alibeck 65.26 300 P **P** **11 15 24.1 +0.4**
BBOO Buckleboo 65.66 184 P **P** **11 15 26.3 +0.4**
BBOO IAmb IAmb 11 15 45.1
comp=Z,26nm,1.2s
APA Apatity 66.06 336⇓ *i*P P 11 15 35.6 +7.4
APA pmax pmax
comp=Z,14nm,0.8s
APA MLR MLR
comp=Z,500nm,16.0s
RES Resolute Bay 66.60 14 P **P** **11 15 32.0 +0.5**
RES pmax pmax
comp=Z,23nm,0.9s
RES Resolute Bay 66.60 14 P **P** **11 15 32.0 +0.5**
RES IAmb IAmb 11 15 52.9
comp=Z,23nm,0.8s
KLMR Klimovskoe 66.80 328 *e*P **P** **11 15 31.6 -1.4**
KLMR pmax pmax
comp=Z,13nm,0.7s
KLMR Klimovskoe 66.80 328 *e*P **P** **11 15 31.6 -1.4**
KLMR AMP 11 15 33.6
comp=Z,13nm,0.7s
HAMF Hammerfest 67.37 341 *e*P **P** **11 15 39.7 +3.2**
ARA0 ARCESS Array S 67.50 340 *e*P **P** **11 15 38.0 +0.6**
ARCES ARCESS Array B 67.50 340 P **P** **11 15 37.7 +0.3**
comp=Z,4.9nm,0.7s,baz=63,slow=7.1,SNR=16
ARCES pP **pP** **11 15 55.8 +0.8**
comp=Z,6.2nm,0.9s,baz=60,slow=7.2,SNR=2.9
YKA Yellowknife Ar 67.56 29 P **P** **11 15 36.8 -1.1**
comp=Z,9.5nm,0.9s,baz=302,slow=6.9,SNR=7.4
YKA pP **pwP** **11 15 56.9 -0.7**
comp=Z,8.9nm,1.0s,baz=296,slow=6.4,SNR=4.4
YKA Yellowknife Ar 67.56 29 *i* P **P** **11 15 37.7 -0.1**
YKA pmax pmax
comp=Z,10.0nm,0.9s
KTK1 Kautokeino 68.47 340 *e*P **P** **11 15 44.2 +0.7**
KTK1 *e* 11 15 45.4
KIF Kilpisjarvi 69.16 340 *e*P **P** **11 15 48.3 +0.6**
JOF Joensuu 69.19 332 P **P** **11 15 48.3 +0.3**
JOF pmax pmax
comp=Z,19nm,0.5s
DAG Danmarks Havn 69.67 355 *i* P **P** **11 15 50.2 -0.6**
DAG *i* 11 16 07.6
DAG pmax pmax
comp=Z,11nm,0.9s
DAG Danmarks Havn 69.67 355 *e*P **P** **11 15 51.4 +0.6**
DAG *e* 11 16 08.9
DAG Danmarks Havn 69.67 355 *i* P **P** **11 15 50.2 -0.6**
comp=Z,11nm,0.9s
DAG *i* 11 16 07.6
DAG Danmarks Havn 69.67 355 *i* P **P** **11 15 50.2 -0.6**
DAG IAmb IAmb 11 15 55.1
comp=Z,11nm,0.9s
DAG *i* 11 16 07.7
NLWA Neilton Lookou 69.88 46 IAmb IAmb 11 15 56.1
comp=Z,28nm,0.8s
MOS Moscow 70.09 324 *e*P **P** **11 15 52.4 -1.2**
VRH Novokhopyorsk 70.13 319 *e*P **P** **11 15 52.9 -1.1**
VRH pmax pmax
comp=Z,30nm,0.7s
D03D Eldon 70.29 46 P **P** **11 15 57.7 +2.6**
baz=298
TOO Toolangi 70.41 176 IAmb IAmb 11 15 58.0
comp=Z,12nm,0.8s
MAK Makhachkala 70.44 309 *e*P **P** **11 15 54.5 -1.5**
MAK *e**PP **pP** **11 16 14.9 +0.9**
MAK *e**SP **sP** **11 16 24.2 +2.8**
MAK *e* 11 18 30.1
MAK *e*PPP PPP 11 20 15.9
MAK *e*S **S** **11 25 00.1 -3.6**
MAK *e**SS **sS** **11 25 38.1 +3.8**
MAK *e*SS **SS** **11 29 36.3 +1.2**
MAK MLR MLR
comp=Z,183nm,17.0s
B05A Bryant 70.54 45 P **P** **11 15 58.6 +2.1**
baz=298
OBN Obninsk 70.92 324 *e*P **P** **11 15 58.4 -0.3**
OBN *e* 11 16 15.0
OBN *e* 11 18 35.2
OBN pmax pmax
comp=Z,11nm,0.6s
LPSR Galich'ya Gora 70.97 321 *e*P **P** **11 15 58.4 -0.7**
LPSR pmax pmax
comp=Z,20nm,0.8s
E04D Cinebar 71.06 46 P **P** **11 16 02.0 +2.3**
baz=298
N2IH Innhavet 71.20 341 *e*P **P** **11 15 57.4 -2.8**
SUF Sumiainen 71.26 334 P **P** **11 15 57.7 -2.9**
SUF pmax pmax
comp=Z,25nm,2.5s
G03D McMinnville, O 71.27 48 P **P** **11 16 03.3 +2.3**
baz=298
C06D Leavenworth 71.41 45 P **P** **11 16 03.9 +2.1**
baz=299
STEI Steigen 71.42 341 *e*P **P** **11 16 02.0 +0.5**
STEI *e* 11 16 05.0
I02D Swisshome 71.42 49 P **P** **11 16 03.8 +1.9**
baz=298

SEKA Sheki 71.46 307 P **P** **11 16 02.3 0.0**
VSR Storozhevoye 71.53 319 *e*P **P** **11 16 02.0 -0.5**
VSR pmax pmax
comp=Z,10.0nm,0.6s
LKRN Lenkeran, Azer 71.55 304 P **P** **11 16 03.0 +0.2**
VORD Divnogorie 71.58 319 *e*P **P** **11 16 02.1 -0.7**
VORD pmax pmax
comp=Z,20nm,1.5s
ZKTA Zakatala 71.64 308 P **P** **11 16 03.9 +0.5**
N2TV T'rnvik 71.70 341 *e*P **P** **11 16 03.8 +0.6**
FAUS Fauske 71.78 341 *e*P **P** **11 16 04.4 +0.7**
J01E Myrtle Point 71.81 50 P **P** **11 16 06.7 +2.3**
baz=298
LTY Liberty 71.87 45 IAmb IAmb 11 16 07.0
comp=Z,14nm,0.7s
BANOM Banah 71.92 289 P **P** **11 16 06.2 +0.9**
H04D Lebanon 71.92 48 P **P** **11 16 06.9 +1.9**
baz=299
I03D Drain, OR 71.93 49 P **P** **11 16 07.2 +2.2**
baz=299
SHME Shamm 71.98 290 P **P** **11 16 05.8 +0.2**
FIA1 FINESS Array S 72.05 333 P **P** **11 16 05.3 0.0**
FIA1 IAmb IAmb 11 16 10.0
comp=Z,56nm,1.6s
FINES FINESS Array B 72.05 333 P **P** **11 16 05.3 0.0**
comp=Z,7.2nm,0.6s,baz=78,slow=5.6,SNR=18
FINES pP **pP** **11 16 23.2 0.0**
comp=Z,8.1nm,0.8s,baz=76,slow=5.6,SNR=3.8
FINES FINESS Array B 72.05 333 P **P** **11 16 05.2 -0.2**
B08A Colville Reser 72.11 44 P **P** **11 16 07.5 +1.4**
B08A IAmb IAmb 11 16 08.6
comp=Z,36nm,0.9s
DBG Daneborg 72.16 355 *e*P **P** **11 16 07.0 +1.2**
H04A Detroit Lake 72.19 48 P **P** **11 16 08.8 +2.2**
H04A IAmb IAmb 11 16 09.4
comp=Z,58nm,1.5s
K02D Willamette Mer 72.21 50 P **P** **11 16 08.8 +2.0**
baz=299
GOF Gofitskoye 72.30 312⇑ *e*P **P** **11 16 07.7 +0.5**
GOF pmax pmax
comp=Z,23nm,0.8s
GANJ Ganja 72.31 307 P **P** **11 16 07.3 -0.1**
NBB05 Inndyr 72.38 341 *e*P **P** **11 16 07.9 +0.7**
G05D Wamic, OR 72.46 47 P **P** **11 16 10.2 +2.0**
baz=299
UOSS Minazif 72.46 289 P **P** **11 16 08.6 0.0**
UOSS Minazif 72.46 289 P **P** **11 16 08.3 -0.2**
NBB30 Finnes 72.50 341 *e*P **P** **11 16 08.4 +0.5**
L02E Cave Junction 72.51 51 P **P** **11 16 10.6 +2.1**
baz=299
HATD Hatta, Dubai 72.58 289 *i* P **P** **11 16 09.6 +0.4**
SNR=6.4
SOHO SOHO 72.59 288 *i* P **P** **11 16 09.3 +0.1**
SNR=10
E07A Sunnyside 72.70 45 P **P** **11 16 11.8 +2.3**
E07A IAmb IAmb 11 16 12.5
comp=Z,29nm,1.0s
ZEI Tsey 72.86 310 *e*P **P** **11 16 09.8 -1.1**
ZEI pmax pmax
comp=Z,8.0nm,0.6s
MOR8 Moi Rana 72.88 340 *e*P **P** **11 16 09.7 -0.5**
MOR8 *i* 11 16 12.6
I05D Terrebonne, OR 72.89 48 P **P** **11 16 12.6 +1.8**
baz=300
J04D Umpqua Nationa 72.94 49 P **P** **11 16 13.2 +1.8**
baz=299
HAWA Hanford 72.97 46 IAmb IAmb 11 16 14.0
comp=Z,19nm,1.1s
F07A Phinny Hill Vi 72.98 46 IAmb IAmb 11 16 14.2
comp=Z,26nm,0.8s
D08A Wollman Farm, 73.00 45 IAmb IAmb 11 16 13.9
comp=Z,31nm,0.8s
C09A Chrisman Ranch 73.01 44 IAmb IAmb 11 16 13.9
comp=Z,31nm,0.8s
KBZ Khabaz 73.04 311 *d i*P **P** **11 16 11.8 +0.2**
KBZ pmax pmax
comp=Z,24nm,1.0s
FAQ Al Faqa, Dubai 73.04 289 P **P** **11 16 12.1 +0.1**
KIV Kislovodsk 73.06 312⇑P **P** **11 16 14.0 +2.1**
KIV Kislovodsk 73.06 312 *e*P **P** **11 16 12.2 +0.3**
KIV pmax pmax
comp=Z,77nm,1.0s
KIV MLR MLR
comp=Z,189nm,18.0s
KIV Kislovodsk 73.06 312 P **P** **11 16 13.4 +1.5**
KIV IAmb IAmb 11 16 14.1
comp=Z,19nm,0.8s
E08A Dider Farm, El 73.21 45 IAmb IAmb 11 16 15.2
comp=Z,19nm,0.8s
E08A pwP 11 16 34.5 +1.7
YBH Yreka Blue Hor 73.30 51 P **P** **11 16 15.3 +2.0**
YBH pmax pmax
comp=Z,8.0nm,0.8s
YBH Yreka Blue Hor 73.30 51 P **P** **11 16 15.3 +2.0**
ASUD Al Ashush, Dub 73.31 289 *i* P **P** **11 16 14.3 +0.8**
SNR=6.2
L04D Klamath Falls 73.32 50 P **P** **11 16 15.1 +1.6**
baz=300,SNR=5.1
M02C Callahan 73.37 51 P **P** **11 16 15.8 +2.0**
baz=300,SNR=6.0
NEW Newport 73.43 43 P **P** **11 16 15.2 +1.3**
baz=301,SNR=22
NEW Newport 73.43 43 IAmb IAmb 11 16 16.4
comp=Z,22nm,0.8s
K04D Chiloquin, OR 73.47 50 P **P** **11 16 15.9 +1.6**
baz=300
J05D Fort Rock, OR 73.48 49 P **P** **11 16 16.5 +2.0**
baz=300
VSU Vasula 73.57 330⇓ *e*P **P** **11 16 14.4 0.0**
VSU pmax pmax
comp=Z,42nm,0.8s
GNI Garni 73.60 307 P **P** **11 16 14.5 -0.7**
comp=Z,13nm,0.5s,baz=219,slow=15,SNR=2.4
GNI Garni 73.60 307 *de*P **P** **11 16 16.4 +1.2**
GNI pmax pmax
comp=Z,19nm,0.7s
GNI Garni 73.60 307 IAmb IAmb 11 16 21.7
comp=Z,18nm,0.8s
N02D Trinity Center 73.67 52 P **P** **11 16 17.6 +2.1**
baz=300,SNR=8.5
E09A Wood Farm, Sta 73.74 45 IAmb IAmb 11 16 18.5
comp=Z,33nm,0.9s
M04C Macdoel 73.84 51 P **P** **11 16 18.4 +1.9**
baz=300,SNR=9.1
G08A Pilot Rock 73.88 46 IAmb IAmb 11 16 19.5
comp=Z,17nm,1.2s
O03E Paynes Creek 74.61 52 P **P** **11 16 21.9 +0.9**
baz=300,SNR=10
SUMG Summit 74.65 360 *i* P **P** **11 16 21.0 0.0**
SUMG *i* 11 16 39.9
SUMG pmax pmax
comp=Z,31nm,0.7s
SUMG Summit 74.65 360 P **P** **11 16 22.4 +1.4**
SUMG IAmb IAmb 11 16 43.3
comp=Z,19nm,0.9s
SUMG Summit 74.65 360 *i* P **P** **11 16 21.0 0.0**
comp=Z,31nm,0.7s
SUMG *i* 11 16 39.9
SUMG Summit 74.65 360 *i* P **P** **11 16 21.0 0.0**
SUMG IAmb IAmb 11 16 26.5
comp=Z,31nm,0.7s
SUMG *i* 11 16 39.9
NSS Namsos 74.78 340 *e* **P** **11 16 24.7 +3.4**
WALA Waterton Lakes 74.82 41 IAmb IAmb 11 16 44.5
comp=Z,11nm,0.7s
SOC Sochi 75.10 312 *e*P **P** **11 16 24.9 +1.3**
SOC *e* 11 19 21.5
SOC *e*PPP PPP 11 20 59.2
SOC *e*S **S** **11 25 59.9 +3.3**
SOC *e*SS **SS** **11 30 45.4 -0.7**
SOC *e*SSS SSS 11 34 04.1
SOC pmax pmax
comp=Z,7.0nm,0.4s
SOC MLR MLR
comp=Z,68nm,14.0s
BMO Blue Mountains 75.11 46 IAmb IAmb 11 16 46.6
comp=Z,20nm,0.8s
J08A Circle Bar Ran 75.17 48 IAmb IAmb 11 16 47.3
comp=Z,23nm,0.8s
BEKR Beckworth 75.78 52 IAmb IAmb 11 16 51.1
comp=Z,17nm,0.9s
ANN Anapa 75.85 314 *e*P **P** **11 16 26.5 -1.4**
ANN *e**PP **pP** **11 16 47.8 +1.9**
ANN *e*S **S** **11 26 04.0 -0.8**
ANN *e*SSS SSS 11 34 18.7

ANN pmax pmax
comp=Z,28nm,1.0s
MSO Missoula 76.02 43 P **P** **11 16 30.0 +1.0**
baz=304
RUBR Rubicon Trail 76.33 52 IAmb IAmb 11 16 54.1
comp=Z,19nm,0.8s
SHAO Shalim 76.34 283 P **P** **11 16 31.0 -0.2**
PNTR Pine Nut 76.68 52 IAmb IAmb 11 16 56.4
comp=Z,12nm,0.8s
CMB Columbia Colle 76.71 53 IAmb IAmb 11 16 55.6
comp=Z,13nm,0.8s
MFID Camas Ranch 76.77 47 IAmb IAmb 11 16 56.3
comp=Z,13nm,0.8s
AKASG Malin Array Be 77.07 323 P **P** **11 16 34.3 -0.4**
comp=Z,6.0nm,0.6s,baz=47,slow=6.2,SNR=18
AKASG pP **pP** **11 16 52.7 0.0**
comp=Z,4.2nm,0.5s,baz=48,slow=6.3,SNR=4.3
AKASG Malin Array Be 77.07 323 P **P** **11 16 34.7 0.0**
AKASG pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 77.07 323 P **P** **11 16 34.7 0.0**
AKBB Malin Array Si 77.07 323 IAmb IAmb 11 16 38.2
comp=Z,13nm,0.7s
PMPB Monarch Peak 77.38 55 IAmb IAmb 11 16 44.4
comp=Z,15nm,1.0s
FFC Flin Flon 77.39 32 P **P** **11 16 37.2 +0.8**
FFC pmax pmax
comp=Z,22nm,1.1s
FFC Flin Flon 77.39 32 P **P** **11 16 37.2 +0.8**
FFC IAmb IAmb 11 16 58.3
comp=Z,22nm,1.1s
HLID Hailey 77.55 46 P **P** **11 16 39.3 +1.5**
baz=304,SNR=6.4
NB2 NORSAR Subarra 77.61 337 P **P** **11 16 37.5 0.0**
comp=Z,6.4nm,0.8s,baz=41,slow=5.6
NOA NORSAR Array B 77.61 337 P **P** **11 16 37.6 0.0**
comp=Z,4.3nm,0.7s,baz=42,slow=5.5,SNR=13
NOA pP **pwP** **11 16 59.9 -0.5**
comp=Z,11nm,0.8s,baz=292,slow=5.0,SNR=14
MLAC Mammoth, Mammo 77.97 53 P **P** **11 16 41.8 +1.6**
baz=302
NV11 Mina Array Sit 77.99 52 IAmb IAmb 11 16 42.9
comp=Z,25nm,1.7s
PAGB Antelope Grade 78.02 55 IAmb IAmb 11 17 03.6
comp=Z,19nm,0.8s
BOZ Bozeman (W) 78.04 43 P **P** **11 16 41.5 +1.1**
baz=305,SNR=12
SMMC Simmler 78.41 55 P **P** **11 16 44.1 +1.6**
baz=302
VES Vestal, Richgr 78.76 55 P **P** **11 16 45.3 +1.0**
baz=303
PKM Mcpherson Peak 78.76 56 P **P** **11 16 46.2 +1.5**
baz=302,SNR=6.3
SBC Santa Barbara 79.07 56 P **P** **11 16 47.7 +1.7**
baz=303
SORM Soroca 79.08 321⇓P **P** **11 16 45.4 -0.4**
SORM Soroca 79.08 321⇓P **P** **11 16 45.4 -0.4**
CWC Cottonwood Cre 79.12 54 P **P** **11 16 47.3 +0.8**
baz=303
ISA Isabella, Lake 79.27 54 P **P** **11 16 47.4 +0.1**
baz=303
GRAC Grapevine Rang 79.29 53 P **P** **11 16 48.6 +1.3**
baz=303
ARVC Arvin 79.32 55 P **P** **11 16 48.5 +1.0**
baz=303
FLWY Flagg Ranch 79.46 44 IAmb IAmb 11 16 53.0
comp=Z,27nm,1.6s
RLMT Red Lodge 79.67 43 P **P** **11 16 50.6 +1.2**
baz=307
R11A Troy Canyon, C 79.72 51 P **P** **11 16 51.0 +1.2**
baz=304,SNR=15
MPMC Manual Prospec 79.72 54 P **P** **11 16 50.9 +1.0**
baz=303,SNR=14
LRMC Laurel Mtn Rad 79.91 54 P **P** **11 16 51.4 +0.6**
baz=303,SNR=7.2
FURC Furnace Creek, 79.92 53 P **P** **11 16 51.6 +0.9**
baz=304,SNR=13
EDW2 Edwards Air Fo 80.03 55 P **P** **11 16 52.5 +1.2**
baz=303,SNR=8.4
TPNV Topopah Spring 80.06 52 P **P** **11 16 52.8 +1.1**
baz=304,SNR=20
TPNV Topopah Spring 80.06 52 IAmb IAmb 11 16 53.9
comp=Z,17nm,0.8s
SPR3 Spring Creek 3 80.17 50 IAmb IAmb 11 16 55.2
comp=Z,27nm,1.7s
ILGA Ilgaz 80.21 313 IAmb IAmb 11 17 01.3
comp=Z,15nm,0.8s
LVV L'vov 80.22 324 *e*P **P** **11 16 53.0 +1.0**
LAO LASA Array 80.40 40 P **P** **11 16 54.5 +1.3**
baz=308
LAO LASA Array 80.40 40 IAmb IAmb 11 16 55.4
comp=Z,14nm,0.9s
DUG Dugway, Tooele 80.44 48 P **P** **11 16 55.0 +1.4**
baz=305,SNR=8.4
CIS Catalina Islan 80.54 56 P **P** **11 16 55.0 +0.9**
baz=303
GSC Goldstone, Bar 80.61 54 P **P** **11 16 55.4 +0.9**
baz=304,SNR=9.5
BFSC Mount Baldy Ra 80.61 55 P **P** **11 16 55.3 +0.7**
baz=304,SNR=5.5
SHOC Shoshone, Teco 80.63 53 P **P** **11 16 55.8 +1.3**
baz=304
BW06 Boulder Array 80.91 45 P **P** **11 16 56.8 +0.7**
baz=307
PDAR Pinedale Array 80.91 45 P **P** **11 16 56.8 +0.6**
comp=Z,2.8nm,0.7s,baz=286,slow=2.8,SNR=15
PDAR pP **pP** **11 17 15.2 +1.2**
comp=Z,1.1nm,0.6s,baz=220,slow=3.5,SNR=3.2
PDAR Pinedale Array 80.91 45 P **P** **11 16 56.6 +0.5**
TESR Tescani 80.99 320⇑P **P** **11 16 57.4 +1.2**
KWP Kalwaria Pacla 81.00 324 IAmb IAmb 11 17 01.1
comp=Z,44nm,1.3s
BIZ Bicaz 81.01 321⇑P **P** **11 16 57.1 +0.8**
CFR Carcaliu 81.01 319⇑P **P** **11 16 57.5 +1.2**
CFR Carcaliu 81.01 319⇑P **P** **11 16 57.5 +1.2**
BRTR Keskin Array B 81.03 312 P **P** **11 16 57.0 +0.2**
comp=Z,11nm,0.9s,baz=90,slow=3.8,SNR=21
BRTR pP **pP** **11 17 14.0 -0.9**
comp=Z,7.9nm,0.9s,baz=101,slow=2.6,SNR=4.0
BRTR Keskin Array B 81.03 312 *i* P **P** **11 16 57.2 +0.5**
BRTR pmax pmax
comp=Z,11nm,0.9s
BRTR Keskin Array B 81.03 312 P **P** **11 16 56.4 -0.3**
BURAR Bucovina Array 81.05 322⇑P **P** **11 16 57.4 +0.8**
BURAR Bucovina Array 81.05 322⇑P **P** **11 16 57.4 +0.8**
BURAR Bucovina Array 81.05 322 P **P** **11 16 56.9 +0.3**
TPGR Topolog 81.05 318⇓P **P** **11 16 57.3 +0.7**
TUQ Turquoise Moun 81.13 54 P **P** **11 16 58.4 +1.1**
baz=304
HEC Hector Ludlow 81.19 54 P **P** **11 16 58.5 +0.9**
baz=304
MURC Murrieta 81.28 56 P **P** **11 16 58.9 +0.8**
baz=304
VRI Vrincioaia 81.36 320⇑P **P** **11 17 00.1 +1.9**
VRI Vrincioaia 81.36 320⇑P **P** **11 17 00.1 +1.9**
PLOR Plostina 81.41 320⇑P **P** **11 17 00.8 +2.3**
PLOR Plostina 81.41 320⇑P **P** **11 17 00.8 +2.3**
RAYN Ar Rayn 81.59 292 *i* P **P** **11 16 59.9 0.0**
SNR=13
RAYN Ar Rayn 81.59 292 P **P** **11 16 59.9 0.0**
RAYN pmax pmax
comp=Z,13nm,0.8s
RAYN Ar Rayn 81.59 292 P **P** **11 16 59.9 0.0**
RAYN IAmb IAmb 11 17 06.8
comp=Z,13nm,0.8s
GMRC Granite Mounta 81.67 54 P **P** **11 17 01.4 +1.2**
baz=305,SNR=13
OZUR 81.72 320⇓P **P** **11 17 01.7 +1.6**
109C Camp Elliot, M 81.74 56 P **P** **11 17 01.4 +1.0**
baz=304

PFO	Pinyon Flats O	81.79	55	*ceP*		P		11 17 01.5	+0.7
PFO					pmax	pmax			
	comp=Z,24nm,1.0s								
PFO	Pinyon Flats O	81.79	55	P		P		11 17 01.7	+0.8
	baz=304,SNR=9.1								
PFO	Pinyon Flats O	81.79	55	P		P		11 17 01.8	+0.9
TPFO	Pinon Flats	81.79	55	P		P		11 17 01.7	+0.8
	baz=304,SNR=13								
BELC	Belle Mtn. Jos	81.88	55	P		P		11 17 02.0	+0.6
	baz=304,SNR=9.5								
DOPR	Dopca	82.01	320	⇑P		P		11 17 03.9	+2.2
MLR	Muntele Rosu	82.02	320	⇓P		P		11 17 03.4	+1.6
MLR	Muntele Rosu	82.02	320	⇓P		P		11 17 03.4	+1.6
MONP2	Monument Peak	82.22	56	P		P		11 17 04.0	+0.8
	baz=304,SNR=7.0								
IRM	Iron Mountain	82.38	54	P		P		11 17 04.8	+1.0
	baz=305,SNR=6.0								
NEE2	Needles Airpor	82.39	53	P		P		11 17 04.6	+0.8
	baz=305								
BC3	Big Chuckawall	82.45	55	P		P		11 17 05.2	+0.9
	baz=305,SNR=7.5								
VOIR		82.53	320	⇑P		P		11 17 05.1	+0.7
VOIR		82.53	320	⇑P		P		11 17 05.1	+0.7
IKP	In-Ko-Pah, Jac	82.57	56	P		P		11 17 06.0	+1.1
	baz=305								
SWSC	Sam W. Stewart	82.62	56	P		P		11 17 05.9	+0.9
	baz=305								
K22A	Casper	82.75	43	P		P		11 17 06.4	+0.7
	baz=309								
ARR	Arges	82.80	320	⇑P		P		11 17 08.3	+2.5
RWWY	Rawlins	82.95	44	IAmb		IAmb		11 17 08.7	
	comp=Z,13nm,0.8s								
PDMCI	Parker Dam,Lak	82.98	54	P		P		11 17 07.9	+1.1
	baz=305								
MDND	Maddock	83.07	36	P		P		11 17 07.6	+0.5
	baz=313								
RSSD	Black Hills	83.22	41	P		P		11 17 09.4	+1.2
RSSD					pmax	pmax			
	comp=Z,4.0nm,0.9s								
RSSD	Black Hills	83.22	41	P		P		11 17 08.4	+0.2
	baz=310								
RSSD	Black Hills	83.22	41	P		P		11 17 09.4	+1.2
GLA	Glamis	83.23	55	P		P		11 17 09.3	+1.1
	baz=305								
GLA	Glamis	83.23	55	IAmb		IAmb		11 17 30.8	
	comp=Z,13nm,0.7s								
O20A	White River Ci	83.29	46	P		P		11 17 09.6	+1.0
	baz=308,SNR=8.1								
O20A	White River Ci	83.29	46	IAmb		IAmb		11 17 10.7	
	comp=Z,18nm,1.0s								
MORC	Moravsky Berou	83.35	327	⇑P		P		11 17 08.7	+0.2
MORC	Moravsky Berou	83.35	327	*eP*		P		11 17 11.5	+3.0
MORC	Moravsky Berou	83.35	327	⇑P		P		11 17 08.7	+0.2
DPC	Dobruska-Polom	83.49	328	*eP*		P		11 17 10.5	+1.2
VYHS	Vyhne	83.64	325	*eP*		P		11 17 11.1	+1.0
VYHS	Vyhne	83.64	325	*eP*		P		11 17 11.0	+1.0
MMAI	Mount Meron Ar	83.76	305	P		P		11 17 11.2	+0.2
	comp=Z,5.7nm,0.6s,baz=50,slow=7.8,SNR=10								
GZR	Gura Zlata	83.77	321	⇑P		P		11 17 12.3	+1.5
GZR	Gura Zlata	83.77	321	⇑P		P		11 17 12.3	+1.5
JAVC	Velka Javorina	83.94	326	*eP*		P		11 17 13.4	+1.8
PV22	Blue Mesa, Par	83.94	48	IAmb		IAmb		11 17 14.2	
	comp=Z,19nm,0.9s								
PV04	Paradox Valley	83.95	48	IAmb		IAmb		11 17 14.4	
	comp=Z,26nm,0.9s								
Y14A	Wickenburg	83.95	53	IAmb		IAmb		11 17 14.0	
	comp=Z,10nm,0.8s								
CSS	Mathiatis	84.02	308	IAmb		IAmb		11 17 21.0	
	comp=Z,18nm,0.9s								
WUAZ	Wupatki	84.11	51	P		P		11 17 14.1	+1.2
	baz=307,SNR=8.6								
WUAZ	Wupatki	84.11	51	IAmb		IAmb		11 17 15.2	
	comp=Z,18nm,0.9s								
VRAC	Vranov	84.11	327	*eP*		P		11 17 15.9	+3.5
113A	Mohawk Valley,	84.12	55	IAmb		IAmb		11 17 14.6	
	comp=Z,9.1nm,0.8s								
BRG	Berggiesshubel	84.15	329	*eP*		P		11 17 15.2	+2.7
	comp=Z,8.8nm,0.8s								
BRG				*i* pP		pP		11 17 32.0	+1.2
	comp=Z,6.2nm,0.7s								
BRG	Berggiesshubel	84.15	329	*eP*		P		11 17 15.2	+2.7
BRG				*i* *PP		pP		11 17 32.0	+1.2
BRG					pmax	pmax			
	comp=Z,9.0nm,0.8s								
BRG					pmax	pmax			
	comp=Z,6.0nm,0.7s								
PV02	Paradox Valley	84.17	48	IAmb		IAmb		11 17 15.4	
	comp=Z,22nm,0.8s								
N23A	Red Feather La	84.19	44	P		P		11 17 14.6	+1.3
	baz=309,SNR=11								
N23A	Red Feather La	84.19	44	IAmb		IAmb		11 17 15.9	
	comp=Z,16nm,0.9s								
CLL	Collm	84.23	330	*i* P		P		11 17 13.0	+0.1
	comp=Z,6.0nm,0.7s								
CLL				*i* PcP		PcP		11 17 16.0	-0.6
	comp=Z,13nm,0.8s								
CLL				*ep*P		pP		11 17 30.0	-1.2
CLL	Collm	84.23	330	*i* P		P		11 17 13.0	+0.1
CLL				*e*				11 17 30.0	
CLL					pmax	pmax			
	comp=Z,6.0nm,0.7s								
CLL	Collm	84.23	330	IAmb		IAmb		11 17 33.2	
	comp=Z,18nm,1.0s								
PV15	Paradox Valley	84.25	48	IAmb		IAmb		11 17 15.7	
	comp=Z,11nm,0.8s								
KRUC	Moravsky	84.38	327	*eP*		P		11 17 14.7	+0.9
MODS	Modra-Piesok	84.46	326	*eP*		P		11 17 17.2	+3.0
MODS	Modra-Piesok	84.46	326	*eP*		P		11 17 17.2	+3.0
PRU	Pruhonice	84.54	328	*eP*		P		11 17 14.5	0.0
PRU				*ep*P		pP		11 17 31.4	-1.4
SMCO	Snowmass	84.65	46	IAmb		IAmb		11 17 18.2	
	comp=Z,12nm,0.8s								
X16A	Lo Mia Camp, P	84.72	52	IAmb		IAmb		11 17 38.7	
	comp=Z,11nm,1.0s								
MVCO	Mesa Verde	84.93	49	P		P		11 17 18.0	+1.0
	baz=308,SNR=6.5								
MVCO	Mesa Verde	84.93	49	IAmb		IAmb		11 17 19.0	
	comp=Z,15nm,1.2s								
214A	Organ Pipe Nat	85.25	55	P		P		11 17 19.5	+1.0
	baz=306								
NKC	Novy Kostel	85.27	330	*eP*		P		11 17 21.9	+3.7
NKC				*ep*P		pP		11 17 34.2	-2.3
CONA	Conrad Observa	85.44	326	*eP*		P		11 17 19.1	-0.1
	comp=Z,14nm,1.5s								
KHC	Kasperske Hory	85.60	328	*eP*		P		11 17 20.5	+0.6
KHC				*ep*P		pP		11 17 36.6	-1.6
S22A	4UR Ranch, Cre	85.64	47	P		P		11 17 21.7	+1.1
	baz=309,SNR=11								
S22A	4UR Ranch, Cre	85.64	47	IAmb		IAmb		11 17 23.2	
	comp=Z,9.8nm,0.9s								
GERES	GERESS Array B	85.76	328	P		P		11 17 21.0	+0.2
	comp=Z,2.5nm,0.6s,baz=38,slow=6.8,SNR=15								
GERES				pP		pP		11 17 37.8	-1.3
	comp=Z,4.9nm,0.8s,baz=56,slow=5.0,SNR=10								
GERES	GERESS Array B	85.76	328	P		P		11 17 20.9	+0.1
Q24A	Divide	85.89	45	P		P		11 17 22.8	+0.9
	baz=310,SNR=5.1								
F33A	5 Mile Ranch,	86.10	36	IAmb		IAmb		11 17 24.2	
	comp=Z,15nm,1.2s								
GRF	Grafenberg Arr	86.19	330	*eP*		pP		11 17 40.4	-0.7
	comp=Z,11nm,1.1s,baz=49,slow=4.9								
MOA	Molln	86.24	327	*eP*		P		11 17 23.6	+0.5
	comp=Z,7.5nm,1.4s								
TUC	Tucson	86.42	54	P		P		11 17 25.5	+1.2
	baz=307								
SDCO	Great Sand Dun	86.45	47	P		P		11 17 25.8	+1.1
	baz=310,SNR=7.7								
EKA	Eskdalemuir Ar	86.66	340	P		P		11 17 28.2	+3.2
SOKA	Soboth	86.74	326	*eP*		P		11 17 24.8	-0.8
	comp=Z,10.0nm,1.3s								
OBKA	Obir	87.09	326	*eP*		P		11 17 25.8	-1.5
	comp=Z,6.0nm,0.8s								
KBA	Koelnbreinsper	87.23	327	*eP*		P		11 17 28.0	-0.1
	comp=Z,2.3nm,0.8s								
KSCO	Kaye Shedlock'	87.35	44	P		P		11 17 29.5	+0.7
	baz=311								
ECSD	EROS Data Cent	87.43	38	P		P		11 17 29.1	+0.1
	baz=315								
ECSD	EROS Data Cent	87.43	38	IAmb		IAmb		11 17 30.0	
	comp=Z,11nm,0.9s								
T25A	Trinidad	87.51	46	P		P		11 17 30.7	+0.9
	baz=310								
ANMO	Albuquerque	87.63	49	⇓*eP*		P		11 17 30.8	+0.5
ANMO					pmax	pmax			
	comp=Z,9.0nm,2.2s								
ANMO	Albuquerque	87.63	49	P		P		11 17 31.2	+0.9
	baz=309								
ANMO	Albuquerque	87.63	49	P		P		11 17 30.2	-0.1
LENM	Lemitar	87.79	50	P		P		11 17 31.9	+0.8
ABTA	Abfaltersbach	87.86	327	*eP*		P		11 17 30.6	-0.4
	comp=Z,5.4nm,1.0s								
WTTA	Wattenberg	87.86	328	*eP*		P		11 17 31.0	-0.2
	comp=Z,2.9nm,0.5s								
MOTA	Moosalm	88.03	328	*eP*		P		11 17 33.0	+1.1
	comp=Z,8.0nm,1.4s								
SQTA	Sankt Quirin	88.08	328	*eP*		P		11 17 30.7	-1.4
	comp=Z,3.3nm,0.9s								
SPMN	Marine on St.	88.24	35	P		P		11 17 33.1	+0.4
	baz=318								
BGNE	Belgrade	88.25	40	P		P		11 17 32.8	-0.1
	baz=314								
121A	Cookes Peak, D	88.29	52	P		P		11 17 33.7	+0.3
	baz=309								
BMRD	Maredsous	88.29	333	P		P		11 17 33.5	+0.7
BMRD	Maredsous	88.29	333	pP		pP		11 17 50.9	-0.4
FETA	Feichten	88.45	328	*eP*		P		11 17 31.3	-2.6
	comp=Z,6.1nm,1.0s								
L34A	Svendsen Farm,	88.80	39	P		P		11 17 36.1	+0.6
CBKS	Cedar Bluff	89.15	43	P		P		11 17 36.9	-0.3
	baz=313								
MNTX	Cornudas Mount	90.39	51	P		P		11 17 44.1	+1.0
	baz=310								
AMTX	Amarillo	90.66	47	P		P		11 17 45.4	+1.0
	baz=312								
AMTX	Amarillo	90.66	47	IAmb		IAmb		11 18 07.2	
	comp=Z,12nm,0.8s								
KSU1	Kansas State U	90.71	41	P		P		11 17 45.0	+0.6
	baz=315								
LSQQ	Lebel-sur-Quev	91.64	24	P		P		11 17 48.7	+0.2
	baz=329								
CHGQ	Chibougamau	91.74	22	P		P		11 17 49.1	+0.1
	baz=331								
WMOK	Wichita Mounta	92.50	45	P		P		11 17 53.3	+0.5
	baz=314								
WMOK	Wichita Mounta	92.50	45	IAmb		IAmb		11 17 54.3	
	comp=Z,6.0nm,0.8s								
TXAR	Lajitas Array	93.04	52	P		P		11 17 56.7	+1.2
	comp=Z,14nm,0.7s,baz=301,slow=3.2,SNR=90								
TXAR				pP		pwP		11 18 15.4	-1.3
	comp=Z,12nm,0.8s,baz=300,slow=2.7,SNR=10								
TXAR	Lajitas Array	93.04	52	P		P		11 17 56.5	+0.9
TUL1	Leonard	93.43	43	P		P		11 17 57.7	+0.6
	baz=316								
TUL1	Leonard	93.43	43	IAmb		IAmb		11 17 58.3	
	comp=Z,6.9nm,0.7s								
ABTX	Abilene, Hawle	93.43	47	P		P		11 17 57.9	+0.7
	baz=313								
ABTX	Abilene, Hawle	93.43	47	IAmb		IAmb		11 17 58.9	
	comp=Z,12nm,1.1s								
D55A	Sainte-Anne-du	93.91	24	P		P		11 17 58.8	-0.2
	baz=330								
CCM	Cathedral Cave	94.35	39	P		P		11 18 01.2	-0.1
	baz=319								
LATQ	La Tuque	94.47	22	P		P		11 18 01.5	-0.1
	baz=332								
U40A	Yellville	94.74	41	P		P		11 18 03.6	+0.5
	baz=318								
JCT	Junction City	94.79	49	P		P		11 18 04.0	+0.5
	baz=313								
E57A	Chemin Saint G	94.89	23	P		P		11 18 03.7	+0.2
	baz=331								
MIAR	Mount Ida	95.67	42	P		P		11 18 07.6	+0.3
	baz=317								
G57A	Newington	95.74	25	P		P		11 18 06.9	-0.5
	baz=331								
833A	Chaparral WMA,	96.51	50	P		P		11 18 12.3	+1.0
	baz=313								
G61A	St-Isidore-de-	96.74	22	P		P		11 18 12.4	+0.5
	baz=333								
J58A	Remsen	97.15	26	P		Pdif		11 18 14.4	+0.5
	baz=330								
I59A	Olmsteadville	97.27	24	P		Pdif		11 18 14.8	+0.3
	baz=331								
I61A	Oroboro, Fairl	97.72	23	P		Pdif		11 18 17.3	+0.8
	baz=333								
L59A	Walton	98.25	26	P		P		11 18 18.7	-0.3
	baz=330								
H66A	Whiting	98.46	20	P		Pdif		11 18 19.7	0.0
	baz=337								
KMSC	Kings Mountain	101.56	34	P		Pdif		11 18 34.1	+0.3
	baz=325								
V58A	Windy Hill, Pi	102.04	32	P		Pdif		11 18 36.1	+0.2
	baz=327								
U59A	Littleton	102.16	31	P		Pdif		11 18 36.3	0.0
	baz=328								
TORD	Torodi Ar. Bea	119.63	313	PKP		PKPdf		11 23 29.9	-1.8
	comp=Z,0.8nm,0.5s,baz=15,slow=2.3,SNR=8.3								
TORD	Torodi Ar. Bea	119.63	313			PKPdf		11 23 31.2	-0.5
QSPA	South Pole Qui	122.81	180			PKPdf		11 23 36.1	-0.2
SDV	Santo Domingo	128.74	41	PKP		PKPdf		11 23 49.3	-0.2
	comp=Z,12nm,0.8s,baz=304,slow=1.1,SNR=6.2								
VNA2	Neumayer--Watz	138.33	195	PKPdf		PKPdf		11 24 06.3	+0.8
VNA3	Neumayer Olymp	138.57	194	PKPdf		PKPdf		11 24 05.0	-0.9
SAML	Samuel	147.44	48	PKIKP		PKPdf		11 24 23.1	-0.1
SAML	Samuel	147.44	48			PKPdf		11 24 23.1	-0.1
LPAZ	La Paz	149.11	64	PKPbc		PKPbc		11 24 31.1	+0.2
	comp=Z,10nm,0.7s,baz=356,slow=2.0,SNR=17								
LPAZ	La Paz	149.11	64	PKPdf		PKPdf		11 24 26.5	-0.1
TA01	Diego Aracena	149.91	73	PKPdf		PKPdf		11 24 26.4	-0.6
TA01						PKiKP		11 24 32.4	-0.4
PB11	IPOC Station P	149.91	71			PKPdf		11 24 27.1	-0.2
PB11				PKPbc		PKiKP		11 24 33.3	+0.2
USHA	Ushuaia	150.15	146	PKPbc		PKiKP		11 24 32.4	+0.1
	comp=Z,12nm,0.6s,baz=230,slow=3.8,SNR=4.7								
PB01	IPOC Station P	150.71	74			PKPbc		11 24 34.0	0.0
PB06	IPOC Station P	151.45	77			PKiKP		11 24 36.5	+0.3
PB14	IPOC Station P	151.60	81			PKPbc		11 24 35.7	-0.5
PB15	IPOC Station P	151.76	77			PKPbc		11 24 36.2	-0.3
LVC	Limon Verde	151.94	76	PKPbc		PKiKP		11 24 38.0	+0.6
	comp=Z,13nm,0.6s,baz=316,slow=1.0,SNR=15								
LVC	Limon Verde	151.94	76			PKiKP		11 24 38.4	+1.0
LVC				PKPab		PKPab		11 24 45.2	-1.4
GO02	Mina Guanaco	152.50	81			PKiKP		11 24 38.6	+0.1
GO02				PKPab		PKPab		11 24 49.3	+0.5
GO03	Copiap	152.84	87	PKPbc		PKiKP		11 24 39.2	+0.4
GO03				PKPab		PKPab		11 24 48.8	-1.1
AC05	El Transito	153.19	89			PKiKP		11 24 40.5	+0.9
PLCA	Paso Flores	153.99	116	PKPbc		PKiKP		11 24 41.4	+0.6
	comp=Z,4.9nm,1.1s,baz=256,slow=5.1,SNR=6.0								
PLCA				PKPab		PKPab		11 24 54.1	-0.3
	comp=Z,2.7nm,0.9s,baz=359,slow=8.0,SNR=5.2								
SIV	San Ignacio	154.02	54	PKP		PKPdf		11 24 33.3	0.0
	comp=Z,2.7nm,1.0s,baz=191,slow=3.2,SNR=6.3								
SIV				PKPbc		PKPbc		11 24 41.4	-0.1
	comp=Z,4.8nm,0.7s,baz=279,slow=2.8,SNR=7.5								
SIV				PKPab		PKPab		11 24 54.3	-0.7
	comp=Z,4.4nm,0.7s,baz=333,slow=3.0,SNR=5.2								
CPUP	Villa Florida	163.00	71	PKPab		PKPab		11 25 33.0	-0.7
	comp=Z,2.3nm,1.0s,baz=45,slow=3.3,SNR=3.0								

VAO ***12*** *11:10:15.2±1.0, 9.°01S×76.°92W, h10km, mb4.3*
IDC ***12*** *11:10:24.7±1.3, 8.°34S×75.°82W, h0km, mb4.3/2, mb1 4.1/6, mb1mx3.8/28, mbtmp4.1/6, ML3.5/4, Error ellipse: s-maj=27.0km s-min=23.7km az=42.0*

ISC 12 11:10:24.7±0.7, 8.655S±0.06×75.91W±0.06, h10km, n21, σ2s42/22, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ATAH	Atahualpa	2.89	301	Pn		Pn	11 11 11.6	+0.4
	24nm,0.3s,baz=121,slow=2.7,SNR=62							
ATAH				Sn		Sn	11 11 46.8	+0.5
	6.0nm,0.3s,baz=106,slow=23,SNR=4.2							
CZSB	Cruzeiro do Su	3.30	74	*eP*		Pb	11 11 21.7	-1.6
NNA	Nana	3.44	195	Pn		Pb	11 11 24.7	-1.2
	8.7nm,0.3s,baz=17,slow=8.5,SNR=12							
NNA				Sn		Sb	11 12 09.5	+1.7
	31nm,0.3s,baz=246,slow=18,SNR=11							
ETMB	Extrema	9.64	98	*eP*		Pn	11 12 46.7	+3.1
LPAZ	La Paz	10.73	136	Pn		Pn	11 13 03.5	+4.4
	0.1nm,0.3s,baz=315,slow=5.7,SNR=3.8							
LPAZ	La Paz	10.73	136	*eP*		Pn	11 12 55.9	-3.3
ROSC	El Rosal	13.49	7	Pn		Pn	11 13 35.5	-1.3
	1.5nm,0.3s,baz=158,slow=19,SNR=1.4							
LVC	Limon Verde	15.42	155	*eP*		Pn	11 13 54.6	-8.3
VILB	Vilhena	16.01	107	*eP*		Pn	11 14 11.2	+1.0
MACA	Manacapuru-AM	16.09	71	*eP*		P	11 14 15.9	+1.3
SDV	Santo Domingo	18.19	17	*eP*		Pn	11 14 35.3	-2.5
CLDB	Colider	19.94	98	*eP*		P	11 14 58.0	+1.0
NPGB	Novo Progresso	20.42	87	*eP*		P	11 15 03.8	+1.5
ITTB	Itaituba	20.48	79	*eP*		P	11 15 05.0	+2.0
MALB	Monte Alegre	22.57	74	*eP*		P	11 15 28.0	+2.5
SNDB	Serra Nova Dou	24.43	100	*eP*		P	11 15 43.0	-0.9
CPUP	Villa Florida	24.90	137	*eP*		P	11 15 41.9	-6.1
MCPB	Macapa, AP	25.14	72	*eP*		P	11 15 50.3	0.0
DBIC	Dimbokro	72.44	80	P		P	11 21 53.2	+1.2
	5.4nm,0.8s,baz=306,slow=7.9,SNR=3.7							
TORD	Torodi Ar. Bea	80.03	75	P		P	11 22 35.4	+0.2
	1.0nm,0.8s,baz=280,slow=6.2,SNR=5.3							
WRA	Warramunga Arr	138.84	226	PKP		PKPdf	11 29 53.5	+1.1
	0.2nm,0.7s,baz=142,slow=1.9,SNR=2.2							

NEIC ***12*** *11:16:46.5±1.5, 1.°13N±0.°05×85.°38W±0.°09, h10km±1km, mb4.7/65, Ms_20 4.8/349, Mwb5.5/33, Mwc5.5(GCMT), Error ellipse: s-maj=14.9km s-min=8.7km az=81.0*
IDC ***12*** *11:16:46.3±0.9, 1.°21N×85.°56W, h0km, mb4.1/11, mb1 4.4/17, mb1mx4.2/34, mbtmp4.3/17, ML3.7/5, MS4.5/25, Ms1 4.5/25, ms1mx4.5/30, Error ellipse: s-maj=27.0km s-min=16.5km az=45.0*
NEIC ***12*** *11:16:49, 1.°08N×85.°27W, h14km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr=0.23; Mθθ=0.53; Mϕϕ=0.75; Mrθ=0.08; Mrϕ=2.09; Mθϕ=0.35; Fault plane solution: Mw=2.22000×1017 NP1:ϕs=8.27000°, δ87.88000°, λ170.43000°. NP2:ϕs=98.63000°, δ80.44000°, λ2.15000°. Principal axes: T 2.1080, Plg8.0000°, Azm323.0000°; N 0.2084, Plg80.0000°, Azm176.0000°; P -2.3164, Plg5.0000°, Azm54.0000°;*
GCMT ***12*** *11:16:50.7±0.1, 1.°13N±0.°01×85.°36W±0.°01, h18km, MW5.5/150, Moment Tensor Solution. s122,c211; s150,c290; Duration: 1s3 Moment tensor: Scale 1017 Nm; Mrr=0.01±.02; Mθθ=0.42±.02; Mϕϕ=-0.42±.02; Mrθ=0.12±.05; Mrϕ=1.89±.02; Mθϕ=0.38±.05; Best double couple: Mo=1.97700×1017 NP1:ϕs=97.00000°, δ79.00000°, λ2.00000°. NP2:ϕs=6.00000°, δ88.00000°, λ169.00000°. Principal axes: T 1.9870, Plg9.0000°, Azm321.0000°; N -0.0220, Plg79.0000°, Azm176.0000°; P -1.9660, Plg6.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***12*** *11:16:51, 1.°13N×85.°36W, h22km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr=0.04; Mθθ=0.62; Mϕϕ=0.57; Mrθ=-0.13; Mrϕ=2.22; Mθϕ=0.15; Fault plane solution: Mo=2.31000×1017 NP1:ϕs=188.00000°, δ86.00000°, λ-177.00000°. NP2:ϕs=97.00000°, δ87.00000°, λ-4.00000°. Principal axes: T 2.3191, Plg0.0000°, Azm143.0000°; N -0.0229, Plg85.0000°, Azm236.0000°; P -2.2961, Plg5.0000°, Azm52.0000°;*

ISC 12 11:16:46.8±0.5, 1.°21N±0.°06×85.°41W±0.°07, h10km, n329, σ1s75/145, mb4.6/38, MS4.8/200, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PAYG	Puerto Ayora	5.23	249	Pn		Pn	11 18 03.6	-1.5
GCUF	Volcan Galeras	8.06	90	*eP*		Pn	11 18 47.3	+2.8
HDC	Heredia	8.82	8	Sn		Sn	11 20 32.5	-1.8
POPC	Popayan, Colom	8.82	81	*eP*		Pn	11 18 52.9	-1.9
JTS	Las Juntas de	9.03	3	Pn		Pn	11 18 59.9	+2.5
	1.8nm,0.3s,baz=240,slow=10,SNR=7.2							
JTS				Sn		Sn	11 20 32.7	-6.6
	0.4nm,0.3s,baz=288,slow=20,SNR=1.0							
PCON	Cinco Dias	9.07	83	*eP*		Pn	11 19 01.2	+2.8
ARE1	Arenal 1	9.21	4	*eP*		Pn	11 19 04.0	+4.1
CEDE	Laguna Cedeo	9.24	4	*eP*		Pn	11 19 05.0	+4.6
CUI	Cuipilapa	9.39	1	*eP*		Pn	11 19 05.5	+3.2
SOLC	Bahia Solano	9.40	58	*eP*		Pn	11 19 05.0	+2.5
YOTC	Yotoco, Valle	9.46	73	*eP*		Pn	11 19 06.8	+3.4
MARP	Paez Belalcaza	9.58	80	*eP*		Pn	11 19 05.4	+0.2
PTAC	Punta Ardita,	9.60	52	*eP*		Pn	11 19 06.8	+1.6
FLOC	Florencia	9.76	88	*eP*		Pn	11 19 04.0	-3.4
GARC	Garzon, Huila	9.96	84	*eP*		Pn	11 19 14.5	+4.2
BETC	Betania	10.06	82	*eP*		Pn	11 19 11.1	-0.5
ANIL	Santa Ana	10.51	72	*eP*		Pn	11 19 14.5	-3.4
TOLC	Tolima	10.61	71	*eP*		Pn	11 19 18.0	-1.4
PTLC	Puerto Leguiza	10.66	95	*eP*		Pn	11 19 20.8	+1.1
ACON	Acoyapa	10.69	1			Pn	11 19 20.9	+0.8
PRAC	Prado	10.80	77	*eP*		Pn	11 19 19.4	-2.3
DBBC	Dabeiba	10.83	58	*eP*		Pn	11 19 22.9	+0.7
ATAH	Atahualpa	10.85	140	Pn		Pn	11 19 22.6	-0.1
	3.1nm,0.3s,baz=335,slow=8.0,SNR=13	

DWPF	**Disney Wildern**	**27.02**	**8**	IAMs_20	IAMs_20	11 32 42.4			
	comp=Z,2µm,19.0s								
PB06	**IPOC Station P**	**28.34**	**148**	P	**P**	**11 22 40.7**	**-0.6**		
LVC	**Limon Verde**	**28.62**	**147**	P	**P**	**11 22 45.4**	**+1.3**		
	comp=Z,1.7nm,0.6s,baz=307,slow=15,SNR=3.0								
SIV	**San Ignacio**	**29.50**	**126**	LR	LR	11 35 29.2			
	comp=Z,2µm,19.3s,baz=317,slow=38								
456A	**Hilliard**	**29.53**	**6**	IAMs_20	IAMs_20	11 33 50.0			
	comp=Z,2µm,19.0s								
BRAL	**Brewton**	**29.84**	**357**	P	**P**	**11 22 55.5**	**+1.2**		
255A	**Hazlehurst**	**30.67**	**5**	IAMs_20	IAMs_20	11 34 34.4			
	comp=Z,1µm,18.0s								
257A	**Skidaway Islan**	**30.88**	**7**	IAMs_20	IAMs_20	11 35 25.7			
	comp=Z,2µm,18.0s								
NHSC	**New Hope**	**32.10**	**8**	IAMs_20	IAMs_20	11 35 39.2			
	comp=Z,1µm,20.0s								
HPIG		**32.13**	**324**	P	**P**	**11 23 14.9**	**0.0**		
HPIG				IAmb	IAmb	11 23 35.9			
	comp=Z,13nm,1.6s								
JCT	**Junction City**	**32.16**	**336**	P	**P**	**11 23 15.9**	**+1.1**		
Z56A	**Williston**	**32.17**	**6**	IAMs_20	IAMs_20	11 35 28.9			
	comp=Z,2µm,19.0s								
SLBS	**Sierra La Lagu**	**32.63**	**315**	IAMs_20	IAMs_20	11 34 20.9			
	comp=Z,1µm,18.0s								
TX32	**Lajitas Array**	**32.94**	**330**	P	**P**	**11 23 22.0**	**+0.2**		
TX32				IAmb	IAmb	11 23 29.6			
	comp=Z,17nm,1.9s								
TXAR	**Lajitas Array**	**32.94**	**330**	P	**P**	**11 23 21.5**	**-0.3**		
	comp=Z,0.6nm,0.7s,baz=146,slow=13,SNR=2.7								
TXAR	**Lajitas Array**	**32.94**	**330**	P	**P**	**11 23 21.9**	**+0.1**		
TX31	**Lajitas Ar. Si**	**32.94**	**330**	P	**P**	**11 23 22.2**	**+0.4**		
Y57A	**Sumter**	**32.97**	**8**	IAMs_20	IAMs_20	11 36 50.1			
	comp=Z,2µm,18.0s								
HODGE	**Hodges**	**32.98**	**5**	IAMs_20	IAMs_20	11 35 55.4			
	comp=Z,2µm,18.0s								
X48A	**Hartselle**	**33.10**	**358**	P	**P**	**11 23 23.4**	**+0.4**		
X51A	**Calhoun**	**33.19**	**1**	IAMs_20	IAMs_20	11 37 55.0			
	comp=Z,1µm,18.0s								
Y60A	**Bolivia**	**33.31**	**11**	IAMs_20	IAMs_20	11 35 54.0			
	comp=Z,1µm,19.0s								
BIRD	**Birdtown, Kers**	**33.58**	**7**	IAMs_20	IAMs_20	11 36 59.3			
	comp=Z,1µm,18.0s								
PAULI	**Pauline**	**33.60**	**5**	IAMs_20	IAMs_20	11 36 13.9			
	comp=Z,2µm,18.0s								
X58A	**Rowland**	**33.65**	**9**	IAMs_20	IAMs_20	11 36 45.1			
	comp=Z,2µm,20.0s								
Z35A	**Perchaven, San**	**33.83**	**342**	P	**P**	**11 23 29.9**	**+0.5**		
KMSC	**Kings Mountain**	**33.97**	**6**	IAMs_20	IAMs_20	11 36 43.6			
	comp=Z,2µm,20.0s								
ABTX	**Abilene, Hawle**	**34.00**	**338**	P	**P**	**11 23 32.1**	**+1.1**		
ABTX				IAmb	IAmb	11 23 43.5			
	comp=Z,12nm,1.1s								
W57A	**Gilead**	**34.14**	**8**	IAMs_20	IAMs_20	11 37 26.1			
	comp=Z,1µm,18.0s								
GO04	**Tololo Observa**	**34.18**	**157**	IAMs_20	IAMs_20	11 33 25.5			
	comp=Z,2µm,21.0s								
V53A	**Saluda**	**34.37**	**4**	IAMs_20	IAMs_20	11 36 29.2			
	comp=Z,1µm,20.0s								
V52A	**Sevierville**	**34.50**	**3**	IAMs_20	IAMs_20	11 37 20.6			
	comp=Z,1µm,18.0s								
CNNC	**Cliffs of the**	**34.57**	**11**	IAMs_20	IAMs_20	11 36 41.4			
	comp=Z,2µm,20.0s								
V55A	**Taylorsville**	**34.68**	**6**	IAMs_20	IAMs_20	11 36 56.5			
	comp=Z,2µm,19.0s								
V58A	**Windy Hill, Pi**	**34.90**	**9**	IAMs_20	IAMs_20	11 37 31.2			
	comp=Z,1µm,19.0s								
H03N2	**Juan Fernandez**	**35.00**	**171**	T	T	12 00 45.0			
	baz=349,slow=76								
H03N1	**Juan Fernandez**	**35.01**	**171**	T	T	12 00 42.2			
	baz=349,slow=76								
H03N3	**Juan Fernandez**	**35.02**	**171**	T	T	12 00 41.1			
	baz=349,slow=76								
U56A	**King**	**35.27**	**7**	IAMs_20	IAMs_20	11 37 14.0			
	comp=Z,1µm,19.0s								
U54A	**Nelsons Funny**	**35.29**	**5**	IAMs_20	IAMs_20	11 37 26.6			
	comp=Z,1µm,19.0s								
V61A	**Roper**	**35.37**	**12**	IAMs_20	IAMs_20	11 37 40.5			
	comp=Z,1µm,18.0s								
FNO	**Franklin**	**35.67**	**343**	P	**P**	**11 23 46.9**	**+1.6**		
U59A	**Littleton**	**35.67**	**11**	IAMs_20	IAMs_20	11 37 47.5			
	comp=Z,2µm,20.0s								
PBMO	**Poplar Bluff**	**35.69**	**353**	P	**P**	**11 23 46.2**	**+0.8**		
PBMO				IAmb	IAmb	11 24 18.7			
	comp=Z,24nm,1.6s								
MNTX	**Cornudas Mount**	**35.72**	**330**	P	**P**	**11 23 46.5**	**+0.7**		
MNTX				IAMs_20	IAMs_20	11 37 08.9			
	comp=Z,2µm,20.0s								
U61A	**Possum Corner**	**35.92**	**12**	IAMs_20	IAMs_20	11 37 58.0			
	comp=Z,1µm,18.0s								
T57A	**Hurt**	**36.06**	**8**	IAMs_20	IAMs_20	11 38 42.9			
	comp=Z,2µm,18.0s								
CPRX	**Cap Rock**	**36.09**	**333**	P	**P**	**11 23 50.3**	**+1.2**		
BLA	**Blacksburg**	**36.12**	**7**	IAMs_20	IAMs_20	11 37 42.4			
	comp=Z,1µm,21.0s								
S51A	**Beattyville**	**36.29**	**2**	IAMs_20	IAMs_20	11 39 37.1			
	comp=Z,1µm,18.0s								
T59A	**Double "B" Far**	**36.31**	**11**	IAMs_20	IAMs_20	11 37 43.6			
	comp=Z,2µm,21.0s								
MGMO	**Mountain Grove**	**36.32**	**351**	P	**P**	**11 23 51.5**	**+0.6**		
MGMO				IAmb	IAmb	11 24 07.7			
	comp=Z,25nm,1.5s								
EPT	**El Paso**	**36.34**	**329**	IAMs_20	IAMs_20	11 37 55.6			
	comp=Z,1µm,18.0s								
SRIG	**Santa Rosalia**	**36.55**	**318**	IAMs_20	IAMs_20	11 36 26.9			
	comp=Z,1µm,22.0s								
S54A	**Dingess, Beckl**	**36.60**	**5**	IAMs_20	IAMs_20	11 38 34.4			
	comp=Z,1µm,19.0s								
BBSR	**BB Station**	**36.62**	**30**	IAMs_20	IAMs_20	11 36 19.2			
	comp=Z,1µm,21.0s								
T60A	**Surry**	**36.64**	**12**	IAMs_20	IAMs_20	11 38 00.1			
	comp=Z,1µm,19.0s								
AMTX	**Amarillo**	**36.78**	**337**	P	**P**	**11 23 56.1**	**+1.2**		
AMTX				IAmb	IAmb	11 24 06.5			
	comp=Z,20nm,1.1s								
S58A	**Poland Farm, P**	**36.85**	**10**	IAMs_20	IAMs_20	11 38 51.8			
	comp=Z,2µm,19.0s								
S57A	**Dark Hollow, R**	**36.85**	**9**	IAMs_20	IAMs_20	11 36 38.9			
	comp=Z,1µm,19.0s								
S39A	**Bolivar**	**37.03**	**350**	P	**P**	**11 23 56.4**	**-0.4**		
CCM	**Cathedral Cave**	**37.05**	**352**	P	**P**	**11 23 55.7**	**-1.4**		
CCM				IAmb	IAmb	11 24 14.8			
	comp=Z,28nm,1.6s								
R53A	**Hurricane**	**37.08**	**5**	IAMs_20	IAMs_20	11 38 23.9			
	comp=Z,2µm,19.0s								
R55A	**Marlinton**	**37.21**	**7**	IAMs_20	IAMs_20	11 38 46.4			
	comp=Z,2µm,20.0s								
R58B	**Mineral**	**37.22**	**10**	IAMs_20	IAMs_20	11 38 53.6			
	comp=Z,2µm,20.0s								
CBN	**Corbin Frederi**	**37.55**	**10**	IAMs_20	IAMs_20	11 39 02.2			
	comp=Z,2µm,20.0s								
319A	**Douglas**	**37.55**	**325**	IAmb	IAmb	11 24 36.1			
	comp=Z,9.0nm,0.9s								
Q51A	**Peebles**	**37.68**	**3**	P	**P**	**11 24 01.1**	**-1.3**		
Q51A				IAmb	IAmb	11 24 17.4			
	comp=Z,26nm,1.2s								
Q54A	**Coxs Mills**	**37.82**	**6**	IAMs_20	IAMs_20	11 38 45.6			
	comp=Z,2µm,20.0s								
Q56A	**Snyder Ridge,**	**38.08**	**8**	IAMs_20	IAMs_20	11 39 55.3			
	comp=Z,1µm,18.0s								
P51A	**Williamsport**	**38.15**	**3**	IAMs_20	IAMs_20	11 38 48.3			
	comp=Z,984nm,18.0s								
BNM	**Barren Site**	**38.31**	**331**	P	**P**	**11 24 09.0**	**+0.9**		
P52A	**Corning**	**38.36**	**4**	IAMs_20	IAMs_20	11 39 02.8			
	comp=Z,1µm,20.0s								
Y22D	**IRIS PASSCAL I**	**38.39**	**331**	IAMs_20	IAMs_20	11 38 35.8			
	comp=Z,2µm,22.0s								
CPUP	**Villa Florida**	**38.52**	**137**	LR	LR	11 41 60.0			
	comp=Z,836nm,19.4s,baz=323,slow=39								
Q60A	**Greensboro**	**38.61**	**12**	IAMs_20	IAMs_20	11 37 36.4			
	comp=Z,2µm,22.0s								
P57A	**Homestead Farm**	**38.68**	**9**	IAMs_20	IAMs_20	11 39 40.3			
	comp=Z,2µm,20.0s								
O52A	**Adamsville**	**38.86**	**4**	IAMs_20	IAMs_20	11 39 47.1			
	comp=Z,1µm,19.0s								
ANMO	**Albuquerque**	**38.88**	**332**	P	**P**	**11 24 11.5**	**-1.3**		
	comp=Z,0.5nm,0.4s,baz=158,slow=16,SNR=2.7								
ANMO	**Albuquerque**	**38.88**	**332**	P	**P**	**11 24 15.1**	**+2.3**		
O53A	**New Philadelph**	**39.04**	**5**	IAMs_20	IAMs_20	11 39 25.9			
	comp=Z,1µm,21.0s								
O56A	**Blue Knob Stat**	**39.37**	**8**	IAMs_20	IAMs_20	11 41 24.5			
	comp=Z,1µm,18.0s								
P60A	**Greenville**	**39.44**	**12**	IAMs_20	IAMs_20	11 39 38.2			
	comp=Z,1µm,18.0s								
P61A	**Hammonton**	**39.48**	**13**	IAMs_20	IAMs_20	11 38 25.4			
	comp=Z,1µm,20.0s								
PSUB	**Penn St. - Bra**	**39.59**	**12**	IAMs_20	IAMs_20	11 39 42.1			
	comp=Z,995nm,18.0s								
N51A	**Ashland**	**39.62**	**4**	IAMs_20	IAMs_20	11 39 42.2			
	comp=Z,1µm,20.0s								
N53A	**Lisbon**	**39.63**	**5**	IAMs_20	IAMs_20	11 39 53.4			
	comp=Z,1µm,21.0s								
PAGS	**Pennsylvania G**	**39.63**	**10**	IAMs_20	IAMs_20	11 39 52.3			
	comp=Z,1µm,21.0s								
CBKS	**Cedar Bluff**	**39.66**	**342**	IAMs_20	IAMs_20	11 42 06.4			
	comp=Z,1µm,20.0s								
T25A	**Trinidad**	**39.82**	**336**	P	**P**	**11 24 21.3**	**+0.6**		
SSPA	**Standing Stone**	**39.83**	**9**	IAMs_20	IAMs_20	11 40 14.7			
	comp=Z,2µm,19.0s								
N54A	**Moraine State**	**39.87**	**6**	IAMs_20	IAMs_20	11 40 17.8			
	comp=Z,2µm,20.0s								
M50A	**Fremont**	**40.06**	**3**	IAMs_20	IAMs_20	11 39 37.0			
	comp=Z,1µm,22.0s								
PIX	**Pinacate**	**40.17**	**322**	IAMs_20	IAMs_20	11 39 55.8			
	comp=Z,1µm,20.0s								
N58A	**Sunbury**	**40.22**	**10**	IAMs_20	IAMs_20	11 40 43.1			
	comp=Z,1µm,20.0s								
LUPA	**Lehigh Univers**	**40.25**	**12**	IAMs_20	IAMs_20	11 40 01.7			
	comp=Z,1µm,21.0s								
M53A	**WI Miller and**	**40.27**	**6**	IAMs_20	IAMs_20	11 40 23.4			
	comp=Z,2µm,20.0s								
X18A	**Snowflake**	**40.30**	**328**	P	**P**	**11 24 25.2**	**+0.6**		
M52A	**Chesterland**	**40.31**	**5**	IAMs_20	IAMs_20	11 40 14.5			
	comp=Z,1µm,18.0s								
N59A	**State Game Lan**	**40.48**	**11**	IAMs_20	IAMs_20	11 41 46.7			
	comp=Z,1µm,18.0s								
BRNJ	**Basking Ridge**	**40.50**	**13**	IAMs_20	IAMs_20	11 38 55.3			
	comp=Z,1µm,21.0s								
M55A	**Ridgway**	**40.52**	**8**	IAMs_20	IAMs_20	11 40 31.0			
	comp=Z,1µm,20.0s								
BDFB	**Brasilia**	**40.57**	**116**	LR	LR	11 42 37.0			
	comp=Z,1µm,19.9s,baz=293,slow=38								
BDFB	**Brasilia**	**40.57**	**116**	IAMs_20	IAMs_20	11 42 25.9			
	comp=Z,1µm,20.0s								
M56A	**Emrium**	**40.62**	**8**	IAMs_20	IAMs_20	11 41 08.5			
	comp=Z,2µm,19.0s								
M57A	**Sunshine Farm,**	**40.64**	**10**	IAMs_20	IAMs_20	11 40 58.0			
	comp=Z,2µm,20.0s								
W18A	**Petrified Fore**	**40.64**	**329**	P	**P**	**11 24 27.7**	**+0.2**		
W18A				IAmb	IAmb	11 24 40.9			
	comp=Z,22nm,1.6s								
SDCO	**Great Sand Dun**	**40.79**	**335**	P	**P**	**11 24 28.2**	**-0.5**		
ODNJ	**Ogdensburg**	**40.87**	**13**	IAMs_20	IAMs_20	11 39 07.2			
	comp=Z,1µm,22.0s								
AAM	**Ann Arbor**	**40.94**	**2**	IAMs_20	IAMs_20	11 40 25.1			
	comp=Z,1µm,22.0s								
TRNY	**Table Rock, Ra**	**41.02**	**13**	P	**P**	**11 24 30.1**	**-0.1**		
TRNY				IAMs_20	IAMs_20	11 39 01.0			
	comp=Z,1µm,19.0s								
KSPA	**Keystone Colle**	**41.09**	**11**	IAMs_20	IAMs_20	11 40 47.1			
	comp=Z,1µm,20.0s								
SCIA	**State Center**	**41.12**	**351**	P	**P**	**11 24 30.5**	**-0.6**		
113A	**Mohawk Valley,**	**41.19**	**323**	P	**P**	**11 24 32.5**	**+0.7**		
WSPT	**Westport, CT**	**41.25**	**14**	IAMs_20	IAMs_20	11 42 04.1			
	comp=Z,1µm,20.0s								
S22A	**4UR Ranch, Cre**	**41.36**	**334**	P	**P**	**11 24 34.0**	**+0.5**		
K50A	**Casco**	**41.45**	**3**	IAMs_20	IAMs_20	11 42 35.8			
	comp=Z,1µm,18.0s								
WVNY	**West Valley, N**	**41.46**	**8**	IAMs_20	IAMs_20	11 41 09.9			
	comp=Z,1µm,20.0s								
YLE	**Yale**	**41.48**	**14**	IAMs_20	IAMs_20	11 42 30.2			
	comp=Z,1µm,18.0s								
Y14A	**Wickenburg**	**41.56**	**325**	P	**P**	**11 24 33.6**	**-1.3**		
Y14A				IAMs_20	IAMs_20	11 40 23.6			
	comp=Z,1µm,22.0s								
BINY	**Binghamton**	**41.67**	**11**	IAMs_20	IAMs_20	11 40 24.4			
	comp=Z,1µm,22.0s								
MVCO	**Mesa Verde**	**41.68**	**332**	P	**P**	**11 24 36.0**	**-0.1**		
MVCO				IAmb	IAmb	11 25 01.5			
	comp=Z,11nm,1.2s								
MVCO				IAMs_20	IAMs_20	11 41 03.8			
	comp=Z,2µm,20.0s								
L59A	**Walton**	**41.85**	**12**	IAMs_20	IAMs_20	11 41 02.0			
	comp=Z,1µm,20.0s								
MMNY	**Mt. Morris Dam**	**41.88**	**8**	IAMs_20	IAMs_20	11 41 30.9			
	comp=Z,1µm,19.0s								
GLA	**Glamis**	**42.03**	**322**	IAMs_20	IAMs_20	11 40 51.1			
	comp=Z,1µm,20.0s								
ESJX	**Sierra Juarez**	**42.04**	**320**	IAMs_20	IAMs_20	11 39 59.3			
	comp=Z,944nm,21.0s								
UABX	**UABC, Campus M**	**42.13**	**321**	IAMs_20	IAMs_20	11 42 01.8			
	comp=Z,1µm,18.0s								
MEDO	**Medina**	**42.23**	**8**	IAMs_20	IAMs_20	11 41 33.2			
	comp=Z,1µm,20.0s								
K58A	**Earlville**	**42.28**	**11**	IAMs_20	IAMs_20	11 42 34.5			
	comp=Z,1µm,19.0s								
J54A	**Appleton**	**42.31**	**7**	IAMs_20	IAMs_20	11 41 27.4			
	comp=Z,1µm,21.0s								
BRYW	**Bryant College**	**42.40**	**15**	IAMs_20	IAMs_20	11 43 29.6			
	comp=Z,1µm,20.0s								
RMX	**La Rumorosa**	**42.52**	**320**	IAMs_20	IAMs_20	11 40 42.2			
	comp=Z,1µm,20.0s								
PV15	**Paradox Valley**	**42.59**	**333**	P	**P**	**11 24 43.5**	**0.0**		
PV15				IAmb	IAmb	11 24 55.9			
	comp=Z,18nm,1.2s								
PV02	**Paradox Valley**	**42.59**	**333**	P	**P**	**11 24 42.6**	**-0.9**		
PV02				IAmb	IAmb	11 24 50.0			
	comp=Z,18nm,1.3s								
I49A	**Point Hope**	**42.60**	**3**	IAMs_20	IAMs_20	11 42 12.3			
	comp=Z,1µm,21.0s								
SMCO	**Snowmass**	**42.62**	**335**	P	**P**	**11 24 41.8**	**-2.1**		
SMCO				IAmb	IAmb	11 24 52.5			
	comp=Z,10nm,0.9s								
SMCO				IAMs_20	IAMs_20	11 42 25.8			
	comp=Z,782nm,19.0s								
TRY	**Troy**	**42.65**	**13**	IAMs_20	IAMs_20	11 39 29.3			
	comp=Z,992nm,22.0s								
PV03	**Paradox Valley**	**42.68**	**332**	P	**P**	**11 24 45.0**	**+0.8**		
PV03				IAmb	IAmb	11 25 10.1			
	comp=Z,16nm,1.5s								
PV04	**Paradox Valley**	**42.82**	**333**	P	**P**	**11 24 45.0**	**-0.3**		
PV04				IAmb	IAmb	11 24 53.7			
	comp=Z,11nm,1.1s								
J57A	**Williamstown**	**42.85**	**10**	IAMs_20	IAMs_20	11 41 10.4			
	comp=Z,1µm,20.0s								
PV10	**Paradox Valley**	**42.87**	**332**	P	**P**	**11 24 44.4**	**-1.3**		
PV22	**Blue Mesa, Par**	**42.88**	**333**	P	**P**	**11 24 45.5**	**-0.3**		
BCX	**Boston College**	**42.89**	**16**	IAMs_20	IAMs_20	11 43 44.5			
	comp=Z,1µm,21.0s								
WES	**Weston**	**42.90**	**15**	IAMs_20	IAMs_20	11 43 33.7			
	comp=Z,1µm,18.0s								
J58A	**Remsen**	**42.93**	**11**	IAMs_20	IAMs_20	11 40 22.6			
	comp=Z,1µm,22.0s								
BAR	**Barrett**	**42.95**	**320**	IAMs_20	IAMs_20	11 41 29.3			
	comp=Z,1µm,18.0s								
TJX	**Tijuana**	**43.08**	**320**	IAMs_20	IAMs_20	11 41 14.9			
	comp=Z,1µm,21.0s								
J59A	**Piesco**	**43.18**	**12**	IAMs_20	IAMs_20	11 40 30.2			
	comp=Z,1µm,22.0s								
109C	**Camp Elliot, M**	**43.36**	**320**	IAMs_20	IAMs_20	11 41 32.2			
	comp=Z,1µm,19.0s								
XPFO	**Pion Flat**	**43.42**	**321**	IAMs_20	IAMs_20	11 41 32.7			
	comp=Z,968nm,19.0s								
PFO	**Pinyon Flats O**	**43.42**	**321**	P	**P**	**11 24 48.9**	**-1.2**		
PFO				IAMs_20	IAMs_20	11 41 32.7			
	comp=Z,1µm,19.0s								
DELO	**Deloro Mine**	**43.67**	**8**	IAMs_20	IAMs_20	11 42 45.3			
	comp=Z,2µm,20.0s								
KNB	**Kanab**	**43.70**	**328**	P	**P**	**11 24 52.5**	**+0.1**		
NCB	**Newcomb**	**43.72**	**12**	IAMs_20	IAMs_20	11 42 18.7			
	comp=Z,736nm,18.0s								
PLCA	**Paso Flores**	**43.89**	**164**	LR	LR	11 38 41.1			
	comp=Z,362nm,20.9s,baz=340,slow=30								
PLCA	**Paso Flores**	**43.89**	**164**	P	**P**	**11 24 52.9**	**-0.8**		
PLCA				IAmb	IAmb	11 25 06.1			
	comp=Z,12nm,1.2s								
HNH	**Hanover**	**43.90**	**14**	IAMs_20	IAMs_20	11 40 40.1			
	comp=Z,872nm,19.0s								
SRU	**San Rafael Swe**	**44.15**	**332**	P	**P**	**11 24 55.1**	**-0.9**		
LONY	**Lake Ozonia**	**44.27**	**11**	IAMs_20	IAMs_20	11 41 14.2			
	comp=Z,1µm,22.0s								
VT1	**Waterbury**	**44.38**	**13**	IAMs_20	IAMs_20	11 42 04.7			
	comp=Z,1µm,21.0s								
SPB	**Sao Paulo**	**44.38**	**126**	IAMs_20	IAMs_20	11 44 50.5			
	comp=Z,1µm,21.0s								
CCUT	**Cedar City**	**44.39**	**328**	P	**P**	**11 24 58.8**	**+0.8**		
SHPR	**Sheep Range**	**44.62**	**325**	P	**P**	**11 25 01.3**	**+1.5**		
SHPR				IAMs_20	IAMs_20	11 42 09.6			
	comp=Z,946nm,22.0s								
TMUT	**Trail Mountain**	**44.63**	**331**	P	**P**	**11 25 01.0**	**+1.0**		
I63A	**Otisfield**	**44.65**	**15**	IAMs_20	IAMs_20	11 40 36.0			
	comp=Z,989nm,21.0s								
FRNY	**Flat Rock**	**44.68**	**12**	IAMs_20	IAMs_20	11 42 38.0			
	comp=Z,935nm,21.0s								
GSC	**Goldstone, Bar**	**44.76**	**323**	IAMs_20	IAMs_20	11 43 09.3			
	comp=Z,1µm,20.0s								
MWC	**Mount Wilson**	**44.83**	**321**	IAMs_20	IAMs_20	11 40 23.0			
	comp=Z,855nm,22.0s								
PASC	**Pasadena Art C**	**44.87**	**320**	IAMs_20	IAMs_20	11 41 34.3			
	comp=Z,828nm,20.0s								
RDMU	**Red Mountain**	**44.89**	**334**	P	**P**	**11 25 02.6**	**+0.7**		
H62A	**Milan**	**44.99**	**14**	IAMs_20	IAMs_20	11 40 48.0			
	comp=Z,1µm,22.0s								
WVL	**Waterville**	**45.37**	**16**	IAMs_20	IAMs_20	11 42 20.7			
	comp=Z,823nm,20.0s								
OSI	**Osito Audit: C**	**45.50**	**321**	IAMs_20	IAMs_20	11 41 53.8			
	comp=Z,896nm,22.0s								
TPNV	**Topopah Spring**	**45.55**	**325**	IAMs_20	IAMs_20	11 44 31.4			
	comp=Z,1µm,21.0s								
G62A	**West of Eustis**	**45.75**	**15**	IAMs_20	IAMs_20	11 41 31.1			
	comp=Z,1µm,21.0s								
RSSD	**Black Hills**	**45.82**	**341**	IAMs_20	IAMs_20	11 44 53.6			
	comp=Z,846nm,22.0s								
ISA	**Isabella, Lake**	**46.02**	**322**	IAMs_20	IAMs_20	11 43 29.6			
	comp=Z,1µm,19.0s								
DUG	**Dugway, Tooele**	**46.10**	**331**	IAMs_20	IAMs_20	11 43 54.9			
	comp=Z,1µm,20.0s								
PDAR	**Pinedale Array**	**46.69**	**336**	P	**P**	**11 25 16.6**	**+0.5**		
	comp=Z,1.5nm,1.0s,baz=133,slow=6.5,SNR=7.9								
PDAR				LR	LR	11 45 33.1			
	comp=Z,2µm,18.4s,baz=148,slow=37								
AHID	**Auburn Hatcher**	**47.34**	**334**	IAMs_20	IAMs_20	11 45 15.6			
	comp=Z,1µm,19.0s								
HAL	**Halifax**	**47.36**	**21**	IAMs_20	IAMs_20	11 42 04.7			
	comp=Z,690nm,18.0s								
OMMB	**Old Mammoth Mi**	**47.61**	**323**	IAMs_20	IAMs_20	11 45 11.9			
	comp=Z,1µm,20.0s								
NV11	**Mina Array Sit**	**47.67**	**325**	IAMs_20	IAMs_20	11 45 16.4			
	comp=Z,1µm,18.0s								
MDPB	**Devils Postpil**	**47.67**	**323**	IAMs_20	IAMs_20	11 43 49.5			
	comp=Z,930nm,22.0s								
REDW	**Red Top Meadow**	**47.72**	**335**	P	**P**	**11 25 24.5**	**+0.4**		
REDW				IAmb	IAmb	11 25 38.5			
	comp=Z,9.3nm,1.1s								
LHV	**Little Huntoon**	**47.75**	**324**	IAMs_20	IAMs_20	11 45 29.5			
	comp=Z,1µm,18.0s								
NVAR	**Mina Array Bea**	**47.75**	**325**	P	**P**	**11 25 24.9**	**+0.4**		
	comp=Z,1.3nm,0.8s,baz=147,slow=6.9,SNR=10.0								
NVAR	**Mina Array Bea**	**47.75**	**325**	P	**P**	**11 25 24.4**	**-0.1**		
SNOW	**Snow King Moun**	**47.76**	**335**	P	**P**	**11 25 24.6**	**+0.1**		
SNOW				IAmb	IAmb	11 25 39.0			
	comp=Z,12nm,1.3s								
SNOW				IAMs_20	IAMs_20	11 45 31.8			
	comp=Z,1µm,21.0s								
TPAW	**Teton Pass**	**47.86**	**335**	IAMs_20	IAMs_20	11 46 03.6			
	comp=Z,1µm,19.0s								
RYN	**Ryan**	**48.01**	**325**	IAMs_20	IAMs_20	11 45 21.5			
	comp=Z,1µm,18.0s								
KVN	**Kaiserville**	**48.06**	**326**	P	**P**	**11 25 27.2**	**+0.4**		
KVN				IAmb	IAmb	11 25 40.1			
	comp=Z,6.7nm,1.2s								
KVN				IAMs_20	IAMs_20	11 45 23.8			
	comp=Z,871nm,18.0s								
IMW	**Indian Meadow**	**48.19**	**335**	IAMs_20	IAMs_20	11 45 46.2			
	comp=Z,1µm,21.0s								
FLWY	**Flagg Ranch**	**48.24**	**336**	IAMs_20	IAMs_20	11 46 00.6			
	comp

comp=Z,452nm,21.9s,baz=262,slow=32
FINES FINESS Array B 99.06 27 LR LR 12 09 45.3
comp=Z,194nm,21.7s,baz=284,slow=32
DZM Mont Dzumac 107.26 247 *e*LR LR 12 06 26.4
comp=Z,434nm,31.1s
ILGA Ilgaz 110.75 45 IAMs_20 IAMs_20 12 17 03.2
comp=Z,245nm,20.0s
ZAA0 Zalesovo Array 124.43 7 IAMs_20 IAMs_20 12 34 03.0
comp=Z,211nm,19.0s
RAYN Ar Rayn 126.34 59 IAMs_20 IAMs_20 12 36 32.0
comp=Z,153nm,19.0s
TLY Talaya 126.75 353 IAMs_20 IAMs_20 12 32 40.5
comp=Z,227nm,21.0s
ULN Ulaanbaatar 129.93 349 IAMs_20 IAMs_20 12 32 47.6
comp=Z,262nm,22.0s
SONM Songino Array 130.08 350 PKP **PKiKP 11 35 59.5 +1.2**
comp=Z,0.6nm,0.8s,baz=36,slow=1.4,SNR=3.8
MKAR Makanchi Array 130.99 11 PKP **PKiKP 11 36 00.9 +0.9**
comp=Z,0.2nm,0.5s,baz=67,slow=3.7,SNR=2.3
AAK Ala-Archa 132.74 20 IAMs_20 IAMs_20 12 41 28.0
comp=Z,185nm,20.0s
HRA Herat 133.37 37 IAMs_20 IAMs_20 12 39 32.8
comp=Z,197nm,19.0s
BJT Baijiatuau 134.47 337 IAMs_20 IAMs_20 12 40 52.7
comp=Z,214nm,21.0s
WMQ Urumqi 134.74 7 *e*P **PKPdf 11 36 05.9 -0.4**
WMQ pmax pmax
comp=Z,140nm,4.3s
HHC Hu-ho-hao-te 135.37 342 *e*P **PKPdf 11 36 06.9 -0.7**
ASAR Alice Springs 135.86 237 PKP **PKiKP 11 36 10.5 -0.1**
comp=Z,0.4nm,0.9s,baz=92,slow=3.8,SNR=4.3
WRA Warramunga Arr 136.91 242 PKP **PKPdf 11 36 11.8 +0.9**
comp=Z,0.7nm,0.9s,baz=88,slow=1.8,SNR=6.4
NJ2 Nanjing 139.72 327 *e*P **PKPdf 11 36 13.8 -1.9**
NJ2 pmax pmax
comp=Z,12nm,0.5s
LZH Lanzhou 141.90 348 *e*PKP **PKPdf 11 36 18.6 -1.2**
LZH pPKP sPKPdf 11 36 29.5 +6.3
LZH sPKP 11 36 33.2
LZH LR LR
comp=N,200nm,17.8s
LZH LR LR
comp=E,260nm,17.9s
LZH LR LR
comp=Z,200nm,19.6s
QIZ Qiongzhong 154.92 324 PKPbc **PKPdf 11 36 39.7 -1.3**
QIZ pPKP **PKPbc 11 36 49.6 -0.1**
QIZ PP **PP 11 40 40.6 +1.0**
CHTO Chiang Mai 159.65 348 IAMs_20 IAMs_20 12 55 27.5
comp=Z,160nm,20.0s

IDC 12 11:37:23.5±999.0, 49°29N×53°62E, h0km, Error ellipse: s-maj=1573.0km s-min=68.8km az=67.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**3.06**	**67**	*i*		11 54 00.0	
	baz=251,slow=316,SNR=2.5						
I46RU	**ZALESOVO INFRA**	**19.82**	**65**	*i*		13 42 20.0	
	baz=269,slow=321,SNR=0.6						
I34MN	**SONGINO INFRAS**	**34.39**	**72**	*i*		15 11 50.0	
	baz=290,slow=334,SNR=0.8						

*REY **12** 11:49:21.7, 64°.67N×17°.40W, h9km*
*IDC **12** 11:49:23.0±0.7, 64°.58N×17°.55W, h0km, mb3.7/11, mb1 3.9/15, mb1mx3.7/51, mbtmp3.7/15, ML3.3/4, Error ellipse: s-maj=23.8km s-min=9.8km az=14.0*
*NEIC **12** 11:49:23.9±1.6, 64°.5N±0°.1×17°.8W±0°.2, h8km±5km, mb4.2/8, Error ellipse: s-maj=16.5km s-min=10.6km az=178.0*
ISC 12 11:49:22.9±0.5, 64°67N±0°.02×17°45W±0°.02, h10km, n79, σ2°28/84, mb3.8/17, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**16**	P	**Pg**	**11 49 24.6**	**-1.3**
	baz=6.9						
IVON	**Vonarskard**	**0.13**	**271**	P	**Pg**	**11 49 24.8**	**-1.2**
	baz=272						
IVON				S	**Sg**	**11 49 27.6**	**-0.6**
	baz=272						
IGRF	**Grimsfjall**	**0.28**	**163**	P	**Pg**	**11 49 27.0**	**-1.5**
	baz=168						
IKVE	**Kverkfjoll**	**0.33**	**89**	P	**Pg**	**11 49 27.8**	**-1.7**
	baz=88						
IKVE				S	**Sg**	**11 49 32.3**	**-1.6**
	baz=88						
IHUS	**Husbondi**	**0.39**	**193**	P	**Pg**	**11 49 29.1**	**-1.5**
	baz=197						
ISKR	**Skrokkalda**	**0.42**	**255**	P	**Pb**	**11 49 29.8**	**-2.6**
	baz=256						
ISKR				S	**Sb**	**11 49 36.1**	**-2.7**
	baz=256						
IVOT	**Vottur**	**0.42**	**164**	P	**Pg**	**11 49 29.6**	**-1.5**
	baz=167						
IVOT				S	**Sg**	**11 49 35.4**	**-1.2**
	baz=167						
IJOK	**Jokulheimar**	**0.49**	**224**	P	**Pb**	**11 49 31.2**	**-2.4**
	baz=226						
IMKO	**Mokollar**	**0.56**	**57**	P	**Pg**	**11 49 31.8**	**-2.0**
	baz=55						
IIEY	**Innrieyrar**	**0.65**	**207**	P	**Pg**	**11 49 33.5**	**-1.9**
	baz=209						
IIEY				S	**Sg**	**11 49 42.4**	**-1.5**
	baz=209						
IKSK	**Karasker**	**0.67**	**140**	P	**Pg**	**11 49 32.5**	**-3.2**
	baz=141						
ISVA	**Svartarkot**	**0.67**	**7**	P	**Pg**	**11 49 33.8**	**-2.1**
	baz=5.2						
ISVA				S	**Sg**	**11 49 42.9**	**-1.7**
	baz=5.2						
IKAL	**Kalfafell**	**0.73**	**188**	P	**Pg**	**11 49 34.6**	**-2.4**
	baz=190						
IVSH	**V-Sauoahnukur**	**0.75**	**79**	P	**Pg**	**11 49 34.6**	**-2.7**
	baz=78						
IVAT	**Vatnsfell**	**0.80**	**233**	P	**Pg**	**11 49 36.3**	**-2.0**
	baz=234						
IFAG	**Fagurholsmyri**	**0.87**	**156**	P	**Pg**	**11 49 36.7**	**-2.9**
	baz=157						
IFAG				S	**Sg**	**11 49 49.0**	**-2.0**
	baz=157						
IHVE	**Hveravellir**	**0.93**	**283**	P	**Pg**	**11 49 38.5**	**-2.3**
	baz=283						
IMEL	**Melhnausar**	**0.96**	**20**	P	**Pg**	**11 49 38.4**	**-2.9**
	baz=19						
IREN	**Reynihlio**	**1.01**	**13**	P	**Pg**	**11 49 39.2**	**-3.0**
	baz=12						
ISNB	**Snabyli**	**1.07**	**209**	P	**Pg**	**11 49 41.1**	**-2.3**
	baz=210						
IKVO	**Krokottuvotn**	**1.07**	**13**	P	**Pg**	**11 49 40.5**	**-3.0**
	baz=12						
IGRS	**Grimsstaoir**	**1.12**	**29**	P	**Pb**	**11 49 41.9**	**-2.4**
	baz=28						
ISLY	**Slysaalda**	**1.12**	**221**	P	**Pb**	**11 49 41.9**	**-2.4**
	baz=222						
IFED	**Fedgar**	**1.17**	**237**	P	**Pb**	**11 49 43.0**	**-2.2**
	baz=238						
IRJU	**Rjupnafell**	**1.19**	**207**	P	**Pb**	**11 49 43.1**	**-2.3**
	baz=208						
ISKI	**Skildingahlsh**	**1.22**	**8**	P	**Pn**	**11 49 42.7**	**-3.2**
	baz=7.3						
IMJO	**Mjoaskard**	**1.22**	**234**	P	**Pb**	**11 49 43.8**	**-2.3**
	baz=234						
IGHA	**Grjothals**	**1.22**	**15**	P	**Pn**	**11 49 43.0**	**-3.0**
	baz=14						
IGRA	**Granasstaoir**	**1.25**	**358**	P	**Pn**	**11 49 43.7**	**-2.7**
	baz=357						
IGYG	**Gygjarholskot**	**1.26**	**253**	P	**Pn**	**11 49 44.2**	**-2.3**
	baz=254						
IHAU	**Haukadalur**	**1.30**	**238**	P	**Pn**	**11 49 45.1**	**-1.9**
	baz=239						
IHVO	**Lagu-Hvolar**	**1.30**	**209**	P	**Pn**	**11 49 45.1**	**-2.0**
	baz=210						
IDIM	**Dimmadalss**	**1.31**	**9**	P	**Pn**	**11 49 44.2**	**-3.0**
	baz=8.4						
IHLA	**Hella**	**1.34**	**343**	P	**Pn**	**11 49 45.0**	**-2.5**
	baz=342						
IALF	**Alftagrof**	**1.41**	**214**	P	**Pb**	**11 49 47.0**	**-2.2**
	baz=214						
IHED	**Heoinshofoi**	**1.42**	**2**	P	**Pn**	**11 49 45.9**	**-2.7**
	baz=1.5						
IESK	**Eystri-Skogar**	**1.45**	**218**	P	**Pn**	**11 49 47.3**	**-1.8**
	baz=219						
ISAU	**Saurbar**	**1.46**	**243**	P	**Pn**	**11 49 47.0**	**-2.2**
	baz=244						
IBRE	**Brettingsstaoi**	**1.47**	**353**	P	**Pn**	**11 49 47.1**	**-2.2**
	baz=352						
IMID	**Miomork**	**1.48**	**227**	P	**Pb**	**11 49 48.0**	**-2.3**
	baz=228						
IGIL	**Gilhagi**	**1.48**	**18**	P	**Pn**	**11 49 47.5**	**-2.1**
	baz=17						
ISIG	**Siglufjorour**	**1.59**	**338**	P	**Pn**	**11 49 48.9**	**-2.1**
	baz=337						
IASM	**Asmuli**	**1.62**	**240**	P	**Pb**	**11 49 50.1**	**-2.6**
	baz=241						
BORG	**Borgarnes**	**1.67**	**274**	Pg	**Pb**	**11 49 50.8**	**-2.8**
	32nm,0.3s,baz=108,slow=7.7,SNR=56						
BORG				Lg	Lg	11 50 14.7	
	21nm,0.3s,baz=208,slow=22,SNR=7.2						
BORG	**Borgarnes**	**1.67**	**274**		**Pb**	**11 49 51.0**	**-2.6**
IKRO	**Krokur**	**1.70**	**252**	P	**Pn**	**11 49 51.1**	**-1.3**
	baz=252						
ISOL	**Solvholt**	**1.70**	**245**	P	**Pn**	**11 49 50.8**	**-1.7**
	baz=246						
IHEI	**Heioarbar**	**1.71**	**256**	P	**Pn**	**11 49 51.3**	**-1.4**
	baz=256						
IVME	**Vestmannaeyjar**	**1.77**	**226**	P	**Pb**	**11 49 52.8**	**-2.6**
	baz=227						
ILEI	**Leirhofn**	**1.79**	**12**	P	**Pn**	**11 49 51.6**	**-2.1**
	baz=12						
SCO	**Scoresbysund**	**6.08**	**346**		Pn	11 50 55.8	+3.2
SCO	**Scoresbysund**	**6.08**	**346**	*e*	**Pn**	**11 50 52.0**	**-0.7**
	baz=174,slow=6.2						
SCO				*i* P	Pn	11 50 55.7	+3.0
SCO				*i* S	**Sn**	**11 52 07.4**	**+5.2**
SCO				IAML		11 52 18.3	
	comp=Z,2.5nm,0.6s						
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn	**Pn**	**11 52 09.5**	**-0.8**
	baz=321,slow=13,SNR=6.3						
NOA	**NORSAR Array B**	**13.51**	**92**	Pn	**Pn**	**11 52 34.3**	**0.0**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.1						
HFS	**Hagfors**	**15.03**	**93**	Pn	**Pn**	**11 52 53.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=280,slow=13,SNR=1.3						
FINES	**FINESS Array B**	**19.68**	**79**	P	**Pn**	**11 53 55.8**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=282,slow=9.2,SNR=8.5						
CLL	**Collm**	**20.69**	**116**	*e*P	Pn	11 54 04.0	-1.0
GRF	**Grafenberg Arr**	**21.32**	**121**	*e*P	**P**	**11 54 10.1**	**+0.5**
	comp=Z,43nm,2.3s,baz=319,slow=11						
BRG	**Berggiesshubel**	**21.40**	**115**	*e*P	**P**	**11 54 10.7**	**+0.3**
	comp=Z,3.9nm,1.1s						
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**11 54 28.6**	**+1.7**
	comp=Z,1.0nm,0.9s,baz=307,slow=13,SNR=2.4						
MORC	**Moravsky Berou**	**23.68**	**112**	P	**P**	**11 54 35.7**	**+1.4**
MORC				IAmb	IAmb	11 54 43.6	
	comp=Z,4.6nm,1.2s						
BNI	**Bardonecchia**	**23.79**	**134**	P	**P**	**11 54 36.9**	**+1.4**
BNI				IAmb	IAmb	11 54 44.4	
	comp=Z,17nm,1.5s						
PSZ	**Piszkesteto**	**26.10**	**112**	P	**P**	**11 54 58.0**	**+1.5**
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**11 54 59.4**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=351,slow=10,SNR=6.1						
AKASG	**Malin Array Be**	**27.82**	**98**	P	**P**	**11 55 14.3**	**+2.4**
	comp=Z,0.5nm,0.4s,baz=311,slow=9.1,SNR=1.5						
BRTR	**Keskin Array B**	**38.46**	**105**	P	**P**	**11 56 47.1**	**+2.4**
	comp=Z,1.4nm,0.8s,baz=344,slow=7.4,SNR=3.8						
KBZ	**Khabaz**	**39.09**	**92**	P	**P**	**11 56 51.4**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=232,slow=20						
INK	**Inuvik**	**39.85**	**329**	P	**P**	**11 56 58.0**	**+2.2**
	comp=Z,1.3nm,1.0s,baz=96,slow=10,SNR=3.1						
TIXI	**Tiksi**	**42.02**	**15**	P	P	11 57 17.2	+3.6
TIXI				IAmb	IAmb	11 57 23.5	
	comp=Z,3.5nm,1.1s						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**11 57 45.2**	**+2.0**
	comp=Z,1.3nm,1.0s,baz=31,slow=6.7,SNR=7.6						
ILAR				PcP	**PP**	**11 59 23.5**	**-6.2**
	comp=Z,0.4nm,0.9s,baz=6.4,slow=2.3,SNR=4.2						
KURK	**Kurchatov**	**48.09**	**58**	P	**P**	**11 58 04.5**	**+2.4**
KURK				IAmb	IAmb	11 58 17.1	
	comp=Z,4.4nm,1.4s						
KURBB	**Kurchatov Arra**	**48.13**	**58**	P	**P**	**11 58 03.0**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=324,slow=7.3,SNR=8.9						
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P	**P**	**11 58 40.9**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=342,slow=8.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P	**P**	**11 58 41.2**	**+0.6**
PD31	**Pinedale Array**	**53.19**	**293**	P	**P**	**11 58 42.5**	**+1.5**
PD31				IAmb	IAmb	11 58 44.4	
	comp=Z,3.1nm,1.1s						
PDAR	**Pinedale Array**	**53.19**	**293**	P	**P**	**11 58 43.0**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=57,slow=5.4,SNR=12						
PDAR	**Pinedale Array**	**53.19**	**293**	P	**P**	**11 58 42.5**	**+1.5**
TXAR	**Lajitas Array**	**62.30**	**280**	P	P	11 59 48.1	+3.0
	comp=Z,1.2nm,1.0s,baz=46,slow=7.7,SNR=2.8						
TXAR	**Lajitas Array**	**62.30**	**280**	P	**P**	**11 59 46.9**	**+1.8**

*DJA **12** 11:50:26.3±0.2, 8°S±2°×12°9E±°, h162km±6km, M4.4/13, mB5.0/7, mb4.5/12, MLv4.4/13, Mw(mB)4.3/7*
*NEIC **12** 11:50:27.1±2.3, 7°.37S±0°.08×128°.62E±0°.07, h148km±2km, mb4.3/16, Error ellipse: s-maj=11.2km s-min=9.1km az=160.0*
*IDC **12** 11:50:27.9±1.9, 7°.38S×128°.65E, h156km±17km, mb3.8/12, mb1 3.9/15, mb1mx3.6/50, mbtmp4.2/15, MS3.2/3, Ms1 3.2/3, ms1mx2.7/46, Error ellipse: s-maj=19.1km s-min=10.9km az=76.0*
ISC 12 11:50:26.8±0.4, 7°.45S±0°.05×128°.61E±0°.05, h150km, n72, σ1°83/77, mb4.2/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.72**	**101**	P	**Pn**	**11 51 10.7**	**+0.1**
SAUI				S	**Sn**	**11 51 46.3**	**+1.8**
SAUI	**Saumlaki**	**2.72**	**101**		**Pn**	**11 51 11.5**	**+0.9**
SAUI				Sn	**Sn**	**11 51 45.0**	**+0.5**
BNDI	**Bandanaira**	**3.18**	**24**	P	**Pn**	**11 51 14.9**	**-1.5**
AAI	**Ambon**	**3.76**	**354**	P	**Pn**	**11 51 25.9**	**+2.0**
NLAI	**Namlea**	**4.44**	**340**	P	**Pn**	**11 51 35.0**	**+2.2**
SOEI	**Soe**	**4.87**	**242**	P	**Pn**	**11 51 39.7**	**+1.2**
SOEI	**Soe**	**4.87**	**242**		**Pn**	**11 51 40.4**	**+1.9**
SOEI				Sn	**Sn**	**11 52 34.1**	**-0.4**
BATI	**Baumata**	**5.60**	**240**	P	**Pn**	**11 51 50.1**	**+1.9**
	172nm,0.3s,baz=97,slow=3.0,SNR=81						
BATI				S	**Sn**	**11 52 52.1**	**+0.3**
	106nm,0.3s,baz=88,slow=22,SNR=16						
BATI	**Baumata**	**5.60**	**240**	P	**Pn**	**11 51 47.1**	**-1.1**
	1.4nm5µm375nm,0.5s						
FAKI	**Fak Fak**	**5.78**	**39**	P	**Pn**	**11 51 47.3**	**-3.3**
	3.3nm882nm38nm,0.6s						
FAKI	**Fak Fak**	**5.78**	**39**	Pn	**Pn**	**11 51 49.2**	**-1.4**
MTN	**Manton Dam**	**5.91**	**155**		**Pn**	**11 51 52.3**	**0.0**
MMRI	**Maumere**	**6.42**	**259**	P	**Pn**	**11 51 58.3**	**-0.8**
	0.2nm44nm,0.5s						
MMRI	**Maumere**	**6.42**	**259**		**Pn**	**11 52 00.8**	**+1.7**
EDFI	**Ende, Flores**	**6.97**	**259**	P	**Pn**	**11 52 06.7**	**+0.2**
	0.1nm9.5nm,0.4s						
SIJI	**Sorong**	**7.05**	**22**	P	**Pn**	**11 52 07.8**	**+0.3**
	3.6nm,0.3s,baz=240,slow=24,SNR=29						
SIJI				S	**Sn**	**11 53 23.8**	**-2.8**
	4.9nm,0.3s,baz=82,slow=22,SNR=10						
KNRA	**Kununurra**	**8.18**	**179**		**Pn**	**11 52 22.2**	**-0.5**
BASI	**Baing, Sumba**	**8.40**	**250**	P	**Pn**	**11 52 21.2**	**-4.3**
	1µm61nm,0.4s						
KAPI	**Kappang**	**9.13**	**285**	P	**Pn**	**11 52 37.1**	**+1.9**
	0.4nm,0.3s,baz=105,slow=12,SNR=2.1						
WBSI	**Waikabubak, Su**	**9.37**	**256**	P	**Pn**	**11 52 38.9**	**+0.4**
	842nm69nm,0.6s						
SRPI	**Serui, Papua**	**9.41**	**54**	P	**Pn**	**11 52 40.3**	**+1.3**
BAKI	**Biak**	**9.72**	**51**	P	**Pn**	**11 52 43.2**	**+0.1**
	77nm,0.7s						
PLAI	**Plampang**	**10.81**	**262**	P	**Pn**	**11 52 55.8**	**-1.7**
	44nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.97**	**195**	P	**Pn**	**11 52 57.3**	**-2.4**
	1.1nm,0.3s,baz=2.3,slow=10.0,SNR=58						
FITZ				S	Sn	11 54 50.2	-11
	1.3nm,0.3s,baz=11,slow=12,SNR=2.1						
FITZ	**Fitzroy Crossi**	**10.97**	**195**		**Pn**	**11 52 58.7**	**-1.0**
WB0	**Warramunga Arr**	**13.47**	**156**		**Pn**	**11 53 29.4**	**-2.7**
WRAB	**Tennant Creek**	**13.61**	**156**		**Pn**	**11 53 31.2**	**-2.6**
WRA	**Warramunga Arr**	**13.61**	**156**	P	**Pn**	**11 53 30.8**	**-3.1**
	3.5nm,0.3s,baz=337,slow=9.8,SNR=122						
WRA				S	Sn	11 55 52.8	-12
	3.8nm,0.3s,baz=338,slow=21,SNR=10						
WRA				LR	LR	11 59 32.9	
	comp=Z,47nm,21.4s,baz=235,slow=40						
WRA	**Warramunga Arr**	**13.61**	**156**		**Pn**	**11 53 31.1**	**-2.7**
WB2	**Warramunga Arr**	**13.62**	**156**		**Pn**	**11 53 31.8**	**-2.1**
WR0	**Warramunga Arr**	**13.71**	**156**		**Pn**	**11 53 32.1**	**-2.9**
PSA00	**Pilbara Seismi**	**16.39**	**210**	P	**P**	**11 54 10.1**	**+1.7**
PSA00				IAmb	IAmb	11 54 24.4	
	comp=Z,26nm,1.4s						
AS31	**Alice Springs**	**16.91**	**163**		**P**	**11 54 14.2**	**0.0**
ASAR	**Alice Springs**	**16.91**	**163**	P	**Pn**	**11 54 15.2**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=336,slow=10,SNR=89						
ASAR				S	**S**	**11 57 13.8**	**-8.9**
	comp=Z,1.5nm,0.3s,baz=319,slow=18,SNR=9.1						
ASAR	**Alice Springs**	**16.91**	**163**		**Pn**	**11 54 16.1**	**+1.4**
CTA	**Charters Tower**	**21.22**	**128**	P	**P**	**11 55 03.0**	**+2.1**
	comp=Z,2.2nm,0.7s,baz=295,slow=14,SNR=1.7						
BBOO	**Buckleboo**	**26.17**	**166**	P	**P**	**11 55 48.1**	**+0.8**
BBOO				IAmb	IAmb	11 55 48.8	
	comp=Z,10nm,0.6s						
STKA	**Stephens Creek**	**27.16**	**155**	P	**P**	**11 55 56.6**	**+0.5**
	comp=Z,3.9nm,0.6s,baz=324,slow=11,SNR=9.6						
STKA	**Stephens Creek**	**27.16**	**155**	P	**P**	**11 55 56.9**	**+0.7**
NWAO	**Narrogin (SRO)**	**27.46**	**201**	P	**P**	**11 55 59.8**	**+0.9**
	comp=Z,3.9nm,0.4s,baz=57,slow=8.7,SNR=7.0						
NWAO	**Narrogin (SRO)**	**27.46**	**201**	P	**P**	**11 56 00.1**	**+1.2**
CAN	**Canberra**	**33.47**	**149**	P	**P**	**11 56 53.7**	**+2.0**
CAN				IAmb	IAmb	11 57 15.5	
	comp=Z,15nm,1.2s						
TOO	**Toolangi**	**33.68**	**155**	P	**P**	**11 56 56.1**	**+2.6**
TOO				IAmb	IAmb	11 57 09.7	
	comp=Z,11nm,1.3s						
CMAR	**Chiang Mai Arr**	**38.98**	**312**	P	**P**	**11 57 39.4**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=140,slow=6.4,SNR=4.5						
CMAR				PcP	**PcP**	**11 59 47.5**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=160,slow=2.9,SNR=4.2						
JWT	**Wachi**	**42.98**	**8**	P	**P**	**11 58 10.8**	**-0.3**
USA0B	**Ussuriysk Arra**	**51.49**	**3**	P	**P**	**11 59 15.6**	**-1.2**
USRK	**Ussuriysk Ar.**	**51.49**	**3**	P	**P**	**11 59 15.1**	**-1.8**
	comp=Z,2.7nm,0.8s,baz=186,slow=7.6,SNR=4.2						
SONM	**Songino Array**	**58.44**	**343**	P	**P**	**12 00 07.1**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=157,slow=7.1,SNR=6.0						
PETK	**Petropavlovsk-**	**65.18**	**19**	P	**P**	**12 00 52.1**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=169,slow=3.5,SNR=14						
PETK	**Petropavlovsk-**	**65.18**	**19**	P	**P**	**12 00 52.0**	**+0.3**
MK31	**Makanchi Array**	**67.85**	**328**	P	**P**	**12 01 09.3**	**+0.5**
MK31				IAmb	IAmb	12 01 10.1	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**67.85**	**328**	P	**P**	**12 01 09.2**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=110,slow=8.7,SNR=25						
MKAR	**Makanchi Array**	**67.85**	**328**	P	**P**	**12 01 09.1**	**+0.2**
MAKZ	**Makanchi**	**68.03**	**327**	P	**P**	**12 01 10.0**	**+0.1**
MAKZ				IAmb	IAmb	12 01 18.4	
	comp=Z,6.8nm,1.4s						
BOOM	**Boomskoye usch**	**69.01**	**321**	P	**P**	**12 01 17.4**	**+1.1**
ZALV	**Zalesovo Beam**	**71.38**	**334**	P	**P**	**12 01 29.7**	**-0.5**
	comp=Z,2.7nm,0.5s,baz=136,slow=5.4,SNR=12						
ZALV	**Zalesovo Beam**	**71.38**	**334**	P	**P**	**12 01 29.8**	**-0.4**
KURBB	**Kurchatov Arra**	**72.17**	**329**	P	**P**	**12 01 35.2**	**+0.2**
	comp=Z,2.8nm,0.5s,baz=128,slow=5.0,SNR=56						
VNDA	**Vanda**	**72.18**	**173**	P	**P**	**12 01 35.2**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=316,slow=7.5,SNR=11						
VNDA	**Vanda**	**72.18**	**173**	P	**P**	**12 01 35.6**	**+0.9**
KURK	**Kurchatov**	**72.18**	**329**	P	**P**	**12 01 35.5**	**+0.4**
KURK				IAmb	IAmb	12 01 37.7	
	comp=Z,3.5nm,0.5s						
KKAR	**Karatay Array**	**72.77**	**319**	P	**P**	**12 01 40.3**	**+1.4**
ABKAR	**Akbulak array**	**82.00**	**322**	P	**P**	**12 02 29.9**	**-0.1**
ABKAR				IAmb	IAmb	12 02 30.7	
	comp=Z,1.9nm,0.6s						
QSPA	**South Pole Qui**	**82.53**	**180**	P	**P**	**12 02 33.3**	**+0.6**
QSPA				IAmb	IAmb	12 02 33.5	
	comp=Z,2.5nm,0.7s						
GNI	**Garni**	**90.08**	**310**	LR	LR	12 51 49.7	
	comp=Z,22nm,19.7s,baz=12,slow=41						
ILAR	**Eielson Array**	**94.34**	**25**	P	**P**	**12 03 27.7**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=252,slow=5.1,SNR=2.4						
OBN	**Obninsk**	**97.22**	**325**	LR	LR	12 52 30.3	
	comp=Z,16nm,18.1s,baz=209,slow=38						
TORD	**Torodi Ar. Bea**	**127.54**	**281**	PKP	**PKPdf**	**12 09 15.6**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=87,slow=4.1,SNR=18						
CPUP	**Villa Florida**	**145.93**	**170**	PKPbc	**PKPdf**	**12 09 48.6**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=191,slow=4.1,SNR=5.9						
CPUP	**Villa Florida**	**145.93**	**170**		**PKPab**	**12 09 50.4**	**+0.3**
LPAZ	**La Paz**	**151.18**	**145**	PKPbc	**PKiKP**	**12 10 04.8**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=310,slow=4.4,SNR=7.4						
LPAZ	**La Paz**	**151.18**	**145**		**PKiKP**	**12 10 05.6**	**+1.0**

*IDC **12** 11:59:25.1±1.1, 34°.71N×81°.18E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.4/66, mbtmp3.5/7, ML2.8/3, Error ellipse: s-maj=38.1km s-min=20.7km az=54.0*
ISC 12 11:59:26.6±1.0, 34°.7N±0°.1×81°.2E±0°.2, h10km, n8, σ1°19/8, mb3.5/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.08**	**4**	Pn	**Pn**	**12 02 20.0**	**+1.2**
	0.2nm,0.3s,baz=188,slow=14,SNR=4.9						
KURBB	**Kurchatov Arra**	**16.00**	**354**	Pn	**Pn**	**12 03 10.4**	**-1.2**
	0.0nm,0.3s,baz=173,slow=11,SNR=2.9						
ZALV	**Zalesovo Beam**	**19.39**	**7**	P	**P**	**12 03 51.5**	**-0.9**
	0.1nm,0.3s,baz=202,slow=11,SNR=1.5						
CMAR	**Chiang Mai Arr**	**22.65**	**131**	P	**P**	**12 04 27.4**	**-0.6**
	1.2nm,0.7s,baz=317,slow=8.7,SNR=9.8						
KVAR	**Kislovodsk Arr**	**30.90**	**299**	P	**P**	**12 05 42.7**	**-0.7**
	3.6nm,0.4s,baz=87,slow=3.1,SNR=2.2				

0.4nm,0.8s,baz=256,slow=3.6,SNR=2.5
MKAR Makanchi Array 93.43 317 P P 12 13 14.6 -1.1
0.3nm,0.6s,baz=94,slow=6.7,SNR=2.7

IDC 12 12:06:42.6±2.1, 1°.38N × 127°.35E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/45, mbtmp3.7/3, Error ellipse: s-maj=172.7km s-min=23.9km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.27**	**162**	P	P	12 11 41.0	-0.5
	1.3nm,0.7s,baz=341,slow=12,SNR=33						
ASAR	**Alice Springs**	**25.70**	**166**	P	P	12 12 15.1	+0.4
	0.6nm,0.3s,baz=347,slow=11,SNR=12						
MKAR	**Makanchi Array**	**59.83**	**326**	P	P	12 16 49.9	-0.1
	0.4nm,0.3s,baz=120,slow=7.7,SNR=11						

ROM 12 12:07:13.8±0.3, 36°.32N±0°.02 × 14°.25E±0°.02, h10km, ML3.1/3, Error ellipse: s-maj=2.7km s-min=1.2km az=332.0, Sicily

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMDC	**Modica**	**0.77**	**34**	P	Pg	12 07 28.1	-0.5
HMDC				S	Sb	12 07 39.5	-0.1
HMDC				AML	AML		
	comp=N,3025μm,0.6s						
HMDC				AML	AML		
	comp=E,2315μm,1.2s						
HPAC	**Pachino**	**0.79**	**61**	P	Pg	12 07 28.5	-0.5
HPAC				AML	AML		
	comp=N,1770μm,1.4s						
HPAC				AML	AML		
	comp=E,2165μm,0.3s						
CLTA	**Licata**	**0.87**	**344**	P	Pb	12 07 30.8	-0.1
CLTA				AML	AML		
	comp=E,598μm,1.3s						
CLTA				AML	AML		
	comp=N,1114μm,0.8s						
CLTA				AML	AML		
	comp=N,1114μm,0.8s						
CLTA				AML	AML		
	comp=E,598μm,1.3s						
HAVL	**Avola**	**0.95**	**47**	P	Pg	12 07 31.2	-0.8
HAVL				S	Sb	12 07 44.9	0.0
HAVL				AML	AML		
	comp=N,1495μm,0.3s						
HAVL				AML	AML		
	comp=E,1500μm,1.3s						
HAVL				AML	AML		
	comp=N,1500μm,0.3s						
FAVR	**Favara**	**1.05**	**334**	P	Pg	12 07 33.3	-0.7
HLNI	**Lentini**	**1.14**	**26**	P	Pb	12 07 34.1	-1.4
HLNI				AML	AML		
	comp=N,1170μm,0.9s						
HLNI				AML	AML		
	comp=E,1375μm,0.2s						
HAGA	**Augusta**	**1.20**	**37**	P	Pn	12 07 35.3	-1.3
HAGA				S	Sb	12 07 52.2	0.0
ESML	**S. M. di Licod**	**1.39**	**21**	P	Pn	12 07 38.7	-0.4
ESML				AML	AML		
	comp=E,474μm,1.4s						
ESML				AML	AML		
	comp=N,472μm,1.5s						
GALF	**Gagliano Caste**	**1.41**	**10**	P	Pn	12 07 39.4	-0.1
GALF				AML	AML		
	comp=N,472μm,0.7s						
GALF				AML	AML		
	comp=E,450μm,0.6s						
MNO	**Monte Soro**	**1.65**	**12**	P	Pn	12 07 43.2	+0.3
MNO				AML	AML		
	comp=N,340μm,0.5s						
MNO				AML	AML		
	comp=E,292μm,1.4s						
GIB	**Gibilmanna**	**1.68**	**354**	P	Pn	12 07 43.5	+0.3
GIB				AML	AML		
	comp=E,342μm,1.4s						
GIB				AML	AML		
	comp=N,388μm,1.4s						
MSFR	**San Fratello**	**1.73**	**9**	P	Pn	12 07 44.1	+0.2
MUCR	**Ucria**	**1.79**	**16**	P	Pn	12 07 45.0	+0.3
MUCR				AML	AML		
	comp=E,238μm,0.4s						
MUCR				AML	AML		
	comp=N,193μm,0.7s						
MCSR	**Castroreale**	**1.91**	**24**	AML	AML		
	comp=E,324μm,0.3s						
MCSR				AML	AML		
	comp=N,379μm,0.3s						
T0721	**Laino Castello**	**3.86**	**20**	AML	AML		
	comp=N,180μm,1.6s						
T0721				AML	AML		
	comp=E,185μm,1.6s						

*REY **12** 12:38:46.3, 64°.67N × 17°.47W, h3km*
*IDC **12** 12:38:47.6±0.8, 64°.58N × 17°.63W, h0km, mb3.7/9, mb1 4.0/11, mb1mx3.7/55, mbtmp3.8/11, ML3.5/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/47, Error ellipse: s-maj=23.5km s-min=11.3km az=16.0*
*NEIC **12** 12:38:48.4±0.5, 64°.55N±0°.06 × 17°.8W±0°.2, h7km±5km, mb4.3/9, Error ellipse: s-maj=11.9km s-min=7.4km az=65.0*
ISC 12 12:38:47.6±0.5, 64°.66N±0°.02 × 17°.51W±0°.02, h10km, n87, σ2s26/91, mb4.0/15, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.10**	**276**	P	**Pg**	**12 38 48.9**	**-1.5**
	baz=271						
IDYN	**Dyngjuhals**	**0.14**	**26**	P	**Pg**	**12 38 49.3**	**-1.7**
	baz=20						
IGRF	**Grimsfjall**	**0.28**	**157**	P	**Pb**	**12 38 52.4**	**-2.4**
	baz=162						
IKVE	**Kverkfjoll**	**0.36**	**87**	P	**Pg**	**12 38 52.9**	**-1.9**
	baz=88						
IKVE				S	**Sg**	**12 38 58.0**	**-1.5**
	baz=88						
IHUS	**Husbondi**	**0.37**	**190**	P	**Pb**	**12 38 53.7**	**-2.7**
	baz=192						
ISKR	**Skrokkalda**	**0.39**	**255**	P	**Pb**	**12 38 53.9**	**-2.8**
	baz=255						
ISKR				S	**Sb**	**12 38 60.0**	**-2.8**
	baz=255						
IVOT	**Vottur**	**0.42**	**160**	P	**Pb**	**12 38 54.4**	**-2.8**
	baz=163						
THOR	**Thorvaldshraun**	**0.45**	**52**	P	**Pg**	**12 38 54.3**	**-2.1**
	baz=52						
THOR				S	**Sg**	**12 39 00.6**	**-1.7**
	baz=52						
IJOK	**Jokulheimar**	**0.47**	**222**	P	**Pb**	**12 38 55.5**	**-2.4**
	baz=223						
IJOK				S	**Sb**	**12 39 02.3**	**-2.6**
	baz=223						
IMKO	**Mokollar**	**0.59**	**57**	P	**Pg**	**12 38 56.7**	**-2.4**
	baz=57						
IMKO				S	**Sg**	**12 39 05.1**	**-1.8**
	baz=57						
IIEY	**Innrieyrar**	**0.63**	**205**	P	**Pg**	**12 38 57.8**	**-2.0**
	baz=206						
IIEY				S	**Sb**	**12 39 07.1**	**-2.5**
	baz=206						
IKSK	**Karasker**	**0.68**	**138**	P	**Pg**	**12 38 57.8**	**-2.9**
	baz=139						
ISVA	**Svartarkot**	**0.69**	**9**	P	**Pg**	**12 38 58.5**	**-2.3**
	baz=7.7						
ISVA				S	**Sg**	**12 39 07.9**	**-2.0**
	baz=7.7						
IKAL	**Kalfafell**	**0.72**	**186**	P	**Pg**	**12 38 59.5**	**-2.0**
	baz=188						
IVAT	**Vatnsfell**	**0.78**	**233**	P	**Pb**	**12 39 01.1**	**-2.1**
	baz=233						
IVSH	**V-Sauoahnukur**	**0.78**	**78**	S	**Sg**	**12 39 10.7**	**-2.1**
	baz=79						
IVSH				P	**Pg**	**12 38 59.5**	**-3.1**
	baz=79						
IFAG	**Fagurholsmyri**	**0.88**	**154**	P	**Pg**	**12 39 01.8**	**-2.6**
	baz=156						
IHVE	**Hveravellir**	**0.91**	**284**	P	**Pg**	**12 39 02.3**	**-2.7**
	baz=284						
IMEL	**Melhnausar**	**0.98**	**21**	P	**Pg**	**12 39 03.1**	**-3.3**
	baz=20						
IREN	**Reynihlio**	**1.02**	**14**	P	**Pg**	**12 39 04.0**	**-3.2**
	baz=13						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ISNB	**Snabyli**	**1.05**	**208**	P	**Pg**	**12 39 05.3**	**-2.5**
	baz=209						
ISNB				S	**Sb**	**12 39 19.3**	**-2.4**
	baz=209						
IKVO	**Krokottuvotn**	**1.09**	**14**	P	**Pg**	**12 39 05.1**	**-3.5**
	baz=13						
ISLY	**Slysaalda**	**1.10**	**221**	P	**Pn**	**12 39 06.9**	**-2.2**
	baz=221						
IGRS	**Grimsstaoir**	**1.14**	**30**	P	**Pb**	**12 39 06.8**	**-2.6**
	baz=30						
IFED	**Fedgar**	**1.14**	**237**	P	**Pn**	**12 39 07.4**	**-2.3**
	baz=237						
IRJU	**Rjupnafell**	**1.17**	**206**	P	**Pb**	**12 39 07.5**	**-2.3**
	baz=207						
IMJO	**Mjoaskard**	**1.19**	**233**	P	**Pb**	**12 39 08.0**	**-2.4**
	baz=233						
IGYG	**Gygjarholskot**	**1.23**	**253**	P	**Pb**	**12 39 08.7**	**-2.3**
	baz=253						
IGHA	**Grjothals**	**1.24**	**16**	P	**Pn**	**12 39 07.3**	**-3.6**
	baz=16						
IGRA	**Granastaoir**	**1.26**	**359**	P	**Pn**	**12 39 08.0**	**-3.3**
	baz=358						
IHAU	**Haukadalur**	**1.28**	**238**	P	**Pg**	**12 39 09.6**	**-2.5**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.28**	**208**	P	**Pn**	**12 39 09.2**	**-2.4**
	baz=208						
IDIM	**Dimmadalss**	**1.33**	**10**	P	**Pn**	**12 39 08.9**	**-3.3**
	baz=9.6						
IHLA	**Hella**	**1.34**	**344**	P	**Pn**	**12 39 09.6**	**-2.7**
	baz=344						
IALF	**Alftagrof**	**1.39**	**213**	P	**Pb**	**12 39 11.1**	**-2.5**
	baz=213						
IESK	**Eystri-Skogar**	**1.43**	**218**	P	**Pb**	**12 39 11.7**	**-2.5**
	baz=218						
IHED	**Heoinshofoi**	**1.43**	**3**	P	**Pn**	**12 39 10.9**	**-2.7**
	baz=2.6						
ISAU	**Saurbar**	**1.43**	**243**	P	**Pn**	**12 39 11.0**	**-2.6**
	baz=243						
IMID	**Miomork**	**1.45**	**227**	P	**Pb**	**12 39 12.3**	**-2.3**
	baz=227						
IBRE	**Brettingsstaoi**	**1.48**	**354**	P	**Pn**	**12 39 11.4**	**-2.8**
	baz=353						
IGIL	**Gilhagi**	**1.50**	**18**	P	**Pn**	**12 39 11.3**	**-3.2**
	baz=18						
ISIG	**Siglufjorour**	**1.59**	**339**	P	**Pn**	**12 39 13.1**	**-2.6**
	baz=338						
IASM	**Asmuli**	**1.59**	**240**	P	**Pb**	**12 39 14.4**	**-2.6**
	baz=240						
BORG	**Borgarnes**	**1.64**	**275**	Pg	**Pn**	**12 39 14.7**	**-1.8**
	22nm,0.3s,baz=101,slow=14,SNR=52						
BORG				Lg	Lg	12 39 39.4	
	10nm,0.3s,baz=95,slow=11,SNR=4.3						
BORG	**Borgarnes**	**1.64**	**275**		**Pn**	**12 39 14.2**	**-2.3**
IKRO	**Krokur**	**1.67**	**252**	P	**Pn**	**12 39 15.2**	**-1.6**
	baz=252						
ISOL	**Solvholt**	**1.67**	**245**	P	**Pb**	**12 39 15.4**	**-3.0**
	baz=245						
IHEI	**Heioarbar**	**1.68**	**256**	P	**Pn**	**12 39 15.4**	**-1.6**
	baz=256						
ILEI	**Leirhofn**	**1.80**	**13**	P	**Pn**	**12 39 16.2**	**-2.4**
	baz=13						
SCO	**Scoresbysund**	**6.09**	**346**		**Pn**	**12 40 17.9**	**+0.5**
SCO				Sn	**Sn**	**12 41 30.4**	**+3.4**
SCO	**Scoresbysund**	**6.09**	**346**	*e*	**Pn**	**12 40 15.1**	**-2.4**
	baz=173,slow=7.9						
SCO				*i* P	**Pn**	**12 40 18.0**	**+0.5**
SCO				*i* S	Sn	12 41 33.7	+6.6
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**12 41 36.3**	**+1.1**
	baz=326,slow=13,SNR=5.9						
ESK	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**12 41 36.4**	**+1.2**
FINES	**FINESS Array B**	**19.71**	**79**	P	**Pn**	**12 43 19.8**	**+1.6**
	0.1nm,0.3s,baz=290,slow=8.3,SNR=2.6						
CLL	**Collm**	**20.71**	**116**	*e*P	Pn	12 43 29.0	-1.0
	comp=Z,9.0nm,1.3s						
CLL				*e*		12 43 37.0	
BRG	**Berggiesshubel**	**21.42**	**115**	*e*P	**P**	**12 43 36.6**	**+1.3**
	comp=Z,13nm,1.3s						
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P	**P**	**12 43 51.9**	**+3.0**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**12 43 52.2**	**+2.4**
GERES	**GERESS Array B**	**22.96**	**119**	P	**P**	**12 43 53.5**	**+1.6**
	comp=Z,1.2nm,0.9s,baz=328,slow=9.5,SNR=5.0						
GERES	**GERESS Array B**	**22.96**	**119**	P	**P**	**12 43 53.8**	**+1.9**
OJC	**Ojcow**	**24.27**	**109**	P	**P**	**12 44 06.3**	**+1.7**
OJC				IAmb	IAmb	12 44 35.8	
	comp=Z,12nm,1.4s						
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**12 44 24.0**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=345,slow=9.7,SNR=4.4						
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**12 44 23.4**	**+0.7**
RES	**Resolute Bay**	**26.47**	**324**	LR	LR	12 55 54.1	
	comp=Z,44nm,18.3s,baz=139,slow=39						
BURAR	**Bucovina Array**	**28.53**	**106**	P	**P**	**12 44 44.1**	**+1.0**
INK	**Inuvik**	**39.84**	**329**	P	**P**	**12 46 22.6**	**+2.1**
	comp=Z,1.7nm,1.0s,baz=28,slow=7.7,SNR=3.6						
TIXI	**Tiksi**	**42.04**	**15**	P	P	12 46 41.1	+2.6
TIXI				IAmb	IAmb	12 46 42.9	
	comp=Z,6.7nm,1.1s						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**12 47 10.3**	**+2.3**
	comp=Z,1.6nm,1.1s,baz=25,slow=6.6,SNR=10						
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**12 47 10.0**	**+2.1**
IMAR	**Indian Mountai**	**45.86**	**337**	P	P	12 47 12.1	+2.8
BCAR	**Beaver Creek A**	**46.11**	**329**	P	P	12 47 13.9	+2.5
ZALV	**Zalesovo Beam**	**47.64**	**51**	P	**P**	**12 47 25.1**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=308,slow=7.1,SNR=1.9						
KURK	**Kurchatov**	**48.12**	**58**	P	**P**	**12 47 28.4**	**+1.4**
KURK				IAmb	IAmb	12 47 29.1	
	comp=Z,4.1nm,1.0s						
KKAR	**Karatay Array**	**51.28**	**70**	P	**P**	**12 47 53.6**	**+2.3**
BOZ	**Bozeman (W)**	**51.60**	**297**	P	**P**	**12 47 54.1**	**+0.3**
BOZ				IAmb	IAmb	12 47 57.6	
	comp=Z,4.2nm,1.1s						
MKAR	**Makanchi Array**	**52.73**	**58**	P	**P**	**12 48 03.1**	**+1.0**
	comp=Z,1.2nm,1.0s,baz=312,slow=7.7,SNR=4.0						
MKAR	**Makanchi Array**	**52.73**	**58**	P	**P**	**12 48 02.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P	**P**	**12 48 06.1**	**+0.8**
	comp=Z,1.3nm,0.9s,baz=342,slow=8.7,SNR=4.6						
TORD	**Torodi Ar. Bea**	**53.14**	**156**	IAmb	IAmb	12 48 07.2	
	comp=Z,1.6nm,1.2s						
BW06	**Boulder Array**	**53.17**	**293**	P	**P**	**12 48 06.3**	**+0.7**
BW06				IAmb	IAmb	12 48 07.8	
	comp=Z,2.7nm,0.9s						
PD31	**Pinedale Array**	**53.17**	**293**	P	**P**	**12 48 06.3**	**+0.7**
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**12 48 06.8**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=65,slow=6.8,SNR=9.9						
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**12 48 06.3**	**+0.7**
PV13	**Radium Mtn., P**	**56.79**	**290**	P	**P**	**12 48 33.3**	**+1.4**
NVAR	**Mina Array Bea**	**60.30**	**297**	P	P	12 48 58.8	+2.5
	comp=Z,0.2nm,0.4s,baz=54,slow=4.7,SNR=3.9						
NVAR	**Mina Array Bea**	**60.30**	**297**	P	**P**	**12 48 57.2**	**+0.9**
ASAR	**Alice Springs**	**134.97**	**38**	PKP	**PKiKP**	**12 58 08.0**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=332,slow=3.0,SNR=4.8						

*IDC **12** 12:41:02.0±1.7, 1°.02N × 97°.17E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.8/51, mbtmp4.0/10, Error ellipse: s-maj=57.6km s-min=19.1km az=62.0*
*NEIC **12** 12:41:03.9±1.7, 0°.94N±0°.08 × 97°.07E±0°.06, h21km±7km, mb4.2/8, Error ellipse: s-maj=12.7km s-min=7.6km az=149.0*
*DJA **12** 12:41:05.4±1.3, 1°N±4° × 97°E±°, h22km±6km, M4.2/8, mB4.7/1, mb4.6/2, MLv4.0/8, Mw(mB)3.9/1*
ISC 12 12:41:05.2±0.7, 1°.07N±0°.06 × 97°.16E±0°.08, h25km, n45, σ1s23/42, mb4.2/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.47**	**60**	P	**Pn**	**12 41 16.4**	**0.0**
GSI				S	**Sn**	**12 41 24.2**	**+0.3**
GSI	**Gunungsitoli**	**0.47**	**60**		**Pn**	**12 41 16.3**	**0.0**
TPTI		**2.18**	**0**	P	**Pn**	**12 41 39.3**	**-0.5**
TPTI				S	**Sn**	**12 42 04.7**	**-1.3**
RPSI	**Rantau Prapat**	**2.39**	**47**		**Pn**	**12 41 43.5**	**+0.8**
MNSI	**Mandailing Nat**	**2.43**	**96**	P	**Pn**	**12 41 43.7**	**+0.4**
KCSI	**Kotacane, Aceh**	**2.51**	**14**	P	**Pn**	**12 41 44.6**	**+0.1**
TSI	**Tuntungan**	**2.79**	**30**	P	**Pn**	**12 41 50.1**	**+1.8**
SISI	**Saibi**	**3.06**	**141**	P	**Pn**	**12 41 53.7**	**+1.7**
LHMI	**Lhok Sumawe**	**4.14**	**357**	P	**Pn**	**12 42 06.1**	**-0.7**
IPM	**Ipoh**	**5.13**	**49**		**Pn**	**12 42 21.8**	**+1.3**
KULM	**Kulim**	**5.45**	**40**		**Pn**	**12 42 25.7**	**+0.8**
MYKOM	**Kota Tinggi**	**6.72**	**84**	Pn	**Pn**	**12 42 43.7**	**+1.3**
PMBI	**Palembang**	**8.58**	**118**	Pn	**Pn**	**12 43 05.7**	**-2.2**
CMAR	**Chiang Mai Arr**	**17.37**	**6**	P	**Pn**	**12 45 06.0**	**-0.1**
	baz=195,slow=13,SNR=9.5						
CMAR	**Chiang Mai Arr**	**17.37**	**6**	P	**P**	**12 45 08.1**	**+0.9**
SLVN	**Son La**	**21.19**	**18**	P	**P**	**12 45 49.2**	**+0.2**
SLVN				IAmb	IAmb	12 45 53.3	

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
	comp=Z,8.1nm,0.9s						
SHL	**Shillong**	**24.88**	**349**	P	**Pb**	**12 46 27.1**	**+0.8**
SHL				IAmb	IAmb	12 46 27.9	
	comp=Z,13nm,0.9s						
H08S2	**Diego Garcia H**	**26.08**	**250**	T	T	13 13 36.4	
	baz=70,slow=74,SNR=526						
H08S3	**Diego Garcia H**	**26.09**	**250**	T	T	13 13 38.7	
	baz=70,slow=74,SNR=1858						
H08S1	**Diego Carcia H**	**26.10**	**250**	T	T	13 13 40.2	
	baz=70,slow=74,SNR=2057						
PSA00	**Pilbara Seismi**	**31.58**	**137**		**S**	**12 52 31.0**	**-2.6**
H01W3	**Cape Leeuwin H**	**39.14**	**158**	T	T	13 29 58.0	
	baz=332,slow=76,SNR=15						
H01W2	**Cape Leeuwin H**	**39.15**	**158**	T	T	13 29 59.1	
	baz=332,slow=76,SNR=17						
H01W1	**Cape Leeuwin H**	**39.15**	**158**	T	T	13 29 55.4	
	baz=332,slow=76,SNR=14						
NIL	**Nilore**	**39.41**	**328**	P	**P**	**12 48 32.1**	**-1.1**
WRA	**Warramunga Arr**	**42.00**	**122**	P	**P**	**12 48 54.7**	**0.0**
	comp=Z,0.4nm,0.5s,baz=304,slow=8.8,SNR=2.8						
ASAR	**Alice Springs**	**43.34**	**127**	P	**P**	**12 49 05.9**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=300,slow=7.2,SNR=4.2						
ASAR	**Alice Springs**	**43.34**	**127**	P	**P**	**12 49 05.4**	**-0.3**
AS31	**Alice Springs**	**43.35**	**127**	P	**P**	**12 49 04.7**	**-1.0**
KSRS	**Korea Array**	**45.98**	**34**	P	**P**	**12 49 26.7**	**+0.4**
	comp=Z,3.4nm,0.9s,baz=228,slow=9.9,SNR=5.2						
SONM	**Songino Array**	**47.27**	**8**	P	**P**	**12 49 37.5**	**+0.9**
	comp=Z,1.8nm,0.5s,baz=192,slow=9.2,SNR=8.9						
SONM	**Songino Array**	**47.27**	**8**	P	**P**	**12 49 37.4**	**+0.9**
SONM				pP	**pP**	**12 49 40.0**	**-4.2**
MK31	**Makanchi Array**	**47.36**	**346**	P	**P**	**12 49 37.4**	**+0.2**
MK31				IAmb	IAmb	12 49 39.1	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**47.36**	**346**	P	**P**	**12 49 38.3**	**+1.2**
	comp=Z,1.8nm,0.7s,baz=155,slow=8.5,SNR=12						
MKAR	**Makanchi Array**	**47.36**	**346**	P	**P**	**12 49 35.6**	**-1.6**
KKAR	**Karatay Array**	**48.16**	**334**	P	**P**	**12 49 44.4**	**+1.1**
USRK	**Ussuriysk Ar.**	**52.90**	**31**	P	**P**	**12 50 20.6**	**+1.4**
	comp=Z,2.2nm,0.7s,baz=217,slow=8.6,SNR=5.7						
USRK	**Ussuriysk Ar.**	**52.90**	**31**	P	**P**	**12 50 19.1**	**-0.1**
STKA	**Stephens Creek**	**53.30**	**132**	P	**P**	**12 50 23.1**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=326,slow=7.3,SNR=4.6						
STKA	**Stephens Creek**	**53.30**	**132**	P	**P**	**12 50 22.2**	**-0.1**
STKA				IAmb	IAmb	12 50 34.7	
	comp=Z,0.5nm,0.9s						
ZAA0	**Zalesovo Array**	**53.68**	**351**	P	**P**	**12 50 25.1**	**+0.4**
ZAA0				IAmb	IAmb	12 50 26.4	
	comp=Z,3.3nm,0.8s						
ZALV	**Zalesovo Beam**	**53.68**	**351**	P	**P**	**12 50 25.7**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=181,slow=6.6,SNR=12						
ZALV	**Zalesovo Beam**	**53.68**	**351**	P	**P**	**12 50 25.4**	**+0.7**
ABKAR	**Akbulak array**	**57.61**	**332**	P	**P**	**12 50 52.3**	**-0.8**
ARCES	**ARCESS Array B**	**82.65**	**340**	P	**P**	**12 53 26.9**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=87,slow=5.9,SNR=3.8						

*TAP **12** 12:46:19.3, 23°.55N × 120°.74E, h6km, ML3.5, B*
ISC 12 12:46:19.8±0.8, 23°.55N±0°.01 × 120°.75E±0°.01, h11km±5km, n125, σ0s73/208, 17C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALS	**Alishan**	**0.07**	**127**	⇓*i* P	**Pg**	**12 46 22.0**	**-0.4**
	baz=122						
ALS				*i* S	**Sg**	**12 46 23.9**	**-0.4**
	baz=122						
CHN5	**Tsauling**	**0.08**	**306**	⇑*i* P	**Pg**	**12 46 21.7**	**-0.5**
	baz=309						
CHN5				*i* S	**Sg**	**12 46 23.3**	**-0.8**
	baz=309						
WHYT	**Xinyi Township**	**0.17**	**34**	⇑*i* P	**Pg**	**12 46 23.8**	**+0.1**
	baz=35						
WHYT				*i* S	**Sg**	**12 46 26.9**	**+0.6**
	baz=35						
WGK	**Gukeng**	**0.21**	**309**	P	**Pg**	**12 46 24.9**	**+0.7**
	baz=311						
WGK				*e*S	**Sg**	**12 46 29.0**	**+1.6**
	baz=311						
WDLH	**Douliu**	**0.23**	**306**	⇓*i* P	**Pg**	**12 46 25.6**	**+1.0**
	baz=307						
WDLH				S	**Sg**	**12 46 30.1**	**+2.2**
	baz=307						
WJS	**Zhushan**	**0.27**	**357**	⇑*i* P	**Pb**	**12 46 26.2**	**-0.5**
	baz=359						
WJS				S	**Sb**	**12 46 31.0**	**-0.3**
	baz=359						
TPUB	**Ta-pu**	**0.27**	**203**	⇑*i* P	**Pg**	**12 46 25.5**	**+0.1**
	baz=192						
TPUB				S	**Sg**	**12 46 29.5**	**+0.5**
	baz=192						
CHY	**Chiayi**	**0.30**	**260**	⇓*i* P	**Pb**	**12 46 26.8**	**-0.4**
	baz=259						
CHY				S	**Sb**	**12 46 32.8**	**+0.6**
	baz=259						
SSLB	**Suanglung**	**0.30**	**39**	⇓*i* P	**Pg**	**12 46 26.0**	**+0.1**
	baz=49						
SSLB				S	**Sg**	**12 46 30.8**	**+0.8**
	baz=49						
WTP	**Ta-pu**	**0.33**	**202**	⇑*i* P	**Pb**	**12 46 26.6**	**-1.0**
	baz=195						
WTP				S	**Sb**	**12 46 32.2**	**-0.8**
	baz=195						
WNT	**Mingjian**	**0.33**	**350**	⇑*i* P	**Pb**	**12 46 27.6**	**-0.1**
	baz=353						
WNT				S	**Sb**	**12 46 33.7**	**+0.6**
	baz=353						
WTK	**Tuku**	**0.35**	**293**	⇓*i* P	**Pb**	**12 46 27.9**	**-0.2**
	baz=293						
WTK				*i* S	**Sb**	**12 46 33.7**	**-0.1**
	baz=293						
SMLT	**Sun Moon Lake**	**0.36**	**23**	⇑*i* P	**Pb**	**12 46 27.7**	**-0.6**
	baz=33						
SMLT				*e*S	**Sb**	**12 46 33.9**	**-0.1**
	baz=33						
TYC	**Yuchr**	**0.36**	**16**	⇑*i* P	**Pb**	**12 46 27.9**	**-0.4**
	baz=27						
TYC				*e*S	**Sb**	**12 46 34.3**	**+0.2**
	baz=27						
TWK	**Hsinying**	**0.37**	**220**	⇑*i* P	**Pb**	**12 46 27.6**	**-0.8**
	baz=217						
TWK				*e*S	**Sb**	**12 46 33.9**	**-0.3**
	baz=217						
STYT	**Tauyuan**	**0.39**	**178**	⇑*i* P	**Pg**	**12 46 27.5**	**0.0**
	baz=168						
STYT				S	**

EHY					*e*S		**Sg**	**12 46 36.8**	**-0.4**
	baz=100									
YULB	**Yu-li**	**0.53**	**107**	⇓*i*P			**Pb**	**12 46 30.3**	**-0.8**
YULB	baz=107				*e*S		**Sg**	**12 46 37.2**	**+0.1**
CHN8	**Yiju**	**0.53**	**247**	P			**Pb**	**12 46 30.8**	**-0.3**
CHN8	baz=245				*e*S		**Sb**	**12 46 40.4**	**+1.5**
WMLT	**Mailiao**	**0.54**	**298**	P			**Pb**	**12 46 31.0**	**-0.3**
WMLT	baz=299				*e*S		**Sb**	**12 46 39.7**	**+0.6**
TWF1	**Yuli**	**0.54**	**111**	⇓*i*P			**Pb**	**12 46 30.7**	**-0.7**
TWF1	baz=111				*e*S		**Sg**	**12 46 38.1**	**+0.5**
WCHH	**Zhanghua**	**0.55**	**342**	*e*P			**Pb**	**12 46 31.6**	**+0.1**
WCHH	baz=343				*e*S		**Sb**	**12 46 40.2**	**+0.8**
SLGT	**Liugui**	**0.56**	**189**	⇑*i*P			**Pb**	**12 46 31.2**	**-0.5**
SLGT	baz=179				*e*S		**Sb**	**12 46 39.3**	**-0.5**
EYUL	**Yuli**	**0.56**	**111**	P			**Pb**	**12 46 31.1**	**-0.6**
EYUL	baz=111				*e*S		**Sg**	**12 46 37.3**	**-0.9**
TCU	**Taichung**	**0.60**	**354**	*i* P			**Pb**	**12 46 32.7**	**+0.4**
TCU	baz=356				*e*S		**Sg**	**12 46 39.7**	**+0.4**
FULB	**Fuli**	**0.61**	**125**	P			**Pb**	**12 46 32.6**	**+0.1**
FULB	baz=124				*e*S		**Sb**	**12 46 41.3**	**+0.1**
HGSD	**Ruisui**	**0.62**	**95**	P			**Pb**	**12 46 32.4**	**-0.3**
HGSD	baz=86				*e*S		**Sb**	**12 46 41.8**	**+0.3**
EGFH	**Guangfu**	**0.64**	**79**	*e*P			**Pb**	**12 46 32.5**	**-0.4**
EGFH	baz=72				*e*S		**Sg**	**12 46 40.7**	**+0.2**
CHGB	**Renai**	**0.64**	**38**	P			**Pg**	**12 46 32.3**	**0.0**
CHGB	baz=50				*e*S		**Sg**	**12 46 41.2**	**+0.5**
ESL	**Shilin**	**0.68**	**67**	P			**Pb**	**12 46 33.4**	**-0.4**
ESL	baz=77				*e*S		**Sg**	**12 46 42.4**	**+0.4**
TAI1	**Yung-k'ang**	**0.70**	**223**	*e*P			**Pn**	**12 46 34.9**	**-0.7**
TAI1	baz=221				*e*S		**Sn**	**12 46 47.3**	**+1.0**
SCST	**Cishan**	**0.70**	**199**	*e*P			**Pb**	**12 46 34.4**	**+0.4**
SCST	baz=197				*e*S		**Sn**	**12 46 47.0**	**+0.4**
CHKT	**Chengkung**	**0.73**	**128**	P			**Pb**	**12 46 34.9**	**+0.4**
CHKT	baz=127				*e*S		**Sn**	**12 46 46.4**	**-0.7**
LONT	**Longtian**	**0.73**	**151**	P			**Pb**	**12 46 34.1**	**-0.5**
WHP	**Taichung City**	**0.75**	**14**	P			**Pb**	**12 46 35.2**	**+0.3**
WHP	baz=26				*e*S		**Sn**	**12 46 47.1**	**-0.7**
WHF	**Hehuan Shan**	**0.76**	**39**	⇑*i*P			**Pb**	**12 46 35.0**	**-0.3**
WHF	baz=50				S		**Sb**	**12 46 46.7**	**+0.9**
EDH	**Donghe**	**0.77**	**138**	P			**Pb**	**12 46 35.8**	**+0.6**
EDH	baz=137				*e*S		**Sb**	**12 46 46.2**	**+0.5**
TWM1	**Shoushan**	**0.78**	**202**	*e*P			**Pn**	**12 46 36.6**	**-0.2**
TWM1	baz=185				*e*S		**Sn**	**12 46 48.7**	**+0.1**
TWG	**Pinlang**	**0.79**	**158**	⇑P			**Pb**	**12 46 35.1**	**-0.4**
TWG	baz=156				*e*S		**Sb**	**12 46 46.1**	**-0.1**
TWGBT	**Beinan**	**0.79**	**157**	⇑*i*P			**Pb**	**12 46 35.0**	**-0.6**
TWGBT	baz=156				*e*S		**Sg**	**12 46 45.5**	**+0.1**
TWQ1	**Liyutan**	**0.79**	**2**	P			**Pb**	**12 46 36.2**	**+0.6**
TWQ1	baz=4.0				*e*S		**Sn**	**12 46 48.1**	**-0.8**
TDCB	**Techi**	**0.79**	**28**	*e*P			**Pg**	**12 46 35.0**	**-0.2**
TDCB	baz=38				*e*S		**Sb**	**12 46 46.6**	**0.0**
WDJ	**Dajia District**	**0.80**	**353**	*e*P			**Pn**	**12 46 36.6**	**-0.5**
WDJ	baz=355				*e*S		**Sn**	**12 46 48.6**	**-0.3**
TWT	**Tachien**	**0.80**	**29**	*e*P			**Pb**	**12 46 35.6**	**-0.2**
TWT	baz=38				*e*S		**Sg**	**12 46 46.1**	**+0.3**
SSD	**Sandimen**	**0.81**	**187**	P			**Pb**	**12 46 35.7**	**-0.2**
SSD	baz=177				*e*S		**Sb**	**12 46 47.5**	**+0.7**
FUSS	**Fushou**	**0.83**	**33**	*e*P			**Pg**	**12 46 35.5**	**-0.3**
FUSS	baz=35				*e*S		**Sb**	**12 46 47.7**	**0.0**
TSMG	**Majia**	**0.85**	**186**	*e*P			**Pb**	**12 46 36.3**	**-0.2**
TSMG	baz=177				*e*S		**Sb**	**12 46 49.0**	**+1.0**
SGLT	**Jiouru**	**0.85**	**196**	*e*P			**Pn**	**12 46 38.0**	**+0.3**
NSY	**Sanyi**	**0.86**	**1**	P			**Pn**	**12 46 37.8**	**-0.1**
NSY	baz=3.0				*e*S		**Sn**	**12 46 51.0**	**+0.5**
TTN	**Taitung**	**0.88**	**155**	*e*P			**Pn**	**12 46 37.7**	**-0.4**
SNJT	**Kaohsiung City**	**0.88**	**206**	*e*P			**Pn**	**12 46 38.5**	**+0.3**
SNJT	baz=223				*e*S		**Sn**	**12 46 53.6**	**+2.6**
HWA	**Hwalien**	**0.89**	**62**	*e*P			**Pb**	**12 46 37.7**	**+0.4**
ETLH	**Xiulin Townshi**	**0.94**	**46**	*e*P			**Pg**	**12 46 37.7**	**-0.1**
ETLH	baz=41				*e*S		**Sb**	**12 46 50.5**	**-0.1**
TWD	**Chiawan**	**0.94**	**56**	*e*P			**Pg**	**12 46 37.7**	**-0.2**
MASBT	**Mashibuluo**	**0.94**	**186**	*e*P			**Pb**	**12 46 37.9**	**-0.2**
MASBT	baz=185				*e*S		**Sn**	**12 46 52.6**	**+0.1**
ECL	**Taimali**	**0.97**	**169**	*e*P			**Pb**	**12 46 38.5**	**-0.1**
ECL	baz=157				*e*S		**Sn**	**12 46 53.4**	**+0.3**
NMLH	**Miaoli**	**0.98**	**2**	*e*P			**Pn**	**12 46 39.6**	**0.0**
NMLH	baz=4.0				*e*S		**Sn**	**12 46 53.1**	**-0.4**
NACB	**Ninganchiao**	**0.99**	**51**	P			**Pg**	**12 46 38.5**	**-0.5**
NACB	baz=53				*e*S		**Sn**	**12 46 53.4**	**-0.4**
WDGT	**Dungji**	**1.04**	**254**	*e*P			**Pg**	**12 46 39.0**	**-0.8**
WDGT	baz=252				*e*S		**Sg**	**12 46 52.9**	**-0.4**
NNSB	**Datong**	**1.05**	**34**	*e*P			**Pg**	**12 46 39.6**	**-0.4**
NNSB	baz=41				*e*S		**Sb**	**12 46 54.4**	**+0.5**
NNSH	**Datong**	**1.05**	**34**	P			**Pg**	**12 46 39.8**	**-0.2**
NNSH	baz=41				*e*S		**Sb**	**12 46 53.9**	**0.0**

NNS	**Nan Shan**	**1.05**	**33**	P			**Pb**	**12 46 40.3**	**+0.1**
NNS	baz=41				*e*S		**Sn**	**12 46 55.1**	**-0.4**
SSPT	**Xinbi**	**1.08**	**189**	*e*P			**Pn**	**12 46 41.2**	**+0.4**
SSPT	baz=175				*e*S		**Sn**	**12 46 59.0**	**+3.2**
PHUB	**P'eng-hu**	**1.08**	**268**	P			**Pg**	**12 46 39.4**	**-1.1**
PHUB	baz=268				*e*S		**Sb**	**12 46 55.3**	**+0.7**
PNG	**Penghu**	**1.09**	**271**	P			**Pg**	**12 46 39.6**	**-1.1**
PNG	baz=270				*e*S		**Sn**	**12 46 55.9**	**-0.3**
LDUT	**Ludao**	**1.10**	**143**	P			**Pg**	**12 46 40.5**	**-0.4**
LDUT	baz=141				*e*S		**Sb**	**12 46 55.6**	**+0.4**
NSTT	**Nanjuang**	**1.10**	**12**	*e*P			**Pn**	**12 46 41.2**	**0.0**
NSTT	baz=2.0				*e*S		**Sn**	**12 46 56.5**	**+0.1**
LIOB	**Emei**	**1.12**	**13**	P			**Pn**	**12 46 41.6**	**+0.2**
LIOB	baz=2.0				*e*S		**Sn**	**12 46 57.7**	**+0.9**
EAST	**Anshuo**	**1.17**	**175**	*e*P			**Pn**	**12 46 42.3**	**+0.2**
EAST	baz=163				*e*S		**Sn**	**12 46 57.8**	**-0.3**
SCZT	**Fangliau**	**1.18**	**186**	*e*P			**Pn**	**12 46 42.5**	**+0.2**
SCZT	baz=183				*e*S		**Sb**	**12 46 57.7**	**+0.2**
TAW	**Tawu**	**1.20**	**173**	*e*P			**Pn**	**12 46 42.5**	**0.0**
TAW	baz=161				*e*S		**Sn**	**12 47 01.8**	**+3.1**
WLCH	**Liuqiu**	**1.24**	**196**	*e*P			**Pn**	**12 46 44.7**	**+1.6**
NSK	**Sanguang**	**1.25**	**26**	*e*P			**Pn**	**12 46 43.6**	**+0.3**
NSK	baz=30				*e*S		**Sn**	**12 47 00.8**	**+0.5**
TWP	**Hsiaoliuchiu**	**1.25**	**196**	*e*P			**Pg**	**12 46 44.2**	**+0.4**
YHNB	**Yeheng**	**1.25**	**27**	*e*P			**Pn**	**12 46 43.5**	**+0.1**
YHNB	baz=30				*e*S		**Sg**	**12 46 59.5**	**-0.7**
SBCB	**Hsinchu**	**1.25**	**10**	*e*P			**Pg**	**12 46 45.4**	**+1.5**
VCHM	**Qimei**	**1.26**	**255**	*e*P			**Pn**	**12 46 42.2**	**-1.1**
VCHM	baz=253				*e*S		**Sg**	**12 46 58.7**	**-1.5**
ENAH	**Nanao**	**1.32**	**47**	*e*P			**Pg**	**12 46 45.0**	**-0.1**
ENAH	baz=50				*e*S		**Sn**	**12 47 03.8**	**+2.0**
SLIU	**Shizi**	**1.33**	**178**	*e*P			**Pg**	**12 46 45.1**	**-0.2**
NWLT	**Wulai**	**1.40**	**29**	*e*P			**Pg**	**12 46 46.4**	**-0.4**
TWE	**Neicheng**	**1.44**	**36**	*e*P			**Pg**	**12 46 47.2**	**-0.2**
TWC	**Suao**	**1.46**	**44**	*e*P			**Pb**	**12 46 46.9**	**-0.1**
HEN	**Hengchun**	**1.54**	**180**	*e*P			**Pb**	**12 46 48.4**	**+0.1**
TATO	**Taipei**	**1.57**	**25**	*e*P			**Pg**	**12 46 50.3**	**+0.3**
NHDH	**Xindian Distri**	**1.57**	**27**	*e*P			**Pg**	**12 46 49.9**	**-0.2**
TWK1	**Hengchun**	**1.60**	**178**	*e*P			**Pg**	**12 46 51.0**	**+0.5**
TWKBT	**Hengchun**	**1.60**	**178**	*e*P			**Pg**	**12 46 50.8**	**+0.2**
TWA	**Mucha**	**1.61**	**28**	*e*P			**Pg**	**12 46 51.5**	**+0.7**
NTC	**Toucheng**	**1.63**	**37**	*e*P			**Pb**	**12 46 50.1**	**+0.2**
TSEB	**Hengchuen, Pin**	**1.65**	**175**	*e*P			**Pg**	**12 46 51.2**	**-0.2**
TWS1	**Kuanyinshan**	**1.66**	**22**	*e*P			**Pb**	**12 46 49.9**	**-0.5**
LAY	**Lan-yu**	**1.68**	**154**	*e*P			**Pn**	**12 46 49.1**	**-0.1**
LAY	baz=152				*e*S		**Sn**	**12 47 11.4**	**+0.7**
TIPB	**Shuangxi**	**1.72**	**35**	*e*P			**Pb**	**12 46 51.7**	**+0.1**
YM04	**YM04**	**1.75**	**24**	*e*P			**Pb**	**12 46 52.0**	**0.0**
YM01	**YM01**	**1.76**	**25**	*e*P			**Pg**	**12 46 52.9**	**-0.6**
YM10	**YM10**	**1.76**	**25**	*e*P			**Pn**	**12 46 50.4**	**0.0**
ANP	**Anpu**	**1.77**	**23**	*e*P			**Pg**	**12 46 53.2**	**-0.6**
YM03	**YM03**	**1.77**	**24**	*e*P			**Pb**	**12 46 51.5**	**-0.9**
YM11	**YM11**	**1.78**	**25**	*e*P			**Pb**	**12 46 51.8**	**-0.6**
NWF	**Wu-fen Shan**	**1.78**	**32**	*e*P			**Pb**	**12 46 52.1**	**-0.4**
WFSB	**Wu-fen Shan**	**1.78**	**32**	*e*P			**Pb**	**12 46 52.2**	**-0.3**
TWB1	**Santiao Chiao**	**1.84**	**38**	*e*P			**Pg**	**12 46 54.3**	**-0.8**
VWUC	**VWUC**	**1.86**	**321**	*e*P			**Pn**	**12 46 50.3**	**-1.3**
PTMZ	**Houxiangcun**	**2.10**	**315**	*e*P			**Pn**	**12 46 54.5**	**-0.3**
PTTC	**Pingtan**	**2.13**	**336**	*e*P			**Pn**	**12 46 54.0**	**-1.4**
KNM	**Kinmen**	**2.28**	**293**	*e*P			**Pn**	**12 46 58.0**	**+0.5**
KNMB	**Chin-men Tao**	**2.34**	**293**	*e*P			**Pn**	**12 46 56.8**	**-1.5**
QZH	**Quanzhou**	**2.41**	**306**	*e*Pn			**Pn**	**12 46 58.2**	**-0.9**
QZH				Sn			**Sn**	**12 47 28.0**	**-0.6**
QZH	comp=N,83nm,0.2s			smax			smax		
QZH	comp=E,33nm,0.2s			smax			smax		
MATB	**Ma-tsu**	**2.69**	**344**	*e*P			**Pn**	**12 47 01.8**	**-1.2**
ZPLA	**Ao Xicun**	**2.77**	**278**	*e*P			**Pn**	**12 47 03.4**	**-0.8**
AXDP	**Jialang**	**2.87**	**298**	*e*P			**Pn**	**12 47 04.3**	**-1.2**
MHZQ	**Yeshan**	**2.98**	**329**	*e*P			**Pn**	**12 47 06.3**	**-0.7**
ZZJH	**Jiuhuzhen**	**2.99**	**288**	*e*P			**Pn**	**12 47 06.5**	**-0.7**
LYJJ	**Jianjiangzhen**	**3.12**	**344**	*e*P			**Pn**	**12 47 08.2**	**-0.7**

KRSC **12** *13:04:26.6±0.9,* **60.10N×163.41E, h36**km±14km**, ML4.4, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OSSR	**Ossora**	**0.87**	**192**	*e*P	Pn	13 04 42.7	+0.5
OSSR				*e*S	Sn	13 04 55.2	+1.5
TILK	**Tilichiki**	**1.41**	**74**	*e*P	Pn	13 04 51.1	+1.5
TILK				*e*S	Sn	13 05 09.5	+2.6
PALN	**Palana**	**2.02**	**241**	*e*P	Pn	13 05 01.4	+3.3
KBTR	**Krutoberegovo**	**3.92**	**185**	*e*P	Pn	13 05 28.2	+4.1
BKI	**Bering**	**5.10**	**163**	P	Pn	13 05 46.5	+6.2
MKZ	**Mys Kozlova**	**5.63**	**190**	P	Pn	13 05 52.0	+4.4

IDC **12** *13:14:31.3±1.9,* **7.10S×121.14E, h464**km±20km**, mb2.5/2, mb1 2.5/4, mb1mx2.4/40, mbtmp3.3/4, Error ellipse: s-maj=121.7km s-min=25.8km az=57.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**3.97**	**141**	P	P	13 15 47.7	+0.5
BATI	13nm,0.3s,baz=299,slow=5.6,SNR=14			S	S	13 16 49.0	+0.1
FITZ	**Fitzroy Crossi**	**11.78**	**159**	P	P	13 17 07.9	+0.2
WRA	10nm,0.3s,baz=300,slow=21,SNR=8.9 **Warramunga Arr**	**18.09**	**136**	P	P	13 18 13.9	-0.4
ASAR	0.2nm,0.3s,baz=337,slow=10,SNR=5.9 **Alice Springs**	**20.54**	**145**	P	P	13 18 37.0	+0.1
MKAR	0.1nm,0.3s,baz=315,slow=11,SNR=6.5 **Makanchi Array**	**63.77**	**331**	P	P	13 24 16.5	-0.1
	0.2nm,0.4s,baz=320,slow=8.6,SNR=5.2 0.5nm,0.7s,baz=133,slow=7.1,SNR=3.2						

KRNET **12** *13:14:35.7±0.1, 42.21N×73.12E, h21*km*, mb2.0*
SOME **12** *13:14:36.0, 42.22N×73.13E, h5*km
NNC **12** *13:14:37.1±0.6, 42.27N×73.09E, h0*km*, mb3.1, mpv2.8, Error ellipse: s-maj=4.9km s-min=3.7km az=164.0*

ISC 12 13:14:36.0±1.1, 42.21N±0.03×73.13E±0.02, h5km±11km**, n26,σ0869/47, 12C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.43**	**100**	⇓*i*P	**Pg**	**13 14 44.6**	**+0.3**
AML	baz=0.0			⇓*i*S	**Sg**	**13 14 50.7**	**+0.8**
MRKS	**Merke**	**0.54**	**7**	*e*P	**Pg**	**13 14 46.6**	**+0.2**
MRKS	baz=8.0			*e*S	**Sg**	**13 14 54.1**	**+0.7**
MRKS	**Merke**	**0.54**	**7**	*e*P	**Pg**	**13 14 46.6**	**+0.2**
MRKS	13nm,0.1s			*e*S	**Sg**	**13 14 54.2**	**+0.7**
MRKS	15nm,0.1s **Merke**	**0.54**	**7**	P	**Pg**	**13 14 46.6**	**+0.2**
MRKS	13nm,0.1s			S	**Sg**	**13 14 54.2**	**+0.7**
MNAS	15nm,0.1s **Manas**	**0.54**	**301**	⇑*i*P	**Pg**	**13 14 46.1**	**-0.3**
MNAS	baz=2.0			⇑*i*S	**Sg**	**13 14 53.4**	**-0.1**
EKS2	**Erkin-Say**	**0.66**	**46**	⇓*i*P	**Pg**	**13 14 48.5**	**-0.2**
EKS2	baz=47			⇓*i*S	**Sg**	**13 14 57.7**	**+0.5**
ARSB	**Arslanbob**	**0.89**	**187**	⇑*i*P	**Pg**	**13 14 52.5**	**-0.6**
ARSB	baz=87			⇑*i*S	**Sg**	**13 15 04.9**	**+0.3**
ARLS	**Aral**	**0.95**	**111**	⇑*i*P	**Pg**	**13 14 53.7**	**-0.6**
ARLS	baz=10.0			⇑*i*S	**Sg**	**13 15 06.8**	**+0.1**
UCH	**Uchtor**	**1.03**	**88**	⇓*i*P	**Pg**	**13 14 55.1**	**-0.6**
UCH	baz=89			⇓*i*S	**Sg**	**13 15 09.1**	**0.0**
AAK	**Ala-Archa**	**1.10**	**67**	⇓*i*P	**Pg**	**13 14 56.2**	**-0.8**
AAK	baz=67			⇓*i*S	**Sg**	**13 15 11.0**	**-0.3**
CHMS	**Chumysh**	**1.43**	**56**	⇑*i*P	**Pn**	**13 15 02.0**	**-0.8**
CHMS	baz=56			⇑*i*S	**Sb**	**13 15 21.4**	**-0.5**
USP	**Ospenovka**	**1.46**	**43**	⇑*i*P	**Pn**	**13 15 02.6**	**-0.6**
USP	baz=43			⇑*i*S	**Sb**	**13 15 22.3**	**-0.4**
SGDS	**Sogindy**	**1.66**	**41**	P	**Pb**	**13 15 07.2**	**0.0**
SGDS	2.3nm,0.1s			S	**Sg**	**13 15 29.1**	**-0.3**
OHH	1.5nm,0.2s **Osh**	**1.70**	**189**	⇓*i*P	**Pn**	**13 15 06.7**	**+0.2**
OHH	baz=89			⇓*i*S	**Sn**	**13 15 29.2**	**+0.5**
TKM2	**Tokmak 2**	**1.96**	**68**	⇑*i*P	**Pn**	**13 15 10.7**	**+0.6**
TKM2	baz=68			⇑*i*S	**Sn**	**13 15 35.9**	**+0.7**
TKM2	**Tokmak 2**	**1.96**	**68**	⇓Pn	**Pb**	**13 15 12.2**	**0.0**
TKM2	0.5nm,0.3s 1.1nm,0.5s			⇓Sn	**Sg**	**13 15 39.0**	**+0.1**
DGS	**Degeres**	**2.20**	**61**	*e*P	**Pb**	**13 15 16.6**	**+0.1**
DGS	4.5nm,0.2s 1.6nm,0.4s			*e*S	**Sg**	**13 15 45.6**	**-1.2**
DGS	**Degeres**	**2.20**	**61**	Pg	**Pb**	**13 15 16.5**	**+0.1**
DGS	4.5nm,0.2s 1.9nm,0.3s			Lg	Lg	13 15 45.6	
KST	**Kastek**	**2.25**	**67**	*e*P	**Pg**	**13 15 19.0**	**-0.2**
KST	3.6nm,0.8s 2.2nm,0.4s			*e*S	**Sg**	**13 15 49.3**	**+1.0**
KST	**Kastek**	**2.25**	**67**	Pg	**Pg**	**13 15 19.0**	**-0.2**
KST	2.1nm,0.3s 2.0nm,0.3s			Lg	Lg	13 15 49.3	
IUG	**Iuzhnay**	**2.31**	**270**	*e*P	**Pb**	**13 15 18.6**	**+0.5**
IUG	1.8nm,0.4s 3.9nm,0.6s			*e*S	**Sg**	**13 15 48.9**	**-1.2**
IUG	**Iuzhnay**	**2.31**	**270**	Pg	**Pb**	**13 15 18.7**	**+0.5**
IUG	3.1nm,0.5s 5.3nm,0.2s			Lg	Lg	13 15 48.9	
KRBS	**Karabastau**	**2.39**	**51**	*e*P	**Pb**	**13 15 20.0**	**+0.5**
KRBS	1.3nm,0.3s 2.8nm,0.5s			*e*S	**Sg**	**13 15 51.4**	**-1.2**
KRBS	**Karabastau**	**2.39**	**51**	Pg	**Pb**	**13 15 20.0**	**+0.5**
KRBS	1.3nm,0.3s 2.8nm,0.5s			Lg	Lg	13 15 51.4	
BTLS	**Baital**	**2.91**	**13**	*e*P	**Pb**	**13 15 29.3**	**+0.9**
BTLS	0.4nm,0.2s 1.9nm,0.2s			*e*S	**Sg**	**13 16 07.1**	**-2.3**
BTLS	**Baital**	**2.91**	**13**	Pg	**Pb**	**13 15 29.3**	**+0.9**
BTLS	0.7nm,0.2s 1.3nm,0.2s			Lg	Lg	13 16 07.0	

IDC **12** *13:18:09.2±1.6, 17.57S×178.75W, h528*km*±20*km*, mb3.3/9, mb1 3.6/11, mb1mx3.4/27, mbtmp4.3/11, Error ellipse: s-maj=40.5km s-min=11.1km az=151.0*
NEIC **12** *13:18:10.7±2.2, 17.7S±0.1×178.7W±0.1, h551*km*±4*km*, mb4.3/45, Error ellipse: s-maj=17.6km s-min=13.8km az=145.0*

ISC 12 13:18:10.3±0.5, 17.70S±0.09×178.65W±0.07, h550km**, n65,σ1811/68, mb4.3/32, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.15**	**269**	P	**P**	**13 19 29.1**	**+2.7**
AFI	**Afiamalu**	**7.61**	**61**	P	**P**	**13 20 02.6**	**-1.9**
AFI	5.2nm,0.3s,baz=234,slow=19,SNR=14			S	**S**	**13 21 36.2**	**-1.6**
AFI	0.9nm,0.3s,baz=9.5,slow=18,SNR=3.1 **Afiamalu**	**7.61**	**61**	P	**P**	**13 20 03.1**	**-1.4**
NIUE	**Niue**	**8.39**	**101**	P	**P**	**13 20 12.4**	**+0.4**
FUNA	**Funafuti**	**9.36**	**347**	P	**P**	**13 20 22.5**	**+0.7**
SANVU	**Saraoutou**	**13.75**	**277**	P	**P**	**13 21 05.9**	**-1.1**
DZM	**Mont Dzumac**	**14.68**	**250**	P	**P**	**13 21 15.7**	**-1.0**
DZM	1.2nm,0.3s,baz=77,slow=19,SNR=19 **Mont Dzumac**	**14.68**	**250**	P	**P**	**13 21 15.4**	**-1.2**
KNTN	**Kanton**	**16.32**	**25**	P	**P**	**13 21 32.2**	**-0.8**
URZ	**Urewera**	**20.82**	**189**	P	**P**	**13 22 12.3**	**-1.3**
BKZ	**Black Stump Fm**	**21.80**	**190**	P	**P**	**13 22 21.1**	**-1.5**
KHZ	**Kahutara**	**25.52**	**194**	P	**P**	**13 22 58.0**	**+2.5**
EIDS	**Eidsvold**	**29.12**	**250**	P	**P**	**13 23 26.7**	**-0.6**
EIDS	comp=Z,9.1nm,0.9s			IAmb	IAmb	13 23 27.7	
ARMA	**Armidale**	**29.85**	**239**	P	**P**	**13 23 33.9**	**+0.3**
ARMA	comp=Z,10nm,0.7s			IAmb	IAmb	13 23 34.9	
CTAO	**Charters Tower**	**33.26**	**260**	P	**P**	**13 24 02.3**	**-0.5**
CTAO	comp=Z,6.2nm,0.7s			IAmb	IAmb	13 24 02.8	
PMG	**Port Moresby**	**34.20**	**279**	P	**P**	**13 24 11.5**	**+0.8**
COEN	**Coen**	**36.87**	**270**	P	**P**	**13 24 33.1**	**+0.2**

COEN					IAmb	IAmb	13 24 33.6	
	comp=Z,7.3nm,0.6s							
TOO	**Toolangi**	**37.12**	**230**	P	**P**		**13 24 35.3**	**+0.6**
TOO					IAmb	IAmb	13 24 35.9	
	comp=Z,9.7nm,0.8s							
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**		**13 24 46.6**	**+0.4**
	comp=Z,5.7nm,0.5s,baz=90,slow=9.8,SNR=31							
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**		**13 24 46.4**	**+0.2**
BBOO	**Buckleboo**	**43.31**	**241**	P	**P**		**13 25 23.9**	**-0.2**
HLK	**Haleakala**	**44.08**	**31**	P	**P**		**13 25 30.4**	**-0.1**
WR0	**Warramunga Arr**	**44.25**	**259**	P	**P**		**13 25 30.3**	**-1.4**
WR0					IAmb	IAmb	13 25 35.7	
	comp=Z,3.4nm,0.9s							
WB0	**Warramunga Arr**	**44.41**	**260**	P	**P**		**13 25 31.4**	**-1.5**
WB0					IAmb	IAmb	13 25 32.5	
	comp=Z,6.4nm,0.9s							
WB2	**Warramunga Arr**	**44.43**	**259**	P	**P**		**13 25 31.7**	**-1.3**
WB2					IAmb	IAmb	13 25 32.8	
	comp=Z,6.7nm,0.7s							
WRAB	**Tennant Creek**	**44.44**	**259**	P	**P**		**13 25 31.7**	**-1.3**
WRAB					IAmb	IAmb	13 25 32.7	
	comp=Z,6.0nm,0.7s							
WRA	**Warramunga Arr**	**44.44**	**259**	P	**P**		**13 25 32.0**	**-1.0**
	comp=Z,4.1nm,0.5s,baz=97,slow=6.9,SNR=148							
WRA					PcP	**PcP**	**13 27 04.7**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=100,slow=3.4,SNR=3.3							
WRA	**Warramunga Arr**	**44.44**	**259**	P	**P**		**13 25 31.1**	**-2.0**
AS31	**Alice Springs**	**44.63**	**254**	P	**P**		**13 25 33.9**	**-0.6**
AS31					IAmb	IAmb	13 25 34.7	
	comp=Z,11nm,0.7s							
ASAR	**Alice Springs**	**44.63**	**254**	P	**P**		**13 25 34.1**	**-0.4**
	comp=Z,40nm,0.6s,baz=88,slow=8.2,SNR=909							
ASAR					PcP	**PcP**	**13 27 05.5**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=98,slow=4.1,SNR=3.2							
MTN	**Manton Dam**	**48.58**	**268**	P	**P**		**13 26 03.5**	**-0.8**
FORT	**Forrest**	**49.89**	**244**	P	**P**		**13 26 12.8**	**-1.1**
KNRA	**Kununurra**	**50.28**	**264**	P	**P**		**13 26 15.7**	**-1.2**
KNRA					IAmb	IAmb	13 26 17.0	
	comp=Z,11nm,0.7s							
FAKI	**Fak Fak**	**50.31**	**281**	P	**P**		**13 26 17.0**	**-0.2**
FAKI					IAmb	IAmb	13 26 45.8	
	comp=Z,14nm,1.1s							
SIJI	**Sorong**	**51.97**	**283**	P	**P**		**13 26 29.2**	**0.0**
	baz=84,slow=9.4							
FITZ	**Fitzroy Crossi**	**52.84**	**260**	P	**P**		**13 26 35.2**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=112,slow=5.2,SNR=24							
FITZ	**Fitzroy Crossi**	**52.84**	**260**	P	**P**		**13 26 35.1**	**-0.2**
SOEI	**Soe**	**55.84**	**270**	P	**P**		**13 26 57.8**	**+1.2**
SOEI					IAmb	IAmb	13 26 58.7	
	comp=Z,18nm,0.8s							
PSA00	**Pilbara Seismi**	**57.74**	**255**	P	**P**		**13 27 08.5**	**-0.9**
PSA00					IAmb	IAmb	13 27 08.8	
	comp=Z,12nm,1.2s							
PSA00	**Pilbara Seismi**	**57.74**	**255**	P	**P**		**13 27 07.8**	**-1.6**
PSA00					IAmb	IAmb	13 27 08.5	
	comp=Z,4.8nm,0.6s							
MORW	**Morawa**	**60.35**	**246**	P	**P**		**13 27 25.8**	**-1.0**
MORW					IAmb	IAmb	13 27 45.2	
	comp=Z,17nm,1.2s							
GIRL	**Giralia**	**62.73**	**253**	P	**P**		**13 27 43.0**	**+0.6**
KKM	**Kota Kinabalu**	**68.47**	**284**	P	**P**		**13 28 18.6**	**+0.1**
UGM	**Wanagama**	**69.42**	**268**	P	**P**		**13 28 23.7**	**-0.5**
SBUM	**Sibu**	**70.95**	**279**	P	**P**		**13 28 31.3**	**-1.8**
QSPA	**South Pole Qui**	**72.35**	**180**	P	**P**		**13 28 40.6**	**+0.1**
PETK	**Petropavlovsk-**	**73.42**	**345**	P	**P**		**13 28 46.8**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=131,slow=8.7,SNR=5.1							
HKPS	**Hong Kong Po S**	**76.81**	**299**	P	**P**		**13 29 05.4**	**-0.8**
KMRM	**Mail Ridge**	**77.00**	**40**	P	**P**		**13 29 09.0**	**+2.1**
KMRM					IAmb	IAmb	13 29 10.8	
	comp=Z,22nm,1.4s							
WDC	**Whiskeytown Da**	**77.93**	**40**	P	**P**		**13 29 13.5**	**+1.7**
MDPB	**Devils Postpil**	**78.49**	**44**	P	**P**		**13 29 16.4**	**+1.2**
YBH	**Yreka Blue Hor**	**78.51**	**39**	P	**P**		**13 29 16.4**	**+1.4**
YBH					IAmb	IAmb	13 29 16.7	
	comp=Z,7.1nm,1.4s							
OMMB	**Old Mammoth Mi**	**78.53**	**44**	P	**P**		**13 29 16.6**	**+1.0**
BEKR	**Beckworth**	**78.89**	**42**	P	**P**		**13 29 17.5**	**+0.3**
PNTR	**Pine Nut**	**78.94**	**43**	P	**P**		**13 29 18.4**	**+0.8**
PNTR					IAmb	IAmb	13 29 19.6	
	comp=Z,4.3nm,0.9s							
PAHR	**Pah Rah Range**	**79.42**	**42**	P	**P**		**13 29 21.1**	**+1.0**
PAHR					IAmb	IAmb	13 29 48.8	
	comp=Z,7.4nm,1.4s							
NVAR	**Mina Array Bea**	**79.43**	**44**	P	**P**		**13 29 21.3**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=226,slow=9.0,SNR=7.9							
KVN	**Kaiserville**	**79.90**	**44**	P	**P**		**13 29 23.4**	**+0.8**
ILAR	**Eielson Array**	**85.74**	**13**	P	**P**		**13 29 50.4**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=222,slow=5.3,SNR=16							
TXAR	**Lajitas Array**	**86.08**	**58**	P	**P**		**13 29 55.1**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=218,slow=5.7,SNR=6.0							
HHC	**Hu-ho-hao-te**	**86.96**	**315**	*eP*	**P**		**13 29 58.2**	**+0.7**
HHC					pmax	pmax		
	comp=Z,19nm,0.7s							
HHC					pmax	pmax		
	comp=Z,60nm,7.6s							
FLWY	**Flagg Ranch**	**87.22**	**42**	P	**P**		**13 29 59.4**	**+0.6**
FLWY					IAmb	IAmb	13 30 00.2	
	comp=Z,12nm,1.2s							
PDAR	**Pinedale Array**	**87.36**	**44**	P	**P**		**13 30 00.1**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=212,slow=3.3,SNR=7.2							
CMAR	**Chiang Mai Arr**	**88.60**	**290**	P	**P**		**13 30 06.5**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=101,slow=2.1,SNR=5.1							
LZH	**Lanzhou**	**90.58**	**308**	*eP*	**P**		**13 30 15.5**	**+0.9**
LZH					pmax	pmax		
	comp=Z,18nm,1.4s							

*IDC **12** 13:31:04.2±1.9, 6°.79N×93°.16E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/33, mbtmp3.6/6, MS3.4/3, Ms1 3.4/3, ms1mx2.8/43, Error ellipse: s-maj=77.4km s-min=23.6km az=59.0*

ISC 12 13:31:05.9±1.5, 6°.8N±0°.2×93°.2E±0°.3, h10km, n12, σ0s69/6, mb3.9/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.83**	**25**	Pn	**Pn**	**13 34 08.5**	**0.0**
	baz=223,slow=14,SNR=2.4						
LEM	**Lembang**	**19.77**	**133**	LR	LR	13 44 07.8	
	comp=Z,50nm,19.1s,baz=256,slow=40						
H08S3	**Diego Garcia H**	**25.17**	**236**	T	T	14 03 34.2	
	baz=54,slow=74						
H08S2	**Diego Garcia H**	**25.17**	**236**	T	T	14 03 37.6	
	baz=54						
H08S1	**Diego Carcia H**	**25.19**	**236**	T	T	14 03 35.7	
	baz=54,slow=74						
MKAR	**Makanchi Array**	**40.91**	**349**	P	**P**	**13 38 48.1**	**-0.2**
	1.7nm,0.7s,baz=161,slow=7.7,SNR=8.2						
ZALV	**Zalesovo Beam**	**47.47**	**353**	P	**P**	**13 39 41.5**	**+0.7**
	1.1nm,0.3s,baz=160,slow=9.5,SNR=4.9						
WRA	**Warramunga Arr**	**48.43**	**124**	P	**P**	**13 39 48.1**	**-0.6**
	0.1nm,0.4s,baz=304,slow=8.9,SNR=5.0						
ASAR	**Alice Springs**	**49.97**	**129**	P	**P**	**13 40 01.2**	**+0.6**
	0.4nm,0.9s,baz=304,slow=7.9,SNR=2.4						
ARU	**Arti**	**56.49**	**338**	LR	LR	14 07 09.1	
	comp=Z,42nm,18.2s,baz=194,slow=38						
FINES	**FINESS Array B**	**73.20**	**332**	P	**P**	**13 42 36.5**	**-0.3**
	1.0nm,0.8s,baz=93,slow=5.6,SNR=1.4						
AFI	**Afiamalu**	**96.46**	**103**	LR	LR	14 28 01.9	
	comp=Z,31nm,20.8s,baz=224,slow=35						

*SJA **12** 13:32:43.1±0.8, 31°.67S×69°.36W, h110km±3km, ML4.0, MW4.0*
*GUC **12** 13:32:43.8±0.7, 31°.67S×69°.53W, h146km±4km, ML4.0*
*NEIC **12** 13:32:43.2±2.8, 31°.67S±0°.05×69°.30W±0°.10, h112km±4km, Error ellipse: s-maj=12.2km s-min=7.7km az=96.0*
*IDC **12** 13:32:44.3±0.8, 31°.75S×69°.31W, h116km±7km, mb3.7/6, mb1 3.7/10, mb1mx3.6/25, mbtmp3.9/10, Error ellipse: s-maj=22.3km s-min=18.0km az=96.0*

ISC 12 13:32:43.6±0.5, 31°.65S±0°.03×69°.34W±0°.03, h114km±4km, n118, σ1s35/151, mb4.5/16, 13C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.16**	**165**	*eP*	**Pn**	**13 32 59.7**	**0.0**
RTLS				*eS*	**Sn**	**13 33 12.0**	**+0.2**
RTLS				IAML		13 33 12.3	
	comp=Z,6μm,0.4s						
ZON	**Zonda**	**0.58**	**80**		**Pn**	**13 33 01.6**	**+0.2**
ZON				Sn	**Sn**	**13 33 14.3**	**-0.5**
AUSP	**Uspallata**	**0.58**	**184**	*eP*	**Pn**	**13 33 01.8**	**+0.1**
AUSP				*eS*	**Sn**	**13 33 14.9**	**-0.4**
RTCV	**Cerro Valdivia**	**0.72**	**108**	*eP*	**Pn**	**13 33 02.8**	**+0.4**
RTCV				*eS*	**Sn**	**13 33 15.4**	**-1.3**
RTLL	**Cerro Villicun**	**0.81**	**67**	*iP*	**Pn**	**13 33 03.3**	**+0.1**
RTLL				*i* S	**Sn**	**13 33 18.0**	**-0.1**
RTLL				IAML		13 33 19.2	
	comp=N,11μm,0.5s						
RTLL	**Cerro Villicun**	**0.81**	**67**	*eP*	**Pn**	**13 33 03.4**	**+0.1**
RTLL				*eS*	**Sn**	**13 33 18.3**	**+0.2**
RTLL				IAML		13 33 20.8	
	comp=Z,4μm,0.2s						
ASAL	**Salagasta**	**1.04**	**156**	*eP*	**Pn**	**13 33 06.0**	**+0.4**
ASAL				*eS*	**Sn**	**13 33 22.1**	**0.0**
ACCO	**Cerro Coronel**	**1.08**	**13**	*eP*	**Pn**	**13 33 07.0**	**+0.7**
ACCO				*eS*	**Sn**	**13 33 25.8**	**+2.4**
ACCO				IAML		13 33 29.0	
	comp=Z,944nm,0.3s						
ARCO	**CERRO ARCO**	**1.24**	**164**	*eP*	**Pn**	**13 33 08.2**	**+0.4**
ARCO				*eS*	**Sn**	**13 33 25.7**	**-0.4**
ARCO				IAML		13 33 27.1	
	comp=Z,2μm,0.5s						
CO03	**El Pedregal**	**1.41**	**305**	↑*iP*	**Pn**	**13 33 10.1**	**+0.6**
CO03				*i* S	**Sn**	**13 33 30.8**	**+1.5**
CO03				IAML		13 33 33.2	
	comp=N,5μm,0.3s						
CO03	**El Pedregal**	**1.41**	**305**	Pn	**Pn**	**13 33 10.1**	**+0.6**
AROD	**Rodeo**	**1.48**	**356**	*eP*	**Pn**	**13 33 12.0**	**+1.3**
AROD				*eS*	**Sn**	**13 33 32.6**	**+1.4**
CO02	**Combarbal**	**1.48**	**287**	↑*iP*	**Pn**	**13 33 10.7**	**+0.2**
CO02				*i* S	**Sn**	**13 33 31.5**	**+0.6**
CO02	**Combarbal**	**1.48**	**287**	Pn	**Pn**	**13 33 10.6**	**+0.1**
AAGR	**Agrelo**	**1.50**	**163**	*eP*	**Pn**	**13 33 11.0**	**+0.3**
AAGR				*eS*	**Sn**	**13 33 31.8**	**+0.5**
VA03	**San Esteban**	**1.51**	**222**	↑*iP*	**Pn**	**13 33 11.3**	**+0.5**
VA03				*i* S	**Sn**	**13 33 32.3**	**+0.8**
VA03				IAML		13 33 33.8	
	comp=N,2μm,0.5s						
VA03	**San Esteban**	**1.51**	**222**	Pn	**Pn**	**13 33 11.1**	**+0.2**
CO01	**Juntas del Tor**	**1.78**	**339**	↑*iP*	**Pn**	**13 33 16.0**	**+1.7**
CO01				*i* S	**Sn**	**13 33 39.7**	**+2.0**
CO01				IAML		13 33 43.3	
	comp=E,3μm,0.5s						
CO01	**Juntas del Tor**	**1.78**	**339**	Pn	**Pn**	**13 33 16.0**	**+1.7**
PEL	**Peldehue**	**1.88**	**217**	↑*iP*	**Pn**	**13 33 15.1**	**-0.1**
PEL				*i* S	**Sn**	**13 33 39.4**	**0.0**
PEL				IAML		13 33 41.6	
	comp=E,568nm,0.5s						
PEL	**Peldehue**	**1.88**	**217**		**Pn**	**13 33 14.8**	**-0.4**
PEL	**Peldehue**	**1.88**	**217**	*eP*	**Pn**	**13 33 15.1**	**-0.1**
GO04	**Tololo Observa**	**1.93**	**319**	↑*iP*	**Pn**	**13 33 16.2**	**+0.1**
GO04				*i* S	**Sn**	**13 33 41.5**	**+0.7**
GO04	**Tololo Observa**	**1.93**	**319**	Pn	**Pn**	**13 33 16.0**	**-0.1**
GO04	**Tololo Observa**	**1.93**	**319**	*eP*	**Pn**	**13 33 16.2**	**+0.1**
GO04				*eS*	**Sn**	**13 33 41.6**	**+0.7**
ROCH	**El Roble**	**1.93**	**226**	↑*iP*	**Pn**	**13 33 15.7**	**-0.4**
ROCH				*i* S	**Sn**	**13 33 40.7**	**-0.2**
ROCH				IAML		13 33 43.7	
	comp=E,776nm,0.3s						
ACAN	**Cantantal**	**1.94**	**109**	*eP*	**Pn**	**13 33 16.5**	**+0.6**
ACAN				*eS*	**Sn**	**13 33 39.9**	**-0.8**
ROC1	**El Roble**	**1.94**	**226**		**Pn**	**13 33 15.4**	**-0.7**
ROC1	**El Roble**	**1.94**	**226**	*eP*	**Pn**	**13 33 15.8**	**-0.4**
ROC1				*eS*	**Sn**	**13 33 41.2**	**+0.1**
MT03	**Universidad Ad**	**2.09**	**208**	*eP*	**Pn**	**13 33 18.6**	**+0.7**
MT03				*i* S	**Sn**	**13 33 44.6**	**+0.4**
MT03				IAML		13 33 46.7	
	comp=N,1μm,0.2s						
MT05	**Renca**	**2.10**	**214**	↑*iP*	**Pn**	**13 33 18.1**	**0.0**
MT05				*i* S	**Sn**	**13 33 44.6**	**+0.2**
MT05				IAML		13 33 46.0	
	comp=E,1μm,0.4s						
MT05	**Renca**	**2.10**	**214**		**Pn**	**13 33 17.8**	**-0.2**
MT02	**Curacav**	**2.21**	**223**	↑*iP*	**Pn**	**13 33 18.6**	**-0.8**
MT02				*i* S	**Sn**	**13 33 46.4**	**-0.4**
MT02				IAML		13 33 47.2	
	comp=E,195nm,0.4s						
MT02	**Curacav**	**2.21**	**223**		**Pn**	**13 33 18.7**	**-0.7**
LMEL	**Las Melosas**	**2.31**	**198**	*eP*	**Pn**	**13 33 21.5**	**+0.7**
LMEL				IAML		13 34 00.3	
	comp=N,315nm,0.2s						
VA01	**Torpederas**	**2.38**	**234**	IAML		13 34 00.0	
	comp=E,397nm,0.1s						
VA01	**Torpederas**	**2.38**	**234**		**Pn**	**13 33 20.3**	**-1.3**
MT09	**Talagante**	**2.54**	**213**	*eP*	**Pn**	**13 33 23.0**	**-0.7**
MT09				*i* S	**Sn**	**13 33 53.8**	**-0.8**
MT09				IAML		13 33 57.6	
	comp=N,492nm,0.4s						
APLL	**PUNTA DE LOS L**	**2.72**	**63**	*eP*	**Pn**	**13 33 26.2**	**+0.1**
AC05	**El Transito**	**2.91**	**344**	↑*iP*	**Pn**	**13 33 29.8**	**+1.0**
AC05				*i* S	**Sn**	**13 34 03.7**	**+0.3**
AC05	**El Transito**	**2.91**	**344**	Pn	**Pn**	**13 33 29.7**	**+1.0**
ACLC	**CERRO LA CRUZ**	**3.03**	**44**	*eP*	**Pn**	**13 33 30.3**	**+0.1**
ACLC				IAML		13 34 30.2	
	comp=Z,331nm,0.5s						
VCA	**Vinchina**	**3.06**	**19**	*eP*	**Pn**	**13 33 31.8**	**+1.1**
VCA				IAML		13 34 11.6	
	comp=Z,552nm,0.4s						
MRA	**San Martin**	**3.17**	**105**	*eP*	**Pn**	**13 33 32.0**	**-0.1**
MRA				IAML		13 34 36.1	
	comp=Z,344nm,0.6s						
RFA	**San Rafael**	**3.20**	**167**	*eP*	**Pn**	**13 33 31.6**	**-0.8**
RFA				*eS*	**Sn**	**13 34 07.7**	**-2.3**
RFA				IAML		13 34 09.6	
	comp=Z,232nm,0.5s						
LAMA	**Las Malvinas**	**3.28**	**178**	*eP*	**Pn**	**13 33 33.1**	**-0.2**
BO02	**Sierra Bellavi**	**3.36**	**201**	↑*eP*	**Pn**	**13 33 34.2**	**-0.3**
BO02				*i* S	**Sn**	**13 34 12.2**	**-1.6**
BO02	**Sierra Bellavi**	**3.36**	**201**		**Pn**	**13 33 33.5**	**-1.0**
AC04	**Llanos de Chal**	**3.74**	**336**	↑*eP*	**Pn**	**13 33 39.2**	**-0.4**
AC04				*i* S	**Sn**	**13 34 21.8**	**-1.1**
AC04	**Llanos de Chal**	**3.74**	**336**		**Pn**	**13 33 38.8**	**-0.8**
PUMA	**Malargue**	**3.84**	**181**	*eP*	**Pn**	**13 33 41.1**	**+0.2**
TCA	**Tanti**	**4.07**	**87**	*eP*	**Pn**	**13 33 43.2**	**-0.8**
TCA				*eS*	Sn	13 34 16.4	-14
TCA				IAML		13 34 29.4	
	comp=Z,186nm,0.6s						
GO03	**Copiap**	**4.11**	**349**	↑*iP*	**Pn**	**13 33 44.1**	**-0.4**
GO03				*i* S	**Sn**	**13 34 31.1**	**-0.7**
GO03	**Copiap**	**4.11**	**349**		**Pn**	**13 33 43.8**	**-0.7**
GO03	**Copiap**	**4.11**	**349**	*eP*	**Pn**	**13 33 44.4**	**-0.2**
GO03				*eS*	**Sn**	**13 34 29.8**	**-2.1**
SUCO	**SUCO**	**4.13**	**115**	*eP*	**Pn**	**13 33 44.8**	**0.0**
SUCO				IAML		13 35 07.3	
	comp=Z,140nm,1.0s						
AC02	**Maricunga**	**4.80**	**2**	Pn	**Pn**	**13 33 54.0**	**-0.2**
BI02	**San Fabin de**	**5.25**	**197**		**Pn**	**13 33 57.7**	**-2.2**
AC01	**Pan de Azucar**	**5.59**	**348**		**Pn**	**13 34 02.2**	**-2.2**
GO02	**Mina Guanaco**	**6.46**	**358**		**Pn**	**13 34 14.5**	**-2.0**
PB14	**IPOC Station P**	**7.06**	**352**	Pn	**Pn**	**13 34 21.1**	**-3.5**
PB14	**IPOC Station P**	**7.06**	**352**	*eP*	**Pn**	**13 34 21.5**	**-3.0**
PB14				IAML		13 36 06.0	
	comp=Z,35nm,0.5s						
LC01	**Cunco**	**7.53**	**195**	Pn	**Pn**	**13 34 29.6**	**-1.0**
PB01	**IPOC Station P**	**8.17**	**352**	Pn	**Pn**	**13 34 37.0**	**-2.4**
PB15	**IPOC Station P**	**8.41**	**359**	Pn	**Pn**	**13 34 39.9**	**-2.9**
PB06	**IPOC Station P**	**8.91**	**359**	Pn	**Pn**	**13 34 48.3**	**-1.3**
LVC	**Limon Verde**	**9.01**	**3**	P	**Pn**	**13 34 48.9**	**-2.2**
	comp=Z,1.8nm,0.3s,baz=160,slow=9.1,SNR=7.7						
LVC				S	**Sn**	**13 36 24.6**	**-6.4**
	comp=Z,1.1nm,0.3s,baz=248,slow=19,SNR=1.9						
LVC	**Limon Verde**	**9.01**	**3**		**Pn**	**13 34 48.1**	**-3.0**
PLCA	**Paso Flores**	**9.12**	**186**	P	**Pn**	**13 34 51.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=22,slow=12,SNR=4.5						
PLCA	**Paso Flores**	**9.12**	**186**		**Pn**	**13 34 50.6**	**-1.6**
PB09	**IPOC Station P**	**9.81**	**1**	Pn	**Pn**	**13 34 59.0**	**-2.7**
PB07	**IPOC Station P**	**9.89**	**357**	Pn	**Pn**	**13 34 59.5**	**-3.4**
PB01	**IPOC Station P**	**10.56**	**359**	Pn	**Pn**	**13 35 07.7**	**-4.2**
LL01	**San Ignacio de**	**10.99**	**192**	Pn	**Pn**	**13 35 13.0**	**-4.3**
PB08	**IPOC Station P**	**11.46**	**1**	Pn	**Pn**	**13 35 23.2**	**-0.9**
CPUP	**Villa Florida**	**11.77**	**66**	P	**Pn**	**13 35 28.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=238,slow=5.7,SNR=3.1						
CPUP				S	**Sn**	**13 37 40.0**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=258,slow=14,SNR=1.7						
CPUP	**Villa Florida**	**11.77**	**66**	Pn	**Pn**	**13 35 25.7**	**-2.2**
PB11	**IPOC Station P**	**11.84**	**359**	Pn	**Pn**	**13 35 27.9**	**-1.1**
GO01	**Chusmiza**	**11.93**	**1**	Pn	**Pn**	**13 35 28.6**	**-1.9**
PSGCX	**Pisagua**	**12.02**	**356**	Pn	**Pn**	**13 35 30.1**	**-1.3**
MNMC	**Minye Minye**	**12.46**	**359**	Pn	**Pn**	**13 35 35.2**	**-2.1**
PB16	**IPOC Station P**	**13.26**	**359**	Pn	**Pn**	**13 35 47.3**	**-0.7**
LPAZ	**La Paz**	**15.33**	**4**	P	**P**	**13 36 16.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=192,slow=7.4,SNR=17						
LPAZ	**La Paz**	**15.33**	**4**	Pn	**Pn**	**13 36 12.8**	**-1.6**
SIV	**San Ignacio**	**17.31**	**28**	P	**Pn**	**13 36 39.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=237,slow=11,SNR=6.0						
EFI	**East Falkland**	**21.67**	**161**	P	**P**	**13 37 24.7**	**-0.1**
SAML	**Samuel**	**23.30**	**16**	P	**P**	**13 37 42.3**	**+0.8**
RCBR	**Riachuelo**	**40.47**	**58**	P	**P**	**13 40 11.8**	**+0.5**
RCBR				IAmb	IAmb	13 40 20.3	
	comp=Z,17nm,1.1s						
TOSP	**Speyside**	**43.53**	**13**	P	**P**	**13 40 36.5**	**+0.5**
BELA	**Belgrano 2**	**48.81**	**171**	P	**P**	**13 41 17.6**	**+0.9**
PDPR	**Patillas Dam,**	**49.48**	**4**	P	**P**	**13 41 21.5**	**-0.9**
PDPR				IAmb	IAmb	13 41 30.7	
	comp=Z,9.5nm,1.1s						
SNAA	**Sanae**	**52.92**	**159**	P	**P**	**13 41 48.0**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=292,slow=8.6,SNR=17						
SNAA	**Sanae**	**52.92**	**159**	IAmb	IAmb	13 41 49.2	
	comp=Z,2.8nm,1.0s						
TEIG	**Tepich**	**54.68**	**338**	P	**P**	**13 42 00.9**	**0.0**
QSPA	**South Pole Qui**	**58.59**	**180**	P	**P**	**13 42 29.0**	**+0.8**
QSPA				IAmb	IAmb	13 42 29.6	
	comp=Z,3.1nm,0.7s						
SHEL	**Horse Pasture**	**59.50**	**91**	P	**P**	**13 42 34.8**	**-0.4**
GOGA	**Godfrey**	**66.07**	**347**	P	**P**	**13 43 18.7**	**+0.5**
GOGA				IAmb	IAmb	13 43 22.9	
	comp=Z,11nm,1.4s						
TXAR	**Lajitas Array**	**68.87**	**328**	P	**P**	**13 43 37.2**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=158,slow=8.7,SNR=5.4						
TX31	**Lajitas Ar. Si**	**68.87**	**328**	P	**P**	**13 43 36.8**	**+0.8**
WVT	**Waverly**	**69.61**	**344**	P	**P**	**13 43 40.0**	**-0.4**
WVT				IAmb	IAmb	13 43 41.4	
	comp=Z,7.5nm,0.8s						
DBIC	**Dimbokro**	**72.26**	**70**	P	**P**	**13 43 57.1**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=223,slow=7.4,SNR=4.0						
DBIC	**Dimbokro**	**72.26**	**70**	IAmb	IAmb	13 44 09.4	
	comp=Z,5.0nm,0.9s						
CCM	**Cathedral Cave**	**72.29**	**342**	P	**P**	**13 43 57.0**	**+0.5**
CCM				IAmb	IAmb	13 44 22.2	
	comp=Z,3.7nm,0.7s						
M55A	**Ridgway**	**73.27**	**353**	P	**P**	**13 44 02.8**	**+0.6**
M55A				IAmb	IAmb	13 44 05.2	
	comp=Z,22nm,1.4s						
F64A	**Sherman**	**77.15**	**1**	P	**P**	**13 44 25.5**	**+1.2**
F64A				IAmb	IAmb	13 44 33.3	
	comp=Z,28nm,1.4s						
LMN	**Caledonia Moun**	**77.24**	**3**	P	**P**	**13 44 25.6**	**+0.8**
LMN				IAmb	IAmb	13 44 42.6	
	comp=Z,28nm,1.3s						
KOWA	**Kowa**	**77.59**	**64**	P	**P**	**13 44 27.9**	**+0.4**
E63A	**Oxbow**	**77.71**	**1**	P	**P**	**13 44 28.5**	**+1.1**
E63A				IAmb	IAmb	13 44 44.3	
	comp=Z,18nm,1.4s						
TORD	**Torodi Ar. Bea**	**81.26**	**69**	P	**P**	**13 44 47.7**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=269,slow=4.9,SNR=10.0						
TORD				pP	**pP**	**13 45 17.0**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=285,slow=4.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**81.26**	**69**	P	**P**	**13 44 47.6**	**+0.2**
PDAR	**Pinedale Array**	**82.74**	**331**	P	**P**	**13 44 56.5**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=159,slow=2.8,SNR=4.2						
NVAR	**Mina Array Bea**	**83.30**	**323**	P	**P**	**13 44 59.2**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=145,slow=5.4,SNR=4.5						
ASAR	**Alice Springs**	**120.67**	**205**	PKP	**PKPdf**	**13 51 21.4**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=106,slow=1.3,SNR=1.8						
WRA	**Warramunga Arr**	**123.90**	**207**	PKP	**PKPdf**	**13 51 27.9**	**-1.0**
	comp=Z,0.4nm,0.8s,

YM10	**YM10**	**0.56 309**	P		**Pb**	**14 26 09.1**	**-0.3**
	baz=309							
YM08	**YM08**	**0.56 313**	P		**Pb**	**14 26 08.8**	**-0.7**
	baz=313							
YM04	**YM04**	**0.58 308**	P		**Pb**	**14 26 09.3**	**-0.4**
	baz=307							
YM03	**YM03**	**0.59 310**	P		**Pb**	**14 26 09.6**	**-0.4**
	baz=310							
ANP	**Anpu**	**0.61 309**	*i* P		**Pb**	**14 26 09.6**	**-0.7**
	baz=310							
YHNB	**Yeheng**	**0.62 258**	P		**Pg**	**14 26 08.9**	**-0.6**
	baz=250							
YHNB			*e*S		**Sg**	**14 26 16.8**	**-0.8**
	baz=250							
TWY	**Chenhua**	**0.62 320**	*i* P		**Pb**	**14 26 10.0**	**-0.4**
	baz=320							
NSK	**Sanguang**	**0.63 259**	*i* P		**Pg**	**14 26 09.2**	**-0.5**
	baz=250							
NSK			*e*S		**Sg**	**14 26 18.0**	**-0.1**
	baz=250							
NTST	**Danshui**	**0.65 304**	P		**Pb**	**14 26 11.1**	**+0.2**
	baz=304							
NNSB	**Datong**	**0.70 238**	P		**Pg**	**14 26 10.8**	**-0.3**
	baz=238							
NNSB			S		**Sb**	**14 26 21.1**	**-0.6**
	baz=238							
NNSH	**Datong**	**0.70 238**	*i* P		**Pg**	**14 26 10.9**	**-0.2**
	baz=238							
NNSH			S		**Sb**	**14 26 21.0**	**-0.8**
	baz=238							
NNS	**Nan Shan**	**0.71 240**	*i* P		**Pg**	**14 26 11.0**	**-0.1**
	baz=238							
NACB	**Ninganchiao**	**0.74 213**	P		**Pg**	**14 26 11.9**	**+0.1**
	baz=203							
NACB			S		**Sb**	**14 26 22.2**	**-0.6**
	baz=203							
ETLH	**Xiulin Townshi**	**0.78 221**	P		**Pg**	**14 26 12.3**	**-0.2**
	baz=230							
ETLH			S		**Sb**	**14 26 23.0**	**-0.9**
	baz=230							
NCU	**National Centr**	**0.79 283**	P		**Pb**	**14 26 13.7**	**+0.3**
	baz=282							
NCUH	**Zhongli**	**0.80 282**	*i* P		**Pn**	**14 26 14.5**	**-0.3**
	baz=282							
TWD	**Chiawan**	**0.82 210**	*i* P		**Pg**	**14 26 13.1**	**-0.2**
	baz=201							
TWD			*i* S		**Sg**	**14 26 23.8**	**-0.2**
	baz=201							
PCYT	**Pengchaiyu**	**0.83 2**	*i* P		**Pb**	**14 26 14.2**	**+0.2**
	baz=2.0							
JYNG	**Yonagunijimaku**	**0.89 113**	P		**Pg**	**14 26 15.2**	**+0.6**
JYNG			*e*S		**Sb**	**14 26 27.9**	**+0.9**
HWA	**Hwalien**	**0.91 206**	*e*P		**Pb**	**14 26 15.2**	**-0.1**
	baz=212							
FUSS	**Fushou**	**0.91 233**	*i* P		**Pg**	**14 26 14.6**	**-0.4**
	baz=223							
YOJ	**Yonaguni jima**	**0.94 111**	P		**Pg**	**14 26 16.0**	**+0.4**
	baz=111							
YOJ			S		**Sn**	**14 26 30.3**	**-0.1**
	baz=111							
YOJ	**Yonaguni jima**	**0.94 111**	P		**Pg**	**14 26 16.0**	**+0.4**
YOJ			*e*S		**Sb**	**14 26 29.1**	**+0.6**
LIOB	**Emei**	**0.94 261**	*i* P		**Pn**	**14 26 16.7**	**-0.1**
	baz=260							
LIOB			*e*S		**Sn**	**14 26 29.3**	**-1.1**
	baz=260							
TWT	**Tachien**	**0.96 236**	*i* P		**Pn**	**14 26 17.3**	**+0.1**
	baz=227							
SBCB	**Hsinchu**	**0.96 270**	P		**Pn**	**14 26 16.8**	**-0.3**
	baz=286							
SBCB			*e*S		**Sn**	**14 26 30.7**	**-0.1**
	baz=286							
NSTT	**Nanjuang**	**0.96 260**	*i* P		**Pn**	**14 26 16.7**	**-0.3**
	baz=259							
NSTT			S		**Sb**	**14 26 29.0**	**0.0**
	baz=259							
WHF	**Hehuan Shan**	**0.96 228**	*i* P		**Pg**	**14 26 15.4**	**-0.6**
	baz=227							
WHF			S		**Sb**	**14 26 29.6**	**+0.1**
	baz=227							
TDCB	**Techi**	**0.97 236**	P		**Pb**	**14 26 16.5**	**0.0**
	baz=228							
CHGB	**Renai**	**1.08 227**	P		**Pg**	**14 26 17.8**	**-0.4**
	baz=228							
CHGB			*e*S		**Sg**	**14 26 31.9**	**-0.4**
	baz=228							
WHP	**Taichung City**	**1.12 243**	*i* P		**Pn**	**14 26 19.3**	**-0.1**
	baz=243							
ESL	**Shilin**	**1.13 210**	*i* P		**Pg**	**14 26 18.6**	**-0.5**
	baz=210							
ESL			S		**Sg**	**14 26 33.5**	**-0.2**
	baz=210							
NMLH	**Miaoli**	**1.17 257**	*i* P		**Pn**	**14 26 21.0**	**+1.1**
	baz=245							
NMLH			S		**Sn**	**14 26 36.9**	**+1.0**
	baz=245							
NSY	**Sanyi**	**1.23 252**	*e*P		**Pg**	**14 26 22.1**	**+1.1**
	baz=252							
NSY			S		**Sn**	**14 26 37.8**	**+0.4**
	baz=252							
TWQ1	**Liyutan**	**1.24 249**	*i* P		**Pg**	**14 26 22.6**	**+1.3**
	baz=249							
TWQ1			*e*S		**Sn**	**14 26 39.0**	**+1.3**
	baz=249							
EGFH	**Guangfu**	**1.26 207**	*i* P		**Pn**	**14 26 20.7**	**-0.4**
	baz=214							
EGFH			*e*S		**Sg**	**14 26 37.9**	**0.0**
	baz=214							
DPDB	**Guoxing**	**1.27 233**	P		**Pg**	**14 26 22.0**	**+0.2**
	baz=223							
WDJ	**Dajia District**	**1.35 251**	*e*P		**Pg**	**14 26 23.6**	**+0.2**
	baz=251							
WDJ			*e*S		**Sg**	**14 26 41.7**	**+0.7**
	baz=251							
SMLT	**Sun Moon Lake**	**1.38 229**	*i* P		**Pg**	**14 26 23.6**	**-0.4**
	baz=230							
SMLT			*e*S		**Sg**	**14 26 42.1**	**0.0**
	baz=230							
TYC	**Yuchr**	**1.40 231**	*i* P		**Pb**	**14 26 23.5**	**-0.2**
	baz=231							
TYC			*e*S		**Sn**	**14 26 41.5**	**-0.1**
	baz=231							
TCU	**Taichung**	**1.40 243**	P		**Pg**	**14 26 25.2**	**+0.9**
	baz=243							
TCU			*e*S		**Sg**	**14 26 43.6**	**+1.0**
	baz=243							
SSLB	**Suanglung**	**1.41 225**	P		**Pb**	**14 26 23.6**	**-0.4**
	baz=226							
SSLB			S		**Sb**	**14 26 41.7**	**-0.4**
	baz=226							
HGSD	**Ruisui**	**1.42 204**	P		**Pg**	**14 26 24.7**	**0.0**
	baz=223							
HGSD			*e*S		**Sg**	**14 26 43.8**	**+0.7**
	baz=223							
EHY	**Hungye**	**1.45 207**	*i* P		**Pn**	**14 26 23.9**	**+0.2**
	baz=220							
EHY			S		**Sg**	**14 26 44.0**	**0.0**
	baz=220							
WNT	**Mingjian**	**1.54 234**	P		**Pg**	**14 26 27.0**	**0.0**
	baz=254							
WNT			S		**Sg**	**14 26 48.6**	**+1.6**
	baz=254							
WHYT	**Xinyi Township**	**1.54 225**	*e*P		**Pb**	**14 26 25.6**	**-0.6**
	baz=226							
WHYT			*e*S		**Sb**	**14 26 45.9**	**0.0**
	baz=226							
WJS	**Zhushan**	**1.54 231**	*i* P		**Pg**	**14 26 26.9**	**-0.2**
	baz=223							
WJS			*e*S		**Sg**	**14 26 48.4**	**+1.3**
	baz=223							
YULB	**Yu-li**	**1.56 206**	P		**Pb**	**14 26 26.2**	**-0.2**
	baz=218							
YULB			S		**Sn**	**14 26 45.9**	**+0.3**
	baz=218							
EYUL	**Yuli**	**1.59 205**	P		**Pb**	**14 26 26.7**	**-0.2**
	baz=218							
EYUL			*e*S		**Sg**	**14 26 48.2**	**-0.3**
	baz=218							
TWF1	**Yuli**	**1.59 205**	*i* P		**Pb**	**14 26 26.6**	**-0.5**
	baz=217							
IRIF	**Iriomote-Funau**	**1.61 106**	P		**Pn**	**14 26 25.3**	**-0.6**
ALS	**Alishan**	**1.71 222**	*i* P		**Pg**	**14 26 30.5**	**+0.3**
	baz=211							
ALS			*e*S		**Sg**	**14 26 52.7**	**+0.2**
	baz=211							
CHN5	**Tsauling**	**1.73 226**	*i* P		**Pg**	**14 26 31.2**	**+0.6**
	baz=229							
CHN5			S		**Sg**	**14 26 54.1**	**+1.1**
	baz=229							
FULB	**Fuli**	**1.73 203**	P		**Pb**	**14 26 29.1**	**-0.4**
	baz=222							
FULB			*e*S		**Sb**	**14 26 51.7**	**+0.4**
	baz=222							
WDLH	**Douliu**	**1.76 231**	P		**Pg**	**14 26 30.5**	**-0.7**
	baz=249							
WDLH			*e*S		**Sg**	**14 26 54.5**	**+0.4**
	baz=249							
HATJ	**Hateruma jima**	**1.77 114**	P		**Pn**	**14 26 28.2**	**0.0**
HATJ			S		**Sn**	**14 26 50.3**	**-0.4**
ELDTW	**Lidau**	**1.86 211**	*i* P		**Pb**	**14 26 31.2**	**-0.4**
	baz=214							
ELDTW			S		**Sb**	**14 26 54.5**	**-0.5**
	baz=214							
WTK	**Tuku**	**1.87 234**	*e*P		**Pb**	**14 26 31.7**	**-0.1**
	baz=235							
JKRS	**Kuro-shima**	**1.88 107**	P		**Pn**	**14 26 29.7**	**+0.1**
JKRS			*e*S		**Sn**	**14 26 52.9**	**-0.5**
CHN2	**Minshiung**	**1.91 229**	*e*S		**Sg**	**14 26 58.8**	**0.0**
	baz=247							
EDH	**Donghe**	**1.94 201**	P		**Pn**	**14 26 31.3**	**+0.8**
	baz=185							
EDH			*e*S		**Sb**	**14 26 56.3**	**-0.9**
	baz=185							
CHN4	**Tsaushan**	**1.96 223**	*i* P		**Pg**	**14 26 34.3**	**-0.7**
	baz=213							
CHN4			S		**Sg**	**14 27 00.7**	**+0.3**
	baz=213							
JIJ	**Ishigaki jima**	**1.96 102**	P		**Pn**	**14 26 30.3**	**-0.5**
TPUB	**Ta-pu**	**1.97 221**	P		**Pb**	**14 26 34.1**	**+0.6**
	baz=210							
TPUB			S		**Sg**	**14 27 00.3**	**-0.6**
	baz=210							
STYT	**Tauyuan**	**2.01 216**	*i* P		**Pb**	**14 26 34.5**	**+0.4**
	baz=209							
STYT			*i* S		**Sg**	**14 27 01.8**	**-0.2**
	baz=209							
WTP	**Ta-pu**	**2.02 220**	*i* P		**Pg**	**14 26 35.4**	**-0.9**
	baz=211							
WTP			S		**Sg**	**14 27 01.5**	**-1.0**
	baz=211							
LONT	**Longtian**	**2.06 204**	*i* P		**Pn**	**14 26 32.6**	**+0.4**
	baz=207							
JISG	**Ishigakijimahi**	**2.08 95**	P		**Pn**	**14 26 31.9**	**-0.5**
TWK	**Hsinying**	**2.08 223**	P		**Pb**	**14 26 35.6**	**+0.2**
	baz=229							
TWK			S		**Sg**	**14 27 03.4**	**-1.1**
	baz=229							
SNST	**Tainan City**	**2.11 222**	P		**Pb**	**14 26 35.7**	**-0.2**
	baz=228							
SNST			S		**Sg**	**14 27 03.9**	**-1.5**
	baz=228							
CHN1	**Nanshi**	**2.12 221**	*i* P		**Pb**	**14 26 36.7**	**+0.7**
	baz=212							
CHN1			*e*S		**Sg**	**14 27 04.4**	**-1.3**
	baz=212							
ICHU	**Yijhu**	**2.15 229**	P		**Pb**	**14 26 36.5**	**0.0**
	baz=249							
ICHU			*e*S		**Sg**	**14 27 05.1**	**-1.6**
	baz=249							
TWG	**Pinlang**	**2.16 204**	P		**Pb**	**14 26 35.3**	**-1.4**
	baz=209							
TWG			S		**Sn**	**14 27 01.8**	**+1.4**
	baz=209							
TWGBT	**Beinan**	**2.16 204**	*e*P		**Pn**	**14 26 34.0**	**+0.4**
	baz=194							
SGST	**Jiashian**	**2.17 218**	P		**Pb**	**14 26 36.2**	**-0.7**
	baz=210							
SGST			S		**Sg**	**14 27 06.2**	**-1.0**
	baz=210							
PTTC	**Pingtan**	**2.17 289**	P		**Pn**	**14 26 35.0**	**+1.3**
	baz=286							
SLGT	**Liugui**	**2.21 216**	*i* P		**Pb**	**14 26 37.5**	**0.0**
	baz=221							
SLGT			S		**Sb**	**14 27 06.0**	**+1.1**
	baz=221							
MATB	**Ma-tsu**	**2.32 306**	P		**Pn**	**14 26 35.9**	**+0.1**
	baz=301							
VWUC	**VWUC**	**2.36 275**	*e*P		**Pn**	**14 26 36.2**	**-0.1**
	baz=273							
SCST	**Cishan**	**2.37 217**	P		**Pb**	**14 26 38.8**	**-1.5**
	baz=224							
SCST			*e*S		**Sb**	**14 27 11.1**	**+1.4**
	baz=224							
ECL	**Taimali**	**2.41 205**	*e*P		**Pn**	**14 26 38.6**	**+1.7**
	baz=197							
ECL			*e*S		**Sn**	**14 27 07.4**	**+0.9**
	baz=197							
SSD	**Sandimen**	**2.42 213**	P		**Pb**	**14 26 39.8**	**-1.2**
	baz=218							
SSD			S		**Sb**	**14 27 11.8**	**+0.8**
	baz=218							
TSMG	**Majia**	**2.45 212**	P		**Pb**	**14 26 41.0**	**-0.5**
	baz=219							
TSMG			*e*S		**Sb**	**14 27 11.3**	**-0.5**
	baz=219							
MASBT	**Mashibuluo**	**2.53 211**	P		**Pb**	**14 26 42.6**	**-0.4**
	baz=218							
MASBT			*e*S		**Sb**	**14 27 13.2**	**-1.1**
	baz=218							
PHUB	**P'eng-hu**	**2.59 241**	*e*P		**Pn**	**14 26 40.2**	**+0.7**
	baz=243							
EAST	**Anshuo**	**2.64 205**	P		**Pn**	**14 26 41.7**	**+1.5**
	baz=197							
PTMZ	**Houxiangcun**	**2.66 276**	P		**Pn**	**14 26 41.0**	**+0.6**
	baz=273							
SSPT	**Xinbi**	**2.67 211**	*e*P		**Pb**	**14 26 44.2**	**-1.2**
	baz=199							
LYJJ	**Jianjiangzhen**	**2.70 311**	*e*P		**Pn**	**14 26 41.7**	**+0.8**
	baz=307							
XPSS	**Dashiqiu**	**2.70 322**	P		**Pn**	**14 26 41.9**	**+1.0**
	baz=316							
SCZT	**Fangliau**	**2.75 209**	*e*P		**Pb**	**14 26 44.3**	**-2.4**
	baz=198							
SLIU	**Shizi**	**2.81 204**	P		**Pn**	**14 26 44.6**	**+2.1**
	baz=197							
MHZQ	**Yeshan**	**3.02 296**	*e*P		**Pn**	**14 26 47.2**	**+1.9**
	baz=292							

*JMA **12** 14:28:01.6±0.1, 24°.82N×121°.95E, h45km±4km, M2.5*
*TAP **12** 14:28:01.4, 24°.81N×122°.01E, h9km, ML2.9, C*
ISC 12 14:28:01.4±0.8, 24°.81N±0°.02×122°.01E±0°.02, h13km±5km, n57, σ0.46/95, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EGS		**0.08**	**296**	*i* P		**Pg**	**14 28 04.1**	**-0.2**
	baz=303							
EGS				S		**Sg**	**14 28 05.4**	**-0.8**
	baz=303							
NTC	**Toucheng**	**0.17**	**285**	P		**Pg**	**14 28 05.7**	**+0.2**
	baz=287							
NTC				S		**Sg**	**14 28 08.7**	**+0.5**
	baz=287							
TWB1	**Santiao Chiao**	**0.20**	**354**	P		**Pg**	**14 28 06.0**	**+0.1**
	baz=345							
TWB1				*i* S		**Sg**	**14 28 08.8**	**-0.2**
	baz=345							
TIPB	**Shuangxi**	**0.23**	**314**	*i* P		**Pg**	**14 28 06.8**	**+0.3**
	baz=314							
TIPB				S		**Sg**	**14 28 10.0**	**+0.1**
	baz=314							
ILA	**Ilan**	**0.24**	**260**	*e*P		**Pb**	**14 28 07.1**	**-0.5**
	baz=260							
ILA				*e*S		**Sg**	**14 28 11.6**	**+1.5**
	baz=260							
TWC	**Suao**	**0.25**	**217**	P		**Pg**	**14 28 06.6**	**-0.1**
	baz=216							
TWC				S		**Sg**	**14 28 09.8**	**-0.5**
	baz=216							
TWE	**Neicheng**	**0.33**	**254**	P		**Pg**	**14 28 08.2**	**+0.2**
	baz=254							
TWE				S		**Sg**	**14 28 12.4**	**-0.1**
	baz=254							
NWF	**Wu-fen Shan**	**0.33**	**321**	P		**Pb**	**14 28 08.9**	**-0.3**
	baz=313							
NWF				S		**Sb**	**14 28 14.1**	**-0.5**
	baz=313							
WFSB	**Wu-fen Shan**	**0.33**	**321**	*e*P		**Pb**	**14 28 08.9**	**-0.3**
	baz=313							
WFSB				S		**Sb**	**14 28 14.1**	**-0.4**
	baz=313							
ENAH	**Nanao**	**0.40**	**207**	*e*P		**Pg**	**14 28 09.7**	**+0.2**
	baz=216							
ENAH				*e*S		**Sg**	**14 28 15.0**	**+0.2**
	baz=216							
TWA	**Mucha**	**0.42 294**	*e*P			**Pb**	**14 28 10.2**	**-0.5**
	baz=284							
TWA				S		**Sb**	**14 28 16.5**	**-0.5**
	baz=284							
NWLT	**Wulai**	**0.46 266**	P			**Pb**	**14 28 11.0**	**-0.5**
	baz=267							
NWLT				S		**Sg**	**14 28 16.3**	**-0.6**
	baz=267							
NHDH	**Xindian Distri**	**0.47 289**	*e*P			**Pb**	**14 28 11.1**	**-0.4**
	baz=280							
NHDH				S		**Sg**	**14 28 15.9**	**-1.0**
	baz=280							
NDT	**Datong Townshi**	**0.50 246**	P			**Pb**	**14 28 11.9**	**-0.1**
	baz=247							
NDT				*e*S		**Sb**	**14 28 18.4**	**-0.7**
	baz=247							
TATO	**Taipei**	**0.50 289**	*e*P			**Pb**	**14 28 11.7**	**-0.4**
	baz=281							
TAP	**Taipei**	**0.51 297**	*e*P			**Pb**	**14 28 12.8**	**+0.6**
	baz=297							
YM01	**YM01**	**0.52 310**	P			**Pb**	**14 28 12.8**	**+0.3**
	baz=310							
YM11	**YM11**	**0.53 312**	P			**Pb**	**14 28 12.9**	**+0.3**
	baz=311							
YM10	**YM10**	**0.54 310**	P			**Pb**	**14 28 13.1**	**+0.4**
	baz=299							
YM10				*e*S		**Sb**	**14 28 20.8**	**+0.5**
	baz=299							
YM08	**YM08**	**0.54 315**	*i* P			**Pb**	**14 28 12.8**	**+0.1**
	baz=314							
YM04	**YM04**	**0.55 309**	*i* P			**Pb**	**14 28 13.3**	**+0.4**
	baz=308							
YM03	**YM03**	**0.56 311**	P			**Pb**	**14 28 13.6**	**+0.4**
	baz=310							
ANP	**Anpu**	**0.58 310**	P			**Pg**	**14 28 13.0**	**+0.1**
	baz=300							
ANP				*e*S		**Sb**	**14 28 21.9**	**+0.2**
	baz=300							
YHNB	**Yeheng**	**0.59 257**	P			**Pb**	**14 28 13.3**	**-0.4**
	baz=249							
YHNB				S		**Sb**	**14 28 22.1**	**+0.1**
	baz=249							
TWY	**Chenhua**	**0.60 321**	*e*P			**Pb**	**14 28 14.5**	**+0.9**
	baz=321							
NSK	**Sanguang**	**0.61 258**	P			**Pb**	**14 28 13.7**	**-0.3**
	baz=258							
NSK				S		**Sb**	**14 28 22.2**	**-0.2**
	baz=258							
NNSB	**Datong**	**0.69 237**	P			**Pg**	**14 28 14.8**	**0.0**
	baz=237							
NNSB				S		**Sb**	**14 28 24.7**	**0.0**
	baz=237							
NNSH	**Datong**	**0.69 237**	*e*P			**Pg**	**14 28 14.5**	**-0.3**
	baz=238							
NNSH				*e*S		**Sb**	**14 28 25.1**	**+0.4**
	baz=238							
NNS	**Nan Shan**	**0.69 238**	P			**Pb**	**14 28 15.5**	**+0.2**
	baz=238							
NNS				*e*S		**Sb**	**14 28 25.3**	**+0.6**
	baz=238							
NACB	**Ninganchiao**	**0.74 211**	P			**Pb**	**14 28 16.0**	**-0.1**
	baz=202							
NACB				*e*S		**Sb**	**14 28 26.0**	**-0.1**
	baz=202							
NCUH	**Zhongli**	**0.77 282**	*e*P			**Pn**	**14 28 18.0**	**+0.1**
	baz=282							
NCUH				*e*S		**Sn**	**14 28 29.1**	**-0.2**
	baz=282							
ETLH	**Xiulin Townshi**	**0.77 219**	P			**Pb**	**14 28 16.8**	**+0.1**
	baz=230							
ETLH				S		**Sb**	**14 28 27.2**	**+0.2**
	baz=230							
PCYT	**Pengchaiyu**	**0.82 4**	*e*P			**Pn**	**14 28 18.4**	**-0.2**
	baz=345							
PCYT				*e*S		**Sn**	**14 28 30.5**	**-0.1**
	baz=345							
TWD	**Chiawan**	**0.82 208**	*e*P			**Pb**	**14 28 17.7**	**+0.2**
	baz=201							
TWD				*e*S		**Sg**	**14 28 27.9**	**-0.1**
	baz=201							
FUSS	**Fushou**	**0.90 231**	*e*P			**Pg**	**14 28 18.7**	**-0.1**
	baz=232							
FUSS				*e*S		**Sb**	**14 28 31.2**	**+0.3**
	baz=232							
LIOB	**Emei**	**0.92 260**	*e*P			**Pn**	**14 28 20.0**	**0.0**
	baz=252							
JYNG	**Yonagunijimaku**	**0.92 113**	P			**Pg**	**14 28 19.3**	**+0.1**
JYNG				S		**Sg**	**14 28 31.7**	**+0.4**
NSTT	**Nanjuang**	**0.94 259**	P			**Pn**	**14 28 20.8**	**+0.6**
	baz=260							
WHF	**Hehuan Shan**	**0.95 226**	*e*P			**Pg**	**14 28 19.6**	**-0.3**
	baz=227							
WHF				*e*S		**Sb**	**14 28 32.5**	**-0.1**
	baz=227							
TDCB	**Techi**	**0.95 235**	*e*P			**Pb**	**14 28 19.7**	**-0.2**
	baz=227							
YOJ	**Yonaguni jima**	**0.97 111**	P			**Pb**	**14 28 20.4**	**+0.3**
	baz=111							
YOJ				S		**Sb**	**14 28 33.5**	**+0.7**
	baz=111							
YOJ	**Yonaguni jima**	**0.97 111**	P			**Pg**	**14 28 19.8**	**-0.4**
YOJ				*e*S		**Sg**	**14 28 33.1**	**+0.2**
CHGB	**Renai**	**1.07 226**	P			**Pb**	**14 28 21.9**	**0.0**
	baz=227							
WHP	**Taichung City**	**1.10 242**	*e*P			**Pn**	**14 28 23.3**	**+0.7**
	baz=243							
WHP				*e*S		**Sn**	**14 28 37.7**	**0.0**
	baz=243							
ESL	**Shilin**	**1.12 208**	P			**Pb**	**14 28 22.6**	**0.0**
	baz=210							
ESL				*e*S		**Sg**	**14 28 37.6**	**-0.1**
	baz=210							
EGFH	**Guangfu**	**1.25 205**	*e*P			**Pb**	**14 28 24.9**	**0.0**
	baz=213							
EGFH				*e*S		**Sb**	**14 28 40.5**	**-0.4**
	baz=213							
SSLB	**Suanglung**	**1.40 224**	*e*P			**Pb**	**14 28 27.1**	**-0.3**
	baz=225							
EHY	**Hungye**	**1.44 206**	*e*P			**Pg**	**14 28 28.6**	**-0.5**
	baz=219							
EHY				*e*S		**Sn**	**14 28 46.0**	**0.0**
	baz=219							
YULB	**Yu-li**	**1.55 205**	*e*P			**Pn**	**14 28 29.2**	**+0.5**
	baz=218							
TWF1	**Yuli**	**1.59 204**	*e*P			**Pb**	**14 28 30.3**	**-0.3**
	baz=217							
IRIF	**Iriomote-Funau**	**1.64 106**	P			**Pn**	**14 28 29.5**	**-0.3**
ALS	**Alishan**	**1.70 221**	*e*P			**Pg**	**14 28 33.5**	**-0.5**
	baz=224							
ALS				*e*S		**Sg**	**14 28 56.2**	**0.0**
	baz=224							
CHN5	**Tsauling**	**1.71 226**	*e*P			**Pg**	**14 28 35.1**	**+0.7**
	baz=229							
CHN5				S		**Sg**	**14 28 58.3**	**+1.7**
	baz=229							
FULB	**Fuli**	**1.73 202**	*e*S			**Sb**	**14 28 55.8**	**+1.0**
	baz=222							
ELDTW	**Lidau**	**1.85 210**	*e*P			**Pg**	**14 28 36.2**	**-0.8**
	baz=214							
ELDTW				*e*S		**Sb**	**14 28 57.7**	**-0.6**
	baz=214							
JKRS	**Kuro-shima**	**1.91 107**	P			**Pn**	**14 28 33.6**	**0.0**
JIJ	**Ishigaki jima**	**1.99 102**	P			**Pn**	**14 28 34.0**	**-0.7**

*IDC **12** 14:28:05.8±18.0, 22°.23S×174°.39W, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.8/46, mbtmp4.1/5, Error ellipse: s-maj=338.5km s-min=142.9km az=79.0*
*NEIC **12** 14:28:13.5±1.1, 22°.0S±0°.2×174°.70W±0°.09, h48km±15km, mb4.4/13, Error ellipse: s-maj=34.6km s-min=9.0km az=164.0*
ISC 12 14:28:13.0±1.2, 22°.1S±0°.2×174°.7W±0°.1, h35km, n22, σ0.69/22, mb4.3/10, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.38**	**57**	Pn		**Pn**	**14 29 30.8**	**0.0**
FUNA	**Funafuti**	**14.66**	**336**	Pn		**Pn**	**14 31 38.0**	**-0.1**
EIDS	**Eidsvold**	**31.44**	**257**	P		**P**	**14 34 31.3**	**0.0**
EIDS				IAmb		IAmb	14 34 48.5	
	comp=Z,9.6nm,1.4s							
CTA	**Charters Tower**	**36.40**	**266**	P		**P**	**14 35 15.0**	**+0.5**
	comp=Z,3.3nm,0.3s,baz=93,slow=11,SNR=17							
CTAO	**Charters Tower**	**36.40**	**266**	P		**P**	**14 35 14.9**	**+0.5**
CTAO				IAmb		IAmb	14 35 28.3	
	comp=Z,10nm,1

	comp=Z,0.9nm,0.5s,baz=93,slow=12,SNR=4.6						
STKA	**Stephens Creek**	**39.92**	**246**	P	**P**	**14 35 44.1**	**+0.1**
BBOO	**Buckleboo**	**44.64**	**245**	P	**P**	**14 36 21.8**	**-0.6**
BBOO				IAmb	IAmb	14 36 35.1	
	comp=Z,8.6nm,1.2s						
AS31	**Alice Springs**	**47.16**	**258**	P	**P**	**14 36 41.7**	**-0.8**
ASAR	**Alice Springs**	**47.16**	**258**	P	**P**	**14 36 41.9**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=104,slow=6.9,SNR=25						
ASAR	**Alice Springs**	**47.16**	**258**	P	**P**	**14 36 41.5**	**-1.0**
WR0	**Warramunga Arr**	**47.24**	**263**	P	**P**	**14 36 42.2**	**-0.9**
WR0				IAmb	IAmb	14 36 53.4	
	comp=Z,6.5nm,1.4s						
WB0	**Warramunga Arr**	**47.41**	**263**	P	**P**	**14 36 43.5**	**-0.9**
WB2	**Warramunga Arr**	**47.42**	**263**	P	**P**	**14 36 43.5**	**-0.9**
WB2				IAmb	IAmb	14 36 44.1	
	comp=Z,2.2nm,0.7s						
WRAB	**Tennant Creek**	**47.42**	**263**	P	**P**	**14 36 43.4**	**-1.1**
WRAB				IAmb	IAmb	14 36 54.8	
	comp=Z,5.1nm,1.4s						
WRA	**Warramunga Arr**	**47.43**	**263**	P	**P**	**14 36 43.7**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=102,slow=8.3,SNR=64						
WRA	**Warramunga Arr**	**47.43**	**263**	P	**P**	**14 36 43.4**	**-1.1**
FORT	**Forrest**	**51.51**	**248**	P	**P**	**14 37 15.1**	**-0.5**
MTN	**Manton Dam**	**52.24**	**271**	P	**P**	**14 37 21.4**	**+0.3**
KNRA	**Kununurra**	**53.61**	**266**	P	**P**	**14 37 31.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**55.86**	**263**	P	**P**	**14 37 48.1**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=84,slow=4.6,SNR=2.2						
FITZ	**Fitzroy Crossi**	**55.86**	**263**	P	**P**	**14 37 47.8**	**+0.2**

DDA ***12*** *14:38:08.2,37.47N×34.16E,h9km±1km,ML1.9*
ISK ***12*** *14:38:08.9,37.51N×34.25E,h19km, ML2.5/11*

ISC 12 14:38:08.4±1.0, 37.45N±0.04×34.22E±0.03, h7km±7km, n16, σ0°78/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KERG	**Konya-Eregli**	**0.08**	**245**	*i* P			**Pg**	**14 38 10.7**	**+0.2**
KERG				*i* S			**Sg**	**14 38 12.4**	**+0.3**
KERG				IAML				14 38 13.0	
	comp=N,5μm,0.3s								
KERG				IAML				14 38 14.0	
	comp=E,4μm,0.5s								
GULE	**Gulek**	**0.47**	**110**	*i* P			**Pb**	**14 38 18.5**	**-0.7**
GULE				*i* S			**Sb**	**14 38 26.4**	**-0.1**
GULE				IAML				14 38 32.0	
	comp=N,154nm,0.3s								
GULE				IAML				14 38 33.0	
	comp=E,192nm,0.4s								
YESY	**Yesilyurt**	**0.50**	**311**	PG			**Pb**	**14 38 19.0**	**-0.7**
YESY				SG			**Sb**	**14 38 26.9**	**-0.4**
MERS	**Mersin**	**0.63**	**157**	PG			**Pn**	**14 38 22.9**	**-1.0**
MERS				SG			**Sn**	**14 38 33.2**	**-1.0**
KARA	**Karaisali**	**0.69**	**106**	PG			**Pb**	**14 38 22.5**	**-0.3**
KARA				SG			**Sb**	**14 38 32.9**	**+0.3**
KRMN	**Karaman**	**0.81**	**250**	PG			**Pn**	**14 38 26.6**	**+0.2**
KRMN				SG			**Sn**	**14 38 38.1**	**-0.7**
AKO	**Adana**	**0.97**	**89**	*i* P			**Pn**	**14 38 27.9**	**-0.7**
AKO				*i* S			**Sn**	**14 38 43.9**	**+1.2**
AKO				IAML				14 38 47.0	
	comp=E,24nm,0.4s								
AKO				IAML				14 38 48.0	
	comp=N,23nm,0.3s								
KEBE	**Keben-Mersin**	**1.08**	**202**	PN			**Pn**	**14 38 29.9**	**-0.2**
KEBE				SN			**Sn**	**14 38 46.7**	**+1.4**
YAHY	**KAYSERI_Yahyal**	**1.11**	**54**	*i* P			**Pb**	**14 38 29.5**	**-0.5**
YAHY				*i* S			**Sn**	**14 38 47.9**	**+1.7**
YAHY				IAML				14 38 52.0	
	comp=E,12nm,0.4s								
YAHY				IAML				14 38 57.0	
	comp=N,9.6nm,0.5s								
TEVE	**Tevekalti-Mers**	**1.19**	**212**	PN			**Pn**	**14 38 31.9**	**+0.3**
TEVE				SN			**Sn**	**14 38 48.9**	**+0.9**
IKL	**Isikli**	**1.28**	**200**	PN			**Pg**	**14 38 33.0**	**0.0**
IKL				SN			**Sn**	**14 38 51.5**	**+1.3**
BERE	**Bereket-Mersin**	**1.36**	**216**	PN			**Pg**	**14 38 35.0**	**+0.5**
AKKU	**Akkuyu-Mersin**	**1.40**	**203**	PN			**Pg**	**14 38 35.2**	**0.0**
AKKU				SN			**Sg**	**14 38 53.6**	**+0.3**
SAIM	**ADANA**	**1.57**	**70**	*i* P			**Pg**	**14 38 38.6**	**+0.1**
TEKE	**Tekeli-Mersin**	**1.58**	**215**	PN			**Pb**	**14 38 37.6**	**-0.3**
GAZI	**Gazipasa**	**1.95**	**232**	PN			**Pb**	**14 38 43.4**	**-0.9**

KRSC 12 14:40:31.1±2.1, 50.48N×157.36E, h48km±25km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.82**	**285**	*eP*			Pn	14 40 47.3	+1.0
SKR				*eS*			Sn	14 40 57.6	+0.3
PAU	**Pauzhetka**	**1.05**	**341**	*eP*			Pn	14 40 51.5	+2.1
PAU				*eS*			Sn	14 41 04.9	+1.9
ALID	**Alaid**	**1.22**	**290**	*eP*			Pn	14 40 53.3	+1.5
ALID				*eS*			Sn	14 41 07.9	+0.7
KDTR	**Khodutka, Kamc**	**1.41**	**18**	*eP*			Pn	14 40 56.2	+1.9
KDTR				*eS*			Sn	14 41 13.4	+1.7
ASAK	**Asacha**	**1.94**	**10**	*eP*			Pn	14 41 04.1	+2.4
ASAK				*eS*			Sn	14 41 27.7	+2.8
RUS	**Russkaya**	**2.09**	**20**	*eP*			Pn	14 41 05.5	+1.9
RUS				*eS*			Sn	14 41 29.5	+1.1
GRL	**Gorelyy**	**2.13**	**12**	*eP*			Pn	14 41 07.2	+3.0
GRL				*eS*			Sn	14 41 32.3	+2.8
KRMR	**Karymshinskiy**	**2.41**	**11**	*eP*			Pn	14 41 11.6	+3.7
KRMR				*eS*			Sn	14 41 42.5	+6.3
PET	**Petropavlovsk**	**2.68**	**17**	*eP*			Pn	14 41 15.4	+3.8
PET				*eS*			Sn	14 41 45.9	+3.1
DALK	**Dalny**	**2.70**	**18**	*eP*			Pn	14 41 14.8	+2.8
DALK				*eS*			Sn	14 41 46.2	+2.8
UGLR	**Uglovaya**	**2.88**	**18**	*eP*			Pn	14 41 18.6	+4.0
UGLR				*eS*			Sn	14 41 52.7	+4.6
AVH	**Avacha**	**2.92**	**16**	*eP*			Pn	14 41 19.1	+4.0
AVH				*eS*			Sn	14 41 53.2	+4.2
KOK	**Koryaka**	**2.93**	**15**	*eP*			Pn	14 41 19.6	+4.4
KOK				*eS*			Sn	14 41 54.1	+4.9
SMAR	**Somma**	**2.93**	**17**	*eP*			Pn	14 41 18.7	+3.3
KRER	**Koryakskii**	**2.96**	**16**	*eP*			Pn	14 41 20.1	+4.4
KRER				*eS*			Sn	14 41 55.1	+5.0
SDLR	**Sedlovina**	**2.96**	**18**	*eP*			Pn	14 41 18.5	+2.8
SDLR				*eS*			Sn	14 41 54.3	+4.3
NLC	**Nalytchevo**	**2.97**	**24**	*eS*			Sn	14 41 49.7	-0.2
KRX	**Arik**	**3.00**	**15**	*eP*			Pn	14 41 20.2	+4.0
KRX				*eS*			Sn	14 41 56.4	+5.5
SPN	**Mys Shipunski**	**3.10**	**31**	*eP*			Pn	14 41 20.9	+3.4
SPN				*eS*			Sn	14 41 55.5	+2.2
GNL	**Ganaly**	**3.25**	**6**	*eP*			Pn	14 41 23.5	+3.9
MKZ	**Mys Kozlova**	**4.88**	**31**	*eP*			Pn	14 41 44.0	+2.2
KBTR	**Krutoberegovo**	**6.61**	**28**	P			Pn	14 42 08.0	+2.5

TAP 12 14:42:40.5, 24.18N×121.76E, h15km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.15**	**268**	P			Pg	14 42 44.1	-0.2
	baz=269								
NACB				S			Sg	14 42 46.9	0.0
	baz=269								
TWD	**Chiawan**	**0.18**	**236**	P			Pg	14 42 44.9	+0.1
	baz=243								
TWD				S			Sg	14 42 48.1	+0.5
	baz=243								
ETLH	**Xiulin Townshi**	**0.26**	**276**	P			Pg	14 42 46.0	0.0
	baz=276								
ETLH				S			Sg	14 42 50.1	+0.3
	baz=276								
ENAH	**Nanao**	**0.27**	**10**	P			Pg	14 42 45.9	-0.4
	baz=2.0								
ENAH				S			Sg	14 42 50.6	+0.4
	baz=2.0								
NNSB	**Datong**	**0.42**	**306**	P			Pg	14 42 49.2	+0.2
	baz=305								
NNSB				S			Sg	14 42 55.3	+0.5
	baz=305								
NNSH	**Datong**	**0.42**	**306**	*eP*			Pg	14 42 48.1	-0.9
	baz=305								
NNSH				S			Sg	14 42 55.2	+0.4
	baz=305								
TWC	**Suao**	**0.43**	**11**	*eP*			Pb	14 42 50.1	+0.3
	baz=7.0								
TWC				*eS*			Sb	14 42 56.2	0.0
	baz=7.0								
NNS	**Nan Shan**	**0.44**	**306**	P			Pg	14 42 49.6	+0.3
	baz=306								
NNS				S			Sg	14 42 55.6	+0.4
WHF	**Hehuan Shan**	**0.45**	**266**	P			Pg	14 42 49.9	+0.3
	baz=266								
WHF				*eS*			Sb	14 42 56.7	-0.5
	baz=266								
ESL	**Shilin**	**0.47**	**219**	*eP*			Pg	14 42 50.0	+0.1
	baz=226								
ESL				S			Sb	14 42 58.3	+1.1
	baz=226								
FUSS	**Fushou**	**0.47**	**278**	P			Pb	14 42 50.5	-0.2
	baz=279								
FUSS				*eS*			Sb	14 42 57.4	-0.2
	baz=279								
NDT	**Datong Townshi**	**0.48**	**332**	P			Pb	14 42 50.3	-0.3
	baz=331								
NDT				S			Sb	14 42 57.6	+0.2
	baz=331								
TWE	**Neicheng**	**0.55**	**351**	P			Pb	14 42 51.7	-0.1
	baz=350								
TWE				S			Sb	14 42 59.3	-0.1
	baz=350								
CHGB	**Renai**	**0.55**	**258**	P			Pb	14 42 52.0	+0.1
	baz=254								
CHGB				*eS*			Sb	14 43 00.2	+0.5
	baz=254								
TDCB	**Techi**	**0.55**	**278**	*eP*			Pb	14 42 52.5	+0.5
	baz=278								
TDCB				S			Sb	14 42 59.8	+0.1
	baz=278								
ILA	**Ilan**	**0.58**	**359**	*eP*			Pb	14 42 52.5	+0.1
	baz=353								
ILA				*eS*			Sb	14 43 00.4	-0.1
	baz=353								
YHNB	**Yeheng**	**0.60**	**324**	P			Pb	14 42 52.7	0.0
	baz=323								
YHNB				*eS*			Sb	14 43 01.3	+0.3
	baz=323								
NSK	**Sanguang**	**0.61**	**324**	P			Pb	14 42 52.9	-0.1
	baz=323								
NSK				S			Sb	14 43 01.6	+0.2
	baz=323								
NWLT	**Wulai**	**0.64**	**339**	*eP*			Pb	14 42 53.2	-0.2
	baz=337								
NWLT				*eS*			Sb	14 43 02.2	0.0
	baz=337								
WHP	**Taichung City**	**0.75**	**278**	*eP*			Pb	14 42 55.7	+0.5
	baz=278								
WHP				S			Sb	14 43 06.3	+0.9
	baz=278								
TIPB	**Shuangxi**	**0.79**	**4**	*eP*			Pg	14 42 55.7	-0.1
	baz=355								
TIPB				*eS*			Sg	14 43 06.1	-0.2
	baz=355								
SSLB	**Suanglung**	**0.83**	**242**	*eP*			Pn	14 42 57.7	0.0
	baz=252								
SSLB				*eS*			Sn	14 43 08.9	-0.9
	baz=252								
YULB	**Yu-li**	**0.89**	**208**	*eP*			Pb	14 42 56.6	-1.1
	baz=220								
YULB				*eS*			Sg	14 43 09.7	+0.2
	baz=220								

ANF ***12*** *14:42:54.3±0.4, 41.82N×119.69W, h0km, ML4.3/22, Error ellipse: s-maj=3.6km s-min=2.7km az=109.0*
SEA ***12*** *14:42:55.6±2.7, 41.81N±0.04×119.62W±0.05, h0km±5km, Error ellipse: s-maj=6.5km s-min=5.1km az=196.0*
NEIC ***12*** *14:42:56.0±2.0, 41.87N±0.04×119.68W±0.05, h6km±4km, Error ellipse: s-maj=5.4km s-min=5.0km az=135.0*
IDC ***12*** *14:42:55.0±0.5, 41.92N×119.72W, h0km, mb3.8/7, mb1 4.0/12,mb1mx3.8/38,mbtmp3.7/12, ML3.5/5, MS3.2/10, Ms1 3.2/10,ms1mx2.9/48, Error ellipse: s-maj=8.5km s-min=4.9km az=13.0*
REN ***12*** *14:42:55.7±2.1, 41.88N±0.04×119.66W±0.05, h2km±5km, ML4.1/4,mb4.2/8(NEIC),ML4.2/78(SEA), Mwr4.1/108(NEIC), Error ellipse: s-maj=6.5km s-min=5.0km az=188.0*
NEIC ***12*** *14:42:55.4, 41.85N×119.65W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-1.19; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$ 1.34; $M_{r\theta}$-0.60; $M_{r\phi}$0.54; $M_{\theta\phi}$-1.06; Fault plane solution: $M_0$1.84000×10^{15} NP1:ϕs27.20000°, δ66.33000°, λ-80.87000°. NP2:ϕs185.37000°, δ25.27000°, λ-109.91000°. Principal axes: T 1.9645, Plg21.0000°, Azm110.0000°; N -0.2882, Plg8.0000°, Azm204.0000°; P -1.6763, Plg67.0000°, Azm314.0000°;*

ISC 12 14:42:56.7±0.5, 41.89N±0.03×119.72W±0.03, h10km, n158, σ1°12/166, mb4.0/10, MS3.1/3, Nevada

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.44**	**272**				**Pg**	**14 43 04.8**	**-0.5**
MOD	**Modoc Plateau**	**0.44**	**272**				**Sg**	**14 43 12.0**	**+0.9**
K05A	**Summer Lake**	**1.21**	**314**	Pn			**Pb**	**14 43 19.0**	**-0.8**
M04C	**Macdoel**	**1.59**	**267**	P			**Pn**	**14 43 24.2**	**-0.8**
	baz=86,SNR=241								
M04C				S			**Sb**	**14 43 46.8**	**+0.4**
	baz=86								
K04D	**Chiloquin, OR**	**1.68**	**297**	P			**Pn**	**14 43 25.7**	**-0.6**
	baz=115,SNR=125								
K04D				S			**Sg**	**14 43 50.2**	**-0.5**
	baz=115								
J08A	**Circle Bar Ran**	**1.73**	**32**				**Pn**	**14 43 25.4**	**-1.6**
J05D	**Fort Rock, OR**	**1.79**	**322**	Pb			**Pb**	**14 43 29.3**	**-0.4**
	baz=140								
J05D				Sb			**Sg**	**14 43 54.9**	**+0.6**
	baz=140								
L04D	**Klamath Falls**	**1.95**	**281**	P			**Pn**	**14 43 29.1**	**-1.0**
	baz=99,SNR=453								
L04D				Sb			**Sg**	**14 43 59.0**	**-0.5**
	baz=99								
BEKR	**Beckworth**	**2.08**	**194**				**Pn**	**14 43 30.4**	**-1.4**
PINE	**Pine Mountain**	**2.10**	**335**				**Pn**	**14 43 32.5**	**+0.3**
PAHR	**Pah Rah Range**	**2.19**	**173**				**Pn**	**14 43 31.7**	**-1.6**
I07A	**Izee**	**2.20**	**4**				**Pn**	**14 43 33.3**	**-0.1**
J04D	**Umpqua Nationa**	**2.22**	**308**	Pb			**Pb**	**14 43 36.3**	**-0.8**
	baz=126								
J04D				Sb			**Sg**	**14 44 07.9**	**-0.3**
	baz=126								
O03E	**Paynes Creek**	**2.24**	**225**	P			**Pn**	**14 43 32.8**	**-1.1**
	baz=45,SNR=186								
O03E				Sb			**Sb**	**14 44 05.2**	**+0.2**
	baz=45								
YBH	**Yreka Blue Hor**	**2.24**	**267**	Pn			**Pn**	**14 43 33.0**	**-1.0**
	13nm,0.3s,baz=70,slow=13,SNR=69								
YBH				Pg			**Pb**	**14 43 35.7**	**-1.6**
	19nm,0.3s,baz=73,slow=14,SNR=90								
YBH				LR			LR	14 44 00.8	
	comp=Z,197nm,20.6s,baz=166,slow=29								
YBH				Lg			Lg	14 44 06.3	
	48nm,0.3s,baz=6.8,slow=14,SNR=13								
YBH	**Yreka Blue Hor**	**2.24**	**267**				**Pn**	**14 43 32.6**	**-1.4**
M02C	**Callahan**	**2.40**	**259**	P			**Pn**	**14 43 34.6**	**-1.5**
	baz=77,SNR=26								
M02C				Sb			**Sb**	**14 44 10.5**	**+0.7**
	baz=77								
N02D	**Trinity Center**	**2.42**	**249**	P			**Pn**	**14 43 34.8**	**-1.7**
	baz=67,SNR=15								
N02D				Sb			**Sb**	**14 44 12.1**	**+1.7**
	baz=67								
WDC	**Whiskeytown Da**	**2.50**	**239**				**Pn**	**14 43 36.3**	**-1.1**
HUMO	**Hull Mountain**	**2.51**	**288**				**Pn**	**14 43 36.2**	**-1.4**
VCNR	**Virginia City**	**2.59**	**179**	Pn			**Pn**	**14 43 37.2**	**-1.7**
ORV	**Oroville**	**2.69**	**211**				**Pn**	**14 43 39.2**	**-0.9**
I05D	**Terrebonne, OR**	**2.72**	**335**	Pb			**Pb**	**14 43 45.0**	**-0.5**
	baz=153								
I05D				Sb			**Sg**	**14 44 22.5**	**-1.6**
	baz=153								
I04A	**Tendick Farm,**	**2.75**	**315**	P			**Pn**	**14 43 41.1**	**+0.2**
	baz=132								
I04A				Sb			**Sg**	**14 44 23.2**	**-1.7**
	baz=132								
PNTR	**Pine Nut**	**2.80**	**178**				**Pn**	**14 43 41.0**	**-0.7**
RUBR	**Rubicon Trail**	**2.85**	**187**	Pn			**Pn**	**14 43 40.9**	**-1.6**
L02E	**Cave Junction**	**2.91**	**277**	P			**Pn**	**14 43 42.5**	**-0.5**
	baz=94,SNR=77								
K02D	**Willamette Mer**	**3.04**	**287**	P			**Pn**	**14 43 44.7**	**-0.2**
	baz=104,SNR=306								
KVN	**Kaiserville**	**3.09**	**156**				**Pn**	**14 43 44.2**	**-1.5**
KRMB	**Red Mountain**	**3.16**	**265**				**Pn**	**14 43 46.7**	**+0.1**
KHMM	**Horse Mountain**	**3.18**	**253**				**Pn**	**14 43 47.0**	**+0.1**
MFID	**Camas Ranch**	**3.25**	**61**				**Pn**	**14 43 46.3**	**-1.5**
H04A	**Detroit Lake**	**3.33**	**328**	Pn			**Pn**	**14 43 49.8**	**+1.0**
J01E	**Myrtle Point**	**3.36**	**294**	Pg			**Pg**	**14 43 59.7**	**-1.4**
	baz=111								
KBO	**Bosley Butte**	**3.37**	**277**				**Pn**	**14 43 49.5**	**0.0**
RYN	**Ryan**	**3.38**	**164**				**Pn**	**14 43 48.5**	**-1.2**
WAKR	**Walker**	**3.39**	**176**				**Pn**	**14 43 49.2**	**-0.6**
JCC	**Jacoby Creek,**	**3.42**	**253**				**Pn**	**14 43 50.0**	**0.0**
H04D	**Lebanon**	**3.44**	**321**	Pb			**Pb**	**14 43 57.8**	**+0.2**
	baz=139								
H04D				Sb			**Sg**	**14 44 44.5**	**-2.6**
	baz=139								
KMRM	**Mail Ridge**	**3.44**	**242**				**Pn**	**14 43 50.7**	**+0.2**
BMO	**Blue Mountains**	**3.45**	**30**				**Pn**	**14 43 50.0**	**-0.5**
G08A	**Pilot Rock**	**3.45**	**9**				**Pn**	**14 43 51.0**	**+0.4**
G05D	**Wamic, OR**	**3.55**	**341**	Pb			**Pb**	**14 43 59.4**	**-0.2**
	baz=160								
KEBM	**Edson Butte**	**3.56**	**288**	Pn			**Pn**	**14 43 52.4**	**+0.3**
ELK	**Elko**	**3.56**	**107**	Pn			**Pn**	**14 43 52.5**	**+0.3**
	2.3nm,0.3s,baz=294,slow=12,SNR=68								
ELK				Pg			**Pb**	**14 43 58.9**	**-1.0**
	16nm,0.3s,baz=12,slow=19,SNR=23								
ELK				Lg			Lg	14 44 46.7	
	36nm,0.3s,baz=37,slow=20,SNR=9.0								
NVAR	**Mina Array Bea**	**3.62**	**162**	Pn			**Pn**	**14 43 53.1**	**+0.1**
	2.6nm,0.3s,baz=342,slow=13,SNR=41								
NVAR				Pg			**Pb**	**14 44 01.2**	**+0.3**
	13nm,0.3s,baz=343,slow=15,SNR=34								
NVAR				Lg			Lg	14 44 49.4	
	27nm,0.3s,baz=349,slow=30,SNR=9.6								
NVAR				LR			LR	14 45 48.3	
	comp=Z,180nm,18.6s,baz=348,slow=47								
NVAR	**Mina Array Bea**	**3.62**	**162**				**Pn**	**14 43 52.5**	**-0.5**
NV11	**Mina Array Sit**	**3.65**	**160**				**Pn**	**14 43 53.2**	**-0.2**
KCPM	**Cahto Peak**	**3.67**	**234**	Pn			**Pn**	**14 43 54.6**	**+1.1**
LHV	**Little Huntoon**	**3.75**	**165**				**Pn**	**14 43 55.2**	**+0.7**
I02D	**Swisshome**	**3.75**	**308**	P			**Pn**	**14 43 55.2**	**+0.6**
	baz=124								
HOPS	**Hopland Field**	**3.86**	**223**	Pn			**Pn**	**14 43 55.3**	**-0.9**
GDXM	**Geysers**	**3.87**	**218**	Pn			**Pn**	**14 43 55.5**	**-0.9**
CMB	**Columbia Colle**	**3.88**	**188**				**Pn**	**14 43 56.8**	**+0.3**
F07A	**Phinny Hill Vi**	**4.01**	**358**	Pn			**Pn**	**14 43 57.6**	**-0.5**
PLID	**Pearl Lake**	**4.19**	**39**				**Pn**	**14 44 00.2**	**-0.6**
F05D	**White Salmon**	**4.19**	**343**	Sb			**Sb**	**14 45 05.6**	**+4.4**
	baz=161								
G03D	**McMinnville, O**	**4.21**	**323**	Pg			**Pg**	**14 44 16.4**	**-0.8**
	baz=141								
HLID	**Hailey**	**4.25**	**65**	P			**Pn**	**14 44 00.9**	**-0.8**
	baz=248								
HLID				Sb			**Sb**	**14 45 03.7**	**+0.7**
	baz=248								
HLID	**Hailey**	**4.25**	**65**				**Pn**	**14 44 00.8**	**-0.8**
TPH	**Tonopah**	**4.26**	**152**				**Pn**	**14 44 01.5**	**-0.4**
MDPB	**Devils Postpil**	**4.28**	**173**	Pn			**Pn**	**14 44 03.4**	**+1.2**
OMMB	**Old Mammoth Mi**	**4.30**	**172**				**Pn**	**14 44 04.2**	**+1.6**
MCCM	**Marconi Confer**	**4.46**	**214**	Pn			**Pn**	**14 44 04.8**	**+0.5**
F10A	**Beach Ranch, E**	**4.46**	**23**				**Pn**	**14 44 06.2**	**+1.7**
HAWA	**Hanford**	**4.51**	**2**				**Pn**	**14 44 04.7**	**-0.3**
E07A	**Sunnyside**	**4.67**	**359**				**Pn**	**14 44 08.1**	**+0.8**
R11A	**Troy Canyon, C**	**4.75**	**137**	P			**Pn**	**14 44 08.7**	**+0.2**
	baz=320								
R11A	**Troy Canyon, C**	**4.75**	**137**				**Pn**	**14 44 09.2**	**+0.8**
E09A	**Wood Farm, Sta**	**4.76**	**13**	Pn			**Pn**	**14 44 10.1**	**+1.6**
SPR3	**Spring Creek 3**	**5.02**	**123**				**Pn**	**14 44 14.0**	**+1.6**
E04D	**Cinebar**	**5.10**	**337**	Pg			**Pg**	**14 44 32.1**	**-2.2**
	baz=155								
BGU	**Big Grassy Mou**	**5.12**	**99**				**Pn**	**14 44 12.8**	**-0.8**
HVU	**Hansel Valley**	**5.19**	**89**	Pn			**Pn**	**14 44 14.6**	**+0.1**
GRAC	**Grapevine Rang**	**5.21**	**159**	P			**Pn**	**14 44 15.7**	**+0.9**
	baz=341								
BCYI	**Bear Canyon**	**5.22**	**60**				**Pn**	**14 44 14.9**	**-0.1**
SAO	**San Andreas Ge**	**5.29**	**195**	Pn			**Pn**	**14 44 14.9**	**-0.9**
SPUT	**South Promonto**	**5.48**	**94**	Pn			**Pn**	**14 44 17.7**	**-0.9**
DUG	**Dugway, Tooele**	**5.49**	**106**	P			**Pn**	**14 44 17.8**	**-0.8**
	baz=290								
DUG	**Dugway, Tooele**	**5.49**	**106**				**Pn**	**14 44 17.9**	**-0.7**
PSUT	**Pine Spring**	**5.60**	**125**	Pn			**Pn**	**14 44 21.0**	**+0.8**
TPNV	**Topopah Spring**	**5.62**	**150**	P			**Pn**	**14 44 21.2**	**+0.7**
	baz=333								
TPNV	**Topopah Spring**	**5.62**	**150**				**Pn**	**14 44 21.1**	**+0.7**
PMPB	**Monarch Peak**	**5.73**	**189**	Pn			**Pn**	**14 44 21.2**	**-0.7**
PRN	**Pahroc Range**	**5.74**	**140**				**Pn**	**14 44 22.9**	**+0.8**
MCMT	**McKenzie Canyo**	**5.81**	**57**				**Pn**	**14 44 22.3**	**-0.8**
CTU	**Camp Tracy**	**6.12**	**99**	Pn			**Pn**	**14 44 25.4**	**-1.9**
DLMT	**Dillon**	**6.23**	**54**				**Pn**	**14 44 27.6**	**-1.2**
TCUT	**Toone Canyon**	**6.29**	**94**				**Pn**	**14 44 28.2**	**-1.5**
JLU	**Jordanelle**	**6.36**	**99**				**Pn**	**14 44 30.5**	**-0.3**
MPU	**Maple Canyon**	**6.40**	**104**				**Pn**	**14 44 31.3**	**+0.1**
SHPR	**Sheep Range**	**6.43**	**145**				**Pn**	**14 44 32.5**	**+0.9**
**

ILAR					LR	LR	15 00 08.0				
	comp=Z,53nm,18.7s,baz=122,slow=37										
ILAR	**Eielson Array**		**27.66**	**335**	P	**P**	**14 48 46.1**	**+1.7**			
TKL	**Tuckaleechee C**		**28.56**	**91**	LR	LR	14 59 28.8				
	comp=Z,32nm,18.5s,baz=304,slow=35										
SADO	**Sadowa**		**29.44**	**70**	LR	LR	15 01 07.5				
	comp=Z,59nm,21.7s,baz=292,slow=37										
IMAR	**Indian Mountai**		**30.66**	**333**	P	**P**	**14 49 12.8**	**+1.8**			
NOA	**NORSAR Array B**		**69.94**	**23**	P	**P**	**14 54 08.0**	**+0.2**			
	comp=Z,0.5nm,0.6s,baz=320,slow=6.5,SNR=2.8										
FINES	**FINESS Array B**		**73.34**	**16**	P	**P**	**14 54 28.0**	**-0.1**			
	comp=Z,2.4nm,1.0s,baz=347,slow=10.0,SNR=4.3										
SONM	**Songino Array**		**81.79**	**331**	P	**P**	**14 55 15.9**	**+0.1**			
	comp=Z,0.2nm,0.4s,baz=34,slow=5.4,SNR=2.5										
ZALV	**Zalesovo Beam**		**82.24**	**346**	P	**P**	**14 55 17.8**	**0.0**			
	comp=Z,0.6nm,0.4s,baz=21,slow=5.2,SNR=4.0										
HHC	**Hu-ho-hao-te**		**85.46**	**324**	*e*P	**P**	**14 55 36.0**	**+1.3**			
HHC					pmax	pmax					
	comp=Z,14nm,0.8s										
HHC					pmax	pmax					
	comp=Z,130nm,7.6s										
WMQ	**Urumqi**		**91.19**	**341**	*e*P	**P**	**14 56 04.0**	**+2.0**			
LZH	**Lanzhou**		**92.76**	**326**	*e*P	**P**	**14 56 05.8**	**-3.7**			
LZH					pP	pP	14 56 12.3	-1.2			
LZH					sP	sP	14 56 15.0	+0.1			
LZH					pmax	pmax					
	comp=Z,17nm,1.4s										

JMA 12 14:43:08.5±0.1,24°.20N×123°.59E,h16km±1km,M1.3,
Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.18**	**44**	P	Pg	14 43 13.0	0.0
IRIF				*e*S	Sg	14 43 16.2	+0.1
HATJ	**Hateruma jima**	**0.24**	**126**	P	Pg	14 43 13.8	-0.1
JKRS	**Kuro-shima**	**0.39**	**84**	P	Pg	14 43 16.4	0.0
JKRS				S	Sb	14 43 22.3	-0.3
JIJ	**Ishigaki jima**	**0.53**	**72**	P	Pg	14 43 18.9	-0.1
JIJ				S	Sg	14 43 25.6	-0.6
JYNG	**Yonagunijimaku**	**0.64**	**293**	P	Pg	14 43 21.0	-0.1
JYNG				*e*S	Sg	14 43 28.8	-0.8
JISG	**Ishigakijimahi**	**0.76**	**59**	P	Pg	14 43 22.8	-0.6
JISG				*e*S	Sg	14 43 33.0	-0.5

*IDC **12** 15:26:08.5±2.8,7°.26S×153°.49E,h0km,mb3.5/4,*
mb1 3.7/5,mb1mx3.4/42,mbtmp3.5/5,ML3.4/1,Error
ellipse: s-maj=67.4km s-min=26.1km az=98.0

ISC 12 15:26:09.1±2.4,7°.3S±0°.1×153°.6E±0°.4,h10km,n6,σ1s04/7,
mb3.5/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.38**	**332**	Pn	**Pn**	**15 27 00.8**	**-1.1**
	3.6nm,0.3s,baz=48,slow=14,SNR=4.7						
KRVT				Sn	**Sn**	15 27 43.0	+1.0
	6.6nm,0.3s,baz=283,slow=8.9,SNR=3.8						
WRA	**Warramunga Arr**	**22.52**	**234**	P	**P**	**15 31 10.3**	**+1.0**
	0.7nm,0.7s,baz=59,slow=9.9,SNR=7.9						
ASAR	**Alice Springs**	**24.95**	**227**	P	**P**	**15 31 32.5**	**-0.4**
	0.3nm,0.5s,baz=58,slow=9.5,SNR=6.6						
FITZ	**Fitzroy Crossi**	**29.28**	**246**	P	**P**	**15 32 11.5**	**-0.3**
	1.1nm,0.7s,baz=90,slow=9.1,SNR=1.9						
MKAR	**Makanchi Array**	**82.74**	**319**	P	**P**	**15 38 33.6**	**+0.3**
	0.5nm,0.6s,baz=91,slow=4.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**151.78**	**284**	PKPbc	**PKiKP**	**15 46 06.6**	**+1.0**
	0.6nm,0.7s,baz=66,slow=3.5,SNR=3.4						

*IDC **12** 15:31:16.8±0.9,10°.87S×66°.65E,h0km,mb3.9/7,*
mb1 4.1/7,mb1mx3.6/61,mbtmp3.9/7,MS3.4/7,Ms1 3.4/7,
ms1mx3.1/39,Error ellipse: s-maj=29.7km s-min=26.1km
az=3.0
*NEIC **12** 15:31:18.0±0.9,10°.8S±0°.2×66°.69E±0°.09,h10km±1km,*
mb4.6/9,Error ellipse: s-maj=29.1km s-min=8.3km
az=153.0

ISC 12 15:31:18.1±0.8,10°.8S±0°.2×66°.7E±0°.1,h10km,n35,
σ0s68/25,mb4.2/10,MS3.5/7,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Garcia H**	**6.53**	**62**	T	T	15 39 40.0	
	baz=245,slow=75,SNR=10.0						
H08S2	**Diego Garcia H**	**6.55**	**62**	T	T	15 39 44.0	
	baz=245,slow=75,SNR=6.2						
H08S3	**Diego Garcia H**	**6.55**	**62**	T	T	15 39 42.8	
	baz=245,slow=75,SNR=31						
DGAR	**Diego Garcia**	**6.63**	**60**	Pn	**Pn**	**15 32 55.2**	**-0.5**
LSZ	**Lusaka**	**37.71**	**259**	P	**P**	**15 38 34.6**	**+0.2**
BOSA	**Boshof**	**42.56**	**239**	P	**P**	**15 39 14.5**	**-0.1**
	1.9nm,0.7s,baz=92,slow=5.1,SNR=3.8						
BOSA				LR	LR	15 53 55.2	
	comp=Z,60nm,20.1s,baz=36,slow=32						
BOSA	**Boshof**	**42.56**	**239**	P	**P**	**15 39 14.9**	**+0.4**
BOSA				IAmb	IAmb	15 39 30.3	
	comp=Z,16nm,1.4s						
CMAR	**Chiang Mai Arr**	**43.12**	**48**	P	**P**	**15 39 19.7**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=238,slow=9.9,SNR=5.3						
CMAR				LR	LR	15 57 17.1	
	comp=Z,21nm,18.2s,baz=192,slow=36						
H01W3	**Cape Leeuwin H**	**49.31**	**127**	T	T	16 33 04.6	
	baz=288						
H01W2	**Cape Leeuwin H**	**49.32**	**127**	T	T	16 33 08.3	
	baz=288						
H01W1	**Cape Leeuwin H**	**49.33**	**127**	T	T	16 33 06.9	
	baz=288						
KAPI	**Kappang**	**52.84**	**88**	LR	LR	16 00 00.6	
	comp=Z,21nm,21.3s,baz=246,slow=33						
FITZ	**Fitzroy Crossi**	**57.38**	**105**	LR	LR	16 01 35.1	
	comp=Z,23nm,21.6s,baz=297,slow=32						
MKAR	**Makanchi Array**	**59.01**	**12**	P	**P**	**15 41 19.0**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=186,slow=10,SNR=2.5						
MKAR	**Makanchi Array**	**59.01**	**12**	P	**P**	**15 41 19.9**	**+1.8**
ABKAR	**Akbulak array**	**60.08**	**355**	P	**P**	**15 41 24.1**	**-1.3**
ASAR	**Alice Springs**	**64.99**	**111**	P	**P**	**15 41 59.0**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=275,slow=6.0,SNR=7.7						
ASAR	**Alice Springs**	**64.99**	**111**	P	**P**	**15 41 58.1**	**-0.8**
WRA	**Warramunga Arr**	**65.53**	**107**	P	**P**	**15 42 02.5**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=274,slow=5.6,SNR=17						
WRA	**Warramunga Arr**	**65.53**	**107**	P	**P**	**15 42 03.2**	**+0.8**
WRAB	**Tennant Creek**	**65.54**	**107**	P	**P**	**15 42 02.2**	**-0.3**
WRAB				IAmb	IAmb	15 42 04.0	
	comp=Z,4.9nm,1.1s						
WB2	**Warramunga Arr**	**65.54**	**107**	P	**P**	**15 42 02.8**	**+0.3**
WB0	**Warramunga Arr**	**65.59**	**107**	P	**P**	**15 42 02.9**	**0.0**
WB0				IAmb	IAmb	15 42 10.6	
	comp=Z,6.5nm,1.4s						
WR0	**Warramunga Arr**	**65.72**	**107**	P	**P**	**15 42 03.2**	**-0.4**
WR0				IAmb	IAmb	15 42 06.2	
	comp=Z,3.6nm,0.9s						
SONM	**Songino Array**	**68.19**	**28**	P	**P**	**15 42 19.4**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=217,slow=5.8,SNR=12						
SONM				LR	LR	16 11 28.3	
	comp=Z,48nm,20.4s,baz=204,slow=35						
SONM	**Songino Array**	**68.19**	**28**	P	**P**	**15 42 18.3**	**-0.5**
DBIC	**Dimbokro**	**73.27**	**280**	LR	LR	16 13 28.1	
	comp=Z,46nm,19.1s,baz=79,slow=34						
KSRS	**Korea Array**	**74.73**	**46**	LR	LR	16 15 35.8	
	comp=Z,22nm,19.6s,baz=200,slow=36						
ESDC	**Sonseca Array**	**82.34**	**313**	P	**P**	**15 43 40.6**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=95,slow=5.2,SNR=4.3						
ESDC	**Sonseca Array**	**82.34**	**313**	P	**P**	**15 43 39.7**	**-0.8**
T42A	**Van Buren**	**147.07**	**326**		**PKPbc**	**15 51 01.4**	**-0.4**
PDAR	**Pinedale Array**	**147.98**	**355**	PKPbc	**PKPbc**	**15 51 04.3**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=98,slow=3.1,SNR=5.0						
PDAR	**Pinedale Array**	**147.98**	**355**		**PKPbc**	**15 51 04.1**	**-0.4**
NVAR	**Mina Array Bea**	**152.12**	**8**	PKPbc	**PKiKP**	**15 51 15.2**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=241,slow=1.5,SNR=5.0						
NVAR	**Mina Array Bea**	**152.12**	**8**		**PKPbc**	**15 51 14.7**	**0.0**

KRSC 12 15:57:21.4±2.5,48°.68N×156°.44E,h6km±41km,ML3.8,
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.01**	**354**	*e*P	Pn	15 57 55.4	-0.4
SKR				*e*S	Sn	15 58 21.0	-0.3
ALID	**Alaid**	**2.26**	**346**	*e*P	Pn	15 57 57.7	-1.7
PAU	**Pauzhetka**	**2.80**	**5**	*e*S	Sb	15 58 44.6	-1.6
KDTR	**Khodutka, Kamc**	**3.30**	**18**	*e*P	Pn	15 58 16.9	+3.4
KDTR				*e*S	Sb	15 58 58.1	-2.5
ASAK	**Asacha**	**3.82**	**14**	*e*P	Pn	15 58 24.5	+3.8
RUS	**Russkaya**	**3.98**	**19**	*e*P	Pn	15 58 26.0	+3.2
RUS				*e*S	Sn	15 59 14.6	+4.9
GRL	**Gorelyy**	**4.01**	**14**	*e*P	Pn	15 58 27.5	+4.1
GRL				*e*S	Sb	15 59 16.8	-4.4
PET	**Petropavlovsk**	**4.56**	**17**	S	Sn	15 59 30.4	+6.2
DALK	**Dalny**	**4.59**	**18**	P	Pn	15 58 35.2	+3.9
DALK				S	Sb	15 59 31.6	-6.2
UGLR	**Uglovaya**	**4.77**	**17**	P	Pn	15 58 38.5	+4.6
AVH	**Avacha**	**4.81**	**17**	*e*P	Pb	15 58 40.8	-5.3
KOK	**Koryaka**	**4.82**	**16**	*e*P	Pn	15 58 39.7	+5.2
SMAR	**Somma**	**4.82**	**17**	*e*P	Pn	15 58 40.3	+5.7
SDLR	**Sedlovina**	**4.85**	**18**	*e*P	Pn	15 58 38.7	+3.7
KRX	**Arik**	**4.88**	**16**	*e*P	Pn	15 58 40.0	+4.6
SPN	**Mys Shipunski**	**4.97**	**26**	*e*P	Pn	15 58 40.6	+4.2
SPN				*e*S	Sn	15 59 41.0	+6.9
MKZ	**Mys Kozlova**	**6.74**	**27**	*e*P	Pn	15 59 03.9	+3.2

*IDC **12** 16:22:27.5±1.8,19°.76N×109°.56W,h0km,mb3.7/3,*
mb1 4.1/7,mb1mx3.8/39,mbtmp3.9/7,ML3.6/4,MS3.2/10,
Ms1 3.3/10,ms1mx3.0/41,Error ellipse: s-maj=39.3km
s-min=16.4km az=121.0

ISC 12 16:22:28.3±0.9,19°.70N±0°.09×109°.61W±0°.09,h10km,n20,
σ0s72/13,MS3.2/6,Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**1.54**	**234**	Pn	**Pb**	**16 22 57.2**	**+0.3**
H06E1				Sn	**Sn**	**16 23 15.1**	**-0.8**
	SNR=387						
H06E1				T	T	16 25 03.8	
	SNR=10						
H06N1	**SOCORRO T-PHAS**	**1.54**	**238**	Pn	**Pb**	**16 22 57.1**	**+0.2**
H06N1				Sn	**Sb**	**16 23 16.5**	**0.0**
H06N1				T	T	16 24 49.1	
	SNR=7.6						
H06S1	**SOCORRO T**	**1.59**	**233**	Pn	**Pb**	**16 22 57.9**	**+0.1**
H06S1				Sn	**Sn**	**16 23 17.2**	**0.0**
LPIG	**La Paz**	**4.43**	**352**	Pn	**Pn**	**16 23 34.5**	**-1.1**
	12nm,0.3s,baz=309,slow=5.1,SNR=3.8						
LPIG				LR	LR	16 24 58.5	
	comp=Z,235nm,21.6s,baz=200,slow=34						
TXAR	**Lajitas Array**	**11.01**	**28**	Pn	**Pn**	**16 25 05.8**	**-0.2**
	0.1nm,0.3s,baz=208,slow=11,SNR=8.3						
CMIG	**Matias Romero**	**14.22**	**98**	Pn	**Pn**	**16 25 49.6**	**-0.3**
	0.2nm,0.3s,baz=304,slow=11,SNR=4.6						
CMIG				LR	LR	16 30 56.4	
	comp=Z,89nm,18.4s,baz=272,slow=36						
PFO	**Pinyon Flats O**	**15.14**	**338**	Pn	**Pn**	**16 26 01.9**	**-0.5**
	0.1nm,0.3s,baz=204,slow=3.5,SNR=3.5						
PFO				LR	LR	16 31 01.0	
	comp=Z,144nm,20.4s,baz=140,slow=34						
ANMO	**Albuquerque**	**15.45**	**10**	LR	LR	16 30 48.6	
	comp=Z,59nm,18.4s,baz=190,slow=33						
NVAR	**Mina Array Bea**	**20.13**	**340**	P	**P**	**16 27 04.3**	**+1.5**
	4.0nm,0.9s,baz=159,slow=12,SNR=11						
ELK	**Elko**	**21.53**	**348**	LR	LR	16 35 29.6	
	comp=Z,51nm,20.8s,baz=220,slow=36						
YBH	**Yreka Blue Hor**	**24.62**	**336**	LR	LR	16 35 40.0	
	comp=Z,42nm,20.6s,baz=322,slow=32						
TKL	**Tuckaleechee C**	**27.75**	**50**	LR	LR	16 39 29.1	
	comp=Z,40nm,18.6s,baz=271,slow=37						
INK	**Inuvik**	**50.86**	**349**	P	**P**	**16 31 29.6**	**+0.6**
	2.7nm,0.9s,baz=112,slow=7.4,SNR=5.9						
ILAR	**Eielson Array**	**51.39**	**341**	P	**P**	**16 31 33.4**	**+0.3**
	0.3nm,0.7s,baz=154,slow=6.3,SNR=6.2						
PPT	**Papeete**	**53.96**	**229**	LR	LR	16 50 24.5	
	comp=Z,27nm,18.2s,baz=358,slow=31						
LPAZ	**La Paz**	**54.23**	**128**	LR	LR	16 52 31.2	
	comp=Z,30nm,20.2s,baz=320,slow=33						
RES	**Resolute Bay**	**55.59**	**5**	LR	LR	16 55 18.3	
	comp=Z,67nm,19.0s,baz=124,slow=36						
H03N2	**Juan Fernandez**	**60.41**	**151**	T	T	17 38 18.4	
	baz=329,slow=77,SNR=17						
H03N1	**Juan Fernandez**	**60.42**	**151**	T	T	17 38 20.8	
	baz=329,slow=77,SNR=21						
H03N3	**Juan Fernandez**	**60.43**	**151**	T	T	17 38 18.7	
	baz=329,slow=77,SNR=25						

*NEIC **12** 16:25:33.5±3.0,36°.03N±0°.06×31°.48E±0°.07,h10km±1km,*
Error ellipse: s-maj=11.2km s-min=8.4km az=205.0
*ISK **12** 16:25:34.5,35°.93N×31°.48E,h15km,ML3.9/47*
*MOS **12** 16:25:36.9±0.9,36°.03N×31°.45E,h69km,mb4.8/5,Error*
ellipse: s-maj=9.3km s-min=7.0km az=86.6
*IDC **12** 16:25:36.6±1.2,35°.97N×31°.39E,h58km±14km,mb3.7/12,*
mb1 3.8/18,mb1mx3.6/46,mbtmp3.9/18,MS2.7/4,
Ms1 2.8/4,ms1mx2.5/56,Error ellipse: s-maj=12.6km
s-min=9.5km az=37.0
*GII **12** 16:25:37.1±0.4,35°.86N×31°.42E,h40km,MD3.6/4*
*DDA **12** 16:25:37.0,36°.00N×31°.48E,h22km±10km,MW4.0*
*NIC **12** 16:25:38.7±0.0,36°.02N×31°.74E,h25km±39km,Ml4.2/8*
*THE **12** 16:25:40.7,35°.84N×31°.13E,h7km±11km,ML3.9/9,Error*
ellipse: s-maj=15.9km s-min=0.9km az=110.0
*HLW **12** 16:25:41.9,35°.78N×31°.09E,h15km±18km,Md4.0*

ISC 12 16:25:36.5±0.5,36°.05N±0°.02×31°.54E±0°.02,h40km±6km,
n296,σ2s06/383,mb4.1/35,3C-7D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALAN	**Alanya-ANTALYA**	**0.65**	**38**	PG	**Pn**	**16 25 50.5**	**+1.2**
GAZI	**Gazipasa**	**0.66**	**73**	PG	**Pn**	**16 25 50.3**	**+0.9**
GAZI				SG	**Sn**	**16 25 59.7**	**+1.1**
GAZI	**Gazipasa**	**0.66**	**73**	*i* P	**Pn**	**16 25 50.2**	**+0.8**
GAZI				*i* S	**Sn**	**16 25 57.5**	**-1.1**
GAZI				IAML		16 26 00.0	
	comp=E,6μm,0.6s						
GAZI				IAML		16 26 01.0	
	comp=N,9μm,0.6s						
KEPZ	**Antalya-Kepez**	**0.85**	**4**	*i* P	**Pn**	**16 25 53.2**	**+1.1**
KEPZ				*i* S	**Sn**	**16 26 02.3**	**-1.1**
KEPZ				IAML		16 26 06.0	
	comp=E,1μm,0.8s						
KEPZ				IAML		16 26 07.0	
	comp=N,1μm,0.9s						
KEMT	**Kemer-ANTALYA**	**0.97**	**305**	PG	**Pn**	**16 25 54.5**	**+0.9**
AKUM	**Antalya-Kumluc**	**1.00**	**286**	*i* P	**Pn**	**16 25 56.1**	**+2.0**
AKUM				*i* S	**Sn**	**16 26 10.1**	**+3.1**
AKUM				IAML		16 26 18.0	
	comp=N,2μm,0.3s						
AKUM				IAML		16 26 21.0	
	comp=E,2μm,0.8s						
BOZY	**Bozyazi-Mersin**	**1.17**	**87**	PN	**Pn**	**16 25 57.8**	**+1.5**
AKMS	**Akamas**	**1.22**	**147**	P	**Pn**	**16 25 57.8**	**+0.7**
AKMS				S	**Sn**	**16 26 15.1**	**+2.8**
AKMS				AML	AML	16 26 21.7	
	comp=E,14nm,0.4s						
AKMS				AML	AML	16 26 21.7	
	comp=E,14nm,0.4s						
AKMS				AML	AML	16 26 21.9	
	comp=E,15nm,0.5s						
AKMS				AML	AML	16 26 21.9	
	comp=E,15nm,0.5s						
ALFC	**Alefka**	**1.24**	**136**	||P	**Pn**	**16 25 57.3**	**-0.1**
ALFC				S	**Sn**	**16 26 11.4**	**-1.6**
ALFC				AML	AML	16 26 18.6	
	comp=E,12nm,0.3s						
ALFC				AML	AML	16 26 18.6	
	comp=E,12nm,0.3s						
ALFC				AML	AML	16 26 22.2	
	comp=E,12nm,0.4s						
ALFC				AML	AML	16 26 22.2	
	comp=E,12nm,0.4s						
ERMK	**Ermenek**	**1.26**	**62**	*i* P	**Pn**	**16 25 59.8**	**+1.9**
ERMK				*i* S	**Sn**	**16 26 15.5**	**+1.9**
ERMK				IAML		16 26 22.0	
	comp=E,1μm,0.5s						
ERMK				IAML		16 26 24.0	
	comp=N,2μm,0.5s						
TEKE	**Tekeli-Mersin**	**1.28**	**85**	PN	**Pn**	**16 25 59.3**	**+1.4**
DEMR	**Demre-Antalya**	**1.33**	**279**	PN	**Pn**	**16 25 59.8**	**+1.1**
KORT	**Korkueli**	**1.35**	**315**	PN	**Pn**	**16 25 59.4**	**+0.4**
KORT	**Korkueli**	**1.35**	**315**	*i* P	**Pn**	**16 25 59.2**	**+0.2**
KORT				*i* S	**Sn**	**16 26 18.3**	**+2.6**
KORT				IAML		16 26 26.0	
	comp=E,875nm,0.5s						
KORT				IAML		16 26 29.0	
	comp=N,839nm,0.8s						
SEYD	**Seydisehir-KON**	**1.38**	**10**	PN	**Pn**	**16 26 01.5**	**+2.1**
AKDN	**Akdeniz- Kıbrı**	**1.39**	**122**	PN	**Pn**	**16 25 59.8**	**+0.5**
BERE	**Bereket-Mersin**	**1.40**	**77**	PN	**Pn**	**16 26 01.4**	**+1.8**
LEF	**Lefka**	**1.44**	**130**	PN	**Pn**	**16 25 59.8**	**-0.3**
LEF	**Lefka**	**1.44**	**130**	*i* P	**Pn**	**16 25 59.8**	**-0.3**
LEF				*i* S	**Sn**	**16 26 12.5**	**-5.3**
ELL	**Elmali**	**1.49**	**298**	PN	**Pn**	**16 26 01.9**	**+1.0**
ELL	**Elmali**	**1.49**	**298**	P	**Pn**	**16 26 01.3**	**+0.4**
ELL	**Elmali**	**1.49**	**298**	Pn	**Pn**	**16 26 01.3**	**+0.4**
YORU	**Yoruktepe-Mers**	**1.52**	**85**	PN	**Pn**	**16 26 02.9**	**+1.7**
NATA	**Nata**	**1.52**	**146**	P	**Pn**	**16 26 04.2**	**+3.0**
NATA				S	**Sn**	**16 26 28.1**	**+8.3**
NATA				AML	AML	16 26 37.8	
	comp=N,34nm,0.6s						
NATA				AML	AML	16 26 37.8	
	comp=N,34nm,0.6s						
NATA				AML	AML	16 26 39.7	
	comp=N,37nm,0.7s						
NATA				AML	AML	16 26 39.7	
	comp=N,37nm,0.7s						
OREN	**Orenkoy-Mersin**	**1.56**	**84**	PN	**Pn**	**16 26 03.3**	**+1.5**
AKAS	**Kas**	**1.57**	**277**	PN	**Pn**	**16 26 02.2**	**+0.1**
AKAS	**Kas**	**1.57**	**277**	*i* P	**Pn**	**16 26 02.9**	**+0.8**
AKAS				*i* S	**Sn**	**16 26 22.2**	**+0.9**
AKAS				IAML		16 26 39.0	
	comp=E,711nm,0.5s						
AKAS				IAML		16 26 43.0	
	comp=N,0.3nm,0.6s						
AKAS	**Kas**	**1.57**	**277**	Pn	**Pn**	**16 26 00.6**	**-1.5**
KSL	**Kastellorizon**	**1.59**	**274**	P	**Pn**	**16 26 03.3**	**+1.2**
KSL				S	**Sn**	**16 26 20.7**	**-0.7**
	comp=N,1μm,0.6s						
TEVE	**Tevekalti-Mers**	**1.59**	**75**	PN	**Pn**	**16 26 03.9**	**+1.7**
BCK	**Bucak**	**1.60**	**332**	PN	**Pn**	**16 26 04.1**	**+1.7**
BCK	**Bucak**	**1.60**	**332**	P	**Pn**	**16 26 04.1**	**+1.7**
AKK1	**Akkuyu-Mersin**	**1.62**	**86**	PN	**Pn**	**16 26 04.3**	**+1.7**
GULN	**MERSIN_Gulnar**	**1.63**	**85**	*i* P	**Pn**	**16 26 04.8**	**+2.1**
GULN				*i* S	**Sn**	**16 26 21.9**	**-0.5**
GULN				IAML		16 26 27.0	
	comp=E,628nm,0.6s						
GULN				IAML		16 26 31.0	
	comp=N,601nm,0.6s						
AKK2	**Akkuyu-Mersin**	**1.63**	**86**	PN	**Pn**	**16 26 04.4**	**+1.7**
AKKU	**Akkuyu-Mersin**	**1.63**	**86**	PN	**Pn**	**16 26 04.4**	**+1.6**
SZAC	**Souni**	**1.69**	**139**	P	**Pn**	**16 26 06.6**	**+2.9**
SZAC				S	**Sn**	**16 26 27.9**	**+3.7**
SZAC				AML	AML	16 26 39.0	
	comp=N,9.2nm,0.6s						
SZAC				AML	AML	16 26 39.0	
	comp=N,9.2nm,0.6s						
SZAC				AML	AML	16 26 41.5	
	comp=N,7.0nm,0.8s						
SZAC				AML	AML	16 26 41.5	
	comp=N,7.0nm,0.8s						
YESI	**Yesilovacik-Me**	**1.71**	**84**	PN	**Pn**	**16 26 05.6**	**+1.8**
TISA	**Tisan-Mersin**	**1.74**	**86**	PN	**Pn**	**16 26 05.9**	**+1.7**
IKL	**Isikli**	**1.75**	**83**	PN	**Pn**	**16 26 06.3**	**+2.0**
ATHAL	**Athalassa**	**1.77**	**120**	P	**Pn**	**16 26 06.2**	**+1.7**
ATHAL				S	**Sn**	**16 26 23.7**	**-2.1**
ATHAL				AML	AML	16 26 39.8	
	comp=N,12nm,0.4s						
ATHAL				AML	AML	16 26 39.8	
	comp=N,12nm,0.4s						
ATHAL				AML	AML	16 26 47.3	
	comp=N,15nm,0.6s						
ATHAL				AML	AML	16 26 47.3	
	comp=N,15nm,0.6s						
KRMN	**Karaman**	**1.79**	**51**	PN	**Pn**	**16 26 07.2**	**+2.2**
KEBE	**Keben-Mersin**	**1.80**	**77**	PN	**Pn**	**16 26 07.2**	**+2.0**
CSS	**Mathiatis**	**1.82**	**126**	PN	**Pn**	**16 26 05.5**	**+0.1**
CSS	**Mathiatis**	**1.82**	**126**	Pn	**Pn**	**16 26 04.8**	**-0.6**
CSS	**Mathiatis**	**1.82**	**126**	P	**Pn**	**16 26 05.0**	**-0.3**
CSS	**Mathiatis**	**1.82**	**126**	Pn	**Pn**	**16 26 04.1**	**-1.3**
KMER	**Konya-Meram**	**1.84**	**21**	*i* P	**Pn**	**16 26 09.1**	**+3.4**
KMER				*i* S	**Sn**	**16 26 27.3**	**-0.6**
KMER				IAML		16 26 35.0	
	comp=N,756nm,0.5s						
KMER				IAML		16 26 38.0	
	comp=E,589nm,0.5s						
AKIN	**Akıncılar- Kıb**	**1.88**	**123**	PN	**Pn**	**16 26 06.4**	**+0.2**
ASGA	**Asgata**	**1.88**	**132**	P	**Pn**	**16 26 07.4**	**+1.2**
ASGA				AML	AML	16 26 44.0	
	comp=E,4.4nm,0.6s						
ASGA				AML	AML	16 26 45.9	
	comp=E,7.2nm,0.6s						
ISP	**Isparta**	**1.95**	**336**	PN	**Pn**	**16 26 08.9**	**+1.7**
ISP	**Isparta**	**1.95**	**336**	P	**Pn**	**16 26 07.5**	**+0.3**
ISP	**Isparta**	**1.95**	**336**	Pn	**Pn**	**16 26 09.6**	**+2.4**
ISP	**Isparta**	**1.95**	**336**		**Pn**	**16 26 07.5**	**+0.3**
SILI	**Silifke-Mersin**	**1.96**	**80**	PN	**Pn**	**16 26 09.4**	**+2.2**
GOLH	**Golhisar**	**1.98**	**307**	*i* P	**Pn**	**16 26 11.6**	**+3.9**
GOLH				*i* S	**Sn**	**16 26 33.6**	**+2.3**
GOLH				IAML		16 26 43.0	
	comp=N,594nm,0.5s						
GOLH				IAML		16 27 27.0	
	comp=E,449nm,2.9s						
MVOU	**Mavrovouni**

OSC1	**CSNet OBS 1**	**2.55**	**185**		P	**Pn**	**16 26 16.1**	**+0.7**
OSC1					S	**Sn**	**16 26 47.1**	**+2.0**
SHUT	**Suhut-Afyon**	**2.62**	**343**		PN	**Pn**	**16 26 19.1**	**+2.6**
SULT	**Sultanhani-AKS**	**2.67**	**36**		PN	**Pn**	**16 26 20.1**	**+3.1**
CHBY	**Cihanbeyli**	**2.75**	**23**		PN	**Pn**	**16 26 21.4**	**+3.2**
TURN	**Turunc**	**2.75**	**286**		PN	**Pn**	**16 26 19.3**	**+1.2**
TURN	**Turunc**	**2.75**	**286**	*i*	P	**Pn**	**16 26 19.6**	**+1.4**
TURN					S	**Sn**	**16 26 48.3**	**-1.9**
ARG	**Arkhangelos**	**2.77**	**274**		PN	**Pn**	**16 26 19.3**	**+1.0**
ARG	**Arkhangelos**	**2.77**	**274**		P	**Pn**	**16 26 19.3**	**+1.0**
ARG					S	**Sn**	**16 26 50.2**	**-0.3**
ARG	**Arkhangelos**	**2.77**	**274**		P	**Pn**	**16 26 19.3**	**+1.0**
ARG					S	**Sn**	**16 26 50.2**	**-0.3**
	comp=N,550nm,0.3s							
MRSB	**Marmaris-Mugla**	**2.78**	**285**		PN	**Pn**	**16 26 19.7**	**+1.2**
DED	**Mersin**	**2.78**	**70**	*i*	P	**Pn**	**16 26 21.8**	**+3.2**
DED					S	**Sn**	**16 26 48.5**	**-2.4**
DED					IAML		16 26 58.0	
	comp=N,151nm,0.5s							
DED					IAML		16 27 23.0	
	comp=E,130nm,0.7s							
YER	**Yerkesik**	**2.83**	**293**		PN	**Pn**	**16 26 21.0**	**+1.7**
YER	**Yerkesik**	**2.83**	**293**		P	**Pn**	**16 26 21.2**	**+1.9**
YER					S	**Sn**	**16 26 53.5**	**+1.2**
YER	**Yerkesik**	**2.83**	**293**		P	**Pn**	**16 26 21.2**	**+1.9**
YER					S	**Sn**	**16 26 53.5**	**+1.2**
KIZT	**Kizilcal**	**2.84**	**5**		PN	**Pn**	**16 26 22.5**	**+3.0**
GULE	**Gulek**	**2.88**	**64**	*i*	P	**Pn**	**16 26 23.1**	**+3.0**
GULE				*i*	S	**Sn**	**16 26 52.5**	**-1.1**
GULE					IAML		16 27 16.0	
	comp=E,506nm,0.5s							
GULE					IAML		16 27 17.0	
	comp=N,503nm,0.7s							
AFYO	**Afyonkarahisar**	**2.91**	**341**	*i*	P	**Pn**	**16 26 22.8**	**+2.5**
AFYO				*i*	S	**Sn**	**16 26 50.1**	**-4.0**
OSC2	**CSNet OBS 4**	**3.03**	**168**		P	**Pn**	**16 26 24.4**	**+2.5**
OSC2					S	**Sn**	**16 26 59.0**	**+2.1**
AKSY	**AKSARAY - Alti**	**3.14**	**34**	*i*	P	**Pn**	**16 26 27.4**	**+3.8**
AKSY				*i*	S	**Sn**	**16 26 59.2**	**-0.7**
AKSY					IAML		16 27 28.0	
	comp=E,49nm,0.7s							
AKSY					IAML		16 27 29.0	
	comp=N,52nm,0.9s							
DATC	**Datca-Mugla**	**3.21**	**284**		PN	**Pn**	**16 26 25.9**	**+1.5**
MLSB	**Milas**	**3.27**	**293**		PN	**Pn**	**16 26 26.9**	**+1.6**
KKUL	**Konya-Kulu**	**3.30**	**19**	*i*	P	**Pn**	**16 26 28.8**	**+2.9**
KKUL				*i*	S	**Sn**	**16 27 01.9**	**-2.0**
KKUL					IAML		16 27 34.0	
	comp=N,59nm,0.7s							
KKUL					IAML		16 27 36.0	
	comp=E,64nm,0.8s							
CIFT	**Cifteler, Eski**	**3.33**	**354**		PN	**Pn**	**16 26 29.4**	**+3.3**
USAK	**Uak-Merkez**	**3.33**	**324**	*i*	P	**Pn**	**16 26 28.7**	**+2.5**
USAK				*i*	S	**Sn**	**16 27 02.2**	**-2.4**
KULA	**Kula-Manisa**	**3.37**	**318**		PN	**Pn**	**16 26 29.1**	**+2.5**
SVRH	**Sivrihisar-ESK**	**3.39**	**360**		PN	**Pn**	**16 26 30.5**	**+3.5**
MANT	**Manisa**	**3.41**	**317**	*i*	P	**Pn**	**16 26 31.2**	**+3.9**
MANT				*i*	S	**Sn**	**16 27 06.0**	**-0.5**
MANT	**Manisa**	**3.41**	**317**			**Pn**	**16 26 28.7**	**+1.4**
GEDZ	**Gediz**	**3.44**	**331**		PN	**Pn**	**16 26 30.7**	**+3.1**
AKO	**Adana**	**3.44**	**65**	*i*	P	**Pn**	**16 26 31.8**	**+4.2**
AKO				*i*	S	Sn	16 26 57.7	-9.4
AKO					IAML		16 27 33.0	
	comp=E,80nm,0.7s							
AKO					IAML		16 27 34.0	
	comp=N,114nm,0.6s							
GDZ	**Gediz**	**3.45**	**332**	*i*	P	**Pn**	**16 26 29.4**	**+1.6**
GDZ				*i*	S	**Sn**	**16 27 04.4**	**-3.0**
GDZ					IAML		16 27 11.0	
	comp=E,34nm,0.5s							
GDZ					IAML		16 27 13.0	
	comp=N,42nm,0.9s							
AYDB	**Zeytinkoy-Aydi**	**3.48**	**304**		PN	**Pn**	**16 26 30.1**	**+1.8**
BODT	**Bodrum**	**3.55**	**288**		PN	**Pn**	**16 26 30.5**	**+1.4**
BODT	**Bodrum**	**3.55**	**288**		P	**Pn**	**16 26 30.5**	**+1.4**
BODT					S	**Sn**	**16 27 09.2**	**-0.7**
NIS1	**Nisyros Isl.**	**3.56**	**280**		PN	**Pn**	**16 26 30.6**	**+1.3**
YKAV	**Yalikavak-Bodr**	**3.59**	**289**		PN	**Pn**	**16 26 31.3**	**+1.6**
KARP	**Karpathos**	**3.59**	**263**		PN	**Pn**	**16 26 30.6**	**+0.9**
KARP	**Karpathos**	**3.59**	**263**		Pn	**Pn**	**16 26 30.4**	**+0.6**
KARP	**Karpathos**	**3.59**	**263**		P	**Pn**	**16 26 30.7**	**+1.0**
KARP					S	**Sn**	**16 27 08.8**	**-2.1**
	comp=N,1µm,0.4s							
KIRS	**Kirehir-Merke**	**3.61**	**31**	*i*	P	**Pn**	**16 26 33.4**	**+3.4**
KIRS				*i*	S	Sn	16 27 00.5	-11
SIMA	**Simav-Kutahya**	**3.65**	**327**		PN	**Pn**	**16 26 33.4**	**+2.9**
YAHY	**KAYSERI_Yahyal**	**3.68**	**55**	*i*	P	**Pn**	**16 26 33.8**	**+2.8**
BBAL	**Bala**	**3.71**	**19**	*i*	P	**Pn**	**16 26 35.0**	**+3.6**
TVSB	**Tavsanli**	**3.77**	**335**		PN	**Pn**	**16 26 33.8**	**+1.5**
AUMIH	**MIHALICIK**	**3.81**	**359**	*i*	P	**Pn**	**16 26 34.6**	**+1.7**
AUMIH				*i*	S	**Sn**	**16 27 09.8**	**-6.7**
GCAM	**G?zelcami?**	**3.82**	**297**		PN	**Pn**	**16 26 34.2**	**+1.3**
GCAM	**G?zelcami?**	**3.82**	**297**	*i*	P	**Pn**	**16 26 33.7**	**+0.8**
GCAM				*i*	S	**Sn**	**16 27 09.7**	**-6.8**
BORA	**Eskisehir**	**3.92**	**348**	*i*	P	**Pn**	**16 26 36.3**	**+2.0**
BORA				*i*	S	**Sn**	**16 27 14.4**	**-4.7**
BHL	**Bhannes**	**4.00**	**121**	*e*	P	**Pn**	**16 26 36.7**	**+1.3**
HWQ	**Hawqa**	**4.02**	**115**	*e*	P	**Pn**	**16 26 38.1**	**+2.5**
BR131	**Keskin Array S**	**4.03**	**24**	‖	P	**Pn**	**16 26 38.9**	**+3.1**
BR131	**Keskin Array S**	**4.03**	**24**		Pn	**Pn**	**16 26 36.4**	**+0.6**
BRTR	**Keskin Array B**	**4.03**	**24**		P	**Pn**	**16 26 38.6**	**+2.8**
	comp=N,5.2nm,0.3s,baz=252,slow=14,SNR=89							
BRTR					S	**Sn**	**16 27 25.1**	**+3.3**
	comp=N,1.6nm,0.3s,baz=97,slow=20,SNR=5.3							
BRTR					LR	LR	16 28 27.0	
	comp=N,51nm,21.2s,baz=267,slow=41							
BRTR	**Keskin Array B**	**4.03**	**24**	*i*	P	**Pn**	**16 26 38.7**	**+2.8**
BRTR					pmax	pmax		
	comp=Z,6.0nm,0.3s							
BRTR	**Keskin Array B**	**4.03**	**24**			**Pn**	**16 26 37.8**	**+2.0**
SRCK	**Saricakaya, Es**	**4.05**	**350**		PN	**Pn**	**16 26 38.7**	**+2.7**
DQRL	**Deir Qamar**	**4.06**	**124**	*e*	P	**Pn**	**16 26 37.1**	**+0.9**
ANDN	**Andirin**	**4.15**	**67**	*i*	P	**Pn**	**16 26 40.8**	**+3.4**
ANDN				*i*	S	**Sn**	**16 27 21.5**	**-3.3**
HNTI	**Hanita**	**4.21**	**134**		Pn	**Pn**	**16 26 38.9**	**+0.7**
HNTI					Sn	**Sn**	**16 27 25.4**	**-0.8**
CDAG	**Cicekdag**	**4.21**	**31**	*i*	P	**Pn**	**16 26 41.6**	**+3.3**
CDAG				*i*	S	**Sn**	**16 27 23.8**	**-2.5**
CDAG					IAML		16 27 50.0	
	comp=N,29nm,0.6s							
CDAG					IAML		16 27 56.0	
	comp=E,41nm,1.0s							
DGB	**zmir**	**4.23**	**300**	*i*	P	**Pn**	**16 26 39.0**	**+0.6**
DGB				*i*	S	**Sn**	**16 27 19.9**	**-6.5**
KAMA	**Osmaniye**	**4.28**	**73**	*i*	P	**Pn**	**16 26 41.0**	**+1.8**
KAMA				*i*	S	**Sn**	**16 27 24.8**	**-3.2**
KAMA					IAML		16 27 32.0	
	comp=N,57nm,0.4s							
KAMA					IAML		16 27 33.0	
	comp=E,97nm,0.6s							
SIRC	**Yozgat**	**4.36**	**40**	*i*	P	**Pn**	**16 26 44.3**	**+4.0**
SIRC					IAML		16 28 03.0	
	comp=N,12nm,0.8s							
RCY	**Rachaya**	**4.36**	**124**	*e*	P	**Pn**	**16 26 41.9**	**+1.6**
DELI	**KIRIKKALE**	**4.37**	**25**	*i*	P	**Pn**	**16 26 42.0**	**+1.5**
DELI				*i*	S	**Sn**	**16 27 23.9**	**-6.3**
DELI					IAML		16 27 36.0	
	comp=N,16nm,0.4s							
DELI					IAML		16 27 37.0	
	comp=E,17nm,0.6s							
KIBS	**BOLU**	**4.37**	**3**	*i*	P	**Pn**	**16 26 42.9**	**+2.3**
KIBS				*i*	S	**Sn**	**16 27 27.3**	**-2.9**
SHBL	**Chebaa**	**4.39**	**127**	*e*	P	**Pn**	**16 26 42.8**	**+2.0**
MMA0B	**Mount Meron ar**	**4.40**	**132**		Pn	**Pn**	**16 26 41.7**	**+0.9**
MMA0B					Sn	**Sn**	**16 27 31.0**	**+0.2**
MMAI	**Mount Meron Ar**	**4.40**	**132**		P	**Pn**	**16 26 41.6**	**+0.8**
	comp=E,14nm,0.3s,baz=308,slow=12,SNR=40							
MMAI					S	**Sn**	**16 27 30.6**	**-0.3**
	comp=E,32nm,0.3s,baz=312,slow=22,SNR=10.0							
MDUB	**Mudurnu**	**4.42**	**357**		Pn	**Pn**	**16 26 42.0**	**+0.8**
GEM	**Giv'at Ha'Em**	**4.42**	**129**		Pn	**Pn**	**16 26 42.5**	**+1.4**
GEM					Sn	**Sn**	**16 27 31.6**	**+0.2**
ZKR	**Zakros**	**4.43**	**259**		P	**Pn**	**16 26 41.9**	**+0.6**
ZKR					S	**Sn**	**16 27 30.0**	**-1.7**
	comp=E,258nm,0.5s							
NATI	**Neve Ativ**	**4.44**	**128**		Pn	**Pn**	**16 26 42.5**	**+1.2**
NATI					Sn	**Sn**	**16 27 31.9**	**+0.2**
OFRI	**`Ofer**	**4.45**	**139**		Pn	**Pn**	**16 26 40.9**	**-0.7**
BLGI	**Bet Lehem HaGe**	**4.48**	**137**		Pn	**Pn**	**16 26 41.9**	**0.0**
BLGI					Sn	**Sn**	**16 27 31.9**	**-0.8**
CMDR	**Camlidere-ANKA**	**4.50**	**9**	*i*	P	**Pn**	**16 26 44.3**	**+2.1**
CMDR				*i*	S	**Sn**	**16 27 29.7**	**-3.7**
CMDR					IAML		16 27 39.0	
	comp=E,34nm,0.5s							
CMDR					IAML		16 27 42.0	
	comp=N,40nm,0.5s							
ULDT	**Uludag**	**4.50**	**336**	*i*	P	**Pn**	**16 26 43.2**	**+0.8**
ULDT				*i*	S	Sn	16 27 24.3	-9.3
HCB	**Kahramanmara**	**4.50**	**72**	*i*	P	**Pn**	**16 26 44.6**	**+2.3**
HCB				*i*	S	**Sn**	**16 27 28.6**	**-4.8**
HCB					IAML		16 27 38.0	
	comp=N,50nm,0.5s							
HCB					IAML		16 27 38.0	
	comp=E,72nm,0.5s							
KAHM	**Kahramanmaras,**	**4.61**	**70**	*i*	P	**Pn**	**16 26 45.4**	**+1.7**
KAHM				*i*	S	**Sn**	**16 27 32.5**	**-3.6**
AMGA	**Amorgos Island**	**4.62**	**281**		P	**Pn**	**16 26 44.5**	**+0.7**
AMGA					S	**Sn**	**16 27 36.2**	**+0.1**
	comp=E,70nm,0.6s							
ANAF	**Anafi Island**	**4.67**	**275**		P	**Pn**	**16 26 45.4**	**+0.9**
ANAF					S	**Sn**	**16 27 35.0**	**-2.5**
	comp=E,1µm,0.4s							
GAZ	**Gaziantep**	**4.70**	**75**		Pn	**Pn**	**16 26 47.0**	**+2.0**
BCAM	**Yenicaga**	**4.78**	**5**	*i*	P	**Pn**	**16 26 47.7**	**+1.6**
BCAM				*i*	S	Sn	16 27 30.5	-10
SLTI	**Sal'it**	**4.78**	**142**		Pn	**Pn**	**16 26 45.0**	**-1.0**
MMLI	**Mount Malkishu**	**4.83**	**137**		Pn	**Pn**	**16 26 46.8**	**+0.1**
MMLI					Sn	**Sn**	**16 27 40.9**	**-0.5**
APE	**Apeiranthos**	**4.94**	**284**	*ce*	P	**Pn**	**16 26 49.9**	**+1.6**
COAL	**Corum-Alaca**	**5.00**	**32**	*i*	P	**Pn**	**16 26 52.6**	**+3.5**
GZT	**Gaziantep**	**5.01**	**73**	*i*	P	**Pn**	**16 26 51.6**	**+2.3**
GZT				*i*	S	**Sn**	**16 27 41.4**	**-4.8**
GZT					IAML		16 27 55.0	
	comp=N,61nm,0.4s							
GZT					IAML		16 28 08.0	
	comp=E,50nm,0.5s							
CUSAR	**Sarkisla-SIVAS**	**5.02**	**47**	*i*	P	**Pn**	**16 26 51.0**	**+1.5**
HMDT	**Nahal Hemdat**	**5.03**	**138**		Pn	**Pn**	**16 26 50.2**	**+0.8**
HMDT					Sn	**Sn**	**16 27 46.5**	**+0.3**
AMAZ	**Amatzia**	**5.31**	**147**		Pn	**Pn**	**16 26 52.6**	**-0.7**
IDI	**Anoyia**	**5.46**	**264**		P	**Pn**	**16 26 55.5**	**+0.1**
	comp=E,18nm,0.3s,baz=61,slow=16,SNR=79							
IDI					S	**Sn**	**16 27 53.3**	**-3.8**
	comp=E,13nm,0.3s,baz=162,slow=14,SNR=9.5							
IDI	**Anoyia**	**5.46**	**264**			**Pn**	**16 26 55.1**	**-0.4**
IDI	**Anoyia**	**5.46**	**264**		P	**Pn**	**16 26 55.3**	**-0.2**
IDI					S	**Sn**	**16 27 54.7**	**-2.4**
	comp=E,140nm,0.5s							
DSI	**Dead Sea**	**5.49**	**143**		Pn	**Pn**	**16 26 56.0**	**+0.2**
DSI					Sn	**Sn**	**16 27 57.2**	**-0.5**
YTIR	**Yattir**	**5.54**	**146**		Pn	**Pn**	**16 26 56.1**	**-0.5**
YTIR					Sn	**Sn**	**16 27 58.6**	**-0.5**
KZIT	**Kziot**	**5.66**	**154**		Pn	**Pn**	**16 26 57.3**	**-0.8**
KZIT					Sn	**Sn**	**16 28 00.3**	**-1.5**
MDBI	**Mazsada**	**5.70**	**145**		Pn	**Pn**	**16 26 58.1**	**-0.5**
MDBI					Sn	**Sn**	**16 28 01.0**	**-1.7**
GHAJ	**Ghor Haditha**	**5.80**	**143**		Pn	**Pn**	**16 27 00.4**	**+0.4**
GHAJ					Sn	**Sn**	**16 28 05.3**	**0.0**
DAMI2	**DAM2**	**5.85**	**145**		Pn	**Pn**	**16 27 00.6**	**-0.1**
ASF	**Jabal al Asfar**	**5.89**	**129**		P	**Pn**	**16 27 03.9**	**+2.5**
	comp=E,0.3nm,0.3s,baz=283,slow=23,SNR=25							
ASF					S	**Sn**	**16 28 10.0**	**+2.3**
	comp=E,0.2nm,0.3s,baz=282,slow=23,SNR=3.7							
HHAG	**Hagoal**	**6.10**	**175**		S	**Sn**	**16 28 08.7**	**-4.0**
	baz=171							
KOT	**Kottamia**	**6.11**	**178**		P	**Pn**	**16 27 04.9**	**+0.6**
	baz=173							
KOT					S	**Sn**	**16 28 08.4**	**-4.6**
	baz=173							
IMMV	**Iera Moni Meta**	**6.17**	**267**		P	**Pn**	**16 27 05.8**	**+0.7**
IMMV					S	**Sn**	**16 28 11.2**	**-3.2**
	comp=E,230nm,0.6s							
GVD	**Gavdhos**	**6.20**	**261**		P	**Pn**	**16 27 06.1**	**+0.6**
GVD					S	**Sn**	**16 28 12.7**	**-2.4**
	comp=E,200nm,0.4s							
HMYD	**Mayadein**	**6.27**	**186**		P	**Pn**	**16 27 08.3**	**+1.8**
	baz=183							
SUZ	**Suez**	**6.29**	**170**		P	**Pn**	**16 27 08.8**	**+2.1**
	baz=165							
PRNI	**Paran**	**6.38**	**152**		Pn	**Pn**	**16 27 07.7**	**-0.3**
PRNI					Sn	**Sn**	**16 28 17.8**	**-1.8**
HSAF	**As Saff**	**6.41**	**180**		P	**Pn**	**16 27 09.3**	**+0.8**
	baz=176							
HNAT	**Natroun**	**6.44**	**187**		P	**Pn**	**16 27 10.5**	**+1.6**
	baz=184							
HNAT					S	**Sn**	**16 28 15.4**	**-5.8**
	baz=184							
GLL	**Jalalah**	**6.46**	**179**		P	**Pn**	**16 27 09.7**	**+0.6**
	baz=175							
KRMI	**Paran Flat**	**6.49**	**155**		Pn	**Pn**	**16 27 08.9**	**-0.7**
KRMI					Sn	**Sn**	**16 28 20.2**	**-2.2**
HRFI	**Mount Harif**	**6.68**	**153**		Pn	**Pn**	**16 27 11.4**	**-0.7**
HRFI					Sn	**Sn**	**16 28 24.8**	**-2.1**
MBRI	**Mt Berech**	**6.85**	**155**		Pn	**Pn**	**16 27 14.5**	**-0.1**
MBRI					Sn	**Sn**	**16 28 29.9**	**-1.4**
SLUM	**Salum**	**6.96**	**231**		P	**Pn**	**16 27 15.1**	**-0.8**
	baz=231							
AQBJ	**Aqaba**	**6.96**	**154**		Sn	**Sn**	**16 28 32.7**	**-1.2**
EIL	**Elat**	**6.98**	**155**		P	**Pn**	**16 27 17.4**	**+1.2**
	comp=E,2.0nm,0.3s,baz=340,slow=2.1,SNR=21							
EIL					S	**Sn**	**16 28 31.4**	**-2.9**
	comp=E,4.6nm,0.3s,baz=129,slow=14,SNR=8.1							
EIL					LR	LR	16 30 08.9	
	comp=E,26nm,18.1s,baz=298,slow=39							
EIL	**Elat**	**6.98**	**155**		Pn	**Pn**	**16 27 15.4**	**-0.8**
EIL					Sn	**Sn**	**16 28 31.7**	**-2.6**
MARD	**Mardin**	**7.53**	**78**		Pn	**Pn**	**16 27 25.8**	**+1.9**
ITM	**Ithomi**	**7.81**	**281**		Pn	**Pn**	**16 27 26.7**	**-0.9**
SWA2		**8.50**	**219**		P	**Pn**	**16 27 36.4**	**-0.7**
	baz=218							
HHRG	**Al Ghardaqah**	**8.97**	**168**		P	**Pn**	**16 27 46.7**	**+3.1**
	baz=165							
GNI	**Garni**	**11.18**	**65**		LR	LR	16 32 52.9	
	comp=E,42nm,19.9s,baz=258,slow=38							
KIV	**Kislovodsk**	**11.63**	**44**	*e*	P	**Pn**	**16 28 17.3**	**-2.7**
KIV					pmax	pmax		
	comp=Z,7.0nm,1.0s							
TIP	**Timpagrande**	**12.13**	**289**		Pn	**Pn**	**16 28 25.2**	**-1.6**
KOLS	**Kolonicke sedl**	**14.56**	**335**	*e*	P	**P**	**16 29 07.2**	**+1.6**
KOLS	**Kolonicke sedl**	**14.56**	**335**	*e*	P	**P**	**16 29 07.2**	**+1.6**
AKASG	**Malin Array Be**	**14.74**	**354**		P	**P**	**16 29 06.5**	**-1.1**
	comp=E,2.3nm,0.3s,baz=176,slow=9.1,SNR=24							
AKASG	**Malin Array Be**	**14.74**	**354**	*ce*	P	**P**	**16 29 07.5**	**-0.1**
AKASG					pmax	pmax		
	comp=E,2.0nm,0.4s							
AKASG	**Malin Array Be**	**14.74**	**354**			**P**	**16 29 07.3**	**-0.2**
AKBB	**Malin Array Si**	**14.74**	**354**	*de*	P	**P**	**16 29 07.4**	**-0.2**
AKBB					pmax	pmax		
	comp=E,13nm,0.8s							
AKBB	**Malin Array Si**	**14.74**	**354**			**P**	**16 29 07.3**	**-0.3**
KWP	**Kalwaria Pacla**	**15.03**	**337**		P	**P**	**16 29 12.3**	**+1.5**
KWP					pmax	pmax		
	comp=E,10.0nm,1.0s							
KWP	**Kalwaria Pacla**	**15.03**	**337**		P	**P**	**16 29 12.3**	**+1.5**
KWP					IAmb	IAmb	16 29 13.2	
	comp=E,10nm,1.0s							
VYHS	**Vyhne**	**15.56**	**327**	*e*	P	**P**	**16 29 17.8**	**+1.1**
VYHS	**Vyhne**	**15.56**	**327**	*e*	P	**P**	**16 29 17.8**	**+1.1**
LANS	**Liptovska Anna**	**15.80**	**330**	*e*	P	**P**	**16 29 21.0**	**+1.6**
LANS	**Liptovska Anna**	**15.80**	**330**	*e*	P	**P**	**16 29 21.0**	**+1.6**
CTI	**Castel Tesino**	**17.98**	**310**		P	**P**	**16 29 47.1**	**+3.5**
CTI					pmax	pmax		
	comp=Z,12nm,1.3s							
CTI	**Castel Tesino**	**17.98**	**310**		P	**P**	**16 29 47.1**	**+3.5**
KEST	**Kesra**	**17.98**	**276**		P	**P**	**16 29 45.6**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=55,slow=7.8,SNR=4.6							
KEST	**Kesra**	**17.98**	**276**		P	**P**	**16 29 44.4**	**+0.7**
KEST					IAmb	IAmb	16 29 47.7	
	comp=Z,42nm,1.5s							
GEC2	**GERESS Array S**	**18.29**	**320**		P	**Pn**	**16 29 48.1**	**+0.9**
GERES	**GERESS Array B**	**18.29**	**320**		P	**Pn**	**16 29 47.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=124,slow=11,SNR=4.1							
GERES	**GERESS Array B**	**18.29**	**320**	*e*	P	**Pn**	**16 29 47.6**	**+0.4**
GERES	**GERESS Array B**	**18.29**	**320**		P	**P**	**16 29 47.0**	**0.0**
OBN	**Obninsk**	**19.38**	**9**	*e*	P	**Pn**	**16 30 01.1**	**+1.0**
OBN					pmax	pmax		
	comp=Z,3.0nm,0.7s							
SENIN	**Lac Senin/Sane**	**20.87**	**307**		P	**P**	**16 30 14.7**	**-0.6**
BFO	**Black Forest**	**21.03**	**313**		P	**P**	**16 30 16.8**	**0.0**
BFO					pmax	pmax		
	comp=Z,7.0nm,1.2s							
BFO	**Black Forest**	**21.03**	**313**		P	**P**	**16 30 16.8**	**0.0**
GEYT	**Alibeck**	**21.29**	**77**		P	**P**	**16 30 21.1**	**+1.4**
	comp=Z,2.1nm,0.6s,baz=282,slow=7.3,SNR=2.7							
GEYT	**Alibeck**	**21.29**	**77**		P	**P**	**16 30 22.9**	**+3.2**
AKTO	**Aktyubinsk**	**23.89**	**45**		P	**P**	**16 30 45.9**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=252,slow=7.8,SNR=12							
UOSS	**Minazif**	**23.90**	**111**		P	**P**	**16 30 45.9**	**-0.7**
UOSS					IAmb	IAmb	16 30 47.4	
	comp=Z,5.3nm,0.9s							
AB08	**Akbulak array**	**24.53**	**49**		P	**P**	**16 30 52.2**	**0.0**
AB09	**Akbulak array**	**24.53**	**49**		P	**P**	**16 30 52.1**	**0.0**
AB04	**Akbulak array**	**24.54**	**49**		P	**P**	**16 30 52.2**	**0.0**
AB03	**Akbulak array**	**24.54**	**49**		P	**P**	**16 30 52.2**	**0.0**
AB31	**Akbulak array**	**24.54**	**49**		P	**P**	**16 30 52.3**	**0.0**
AB31					IAmb	IAmb	16 30 52.7	
	comp=Z,3.6nm,0.6s							
ABKAR	**Akbulak array**	**24.54**	**49**		P	**P**	**16 30 52.4**	**+0.1**
ABKAR					IAmb	IAmb	16 30 52.7	
	comp=Z,3.6nm,0.6s							
KLMR	**Klimovskoe**	**25.34**	**9**	*e*	P	**P**	**16 30 57.5**	**-1.9**
KLMR					pmax	pmax		
	comp=Z,12nm,0.7s							
KLMR	**Klimovskoe**	**25.34**	**9**	*e*	P	**P**	**16 30 57.5**	**-1.9**
KLMR					AMP		16 31 00.3	
	comp=Z,12nm,0.7s							
KIRV	**Kirov**	**25.44**	**22**	‖	*e* P	**P**	**16 30 58.9**	**-1.3**
FINES	**FINESS Array B**	**25.65**	**354**		P	**P**	**16 31 00.6**	**-1.6**
	comp=Z,2.5nm,0.5s,baz=159,slow=11,SNR=29							
FINES	**FINESS Array B**	**25.65**	**354**		P	**P**	**16 31 00.7**	**-1.5**
FIA1	**FINESS Array S**	**25.65**	**354**		P	**P**	**16 31 00.7**	**-1.5**
FIA1					IAmb	IAmb	16 31 22.5	
	comp=Z,8.0nm,1.1s							
ARU	**Arti**	**27.35**	**33**		P	**P**	**16 31 16.1**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=233,slow=11,SNR=4.8							
ARU	**Arti**	**27.35**	**33**	*d*	*i* P	**P**	**16 31 17.3**	**-0.3**
ARU							16 32 01.2	
ARU					S	**S**	**16 35 59.7**	**+5.1**
ARU					SS	**SnSn**	**16 37 08.7**	**+3.0**
ARU					pmax	pmax		
	comp=Z,13nm,2.1s							
ARU	**Arti**	**27.35**	**33**		P	**P**	**16 31 17.5**	**-0.1**
ARU					IAmb	IAmb	16 31 18.1	
	comp=Z,3.3nm,0.8s							
NAO01	**NORSAR Array S**	**28.09**	**338**		P	**P**	**16 31 25.6**	**+1.4**
NOA	**NORSAR Array B**	**28.16**	**339**		P	**P**	**16 31 22.7**	**-2.1**
	comp=Z,1.5nm,0.8s,baz=141,slow=9.2,SNR=3.4							
NBO00	**NORSAR Array S**	**28.28**	**339**		P	**P**	**16 31 28.7**	**+2.9**
NBO00					IAmb	IAmb	16 31 38.0	
	comp=Z,14nm,1.1s							
CHGR	**Chuyangaron**	**29.88**	**74**		P	**P**	**16 31 40.8**	**+0.4**
CHGR					IAmb	IAmb	16 31 41.2	
	comp=Z,8.5nm,1.3s							
KK01	**Karatay Array**	**30.64**	**65**		P	**P**	**16 31 47.6**	**+0.6**
KK04	**Karatay Array**	**30.64**	**65**		P	**P**	**16 31 47.7**	**+0.7**
KK31	**Karatay Array**	**30.64**	**65**		P	**P**	**16 31 47.1**	**0.0**
KK31					pmax	pmax		
	comp=Z,2.0nm,0.8s							
KK31	**Karatay Array**	**30.64**	**65**		P	**P**	**16 31 47.0**	**0.0**
KKAR	**Karatay Array**	**30.64**	**65**		P	**P**	**16 31 46.1**	**-0.9**
KKAR	**Karatay Array**	**30.64**	**65**		P

5.5nm,0.3s,baz=87,slow=4.8,SNR=11
BATI S **Sn** **16 32 03.6 -1.0**
3.6nm,0.3s,baz=104,slow=20,SNR=1.7
BATI Baumata 6.46 245 P **Pn** **16 30 53.8 +1.7**
0.1nm18nm,0.5s
SIJI Sorong 6.78 14 P **Pn** **16 30 57.6 +1.2**
1.2nm,0.3s,baz=210,slow=23,SNR=15
SIJI S **Sn** **16 32 10.9 -1.3**
2.3nm,0.3s,baz=319,slow=20,SNR=8.6
MMRI Maumere 7.39 261 P **Pn** **16 31 06.8 +2.1**
0.1nm29nm,0.8s
EDFI Ende, Flores 7.94 260 P **Pn** **16 31 14.5 +2.2**
0.0nm3.3nm,0.8s
BASI Baing, Sumba 9.32 252 P **Pn** **16 31 30.8 -0.3**
54nm,0.9s
LUWI Luwuk 9.35 313 P **Pn** **16 31 32.1 +0.7**
733nm21nm,0.8s
WBSI Waikabubak, Su 10.33 257 P **Pn** **16 31 45.5 +0.8**
18nm,1.1s
SMPI Sarmi 10.59 59 P **Pn** **16 31 47.6 -0.6**
8.2nm,1.5s
FITZ Fitzroy Crossi 11.23 200 P **Pn** **16 31 54.8 -2.2**
0.7nm,0.3s,baz=32,slow=10.0,SNR=66
FITZ S Sn 16 33 48.4 -12
1.8nm,0.3s,baz=39,slow=12,SNR=4.5
WRA Warramunga Arr 13.20 160 P **Pn** **16 32 20.6 -2.5**
1.7nm,0.3s,baz=334,slow=13,SNR=109
WRA S Sn 16 34 37.4 -11
1.1nm,0.3s,baz=334,slow=23,SNR=4.3
ASAR Alice Springs 16.61 166 P **P** **16 33 06.3 -0.8**
0.9nm,0.3s,baz=332,slow=9.5,SNR=64
CTA Charters Tower 20.42 130 P Pn 16 33 54.0 +2.1
4.7nm,0.7s,baz=300,slow=14,SNR=8.2
STKA Stephens Creek 26.71 157 P **P** **16 34 53.1 +3.5**
1.4nm,0.6s,baz=342,slow=9.7,SNR=5.1
MKAR Makanchi Array 68.42 327 P P 16 40 15.3 +4.7
0.7nm,0.5s,baz=123,slow=7.8,SNR=13

IDC 12 16:40:51.3±1.3, 55.26S×27.72W, h0km, mb3.7/2, mb1 3.8/2, mb1mx3.6/21, mbtmp3.7/2, MS3.1/2, Ms1 3.0/2, ms1mx2.7/22, Error ellipse: s-maj=105.2km s-min=34.9km az=100.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**31.57 279**		LR	LR	LR	17 01 02.7	
	comp=Z,28nm,18.6s,baz=304,slow=38							
BOSA	**Boshof**	**46.08 77**		LR	LR		17 05 51.4	
	comp=Z,21nm,18.2s,baz=184,slow=33							
VNDA	**Vanda**	**47.35 183**		P	P		16 49 26.1	-0.1
	0.6nm,0.7s,baz=182,slow=6.7,SNR=9.2							
TORD	**Torodi Ar. Bea**	**72.52 30**		P	P		16 52 19.8	0.0
	0.5nm,0.5s,baz=201,slow=6.4,SNR=3.6							
RAO	**Raoul Island**	**92.03 206**		LR	LR		17 29 32.5	
	comp=Z,339nm,20.6s,baz=216,slow=32							
ILAR	**Eielson Array**	**149.36 313**		PKPbc	PKPbc		17 00 40.0	-0.5
	1.0nm,0.9s,baz=123,slow=2.6,SNR=10.0							

IDC 12 16:50:14.0±42.0, 56.99S×144.67E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/35, mbtmp3.7/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/24, Error ellipse: s-maj=743.3km s-min=149.7km az=152.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**25.20 354**		P	P	P	16 55 40.9	-0.2
	1.1nm,0.6s,baz=158,slow=13,SNR=3.8							
ASAR	**Alice Springs**	**34.20 342**		P	P	P	16 57 00.7	-0.4
	0.5nm,0.5s,baz=164,slow=10,SNR=31							
WRA	**Warramunga Arr**	**37.78 344**		P	P	P	16 57 31.9	+0.2
	0.6nm,0.5s,baz=172,slow=7.5,SNR=21							
FITZ	**Fitzroy Crossi**	**41.36 332**		P	P	P	16 58 01.7	+0.1
	0.9nm,0.8s,baz=155,slow=13,SNR=1.7							
SNAA	**Sanae**	**49.62 193**		LR	LR	LR	17 18 07.2	
	comp=Z,15nm,19.1s,baz=188,slow=34							

IDC 12 17:11:22.5±31.0, 55.33S×143.29E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/20, mbtmp3.5/3, Error ellipse: s-maj=536.7km s-min=172.4km az=147.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**23.48 356**		P	P	P	17 16 34.0	+0.4
	0.8nm,0.5s,baz=163,slow=17,SNR=3.1							
ASAR	**Alice Springs**	**32.38 344**		P	P	P	17 17 53.5	-0.3
	0.5nm,0.7s,baz=164,slow=9.8,SNR=16							
WRA	**Warramunga Arr**	**35.98 346**		P	P	P	17 18 24.9	0.0
	0.4nm,0.5s,baz=170,slow=7.8,SNR=13							

*JMA **12** 17:23:01.4±0.2, 24.81N×122.41E, h113km±3km, M2.2*
*TAP **12** 17:23:01.3, 24.87N×122.47E, h109km, ML3.7, C*
ISC 12 17:23:01.8±1.5, 24.83N±0.04×122.44E±0.03, h110km±8km, n106, σ0.78/186, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.45 294**		P	P	**Pn**	**17 23 18.2**	**-0.1**
	baz=288							
TWB1				S		**Sn**	**17 23 30.5**	**-0.2**
	baz=288							
NTC	**Toucheng**	**0.55 273**		P	P	**Pn**	**17 23 18.9**	**-0.2**
	baz=263							
NTC				*e*S		**Sn**	**17 23 32.0**	**+0.1**
	baz=263							
TIPB	**Shuangxi**	**0.57 284**		*i* P	P	**Pn**	**17 23 19.2**	**0.0**
	baz=277							
TIPB				*i* S		**Sn**	**17 23 32.2**	**-0.1**
	baz=277							
TWC	**Suao**	**0.58 248**		P	P	**Pn**	**17 23 19.0**	**-0.2**
	baz=240							
TWC				*e*S		**Sn**	**17 23 31.8**	**-0.4**
	baz=240							
JYNG	**Yonagunijimaku**	**0.60 129**		P	P	**Pn**	**17 23 19.4**	**0.0**
JYNG				S		**Sn**	**17 23 33.0**	**+0.5**
ILA	**Ilan**	**0.63 264**		*e*P	P	**Pn**	**17 23 19.6**	**0.0**
	baz=253							
ILA				*e*S		**Sn**	**17 23 33.8**	**+0.8**
	baz=253							
YOJ	**Yonaguni jima**	**0.64 125**		*i* P	P	**Pn**	**17 23 19.6**	**-0.1**
	baz=137							
YOJ				S		**Sn**	**17 23 32.7**	**-0.4**
	baz=137							
YOJ	**Yonaguni jima**	**0.64 125**		P	P	**Pn**	**17 23 19.7**	**0.0**
YOJ				S		**Sn**	**17 23 33.5**	**+0.4**
NWF	**Wu-fen Shan**	**0.64 292**		P	P	**Pn**	**17 23 19.8**	**0.0**
	baz=292							
NWF				*e*S		**Sn**	**17 23 33.0**	**-0.3**
	baz=292							
WFSB	**Wu-fen Shan**	**0.64 292**		P	P	**Pn**	**17 23 19.7**	**0.0**
	baz=288							
WFSB				S		**Sn**	**17 23 33.5**	**+0.3**
	baz=288							
ENAH	**Nanao**	**0.69 237**		P	P	**Pn**	**17 23 20.4**	**+0.3**
	baz=235							
ENAH				*e*S		**Sn**	**17 23 34.1**	**+0.3**
	baz=235							
NHDH	**Xindian Distri**	**0.84 279**		*e*P	P	**Pn**	**17 23 21.4**	**0.0**
	baz=276							
NHDH				*e*S		**Sn**	**17 23 35.7**	**-0.5**
	baz=276							
YM01	**YM01**	**0.85 292**		P	P	**Pn**	**17 23 21.6**	**0.0**
	baz=288							
YM01				S		**Sn**	**17 23 36.3**	**-0.2**
	baz=288							
YM08	**YM08**	**0.85 295**		*e*P	P	**Pn**	**17 23 21.4**	**-0.2**
	baz=291							
YM08				*e*S		**Sn**	**17 23 36.0**	**-0.3**
	baz=291							
NWLT	**Wulai**	**0.85 267**		P	P	**Pn**	**17 23 21.3**	**-0.3**
	baz=271							
NWLT				*e*S		**Sn**	**17 23 36.5**	**0.0**
	baz=271							
YM11	**YM11**	**0.85 293**		*e*P	P	**Pn**	**17 23 21.8**	**+0.2**
	baz=289							
YM11				*e*S		**Sn**	**17 23 36.4**	**-0.2**
	baz=289							
TAP1	**Taipei**	**0.86 284**		P	P	**Pn**	**17 23 21.6**	**+0.1**
	baz=272							
TAP1				S		**Sn**	**17 23 36.4**	**-0.1**
	baz=272							
YM10	**YM10**	**0.86 292**		P	P	**Pn**	**17 23 21.5**	**-0.1**
	baz=289							
YM10				*e*S		**Sn**	**17 23 36.2**	**-0.4**
	baz=289							
NDT	**Datong Townshi**	**0.87 255**		*e*P	P	**Pn**	**17 23 22.2**	**+0.5**
	baz=254							
NDT				*e*S		**Sn**	**17 23 37.8**	**+1.0**
	baz=254							
TAP	**Taipei**	**0.87 284**		*e*P	P	**Pn**	**17 23 21.7**	**0.0**
	baz=272							
TAP				*e*S		**Sn**	**17 23 36.5**	**-0.2**
	baz=272							
TATO	**Taipei**	**0.87 280**		*e*P	P	**Pn**	**17 23 21.5**	**-0.3**
	baz=276							
TATO				*e*S		**Sn**	**17 23 35.6**	**-1.1**
	baz=276							
YM04	**YM04**	**0.88 292**		*e*P	P	**Pn**	**17 23 21.9**	**+0.1**
	baz=288							
YM04				*e*S		**Sn**	**17 23 36.4**	**-0.5**
	baz=288							
YM03	**YM03**	**0.89 293**		*e*P	P	**Pn**	**17 23 21.9**	**-0.1**
	baz=290							
YM03				*e*S		**Sn**	**17 23 37.0**	**-0.1**
	baz=290							
ANP	**Anpu**	**0.91 293**		*e*P	P	**Pn**	**17 23 22.1**	**0.0**
	baz=290							
ANP				*e*S		**Sn**	**17 23 37.2**	**-0.3**
	baz=290							
NTST	**Danshui**	**0.96 291**		*e*P	P	**Pn**	**17 23 22.7**	**+0.2**
	baz=287							
NTST				*e*S		**Sn**	**17 23 38.1**	**-0.1**
	baz=287							
TWS1	**Kuangyinshan**	**0.96 286**		*e*P	P	**Pn**	**17 23 22.7**	**+0.1**
	baz=283							
TWS1				*e*S		**Sn**	**17 23 38.3**	**0.0**
	baz=283							
YHNB	**Yeheng**	**0.98 261**		P	P	**Pn**	**17 23 23.1**	**+0.3**
	baz=263							
YHNB				S		**Sn**	**17 23 38.9**	**+0.1**
	baz=263							
NSK	**Sanguang**	**0.99 261**		P	P	**Pn**	**17 23 23.1**	**+0.1**
	baz=264							
NSK				S		**Sn**	**17 23 38.9**	**-0.1**
	baz=264							
NACB	**Ninganchiao**	**1.01 230**		*e*P	P	**Pn**	**17 23 22.8**	**-0.3**
	baz=222							
NACB				*e*S		**Sn**	**17 23 38.2**	**-0.9**
	baz=222							
NNSB	**Datong**	**1.04 248**		*e*P	P	**Pn**	**17 23 23.9**	**+0.3**
	baz=238							
NNSB				*e*S		**Sn**	**17 23 40.1**	**+0.2**
	baz=238							
NNSH	**Datong**	**1.04 248**		*e*P	P	**Pn**	**17 23 23.9**	**+0.3**
	baz=239							
NNSH				*e*S		**Sn**	**17 23 40.1**	**+0.1**
	baz=239							
NNS	**Nan Shan**	**1.04 248**		P	P	**Pn**	**17 23 24.1**	**+0.5**
	baz=239							
NNS				*e*S		**Sn**	**17 23 40.3**	**+0.3**
	baz=239							
ETLH	**Xiulin Townshi**	**1.07 235**		*e*P	P	**Pn**	**17 23 23.9**	**+0.1**
	baz=233							
ETLH				*e*S		**Sn**	**17 23 40.8**	**+0.3**
	baz=233							
TWD	**Chiawan**	**1.07 226**		*e*P	P	**Pn**	**17 23 23.6**	**-0.2**
	baz=220							
TWD				*e*S		**Sn**	**17 23 39.7**	**-0.6**
	baz=220							
HWA	**Hwalien**	**1.14 222**		*e*P	P	**Pn**	**17 23 25.2**	**+0.7**
	baz=215							
HWA				*e*S		**Sn**	**17 23 42.4**	**+0.8**
	baz=215							
NCUH	**Zhongli**	**1.15 277**		*e*P	P	**Pn**	**17 23 24.8**	**+0.3**
	baz=274							
NCUH				*e*S		**Sn**	**17 23 42.1**	**+0.3**
	baz=274							
FUSS	**Fushou**	**1.23 242**		P	P	**Pn**	**17 23 26.4**	**+0.6**
	baz=236							
FUSS				*e*S		**Sn**	**17 23 44.0**	**+0.1**
	baz=236							
WHF	**Hehuan Shan**	**1.27 238**		*e*P	P	**Pn**	**17 23 26.6**	**+0.2**
	baz=231							
WHF				*e*S		**Sn**	**17 23 44.9**	**0.0**
	baz=231							
IRIF	**Iriomote-Funau**	**1.28 112**		P	P	**Pn**	**17 23 25.9**	**-0.1**
IRIF				S		**Sn**	**17 23 44.4**	**+0.1**
TDCB	**Techi**	**1.30 244**		*e*P	P	**Pn**	**17 23 27.2**	**+0.7**
	baz=237							
TDCB				*e*S		**Sn**	**17 23 45.3**	**+0.3**
	baz=237							
LIOB	**Emei**	**1.31 262**		*e*P	P	**Pn**	**17 23 26.6**	**+0.2**
	baz=260							
LIOB				*e*S		**Sn**	**17 23 45.0**	**0.0**
	baz=260							
SBCB	**Hsinchu**	**1.32 269**		*e*S		**Sn**	**17 23 45.6**	**+0.4**
	baz=258							
NSTT	**Nanjuang**	**1.32 262**		*e*P	P	**Pn**	**17 23 26.5**	**0.0**
	baz=259							
NSTT				*e*S		**Sn**	**17 23 44.9**	**-0.4**
	baz=259							
HSN	**Hsinchu**	**1.33 269**		*e*S		**Sn**	**17 23 44.7**	**-0.8**
	baz=258							
ESL	**Shilin**	**1.36 222**		*e*P	P	**Pn**	**17 23 26.4**	**-0.6**
	baz=230							
CHGB	**Renai**	**1.38 237**		P	P	**Pn**	**17 23 28.0**	**+0.5**
	baz=229							
CHGB				*e*S		**Sn**	**17 23 46.3**	**-0.6**
	baz=229							
HATJ	**Hateruma jima**	**1.47 121**		S		**Sn**	**17 23 48.9**	**+0.7**
WHP	**Taichung City**	**1.47 248**		*e*P	P	**Pn**	**17 23 29.2**	**+0.8**
	baz=255							
WHP				*e*S		**Sn**	**17 23 48.8**	**+0.4**
	baz=255							
EGFH	**Guangfu**	**1.48 219**		*e*P	P	**Pn**	**17 23 28.9**	**+0.5**
	baz=226							
EGFH				*e*S		**Sn**	**17 23 48.2**	**-0.3**
	baz=226							
NMLH	**Miaoli**	**1.53 259**		*e*P	P	**Pn**	**17 23 28.7**	**-0.3**
	baz=257							
NMLH				*e*S		**Sn**	**17 23 49.0**	**-0.5**
	baz=257							
JKRS	**Kuro-shima**	**1.55 112**		P	P	**Pn**	**17 23 29.7**	**+0.5**
JKRS				S		**Sn**	**17 23 50.6**	**+0.6**
NSY	**Sanyi**	**1.58 255**		*e*P	P	**Pn**	**17 23 30.2**	**+0.6**
	baz=253							
NSY				*e*S		**Sn**	**17 23 51.4**	**+0.6**
	baz=253							
DPDB	**Guoxing**	**1.59 240**		*e*P	P	**Pn**	**17 23 31.1**	**+1.3**
	baz=234							
DPDB				*e*S		**Sn**	**17 23 52.1**	**+1.1**
	baz=234							
JIJ	**Ishigaki jima**	**1.62 106**		P	P	**Pn**	**17 23 30.2**	**+0.1**
JIJ				S		**Sn**	**17 23 51.1**	**-0.5**
HGSD	**Ruisui**	**1.62 215**		*e*P	P	**Pn**	**17 23 30.2**	**+0.1**
	baz=209							
HGSD				*e*S		**Sn**	**17 23 50.7**	**-0.9**
	baz=209							
EHY	**Hungye**	**1.67 218**		*e*P	P	**Pn**	**17 23 31.0**	**+0.3**
	baz=225							
SMLT	**Sun Moon Lake**	**1.69 236**		*e*P	P	**Pn**	**17 23 32.2**	**+1.1**
	baz=231							
SMLT				*e*S		**Sn**	**17 23 55.5**	**+2.2**
	baz=231							
SSLB	**Suanglung**	**1.71 233**		*e*P	P	**Pn**	**17 23 32.4**	**+1.2**
	baz=227							
SSLB				*e*S		**Sn**	**17 23 54.0**	**+0.5**
	baz=227							
WDJ	**Dajia District**	**1.71 254**		*e*P	P	**Pn**	**17 23 31.7**	**+0.6**
	baz=252							
WDJ				*e*S		**Sn**	**17 23 53.6**	**+0.2**
	baz=252							
JISG	**Ishigakijimahi**	**1.72 98**		P	P	**Pn**	**17 23 31.7**	**+0.4**
JISG				S		**Sn**	**17 23 53.7**	**-0.1**
TCU	**Taichung**	**1.74 247**		*e*S		**Sn**	**17 23 54.7**	**+0.5**
	baz=254							
YULB	**Yu-li**	**1.77 216**		*e*P	P	**Pn**	**17 23 30.8**	**-1.2**
	baz=223							
EYUL	**Yuli**	**1.79 215**		*e*P	P	**Pn**	**17 23 33.2**	**+0.9**
	baz=222							
EYUL				*e*S		**Sn**	**17 23 55.8**	**+0.3**
	baz=222							
TWF1	**Yuli**	**1.80 216**		*e*P	P	**Pn**	**17 23 31.9**	**-0.5**
	baz=222							
WHYT	**Xinyi Township**	**1.83 232**		*e*P	P	**Pn**	**17 23 34.0**	**+1.2**
	baz=227							
WHYT				*e*S		**Sn**	**17 23 58.1**	**+1.7**
	baz=227							
WJS	**Zhushan**	**1.85 238**		*e*P	P	**Pn**	**17 23 34.2**	**+1.2**
	baz=245							
WJS				*e*S		**Sn**	**17 23 57.7**	**+0.9**
	baz=245							
WNT	**Mingjian**	**1.86 240**		*e*P	P	**Pn**	**17 23 34.2**	**+1.1**
	baz=238							
WNT				*e*S		**Sn**	**17 23 58.0**	**+1.2**
	baz=238							
WCHH	**Zhanghua**	**1.87 247**		*e*S		**Sn**	**17 23 57.0**	**0.0**
	baz=252							
FULB	**Fuli**	**1.93 213**		*e*P	P	**Pn**	**17 23 34.6**	**+0.6**
	baz=207							
FULB				*e*S		**Sn**	**17 23 58.4**	**-0.1**
	baz=207							
CHKT	**Chengkung**	**1.98 210**		*e*P	P	**Pn**	**17 23 34.0**	**-0.6**
	baz=204							
CHKT				*e*S		**Sn**	**17 23 57.8**	**-1.9**
	baz=204							
ALS	**Alishan**	**1.99 229**		*e*P	P	**Pn**	**17 23 36.2**	**+1.2**
	baz=221							
ALS				*e*S		**Sn**	**17 24 01.5**	**+1.3**
	baz=221							
CHN5	**Tsauling**	**2.02 233**		*e*P	P	**Pn**	**17 23 36.2**	**+1.1**
	baz=241							
CHN5				*e*S		**Sn**	**17 24 02.0**	**+1.4**
	baz=241							
WGK	**Gukeng**	**2.06 237**		*e*P	P	**Pn**	**17 23 36.8**	**+1.3**
	baz=235							
WGK				*e*S		**Sn**	**17 24 02.9**	**+1.7**
	baz=235							
JTJ	**Tarama**	**2.07 95**		S		**Sn**	**17 24 02.7**	**+1.2**
WDLH	**Douliu**	**2.07 237**		*e*P	P	**Pn**	**17 23 36.5**	**+0.7**
	baz=236							
WDLH				*e*S		**Sn**	**17 24 02.4**	**+0.7**
	baz=236							
ELDTW	**Lidau**	**2.09 219**		*e*P	P	**Pn**	**17 23 36.3**	**+0.2**
	baz=213							
ELDTW				*e*S		**Sn**	**17 24 00.1**	**-2.1**
	baz=213							
RLNB	**Erlin**	**2.11 244**		*e*P	P	**Pn**	**17 23 36.6**	**+0.3**
	baz=243							
RLNB				*e*S		**Sn**	**17 24 03.3**	**+0.7**
	baz=243							
EDH	**Donghe**	**2.12 210**		*e*P	P	**Pn**	**17 23 36.0**	**-0.4**
	baz=205							
EDH				*e*S		**Sn**	**17 24 01.1**	**-1.6**
	baz=205							
WTK	**Tuku**	**2.19 239**		*e*P	P	**Pn**	**17 23 37.5**	**+0.3**
	baz=238							
WTK				*e*S		**Sn**	**17 24 04.1**	**-0.2**
	baz=238							
TPUB	**Ta-pu**	**2.25 228**		*e*P	P	**Pn**	**17 23 38.9**	**+0.8**
	baz=237							
TPUB				*e*S		**Sn**	**17 24 06.2**	**+0.5**
	baz=237							
LONT	**Longtian**	**2.26 212**		*e*P	P	**Pn**	**17 23 37.6**	**-0.5**
	baz=212							
LONT				*e*S		**Sn**	**17 24 05.0**	**-0.9**
	baz=212							
STYT	**Tauyuan**	**2.26 223**		*e*P	P	**Pn**	**17 23 39.6**	**+1.3**
	baz=222							
STYT				*e*S		**Sn**	**17 24 07.4**	**+1.3**
	baz=222							
CHY	**Chiayi**	**2.27 235**		*e*P	P	**Pn**	**17 23 38.8**	**+0.6**
	baz=242							
CHY				*e*S		**Sn**	**17 24 06.7**	**+0.5**
	baz=242							
WTP	**Ta-pu**	**2.29 227**		*e*P	P	**Pn**	**17 23 39.5**	**+0.8**
	baz=238							
LDUT	**Ludao**	**2.32 203**		*e*S		**Sn**	**17 24 05.4**	**-2.0**
	baz=202							
WSF	**Szhu**	**2.34 240**		*e*S		**Sn**	**17 24 08.0**	**+0.1**
	baz=238							
TWGBT	**Beinan**	**2.36 212**		*e*P	P	**Pn**	**17 23 37.6**	**-1.9**
	baz=211							
TWGBT				*e*S		**Sn**	**17 24 06.8**	**-1.4**
	baz=211							
TWK	**Hsinying**	**2.37 229**		*e*P	P	**Pn**	**17 23 40.3**	**+0.7**
	baz=228							
TWK				*e*S		**Sn**	**17 24 10.0**	**+1.5**
	baz=228							
WLGB	**Puzi**	**2.37 236**		*e*S		**Sn**	**17 24 08.9**	**+0.4**
	baz=234							
SNST	**Tainan City**	**2.39 228**		*e*P	P	**Pn**	**17 23 40.8**	**+1.0**
	baz=227							
SNST				*e*S		**Sn**	**17 24 09.2**	**+0.2**
	baz=227							
CHN1	**Nanshi**	**2.39 227**		*e*P	P	**Pn**	**17 23 40.6**	**+0.7**
	baz=226							
CHN1				*e*S		**Sn**	**17 24 10.3**	**+1.2**
	baz=226							
SGST	**Jiashian**	**2.43 225**		*e*P	P	**Pn**	**17 23 40.5**	**+0.1**
	baz=224							
SGST				*e*S		**Sn**	**17 24 10.6**	**+0.6**
	baz=224							
SLGT	**Liugui**	**2.46 222**		*e*P	P	**Pn**	**17 23 42.0**	**+1.3**
	baz=229							
SLGT				*e*S		**Sn**	**17 24 12.3**	**+1.8**
	baz=229							
CHN8	**Yiju**	**2.51 234**		*e*S		**Sn**	**17 24 12.4**	**+0.6**
	baz=233							
ECL	**Taimali**	**2.60 212**		*e*P	P	**Pn**	**17 23 41.1**	**-1.5**
	baz=206							
ECL				*e*S		**Sn**	**17 24 12.2**	**-1.8**
	baz=206							
SSD	**Sandimen**	**2.65 219**		*e*P	P	**Pn**	**17 23 44.3**	**+1.0**
	baz=218							
TSMG	**Majia**	**2.68 218**		*e*P	P	**Pn**	**17 23 44.4**	**+0.7**
	baz=218							
VWUC	**VWUC**	**2.72 274**		*e*P	P	**Pn**	**17 23 43.1**	**-1.0**
	baz=272							
MASBT	**Mashibuluo**	**2.76 217**		*e*P	P	**Pn**	**17 23 45.6**	**+1.0**
	baz=217							
EAST	**Anshuo**	**2.84 211**		*e*P	P	**Pn**	**17 23 45.0**	**-0.8**
	baz=207							
LAY	**Lan-yu**	**2.90 197**		*e*P	P	**Pn**	**17 23 46.1**	**-0.4**
	baz=197							
PHUB	**P'eng-hu**	**2.93 244**		*e*P	P	**Pn**	**17 23 45.0**	**-1.9**
	baz=243							
SCZT	**Fangliau**	**2.96 215**		*e*P	P	**Pn**	**17 23 47.9**	**+0.6**
	baz=214							
SLIU	**Shizi**	**3.00 210**		*e*P	P	**Pn**	**17 23 47.7**	**-0.2**
	baz=207							
PTMZ	**Houxiangcun**	**3.02 275**		*e*P	P	**Pn**	**17 23 47.6**	**-0.5**
	baz=272							
VCHM	**Qimei**	**3.19 240**		*e*S		**Sn**	**17 24 26.0**	**-1.8**
	baz=230							

IDC 12 17:27:38.9±2.5, 10.29S×112.99E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/33, mbtmp3.4/4, Error ellipse: s-maj=124.6km s-min=22.0km az=46.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.71 117**		P	P	P	17 32 42.8	+0.3
	0.5nm,0.6s,baz=291,slow=11,SNR=7.6							
ASAR	**Alice Springs**	**23.98 126**		P	P	P	17 32 55.5	+0.2
	0.6nm,0.5s,baz=302,slow=9.7,SNR=25							
CMAR	**Chiang Mai Arr**	**31.75 334**		P	P	P	17 34 06.4	+1.4
	0.3nm,0.6s,baz=160,slow=8.6,SNR=2.3							
MKAR	**Makanchi Array**	**63.10 337**		P	P	P	17 38 06.9	-1.4
	0.6nm,0.8s,baz=152,slow=9.1,SNR=4.3							

*INET **12** 18:32:46.7, 13.62N×90.74W, h10km, ML3.6*
*SNET **12** 18:32:47.5±1.0, 13.59N×90.76W, h29km±5km, ML3.7*
*UCR **12** 18:32:47.7±1.0, 13.59N×90.76W, h29km±4km, ML3.6*
*GCG **12** 18:32:51.3±0.7, 13.83N×90.79W, h50km±26km, MD3.8*
ISC 12 18:32:47.4±1.5, 13.55N±0.08×90.77W±0.05, h29km, n35, σ0.83/40, 6C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.85 10**		*e*P	P	**Pn**	**18 33 04.3**	**+0.5**
FUG	**Fuego 3**	**0.90 355**		*e*P	P	**Pb**	**18 33 04.6**	**+0.1**
NUBE	**Las Nubes**	**1.02 70**		*e*P	P	**Pn**	**18 33 05.4**	**-0.6**
NUBE				IAML			18 33 24.7	
NUBE	**Las Nubes**	**1.02 70**		*e*P	P	**Pn**	**18 33 05.4**	**-0.6**
NUBE				IAML			18 33 24.7	
NBG	**Las Nubes**	**1.11 22**		*e*P	P	**Pb**	**18 33 08.7**	**+0.5**
NBG				*e*S		**Sb**	**18 33 24.6**	**+2.2**
RTR	**El

CEDA					IAML			18 33 35.9	
	comp=Z,3μm,0.5s								
CEDA	**San Andres**	**1.36**	**79**	*eS*		**Sb**		**18 33 28.3**	**-1.0**
CEDA					IAML			18 33 35.9	
	comp=Z,3μm,0.5s								
STG3	**Santiaguito 3,**	**1.39**	**326**	*eP*		**Pb**		**18 33 11.7**	**-1.3**
TACO	**Tacachico**	**1.44**	**73⇑**	*eP*		**Pn**		**18 33 11.4**	**-0.2**
TACO				*eS*		**Sb**		**18 33 30.6**	**-0.9**
TACO	**Tacachico**	**1.44**	**73⇑**	*eP*		**Pn**		**18 33 11.4**	**-0.2**
TACO				*eS*		**Sb**		**18 33 30.6**	**-0.9**
BOQS	**Boqueron**	**1.46**	**83**	*eP*		**Pn**		**18 33 12.2**	**+0.1**
BOQS	**Boqueron**	**1.46**	**83**	*eP*		**Pn**		**18 33 12.2**	**+0.1**
MTO3	**Montecristo**	**1.60**	**58⇑**	*iP*		**Pn**		**18 33 13.8**	**-0.3**
MTO3	**Montecristo**	**1.60**	**58⇑**	*iP*		**Pn**		**18 33 13.8**	**-0.3**
LFRS	**El Faro**	**1.66**	**87**	*eP*		**Pn**		**18 33 15.1**	**+0.3**
LFRS	**El Faro**	**1.66**	**87**	*eP*		**Pn**		**18 33 15.1**	**+0.3**
LBRS	**Las Brisas**	**1.69**	**83**	*eP*		**Pn**		**18 33 15.4**	**+0.3**
LBRS	**Las Brisas**	**1.69**	**83**	*eP*		**Pn**		**18 33 15.4**	**+0.3**
PAVA	**Las Pavas**	**1.79**	**85**	*eP*		**Pn**		**18 33 16.6**	**+0.1**
PAVA					IAML			18 33 46.1	
	comp=Z,416nm,0.5s								
PAVA	**Las Pavas**	**1.79**	**85**	*eP*		**Pn**		**18 33 16.6**	**+0.1**
PAVA					IAML			18 33 46.1	
	comp=Z,416nm,0.5s								
COEG	**Centro de Oper**	**1.84**	**88**	*eP*		**Pn**		**18 33 18.0**	**+0.9**
COEG				*eS*		**Sn**		**18 33 40.6**	**+1.1**
COEG					IAML			18 33 46.8	
	comp=Z,984nm,0.2s								
COEG	**Centro de Oper**	**1.84**	**88**	*eP*		**Pn**		**18 33 18.0**	**+0.9**
COEG				*eS*		**Sn**		**18 33 40.6**	**+1.1**
COEG					IAML			18 33 46.8	
	comp=Z,984nm,0.2s								
MRL	**Marmol**	**1.85**	**34**	*eP*		**Pn**		**18 33 17.7**	**+0.3**
MRL	**Marmol**	**1.85**	**34**	*eP*		**Pn**		**18 33 17.7**	**+0.3**
MRL	**Marmol**	**1.85**	**34**	*eP*		**Pb**		**18 33 18.5**	**-2.2**
LCND	**La Caada**	**2.81**	**95**	*eS*		**Sn**		**18 34 04.0**	**+0.6**
LCND					IAML			18 34 07.6	
	comp=Z,420nm,0.7s								
LCND	**La Caada**	**2.81**	**95**	*eS*		**Sn**		**18 34 04.0**	**+0.6**
LCND					IAML			18 34 07.6	
	comp=Z,420nm,0.7s								
CSGN	**Cosiguina Volc**	**3.17**	**100**	*eP*		**Pn**		**18 33 36.8**	**+1.2**
CSGN	**Cosiguina Volc**	**3.17**	**100**	*eP*		**Pn**		**18 33 36.8**	**+1.2**

*JMA **12** 18:46:50.8±0.1,24°.40N×122°.24E,h55km±3km,M2.2*
*TAP **12** 18:46:51.1,24°.45N×122°.24E,h49km,ML3.0,C*
ISC 12 18:46:51.6±2.5,24°.45N±0°.03×122°.26E±0°.02,h39km±5km,
n95,σ0s94/155,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.41**	**293**	P		**Pn**	**18 47 01.1**	**+0.1**
	baz=299							
TWC				*eS*		**Sn**	**18 47 08.1**	**+0.3**
	baz=299							
ENAH	**Nanao**	**0.41**	**271**	P		**Pn**	**18 47 01.1**	**+0.2**
	baz=274							
ENAH				*eS*		**Sn**	**18 47 07.5**	**-0.3**
	baz=274							
EGS		**0.50**	**323**	*eP*		**Pn**	**18 47 02.1**	**-0.2**
	baz=320							
EGS				*eS*		**Sn**	**18 47 09.9**	**+0.2**
	baz=320							
ILA	**Ilan**	**0.57**	**304**	*eP*		**Pn**	**18 47 02.3**	**-0.9**
	baz=306							
ILA				*eS*		**Sn**	**18 47 12.3**	**+0.9**
	baz=306							
NTC	**Toucheng**	**0.57**	**316**	*eP*		**Pn**	**18 47 03.2**	**0.0**
	baz=326							
NTC				*eS*		**Sn**	**18 47 11.2**	**-0.2**
	baz=326							
TWE	**Neicheng**	**0.61**	**297**	*eP*		**Pn**	**18 47 04.0**	**+0.3**
	baz=303							
TWE				*eS*		**Sn**	**18 47 11.7**	**-0.7**
	baz=303							
TWB1	**Santiao Chiao**	**0.61**	**336**	P		**Pn**	**18 47 03.4**	**-0.5**
	baz=327							
TWB1				*eS*		**Sn**	**18 47 12.1**	**-0.4**
	baz=327							
JYNG	**Yonagunijimaku**	**0.62**	**89**	P		**Pn**	**18 47 04.3**	**+0.3**
JYNG				*eS*		**Sn**	**18 47 13.5**	**+0.8**
TIPB	**Shuangxi**	**0.66**	**323**	*eP*		**Pn**	**18 47 04.4**	**-0.1**
	baz=332							
TIPB				*eS*		**Sn**	**18 47 13.4**	**-0.3**
	baz=332							
NACB	**Ninganchiao**	**0.67**	**246**	P		**Pn**	**18 47 04.0**	**-0.6**
	baz=235							
NACB				*eS*		**Sn**	**18 47 13.8**	**0.0**
	baz=235							
YOJ	**Yonaguni jima**	**0.68**	**89**	*i* P		**Pn**	**18 47 05.0**	**+0.3**
	baz=79							
YOJ				S		**Sn**	**18 47 14.6**	**+0.4**
	baz=79							
YOJ	**Yonaguni jima**	**0.68**	**89**	P		**Pn**	**18 47 05.0**	**+0.3**
YOJ				*eS*		**Sn**	**18 47 14.6**	**+0.4**
NDT	**Datong Townshi**	**0.70**	**283**	P		**Pn**	**18 47 05.6**	**+0.5**
	baz=283							
NDT				*eS*		**Sn**	**18 47 15.5**	**+0.8**
	baz=283							
TWD	**Chiawan**	**0.71**	**239**	P		**Pn**	**18 47 04.7**	**-0.4**
	baz=227							
TWD				*eS*		**Sn**	**18 47 14.5**	**-0.3**
	baz=227							
ETLH	**Xiulin Townshi**	**0.75**	**252**	P		**Pn**	**18 47 05.4**	**-0.4**
	baz=242							
ETLH				*eS*		**Sn**	**18 47 15.7**	**-0.2**
	baz=242							
NWF	**Wu-fen Shan**	**0.76**	**325**	P		**Pn**	**18 47 05.8**	**-0.1**
	baz=326							
NWF				*eS*		**Sn**	**18 47 14.8**	**-1.4**
	baz=326							
WFSB	**Wu-fen Shan**	**0.76**	**325**	P		**Pn**	**18 47 05.6**	**-0.2**
	baz=326							
WFSB				*eS*		**Sn**	**18 47 16.4**	**+0.3**
	baz=326							
NWLT	**Wulai**	**0.77**	**296**	*eP*		**Pn**	**18 47 06.6**	**+0.7**
	baz=302							
NWLT				*eS*		**Sn**	**18 47 16.9**	**+0.6**
	baz=302							
NNSB	**Datong**	**0.80**	**269**	P		**Pn**	**18 47 06.5**	**+0.1**
	baz=259							
NNSB				*eS*		**Sn**	**18 47 17.3**	**0.0**
	baz=259							
NNSH	**Datong**	**0.80**	**269**	P		**Pn**	**18 47 06.5**	**0.0**
	baz=259							
NNSH				*eS*		**Sn**	**18 47 16.9**	**-0.4**
	baz=259							
NNS	**Nan Shan**	**0.81**	**270**	P		**Pn**	**18 47 06.3**	**-0.3**
	baz=259							
NNS				*eS*		**Sn**	**18 47 17.2**	**-0.3**
	baz=259							
TWA	**Mucha**	**0.82**	**311**	P		**Pn**	**18 47 06.8**	**+0.2**
	baz=323							
TWA				*eS*		**Sn**	**18 47 17.4**	**0.0**
	baz=323							
YHNB	**Yeheng**	**0.84**	**286**	*i* P		**Pn**	**18 47 07.5**	**+0.5**
	baz=276							
YHNB				*eS*		**Sn**	**18 47 18.9**	**+0.7**
	baz=276							
NHDH	**Xindian Distri**	**0.85**	**308**	*eP*		**Pn**	**18 47 06.7**	**-0.3**
	baz=318							
NHDH				*eS*		**Sn**	**18 47 18.5**	**+0.3**
	baz=318							
NSK	**Sanguang**	**0.86**	**286**	*eP*		**Pn**	**18 47 07.6**	**+0.4**
	baz=275							
NSK				*eS*		**Sn**	**18 47 19.4**	**+0.9**
	baz=275							
TATO	**Taipei**	**0.88**	**307**	*eP*		**Pn**	**18 47 06.0**	**-1.4**
	baz=321							
TAP1	**Taipei**	**0.90**	**311**	*eP*		**Pn**	**18 47 07.6**	**0.0**
	baz=311							
TAP	**Taipei**	**0.91**	**311**	*eP*		**Pn**	**18 47 07.3**	**-0.5**
	baz=324							
TAP				*eS*		**Sn**	**18 47 19.1**	**-0.6**
	baz=324							
YM01	**YM01**	**0.94**	**318**	*eP*		**Pn**	**18 47 07.8**	**-0.5**
	baz=319							
YM01				*eS*		**Sn**	**18 47 20.1**	**-0.5**
	baz=319							
FUSS	**Fushou**	**0.95**	**258**	P		**Pn**	**18 47 08.6**	**-0.1**
	baz=258							
FUSS				*eS*		**Sn**	**18 47 20.9**	**-0.2**
	baz=258							
YM10	**YM10**	**0.95**	**318**	*eP*		**Pn**	**18 47 07.9**	**-0.6**
	baz=319							
YM10				*eS*		**Sn**	**18 47 20.5**	**-0.4**
	baz=319							
YM11	**YM11**	**0.95**	**319**	*eP*		**Pn**	**18 47 08.2**	**-0.3**
	baz=319							
WHF	**Hehuan Shan**	**0.96**	**252**	P		**Pn**	**18 47 08.7**	**-0.2**
	baz=251							
WHF				*eS*		**Sn**	**18 47 21.1**	**-0.5**
	baz=251							
YM08	**YM08**	**0.96**	**320**	*eP*		**Pn**	**18 47 07.8**	**-0.8**
	baz=321							
YM08				*eS*		**Sn**	**18 47 19.7**	**-1.3**
	baz=321							
YM04	**YM04**	**0.97**	**317**	P		**Pn**	**18 47 08.2**	**-0.4**
	baz=318							
YM04				*eS*		**Sn**	**18 47 20.2**	**-1.0**
	baz=318							
YM03	**YM03**	**0.98**	**318**	*eP*		**Pn**	**18 47 06.8**	**-2.1**
	baz=319							
ESL	**Shilin**	**0.98**	**231**	*eP*		**Pn**	**18 47 07.8**	**-1.0**
	baz=229							
ESL				*eS*		**Sn**	**18 47 20.6**	**-1.0**
	baz=229							
ANP	**Anpu**	**1.00**	**318**	*eP*		**Pn**	**18 47 10.6**	**+1.4**
	baz=318							
TWS1	**Kuangyinshan**	**1.01**	**310**	*eP*		**Pn**	**18 47 09.1**	**-0.1**
	baz=322							
TWS1				*eS*		**Sn**	**18 47 22.3**	**+0.2**
	baz=322							
TWT	**Tachien**	**1.01**	**259**	P		**Pn**	**18 47 09.7**	**+0.3**
	baz=259							
TWT				*eS*		**Sn**	**18 47 22.8**	**+0.3**
	baz=259							
TWY	**Chenhua**	**1.02**	**324**	*eP*		**Pn**	**18 47 09.3**	**-0.1**
	baz=325							
TWY				*eS*		**Sn**	**18 47 22.5**	**0.0**
	baz=325							
TDCB	**Techi**	**1.03**	**259**	*eP*		**Pn**	**18 47 09.7**	**+0.1**
	baz=259							
TDCB				*eS*		**Sn**	**18 47 22.5**	**-0.3**
	baz=259							
NTST	**Danshui**	**1.03**	**314**	*eP*		**Pn**	**18 47 09.1**	**-0.4**
	baz=325							
CHGB	**Renai**	**1.07**	**249**	*eP*		**Pn**	**18 47 10.2**	**0.0**
	baz=238							
CHGB				*eS*		**Sn**	**18 47 23.2**	**-0.7**
	baz=238							
EGFH	**Guangfu**	**1.09**	**225**	*eP*		**Pn**	**18 47 09.7**	**-0.6**
	baz=215							
NCUH	**Zhongli**	**1.11**	**298**	*eP*		**Pn**	**18 47 11.4**	**+0.8**
	baz=298							
LIOB	**Emei**	**1.15**	**280**	*eP*		**Pn**	**18 47 12.1**	**+0.8**
	baz=280							
LIOB				*eS*		**Sn**	**18 47 27.9**	**+2.1**
	baz=280							
NSTT	**Nanjuang**	**1.16**	**279**	*eP*		**Pn**	**18 47 12.1**	**+0.7**
	baz=279							
NSTT				*eS*		**Sn**	**18 47 27.4**	**+1.4**
	baz=279							
WHP	**Taichung City**	**1.21**	**262**	*eP*		**Pn**	**18 47 13.2**	**+1.1**
	baz=255							
WHP				*eS*		**Sn**	**18 47 28.3**	**+1.0**
	baz=255							
HGSD	**Ruisui**	**1.22**	**219**	*eP*		**Pn**	**18 47 10.9**	**-1.2**
	baz=212							
HGSD				*eS*		**Sn**	**18 47 26.0**	**-1.4**
	baz=212							
EHY	**Hungye**	**1.27**	**223**	*eP*		**Pn**	**18 47 12.0**	**-0.8**
	baz=222							
DPDB	**Guoxing**	**1.29**	**252**	*eP*		**Pn**	**18 47 13.5**	**+0.4**
	baz=244							
DPDB				*eS*		**Sn**	**18 47 29.6**	**+0.5**
	baz=244							
IRIF	**Iriomote-Funau**	**1.34**	**94**	P		**Pn**	**18 47 13.7**	**-0.1**
IRIF				S		**Sn**	**18 47 31.4**	**+1.0**
TWQ1	**Liyutan**	**1.36**	**266**	*eP*		**Pn**	**18 47 14.8**	**+0.7**
	baz=266							
TWQ1				*eS*		**Sn**	**18 47 33.2**	**+2.3**
	baz=266							
SSLB	**Suanglung**	**1.36**	**242**	*eP*		**Pn**	**18 47 13.9**	**-0.2**
	baz=233							
SSLB				*eS*		**Sn**	**18 47 30.3**	**-0.7**
	baz=233							
SMLT	**Sun Moon Lake**	**1.37**	**246**	*eP*		**Pn**	**18 47 14.6**	**+0.4**
	baz=237							
SMLT				*eS*		**Sn**	**18 47 31.2**	**+0.1**
	baz=237							
YULB	**Yu-li**	**1.37**	**220**	*eP*		**Pn**	**18 47 12.9**	**-1.3**
	baz=220							
YULB				*eS*		**Sn**	**18 47 28.6**	**-2.6**
	baz=220							
TYC	**Yuchr**	**1.39**	**248**	*eP*		**Pn**	**18 47 14.8**	**+0.4**
	baz=239							
TYC				*eS*		**Sn**	**18 47 32.6**	**+1.0**
	baz=239							
EYUL	**Yuli**	**1.39**	**219**	*eP*		**Pn**	**18 47 13.9**	**-0.6**
	baz=229							
EYUL				*eS*		**Sn**	**18 47 31.0**	**-0.7**
	baz=229							
TWF1	**Yuli**	**1.40**	**219**	*eP*		**Pn**	**18 47 13.2**	**-1.4**
	baz=229							
TWF1				*eS*		**Sn**	**18 47 29.9**	**-2.0**
	baz=229							
WHYT	**Xinyi Township**	**1.49**	**240**	*eP*		**Pn**	**18 47 17.6**	**+1.7**
	baz=232							
WHYT				*eS*		**Sn**	**18 47 34.4**	**+0.3**
	baz=232							
FULB	**Fuli**	**1.53**	**216**	*eP*		**Pn**	**18 47 15.3**	**-1.0**
	baz=205							
WJS	**Zhushan**	**1.53**	**246**	*eP*		**Pn**	**18 47 17.7**	**+1.3**
	baz=236							
WJS				*eS*		**Sn**	**18 47 36.2**	**+1.0**
	baz=236							
WNT	**Mingjian**	**1.55**	**249**	*eP*		**Pn**	**18 47 17.9**	**+1.3**
	baz=248							
CHKT	**Chengkung**	**1.57**	**212**	*eP*		**Pn**	**18 47 15.3**	**-1.6**
	baz=201							
JKRS	**Kuro-shima**	**1.61**	**97**	P		**Pn**	**18 47 18.0**	**+0.6**
JKRS				*eS*		**Sn**	**18 47 37.5**	**+0.6**
ALS	**Alishan**	**1.63**	**235**	*eP*		**Pn**	**18 47 18.7**	**+0.7**
	baz=225							
ALS				*eS*		**Sn**	**18 47 37.3**	**-0.5**
	baz=225							
CHN5	**Tsauling**	**1.68**	**240**	*eP*		**Pn**	**18 47 19.3**	**+0.8**
	baz=229							
ELDTW	**Lidau**	**1.69**	**223**	*eP*		**Pn**	**18 47 17.7**	**-1.0**
	baz=222							
EDH	**Donghe**	**1.71**	**211**	*eP*		**Pn**	**18 47 17.6**	**-1.2**
	baz=202							
JIJ	**Ishigaki jima**	**1.72**	**92**	P		**Pn**	**18 47 18.9**	**0.0**
JIJ				S		**Sn**	**18 47 39.5**	**-0.1**
WGK	**Gukeng**	**1.73**	**244**	*eP*		**Pn**	**18 47 20.6**	**+1.5**
	baz=233							
WDLH	**Douliu**	**1.75**	**245**	*eP*		**Pn**	**18 47 20.3**	**+0.9**
	baz=234							
RLNB	**Erlin**	**1.82**	**253**	*eP*		**Pn**	**18 47 20.5**	**+0.1**
	baz=263							
JISG	**Ishigakijimahi**	**1.87**	**85**	P		**Pn**	**18 47 21.0**	**0.0**
JISG				S		**Sn**	**18 47 43.0**	**-0.4**
WTK	**Tuku**	**1.87**	**247**	*eP*		**Pn**	**18 47 21.4**	**+0.3**
	baz=246							
CHN4	**Tsaushan**	**1.88**	**235**	*eP*		**Pn**	**18 47 22.7**	**+1.5**
	baz=225							
CHN4				*eS*		**Sn**	**18 47 45.8**	**+2.2**
	baz=225							
STYT	**Tauyuan**	**1.88**	**228**	*eP*		**Pn**	**18 47 22.9**	**+1.7**
	baz=218							
TPUB	**Ta-pu**	**1.88**	**233**	*eP*		**Pn**	**18 47 22.7**	**+1.5**
	baz=225							
TPUB				*eS*		**Sn**	**18 47 45.3**	**+1.6**
	baz=225							
WTP	**Ta-pu**	**1.93**	**232**	*eP*		**Pn**	**18 47 23.6**	**+1.8**
	baz=221							
TWGBT	**Beinan**	**1.95**	**214**	*eP*		**Pn**	**18 47 20.3**	**-1.9**
	baz=213							
TWG	**Pinlang**	**1.95**	**214**	*eP*		**Pn**	**18 47 21.4**	**-0.8**
	baz=213							
TWK	**Hsinying**	**2.00**	**235**	*eP*		**Pn**	**18 47 24.0**	**+1.1**
	baz=224							
TWK				*eS*		**Sn**	**18 47 48.5**	**+1.6**
	baz=224							
CHN1	**Nanshi**	**2.02**	**232**	*eP*		**Pn**	**18 47 25.3**	**+2.1**
	baz=232							
WSF	**Szhu**	**2.03**	**247**	*eP*		**Pn**	**18 47 23.5**	**+0.3**
	baz=259							
SGST	**Jiashian**	**2.05**	**229**	*eP*		**Pn**	**18 47 23.4**	**-0.2**
	baz=219							
SLGT	**Liugui**	**2.07**	**226**	*eP*		**Pn**	**18 47 25.0**	**+1.2**
	baz=226							
SCST	**Cishan**	**2.25**	**227**	*eP*		**Pn**	**18 47 26.5**	**+0.3**
	baz=237							
SSD	**Sandimen**	**2.26**	**222**	*eP*		**Pn**	**18 47 28.1**	**+1.7**
	baz=221							
TSMG	**Majia**	**2.28**	**221**	*eP*		**Pn**	**18 47 28.6**	**+1.9**
	baz=220							
MASBT	**Mashibuluo**	**2.36**	**220**	*eP*		**Pn**	**18 47 28.2**	**+0.4**
	baz=219							
EAST	**Anshuo**	**2.43**	**213**	*eP*		**Pn**	**18 47 27.7**	**-1.1**
	baz=204							
SCZT	**Fangliau**	**2.56**	**217**	*eP*		**Pn**	**18 47 32.5**	**+2.0**
	baz=207							
VWUC	**VWUC**	**2.62**	**283**	*eP*		**Pn**	**18 47 30.4**	**-0.9**
	baz=282							
XPSS	**Dashiqiu**	**3.10**	**323**	*eP*		**Pn**	**18 47 36.5**	**-1.4**
	baz=322							

*GII **12** 19:04:02.9±0.0,34°.53N×21°.23E,h4km,mb4.3/2,MD4.1/2*
*THE **12** 19:04:07.3,34°.97N×20°.32E,h32km±65km,ML3.6/8,Error ellipse: s-maj=65.7km s-min=1.8km az=135.0*
*ATH **12** 19:04:09.2,35°.14N×20°.54E,h45km±17km,ML3.5/13,Error ellipse: s-maj=19.6km s-min=2.1km az=228.0*
ISC 12 19:03:58.3±0.8,34°.69N±0°.04×20°.38E±0°.03,h28km±3km,
n125,σ2s54/97,7C-6D,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PYL	**PYLOS**	**2.47**	**26**	P		**Pb**	**19 04 41.5**	**-0.4**
PYL				S		**Sn**	**19 05 05.2**	**-0.6**
PYL					AML	AML	19 05 13.4	
	comp=E,735μm,0.4s							
PYL					AML	AML	19 05 18.9	
	comp=N,642μm,0.7s							
PYL	**PYLOS**	**2.47**	**26**	P		**Pb**	**19 04 41.4**	**-0.5**
PYL				S		**Sn**	**19 05 08.2**	**+2.4**
	comp=N,350nm,0.6s							
ANKY	**Antikythira Is**	**2.66**	**63**	P		**Pb**	**19 04 47.2**	**+2.0**
KTHA	**Kythira Island**	**2.69**	**54**	P		**Pb**	**19 04 46.8**	**+1.1**
KTHA				S		**Sn**	**19 05 13.7**	**+2.3**
KTHA					AML	AML	19 05 20.2	
	comp=N,430μm,0.5s							
KTHA					AML	AML	19 05 20.3	
	comp=E,1144μm,0.4s							
KTHA	**Kythira Island**	**2.69**	**54**	*eP*		**Pn**	**19 04 43.4**	**+3.7**
KTHA	**Kythira Island**	**2.69**	**54**	P		**Pb**	**19 04 46.9**	**+1.1**
KTHA				S		**Sb**	**19 05 17.2**	**-1.1**
KNDR	**Palaiochora Ch**	**2.77**	**78**	*eP*		**Pb**	**19 04 47.4**	**+0.4**
ITM	**Ithomi**	**2.79**	**26**	P		**Pb**	**19 04 46.3**	**-1.1**
ITM				S		**Sn**	**19 05 13.5**	**-0.2**
ITM					AML	AML	19 05 22.6	
	comp=N,446μm,0.3s							
ITM					AML	AML	19 05 23.0	
	comp=E,652μm,0.4s							
ITM	**Ithomi**	**2.79**	**26**	*eP*		**Pn**	**19 04 44.9**	**+3.9**
ITM	**Ithomi**	**2.79**	**26**	P		**Pb**	**19 04 46.3**	**-1.1**
ITM				S		**Sn**	**19 05 16.8**	**+3.1**
RODP	**Rodopos**	**2.90**	**72**	*eP*		**Pb**	**19 04 49.2**	**-0.1**
RODP	**Rodopos**	**2.90**	**72**	P		**Pb**	**19 04 51.5**	**+2.2**
RODP				S		**Sb**	**19 05 26.0**	**+1.7**
	comp=E,80nm,0.5s							
VLI	**Velíai**	**2.90**	**45**	P		**Pb**	**19 04 49.1**	**-0.3**
VLI					AML	AML	19 05 25.0	
	comp=N,1182μm,0.5s							
VLI					AML	AML	19 05 26.2	
	comp=E,781μm,0.4s							
VLI	**Velíai**	**2.90**	**45**	P		**Pb**	**19 04 49.9**	**+0.5**
VLI				S		**Sb**	**19 05 23.1**	**-1.3**
	comp=E,310nm,0.4s							
AMT	**Artemida-Makis**	**3.04**	**20**	P		**Pb**	**19 04 50.1**	**-1.6**
AMT					AML	AML	19 05 27.3	
	comp=N,1650μm,0.6s							
AMT					AML	AML	19 05 27.6	
	comp=E,1588μm,0.8s							
AMT	**Artemida-Makis**	**3.04**	**20**	P		**Pb**	**19 04 50.0**	**-1.6**
AMT				S		**Sn**	**19 05 22.8**	**+2.9**
	comp=E,840nm,0.5s							
IMMV	**Iera Moni Meta**	**3.05**	**74**	P		**Pb**	**19 04 53.4**	**+1.5**
IMMV				S		**Sn**	**19 05 26.2**	**+6.0**
IMMV					AML	AML	19 05 29.9	
	comp=E,661μm,0.6s							
IMMV					AML	AML	19 05 30.5	
	comp=N,976μm,0.7s							
IMMV	**Iera Moni Meta**	**3.05**	**74**	P		**Pb**	**19 04 51.9**	**+0.1**
IMMV	**Iera Moni Meta**	**3.05**	**74**	P		**Pb**	**19 04 52.6**	**+0.8**
GVD	**Gavdhos**	**3.05**	**86**	P		**Pb**	**19 04 54.3**	**+2.4**
GVD					AML	AML	19 05 31.1	
	comp=N,1036μm,0.4s							
GVD					AML	AML	19 05 31.6	
	comp=E,1618μm,0.4s							
GVD	**Gavdhos**	**3.05**	**86**	*eP*		**Pb**	**19 04 54.2**	**+2.4**
GVD	**Gavdhos**	**3.05**	**86**	P		**Pb**	**19 04 53.8**	**+1.9**
GVDS	**Gavdos**	**3.06**	**86**	*eP*		**Pb**	**19 04 53.8**	**+1.9**
VLX	**Vlachokerasia**	**3.13**	**31**	P		**Pb**	**19 04 51.7**	**-1.6**
VLX					AML	AML	19 05 33.8	
	comp=N,570μm,0.7s							
VLX					AML	AML	19 05 36.9	
	comp=E,634μm,0.6s							
VLX	**Vlachokerasia**	**3.13**	**31**	P		**Pb**	**19 04 51.9**	**-1.4**
VLX				S		**Sn**	**19 05 26.3**	**+4.0**
	comp=E,310nm,0.6s							
VLMS	**Volimes, Zakyn**	**3.19**	**4**	P		**Pb**	**19 04 52.1**	**-2.2**
VLMS					AML	AML	19 05 30.2	
	comp=N,1664μm,0.5s							
VLMS					AML	AML	19 05 30.4	
	comp=E,1360μm,0.2s							
VLMS	**Volimes, Zakyn**	**3.19**	**4**	S		Pn	19 04 51.7	+5.1
VLMS				S		**Sn**	**19 05 25.7**	**+2.0**
	comp=E,858nm,0.3s							
VAM	**Vamos**	**3.21**	**76**	P		**Pb**	**19 04 55.7**	**+1.1**
VAM					AML	AML	19 05 34.6	
	comp=N,962μm,0.7s							
VAM					AML	AML	19 05 43.1	
	comp=E,715μm,0.6s							
VAM	**Vamos**	**3.21**	**76**	P		**Pb**	**19 04 55.1**	**+0.5**
TRIP	**Tripoli**	**3.22**	**28**	P		**Pb**	**19 04 52.8**	**-2.0**
TRIP				S		**Sn**	**19 05 24.3**	**-0.3**
TRIP					AML	AML	19 05 35.5	
	comp=E,541μm,0.6s							
TRIP					AML	AML	19 05 35.9	
	comp=N,470μm,0.7s							
DRO	**Drossia**	**3.43**	**18**	P		**Pb**	**19 04 55.8**	**-2.6**
DRO					AML	AML	19 05 46.0	
	comp=E,444μm,0.3s							
DRO					AML	AML	19 05 49.3	
	comp=N,542μm,0.6s							
DRO	**Drossia**	**3.43**	**18**	P		**Pb**	**19 04 55.8**	**-2.6**
DRO				S		**Sn**	**19 05 31.6**	**+2.0**
	comp=N,252nm,0.5s							
**VLS

VILL	**Villia**	**4.20**	**33**	P		Pn	19 05 05.5	+5.0	
EVR	**Evrytania**	**4.38**	**15**	P		Pn	19 05 10.2	+7.3	
AXAR	**Agios Charalam**	**4.46**	**23**	P		Pn	19 05 10.4	+6.3	
LKR	**Lokris**	**4.48**	**27**	P		Pn	19 05 09.5	+5.2	
MAKR	**Makrakomi, Fth**	**4.54**	**17**	P		Pn	19 05 12.3	+7.2	
AGG	**Agios Georgios**	**4.60**	**19**	*e*P		Pn	19 05 11.1	+5.1	
APE	**Apeiranthos**	**4.81**	**59**	⇑P		**Pn**	**19 05 13.2**	**+4.3**	
APE				⇓S		**Sn**	**19 06 03.6**	**0.0**	
APE	**Apeiranthos**	**4.81**	**59**	*e*P		Pn	19 05 14.0	+5.2	
ZKR	**Zakros**	**4.81**	**83**	*e*P		Pb	19 05 17.5	-4.4	
XOR	**Xorichti**	**5.18**	**25**	P		Pn	19 05 19.4	+5.4	
AOS	**Alonnisos**	**5.28**	**31**	*e*P		**Pn**	**19 05 19.6**	**+4.3**	
AOS	**Alonnisos**	**5.28**	**31**	P		Pn	19 05 20.8	+5.5	
KPRO	**Kipourio**	**5.32**	**8**	P		Pn	19 05 21.5	+5.6	
TIP	**Timpagrande**	**5.34**	**328**	⇓P		Pn	19 05 21.3	+5.1	
TIP				⇓S		**Sn**	**19 06 16.0**	**-0.8**	
KARP	**Karpathos**	**5.62**	**79**	*e*P		Pn	19 05 28.9	+8.9	
KARP	**Karpathos**	**5.62**	**79**	P		Pn	19 05 27.1	+7.1	
URLA	**Izmir**	**6.20**	**52**	*e*P		Pn	19 05 33.8	+5.8	
HORT	**Hortiatis**	**6.28**	**19**	*e*P		Pn	19 05 34.4	+5.3	
SIGR	**SIGRI**	**6.29**	**43**	*e*P		Pn	19 05 34.3	+5.2	
OUR	**Ouranopolis**	**6.32**	**26**	*e*P		Pn	19 05 34.7	+5.2	
OHR	**Ohrid**	**6.42**	**3**	*i* Pn		**Pb**	**19 05 49.1**	**-0.2**	
GRG	**Griva**	**6.46**	**14**	*e*P		Pn	19 05 36.6	+5.1	
ARG	**Arkhangelos**	**6.50**	**74**	P		Pn	19 05 39.9	+7.9	
MATE	**Matera**	**6.63**	**335**	⇑P		Pn	19 05 37.5	+3.8	
MATE				⇓S		**Sn**	**19 06 45.1**	**-3.2**	
TURN	**Turunc**	**6.72**	**70**	*e*P		Pn	19 05 42.2	+7.1	
YER	**Yerkesik**	**6.86**	**67**	*e*P		Pn	19 05 44.5	+7.5	
DALY	**Dalyan (Mula)**	**7.05**	**70**	*e*P		Pn	19 05 46.9	+7.3	
STIP	**Stip**	**7.14**	**11**	*i* Pn		Pn	19 05 48.7	+7.9	
FETY	**Fethiye**	**7.34**	**72**	*e*P		Pn	19 05 51.6	+8.0	
CAME	**Cameli-Denizli**	**7.59**	**70**	*e*P		Pn	19 05 53.8	+6.7	
RDO	**Rodhopi**	**7.63**	**31**	*e*P		Pn	19 05 53.0	+5.5	
ALN	**Alexandroupoli**	**7.65**	**34**	*e*P		Pn	19 05 53.2	+5.4	
AKAS	**Kas**	**7.68**	**76**	*e*P		Pn	19 05 57.4	+9.0	
ELL	**Elmali**	**8.02**	**72**	*e*P		Pn	19 05 59.9	+6.9	
KORT	**Korkueli**	**8.42**	**71**	*e*P		Pn	19 06 06.1	+7.6	
STON	**Ston**	**8.44**	**346**	*e*Pn		**Pn**	**19 06 01.0**	**+2.4**	
LSTV	**Lastovo**	**8.52**	**342**	Sn		Sn	19 07 26.8	-8.1	
RICI	**Ricice**	**9.15**	**345**	*e*Pn		**Pn**	**19 06 11.1**	**+2.7**	
RICI				Sn		Sn	19 07 42.9	-7.6	
KIJV	**Kijevo**	**9.80**	**343**	*e*Pn		**Pn**	**19 06 20.2**	**+2.9**	
KIJV				Sn		**Sn**	**19 07 59.4**	**-6.9**	
MORI	**Morici**	**9.86**	**340**	*e*Pn		**Pn**	**19 06 19.7**	**+1.6**	
MORI				Sn		**Sn**	**19 08 00.6**	**-7.0**	
DUGI	**Dugi Otok**	**10.16**	**338**	*e*Pn		**Pn**	**19 06 25.5**	**+3.3**	
DUGI				Sn		**Sn**	**19 08 07.9**	**-7.4**	
CSS	**Mathiatis**	**10.65**	**85**	Pn		**Pn**	**19 06 29.8**	**+0.9**	
CSS				Sn		**Sn**	**19 08 24.2**	**-3.0**	
NVLJ	**Novalja**	**10.74**	**338**	*e*Pn		**Pn**	**19 06 33.4**	**+3.3**	
NVLJ				Sn		Sn	19 08 21.0	-8.3	
BZS	**Buzias**	**10.96**	**5**	⇓P		**Pn**	**19 06 33.2**	**+0.1**	
BZS				⇑S		Sn	19 08 27.2	-7.5	
MOSL	**Moslavina**	**11.26**	**347**	*e*Pn		**Pn**	**19 06 39.0**	**+1.7**	
MOSL				Sn		Sn	19 08 33.6	-8.5	
VOIR		**11.31**	**17**	⇑P		**Pn**	**19 06 38.0**	**-0.1**	
OZLJ	**Ozalj**	**11.54**	**343**	*e*Pn		**Pn**	**19 06 44.5**	**+3.4**	
MLR	**Muntele Rosu**	**11.60**	**20**	⇑P		**Pn**	**19 06 40.8**	**-1.2**	
VRI	**Vrincioaia**	**12.17**	**21**	⇑P		**Pn**	**19 06 49.6**	**0.0**	
KZIT	**Kziot**	**12.38**	**104**	Sn		**Sn**	**19 09 06.9**	**-2.7**	
SLTI	**Sal'it**	**12.48**	**97**	Sn		**Sn**	**19 09 09.2**	**-2.9**	
AMAZ	**Amatzia**	**12.58**	**100**	Sn		**Sn**	**19 09 13.0**	**-1.6**	
MMA0B	**Mount Meron ar**	**12.60**	**93**	Pn		**Pn**	**19 06 56.4**	**+0.7**	
MMA0B				Sn		**Sn**	**19 09 13.8**	**-1.3**	
YTIR	**Yattir**	**12.80**	**101**	Sn		**Sn**	**19 09 18.4**	**-1.6**	
NATI	**Neve Ativ**	**12.82**	**92**	Sn		**Sn**	**19 09 15.0**	**-2.4**	
HMDT	**Nahal Hemdat**	**12.87**	**97**	Sn		**Sn**	**19 09 19.5**	**-2.2**	
MDBI	**Mazsada**	**13.01**	**101**	Sn		**Sn**	**19 09 22.7**	**-2.3**	
PRNI	**Paran**	**13.07**	**105**	Pn		**Pn**	**19 07 03.0**	**+0.9**	
PRNI				Sn		**Sn**	**19 09 25.2**	**-1.4**	
ZFRI	**Zfri**	**13.13**	**104**	Sn		**Sn**	**19 09 25.2**	**-2.8**	
GHAJ	**Ghor Haditha**	**13.18**	**101**	Sn		**Sn**	**19 09 27.5**	**-1.7**	
HRFI	**Mount Harif**	**13.22**	**106**	Pn		**Pn**	**19 07 05.0**	**+0.8**	
HRFI				Sn		**Sn**	**19 09 28.5**	**-1.8**	
MBRI	**Mt Berech**	**13.23**	**108**	Pn		**Pn**	**19 07 05.8**	**+1.5**	
MBRI				Sn		**Sn**	**19 09 29.4**	**-1.1**	
EIL	**Elat**	**13.31**	**108**	Pn		**Pn**	**19 07 06.2**	**+0.9**	
EIL	**Elat**	**13.31**	**108**	Pn		**Pn**	**19 07 06.2**	**+0.9**	
EIL				Sn		**Sn**	**19 09 30.3**	**-2.1**	
EIL				Sn		**Sn**	**19 09 30.8**	**-1.6**	
VYHS	**Vyhne**	**13.85**	**356**	*e*PN		P	19 07 27.6	+7.0	

DJA ***12*** *19:15:09.2±0.5, 1°S±2°×12°7E±°, h21km±5km, M4.0/13, mB4.8/4, mb4.2/7, MLv3.8/13, Mw(mB)4.1/4*

IDC ***12*** *19:15:10.8±2.6, 0°.99S×127°.24E, h79km±29km, mb3.1/4, mb1 3.2/6, mb1mx3.1/31, mbtmp3.5/6, Error ellipse: s-maj=22.2km s-min=19.7km az=152.0*

ISC 12 19:15:08.6±0.9, 0°.96S±0°.07×127°.21E±0°.07, h35km, n18, σ2§39/19, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
TNTI	**Ternate**	**1.73**	**5**	P	**Pn**	**19**	**15**	**38.2**	**+2.1**
TNTI				S	**Sn**	**19**	**15**	**59.6**	**+2.6**
NLAI	**Namlea**	**2.27**	**183**	P	**Pn**	**19**	**15**	**44.3**	**+0.7**
KMSI	**Cibinong**	**3.57**	**295**	P	**Pn**	**19**	**16**	**04.0**	**+2.5**
SIJI	**Sorong**	**4.06**	**89**	P	**Pn**	**19**	**16**	**10.2**	**+2.0**
	1.1nm,0.3s,baz=230,slow=22,SNR=12								
SIJI				S	**Sn**	**19**	**16**	**56.8**	**+2.2**
	0.5nm,0.3s,baz=221,slow=22,SNR=1.7								
LUWI	**Luwuk**	**4.44**	**269**	P	**Pn**	**19**	**16**	**13.5**	**+0.1**
GTOI	**Gorontalo**	**4.49**	**291**	P	**Pn**	**19**	**16**	**18.0**	**+3.9**
APSI	**Ampana**	**5.56**	**270**	P	**Pn**	**19**	**16**	**29.7**	**+0.8**
	0.4nm1µm54nm,0.4s								
MPSI	**Mapaga**	**7.42**	**280**	P	**Pn**	**19**	**16**	**55.6**	**+1.1**
	0.0nm362nm5.1nm,0.9s								
TTSI	**Tana Toraja**	**7.67**	**254**	P	**Pn**	**19**	**16**	**59.1**	**+1.2**
	0.1nm14nm,0.5s								
SPSI	**Sidrap Palu**	**8.01**	**248**	P	**Pn**	**19**	**17**	**04.9**	**+2.4**
	0.4nm1µm64nm,0.5s								
BSSI	**Bau Bau, Buton**	**8.45**	**232**	P	**Pn**	**19**	**17**	**11.3**	**+2.7**
	302nm3.8nm,0.4s								
KAPI	**Kappang**	**8.47**	**241**	P	**Pn**	**19**	**17**	**10.9**	**+2.1**
	1.5nm,0.3s,baz=48,slow=6.9,SNR=8.6								
EDFI	**Ende, Flores**	**9.49**	**215**	P	**Pn**	**19**	**17**	**26.5**	**+3.5**
SMPI	**Sarmi**	**11.54**	**95**	P	Pn	19	17	58.7	+7.7
WRA	**Warramunga Arr**	**20.11**	**160**	P	**P**	**19**	**19**	**37.4**	**-2.2**
	0.1nm,0.4s,baz=340,slow=11,SNR=8.3								
ASAR	**Alice Springs**	**23.49**	**164**	P	**P**	**19**	**20**	**13.8**	**-1.5**
	0.2nm,0.4s,baz=344,slow=11,SNR=9.2								
USRK	**Ussuriysk Ar.**	**45.16**	**5**	P	**P**	**19**	**23**	**19.9**	**-2.0**
	1.6nm,0.7s,baz=175,slow=8.0,SNR=2.2								
MKAR	**Makanchi Array**	**61.68**	**327**	P	**P**	**19**	**25**	**20.8**	**-2.4**
	0.5nm,0.3s,baz=116,slow=8.0,SNR=12								

IDC ***12*** *19:37:19.8±0.7, 6°.37S×146°.16E, h0km, mb4.5/14, mb1 4.5/17, mb1mx4.4/30, mbtmp4.4/17, ML3.8/2, MS3.6/14, Ms1 3.7/14, ms1mx3.5/40, Error ellipse: s-maj=21.2km s-min=14.3km az=83.0*

NEIC ***12*** *19:37:26.3±2.6, 6°.54S±0°.07×145°.93E±0°.09, h49km±7km, mb4.6/37, Error ellipse: s-maj=12.5km s-min=9.8km az=104.0*

DJA ***12*** *19:37:27.1±0.4, 7°S±3°×14°6E±°, h45km±5km, M4.9/24, mb4.7/24, mB5.3/5, MLv5.1/5, Mw(mB)4.7/5*

ISC 12 19:37:26.5±0.5, 6°.56S±0°.05×145°.95E±0°.07, h50km, n114, σ1§36/107, mb4.7/50, MS3.6/12, 1D, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PMG	**Port Moresby**	**3.07**	**157**	Pn	**Pn**	**19**	**38**	**11.5**	**-1.1**
	7.8nm,0.3s,baz=1.8,slow=6.0,SNR=18								
PMG				Sn	**Sn**	**19**	**38**	**48.1**	**0.0**
	39nm,0.3s,baz=149,slow=23,SNR=4.0								
MANU	**Manus Island**	**4.70**	**18**	Pn	**Pn**	**19**	**38**	**35.3**	**+0.3**
KRVT	**Keravat (AS076**	**6.45**	**70**	Pn	**Pn**	**19**	**38**	**58.0**	**-1.0**
	5.8nm,0.3s,baz=128,slow=3.9,SNR=8.5								
KRVT				LR	LR	19	41	14.9	
	comp=Z,890nm,21.4s,baz=252,slow=38								
RABL	**Rabaul**	**6.62**	**69**		**Pn**	**19**	**39**	**02.5**	**+1.2**
GENI	**Genyem**	**6.98**	**304**	P	**Pn**	**19**	**39**	**06.6**	**+0.3**
	0.8nm2µm90nm,0.8s								
COEN	**Coen**	**7.84**	**200**	Pn	**Pn**	**19**	**39**	**17.9**	**-0.2**
SMPI	**Sarmi**	**8.53**	**302**	P	**Pn**	**19**	**39**	**27.2**	**-0.3**
	35nm,1.1s								
CTA	**Charters Tower**	**13.45**	**179**	Pn	**Pn**	**19**	**40**	**35.8**	**+1.0**
	0.5nm,0.3s,baz=7.0,slow=17,SNR=5.6								
SIJI	**Sorong**	**15.70**	**291**	Pn	**Pn**	**19**	**41**	**04.5**	**-0.1**
	0.2nm,0.3s,baz=244,slow=23,SNR=9.0								
SIJI				LR	LR	19	48	10.2	
	comp=Z,386nm,19.9s,baz=140,slow=41								
MTN	**Manton Dam**	**15.88**	**246**	Pn	**Pn**	**19**	**41**	**06.1**	**-0.8**
MTN				IAmb	IAmb	19	41	11.5	
	comp=Z,48nm,0.8s								
WB0	**Warramunga Arr**	**17.28**	**219**	P	**P**	**19**	**41**	**24.9**	**-0.3**
WR0	**Warramunga Arr**	**17.33**	**219**	P	**Pn**	**19**	**41**	**24.4**	**-0.6**
WRAB	**Tennant Creek**	**17.43**	**219**	P	**Pn**	**19**	**41**	**25.4**	**-0.8**
WRAB				IAmb	IAmb	19	41	43.3	
	comp=Z,36nm,1.1s								
WB2	**Warramunga Arr**	**17.43**	**219**		**Pn**	**19**	**41**	**25.8**	**-0.6**
WRA	**Warramunga Arr**	**17.44**	**219**	P	**Pn**	**19**	**41**	**25.6**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=40,slow=11,SNR=41								
WRA				LR	LR	19	48	34.9	
	comp=Z,209nm,18.8s,baz=25,slow=38								
WRA	**Warramunga Arr**	**17.44**	**219**	P	**P**	**19**	**41**	**27.5**	**+0.5**
KNRA	**Kununurra**	**19.13**	**240**		**P**	**19**	**41**	**46.0**	**+0.4**
KNRA				IAmb	IAmb	19	41	49.2	
	comp=Z,45nm,0.8s								
EIDS	**Eidsvold**	**19.34**	**166**	P	**Pn**	**19**	**41**	**49.0**	**-0.3**
TNTI	**Ternate**	**19.93**	**291**	P	**P**	**19**	**41**	**52.4**	**-2.0**
TNTI				IAmb	IAmb	19	42	19.8	
	comp=Z,44nm,1.4s								
GUMO	**Guam**	**20.05**	**357**	LR	LR	19	49	05.2	
	comp=Z,73nm,19.0s,baz=166,slow=36								
AS31	**Alice Springs**	**20.58**	**213**	P	**P**	**19**	**42**	**02.2**	**+0.8**
ASAR	**Alice Springs**	**20.58**	**213**	P	**P**	**19**	**42**	**01.8**	**+0.3**
	comp=Z,14nm,0.8s,baz=47,slow=8.2,SNR=26								
ASAR	**Alice Springs**	**20.58**	**213**	P	**P**	**19**	**42**	**01.5**	**0.0**
SOEI	**Soe**	**21.70**	**260**	P	**P**	**19**	**42**	**14.8**	**+1.2**
	comp=Z,39nm,1.1s								
SOEI	**Soe**	**21.70**	**260**	P	**P**	**19**	**42**	**14.1**	**+0.4**
SOEI				IAmb	IAmb	19	42	35.8	
	comp=Z,24nm,0.8s								
BATI	**Baumata**	**22.34**	**259**	P	**P**	**19**	**42**	**22.6**	**+2.2**
	comp=Z,14nm,0.6s,baz=257,slow=6.2,SNR=3.6								
BATI	**Baumata**	**22.34**	**259**	P	**P**	**19**	**42**	**19.2**	**-1.3**
	comp=Z,14nm,0.8s								
FITZ	**Fitzroy Crossi**	**22.89**	**238**	P	**P**	**19**	**42**	**24.8**	**-1.4**
	comp=Z,9.7nm,1.0s,baz=62,slow=14,SNR=16								
FITZ				LR	LR	19	52	09.2	
	comp=Z,260nm,20.2s,baz=63,slow=38								
FITZ	**Fitzroy Crossi**	**22.89**	**238**	P	**P**	**19**	**42**	**25.1**	**-1.1**
FITZ				IAmb	IAmb	19	42	32.8	
	comp=Z,20nm,0.9s								
MMRI	**Maumere**	**23.59**	**263**	P	**P**	**19**	**42**	**32.8**	**-0.3**
	comp=Z,54nm,0.9s								
LUWI	**Luwuk**	**23.76**	**282**	P	**P**	**19**	**42**	**32.2**	**-2.5**
LUWI				IAmb	IAmb	19	42	55.9	
	comp=Z,41nm,1.1s								
EDFI	**Ende, Flores**	**24.14**	**263**	P	**P**	**19**	**42**	**37.2**	**-1.1**
	comp=Z,13nm,0.7s								
APSI	**Ampana**	**24.88**	**282**	P	**P**	**19**	**42**	**44.9**	**0.0**
	comp=Z,305nmcomp=Z,25nm,1.1s								
DZM	**Mont Dzumac**	**25.09**	**130**	P	**P**	**19**	**42**	**47.6**	**+0.8**
	comp=Z,13nm,1.0s,baz=17,slow=14,SNR=6.7								
DZM				LR	LR	19	51	48.1	
	comp=Z,262nm,19.3s,baz=228,slow=35								
DZM	**Mont Dzumac**	**25.09**	**130**	*e*P	**P**	**19**	**42**	**47.8**	**+1.0**
	comp=Z,39nm,1.2s								
DZM				*e*LR	LR	19	49	02.0	
	comp=Z,516nm,25.4s								
DZM	**Mont Dzumac**	**25.09**	**130**	P	**P**	**19**	**42**	**47.4**	**+0.6**
DZM				IAmb	IAmb	19	42	52.5	
	comp=Z,25nm,1.3s								
BSSI	**Bau Bau, Buton**	**25.31**	**269**	P	**P**	**19**	**42**	**49.0**	**+0.2**
	comp=Z,24nm,1.0s								
BASI	**Baing, Sumba**	**25.36**	**260**	P	**P**	**19**	**42**	**48.9**	**-0.3**
	comp=Z,52nm,1.4s								
STKA	**Stephens Creek**	**25.52**	**189**	P	**P**	**19**	**42**	**51.5**	**+1.1**
	comp=Z,5.1nm,0.7s,baz=359,slow=8.9,SNR=11								
STKA				LR	LR	19	53	39.4	
	comp=Z,283nm,19.4s,baz=5.2,slow=38								
STKA	**Stephens Creek**	**25.52**	**189**	P	**P**	**19**	**42**	**50.8**	**+0.3**
WSI	**Waingapu**	**25.58**	**261**	P	**P**	**19**	**42**	**49.6**	**-1.6**
	comp=Z,3µmcomp=Z,174nm,0.7s								
BKSI	**Bulukumba**	**25.72**	**271**	P	**P**	**19**	**42**	**52.2**	**-0.3**
	comp=Z,14nm,0.8s								
BNSI	**Bone**	**25.81**	**273**	P	**P**	**19**	**42**	**54.1**	**+0.8**
	comp=Z,24nm,0.7s								
KAPI	**Kappang**	**26.11**	**272**	P	**P**	**19**	**42**	**58.4**	**+2.4**
	comp=Z,28nm,0.7s,baz=116,slow=5.1,SNR=21								
KAPI				LR	LR	19	56	44.1	
	comp=Z,103nm,18.1s,baz=82,slow=44								
KAPI	**Kappang**	**26.11**	**272**	P	**P**	**19**	**42**	**57.6**	**+1.5**
WBSI	**Waikabubak, Su**	**26.47**	**262**	P	**P**	**19**	**42**	**59.2**	**-0.1**
MJAR	**Matsushiro Arr**	**43.48**	**351**	P	**P**	**19**	**45**	**22.6**	**-2.4**
MJAR				LR	LR	20	01	49.7	
	comp=Z,34nm,20.4s,baz=340,slow=34								
MJAR	**Matsushiro Arr**	**43.48**	**351**	P	**P**	**19**	**45**	**22.6**	**-2.4**
MAT	**Matsushiro**	**43.49**	**351**	P	**P**	**19**	**45**	**22.7**	**-2.3**
NJ2	**Nanjing**	**46.28**	**328**	*e*P	**P**	**19**	**45**	**48.5**	**+1.2**
NJ2				pmax	pmax				
	comp=Z,5.0nm,0.5s								
KSRS	**Korea Array**	**46.91**	**340**	P	**P**	**19**	**45**	**51.0**	**-1.1**
	comp=Z,5.7nm,0.9s,baz=159,slow=8.9,SNR=8.8								
KSRS				LR	LR	20	01	49.6	
	comp=Z,88nm,21.9s,baz=154,slow=31								
WHN	**Wuhan**	**47.73**	**322**	P	**P**	**19**	**46**	**00.7**	**+2.1**
PHET	**Kaeng Krachan**	**49.92**	**293**	P	P	19	46	22.6	+6.9
	comp=Z,0.1nmcomp=Z,18nm,0.8s								
UTTA	**Uttaradit**	**50.91**	**299**	P	P	19	46	29.4	+6.2
UTHA	**Uthaitani**	**51.03**	**296**	P	P	19	46	30.5	+6.4
	comp=Z,0.0nmcomp=Z,14nm,1.0s								
USRK	**Ussuriysk Ar.**	**52.07**	**347**	P	**P**	**19**	**46**	**30.9**	**-0.5**
	comp=Z,7.9nm,0.6s,baz=178,slow=6.5,SNR=22								
USRK	**Ussuriysk Ar.**	**52.07**	**347**	P	**P**	**19**	**46**	**30.3**	**-1.1**
USA0B	**Ussuriysk Arra**	**52.07**	**347**	P	**P**	**19**	**46**	**31.0**	**-0.4**
PAYA	**Payao**	**52.17**	**301**	P	**P**	**19**	**46**	**34.0**	**+1.4**
	comp=Z,2µmcomp=Z,241nm,0.8s								
CM35	**Chiang Mai Arr**	**52.51**	**299**	P	**P**	**19**	**46**	**36.0**	**+0.9**
CM09	**Chiang Mai Arr**	**52.55**	**299**	P	**P**	**19**	**46**	**37.0**	**+1.6**
	comp=Z,98nmcomp=Z,12nm,1.0s								
CM05	**Chiang Mai Arr**	**52.58**	**299**	P	**P**	**19**	**46**	**37.0**	**+1.4**
	comp=Z,89nmcomp=Z,11nm,0.9s								
CM02	**Chiang Mai Arr**	**52.59**	**299**	P	**P**	**19**	**46**	**37.0**	**+1.3**
	comp=Z,113nmcomp=Z,15nm,0.8s								
CM31	**Chiang Mai Arr**	**52.60**	**299**	P	**P**	**19**	**46**	**38.1**	**+2.3**
	comp=Z,262nm,0.8s								
CM31	**Chiang Mai Arr**	**52.60**	**299**	P	**P**	**19**	**46**	**36.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**52.60**	**299**	P	**P**	**19**	**46**	**37.6**	**+1.8**
	comp=Z,5.1nm,0.8s,baz=118,slow=6.0,SNR=39								
CMAR	**Chiang Mai Arr**	**52.60**	**299**	P	**P**	**19**	**46**	**36.7**	**+0.9**
CM15	**Chiang Mai Arr**	**52.62**	**299**	P	**P**	**19**	**46**	**37.9**	**+2.0**
	comp=Z,139nmcomp=Z,16nm,0.8s								
CM13	**Chiang Mai Arr**	**52.62**	**299**	P	**P**	**19**	**46**	**38.0**	**+2.0**
	comp=Z,96nmcomp=Z,12nm,0.7s								
CMMT	**Chiang Mai**	**52.74**	**299**	P	**P**	**19**	**46**	**40.0**	**+3.2**
	comp=Z,242nmcomp=Z,5.4nm,1.0s								
CHTO	**Chiang Mai**	**52.74**	**299**	P	**P**	**19**	**46**	**36.3**	**-0.6**
CHTO				IAmb	IAmb	19	46	44.0	
	comp=Z,8.3nm,0.9s								
MHMT	**Maesarieng**	**53.37**	**298**	P	**P**	**19**	**46**	**45.0**	**+3.6**
CN2	**Changchun**	**53.45**	**342**	*e*P	**P**	**19**	**46**	**45.0**	**+3.5**
XAN	**Xi'an**	**53.46**	**322**	P	**P**	**19**	**46**	**38.7**	**-3.2**
XAN				pP	pP	19	46	45.9	-10
XAN				pmax	pmax				
	comp=Z,16nm,1.1s								
XAN				pmax	pmax				
	comp=Z,120nm,4.9s								
XAN	**Xi'an**	**53.46**	**322**	P	**P**	**19**	**46**	**41.0**	**-0.9**
CD2	**Chengdu**	**54.92**	**315**	P	**P**	**19**	**46**	**52.8**	**+0.2**
CD2				pmax	pmax				
	comp=Z,30nm,0.8s								
HHC	**Hu-ho-hao-te**	**56.77**	**329**	*e*P	**P**	**19**	**47**	**05.7**	**0.0**
HHC				pmax	pmax				
	comp=Z,7.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,48nm,6.6s								
LZH	**Lanzhou**	**57.96**	**320**	*e*P	**P**	**19**	**47**	**14.8**	**+0.5**
LZH				pP	pP	19	47	31.1	+2.4
LZH				sP	sP	19	47	37.9	+3.2
LZH				pmax	pmax				
	comp=Z,20nm,1.1s								
PETK	**Petropavlovsk-**	**60.27**	**8**	P	**P**	**19**	**47**	**29.6**	**-0.1**
	comp=Z,8.2nm,0.8s,baz=166,slow=6.9,SNR=14								
PETK				LR	LR	20	09	18.7	
	comp=Z,49nm,21.8s,baz=194,slow=32								
PETK	**Petropavlovsk-**	**60.27**	**8**	P	**P**	**19**	**47**	**29.4**	**-0.3**
SHL	**Shillong**	**61.45**	**304**	P	**P**	**19**	**47**	**39.5**	**+1.0**
GTA	**Gaotai**	**62.51**	**321**	⇓P	**P**	**19**	**47**	**46.2**	**+0.9**
GTA				pP	pP	19	48	01.1	+1.2
GTA				sP	sP	19	48	08.2	+2.4
GTA				pmax	pmax				
	comp=Z,8.0nm,1.0s								
PPT	**Papeete**	**63.74**	**106**	LR	LR	20	12	08.3	
	comp=Z,24nm,19.4s,baz=266,slow=33								
PPT2	**Papeete2**	**63.74**	**106**	*e*LR	LR	20	07	02.7	
	comp=Z,135nm,32.0s								
LSA	**Lhasa**	**63.75**	**308**	P	**P**	**19**	**47**	**53.9**	**-0.2**
LSA				IAmb	IAmb	19	48	02.3	
	comp=Z,5.0nm,0.7s								
SONM	**Songino Array**	**64.39**	**332**	P	**P**	**19**	**47**	**57.9**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=153,slow=7.0,SNR=8.0								
SONM	**Songino Array**	**64.39**	**332**	P	**P**	**19**	**47**	**57.9**	**+0.4**
YAK	**Yakutsk**	**69.54**	**352**	LR	LR	20	18	32.2	
	comp=Z,24nm,18.2s,baz=87,slow=36								
VNDA	**Vanda**	**71.42**	**176**	LR	LR	20	18	45.9	
	comp=Z,104nm,18.2s,baz=358,slow=35								
WMQ	**Urumqi**	**72.54**	**320**	*e*P	**P**	**19**	**48**	**49.9**	**+1.4**
WMQ				pP	PcP	19	49	04.9	-1.0
WMQ				pmax	pmax				
	comp=Z,20nm,0.7s								
WMQ				pmax	pmax				
	comp=Z,200nm,4.1s								
WMQ	**Urumqi**	**72.54**	**320**	P	**P**	**19**	**48**	**48.2**	**-0.3**
WMQ				IAmb	IAmb	19	48	51.0	
	comp=Z,18nm,1.2s								
MKAR	**Makanchi Array**	**77.27**	**321**	P	**P**	**19**	**49**	**15.8**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=102,slow=7.0,SNR=12								
MKAR	**Makanchi Array**	**77.27**	**321**	P	**P**	**19**	**49**	**16.4**	**+0.8**
ZAA0	**Zalesovo Array**	**78.93**	**328**	P	**P**	**19**	**49**	**22.9**	**-1.8**
ZALV	**Zalesovo Beam**	**78.93**	**328**	P	**P**	**19**	**49**	**23.9**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=101,slow=5.6,SNR=5.3								
ZALV	**Zalesovo Beam**	**78.93**	**328**	P	**P**	**19**	**49**	**22.9**	**-1.7**
NIL	**Nilore**	**79.40**	**306**	P	**P**	**19**	**49**	**29.1**	**+1.3**
BOOM	**Boomskoye usch**	**79.93**	**315**	P	**P**	**19**	**49**	**31.9**	**+1.3**
BOOM				I

WRAB	**Tennant Creek**	**18.99**	**224**		**P**		**19 49 51.0**	**-0.4**
WRAB				IAmb	IAmb	19 49 56.9		
	comp=Z,5.8nm,1.1s							
WC3	**Warramunga Arr**	**18.99**	**224**	P	**P**		**19 49 50.6**	**-0.8**
WC3				IAmb	IAmb	19 50 11.9		
	comp=Z,15nm,1.4s							
WB2	**Warramunga Arr**	**18.99**	**224**	P	**P**		**19 49 51.4**	**0.0**
WB2				IAmb	IAmb	19 50 07.1		
	comp=Z,10nm,1.2s							
WRA	**Warramunga Arr**	**19.00**	**224**	P	**P**		**19 49 51.9**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=48,slow=10.0,SNR=5.2							
WRA	**Warramunga Arr**	**19.00**	**224**	P	**P**		**19 49 51.8**	**+0.3**
SANVU	**Saraoutou**	**20.44**	**117**	P	**P**		**19 50 07.1**	**-0.1**
KNRA	**Kununurra**	**21.22**	**243**	P	**P**		**19 50 15.4**	**-0.2**
AS31	**Alice Springs**	**21.92**	**218**	P	**P**		**19 50 22.8**	**-0.4**
ASAR	**Alice Springs**	**21.92**	**218**	P	**P**		**19 50 22.9**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=56,slow=9.3,SNR=18							
FITZ	**Fitzroy Crossi**	**24.93**	**241**	P	**P**		**19 50 53.1**	**+0.6**
	comp=Z,3.4nm,0.5s,baz=49,slow=9.5,SNR=14							
FITZ	**Fitzroy Crossi**	**24.93**	**241**	P	**P**		**19 50 53.2**	**+0.6**
FITZ				IAmb	IAmb	19 51 05.2		
	comp=Z,18nm,1.2s							
STKA	**Stephens Creek**	**25.91**	**193**	P	**P**		**19 51 01.2**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=11,slow=12,SNR=3.0							
STKA	**Stephens Creek**	**25.91**	**193**	P	**P**		**19 51 00.7**	**-0.7**
IL31		**85.52**	**23**	P	**P**		**19 58 06.0**	**-0.2**
IL31				IAmb	IAmb	19 58 13.7		
	comp=Z,4.3nm,1.2s							
TORD	**Torodi Ar. Bea**	**146.56**	**284**	PKPbc	**PKPab**		**20 05 13.0**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=53,slow=2.6,SNR=2.7							

*BJI **12** 19:59:34.6±0.0, 10°.93N×57°.32E, h10km, mB5.0/35, mb4.7/49, Ms4.7/30, Ms7 4.4/31*

*IDC **12** 19:59:39.9±0.5, 11°.56N×57°.81E, h0km, mb4.4/35, mb1 4.5/37, mb1mx4.3/68, mbtmp4.4/37, ML4.4/2, MS4.2/29, Ms1 4.2/29, ms1mx4.1/37, Error ellipse: s-maj=14.0km s-min=11.5km az=4.0*

*OMAN **12** 19:59:40.2±0.3, 11°.54N×58°.04E, h10km±10km, mb6.0/15, ms4.2/5, Mwp5.3/6, Error ellipse: s-maj=13.4km s-min=6.1km az=247.0*

*GCMT **12** 19:59:41.7±0.2, 11°.70N±0°.01×57°.62E±0°.01, h13km±1km, MW5.0/111, Moment Tensor Solution. s47,c61; s111,c185; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.16±.09; Mθθ-3.24±.10; Mϕϕ3.07±.10; Mrθ-0.47±.21; Mθϕ-2.31±.09; Mϕr-0.18±.22; Best double couple: Mo3.94000×10^16^ NP1:ϕs117.00000°, δ85.00000°, λ-175.00000°. NP2:ϕs27.00000°, δ85.00000°, λ-5.00000°. Principal axes: T 3.8250, Plg0.0000°, Azm72.0000°; N 0.2220, Plg83.0000°, Azm165.0000°; P -4.0550, Plg7.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **12** 19:59:41.7±1.6, 11°.59N±0°.10×57°.74E±0°.08, h10km±1km, mb4.8/67 Error ellipse: s-maj=16.5km s-min=13.1km az=164.0*

*MOS **12** 19:59:43.1±1.1, 11°.76N×57°.74E, h20km, mb4.9/51, MS4.4/4, Error ellipse: s-maj=8.1km s-min=4.6km az=94.5*

ISC 12 19:59:42.1±0.4,**11°.67N**±0°.05×**57°.75E**±0°.04,**h10km**,**n356,** σ1**s55**/379,**mb4.7**/123,**MS4.3**/41,**24C-36D,Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**3.71**	**278**	P	**Pn**	**20 00 37.8**	**-1.8**
	SNR=31						
SOCY	**Socotra**	**3.71**	**278**		**Pn**	**20 00 38.4**	**-1.2**
DMTO	**DMTO**	**6.59**	**336**	P	**Pn**	**20 01 21.2**	**+2.1**
	SNR=9.7						
DMTO				P	**Pn**	**20 01 21.2**	**+2.1**
	SNR=9.7						
SHAO	**Shalim**	**6.64**	**342**	*i* Pn	**Pn**	**20 01 22.4**	**+2.6**
	SNR=47						
SHAO	**Shalim**	**6.64**	**342**	P	**Pn**	**20 01 22.3**	**+2.6**
	SNR=16						
RBK	**Rabkut**	**6.74**	**330**	P	**Pn**	**20 01 23.3**	**+2.1**
	SNR=12						
RBK				P	**Pn**	**20 01 23.3**	**+2.1**
	SNR=12						
ABTO	**Aybut**	**7.11**	**323**	P	**Pn**	**20 01 28.6**	**+2.3**
	SNR=8.3						
ABTO				P	**Pn**	**20 01 28.6**	**+2.3**
	SNR=8.3						
WHFO	**Wadi Hawf**	**7.30**	**329**	P	**Pn**	**20 01 31.7**	**+2.8**
	SNR=24						
WHFO				P	**Pn**	**20 01 31.7**	**+2.8**
	SNR=24						
WHFO				P	**Pn**	**20 01 31.7**	**+2.8**
	SNR=24						
DQM	**DQM**	**8.21**	**359**	P	**Pn**	**20 01 42.1**	**+0.7**
	SNR=28						
DQM				P	**Pn**	**20 01 42.1**	**+0.7**
	SNR=28						
MHTO	**MHTO**	**9.27**	**1**	P	**Pn**	**20 01 55.5**	**-0.3**
	SNR=14						
MHTO				P	**Pn**	**20 01 55.5**	**-0.3**
	SNR=14						
MHTO				P	**Pn**	**20 01 55.5**	**-0.3**
	SNR=14						
JLN	**Jalan Bani Buh**	**10.54**	**8**	P	**Pn**	**20 02 12.7**	**-0.6**
	SNR=8.6						
WSAR	**Wadi Sarin**	**11.54**	**4**	Pn	**Pn**	**20 02 27.5**	**+0.5**
	3.0nm,0.3s,baz=227,slow=11,SNR=44						
WSAR				LR	LR	20 06 25.3	
	comp=Z,3μm,18.3s,baz=199,slow=35						
SOHO	**SOHO**	**12.45**	**355**	*i* Pn	**Pn**	**20 02 42.0**	**+2.6**
	SNR=77						
ALNE	**Al Ain**	**12.46**	**352**	*i* Pn	**Pn**	**20 02 43.3**	**+3.6**
	SNR=15						
AJN	**Ajban**	**13.09**	**349**	*i* Pn	**Pn**	**20 02 50.8**	**+2.7**
	SNR=9.8						
ASUD	**Al Ashush, Dub**	**13.09**	**350**	*i* Pn	**Pn**	**20 02 50.7**	**+2.6**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**13.16**	**351**	*i* Pn	**Pn**	**20 02 52.2**	**+3.0**
	SNR=8.4						
HATD	**Hatta, Dubai**	**13.17**	**354**	*i* Pn	**Pn**	**20 02 50.0**	**+0.6**
	SNR=15						
UOSS	**Minazif**	**13.29**	**354**	*i* Pn	**Pn**	**20 02 50.6**	**-0.3**
	SNR=20						
UOSS	**Minazif**	**13.29**	**354**	Pn	**Pn**	**20 02 50.8**	**0.0**
NAZ	**Nazwa, Dubai**	**13.39**	**352**	*i* Pn	**Pn**	**20 02 55.0**	**+2.7**
	SNR=25						
MDH	**Madha**	**13.62**	**354**	*i* Pn	**Pn**	**20 02 56.2**	**+0.7**
	SNR=5.6						
MSFE	**Esma-Masafi**	**13.70**	**354**	*i* Pn	**Pn**	**20 02 56.3**	**-0.2**
	SNR=12						
BANOM	**Banah**	**14.24**	**355**	*i* Pn	**Pn**	**20 03 03.5**	**-0.5**
	SNR=7.5						
ATD	**Arta Tunnel**	**14.60**	**271**	Pn	**Pn**	**20 03 08.1**	**-0.9**
	1.2nm,0.3s,baz=328,slow=5.6,SNR=9.2						
ATD				LR	LR	20 07 35.4	
	comp=Z,1μm,20.8s,baz=80,slow=32						
ATD	**Arta Tunnel**	**14.60**	**271**	Pn	**Pn**	**20 03 08.0**	**-0.9**
RAYN	**Ar Rayn**	**16.57**	**317**	*i* Pn	**Pn**	**20 03 31.8**	**-2.9**
	SNR=27						
RAYN	**Ar Rayn**	**16.57**	**317**	Pn	**Pn**	**20 03 31.6**	**-3.1**
ANKE	**Ethiopia-Afar**	**17.82**	**265**	*i* P	**P**	**20 03 52.6**	**+1.0**
FURI	**Furi**	**18.96**	**263**	P	**P**	**20 04 03.5**	**-0.5**
FURI				IAmb	IAmb	20 04 08.5	
	comp=Z,94nm,1.0s						
HYB	**Hyderabad**	**20.93**	**72**	*i* P	**P**	**20 04 25.0**	**-0.2**
HRA	**Herat**	**22.98**	**10**	P	**P**	**20 04 47.7**	**+0.5**
HRA				IAmb	IAmb	20 04 51.2	
	comp=Z,37nm,0.9s						
PALK	**Pallekele**	**23.05**	**99**	LR	LR	20 12 04.3	
	comp=Z,704nm,19.4s,baz=30,slow=32						
PALK	**Pallekele**	**23.05**	**99**	P	**P**	**20 04 46.8**	**-1.2**
PALK				IAmb	IAmb	20 05 13.6	
	comp=Z,28nm,1.1s						
LODK	**Lodwar**	**23.64**	**251**	P	**P**	**20 04 55.9**	**+2.0**
	SNR=28						
KMBO	**Kilima Mbogo**	**24.01**	**239**	P	**P**	**20 04 58.7**	**+1.1**
	comp=Z,34nm,1.0s,baz=45,slow=11,SNR=71						
KMBO				LR	LR	20 15 20.3	
	comp=Z,706nm,18.3s,baz=90,slow=39						
KMBO	**Kilima Mbogo**	**24.01**	**239**	*i* P	**P**	**20 04 57.6**	**0.0**
	SNR=60						
KMBO	**Kilima Mbogo**	**24.01**	**239**	P	**P**	**20 04 57.8**	**+0.3**
KMBO				P	**P**	**20 04 57.8**	**+0.3**
KMBO	**Kilima Mbogo**	**24.01**	**239**	P	**P**	**20 04 58.1**	**+0.5**
KMBO				pmax	pmax		
	comp=Z,92nm,1.3s						
KMBO	**Kilima Mbogo**	**24.01**	**239**	P	**P**	**20 04 57.6**	**0.0**
KMBO					IAmb	IAmb	20 05 00.3
	comp=Z,50nm,1.1s						
KIBK	**Kibwezi**	**24.03**	**236**	P	**P**	**20 04 57.4**	**-0.2**
	SNR=39						
KBL	**Kabul**	**24.98**	**23**	P	**P**	**20 05 08.5**	**+2.2**
	SNR=6.1						
KBL	**Kabul**	**24.98**	**23**	P	**P**	**20 05 07.0**	**+0.7**
KBL				pmax	pmax		
	comp=Z,11nm,0.6s						
KBL	**Kabul**	**24.98**	**23**	P	**P**	**20 05 07.0**	**+0.7**
KBL				IAmb	IAmb	20 05 19.8	
	comp=Z,11nm,0.7s						
NIL	**Nilore**	**26.07**	**30**	P	**P**	**20 05 16.0**	**0.0**
NIL				pmax	pmax		
	comp=Z,27nm,1.0s						
NIL	**Nilore**	**26.07**	**30**	P	**P**	**20 05 17.0**	**+1.0**
NIL				IAmb	IAmb	20 05 34.1	
	comp=Z,27nm,1.1s						
GEYT	**Alibeck**	**26.15**	**1**	P	**P**	**20 05 17.3**	**+0.7**
	comp=Z,11nm,0.8s,baz=184,slow=10,SNR=12						
GEYT				LR	LR	20 16 05.6	
	comp=Z,268nm,19.5s,baz=210,slow=38						
GEYT	**Alibeck**	**26.15**	**1**	P	**P**	**20 05 17.2**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**26.15**	**1**	P	**P**	**20 05 17.2**	**+0.6**
GYA0B				IAmb	IAmb	20 05 42.9	
	comp=Z,20nm,1.0s						
EIL	**Elat**	**27.75**	**314**	P	**P**	**20 05 32.8**	**+1.7**
	comp=Z,3.2nm,0.9s,baz=166,slow=6.4,SNR=2.6						
EIL				LR	LR	20 15 31.5	
	comp=Z,381nm,19.1s,baz=132,slow=34						
PYUN	**Piuthan**	**28.73**	**52**	*e*P	**P**	**20 05 41.2**	**+1.1**
KOLN	**Koldanda**	**29.04**	**53**	*e*P	**P**	**20 05 44.7**	**+1.9**
DANN	**Dangsing**	**29.44**	**52**	*e*P	**P**	**20 05 47.7**	**+1.2**
	comp=Z,11nm,0.7s						
MBAR	**Mbarara**	**29.47**	**247**	P	**P**	**20 05 47.7**	**+0.9**
	comp=Z,2.2nm,0.2s,baz=45,slow=15,SNR=4.7						
MBAR				LR	LR	20 17 52.6	
	comp=Z,432nm,18.8s,baz=56,slow=37						
MBAR	**Mbarara**	**29.47**	**247**	*ce*P	**P**	**20 05 49.0**	**+2.3**
MBAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MBAR	**Mbarara**	**29.47**	**247**	P	**P**	**20 05 47.3**	**+0.6**
MMAI	**Mount Meron Ar**	**29.51**	**320**	P	**P**	**20 05 48.6**	**+1.8**
	comp=Z,1.7nm,0.7s,baz=94,slow=11,SNR=4.6						
MMAI				LR	LR	20 17 48.6	
	comp=Z,499nm,20.0s,baz=140,slow=37						
GEVA	**Gevas**	**29.60**	**336**		**P**	**20 05 47.5**	**-0.2**
MARD	**Mardin**	**29.73**	**332**	P	**P**	**20 05 49.9**	**+1.1**
MARD				IAmb	IAmb	20 06 07.6	
	comp=Z,9.8nm,0.7s						
GKN	**Gorkha**	**29.96**	**53**	*e*P	**P**	**20 05 52.3**	**+1.4**
	comp=Z,17nm,0.9s						
DMN	**Daman**	**30.15**	**54**	*e*P	**P**	**20 05 54.3**	**+1.5**
PKIN	**Phulchoki**	**30.37**	**55**	*e*P	**P**	**20 05 56.0**	**+1.3**
	comp=Z,23nm,0.6s						
PKI	**Pulchoki**	**30.38**	**55**	*e*P	**P**	**20 05 56.3**	**+1.5**
	comp=Z,32nm,0.8s						
GNI	**Garni**	**30.61**	**340**	P	**P**	**20 05 58.2**	**+1.7**
	comp=Z,9.6nm,0.7s,baz=13,slow=3.8,SNR=9.9						
GNI	**Garni**	**30.61**	**340**	P	**P**	**20 05 58.0**	**+1.4**
GNI	**Garni**	**30.61**	**340**	*de*P	**P**	**20 05 58.7**	**+2.2**
GNI				pmax	pmax		
	comp=Z,48nm,2.4s						
GNI	**Garni**	**30.61**	**340**	P	**P**	**20 05 58.3**	**+1.8**
GUN	**Gumba**	**30.90**	**54**	*e*P	**P**	**20 06 01.2**	**+1.7**
	comp=Z,31nm,0.9s						
RAMN	**Ramite**	**31.08**	**57**	*e*P	**P**	**20 06 02.6**	**+1.6**
	comp=Z,19nm,0.6s						
MALT	**Malatya**	**31.65**	**330**	P	**P**	**20 06 08.7**	**+3.0**
ODAN	**Odare**	**31.69**	**57**	*e*P	**P**	**20 06 08.3**	**+1.9**
	comp=Z,21nm,0.6s						
KOPT	**Kop Dagi**	**32.09**	**335**	P	**P**	**20 06 10.2**	**+0.4**
KOPT				IAmb	IAmb	20 06 23.0	
	comp=Z,14nm,1.0s						
KSH	**Kashi**	**32.10**	**27**	P	**P**	**20 06 06.9**	**-2.8**
KSH				sP	pwP	20 06 17.2	-0.1
KSH				S	**S**	**20 11 15.3**	**-6.8**
KSH				pmax	pmax		
	comp=Z,21nm,0.8s						
KSH				pmax	pmax		
	comp=Z,300nm,4.6s						
KSH				LR	LR		
	comp=Z,280nm,6.7s						
KSH				LR	LR		
	comp=Z,970nm,12.9s						
KSH				LR	LR		
	comp=Z,560nm,14.5s						
TAPN	**Taplejung**	**32.14**	**57**	*e*P	**P**	**20 06 11.9**	**+1.5**
	comp=Z,26nm,0.8s						
IUG	**Iuzhnay**	**32.20**	**17**	*e*P	**P**	**20 06 11.6**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=17						
IUG	**Iuzhnay**	**32.20**	**17**	*e*P	**P**	**20 06 11.6**	**+1.1**
IUG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MAK	**Makhachkala**	**32.42**	**346**	*e*P	**P**	**20 06 08.1**	**-4.1**
MAK				*e*		20 07 15.7	
MAK				*e*S	**S**	**20 11 20.5**	**-6.2**
MAK				*e*SS	**SnSn**	**20 13 18.8**	**-0.7**
MAK				MLR	MLR		
	comp=Z,754nm,16.0s						
KK31	**Karatay Array**	**33.22**	**17**	P	**P**	**20 06 20.1**	**+0.8**
KK31				IAmb	IAmb	20 06 23.7	
	comp=Z,6.8nm,0.7s						
KKAR	**Karatay Array**	**33.22**	**17**	P	**P**	**20 06 20.1**	**+0.8**
KKAR				IAmb	IAmb	20 06 23.7	
	comp=Z,6.8nm,0.7s						
KKAR	**Karatay Array**	**33.22**	**17**	P	**P**	**20 06 20.0**	**+0.8**
ONI	**Oni**	**33.23**	**341**	P	**P**	**20 06 22.5**	**+3.1**
ZEI	**Tsey**	**33.26**	**341**	*e*P	**P**	**20 06 20.4**	**+0.6**
ZEI				pmax	pmax		
	comp=Z,19nm,1.0s						
DZA	**Taraz**	**33.27**	**18**	*e*P	**P**	**20 06 21.2**	**+1.4**
	baz=18						
DZA	**Taraz**	**33.27**	**18**	*e*P	**P**	**20 06 21.2**	**+1.4**
CHVG	**Ch'k'valeri**	**33.80**	**339**	⇑P	**P**	**20 06 27.1**	**+2.7**
CHVG	**Ch'k'valeri**	**33.80**	**339**	⇑P	**P**	**20 06 27.1**	**+2.7**
AAK	**Ala-Archa**	**34.12**	**22**	*i* P	**P**	**20 06 29.8**	**+2.4**
	SNR=6.9						
AAK	**Ala-Archa**	**34.12**	**22**	P	**P**	**20 06 29.7**	**+2.4**
AAK	**Ala-Archa**	**34.12**	**22**	⇓*e*P	**P**	**20 06 28.8**	**+1.5**
AAK				pmax	pmax		
	comp=Z,56nm,1.7s						
TOKA	**Tokat**	**34.16**	**330**	P	**P**	**20 06 27.6**	**+0.1**
TOKA				IAmb	IAmb	20 06 33.5	
	comp=Z,15nm,1.1s						
KBZ	**Khabaz**	**34.42**	**341**	P	**P**	**20 06 30.7**	**+1.0**
	comp=Z,7.2nm,0.9s,baz=56,slow=24,SNR=12						
KBZ				LR	LR	20 22 17.2	
	comp=Z,663nm,18.8s,baz=158,slow=39						
KBZ	**Khabaz**	**34.42**	**341**	*d* iP	**P**	**20 06 31.0**	**+1.3**
KBZ				pmax	pmax		
	comp=Z,11nm,1.1s						
BOOM	**Boomskoye usch**	**34.55**	**24**	P	**P**	**20 06 32.4**	**+1.3**
BOOM				pmax	pmax		
	comp=Z,23nm,1.2s						
BOOM	**Boomskoye usch**	**34.55**	**24**	P	**P**	**20 06 32.4**	**+1.3**
BOOM				IAmb	IAmb	20 06 44.9	
	comp=Z,23nm,1.2s						
KIV	**Kislovodsk**	**34.70**	**341**	⇑P	**P**	**20 06 33.8**	**+1.6**
KIV	**Kislovodsk**	**34.70**	**341**	P	**P**	**20 06 33.5**	**+1.3**
KIV				P	**P**	**20 06 33.5**	**+1.3**
KIV	**Kislovodsk**	**34.70**	**341**	*e*P	**P**	**20 06 34.0**	**+1.8**
KIV				*e*		20 07 50.0	
KIV				*e*S	**S**	**20 12 04.3**	**+2.1**
KIV				pmax	pmax		
	comp=Z,148nm,4.3s						
KIV				pmax	pmax		
	comp=Z,81nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1μm,16.0s						
KIV	**Kislovodsk**	**34.70**	**341**	P	**P**	**20 06 33.0**	**+0.8**
KIV				IAmb	IAmb	20 06 45.0	
	comp=Z,25nm,1.0s						
TKM2	**Tokmak 2**	**34.78**	**23**	*i* P	**P**	**20 06 33.5**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,13nm,1.6s						
SGDS	**Sogindy**	**34.88**	**22**	*e*P	**P**	**20 06 34.9**	**+1.1**
	comp=Z,5.0nm,1.3s,baz=22						
SGDS	**Sogindy**	**34.88**	**22**	*e*P	**P**	**20 06 34.8**	**+1.1**
SGDS				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SHL	**Shillong**	**35.06**	**62**	P	**P**	**20 06 36.6**	**+0.9**
SHL				pmax	pmax		
	comp=Z,12nm,0.8s						
SHL	**Shillong**	**35.06**	**62**	P	**P**	**20 06 36.6**	**+0.9**
SHL				IAmb	IAmb	20 06 45.7	
	comp=Z,12nm,0.8s						
BR131	**Keskin Array S**	**35.16**	**327**	P	**P**	**20 06 37.7**	**+1.3**
BRTR	**Keskin Array B**	**35.16**	**327**	P	**P**	**20 06 37.1**	**+0.8**
	comp=Z,4.7nm,1.0s,baz=139,slow=8.2,SNR=9.7						
BRTR				LR	LR	20 21 57.6	
	comp=Z,344nm,19.9s,baz=126,slow=38						
BRTR	**Keskin Array B**	**35.16**	**327**	P	**P**	**20 06 36.5**	**+0.1**
AKAS	**Kas**	**35.25**	**319**	P	**P**	**20 06 37.8**	**+0.7**
AKAS				IAmb	IAmb	20 06 52.2	
	comp=Z,11nm,0.7s						
ELL	**Elmali**	**35.37**	**320**	P	**P**	**20 06 40.0**	**+1.9**
ELL	**Elmali**	**35.37**	**320**	P	**P**	**20 06 38.7**	**+0.6**
SOC	**Sochi**	**35.42**	**337**	*e*P	**P**	**20 06 36.9**	**-1.4**
SOC				*e*		20 07 52.6	
SOC				*e*PPP	PPP	20 08 18.0	
SOC				*e*S	**S**	**20 12 12.6**	**-0.5**
SOC				*e*SS	**SnSn**	**20 14 34.5**	**+2.3**
SOC				*e*SSS	SSS	20 14 51.8	
SOC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,418nm,16.0s						
AAA	**Alma-Ata**	**35.55**	**24**	*e*P	**P**	**20 06 40.9**	**+1.3**
	comp=Z,13nm,1.3s,baz=24						
AAA	**Alma-Ata**	**35.55**	**24**	*e*P	**P**	**20 06 40.8**	**+1.3**
AAA				pmax	pmax		
	comp=Z,13nm,1.3s						
MDOK	**Medeo**	**35.56**	**25**	*e*P	**P**	**20 06 40.7**	**+1.0**
	baz=25						
MDOK				*e*S	**S**	**20 12 17.4**	**+1.6**
	baz=25						
MDOK				LR	LR	20 22 08.6	
	comp=Z,120nm,14.4s,baz=25						
MDOK	**Medeo**	**35.56**	**25**	*e*P	**P**	**20 06 40.7**	**+1.0**
MDOK				*e*S	**S**	**20 12 17.3**	**+1.6**
MDOK				MLR	MLR		
	comp=Z,120nm,14.0s						
GOF	**Gofitskoye**	**35.58**	**342**	⇑*e*P	**P**	**20 06 40.9**	**+1.3**
LSA	**Lhasa**	**35.85**	**55**	P	**P**	**20 06 43.6**	**+0.9**
LSA				pmax	pmax		
	comp=Z,21nm,1.7s						
LSA	**Lhasa**	**35.85**	**55**	P	**P**	**20 06 42.9**	**+0.2**
LSA				pmax	pmax		
	comp=Z,27nm,2.0s						
LSA	**Lhasa**	**35.85**	**55**	P	**P**	**20 06 42.9**	**+0.2**
LSA				IAmb	IAmb	20 06 45.8	
	comp=Z,27nm,2.0s						
KUU	**Kurty**	**35.89**	**23**	*e*P	**P**	**20 06 43.4**	**+1.0**
	comp=Z,14nm,1.6s,baz=23						
KUU	**Kurty**	**35.89**	**23**	*e*P	**P**	**20 06 43.4**	**+1.0**
KUU				pmax	pmax		
	comp=Z,14nm,1.6s						
SATY	**Saty**	**36.05**	**26**	*e*P	**P**	**20 06 44.6**	**+0.7**
	baz=26						
SATY	**Saty**	**36.05**	**26**	*e*P	**P**	**20 06 44.6**	**+0.7**
BTLS	**Baital**	**36.07**	**20**	*e*P	**P**	**20 06 44.5**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=20						
BTLS	**Baital**	**36.07**	**20**	*e*P	**P**	**20 06 44.4**	**+0.6**
BTLS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILGA	**Ilgaz**	**36.09**	**328**	P	**P**	**20 06 45.1**	**+0.7**
KPKS	**Kokpek**	**36.49**	**26**	*e*P	**P**	**20 06 48.3**	**+0.6**
	baz=26						
KPKS	**Kokpek**	**36.49**	**26**	*e*P	**P**	**20 06 48.2**	**+0.6**
SHLS	**Shalkode**	**36.59**	**27**	*e*P	**P**	**20 06 51.2**	**+2.6**
	comp=Z,7.1nm,1.1s,baz=27						
SHLS	**Shalkode**	**36.59**	**27**	*e*P	**P**	**20 06 51.1**	**+2.6**
SHLS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PDGK	**Podgornoye**	**36.74**	**27**	P	**P**	**20 06 50.2**	**+0.4**
ANN	**Anapa**	**37.33**	**336**	*e*P	**P**	**20 06 54.0**	**-0.6**
ANN				*e**PP	**sP**	**20 06 57.1**	**-0.4**
ANN				*e*		20 08 19.4	
ANN				*e*S	**S**	**20 12 42.7**	**+0.5**
ANN				pmax	pmax		
	comp=Z,20nm,0.8s						
ANN				MLR	MLR		
	comp=Z,585nm,17.0s						
ANN				MLR	MLR		
	comp=N,573nm,16.0s						
ABKAR	**Akbulak array**	**37.52**	**2**	P	**P**	**20 06 56.6**	**+0.5**
ABKAR				IAmb	IAmb	20 06 59.5	
	comp=Z,14nm,0.8s						
ABKAR	**Akbulak array**	**37.52**	**2**	P	**P**	**20 06 56.3**	**+0.2**
TDK	**Taldyqorghan**	**37.63**	**24**	*e*P	**P**	**20 06 57.7**	**+0.4**
	comp=Z,4.3nm,0.6s,baz=24						
TDK	**Taldyqorghan**	**37.63**	**24**	*e*P	**P**	**20 06 57.6**	**+0.4**
TDK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
IDI	**Anoyia**	**37.93**	**314**	⇑P	**P**	**20 07 01.9**	**+2.0**
IDI	**Anoyia**	**37.93**	**314**	P	**P**	**20 07 01.9**	**+2.0**
APE	**Apeiranthos**	**38.41**	**317**	⇓P	**P**	**20 07 07.1**	**+3.1**
APE	**Apeiranthos**	**38.41**	**317**	*ce*P	**P**	**20 07 07.0**	**+3.0**
APE				pmax	pmax		
	comp=Z,27nm,0.9s						
LHMI	**Lhok Sumawe**	**39.27**	**96**	P	**P**	**20 07 13.4**	**+2.0**
	comp=Z,38nm,0.9s						
MHMT	**Maesarieng**	**39.30**	**76**	P	**P**	**20 07 13.4**	**+1.8**
LSZ	**Lusaka**	**39.67**	**228**	P	**P**	**20 07 14.5**	**-0.3**
BRZS	**Berezniki**	**40.13**	**15**	*e*P	**P**	**20 07 18.9**	**+0.7**
	baz=15						
BRZS	**Berezniki**	**40.13**	**15**	*e*P	**P**	**20 07 18.8**	**+0.7**
CM32	**Chiang Mai Arr**	**40.20**	**75**	P	**P**	**20 07 20.0**	**+0.9**
CM15	**Chiang Mai Arr**	**40.26**	**75**	P	**P**	**20 07 21.5**	**+1.9**
CM05	**Chiang Mai Arr**	**40.28**	**75**	P	**P**	**20 07 21.0**	**+1.2**
CM31	**Chiang Mai Arr**	**40.28**	**75**	P	**P**	**20 07 22.0**	**+2.2**
CM31	**Chiang Mai Arr**	**40.28**	**75**	P	**P**	**20 07 20.0**	**+0.2**
CM31				IAmb	IAmb	20 07 31.4	
	comp=Z,29nm,1.1s						
CMAR	**Chiang Mai Arr**	**40.28**	**75**	P	**P**	**20 07 20.6**	**+

PHIT Phitsanulok 41.62 77 P P 20 07 33.0 +2.2
HARR Harsova 41.66 328 ⇑P P 20 07 31.4 +0.7
HARR Harsova 41.66 328 ⇑P P 20 07 31.4 +0.7
RAZG Razgrad 41.68 325 ⇑P P 20 07 33.4 +2.4
UTTA Uttaradit 41.77 76 P P 20 07 33.4 +1.4
CFR Carcaliu 41.89 328 ⇓P P 20 07 33.0 +0.4
CFR Carcaliu 41.89 328 ⇓P P 20 07 33.0 +0.4
SRS Serrai 41.91 321 P P 20 07 34.8 +1.9
SRS pmax pmax
comp=Z,8.0nm,1.2s
VORD Divnogorie 41.99 343 *eP* **P 20 07 32.8 -0.5**
VORD pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 42.25 343 *eP* **P 20 07 34.7 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.9s
KURBB Kurchatov Arra 42.41 20 P P 20 07 37.3 +0.5
comp=Z,5.1nm,0.7s,baz=217,slow=8.1,SNR=45
BRVK Borovoye 42.49 11 *de*P **P 20 07 37.9 +0.5**
BRVK pmax pmax
comp=Z,15nm,2.3s
BRVK Borovoye 42.49 11 P P 20 07 37.3 -0.1
KURK Kurchatov 42.52 20⇓ *e*P **P 20 07 38.1 +0.4**
KURK pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 42.52 20 P P 20 07 37.6 0.0
SEM Semipalatinsk 42.82 21 *e*P **P 20 07 40.8 +0.4**
comp=Z,3.4nm,0.7s,baz=21
SEM Semipalatinsk 42.82 21 *e*P **P 20 07 40.7 +0.4**
SEM pmax pmax
comp=Z,3.0nm,0.7s
VRI Vrincioaia 43.08 328 ⇓P P 20 07 43.5 +1.1
VRI Vrincioaia 43.08 328 ⇓P P 20 07 43.5 +1.1
PLOR Plostina 43.11 328 ⇓P P 20 07 43.7 +1.1
PLOR Plostina 43.11 328 ⇑P P 20 07 43.7 +1.1
VLAD Vladila 43.14 325 ⇑P P 20 07 44.1 +1.3
MLR Muntele Rosu 43.24 327 ⇓P P 20 07 45.0 +1.2
MLR Muntele Rosu 43.24 327 ⇓P P 20 07 45.0 +1.2
MLR Muntele Rosu 43.24 327 P P 20 07 44.1 +0.3
MLR IAmb IAmb 20 07 49.1
comp=Z,38nm,1.8s
LPSR Galich'ya Gora 43.55 343 *eP* **P 20 07 46.7 +0.8**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
TESR Tescani 43.56 329 ⇑P P 20 07 46.2 0.0
VOIR 43.69 327 ⇑P P 20 07 47.3 0.0
VOIR 43.69 327 ⇑P P 20 07 47.3 0.0
DOPR Dopca 43.85 327 ⇑P P 20 07 48.4 -0.1
ARR Arges 43.87 326 ⇓P P 20 07 49.1 +0.4
SORM Soroca 43.87 332 ⇓P P 20 07 47.7 -0.9
SORM Soroca 43.87 332 ⇓P P 20 07 47.7 -0.9
KHON Khomkaen 43.92 79 P P 20 08 00.0 +11
BIZ Bicaz 44.12 329 ⇑P P 20 07 50.9 +0.2
PRAR RASCA 44.35 329 ⇓P P 20 07 51.8 -0.8
LOT Lotru 44.39 326 ⇓P P 20 07 52.1 -0.9
BKNI Bangkinang 44.43 102 P P 20 07 56.3 +2.7
comp=Z,1μmcomp=Z,63nm,0.6s
KMI Kunming 44.53 66⇓ *e*P **P 20 07 55.0 +0.4**
KMI pP sP 20 07 58.3 +1.2
KMI sP pwP 20 08 00.4 -1.7
KMI pmax pmax
comp=Z,11nm,0.5s
ARU Arti 44.66 1 P P 20 07 55.7 +0.9
ARU 20 09 39.7
ARU S **S 20 14 33.7 +2.6**
ARU SS **SS 20 17 51.3 0.0**
HERR Herculane 44.80 324 ⇓P P 20 07 56.2 +0.1
BURAR Bucovina Array 45.03 329 ⇓P P 20 07 58.5 +0.5
BURAR Bucovina Array 45.03 329 ⇓P P 20 07 58.5 +0.5
BURAR Bucovina Array 45.03 329 P P 20 07 57.3 -0.7
BUR08 Bucovina Ar. S 45.05 329 P P 20 07 58.1 -0.2
KMPD K-Podol'skiy 45.06 331 P P 20 07 56.0 -2.1
SLVN Son La 45.15 72 P P 20 07 59.9 +0.5
AKASG Malin Array Be 45.38 335 P P 20 07 59.8 -0.8
comp=Z,3.6nm,0.7s,baz=129,slow=7.3,SNR=9.5
AKASG PP **PP 20 09 45.8 -1.0**
comp=Z,0.6nm,0.4s,baz=138,slow=8.9,SNR=5.3
AKASG LR LR 20 30 05.0
comp=Z,363nm,18.8s,baz=140,slow=40
AKBB Malin Array Si 45.38 335 P P 20 07 59.2 -1.4
AKBB IAmb IAmb 20 08 04.4
comp=Z,8.4nm,0.7s
KIEV Kiev 45.38 335 P P 20 08 00.0 -0.6
BZS Buzias 45.70 325 ⇓P P 20 08 03.1 -0.1
BZS Buzias 45.70 325 ⇓P P 20 08 03.1 -0.1
SIRR Siria 46.06 325 ⇓P P 20 08 06.2 0.0
GTA Gaotai 46.33 46 P P 20 08 10.3 +1.7
GTA pP pwP 20 08 14.8 -1.4
GTA sP sP 20 08 17.4 +6.4
GTA S **S 20 14 55.2 -0.8**
GTA pmax pmax
comp=Z,3.0nm,1.6s
GTA pmax pmax
comp=Z,100nm,5.0s
GTA LR LR
comp=Z,180nm,16.0s
GTA LR LR
comp=Z,200nm,16.4s
GTA LR LR
comp=Z,280nm,19.3s
OBN Obninsk 46.42 343 *e*P **P 20 08 09.2 +0.4**
OBN *e* 20 09 58.8
OBN *e*PPP PPP 20 10 39.2
OBN pmax pmax
comp=Z,6.0nm,1.0s
CD2 Chengdu 46.57 58 P P 20 08 10.0 -0.4
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 LR LR
comp=Z,520nm,16.5s
CD2 LR LR
comp=Z,380nm,20.4s
CD2 LR LR
comp=Z,470nm,15.7s
MOS Moscow 46.69 344 *e*P **P 20 08 13.6 +2.7**
MOS *e* 20 10 01.4
MOS *e*PPP PPP 20 10 47.9
MOS *e*S **S 20 14 59.3 -1.0**
KSI Kapahiang 47.12 106 P P 20 08 16.4 +1.4
comp=Z,78μmcomp=Z,3μmcomp=Z,19nm,1.5s
KIRV Kirov 47.24 354 *de*P **P 20 08 15.2 +0.1**
ZAA0 Zalesovo Array 47.34 21 P P 20 08 14.5 -1.5
ZALV Zalesovo Beam 47.34 21 P P 20 08 15.6 -0.4
comp=Z,9.0nm,0.5s,baz=225,slow=7.5,SNR=46
ZALV LR LR 20 28 59.5
comp=Z,195nm,21.8s,baz=218,slow=37
ZALV Zalesovo Beam 47.34 21 P P 20 08 14.9 -1.1
KOLS Kolonicke sedl 47.38 329 *e*P **P 20 08 17.3 +0.9**
KOLS pmax pmax
comp=Z,10.0nm,1.1s
KOLS Kolonicke sedl 47.38 329 *e*P **P 20 08 17.3 +0.9**
KWP Kalwaria Pacla 47.61 330 P P 20 08 17.8 -0.4
KWP pmax pmax
comp=Z,20nm,1.2s
KWP Kalwaria Pacla 47.61 330 P P 20 08 17.8 -0.4
LZH Lanzhou 48.08 52 *e*P **P 20 08 23.0 +0.7**
LZH pP sP 20 08 27.5 +2.7
LZH sP pwP 20 08 30.1 +0.2
LZH pmax pmax
comp=Z,15nm,1.4s
LZH pmax pmax
comp=Z,68nm,4.6s
LZH LR LR
comp=Z,450nm,14.0s
LZH LR LR
comp=Z,620nm,14.4s
LZH LR LR
comp=Z,860nm,16.0s
GYA Guiyang 48.23 65 ⇓P P 20 08 23.6 +0.1
GYA pP pwP 20 08 32.5 +1.4
GYA S **S 20 15 16.8 -6.6**
GYA pmax pmax
comp=Z,7.0nm,1.1s
GYA pmax pmax
comp=Z,150nm,4.7s
GYA LR LR
comp=Z,310nm,19.5s
VYHS Vyhne 48.92 326 *e*P **P 20 08 29.1 +0.7**
VYHS Vyhne 48.92 326 *e*P **P 20 08 29.1 +0.7**
LANS Liptovska Anna 48.97 327 *e*P **P 20 08 29.0 +0.3**
LANS pmax pmax
comp=Z,3.0nm,1.0s
LANS Liptovska Anna 48.97 327 *e*P **P 20 08 29.0 +0.3**
NACGM Naroch 49.52 337 *e* **P 20 08 33.0 +0.2**

MODS Modra-Piesok 49.71 325 *e*P **P 20 08 33.3 -1.1**
MODS pmax pmax
comp=Z,19nm,1.5s
MODS Modra-Piesok 49.71 325 *e*P **P 20 08 33.3 -1.1**
ZST Bratislava 49.71 325 *e*P **P 20 08 36.9 +2.5**
ZST Bratislava 49.71 325 *e*P **P 20 08 36.9 +2.5**
KEST Kesra 49.76 307 P P 20 08 34.5 -0.5
comp=Z,7.4nm,1.0s,baz=269,slow=18,SNR=2.0
TSUM Tsumeb 50.08 233 P P 20 08 38.0 +0.3
TSUM IAmb IAmb 20 08 39.9
comp=Z,8.3nm,0.9s
ARSA Arzberg 50.11 323 *e*P **P 20 08 39.0 +1.5**
comp=Z,7.7nm,1.5s
CONA Conrad Observa 50.27 324 *e*P **P 20 08 40.1 +1.3**
comp=Z,7.2nm,1.1s
SUW Suwalki 50.33 334 P P 20 08 39.0 0.0
MORC Moravsky Berou 50.35 327 ⇑P P 20 08 38.4 -0.9
MORC Moravsky Berou 50.35 327 ⇑P P 20 08 38.4 -0.9
MORC Moravsky Berou 50.35 327 P P 20 08 38.5 -0.8
MORC IAmb IAmb 20 08 56.3
comp=Z,11nm,1.2s
QIZ Qiongzhong 50.62 75 P P 20 08 40.2 -1.6
QIZ PP **PP 20 10 36.1 -1.6**
QIZ S **S 20 15 56.0 -0.9**
QIZ LR LR
comp=Z,270nm,12.4s
TAM Tamanrasset 50.86 290 P P 20 08 41.2 -2.5
TAM pmax pmax
comp=Z,10.0nm,1.4s
TAM Tamanrasset 50.86 290 P P 20 08 41.2 -2.5
KLMR Klimovskoe 50.90 349 *e*P **P 20 08 41.6 -1.5**
KLMR pmax pmax
comp=Z,27nm,1.4s
KLMR Klimovskoe 50.90 349 *e*P **P 20 08 41.7 -1.4**
KLMR *e*P **P 20 08 41.7 -1.4**
KLMR *e*P **P 20 08 41.7 -1.4**
KLMR AMP 20 08 49.5
comp=Z,27nm,1.4s
KLMR LQ LQ 20 25 38.7
KLMR LQ LQ 20 25 38.7
KLMR LR LR 20 30 12.9
BOSA Boshof 50.90 217 P P 20 08 40.9 -2.9
comp=Z,4.9nm,0.9s,baz=8.7,slow=22,SNR=3.2
BOSA LR LR 20 27 08.0
comp=Z,282nm,22.0s,baz=46,slow=32
BOSA Boshof 50.90 217 P P 20 08 41.8 -2.0
KRLC Kraliky 50.93 327 *e*P **P 20 08 44.5 +0.9**
MOA Molln 51.15 323 *e*P **P 20 08 45.3 0.0**
comp=Z,4.9nm,0.9s
ENH Enshi 51.28 61 P P 20 08 45.0 -1.6
ENH IAmb IAmb 20 09 06.8
comp=Z,17nm,1.0s
XAN Xi'an 51.54 56 P P 20 08 48.2 -0.3
XAN pP pwP 20 09 00.6 +4.5
XAN S S 20 16 21.1 +12
XAN pmax pmax
comp=Z,15nm,0.9s
XAN pmax pmax
comp=Z,150nm,4.3s
XAN LR LR
comp=Z,310nm,17.1s
XAN LR LR
comp=Z,280nm,19.0s
XAN LR LR
comp=Z,310nm,18.4s
XAN Xi'an 51.54 56 P P 20 08 48.0 -0.5
XAN pmax pmax
comp=Z,9.0nm,0.8s
XAN Xi'an 51.54 56 P P 20 08 48.0 -0.5
XAN IAmb IAmb 20 08 49.0
comp=Z,9.6nm,0.8s
UPC Upice 51.58 327 *e*P **P 20 08 48.9 +0.4**
UPC AMS AMS 20 30 30.0
comp=Z,400nm,20.1s
GERES GERESS Array B 51.97 324 P P 20 08 50.5 -1.1
comp=Z,0.8nm,0.8s,baz=93,slow=14,SNR=6.1
GERES LR LR 20 32 55.6
comp=Z,120nm,21.3s,baz=130,slow=38
PRU Pruhonice 52.09 326 *e*P **P 20 08 52.8 +0.5**
KHC Kasperske Hory 52.19 325 *e*P **P 20 08 53.9 +0.8**
WTTA Wattenberg 52.43 322 *e*P **P 20 08 55.3 +0.2**
comp=Z,13nm,1.4s
WATA Walderalm 52.50 322 *e*P **P 20 08 55.6 0.0**
comp=Z,5.4nm,0.7s
SQTA Sankt Quirin 52.67 322 *e*P **P 20 08 57.1 +0.2**
comp=Z,4.9nm,0.6s
MOTA Moosalm 52.79 322 *e*P **P 20 08 57.6 -0.1**
comp=Z,12nm,1.0s
FETA Feichten 52.88 321 *e*P **P 20 08 60.0 +1.6**
comp=Z,14nm,1.7s
RETA Reutte 53.06 322 *e*P **P 20 08 58.9 -0.8**
comp=Z,5.3nm,0.9s
DAVOX Davos/Dischmat 53.30 321 P P 20 09 01.9 +0.4
comp=Z,2.5nm,0.6s,baz=154,slow=18,SNR=3.7
DAVOX LR LR 20 34 28.1
comp=Z,121nm,19.7s,baz=154,slow=39
DAVA Damuels 53.52 321 *e*P **P 20 09 03.3 +0.3**
comp=Z,12nm,0.9s
CLL Collm 53.62 327 *e*P **P 20 09 04.0 +0.5**
CLL *e*S **S 20 16 35.0 -2.0**
CLL *e* 20 21 12.0
CLL Collm 53.62 327 *e*P **P 20 09 04.0 +0.5**
CLL *e*S **S 20 16 35.0 -2.0**
TMCR Tamitsa 54.22 350 *e*P **P 20 09 07.2 -0.4**
TMCR pmax pmax
comp=Z,24nm,1.2s
SONM Songino Array 54.23 39 P P 20 09 08.2 0.0
comp=Z,1.8nm,1.0s,baz=237,slow=7.3,SNR=7.4
SONM LR LR 20 35 02.7
comp=Z,200nm,18.9s,baz=218,slow=39
SONM Songino Array 54.23 39 P P 20 09 08.7 +0.5
TLY Talaya 54.43 33 LR LR 20 33 48.7
comp=Z,207nm,18.5s,baz=240,slow=38
ULN Ulaanbaatar 54.64 39⇓ *e*P **P 20 09 14.3 +3.0**
ULN pmax pmax
comp=Z,6.0nm,1.1s
TOA0 Torodi Ar. Sit 54.67 278 P P 20 09 12.4 +0.6
TORD Torodi Ar. Bea 54.67 278 P P 20 09 11.6 -0.2
comp=Z,4.4nm,1.1s,baz=83,slow=6.7,SNR=12
TORD LR LR 20 32 16.1
comp=Z,176nm,18.5s,baz=20,slow=36
TORD Torodi Ar. Bea 54.67 278 P P 20 09 11.6 -0.2
SBUM Sibu 54.74 95 P P 20 09 11.9 -0.4
SBUM IAmb IAmb 20 09 24.6
comp=Z,11nm,1.0s
SENIN Lac Senin/Sane 54.76 319 P P 20 09 11.6 -0.7
SENIN IAmb IAmb 20 09 31.5
comp=Z,7.5nm,0.9s
FINES FINESS Array B 54.77 342 P P 20 09 11.5 -0.2
comp=Z,4.2nm,0.6s,baz=142,slow=6.8,SNR=16
FINES FINESS Array B 54.77 342 *i* P **P 20 09 12.3 +0.6**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 54.77 342 P P 20 09 12.4 +0.6
HHC Hu-ho-hao-te 55.27 48 *e*P **P 20 09 16.3 +0.4**
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,150nm,6.6s
NJ2 Nanjing 59.47 60 *e*P **P 20 09 44.9 -0.6**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NB2 NORSAR Subarra 59.76 336 P P 20 09 44.2 -2.9
comp=Z,3.1nm,1.1s,baz=125,slow=6.9
NOA NORSAR Array B 59.76 336 P P 20 09 46.3 -0.9
comp=Z,0.9nm,0.9s,baz=222,slow=12,SNR=2.9
KOWA Kowa 60.07 280 P P 20 09 50.5 +0.6
MDT Midelt 60.58 301 P P 20 09 53.1 -0.2
comp=Z,2.0nm,0.8s,baz=55,slow=7.7,SNR=5.0
NRIK Noril'sk 60.69 12 P P 20 09 52.9 -0.4
comp=Z,4.1nm,0.8s,baz=197,slow=5.7,SNR=8.1
NRIK LR LR 20 39 24.9
comp=Z,197nm,18.3s,baz=199,slow=39
NRIK Noril'sk 60.69 12⇑ *e*P **P 20 09 52.8 -0.4**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
ESBB Sonseca Array 60.91 309 P P 20 09 55.7 +0.3
ESBB IAmb IAmb 20 10 06.8
comp=Z,14nm,1.0s
ESDC Sonseca Array 60.91 309 P P 20 09 54.8 -0.6
comp=Z,5.6nm,0.7s,baz=85,slow=5.8,SNR=20
ESDC Sonseca Array 60.91 309 P P 20 09 54.5 -1.0
PAB San Pablo 61.19 309 P P 20 09 59.5 +2.2
PAB IAmb IAmb 20 10 08.8
comp=Z,15nm,1.1s
ARCES ARCESS Array B 61.34 348 P P 20 09 57.5 -0.2
comp=Z,4.0nm,0.9s,baz=122,slow=4.6,SNR=8.4
ARCES LR LR 20 39 47.7
comp=Z,397nm,18.7s,baz=175,slow=39
DBIC Dimbokro 61.90 271 P P 20 10 03.1 +0.7
comp=Z,4.7nm,1.0s,baz=63,slow=5.3,SNR=3.5
BNSI Bone 64.04 101 P P 20 10 15.9 -0.7
CN2 Changchun 65.94 47 *e*P **P 20 10 32.6 +4.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
KSRS Korea Array 67.29 54 P P 20 10 35.9 -1.4
comp=Z,2.7nm,0.8s,baz=256,slow=7.4,SNR=5.9
KSRS LR LR 20 42 06.5
comp=Z,116nm,19.0s,baz=266,slow=38
BATI Baumata 69.02 106 P P 20 10 47.4 -1.1
comp=Z,7.3nm,0.6s,baz=265,slow=16,SNR=2.4
SOEI Soe 69.46 105 P P 20 10 50.8 -0.6
JNU Nakatsue 69.64 59 P P 20 10 51.3 -0.9
comp=Z,23nm,1.1s,baz=227,slow=1.6,SNR=3.1
TNTI Ternate 69.89 93 P P 20 10 53.4 -0.6
H01W3 Cape Leeuwin H 70.65 133 T T 21 27 55.9
baz=300,slow=75,SNR=18
H01W2 Cape Leeuwin H 70.65 133 T T 21 27 56.1
baz=300,slow=75,SNR=14
H01W1 Cape Leeuwin H 70.67 133 T T 21 27 57.1
baz=300,slow=75,SNR=15
USRK Ussuriysk Ar. 70.67 47 P P 20 10 57.4 -0.8
comp=Z,2.1nm,0.8s,baz=137,slow=40,SNR=2.4
USRK LR LR 20 44 12.7
comp=Z,158nm,18.1s,baz=254,slow=38
KLR Kul'dur 70.81 42⇓ *e*P **P 20 11 00.9 +2.0**
KLR pmax pmax
comp=Z,6.0nm,1.5s
YAK Yakutsk 71.31 28 P P 20 11 01.1 -0.6
comp=Z,3.0nm,0.3s,baz=0.4,slow=4.0,SNR=4.4
YAK Yakutsk 71.31 28⇓ *e*P **P 20 11 02.1 +0.4**
YAK pmax pmax
comp=Z,16nm,1.1s
YAK Yakutsk 71.31 28 P P 20 11 01.7 0.0
TIXI Tiksi 73.08 18⇓ *e*P **P 20 11 12.5 +0.4**
TIXI pmax pmax
comp=Z,49nm,2.5s
TIXI Tiksi 73.08 18 P P 20 11 11.3 -0.8
FITZ Fitzroy Crossi 73.23 113 P P 20 11 13.2 -0.7
comp=Z,1.8nm,0.7s,baz=25,slow=3.6,SNR=2.5
FITZ Fitzroy Crossi 73.23 113 P P 20 11 13.6 -0.3
baz=73,SNR=3.1
MJAR Matsushiro Arr 75.53 55 LR LR 20 47 11.5
comp=Z,179nm,19.3s,baz=310,slow=38
WRKA Warakurna 77.80 119 P P 20 11 40.0 -0.2
baz=78,SNR=3.7
MAW Mawson 79.15 178 LR LR 20 39 37.3
comp=Z,210nm,20.9s,baz=22,slow=30
SYO Syowa Base 81.49 187⇓ *e*pP pP 20 12 03.4 +2.2
WRA Warramunga Arr 81.63 112 P P 20 11 58.7 -2.3
comp=Z,1.3nm,0.6s,baz=295,slow=4.4,SNR=17
WRA Warramunga Arr 81.63 112 P P 20 12 00.4 -0.6
WRA Warramunga Arr 81.63 112 P P 20 12 00.4 -0.6
WRAB Tennant Creek 81.64 112⇓ *e*P **P 20 12 00.7 -0.4**
WRAB pmax pmax
comp=Z,9.0nm,1.4s
WRAB Tennant Creek 81.64 112 P P 20 11 59.8 -1.2
WRAB IAmb IAmb 20 12 24.8
comp=Z,26nm,1.6s
WB2 Warramunga Arr 81.64 112 P P 20 11 59.9 -1.2
baz=82
WB2 Warramunga Arr 81.64 112 P P 20 12 00.6 -0.5
SEY Seymchan 81.81 27 P P 20 12 01.1 -0.1
comp=Z,6.0nm,1.1s,baz=122,slow=2.2,SNR=4.7
SEY LR LR 20 50 48.4
comp=Z,125nm,19.7s,baz=310,slow=38
SEY Seymchan 81.81 27⇑ *e*P **P 20 12 03.3 +2.2**
WR0 Warramunga Arr 81.82 112 P P 20 12 01.0 -1.0
WR0 IAmb IAmb 20 12 25.5
comp=Z,20nm,1.7s
AS31 Alice Springs 82.26 116 P P 20 12 03.5 -0.9
ASAR Alice Springs 82.26 116 P P 20 12 03.4 -1.0
comp=Z,2.9nm,1.0s,baz=289,slow=5.0,SNR=12
ASAR LR LR 20 43 18.8
comp=Z,88nm,20.5s,baz=298,slow=32
ASAR Alice Springs 82.26 116 P P 20 12 02.3 -2.1
BILL Bilibino 86.03 21 *e*P **P 20 12 25.3 +2.6**
BILL *e* 20 15 46.9
BILL *e*PPP PPP 20 17 37.5
BILL pmax pmax
comp=Z,4.0nm,1.0s
NVL N'lazarevskaya 87.92 194 *e*P **P 20 12 34.3 +2.7**
NVL pmax pmax
comp=Z,7.0nm,0.8s
STKA Stephens Creek 90.94 122 LR LR 20 47 01.7
comp=Z,96nm,21.2s,baz=225,slow=31
PFO Pinyon Flats O 134.63 353⇑ *e*P **Pdif 20 15 54.6 -7.6**
PFO pmax pmax
comp=Z,11nm,1.5s

IDC **12** *20:00:05.8±1.0,31.54N±40.69W,h0km,mb3.9/14, mb1 4.1/14,mb1mx3.9/67,mbtmp3.9/14,MS3.9/2, Ms1 3.9/2,ms1mx3.2/47,Error ellipse: s-maj=30.1km s-min=19.2km az=175.0*
NEIC **12** *20:00:07.8±1.2,31.7N±0.1×40.75W±0.05,h10km±1km, mb4.7/18,Error ellipse: s-maj=23.8km s-min=4.6km az=168.0*
GCMT **12** *20:00:09.8±0.3,32.08N±0.04×40.55W±0.03,h17km±1km, MW4.9/96,Moment Tensor Solution. s15,c16; s96,c117; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.38±.19; Mθθ 1.19±.14; Mθφ 1.19±.11; Mrθ 1.74±.43; Mrφ 1.11±.09; Mφr=1.49±.33; Best double couple: M₀3.03100×10¹⁶ NP1:φs21.00000°,δ49.00000°,λ=-132.00000°. NP2: φs255.00000°,δ56.00000°,λ=-52.00000°. Principal axes: T 2.3130, Plg4.0000°, Azm319.0000°; N 1.4350, Plg30.0000°, Azm52.0000°; P -3.7480, Plg59.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 20:00:07.6±0.6,31.7N±0.1×40.71W±0.10,h10km,n48, σ0s82/42,mb4.3/23,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**35.85**	**353**	LR	LR	20 17 22.2	
	comp=Z,297nm,20.5s,baz=137,slow=29						
SDV	**Santo Domingo**	**35.86**	**237**	P	**P**	**20 07 08.7**	**+0.7**
FRB	**Frobisher Bay**	**36.56**	**340**	LR	LR	20 20 05.7	
	comp=Z,125nm,21.8s,baz=176,slow=33						
OXF	**Oxford**	**40.59**	**288**	P	**P**	**20 07 47.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**43.00**	**106**	P	**P**	**20 08 06.2**	**-1.2**
	1.4nm,0.9s,baz=303,slow=5.3,SNR=5.4						
TORD	**Torodi Ar. Bea**	**43.00**	**106**	P	**P**	**20 08 07.5**	**+0.1**
CLL	**Collm**	**43.66**	**47**	*e*P	**P**	**20 08 12.0**	**-0.3**
	comp=Z,9.0nm,1.2s						
GERES	**GERESS Array B**	**43.95**	**51**	P	**P**	**20 08 14.6**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=260,slow=11,SNR=1.9						
GERES	**GERESS Array B**	**43.95**	**51**	P	**P**	**20 08 14.4**	**-0.4**
MIAR	**Mount Ida**	**43.96**	**289**	P	**P**	**20 08 14.6**	**-0.4**
NOA	**NORSAR Array B**	**44.58**	**33**	P	**P**	**20 08 20.1**	**+0.5**
	comp=Z,3.5nm,1.2s,baz=257,slow=7.9,SNR=4.4						
SAML	**Samuel**	**45.76**	**212**	P	**P**	**20 08 29.9**	**+0.5**
SAML				IAmb	IAmb	20 08 30.7	
	comp=Z,6.1nm,1.1s						
H10N2	**ASCENSION HYDR**	**46.59**	**143**	T	T	20 58 03.2	
	baz=329,slow=75,SNR=265						
H10N3	**ASCENSION HYDR**	**46.60**	**143**	T	T	20 58 04.3	
	baz=329,slow=75,SNR=303						
H10N1	**ASCENSION HYDR**	**46.61**	**143**	T	T	20 58 04.6	
	baz=329,slow=75,SNR=322						
TXAR	**Lajitas Array**	**53.62**	**285**	P	**P**	**20 09 30.2**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=79,slow=4.8,SNR=2.0						
TX31	**Lajitas Ar. Si**	**53.62**	**285**	P	**P**	**20 09 29.7**	**+0.3**
TX31				IAmb	IAmb	20 09 45.8	
	comp=Z,9.8nm,1.4s						
AKASG	**Malin Array Be**	**53.90**	**48**	P	**P**	**20 09 30.9**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=273,slow=6.5,SNR=10.0						
LPAZ	**La Paz**	**54.46**	**213**	P	**P**	**20 09 35.7**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=22,slow=5.0,SNR=2.6						
PDAR	**Pinedale Array**	**54.55**	**303**	P	**P**	**20 09 35.5**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=56,slow=34,SNR=4.5						
PDAR	**Pinedale Array**	**54.55**	**303**	P	**P**	**20 09 36.3**	**+0.2**
GO01	**Chusmiza**	**57.89**	**212**	P	**P**	**20 10 00.3**	**-0.2**
GO01				IAmb	IAmb	20 10 01.2	

comp=Z,11nm,1.1s
BRTR Keskin Array B 59.34 60 P **P** **20 10 10.1 0.0**
comp=Z,1.2nm,0.8s,baz=316,slow=4.0,SNR=2.2
INK Inuvik 62.00 335 P **P** **20 10 28.2 +0.7**
comp=Z,2.4nm,1.0s,baz=76,slow=7.7,SNR=4.5
INK Inuvik 62.00 335 P **P** **20 10 28.1 +0.5**
INK IAmb IAmb 20 10 35.9
comp=Z,8.2nm,1.2s
NVAR Mina Array Bea 62.14 300 P **P** **20 10 27.9 -1.4**
comp=Z,0.3nm,0.5s,baz=66,slow=12,SNR=2.5
NVAR Mina Array Bea 62.14 300 P **P** **20 10 27.7 -1.6**
MOD Modoc Plateau 62.44 304 P **P** **20 10 31.3 +0.1**
MOD IAmb IAmb 20 10 39.6
comp=Z,11nm,1.4s
ORV Oroville 64.09 302 P **P** **20 10 42.2 +0.2**
ILAR Eielson Array 68.27 334 P **P** **20 11 09.9 +1.6**
comp=Z,1.4nm,1.0s,baz=46,slow=2.9,SNR=7.8
ILAR Eielson Array 68.27 334 P **P** **20 11 08.1 -0.2**
CCB Clear Creek Bu 68.68 334 P **P** **20 11 10.4 -0.5**
CCB IAmb IAmb 20 11 12.9
comp=Z,11nm,1.4s
ARU Arti 69.02 36 P **P** **20 11 13.1 0.0**
BWN Browne 69.54 334 P **P** **20 11 13.6 -2.7**
ABKAR Akbulak array 73.06 42 P **P** **20 11 38.5 +0.7**
ABKAR Akbulak array 73.06 42 P **P** **20 11 38.5 +0.7**
ABKAR IAmb IAmb 20 11 39.5
comp=Z,5.6nm,1.4s
H09W1 TRISTAN DA CUN 73.38 157 T T 21 31 38.0
SNR=48
BRVK Borovoye 76.58 35 P **P** **20 11 57.0 -1.0**
KURK Kurchatov 82.08 34 P **P** **20 12 28.2 0.0**
KURBB Kurchatov Arra 82.10 34 P **P** **20 12 28.6 +0.3**
comp=Z,1.3nm,0.8s,baz=315,slow=5.8,SNR=8.2
ZAA0 Zalesovo Array 82.62 29 P **P** **20 12 31.4 +0.5**
ZAA0 IAmb IAmb 20 12 32.5
comp=Z,4.2nm,1.0s
ZALV Zalesovo Beam 82.62 29 P **P** **20 12 32.2 +1.3**
comp=Z,1.6nm,0.6s,baz=289,slow=5.8,SNR=4.1
ZALV Zalesovo Beam 82.62 29 P **P** **20 12 29.6 -1.3**
UOSS Minazif 82.77 65 P **P** **20 12 32.5 +0.3**
UOSS IAmb IAmb 20 12 32.8
comp=Z,8.0nm,1.0s
MKAR Makanchi Array 86.53 35 P **P** **20 12 51.1 +0.2**
comp=Z,1.1nm,0.9s,baz=309,slow=4.6,SNR=3.3
WRA Warramunga Arr 167.50 22 PKPab **PKPab** **20 21 19.9 -0.1**
comp=Z,1.4nm,1.3s,baz=329,slow=1.5,SNR=2.9
ASAR Alice Springs 170.71 32 PKPab **PKPab** **20 21 34.5 +0.4**
comp=Z,1.4nm,1.0s,baz=341,slow=5.0,SNR=7.9
ASAR Alice Springs 170.71 32 **PKPab** **20 21 34.3 +0.1**

IDC ***12*** *20:03:10.9±1.8, 43.72N×105.46W, h0km, mb1 3.8/3, mb1mx3.4/57, mbtmp3.7/3, ML3.5/3, Error ellipse: s-maj=55.2km s-min=9.8km az=151.0*
NEIC ***12*** *20:03:10.6±1.6, 43.80N±0.03×105.11W±0.09, h0km±2km, ML3.4/61, Error ellipse: s-maj=10.7km s-min=5.7km az=86.0*
ISC 12 20:03:11.6±1.0, 43.78N±0.05×105.26W±0.06, h0km, n48, σ0 77/46, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RSSD	**Black Hills**	**0.95**	**68**	Pn		**Pg**	**20 03 30.4**	**+0.6**
K22A	**Casper**	**1.46**	**220**	Pn		**Pn**	**20 03 37.3**	**-2.0**
K22A				IAML			20 04 02.5	
	comp=E,321nm,0.3s							
PHWY	**Pilot Hill**	**2.48**	**183**			**Pn**	**20 03 53.5**	**0.0**
RWWY	**Rawlins**	**2.53**	**215**			**Pn**	**20 03 54.8**	**+0.6**
RWWY				IAML			20 04 31.5	
	comp=E,149nm,0.7s							
RWWY				IAML			20 04 31.7	
	comp=E,137nm,0.4s							
N23A	**Red Feather La**	**2.93**	**190**			**Pn**	**20 04 00.2**	**+0.6**
N23A				IAML			20 04 45.2	
	comp=N,114nm,0.4s							
LAO	**LASA Array**	**2.99**	**347**	Pn		**Pn**	**20 04 00.1**	**-0.2**
LAO				IAML			20 04 45.3	
	comp=N,107nm,0.3s							
LAO				IAML			20 04 45.6	
	comp=N,148nm,0.3s							
RLMT	**Red Lodge**	**3.17**	**296**			**Pn**	**20 04 02.9**	**0.0**
RLMT				IAML			20 04 53.8	
	comp=N,51nm,0.3s							
PD31	**Pinedale Array**	**3.30**	**254**			**Pn**	**20 04 04.4**	**-0.2**
PDAR	**Pinedale Array**	**3.30**	**254**	Pn		**Pn**	**20 04 04.3**	**-0.3**
	comp=N,4.1nm,0.3s,baz=77,slow=16,SNR=72							
PDAR				Lg		Lg	20 04 48.3	
	comp=N,12nm,0.3s,baz=75,slow=33,SNR=3.7							
PDAR	**Pinedale Array**	**3.30**	**254**			**Pn**	**20 04 04.2**	**-0.5**
BW06	**Boulder Array**	**3.30**	**254**			**Pn**	**20 04 04.4**	**-0.3**
YNE	**Yellowstone No**	**3.62**	**291**			**Pn**	**20 04 08.9**	**-0.2**
YMP	**Mirror Lake Pl**	**3.65**	**287**			**Pn**	**20 04 09.6**	**+0.1**
GCMT	**Greycliff**	**3.73**	**304**			**Pn**	**20 04 11.0**	**+0.5**
H17A	**Grant Village**	**3.88**	**281**			**Pn**	**20 04 13.1**	**+0.4**
H17A				IAML			20 06 43.3	
	comp=N,45nm,1.2s							
FLWY	**Flagg Ranch**	**3.94**	**276**			**Pn**	**20 04 13.8**	**+0.3**
FLWY				IAML			20 06 50.9	
	comp=N,48nm,2.1s							
FLWY				IAML			20 06 52.6	
	comp=N,34nm,1.4s							
ISCO	**Idaho Springs**	**3.98**	**184**			**Pn**	**20 04 14.8**	**+0.7**
ISCO				IAML			20 06 36.3	
	comp=N,32nm,0.5s							
SNOW	**Snow King Moun**	**4.00**	**267**			**Pn**	**20 04 14.9**	**+0.5**
SNOW				IAML			20 06 44.5	
	comp=N,49nm,1.3s							
SNOW				IAML			20 06 55.9	
	comp=N,46nm,1.3s							
YPP	**Pitchstone Pla**	**4.03**	**279**			**Pn**	**20 04 14.8**	**+0.1**
REDW	**Red Top Meadow**	**4.08**	**266**			**Pn**	**20 04 16.0**	**+0.5**
REDW				IAML			20 07 01.2	
	comp=N,51nm,1.6s							
IMW	**Indian Meadow**	**4.11**	**274**			**Pn**	**20 04 17.2**	**+1.4**
IMW				IAML			20 05 59.8	
	comp=N,51nm,0.5s							
IMW				IAML			20 06 55.7	
	comp=N,30nm,0.5s							
YHH	**Holmes Hill**	**4.14**	**286**	Pn		**Pn**	**20 04 17.0**	**+0.7**
TPAW	**Teton Pass**	**4.14**	**268**			**Pn**	**20 04 17.1**	**+0.8**
TPAW				IAML			20 06 59.6	
	comp=N,33nm,0.9s							
TPAW				IAML			20 07 04.6	
	comp=N,30nm,0.8s							
YMR	**Madison River**	**4.20**	**284**			**Pn**	**20 04 18.3**	**+1.3**
O20A	**White River Ci**	**4.26**	**212**			**Pn**	**20 04 18.9**	**+1.0**
O20A				IAML			20 06 54.7	
	comp=E,51nm,1.0s							
E28A	**Huff**	**4.27**	**48**			Pn	20 04 13.5	-4.3
AHID	**Auburn Hatcher**	**4.38**	**259**			**Pn**	**20 04 19.8**	**+0.3**
AHID				IAML			20 06 58.2	
	comp=N,42nm,1.0s							
AHID				IAML			20 07 03.4	
	comp=E,35nm,1.2s							
YHL	**Hebgen Lake**	**4.38**	**286**			**Pn**	**20 04 19.0**	**-0.6**
ECR	**Eagle Creek**	**4.51**	**263**			**Pn**	**20 04 21.4**	**+0.1**
RDMU	**Red Mountain**	**4.53**	**226**			**Pn**	**20 04 21.4**	**-0.2**
QLMT	**Earthquake Lak**	**4.55**	**285**			**Pn**	**20 04 20.9**	**-0.9**
DGMT	**Dagmar**	**4.75**	**9**			**Pn**	**20 04 23.5**	**-0.9**
SMCO	**Snowmass**	**4.77**	**196**			**Pb**	**20 04 36.1**	**-0.2**
SMCO				IAML			20 05 41.6	
	comp=E,18nm,0.3s							
SMCO				IAML			20 07 08.8	
	comp=E,34nm,0.9s							
BOZ	**Bozeman (W)**	**4.89**	**294**			**Pn**	**20 04 25.9**	**-0.6**
KSCO	**Kaye Shedlock'**	**5.16**	**157**			**Pn**	**20 04 28.2**	**-1.9**
TCUT	**Toone Canyon**	**5.27**	**242**			**Pn**	**20 04 31.1**	**-0.6**
EGMT	**Eagleton**	**5.28**	**325**	Pn		**Pn**	**20 04 31.4**	**-0.3**
HRY	**Holter Researc**	**5.49**	**305**			**Pn**	**20 04 35.1**	**+0.5**
LRM	**Limekiln Ridge**	**5.51**	**294**			**Pn**	**20 04 35.1**	**0.0**
PV22	**Blue Mesa, Par**	**5.88**	**208**			**Pn**	**20 04 41.1**	**+1.0**
PV07	**Paradox Valley**	**5.92**	**207**			**Pn**	**20 04 41.8**	**+1.2**
PV04	**Paradox Valley**	**6.04**	**208**			**Pn**	**20 04 42.7**	**+0.4**
SRU	**San Rafael Swe**	**6.11**	**222**			**Pn**	**20 04 43.0**	**-0.3**
PV16	**Nyswonger Mesa**	**6.12**	**208**			**Pn**	**20 04 43.4**	**0.0**
ELK	**Elko**	**8.00**	**251**	Pn		**Pn**	**20 05 10.3**	**+1.1**
	comp=E,0.6nm,0.3s,baz=83,slow=8.2,SNR=9.4							
ELK	**Elko**	**8.00**	**251**			**Pn**	**20 05 09.6**	**+0.4**
I10CA	**LAC DU BONNET**	**9.00**	**41**	*i*			21 00 45.0	
	baz=220,slow=331,SNR=9.4							
ULM	**Lac du Bonnet**	**9.11**	**41**	Pn		**Pn**	**20 05 22.9**	**-1.2**
	comp=E,1.3nm,0.3s,baz=232,slow=11,SNR=9.7							

BJI ***12*** *20:05:26.5±0.0, 31.51N×40.12W, h10km, mB5.5/5, mb5.3/5, Ms5.3/1*
IDC ***12*** *20:05:27.6±0.8, 31.53N×40.67W, h0km, mb4.2/21, mb1 4.4/21, mb1mx4.1/63, mbtmp4.2/21, MS4.0/16, Ms1 4.0/16, ms1mx3.7/49, Error ellipse: s-maj=24.4km s-min=15.0km az=173.0*
NEIC ***12*** *20:05:29.7±1.7, 31.7N±0.1×40.63W±0.06, h10km±1km, mb4.9/90, Error ellipse: s-maj=21.8km s-min=4.8km az=160.0*
GCMT ***12*** *20:05:31.7±0.3, 31.38N±0.03×40.56W±0.03, h28km±1km, MW5.0/83, Moment Tensor Solution. s14,c15; s83,c104; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-2.66±.25; Mθθ-0.33±.19; Mϕϕ2.99±.19; Mrθ-3.09±.31; Mθϕ0.66±.13; Mϕr-2.17±.20; Best double couple: M○4.73600×1016 NP1:ϕs168.00000°, δ27.00000°, λ-141.00000°. NP2: ϕs42.00000°, δ73.00000°, λ-68.00000°. Principal axes: T 4.4130, Plg25.0000°, Azm115.0000°; N 0.6480, Plg21.0000°, Azm215.0000°; P -5.0590, Plg57.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***12*** *20:05:38.1±0.0, 31.64N×39.51W, h33km, mb4.8*
ISC 12 20:05:29.8±0.5, 31.7N±0.1×40.64W±0.07, h10km, n197, σ0 96/185, mb4.8/80, MS4.1/16, 9C-2D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SJG	**San Juan**	**26.69**	**246**	LR		LR	20 19 14.6	
	comp=Z,77nm,21.6s,baz=81,slow=31							
SCHQ	**Schefferville**	**29.70**	**329**	LR		LR	20 22 36.4	
	comp=Z,829nm,19.3s,baz=120,slow=34							
ESDC	**Sonseca Array**	**30.70**	**65**	P		**P**	**20 11 44.8**	**0.0**
	1.0nm,0.7s,baz=276,slow=10.0,SNR=2.8							
ESDC				LR		LR	20 21 20.9	
	comp=Z,88nm,21.2s,baz=275,slow=31							
TZTN	**Tazewell**	**35.65**	**290**	P		**P**	**20 12 27.2**	**-0.7**
TZTN				IAmb		IAmb	20 12 34.3	
	comp=Z,24nm,1.4s							
SDV	**Santo Domingo**	**35.90**	**237**	P		**P**	**20 12 30.7**	**+0.2**
SDV				IAmb		IAmb	20 12 43.9	
	comp=Z,22nm,1.1s							
CLTN	**Cedars of Leba**	**37.93**	**289**	P		**P**	**20 12 47.6**	**+0.2**
BFO	**Black Forest**	**40.32**	**51**	P		**P**	**20 13 05.5**	**-1.8**
BFO				IAmb		IAmb	20 13 08.6	
	comp=Z,43nm,1.5s							
TUE	**Stuetta**	**40.86**	**54**	P		**P**	**20 13 11.8**	**-0.2**
TUE				IAmb		IAmb	20 13 15.8	
	comp=Z,40nm,1.5s							
DAVOX	**Davos/Dischmat**	**41.24**	**54**	P		**P**	**20 13 15.8**	**+0.7**
	comp=Z,3.9nm,0.8s,baz=284,slow=9.1,SNR=4.9							
DAVA	**Damuels**	**41.27**	**53**	*e*P		**P**	**20 13 16.2**	**+0.9**
	comp=Z,17nm,1.2s							
T42A	**Van Buren**	**41.61**	**292**	P		**P**	**20 13 18.6**	**+0.6**
DBIC	**Dimbokro**	**41.63**	**119**	LR		LR	20 28 10.6	
	comp=Z,410nm,19.6s,baz=310,slow=33							
TAM	**Tamanrasset**	**41.74**	**90**	P		**P**	**20 13 20.0**	**+0.6**
FETA	**Feichten**	**41.84**	**53**	*e*P		**P**	**20 13 20.4**	**+0.5**
	comp=Z,11nm,1.5s							
RETA	**Reutte**	**41.88**	**53**	*e*P		**P**	**20 13 21.0**	**+0.8**
	comp=Z,13nm,1.4s							
MOTA	**Moosalm**	**42.11**	**53**	*e*P		**P**	**20 13 22.8**	**+0.6**
	comp=Z,11nm,1.4s							
OSSC	**Osservatorio P**	**42.17**	**58**	P		**P**	**20 13 22.0**	**-0.5**
SQTA	**Sankt Quirin**	**42.17**	**53**	*e*P		**P**	**20 13 23.3**	**+0.7**
	comp=Z,12nm,1.0s							
GRF	**Grafenberg Arr**	**42.35**	**49**	*e*P		**P**	**20 13 23.5**	**-0.4**
	comp=Z,32nm,1.6s,baz=262,slow=7.9							
WATA	**Walderalm**	**42.43**	**53**	*e*P		**P**	**20 13 25.3**	**+0.6**
	comp=Z,11nm,1.0s							
CTI	**Castel Tesino**	**42.44**	**55**	P		**P**	**20 13 24.3**	**-0.6**
CTI				IAmb		IAmb	20 13 25.8	
	comp=Z,44nm,1.6s							
WTTA	**Wattenberg**	**42.47**	**53**	*e*P		**P**	**20 13 25.8**	**+0.7**
	comp=Z,12nm,1.0s							
FCAR	**Ozark Folk Cen**	**42.60**	**290**	P		**P**	**20 13 26.5**	**+0.3**
W41B	**Gary Mavity, V**	**42.83**	**289**	P		**P**	**20 13 30.0**	**+2.0**
TOA0	**Torodi Ar. Sit**	**42.94**	**106**	P		**P**	**20 13 29.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**42.94**	**106**	P		**P**	**20 13 28.8**	**-0.2**
	comp=Z,3nm,1.0s,baz=300,slow=7.4,SNR=12							
TORD	**Torodi Ar. Bea**	**42.94**	**106**	P		**P**	**20 13 28.9**	**-0.2**
UALR	**University of**	**42.98**	**289**	P		**P**	**20 13 29.5**	**+0.3**
UALR				IAmb		IAmb	20 13 35.6	
	comp=Z,22nm,1.0s							
ABTA	**Abfaltersbach**	**43.05**	**54**	P		**P**	**20 13 30.0**	**+0.3**
	comp=Z,9.9nm,0.9s							
JMIC	**Jan Mayen**	**43.12**	**15**	LR		LR	20 26 02.2	
	comp=Z,61nm,18.6s,baz=32,slow=29							
NKC	**Novy Kostel**	**43.19**	**49**	*e*P		**P**	**20 13 31.0**	**+0.3**
S39A	**Bolivar**	**43.27**	**293**	P		**P**	**20 13 32.6**	**+1.0**
KBA	**Kohlbreinsper**	**43.63**	**53**	*e*P		**P**	**20 13 33.5**	**-1.0**
	comp=Z,14nm,1.4s							
CLL	**Collm**	**43.63**	**47**	*i* P		**P**	**20 13 34.2**	**-0.1**
	comp=Z,47nm,1.8s							
CLL				*i*			20 13 41.6	
CLL	**Collm**	**43.63**	**47**	P		**P**	**20 13 33.6**	**-0.6**
CLL				IAmb		IAmb	20 13 35.4	
	comp=Z,23nm,1.3s							
MYKA	**Terra Mystica**	**43.83**	**54**	*e*P		**P**	**20 13 37.1**	**+1.2**
	comp=Z,17nm,1.5s							
KHC	**Kasperske Hory**	**43.85**	**50**	*e*P		**P**	**20 13 36.0**	**-0.1**
KHC				*ex*		x	20 13 42.6	
GEC2	**GERESS Array S**	**43.91**	**51**	P		**P**	**20 13 36.3**	**-0.4**
GEC2				IAmb		IAmb	20 13 49.6	
	comp=Z,35nm,2.0s							
GERES	**GERESS Array B**	**43.91**	**51**	P		**P**	**20 13 36.3**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=260,slow=6.6,SNR=8.1							
GERES	**GERESS Array B**	**43.91**	**51**	P		**P**	**20 13 36.0**	**-0.7**
BRG	**Berggiesshubel**	**44.19**	**48**	*e*P		**P**	**20 13 38.8**	**+0.1**
	comp=Z,36nm,1.6s							
OBKA	**Obir**	**44.45**	**54**	P		**P**	**20 13 41.0**	**-0.1**
	comp=Z,15nm,0.8s							
PRU	**Pruhonice**	**44.51**	**49**	*e*P		**P**	**20 13 42.0**	**+0.6**
PRU				*ex*		x	20 13 49.2	
ULM	**Lac du Bonnet**	**44.56**	**311**	LR		LR	20 30 16.9	
	comp=Z,145nm,21.2s,baz=88,slow=33							
NOA	**NORSAR Array B**	**44.56**	**33**	P		**P**	**20 13 41.7**	**0.0**
	comp=Z,0.4nm,0.7s,baz=132,slow=14,SNR=4.2							
NOA				LR		LR	20 28 39.3	
	comp=Z,82nm,20.1s,baz=115,slow=31							
SOKA	**Soboth**	**44.78**	**54**	*e*P		**P**	**20 13 42.8**	**-0.8**
	comp=Z,7.4nm,1.2s							
ARSA	**Arzberg**	**45.11**	**53**	*e*P		**P**	**20 13 45.7**	**-0.5**
	comp=Z,20nm,1.8s							
CONA	**Conrad Observa**	**45.34**	**52**	*e*P		**P**	**20 13 47.8**	**-0.2**
	comp=Z,10nm,2.0s							
X37A	**Clayton**	**45.46**	**289**	P		**P**	**20 13 51.7**	**+2.6**
X37A				IAmb		IAmb	20 13 55.9	
	comp=Z,15nm,0.9s							
UPC	**Upice**	**45.48**	**48**	*e*P		**P**	**20 13 49.4**	**+0.3**
CHVC	**Chvalec**	**45.51**	**48**	*e*P		**P**	**20 13 48.8**	**-0.5**
TUL1	**Leonard**	**45.53**	**291**			**P**	**20 13 50.9**	**+1.2**
TUL1				IAmb		IAmb	20 13 55.8	
	comp=Z,14nm,0.9s							
NATX	**Nacogdoches**	**45.55**	**285**	P		**P**	**20 13 52.5**	**+2.7**
DPC	**Dobruska-Polom**	**45.67**	**49**	*e*P		**P**	**20 13 50.7**	**+0.1**
DPC				*ex*		x	20 13 57.9	
KRUC	**Moravsky**	**45.70**	**50**	*e*P		**P**	**20 13 50.5**	**-0.3**
VRAC	**Vranov**	**45.83**	**50**	*e*P		**P**	**20 13 52.0**	**+0.2**
MODS	**Modra-Piesok**	**46.28**	**51**	*e*P		**P**	**20 13 55.9**	**+0.5**
MORC	**Moravsky Berou**	**46.45**	**49**	*e*P		**P**	**20 13 56.7**	**0.0**
MORC	**Moravsky Berou**	**46.45**	**49**	P		**P**	**20 13 56.8**	**0.0**
H10N2	**ASCENSION HYDR**	**46.54**	**143**	T		T	21 03 31.5	
	baz=329,slow=75,SNR=23							
H10N3	**ASCENSION HYDR**	**46.54**	**143**	T		T	21 03 32.9	
	baz=329,slow=75,SNR=66							
H10N1	**ASCENSION HYDR**	**46.56**	**143**	T		T	21 03 34.0	
	baz=329,slow=75,SNR=18							
VYHS	**Vyhne**	**47.32**	**51**	*e*P		**P**	**20 14 02.6**	**-0.9**
MTO3	**Montecristo**	**47.60**	**260**	P		**P**	**20 14 07.2**	**+0.8**
MTO3				IAmb		IAmb	20 14 16.6	
	comp=Z,18nm,1.3s							
PSZ	**Piszkesteto**	**48.05**	**52**	P		**P**	**20 14 07.8**	**-1.5**
PSZ				IAmb		IAmb	20 14 10.6	
	comp=Z,17nm,1.5s							
WMOK	**Wichita Mounta**	**48.17**	**290**	P		**P**	**20 14 09.2**	**-1.2**
WMOK				IAmb		IAmb	20 14 17.1	
	comp=Z,7.3nm,0.9s							
SIRR	**Siria**	**49.38**	**54**	⇑P		**P**	**20 14 20.1**	**+0.6**
BZS	**Buzias**	**49.42**	**55**	⇑P		**P**	**20 14 20.5**	**+0.8**
KOLS	**Kolonicke sedl**	**49.57**	**50**	*e*P		**P**	**20 14 21.5**	**+0.6**
KWP	**Kalwaria Pacla**	**49.80**	**50**	P		**P**	**20 14 22.4**	**-0.2**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JCT	**Junction City**	**50.13**	**285**	P		**P**	**20 14 23.9**	**-1.5**
JCT				IAmb		IAmb	20 14 32.3	
	comp=Z,16nm,1.1s							
ARR	**Arges**	**51.55**	**55**	⇓P		**P**	**20 14 34.4**	**-1.6**
MSTX	**Muleshoe**	**51.56**	**290**	P		**P**	**20 14 34.4**	**-1.8**
MSTX				IAmb		IAmb	20 14 42.6	
	comp=Z,11nm,0.9s							
ISAL	**Salakas**	**51.63**	**42**	*e*P		**P**	**20 14 36.6**	**+0.4**
BUR08	**Bucovina Ar. S**	**51.64**	**52**	P		**P**	**20 14 36.9**	**+0.3**
BUR08				IAmb		IAmb	20 14 38.3	
	comp=Z,19nm,1.2s							
BURAR	**Bucovina Array**	**51.65**	**52**	⇑P		**P**	**20 14 37.3**	**+0.6**
BURAR	**Bucovina Array**	**51.65**	**52**	P		**P**	**20 14 36.9**	**+0.2**
IIGN	**Ignalina**	**51.69**	**42**	*e*P		**P**	**20 14 37.2**	**+0.4**
IZAR	**Zarasai**	**51.69**	**42**	*e*P		**P**	**20 14 37.1**	**+0.4**
FINES	**FINESS Array B**	**51.70**	**34**	P		**P**	**20 14 36.7**	**0.0**
	comp=Z,4.1nm,0.8s,baz=251,slow=5.8,SNR=9.1							
FINES	**FINESS Array B**	**51.70**	**34**	P		**P**	**20 14 36.4**	**-0.2**
VOIR		**51.84**	**55**	⇑P		**P**	**20 14 37.8**	**-0.4**
IDID	**Didziasalis**	**51.98**	**42**	*e*P		**P**	**20 14 39.5**	**+0.5**
BIZ	**Bicaz**	**52.34**	**53**	⇑P		**P**	**20 14 42.5**	**+0.8**
MLR	**Muntele Rosu**	**52.45**	**55**	⇑P		**P**	**20 14 40.6**	**-2.2**
MLR	**Muntele Rosu**	**52.45**	**55**	P		**P**	**20 14 42.7**	**0.0**
TESR	**Tescani**	**52.77**	**53**	⇓P		P	20 14 38.5	-6.5
PLOR	**Plostina**	**52.88**	**54**	⇑P		**P**	20 14 39.2	-6.6
VRI	**Vrincioaia**	**52.93**	**54**	⇑P		**P**	**20 14 42.1**	**-4.1**
GDL2	**Guadalupe Moun**	**53.34**	**289**	P		**P**	**20 14 49.9**	**+0.3**
SORM	**Soroca**	**53.67**	**51**	⇑P		**P**	**20 14 49.8**	**-1.7**
TXAR	**Lajitas Array**	**53.68**	**285**	P		**P**	**20 14 52.0**	**0.0**
	comp=Z,1.0nm,0.8s,baz=93,slow=6.8,SNR=2.7							
TXAR				LR		LR	20 35 37.7	
	comp=Z,54nm,20.9s,baz=0.0,slow=34							
EGMT	**Eagleton**	**53.76**	**309**	P		**P**	**20 14 51.6**	**-0.8**
EGMT				IAmb		IAmb	20 14 59.3	
	comp=Z,13nm,0.9s							
AKASG	**Malin Array Be**	**53.87**	**48**	P		**P**	**20 14 51.4**	**-1.5**
	comp=Z,9.6nm,0.7s,baz=276,slow=6.3,SNR=28							
AKBB	**Malin Array Si**	**53.87**	**48**	P		**P**	**20 14 51.5**	**-1.5**
AKBB				IAmb		IAmb	20 14 53.1	
	comp=Z,16nm,1.1s							
GCMT	**Greycliff**	**54.08**	**306**	P		**P**	**20 14 54.8**	**+0.1**
YNE	**Yellowstone No**	**54.46**	**305**	P		**P**	**20 14 58.0**	**+0.4**
LPAZ	**La Paz**	**54.47**	**213**	P		**P**	**20 14 56.6**	**-1.8**
	comp=Z,2.5nm,0.9s,baz=19,slow=7.4,SNR=7.8							
LPAZ				LR		LR	20 36 27.2	
	comp=Z,97nm,21.2s,baz=21,slow=34							
LPAZ	**La Paz**	**54.47**	**213**	P		**P**	**20 14 58.0**	**-0.4**
BNM	**Barren Site**	**54.58**	**292**	P		**P**	**20 14 57.9**	**-0.8**
BW06	**Boulder Array**	**54.61**	**303**	P		**P**	**20 14 57.6**	**-1.2**
BW06				IAmb		IAmb	20 15 04.8	
	comp=Z,12nm,0.9s							
PD31	**Pinedale Array**	**54.61**	**303**	P		**P**	**20 14 58.1**	**-0.6**
PD31				IAmb		IAmb	20 15 04.8	
	comp=Z,11nm,0.9s							
PDAR	**Pinedale Array**	**54.61**	**303**	P		**P**	**20 14 57.7**	**-1.1**
	comp=Z,2.5nm,0.9s,baz=79,slow=9.2,SNR=10							
PDAR				LR		LR	20 36 31.1	
	comp=Z,437nm,20.0s,baz=109,slow=34							
PDAR	**Pinedale Array**	**54.61**	**303**	P		**P**	**20 14 57.6**	**-1.2**
YMP	**Mirror Lake Pl**	**54.62**	**305**	P		**P**	**20 14 58.6**	**-0.3**
YHH	**Holmes Hill**	**55.09**	**305**	P		**P**	**20 15 02.2**	**-0.1**
RDMU	**Red Mountain**	**55.12**	**300**	P		**P**	**20 15 01.4**	**-1.0**
YKA	**Yellowknife Ar**	**55.12**	**327**	LR		LR	20 37 28.2	
	comp=Z,331nm,20.8s,baz=0.0,slow=35							
YMR	**Madison River**	**55.20**	**305**	P		**P**	**20 15 03.4**	**+0.4**
YHL	**Hebgen Lake**	**55.31**	**305**	P		**P**	**20 15 04.0**	**+0.1**
YHB	**Horse Butte**	**55.34**	**305**	P		**P**	**20 15 04.5**	**+0.5**
IMW	**Indian Meadow**	**55.34**	**304**	P		**P**	**20 15 03.8**	**-0.4**
IMW				IAmb		IAmb	20 15 10.8	
	comp=Z,9.4nm,0.9s							
REDW	**Red Top Meadow**	**55.40**	**304**	P		**P**	**20 15 04.1**	**-0.4**
REDW				IAmb		IAmb	20 15 10.9	
	comp=Z,13nm,1.2s							
TPAW	**Teton Pass**	**55.44**	**304**	P		**P**	**20 15 04.2**	**-0.7**
TPAW				IAmb		IAmb	20 15 11.5	
	comp=Z,13nm,1.1s							
QLMT	**Earthquake Lak**	**55.49**	**305**	P		**P**	**20 15 04.9**	**-0.2**
AHID	**Auburn Hatcher**	**55.71**	**303**	P		**P**	**20 15 06.4**	**-0.3**
AHID				IAmb		IAmb	20 15 13.0	
	comp=Z,26nm,1.6s							
DLMT	**Dillon**	**56.18**	**306**	P		**P**	**20 15 09.

GYA0B	ALIBECK ARRAY	77.47	53	P	P	20 17 25.8	+0.1
BRZS	Berezniki	79.59	37	eP	P	20 17 35.4	-1.6
	baz=37						
KMBO	Kilima Mbogo	80.29	97	LR	LR	20 52 25.4	
	comp=Z,206nm,20.3s,baz=276,slow=35						
KMBO	Kilima Mbogo	80.29	97	P	P	20 17 43.7	+2.0
LSZ	Lusaka	80.76	114	P	P	20 17 45.0	+1.1
KURK	Kurchatov	82.07	34	P	P	20 17 49.9	-0.3
KURK				IAmb	IAmb	20 17 52.3	
	comp=Z,18nm,1.4s						
KURBB	Kurchatov Arra	82.09	34	P	P	20 17 50.5	+0.2
	baz=315,slow=6.1						
HRA	Herat	82.17	54	P	P	20 17 51.4	0.0
ZAA0	Zalesovo Array	82.61	29	P	P	20 17 53.1	+0.1
ZALV	Zalesovo Beam	82.61	29	P	P	20 17 53.1	+0.1
	comp=Z,4.1nm,0.9s,baz=304,slow=8.0,SNR=12						
ZALV	Zalesovo Beam	82.61	29	P	P	20 17 52.2	-0.8
UOSS	Minazif	82.72	65	P	P	20 17 53.7	-0.5
SEM	Semipalatinsk	83.05	34	eP	P	20 17 54.7	-0.9
	comp=Z,2.1nm,1.2s,baz=34						
DZA	Taraz	83.14	43	eP	P	20 17 56.0	0.0
	baz=43						
BTLS	Baital	83.36	40	eP	P	20 17 56.4	-0.7
	comp=Z,2.3nm,1.5s,baz=40						
CHGR	Chuyangaron	84.34	48	P	P	20 18 02.7	+0.3
SGDS	Sogindy	84.69	41	eP	P	20 18 03.1	-0.9
	baz=42						
GAR	Garm	84.86	47	P	P	20 18 04.8	-0.3
FRU1	Bishkek	85.09	42	P	P	20 18 05.4	-0.6
FRU1				IAmb	IAmb	20 18 07.3	
	comp=Z,13nm,1.4s						
KUU	Kurty	85.36	40	eP	P	20 18 06.8	-0.5
	comp=Z,6.7nm,1.8s,baz=40						
TDK	Taldyqorghan	85.75	38	eP	P	20 18 08.2	-1.0
	comp=Z,7.4nm,1.7s,baz=38						
AAA	Alma-Ata	86.12	41	eP	P	20 18 10.8	-0.4
	baz=41						
YAK	Yakutsk	86.33	5	P	P	20 18 11.6	-0.1
	comp=Z,3.0nm,0.5s,baz=194,slow=3.8,SNR=2.5						
YAK	Yakutsk	86.33	5	P	P	20 18 10.5	-1.1
YAK				IAmb	IAmb	20 18 12.2	
	comp=Z,10.0nm,0.9s						
MKAR	Makanchi Array	86.52	35	P	P	20 18 12.9	-0.1
	comp=Z,2.0nm,0.9s,baz=306,slow=4.1,SNR=8.7						
MKAR	Makanchi Array	86.52	35	P	P	20 18 12.6	-0.4
BOSA	Boshof	86.71	126	LR	LR	20 51 09.4	
	comp=Z,92nm,20.7s,baz=323,slow=32						
KPKS	Kokpek	86.92	39	eP	P	20 18 13.9	-1.2
	comp=Z,6.7nm,2.1s,baz=40						
SHLS	Shalkode	87.55	39	eP	P	20 18 18.6	+0.4
	comp=Z,5.3nm,1.2s,baz=39						
WMQ	Urumqi	91.30	35	eP	P	20 18 37.1	+1.4
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.9s						
SONM	Songino Array	95.53	22	P	P	20 18 56.2	+1.1
	comp=Z,0.2nm,0.4s,baz=329,slow=4.7,SNR=1.9						
WRA	Warramunga Arr	167.50	22	PKP	PKPdf	20 25 34.8	-1.9
	comp=Z,0.7nm,1.1s,baz=4.6,slow=2.7,SNR=3.9						
WRA				PKPab	PKPab	20 26 41.8	-0.3
	comp=Z,0.6nm,0.9s,baz=324,slow=2.7,SNR=3.5						
ASAR	Alice Springs	170.70	33	PKP	PKPdf	20 25 37.8	-0.9
	comp=Z,1.0nm,0.9s,baz=240,slow=1.3,SNR=7.5						
ASAR				PKPab	PKPab	20 26 56.0	-0.2
	comp=Z,2.8nm,0.9s,baz=333,slow=4.5,SNR=18						
ASAR	Alice Springs	170.70	33		PKPdf	20 25 37.3	-1.3
ASAR				PKPab	PKPab	20 26 55.3	-1.0

IDC 12 20:12:16.4±5.8, 14°34S×166°30E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/42, mbtmp3.6/5, ML3.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/20, Error ellipse: s-maj=113.8km s-min=40.2km az=36.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.69	179	Pn	Pn	20 14 10.1	+0.3
	0.4nm,0.3s,baz=305,slow=16,SNR=2.3						
DZM				Sn	Sn	20 15 33.3	-4.5
	baz=288,slow=22,SNR=1.2						
HNR	Honiara	7.90	307	LR	LR	20 16 55.4	
	comp=Z,53nm,19.5s,baz=236,slow=35						
STKA	Stephens Creek	28.54	228	P	P	20 18 13.0	-0.9
	1.9nm,1.0s,baz=68,slow=11,SNR=2.8						
WRA	Warramunga Arr	31.01	255	P	P	20 18 36.2	+0.2
	0.5nm,0.9s,baz=86,slow=9.6,SNR=3.1						
ASAR	Alice Springs	31.93	248	P	P	20 18 44.7	+0.5
	0.3nm,0.7s,baz=72,slow=9.7,SNR=5.2						
VNDA	Vanda	63.23	181	P	P	20 22 46.1	-0.1
	0.6nm,0.7s,baz=12,slow=6.3,SNR=5.0						

ANF 12 20:14:05.5±0.6, 43.91N×128.78W, h0km, ML4.0/14, Error ellipse: s-maj=5.0km s-min=3.9km az=42.0
NEIC 12 20:14:06.0±2.1, 44.03N±0.08×129.0W±0.1, h10km±1km, mb4.3/78, Error ellipse: s-maj=17.2km s-min=9.0km az=229.0
IDC 12 20:14:05.3±1.1, 44.13N×128.82W, h0km, mb3.8/10, mb1 4.1/18, mb1mx3.9/65, mbtmp3.9/18, ML3.6/8, MS3.5/7, Ms1 3.5/7, ms1mx3.2/51, Error ellipse: s-maj=26.2km s-min=12.1km az=45.0

ISC 12 20:14:06.5±0.7, 44.00N±0.06×128.96W±0.07, h15km, n249, σ1§61/252, mb4.3/19, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	3.55	107		Pn	20 14 58.8	-2.3
I02D	Swisshome	3.69	87	P	Pn	20 15 01.2	-1.8
	baz=271,SNR=76						
I02D				S	Sn	20 15 44.3	-1.8
	baz=271						
J01E	Myrtle Point	3.75	101	P	Pn	20 15 01.8	-2.0
	baz=286,SNR=11						
J01E				S	Sn	20 15 45.8	-1.8
	baz=286						
KBO	Bosley Butte	3.90	116		Pn	20 15 03.9	-2.0
I03D	Drain, OR	4.07	92	P	Pn	20 15 06.6	-1.6
	baz=277						
I03D				S	Sn	20 15 55.2	-0.4
	baz=277						
K02D	Willamette Mer	4.08	107	P	Pn	20 15 06.0	-2.4
	baz=292,SNR=43						
K02D				S	Sn	20 15 54.3	-1.5
	baz=292						
COR	Corvallis	4.11	80		Pn	20 15 07.2	-1.5
G03D	McMinnville, O	4.25	71	P	Pn	20 15 09.8	-0.8
	baz=256,SNR=28						
G03D				S	Sn	20 16 00.1	+0.2
	baz=256						
L02E	Cave Junction	4.33	113	P	Pn	20 15 10.3	-1.5
	baz=298,SNR=9.9						
L02E				S	Sn	20 16 00.9	-1.2
	baz=298						
KRMB	Red Mountain	4.47	122	Pn	Pn	20 15 12.2	-1.6
H04D	Lebanon	4.50	81	P	Pn	20 15 13.2	-0.9
	baz=266,SNR=28						
H04D				S	Sn	20 16 06.5	+0.3
	baz=266						
E03A	Lebam	4.58	54	Pn	Pn	20 15 14.7	-0.5
HUMO	Hull Mountain	4.60	106		Pn	20 15 14.0	-1.5
F04D	Rainier, OR	4.71	62	P	Pn	20 15 16.8	0.0
	baz=246						
F04D				S	Sn	20 16 12.2	+1.0
	baz=246						
I04A	Tendick Farm,	4.74	90	P	Pn	20 15 16.2	-1.2
	baz=275,SNR=58						
I04A				S	Sn	20 16 10.7	-1.4
	baz=275						
JCC	Jacoby Creek,	4.84	129	Pn	Pn	20 15 18.7	0.0
H04A	Detroit Lake	4.91	80		Pn	20 15 19.6	-0.1
NLWA	Neilton Lookou	4.92	45		Pn	20 15 19.5	-0.4
KHMM	Horse Mountain	4.97	127	Pn	Pn	20 15 20.9	+0.2
F04A	Amboy	5.03	65	Pn	Pn	20 15 20.1	-1.2
J04D	Umpqua Nationa	5.03	96	P	Pn	20 15 21.0	-0.6
	baz=282,SNR=45						
J04D				S	Sn	20 16 19.3	-0.3
	baz=282						
YBH	Yreka Blue Hor	5.12	114	Pn	Pn	20 15 22.9	+0.2
	2.4nm,0.3s,baz=314,slow=11,SNR=26						
YBH				Sn	Sn	20 16 22.6	+1.0
	0.5nm,0.3s,baz=213,slow=9.5,SNR=3.1						
YBH				LR	LR	20 16 31.5	
	comp=Z,44nm,19.7s,baz=298,slow=29						
YBH	Yreka Blue Hor	5.12	114		Pn	20 15 22.3	-0.4
E04D	Cinebar	5.19	58	P	Pn	20 15 24.0	+0.5
	baz=243						
L04D	Klamath Falls	5.19	108	P	Pn	20 15 23.3	-0.4
	baz=293,SNR=19						
L04D				S	Sn	20 16 22.6	-0.7
	baz=293						
M02C	Callahan	5.20	118	P	Pn	20 15 23.4	-0.4
	baz=303						
D03D	Eldon	5.42	47	P	Pn	20 15 26.8	+0.1
	baz=231,SNR=9.8						
KMRM	Mail Ridge	5.43	132	Pn	Pn	20 15 27.9	+1.0
K04D	Chiloquin, OR	5.44	102	P	Pn	20 15 25.0	-2.1
	baz=288						
I05D	Terrebonne, OR	5.49	84	P	Pn	20 15 26.6	-1.2
	baz=270						
G05D	Wamic, OR	5.60	75	P	Pn	20 15 28.7	-0.5
	baz=260,SNR=28						
G05D				S	Sn	20 16 33.7	+0.5
	baz=260						
J05D	Fort Rock, OR	5.65	95	P	Pn	20 15 29.3	-0.8
	baz=280,SNR=23						
PINE	Pine Mountain	5.80	89		Pn	20 15 31.6	-0.6
D05A	Enumclaw	5.84	54		Pn	20 15 33.2	+0.8
WDC	Whiskeytown Da	5.86	123		Pn	20 15 35.0	+2.2
KCPM	Cahto Peak	5.89	135		Pn	20 15 33.9	+0.6
PGC	Sidney	6.02	37	Pn	Pn	20 15 34.1	-0.7
K05A	Summer Lake	6.02	99		Pn	20 15 35.3	+0.1
B05A	Bryant	6.40	46	P	Pn	20 15 40.6	+0.5
	baz=230,SNR=10						
B05A				S	Sn	20 16 54.6	+1.7
	baz=230						
A04D	Lummi Island	6.41	40	P	Pn	20 15 41.1	+0.9
	baz=224						
LTY	Liberty	6.67	58		Pn	20 15 43.4	-0.5
HOPS	Hopland Field	6.67	137	Pn	Pn	20 15 44.2	+0.2
F07A	Phinny Hill Vi	6.69	70		Pn	20 15 43.7	-0.3
MOD	Modoc Plateau	6.69	105		Pn	20 15 43.9	-0.5
I07A	Izee	6.82	86		Pn	20 15 44.9	-1.1
B06A	Marblemount	6.88	46		Pn	20 15 43.1	-3.5
E07A	Sunnyside	6.92	65		Pn	20 15 46.5	-0.8
GDXM	Geysers	6.96	136		Pn	20 15 49.2	+1.3
HAWA	Hanford	7.08	67		Pn	20 15 46.5	-2.9
ORV	Oroville	7.11	126	Pn	Pn	20 15 51.5	+1.3
G08A	Pilot Rock	7.25	76	Pn	Pn	20 15 51.5	+0.5
E08A	Dider Farm, El	7.42	67	Pn	Pn	20 15 53.2	-0.9
MCCM	Marconi Confer	7.43	140	Pn	Pn	20 15 55.0	+0.6
BEKR	Beckworth	7.63	120		Pn	20 16 00.1	+2.9
D08A	Wollman Farm,	7.69	63	Pn	Pn	20 15 57.8	0.0
AFDM	Forest Hills D	7.84	127		Pn	20 16 01.1	+1.2
B08A	Colville Reser	7.98	54	Pn	Pn	20 15 60.0	-1.9
E09A	Wood Farm, Sta	8.04	68		Pn	20 16 04.1	+1.5
BBB	Bella Bella	8.21	4	Pn	Pn	20 16 06.6	+1.7
	0.4nm,0.3s,baz=188,slow=7.5,SNR=6.3						
RUBR	Rubicon Trail	8.25	124	Pn	Pn	20 16 02.1	-3.6
C09A	Chrisman Ranch	8.37	59	Pn	Pn	20 16 06.9	-0.3
BMO	Blue Mountains	8.39	80		Pn	20 16 08.2	+0.6
F10A	Beach Ranch, E	8.55	73		Pn	20 16 09.3	-0.4
PNTR	Pine Nut	8.56	122		Pn	20 16 11.9	+1.9
CMB	Columbia Colle	8.80	130		Pn	20 16 15.9	+2.7
WAKR	Walker	9.03	124		Pn	20 16 19.9	+3.4
NEW	Newport	9.26	58	Pn	Pn	20 16 19.7	+0.2
	1.0nm,0.3s,baz=236,slow=6.6,SNR=7.4						
NEW				LR	LR	20 19 45.8	
	comp=Z,445nm,21.7s,baz=249,slow=37						
NEW	Newport	9.26	58	P	Pn	20 16 19.4	0.0
	baz=247						
NEW	Newport	9.26	58	Pn	Pn	20 16 19.4	0.0
PLID	Pearl Lake	9.32	79	Pn	Pn	20 16 21.8	+1.3
RYN	Ryan	9.51	121		Pn	20 16 25.3	+2.3
KVN	Kaiserville	9.53	118		Pn	20 16 27.6	+4.3
MFID	Camas Ranch	9.53	89		Pn	20 16 24.9	+1.7
LHV	Little Huntoon	9.75	122		Pn	20 16 29.7	+3.5
NVAR	Mina Array Bea	9.77	121	Pn	Pn	20 16 29.7	+3.1
	0.4nm,0.3s,baz=298,slow=14,SNR=20						
NVAR				LR	LR	20 19 06.0	
	comp=Z,52nm,20.8s,baz=306,slow=31						
NVAR	Mina Array Bea	9.77	121	Pn	Pn	20 16 29.5	+3.0
MDPB	Devils Postpil	9.82	127		Pn	20 16 29.5	+2.1
NV11	Mina Array Sit	9.86	121		Pn	20 16 30.2	+2.5
OMMB	Old Mammoth Mi	9.88	127	Pn	Pn	20 16 32.5	+4.3
HLID	Hailey	10.53	87		Pn	20 16 40.0	+2.9
TPH	Tonopah	10.66	120	Pn	Pn	20 16 43.9	+5.2
ELK	Elko	10.66	103	Pn	Pn	20 16 42.0	+3.2
	0.1nm,0.3s,baz=294,slow=10,SNR=20						
ELK				LR	LR	20 21 01.1	
	comp=Z,188nm,18.5s,baz=290,slow=39						
ELK	Elko	10.66	103	Pn	Pn	20 16 42.3	+3.4
JTMT	Jette	10.90	65		Pn	20 16 41.4	-0.6
MSO	Missoula	10.93	70	P	Pn	20 16 42.1	-0.3
	baz=260						
MSO	Missoula	10.93	70	Pn	Pn	20 16 43.0	+0.6
BCYI	Bear Canyon	11.19	83		Pn	20 16 48.4	+2.4
WALA	Waterton Lakes	11.53	59	Pn	Pn	20 16 51.0	+0.4
R11A	Troy Canyon, C	11.55	115	Pn	Pn	20 16 49.6	-1.3
MCMT	McKenzie Canyo	11.56	80		Pn	20 16 52.0	+0.9
ISA	Isabella, Lake	11.58	132	Pn	Pn	20 16 53.6	+2.3
DLMT	Dillon	11.73	78		Pn	20 16 54.7	+2.3
LRM	Limekiln Ridge	11.85	75	Pn	Pn	20 16 55.9	+0.8
TPNV	Topopah Spring	11.96	122		Pn	20 17 00.6	+4.0
SPR3	Spring Creek 3	12.05	109	Pn	Pn	20 16 58.8	+0.9
HRY	Holter Researc	12.35	71	Pn	Pn	20 17 02.9	+1.0
BOZ	Bozeman (W)	12.42	77	P	Pn	20 17 03.3	+0.6
	baz=269						
BOZ	Bozeman (W)	12.42	77		Pn	20 17 04.6	+1.8
EDW2	Edwards Air Fo	12.43	133	P	Pn	20 17 03.2	+0.3
	baz=321						
PRN	Pahroc Range	12.43	117		Pn	20 17 07.3	+4.3
QLMT	Earthquake Lak	12.57	80		Pn	20 17 06.9	+2.0
DUG	Dugway, Tooele	12.58	102		Pn	20 17 05.3	+0.3
YHB	Horse Butte	12.74	80		Pn	20 17 05.1	-2.1
YHL	Hebgen Lake	12.74	80		Pn	20 17 09.3	+1.9
GSC	Goldstone, Bar	12.76	129	Pn	Pn	20 17 10.9	+3.5
ECR	Eagle Creek	12.81	88		Pn	20 17 13.1	+5.0
YMR	Madison River	12.91	81		Pn	20 17 11.4	+1.9
SHPR	Sheep Range	12.92	121		Pn	20 17 10.3	+0.7
YHH	Holmes Hill	12.98	80	Pn	Pn	20 17 12.7	+2.1
IMW	Indian Meadow	12.99	84		Pn	20 17 14.3	+3.6
TPAW	Teton Pass	13.04	86		Pn	20 17 13.6	+2.3
YPP	Pitchstone Pla	13.05	82		Pn	20 17 14.4	+2.9
AHID	Auburn Hatcher	13.06	89	Pn	Pn	20 17 13.1	+1.6
YNR	Norris Junctio	13.11	80		Pn	20 17 12.4	+0.1
REDW	Red Top Meadow	13.13	86		Pn	20 17 15.6	+3.0
FLWY	Flagg Ranch	13.14	83		Pn	20 17 16.9	+4.2
SNOW	Snow King Moun	13.18	86	Pn	Pn	20 17 11.1	-2.2
H17A	Grant Village	13.20	82		Pn	20 17 16.6	+3.0
YUF	Upper Falls	13.23	80	Pn	Pn	20 17 15.1	+1.2
TCUT	Toone Canyon	13.26	96	Pn	Pn	20 17 14.3	0.0
LKWY	Lake	13.32	81	Pn	Pn	20 17 14.4	-0.7
JLU	Jordanelle	13.40	99	Pn	Pn	20 17 16.1	-0.1
YMP	Mirror Lake Pl	13.48	80	Pn	Pn	20 17 16.9	-0.5
TCRU	Three Creeks R	13.53	108	Pn	Pn	20 17 21.9	+3.9
YNE	Yellowstone No	13.57	79	Pn	Pn	20 17 21.8	+3.2
MVU	Marysvale	13.74	108		Pn	20 17 21.8	+0.9
MSU	Marysvale	13.76	108		Pn	20 17 23.9	+2.7
GCMT	Greycliff	13.80	76		Pn	20 17 23.4	+1.8
LCMT	Little Creek M	13.84	115	Pn	Pn	20 17 22.7	+0.5
EGMT	Eagleton	13.94	66	Pn	Pn	20 17 23.3	-0.1
MTPU	Mount Pierson	13.99	109		Pn	20 17 25.8	+1.4
TMUT	Trail Mountain	14.08	103		Pn	20 17 25.7	+0.1
RLMT	Red Lodge	14.09	79		Pn	20 17 25.2	-0.4
KNB	Kanab	14.11	114	Pn	Pn	20 17 28.2	+2.3
BW06	Boulder Array	14.17	88		Pn	20 17 29.4	+2.7
PD31	Pinedale Array	14.17	88		Pn	20 17 27.9	+1.1
PDAR	Pinedale Array	14.17	88	Pn	Pn	20 17 29.7	+3.0
	0.1nm,0.3s,baz=285,slow=12,SNR=10						
PDAR	Pinedale Array	14.17	88	Pn		20 17 28.7	+2.0
PKCU	Pink Cliffs	14.21	112		Pn	20 17 27.8	+0.3
PFO	Pinyon Flats O	14.22	133	Pn	Pn	20 17 29.9	+2.6
	0.2nm,0.3s,baz=314,slow=19,SNR=4.6						
PFO				LR	LR	20 22 23.1	
	comp=Z,278nm,18.1s,baz=316,slow=35						
PFO	Pinyon Flats O	14.22	133	Pn	Pn	20 17 29.7	+2.4
Q16A	Castle Valley	14.27	105		Pn	20 17 29.7	+1.6
P17A	Butcher Ranch,	14.33	102		Pn	20 17 29.9	+1.0
DLBC	Dease Lake	14.47	358	Pn	Pn	20 17 31.2	+0.5
	0.0nm,0.3s,baz=164,slow=20,SNR=2.2						
DLBC				LR	LR	20 22 15.4	
	comp=Z,259nm,20.9s,baz=196,slow=34						
W13A	Hualapai Mount	14.62	122		Pn	20 17 33.2	+0.3
SRU	San Rafael Swe	14.64	103	P	P	20 17 41.2	+1.8
RDMU	Red Mountain	14.76	97		Pn	20 17 32.6	-2.1
U15A	North Rim	14.80	115	Pn	Pn	20 17 37.2	+1.8
TKX	Tecate	14.96	136	Pn	Pn	20 17 37.8	+0.5
GLA	Glamis	15.53	130	Pn	Pn	20 17 46.7	+1.9
GLA				IAmb	IAmb	20 17 56.2	
	comp=Z,26nm,1.4s						
ESJX	Sierra Juarez	15.74	135	P	Pn	20 17 49.1	+1.4
ESJX				IAmb	IAmb	20 17 50.2	
	comp=Z,19nm,1.2s						
O20A	White River Ci	15.86	97		Pn	20 17 48.0	-1.3
O20A				IAmb	IAmb	20 17 58.8	
	comp=Z,57nm,1.4s						
WUAZ	Wupatki	15.94	116	Pn	Pn	20 17 51.9	+1.6
WUAZ				IAmb	IAmb	20 18 01.7	
	comp=Z,33nm,1.1s						
Y14A	Wickenburg	15.94	124		Pn	20 17 50.3	+0.1
PV23	Carpenter Ridg	15.99	103		Pn	20 17 50.4	-0.6
PV23				IAmb	IAmb	20 18 02.5	
	comp=Z,19nm,0.9s						
PV10	Paradox Valley	16.00	104	Pn	Pn	20 17 51.0	-0.2
PV10				IAmb	IAmb	20 18 10.5	
	comp=Z,20nm,1.1s						
PV14	Lion Creek, Pa	16.02	104		P	20 17 53.7	-1.1
PV14				IAmb	IAmb	20 18 09.2	
	comp=Z,25nm,1.1s						
PV20	West Nyswonger	16.07	104	P	P	20 17 54.3	-1.1
PV20				IAmb	IAmb	20 18 05.7	
	comp=Z,14nm,0.9s						
PV19	Morning Glory	16.07	104		Pn	20 17 52.2	+0.1
PV04	Paradox Valley	16.09	103		Pn	20 17 51.5	-0.7
PV04				IAmb	IAmb	20 18 05.2	
	comp=Z,22nm,1.1s						
PV17	East Wray Mesa	16.10	104	Pn	Pn	20 17 53.7	+1.2
PV17				IAmb	IAmb	20 18 04.8	
	comp=Z,22nm,1.1s						
PV22	Blue Mesa, Par	16.11	103	P	P	20 17 54.4	-1.4
PV22				IAmb	IAmb	20 18 06.0	
	comp=Z,33nm,1.2s						
RWWY	Rawlins	16.12	91		Pn	20 17 52.8	+0.1
RWWY				IAmb	IAmb	20 18 00.6	
	comp=Z,19nm,1.1s						
PV16	Nyswonger Mesa	16.12	104	P	P	20 17 54.4	-1.5
PV18	Skein Mesa, Pa	16.15	104		P	20 17 55.2	-1.1
PV11	David Mesa, Pa	16.15	104	Pn	Pn	20 17 53.3	+0.2
PV11				IAmb	IAmb	20 18 05.7	
	comp=Z,14nm,0.8s						
PV03	Paradox Valley	16.19	104	P	P	20 17 55.6	-1.1
PV12	Saucer Basin,	16.20	104		Pn	20 17 52.5	-1.1
PV12				IAmb	IAmb	20 18 06.3	
	comp=Z,26nm,1.3s						
LAO	LASA Array	16.20	72	Pn	Pn	20 17 54.2	+0.7
LAO				IAmb	IAmb	20 18 00.8	
	comp=Z,20nm,1.1s						
PV07	Paradox Valley	16.25	103		P	20 17 56.3	-1.1
PV07				IAmb	IAmb	20 17 58.4	
	comp=Z,19nm,1.1s						
PV13	Radium Mtn., P	16.25	104		Pn	20 17 54.3	-0.1
PV02	Paradox Valley	16.29	104		Pn	20 17 55.4	+0.5
K22A	Casper	16.38	87	P	P	20 17 58.0	-0.7
K22A				IAmb	IAmb	20 18 07.3	
	comp=Z,28nm,1.5s						
PV15	Paradox Valley	16.41	103	P	Pn	20 17 57.1	+0.7
PV01	Paradox Valley	16.44	104		Pn	20 17 57.7	+0.9
PV01				IAmb	IAmb	20 18 09.5	
	comp=Z,26nm,1.1s						
X16A	Lo Mia Camp, P	16.58	119		Pn	20 17 59.1	+0.6
SPX	San Pedro Mart	16.76	136	P	Pn	20 18 02.7	+1.7
SPX				IAmb	IAmb	20 18 07.9	
	comp=Z,24nm,1.3s						
MVCO	Mesa Verde	16.93	107		P	20 18 04.7	-0.3
MVCO				IAmb	IAmb	20 18 10.7	
	comp=Z,20nm,1.1s						
SMCO	Snowmass	17.12	99		P	20 18 06.8	-0.4
BCPM	Bancas Point	17.24	342	Pn	Pn	20 18 03.9	-2.6
BCPM				IAmb	IAmb	20 18 05.6	
	comp=Z,38nm,1.5s						
W18A	Petrified Fore	17.25	114		P	20 18 09.0	+0.6
W18A				IAmb	IAmb	20 18 21.1	
	comp=Z,44nm,1.1s						
N23A	Red Feather La	17.26	92	P	Pn	20 18 07.6	+0.5
N23A				IAmb	IAmb	20 18 30.7	
	comp=Z,24nm,1.2s						
PHWY	Pilot Hill	17.49	91	P	Pn	20 18 09.7	-0.3
DGMT	Dagmar	17.68	67	P	Pn	20 18 12.1	0.0
DGMT				IAmb	IAmb	20 18 18.9	
	comp=Z,70nm,1.5s						
S22A	4UR Ranch, Cre	17.84	103	P	P	20 18 16.1	+1.0
RSSD	Black Hills	17.90	81	P	P	20 18 15.3	-0.3
TUC	Tucson	18.41	123	P	P	20 18 23.3	+2.2
Q24A	Divide	18.51	98	P	Pn	20 18 24.0	+1.4
SDCO	Great Sand Dun	18.78	101	P	Pn	20 18 28.0	+2.1
MCARA	McCarthy VSAT	19.31	339	P	P	20 18 28.3	-2.4
MCARA				IAmb	IAmb	20 18 35.5	
	comp=Z,32nm,1.4s						
ANMO	Albuquerque	19.54	110	P	P	20 18 33.4	-0.2
	comp=Z,0.1nm,0.3s,baz=333,slow=11,SNR=1.1						
ANMO	Albuquerque	19.54	110	P	Pn	20 18 37.8	+2.9
LENM	Lemitar	19.64	113		P

H11N3	**WAKE ISLAND Hy**	**58.07**	**267**	T		T		21 26 51.0	
	baz=49,slow=75,SNR=3652								
H11N2	**WAKE ISLAND Hy**	**58.07**	**267**	T		T		21 26 51.1	
	baz=49,slow=75,SNR=2512								
H11N1	**WAKE ISLAND Hy**	**58.09**	**267**	T		T		21 26 55.4	
	baz=49,slow=75,SNR=3236								
H11S1	**WAKE ISLAND Hy**	**59.00**	**266**	T		T		21 28 01.5	
	baz=50,slow=75,SNR=222								
H11S2	**WAKE ISLAND Hy**	**59.01**	**266**	T		T		21 28 01.6	
	baz=50,slow=75,SNR=258								
H11S3	**WAKE ISLAND Hy**	**59.02**	**266**	T		T		21 28 03.0	
	baz=50,slow=75,SNR=147								
SONM	**Songino Array**	**76.40**	**325**	P		**P**		**20 25 57.7**	**+2.5**
	comp=Z,0.2nm,0.5s,baz=38,slow=7.3,SNR=2.8								
SONM				LR		LR		20 59 28.2	
	comp=Z,50nm,18.1s,baz=326,slow=36								
SONM	**Songino Array**	**76.40**	**325**	P		**P**		**20 25 54.7**	**-0.5**
ZALV	**Zalesovo Beam**	**78.24**	**340**	LR		LR		21 01 58.9	
	comp=Z,31nm,19.1s,baz=348,slow=37								
HHC	**Hu-ho-hao-te**	**79.53**	**318**	*e*P		**P**		**20 26 12.7**	**0.0**
HHC				pmax		pmax			
	comp=Z,15nm,0.7s								
HHC				pmax		pmax			
	comp=Z,68nm,5.7s								
LPAZ	**La Paz**	**81.67**	**122**	P		**P**		**20 26 27.1**	**+2.2**
	comp=Z,3.5nm,0.9s,baz=4.3,slow=7.4,SNR=8.5								
LPAZ	**La Paz**	**81.67**	**122**	P		**P**		**20 26 24.9**	**-0.1**
LPAZ				IAmb		IAmb		20 26 32.0	
	comp=Z,3.8nm,0.8s								
KURK	**Kurchatov**	**82.66**	**343**	P		**P**		**20 26 29.5**	**+0.5**
KURK				IAmb		IAmb		20 26 36.8	
	comp=Z,4.3nm,1.2s								
KURBB	**Kurchatov Arra**	**82.77**	**343**	P		**P**		**20 26 29.3**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=19,slow=5.0,SNR=7.0								
MKAR	**Makanchi Array**	**85.47**	**339**	P		**P**		**20 26 43.0**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=55,slow=6.1,SNR=1.9								
MKAR	**Makanchi Array**	**85.47**	**339**	P		**P**		**20 26 43.7**	**+0.3**
WMQ	**Urumqi**	**86.64**	**334**	*e*P		**P**		**20 26 49.8**	**+0.4**
LZH	**Lanzhou**	**86.99**	**320**	*e*P		**P**		**20 26 49.9**	**-1.4**
LZH				pP		PcP		20 26 54.6	+1.1
LZH				sP		pP		20 26 56.9	+1.3
LZH				pmax		pmax			
	comp=Z,19nm,1.5s								

IDC ***12*** *20:21:19.8±0.9,31°.63N×40°.66W, h0km, mb4.0/17, mb1 4.1/17, mb1mx4.0/49, mbtmp4.0/17, MS3.8/20, Ms1 3.9/20, ms1mx3.6/43, Error ellipse: s-maj=26.8km s-min=17.3km az=171.0*

NEIC ***12*** *20:21:21.3±1.1, 31°.6N±0°.1×40°.7W±0°.1, h10km±1km, mb4.7/32, Error ellipse: s-maj=20.9km s-min=17.7km az=175.0*

GCMT ***12*** *20:21:22.3±0.4, 31°.53N±0°.03×40°.69W±0°.03, h22km±1km, MW5.0/79, Moment Tensor Solution. s16,c17; s79,c90; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.14±.20; Mθθ=0.37±.15; Mϕϕ=1.77±.14; Mrθ=-2.56±.26; Mrϕ=1.54±.11; Mθϕ=-0.40±.18; Best double couple: M0=3.59200×10¹⁶ NP1:ϕs=187.00000°, δ34.00000°, λ=-142.00000°. NP2: ϕs=63.00000°, δ70.00000°, λ=-62.00000°. Principal axes: T 3.4040, Plg20.0000°, Azm133.0000°; N 0.3780, Plg26.0000°, Azm233.0000°; P -3.7800, Plg56.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 20:21:21.5±0.6, 31°.7N±0°.1×40°.70W±0°.09, h10km, n101, σ0.81/85, mb4.4/43, MS3.8/20, 4C-1D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**26.66**	**246**	LR	LR	20 35 06.4	
	comp=Z,72nm,21.2s,baz=56,slow=31						
MDP	**Montagnes des**	**28.71**	**205**	LR	LR	20 36 12.7	
	comp=Z,71nm,20.4s,baz=3.5,slow=31						
ESDC	**Sonseca Array**	**30.73**	**65**	LR	LR	20 37 46.3	
	comp=Z,93nm,20.6s,baz=240,slow=32						
ESDC	**Sonseca Array**	**30.73**	**65**	P	**P**	**20 27 35.2**	**-1.6**
SFJD	**Kangerlussuaq**	**35.85**	**353**	LR	LR	20 40 53.3	
	comp=Z,109nm,19.3s,baz=150,slow=33						
SDV	**Santo Domingo**	**35.87**	**237**	P	**P**	**20 28 22.1**	**+0.1**
SDV				IAmb	IAmb	20 28 25.1	
	comp=Z,17nm,1.2s						
BFO	**Black Forest**	**40.34**	**51**	P	**P**	**20 28 58.8**	**-0.3**
BFO				IAmb	IAmb	20 29 00.3	
	comp=Z,28nm,1.4s						
TUE	**Stuetta**	**40.88**	**54**	P	**P**	**20 29 04.5**	**+0.7**
TUE				IAmb	IAmb	20 29 06.0	
	comp=Z,26nm,1.4s						
DAVA	**Damuels**	**41.29**	**53**	*e*P	**P**	**20 29 08.1**	**+0.9**
	comp=Z,11nm,1.3s						
ROSC	**El Rosal**	**41.30**	**237**	LR	LR	20 44 44.9	
	comp=Z,123nm,21.6s,baz=41,slow=34						
KEST	**Kesra**	**41.47**	**70**	LR	LR	20 42 57.0	
	comp=Z,135nm,20.8s,baz=260,slow=31						
DBIC	**Dimbokro**	**41.68**	**119**	LR	LR	20 45 09.0	
	comp=Z,288nm,18.6s,baz=314,slow=34						
TAM	**Tamanrasset**	**41.73**	**90**	P	**P**	**20 29 12.8**	**+1.3**
FETA	**Feichten**	**41.86**	**53**	*e*P	**P**	**20 29 12.6**	**+0.8**
	comp=Z,10.0nm,1.7s						
RETA	**Reutte**	**41.90**	**53**	*e*P	**P**	**20 29 13.1**	**+1.0**
	comp=Z,9.2nm,1.3s						
ZCCA	**Zocca**	**41.98**	**57**	P	**P**	**20 29 13.4**	**+0.7**
MOTA	**Moosalm**	**42.13**	**53**	*e*P	**P**	**20 29 15.9**	**+1.9**
	comp=Z,16nm,1.7s						
SQTA	**Sankt Quirin**	**42.19**	**53**	*e*P	**P**	**20 29 15.4**	**+0.9**
	comp=Z,9.1nm,1.1s						
GRF	**Grafenberg Arr**	**42.37**	**49**	*e*P	**P**	**20 29 16.1**	**+0.3**
	comp=Z,37nm,1.7s,baz=261,slow=7.6						
WATA	**Walderalm**	**42.45**	**53**	*e*P	**P**	**20 29 17.1**	**+0.4**
	comp=Z,9.8nm,1.3s						
WTTA	**Wattenberg**	**42.49**	**53**	*e*P	**P**	**20 29 17.6**	**+0.7**
	comp=Z,18nm,1.2s						
TOA0	**Torodi Ar. Sit**	**42.99**	**106**	P	**P**	**20 29 20.9**	**-0.2**
TOA0				IAmb	IAmb	20 29 21.8	
	comp=Z,14nm,1.4s						
TORD	**Torodi Ar. Bea**	**42.99**	**106**	P	**P**	**20 29 20.4**	**-0.8**
	comp=Z,3.5nm,1.2s,baz=306,slow=7.8,SNR=9.3						
TORD				LR	LR	20 45 06.5	
	comp=Z,129nm,20.5s,baz=70,slow=33						
TORD	**Torodi Ar. Bea**	**42.99**	**106**	P	**P**	**20 29 19.4**	**-1.7**
ABTA	**Abfaltersbach**	**43.07**	**54**	*e*P	**P**	**20 29 22.1**	**+0.5**
	comp=Z,19nm,1.5s						
CLL	**Collm**	**43.65**	**47**	*i* P	**P**	**20 29 26.1**	**0.0**
	comp=Z,22nm,1.5s						
CLL				LmV		20 43 00.0	
	comp=Z,200nm,19.0s						
CLL	**Collm**	**43.65**	**47**	P	**P**	**20 29 26.2**	**0.0**
CLL				IAmb	IAmb	20 29 27.3	
	comp=Z,14nm,1.2s						
KHC	**Kasperske Hory**	**43.86**	**50**	*e*P	**P**	**20 29 27.8**	**-0.1**
GEC2	**GERESS Array S**	**43.93**	**51**	P	**P**	**20 29 28.4**	**-0.1**
GERES	**GERESS Array B**	**43.93**	**51**	P	**P**	**20 29 26.8**	**-1.8**
	comp=Z,0.7nm,0.8s,baz=267,slow=6.7,SNR=5.9						
GERES				LR	LR	20 46 02.4	
	comp=Z,59nm,18.5s,baz=271,slow=34						
GERES	**GERESS Array B**	**43.93**	**51**	P	**P**	**20 29 28.0**	**-0.5**
BRG	**Berggiesshubel**	**44.20**	**48**	*e*P	**P**	**20 29 30.6**	**0.0**
	comp=Z,38nm,1.9s						
MOA	**Molln**	**44.28**	**52**	*e*P	**P**	**20 29 32.3**	**+1.0**
	comp=Z,9.1nm,1.4s						
ULM	**Lac du Bonnet**	**44.50**	**311**	LR	LR	20 48 08.3	
	comp=Z,136nm,19.7s,baz=82,slow=36						
PRU	**Pruhonice**	**44.53**	**49**	*e*P	**P**	**20 29 33.5**	**+0.3**
NOA	**NORSAR Array B**	**44.57**	**33**	P	**P**	**20 29 32.8**	**-0.6**
	comp=Z,1.9nm,1.0s,baz=252,slow=8.3,SNR=3.2						
ARSA	**Arzberg**	**45.13**	**53**	*e*P	**P**	**20 29 38.7**	**+0.6**
	comp=Z,14nm,1.6s						
CONA	**Conrad Observa**	**45.36**	**52**	*e*P	**P**	**20 29 39.6**	**-0.3**
	comp=Z,4.3nm,1.1s						
CHVC	**Chvalec**	**45.53**	**48**	*e*P	**P**	**20 29 41.9**	**+0.7**
DPC	**Dobruska-Polom**	**45.69**	**49**	*e*P	**P**	**20 29 42.6**	**+0.1**
KRUC	**Moravsky**	**45.71**	**50**	*e*P	**P**	**20 29 42.4**	**-0.2**
SAML	**Samuel**	**45.77**	**212**	P	**P**	**20 29 42.9**	**-0.4**
VRAC	**Vranov**	**45.85**	**50**	*e*P	**P**	**20 29 43.7**	**0.0**
MODS	**Modra-Piesok**	**46.30**	**51**	*e*P	**P**	**20 29 46.5**	**-0.8**
MORC	**Moravsky Berou**	**46.47**	**49**	*e*P	**P**	**20 29 48.6**	**0.0**
H10N2	**ASCENSION HYDR**	**46.59**	**143**	T	T	21 19 12.0	
	baz=329,slow=75,SNR=245						
H10N3	**ASCENSION HYDR**	**46.59**	**143**	T	T	21 19 22.4	
	baz=329,slow=75,SNR=295						
H10N1	**ASCENSION HYDR**	**46.61**	**143**	T	T	21 19 14.7	
	baz=329,slow=75,SNR=252						
VYHS	**Vyhne**	**47.34**	**51**	*e*P	**P**	**20 29 54.8**	**-0.6**
BZS	**Buzias**	**49.44**	**55**	⇑P	**P**	**20 30 12.5**	**+0.9**
GZR	**Gura Zlata**	**50.28**	**55**	⇓P	**P**	**20 30 16.5**	**-1.6**
CMIG	**Matias Romero**	**50.97**	**267**	LR	LR	20 50 08.3	
	comp=Z,90nm,21.1s,baz=15,slow=34						
BUR08	**Bucovina Ar. S**	**51.66**	**52**	P	**P**	**20 30 29.0**	**+0.5**
BUR08				IAmb	IAmb	20 30 30.1	
	comp=Z,14nm,1.4s						
BURAR	**Bucovina Array**	**51.67**	**52**	⇑P	**P**	**20 30 29.7**	**+1.1**
BURAR	**Bucovina Array**	**51.67**	**52**	P	**P**	**20 30 28.7**	**+0.1**
FINES	**FINESS Array B**	**51.70**	**34**	P	**P**	**20 30 27.9**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=282,slow=9.8,SNR=5.7						
FINES	**FINESS Array B**	**51.70**	**34**	P	**P**	**20 30 28.1**	**-0.3**
VOIR		**51.86**	**55**	⇑P	**P**	**20 30 29.5**	**-0.4**
MLR	**Muntele Rosu**	**52.47**	**55**	⇑P	**P**	**20 30 34.3**	**-0.3**
MLR	**Muntele Rosu**	**52.47**	**55**	P	**P**	**20 30 33.7**	**-0.9**
TXAR	**Lajitas Array**	**53.63**	**285**	P	**P**	**20 30 43.6**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=89,slow=7.4,SNR=3.5						
TXAR				LR	LR	20 51 31.0	
	comp=Z,90nm,21.0s,baz=0.0,slow=34						
AKASG	**Malin Array Be**	**53.89**	**48**	P	**P**	**20 30 44.1**	**-0.6**
	comp=Z,4.3nm,0.8s,baz=276,slow=6.6,SNR=22						
AKASG				LR	LR	20 50 01.9	
	comp=Z,56nm,21.1s,baz=335,slow=32						
LPAZ	**La Paz**	**54.47**	**213**	P	**P**	**20 30 49.6**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=21,slow=7.2,SNR=5.3						
LPAZ	**La Paz**	**54.47**	**213**	P	**P**	**20 30 49.3**	**-0.7**
PD31	**Pinedale Array**	**54.55**	**303**	P	**P**	**20 30 49.9**	**-0.2**
PD31				IAmb	IAmb	20 30 57.7	
	comp=Z,5.3nm,1.0s						
PDAR	**Pinedale Array**	**54.55**	**303**	P	**P**	**20 30 50.0**	**0.0**
	comp=Z,1.3nm,0.7s,baz=76,slow=6.3,SNR=10						
PDAR				LR	LR	20 53 28.9	
	comp=Z,289nm,18.2s,baz=94,slow=35						
PDAR	**Pinedale Array**	**54.55**	**303**	P	**P**	**20 30 48.4**	**-1.6**
BW06	**Boulder Array**	**54.55**	**303**	P	**P**	**20 30 50.0**	**-0.1**
BW06				IAmb	IAmb	20 30 57.7	
	comp=Z,6.0nm,1.0s						
YMP	**Mirror Lake Pl**	**54.57**	**305**	P	**P**	**20 30 50.8**	**+0.6**
YKA	**Yellowknife Ar**	**55.07**	**327**	LR	LR	20 53 50.4	
	comp=Z,276nm,19.1s,baz=0.0,slow=35						
IMW	**Indian Meadow**	**55.29**	**304**	P	**P**	**20 30 53.3**	**-2.2**
OBN	**Obninsk**	**57.61**	**42**	LR	LR	20 53 33.0	
	comp=Z,16nm,18.1s,baz=350,slow=34						
MFID	**Camas Ranch**	**58.85**	**305**	P	**P**	**20 31 20.5**	**0.0**
MFID				IAmb	IAmb	20 31 27.7	
	comp=Z,11nm,1.4s						
BRTR	**Keskin Array B**	**59.33**	**60**	P	**P**	**20 31 24.7**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=289,slow=4.4,SNR=4.4						
BRTR	**Keskin Array B**	**59.33**	**60**	P	**P**	**20 31 23.5**	**-0.4**
J08A	**Circle Bar Ran**	**60.72**	**305**	P	**P**	**20 31 35.3**	**+2.0**
INK	**Inuvik**	**62.00**	**335**	P	**P**	**20 31 41.0**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=62,slow=3.7,SNR=4.5						
INK	**Inuvik**	**62.00**	**335**	P	**P**	**20 31 40.8**	**-0.6**
INK				IAmb	IAmb	20 31 48.5	
	comp=Z,9.6nm,1.3s						
NVAR	**Mina Array Bea**	**62.15**	**300**	P	**P**	**20 31 43.3**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=73,slow=6.9,SNR=5.2						
NVAR				LR	LR	20 58 08.7	
	comp=Z,402nm,18.9s,baz=86,slow=36						
GNI	**Garni**	**67.20**	**56**	P	**P**	**20 32 16.2**	**+0.1**
ILAR	**Eielson Array**	**68.27**	**334**	P	**P**	**20 32 22.6**	**+0.4**
	comp=Z,1.7nm,1.1s,baz=49,slow=5.4,SNR=6.9						
ILAR				LR	LR	21 01 48.1	
	comp=Z,162nm,19.8s,baz=74,slow=36						
ILAR	**Eielson Array**	**68.27**	**334**	P	**P**	**20 32 22.2**	**0.0**
ARU	**Arti**	**69.01**	**36**	P	**P**	**20 32 26.9**	**0.0**
NRIK	**Noril'sk**	**72.47**	**17**	P	**P**	**20 32 49.1**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=324,slow=5.4,SNR=6.0						
ABKAR	**Akbulak array**	**73.05**	**42**	P	**P**	**20 32 51.7**	**+0.1**
ABKAR				IAmb	IAmb	20 32 52.9	
	comp=Z,8.5nm,1.2s						
ABKAR	**Akbulak array**	**73.05**	**42**	P	**P**	**20 32 51.9**	**+0.3**
BRVK	**Borovoye**	**76.57**	**35**	P	**P**	**20 33 12.2**	**+0.3**
BRVK				IAmb	IAmb	20 33 13.5	
	comp=Z,9.6nm,1.3s						
BVAR	**Borovoye Array**	**76.64**	**35**	P	**P**	**20 33 13.1**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=249,slow=32,SNR=8.1						
KMBO	**Kilima Mbogo**	**80.34**	**97**	LR	LR	21 08 17.0	
	comp=Z,173nm,20.4s,baz=275,slow=35						
LSZ	**Lusaka**	**80.82**	**114**	P	**P**	**20 33 37.4**	**+1.4**
LSZ				IAmb	IAmb	20 33 50.0	
	comp=Z,9.0nm,1.4s						
KURK	**Kurchatov**	**82.07**	**34**	P	**P**	**20 33 42.1**	**+0.1**
KURK				IAmb	IAmb	20 33 43.2	
	comp=Z,14nm,1.4s						
KURBB	**Kurchatov Arra**	**82.09**	**34**	P	**P**	**20 33 42.5**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=312,slow=6.1,SNR=14						
HRA	**Herat**	**82.19**	**54**	P	**P**	**20 33 43.0**	**-0.2**
ZAA0	**Zalesovo Array**	**82.61**	**29**	P	**P**	**20 33 44.8**	**+0.1**
ZAA0				IAmb	IAmb	20 33 45.8	
	comp=Z,10nm,1.4s						
ZALV	**Zalesovo Beam**	**82.61**	**29**	P	**P**	**20 33 45.0**	**+0.3**
	comp=Z,2.2nm,0.9s,baz=287,slow=6.0,SNR=8.4						
ZALV	**Zalesovo Beam**	**82.61**	**29**	P	**P**	**20 33 43.9**	**-0.8**
UOSS	**Minazif**	**82.75**	**65**	P	**P**	**20 33 45.6**	**-0.4**
CHGR	**Chuyangaron**	**84.36**	**48**	P	**P**	**20 33 54.6**	**+0.4**
MKAR	**Makanchi Array**	**86.52**	**35**	P	**P**	**20 34 04.8**	**+0.1**
	comp=Z,1.2nm,1.0s,baz=311,slow=11,SNR=3.8						
MKAR	**Makanchi Array**	**86.52**	**35**	P	**P**	**20 34 03.2**	**-1.5**
BOSA	**Boshof**	**86.76**	**126**	LR	LR	21 08 13.7	
	comp=Z,68nm,18.2s,baz=338,slow=32						

PRU 12 20:26:44.3±0.0, 50°.42N×18°.92E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.60**	**109**	*e*Pg	Pg	20 26 55.8	0.0
OJC				*e*Sg	Sg	20 27 03.5	0.0
MORC	**Moravsky Berou**	**1.10**	**235**	*e*PG	Pg	20 27 05.2	-0.1
MORC				*e*SG	Sg	20 27 19.6	+0.1
KRLC	**Kraliky**	**1.42**	**257**	*e*SG	Sn	20 27 31.7	+1.0
DPC	**Dobruska-Polom**	**1.66**	**269**	*e*PG	Pg	20 27 17.6	+1.4
DPC				*e*SG	Sg	20 27 39.5	+1.8
DPC	**Dobruska-Polom**	**1.66**	**269**	*e*x	Pg	20 27 17.5	+1.3

TAP ***12*** *20:35:53.2, 24°.58N×122°.17E, h65km, ML3.1, B*

JMA ***12*** *20:35:53.1±0.1, 24°.54N×122°.14E, h74km±2km, M2.3*

ISC 12 20:35:54.1±1.3, 24°.57N±0°.03×122°.16E±0°.02, h63km±7km, n95, σ0.63/164, 8C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.29**	**278**	*i* P	**Pn**	**20 36 04.5**	**+0.1**
TWC	baz=276			*i* S	**Sn**	**20 36 12.2**	**+0.3**
	baz=276						
ENAH	**Nanao**	**0.34**	**250**	P	**Pn**	**20 36 05.1**	**+0.3**
ENAH	baz=248			*e*S	**Sn**	**20 36 13.2**	**+0.6**
	baz=248						
EGS		**0.35**	**323**	*i* P	**Pn**	**20 36 05.2**	**+0.3**
EGS	baz=322			S	**Sn**	**20 36 12.6**	**-0.1**
	baz=322						
NTC	**Toucheng**	**0.42**	**313**	*e*P	**Pn**	**20 36 04.8**	**-0.7**
NTC	baz=311			*e*S	**Sn**	**20 36 14.0**	**+0.2**
	baz=311						
ILA	**Ilan**	**0.43**	**298**	P	**Pn**	**20 36 04.9**	**-0.7**
ILA	baz=296			S	**Sn**	**20 36 13.6**	**-0.3**
	baz=296						
TWB1	**Santiao Chiao**	**0.47**	**340**	⇑*i* P	**Pn**	**20 36 05.7**	**-0.3**
TWB1	baz=339			*i* S	**Sn**	**20 36 14.6**	**0.0**
	baz=339						
TWE	**Neicheng**	**0.48**	**289**	⇑*i* P	**Pn**	**20 36 06.3**	**+0.2**
TWE	baz=287			S	**Sn**	**20 36 15.2**	**+0.5**
	baz=287						
TIPB	**Shuangxi**	**0.51**	**323**	*e*P	**Pn**	**20 36 06.1**	**-0.3**
TIPB	baz=321			*e*S	**Sn**	**20 36 14.6**	**-0.8**
	baz=321						
NDT	**Datong Townshi**	**0.59**	**273**	⇑*i* P	**Pn**	**20 36 07.7**	**+0.3**
NDT	baz=272			S	**Sn**	**20 36 17.9**	**+0.9**
	baz=272						
NWF	**Wu-fen Shan**	**0.61**	**325**	*i* P	**Pn**	**20 36 07.1**	**-0.5**
NWF	baz=324			*i* S	**Sn**	**20 36 17.2**	**-0.3**
	baz=324						
WFSB	**Wu-fen Shan**	**0.61**	**325**	P	**Pn**	**20 36 07.2**	**-0.3**
WFSB	baz=324			S	**Sn**	**20 36 17.7**	**+0.4**
	baz=324						
NWLT	**Wulai**	**0.64**	**289**	*i* P	**Pn**	**20 36 08.0**	**+0.2**
NWLT	baz=288			S	**Sn**	**20 36 18.6**	**+0.7**
	baz=288						
NACB	**Ninganchiao**	**0.65**	**233**	P	**Pn**	**20 36 07.5**	**-0.5**
NACB	baz=232			S	**Sn**	**20 36 18.3**	**+0.2**
	baz=232						
TWA	**Mucha**	**0.67**	**308**	*i* P	**Pn**	**20 36 07.8**	**-0.4**
TWA	baz=307			*i* S	**Sn**	**20 36 18.3**	**-0.2**
	baz=307						
NHDH	**Xindian Distri**	**0.70**	**304**	*e*P	**Pn**	**20 36 06.6**	**-2.0**
NHDH	baz=303			*e*S	**Sn**	**20 36 20.2**	**+1.0**
	baz=303						
TWD	**Chiawan**	**0.71**	**227**	*i* P	**Pn**	**20 36 08.1**	**-0.5**
TWD	baz=226			*i* S	**Sn**	**20 36 19.3**	**0.0**
	baz=226						
ETLH	**Xiulin Townshi**	**0.72**	**240**	P	**Pn**	**20 36 08.4**	**-0.4**
ETLH	baz=239			S	**Sn**	**20 36 19.4**	**-0.3**
	baz=239						
JYNG	**Yonagunijimaku**	**0.72**	**99**	P	**Pn**	**20 36 09.0**	**+0.2**
JYNG				*e*S	**Sn**	**20 36 20.5**	**+1.0**
YHNB	**Yeheng**	**0.72**	**278**	⇑P	**Pn**	**20 36 08.9**	**0.0**
YHNB	baz=277			S	**Sn**	**20 36 20.1**	**+0.3**
	baz=277						
NNSB	**Datong**	**0.72**	**259**	⇑P	**Pn**	**20 36 08.8**	**-0.2**
NNSB	baz=258			S	**Sn**	**20 36 20.0**	**+0.1**
	baz=258						
NNSH	**Datong**	**0.72**	**259**	*e*P	**Pn**	**20 36 08.8**	**-0.2**
NNSH	baz=258			*e*S	**Sn**	**20 36 19.7**	**-0.1**
	baz=258						
NNS	**Nan Shan**	**0.73**	**260**	⇑*i* P	**Pn**	**20 36 08.8**	**-0.2**
NNS	baz=259			*i* S	**Sn**	**20 36 19.7**	**-0.3**
	baz=259						
TATO	**Taipei**	**0.74**	**304**	P	**Pn**	**20 36 08.1**	**-0.8**
TATO	baz=302			*e*S	**Sn**	**20 36 20.3**	**+0.5**
	baz=302						
NSK	**Sanguang**	**0.74**	**279**	⇑*i* P	**Pn**	**20 36 09.1**	**0.0**
NSK	baz=277			*i* S	**Sn**	**20 36 20.4**	**+0.3**
	baz=277						
TAP1	**Taipei**	**0.75**	**309**	*e*S	**Sn**	**20 36 19.8**	**-0.3**
HWA	**Hwalien**	**0.78**	**221**	P	**Pn**	**20 36 09.4**	**-0.1**
HWA	baz=220			*e*S	**Sn**	**20 36 21.4**	**+0.7**
	baz=220						
YOJ	**Yonaguni jima**	**0.78**	**98**	*e*P	**Pn**	**20 36 09.4**	**0.0**
YOJ	baz=98			*e*S	**Sn**	**20 36 21.6**	**+0.9**
	baz=98						
YOJ	**Yonaguni jima**	**0.78**	**98**	P	**Pn**	**20 36 09.7**	**+0.2**
YOJ				*e*S	**Sn**	**20 36 20.8**	**0.0**
YM01	**YM01**	**0.79**	**317**	P	**Pn**	**20 36 08.9**	**-0.7**
YM01	baz=316			S	**Sn**	**20 36 20.3**	**-0.8**
	baz=316						
YM10	**YM10**	**0.80**	**317**	P	**Pn**	**20 36 09.3**	**-0.6**
YM10	baz=316			S	**Sn**	**20 36 21.1**	**-0.3**
	baz=316						
YM11	**YM11**	**0.80**	**318**	P	**Pn**	**20 36 09.4**	**-0.4**
YM11	baz=317			S	**Sn**	**20 36 20.8**	**-0.7**
	baz=317						
YM08	**YM08**	**0.81**	**320**	P	**Pn**	**20 36 08.8**	**-1.1**
YM08	baz=319			S	**Sn**	**20 36 20.4**	**-1.1**
	baz=319						
YM04	**YM04**	**0.82**	**316**	P	**Pn**	**20 36 09.3**	**-0.6**
YM04	baz=314			*e*S	**Sn**	**20 36 20.7**	**-0.9**
	baz=314						
YM03	**YM03**	**0.83**	**317**	*e*S	**Sn**	**20 36 22.1**	**0.0**
ANP	**Anpu**	**0.85**	**317**	P	**Pn**	**20 36 10.2**	**-0.2**
ANP	baz=316			S	**Sn**	**20 36 22.4**	**-0.1**
	baz=316						
TWS1	**Kuangyinshan**	**0.86**	**308**	P	**Pn**	**20 36 10.3**	**-0.2**
TWS1	baz=307			S	**Sn**	**20 36 22.3**	**-0.3**
	baz=307						
TWY	**Chenhua**	**0.87**	**324**	*e*P	**Pn**	**20 36 10.5**	**-0.2**
TWY	baz=323			*e*S	**Sn**	**20 36 23.1**	**+0.3**
	baz=323						
NTST	**Danshui**	**0.88**	**313**	*e*P	**Pn**	**20 36 10.4**	**-0.3**
NTST	baz=311			*e*S	**Sn**	**20 36 23.1**	**+0.1**
	baz=311						
FUSS	**Fushou**	**0.90**	**249**	*i* P	**Pn**	**20 36 11.2**	**0.0**
FUSS	baz=248			S	**Sn**	**20 36 24.0**	**+0.2**
	baz=248						
WHF	**Hehuan Shan**	**0.92**	**243**	⇑*i* P	**Pn**	**20 36 11.4**	**-0.3**
WHF	baz=242			*i* S	**Sn**	**20 36 24.4**	**-0.2**
	baz=242						
TWT	**Tachien**	**0.95**	**251**	P	**Pn**	**20 36 12.2**	**+0.4**
TWT	baz=250			*i* S	**Sn**	**20 36 25.5**	**+0.5**
	baz=250						
TDCB	**Techi**	**0.97**	**251**	P	**Pn**	**20 36 12.2**	**+0.2**
TDCB	baz=250			S	**Sn**	**20 36 25.3**	**+0.1**
	baz=250						
NCUH	**Zhongli**	**0.97**	**294**	S	**Sn**	**20 36 26.5**	**+1.3**

SMLT				S		Sn	20 36 34.2	+0.3
	baz=238							
SSLB	**Suanglung**	**1.35**	**235**	P		Pn	20 36 16.4	-0.5
	baz=234							
SSLB				S		Sn	20 36 34.6	+0.6
	baz=234							
TYC	**Yuchr**	**1.36**	**241**	*i* P		Pn	20 36 17.6	+0.5
	baz=240							
TYC				*i* S		Sn	20 36 34.8	+0.6
	baz=240							
WDJ	**Dajia District**	**1.41**	**261**	S		Sn	20 36 36.2	+1.0
	baz=260							
YULB	**Yu-li**	**1.41**	**214**	P		Pn	20 36 16.1	-1.6
	baz=214							
YULB				S		Sn	20 36 34.9	-0.6
	baz=214							
TCU	**Taichung**	**1.42**	**253**	*e*S		Sn	20 36 36.0	+0.4
	baz=252							
EYUL	**Yuli**	**1.44**	**213**	*e*P		Pn	20 36 19.2	+1.1
	baz=212							
IRIF	**Iriomote-Funau**	**1.45**	**99**	P		Pn	20 36 17.9	-0.2
IRIF				*e*S		Sn	20 36 35.4	-0.8
TWF1	**Yuli**	**1.45**	**213**	*i* P		Pn	20 36 16.9	-1.3
	baz=212							
TWF1				S		Sn	20 36 35.0	-1.2
	baz=212							
WHYT	**Xinyi Township**	**1.48**	**234**	P		Pn	20 36 19.5	+0.9
	baz=233							
WHYT				S		Sn	20 36 39.0	+1.9
	baz=233							
WJS	**Zhushan**	**1.51**	**241**	*e*P		Pn	20 36 18.8	-0.2
	baz=240							
WJS				*e*S		Sn	20 36 38.0	+0.3
	baz=240							
WNT	**Mingjian**	**1.52**	**243**	P		Pn	20 36 18.8	-0.3
	baz=242							
WNT				*e*S		Sn	20 36 38.1	+0.2
	baz=242							
WCHH	**Zhanghua**	**1.54**	**252**	*e*S		Sn	20 36 38.7	+0.2
	baz=251							
FULB	**Fuli**	**1.58**	**210**	P		Pn	20 36 19.0	-0.9
	baz=210							
FULB				S		Sn	20 36 39.2	-0.3
	baz=210							
HATJ	**Hateruma jima**	**1.58**	**108**	*e*S		Sn	20 36 40.4	+0.9
ALS	**Alishan**	**1.63**	**230**	P		Pn	20 36 21.0	+0.1
	baz=229							
ALS				S		Sn	20 36 41.3	+0.2
	baz=229							
CHN5	**Tsauling**	**1.67**	**235**	P		Pn	20 36 21.8	+0.6
	baz=234							
CHN5				*e*S		Sn	20 36 41.9	+0.2
	baz=234							
JKRS	**Kuro-shima**	**1.71**	**101**	P		Pn	20 36 21.9	+0.2
JKRS				*e*S		Sn	20 36 43.2	+0.5
WDLH	**Douliu**	**1.72**	**240**	*e*P		Pn	20 36 21.9	0.0
	baz=239							
WDLH				*e*S		Sn	20 36 43.0	+0.1
	baz=239							
ELDTW	**Lidau**	**1.73**	**218**	P		Pn	20 36 21.0	-1.1
	baz=217							
ELDTW				*e*S		Sn	20 36 42.1	-1.1
	baz=217							
RLNB	**Erlin**	**1.78**	**248**	*e*S		Sn	20 36 43.9	-0.3
	baz=247							
JIJ	**Ishigaki jima**	**1.81**	**96**	P		Pn	20 36 22.9	-0.2
JIJ				S		Sn	20 36 44.6	-0.5
WTK	**Tuku**	**1.84**	**242**	*e*P		Pn	20 36 23.1	-0.4
	baz=241							
CHN4	**Tsaushan**	**1.88**	**230**	*e*P		Pn	20 36 25.0	+1.0
	baz=229							
TPUB	**Ta-pu**	**1.89**	**228**	*e*P		Pn	20 36 24.4	+0.3
	baz=227							
STYT	**Tauyuan**	**1.90**	**223**	*e*P		Pn	20 36 24.6	+0.2
	baz=222							
LONT	**Longtian**	**1.91**	**210**	*e*P		Pn	20 36 22.9	-1.5
	baz=209							
WTP	**Ta-pu**	**1.94**	**227**	*e*P		Pn	20 36 25.2	+0.4
	baz=226							
JISG	**Ishigakijimahi**	**1.96**	**89**	P		Pn	20 36 24.8	-0.2
JISG				*e*S		Sn	20 36 48.3	-0.2
TWGBT	**Beinan**	**2.01**	**210**	*e*P		Pn	20 36 24.7	-1.0
	baz=209							
TWGBT				*e*S		Sn	20 36 48.6	-1.2
	baz=209							
TWK	**Hsinying**	**2.01**	**230**	*e*P		Pn	20 36 26.2	+0.4
	baz=229							
CHN1	**Nanshi**	**2.03**	**228**	*e*P		Pn	20 36 26.2	+0.1
	baz=227							
SGST	**Jiashian**	**2.07**	**225**	P		Pn	20 36 27.0	+0.4
	baz=224							
SGST				*e*S		Sn	20 36 52.0	+0.7
	baz=224							
SLGT	**Liugui**	**2.10**	**222**	*e*P		Pn	20 36 28.1	+1.2
	baz=221							
SCST	**Cishan**	**2.27**	**223**	*e*P		Pn	20 36 28.4	-0.8
	baz=222							
SSD	**Sandimen**	**2.29**	**218**	*e*P		Pn	20 36 30.4	+0.8
	baz=217							
JTJ	**Tarama**	**2.31**	**88**	*e*S		Sn	20 36 58.2	+1.0
MASBT	**Mashibuluo**	**2.40**	**216**	*e*P		Pn	20 36 31.1	0.0
	baz=215							
JIRB	**Irabujima**	**2.75**	**84**	*e*S		Sn	20 37 08.3	+0.4

IDC 12 20:47:09.1±8.1, 6.06S×150.08E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/32, mbtmp3.5/4, Error ellipse: s-maj=125.5km s-min=68.2km az=39.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.60**	**226**	P	P	20 51 48.4	-1.6
	0.2nm,0.3s,baz=51,slow=11,SNR=2.1						
ASAR	**Alice Springs**	**23.42**	**220**	P	P	20 52 20.3	+0.2
	0.3nm,0.4s,baz=56,slow=9.5,SNR=9.2						
FITZ	**Fitzroy Crossi**	**26.68**	**241**	P	P	20 52 50.8	+0.7
	0.6nm,0.4s,baz=58,slow=11						
STKA	**Stephens Creek**	**26.88**	**196**	P	P	20 52 51.5	-0.2
	0.4nm,0.2s,baz=0.0,slow=11,SNR=2.0						

IDC 12 20:53:10.9±3.1, 6.40N×126.46E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.1/43, mbtmp3.2/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/20, Error ellipse: s-maj=202.6km s-min=47.6km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**25.92**	**127**	LR	LR	21 09 57.2	
	comp=Z,30nm,20.1s,baz=147,slow=39						
JNU	**Nakatsue**	**26.91**	**8**	LR	LR	21 09 23.6	
	comp=Z,30nm,21.1s,baz=28,slow=36						
WRA	**Warramunga Arr**	**27.30**	**164**	P	P	20 58 57.6	+0.1
	0.3nm,0.6s,baz=344,slow=10,SNR=6.1						
ASAR	**Alice Springs**	**30.75**	**167**	P	P	20 59 28.1	-0.1
	0.2nm,0.6s,baz=352,slow=8.2,SNR=5.5						
TORD	**Torodi Ar. Bea**	**121.80**	**290**	PKP	PKPdf	21 12 07.9	-0.2
	0.8nm,1.1s,baz=71,slow=1.6,SNR=1.7						

*REY **12** 21:14:29.7, 64.62N×17.40W, h4km*
*NEIC **12** 21:14:30.7±2.9, 64.42N±0.08×17.6W±0.1, h6km±4km, mb4.5/19, Error ellipse: s-maj=13.7km s-min=6.1km az=212.0*
*IDC **12** 21:14:31.1±0.8, 64.42N×17.78W, h0km, mb3.7/9, mb1 4.0/11, mb1mx3.7/39, mbtmp3.7/11, ML3.4/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/61, Error ellipse: s-maj=27.6km s-min=10.9km az=20.0*

ISC 12 21:14:31.2±0.4, 64.61N±0.02×17.44W±0.02, h10km, n98, σ2.911/114, mb4.2/20, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.15**	**295**	P	**Pg**	**21 14 33.2**	**-1.4**
	baz=290						
IVON				S	**Sg**	**21 14 35.9**	**-1.2**
	baz=290						
IDYN	**Dyngjuhals**	**0.19**	**9**	P	**Pg**	**21 14 33.4**	**-1.8**
	baz=4.9						
IGRF	**Grimsfjall**	**0.21**	**160**	P	**Pg**	**21 14 34.3**	**-1.5**
	baz=165						
IGRF				S	**Sg**	**21 14 37.8**	**-1.0**
	baz=165						
IURH	**Urdarhals**	**0.25**	**30**	P	**Pg**	**21 14 34.5**	**-1.8**
	baz=28						
IURH				S	**Sg**	**21 14 38.5**	**-1.1**
	baz=28						
IHUS	**Husbondi**	**0.33**	**197**	P	**Pg**	**21 14 36.6**	**-1.2**
	baz=199						
IKVE	**Kverkfjoll**	**0.33**	**78**	P	**Pg**	**21 14 36.1**	**-1.8**
	baz=79						
IKVE				S	**Sg**	**21 14 40.8**	**-1.6**
	baz=79						
IVOT	**Vottur**	**0.36**	**162**	P	**Pg**	**21 14 37.0**	**-1.3**
	baz=165						
IVOT				S	**Sg**	**21 14 42.3**	**-0.7**
	baz=165						
ISKR	**Skrokkalda**	**0.41**	**264**	P	**Pg**	**21 14 37.7**	**-1.6**
	baz=262						
ISKR				S	**Sb**	**21 14 44.3**	**-2.7**
	baz=262						
IJOK	**Jokulheimar**	**0.45**	**230**	P	**Pg**	**21 14 38.3**	**-1.7**
	baz=230						
IJOK				S	**Sb**	**21 14 45.6**	**-2.4**
	baz=230						
THOR	**Thorvaldshraun**	**0.46**	**45**	P	**Pg**	**21 14 38.2**	**-2.0**
	baz=44						
THOR				S	**Sg**	**21 14 45.2**	**-1.1**
	baz=44						
IKRE	**Kreppuhraun**	**0.49**	**68**	P	**Pg**	**21 14 38.3**	**-2.3**
	baz=69						
IKRE				S	**Sg**	**21 14 45.8**	**-1.3**
	baz=69						
IASK	**Askja**	**0.56**	**37**	P	**Pg**	**21 14 39.5**	**-2.5**
	baz=36						
IASK				S	**Sg**	**21 14 47.9**	**-1.5**
	baz=36						
IIEY	**Innrieyrar**	**0.60**	**210**	P	**Pg**	**21 14 40.8**	**-1.9**
	baz=211						
IIEY				S	**Sb**	**21 14 49.8**	**-2.4**
	baz=211						
IMKO	**Mokollar**	**0.60**	**51**	P	**Pg**	**21 14 40.2**	**-2.6**
	baz=51						
IMKO				S	**Sg**	**21 14 49.1**	**-1.5**
	baz=51						
IKSK	**Karasker**	**0.61**	**137**	P	**Pg**	**21 14 40.3**	**-2.8**
	baz=138						
IKAL	**Kalfafell**	**0.67**	**190**	P	**Pg**	**21 14 42.1**	**-2.0**
	baz=191						
IKAL				S	**Sb**	**21 14 52.4**	**-1.9**
	baz=191						
ISVA	**Svartarkot**	**0.74**	**6**	P	**Pg**	**21 14 42.8**	**-2.6**
	baz=4.9						
ISVA				S	**Sg**	**21 14 53.2**	**-1.8**
	baz=4.9						
IVSH	**V-Sauoahnukur**	**0.76**	**74**	P	**Pg**	**21 14 43.0**	**-2.9**
	baz=74						
IVSH				S	**Sg**	**21 14 54.0**	**-1.8**
	baz=74						
IVAT	**Vatnsfell**	**0.77**	**237**	P	**Pg**	**21 14 44.0**	**-2.0**
	baz=237						
IVAT				S	**Sb**	**21 14 55.4**	**-1.8**
	baz=237						
IFAG	**Fagurholsmyri**	**0.81**	**155**	P	**Pg**	**21 14 44.2**	**-2.6**
	baz=156						
IFAG				S	**Sb**	**21 14 56.5**	**-1.9**
	baz=156						
IHVE	**Hvervellir**	**0.95**	**287**	P	**Pg**	**21 14 46.6**	**-2.9**
	baz=286						
ISNB	**Snabyli**	**1.02**	**211**	P	**Pg**	**21 14 48.2**	**-2.6**
	baz=212						
IMEL	**Melhnausar**	**1.02**	**18**	P	**Pg**	**21 14 47.3**	**-3.5**
	baz=18						
IREN	**Reynihlio**	**1.07**	**12**	P	**Pg**	**21 14 48.2**	**-3.5**
	baz=11						
ISLY	**Slysaalda**	**1.08**	**224**	P	**Pg**	**21 14 49.0**	**-2.8**
	baz=224						
IRJU	**Rjupnafell**	**1.13**	**209**	P	**Pb**	**21 14 50.3**	**-2.6**
	baz=210						
IFED	**Fedgar**	**1.14**	**240**	P	**Pb**	**21 14 50.3**	**-2.8**
	baz=240						
IGRS	**Grimsstaoir**	**1.17**	**28**	P	**Pb**	**21 14 50.6**	**-2.9**
	baz=27						
IMJO	**Mjoaskard**	**1.19**	**236**	P	**Pb**	**21 14 51.2**	**-2.6**
	baz=236						
IGYG	**Gygjarholskot**	**1.25**	**256**	P	**Pn**	**21 14 52.1**	**-2.5**
	baz=256						
IHVO	**Lagu-Hvolar**	**1.25**	**210**	P	**Pn**	**21 14 52.2**	**-2.5**
	baz=211						
IHAU	**Haukadalur**	**1.28**	**241**	P	**Pn**	**21 14 52.3**	**-2.7**
	baz=241						
ISKI	**Skildingahlsh**	**1.28**	**8**	P	**Pn**	**21 14 51.8**	**-3.3**
	baz=7.0						
IGHA	**Grjothals**	**1.28**	**14**	P	**Pn**	**21 14 51.6**	**-3.5**
	baz=14						
IGRA	**Granastaoir**	**1.32**	**357**	P	**Pn**	**21 14 52.1**	**-3.5**
	baz=357						
IALF	**Alftagrof**	**1.36**	**215**	P	**Pn**	**21 14 54.1**	**-2.1**
	baz=216						
IDIM	**Dimmadalss**	**1.38**	**9**	P	**Pn**	**21 14 53.2**	**-3.2**
	baz=8.1						
IHLA	**Hella**	**1.40**	**344**	P	**Pn**	**21 14 53.7**	**-3.0**
	baz=343						
IESK	**Eystri-Skogar**	**1.40**	**220**	P	**Pn**	**21 14 54.2**	**-2.6**
	baz=220						
IMID	**Miomork**	**1.44**	**230**	P	**Pn**	**21 14 55.1**	**-2.1**
	baz=230						
ISAU	**Saurbar**	**1.44**	**246**	P	**Pn**	**21 14 54.6**	**-2.7**
	baz=246						
IHED	**Heoinshofoi**	**1.48**	**2**	P	**Pn**	**21 14 54.8**	**-3.0**
	baz=1.5						
IBRE	**Brettingsstaoi**	**1.53**	**353**	P	**Pn**	**21 14 55.7**	**-2.9**
	baz=352						
IASM	**Asmuli**	**1.59**	**242**	P	**Pn**	**21 14 57.5**	**-1.9**
	baz=242						
ISIG	**Siglufjorour**	**1.65**	**339**	P	**Pn**	**21 14 57.9**	**-2.3**
	baz=338						
ISOL	**Solvholt**	**1.68**	**248**	P	**Pn**	**21 14 58.5**	**-2.0**
	baz=248						
BORG	**Borgarnes**	**1.68**	**277**	Pg	**Pn**	**21 14 59.0**	**-1.5**
	15nm,0.3s,baz=92,slow=9.5,SNR=42						
BORG				Lg	Lg	21 15 20.4	
	6.3nm,0.3s,baz=116,slow=7.2,SNR=5.2						
BORG	**Borgarnes**	**1.68**	**277**	Pn	**Pn**	**21 14 58.7**	**-1.9**
BORG				Sn	**Sg**	**21 15 23.6**	**-1.5**
IKRO	**Krokur**	**1.68**	**254**	P	**Pn**	**21 14 58.6**	**-2.0**
	baz=254						
IHEI	**Heioarbar**	**1.70**	**258**	P	**Pn**	**21 14 59.4**	**-1.5**
	baz=258						
SCO	**Scoresbysund**	**6.15**	**346**		**Pn**	**21 16 03.4**	**+1.5**
SCO	**Scoresbysund**	**6.15**	**346**	*e*	**Pn**	**21 16 01.6**	**-0.3**
	baz=151,slow=8.6						
SCO				*i* P	**Pn**	**21 16 03.8**	**+1.9**
SCO				*i* S	**Sn**	**21 17 16.1**	**+4.0**
EKA	**Eskdalemuir Ar**	**11.70**	**136**	Pn	**Pn**	**21 17 17.9**	**0.0**
	baz=322,slow=14,SNR=10						
ESK	**Eskdalemuir**	**11.70**	**136**	Pn	**Pn**	**21 17 17.2**	**-0.8**
SFJD	**Kangerlussuaq**	**13.71**	**295**	LR	LR	21 22 10.1	
	comp=Z,108nm,19.2s,baz=128,slow=34						
FINES	**FINESS Array B**	**19.69**	**79**	P	**Pn**	**21 19 02.2**	**+0.7**
	0.1nm,0.3s,baz=285,slow=11,SNR=2.3						
CLL	**Collm**	**20.66**	**116**	*e*P	Pn	21 19 12.0	-1.0
STU	**Stuttgart**	**21.32**	**125**	P	**P**	**21 19 14.4**	**-3.4**
STU				IAmb	IAmb	21 19 15.3	
	comp=Z,18nm,0.5s						
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P	**P**	**21 19 19.3**	**+0.9**
	comp=Z,6.0nm,1.1s						
BRG				*e*		21 19 28.8	
	comp=Z,8.3nm,1.3s						
CHVC	**Chvalec**	**22.42**	**113**	*e*P	**P**	**21 19 32.7**	**+3.0**
KHC	**Kasperske Hory**	**22.62**	**118**	*e*P	**P**	**21 19 33.9**	**+2.0**
DPC	**Dobruska-Polom**	**22.71**	**113**	*e*P	**P**	**21 19 35.0**	**+2.2**
GERES	**GERESS Array B**	**22.90**	**119**	P	**P**	**21 19 36.7**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=319,slow=5.8,SNR=6.3						
GERES	**GERESS Array B**	**22.90**	**119**	P	**P**	**21 19 31.9**	**-3.0**
DAVOX	**Daxp/Dischmat**	**23.26**	**127**	LR	LR	21 29 23.4	
	comp=Z,62nm,19.1s,baz=230,slow=38						
VRAC	**Vranov**	**23.65**	**114**	LR	LR	21 29 05.1	
	comp=Z,87nm,18.1s,baz=284,slow=37						
EUNU	**Eureka**	**23.73**	**336**	P	**P**	**21 19 43.1**	**+0.1**
EUNU				IAmb	IAmb	21 19 47.9	
	comp=Z,11nm,1.1s						
KWP	**Kalwaria Pacla**	**25.87**	**106**	P	**P**	**21 20 02.4**	**-0.3**
KWP				IAmb	IAmb	21 20 06.9	
	comp=Z,28nm,1.3s						
PSZ	**Piszkesteto**	**26.07**	**112**	P	**P**	**21 20 03.4**	**-1.2**
PSZ				IAmb	IAmb	21 20 17.3	
	comp=Z,7.5nm,1.3s						
ESDC	**Sonseca Array**	**26.19**	**156**	P	**P**	**21 20 05.9**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=353,slow=9.1,SNR=3.1						
AKASG	**Malin Array Be**	**27.81**	**98**	P	**P**	**21 20 22.3**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=308,slow=9.3,SNR=1.8						
MAKA	**Makarska**	**28.83**	**121**	Sn	**S**	**21 25 21.8**	**+3.0**
BRTR	**Keskin Array B**	**38.44**	**105**	P	P	21 21 56.1	+3.2
	comp=Z,1.2nm,0.8s,baz=296,slow=7.9,SNR=2.3						
TIXI	**Tiksi**	**42.08**	**15**	P	**P**	**21 22 24.5**	**+2.1**
TIXI				IAmb	IAmb	21 22 27.1	
	comp=Z,6.5nm,1.1s						
AAM	**Ann Arbor**	**42.78**	**272**	P	**P**	**21 22 26.8**	**-1.7**
TOLK	**Toolik Lake Re**	**42.81**	**336**	P	**P**	**21 22 29.8**	**+1.3**
TOLK				IAmb	IAmb	21 22 33.8	
	comp=Z,21nm,1.4s						
MARD	**Mardin**	**43.47**	**100**	P	**P**	**21 22 34.7**	**+0.4**
MARD				IAmb	IAmb	21 22 42.8	
	comp=Z,5.2nm,0.4s						
ILAR	**Eielson Array**	**45.75**	**332**	P	**P**	**21 22 54.3**	**+2.3**
	comp=Z,1.8nm,1.1s,baz=24,slow=5.1,SNR=11						
ILAR				PcP	**PcP**	**21 24 31.4**	**+1.9**
	comp=Z,1.1nm,1.0s,baz=359,slow=2.8,SNR=5.5						
ILAR	**Eielson Array**	**45.75**	**332**	P	**P**	**21 22 54.5**	**+2.5**
P48A	**Milroy**	**45.88**	**271**	P	**P**	**21 22 52.5**	**-0.8**
IMAR	**Indian Mountai**	**45.92**	**337**	P	**P**	**21 22 55.7**	**+2.4**
BCAR	**Beaver Creek A**	**46.17**	**329**	P	**P**	**21 22 57.7**	**+2.2**
ZALV	**Zalesovo Beam**	**47.65**	**51**	P	**P**	**21 23 09.8**	**+2.8**
	comp=Z,0.3nm,0.4s,baz=334,slow=9.6,SNR=1.4						
ZALV	**Zalesovo Beam**	**47.65**	**51**	P	**P**	**21 23 08.5**	**+1.6**
V52A	**Sevierville**	**48.12**	**267**	P	**P**	**21 23 10.0**	**-0.9**
EGMT	**Eagleton**	**48.92**	**297**	P	**P**	**21 23 18.4**	**+1.3**
KK31	**Karatay Array**	**51.27**	**70**	P	**P**	**21 23 34.7**	**-0.1**
KKAR	**Karatay Array**	**51.27**	**70**	P	**P**	**21 23 34.5**	**-0.2**
KKAR	**Karatay Array**	**51.27**	**70**	P	**P**	**21 23 34.6**	**-0.2**
KKAR				IAmb	IAmb	21 23 38.5	
	comp=Z,2.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**53.08**	**156**	P	**P**	**21 23 48.9**	**+0.4**
	comp=Z,1.2nm,1.1s,baz=352,slow=9.0,SNR=4.5						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**21 23 50.7**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=41,slow=5.9,SNR=2.3						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**21 23 50.2**	**+0.7**
BTK	**Batken**	**53.95**	**72**	P	**P**	**21 23 56.2**	**+1.4**
BTK				IAmb	IAmb	21 23 60.0	
	comp=Z,6.9nm,1.4s						
WMOK	**Wichita Mounta**	**55.58**	**279**	P	**P**	**21 24 07.0**	**+0.4**
WMOK				IAmb	IAmb	21 24 20.3	
	comp=Z,3.2nm,0.8s						
SDCO	**Great Sand Dun**	**55.84**	**287**	P	**P**	**21 24 09.8**	**+1.1**
R11A	**Troy Canyon, C**	**59.37**	**295**	P	**P**	**21 24 34.5**	**+1.1**
U15A	**North Rim**	**59.73**	**291**	P	**P**	**21 24 35.3**	**-0.8**
U15A				IAmb	IAmb	21 24 39.5	
	comp=Z,2.4nm,0.9s						
TXAR	**Lajitas Array**	**62.32**	**280**	P	**P**	**21 24 54.6**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=77,slow=4.7,SNR=2.5						

*THE **12** 21:22:57.9, 38.30N×20.44E, h12km±1km, ML3.0/10, Error ellipse: s-maj=1.4km s-min=0.4km az=266.0*
*ATH **12** 21:22:57.8, 38.29N×20.47E, h12km±1km, ML2.6/11, Error ellipse: s-maj=1.9km s-min=0.6km az=256.0*

ISC 12 21:22:57.4±0.8, 38.30N±0.02×20.44E±0.03, h14km±4km, n49, σ0.963/79, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF5	**Kardakata, Kep**	**0.03**	**128**	P	**Pg**	**21 22 59.8**	**-0.2**
KEF5				S	**Sg**	**21 23 01.0**	**-0.8**
KEF5	**Kardakata, Kep**	**0.03**	**128**	P	**Pg**	**21 22 59.9**	**-0.1**
KEF5				S	**Sg**	**21 23 01.2**	**-0.5**
	79μm,0.2s						
KEF4	**Livadi, Kephal**	**0.04**	**199**	P	**Pg**	**21 22 60.0**	**0.0**
KEF4				S	**Sg**	**21 23 01.5**	**-0.3**
KEF4	**Livadi, Kephal**	**0.04**	**199**	P	**Pg**	**21 23 00.1**	**+0.1**
KEF4				S	**Sg**	**21 23 01.8**	**+0.1**
	152μm,0.2s						
DMLN	**Damoulianata-K**	**0.08**	**223**	P	**Pg**	**21 23 00.6**	**+0.2**
DMLN				S	**Sg**	**21 23 02.4**	**+0.1**
DMLN	**Damoulianata-K**	**0.08**	**223**	P	**Pg**	**21 23 00.6**	**+0.2**
DMLN				S	**Sg**	**21 23 02.6**	**+0.3**
	41μm,0.2s						
LXRA	**Lixouri, Kepha**	**0.10**	**182**	P	**Pg**	**21 23 00.8**	**+0.3**
LXRA				S	**Sg**	**21 23 03.0**	**+0.4**
ARGA	**Argostoli. Kep**	**0.12**	**166**	P	**Pg**	**21 23 00.9**	**+0.1**
ARGA				S	**Sg**	**21 23 03.2**	**+0.1**
VLS	**Valsamata**	**0.17**	**135**	P	**Pg**	**21 23 01.4**	**0.0**
VLS				S	**Sg**	**21 23 04.2**	**0.0**
VLS				AML	AML	21 23 04.3	
	comp=N,69944μm,0.1s						
VLS				AML	AML	21 23 04.3	
VLS	**Valsamata**	**0.17**	**135**	P	**Pg**	**21 23 01.5**	**0.0**
VLS				S	**Sg**	**21 23 04.3**	**+0.1**
	comp=N,47μm,0.1s						
FSK	**Fiskardo**	**0.19**	**30**	P	**Pg**	**21 23 02.1**	**+0.3**
FSK				S	**Sg**	**21 23 05.1**	**+0.2**
FSK				AML	AML	21 23 06.7	
	comp=N,2638μm,0.2s						
FSK				AML	AML	21 23 06.9	
	comp=E,7086μm,0.2s						
FSK	**Fiskardo**	**0.19**	**30**	P	**Pg**	**21 23 02.1**	**+0.3**
FSK				S	**Sg**	**21 23 05.4**	**+0.6**
	comp=E,2μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.21**	**148**	P	**Pg**	**21 23 02.3**	**+0.1**
PSDA				S	**Sg**	**21 23 05.8**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.21**	**148**	P	**Pg**	**21 23 02.4**	**+0.2**
PSDA				S	**Sg**	**21 23 05.8**	**+0.4**
	comp=E,715nm,0.2s						
EVGI	**Lefkada island**	**0.37**	**27**	P	**Pg**	**21 23 05.3**	**+0.4**
EVGI				S	**Sg**	**21 23 10.4**	**+0.4**
EVGI	**Lefkada island**	**0.37**	**27**	P	**Pg**	**21 23 05.3**	**+0.4**
EVGI				S	**Sb**	**21 23 11.3**	**0.0**
	comp=E,722nm,0.2s						
VLMS	**Volimes, Zakyn**	**0.45**	**157**	P	**Pg**	**21 23 06.4**	**0.0**
VLMS				S	**Sg**	**21 23 13.0**	**+0.4**
VLMS				AML	AML	21 23 16.9	
	comp=E,3849μm,0.1s						
VLMS				AML	AML	21 23 17.2	
	comp=N,4109μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.45**	**157**	P	**Pg**	**21 23 06.6**	**+0.2**
VLMS				S	**Sb**	**21 23 14.2**	**+0.5**
	comp=N,2μm,0.1s						
MGNA	**Meganis**	**0.45**	**37**	P	**Pg**	**21 23 06.7**	**+0.3**
MGNA				S	**Sg**	**21 23 13.1**	**+0.6**
MGNA				AML	AML	21 23 14.1	
	comp=N,4655μm,0.3s						
MGNA				AML	AML	21 23 14.3	
	comp=E,4861μm,0.2s						
NYDR	**Nydri-Lefkada**	**0.46**	**26**	P	**Pg**	**21 23 06.7**	**0.0**
NYDR				S	**Sg**	**21 23 13.4**	**+0.5**
NYDR	**Nydri-Lefkada**	**0.46**	**26**

	comp=N,419μm,0.4s							
AMT					AML	AML	21 23 53.8	
	comp=E,381μm,0.7s							
TRIZ	**Trizonia**	**1.29**	**86**	P		**Pn**	**21 23 20.8**	**-0.1**
KALE	**Kalithea**	**1.34**	**85**	P		**Pn**	**21 23 21.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.37**	**100**	P		**Pn**	**21 23 22.5**	**+0.4**
KLV					AML	AML	21 23 45.9	
	comp=N,197μm,0.4s							
KLV					AML	AML	21 23 49.6	
	comp=E,192μm,0.6s							
MAKR	**Makrakomi, Fth**	**1.51**	**61**	P		**Pb**	**21 23 25.2**	**+0.1**
GUR	**Goura**	**1.54**	**103**	P		**Pn**	**21 23 25.3**	**+0.8**
GUR					AML	AML	21 23 51.9	
	comp=N,523μm,0.5s							
GUR					AML	AML	21 23 55.4	
	comp=E,342μm,0.3s							
ITM	**Ithomi**	**1.62**	**133**	P		**Pb**	**21 23 27.9**	**+0.9**
TRIP	**Tripoli**	**1.64**	**117**	P		**Pb**	**21 23 27.7**	**+0.3**
AGG	**Agios Georgios**	**1.65**	**63**	P		**Pb**	**21 23 28.2**	**+0.7**
STON	**Ston**	**5.03**	**336**	*e*Pn		**Pn**	**21 24 12.7**	**+0.5**
STON				Sn		**Sn**	**21 25 07.8**	**-2.3**
RICI	**Ricice**	**5.77**	**335**	*e*Pn		**Pn**	**21 24 22.4**	**-0.1**
RICI				Sn		**Sn**	**21 25 25.0**	**-3.4**
KIJV	**Kijevo**	**6.47**	**333**	*e*Pn		**Pn**	**21 24 32.9**	**+0.8**
MORI	**Morici**	**6.61**	**329**	*e*Pn		**Pn**	**21 24 35.1**	**+1.0**
DUGI	**Dugi Otok**	**6.99**	**326**	*e*Pn		**Pn**	**21 24 40.3**	**+1.0**
NVLJ	**Novalja**	**7.53**	**328**	*e*Pn		**Pn**	**21 24 47.1**	**+0.4**

IDC ***12*** *21:27:15.7±4.0, 16°23S×85°15E, h0km, mb3.9/6, mb1 4.0/6,mb1mx3.6/64,mbtmp3.9/6, Error ellipse: s-maj=116.7km s-min=25.8km az=52.0*

ISC 12 21:27:15.8±1.4**, 16°43S**±0°3×**84°9E**±0°2**, h10**km**, n7**, σ0**s55**/7, **mb4.1**/6**, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.27**	**22**	P	**P**	**21 34 27.6**	**-0.6**
	0.4nm,0.5s,baz=202,slow=9.6,SNR=5.5						
ASAR	**Alice Springs**	**46.41**	**107**	P	**P**	**21 35 43.2**	**+0.3**
	1.6nm,0.8s,baz=277,slow=7.3,SNR=14						
WRA	**Warramunga Arr**	**46.96**	**102**	P	**P**	**21 35 47.0**	**-0.3**
	1.3nm,0.8s,baz=271,slow=8.8,SNR=7.8						
MBAR	**Mbarara**	**55.62**	**281**	*e*P	**P**	**21 36 52.4**	**-0.2**
MKAR	**Makanchi Array**	**62.93**	**358**	P	**P**	**21 37 42.5**	**+0.1**
	0.9nm,1.0s,baz=188,slow=7.8,SNR=2.4						
SONM	**Songino Array**	**66.75**	**16**	P	**P**	**21 38 07.6**	**+0.2**
	1.1nm,0.8s,baz=196,slow=7.2,SNR=6.6						
ZALV	**Zalesovo Beam**	**70.05**	**360**	P	**P**	**21 38 28.4**	**+0.8**
	2.5nm,0.6s,baz=194,slow=4.6,SNR=11						

DNK ***12*** *21:33:57.3±2.0, 58°81N×20°18E, h0km±103km, ML3.0, Explosion*
IDC ***12*** *21:34:00.4±3.8, 56°80N×17°35E, h0km, mb1 3.3/4, mb1mx3.0/70, mbtmp3.2/4, ML2.5/4, Error ellipse: s-maj=41.9km s-min=14.5km az=1.0*
NAO ***12*** *21:34:14.9±1.1, 58°13N×17°74E, ML2.5*
UPP ***12*** *21:34:15.3±0.1, 58°32N×17°57E, h0km, ML1.8, Explosion*
HEL ***12*** *21:34:16.1±0.0, 58°33N×17°57E, h0km, ML1.9, ML1.8(UPP), Explosion*
BER ***12*** *21:34:18.9±7.5, 58°36N×17°76E, h0km, ML2.1, ML1.8(UPP), Suspected explosion*

ISC 12 21:34:14.4±0.8**, 58°32N**±0°02×**17°60E**±0°02**, h0**km**, n66, σ1**s**42**/91**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIKU	**Vikbolandet**	**0.51**	**291**	P	**Pg**	**21 34 24.8**	**+0.7**
VIKU				S	**Sg**	**21 34 31.0**	**+0.3**
VIKU	**Vikbolandet**	**0.51**	**291**	*i* P	**Pg**	**21 34 24.8**	**+0.7**
VIKU				*i* S	**Sg**	**21 34 31.0**	**+0.3**
VIKU	**Vikbolandet**	**0.51**	**291**	P	**Pg**	**21 34 24.8**	**+0.7**
VIKU				S	**Sg**	**21 34 31.0**	**+0.3**
NYNU	**Nynaeshamn**	**0.71**	**17**	P	**Pg**	**21 34 28.9**	**+0.8**
NYNU	**Nynaeshamn**	**0.71**	**17**	*i* P	**Pg**	**21 34 28.9**	**+0.8**
NYNU	**Nynaeshamn**	**0.71**	**17**	P	**Pg**	**21 34 28.9**	**+0.8**
GOTU	**Gotland**	**0.82**	**141**	P	**Pg**	**21 34 30.8**	**+0.7**
GOTU	**Gotland**	**0.82**	**141**	*i* P	**Pg**	**21 34 30.8**	**+0.7**
GOTU	**Gotland**	**0.82**	**141**	P	**Pg**	**21 34 30.8**	**+0.7**
VSTU	**Vaestervik**	**0.88**	**221**	P	**Pg**	**21 34 31.7**	**+0.6**
VSTU	**Vaestervik**	**0.88**	**221**	*i* P	**Pg**	**21 34 31.7**	**+0.6**
VSTU	**Vaestervik**	**0.88**	**221**	P	**Pg**	**21 34 31.7**	**+0.6**
BYXU	**Byxelkrok**	**1.08**	**197**	P	**Pg**	**21 34 35.6**	**+0.5**
BYXU	**Byxelkrok**	**1.08**	**197**	*e*P	**Pg**	**21 34 35.6**	**+0.5**
BYXU	**Byxelkrok**	**1.08**	**197**	P	**Pg**	**21 34 35.6**	**+0.5**
LNKU	**Linkoeping**	**1.11**	**266**	P	**Pg**	**21 34 35.8**	**+0.1**
LNKU	**Linkoeping**	**1.11**	**266**	*e*P	**Pg**	**21 34 35.8**	**+0.1**
LNKU	**Linkoeping**	**1.11**	**266**	P	**Pg**	**21 34 35.8**	**+0.1**
OSKU	**Oskarshamn**	**1.39**	**216**	P	**Pg**	**21 34 41.1**	**+0.1**
OSKU				S	**Sb**	**21 34 59.9**	**+0.5**
OSKU	**Oskarshamn**	**1.39**	**216**	*e*P	**Pg**	**21 34 41.1**	**+0.1**
OSKU				*e*S	**Sb**	**21 34 59.9**	**+0.5**
OSKU	**Oskarshamn**	**1.39**	**216**	P	**Pg**	**21 34 41.1**	**+0.1**
OSKU				S	**Sb**	**21 34 59.9**	**+0.5**
EKSU	**Eksjoe**	**1.44**	**239**	P	**Pn**	**21 34 41.6**	**-0.1**
EKSU	**Eksjoe**	**1.44**	**239**	*e*P	**Pn**	**21 34 41.6**	**-0.1**
EKSU	**Eksjoe**	**1.44**	**239**	P	**Pn**	**21 34 41.6**	**-0.1**
ASKU	**Askersund**	**1.56**	**293**	P	**Pn**	**21 34 43.7**	**+0.4**
ASKU	**Askersund**	**1.56**	**293**	*e*P	**Pn**	**21 34 43.7**	**+0.4**
ASKU	**Askersund**	**1.56**	**293**	P	**Pn**	**21 34 43.7**	**+0.4**
AAL	**Aland**	**2.23**	**32**	*e*P	**Pn**	**21 34 54.6**	**+2.1**
AAL				*e*S	**Sn**	**21 35 22.6**	**+1.9**
BORU	**Boraas**	**2.67**	**257**	*i* P	**Pn**	**21 35 00.6**	**+2.1**
HFS	**Hagfors**	**2.71**	**314**	Pn	**Pn**	**21 35 01.3**	**+2.2**
	0.6nm,0.3s,baz=146,slow=14,SNR=9.6						
HFS				Sn	**Sb**	**21 35 37.0**	**-0.4**
	4.3nm,0.3s,baz=140,slow=19,SNR=6.8						
HFS	**Hagfors**	**2.71**	**314**	Pn	**Pn**	**21 35 01.6**	**+2.5**
	baz=130,slow=11						
HFS				Sn	**Sb**	**21 35 37.7**	**+0.4**
	baz=126,slow=37						
HFS	**Hagfors**	**2.71**	**314**	Pn	**Pn**	**21 35 01.6**	**+2.5**
	baz=130,slow=11						
HFS				Sn	**Sb**	**21 35 37.7**	**+0.4**
	baz=126,slow=37						
DEL	**Delary**	**2.75**	**229**	*i* P	**Pn**	**21 35 00.7**	**+1.1**
DEL				IAML		21 36 04.9	
	comp=Z,12nm,0.3s						
ONAU	**Onsala**	**3.18**	**255**	*e*P	**Pn**	**21 35 08.0**	**+2.4**
TJOU	**Tjoern**	**3.18**	**267**	*i* P	**Pn**	**21 35 07.7**	**+2.1**
STRU	**Stroemstad**	**3.43**	**285**	*e*P	**Pn**	**21 35 10.5**	**+1.5**
RAF	**Rauma**	**3.43**	**36**	*e*P	**Pn**	**21 35 10.6**	**+1.6**
RAF				*e*S	**Sn**	**21 35 50.7**	**+0.3**
RAF				MSG		21 36 10.0	
	comp=Z,2.5nm,0.1s						
LUNU	**Lund**	**3.53**	**222**	*i* P	**Pn**	**21 35 11.3**	**+0.9**
LUNU				*i* S	**Sg**	**21 36 06.7**	**-1.0**
BSD	**Bornholm Skovb**	**3.54**	**206**	*i* P	**Pn**	**21 35 11.0**	**+0.4**
BSD				*i*		21 36 08.7	
BSD				IAML		21 36 30.9	
	comp=Z,18nm,0.3s						
BSD	**Bornholm Skovb**	**3.54**	**206**	*i* P	**Pn**	**21 35 11.0**	**+0.4**
BSD				*i*		21 36 08.7	
BSD	**Bornholm Skovb**	**3.54**	**206**	*i* P	**Pn**	**21 35 11.0**	**+0.4**
BSD				*i*		21 36 08.7	
BSD				IAML		21 36 30.9	
	comp=Z,18nm,0.3s						
NRA0	**NORESS Array S**	**3.92**	**311**	Pn	**Pn**	**21 35 17.4**	**+1.6**
	baz=127,slow=14						
NRA0				Sn	**Sb**	**21 36 08.2**	**-4.1**
	baz=118,slow=16						
NRA0	**NORESS Array S**	**3.92**	**311**	Pn	**Pn**	**21 35 17.4**	**+1.6**
	baz=127,slow=14						
NRA0				Sn	**Sb**	**21 36 08.2**	**-4.1**
	baz=118,slow=16						
MEF	**Metsahovi**	**3.97**	**59**	*e*P	**Pn**	**21 35 18.0**	**+1.6**
MEF				*e*S	**Sn**	**21 36 02.9**	**-0.7**
MEF				MSG		21 36 28.1	
	comp=Z,1.9nm,0.1s						
NB2	**NORSAR Subarra**	**4.23**	**313**	Pn	**Pn**	**21 35 21.9**	**+1.8**
	baz=134,slow=14						
NB2	**NORSAR Subarra**	**4.23**	**313**	Pn	**Pn**	**21 35 21.9**	**+1.8**
	baz=134,slow=14						
NOA	**NORSAR Array B**	**4.23**	**313**	Pn	**Pn**	**21 35 18.8**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=133,slow=12,SNR=8.1						
NOA				Sn	**Sb**	**21 36 19.8**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=233,slow=16,SNR=4.0						
VSU	**Vasula**	**4.81**	**84**	Sn	**Sn**	**21 36 25.6**	**+1.3**
VSU				Lg		21 36 44.8	
VSU	**Vasula**	**4.81**	**84**	Sn	**Sn**	**21 36 25.6**	**+1.3**
VSU				Sg	**Sg**	**21 36 44.8**	**-3.9**
MUD	**Monsted U'grnd**	**4.93**	**251**	IAML		21 37 39.6	
	comp=Z,4.8nm,0.4s						
MUD	**Monsted U'grnd**	**4.93**	**251**	IAML		21 37 39.6	
	comp=Z,4.8nm,0.4s						
KEF	**Keuruu**	**5.29**	**40**	*e*P	**Pn**	**21 35 36.3**	**+1.8**
KEF				*e*S	**Sn**	**21 36 35.9**	**-0.2**
FIA0	**FINESS Array S**	**5.29**	**50**	Pn	**Pn**	**21 35 36.5**	**+2.0**
	baz=231,slow=12						
FIA0				Sn	**Sn**	**21 36 35.5**	**-0.6**
	baz=228,slow=18						
FIA0	**FINESS Array S**	**5.29**	**50**	*e*P	**Pn**	**21 35 36.9**	**+2.3**
FIA0				*e*S	**Sn**	**21 36 36.1**	**-0.1**
FIA0	**FINESS Array S**	**5.29**	**50**	Pn	**Pn**	**21 35 36.5**	**+2.0**
	baz=231,slow=12						
FIA0				Sn	**Sn**	**21 36 35.5**	**-0.6**
	baz=228,slow=18						
FINES	**FINESS Array B**	**5.29**	**50**	Pn	**Pn**	**21 35 36.3**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=228,slow=12,SNR=11						
FINES				Sn	**Sb**	**21 36 50.4**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=228,slow=17,SNR=5.1						
FIA1	**FINESS Array S**	**5.29**	**50**	*e*P	**Pn**	**21 35 36.9**	**+2.3**
FIA1				*e*S	**Sn**	**21 36 36.1**	**-0.1**
VAF	**Ylistaro**	**5.35**	**26**	*e*P	**Pn**	**21 35 37.9**	**+2.5**
VAF				*e*S	**Sn**	**21 36 37.1**	**-0.4**
SNART	**Snartemo**	**5.48**	**275**	*e*P	**Pn**	**21 35 38.0**	**+0.9**
SNART				IAML		21 37 30.8	
	comp=Z,5.7nm,0.3s						
SNART	**Snartemo**	**5.48**	**275**	*e*P	**Pn**	**21 35 38.0**	**+0.9**
SNART				IAML		21 37 30.8	
	comp=Z,5.7nm,0.3s						
VJF	**Virojoki**	**5.54**	**62**	*e*P	**Pn**	**21 35 39.0**	**+1.0**
VJF				*e*S	**Sn**	**21 36 41.3**	**-1.1**
KAF	**Kangasniemi**	**5.76**	**45**	*e*P	**Pn**	**21 35 42.8**	**+1.7**
KAF				*e*S	**Sn**	**21 36 46.9**	**-0.9**
SUF	**Sumiainen**	**6.10**	**40**	*e*P	**Pn**	**21 35 46.6**	**+1.0**
SUF				*e*S	**Sn**	**21 36 54.7**	**-1.4**
ARA0	**ARCESS Array S**	**11.76**	**14**	Pn	**Pn**	**21 37 01.7**	**-1.5**
	baz=191,slow=14						
ARA0	**ARCESS Array S**	**11.76**	**14**	Pn	**Pn**	**21 37 01.7**	**-1.5**
	baz=191,slow=14						
ARCES	**ARCESS Array B**	**11.76**	**14**	Pn	**Pn**	**21 37 02.4**	**-0.8**
	baz=196,slow=13,SNR=6.3						

NEIC ***12*** *21:36:39.2±2.6, 6°62S±0°10×154°84E±0°10, h35km±1km, mb4.3/14, Error ellipse: s-maj=17.6km s-min=15.2km az=37.0*
IDC ***12*** *21:36:39.9±5.8, 6°74S×154°94E, h44km±42km, mb3.8/8, mb1 4.0/10,mb1mx3.7/51,mbtmp4.1/10,ML2.8/2,MS3.4/5, Ms1 3.4/5,ms1mx3.0/28, Error ellipse: s-maj=54.2km s-min=21.3km az=101.0*

ISC 12 21:36:41.5±0.7**, 6°61S**±0°07×**154°80E**±0°09**, h56**km**, n46, σ0**s**81**/48**, mb4.1**/12**, MS3.3**/3**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.56**	**312**	Pn	**Pn**	**21 37 34.5**	**+0.2**
KRVT	**Keravat (AS076**	**3.59**	**309**	P	**Pn**	**21 37 35.0**	**+0.3**
	4.7nm,0.3s,baz=111,slow=3.3,SNR=9.3						
KRVT				S	**Sn**	**21 38 15.4**	**-0.4**
	24nm,0.3s,baz=226,slow=17,SNR=1.6						
HNR	**Honiara**	**5.81**	**119**	LR	LR	21 40 31.9	
	comp=Z,367nm,19.7s,baz=312,slow=41						
PMG	**Port Moresby**	**8.06**	**249**	P	**Pn**	**21 38 37.2**	**+1.1**
	2.0nm,0.3s,baz=77,slow=8.0,SNR=8.0						
PMG				S	**Sn**	**21 40 06.8**	**+0.9**
	1.6nm,0.3s,baz=75,slow=21,SNR=3.9						
PMG				LR	LR	21 42 00.8	
	comp=Z,251nm,18.2s,baz=52,slow=39						
PMG	**Port Moresby**	**8.06**	**249**		**Pn**	**21 38 36.4**	**+0.3**
PATS	**Pohnpei**	**13.80**	**15**	Pn	**Pn**	**21 39 53.9**	**-0.6**
CTA	**Charters Tower**	**15.76**	**211**	P	**P**	**21 40 22.6**	**-0.4**
	0.3nm,0.3s,baz=39,slow=14,SNR=8.7						
CTAO	**Charters Tower**	**15.76**	**211**	P	**P**	**21 40 21.5**	**-1.6**
CTAO				IAmb	IAmb	21 40 24.8	
	comp=Z,9.9nm,0.8s						
DZM	**Mont Dzumac**	**19.05**	**145**	P	**P**	**21 40 59.9**	**+0.6**
WR0	**Warramunga Arr**	**23.73**	**234**	P	**P**	**21 41 47.6**	**-1.2**
WR0				IAmb	IAmb	21 41 49.5	
	comp=Z,13nm,1.0s						
WB0	**Warramunga Arr**	**23.75**	**235**	P	**P**	**21 41 47.9**	**-1.0**
WB0				IAmb	IAmb	21 41 49.6	
	comp=Z,17nm,1.1s						
WRA	**Warramunga Arr**	**23.88**	**234**	P	**P**	**21 41 49.4**	**-0.8**
	comp=Z,7.0nm,0.8s,baz=56,slow=9.2,SNR=40						
WRA				PcP	**PcP**	**21 45 32.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=55,slow=2.5,SNR=3.3						
WRA				LR	LR	21 50 50.6	
	comp=Z,96nm,20.6s,baz=30,slow=36						
WRA	**Warramunga Arr**	**23.88**	**234**	P	**P**	**21 41 48.3**	**-1.9**
AS31	**Alice Springs**	**26.29**	**228**	P	**P**	**21 42 11.2**	**-0.9**
ASAR	**Alice Springs**	**26.29**	**228**	P	**P**	**21 42 11.3**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=68,slow=8.7,SNR=17						
ASAR	**Alice Springs**	**26.29**	**228**	P	**P**	**21 42 11.2**	**-0.8**
STKA	**Stephens Creek**	**28.01**	**204**	P	**P**	**21 42 26.3**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=26,slow=15,SNR=2.2						
STKA	**Stephens Creek**	**28.01**	**204**	P	**P**	**21 42 26.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**30.64**	**245**	P	**P**	**21 42 50.2**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=181,slow=9.3,SNR=6.0						
FITZ				LR	LR	21 55 57.1	
	comp=Z,72nm,19.8s,baz=61,slow=38						
FITZ	**Fitzroy Crossi**	**30.64**	**245**	P	**P**	**21 42 49.9**	**-0.9**
FITZ				IAmb	IAmb	21 43 03.3	
	comp=Z,2.8nm,0.8s						
BKZ	**Black Stump Fm**	**37.86**	**152**	P	**P**	**21 43 53.6**	**+0.6**
CISI	**Cisompet, Garu**	**46.62**	**266**	P	**P**	**21 45 03.8**	**-1.0**
ASAJ	**Asahikawa**	**51.68**	**349**	LR	LR	22 07 32.0	
	comp=Z,20nm,18.9s,baz=170,slow=36						
CMAR	**Chiang Mai Arr**	**60.45**	**295**	P	**P**	**21 46 47.6**	**+1.7**
	comp=Z,0.9nm,0.5s,baz=111,slow=5.2,SNR=9.5						
CMAR	**Chiang Mai Arr**	**60.45**	**295**	P	**P**	**21 46 46.5**	**+0.6**
SONM	**Songino Array**	**68.91**	**327**	P	**P**	**21 47 41.4**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=143,slow=6.6,SNR=3.8						
SONM	**Songino Array**	**68.91**	**327**	P	**P**	**21 47 40.9**	**+0.2**
SHL	**Shillong**	**68.94**	**300**	P	**P**	**21 47 41.4**	**0.0**
LSA	**Lhasa**	**70.90**	**304**	P	**P**	**21 47 53.0**	**-0.8**
LSA				IAmb	IAmb	21 47 55.8	
	comp=Z,4.4nm,0.8s						
TAPN	**Taplejung**	**73.04**	**301**	*e*P	**P**	**21 48 06.9**	**+0.5**
	comp=Z,0.8nm,0.1s						
ODAN	**Odare**	**73.17**	**300**	*e*P	**P**	**21 48 07.7**	**+0.6**
GUN	**Gumba**	**74.76**	**301**	*e*P	**P**	**21 48 17.4**	**+0.9**
	comp=Z,21nm,0.7s						
PKI	**Pulchoki**	**75.06**	**301**	*e*P	**P**	**21 48 18.5**	**+0.3**
	comp=Z,16nm,1.1s						
PKIN	**Phulchoki**	**75.08**	**301**	*e*P	**P**	**21 48 18.4**	**+0.2**
	comp=Z,8.8nm,0.7s						
KKN	**Kakani**	**75.23**	**301**	*e*P	**P**	**21 48 19.3**	**+0.2**
	comp=Z,11nm,0.7s						
DMN	**Daman**	**75.33**	**301**	*e*P	**P**	**21 48 20.5**	**+0.8**
	comp=Z,24nm,0.7s						
GKN	**Gorkha**	**75.84**	**301**	*e*P	**P**	**21 48 23.1**	**+0.6**
	comp=Z,25nm,0.9s						
KOLN	**Koldanda**	**76.66**	**300**	*e*P	**P**	**21 48 27.6**	**+0.4**
	comp=Z,24nm,0.9s						
DANN	**Dangsing**	**76.68**	**301**	*e*P	**P**	**21 48 27.5**	**+0.1**
	comp=Z,15nm,0.7s						
PYUN	**Piuthan**	**77.27**	**301**	*e*P	**P**	**21 48 30.8**	**+0.2**
	comp=Z,19nm,0.8s						
MK31	**Makanchi Array**	**82.99**	**319**	P	**P**	**21 49 01.5**	**+0.7**
MK31				IAmb	IAmb	21 49 02.9	
	comp=Z,2.0nm,1.1s						
MKAR	**Makanchi Array**	**82.99**	**319**	P	**P**	**21 49 01.8**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=100,slow=5.3,SNR=8.2						
MKAR	**Makanchi Array**	**82.99**	**319**	P	**P**	**21 49 01.7**	**+0.9**
ZALV	**Zalesovo Beam**	**83.75**	**326**	P	**P**	**21 49 03.6**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=101,slow=7.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**152.74**	**286**	PKPbc	**PKPbc**	**21 56 33.3**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=70,slow=2.4,SNR=8.6						
TORD	**Torodi Ar. Bea**	**152.74**	**286**	PKPdf	**PKPdf**	**21 56 26.4**	**+0.4**
TORD					**PKPbc**	**21 56 33.2**	**+0.1**

ANF ***12*** *21:39:58.3±0.6, 37°32N×97°53W, h11km±4km, ML6.4/15, Error ellipse: s-maj=2.5km s-min=2.2km az=66.0*
BJI ***12*** *21:39:59.0±0.0, 37°34N×97°16W, h5km, mB5.6/4, mb5.0/5, Ms5.5/1, Ms7 5.2/1*
IDC ***12*** *21:40:00.1±0.4, 37°31N×97°48W, h0km, mb4.4/30, mb1 4.6/40,mb1mx4.5/67,mbtmp4.5/40,ML4.3/9,MS4.3/37, Ms1 4.3/37,ms1mx4.3/41, Error ellipse: s-maj=9.0km s-min=7.7km az=146.0*
NEIC ***12*** *21:40:00.6, 37°27N×97°62W, h5km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.41; Mθθ1.44; Mϕϕ-1.02; Mrθ0.71; Mrϕ1.26; Mθϕ-0.17; Fault plane solution: M₀1.94000×10¹⁶ NP1:φs22.37000°, δ66.23000°, λ-175.33000°. NP2:φs290.48000°, δ85.73000°, λ-23.84000°. Principal axes: T 2.1089, Plg13.0000°, Azm339.0000°; N -0.4000, Plg66.0000°, Azm101.0000°; P -1.7089, Plg20.0000°, Azm244.0000°;*
NEIC ***12*** *21:40:00.6±0.5, 37°27N±0°03×97°62W±0°04, h4km±6km, mb4.7/124, Mwr4.8/74, Mww4.9 Error ellipse: s-maj=4.9km s-min=3.4km az=52.0*
NEIC ***12*** *21:40:00, 37°27N×97°62W, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=0.61; Mθθ2.15; Mϕϕ-1.54; Mrθ1.04; Mrϕ1.67; Mθϕ-1.51; Fault plane solution: M₀3.14000×10¹⁶ NP1:φs29.00000°, δ60.00000°, λ-161.00000°. NP2:φs290.00000°, δ73.00000°, λ-30.00000°. Principal axes: T 2.8625, Plg9.0000°, Azm342.0000°; N 0.4934, Plg55.0000°, Azm84.0000°; P -3.3559, Plg33.0000°, Azm246.0000°;*
GCMT ***12*** *21:40:02.6±0.2, 37°38N±0°01×97°60W±0°01, h22km±1km, MW5.0/113, Moment Tensor Solution. s41,c48; s113,c162; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.69±.13; Mθθ3.12±.13; Mϕϕ-2.43±.11; Mrθ0.32±.17; Mθϕ2.57±.09; Mrϕ-0.30±.17; Best double couple: M₀3.81400×10¹⁶ NP1:φs24.00000°, δ83.00000°, λ-176.00000°. NP2:φs293.00000°, δ86.00000°, λ-7.00000°. Principal axes: T 4.1340, Plg2.0000°, Azm339.0000°; N -0.6390, Plg82.0000°, Azm84.0000°; P -3.4940, Plg8.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 12 21:40:00.6±0.3**, 37°31N**±0°02×**97°57W**±0°03**, h10**km**, n502, σ2s**04**/480**, mb4.6**/51**, MS4.4**/30**, 3C**, **Kansas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN09	**Caldwell North**	**0.18**	**193**		**Pg**	**21 40 03.6**	**-0.8**
KAN09				Sg	**Sg**	**21 40 05.7**	**-1.3**
KAN05	**Bluff City Nor**	**0.31**	**230**		**Pg**	**21 40 05.6**	**-1.2**
KAN05				Sg	**Sg**	**21 40 09.4**	**-1.7**
KAN08	**Anthony NE Sta**	**0.33**	**256**		**Pg**	**21 40 06.0**	**-1.2**
KAN08				Sg	**Sg**	**21 40 10.2**	**-1.4**
KAN12	**Harper NE Stat**	**0.34**	**268**		**Pg**	**21 40 06.4**	**-1.0**
KAN12				Sg	**Sg**	**21 40 10.7**	**-1.2**
KAN10	**Anthony SW Sta**	**0.46**	**246**	Pg	**Pg**	**21 40 08.3**	**-1.2**
KAN10				Sg	**Sg**	**21 40 13.9**	**-1.7**
KAN14	**Manchester OK**	**0.47**	**222**		**Pg**	**21 40 08.5**	**-1.2**
KAN14				Sg	**Sg**	**21 40 14.0**	**-2.1**
GC02	**Grant County #**	**0.51**	**207**		**Pg**	**21 40 09.4**	**-1.1**
CROK	**Carrier**	**0.87**	**203**		**Pg**	**21 40 16.1**	**-1.3**
T35A	**Sooner Cattle**	**0.93**	**115**	Pg	**Pb**	**21 40 18.7**	**-0.2**
QUOK	**Quay**	**1.33**	**148**		**Pb**	**21 40 25.1**	**-0.5**
R32A	**Long Quarter,**	**1.43**	**321**	Pn	**Pn**	**21 40 26.9**	**+0.2**
OK031	**S. Brethren Rd**	**1.48**	**156**		**Pn**	**21 40 27.3**	**+0.1**
U32A	**Winter Ranch,**	**1.48**	**231**	Pn	**Pn**	**21 40 26.5**	**-0.7**
OK029	**Liberty Lake**	**1.51**	**176**		**Pn**	**21 40 27.8**	**0.0**
OK030	**Cody Creek RV**	**1.52**	**155**		**Pb**	**21 40 28.1**	**-0.8**
BCOK	**Bluff Creek, N**	**1.65**	**181**	Pn	**Pn**	**21 40 29.3**	**+0.3**
OK025	**Westminster Rd**	**1.74**	**174**		**Pn**	**21 40 31.1**	**+0.4**
OKCFA	**Oklahoma City**	**1.89**	**177**	Pn	**Pn**	**21 40 33.2**	**+0.3**
OKCSW	**OKLAHOMA CITY**	**1.90**	**177**		**Pn**	**21 40 33.4**	**+0.3**
KSU1	**Kansas State U**	**1.94**	**23**	P	**Pb**	**21 40 35.8**	**-0.2**
	baz=204,SNR=673						
KSU1				Sg	**Sg**	**21 41 02.8**	**-0.2**
	baz=204						
OK011	**Prague**	**1.96**	**158**		**Pn**	**21 40 34.2**	**+0.4**
TUL1	**Leonard**	**2.00**	**134**	P	**Pb**	**21 40 35.6**	**-1.5**
	baz=314,SNR=1000						
TUL1				Sg	**Sg**	**21 41 03.5**	**-1.3**
	baz=314						
TUL1	**Leonard**	**2.00**	**134**	Pn	**Pb**	**21 40 35.5**	**-1.5**
FNO	**Franklin**	**2.05**	**176**	Pn	**Pn**	**21 40 35.4**	**+0.2**
W35A	**Tecumseh**	**2.23**	**165**		**Pn**	**21 40 37.8**	**+0.3**
CBKS	**Cedar Bluff**	**2.28**	**312**	P	**

Z41A S Sn 21 42 28.1 -0.6
baz=317
Z41A Richland Creek 5.62 135 Pn 21 41 25.0 +0.9
SCIA State Center 5.69 35 P Pn 21 41 25.7 +0.5
baz=218,SNR=18
SCIA S Sn 21 42 30.6 +0.1
baz=218
SCIA State Center 5.69 35 Pn 21 41 27.0 +1.9
FVM French Village 5.71 81 Pn 21 41 26.1 +0.7
PBMO Poplar Bluff 5.74 93 Pn 21 41 26.2 +0.4
HBAR Harrisburg 5.84 105 Pn 21 41 27.9 +0.7
SLM Saint Louis 5.94 75 Pn 21 41 29.7 +1.1
ETX02 Prairie Street 5.99 153 Pn 21 41 30.5 +1.3
NATX Nacogdoches 6.03 156 P Pn 21 41 29.0 -0.8
baz=337
NATX S Sn 21 42 37.7 -1.3
baz=337
NATX Nacogdoches 6.03 156 Pn Pn 21 41 29.6 -0.2
X43A Marvell 6.10 115 P Pn 21 41 30.6 -0.1
baz=299
X43A S Sn 21 42 39.4 -1.2
baz=299
LPAR Lepanto 6.10 104 Pn 21 41 31.2 +0.5
Q24A Divide 6.20 288 P Pn 21 41 31.2 -1.2
baz=104,SNR=55
Q24A Divide 6.20 288 Pn 21 41 32.3 -0.1
N41A Harden Midland 6.23 55 Pn 21 41 34.0 +1.4
SDCO Great Sand Dun 6.32 276 P Pn 21 41 33.4 -0.6
baz=92
SDCO Great Sand Dun 6.32 276 Pn Pn 21 41 35.1 +1.0
PENMO Penman 6.42 95 Pn 21 41 37.0 +1.8
ECSD EROS Data Cent 6.46 6 P Pn 21 41 35.5 -0.2
baz=187
ECSD S Sn 21 42 47.5 -1.9
baz=187
ECSD EROS Data Cent 6.46 6 Pn Pn 21 41 35.9 +0.2
K38A Parkersburg 6.48 33 Pn 21 41 36.2 +0.2
435B Jarrell 6.51 180 P Pn 21 41 35.2 -1.2
baz=360,SNR=92
435B Jarrell 6.51 180 Pn 21 41 35.3 -1.2
MET Memphis--Engin 6.55 107 Pn Pn 21 41 36.5 -0.4
S44A Carbondale 6.62 84 Pn 21 41 38.5 +0.6
CPRX Cap Rock 6.69 232 Pn 21 41 38.6 -0.5
HICK Hickman 6.73 94 Pn Pn 21 41 40.3 +1.0
P43A Skaggs, Pawnee 6.73 67 Pn 21 41 40.2 +0.8
L40A Anamosa 6.82 44 Pn Pn 21 41 41.1 +0.6
Q44A Meyer Farm, Va 6.93 74 Pn Pn 21 41 43.0 +0.8
JCT Junction City 7.06 196 P Pn 21 41 42.4 -1.6
baz=14
JCT Junction City 7.06 196 Pn Pn 21 41 42.2 -1.8
W45A Hickory Valley 7.11 105 Pn Pn 21 41 43.7 -0.9
OXF Oxford 7.19 110 P Pn 21 41 44.5 -1.1
baz=295
SUSD Miller 7.20 352 P Pn 21 41 45.8 -0.1
baz=172
SUSD S Sn 21 43 06.0 -1.7
baz=172
SUSD Miller 7.20 352 Pn 21 41 46.1 +0.2
HDIL Hopedale 7.22 61 P Pn 21 41 44.9 -1.2
baz=246
PHWY Pilot Hill 7.30 306 Pn 21 41 47.5 0.0
342A Flagon Creek P 7.34 142 Pn Pn 21 41 48.7 +1.0
S22A 4UR Ranch, Cre 7.37 276 Pn Pn 21 41 49.1 +0.6
I37A Lemond, Waseca 7.41 24 Pn Pn 21 41 48.9 +0.2
N23A Red Feather La 7.43 301 P Pn 21 41 48.9 -0.4
baz=117
HKT Hockley 7.48 168 Pn Pn 21 41 49.0 -0.7
GDL2 Guadalupe Moun 7.56 230 Pn Pn 21 41 51.3 +0.3
ANMO Albuquerque 7.57 254 Pn Pn 21 41 52.4 +1.3
8.9nm,0.3s,baz=67,slow=13,SNR=36
ANMO Pg Pg 21 42 19.3 -6.2
88nm,0.3s,baz=72,slow=18,SNR=13
ANMO Lg Lg 21 43 48.6
41nm,0.3s,baz=89,slow=10,SNR=3.6
ANMO LR LR 21 45 01.8
comp=Z,3μm,20.9s,baz=70,slow=40
ANMO Albuquerque 7.57 254 P Pn 21 41 51.0 -0.1
baz=69
ANMO Albuquerque 7.57 254 Pn Pn 21 41 51.9 +0.8
SMCO Snowmass 7.63 287 Pn 21 41 52.8 +0.6
L42A Oliver, Polo 7.69 50 Pn 21 41 53.0 +0.5
VBMS Vicksburg 7.71 129 P Pn 21 41 53.1 +0.3
baz=313
VBMS Vicksburg 7.71 129 Pn 21 41 53.4 +0.6
USIN University of 7.88 82 Pn 21 41 55.6 +0.3
WVT Waverly 7.91 96 P Pn 21 41 54.3 -1.3
baz=281
WVT Waverly 7.91 96 Pn Pn 21 41 55.1 -0.5
JFWS Jewell Farm 7.92 43 P Pn 21 41 55.8 0.0
baz=227
JFWS Jewell Farm 7.92 43 Pn 21 41 56.1 +0.4
BNM Barren Site 8.01 250 Pn Pn 21 41 57.6 +0.3
Y22D IRIS PASSCAL I 8.26 250 Pn Pn 21 42 01.9 +1.3
RSSD Black Hills 8.39 326 P Pn 21 42 00.9 -1.4
baz=142
RSSD S Sn 21 43 35.6 -1.6
baz=142
RSSD Black Hills 8.39 326 Pn Pn 21 42 02.6 +0.2
M44A Midewin, Midew 8.43 58 Pn Pn 21 42 02.9 +0.2
I40A Norwalk 8.43 37 Pn Pn 21 42 03.3 +0.5
MNTX Cornudas Mount 8.54 231 P Pn 21 42 03.7 -0.5
baz=47
MNTX Cornudas Mount 8.54 231 Pn Pn 21 42 03.7 -0.5
F33A 5 Mile Ranch, 8.58 6 Pn Pn 21 42 04.3 -0.5
RWWY Rawlins 8.64 303 Pn 21 42 06.5 +0.7
SPMN Marine on St. 8.68 23 P Pn 21 42 06.1 -0.1
baz=206
SPMN Marine on St. 8.68 23 Pn Pn 21 42 06.1 -0.1
K22A Casper 8.70 311 P Pn 21 42 05.9 -0.7
baz=125
K22A Casper 8.70 311 Pn Pn 21 42 06.3 -0.3
SFIN Lafayette 8.73 66 P Pn 21 42 05.8 -1.0
baz=253
HQIL Hanson Quary C 8.74 56 Pn Pn 21 42 07.1 +0.1
PV07 Paradox Valley 8.83 281 Pn Pn 21 42 09.8 +1.3
L44A Lake County Fo 8.88 54 P Pn 21 42 08.2 -0.8
baz=240
WCI Wyandotte Cave 8.98 81 P Pn 21 42 09.2 -1.0
baz=267
833A Chaparral WMA, 9.09 190 P Pn 21 42 09.9 -1.9
baz=9.0
TXAR Lajitas Array 9.45 214 Pn Pn 21 42 15.6 -1.2
17nm,0.3s,baz=43,slow=11,SNR=120
TXAR Pg 21 42 50.6
30nm,0.3s,baz=34,slow=16,SNR=9.0
TXAR Lg Lg 21 44 53.0
56nm,0.3s,baz=42,slow=27,SNR=7.8
121A Cookes Peak, D 9.64 243 P Pn 21 42 18.2 -1.4
baz=58
LRAL Lakeview Retre 9.65 113 P Pn 21 42 19.4 0.0
baz=299
E38A The Farm, Brul 10.31 24 Pn 21 42 28.2 -0.3
P49A Miami Univ. Ec 10.33 74 P Pn 21 42 27.1 -1.6
baz=262
SRU San Rafael Swe 10.35 284 Pn 21 42 29.8 +0.6
MDND Maddock 10.64 353 P Pn 21 42 29.9 -3.1
baz=171
BRAL Brewton 10.64 122 Pn 21 42 33.3 +0.2
PDAR Pinedale Array 10.68 304 Pn Pn 21 42 33.5 -0.3
5.8nm,0.3s,baz=125,slow=12,SNR=102
PDAR Pg 21 43 12.5
13nm,0.3s,baz=114,slow=16,SNR=6.2
PDAR Lg Lg 21 45 33.6
19nm,0.3s,baz=100,slow=33,SNR=7.7
PDAR LR LR 21 47 05.4
comp=Z,3μm,18.2s,baz=120,slow=40
BW06 Boulder Array 10.68 304 P Pn 21 42 31.5 -2.3
baz=117
CPCT Cooper Cave 10.68 96 Pn Pn 21 42 33.4 -0.3
COWI Conover 10.80 33 Pn 21 42 35.2 -0.1
I45A Fountain 10.91 48 Pn 21 42 36.8 +0.1
AGMN Agassiz Nation 11.05 6 P Pn 21 42 36.9 -1.7
baz=187
TKL Tuckaleechee C 11.23 94 Pn Pn 21 42 40.3 -0.9
8.7nm,0.3s,baz=298,slow=9.0,SNR=60
TKL Lg Lg 21 45 45.2
31nm,0.3s,baz=155,slow=16,SNR=5.2
TKL LR LR 21 47 11.9
comp=Z,1μm,18.8s,baz=283,slow=39
TZTN Tazewell 11.25 90 P Pn 21 42 39.1 -2.3
baz=278
TZTN Tazewell 11.25 90 Pn Pn 21 42 41.9 +0.5
319A Douglas 11.34 242 Pn Pn 21 42 42.5 -0.3
LAO LASA Array 11.36 328 P Pn 21 42 40.2 -2.7
baz=143
LAO LASA Array 11.36 328 Pn Pn 21 42 41.8 -1.1
EYMN Ely 11.53 21 P Pn 21 42 42.6 -2.5
baz=205
P51A Williamsport 11.59 75 P Pn 21 42 42.6 -3.4
baz=264
ACSO Alum Creek Sta 11.76 71 P Pn 21 42 45.7 -2.5
baz=260
RLMT Red Lodge 11.76 315 P Pn 21 42 46.6 -1.9
baz=128
AAM Ann Arbor 11.80 61 P Pn 21 42 47.4 -1.5
baz=250
451A Vernon 11.87 121 Pn 21 42 50.2 +0.4
TUC Tucson 11.95 249 P Pn 21 42 48.2 -2.8
baz=62
TUC Tucson 11.95 249 Pn Pn 21 42 51.3 +0.2
T53A Wise 12.01 87 P Pn 21 42 50.4 -1.4
baz=276
O51A Pataskala 12.03 72 P Pn 21 42 49.7 -2.3
baz=261
H17A Grant Village 12.12 310 P Pn 21 42 50.1 -3.3
baz=122
GOGA Godfrey 12.15 104 P Pn 21 42 50.8 -2.9
baz=292
Q52A Bidwell 12.16 78 P Pn 21 42 50.3 -3.6
baz=267
S53A Williamson 12.28 84 P Pn 21 42 52.6 -2.9
baz=273
GLMI Grayling 12.31 48 P Pn 21 42 53.1 -2.9
baz=237
P52A Corning 12.32 74 P Pn 21 42 53.3 -2.7
baz=264
HPIG 12.41 216 Pn Pn 21 42 57.2 -0.2
M51A Elyria 12.57 67 P Pn 21 42 57.0 -2.5
baz=256
Q53A Leroy 12.74 78 P Pn 21 42 59.2 -2.6
baz=268
P53A Whipple 12.88 75 P Pn 21 43 01.2 -2.5
baz=265
S54A Dingess, Beckl 12.91 83 P Pn 21 43 01.6 -2.6
baz=273
ULM Lac du Bonnet 12.99 5 Pn Pn 21 43 01.4 -3.8
13nm,0.3s,baz=182,slow=12,SNR=68
ULM Sn Sn 21 45 22.6 -7.0
15nm,0.3s,baz=240,slow=15,SNR=3.4
ULM Lg Lg 21 46 43.4
8.6nm,0.3s,baz=88,slow=22,SNR=4.0
ULM LR LR 21 48 14.9
comp=Z,2μm,18.3s,baz=190,slow=38
553A Crawfordville 13.03 119 Pn Pn 21 43 05.8 +0.1
Q54A Coxs Mills 13.28 78 P Pn 21 43 06.6 -2.6
baz=268
KMSC Kings Mountain 13.29 94 P Pn 21 43 06.9 -2.3
baz=284
T55A Pulaski 13.38 86 P Pn 21 43 08.9 -1.6
baz=276
BOZ Bozeman (W) 13.39 313 P Pn 21 43 09.4 -1.4
baz=124
S55A Lewisburg 13.56 83 P Pn 21 43 10.5 -2.4
baz=273
P54A Burton 13.59 75 P Pn 21 43 10.5 -2.9
baz=266
214A Organ Pipe Nat 13.63 251 P Pn 21 43 12.4 -1.6
baz=63
BLA Blacksburg 13.66 85 P Pn 21 43 11.7 -2.7
baz=276
X56A White Oak 13.70 97 P Pn 21 43 11.1 -3.7
baz=286
M53A WI Miller and 13.70 67 P Pn 21 43 11.5 -3.4
baz=258
O54A Avella 13.72 73 P Pn 21 43 11.4 -3.7
baz=263
R55A Marlinton 13.84 81 P Pn 21 43 13.7 -3.1
baz=271
W56A Indian Trail 13.89 94 P Pn 21 43 14.3 -3.1
baz=284
EGMT Eagleton 13.95 324 P Pn 21 43 16.2 -2.0
baz=136
EGMT Eagleton 13.95 324 Pn Pn 21 43 17.3 -1.0
T56A Rocky Mt 13.99 86 P Pn 21 43 16.3 -2.5
baz=276
P55A Reedsville 14.09 76 P Pn 21 43 16.8 -3.4
baz=266
L53A Girard 14.12 65 P Pn 21 43 16.8 -3.7
baz=256
N54A Moraine State 14.12 70 P Pn 21 43 17.2 -3.5
baz=261
I51A Listowel 14.14 58 P Pn 21 43 16.9 -3.9
baz=248
HRY Holter Researc 14.14 316 Pn 21 43 19.3 -1.7
ELK Elko 14.16 289 Pn Pn 21 43 24.6 +3.3
0.1nm,0.3s,baz=87,slow=13,SNR=11
ELK Lg Lg 21 47 28.5
0.3nm,0.3s,baz=344,slow=23,SNR=4.7
ELK LR LR 21 49 35.4
comp=Z,578nm,20.0s,baz=94,slow=40
HLID Hailey 14.26 301 P Pn 21 43 20.1 -2.6
baz=110
HLID Hailey 14.26 301 Pn Pn 21 43 22.2 -0.4
R11A Troy Canyon, C 14.28 280 P Pn 21 43 23.9 +0.9
baz=89
S56A Natural Bridge 14.30 83 P Pn 21 43 20.3 -2.9
baz=274
Z57A Bowman 14.34 101 P Pn 21 43 20.7 -2.9
baz=291
Y57A Sumter 14.35 98 Pn Pn 21 43 21.3 -2.4
W57A Gilead 14.35 93 P Pn 21 43 20.2 -3.6
baz=284
ERPA Erie 14.35 65 P Pn 21 43 20.4 -3.4
baz=256
V57A Coltrane Farms 14.37 90 P Pn 21 43 20.5 -3.5
baz=281
R56A Bull Pasture M 14.40 80 P Pn 21 43 20.2 -4.3
baz=271
X57A Johnson Farm, 14.45 96 P Pn 21 43 21.2 -3.9
baz=286
M54A Oil Creek Stat 14.46 68 P Pn 21 43 21.8 -3.5
baz=259
RCRC Randolf Colleg 14.55 84 Pn 21 43 24.9 -1.6
Q56A Snyder Ridge, 14.56 78 P Pn 21 43 22.5 -4.2
baz=269
T57A Hurt 14.61 86 P Pn 21 43 24.5 -2.8
baz=277
U57A Blanch 14.62 88 P Pn 21 43 23.6 -3.9
baz=279
GLA Glamis 14.74 258 P Pn 21 43 26.6 -2.5
baz=68
S57A Dark Hollow, R 14.78 83 P Pn 21 43 25.7 -3.9
baz=274
P56A Dayton Farm, R 14.85 76 P Pn 21 43 26.6 -3.9
baz=267
TUQ Turquoise Moun 14.91 268 P Pn 21 43 28.7 -2.7
baz=78
TPNV Topopah Spring 14.91 274 P Pn 21 43 27.9 -3.6
baz=83
V58A Windy Hill, Pi 14.91 90 P Pn 21 43 27.6 -3.8
baz=281
V58A Windy Hill, Pi 14.91 90 Pn Pn 21 43 28.0 -3.4
O56A Blue Knob Stat 15.11 73 P Pn 21 43 29.4 -4.7
baz=265
ZAIG Zacatecas 15.12 198 Pn Pn 21 43 34.0 -0.6
ZAIG IAmb IAmb 21 43 48.6
comp=Z,26nm,1.2s
Q57A Strasburg 15.17 78 P Pn 21 43 31.4 -3.5
baz=269
MFID Camas Ranch 15.18 299 Pn Pn 21 43 34.9 -0.2
BELC Belle Mtn. Jos 15.34 263 P Pn 21 43 33.8 -3.5
baz=72
N56A West Decatur 15.39 71 P Pn 21 43 33.2 -4.5
baz=263
MSO Missoula 15.41 313 P Pn 21 43 33.7 -4.4
baz=122
MSO Missoula 15.41 313 Pn Pn 21 43 35.7 -2.4
MSO IAmb IAmb 21 43 54.7
comp=Z,36nm,1.4s
P57A Homestead Farm 15.49 76 Pn Pn 21 43 36.5 -2.6
P57A IAmb IAmb 21 43 44.7
comp=Z,32nm,0.9s
R58A Rapidan 15.50 80 P Pn 21 43 35.7 -3.5
baz=272
M56A Emporium 15.55 68 P Pn 21 43 35.1 -4.8
baz=261
TPH Tonopah 15.58 279 Pn 21 43 40.4 -0.1
W59A Clinton 15.58 92 P Pn 21 43 36.4 -3.8
baz=283
R58B Mineral 15.62 82 Pn 21 43 39.8 -0.9
R58B IAmb IAmb 21 43 46.4
comp=Z,36nm,1.1s
V59A Middlesex 15.62 90 P Pn 21 43 36.4 -4.3
baz=281
SADO Sadowa 15.76 56 Pn Pn 21 43 38.3 -4.2
comp=Z,4.0nm,0.3s,baz=264,slow=12,SNR=13
SADO Sn Sn 21 46 28.1 -8.9
comp=Z,5.4nm,0.3s,baz=261,slow=15,SNR=1.9
SADO Lg Lg 21 48 09.8
comp=Z,6.7nm,0.3s,baz=189,slow=22,SNR=9.9
SADO LR LR 21 49 52.8
comp=Z,3μm,18.5s,baz=265,slow=38
O57A Amberson 15.82 73 P Pn 21 43 38.8 -4.6
baz=266
PFO Pinyon Flats O 15.83 262 Pn P 21 43 46.2 -1.3
comp=Z,0.2nm,0.3s,baz=44,slow=11,SNR=8.2
PFO Pg 21 44 51.0
comp=Z,0.1nm,0.3s,baz=76,slow=19,SNR=2.0
PFO Lg Lg 21 48 14.9
comp=Z,0.2nm,0.3s,baz=161,slow=18,SNR=3.8
PFO LR LR 21 50 58.8
comp=Z,250nm,20.1s,baz=75,slow=41
PFO Pinyon Flats O 15.83 262 Pn Pn 21 43 44.3 +0.7
U59A Littleton 15.87 87 P Pn 21 43 39.7 -4.3
baz=279
PLID Pearl Lake 15.88 305 Pn Pn 21 43 44.3 0.0
N57A Milroy 15.93 71 P Pn 21 43 40.3 -4.4
baz=264
T59A Double "B" Far 15.97 85 P Pn 21 43 41.1 -4.1
baz=277
ESJX Sierra Juarez 16.02 256 Pn 21 43 46.2 +0.2
ESJX IAmb IAmb 21 43 53.5
comp=Z,63nm,1.5s
P58A Pank, Wackersv 16.04 76 P Pn 21 43 40.9 -5.2
baz=268
H53A Bobcaygeon 16.06 57 P Pn 21 43 41.0 -5.3
baz=250
JTMT Jette 16.11 316 Pn Pn 21 43 46.0 -1.2
L56A Greenwood 16.12 66 P Pn 21 43 43.5 -3.8
baz=259
NV11 Mina Array Sit 16.30 280 Pn Pn 21 43 50.2 +0.6
TKX Tecate 16.31 259 P P 21 43 51.4 -1.3
TKX IAmb IAmb 21 43 56.9
comp=Z,124nm,1.3s
M57A Sunshine Farm, 16.32 69 P Pn 21 43 46.2 -3.5
baz=262
BAR Barrett 16.32 259 Pn Pn 21 43 50.8 +1.0
BAR IAmb IAmb 21 43 58.1
comp=Z,52nm,1.1s
O58A Lewisberry 16.36 74 P Pn 21 43 46.6 -3.7
baz=267
NVAR Mina Array Bea 16.41 280 Pn P 21 43 53.1 -0.9
comp=Z,0.1nm,0.3s,baz=89,slow=11,SNR=25
NVAR Lg Lg 21 48 37.6
comp=Z,0.2nm,0.3s,baz=87,slow=33,SNR=1.9
NVAR LR LR 21 49 48.6
comp=Z,258nm,20.1s,baz=86,slow=36
CBX Cerro Bola 16.45 258 P 21 43 52.9 -1.4
109C Camp Elliot, M 16.58 260 IAmb IAmb 21 44 00.8
comp=Z,54nm,1.2s
S60A Water View 16.60 82 P Pn 21 43 49.2 -4.1
baz=275
L57A Andrews Acres 16.62 67 P Pn 21 43 50.2 -3.4
baz=260
BMO Blue Mountains 16.66 303 Pn 21 43 53.5 -0.6
BMO IAmb IAmb 21 43 59.7
comp=Z,49nm,1.3s
G54A Lake Saint Pet 16.68 55 P Pn 21 43 49.8 -4.5
baz=248
WALA Waterton Lakes 16.69 320 Pn Pn 21 43 52.8 -1.8
WALA IAmb IAmb 21 44 01.4
comp=Z,76nm,1.8s
M58A Price's Panora 16.82 70 P Pn 21 43 52.5 -3.6
baz=263
J56A Wolcott 16.87 63 P Pn 21 43 53.5 -3.2
baz=256
ISA Isabella, Lake 16.89 271 Pn 21 43 57.9 +0.7
ISA IAmb IAmb 21 44 05.0
comp=Z,46nm,1.1s
ALGO Algonquin Park 16.92 53 P Pn 21 43 53.6 -3.8
baz=246
V61A Roper 16.94 89 P Pn 21 43 53.7 -3.9
baz=281
K57A Scipio Center 17.00 65 P Pn 21 43 53.9 -4.4
baz=258
LPIG La Paz 17.10 223 P P 21 44 03.2 +1.7
comp=Z,2.5nm,0.3s,baz=319,slow=5.0,SNR=5.0
LPIG LR LR 21 50 13.9
comp=Z,764nm,18.3s,baz=38,slow=36
PLVO Plevna 17.22 57 Pn Pn 21 43 57.2 -4.0
PLVO IAmb IAmb 21 44 10.8
comp=Z,154nm,1.8s
SLBS Sierra La Lagu 17.24 222 P P 21 44 03.4 +0.2
BINY Binghamton 17.29 67 Pn Pn 21 43 59.2 -2.7
BINY IAmb IAmb 21 44 04.9
comp=Z,57nm,1.1s
N59A State Game Lan 17.29 71 P Pn 21 43 59.5 -2.6
baz=265
P60A Greenville 17.33 75 IAmb IAmb 21 44 05.3
comp=Z,53nm,1.2s
L58A Harry Jones Me 17.36 67 P Pn 21 43 59.8 -3.1
baz=261
PNTR Pine Nut 17.41 283 IAmb IAmb 21 44 10.3
comp=Z,90nm,1.7s
VCNR Virginia City 17.44 283 IAmb IAmb 21 44 10.9
comp=Z,62nm,1.6s
PSUB Penn St. - Bra 17.48 75 IAmb IAmb 21 44 06.8
comp=Z,77nm,1.2s
J57A Williamstown 17.51 63 P Pn 21 44 01.1 -3.6
baz=257
LUPA Lehigh Univers 17.57 72 IAmb IAmb 21 44 08.0
comp=Z,106nm,1.3s
M59A Waymart 17.61 69 P Pn 21 44 02.5 -3.5
baz=263
K58A Earlville 17.63 65 P Pn 21 44 01.8 -4.5
baz=259
MOIG Morelia 17.85 191 Pn 21 44 09.1 -0.2
I57A Carthage 17.88 61 P Pn 21 44 05.6 -3.6
baz=256
L59A Walton 17.98 67 P Pn 21 44 06.8 -3.8
baz=262
L59A Walton 17.98 67 Pn 21 44 09.0 -1.6
P61A Hammonton 17.98 75 P Pn 21 44 07.8 -2.7
baz=270
NEW Newport 18.00 314 P P 21 44 11.5 +0.2
comp=Z,0.4nm,0.3s,baz=121,slow=12,SNR=13
NEW Lg Lg 21 49 22.8
comp=Z,0.4nm,0.3s,baz=338,slow=2.7,SNR=3.5
NEW LR LR 21 51 37.9
comp=Z,1μm,19.4s,baz=117,slow=39
J58A Remsen 18.01 63 P Pn 21 44 07.5 -3.4
baz=258
MOD Modoc Plateau 18.09 292 IAmb IAmb 21 44 29.6
comp=Z,49nm,1.4s
M60A Port Jervis 18.19 70 P Pn 21 44 10.6 -2.5
baz=265
H57A Richville 18.20 60 P Pn 21 44 09.7 -3.5
baz=254
K59A Cooperstown 18.21 65 P Pn 21 44 08.8 -4.6
baz=260
I58A Old Forge 18.30 63 P Pn 21 44 11.2 -3.3
baz=257
D08A Wollman Farm, 18.53 308 IAmb IAmb 21 44 19.1
comp=Z,47nm,1.6s
J59A Piesco 18.59 64 P P 21 44 13.4 -4.3
baz=258
PMPB Monarch Peak 18.64 274 IAmb IAmb 21 44 26.1
comp=Z,77nm,0.9s
K05A Summer Lake 18.64 294 IAmb IAmb 21 44 32.3
comp=Z,54nm,1.3s
G57A Newington 18.65 58 P P 21 44 14.2 -4.2
baz=253
PAL Palisades 18.70 71 P P 21 44 15.5 -3.5
baz=266
PAL Palisades 18.70 71 IAmb IAmb 21 44 20.3
comp=Z,46nm,0.9s
LONY Lake Ozonia 18.80 60 P P 21 44 16.3 -3.8
baz=255
LONY Lake Ozonia 18.80 60 IAmb IAmb 21 44 21.6
comp=Z,39nm,1.1s
M61A Granite Spring 18.83 70 P P 21 44 16.4 -4.0
baz=266
TEIG Tepich 18.85 152 P P 21 44 20.3 -0.5
PINE Pine Mountain 18.87 297 IAmb IAmb 21 44 26.2
comp=Z,28nm,1.0s
ORV Oroville 18.87 284 Pn 21 44 21.9 +0.5
K60A Five Rivers En 18.89 66 P P 21 44 18.3 -2.7
baz=262
NCB Newcomb 18.89 62 IAmb IAmb 21 44 21.3

comp=Z,91nm,1.5s
E07A Sunnyside 18.93 306 P P 21 44 20.7 -0.8
D55A Sainte-Anne-du 18.98 52 P P 21 44 19.5 -2.5
baz=247
H58A Gabriels 19.02 61 P P 21 44 19.8 -2.8
baz=256
F57A Harrington 19.06 56 P P 21 44 19.6 -3.4
baz=252
SAO San Andreas Ge 19.06 276 P Pn 21 44 23.9 +0.1
TRY Troy 19.06 66 P P 21 44 21.6 -1.4
TRY IAmb IAmb 21 44 23.2
comp=Z,67nm,1.2s
L61A Hillsdale 1, H 19.07 68 P P 21 44 19.0 -4.1
baz=263
KSCT Kent School, K 19.08 69 IAmb IAmb 21 44 25.6
comp=Z,55nm,0.7s
E56A St. Veronique 19.08 54 P P 21 44 20.4 -2.8
baz=249
I59A Olmsteadville 19.10 63 P P 21 44 20.5 -2.9
baz=258
O03E Paynes Creek 19.11 286 P P 21 44 20.1 -3.5
baz=91
ACCN Adirondack Com 19.17 64 P P 21 44 22.8 -1.4
G58A Ormstown 19.30 59 P P 21 44 22.8 -2.7
baz=254
J60A Lant Hill Farm 19.32 65 P P 21 44 23.3 -2.5
baz=260
K61A Williamstown 19.35 66 P P 21 44 24.8 -1.3
baz=262
H59A Cadyville 19.42 60 P P 21 44 24.6 -2.3
baz=256
D56A ZEC Mazanza, M 19.45 53 P P 21 44 25.0 -2.1
baz=248
M62A Hamden 19.50 70 P P 21 44 26.5 -1.2
baz=266
I60A Shoreham 19.52 63 P P 21 44 25.0 -3.0
baz=259
E57A Chemin Saint G 19.61 55 P P 21 44 27.5 -1.5
baz=251
WDC Whiskeytown Da 19.68 287 P P 21 44 28.5 -1.2
TLIG Tlapa 19.69 183 P P 21 44 29.1 -1.0
TLIG IAmb IAmb 21 44 33.0
comp=Z,74nm,1.5s
LTY Liberty 19.71 308 IAmb IAmb 21 44 34.2
comp=Z,52nm,1.4s
L61B Northampton 19.75 67 P P 21 44 28.7 -1.8
baz=263
YBH Yreka Blue Hor 19.86 291 P Pn 21 44 35.2 +1.7
comp=Z,0.5nm,0.3s,baz=95,slow=4.9,SNR=36
YBH LR LR 21 53 24.1
comp=Z,481nm,18.8s,baz=94,slow=40
YBH Yreka Blue Hor 19.86 291 IAmb IAmb 21 44 37.2
comp=Z,44nm,1.0s
J61A Chester 19.96 65 P P 21 44 30.3 -2.5
baz=261
QUA2 Belchertown 19.97 68 IAmb IAmb 21 44 35.3
comp=Z,92nm,1.6s
VT1 Waterbury 20.00 62 IAmb IAmb 21 44 34.2
comp=Z,46nm,1.1s
H60A Morristown 20.09 61 P P 21 44 31.3 -2.9
baz=257
K62A Royalston 20.10 67 P P 21 44 32.4 -1.9
baz=263
K62A Royalston 20.10 67 IAmb IAmb 21 44 37.6
comp=Z,26nm,0.9s
HUMO Hull Mountain 20.13 293 P 21 44 34.0 -0.7
E58A La Victoria 20.17 56 P P 21 44 31.8 -3.3
baz=252
HNH Hanover 20.22 64 IAmb IAmb 21 44 37.2
comp=Z,95nm,1.7s
CMIG Matias Romero 20.28 173 P P 21 44 36.0 -0.4
comp=Z,26nm,1.0s,baz=346,slow=8.7,SNR=29
CMIG LR LR 21 55 44.2
comp=Z,401nm,18.1s,baz=336,slow=47
F04A Amboy 20.41 303 P P 21 44 38.0 +0.3
F04A IAmb IAmb 21 44 41.6
comp=Z,72nm,1.3s
D05A Enumclaw 20.52 306 IAmb IAmb 21 44 54.5
comp=Z,85nm,1.3s
BRYW Bryant College 20.54 69 IAmb IAmb 21 44 41.9
comp=Z,103nm,1.6s
LBNH Lisbon 20.57 62 P P 21 44 37.2 -2.2
baz=259
LBNH Lisbon 20.57 62 IAmb IAmb 21 44 41.5
comp=Z,53nm,1.2s
HRV Adam Dziewonsk 20.58 67 P P 21 44 40.1 +0.6
HRV IAmb IAmb 21 44 45.9
comp=Z,38nm,1.0s
KHMM Horse Mountain 20.59 288 P 21 44 40.7 +0.9
KHMM IAmb IAmb 21 44 44.4
comp=Z,37nm,1.3s
WES Weston 20.74 68 IAmb IAmb 21 44 46.4
comp=Z,36nm,1.3s
F60A Warwick 20.94 58 P P 21 44 42.1 -1.3
baz=255
B05A Bryant 20.98 309 P P 21 44 42.8 -1.0
baz=113
H62A Milan 21.17 62 P P 21 44 46.3 +0.4
PETF Flores 21.42 159 P P 21 44 48.6 -0.1
PETF IAmb IAmb 21 44 54.4
comp=Z,51nm,0.9s
I63A Otisfield 21.49 63 P P 21 44 49.8 +0.5
CCIG Comitan 21.49 166 P P 21 44 49.9 +0.2
F61A St Evariste 21.59 58 P P 21 44 47.5 -2.9
baz=256
D60A Saint Jean D'O 21.88 56 P P 21 44 50.7 -2.8
baz=254
WVL Waterville 22.23 62 IAmb IAmb 21 45 02.9
comp=Z,48nm,1.0s
PKME Peaks-Kenny Pk 22.60 61 P P 21 45 01.3 +0.1
RTAL Retalhuleu 23.29 165 P P 21 45 08.2 -0.3
ESQI Esquipulas 23.81 160 P P 21 45 13.9 +0.1
TGUH Tegucigalpa,Un 24.91 156 P P 21 45 24.8 +0.8
BBB Bella Bella 26.05 315 LR LR 21 57 22.5
comp=Z,244nm,20.0s,baz=120,slow=40
SCHQ Schefferville 27.28 40 P P 21 45 45.5 +0.6
comp=Z,8.4nm,0.8s,baz=244,slow=10,SNR=4.5
SCHQ Lg Lg 21 54 09.5
comp=Z,33nm,0.8s,baz=167,slow=19,SNR=5.2
SCHQ LR LR 21 56 49.8
comp=Z,1μm,19.4s,baz=260,slow=37
YKA Yellowknife Ar 27.31 343 P P 21 45 46.1 +0.9
comp=Z,14nm,1.1s,baz=134,slow=7.7,SNR=15
YKA Lg Lg 21 54 31.3
comp=Z,22nm,1.1s,baz=142,slow=29,SNR=4.3
YKA LR LR 21 57 03.1
comp=Z,1μm,21.2s,baz=0.0,slow=37
ACON Acoyapa 27.58 153 P P 21 45 48.2 +0.3
ACON IAmb IAmb 21 45 51.0
comp=Z,32nm,1.4s
JTS Las Juntas de 29.21 154 P P 21 46 02.4 0.0
comp=Z,3.4nm,0.3s,baz=62,slow=17,SNR=6.5
JTS Las Juntas de 29.21 154 IAmb IAmb 21 46 18.3
comp=Z,27nm,1.8s
DLBC Dease Lake 29.87 325 P P 21 46 09.1 +1.1
comp=Z,6.5nm,0.8s,baz=118,slow=5.4,SNR=8.5
DLBC Lg Lg 21 55 45.4
comp=Z,7.2nm,1.2s,baz=239,slow=23,SNR=4.2
DLBC LR LR 21 58 60.0
comp=Z,1μm,19.7s,baz=114,slow=38
DLBC Dease Lake 29.87 325 P P 21 46 09.5 +1.5
DLBC IAmb IAmb 21 46 15.2
comp=Z,10.0nm,0.9s
FRB Frobisher Bay 31.72 24 P P 21 46 24.5 +0.4
comp=Z,5.2nm,0.5s,baz=210,slow=12,SNR=5.4
FRB LR LR 21 57 42.1
comp=Z,624nm,18.4s,baz=227,slow=34
EPYK Eagle Plains 36.72 335 IAmb IAmb 21 47 15.4
comp=Z,20nm,1.5s
INK Inuvik 36.85 339 P P 21 47 09.4 +0.9
comp=Z,6.5nm,1.1s,baz=134,slow=5.3,SNR=7.9
INK Inuvik 36.85 339 IAmb IAmb 21 47 13.1
comp=Z,25nm,1.6s
SDV Santo Domingo 37.34 132 P P 21 47 15.1 +1.5
comp=Z,8.9nm,0.6s,baz=338,slow=6.1,SNR=9.0
SDV Santo Domingo 37.34 132 P P 21 47 15.0 +1.5
SDV IAmb IAmb 21 47 16.8
comp=Z,11nm,0.7s
SDV Santo Domingo 37.34 132 eP P 21 47 15.5 +1.9
RES Resolute Bay 37.48 1 P P 21 47 14.1 +0.2
K27K Chicken 37.60 330 IAmb IAmb 21 47 30.9
comp=Z,12nm,1.3s
ROSC El Rosal 38.69 141 LR LR 22 07 51.1
comp=Z,236nm,18.3s,baz=46,slow=43
IL31 39.82 330 P P 21 47 34.6 +1.0
IL31 IAmb IAmb 21 47 42.6
comp=Z,14nm,0.9s
ILAR Eielson Array 39.82 330 P P 21 47 35.1 +1.5
comp=Z,11nm,0.7s,baz=109,slow=7.1,SNR=54
ILAR LR LR 22 05 36.6
comp=Z,617nm,19.8s,baz=114,slow=39
ILAR Eielson Array 39.82 330 P P 21 47 34.5 +0.8
CCB Clear Creek Bu 40.15 329 IAmb IAmb 21 47 40.6
comp=Z,22nm,1.4s
POKR Poker Flat Res 40.15 330 IAmb IAmb 21 47 51.3
comp=Z,14nm,1.4s
MDM Murphy Dome 40.42 329 P P 21 47 39.6 +0.9
MDM IAmb IAmb 21 47 49.1
comp=Z,9.3nm,0.9s
KTH Kantishna Hill 41.17 327 IAmb IAmb 21 47 52.8
comp=Z,31nm,1.4s
CZSB Cruzeiro do Su 50.48 147 eP P 21 49 01.0 +2.2
ETMB Extrema 55.33 141 eP P 21 49 33.6 -1.1
MALB Monte Alegre 55.91 124 eP P 21 49 39.5 +0.6
ITTB Itaituba 56.86 127 eP P 21 49 45.6 0.0
SPA0 Spitsbergen Ar 58.41 13 eP P 21 49 56.6 +0.8
SPITS Spitsbergen Ar 58.41 13 P P 21 49 56.5 +0.8
comp=Z,3.8nm,0.7s,baz=0.0,slow=1.7,SNR=13
LPAZ La Paz 60.09 147 P P 21 50 09.9 +1.1
comp=Z,4.3nm,0.5s,baz=330,slow=4.2,SNR=16
LPAZ LR LR 22 20 33.7
comp=Z,82nm,18.1s,baz=315,slow=40
LPAZ La Paz 60.09 147 eP P 21 50 09.0 +0.2
TAOE Nuku Hiva Isla 60.80 230 eLR LR 22 08 07.2
comp=Z,250nm,23.2s
VILB Vilhena 61.10 137 eP P 21 50 16.7 +1.7
CLDB Colider 61.90 132 eP P 21 50 20.4 -0.1
PRPB Parauapebas 62.06 124 eP P 21 50 22.6 +1.0
PB11 IPOC Station P 62.57 150 P P 21 50 25.4 +0.5
ESK Eskdalemuir 62.58 40 P P 21 50 25.0 +0.5
EKA Eskdalemuir Ar 62.59 40 P P 21 50 24.4 -0.3
comp=Z,2.1nm,0.5s,baz=293,slow=6.4,SNR=14
PTLB Pontes e Lacer 63.73 138 eP P 21 50 32.9 +0.3
STEI Steigen 63.77 23 eP P 21 50 33.0 +0.9
TRO Tromso 63.84 20 eP P 21 50 32.9 +0.2
MOL Molde 63.98 30 eP P 21 50 33.7 0.0
HYA Hoyanger 64.15 32 eP P 21 50 35.3 +0.5
BER Bergen 64.19 33 eP P 21 50 35.7 +0.7
HAMF Hammerfest 64.46 18 eP P 21 50 37.0 +0.3
NSS Namsos 64.60 27 eP P 21 50 38.1 +0.4
KTK1 Kautokeino 65.42 20 eP P 21 50 43.9 +0.9
LVC Limon Verde 65.43 151 eP P 21 50 44.3 +0.3
SMTB Santa Maria do 65.52 124 eP P 21 50 46.5 +2.1
ARA0 ARCESS Array S 65.67 19 eP P 21 50 45.4 +0.8
ARCES ARCESS Array B 65.67 19 P P 21 50 44.8 +0.2
comp=Z,4.9nm,0.5s,baz=315,slow=6.3,SNR=28
ARCES LR LR 22 19 56.6
comp=Z,209nm,19.2s,baz=300,slow=36
NOA NORSAR Array B 66.28 30 P P 21 50 49.1 +0.4
comp=Z,1.3nm,0.8s,baz=303,slow=6.7,SNR=2.7
NOA LR LR 22 18 17.9
comp=Z,178nm,19.2s,baz=290,slow=35
NC602 NORSAR Array S 66.58 30 eP P 21 50 51.2 +0.6
PB14 IPOC Station P 66.70 153 P P 21 50 53.2 +1.1
PEXB Peixe 67.48 127 eP P 21 50 58.8 +2.0
HFS Hagfors 67.80 30 P P 21 50 59.1 +0.7
comp=Z,1.4nm,0.5s,baz=338,slow=3.4,SNR=1.6
ARAG Araguaiana, MT 68.07 132 eP P 21 51 01.5 +0.9
PETK Petropavlovsk- 68.94 321 P P 21 51 06.1 +0.5
comp=Z,2.4nm,0.8s,baz=35,slow=5.3,SNR=3.7
PETK LR LR 22 23 08.6
comp=Z,168nm,19.8s,baz=64,slow=38
MEM Membach 69.76 41 P P 21 51 11.3 +0.6
ESDC Sonseca Array 69.81 55 P P 21 51 12.3 +1.0
comp=Z,3.6nm,1.1s,baz=304,slow=7.1,SNR=6.6
ESDC Sonseca Array 69.81 55 P P 21 51 11.7 +0.4
BTNL Ternell 69.84 41 P P 21 51 12.4 +1.1
BDFB Brasilia 70.33 129 LR LR 22 22 54.6
comp=Z,188nm,21.9s,baz=311,slow=37
WLF Walferdange 70.37 42 P P 21 51 15.1 +0.6
FINES FINESS Array B 71.52 25 P P 21 51 22.1 +0.9
comp=Z,2.9nm,0.6s,baz=316,slow=3.4,SNR=14
RCBR Riachuelo 71.60 113 eP P 21 51 24.7 +2.2
CLL Collm 72.90 38 i P P 21 51 30.6 +0.9
comp=Z,22nm,1.6s
CLL LmH 22 19 00.0
comp=N,200nm,19.3s
CLL LmH 22 19 00.0
comp=E,200nm,20.4s
GRF Grafenberg Arr 73.01 40 eP P 21 51 31.8 +1.4
comp=E,7.9nm,1.2s,baz=308,slow=5.9
MDT Midelt 73.09 62 P P 21 51 32.8 +1.5
comp=E,6.4nm,1.0s,baz=322,slow=4.8,SNR=5.2
PPT Papeete 73.31 232 LR LR 22 17 22.6
comp=E,106nm,20.3s,baz=1.5,slow=31
PPT2 Papeete2 73.33 232 eLR LR 22 13 54.8
comp=E,288nm,24.8s
NRIK Noril'sk 73.59 358 LR LR 22 25 08.0
comp=E,262nm,20.0s,baz=19,slow=37
BRG Berggiesshubel 73.64 38 eP P 21 51 35.0 +0.9
comp=E,9.1nm,1.2s
BRG e 21 53 13.3
comp=E,10nm,1.3s
comp=N,258nm,17.8s
comp=E,535nm,21.1s
comp=Z,625nm,18.4s
CPUP Villa Florida 73.74 143 P P 21 51 36.5 +1.7
comp=Z,2.1nm,0.7s,baz=332,slow=4.1,SNR=4.1
CPUP LR LR 22 26 05.3
comp=Z,85nm,21.3s,baz=348,slow=38
CPUP Villa Florida 73.74 143 IAmb IAmb 21 51 46.7
comp=Z,12nm,1.5s
DAVOX Davos/Dischmat 74.09 43 P P 21 51 38.9 +1.9
comp=Z,4.1nm,0.8s,baz=314,slow=6.8,SNR=6.8
FUORN Ofenpass-Fuorn 74.40 43 P P 21 51 41.0 +2.1
FETA Feichten 74.40 42 eP P 21 51 39.8 +1.0
comp=Z,4.8nm,1.3s
KHC Kasperske Hory 74.56 39 eP P 21 51 40.9 +1.4
KHC AMS AMS 22 23 40.0
comp=Z,500nm,22.5s
GEC2 GERESS Array S 74.81 40 IAmb IAmb 21 51 43.4
comp=Z,15nm,1.6s
GERES GERESS Array B 74.81 40 P P 21 51 42.5 +1.4
comp=Z,0.8nm,0.5s,baz=319,slow=4.9,SNR=10
GERES LR LR 22 23 59.6
comp=Z,371nm,18.2s,baz=308,slow=35
GERES GERESS Array B 74.81 40 P P 21 51 41.8 +0.7
OSTC Ostas 74.95 37 eP P 21 51 43.1 +1.4
DPC Dobruska-Polom 75.13 37 eP P 21 51 43.1 +0.3
ABTA Abfaltersbach 75.53 42 eP P 21 51 47.3 +2.1
comp=Z,6.1nm,0.9s
KBA Kbnbreinspr 75.75 41 eP P 21 51 48.3 +1.7
comp=Z,10nm,1.4s
OBKA Obir 76.75 41 eP P 21 51 54.5 +2.3
comp=Z,18nm,1.4s
SOKA Soboth 76.90 41 eP P 21 51 55.6 +2.6
comp=Z,7.5nm,1.3s
TBI Tubuai 77.62 228 eLR LR 22 15 52.7
comp=Z,192nm,27.2s
KEST Kesra 80.67 52 P P 21 52 15.2 +1.3
comp=Z,2.0nm,0.6s,baz=271,slow=7.1,SNR=4.8
KEST LR LR 22 26 35.6
comp=Z,231nm,20.1s,baz=251,slow=35
AKASG Malin Array Be 80.67 31 P P 21 52 14.3 +0.8
comp=Z,0.7nm,0.4s,baz=314,slow=4.8,SNR=8.0
BURAR Bucovina Array 81.24 35 ⇑P P 21 52 19.5 +2.8
BURAR Bucovina Array 81.24 35 P P 21 52 17.8 +1.0
PLCA Paso Flores 81.52 160 P P 21 52 20.2 +2.2
comp=Z,2.0nm,0.7s,baz=335,slow=21,SNR=4.0
VOIR 82.76 37 ⇑P P 21 52 26.2 +1.4
MLR Muntele Rosu 83.15 36 ⇑P P 21 52 28.5 +1.7
KOWA Kowa 84.13 76 P P 21 52 32.9 +0.7
TAM Tamanrasset 86.23 64 IAmb IAmb 21 52 45.9
comp=Z,7.9nm,1.4s
USRK Ussuriysk Ar. 87.29 327 LR LR 22 35 37.4
comp=Z,263nm,18.4s,baz=23,slow=38
DBIC Dimbokro 88.16 83 P P 21 52 52.6 +0.6
comp=Z,10.0nm,1.2s,baz=302,slow=5.0,SNR=4.0
DBIC LR LR 22 26 44.6
comp=Z,240nm,21.7s,baz=281,slow=32
DBIC Dimbokro 88.16 83 P P 21 52 52.6 +0.6
ZALV Zalesovo Beam 89.09 359 P P 21 52 56.6 +0.9
comp=Z,0.7nm,0.6s,baz=351,slow=7.3,SNR=3.1
ZALV LR LR 22 35 20.6
comp=Z,139nm,21.0s,baz=348,slow=37
TOA0 Torodi Ar. Sit 89.35 74 P P 21 52 58.2 +0.5
TOA0 IAmb IAmb 21 52 58.9
comp=Z,11nm,1.6s
TORD Torodi Ar. Bea 89.35 74 P P 21 52 57.8 +0.1
comp=Z,0.6nm,0.5s,baz=300,slow=9.5,SNR=6.3
TORD LR LR 22 30 03.0
comp=Z,329nm,20.4s,baz=300,slow=34
TORD Torodi Ar. Bea 89.35 74 P P 21 52 57.8 +0.1
BRTR Keskin Array B 91.20 35 LR LR 22 33 23.0
comp=Z,60nm,21.1s,baz=315,slow=35
KBZ Khabaz 91.72 27 LR LR 22 32 52.6
comp=Z,350nm,20.3s,baz=234,slow=35
SONM Songino Array 92.57 344 P P 21 53 15.3 +3.0
comp=Z,0.4nm,0.7s,baz=28,slow=3.2,SNR=2.2
SONM LR LR 22 38 03.5
comp=Z,367nm,21.3s,baz=13,slow=38
MKAR Makanchi Array 96.27 0 LR LR 22 41 04.7
comp=Z,140nm,18.5s,baz=350,slow=38
HHC Hu-ho-hao-te 97.76 338 eP Pdif 21 53 38.4 +2.2
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,72nm,7.6s
WMQ Urumqi 99.11 356 eP Pdif 21 53 43.8 +1.8
WMQ pmax pmax
comp=Z,15nm,0.7s
VNDA Vanda 128.38 196 PKP PKiKP 21 59 08.3 +1.6
comp=Z,1.2nm,1.0s,baz=108,slow=1.5,SNR=6.2
WRA Warramunga Arr 131.87 276 PKP PKiKP 21 59 15.9 +0.4
comp=Z,0.3nm,0.5s,baz=60,slow=2.2,SNR=8.6
ASAR Alice Springs 134.13 272 PKP PKPdf 21 59 18.9 +0.2
comp=Z,0.3nm,0.4s,baz=35,slow=1.8,SNR=4.1

*REY **12** 21:42:28.9, 64.67N×17.46W, h6km*
*NEIC **12** 21:42:30.0±1.2, 64.64N±0.08×17.8W±0.1, h8km±4km, mb4.4/24, Error ellipse: s-maj=11.9km s-min=8.4km az=182.0*
*IDC **12** 21:42:29.5±0.8, 64.59N×17.58W, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.7/65, mbtmp3.8/10, ML3.3/2, Error ellipse: s-maj=23.1km s-min=11.3km az=12.0*
ISC 12 21:42:30.3±0.4, 64.67N±0.02×17.50W±0.02, h10km, n92, σ2900/105, mb4.2/20, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.11**	**274**	P	**Pg**	**21 42 31.7**	**-1.5**
	baz=270						
IVON				S	**Sg**	**21 42 34.2**	**-1.0**
	baz=270						
IDYN	**Dyngjuhals**	**0.14**	**25**	P	**Pg**	**21 42 31.8**	**-1.8**
	baz=19						
IKVE	**Kverkfjoll**	**0.35**	**88**	P	**Pg**	**21 42 35.5**	**-1.9**
	baz=89						
IKVE				S	**Sg**	**21 42 40.3**	**-1.8**
	baz=89						
IHUS	**Husbondi**	**0.38**	**190**	P	**Pg**	**21 42 36.4**	**-1.4**
	baz=193						
IHUS				S	**Sb**	**21 42 42.1**	**-3.1**
	baz=193						
ISKR	**Skrokkalda**	**0.40**	**255**	P	**Pg**	**21 42 36.6**	**-1.6**
	baz=254						
ISKR				S	**Sb**	**21 42 43.0**	**-2.6**
	baz=254						
IVOT	**Vottur**	**0.42**	**161**	P	**Pg**	**21 42 37.0**	**-1.6**
	baz=163						
IJOK	**Jokulheimar**	**0.47**	**222**	P	**Pb**	**21 42 38.0**	**-2.7**
	baz=223						
IKRE	**Kreppuhraun**	**0.49**	**76**	P	**Pg**	**21 42 37.7**	**-2.3**
	baz=76						
IKRE				S	**Sg**	**21 42 44.7**	**-1.8**
	baz=76						
IASK	**Askja**	**0.53**	**43**	P	**Pg**	**21 42 38.2**	**-2.4**
	baz=42						
IMKO	**Mokollar**	**0.59**	**57**	P	**Pg**	**21 42 39.3**	**-2.4**
	baz=57						
IMKO				S	**Sg**	**21 42 48.2**	**-1.2**
	baz=57						
IIEY	**Innrieyrar**	**0.64**	**206**	P	**Pg**	**21 42 40.5**	**-2.1**
	baz=207						
IIEY				S	**Sb**	**21 42 49.5**	**-2.9**
	baz=207						
IKSK	**Karasker**	**0.68**	**138**	P	**Pg**	**21 42 40.5**	**-2.9**
	baz=140						
IKSK				S	**Sg**	**21 42 50.3**	**-1.9**
	baz=140						
ISVA	**Svartarkot**	**0.68**	**9**	P	**Pg**	**21 42 41.1**	**-2.4**
	baz=7.3						
ISVA				S	**Sg**	**21 42 50.9**	**-1.5**
	baz=7.3						
IKAL	**Kalfafell**	**0.73**	**187**	P	**Pg**	**21 42 42.1**	**-2.2**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**79**	P	**Pg**	**21 42 42.2**	**-3.0**
	baz=79						
IVSH				S	**Sg**	**21 42 52.8**	**-2.5**
	baz=79						
IVAT	**Vatnsfell**	**0.78**	**233**	P	**Pb**	**21 42 43.6**	**-2.4**
	baz=233						
IFAG	**Fagurholsmyri**	**0.88**	**155**	P	**Pg**	**21 42 44.5**	**-2.6**
	baz=156						
IMEL	**Melhnausar**	**0.97**	**21**	P	**Pg**	**21 42 45.9**	**-3.2**
	baz=20						
ISNB	**Snabyli**	**1.06**	**208**	P	**Pg**	**21 42 47.9**	**-2.7**
	baz=209						
IKVO	**Krokottuvotn**	**1.08**	**14**	P	**Pb**	**21 42 47.8**	**-3.4**
	baz=13						
IGRS	**Grimsstaoir**	**1.14**	**30**	P	**Pn**	**21 42 49.3**	**-3.0**
	baz=30						
IFED	**Fedgar**	**1.15**	**237**	P	**Pg**	**21 42 49.6**	**-2.7**
	baz=237						
IGHA	**Grjothals**	**1.23**	**16**	P	**Pn**	**21 42 50.2**	**-3.4**
	baz=16						
IGYG	**Gygjarholskot**	**1.24**	**253**	P	**Pb**	**21 42 50.9**	**-2.9**
	baz=253						
IGRA	**Granastaoir**	**1.26**	**359**	P	**Pn**	**21 42 50.5**	**-3.4**
	baz=358						
IDIM	**Dimmadalss**	**1.32**	**10**	P	**Pn**	**21 42 51.4**	**-3.4**
	baz=9.5						
IHLA	**Hella**	**1.34**	**344**	P	**Pn**	**21 42 52.0**	**-3.0**
	baz=343						
IALF	**Alftagrof**	**1.39**	**213**	P	**Pn**	**21 42 53.7**	**-2.1**
	baz=213						
IHED	**Heoinshofoi**	**1.42**	**3**	P	**Pn**	**21 42 53.2**	**-3.0**
	baz=2.5						
IESK	**Eystri-Skogar**	**1.43**	**218**	P	**Pn**	**21 42 54.2**	**-2.0**
	baz=218						
ISAU	**Saurbar**	**1.44**	**243**	P	**Pn**	**21 42 53.7**	**-2.7**
	baz=243						
IMID	**Miomork**	**1.46**	**227**	P	**Pn**	**21 42 54.6**	**-2.0**
	baz=227						
IBRE	**Brettingsstaoi**	**1.47**	**353**	P	**Pn**	**21 42 54.3**	**-2.6**
	baz=353						
ISIG	**Siglufjorour**	**1.59**	**339**	P	**Pn**	**21 42 55.8**	**-2.6**
	baz=338						
ISIG				S	**Sn**	**21 43 17.3**	**-1.6**
	baz=338						
BORG	**Borgarnes**	**1.65**	**275**	Pg	**Pn**	**21 42 57.2**	**-2.0**
	18nm,0.3s,baz=94,slow=8.6,SNR=42						
BORG				Lg	Lg	21 43 21.6	
	9.4nm,0.3s,baz=342,slow=16,SNR=6.2						
BORG	**Borgarnes**	**1.65**	**275**	Pn	**Pn**	**21 42 56.5**	**-2.7**
BORG				Sn	**Sn**	**21 43 18.1**	**-2.3**
IKRO	**Krokur**	**1.67**	**252**	P	**Pn**	**21 42 57.7**	**-1.9**
	baz=252						
SCO	**Scoresbysund**	**6.08**	**346**		**Pn**	**21 43 58.4**	**-1.7**
SCO	**Scoresbysund**	**6.08**	**346**	*e*	Pn	21 43 55.2	-5.0
	baz=160,slow=7.9						
SCO				*i* P	**Pn**	**21 44 00.0**	**-0.1**
SCO				*e*S	**Sn**	**21 45 11.6**	**+1.9**
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**21 45 17.6**	**-0.3**
	baz=324,slow=13,SNR=8.5						
ESK	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**21 45 18.9**	**+1.0**
DAG	**Danmarks Havn**	**12.17**	**359**	*i* P	**Pn**	**21 45 26.8**	**+3.4**
DAG	**Danmarks Havn**	**12.17**	**359**	*i* P	**Pn**	**21 45 26.8**	**+3.4**
NC204	**NORSAR Array S**	**13.23**	**92**	Pn	**Pn**	**21 45 36.3**	**-1.7**
HFS	**Hagfors**	**15.05**	**93**	Pn	**P**	**21 46 10.3**	**+2.2**
	0.1nm,0.3s,baz=316,slow=10,SNR=5.3						
SPA0	**Spitsbergen Ar**	**16.87**	**23**	Pn	**Pn**	**21 46 25.3**	**-0.8**
SPA0				IAmb	IAmb	21 46 41.3	
	comp=Z,32nm,1.3s						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**21 47 01.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=270,slow=7.6,SNR=3.6						
FINES	**FINESS Array B**	**19.70**	**79**	P	**Pn**	**21 47 00.9**	**0.0**
CLL	**Collm**	**20.70**	**116**	P	**P**	**21 47 11.1**	**+0.7**
GRF	**Grafenberg Arr**	**21.33**	**121**	*eP*	**P**	**21 47 20.6**	**+3.4**
	comp=Z,8.0nm,1.2s,baz=320,slow=9.5						
BRG	**Berggiesshubel**	**21.41**	**115**	*eP*	**P**	**21 47 20.8**	**+2.8**
	comp=Z,18nm,1.3s						
PRU	**Pruhonice**	**22.35**	**116**	*eP*	**P**	**21 47 30.3**	**+2.3**
CHVC	**Chvalec**	**22.47**	**113**	*eP*	**P**	**21 47 32.0**	**+2.7**
KHC	**Kasperske Hory**	**22.68**	**118**	*eP*	**P**	**21 47 32.6**	**+1.0**
DPC	**Dobruska-Polom**	**22.76**	**113**	*eP*	**P**	**21 47 34.0**	**+1.5**
SUW	**Suwalki**	**22.88**	**98**	P	**P**	**21 47 34.5**	**+0.8**

SUW					IAmb	IAmb	21 47 34.5		
	comp=Z,14nm,0.9s								
GEC2	**GERESS Array S**	**22.96**	**119**		P	**P**	**21 47 36.0**	**+1.4**
GERES	**GERESS Array B**	**22.96**	**119**		P	**P**	**21 47 35.4**	**+0.8**
	comp=Z,1.9nm,1.0s,baz=324,slow=6.6,SNR=7.1								
EUNU	**Eureka**	**23.67**	**336**		P	**P**	**21 47 41.5**	**+0.1**
OJC	**Ojcow**	**24.26**	**109**		P	**P**	**21 47 47.8**	**+0.6**
OJC					IAmb	IAmb	21 48 01.9		
	comp=Z,8.6nm,1.4s								
KWP	**Kalwaria Pacla**	**25.91**	**106**		P	**P**	**21 48 03.3**	**+1.2**
KWP					IAmb	IAmb	21 48 06.2		
	comp=Z,17nm,1.2s								
PSZ	**Piszkesteto**	**26.12**	**112**		P	**P**	**21 48 04.9**	**+0.7**
ESDC	**Sonseca Array**	**26.25**	**156**		P	**P**	**21 48 06.6**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=352,slow=10,SNR=7.0								
AKASG	**Malin Array Be**	**27.84**	**98**		P	**P**	**21 48 19.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=319,slow=9.4,SNR=2.3								
AKASG	**Malin Array Be**	**27.84**	**98**		P	**P**	**21 48 18.9**	**-0.5**
BRTR	**Keskin Array B**	**38.48**	**105**		P	**P**	**21 49 53.1**	**+0.8**
AKTO	**Aktyubinsk**	**40.29**	**73**		P	**P**	**21 50 08.2**	**+1.1**
	comp=Z,1.2nm,0.6s,baz=330,slow=10,SNR=3.6								
AKH	**Akhalkalaki**	**41.26**	**94**		P	**P**	**21 50 16.8**	**+1.4**
AKH					IAmb	IAmb	21 50 19.1		
	comp=Z,11nm,1.0s								
ABKAR	**Akbulak array**	**41.99**	**73**		P	**P**	**21 50 22.0**	**+0.9**
ABKAR	**Akbulak array**	**41.99**	**73**		P	**P**	**21 50 21.7**	**+0.6**
TIXI	**Tiksi**	**42.03**	**15**		P	**P**	**21 50 22.9**	**+1.7**
TIXI					IAmb	IAmb	21 50 24.5		
	comp=Z,8.1nm,1.1s								
TOLK	**Toolik Lake Re**	**42.75**	**336**		P	**P**	**21 50 28.6**	**+1.5**
BMAR	**Burnt Mountain**	**42.90**	**333**		P	**P**	**21 50 29.1**	**+0.8**
MARD	**Mardin**	**43.51**	**100**		P	**P**	**21 50 35.9**	**+2.1**
MARD					IAmb	IAmb	21 50 38.5		
	comp=Z,4.7nm,0.5s								
ILAR	**Eielson Array**	**45.69**	**332**		P	**P**	**21 50 52.9**	**+2.2**
	comp=Z,1.0nm,0.9s,baz=358,slow=7.4,SNR=4.6								
ZAA0	**Zalesovo Array**	**47.63**	**51**		P	**P**	**21 51 06.4**	**+0.4**
ZAA0					IAmb	IAmb	21 51 07.3		
	comp=Z,2.4nm,0.8s								
ZALV	**Zalesovo Beam**	**47.63**	**51**		P	**P**	**21 51 06.4**	**+0.4**
KURK	**Kurchatov**	**48.11**	**58**		P	**P**	**21 51 10.4**	**+0.7**
KURK					IAmb	IAmb	21 51 11.2		
	comp=Z,5.0nm,1.0s								
KK31	**Karatay Array**	**51.28**	**70**		P	**P**	**21 51 35.5**	**+1.5**
KK31					IAmb	IAmb	21 51 39.0		
	comp=Z,5.5nm,1.3s								
KKAR	**Karatay Array**	**51.28**	**70**		P	**P**	**21 51 35.3**	**+1.3**
MKAR	**Makanchi Array**	**52.73**	**58**		P	**P**	**21 51 45.3**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=328,slow=5.1,SNR=2.6								
TORD	**Torodi Ar. Bea**	**53.14**	**156**		P	**P**	**21 51 48.1**	**+0.1**
	comp=Z,2.2nm,1.1s,baz=343,slow=7.0,SNR=7.1								
TORD	**Torodi Ar. Bea**	**53.14**	**156**		P	**P**	**21 51 48.0**	**0.0**
PGC	**Sidney**	**53.33**	**307**		P	**P**	**21 51 49.2**	**+0.2**
BTK	**Batken**	**53.96**	**72**		P	**P**	**21 51 55.0**	**+1.0**
CHGR	**Chuyangaron**	**54.46**	**73**		P	**P**	**21 51 58.2**	**+0.6**
GAR	**Garm**	**54.65**	**73**		P	**P**	**21 52 00.3**	**+1.2**
DBIC	**Dimbokro**	**58.59**	**165**		P	**P**	**21 52 27.5**	**+0.4**
SONM	**Songino Array**	**59.64**	**40**		P	**P**	**21 52 35.4**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=324,slow=9.9,SNR=5.4								
SONM	**Songino Array**	**59.64**	**40**		P	**P**	**21 52 34.9**	**+0.7**
GTA	**Gaotai**	**65.30**	**49**		*e*P	**P**	**21 53 13.4**	**+1.2**
GTA					pP	sP	21 53 20.3	+3.1
GTA					sP	pP	21 53 23.7	+7.9
GTA					pmax	pmax			
	comp=Z,2.0nm,1.2s								
GTA					pmax	pmax			
	comp=Z,72nm,4.2s								
GTA					LR	LR			
	comp=N,200nm,18.5s								
GTA					LR	LR			
	comp=E,190nm,17.8s								
GTA					LR	LR			
	comp=Z,260nm,16.4s								
CMAR	**Chiang Mai Arr**	**84.13**	**59**		P	**P**	**21 55 00.4**	**-1.0**

*IDC **12** 21:44:58.3±5.5,6˚.86S×154˚.83E, h92km±37km, mb3.5/5, mb1 3.7/8, mb1mx3.5/36, mbtmp3.9/8, Error ellipse: s-maj=48.4km s-min=18.7km az=95.0*

ISC 12 21:44:51.1±1.4, 7˚.0S±0˚.1×155˚.2E±0˚.1, h41km, n9, σ0s92/12, mb3.8/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.13**	**309**	P	**Pn**	**21 45 52.7**	**+0.9**
	21nm,0.3s,baz=338,slow=12,SNR=4.4						
KRVT				S	**Sn**	**21 46 39.2**	**+0.4**
	24nm,0.3s,baz=194,slow=17,SNR=4.5						
PMG	**Port Moresby**	**8.35**	**252**	P	**Pn**	**21 46 50.6**	**+0.9**
	1.8nm,0.3s,baz=87,slow=16,SNR=3.8						
PMG				S	**Sn**	**21 48 22.0**	**-0.8**
	2.3nm,0.3s,baz=93,slow=14,SNR=3.8						
CTA	**Charters Tower**	**15.69**	**213**	P	**P**	**21 48 33.7**	**+0.7**
	0.2nm,0.3s,baz=27,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**24.03**	**235**	P	**P**	**21 50 02.3**	**-0.3**
	1.8nm,0.8s,baz=56,slow=9.4,SNR=13						
WRA				PcP	**PcP**	**21 53 45.1**	**+1.4**
	0.4nm,0.7s,baz=59,slow=2.4,SNR=3.2						
ASAR	**Alice Springs**	**26.37**	**229**	P	**P**	**21 50 24.2**	**+0.4**
	0.4nm,0.6s,baz=60,slow=8.2,SNR=5.9						
FITZ	**Fitzroy Crossi**	**30.88**	**246**	P	**P**	**21 51 03.6**	**-0.3**
	1.7nm,0.8s,baz=69,slow=8.6,SNR=1.7						
CMAR	**Chiang Mai Arr**	**60.98**	**295**	P	**P**	**21 54 59.5**	**-1.3**
	1.0nm,0.9s,baz=109,slow=4.2,SNR=6.2						
MKAR	**Makanchi Array**	**83.53**	**319**	P	**P**	**21 57 14.1**	**-0.8**
	0.8nm,0.6s,baz=104,slow=5.1,SNR=5.9						
TORD	**Torodi Ar. Bea**	**153.24**	**285**	PKPbc	**PKiKP**	**22 04 45.9**	**0.0**
	1.6nm,0.8s,baz=56,slow=2.7,SNR=9.2						

*IDC **12** 21:48:24.3±1.1, 64˚.61N×17˚.55W, h0km, mb3.9/5, mb1 4.1/7, mb1mx3.7/49, mbtmp3.8/7, ML3.3/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/48, Error ellipse: s-maj=30.6km s-min=12.9km az=9.0*

*NEIC **12** 21:48:25.5±1.5, 64˚.5N±0˚.1×17˚.7W±0˚.1, h7km±4km, mb4.5/21, Error ellipse: s-maj=15.5km s-min=6.9km az=192.0*

ISC 12 21:48:25.8±0.6, 64˚.48N±0˚.09×17˚.71W±0˚.06, h10km, n44, σ1s27/41, mb4.4/14, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.58**	**281**	Pg	**Pn**	**21 48 53.2**	**-0.6**
	10nm,0.3s,baz=33,slow=20,SNR=7.1						
BORG				Lg	Lg	21 49 16.9	
	14nm,0.3s,baz=252,slow=22,SNR=6.6						
BORG	**Borgarnes**	**1.58**	**281**		**Pn**	**21 48 53.5**	**-0.3**
BORG				Sn	**Sg**	**21 49 16.4**	**-0.2**
SCO	**Scoresbysund**	**6.25**	**347**	Pn	**Pn**	**21 49 57.2**	**-0.6**
EKA	**Eskdalemuir Ar**	**11.69**	**135**	Pn	**Pn**	**21 51 12.3**	**-0.1**
	baz=326,slow=13,SNR=6.2						
NOA	**NORSAR Array B**	**13.62**	**91**	Pn	**Pn**	**21 51 35.0**	**-3.8**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.5						
NOA				LR	LR	21 56 24.1	
	comp=Z,72nm,20.3s,baz=300,slow=35						
NC405	**NORSAR Array S**	**13.80**	**91**	Pn	**Pn**	**21 51 41.5**	**+0.3**
FINES	**FINESS Array B**	**19.83**	**79**	LR	LR	21 59 22.4	
	comp=Z,90nm,18.1s,baz=256,slow=33						
FINES	**FINESS Array B**	**19.83**	**79**	P	**Pn**	**21 52 59.2**	**+1.4**
FIA1	**FINESS Array S**	**19.83**	**79**	P	**Pn**	**21 52 58.8**	**+1.0**
FIA1				IAmb	IAmb	21 53 06.9	
	comp=Z,18nm,1.2s						
CLL	**Collm**	**20.71**	**115**	*e*P	**P**	**21 53 05.0**	**-0.8**
STU	**Stuttgart**	**21.34**	**125**	P	**P**	**21 53 12.2**	**-0.5**
STU				IAmb	IAmb	21 53 24.8	
	comp=Z,13nm,0.7s						
NKC	**Novy Kostel**	**21.34**	**118**	*e*P	P	21 53 31.7	+19
OSTC	**Ostas**	**22.57**	**112**	*e*P	**P**	**21 53 27.1**	**+1.2**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P	**P**	**21 53 30.3**	**+3.3**
DPC	**Dobruska-Polom**	**22.77**	**112**	*e*P	**P**	**21 53 31.2**	**+3.1**
GEC2	**GERESS Array S**	**22.95**	**118**	P	**P**	**21 53 29.9**	**-0.1**
GERES	**GERESS Array B**	**22.95**	**118**	P	**P**	**21 53 29.8**	**-0.1**
DAVOX	**Davos/Dischmat**	**23.28**	**126**	LR	LR	22 03 45.0	
	comp=Z,128nm,18.2s,baz=336,slow=40						
OJC	**Ojcow**	**24.29**	**108**	P	**P**	**21 53 43.0**	**0.0**
KWP	**Kalwaria Pacla**	**25.95**	**106**	P	**P**	**21 53 58.0**	**0.0**
ESDC	**Sonseca Array**	**26.12**	**155**	P	**P**	**21 54 00.3**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=338,slow=10,SNR=4.3						
PSZ	**Piszkesteto**	**26.13**	**111**	P	**P**	**21 54 00.6**	**+0.8**
PSZ				IAmb	IAmb	21 54 02.9	
	comp=Z,11nm,1.2s						
ELL	**Elmali**	**39.52**	**111**	P	**P**	**21 55 56.4**	**0.0**
AKH	**Akhalkalaki**	**41.34**	**94**	P	**P**	**21 56 11.7**	**+0.1**
TIXI	**Tiksi**	**42.24**	**15**	P	**P**	**21 56 17.9**	**-0.4**
TIXI				IAmb	IAmb	21 56 21.5	
	comp=Z,16nm,1.4s						
TOLK	**Toolik Lake Re**	**42.88**	**336**	P	**P**	**21 56 25.3**	**+1.6**
TOLK				IAmb	IAmb	21 56 27.7	
	comp=Z,20nm,1.4s						
MARD	**Mardin**	**43.57**	**100**	P	**P**	**21 56 30.5**	**+0.8**
MARD				IAmb	IAmb	21 56 33.6	
	comp=Z,14nm,1.3s						
DAWY	**Dawson**	**44.81**	**328**	P	**P**	**21 56 39.7**	**+0.5**
IL31		**45.81**	**332**	P	**P**	**21 56 48.3**	**+1.3**
IL31				IAmb	IAmb	21 56 50.8	
	comp=Z,9.9nm,1.4s						
ILAR	**Eielson Array**	**45.81**	**332**	P	**P**	**21 56 44.6**	**-2.5**
	comp=Z,0.5nm,0.9s,baz=18,slow=6.0,SNR=1.8						
ILAR	**Eielson Array**	**45.81**	**332**	P	**P**	**21 56 48.0**	**+1.0**
IMAR	**Indian Mountai**	**45.99**	**337**	P	**P**	**21 56 48.2**	**-0.3**
GEYT	**Alibeck**	**50.54**	**83**	P	**P**	**21 57 24.5**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**50.54**	**83**	P	**P**	**21 57 24.6**	**+0.7**
GYA0B				IAmb	IAmb	21 57 26.2	
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**51.43**	**69**	P	**P**	**21 57 29.7**	**-0.9**
KKAR	**Karatay Array**	**51.43**	**69**	P	**P**	**21 57 29.4**	**-1.2**
TOA0	**Torodi Ar. Sit**	**53.01**	**156**	P	**P**	**21 57 41.7**	**-0.8**
TOA0				IAmb	IAmb	21 57 41.8	
	comp=Z,7.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**53.01**	**156**	P	**P**	**21 57 41.9**	**-0.6**
FXWY	**Fox Creek**	**53.02**	**295**	P	**P**	**21 57 43.0**	**+0.4**
PDAR	**Pinedale Array**	**53.17**	**293**	P	**P**	**21 57 43.9**	**+0.1**
	comp=Z,3.3nm,0.9s,baz=70,slow=9.9,SNR=3.9						
CHGR	**Chuyangaron**	**54.60**	**74**	P	**P**	**21 57 54.3**	**+0.1**
CHGR				IAmb	IAmb	21 57 56.0	
	comp=Z,8.0nm,1.1s						
SONM	**Songino Array**	**59.84**	**40**	P	**P**	**21 58 30.4**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=348,slow=4.7,SNR=2.7						
TXAR	**Lajitas Array**	**62.23**	**280**	LR	LR	22 24 14.7	
	comp=Z,47nm,19.0s,baz=0.0,slow=34						
CMAR	**Chiang Mai Arr**	**84.31**	**58**	P	**P**	**22 00 58.9**	**+1.2**
	comp=Z,0.7nm,0.5s,baz=324,slow=6.2,SNR=5.0						

IGQ 12 22:17:56.3±2.1, 0˚N±7˚×8˚3W±1˚7, h10km, M4.2, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPLP	**Puerto Lpez**	**3.09**	**129**	P	Pn	22 18 43.8	-1.4
PPLP				S	Sn	22 19 22.7	+0.5
BV15	**Puerto Quito-O**	**3.96**	**93**	P	Pn	22 18 55.3	-2.0
GGPC	**Guagua Pichinc**	**4.62**	**97**	P	Pn	22 19 05.6	-1.2
PULU	**Pululahua**	**4.69**	**95**	P	Pn	22 19 06.7	-0.9
CUSE	**Cuicocha Este**	**4.78**	**91**	P	Pn	22 19 07.9	-1.0
BNAS	**Cotopaxi Volca**	**4.82**	**103**	P	Pn	22 19 10.6	+1.2
CUIC	**Cuicocha-Domo**	**4.82**	**91**	P	Pn	22 19 08.3	-1.1
CUSW	**Cuicocha Oeste**	**4.83**	**91**	P	Pn	22 19 08.6	-0.8
COHC	**Cochacoy**	**4.85**	**126**	P	Pn	22 19 09.5	+0.1
BMOR	**Cotopaxi Volca**	**4.85**	**103**	P	Pn	22 19 10.2	+0.3
BREF	**Cotopaxi Volca**	**4.86**	**103**	P	Pn	22 19 11.9	+1.8
BTAM	**Cotopaxi Volca**	**4.90**	**103**	P	Pn	22 19 11.5	+0.9
URCU	**Urcuqui**	**4.92**	**90**	P	Pn	22 19 09.5	-1.3
VCES	**Cotopaxi**	**4.93**	**104**	P	Pn	22 19 12.5	+1.5
IMBA	**Imbabura, San**	**4.98**	**91**	P	Pn	22 19 11.2	-0.4
ANTG	**Antisana-Guama**	**5.01**	**100**	P	Pn	22 19 12.7	+0.6
ANTM	**Antisana-La Mi**	**5.04**	**101**	P	Pn	22 19 13.5	+1.0
BMAS	**Trigal station**	**5.07**	**112**	P	Pn	22 19 13.9	+1.2
ANTS	**Antisana-Sarah**	**5.09**	**100**	P	Pn	22 19 14.1	+0.9
BULB	**Ulba Tungurahu**	**5.11**	**111**	P	Pn	22 19 15.6	+2.3
YAHU	**Yahuarcocha**	**5.11**	**90**	P	Pn	22 19 12.6	-0.7
BPAT	**Tungurahua Vol**	**5.11**	**112**	P	Pn	22 19 12.2	-1.2
PIAT	**Ana Tenorio**	**5.11**	**106**	P	Pn	22 19 14.9	+1.6
CHL1	**Volcn Chiles**	**5.25**	**86**	P	Pn	22 19 13.5	-1.9
CHL2	**Volcn Chiles**	**5.28**	**86**	P	Pn	22 19 13.4	-2.3
SANGA	**Volcan Sangay**	**5.39**	**117**	P	Pn	22 19 20.0	+2.8
TULM	**Tulcn-Chalpat**	**5.40**	**87**	P	Pn	22 19 18.4	+1.0
ARDO	**Archidona, Ten**	**5.55**	**104**	P	Pn	22 19 22.5	+3.3
MCRA	**Macar, Loja**	**5.73**	**146**	P	Pn	22 19 21.8	+0.2
BOSC	**San Juan Bosco**	**5.86**	**127**	P	Pn	22 19 28.5	+5.0
PKYU	**Pakayacu**	**5.94**	**110**	P	Pn	22 19 27.5	+3.0

IDC 12 22:40:10.6±1.2, 55˚.07S×28˚.39W, h0km, mb3.9/2, mb1 4.0/2, mb1mx3.7/19, mbtmp3.9/2, Error ellipse: s-maj=88.0km s-min=31.4km az=103.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.53**	**183**	P	P	22 48 46.6	-0.2
	0.6nm,0.6s,baz=189,slow=6.5,SNR=12						
TORD	**Torodi Ar. Bea**	**72.54**	**31**	P	P	22 51 39.1	-0.1
	0.9nm,0.6s,baz=201,slow=5.6,SNR=11						
ILAR	**Eielson Array**	**148.94**	**313**	PKPbc	PKPbc	22 59 58.3	-0.6
	0.8nm,0.7s,baz=128,slow=2.1,SNR=12						
SONM	**Songino Array**	**151.34**	**86**	PKPbc	PKPbc	23 00 05.5	+0.2
	0.5nm,0.7s,baz=217,slow=2.7,SNR=2.9						

*IDC **12** 22:46:27.8±2.4, 8˚.21S×119˚.77E, h199km±22km, mb3.1/3, mb1 3.0/6, mb1mx2.8/36, mbtmp3.4/6, Error ellipse: s-maj=67.0km s-min=12.9km az=54.0*

*DJA **12** 22:46:27.7±0.6, 8˚.5±4˚×12˚.0E±˚, h156km±7km, M3.2/9, MLv3.2/9*

ISC 12 22:46:25.1±0.9, 8˚.40S±0˚.06×119˚.71E±0˚.06, h200km, n15, σ2s08/20, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.27**	**194**	P	**Pn**	**22 46 56.4**	**-0.5**
WBSI				S	**Sn**	**22 47 18.8**	**-3.0**
WSI	**Waingapu**	**1.38**	**155**	S	**Sn**	**22 47 20.8**	**-2.5**
PLAI	**Plampang**	**1.96**	**257**	P	**Pn**	**22 47 03.5**	**+0.3**
PLAI				S	**Sn**	**22 47 30.9**	**-1.9**
EDFI	**Ende, Flores**	**1.99**	**100**	P	**Pn**	**22 47 03.3**	**-0.3**
EDFI				S	**Sn**	**22 47 30.7**	**-2.8**
BASI	**Baing, Sumba**	**2.00**	**155**	P	**Pn**	**22 47 04.1**	**+0.5**
BASI				S	**Sn**	**22 47 32.3**	**-1.3**
BSSI	**Bau Bau, Buton**	**2.38**	**19**	P	**Pn**	**22 47 06.5**	**-1.2**
TWSI	**Taliwang, Sumb**	**2.82**	**263**	P	**Pn**	**22 47 13.3**	**+0.7**
BKSI	**Bulukumba**	**3.09**	**8**	P	**Pn**	**22 47 14.7**	**-1.1**
KAPI	**Kappang**	**3.37**	**1**	P	**Pn**	**22 47 19.3**	**+0.2**
	2.3nm,0.3s,baz=165,slow=12,SNR=3.6						
SOEI	**Soe**	**4.69**	**107**	P	**Pn**	**22 47 37.2**	**+1.4**
FITZ	**Fitzroy Crossi**	**11.23**	**150**	P	**P**	**22 49 04.8**	**-1.4**
	0.1nm,0.3s,baz=341,slow=11,SNR=1.3						
FITZ				S	**Sn**	**22 51 03.1**	**-2.4**
	0.2nm,0.3s,baz=161,slow=24,SNR=8.8						
WRA	**Warramunga Arr**	**18.22**	**131**	P	**Pn**	**22 50 27.1**	**+1.2**
	0.1nm,0.3s,baz=302,slow=12,SNR=8.6						
WRA				S	**S**	**22 53 46.5**	**+4.9**
	0.1nm,0.3s,baz=305,slow=24,SNR=2.9						
ASAR	**Alice Springs**	**20.37**	**140**	P	Pn	22 50 50.9	-0.8
	0.4nm,0.4s,baz=314,slow=10,SNR=7.9						
MKAR	**Makanchi Array**	**64.25**	**332**	P	**P**	**22 56 41.0**	**+2.1**
	0.7nm,0.7s,baz=123,slow=5.3,SNR=5.1						
ZALV	**Zalesovo Beam**	**68.74**	**339**	P	**P**	**22 57 08.6**	**+1.5**
	0.2nm,0.4s,baz=134,slow=6.2,SNR=3.9						

*MOS **12** 23:37:29.2±1.2, 43˚.02N×145˚.70E, h77km, mb4.3/4, Error ellipse: s-maj=13.1km s-min=9.9km az=91.3*

*SKHL **12** 23:37:30.0±0.7, 43˚.02N×145˚.70E, h75km±4km, mb4.6/4*

*NIED **12** 23:37:31.2, 43˚.14N×145˚.59E, h69km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr3.43; Mθθ-0.38; Mφφ-3.05; Mrθ1.04; Mrφ1.31; Mθφ-2.70; Fault plane solution: M0 4.55000×10^14 NP1: ϕs158.00000°, δ65.00000°, λ91.00000°. NP2: ϕs337.00000°, δ25.00000°, λ89.00000°.*

*NEIC **12** 23:37:31.4±1.2, 43˚.21N±0˚.10×145˚.5E±0˚.1, h69km±10km, mb4.3/15 Error ellipse: s-maj=14.9km s-min=13.2km az=136.0*

*JMA **12** 23:37:31.1±0.1, 43˚.14N×145˚.59E, h69km±1km, M3.8*

JMA Felt II J1.

*IDC **12** 23:37:33.2±2.2, 42˚.93N×145˚.52E, h101km±18km, mb3.5/11, mb1 3.7/14, mb1mx3.4/50, mbtmp3.8/14, MS2.3/1, Ms1 2.3/1, ms1mx2.1/32, Error ellipse: s-maj=21.2km s-min=17.6km az=180.0*

ISC 12 23:37:31.1±0.7, 43˚.13N±0˚.05×145˚.61E±0˚.04, h67km±5km, n79, σ1s23/96, mb4.0/22, 4C-1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.26**	**23**	P	**Pn**	**23 37 42.0**	**+0.4**
NEM2				*e*S	**Sn**	**23 37 49.8**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.26**	**20**	*i* P	**Pn**	**23 37 42.0**	**+0.4**
NMR				*i* S	**Sn**	**23 37 49.0**	**-0.3**
NMR	**Nemuro--Hokkai**	**0.26**	**20**	↑*i* PN	**Pn**	**23 37 42.0**	**+0.4**
NMR				*i* S	**Sn**	**23 37 49.9**	**+0.6**
JKHN	**Kushirohamanak**	**0.33**	**263**	P	**Pn**	**23 37 42.6**	**+0.5**
JKHN				*e*S	**Sn**	**23 37 51.0**	**+0.8**
GLVR	**Golovnino**	**0.61**	**354**	*i* P	**Pn**	**23 37 44.0**	**-0.8**
GLVR				AMB	AMB	23 37 46.0	
	281nm,0.4s						
GLVR				*i* S	**Sn**	**23 37 56.0**	**+1.1**
GLVR				A	A	23 37 57.0	
	1µm,0.3s						
GLVR				A	A	23 37 57.0	
	759nm,0.3s						
GLVR	**Golovnino**	**0.61**	**354**	↑*i* PN	**Pn**	**23 37 44.9**	**+0.1**
GLVR				*i* S	**Sn**	**23 37 56.0**	**+1.1**
GLVR				pmax	pmax		
	comp=N,934nm,0.1s						
GLVR				pmax	pmax		
	comp=E,271nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,3µm,0.1s						
GLVR				smax	smax		
	comp=N,12µm,0.3s						
GLVR				smax	smax		
	comp=E,8µm,0.3s						
JAK	**Akkeshi**	**0.68**	**259**	P	**Pn**	**23 37 45.5**	**0.0**
JAK				*e*S	**Sn**	**23 37 56.1**	**0.0**
JNSB	**Nemuroshibetsu**	**0.78**	**326**	P	**Pn**	**23 37 46.7**	**0.0**
JNSB				*e*S	**Sn**	**23 37 58.1**	**-0.2**
JNK	**Nakash**	**0.79**	**306**	P	**Pn**	**23 37 46.5**	**-0.4**
JNK				*e*S	**Sn**	**23 37 57.6**	**-0.9**
GRPR	**Tuman**	**0.87**	**8**	*i* P	**Pn**	**23 37 48.0**	**+0.1**
GRPR				AMB	AMB	23 37 48.0	
	comp=E,544nm,0.3s						
GRPR				*i* S	**Sn**	**23 38 00.0**	**-0.2**
GRPR				A	A	23 38 00.0	
	comp=E,874nm,0.4s						
GRPR				A	A	23 38 00.0	
	comp=E,1µm,0.4s						
GRPR	**Tuman**	**0.87**	**8**	↑*i* PN	**Pn**	**23 37 48.0**	**+0.1**
GRPR				*i* S	**Sn**	**23 38 00.2**	**0.0**
GRPR				pmax	pmax		
	comp=N,142nm,0.1s						
GRPR				pmax	pmax		
	comp=E,126nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,544nm,0.1s						
GRPR				smax	smax		
	comp=E,11µm,0.3s						
GRPR				smax	smax		
	comp=N,9µm,0.4s						
JRA	**Rausu**	**0.88**	**337**	P	**Pn**	**23 37 48.1**	**+0.1**
JRA				*e*S	**Sn**	**23 38 00.6**	**+0.2**
YUK	**Yuzh-Kuril'sk**	**0.93**	**11**	*i* P	**Pn**	**23 37 48.0**	**-0.5**
YUK				AMB	AMB	23 37 49.0	
	comp=N,74nm,0.2s						
YUK				*i* S	**Sn**	**23 38 01.0**	**-0.4**
YUK				A	A	23 38 04.0	
	comp=N,455nm,0.3s						
YUK				A	A	23 38 04.0	
	comp=N,3µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.93**	**11**	*e*PN	**Pn**	**23 37 49.0**	**+0.5**
JOB	**Onbets**	**1.32**	**261**	P	**Pn**	**23 37 53.6**	**+0.1**
JOB				*e*S	**Sn**	**23 38 10.4**	**0.0**
JAR	**Ashorobuto**	**1.35**	**278**	P	**Pn**	**23 37 54.1**	**+0.1**
JAR				*e*S	**Sn**	**23 38 11.2**	**0.0**
JTKR	**Abashiri--Toko**	**1.50**	**305**	P	**Pn**	**23 37 56.2**	**+0.3**
JTKR				*e*S	**Sn**	**23 38 14.5**	**0.0**
JCH	**Churui**	**1.73**	**254**	P	**Pn**	**23 37 58.8**	**-0.2**
JCH				*e*S	**Sn**	**23 38 19.1**	**-1.0**
ERM	**Erimo**	**2.12**	**239**	*de*PN	**Pn**	**23 38 06.3**	**+2.0**
ERM	**Erimo**	**2.12**	**239**		**Pn**	**23 38 06.0**	**+1.7**
ERM				Sn	**Sn**	**23 38 31.0**	**+1.3**
JEM	**Erimo**	**2.12**	**239**	Pn	**Pn**	**23 38 06.0**	**+1.7**
JEM				Sn	**Sn**	**23 38 30.6**	**+1.0**
JKA	**Kamikawa-asahi**	**2.40**	**295**	*e*P	**Pn**	**23 38 09.6**	**+1.6**
JKA	**Kamikawa-asahi**	**2.40**	**295**		**Pn**	**23 38 07.2**	**-0.9**
ASAJ	**Asahikawa**	**2.40**	**295

BCAR	Beaver Creek A	45.08	38	P		P	23 45 40.5	+0.4
INK	Inuvik	47.50	30	P		P	23 45 58.7	-0.2
	comp=Z,0.5nm,0.4s,baz=267,slow=2.2,SNR=4.4							
INK	Inuvik	47.50	30	P		P	23 45 58.8	-0.2
INK				pmax		pmax		
	comp=Z,2.0nm,1.1s							
INK	Inuvik	47.50	30	P		P	23 45 58.8	-0.2
HYT	Haines Junctio	47.53	40	P		P	23 46 00.5	+1.0
HYT				IAmb		IAmb	23 46 02.3	
	comp=Z,3.8nm,0.9s							
BRVK	Borovoye	49.08	309	eP		P	23 46 10.8	-0.5
BRVK	Borovoye	49.08	309	P		P	23 46 10.8	-0.5
BRVK				pmax		pmax		
	comp=Z,1.0nm,1.0s							
BRVK	Borovoye	49.08	309	P		P	23 46 10.8	-0.5
BESE	Bessie Mountai	49.47	43	P		P	23 46 14.5	+0.2
BOOM	Boomskoye usch	49.72	295	P		P	23 46 15.9	-0.6
BOOM				pmax		pmax		
	comp=Z,7.0nm,1.2s							
BOOM	Boomskoye usch	49.72	295	P		P	23 46 15.9	-0.6
BOOM				IAmb		IAmb	23 46 25.8	
	comp=Z,6.7nm,1.1s							
CHGR	Chuyangaron	56.08	293	P		P	23 47 02.2	-1.2
CHGR				IAmb		IAmb	23 47 14.1	
	comp=Z,5.2nm,1.0s							
ABKAR	Akbulak array	56.57	308	P		P	23 47 05.6	-0.9
ABKAR	Akbulak array	56.57	308	P		P	23 47 05.7	-0.9
WRA	Warramunga Arr	63.61	192	P		P	23 47 51.7	-3.2
	comp=Z,0.2nm,0.8s,baz=9.1,slow=6.9,SNR=1.7							
FIA1	FINESS Array S	64.91	333	P		P	23 48 01.6	-1.4
FIA1				IAmb		IAmb	23 48 30.2	
	comp=Z,5.3nm,1.1s							
FINES	FINESS Array B	64.91	333	P		P	23 48 01.6	-1.4
	comp=Z,1.6nm,0.5s,baz=40,slow=8.1,SNR=14							
OBN	Obninsk	65.15	323	eP		P	23 48 07.1	+2.5
OBN	Obninsk	65.15	323	eP		P	23 48 07.1	+2.5
OBN				e			23 48 39.0	
OBN				pmax		pmax		
	comp=Z,4.0nm,0.9s							
NVAR	Mina Array Bea	68.86	57	P		P	23 48 28.9	+0.2
	comp=Z,0.8nm,0.8s,baz=297,slow=6.6,SNR=5.2							
PDAR	Pinedale Array	71.17	49	P		P	23 48 42.6	-0.2
	comp=Z,0.4nm,0.5s,baz=276,slow=2.5,SNR=4.6							
TXAR	Lajitas Array	83.93	55	P		P	23 49 53.6	-0.4
	comp=Z,0.4nm,0.6s,baz=308,slow=4.4,SNR=2.8							

NEIC ***12*** *23:42:58.4±2.5, 14°.75N±0°.06×92°.57W±0°.05, h87km±6km, Error ellipse: s-maj=10.0km s-min=5.4km az=208.0*
MEX ***12*** *23:42:59.2±0.8, 14°.74N×92°.56W, h87km±6km, MD4.0*
GCG ***12*** *23:43:00.6±0.3, 15°.03N×92°.50W, h39km±72km, MD4.4*
IDC ***12*** *23:43:04.0±3.3, 15°.05N×91°.99W, h130km±30km, mb3.9/13, mb1 4.0/15, mb1mx3.7/38, mbtmp4.2/15, MS3.1/1, Ms1 3.1/1, ms1mx2.4/24, Error ellipse: s-maj=36.6km s-min=15.5km az=40.0*

ISC 12 23:42:58.3±0.7, 14.79N±0.05×92.56W±0.04, h89km±6km, n121, σ1$22/134, mb4.3/36, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		0.31	67	*i* P	Pn	23 43 11.2	-0.4
THIG				eS	Sn	23 43 20.8	-0.8
THIG		0.31	67		Pn	23 43 11.2	-0.4
THIG					Sn	23 43 20.8	-0.8
RTAL	Retalhuleu	0.87	107		Pn	23 43 16.7	+0.1
RTAL				Sn	Sn	23 43 30.5	+0.3
STG3	Santiaguito 3,	0.96	94	eP	Pn	23 43 18.0	+0.4
PCIG		1.11	325	*i* P	Pn	23 43 19.5	+0.2
PCIG				*i* S	Sn	23 43 35.1	+0.1
PCIG		1.11	325		Pn	23 43 19.5	+0.2
PCIG					Sn	23 43 35.1	+0.1
HUEH	Huehuetenango	1.15	62	Pn	Pn	23 43 20.5	+0.6
HUEH				Sn	Sn	23 43 37.7	+1.5
CCIG	Comitan	1.54	15	eP	Pn	23 43 25.7	+1.0
CCIG				eS	Sn	23 43 44.9	+0.2
CCIG	Comitan	1.54	15		Pn	23 43 25.4	+0.7
CCIG				Sn	Sn	23 43 45.8	+1.0
FUG	Fuego 3	1.69	101	eP	Pn	23 43 28.4	+1.7
FUG				eS	Sn	23 43 50.1	+1.9
TGIG		2.06	345	eP	Pn	23 43 30.9	-0.4
TGIG				*i* S	Sn	23 43 55.8	-0.6
TGIG		2.06	345		Pn	23 43 30.9	-0.4
TGIG					Sn	23 43 55.8	-0.6
NBG	Las Nubes	2.15	95	eP	Pn	23 43 34.6	+1.9
MRL	Marmol	2.79	84	eP	Pn	23 43 42.7	+1.5
MTO3	Montecristo	3.12	97	Pn	Pn	23 43 45.9	+0.2
ESQI	Esquipulas	3.12	94	Pn	Pn	23 43 46.1	+0.6
CMIG	Matias Romero	3.20	316	P	Pn	23 43 47.6	+1.0
	7.2nm,0.3s,baz=141,slow=10.0,SNR=68						
CMIG				S	Sn	23 44 24.6	+0.7
	51nm,0.3s,baz=184,slow=13,SNR=9.9						
CMIG	Matias Romero	3.20	316	eP	Pn	23 43 47.0	+0.4
CMIG	Matias Romero	3.20	316		Pn	23 43 47.0	+0.4
PETF	Flores	3.34	50	Pn	Pn	23 43 48.7	+0.2
SNET	Serv Nac Est T	3.40	108	Pn	Pn	23 43 49.7	+0.4
HUIG	Huatulco	3.56	286	*i* P	Pn	23 43 50.9	-0.5
HUIG				*i* S	Sn	23 44 31.7	-0.9
HUIG	Huatulco	3.56	286		Pn	23 43 50.9	-0.5
HUIG					Sn	23 44 31.7	-0.9
TGUH	Tegucigalpa,Un	5.17	97	Pn	Pn	23 44 13.7	+0.3
CRIN	San Cristobal	5.74	111	Pn	Pn	23 44 21.2	+0.1
TLIG	Tlapa	6.40	296	Pn	Pn	23 44 32.7	+2.5
MATN	Matagalpa	6.70	105	Pn	Pn	23 44 34.6	+0.4
TEIG	Tepich	6.78	36		Pn	23 44 34.1	-1.1
JTS	Las Juntas de	8.66	120	P	Pn	23 45 00.4	-0.5
	2.1nm,0.3s,baz=43,slow=20,SNR=5.0						
MTDJ	Mount Denham	14.81	75	P	P	23 46 26.3	-0.6
344A	Westbrook Farm	16.68	5	Pn	P	23 46 47.5	+0.1
553A	Crawfordville	17.06	25		P	23 46 52.8	+1.1
553A				IAmb	IAmb	23 47 07.4	
	comp=Z,9.9nm,0.6s						
BRAL	Brewton	17.07	16		P	23 46 52.5	+0.8
BRAL				IAmb	IAmb	23 46 53.8	
	comp=Z,28nm,0.8s						
TX31	Lajitas Ar. Si	17.75	326		Pn	23 47 02.3	+2.5
TX32	Lajitas Array	17.75	326	P	Pn	23 47 01.2	+1.4
TXAR	Lajitas Array	17.75	326	P	Pn	23 47 02.4	+2.6
	comp=Z,0.2nm,0.3s,baz=144,slow=11,SNR=11						
TXAR	Lajitas Array	17.75	326	P	Pn	23 47 00.8	+1.0
352A	Blakely	18.03	22	P	Pn	23 47 03.0	0.0
352A				IAmb	IAmb	23 47 04.7	
	comp=Z,26nm,0.9s						
TIGA	Tifton	18.50	25	P	Pn	23 47 08.1	-0.6
TIGA				IAmb	IAmb	23 47 10.7	
	comp=Z,20nm,0.8s						
LRAL	Lakeview Retre	18.86	15		Pn	23 47 11.9	-1.0
152A	Waverly Hall	19.18	20	P	P	23 47 15.5	+0.5
152A				IAmb	IAmb	23 47 20.3	
	comp=Z,12nm,0.6s						
MIAR	Mount Ida	19.70	358		Pn	23 47 22.1	-0.6
154A	Montrose	19.72	24	P	P	23 47 21.0	+0.1
Y49A	Blount Mountai	19.79	15	P	P	23 47 22.3	+0.7
OXF	Oxford	19.85	8		Pn	23 47 23.2	-1.3
OXF				IAmb	IAmb	23 47 26.2	
	comp=Z,15nm,0.7s						
X48A	Hartselle	20.20	13	P	P	23 47 26.9	+0.8
GOGA	Godfrey	20.30	22	P	P	23 47 27.3	+0.3
GOGA				IAmb	IAmb	23 47 30.0	
	comp=Z,8.9nm,0.7s						
Y52A	Lilburn	20.49	21	P	P	23 47 29.4	+0.2
Y52A				IAmb	IAmb	23 47 30.2	
	comp=Z,17nm,0.7s						
MNTX	Cornudas Mount	20.52	327	P	P	23 47 30.1	+0.7
FPAL	Fort Paine	20.64	16	P	P	23 47 30.8	0.0
FPAL				IAmb	IAmb	23 47 31.4	
	comp=Z,11nm,0.7s						
SDDR	Presa de Saban	20.77	75	P	P	23 47 32.4	+0.1
SDDR				IAmb	IAmb	23 47 33.2	
	comp=Z,9.4nm,0.8s						
SWET	Sewanee	21.20	15	P	P	23 47 36.4	-0.4
SWET				IAmb	IAmb	23 47 36.9	
	comp=Z,11nm,0.6s						
LCAR	Lake Charles	21.23	3	P	P	23 47 38.9	+1.8
W50A	Signal Mountai	21.35	16	P	P	23 47 39.9	+1.5
AMTX	Amarillo	21.64	339	P	P	23 47 41.8	+0.3
AMTX				IAmb	IAmb	23 47 45.6	
	comp=Z,6.8nm,0.6s						
CPCT	Cooper Cave	21.81	18	P	P	23 47 42.6	-0.6
BG3	Lake Jocassee	21.91	22	P	P	23 47 44.4	+0.1
BG3				IAmb	IAmb	23 47 45.6	
	comp=Z,9.7nm,0.8s						
CLTN	Cedars of Leba	21.94	14	P	P	23 47 43.8	-0.8
PBMO	Poplar Bluff	21.99	5	P	P	23 47 44.3	-0.8
PBMO				IAmb	IAmb	23 47 45.3	
	comp=Z,8.0nm,0.5s						
V51A	Loudon	22.19	18	P	P	23 47 46.5	-0.7
V51A				IAmb	IAmb	23 48 04.2	
	comp=Z,18nm,1.4s						
TKL	Tuckaleechee C	22.23	19	P	P	23 47 47.0	-0.8
	comp=Z,7.0nm,0.7s,baz=189,slow=11,SNR=12						
TKL	Tuckaleechee C	22.23	19	P	P	23 47 47.5	-0.3
TKL				IAmb	IAmb	23 47 49.0	
	comp=Z,31nm,1.4s						
SDV	Santo Domingo	22.23	103	P	P	23 47 46.5	-1.7
	comp=Z,3.0nm,0.5s,baz=303,slow=10,SNR=1.8						
SDV	Santo Domingo	22.23	103	P	P	23 47 48.4	+0.2
SDV				IAmb	IAmb	23 47 54.0	
	comp=Z,4.8nm,0.9s						
V52A	Sevierville	22.45	19	P	P	23 47 50.0	-0.1
V52A				IAmb	IAmb	23 47 50.3	
	comp=Z,12nm,0.8s						
121A	Cookes Peak, D	22.46	324	P	P	23 47 52.3	+1.9
U49A	Red Boiling Sp	22.47	14	P	P	23 47 48.9	-1.3
U49A				IAmb	IAmb	23 47 50.2	
	comp=Z,9.2nm,0.6s						
V53A	Saluda	22.56	21	P	P	23 47 51.0	-0.3
V53A				IAmb	IAmb	23 47 52.2	
	comp=Z,23nm,1.2s						
T47A	Sharon Grove	22.64	11	P	P	23 47 51.2	-0.8
T47A				IAmb	IAmb	23 47 52.5	
	comp=Z,17nm,0.7s						
KMSC	Kings Mountain	22.64	24	P	P	23 47 51.5	-0.6
KMSC				IAmb	IAmb	23 47 52.3	
	comp=Z,8.9nm,0.7s						
S44A	Carbondale	23.00	7	P	P	23 47 54.9	-0.8
S44A				IAmb	IAmb	23 47 56.0	
	comp=Z,11nm,0.6s						
BNM	Barren Site	23.10	329	P	P	23 47 58.0	+1.1
TZTN	Tazewell	23.11	19	P	P	23 47 56.2	-0.6
TZTN				IAmb	IAmb	23 47 56.8	
	comp=Z,17nm,0.7s						
T50A	Nancy	23.19	16	P	P	23 47 55.6	-1.8
T50A				IAmb	IAmb	23 47 56.6	
	comp=Z,11nm,0.8s						
V55A	Taylorsville	23.31	24	P	P	23 47 57.8	-0.8
V55A				IAmb	IAmb	23 47 58.4	
	comp=Z,10nm,0.8s						
ANMO	Albuquerque	23.66	331	P	P	23 48 03.3	+1.4
	comp=Z,1.4nm,0.4s,baz=152,slow=13,SNR=7.2						
ANMO	Albuquerque	23.66	331	P	P	23 48 03.4	+1.4
U54A	Nelsons Funny	23.68	22	P	P	23 48 01.4	-0.6
WCI	Wyandotte Cave	24.00	12	P	P	23 48 04.2	-0.5
S51A	Beattyville	24.11	18	P	P	23 48 05.7	-0.1
S51A				IAmb	IAmb	23 48 06.2	
	comp=Z,13nm,0.7s						
V58A	Windy Hill, Pi	24.14	28	P	P	23 48 04.4	-1.7
CRPR	Cabo Rojo, PR	24.61	79	P	P	23 48 10.1	-0.4
T57A	Hurt	25.10	26	P	P	23 48 13.6	-1.2
T57A				IAmb	IAmb	23 48 14.5	
	comp=Z,8.0nm,0.8s						
P46A	Rosedale	25.18	10	P	P	23 48 14.8	-0.6
P46A				IAmb	IAmb	23 48 16.7	
	comp=Z,13nm,0.7s						
R53A	Hurricane	25.26	20	P	P	23 48 16.6	+0.4
R53A				IAmb	IAmb	23 48 18.4	
	comp=Z,17nm,1.2s						
Q51A	Peebles	25.47	17	P	P	23 48 17.4	-0.8
T59A	Double "B" Far	25.82	28	P	P	23 48 20.3	-1.0
T59A				IAmb	IAmb	23 48 20.8	
	comp=Z,14nm,0.8s						
JSRW	J. Sargeant Re	26.27	27	P	P	23 48 24.2	-1.1
MVCO	Mesa Verde	26.46	331	P	P	23 48 28.5	+1.1
MVCO				IAmb	IAmb	23 48 30.6	
	comp=Z,9.5nm,0.9s						
K58A	Earlville	31.45	24	P	P	23 49 09.7	-1.6
ELK	Elko	32.54	327	P	P	23 49 23.6	+2.4
NVAR	Mina Array Bea	32.73	321	P	P	23 49 26.3	+3.4
	comp=Z,3.4nm,0.8s,baz=135,slow=8.3,SNR=19						
NVAR	Mina Array Bea	32.73	321	P	P	23 49 25.6	+2.8
KVN	Kaiserville	33.00	322	P	P	23 49 27.6	+2.5
KVN				IAmb	IAmb	23 49 30.1	
	comp=Z,6.6nm,1.3s						
HLID	Hailey	34.23	331	P	P	23 49 37.8	+2.0
MCMT	McKenzie Canyo	34.53	334	P	P	23 49 40.4	+1.9
J08A	Circle Bar Ran	36.09	327	P	P	23 49 53.7	+2.0
PLID	Pearl Lake	36.13	331	P	P	23 49 53.7	+1.5
PLID				IAmb	IAmb	23 49 54.5	
	comp=Z,4.5nm,0.7s						
F10A	Beach Ranch, E	37.37	331	P	P	23 50 04.0	+1.6
SAML	Samuel	37.47	127	P	P	23 50 02.5	-1.1
SAML				IAmb	IAmb	23 50 03.3	
	comp=Z,4.3nm,0.8s						
PSGCX	Pisagua	40.68	146	P	P	23 50 31.4	+1.1
SCHQ	Schefferville	44.68	21	P	P	23 50 59.7	-2.5
	comp=Z,3.1nm,0.6s,baz=224,slow=10,SNR=5.0						
YKA	Yellowknife Ar	50.14	347	P	P	23 51 43.9	-0.5
	comp=Z,2.0nm,0.7s,baz=154,slow=7.0,SNR=6.6						
DLBC	Dease Lake	51.72	336	P	P	23 51 59.0	+2.6
	comp=Z,6.1nm,0.6s,baz=126,slow=4.3,SNR=8.9						
DLBC	Dease Lake	51.72	336	P	P	23 51 58.9	+2.5
BDFB	Brasilia	53.40	123	P	P	23 52 09.0	-0.4
	comp=Z,1.5nm,0.5s,baz=296,slow=13,SNR=3.2						
BDFB	Brasilia	53.40	123	P	P	23 52 09.4	-0.1
BDFB				IAmb	IAmb	23 52 09.6	
	comp=Z,2.1nm,0.7s						
INK	Inuvik	59.54	344	P	P	23 52 52.1	0.0
	comp=Z,3.2nm,0.7s,baz=118,slow=6.1,SNR=13						
INK	Inuvik	59.54	344	P	P	23 52 52.7	+0.6
RCBR	Riachuelo	59.77	106	LR	LR	00 19 02.3	
	comp=Z,16nm,19.5s,baz=230,slow=36						
PAX	Paxson	60.52	335	P	P	23 53 00.2	+1.2
IL31		61.91	337	P	P	23 53 09.1	+0.8
ILAR	Eielson Array	61.91	337	P	P	23 53 09.0	+0.7
	comp=Z,2.7nm,0.6s,baz=131,slow=5.5,SNR=35						
ILAR	Eielson Array	61.91	337	P	P	23 53 09.2	+0.9
RND	Reindeer	62.09	335	P	P	23 53 11.0	+1.4
TRF	Thorofare Moun	62.70	335	P	P	23 53 15.0	+1.2
TOLK	Toolik Lake Re	64.60	340	P	P	23 53 27.4	+1.3
ESDC	Sonseca Array	79.66	52	P	P	23 54 53.4	-3.0
	comp=Z,0.4nm,0.8s,baz=294,slow=4.7,SNR=4.0						
ARCES	ARCESS Array B	85.56	18	P	P	23 55 24.6	-1.8
	comp=Z,3.2nm,0.8s,baz=308,slow=4.4,SNR=3.6						
FINES	FINESS Array B	90.02	25	P	P	23 55 45.7	-2.1
	comp=Z,1.6nm,0.8s,baz=243,slow=1.7,SNR=4.4						
CMAR	Chiang Mai Arr	145.08	341	PKPbc	PKPab	00 02 26.5	+0.6
	comp=Z,1.9nm,0.7s,baz=343,slow=3.7,SNR=14						

IDC 12 23:55:23.3±9.3, 54°.23S×131°.24W, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.7/21, mbtmp4.1/2, MS3.5/5, Ms1 3.4/5, ms1mx3.2/22, Error ellipse: s-maj=936.1km s-min=139.8km az=151.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	Vanda	32.84	202	LR	LR	00 12 09.9	
	comp=Z,24nm,21.9s,baz=47,slow=31						
TBI	Tubuai	33.74	329	eT	T	00 37 57.9	
	28nm,0.3s						
PPT2	Papeete2	39.22	332	eLR	LR	00 13 40.2	
	comp=Z,177nm,26.8s						
PPT	Papeete	39.24	332	LR	LR	00 14 50.4	
	comp=Z,76nm,18.8s,baz=190,slow=30						
VAH	Vaihoa	40.96	335	eT	T	00 46 58.6	
	7.7nm,0.2s						
H03S2	Juan Fernandez	41.63	83	T	T	00 47 38.5	
	baz=222,slow=74,SNR=72						
H03S1	Juan Fernandez	41.64	83	T	T	00 47 39.9	
	baz=222,slow=74,SNR=91						
H03S3	Juan Fernandez	41.65	83	T	T	00 47 39.0	
	baz=222,slow=74,SNR=80						
H03N3	Juan Fernandez	41.91	82	T	T	00 47 54.7	
	baz=224,slow=72,SNR=60						
H03N2	Juan Fernandez	41.91	82	T	T	00 48 10.3	
	baz=224,slow=72,SNR=91						
H03N1	Juan Fernandez	41.92	82	T	T	00 47 57.2	
	baz=224,slow=72,SNR=58						
CPUP	Villa Florida	59.79	94	LR	LR	00 27 27.0	
	comp=Z,33nm,18.5s,baz=214,slow=32						
STKA	Stephens Creek	63.25	252	LR	LR	00 29 22.9	
	comp=Z,38nm,18.2s,baz=200,slow=32						
ASAR	Alice Springs	73.89	252	P	P	00 07 00.1	0.0
	1.1nm,0.6s,baz=142,slow=6.4,SNR=9.8						
WRA	Warramunga Arr	76.59	255	P	P	00 07 15.8	+0.1
	0.9nm,0.5s,baz=143,slow=5.2,SNR=15						
RCBR	Riachuelo	88.44	98	LR	LR	00 43 59.5	
	comp=Z,47nm,20.0s,baz=355,slow=33						
SONM	Songino Array	144.09	284	PKP	PKPdf	00 14 59.4	-0.7
	1.2nm,0.7s,baz=128,slow=3.1,SNR=7.1						

DSN ***13*** *00:38:55.4±2.0, 27°.48N×53°.78E, h10km, ML5.1/10, Error ellipse: s-maj=25.8km s-min=9.4km az=13.0*
BJI ***13*** *00:38:59.4±0.0, 26°.90N×53°.49E, h20km, mB4.9/25, mb4.7/39, Ms4.5/10, Ms7 4.3/2*
MOS ***13*** *00:39:00.8±0.9, 26°.68N×53°.86E, h18km, mb4.9/75, Error ellipse: s-maj=5.2km s-min=3.6km az=107.6*
THR ***13*** *00:39:01.8±0.3, 26°.61N×53°.95E, h14km±7km, ML4.4*
NEIC ***13*** *00:39:01.9±1.4, 26°.77N±0°.05×53°.86E±0°.05, h10km±1km, Error ellipse: s-maj=9.0km s-min=6.5km az=223.0*
GII ***13*** *00:39:01.9±0.0, 26°.60N×53°.94E, h10km*
OMAN ***13*** *00:39:02.4±0.2, 26°.98N×53°.95E, h11km±8km, ml4.7/9, Error ellipse: s-maj=4.8km s-min=2.7km az=248.0*
TEH ***13*** *00:39:02.1, 26°.72N×53°.92E, h12km, ML4.6*
SGS ***13*** *00:39:03.6, 27°.01N×54°.15E, h51km, ML4.2*
IDC ***13*** *00:39:05.8±1.7, 26°.67N×53°.87E, h41km±16km, mb4.3/30, mb1 4.4/35, mb1mx4.3/47, mbtmp4.5/35, ML3.9/5, MS3.7/22, Ms1 3.7/22, ms1mx3.5/49, Error ellipse: s-maj=11.4km s-min=9.1km az=25.0*
BGR ***13*** *00:39:20.8±0.0, 28°.30N×52°.61E, h33km, mb4.2*

ISC 13 00:39:01.7±1.1, 26°.72N±0°.03×53°.87E±0°.03, h11km±6km, n499, σ1$21/502, mb4.7/137, MS3.8/24, 29C-16D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.88	315	ePg	Pn	00 39 19.8	-0.3
LMD1				*e*		00 39 41.2	
LMD1	Lamerd	0.88	315	Pg	Pn	00 39 19.8	-0.3
LAR1	LAR	1.05	25	ePg	Pn	00 39 22.3	-0.2
LAR1				*e*		00 39 49.3	
LAR1	LAR	1.05	25	Pg	Pn	00 39 22.3	-0.2
GHIR	Ghir-Karzin	1.74	334	ePn	Pg	00 39 35.5	+0.3
GHIR				eSg	Sg	00 40 01.1	+3.2
GHIR				IAML		00 40 06.8	
	comp=E,4µm,0.8s						
GHIR	Ghir-Karzin	1.74	334	ePn	Pg	00 39 35.5	+0.3
GHIR	Ghir-Karzin	1.74	334	Pn	Pg	00 39 35.5	+0.3
JHRM	Jahrom	1.80	352	ePg	Pg	00 39 35.0	-1.2
JHRM				*e*		00 40 04.6	
JHRM	Jahrom	1.80	352	Pg	Pg	00 39 35.0	-1.2
QIR1	Qir	1.90	338	ePn	Pb	00 39 35.7	-0.7
QIR1				*e*		00 40 13.8	
UMQ	Umm Al-Quwin	2.01	126	eP	Pn	00 39 36.7	+1.1
	SNR=15						
UMQ	Umm Al-Quwin	2.01	126	P	Pb	00 39 38.0	-0.2
	SNR=17						
UMQ				S	Sb	00 40 03.4	+0.1
UMQ	Umm Al-Quwin	2.01	126	ePn	Pb	00 39 37.5	-0.8
UMQ	Umm Al-Quwin	2.01	126	Pn	Pb	00 39 37.4	-0.8
SHME	Shamm	2.15	108	eP	Pn	00 39 38.1	+0.5
	SNR=30						
SHME	Shamm	2.15	108	ePn	Pn	00 39 38.1	+0.5
SHME	Shamm	2.15	108	Pn	Pn	00 39 38.0	+0.5
BNDS	Bandar-Abbas	2.16	71	ePn	Pb	00 39 39.1	-2.0
BNDS	Bandar-Abbas	2.16	71	ePn	Pb	00 39 39.1	-2.0
BNDS	Bandar-Abbas	2.16	71	Pn	Pb	00 39 39.1	-2.0
GENO	Geno	2.17	71	ePn	Pn	00 39 38.9	+0.9
GENO				*e*		00 40 23.0	
GENO	Geno	2.17	71	Pn	Pn	00 39 38.9	+0.9
NAZ	Nazwa, Dubai	2.37	136	*i* P	Pb	00 39 43.3	-1.1
	SNR=51						
NAZ	Nazwa, Dubai	2.37	136	P	Pb	00 39 43.5	-0.9
	SNR=151						
NAZ	Nazwa, Dubai	2.37	136	ePn	Pb	00 39 43.4	-1.1
NAZ	Nazwa, Dubai	2.37	136	Pn	Pb	00 39 43.3	-1.1
AJN	Ajban	2.37	155	*i* P	Pb	00 39 43.6	-0.9
	SNR=16						
AJN	Ajban	2.37	155	P	Pb	00 39 43.6	-0.9
	SNR=74						
AJN	Ajban	2.37	155	ePn	Pb	00 39 43.1	-1.5
AJN	Ajban	2.37	155	Pn	Pb	00 39 43.0	-1.5
ASUD	Al Ashush, Dub	2.47	147	*i* P	Pb	00 39 45.1	-1.0
	SNR=98						
ASUD	Al Ashush, Dub	2.47	147	P	Pb	00 39 45.5	-0.7
	SNR=131						
ASUD				S	Sb	00 40 16.6	0.0
ASUD	Al Ashush, Dub	2.47	147	ePn	Pb	00 39 45.2	-1.0
ASUD	Al Ashush, Dub	2.47	147	Pn	Pb	00 39 45.2	-1.0
MSFE	Esma-Masafi	2.47	123	*i* P	Pn	00 39 43.5	+1.5
	SNR=63						
MSFE	Esma-Masafi	2.47	123	ePn	Pn	00 39 43.5	+1.5
MSFE	Esma-Masafi	2.47	123	Pn	Pn	00 39 43.5	+1.5
FAQ	Al Faqa, Dubai	2.51	141	*i* P	Pb	00 39 45.1	-1.7
	SNR=38						
FAQ	Al Faqa, Dubai	2.51	141	P	Pb	00 39 45.4	-1.5
	SNR=153						
FAQ	Al Faqa, Dubai	2.51	141	ePn	Pn	00 39 45.0	+2.4
FAQ	Al Faqa, Dubai	2.51	141	Pn	Pn	00 39 44.9	+2.4
UOSS	Minazif	2.75	129	*i* P	Pn	00 39 47.4	+1.6
	SNR=76						
UOSS	Minazif	2.75	129	ePn	Pn	00 39 47.4	+1.6
UOSS	Minazif	2.75	129	Pn	Pn	00 39 47.3	+1.4
UOSS				Sn	Sn	00 40 19.1	0.0
HATD	Hatta, Dubai	2.78

TNSJ	Nastanj	7.60	18	ePn		Pn	00 40 53.1	+0.5		
LYLS		7.62	234	P		Pn	00 40 53.6	+0.7		
IDAH	Dahanechah	7.95	40	ePn		Pn	00 40 59.9	+2.4		
AFRZ	Afriz	8.03	32	ePn		Pn	00 41 00.7	+2.1		
IMON	Monand	8.18	37	ePn		Pn	00 41 03.5	+2.8		
BMDN	Meydan	8.19	329	ePn		Pn	00 41 02.5	+1.8		
RAYN	Ar Rayn	8.22	249	*i* P		Pn	00 41 00.4	-0.7		
	SNR=59									
RAYN	Ar Rayn	8.22	249	P		Pn	00 41 01.1	0.0		
RAYN	Ar Rayn	8.22	249	Pn		Pn	00 41 01.1	0.0		
SHRT	Shahrakht	8.86	37	ePn		Pn	00 41 12.4	+2.5		
SHRT	Shahrakht	8.86	37	ePn		Pn	00 41 12.4	+2.5		
IDMV	Damavand	8.97	350	ePn		Pn	00 41 12.3	+0.8		
IKOM	Komasi	9.23	325	ePn		Pn	00 41 15.3	+0.3		
IRAZ	Razeghan	9.29	340	ePn		Pn	00 41 15.8	-0.1		
IMHD	Mahdasht	9.35	344	ePn		Pn	00 41 15.3	-1.2		
IALA	Alasht	9.38	355	ePn		Pn	00 41 19.3	+2.2		
ARSS	Ar Rass	9.57	267	P		Pn	00 41 20.9	+1.2		
KER	Kermanshah	9.59	324	ePn		Pn	00 41 21.8	+1.9		
IGLO	Ghaloghah	9.75	360	ePn		Pn	00 41 24.8	+2.6		
IGHG	Ghaleghazi	9.85	322	ePn		Pn	00 41 26.7	+3.1		
IDHR	Dehrash	10.23	323	ePn		Pn	00 41 29.3	+0.6		
HRA	Herat	10.51	41	Pn		Pn	00 41 33.7	+1.1		
HIL01	Al Amaaer	10.70	268	P		Pn	00 41 34.9	-0.2		
GEYT	Alibeck	11.74	17	P		Pn	00 41 52.2	+3.0		
	comp=N,0.1nm,0.3s,baz=201,slow=7.9,SNR=11									
GEYT					LR	LR	00 47 15.5			
	comp=N,616nm,19.2s,baz=215,slow=42									
GEYT	Alibeck	11.74	17	Pn		Pn	00 41 52.0	+2.8		
GYA0B	ALIBECK ARRAY	11.74	17	Pn		Pn	00 41 51.9	+2.6		
SOCY	Socotra	14.46	180	Pn		Pn	00 42 22.3	-4.3		
GEVA	Gevas	14.71	324	Pn		Pn	00 42 28.7	-1.2		
KBL	Kabul	15.20	56	P		Pn	00 42 37.5	+0.9		
KBL					pmax	pmax				
	comp=Z,36nm,1.7s									
KBL	Kabul	15.20	56			Pn	00 42 37.5	+0.9		
MARD	Mardin	15.30	317	Pn		Pn	00 42 37.3	-0.7		
MARD					IAmb	IAmb	00 42 50.3			
	comp=Z,15nm,0.6s									
GNI	Garni	15.39	333	P		P	00 42 46.2	+2.5		
	comp=Z,2.5nm,0.3s,baz=134,slow=4.2,SNR=22									
GNI	Garni	15.39	333	⇑*e*P		P	00 42 46.1	+2.4		
LGD	Lagodekhi	16.33	339	P		P	00 42 56.6	+2.7		
KARS	Kars	16.50	330	P		P	00 42 58.9	+2.9		
GHAJ	Ghor Haditha	16.64	290	Pn		Pn	00 42 55.5	+0.5		
ZFRI	Zfri	16.84	287	Pn		P	00 42 58.6	-1.1		
DSI	Dead Sea	16.85	291	Pn		P	00 42 59.2	-0.6		
HRFI	Mount Harif	16.90	286	Pn		P	00 42 59.2	-1.1		
EIL	Elat	16.93	284	P		P	00 43 01.5	+0.8		
	comp=Z,0.4nm,0.3s,baz=120,slow=6.9,SNR=6.0									
EIL	Elat	16.93	284	Pn		P	00 43 00.3	-0.4		
PRNI	Paran	16.96	287	Pn		P	00 43 01.4	+0.3		
AKH	Akhalkalaki	16.97	332	P		P	00 43 00.5	-0.7		
AKH					pmax	pmax				
	comp=Z,57nm,1.5s									
AKH	Akhalkalaki	16.97	332	P		P	00 43 00.5	-0.7		
NATI	Neve Ativ	17.00	297	Pn		Pn	00 42 59.5	0.0		
MAK	Makhachkala	17.01	344	*e*P		Pn	00 42 56.9	-2.7		
MAK				*e*S		Sn	00 46 05.9	-2.8		
MAK					pmax	pmax				
	comp=Z,262nm,1.3s									
MAK					MLR	MLR				
	comp=Z,111nm,13.0s									
MMLI	Mount Malkishu	17.02	294	Pn		P	00 43 01.5	-0.2		
YTIR	Yattir	17.03	290	Pn		P	00 43 01.8	-0.1		
GEH	Giv'at Ha'Em	17.04	297	Pn		P	00 43 01.6	-0.3		
KRMI	Paran Flat	17.18	286	Pn		P	00 43 03.5	+0.1		
MMA0B	Mount Meron ar	17.19	296	Pn		P	00 43 03.4	-0.2		
MMAI	Mount Meron Ar	17.19	296	P		P	00 43 03.3	-0.3		
	comp=Z,0.8nm,0.3s,baz=111,slow=16,SNR=16									
AMAZ	Amatzia	17.23	291	Pn		P	00 43 04.3	+0.2		
BLGI	Bet Lehem HaGe	17.28	295	Pn		P	00 43 04.9	+0.3		
SLTI	Sal'it	17.28	293	Pn		P	00 43 04.6	0.0		
KOPT	Kop Dagi	17.31	323			P	00 43 03.8	-1.3		
KOPT					IAmb	IAmb	00 43 22.0			
	comp=Z,79nm,1.7s									
MALT	Malatya	17.38	316	P		P	00 43 08.4	+2.6		
OFRI	`Ofer	17.42	294	Pn		P	00 43 06.0	-0.2		
CHGR	Chuyangaron	17.50	43	Pn		Pn	00 43 04.5	-1.4		
GAZ	Gaziantep	17.54	311	Pn		P	00 43 06.5	-0.9		
KZIT	Kziot	17.56	288	Pn		P	00 43 08.0	+0.3		
GROC	Groznyy	17.71	340	*e*P		Pn	00 43 07.5	-0.8		
GROC				*e*S		S	00 46 28.2	-4.7		
GROC					pmax	pmax				
	comp=Z,12nm,0.6s									
ZEI	Tsey	17.98	336	*e*P		Pn	00 43 02.5	-9.4		
ZEI					pmax	pmax				
	comp=Z,17nm,1.2s									
NIL	Nilore	18.11	63	P		P	00 43 13.7	-0.1		
NIL					pmax	pmax				
	comp=Z,69nm,1.7s									
NIL	Nilore	18.11	63			P	00 43 13.7	-0.1		
GAR	Garm	18.43	44	P		P	00 43 15.1	-2.2		
KBZ	Khabaz	19.16	335	LR		LR	00 51 51.3			
	comp=Z,171nm,21.2s,baz=210,slow=40									
KBZ	Khabaz	19.16	335	⇓*e*P		Pn	00 43 27.0	+1.0		
KBZ					pmax	pmax				
	comp=Z,13nm,0.9s									
CSS	Mathiatis	19.43	300	P		P	00 43 26.5	-1.7		
KVAR	Kislovodsk Arr	19.43	335	P		Pn	00 43 30.7	+1.3		
	baz=87,slow=23,SNR=19									
KIV	Kislovodsk	19.43	335	*e*P		Pn	00 43 30.0	+0.6		
KIV					pmax	pmax				
	comp=Z,77nm,1.0s									
KIV					MLR	MLR				
	comp=Z,159nm,14.0s									
KIV	Kislovodsk	19.43	335	P		Pn	00 43 29.2	-0.2		
GOF	Gofitskoye	20.26	337	⇑*e*P		Pn	00 43 38.6	-0.5		
GOF					pmax	pmax				
	comp=Z,15nm,0.9s									
IUG	luzhnay	20.31	37	*e*P		P	00 43 37.8	0.0		
	comp=Z,20nm,1.7s,baz=37									
IUG	luzhnay	20.31	37	*e*P		P	00 43 37.8	0.0		
IUG					pmax	pmax				
	comp=Z,20nm,1.7s									
SOC	Sochi	20.37	329	*e*P		P	00 43 37.5	-0.8		
SOC				*e*PPP		PPP	00 44 08.3			
SOC				*e*S		Sn	00 47 27.8	-2.0		
SOC				*e*SSS		SSS	00 48 03.7			
SOC					pmax	pmax				
	comp=Z,17nm,0.9s									
SOC					MLR	MLR				
	comp=Z,148nm,13.0s									
KK31	Karatay Array	21.23	35	*i* P		P	00 43 47.3	-0.4		
KK31	Karatay Array	21.23	35	P		P	00 43 47.3	-0.4		
KKAR	Karatay Array	21.23	35	P		P	00 43 47.0	-0.7		
KKAR	Karatay Array	21.23	35	P		P	00 43 47.0	-0.7		
BR131	Keskin Array S	21.26	313	P		P	00 43 47.9	-0.3		
BR131					pmax	pmax				
	comp=Z,10.0nm,0.8s									
BR131	Keskin Array S	21.26	313	P		P	00 43 47.9	-0.3		
BRTR	Keskin Array B	21.26	313	P		P	00 43 49.1	+0.9		
	comp=Z,10nm,0.8s,baz=126,slow=12,SNR=15									
BRTR					LR	LR	00 53 17.6			
	comp=Z,52nm,19.4s,baz=130,slow=40									
BRTR	Keskin Array B	21.26	313	P		P	00 43 48.7	+0.5		
BRTR	Keskin Array B	21.26	313	P		P	00 43 48.7	+0.5		
DZA	Taraz	21.52	37	*e*P		P	00 43 50.3	-0.5		
	comp=Z,16nm,0.9s,baz=37									
DZA				*e*S		S	00 47 50.5	+1.1		
	baz=37									
DZA	Taraz	21.52	37	*e*P		P	00 43 50.3	-0.5		
DZA				*e*S		S	00 47 50.4	+1.1		
DZA					pmax	pmax				
	comp=Z,16nm,0.9s									
BR231	Keskin MP Arra	21.89	312	P		P	00 43 55.5	+0.5		
BR231					IAmb	IAmb	00 43 59.6			
	comp=Z,18nm,0.8s									
ILGA	Ilgaz	21.93	316	P		P	00 43 55.5	0.0		
ILGA					IAmb	IAmb	00 44 05.3			
	comp=Z,43nm,1.5s									
ANN	Anapa	22.36	328	*e*P		P	00 44 02.7	+3.0		
ANN				*e*S		Sn	00 48 11.3	-6.2		
ANN					pmax	pmax				
	comp=Z,36nm,1.1s									
KSH	Kashi	22.42	50	P		P	00 43 54.8	-5.8		
KSH				S		S	00 47 49.3	-18		
KSH					pmax	pmax				
	comp=Z,12nm,0.6s									
KSH					pmax	pmax				
	comp=Z,280nm,4.8s									
KSH					LR	LR				
	comp=Z,380nm,9.0s									
KSH					LR	LR				
	comp=Z,540nm,10.5s									
ELL	Elmali	22.64	302	P		P	00 44 03.8	+0.7		
ELL					pmax	pmax				
	comp=Z,155nm,1.2s									
ELL	Elmali	22.64	302	P		P	00 44 03.8	+0.7		
AKAS	Kas	22.71	301	P		P	00 44 03.0	-0.8		
AB31	Akbulak array	22.99	10	*e*P		P	00 44 06.7	+0.3		
ABKAR	Akbulak array	22.99	10	P		P	00 44 06.5	+0.2		
ABKAR					IAmb	IAmb	00 44 09.0			
	comp=Z,51nm,1.4s									
ABKAR	Akbulak array	22.99	10	P		P	00 44 06.3	-0.1		
AAK	Ala-Archa	23.14	41	*de*P		P	00 44 09.4	+1.1		
AAK					pmax	pmax				
	comp=Z,44nm,1.7s									
AAK	Ala-Archa	23.14	41	P		P	00 44 08.6	+0.3		
MDUB	Mudurnu	23.25	312	P		P	00 44 08.5	-0.8		
FRU1	Bishkek	23.33	41	P		P	00 44 11.4	+1.4		
FRU1					pmax	pmax				
	comp=Z,37nm,0.4s									
FRU1	Bishkek	23.33	41	P		P	00 44 11.4	+1.4		
SGDS	Sogindy	23.72	40	*e*P		P	00 44 13.9	0.0		
	comp=Z,4.7nm,1.1s,baz=40									
SGDS				*e*S		S	00 48 30.8	+1.8		
	baz=40									
SGDS	Sogindy	23.72	40	*e*P		P	00 44 13.8	0.0		
SGDS				*e*S		S	00 48 30.7	+1.8		
SGDS					pmax	pmax				
	comp=Z,5.0nm,1.1s									
AKTO	Aktyubinsk	23.89	7	P		P	00 44 16.3	+0.9		
	comp=Z,8.4nm,0.7s,baz=192,slow=9.0,SNR=30									
AKTO	Aktyubinsk	23.89	7	P		P	00 44 15.8	+0.4		
SIM	Simferopol'	24.12	324	*di* P		P	00 44 17.5	-0.1		
SIM					pmax	pmax				
	comp=Z,51nm,1.3s									
MANT	Manisa	24.26	305	P		P	00 44 19.3	+0.1		
BTLS	Baital	24.41	36	*e*P		P	00 44 20.3	0.0		
	comp=Z,5.2nm,0.8s,baz=37									
BTLS	Baital	24.41	36	*e*P		P	00 44 20.2	0.0		
BTLS					pmax	pmax				
	comp=Z,5.0nm,0.8s									
HYB	Hyderabad	24.64	107	*i* P		P	00 44 24.0	+1.4		
TNSS	Tian-Shan	24.85	43	*e*P		P	00 44 25.9	+1.1		
	baz=43									
TNSS	Tian-Shan	24.85	43	*e*P		P	00 44 25.8	+1.1		
AAA	Alma-Ata	24.93	43	*e*P		P	00 44 24.1	-0.9		
	baz=43									
AAA	Alma-Ata	24.93	43	*e*P		P	00 44 24.1	-0.9		
KUU	Kurty	24.97	41	*e*P		P	00 44 25.3	-0.1		
	comp=Z,8.8nm,1.4s,baz=41									
KUU	Kurty	24.97	41	*e*P		P	00 44 25.3	-0.1		
KUU					pmax	pmax				
	comp=Z,9.0nm,1.4s									
MDOK	Medeo	24.98	43	*e*P		P	00 44 26.2	+0.5		
	baz=43									
MDOK	Medeo	24.98	43	*e*P		P	00 44 26.1	+0.5		
APE	Apeiranthos	26.09	300	P		P	00 44 35.7	0.0		
APE	Apeiranthos	26.09	300	P		P	00 44 35.6	0.0		
VRH	Novokhopyorsk	26.14	343	*e*P		P	00 44 35.9	+0.1		
VRH					pmax	pmax				
	comp=Z,60nm,1.5s									
KPKS	Kokpek	26.15	44	*e*P		P	00 44 36.1	0.0		
	comp=Z,4.6nm,0.9s,baz=44									
KPKS	Kokpek	26.15	44	*e*P		P	00 44 36.1	0.0		
KPKS					pmax	pmax				
	comp=Z,5.0nm,0.9s									
IDI	Anoyia	26.19	296	P		P	00 44 37.2	+0.6		
	comp=Z,19nm,0.9s,baz=91,slow=11,SNR=10.0									
IDI	Anoyia	26.19	296	⇑P		P	00 44 35.6	-1.0		
IDI	Anoyia	26.19	296	P		P	00 44 36.8	+0.2		
SHLS	Shalkode	26.48	45	*e*P		P	00 44 41.6	+2.4		
	baz=46									
SHLS	Shalkode	26.48	45	*e*P		P	00 44 41.5	+2.4		
VORD	Divnogorie	26.64	339	*e*P		P	00 44 40.7	+0.4		
VORD					pmax	pmax				
	comp=Z,8.0nm,0.5s									
TDK	Taldyqorghan	26.82	41	*e*P		P	00 44 42.2	0.0		
	baz=41									
TDK	Taldyqorghan	26.82	41	*e*P		P	00 44 42.1	0.0		
VSR	Storozhevoye	26.90	339	*e*P		P	00 44 42.6	0.0		
VSR					pmax	pmax				
	comp=Z,10.0nm,0.7s									
ALN	Alexandroupoli	26.96	309	P		P	00 44 43.5	+0.2		
ALN					pmax	pmax				
	comp=Z,27nm,1.5s									
ALN	Alexandroupoli	26.96	309	P		P	00 44 43.5	+0.2		
ALN					IAmb	IAmb	00 44 48.8			
	comp=Z,26nm,1.5s									
TPGR	Topolog	27.28	318	⇑P		P	00 44 46.4	+0.3		
BRZS	Berezniki	27.36	27	*e*P		P	00 44 46.7	-0.3		
	baz=27									
BRZS	Berezniki	27.36	27	*e*P		P	00 44 46.6	-0.3		
HARR	Harsova	27.48	317	⇑P		P	00 44 48.3	+0.4		
HARR	Harsova	27.48	317	P		P	00 44 48.3	+0.4		
CFR	Carcaliu	27.62	319	⇑P		P	00 44 49.4	+0.2		
CFR	Carcaliu	27.62	319	P		P	00 44 49.4	+0.2		
RAZG	Razgrad	27.80	314	P		P	00 44 51.9	+1.0		
MILM	Milestii Mici	28.23	322	⇑P		P	00 44 55.1	+0.4		
GHRR		28.53	319	P		P	00 44 59.1	+1.8		
SRS	Serrai	28.77	308	P		P	00 45 01.4	+1.9		
VRI	Vrincioaia	28.82	319	⇑P		P	00 45 00.6	+0.5		
VRI	Vrincioaia	28.82	319	P		P	00 45 00.5	+0.5		
PLOR	Plostina	28.86	319	⇑P		P	00 45 01.7	+1.4		
PLOR	Plostina	28.86	319	P		P	00 45 01.7	+1.4		
BRVK	Borovoye	29.02	21	*c i* P		P	00 45 02.2	+0.6		
BRVK					pmax	pmax				
	comp=Z,12nm,1.3s									
BRVK	Borovoye	29.02	21	P		P	00 45 01.9	+0.2		
BRVK					IAmb	IAmb	00 45 03.3			
	comp=Z,23nm,1.6s									
BVAR	Borovoye Array	29.03	21	P		P	00 45 01.8	+0.1		
	comp=Z,2.0nm,0.7s,baz=206,slow=6.5,SNR=9.2									
MLR	Muntele Rosu	29.10	317	P		P	00 45 02.9	+0.4		
	comp=Z,3.4nm,0.8s,baz=131,slow=18,SNR=4.8									
MLR	Muntele Rosu	29.10	317	⇑P		P	00 45 03.8	+1.3		
MLR	Muntele Rosu	29.10	317	P		P	00 45 02.5	-0.1		
MLR					pmax	pmax				
	comp=Z,6.0nm,0.9s									
MLR	Muntele Rosu	29.10	317	P		P	00 45 02.5	-0.1		
TESR	Tescani	29.22	320	⇑P		P	00 45 04.4	+0.9		
GIRR	Girov	29.55	320	P		P	00 45 06.9	+0.5		
VOIR		29.62	317	⇑P		P	00 45 08.3	+1.2		
VOIR		29.62	317	P		P	00 45 08.7	+1.6		
VOIR					pmax	pmax				
	comp=Z,8.0nm,1.3s									
DOPR	Dopca	29.68	318	⇑P		P	00 45 08.6	+1.0		
BIZ	Bicaz	29.77	320	⇑P		P	00 45 09.3	+1.0		
ARU	Arti	29.88		P		P	00 45 09.5	+0.4		
	comp=Z,1.9nm,0.9s,baz=221,slow=5.1,SNR=7.1									
ARU				PcP		PcP	00 48 12.0	+0.1		
	comp=Z,0.3nm,0.3s,baz=300,slow=20,SNR=3.6									
ARU	Arti	29.88	5	*di* P		P	00 45 09.4	+0.2		
ARU							00 46 02.2			
ARU				S		S	00 50 09.4	+3.4		
ARU				SS		SnSn	00 51 40.0	+3.3		
ARU					pmax	pmax				
	comp=Z,11nm,1.1s									
ARU	Arti	29.88	5	P		P	00 45 09.3	+0.2		
ARU					IAmb	IAmb	00 45 11.7			
	comp=Z,11nm,1.1s									
MAKZ	Makanchi	29.90	40	P		P	00 45 10.2	+0.7		
MAKZ					pmax	pmax				
	comp=Z,23nm,1.3s									
MAKZ	Makanchi	29.90	40	P		P	00 45 10.2	+0.7		
MAKZ					IAmb	IAmb	00 45 11.8			
	comp=Z,23nm,1.3s									
MK31	Makanchi Array	30.07	41	*c i* P		P	00 45 11.6	+0.5		
MK31	Makanchi Array	30.07	41	P		P	00 45 11.4	+0.4		
MKAR	Makanchi Array	30.07	41	P		P	00 45 11.7	+0.6		
	comp=Z,3.3nm,0.7s,baz=229,slow=8.7,SNR=20									
MKAR				PcP		PcP	00 48 11.9	-0.8		
	comp=Z,0.6nm,0.6s,baz=229,slow=3.4,SNR=2.8									
MKAR					LR	LR	00 59 27.0			
	comp=Z,108nm,18.1s,baz=252,slow=41									
MKAR	Makanchi Array	30.07	41	P		P	00 45 11.4	+0.3		
AKASG	Malin Array Be	30.44	328	P		P	00 45 13.9	-0.4		
	comp=Z,3.1nm,0.5s,baz=134,slow=8.5,SNR=12									
AKASG				PcP		PcP	00 48 12.7	-0.8		
	comp=Z,1.3nm,0.5s,baz=94,slow=2.0,SNR=7.2									
AKASG					LR	LR	00 59 04.1			
	comp=Z,96nm,19.8s,baz=140,slow=39									
AKASG	Malin Array Be	30.44	328	P		P	00 45 13.3	-0.9		
AKBB	Malin Array Si	30.44	328	⇑*e*P		P	00 45 13.7	-0.5		
AKBB					pmax	pmax				
	comp=Z,19nm,1.3s									
AKBB	Malin Array Si	30.44	328	P		P	00 45 13.4	-0.8		
AKBB					IAmb	IAmb	00 45 14.6			
	comp=Z,26nm,1.4s									
SVE	Sverdlovsk	30.47	7	*e*P		P	00 45 15.7	+1.3		
SVE					pmax	pmax				
	comp=Z,24nm,1.1s									
KURK	Kurchatov	30.51	32	*ce*P		P	00 45 15.5	+0.7		
KURK					pmax	pmax				
	comp=Z,6.0nm,1.3s									
KURK	Kurchatov	30.51	32	P		P	00 45 15.0	+0.2		
KURK					IAmb	IAmb	00 45 16.5			
	comp=Z,11nm,1.2s									
BURAR	Bucovina Array	30.64	320	⇑P		P	00 45 17.4	+1.2		
BURAR	Bucovina Array	30.64	320	P		P	00 45 17.4	+1.2		
BURAR	Bucovina Array	30.64	320	P		P	00 45 16.0	-0.2		
BUR08	Bucovina Ar. S	30.67	321	P		P	00 45 16.7	+0.3		
ARCR	ARCALIA	30.86	319	⇓P		P	00 45 19.7	+1.7		
GZR	Gura Zlata	31.01	315	⇑P		P	00 45 19.7	+0.3		
HERR	Herculane	31.02	314	⇓P		Pb	00 45 20.5	+1.6		
OBN	Obninsk	31.05	341	*c i* P		P	00 45 19.8	+0.3		
OBN				*i*			00 48 15.1			
OBN					pmax	pmax				
	comp=Z,20nm,1.0s									
OBN	Obninsk	31.05	341	P		P	00 45 19.5	0.0		
OBN					IAmb	IAmb	00 45 20.3			
	comp=Z,13nm,0.7s									
SEM	Semipalatinsk	31.09	33	*e*P		P	00 45 20.4	+0.2		
	comp=Z,2.6nm,0.7s,baz=34									
SEM	Semipalatinsk	31.09	33	*e*P		P	00 45 20.4	+0.2		
SEM					pmax	pmax				
	comp=Z,3.0nm,0.7s									
BZS	Buzias	31.84	315	⇑P		Pg	00 45 28.0	+0.9		
BZS	Buzias	31.84	315	P		P	00 45 27.9	+1.2		
KMBO	Kilima Mbogo	31.98	213	LR		LR	00 59 56.9			
	comp=Z,110nm,19.9s,baz=86,slow=39									
KIRV	Kirov	32.00	356	*c i* P		P	00 45 28.5	+0.7		
PALK	Pallekele	32.01	122	P		P	00 45 27.3	-1.1		
	comp=Z,4.0nm,0.5s,baz=65,slow=12,SNR=4.4									
SIRR	Siria	32.10	316	⇑P		Pg	00 45 30.0	+1.4		
WMQ	Urumqi	32.18	49	*e*P		P	00 45 30.8	+1.1		
WMQ				pP		sP	00 45 37.0	+2.6		
WMQ					pmax	pmax				
	comp=Z,130nm,4.3s									
WMQ					LR	LR				
	comp=Z,590nm,29.1s									
WMQ					LR	LR				
	comp=Z,1μm,29.1s									
WMQ	Urumqi	32.18	49	P		P	00 45 29.8	+0.1		
WMQ					pmax	pmax				
	comp=Z,7.0nm,0.9s									
WMQ	Urumqi	32.18	49	P		P	00 45 29.8	+0.1		
WMQ					IAmb	IAmb	00 45 31.2			
	comp=Z,7.2nm,0.9s									
LSA	Lhasa	32.90	76	P		P	00 45 36.7	0.0		
LSA					pmax	pmax				
	comp=Z,6.0nm,0.9s									
LSA	Lhasa	32.90	76	P		P	00 45 36.6	0.0		
LSA					IAmb	IAmb	00 45 38.8			
	comp=Z,6.1nm,0.9s									
KOLS	Kolonicke sedl	33.01	321	*e*P		P	00 45 38.4	+1.6		
KOLS					pmax	pmax				
	comp=Z,23nm,1.2s									
KOLS	Kolonicke sedl	33.01	321	*e*P		P	00 45 38.4	+1.6		
KWP	Kalwaria Pacla	33.13	322	*e*P		P	00 45 38.7	+0.8		
KWP	Kalwaria Pacla	33.13	322	P		P	00 45 38.3	+0.4		
KWP					pmax	pmax				
	comp=Z,56nm,1.5s									
KWP	Kalwaria Pacla	33.13	322	P		P	00 45 38.3	+0.4		
CRVS	Cervenica-Dubn	33.45	320	*e*P		P	00 45 41.6	+0.9		
CRVS					pmax	pmax				
	comp=Z,22nm,1.2s									
CRVS	Cervenica-Dubn	33.45	320	*e*P		P	00 45 41.6	+0.9		
KECS	Kecovo	33.82	319	*e*P		P	00 45 44.8	+0.9		
KECS					pmax	pmax				
	comp=Z,6.0nm,0.9s									
KECS	Kecovo	33.82	319	*e*P		P	00 45 44.8	+0.9		
NIE	Niedzica	34.37	320	P		P	00 45 51.7	+3.0		
LANS	Liptovska Anna	34.73	319	*e*P		P	00 45 53.0	+1.2		
LANS			

	comp=Z,14nm,0.6s								
MOTA	**Moosalm**	**39.24**	**313**	*e*P		**P**		**00 46 30.0**	**-0.4**
	comp=Z,11nm,0.8s,SNR=7.8								
CLL	**Collm**	**39.40**	**320**	*e*P		**P**		**00 46 31.0**	**-0.4**
	comp=Z,8.0nm,1.1s								
CLL	**Collm**	**39.40**	**320**	*e*P		**P**		**00 46 31.0**	**-0.4**
CLL				pmax	pmax				
	comp=Z,8.0nm,1.1s								
CLL	**Collm**	**39.40**	**320**	P		**P**		**00 46 31.2**	**-0.2**
FETA	**Feichten**	**39.40**	**313**	*e*P		**P**		**00 46 32.1**	**+0.4**
	comp=Z,12nm,0.8s								
FIA1	**FINESS Array S**	**39.43**	**339**	P		**P**		**00 46 31.5**	**0.0**
FIA1				IAmb	IAmb			00 46 34.3	
	comp=Z,39nm,1.4s								
FINES	**FINESS Array B**	**39.43**	**339**	P		**P**		**00 46 31.5**	**0.0**
	comp=Z,7.6nm,0.7s,baz=142,slow=9.9,SNR=38								
FINES				LR	LR			01 06 52.9	
	comp=Z,121nm,18.0s,baz=186,slow=42								
RETA	**Reutte**	**39.51**	**313**	*e*P		**P**		**00 46 32.0**	**-0.5**
	comp=Z,6.9nm,0.7s,SNR=8.9								
FUORN	**Ofenpass-Fuorn**	**39.61**	**312**	P		**P**		**00 46 32.7**	**-0.8**
FUORN				IAmb	IAmb			00 46 46.8	
	comp=Z,35nm,1.8s								
GRF	**Grafenberg Arr**	**39.88**	**317**	*e*P		**P**		**00 46 35.3**	**-0.2**
	comp=Z,6.5nm,1.2s,baz=113,slow=9.3								
DAVA	**Damuels**	**40.03**	**313**	*e*P		**P**		**00 46 36.6**	**-0.3**
	comp=Z,22nm,0.7s,SNR=27								
BSD	**Bornholm Skovb**	**40.03**	**326**	*i* P		**P**		**00 46 35.2**	**-1.4**
BSD				pmax	pmax				
	comp=Z,4.0nm,0.5s								
BSD	**Bornholm Skovb**	**40.03**	**326**	*i* P		**P**		**00 46 35.2**	**-1.4**
	comp=Z,3.9nm,0.5s								
BSD	**Bornholm Skovb**	**40.03**	**326**	*i* P		**P**		**00 46 35.2**	**-1.4**
BSD				IAmb	IAmb			00 46 36.7	
	comp=Z,3.9nm,0.5s								
GTA	**Gaotai**	**40.13**	**60**	P		**P**		**00 46 39.2**	**+1.3**
GTA				pP	sP			00 46 44.6	+2.0
GTA				sP	pP			00 46 47.4	+6.2
GTA				pmax	pmax				
	comp=Z,17nm,1.2s								
GTA				pmax	pmax				
	comp=Z,58nm,5.3s								
GTA				LR	LR				
	comp=Z,120nm,14.5s								
GTA				LR	LR				
	comp=Z,87nm,17.8s								
SBF	**Sospel**	**41.00**	**307**	*e*P		**P**		**00 46 44.7**	**-0.2**
SBF				pmax	pmax				
	comp=Z,42nm,1.2s								
SENIN	**Lac Senin/Sane**	**41.54**	**311**	P		**P**		**00 46 48.7**	**-0.8**
BNI	**Bardonecchia**	**41.73**	**309**	P		**P**		**00 46 50.4**	**-0.6**
BNI				pmax	pmax				
	comp=Z,19nm,1.1s								
BNI	**Bardonecchia**	**41.73**	**309**	P		**P**		**00 46 50.4**	**-0.6**
BNI				IAmb	IAmb			00 46 53.2	
	comp=Z,19nm,1.1s								
LPG	**La Plagne**	**41.75**	**309**	*e*P		**P**		**00 46 50.4**	**-0.9**
LPG				pmax	pmax				
	comp=Z,8.0nm,0.8s								
LPL	**La Plagne**	**41.77**	**309**	*e*P		**P**		**00 46 50.7**	**-0.7**
LPL				pmax	pmax				
	comp=Z,17nm,1.2s								
CDF	**Champ du Feu**	**42.01**	**314**	*e*P		**P**		**00 46 53.3**	**+0.1**
CDF				pmax	pmax				
	comp=Z,31nm,1.7s								
ECH	**Echery**	**42.04**	**313**	P		**P**		**00 46 52.4**	**-1.0**
ECH				pmax	pmax				
	comp=Z,13nm,1.0s								
ECH	**Echery**	**42.04**	**313**	P		**P**		**00 46 52.4**	**-1.0**
ECH				IAmb	IAmb			00 46 53.8	
	comp=Z,13nm,1.0s								
CHTO	**Chiang Mai**	**42.13**	**91**	P		**P**		**00 46 54.8**	**+0.4**
CHTO				pmax	pmax				
	comp=Z,27nm,1.5s								
CHTO	**Chiang Mai**	**42.13**	**91**	P		**P**		**00 46 54.8**	**+0.4**
CHTO				IAmb	IAmb			00 46 56.3	
	comp=Z,27nm,1.4s								
HINF	**Hinteralfeld**	**42.15**	**313**	*e*P		**P**		**00 46 53.3**	**-1.0**
HINF				pmax	pmax				
	comp=Z,14nm,1.3s								
CMAR	**Chiang Mai Arr**	**42.25**	**92**	P		**P**		**00 46 55.5**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=283,slow=9.6,SNR=16								
CMAR				PcP		**PcP**		**00 48 49.5**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=289,slow=5.9,SNR=5.7								
CMAR	**Chiang Mai Arr**	**42.25**	**92**	*i* P		**P**		**00 46 56.0**	**+0.6**
CMAR				pmax	pmax				
	comp=Z,3.0nm,0.6s								
CMAR	**Chiang Mai Arr**	**42.25**	**92**	P		**P**		**00 46 56.0**	**+0.6**
CABF	**La Chapelle**	**42.41**	**311**	*e*P		**P**		**00 46 55.1**	**-1.4**
CABF				pmax	pmax				
	comp=Z,105nm,2.0s								
HAU	**Haudompre**	**42.52**	**313**	*e*P		**P**		**00 46 56.1**	**-1.2**
HAU				pmax	pmax				
	comp=Z,23nm,1.4s								
LZH	**Lanzhou**	**43.27**	**65**	*e*P		**P**		**00 47 04.9**	**+1.2**
LZH				pP	sP			00 47 08.9	+0.5
LZH				sP	pP			00 47 11.8	+4.8
LZH				pmax	pmax				
	comp=Z,17nm,1.0s								
MUD	**Monsted U'grnd**	**43.53**	**325**	*i* P		**P**		**00 47 06.4**	**+1.2**
MUD				pmax	pmax				
	comp=Z,66nm,1.1s								
MUD	**Monsted U'grnd**	**43.53**	**325**	*i* P		**P**		**00 47 06.4**	**+1.2**
	comp=Z,66nm,1.1s								
MUD	**Monsted U'grnd**	**43.53**	**325**	*i* P		**P**		**00 47 06.4**	**+1.2**
MUD				IAmb	IAmb			00 47 07.8	
	comp=Z,66nm,1.1s								
CD2	**Chengdu**	**43.63**	**72**	P		**P**		**00 47 05.2**	**-1.3**
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
KMI	**Kunming**	**43.77**	**81**	P		**P**		**00 47 08.0**	**+0.1**
KMI				pmax	pmax				
	comp=Z,13nm,0.6s								
KMI	**Kunming**	**43.77**	**81**	P		**P**		**00 47 08.0**	**+0.1**
KMI				IAmb	IAmb			00 47 12.9	
	comp=Z,12nm,0.6s								
TAM	**Tamanrasset**	**43.87**	**276**	P		**P**		**00 47 08.5**	**-0.2**
TAM				pmax	pmax				
	comp=Z,6.0nm,0.8s								
TAM	**Tamanrasset**	**43.87**	**276**	P		**P**		**00 47 08.5**	**-0.2**
SMF	**Signal de Mont**	**43.94**	**310**	*e*P		**P**		**00 47 07.9**	**-0.9**
SMF				pmax	pmax				
	comp=Z,16nm,1.1s								
GIVF	**Givet**	**43.97**	**316**	*e*P		**P**		**00 47 09.3**	**+0.4**
GIVF				pmax	pmax				
	comp=Z,92nm,1.9s								
DOU	**Dourbes**	**44.11**	**315**	P		**P**		**00 47 10.7**	**+0.6**
SSF	**Saint Saulge**	**44.23**	**311**	*e*P		**P**		**00 47 10.5**	**-0.6**
SSF				pmax	pmax				
	comp=Z,13nm,1.0s								
AVF	**Avril sur Loir**	**44.30**	**311**	*e*P		**P**		**00 47 10.6**	**-1.0**
AVF				pmax	pmax				
	comp=Z,32nm,1.7s								
BAIF	**Baives**	**44.35**	**315**	*e*P		**P**		**00 47 12.4**	**+0.5**
BAIF				pmax	pmax				
	comp=Z,17nm,0.9s								
NC602	**NORSAR Array S**	**44.40**	**332**	*e*P		**P**		**00 47 12.0**	**-0.2**
NORES	**NORESS Array B**	**44.40**	**332**	P		**P**		**00 47 13.0**	**+0.8**
NC405	**NORSAR Array S**	**44.52**	**332**	P		**P**		**00 47 12.8**	**-0.4**
NB2	**NORSAR Subarra**	**44.70**	**332**	P		**P**		**00 47 13.8**	**-0.8**
	comp=Z,7.0nm,0.8s,baz=119,slow=7.9								
NB2	**NORSAR Subarra**	**44.70**	**332**	P		**P**		**00 47 13.8**	**-0.8**
	baz=119,slow=7.9								
NOA	**NORSAR Array B**	**44.70**	**332**	P		**P**		**00 47 13.8**	**-0.8**
	comp=Z,3.7nm,0.7s,baz=120,slow=8.0,SNR=12								
NOA				LR	LR			01 07 48.3	
	comp=Z,82nm,19.0s,baz=105,slow=38								
CAF	**Calviac**	**44.95**	**308**	*e*P		**P**		**00 47 16.8**	**-0.1**
CAF				pmax	pmax				
	comp=Z,18nm,1.1s								
TCF	**Toulx Ste Croi**	**45.01**	**310**	*e*P		**P**		**00 47 16.9**	**-0.4**
TCF				pmax	pmax				
	comp=Z,5.0nm,0.7s								
RJF	**Les Rejaudoux**	**45.38**	**308**	*e*P		**P**		**00 47 20.5**	**+0.3**
RJF				pmax	pmax				
	comp=Z,14nm,1.0s								
SONM	**Songino Array**	**45.81**	**48**	P		**P**		**00 47 24.3**	**+0.5**
	comp=Z,4.8nm,0.9s,baz=270,slow=8.9,SNR=21								
SONM	**Songino Array**	**45.81**	**48**	P		**P**		**00 47 24.1**	**+0.3**
SONM				pmax	pmax				
	comp=Z,5.0nm,1.1s								
SONM	**Songino Array**	**45.81**	**48**	P		**P**		**00 47 24.1**	**+0.3**
KEV	**Kevo**	**45.81**	**347**	P		**P**		**00 47 23.5**	**+0.2**
KEV				pmax	pmax				
	comp=Z,119nm,1.8s								
KEV	**Kevo**	**45.81**	**347**	P		**P**		**00 47 23.5**	**+0.2**
LFF	**La Frestale**	**45.89**	**308**	*e*P		**P**		**00 47 24.4**	**+0.1**
LFF				pmax	pmax				
	comp=Z,20nm,0.9s								
ARA0	**ARCESS Array S**	**45.94**	**347**	P		**P**		**00 47 24.6**	**+0.3**
ARA0	**ARCESS Array S**	**45.94**	**347**	*e*P		**P**		**00 47 24.9**	**+0.6**
ARCES	**ARCESS Array B**	**45.94**	**347**	P		**P**		**00 47 24.8**	**+0.5**
	comp=Z,5.1nm,0.5s,baz=142,slow=9.2,SNR=54								
ARCES				LR	LR			01 07 55.3	
	comp=Z,92nm,18.5s,baz=245,slow=38								
KTK1	**Kautokeino**	**46.02**	**345**	*e*P		**P**		**00 47 25.1**	**+0.2**
DOMB	**Dombas**	**46.09**	**333**	*e*P		**P**		**00 47 26.7**	**+1.0**
ULN	**Ulaanbaatar**	**46.25**	**48**	⇓*i*P		**P**		**00 47 28.0**	**+0.7**
ULN				pmax	pmax				
	comp=Z,4.0nm,1.0s								
ULN	**Ulaanbaatar**	**46.25**	**48**	P		**P**		**00 47 27.4**	**+0.1**
ULN				IAmb	IAmb			00 47 28.6	
	comp=Z,7.4nm,1.1s								
NSS	**Namsos**	**46.28**	**336**	*e*P		**P**		**00 47 27.7**	**+0.7**
MOR8	**Moi Rana**	**46.42**	**339**	*e*P		**P**		**00 47 28.4**	**+0.3**
ETSF	**Etsaut**	**46.71**	**305**	*e*P		**P**		**00 47 32.3**	**+1.4**
ETSF				pmax	pmax				
	comp=Z,23nm,1.2s								
LDF	**La Druitiere**	**46.88**	**313**	*e*P		**P**		**00 47 30.8**	**-1.2**
LDF				pmax	pmax				
	comp=Z,55nm,1.8s								
GYA	**Guiyang**	**46.92**	**78**	⇓P		**P**		**00 47 33.0**	**+0.2**
GYA				pmax	pmax				
	comp=Z,14nm,1.1s								
FAUS	**Fauske**	**46.93**	**341**	*e*P		**P**		**00 47 32.0**	**0.0**
NRIK	**Noril'sk**	**46.98**	**16**	P		**P**		**00 47 33.3**	**+0.8**
	comp=Z,7.8nm,0.9s,baz=224,slow=5.4,SNR=21								
NRIK				LR	LR			01 10 02.6	
	comp=Z,73nm,18.4s,baz=201,slow=40								
NRIK	**Noril'sk**	**46.98**	**16***c*	*i*P		**P**		**00 47 33.3**	**+0.8**
NRIK				pmax	pmax				
	comp=Z,14nm,1.1s								
KONS	**Konsvik**	**47.05**	**339**	*e*P		**P**		**00 47 34.1**	**+1.2**
HAMF	**Hammerfest**	**47.20**	**347**	*e*P		**P**		**00 47 34.6**	**+0.4**
STEI	**Steigen**	**47.30**	**341**	*e*P		**P**		**00 47 34.8**	**-0.1**
TRO	**Tromso**	**47.50**	**344**	*e*P		**P**		**00 47 36.4**	**-0.1**
XAN	**Xi'an**	**47.58**	**67**	P		**P**		00 47 28.0	-10
XAN				pmax	pmax				
	comp=Z,6.0nm,1.0s								
XAN				pmax	pmax				
	comp=Z,140nm,4.6s								
ENH	**Enshi**	**48.60**	**72**	P		**P**		**00 47 45.9**	**+0.2**
ENH				IAmb	IAmb			00 47 47.0	
	comp=Z,9.3nm,0.6s								
LSZ	**Lusaka**	**48.63**	**214**	P		**P**		**00 47 46.2**	**+0.2**
LSZ				pmax	pmax				
	comp=Z,9.0nm,1.1s								
LSZ	**Lusaka**	**48.63**	**214**	P		**P**		**00 47 46.2**	**+0.2**
LSZ				IAmb	IAmb			00 47 49.9	
	comp=Z,8.9nm,1.1s								
HHC	**Hu-ho-hao-te**	**49.16**	**58**	*e*P		**P**		**00 47 50.6**	**+0.7**
HHC				pmax	pmax				
	comp=Z,17nm,0.9s								
HHC				pmax	pmax				
	comp=Z,95nm,5.4s								
ESDC	**Sonseca Array**	**49.31**	**301**	P		**P**		**00 47 50.2**	**-0.8**
	comp=Z,3.2nm,0.9s,baz=76,slow=6.9,SNR=12								
ESDC	**Sonseca Array**	**49.31**	**301**	P		**P**		**00 47 50.9**	**-0.2**
EKA	**Eskdalemuir Ar**	**49.82**	**321**	P		**P**		**00 47 54.5**	**-0.1**
TOA0	**Torodi Ar. Sit**	**50.55**	**265**	P		**P**		**00 47 60.0**	**-0.7**
TOA0				IAmb	IAmb			00 48 01.8	
	comp=Z,14nm,0.8s								
TORD	**Torodi Ar. Bea**	**50.55**	**265**	P		**P**		**00 48 00.1**	**-0.5**
	comp=Z,12nm,0.9s,baz=60,slow=6.9,SNR=59								
TORD				LR	LR			01 11 23.7	
	comp=Z,53nm,18.6s,baz=335,slow=38								
TORD	**Torodi Ar. Bea**	**50.55**	**265**	P		**P**		**00 48 00.2**	**-0.5**
BOD	**Bodaibo**	**51.97**	**36**	*e*P		**P**		**00 48 10.2**	**-0.5**
BOD				pmax	pmax				
	comp=Z,27nm,1.3s								
KOWA	**Kowa**	**55.12**	**269**	P		**P**		**00 48 34.1**	**-0.4**
KOWA				IAmb	IAmb			00 48 35.3	
	comp=Z,14nm,0.8s								
NJ2	**Nanjing**	**56.13**	**68**	*e*P		**P**		**00 48 41.2**	**-0.3**
NJ2				pmax	pmax				
	comp=Z,9.0nm,0.5s								
LBTB	**Lobatse**	**58.22**	**210**	LR		LR		01 15 09.9	
	comp=Z,104nm,18.4s,baz=20,slow=37								
LBTB	**Lobatse**	**58.22**	**210**	P		**P**		**00 48 57.3**	**+0.9**
LBTB				pmax	pmax				
	comp=Z,48nm,1.7s								
LBTB	**Lobatse**	**58.22**	**210**	P		**P**		**00 48 57.3**	**+0.9**
DBIC	**Dimbokro**	**59.15**	**261**	P		**P**		**00 49 02.8**	**-0.1**
	comp=Z,17nm,0.6s,baz=39,slow=7.1,SNR=35								
DBIC	**Dimbokro**	**59.15**	**261**	P		**P**		**00 49 02.8**	**-0.1**
DBIC				pmax	pmax				
	comp=Z,20nm,0.8s								
DBIC	**Dimbokro**	**59.15**	**261**	P		**P**		**00 49 02.8**	**-0.1**
YAK	**Yakutsk**	**60.15**	**32**	LR		LR		01 17 26.0	
	comp=Z,85nm,18.4s,baz=269,slow=38								
YAK	**Yakutsk**	**60.15**	**32**	⇓*i*P		**P**		**00 49 08.6**	**-0.5**
YAK				pmax	pmax				
	comp=Z,16nm,0.6s								
TIXI	**Tiksi**	**60.16**	**21**	⇑*e*P		**P**		**00 49 08.9**	**-0.2**
TIXI				pmax	pmax				
	comp=Z,25nm,1.3s								
TIXI	**Tiksi**	**60.16**	**21**	P		**P**		**00 49 08.9**	**-0.2**
TIXI				IAmb	IAmb			00 49 09.4	
	comp=Z,3.7nm,0.8s								
DBG	**Daneborg**	**60.19**	**342**	*i* P		**P**		**00 49 10.5**	**+1.2**
DBG				IAmb	IAmb			00 49 11.7	
	comp=Z,8.7nm,1.0s								
DAG	**Danmarks Havn**	**60.19**	**345**	*i* P		**P**		**00 49 08.8**	**-0.4**
DAG				pmax	pmax				
	comp=Z,5.0nm,0.8s								
DAG	**Danmarks Havn**	**60.19**	**345**	*i* P		**P**		**00 49 08.8**	**-0.4**
	comp=Z,5.0nm,0.8s								
DAG	**Danmarks Havn**	**60.19**	**345**	*i* P		**P**		**00 49 08.9**	**-0.4**
DAG				IAmb	IAmb			00 49 10.0	
	comp=Z,5.0nm,0.8s								
BOSA	**Boshof**	**61.49**	**209**	P		**P**		**00 49 18.5**	**-0.3**
	comp=Z,3.2nm,0.6s,baz=30,slow=7.1,SNR=11								
BOSA				LR	LR			01 19 08.5	
	comp=Z,53nm,19.2s,baz=34,slow=39								
BOSA	**Boshof**	**61.49**	**209**	P		**P**		**00 49 18.7**	**-0.1**
BOSA				pmax	pmax				
	comp=Z,60nm,1.8s								
BOSA	**Boshof**	**61.49**	**209**	P		**P**		**00 49 18.7**	**-0.1**
KSRS	**Korea Array**	**62.20**	**60**	P		**P**		**00 49 22.5**	**-1.0**
	comp=Z,3.7nm,0.7s,baz=278,slow=5.5,SNR=5.9								
KLR	**Kul'dur**	**62.56**	**46**	P		**P**		**00 49 24.6**	**-1.1**
	comp=Z,5.4nm,0.9s,baz=285,slow=7.4,SNR=6.7								
KLR				LR	LR			01 18 32.0	
	comp=Z,64nm,18.2s,baz=264,slow=38								
KLR	**Kul'dur**	**62.56**	**46**	⇑*e*P		**P**		**00 49 24.5**	**-1.2**
KLR				pmax	pmax				
	comp=Z,12nm,1.1s								
SUMG	**Summit**	**65.45**	**341**	⇓*i*P		**P**		**00 49 46.5**	**+1.7**
SUMG				pmax	pmax				
	comp=Z,49nm,1.0s								
SUMG	**Summit**	**65.45**	**341**	P		**P**		**00 49 45.1**	**+0.3**
SUMG	**Summit**	**65.45**	**341**	⇓*i*P		**P**		**00 49 46.5**	**+1.7**
	comp=Z,49nm,1.0s								
SUMG	**Summit**	**65.45**	**341**	⇓*i*P		**P**		**00 49 46.6**	**+1.7**
SUMG				IAmb	IAmb			00 49 47.0	
	comp=Z,49nm,1.0s								
JNU	**Nakatsue**	**65.67**	**64**	LR		LR		01 22 34.3	
	comp=Z,69nm,19.3s,baz=306,slow=40								
SUR	**Sutherland**	**66.67**	**210**	P		**P**		**00 49 52.7**	**-0.2**
SEY	**Seymchan**	**70.30**	**29**	LR		LR		01 24 13.3	
	comp=Z,155nm,18.9s,baz=299,slow=38								
SEY	**Seymchan**	**70.30**	**29**	⇓*i*P		**P**		**00 50 15.1**	**+0.1**
MA2	**Magadan**	**70.72**	**32**	LR		LR		01 24 42.9	
	comp=Z,37nm,19.4s,baz=310,slow=39								
ASAJ	**Asahikawa**	**71.06**	**50**	LR		LR		01 25 44.2	
	comp=Z,55nm,19.7s,baz=66,slow=39								
BILL	**Bilibino**	**73.37**	**21**	*i* P		**P**		**00 50 33.8**	**+0.4**
BILL				*i*				00 50 53.1	
BILL				*i*				00 53 19.9	
BILL				pmax	pmax				
	comp=Z,13nm,1.2s								
BILL				MLR	MLR				
	comp=Z,81nm,18.0s								
TNTI	**Ternate**	**74.93**	**97**	P		**P**		**00 50 43.8**	**+0.4**
RES	**Resolute Bay**	**76.83**	**352**	LR		LR		01 29 32.2	
	comp=Z,75nm,18.4s,baz=92,slow=39								
A21K	**Barrow**	**79.92**	**10**	P		**P**		**00 51 10.6**	**+0.3**
A21K				IAmb	IAmb			00 51 12.3	
	comp=Z,23nm,1.2s								
FITZ	**Fitzroy Crossi**	**82.65**	**114**	P		**P**		**00 51 25.6**	**-0.1**
FITZ				IAmb	IAmb			00 51 26.6	
	comp=Z,7.5nm,0.7s								
TOLK	**Toolik Lake Re**	**83.37**	**8**	P		**P**		**00 51 29.1**	**+0.4**
TOLK				IAmb	IAmb			00 51 30.6	
	comp=Z,10.0nm,1.1s								
KNRA	**Kununurra**	**84.01**	**111**	P		**P**		**00 51 32.3**	**-0.4**
SCHQ	**Schefferville**	**84.23**	**330**	P		**P**		**00 51 32.6**	**-0.7**
	comp=Z,6.3nm,1.1s,baz=38,slow=19,SNR=2.6								
COLD	**Coldfoot**	**84.61**	**9**	P		**P**		**00 51 35.2**	**+0.2**
COLD				IAmb	IAmb			00 51 36.7	
	comp=Z,7.3nm,1.1s								
INK	**Inuvik**	**85.10**	**3**	P		**P**		**00 51 37.5**	**+0.1**
	comp=Z,2.7nm,0.9s,baz=318,slow=10.0,SNR=4.7								
INK	**Inuvik**	**85.10**	**3**	P		**P**		**00 51 37.2**	**-0.2**
INK				pmax	pmax				
	comp=Z,6.0nm,1.2s								
INK	**Inuvik**	**85.10**	**3**	P		**P**		**00 51 37.2**	**-0.2**
INK				IAmb	IAmb			00 51 41.3	
	comp=Z,6.1nm,1.2s								
BMAR	**Burnt Mountain**	**85.12**	**7**	P		**P**		**00 51 38.7**	**+1.1**
IMAR	**Indian Mountai**	**85.20**	**11**	P		**P**		**00 51 38.1**	**+0.1**
EPYK	**Eagle Plains**	**86.85**	**4**	P		**P**		**00 51 45.9**	**-0.3**
EPYK				IAmb	IAmb			00 51 47.1	
	comp=Z,12nm,1.0s								
COLA	**College**	**87.16**	**9**	⇓*e*P		**P**		**00 51 46.8**	**-0.8**
COLA				pmax	pmax				
	comp=Z,16nm,2.3s								
ILAR	**Eielson Array**	**87.39**	**9**	P		**P**		**00 51 48.2**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=334,slow=3.9,SNR=9.7								
ILAR	**Eielson Array**	**87.39**	**9**	P		**P**		**00 51 47.8**	**-0.9**
ILAR	**Eielson Array**	**87.39**	**9**	P		**P**		**00 51 47.8**	**-0.9**
BPAW	**Bear Paw Mtn.**	**87.40**	**11**	P		**P**		**00 51 48.9**	**+0.1**
EGAK	**Eagle**	**88.06**	**6**	P		**P**		**00 51 52.0**	**+0.1**
EGAK				IAmb	IAmb			00 51 53.3	
	comp=Z,7.0nm,1.1s								
YKA	**Yellowknife Ar**	**90.62**	**355**	P		**P**		**00 52 03.7**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=30,slow=5.7,SNR=7.1								
YKA	**Yellowknife Ar**	**90.62**	**355**	*i* P		**P**		**00 52 04.5**	**+0.5**
YKA				pmax	pmax				
	comp=Z,3.0nm,1.0s								
WRA	**Warramunga Arr**	**90.71**	**112**	P		**P**		**00 52 04.4**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=310,slow=4.2,SNR=16								
WRA	**Warramunga Arr**	**90.71**	**112**	P		**P**		**00 52 04.0**	**-1.2**
WRAB	**Tennant Creek**	**90.71**	**112**	⇓*e*P		**P**		**00 52 04.6**	**-0.6**
WRAB				pmax	pmax				
	comp=Z,10.0nm,1.6s								
ASAR	**Alice Springs**	**92.10**	**115**	P		**P**		**00 52 10.9**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=297,slow=4.4,SNR=9.7								
ASAR	**Alice Springs**	**92.10**	**115**	P		**P**		**00 52 11.1**	**-0.5**
ASAR	**Alice Springs**	**92.10**	**115**	P		**P**		**00 52 11.1**	**-0.5**
NVAR	**Mina Array Bea**	**114.78**	**353**	PKP		PKPdf		00 57 42.8	-0.2
	comp=Z,0.7nm,0.8s,baz=345,slow=0.5,SNR=5.9								
QSPA	**South Pole Qui**	**116.57**	**180**	PKP		**PKiKP**		**00 57 45.0**	**-0.2**
	comp=Z,2.1nm,0.7s,baz=278,slow=0.5,SNR=6.0								

DJA ***13*** *00:40:13.4±0.4, 5˚N±4˚×12˚5E±˚, h10km, M4.6/14, mb4.8/14, mB5.1/10, MLv4.8/13, Mw(mB)4.5/10*
MAN ***13*** *00:40:14.7, 4.80N×125.07E, h24km, mb4.8, ML3.7, MS3.7*
NEIC ***13*** *00:40:16.5±0.9, 4.73N±0.04×125.25E±0.06, h50km±7km, mb4.6/36, Error ellipse: s-maj=9.1km s-min=4.3km az=109.0*
IDC ***13*** *00:40:18.1±1.5, 4.71N×125.31E, h67km±15km, mb4.0/12, mb1 4.2/16, mb1mx3.9/40, mbtmp4.3/16, MS3.2/7, Ms1 3.2/7, ms1mx3.0/32, Error ellipse: s-maj=25.1km s-min=9.4km az=82.0*

ISC 13 00:40:15.8±0.6, 4.73N±0.03×125.17E±0.05, h40km±7km, n93,σ1s37/102, mb4.5/33, MS3.0/6, 2C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.10**	**161**	P	**Pn**	**00 40 33.8**	**-1.0**
SGSI				S	**Sn**	**00 40 48.2**	**-0.5**
DDMP	**Don Marcelino,**	**1.47**	**21**	*e*P	**Pn**	**00 40 39.4**	**-0.5**
DDMP				*e*S	**Sn**	**00 40 58.0**	**+0.2**
SKMP	**Bagumbayan, Su**	**1.89**	**341**	*e*P	**Pn**	**00 40 44.7**	**-0.9**
SKMP				*e*S	**Sn**	**00 41 06.7**	**-1.5**
KCP	**Kidapawan**	**2.27**	**358**	⇑*i*P	**Pn**	**00 40 52.0**	**+1.2**
KCP				*i* S	**Sn**	**00 41 14.4**	**-3.3**
DAV	**

comp=Z,2.0nm,0.6s,baz=348,slow=8.0,SNR=22
ASAR PcP **PcP** **00 49 20.5 -0.9**
comp=Z,1.4nm,0.9s,baz=347,slow=2.9,SNR=4.5
ASAR S **S** **00 51 08.6 +0.3**
comp=Z,0.2nm,0.4s,baz=342,slow=17,SNR=2.3
ASAR Alice Springs 29.48 164 P **P** **00 46 14.9 -1.5**
JWT Wachi 31.84 16 P **P** **00 46 36.8 -0.2**
KSRS Korea Array 32.67 4 LR LR 01 03 45.6
comp=Z,27nm,18.0s,baz=200,slow=43
XAN Xi'an 32.84 335 P **P** **00 46 46.3 +0.4**
XAN IAmb IAmb 00 46 47.2
comp=Z,5.7nm,0.8s
MJAR Matsushiro Arr 33.85 19 LR LR 01 00 01.2
comp=Z,29nm,21.4s,baz=215,slow=35
LZH Lanzhou 36.87 331 *e*P **P** **00 47 23.1 +2.3**
LZH pP pP 00 47 33.0 +2.8
LZH sP sP 00 47 37.5 +3.2
LZH pmax pmax
comp=Z,16nm,1.0s
HHC Hu-ho-hao-te 37.98 343 *e*P **P** **00 47 31.6 +1.5**
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,100nm,4.9s
SHL Shillong 38.04 306 P **P** **00 47 31.8 +1.0**
NWAO Narrogin (SRO) 38.20 191 P **P** **00 47 31.6 -0.3**
BBOO Buckleboo 38.74 165 P **P** **00 47 36.1 -0.3**
EIDS Eidsvold 39.09 141 P **P** **00 47 38.9 -0.6**
EIDS IAmb IAmb 00 47 39.5
comp=Z,7.1nm,0.8s
STKA Stephens Creek 39.62 158 P **P** **00 47 42.4 -1.4**
comp=Z,5.3nm,0.7s,baz=331,slow=8.3,SNR=15
STKA Stephens Creek 39.62 158 P **P** **00 47 43.5 -0.3**
USA0B Ussuriysk Arra 39.77 8 P **P** **00 47 44.6 -0.2**
USA0B IAmb IAmb 00 47 45.7
comp=Z,11nm,0.9s
USRK Ussuriysk Ar. 39.77 8 P **P** **00 47 44.0 -0.8**
comp=Z,4.1nm,0.7s,baz=205,slow=8.4,SNR=6.1
USRK Ussuriysk Ar. 39.77 8 P **P** **00 47 44.5 -0.3**
GTA Gaotai 41.45 330 *e*P **P** **00 48 00.1 +1.1**
GTA pP pP 00 48 12.7 +4.2
GTA sP pwP 00 48 18.0 +2.2
GTA pmax pmax
comp=Z,5.0nm,1.1s
ARMA Armidale 43.16 146 P **P** **00 48 13.0 +0.1**
ARMA IAmb IAmb 00 48 21.3
comp=Z,18nm,1.4s
KLR Kul'dur 44.69 6 P **P** **00 48 23.1 -1.8**
comp=Z,1.0nm,0.5s,baz=205,slow=18,SNR=2.1
CAN Canberra 45.70 153 P **P** **00 48 34.1 +0.9**
CAN IAmb IAmb 00 48 34.8
comp=Z,9.4nm,0.9s
TOO Toolangi 46.14 158 P **P** **00 48 36.9 +0.3**
TOO IAmb IAmb 00 48 39.6
comp=Z,7.8nm,1.0s
DZM Mont Dzumac 48.38 125 P **P** **00 48 54.5 +0.2**
DZM IAmb IAmb 00 48 55.5
comp=Z,5.8nm,0.7s
WMQ Urumqi 51.02 325 *e*P **P** **00 49 16.0 +1.9**
MK31 Makanchi Array 55.85 326 P **P** **00 49 49.2 -0.3**
MK31 IAmb IAmb 00 49 54.8
comp=Z,5.4nm,1.3s
MKAR Makanchi Array 55.85 326 P **P** **00 49 49.4 -0.1**
comp=Z,2.7nm,0.7s,baz=126,slow=8.3,SNR=18
MKAR Makanchi Array 55.85 326 P **P** **00 49 49.0 -0.4**
MAKZ Makanchi 56.04 325 P **P** **00 49 50.4 -0.3**
NIL Nilore 56.09 308 P **P** **00 49 51.5 +0.2**
NIL IAmb IAmb 00 49 54.2
comp=Z,6.7nm,1.0s
YAK Yakutsk 57.27 3 P **P** **00 49 58.5 -0.7**
ZALV Zalesovo Beam 59.00 333 P **P** **00 50 10.1 -1.4**
comp=Z,0.5nm,0.5s,baz=120,slow=5.7,SNR=2.3
KBL Kabul 59.69 307 P **P** **00 50 16.8 -0.1**
KBL IAmb IAmb 00 50 33.7
comp=Z,3.2nm,0.8s
KURK Kurchatov 60.07 328 P **P** **00 50 18.6 -0.2**
KURK IAmb IAmb 00 50 19.9
comp=Z,5.4nm,0.8s
GAR Garm 60.11 313 P **P** **00 50 19.7 +0.1**
KK31 Karatay Array 61.45 317 P **P** **00 50 28.3 -0.1**
KK31 IAmb IAmb 00 50 30.1
comp=Z,4.0nm,1.1s
URZ Urewera 64.33 137 LR LR 01 19 55.3
comp=Z,35nm,18.0s,baz=209,slow=37
BRVK Borovoye 65.71 327 P **P** **00 50 56.1 -0.3**
BRVK IAmb IAmb 00 50 57.2
comp=Z,4.5nm,1.1s
ATKA Atka Island 68.57 35 P **P** **00 51 13.5 -1.0**
ABKAR Akbulak array 70.40 321 P **P** **00 51 25.6 -0.3**
ABKAR Akbulak array 70.40 321 P **P** **00 51 25.9 0.0**
ABKAR IAmb IAmb 00 51 31.8
comp=Z,2.9nm,1.2s
VNDA Vanda 84.61 172 P **P** **00 52 44.1 -0.5**
comp=Z,1.8nm,0.8s,baz=304,slow=7.1,SNR=12
VNDA Vanda 84.61 172 P **P** **00 52 44.6 -0.1**
ILAR Eielson Array 84.87 25 P **P** **00 52 45.4 -0.9**
comp=Z,0.7nm,0.7s,baz=249,slow=4.7,SNR=6.5
OBN Obninsk 85.35 325 LR LR 01 32 14.8
comp=Z,11nm,18.1s,baz=5.5,slow=36
BMAR Burnt Mountain 85.76 23 P **P** **00 52 50.5 -0.2**
KMBO Kilima Mbogo 88.02 269 P **P** **00 53 02.9 -0.2**
comp=Z,0.5nm,0.5s,baz=102,slow=9.3,SNR=3.0
TORD Torodi Ar. Bea 121.13 288 PKP **PKPdf** **00 59 04.1 -1.4**
comp=Z,0.9nm,0.8s,baz=19,slow=2.1,SNR=5.8
TXAR Lajitas Array 122.20 51 PKP **PKPdf** **00 59 05.8 -1.4**
comp=Z,0.8nm,0.6s,baz=293,slow=0.7,SNR=5.2

HEL ***13*** *00:40:21.1, 67°.83N×20°.26E, h0km, ML2.0, Explosion*
UPP 13 00:40:20.2±0.0, 67°.84N×20°.19E, h0km, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**27**	P	Pg	00 40 22.9	+0.2
KUA				S	Sg	00 40 24.8	+0.5
KUA	**Kurravaara**	**0.13**	**27**	*i* P	Pg	00 40 22.9	+0.2
KUA				*i* S	Sg	00 40 24.8	+0.5
RATU	**Laukkuluspa**	**0.23**	**266**	P	Pg	00 40 24.7	+0.2
RATU	**Laukkuluspa**	**0.23**	**266**	*i* P	Pg	00 40 24.7	+0.2
KOVU	**Salmi**	**0.39**	**359**	P	Pg	00 40 27.7	+0.1
KOVU	**Salmi**	**0.39**	**359**	*i* P	Pg	00 40 27.7	+0.1
LANU	**Lannavaara**	**0.71**	**72**	P	Pg	00 40 33.8	0.0
LANU	**Lannavaara**	**0.71**	**72**	*e*PB	Pg	00 40 34.3	+0.5
LANU				*e*S	Sg	00 40 42.6	-0.4
DUNU	**Dundret**	**0.74**	**168**	P	Pg	00 40 34.0	-0.3
DUNU	**Dundret**	**0.74**	**168**	*i* P	Pg	00 40 34.0	-0.3
SALU	**Saltoluokta**	**0.79**	**235**	P	Pg	00 40 35.2	-0.2
SALU	**Saltoluokta**	**0.79**	**235**	*i* P	Pg	00 40 35.2	-0.2
SALU	**Saltoluokta**	**0.79**	**235**	*e*P	Pg	00 40 35.2	-0.1
KIF	**Kilpisjarvi** baz=189	**1.19**	**11**	*e*PN	Pn	00 40 45.6	+1.5
KIF				MSG		00 40 58.4	
	comp=Z,12nm,0.2s						
KIF				*e*SB	Sb	00 40 59.0	-0.5
KIF	**Kilpisjarvi**	**1.19**	**11**	*e*P	Pg	00 40 42.5	-0.5
PAJU	**Pajala**	**1.40**	**125**	P	Pg	00 40 45.6	-1.3
PAJU	**Pajala** baz=308	**1.40**	**125**	*e*PG	Pg	00 40 45.7	-1.2
PAJU				*e*SN	Sn	00 41 07.4	+1.4
ERTU	**Ertsjaerv**	**1.51**	**148**	P	Pn	00 40 47.8	-0.7
ERTU	**Ertsjaerv**	**1.51**	**148**	*e*SN	Sn	00 41 11.0	+2.2
HARU	**Harads**	**1.71**	**169**	P	Pn	00 40 51.4	+0.1
HARU	**Harads**	**1.71**	**169**	*e*P	Pn	00 40 51.4	+0.1
KALU	**Kalix**	**2.35**	**146**	*e*P	Pn	00 40 59.8	-0.1
KALU				*e*SB	Sb	00 41 31.3	-1.5
TOF	**Tornio**	**2.40**	**135**	*e*PB	Pn	00 41 02.2	+1.5
TOF				MSG		00 41 31.6	
	comp=Z,8.4nm,0.2s						
TOF				*e*SG	Sb	00 41 34.8	+0.4
SGF	**Sodankyl**	**2.46**	**96**	*e*PG	Pb	00 41 04.1	-1.1
SGF				*e*SG	Sb	00 41 37.2	+1.3
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pb	00 41 05.6	-1.7
RNF				*e*SG	Sb	00 41 39.5	0.0
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*PG	Pb	00 41 06.8	-0.5

UPP 13 00:40:23.7±0.1, 67°.84N×20°.19E, h0km, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**25**	P	Pg	00 40 26.5	+0.3
KUA				S	Sg	00 40 28.3	+0.4
KOVU	**Salmi**	**0.39**	**358**	P	Pg	00 40 31.2	0.0
LANU	**Lannavaara**	**0.71**	**72**	P	Pg	00 40 37.2	-0.1
LANU				S	Sg	00 40 46.9	+0.4
DUNU	**Dundret**	**0.73**	**168**	P	Pg	00 40 37.4	-0.3
SALU	**Saltoluokta**	**0.79**	**235**	P	Pg	00 40 38.7	-0.1
PAJU	**Pajala**	**1.39**	**124**	P	Pg	00 40 49.2	-1.1

ROM 13 00:43:16.0±0.1, 43°.465N±0°.002×12°.513E±0°.004, h9km, Md1.1/2, ML0.9/3, Error ellipse: s-maj=0.3km s-min=0.2km az=132.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIEI	**Pieia**	**0.07**	**13**	P	Pg	00 43 18.5	+0.3
PIEI				S	Sg	00 43 20.1	+0.3
PIEI				AML	AML		
	comp=E,224μm,0.3s						
PIEI				AML	AML		
	comp=N,141μm,0.1s						
PIEI				AML	AML		
	comp=N,141μm,0.1s						
PIEI				AML	AML		
	comp=E,223μm,0.3s						
PIEI				END			
ATPI	**Pietralunga -**	**0.08**	**260**	P	Pg	00 43 18.6	+0.3
ATPI				S	Sg	00 43 20.3	+0.3
ATPI				AML	AML		
	comp=E,69μm,1.5s						
ATPI				AML	AML		
	comp=N,118μm,0.1s						
ATPI				END			
ATFO	**Monte Foce - G**	**0.11**	**156**	P	Pg	00 43 19.0	+0.4
ATFO				S	Sg	00 43 21.0	+0.5
ATFO				AML	AML		
	comp=E,77μm,0.6s						
ATFO				AML	AML		
	comp=N,86μm,1.5s						
ATFO				AML	AML		
	comp=E,77μm,0.6s						
ATVO	**AVT- Monte Val**	**0.11**	**223**	P	Pg	00 43 19.1	+0.4
ATVO				S	Sg	00 43 21.2	+0.6
ATVO				AML	AML		
	comp=E,70μm,0.1s						
ATVO				AML	AML		
	comp=N,70μm,0.2s						
ATVO				AML	AML		
	comp=E,70μm,0.1s						
ATVO				AML	AML		
	comp=N,70μm,0.2s						
APEC	**Apecchio**	**0.12**	**324**	P	Pg	00 43 19.2	+0.5
APEC				S	Sg	00 43 21.5	+0.8
FRON	**Frontone**	**0.16**	**71**	P	Pg	00 43 20.1	+0.6
FRON				S	Sg	00 43 23.0	+1.1
MURB	**Monte Urbino**	**0.20**	**177**	P	Pg	00 43 20.8	+0.7
MURB				S	Sg	00 43 24.5	+1.5
MPAG	**Monte Paganucc**	**0.24**	**47**	P	Pg	00 43 21.7	+0.8
MPAG				S	Sg	00 43 25.8	+1.5
FSSB	**Fossombrone**	**0.30**	**40**	P	Pg	00 43 22.5	+0.6
FSSB				S	Sb	00 43 27.7	-0.8

IDC 13 00:52:38.8±3.5, 2°.59S×151°.15E, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.6/25, mbtmp3.9/2, Error ellipse: s-maj=131.1km s-min=48.4km az=113.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.81**	**222**	P	P	00 57 54.5	+0.8
	3.3nm,0.3s,baz=48,slow=9.8,SNR=85						
ASAR	**Alice Springs**	**26.79**	**217**	P	P	00 58 20.6	-0.2
	0.2nm,0.4s,baz=52,slow=7.9,SNR=2.1						
TORD	**Torodi Ar. Bea**	**148.03**	**291**	PKPbc	PKPbc	01 12 26.1	-1.3
	0.4nm,0.5s,baz=60,slow=2.2,SNR=5.4						

IDC 13 01:00:45.9±1.7, 11°.23S×166°.24E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/37, mbtmp3.7/5, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/31, Error ellipse: s-maj=55.8km s-min=30.0km az=126.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.78**	**179**	Pn	Pn	01 03 22.5	+0.8
	0.2nm,0.3s,baz=98,slow=17,SNR=1.8						
WRA	**Warramunga Arr**	**31.88**	**250**	P	P	01 07 13.9	+0.8
	0.3nm,0.4s,baz=83,slow=9.1,SNR=7.6						
ASAR	**Alice Springs**	**33.14**	**244**	P	P	01 07 23.1	-1.1
	0.5nm,0.6s,baz=73,slow=9.2,SNR=5.5						
PPT	**Papeete**	**43.18**	**104**	LR	LR	01 24 34.2	
	comp=Z,48nm,18.3s,baz=355,slow=33						
ILAR	**Eielson Array**	**83.53**	**18**	P	P	01 13 15.3	-0.1
	0.5nm,0.6s,baz=237,slow=5.0,SNR=7.8						
MKAR	**Makanchi Array**	**93.99**	**317**	P	P	01 14 06.0	+0.1
	0.4nm,0.7s,baz=96,slow=6.5,SNR=3.6						

JMA ***13*** *01:10:07.4±0.1, 38°.18N×141°.70E, h50km±1km, M3.4*
IDC ***13*** *01:10:18.7±21.0, 38°.34N×141°.93E, h173km±131km, mb3.1/3, mb1 3.2/4, mb1mx2.8/53, mbtmp3.5/4, Error ellipse: s-maj=292.2km s-min=27.3km az=67.0*
ISC 13 01:10:06.7±1.5, 38°.15N±0°.06×141°.8E±0°.1, h49km±10km, n22, σ0°.54/22, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.28**	**304**	P	**Pn**	**01 10 16.0**	**+0.4**
JIKH				S	**Sn**	**01 10 21.9**	**+0.1**
JIO	**Ouri**	**0.45**	**313**	P	**Pn**	**01 10 17.5**	**+0.3**
JIO				S	**Sn**	**01 10 24.4**	**-0.3**
JKMT	**Kesennumamotoy**	**0.70**	**341**	P	**Pn**	**01 10 20.4**	**+0.1**
JMM	**Marumori**	**0.82**	**250**	P	**Pn**	**01 10 21.9**	**-0.1**
JMM				S	**Sn**	**01 10 32.4**	**-0.7**
JOU	**Okura**	**0.89**	**284**	P	**Pn**	**01 10 23.2**	**+0.2**
JMK	**Ichinoseki**	**0.91**	**332**	P	**Pn**	**01 10 23.5**	**+0.4**
JMK				S	**Sn**	**01 10 34.6**	**-0.5**
JFK	**Kawauchi**	**1.06**	**222**	P	**Pn**	**01 10 25.4**	**+0.2**
JFK				S	**Sn**	**01 10 38.5**	**-0.3**
JFT	**Otama**	**1.30**	**241**	P	**Pn**	**01 10 29.2**	**+0.8**
JFT				S	**Sn**	**01 10 45.2**	**+0.6**
JYS	**Shirataka**	**1.34**	**273**	P	**Pn**	**01 10 29.7**	**+0.7**
JYK	**Kaneyama**	**1.34**	**305**	P	**Pn**	**01 10 29.5**	**+0.5**
JOM	**Ohasama**	**1.37**	**344**	P	**Pn**	**01 10 30.1**	**+0.7**
JRG	**Rokugo**	**1.52**	**325**	P	**Pn**	**01 10 32.4**	**+0.9**
JYA	**Atsumi**	**1.67**	**286**	P	**Pn**	**01 10 34.0**	**+0.5**
H11N2	**WAKE ISLAND Hy** baz=316,slow=75,SNR=47	**28.50**	**123**	T	T	01 46 09.3	
H11N1	**WAKE ISLAND Hy** baz=316,slow=75,SNR=84	**28.51**	**123**	T	T	01 46 10.6	
H11N3	**WAKE ISLAND Hy** baz=316,slow=75,SNR=117	**28.52**	**123**	T	T	01 46 19.8	
H11S1	**WAKE ISLAND Hy** baz=318,slow=76,SNR=46	**29.25**	**125**	T	T	01 47 08.7	
H11S3	**WAKE ISLAND Hy** baz=318,slow=76,SNR=61	**29.25**	**125**	T	T	01 47 09.8	
H11S2	**WAKE ISLAND Hy** baz=318,slow=76,SNR=35	**29.27**	**125**	T	T	01 47 12.4	
ZALV	**Zalesovo Beam**	**41.38**	**311**	P	**P**	**01 17 47.1**	**-0.6**
	0.6nm,0.4s,baz=88,slow=9.4,SNR=2.6						
MKAR	**Makanchi Array**	**43.77**	**301**	P	**P**	**01 18 07.0**	**-0.4**
	0.4nm,0.7s,baz=85,slow=8.7,SNR=2.8						
WRA	**Warramunga Arr**	**58.21**	**188**	P	**P**	**01 19 56.1**	**+0.2**
	0.2nm,0.4s,baz=6.3,slow=7.3,SNR=5.4						

JMA 13 01:10:47.2±0.1, 36°.13N×140°.06E, h64km±1km, M3.0, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.15**	**48**	P	Pn	01 10 57.0	+0.1
JYT				S	Sn	01 11 04.2	+0.3
JAG	**Ashikaga**	**0.57**	**301**	P	Pn	01 11 00.5	+0.2
JAG				S	Sn	01 11 10.2	+0.4
JKT	**Katashina**	**0.91**	**314**	P	Pn	01 11 04.5	+0.1
JKT				S	Sn	01 11 17.8	+0.7
JRY	**Ryogami san**	**0.94**	**263**	P	Pn	01 11 05.1	+0.4
JRY				S	Sn	01 11 18.4	+0.7
JOD2	**Odawara 2**	**1.17**	**223**	P	Pn	01 11 07.7	0.0
JOD2				S	Sn	01 11 22.4	-0.5
JYN	**Shimob**	**1.38**	**243**	P	Pn	01 11 11.3	+0.8
JYN				S	Sn	01 11 29.0	+1.0
MJAR	**Matsushiro Arr**	**1.55**	**286**	P	Pn	01 11 12.6	-0.1
	0.4nm,0.3s,baz=66,slow=3.1,SNR=4.9						
MAT	**Matsushiro**	**1.55**	**286**	S	Sn	01 11 34.1	+2.2
MAT	**Matsushiro**	**1.55**	**286**	P	Pn	01 11 13.5	+0.8

BGR ***13*** *01:18:22.0±0.0, 65°.47N×19°.79W, h33km, mb4.7*
REY ***13*** *01:18:28.2, 64°.66N×17°.51W, h0km*
IDC ***13*** *01:18:28.7±0.6, 64°.57N×17°.63W, h0km, mb4.0/18, mb1 4.2/22, mb1mx4.0/56, mbtmp4.0/22, ML2.6/3, MS3.5/20, Ms1 3.5/20, ms1mx3.3/43, Error ellipse: s-maj=18.7km s-min=9.0km az=13.0*
MOS ***13*** *01:18:29.5±1.1, 64°.64N×17°.82W, h12km, mb4.7/52, Error ellipse: s-maj=12.3km s-min=5.9km az=112.7*
NEIC ***13*** *01:18:30.5±0.4, 64°.63N±0°.08×17°.9W±0°.1, h8km±4km, mb4.7/45, Error ellipse: s-maj=11.6km s-min=8.0km az=178.0*
ISC 13 01:18:30.6±0.3, 64°.63N±0°.02×17°.64W±0°.02, h10km, n249, σ1°.71/240, mb4.5/92, MS3.5/14, 6C-5D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard** baz=275	**0.06**	**309**	P	**Pg**	**01 18 30.9**	**-2.0**
IVON				S	**Sg**	**01 18 33.0**	**-1.5**
IDYN	**Dyngjuhals** baz=26	**0.20**	**37**	P	Pg	01 18 31.6	-3.2
IGRF	**Grimsfjall** baz=158	**0.28**	**144**	P	**Pg**	**01 18 34.0**	**-2.3**
ISKR	**Skrokkalda** baz=255	**0.33**	**257**	P	**Pg**	**01 18 35.9**	**-1.3**
ISKR				S	**Sg**	**01 18 42.3**	**+0.7**
IHUS	**Husbondi** baz=190	**0.34**	**181**	P	**Pg**	**01 18 35.8**	**-1.6**
IHUS				S	**Sg**	**01 18 41.1**	**-0.8**
IJOK	**Jokulheimar** baz=222	**0.41**	**219**	P	**Pb**	**01 18 37.6**	**-2.3**
IJOK				S	**Sb**	**01 18 44.0**	**-2.2**
IVOT	**Vottur** baz=160	**0.41**	**151**	P	**Pg**	**01 18 36.7**	**-2.1**
IKVE	**Kverkfjoll** baz=87	**0.42**	**83**	P	Pg	01 18 36.1	-2.8
IKVE				S	**Sg**	**01 18 41.4**	**-3.0**
THOR	**Thorvaldshraun** baz=52	**0.51**	**53**	P	Pg	01 18 37.2	-3.4
THOR				S	**Sg**	**01 18 44.0**	**-3.3**
IKRE	**Kreppuhraun** baz=76	**0.56**	**74**	P	Pg	01 18 37.7	-3.8
IKRE				S	**Sg**	**01 18 45.2**	**-3.6**
IIEY	**Innrieyrar** baz=205	**0.58**	**201**	P	**Pg**	**01 18 40.0**	**-1.8**
IASK	**Askja** baz=43	**0.60**	**45**	P	Pg	01 18 38.4	-3.8
IASK				S	**Sg**	**01 18 46.7**	**-3.3**
IMKO	**Mokollar** baz=57	**0.66**	**58**	P	Pg	01 18 39.5	-3.8
IMKO				S	**Sg**	**01 18 48.4**	**-3.5**
IKAL	**Kalfafell** baz=186	**0.69**	**182**	P	**Pg**	**01 18 41.4**	**-2.4**
IKSK	**Karasker** baz=138	**0.69**	**133**	P	Pg	01 18 40.4	-3.6
IKSK				S	**Sg**	**01 18 50.4**	**-2.7**
IVAT	**Vatnsfell** baz=232	**0.71**	**232**	P	**Pb**	**01 18 42.9**	**-2.2**
ISVA	**Svartarkot** baz=9.0	**0.73**	**13**	P	Pg	01 18 40.9	-3.7
ISVA				S	**Sg**	**01 18 51.1**	**-3.0**
IVSH	**V-Sauoahnukur** baz=78	**0.84**	**77**	P	Pg	01 18 42.3	-4.5
IVSH				S	Sg	01 18 53.0	-4.8
IHVE	**Hveravellir** baz=284	**0.86**	**287**	P	**Pg**	**01 18 44.5**	**-2.6**
IHVE				S	**Sb**	**01 18 56.7**	**-2.5**
IFAG	**Fagurholsmyri** baz=154	**0.88**	**150**	P	**Pg**	**01 18 44.3**	**-3.2**
IFAG				S	**Sg**	**01 18 56.5**	**-2.3**
IMEL	**Melhnausar** baz=21	**1.03**	**23**	P	Pb	01 18 45.7	-4.8
IREN	**Reynihlio** baz=14	**1.06**	**17**	P	Pb	01 18 46.4	-4.7
IRJU	**Rjupnafell** baz=206	**1.12**	**204**	P	**Pg**	**01 18 49.4**	**-2.6**
IMJO	**Mjoaskard** baz=233	**1.13**	**232**	P	**Pb**	**01 18 50.0**	**-2.3**
IKVO	**Krokottuvotn** baz=14	**1.13**	**16**	P	Pn	01 18 47.6	-4.9
IGYG	**Gygjarholskot** baz=253	**1.17**	**254**	P	**Pg**	**01 18 50.2**	**-2.8**
IHAU	**Haukadalur** baz=238	**1.21**	**238**	P	**Pb**	**01 18 51.2**	**-2.4**
ISKI	**Skildingahlsh** baz=9.3	**1.27**	**11**	P	Pn	01 18 49.9	-4.5
IGHA	**Grjothals** baz=16	**1.28**	**18**	P	Pn	01 18 50.2	-4.4
IGRA	**Granastaoir** baz=359	**1.29**	**1**	P	Pn	01 18 50.2	-4.4
IALF	**Alftagrof** baz=213	**1.33**	**211**	P	**Pb**	**01 18 53.2**	**-2.5**
IHLA	**Hella** baz=344	**1.35**	**347**	P	**Pn**	**01 18 52.1**	**-3.4**
IDIM	**Dimmadalss** baz=10	**1.37**	**12**	P	Pn	01 18 51.4	-4.3
IESK	**Eystri-Skogar** baz=218	**1.37**	**216**	P	**Pn**	**01 18 53.3**	**-2.4**
ISAU	**Saurbar** baz=243	**1.37**	**243**	P	**Pn**	**01 18 53.3**	**-2.4**
IHED	**Heoinshofoi** baz=3.3	**1.46**	**5**	P	Pn	01 18 53.1	-3.9
IBRE	**Brettingsstaoi** baz=354	**1.50**	**356**	P	**Pn**	**01 18 53.9**	**-3.6**
IASM	**Asmuli** baz=240	**1.53**	**240**	P	**Pb**	**01 18 56.1**	**-2.8**
BORG	**Borgarnes** 35nm,0.3s,baz=105,slow=7.2,SNR=73	**1.59**	**276**	Pg	**Pn**	**01 18 56.6**	**-2.1**
BORG				Lg	Lg	01 19 19.6	
	22nm,0.3s,baz=69,slow=3.6,SNR=4.7						
BORG				LR	LR	01 19 34.5	
	comp=Z,681nm,19.9s,baz=128,slow=41						
BORG	**Borgarnes**	**1.59**	**276**	P	**Pn**	**01 18 56.9**	**-1.8**
BORG						01 19 16.3	
BORG	**Borgarnes**	**1.59**	**276**	Pn	**Pn**	**01 18 56.9**	**-1.8**
BORG					Sn	**Sb**	**01 19 16.3**	**-3.7**
ISIG	**Siglufjorour** baz=339	**1.60**	**341**	P	**Pn**	**01 18 55.4**	**-3.4**
IKRO	**Krokur** baz=252	**1.60**	**252**	P	**Pn**	**01 18 57.2**	**-1.8**
ISOL	**Solvholt** baz=245	**1.60**	**245**	P	**Pn**	**01 18 57.1**	**-1.8**
SCO	**Scoresbysund** baz=184,slow=6.9	**6.10**	**346**	*e*	**Pn**	**01 19 58.5**	**-2.1**
SCO				*i* P	**Pn**	**01 20 00.4**	**-0.2**
SCO				*i* S	**Sn**	**01 21 13.9**	**+3.5**
SCO				IAML		01 21 22.7	
	comp=Z,2.7nm,0.5s						
JMIC	**Jan Mayen** comp=Z,292nm,19.6s,baz=218,slow=32	**7.25**	**24**	LR	LR	01 22 25.6	
EKA	**Eskdalemuir Ar** baz=322,slow=13,SNR=17	**11.78**	**136**	Pn	**Pn**	**01 21 17.2**	**-1.2**
ESK	**Eskdalemuir**	**11.78**	**136**	P	**Pn**	**01 21 19.6**	**+1.2**
ESK	**Eskdalemuir**	**11.78**	**136**	Pn	**Pn**	**01 21 19.6**	**+1.2**
DAG	**Danmarks Havn**	**12.21**	**359**	*i* P	**Pn**	**01 21 26.3**	**+2.2**
DAG	**Danmarks Havn**	**12.21**	**359**	*i* P	**Pn**	**01 21 26.3**	**+2.2**
DAG	**Danmarks Havn**	**12.21**	**359**	*i* P	**Pn**	**01 21 26.3**	**+2.2**
NC204	**NORSAR Array S**	**13.29**	**92**	Pn	**Pn**	**01 21 40.4**	**+1.2**
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=297,slow=14,SNR=3.5	**13.59**	**92**	Pn	**Pn**	**01 21 41.0**	**-2.2**
NOA				LR	LR	01 26 38.8	
	comp=Z,119nm,18.6s,baz=305,slow=36						
SFJD	**Kangerlussuaq** comp=Z,353nm,19.3s,baz=85,slow=35	**13.62**	**295**	LR	LR	01 26 30.0	
HFS	**Hagfors** comp=Z,0.1nm,0.3s,baz=292,slow=7.6,SNR=2.4	**15.11**	**93**	Pn	**Pn**	**01 22 02.2**	**-1.6**

HFS LR LR 01 27 53.3
comp=Z,115nm,18.2s,baz=293,slow=37
SPITS Spitsbergen Ar 16.92 23 LR LR 01 27 39.7
comp=Z,59nm,19.9s,baz=235,slow=32
ARCES ARCESS Array B 17.19 54 LR LR 01 27 39.1
comp=Z,75nm,19.6s,baz=295,slow=32
QUIF Quistinic 18.50 148 *eP* **P 01 22 44.0 -2.6**
QUIF pmax pmax
comp=Z,384nm,2.6s
BAIF Baives 18.61 131 *eP* **Pn 01 22 50.1 +2.0**
BAIF pmax pmax
comp=Z,31nm,1.4s
MEM Membach 18.74 127 P **Pn 01 22 53.1 +3.5**
MEM pmax pmax
comp=Z,27nm,1.5s
FINES FINESS Array B 19.77 79 P **P 01 23 00.9 +0.5**
comp=Z,0.1nm,0.3s,baz=304,slow=11,SNR=4.4
FINES LR LR 01 29 21.9
comp=Z,114nm,21.5s,baz=292,slow=33
FINES FINESS Array B 19.77 79 P **P 01 23 01.5 +1.1**
FINES FINESS Array B 19.77 79 P **P 01 23 01.5 +1.1**
TNS Taunus Mts 19.92 124 P **Pn 01 23 04.4 +0.6**
TNS pmax pmax
comp=Z,12nm,1.2s
MOX Moxa 20.74 119 P **P 01 23 12.6 +1.6**
MOX pmax pmax
comp=Z,16nm,1.4s
CLL Collm 20.75 115 *i* P **P 01 23 11.2 +0.1**
comp=Z,33nm,1.4s
CLL *e* 01 23 21.0
CLL Collm 20.75 115 P **P 01 23 12.2 +1.1**
CLL pmax pmax
comp=Z,28nm,1.3s
CLL Collm 20.75 115 P **P 01 23 12.2 +1.1**
LOR Lormes 20.97 136 *eP* **P 01 23 14.7 +1.2**
LOR pmax pmax
comp=Z,33nm,1.3s
SSF Saint Saulge 21.05 137 *eP* **P 01 23 14.5 +0.1**
SSF pmax pmax
comp=Z,52nm,1.6s
CDF Champ du Feu 21.05 129 *eP* **P 01 23 15.6 +1.1**
CDF pmax pmax
comp=Z,21nm,1.2s
HAU Haudompre 21.09 131 *eP* **P 01 23 15.9 +1.0**
HAU pmax pmax
comp=Z,52nm,1.6s
ECH Echery 21.18 129 P **P 01 23 17.0 +1.2**
ECH pmax pmax
comp=Z,18nm,1.2s
ECH Echery 21.18 129 P **P 01 23 17.0 +1.2**
AVF Avril sur Loir 21.25 137 *eP* **P 01 23 16.6 +0.1**
AVF pmax pmax
comp=Z,34nm,1.4s
BGF Bois d'Agland 21.31 138 *eP* **P 01 23 17.3 +0.1**
BGF pmax pmax
comp=Z,34nm,1.4s
GRF Grafenberg Arr 21.37 121 *eP* **P 01 23 19.0 +1.2**
comp=Z,40nm,1.5s,baz=325,slow=10
TCF Toulx Ste Croi 21.38 140 *eP* **P 01 23 19.3 +1.3**
TCF pmax pmax
comp=Z,52nm,1.4s
NKC Novy Kostel 21.39 118 *eP* **P 01 23 22.1 +4.1**
NKC Novy Kostel 21.39 118 *eP* **P 01 23 22.1 +4.1**
HINF Hinteralfeld 21.43 130 *eP* **P 01 23 20.4 +1.9**
HINF pmax pmax
comp=Z,54nm,1.9s
BRG Berggiesshubel 21.45 115 *eP* **P 01 23 18.9 +0.2**
comp=Z,46nm,1.7s
BRG Berggiesshubel 21.45 115 *eP* **P 01 23 18.9 +0.2**
BRG pmax pmax
comp=Z,46nm,1.7s
BFO Black Forest 21.48 127 P **P 01 23 20.4 +1.4**
BFO pmax pmax
comp=Z,34nm,1.5s
BFO Black Forest 21.48 127 P **P 01 23 20.4 +1.4**
SMF Signal de Mont 21.52 137 *eP* **P 01 23 20.7 +1.2**
SMF pmax pmax
comp=Z,33nm,1.2s
VSU Vasula 21.63 86‖ *eP* **P 01 23 23.7 +3.2**
FRB Frobisher Bay 21.70 291 LR LR 01 31 00.2
comp=Z,180nm,20.1s,baz=20,slow=35
SLE Schleitheim 22.02 128 P **P 01 23 26.3 +1.4**
SLE pmax pmax
comp=Z,18nm,1.2s
RJF Les Rejaudoux 22.10 142 *eP* **P 01 23 26.0 +0.3**
RJF pmax pmax
comp=Z,34nm,1.4s
PRU Pruhonice 22.39 116 *eP* **P 01 23 30.5 +1.7**
PRU Pruhonice 22.39 116 *eP* **P 01 23 30.5 +1.7**
KSP Ksiaz 22.41 112 P **P 01 23 29.8 +0.9**
KSP pmax pmax
comp=Z,21nm,1.7s
WET Wettzell 22.44 119 P **P 01 23 33.4 +4.1**
WET pmax pmax
comp=Z,9.0nm,1.6s
CHVC Chvalec 22.51 113 *eP* **P 01 23 31.4 +1.3**
CAF Calviac 22.59 141 *eP* **P 01 23 30.2 -0.8**
CAF pmax pmax
comp=Z,17nm,1.2s
OSTC Ostas 22.60 112 *eP* **P 01 23 32.0 +1.0**
KHC Kasperske Hory 22.71 118 *eP* **P 01 23 32.3 +0.1**
KHC Kasperske Hory 22.71 118 *eP* **P 01 23 32.3 +0.1**
DPC Dobruska-Polom 22.80 113 *eP* **P 01 23 34.3 +1.1**
DPC Dobruska-Polom 22.80 113 *eP* **P 01 23 34.3 +1.1**
DAVA Damuels 22.91 126 *eP* **P 01 23 36.1 +1.6**
comp=Z,20nm,1.2s
GEC2 GERESS Array S 22.99 118 P **P 01 23 36.6 +1.3**
GEC2 IAmb IAmb 01 23 49.8
comp=Z,26nm,1.5s
GERES GERESS Array B 22.99 118 P **P 01 23 34.2 -1.0**
comp=Z,3.5nm,1.1s,baz=314,slow=6.5,SNR=8.6
GERES LR LR 01 32 59.8
comp=Z,120nm,19.5s,baz=344,slow=38
GERES GERESS Array B 22.99 118 P **P 01 23 36.6 +1.3**
GERES GERESS Array B 22.99 118 P **P 01 23 36.6 +1.3**
RETA Reutte 23.05 125 *eP* **P 01 23 37.4 +1.6**
comp=Z,14nm,1.4s
MOTA Moosalm 23.29 124 *eP* **P 01 23 40.6 +2.2**
comp=Z,14nm,1.2s
DAVOX Davos/Dischmat 23.35 127 LR LR 01 33 38.9
comp=Z,161nm,19.5s,baz=272,slow=39
TMCR Tamitsa 23.42 66 *eP* **P 01 23 39.2 0.0**
TMCR pmax pmax
comp=Z,23nm,0.9s
SQTA Sankt Quirin 23.44 124 *eP* **P 01 23 42.2 +2.5**
comp=Z,25nm,1.5s
FETA Feichten 23.44 125 *eP* **P 01 23 42.8 +3.0**
comp=Z,16nm,1.7s
LPG La Plagne 23.44 133 *eP* **P 01 23 43.5 +3.5**
LPG pmax pmax
comp=Z,19nm,1.4s
WATA Walderalm 23.47 124 *eP* **P 01 23 42.2 +2.1**
comp=Z,3.7nm,0.7s
WTTA Wattenberg 23.55 124 *eP* **P 01 23 43.0 +2.0**
comp=Z,14nm,1.7s
WTTA Wattenberg 23.55 124 P **P 01 23 42.6 +1.6**
WTTA pmax pmax
comp=Z,20nm,1.9s
EUNU Eureka 23.68 336 P **P 01 23 41.5 -0.3**
EUNU IAmb IAmb 01 23 56.4
comp=Z,28nm,1.4s
ORIF Oris-en-Rattie 23.70 135 *eP* **P 01 23 45.4 +3.1**
ORIF pmax pmax
comp=Z,21nm,1.4s
VRAC Vranov 23.74 114 P **P 01 23 42.1 -0.4**
comp=Z,3.7nm,0.4s,baz=334,slow=11,SNR=6.3
VRAC LR LR 01 34 05.2
comp=Z,141nm,18.1s,baz=322,slow=40
VRAC Vranov 23.74 114 *eP* **P 01 23 42.8 +0.2**
MORC Moravsky Berou 23.74 112 *eP* **P 01 23 42.8 +0.1**
MORC Moravsky Berou 23.74 112 P **P 01 23 43.9 +1.2**
MORC pmax pmax
comp=Z,69nm,1.9s
MORC Moravsky Berou 23.74 112 P **P 01 23 43.9 +1.2**
MORC IAmb IAmb 01 23 55.9
comp=Z,69nm,1.9s
BNI Bardonecchia 23.82 134 P **P 01 23 44.7 +1.1**
BNI pmax pmax
comp=Z,24nm,1.4s
BNI Bardonecchia 23.82 134 P **P 01 23 44.7 +1.1**
BNI IAmb IAmb 01 23 54.6
comp=Z,24nm,1.4s
KRUC Moravsky 23.86 114 *eP* **P 01 23 43.7 0.0**
KRUC Moravsky 23.86 114 P **P 01 23 46.1 +2.4**
KRUC pmax pmax
comp=Z,10.0nm,2.0s
NACGM Naroch 23.88 93 *e* **P 01 23 44.0 +0.2**
ABTA Abfaltersbach 24.31 123 *eP* **P 01 23 50.9 +2.8**
comp=Z,10nm,1.6s
OJC Ojcow 24.31 108 P **P 01 23 48.4 +0.4**
OJC pmax pmax
comp=Z,30nm,1.7s
OJC Ojcow 24.31 108 P **P 01 23 48.4 +0.4**
OJC IAmb IAmb 01 23 52.1
comp=Z,30nm,1.7s
CONA Conrad Observa 24.57 117 *eP* **P 01 23 51.9 +1.5**
comp=Z,2.8nm,0.8s
MICGM Minsk 24.62 93 *e* **P 01 23 50.0 -0.7**
MNK Minsk 24.62 93 *eP* **P 01 23 50.0 -0.7**
SMOL Smolenice 24.70 114 *eP* **P 01 23 52.6 +1.1**
SMOL pmax pmax
comp=Z,7.0nm,1.2s
SMOL Smolenice 24.70 114 *eP* **P 01 23 52.6 +1.1**
MYKA Terra Mystica 24.82 122 *eP* **P 01 23 53.5 +0.8**
comp=Z,4.6nm,0.7s
LANS Liptovska Anna 25.01 110 *eP* **P 01 23 57.1 +2.8**
LANS pmax pmax
comp=Z,9.0nm,1.5s
LANS Liptovska Anna 25.01 110 *eP* **P 01 23 57.1 +2.8**
NIE Niedzica 25.14 109 P **P 01 23 56.4 +0.9**
NIE pmax pmax
comp=Z,6.0nm,1.4s
VYHS Vyhne 25.28 112 *eP* **P 01 23 58.2 +1.5**
VYHS pmax pmax
comp=Z,13nm,1.2s
VYHS Vyhne 25.28 112 *eP* **P 01 23 58.2 +1.5**
SOKA Sooth 25.29 120 *eP* **P 01 23 56.1 -0.9**
comp=Z,16nm,2.0s
KLMR Klimovskoe 25.67 72 *eP* **P 01 23 59.3 -0.8**
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 25.67 72 *eP* **P 01 23 59.3 -0.8**
KLMR AMP 01 24 05.8
comp=Z,22nm,1.5s
KWP Kalwaria Pacla 25.96 106 P **P 01 24 04.2 +1.3**
KWP pmax pmax
comp=Z,50nm,1.5s
KWP Kalwaria Pacla 25.96 106 P **P 01 24 04.2 +1.3**
SCHQ Schefferville 25.98 271 P **P 01 24 02.3 -0.8**
comp=Z,10nm,1.1s,baz=56,slow=15,SNR=3.0
PSZ Piszkesteto 26.16 112 P **P 01 24 06.1 +1.3**
PSZ pmax pmax
comp=Z,19nm,1.3s
PSZ Piszkesteto 26.16 112 P **P 01 24 06.1 +1.3**
PSZ IAmb IAmb 01 24 08.6
comp=Z,19nm,1.3s
ESDC Sonseca Array 26.25 156 P **P 01 24 05.0 -0.6**
comp=Z,1.8nm,0.8s,baz=343,slow=9.0,SNR=7.1
ESDC LR LR 01 33 47.3
comp=Z,54nm,19.7s,baz=200,slow=35
ESDC Sonseca Array 26.25 156 P **P 01 24 06.6 +1.0**
KOLS Kolonicke sedl 26.32 107 *eP* **P 01 24 09.3 +1.1**
KOLS pmax pmax
comp=Z,20nm,1.5s
KOLS Kolonicke sedl 26.32 107 *eP* **P 01 24 09.3 +3.1**
LVV L'vov 26.37 104 *eP* **P 01 24 06.0 -0.6**
UZH Uzhgorod 26.57 108 *eP* **P 01 24 11.0 +2.6**
AKASG Malin Array Be 27.90 97 P **P 01 24 18.5 -1.8**
comp=Z,0.4nm,0.5s,baz=321,slow=9.6,SNR=4.9
AKASG Malin Array Be 27.90 97 *i* P **P 01 24 21.8 +1.5**
AKASG Malin Array Be 27.90 97 P **P 01 24 21.6 +1.3**
OBN Obninsk 27.95 84 *i* P **P 01 24 21.2 +0.6**
OBN pmax pmax
comp=Z,13nm,1.0s
KEST Kesra 33.17 138 LR LR 01 37 56.0
comp=Z,82nm,19.0s,baz=249,slow=35
ARU Arti 36.15 66‖ *eP* P 01 25 37.6 +5.1
ARU pmax pmax
comp=Z,16nm,1.9s
NRIK Noril'sk 36.52 35 P **P 01 25 36.6 +1.1**
comp=Z,2.4nm,0.9s,baz=332,slow=5.2,SNR=5.1
GOF Gofitskoye 38.17 91⇑ *eP* **P 01 25 50.9 +1.1**
GOF pmax pmax
comp=Z,18nm,1.0s
SADO Sadowa 38.76 270 LR LR 01 39 35.5
comp=Z,100nm,18.1s,baz=310,slow=33
KIV Kislovodsk 38.90 92 *eP* **P 01 26 00.1 +4.1**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,132nm,16.0s
KBZ Khabaz 39.17 92 P **P 01 25 58.0 -0.2**
comp=Z,2.3nm,0.8s,baz=326,slow=11
KBZ Khabaz 39.17 92‖ *eP* **P 01 25 59.2 +1.0**
KBZ pmax pmax
comp=Z,11nm,2.0s
INK Inuvik 39.84 329 P **P 01 26 02.2 -1.2**
comp=Z,2.6nm,1.0s,baz=37,slow=15,SNR=5.1
INK Inuvik 39.84 329 P **P 01 26 03.3 -0.1**
INK pmax pmax
comp=Z,5.0nm,1.2s
INK Inuvik 39.84 329 P **P 01 26 03.3 -0.1**
A21K Barrow 41.44 341 P **P 01 26 16.7 0.0**
A21K IAmb IAmb 01 26 20.3
comp=Z,14nm,1.1s
ULM Lac du Bonnet 41.55 289 LR LR 01 41 53.9
comp=Z,87nm,22.0s,baz=54,slow=34
ABKAR Akbulak array 42.06 73 P **P 01 26 22.2 +0.3**
TIXI Tiksi 42.08 15⇑ *iP* **P 01 26 23.9 +2.1**
TIXI pmax pmax
comp=Z,115nm,2.5s
TIXI Tiksi 42.08 15 P **P 01 26 22.6 +0.8**
TIXI IAmb IAmb 01 26 24.9
comp=Z,14nm,1.2s
TOLK Toolik Lake Re 42.75 336 P **P 01 26 27.5 0.0**
TOLK IAmb IAmb 01 26 30.9
comp=Z,15nm,1.1s
BRVK Borovoye 43.20 62⇑ *iP* **P 01 26 32.0 +0.8**
BRVK pmax pmax
comp=Z,6.0nm,1.3s
BRVK Borovoye 43.20 62 P **P 01 26 32.4 +1.2**
FYU Fort Yukon 43.78 333 P **P 01 26 35.7 0.0**
P53A Whipple 44.02 267 P **P 01 26 37.7 -0.3**
IL31 45.69 332 P **P 01 26 51.0 +0.1**
IL31 IAmb IAmb 01 26 54.0
comp=Z,10nm,1.4s
ILAR Eielson Array 45.69 332 P **P 01 26 51.0 +0.1**
comp=Z,4.2nm,1.1s,baz=24,slow=5.9,SNR=18
ILAR PcP **PcP 01 28 28.5 -0.1**
comp=Z,1.6nm,1.0s,baz=9.0,slow=3.1,SNR=6.5
ILAR Eielson Array 45.69 332 P **P 01 26 50.9 0.0**
ILAR **PcP 01 28 29.4 +0.8**
MDM Murphy Dome 45.78 333 P **P 01 26 51.7 0.0**
MDM IAmb IAmb 01 26 56.6
comp=Z,13nm,1.2s
COLA College 45.79 333‖ *eP* **P 01 26 52.8 +1.2**
COLA pmax pmax
comp=Z,8.0nm,1.1s
BILL Bilibino 47.58 358 *i* P **P 01 27 04.9 -0.8**
BILL pmax pmax
comp=Z,5.0nm,1.3s
ZALV Zalesovo Beam 47.70 51 P **P 01 27 06.6 -0.2**
comp=Z,0.8nm,0.5s,baz=329,slow=10,SNR=5.5
ZALV PcP **PcP 01 28 36.5 +0.6**
comp=Z,0.3nm,0.3s,baz=338,slow=1.6,SNR=1.8
ZALV Zalesovo Beam 47.70 51 *iP* **P 01 27 09.1 +2.3**
ZALV pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 47.70 51 P **P 01 27 07.1 +0.3**
KURK Kurchatov 48.18 58⇑ *iP* **P 01 27 11.1 +0.5**
KURK pmax pmax
comp=Z,7.0nm,1.3s
LAO LASA Array 48.55 293 P **P 01 27 13.2 -0.4**
LAO IAmb IAmb 01 27 18.6
comp=Z,13nm,1.4s
T47A Sharon Grove 48.58 270 P **P 01 27 13.4 -0.3**
T47A ScP **ScP 01 32 35.3 +1.6**
EGMT Eagleton 48.84 297 P **P 01 27 15.3 -0.4**
GEYT Alibeck 50.49 83 LR LR 01 51 56.5
comp=Z,36nm,18.0s,baz=35,slow=40
RLMT Red Lodge 51.05 294 P **P 01 27 32.2 -0.6**
RLMT IAmb IAmb 01 27 37.5
comp=Z,22nm,1.6s
KK31 Karatay Array 51.34 70 P **P 01 27 35.9 +1.1**
KK31 pmax pmax
comp=Z,11nm,1.6s
KK31 Karatay Array 51.34 70 P **P 01 27 35.9 +1.1**
KK31 IAmb IAmb 01 27 37.0
comp=Z,11nm,1.6s
KKAR Karatay Array 51.34 70 P **P 01 27 35.9 +1.1**
KKAR pmax pmax
comp=Z,11nm,1.6s
KKAR Karatay Array 51.34 70 P **P 01 27 35.9 +1.1**
KKAR IAmb IAmb 01 27 37.0
comp=Z,11nm,1.6s
K22A Casper 52.02 291 P **P 01 27 39.4 -0.6**
MKAR Makanchi Array 52.80 58 P **P 01 27 44.6 -0.9**
comp=Z,1.2nm,0.9s,baz=324,slow=6.0,SNR=5.7
MKAR Makanchi Array 52.80 58 *i* P **P 01 27 45.7 +0.2**
MKAR pmax pmax
comp=Z,2.0nm,1.0s
MKAR Makanchi Array 52.80 58 P **P 01 27 46.5 +1.0**
PDAR Pinedale Array 53.13 293 P **P 01 27 48.4 +0.1**
comp=Z,3.8nm,1.0s,baz=53,slow=5.7,SNR=18
PDAR LR LR 01 48 47.6
comp=Z,89nm,18.0s,baz=27,slow=34
PDAR Pinedale Array 53.13 293 P **P 01 27 47.6 -0.7**
TORD Torodi Ar. Bea 53.14 156 P **P 01 27 47.3 -1.0**
comp=Z,2.4nm,1.0s,baz=344,slow=8.0,SNR=8.7
TORD Torodi Ar. Bea 53.14 156 P **P 01 27 48.3 0.0**
N23A Red Feather La 53.26 289 P **P 01 27 48.6 -0.7**
N23A IAmb IAmb 01 27 53.8
comp=Z,13nm,1.2s
AAK Ala-Archa 53.33 67⇑ *eP* **P 01 27 51.4 +1.7**
AAK pmax pmax
comp=Z,9.0nm,1.0s
PLID Pearl Lake 53.66 300 P **P 01 27 51.6 -0.5**
PLID IAmb IAmb 01 27 56.9
comp=Z,7.8nm,1.2s
OHAK Old Harbor 53.86 332 P **P 01 27 53.3 +0.2**
CHGR Chuyangaron 54.53 74 P **P 01 27 59.3 +0.9**
WMOK Wichita Mounta 55.49 279 P **P 01 28 04.8 -0.5**
WMOK pmax pmax
comp=Z,6.0nm,1.2s
WMOK Wichita Mounta 55.49 279 P **P 01 28 04.8 -0.5**
ZAK Zakamensk 56.53 41 *eP* **P 01 28 13.6 +1.0**
ZAK pmax pmax
comp=Z,5.0nm,1.3s
KSH Kashi 56.57 68 *eP* **P 01 28 17.3 +4.2**
KSH pmax pmax
comp=Z,9.0nm,0.8s
KSH pmax pmax
comp=Z,290nm,4.6s
ELK Elko 57.08 296 P **P 01 28 17.3 +0.4**
comp=Z,0.6nm,0.6s,baz=75,slow=13,SNR=3.6
ELK Elko 57.08 296 P **P 01 28 16.2 -0.6**
WMQ Urumqi 57.30 56 *eP* **P 01 28 21.3 +3.1**
MSU Marysvale 57.80 292 P **P 01 28 21.3 -0.6**
MSU Marysvale 57.80 292 P **P 01 28 21.3 -0.6**
SPR3 Spring Creek 3 58.23 294 P **P 01 28 24.3 -0.7**
PSUT Pine Spring 58.44 294 P **P 01 28 25.8 -0.6**
ANMO Albuquerque 58.54 286‖ *eP* **P 01 28 29.4 +2.3**
ANMO pmax pmax
comp=Z,8.0nm,2.9s
CCUT Cedar City 59.10 293 P **P 01 28 30.4 -0.6**
U15A North Rim 59.64 291 P **P 01 28 34.2 -0.7**
U15A IAmb IAmb 01 28 36.6
comp=Z,5.3nm,1.2s
SONM Songino Array 59.71 40 P **P 01 28 34.0 -1.0**
comp=Z,0.5nm,0.8s,baz=318,slow=10,SNR=3.5
SONM Songino Array 59.71 40 P **P 01 28 35.6 +0.7**
SONM pmax pmax
comp=Z,3.0nm,1.6s
SONM Songino Array 59.71 40 P **P 01 28 35.6 +0.7**
ULN Ulaanbaatar 59.86 40 *di* **P 01 28 34.7 -1.3**
ULN pmax pmax
comp=Z,15nm,1.7s
ULN Ulaanbaatar 59.86 40 P **P 01 28 34.9 -1.1**
WUAZ Wupatki 60.06 290 P **P 01 28 37.1 -0.5**
WUAZ IAmb IAmb 01 28 40.2
comp=Z,6.7nm,1.1s
NVAR Mina Array Bea 60.26 297 P **P 01 28 39.7 +0.6**
comp=Z,0.7nm,0.9s,baz=70,slow=6.2,SNR=5.3
NVAR Mina Array Bea 60.26 297 P **P 01 28 38.4 -0.7**
NIL Nilore 60.52 73 P **P 01 28 41.4 +0.8**
NIL pmax pmax
comp=Z,11nm,1.1s
NIL Nilore 60.52 73 P **P 01 28 41.4 +0.8**
NIL IAmb IAmb 01 28 45.6
comp=Z,11nm,1.1s
TX31 Lajitas Ar. Si 62.23 280 P **P 01 28 51.9 -0.4**
TXAR Lajitas Array 62.23 280 P **P 01 28 52.5 +0.3**
comp=Z,1.9nm,1.1s,baz=132,slow=3.7,SNR=6.1
TXAR LR LR 01 54 40.2
comp=Z,67nm,19.4s,baz=0.0,slow=35
TXAR Lajitas Array 62.23 280 P **P 01 28 51.9 -0.4**
GTA Gaotai 65.37 49 *eP* **P 01 29 13.9 +1.0**
GTA pP pP 01 29 17.2 +0.6
GTA sP sP 01 29 19.9 +1.9
GTA pmax pmax
comp=Z,5.0nm,0.8s
HHC Hu-ho-hao-te 67.58 39 *eP* **P 01 29 28.1 +1.1**
HHC pmax pmax
comp=Z,16nm,1.0s
HHC pmax pmax
comp=Z,98nm,6.1s
KMBO Kilima Mbogo 76.70 123 LR LR 02 07 39.8
comp=Z,20nm,18.0s,baz=90,slow=38
NJ2 Nanjing 77.80 37 *eP* **P 01 30 27.4 -0.3**
NJ2 pmax pmax
comp=Z,13nm,0.5s
CMAR Chiang Mai Arr 84.20 59 P **P 01 31 01.9 -0.1**
comp=Z,0.7nm,0.3s,baz=318,slow=6.1,SNR=4.2
CMAR LR LR 02 11 21.6
comp=Z,11nm,18.5s,baz=55,slow=38
CMAR Chiang Mai Arr 84.20 59 *iP* **P 01 31 03.2 +1.2**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 84.20 59 P **P 01 31 02.6 +0.6**
STKA Stephens Creek 144.78 32 PKP **PKPab 01 38 06.1 +0.3**
comp=Z,0.5nm,0.4s,baz=316,slow=2.6,SNR=3.5

IDC ***13*** *01:28:30.9±1.0, 35°.49N×96°.60W, h0km, mb3.3/1, mb1 3.8/7, mb1mx3.6/42, mbtmp3.5/7, ML3.5/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/19, Error ellipse: s-maj=14.2km s-min=10.8km az=147.0*

TUL ***13*** *01:28:31.3±0.9, 35°.35'N±0°.02×96°.54W±0°.02, h3km±7km, ML3.8, Mwr3.6/36(NEIC), Error ellipse: s-maj=3.5km s-min=0.6km az=140.0*

NEIC ***13*** *01:28:31.5, 35°.33N×96°.54W, h3km, Moment Tensor Solution. Moment tensor: Scale 10^14Nm; Mrr=0.53; Mθθ2.63; Mφφ-2.09; Mrθ0.75; Mrφ2.51; Mθφ-0.28; Fault plane solution: M0 3.57000×10^14 NP1:φs 21.77000°, δ 76.28000°, λ -177.18000°. NP2:φs 291.10000°, δ 87.26000°, λ -13.74000°. Principal axes: T 3.7916, Plg 8.0000°, Azm 337.0000°; N -0.4947, Plg 76.0000°, Azm 100.0000°; P -3.2969, Plg 12.0000°, Azm 246.0000°;*

NEIC ***13*** *01:28:31.4±0.8, 35°.34N±0°.02×96°.52W±0°.02, h2km±8km Error ellipse: s-maj=3.4km s-min=2.5km az=156.0*

ANF ***13*** *01:28:33.2±0.5, 35°.38N×96°.52W, h20km±4km, ML4.8/16, Error ellipse: s-maj=2.4km s-min=1.4km az=177.0*

ISC 13 01:28:31.4±1.0, 35°.39N±0°.03×96°.50W±0°.02, h8km±7km, n106, σ0s 97/134, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK011	**Prague**	**0.18**	**302**	Pg	**Pg**	**01 28 35.6**	**+0.5**
OK011				Sg	**Sg**	**01 28 38.5**	**+0.9**
W35A	**Tecumseh**	**0.39**	**232**		**Pg**	**01 28 37.9**	**-1.1**
W35A				Sg	**Sg**	**01 28 42.9**	**-1.2**
OK030	**Cody Creek RV**	**0.58**	**337**		**Pb**	**01 28 43.4**	**-0.5**
OK030				Sg	**Sb**	**01 28 52.2**	**-0.2**
OK031	**S. Brethren Rd**	**0.62**	**334**		**Pb**	**01 28 44.0**	**-0.6**
OK031				Sg	**Sb**	**01 28 53.5**	**-0.1**
OK001	**Jones High Sch**	**0.67**	**285**	Pg	**Pg**	**01 28 43.6**	**-0.7**
OK001				Sg	**Sg**	**01 28 53.3**	**+0.4**
OK025	**Westminster Rd**	**0.71**	**286**		**Pg**	**01 28 44.7**	**-0.4**
OK025				Sg	**Sg**	**01 28 54.8**	**+0.4**
FNO	**Franklin**	**0.75**	**260**	Pg	**Pg**	**01 28 45.2**	**-0.6**
FNO				Sg	**Sg**	**01 28 55.3**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.77**	**271**		**Pg**	**01 28 45.7**	**-0.5**
OKCSW				Sg	**Sg**	**01 28 56.0**	**-0.1**
OK009	**Oakdale Elemen**	**0.78**	**284**	Pg	**Pg**	**01 28 45.8**	**-0.5**
OK009				Sg	**Sg**	**01 28 56.9**	**+0.5**
OKCFA	**Oklahoma City**	**0.78**	**272**	Pg	**Pg**	**01 28 45.9**	**-0.5**
OKCFA				Sg	**Sg**	**01 28 56.2**	**-0.2**
TUL1	**Leonard** baz=228,SNR=270	**0.78**	**48**	P	**Pb**	**01 28 47.3**	**+0.1**
TUL1				S	**Sb**	**01 28 58.1**	**+0.1**
TUL1	**Leonard** baz=228	**0.78**	**48**	Pg	**Pb**	**01 28 47.3**	**+0.1**

TUL1 Sg **Sb** **01 28 58.0 0.0**
QUOK Quay 0.80 348 **Pb** **01 28 47.1 -0.5**
QUOK Sg **Sb** **01 28 59.0 +0.5**
OK029 Liberty Lake 0.88 298 **Pg** **01 28 47.9 -0.4**
OK029 Sg **Sg** **01 28 60.0 +0.3**
BCOK Bluff Creek, N 0.94 287 Pg **Pg** **01 28 48.7 -0.9**
BCOK Sg **Sg** **01 29 01.8 0.0**
X37A Clayton 1.23 130 Pn **Pb** **01 28 54.0 -0.9**
T35A Sooner Cattle 1.52 360 **Pb** **01 28 59.3 -0.7**
CROK Carrier 1.64 313 Pn **Pb** **01 29 01.3 -0.6**
KAN13 South Haven SW 1.80 334 Pn **Pb** **01 29 03.9 -0.8**
GC02 Grant County # 1.82 323 **Pb** **01 29 04.3 -0.8**
KAN14 Manchester OK 1.96 323 Pn **Pn** **01 29 05.8 +0.8**
KAN09 Caldwell North 1.96 333 Pn **Pb** **01 29 06.9 -0.6**
WMOK Wichita Mounta 1.98 251 P **Pn** **01 29 05.7 +0.4**
baz=71,SNR=503
WMOK Sb **Sb** **01 29 33.5 +0.9**
baz=71
WMOK Wichita Mounta 1.98 251 Pn **Pn** **01 29 05.3 0.0**
U38A Gravette 2.01 58 Pn **Pb** **01 29 07.3 -1.0**
KAN05 Bluff City Nor 2.04 328 **Pn** **01 29 07.2 +1.1**
Z35A Perchaven, San 2.15 197 **Pn** **01 29 07.6 0.0**
KAN10 Anthony SW Sta 2.15 324 **Pn** **01 29 08.7 +1.0**
KAN08 Anthony NE Sta 2.18 327 **Pn** **01 29 09.0 +0.9**
W39A Magazine 2.23 94 P **Pn** **01 29 09.9 +1.2**
baz=275,SNR=108
W39A Sb **Sg** **01 29 42.1 -1.1**
baz=275
W39A Magazine 2.23 94 **Pn** **01 29 09.7 +1.0**
KAN12 Harper NE Stat 2.25 328 **Pn** **01 29 09.9 +0.8**
U32A Winter Ranch, 2.26 297 Pn **Pn** **01 29 09.6 +0.4**
HHAR Hobbs 2.26 66 **Pb** **01 29 10.7 -1.9**
Z38A Mt. Pleasant 2.47 149 **Pn** **01 29 12.4 +0.4**
MIAR Mount Ida 2.55 109 P **Pn** **01 29 13.8 +0.7**
baz=289,SNR=35
MIAR Mount Ida 2.55 109 Pn **Pn** **01 29 14.5 +1.5**
U40A Yellville 3.12 71 P **Pn** **01 29 22.3 +1.4**
baz=252,SNR=125
U40A Yellville 3.12 71 Pn **Pn** **01 29 21.8 +0.9**
X40A Basin Creek Fa 3.15 106 P **Pn** **01 29 22.7 +1.4**
baz=287
X40A Sb **Sb** **01 30 08.9 +2.8**
baz=287
X40A Basin Creek Fa 3.15 106 **Pn** **01 29 22.0 +0.7**
WLAR White Oak Lake 3.27 120 Pn **Pn** **01 29 23.8 +0.7**
237A Washetta, Mont 3.43 170 Pn **Pn** **01 29 25.0 -0.2**
S39A Bolivar 3.44 47 Pn **Pn** **01 29 26.4 +1.0**
WHAR Wooly Hollow 3.45 90 Pn **Pn** **01 29 26.2 +0.8**
UALR University of 3.46 99 Pn **Pn** **01 29 26.8 +1.1**
WHTX Lake Whitney, 3.48 193 Pn **Pn** **01 29 25.9 0.0**
W41B Gary Mavity, V 3.49 92 P **Pn** **01 29 27.5 +1.5**
baz=274,SNR=25
W41B Gary Mavity, V 3.49 92 Pn **Pn** **01 29 26.7 +0.8**
FCAR Ozark Folk Cen 3.60 81 **Pn** **01 29 28.5 +0.9**
KSU1 Kansas State U 3.70 359 P **Pn** **01 29 29.9 +0.9**
baz=179,SNR=6.9
Z41A Richland Creek 3.73 124 P **Pn** **01 29 29.8 +0.4**
baz=305,SNR=9.2
Z41A S **Sn** **01 30 14.5 +1.1**
baz=305
Z41A Richland Creek 3.73 124 Pn **Pn** **01 29 29.7 +0.4**
ABTX Abilene, Hawle 3.80 224 P **Pn** **01 29 30.2 -0.1**
baz=42
ABTX S **Sn** **01 30 14.7 -0.5**
baz=42
ABTX Abilene, Hawle 3.80 224 Pn **Pn** **01 29 29.9 -0.4**
MGMO Mountain Grove 3.85 62 **Pn** **01 29 31.9 +1.0**
NATX Nacogdoches 3.94 157 P **Pn** **01 29 31.9 -0.3**
baz=337
NATX S **Sn** **01 30 17.6 -0.9**
baz=337
NATX Nacogdoches 3.94 157 Pn **Pn** **01 29 31.9 -0.3**
CCAR Cane Creek 4.17 109 **Pn** **01 29 37.2 +1.9**
AMTX Amarillo 4.28 265 P **Pn** **01 29 37.1 +0.2**
baz=82
AMTX S **Sn** **01 30 27.1 0.0**
baz=82
AMTX Amarillo 4.28 265 Pn **Pn** **01 29 36.8 -0.2**
CBKS Cedar Bluff 4.28 324 P **Pn** **01 29 37.5 +0.5**
baz=143,SNR=5.9
CBKS S **Sn** **01 30 27.8 +0.6**
baz=143
CBKS Cedar Bluff 4.28 324 Pn **Pn** **01 29 37.6 +0.5**
LCAR Lake Charles 4.40 80 **Pn** **01 29 39.5 +0.9**
R40A Maddies Statio 4.46 48 Pn **Pn** **01 29 40.4 +1.0**
T42A Van Buren 4.67 68 Pn **Pn** **01 29 43.2 +1.0**
435B Jarrell 4.69 191 Sb **Sb** **01 30 54.7 +4.2**
baz=11
435B Jarrell 4.69 191 Pn **Pn** **01 29 42.1 -0.4**
HBAR Harrisburg 4.77 86 Pn **Pn** **01 29 44.2 +0.6**
CCM Cathedral Cave 4.99 56 P **Pn** **01 29 48.3 +1.6**
baz=239
CCM Cathedral Cave 4.99 56 Pn **Pn** **01 29 47.7 +1.0**
MSTX Muleshoe 5.36 256 P **Pn** **01 29 51.6 -0.3**
baz=73,SNR=10
MSTX S **Sn** **01 30 52.8 -1.0**
baz=73
MSTX Muleshoe 5.36 256 Pn **Pn** **01 29 51.5 -0.3**
FVM French Village 5.53 60 **Pn** **01 29 54.9 +0.9**
JCT Junction City 5.63 210 P **Pn** **01 29 54.3 -1.2**
baz=28
JCT Junction City 5.63 210 Pn **Pn** **01 29 54.3 -1.2**
OXF Oxford 5.89 97 P **Pn** **01 29 59.8 +0.7**
baz=280
OXF S **Sn** **01 31 07.1 +0.3**
baz=280
OXF Oxford 5.89 97 Pn **Pn** **01 29 59.8 +0.7**
W45A Hickory Valley 5.99 90 Pn **Pn** **01 30 01.2 +0.8**
KSCO Kaye Shedlock' 6.08 308 P **Pn** **01 30 02.6 +0.8**
baz=125
KSCO S **Sn** **01 31 11.4 -0.2**
baz=125
KSCO Kaye Shedlock' 6.08 308 Pn **Pn** **01 30 02.0 +0.2**
BGNE Belgrade 6.14 348 P **Pn** **01 30 03.0 +0.4**
baz=168
BGNE S **Sn** **01 31 13.0 -0.1**
baz=168
T25A Trinidad 6.62 288 P **Pn** **01 30 09.3 0.0**
baz=103
SCIA State Center 6.99 21 S **Sn** **01 31 34.3 +0.4**
baz=203
WVT Waverly 7.09 82 P **Pn** **01 30 16.1 +0.6**
baz=266
WVT S **Sn** **01 31 36.5 +0.2**
baz=266
SDCO Great Sand Dun 7.61 291 P **Pn** **01 30 23.4 +0.4**
baz=106,SNR=12
HDIL Hopedale 7.68 46 P **Pn** **01 30 24.6 +1.0**
baz=230
Q24A Divide 7.77 300 P **Pn** **01 30 25.4 +0.3**
baz=115,SNR=6.1
Q24A S **Sn** **01 31 52.0 -1.4**
baz=115
ANMO Albuquerque 8.16 270 Pn **Pn** **01 30 27.9 -2.5**
0.1nm,0.3s,baz=86,slow=14,SNR=2.4
ANMO Pg **Pb** **01 30 57.2 +4.0**
0.6nm,0.3s,baz=87,slow=15,SNR=5.1
ANMO Lg Lg 01 32 46.3
3.9nm,0.3s,baz=66,slow=7.6,SNR=5.7
ANMO LR LR 01 33 46.9
comp=Z,88nm,19.2s,baz=66,slow=39
LRAL Lakeview Retre 8.21 104 P **Pn** **01 30 31.4 +0.4**
baz=289
MNTX Cornudas Mount 8.28 246 P **Pn** **01 30 31.2 -0.6**
baz=61,SNR=8.8
ECSD EROS Data Cent 8.33 359 P **Pn** **01 30 32.9 +0.4**
baz=180,SNR=10
ISCO Idaho Springs 8.46 304 P **Pn** **01 30 35.1 +0.4**
baz=119
TXAR Lajitas Array 8.55 227 Pn **Pn** **01 30 34.8 -1.0**
0.7nm,0.3s,baz=51,slow=11,SNR=22
TXAR Lg Lg 01 32 56.3
8.1nm,0.3s,baz=52,slow=29,SNR=11
TXAR LR LR 01 34 22.9
comp=Z,64nm,19.7s,baz=0.0,slow=41
WCI Wyandotte Cave 8.66 68 S **Sn** **01 32 14.9 0.0**
baz=254
JFWS Jewell Farm 8.94 31 P **Pn** **01 30 41.8 +0.9**
baz=215
N23A Red Feather La 9.24 309 P **Pn** **01 30 45.7 +0.4**
baz=124,SNR=18
TKL Tuckaleechee C 10.38 85 Pn **Pn** **01 31 00.5 -0.1**
0.4nm,0.3s,baz=266,slow=16,SNR=4.3
TKL Lg Lg 01 33 52.5
2.4nm,0.3s,baz=160,slow=15,SNR=5.2

RSSD Black Hills 10.47 329 P **Pn** **01 31 02.4 +0.4**
baz=144
Q52A Bidwell 11.90 68 P **Pn** **01 31 22.0 +0.6**
baz=257
PDAR Pinedale Array 12.53 310 Pn **Pn** **01 31 29.1 -1.1**
0.3nm,0.3s,baz=120,slow=14,SNR=8.9
PDAR Lg 01 34 57.3
0.2nm,0.3s,baz=113,slow=36,SNR=1.9
P53A Whipple 12.69 67 P **Pn** **01 31 32.1 -0.1**
baz=256
ULM Lac du Bonnet 14.86 2 Pn Pn 01 31 55.9 -5.8
0.4nm,0.3s,baz=186,slow=14,SNR=1.5
ULM Sn Sn 01 34 33.6 -13
0.3nm,0.3s,baz=321,slow=20,SNR=2.0
ULM Lg Lg 01 36 06.0
0.3nm,0.3s,baz=75,slow=12,SNR=1.7
NVAR Mina Array Bea 17.69 286 P **Pn** **01 32 37.6 -0.9**
baz=90,slow=11,SNR=2.5
YBH Yreka Blue Hor 21.40 295 LR LR 01 42 14.1
comp=Z,77nm,18.7s,baz=34,slow=39
ILAR Eielson Array 41.91 330 P **P** **01 36 23.1 +1.0**
0.4nm,0.8s,baz=116,slow=7.1,SNR=3.1

IDC 13 01:29:42.1±2.6, 4.72S×135.76E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.4/25, mbtmp3.3/4, ML3.3/3, MS2.7/1, Ms1 2.9/1, ms1mx2.2/21, Error ellipse: s-maj=69.0km s-min=30.8km az=91.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.20**	**185**	Pn	Pn	01 33 17.5	-0.7
	0.1nm,0.3s,baz=7.6,slow=12,SNR=1.5						
WRA				Sn	Sn	01 35 55.5	-12
	0.2nm,0.3s,baz=16,slow=24,SNR=4.8						
WRA				Lg	Lg	01 37 36.7	
	baz=1.9,slow=30,SNR=1.1						
FITZ	**Fitzroy Crossi**	**16.57**	**216**	Pn	Pn	01 33 35.2	-0.9
	0.2nm,0.3s,baz=41,slow=12,SNR=2.3						
FITZ				Sn	Sn	01 36 41.5	+0.6
	baz=1.3,slow=22,SNR=0.8						
ASAR	**Alice Springs**	**18.92**	**185**	P	Pn	01 34 05.6	+0.3
	0.1nm,0.3s,baz=13,slow=11,SNR=4.9						
ASAR				S	Sn	01 37 30.2	-7.6
	0.1nm,0.3s,baz=5.5,slow=30,SNR=1.5						
CMAR	**Chiang Mai Arr**	**42.97**	**303**	LR	LR	01 58 28.0	
	comp=Z,9.1nm,18.0s,baz=80,slow=40						
MKAR	**Makanchi Array**	**69.62**	**324**	P	P	01 40 53.4	0.0
	0.2nm,0.5s,baz=110,slow=7.7,SNR=2.1						

IDC 13 01:50:42.3±1.4, 55.37S×26.94W, h0km, mb3.6/2, mb1 3.7/2, mb1mx3.6/16, mbtmp3.6/2, Error ellipse: s-maj=112.2km s-min=38.3km az=100.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**47.26**	**183**	P	P	01 59 16.4	-0.1
	0.7nm,0.7s,baz=191,slow=7.0,SNR=4.3						
TORD	**Torodi Ar. Bea**	**72.39**	**29**	P	P	02 02 10.1	0.0
	0.4nm,0.8s,baz=202,slow=6.6,SNR=2.2						
ILAR	**Eielson Array**	**149.76**	**312**	PKPbc	PKPbc	02 10 32.1	-0.5
	0.7nm,0.8s,baz=116,slow=2.1,SNR=7.4						

*IDC **13** 01:54:38.7±1.8, 3.54S×138.42E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.8/21, mbtmp3.9/5, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/26, Error ellipse: s-maj=55.0km s-min=28.8km az=95.0*

ISC 13 01:54:43.0±1.3, 3.94S±0.10×138.4E±0.2, h35km, n7, σ2s68/9, mb3.6/3, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**10.28**	**122**	LR	LR	02 02 38.7	
	comp=Z,74nm,18.5s,baz=10,slow=46						
WRA	**Warramunga Arr**	**16.39**	**194**	Pn	**Pn**	**01 58 31.3**	**+0.8**
	0.2nm,0.3s,baz=12,slow=13,SNR=12						
WRA				Sn	**Sn**	**02 01 27.0**	**-4.4**
	baz=14,slow=20,SNR=1.3						
WRA				Lg	Lg	02 03 35.7	
	0.1nm,0.3s,baz=12,slow=28,SNR=3.3						
FITZ	**Fitzroy Crossi**	**18.80**	**221**	P	**Pn**	**01 59 03.1**	**+2.8**
	0.2nm,0.3s,baz=37,slow=10,SNR=2.7						
FITZ				S	**Sn**	**02 02 27.6**	**-2.3**
	0.2nm,0.3s,baz=150,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**20.08**	**192**	P	**Pn**	**01 59 18.6**	**+2.9**
	5.5nm,0.7s,baz=16,slow=10,SNR=62						
ASAR				S	**Sn**	**02 03 00.9**	**+0.1**
	0.4nm,0.6s,baz=17,slow=25,SNR=2.3						
CMAR	**Chiang Mai Arr**	**44.77**	**301**	P	**P**	**02 02 53.1**	**-0.4**
	2.3nm,0.3s,baz=129,slow=7.1,SNR=5.3						
MKAR	**Makanchi Array**	**70.55**	**323**	P	**P**	**02 05 54.1**	**-0.5**
	0.3nm,0.5s,baz=115,slow=7.7,SNR=3.6						
ILAR	**Eielson Array**	**87.08**	**24**	P	**P**	**02 07 24.1**	**-0.8**
	0.3nm,0.8s,baz=265,slow=4.5,SNR=2.0						

*JMA **13** 01:58:21.3, 24.17N×122.21E, h24km±2km, M2.7*
*TAP **13** 01:58:22.0, 24.26N×122.13E, h22km, ML2.9, D*

ISC 13 01:58:20.8±1.1, 24.24N±0.02×122.23E±0.02, h10km±9km, n68, σ0s56/122, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.43**	**298**	P	**Pg**	**01 58 29.6**	**+0.3**
	baz=309						
ENAH				S	**Sg**	**01 58 35.5**	**+0.5**
	baz=309						
TWC	**Suao**	**0.50**	**317**	P	**Pg**	**01 58 30.7**	**+0.1**
	baz=324						
TWC				S	**Sg**	**01 58 37.4**	**+0.1**
	baz=324						
NACB	**Ninganchiao**	**0.58**	**263**	*e*P	**Pb**	**01 58 33.1**	**0.0**
	baz=264						
NACB				*e*S	**Sg**	**01 58 40.4**	**+0.6**
	baz=264						
TWD	**Chiawan**	**0.60**	**254**	*e*P	**Pb**	**01 58 34.1**	**+0.7**
	baz=249						
EGS		**0.66**	**336**	*e*P	**Pg**	**01 58 33.7**	**+0.1**
	baz=344						
EGS				*e*S	**Sg**	**01 58 42.7**	**+0.6**
	baz=344						
ILA	**Ilan**	**0.68**	**320**	*e*P	**Pg**	**01 58 34.0**	**0.0**
	baz=326						
ILA				*e*S	**Sg**	**01 58 43.4**	**+0.5**
	baz=326						
ETLH	**Xiulin Townshi**	**0.68**	**267**	*e*P	**Pg**	**01 58 34.2**	**+0.2**
	baz=264						
ETLH				*e*S	**Sb**	**01 58 44.3**	**-0.1**
	baz=264						
JYNG	**Yonagunijimaku**	**0.69**	**72**	P	**Pb**	**01 58 34.9**	**+0.1**
JYNG				S	**Sb**	**01 58 44.8**	**+0.4**
TWE	**Neicheng**	**0.70**	**313**	P	**Pg**	**01 58 34.4**	**+0.1**
	baz=318						
TWE				S	**Sg**	**01 58 42.1**	**-1.4**
	baz=318						
NTC	**Toucheng**	**0.71**	**329**	*e*P	**Pb**	**01 58 35.0**	**-0.3**
	baz=346						
NTC				*e*S	**Sg**	**01 58 43.5**	**-0.3**
	baz=346						
NDT	**Datong Townshi**	**0.74**	**299**	P	**Pb**	**01 58 35.6**	**-0.3**
	baz=308						
NDT				S	**Sg**	**01 58 44.5**	**-0.4**
	baz=308						
YOJ	**Yonaguni jima**	**0.75**	**73**	P	**Pb**	**01 58 36.1**	**+0.2**
YOJ				S	**Sb**	**01 58 46.3**	**+0.2**
TWB1	**Santiao Chiao**	**0.79**	**344**	*e*P	**Pb**	**01 58 37.0**	**+0.4**
	baz=341						
TWB1				*e*S	**Sb**	**01 58 47.4**	**-0.1**
	baz=341						
NNSB	**Datong**	**0.79**	**284**	P	**Pg**	**01 58 36.4**	**+0.3**
	baz=290						
NNSB				S	**Sg**	**01 58 45.9**	**-0.7**
	baz=290						
NNSH	**Datong**	**0.79**	**284**	*e*P	**Pb**	**01 58 36.6**	**-0.2**
	baz=284						
NNS	**Nan Shan**	**0.81**	**284**	P	**Pg**	**01 58 36.6**	**+0.3**
	baz=290						
NNS				S	**Sg**	**01 58 46.5**	**-0.4**
	baz=290						
TIPB	**Shuangxi**	**0.81**	**333**	*e*P	**Pb**	**01 58 37.0**	**0.0**
	baz=339						
TIPB				*e*S	**Sg**	**01 58 47.0**	**-0.1**
	baz=339						
ESL	**Shilin**	**0.84**	**240**	*e*P	**Pn**	**01 58 38.4**	**-0.4**
	baz=218						
NWLT	**Wulai**	**0.85**	**309**	P	**Pg**	**01 58 37.4**	**+0.3**
	baz=308						
NWLT				*e*S	**Sg**	**01 58 47.6**	**-0.7**
	baz=308						
WHF	**Hehuan Shan**	**0.89**	**264**	*e*P	**Pb**	**01 58 38.6**	**+0.1**
	baz=261						
WHF				*e*S	**Sg**	**01 58 49.0**	**-0.5**
	baz=261						
YHNB	**Yeheng**	**0.89**	**299**	P	**Pg**	**01 58 38.0**	**+0.2**
	baz=310						
YHNB				S	**Sg**	**01 58 49.0**	**-0.4**
	baz=310						
FUSS	**Fushou**	**0.90**	**270**	*e*P	**Pb**	**01 58 39.1**	**+0.5**
	baz=268						
FUSS				*e*S	**Sg**	**01 58 49.3**	**-0.6**
	baz=268						
NSK	**Sanguang**	**0.90**	**299**	P	**Pg**	**01 58 38.3**	**+0.1**
	baz=309						
NSK				S	**Sg**	**01 58 49.2**	**-0.8**
	baz=309						
NWF	**Wu-fen Shan**	**0.92**	**334**	*e*P	**Pb**	**01 58 39.2**	**+0.3**
	baz=339						
NWF				*e*S	**Sb**	**01 58 51.3**	**+0.1**
	baz=339						
WFSB	**Wu-fen Shan**	**0.92**	**334**	*e*P	**Pb**	**01 58 39.4**	**+0.5**
	baz=332						
WFSB				*e*S	**Sb**	**01 58 51.1**	**0.0**
	baz=332						
EGFH	**Guangfu**	**0.93**	**232**	*e*P	**Pn**	**01 58 40.9**	**+0.9**
	baz=214						
TWA	**Mucha**	**0.94**	**321**	*e*P	**Pb**	**01 58 39.3**	**+0.1**
	baz=333						
TWA				*e*S	**Sg**	**01 58 51.2**	**0.0**
	baz=333						
NHDH	**Xindian Distri**	**0.96**	**318**	*e*P	**Pn**	**01 58 40.5**	**+0.1**
	baz=313						
NHDH				*e*S	**Sg**	**01 58 51.6**	**-0.2**
	baz=313						
TWT	**Tachien**	**0.96**	**271**	*e*P	**Pn**	**01 58 40.3**	**-0.2**
	baz=260						
TWT				*e*S	**Sb**	**01 58 52.4**	**-0.1**
	baz=260						
TDCB	**Techi**	**0.98**	**271**	*e*P	**Pb**	**01 58 40.3**	**+0.4**
	baz=260						
TDCB				*e*S	**Sg**	**01 58 52.0**	**-0.4**
	baz=260						
CHGB	**Renai**	**0.98**	**260**	*e*P	**Pg**	**01 58 39.6**	**-0.1**
	baz=241						
CHGB				*e*S	**Sg**	**01 58 51.7**	**-0.8**
	baz=241						
TATO	**Taipei**	**0.99**	**317**	*e*P	**Pb**	**01 58 40.2**	**+0.1**
	baz=336						
TATO				*e*S	**Sg**	**01 58 52.3**	**-0.6**
	baz=336						
HGSD	**Ruisui**	**1.05**	**225**	*e*P	**Pn**	**01 58 42.0**	**+0.4**
	baz=209						
YM01	**YM01**	**1.08**	**326**	*e*P	**Pn**	**01 58 42.4**	**+0.4**
	baz=344						
YM01				*e*S	**Sb**	**01 58 56.0**	**+0.2**
	baz=344						
YM10	**YM10**	**1.09**	**326**	*e*P	**Pb**	**01 58 42.1**	**+0.2**
	baz=344						
YM10				*e*S	**Sg**	**01 58 56.1**	**0.0**
	baz=344						
YM11	**YM11**	**1.09**	**327**	*e*P	**Pn**	**01 58 42.4**	**+0.1**
	baz=348						
YM04	**YM04**	**1.10**	**325**	*e*P	**Pb**	**01 58 42.1**	**+0.1**
	baz=343						
YM04				*e*S	**Sg**	**01 58 56.2**	**-0.2**
	baz=343						
YM08	**YM08**	**1.11**	**328**	*e*P	**Pn**	**01 58 42.4**	**0.0**
	baz=349						
YM03	**YM03**	**1.12**	**326**	*e*P	**Pn**	**01 58 42.7**	**0.0**
	baz=343						
YM03				*e*S	**Sb**	**01 58 57.8**	**+0.7**
	baz=343						
TWS1	**Kuangyinshan**	**1.13**	**319**	*e*P	**Pn**	**01 58 43.2**	**+0.6**
	baz=335						
TWS1				*e*S	**Sg**	**01 58 57.0**	**-0.2**
	baz=335						
ANP	**Anpu**	**1.14**	**326**	*e*P	**Pn**	**01 58 43.2**	**+0.3**
	baz=330						
WHP	**Taichung City**	**1.17**	**272**	*e*P	**Pn**	**01 58 44.2**	**+0.8**
	baz=270						
WHP				*e*S	**Sg**	**01 58 58.7**	**+0.1**
	baz=270						
LIOB	**Emei**	**1.18**	**290**	*e*P	**Pn**	**01 58 43.7**	**+0.3**
	baz=291						
LIOB				*e*S	**Sg**	**01 58 56.8**	**-1.9**
	baz=291						
NSTT	**Nanjuang**	**1.18**	**289**	*e*P	**Pn**	**01 58 43.7**	**+0.3**
	baz=290						
NSTT				*e*S	**Sg**	**01 58 58.1**	**-0.9**
	baz=290						
NCUH	**Zhongli**	**1.19**	**307**	*e*P	**Pn**	**01 58 44.2**	**+0.7**
	baz=310						
YULB	**Yu-li**	**1.20**	**225**	*e*P	**Pb**	**01 58 43.6**	**0.0**
	baz=219						
YULB				*e*S	**Sb**	**01 58 59.5**	**+0.2**
	baz=219						
DPDB	**Guoxing**	**1.21**	**260**	*e*P	**Pb**	**01 58 43.5**	**-0.3**
	baz=246						
EYUL	**Yuli**	**1.22**	**223**	*e*P	**Pn**	**01 58 44.5**	**+0.3**
	baz=234						
EYUL				*e*S	**Sn**	**01 59 00.4**	**-0.1**
	baz=234						
TWF1	**Yuli**	**1.23**	**224**	*e*P	**Pg**	**01 58 44.7**	**+0.2**
	baz=235						
TWF1				*e*S	**Sn**	**01 59 01.2**	**+0.5**
	baz=235						
SSLB	**Suanglung**	**1.25**	**249**	*e*P	**Pn**	**01 58 44.5**	**+0.2**
	baz=245						
SSLB				*e*S	**Sb**	**01 59 00.2**	**-0.5**
	baz=245						
SMLT	**Sun Moon Lake**	**1.27**	**254**	*e*P	**Pn**	**01 58 44.5**	**-0.1**
	baz=235						
SMLT				*e*S	**Sb**	**01 59 00.6**	**-0.6**
	baz=235						
TYC	**Yuchr**	**1.30**	**255**	*e*P	**Pn**	**01 58 44.8**	**-0.2**
	baz=238						
TYC				*e*S	**Sb**	**01 59 02.3**	**+0.3**
	baz=238						
FULB	**Fuli**	**1.35**	**220**	*e*P	**Pg**	**01 58 47.0**	**+0.4**
	baz=199						
FULB				*e*S	**Sn**	**01 59 03.9**	**+0.2**
	baz=199						
IRIF	**Iriomote-Funau**	**1.37**	**86**	P	**Pn**	**01 58 45.5**	**-0.5**
HATJ	**Hateruma jima**	**1.45**	**97**	*e*S	**Sn**	**01 59 06.0**	**-0.2**
ALS	**Alishan**	**1.49**	**241**	*e*P	**Pn**	**01 58 48.3**	**+0.4**
	baz=223						
ALS				*e*S	**Sn**	**01 59 06.5**	**-1.2**
	baz=223						
ELDTW	**Lidau**	**1.53**	**227**	*e*P	**Pb**	**01 58 48.9**	**-0.4**
	baz=221						
ELDTW				*e*S	**Sn**	**01 59 08.0**	**-0.3**
	baz=221						
CHN5	**Tsauling**	**1.56**	**246**	*e*S	**Sb**	**01 59 09.8**	**+0.2**
	baz=227						
JKRS	**Kuro-shima**	**1.62**	**90**	P	**Pn**	**01 58 49.4**	**-0.1**
JKRS				S	**Sn**	**01 59 10.4**	**-0.1**
CHN4	**Tsaushan**	**1.74**	**240**	*e*P	**Pn**	**01 58 51.5**	**+0.4**
	baz=223						
CHN4				*e*S	**Sb**	**01 59 14.7**	**-0.1**
	baz=223						
JIJ	**Ishigaki jima**	**1.75**	**86**	P	**Pn**	**01 58 51.0**	**-0.2**
JIJ				*e*S	**Sn**	**01 59 12.5**	**-1.1**
WTP	**Ta-pu**	**1.78**	**236**	*e*P	**Pn**	**01 58 52.1**	**+0.4**
	baz=232						
WTP				*e*S	**Sn**	**01 59 15.1**	**+0.6**
	baz=232						
CHN1	**Nanshi**	**1.88**	**236**	*e*P	**Pn**	**01 58 53.6**	**+0.6**
	baz=232						
CHN1				*e*S	**Sn**	**01 59 17.9**	**+1.0**
	baz=232						
SLGT	**Liugui**	**1.91**	**230**	*e*P	**Pb**	**01 58 54.8**	**-1.0**
	baz=215						
SLGT				*e*S	**Sn**	**01 59 18.2**	**+0.6**
	baz=215						
SSD	**Sandimen**	**2.09**	**225**	*e*P	**Pn**	**01 58 57.2**	**+1.3**
	baz=220						
TSMG	**Majia**	**2.11**	**224**	*e*P	**Pn**	**01 58 57.5**	**+1.4**
	baz=219						
TSMG				*e*S	**Sn**	**01 59 23.1**	**+0.6**
	baz=219						
MASBT	**Mashibuluo**	**2.19**	**222**	*e*P	**Pb**	**01 58 59.0**	**-1.5**
	baz=207						
MASBT				*e*S	**Sn**	**01 59 25.7**	**+1.3**

baz=207
VWUC VWUC 2.64 287 *e*P **Pn 01 59 03.5 +0.1**
baz=288
VWUC *e*S **Sn 01 59 33.6 -1.9**
baz=288

IDC ***13*** *02:27:08.5±22.0, 7°.29S×119°.42E, h358km±245km, mb2.9/2, mb1 3.0/3, mb1mx2.7/35, mbtmp3.5/3, Error ellipse: s-maj=333.6km s-min=42.2km az=62.0*
DJA ***13*** *02:27:21.8±1.5, 7°S±11°×12°0E±°, h528km±25km, M3.9/8, mb3.9/4, MLv3.9/8*
ISC 13 02:27:22.1±1.0, 7°.1S±0°.1×120°.2E±0°.1, h500km, n11, σ2§06/11, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**2.24**	**138**	P	**P**	**02 28 29.9**	**+1.3**
WBSI	**Waikabubak, Su**	**2.66**	**197**	P	**P**	**02 28 32.6**	**+1.7**
PLAI	**Plampang**	**2.94**	**234**	P	**P**	**02 28 34.7**	**+2.0**
BASI	**Baing, Sumba**	**3.15**	**173**	P	**P**	**02 28 36.6**	**+2.5**
TWSI	**Taliwang, Sumb**	**3.65**	**243**	P	**P**	**02 28 39.7**	**+1.9**
SOEI	**Soe**	**4.85**	**124**	P	**P**	**02 28 48.7**	**+0.8**
JAGI	**Jajag, Banyuwa**	**6.12**	**257**	P	**P**	**02 28 59.3**	**-0.3**
	0.2nm43nm,0.8s						
GTOI	**Gorontalo**	**8.17**	**20**	P	**P**	**02 29 21.8**	**+1.5**
WRA	**Warramunga Arr**	**18.78**	**134**	P	**P**	**02 31 07.6**	**-2.0**
	0.2nm,0.3s,baz=308,slow=9.7,SNR=13						
ASAR	**Alice Springs**	**21.12**	**143**	P	**P**	**02 31 29.1**	**-1.9**
	0.7nm,0.4s,baz=318,slow=8.9,SNR=10						
MKAR	**Makanchi Array**	**63.30**	**332**	P	**P**	**02 36 59.3**	**-2.1**
	0.3nm,0.5s,baz=144,slow=8.0,SNR=3.6						

IDC ***13*** *02:31:58.2±0.5, 6°.07S×148°.25E, h43km±4km, mb4.5/24, mb1 4.7/28, mb1mx4.6/34, mbtmp4.8/28, ML4.6/4, MS3.8/20, Ms1 3.8/20, ms1mx3.7/33, Error ellipse: s-maj=11.9km s-min=7.9km az=97.0*
NEIC ***13*** *02:31:59.3±1.3, 6°.14S±0°.08×148°.19E±0°.09, h60km±5km, mb4.9/37, Error ellipse: s-maj=14.2km s-min=9.2km az=125.0*
BJI ***13*** *02:32:00.2±0.0, 6°.20S×148°.30E, h80km, mB5.1/26, mb4.9/34, Ms4.7/5, Ms7 4.4/4*
DJA ***13*** *02:32:00.2±0.6, 6°S±4°×14°8E±°, h49km±6km, M5.1/30, mB5.3/7, mb5.1/30, MLv5.5/2, Mw(mB)4.8/7*
GCMT ***13*** *02:32:03.3±0.3, 6°.41S±0°.02×148°.24E±0°.03, h39km±1km, MW4.9/54, Moment Tensor Solution. s47,c52; s54,c62; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.88±.17; Mθθ-2.66±.10; Mφφ0.77±.12; Mrθ0.83±.13; Mθφ-0.45±.12; Mφr-0.23±.15; Best double couple: Mo2.47700×10¹⁶ NP1:φs247.00000°, δ38.00000°, λ66.00000°. NP2: φs96.00000°, δ56.00000°, λ107.00000°. Principal axes: T 2.1010, Plg73.0000°, Azm51.0000°; N 0.7470, Plg14.0000°, Azm266.0000°; P -2.8530, Plg10.0000°, Azm174.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 13 02:31:59.9±0.3, 6°.15S±0°.04×148°.25E±0°.06, h65km, n216, σ1§68/218, mb5.0/55, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.41**	**198**	P	**Pn**	**02 32 50.4**	**-0.2**
	185nm,0.3s,baz=18,slow=5.9,SNR=268						
PMG				S	**Sn**	**02 33 31.5**	**+1.7**
	490nm,0.3s,baz=351,slow=19,SNR=4.8						
PMG	**Port Moresby**	**3.41**	**198**		**Pn**	**02 32 49.6**	**-1.0**
PMG				Sn	**Sn**	**02 33 27.3**	**-2.5**
KRVT	**Keravat (AS076**	**4.18**	**64**	P	**Pn**	**02 33 00.7**	**-0.6**
	44nm,0.3s,baz=351,slow=2.1,SNR=15						
KRVT				S	Sn	02 34 00.5	+12
	32nm,0.3s,baz=204,slow=17,SNR=5.8						
KRVT				LR	LR	02 34 41.0	
	comp=Z,2μm,20.2s,baz=179,slow=39						
RABL	**Rabaul**	**4.36**	**64**	Pn	**Pn**	**02 33 03.6**	**-0.1**
GENI	**Geneyem**	**8.80**	**293**	P	Pn	02 34 14.6	+10
COEN	**Coen**	**9.22**	**212**	P	**Pn**	**02 34 09.3**	**-0.9**
	baz=9.2,SNR=44						
COEN				S	**Sn**	**02 35 45.8**	**-6.8**
	baz=9.2						
COEN	**Coen**	**9.22**	**212**	Pn	**Pn**	**02 34 09.1**	**-1.2**
SMPI	**Sarmi**	**10.38**	**293**	P	Pn	02 34 45.6	+20
MTSU	**Mount Surprise**	**12.51**	**198**	P	**Pn**	**02 34 55.6**	**+0.4**
	baz=12,SNR=21						
CTA	**Charters Tower**	**13.99**	**188**	P	**Pn**	**02 35 15.0**	**-0.1**
	1.4nm,0.3s,baz=5.6,slow=14,SNR=11						
CTAO	**Charters Tower**	**13.99**	**188**	Pn	**Pn**	**02 35 14.9**	**-0.1**
QIS	**Mount Isa**	**16.59**	**210**	P	**Pn**	**02 35 48.6**	**+0.1**
	baz=17,SNR=106						
KDU	**Kakadu**	**16.86**	**246**	P	**Pn**	**02 35 51.8**	**0.0**
	baz=17,SNR=27						
SIJI	**Sorong**	**17.74**	**287**	P	**Pn**	**02 36 02.5**	**-0.1**
	2.0nm,0.3s,baz=229,slow=19,SNR=2.0						
MTN	**Manton Dam**	**18.14**	**247**	P	**Pn**	**02 36 08.1**	**+0.7**
	baz=18,SNR=5.2						
MTN	**Manton Dam**	**18.14**	**247**	P	**Pn**	**02 36 07.5**	**+0.1**
BNDI	**Bandanaira**	**18.34**	**274**	P	**Pn**	**02 36 14.4**	**+4.5**
	124nm,0.7s						
WB0	**Warramunga Arr**	**19.09**	**224**		**P**	**02 36 16.8**	**-0.6**
WB0				IAmb	IAmb	02 36 21.2	
	comp=Z,31nm,0.8s						
WR0	**Warramunga Arr**	**19.13**	**223**	P	**P**	**02 36 17.3**	**-0.5**
WR0				IAmb	IAmb	02 36 22.1	
	comp=Z,58nm,1.0s						
WB2	**Warramunga Arr**	**19.24**	**223**	P	**P**	**02 36 19.6**	**+0.5**
	baz=19						
WB2	**Warramunga Arr**	**19.24**	**223**		**P**	**02 36 19.1**	**0.0**
WB2				IAmb	IAmb	02 36 27.3	
	comp=Z,39nm,0.9s						
WRA	**Warramunga Arr**	**19.25**	**223**	P	**P**	**02 36 19.5**	**+0.3**
	comp=Z,2.3nm,0.3s,baz=47,slow=11,SNR=113						
WRA				S	**S**	**02 39 51.5**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=45,slow=22,SNR=14						
WRA				PcP	**PcP**	**02 40 41.4**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=24,slow=1.9,SNR=8.5						
WRA				LR	LR	02 44 17.6	
	comp=Z,410nm,21.1s,baz=50,slow=38						
WRA	**Warramunga Arr**	**19.25**	**223**	P	**P**	**02 36 18.2**	**-1.0**
WRA					**PcP**	**02 40 40.5**	**+0.3**
EIDS	**Eidsvold**	**19.30**	**172**	P	**Pn**	**02 36 20.7**	**-0.5**
	baz=19,SNR=11						
EIDS	**Eidsvold**	**19.30**	**172**		**P**	**02 36 19.6**	**-0.1**
MSAI	**Masohi**	**19.45**	**277**	P	Pn	02 36 37.5	+14
GUMO	**Guam**	**19.90**	**350**	P	**Pn**	**02 36 28.3**	**-0.1**
	comp=Z,8.1nm,0.3s,baz=157,slow=13,SNR=5.2						
GUMO	**Guam**	**19.90**	**350**	P	**P**	**02 36 26.0**	**-0.3**
GUMO				IAmb	IAmb	02 36 31.0	
	comp=Z,66nm,0.8s						
RMQ	**Roma**	**20.23**	**179**	P	Pn	02 36 31.3	-0.8
	baz=20,SNR=24						
QLP	**Quilpie**	**20.67**	**190**	P	**P**	**02 36 35.5**	**+0.9**
	baz=21,SNR=50						
SANVU	**Saraoutou**	**20.76**	**118**	P	**P**	**02 36 35.8**	**+0.2**
SANVU				IAmb	IAmb	02 36 54.8	
	comp=Z,77nm,1.1s						
NLAI	**Namlea**	**21.28**	**277**	P	P	02 36 49.0	+7.9
KNRA	**Kununurra**	**21.33**	**242**	P	**P**	**02 36 42.6**	**+0.9**
	baz=21,SNR=7.1						
KNRA	**Kununurra**	**21.33**	**242**	P	**P**	**02 36 41.0**	**-0.6**
KNRA				IAmb	IAmb	02 36 56.2	
	comp=Z,42nm,0.6s						
AS31	**Alice Springs**	**22.22**	**217**	P	**P**	**02 36 50.8**	**-0.4**
AS31				IAmb	IAmb	02 37 08.2	
	comp=Z,30nm,0.6s						
ASAR	**Alice Springs**	**22.22**	**217**	P	**P**	**02 36 51.7**	**+0.5**
	comp=Z,44nm,0.6s,baz=51,slow=9.5,SNR=294						
ASAR				S	**S**	**02 40 51.6**	**-0.4**
	comp=Z,18nm,0.7s,baz=34,slow=22,SNR=7.6						
ASAR				ScP	**ScP**	**02 44 19.0**	**+1.2**
	comp=Z,2.3nm,1.0s,baz=57,slow=3.4,SNR=5.4						
ASAR				LR	LR	02 46 32.0	
	comp=Z,513nm,18.9s,baz=40,slow=39						
DZM	**Mont Dzumac**	**23.65**	**134**	P	**P**	**02 37 06.0**	**+0.3**
	comp=Z,6.1nm,0.6s,baz=300,slow=10,SNR=8.3						
DZM				PcP	**PcP**	**02 40 50.8**	**+2.0**
	comp=Z,3.7nm,0.7s,baz=292,slow=5.4,SNR=3.8						
DZM	**Mont Dzumac**	**23.65**	**134**	*e*P	**P**	**02 37 05.3**	**-0.4**
	comp=Z,43nm,1.1s						
DZM				*e*LR	LR	02 42 55.4	
	comp=Z,812nm,23.7s						
DZM	**Mont Dzumac**	**23.65**	**134**	P	**P**	**02 37 06.0**	**+0.3**
SOEI	**Soe**	**24.02**	**260**	P	**P**	**02 37 12.0**	**+2.9**
	comp=Z,93nm,0.7s						
SOEI	**Soe**	**24.02**	**260**	P	**P**	**02 37 08.4**	**-0.7**
SOEI				IAmb	IAmb	02 37 21.9	
	comp=Z,38nm,0.8s						
ARMA	**Armidale**	**24.35**	**173**	P	**P**	**02 37 12.5**	**+0.7**
	baz=24,SNR=6.8						
ARMA	**Armidale**	**24.35**	**173**	P	**P**	**02 37 12.0**	**+0.1**
BATI	**Baumata**	**24.66**	**259**	P	**P**	**02 37 14.8**	**0.0**
	comp=Z,39nm,0.4s,baz=345,slow=3.3,SNR=7.3						
BATI	**Baumata**	**24.66**	**259**	P	**P**	**02 37 18.6**	**+3.8**
	comp=Z,64nm,0.9s						
FITZ	**Fitzroy Crossi**	**25.05**	**240**	P	**P**	**02 37 19.6**	**+1.3**
	comp=Z,70nm,0.6s,baz=62,slow=8.1,SNR=216						
FITZ				PcP	**PcP**	**02 40 53.4**	**+1.7**
	comp=Z,6.4nm,0.9s,baz=34,slow=3.6,SNR=2.5						
FITZ	**Fitzroy Crossi**	**25.05**	**240**	P	**P**	**02 37 19.7**	**+1.3**
	baz=25,SNR=119						
FITZ	**Fitzroy Crossi**	**25.05**	**240**	P	**P**	**02 37 18.3**	**0.0**
CMSA	**Cobar Meteorol**	**25.37**	**185**	P	**P**	**02 37 22.3**	**+1.3**
	baz=25,SNR=25						
MMRI	**Maumere**	**25.91**	**263**	P	**P**	**02 37 25.1**	**-1.1**
LUWI	**Luwuk**	**25.92**	**280**	P	P	02 37 45.6	+19
GTOI	**Gorontalo**	**26.08**	**284**	P	**P**	**02 37 31.4**	**+3.7**
	comp=Z,303nmcomp=Z,19nm,0.6s						
STKA	**Stephens Creek**	**26.34**	**193**	P	**P**	**02 37 30.6**	**+0.8**
	comp=Z,32nm,0.8s,baz=351,slow=8.5,SNR=52						
STKA				LR	LR	02 49 22.8	
	comp=Z,602nm,18.6s,baz=19,slow=40						
STKA	**Stephens Creek**	**26.34**	**193**	P	**P**	**02 37 31.8**	**+2.0**
	baz=26						
STKA	**Stephens Creek**	**26.34**	**193**	P	**P**	**02 37 29.7**	**-0.1**
EDFI	**Ende, Flores**	**26.46**	**263**	P	**P**	**02 37 30.6**	**-0.6**
	comp=Z,560nmcomp=Z,62nm,0.8s						
WRKA	**Warakurna**	**26.80**	**223**	P	**P**	**02 37 34.8**	**+0.7**
	baz=27,SNR=42						
BSSI	**Bau Bau, Buton**	**27.60**	**269**	P	**P**	**02 37 43.3**	**+1.9**
	comp=Z,461nmcomp=Z,42nm,1.2s						
BASI	**Baing, Sumba**	**27.68**	**260**	P	**P**	**02 37 46.5**	**+4.4**
	comp=Z,966nmcomp=Z,99nm,0.9s						
YNG	**Young**	**28.01**	**180**	P	**P**	**02 37 46.7**	**+1.9**
	baz=28,SNR=7.8						
KAPI	**Kappang**	**28.39**	**271**	P	**P**	**02 37 49.6**	**+1.3**
	comp=Z,8.9nm,0.8s,baz=172,slow=5.1,SNR=5.6						
HTT	**Hallett**	**28.49**	**197**	P	**P**	**02 37 50.2**	**+1.0**
	baz=28,SNR=4.7						
WBSI	**Waikabubak, Su**	**28.79**	**261**	P	**P**	**02 37 54.0**	**+2.0**
	comp=Z,49nm,0.9s						
PLAI	**Plampang**	**30.32**	**263**	P	**P**	**02 38 04.6**	**-1.0**
FORT	**Forrest**	**30.98**	**215**	P	**P**	**02 38 12.0**	**+0.9**
	baz=31,SNR=9.5						
TWSI	**Taliwang, Sumb**	**31.20**	**263**	P	**P**	**02 38 14.3**	**+1.0**
	comp=Z,505nmcomp=Z,26nm,0.7s						
PSA00	**Pilbara Seismi**	**31.46**	**238**	P	**P**	**02 38 15.1**	**-0.4**
PSA00				IAmb	IAmb	02 38 27.2	
	comp=Z,19nm,0.8s						
MEEK	**Meekatharra**	**34.81**	**231**	P	**P**	**02 38 45.8**	**+1.1**
	baz=35,SNR=6.6						
KMBL	**Kambalda**	**35.20**	**221**	P	**P**	**02 38 49.3**	**+1.4**
	baz=35,SNR=10						
MOO	**Moorlands**	**36.15**	**181**	P	**P**	**02 38 57.4**	**+1.5**
	baz=36,SNR=4.7						
PWJI	**Pagerwojo**	**36.21**	**265**	P	**P**	**02 38 57.6**	**+0.8**
	comp=Z,56nm,0.8s						
WOJI	**Wonogiri, Jawa**	**37.08**	**265**	P	**P**	**02 39 04.4**	**+0.2**
	comp=Z,140nm,0.9s						
MORW	**Morawa**	**38.01**	**229**	P	**P**	**02 39 12.7**	**+0.9**
	baz=38,SNR=3.6						
KLBR	**Kellerberrin**	**38.13**	**225**	P	**P**	**02 39 13.3**	**+0.4**
	baz=38,SNR=12						
KPJI	**Karang Pucung**	**39.06**	**266**	P	**P**	**02 39 23.5**	**+2.6**
	comp=Z,61nm,0.9s						
NWAO	**Narrogin (SRO)**	**39.26**	**223**	P	**P**	**02 39 23.4**	**+1.0**
	comp=Z,6.9nm,0.7s,baz=106,slow=7.4,SNR=1.7						
AFI	**Afiamalu**	**40.06**	**104**	P	**P**	**02 39 30.3**	**+1.1**
	comp=Z,40nm,0.8s,baz=157,slow=21,SNR=4.2						
AFI	**Afiamalu**	**40.06**	**104**	P	**P**	**02 39 29.0**	**-0.3**
AFI				IAmb	IAmb	02 39 30.7	
	comp=Z,35nm,0.9s						
CISI	**Cisompet, Garu**	**40.16**	**266**	P	**P**	**02 39 30.5**	**+0.4**
	comp=Z,4μmcomp=Z,215nm,0.9s						
CISI	**Cisompet, Garu**	**40.16**	**266**	P	**P**	**02 39 29.6**	**-0.6**
LEM	**Lembang**	**40.37**	**267**	P	**P**	**02 39 31.2**	**-0.8**
	comp=Z,50nm,0.6s,baz=35,slow=6.2,SNR=7.7						
LEM				LR	LR	02 59 07.0	
	comp=Z,45nm,18.3s,baz=258,slow=40						
TPI	**Tanjungpandan**	**40.61**	**273**	P	**P**	**02 39 37.4**	**+3.7**
	comp=Z,29nm,0.9s						
URZ	**Urewera**	**41.30**	**145**	P	**P**	**02 39 40.3**	**+1.2**
	comp=Z,7.7nm,0.8s,baz=45,slow=1.4,SNR=2.5						
JNU	**Nakatsue**	**42.40**	**338**	P	**P**	**02 39 48.1**	**-0.1**
	comp=Z,10nm,0.8s,baz=203,slow=7.6,SNR=4.7						
JNU				LR	LR	02 53 58.6	
	comp=Z,166nm,20.4s,baz=125,slow=31						
JNU	**Nakatsue**	**42.40**	**338**	P	**P**	**02 39 48.2**	**0.0**
JNU				IAmb	IAmb	02 40 04.8	
	comp=Z,27nm,0.9s						
RPZ	**Rata Peaks**	**42.44**	**155**	P	**P**	**02 39 49.8**	**+1.4**
	comp=Z,11nm,0.8s,baz=8.1,slow=19,SNR=1.3						
MJAR	**Matsushiro Arr**	**43.50**	**348**	P	**P**	**02 39 57.4**	**+0.4**
	comp=Z,12nm,0.9s,baz=171,slow=8.6,SNR=14						
MJAR				pP	**pP**	**02 40 09.2**	**-4.2**
	comp=Z,14nm,0.9s,baz=173,slow=8.0,SNR=7.3						
MJAR				LR	LR	02 55 53.4	
	comp=Z,138nm,22.0s,baz=205,slow=33						
MJAR	**Matsushiro Arr**	**43.50**	**348**	P	**P**	**02 39 57.0**	**0.0**
MAT	**Matsushiro**	**43.50**	**348**	P	**P**	**02 39 57.6**	**+0.6**
MAT				*e*S	**S**	**02 46 28.2**	**+7.1**
MDSI	**Maura Dua**	**43.91**	**270**	P	**P**	**02 40 01.3**	**+0.7**
	comp=Z,18nm,1.2s						
SDSI	**Sungai Dareh**	**47.00**	**274**	P	**P**	**02 40 26.1**	**+1.0**
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**47.20**	**325**	*e*P	**P**	**02 40 29.4**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSRS	**Korea Array**	**47.35**	**338**	P	**P**	**02 40 28.0**	**+0.7**
	comp=Z,5.2nm,0.9s,baz=157,slow=9.3,SNR=7.2						
KSRS				LR	LR	02 58 25.2	
	comp=Z,188nm,21.9s,baz=147,slow=34						
USRK	**Ussuriysk Ar.**	**52.23**	**345**	P	**P**	**02 41 05.2**	**+1.0**
	comp=Z,12nm,0.6s,baz=169,slow=7.0,SNR=53						
USRK				pP	**pP**	**02 41 17.2**	**-3.8**
	comp=Z,7.2nm,0.7s,baz=176,slow=6.7,SNR=6.6						
USRK				LR	LR	03 00 19.6	
	comp=Z,56nm,21.2s,baz=171,slow=33						
USRK	**Ussuriysk Ar.**	**52.23**	**345**	P	**P**	**02 41 03.7**	**-0.6**
MDJ	**Mudanjiang**	**53.26**	**343**	P	**P**	**02 41 12.8**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,16nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,150nm,4.3s						
CMAR	**Chiang Mai Arr**	**54.42**	**298**	P	**P**	**02 41 22.6**	**+1.8**
	comp=Z,0.7nm,0.2s,baz=131,slow=6.5,SNR=5.5						
CMAR				LR	LR	03 06 18.0	
	comp=Z,35nm,19.8s,baz=161,slow=38						
CMAR	**Chiang Mai Arr**	**54.42**	**298**	P	**P**	**02 41 20.4**	**-0.5**
XAN	**Xi'an**	**54.60**	**320**	P	**P**	**02 41 19.5**	**-2.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,57nm,5.7s						
HHC	**Hu-ho-hao-te**	**57.62**	**328**	*e*P	**P**	**02 41 46.9**	**+3.4**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.6s						
LZH	**Lanzhou**	**59.14**	**319**	*e*P	P	02 42 01.0	+6.8
LZH				pP	sP	02 42 16.4	-2.0
LZH				sP	pP	02 42 25.0	+14
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.3s						
LZH				LR	LR		
	comp=Z,160nm,14.1s						
LZH				LR	LR		
	comp=Z,190nm,15.2s						
LZH				LR	LR		
	comp=Z,190nm,14.6s						
PETK	**Petropavlovsk-**	**59.58**	**7**	P	**P**	**02 41 58.2**	**+1.5**
	comp=Z,18nm,0.9s,baz=165,slow=6.9,SNR=10						
PETK				pP	**pP**	**02 42 09.9**	**-3.9**
	comp=Z,13nm,0.8s,baz=180,slow=7.4,SNR=7.8						
PETK				LR	LR	03 03 52.2	
	comp=Z,157nm,22.0s,baz=187,slow=32						
PETK	**Petropavlovsk-**	**59.58**	**7**	P	**P**	**02 41 56.6**	**0.0**
PPT	**Papeete**	**61.66**	**107**	LR	LR	03 06 02.9	
	comp=Z,23nm,18.4s,baz=147,slow=33						
PPT2	**Papeete2**	**61.66**	**107**	*e*LR	LR	03 00 28.0	
	comp=Z,113nm,27.5s						
GTA	**Gaotai**	**63.66**	**320**	*e*P	**P**	**02 42 25.2**	**+0.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ULN	**Ulaanbaatar**	**64.85**	**331**	P	**P**	**02 42 31.3**	**-1.0**
SONM	**Songino Array**	**65.15**	**330**	P	**P**	**02 42 34.4**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=148,slow=7.0,SNR=11						
SONM				pP	**pP**	**02 42 47.4**	**-4.0**
	comp=Z,2.6nm,0.8s,baz=138,slow=6.8,SNR=6.8						
SONM				LR	LR	03 09 42.1	
	comp=Z,189nm,21.6s,baz=148,slow=35						
SONM	**Songino Array**	**65.15**	**330**	P	**P**	**02 42 33.5**	**-0.7**
VNDA	**Vanda**	**71.69**	**177**	P	**P**	**02 43 15.6**	**+1.2**
	comp=Z,3.5nm,0.6s,baz=331,slow=6.7,SNR=37						
VNDA				LR	LR	03 13 40.9	
	comp=Z,39nm,18.7s,baz=342,slow=35						
VNDA	**Vanda**	**71.69**	**177**	P	**P**	**02 43 15.3**	**+1.0**
WMQ	**Urumqi**	**73.72**	**319**	*e*P	**P**	**02 43 30.4**	**+3.3**
MKAR	**Makanchi Array**	**78.41**	**320**	P	**P**	**02 43 52.7**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=101,slow=7.0,SNR=8.9						
MKAR	**Makanchi Array**	**78.41**	**320**	P	**P**	**02 43 52.8**	**-0.8**
ZALV	**Zalesovo Beam**	**79.81**	**328**	P	**P**	**02 43 59.8**	**-1.2**
	comp=Z,3.1nm,0.7s,baz=105,slow=4.6,SNR=7.9						
ZALV				LR	LR	03 18 27.0	
	comp=Z,94nm,21.6s,baz=108,slow=35						
ZALV	**Zalesovo Beam**	**79.81**	**328**	P	**P**	**02 43 59.0**	**-2.0**
KSH	**Kashi**	**80.41**	**312**	*e*P	**P**	**02 44 06.8**	**+2.0**
KSH				pmax	pmax		
	comp=Z,17nm,0.6s						
KSH				pmax	pmax		
	comp=Z,240nm,4.6s						
CNPM	**China Poot**	**80.92**	**27**	P	**P**	**02 44 07.5**	**+0.6**
MAW	**Mawson**	**82.58**	**203**	P	**P**	**02 44 17.0**	**+1.5**
	comp=Z,3.4nm,0.6s,baz=31,slow=5.9,SNR=4.8						
MAW				pP	**pP**	**02 44 28.7**	**-3.5**
	comp=Z,5.4nm,0.7s,baz=99,slow=7.5,SNR=3.8						
MAW				LR	LR	03 21 08.0	
	comp=Z,38nm,18.1s,baz=60,slow=36						
MAW	**Mawson**	**82.58**	**203**	P	**P**	**02 44 16.5**	**+1.0**
KTH	**Kantishna Hill**	**83.00**	**23**	P	**P**	**02 44 18.1**	**+0.3**
KTH				IAmb	IAmb	02 44 31.0	
	comp=Z,18nm,1.0s						
BPAW	**Bear Paw Mtn.**	**83.25**	**23**	P	**P**	**02 44 19.9**	**+0.8**
BPAW				IAmb	IAmb	02 44 20.7	
	comp=Z,7.4nm,1.0s						
SML	**Sawmill**	**83.25**	**25**	P	**P**	**02 44 19.8**	**+0.6**
QSPA	**South Pole Qui**	**83.81**	**180**	P	**P**	**02 44 22.9**	**+0.8**
COLD	**Coldfoot**	**85.05**	**20**	P	**P**	**02 44 29.0**	**+0.9**
COLD				IAmb	IAmb	02 44 43.3	
	comp=Z,9.3nm,0.9s						
GLB	**Gilahina Butte**	**85.06**	**27**	P	**P**	**02 44 29.4**	**+1.0**
GLB				IAmb	IAmb	02 44 30.4	
	comp=Z,12nm,0.7s						
IL31		**85.14**	**23**	P	**P**	**02 44 28.0**	**-0.5**
IL31				IAmb	IAmb	02 44 29.4	
	comp=Z,13nm,0.8s						
ILAR	**Eielson Array**	**85.14**	**23**	P	**P**	**02 44 27.6**	**-1.0**
	comp=Z,10nm,0.8s,baz=250,slow=4.4,SNR=102						
ILAR				pP	**pP**	**02 44 40.1**	**-6.5**
	comp=Z,13nm,0.9s,baz=255,slow=4.8,SNR=16						
NRIK	**Noril'sk**	**85.80**	**342**	P	**P**	**02 44 30.1**	**-1.7**
	comp=Z,2.8nm,0.6s,baz=142,slow=1.4,SNR=6.6						
NRIK				pP	**pP**	**02 44 43.0**	**-6.9**
	comp=Z,3.3nm,0.9s,baz=136,slow=5.5,SNR=2.8						
NRIK				LR	LR	03 24 41.0	
	comp=Z,39nm,18.2s,baz=201,slow=37						
EGAK	**Eagle**	**87.40**	**24**	P	**P**	**02 44 40.8**	**+1.1**
HYT	**Haines Junctio**	**87.74**	**28**	P	**P**	**02 44 42.3**	**+0.7**
EPYK	**Eagle Plains**	**89.65**	**23**	P	**P**	**02 44 51.3**	**+1.0**
EPYK				IAmb	IAmb	02 44 54.0	
	comp=Z,6.5nm,0.8s						
SYO	**Syowa Base**	**90.88**	**200**	*e*P	**P**	**02 44 55.1**	**-0.9**
ABKAR	**Akbulak array**	**93.51**	**319**	P	**P**	**02 45 07.2**	**-1.4**
GEYT	**Alibeck**	**93.84**	**308**	LR	LR	03 28 15.9	
	comp=Z,31nm,21.8s,baz=5.0,slow=36						
AKTO	**Aktyubinsk**	**94.85**	**320**	LR	LR	03 26 28.5	
	comp=Z,28nm,21.8s,baz=72,slow=34						
BELA	**Belgrano 2**	**96.08**	**179**	P	**P**	**02 45 20.1**	**+0.3**
NVAR	**Mina Array Bea**	**96.48**	**52**	P	**P**	**02 45 23.6**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=253,slow=8.1,SNR=4.7						
NVAR	**Mina Array Bea**	**96.48**	**52**	P	**P**	**02 45 22.7**	**0.0**
NEW	**Newport**	**97.63**	**42**	LR	LR	03 22 02.6	
	comp=Z,82nm,20.3s,baz=223,slow=31						
SNAA	**Sanae**	**100.04**	**189**	P	**Pdif**	**02 45 37.7**	**-0.1**
VNA2	**Neumayer--Watz**	**101.38**	**188**	P	**Pdif**	**02 45 44.1**	**+0.5**
	baz=156,slow=3.8						
VNA3	**Neumayer Olymp**	**101.38**	**187**	P	**Pdif**	**02 45 44.0**	**+0.3**
VNA1	**Neumayer--Stat**	**101.75**	**188**	P	**Pdif**	**02

CHIC	**Chingaza**	**138.18**	**90**	*e*P		PKPpre	02 51 13.0		
OCAC	**Ocana**	**138.72**	**85**	*e*P		**PKPdf**	**02 51 19.7**	**-0.1**	
RUSC	**La Rusia**	**138.90**	**88**	*e*P		PKPpre	02 51 15.5		
GUVC	**San Jose del G**	**139.09**	**93**	*e*P		**PKPdf**	**02 51 20.4**	**0.0**	
CPUP	**Villa Florida**	**139.28**	**144**	PKP		**PKPdf**	**02 51 21.2**	**+0.8**	
	comp=Z,5.7nm,1.0s,baz=299,slow=1.2,SNR=8.3								
CPUP	**Villa Florida**	**139.28**	**144**			**PKPdf**	**02 51 20.7**	**+0.3**	
PAMC	**Pamplona, Colo**	**139.33**	**86**	*e*P		**PKPdf**	**02 51 21.9**	**+0.5**	
SDV	**Santo Domingo**	**141.37**	**84**	PKhKP		PKPpre	02 51 20.0		
	comp=Z,18nm,0.8s,baz=302,slow=1.4,SNR=7.9								
SDV				PKP		**PKPdf**	**02 51 25.9**	**+1.2**	
	comp=Z,18nm,0.8s,baz=349,slow=5.2,SNR=7.6								
SDV	**Santo Domingo**	**141.37**	**84**	*e*P		PKPpre	02 51 19.7		
SIV	**San Ignacio**	**143.57**	**128**	PKhKP		PKPab	02 51 25.9	+0.9	
	comp=Z,8.9nm,0.6s,baz=233,slow=2.9,SNR=48								
SJG	**San Juan**	**144.41**	**67**	PKP		**PKPab**	**02 51 27.8**	**-0.2**	
	comp=Z,8.5nm,0.6s,baz=22,slow=2.8,SNR=5.1								
SJG	**San Juan**	**144.41**	**67**	*e*P		**PKPab**	**02 51 25.4**	**-2.6**	
CDVI	**St. Croix**	**145.77**	**67**	PKPdf		**PKPdf**	**02 51 31.5**	**-0.6**	
TOA0	**Torodi Ar. Sit**	**146.33**	**284**			**PKPdf**	**02 51 32.5**	**-0.6**	
TORD	**Torodi Ar. Bea**	**146.33**	**284**	PKPbc		**PKPdf**	**02 51 33.4**	**+0.3**	
	comp=Z,4.2nm,0.5s,baz=66,slow=3.1,SNR=67								
TORD	**Torodi Ar. Bea**	**146.33**	**284**			**PKPdf**	**02 51 32.6**	**-0.5**	
PCRV	**Puerto La Cruz**	**147.21**	**81**	PKPbc		**PKPbc**	**02 51 36.5**	**-0.5**	
	comp=Z,15nm,0.5s,baz=340,slow=3.0,SNR=14								
KOWA	**Kowa**	**151.51**	**289**			**PKPbc**	**02 51 47.1**	**-0.5**	
BDFB	**Brasilia**	**153.01**	**144**	PKP		**PKPdf**	**02 51 45.1**	**+1.3**	
	comp=Z,8.4nm,0.9s,baz=165,slow=4.6,SNR=12								
BDFB				PKPbc		**PKiKP**	**02 51 51.8**	**+0.5**	
	comp=Z,14nm,0.5s,baz=196,slow=1.4,SNR=20								
BDFB				PKPab		**PKPab**	**02 52 04.3**	**+1.8**	
	comp=Z,11nm,0.6s,baz=206,slow=2.6,SNR=9.1								
BDFB	**Brasilia**	**153.01**	**144**	PKPdf		**PKPdf**	**02 51 43.3**	**-0.5**	
DBIC	**Dimbokro**	**153.27**	**273**	PKP		**PKPdf**	**02 51 45.0**	**+0.9**	
	comp=Z,3.4nm,0.8s,baz=96,slow=3.0,SNR=3.8								
DBIC				PKPbc		**PKiKP**	**02 51 52.2**	**+0.4**	
	comp=Z,3.4nm,0.4s,baz=83,slow=2.7,SNR=13								
DBIC				PKPab		**PKPab**	**02 52 05.2**	**+1.4**	
	comp=Z,4.0nm,0.5s,baz=77,slow=3.1,SNR=5.9								
DBIC	**Dimbokro**	**153.27**	**273**			**PKPbc**	**02 51 50.9**	**-0.7**	

*NNC **13** 02:34:23.1±0.6,43.4°43N×78.8°87E,h6^{km}±4^{km},mb2.6, mpv2.7, Error ellipse: s-maj=4.5km s-min=3.7km az=178.0*
*SOME **13** 02:34:23.3,43.4°45N×78.8°83E,h15^{km}*

ISC 13 02:34:23.4±1.0,43°47N±0.03×78°85E±0.02,h12^{km}±10^{km}, n17,σ0°47/34,1C-1D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPKS	**Kokpek**	**0.12**	**270**	⇑*i*P	**Pb**	**02 34 27.1**	**-0.6**
	129nm,0.1s						
KPKS				*e*S	**Sg**	**02 34 29.8**	**+0.8**
	86nm,0.1s						
UZB	**Uzynbulak**	**0.34**	**158**	⇓*i*P	**Pg**	**02 34 30.2**	**-0.2**
	3.9nm,0.1s						
UZB				*e*S	**Sg**	**02 34 35.0**	**-0.1**
	14nm,0.1s						
UZB	**Uzynbulak**	**0.34**	**158**	P	**Pg**	**02 34 30.2**	**-0.2**
	3.9nm,0.1s						
UZB				S	**Sg**	**02 34 35.1**	**+0.1**
	14nm,0.1s						
ZHN	**Zhinishke**	**0.42**	**226**	*e*P	**Pg**	**02 34 31.4**	**-0.4**
	16nm,0.2s						
ZHN				*e*S	**Sg**	**02 34 37.2**	**-0.3**
	19nm,0.1s						
ZHN	**Zhinishke**	**0.42**	**226**	P	**Pg**	**02 34 31.5**	**-0.3**
	6.2nm,0.1s						
ZHN				S	**Sg**	**02 34 37.1**	**-0.4**
	19nm,0.1s						
PDGK	**Podgornoye**	**0.49**	**106**	P	**Pg**	**02 34 33.1**	**+0.1**
	0.3nm,0.1s						
PDGK				S	**Sg**	**02 34 39.7**	**+0.3**
	2.2nm,0.2s						
SATY	**Saty**	**0.52**	**219**	*e*P	**Pg**	**02 34 33.3**	**-0.3**
	6.0nm,0.1s						
SATY				*e*S	**Sg**	**02 34 40.5**	**0.0**
	60nm,0.1s						
SATY	**Saty**	**0.52**	**219**	P	**Pg**	**02 34 33.3**	**-0.3**
	6.0nm,0.1s						
SATY				S	**Sg**	**02 34 40.5**	**0.0**
	60nm,0.1s						
MNBS	**Baschi**	**0.69**	**332**	*e*P	**Pg**	**02 34 36.6**	**-0.3**
	3.8nm,0.1s						
MNBS				*e*S	**Sg**	**02 34 46.1**	**+0.1**
	11nm,0.2s						
MNBS	**Baschi**	**0.69**	**332**	P	**Pg**	**02 34 36.6**	**-0.3**
	3.8nm,0.1s						
MNBS				S	**Sg**	**02 34 46.2**	**+0.1**
	11nm,0.2s						
ARXS	**Arharly**	**1.05**	**316**	*e*P	**Pg**	**02 34 42.8**	**-0.8**
	1.0nm,0.1s						
ARXS				*e*S	**Sg**	**02 34 56.9**	**-0.4**
	3.0nm,0.1s						
ARXS	**Arharly**	**1.05**	**316**	P	**Pg**	**02 34 43.6**	**0.0**
	1.7nm,0.1s						
ARXS				S	**Sb**	**02 34 58.3**	**+1.1**
	2.1nm,0.2s						
DJR	**Jarkent**	**1.10**	**38**	*e*P	**Pb**	**02 34 44.0**	**-0.4**
	0.6nm,0.2s						
DJR				*e*S	**Sg**	**02 34 58.7**	**-0.2**
	4.5nm,0.3s						
DJR	**Jarkent**	**1.10**	**38**	P	**Pg**	**02 34 43.9**	**-0.5**
	1.0nm,0.2s						
DJR				S	**Sg**	**02 34 58.7**	**-0.2**
	3.9nm,0.3s						
TNSS	**Tian-Shan**	**1.45**	**253**	P	**Pg**	**02 34 51.1**	**-0.2**
	0.9nm,0.2s						
TNSS				S	**Sg**	**02 35 10.7**	**+0.4**
	1.7nm,0.3s						
KTBS	**Karatobe**	**1.59**	**280**	*e*P	**Pb**	**02 34 52.6**	**-0.2**
	0.7nm,0.4s						
KTBS				*e*S	**Sb**	**02 35 13.8**	**+0.9**
	4.6nm,0.4s						
KTBS	**Karatobe**	**1.59**	**280**	P	**Pg**	**02 34 53.7**	**-0.2**
	0.7nm,0.4s						
KTBS				S	**Sb**	**02 35 13.8**	**+0.9**
	4.6nm,0.4s						

*EAF **13** 02:34:50.5±2.9,26.5°53S×22.9°96E,h10^{km},MD4.2*
*PRE **13** 02:34:58.6±1.1,26.9°96S×26.7°74E,h2^{km},ML3.1*
*IDC **13** 02:35:03.5±2.4,26.8°81S×26.4°49E,h0^{km},mb3.7/2, mb1 3.8/3,mb1mx3.5/33,mbtmp3.7/3,ML3.6/1,Error ellipse: s-maj=69.7km s-min=16.0km az=109.0*

ISC 13 02:34:59.8±1.1,26°92S±0.03×26°72E±0.03,h10^{km}±8^{km}, n27,σ2°03/50,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WDLM	**Western Deep L**	**0.80**	**52**	*e*P	**Pg**	**02 35 14.5**	**-0.7**
WDLM				*e*S	**Sg**	**02 35 25.1**	**-0.6**
WDLM				AML	AML	02 35 27.3	
	comp=Z,589nm,0.2s						
KLOF	**Kloof**	**0.98**	**54**	*e*P	**Pg**	**02 35 17.6**	**-1.1**
KLOF				*e*S	**Sb**	**02 35 30.9**	**-1.1**
KLOF				AML	AML	02 35 37.8	
	comp=Z,2μm,0.2s						
KSR	**Koster**	**1.08**	**8**	*e*P	**Pn**	**02 35 20.4**	**-0.7**
KSR				*e*S	**Sb**	**02 35 34.7**	**-0.1**
KSR				AML	AML	02 35 40.9	
	comp=Z,2μm,0.2s						
ERPM	**east rand prop**	**1.48**	**67**	*e*P	**Pg**	**02 35 27.5**	**-0.7**
ERPM				*e*S	**Sg**	**02 35 48.3**	**+0.9**
ERPM				AML	AML	02 35 52.9	
	comp=Z,207nm,0.3s						
BOSA	**Boshof**	**2.13**	**217**	Pn	**Pg**	**02 35 40.0**	**-0.6**
	comp=Z,13nm,0.3s,baz=39,slow=18,SNR=142						
BOSA				Lg	Lg	02 36 10.2	
	comp=Z,50nm,0.3s,baz=308,slow=22,SNR=39						
BOSA	**Boshof**	**2.13**	**217**	*i*P	**Pg**	**02 35 40.1**	**-0.6**
BOSA				*i*S	**Sg**	**02 36 10.3**	**+2.0**
BOSA	**Boshof**	**2.13**	**217**	*e*P	**Pn**	**02 35 35.2**	**-0.4**
BOSA				*e*S	**Sb**	**02 36 02.4**	**-2.6**
BOSA				AML	AML	02 36 11.2	
	comp=Z,155nm,0.3s						
BOSA	**Boshof**	**2.13**	**217**	*i*P	**Pg**	**02 35 40.1**	**-0.6**
BOSA				*i*S	**Sg**	**02 36 10.3**	**+2.0**
LBTB	**Lobatse**	**2.15**	**332**	*i*P	**Pg**	**02 35 40.2**	**-0.9**
LBTB				*i*S	**Sg**	**02 36 08.2**	**-1.0**
LBTB	**Lobatse**	**2.15**	**332**	*e*P	**Pb**	**02 35 37.5**	**-1.5**
LBTB				*e*S	**Sb**	**02 36 04.8**	**-1.0**
LBTB				AML	AML	02 36 09.3	
	comp=Z,621nm,0.5s						
LBTB	**Lobatse**	**2.15**	**332**	*i*P	**Pg**	**02 35 40.2**	**-0.9**

LBTB				*i*S		**Sg**	**02 36 08.2**	**-1.0**	
HVD	**Gariep Dam**	**3.82**	**196**	*e*P		**Pn**	**02 35 58.9**	**+0.1**	
HVD				*e*S		**Sn**	**02 36 42.6**	**-1.4**	
HVD				AML		AML	02 37 17.4		
	comp=Z,52nm,0.7s								
POGA	**Pongola**	**4.46**	**97**	*e*P		**Pn**	**02 36 07.9**	**+0.4**	
POGA				*e*S		**Sn**	**02 36 58.6**	**-0.9**	
POGA				AML		AML	02 37 23.7		
	comp=Z,57nm,0.4s								
UPI	**Upington**	**5.06**	**252**	*e*P		**Pn**	**02 36 16.6**	**+0.8**	
UPI				*e*S		**Sn**	**02 37 13.2**	**-1.2**	
UPI				AML		AML	02 37 46.5		
	comp=Z,24nm,0.5s								
KEIM	**Keimoes**	**5.40**	**249**	*e*P		**Pn**	**02 36 20.9**	**+0.4**	
KEIM				*e*S		**Sn**	**02 37 20.9**	**-1.8**	
KEIM				AML		AML	02 37 50.7		
	comp=Z,40nm,0.4s								
MOPA	**Mopani**	**5.42**	**52**	*e*P		**Pn**	**02 36 21.6**	**+0.8**	
MOPA				*e*S		**Sn**	**02 37 21.2**	**-2.1**	
MOPA				AML		AML	02 37 54.5		
	comp=Z,32nm,0.4s								
GRAN	**Grantham**	**6.67**	**215**	*e*P		**Pn**	**02 36 38.4**	**+0.5**	
GRAN				*e*S		**Sn**	**02 37 50.7**	**-3.2**	
GRAN				AML		AML	02 38 14.0		
	comp=Z,12nm,0.3s								
BLWY	**Bulawayo**	**6.97**	**15**	*i*P		**Pn**	**02 36 44.5**	**+2.3**	
BLWY				*i*S		**Sn**	**02 37 58.5**	**-3.1**	
BLWY	**Bulawayo**	**6.97**	**15**	*i*P		**Pn**	**02 36 44.5**	**+2.3**	
BLWY				*i*S		**Sn**	**02 37 58.5**	**-3.1**	
BUFB	**Buffelsbos**	**7.40**	**193**	*e*P		**Pn**	**02 36 47.7**	**-0.2**	
BUFB				*e*S		**Sn**	**02 38 08.0**	**-3.9**	
BUFB				AML		AML	02 39 00.9		
	comp=Z,14nm,0.5s								
KROM	**Kromhout**	**7.42**	**194**	*e*P		**Pn**	**02 36 48.2**	**0.0**	
KROM				*e*S		**Sn**	**02 38 09.5**	**-2.8**	
KROM				AML		AML	02 38 22.4		
	comp=Z,43nm,0.5s								
CVNA	**Calvinia**	**7.59**	**232**	*e*P		**Pn**	**02 36 51.8**	**+1.2**	
CVNA				*e*S		**Sn**	**02 38 12.8**	**-4.0**	
CVNA				AML		AML	02 38 20.5		
	comp=Z,6.5nm,0.3s								
KOMG	**Komaggas**	**8.63**	**248**	*e*P		**Pn**	**02 37 05.7**	**+0.9**	
KOMG				*e*S		**Sn**	**02 38 37.7**	**-4.4**	
KOMG				AML		AML	02 39 37.1		
	comp=Z,14nm,0.5s								
AUSN	**Aus**	**9.35**	**269**	*e*P		**Pn**	**02 37 16.8**	**+2.0**	
AUSN				*e*S		**Sn**	**02 38 56.3**	**-3.9**	
AUSN				AML		AML	02 40 07.3		
	comp=Z,7.0nm,0.5s								
TORD	**Torodi Ar. Bea**	**46.66**	**325**	P		**P**	**02 43 31.9**	**+3.1**	
	comp=Z,0.7nm,0.6s,baz=142,slow=6.7,SNR=12								
ESDC	**Sonseca Array**	**72.17**	**336**	P		**P**	**02 46 28.2**	**+3.5**	
	comp=Z,0.7nm,0.9s,baz=154,slow=5.8,SNR=3.2								
NVAR	**Mina Array Bea**	**148.58**	**300**	PKPbc		**PKPab**	**02 54 53.4**	**+2.4**	
	comp=Z,0.2nm,0.6s,baz=90,slow=3.6,SNR=2.5								

*NEIC **13** 02:45:48.9±1.3,30.7°46N±0.06×132.7°40E±0.08,h31^{km}±4^{km}, mb4.5/12, Error ellipse: s-maj=10.3km s-min=7.8km az=56.0*
*JMA **13** 02:45:49.1±0.1,30.7°48N×132.7°28E,h69^{km}±4^{km},M4.2*
*IDC **13** 02:45:51.4±2.7,30.7°48N×132.7°52E,h46^{km}±26^{km},mb3.9/15, mb1 4.1/17,mb1mx4.0/44,mbtmp4.1/17,ML3.1/2,Error ellipse: s-maj=20.2km s-min=13.0km az=85.0*

ISC 13 02:45:49.0±1.1,30°46N±0.06×132°38E±0.05,h28^{km}±7^{km}, n67,σ0°87/79,mb4.4/23,7C,Southeast of Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**1.22**	**280**	⇑P	**Pn**	**02 46 09.2**	**-1.0**
JTN				*e*S	**Sn**	**02 46 25.0**	**-0.8**
JMTN	**Minamitane**	**1.28**	**268**	⇑P	**Pn**	**02 46 10.4**	**-0.6**
JMTN				*e*S	**Sn**	**02 46 26.9**	**-0.3**
JNAR	**Kushima--Naru**	**1.43**	**319**	⇑P	**Pn**	**02 46 12.7**	**-0.3**
JNAR				*e*S	**Sn**	**02 46 30.2**	**-0.7**
JTSR	**Tashiro 2**	**1.44**	**300**	⇑P	**Pn**	**02 46 12.1**	**-1.1**
JTSR				*e*S	**Sn**	**02 46 29.3**	**-1.9**
JNKG	**Nichinankitago**	**1.48**	**325**	⇑P	**Pn**	**02 46 13.3**	**-0.4**
JNKG				*e*S	**Sn**	**02 46 30.6**	**-1.5**
JYAK	**Yakushimahirau**	**1.63**	**263**	P	**Pn**	**02 46 14.9**	**-0.9**
JYAK				*e*S	**Sn**	**02 46 34.6**	**-1.2**
JTZ	**Takazaki**	**1.81**	**323**	⇑P	**Pn**	**02 46 17.9**	**-0.5**
JTZ				*e*S	**Sn**	**02 46 39.3**	**-1.2**
JKC	**Kuchinoerabu**	**1.88**	**271**	⇑P	**Pn**	**02 46 18.7**	**-0.6**
JKC				*e*S	**Sn**	**02 46 40.4**	**-1.7**
JSU	**Suzuyama**	**1.95**	**303**	Pn	**Pn**	**02 46 19.4**	**-1.0**
JSU				Sn	**Sn**	**02 46 43.3**	**-0.6**
JNN	**Nakanoshima**	**2.25**	**255**	P	**Pn**	**02 46 23.9**	**-0.5**
JNN				*e*S	**Sn**	**02 46 50.4**	**-0.9**
JNU	**Nakatsue**	**2.95**	**335**	Pn	**Pn**	**02 46 34.3**	**+0.3**
JNU				Sn	**Sn**	**02 47 07.8**	**-0.7**
JMN	**Monobe**	**3.50**	**21**	Pn	**Pn**	**02 46 40.6**	**-1.0**
JHS	**Saijyo**	**4.57**	**8**		**Pn**	**02 46 55.7**	**-0.6**
JTU	**Tsushima**	**4.77**	**329**	Pn	**Pn**	**02 46 58.3**	**-0.8**
JWT	**Wachi**	**5.44**	**27**	Pn	**Pn**	**02 47 07.5**	**-0.7**
MAJO	**Matsushiro**	**7.78**	**37**	Pn	**Pn**	**02 47 40.2**	**-0.2**
MAT	**Matsushiro**	**7.78**	**37**	P	**Pn**	**02 47 39.9**	**-0.5**
MJAR	**Matsushiro Arr**	**7.78**	**37**	P	**Pn**	**02 47 41.1**	**+0.7**
	0.2nm,0.3s,baz=250,slow=15,SNR=5.5						
MJAR	**Matsushiro Arr**	**7.78**	**37**		**Pn**	**02 47 38.9**	**-1.5**
KSRS	**Korea Array**	**7.90**	**333**	P	**Pn**	**02 47 42.8**	**+0.8**
	0.4nm,0.3s,baz=153,slow=14,SNR=3.0						
SONM	**Songino Array**	**26.41**	**318**	P	**P**	**02 51 25.3**	**+2.1**
	0.8nm,0.8s,baz=141,slow=9.3,SNR=4.7						
SONM	**Songino Array**	**26.41**	**318**	P	**P**	**02 51 23.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**32.57**	**256**	P	**P**	**02 52 20.0**	**+1.9**
	0.8nm,0.3s,baz=55,slow=7.8,SNR=1.5						
MKAR	**Makanchi Array**	**41.66**	**308**	P	**P**	**02 53 37.0**	**+2.0**
	0.5nm,0.5s,baz=86,slow=12,SNR=2.9						
FITZ	**Fitzroy Crossi**	**48.71**	**189**	P	**P**	**02 54 31.4**	**+0.5**
	2.7nm,0.6s,baz=14,slow=6.8,SNR=10						
FITZ	**Fitzroy Crossi**	**48.71**	**189**	P	**P**	**02 54 30.7**	**-0.3**
FITZ				IAmb	IAmb	02 54 32.2	
	comp=Z,2.5nm,0.7s						
WB0	**Warramunga Arr**	**49.97**	**178**	P	**P**	**02 54 40.2**	**-0.5**
WB0				IAmb	IAmb	02 54 41.2	
	comp=Z,5.4nm,0.8s						
KKAR	**Karatay Array**	**50.09**	**303**	P	**P**	**02 54 40.8**	**-0.6**
WRA	**Warramunga Arr**	**50.14**	**178**	P	**P**	**02 54 41.8**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=354,slow=8.4,SNR=26						
WRA	**Warramunga Arr**	**50.14**	**178**	P	**P**	**02 54 41.6**	**-0.3**
WB2	**Warramunga Arr**	**50.14**	**178**	P	**P**	**02 54 41.5**	**-0.5**
WB2				IAmb	IAmb	02 54 42.7	
	comp=Z,5.7nm,0.8s						
WR0	**Warramunga Arr**	**50.17**	**177**	P	**P**	**02 54 42.2**	**0.0**
AS31	**Alice Springs**	**53.83**	**178**	P	**P**	**02 55 09.6**	**+0.2**
ASAR	**Alice Springs**	**53.83**	**178**	P	**P**	**02 55 09.7**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=11,slow=12,SNR=34						
ASAR	**Alice Springs**	**53.83**	**178**	P	**P**	**02 55 08.7**	**-0.8**
IMAR	**Indian Mountai**	**56.06**	**28**	P	**P**	**02 55 24.1**	**-1.0**
ABKAR	**Akbulak array**	**56.51**	**311**	P	**P**	**02 55 28.2**	**-0.4**
ABKAR				IAmb	IAmb	02 55 35.2	
	comp=Z,3.2nm,0.9s						
ABKAR	**Akbulak array**	**56.51**	**311**	P	**P**	**02 55 27.9**	**-0.6**
PPLA	**Purkeypile**	**56.78**	**32**	P	**P**	**02 55 30.4**	**-0.1**
PPLA				IAmb	IAmb	02 55 42.4	
	comp=Z,8.1nm,1.1s						
MDM	**Murphy Dome**	**58.40**	**29**	P	**P**	**02 55 41.7**	**+0.1**
ILAR	**Eielson Array**	**58.98**	**30**	P	**P**	**02 55 44.9**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=285,slow=7.3,SNR=11						
STKA	**Stephens Creek**	**62.61**	**171**	P	**P**	**02 56 11.2**	**+0.6**
	comp=Z,6.6nm,0.6s,baz=343,slow=7.8,SNR=19						
STKA	**Stephens Creek**	**62.61**	**171**	P	**P**	**02 56 10.3**	**-0.3**
INK	**Inuvik**	**63.56**	**24**	P	**P**	**02 56 16.8**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=306,slow=6.5,SNR=12						
INK	**Inuvik**	**63.56**	**24**	P	**P**	**02 56 16.8**	**+0.3**
INK				IAmb	IAmb	02 56 17.0	
	comp=Z,1.9nm,0.7s						
FINES	**FINESS Array B**	**70.98**	**331**	P	**P**	**02 57 03.1**	**-0.6**
	comp=Z,2.4nm,0.6s,baz=64,slow=8.7,SNR=12						
FINES	**FINESS Array B**	**70.98**	**331**	P	**P**	**02 57 03.3**	**-0.4**
AKASG	**Malin Array Be**	**74.67**	**320**	P	**P**	**02 57 25.8**	**0.0**
	comp=Z,0.8nm,0.5s,baz=51,slow=6.0,SNR=5.2						
BRTR	**Keskin Array B**	**77.30**	**309**	P	**P**	**02 57 41.8**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=90,slow=5.8,SNR=5.0						
BRTR	**Keskin Array B**	**77.30**	**309**	P	**P**	**02 57 40.7**	**-0.5**
CHVC	**Chvalec**	**81.69**	**325**	*e*P	P	02 58 10.9	+6.2
DPC	**Dobruska-Polom**	**81.70**	**324**	*e*P	**P**	**02 58 05.8**	**+1.0**
DPC				*ex*	x	02 58 16.7	
CLL	**Collm**	**82.72**	**327**	*i*P	**P**	**02 58 10.4**	**+0.4**
	comp=Z,7.0nm,0.7s						
CLL				*e*PcP	**PcP**	**02 58 16.0**	**+1.1**
CLL				*i*pP	**sP**	**02 58 20.7**	**-0.3**

CONA	**Conrad Observa**	**83.45**	**323**	*e*P		**P**	**02 58 15.8**	**+1.7**	
	comp=Z,3.0nm,0.6s								
NKC	**Novy Kostel**	**83.69**	**326**	*e*P		**P**	**02 58 15.4**	**+0.3**	
KHC	**Kasperske Hory**	**83.85**	**325**	*e*P		**P**	**02 58 15.9**	**-0.1**	
KHC				*ex*		x	02 58 26.9		
GERES	**GERESS Array B**	**83.98**	**324**	P		**P**	**02 58 17.1**	**+0.4**	
	comp=Z,1.6nm,0.7s,baz=46,slow=5.8,SNR=13								
GERES	**GERESS Array B**	**83.98**	**324**	P		**P**	**02 58 16.7**	**0.0**	
ARSA	**Arzberg**	**84.06**	**322**	*e*P		**P**	**02 58 18.3**	**+1.3**	
	comp=Z,6.3nm,0.8s								
SOKA	**Soboth**	**84.68**	**322**	*e*P		**P**	**02 58 21.3**	**+1.0**	
	comp=Z,5.3nm,0.7s								
NVAR	**Mina Array Bea**	**84.96**	**48**	P		**P**	**02 58 22.4**	**+0.3**	
	comp=Z,2.3nm,0.7s,baz=299,slow=5.2,SNR=21								
NVAR	**Mina Array Bea**	**84.96**	**48**	P		**P**	**02 58 21.4**	**-0.7**	
PDAR	**Pinedale Array**	**87.59**	**41**	P		**P**	**02 58 34.6**	**-0.3**	
	comp=Z,0.2nm,0.4s,baz=294,slow=1.5,SNR=3.9								
PDAR	**Pinedale Array**	**87.59**	**41**	P		**P**	**02 58 33.8**	**-1.1**	
TORD	**Torodi Ar. Bea**	**115.74**	**305**	PKP		**PKPdf**	**03 04 28.6**	**-0.8**	
	comp=Z,0.2nm,0.6s,baz=24,slow=2.3,SNR=5.0								
TORD	**Torodi Ar. Bea**	**115.74**	**305**			**PKPdf**	**03 04 28.1**	**-1.3**	
QSPA	**South Pole Qui**	**120.22**	**180**	PKP		**PKPdf**	**03 04 35.8**	**-0.7**	
	comp=Z,1.0nm,0.6s,baz=288,slow=0.7,SNR=1.5								

*IDC **13** 03:07:31.3±1.0,26.5°51N×111.7°2W,h0^{km},mb4.1/5, mb1 4.2/12,mb1mx4.0/52,mbtmp4.0/12,ML3.7/6,MS3.7/16, Ms1 3.7/16,ms1mx3.5/42,Error ellipse: s-maj=21.7km s-min=11.4km az=64.0*
*ECX **13** 03:07:31.9±0.8,26.6°55N×111.7°2W,h9^{km}±7^{km},MD4.3, ML4.5*
*NEIC **13** 03:07:32.5±0.7,26.7°57N±0.06×111.8°1W±0.09,h9^{km}±5^{km}, mb4.2/94,Error ellipse: s-maj=13.4km s-min=6.4km az=60.0*
*MEX **13** 03:07:32.1±0.6,26.5°52N×111.8°8W,h10^{km},MD4.6*

ISC 13 03:07:33.3±0.7,26°62N±0.06×111°82W±0.06,h10^{km}, n246,σ1°60/205,mb4.3/18,MS3.7/15,3C-2D,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	**Santa Rosalia**	**0.79**	**332**	*i*P	**Pg**	**03 07 46.0**	**-2.5**
SRIG				*i*S	**Sg**	**03 07 57.5**	**-1.5**
SRIG	**Santa Rosalia**	**0.79**	**332**		**Pg**	**03 07 46.1**	**-2.5**
SRIG					**Sg**	**03 07 59.9**	**+1.0**
SRIG	**Santa Rosalia**	**0.79**	**332**	⇓*e*P	**Pg**	**03 07 46.0**	**-2.5**
SRIG				*e*S	**Sg**	**03 07 57.4**	**-1.5**
GUYB	**Guaymas**	**1.52**	**33**	*e*P	**Pn**	**03 07 57.2**	**-3.4**
GUYB				*e*S	**Sn**	**03 08 16.6**	**-3.9**
HSIG		**2.51**	**18**	*i*P	**Pn**	**03 08 11.5**	**-2.6**
HSIG		**2.51**	**18**		**Pn**	**03 08 11.6**	**-2.6**
HSIG		**2.51**	**18**	*e*P	**Pn**	**03 08 11.4**	**-2.8**
TSIG	**Topolobambo**	**2.70**	**112**	*i*P	**Pn**	**03 08 12.2**	**-4.5**
LPIG	**La Paz**	**2.86**	**151**	Pn	**Pn**	**03 08 16.2**	**-2.8**
	50nm,0.3s,baz=152,slow=1.2,SNR=14						
LPIG				Lg	Lg	03 08 55.7	
	68nm,0.3s,baz=221,slow=22,SNR=15						
LPIG	**La Paz**	**2.86**	**151**	*i*P	**Pn**	**03 08 15.7**	**-3.2**
SLBS	**Sierra La Lagu**	**3.38**	**149**	Pn	**Pn**	**03 08 24.1**	**-2.1**
CGIG		**5.03**	**41**	*i*P	**Pn**	**03 08 48.6**	**-0.4**
PIX	**Pinacate**	**5.13**	**344**	Pn	**Pn**	**03 08 49.0

ISA	**Isabella, Lake**	**10.66**	**329**	P		**Pn**	**03 10 09.8**	**+3.7**
	baz=146							
ISA	**Isabella, Lake**	**10.66**	**329**	Pn		**Pn**	**03 10 06.5**	**+0.3**
MSTX	**Muleshoe**	**10.71**	**45**	P		**Pn**	**03 10 09.4**	**+2.5**
	baz=229,SNR=8.6							
PKM	**Mcpherson Peak**	**10.73**	**322**	P		**Pn**	**03 10 10.7**	**+3.5**
	baz=138							
MVCO	**Mesa Verde**	**10.93**	**14**	P		**Pn**	**03 10 12.1**	**+2.2**
	baz=196,SNR=7.6							
MVCO	**Mesa Verde**	**10.93**	**14**	Pn		**Pn**	**03 10 09.7**	**-0.3**
TPNV	**Topopah Spring**	**10.96**	**341**	P		**Pn**	**03 10 14.2**	**+3.8**
	baz=159							
VES	**Vestal, Richgr**	**11.09**	**328**	P		**Pn**	**03 10 14.3**	**+2.3**
	baz=144,SNR=6.4							
SMMC	**Simmler**	**11.14**	**323**	P		**Pn**	**03 10 15.3**	**+2.5**
	baz=139,SNR=6.1							
CWC	**Cottonwood Cre**	**11.15**	**333**	P		**Pn**	**03 10 16.6**	**+3.7**
	baz=150							
833A	**Chaparral WMA,**	**11.16**	**78**	P		**Pn**	**03 10 14.7**	**+1.7**
	baz=264							
JCT	**Junction City**	**11.24**	**67**	P		**Pn**	**03 10 15.6**	**+1.5**
	baz=253,SNR=5.7							
JCT	**Junction City**	**11.24**	**67**	Pn		**Pn**	**03 10 13.6**	**-0.5**
GRAC	**Grapevine Rang**	**11.37**	**337**	P		**Pn**	**03 10 17.7**	**+1.9**
	baz=154							
PV13	**Radium Mtn., P**	**11.78**	**12**			**Pn**	**03 10 21.4**	**-0.2**
PV02	**Paradox Valley**	**11.84**	**12**			**Pn**	**03 10 22.1**	**-0.3**
MSU	**Marysvale**	**11.86**	**359**	Pn		**Pn**	**03 10 22.6**	**-0.1**
S22A	**4UR Ranch, Cre**	**11.87**	**20**	P		**Pn**	**03 10 24.9**	**+2.1**
	baz=202							
AMTX	**Amarillo**	**11.99**	**44**	P		**Pn**	**03 10 25.2**	**+0.9**
	baz=229							
AMTX	**Amarillo**	**11.99**	**44**	Pn		**Pn**	**03 10 24.1**	**-0.3**
R11A	**Troy Canyon, C**	**12.12**	**346**	P		**Pn**	**03 10 28.5**	**+2.3**
	baz=164,SNR=7.6							
ABTX	**Abilene, Hawle**	**12.16**	**58**	P		**Pn**	**03 10 28.0**	**+1.4**
	baz=243,SNR=18							
T25A	**Trinidad**	**12.22**	**29**	P		**Pn**	**03 10 30.3**	**+2.7**
	baz=213,SNR=11							
SDCO	**Great Sand Dun**	**12.31**	**24**	P		**Pn**	**03 10 31.0**	**+2.1**
	baz=207							
NVAR	**Mina Array Bea**	**12.98**	**337**	Pn		**Pn**	**03 10 42.7**	**+4.7**
	baz=156,slow=14,SNR=5.3							
NVAR	**Mina Array Bea**	**12.98**	**337**	Pn		**Pn**	**03 10 38.1**	**+0.1**
Q24A	**Divide**	**13.52**	**23**	P		**Pn**	**03 10 46.6**	**+1.2**
	baz=206							
DUG	**Dugway, Tooele**	**13.56**	**357**	P		**Pn**	**03 10 49.9**	**+4.1**
	baz=176,SNR=12							
O20A	**White River Ci**	**13.80**	**12**	P		**Pn**	**03 10 51.8**	**+2.6**
	baz=193,SNR=8.3							
WMOK	**Wichita Mounta**	**13.82**	**51**	P		**Pn**	**03 10 49.8**	**+0.4**
	baz=237,SNR=8.4							
ISCO	**Idaho Springs**	**14.12**	**20**	P		**Pn**	**03 10 57.9**	**+4.1**
	baz=203							
ELK	**Elko**	**14.37**	**349**	Pn		**Pn**	**03 10 59.0**	**+2.0**
	comp=E,0.1nm,0.3s,baz=196,slow=11,SNR=10							
ELK				LR		LR	03 16 25.8	
	comp=E,255nm,21.9s,baz=179,slow=37							
KSCO	**Kaye Shedlock'**	**14.56**	**30**	P		**Pn**	**03 11 02.1**	**+2.6**
	baz=214							
BEKR	**Beckworth**	**15.01**	**334**	Pn		**Pn**	**03 11 05.8**	**+0.2**
BEKR				IAmb		IAmb	03 11 15.9	
	comp=Z,11nm,1.1s							
N23A	**Red Feather La**	**15.04**	**17**	P		**P**	**03 11 09.9**	**-1.8**
	baz=200							
ORV	**Oroville**	**15.22**	**330**	Pn		**Pn**	**03 11 08.5**	**+0.2**
W35A	**Tecumseh**	**15.38**	**53**			**Pn**	**03 11 10.1**	**-0.3**
KAN14	**Manchester OK**	**15.63**	**45**	Pn		**Pn**	**03 11 13.4**	**-0.3**
OK031	**S. Brethren Rd**	**15.81**	**50**	Pn		**Pn**	**03 11 15.7**	**-0.3**
OK031				IAmb		IAmb	03 11 25.0	
	comp=Z,22nm,0.9s							
CBKS	**Cedar Bluff**	**15.83**	**37**	P		**P**	**03 11 20.6**	**+0.4**
	baz=223							
CBKS	**Cedar Bluff**	**15.83**	**37**	Pn		**Pn**	**03 11 16.1**	**-0.2**
CBKS				IAmb		IAmb	03 11 23.4	
	comp=Z,24nm,1.1s							
OK030	**Cody Creek RV**	**15.84**	**50**	Pn		**Pn**	**03 11 15.7**	**-0.6**
O03E	**Paynes Creek**	**15.96**	**331**	P		**Pn**	**03 11 20.2**	**+2.1**
	baz=146							
BW06	**Boulder Array**	**16.21**	**6**	P		**P**	**03 11 24.8**	**+0.2**
	baz=187							
BW06	**Boulder Array**	**16.21**	**6**	Pn		**Pn**	**03 11 20.7**	**-0.7**
PD31	**Pinedale Array**	**16.21**	**6**	Pn		**Pn**	**03 11 21.2**	**-0.2**
PDAR	**Pinedale Array**	**16.21**	**6**	Pn		**P**	**03 11 25.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=181,slow=7.4,SNR=11							
PDAR				LR		LR	03 17 50.7	
	comp=Z,384nm,20.0s,baz=198,slow=38							
PDAR	**Pinedale Array**	**16.21**	**6**	Pn		**Pn**	**03 11 21.3**	**-0.2**
X37A	**Clayton**	**16.22**	**57**	Pn		**Pn**	**03 11 20.3**	**-1.0**
X37A				IAmb		IAmb	03 11 32.5	
	comp=Z,15nm,0.9s							
TUL1	**Leonard**	**16.52**	**52**	P		**P**	**03 11 26.8**	**-0.9**
	baz=240							
TUL1	**Leonard**	**16.52**	**52**	Pn		**Pn**	**03 11 24.8**	**-0.3**
T35A	**Sooner Cattle**	**16.55**	**48**	IAmb		IAmb	03 11 34.2	
	comp=Z,21nm,1.1s							
K22A	**Casper**	**16.57**	**14**	P		**Pn**	**03 11 27.5**	**+1.6**
	baz=197							
K22A	**Casper**	**16.57**	**14**	IAmb		IAmb	03 11 42.6	
	comp=Z,14nm,1.1s							
TPAW	**Teton Pass**	**16.84**	**2**	IAmb		IAmb	03 11 49.0	
	comp=Z,12nm,1.1s							
HLID	**Hailey**	**17.03**	**354**	P		**P**	**03 11 34.3**	**+0.7**
	baz=172							
HLID	**Hailey**	**17.03**	**354**	Pn		**Pn**	**03 11 31.8**	**0.0**
M04C	**Macdoel**	**17.23**	**334**	P		**P**	**03 11 36.5**	**+0.8**
	baz=148							
IMW	**Indian Meadow**	**17.25**	**2**	IAmb		IAmb	03 11 50.3	
	comp=Z,17nm,1.1s							
M02C	**Callahan**	**17.32**	**331**	P		**P**	**03 11 38.2**	**+1.5**
	baz=145							
FLWY	**Flagg Ranch**	**17.45**	**3**	IAmb		IAmb	03 11 43.5	
	comp=Z,15nm,1.1s							
MIAR	**Mount Ida**	**17.56**	**59**	P		**P**	**03 11 39.5**	**+0.2**
	baz=248							
W39A	**Magazine**	**17.66**	**57**	P		**P**	**03 11 40.9**	**+0.6**
	baz=246							
K05A	**Summer Lake**	**17.70**	**338**	IAmb		IAmb	03 11 47.7	
	comp=Z,24nm,1.0s							
Z41A	**Richland Creek**	**17.75**	**64**	P		**P**	**03 11 41.6**	**+0.3**
	baz=253							
Z41A	**Richland Creek**	**17.75**	**64**			**Pn**	**03 11 40.4**	**-0.1**
Z41A				IAmb		IAmb	03 11 46.4	
	comp=Z,42nm,1.1s							
L04D	**Klamath Falls**	**17.78**	**334**	P		**P**	**03 11 43.4**	**+1.6**
	baz=148							
KSU1	**Kansas State U**	**17.80**	**42**	P		**P**	**03 11 42.4**	**+0.4**
	baz=230							
K04D	**Chiloquin, OR**	**17.91**	**336**	P		**P**	**03 11 45.1**	**+1.8**
	baz=150							
HHAR	**Hobbs**	**18.01**	**53**	IAmb		IAmb	03 11 48.9	
	comp=Z,8.7nm,0.9s							
X40A	**Basin Creek Fa**	**18.11**	**60**	P		**P**	**03 11 46.5**	**+1.1**
	baz=249							
J05D	**Fort Rock, OR**	**18.31**	**338**	P		**P**	**03 11 49.0**	**+1.4**
	baz=152,SNR=5.8							
CMIG	**Matias Romero**	**18.34**	**118**	P		**P**	**03 11 49.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=309,slow=11,SNR=6.0							
BGNE	**Belgrade**	**18.56**	**34**	P		**Pn**	**03 11 51.9**	**+1.4**
	baz=221							
RSSD	**Black Hills**	**18.56**	**18**	P		**Pn**	**03 11 51.8**	**+1.1**
	baz=202							
RLMT	**Red Lodge**	**18.58**	**6**	P		**Pn**	**03 11 53.1**	**+2.3**
	baz=187,SNR=5.9							
W41B	**Gary Mavity, V**	**18.81**	**58**	P		**Pn**	**03 11 54.3**	**+0.7**
	baz=248							
WHAR	**Wooly Hollow**	**18.82**	**58**	IAmb		IAmb	03 12 01.2	
	comp=Z,19nm,1.2s							
U40A	**Yellville**	**18.83**	**54**	P		**P**	**03 11 53.4**	**0.0**
	baz=244,SNR=8.7							
U40A	**Yellville**	**18.83**	**54**	IAmb		IAmb	03 11 57.4	
	comp=Z,21nm,1.1s							
BOZ	**Bozeman (W)**	**18.94**	**0**	P		**Pn**	**03 11 55.9**	**+0.7**
	baz=180							
S39A	**Bolivar**	**19.12**	**50**	IAmb		IAmb	03 12 00.5	
	comp=Z,14nm,1.1s							
FCAR	**Ozark Folk Cen**	**19.18**	**56**	IAmb		IAmb	03 12 07.4	
	comp=Z,8.0nm,0.9s							
J01E	**Myrtle Point**	**19.23**	**332**	P		**Pn**	**03 11 59.1**	**+0.6**
	baz=145							
I05D	**Terrebonne, OR**	**19.28**	**339**	P		**P**	**03 11 59.5**	**+1.3**
	baz=154							
G08A	**Pilot Rock**	**19.49**	**345**	P		**P**	**03 12 00.7**	**+0.2**
MGMO	**Mountain Grove**	**19.61**	**53**	IAmb		IAmb	03 12 06.4	
	comp=Z,24nm,1.1s							
F10A	**Beach Ranch, E**	**19.79**	**349**	IAmb		IAmb	03 12 07.8	
	comp=Z,12nm,1.0s							
LCAR	**Lake Charles**	**19.97**	**57**	IAmb		IAmb	03 12 10.1	
	comp=Z,18nm,1.1s							
R40A	**Maddies Statio**	**20.14**	**50**	IAmb		IAmb	03 12 12.3	
	comp=Z,12nm,1.0s							
MSO	**Missoula**	**20.24**	**356**	P		**P**	**03 12 10.2**	**+1.5**
	baz=174							
MSO	**Missoula**	**20.24**	**356**	IAmb		IAmb	03 12 24.7	
	comp=Z,15nm,1.1s							
T42A	**Van Buren**	**20.40**	**54**	IAmb		IAmb	03 12 13.9	
	comp=Z,8.0nm,1.1s							
E09A	**Wood Farm, Sta**	**20.48**	**347**	IAmb		IAmb	03 12 14.0	
	comp=Z,16nm,1.0s							
LAO	**LASA Array**	**20.51**	**11**	P		**P**	**03 12 13.1**	**+1.5**
	baz=194							
LAO	**LASA Array**	**20.51**	**11**	P		**P**	**03 12 11.7**	**0.0**
LAO				IAmb		IAmb	03 12 31.8	
	comp=Z,6.3nm,0.8s							
HAWA	**Hanford**	**20.66**	**345**	P		**P**	**03 12 13.5**	**+0.3**
HAWA				IAmb		IAmb	03 12 16.4	
	comp=Z,12nm,1.1s							
CCM	**Cathedral Cave**	**20.74**	**52**	P		**P**	**03 12 15.0**	**+0.9**
	baz=242							
CCM	**Cathedral Cave**	**20.74**	**52**	P		**P**	**03 12 13.9**	**-0.2**
CCM				IAmb		IAmb	03 12 17.7	
	comp=Z,8.7nm,1.1s							
PBMO	**Poplar Bluff**	**20.78**	**56**	IAmb		IAmb	03 12 20.1	
	comp=Z,12nm,0.9s							
OXF	**Oxford**	**20.81**	**62**	P		**P**	**03 12 15.2**	**+0.3**
	baz=254							
E07A	**Sunnyside**	**20.90**	**344**	P		**P**	**03 12 16.7**	**+1.0**
E07A				IAmb		IAmb	03 12 18.6	
	comp=Z,8.8nm,0.9s							
P40A	**Paris**	**20.92**	**47**	IAmb		IAmb	03 12 19.9	
	comp=Z,15nm,1.1s							
ECSD	**EROS Data Cent**	**21.06**	**32**	P		**P**	**03 12 18.4**	**+0.9**
	baz=221							
ECSD	**EROS Data Cent**	**21.06**	**32**	P		**P**	**03 12 17.4**	**-0.1**
ECSD				IAmb		IAmb	03 12 24.4	
	comp=Z,9.5nm,1.0s							
D08A	**Wollman Farm,**	**21.16**	**346**	P		**P**	**03 12 18.8**	**+0.3**
D08A				IAmb		IAmb	03 12 20.8	
	comp=Z,14nm,1.1s							
EGMT	**Eagleton**	**21.43**	**4**	P		**P**	**03 12 22.8**	**+1.3**
	baz=185							
EGMT	**Eagleton**	**21.43**	**4**	P		**P**	**03 12 21.6**	**+0.1**
EGMT				IAmb		IAmb	03 12 28.3	
	comp=Z,6.9nm,0.8s							
LON	**Longmire**	**21.59**	**341**	IAmb		IAmb	03 12 27.0	
	comp=Z,14nm,1.1s							
E04D	**Cinebar**	**21.65**	**340**	P		**P**	**03 12 25.3**	**+1.5**
	baz=153							
NEW	**Newport**	**22.00**	**351**	P		**P**	**03 12 27.3**	**-0.3**
	comp=Z,4.9nm,0.9s,baz=179,slow=13,SNR=5.3							
NEW	**Newport**	**22.00**	**351**	P		**P**	**03 12 28.4**	**+0.8**
	baz=167							
NEW	**Newport**	**22.00**	**351**	IAmb		IAmb	03 12 29.8	
	comp=Z,8.6nm,1.1s							
LRAL	**Lakeview Retre**	**22.43**	**68**	P		**P**	**03 12 32.6**	**+0.3**
	baz=260							
LRAL	**Lakeview Retre**	**22.43**	**68**	IAmb		IAmb	03 12 39.8	
	comp=Z,8.3nm,1.1s							
WVT	**Waverly**	**22.52**	**59**	P		**P**	**03 12 33.7**	**+0.4**
	baz=252							
WVT	**Waverly**	**22.52**	**59**	P		**P**	**03 12 33.0**	**-0.3**
WVT				IAmb		IAmb	03 12 37.7	
	comp=Z,14nm,0.9s							
X48A	**Hartselle**	**22.68**	**64**	IAmb		IAmb	03 12 53.4	
	comp=Z,4.9nm,0.9s							
L40A	**Anamosa**	**22.86**	**42**	P		**P**	**03 12 36.6**	**-0.1**
T47A	**Sharon Grove**	**23.35**	**58**	IAmb		IAmb	03 12 45.5	
	comp=Z,12nm,1.1s							
CLTN	**Cedars of Leba**	**23.67**	**60**	IAmb		IAmb	03 12 48.3	
	comp=Z,11nm,0.9s							
FPAL	**Fort Paine**	**23.86**	**64**	IAmb		IAmb	03 12 52.3	
	comp=Z,11nm,1.1s							
152A	**Waverly Hall**	**24.27**	**69**	IAmb		IAmb	03 12 58.3	
	comp=Z,8.6nm,1.1s							
SFIN	**Lafayette**	**24.66**	**50**	P		**P**	**03 12 54.5**	**+0.3**
	baz=244							
CPCT	**Cooper Cave**	**24.93**	**63**	IAmb		IAmb	03 13 01.8	
	comp=Z,7.7nm,1.1s							
AGMN	**Agassiz Nation**	**24.98**	**26**	P		**P**	**03 12 57.7**	**+0.7**
	baz=216							
AGMN	**Agassiz Nation**	**24.98**	**26**	IAmb		IAmb	03 12 60.0	
	comp=Z,8.9nm,0.9s							
TIGA	**Tin**	**25.11**	**72**	P		**P**	**03 12 59.3**	**+0.9**
	baz=266							
TKL	**Tuckaleechee C**	**25.57**	**63**	P		**P**	**03 13 02.0**	**-0.5**
	comp=Z,6.6nm,0.8s,baz=217,slow=10,SNR=3.8							
TKL				LR		LR	03 23 40.9	
	comp=Z,154nm,20.5s,baz=254,slow=38							
TKL	**Tuckaleechee C**	**25.57**	**63**	P		**P**	**03 13 02.2**	**-0.3**
X54A	**Belton**	**26.48**	**65**	P		**P**	**03 13 12.8**	**+2.0**
	baz=260							
ULM	**Lac du Bonnet**	**26.58**	**23**	LR		LR	03 22 22.7	
	comp=Z,97nm,21.6s,baz=280,slow=34							
X55A	**Gracelyn & Ava**	**27.07**	**66**	P		**P**	**03 13 18.0**	**+1.9**
	baz=261							
U54A	**Nelsons Funny**	**27.30**	**61**	P		**P**	**03 13 19.1**	**+0.9**
	baz=257							
KMSC	**Kings Mountain**	**27.43**	**65**	P		**P**	**03 13 19.7**	**+0.5**
	baz=260							
Q52A	**Bidwell**	**27.60**	**56**	P		**P**	**03 13 20.3**	**-0.4**
	baz=252							
V55A	**Taylorsville**	**27.64**	**63**	P		**P**	**03 13 20.8**	**-0.4**
	baz=259							
BBB	**Bella Bella**	**28.33**	**339**	LR		LR	03 25 10.3	
	comp=Z,229nm,18.2s,baz=184,slow=37							
R55A	**Marlinton**	**29.03**	**58**	P		**P**	**03 13 32.7**	**-0.9**
	baz=256							
Q55A	**Buckhannon**	**29.24**	**57**	P		**P**	**03 13 35.5**	**+0.1**
	baz=254							
U57A	**Blanch**	**29.25**	**62**	P		**P**	**03 13 35.7**	**+0.2**
	baz=260							
O54A	**Avella**	**29.36**	**55**	P		**P**	**03 13 36.7**	**+0.3**
	baz=252							
T57A	**Hurt**	**29.42**	**61**	P		**P**	**03 13 36.7**	**-0.3**
	baz=259							
M53A	**WI Miller and**	**29.55**	**52**	P		**P**	**03 13 38.2**	**0.0**
	baz=250							
T58A	**Grand View Acr**	**29.97**	**62**	P		**P**	**03 13 41.8**	**-0.1**
	baz=259							
O55A	**Ligonier**	**30.15**	**55**	P		**P**	**03 13 44.1**	**+0.6**
	baz=253							
T59A	**Double "B" Far**	**30.75**	**62**	P		**P**	**03 13 49.9**	**+1.2**
	baz=260							
P58A	**Pank, Wackersv**	**31.45**	**57**	P		**P**	**03 13 55.9**	**+1.0**
	baz=256							
U61A	**Possum Corner**	**31.53**	**63**	P		**P**	**03 13 56.5**	**+0.8**
	baz=262							
G54A	**Lake Saint Pet**	**32.77**	**46**	P		**P**	**03 14 07.3**	**+0.8**
	baz=246							
P61A	**Hammonton**	**33.38**	**58**	P		**P**	**03 14 13.4**	**+1.5**
	baz=258							
K58A	**Earlville**	**33.52**	**52**	P		**P**	**03 14 14.4**	**+1.4**
	baz=253							
D56A	**ZEC Mazanza, M**	**35.54**	**45**	P		**P**	**03 14 31.7**	**+1.2**
	baz=248							
G60A	**Masonville**	**36.49**	**49**	P		**P**	**03 14 39.5**	**+0.9**
	baz=253							
H61A	**Lyndonville**	**36.61**	**50**	P		**P**	**03 14 40.7**	**+1.1**
	baz=254							
G61A	**St-Isidore-de-**	**37.09**	**49**	P		**P**	**03 14 44.8**	**+1.1**
	baz=254							
H62A	**Milan**	**37.15**	**50**	P		**P**	**03 14 45.3**	**+1.1**
	baz=255							
POHA	**Pohakuloa**	**40.61**	**270**	P		**P**	**03 15 11.1**	**-2.8**
ROSC	**El Rosal**	**41.83**	**115**	LR		LR	03 34 59.3	
	comp=Z,58nm,19.1s,baz=99,slow=40							
SDV	**Santo Domingo**	**42.77**	**107**	P		**P**	**03 15 29.5**	**-1.9**
	comp=Z,2.0nm,0.2s,baz=321,slow=9.6,SNR=2.5							
SDV	**Santo Domingo**	**42.77**	**107**	P		**P**	**03 15 31.0**	**-0.5**
ILAR	**Eielson Array**	**44.22**	**339**	P		**P**	**03 15 42.5**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=155,slow=7.3,SNR=7.6							
ILAR				LR		LR	03 35 15.7	
	comp=Z,123nm,18.3s,baz=144,slow=38							
ILAR	**Eielson Array**	**44.22**	**339**	P		**P**	**03 15 43.0**	**+0.6**
TAOE	**Nuku Hiva Isla**	**44.72**	**222**	*e*LQ		LQ	03 25 49.7	
	comp=Z,224nm,26.4s							
TAOE				*e*LR		LR	03 27 39.2	
	comp=Z,90nm,25.2s							
MLY	**Manley**	**45.64**	**338**	P		**P**	**03 15 55.7**	**+2.0**
	baz=128							
IMAR	**Indian Mountai**	**47.22**	**338**	P		**P**	**03 16 07.4**	**+1.4**
TOLK	**Toolik Lake Re**	**47.62**	**342**	P		**P**	**03 16 10.8**	**+1.6**
	baz=132							
PPT	**Papeete**	**57.22**	**224**	LR		LR	03 37 12.9	
	comp=Z,34nm,19.0s,baz=357,slow=31							
PPT2	**Papeete2**	**57.23**	**224**	*e*LR		LR	03 33 32.2	
	comp=Z,70nm,23.5s							
LPAZ	**La Paz**	**60.17**	**130**	LR		LR	03 40 39.2	
	comp=Z,38nm,20.8s,baz=334,slow=33							
AFI	**Afiamalu**	**70.81**	**243**	LR		LR	03 41 09.4	
	comp=Z,69nm,19.2s,baz=264,slow=28							
PLCA	**Paso Flores**	**77.20**	**149**	P		**P**	**03 19 27.9**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=356,slow=9.2,SNR=4.6							
PLCA				LR		LR	03 46 46.8	
	comp=Z,42nm,18.2s,baz=327,slow=31							
PLCA	**Paso Flores**	**77.20**	**149**	P		**P**	**03 19 27.7**	**+0.3**
PLCA				IAmb		IAmb	03 19 33.8	
	comp=Z,3.7nm,1.1s							
ARCES	**ARCESS Array B**	**79.30**	**14**	LR		LR	03 56 10.2	
	comp=Z,36nm,18.5s,baz=285,slow=37							
FINES	**FINESS Array B**	**85.89**	**19**	LR		LR	03 57 02.8	
	comp=Z,77nm,19.3s,baz=345,slow=35							
OBN	**Obninsk**	**94.20**	**18**	LR		LR	04 02 37.0	
	comp=Z,16nm,18.6s,baz=346,slow=35							
KOWA	**Kowa**	**98.87**	**69**	LR		LR	04 02 24.3	
	comp=Z,64nm,19.2s,baz=262,slow=33							
WRA	**Warramunga Arr**	**119.44**	**261**	PKP		**PKPdf**	**03 26 22.9**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=69,slow=2.5,SNR=2.2							

MAN ***13*** *03:14:52.3, 9.°16N× 126.°77E, h33km, mb4.8, ML3.7, MS3.7*
IDC ***13*** *03:14:53.6±2.9, 9.°10N× 126.°39E, h45km±28km, mb4.1/29, mb1 4.3/31, mb1mx4.1/50, mbtmp4.4/31, ML5.2/2, MS3.4/19, Ms1 3.5/19, ms1mx3.3/54, Error ellipse: s-maj=18.9km s-min=9.4km az=84.0*
DJA ***13*** *03:14:56.3±1.1, 9.°N±8.°× 12.°8E±.°, h85km±9km, M5.2/13, mB5.6/7, mb4.8/13, MLv5.3/3, Mw(mB)5.2/7, Mwp5.1/1*
NEIC ***13*** *03:14:57.9±1.1, 9.°05N±0.°07× 126.°4E±0.°1, h90km±4km, mb4.6/47, Error ellipse: s-maj=15.3km s-min=10.8km az=88.0*

ISC 13 03:14:55.4±0.8, 9.°14N±0.°03× 126.°58E±0.°06, h62km±8km, n146,σ1θ63/135, mb4.5/52, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLSP	**General Luna,**	**0.78**	**325**	*e*P	**Pn**	**03 15 08.9**	**-1.7**
GLSP				*e*S	**Sn**	**03 15 20.2**	**-1.7**
BIP	**Bislig**	**0.97**	**200**	*i*P	Pn	03 15 09.8	-3.4
BIP				*i* S	**Sn**	**03 15 23.2**	**-3.0**
BUKP	**Musuan**	**1.96**	**230**	*e*P	**Pn**	**03 15 26.0**	**-0.4**
BUKP				*e*S	**Sn**	**03 15 52.1**	**+2.2**
MSLP	**Maasin**	**1.96**	**300**	*e*P	**Pn**	**03 15 26.2**	**-0.1**
MSLP				*e*S	**Sn**	**03 15 52.0**	**+2.2**
CGP	**Cagayan de Oro**	**1.98**	**250**	*e*P	**Pn**	**03 15 26.6**	**-0.1**
CGP				*i* S	**Sn**	**03 15 51.9**	**+1.4**
DAV	**Davao City (W)**	**2.29**	**206**	P	**Pn**	**03 15 32.0**	**+1.2**
	127nm,0.3s,baz=45,slow=3.4,SNR=18						
DAV				S	**Sn**	**03 16 02.6**	**+4.7**
	81nm,0.3s,baz=5.1,slow=0.9,SNR=6.9						
DAV				LR	LR	03 16 39.3	
	comp=Z,2μm,21.7s,baz=92,slow=49						
DAV	**Davao City (W)**	**2.29**	**206**		**Pn**	**03 15 32.0**	**+1.2**
DAV				Sn	**Sn**	**03 15 58.3**	**+0.4**
DAV	**Davao City (W)**	**2.29**	**206**	*e*P	**Pn**	**03 15 31.0**	**+0.2**
KCP	**Kidapawan**	**2.58**	**215**	*i*P	**Pn**	**03 15 35.2**	**+0.4**
KCP				*i* S	Sn	03 15 55.5	-10
BESP	**Borongan**	**2.69**	**335**	*e*P	**Pn**	**03 15 35.4**	**-0.9**
BESP				*e*S	**Sn**	**03 16 07.5**	**-0.1**
TBP	**Tagbilaran**	**2.73**	**282**	*e*P	**Pn**	**03 15 38.0**	**+1.1**
LLP	**Lapu-Lapu**	**2.83**	**295**	*e*P	**Pn**	**03 15 39.2**	**+1.0**
LLP				*i* S	**Sn**	**03 16 13.2**	**+2.1**
DDMP	**Don Marcelino,**	**3.14**	**196**	*e*P	**Pn**	**03 15 41.2**	**-1.2**
DDMP				*e*S	**Sn**	**03 16 16.4**	**-2.4**
PAGZ	**Pagadian**	**3.41**	**248**	*e*P	**Pn**	**03 15 47.5**	**+1.4**
CNP	**Catarman**	**3.84**	**331**	*e*P	**Pn**	**03 15 51.8**	**-0.1**
CNP				*e*S	**Sn**	**03 16 36.7**	**+0.9**
CNOP	**Candoni, Negro**	**3.94**	**280**	*e*P	**Pn**	**03 15 54.3**	**+0.9**
CNOP				*e*S	**Sn**	**03 16 30.7**	**-7.8**
GUIM	**Jordan**	**4.20**	**291**	*e*P	**Pn**	**03 15 58.0**	**+1.1**
GUIM				*e*S	**Sn**	**03 16 44.6**	**-0.1**
PVCP	**Virac**	**5.02**	**332**	*e*P	**Pn**	**03 16 08.0**	**-0.2**
PVCP				*e*S	**Sn**	**03 17 02.3**	**-2.6**
SGSI	**Sangihe**	**5.52**	**191**	P	Pn	03 16 26.2	+11
	1.4nm13μm202nm,0.5s						
LQP	**Lukban**	**6.98**	**315**	*e*P	**Pn**	**03 16 37.2**	**+2.0**
TGY	**

comp=E,310nm,18.0s
CD2 LR LR
comp=Z,290nm,17.3s
AS31 Alice Springs 33.38 168 P **P** **03 21 26.9 -1.2**
ASAR Alice Springs 33.39 168 P **P** **03 21 27.3 -0.8**
comp=Z,1.1nm,0.6s,baz=7.4,slow=9.8,SNR=13
ASAR PcP **PcP** **03 24 08.7 0.0**
comp=Z,2.2nm,0.7s,baz=346,slow=2.5,SNR=11
ASAR Alice Springs 33.39 168 P **P** **03 21 27.5 -0.7**
ASAR **PcP** **03 24 07.9 -0.7**
HHC Hu-ho-hao-te 34.27 340 *e*P P 03 21 42.8 +7.1
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,130nm,6.2s
USA0B Ussuriysk Arra 35.24 7 P **P** **03 21 44.8 +1.0**
USRK Ussuriysk Ar. 35.24 7 P **P** **03 21 45.0 +1.2**
comp=Z,11nm,0.7s,baz=183,slow=8.0,SNR=18
USRK LR LR 03 38 06.0
comp=Z,42nm,18.1s,baz=152,slow=39
USRK Ussuriysk Ar. 35.24 7 P **P** **03 21 44.2 +0.4**
ASAJ Asahikawa 37.52 19 P **P** **03 22 05.2 +1.8**
comp=Z,13nm,0.9s,baz=243,slow=32,SNR=6.7
JKA Kamikawa-asahi 37.52 19 P **P** **03 22 04.5 +1.2**
H11S3 WAKE ISLAND Hy 39.96 72 T T 04 05 21.0
baz=262,slow=75,SNR=310
H11S1 WAKE ISLAND Hy 39.98 72 T T 04 05 21.6
baz=262,slow=75,SNR=162
H11S2 WAKE ISLAND Hy 39.99 72 T T 04 05 22.2
baz=262,slow=75,SNR=251
KLR Kul'dur 40.19 5 P **P** **03 22 26.8 +1.2**
comp=Z,5.0nm,0.5s,baz=192,slow=7.4,SNR=23
H11N1 WAKE ISLAND Hy 40.33 70 T T 04 06 03.4
baz=266,slow=74,SNR=101
H11N2 WAKE ISLAND Hy 40.34 70 T T 04 06 01.9
baz=266,slow=74,SNR=76
H11N3 WAKE ISLAND Hy 40.35 70 T T 04 06 01.9
baz=266,slow=74,SNR=89
SONM Songino Array 42.17 340 P **P** **03 22 42.0 -0.1**
comp=Z,0.5nm,0.5s,baz=152,slow=10,SNR=3.8
SONM PcP **PcP** **03 24 35.9 +0.5**
comp=Z,0.5nm,0.5s,baz=163,slow=5.1,SNR=2.9
SONM Songino Array 42.17 340 P **P** **03 22 42.2 +0.2**
BBOO Buckleboo 42.69 168 P **P** **03 22 45.7 -0.5**
BBOO IAmb IAmb 03 22 47.6
comp=Z,10.0nm,0.8s
NWAO Narrogin (SRO) 42.77 192 P **P** **03 22 46.4 -0.5**
comp=Z,35nm,0.9s,baz=41,slow=7.2,SNR=9.7
NWAO Narrogin (SRO) 42.77 192 P **P** **03 22 44.8 -2.1**
STKA Stephens Creek 43.24 161 P **P** **03 22 50.4 -0.4**
comp=Z,2.5nm,0.4s,baz=338,slow=8.0,SNR=6.8
STKA Stephens Creek 43.24 161 P **P** **03 22 50.5 -0.2**
WMQ Urumqi 48.29 323 *e*P P 03 23 37.8 +7.2
PETK Petropavlovsk- 50.53 24 P **P** **03 23 49.4 +2.0**
comp=Z,6.4nm,0.5s,baz=200,slow=3.0,SNR=22
PETK LR LR 03 47 12.6
comp=Z,30nm,18.0s,baz=87,slow=38
PETK Petropavlovsk- 50.53 24 P **P** **03 23 47.8 +0.4**
MK31 Makanchi Array 53.10 323 P **P** **03 24 06.0 -0.7**
MK31 IAmb IAmb 03 24 19.9
comp=Z,2.7nm,0.7s
MKAR Makanchi Array 53.10 323 P **P** **03 24 05.9 -0.8**
comp=Z,2.2nm,0.5s,baz=124,slow=8.0,SNR=19
MKAR PcP **PcP** **03 25 14.3 0.0**
comp=Z,1.6nm,0.6s,baz=98,slow=9.2,SNR=4.1
MKAR LR LR 03 48 22.2
comp=Z,86nm,19.4s,baz=113,slow=38
MKAR Makanchi Array 53.10 323 P **P** **03 24 05.8 -0.9**
MKAR **PcP** **03 25 13.6 -0.7**
ZALV Zalesovo Beam 55.75 332 P **P** **03 24 24.9 -0.8**
comp=Z,0.7nm,0.3s,baz=134,slow=8.3,SNR=2.9
KURK Kurchatov 57.16 326 P **P** **03 24 35.5 -0.3**
KURK IAmb IAmb 03 24 36.2
comp=Z,9.1nm,1.1s
KURBB Kurchatov Arra 57.17 326 P **P** **03 24 35.5 -0.3**
comp=Z,2.4nm,0.5s,baz=123,slow=7.1,SNR=24
KK31 Karatay Array 59.26 315 P **P** **03 24 49.2 -1.4**
KKAR Karatay Array 59.26 315 P **P** **03 24 49.2 -1.4**
KKAR Karatay Array 59.26 315 P **P** **03 24 49.6 -1.0**
TIXI Tiksi 62.47 1 P **P** **03 25 12.1 +0.3**
BVAR Borovoye Array 62.76 326 P **P** **03 25 13.2 -0.9**
comp=Z,1.5nm,0.7s,baz=222,slow=25,SNR=6.2
BRVK Borovoye 62.83 326 P **P** **03 25 13.9 -0.7**
BRVK IAmb IAmb 03 25 15.0
comp=Z,4.5nm,0.8s
NRIK Noril'sk 65.17 346 P **P** **03 25 30.0 +0.3**
comp=Z,4.1nm,0.6s,baz=132,slow=6.4,SNR=8.0
RPZ Rata Peaks 66.28 146 LR LR 03 51 19.8
comp=Z,52nm,21.0s,baz=1.0,slow=33
URZ Urewera 66.62 139 LR LR 03 52 30.6
comp=Z,66nm,22.0s,baz=31,slow=34
GEYT Alibeck 67.46 307 P **P** **03 25 45.8 +0.8**
comp=Z,2.6nm,0.7s,baz=95,slow=3.3,SNR=4.5
GEYT Alibeck 67.46 307 P **P** **03 25 43.7 -1.3**
ABKAR Akbulak array 67.92 320 P **P** **03 25 46.9 -0.7**
AKTO Aktyubinsk 69.38 321 P **P** **03 25 55.8 -0.8**
comp=Z,1.2nm,0.5s,baz=86,slow=6.7,SNR=6.6
ARU Arti 70.33 327 P **P** **03 26 01.4 -0.9**
comp=Z,2.7nm,0.4s,baz=86,slow=4.6,SNR=11
ARU Arti 70.33 327 P **P** **03 26 01.8 -0.5**
ARU IAmb IAmb 03 26 02.1
comp=Z,7.1nm,0.5s
IMAR Indian Mountai 77.50 24 P **P** **03 26 44.2 +0.1**
RAYN Ar Rayn 78.27 292 P **P** **03 26 47.2 -2.0**
RAYN IAmb IAmb 03 26 49.5
comp=Z,7.0nm,0.9s
COLD Coldfoot 79.00 23 IAmb IAmb 03 26 55.6
comp=Z,7.3nm,1.0s
KBZ Khabaz 79.19 313 P **P** **03 26 53.1 -0.7**
comp=Z,2.3nm,0.9s,baz=53,slow=20
I23K Minto, Yukon-K 79.27 25 IAmb IAmb 03 26 56.6
comp=Z,4.9nm,0.6s
TOLK Toolik Lake Re 79.30 22 IAmb IAmb 03 26 57.2
comp=Z,9.5nm,0.7s
CCB Clear Creek Bu 79.92 26 IAmb IAmb 03 27 01.8
comp=Z,3.9nm,0.8s
IL31 80.32 26 IAmb IAmb 03 27 03.5
comp=Z,4.1nm,0.8s
ILAR Eielson Array 80.32 26 P **P** **03 26 59.6 +0.1**
comp=Z,2.1nm,0.6s,baz=238,slow=5.0,SNR=23
ILAR Eielson Array 80.32 26 P **P** **03 26 59.1 -0.4**
KLMR Klimovskoe 80.65 330 *e*P **P** **03 27 00.3 -1.1**
KLMR AMP 03 27 16.5
comp=Z,15nm,1.4s
BMAR Burnt Mountain 81.18 23 P **P** **03 27 04.7 +0.5**
MENT Mentasta 81.79 28 P **P** **03 27 07.3 -0.2**
MENT IAmb IAmb 03 27 15.9
comp=Z,9.1nm,1.0s
GLB Gilahina Butte 81.86 29 IAmb IAmb 03 27 11.4
comp=Z,6.2nm,0.9s
ATD Arta Tunnel 82.12 280 LR LR 04 00 46.9
comp=Z,27nm,21.4s,baz=52,slow=34
K27K Chicken 82.44 26 IAmb IAmb 03 27 15.1
comp=Z,13nm,0.8s
EGAK Eagle 82.77 26 IAmb IAmb 03 27 16.2
comp=Z,5.3nm,0.8s
BARN Barnard Glacie 82.92 29 P **P** **03 27 15.1 +1.4**
BARN IAmb IAmb 03 27 17.0
comp=Z,11nm,0.8s
CTGM Chitina Glacie 83.09 29 P **P** **03 27 16.0 +1.6**
DAWY Dawson 83.61 26 P **P** **03 27 18.3 +1.4**
DAWY IAmb IAmb 03 27 20.8
comp=Z,13nm,1.1s
EPYK Eagle Plains 84.37 24 P **P** **03 27 21.8 +1.0**
HYT Haines Junctio 84.97 29 P **P** **03 27 26.5 +2.5**
HYT IAmb IAmb 03 27 27.4
comp=Z,13nm,1.1s
INK Inuvik 85.21 22 P **P** **03 27 25.7 +0.9**
ARCES ARCESS Array B 85.35 340 P **P** **03 27 25.4 -0.2**
comp=Z,3.2nm,0.7s,baz=81,slow=6.4,SNR=20
MMAI Mount Meron Ar 86.07 303 LR LR 04 09 04.7
comp=Z,19nm,21.6s,baz=340,slow=38
EIL Elat 86.94 299 LR LR 04 12 47.6
comp=Z,19nm,18.0s,baz=111,slow=40
FINES FINESS Array B 87.02 332 P **P** **03 27 33.4 -0.5**
comp=Z,1.2nm,0.5s,baz=80,slow=4.4,SNR=14
AKASG Malin Array Be 87.62 321 P **P** **03 27 35.6 -1.4**
comp=Z,0.3nm,0.4s,baz=67,slow=4.2,SNR=4.1
AKASG Malin Array Be 87.62 321 P **P** **03 27 36.0 -1.0**
VNDA Vanda 88.78 173 P **P** **03 27 42.0 +0.1**
comp=Z,1.4nm,0.7s,baz=320,slow=6.1,SNR=9.7
VNDA Vanda 88.78 173 P **P** **03 27 41.5 -0.3**
KMBO Kilima Mbogo 89.51 269 P **P** **03 27 47.0 +0.1**
comp=Z,1.6nm,0.8s,baz=54,slow=5.7,SNR=5.5
NOA NORSAR Array B 93.90 334 LR LR 04 13 14.3
comp=Z,33nm,18.5s,baz=290,slow=37

YKA Yellowknife Ar 94.66 24 P **P** **03 28 10.4 +1.0**
comp=Z,3.5nm,0.7s,baz=304,slow=3.7,SNR=10
MBAR Mbarara 95.86 270 LR LR 04 09 00.5
comp=Z,15nm,18.6s,baz=42,slow=34
TXAR Lajitas Array 118.32 50 PKP **PKiKP** **03 33 37.6 +0.9**
comp=Z,0.1nm,0.4s,baz=146,slow=2.7,SNR=3.9
TORD Torodi Ar. Bea 120.96 291 PKP **PKiKP** **03 33 41.2 -0.8**
comp=Z,0.8nm,0.3s,baz=56,slow=2.1,SNR=19
TORD Torodi Ar. Bea 120.96 291 **PKPdf** **03 33 40.2 -1.7**
PLCA Paso Flores 145.06 157 PKPbc **PKPdf** **03 34 26.7 +0.5**
comp=Z,2.8nm,0.8s,baz=209,slow=3.1,SNR=7.7
PLCA Paso Flores 145.06 157 **PKPdf** **03 34 25.9 -0.3**
LPAZ La Paz 164.00 118 PKP **PKPdf** **03 34 54.4 +1.0**
comp=Z,1.3nm,1.0s,baz=270,slow=3.0,SNR=2.5

IDC ***13*** *03:38:45.9±3.4, 19°.17S×169°.52E, h266km±46km, mb3.1/4, mb1 3.3/5, mb1mx3.1/27, mbtmp3.7/5, Error ellipse: s-maj=110.4km s-min=29.6km az=156.0*
ISC 13 03:38:45.0±1.7**, 18°.8S**±0.3×**169°.4E**±0.4**, h250**km**, n7, σ1ŝ19/8, mb3.4/4, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.25**	**220**	P	**Pn**	**03 39 53.2**	**+1.4**
	2.2nm,0.3s,baz=325,slow=22,SNR=24						
DZM				S	**S**	**03 40 43.2**	**-1.7**
	2.2nm,0.3s,baz=156,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**33.05**	**262**	P	**P**	**03 44 56.9**	**-0.5**
	0.1nm,0.5s,baz=102,slow=8.8,SNR=3.1						
ASAR	**Alice Springs**	**33.37**	**255**	P	**P**	**03 45 00.5**	**+0.3**
	0.8nm,0.4s,baz=82,slow=8.9,SNR=7.6						
SONM	**Songino Array**	**86.98**	**323**	P	**P**	**03 51 02.7**	**+0.7**
	0.2nm,0.4s,baz=140,slow=7.5,SNR=4.3						
ILAR	**Eielson Array**	**89.80**	**17**	P	**P**	**03 51 13.8**	**-0.9**
	0.3nm,0.5s,baz=239,slow=5.3,SNR=7.3						
ARCES	**ARCESS Array B**	**124.71**	**345**	PKP	**PKPdf**	**03 57 13.6**	**-0.6**
	3.6nm,0.9s,baz=67,slow=3.0,SNR=3.1						
DAVOX	**Davos/Dischmat**	**147.43**	**333**	PKPbc	**PKPbc**	**03 58 00.1**	**+0.5**
	1.6nm,0.4s,baz=315,slow=5.7,SNR=6.5						

NIC ***13*** *03:53:40.1±0.0, 34°.40N×26°.25E, h110km±4km, Ml3.8/3*
ATH ***13*** *03:53:41.5, 34°.43N×26°.42E, h26km±3km, ML3.1/6, Error ellipse: s-maj=5.0km s-min=1.7km az=334.0*
HLW ***13*** *03:53:42.4, 34°.73N×26°.49E, h22km±21km, Md3.0*
THE ***13*** *03:53:42.4, 34°.45N×26°.41E, h4km±3km, ML2.9/4, Error ellipse: s-maj=4.1km s-min=2.1km az=285.0*
IDC ***13*** *03:53:44.7±1.8, 34°.65N×26°.53E, h56km±21km, mb3.9/5, mb1 3.8/9, mb1mx3.3/55, mbtmp3.9/9, ML3.8/4, Error ellipse: s-maj=25.1km s-min=15.6km az=21.0*
ISK ***13*** *03:53:45.5, 34°.99N×26°.30E, h88km, ML2.9/17*
GII ***13*** *03:53:48.6±0.0, 33°.85N×26°.95E, h1km, MD3.4/1*
DDA ***13*** *03:54:00.3, 35°.50N×27°.72E, h22km±2km, ML2.5*
ISC 13 03:53:44.2±0.9**, 34°.53N**±0.04×**26°.55E**±0.04**, h65**km±9km**, n88, σ2ŝ44/114, mb4.2/5, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.65**	**335**	P	**Pn**	**03 53 55.2**	**-3.0**
ZKR				S	**Sn**	**03 54 06.1**	**-2.4**
ZKR				AML	AML	03 54 07.8	
	comp=N,2235μm,0.6s						
ZKR				AML	AML	03 54 11.1	
	comp=E,4242μm,0.5s						
ZKR	**Zakros**	**0.65**	**335**	P	**Pn**	**03 53 55.1**	**-3.1**
ZKR				S	**Sn**	**03 54 06.7**	**-1.8**
	comp=E,2μm,0.5s						
STIA	**Sitia Lasithi**	**0.77**	**331**	P	**Pn**	**03 53 57.2**	**-2.5**
STIA				S	**Sn**	**03 54 10.3**	**-0.7**
FRMA	**Ierapetra Chan**	**0.83**	**306**	P	**Pn**	**03 53 56.8**	**-3.5**
FRMA				S	**Sn**	**03 54 07.6**	**-4.7**
	comp=E,725nm,0.5s						
NPS	**Neapolis**	**1.06**	**314**	P	**Pn**	**03 54 02.1**	**-1.2**
NPS				S	**Sn**	**03 54 16.8**	**-0.7**
NPS				AML	AML	03 54 25.0	
	comp=N,1336μm,0.7s						
NPS				AML	AML	03 54 25.7	
	comp=E,1836μm,0.7s						
NPS	**Neapolis**	**1.06**	**314**	P	**Pn**	**03 54 02.0**	**-1.3**
LAST	**Lasithi**	**1.08**	**306**	P	**Pn**	**03 54 01.5**	**-2.1**
LAST				S	**Sn**	**03 54 16.4**	**-1.7**
LAST				AML	AML	03 54 19.2	
	comp=E,1740μm,0.5s						
LAST				AML	AML	03 54 19.2	
	comp=N,1934μm,0.5s						
LAST	**Lasithi**	**1.08**	**306**	P	**Pn**	**03 54 02.3**	**-1.4**
LAST				S	**Sn**	**03 54 16.5**	**-1.6**
	comp=N,808nm,0.5s						
KARP	**Karpathos**	**1.13**	**26**	P	**Pn**	**03 54 05.7**	**+1.5**
KARP				S	**Sn**	**03 54 22.6**	**+3.4**
KARP				AML	AML	03 54 36.5	
	comp=E,1320μm,0.5s						
KARP				AML	AML	03 54 38.2	
	comp=N,1494μm,0.6s						
KARP	**Karpathos**	**1.13**	**26**	PG	**Pn**	**03 54 05.6**	**+1.4**
KARP				SG	**Sn**	**03 54 18.6**	**-0.6**
KARP	**Karpathos**	**1.13**	**26**	P	**Pn**	**03 54 05.5**	**+1.2**
KARP				S	**Sn**	**03 54 25.9**	**+6.8**
KARP				AML	AML	03 54 36.1	
	comp=N,1.3nm,0.5s						
KARP				AML	AML	03 54 36.1	
	comp=N,1.3nm,0.5s						
KARP				AML	AML	03 54 37.5	
	comp=N,1.5nm,0.7s						
KARP				AML	AML	03 54 37.5	
	comp=N,1.5nm,0.7s						
KARP	**Karpathos**	**1.13**	**26**	P	**Pn**	**03 54 05.8**	**+1.5**
KARP				S	**Sn**	**03 54 22.9**	**+3.7**
	comp=N,625nm,0.6s						
HRKL	**Herakleio**	**1.43**	**304**	PG	**Pn**	**03 54 06.2**	**-1.8**
SIVA	**Sivas**	**1.52**	**289**	P	**Pn**	**03 54 08.4**	**-0.8**
SIVA				AML	AML	03 54 42.5	
	comp=E,1968μm,0.6s						
SIVA				AML	AML	03 54 43.4	
	comp=N,1210μm,0.7s						
SIVA	**Sivas**	**1.52**	**289**	P	**Pn**	**03 54 08.4**	**-0.8**
IDI	**Anoyia**	**1.56**	**299**	P	**Pn**	**03 54 08.8**	**-1.2**
	comp=N,5.4nm,0.3s,baz=288,slow=23,SNR=52						
IDI				S	**Sn**	**03 54 31.7**	**+2.4**
	comp=N,15nm,0.3s,baz=1.5,slow=20,SNR=6.5						
IDI	**Anoyia**	**1.56**	**299**	P	**Pn**	**03 54 08.7**	**-1.2**
IDI				AML	AML	03 54 37.5	
	comp=N,513μm,0.5s						
IDI				AML	AML	03 54 46.2	
	comp=E,311μm,0.7s						
IDI	**Anoyia**	**1.56**	**299**	PN	**Pn**	**03 54 08.4**	**-1.5**
IDI	**Anoyia**	**1.56**	**299**	P	**Pn**	**03 54 08.7**	**-1.2**
ANAF	**Anafi Island**	**1.93**	**341**	P	**Pn**	**03 54 13.6**	**-1.3**
GVD	**Gavdhos**	**2.06**	**279**	P	**Pn**	**03 54 15.7**	**-0.8**
THR3	**Thira Island,**	**2.10**	**334**	P	**Pn**	**03 54 15.2**	**-1.9**
THT2	**Imerovigli**	**2.11**	**334**	PN	**Pn**	**03 54 13.5**	**-3.8**
ARG	**Arkhangelos**	**2.12**	**37**	PN	**Pn**	**03 54 18.1**	**+0.7**
ARG	**Arkhangelos**	**2.12**	**37**	P	**Pn**	**03 54 20.4**	**+3.0**
VAM	**Vamos**	**2.12**	**295**	P	**Pn**	**03 54 16.6**	**-0.8**
NIS1	**Nisyros Isl.**	**2.13**	**14**	PN	**Pn**	**03 54 15.5**	**-2.1**
CMBO	**Columbo, Santo**	**2.15**	**335**	P	**Pn**	**03 54 16.6**	**-1.2**
IMMV	**Iera Moni Meta**	**2.31**	**294**	P	**Pn**	**03 54 19.5**	**-0.5**
MRSB	**Marmaris-Mugla**	**2.56**	**31**	PN	**Pn**	**03 54 23.1**	**-0.3**
BODT	**Bodrum**	**2.60**	**13**	PN	**Pn**	**03 54 22.2**	**-1.8**
TURN	**Turunc**	**2.63**	**31**	PN	**Pn**	**03 54 23.8**	**-0.5**
TURN	**Turunc**	**2.63**	**31**	*i* P	**Pn**	**03 54 25.3**	**+1.0**
TURN				*i* S	**Sn**	**03 54 48.1**	**-7.0**
APE	**Apeiranthos**	**2.67**	**342**	PN	**Pn**	**03 54 21.6**	**-3.3**
APE	**Apeiranthos**	**2.67**	**342**	P	**Pn**	**03 54 23.3**	**-1.6**
DALY	**Dalyan (Mula)**	**2.85**	**36**	PN	**Pn**	**03 54 27.5**	**+0.2**
DALY	**Dalyan (Mula)**	**2.85**	**36**	*i* P	**Pn**	**03 54 29.0**	**+1.7**
DALY				*i* S	**Sn**	**03 54 56.8**	**-3.7**
MLSB	**Milas**	**2.93**	**19**	PN	**Pn**	**03 54 26.7**	**-1.8**
FETY	**Fethiye**	**2.94**	**44**	PN	**Pn**	**03 54 29.4**	**+0.8**
FETY	**Fethiye**	**2.94**	**44**	*i* P	**Pn**	**03 54 29.6**	**+0.9**
FETY				*i* S	Sn	03 54 50.7	-12
YER	**Yerkesik**	**2.96**	**28**	PN	**Pn**	**03 54 28.1**	**-0.7**
KSL	**Kastellorizon**	**2.96**	**56**	P	**Pn**	**03 54 30.4**	**+1.6**
KSL	**Kastellorizon**	**2.96**	**56**	P	**Pn**	**03 54 30.3**	**+1.5**
KSL				S	**Sn**	**03 55 09.1**	**+6.0**
AKAS	**Kas**	**3.02**	**55**	PN	**Pn**	**03 54 31.9**	**+2.1**
AKAS	**Kas**	**3.02**	**55**	*i* P	**Pn**	**03 54 31.4**	**+1.6**
AKAS				*i* S	Sn	03 54 54.9	-10
GCAM	**G?zelcaml?**	**3.21**	**10**	PN	**Pn**	**03 54 30.0**	**-2.2**
GCAM	**G?zelcaml?**	**3.21**	**10**	*i* P	**Pn**	**03 54 31.4**	**-0.9**
MATC	**Matruh**	**3.23**	**170**	P	**Pn**	**03 54 33.0**	**+0.5**
	baz=169						

SLUM Salum 3.23 201 P **Pn** **03 54 32.2 -0.4**
baz=199
SLUM S **Sn** **03 55 08.5 -1.4**
baz=199
CAME Cameli-Denizli 3.29 42 PN **Pn** **03 54 34.3 +0.9**
TAVA DENIZLI_Tavas 3.50 32 *i* P **Pn** **03 54 37.1 +0.8**
TAVA *i* S Sn 03 55 06.6 -10
ELL Elmali 3.52 50 PN **Pn** **03 54 38.0 +1.4**
AKUM Antalya-Kumluc 3.58 59 *i* P **Pn** **03 54 38.4 +1.2**
AKUM *i* S **Sn** **03 55 09.9 -8.4**
AYDB Zeytinkoy-Aydi 3.58 17 PN **Pn** **03 54 35.2 -2.2**
GOLH Golhisar 3.64 41 *i* P **Pn** **03 54 40.5 +2.3**
GOLH *i* S **Sn** **03 55 14.5 -5.5**
GOLH IAML 03 56 06.0
comp=N,22nm,0.9s
GOLH IAML 03 56 12.0
comp=E,31nm,2.7s
URLA Izmir 3.82 1 PN **Pn** **03 54 37.2 -3.4**
KORT Korkueli 3.95 50 PN **Pn** **03 54 43.8 +1.3**
KORT Korkueli 3.95 50 *i* P **Pn** **03 54 44.7 +2.2**
KORT *i* S **Sn** **03 55 21.2 -6.5**
KORT IAML 03 55 34.0
comp=E,23nm,0.5s
OSC1 CSNet OBS 1 4.06 103 P **Pn** **03 54 44.2 +0.4**
KEPZ Antalya-Kepez 4.74 59 *i* P **Pn** **03 54 55.2 +1.9**
KEPZ *i* S Sn 03 55 36.1 -11
KEPZ IAML 03 55 55.0
comp=N,9.5nm,0.5s
AKMS Akamas 4.79 83 P **Pn** **03 54 55.0 +1.2**
AKMS AML AML 03 55 50.4
comp=N,0.2nm,0.3s
AKMS AML AML 03 55 50.5
comp=N,0.3nm,0.3s
NATA Nata 4.97 85 P **Pn** **03 54 57.7 +1.5**
GAZI Gazipasa 5.01 68 PN **Pn** **03 54 59.8 +3.0**
ALFC Alefka 5.01 81 P **Pn** **03 54 58.3 +1.4**
ALFC AML AML 03 55 53.1
comp=N,0.2nm,0.3s
ALFC AML AML 03 55 57.3
comp=N,0.3nm,0.4s
SEYD Seydisehir-KON 5.16 55 PN **Pn** **03 55 00.3 +1.3**
SZAC Souni 5.22 86 P **Pn** **03 55 01.9 +2.1**
SWA2 5.35 190 P **Pn** **03 55 01.3 -0.3**
baz=190
MVOU Mavrovouni 5.85 83 P **Pn** **03 55 10.5 +2.2**
KOT Kottamia 6.41 134 P **Pn** **03 55 18.3 +2.3**
baz=135
SUZ Suez 7.08 130 P **Pn** **03 55 25.6 +0.4**
baz=130
NBNS Bani Suef 7.14 144 P **Pn** **03 55 27.1 +1.0**
baz=144
HFRF Wahat Farafira 7.51 168 P **Pn** **03 55 31.2 +0.1**
baz=167
MMAI Mount Meron Ar 7.52 99 P **Pn** **03 55 33.9 +2.5**
comp=N,1.2nm,0.3s,baz=277,slow=12,SNR=5.4
MMAI S **Sn** **03 56 57.7 +2.5**
comp=N,3.7nm,0.3s,baz=240,slow=16,SNR=12
HMDT Nahal Hemdat 7.84 104 Pn **Pn** **03 55 38.0 +2.4**
HMDT Sn **Sn** **03 57 03.4 +0.6**
YTIR Yattir 7.86 111 Pn **Pn** **03 55 36.9 +1.0**
YTIR Sn **Sn** **03 57 02.2 -1.2**
DSI Dead Sea 7.98 109 Pn **Pn** **03 55 38.5 +1.1**
DSI Sn **Sn** **03 57 04.7 -1.5**
PRNI Paran 8.27 118 Pn **Pn** **03 55 42.6 +1.1**
PRNI Sn **Sn** **03 57 10.2 -3.2**
MBRI Mt Berech 8.52 121 Pn **Pn** **03 55 45.6 +0.7**
EIL Elat 8.61 122 P **Pn** **03 55 46.6 +0.5**
comp=N,0.4nm,0.3s,baz=344,slow=1.9,SNR=17
EIL S **Sn** **03 57 18.0 -3.8**
comp=N,1.1nm,0.3s,baz=106,slow=1.0,SNR=8.6
EIL Elat 8.61 122 Pn **Pn** **03 55 47.0 +0.8**
EIL Sn **Sn** **03 57 17.7 -4.1**
HHRG Al Ghardaqah 9.45 139 P **Pn** **03 56 00.6 +2.9**
baz=139
AKASG Malin Array Be 16.28 6 P **Pn** **03 57 28.4 -0.1**
comp=N,2.0nm,0.3s,baz=193,slow=11,SNR=7.2
GERES GERESS Array B 17.19 330 P **P** **03 57 40.6 -0.1**
comp=N,0.1nm,0.3s,baz=133,slow=12,SNR=3.2
FINES FINESS Array B 26.93 359 P **P** **03 59 18.6 -0.4**
comp=N,2.7nm,0.9s,baz=154,slow=11,SNR=7.5
HFS Hagfors 26.96 346 P **P** **03 59 18.9 -0.5**
comp=N,7.6nm,1.1s,baz=145,slow=16,SNR=4.8
TORD Torodi Ar. Bea 30.99 233 P **P** **03 59 57.1 +1.5**
comp=N,0.7nm,0.8s,baz=42,slow=9.4,SNR=3.5
ARCES ARCESS Array B 35.06 359 P **P** **04 00 30.4 -0.1**
comp=N,7.1nm,1.1s,baz=166,slow=5.6,SNR=5.1
SCHQ Schefferville 64.41 320 P **P** **04 04 14.8 +1.6**
comp=N,2.1nm,0.5s,baz=38,slow=2.6,SNR=7.0

ISK ***13*** *03:55:14.6, 39°.95N×36°.00E, h5km, ML2.8/19*
DDA ***13*** *03:55:15.1, 39°.95N×36°.00E, h6km±3km, ML2.8*
ATA ***13*** *03:55:45.0±1.5, 39°.59N×38°.71E, h3km±65km, ML1.2, MW3.6*
ISC 13 03:55:15.1±1.1**, 39°.94N**±0.02×**36°.00E**±0.02**, h6**km±10km**, n47, σ0ŝ77/74, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOKA	**Tokat**	**0.53**	**44**	*i* P	**Pg**	**03 55 26.0**	**+0.6**
TOKA				*i* S	**Sg**	**03 55 32.4**	**+0.1**
CUSAR	**Sarkisla-SIVAS**	**0.55**	**160**	*i* P	**Pg**	**03 55 26.1**	**+0.4**
CUSAR				*i* S	**Sg**	**03 55 32.1**	**-0.9**
TOKT	**Tokat**	**0.57**	**47**	PG	**Pg**	**03 55 26.5**	**+0.5**
TOKT				SG	**Sb**	**03 55 35.4**	**-0.5**
SVSK	**Karacayir**	**0.77**	**91**	PG	**Pg**	**03 55 30.1**	**+0.2**
SVSK				SG	**Sb**	**03 55 41.4**	**-0.2**
COAL	**Corum-Alaca**	**0.84**	**292**	*i* P	**Pg**	**03 55 31.6**	**+0.4**
COAL				*i* S	**Sb**	**03 55 43.5**	**-0.3**
SCER	**sogukcermik**	**0.87**	**95**	*i* P	**Pg**	**03 55 31.9**	**0.0**
SCER				*i* S	**Sg**	**03 55 42.1**	**-1.0**
SCER				IAML		03 55 44.0	
	comp=E,304nm,0.4s						
SCER				IAML		03 55 45.0	
	comp=N,440nm,0.5s						
CUALT	**Altinyayla-SIV**	**0.88**	**139**	*i* P	**Pb**	**03 55 32.7**	**-0.2**
CUALT				*i* S	**Sb**	**03 55 45.1**	**+0.1**
SIRC	**Yozgat**	**0.89**	**228**	*i* P	**Pg**	**03 55 32.1**	**-0.1**
SIRC				*i* S	**Sg**	**03 55 43.5**	**-0.2**
KUPE	**Kupecik-Ladik(**	**0.94**	**2**	PG	**Pb**	**03 55 33.7**	**-0.2**
KUPE				SG	**Sn**	**03 55 47.6**	**-1.2**
ERBA	**Erbaa**	**0.94**	**38**	*i* P	**Pb**	**03 55 33.8**	**-0.1**
KAYA	**Kayacik-Havza(**	**1.03**	**349**	PG	**Pb**	**03 55 35.2**	**-0.2**
KAYA				SG	**Sn**	**03 55 50.6**	**-0.3**
GUNE	**Kayseri**	**1.07**	**196**	*i* P	**Pn**	**03 55 36.7**	**-0.1**
GUNE				*i* S	**Sg**	**03 55 49.8**	**+0.2**
GUNE				IAML		03 55 56.0	
	comp=E,279nm,0.4s						
GUNE				IAML		03 56 00.0	
	comp=N,234nm,0.3s						
CORM	**Corum**	**1.08**	**283**	PG	**Pb**	**03 55 36.2**	**-0.1**
CORM				SG	**Sn**	**03 55 52.1**	**-0.2**
BNN	**Bunyan**	**1.09**	**186**	PN	**Pg**	**03 55 36.4**	**+0.4**
RSDY	**Resadiye-TOKAT**	**1.12**	**65**	PN	**Pn**	**03 55 37.3**	**-0.1**
RSDY				SN	**Sn**	**03 55 53.6**	**+0.5**
KVT	**Kavak**	**1.14**	**2**	PN	**Pb**	**03 55 37.3**	**0.0**
KVT				SN	**Sn**	**03 55 53.9**	**+0.1**
HAVZ	**Havza**	**1.16**	**349**	*i* P	**Pn**	**03 55 38.4**	**+0.5**
HAVZ				*i* S	**Sg**	**03 55 52.2**	**-0.1**
CTAK	**Corum_Osmancik**	**1.17**	**308**	*i* P	**Pb**	**03 55 37.6**	**-0.2**
CTAK				*i* S

SUSE				*i* S	**Sg**	**03 56 09.8**	**-0.3**
SUSE				IAML		03 56 14.0	
	comp=N,94nm,0.3s						
SUSE				IAML		03 56 16.0	
	comp=E,98nm,0.7s						
ORDU	**Ordu-Boztepe**	**1.77**	**53**	*i* P	**Pn**	**03 55 46.8**	**+0.6**
ORDU				*i* S	**Sn**	**03 56 08.3**	**-0.8**
ORDU				IAML		03 56 50.0	
	comp=E,83nm,2.0s						
DARE	**Darende-Malaty**	**1.79**	**139**	PN	**Pb**	**03 55 48.3**	**0.0**
DIKM	**Dikmen**	**1.80**	**342**	PN	**Pb**	**03 55 47.9**	**-0.6**
KIRS	**Kırehir-Merke**	**1.80**	**244**	*i* P	**Pb**	**03 55 48.6**	**+0.1**
KIRS				IAML		03 56 14.0	
	comp=N,83nm,0.5s						
KIRS				IAML		03 56 14.0	
	comp=E,93nm,0.6s						
BRTR	**Keskin Array B**	**1.83**	**264**	PN	**Pb**	**03 55 48.5**	**-0.6**
BRTR				SN	**Sg**	**03 56 13.2**	**-0.7**
HEKM	**Malatya_Hekimh**	**1.85**	**124**	*i* P	**Pb**	**03 55 49.8**	**+0.3**
HEKM				*i* S	**Sb**	**03 56 12.8**	**-0.1**
CANT	**Cankiri**	**1.94**	**291**	PN	**Pn**	**03 55 49.8**	**+1.1**
YAYX	**Yaylak**	**1.97**	**240**	PN	**Pb**	**03 55 50.4**	**-1.0**
ARPR	**Arapgir-MALATY**	**2.00**	**114**	PN	**Pb**	**03 55 51.0**	**-0.9**
KEMA	**Kemaliye**	**2.04**	**108**	*eP*	**Pn**	**03 55 52.6**	**0.0**
KEMA				IAML		03 56 24.6	
	comp=Z,6.6nm,0.5s						
KEMA	**Kemaliye**	**2.04**	**108**	*i* P	**Pb**	**03 55 53.1**	**+0.4**
KEMA				*i* S	**Sb**	**03 56 18.2**	**-0.2**
GULA	**Gulagac**	**2.10**	**221**	PN	**Pb**	**03 55 52.5**	**-1.2**
SERE	**Sereflikochisa**	**2.13**	**243**	PN	**Pn**	**03 55 52.7**	**+1.3**
REFA	**Refahiye_ERZN**	**2.20**	**103**	*eP*	**Pn**	**03 55 52.6**	**+0.2**
REFA				IAML		03 56 25.9	
	comp=Z,18nm,0.4s						
ESPY	**Espiye-Giresun**	**2.30**	**64**	PN	**Pn**	**03 55 55.2**	**+1.6**
MALT	**Malatya**	**2.49**	**130**	PN	**Pn**	**03 55 58.3**	**+2.0**
KKUL	**Konya-Kulu**	**2.50**	**253**	*i* P	**Pn**	**03 55 57.4**	**+0.8**
KELT	**Kelkit**	**2.51**	**84**	*eP*	**Pn**	**03 55 58.1**	**+1.5**
KELT				IAML		03 56 39.1	
	comp=Z,12nm,0.5s						
PTK	**Pertek**	**2.83**	**111**	PN	**Pn**	**03 56 03.1**	**+2.0**
BAYB	**BAYBURT**	**3.28**	**83**	*eP*	**Pb**	**03 56 12.1**	**-1.8**
BAYB				IAML		03 57 12.6	
	comp=Z,7.5nm,1.7s						
KRIK	**Erzurum-spir**	**3.80**	**82**	*eP*	**Pb**	**03 56 20.9**	**-1.8**

*IDC **13** 04:46:48.1±3.5,8°.95S×67°.56E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/41, mbtmp3.7/5, MS2.9/4, Ms1 3.0/4, ms1mx2.8/31, Error ellipse: s-maj=119.3km s-min=31.5km az=62.0*

ISC 13 04:46:49.1±1.5, 9°.0S±0°.3×67°.4E±0°.1, h10km, n15, σ0s81/12, mb3.9/5, MS2.8/4, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**5.20**	**75**	Pn	**Pn**	**04 48 07.5**	**+0.7**
	baz=273,slow=14,SNR=52						
H08S1				Sn	**Sn**	**04 49 06.0**	**-0.8**
H08S3	**Diego Garcia H**	**5.22**	**75**	Pn	**Pn**	**04 48 07.8**	**+0.8**
	baz=273,slow=14,SNR=235						
H08S3				Sn	**Sn**	**04 49 06.2**	**-1.0**
H08S2	**Diego Garcia H**	**5.22**	**75**	Pn	**Pn**	**04 48 07.9**	**+0.9**
	baz=273,slow=14,SNR=57						
H08S2				Sn	**Sn**	**04 49 07.4**	**+0.1**
PALK	**Pallekele**	**20.91**	**40**	LR	LR	04 58 02.2	
	comp=Z,24nm,18.6s,baz=322,slow=32						
KMBO	**Kilima Mbogo**	**31.01**	**283**	LR	LR	05 04 28.4	
	comp=Z,17nm,19.5s,baz=93,slow=34						
CMAR	**Chiang Mai Arr**	**41.40**	**49**	LR	LR	05 10 00.2	
	comp=Z,14nm,18.3s,baz=75,slow=34						
H01W3	**Cape Leeuwin H**	**49.83**	**128**	T	T	05 48 60.0	
	baz=289,slow=75,SNR=37						
H01W2	**Cape Leeuwin H**	**49.83**	**128**	T	T	05 49 00.2	
	baz=289,slow=75,SNR=46						
H01W1	**Cape Leeuwin H**	**49.84**	**128**	T	T	05 49 01.3	
	baz=289,slow=75,SNR=37						
MKAR	**Makanchi Array**	**57.12**	**12**	P	**P**	**04 56 34.8**	**-1.0**
	0.6nm,0.8s,baz=191,slow=4.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**64.43**	**11**	P	**P**	**04 57 25.1**	**-0.3**
	0.4nm,0.4s,baz=187,slow=7.3,SNR=1.9						
ASAR	**Alice Springs**	**64.97**	**112**	P	**P**	**04 57 29.6**	**-0.2**
	0.6nm,0.7s,baz=280,slow=4.9,SNR=5.3						
WRA	**Warramunga Arr**	**65.37**	**108**	P	**P**	**04 57 31.9**	**-0.5**
	0.9nm,1.0s,baz=280,slow=5.3,SNR=5.5						
WRA				LR	LR	05 21 55.5	
	comp=Z,24nm,21.9s,baz=155,slow=32						
SONM	**Songino Array**	**66.28**	**28**	P	**P**	**04 57 38.7**	**+1.0**
	0.7nm,0.6s,baz=227,slow=6.6,SNR=4.5						
NVAR	**Mina Array Bea**	**150.26**	**9**	PKPbc	**PKiKP**	**05 06 41.8**	**-0.3**
	0.6nm,0.7s,baz=262,slow=1.4,SNR=5.4						

*CNRM **13** 04:49:25.3±1.1, 33°.42N×4°.97W, h4km±7km, Error ellipse: s-maj=7.7km s-min=5.2km az=74.0*
*MDD **13** 04:49:25.5±4.5, 33°.64N×5°.01W, h0km, mb3.0/3, Error ellipse: s-maj=48.3km s-min=38.2km az=76.0, PRXIMO SIN SOLUCIN*

ISC 13 04:49:23.9±1.1, 33°.54N±0°.03×4°.91W±0°.05, h13km±8km, n14, σ1s79/24, Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IFR	**Ifrane**	**0.18**	**262**	*eP*	**Pg**	**04 49 27.8**	**-0.2**
IFR				*es*	**Sg**	**04 49 29.9**	**-1.1**
MD31	**MD31**	**0.69**	**169**	P	**Pg**	**04 49 36.9**	**-0.3**
MD31				S	**Sg**	**04 49 45.3**	**-0.9**
MDT	**Midelt**	**0.77**	**160**	P	**Pg**	**04 49 38.3**	**-0.5**
MDT				S	**Sg**	**04 49 48.1**	**-0.8**
RSA	**Sarsar**	**1.54**	**331**	P	**Pg**	**04 49 54.1**	**+0.7**
RSA				S	**Sg**	**04 50 16.7**	**+3.4**
GOLM	**Goulmima**	**1.83**	**181**	P	**Pg**	**04 49 59.0**	**0.0**
GOLM				S	**Sb**	**04 50 21.1**	**+0.9**
AVE	**Averroes**	**2.10**	**264**	P	**Pn**	**04 49 59.5**	**+0.6**
AVE				S	**Sb**	**04 50 28.5**	**+0.5**
TZRR	**Tazzarine**	**2.80**	**192**	P	**Pn**	**04 50 10.2**	**+1.6**
TZRR				Lg	Lg	04 50 48.3	
OUZM	**OUZ**	**3.06**	**211**	P	**Pn**	**04 50 13.0**	**+1.0**
FIGM	**Figuig**	**3.38**	**114**	P	**Pn**	**04 50 18.9**	**+2.4**
OUK	**Oukaimeden**	**3.41**	**228**	P	**Pn**	**04 50 19.8**	**+2.7**
EMIN	**Mina Concepcio**	**4.45**	**342**	P	**Pn**	**04 50 31.4**	**+0.2**
	0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**04 51 19.4**	**-3.5**
	0.1nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.50**	**333**	P	**Pn**	**04 50 32.1**	**+0.3**
	0.9nm,0.1s,SNR=4.0						
EGRO				S	**Sn**	**04 51 21.3**	**-2.7**
	0.3nm,0.0s,SNR=7.9						
ECAB	**El Cabril**	**4.54**	**355**	P	**Pn**	**04 50 33.5**	**+1.1**
	0.1nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**04 51 23.9**	**-1.3**
	1.4nm,0.2s,SNR=7.2						
EADA	**Adamuz**	**4.62**	**3**	P	**Pn**	**04 50 34.0**	**+0.5**
	0.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**04 51 24.2**	**-3.0**
	0.4nm,0.1s,SNR=7.9						

*TIR **13** 04:55:01.4, 39°.32N×18°.82E, h46km, Md3.5*

ISC 13 04:55:00.2±1.8, 39°.41N±0°.06×18°.85E±0°.05, h9km±12km, n21, σ1s64/36, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCTE	**Santa Cesarea**	**0.72**	**336**	P	**Pn**	**04 55 17.4**	**+0.7**
	baz=341						
SCTE				S	**Sn**	**04 55 29.7**	**+1.8**
	baz=341						
KEK	**Kerkira**	**0.79**	**67**	P	**Pn**	**04 55 18.3**	**+0.7**
	baz=62						
SRN	**Sarande**	**1.00**	**62**	P	**Pn**	**04 55 21.8**	**+1.3**
	baz=58						
SRN				S	**Sn**	**04 55 36.5**	**+1.7**
	baz=58						
IGT	**Igoumenitsa**	**1.15**	**84**	P	**Pn**	**04 55 23.4**	**+0.8**
	baz=79						
IGT				S	**Sn**	**04 55 40.0**	**+1.5**
	baz=79						
VLO	**Vlora**	**1.16**	**25**	P	**Pg**	**04 55 24.6**	**+2.0**
	baz=24						
VLO				S	**Sn**	**04 55 41.9**	**+3.1**
	baz=24						
LSK	**Leskovik**	**1.53**	**61**	P	**Pg**	**04 55 29.3**	**-0.4**
	baz=58						
LSK				S	**Sg**	**04 55 50.2**	**+0.6**
	baz=58						
LKD2	**Lefkada island**	**1.54**	**113**	P	**Pb**	**04 55 28.1**	**-0.8**
	baz=109						
LKD2				S	**Sg**	**04 55 48.6**	**-1.0**
	baz=109						
TIR	**Tirane**	**2.08**	**21**	P	**Pb**	**04 55 37.5**	**-0.7**
	baz=21						
TIR				S	**Sb**	**04 56 04.4**	**+0.2**
	baz=21						
OHR	**Ohrid**	**2.26**	**41**	*i* Pn	**Pb**	**04 55 41.1**	**-0.2**
PHP	**Peshkopia**	**2.57**	**28**	P	**Pb**	**04 55 44.3**	**-2.3**
	baz=27						
PHP				S	**Sb**	**04 56 17.1**	**-1.2**
	baz=27						
PUK	**Puka**	**2.74**	**16**	P	**Pb**	**04 55 47.3**	**-2.2**
	baz=16						
PUK				S	**Sb**	**04 56 21.5**	**-1.8**
	baz=16						
STIP	**Stip**	**3.41**	**47**	*i* Pn	**Pb**	**04 55 57.6**	**-3.3**
VAY	**Valandovo**	**3.42**	**55**	*i* Pn	**Pn**	**04 55 53.9**	**+0.1**
STON	**Ston**	**3.56**	**346**	*ePn*	**Pn**	**04 55 57.3**	**+1.6**
STON				Sn	**Sn**	**04 56 37.0**	**-1.0**
LSTV	**Lastovo**	**3.67**	**337**	Sn	**Sn**	**04 56 39.1**	**-1.4**
MAKA	**Makarska**	**4.11**	**341**	Sn	**Sn**	**04 56 51.4**	**0.0**
RICI	**Ricice**	**4.28**	**343**	*ePn*	**Pn**	**04 56 07.5**	**+1.9**
RICI				Sn	**Sn**	**04 56 54.9**	**-0.8**
KIJV	**Kijevo**	**4.94**	**339**	*ePn*	**Pn**	**04 56 17.6**	**+2.9**
KIJV				Sn	**Sn**	**04 57 11.6**	**-0.4**
MORI	**Morici**	**5.04**	**333**	*ePn*	**Pn**	**04 56 17.8**	**+1.8**
MORI				Sn	**Sn**	**04 57 14.2**	**-0.1**
DUGI	**Dugi Otok**	**5.38**	**329**	*ePn*	**Pn**	**04 56 22.6**	**+1.8**
DUGI				Sn	**Sn**	**04 57 21.1**	**-1.8**
NVLJ	**Novalja**	**5.94**	**331**	*ePn*	**Pn**	**04 56 30.0**	**+1.6**
NVLJ				Sn	**Sn**	**04 57 35.2**	**-1.4**

*NEIC **13** 05:10:37.8±1.8, 18°.7N±0°.1×69°.01W±0°.07, h147km±14km, Error ellipse: s-maj=17.5km s-min=8.7km az=200.0*
*RSPR **13** 05:10:37.2, 19°.18N×68°.70W, h182km±3km, MD3.9/8*
*OSPL **13** 05:10:40.3±9.4, 18°.11N×69°.12W, h116km±104km, ML3.4*

ISC 13 05:10:37.9±1.2, 18°.6N±0°.1×69°.11W±0°.03, h139km±12km, n54, σ1s44/62, 10C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOSC1	**San Cristbal**	**0.97**	**258**	*i* P	**Pn**	**05 10 59.8**	**-1.5**
LOSC1				*eS*	**Sn**	**05 11 15.4**	**-3.8**
LOSC1				IAML		05 11 16.0	
	comp=Z,1µm,1.7s						
SC01	**Santiago de Io**	**1.73**	**298**		**Pn**	**05 11 10.2**	**+1.0**
AGPR	**Aguadilla, PR**	**1.90**	**94**	*eP*	**Pn**	**05 11 11.4**	**+0.2**
AGPR	**Aguadilla, PR**	**1.90**	**94**	*eS*	**Sn**	**05 11 37.3**	**+0.6**
AGPR	**Aguadilla, PR**	**1.90**	**94**		**Pn**	**05 11 10.5**	**-0.7**
AGPR	**Aguadilla, PR**	**1.90**	**94**	*i* P	**Pn**	**05 11 11.7**	**+0.4**
AGPR				*eS*	**Sn**	**05 11 35.0**	**-1.7**
AGPR				IAML		05 11 42.5	
	comp=Z,224nm,0.2s						
MPR	**Mayaguez**	**1.91**	**102**	Pn	**Pn**	**05 11 10.3**	**-1.1**
MPR	**Mayaguez**	**1.91**	**102**	*i* P	**Pn**	**05 11 11.2**	**-0.1**
MPR				IAML		05 11 42.9	
	comp=Z,94nm,0.3s						
LSP	**Las Mesas**	**1.97**	**102**	*eP*	**Pn**	**05 11 12.4**	**+0.3**
LSP	**Las Mesas**	**1.97**	**102**	*eS*	**Sn**	**05 11 40.5**	**+2.2**
LSP	**Las Mesas**	**1.97**	**102**		**Pn**	**05 11 12.4**	**+0.3**
LSP					**Sn**	**05 11 40.5**	**+2.2**
CRPR	**Cabo Rojo, PR**	**1.99**	**107**	*eP*	**Pn**	**05 11 13.6**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.99**	**107**	*eS*	**Sn**	**05 11 42.0**	**+3.3**
CRPR	**Cabo Rojo, PR**	**1.99**	**107**		**Pn**	**05 11 10.7**	**-1.7**
MLPR	**Magueyes Islan**	**2.06**	**108**		**Pn**	**05 11 11.4**	**-1.7**
SDDR	**Presa de Saban**	**2.10**	**280**	Pn	**Pn**	**05 11 14.4**	**+0.8**
SDDR	**Presa de Saban**	**2.10**	**280**	*i* P	**Pn**	**05 11 14.5**	**+0.9**
SDDR				*eS*	**Sn**	**05 11 42.4**	**+1.4**
SDDR				IAML		05 11 47.5	
	comp=Z,173nm,0.3s						
LONE1	**Neyba**	**2.20**	**267**	*eS*	**Pn**	**05 11 15.5**	**+0.7**
LONE1				IAML		05 11 16.0	
	comp=Z,1µm,1.7s						
GBPR	**Guanica, Bosqu**	**2.21**	**106**	*eP*	**Pn**	**05 11 15.6**	**+0.6**
GBPR				*eS*	**Sn**	**05 11 46.3**	**+2.9**
GBPR	**Guanica, Bosqu**	**2.21**	**106**		**Pn**	**05 11 15.6**	**+0.6**
GBPR					**Sn**	**05 11 46.3**	**+2.9**
AOPR	**Arecibo Observ**	**2.25**	**96**	*eP*	**Pn**	**05 11 15.2**	**-0.3**
AOPR	**Arecibo Observ**	**2.25**	**96**	*eS*	**Sn**	**05 11 44.5**	**+0.1**
AOPR	**Arecibo Observ**	**2.25**	**96**		**Pn**	**05 11 15.1**	**-0.5**
OBIP	**Obispado Ponce**	**2.45**	**103**	*eP*	**Pn**	**05 11 18.1**	**+0.2**
OBIP	**Obispado Ponce**	**2.45**	**103**	*eS*	**Sn**	**05 11 50.1**	**+1.5**
OBIP	**Obispado Ponce**	**2.45**	**103**		**Pn**	**05 11 16.6**	**-1.3**
EMPR	**Esperanza - Ma**	**2.45**	**93**	*eP*	**Pn**	**05 11 17.0**	**-0.9**
EMPR	**Esperanza - Ma**	**2.45**	**93**	*eS*	**Sn**	**05 11 47.0**	**-1.7**
EMPR	**Esperanza - Ma**	**2.45**	**93**		**Pn**	**05 11 16.8**	**-1.1**
CELP	**Cerrillos**	**2.46**	**102**	*eP*	**Pn**	**05 11 17.6**	**-0.5**
CELP	**Cerrillos**	**2.46**	**102**	*eS*	**Sn**	**05 11 49.6**	**+0.6**
CELP	**Cerrillos**	**2.46**	**102**		**Pn**	**05 11 17.6**	**-0.5**
CELP					**Sn**	**05 11 49.6**	**+0.6**
SJG	**San Juan**	**2.86**	**100**	*eP*	**Pn**	**05 11 22.1**	**-0.9**
SJG				*eS*	**Sn**	**05 11 55.8**	**-2.0**
SJG	**San Juan**	**2.86**	**100**		**Pn**	**05 11 21.7**	**-1.4**
IGPR	**InterUniversit**	**2.93**	**102**	*eP*	**Pn**	**05 11 23.1**	**-0.9**
IGPR	**InterUniversit**	**2.93**	**102**	*eS*	**Sn**	**05 11 59.6**	**+0.2**
IGPR	**InterUniversit**	**2.93**	**102**		**Pn**	**05 11 22.6**	**-1.4**
PDPR	**Patillas Dam,**	**2.99**	**101**	*eP*	**Pn**	**05 11 23.7**	**-1.1**
PDPR	**Patillas Dam,**	**2.99**	**101**	*eS*	**Sn**	**05 12 00.4**	**-0.5**
PDPR	**Patillas Dam,**	**2.99**	**101**	Pn	**Pn**	**05 11 24.1**	**-0.7**
CBYP	**Canovanas**	**3.11**	**96**	*eP*	**Pn**	**05 11 25.1**	**-1.3**
CBYP	**Canovanas**	**3.11**	**96**	*eS*	**Sn**	**05 12 01.4**	**-2.3**
CBYP	**Canovanas**	**3.11**	**96**	Pn	**Pn**	**05 11 25.0**	**-1.3**
LGNH	**Logne**	**3.32**	**269**	*i* P	**Pn**	**05 11 29.1**	**+0.1**
CUPR	**Culebra, Puert**	**3.65**	**94**		**Pn**	**05 11 31.9**	**-1.4**
CDVI	**St. Croix**	**4.22**	**101**	Pn	**Pn**	**05 11 40.7**	**0.0**
URIC	**Uribia, Colomb**	**7.41**	**202**	*eP*	**Pn**	**05 12 21.0**	**-2.6**
SDV	**Santo Domingo**	**9.78**	**189**		**Pn**	**05 12 57.0**	**+1.5**
OCAC	**Ocana**	**11.09**	**202**	*eP*	**Pn**	**05 13 13.6**	**+0.7**
PAMC	**Pamplona, Colo**	**11.74**	**198**	*eP*	**Pn**	**05 13 22.7**	**+1.1**
PTBC	**PUERTO BERRIO,**	**13.08**	**204**	*eP*	**Pn**	**05 13 36.6**	**-2.1**
RUSC	**La Rusia**	**13.22**	**198**	*eP*	**Pn**	**05 13 41.3**	**+0.4**
HELC	**Santa Helena**	**13.84**	**208**	*eP*	**P**	**05 13 52.3**	**-0.2**
CBOC	**Ciudad Bolivar**	**14.35**	**209**	*eP*	**P**	**05 13 57.5**	**-0.5**

*INET **13** 05:18:09.5, 12°.84N×88°.68W, h29km, ML3.1*
*SNET **13** 05:18:09.6±0.9, 12°.94N×88°.64W, h64km±9km, ML3.7*
*UCR **13** 05:18:10.4±1.1, 13°.02N×88°.63W, h68km±9km, ML3.7, mb3.7(NEIC)*

ISC 13 05:18:08.4±1.3, 12°.90N±0°.09×88°.65W±0°.05, h72km±9km, n50, σ1s07/69, 4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.43**	**10**	*eP*	**Pn**	**05 18 20.9**	**0.0**
ALJI				*eS*	**Sn**	**05 18 30.1**	**+0.1**
ALJI				IAML		05 18 30.7	
	comp=Z,4µm,0.2s						
ALJI	**Alcalda de J**	**0.43**	**10**	*eP*	**Pn**	**05 18 20.9**	**0.0**
ALJI				*eS*	**Sn**	**05 18 30.1**	**+0.1**
ALJI				IAML		05 18 30.7	
	comp=Z,4µm,0.2s						
TECA	**Tecapa**	**0.61**	**14**	*iP*	**Pn**	**05 18 23.1**	**+0.3**
TECA	**Tecapa**	**0.61**	**14**	*iP*	**Pn**	**05 18 23.1**	**+0.3**
LCY	**Lacayo**	**0.63**	**34**	*eP*	**Pn**	**05 18 23.3**	**+0.4**
LCY	**Lacayo**	**0.63**	**34**	*eP*	**Pn**	**05 18 23.3**	**+0.4**
PACA	**Pacayal**	**0.65**	**29**	*eP*	**Pn**	**05 18 23.6**	**+0.5**
PACA	**Pacayal**	**0.65**	**29**	*eP*	**Pn**	**05 18 23.6**	**+0.5**
LFRS	**El Faro**	**0.82**	**331**	*iP*	**Pn**	**05 18 25.4**	**+0.3**
LFRS	**El Faro**	**0.82**	**331**	*iP*	**Pn**	**05 18 25.4**	**+0.3**
LCND	**La Caada**	**0.85**	**61**	*eP*	**Pn**	**05 18 25.8**	**+0.6**
LCND				*eS*	**Sn**	**05 18 38.4**	**+0.8**
LCND				IAML		05 18 40.0	
	comp=Z,3µm,0.3s						
LCND	**La Caada**	**0.85**	**61**	*eP*	**Pn**	**05 18 25.8**	**+0.6**
LCND				*eS*	**Sn**	**05 18 38.4**	**+0.8**
LCND				IAML		05 18 40.0	
	comp=Z,3µm,0.3s						
PAVA	**Las Pavas**	**0.85**	**341**	*eP*	**Pn**	**05 18 26.1**	**+0.6**
PAVA				*eS*	**Sn**	**05 18 39.2**	**+1.2**
PAVA				IAML		05 18 40.8	
	comp=Z,2µm,0.3s						
PAVA	**Las Pavas**	**0.85**	**341**	*eP*	**Pn**	**05 18 26.1**	**+0.6**
PAVA				*eS*	**Sn**	**05 18 39.2**	**+1.2**
PAVA				IAML		05 18 40.8	
	comp=Z,2µm,0.3s						
LBRS	**Las Brisas**	**0.92**	**335**	*eP*	**Pn**	**05 18 27.0**	**+0.9**
LBRS	**Las Brisas**	**0.92**	**335**	*eP*	**Pn**	**05 18 27.0**	**+0.9**
SNET	**Serv Nac Est T**	**0.96**	**324**	*eP*	**Pn**	**05 18 26.8**	**+0.1**
SNET				*eS*	**Sn**	**05 18 40.5**	**+0.2**
SNET				IAML		05 18 41.8	
	comp=Z,2µm,0.2s						
SNET	**Serv Nac Est T**	**0.96**	**324**	*eP*	**Pn**	**05 18 26.8**	**+0.1**
SNET				*eS*	**Sn**	**05 18 40.5**	**+0.2**
SNET				IAML		05 18 41.8	
	comp=Z,2µm,0.2s						
SNET	**Serv Nac Est T**	**0.96**	**324**		**Pn**	**05 18 26.4**	**-0.3**
OPAM	**Oficina de Pla**	**0.97**	**327**	*eP*	**Pn**	**05 18 27.3**	**+0.6**
OPAM				*eS*	**Sn**	**05 18 40.9**	**+0.6**
OPAM				IAML		05 18 42.4	
	comp=Z,4µm,0.1s						
OPAM	**Oficina de Pla**	**0.97**	**327**	*eP*	**Pn**	**05 18 27.3**	**+0.6**
OPAM				*eS*	**Sn**	**05 18 40.9**	**+0.6**
OPAM				IAML		05 18 42.4	
	comp=Z,4µm,0.1s						
BOQS	**Boqueron**	**1.03**	**324**	*eP*	**Pn**	**05 18 28.5**	**+0.9**
BOQS	**Boqueron**	**1.03**	**324**	*eP*	**Pn**	**05 18 28.5**	**+0.9**
CSGN	**Cosiguina Volc**	**1.07**	**86**	Pn	**Pn**	**05 18 28.9**	**+1.0**
CEDA	**San Andres**	**1.15**	**321**	*eP*	**Pn**	**05 18 29.9**	**+0.9**
CEDA				*eS*	**Sn**	**05 18 45.6**	**+1.2**
CEDA	**San Andres**	**1.15**	**321**	*eP*	**Pn**	**05 18 29.9**	**+0.9**
CEDA				*eS*	**Sn**	**05 18 45.6**	**+1.2**
TACO	**Tacachico**	**1.27**	**327**	*eP*	**Pn**	**05 18 31.2**	**+0.7**
TACO				*eS*	**Sn**	**05 18 47.7**	**+0.7**
TACO	**Tacachico**	**1.27**	**327**	*eP*	**Pn**	**05 18 31.2**	**+0.7**
TACO				*eS*	**Sn**	**05 18 47.7**	**+0.7**
SBLS	**San Blas**	**1.33**	**315**	*eP*	**Pn**	**05 18 33.3**	**+1.8**
SBLS	**San Blas**	**1.33**	**315**	*eP*	**Pn**	**05 18 33.3**	**+1.8**
RTR	**El Retiro**	**1.39**	**316**	*eP*	**Pn**	**05 18 33.8**	**+1.7**
RTR	**El Retiro**	**1.39**	**316**	*eP*	**Pn**	**05 18 33.8**	**+1.7**
NUBE	**Las Nubes**	**1.48**	**312**	*eP*	**Pn**	**05 18 34.5**	**+1.1**
NUBE				*eS*	**Sn**	**05 18 53.4**	**+1.2**
NUBE				IAML		05 18 55.3	
	comp=N,958nm,0.2s						
NUBE	**Las Nubes**	**1.48**	**312**	*eP*	**Pn**	**05 18 34.5**	**+1.1**
NUBE				*eS*	**Sn**	**05 18 53.4**	**+1.2**
NUBE				IAML		05 18 55.3	
	comp=N,958nm,0.2s						
CRIN	**San Cristobal**	**1.57**	**97**		**Pn**	**05 18 35.9**	**+1.4**
CRIN				Sn	**Sn**	**05 18 55.9**	**+1.7**
MTO3	**Montecristo**	**1.64**	**335**	*eP*	**Pn**	**05 18 36.7**	**+1.1**
MTO3	**Montecristo**	**1.64**	**335**	*eP*	**Pn**	**05 18 36.7**	**+1.1**
MTO3	**Montecristo**	**1.64**	**335**		**Pn**	**05 18 35.9**	**-0.8**
MTO3	**Montecristo**	**1.64**	**335**		**Pn**	**05 18 35.4**	**-0.1**
MTO3				Sn	**Sn**	**05 18 54.5**	**-1.5**
TGUH	**Tegucigalpa,Un**	**1.77**	**49**		**Pn**	**05 18 38.2**	**+1.1**
TGUH				Sn	**Sn**	**05 19 01.0**	**+2.1**
ESQI	**Esquipulas**	**1.78**	**338**		**Pn**	**05 18 39.0**	**+3.7**
ESQI	**Esquipulas**	**1.78**	**338**		**Pn**	**05 18 39.0**	**+1.7**
CNGN	**Cerro Negro**	**1.95**	**102**	*eP*	**Pn**	**05 18 40.3**	**+0.9**
CNGN	**Cerro Negro**	**1.95**	**102**	*eP*	**Pn**	**05 18 40.3**	**+0.9**
MATN	**Matagalpa**	**2.66**	**89**		**Pn**	**05 18 49.8**	**+0.7**
ACON	**Acoyapa**	**3.52**	**105**	Pn	**Pn**	**05 19 01.0**	**+0.3**
ESPN	**Las Esperanzas**	**4.31**	**99**	Pn	**Pn**	**05 19 11.4**	**0.0**
TEIG	**Tepich**	**7.29**	**3**	Pn	**Pn**	**05 19 54.5**	**+2.1**
Y59A	**Loris**	**22.80**	**21**	P	**P**	**05 23 03.7**	**-1.5**
LCAR	**Lake Charles**	**23.18**	**355**	P	**P**	**05 23 06.1**	**-2.8**

*MDD **13** 05:18:14.4±2.4, 37°.21N×13°.49W, h0km, mb3.5/6, Error ellipse: s-maj=27.3km s-min=19.0km az=175.0, PRXIMO SOLUCIN POBRE*
*INMG **13** 05:18:16.4±1.0, 37°.13N×13°.88W, h10km, ML2.3, Error ellipse: s-maj=6.7km s-min=6.7km az=45.0*

ISC 13 05:18:17.2±4.2, 37°.3N±0°.1×13°.2W±0°.2, h10km, n34, σ0s82/56, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.53**	**91**	P	**Pn**	**05 19 12.0**	**0.0**
	1.4nm,0.2s,SNR=7.9						
PFVI				S

1.7nm,0.7s,SNR=7.9

THE ***13*** *05:24:43.2, 39.29N× 18.75E, h5km± 1km, ML3.3/13, Error ellipse: s-maj=2.5km s-min=0.8km az=308.0*

ISC 13 05:24:44.7±1.5, 39.33N±0.05× 18.78E±0.04, h17km±10km, n33, σ1972/55, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.87**	**64**	P	**Pg**	**05 25 00.1**	**-1.6**
KEK				S	**Sb**	**05 25 14.4**	**+1.6**
	2μm,0.7s						
SRN	**Sarande**	**1.09**	**59**	P	**Pg**	**05 25 04.1**	**-1.7**
SRN				S	**Sb**	**05 25 20.3**	**+1.3**
	870nm,0.8s						
IGT	**Igoumenitsa**	**1.22**	**80**	P	**Pg**	**05 25 05.7**	**-2.5**
IGT				S	**Sg**	**05 25 23.3**	**-0.8**
	678nm,0.6s						
TSLK	**Tsoukalades, L**	**1.54**	**108**	P	**Pn**	**05 25 11.0**	**-0.4**
TSLK				S	**Sn**	**05 25 31.9**	**+0.8**
	968nm,0.5s						
LKD2	**Lefkada island**	**1.56**	**110**	P	**Pn**	**05 25 10.9**	**-0.8**
LKD2				S	**Sb**	**05 25 32.8**	**+0.3**
	1μm,0.5s						
NYDR	**Nydri-Lefkada**	**1.61**	**112**	P	**Pn**	**05 25 11.3**	**-1.1**
NYDR				S	**Sn**	**05 25 33.4**	**+0.6**
	888nm,0.5s						
EVGI	**Lefkada island**	**1.62**	**115**	P	**Pn**	**05 25 11.5**	**-1.0**
EVGI				S	**Sn**	**05 25 33.8**	**+0.7**
	245nm,0.5s						
LSK	**Leskovik**	**1.62**	**59**	P	**Pn**	**05 25 12.3**	**-0.3**
LSK				S	**Sb**	**05 25 35.3**	**+0.8**
	590nm,0.7s						
JAN	**Janina**	**1.63**	**78**	P	**Pn**	**05 25 12.4**	**-0.3**
JAN				S	**Sn**	**05 25 35.2**	**+1.8**
	622nm,0.4s						
FSK	**Fiskardo**	**1.64**	**121**	P	**Pn**	**05 25 11.5**	**-1.2**
FSK				S	**Sn**	**05 25 33.7**	**+0.3**
	688nm,0.5s						
DMLN	**Damoulianata-K**	**1.65**	**131**	P	**Pn**	**05 25 12.1**	**-0.9**
DMLN				S	**Sb**	**05 25 34.7**	**-0.6**
	2μm,0.5s						
TAR1	**Taranto**	**1.66**	**316**	*e*Pn	**Pn**	**05 25 13.5**	**+0.4**
TAR1				Sn	**Sg**	**05 25 44.1**	**+5.9**
KEF5	**Kardakata, Kep**	**1.68**	**128**	P	**Pn**	**05 25 12.2**	**-1.2**
KEF5				S	**Sn**	**05 25 35.2**	**+0.6**
	3μm,0.6s						
VLS	**Valsamata**	**1.82**	**129**	P	**Pn**	**05 25 14.2**	**-1.1**
VLS				S	**Sn**	**05 25 39.1**	**+1.1**
	538nm,0.5s						
PDO	**Prodromos**	**2.01**	**111**	P	**Pn**	**05 25 17.5**	**-0.3**
PENT	**Pentalofos**	**2.01**	**64**	P	**Pn**	**05 25 18.7**	**+0.7**
OHR	**Ohrid**	**2.35**	**40**	*i* Pn	**Pn**	**05 25 23.2**	**+0.5**
ANX	**Ano Chora**	**2.55**	**106**	P	**Pn**	**05 25 26.3**	**+0.9**
EFP	**Efpalio**	**2.60**	**109**	P	**Pn**	**05 25 26.5**	**+0.5**
STIP	**Stip**	**3.51**	**47**	*i* Pn	**Pn**	**05 25 41.2**	**+2.7**
VAY	**Valandovo**	**3.51**	**54**	*i* Pn	**Pn**	**05 25 38.2**	**-0.3**
STON	**Ston**	**3.63**	**347**	*e*Pn	**Pn**	**05 25 40.1**	**0.0**
STON				Sn	**Sn**	**05 26 19.4**	**-3.2**
LSTV	**Lastovo**	**3.72**	**338**	*e*Pn	**Pn**	**05 25 41.5**	**+0.1**
LSTV				Sn	**Sn**	**05 26 21.8**	**-3.0**
MAKA	**Makarska**	**4.17**	**342**	*e*Pn	**Pn**	**05 25 48.0**	**+0.4**
MAKA				Sn	**Sn**	**05 26 33.7**	**-2.2**
RICI	**Ricice**	**4.34**	**344**	*e*Pn	**Pn**	**05 25 50.8**	**+0.8**
RICI				Sn	**Sn**	**05 26 39.2**	**-1.0**
KIJV	**Kijevo**	**5.00**	**340**	*e*Pn	**Pn**	**05 25 60.0**	**+1.0**
KIJV				Sn	**Sn**	**05 26 54.8**	**-1.6**
MORI	**Morici**	**5.09**	**334**	*e*Pn	**Pn**	**05 26 01.2**	**+1.1**
MORI				Sn	**Sn**	**05 26 56.9**	**-1.6**
DUGI	**Dugi Otok**	**5.43**	**330**	*e*Pn	**Pn**	**05 26 05.5**	**+0.6**
DUGI				Sn	**Sn**	**05 27 04.6**	**-2.3**
NVLJ	**Novalja**	**5.99**	**332**	*e*Pn	**Pn**	**05 26 13.1**	**+0.6**
NVLJ				Sn	**Sn**	**05 27 18.1**	**-2.5**
OBKA	**Obir**	**7.82**	**338**	*e*Pn	**Pn**	**05 26 41.4**	**+3.7**
	0.9nm,0.2s						
SOKA	**Soboth**	**7.84**	**341**	*e*Pn	**Pn**	**05 26 38.5**	**+0.4**
	1.7nm,0.3s						
MYKA	**Terra Mystica**	**8.21**	**334**	*i* Pn	**Pn**	**05 26 46.9**	**+3.7**
	1.2nm,0.1s						
MOA	**Molln**	**9.12**	**340**	*i* Pn	**Pn**	**05 26 56.4**	**+0.8**
	1.1nm,0.2s						

DJA 13 05:40:46.6±0.3, 10°S±3°× 11°6E±°, h10km, M3.6/9, mb4.0/3, MLv3.4/9, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWSI	**Taliwang, Sumb**	**1.31**	**36**	P	Pb	05 41 11.2	-0.1
TWSI				S	Sb	05 41 26.5	-1.7
PLAI	**Plampang**	**1.91**	**59**	P	Pn	05 41 20.2	+0.9
PLAI				S	Sn	05 41 42.2	-1.2
SRBI	**Singaraja**	**1.93**	**333**	P	Pn	05 41 20.0	+0.5
JAGI	**Jajag, Banyuwa**	**2.35**	**304**	P	Pn	05 41 26.4	+1.1
JAGI				S	Sn	05 41 52.8	-1.4
GMJI	**Gumukmas**	**3.04**	**300**	P	Pn	05 41 36.0	+1.2
GMJI				S	Sn	05 42 11.4	0.0
WBSI	**Waikabubak, Su**	**3.24**	**87**	P	Pn	05 41 38.2	+0.6
WBSI				S	Sn	05 42 16.1	-0.2
EDFI	**Ende, Flores**	**5.61**	**80**	P	Pn	05 42 10.6	+0.4
	0.0nm2.6nm,0.5s						

IDC 13 05:44:57.9±1.7, 2.82N× 124.18E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/28, mbtmp3.6/5, Error ellipse: s-maj=142.9km s-min=24.6km az=65.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.83**	**176**	P	P	05 49 41.7	+0.4
	1.3nm,0.9s,baz=358,slow=11,SNR=1.5						
WRA	**Warramunga Arr**	**24.72**	**157**	P	P	05 50 21.5	+0.3
	0.4nm,0.3s,baz=334,slow=9.7,SNR=17						
ASAR	**Alice Springs**	**27.98**	**161**	P	P	05 50 50.2	-0.3
	0.1nm,0.3s,baz=340,slow=7.9,SNR=3.1						
STKA	**Stephens Creek**	**38.27**	**156**	P	P	05 52 19.6	-0.5
	0.8nm,0.4s,baz=342,slow=13,SNR=2.8						
MKAR	**Makanchi Array**	**56.88**	**327**	P	P	05 54 44.6	0.0
	0.6nm,0.5s,baz=122,slow=9.0,SNR=5.0						

DJA ***13*** *06:22:47.7±1.6, 0°S±5°× 12°4E±°, h19km±13km, M3.4/6, MLv3.4/6*

IDC ***13*** *06:22:48.7±1.7, 1°.08S× 124°.21E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/35, mbtmp3.1/3, Error ellipse: s-maj=213.5km s-min=26.1km az=62.0*

ISC 13 06:22:44.9±1.3, 0°.24S±0°.08× 124°.49E±0°.08, h10km, n8, σ1§78/8, mb3.1/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.95**	**328**	P	**Pg**	**06 23 03.4**	**+0.1**
GTOI	**Gorontalo**	**1.72**	**300**	P	**Pn**	**06 23 15.8**	**+0.9**
GTOI				S	**Sn**	**06 23 34.3**	**-2.6**
LUWI	**Luwuk**	**1.90**	**245**	S	**Sb**	**06 23 44.6**	**+1.2**
APSI	**Ampana**	**2.92**	**257**	P	**Pn**	**06 23 32.7**	**+1.3**
SGSI	**Sangihe**	**4.03**	**15**	P	**Pn**	**06 23 48.2**	**+1.4**
WRA	**Warramunga Arr**	**21.83**	**154**	P	**P**	**06 27 36.0**	**-1.7**
	0.5nm,0.7s,baz=330,slow=12,SNR=5.8						
ASAR	**Alice Springs**	**25.02**	**159**	P	**P**	**06 28 08.7**	**-0.6**
	0.3nm,0.7s,baz=332,slow=9.5,SNR=4.0						
MKAR	**Makanchi Array**	**59.60**	**328**	P	P	06 32 58.3	+9.2
	0.2nm,0.5s,baz=133,slow=8.1,SNR=3.1						

NEIC ***13*** *06:27:37.2±1.9, 20°.28S±0°.07× 169°.4E±0°.1, h54km±6km, mb4.6/31, Error ellipse: s-maj=16.6km s-min=9.7km az=99.0*

IDC ***13*** *06:27:38.1±1.0, 20°.40S× 169°.27E, h55km±6km, mb4.2/9, mb1 4.4/10, mb1mx4.1/33, mbtmp4.5/10, MS3.2/9, Ms1 3.2/9, ms1mx3.0/27, Error ellipse: s-maj=26.5km s-min=12.4km az=139.0*

ISC 13 06:27:37.4±0.5, 20.32S±0°.07× 169.33E±0°.08, h55km, n83, σ1§02/84, mb4.6/23, MS3.4/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.21**	**237**	P	**Pn**	**06 28 25.6**	**+0.1**
	22nm,0.3s,baz=109,slow=11,SNR=947						
DZM				S	**Sn**	**06 29 00.8**	**-1.7**
	198nm,0.3s,baz=102,slow=19,SNR=19						
DZM				LR	LR	06 29 05.3	
	comp=Z,74nm,19.5s,baz=57,slow=28						
DZM	**Mont Dzumac**	**3.21**	**237**	*e*Pn	**Pn**	**06 28 25.6**	**+0.1**
	277nm,1.1s						
DZM				*e*Sn	**Sn**	**06 28 59.6**	**-2.9**
	550nm,0.2s						
DZM				*e*LR	LR	06 29 07.7	
	comp=Z,789nm,26.5s						
DZM	**Mont Dzumac**	**3.21**	**237**	Pn	**Pn**	**06 28 25.8**	**+0.3**
DZM				Sn	**Sn**	**06 29 01.9**	**-0.6**
SANVU	**Saraoutou**	**5.26**	**337**	Pn	**Pn**	**06 28 52.7**	**-0.8**
HNR	**Honiara**	**14.12**	**319**	LR	LR	06 34 31.7	
	comp=Z,71nm,20.6s,baz=142,slow=29						
EIDS	**Eidsvold**	**17.55**	**250**	P	**Pn**	**06 31 37.4**	**-0.9**
ARMA	**Armidale**	**18.87**	**234**		**P**	**06 31 52.5**	**-0.8**
ARMA				IAmb	IAmb	06 31 58.6	
	comp=Z,49nm,1.5s						
BKZ	**Black Stump Fm**	**19.77**	**163**	P	**Pn**	**06 32 05.4**	**+0.5**
BKZ				IAmb	IAmb	06 32 06.7	
	comp=Z,22nm,1.1s						
CTA	**Charters Tower**	**21.66**	**267**	P	**P**	**06 32 25.4**	**+1.9**
	comp=Z,15nm,0.8s,baz=94,slow=11,SNR=18						
CTAO	**Charters Tower**	**21.66**	**267**	P	**P**	**06 32 25.7**	**+2.2**
CTAO				IAmb	IAmb	06 32 27.6	
	comp=Z,14nm,0.7s						
KRVT	**Keravat (AS076**	**23.18**	**311**	LR	LR	06 41 17.6	
	comp=Z,58nm,18.0s,baz=106,slow=35						
PMG	**Port Moresby**	**23.99**	**294**	P	**P**	**06 32 47.6**	**+0.6**
	comp=Z,33nm,0.9s,baz=124,slow=7.3,SNR=5.6						
PMG				LR	LR	06 41 29.4	
	comp=Z,73nm,18.8s,baz=202,slow=35						
PMG	**Port Moresby**	**23.99**	**294**	IAmb	IAmb	06 32 49.1	
	comp=Z,24nm,0.8s						
TOO	**Toolangi**	**26.91**	**225**	P	**P**	**06 33 15.1**	**+1.6**
STKA	**Stephens Creek**	**27.36**	**240**	P	**P**	**06 33 18.5**	**+1.0**
	comp=Z,5.7nm,0.7s,baz=87,slow=11,SNR=14						
STKA				LR	LR	06 43 19.0	
	comp=Z,74nm,21.5s,baz=27,slow=34						
STKA	**Stephens Creek**	**27.36**	**240**	P	**P**	**06 33 18.7**	**+1.2**
RAR	**Rarotonga**	**28.88**	**97**	LR	LR	06 45 50.0	
	comp=Z,15nm,18.1s,baz=234,slow=38						
BBOO	**Buckleboo**	**32.12**	**240**	P	**P**	**06 34 00.3**	**+0.6**
BBOO				IAmb	IAmb	06 34 10.7	
	comp=Z,16nm,1.2s						
WR0	**Warramunga Arr**	**32.63**	**264**	P	**P**	**06 34 03.6**	**-0.6**
WR0				IAmb	IAmb	06 34 04.4	
	comp=Z,8.1nm,1.1s						
WB0	**Warramunga Arr**	**32.79**	**265**	P	**P**	**06 34 04.8**	**-0.9**
WB2	**Warramunga Arr**	**32.81**	**264**	P	**P**	**06 34 05.2**	**-0.7**
WB2				IAmb	IAmb	06 34 06.1	
	comp=Z,9.7nm,1.2s						
WRAB	**Tennant Creek**	**32.81**	**265**	P	**P**	**06 34 05.3**	**-0.6**
WRA	**Warramunga Arr**	**32.82**	**264**	P	**P**	**06 34 05.2**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=96,slow=8.3,SNR=62						
WRA				pP	**pP**	**06 34 18.4**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=93,slow=8.8,SNR=8.5						
WRA				PcP	**PcP**	**06 36 49.7**	**-0.3**
	comp=Z,0.9nm,1.1s,baz=97,slow=3.4,SNR=3.3						
WRA				LR	LR	06 46 42.0	
	comp=Z,108nm,19.5s,baz=105,slow=35						
WRA	**Warramunga Arr**	**32.82**	**264**	P	**P**	**06 34 05.2**	**-0.8**
AS31	**Alice Springs**	**32.97**	**258**	P	**P**	**06 34 07.4**	**+0.2**
AS31				IAmb	IAmb	06 34 07.8	
	comp=Z,6.0nm,0.5s						
ASAR	**Alice Springs**	**32.97**	**258**	P	**P**	**06 34 07.1**	**-0.1**
	comp=Z,8.2nm,0.5s,baz=85,slow=9.2,SNR=139						
ASAR				pP	**pP**	**06 34 20.8**	**+0.8**
	comp=Z,5.7nm,0.8s,baz=81,slow=8.9,SNR=9.8						
ASAR				PcP	**PcP**	**06 36 49.7**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=109,slow=2.5,SNR=4.1						
ASAR				LR	LR	06 47 15.0	
	comp=Z,91nm,19.1s,baz=100,slow=36						
ASAR	**Alice Springs**	**32.97**	**258**	P	**P**	**06 34 07.4**	**+0.2**
MTN	**Manton Dam**	**37.29**	**275**	P	**P**	**06 34 44.5**	**+0.1**
TBI	**Tubuai**	**38.28**	**102**	*e*LR	LR	06 45 19.9	
	comp=Z,136nm,29.8s						
FORT	**Forrest**	**38.48**	**246**	P	**P**	**06 34 53.9**	**-0.4**
KNRA	**Kununurra**	**38.79**	**270**	P	**P**	**06 34 57.1**	**0.0**
KNRA				IAmb	IAmb	06 34 57.6	
	comp=Z,9.4nm,0.8s						
PPT2	**Papeete2**	**38.89**	**93**	*e*LR	LR	06 45 33.6	
	comp=Z,131nm,28.5s						
PPT	**Papeete**	**38.89**	**93**	LR	LR	06 46 37.3	
	comp=Z,56nm,20.1s,baz=245,slow=29						
FAKI	**Fak Fak**	**40.08**	**291**	P	**P**	**06 35 07.2**	**-0.7**
FAKI				IAmb	IAmb	06 35 08.0	
	comp=Z,9.6nm,0.9s						
FITZ	**Fitzroy Crossi**	**41.23**	**265**	P	**P**	**06 35 18.0**	**+0.7**
PSA00	**Pilbara Seismi**	**46.08**	**259**	P	**P**	**06 35 55.2**	**-1.0**
NWAO	**Narrogin (SRO)**	**47.81**	**244**	P	**P**	**06 36 08.3**	**-1.3**
VNDA	**Vanda**	**57.36**	**182**	P	**P**	**06 37 19.6**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=352,slow=7.5,SNR=4.7						
VNDA	**Vanda**	**57.36**	**182**	P	**P**	**06 37 20.0**	**+0.5**
QSPA	**South Pole Qui**	**69.74**	**180**	P	**P**	**06 38 41.9**	**+0.4**
QSPA				IAmb	IAmb	06 38 42.5	
	comp=Z,7.3nm,0.9s						
NJ2	**Nanjing**	**71.05**	**316**	*e*P	**P**	**06 38 51.1**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MAW	**Mawson**	**77.47**	**202**	P	**P**	**06 39 27.5**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=135,slow=7.1,SNR=3.5						
MAW	**Mawson**	**77.47**	**202**	P	**P**	**06 39 27.1**	**+0.5**
XAN	**Xi'an**	**78.91**	**313**	P	**P**	**06 39 35.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,120nm,3.8s						
CMAR	**Chiang Mai Arr**	**79.03**	**294**	P	**P**	**06 39 37.5**	**+1.4**
	comp=Z,4.0nm,0.8s,baz=133,slow=4.0,SNR=15						
CHTO	**Chiang Mai**	**79.18**	**295**	P	**P**	**06 39 37.9**	**+0.9**
CHTO				IAmb	IAmb	06 39 38.9	
	comp=Z,6.4nm,0.7s						
BELA	**Belgrano 2**	**81.02**	**175**	P	**P**	**06 39 45.4**	**-0.5**
HHC	**Hu-ho-hao-te**	**81.10**	**319**	*e*P	**P**	**06 39 47.5**	**+0.6**
HHC				pmax	pmax		
	comp=Z,15nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,5.6s						
PASC	**Pasadena Art C**	**87.64**	**52**	P	**P**	**06 40 20.4**	**+0.3**
MWC	**Mount Wilson**	**87.76**	**52**	P	**P**	**06 40 18.5**	**-2.4**
ULN	**Ulaanbaatar**	**87.78**	**323**	P	**P**	**06 40 20.9**	**+0.3**
ULN				IAmb	IAmb	06 40 21.8	
	comp=Z,4.8nm,1.0s						
SNAA	**Sanae**	**88.09**	**182**	P	**P**	**06 40 20.6**	**-1.1**
SNAA	**Sanae**	**88.09**	**182**	P	**P**	**06 40 21.0**	**-0.7**
SNAA				IAmb	IAmb	06 40 37.9	
	comp=Z,7.0nm,1.4s						
SONM	**Songino Array**	**88.14**	**323**	P	**P**	**06 40 22.9**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=137,slow=5.3,SNR=15						
SONM				pP	**pP**	**06 40 39.4**	**+1.8**
	comp=Z,2.0nm,1.0s,baz=141,slow=5.1,SNR=4.4						
SONM	**Songino Array**	**88.14**	**323**	P	**P**	**06 40 22.5**	**+0.3**
VNA3	**Neumayer Olymp**	**88.67**	**180**	P	**P**	**06 40 23.3**	**-1.1**
VNA2	**Neumayer--Watz**	**88.97**	**181**	P	**P**	**06 40 25.0**	**-0.7**
	baz=170,slow=4.8						
VNA1	**Neumayer--Stat**	**89.26**	**181**	P	**P**	**06 40 26.0**	**-1.0**
ILAR	**Eielson Array**	**91.23**	**17**	P	**P**	**06 40 33.9**	**-2.3**
	comp=Z,0.4nm,0.8s,baz=234,slow=5.1,SNR=4.5						
WMQ	**Urumqi**	**98.02**	**314**	*e*P	Pdif	06 41 08.8	+0.9
ARCES	**ARCESS Array B**	**126.13**	**345**	PKP	**PKPdf**	**06 46 31.9**	**-1.0**
	comp=Z,4.3nm,1.0s,baz=80,slow=2.2,SNR=11						
FINES	**FINESS Array B**	**131.62**	**337**	PKP	**PKPdf**	**06 46 43.6**	**0.0**
	comp=Z,1.1nm,0.8s,baz=104,slow=4.4,SNR=5.8						
PRU	**Pruhonice**	**144.27**	**332**	*e*PKP	**PKPab**	**06 47 05.2**	**+0.1**
PBCC	**Pribram**	**144.73**	**332**	*e*PKP	**PKPab**	**06 47 07.2**	**+0.3**
NKC	**Novy Kostel**	**144.98**	**334**	*e*PKP	**PKPab**	**06 47 07.5**	**-0.3**
CONA	**Conrad Observa**	**145.11**	**328**	*e*P	**PKPbc**	**06 47 08.4**	**+0.1**
	comp=Z,10nm,0.6s,SNR=8.7						
KHC	**Kasperske Hory**	**145.33**	**332**	*e*PKP	**PKPbc**	**06 47 08.8**	**-0.1**
GERES	**GERESS Array B**	**145.48**	**331**	PKPbc	**PKPdf**	**06 47 09.2**	**-0.2**
	comp=Z,9.1nm,0.7s,baz=44,slow=4.1,SNR=52						
GERES				pPKPbc	**pPKPdf**	**06 47 26.4**	**+1.0**
	comp=Z,2.4nm,0.7s,baz=20,slow=4.3,SNR=4.2						
GERES	**GERESS Array B**	**145.48**	**331**		**PKPdf**	**06 47 08.9**	**-0.4**
GRF	**Grafenberg Arr**	**145.90**	**334**	*e*PKP	**PKPdf**	**06 47 10.7**	**+0.8**
	baz=38,slow=2.8						
MOA	**Molln**	**145.94**	**330**	*e*P	**PKPdf**	**06 47 11.0**	**+0.9**
	comp=Z,2.9nm,0.5s						
SOKA	**Soboth**	**146.37**	**327**	*i* P	**PKPdf**	**06 47 11.4**	**+0.4**
	comp=Z,4.3nm,0.7s						
VNDS	**Vrh nad Dolski**	**146.93**	**327**	*i* PKPbc	**PKPdf**	**06 47 13.3**	**+1.5**
MYKA	**Terra Mystica**	**147.10**	**329**	*e*P	**PKPdf**	**06 47 13.2**	**+1.0**
	comp=Z,3.9nm,0.5s						
GBAS	**Gorenja Brezov**	**147.18**	**327**	*i* PKPbc	**PKPdf**	**06 47 13.9**	**+1.6**
CEY	**Cerknica**	**147.32**	**327**	*i* PKPbc	**PKPdf**	**06 47 14.4**	**+1.9**
ABTA	**Abfaltersbach**	**147.56**	**330**	*e*P	**PKPdf**	**06 47 14.5**	**+1.5**
	comp=Z,5.0nm,0.5s						
WTTA	**Wattenberg**	**147.58**	**331**	*e*P	**PKPbc**	**06 47 15.2**	**-0.6**
	comp=Z,1.8nm,0.4s						
MOTA	**Moosalm**	**147.76**	**332**	*e*P	**PKPdf**	**06 47 15.3**	**+1.9**
	comp=Z,5.8nm,0.6s,SNR=4.2						
WLF	**Walferdange**	**147.80**	**339**	PKiKP	**PKPbc**	**06 47 16.5**	**+0.5**
SQTA	**Sankt Quirin**	**147.81**	**332**	*i* P	**PKPbc**	**06 47 15.7**	**-0.6**
	comp=Z,4.4nm,0.4s						
DOU	**Dourbes**	**147.91**	**341**	PKiKP	**PKPbc**	**06 47 15.9**	**-0.4**
FETA	**Feichten**	**148.17**	**332**	*i* P	**PKPbc**	**06 47 16.8**	**-0.6**
	comp=Z,3.2nm,0.5s						

KRSC 13 06:28:54.3±1.7, 50.28N× 159.11E, h40km±25km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**1.67**	**337**	*e*P	Pn	06 29 23.1	+2.1
KDTR				*e*S	Sn	06 29 43.7	+2.6
PAU	**Pauzhetka**	**1.88**	**310**	*e*P	Pn	06 29 26.6	+2.7
PAU				*e*S	Sn	06 29 49.5	+3.1
SKR	**Severo-Kuril's**	**1.96**	**283**	*e*P	Pn	06 29 26.7	+1.8
SKR				*e*S	Sn	06 29 49.7	+1.5
RUS	**Russkaya**	**2.19**	**350**	*e*P	Pn	06 29 30.2	+2.0
RUS				*e*S	Sn	06 29 55.7	+1.7
GRL	**Gorelyy**	**2.37**	**344**	*e*P	Pn	06 29 34.0	+3.2
GRL				*e*S	Sn	06 30 02.0	+3.4
KRMR	**Karymshinskiy**	**2.63**	**347**	*e*S	Sn	06 30 08.9	+4.1
SPN	**Mys Shipunski**	**2.88**	**11**	*e*P	Pn	06 29 40.5	+2.8
SPN				*e*S	Sn	06 30 13.1	+2.0
SMAR	**Somma**	**3.00**	**356**	*e*P	Pn	06 29 43.9	+4.4
AVH	**Avacha**	**3.00**	**356**	*e*P	Pn	06 29 43.5	+4.1
KOK	**Koryaka**	**3.03**	**355**	*e*P	Pn	06 29 44.0	+4.1
KRER	**Koryakskii**	**3.04**	**356**	*e*P	Pn	06 29 43.0	+3.6
KRX	**Arik**	**3.10**	**355**	*e*P	Pn	06 29 44.8	+4.0
KZV	**Kizimen**	**4.90**	**8**	*e*P	Pn	06 30 09.3	+3.8
TUMR	**Tumrok**	**5.05**	**7**	*e*P	Pn	06 30 12.5	+4.9

NEIC ***13*** *06:36:07.6, 41°.91N× 119°.68W, h6km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=3.43; Mθθ=1.99; Mφφ=5.42; Mrθ=-3.11; Mrφ=1.18; Mθφ=-3.44; Fault plane solution: M0=6.74000×10^15 NP1:φs=35.78000°, δ=71.24000°, λ=-62.06000°. NP2:φs=157.01000°, δ=33.23000°, λ=-144.07000°. Principal axes: T 7.1243, Plg=21.0000°, Azm=105.0000°; N -0.8523, Plg=26.0000°, Azm=206.0000°; P -6.2720, Plg=55.0000°, Azm=341.0000°;*

IDC ***13*** *06:36:07.1±0.4, 41°.92N× 119°.69W, h0km, mb4.3/13, mb1 4.3/22, mb1mx4.2/50, mbtmp4.1/22, ML3.5/9, MS3.7/22, Ms1 3.7/22, ms1mx3.6/45 Error ellipse: s-maj=6.8km s-min=6.1km az=33.0*

REN ***13*** *06:36:07.5±2.5, 41°.90N±0°.04× 119°.62W±0°.05, h0km±5km, ML4.6/7, mb4.8/37(NEIC), ML4.7/99(SEA), Mwr4.5/135(NEIC), Mww4.6(NEIC), Error ellipse: s-maj=7.0km s-min=4.8km az=221.0*

ANF ***13*** *06:36:07.5±0.1, 41°.88N× 119°.75W, h0km, ML4.8/24, Error ellipse: s-maj=2.4km s-min=1.7km az=24.0*

SEA ***13*** *06:36:07.2±3.0, 41°.77N±0°.04× 119°.63W±0°.05, h0km±5km, Error ellipse: s-maj=6.2km s-min=4.2km az=211.0*

NEIC ***13*** *06:36:08.1±2.3, 41°.94N±0°.04× 119°.66W±0°.05, h5km±1km, Error ellipse: s-maj=8.1km s-min=5.5km az=222.0*

GCMT ***13*** *06:36:11.5±0.5, 41°.91N±0°.05× 119°.56W±0°.05, h18km±1km, MW4.7/67, Moment Tensor Solution. s14,c14; s67,c92; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=1.28±.16; Mθθ=-0.09±.10; Mφφ=1.37±.10; Mrθ=-0.27±.31; Mrφ=0.29±.06; Mθφ=-0.64±.22; Best double couple: M0=1.52200×10^16 NP1:φs=184.00000°, δ=32.00000°, λ=-101.00000°. NP2: φs=17.00000°, δ=59.00000°, λ=-83.00000°. Principal axes: T 1.5890, Plg=13.0000°, Azm=102.0000°; N -0.1360, Plg=6.0000°, Azm=193.0000°; P -1.4560, Plg=75.0000°, Azm=306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***13*** *06:36:14, 41°.81N× 119°.81W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=-0.82; Mθθ=0.14; Mφφ=0.96; Mrθ=-0.46; Mrφ=0.24; Mθφ=-0.20; Fault plane solution: M0=1.06000×10^16 NP1:φs=168.00000°, δ=41.00000°, λ=-128.00000°. NP2:φs=35.00000°, δ=59.00000°, λ=-61.00000°. Principal axes: T 1.0581, Plg=9.0000°, Azm=105.0000°; N 0.0013, Plg=24.0000°, Azm=199.0000°; P -1.0594, Plg=64.0000°, Azm=355.0000°;*

**ISC 13 06:36:08.0±1.2, 41°.92N±0°.03× 119°.68W±0°.03, h6km±8km, n

baz=122,SNR=39
J01E Myrtle Point 3.38 293 P **Pn 06 37 02.0 +0.7**
baz=110,SNR=33
KBO Bosley Butte 3.40 276 Pn **Pn 06 37 02.3 +0.6**
H04D Lebanon 3.43 320 P **Pn 06 37 02.6 +0.5**
baz=138,SNR=64
H04D Sb **Sg 06 37 56.0 -2.2**
baz=138
JCC Jacoby Creek, 3.46 253 Pn **Pn 06 37 02.1 -0.2**
KMRM Mail Ridge 3.49 242 Pn **Pn 06 37 03.1 +0.3**
G05D Wamic, OR 3.53 341 P **Pn 06 37 03.6 +0.2**
baz=159,SNR=12
G05D Sb **Sg 06 37 58.3 -3.1**
baz=159
ELK Elko 3.54 108 Pn **Pn 06 37 04.7 +1.0**
5.3nm,0.3s,baz=299,slow=14,SNR=108
ELK Sn **Sn 06 37 43.2 -2.8**
48nm,0.3s,baz=179,slow=18,SNR=3.7
ELK Lg Lg 06 37 55.0
191nm,0.3s,baz=41,slow=15,SNR=6.4
KEBM Edson Butte 3.58 287 Pn **Pn 06 37 04.6 +0.5**
NVAR Mina Array Bea 3.64 163 Pn **Pn 06 37 04.9 -0.1**
5.4nm,0.3s,baz=342,slow=12,SNR=82
NVAR Pg **Pb 06 37 13.3 +0.5**
30nm,0.3s,baz=346,slow=15,SNR=58
NVAR Lg Lg 06 38 01.9
99nm,0.3s,baz=157,slow=14,SNR=12
NVAR LR LR 06 38 52.6
comp=Z,2µm,18.7s,baz=345,slow=45
KCPM Cahto Peak 3.71 234 Pn **Pn 06 37 06.8 +0.9**
COR Corvallis 3.76 316 Pn **Pn 06 37 08.9 +2.5**
I02D Swisshome 3.76 307 P **Pn 06 37 07.1 +0.6**
baz=124,SNR=9.7
CMB Columbia Colle 3.92 188 Pn 06 37 10.1 +1.4
F07A Phinny Hill Vi 3.98 357 Pn 06 37 11.7 +2.2
PLID Pearl Lake 4.14 39 Pn **Pn 06 37 12.2 +0.2**
F05D White Salmon 4.17 343 P **Pn 06 37 12.7 +0.5**
baz=161
G03D McMinnville, O 4.20 323 P **Pn 06 37 15.4 +2.9**
baz=140
HLID Hailey 4.21 65 P **Pn 06 37 11.9 -1.0**
baz=248
HLID Hailey 4.21 65 Pn **Pn 06 37 12.1 -0.7**
TPH Tonopah 4.28 153 Pn 06 37 14.1 +0.3
MDPB Devils Postpil 4.30 174 Pn 06 37 15.9 +1.6
OMMB Old Mammoth Mi 4.33 173 Pn **Pn 06 37 17.1 +2.4**
F10A Beach Ranch, E 4.42 23 Pn 06 37 16.4 +0.7
HAWA Hanford 4.47 1 Pn **Pn 06 37 18.6 +2.3**
F04A Amboy 4.48 335 Pn **Pn 06 37 18.0 +1.7**
E08A Dider Farm, El 4.59 5 Pn **Pn 06 37 19.4 +1.4**
E07A Sunnyside 4.64 358 Pn **Pn 06 37 20.9 +2.3**
E09A Wood Farm, Sta 4.72 13 Pn 06 37 20.4 +0.7
R11A Troy Canyon, C 4.75 137 P **Pn 06 37 21.1 +0.8**
baz=320
R11A Troy Canyon, C 4.75 137 Pn **Pn 06 37 20.8 +0.5**
TIN Tinemaha, Big 4.98 167 P **Pn 06 37 24.0 +0.5**
baz=348
SPR3 Spring Creek 3 5.01 124 Pn **Pn 06 37 26.3 +2.3**
E04D Cinebar 5.08 337 P **Pn 06 37 27.3 +2.7**
baz=155
BGU Big Grassy Mou 5.09 99 Pn 06 37 24.7 -0.3
D08A Wollman Farm, 5.17 6 Pn **Pn 06 37 27.6 +1.8**
BCYI Bear Canyon 5.17 60 Pn 06 37 27.1 +0.9
GRAC Grapevine Rang 5.23 159 P **Pn 06 37 27.6 +0.8**
baz=341
SAO San Andreas Ge 5.33 196 Pn **Pn 06 37 28.6 +0.6**
DUG Dugway, Tooele 5.46 106 P **Pn 06 37 30.7 +0.6**
baz=291
DUG Dugway, Tooele 5.46 106 Pn **Pn 06 37 30.9 +0.8**
PSUT Pine Spring 5.59 125 Pn **Pn 06 37 33.0 +1.1**
CWC Cottonwood Cre 5.61 167 P **Pn 06 37 32.7 +0.6**
baz=348
TPNV Topopah Spring 5.63 151 P **Pn 06 37 33.3 +1.0**
baz=333
TPNV Topopah Spring 5.63 151 Pn 06 37 33.9 +1.6
PRN Pahroc Range 5.75 140 Pn 06 37 35.6 +1.7
MCMT McKenzie Canyo 5.76 57 Pn 06 37 35.5 +1.2
FURC Furnace Creek, 5.86 157 P **Pn 06 37 36.6 +1.2**
baz=339
NLU North Lily Min 6.08 106 Pn 06 37 39.0 +0.4
CTU Camp Tracy 6.09 99 Pn **Pn 06 37 39.4 +0.6**
MPMC Manual Prospec 6.09 163 P **Pn 06 37 39.6 +0.9**
baz=345
D03D Eldon 6.12 338 P **Pn 06 37 39.7 +0.8**
baz=155,SNR=9.6
DLMT Dillon 6.18 54 Pn 06 37 40.6 +0.7
PAGB Antelope Grade 6.19 184 Pn **Pn 06 37 39.1 -0.9**
TCUT Toone Canyon 6.26 95 Pn 06 37 41.5 +0.4
JLU Jordanelle 6.34 99 Pn 06 37 42.8 +0.7
MPU Maple Canyon 6.38 105 Pn 06 37 43.1 +0.5
MSO Missoula 6.40 38 P **Pn 06 37 44.5 +1.6**
baz=222
MSO Missoula 6.40 38 Pn **Pn 06 37 44.1 +1.3**
TCRU Three Creeks R 6.44 118 Pn 06 37 44.4 +0.8
SHPR Sheep Range 6.44 146 Pn **Pn 06 37 45.2 +1.7**
B08A Colville Reser 6.45 2 Pn **Pn 06 37 47.7 +4.3**
LRM Limekiln Ridge 6.52 51 Pn **Pn 06 37 45.5 +0.9**
CCUT Cedar City 6.53 130 Pn **Pn 06 37 46.0 +1.1**
SHOC Shoshone, Teco 6.57 155 P **Pn 06 37 44.5 -0.6**
baz=338
B05A Bryant 6.57 346 P **Pn 06 37 46.8 +1.6**
baz=164,SNR=16
NEW Newport 6.60 15 Pn **Pn 06 37 49.0 +3.5**
0.4nm,0.3s,baz=300,slow=16,SNR=7.1
NEW Lg Lg 06 39 35.4
0.8nm,0.3s,baz=300,slow=16,SNR=3.4
NEW LR LR 06 40 43.5
comp=Z,806nm,19.8s,baz=196,slow=42
NEW Newport 6.60 15 P **Pn 06 37 48.1 +2.6**
baz=196
NEW Newport 6.60 15 Pn **Pn 06 37 48.2 +2.6**
MVU Marysvale 6.65 118 Pn 06 37 47.6 +1.1
SZCU Shurtz Canyon 6.66 128 Pn 06 37 47.7 +1.1
MSU Marysvale 6.67 118 Pn **Pn 06 37 48.0 +1.3**
QLMT Earthquake Lak 6.67 61 Pn 06 37 48.1 +1.4
IMW Indian Meadow 6.71 70 Pn 06 37 51.3 +4.0
YHB Horse Butte 6.80 63 Pn 06 37 49.8 +1.3
YHL Hebgen Lake 6.84 62 Pn 06 37 51.1 +2.0
BOZ Bozeman (W) 6.89 55 P **Pn 06 37 50.2 +0.6**
baz=240
BOZ Bozeman (W) 6.89 55 Pn 06 37 50.5 +0.9
FLWY Flagg Ranch 6.93 69 Pn 06 37 53.7 +3.5
MTPU Mount Pierson 6.93 121 Pn 06 37 52.1 +1.7
TMUT Trail Mountain 6.95 109 Pn 06 37 52.1 +1.5
GSC Goldstone, Bar 6.98 160 P **Pn 06 37 51.1 +0.3**
baz=342
GSC Goldstone, Bar 6.98 160 Pn **Pn 06 37 52.5 +1.7**
LCMT Little Creek M 6.98 132 Pn 06 37 52.2 +1.4
TUQ Turquoise Moun 7.11 154 P **Pn 06 37 52.8 +0.2**
baz=337
Q16A Castle Valley 7.15 112 Pn **Pn 06 37 53.2 0.0**
HRY Holter Researc 7.39 47 Pn 06 37 56.0 -0.5
BW06 Boulder Array 7.54 80 P **Pn 06 38 00.6 +1.9**
baz=267
PDAR Pinedale Array 7.54 80 Pn **Pn 06 38 00.8 +2.1**
0.2nm,0.3s,baz=259,slow=12,SNR=21
PDAR Lg Lg 06 40 04.8
0.5nm,0.3s,baz=239,slow=24,SNR=2.1
GMRC Granite Mounta 7.79 155 P **Pn 06 38 02.5 +0.5**
baz=338
W13A Hualapai Mount 8.18 144 Pn **Pn 06 38 07.2 -0.2**
GCMT Greycliff 8.20 58 Pn 06 38 07.8 +0.2
WALA Waterton Lakes 8.21 28 Pn **Pn 06 38 07.5 -0.1**
IRM Iron Mountain 8.53 154 P **Pn 06 38 12.0 0.0**
baz=337
PFO Pinyon Flats O 8.67 162 Pn **Pn 06 38 16.1 +2.0**
0.1nm,0.3s,baz=262,slow=2.0,SNR=5.0
PFO Pinyon Flats O 8.67 162 P **Pn 06 38 14.4 +0.3**
baz=344
O20A White River Ci 8.82 98 P **Pn 06 38 17.6 +1.4**
baz=285
WUAZ Wupatki 9.10 132 P **Pn 06 38 21.3 +1.2**
baz=317
K22A Casper 9.78 81 P **Pn 06 38 30.7 +1.5**
baz=270
MVCO Mesa Verde 9.82 115 P **Pn 06 38 31.3 +1.3**
baz=302
N23A Red Feather La 10.37 91 P **Pn 06 38 37.8 +0.3**
baz=280
N23A Red Feather La 10.37 91 Pn **Pn 06 38 36.9 -0.5**
PHWY Pilot Hill 10.67 89 Pn 06 38 40.1 -1.5
S22A 4UR Ranch, Cre 10.72 109 P **Pn 06 38 42.1 -0.2**
baz=297
ISCO Idaho Springs 10.86 97 P **Pn 06 38 44.0 -0.2**
baz=286

214A Organ Pipe Nat 11.35 149 P **Pn 06 38 50.8 +0.1**
baz=333
SDCO Great Sand Dun 11.66 106 P **Pn 06 38 54.6 -0.6**
baz=295
BBB Bella Bella 11.76 334 LR LR 06 43 58.3
comp=Z,492nm,18.8s,baz=146,slow=40
TUC Tucson 11.92 141 P **Pn 06 38 57.5 -1.0**
baz=326
ANMO Albuquerque 12.48 120 Pn **Pn 06 39 08.0 +1.8**
0.1nm,0.3s,baz=321,slow=13,SNR=7.3
ANMO Lg Lg 06 42 42.0
0.1nm,0.3s,baz=180,slow=20,SNR=2.5
ANMO LR LR 06 44 38.0
comp=Z,649nm,20.6s,baz=300,slow=41
ANMO Albuquerque 12.48 120 P **Pn 06 39 06.4 +0.2**
baz=308
ANMO Albuquerque 12.48 120 Pn **Pn 06 39 04.8 -1.4**
T25A Trinidad 12.71 107 P **Pn 06 39 09.5 +0.1**
baz=297
T25A Trinidad 12.71 107 Pn **Pn 06 39 08.8 -0.6**
KSCO Kaye Shedlock' 13.30 97 Pn **Pn 06 39 17.1 -0.4**
319A Douglas 13.42 138 Pn **Pn 06 39 17.0 -2.0**
ECSD EROS Data Cent 17.01 76 P **Pn 06 40 06.5 +0.1**
baz=272
KSU1 Kansas State U 17.75 91 P **Pn 06 40 16.1 +0.4**
baz=286
DLBC Dease Lake 17.78 342 P **P 06 40 20.4 +3.6**
baz=257,slow=3.0,SNR=4.3
WMOK Wichita Mounta 17.87 107 P **Pn 06 40 16.9 -0.2**
baz=300
TXAR Lajitas Array 18.05 129 P **P 06 40 20.3 +0.3**
0.1nm,0.3s,baz=326,slow=9.1,SNR=6.5
TXAR LR LR 06 48 23.2
comp=Z,181nm,20.1s,baz=0.0,slow=41
ULM Lac du Bonnet 18.43 55 P **P 06 40 23.3 -0.6**
0.3nm,0.3s,baz=275,slow=7.8,SNR=5.7
ULM LR LR 06 46 54.1
comp=Z,157nm,20.8s,baz=262,slow=35
LPIG La Paz 19.40 153 LR LR 06 48 28.2
comp=Z,231nm,20.0s,baz=344,slow=38
SPMN Marine on St. 19.71 71 P **P 06 40 38.5 +0.4**
baz=270
EYMN Ely 20.77 64 P **P 06 40 49.9 +0.3**
baz=264
YKA Yellowknife Ar 20.83 7 P **P 06 40 50.7 +0.8**
9.5nm,1.1s,baz=191,slow=9.2,SNR=13
YKA LR LR 06 49 36.5
comp=Z,239nm,21.0s,baz=0.0,slow=39
P40A Paris 21.04 87 P **P 06 40 52.2 -0.2**
L40A Anamosa 21.11 80 P **P 06 40 53.3 +0.1**
L40A IAmb IAmb 06 41 00.4
comp=Z,39nm,0.9s
R40A Maddies Statio 21.24 91 P **P 06 40 54.2 -0.4**
W39A Magazine 21.28 100 P **P 06 40 55.7 +0.6**
baz=296
W39A Magazine 21.28 100 P **P 06 40 55.4 +0.3**
I40A Norwalk 21.33 75 P **P 06 40 55.3 -0.3**
I40A IAmb IAmb 06 41 00.2
comp=Z,30nm,0.8s
833A Chaparral WMA, 21.36 123 P **P 06 40 54.4 -1.6**
baz=315
U40A Yellville 21.49 96 P **P 06 40 55.9 -1.5**
baz=293
U40A Yellville 21.49 96 P **P 06 40 56.5 -0.9**
G40A Rib Lake 21.55 71 P **P 06 40 57.7 -0.3**
MGMO Mountain Grove 21.62 94 P **P 06 40 58.2 -0.6**
JFWS Jewell Farm 21.70 77 P **P 06 40 55.8 -3.8**
baz=277
JFWS Jewell Farm 21.70 77 P **P 06 40 59.1 -0.4**
JFWS IAmb IAmb 06 41 03.4
comp=Z,31nm,0.8s
MIAR Mount Ida 21.73 101 P **P 06 40 59.1 -0.8**
baz=298
CCM Cathedral Cave 22.08 91 P **P 06 41 03.0 -0.6**
baz=289
CCM Cathedral Cave 22.08 91 P **P 06 41 02.7 -0.9**
CCM IAmb IAmb 06 41 10.1
comp=Z,76nm,1.8s
FCAR Ozark Folk Cen 22.22 97 P **P 06 41 05.5 +0.4**
W41B Gary Mavity, V 22.43 98 P **P 06 41 06.9 -0.5**
baz=296
W41B Gary Mavity, V 22.43 98 P **P 06 41 06.9 -0.5**
WLAR White Oak Lake 22.47 103 P **P 06 41 07.4 -0.5**
WLAR IAmb IAmb 06 41 14.7
comp=Z,101nm,1.7s
HDIL Hopedale 22.83 83 P **P 06 41 11.8 +0.1**
baz=283
Q44A Meyer Farm, Va 23.48 87 P **P 06 41 17.3 -1.0**
Q44A IAmb IAmb 06 41 24.7
comp=Z,30nm,0.8s
T45A Paducah 24.37 91 P **P 06 41 25.8 -1.0**
SFIN Lafayette 24.50 83 P **P 06 41 26.7 -1.3**
baz=284
SFIN Lafayette 24.50 83 P **P 06 41 26.9 -1.1**
SFIN IAmb IAmb 06 41 32.4
comp=Z,19nm,0.8s
P46A Rosedale 24.62 84 P **P 06 41 28.8 -0.3**
P46A IAmb IAmb 06 41 33.1
comp=Z,24nm,0.8s
W45A Hickory Valley 24.70 96 P **P 06 41 29.7 -0.1**
L46A Eue Claire 24.73 78 P **P 06 41 30.4 +0.3**
USIN Univiersity of 24.78 88 P **P 06 41 30.0 -0.4**
OXF Oxford 24.81 97 P **P 06 41 30.4 -0.4**
baz=296
OXF Oxford 24.81 97 P **P 06 41 30.8 -0.1**
BCAR Beaver Creek A 24.85 336 P **P 06 41 32.1 +1.2**
BLO Bloomington 25.25 85 P **P 06 41 34.4 -0.4**
L26K Log Cabin Wild 25.30 335 P **P 06 41 34.9 -0.1**
baz=136
WVT Waverly 25.32 93 P **P 06 41 34.9 -0.5**
baz=293
WVT Waverly 25.32 93 P **P 06 41 34.5 -0.8**
WVT IAmb IAmb 06 41 41.2
comp=Z,16nm,0.8s
N47A Urbana 25.42 81 P **P 06 41 36.2 -0.1**
N47A IAmb IAmb 06 41 41.6
comp=Z,21nm,0.9s
PLAL Pickwick Lake 25.60 95 P **P 06 41 36.9 -1.0**
PLAL IAmb IAmb 06 41 41.6
comp=Z,17nm,0.9s
K27K Chicken 25.66 337 P **P 06 41 39.4 +1.2**
baz=139
WCI Wyandotte Cave 25.71 87 P **P 06 41 38.1 -0.8**
baz=289
WCI Wyandotte Cave 25.71 87 P **P 06 41 38.4 -0.5**
SCRK Sand Creek 26.19 336 P **P 06 41 42.8 -0.4**
baz=136
EPYK Eagle Plains 26.27 345 P **P 06 41 42.7 -1.1**
baz=150
Z47A Carrollton 26.41 99 P **P 06 41 44.9 -0.3**
Z47A IAmb IAmb 06 41 49.3
comp=Z,21nm,0.7s
P49A Miami Univ. Ec 26.49 83 P **P 06 41 44.5 -1.5**
baz=287
LRAL Lakeview Retre 27.27 98 P **P 06 41 52.4 -0.7**
baz=298
LRAL Lakeview Retre 27.27 98 P **P 06 41 53.0 0.0**
INK Inuvik 27.47 349 P **P 06 41 55.2 +0.8**
comp=Z,2.3nm,0.7s,baz=155,slow=7.7,SNR=12
INK LR LR 06 53 25.1
comp=Z,304nm,18.9s,baz=158,slow=38
ACSO Alum Creek Sta 27.58 81 P **P 06 41 55.5 -0.3**
baz=286
C36M Paulatuk 27.59 357 P **P 06 41 55.0 -0.5**
baz=173
ILAR Eielson Array 27.65 335 P **P 06 41 57.6 +1.5**
comp=Z,2.2nm,0.7s,baz=156,slow=7.9,SNR=37
ILAR LR LR 06 52 33.6
comp=Z,150nm,20.3s,baz=148,slow=36
ILAR Eielson Array 27.65 335 P **P 06 41 56.5 +0.4**
MCK McKinley 27.65 332 P **P 06 41 54.6 -1.6**
baz=128
V51A Loudon 28.04 91 P **P 06 41 58.4 -1.5**
V51A IAmb IAmb 06 42 03.9
comp=Z,17nm,1.1s
CPCT Cooper Cave 28.05 92 P **P 06 41 59.5 -0.6**
CPCT IAmb IAmb 06 42 04.2
comp=Z,22nm,1.1s
POKR Poker Plat Res 28.05 335 P **P 06 41 58.9 -0.9**
baz=132
Z51A Franklin 28.49 96 P **P 06 42 03.9 0.0**
Z51A IAmb IAmb 06 42 07.5
comp=Z,12nm,0.8s
TKL Tuckaleechee C 28.53 91 P **P 06 42 03.5 -0.8**
comp=Z,5.3nm,0.8s,baz=252,slow=3.2,SNR=5.4
TKL LR LR 06 53 37.2

comp=Z,149nm,18.1s,baz=306,slow=37
I23K Minto, Yukon-K 28.69 334 P **P 06 42 05.7 +0.3**
baz=130
Y52A Lilburn 29.07 94 P **P 06 42 08.9 -0.2**
Y52A IAmb IAmb 06 42 12.9
comp=Z,18nm,1.1s
152A Waverly Hall 29.13 97 P **P 06 42 09.1 -0.6**
152A IAmb IAmb 06 42 13.6
comp=Z,12nm,0.8s
SADO Sadowa 29.40 71 LR LR 06 53 02.0
comp=Z,204nm,19.6s,baz=300,slow=34
P54A Burton 29.61 81 P **P 06 42 13.5 -0.4**
baz=287
T54A Tazewell 29.63 87 P **P 06 42 13.8 -0.3**
baz=291
GOGA Godfrey 29.72 95 P **P 06 42 13.8 -1.0**
baz=297
V54A Nebo 29.84 89 P **P 06 42 15.1 -0.8**
baz=294
W54A Cherokee Point 29.94 91 P **P 06 42 15.8 -1.0**
baz=295
X54A Belton 30.03 92 P **P 06 42 17.0 -0.6**
baz=295
PAULI Pauline 30.33 91 P **P 06 42 19.9 -0.4**
X55A Gracelyn & Ava 30.61 91 P **P 06 42 22.0 -0.8**
baz=296
IMAR Indian Mountai 30.65 333 P **P 06 42 24.7 +1.9**
JSC Jenkinsville 30.98 91 P **P 06 42 25.4 -0.5**
X56A White Oak 31.05 91 P **P 06 42 26.1 -0.6**
baz=295
TOLK Toolik Lake Re 31.09 339 P **P 06 42 26.9 +0.2**
baz=134
W56A Indian Trail 31.12 90 P **P 06 42 25.7 -1.5**
baz=294
157A Early Branch 31.89 94 P **P 06 42 33.8 -0.3**
baz=298
Z58A St. Stephen 32.47 92 P **P 06 42 37.8 -1.3**
baz=297
RES Resolute Bay 34.74 11 P **P 06 42 58.8 +0.4**
comp=Z,3.7nm,0.8s,baz=178,slow=8.3,SNR=5.4
SCHQ Schefferville 36.52 51 P **P 06 43 13.3 -0.6**
comp=Z,9.3nm,0.9s,baz=271,slow=9.2,SNR=6.5
SCHQ Schefferville 36.52 51 IAmb IAmb 06 43 18.5
comp=Z,30nm,1.5s
ROSC El Rosal 54.66 120 LR LR 07 14 00.5
comp=Z,53nm,18.4s,baz=316,slow=42
ARCES ARCESS Array B 65.95 13 LR LR 07 15 55.4
comp=Z,65nm,18.3s,baz=300,slow=36
NB2 NORSAR Subarra 69.90 23 P **P 06 47 19.4 0.0**
comp=Z,4.5nm,0.8s,baz=318,slow=6.5
NOA NORSAR Array B 69.90 23 P **P 06 47 19.7 +0.2**
comp=Z,1.9nm,0.8s,baz=319,slow=6.5,SNR=5.7
USRK Ussuriysk Ar. 72.93 314 LR LR 07 18 54.2
comp=Z,30nm,19.0s,baz=360,slow=35
FINES FINESS Array B 73.31 16 P **P 06 47 39.9 +0.1**
comp=Z,6.4nm,1.0s,baz=349,slow=5.8,SNR=6.7
LPAZ La Paz 74.92 129 LR LR 07 21 56.1
comp=Z,18nm,20.2s,baz=334,slow=37
KLMR Klimovskoe 76.18 10 *e*P **P 06 47 54.1 -2.4**
KLMR AMP 06 47 59.8
comp=Z,17nm,1.5s
CLL Collm 78.43 28 *e*(P) **P 06 48 14.0 +4.7**
KSRS Korea Array 79.82 312 LR LR 07 24 15.2
comp=Z,42nm,18.3s,baz=148,slow=36
ESDC Sonseca Array 80.02 45 P **P 06 48 18.7 +0.4**
comp=Z,1.6nm,1.0s,baz=294,slow=9.7,SNR=3.9
ESDC LR LR 07 20 24.2
comp=Z,27nm,20.4s,baz=210,slow=33
SONM Songino Array 81.78 331 P **P 06 48 28.4 +0.7**
comp=Z,0.8nm,0.7s,baz=34,slow=2.2,SNR=4.9
SONM LR LR 07 25 43.1
comp=Z,97nm,18.3s,baz=31,slow=36
ZAA0 Zalesovo Array 82.22 346 P **P 06 48 29.6 -0.1**
ZAA0 IAmb IAmb 06 48 31.1
comp=Z,17nm,1.9s
ZALV Zalesovo Beam 82.22 346 P **P 06 48 29.8 +0.1**
comp=Z,1.3nm,0.6s,baz=14,slow=4.2,SNR=6.6
ZALV LR LR 07 30 16.1
comp=Z,36nm,18.2s,baz=38,slow=40
ZALV Zalesovo Beam 82.22 346 P **P 06 48 29.3 -0.4**
MODS Modra-Piesok 82.39 27 *e*P **P 06 48 29.7 -1.0**
AKASG Malin Array Be 83.84 19 P **P 06 48 38.1 0.0**
comp=Z,0.7nm,0.3s,baz=351,slow=4.3,SNR=6.4
HHC Hu-ho-hao-te 85.46 324 *e*P **P 06 48 48.0 +1.4**
HHC pmax pmax
comp=Z,24nm,0.9s
HHC pmax pmax
comp=Z,200nm,6.3s
NJ2 Nanjing 88.82 314 *e*P **P 06 49 02.1 -0.8**
NJ2 pmax pmax
comp=Z,11nm,0.5s
MKAR Makanchi Array 89.54 345 P **P 06 49 05.8 -0.4**
comp=Z,0.9nm,0.8s,baz=12,slow=6.2,SNR=3.7
MKAR LR LR 07 34 47.3
comp=Z,28nm,18.2s,baz=10.0,slow=39
WMQ Urumqi 91.17 341 *e*P **P 06 49 15.3 +1.5**
WRA Warramunga Arr 114.77 265 PKP PKPdf 06 54 49.0 -0.6
comp=Z,0.4nm,0.9s,baz=45,slow=1.9,SNR=5.2
ASAR Alice Springs 117.33 262 PKP **PKPdf 06 54 52.7 -1.8**
comp=Z,0.3nm,0.6s,baz=79,slow=2.0,SNR=1.9
VNDA Vanda 128.11 196 PKP **PKiKP 06 55 14.2 +0.1**
comp=Z,0.4nm,0.7s,baz=10,slow=2.5,SNR=2.3

SKO ***13*** *06:48:45.7,41°.90N×20°.06E,h29km*
TIR ***13*** *06:48:45.3,41°.93N×20°.11E,h11km±3km,Md2.6*
ISC 13 06:48:44.9±2.1, 41°.8N±0°.1×20°.04E±0°.08, h4km±19km, n9, σ1§45/16, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.26**	**335**	P		**Pg**		**06 48 49.9**	**-0.1**
	baz=307								
PUK				S		**Sg**		**06 48 53.4**	**+0.1**
	baz=307								
PHP	**Peshkopia**	**0.33**	**113**	P		**Pb**		**06 48 52.1**	**-1.2**
	baz=133								
PHP				S		**Sb**		**06 48 58.2**	**-0.7**
	baz=133								
BCI	**Bajram Curri**	**0.56**	**2**	P		**Pg**		**06 48 54.5**	**-1.1**
	baz=357								
BCI				S		**Sg**		**06 49 01.3**	**-1.5**
	baz=357								
OHR	**Ohrid**	**0.90**	**141**	*i* Pg		**Pn**		**06 49 03.0**	**-1.4**
OHR				*i* Sg		**Sn**		**06 49 17.2**	**-0.7**
OHR				*e*Lg		Lg		06 49 20.2	
	comp=E,29nm,0.6s								
STIP	**Stip**	**1.61**	**93**	*e*Pn		**Pg**		**06 49 18.1**	**+2.3**
STIP				*i* Sn		**Sg**		**06 49 38.5**	**+1.8**
STIP				*e*Lg		Lg		06 49 39.6	
	comp=N,1.8nm,0.6s								
STON	**Ston**	**2.03**	**302**	*e*Pn		**Pn**		**06 49 21.2**	**+1.3**
STON				Sn		**Sb**		**06 49 49.1**	**+1.0**
LSTV	**Lastovo**	**2.52**	**293**	*i* Pn		**Pn**		**06 49 26.7**	**0.0**
LSTV				Sn		**Sb**		**06 50 01.5**	**-0.7**
RICI	**Ricice**	**2.73**	**309**	*e*Pn		**Pn**		**06 49 30.9**	**+1.4**
KIJV	**Kijevo**	**3.46**	**311**	*e*Pn		**Pn**		**06 49 41.4**	**+1.9**

TIR ***13*** *06:50:52.8,41°.92N×20°.09E,h15km±1km,Md2.5*
SKO ***13*** *06:50:53.1,41°.92N×20°.04E,h36km*
ISC 13 06:50:53.9±1.1, 41°.92N±0°.04×20°.11E±0°.04, h5km±11km, n11, σ0§87/18, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.20**	**306**	P		**Pg**		**06 50 57.5**	**-0.4**
	baz=311								
PUK				S		**Sg**		**06 51 01.2**	**+0.7**
	baz=311								
PHP	**Peshkopia**	**0.34**	**134**	P		**Pg**		**06 50 59.9**	**-0.6**
	baz=131								
PHP				S		**Sg**		**06 51 05.9**	**+0.9**
	baz=131								
BCI	**Bajram Curri**	**0.44**	**356**	P		**Pg**		**06 51 02.0**	**-0.4**
	baz=358								
BCI				S		**Sb**		**06 51 09.3**	**-1.8**
	baz=358								
TIR	**Tirane**	**0.60**	**198**	P		**Pg**		**06 51 04.8**	**-0.6**
	baz=197								
TIR				S		**Sg**		**06 51 14.1**	**+0.8**
	baz=197								
OHR	**Ohrid**	**0.96**	**147**	*i* Pg		**Pg**		**06 51 11.4**	**-0.9**
OHR				*i* Sg		**Sg**		**06 51 25.1**	**+0.3**
OHR				*e*Lg		Lg		06 51 27.8	
	comp=E,35nm,0.6s								
STIP	**Stip**	**1.57**	**98**	*i* Pn		**Pg**		**06 51 23.7**	**-0.2**

STIP				*e*Sn	**Sg**	**06 51 45.6**	**+1.4**
STIP				*e*Lg	Lg	06 51 50.2	
	comp=E,2.5nm,0.5s						
STON	**Ston**	**2.02**	**299**	*e*Pn	**Pn**	**06 51 28.6**	**+0.1**
STON				Sn	**Sn**	**06 51 55.3**	**+1.1**
LSTV	**Lastovo**	**2.53**	**291**	*e*Pn	**Pn**	**06 51 36.0**	**+0.4**
MAKA	**Makarska**	**2.66**	**302**	*e*Pn	**Pn**	**06 51 37.3**	**0.0**
RICI	**Ricice**	**2.70**	**307**	*e*Pn	**Pn**	**06 51 37.9**	**0.0**
KIJV	**Kijevo**	**3.42**	**309**	*e*Pn	**Pn**	**06 51 48.1**	**+0.2**

IDC ***13*** *07:22:18.0±0.4,58°.72S×25°.24W, h0km, mb4.5/14, mb1 4.6/15, mb1mx4.5/27, mbtmp4.5/15, ML4.9/1, MS3.8/17, Ms1 3.8/17, ms1mx3.8/20, Error ellipse: s-maj=18.9km s-min=14.6km az=58.0*
NEIC ***13*** *07:22:23.4±1.5,58°.8S±0°.1×25°.2W±0°.1, h35km±1km, mb5.0/30, Error ellipse: s-maj=20.7km s-min=5.7km az=212.0*

ISC 13 07:22:22.2±0.4, 58°.75S±0°.08×25°.19W±0°.09, h28km, n87, σ0s94/85, mb4.8/22, MS3.9/16, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.68**	**301**	Pn	**Pn**	**07 24 12.0**	**0.0**
VNA1	**Neumayer--Stat**	**13.88**	**156**	P	**Pn**	**07 25 35.6**	**-1.0**
VNA3	**Neumayer Olymp**	**14.08**	**159**	P	**Pn**	**07 25 37.6**	**-1.7**
VNA2	**Neumayer--Watz**	**14.28**	**156**	P	**Pn**	**07 25 40.2**	**-1.9**
	baz=318,slow=14						
SNAA	**Sanae**	**15.83**	**154**	P	**Pn**	**07 26 01.6**	**-1.2**
SNAA	**Sanae**	**15.83**	**154**	Pn	**Pn**	**07 26 01.6**	**-1.2**
	4.7nm,0.3s,baz=321,slow=14,SNR=150						
SNAA				Sn	Sn	07 28 41.4	-16
	1.1nm,0.3s,baz=307,slow=19,SNR=4.3						
SNAA				LR	LR	07 30 55.1	
	comp=Z,345nm,20.0s,baz=9.0,slow=33						
SNAA	**Sanae**	**15.83**	**154**	Pn	**Pn**	**07 26 02.0**	**-0.7**
BELA	**Belgrano 2**	**19.48**	**186**	P	**P**	**07 26 46.2**	**-0.1**
EFI	**East Falkland**	**19.89**	**276**	P	**P**	**07 26 51.0**	**+0.1**
EFI				IAmb	IAmb	07 26 56.2	
	comp=Z,117nm,1.4s						
USHA	**Ushuaia**	**23.69**	**261**	P	**P**	**07 27 31.0**	**-0.1**
	comp=Z,13nm,0.5s,baz=114,slow=6.7,SNR=5.5						
QSPA	**South Pole Qui**	**31.49**	**180**	P	**P**	**07 28 42.2**	**+0.9**
	comp=Z,17nm,0.6s,baz=206,slow=2.4,SNR=158						
QSPA				PcP	**PcP**	**07 31 33.5**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=137,slow=5.5,SNR=3.3						
QSPA	**South Pole Qui**	**31.49**	**180**	P	**P**	**07 28 42.4**	**+1.1**
QSPA				IAmb	IAmb	07 28 42.8	
	comp=Z,18nm,0.7s						
QSPA					**PcP**	**07 31 33.4**	**+0.1**
PLCA	**Paso Flores**	**33.59**	**282**	P	**P**	**07 28 59.7**	**0.0**
	comp=Z,4.4nm,0.8s,baz=156,slow=8.8,SNR=10						
PLCA				LR	LR	07 42 27.4	
	comp=Z,116nm,18.4s,baz=139,slow=36						
PLCA	**Paso Flores**	**33.59**	**282**	P	**P**	**07 28 59.5**	**-0.1**
LC01	**Cunco**	**35.63**	**283**	P	**P**	**07 29 16.5**	**-0.8**
MAW	**Mawson**	**37.35**	**141**	P	**P**	**07 29 32.1**	**+0.5**
	comp=Z,4.9nm,0.7s,baz=234,slow=8.3,SNR=7.3						
MAW				LR	LR	07 43 11.1	
	comp=Z,170nm,19.5s,baz=235,slow=34						
MAW	**Mawson**	**37.35**	**141**	P	**P**	**07 29 30.1**	**-1.5**
BO02	**Sierra Bellavi**	**38.28**	**288**	P	**P**	**07 29 38.0**	**-2.0**
BO02				IAmb	IAmb	07 30 23.5	
	comp=Z,64nm,2.0s						
MT05	**Renca**	**39.38**	**290**	P	**P**	**07 29 47.6**	**-1.5**
CPUP	**Villa Florida**	**39.41**	**311**	P	**P**	**07 29 48.5**	**-0.9**
	comp=Z,2.7nm,1.0s,baz=182,slow=18,SNR=2.9						
CPUP				LR	LR	07 46 53.3	
	comp=Z,76nm,19.6s,baz=166,slow=38						
CPUP	**Villa Florida**	**39.41**	**311**	P	**P**	**07 29 48.7**	**-0.7**
CPUP				IAmb	IAmb	07 30 12.4	
	comp=Z,39nm,1.9s						
PEL	**Peldehue**	**39.56**	**290**	P	**P**	**07 29 51.6**	**+1.0**
VA03	**San Esteban**	**39.80**	**291**	P	**P**	**07 29 53.7**	**+1.0**
VA03				IAmb	IAmb	07 30 17.3	
	comp=Z,36nm,1.1s						
ROC1	**El Roble**	**39.86**	**290**	P	**P**	**07 29 55.7**	**+2.4**
ZON	**Zonda**	**39.90**	**294**	P	**P**	**07 29 53.7**	**+0.3**
ZON				IAmb	IAmb	07 30 09.6	
	comp=Z,51nm,1.9s						
CO02	**Combarbal**	**41.30**	**291**	P	**P**	**07 30 04.2**	**-0.9**
CO03	**El Pedregal**	**41.45**	**292**	P	**P**	**07 30 06.3**	**+0.1**
CO01	**Juntas del Tor**	**41.87**	**293**	P	**P**	**07 30 11.3**	**+1.4**
CO01				IAmb	IAmb	07 30 27.1	
	comp=Z,19nm,0.9s						
AC05	**El Transito**	**42.91**	**294**	P	**P**	**07 30 18.8**	**+0.5**
AC05				IAmb	IAmb	07 30 35.2	
	comp=Z,52nm,1.4s						
AC04	**Llanos de Chal**	**43.82**	**294**	P	**P**	**07 30 26.2**	**+0.8**
AC04				IAmb	IAmb	07 30 41.8	
	comp=Z,33nm,0.9s						
VNDA	**Vanda**	**43.91**	**182**	P	**P**	**07 30 27.1**	**+1.5**
	comp=Z,12nm,0.7s,baz=185,slow=6.9,SNR=87						
VNDA				PcP	**PcP**	**07 32 11.1**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=240,slow=4.0,SNR=2.7						
VNDA				LR	LR	07 47 13.6	
	comp=Z,74nm,21.9s,baz=181,slow=34						
VNDA	**Vanda**	**43.91**	**182**	P	**P**	**07 30 27.5**	**+1.8**
VNDA				IAmb	IAmb	07 30 28.1	
	comp=Z,13nm,0.7s						
AC02	**Maricunga**	**44.06**	**297**	P	**P**	**07 30 28.4**	**+0.4**
BOSA	**Boshof**	**45.70**	**71**	P	**P**	**07 30 40.5**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=123,slow=11,SNR=3.8						
BOSA				PcP	**PcP**	**07 32 18.1**	**-0.1**
	comp=Z,3.1nm,1.0s,baz=127,slow=5.1,SNR=1.8						
BOSA				LR	LR	07 46 12.9	
	comp=Z,87nm,20.0s,baz=205,slow=31						
BOSA	**Boshof**	**45.70**	**71**	P	**P**	**07 30 40.5**	**-0.1**
BDFB	**Brasilia**	**46.24**	**329**	P	**P**	**07 30 44.3**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=121,slow=18,SNR=1.5						
BDFB				PcP	**PcP**	**07 32 20.7**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=207,slow=2.3,SNR=3.1						
BDFB				LR	LR	07 49 45.3	
	comp=Z,83nm,18.9s,baz=140,slow=36						
GO01	**Chusmiza**	**50.29**	**302**	P	**P**	**07 31 13.9**	**-2.7**
GO01				IAmb	IAmb	07 31 18.1	
	comp=Z,29nm,1.8s						
H10S2	**ASCENSION HYDR**	**50.33**	**14**	T	T	08 25 49.2	
	baz=32,slow=74,SNR=20						
H10S3	**ASCENSION HYDR**	**50.33**	**14**	T	T	08 25 45.0	
	baz=188,slow=74,SNR=30						
H10N1	**ASCENSION HYDR**	**51.45**	**14**	T	T	08 27 17.3	
	baz=188						
H10N3	**ASCENSION HYDR**	**51.45**	**14**	T	T	08 27 13.0	
	baz=188,slow=75,SNR=24						
H10N2	**ASCENSION HYDR**	**51.46**	**14**	T	T	08 27 15.0	
	baz=188,slow=75,SNR=13						
PB16	**IPOC Station P**	**51.60**	**302**	P	**P**	**07 31 27.2**	**+0.7**
PB16				IAmb	IAmb	07 32 38.0	
	comp=Z,24nm,1.9s						
LPAZ	**La Paz**	**52.81**	**305**	P	**P**	**07 31 34.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=122,slow=4.1,SNR=7.7						
LPAZ				PcP	**PcP**	**07 32 44.8**	**0.0**
	comp=Z,1.2nm,0.6s,baz=106,slow=0.7,SNR=2.1						
LPAZ				LR	LR	07 56 31.6	
	comp=Z,41nm,19.1s,baz=144,slow=39						
LPAZ	**La Paz**	**52.81**	**305**	P	**P**	**07 31 35.4**	**-0.2**
LPAZ				PcP	**PcP**	**07 32 45.3**	**+0.6**
SAML	**Samuel**	**57.47**	**314**	P	**P**	**07 32 07.3**	**-1.1**
DBIC	**Dimbokro**	**67.23**	**22**	P	**P**	**07 33 14.3**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=157,slow=13,SNR=3.5						
DBIC				LR	LR	07 55 07.4	
	comp=Z,63nm,21.2s,baz=134,slow=29						
DBIC	**Dimbokro**	**67.23**	**22**	P	**P**	**07 33 15.3**	**+1.7**
DBIC				IAmb	IAmb	07 34 53.1	
	comp=Z,31nm,1.7s						
ROSC	**El Rosal**	**74.43**	**309**	LR	LR	08 07 16.1	
	comp=Z,79nm,21.9s,baz=114,slow=36						
TOA0	**Torodi Ar. Sit**	**74.93**	**27**	P	**P**	**07 34 01.5**	**+1.3**
TOA0				IAmb	IAmb	07 34 02.6	
	comp=Z,8.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**74.93**	**27**	P	**P**	**07 34 01.6**	**+1.3**
	comp=Z,8.9nm,0.8s,baz=195,slow=6.1,SNR=48						
TORD				LR	LR	08 01 33.3	
	comp=Z,54nm,19.7s,baz=335,slow=31						
TORD	**Torodi Ar. Bea**	**74.93**	**27**	P	**P**	**07 34 01.5**	**+1.3**
KMBO	**Kilima Mbogo**	**75.06**	**67**	LR	LR	08 04 08.5	
	comp=Z,137nm,19.3s,baz=94,slow=33						
TAU	**Tasmania Unive**	**78.51**	**174**	P	**P**	**07 34 20.7**	**+0.4**
THZ	**Tophouse**	**78.72**	**194**	P	**P**	**07 34 23.4**	**+1.8**
STKA	**Stephens Creek**	**89.04**	**169**	P	**P**	**07 35 14.3**	**0.0**
	comp=Z,4.6nm,0.9s,baz=153,slow=6.4,SNR=9.3						
STKA				LR	LR	08 13 29.7	
	comp=Z,117nm,18.4s,baz=206,slow=34						
STKA	**Stephens Creek**	**89.04**	**169**	P	**P**	**07 35 14.6**	**+0.3**
PPT	**Papeete**	**91.42**	**232**	LR	LR	08 09 22.9	
	comp=Z,46nm,18.1s,baz=163,slow=31						
ASAR	**Alice Springs**	**96.08**	**161**	P	**P**	**07 35 46.5**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=183,slow=3.8,SNR=17						
ASAR				LR	LR	08 17 01.2	
	comp=Z,74nm,19.1s,baz=174,slow=34						
KEST	**Kesra**	**98.44**	**28**	LR	LR	08 13 14.0	
	comp=Z,40nm,20.8s,baz=298,slow=31						
WRA	**Warramunga Arr**	**99.80**	**160**	P	**Pdif**	**07 36 02.1**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=195,slow=3.9,SNR=5.7						
WRA				LR	LR	08 19 25.6	
	comp=Z,80nm,19.7s,baz=175,slow=34						
SCHQ	**Schefferville**	**118.08**	**334**	PKP	**PKiKP**	**07 41 04.8**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=202,slow=5.4,SNR=1.4						
PDAR	**Pinedale Array**	**122.66**	**299**	PKP	**PKPdf**	**07 41 14.0**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=134,slow=5.0,SNR=9.7						
PDAR	**Pinedale Array**	**122.66**	**299**		**PKPdf**	**07 41 14.2**	**-0.3**
ULM	**Lac du Bonnet**	**122.93**	**314**	PKP	**PKPdf**	**07 41 14.0**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=124,slow=3.7,SNR=3.2						
ULM	**Lac du Bonnet**	**122.93**	**314**		**PKiKP**	**07 41 14.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**123.11**	**110**	PKP	**PKiKP**	**07 41 16.0**	**0.0**
	comp=Z,0.8nm,0.3s,baz=243,slow=2.8,SNR=6.3						
CMAR	**Chiang Mai Arr**	**123.11**	**110**	PKPdf	**PKPdf**	**07 41 15.4**	**-0.3**
NVAR	**Mina Array Bea**	**123.40**	**290**	PKP	**PKiKP**	**07 41 17.1**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=131,slow=3.2,SNR=15						
NVAR	**Mina Array Bea**	**123.40**	**290**		**PKiKP**	**07 41 16.7**	**+0.5**
FINES	**FINESS Array B**	**126.28**	**28**	PKP	**PKiKP**	**07 41 20.7**	**-0.2**
	comp=Z,0.0nm,0.8s,baz=110,slow=2.2,SNR=7.5						
FINES	**FINESS Array B**	**126.28**	**28**		**PKPdf**	**07 41 20.1**	**-0.3**
AKTO	**Aktyubinsk**	**128.07**	**54**	PKP	**PKiKP**	**07 41 24.5**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=199,slow=2.1,SNR=5.6						
ARCES	**ARCESS Array B**	**133.06**	**22**	PKP	**PKPdf**	**07 41 33.5**	**+0.4**
	comp=Z,3.9nm,0.8s,baz=144,slow=2.3,SNR=9.4						
KURBB	**Kurchatov Arra**	**137.44**	**66**	PKP	**PKiKP**	**07 41 42.8**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=226,slow=2.3,SNR=5.4						
KURK	**Kurchatov**	**137.55**	**66**		**PKiKP**	**07 41 43.5**	**-0.5**
YKA	**Yellowknife Ar**	**138.88**	**315**	PKP	**PKPdf**	**07 41 45.0**	**+0.9**
	comp=Z,5.0nm,0.6s,baz=121,slow=3.0,SNR=22						
SONM	**Songino Array**	**149.74**	**90**	PKPbc	**PKiKP**	**07 42 08.7**	**-0.6**
	comp=Z,5.4nm,0.9s,baz=216,slow=2.4,SNR=18						
SONM	**Songino Array**	**149.74**	**90**		**PKPbc**	**07 42 08.4**	**+0.1**
NRIK	**Noril'sk**	**150.38**	**41**	PKPbc	**PKPbc**	**07 42 08.2**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=290,slow=1.8,SNR=5.0						
TLY	**Talaya**	**150.61**	**81**	PKPbc	**PKiKP**	**07 42 10.5**	**-0.4**
	comp=Z,5.1nm,0.9s,baz=256,slow=3.1,SNR=7.1						
TLY	**Talaya**	**150.61**	**81**		**PKiKP**	**07 42 10.7**	**-0.2**
KSRS	**Korea Array**	**152.47**	**129**	PKPab	**PKPab**	**07 42 24.6**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=215,slow=4.3,SNR=4.2						
ILAR	**Eielson Array**	**152.67**	**307**	PKPbc	**PKiKP**	**07 42 14.6**	**-0.1**
	comp=Z,14nm,0.9s,baz=150,slow=2.1,SNR=97						
ILAR	**Eielson Array**	**152.67**	**307**		**PKPbc**	**07 42 14.3**	**-0.1**
PETK	**Petropavlovsk-**	**174.12**	**197**	PKP	**PKPdf**	**07 42 26.7**	**-0.9**
	comp=Z,7.3nm,1.0s,baz=225,slow=5.5,SNR=3.6						
PETK	**Petropavlovsk-**	**174.12**	**197**		**PKPdf**	**07 42 26.9**	**-0.8**

IDC ***13*** *07:31:55.2±1.5,31°.99S×177°.91W, h0km, mb4.4/3, mb1 4.5/5, mb1mx4. 1/24, mbtmp4.4/5, ML4.1/2, MS3.6/2, Ms1 3.5/2, ms1mx2.9/36, Error ellipse: s-maj=39.7km s-min=28.0km az=119.0*

ISC 13 07:31:56.4±1.4, 32°.3S±0°.1×177°.8W±0°.2, h10km, n33, σ1s04/31, mb4.2/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.01**	**357**	Pn	Pn	07 32 39.2	-4.9
	50nm,0.3s,baz=90,slow=20,SNR=3.9						
PKGZ	**Pakihiroa**	**6.56**	**210**	P	**Pn**	**07 33 32.0**	**-1.0**
PUZ	**Puketiti**	**6.64**	**208**	P	**Pn**	**07 33 32.7**	**-1.4**
RUGZ	**Raukumara Rang**	**6.80**	**212**	P	**Pn**	**07 33 36.2**	**-0.2**
CNGZ	**Carnagh Statio**	**7.02**	**207**	P	**Pn**	**07 33 38.4**	**-0.8**
MWZ	**Matawai**	**7.17**	**211**	P	**Pn**	**07 33 42.0**	**+0.6**
URZ	**Urewera**	**7.30**	**214**	Pn	**Pn**	**07 33 44.1**	**+1.0**
	1.6nm,0.3s,baz=21,slow=3.9,SNR=2.9						
URZ				Sn	**Sn**	**07 35 06.8**	**+0.8**
	12nm,0.3s,baz=81,slow=22,SNR=19						
URZ	**Urewera**	**7.30**	**214**	P	**Pn**	**07 33 43.4**	**+0.3**
RIGZ	**Rimuhau**	**7.39**	**208**	P	**Pn**	**07 33 45.9**	**+1.6**
LIRZ	**Lichensteins R**	**7.46**	**218**	P	Pb	07 34 01.1	-4.9
SNGZ	**Shannon Statio**	**7.63**	**210**	P	**Pn**	**07 33 49.0**	**+1.4**
SNGZ	**Shannon Statio**	**7.63**	**210**	P	**Sn**	**07 35 14.6**	**+0.5**
RAHZ	**Arahi**	**7.85**	**211**	P	**Sn**	**07 35 19.0**	**-0.5**
MTHZ	**Maungataniwha**	**7.90**	**212**	P	**Pn**	**07 33 53.3**	**+1.8**
MTHZ	**Maungataniwha**	**7.90**	**212**	P	**Sn**	**07 35 21.7**	**+0.8**
WHHZ	**Waihua**	**7.92**	**209**	P	**Sn**	**07 35 21.4**	**+0.2**
NMHZ	**Naumai**	**8.12**	**211**	P	**Sn**	**07 35 26.7**	**+0.4**
ARHZ	**Aropaoanui**	**8.18**	**210**	P	**Sn**	**07 35 27.0**	**-0.6**
BKZ	**Black Stump Fm**	**8.32**	**213**	P	**Pn**	**07 33 58.3**	**+1.2**
BKZ	**Black Stump Fm**	**8.32**	**213**	P	**Sn**	**07 35 32.0**	**+0.8**
MCHZ	**McNeill Hill**	**8.45**	**211**	P	**Sn**	**07 35 34.7**	**+0.3**
KWHZ	**Kaweka Forest**	**8.56**	**212**	P	**Sn**	**07 35 35.8**	**-1.2**
ETVZ	**East Tongariro**	**8.66**	**216**	P	**Sn**	**07 35 38.1**	**-1.7**
KAHZ	**Kahuranaki**	**8.67**	**208**	P	**Sn**	**07 35 38.1**	**-1.7**
DZM	**Mont Dzumac**	**17.31**	**302**	P	**P**	**07 36 00.9**	**+1.1**
	0.1nm,0.3s,baz=119,slow=13,SNR=3.1						
DZM				LR	LR	07 41 30.1	
	comp=Z,178nm,19.5s,baz=142,slow=34						
STKA	**Stephens Creek**	**34.29**	**260**	P	**P**	**07 38 42.7**	**-0.3**
	1.2nm,0.6s,baz=108,slow=12,SNR=5.6						
ASAR	**Alice Springs**	**43.24**	**269**	P	**P**	**07 39 57.6**	**-0.6**
	2.5nm,0.5s,baz=106,slow=7.5,SNR=34						
WRA	**Warramunga Arr**	**44.39**	**274**	P	**P**	**07 40 06.5**	**-1.0**
	5.9nm,0.5s,baz=113,slow=7.8,SNR=189						
TXAR	**Lajitas Array**	**93.23**	**57**	LR	LR	08 20 00.8	
	comp=Z,25nm,20.0s,baz=0.0,slow=31						
FINES	**FINESS Array B**	**146.96**	**339**	PKPbc	**PKPbc**	**07 51 38.0**	**-0.4**
	2.8nm,0.6s,baz=56,slow=3.6,SNR=18						
NB2	**NORSAR Subarra**	**150.62**	**351**	PKP	**PKiKP**	**07 51 49.1**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=17,slow=2.6						
AKASG	**Malin Array Be**	**152.88**	**321**	PKPbc	**PKPbc**	**07 51 52.4**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=48,slow=2.2,SNR=1.7						
TORD	**Torodi Ar. Bea**	**160.97**	**178**	PKPab	**PKPab**	**07 52 41.4**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=178,slow=3.4,SNR=6.8						

NNC 13 07:40:14.5±2.3, 53°.64N×88°.14E, h0km, mb3.7, mpv3.3, 8C-6D, Error ellipse: s-maj=17.8km s-min=9.6km az=59.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.99**	**280**	⇑Pn	Pn	07 40 48.6	-0.8
	5.0nm,0.7s						
ZAA0				⇑Sn	Sb	07 41 16.5	-0.4
	18nm,0.8s						
KURK	**Kurchatov**	**6.54**	**247**	⇑Pn	Pn	07 41 52.1	+0.2
	2.4nm,0.8s						
KURK				⇓Sn	Sn	07 43 07.0	-0.1
	2.3nm,0.7s						
KURK				⇑Lg	Lg	07 43 39.6	
	14nm,0.9s						
KURBB	**Kurchatov Arra**	**6.64**	**247**	⇑Pn	Pn	07 41 53.8	+0.7
	3.4nm,0.3s						
KURBB				⇓Sn	Sn	07 43 08.8	-0.7
	8.2nm,0.6s						
KURBB				⇑Lg	Lg	07 43 45.4	
	12nm,0.7s						
MK31	**Makanchi Array**	**7.80**	**211**	⇑Pn	Pn	07 42 11.4	+2.2
	0.5nm,0.6s,baz=25,slow=13,SNR=7.5						
MK31				⇑Sn	Sn	07 43 42.1	+3.8
	1.2nm,0.6s,baz=30,slow=21,SNR=5.3						
MK31				⇓Lg	Lg	07 44 23.0	
	3.0nm,0.7s						
MAKZ	**Makanchi**	**7.89**	**212**	⇓Pn	Pn	07 42 09.5	-0.9
	4.2nm,1.1s						
MAKZ				⇓Sn	Sn	07 43 40.7	+0.3
	2.6nm,0.9s						
MAKZ				⇓Lg	Lg	07 44 25.4	
	6.9nm,1.2s						

IDC ***13*** *07:56:19.8±0.7,58°.67S×25°.50W, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.9/28, mbtmp4.0/7, ML4.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/19, Error ellipse: s-maj=31.3km s-min=20.3km az=73.0*
NEIC ***13*** *07:56:24.9±1.1,59°.0S±0°.1×25°.4W±0°.3, h35km±1km, mb4.4/10, Error ellipse: s-maj=31.2km s-min=15.9km az=50.0*

ISC 13 07:56:24.5±0.6, 59°.0S±0°.1×25°.2W±0°.1, h35km, n38, σ2s01/34, mb4.2/8, South Sandwich Islands region

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

HOPE	**Hope Point**	**7.80**	**302**	Pn	**Pn**	**07 58 15.7**	**+0.4**
VNA1	**Neumayer--Stat**	**13.69**	**156**	P	**Pn**	**07 59 37.1**	**+1.4**
VNA3	**Neumayer Olymp**	**13.88**	**159**	P	**Pn**	**07 59 39.4**	**+1.1**
VNA2	**Neumayer--Watz**	**14.08**	**156**	P	**Pn**	**07 59 42.0**	**+0.8**
	baz=316,slow=15						
SNAA	**Sanae**	**15.64**	**154**	P	**Pn**	**08 00 03.4**	**+1.5**
SNAA	**Sanae**	**15.64**	**154**	Pn	**Pn**	**08 00 03.6**	**+1.6**
	1.4nm,0.3s,baz=318,slow=14,SNR=81						
SNAA				Sn	**Sn**	**08 02 45.7**	**-8.1**
	0.2nm,0.3s,baz=315,slow=17,SNR=3.8						
SNAA				LR	LR	08 06 00.8	
	comp=Z,28nm,18.1s,baz=8.0,slow=36						
SNAA	**Sanae**	**15.64**	**154**		**Pn**	**08 00 03.6**	**+1.6**
BELA	**Belgrano 2**	**19.27**	**186**		**Pn**	**08 00 47.7**	**+1.0**
QSPA	**South Pole Qui**	**31.28**	**180**	P	**P**	**08 02 44.0**	**+3.2**
	1.5nm,0.6s,baz=225,slow=1.8,SNR=26						
QSPA	**South Pole Qui**	**31.28**	**180**	P	**P**	**08 02 41.9**	**+1.1**
QSPA				IAmb	IAmb	08 02 52.4	
	comp=Z,14nm,1.8s						
PLCA	**Paso Flores**	**33.64**	**282**	P	**P**	**08 03 01.0**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=163,slow=11,SNR=2.9						
CO01	**Juntas del Tor**	**41.96**	**294**	P	**P**	**08 04 11.4**	**-0.7**
AC05	**El Transito**	**43.00**	**294**	P	**P**	**08 04 20.0**	**-0.4**
VNDA	**Vanda**	**43.70**	**182**	P	**P**	**08 04 28.7**	**+3.3**
	comp=Z,0.8nm,0.6s,baz=191,slow=6.5,SNR=9.0						
VNDA	**Vanda**	**43.70**	**182**	P	**P**	**08 04 24.3**	**-1.1**
SIV	**San Ignacio**	**50.36**	**313**	P	**P**	**08 05 15.8**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=183,slow=6.8,SNR=5.1						
H10S2	**ASCENSION HYDR**	**50.53**	**14**	T	T	08 59 51.1	
	baz=33,slow=74,SNR=13						
H10S3	**ASCENSION HYDR**	**50.54**	**14**	T	T	08 59 50.9	
	baz=187,slow=74,SNR=18						
H10N1	**ASCENSION HYDR**	**51.65**	**14**	T	T	09 00 58.1	
	baz=195,SNR=7.6						
H10N3	**ASCENSION HYDR**	**51.65**	**14**	T	T	09 01 07.9	
	baz=195,SNR=15						
H10N2	**ASCENSION HYDR**	**51.67**	**14**	T	T	09 01 04.1	
	baz=195,SNR=16						
LPAZ	**La Paz**	**52.94**	**305**	P	**P**	**08 05 35.2**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=224,slow=6.2,SNR=5.7						
LPAZ	**La Paz**	**52.94**	**305**	P	**P**	**08 05 35.4**	**-2.5**
LPAZ				IAmb	IAmb	08 05 39.7	
	comp=Z,10nm,1.8s						
SAML	**Samuel**	**57.62**	**314**	P	**P**	**08 06 10.4**	**-0.4**
SAML				IAmb	IAmb	08 07 42.4	
	comp=Z,7.2nm,1.8s						
TOA0	**Torodi Ar. Sit**	**75.11**	**27**	P	**P**	**08 08 03.6**	**+0.9**
TOA0				IAmb	IAmb	08 08 04.2	
	comp=Z,3.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**75.11**	**27**	P	**P**	**08 08 03.4**	**+0.7**
	comp=Z,2.2nm,0.5s,baz=201,slow=6.0,SNR=18						
TORD	**Torodi Ar. Bea**	**75.11**	**27**	P	**P**	**08 08 03.6**	**+0.9**
PDAR	**Pinedale Array**	**122.77**	**299**	PKP	**PKPdf**	**08 15 15.7**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=129,slow=4.1,SNR=5.4						
NVAR	**Mina Array Bea**	**123.47**	**290**	PKP	**PKiKP**	**08 15 17.7**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=160,slow=3.4,SNR=2.7						
FINES	**FINESS Array B**	**126.46**	**28**	PKP	**PKPdf**	**08 15 21.6**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=197,slow=6.0,SNR=5.3						
FINES	**FINESS Array B**	**126.46**	**28**		**PKPdf**	**08 15 21.3

ellipse: s-maj=28.3km s-min=14.8km az=29.0
NEIC ***13*** *08:26:50.3±1.2, 64°.67N×0°.1×17°.6W×0°.1, h6km±3km, mb4.3/5, Error ellipse: s-maj=16.4km s-min=7.6km az=181.0*

ISC 13 08:26:49.9±0.5, 64°.67N±0°.02×17°.49W±0°.02, h10km, n61, σ1$99/75, mb3.8/9, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.12**	**270**	P	**Pg**	**08 26 51.6**	**-1.3**
	baz=270						
IVON				S	**Sg**	**08 26 54.7**	**-0.2**
	baz=270						
IDYN	**Dyngjuhals**	**0.13**	**23**	P	**Pg**	**08 26 51.7**	**-1.3**
	baz=17						
IDYN				S	**Sg**	**08 26 54.4**	**-0.9**
	baz=17						
IGRF	**Grimsfjall**	**0.28**	**160**	P	**Pg**	**08 26 54.3**	**-1.4**
	baz=163						
IKVE	**Kverkfjoll**	**0.35**	**89**	P	**Pg**	**08 26 55.4**	**-1.5**
	baz=89						
IKVE				S	**Sg**	**08 27 00.2**	**-1.3**
	baz=89						
ISKR	**Skrokkalda**	**0.41**	**254**	P	**Pg**	**08 26 56.5**	**-1.4**
	baz=255						
ISKR				S	**Sb**	**08 27 03.6**	**-1.8**
	baz=255						
IVOT	**Vottur**	**0.42**	**162**	P	**Pg**	**08 26 56.8**	**-1.5**
	baz=164						
THOR	**Thorvaldshraun**	**0.43**	**53**	P	**Pg**	**08 26 56.7**	**-1.8**
	baz=51						
THOR				S	**Sg**	**08 27 03.3**	**-0.9**
	baz=51						
IJOK	**Jokulheimar**	**0.48**	**222**	P	**Pg**	**08 26 58.0**	**-1.3**
	baz=223						
IKRE	**Kreppuhraun**	**0.49**	**76**	P	**Pg**	**08 26 57.3**	**-2.1**
	baz=76						
IKRE				S	**Sg**	**08 27 04.5**	**-1.3**
	baz=76						
IASK	**Askja**	**0.52**	**43**	P	**Pg**	**08 26 58.1**	**-2.0**
	baz=42						
IASK				S	**Sg**	**08 27 05.3**	**-1.7**
	baz=42						
IMKO	**Mokollar**	**0.58**	**58**	P	**Pg**	**08 26 59.1**	**-2.0**
	baz=57						
IMKO				S	**Sg**	**08 27 07.7**	**-1.1**
	baz=57						
IIEY	**Innrieyrar**	**0.64**	**206**	P	**Pg**	**08 27 00.4**	**-1.9**
	baz=207						
ISVA	**Svartarkot**	**0.67**	**8**	P	**Pg**	**08 27 00.9**	**-2.0**
	baz=7.1						
ISVA				S	**Sg**	**08 27 10.7**	**-1.1**
	baz=7.1						
IKSK	**Karasker**	**0.68**	**139**	P	**Pg**	**08 27 00.2**	**-2.8**
	baz=140						
IKAL	**Kalfafell**	**0.73**	**187**	P	**Pg**	**08 27 01.9**	**-2.1**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**79**	S	**Sg**	**08 27 12.4**	**-2.3**
	baz=79						
IVSH				P	**Pg**	**08 27 01.9**	**-2.8**
	baz=79						
IVAT	**Vatnsfell**	**0.79**	**233**	P	**Pg**	**08 27 03.4**	**-1.8**
	baz=233						
IFAG	**Fagurholsmyri**	**0.88**	**155**	P	**Pg**	**08 27 04.3**	**-2.5**
	baz=156						
IHVE	**Hveravellir**	**0.91**	**283**	P	**Pg**	**08 27 04.8**	**-2.7**
	baz=283						
IMEL	**Melhnausar**	**0.97**	**21**	P	**Pg**	**08 27 05.6**	**-2.9**
	baz=20						
IMEL				S	**Sg**	**08 27 19.4**	**-1.6**
	baz=20						
IREN	**Reynihlio**	**1.01**	**14**	P	**Pg**	**08 27 06.4**	**-2.9**
	baz=13						
ISNB	**Snabyli**	**1.07**	**209**	P	**Pg**	**08 27 07.8**	**-2.6**
	baz=209						
IKVO	**Krokottuvotn**	**1.08**	**13**	P	**Pg**	**08 27 07.5**	**-3.1**
	baz=13						
ISLY	**Slysaalda**	**1.11**	**221**	P	**Pg**	**08 27 08.8**	**-2.5**
	baz=221						
IGRS	**Grimsstaoir**	**1.13**	**30**	P	**Pb**	**08 27 09.2**	**-2.3**
	baz=29						
IFED	**Fedgar**	**1.16**	**237**	P	**Pb**	**08 27 09.6**	**-2.4**
	baz=237						
IRJU	**Rjupnafell**	**1.18**	**207**	P	**Pb**	**08 27 09.8**	**-2.5**
	baz=207						
IMJO	**Mjoaskard**	**1.21**	**233**	P	**Pb**	**08 27 10.6**	**-2.3**
	baz=234						
ISKI	**Skildingahlsh**	**1.22**	**9**	P	**Pn**	**08 27 09.8**	**-3.2**
	baz=8.3						
IGHA	**Grjothals**	**1.23**	**16**	P	**Pn**	**08 27 09.8**	**-3.3**
	baz=15						
IGYG	**Gygjarholskot**	**1.25**	**253**	P	**Pn**	**08 27 10.8**	**-2.6**
	baz=253						
IGRA	**Granastaoir**	**1.25**	**358**	P	**Pn**	**08 27 10.4**	**-3.0**
	baz=358						
IHAU	**Haukadalur**	**1.29**	**238**	P	**Pn**	**08 27 11.6**	**-2.4**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.30**	**208**	P	**Pn**	**08 27 12.0**	**-2.1**
	baz=209						
IDIM	**Dimmadalss**	**1.31**	**10**	P	**Pn**	**08 27 11.3**	**-3.0**
	baz=9.3						
IHLA	**Hella**	**1.33**	**344**	P	**Pn**	**08 27 12.0**	**-2.5**
	baz=343						
BORG	**Borgarnes**	**1.65**	**274**	Pn	**Pn**	**08 27 16.7**	**-2.2**
	18nm,0.3s,baz=88,slow=7.5,SNR=45						
BORG				Sn	**Sb**	**08 27 40.3**	**-0.9**
	21nm,0.3s,baz=38,slow=23,SNR=8.9						
BORG	**Borgarnes**	**1.65**	**274**		**Pn**	**08 27 17.3**	**-1.6**
BORG				Sn	**Sg**	**08 27 41.3**	**-1.6**
SCO	**Scoresbysund**	**6.08**	**346**		**Pn**	**08 28 20.7**	**+1.0**
SCO	**Scoresbysund**	**6.08**	**346**	*e*	**Pn**	**08 28 19.0**	**-0.7**
	baz=174,slow=7.4						
SCO				*i* P	**Pn**	**08 28 20.0**	**+0.3**
SCO				*e*S	**Sn**	**08 29 33.7**	**+4.6**
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**08 29 37.9**	**+0.4**
	baz=324,slow=12,SNR=4.8						
NOA	**NORSAR Array B**	**13.53**	**92**	Pn	**Pn**	**08 30 04.1**	**+2.4**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.0						
HFS	**Hagfors**	**15.04**	**93**	Pn	**P**	**08 30 29.5**	**+1.9**
	0.1nm,0.3s,baz=2.1,slow=12,SNR=3.7						
CLL	**Collm**	**20.70**	**116**	*e*P	Pn	08 31 33.0	+0.7
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P	**P**	**08 31 38.7**	**+1.1**
	9.3nm,1.1s						
BRG				*e*		08 35 02.2	
	8.9nm,1.2s						
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**08 31 55.7**	**+1.6**
	0.5nm,0.6s,baz=352,slow=8.1,SNR=3.8						
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**08 31 54.5**	**+0.4**
ESDC	**Sonseca Array**	**26.26**	**156**	P	**P**	**08 32 26.0**	**+1.0**
	0.9nm,0.8s,baz=352,slow=8.6,SNR=4.3						
INK	**Inuvik**	**39.84**	**329**	P	**P**	**08 34 23.4**	**+0.6**
	1.1nm,0.9s,baz=31,slow=5.7,SNR=4.4						
INK	**Inuvik**	**39.84**	**329**	P	**P**	**08 34 24.6**	**+1.8**
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**08 35 11.3**	**+1.1**
	0.7nm,0.9s,baz=15,slow=6.2,SNR=6.8						
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**08 35 11.5**	**+1.3**
KURK	**Kurchatov**	**48.10**	**58**	P	**P**	**08 35 30.7**	**+1.4**
MKAR	**Makanchi Array**	**52.72**	**58**	P	**P**	**08 36 05.7**	**+1.4**
	1.2nm,0.9s,baz=323,slow=5.2,SNR=4.2						
MKAR	**Makanchi Array**	**52.72**	**58**	P	**P**	**08 36 05.4**	**+1.2**
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P	**P**	**08 36 07.8**	**+0.2**
	1.0nm,0.9s,baz=350,slow=6.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P	**P**	**08 36 09.0**	**+1.3**
BW06	**Boulder Array**	**53.18**	**293**	P	**P**	**08 36 07.1**	**-0.9**
BW06				IAmb	IAmb	08 36 14.5	
	comp=Z,4.8nm,1.3s						
PD31	**Pinedale Array**	**53.18**	**293**	P	**P**	**08 36 08.9**	**+0.9**
PD31				IAmb	IAmb	08 36 10.0	
	comp=Z,6.6nm,1.4s						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**08 36 08.7**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=60,slow=7.0,SNR=6.0						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**08 36 09.1**	**+1.1**

REY ***13*** *08:30:12.4, 64°.67N×17°.39W, h3km*
IDC ***13*** *08:30:13.7±0.9, 64°.37N×17°.94W, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.6/48, mbtmp3.6/8, ML3.5/2, MS3.3/12, Ms1 3.3/12, ms1mx3.0/52, Error ellipse: s-maj=34.0km s-min=14.8km az=35.0*

ISC 13 08:30:12.2±1.1, 64°.70N±0°.03×17°.40W±0°.03, h5km±8km, n43, σ1$72/37, mb3.6/6, MS3.3/7, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.16**	**260**	P	**Pb**	**08 30 15.8**	**+0.4**
	baz=273						
IGRF	**Grimsfjall**	**0.30**	**169**	P	**Pg**	**08 30 17.7**	**-0.3**
	baz=169						
IKVE	**Kverkfjoll**	**0.31**	**94**	P	**Pb**	**08 30 18.9**	**-1.4**
	baz=88						
IKVE				S	**Sb**	**08 30 24.0**	**-1.7**
	baz=88						
THOR	**Thorvaldshraun**	**0.39**	**52**	P	**Pb**	**08 30 20.3**	**-1.3**
	baz=48						
THOR				S	**Sb**	**08 30 26.8**	**-1.0**
	baz=48						
IHUS	**Husbondi**	**0.42**	**196**	P	**Pg**	**08 30 19.9**	**-0.4**
	baz=197						
IVOT	**Vottur**	**0.44**	**168**	P	**Pg**	**08 30 20.3**	**-0.4**
	baz=167						
IKRE	**Kreppuhraun**	**0.44**	**79**	P	**Pg**	**08 30 20.8**	**+0.1**
	baz=74						
IKRE				S	**Sb**	**08 30 27.4**	**-2.0**
	baz=74						
ISKR	**Skrokkalda**	**0.45**	**252**	P	**Pb**	**08 30 21.1**	**-1.5**
	baz=256						
IASK	**Askja**	**0.48**	**42**	P	**Pb**	**08 30 21.8**	**-1.3**
	baz=39						
IJOK	**Jokulheimar**	**0.53**	**223**	P	**Pg**	**08 30 22.1**	**-0.2**
	baz=226						
IMKO	**Mokollar**	**0.53**	**58**	P	**Pb**	**08 30 22.7**	**-1.3**
	baz=55						
IMKO				S	**Sb**	**08 30 30.8**	**-1.2**
	baz=55						
ISVA	**Svartarkot**	**0.64**	**5**	P	**Pb**	**08 30 24.6**	**-1.3**
	baz=4.8						
IKSK	**Karasker**	**0.67**	**143**	P	**Pg**	**08 30 23.9**	**-1.1**
	baz=142						
IIEY	**Innrieyrar**	**0.68**	**208**	P	**Pg**	**08 30 24.6**	**-0.7**
	baz=210						
IVSH	**V-Sauoahnukur**	**0.72**	**81**	P	**Pg**	**08 30 25.5**	**-0.6**
	baz=78						
IKAL	**Kalfafell**	**0.77**	**190**	P	**Pg**	**08 30 25.6**	**-1.2**
	baz=190						
IVAT	**Vatnsfell**	**0.84**	**233**	P	**Pg**	**08 30 27.4**	**-0.8**
	baz=235						
IFAG	**Fagurholsmyri**	**0.89**	**158**	P	**Pb**	**08 30 27.7**	**-2.3**
	baz=158						
IMEL	**Melhnausar**	**0.93**	**19**	P	**Pg**	**08 30 29.3**	**-0.7**
	baz=18						
IREN	**Reynihlio**	**0.97**	**12**	P	**Pn**	**08 30 30.1**	**-2.4**
	baz=12						
IGRS	**Grimsstaoir**	**1.08**	**29**	P	**Pg**	**08 30 32.8**	**-0.2**
	baz=28						
ISLY	**Slysaalda**	**1.16**	**221**	P	**Pn**	**08 30 32.8**	**-2.3**
	baz=222						
ISKI	**Skildingahlsh**	**1.19**	**7**	P	**Pg**	**08 30 33.5**	**-1.4**
	baz=7.0						
IFED	**Fedgar**	**1.21**	**237**	P	**Pn**	**08 30 33.9**	**-1.8**
	baz=238						
IRJU	**Rjupnafell**	**1.22**	**208**	P	**Pn**	**08 30 33.9**	**-1.9**
	baz=209						
BORG	**Borgarnes**	**1.69**	**273**	Pn	**Pb**	**08 30 41.7**	**-2.0**
	25nm,0.3s,baz=84,slow=7.4,SNR=14						
BORG				Sn	**Sg**	**08 31 05.2**	**-1.1**
	12nm,0.3s,baz=49,slow=20,SNR=4.6						
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn	**Pn**	**08 33 00.7**	**+0.5**
	baz=326,slow=13,SNR=4.8						
NOA	**NORSAR Array B**	**13.49**	**93**	LR	LR	08 38 49.5	
	comp=Z,54nm,18.8s,baz=300,slow=38						
SFJD	**Kangerlussuaq**	**13.69**	**295**	LR	LR	08 37 42.6	
	comp=Z,252nm,21.5s,baz=110,slow=33						
HFS	**Hagfors**	**15.00**	**93**	LR	LR	08 39 36.7	
	comp=Z,53nm,19.1s,baz=322,slow=37						
ARCES	**ARCESS Array B**	**17.06**	**55**	LR	LR	08 39 44.9	
	comp=Z,103nm,18.2s,baz=245,slow=33						
FINES	**FINESS Array B**	**19.66**	**79**	P	**Pn**	**08 34 47.9**	**+5.1**
	0.1nm,0.3s,baz=288,slow=12,SNR=1.2						
FINES				LR	LR	08 41 42.2	
	comp=Z,105nm,19.1s,baz=314,slow=34						
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**08 35 19.8**	**+2.9**
	0.2nm,0.2s,baz=309,slow=6.2,SNR=2.4						
GERES				LR	LR	08 44 24.6	
	comp=Z,64nm,20.4s,baz=301,slow=37						
DAVOX	**Davos/Dischmat**	**23.30**	**127**	LR	LR	08 44 55.9	
	comp=Z,48nm,20.0s,baz=17,slow=38						
VRAC	**Vranov**	**23.67**	**114**	LR	LR	08 44 18.4	
	comp=Z,75nm,19.9s,baz=302,slow=36						
ESDC	**Sonseca Array**	**26.27**	**156**	P	**P**	**08 35 50.2**	**+2.1**
	0.8nm,0.8s,baz=334,slow=8.6,SNR=2.7						
ARU	**Arti**	**36.03**	**66**	LR	LR	08 51 14.5	
	comp=Z,60nm,21.0s,baz=266,slow=35						
INK	**Inuvik**	**39.84**	**329**	P	P	08 37 49.6	+3.8
	2.1nm,1.1s,baz=41,slow=13,SNR=3.2						
AKTO	**Aktyubinsk**	**40.23**	**73**	LR	LR	08 54 25.6	
	comp=Z,43nm,20.5s,baz=337,slow=36						
ILAR	**Eielson Array**	**45.68**	**332**	P	P	08 38 36.4	+3.1
	1.1nm,1.0s,baz=25,slow=5.8,SNR=7.0						
TORD	**Torodi Ar. Bea**	**53.15**	**157**	P	**P**	**08 39 30.5**	**-0.3**
	0.5nm,0.7s,baz=340,slow=8.1,SNR=2.6						
PDAR	**Pinedale Array**	**53.20**	**293**	P	**P**	**08 39 32.9**	**+1.6**
	1.4nm,0.9s,baz=57,slow=5.5,SNR=9.0						
PDAR				LR	LR	09 02 03.9	
	comp=Z,54nm,19.1s,baz=37,slow=36						
TXAR	**Lajitas Array**	**62.32**	**280**	LR	LR	09 06 39.8	
	comp=Z,52nm,20.6s,baz=0.0,slow=35						

ISK ***13*** *08:44:32.9, 35°.98N×31°.78E, h60km±1km, ML2.6/15*
NIC ***13*** *08:44:33.5±0.0, 36°.06N×31°.94E, h59km±12km, Ml2.7/3*
DDA ***13*** *08:44:33.5, 36°.63N×32°.88E, h7km±1km, ML2.0*
GII ***13*** *08:44:47.4±0.0, 35°.36N×32°.23E, h30km*

ISC 13 08:44:33.8±1.4, 36°.00N±0°.04×31°.81E±0°.04, h63km±11km, n33, σ0$89/50, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.47**	**59**	PG	**Pn**	**08 44 45.5**	**-0.3**
GAZI				SG	**Sn**	**08 44 54.2**	**-0.3**
GAZI	**Gazipasa**	**0.47**	**59**	*i* P	**Pn**	**08 44 45.6**	**-0.1**
GAZI				*i* S	**Sn**	**08 44 54.4**	**-0.1**
GAZI				IAML		08 44 55.0	
	comp=E,81nm,0.2s						
GAZI				IAML		08 44 55.0	
	comp=N,114nm,0.7s						
ALAN	**Alanya-ANTALYA**	**0.59**	**18**	PG	**Pn**	**08 44 46.2**	**-0.8**
ALAN				SG	**Sn**	**08 44 56.9**	**+0.3**
BOZY	**Bozyazi-Mersin**	**0.95**	**83**	PG	**Pn**	**08 44 51.2**	**-0.1**
BOZY				SG	**Sn**	**08 45 04.8**	**+0.5**
ALFC	**Alefka**	**1.05**	**142**	P	**Pn**	**08 44 52.7**	**0.0**
ALFC				S	**Sn**	**08 45 07.0**	**+0.3**
ALFC				AML	AML	08 45 07.7	
	comp=N,0.7nm,0.2s						
ALFC				AML	AML	08 45 07.7	
	comp=N,0.7nm,0.2s						
ALFC				AML	AML	08 45 08.8	
	comp=N,0.7nm,0.1s						
ALFC				AML	AML	08 45 08.8	
	comp=N,0.7nm,0.1s						
AKMS	**Akamas**	**1.06**	**156**	P	**Pn**	**08 44 53.8**	**+0.9**
AKMS				S	**Sn**	**08 45 08.3**	**+1.4**
AKMS				AML	AML	08 45 08.7	
	comp=N,0.6nm,0.2s						
AKMS				AML	AML	08 45 08.7	
	comp=N,0.6nm,0.2s						
AKMS				AML	AML	08 45 09.7	
	comp=N,0.4nm,0.3s						
AKMS				AML	AML	08 45 09.7	
	comp=N,0.4nm,0.3s						
TEKE	**Tekeli-Mersin**	**1.06**	**82**	PN	**Pn**	**08 44 52.9**	**+0.1**
TEKE				SN	**Sn**	**08 45 07.2**	**+0.3**
BERE	**Bereket-Mersin**	**1.20**	**72**	PN	**Pn**	**08 44 54.7**	**0.0**
BERE				SN	**Sn**	**08 45 10.5**	**+0.3**
AKUM	**Antalya-Kumluc**	**1.23**	**286**	*i* P	**Pn**	**08 44 54.6**	**-0.4**
LEF	**Lefka**	**1.24**	**134**	PN	**Pn**	**08 44 54.8**	**-0.3**
LEF				SN	**Sn**	**08 45 10.4**	**-0.6**
YORU	**Yoruktepe-Mers**	**1.30**	**83**	PN	**Pn**	**08 44 56.1**	**+0.2**
YORU				SN	**Sn**	**08 45 13.3**	**+0.8**
TEVE	**Tevekalti-Mers**	**1.39**	**71**	PN	**Pn**	**08 44 57.3**	**+0.1**
TEVE				SN	**Sn**	**08 45 15.2**	**+0.5**
AKK1	**Akkuyu-Mersin**	**1.41**	**83**	PN	**Pn**	**08 44 57.9**	**+0.6**
AKK1				SN	**Sn**	**08 45 15.7**	**+0.7**
SEYD	**Seydisehir-KON**	**1.41**	**1**	PN	**Pn**	**08 44 57.2**	**-0.3**
SEYD				SN	**Sn**	**08 45 15.1**	**-0.1**
AKK2	**Akkuyu-Mersin**	**1.41**	**84**	PN	**Pn**	**08 44 57.9**	**+0.5**
AKKU	**Akkuyu-Mersin**	**1.42**	**83**	PN	**Pn**	**08 44 57.9**	**+0.4**
AKKU				SN	**Sn**	**08 45 15.9**	**+0.7**
SZAC	**Souni**	**1.52**	**144**	P	**Pn**	**08 45 00.2**	**+1.4**
SZAC				AML	AML	08 45 22.8	
	comp=N,0.3nm,0.2s						
SZAC				AML	AML	08 45 29.2	
	comp=N,0.3nm,0.6s						
TISA	**Tisan-Mersin**	**1.52**	**83**	PN	**Pn**	**08 44 58.9**	**0.0**
IKL	**Isikli**	**1.54**	**80**	PN	**Pn**	**08 44 59.3**	**+0.2**
IKL				SN	**Sn**	**08 45 18.3**	**+0.2**
KEBE	**Keben-Mersin**	**1.60**	**73**	PN	**Pn**	**08 45 00.8**	**+0.8**
CSS	**Mathiatis**	**1.61**	**129**	PN	**Pn**	**08 45 00.2**	**+0.1**
CSS	**Mathiatis**	**1.61**	**129**	Pg	**Pn**	**08 45 00.1**	**0.0**
CSS	**Mathiatis**	**1.61**	**129**	P	**Pn**	**08 45 00.3**	**+0.1**
CSS				S	**Sn**	**08 45 19.0**	**-0.9**
ELL	**Elmali**	**1.71**	**297**	P	**Pn**	**08 45 01.6**	**+0.1**
SILI	**Silifke-Mersin**	**1.75**	**77**	PN	**Pn**	**08 45 02.7**	**+0.8**
MVOU	**Mavrovouni**	**1.78**	**123**	P	**Pn**	**08 45 02.0**	**-0.3**
MVOU				S	**Sn**	**08 45 22.9**	**-1.0**
MERS	**Mersin**	**2.35**	**67**	PN	**Pn**	**08 45 10.7**	**+0.5**
OSC1	**CSNet OBS 1**	**2.53**	**190**	S	**Sn**	**08 45 44.9**	**+2.8**
CMRD	**Camardi-Nigde**	**3.04**	**56**	PN	**Pn**	**08 45 20.7**	**+1.0**
MMA0B	**Mount Meron ar**	**4.20**	**134**	Pn	Pn	08 45 41.2	+5.8
MMA0B				Sn	**Sn**	**08 46 21.4**	**-1.8**
GEM	**Giv'at Ha'Em**	**4.22**	**130**	Pn	Pn	08 45 41.3	+5.7
GEM				Sn	**Sn**	**08 46 22.6**	**-1.0**
NATI	**Neve Ativ**	**4.23**	**129**	Pn	Pn	08 45 40.1	+4.3
NATI				Sn	**Sn**	**08 46 21.9**	**-2.0**
MBRI	**Mt Berech**	**6.71**	**156**	Sn	**Sn**	**08 47 22.4**	**-2.5**

BJI ***13*** *08:49:13.6±0.0, 4°.22N×94°.72E, h27km, mB5.0/18, mb4.7/29, Ms4.8/3, Ms7 4.6/2*
IDC ***13*** *08:49:19.6±4.0, 4°.87N×95°.03E, h29km±27km, mb4.3/34, mb1 4.4/35, mb1mx4.3/48, mbtmp4.5/35, ML3.8/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/44, Error ellipse: s-maj=15.7km s-min=11.6km az=46.0*
NEIC ***13*** *08:49:20.1±1.4, 4°.75N±0°.08×95°.01E±0°.08, h35km±1km, mb4.9/65, Error ellipse: s-maj=13.9km s-min=12.9km az=181.0*
DJA ***13*** *08:49:21.1±1.9, 5°.N±5°.×9°.5E±°, h21km±18km, M4.7/10, mB5.2/5, mb4.6/10, MLv4.8/10, Mw(mB)4.6/5*
KLM ***13*** *08:49:24.0, 4°.64N×94°.94E, h67km, mb4.8*

ISC 13 08:49:22.4±1.1, 4°.73N±0°.05×95°.01E±0°.06, h56km±10km, n268, σ0$96/265, mb4.8/78, 7C-10D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.00**	**76**	P	**Pn**	**08 49 55.0**	**+1.2**
LHMI	**Lhok Sumawe**	**2.00**	**76**	Pn	**Pn**	**08 49 54.9**	**+1.2**
SNSI	**Sinabang, Aceh**	**2.66**	**150**	P	**Pn**	**08 50 02.0**	**-0.8**
SNSI				S	**Sn**	**08 50 32.8**	**-1.0**
KCSI	**Kotacane, Aceh**	**3.01**	**113**	P	**Pn**	**08 50 08.7**	**+1.1**
TSI	**Tuntungan**	**3.75**	**109**	P	**Pn**	**08 50 19.1**	**+1.3**
GSI	**Gunungsitoli**	**4.26**	**143**	P	**Pn**	**08 50 24.1**	**-0.7**
GSI	**Gunungsitoli**	**4.26**	**143**	Pn	**Pn**	**08 50 24.2**	**-0.7**
RPSI	**Rantau Prapat**	**4.40**	**117**	Pn	**Pn**	**08 50 28.2**	**+1.4**
PKDT	**Phuket**	**4.56**	**46**	P	**Pn**	**08 50 29.7**	**+0.7**
	2.8nm26µm246nm,0.4s						
TRTT	**Trang**	**5.59**	**56**	P	**Pn**	**08 50 43.6**	**+0.6**
	0.7nm2µm65nm,0.6s						
SURT	**Suratani**	**5.64**	**42**	P	Pn	08 50 50.6	+6.9
	56nm3.2nm,1.1s						
KULM	**Kulim**	**5.65**	**84**	Pn	**Pn**	**08 50 44.2**	**+0.3**
KULM	**Kulim**	**5.65**	**84**	P	**Pn**	**08 50 45.0**	**+1.1**
PBSI	**Pulau Batu**	**5.77**	**145**	P	**Pn**	**08 50 45.1**	**-0.4**
	0.7nm89nm,1.3s						
IPM	**Ipoh**	**6.01**	**92**	Pn	**Pn**	**08 50 48.6**	**-0.2**
IPM	**Ipoh**	**6.01**	**92**	P	**Pn**	**08 50 49.0**	**+0.2**
MNSI	**Mandailing Nat**	**6.01**	**130**	P	**Pn**	**08 50 49.3**	**+0.5**
SISI	**Saibi**	**7.27**	**146**	P	**Pn**	**08 51 05.7**	**-0.3**
	0.2nm21nm,1.1s						
SDSI	**Sungai Dareh**	**8.53**	**131**	P	**Pn**	**08 51 23.3**	**-0.1**
	596nm10nm,0.5s						
SRAK	**Srakaew**	**11.54**	**36**	P	Pn	08 52 12.8	+8.3
	11µm637nm,0.4s						
MNAI	**Manna**	**12.03**	**139**	Pn	**Pn**	**08 52 10.5**	**-0.6**
MDSI	**Maura Dua**	**12.95**	**135**	P	**Pn**	**08 52 22.1**	**-1.7**
	17nm,0.7s						
SUKH	**Sukhothai**	**13.46**	**19**	P	**P**	**08 52 39.0**	**+0.7**
	18nm,0.7s						
UTTA	**Uttaradit**	**14.03**	**22**	P	**P**	**08 52 45.3**	**+0.7**
	208nm9.5nm,0.7s						
CM05	**Chiang Mai Arr**	**14.12**	**16**	P	**P**	**08 52 45.9**	**+0.2**
	133nm12nm,0.8s						
CM04	**Chiang Mai Arr**	**14.13**	**16**	P	**P**	**08 52 45.0**	**-0.8**
	226nm20nm,0.7s						
CM13	**Chiang Mai Arr**	**14.13**	**15**	P	**P**	**08 52 45.9**	**+0.1**
	144nm12nm,0.7s						
CM01	**Chiang Mai Arr**	**14.15**	**16**	P	**P**	**08 52 46.1**	**+0.2**
	215nm21nm,0.6s						
CM02	**Chiang Mai Arr**	**14.16**	**15**	P	**P**	**08 52 46.2**	**+0.2**
	150nm13nm,0.6s						
CM15	**Chiang Mai Arr**	**14.17**	**15**	P	**P**	**08 52 47.0**	**+0.8**
CM09	**Chiang Mai Arr**	**14.18**	**16**	P	**P**	**08 52 46.5**	**+0.3**
	201nm20nm,0.7s						
CM31	**Chiang Mai Arr**	**14.18**	**15**	P	**P**	**08 52 47.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**14.18**	**15**	Pn	**P**	**08 52 45.2**	**-1.1**
	1.9nm,0.3s,baz=208,slow=11,SNR=34						
CMAR				LR	LR	08 58 12.7	
	comp=Z,56nm,19.5s,baz=204,slow=38						
CM36	**Chiang Mai Arr**	**14.28**	**16**	P	**P**	**08 52 47.0**	**-0.4**
LAMP	**Lampang**	**14.44**	**18**	P	**P**	**08 52 49.8**	**+0.6**
	31nm,0.7s

FITZ	**Fitzroy Crossi**	**37.78**	**128**	P	**P**	**08 56 33.1**	**-0.4**
FAKI	**Fak Fak**	**37.98**	**101**	P	**P**	**08 56 34.8**	**-0.5**
KSH	**Kashi**	**38.68**	**336**	*eP*	**P**	**08 56 39.8**	**-1.1**
KSH				pP	pP	08 56 50.3	-4.6
KSH				pmax	pmax		
	comp=Z,32nm,0.5s						
KSH				pmax	pmax		
	comp=Z,190nm,4.6s						
HHC	**Hu-ho-hao-te**	**38.92**	**20**	*eP*	**P**	**08 56 45.0**	**+2.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
KNRA	**Kununurra**	**39.09**	**122**	P	**P**	**08 56 43.5**	**-1.0**
KNRA				IAmb	IAmb	08 56 44.1	
	comp=Z,10nm,0.6s						
WMQ	**Urumqi**	**39.46**	**352**	*eP*	**P**	**08 56 48.8**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.3s						
WMQ				LR	LR		
	comp=Z,560nm,29.1s						
WMQ				LR	LR		
	comp=Z,1μm,28.8s						
MTN	**Manton Dam**	**39.91**	**116**	P	**P**	**08 56 50.3**	**-1.0**
MTN				IAmb	IAmb	08 56 50.9	
	comp=Z,12nm,0.5s						
BJI	**Beijing**	**40.01**	**26**	P	**P**	**08 56 52.5**	**+0.7**
BJI				pmax	pmax		
	comp=Z,13nm,0.7s						
KDJ	**Kajisay**	**40.49**	**339**	P	**P**	**08 56 57.2**	**+1.2**
CHGR	**Chuyangaron**	**41.13**	**329**	P	**P**	**08 57 00.3**	**-0.9**
CHGR				IAmb	IAmb	08 57 03.2	
	comp=Z,12nm,0.7s						
BOOM	**Boomskoye usch**	**41.25**	**339**	P	**P**	**08 57 02.5**	**+0.2**
BOOM				IAmb	IAmb	08 57 03.5	
	comp=Z,15nm,0.7s						
BTK	**Batken**	**41.38**	**332**	P	**P**	**08 57 03.4**	**+0.1**
TKM2	**Tokmak 2**	**41.75**	**338**	P	**P**	**08 57 06.8**	**+0.5**
	SNR=12						
KBK	**Karagaybulak**	**41.76**	**338**	P	**P**	**08 57 07.7**	**+1.3**
	SNR=14						
AML	**Almayashu**	**41.81**	**336**	P	**P**	**08 57 08.1**	**+1.0**
	SNR=23						
AAK	**Ala-Archa**	**41.92**	**337**	P	**P**	**08 57 09.1**	**+1.4**
	SNR=6.8						
AAK	**Ala-Archa**	**41.92**	**337**	P	**P**	**08 57 08.3**	**+0.6**
EKS2	**Erkin-Say**	**42.22**	**337**	P	**P**	**08 57 11.3**	**+1.2**
	SNR=9.3						
USP	**Ospenovka**	**42.45**	**338**	P	**P**	**08 57 13.1**	**+1.2**
	SNR=5.3						
MK31	**Makanchi Array**	**43.33**	**347**	P	**P**	**08 57 18.4**	**-0.4**
MKAR	**Makanchi Array**	**43.33**	**347**	P	**P**	**08 57 18.3**	**-0.6**
	comp=Z,8.2nm,0.4s,baz=161,slow=8.2,SNR=149						
MKAR				PcP	**PcP**	**08 59 07.3**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=194,slow=3.4,SNR=2.3						
MKAR				LR	LR	09 18 13.7	
	comp=Z,45nm,18.6s,baz=162,slow=40						
MKAR	**Makanchi Array**	**43.33**	**347**	P	**P**	**08 57 18.2**	**-0.7**
MAKZ	**Makanchi**	**43.41**	**347**	P	**P**	**08 57 19.4**	**-0.2**
MAKZ				IAmb	IAmb	08 57 20.0	
	comp=Z,13nm,0.4s						
KK06	**Karatay Array**	**43.93**	**334**	P	**P**	**08 57 24.4**	**+0.6**
KK07	**Karatay Array**	**43.94**	**334**	P	**P**	**08 57 24.3**	**+0.5**
KK02	**Karatay Array**	**43.94**	**334**	P	**P**	**08 57 24.1**	**+0.2**
KK31	**Karatay Array**	**43.94**	**334**	P	**P**	**08 57 24.0**	**+0.1**
KKAR	**Karatay Array**	**43.94**	**334**	P	**P**	**08 57 24.2**	**+0.3**
KK01	**Karatay Array**	**43.95**	**334**	P	**P**	**08 57 24.2**	**+0.2**
KK09	**Karatay Array**	**43.96**	**334**	P	**P**	**08 57 24.0**	**0.0**
SONM	**Songino Array**	**44.05**	**11**	P	**P**	**08 57 22.9**	**-1.8**
	comp=Z,1.3nm,0.5s,baz=189,slow=9.1,SNR=9.5						
SONM				PcP	**PcP**	**08 59 09.8**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=182,slow=3.7,SNR=9.4						
SONM	**Songino Array**	**44.05**	**11**	P	**P**	**08 57 24.7**	**-0.1**
SONM				PcP	**PcP**	**08 59 09.2**	**-0.2**
KSRS	**Korea Array**	**44.33**	**38**	P	**P**	**08 57 26.1**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=225,slow=8.6,SNR=6.1						
WB0	**Warramunga Arr**	**45.74**	**123**	P	**P**	**08 57 38.5**	**-0.1**
WB0				IAmb	IAmb	08 57 39.5	
	comp=Z,17nm,0.6s						
WRA	**Warramunga Arr**	**45.78**	**124**	P	**P**	**08 57 39.0**	**+0.2**
	comp=Z,11nm,0.6s,baz=301,slow=9.5,SNR=214						
WRA				ScP	**ScP**	**09 03 07.6**	**+3.3**
	comp=Z,0.3nm,0.8s,baz=314,slow=3.6,SNR=2.7						
WRA				LR	LR	09 18 07.8	
	comp=Z,34nm,18.7s,baz=290,slow=38						
WRA	**Warramunga Arr**	**45.78**	**124**	P	**P**	**08 57 38.6**	**-0.2**
WRAB	**Tennant Creek**	**45.78**	**124**	P	**P**	**08 57 38.7**	**-0.2**
WB2	**Warramunga Arr**	**45.79**	**124**	P	**P**	**08 57 39.1**	**+0.2**
WB2				IAmb	IAmb	08 57 40.0	
	comp=Z,17nm,0.6s						
WC3	**Warramunga Arr**	**45.81**	**124**	P	**P**	**08 57 38.1**	**-1.0**
WR0	**Warramunga Arr**	**45.95**	**124**	P	**P**	**08 57 40.5**	**+0.3**
GYB1	**ALIBECK ARRAY**	**47.11**	**320**	P	**P**	**08 57 49.8**	**+0.8**
GYB1				IAmb	IAmb	08 57 50.6	
	comp=Z,9.6nm,0.9s						
GYA1	**ALIBECK ARRAY**	**47.12**	**320**	P	**P**	**08 57 49.7**	**+0.6**
GYA1				IAmb	IAmb	08 57 51.4	
	comp=Z,9.1nm,0.8s						
GEYT	**Alibeck**	**47.12**	**320**	P	**P**	**08 57 49.3**	**+0.2**
	comp=Z,5.4nm,0.5s,baz=140,slow=7.2,SNR=8.2						
GEYT	**Alibeck**	**47.12**	**320**	P	**P**	**08 57 50.0**	**+0.9**
GYA0	**ALIBECK ARRAY**	**47.12**	**320**	P	**P**	**08 57 49.9**	**+0.7**
GYA0				IAmb	IAmb	08 57 50.7	
	comp=Z,10.0nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**47.12**	**320**	P	**P**	**08 57 50.1**	**+0.9**
GYA0B				IAmb	IAmb	08 57 50.7	
	comp=Z,10nm,0.8s						
GYA2	**ALIBECK ARRAY**	**47.12**	**320**	P	**P**	**08 57 50.2**	**+1.1**
GYA2				IAmb	IAmb	08 57 50.7	
	comp=Z,7.4nm,0.8s						
GYB4	**ALIBECK ARRAY**	**47.13**	**320**	P	**P**	**08 57 50.1**	**+0.9**
GYB4				IAmb	IAmb	08 57 50.8	
	comp=Z,9.3nm,0.8s						
AS31	**Alice Springs**	**47.27**	**128**	P	**P**	**08 57 51.1**	**+0.5**
ASAR	**Alice Springs**	**47.27**	**128**	P	**P**	**08 57 50.8**	**+0.2**
	comp=Z,5.6nm,0.5s,baz=299,slow=7.9,SNR=141						
ASAR				LR	LR	09 20 01.1	
	comp=Z,29nm,19.1s,baz=338,slow=39						
ASAR	**Alice Springs**	**47.27**	**128**	P	**P**	**08 57 50.5**	**0.0**
TLY	**Talaya**	**47.35**	**7**	P	**P**	**08 57 50.6**	**0.0**
	comp=Z,1.0nm,0.3s,baz=224,slow=5.3,SNR=3.6						
TLY				LR	LR	09 18 40.6	
	comp=Z,44nm,20.5s,baz=134,slow=37						
TLY	**Talaya**	**47.35**	**7**	P	**P**	**08 57 51.2**	**+0.5**
KURBB	**Kurchatov Arra**	**47.79**	**346**	P	**P**	**08 57 52.8**	**-1.2**
	comp=Z,10nm,0.6s,baz=169,slow=7.0,SNR=47						
KURBB				PcP	**PcP**	**08 59 22.9**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=144,slow=2.3,SNR=5.9						
KURK	**Kurchatov**	**47.85**	**346**	P	**P**	**08 57 54.5**	**0.0**
KURK				IAmb	IAmb	08 57 55.3	
	comp=Z,9.1nm,0.5s						
ZAA0	**Zalesovo Array**	**49.77**	**352**	P	**P**	**08 58 08.6**	**-0.6**
ZAA0				IAmb	IAmb	08 58 10.6	
	comp=Z,7.8nm,0.5s						
ZALV	**Zalesovo Beam**	**49.77**	**352**	P	**P**	**08 58 08.6**	**-0.6**
	comp=Z,8.2nm,0.4s,baz=187,slow=7.5,SNR=28						
ZALV				PcP	**PcP**	**08 59 28.7**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=159,slow=2.6,SNR=3.5						
MJAR	**Matsushiro Arr**	**50.68**	**45**	P	**P**	**08 58 16.0**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=220,slow=7.7,SNR=4.4						
MJAR	**Matsushiro Arr**	**50.68**	**45**	P	**P**	**08 58 16.0**	**-0.5**
USRK	**Ussuriysk Ar.**	**50.99**	**34**	P	**P**	**08 58 18.2**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=240,slow=6.9,SNR=6.4						
USRK	**Ussuriysk Ar.**	**50.99**	**34**	P	**P**	**08 58 17.8**	**-0.7**
RAYN	**Ar Rayn**	**51.20**	**296**	P	**P**	**08 58 21.7**	**+1.2**
BVAR	**Borovoye Array**	**52.22**	**341**	P	**P**	**08 58 26.8**	**-0.9**
	comp=Z,6.3nm,0.6s,baz=211,slow=31,SNR=48						
BRVK	**Borovoye**	**52.29**	**341**	P	**P**	**08 58 27.1**	**-1.0**
AB07	**Akbulak array**	**53.37**	**332**	P	**P**	**08 58 35.8**	**-0.3**
AB06	**Akbulak array**	**53.38**	**332**	P	**P**	**08 58 36.6**	**+0.3**
AB08	**Akbulak array**	**53.38**	**332**	P	**P**	**08 58 35.5**	**-0.8**
ABKAR	**Akbulak array**	**53.39**	**332**	P	**P**	**08 58 35.4**	**-0.9**
AB02	**Akbulak array**	**53.39**	**332**	P	**P**	**08 58 36.0**	**-0.3**
AB09	**Akbulak array**	**53.41**	**332**	P	**P**	**08 58 36.3**	**-0.1**
KLR	**Kul'dur**	**54.17**	**29**	P	**P**	**08 58 41.4**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=217,slow=5.5,SNR=8.8						
AKTO	**Aktyubinsk**	**55.11**	**332**	P	**P**	**08 58 47.6**	**-1.2**
	comp=Z,1.8nm,0.4s,baz=134,slow=9.0,SNR=5.9						
ASAJ	**Asahikawa**	**57.25**	**39**	P	**P**	**08 59 04.2**	**0.0**
	comp=Z,5.3nm,0.6s,baz=294,slow=10.0,SNR=2.9						
STKA	**Stephens Creek**	**57.34**	**133**	P	**P**	**08 59 05.2**	**+0.2**
	comp=Z,2.0nm,1.0s,baz=300,slow=4.2,SNR=4.0						
STKA	**Stephens Creek**	**57.34**	**133**	P	**P**	**08 59 04.7**	**-0.3**

KMBO	**Kilima Mbogo**	**57.99**	**266**	P	**P**	**08 59 14.3**	**+4.1**
	comp=Z,1.1nm,0.3s,baz=68,slow=11,SNR=4.0						
ARU	**Arti**	**59.10**	**337**	P	**P**	**08 59 15.7**	**-1.1**
	comp=Z,2.9nm,0.2s,baz=313,slow=1.1,SNR=3.6						
ARU	**Arti**	**59.10**	**337**	P	**P**	**08 59 15.7**	**-1.1**
ARU				IAmb	IAmb	08 59 17.4	
	comp=Z,9.0nm,1.1s						
KBZ	**Khabaz**	**59.99**	**319**	P	**P**	**08 59 23.1**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=56,slow=24,SNR=5.3						
GAZ	**Gaziantep**	**61.73**	**310**	P	**P**	**08 59 35.9**	**+0.6**
GAZ				IAmb	IAmb	08 59 37.2	
	comp=Z,15nm,0.9s						
KIRV	**Kirov**	**64.21**	**335**	P	**P**	**08 59 50.9**	**-0.3**
	comp=Z,10nm,0.5s,baz=73,slow=1.8,SNR=3.8						
NRIK	**Noril'sk**	**64.70**	**357**	P	**P**	**08 59 52.2**	**-2.0**
	comp=Z,3.7nm,0.6s,baz=149,slow=5.9,SNR=7.9						
BR131	**Keskin Array S**	**65.14**	**312**	P	**P**	**08 59 57.7**	**-0.2**
BR131				IAmb	IAmb	09 00 00.1	
	comp=Z,6.3nm,0.8s						
BRTR	**Keskin Array B**	**65.14**	**312**	P	**P**	**08 59 57.4**	**-0.5**
	comp=Z,3.7nm,0.5s,baz=118,slow=7.3,SNR=12						
MDUB	**Mudurnu**	**67.14**	**312**	P	**P**	**09 00 10.8**	**+0.2**
TLCR		**69.97**	**316**	⇓P	**P**	**09 00 27.2**	**-0.8**
TIRR	**Tirgusor**	**70.08**	**316**	⇑P	**P**	**09 00 28.7**	**-0.1**
TIXI	**Tiksi**	**70.13**	**11**	P	**P**	**09 00 27.1**	**-1.4**
TIXI				IAmb	IAmb	09 00 27.5	
	comp=Z,5.9nm,0.5s						
CFR	**Carcaliu**	**70.44**	**316**	⇓P	**P**	**09 00 30.8**	**-0.1**
HARR	**Harsova**	**70.47**	**316**	⇓P	**P**	**09 00 30.1**	**-1.0**
SORM	**Soroca**	**71.01**	**319**	⇓P	**P**	**09 00 33.8**	**-0.5**
IDI	**Anoyia**	**71.07**	**306**	⇓P	**P**	**09 00 30.0**	**-5.0**
AKASG	**Malin Array Be**	**71.14**	**322**	P	**P**	**09 00 34.0**	**-1.0**
	comp=Z,4.2nm,0.5s,baz=92,slow=4.5,SNR=9.9						
AKASG	**Malin Array Be**	**71.14**	**322**	P	**P**	**09 00 34.2**	**-0.8**
AKBB	**Malin Array Si**	**71.14**	**322**	P	**P**	**09 00 34.2**	**-0.8**
AKBB				IAmb	IAmb	09 00 34.3	
	comp=Z,6.2nm,0.5s						
BISRR	**Bisoca**	**71.50**	**316**	⇑P	**P**	**09 00 37.3**	**-0.2**
VRI	**Vrincioaia**	**71.56**	**317**	⇑P	**P**	**09 00 38.0**	**+0.3**
PLOR	**Plostina**	**71.61**	**317**	⇑P	**P**	**09 00 38.2**	**+0.2**
TESR	**Tescani**	**71.75**	**317**	⇓P	**P**	**09 00 39.1**	**+0.2**
MLR	**Muntele Rosu**	**72.02**	**316**	⇓P	**P**	**09 00 40.4**	**-0.3**
MLR	**Muntele Rosu**	**72.02**	**316**	P	**P**	**09 00 41.1**	**+0.5**
MLR				IAmb	IAmb	09 00 42.1	
	comp=Z,13nm,0.8s						
VOIR		**72.62**	**316**	⇑P	**P**	**09 00 43.9**	**-0.3**
ARR	**Arges**	**72.90**	**316**	⇑P	**P**	**09 00 45.5**	**-0.2**
BURAR	**Bucovina Array**	**72.95**	**318**	⇓P	**P**	**09 00 46.3**	**+0.3**
BURAR	**Bucovina Array**	**72.95**	**318**	P	**P**	**09 00 46.6**	**+0.6**
BUR08	**Bucovina Ar. S**	**72.96**	**318**	P	**P**	**09 00 47.0**	**+0.8**
BOSA	**Boshof**	**74.67**	**239**	P	**P**	**09 00 58.0**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=74,slow=3.7,SNR=7.1						
BOSA	**Boshof**	**74.67**	**239**	P	**P**	**09 00 57.8**	**+1.2**
BOSA				IAmb	IAmb	09 01 11.2	
	comp=Z,22nm,1.4s						
LVZ	**Lovozero**	**74.79**	**340**	P	**P**	**09 00 56.0**	**-0.4**
KWP	**Kalwaria Pacla**	**74.97**	**320**	P	**P**	**09 00 57.0**	**-0.7**
SIRR	**Siria**	**75.10**	**317**	⇓P	**P**	**09 00 59.0**	**+0.5**
KOLS	**Kolonicke sedl**	**75.13**	**319**	*eP*	**P**	**09 00 59.5**	**+0.8**
CRVS	**Cervenica-Dubn**	**75.65**	**319**	*eP*	**P**	**09 01 02.4**	**+0.7**
FINES	**FINESS Array B**	**75.88**	**332**	P	**P**	**09 01 02.3**	**-0.4**
	comp=Z,6.4nm,0.6s,baz=104,slow=5.7,SNR=53						
FINES	**FINESS Array B**	**75.88**	**332**	P	**P**	**09 01 02.4**	**-0.2**
KECS	**Kecovo**	**76.22**	**319**	*eP*	**P**	**09 01 05.5**	**+0.6**
PSZ	**Piszkesteto**	**76.53**	**318**	P	**P**	**09 01 07.0**	**+0.2**
PSZ				IAmb	IAmb	09 01 07.9	
	comp=Z,11nm,0.7s						
OJC	**Ojcow**	**76.92**	**320**	*eP*	**P**	**09 01 09.2**	**+0.4**
OJC	**Ojcow**	**76.92**	**320**	P	**P**	**09 01 07.6**	**-1.2**
LANS	**Liptovska Anna**	**76.98**	**319**	*eP*	**P**	**09 01 10.3**	**+1.0**
VYHS	**Vyhne**	**77.31**	**319**	*eP*	**P**	**09 01 11.3**	**+0.2**
MORC	**Moravsky Berou**	**78.31**	**320**	⇑P	**P**	**09 01 17.1**	**+0.4**
MORC	**Moravsky Berou**	**78.31**	**320**	P	**P**	**09 01 16.7**	**+0.1**
MORC				IAmb	IAmb	09 01 18.1	
	comp=Z,7.2nm,0.8s						
MODS	**Modra-Piesok**	**78.33**	**318**	*eP*	**P**	**09 01 16.1**	**-0.7**
ZST	**Bratislava**	**78.43**	**318**	*eP*	**P**	**09 01 17.9**	**+0.7**
ARD4	**ARCESS Array S**	**78.48**	**340**	P	**P**	**09 01 16.5**	**-0.6**
ARD5	**ARCESS Array S**	**78.49**	**340**	P	**P**	**09 01 17.6**	**+0.4**
ARC2	**ARCESS Array S**	**78.49**	**340**	P	**P**	**09 01 17.3**	**+0.1**
ARA0	**ARCESS Array S**	**78.50**	**340**	*eP*	**P**	**09 01 17.2**	**0.0**
ARA1	**ARCESS Array S**	**78.50**	**340**	P	**P**	**09 01 17.5**	**+0.3**
ARA1				IAmb	IAmb	09 01 31.3	
	comp=Z,25nm,1.2s						
ARCES	**ARCESS Array B**	**78.50**	**340**	P	**P**	**09 01 17.2**	**0.0**
	comp=Z,5.0nm,0.4s,baz=93,slow=6.0,SNR=107						
KRLC	**Kraliky**	**78.83**	**320**	*eP*	**P**	**09 01 20.2**	**+0.7**
KTK1	**Kautokeino**	**79.12**	**340**	*eP*	**P**	**09 01 20.4**	**-0.3**
DPC	**Dobruska-Polom**	**79.15**	**320**	*eP*	**P**	**09 01 21.9**	**+0.6**
CHVC	**Chvalec**	**79.35**	**320**	*eP*	**P**	**09 01 22.9**	**+0.6**
HAMF	**Hammerfest**	**79.42**	**341**	*eP*	**P**	**09 01 22.4**	**+0.2**
SOKA	**Soboth**	**79.69**	**316**	*eP*	**P**	**09 01 24.1**	**-0.3**
	comp=Z,7.3nm,0.8s						
MOA	**Molln**	**80.30**	**318**	*eP*	P	09 01 38.6	+11
	comp=Z,6.2nm,0.5s						
MYKA	**Terra Mystica**	**80.65**	**316**	*eP*	**P**	**09 01 29.5**	**0.0**
	comp=Z,3.0nm,0.5s						
PRED	**Cave del Predi**	**80.69**	**316**	P	**P**	**09 01 29.4**	**-0.3**
PRED				IAmb	IAmb	09 01 30.8	
	comp=Z,12nm,0.8s						
GEC2	**GERESS Array S**	**80.73**	**319**	P	**P**	**09 01 30.1**	**+0.2**
GEC2				IAmb	IAmb	09 01 31.4	
	comp=Z,9.0nm,0.7s						
GEC2B	**GERESS ARRAY S**	**80.73**	**319**	P	**P**	**09 01 30.6**	**+0.7**
GERES	**GERESS Array B**	**80.73**	**319**	P	**P**	**09 01 30.5**	**+0.6**
	comp=Z,6.0nm,0.6s,baz=90,slow=6.7,SNR=41						
GERES	**GERESS Array B**	**80.73**	**319**	P	**P**	**09 01 29.9**	**0.0**
TRO	**Tromso**	**80.75**	**340**	*eP*	**P**	**09 01 29.1**	**-0.3**
KHC	**Kasperske Hory**	**80.83**	**319**	*eP*	**P**	**09 01 29.7**	**-0.7**
KBA	**Koelnbreinsper**	**80.88**	**317**	*eP*	**P**	**09 01 30.5**	**-0.3**
	comp=Z,3.7nm,0.6s						
ZOU	**Zoufplan**	**81.11**	**316**	P	**P**	**09 01 31.9**	**-0.2**
ZOU				IAmb	IAmb	09 01 32.6	
	comp=Z,6.5nm,0.7s						
STAL	**STALIGIAL**	**81.28**	**316**	P	**P**	**09 01 33.0**	**+0.2**
CIMO	**Cimolais**	**81.46**	**316**	P	**P**	**09 01 34.0**	**+0.2**
N2IH	**Innhavet**	**81.54**	**338**	*eP*	**P**	**09 01 33.5**	**-0.1**
FAUS	**Fauske**	**81.70**	**337**	*eP*	**P**	**09 01 34.3**	**-0.2**
N2TV	**TYrnvik**	**81.79**	**338**	*eP*	**P**	**09 01 34.6**	**-0.4**
STEI	**Steigen**	**81.79**	**338**	*eP*	**P**	**09 01 35.1**	**+0.2**
MOR8	**Moi Rana**	**81.88**	**336**	*eP*	**P**	**09 01 34.6**	**-0.9**
CTI	**Castel Tesino**	**82.00**	**316**	P	**P**	**09 01 37.2**	**+0.5**
CTI				IAmb	IAmb	09 01 38.0	
	comp=Z,14nm,0.8s						
WTTA	**Wattenberg**	**82.05**	**317**	*eP*	**P**	**09 01 36.8**	**-0.2**
	comp=Z,5.6nm,0.4s,SNR=7.8						
WATA	**Walderalm**	**82.09**	**317**	*eP*	**P**	**09 01 36.8**	**-0.4**
	comp=Z,3.8nm,0.4s						
NBB05	**Inndyr**	**82.14**	**337**	*eP*	**P**	**09 01 37.0**	**+0.1**
N2VI	**Vinje**	**82.23**	**338**	*eP*	**P**	**09 01 37.0**	**-0.2**
NBB30	**Finnes**	**82.25**	**337**	*eP*	**P**	**09 01 37.1**	**-0.2**
SQTA	**Sankt Quirin**	**82.34**	**317**	*eP*	**P**	**09 01 38.3**	**-0.2**
	comp=Z,15nm,0.5s,SNR=7.3						
MOTA	**Moosalm**	**82.41**	**317**	*eP*	**P**	**09 01 38.5**	**-0.4**
	comp=Z,3.8nm,0.5s						
KONS	**Konsvik**	**82.45**	**336**	*eP*	**P**	**09 01 37.9**	**-0.5**
LOF	**Lofoten**	**82.45**	**338**	*eP*	**P**	**09 01 37.8**	**-0.6**
RETA	**Reutte**	**82.65**	**317**	*eP*	**P**	**09 01 40.0**	**0.0**
	comp=Z,7.0nm,0.4s,SNR=14						
FETA	**Feichten**	**82.66**	**317**	*eP*	**P**	**09 01 40.3**	**+0.1**
	comp=Z,4.3nm,0.5s						
NSS	**Namsos**	**82.76**	**334**	*eP*	**P**	**09 01 39.2**	**-0.8**
NB2	**NORSAR Subarra**	**82.88**	**331**	P	**P**	**09 01 39.8**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=96,slow=5.1						
NB2	**NORSAR Subarra**	**82.88**	**331**	P	**P**	**09 01 39.8**	**-1.0**
	baz=96,slow=5.1						
NOA	**NORSAR Array B**	**82.88**	**331**	P	**P**	**09 01 38.9**	**-1.9**
	comp=Z,1.9nm,0.8s,baz=94,slow=5.4,SNR=6.0						
HSPB	**Hornsund (broa**	**83.05**	**347**	*eP*	**P**	**09 01 41.9**	**+0.5**
SPA0	**Spitsbergen Ar**	**83.07**	**348**	*eP*	**P**	**09 01 41.0**	**-0.5**
SPITS	**Spitsbergen Ar**	**83.07**	**348**	P	**P**	**09 01 40.8**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=108,slow=11,SNR=26						
MSSA	**Maissana**	**83.49**	**314**	P	**P**	**09 01 44.0**	**-0.4**
KEST	**Kesra**	**83.74**	**305**	P	**P**	**09 01 47.2**	**+1.3**
	comp=Z,7.7nm,0.7s,baz=356,slow=2.2,SNR=4.9						
KEST	**Kesra**	**83.74**	**305**	P	**P**	**09 01 45.5**	**-0.4**
KEST				IAmb	IAmb	09 01 48.0	
	comp=Z,8.2nm,0.8s						
MOL	**Molde**	**84.66**	**332**	*eP*	**P**	**09 01 50.6**	**+0.8**
SENIN	**Lac Senin/Sane**	**85.03**	**316**	P	**P**	**09 01 52.4**	**0.0**
SENIN				IAmb	IAmb	09 01 54.3	
	comp=Z,6.3nm,0.8s						
BLS5	**Blasjo**	**85.22**	**329**	*eP*	**P**	**09 01 53.3**	**+0.5**
VNDA	**Vanda**	**89.70**	**168**	P	**P**	**09 02 15.4**	**+1.6**

	comp=Z,0.5nm,0.7s,baz=297,slow=8.5,SNR=4.3							
EKA	**Eskdalemuir Ar**	**90.78**	**326**	P	**P**	**09 02 19.4**	**-0.1**
	baz=95,slow=5.0							
TORD	**Torodi Ar. Bea**	**92.15**	**283**	P	**P**	**09 02 27.6**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=85,slow=4.4,SNR=4.0							
TORD	**Torodi Ar. Bea**	**92.15**	**283**	P	**P**	**09 02 26.2**	**-0.4**
ESDC	**Sonseca Array**	**93.89**	**310**	P	**P**	**09 02 34.1**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=62,slow=4.4,SNR=6.4							
ILAR	**Eielson Array**	**97.31**	**22**	P	Pdif	09 02 49.4	+0.1	
	comp=Z,0.2nm,0.6s,baz=296,slow=2.9,SNR=4.0							
ILAR	**Eielson Array**	**97.31**	**22**	P	Pdif	09 02 49.8	+0.5	
SCHQ	**Schefferville**	**118.76**	**348**	PKP	**PKPdf**	**09 08 04.3**	**0.0**	
	comp=Z,4.3nm,1.0s,baz=31,slow=12,SNR=3.8							
ULM	**Lac du Bonnet**	**124.44**	**8**	PKP	**PKPdf**	**09 08 14.5**	**-0.9**	
	comp=Z,4.0nm,0.8s,baz=304,slow=3.6,SNR=2.8							
NVAR	**Mina Array Bea**	**127.12**	**33**	PKP	**PKiKP**	**09 08 22.6**	**+0.9**	
	comp=Z,0.8nm,0.6s,baz=306,slow=2.4,SNR=10							
NVAR	**Mina Array Bea**	**127.12**	**33**	PKPdf	**PKiKP**	**09 08 21.7**	**0.0**	
PDAR	**Pinedale Array**	**127.74**	**23**	PKP	**PKPdf**	**09 08 22.4**	**+0.1**	
	comp=Z,0.9nm,0.5s,baz=99,slow=2.4,SNR=12							
PDAR	**Pinedale Array**	**127.74**	**23**		**PKPdf**	**09 08 22.2**	**-0.1**	
Q16A	**Castle Valley**	**130.28**	**27**	PKPdf	**PKiKP**	**09 08 28.4**	**+0.4**	
TXAR	**Lajitas Array**	**141.68**	**27**	PKhKP	**PKPdf**	**09 08 44.7**	**-3.7**	
	comp=Z,0.9nm,0.6s,baz=104,slow=0.4,SNR=3.7							
PLCA	**Paso Flores**	**141.88**	**198**	PKhKP	**PKPdf**	**09 08 44.1**	**-4.3**	
	comp=Z,1.1nm,0.8s,baz=206,slow=4.1,SNR=6.0							
JCT	**Junction City**	**142.23**	**21**	PKPdf	**PKPdf**	**09 08 49.5**	**+0.2**	
CPUP	**Villa Florida**	**145.92**	**228**	PKPbc	**PKPbc**	**09 08 56.5**	**+0.1**	
	comp=Z,4.9nm,0.8s,baz=115,slow=4.7,SNR=9.8							
LPAZ	**La Paz**	**159.85**	**234**	PKPab	**PKPab**	**09 09 56.3**	**+0.2**	
	comp=Z,0.5nm,0.5s,baz=130,slow=4.1,SNR=5.1							
LPAZ	**La Paz**	**159.85**	**234**	PKPdf	**PKPdf**	**09 09 17.0**	**0.0**	
LPAZ				PKPab	**PKPab**	**09 09 55.4**	**-0.8**	

JMA ***13*** *09:13:14.8₅0.1,38.41N×142.17E,h31km±2km,M3.8*
*JMA Fel

CBOC	**Ciudad Bolivar**	**13.96**	**353**	*eP*		**Pn**	**09 17 37.6**	**+1.4**
PB07	**IPOC Station P**	**14.24**	**163**			**P**	**09 17 42.5**	**-0.1**
PB09	**IPOC Station P**	**14.50**	**160**	Pn		**Pn**	**09 17 44.0**	**+0.9**
PTBC	**PUERTO BERRIO,**	**14.54**	**360**	*eP*		**P**	**09 17 46.0**	**+0.2**
VILB	**Vilhena**	**14.78**	**110**	*eP*		**P**	**09 17 47.3**	**-1.2**
SIV	**San Ignacio**	**15.21**	**122**	P		**P**	**09 17 52.6**	**-0.7**
	0.7nm,0.3s,baz=303,slow=11,SNR=30							
SIV				S		**Sn**	**09 20 35.6**	**-5.5**
	0.4nm,0.3s,baz=238,slow=14,SNR=4.4							
LVC	**Limon Verde**	**15.37**	**160**	P		**P**	**09 17 55.0**	**-0.4**
	0.2nm,0.3s,baz=306,slow=16,SNR=3.6							
LVC	**Limon Verde**	**15.37**	**160**	Pn		**Pn**	**09 17 54.3**	**+0.3**
LVC	**Limon Verde**	**15.37**	**160**	*eP*		**P**	**09 17 54.6**	**-0.7**
LVC				*eS*		**Sn**	**09 20 45.8**	**+0.5**
PAMC	**Pamplona, Colo**	**15.43**	**6**	*eP*		**P**	**09 17 57.7**	**+1.5**
OCAC	**Ocana**	**16.26**	**4**	*eP*		**Pn**	**09 18 03.4**	**-1.4**
SDV	**Santo Domingo**	**17.28**	**13**	P		**Pn**	**09 18 18.3**	**+1.1**
	3.0nm,0.3s,baz=194,slow=13,SNR=9.4							
SDV	**Santo Domingo**	**17.28**	**13**	*eP*		**Pn**	**09 18 18.1**	**+0.9**
SDV	**Santo Domingo**	**17.28**	**13**	P		**P**	**09 18 16.8**	**+0.5**
SDV				IAmb		IAmb	09 18 20.1	
	comp=Z,10nm,0.5s							
SDV	**Santo Domingo**	**17.28**	**13**	*eP*		**Pn**	**09 18 17.9**	**+0.7**
PAYG	**Puerto Ayora**	**17.45**	**294**	P		**P**	**09 18 17.2**	**-0.8**
PAYG				IAmb		IAmb	09 18 21.5	
	comp=Z,18nm,0.8s							
ARGC	**Ariguani, Magd**	**17.84**	**1**	*eP*		**P**	**09 18 20.1**	**-2.1**
SJCC	**San Jacinto, C**	**17.89**	**358**	*eP*		**Pn**	**09 18 23.8**	**-0.5**
CLDB	**Colider**	**18.56**	**100**	*eP*		**P**	**09 18 30.1**	**0.0**
NPGB	**Novo Progresso**	**18.91**	**88**	*eP*		**Pn**	**09 18 35.1**	**-1.2**
NPGB				*eS*		**S**	**09 21 59.6**	**-1.5**
ITTB	**Itaituba**	**18.93**	**80**	*eP*		**Pn**	**09 18 35.5**	**-1.0**
ITTB				*eS*		**S**	**09 22 01.2**	**-0.2**
AC02	**Maricunga**	**19.30**	**166**	P		**Pn**	**09 18 39.8**	**-1.5**
URIC	**Uribia, Colomb**	**19.81**	**7**	*eP*		**P**	**09 18 41.1**	**-2.5**
PCRV	**Puerto La Cruz**	**20.59**	**28**	P		**P**	**09 18 52.3**	**+0.2**
	comp=Z,5.3nm,0.5s,baz=145,slow=12,SNR=4.0							
PLCV	**Puerto La Cruz**	**20.61**	**26**	P		**P**	**09 18 52.3**	**+0.1**
MALB	**Monte Alegre**	**21.00**	**74**	*eP*		**P**	**09 18 57.1**	**+0.8**
MALB				*eS*		**S**	**09 22 41.5**	**-0.4**
AQDB	**Aquidauana**	**21.88**	**126**	*eP*		**P**	**09 19 07.2**	**+1.5**
SNDB	**Serra Nova Dou**	**23.08**	**102**	*eP*		**P**	**09 19 18.0**	**+0.7**
SNDB				*eS*		**S**	**09 23 16.6**	**-0.4**
ARAG	**Araguaiana, MT**	**23.35**	**111**	*eP*		**P**	**09 19 19.9**	**+0.2**
ARAG				*eS*		**S**	**09 23 22.1**	**+0.8**
MCPB	**Macapa, AP**	**23.56**	**72**	*eP*		**P**	**09 19 22.1**	**+0.5**
MCPB				*eS*		**S**	**09 23 24.7**	**-0.1**
GRGR	**Grenville**	**23.76**	**32**	P		**P**	**09 19 22.3**	**-1.1**
CPUP	**Villa Florida**	**24.34**	**140**	P		**P**	**09 19 28.7**	**+0.1**
	comp=Z,9.0nm,0.7s,baz=325,slow=9.5,SNR=19							
CPUP	**Villa Florida**	**24.34**	**140**	P		**P**	**09 19 28.9**	**+0.3**
CPUP				IAmb		IAmb	09 19 29.4	
	comp=Z,8.8nm,0.8s							
CPUP	**Villa Florida**	**24.34**	**140**	*eP*		**P**	**09 19 30.3**	**+1.7**
CPUP				*eS*		**S**	**09 23 37.0**	**+0.1**
PRPB	**Parauapebas**	**24.48**	**87**	*eP*		**P**	**09 19 30.7**	**+0.7**
PRPB				*eS*		**S**	**09 23 40.0**	**+0.5**
MDP	**Montagnes des**	**25.36**	**60**	P		**P**	**09 19 37.2**	**-0.8**
	comp=Z,5.4nm,0.8s,baz=242,slow=15,SNR=3.5							
TRCB	**Terra Rica**	**25.52**	**127**	*eP*		**P**	**09 19 41.0**	**+1.6**
ITRB	**Iturama**	**26.00**	**119**	*eP*		**P**	**09 19 43.8**	**0.0**
PCMB	**Pacaembu**	**26.04**	**124**	*eP*		**P**	**09 19 45.9**	**+1.8**
TMAB	**Tom-Au,PA,Br**	**26.80**	**79**	*eP*		**P**	**09 19 51.7**	**+0.7**
BDFB	**Brasilia**	**26.88**	**109**	P		**P**	**09 19 51.9**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=273,slow=15,SNR=3.3							
BDFB				pP		**pP**	**09 20 24.3**	**+0.9**
	comp=Z,7.5nm,0.8s,baz=278,slow=9.3,SNR=4.2							
MLPR	**Magueyes Islan**	**26.90**	**16**	P		**P**	**09 19 51.8**	**+0.1**
MLPR				IAmb		IAmb	09 20 03.6	
	comp=Z,12nm,0.9s							
CRPR	**Cabo Rojo, PR**	**26.92**	**15**	P		**P**	**09 19 51.5**	**-0.3**
CRPR				IAmb		IAmb	09 19 55.7	
	comp=Z,12nm,0.9s							
PTGB	**Pitanga**	**26.99**	**130**	*eP*		**P**	**09 19 52.7**	**0.0**
ITQB	**Itaqui**	**27.20**	**144**	*eP*		**P**	**09 19 55.0**	**+0.7**
PDPR	**Patillas Dam,**	**27.24**	**18**	P		**P**	**09 19 54.9**	**+0.2**
PDPR				IAmb		IAmb	09 19 59.2	
	comp=Z,16nm,0.9s							
SJG	**San Juan**	**27.29**	**17**	P		**P**	**09 19 55.0**	**-0.2**
	comp=Z,14nm,0.4s,baz=185,slow=4.9,SNR=8.7							
IPMB	**Ipameri, GO**	**27.31**	**114**	*eP*		**P**	**09 19 55.3**	**-0.2**
AOPR	**Arecibo Observ**	**27.34**	**16**	P		**P**	**09 19 55.6**	**0.0**
CBYP	**Canovanas**	**27.53**	**18**	P		**P**	**09 19 56.8**	**-0.6**
CBYP				IAmb		IAmb	09 20 02.7	
	comp=Z,19nm,1.2s							
CUPR	**Culebra, Puert**	**27.74**	**19**	P		**P**	**09 19 58.4**	**-0.8**
BB19B	**Bebedouro**	**28.11**	**120**	*eP*		**P**	**09 20 03.6**	**+1.0**
BB19B				*eS*		**S**	**09 24 36.0**	**-0.8**
FRTB	**Fartura**	**28.24**	**125**	*eP*		**P**	**09 20 04.9**	**+1.1**
ITAB	**Concordia**	**28.42**	**135**	*eP*		**P**	**09 20 05.1**	**-0.1**
SDBA	**SAO DESIDERIO**	**29.34**	**101**	*eP*		**P**	**09 20 14.6**	**+1.0**
PLCA	**Paso Flores**	**32.68**	**175**	P		**P**	**09 20 43.1**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=350,slow=9.5,SNR=3.5							
SJMB	**Sao Joao De Ma**	**33.93**	**112**	*eP*		**P**	**09 20 53.9**	**+0.2**
BSFB	**Barra de Sao F**	**34.27**	**112**	*eP*		**P**	**09 20 57.0**	**+0.3**
BSFB				*eS*		**S**	**09 26 12.2**	**-0.6**
GDU01	**Guandu, BA**	**34.63**	**102**	*eP*		**P**	**09 20 59.3**	**-0.4**
GDU01				*epP*		**pP**	**09 21 33.2**	**+1.0**
NAN01	**Guarapari, ES**	**34.73**	**110**	*eP*		**P**	**09 21 00.8**	**+0.3**
NAN01				*epP*		**pP**	**09 21 35.1**	**+2.0**
TX31	**Lajitas Ar. Si**	**46.68**	**324**	P		**P**	**09 22 37.7**	**-0.7**
TXAR	**Lajitas Array**	**46.68**	**324**	P		**P**	**09 22 39.1**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=146,slow=8.8,SNR=7.9							
TXAR				pP		**pP**	**09 23 11.0**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=146,slow=9.8,SNR=3.1							
TXAR	**Lajitas Array**	**46.68**	**324**	P		**P**	**09 22 38.4**	**0.0**
SDCO	**Great Sand Dun**	**54.06**	**330**	P		**P**	**09 23 34.4**	**+0.3**
X16A	**Lo Mia Camp, P**	**54.92**	**323**	P		**P**	**09 23 40.8**	**+0.6**
SPX	**San Pedro Mart**	**55.31**	**317**	P		**P**	**09 23 43.7**	**+0.5**
SPX				IAmb		IAmb	09 23 51.3	
	comp=Z,8.0nm,1.4s							
SMCO	**Snowmass**	**55.90**	**330**	IAmb		IAmb	09 24 01.9	
	comp=Z,3.4nm,0.9s							
PV01	**Paradox Valley**	**55.94**	**328**	P		**P**	**09 23 47.9**	**+0.5**
PV01				IAmb		IAmb	09 23 49.0	
	comp=Z,2.2nm,0.7s							
TKX	**Tecate**	**57.01**	**317**	P		**P**	**09 23 50.6**	**-4.3**
PDAR	**Pinedale Array**	**59.90**	**331**	P		**P**	**09 24 15.4**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=182,slow=7.3,SNR=4.3							
PDAR				pP		**pP**	**09 24 51.2**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=185,slow=6.3,SNR=3.5							
NVAR	**Mina Array Bea**	**61.72**	**322**	P		**P**	**09 24 28.3**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=125,slow=7.8,SNR=5.0							
NVAR				pP		**PcP**	**09 25 05.9**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=126,slow=4.6,SNR=3.2							
YNE	**Yellowstone No**	**61.80**	**332**	P		**P**	**09 24 28.4**	**+0.6**
YHL	**Hebgen Lake**	**62.24**	**331**	P		**P**	**09 24 32.6**	**+1.8**
LIC	**Lamto**	**70.64**	**81**	*eP*		**P**	**09 25 23.6**	**-0.8**
	comp=Z,14nm,0.7s							
TIC	**Toumodi**	**70.72**	**80**	*eP*		**P**	**09 25 24.2**	**-0.7**
DBIC	**Dimbokro**	**70.89**	**80**	P		**P**	**09 25 25.5**	**-0.3**
	comp=Z,11nm,0.5s,baz=238,slow=6.3,SNR=16							
DBIC	**Dimbokro**	**70.89**	**80**	P		**P**	**09 25 25.6**	**-0.3**
KIC	**Kosan Boka**	**70.94**	**80**	*eP*		**P**	**09 25 25.6**	**-0.6**
	comp=Z,41nm,0.9s							
KOWA	**Kowa**	**73.32**	**72**	P		**P**	**09 25 39.9**	**-0.4**
KOWA				IAmb		IAmb	09 25 40.9	
	comp=Z,11nm,0.6s							
VNA3	**Neumayer Olymp**	**74.39**	**162**	P		**P**	**09 25 46.8**	**+1.2**
VNA1	**Neumayer--Stat**	**74.61**	**162**	P		**P**	**09 25 48.9**	**+2.2**
VNA2	**Neumayer--Watz**	**74.98**	**162**	P		**P**	**09 25 50.1**	**+1.1**
	baz=288,slow=5.6							
SNAA	**Sanae**	**76.60**	**162**	P		**P**	**09 25 59.4**	**+1.2**
TOA0	**Torodi Ar. Sit**	**78.46**	**75**			**P**	**09 26 09.0**	**-0.6**
TOA0				IAmb		IAmb	09 26 09.8	
	comp=Z,8.4nm,0.8s							
TORD	**Torodi Ar. Bea**	**78.46**	**75**	P		**P**	**09 26 08.8**	**-0.7**
	comp=Z,7.6nm,0.7s,baz=288,slow=6.1,SNR=44							
TORD	**Torodi Ar. Bea**	**78.46**	**75**			**P**	**09 26 08.7**	**-0.9**
ESDC	**Sonseca Array**	**80.40**	**48**	P		**P**	**09 26 20.1**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=254,slow=5.7,SNR=7.0							
QSPA	**South Pole Qui**	**82.01**	**180**	P		**P**	**09 26 29.6**	**+1.9**
INK	**Inuvik**	**86.61**	**341**	P		**P**	**09 26 49.9**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=120,slow=3.3,SNR=3.3							
NOA	**NORSAR Array B**	**94.90**	**29**	P		**P**	**09 27 29.8**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=259,slow=4.5,SNR=3.5							
ZALV	**Zalesovo Beam**	**131.31**	**16**	PKP		**PKPdf**	**09 33 18.6**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=288,slow=1.4,SNR=4.0							
MKAR	**Makanchi Array**	**136.59**	**23**	PKP		**PKPdf**	**09 33 28.9**	**-0.2**
	comp=Z,0.9nm,0.9s,baz=276,slow=2.2,SNR=4.3							
ASAR	**Alice Springs**	**138.02**	**221**	PKhKP	PKPpre		09 33 28.2	
	comp=Z,0.4nm,0.8s,baz=116,slow=2.2,SNR=1.7							
ASAR				PKP		**PKPdf**	**09 33 32.8**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=111,slow=2.4,SNR=4.8							
WRA	**Warramunga Arr**	**140.29**	**225**	PKhKP	PKPpre		09 33 29.6	
	comp=Z,0.1nm,0.5s,baz=127,slow=2.6,SNR=5.3							
WRA				PKP		**PKPdf**	**09 33 37.2**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=134,slow=1.6,SNR=11							
WRA				pPKP	pPKPdf		09 34 15.2	-1.6
	comp=Z,0.7nm,0.9s,baz=121,slow=2.3,SNR=2.4							
FITZ	**Fitzroy Crossi**	**147.30**	**217**	PKPbc		**PKPbc**	**09 33 51.7**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=135,slow=8.6,SNR=3.4							
FITZ				pPKPbc		**pPKPdf**	**09 34 30.1**	**+1.1**
	comp=Z,4.3nm,0.8s,baz=158,slow=7.5,SNR=5.4							
FITZ	**Fitzroy Crossi**	**147.30**	**217**			**PKPdf**	**09 33 47.0**	**-1.8**
CMAR	**Chiang Mai Arr**	**167.84**	**31**	PKPab		**PKPab**	**09 35 20.6**	**-0.8**
	comp=Z,1.0nm,0.3s,baz=324,slow=5.9,SNR=4.7							

NEIC ***13*** *09:21:54.5±1.4, 10.86S±0.06×162.42E±0.09, h97km±8km, mb4.2/14, Error ellipse: s-maj=15.0km s-min=6.3km az=59.0*

IDC ***13*** *09:21:56.6±2.4, 10.83S×162.26E, h107km±19km, mb3.3/8, mb1 3.6/11, mb1mx3.5/37, mbtmp3.8/11, MS2.8/3, Ms1 2.8/3, ms1mx2.5/16, Error ellipse: s-maj=22.9km s-min=17.1km az=77.0*

ISC 13 09:21:55.0±0.7, 10.87S±0.08×162.38E±0.09, h100km, n35, σ1s23/30, mb3.8/12, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.79**	**301**	P		**Pn**		**09 22 37.6**	**-0.4**
	318nm,0.3s,baz=156,slow=5.7,SNR=67								
HNR				S		**Sn**		**09 23 11.0**	**0.0**
	91nm,0.3s,baz=186,slow=21,SNR=9.3								
HNR				LR		LR		09 23 20.8	
	comp=Z,63nm,18.2s,baz=191,slow=32								
SANVU	**Saraoutou**	**6.54**	**135**			**Pn**		**09 23 27.9**	**-0.7**
SANVU						**Sn**		**09 24 40.6**	**-1.2**
DZM	**Mont Dzumac**	**11.79**	**161**	P		**Pn**		**09 24 42.2**	**+2.1**
	0.2nm,0.3s,baz=353,slow=9.9,SNR=12								
DZM				S		**Sn**		**09 26 47.7**	**-2.1**
	0.5nm,0.3s,baz=330,slow=20,SNR=4.6								
DZM	**Mont Dzumac**	**11.79**	**161**			**Pn**		**09 24 39.7**	**-0.4**
CTA	**Charters Tower**	**18.02**	**238**	P		**Pn**		**09 26 00.2**	**+1.1**
	0.3nm,0.3s,baz=56,slow=9.6,SNR=6.2								
CTAO	**Charters Tower**	**18.02**	**238**	Pn		**Pn**		**09 26 00.3**	**+1.1**
COEN	**Coen**	**19.00**	**259**	P		**Pn**		**09 26 09.3**	**-1.6**
COEN				IAmb		IAmb		09 26 33.9	
	comp=Z,9.0nm,1.2s								
WR0	**Warramunga Arr**	**28.28**	**248**	P		**P**		**09 27 39.1**	**-0.1**
WB0	**Warramunga Arr**	**28.36**	**248**	P		**P**		**09 27 39.8**	**-0.2**
WB0				IAmb		IAmb		09 27 47.5	
	comp=Z,8.4nm,1.4s								
WRAB	**Tennant Creek**	**28.45**	**248**	P		**P**		**09 27 38.3**	**-2.4**
WB2	**Warramunga Arr**	**28.45**	**248**	P		**P**		**09 27 41.3**	**+0.6**
WB2				IAmb		IAmb		09 27 52.5	
	comp=Z,9.0nm,1.5s								
WRA	**Warramunga Arr**	**28.46**	**248**	P		**P**		**09 27 40.3**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=77,slow=8.9,SNR=5.4								
WRA				LR		LR		09 38 02.2	
	comp=Z,27nm,19.4s,baz=150,slow=34								
H11S2	**WAKE ISLAND Hy**	**29.49**	**8**	T		T		09 58 59.6	
	baz=188,slow=76,SNR=66								
H11S3	**WAKE ISLAND Hy**	**29.49**	**8**	T		T		09 58 58.8	
	baz=188,slow=76,SNR=41								
H11S1	**WAKE ISLAND Hy**	**29.51**	**8**	T		T		09 58 58.2	
	baz=188,slow=76,SNR=40								
GUMO	**Guam**	**29.88**	**324**	LR		LR		09 39 44.8	
	comp=Z,23nm,19.8s,baz=139,slow=36								
ASAR	**Alice Springs**	**29.95**	**241**	P		**P**		**09 27 53.2**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=64,slow=10,SNR=5.2								
TOO	**Toolangi**	**30.61**	**207**	P		**P**		**09 28 00.0**	**+0.3**
TOO				IAmb		IAmb		09 28 22.1	
	comp=Z,7.2nm,1.2s								
H11N1	**WAKE ISLAND Hy**	**30.72**	**8**	T		T		10 00 32.6	
	baz=188,slow=76,SNR=31								
H11N3	**WAKE ISLAND Hy**	**30.73**	**8**	T		T		10 00 33.1	
	baz=188,slow=76,SNR=42								
H11N2	**WAKE ISLAND Hy**	**30.74**	**8**	T		T		10 00 33.9	
	baz=188,slow=76,SNR=30								
BBOO	**Buckleboo**	**32.59**	**224**	P		**P**		**09 28 17.4**	**+0.3**
FITZ	**Fitzroy Crossi**	**36.24**	**254**	P		**P**		**09 28 47.8**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=62,slow=9.5,SNR=1.6								
FITZ	**Fitzroy Crossi**	**36.24**	**254**	P		**P**		**09 28 47.8**	**-0.9**
VNDA	**Vanda**	**66.63**	**180**	P		**P**		**09 32 36.4**	**+2.0**
	comp=Z,1.2nm,0.7s,baz=346,slow=6.0,SNR=11								
VNDA	**Vanda**	**66.63**	**180**	P		**P**		**09 32 34.5**	**+0.1**
VNDA				IAmb		IAmb		09 32 36.9	
	comp=Z,2.0nm,0.8s								
CM31	**Chiang Mai Arr**	**69.02**	**295**	P		**P**		**09 32 48.4**	**-2.0**
CMAR	**Chiang Mai Arr**	**69.02**	**295**	P		**P**		**09 32 48.1**	**-2.3**
SONM	**Songino Array**	**76.60**	**325**	P		**P**		**09 33 35.8**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=153,slow=5.7,SNR=4.7								
SONM	**Songino Array**	**76.60**	**325**	IAmb		IAmb		09 33 36.4	
	comp=Z,0.9nm,0.7s								
QSPA	**South Pole Qui**	**79.13**	**180**	P		**P**		**09 33 49.2**	**+0.7**
QSPA				IAmb		IAmb		09 33 50.7	
	comp=Z,6.8nm,1.3s								
IMAR	**Indian Mountai**	**83.18**	**17**	P		**P**		**09 34 09.7**	**0.0**
ILAR	**Eielson Array**	**84.43**	**19**	P		**P**		**09 34 17.0**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=236,slow=4.7,SNR=3.9								
NVAR	**Mina Array Bea**	**88.45**	**51**	P		**P**		**09 34 36.7**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=238,slow=9.4,SNR=3.1								
MKAR	**Makanchi Array**	**91.15**	**317**	P		**P**		**09 34 49.2**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=86,slow=8.1,SNR=2.6								

HLW ***13*** *09:37:49.0, 38.60N×20.52E, h10km±23km, Md4.6*

MOS ***13*** *09:37:51.6±1.3, 38.35N×20.17E, h16km, mb4.7/26, Error ellipse: s-maj=5.6km s-min=2.9km az=75.3*

IDC ***13*** *09:37:51.1±0.5, 38.41N×20.50E, h0km, mb4.3/23, mb1 4.3/34, mb1mx4.2/52, mbtmp4.2/34, ML4.0/10, MS3.5/24, Ms1 3.5/24, ms1mx3.4/56, Error ellipse: s-maj=11.8km s-min=10.2km az=141.0*

BGR ***13*** *09:37:51.5±1.5, 38.65N×21.81E, h10km, Ms3.3, Error ellipse: s-maj=111.2km s-min=18.9km az=60.0*

TIR ***13*** *09:37:52.2, 38.42N×20.34E, h10km, Ml4.6*

NEIC ***13*** *09:37:53.2±2.8, 38.42N±0.05×20.41E±0.06, h10km±1km, Error ellipse: s-maj=9.6km s-min=7.2km az=211.0*

MED_RC ***13*** *09:37:53.0±0.3, 38.41N×20.39E, h24km±1km, MW4.6/21, Moment Tensor Solution.Mantle waves: s21,c31; Duration: 1!0 Moment tensor: Scale 10^16Nm; Mrr0.36±.11; Mθθ0.56±.07; Mϕϕ-0.93±.07; Mrθ-0.05±.06; Mθϕ0.85±.06; Mϕr-0.02±.06; Best double couple: M☐1.13000×10^16 NP1☐s291.00000°, ☐86.00000°, ☐4.00000°. NP2:☐s200.00000°, ☐86.00000°, ☐176.00000°. Principal axes: T 0.9500, Plg5.0000°, Azm156.0000°; N 0.3600, Plg85.0000°, Azm336.0000°; P -1.3100, Plg0.0000°, Azm246.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

BEO ***13*** *09:37:53.5±0.6, 38.34N×20.14E, h23km±4km, ML4.4/21*

ATH ***13*** *09:37:53.3, 38.38N×20.51E, h12km±1km, ML4.5/14, Error ellipse: s-maj=1.4km s-min=0.5km az=266.0*

THE ***13*** *09:37:53.5, 38.39N×20.49E, h11km, ML4.5/9, Error ellipse: s-maj=1.0km s-min=0.4km az=278.0*

PDG ***13*** *09:37:55.3±0.3, 38.69N×20.30E, h13km±1km, MD4.7/2, ML4.2/12, Error ellipse: s-maj=2.0km s-min=1.3km az=90.0*

GII ***13*** *09:38:04.7±0.0, 37.43N×21.20E, h8km, mb4.9/2, MD4.9/2, Mm4.8/3*

ISC 13 09:37:53.5±0.6, 38.40N±0.01×20.47E±0.02, h16km±3km, n447, σ2s12/534, mb4.4/48, MS3.6/14, 36C-18D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.08**	**81**	P		**Pg**		**09 37 55.7**	**-1.0**
VSK1				S		**Sg**		**09 37 57.4**	**-1.3**
FSK	**Fiskardo**	**0.10**	**50**	P		**Pg**		**09 37 56.0**	**-0.9**
FSK	**Fiskardo**	**0.10**	**50**	P		**Pg**		**09 37 56.0**	**-0.9**
FSK				S		**Sg**		**09 37 58.1**	**-0.9**
	295µm,0.5s								
KEF5	**Kardakata, Kep**	**0.12**	**180**	P		**Pg**		**09 37 56.2**	**-1.0**
KEF5				S		**Sg**		**09 37 58.5**	**-0.9**
KEF5	**Kardakata, Kep**	**0.12**	**180**	P		**Pg**		**09 37 56.1**	**-1.0**
KEF5				S		**Sg**		**09 37 58.4**	**-1.1**
KEF4	**Livadi, Kephal**	**0.14**	**194**	P		**Pg**		**09 37 56.5**	**-0.9**
KEF4				S		**Sg**		**09 37 59.1**	**-0.9**
KEF4	**Livadi, Kephal**	**0.14**	**194**	P		**Pg**		**09 37 56.5**	**-0.9**
KEF4				S		**Sg**		**09 37 59.7**	**-0.2**
DMLN	**Damoulianata-K**	**0.17**	**205**	P		**Pg**		**09 37 57.1**	**-0.8**
DMLN				S		**Sg**		**09 38 00.1**	**-0.6**
DMLN	**Damoulianata-K**	**0.17**	**205**	P		**Pg**		**09 37 57.1**	**-0.8**
DMLN				S		**Sg**		**09 38 00.2**	**-0.6**
	380µm,0.4s								
LXRA	**Lixouri, Kepha**	**0.20**	**187**	P		**Pg**		**09 37 57.6**	**-0.6**
LXRA				S		**Sg**		**09 38 01.2**	**-0.1**
ARGA	**Argostoli. Kep**	**0.22**	**178**	P		**Pg**		**09 37 57.7**	**-0.8**
ARGA				S		**Sg**		**09 38 01.6**	**-0.3**
VLS	**Valsamata**	**0.24**	**156**	P		**Pg**		**09 37 58.1**	**-0.8**
VLS				S		**Sg**		**09 38 01.9**	**-0.6**
VLS				AML		AML		09 38 02.5	
VLS				AML		AML		09 38 02.6	
VLS	**Valsamata**	**0.24**	**156**	P		**Pg**		**09 37 58.0**	**-0.8**
VLS				S		**Sg**		**09 38 01.9**	**-0.6**
VLS	**Valsamata**	**0.24**	**156**	P		**Pg**		**09 37 58.0**	**-0.8**
VLS				S		**Sg**		**09 38 01.9**	**-0.6**
	116µm,0.2s								
EVGI	**Lefkada island**	**0.27**	**33**	P		**Pg**		**09 37 59.0**	**-0.3**
EVGI				S		**Sg**		**09 38 03.6**	**+0.3**
EVGI	**Lefkada island**	**0.27**	**33**	P		**Pg**		**09 37 59.0**	**-0.3**
EVGI				S		**Sg**		**09 38 03.6**	**+0.3**
	118µm,0.2s								
PSDA	**Pessada-Kefalo**	**0.30**	**162**	P		**Pg**		**09 37 59.1**	**-0.7**
PSDA				S		**Sg**		**09 38 03.8**	**-0.3**
PSDA	**Pessada-Kefalo**	**0.30**	**162**	P		**Pg**		**09 37 59.1**	**-0.7**
PSDA				S		**Sg**		**09 38 03.9**	**-0.2**
	12µm,0.4s								
MGNA	**Meganis**	**0.36**	**44**	P		**Pg**		**09 38 00.4**	**-0.5**
MGNA				S		**Sb**		**09 38 06.2**	**-0.9**
NYDR	**Nydri-Lefkada**	**0.36**	**30**	P		**Pg**		**09 38 00.4**	**-0.6**
NYDR				S		**Sb**		**09 38 06.2**	**-0.9**
NYDR	**Nydri-Lefkada**	**0.36**	**30**	P		**Pg**		**09 38 00.4**	**-0.6**
NYDR				S		**Sb**		**09 38 06.3**	**-0.8**
	181µm,0.5s								
LKD2	**Lefkada island**	**0.42**	**21**	P		**Pg**		**09 38 01.4**	**-0.6**
LKD2				S		**Sg**		**09 38 07.4**	**-0.4**
LKD2				AML		AML		09 38 08.6	
LKD2				AML		AML		09 38 09.3	
LKD2	**Lefkada island**	**0.42**	**21**	P		**Pg**		**09 38 01.4**	**-0.6**
	baz=33								
LKD2				S		**Sb**		**09 38 08.1**	**-0.6**
	baz=33								
LKD2	**Lefkada island**	**0.42**	**21**	P		**Pg**		**09 38 01.4**	**-0.6**
LKD2				S		**Sb**		**09 38 08.3**	**-0.4**
	82µm,0.5s								
TSLK	**Tsoukalades, L**	**0.45**	**19**	P		**Pg**		**09 38 02.1**	**-0.5**
TSLK				S		**Sb**		**

SCTE	**Santa Cesarea**	2.28	318		P		Pn	09 38 31.7	+1.1
	baz=320								
SCTE					S		Sb	09 39 01.8	-0.6
	baz=320								
LIT	**Litokhoron**	2.31	42		P		Pb	09 38 34.2	-0.8
LIT	**Litokhoron**	2.31	42				Pb	09 38 34.1	-0.8
NEO	**Neokhori**	2.33	66		P		Pb	09 38 33.5	-1.8
ATH	**Athens Observa**	2.59	98		P		Pb	09 38 37.9	-1.8
VLY	**Voula,Athens**	2.68	101		P		Pn	09 38 37.7	+1.7
OHR	**Ohrid**	2.72	5		*i* Pn		Pn	09 38 39.0	+2.4
OHR	**Ohrid**	2.72	5		P		Pn	09 38 38.7	+2.0
DION	**Dionisos Attik**	2.75	96		P		Pn	09 38 38.9	+1.9
PAIG	**Paliouri**	2.93	58		P		Pb	09 38 42.9	-2.4
THE	**Thessaloniki**	2.95	40		P		Pb	09 38 43.7	-2.0
GRG	**Griva**	2.96	30		P		Pn	09 38 42.3	+2.4
TIR	**Tirane**	2.98	351	⇓	P		Pn	09 38 41.8	+1.5
TIR	**Tirane**	2.98	351		P		Pn	09 38 41.3	+1.1
TIR	**Tirane**	2.98	351				Pn	09 38 41.3	+1.1
TIR	**Tirane**	2.98	351		P		Pn	09 38 41.7	+1.5
	baz=353								
TIR					S		Sb	09 39 20.2	-2.3
	baz=353								
TIR					AMP				
	comp=E,3.8nm,0.9s,baz=353								
TIP	**Timpagrande**	3.00	286	⇓	P		Pn	09 38 40.6	0.0
TIP	**Timpagrande**	3.00	286				Pn	09 38 40.9	+0.4
PLG	**Polygyros**	3.04	49		P		Pn	09 38 43.7	+2.7
TAR1	**Taranto**	3.25	312	⇑	*i* Pn		Pn	09 38 44.4	+0.5
PHP	**Peshkopia**	3.28	360		P		Pn	09 38 45.9	+1.5
	baz=1.0								
PHP					AMP				
	comp=N,5.0nm,0.8s,baz=1.0								
SOH	**Sokhos**	3.29	42		P		Pb	09 38 47.9	-3.7
VAY	**Valandovo**	3.34	28		*e*Pn		Pn	09 38 47.2	+2.1
VAY	**Valandovo**	3.34	28		*i* Pn		Pn	09 38 47.5	+2.5
OUR	**Ouranopolis**	3.34	54		P		Pb	09 38 49.0	-3.4
STIP	**Stip**	3.55	21		*i* Pn		Pn	09 38 51.2	+3.2
CEL	**Celeste**	3.60	269				Pn	09 38 49.0	+0.2
SRS	**Serrai**	3.63	41		*e*Pn		Pn	09 38 51.4	+2.3
SRS	**Serrai**	3.63	41		P		Pn	09 38 51.3	+2.2
SKO	**Skopje**	3.65	11		*e*Pn		Pn	09 38 50.3	+1.0
SKO	**Skopje**	3.65	11		*i* Pn		Pn	09 38 51.2	+1.9
PUK	**Puka**	3.67	353		P		Pn	09 38 50.5	+0.8
	baz=355								
MATE	**Matera**	3.68	309	⇑	P		Pn	09 38 49.6	-0.1
MATE				⇑	S		Sn	09 39 33.3	+0.6
ULC	**Ulcinj**	3.68	346	⇓	*i* Pn		Pn	09 38 49.0	-0.9
ULC					*i* Sn		Sn	09 39 29.8	-3.2
DRME	**Dracevica, Mon**	3.91	346	⇑	*i* Pn		Pn	09 38 52.6	-0.4
DRME					*i* Sn		Sn	09 39 35.2	-3.3
DRME	**Dracevica, Mon**	3.91	346	⇑	*i* Pn		Pn	09 38 52.6	-0.4
BCI	**Bajram Curri**	3.98	356		P		Pn	09 38 55.3	+1.4
	baz=358								
MMB	**Musomiste**	4.05	37		P		Pn	09 38 59.5	+4.5
BUM	**Brajici-Budva**	4.08	343		*e*Pn		Pn	09 38 54.5	-0.9
BUM					*i* Sn		Sn	09 39 39.2	-3.6
PDG	**Podgorica**	4.13	347		*e*Pn		Pn	09 38 55.5	-0.4
PDG					*e*Sn		Sn	09 39 40.7	-3.3
PDG	**Podgorica**	4.13	347	⇑	P		Pn	09 38 56.7	+0.7
PDG	**Podgorica**	4.13	347	⇑	*i* Pn		Pn	09 38 55.6	-0.4
PDG	**Podgorica**	4.13	347		Pn		Pn	09 38 55.8	-0.2
TTG	**Podgorica**	4.13	347		P		Pn	09 38 55.6	-0.4
TTG					S		Sn	09 39 42.0	-2.0
TTG	**Podgorica**	4.13	347	⇓	*i* Pn		Pn	09 38 55.5	-0.4
TTG					*i* Sn		Sn	09 39 40.6	-3.4
PVY	**Plav**	4.21	355	⇑	*i* Pn		Pn	09 38 56.7	-0.5
PVY					*i* Sn		Sn	09 39 43.1	-3.0
APE	**Apeiranthos**	4.23	107	⇓	P		Pn	09 39 50.8	+2.4
APE				⇓	S		Sn	09 39 50.1	+4.7
APE	**Apeiranthos**	4.23	107		*i* P		Pn	09 38 59.1	+1.8
PRVS	**Prvonek**	4.29	16		*e*Pn		Pn	09 38 59.0	+0.9
CEME	**Cevo**	4.31	345		*e*Pn		Pn	09 38 57.7	-0.8
CEME					*i* Sn		Sn	09 39 44.9	-3.6
HCY	**Herceg Novi**	4.32	340		P		Pn	09 38 57.3	-1.3
HCY					S		Sn	09 39 46.0	-2.6
HCY	**Herceg Novi**	4.32	340	⇓	*i* Pn		Pn	09 38 57.5	-1.0
HCY					*i* Sn		Sn	09 39 44.9	-3.7
HCY	**Herceg Novi**	4.32	340		*e*Pn		Pn	09 38 57.2	-1.3
BOSS	**Bosilegrad**	4.37	20		*e*Pn		Pn	09 39 00.7	+1.4
BOSS					*e*Sn		Sn	09 39 49.8	-0.2
IVA	**Berane**	4.49	355		*e*Pn		Pn	09 39 00.9	-0.1
IVA					*i* Sn		Sn	09 39 49.6	-3.4
KOME	**Kolasin**	4.51	351	⇓	*i* Pn		Pn	09 39 00.7	-0.5
KOME					*i* Sn		Sn	09 39 49.7	-3.7
NKY	**Niksic**	4.55	346		P		Pn	09 39 01.6	-0.3
NKY					S		Sn	09 39 52.0	-2.5
NKY	**Niksic**	4.55	346	⇓	*i* Pn		Pn	09 39 01.0	-0.9
NKY					*i* Sn		Sn	09 39 50.5	-4.0
TREB	**Trebinje**	4.61	340		*e*Pn		Pn	09 39 01.4	-1.1
TREB					*e*Sn		Sn	09 39 54.0	-1.7
TREB	**Trebinje**	4.61	340		*e*Pn		Pn	09 39 01.1	-1.4
RZN	**Rozhen**	4.63	43		P		Pn	09 39 06.4	+3.4
IDI	**Anoyia**	4.71	130		Pn		Pn	09 39 05.1	+1.1
	comp=N,3.0nm,0.3s,baz=328,slow=16,SNR=18								
IDI					Sn		Sn	09 39 59.2	+0.8
	comp=N,13nm,0.3s,baz=119,slow=18,SNR=4.6								
IDI	**Anoyia**	4.71	130	⇑	P		Pn	09 39 06.4	+2.4
IDI				⇓	S		Sn	09 40 02.8	+4.4
IDI	**Anoyia**	4.71	130		Pn		Pn	09 39 05.7	+1.6
VTS	**Vitosha**	4.71	26		Pn		Pn	09 39 06.2	+2.1
VTS					S		Sn	09 40 03.1	+4.5
BRY	**Bratogost**	4.73	343		P		Pn	09 39 03.4	-1.0
BRY					S		Sn	09 39 56.0	-3.0
BRY	**Bratogost**	4.73	343	⇑	*i* Pn		Pn	09 39 03.4	-1.0
BRY					*i* Sn		Sn	09 39 54.8	-4.2
BRY	**Bratogost**	4.73	343		*e*Pn		Pn	09 39 03.0	-1.4
SELS	**Selova**	4.84	6		*e*Pn		Pn	09 39 05.2	-0.6
SELS					*e*Sn		Sn	09 40 00.7	-0.9
SJES	**Sjenica**	4.87	356		*e*Pn		Pn	09 39 06.8	+0.5
VAE	**Valguarnera**	4.88	261		Pn		Pn	09 39 07.0	+0.7
	comp=N,2.1nm,0.3s,baz=166,slow=12,SNR=2.4								
VAE					Sn		Sn	09 40 08.5	+6.1
	comp=N,13nm,0.3s,baz=45,slow=20,SNR=4.2								
SGRT	**San Giovanni R**	4.94	314				Pn	09 39 06.4	-0.7
STON	**Ston**	4.94	336		*e*Pn		Pn	09 39 06.6	-0.5
STON	**Ston**	4.94	336		*e*Pn		Pn	09 39 05.9	-1.2
STON					Sn		Sn	09 39 59.8	-4.1
UPM	**Unac-Piva**	4.95	347	⇑	*i* Pn		Pn	09 39 06.4	-0.9
UPM					*i* Sn		Sn	09 39 59.9	-4.4
UPM	**Unac-Piva**	4.95	347		*e*Pn		Pn	09 39 07.0	-0.3
ALN	**Alexandroupoli**	4.98	58		P		Pn	09 39 09.2	+1.6
ALN	**Alexandroupoli**	4.98	58				Pn	09 39 09.2	+1.6
PLE	**Pljevlja**	5.00	351		P		Pn	09 39 07.9	-0.1
PLE	**Pljevlja**	5.00	351	⇓	*i* Pn		Pn	09 39 07.1	-0.9
PLE					*i* Sn		Sn	09 40 01.4	-4.0
KDZ	**Kurdzhali**	5.00	48		P		Pn	09 39 10.8	+2.9
KDZ					S		Sn	09 40 08.3	+2.9
PGB	**Panagyurishte**	5.02	33		P		Pn	09 39 13.4	+5.2
ZAPS	**Zavoj**	5.14	18		*e*Pn		Pn	09 39 12.0	+2.1
LSTV	**Lastovo**	5.15	329		*e*Pn		Pn	09 39 08.8	-1.1
LSTV					Sn		Sn	09 40 03.8	-5.1
IVAS	**Ivanjica**	5.18	357		*e*Pn		Pn	09 39 10.0	-0.5
IVAS					*e*Sn		Sn	09 40 08.7	-1.2
PAOL	**Paolisi**	5.25	302				Pn	09 39 13.2	+1.7
RUDO	**Rudo**	5.28	351		*e*Pn		Pn	09 39 09.3	-2.5
BOVS	**Bovan**	5.32	10		*e*Pn		Pn	09 39 11.5	-0.7
BOVS					*e*Sn		Sn	09 40 12.4	-0.8
BLKB	**Belogradchik**	5.48	17	⇓	S		Sn	09 40 20.1	+2.8
GRUS	**Gruza**	5.49	2		*e*Pn		Pn	09 39 14.8	+0.2
GRUS					*e*Sn		Sn	09 40 16.1	-1.3
BBLS	**Lazići**	5.52	352		*e*Pn		Pn	09 39 14.9	-0.3
BBLS					*e*Sn		Sn	09 40 14.7	-3.7
BBLS	**Lazići**	5.52	352	⇑	*i* Pn		Pn	09 39 16.9	+1.7
MAKA	**Makarska**	5.54	333		*e*Pn		Pn	09 39 14.5	-0.8
MAKA					Sn		Sn	09 40 14.3	-4.4
ZAGS	**Zajecar**	5.57	13		*e*Pn		Pn	09 39 15.5	-0.3
ZAGS					*e*Sn		Sn	09 40 19.1	-0.4
CORL	**Corleone**	5.67	267				Pn	09 39 16.7	-0.5
RICI	**Ricice**	5.68	335		*e*Pn		Pn	09 39 16.7	-0.6
RICI					Sn		Sn	09 40 18.0	-4.2
DIVS	**Divibare**	5.71	357		*e*Pn		Pn	09 39 16.8	-0.9
DIVS					*e*Sn		Sn	09 40 19.7	-3.2
DIVS	**Divibare**	5.71	357	⇑	*i* Pn		Pn	09 39 16.8	-0.9
DIVS	**Divibare**	5.71	357		Pn		Pn	09 39 16.8	-0.9
CLTB	**Caltabellotta**	5.79	264				Pn	09 39 21.0	+2.1
HAPS	**Han Pijesak,BI**	5.80	349		*e*Pn		Pn	09 39 17.0	-2.0
HAPS					*e*Sn		Sn	09 40 21.1	-4.1
HAPS	**Han Pijesak,BI**	5.80	349		*e*Pn		Pn	09 39 17.2	-1.8
TRUS	**Trudelj**	5.82	360		*e*Pn		Pn	09 39 19.0	-0.2
TRUS					*e*Sn		Sn	09 40 23.5	-2.1
KARP	**Karpathos**	6.07	116				Pn	09 39 25.6	+3.0

INTR	**Introdacqua**	6.19	308		Pn		Pn	09 39 25.4	+1.1
TEKS	**Tekeris**	6.19	354		*e*Pn		Pn	09 39 23.5	-0.7
TEKS					*e*Sn		Sn	09 40 30.5	-4.2
TEKS	**Tekeris**	6.19	354	⇑	*i* Pn		Pn	09 39 23.2	-1.0
KIJV	**Kijevo**	6.38	333		*e*Pn		Pn	09 39 26.8	-0.2
KIJV					Sn		Sn	09 40 36.1	-3.4
MDVR	**Moldovita**	6.45	8	⇓	P		Pn	09 39 29.5	+1.7
MORI	**Morici**	6.54	328		*i* Pn		Pn	09 39 28.9	-0.1
MORI					Sn		Sn	09 40 37.9	-5.4
HERR	**Herculane**	6.64	12	⇑	P		Pn	09 39 32.2	+1.8
AQU	**L'Aquila**	6.69	308		P		Pn	09 39 34.5	+3.4
AQU					pmax		pmax		
	comp=Z,90nm,0.9s								
AQU	**L'Aquila**	6.69	308		*e*Pn		Pn	09 39 34.1	+3.0
FRGS	**Fruska Gora**	6.77	356		*e*Pn		Pn	09 39 31.2	-1.1
FRGS					*e*Sn		Sn	09 40 44.7	-4.4
FRGS	**Fruska Gora**	6.77	356		*e*Pn		Pn	09 39 30.8	-1.5
BLY	**Banja Luka**	6.81	340		*e*Pn		Pn	09 39 30.8	-1.9
RAZG	**Razgrad**	6.89	40	⇑	P		Pn	09 39 35.8	+1.9
DUGI	**Dugi Otok**	6.92	326		*e*Pn		Pn	09 39 33.2	-1.0
DUGI					Sn		Sn	09 40 45.6	-7.1
GZR	**Gura Zlata**	7.20	13	⇓	P		Pn	09 39 39.6	+1.4
BZS	**Buzias**	7.26	6	⇓	P		Pn	09 39 40.6	+1.6
NVLJ	**Novalja**	7.46	327		*e*Pn		Pn	09 39 41.3	-0.3
NVLJ					Sn		Sn	09 40 59.9	-5.9
AKAS	**Kas**	7.59	104		Pn		Pn	09 39 46.3	+2.6
ARR	**Arges**	7.62	23	⇑	P		Pn	09 39 45.9	+1.9
ELL	**Elmali**	7.67	99		P		Pn	09 39 46.2	+1.4
ELL	**Elmali**	7.67	99		Pn		Pn	09 39 46.2	+1.4
MURB	**Monte Urbino**	7.74	311				Pn	09 39 46.5	+0.9
VOIR		7.82	24	⇓	P		Pn	09 39 49.2	+2.6
VOIR		7.82	24		P		Pn	09 39 48.6	+1.9
VOIR					pmax		pmax		
	comp=Z,20nm,0.8s								
SLUM	**Salum**	7.91	149		P		Pn	09 39 45.1	-2.8
	baz=150								
SLUM					S		Sn	09 41 08.4	-8.7
	baz=150								
SIRR	**Siria**	7.91	6	⇑	P		Pn	09 39 49.1	+1.1
MORH	**Mrgy, Hungar**	7.93	351		*e*Pn		Pn	09 39 46.0	-2.1
BOJS	**Bojanci**	8.09	333	⇓	Pn		Pn	09 39 50.1	-0.2
ISR	**Istrita**	8.10	32	⇑	P		Pn	09 39 53.3	+2.7
ISR	**Istrita**	8.10	32		P		Pn	09 39 55.3	+4.7
ISR					pmax		pmax		
	comp=Z,101nm,0.9s								
OZLJ	**Ozalj**	8.12	334		*e*Pn		Pn	09 39 50.3	-0.3
MLR	**Muntele Rosu**	8.18	28		Pn		Pn	09 39 52.4	+0.7
	comp=Z,0.3nm,0.3s,baz=178,slow=4.5,SNR=3.0								
MLR					LR		LR	09 44 04.2	
	comp=Z,250nm,19.8s,baz=178,slow=46								
MLR	**Muntele Rosu**	8.18	28	⇓	P		Pn	09 39 52.9	+1.3
MLR	**Muntele Rosu**	8.18	28		P		Pn	09 39 54.5	+2.8
MLR	**Muntele Rosu**	8.18	28				Pn	09 39 54.5	+2.8
PTJ	**Puntijarka**	8.21	337		*e*Pn		Pn	09 39 51.0	-1.1
RIY	**Rijeka**	8.23	329	⇑	*i* Pn		Pn	09 39 51.6	-0.7
RIY	**Rijeka**	8.23	329		*e*Pn		Pn	09 39 51.3	-1.0
KALN	**Kalnik**	8.28	340		*e*Pn		Pn	09 39 51.9	-1.1
CRES	**Cresnjev**	8.30	335	⇑	*i* Pn		Pn	09 39 52.0	-1.3
DOPR	**Dopca**	8.40	24	⇑	P		Pn	09 39 56.5	+2.0
BEHE	**Becsehely**	8.52	343		*e*Pn		Pn	09 39 55.7	-0.5
BISRR	**Bisoca**	8.52	31	⇑	P		Pn	09 39 58.8	+2.5
MDUB	**Mudurnu**	8.56	73				Pn	09 39 59.6	+2.8
CEY	**Cerknica**	8.60	330	⇑	*i* Pn		Pn	09 39 56.4	-1.0
OSSC	**Osservatorio P**	8.65	309		Pn		Pn	09 39 58.9	+0.8
PLOR	**Plostina**	8.75	30	⇓	P		Pn	09 40 02.2	+2.8
PLOR	**Plostina**	8.75	30		P		Pn	09 40 02.2	+2.8
TPGR	**Topolog**	8.78	40	⇑	P		Pn	09 40 02.5	+2.8
VRI	**Vrincioaia**	8.79	30	⇑	P		Pn	09 40 02.1	+2.1
VRI	**Vrincioaia**	8.79	30		P		Pn	09 40 04.9	+4.9
VRI					pmax		pmax		
	comp=Z,63nm,1.2s								
LJU	**Ljubljana**	8.82	332	⇑	*i* Pn		Pn	09 39 58.3	-2.0
CFR	**Carcaliu**	8.87	38	⇑	P		Pn	09 40 02.9	+1.9
SOKA	**Soboth**	9.19	336		*i* Pn		Pn	09 40 04.1	-1.4
	comp=Z,23nm,0.5s,SNR=20								
SOKA					*e*Sn		Sn	09 41 41.9	-6.8
	comp=Z,31nm,0.9s								
OBKA	**Obir**	9.21	334		*e*Pn		Pn	09 40 05.3	-0.4
	comp=Z,12nm,0.2s								
OBKA					*e*Sn		Sn	09 41 44.2	-4.8
	comp=Z,22nm,0.3s								
OBKA	**Obir**	9.21	334		*e*Pn		Pn	09 40 05.1	-0.6
OBKA					*e*Sn		Sn	09 41 43.4	-5.7
KEST	**Kesra**	9.28	257		Pn		Pn	09 40 06.5	-0.2
	comp=Z,0.7nm,0.3s,baz=7.4,slow=0.4,SNR=3.3								
ZCCA	**Zocca**	9.29	313		Pn		Pn	09 40 09.0	+2.2
PSZ	**Piszkesteto**	9.53	358		P		Pn	09 40 10.3	+0.2
PSZ	**Piszkesteto**	9.53	358				Pn	09 40 10.3	+0.2
ARSA	**Arzberg**	9.56	339		*e*Pn		Pn	09 40 09.1	-1.4
	comp=Z,3.7nm,0.3s								
MYKA	**Terra Mystica**	9.64	331		*e*Pn		Pn	09 40 10.3	-1.3
	comp=Z,5.5nm,0.4s								
BURAR	**Bucovina Array**	9.85	19	⇑	P		Pn	09 40 17.1	+2.6
BURAR	**Bucovina Array**	9.85	19		P		Pn	09 40 17.1	+2.6
SWA2		10.03	154		P		Pn	09 40 14.4	-2.5
	baz=154								
SWA2					S		Sn	09 42 01.5	-7.5
	baz=154								
CTI	**Castel Tesino**	10.05	322		P		Pn	09 40 16.1	-1.3
CTI	**Castel Tesino**	10.05	322		Pn		Pn	09 40 16.1	-1.3
ZST	**Bratislava**	10.10	347		*e*SN		Sn	09 42 03.0	-7.7
CONA	**Conrad Observa**	10.10	342		*e*Pn		Pn	09 40 18.1	+0.1
	comp=Z,1.1nm,0.3s								
KBA	**Koelnbreinsper**	10.13	331		*e*Pn		Pn	09 40 17.6	-0.9
	comp=Z,6.2nm,0.4s								
KBA					*e*Sn		Sn	09 42 06.5	-5.3
	comp=Z,5.2nm,0.2s								
KBA	**Koelnbreinsper**	10.13	331		P		Pn	09 40 18.0	-0.5
KBA					pmax		pmax		
	comp=Z,25nm,1.0s								
VYHS	**Vyhne**	10.16	354		*e*P		Pn	09 40 18.1	-0.6
VYHS					*e*			09 42 06.0	
VYHS	**Vyhne**	10.16	354		*e*PN		Pn	09 40 18.1	-0.6
VYHS					*e*SN		Sn	09 42 06.0	-6.3
ABTA	**Abfaltersbach**	10.20	327		*e*Pn		Pn	09 40 18.0	-1.3
	comp=Z,2.9nm,0.2s,SNR=6.8								
ABTA					*e*Sn		Sn	09 42 05.6	-7.7
	comp=Z,11nm,0.3s								
BR131	**Keskin Array S**	10.33	79		P		Pn	09 40 22.1	+0.9
BR131	**Keskin Array S**	10.33	79				Pn	09 40 22.1	+0.9
BRTR	**Keskin Array B**	10.33	79		Pn		Pn	09 40 25.8	+4.6
	comp=Z,0.5nm,0.3s,baz=260,slow=12,SNR=6.1								
BRTR					LR		LR	09 44 24.1	
	comp=Z,198nm,21.6s,baz=266,slow=38								
BRTR	**Keskin Array B**	10.33	79				Pn	09 40 21.7	+0.5
MOA	**Molln**	10.47	336		*i* Pn		Pn	09 40 22.2	-0.8
	comp=Z,7.4nm,0.3s,SNR=14								
MOA					*e*Sn		Sn	09 42 14.3	-5.7
	comp=Z,9.9nm,0.3s								
MOA	**Molln**	10.47	336		*e*Pn		Pn	09 40 21.9	-1.1
KOLS	**Kolonicke sedl**	10.61	6		*e*P		Pn	09 40 28.6	+3.7
KOLS	**Kolonicke sedl**	10.61	6		*e*PN		Pn	09 40 28.6	+3.7
JAVC	**Velka Javorina**	10.65	350		*e*PN		Pn	09 40 25.3	-0.2
RJOB	**Jochberg**	10.88	331		*e*Pn		Pn	09 40 28.4	-0.3
RJOB					*e*Sn		Sn	09 42 22.7	-7.5
WTTA	**Wattenberg**	10.97	327		*e*Pn		Pn	09 40 29.8	-0.2
	comp=Z,6.8nm,0.3s,SNR=9.6								
WTTA					*e*Sn		Sn	09 42 26.0	-6.5
	comp=Z,25nm,0.4s								
WTTA	**Wattenberg**	10.97	327		P		Pn	09 40 30.0	0.0
WTTA					pmax		pmax		
	comp=Z,33nm,1.2s								
WTTA	**Wattenberg**	10.97	327		*e*Pn		Pn	09 40 30.5	+0.5
NIE	**Niedzica**	11.02	359		P		Pn	09 40 31.4	+0.9
NIE					pmax		pmax		
	comp=Z,5.0nm,1.7s								
WATA	**Walderalm**	11.05	327		*e*Pn		Pn	09 40 30.6	-0.5
	comp=Z,16nm,0.4s,SNR=7.3								
WATA					*e*Sn		Sn	09 42 29.4	-5.0
	comp=Z,9.6nm,0.3s								
SQTA	**Sankt Quirin**	11.13	325		*e*Pn		Pn	09 40 31.8	-0.2
	comp=Z,10.0nm,0.5s,SNR=4.4								
FUORN	**Ofenpass-Fuorn**	11.14	321				Pn	09 40 32.5	+0.1
FETA	**Feichten**	11.20	323		*e*Pn		Pn	09 40 32.6	-0.5
	comp=Z,3.7nm,0.5s,SNR=5.0								
FETA					Sn		Sn	09 42 35.1	-2.9
	comp=Z,14nm,0.6s								
VRAC	**Vranov**	11.26	347		LR		LR	09 45 15.4	
	comp=Z,374nm,18.4s,baz=165,slow=40								
MOTA	**Moosalm**	11.27	326		*e*Pn		Pn	09 40 33.7	-0.3
	comp=Z,8.8nm,0.3s,SNR=4.8								
ZUGS	**Zugspitze, Sch**	11.38	325		*e*Pn		Pn	09 40 36.7	+1.1
DAVOX	**Davos/Dischmat**	11.44	320		Pn		Pn	09 40 36.4	0.0

	comp=Z,1.5nm,0.3s,baz=238,slow=14,SNR=7.6								
DAVOX					Sn		Sn	09 42 33.6	-10
	comp=Z,0.9nm,0.3s,baz=155,slow=19,SNR=2.2								
DAVOX					LR		LR	09 45 37.5	
	comp=Z,376nm,20.5s,baz=110,slow=41								
TUE	**Stuetta**	11.51	318		Pn		Pn	09 40 37.2	-0.1
GEC2	**GERESS Array S**	11.53	337		*e*L		L	09 45 10.4	
	comp=Z,225nm,22.6s								
GEC2	**GERESS Array S**	11.53	337		Pn		Pn	09 40 36.3	-1.2
GERES	**GERESS Array B**	11.53	337		Pn		Pn	09 40 36.3	-1.2
	comp=Z,0.7nm,0.3s,baz=157,slow=14,SNR=20								
GERES					Sn		Sn	09 42 39.1	-6.9
	comp=Z,1.3nm,0.3s,baz=152,slow=23,SNR=3.0								
GERES					LR		LR	09 46 40.6	
	comp=Z,106nm,18.6s,baz=162,slow=46								
GERES	**GERESS Array B**	11.53	337				Pn	09 40 35.1	-2.4
MORC	**Moravsky Berou**	11.57	351		*e*PN		Pn	09 40 37.0	-1.0
MORC	**Moravsky Berou**	11.57	351		P		Pn	09 40 38.2	+0.2
MORC	**Moravsky Berou**	11.57	351		Pn		Pn	09 40 38.2	+0.2
KHC	**Kasperske Hory**	11.82	337		*e*P		Pn	09 40 39.9	-1.6
KHC					*e*			09 42 45.6	
KHC	**Kasperske Hory**	11.82	337		*e*PN		Pn	09 40 39.9	-1.6
KHC					*e*SN		Sn	09 42 45.6	-7.4
KRLC	**Kraliky**	11.97	348		*e*P		Pn	09 40 43.2	-0.3
KRLC	**Kraliky**	11.97	348		*e*PN		Pn	09 40 43.2	-0.3
WET	**Wettzell**	12.05	335		P		Pn	09 40 43.1	-1.5
WET					pmax		pmax		
	comp=Z,11nm,0.9s								
WET	**Wettzell**	12.05	335		*e*L		L	09 46 22.2	
	comp=Z,472nm,16.9s								
PRU	**Pruhonice**	12.34	342		*e*P		Pn	09 40 47.

SNR=9.3
MDT Midelt 21.11 262 P P 09 42 38.5 +0.9
SNR=9.3
ARF Arif 21.37 258 P P 09 42 42.0 +1.7
SNR=7.7
ARF Arif 21.37 258 P P 09 42 42.0 +1.7
SNR=7.7
HFS Hagfors 22.18 351 P P 09 42 48.9 +0.2
comp=Z,13nm,0.6s,baz=146,slow=11,SNR=14
HFS LR LR 09 51 28.0
comp=Z,211nm,21.2s,baz=213,slow=37
KONO Kongsberg 22.38 345 *i* P **P 09 42 52.8 +2.0**
KONO pmax pmax
comp=Z,14nm,1.1s
TZRR Tazzarine 22.69 258 P P 09 42 56.0 +1.4
SNR=15
TZRR Tazzarine 22.69 258 P P 09 42 56.0 +1.4
SNR=15
NORES NORESS Array B 23.05 349 P P 09 42 59.9 +1.9
NORES pmax pmax
comp=Z,3.0nm,0.4s
EKA Eskdalemuir Ar 23.23 324 P P 09 43 00.1 +0.4
comp=Z,4.9nm,0.7s,baz=124,slow=8.7,SNR=11
FINES FINESS Array B 23.34 7 P P 09 42 59.1 -1.6
comp=Z,12nm,0.7s,baz=166,slow=9.5,SNR=23
FINES LR LR 09 53 18.1
comp=Z,192nm,20.2s,baz=193,slow=40
FINES FINESS Array B 23.34 7 *i* P **P 09 42 59.0 -1.8**
FINES pmax pmax
comp=Z,12nm,0.7s
FINES FINESS Array B 23.34 7 P P 09 42 59.5 -1.3
FIA1 FINESS Array S 23.34 7 P P 09 43 01.0 +0.2
NC405 NORSAR Array S 23.39 349 P P 09 43 00.2 -1.2
NB2 NORSAR Subarra 23.39 349 P P 09 43 00.5 -0.9
comp=Z,2.7nm,0.6s,baz=162,slow=11
NOA NORSAR Array B 23.39 349 P P 09 43 00.8 -0.7
comp=Z,4.0nm,0.6s,baz=164,slow=11,SNR=16
NOA LR LR 09 53 56.1
comp=Z,129nm,18.3s,baz=165,slow=41
NBO00 NORSAR Array S 23.46 348 P P 09 42 58.6 -3.4
NC303 NORSAR Array S 23.55 349 P P 09 43 02.2 -0.7
OUZM OUZ 23.55 260 P P 09 43 06.0 +2.6
SNR=6.2
OUZM OUZ 23.55 260 P P 09 43 06.0 +2.6
SNR=6.2
NC204 NORSAR Array S 23.69 348 P P 09 43 04.4 +0.1
NC204 IAmb IAmb 09 43 19.9
comp=Z,24nm,1.1s
KLMR Klimovskoe 25.45 22 *e*P **P 09 43 19.4 -1.0**
KLMR pmax pmax
comp=Z,20nm,1.1s
KLMR Klimovskoe 25.45 22 *e*P **P 09 43 19.4 -1.0**
KLMR *e*P **P 09 43 19.4 -1.0**
KLMR *e*P **P 09 43 19.4 -1.0**
KLMR AMP 09 43 24.2
comp=Z,20nm,1.1s
KLMR LQ LQ 09 50 28.7
KLMR LQ LQ 09 50 28.7
KLMR LR LR 09 52 03.5
RAYN Ar Rayn 25.98 118 P P 09 43 26.9 +1.2
RAYN pmax pmax
comp=Z,6.0nm,1.0s
RAYN Ar Rayn 25.98 118 P P 09 43 26.9 +1.2
KIRV Kirov 27.50 33 LR LR 09 55 19.8
comp=Z,198nm,18.2s,baz=235,slow=38
TMCR Tamitsa 27.84 16 *e*P **P 09 43 39.4 -2.5**
TMCR pmax pmax
comp=Z,11nm,0.4s
AKTO Aktyubinsk 29.08 53 P P 09 43 52.0 -1.1
comp=Z,0.8nm,0.3s,baz=252,slow=9.6,SNR=2.5
GEYT Alibeck 29.47 79 P P 09 43 57.4 +0.6
comp=Z,5.7nm,0.5s,baz=279,slow=7.0,SNR=7.5
GEYT LR LR 09 59 28.2
comp=Z,38nm,18.6s,baz=10.0,slow=44
GEYT Alibeck 29.47 79 P P 09 43 56.7 -0.1
ABKAR Akbulak array 30.15 56 P P 09 44 02.2 -0.4
ABKAR Akbulak array 30.15 56 P P 09 44 04.4 +1.8
ABKAR IAmb IAmb 09 44 08.8
comp=Z,2.5nm,0.9s
TOA0 Torodi Ar. Sit 30.18 219 P P 09 44 02.1 -1.0
TOA0 IAmb IAmb 09 44 04.0
comp=Z,4.4nm,0.8s
TORD Torodi Ar. Bea 30.18 219 P P 09 44 03.4 +0.3
comp=Z,4.4nm,0.7s,baz=32,slow=9.2,SNR=29
TORD PcP **PcP 09 47 05.7 +1.5**
comp=Z,0.3nm,0.5s,baz=4.6,slow=4.6,SNR=2.6
TORD Torodi Ar. Bea 30.18 219 P P 09 44 03.0 -0.1
LVZ Lovozero 30.59 10 *i* P **P 09 44 06.2 -0.1**
LVZ pmax pmax
comp=Z,33nm,1.3s
ARU Arti 30.92 42 P P 09 44 08.5 -0.8
comp=Z,2.6nm,0.2s,baz=263,slow=17,SNR=1.3
ARU Arti 30.92 42 *i* P **P 09 44 11.3 +1.9**
ARU pmax pmax
comp=Z,6.0nm,1.4s
ARCES ARCESS Array B 31.32 3 P P 09 44 12.9 +0.2
comp=Z,2.3nm,0.7s,baz=188,slow=12,SNR=6.5
ARCES LR LR 09 57 21.7
comp=Z,137nm,21.0s,baz=220,slow=37
KOWA Kowa 32.17 229 P P 09 44 21.0 +0.3
comp=Z,2.3nm,0.6s,baz=42,slow=6.7,SNR=8.5
KOWA Kowa 32.17 229 IAmb IAmb 09 44 21.7
comp=Z,2.9nm,0.7s
BRVK Borovoye 36.95 50 *i* P **P 09 45 03.0 +1.3**
BRVK pmax pmax
comp=Z,12nm,1.0s
KK31 Karatay Array 37.75 67 P P 09 45 08.2 -0.4
KK31 pmax pmax
comp=Z,7.0nm,0.6s
KK31 Karatay Array 37.75 67 P P 09 45 08.2 -0.4
KK31 IAmb IAmb 09 45 11.8
comp=Z,6.5nm,0.6s
KKAR Karatay Array 37.75 67 P P 09 45 09.0 +0.4
KKAR Karatay Array 37.75 67 P P 09 45 09.0 +0.4
KKAR Karatay Array 37.75 67 IAmb IAmb 09 45 11.8
comp=Z,6.5nm,0.6s
DBIC Dimbokro 39.03 222 P P 09 45 19.3 -0.2
comp=Z,6.2nm,0.7s,baz=5.3,slow=10,SNR=8.6
DBIC LR LR 10 04 13.5
comp=Z,114nm,18.5s,baz=18,slow=40
DBIC Dimbokro 39.03 222 P P 09 45 19.6 0.0
DBIC pmax pmax
comp=Z,8.0nm,0.8s
DBIC Dimbokro 39.03 222 P P 09 45 19.6 0.0
DBIC IAmb IAmb 09 45 20.3
comp=Z,8.4nm,0.8s
TIC Toumodi 39.13 223 *e*P **P 09 45 20.0 -0.5**
KIC Kosan Boka 39.23 222 *e*P **P 09 45 20.8 -0.4**
comp=Z,14nm,0.8s
LIC Lamto 39.49 222 *e*P **P 09 45 23.0 -0.5**
comp=Z,42nm,0.9s
SOCY Socotra 39.62 122 P P 09 45 23.6 -1.1
MBAR Mbarara 39.95 164 *i* P **P 09 45 28.5 +1.1**
MBAR pmax pmax
comp=Z,4.0nm,0.8s
MBAR Mbarara 39.95 164 P P 09 45 29.2 +1.8
MBAR IAmb IAmb 09 45 31.7
comp=Z,10.0nm,1.2s
AAK Ala-Archa 40.71 66*ce*P **P 09 45 36.0 +2.5**
AAK pmax pmax
comp=Z,11nm,1.0s
KURK Kurchatov 42.18 54 *i* P **P 09 45 46.7 +1.4**
KURK pmax pmax
comp=Z,4.0nm,1.1s
KMBO Kilima Mbogo 42.26 155 LR LR 10 04 01.5
comp=Z,56nm,21.6s,baz=86,slow=37
MAKZ Makanchi 45.01 59 P P 09 46 09.0 +0.8
MAKZ pmax pmax
comp=Z,12nm,1.1s
MAKZ Makanchi 45.01 59 P P 09 46 09.0 +0.8
MAKZ IAmb IAmb 09 46 09.9
comp=Z,12nm,1.1s
MK31 Makanchi Array 45.22 59*ce*P **P 09 46 12.3 +2.4**
MK31 Makanchi Array 45.22 59 P P 09 46 09.2 -0.7
MK31 IAmb IAmb 09 46 13.8
comp=Z,3.7nm,0.7s
MKAR Makanchi Array 45.22 59 P P 09 46 09.1 -0.8
comp=Z,2.5nm,0.5s,baz=285,slow=4.8,SNR=17
MKAR LR LR 10 09 26.5
comp=Z,54nm,19.3s,baz=285,slow=42
ZAA0 Zalesovo Array 45.58 48 P P 09 46 12.1 -0.5
ZALV Zalesovo Beam 45.58 48 P P 09 46 12.2 -0.3
comp=Z,5.2nm,0.4s,baz=281,slow=8.5,SNR=19
ZALV LR LR 10 07 39.5
comp=Z,123nm,18.0s,baz=284,slow=39
ZALV Zalesovo Beam 45.58 48 *i* P **P 09 46 12.0 -0.5**
ZALV pmax pmax
comp=Z,5.0nm,0.4s
ZALV Zalesovo Beam 45.58 48 P P 09 46 12.1 -0.5
NRIK Noril'sk 46.62 27 P P 09 46 21.9 +1.4
comp=Z,0.8nm,0.4s,baz=297,slow=6.8,SNR=2.3
NRIK Noril'sk 46.62 27 *i* P **P 09 46 22.4 +1.9**
NRIK pmax pmax
comp=Z,3.0nm,1.1s
WMQ Urumqi 49.69 61 *e*P **P 09 46 49.0 +4.3**
EUNU Eureka 55.29 348 P P 09 47 25.1 -0.6
TLY Talaya 57.17 47 *i* P **P 09 47 41.3 +1.8**
TLY pmax pmax
comp=Z,7.0nm,0.8s
SCHQ Schefferville 58.27 317 P P 09 47 47.9 +0.7
comp=Z,2.6nm,0.6s,baz=20,slow=4.8,SNR=5.8
SCHQ Schefferville 58.27 317 P P 09 47 46.5 -0.7
TIXI Tiksi 59.46 20*ce*P **P 09 47 57.6 +2.5**
TIXI pmax pmax
comp=Z,41nm,2.5s
GTA Gaotai 59.76 62 *e*P **P 09 47 59.8 +1.9**
GTA pP sP 09 48 03.0 -1.7
GTA sP pP 09 48 05.8 +2.9
GTA pmax pmax
comp=Z,4.0nm,1.0s
SONM Songino Array 60.35 51 P P 09 48 01.8 0.0
comp=Z,1.8nm,0.9s,baz=280,slow=8.1,SNR=8.9
ULN Ulaanbaatar 60.74 50*ce*P **P 09 48 05.9 +1.4**
ULN pmax pmax
comp=Z,4.0nm,1.3s
BOSA Boshof 66.81 175 P P 09 48 43.8 -0.7
comp=Z,0.8nm,0.5s,baz=323,slow=5.1,SNR=0.9
BOSA LR LR 10 19 39.1
comp=Z,124nm,18.5s,baz=4.0,slow=38
HHC Hu-ho-hao-te 66.94 56 *e*P **P 09 48 47.4 +2.0**
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,100nm,6.6s
CMAR Chiang Mai Arr 69.90 82 P P **P 09 49 02.4 -1.7**
comp=Z,0.9nm,0.3s,baz=300,slow=7.1,SNR=5.1
CMAR Chiang Mai Arr 69.90 82*ce*P **P 09 49 04.5 +0.4**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
BILL Bilibino 70.81 13 *i* P **P 09 49 10.8 +1.9**
BILL pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 71.84 350 P P 09 49 15.9 +0.9
comp=Z,0.6nm,0.5s,baz=2.6,slow=4.1,SNR=6.1
INK Inuvik 71.84 350 P P 09 49 15.9 +0.9
INK pmax pmax
comp=Z,5.0nm,1.5s
INK Inuvik 71.84 350 IAmb IAmb 09 49 33.8
comp=Z,4.5nm,1.5s
KLR Kul'dur 73.73 40 LR LR 10 22 20.1
comp=Z,38nm,18.0s,baz=274,slow=36
KLR Kul'dur 73.73 40 *i* P **P 09 49 27.0 +0.4**
KLR pmax pmax
comp=Z,4.0nm,0.9s
MA2 Magadan 74.11 24 LR LR 10 26 41.9
comp=Z,46nm,18.7s,baz=110,slow=40
ILAR Eielson Array 76.69 354 P P 09 49 44.5 +1.1
comp=Z,0.4nm,0.8s,baz=349,slow=8,SNR=3.9
USRK Ussuriysk Ar. 77.15 43 P P 09 49 46.2 -0.1
comp=Z,2.1nm,0.7s,baz=344,slow=4.7,SNR=3.8
KSRS Korea Array 79.22 51 P P 09 49 59.0 +1.1
comp=Z,1.1nm,0.6s,baz=289,slow=3.7,SNR=2.5
KSRS Korea Array 79.22 51 P P 09 49 59.0 +1.1
WRA Warramunga Arr 120.59 92 PKP **PKPdf 09 56 44.0 -0.8**
comp=Z,0.3nm,0.6s,baz=319,slow=1.9,SNR=7.4
ASAR Alice Springs 122.24 96 PKP **PKPdf 09 56 47.3 -0.7**
comp=Z,0.4nm,0.6s,baz=305,slow=1.5,SNR=6.0

*ATH **13** 09:43:02.2,38.39°N×20.49°E,h14km±2km, ML2.7/3, Error ellipse: s-maj=2.4km s-min=0.6km az=271.0*
*THE **13** 09:43:02.9,38.39°N×20.48°E,h8km±1km, ML2.9/10, Error ellipse: s-maj=1.2km s-min=0.3km az=271.0*
ISC 13 09:43:01.7±0.9, 38.40N±0.02×20.42E±0.04, h17km±5km, n38, σ1s13/65, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.13**	**61**	P	**Pg**	**09 43 04.9**	**-0.5**
FSK				S	**Sg**	**09 43 06.9**	**-1.0**
FSK				AML	AML	09 43 07.4	
	comp=E,46402μm,0.3s						
FSK				AML	AML	09 43 07.5	
	comp=N,16413μm,0.2s						
FSK	**Fiskardo**	**0.13**	**61**	P	**Pg**	**09 43 05.0**	**-0.5**
FSK				S	**Sg**	**09 43 07.0**	**-1.0**
	comp=N,16μm,0.2s						
KEF5	**Kardakata, Kep**	**0.13**	**163**	P	**Pg**	**09 43 05.2**	**-0.2**
KEF5				S	**Sg**	**09 43 07.7**	**-0.3**
KEF5	**Kardakata, Kep**	**0.13**	**163**	P	**Pg**	**09 43 05.3**	**-0.2**
KEF5				S	**Sg**	**09 43 07.7**	**-0.3**
	comp=N,36μm,0.3s						
KEF4	**Livadi, Kephal**	**0.14**	**179**	P	**Pg**	**09 43 05.7**	**+0.1**
KEF4				S	**Sg**	**09 43 08.6**	**+0.4**
KEF4	**Livadi, Kephal**	**0.14**	**179**	P	**Pg**	**09 43 05.7**	**+0.1**
KEF4				S	**Sg**	**09 43 08.6**	**+0.4**
DMLN	**Damoulianata-K**	**0.17**	**193**	P	**Pg**	**09 43 06.2**	**+0.2**
DMLN				S	**Sg**	**09 43 09.5**	**+0.7**
	comp=N,20μm,0.3s						
LXRA	**Lixouri, Kepha**	**0.20**	**176**	P	**Pg**	**09 43 06.8**	**+0.4**
LXRA				S	**Sg**	**09 43 10.5**	**+0.9**
ARGA	**Argostoli. Kep**	**0.23**	**168**	P	**Pg**	**09 43 06.8**	**0.0**
ARGA				S	**Sg**	**09 43 10.6**	**+0.3**
VLS	**Valsamata**	**0.26**	**149**	P	**Pg**	**09 43 07.1**	**-0.3**
VLS				S	**Sg**	**09 43 10.9**	**-0.4**
VLS	**Valsamata**	**0.26**	**149**	P	**Pg**	**09 43 07.1**	**-0.3**
VLS				S	**Sg**	**09 43 10.9**	**-0.4**
	comp=N,10μm,0.2s						
EVGI	**Lefkada island**	**0.29**	**40**	P	**Pg**	**09 43 08.0**	**+0.1**
EVGI				S	**Sg**	**09 43 12.4**	**+0.3**
EVGI	**Lefkada island**	**0.29**	**40**	P	**Pg**	**09 43 08.0**	**+0.1**
EVGI				S	**Sg**	**09 43 12.5**	**+0.3**
	comp=N,3μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.31**	**156**	P	**Pg**	**09 43 08.0**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.31**	**156**	P	**Pg**	**09 43 08.1**	**-0.2**
PSDA				S	**Sg**	**09 43 13.0**	**+0.2**
NYDR	**Nydri-Lefkada**	**0.38**	**35**	P	**Pg**	**09 43 09.3**	**-0.2**
NYDR				S	**Sg**	**09 43 15.2**	**+0.4**
NYDR	**Nydri-Lefkada**	**0.38**	**35**	P	**Pg**	**09 43 09.5**	**0.0**
NYDR				S	**Sg**	**09 43 15.3**	**+0.4**
	comp=N,3μm,0.4s						
MGNA	**Meganis**	**0.39**	**48**	P	**Pg**	**09 43 09.4**	**-0.3**
LKD2	**Lefkada island**	**0.43**	**25**	P	**Pg**	**09 43 10.4**	**0.0**
LKD2				S	**Sg**	**09 43 16.9**	**+0.5**
LKD2				AML	AML	09 43 21.9	
	comp=E,1757μm,0.5s						
LKD2				AML	AML	09 43 21.9	
	comp=N,1846μm,0.3s						
LKD2	**Lefkada island**	**0.43**	**25**	P	**Pg**	**09 43 10.4**	**0.0**
LKD2				S	**Sg**	**09 43 16.9**	**+0.5**
	comp=N,1μm,0.5s						
TSLK	**Tsoukalades, L**	**0.46**	**23**	P	**Pg**	**09 43 11.0**	**0.0**
TSLK				S	**Sg**	**09 43 18.4**	**+1.0**
TSLK				AML	AML	09 43 19.8	
	comp=N,2425μm,0.4s						
TSLK				AML	AML	09 43 21.9	
	comp=E,2183μm,0.5s						
TSLK	**Tsoukalades, L**	**0.46**	**23**	P	**Pg**	**09 43 11.2**	**+0.2**
TSLK				S	**Sb**	**09 43 18.8**	**+0.8**
	comp=E,1μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P	**Pg**	**09 43 12.2**	**-0.5**
VLMS				S	**Sg**	**09 43 20.6**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P	**Pg**	**09 43 12.4**	**-0.3**
VLMS				S	**Sb**	**09 43 21.4**	**+0.7**
	comp=E,2μm,0.2s						
PDO	**Prodromos**	**0.63**	**71**	P	**Pg**	**09 43 13.6**	**-0.5**
PDO				S	**Sg**	**09 43 22.0**	**-0.5**
PDO	**Prodromos**	**0.63**	**71**	P	**Pg**	**09 43 13.8**	**-0.3**
PDO				S	**Sb**	**09 43 22.7**	**-0.1**
RLS	**Riolos of Patr**	**0.89**	**112**	P	**Pg**	**09 43 18.9**	**-0.1**
RLS				S	**Sb**	**09 43 31.5**	**+1.2**
IGT	**Igoumenitsa**	**1.13**	**357**	P	**Pn**	**09 43 24.5**	**+1.7**
IGT				S	**Sn**	**09 43 41.6**	**+3.5**
	comp=E,218nm,0.3s						
ANX	**Ano Chora**	**1.19**	**80**	P	**Pb**	**09 43 24.3**	**+0.4**
SERG	**Sergoula**	**1.28**	**89**	P	**Pn**	**09 43 24.7**	**-0.2**
GUR	**Goura**	**1.58**	**106**	P	**Pn**	**09 43 29.9**	**+0.8**
GUR				S	**Sb**	**09 43 50.7**	**+0.3**
STON	**Ston**	**4.92**	**336**	Sn	**Sn**	**09 45 09.3**	**-2.1**
LSTV	**Lastovo**	**5.12**	**330**	Sn	**Sn**	**09 45 13.8**	**-2.6**
MAKA	**Makarska**	**5.52**	**333**	Sn	**Sn**	**09 45 24.5**	**-1.7**
RICI	**Ricice**	**5.67**	**335**	Sn	**Sn**	**09 45 28.2**	**-1.6**
KIJV	**Kijevo**	**6.37**	**333**	Sn	**Sn**	**09 45 45.8**	**-1.3**
MORI	**Morici**	**6.52**	**328**	Sn	**Sn**	**09 45 47.7**	**-3.0**
DUGI	**Dugi Otok**	**6.90**	**326**	Sn	**Sn**	**09 45 55.3**	**-4.8**

ISC 13 09:52:01.4±1.1, 48.74N±0.07×18.05E±0.05, h16km±9km, n6, σ0s33/11, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAVC	**Velka Javorina**	**0.28**	**296**	*e*P	**Pg**	**09 52 07.2**	**-0.2**
JAVC				*e*S	**Sg**	**09 52 11.7**	**+0.1**
KOLL	**Kolacno**	**0.28**	**124**	*e*P	**Pg**	**09 52 07.4**	**0.0**
KOLL				*e*S	**Sb**	**09 52 12.4**	**-0.2**
VYHS	**Vyhne**	**0.57**	**115**	*e*P	**Pg**	**09 52 12.3**	**-0.4**
VYHS				*e*S	**Sg**	**09 52 20.9**	**+0.5**
MODS	**Modra-Piesok**	**0.63**	**235**	*e*P	**Pg**	**09 52 13.5**	**-0.3**
MORC	**Moravsky Berou**	**1.09**	**342**	*e*P	**Pb**	**09 52 21.8**	**-0.2**
MORC				*e*S	**Sb**	**09 52 36.2**	**+0.1**
VRAC	**Vranov**	**1.12**	**301**	*e*P	**Pb**	**09 52 22.6**	**+0.2**
VRAC				*e*S	**Sn**	**09 52 37.7**	**+0.1**

HEL 13 09:59:19.3±0.5, 67.77N×20.35E, h0km, ML1.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LANU	**Lannavaara**	**0.68**	**65**	PB	Pg	09 59 32.5	+0.2
KIF	**Kilpisjarvi**	**1.26**	**8**	MSG		09 59 58.5	
	comp=Z,1.9nm,0.2s						
KIF				SG	Sg	09 59 59.1	-0.4
PAJU	**Pajala**	**1.30**	**124**	PN	Pb	09 59 44.5	-0.1
PAJU				SN	Sn	10 00 02.6	-0.2
ERTU	**Ertsjaerv**	**1.41**	**149**	SN	Sn	10 00 06.2	+0.6
TOF	**Tornio**	**2.31**	**135**	MSG		10 00 27.7	
	comp=Z,1.6nm,0.2s						
TOF				SG	Sb	10 00 31.7	+1.0
RNF	**Rovaniemi**	**2.50**	**115**	SG	Sb	10 00 36.5	+0.3
ARA0	**ARCESS Array S**	**2.59**	**44**	PB	Pn	10 00 03.3	+0.9
	baz=226						
ARA0				SG	Sb	10 00 40.1	+1.1

*UPP **13** 10:00:38.6±3.1, 64.66N×30.89E, h0km, ML1.7, Suspected explosion*
*HEL **13** 10:00:39.3±0.2, 64.82N×30.92E, h0km, ML2.0, Explosion*
*IDC **13** 10:00:39.4±2.7, 64.68N×31.18E, h0km, mb1 3.1/3, mb1mx3.0/37, mbtmp3.0/3, ML2.0/3, Error ellipse: s-maj=38.6km s-min=10.0km az=103.0*
*KOLA **13** 10:00:40.3, 64.77N×30.70E, h0km*
ISC 13 10:00:39.1±1.2, 64.80N±0.04×30.72E±0.05, h0km, n22, σ1s07/33, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KU6	**Riekki**	**1.27**	**345**	SB	**Sg**	**10 01 19.9**	**-0.1**
KU6	**Riekki**	**1.27**	**345**	*e*P	**Pg**	**10 01 02.8**	**-0.6**
KU6				*e*S	**Sg**	**10 01 18.6**	**-1.4**
MSF	**Maaselka**	**1.32**	**328**	SN	**Pg**	**10 01 03.6**	**-0.7**
MSF	**Maaselka**	**1.32**	**328**	*e*P	**Pg**	**10 01 03.5**	**-0.7**
MSF				*e*S	**Sg**	**10 01 20.2**	**-1.1**
JOF	**Joensuu**	**1.91**	**172**	*e*P	**Pn**	**10 01 12.7**	**-0.2**
JOF				*e*S	**Sn**	**10 01 37.6**	**0.0**
OUL	**Oulu**	**2.07**	**280**	*e*P	**Pn**	**10 01 16.4**	**+1.4**
OUL				*e*S	**Sn**	**10 01 43.0**	**+1.4**
OUL				MSG		10 01 45.8	
	comp=Z,8.9nm,0.1s						
OBF4	**Vikkela, Lumij**	**2.40**	**273**	*e*P	**Pn**	**10 01 21.2**	**+1.6**
OBF4				*e*S	**Sb**	**10 01 52.0**	**-1.2**
OUF	**Merijarvi**	**2.62**	**263**	*e*P	**Pn**	**10 01 23.9**	**+1.3**
OUF				*e*S	**Sn**	**10 01 56.8**	**+1.8**
OUF				MSG		10 02 01.6	
	comp=Z,4.3nm,0.1s						
RNF	**Rovaniemi**	**2.66**	**315**	*e*P	**Pn**	**10 01 23.8**	**+0.7**
RNF				*e*S	**Sn**	**10 01 56.7**	**+0.7**
APA0	**Apatity Array**	**2.96**	**17**	P	**Pn**	**10 01 28.4**	**+1.1**
APA0				S	**Sn**	**10 02 04.3**	**+0.9**
APA	**Apatity**	**2.98**	**20**	P	**Pn**	**10 01 28.7**	**+1.2**
APA				S	**Sn**	**10 02 04.8**	**+0.9**
PAJU	**Pajala**	**3.83**	**309**	P	**Pn**	**10 01 40.1**	**+0.9**
SJUU	**Sjulsmark**	**3.91**	**285**	P	**Pn**	**10 01 40.8**	**+0.5**
SJUU				S	**Sn**	**10 02 28.7**	**+1.9**
ERTU	**Ertsjaerv**	**3.94**	**300**	P	**Pn**	**10 01 41.6**	**+0.9**
FINES	**FINESS Array B**	**3.98**	**214**	Pn	**Pn**	**10 01 41.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=6.6						
FINES				Lg	Lg	10 02 42.8	
	comp=Z,1.2nm,0.3s,baz=36,slow=29,SNR=11						
BURU	**Burvik**	**4.02**	**271**	S	**Sn**	**10 02 29.6**	**+0.2**
HARU	**Harads**	**4.28**	**293**	P	**Pn**	**10 01 46.1**	**+0.7**
MASU	**Masugnsbyn**	**4.43**	**311**	P	**Pn**	**10 01 48.9**	**+1.4**
LILU	**Lilltraesk**	**4.63**	**281**	P	**Pn**	**10 01 50.6**	**+0.4**
DUNU	**Dundret**	**4.76**	**304**	P	**Pn**	**10 01 52.4**	**+0.5**
ARCES	**ARCESS Array B**	**5.17**	**339**	Pn	**Pn**	**10 01 57.9**	**+0.3**
	baz=152,slow=12,SNR=35						
ARCES				Sn	**Sn**	**10 02 56.5**	**-1.3**
	baz=149,slow=25,SNR=1.6						
ARCES				Lg	Lg	10 03 18.1	
	baz=146,slow=36,SNR=8.7						
NOA	**NORSAR Array B**	**9.64**	**256**	Pn	**Pn**	**10 02 57.7**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=86,slow=7.5,SNR=2.2						

*ATH **13** 10:03:01.6,38.39°N×20.48°E,h13km±2km, ML2.8/2, Error ellipse: s-maj=2.4km s-min=0.7km az=285.0*
*THE **13** 10:03:02.1,38.39°N×20.47°E,h8km, ML2.6/10, Error ellipse: s-maj=1.1km s-min=0.4km az=267.0*
ISC 13 10:03:01.0±0.8, 38.40N±0.02×20.41E±0.04, h16km±5km, n34, σ1s17/61, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF5	**Kardakata, Kep**	**0.14**	**158**	P	**Pg**	**10 03 04.6**	**-0.2**
KEF5				S	**Sg**	**10 03 06.9**	**-0.5**
KEF5	**Kardakata, Kep**	**0.14**	**158**	P	**Pg**	**10 03 04.6**	**-0.2**
KEF5				S	**Sg**	**10 03 06.8**	**-0.5**
	18μm,0.3s						
FSK	**Fiskardo**	**0.14**	**66**	P	**Pg**	**10 03 04.3**	**-0.5**
FSK				S	**Sg**	**10 03 06.2**	**-1.1**
FSK				AML	AML	10 03 06.4	
	comp=N,7485μm,0.2s						
FSK				AML	AML	10 03 07.0	
	comp=E,22678μm,0.2s						
FSK	**Fiskardo**	**0.14**	**66**	P	**Pg**	**10 03 04.3**	**-0.5**
FSK				S	**Sg**	**10 03 06.2**	**-1.1**
	comp=E,8μm,0.2s						
KEF4	**Livadi, Kephal**	**0.15**	**174**	P	**Pg**	**10 03 05.0**	**+0.1**
KEF4				S	**Sg**	**10 03 07.9**	**+0.3**
KEF4	**Livadi, Kephal**	**0.15**	**174**	P	**Pg**	**10 03 05.0**	**+0.1**
KEF4				S	**Sg**	**10 03 07.8**	**+0.3**
DMLN	**Damoulianata-K**	**0.17**	**189**	P	**Pg**	**10 03 05.6**	**+0.3**
DMLN	**Damoulianata-K**	**0.17**	**189**	P	**Pg**	**10 03 05.6**	**+0.3**
DMLN				S	**Sg**	**10 03 08.7**	**+0.7**
	comp=E,9μm,0.4s						
LXRA	**Lixouri, Kepha**	**0.20**	**173**	P	**Pg**	**10 03 06.1**	**+0.3**
LXRA				S	**Sg**	**10 03 09.4**	**+0.5**
ARGA	**Argostoli. Kep**	**0.23**	**166**	P	**Pg**	**10 03 06.2**	**-0.1**
ARGA				S	**Sg**	**10 03 09.7**	**-0.1**
VLS	**Valsamata**	**0.27**	**147**	P	**Pg**	**10 03 06.4**	**-0.4**
VLS				S	**Sg**	**10 03 10.2**	**-0.6**
VLS				AML	AML	10 03 10.4	
	comp=N,4879μm,0.1s						
VLS				AML	AML	10 03 10.6	
	comp=E,6566μm,0.1s						
VLS	**Valsamata**	**0.27**	**147**	P	**Pg**	**10 03 06.4**	**-0.4**
VLS				S	**Sg**	**10 03 10.3**	**-0.5**
	comp=E,3μm,0.1s						
EVGI	**Lefkada island**	**0.29**	**42**	P	**Pg**	**10 03 07.3**	**0.0**
EVGI				S	**Sg**	**10 03 11.8**	**+0.2**
EVGI	**Lefkada island**	**0.29**	**42**	P	**Pg**	**10 03 07.3**	**0.0**
EVGI				S	**Sg**	**10 03 11.9**	**+0.4**
	comp=E,2μm,0.1s						
PSDA	**Pessada-Kefalo**	**0.32**	**154**	P	**Pg**	**10 03 07.3**	**-0.4**
PSDA	**Pessada-Kefalo**	**0.32**	**154**	P	**Pg**	**10 03 07.5**	**-0.2**
PSDA				S	**Sg**	**10 03 12.2**	**-0.1**
NYDR	**Nydri-Lefkada**	**0.39**	**37**	P	**Pg**	**10 03 08.7**	**-0.2**
NYDR				S	**Sg**	**10 03 14.6**	**+0.4**
	comp=E,1μm,0.2s						
MGNA	**Meganis**	**0.39**	**50**	P	**Pg**	**10 03 08.7**	**-0.3**
MGNA				S	**Sg**	**10 03 14.4**	**-0.1**

LKD2	**Lefkada island**	**0.43**	**27**	P		**Pg**	**10 03 09.6**	**-0.1**
LKD2	**Lefkada island**	**0.43**	**27**	P		**Pg**	**10 03 09.8**	**+0.1**
LKD2				S		**Sb**	**10 03 16.9**	**+0.3**
	comp=E,490nm,0.2s							
TSLK	**Tsoukalades, L**	**0.46**	**25**	P		**Pg**	**10 03 10.6**	**+0.2**
TSLK	**Tsoukalades, L**	**0.46**	**25**	P		**Pg**	**10 03 10.5**	**+0.2**
TSLK				S		**Sb**	**10 03 17.9**	**+0.4**
	comp=E,578nm,0.3s							
VLMS	**Volimes, Zakyn**	**0.56**	**159**	P		**Pg**	**10 03 11.6**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.56**	**159**	P		**Pg**	**10 03 11.8**	**-0.3**
VLMS				S		**Sb**	**10 03 20.8**	**+0.5**
	comp=E,760nm,0.2s							
PDO	**Prodromos**	**0.64**	**72**	P		**Pg**	**10 03 12.9**	**-0.7**
PDO				S		**Sb**	**10 03 22.6**	**+0.1**
DRO	**Drossia**	**1.12**	**113**	P		**Pb**	**10 03 22.0**	**0.0**
IGT	**Igoumenitsa**	**1.13**	**357**	P		**Pb**	**10 03 23.0**	**+0.9**
IGT				S		**Sn**	**10 03 40.9**	**+3.5**
	comp=E,100nm,0.2s							
ANX	**Ano Chora**	**1.21**	**80**	P		**Pb**	**10 03 23.4**	**-0.1**
ANX				S		**Sn**	**10 03 41.4**	**+2.1**
SERG	**Sergoula**	**1.30**	**89**	P		**Pn**	**10 03 24.5**	**0.0**
LSTV	**Lastovo**	**5.12**	**330**	*e*Pn		**Pn**	**10 04 16.8**	**-0.1**
LSTV				Sn		**Sn**	**10 05 12.7**	**-2.9**
RICI	**Ricice**	**5.66**	**335**	*e*Pn		**Pn**	**10 04 25.7**	**+1.3**
RICI				Sn		**Sn**	**10 05 26.0**	**-3.0**
KIJV	**Kijevo**	**6.36**	**333**	*e*Pn		**Pn**	**10 04 35.3**	**+1.3**
KIJV				Sn		**Sn**	**10 05 44.3**	**-1.9**
MORI	**Morici**	**6.51**	**328**	*e*Pn		**Pn**	**10 04 37.0**	**+1.0**
MORI				Sn		**Sn**	**10 05 46.9**	**-3.0**
DUGI	**Dugi Otok**	**6.88**	**326**	*e*Pn		**Pn**	**10 04 42.9**	**+1.6**
DUGI				Sn		**Sn**	**10 05 55.3**	**-3.9**

IDC ***13*** *10:10:18.9±3.1,46°.95N×153°.37E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.6/38, mbtmp3.9/6, ML2.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/68, Error ellipse: s-maj=69.9km s-min=39.5km az=179.0*

ISC 13 10:10:24.5±2.4, 47°.1N±0°.3×153°.5E±0°.3, h31km, n14, σ0^{6}20/7, mb3.8/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.62**	**23**	Pn		**Pn**	**10 11 59.5**	**-0.1**
	0.5nm,0.3s,baz=178,slow=11,SNR=7.2							
MJAR	**Matsushiro Arr**	**15.47**	**233**	LR		LR	10 20 03.0	
	comp=Z,43nm,18.2s,baz=5.0,slow=38							
H11N2	**WAKE ISLAND Hy**	**29.41**	**154**	T		T	10 48 21.4	
	baz=341,slow=76,SNR=26							
H11N1	**WAKE ISLAND Hy**	**29.42**	**154**	T		T	10 48 24.4	
	baz=341,slow=76,SNR=33							
H11N3	**WAKE ISLAND Hy**	**29.42**	**154**	T		T	10 48 17.0	
	baz=341,slow=76,SNR=16							
H11S1	**WAKE ISLAND Hy**	**30.50**	**155**	T		T	10 49 21.0	
	baz=341,slow=76,SNR=39							
H11S3	**WAKE ISLAND Hy**	**30.51**	**155**	T		T	10 49 24.4	
	baz=341,slow=76,SNR=44							
H11S2	**WAKE ISLAND Hy**	**30.52**	**155**	T		T	10 49 20.5	
	baz=341,slow=76,SNR=51							
ILAR	**Eielson Array**	**36.14**	**39**	P		**P**	**10 17 23.4**	**0.0**
	1.3nm,1.0s,baz=269,slow=8.1,SNR=7.1							
INK	**Inuvik**	**41.24**	**33**	P		**P**	**10 18 06.3**	**+0.3**
	1.3nm,0.8s,baz=285,slow=5.8,SNR=5.3							
FINES	**FINESS Array B**	**63.84**	**335**	P		**P**	**10 20 53.2**	**-0.2**
	3.1nm,1.0s,baz=46,slow=9.9,SNR=6.5							
NB2	**NORSAR Subarra**	**67.99**	**341**	P		**P**	**10 21 20.3**	**+0.2**
	comp=Z,20nm,1.4s,baz=29,slow=6.5							
NOA	**NORSAR Array B**	**67.99**	**341**	P		**P**	**10 21 20.1**	**0.0**
	comp=Z,1.9nm,0.9s,baz=26,slow=6.4,SNR=4.1							
TXAR	**Lajitas Array**	**77.12**	**61**	P		**P**	**10 22 14.9**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=298,slow=5.7,SNR=3.7							

JMA ***13*** *10:15:33.4±0.1,40°.25N×142°.51E, h33km±1km, M3.8*

NIED ***13*** *10:15:33.4,40°.25N×142°.51E, h33km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}2.26; $M_{\theta\theta}$-0.66; $M_{\phi\phi}$-1.61; $M_{r\theta}$2.71; $M_{\theta\phi}$-0.80; $M_{\phi r}$5.11; Fault plane solution: $M_0$6.18000×10^{14} NP1:ϕ_s28.00000°, δ80.00000°, λ90.00000°. NP2:ϕ_s211.00000°, δ10.00000°, λ93.00000°.*

IDC ***13*** *10:15:35.9±2.7,40°.23N×142°.51E, h63km±25km, mb3.4/9, mb1 3.6/12, mb1mx3.4/46, mbtmp3.7/12, ML3.3/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/46 Error ellipse: s-maj=24.1km s-min=16.6km az=108.0*

ISC 13 10:15:31.9±1.6, 40°.31N±0°.04×142°.53E±0°.07, h23km±11km, n32, σ1^{8}69/34, mb3.7/9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTH	**Tanohata**	**0.63**	**234**	P		**Pn**	**10 15 45.1**	**-0.3**
JTH				S		**Sb**	**10 15 53.7**	**+1.0**
JKEN	**Kujiedanarisaw**	**0.64**	**260**	P		**Pn**	**10 15 45.3**	**-0.2**
JKEN				S		**Sn**	**10 15 53.7**	**-1.1**
JANG	**Nango**	**0.78**	**275**	P		**Pn**	**10 15 47.7**	**+0.3**
JANG				S		**Sn**	**10 15 57.9**	**-0.5**
MIYJ	**Miyakonagasawa**	**0.92**	**217**	P		**Pb**	**10 15 48.8**	**-0.3**
MIYJ				*e*S		**Sb**	**10 16 00.1**	**-0.7**
JKZ	**Kuzumaki**	**0.97**	**251**	P		**Pn**	**10 15 50.6**	**+0.4**
JKZ				*e*S		**Sn**	**10 16 03.0**	**-0.3**
JARK	**Aomorirokkasho**	**1.12**	**308**	P		**Pb**	**10 15 53.1**	**+0.5**
JTM	**Tenmabayashi**	**1.21**	**294**	P		**Pb**	**10 15 54.5**	**+0.4**
JOM	**Ohasama**	**1.27**	**229**	P		**Pb**	**10 15 54.9**	**-0.2**
JOM				*e*S		**Sn**	**10 16 10.3**	**-0.2**
JAH	**Hinai**	**1.45**	**266**	P		**Pb**	**10 15 58.2**	**0.0**
JOT	**Ohata**	**1.55**	**314**	P		**Pb**	**10 15 59.6**	**-0.3**
JMK	**Ichinoseki**	**1.69**	**217**	P		**Pb**	**10 16 01.5**	**-0.8**
JMK				*e*S		**Sb**	**10 16 22.3**	**-0.9**
JRG	**Rokugo**	**1.72**	**238**	P		**Pb**	**10 16 02.7**	**-0.1**
ASAJ	**Asahikawa**	**3.80**	**1**	P		**Pn**	**10 16 31.2**	**+2.2**
	7.1nm,0.3s,baz=230,slow=10,SNR=25							
ASAJ				S		**Sb**	**10 17 20.3**	**-3.5**
	4.1nm,0.3s,baz=348,slow=19,SNR=2.3							
MAT	**Matsushiro**	**5.07**	**223**	P		**Pn**	**10 16 49.8**	**+3.4**
MAT				*e*S		**Sn**	**10 17 48.7**	**+4.4**
MJAR	**Matsushiro Arr**	**5.07**	**223**	P		**Pn**	**10 16 49.6**	**+3.2**
	0.4nm,0.3s,baz=29,slow=14,SNR=20							
USRK	**Ussuriysk Ar.**	**8.72**	**300**	P		**Pn**	**10 17 40.5**	**+3.9**
	baz=101,slow=15,SNR=11							
KSRS	**Korea Array**	**11.73**	**261**	LR		LR	10 22 25.4	
	comp=Z,32nm,20.7s,baz=0.0,slow=35							
SONM	**Songino Array**	**26.84**	**298**	P		**P**	**10 21 10.8**	**+0.3**
	0.6nm,0.4s,baz=96,slow=7.5,SNR=4.3							
H11N2	**WAKE ISLAND Hy**	**29.26**	**127**	T		T	10 52 19.3	
	baz=319,slow=75,SNR=81							
H11N1	**WAKE ISLAND Hy**	**29.27**	**127**	T		T	10 52 18.1	
	baz=319,slow=75,SNR=79							
H11N3	**WAKE ISLAND Hy**	**29.28**	**127**	T		T	10 52 19.8	
	baz=319,slow=75,SNR=89							
H11S1	**WAKE ISLAND Hy**	**30.08**	**129**	T		T	10 53 13.0	
	baz=321,slow=76,SNR=17							
H11S3	**WAKE ISLAND Hy**	**30.09**	**129**	T		T	10 53 09.6	
	baz=321,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hy**	**30.10**	**129**	T		T	10 53 10.8	
	baz=321,slow=76,SNR=11							
ZALV	**Zalesovo Beam**	**40.42**	**310**	P		**P**	**10 23 07.0**	**-1.0**
	0.7nm,0.3s,baz=68,slow=9.3,SNR=2.7							
MKAR	**Makanchi Array**	**43.19**	**299**	P		**P**	**10 23 31.0**	**+0.1**
	0.9nm,0.6s,baz=85,slow=11,SNR=4.8							
ILAR	**Eielson Array**	**46.28**	**34**	P		**P**	**10 23 55.8**	**+0.6**
	0.5nm,0.6s,baz=266,slow=5.7,SNR=8.1							
INK	**Inuvik**	**51.08**	**28**	P		**P**	**10 24 32.1**	**+0.1**
	0.9nm,0.4s,baz=283,slow=7.4,SNR=10							
WRA	**Warramunga Arr**	**60.43**	**189**	P		**P**	**10 25 38.0**	**-1.5**
	0.6nm,0.8s,baz=7.8,slow=7.7,SNR=8.4							
ASAR	**Alice Springs**	**64.16**	**189**	P		**P**	**10 26 02.6**	**-1.8**
	0.2nm,0.6s,baz=9.6,slow=5.3,SNR=4.4							
FINES	**FINESS Array B**	**66.33**	**332**	P		**P**	**10 26 17.8**	**-0.3**
	1.2nm,0.6s,baz=24,slow=8.0,SNR=5.9							
PDAR	**Pinedale Array**	**74.76**	**47**	P		**P**	**10 27 10.4**	**+0.1**
	0.1nm,0.3s,baz=353,slow=3.7,SNR=3.7							

IDC ***13*** *10:24:17.1±0.4, 15°.37S×173°.11E, h0km, mb5.2/30, mb1 5.3/32, mb1mx5.2/37, mbtmp5.2/32, ML4.0/2, MS5.2/30, Ms1 5.3/30, ms1mx5.3/30, Error ellipse: s-maj=12.4km s-min=10.7km az=156.0*

NEIC ***13*** *10:24:18.4, 15°.18S×173°.06E, h6km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-4.23; $M_{\theta\theta}$4.95; $M_{\phi\phi}$-0.72; $M_{r\theta}$0.90; $M_{\theta\phi}$-2.63; $M_{\phi r}$1.04; Fault plane solution: $M_0$5.50000×10^{17} NP1:ϕ_s270.46000°, δ51.81000°, λ-119.71000°. NP2:ϕ_s133.16000°, δ46.95000°, λ-57.79000°. Principal axes: T 6.0057, Plg3.0000°, Azm21.0000°; N -1.2061, Plg23.0000°, Azm290.0000°; P -4.7996, Plg67.0000°, Azm117.0000°;*

BJI ***13*** *10:24:18.4±0.0, 14°.72S×173°.04E, h5km, mB6.1/68, mb5.3/52, Ms5.7/73, Ms7 5.3/65*

NEIC ***13*** *10:24:18.3±2.0, 15°.22S±0°.07×173°.08E±0°.06, h10km±1km, mb5.7/316, Ms_20 5.7/771, Mwb5.8/45, Mwc6.1/39, Mww6.0, Mwc6.0(GCMT), Error ellipse: s-maj=12.6km s-min=10.2km az=160.0*

MOS ***13*** *10:24:19.7±1.0, 15°.29S×173°.08E, h26km, mb5.6/51, MS5.5/12, Error ellipse: s-maj=8.9km s-min=7.3km az=125.0*

NEIC ***13*** *10:24:22, 15°.34S×173°.25E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.94; $M_{\theta\theta}$1.01; $M_{\phi\phi}$-0.07; $M_{r\theta}$-0.16; $M_{\theta\phi}$-0.62; $M_{\phi r}$-0.08; Fault plane solution: $M_0$1.18000×10^{18} NP1:ϕ_s307.00000°, δ44.00000°, λ-71.00000°. NP2:ϕ_s103.00000°, δ49.00000°, λ-107.00000°. Principal axes: T 1.3026, Plg3.0000°, Azm204.0000°; N -0.3218, Plg13.0000°, Azm114.0000°; P -0.9808, Plg77.0000°, Azm307.0000°;*

NEIC ***13*** *10:24:23, 15°.07S×173°.16E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.89; $M_{\theta\theta}$1.04; $M_{\phi\phi}$-0.15; $M_{r\theta}$-0.34; $M_{\theta\phi}$-0.67; $M_{\phi r}$0.34; Fault plane solution: $M_0$1.27000×10^{18} NP1:ϕ_s276.00000°, δ37.00000°, λ-116.00000°. NP2:ϕ_s128.00000°, δ58.00000°, λ-71.00000°. Principal axes: T 1.4249, Plg11.0000°, Azm205.0000°; N -0.3978, Plg16.0000°, Azm298.0000°; P -1.0271, Plg71.0000°, Azm81.0000°;*

GCMT ***13*** *10:24:24.3±0.1, 15°.28S×173°.13E, h12km, MW6.0/158, Moment Tensor Solution. s146,c316; s158,c524; Duration: 28s4 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.91±.01; $M_{\theta\theta}$0.99±.01; $M_{\phi\phi}$-0.08±.01; $M_{r\theta}$-0.30±.02; $M_{\theta\phi}$-0.60±.01; $M_{\phi r}$0.19±.02; Best double couple: $M_0$1.14500×10^{18} NP1:ϕ_s289.00000°, δ36.00000°, λ-97.00000°. NP2:ϕ_s118.00000°, δ54.00000°, λ-85.00000°. Principal axes: T 1.3190, Plg9.0000°, Azm204.0000°; N -0.3470, Plg4.0000°, Azm295.0000°; P -0.9710, Plg80.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***13*** *10:24:39, 15°.31S×172°.96E, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}-0.96; $M_{\theta\theta}$1.06; $M_{\phi\phi}$-0.10; $M_{r\theta}$1.19; $M_{\theta\phi}$-0.73; $M_{\phi r}$-0.46; Fault plane solution: $M_0$1.75000×10^{18} NP1:ϕ_s291.11000°, δ68.67000°, λ-94.73000°. NP2:ϕ_s123.93000°, δ21.83000°, λ-78.07000°. Principal axes: T 1.9680, Plg24.0000°, Azm25.0000°; N -0.4445, Plg4.0000°, Azm293.0000°; P -1.5235, Plg66.0000°, Azm193.0000°;*

ISC 13 10:24:18.4±0.7, 15°.26S±0°.04×173°.12E±0°.04, h11km±3km, n1079, σ1^{9}53/689, mb5.6/203, MS5.6/451, 12C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.33**	**118**	P		**Pn**	**10 25 40.1**	**+2.1**
MSVF	**Nonsavu**	**5.33**	**118**	Pn		**Pn**	**10 25 40.1**	**+2.1**
SANVU	**Saraoutou**	**5.71**	**267**	Pn		**Pn**	**10 25 40.5**	**-2.7**
FUNA	**Funafuti**	**8.95**	**42**	Pn		**Pn**	**10 26 24.7**	**-3.1**
DZM	**Mont Dzumac**	**9.27**	**222**	Pn		**Pn**	**10 26 32.0**	**-0.2**
	11nm,0.3s,baz=110,slow=14,SNR=75							
DZM				Sn		**Sn**	**10 28 16.2**	**-0.4**
	4.0nm,0.3s,baz=295,slow=19,SNR=1.8							
DZM	**Mont Dzumac**	**9.27**	**222**	*e*Pn		**Pn**	**10 26 31.8**	**-0.4**
	422nm,0.8s							
DZM				*e*LR		LR	10 28 36.0	
	comp=Z,112μm,27.5s							
DZM	**Mont Dzumac**	**9.27**	**222**	Pn		**Pn**	**10 26 32.9**	**+0.8**
HNR	**Honiara**	**14.11**	**293**	LR		LR	10 32 14.0	
	comp=Z,7μm,19.6s,baz=130,slow=34							
NFK	**Norfolk Island**	**14.53**	**198**	P		**Pn**	**10 27 45.8**	**+1.7**
	baz=14							
AFI	**Afiamalu**	**14.68**	**87**	Pn		**Pn**	**10 27 46.2**	**0.0**
	0.1nm,0.3s,baz=296,slow=4.0,SNR=6.5							
AFI				Sn		**Sn**	**10 30 25.9**	**-3.2**
	1.2nm,0.3s,baz=202,slow=5.4,SNR=5.5							
AFI				LR		LR	10 31 17.2	
	comp=Z,7μm,20.3s,baz=260,slow=29							
AFI	**Afiamalu**	**14.68**	**87**	Pn		**Pn**	**10 27 46.0**	**-0.3**
RAO	**Raoul Island**	**16.19**	**151**	LR		LR	10 32 42.7	
	comp=Z,16μm,21.7s,baz=312,slow=31							
TARA	**Tarawa**	**16.51**	**359**	P		**Pn**	**10 28 08.0**	**-2.2**
TARA				IAmb		IAmb	10 28 25.9	
	comp=Z,816nm,1.3s							
NIUE	**Niue**	**16.63**	**106**	P		**Pn**	**10 28 11.6**	**-0.1**
KNTN	**Kanton**	**19.42**	**52**	P		**P**	**10 28 43.6**	**-1.3**
KNTN				IAmb		IAmb	10 28 58.6	
	comp=Z,1μm,1.8s							
OUZ	**Omahuta**	**19.88**	**179**	P		**Pn**	**10 28 53.7**	**+2.4**
OUZ	**Omahuta**	**19.88**	**179**	P		**Pn**	**10 28 52.4**	**+1.1**
OUZ				IAmb		IAmb	10 28 58.2	
	comp=Z,806nm,1.8s							
WCZ	**Waipu Caves**	**20.62**	**177**	P		**P**	**10 28 58.9**	**+1.1**
LHI	**Lord Howe Isla**	**20.66**	**216**	P		Pn	10 29 00.8	+0.1
	baz=21,SNR=7.4							
LHI	**Lord Howe Isla**	**20.66**	**216**	P		**P**	**10 28 58.6**	**+0.3**
LHI				IAmb		IAmb	10 29 03.2	
	comp=Z,326nm,1.1s							
KUZ	**Kuaotunu**	**21.52**	**174**	P		**P**	**10 29 10.4**	**+2.9**
MKAZ	**Moumakai**	**21.83**	**176**	P		**P**	**10 29 14.9**	**+4.1**
TOZ	**Tahuroa Road**	**22.48**	**175**	P		**P**	**10 29 20.7**	**+2.9**
MXZ	**Matakaoa Point**	**22.68**	**169**	P		**P**	**10 29 19.8**	**-0.2**
MXZ	**Matakaoa Point**	**22.68**	**169**	P		**P**	**10 29 19.9**	**0.0**
HAZ	**Te Kaha**	**22.78**	**170**	P		**P**	**10 29 22.6**	**+1.6**
WMGZ	**Waiomatatini S**	**22.95**	**169**	P		**P**	**10 29 23.0**	**+0.2**
EIDS	**Eidsvold**	**22.95**	**241**	P		**P**	**10 29 24.8**	**+1.9**
	baz=23,SNR=16							
EIDS	**Eidsvold**	**22.95**	**241**	P		**P**	**10 29 23.7**	**+0.7**
PKGZ	**Pakihiroa**	**22.96**	**170**	P		**P**	**10 29 23.2**	**+0.3**
RUGZ	**Raukumara Rang**	**22.97**	**171**	P		**P**	**10 29 23.9**	**+0.8**
MKRZ	**Makatiti**	**22.98**	**173**	P		**P**	**10 29 20.1**	**-3.0**
TLZ	**Tolley Road**	**23.07**	**175**	P		**P**	**10 29 27.1**	**+3.0**
PUZ	**Puketiti**	**23.17**	**170**	P		**P**	**10 29 24.8**	**-0.2**
URZ	**Urewera**	**23.18**	**172**	P		**P**	**10 29 25.1**	**0.0**
	comp=Z,66nm,0.8s,baz=22,slow=3.8,SNR=13							
URZ				S		Sn	10 33 46.6	-7.3
	comp=Z,12nm,1.0s,baz=162,slow=20,SNR=1.2							
URZ				LR		LR	10 37 38.6	
	comp=Z,6μm,19.2s,baz=12,slow=35							
URZ	**Urewera**	**23.18**	**172**	P		**P**	**10 29 25.7**	**+0.7**
URZ	**Urewera**	**23.18**	**172**	P		**P**	**10 29 26.1**	**+1.0**
HIZ	**Hauiti**	**23.21**	**177**	P		**P**	**10 29 25.8**	**+0.4**
MWZ	**Matawai**	**23.31**	**171**	P		**P**	**10 29 26.8**	**+0.4**
MUGZ	**Murupara**	**23.35**	**173**	P		**P**	**10 29 26.7**	**-0.1**
RABL	**Rabaul**	**23.38**	**296**	P		**P**	**10 29 24.0**	**-3.4**
RABL				IAmb		IAmb	10 29 30.6	
	comp=Z,210nm,1.4s							
KRVT	**Keravat (AS076**	**23.44**	**296**	P		**P**	**10 29 28.5**	**+0.5**
	comp=Z,329nm,1.2s,baz=298,slow=3.6,SNR=24							
KRVT				LR		LR	10 38 16.2	
	comp=Z,6μm,20.3s,baz=125,slow=36							
RAGZ	**Rawiri**	**23.45**	**172**	P		**P**	**10 29 24.9**	**-3.1**
CNGZ	**Carnagh Statio**	**23.56**	**170**	P		**P**	**10 29 29.2**	**+0.3**
RIGZ	**Rimuhau**	**23.71**	**171**	P		**P**	**10 29 30.5**	**0.0**
SNGZ	**Shannon Statio**	**23.72**	**172**	P		**P**	**10 29 31.8**	**+1.2**
BKZ	**Black Stump Fm**	**24.00**	**174**	P		**P**	**10 29 32.7**	**-0.5**
BKZ				IAmb		IAmb	10 30 05.7	
	comp=Z,275nm,1.3s							
KWAJ	**Kwajalein Atol**	**24.53**	**347**	P		**P**	**10 29 33.7**	**-4.5**
KWAJ				pmax		pmax		
	comp=Z,792nm,1.8s							
KWAJ	**Kwajalein Atol**	**24.53**	**347**	P		**P**	**10 29 33.7**	**-4.5**
KWAJ	**Kwajalein Atol**	**24.53**	**347**	IAMs_20		IAMs_20	10 36 28.5	
	comp=Z,15μm,19.0s							
ARMA	**Armidale**	**24.83**	**229**	P		**P**	**10 29 43.1**	**+2.1**
	baz=25,SNR=26							
ARMA	**Armidale**	**24.83**	**229**	P		**P**	**10 29 41.7**	**+0.6**
ARMA				IAMs_20		IAMs_20	10 37 36.5	
	comp=Z,19μm,20.0s							
RMQ	**Roma**	**25.31**	**240**	P		**P**	**10 29 47.6**	**+2.3**
	baz=25,SNR=67							
BFZ	**Birch Farm**	**25.47**	**174**	P		**P**	**10 29 45.2**	**-1.3**
BFZ				IAMs_20		IAMs_20	10 37 57.5	
	comp=Z,21μm,18.0s							
QRZ	**Quartz Range**	**25.47**	**181**	IAMs_20		IAMs_20	10 37 56.4	
	comp=Z,18μm,20.0s							
NNZ	**Nelson**	**25.86**	**180**	P		**P**	**10 29 45.0**	**-5.1**
NNZ				IAMs_20		IAMs_20	10 37 48.5	
	comp=Z,26μm,21.0s							

PMG	**Port Moresby**	**26.01**	**280**	P		**P**	**10 29 52.3**	**+0.5**
	comp=Z,86nm,0.9s,baz=82,slow=6.6,SNR=11							
PMG				S		**S**	**10 34 26.7**	**+4.0**
	comp=Z,3.3nm,0.4s,baz=177,slow=19,SNR=1.4							
PMG				LR		LR	10 39 14.9	
	comp=Z,7μm,18.0s,baz=355,slow=34							
PMG	**Port Moresby**	**26.01**	**280**	P		**P**	**10 29 50.3**	**-1.4**
PMG				pmax		pmax		
	comp=Z,99nm,1.0s							
PMG	**Port Moresby**	**26.01**	**280**	P		**P**	**10 29 50.3**	**-1.4**
CTA	**Charters Tower**	**26.03**	**255**	P		**P**	**10 29 52.4**	**+0.5**
	comp=Z,51nm,0.8s,baz=80,slow=12,SNR=37							
CTA				S		**S**	**10 34 23.1**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=12,slow=19,SNR=1.4							
CTA				LR		LR	10 38 55.8	
	comp=Z,4μm,19.2s,baz=86,slow=34							
CTAO	**Charters Tower**	**26.03**	**255**	P		**P**	**10 29 51.6**	**-0.3**
CTAO				pmax		pmax		
	comp=Z,75nm,0.9s							
CTAO				MLR		MLR		
	comp=Z,4μm,21.0s							
CTAO	**Charters Tower**	**26.03**	**255**	P		**P**	**10 29 51.6**	**-0.3**
RAR	**Rarotonga**	**26.39**	**107**	LR		LR	10 38 14.9	
	comp=Z,2μm,20.1s,baz=279,slow=32							
THZ	**Tophouse**	**26.41**	**180**	IAmb		IAmb	10 29 59.9	
	comp=Z,253nm,1.2s							
THZ				IAMs_20		IAMs_20	10 38 16.9	
	comp=Z,18μm,22.0s							
PATS	**Pohnpei**	**26.41**	**325**	P		**P**	**10 29 59.1**	**+3.8**
	baz=27							
PATS	**Pohnpei**	**26.41**	**325**	P		**P**	**10 29 53.9**	**-1.4**
PATS				IAmb		IAmb	10 30 01.0	
	comp=Z,362nm,1.5s							
LTZ	**Lake Taylor**	**27.43**	**181**	IAMs_20		IAMs_20	10 39 38.0	
	comp=Z,13μm,18.0s							
MTSU	**Mount Surprise**	**27.73**	**260**	P		**P**	**10 30 08.8**	**+1.6**
	baz=28,SNR=7.9							
RPZ	**Rata Peaks**	**28.41**	**183**	P		**P**	**10 30 14.3**	**+1.3**
	comp=Z,23nm,1.0s,baz=342,slow=20,SNR=2.3							
RPZ				S		**S**	**10 34 58.1**	**-2.0**
	comp=Z,13nm,1.0s,baz=77,slow=19,SNR=1.1							
RPZ				LR		LR	10 40 20.1	
	comp=Z,12μm,20.2s,baz=6.5,slow=34							
RPZ	**Rata Peaks**	**28.41**	**183**	IAMs_20		IAMs_20	10 39 00.8	
	comp=Z,17μm,22.0s							
COEN	**Coen**	**29.00**	**269**	P		**P**	**10 30 19.9**	**+1.3**
	baz=29,SNR=8.1							
COEN	**Coen**	**29.00**	**269**	P		**P**	**10 30 16.7**	**-1.8**
QLP	**Quilpie**	**29.17**	**243**	P		**P**	**10 30 21.4**	**+1.4**
	baz=29,SNR=11							
CNB	**Canberra Magne**	**29.19**	**222**	P		**P**	**10 30 21.8**	**+1.6**
	baz=29,SNR=13							
YNG	**Young**	**29.25**	**225**	P		**P**	**10 30 22.8**	**+2.2**
	baz=29,SNR=5.9							
WKZ	**Wanaka**	**29.67**	**186**	IAMs_20		IAMs_20	10 40 44.1	
	comp=Z,11μm,19.0s							
CMSA	**Cobar Meteorol**	**29.82**	**232**	P		**P**	**10 30 26.3**	**+0.7**
	baz=30,SNR=27							
QIS	**Mount Isa**	**32.29**	**256**	P		**P**	**10 30 48.6**	**+1.0**
	baz=32,SNR=11							
TOO	**Toolangi**	**33.04**	**223**	P		**P**	**10 30 55.4**	**+1.4**
	baz=33,SNR=7.2							
STKA	**Stephens Creek**	**33.13**	**234**	P		**P**	**10 30 55.7**	**+0.8**
	comp=Z,27nm,0.7s,baz=60,slow=8.3,SNR=39							
STKA				PcP		**PcP**	**10 33 38.1**	**+0.1**
	comp=Z,9.0nm,0.8s,baz=89,slow=2.8,SNR=3.8							
STKA				S		**S**	**10 36 10.3**	**-3.9**
	comp=Z,2.2nm,0.9s,baz=158,slow=19,SNR=1.6							
STKA				LR		LR	10 42 33.0	
	comp=Z,5μm,21.2s,baz=64,slow=33							
STKA	**Stephens Creek**	**33.13**	**234**	P		**P**	**10 30 56.0**	**+1.1**
	baz=33,SNR=15							
STKA	**Stephens Creek**	**33.13**	**234**	P	

KDU Kakadu 39.49 268 P **P** **10 31 49.6 +0.2**
baz=40,SNR=26
GUMO Guam 40.04 314 P **P** **10 31 55.1 +1.2**
comp=Z,123nm,1.0s,baz=199,slow=12,SNR=4.0
GUMO LR LR 10 47 42.3
comp=Z,2μm,19.1s,baz=128,slow=35
GUMO Guam 40.04 314 P **P** **10 31 54.3 +0.4**
GUMO pmax pmax
comp=Z,228nm,1.2s
MTN Manton Dam 40.76 268 P **P** **10 32 00.9 +0.9**
baz=41,SNR=13
MTN Manton Dam 40.76 268 P **P** **10 32 00.5 +0.5**
FAKI Fak Fak 42.09 283 IAmb IAmb 10 32 16.0
comp=Z,119nm,0.9s
KNRA Kununurra 42.70 263 P **P** **10 32 15.8 0.0**
baz=43,SNR=27
KNRA Kununurra 42.70 263 P **P** **10 32 15.9 +0.1**
KNRA IAmb IAmb 10 32 20.5
comp=Z,102nm,0.8s
WRKA Warakurna 43.02 250 P **P** **10 32 18.3 -0.2**
baz=43,SNR=57
SIJI Sorong 43.72 285 P **P** **10 32 23.7 -0.4**
comp=Z,224nm,1.1s,baz=85,slow=7.1
SIJI LR LR 10 49 36.4
comp=Z,3μm,21.4s,baz=114,slow=35
FORT Forrest 43.95 241 P **P** **10 32 26.3 +0.5**
baz=44
FORT Forrest 43.95 241 P **P** **10 32 26.2 +0.5**
FORT IAMs_20 IAMs_20 10 49 17.1
comp=Z,7μm,22.0s
FITZ Fitzroy Crossi 45.48 260 P **P** **10 32 39.1 +1.0**
baz=46,SNR=30
FITZ Fitzroy Crossi 45.48 260 P **P** **10 32 38.4 +0.3**
FITZ **pP** **10 32 39.3 -1.2**
HPAH Hawaii Prepara 46.58 42 IAMs_20 IAMs_20 10 46 28.5
comp=Z,6μm,21.0s
SOEI Soe 47.93 271 IAmb IAmb 10 33 18.4
comp=Z,81nm,0.8s
BATI Baumata 48.42 270 LR LR 10 52 08.5
comp=Z,3μm,20.6s,baz=146,slow=34
RKT Rikitea 49.43 107 *e*S **S** **10 40 16.5 +0.3**
RKT comp=Z,825nm,27.5s *e*LQ LQ 10 45 09.0
RKT comp=Z,2μm,30.2s *e*LR LR 10 47 15.3
comp=Z,6μm,25.8s
PSA00 Pilbara Seismi 50.74 254 P **P** **10 33 18.0 -0.8**
PSA00 Pilbara Seismi 50.74 254 P **P** **10 33 18.1 -0.7**
PSA00 IAmb IAmb 10 33 33.9
comp=Z,13nm,0.8s
LUWI Luwuk 51.65 281 P **P** **10 33 24.9 -0.8**
MEEK Meekatharra 51.81 248 P **P** **10 33 26.8 -0.1**
baz=52,SNR=7.4
KLBR Kellerberrin 52.81 242 P **P** **10 33 34.0 -0.2**
baz=53,SNR=7.3
KAPI Kappang 53.39 275 P **P** **10 33 39.8 +1.2**
comp=Z,30nm,0.7s,baz=118,slow=5.6
KAPI Kappang 53.39 275 P **P** **10 33 39.7 +1.1**
KAPI pmax pmax
comp=Z,125nm,1.3s
KAPI Kappang 53.39 275 P **P** **10 33 39.7 +1.1**
KAPI IAmb IAmb 10 33 43.6
comp=Z,125nm,1.3s
GIRL Giralia 55.88 253 IAMs_20 IAMs_20 10 57 29.0
comp=Z,5μm,18.0s
JHJ Hachijo jima 2 57.70 327 P **P** **10 34 11.4 +2.2**
comp=Z,142nm,0.8s,baz=73,slow=19,SNR=1.9
MYLDM Lahad Datu 57.79 286 P **P** **10 34 10.9 +0.7**
JAGI Jajag, Banyuwa 57.96 269 P **P** **10 34 10.8 -0.7**
JAGI IAmb IAmb 10 34 21.5
comp=Z,72nm,0.9s
SPMM Sapulut 59.51 285 P **P** **10 34 24.0 +1.7**
KKM Kota Kinabalu 60.22 286 P **P** **10 34 26.7 -0.6**
KKM IAmb IAmb 10 34 37.4
comp=Z,133nm,1.5s
MJAR Matsushiro Arr 61.16 328 P **P** **10 34 34.5 +1.3**
comp=Z,17nm,0.9s,baz=158,slow=7.0,SNR=15
MJAR LR LR 10 56 19.7
comp=Z,800nm,21.9s,baz=150,slow=31
MJAR Matsushiro Arr 61.16 328 P **P** **10 34 35.1 +1.9**
MJAR pmax pmax
comp=Z,8.0nm,0.9s
MJAR Matsushiro Arr 61.16 328 P **P** **10 34 35.1 +1.9**
MAJO Matsushiro 61.17 328 *i* P **P** **10 34 34.5 +1.3**
MAJO pmax pmax
comp=Z,57nm,1.4s
MAJO Matsushiro 61.17 328 P **P** **10 34 34.3 +1.1**
MAJO IAmb IAmb 10 34 38.4
comp=Z,71nm,1.4s
MAT Matsushiro 61.17 328 P **P** **10 34 33.3 +0.1**
MAT S **S** **10 42 51.0 -1.7**
VNDA Vanda 62.53 183 P **P** **10 34 41.1 -0.6**
comp=Z,4.3nm,0.7s,baz=356,slow=7.3,SNR=30
VNDA LR LR 10 57 03.4
comp=Z,6μm,21.7s,baz=18,slow=32
VNDA PKPPKP **P'P'df** **11 03 49.0 -0.9**
comp=Z,1.0nm,1.0s,baz=244,slow=5.2,SNR=4.7
VNDA Vanda 62.53 183 P **P** **10 34 41.2 -0.6**
VNDA pmax pmax
comp=Z,94nm,2.0s
VNDA Vanda 62.53 183 P **P** **10 34 41.2 -0.6**
VNDA IAmb IAmb 10 34 46.2
comp=Z,94nm,2.0s
SBUM Sibu 62.75 281 P **P** **10 34 44.1 -0.2**
SBUM IAmb IAmb 10 34 48.6
comp=Z,70nm,1.8s
SBUM Sibu 62.75 281 P **P** **10 34 48.0 +3.7**
JTM Tenmabayashi 63.20 333 IAMs_20 IAMs_20 10 55 20.8
comp=Z,5μm,21.0s
YUK Yuzh-Kuril'sk 64.05 338 *e*P **P** **10 34 51.3 -0.9**
YUK *e* 10 37 11.5
YUK *e*S **S** **10 43 28.1 -0.5**
YUK *e*SS **SS** **10 47 37.1 -0.9**
TPUB Ta-pu 64.06 306 IAMs_20 IAMs_20 10 57 12.5
comp=Z,4μm,22.0s
SSLB Suanglung 64.06 306 IAMs_20 IAMs_20 10 57 45.5
comp=Z,5μm,22.0s
YHNB Yeheng 64.21 307 IAMs_20 IAMs_20 10 58 05.3
comp=Z,4μm,22.0s
KSM Kuching 64.27 279 P **P** **10 34 54.9 +0.5**
KSM IAmb IAmb 10 35 00.1
comp=Z,33nm,0.8s
KSM Kuching 64.27 279 P **P** **10 34 56.0 +1.6**
CISI Cisompet, Garu 64.28 269 IAmb IAmb 10 35 00.9
comp=Z,63nm,0.8s
TATO Taipei 64.29 308 IAMs_20 IAMs_20 10 58 08.2
comp=Z,5μm,22.0s
KUR Kuril'sk 64.43 340 *d i* P **P** **10 34 56.0 +1.4**
KUR *i* 10 35 30.1
KUR PPP PPP 10 38 52.3
KUR pmax pmax
comp=Z,2μm,7.3s
LEM Lembang 64.64 270 P **P** **10 34 57.9 +0.9**
comp=Z,58nm,0.6s,baz=44,slow=6.5,SNR=7.5
JEW Eniwo 64.73 335 IAMs_20 IAMs_20 10 59 10.7
comp=Z,6μm,20.0s
JKA Kamikawa-asahi 65.33 336 IAMs_20 IAMs_20 10 56 44.7
comp=Z,6μm,22.0s
ASAJ Asahikawa 65.33 336 P **P** **10 35 01.5 +0.9**
comp=Z,21nm,1.0s,baz=207,slow=4.5,SNR=5.7
QZH Quanzhou 66.50 306⇑ *i* P **P** **10 35 11.1 +2.5**
QZH S **S** **10 44 03.8 +4.3**
QZH pmax pmax
comp=Z,840nm,4.0s
QZH LR LR
comp=Z,2μm,24.6s
QZH LR LR
comp=Z,890nm,20.8s
QZH LR LR
comp=Z,2μm,21.8s
SKR Severo-Kuril's 67.34 348 *e*P **P** **10 35 10.6 -2.7**
SKR MLR MLR
comp=Z,2μm,18.0s
SKR MLR MLR
comp=Z,2μm,16.0s
KSRS Korea Array 67.49 322 P **P** **10 35 14.2 -0.3**
comp=Z,1.4nm,0.4s,baz=131,slow=6.6,SNR=5.3
KSRS LR LR 11 04 38.8
comp=Z,878nm,18.1s,baz=124,slow=36
KSAR Wonju Array Be 67.51 322 P **P** **10 35 14.2 -0.5**
KSAR Wonju Array Be 67.51 322 P **P** **10 35 14.2 -0.5**
KS19 Wonju Array Si 67.56 322 P **P** **10 35 13.8 -1.3**
KS19 IAmb IAmb 10 36 45.8
comp=Z,134nm,1.9s
YSS Yuzh-Sakhalins 67.67 338 *i* P **P** **10 35 17.3 +1.8**
YSS pmax pmax
comp=Z,54nm,1.2s
SSE Sheshan 67.91 313 P **P** **10 35 17.8 +0.4**
SSE S **S** **10 44 19.8 +3.6**
SSE pmax pmax
comp=Z,18nm,0.8s
SSE pmax pmax
comp=Z,390nm,4.1s
SSE LR LR
comp=Z,330nm,22.7s
SSE LR LR
comp=Z,740nm,16.3s
ATKA Atka Island 68.08 8 IAMs_20 IAMs_20 10 59 20.3
comp=Z,4μm,20.0s
PET Petropavlovsk 69.14 351 *e*P **P** **10 35 24.8 +0.2**
PET *e*S **S** **10 44 29.1 -0.9**
PET pmax pmax
comp=Z,1μm,9.0s
PET pmax pmax
comp=Z,1μm,18.9s
PET pmax pmax
comp=Z,87nm,1.3s
PET Petropavlovsk 69.14 351 IAMs_20 IAMs_20 10 58 48.3
comp=Z,5μm,22.0s
VLA Vladivostok 69.31 329 *i* P **P** **10 35 27.4 +1.5**
VLA pmax pmax
comp=Z,38nm,0.6s
PEA0B Petropavlovsk- 69.38 350 *ce*P **P** **10 35 26.7 +0.6**
PEA0B Petropavlovsk- 69.38 350 P **P** **10 35 26.4 +0.3**
PETK Petropavlovsk- 69.38 350 P **P** **10 35 27.3 +1.2**
comp=Z,24nm,0.9s,baz=146,slow=8.6,SNR=9.5
PETK LR LR 10 59 19.1
comp=Z,4μm,21.9s,baz=157,slow=30
PETK Petropavlovsk- 69.38 350 P **P** **10 35 25.5 -0.6**
PETK Petropavlovsk- 69.38 350 P **P** **10 35 25.5 -0.6**
DLV T Lat 69.46 289 P **P** **10 35 27.9 +0.3**
DLV IAmb IAmb 10 35 37.8
comp=Z,68nm,1.1s
NIKH Nikolski High 69.71 12 IAMs_20 IAMs_20 10 58 18.6
comp=Z,4μm,22.0s
GZH Guangzhou 69.80 302 P **P** **10 35 31.8 +2.5**
GZH S **S** **10 44 45.4 +6.5**
GZH pmax pmax
comp=Z,950nm,3.9s
USA0B Ussuriysk Arra 70.06 330 *i* P **P** **10 35 31.9 +1.5**
USRK Ussuriysk Ar. 70.06 330 P **P** **10 35 32.4 +2.0**
comp=Z,5.8nm,0.7s,baz=140,slow=4.8,SNR=15
USRK LR LR 11 01 42.5
comp=Z,2μm,21.5s,baz=125,slow=32
USRK Ussuriysk Ar. 70.06 330 P **P** **10 35 31.9 +1.5**
USRK Ussuriysk Ar. 70.06 330 P **P** **10 35 31.9 +1.5**
NJ2 Nanjing 70.09 313 *e*P **P** **10 35 31.9 +1.0**
NJ2 S **S** **10 44 41.4 -0.7**
NJ2 sS **sS** **10 44 47.3 +1.3**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 pmax pmax
comp=Z,890nm,3.7s
NJ2 LR LR
comp=Z,2μm,15.6s
NJ2 LR LR
comp=Z,1μm,15.6s
NJ2 LR LR
comp=Z,2μm,22.7s
MYKOM Kota Tinggi 70.53 277 P **P** **10 35 38.0 +4.0**
QIZ Qiongzhong 70.99 297 P **P** **10 35 35.3 -1.4**
QIZ S **S** **10 44 52.4 -0.6**
QIZ LR LR
comp=Z,780nm,32.2s
QIZ LR LR
comp=Z,730nm,27.1s
QIZ LR LR
comp=Z,880nm,18.0s
UNV Unalaska Valle 71.01 13 IAMs_20 IAMs_20 10 59 29.0
comp=Z,5μm,22.0s
TYV Tymovskoe 71.05 340 *e*P **P** **10 35 38.1 +1.8**
TYV *e*S **S** **10 44 53.7 +1.3**
TYV pmax pmax
comp=Z,23nm,1.4s
TYV pmax pmax
comp=Z,1μm,5.0s
TYV smax smax
comp=N,9.0nm,1.2s
TYV smax smax
comp=N,300nm,3.0s
MDJ Mudanjiang 71.54 329 P **P** **10 35 41.0 +1.5**
MDJ pP sP 10 35 44.3 +1.5
MDJ sP pwP 10 35 45.4 -0.8
MDJ PP **PP** **10 38 22.0 +3.5**
MDJ S **S** **10 45 02.1 +3.7**
MDJ sS sS 10 45 05.4 +3.0
MDJ pmax pmax
comp=N,30nm,1.2s
MDJ LR LR
comp=N,2μm,14.1s
MDJ LR LR
comp=N,2μm,14.1s
MDJ LR LR
comp=N,3μm,19.1s
DL2 Dalian 72.23 320 P **P** **10 35 45.3 +1.6**
DL2 S **S** **10 45 11.6 +5.1**
DL2 SS **SS** **10 49 44.0 -0.7**
DL2 pmax pmax
comp=N,54nm,1.3s
DL2 pmax pmax
comp=N,970nm,4.1s
DL2 LR LR
comp=N,2μm,16.9s
DL2 LR LR
comp=N,750nm,19.3s
DL2 LR LR
comp=N,1μm,16.2s
WHN Wuhan 72.58 309⇓ P **P** **10 35 46.5 +0.5**
WHN S **S** **10 45 13.5 +2.6**
WHN pmax pmax
comp=N,2μm,5.1s
WHN LR LR
comp=N,2μm,11.4s
WHN LR LR
comp=N,580nm,4.9s
WHN LR LR
comp=N,4μm,27.5s
FALS False Pass 72.63 14 IAMs_20 IAMs_20 11 01 20.0
comp=Z,5μm,20.0s
BKNI Bangkinang 72.82 275 P **P** **10 35 47.4 -0.4**
BKNI IAmb IAmb 10 35 52.6
comp=Z,89nm,1.1s
CN2 Changchun 73.14 326 *e*P **P** **10 35 49.4 +0.4**
CN2 *e*PP **PP** **10 38 35.0 +2.8**
CN2 *e*S **S** **10 45 18.3 +1.6**
CN2 pmax pmax
comp=Z,40nm,1.6s
CN2 pmax pmax
comp=Z,1μm,4.0s
CN2 LR LR
comp=Z,2μm,24.0s
CN2 LR LR
comp=Z,1μm,24.0s
CN2 LR LR
comp=Z,1μm,26.0s
GRNR Gornyy 73.19 337⇑ *i* P **P** **10 35 51.7 +2.5**
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR MLR MLR
comp=E,650nm,16.0s
SPIA Saint Paul Isl 73.49 9 IAMs_20 IAMs_20 11 00 34.8
comp=Z,4μm,21.0s
TIA Tai'an 73.58 316 P **P** **10 35 47.6 -4.3**
TIA S **SKiKP** **10 45 25.0 +2.4**
TIA SS **SS** **10 50 05.8 +0.2**
TIA pmax pmax
comp=Z,500nm,9.8s
TIA LR LR
comp=Z,2μm,29.9s
TIA LR LR
comp=Z,1μm,27.9s
TIA LR LR
comp=Z,2μm,31.4s
NKL Nikolayevsk 73.64 340 *e*P **P** **10 35 52.5 +0.8**
NKL *e* 10 38 37.8
NKL *e*S **SKiKP** **10 45 23.3 +1.3**
NKL pmax pmax
comp=E,49nm,1.3s
NKL pmax pmax
comp=N,8.0nm,1.1s
NKL pmax pmax
comp=Z,47nm,1.5s
NKL smax smax
comp=E,77nm,1.5s
NKL smax smax
comp=N,13nm,2.6s
KLR Kul'dur 73.91 333 *ce*P **P** **10 35 54.7 +1.3**
KLR pmax pmax
comp=Z,13nm,0.9s
IPM Ipoh 74.01 279 P **P** **10 35 54.5 -0.3**
IPM Ipoh 74.01 279 P **P** **10 35 58.0 +3.1**
KULM Kulim 74.60 280 P **P** **10 36 03.0 +4.7**
QSPA South Pole Qui 74.77 180 P **P** **10 35 56.7 -1.8**
QSPA IAmb IAmb 10 36 08.1
comp=Z,66nm,1.1s
RPSI Rantau Prapat 75.50 277 P **P** **10 36 02.5 -1.0**
PSI Prapat 75.53 277 P **P** **10 36 02.5 -1.3**
PSI pmax pmax
comp=Z,42nm,1.0s
ENH Enshi 76.14 307 IAmb IAmb 10 36 09.5
comp=Z,102nm,1.5s
BJT Baijiatuao 76.31 319 P **P** **10 36 08.1 +0.6**
BJT pmax pmax
comp=Z,27nm,1.1s
BJT Baijiatuao 76.31 319 P **P** **10 36 08.1 +0.6**
BJI Beijing 76.32 319 P **P** **10 36 09.4 +1.8**
BJI S **S** **10 45 56.4 +4.0**
BJI SS **SS** **10 50 46.1 -0.9**
BJI pmax pmax
comp=Z,1μm,4.4s
BJI LR LR
comp=Z,880nm,17.3s
BJI LR LR
comp=Z,680nm,18.2s
BJI LR LR
comp=Z,1μm,24.5s
GSI Gunungsitoli 76.41 275 P **P** **10 36 08.8 +0.1**
GSI IAmb IAmb 10 36 14.4
comp=Z,55nm,0.8s
GYA Guiyang 76.72 302⇑ P **P** **10 36 12.1 +1.8**
GYA S **S** **10 46 04.0 +6.3**
GYA SKS **SKSac** **10 46 16.5 -6.3**
GYA pmax pmax
comp=Z,1μm,4.4s
GYA LR LR
comp=Z,830nm,20.5s
GYA LR LR
comp=Z,800nm,22.7s
GYA LR LR
comp=Z,1μm,21.2s
MA2 Magadan 76.76 349 *i* P **P** **10 36 11.3 +1.7**
MA2 pmax pmax
comp=Z,95nm,0.8s
MA2 Magadan 76.76 349 IAMs_20 IAMs_20 11 05 15.8
comp=Z,3μm,20.0s
SLVN Son La 77.02 297 P **P** **10 36 13.2 +1.2**
TIY Taiyuan 77.56 315 *e*P **P** **10 36 15.8 +1.1**
TIY S **S** **10 46 07.0 +0.7**
TIY SS **SS** **10 51 06.3 +0.2**
TIY pmax pmax
comp=Z,1μm,4.1s
TIY LR LR
comp=Z,890nm,12.2s
TIY LR LR
comp=Z,270nm,10.2s
TIY LR LR
comp=Z,980nm,21.5s
XAN Xi'an 78.28 310 P **P** **10 36 19.5 +0.7**
XAN PP **PP** **10 39 11.3 -4.7**
XAN S **S** **10 46 18.5 +4.3**
XAN pmax pmax
comp=Z,30nm,1.3s
XAN pmax pmax
comp=Z,1μm,4.1s
XAN LR LR
comp=Z,1μm,17.3s
XAN LR LR
comp=Z,930nm,18.2s
XAN LR LR
comp=Z,2μm,20.1s
XAN Xi'an 78.28 310 P **P** **10 36 19.1 +0.3**
XAN pmax pmax
comp=Z,115nm,1.8s
XAN Xi'an 78.28 310 P **P** **10 36 19.1 +0.3**
XAN IAmb IAmb 10 36 22.1
comp=Z,115nm,1.8s
ZEA Zeya 79.12 334 *de*P **P** **10 36 24.3 +1.4**
ZEA *e*S **SKSac** **10 46 37.0 -1.6**
ZEA *e* 10 46 59.4
ZEA pmax pmax
comp=E,200nm,5.0s
ZEA pmax pmax
comp=N,400nm,7.6s
ZEA pmax pmax
comp=Z,700nm,5.8s
ZEA pmax pmax
comp=Z,20nm,2.0s
KMI Kunming 79.44 300⇑ *e*P **P** **10 36 28.3 +2.7**
KMI pP pwP 10 36 31.3 -1.2
KMI sP PcP 10 36 32.3 -1.3
KMI S **S** **10 46 27.6 +0.3**
KMI pmax pmax
comp=Z,33nm,2.0s
KMI pmax pmax
comp=Z,1μm,5.0s
KMI LR LR
comp=Z,940nm,18.6s
KMI LR LR
comp=Z,1μm,23.0s
KMI LR LR
comp=Z,2μm,22.3s
KMI Kunming 79.44 300 P **P** **10 36 26.5 +0.9**
KMI pmax pmax
comp=Z,120nm,1.7s
KMI Kunming 79.44 300 P **P** **10 36 26.5 +0.9**
KMI IAmb IAmb 10 36 29.4
comp=Z,120nm,1.7s
SEY Seymchan 79.61 351 *i* P **P** **10 36 26.2 +0.8**
HIA Hailar 79.66 328 *i* P **P** **10 36 27.2 +1.2**
HIA pmax pmax
comp=Z,12nm,0.9s
HIA Hailar 79.66 328 P **P** **10 36 27.0 +1.0**
HHC Hu-ho-hao-te 79.73 317 *e*P **P** **10 36 29.0 +2.3**
HHC sP PcP 10 36 36.0 +1.6
HHC SKS **SKSac** **10 46 41.4 -2.4**
HHC pmax pmax
comp=Z,42nm,1.4s
HHC pmax pmax
comp=Z,380nm,5.4s
HOM Homer 79.93 17 P **P** **10 36 28.5 +1.4**
baz=214
CNPM China Poot 79.94 18 IAMs_20 IAMs_20 11 04 44.4
comp=Z,3μm,19.0s
MCCM Marconi Confer 80.05 46 IAMs_20 IAMs_20 11 04 14.8
comp=Z,3μm,20.0s
BRLK Bradley Lake 80.24 18 IAmb IAmb 10 36 56.2
comp=Z,265nm,2.0s
BRLK IAMs_20 IAMs_20 11 05 56.8
comp=Z,3μm,21.0s
SNCC San Nicolas Is 80.29 52 P **P** **10 36 30.1 +0.4**
baz=245
RSO Redoubt South 80.29 16 P **P** **10 36 29.6 +0.2**
KCPM Cahto Peak 80.31 44 IAMs_20 IAMs_20 11 06 28.4
comp=Z,3μm,19.0s
HOPS Hopland Field 80.33 45 IAMs_20 IAMs_20 11 02 36.9
comp=Z,3μm,21.0s
CM31 Chiang Mai Arr 80.36 292 P **P** **10 36 30.3 -0.1**
CM31 IAmb IAmb 10 36 41.6
comp=Z,67nm,1.1s
CMAR Chiang Mai Arr 80.36 292 P **P** **10 36 32.3 +1.9**
comp=Z,23nm,0.8s,baz=116,slow=3.8,SNR=29
CMAR LR LR 11 09 21.5
comp=Z,476nm,21.6s,baz=152,slow=34
CMAR Chiang Mai Arr 80.36 292 P **P** **10 36 30.8 +0.4**
CMAR Chiang Mai Arr 80.36 292 P **P** **10 36 30.8 +0.4**
SAO San Andreas Ge 80.42 48 P **P** **10 36 30.8 +0.4**
SAO pmax pmax
comp=Z,111nm,2.0s
SAO San Andreas Ge 80.42 48 P **P** **10 36 30.8 +0.4**
SAO IAmb IAmb 10 36 32.2
comp=Z,111nm,2.0s
GDXM Geysers 80.43 45 IAMs_20 IAMs_20 11 04 48.6
comp=Z,3μm,20.0s
CHTO Chiang Mai 80.48 292 P **P** **10 36 32.5 +1.4**
CHTO pmax pmax
comp=Z,55nm,1.2s
CHTO Chiang Mai 80.48 292 P **P** **10 36 32.5 +1.4**
KMRM Mail Ridge 80.49 44 P **P** **10 36 32.0 +1.3**

KMRM IAmb IAmb 10 36 33.0
comp=Z,66nm,1.1s
SCZ2 Santa Cruz Isl 80.53 51 P **P** **10 36 31.8 +0.8**
baz=244
BTO Baotou 80.63 317 *e*P **P** **10 36 32.3 +0.8**
BTO S **S** **10 46 38.3 -0.6**
PMPB Monarch Peak 80.64 49 P **P** **10 36 32.6 +1.0**
PMPB IAmb IAmb 10 36 38.0
comp=Z,122nm,1.6s
SBC Santa Barbara 80.66 51 P **P** **10 36 32.2 +0.5**
baz=244
PKM Mcpherson Peak 80.78 50 P **P** **10 36 33.3 +0.7**
baz=244
PAGB Antelope Grade 80.83 49 P **P** **10 36 33.7 +1.1**
PAGB IAmb IAmb 10 36 35.8
comp=Z,99nm,1.7s
SMMC Simmler 80.83 50 P **P** **10 36 33.8 +1.2**
baz=244
CD2 Chengdu 80.87 305 P **P** **10 36 32.3 -0.7**
CD2 PP **PP** **10 39 34.1 -3.5**
CD2 S **S** **10 46 41.4 -0.4**
CD2 SS **SS** **10 51 56.1 +0.1**
CD2 pmax pmax
comp=Z,50nm,1.1s
CD2 pmax pmax
comp=Z,2µm,4.3s
CD2 LR LR
comp=Z,2µm,23.7s
CD2 LR LR
comp=Z,2µm,27.5s
CD2 LR LR
comp=Z,2µm,22.8s
SCI2 San Clemente I 80.92 52 P **P** **10 36 33.8 +0.7**
baz=245
SEW Seward 80.94 18 IAMs_20 IAMs_20 11 05 19.8
comp=Z,3µm,22.0s
CAPN Captain Cook N 80.99 17 P **P** **10 36 34.4 +1.6**
baz=215
O22K Cooper Landing 81.16 18 P **P** **10 36 34.5 +0.8**
baz=216
O22K Cooper Landing 81.16 18 P **P** **10 36 34.3 +0.6**
O22K IAMs_20 IAMs_20 11 05 53.7
comp=Z,3µm,21.0s
CIS Catalina Islan 81.20 52 P **P** **10 36 35.0 +0.4**
baz=245
ANM Nome 81.27 9 IAMs_20 IAMs_20 11 06 44.0
comp=Z,4µm,21.0s
Q23K Middleton Isla 81.37 20 P **P** **10 36 36.0 +1.2**
baz=219
FMP Fort Macarthur 81.42 52 P **P** **10 36 36.4 +0.7**
baz=245
WDC Whiskeytown Da 81.44 44 P **P** **10 36 37.1 +1.4**
WDC pmax pmax
comp=Z,88nm,1.8s
WDC Whiskeytown Da 81.44 44 P **P** **10 36 37.1 +1.4**
WDC IAmb IAmb 10 36 54.2
comp=Z,88nm,1.8s
OSI Osito Audit: C 81.47 51 P **P** **10 36 37.0 +0.9**
baz=245
OSI Osito Audit: C 81.47 51 P **P** **10 36 35.9 -0.2**
OSI IAmb IAmb 10 36 44.5
comp=Z,123nm,1.8s
OSI IAMs_20 IAMs_20 11 03 30.8
comp=Z,4µm,22.0s
L02E Cave Junction 81.50 42 P **P** **10 36 36.9 +0.9**
baz=241
N02D Trinity Center 81.52 44 P **P** **10 36 36.8 +0.6**
baz=242,SNR=6.8
TTA Tatalina 81.58 14 P **P** **10 36 36.5 +0.4**
TTA pmax pmax
comp=Z,56nm,1.2s
TTA Tatalina 81.58 14 P **P** **10 36 36.5 +0.4**
TTA IAMs_20 IAMs_20 11 07 07.6
comp=Z,3µm,21.0s
ARVC Arvin 81.61 50 P **P** **10 36 37.6 +0.8**
baz=245
DECC Green Verdugo 81.61 51 P **P** **10 36 36.9 +0.1**
baz=245
M02C Callahan 81.62 43 P **P** **10 36 37.5 +0.7**
baz=241,SNR=7.3
RC01 Rabbit Creek A 81.65 17 P **P** **10 36 36.9 +0.5**
baz=216,SNR=6.1
ORV Oroville 81.67 45 P **P** **10 36 36.9 0.0**
ORV pmax pmax
comp=Z,60nm,1.8s
ORV Oroville 81.67 45 P **P** **10 36 36.9 0.0**
SUA Susitna One 81.67 17 P **P** **10 36 36.4 -0.2**
SUA IAmb IAmb 10 36 42.0
comp=Z,102nm,1.3s
SUA IAMs_20 IAMs_20 11 05 44.1
comp=Z,3µm,21.0s
PASC Pasadena Art C 81.69 51 P **P** **10 36 37.2 0.0**
PASC Pasadena Art C 81.69 51 IAMs_20 IAMs_20 11 04 17.8
comp=Z,4µm,21.0s
VOG Valley Oaks Go 81.72 49 P **P** **10 36 37.7 +0.5**
baz=244
K02D Willamette Mer 81.72 42 P **P** **10 36 37.8 +0.5**
baz=241
VES Vestal, Richgr 81.73 49 P **P** **10 36 37.4 +0.1**
baz=245,SNR=6.0
AFDM Forest Hills D 81.75 46 IAMs_20 IAMs_20 11 03 43.8
comp=Z,3µm,22.0s
J01E Myrtle Point 81.78 41 P **P** **10 36 38.0 +0.5**
baz=240
O03E Paynes Creek 81.80 44 P **P** **10 36 38.0 +0.2**
baz=242,SNR=7.2
MWC Mount Wilson 81.81 51 IAmb IAmb 10 36 39.5
comp=Z,116nm,1.9s
MWC IAMs_20 IAMs_20 11 04 43.7
comp=Z,4µm,20.0s
TNA Tin City 81.84 8 P **P** **10 36 37.4 +0.2**
baz=198
TNA Tin City 81.84 8 IAMs_20 IAMs_20 11 04 56.2
comp=Z,3µm,22.0s
YBH Yreka Blue Hor 81.88 43 P **P** **10 36 39.2 +1.1**
YBH pmax pmax
comp=Z,127nm,2.0s
YBH Yreka Blue Hor 81.88 43 P **P** **10 36 39.2 +1.1**
YBH IAmb IAmb 10 36 44.4
comp=Z,127nm,1.9s
SKT Skwentna 81.88 16 IAmb IAmb 10 36 40.2
comp=Z,123nm,2.0s
CCX Cicese 81.92 54 P **P** **10 36 36.8 -1.6**
CCX IAmb IAmb 10 36 42.4
comp=Z,156nm,2.0s
109C Camp Elliot, M 81.99 53 P **P** **10 36 39.1 +0.3**
baz=246
109C Camp Elliot, M 81.99 53 P **P** **10 36 36.7 -2.0**
HIN Hinchinbrook I 82.07 19 IAMs_20 IAMs_20 11 04 06.8
comp=Z,4µm,22.0s
CBX Cerro Bola 82.10 54 P **P** **10 36 39.4 -0.1**
ISA Isabella, Lake 82.10 50 P **P** **10 36 40.2 +0.7**
baz=245,SNR=19
BFSC Mount Baldy Ra 82.11 51 P **P** **10 36 39.5 -0.1**
baz=246,SNR=10
EDW2 Edwards Air Fo 82.13 51 P **P** **10 36 40.2 +0.6**
baz=245,SNR=10
MURC Murrieta 82.21 52 P **P** **10 36 40.2 +0.3**
baz=246,SNR=12
PMR Palmer 82.23 17 IAMs_20 IAMs_20 11 07 23.9
comp=Z,3µm,21.0s
BAR Barrett 82.24 53 IAmb IAmb 10 36 45.9
comp=Z,93nm,1.8s
TKX Tecate 82.24 53 P **P** **10 36 40.0 -0.2**
GLI Glacier Island 82.26 18 P **P** **10 36 39.4 -0.2**
GLI IAmb IAmb 10 36 45.7
comp=Z,147nm,1.5s
GLI IAMs_20 IAMs_20 11 06 06.9
comp=Z,3µm,21.0s
KNK Knik Glacier 82.28 18 P **P** **10 36 39.5 -0.2**
I02D Swisshome 82.31 40 P **P** **10 36 41.4 +1.2**
baz=240
FID Port Fidalgo 82.35 19 P **P** **10 36 40.4 +0.4**
RUBR Rubicon Trail 82.37 46 IAMs_20 IAMs_20 11 04 02.0
comp=Z,3µm,21.0s
L04D Klamath Falls 82.38 43 P **P** **10 36 41.6 +0.8**
baz=242
I03D Drain, OR 82.42 41 P **P** **10 36 41.0 +0.2**
baz=241
EYAK Cordova Ski Ar 82.42 19 IAMs_20 IAMs_20 11 05 13.2
comp=Z,4µm,22.0s
GHO Glory Hole Cre 82.43 17 P **P** **10 36 40.4 -0.1**
GHO IAMs_20 IAMs_20 11 07 08.3
comp=Z,3µm,20.0s
M04C Macdoel 82.47 43 P **P** **10 36 41.9 +0.6**
baz=242,SNR=6.2
PPLA Purkeypile 82.48 15 IAmb IAmb 10 36 43.1
comp=Z,152nm,1.9s
MDPB Devils Postpil 82.50 48 IAmb IAmb 10 36 43.4
comp=Z,95nm,1.9s
MONP2 Monument Peak 82.52 53 P **P** **10 36 42.5 +0.7**
baz=247,SNR=25
ESJX Sierra Juarez 82.53 54 P **P** **10 36 41.4 -0.5**
ESJX IAmb IAmb 10 36 47.4
comp=Z,96nm,1.9s
SPX San Pedro Mart 82.54 55 P **P** **10 36 43.1 +1.0**
SPX IAmb IAmb 10 36 45.3
comp=Z,105nm,2.0s
OMMB Old Mammoth Mi 82.55 48 IAmb IAmb 10 36 48.1
comp=Z,78nm,1.8s
CUT Chulitna 82.57 16 P **P** **10 36 41.3 +0.1**
baz=216
DIB Dawson Inlet, 82.59 30 IAMs_20 IAMs_20 11 04 02.4
comp=Z,4µm,22.0s
BEKR Beckworth 82.59 45 IAMs_20 IAMs_20 11 04 19.9
comp=Z,3µm,21.0s
LRMC Laurel Mtn Rad 82.61 50 P **P** **10 36 42.8 +0.6**
baz=246
SML Sawmill 82.63 17 P **P** **10 36 40.8 -0.8**
SML pmax pmax
comp=Z,287nm,1.8s
SML Sawmill 82.63 17 P **P** **10 36 40.8 -0.8**
RAGM Ragged Mountai 82.64 20 IAMs_20 IAMs_20 11 04 09.0
comp=Z,3µm,22.0s
IKP In-Ko-Pah, Jac 82.66 53 P **P** **10 36 43.2 +0.7**
baz=247,SNR=9.1
RMX La Rumorosa 82.67 53 P **P** **10 36 43.0 +0.5**
RMX IAmb IAmb 10 37 08.6
comp=Z,44nm,1.0s
RMX IAMs_20 IAMs_20 11 03 54.2
comp=Z,3µm,22.0s
MLAC Mammoth, Mammo 82.68 48 P **P** **10 36 43.6 +1.0**
baz=244
BBRC Big Bear Solar 82.68 52 P **P** **10 36 42.6 -0.1**
baz=246,SNR=6.4
CWC Cottonwood Cre 82.72 49 P **P** **10 36 43.1 +0.4**
baz=245
HMT Hamilton 82.74 20 IAMs_20 IAMs_20 11 05 57.6
comp=Z,4µm,20.0s
PNTR Pine Nut 82.77 46 P **P** **10 36 43.5 +0.5**
PNTR IAMs_20 IAMs_20 11 05 49.7
comp=Z,3µm,20.0s
PFO Pinyon Flats O 82.77 52 *d i*P **P** **10 36 43.1 +0.1**
PFO pmax pmax
comp=Z,11nm,0.6s
PFO Pinyon Flats O 82.77 52 P **P** **10 36 43.5 +0.5**
baz=246,SNR=13
PFO Pinyon Flats O 82.77 52 P **P** **10 36 43.2 +0.1**
PFO IAmb IAmb 10 36 45.8
comp=Z,177nm,2.0s
PFO Pinyon Flats O 82.77 52 IAMs_20 IAMs_20 11 04 40.4
comp=Z,3µm,22.0s
TPFO Pinon Flats 82.77 52 P **P** **10 36 43.5 +0.5**
baz=246,SNR=14
XPFO Pion Flat 82.78 52 IAMs_20 IAMs_20 11 04 40.6
comp=Z,3µm,22.0s
VCNR Virginia City 82.83 46 IAMs_20 IAMs_20 11 04 28.2
comp=Z,2µm,21.0s
TIN Tinemaha, Big 82.87 49 P **P** **10 36 44.1 +0.7**
baz=245
RRX Edison Barstow 82.87 51 P **P** **10 36 44.2 +0.8**
baz=246
LZH Lanzhou 82.92 310 *e*P **P** **10 36 45.3 +1.5**
LZH pP PcP 10 36 49.6 +1.0
LZH sP pwP 10 36 52.8 +2.2
LZH pmax pmax
comp=Z,29nm,1.1s
LZH pmax pmax
comp=Z,1µm,4.3s
LZH LR LR
comp=Z,1µm,13.6s
LZH LR LR
comp=Z,1µm,16.3s
LZH LR LR
comp=Z,1µm,17.3s
K04D Chiloquin, OR 82.93 42 P **P** **10 36 44.3 +0.6**
baz=242
SCM Sheep Creek Mo 82.94 18 P **P** **10 36 42.9 -0.3**
SCM pmax pmax
comp=Z,101nm,1.0s
SCM Sheep Creek Mo 82.94 18 P **P** **10 36 42.9 -0.3**
SCM IAMs_20 IAMs_20 11 06 52.8
comp=Z,3µm,22.0s
J04D Umpqua Nationa 82.99 42 P **P** **10 36 44.8 +0.8**
baz=242
MPMC Manual Prospec 82.99 50 P **P** **10 36 44.8 +0.6**
baz=246,SNR=26
SWSC Sam W. Stewart 83.02 53 P **P** **10 36 44.7 +0.5**
baz=247,SNR=9.7
SFX San Felipe 83.03 55 P **P** **10 36 43.3 -0.9**
I04A Tendick Farm, 83.06 41 P **P** **10 36 44.5 +0.3**
baz=241
KLU Klutina 83.10 18 IAMs_20 IAMs_20 11 06 11.0
comp=Z,4µm,22.0s
LHV Little Huntoon 83.18 47 IAmb IAmb 10 36 54.4
comp=Z,40nm,1.0s
GSC Goldstone, Bar 83.19 51 P **P** **10 36 45.5 +0.3**
baz=246,SNR=18
GSC Goldstone, Bar 83.19 51 IAMs_20 IAMs_20 11 04 24.3
comp=Z,4µm,22.0s
PAHR Pah Rah Range 83.19 46 IAmb IAmb 10 36 49.0
comp=Z,160nm,2.0s
PAHR IAMs_20 IAMs_20 11 04 38.9
comp=Z,2µm,22.0s
H04D Lebanon 83.20 40 P **P** **10 36 45.6 +0.7**
baz=241
G03D McMinnville, O 83.21 40 P **P** **10 36 45.9 +1.0**
baz=241
BILL Bilibino 83.22 357 *i* P **P** **10 36 43.3 -1.1**
BILL *i* 10 36 51.0
BILL *e* 10 39 52.5
BILL pmax pmax
comp=Z,21nm,1.1s
BILL MLR MLR
comp=Z,1µm,18.0s
BILL Bilibino 83.22 357 P **P** **10 36 44.2 -0.2**
BILL IAMs_20 IAMs_20 11 06 18.3
comp=Z,4µm,22.0s
BELC Belle Mtn. Jos 83.28 52 P **P** **10 36 46.5 +0.8**
baz=247,SNR=38
KTH Kantishna Hill 83.34 15 IAMs_20 IAMs_20 11 06 13.2
comp=Z,2µm,22.0s
HEC Hector,Ludlow 83.35 51 P **P** **10 36 46.2 +0.2**
baz=246,SNR=9.0
NVAR Mina Array Bea 83.40 47 P **P** **10 36 47.0 +0.7**
comp=Z,7.0nm,0.7s,baz=229,slow=8.5,SNR=40
NVAR LR LR 11 05 45.7
comp=Z,6µm,21.5s,baz=264,slow=30
NVAR Mina Array Bea 83.40 47 P **P** **10 36 46.2 -0.1**
MESA MESA 83.40 21 P **P** **10 36 46.4 +0.7**
TRF Thorofare Moun 83.42 16 P **P** **10 36 45.0 -0.8**
TRF IAmb IAmb 10 36 55.8
comp=Z,58nm,1.0s
CRQM Cirque 83.42 20 IAmb IAmb 10 36 57.4
comp=Z,81nm,1.1s
CRQM IAMs_20 IAMs_20 11 06 00.1
comp=Z,3µm,22.0s
GRAC Grapevine Rang 83.47 49 P **P** **10 36 47.6 +1.1**
baz=246,SNR=25
MAW Mawson 83.48 201 P **P** **10 36 45.0 -0.9**
comp=Z,6.3nm,0.8s,baz=142,slow=6.3,SNR=7.8
MAW LR LR 11 09 54.6
comp=Z,2µm,19.5s,baz=114,slow=33
MAW Mawson 83.48 201 P **P** **10 36 45.8 -0.1**
baz=83
MAW Mawson 83.48 201 P **P** **10 36 45.5 -0.4**
MAW pmax pmax
comp=Z,7.0nm,1.2s
MAW Mawson 83.48 201 P **P** **10 36 45.5 -0.4**
M24K Tolsona, Glenn 83.50 18 P **P** **10 36 46.7 +0.6**
baz=219,SNR=12
M24K Tolsona, Glenn 83.50 18 IAMs_20 IAMs_20 11 06 36.5
comp=Z,3µm,20.0s
NV11 Mina Array Sit 83.50 47 IAmb IAmb 10 36 52.8
comp=Z,122nm,1.8s
TGL Tana Glacier 83.53 20 IAmb IAmb 10 36 58.4
comp=Z,96nm,1.3s
TGL IAMs_20 IAMs_20 11 06 02.4
comp=Z,3µm,21.0s
MOD Modoc Plateau 83.55 44 IAmb IAmb 10 36 52.8
comp=Z,84nm,1.5s
MOD IAMs_20 IAMs_20 11 05 58.0
comp=Z,3µm,22.0s
BC3 Big Chuckawall 83.56 53 P **P** **10 36 47.8 +0.7**
baz=247,SNR=24
J05D Fort Rock, OR 83.57 42 P **P** **10 36 47.9 +0.9**
baz=242,SNR=19
ISLE Juniper Island 83.58 20 IAMs_20 IAMs_20 11 06 03.2
comp=Z,3µm,20.0s
N25K Chitina, Valde 83.59 19 P **P** **10 36 46.7 +0.1**
baz=221,SNR=22
N25K Chitina, Valde 83.59 19 IAmb IAmb 10 37 02.9
comp=Z,110nm,1.6s
N25K IAMs_20 IAMs_20 11 06 01.1
comp=Z,3µm,22.0s
FURC Furnace Creek, 83.62 50 P **P** **10 36 47.7 +0.5**
baz=246,SNR=22
H04A Detroit Lake 83.63 40 IAmb IAmb 10 36 50.3
comp=Z,117nm,1.8s
VRDI Verde Repeater 83.67 20 IAmb IAmb 10 36 48.2
comp=Z,136nm,1.8s
VRDI IAMs_20 IAMs_20 11 07 11.3
comp=Z,2µm,21.0s
CRAG Craig 83.69 28 IAMs_20 IAMs_20 11 05 07.4
comp=Z,4µm,22.0s
E03A Lebam 83.69 38 IAMs_20 IAMs_20 11 06 51.4
comp=Z,4µm,20.0s
GLB Gilahina Butte 83.72 19 IAmb IAmb 10 36 48.4
comp=Z,119nm,1.7s
GLB IAMs_20 IAMs_20 11 05 30.9
comp=Z,2µm,21.0s
RND Reindeer 83.77 16 IAMs_20 IAMs_20 11 07 24.4
comp=Z,4µm,21.0s
SRIG Santa Rosalia 83.80 60 IAMs_20 IAMs_20 11 04 56.1
comp=Z,3µm,22.0s
F04D Rainier, OR 83.80 39 P **P** **10 36 48.5 +0.7**
baz=241
KVN Kaiserville 83.81 47 IAmb IAmb 10 37 06.5
comp=Z,83nm,1.7s
GLA Glamis 83.81 53 P **P** **10 36 49.1 +0.8**
GLA pmax pmax
comp=Z,51nm,1.0s
GLA Glamis 83.81 53 P **P** **10 36 49.3 +1.0**
baz=248,SNR=11
GLA Glamis 83.81 53 P **P** **10 36 49.1 +0.8**
GLA IAmb IAmb 10 36 53.4
comp=Z,51nm,0.9s
SHOC Shoshone, Teco 83.83 50 P **P** **10 36 49.0 +0.8**
baz=246
GMRC Granite Mounta 83.84 52 P **P** **10 36 49.1 +0.6**
baz=247,SNR=31
TABL Table Mountain 83.87 21 P **P** **10 36 47.6 -0.6**
BALM Baldy 83.89 20 IAmb IAmb 10 36 53.6
comp=Z,97nm,1.6s
BALM IAMs_20 IAMs_20 11 06 24.1
comp=Z,3µm,21.0s
TUQ Turquoise Moun 83.90 51 P **P** **10 36 49.4 +0.6**
baz=247,SNR=6.3
DHY Denali Highway 83.91 17 P **P** **10 36 47.9 -0.4**
DHY IAmb IAmb 10 37 03.5
comp=Z,38nm,1.0s
DHY IAMs_20 IAMs_20 11 07 54.3
comp=Z,3µm,21.0s
MCARA McCarthy VSAT 83.93 20 P **P** **10 36 48.0 -0.2**
PCA Pinnacle 83.93 21 P **P** **10 36 49.6 +1.3**
PCA IAmb IAmb 10 36 59.4
comp=Z,40nm,1.0s
NLWA Neilton Lookou 83.93 38 IAMs_20 IAMs_20 11 09 33.7
comp=Z,3µm,19.0s
PBA Port Blair 83.94 284 *e*P P 10 36 48.6 -0.7
IRM Iron Mountain 83.99 52 P **P** **10 36 50.0 +0.8**
baz=247,SNR=44
I05D Terrebonne, OR 84.00 41 P **P** **10 36 49.6 +0.6**
baz=242
PINE Pine Mountain 84.00 42 IAmb IAmb 10 36 55.4
comp=Z,68nm,1.1s
MCK McKinley 84.01 16 P **P** **10 36 48.5 -0.1**
baz=217,SNR=16
F04A Amboy 84.08 39 IAMs_20 IAMs_20 11 06 25.8
comp=Z,4µm,21.0s
BARN Barnard Glacie 84.14 20 IAMs_20 IAMs_20 11 06 09.1
comp=Z,3µm,22.0s
BBB Bella Bella 84.15 32 IAMs_20 IAMs_20 11 05 46.1
comp=Z,3µm,22.0s
CTGM Chitina Glacie 84.18 20 P **P** **10 36 49.0 -0.6**
CTGM IAMs_20 IAMs_20 11 08 13.2
comp=Z,3µm,20.0s
TPNV Topopah Spring 84.27 49 P **P** **10 36 51.6 +0.9**
baz=246,SNR=35
TPNV Topopah Spring 84.27 49 IAmb IAmb 10 36 55.6
comp=Z,121nm,1.7s
YAK Yakutsk 84.28 341 P **P** **10 36 50.2 +0.3**
comp=Z,9.4nm,0.5s,baz=56,slow=22,SNR=6.5
YAK Yakutsk 84.28 341 *e*P **P** **10 36 49.9 0.0**
YAK pmax pmax
comp=Z,23nm,0.9s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK pmax pmax
comp=E,14nm,1.5s
YAK Yakutsk 84.28 341 P **P** **10 36 51.5 +1.6**
YAK IAmb IAmb 10 36 54.6
comp=Z,31nm,0.8s
YAK IAMs_20 IAMs_20 11 08 17.7
comp=Z,4µm,22.0s
E04D Cinebar 84.30 39 P **P** **10 36 50.8 +0.4**
baz=241
G05D Wamic, OR 84.44 40 P **P** **10 36 51.7 +0.5**
baz=242
D03D Eldon 84.46 38 P **P** **10 36 52.0 +0.8**
baz=240
D04E Lakebay 84.48 38 P **P** **10 36 52.4 +1.1**
baz=241
SLBS Sierra La Lagu 84.52 64 P **P** **10 36 54.6 +2.4**
113A Mohawk Valley, 84.53 54 IAmb IAmb 10 36 56.8
comp=Z,74nm,1.4s
MLY Manley 84.61 15 P **P** **10 36 51.1 -0.5**
baz=215,SNR=9.0
WRAK Wrangell Islan 84.62 27 IAMs_20 IAMs_20 11 05 36.0
comp=Z,4µm,21.0s
NEE2 Needles Airpor 84.63 52 P **P** **10 36 53.3 +1.0**
baz=247
F05D White Salmon 84.65 40 P **P** **10 36 53.0 +0.8**
baz=242
NEA2 Nenana 84.67 15 P **P** **10 36 51.0 -0.9**
baz=216,SNR=7.7
PDMCI Parker Dam,Lak 84.82 53 P **P** **10 36 54.1 +0.8**
baz=248,SNR=17
WRH Wood River Hil 84.82 16 P **P** **10 36 52.0 -0.7**
WRH IAMs_20 IAMs_20 11 07 55.9
comp=Z,3µm,21.0s
LON Longmire 84.85 39 IAMs_20 IAMs_20 11 07 01.0
comp=Z,3µm,21.0s
MENT Mentasta 84.87 18 IAMs_20 IAMs_20 11 07 29.9
comp=Z,4µm,22.0s
SHPR Sheep Range 84.89 50 IAMs_20 IAMs_20 11 05 29.6
comp=Z,4µm,22.0s
D05A Enumclaw 84.95 38 IAMs_20 IAMs_20 11 07 51.6
comp=Z,2µm,20.0s
214A Organ Pipe Nat 84.98 55 P **P** **10 36 55.2 +0.9**
baz=249,SNR=18
214A Organ Pipe Nat 84.98 55 P **P** **10 36 54.2 0.0**
CCB Clear Creek Bu 85.04 16 IAmb IAmb 10 36 56.0
comp=Z,28nm,0.9s
CCB IAMs_20 IAMs_20 11 08 45.6
comp=Z,3µm,21.0s
I23K Minto, Yukon-K 85.04 15 P **P** **10 36 53.1 -0.6**
baz=216,SNR=9.3
I23K Minto, Yukon-K 85.04 15 IAmb IAmb 10 36 57.4
comp=Z,89nm,1.9s
I23K IAMs_20 IAMs_20 11 07 56.7
comp=Z,2µm,21.0s
L26K Log Cabin Wild 85.05 18 P **P** **10 36 53.9 +0.1**
baz=222,SNR=10
I07A Izee 85.05 42 IAmb IAmb 10 37 00.3
comp=Z,45nm,1.2s
HDA Harding Lake 85.08 16 P **P** **10 36 53.7 -0.2**
baz=218,SNR=18
HDA Harding Lake 85.08 16 IAmb IAmb 10 36 56.7
comp=Z,75nm,1.1s
HDA IAMs_20 IAMs_20 11 07 18.7
comp=Z,4µm,22.0s
RIDG Independent Ri 85.15 17 IAmb IAmb 10 36 57.3
comp=Z,49nm,0.9s
MDM Murphy Dome 85.18 15 IAmb IAmb 10 36 56.7
comp=Z,51nm,1.1s
TCOL CIGO, UAF Yank 85.20 16 P **P** **10 36 53.7 -0.9**
baz=218,SNR=12
TCOL CIGO, UAF Yank 85.20 16 IAmb IAmb 10 37 05.3
comp=Z,40nm,0.9s
TCOL IAMs_20 IAMs_20 11 08 52.0
comp=Z,2µm,20.0s

COLA College 85.21 16 *i* P P 10 36 54.2 -0.3
COLA pmax pmax
comp=Z,103nm,2.2s
COLA College 85.21 16 P P 10 36 54.4 -0.1
COLA IAmb IAmb 10 37 05.3
comp=Z,37nm,0.9s
COLA College 85.21 16 IAMs_20 IAMs_20 11 08 51.5
comp=Z,2µm,20.0s
DOT Dot Lake 85.31 18 IAMs_20 IAMs_20 11 07 53.7
comp=Z,2µm,22.0s
R11A Troy Canyon, C 85.31 48 P P 10 36 56.1 +0.1
baz=247,SNR=22
R11A Troy Canyon, C 85.31 48 IAmb IAmb 10 36 58.7
comp=Z,132nm,1.9s
R11A IAMs_20 IAMs_20 11 05 57.4
comp=Z,4µm,22.0s
W13A Hualapai Mount 85.31 52 IAmb IAmb 10 36 58.0
comp=Z,48nm,1.4s
W13A IAMs_20 IAMs_20 11 05 36.7
comp=Z,3µm,22.0s
PRN Pahroc Range 85.33 49 IAmb IAmb 10 37 02.6
comp=Z,40nm,1.0s
IL31 85.38 16 IAmb IAmb 10 37 04.3
comp=Z,46nm,0.8s
ILAR Eielson Array 85.38 16 P P 10 36 55.0 -0.4
comp=Z,30nm,0.8s,baz=230,slow=5.1,SNR=190
ILAR LR LR 11 08 45.7
comp=Z,3µm,21.1s,baz=246,slow=31
ILAR Eielson Array 85.38 16 P P 10 36 54.1 -1.3
ILAR Eielson Array 85.38 16 P P 10 36 54.1 -1.3
B05A Bryant 85.40 37 P P 10 36 56.5 +0.6
baz=241
J08A Circle Bar Ran 85.40 43 IAMs_20 IAMs_20 11 08 39.4
comp=Z,3µm,20.0s
HYT Haines Junctio 85.42 22 IAmb IAmb 10 37 01.1
comp=Z,112nm,2.0s
HSIG 85.45 58 IAmb IAmb 10 37 00.3
comp=Z,131nm,1.9s
HSIG IAMs_20 IAMs_20 11 05 57.0
comp=Z,3µm,21.0s
POKR Poker Flat Res 85.51 16 P P 10 36 55.0 -1.0
baz=218,SNR=15
POKR Poker Flat Res 85.51 16 IAmb IAmb 10 36 58.3
comp=Z,36nm,0.9s
POKR IAMs_20 IAMs_20 11 09 31.0
comp=Z,3µm,20.0s
BCAR Beaver Creek A 85.56 19 P P 10 36 56.1 -0.4
SCRK Sand Creek 85.58 18 P P 10 36 56.5 -0.1
baz=221
F07A Phinny Hill Vi 85.60 40 IAmb IAmb 10 36 59.7
comp=Z,79nm,1.9s
F07A IAMs_20 IAMs_20 11 07 28.4
comp=Z,4µm,21.0s
LTY Liberty 85.77 39 IAMs_20 IAMs_20 11 07 08.8
comp=Z,3µm,20.0s
B06A Marblemount 85.88 37 IAMs_20 IAMs_20 11 06 32.6
comp=Z,3µm,22.0s
G08A Pilot Rock 85.94 41 IAmb IAmb 10 37 00.3
comp=Z,87nm,1.8s
E07A Sunnyside 85.95 40 IAMs_20 IAMs_20 11 07 47.5
comp=Z,3µm,20.0s
C06D Leavenworth 85.95 38 P P 10 36 58.9 +0.2
baz=242
ULN Ulaanbaatar 85.97 322 *ce*P P 10 36 59.3 +0.3
ULN pmax pmax
comp=Z,22nm,1.0s
ULN Ulaanbaatar 85.97 322 P P 10 36 59.7 +0.7
LKP Lekhapani 86.01 300 *e*P P 10 37 00.5 +1.0
HAWA Hanford 86.07 40 P P 10 36 59.1 -0.2
HAWA IAmb IAmb 10 37 00.9
comp=Z,98nm,1.9s
HAWA IAMs_20 IAMs_20 11 07 30.8
comp=Z,3µm,20.0s
K27K Chicken 86.18 18 P P 10 37 00.1 +0.6
baz=223
K27K Chicken 86.18 18 IAMs_20 IAMs_20 11 07 58.9
comp=Z,3µm,22.0s
PRP Porcupine Dome 86.33 16 IAMs_20 IAMs_20 11 09 43.6
comp=Z,4µm,20.0s
SONM Songino Array 86.35 322 P P 10 37 00.8 -0.1
comp=Z,7.7nm,0.8s,baz=149,slow=5.1,SNR=18
SONM PP PP 10 40 22.1 -0.2
comp=Z,2.4nm,1.1s,baz=130,slow=8.3,SNR=3.5
SONM PKPPKP P'P'df 11 03 11.5 +8.5
comp=Z,0.6nm,0.8s,baz=94,slow=5.9,SNR=4.2
SONM LR LR 11 13 23.4
comp=Z,790nm,21.0s,baz=110,slow=34
SONM Songino Array 86.35 322 P P 10 37 00.6 -0.3
SONM pmax pmax
comp=Z,11nm,1.0s
SONM Songino Array 86.35 322 P P 10 37 00.6 -0.3
E08A Dider Farm, El 86.41 40 IAmb IAmb 10 37 02.6
comp=Z,94nm,1.7s
E08A IAMs_20 IAMs_20 11 07 41.7
comp=Z,3µm,20.0s
SPR3 Spring Creek 3 86.47 48 IAmb IAmb 10 37 03.3
comp=Z,101nm,1.8s
ELK Elko 86.51 46 IAMs_20 IAMs_20 11 06 44.9
comp=Z,3µm,22.0s
COLD Coldfoot 86.54 13 P P 10 37 02.0 +0.9
baz=215,SNR=15
COLD Coldfoot 86.54 13 IAMs_20 IAMs_20 11 10 22.1
comp=Z,2µm,20.0s
TUC Tucson 86.72 55 P P 10 37 03.0 +0.1
TUC pmax pmax
comp=Z,46nm,1.5s
TUC Tucson 86.72 55 P P 10 37 03.9 +0.9
baz=250
TUC Tucson 86.72 55 P P 10 37 03.0 +0.1
D08A Wollman Farm, 86.75 39 P P 10 37 02.8 +0.2
D08A IAmb IAmb 10 37 05.3
comp=Z,106nm,1.8s
D08A IAMs_20 IAMs_20 11 08 10.6
comp=Z,3µm,20.0s
BMO Blue Mountains 86.81 42 IAmb IAmb 10 37 11.6
comp=Z,70nm,1.9s
MOKO MOKOCHONG 86.81 298 *e*P P 10 37 03.7 +0.1
IMP Imphal 86.82 297 *e*P P 10 37 03.5 -0.1
DLBC Dease Lake 86.84 26 IAmb IAmb 10 37 21.2
comp=Z,59nm,1.6s
X16A Lo Mia Camp, P 86.94 53 IAmb IAmb 10 37 10.7
comp=Z,147nm,2.0s
SAIH SAIHA 86.94 294 *e*P P 10 37 04.8 +0.5
SAIH *i* x x 10 37 55.0
KOHI KOHIMA 86.96 298 *e*P P 10 37 04.8 +0.4
E09A Wood Farm, Sta 86.99 40 IAmb IAmb 10 37 05.0
comp=Z,62nm,1.6s
E09A IAMs_20 IAMs_20 11 08 11.0
comp=Z,3µm,21.0s
EGAK Eagle 87.00 18 IAMs_20 IAMs_20 11 08 34.5
comp=Z,3µm,22.0s
U15A North Rim 87.01 51 IAmb IAmb 10 37 11.1
comp=Z,87nm,1.4s
U15A IAMs_20 IAMs_20 11 06 42.5
comp=Z,3µm,22.0s
DAWY Dawson 87.03 19 IAMs_20 IAMs_20 11 06 51.4
comp=Z,3µm,22.0s
B08A Colville Reser 87.08 38 P P 10 37 04.2 -0.1
B08A IAmb IAmb 10 37 09.3
comp=Z,118nm,1.9s
JORH JORHAT 87.16 299 *e*P P 10 37 05.8 +0.7
GTA Gaotai 87.17 312 ⇓P P 10 37 06.1 +1.1
GTA pP pwP 10 37 10.4 -1.5
GTA sP sP 10 37 13.5 +5.1
GTA SKS **SKSac** 10 47 34.0 +1.3
GTA sS ScS 10 47 53.4 +1.1
GTA SS **SS** 10 53 26.8 -2.3
GTA pmax pmax
comp=Z,32nm,1.8s
GTA pmax pmax
comp=Z,1µm,5.5s
GTA LR LR
comp=Z,940nm,17.1s
GTA LR LR
comp=Z,1µm,20.0s
GTA LR LR
comp=Z,1µm,20.4s
MFID Camas Ranch 87.18 44 IAmb IAmb 10 37 06.5
comp=Z,41nm,1.4s
MFID IAMs_20 IAMs_20 11 07 33.4
comp=Z,4µm,21.0s
FYU Fort Yukon 87.21 15 IAMs_20 IAMs_20 11 09 53.9
comp=Z,2µm,21.0s
F10A Beach Ranch, E 87.33 41 IAMs_20 IAMs_20 11 07 52.2
comp=Z,3µm,20.0s
WUAZ Wupatki 87.38 52 P P 10 37 07.1 +0.9
baz=249,SNR=18

WUAZ Wupatki 87.38 52 IAmb IAmb 10 37 12.6
comp=Z,46nm,1.1s
WUAZ IAMs_20 IAMs_20 11 07 27.4
comp=Z,2µm,22.0s
C09A Chrisman Ranch 87.47 39 IAMs_20 IAMs_20 11 08 01.6
comp=Z,3µm,21.0s
BOD Bodaibo 87.47 333 *e*P P 10 37 06.1 +0.3
BOD pmax pmax
comp=Z,36nm,2.2s
PLID Pearl Lake 87.75 42 IAmb IAmb 10 37 13.1
comp=Z,105nm,1.8s
ZIRO ZIRO 87.75 299 *e*P P 10 37 10.1 +2.0
SILR SILCHAR 87.80 296 *e*P P 10 37 09.5 +1.3
SILR IAmb IAmb 10 37 13.0
comp=Z,70nm,0.5s
TOLK Toolik Lake Re 87.83 13 P P 10 37 08.3 +0.9
baz=216,SNR=19
TOLK Toolik Lake Re 87.83 13 IAMs_20 IAMs_20 11 11 36.3
comp=Z,3µm,20.0s
DUG Dugway, Tooele 88.00 47 P P 10 37 09.4 +0.3
DUG pmax pmax
comp=Z,63nm,1.4s
DUG Dugway, Tooele 88.00 47 P P 10 37 09.6 +0.6
baz=248,SNR=22
DUG Dugway, Tooele 88.00 47 P P 10 37 09.4 +0.3
DUG IAmb IAmb 10 37 27.1
comp=Z,63nm,1.4s
BMAR Burnt Mountain 88.04 15 P P 10 37 09.1 +0.7
HLID Hailey 88.18 44 P P 10 37 10.4 +0.6
baz=247,SNR=44
TEZP TEZPUR 88.36 298 *e*P P 10 37 11.2 +0.4
NEW Newport 88.36 39 P P 10 37 10.3 -0.1
baz=245,SNR=7.7
NEW Newport 88.36 39 IAmb IAmb 10 37 12.7
comp=Z,101nm,1.9s
NEW Newport 88.36 39 IAMs_20 IAMs_20 11 08 48.4
comp=Z,2µm,20.0s
W18A Petrified Fore 88.50 53 P P 10 37 12.6 +1.0
baz=250
BELO BELONIA 88.52 294 *e*P P 10 37 13.9 +2.2
A21K Barrow 88.80 9 P P 10 37 11.8 0.0
baz=209
A21K Barrow 88.80 9 IAmb IAmb 10 37 24.1
comp=Z,66nm,1.5s
A21K IAMs_20 IAMs_20 11 10 19.7
comp=Z,3µm,22.0s
SHL Shillong 88.83 297 *e*P P 10 37 14.4 +1.1
SHL IAmb IAmb 10 37 22.8
comp=Z,44nm,1.2s
SHL Shillong 88.83 297 IAmb IAmb 10 37 32.5
comp=Z,55nm,1.2s
BCYI Bear Canyon 89.14 43 P P 10 37 13.3 -1.1
GUWA GUWAHATI 89.18 297 *e*P P 10 37 14.3 -0.4
121A Cookes Peak, D 89.18 56 P P 10 37 16.1 +1.3
baz=251,SNR=12
121A Cookes Peak, D 89.18 56 IAmb IAmb 10 37 33.2
comp=Z,67nm,1.6s
ZAK Zakamensk 89.31 323 *e*P P 10 37 14.2 -0.7
ZAK pmax pmax
comp=Z,19nm,2.0s
EPYK Eagle Plains 89.44 18 P P 10 37 14.4 -0.7
baz=228,SNR=6.7
EPYK Eagle Plains 89.44 18 IAMs_20 IAMs_20 11 09 60.0
comp=Z,3µm,22.0s
TLY Talaya 89.66 324 P P 10 37 18.8 +2.4
comp=Z,7.3nm,0.8s,baz=141,slow=3.2,SNR=10
TLY Talaya 89.66 324 *d* iP P 10 37 16.6 +0.2
TLY pmax pmax
comp=Z,7.0nm,0.7s
TLY Talaya 89.66 324 P P 10 37 17.4 +1.0
SYO Syowa Base 89.74 195 ⇑ iX P 10 37 10.6 -5.9
SYO Syowa Base 89.74 195 ⇓ iX P 10 37 14.6 -1.9
MSO Missoula 89.76 41 P P 10 37 16.9 -0.2
baz=247,SNR=10
MSO Missoula 89.76 41 IAmb IAmb 10 37 19.0
comp=Z,122nm,2.0s
MSO IAMs_20 IAMs_20 11 08 13.4
comp=Z,3µm,21.0s
JTMT Jette 89.90 40 IAMs_20 IAMs_20 11 09 49.0
comp=Z,3µm,21.0s
DLMT Dillon 90.07 43 P P 10 37 18.5 -0.1
PV10 Paradox Valley 90.11 50 IAmb IAmb 10 37 21.9
comp=Z,56nm,0.9s
PV10 IAMs_20 IAMs_20 11 08 20.7
comp=Z,3µm,20.0s
PV14 Lion Creek, Pa 90.12 50 IAMs_20 IAMs_20 11 08 24.9
comp=Z,3µm,22.0s
PV19 Morning Glory 90.13 50 IAmb IAmb 10 37 29.6
comp=Z,45nm,0.9s
PV19 IAMs_20 IAMs_20 11 09 12.4
comp=Z,2µm,22.0s
MVCO Mesa Verde 90.13 51 P P 10 37 19.9 +0.6
baz=251,SNR=11
MVCO Mesa Verde 90.13 51 IAMs_20 IAMs_20 11 09 38.3
comp=Z,2µm,21.0s
AHID Auburn Hatcher 90.14 46 IAMs_20 IAMs_20 11 09 56.8
comp=Z,2µm,21.0s
PV20 West Nyswonger 90.15 50 IAmb IAmb 10 37 29.6
comp=Z,40nm,1.0s
PV23 Carpenter Ridg 90.16 50 IAmb IAmb 10 37 22.4
comp=Z,51nm,0.8s
PV23 IAMs_20 IAMs_20 11 08 53.8
comp=Z,3µm,22.0s
PV18 Skein Mesa, Pa 90.16 50 IAmb IAmb 10 37 29.7
comp=Z,34nm,1.1s
PV18 IAMs_20 IAMs_20 11 08 14.0
comp=Z,2µm,22.0s
PV16 Nyswonger Mesa 90.18 50 IAmb IAmb 10 37 38.3
comp=Z,55nm,1.3s
PV16 IAMs_20 IAMs_20 11 09 01.5
comp=Z,2µm,22.0s
PV11 David Mesa, Pa 90.21 50 IAMs_20 IAMs_20 11 08 39.2
comp=Z,3µm,22.0s
PV03 Paradox Valley 90.21 50 P P 10 37 19.5 -0.1
PV03 IAMs_20 IAMs_20 11 08 51.3
comp=Z,3µm,22.0s
PV04 Paradox Valley 90.22 50 IAmb IAmb 10 37 24.3
comp=Z,45nm,0.9s
PV02 Paradox Valley 90.28 50 IAmb IAmb 10 37 25.9
comp=Z,32nm,1.0s
PV22 Blue Mesa, Par 90.35 50 IAmb IAmb 10 37 23.2
comp=Z,44nm,0.8s
Y22D IRIS PASSCAL I 90.35 55 P P 10 37 21.5 +1.2
baz=252
Y22D IRIS PASSCAL I 90.35 55 IAmb IAmb 10 37 22.4
comp=Z,42nm,1.0s
PV01 Paradox Valley 90.38 51 IAMs_20 IAMs_20 11 08 42.8
comp=Z,3µm,22.0s
PV07 Paradox Valley 90.42 50 IAMs_20 IAMs_20 11 09 21.9
comp=Z,2µm,22.0s
TPAW Teton Pass 90.49 45 IAmb IAmb 10 37 25.8
comp=Z,61nm,1.4s
TPAW IAMs_20 IAMs_20 11 08 44.2
comp=Z,2µm,21.0s
SNOW Snow King Moun 90.62 45 P P 10 37 21.9 +0.5
SNOW IAMs_20 IAMs_20 11 08 47.5
comp=Z,2µm,21.0s
WALA Waterton Lakes 90.63 39 IAmb IAmb 10 37 39.3
comp=Z,94nm,1.8s
WALA IAMs_20 IAMs_20 11 10 20.4
comp=Z,2µm,20.0s
IMW Indian Meadow 90.64 45 IAmb IAmb 10 37 26.3
comp=Z,47nm,1.2s
IMW IAMs_20 IAMs_20 11 09 14.2
comp=Z,2µm,22.0s
ZAIG Zacatecas 90.71 67 IAMs_20 IAMs_20 11 08 07.8
comp=Z,3µm,22.0s
BOZ Bozeman (W) 90.79 43 P P 10 37 22.7 +0.7
baz=249,SNR=29
BOZ Bozeman (W) 90.79 43 IAmb IAmb 10 37 23.7
comp=Z,100nm,1.8s
MNTX Cornudas Mount 90.87 57 P P 10 37 22.8 +0.3
baz=253,SNR=22
MNTX Cornudas Mount 90.87 57 P P 10 37 22.6 +0.1
FLWY Flagg Ranch 90.87 44 IAmb IAmb 10 37 27.6
comp=Z,76nm,1.6s
FLWY IAMs_20 IAMs_20 11 09 21.2
comp=Z,3µm,22.0s
YMR Madison River 90.90 44 P P 10 37 23.6 +1.0
ANMO Albuquerque 90.99 54 *de*P P 10 37 23.6 +0.4
ANMO pmax pmax
comp=Z,116nm,2.0s
ANMO Albuquerque 90.99 54 P P 10 37 23.8 +0.6
baz=252
ANMO Albuquerque 90.99 54 P P 10 37 23.2 0.0
ANMO IAmb IAmb 10 37 27.6
comp=Z,45nm,1.2s

H17A Grant Village 91.06 44 P P 10 37 25.3 +1.9
baz=250,SNR=12
H17A Grant Village 91.06 44 IAMs_20 IAMs_20 11 11 26.2
comp=Z,4µm,21.0s
MOY Mondy 91.16 324 *e*P P 10 37 24.2 +0.7
MOY pmax pmax
comp=Z,113nm,4.0s
BW06 Boulder Array 91.20 46 P P 10 37 24.3 +0.2
baz=250,SNR=22
PD31 Pinedale Array 91.20 46 IAmb IAmb 10 37 26.2
comp=Z,113nm,1.9s
PDAR Pinedale Array 91.20 46 P P 10 37 24.7 +0.6
comp=Z,3.7nm,0.7s,baz=222,slow=3.0,SNR=40
PDAR LR LR 11 11 57.4
comp=Z,1µm,20.7s,baz=253,slow=31
PDAR Pinedale Array 91.20 46 P P 10 37 23.4 -0.7
O20A White River Ci 91.27 49 P P 10 37 25.0 +0.6
baz=251,SNR=16
O20A White River Ci 91.27 49 IAmb IAmb 10 37 34.9
comp=Z,38nm,1.1s
S22A 4UR Ranch, Cre 91.56 51 P P 10 37 27.2 +1.2
baz=252,SNR=42
S22A 4UR Ranch, Cre 91.56 51 IAMs_20 IAMs_20 11 10 56.1
comp=Z,3µm,21.0s
TX32 Lajitas Array 91.60 60 IAmb IAmb 10 37 30.8
comp=Z,78nm,1.4s
TXAR Lajitas Array 91.60 60 P P 10 37 27.1 +1.1
comp=Z,8.5nm,0.7s,baz=224,slow=5.1,SNR=49
TXAR PP PP 10 41 07.9 +3.3
comp=Z,0.5nm,0.7s,baz=242,slow=5.7,SNR=3.9
TXAR LR LR 11 09 44.2
comp=Z,3µm,21.7s,baz=0.0,slow=30
TXAR Lajitas Array 91.60 60 P P 10 37 26.2 +0.2
TXAR Lajitas Array 91.60 60 P P 10 37 26.2 +0.2
TIXI Tiksi 91.67 347 *ce*P P 10 37 25.1 -0.2
TIXI pmax pmax
comp=Z,63nm,1.3s
TIXI Tiksi 91.67 347 P P 10 37 23.9 -1.3
TIXI IAmb IAmb 10 37 35.4
comp=Z,48nm,0.9s
SMCO Snowmass 91.90 50 IAmb IAmb 10 37 30.4
comp=Z,24nm,0.8s
SMCO IAMs_20 IAMs_20 11 10 30.8
comp=Z,3µm,21.0s
GTK Tadong 92.15 298 *e*P P 10 37 29.3 +0.6
RLMT Red Lodge 92.19 44 P P 10 37 29.5 +0.9
baz=251,SNR=14
RLMT Red Lodge 92.19 44 IAmb IAmb 10 37 30.5
comp=Z,57nm,1.8s
SDCO Great Sand Dun 92.56 52 P P 10 37 30.7 +0.1
baz=253,SNR=15
SDCO Great Sand Dun 92.56 52 IAMs_20 IAMs_20 11 11 06.7
comp=Z,2µm,22.0s
UNM Universidad Na 92.84 71 IAMs_20 IAMs_20 11 08 49.5
comp=Z,2µm,22.0s
EGMT Eagleton 92.84 41 P P 10 37 31.6 +0.2
baz=250,SNR=9.0
EGMT Eagleton 92.84 41 IAmb IAmb 10 37 40.1
comp=Z,26nm,1.1s
EGMT IAMs_20 IAMs_20 11 11 53.9
comp=Z,2µm,20.0s
ISCO Idaho Springs 93.09 50 P P 10 37 33.6 +0.6
baz=253
ISCO Idaho Springs 93.09 50 IAmb IAmb 10 37 35.8
comp=Z,36nm,1.7s
ISCO IAMs_20 IAMs_20 11 10 26.5
comp=Z,2µm,21.0s
N23A Red Feather La 93.17 49 P P 10 37 33.9 +0.6
baz=253,SNR=11
N23A Red Feather La 93.17 49 P P 10 37 32.9 -0.4
N23A IAmb IAmb 10 37 43.9
comp=Z,28nm,1.1s
Q24A Divide 93.19 51 P P 10 37 34.0 +0.5
baz=253,SNR=7.1
Q24A Divide 93.19 51 IAmb IAmb 10 37 35.1
comp=Z,61nm,1.9s
NVL N'lazarevskaya 93.22 186 *e*P P 10 37 39.1 +6.5
NVL pmax pmax
comp=Z,12nm,0.9s
T25A Trinidad 93.22 53 P P 10 37 33.9 +0.4
baz=254
T25A Trinidad 93.22 53 IAmb IAmb 10 37 37.6
comp=Z,72nm,2.0s
T25A IAMs_20 IAMs_20 11 10 22.1
comp=Z,2µm,21.0s
SNAA Sanae 93.23 181 P P 10 37 31.3 -1.5
SNAA Sanae 93.23 181 *ce*P P 10 37 30.7 -2.1
SNAA pmax pmax
comp=Z,5.0nm,0.9s
SNAA Sanae 93.23 181 P P 10 37 30.7 -2.1
SNAA IAmb IAmb 10 37 32.8
comp=Z,46nm,1.5s
SNAA IAMs_20 IAMs_20 11 16 14.0
comp=Z,2µm,20.0s
K22A Casper 93.28 47 P P 10 37 33.4 -0.2
baz=252,SNR=8.2
K22A Casper 93.28 47 IAMs_20 IAMs_20 11 10 55.3
comp=Z,2µm,22.0s
BOK Bokaro 93.57 294 *ex* P 10 37 33.4 -1.8
BOK IAmb IAmb 10 37 37.3
comp=Z,6.6nm,0.6s
MSTX Muleshoe 93.62 56 P P 10 37 34.8 -0.5
baz=254,SNR=12
MSTX Muleshoe 93.62 56 IAMs_20 IAMs_20 11 13 10.0
comp=Z,2µm,19.0s
VNA3 Neumayer Olymp 93.69 179 P P 10 37 32.7 -2.1
VNA2 Neumayer--Watz 94.03 180 P P 10 37 34.6 -1.8
baz=170,slow=5.0
VNA1 Neumayer--Stat 94.30 180 P P 10 37 36.4 -1.1
LAO LASA Array 94.69 43 P P 10 37 40.7 +0.8
baz=253,SNR=9.2
LAO LASA Array 94.69 43 IAmb IAmb 10 37 42.0
comp=Z,63nm,1.6s
AMTX Amarillo 94.73 55 P P 10 37 40.0 -0.4
baz=255
AMTX Amarillo 94.73 55 IAmb IAmb 10 37 45.5
comp=Z,85nm,1.9s
833A Chaparral WMA, 94.94 62 P P 10 37 41.0 -0.3
baz=256
C36M Paulatuk 95.06 18 P P 10 37 42.3 +1.4
baz=240
C36M Paulatuk 95.06 18 IAmb IAmb 10 37 41.8
comp=Z,43nm,1.7s
C36M IAMs_20 IAMs_20 11 13 08.5
comp=Z,2µm,22.0s
KSCO Kaye Shedlock' 95.09 51 P P 10 37 42.0 0.0
baz=255
KSCO Kaye Shedlock' 95.09 51 IAMs_20 IAMs_20 11 11 49.4
comp=Z,2µm,22.0s
JCT Junction City 95.14 60 P P 10 37 41.9 -0.3
baz=256
JCT Junction City 95.14 60 IAMs_20 IAMs_20 11 11 47.5
comp=Z,3µm,21.0s
RSSD Black Hills 95.44 46 P P 10 37 43.9 +0.3
RSSD pmax pmax
comp=Z,49nm,1.8s
RSSD Black Hills 95.44 46 P P 10 37 43.3 -0.2
baz=254
RSSD Black Hills 95.44 46 P P 10 37 43.9 +0.3
RSSD IAmb IAmb 10 37 44.4
comp=Z,49nm,1.8s
YKA Yellowknife Ar 95.47 26 P P 10 37 43.4 +0.5
comp=Z,4.2nm,0.7s,baz=253,slow=4.6,SNR=16
YKA LR LR 11 12 47.1
comp=Z,4µm,22.0s,baz=0.0,slow=30
ABTX Abilene, Hawle 95.80 58 P P 10 37 45.3 0.0
baz=256
ABTX Abilene, Hawle 95.80 58 P P 10 37 44.8 -0.5
ABTX IAmb IAmb 10 37 48.8
comp=Z,31nm,1.1s
KVTX Kingsville 96.04 63 IAMs_20 IAMs_20 11 11 13.7
comp=Z,3µm,21.0s
MDRS Chennai 96.08 282 *ex* P 10 37 47.5 +0.6
DGMT Dagmar 96.51 42 P P 10 37 48.0 -0.1
baz=255
DGMT Dagmar 96.51 42 IAMs_20 IAMs_20 11 14 15.2
comp=Z,2µm,21.0s
WMOK Wichita Mounta 97.01 56 P P 10 37 50.1 -0.5
baz=256
435B Jarrell 97.06 60 P P 10 37 50.5 -0.5
baz=257
435B Jarrell 97.06 60 IAMs_20 IAMs_20 11 12 32.8
comp=Z,3µm,22.0s
WMQ Urumqi 97.17 313 *e*P Pdif 10 37 51.8 +0.5
WMQ pP sP 10 37 55.3 +0.7
WMQ sP pwP 10 38 00.4 +2.3
WMQ pmax pmax

	comp=Z,19nm,1.5s									
WMQ					pmax	pmax				
	comp=Z,840nm,5.1s									
WMQ					LR	LR				
	comp=Z,1µm,13.5s									
WMQ					LR	LR				
	comp=Z,1µm,18.5s									
WMQ					LR	LR				
	comp=Z,2µm,25.7s									
CBKS	**Cedar Bluff**	**97.22**	**52**		P	**P**		**10 37 51.5**	**0.0**	
	baz=256									
CBKS	**Cedar Bluff**	**97.22**	**52**		IAMs_20	IAMs_20		11 13 46.0		
	comp=Z,2µm,22.0s									
WHTX	**Lake Whitney,**	**97.45**	**59**		P	**P**		**10 37 52.6**	**-0.1**	
	baz=257									
WHTX	**Lake Whitney,**	**97.45**	**59**		IAMs_20	IAMs_20		11 13 31.7		
	comp=Z,3µm,21.0s									
R32A	**Long Quarter,**	**97.91**	**52**		IAMs_20	IAMs_20		11 13 55.3		
	comp=Z,2µm,22.0s									
CROK	**Carrier**	**98.05**	**54**		IAMs_20	IAMs_20		11 19 57.0		
	comp=Z,3µm,19.0s									
DGAR	**Diego Garcia**	**98.26**	**260**		IAMs_20	IAMs_20		11 18 15.0		
	comp=Z,2µm,21.0s									
237A	**Washetta, Mont**	**98.82**	**59**		IAMs_20	IAMs_20		11 14 41.9		
	comp=Z,3µm,20.0s									
PLCA	**Paso Flores**	**98.93**	**136**		LR	LR		11 14 41.1		
	comp=Z,590nm,19.9s,baz=244,slow=31									
BGNE	**Belgrade**	**98.99**	**50**		P	Pdif		10 37 59.5	+0.1	
	baz=258									
BGNE	**Belgrade**	**98.99**	**50**		IAMs_20	IAMs_20		11 14 53.6		
	comp=Z,3µm,22.0s									
SUSD	**Miller**	**99.06**	**46**		IAMs_20	IAMs_20		11 14 59.4		
	comp=Z,3µm,22.0s									
N33A	**J Bar K, Exete**	**99.37**	**50**		IAMs_20	IAMs_20		11 15 36.6		
	comp=Z,2µm,22.0s									
FFC	**Flin Flon**	**99.40**	**36**		IAMs_20	IAMs_20		11 14 44.1		
	comp=Z,2µm,21.0s									
TUL1	**Leonard**	**99.65**	**55**		IAMs_20	IAMs_20		11 18 46.6		
	comp=Z,2µm,19.0s									
KSU1	**Kansas State U**	**99.66**	**52**		P	**Pdif**		**10 38 02.7**	**+0.3**	
	baz=258									
KSU1	**Kansas State U**	**99.66**	**52**		IAMs_20	IAMs_20		11 15 41.6		
	comp=Z,2µm,20.0s									
X37A	**Clayton**	**99.72**	**57**		IAMs_20	IAMs_20		11 17 00.5		
	comp=Z,2µm,20.0s									
NATX	**Nacogdoches**	**99.72**	**60**		P	**Pdif**		**10 38 02.8**	**-0.1**	
	baz=258									
NATX	**Nacogdoches**	**99.72**	**60**		IAMs_20	IAMs_20		11 15 09.9		
	comp=Z,2µm,20.0s									
Z38A	**Mt. Pleasant**	**99.76**	**58**		IAMs_20	IAMs_20		11 19 36.8		
	comp=Z,2µm,18.0s									
ZSN	**Zaisan**	**99.92**	**316**		*e*PP	**PP**		**10 42 07.2**	**-1.3**	
	baz=316									
ECSD	**EROS Data Cent**	**100.57**	**48**		P	**Pdif**		**10 38 06.4**	**0.0**	
	baz=259									
N35A	**Tabor**	**100.73**	**51**		IAMs_20	IAMs_20		11 16 28.9		
	comp=Z,3µm,22.0s									
441A	**DeRidder**	**100.75**	**61**		IAMs_20	IAMs_20		11 17 06.3		
	comp=Z,2µm,20.0s									
U38A	**Gravette**	**100.87**	**55**		IAMs_20	IAMs_20		11 17 38.9		
	comp=Z,2µm,20.0s									
BHPL	**Bhopal**	**101.00**	**291**		*ex*	**Pdif**		**10 38 06.6**	**-2.2**	
BHPL					*i x*	x		10 42 16.5		
W39A	**Magazine**	**101.11**	**56**		IAMs_20	IAMs_20		11 20 11.5		
	comp=Z,2µm,20.0s									
MIAR	**Mount Ida**	**101.16**	**57**		IAMs_20	IAMs_20		11 17 07.8		
	comp=Z,2µm,21.0s									
ZALV	**Zalesovo Beam**	**101.19**	**323**		P	**Pdif**		**10 38 09.9**	**+1.1**	
	comp=Z,0.8nm,0.4s,baz=90,slow=5.9,SNR=4.6									
ZALV	**Zalesovo Beam**	**101.19**	**323**		P	**Pdif**		**10 38 09.4**	**+0.5**	
ZALV	**Zalesovo Beam**	**101.19**	**323**			**Pdif**		**10 38 09.4**	**+0.5**	
WLAR	**White Oak Lake**	**101.38**	**58**		IAMs_20	IAMs_20		11 19 48.7		
	comp=Z,3µm,20.0s									
MKAR	**Makanchi Array**	**101.52**	**315**		P	**Pdif**		**10 38 12.5**	**+1.9**	
	comp=Z,2.8nm,0.8s,baz=87,slow=6.3,SNR=15									
MKAR					PP	**PP**		**10 42 21.4**	**+0.6**	
	comp=Z,0.6nm,0.8s,baz=105,slow=9.2,SNR=4.8									
MKAR					PKKPbc	**PKKPbc**		**10 54 16.8**	**-3.1**	
	comp=Z,0.7nm,0.8s,baz=253,slow=1.3,SNR=4.6									
Z41A	**Richland Creek**	**101.55**	**59**		IAMs_20	IAMs_20		11 16 20.3		
	comp=Z,3µm,21.0s									
342A	**Flagon Creek P**	**101.60**	**61**		IAMs_20	IAMs_20		11 17 23.7		
	comp=Z,3µm,22.0s									
X40A	**Basin Creek Fa**	**101.75**	**57**		P	**Pdif**		**10 38 11.8**	**-0.1**	
	baz=260									
DDI	**Dehra Dun**	**101.84**	**298**		*ex*	**PP**		**10 42 22.4**	**-1.2**	
S39A	**Bolivar**	**101.93**	**54**		IAMs_20	IAMs_20		11 18 30.9		
	comp=Z,2µm,20.0s									
U40A	**Yellville**	**102.07**	**55**		P	**Pdif**		**10 38 13.0**	**-0.2**	
	baz=260									
U40A	**Yellville**	**102.07**	**55**		IAMs_20	IAMs_20		11 16 45.7		
	comp=Z,2µm,22.0s									
P38A	**Dawn**	**102.10**	**52**		IAMs_20	IAMs_20		11 20 30.2		
	comp=Z,2µm,19.0s									
ULM	**Lac du Bonnet**	**102.21**	**41**		IAMs_20	IAMs_20		11 18 04.7		
	comp=Z,2µm,20.0s									
WHAR	**Wooly Hollow**	**102.33**	**57**		IAMs_20	IAMs_20		11 16 54.9		
	comp=Z,2µm,20.0s									
W41B	**Gary Mavity, V**	**102.35**	**57**		P	**Pdif**		**10 38 13.9**	**-0.5**	
	baz=260									
W41B	**Gary Mavity, V**	**102.35**	**57**		IAMs_20	IAMs_20		11 18 16.2		
	comp=Z,2µm,20.0s									
CCAR	**Cane Creek**	**102.52**	**58**		IAMs_20	IAMs_20		11 16 40.8		
	comp=Z,2µm,21.0s									
N38A	**Joes South For**	**102.52**	**51**		IAMs_20	IAMs_20		11 18 07.2		
	comp=Z,3µm,21.0s									
NRIK	**Noril'sk**	**102.60**	**339**		P	**Pdif**		**10 38 16.4**	**+1.6**	
	comp=Z,1.9nm,0.9s,baz=95,slow=4.2,SNR=4.7									
NRIK	**Noril'sk**	**102.60**	**339**		*i* P	**Pdif**		**10 38 15.5**	**+0.7**	
NRIK					pmax	pmax				
	comp=Z,3.0nm,1.0s									
143A	**Socs Landing,**	**102.61**	**59**		IAMs_20	IAMs_20		11 20 48.4		
	comp=Z,2µm,21.0s									
MGMO	**Mountain Grove**	**102.67**	**55**		IAMs_20	IAMs_20		11 20 38.4		
	comp=Z,2µm,20.0s									
SCIA	**State Center**	**102.72**	**50**		IAMs_20	IAMs_20		11 20 15.2		
	comp=Z,2µm,19.0s									
SMLA	**Simla**	**102.74**	**299**		*ex*	**PP**		**10 42 26.5**	**-3.7**	
R40A	**Maddies Statio**	**102.85**	**54**		IAMs_20	IAMs_20		11 21 11.3		
	comp=Z,2µm,20.0s									
F36A	**Milaca**	**103.10**	**46**		IAMs_20	IAMs_20		11 21 22.8		
	comp=Z,2µm,18.0s									
P40A	**Paris**	**103.22**	**52**		IAMs_20	IAMs_20		11 17 47.8		
	comp=Z,2µm,21.0s									
VBMS	**Vicksburg**	**103.26**	**60**		IAMs_20	IAMs_20		11 17 43.8		
	comp=Z,2µm,20.0s									
X43A	**Marvell**	**103.35**	**58**		IAMs_20	IAMs_20		11 20 44.7		
	comp=Z,1µm,20.0s									
LCAR	**Lake Charles**	**103.38**	**56**		IAMs_20	IAMs_20		11 18 01.3		
	comp=Z,2µm,22.0s									
SEM	**Semipalatinsk**	**103.42**	**319**		*e*PP	**PP**		**10 42 33.2**	**-1.9**	
	baz=319									
SPMN	**Marine on St.**	**103.51**	**46**		IAMs_20	IAMs_20		11 17 40.7		
	comp=Z,2µm,22.0s									
KPKS	**Kokpek**	**103.52**	**312**		*e*PP	**PP**		**10 42 34.4**	**-1.5**	
	comp=Z,112nm,3.9s,baz=312									
T42A	**Van Buren**	**103.58**	**55**		IAMs_20	IAMs_20		11 23 26.5		
	comp=Z,2µm,18.0s									
CCM	**Cathedral Cave**	**103.61**	**54**		P	**Pdif**		**10 38 19.5**	**-0.5**	
	baz=261									
CCM	**Cathedral Cave**	**103.61**	**54**		IAMs_20	IAMs_20		11 18 34.4		
	comp=Z,2µm,22.0s									
SATY	**Saty**	**103.66**	**311**		*e*PP	**PP**		**10 42 35.6**	**-1.4**	
	comp=Z,34nm,3.0s,baz=311									
HBAR	**Harrisburg**	**103.69**	**57**		IAMs_20	IAMs_20		11 18 44.0		
	comp=Z,2µm,20.0s									
TDK	**Taldyqorghan**	**103.93**	**313**		*e*PP	**PP**		**10 42 37.3**	**-1.5**	
	baz=313									
LPAR	**Lepanto**	**103.99**	**57**		IAMs_20	IAMs_20		11 19 33.6		
	comp=Z,2µm,20.0s									
346A	**Big Creek Wild**	**104.01**	**61**		IAMs_20	IAMs_20		11 19 22.6		
	comp=Z,2µm,21.0s									
JTS	**Las Juntas de**	**104.05**	**83**		IAMs_20	IAMs_20		11 14 15.2		
	comp=Z,2µm,21.0s									
PBMO	**Poplar Bluff**	**104.06**	**55**		IAMs_20	IAMs_20		11 19 46.4		
	comp=Z,2µm,20.0s									
L40A	**Anamosa**	**104.21**	**50**		IAMs_20	IAMs_20		11 20 52.7		
	comp=Z,2µm,20.0s									
FVM	**French Village**	**104.24**	**54**		IAMs_20	IAMs_20		11 19 57.0		
	comp=Z,2µm,20.0s									
GNAR	**Gosnell**	**104.27**	**56**		IAMs_20	IAMs_20		11 18 25.0		
	comp=Z,2µm,20.0s									
N41A	**Harden Midland**	**104.30**	**51**		IAMs_20	IAMs_20		11 17 46.2		
	comp=Z,2µm,22.0s									
Y45A	**Yeager Farm, C**	**104.34**	**58**		IAMs_20	IAMs_20		11 18 36.0		
	comp=Z,2µm,20.0s									
FCC	**Fort Churchill**	**104.35**	**32**		IAMs_20	IAMs_20		11 17 05.4		
	comp=Z,3µm,22.0s									
PEBM	**Pemiscott Bayo**	**104.42**	**56**		IAMs_20	IAMs_20		11 17 56.9		
	comp=Z,2µm,20.0s									
KURBB	**Kurchatov Arra**	**104.53**	**319**		PKKPbc	PKKPbc		10 54 08.7	-2.3	
	comp=Z,0.4nm,0.7s,baz=272,slow=3.7,SNR=5.5									
OXF	**Oxford**	**104.55**	**58**		IAMs_20	IAMs_20		11 22 57.5		
	comp=Z,2µm,19.0s									
146A	**Union**	**104.55**	**60**		IAMs_20	IAMs_20		11 17 52.8		
	comp=Z,2µm,22.0s									
PVMO	**Portageville**	**104.59**	**56**		IAMs_20	IAMs_20		11 18 57.5		
	comp=Z,2µm,21.0s									
PENMO	**Penman**	**104.65**	**56**		IAMs_20	IAMs_20		11 19 09.1		
	comp=Z,2µm,20.0s									
MDOK	**Medeo**	**104.66**	**311**		*e*PP	**PP**		**10 42 42.3**	**-2.2**	
	comp=Z,412nm,4.2s,baz=311									
AAA	**Alma-Ata**	**104.76**	**311**		*e*PP	**PP**		**10 42 44.1**	**-1.0**	
	baz=311									
HALT	**Halls**	**104.81**	**56**		IAMs_20	IAMs_20		11 18 19.2		
	comp=Z,2µm,22.0s									
W45A	**Hickory Valley**	**104.82**	**57**		IAMs_20	IAMs_20		11 22 30.7		
	comp=Z,2µm,20.0s									
GLAT	**Glass**	**104.90**	**56**		IAMs_20	IAMs_20		11 19 03.6		
	comp=Z,2µm,20.0s									
HICK	**Hickman**	**104.98**	**56**		IAMs_20	IAMs_20		11 19 08.9		
	comp=Z,2µm,20.0s									
S44A	**Carbondale**	**105.12**	**55**		IAMs_20	IAMs_20		11 19 12.4		
	comp=Z,3µm,22.0s									
RES	**Resolute Bay**	**105.13**	**16**		IAMs_20	IAMs_20		11 20 26.6		
	comp=Z,3µm,22.0s									
KUU	**Kurty**	**105.26**	**312**		*i* PP	**PP**		**10 42 47.1**	**-1.7**	
	comp=Z,231nm,3.4s,baz=312									
G40A	**Rib Lake**	**105.34**	**47**		IAMs_20	IAMs_20		11 19 09.2		
	comp=Z,2µm,20.0s									
L42A	**Oliver, Polo**	**105.35**	**50**		IAMs_20	IAMs_20		11 19 59.9		
	comp=Z,2µm,21.0s									
HDIL	**Hopedale**	**105.45**	**52**		IAMs_20	IAMs_20		11 23 14.9		
	comp=Z,2µm,19.0s									
Z47A	**Carrollton**	**105.45**	**59**		IAMs_20	IAMs_20		11 19 12.7		
	comp=Z,2µm,21.0s									
Q44A	**Meyer Farm, Va**	**105.46**	**53**		IAMs_20	IAMs_20		11 20 09.3		
	comp=Z,2µm,22.0s									
T45A	**Paducah**	**105.51**	**55**		IAMs_20	IAMs_20		11 19 16.8		
	comp=Z,1µm,21.0s									
PLAL	**Pickwick Lake**	**105.70**	**57**		IAMs_20	IAMs_20		11 18 51.0		
	comp=Z,2µm,20.0s									
BRAL	**Brewton**	**106.02**	**61**		IAMs_20	IAMs_20		11 21 26.9		
	comp=Z,2µm,21.0s									
O44A	**Mansfield**	**106.03**	**52**		IAMs_20	IAMs_20		11 21 01.3		
	comp=Z,2µm,21.0s									
OLIL	**Olney**	**106.15**	**54**		IAMs_20	IAMs_20		11 19 55.6		
	comp=Z,2µm,21.0s									
COWI	**Conover**	**106.16**	**46**		IAMs_20	IAMs_20		11 20 23.9		
	comp=Z,2µm,20.0s									
LRAL	**Lakeview Retre**	**106.32**	**60**		IAMs_20	IAMs_20		11 19 31.7		
	comp=Z,2µm,21.0s									
USIN	**University of**	**106.40**	**54**		IAMs_20	IAMs_20		11 20 00.3		
	comp=Z,2µm,22.0s									
X48A	**Hartselle**	**106.47**	**58**		IAMs_20	IAMs_20		11 20 43.5		
	comp=Z,2µm,21.0s									
L44A	**Lake County Fo**	**106.67**	**50**		IAMs_20	IAMs_20		11 22 44.8		
	comp=Z,2µm,20.0s									
HQIL	**Hanson Quary C**	**106.67**	**50**		IAMs_20	IAMs_20		11 22 01.0		
	comp=Z,2µm,19.0s									
T47A	**Sharon Grove**	**106.73**	**55**		IAMs_20	IAMs_20		11 19 31.1		
	comp=Z,2µm,22.0s									
EUNU	**Eureka**	**106.74**	**10**		IAMs_20	IAMs_20		11 23 06.8		
	comp=Z,3µm,22.0s									
V48A	**Smith Brothers**	**106.81**	**57**		IAMs_20	IAMs_20		11 19 45.4		
	comp=Z,2µm,22.0s									
F42A	**Maple Grove Fa**	**106.83**	**46**		IAMs_20	IAMs_20		11 21 34.7		
	comp=Z,2µm,20.0s									
Y49A	**Blount Mountai**	**106.92**	**59**		IAMs_20	IAMs_20		11 24 19.4		
	comp=Z,2µm,19.0s									
P46A	**Reedale**	**106.94**	**53**		IAMs_20	IAMs_20		11 21 56.4		
	comp=Z,2µm,21.0s									
BTLS	**Baital**	**107.00**	**313**		*e*PP	**PP**		**10 42 59.7**	**-1.8**	
	comp=Z,39nm,3.2s,baz=313									
451A	**Vernon**	**107.05**	**62**		IAMs_20	IAMs_20		11 22 53.3		
	comp=Z,2µm,21.0s									
SFIN	**Lafayette**	**107.10**	**52**		IAMs_20	IAMs_20		11 23 29.5		
	comp=Z,1µm,20.0s									
BLO	**Bloomington**	**107.42**	**53**		IAMs_20	IAMs_20		11 21 22.2		
	comp=Z,2µm,22.0s									
SWET	**Sewanee**	**107.47**	**57**		IAMs_20	IAMs_20		11 22 48.9		
	comp=Z,2µm,20.0s									
WCI	**Wyandotte Cave**	**107.51**	**54**		IAMs_20	IAMs_20		11 21 26.5		
	comp=Z,2µm,21.0s									
PAC1	**Pacto, Paraso**	**107.51**	**95**		*e*P	**PKiKP**		**10 42 52.5**	**+5.9**	
FPAL	**Fort Paine**	**107.66**	**58**		IAMs_20	IAMs_20		11 24 34.9		
	comp=Z,2µm,19.0s									
U49A	**Red Boiling Sp**	**107.74**	**56**		IAMs_20	IAMs_20		11 22 15.8		
	comp=Z,2µm,21.0s									
L46A	**Eue Claire**	**107.85**	**50**		IAMs_20	IAMs_20		11 20 47.1		
	comp=Z,2µm,21.0s									
352A	**Blakely**	**107.86**	**61**		IAMs_20	IAMs_20		11 20 21.6		
	comp=Z,2µm,22.0s									
Z51A	**Franklin**	**107.88**	**59**		IAMs_20	IAMs_20		11 20 18.8		
	comp=Z,2µm,20.0s									
W50A	**Signal Mountai**	**107.97**	**58**		IAMs_20	IAMs_20		11 19 47.3		
	comp=Z,2µm,21.0s									
553A	**Crawfordville**	**108.12**	**63**		IAMs_20	IAMs_20		11 22 22.6		
	comp=Z,2µm,21.0s									
152A	**Waverly Hall**	**108.18**	**60**		IAMs_20	IAMs_20		11 20 59.0		
	comp=Z,2µm,21.0s									
N47A	**Urbana**	**108.21**	**52**		IAMs_20	IAMs_20		11 20 26.8		
	comp=Z,2µm,21.0s									
X51A	**Calhoun**	**108.28**	**58**		IAMs_20	IAMs_20		11 25 03.4		
	comp=Z,2µm,18.0s									
P48A	**Milroy**	**108.30**	**53**		IAMs_20	IAMs_20		11 20 36.3		
	comp=Z,2µm,22.0s									
R49A	**Shelbyville**	**108.39**	**54**		IAMs_20	IAMs_20		11 22 15.0		
	comp=Z,2µm,21.0s									
G45A	**Suttons Bay**	**108.52**	**47**		IAMs_20	IAMs_20		11 20 28.5		
	comp=Z,2µm,20.0s									
T50A	**Nancy**	**108.54**	**56**		IAMs_20	IAMs_20		11 24 44.0		
	comp=Z,2µm,20.0s									
CPCT	**Cooper Cave**	**108.64**	**57**		IAMs_20	IAMs_20		11 22 01.9		
	comp=Z,2µm,21.0s									
DZA	**Taraz**	**108.81**	**311**		*e*PP	**PP**		**10 43 12.7**	**-2.1**	
	baz=310									
V51A	**Loudon**	**108.82**	**57**		IAMs_20	IAMs_20		11 25 19.5		
	comp=Z,1µm,19.0s									
P49A	**Miami Univ. Ec**	**108.85**	**53**		IAMs_20	IAMs_20		11 25 35.9		
	comp=Z,2µm,20.0s									
Y52A	**Lilburn**	**108.86**	**59**		IAMs_20	IAMs_20		11 20 59.8		
	comp=Z,2µm,21.0s									
R50A	**Paris**	**109.05**	**54**		IAMs_20	IAMs_20		11 22 45.5		
	comp=Z,2µm,21.0s									
W52A	**Murphy**	**109.09**	**58**		IAMs_20	IAMs_20		11 21 07.9		
	comp=Z,2µm,22.0s									
O49A	**Covington**	**109.19**	**52**		IAMs_20	IAMs_20		11 20 23.9		
	comp=Z,2µm,22.0s									
GLMI	**Grayling**	**109.25**	**47**		IAMs_20	IAMs_20		11 23 57.8		
	comp=Z,2µm,19.0s									
TKL	**Tuckaleechee C**	**109.27**	**57**		IAMs_20	IAMs_20		11 21 09.5		
	comp=Z,2µm,22.0s									
GAR	**Garm**	**109.31**	**306**		IAMs_20	IAMs_20		11 27 32.6		
	comp=Z,2µm,21.0s									
N49A	**Columbus Grove**	**109.36**	**52**		IAMs_20	IAMs_20		11 20 40.1		
	comp=Z,2µm,22.0s									
V52A	**Sevierville**	**109.43**	**57**		IAMs_20	IAMs_20		11 21 35.7		
	comp=Z,2µm,21.0s									
656A	**Willston**	**109.65**	**64**		IAMs_20	IAMs_20		11 25 07.4		
	comp=Z,1µm,20.0s									
IUG	**luzhnay**	**109.72**	**310**		*e*PP	**PP**		**10 43 20.2**	**-1.4**	
	baz=310									
Q51A	**Peebles**	**109.88**	**54**		IAMs_20	IAMs_20		11 25 27.6		
	comp=Z,2µm,20.0s									
BG3	**Lake Jocassee**	**109.90**	**58**		IAMs_20	IAMs_20		11 21 32.2		
	comp=Z,1µm,21.0s									
V53A	**Saluda**	**110.05**	**57**		IAMs_20	IAMs_20		11 25 49.2		
	comp=Z,2µm,19.0s									
P51A	**Williamsport**	**110.12**	**53**		IAMs_20	IAMs_20		11 21 58.7		
	comp=Z,1µm,22.0s									
CHGR	**Chuyangaron**	**110.19**	**306**		IAMs_20	IAMs_20		11 27 53.9		
	comp=Z,2µm,22.0s									
ACSO	**Alum Creek Sta**	**110.23**	**52**		IAMs_20	IAMs_20		11 25 01.3		
	comp=Z,2µm,20.0s									
M50A	**Fremont**	**110.24**	**51**		IAMs_20	IAMs_20		11 21 38.5		
	comp=Z,3µm,21.0s									
456A	**Hilliard**	**110.25**	**63**		IAMs_20	IAMs_20		11 23 12.0		
	comp=Z,2µm,22.0s									
HODGE	**Hodges**	**110.38**	**59**		IAMs_20	IAMs_20		11 21 36.2		
	comp=Z,2µm,22.0s									
N51A	**Ashland**	**110.72**	**52**		IAMs_20	IAMs_20		11 21 56.3		
	comp=Z,3µm,22.0s									
PAULI	**Pauline**	**110.80**	**58**		IAMs_20	IAMs_20		11 24 33.1		
	comp=Z,2µm,20.0s									
P52A	**Corning**	**110.85**	**53**		IAMs_20	IAMs_20		11 29 01.8		
	comp=Z,1µm,18.0s									
U54A	**Nelsons Funny**	**110.92**	**56**		IAMs_20	IAMs_20		11 22 02.0		
	comp=Z,2µm,22.0s									
R53A	**Hurricane**	**110.92**	**54**		IAMs_20	IAMs_20		11 24 31.9		
	comp=Z,2µm,20.0s									
Z56A	**Williston**	**111.05**	**60**		IAMs_20	IAMs_20		11 22 24.8		
	comp=Z,2µm,21.0s									
O52A	**Adamsville**	**111.10**	**53**		IAMs_20	IAMs_20		11 25 46.4		
	comp=Z,2µm,20.0s									
TULEG	**Thule**	**111.14**	**13**		IAMs_20	IAMs_20		11 23 55.2		
	comp=Z,2µm,20.0s									
KMSC	**Kings Mountain**	**111.22**	**58**		IAMs_20	IAMs_20		11 26 46.1		
	comp=Z,2µm,19.0s									
060A	**Indiantown**	**111.28**	**67**		IAMs_20	IAMs_20		11 23 30.9		
	comp=Z,1µm,21.0s									
V55A	**Taylorsville**	**111.36**	**57**		IAMs_20	IAMs_20		11 23 37.8		
	comp=Z,2µm,21.0s									
S54A	**Dingess, Beckl**	**111.40**	**55**		IAMs_20	IAMs_20		11 22 57.6		
	comp=Z,2µm,22.0s									
P53A	**Whipple**	**111.42**	**53**		IAMs_20	IAMs_20		11 21 20.9		
	comp=Z,1µm,22.0s									
M52A	**Chesterland**	**111.51**	**51**		IAMs_20	IAMs_20		11 23 08.2		
	comp=Z,2µm,20.0s									
O53A	**New Philadelph**	**111.58**	**52**		IAMs_20	IAMs_20		11 26 28.1		
	comp=Z,2µm,19.0s									
Q54A	**Coxs Mills**	**111.83**	**54**		IAMs_20	IAMs_20		11 26 13.8		
	comp=Z,1µm,21.0s									
BIRD	**Birdtown, Kers**	**111.90**	**58**		IAMs_20	IAMs_20		11 22 53.2		
	comp=Z,3µm,22.0s									
Y57A	**Sumter**	**111.91**	**59**		IAMs_20	IAMs_20		11 23 10.7		
	comp=Z,2µm,22.0s									
M53A	**WI Miller and**	**112.02**	**51**		IAMs_20	IAMs_20		11 22 44.7		
	comp=Z,2µm,22.0s									
NHSC	**New Hope**	**112.02**	**60**		IAMs_20	IAMs_20		11 22 45.8		
	comp=Z,2µm,21.0s									
U56A	**King**	**112.06**	**57**		IAMs_20	IAMs_20		11 24 36.4		
	comp=Z,2µm,22.0s									
BLA	**Blacksburg**	**112.08**	**56**		IAMs_20	IAMs_20		11 23 21.6		
	comp=Z,2µm,21.0s									
W57A	**Gilead**	**112.31**	**58**		IAMs_20	IAMs_20		11 27 28.2		
	comp=Z,2µm,19.0s									
R55A	**Marlinton**	**112.36**	**55**		IAMs_20	IAMs_20		11 24 17.0		
	comp=Z,2µm,21.0s									
ALLY	**Alegheny Colle**	**112.42**	**51**		IAMs_20	IAMs_20		11 27 04.3		
	comp=Z,2µm,22.0s									

MAK			*i*			10 43 20.4	
MAK			*e*			10 45 15.4	
MAK			*e*PPP	PPP		10 47 54.1	
MAK			*e*			10 50 20.6	
MAK			*e*SS	SS		11 02 18.2	-0.3
MAK			*e*SSS	SSS		11 06 53.5	
MAK			MLR	MLR			
	comp=Z,914nm,17.0s						
BOSA	**Boshof**	**126.44 216**	PKP	**PKPdf**		**10 43 22.6**	**+0.1**
	comp=Z,3.0nm,1.0s,baz=207,slow=4.5,SNR=3.1						
MOS	**Moscow**	**127.23 330**	*i* PKIKP	**PKPdf**		**10 43 20.9**	**-1.9**
MOS			*e*			10 45 22.7	
MOS			pmax	pmax			
	comp=Z,65nm,0.6s						
OBN	**Obninsk**	**128.08 330**	*i* PKIKP	**PKPdf**		**10 43 24.7**	**+0.3**
OBN			*i*			10 45 26.9	
OBN			pmax	pmax			
	comp=Z,11nm,0.9s						
OBN	**Obninsk**	**128.08 330**	IAMs_20	IAMs_20		11 37 04.0	
	comp=Z,2µm,22.0s						
FINES	**FINESS Array B**	**128.21 341**	PKP	**PKPdf**		**10 43 24.5**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=147,slow=3.3,SNR=3.9						
GOF	**Gofitskoye**	**128.68 316**	*e*PKIKP	**PKPdf**		**10 43 22.7**	**-3.3**
GNI	**Garni**	**128.86 310**	*i* PKIKP	**PKPdf**		**10 43 25.7**	**-1.0**
BDFB	**Brasilia**	**129.07 125**	PKP	**PKPdf**		**10 43 27.8**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=204,slow=8.5,SNR=7.3						
BDFB	**Brasilia**	**129.07 125**	PKIKP	**PKiKP**		**10 43 28.4**	**0.0**
BDFB	**Brasilia**	**129.07 125**	PKPdf	**PKiKP**		**10 43 28.4**	**0.0**
KBZ	**Khabaz**	**129.20 314**	*i* PKIKP	**PKPdf**		**10 43 27.2**	**+0.3**
KBZ			pmax	pmax			
	comp=Z,9.0nm,1.9s						
KIV	**Kislovodsk**	**129.28 315**	*i* PKIKP	**PKPdf**		**10 43 26.8**	**-0.5**
KIV			*e*			10 45 34.4	
KIV			*e*SS	SS		11 02 56.0	-1.1
KIV			pmax	pmax			
	comp=Z,24nm,1.1s						
RAYN	**Ar Rayn**	**130.14 288**	PKIKP	**PKiKP**		**10 43 30.9**	**+0.7**
RAYN	**Ar Rayn**	**130.14 288**	PKPdf	**PKiKP**		**10 43 30.9**	**+0.7**
SOC	**Sochi**	**131.43 315**	*i* PKIKP	**PKPdf**		**10 43 31.5**	**+0.3**
SOC			*e*			10 45 50.7	
SOC			pmax	pmax			
	comp=Z,9.0nm,0.5s						
SOC			MLR	MLR			
	comp=Z,818nm,20.0s						
ATD	**Arta Tunnel**	**131.57 272**	IAMs_20	IAMs_20		11 36 59.6	
	comp=Z,1µm,21.0s						
NB2	**NORSAR Subarra**	**132.46 348**	PKPdf	**PKPdf**		**10 43 32.7**	**0.0**
	comp=Z,9.0nm,2.0s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**132.46 348**	PKP	**PKPdf**		**10 43 32.2**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=29,slow=2.0,SNR=5.5						
ANN	**Anapa**	**132.49 318**	*i* PKIKP	**PKPdf**		**10 43 32.3**	**-0.8**
ANN			pmax	pmax			
	comp=Z,21nm,1.2s						
ANN			pmax	pmax			
	comp=Z,268nm,3.7s						
ANN			MLR	MLR			
	comp=Z,1µm,21.0s						
MARD	**Mardin**	**132.55 307**	IAMs_20	IAMs_20		11 52 09.8	
	comp=Z,925nm,19.0s						
KMBO	**Kilima Mbogo**	**133.44 253**	IAMs_20	IAMs_20		11 34 54.0	
	comp=Z,1µm,22.0s						
LSZ	**Lusaka**	**133.94 230**	PKIKP	**PKiKP**		**10 43 38.8**	**+0.6**
LSZ	**Lusaka**	**133.94 230**		**PKiKP**		**10 43 38.8**	**+0.6**
LSZ	**Lusaka**	**133.94 230**	IAMs_20	IAMs_20		11 32 16.1	
	comp=Z,1µm,20.0s						
KONO	**Kongsberg**	**134.06 348**	IAMs_20	IAMs_20		11 40 03.1	
	comp=Z,2µm,22.0s						
AKBB	**Malin Array Si**	**134.25 328**	*i* PKIKP	**PKPdf**		**10 43 35.9**	**-0.4**
BRTR	**Keskin Array B**	**137.09 313**	PKP	**PKiKP**		**10 43 44.3**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=56,slow=0.5,SNR=2.4						
RGN	**Rugen**	**137.76 343**	IAMs_20	IAMs_20		11 45 44.5	
	comp=Z,2µm,20.0s						
KWP	**Kalwaria Pacla**	**138.12 331**	IAMs_20	IAMs_20		11 43 28.7	
	comp=Z,2µm,21.0s						
TSUM	**Tsumeb**	**138.14 216**	IAMs_20	IAMs_20		11 42 26.0	
	comp=Z,1µm,19.0s						
KOLS	**Kolonicke sedl**	**138.81 331**	*e*PKIKP	**PKPdf**		**10 43 45.9**	**+1.0**
KOLS	**Kolonicke sedl**	**138.81 331**	*e*PKP	**PKPdf**		**10 43 45.9**	**+1.0**
UZH	**Uzhgorod**	**139.01 330**	*i* PKIKP	**PKPdf**		**10 43 46.3**	**+1.1**
UZH			*i*			10 43 54.8	
UZH			*e*			10 46 36.3	
UZH			*e*			10 50 46.6	
PRD	**Provadia**	**139.61 321**	*i* P	**PKPdf**		**10 43 46.6**	**+0.2**
MBAR	**Mbarara**	**139.62 250**	*i* PKIKP	**PKPdf**		**10 43 46.8**	**-0.8**
MBAR	**Mbarara**	**139.62 250**	IAMs_20	IAMs_20		11 38 07.9	
	comp=Z,2µm,22.0s						
OKC	**Ostrava-Krasne**	**139.96 335**	AMS	AMS		11 43 30.0	
	comp=Z,1µm,23.5s						
OSTC	**Ostas**	**140.16 337**	*e*PKP	**PKiKP**		**10 43 50.4**	**+0.7**
OSTC			AMS	AMS		11 40 20.0	
	comp=Z,2µm,25.0s						
CHVC	**Chvalec**	**140.19 337**	AMS	AMS		11 47 10.0	
	comp=Z,2µm,22.5s						
MORC	**Moravsky Berou**	**140.26 335**	*e*PKP	**PKPdf**		**10 43 48.1**	**+0.6**
UPC	**Upice**	**140.27 337**	AMS	AMS		11 46 10.0	
	comp=Z,2µm,20.9s						
DPC	**Dobruska-Polom**	**140.28 337**	*e*PKIKP	**PKPdf**		**10 43 46.8**	**-0.7**
DPC			MLR	MLR			
	comp=Z,2µm,18.0s						
DPC	**Dobruska-Polom**	**140.28 337**	*e*PKP	**PKPdf**		**10 43 46.8**	**-0.7**
DPC			AMS	AMS		11 39 50.0	
	comp=Z,2µm,18.0s						
KRLC	**Kraliky**	**140.32 336**	AMS	AMS		11 48 10.0	
	comp=Z,2µm,21.8s						
PSZ	**Piszkesteto**	**140.65 331**	IAMs_20	IAMs_20		11 52 24.5	
	comp=Z,1µm,21.0s						
CLL	**Collm**	**140.66 340**	*i* PKPdf	**PKiKP**		**10 43 51.0**	**+0.3**
	comp=Z,42nm,1.8s						
CLL			*e*			10 46 36.0	
CLL			*e*PKSdf	**PKSdf**		**10 47 24.0**	**+0.1**
CLL			*e*PPP	PPP		10 50 06.0	
CLL			*e*SKKSac	SKKSac		10 53 36.0	-5.2
CLL			*e*Sdif	**Sdif**		**10 55 24.0**	**+6.5**
CLL			*e*PSKS			10 57 06.0	
CLL			*e*PPPrev			10 58 57.0	
CLL			*e*SKKSdf	**SKKSdf**		**11 00 25.0**	**+0.1**
CLL			*e*SS	**SS**		**11 05 15.0**	**+3.0**
CLL			*e*SSS	SSS		11 10 22.0	
CLL	**Collm**	**140.66 340**	*i* PKIKP	**PKiKP**		**10 43 51.0**	**+0.3**
CLL			pmax	pmax			
	comp=Z,42nm,1.8s						
CLL	**Collm**	**140.66 340**	IAMs_20	IAMs_20		11 43 18.0	
	comp=Z,1µm,20.0s						
VYHS	**Vyhne**	**140.70 333**	*e*PKIKP	**PKPdf**		**10 43 48.7**	**+0.4**
VYHS	**Vyhne**	**140.70 333**	*e*PKP	**PKPdf**		**10 43 48.7**	**+0.4**
BRG	**Berggiesshubel**	**140.71 339**	*e*PKP	**PKPdf**		**10 43 48.8**	**+0.6**
	comp=Z,35nm,1.5s						
	comp=N,2µm,24.8s						
	comp=E,718nm,16.1s						
	comp=Z,2µm,21.6s						
BRG	**Berggiesshubel**	**140.71 339**	*e*PKIKP	**PKPdf**		**10 43 48.8**	**+0.6**
BRG			pmax	pmax			
	comp=Z,35nm,1.5s						
BRG			MLR	MLR			
	comp=N,2µm,24.8s						
BRG			MLR	MLR			
	comp=E,718nm,16.1s						
BRG			MLR	MLR			
	comp=Z,2µm,21.6s						
PVCC	**Panska Ves**	**140.78 338**	AMS	AMS		11 44 10.0	
	comp=Z,2µm,21.8s						
JAVC	**Velka Javorina**	**140.92 334**	*e*PKP	**PKiKP**		**10 43 51.9**	**+0.5**
VRAC	**Vranov**	**141.01 336**	*e*PKP	**PKiKP**		**10 43 50.9**	**-0.6**
PRA	**Prague**	**141.21 338**	AMS	AMS		11 44 20.0	
	comp=Z,1µm,22.8s						
PRU	**Pruhonice**	**141.24 338**	AMS	AMS		11 44 40.0	
	comp=Z,2µm,21.1s						
KRUC	**Moravsky**	**141.28 335**	*e*PKP	**PKPdf**		**10 43 49.3**	**0.0**
MODS	**Modra-Piesok**	**141.46 334**	*e*PKIKP	**PKPdf**		**10 43 50.1**	**+0.4**
MODS	**Modra-Piesok**	**141.46 334**	*e*PKP	**PKPdf**		**10 43 50.1**	**+0.4**
NKC	**Novy Kostel**	**141.76 340**	*e*PKIKP	**PKiKP**		**10 43 55.8**	**+2.7**
NKC			MLR	MLR			
	comp=Z,2µm,21.3s						
NKC	**Novy Kostel**	**141.76 340**	*e*PKP	**PKiKP**		**10 43 55.8**	**+2.7**
NKC			AMS	AMS		11 44 00.0	
	comp=Z,2µm,21.3s						
PGB	**Panagyurishte**	**141.94 322**	*i* P	**PKPdf**		**10 43 46.1**	**-4.7**
KHC	**Kasperske Hory**	**142.30 338**	*e*PKIKP	**PKiKP**		**10 43 55.9**	**+1.7**
KHC			MLR	MLR			
	comp=Z,2µm,21.0s						
KHC	**Kasperske Hory**	**142.30 338**	*e*PKP	**PKiKP**		**10 43 55.9**	**+1.7**
KHC			AMS	AMS		11 45 30.0	
	comp=Z,2µm,21.0s						
CONA	**Conrad Observa**	**142.40 335**	*e*P	**PKPdf**		**10 43 49.2**	**-2.3**
	comp=Z,12nm,1.7s						
VTS	**Vitosha**	**142.45 323**	*i* P	**PKPdf**		**10 43 47.9**	**-3.9**
GERES	**GERESS Array B**	**142.50 338**	PKP	**PKiKP**		**10 43 53.7**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=117,slow=1.5,SNR=9.2						
GERES	**GERESS Array B**	**142.50 338**	PKIKP	**PKPdf**		**10 43 52.1**	**+0.5**
GERES	**GERESS Array B**	**142.50 338**		**PKPdf**		**10 43 52.1**	**+0.5**
GRF	**Grafenberg Arr**	**142.63 341**	*e*PKP	**PKPdf**		**10 43 48.4**	**-3.3**
	baz=30,slow=2.9						
GRF			*e*L	L		11 45 00.1	
	comp=Z,2µm,22.0s						
MMB	**Musomiste**	**142.76 321**	*i* P	**PKPdf**		**10 43 48.7**	**-3.6**
KKB	**Krupnik**	**142.99 322**	*i* P	**PKPdf**		**10 43 49.7**	**-2.9**
ARSA	**Arzberg**	**143.07 334**	*e*P	**PKPdf**		**10 43 52.0**	**-0.6**
	comp=Z,4.5nm,0.9s						
MOA	**Molln**	**143.10 336**	*e*P	**PKPdf**		**10 43 52.8**	**+0.1**
	comp=Z,8.3nm,1.0s						
DIVS	**Divibare**	**143.30 327**	IAMs_20	IAMs_20		11 49 26.9	
	comp=Z,1µm,21.0s						
UCC	**Uccle**	**143.41 348**	IAMs_20	IAMs_20		11 47 13.5	
	comp=Z,1µm,20.0s						
VAY	**Valandovo**	**143.62 321**	*i* P	PKPbc		10 43 51.6	+0.6
STIP	**Stip**	**143.63 322**	*i* P	PKPbc		10 43 51.3	+0.2
SOKA	**Soboth**	**143.73 334**	*e*P	PKPab		10 43 51.0	+0.4
	comp=Z,13nm,1.1s						
STU	**Stuttgart**	**144.07 342**	IAMs_20	IAMs_20		11 46 21.1	
	comp=Z,1µm,20.0s						
KBA	**Koelnbreinsper**	**144.09 336**	*e*P	**PKPab**		**10 43 52.1**	**0.0**
	comp=Z,22nm,1.8s						
MYKA	**Terra Mystica**	**144.34 336**	*e*P	**PKPab**		**10 43 52.1**	**-0.8**
	comp=Z,8.7nm,0.9s						
XOR	**Xorichti**	**144.37 318**	P	**PKPab**		**10 43 51.6**	**-1.6**
LIT	**Litokhoron**	**144.39 320**	PKIKP	PKPbc		10 43 53.5	0.0
LIT	**Litokhoron**	**144.39 320**	PKPdf	PKPbc		10 43 53.5	-0.1
LIT	**Litokhoron**	**144.39 320**	P	**PKPab**		**10 43 52.2**	**-1.1**
LJU	**Ljubljana**	**144.45 334**	*e*PKPdf	PKPbc		10 43 53.6	+0.1
PRED	**Cave del Predi**	**144.53 335**	IAMs_20	IAMs_20		11 49 49.6	
	comp=Z,1µm,22.0s						
WATA	**Walderalm**	**144.54 338**	*e*P	PKPbc		10 43 54.2	+0.3
	comp=Z,32nm,1.9s						
WTTA	**Wattenberg**	**144.58 338**	*e*P	PKPbc		10 43 54.2	+0.1
	comp=Z,30nm,1.4s,SNR=8.7						
WTTA	**Wattenberg**	**144.58 338**	PKIKP	**PKPdf**		**10 43 55.0**	**-0.5**
PHP	**Peshkopia**	**144.65 324**	P	**PKPab**		**10 43 53.2**	**-1.0**
ABTA	**Abfaltersbach**	**144.69 337**	*e*P	**PKPab**		**10 43 53.7**	**-0.5**
	comp=Z,22nm,1.3s						
RETA	**Reutte**	**144.69 339**	*e*P	PKPbc		10 43 54.3	0.0
	comp=Z,54nm,1.9s,SNR=13						
MOTA	**Moosalm**	**144.70 339**	*e*P	**PKPab**		**10 43 54.3**	**0.0**
	comp=Z,25nm,1.2s,SNR=8.7						
BFO	**Black Forest**	**144.72 342**	PKIKP	PKPbc		10 43 54.5	+0.2
BFO			MLR	MLR			
	comp=Z,2µm,22.0s						
BFO	**Black Forest**	**144.72 342**	PKPdf	PKPbc		10 43 54.5	+0.2
CEY	**Cerknica**	**144.74 334**	*e*PKPdf	**PKPab**		**10 43 54.3**	**0.0**
SQTA	**Sankt Quirin**	**144.77 338**	*e*P	PKPbc		10 43 54.8	+0.2
	SNR=8.9						
VLY	**Voula,Athens**	**144.79 316**	P	**PKPab**		**10 43 53.0**	**-1.7**
OHR	**Ohrid**	**144.81 322**	*i* P	**PKPdf**		**10 43 55.5**	**-0.4**
PDG	**Podgorica**	**144.82 326**	IAMs_20	IAMs_20		11 50 33.4	
	comp=Z,2µm,21.0s						
LAST	**Lasithi**	**144.89 310**	P	**PKPab**		**10 43 55.3**	**0.0**
KNDS	**Knezji Dol**	**144.92 334**	*e*PKPdf	PKPbc		10 43 55.5	+0.3
CIMO	**Cimolais**	**145.08 336**		**PKPbc**		**10 43 54.7**	**-0.9**
FETA	**Feichten**	**145.11 339**	*e*P	**PKPbc**		**10 43 55.1**	**-0.7**
	SNR=14						
AGG	**Agios Georgios**	**145.12 318**	P	**PKPbc**		**10 43 54.6**	**-1.3**
DAVA	**Damuels**	**145.16 340**	*e*P	**PKPbc**		**10 43 56.0**	**0.0**
	comp=Z,77nm,1.1s,SNR=18						
LTK	**Loutraki**	**145.25 316**	P	**PKPbc**		**10 43 54.4**	**-2.0**
IDI	**Anoyia**	**145.26 311**	PKPbc	**PKPab**		**10 43 56.7**	**0.0**
	comp=Z,14nm,0.8s,baz=169,slow=4.9,SNR=7.4						
LSK	**Leskovik**	**145.52 321**	P	**PKPdf**		**10 43 56.9**	**-0.3**
DAVOX	**Davos/Dischmat**	**145.61 339**	PKPbc	**PKPbc**		**10 43 57.5**	**+0.1**
	comp=Z,29nm,0.8s,baz=20,slow=1.7,SNR=25						
ANX	**Ano Chora**	**145.62 318**	P	**PKPdf**		**10 43 57.3**	**-0.1**
VAM	**Vamos**	**145.71 312**	P	**PKPab**		**10 43 58.3**	**+0.1**
GUR	**Goura**	**145.71 317**	P	**PKPdf**		**10 43 57.0**	**-0.6**
KLV	**Kalavryta, Ach**	**145.78 317**	P	**PKPdf**		**10 43 56.8**	**-0.9**
IMMV	**Iera Moni Meta**	**145.84 312**	P	**PKPbc**		**10 43 58.4**	**+0.1**
VLX	**Vlachokerasia**	**145.99 316**	P	**PKPdf**		**10 43 58.1**	**0.0**
PDO	**Prodromos**	**146.09 319**	P	**PKPab**		**10 43 59.4**	**-0.1**
ANKY	**Antikythira Is**	**146.13 313**	P	**PKPab**		**10 43 59.7**	**-0.1**
TEOL	**Teolo**	**146.17 336**	IAMs_20	IAMs_20		11 49 21.9	
	comp=Z,1µm,20.0s						
LKD2	**Lefkada island**	**146.31 319**	P	**PKPab**		**10 44 00.2**	**-0.2**
ZCCA	**Zocca**	**147.28 336**	PKPdf	**PKPdf**		**10 44 00.9**	**+1.0**
VLC	**Villacollemand**	**147.67 336**	IAMs_20	IAMs_20		11 48 26.8	
	comp=Z,2µm,22.0s						
OSSC	**Osservatorio P**	**147.86 335**	IAMs_20	IAMs_20		11 48 11.9	
	comp=Z,1µm,22.0s						
TIP	**Timpagnde**	**148.41 323**	IAMs_20	IAMs_20		11 52 37.7	
	comp=Z,1µm,21.0s						
CEL	**Celeste**	**149.53 323**	IAMs_20	IAMs_20		11 55 12.3	
	comp=Z,1µm,20.0s						
VSL	**Villasalto**	**151.97 333**	IAMs_20	IAMs_20		11 51 13.8	
	comp=Z,1µm,21.0s						
MAHO	**Mahon**	**153.59 340**	PKP	PKPdf		10 43 56.3	-14
MAHO			*e*SS	SS		11 06 51.5	-47
UCM	**Universidad Co**	**154.85 353**	PKP	**PKPdf**		**10 44 07.3**	**-4.3**
UCM	**Universidad Co**	**154.85 353**	PP	PP		10 48 10.5	+0.6
ES02	**SONSECA Array**	**155.54 355**	IAMs_20	IAMs_20		11 47 16.3	
	comp=Z,1µm,21.0s						
ESDC	**Sonseca Array**	**155.55 355**	PKPab	**PKPab**		**10 44 39.0**	**+0.7**
	comp=Z,4.5nm,1.1s,baz=0.7,slow=3.1,SNR=8.8						
ESDC	**Sonseca Array**	**155.55 355**		**PKPab**		**10 44 39.2**	**+0.9**
ES01	**SONSECA Array**	**155.55 355**	IAMs_20	IAMs_20		11 34 58.5	
	comp=Z,684nm,18.0s						
LIS	**Lisbon**	**156.55 4**	*e*PKPdf	**PKPdf**		**10 44 13.0**	**-0.9**
LIS			AMS	AMS		11 50 24.2	
	comp=N,2µm,20.3s						
LIS	**Lisbon**	**156.55 4**	*e*PKIKP	**PKPdf**		**10 44 13.0**	**-0.9**
EVO	**Evora**	**156.80 2**	PKP	**PKPdf**		**10 44 19.6**	**+5.4**
CART	**Cartagena**	**157.16 348**	PKP	**PKPdf**		**10 44 10.5**	**-4.2**
CART	**Cartagena**	**157.16 348**	IAMs_20	IAMs_20		11 50 24.3	
	comp=Z,1µm,22.0s						
MORF	**Marmelete**	**157.99 4**	*e*PKPdf	**PKPdf**		**10 44 14.7**	**-1.2**
MORF			AMS	AMS		11 51 51.7	
	comp=Z,2µm,18.8s						
MORF	**Marmelete**	**157.99 4**	*e*PKIKP	**PKPdf**		**10 44 14.7**	**-1.2**
EMAL	**Malaga-Limoner**	**158.48 355**	PKP	**PKPdf**		**10 44 10.8**	**-5.6**
EMAL			*e*SS	SS		11 08 09.7	-21
CEU	**Ceuta**	**159.41 357**	PKP	**PKPdf**		**10 44 18.1**	**+0.6**
CEU	**Ceuta**	**159.41 357**	PP	PP		10 48 42.1	+7.2
MELI	**Melilla**	**159.74 351**	PKP	**PKPdf**		**10 44 13.8**	**-4.1**
PVLZ	**Peæn de**	**160.04 354**	PKP	**PKPdf**		**10 44 17.9**	**-0.4**
PVLZ			*e*SS	SS		11 08 28.1	-19
IFR	**Ifrane**	**161.76 355**	PKP	**PKPdf**		**10 44 22.4**	**+2.0**
IFR			*e*SS	SS		11 09 03.8	-1.6
AVE	**Averroes**	**162.04 1**	PKP	**PKPdf**		**10 44 18.4**	**-2.0**
AVE	**Averroes**	**162.04 1**	PP	PP		10 48 43.0	-6.1
LIC	**Lamto**	**170.84 192**	*e*P	**PKPdf**		**10 44 25.1**	**-2.8**
	comp=Z,180nm,2.7s						
KIC	**Kosan Boka**	**170.91 194**	*e*P	**PKPdf**		**10 44 26.8**	**-1.1**
	comp=Z,381nm,2.8s						
DBIC	**Dimbokro**	**171.23 193**	PKPab	**PKPab**		**10 45 47.4**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=219,slow=3.0,SNR=3.8						
DBIC			PP	**PP**		**10 49 38.6**	**+2.0**
	comp=Z,4.0nm,0.9s,baz=139,slow=6.0,SNR=3.7						
DBIC	**Dimbokro**	**171.23 193**	PKIKP	**PKPdf**		**10 44 29.3**	**+1.3**
DBIC	**Dimbokro**	**171.23 193**		**PKPdf**		**10 44 29.3**	**+1.3**
TIC	**Toumodi**	**171.24 192**	*e*P	**PKPdf**		**10 44 26.9**	**-1.2**
TOA0	**Torodi Ar. Sit**	**171.43 257**		**PKPdf**		**10 44 27.1**	**-1.1**
TORD	**Torodi Ar. Bea**	**171.43 257**	PKP	**PKPdf**		**10 44 27.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=264,slow=0.2,SNR=15						
TORD			PKPab	**PKPab**		**10 45 49.0**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=85,slow=3.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**171.43 257**		**PKPdf**		**10 44 25.9**	**-2.2**
KOWA	**Kowa**	**177.13 255**		**PKPdf**		**10 44 28.4**	**-1.6**

*ATH **13** 10:35:45.9, 38°.39N×20°.52E, h14km±2km, ML2.5/5, Error ellipse: s-maj=2.7km s-min=0.7km az=272.0*
*THE **13** 10:35:46.4, 38°.39N×20°.49E, h8km, ML2.3/9, Error ellipse: s-maj=0.8km s-min=0.3km az=246.0*
ISC 13 10:35:45.2±0.8, 38°.40N±0°.02×20°.41E±0°.04, h16km±5km, n34, σ1s10/62, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF5	**Kardakata, Kep**	**0.13**	**160**	P	**Pg**	**10 35 49.1**	**+0.1**
KEF5				S	**Sg**	**10 35 50.8**	**-0.7**
KEF5	**Kardakata, Kep**	**0.13**	**160**	P	**Pg**	**10 35 49.0**	**+0.1**
KEF5				S	**Sg**	**10 35 51.0**	**-0.5**
FSK	**Fiskardo**	**0.13**	**64**	P	**Pg**	**10 35 48.7**	**-0.3**
FSK				S	**Sg**	**10 35 50.3**	**-1.2**
FSK				AML	AML	10 35 51.2	
	comp=N,7253µm,0.2s						
FSK				AML	AML	10 35 51.4	
	comp=E,9131µm,0.2s						
FSK	**Fiskardo**	**0.13**	**64**	P	**Pg**	**10 35 48.7**	**-0.3**
FSK				S	**Sg**	**10 35 50.6**	**-0.9**
	comp=E,4µm,0.2s						
KEF4	**Livadi, Kephal**	**0.14**	**176**	P	**Pg**	**10 35 49.4**	**+0.3**
KEF4				S	**Sg**	**10 35 52.0**	**+0.3**
KEF4	**Livadi, Kephal**	**0.14**	**176**	P	**Pg**	**10 35 49.4**	**+0.3**
KEF4				S	**Sg**	**10 35 51.7**	**0.0**
DMLN	**Damoulianata-K**	**0.16**	**191**	P	**Pg**	**10 35 49.9**	**+0.5**
DMLN				S	**Sg**	**10 35 52.9**	**+0.6**
LXRA	**Lixouri, Kepha**	**0.20**	**174**	P	**Pg**	**10 35 50.4**	**+0.5**
LXRA				S	**Sg**	**10 35 54.0**	**+0.8**
ARGA	**Argostoli. Kep**	**0.23**	**167**	P	**Pg**	**10 35 50.5**	**+0.1**
ARGA				S	**Sg**	**10 35 54.0**	**+0.1**
VLS	**Valsamata**	**0.26**	**148**	P	**Pg**	**10 35 50.8**	**-0.2**
VLS				S	**Sg**	**10 35 54.3**	**-0.6**
VLS				AML	AML	10 35 55.0	
	comp=E,11484µm,0.3s						
VLS				AML	AML	10 35 55.0	
	comp=N,9161µm,0.3s						
VLS	**Valsamata**	**0.26**	**148**	P	**Pg**	**10 35 50.8**	**-0.2**
VLS				S	**Sg**	**10 35 54.8**	**-0.1**
	comp=N,4µm,0.2s						
EVGI	**Lefkada island**	**0.29**	**41**	P	**Pg**	**10 35 51.6**	**+0.1**
EVGI				S	**Sg**	**10 35 55.7**	**0.0**
EVGI	**Lefkada island**	**0.29**	**41**	P	**Pg**	**10 35 51.5**	**+0.1**
EVGI				S	**Sg**	**10 35 56.2**	**+0.4**
	comp=N,592nm,0.1s						
PSDA	**Pessada-Kefalo**	**0.32**	**155**	P	**Pg**	**10 35 51.9**	**0.0**
PSDA				S	**Sg**	**10 35 56.1**	**-0.3**
PSDA	**Pessada-Kefalo**	**0.32**	**155**	P	**Pg**	**10 35 51.9**	**0.0**
PSDA				S	**Sg**	**10 35 56.4**	**0.0**
	comp=N,292nm,0.2s						
NYDR	**Nydri-Lefkada**	**0.39**	**36**	P	**Pg**	**10 35 53.0**	**-0.1**
NYDR				S	**Sg**	**10 35 58.7**	**+0.3**
	comp=N,742nm,0.3s						
MGNA	**Meganis**	**0.39**	**49**	P	**Pg**	**10 35 53.0**	**-0.2**
MGNA				S	**Sg**	**10 35 57.7**	**-1.0**
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**	**10 35 54.1**	**+0.1**
LKD2				S	**Sg**	**10 36 00.3**	**+0.4**
LKD2				AML	AML	10 36 05.9	
	comp=E,1146µm,0.7s						
LKD2				AML	AML	10 36 06.8	
	comp=N,1030µm,0.6s						
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**	**10 35 54.1**	**+0.1**
LKD2				S	**Sg**	**10 36 00.6**	**+0.7**
	comp=N,382nm,0.5s						
TSLK	**Tsoukalades, L**	**0.47**	**24**	P	**Pg**	**10 35 54.8**	**+0.2**
TSLK				S	**Sg**	**10 36 01.7**	**+0.9**
TSLK				AML	AML	10 36 04.0	
	comp=E,1158µm,0.4s						
TSLK				AML	AML	10 36 06.2	
	comp=N,954µm,0.4s						
TSLK	**Tsoukalades, L**	**0.47**	**24**	P	**Pg**	**10 35 54.9**	**+0.4**
TSLK				S	**Sb**	**10 36 02.4**	**+0.8**
	comp=N,472nm,0.4s						
VLMS	**Volimes, Zakyn**	**0.56**	**159**	P	**Pg**	**10 35 56.0**	**-0.3**
VLMS				S	**Sg**	**10 36 03.6**	**-0.1**
VLMS				AML	AML	10 36 11.2	
	comp=N,1935µm,0.5s						
VLMS				AML	AML	10 36 11.8	
	comp=E,1062µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.56**	**159**	P	**Pg**	**10 35 56.1**	**-

HAMF eS **Sn** **10 42 59.8 -2.9**
HAMF IAML 10 43 22.8
comp=Z,12nm,0.8s
KIF Kilpisjarvi 5.07 292 Pn **Pn** **10 42 11.2 -0.2**
KIF Sn **Sn** **10 43 08.3 -2.2**
KIF Lg Lg 10 43 29.4
KIF Kilpisjarvi 5.07 292 *e*P **Pn** **10 42 11.6 +0.2**
KIF *e*S **Sn** **10 43 08.1 -2.5**
FIA0 FINESS Array S 7.10 212 Pn **Pn** **10 42 39.6 +0.4**
baz=27,slow=14
FIA0 Sn **Sn** **10 43 57.5 -3.0**
baz=31,slow=18
FIA0 Lg Lg 10 44 34.8
baz=41,slow=28
FIA0 FINESS Array S 7.10 212 Pn **Pn** **10 42 39.6 +0.4**
baz=27,slow=14
FIA0 Sn **Sn** **10 43 57.5 -3.0**
baz=31,slow=18
FIA0 Sg **Sg** **10 44 34.8 -7.2**
baz=41,slow=28
STEI Steigen 7.11 281 *e*P **Pn** **10 42 37.9 -1.4**
STEI IAML 10 44 03.6
comp=Z,2.3nm,0.6s
FAUS Fauske 7.17 277 *e*P **Pn** **10 42 38.7 -1.4**
FAUS *e*S **Sn** **10 43 56.4 -5.8**
FAUS IAML 10 44 33.7
comp=Z,3.4nm,0.5s

GCMT ***13*** *10:42:15.9±0.4, 10.40S±0.02×165.29E±0.03, h71km±4km, MW5.2/76, Moment Tensor Solution. s2,c2; s76,c103; Duration: 1!0 Moment tensor: Scale 10^17 Nm; Mrr0.88±.06; Mθθ-0.19±.04; Mϕϕ-0.69±.04; Mrθ0.17±.03; Mθϕ-0.37±.03; Mϕr0.17±.04; Best double couple: Mo0.91800×10^17 NP1:ϕs204.00000°, δ38.00000°, λ83.00000°. NP2:ϕs32.00000°, δ53.00000°, λ95.00000°. Principal axes: T 0.9150, Plg81.0000°, Azm329.0000°; N 0.0070, Plg4.0000°, Azm209.0000°; P -0.9210, Plg7.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***13*** *10:42:17.1±0.0, 10.24S×165.50E, h41km, mB5.4/41, mb5.2/58, Ms5.3/19, Ms7 4.9/19*

IDC ***13*** *10:42:18.1±2.0, 10.62S×165.57E, h48km±18km, mb4.7/29, mb1 4.7/33, mb1mx4.7/40, mbtmp4.9/33, ML2.4/1, MS4.5/1, Ms1 4.5/1, ms1mx3.8/25, Error ellipse: s-maj=13.5km s-min=10.3km az=64.0*

MOS ***13*** *10:42:18.2±1.0, 10.50S×165.47E, h59km, mb5.3/38, Error ellipse: s-maj=9.0km s-min=7.0km az=133.1*

NEIC ***13*** *10:42:19.9±1.7, 10.63S±0.08×165.56E±0.08, h65km±4km, mb5.1/217, Error ellipse: s-maj=13.0km s-min=8.9km az=221.0*

ISC 13 10:42:15.8±0.2, 10.62S±0.05×165.63E±0.05, h31km, n575, σ1§13/520, mb5.2/160, MS4.9/8, 16C-3D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**5.04**	**162**	Pn	**Pn**	**10 43 30.7**	**+1.4**
HNR	**Honiara**	**5.72**	**281**	P	**Pn**	**10 43 38.2**	**-0.5**
	35nm,0.3s,baz=183,slow=5.3,SNR=10						
HNR				S	**Sn**	**10 44 45.5**	**+2.1**
	51nm,0.3s,baz=284,slow=11,SNR=3.8						
HNR				LR	LR	10 45 56.1	
	comp=Z,4μm,18.4s,baz=112,slow=38						
HNR	**Honiara**	**5.72**	**281**	P	**Pn**	**10 43 39.3**	**+0.6**
HNR						10 44 45.5	
HNR	**Honiara**	**5.72**	**281**	Pn	**Pn**	**10 43 39.3**	**+0.6**
DZM	**Mont Dzumac**	**11.41**	**176**	P	**Pn**	**10 44 58.7**	**+1.9**
	3.7nm,0.3s,baz=313,slow=12,SNR=41						
DZM				S	**Sn**	**10 47 04.8**	**+1.4**
	1.4nm,0.3s,baz=24,slow=20,SNR=6.4						
DZM	**Mont Dzumac**	**11.41**	**176**	*e*Pn	**Pn**	**10 44 59.0**	**+2.1**
	20nm,0.3s						
DZM				*e*Sn	**Sn**	**10 46 58.5**	**-4.9**
	7.0nm,0.3s						
DZM	**Mont Dzumac**	**11.41**	**176**	Pn	**Pn**	**10 44 58.4**	**+1.5**
TARA	**Tarawa**	**13.93**	**32**	P	**P**	**10 45 41.0**	**+2.0**
MSVF	**Nonsavu**	**13.96**	**122**	P	**P**	**10 45 38.1**	**-1.2**
MSVF	**Nonsavu**	**13.96**	**122**	Pn	**P**	**10 45 38.1**	**-1.2**
KRVT	**Keravat (AS076**	**14.87**	**294**	P	**Pn**	**10 45 43.8**	**-0.3**
	baz=49,slow=9.3,SNR=2.8						
PMG	**Port Moresby**	**18.23**	**272**	P	**P**	**10 46 26.8**	**+0.1**
	0.4nm,0.3s,baz=72,slow=6.4,SNR=3.4						
PMG	**Port Moresby**	**18.23**	**272**	P	**P**	**10 46 29.0**	**+2.3**
PMG				pmax	pmax		
	comp=Z,70nm,1.2s						
PMG	**Port Moresby**	**18.23**	**272**	P	**P**	**10 46 29.0**	**+2.3**
MANU	**Manus Island**	**20.04**	**294**	P	Pn	10 46 49.2	+0.8
MANU				IAmb	IAmb	10 46 57.5	
	comp=Z,215nm,1.4s						
EIDS	**Eidsvold**	**20.14**	**221**	P	Pn	10 46 48.9	-0.6
CTA	**Charters Tower**	**20.90**	**241**	P	Pn	10 46 57.3	-1.2
	comp=Z,18nm,0.9s,baz=67,slow=12,SNR=15						
CTAO	**Charters Tower**	**20.90**	**241**	P	**P**	**10 46 57.1**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,52nm,1.0s						
CTAO	**Charters Tower**	**20.90**	**241**	P	**P**	**10 46 57.1**	**+1.2**
COEN	**Coen**	**22.19**	**259**	P	**P**	**10 47 10.4**	**+0.7**
AFI	**Afiamalu**	**22.31**	**101**	P	**P**	**10 47 12.8**	**+1.7**
	comp=Z,29nm,0.9s,baz=198,slow=7.2,SNR=3.9						
AFI	**Afiamalu**	**22.31**	**101**	P	**P**	**10 47 12.8**	**+1.7**
AFI				pmax	pmax		
	comp=Z,58nm,1.0s						
AFI	**Afiamalu**	**22.31**	**101**	IAmb	IAmb	10 47 22.5	
	comp=Z,58nm,1.0s						
ARMA	**Armidale**	**23.62**	**211**	P	**P**	**10 47 25.9**	**+1.5**
OUZ	**Omahuta**	**25.54**	**165**	P	**P**	**10 47 45.6**	**+3.8**
OUZ				IAmb	IAmb	10 47 47.2	
	comp=Z,103nm,1.1s						
GENI	**Genyem**	**26.50**	**286**	P	**P**	**10 47 49.9**	**-0.9**
	comp=Z,38nm,0.9s						
SMPI	**Sarmi**	**28.07**	**286**	P	**P**	**10 48 04.5**	**-0.4**
	comp=Z,69nm,1.7s						
OPRZ	**Ohinepanea**	**28.83**	**162**	P	**P**	**10 48 14.0**	**+2.7**
H11S2	**WAKE ISLAND Hy**	**28.95**	**2**	T	T	11 18 16.6	
	baz=181,slow=76,SNR=446						
H11S3	**WAKE ISLAND Hy**	**28.95**	**2**	T	T	11 18 16.9	
	baz=181,slow=76,SNR=431						
H11S1	**WAKE ISLAND Hy**	**28.96**	**2**	T	T	11 18 20.2	
	baz=181,slow=76,SNR=315						
WHRZ	**Whale Island**	**28.97**	**161**	P	**P**	**10 48 16.0**	**+3.4**
HIZ	**Hauiti**	**28.98**	**165**	P	**P**	**10 48 12.9**	**+0.3**
OMRZ	**Omania**	**29.02**	**162**	P	**P**	**10 48 16.1**	**+3.1**
PKGZ	**Pakihiroa**	**29.36**	**160**	P	**P**	**10 48 16.9**	**+0.8**
URZ	**Urewera**	**29.38**	**161**	P	**P**	**10 48 17.4**	**+1.1**
	comp=Z,95nm,0.8s,baz=352,slow=3.9,SNR=25						
URZ	**Urewera**	**29.38**	**161**	P	**P**	**10 48 16.7**	**+0.5**
URZ	**Urewera**	**29.38**	**161**	P	**P**	**10 48 16.3**	**0.0**
PRRZ	**Plateau Road**	**29.39**	**163**	P	**P**	**10 48 19.5**	**+3.3**
WMGZ	**Waiomatatini S**	**29.42**	**159**	P	**P**	**10 48 17.5**	**+0.9**
MUGZ	**Murupara**	**29.48**	**162**	P	**P**	**10 48 19.5**	**+2.4**
TWGZ	**Tauwhareparae**	**29.59**	**160**	P	**P**	**10 48 19.5**	**+1.3**
H11N1	**WAKE ISLAND Hy**	**30.17**	**2**	T	T	11 19 48.2	
	baz=182,slow=76,SNR=433						
H11N3	**WAKE ISLAND Hy**	**30.17**	**2**	T	T	11 19 51.5	
	baz=182,slow=76,SNR=373						
H11N2	**WAKE ISLAND Hy**	**30.18**	**2**	T	T	11 19 50.7	
	baz=182,slow=76,SNR=352						
STKA	**Stephens Creek**	**30.67**	**223**	P	**P**	**10 48 28.4**	**+0.6**
	comp=Z,4.3nm,0.6s,baz=46,slow=8.5,SNR=9.7						
STKA				PcP	**PcP**	**10 51 24.8**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=59,slow=12,SNR=3.0						
STKA	**Stephens Creek**	**30.67**	**223**	P	**P**	**10 48 28.6**	**+0.9**
WB0	**Warramunga Arr**	**31.44**	**249**	P	**P**	**10 48 32.5**	**-2.2**
WRAB	**Tennant Creek**	**31.51**	**249**	*ce*P	**P**	**10 48 35.9**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,16nm,2.5s						
WRAB	**Tennant Creek**	**31.51**	**249**	P	**P**	**10 48 34.5**	**-0.8**
WRA	**Warramunga Arr**	**31.53**	**249**	P	**P**	**10 48 33.8**	**-1.7**
	comp=Z,6.9nm,0.9s,baz=79,slow=8.9,SNR=37						
WRA				PcP	**PcP**	**10 51 27.6**	**-0.3**
	comp=Z,4.0nm,0.8s,baz=76,slow=2.9,SNR=10.0						
WRA				PKiKP	**PKiKP**	**10 58 56.0**	**-1.5**
	comp=Z,1.3nm,0.7s,baz=12,slow=0.8,SNR=19						
WRA	**Warramunga Arr**	**31.53**	**249**	*ce*P	**P**	**10 48 35.7**	**+0.2**
WRA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WRA	**Warramunga Arr**	**31.53**	**249**	P	**P**	**10 48 33.6**	**-1.8**
TUWZ	**Tuamarina**	**31.55**	**168**	P	**P**	**10 48 35.9**	**+0.6**
SNZO	**South Karori**	**31.60**	**167**	P	**P**	**10 48 37.1**	**+1.4**
LTZ	**Lake Taylor**	**32.56**	**171**	P	**P**	**10 48 45.1**	**+0.9**
ASAR	**Alice Springs**	**32.88**	**243**	P	**P**	**10 48 45.8**	**-1.6**
	comp=Z,3.4nm,0.8s,baz=64,slow=10,SNR=31						
ASAR				PcP	**PcP**	**10 51 31.4**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=77,slow=2.5,SNR=9.4						
ASAR				PKiKP	**PKiKP**	**10 58 56.9**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=86,slow=1.3,SNR=7.8						
ASAR	**Alice Springs**	**32.88**	**243**	P	**P**	**10 48 45.1**	**-2.3**
ASAR						10 51 30.2	
ASAR	**Alice Springs**	**32.88**	**243**	P	**P**	**10 48 45.1**	**-2.3**
ASAR					**PcP**	**10 51 30.2**	**-1.5**
RPZ	**Rata Peaks**	**33.31**	**173**	P	**P**	**10 48 50.8**	**+0.1**
	comp=Z,70nm,0.8s,baz=198,slow=2.3,SNR=14						
RPZ	**Rata Peaks**	**33.31**	**173**	P	**P**	**10 48 53.4**	**+2.7**
RPZ	**Rata Peaks**	**33.31**	**173**	P	**P**	**10 48 52.8**	**+2.0**
JCZ	**Jackson Bay**	**33.44**	**176**	P	**P**	**10 48 54.6**	**+2.6**
MQZ	**McQueen's Vall**	**33.52**	**171**	P	**P**	**10 48 53.7**	**+1.1**
LBZ	**Lake Benmore**	**33.87**	**174**	P	**P**	**10 48 56.2**	**+0.6**
WKZ	**Wanaka**	**34.21**	**176**	P	**P**	**10 48 56.7**	**-1.9**
WKZ				IAmb	IAmb	10 49 03.0	
	comp=Z,50nm,1.1s						
ODZ	**Otahua Downs**	**34.57**	**174**	P	**P**	**10 49 01.0**	**-0.7**
ODZ				IAmb	IAmb	10 49 09.5	
	comp=Z,58nm,1.4s						
BBOO	**Buckleboo**	**35.04**	**226**	P	**P**	**10 49 05.3**	**-0.7**
BBOO				IAmb	IAmb	10 49 06.9	
	comp=Z,31nm,1.1s						
SIJI	**Sorong**	**35.49**	**284**	P	**P**	**10 49 10.5**	**+0.4**
	comp=Z,10nm,0.7s,baz=29,slow=6.6,SNR=5.1						
TAU	**Tasmania Unive**	**35.91**	**203**	P	**P**	**10 49 13.1**	**-0.1**
TAU				pmax	pmax		
	comp=Z,45nm,1.4s						
TAU	**Tasmania Unive**	**35.91**	**203**	P	**P**	**10 49 13.1**	**-0.1**
TAU				IAmb	IAmb	10 49 13.2	
	comp=Z,45nm,1.4s						
KNRA	**Kununurra**	**36.22**	**258**	P	**P**	**10 49 14.9**	**-1.4**
NLAI	**Namlea**	**38.91**	**278**	P	**P**	**10 49 38.5**	**-0.6**
	comp=Z,31nm,1.6s						
EDFI	**Ende, Flores**	**43.33**	**268**	P	**P**	**10 50 14.4**	**-1.2**
	comp=Z,11nm,1.2s						
TVO	**Taravao**	**44.23**	**105**	*e*P	**P**	**10 50 24.0**	**+1.3**
	comp=Z,15nm,0.9s						
KAPI	**Kappang**	**45.76**	**273**	P	**P**	**10 50 34.4**	**-0.4**
	comp=Z,10.0nm,0.9s,baz=348,slow=6.8,SNR=4.4						
MYLDM	**Lahad Datu**	**49.48**	**286**	P	**P**	**10 51 04.9**	**+1.2**
SPMM	**Sapulut**	**51.26**	**285**	P	**P**	**10 51 17.0**	**-0.3**
KKM	**Kota Kinabalu**	**51.91**	**286**	P	**P**	**10 51 21.6**	**-0.6**
JMN	**Monobe**	**53.45**	**327**	P	**P**	**10 51 33.4**	**+0.2**
MJAR	**Matsushiro Arr**	**53.54**	**333**	P	**P**	**10 51 33.5**	**-0.3**
	comp=Z,8.7nm,0.8s,baz=166,slow=8.4,SNR=13						
MJAR	**Matsushiro Arr**	**53.54**	**333**	P	**P**	**10 51 34.2**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	**Matsushiro Arr**	**53.54**	**333**	P	**P**	**10 51 34.1**	**+0.4**
MAJO	**Matsushiro**	**53.55**	**333**	P	**P**	**10 51 34.5**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,20nm,1.0s						
MAJO	**Matsushiro**	**53.55**	**333**	P	**P**	**10 51 34.5**	**+0.7**
MAJO				IAmb	IAmb	10 51 35.5	
	comp=Z,20nm,0.9s						
MAT	**Matsushiro**	**53.55**	**333**	P	**P**	**10 51 33.9**	**+0.1**
MAT				*e*S	**S**	**10 59 11.4**	**+6.4**
JNU	**Nakatsue**	**54.67**	**324**	P	**P**	**10 51 41.6**	**-0.5**
SBUM	**Sibu**	**54.71**	**281**	P	**P**	**10 51 42.4**	**-0.4**
SBUM	**Sibu**	**54.71**	**281**	P	**P**	**10 51 43.0**	**+0.3**
KSM	**Kuching**	**56.33**	**279**	P	**P**	**10 51 51.6**	**-2.7**
KSM				IAmb	IAmb	10 51 54.4	
	comp=Z,24nm,1.3s						
KSM	**Kuching**	**56.33**	**279**	P	**P**	**10 51 54.0**	**-0.3**
LEM	**Lembang**	**57.40**	**269**	P	**P**	**10 52 02.5**	**+0.4**
	comp=Z,18nm,0.5s,baz=110,slow=10,SNR=4.0						
JKA	**Kamikawa-asahi**	**58.36**	**341**	P	**P**	**10 52 08.7**	**+0.7**
ASAJ	**Asahikawa**	**58.36**	**341**	P	**P**	**10 52 08.7**	**+0.6**
	comp=Z,29nm,0.8s,baz=232,slow=14,SNR=7.2						
ASAJ	**Asahikawa**	**58.36**	**341**	P	**P**	**10 52 08.7**	**+0.6**
ASAJ				pmax	pmax		
	comp=Z,80nm,1.3s						
TJN	**Taejon**	**59.02**	**324**	*ce*P	**P**	**10 52 13.2**	**+0.4**
KSRS	**Korea Array**	**59.46**	**326**	P	**P**	**10 52 16.4**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=136,slow=7.2,SNR=11						
KSAR	**Wonju Array Be**	**59.48**	**326**	P	**P**	**10 52 16.1**	**+0.1**
KSAR	**Wonju Array Be**	**59.48**	**326**	P	**P**	**10 52 16.1**	**+0.1**
YSS	**Yuzh-Sakhalins**	**60.85**	**342**	*e*P	**P**	**10 52 27.0**	**+1.8**
NJ2	**Nanjing**	**61.64**	**315**	*e*P	**P**	**10 52 32.0**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,25nm,0.6s						
USA0B	**Ussuriysk Arra**	**62.52**	**333**	*i* P	**P**	**10 52 37.3**	**+0.8**
USRK	**Ussuriysk Ar.**	**62.52**	**333**	P	**P**	**10 52 37.6**	**+1.1**
	comp=Z,9.0nm,0.8s,baz=147,slow=6.9,SNR=12						
USRK	**Ussuriysk Ar.**	**62.52**	**333**	P	**P**	**10 52 36.8**	**+0.3**
USRK	**Ussuriysk Ar.**	**62.52**	**333**	P	**P**	**10 52 36.8**	**+0.3**
MYKOM	**Kota Tinggi**	**62.68**	**278**	P	**P**	**10 52 38.0**	**-0.2**
PET	**Petropavlovsk**	**63.67**	**355**	*i* P	**P**	**10 52 42.6**	**-1.3**
PET				pmax	pmax		
	comp=Z,189nm,1.2s						
PEA0B	**Petropavlovsk-**	**63.84**	**355**	P	**P**	**10 52 45.3**	**+0.3**
PEA0B				pmax	pmax		
	comp=Z,41nm,1.0s						
PEA0B	**Petropavlovsk-**	**63.84**	**355**	P	**P**	**10 52 45.3**	**+0.3**
PETK	**Petropavlovsk-**	**63.84**	**355**	P	**P**	**10 52 46.3**	**+1.3**
	comp=Z,21nm,0.8s,baz=142,slow=7.5,SNR=13						
PETK	**Petropavlovsk-**	**63.84**	**355**	P	**P**	**10 52 43.8**	**-1.3**
PETK	**Petropavlovsk-**	**63.84**	**355**	P	**P**	**10 52 43.8**	**-1.3**
MDJ	**Mudanjiang**	**63.92**	**332**	P	**P**	**10 52 46.3**	**+0.5**
MDJ				pP	sP	10 52 58.8	+0.3
MDJ				sP	pwP	10 53 03.3	+5.8
MDJ				pmax	pmax		
	comp=Z,35nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,460nm,5.9s						
SDSI	**Sungai Dareh**	**64.49**	**274**	P	**P**	**10 52 52.0**	**+1.9**
CN2	**Changchun**	**65.32**	**329**	*e*P	**P**	**10 52 54.6**	**-0.3**
CN2				*es*P	sP	10 53 12.6	+4.9
CN2				*e*PP	**PP**	**10 55 20.8**	**+1.7**
CN2				*e*S	**S**	**11 01 34.0**	**-2.8**
CN2				pmax	pmax		
	comp=Z,30nm,1.1s						
CN2				LR	LR		
	comp=Z,540nm,17.0s						
CN2				LR	LR		
	comp=Z,750nm,17.0s						
CN2				LR	LR		
	comp=Z,770nm,19.0s						
IPM	**Ipoh**	**66.04**	**280**	P	**P**	**10 53 00.0**	**-0.2**
KLR	**Kul'dur**	**66.62**	**337**	*ce*P	**P**	**10 53 04.2**	**+1.0**
KLR				pmax	pmax		
	comp=Z,36nm,1.0s						
MNSI	**Mandailing Nat**	**66.64**	**275**	P	**P**	**10 53 02.8**	**-1.3**
VNDA	**Vanda**	**66.92**	**181**	P	**P**	**10 53 05.9**	**+1.2**
	comp=Z,7.6nm,0.9s,baz=2.7,slow=6.7,SNR=31						
VNDA	**Vanda**	**66.92**	**181**	P	**P**	**10 53 05.8**	**+1.1**
VNDA				pmax	pmax		
	comp=Z,22nm,1.3s						
VNDA	**Vanda**	**66.92**	**181**	P	**P**	**10 53 05.8**	**+1.1**
VNDA				IAmb	IAmb	10 53 07.1	
	comp=Z,22nm,1.2s						
NIKH	**Nikolski High**	**67.00**	**16**	P	**P**	**10 53 05.8**	**+0.3**
RPSI	**Rantau Prapat**	**67.68**	**277**	P	**P**	**10 53 09.6**	**-1.1**
RPSI				IAmb	IAmb	10 53 10.4	
	comp=Z,16nm,1.0s						
PSI	**Prapat**	**67.70**	**277**	P	**P**	**10 53 09.6**	**-1.4**
PSI				pmax	pmax		
	comp=Z,16nm,1.0s						
BJI	**Beijing**	**68.08**	**321**	P	**P**	**10 53 13.3**	**+0.7**
BJI				pmax	pmax		
	comp=Z,14nm,0.7s						
GYA	**Guiyang**	**68.09**	**304**	⇓P	**P**	**10 53 12.9**	**-0.2**
GYA				pmax	pmax		
	comp=Z,18nm,1.0s						
GYA				pmax	pmax		
	comp=Z,320nm,3.5s						
GYA				LR	LR		
	comp=Z,640nm,21.1s						
UNV	**Unalaska Valle**	**68.44**	**17**	P	**P**	**10 53 11.7**	**-2.9**
GSI	**Gunungsitoli**	**68.71**	**276**	P	**P**	**10 53 17.0**	**-0.1**
GSI	**Gunungsitoli**	**68.71**	**276**	P	**P**	**10 53 16.4**	**-0.7**
GSI				IAmb	IAmb	10 53 17.4	
	comp=Z,34nm,0.8s						
TIY	**Taiyuan**	**69.17**	**317**	*e*P	**P**	**10 53 21.0**	**+1.4**
XAN	**Xi'an**	**69.75**	**312**	P	**P**	**10 53 23.0**	**-0.3**
XAN				pP	pP	10 53 31.3	-0.9
XAN				sP	pwP	10 53 34.8	-0.4
XAN				pmax	pmax		
	comp=Z,27nm,1.2s						
XAN				pmax	pmax		
	comp=Z,220nm,4.1s						
XAN	**Xi'an**	**69.75**	**312**	IAmb	IAmb	10 53 24.2	
	comp=Z,42nm,1.3s						
PHIT	**Phitsanulok**	**70.11**	**293**	P	**P**	**10 53 26.9**	**+1.2**
UTTA	**Uttaradit**	**70.16**	**293**	P	**P**	**10 53 26.0**	**0.0**
KMI	**Kunming**	**70.81**	**301**	⇑*e*P	**P**	**10 53 31.3**	**+1.2**
KMI				pP	sP	10 53 44.1	+1.8
KMI				sP	PcP	10 53 49.8	-0.9
KMI				S	**S**	**11 02 42.6**	**-0.9**
KMI				pmax	pmax		
	comp=Z,29nm,1.1s						
KMI				pmax	pmax		
	comp=Z,310nm,6.0s						
KMI				LR	LR		
	comp=Z,330nm,11.8s						
KMI				LR	LR		
	comp=Z,600nm,19.1s						
KMI				LR	LR		
	comp=Z,420nm,14.2s						
SUKH	**Sukhothai**	**70.92**	**293**	P	**P**	**10 53 31.6**	**+1.0**
LAMP	**Lampang**	**71.24**	**294**	P	**P**	**10 53 33.6**	**+1.0**
PAYA	**Payao**	**71.29**	**295**	P	**P**	**10 53 33.6**	**+0.6**
HHC	**Hu-ho-hao-te**	**71.44**	**320**	*e*P	**P**	**10 53 34.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,4.8s						
CM04	**Chiang Mai Arr**	**71.79**	**293**	P	**P**	**10 53 36.5**	**+0.6**
CM01	**Chiang Mai Arr**	**71.81**	**293**	P	**P**	**10 53 36.0**	**-0.1**
CM05	**Chiang Mai Arr**	**71.82**	**293**	P	**P**	**10 53 36.8**	**+0.7**
CM02	**Chiang Mai Arr**	**71.83**	**293**	P	**P**	**10 53 36.0**	**-0.1**
CM31	**Chiang Mai Arr**	**71.84**	**293**	P	**P**	**10 53 37.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**71.84**	**293**	P	**P**	**10 53 36.6**	**+0.4**
	comp=Z,11nm,0.9s,baz=114,slow=4.4,SNR=55						
CMAR	**Chiang Mai Arr**	**71.84**	**293**	P	**P**	**10 53 36.2**	**0.0**
CM13	**Chiang Mai Arr**	**71.86**	**293**	P	**P**	**10 53 36.9**	**+0.6**
ZEA	**Zeya**	**71.91**	**337**	⇑*e*P	**P**	**10 53 37.4**	**+1.6**
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,40nm,0.9s						
HIA	**Hailar**	**71.95**	**330**	*i* P	**P**	**10 53 35.8**	**-0.4**
HIA				pmax	pmax		
	comp=Z,23nm,1.0s						
CHTO	**Chiang Mai**	**71.95**	**294**	P	**P**	**10 53 36.9**	**0.0**
CHTO				pmax	pmax		
	comp=Z,27nm,1.2s						
CM32	**Chiang Mai Arr**	**71.99**	**294**	P	**P**	**10 53 38.0**	**+0.9**
CD2	**Chengdu**	**72.26**	**307**	P	**P**	**10 53 38.1**	**-0.4**
CD2				S	**S**	**11 02 58.9**	**-0.8**
CD2				pmax	pmax		
	comp=Z,50nm,1.1s						
CD2				pmax	pmax		
	comp=Z,350nm,11.8s						
CD2				LR	LR		
	comp=Z,2μm,22.6s						
CD2				LR	LR		
	comp=Z,2μm,23.5s						
CD2				LR	LR		
	comp=Z,2μm,22.6s						
SEY	**Seymchan**	**74.04**	**354**	*i* P	**P**	**10 53 48.2**	**-0.1**
LZH	**Lanzhou**	**74.39**	**312**	*e*P	**P**	**10 53 52.6**	**+1.5**
LZH				pP	pP	10 53 58.6	-1.5
LZH				pmax	pmax		
	comp=Z,42nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,4.8s						
LZH				LR	LR		
	comp=Z,260nm,14.3s						
LZH				LR	LR		
	comp=Z,210nm,15.8s						
LZH				LR	LR		
	comp=Z,270nm,16.3s						
YAK	**Yakutsk**	**77.66**	**344**	*ce*P	**P**	**10 54 09.2**	**+0.2**
YAK				pmax	pmax		
	comp=Z,38nm,0.9s						
YAK	**Yakutsk**	**77.66**	**344**	P	**P**	**10 54 09.1**	**+0.2**
SVW2	**Sparrevohn**	**77.75**	**18**	IAmb	IAmb	10 54 11.6	
	comp=Z,48nm,1.2s						
ULN	**Ulaanbaatar**	**77.89**	**324**	*ce*P	**P**	**10 54 11.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,45nm,1.3s						
ULN	**Ulaanbaatar**	**77.89**	**324**	P	**P**	**10 54 11.6**	**+0.8**
ULN				IAmb	IAmb	10 54 12.4	
	comp=Z,30nm,0.9s						
CNPM	**China Poot**	**77.99**	**21**	P	**P**	**10 54 11.2**	**+0.3**
CNPM				IAmb	IAmb	10 54 24.5	
	comp=Z,46nm,1.2s						
RSO	**Redoubt South**	**78.16**	**20**	P	**P**	**10 54 13.1**	**+1.1**
SONM	**Songino Array**	**78.26**	**324**	P	**P**	**10 54 13.3**	**+0.5**
	comp=Z,8.9nm,0.9s,baz=138,slow=6.4,SNR=40						
SONM	**Songino Array**	**78.26**	**324**	P	**P**	**10 54 12.6**	**-0.2**
SONM				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**78.26**	**324**	P	**P**	**10 54 12.6**	**-0.2**
BILL	**Bilibino**	**78.46**	**0**	*i* P	**P**	**10 54 13.6**	**+0.3**
BILL				*i*		10 54 20.6	
BILL				*i*		10 54 29.9	
BILL				*i*		10 57 10.1	
BILL				pmax	pmax		
	comp=Z,46nm,1.0s						
BILL	**Bilibino**	**78.46**	**0**	P	**P**	**10 54 14.0**	**+0.8**
GTA	**Gaotai**	**78.68**	**314**	⇓P	**P**	**10 54 15.9**	**+0.6**
GTA				pmax	pmax		
	comp=Z,31nm,1.3s						
SEW	**Seward**	**79.03**	**21**	P	**P**	**10 54 17.5**	**+1.0**
O22K	**Cooper Landing**	**79.20**	**21**	P	**P**	**10 54 18.1**	**+0.6**
	baz=225						
O22K	**Cooper Landing**	**79.20**	**21**	P	**P**	**10 54 17.4**	**-0.2**
QSPA	**South Pole Qui

TGL IAmb IAmb 10 54 33.8
comp=Z,29nm,0.8s
VRDI Verde Repeater 81.97 22 IAmb IAmb 10 54 34.0
comp=Z,26nm,0.7s
IMAR Indian Mountai 82.05 16 P **P 10 54 33.7 +1.0**
MLY Manley 82.17 17 P **P 10 54 33.5 +0.1**
baz=223
MCARA McCarthy VSAT 82.23 22 IAmb IAmb 10 54 35.4
comp=Z,22nm,0.9s
BALM Baldy 82.27 23 P **P 10 54 34.3 +0.2**
NEA2 Nenana 82.35 18 P **P 10 54 34.1 -0.2**
baz=225
PCA Pinnacle 82.51 24 P **P 10 54 36.0 +0.7**
CTGM Chitina Glacie 82.61 23 P **P 10 54 36.6 +0.7**
I23K Minto, Yukon-K 82.66 18 P **P 10 54 35.5 -0.3**
baz=224
MDM Murphy Dome 82.86 18 P **P 10 54 36.7 -0.3**
MDM IAmb IAmb 10 54 38.3
comp=Z,22nm,1.2s
HDA Harding Lake 82.88 19 P **P 10 54 37.0 0.0**
baz=227
TCOL CIGO, UAF Yank 82.92 18 P **P 10 54 37.1 -0.1**
baz=226
TCOL CIGO, UAF Yank 82.92 18 IAmb IAmb 10 54 39.3
comp=Z,25nm,0.7s
COLA College 82.92 18 *i* P **P 10 54 37.1 -0.1**
COLA pmax pmax
comp=Z,20nm,0.7s
COLA College 82.92 18 P **P 10 54 36.9 -0.3**
COLA IAmb IAmb 10 54 39.3
comp=Z,25nm,0.7s
MENT Mentasta 82.98 21 P **P 10 54 38.4 +0.7**
MENT IAmb IAmb 10 54 39.5
comp=Z,14nm,0.6s
IL31 83.15 19 IAmb IAmb 10 54 39.7
comp=Z,12nm,0.7s
ILAR Eielson Array 83.15 19 P **P**
comp=Z,12nm,0.7s,baz=237,slow=5.1,SNR=139 **10 54 38.1 -0.3**
ILAR Eielson Array 83.15 19 P **P 10 54 38.3 -0.1**
ILAR Eielson Array 83.15 19 P **P 10 54 38.3 -0.1**
L26K Log Cabin Wild 83.16 21 P **P 10 54 39.4 +0.8**
baz=230
POKR Poker Plat Res 83.22 18 P **P 10 54 39.0 +0.2**
baz=226
POKR Poker Plat Res 83.22 18 IAmb IAmb 10 54 39.7
comp=Z,16nm,0.9s
DOT Dot Lake 83.32 20 IAmb IAmb 10 54 41.0
comp=Z,18nm,0.8s
J01E Myrtle Point 83.33 44 P **P 10 54 40.3 +0.5**
baz=249
K02D Willamette Mer 83.35 44 P **P 10 54 41.1 +1.0**
baz=249
N02D Trinity Center 83.42 46 P **P 10 54 41.4 +0.9**
baz=250
M02C Callahan 83.46 46 P **P 10 54 41.4 +0.8**
baz=250
SCRK Sand Creek 83.56 20 P **P 10 54 41.3 +0.6**
baz=230
SMMC Simmler 83.61 52 P **P 10 54 41.6 0.0**
baz=252
PKM Mcpherson Peak 83.63 53 P **P 10 54 42.9 +1.1**
baz=252
BCAR Beaver Creek A 83.74 21 P **P 10 54 42.9 +1.3**
HUMO Hull Mountain 83.81 45 P **P 10 54 42.1 -0.2**
HUMO IAmb IAmb 10 54 44.6
comp=Z,19nm,1.0s
O03E Paynes Creek 83.84 47 P **P 10 54 43.0 +0.4**
baz=251,SNR=6.7
COLD Coldfoot 83.92 16 P **P 10 54 44.0 +1.6**
baz=224
COLD Coldfoot 83.92 16 P **P 10 54 42.7 +0.3**
AFDM Forest Hills D 84.01 49 IAmb IAmb 10 54 45.0
comp=Z,18nm,0.9s
HYT Haines Junctio 84.05 24 IAmb IAmb 10 54 44.9
comp=Z,15nm,0.8s
L04D Klamath Falls 84.13 45 P **P 10 54 44.5 +0.3**
baz=250
CMB Columbia Colle 84.15 50 P **P 10 54 44.9 +0.6**
CMB pmax pmax
comp=Z,12nm,0.9s
CMB Columbia Colle 84.15 50 P **P 10 54 44.9 +0.6**
K27K Chicken 84.24 20 P **P 10 54 45.4 +1.3**
baz=231
M04C Macdoel 84.31 46 P **P 10 54 45.9 +0.8**
baz=250,SNR=5.8
ARVC Arvin 84.47 53 P **P 10 54 46.1 +0.2**
baz=253
VES Vestal, Richgr 84.48 52 P **P 10 54 46.2 +0.3**
baz=253
I04A Tendick Farm, 84.59 44 P **P 10 54 47.0 +0.6**
baz=250
J04D Umpqua Nationa 84.61 44 P **P 10 54 47.6 +1.0**
baz=250
BEKR Beckworth 84.75 48 IAmb IAmb 10 54 48.9
comp=Z,11nm,0.7s
MWC Mount Wilson 84.82 54 P **P 10 54 47.6 -0.3**
MWC pmax pmax
comp=Z,13nm,1.0s
MWC Mount Wilson 84.82 54 P **P 10 54 47.6 -0.3**
MWC IAmb IAmb 10 54 48.9
comp=Z,13nm,0.9s
ISA Isabella, Lake 84.90 52 P **P 10 54 47.2 -1.0**
ISA pmax pmax
comp=Z,15nm,1.0s
ISA Isabella, Lake 84.90 52 P **P 10 54 48.7 +0.5**
baz=253,SNR=11
ISA Isabella, Lake 84.90 52 P **P 10 54 47.1 -1.0**
ISA IAmb IAmb 10 54 49.9
comp=Z,15nm,1.0s
WAKR Walker 85.01 50 IAmb IAmb 10 54 50.9
comp=Z,38nm,1.4s
MDPB Devils Postpil 85.02 50 IAmb IAmb 10 54 50.6
comp=Z,17nm,0.9s
EDW2 Edwards Air Fo 85.06 53 P **P 10 54 49.8 +0.9**
baz=254,SNR=12
PNTR Pine Nut 85.07 49 IAmb IAmb 10 54 50.9
comp=Z,13nm,0.8s
OMMB Old Mammoth Mi 85.07 50 IAmb IAmb 10 54 51.0
comp=Z,16nm,1.2s
MAW Mawson 85.07 202 P **P 10 54 49.3 +1.1**
comp=Z,42nm,1.0s,baz=108,slow=6.4,SNR=38
MAW Mawson 85.07 202 P **P 10 54 49.3 +1.1**
MAW pmax pmax
comp=Z,9.0nm,0.9s
MAW Mawson 85.07 202 P **P 10 54 49.3 +1.1**
VCNR Virginia City 85.09 49 P **P 10 54 45.6 -3.6**
TOLK Toolik Lake Re 85.11 15 P **P 10 54 49.4 +1.0**
baz=224
BFSC Mount Baldy Ra 85.14 54 P **P 10 54 49.5 0.0**
baz=254,SNR=8.7
DAWY Dawson 85.20 21 P **P 10 54 49.4 +0.5**
DAWY IAmb IAmb 10 54 50.9
comp=Z,18nm,0.8s
109C Camp Elliot, M 85.22 55 P **P 10 54 49.3 -0.4**
baz=254
J05D Fort Rock, OR 85.23 45 P **P 10 54 50.4 +0.7**
baz=251,SNR=10
K05A Summer Lake 85.28 45 IAmb IAmb 10 54 52.0
comp=Z,21nm,0.9s
MURC Murrieta 85.34 55 P **P 10 54 50.2 -0.1**
baz=254
PAHR Pah Rah Range 85.41 48 IAmb IAmb 10 54 52.4
comp=Z,12nm,0.9s
CWC Cottonwood Cre 85.43 52 P **P 10 54 51.5 +0.6**
baz=253
E04D Cinebar 85.45 41 P **P 10 54 51.1 +0.6**
baz=250
D03D Eldon 85.46 40 P **P 10 54 51.7 +1.2**
baz=249
LRMC Laurel Mtn Rad 85.47 53 P **P 10 54 51.7 +0.6**
baz=254
I05D Terrebonne, OR 85.50 44 P **P 10 54 51.5 +0.6**
baz=251
A21K Barrow 85.58 11 P **P 10 54 51.3 +0.8**
baz=217
A21K Barrow 85.58 11 IAmb IAmb 10 54 51.8
comp=Z,22nm,1.1s
PINE Pine Mountain 85.60 44 IAmb IAmb 10 54 53.5
comp=Z,15nm,0.8s
LHV Little Huntoon 85.63 50 IAmb IAmb 10 54 53.8
comp=Z,17nm,1.0s
BMAR Burnt Mountain 85.64 17 P **P 10 54 51.8 +0.8**
TIXI Tiksi 85.65 349 *ce* P **P 10 54 50.8 -0.1**
TIXI pmax pmax
comp=Z,244nm,2.5s
TIXI Tiksi 85.65 349 **P 10 54 50.4 -0.5**
RYN Ryan 85.73 50 IAmb IAmb 10 54 54.0
comp=Z,11nm,0.9s
BBRC Big Bear Solar 85.74 54 P **P 10 54 53.0 +0.5**
baz=254,SNR=5.4
MONP2 Monument Peak 85.77 56 P **P 10 54 53.5 +0.8**
baz=255,SNR=9.4
MPMC Manual Prospec 85.78 52 P **P 10 54 53.2 +0.5**
baz=254,SNR=13
NVAR Mina Array Bea 85.84 50 P **P 10 54 53.8 +0.8**
comp=Z,12nm,0.9s,baz=234,slow=8.1,SNR=52
NVAR Mina Array Bea 85.84 50 P **P 10 54 52.1 -0.8**
PFO Pinyon Flats O 85.93 55 *i* P **P 10 54 52.4 -1.0**
PFO pmax pmax
comp=Z,8.0nm,0.7s
PFO Pinyon Flats O 85.93 55 P **P 10 54 53.9 +0.5**
baz=254,SNR=5.2
TPFO Pinon Flats 85.93 55 P **P 10 54 53.9 +0.5**
baz=254,SNR=5.2
F05D White Salmon 85.94 42 P **P 10 54 53.9 +0.9**
baz=250
NV11 Mina Array Sit 85.95 50 P **P 10 54 53.2 -0.2**
NV11 IAmb IAmb 10 54 55.1
comp=Z,18nm,1.0s
DLBC Dease Lake 86.09 28 P **P 10 54 53.3 -0.2**
comp=Z,5.3nm,1.1s,baz=275,slow=5.8,SNR=5.1
GSC Goldstone, Bar 86.11 53 P **P 10 54 54.6 +0.4**
baz=254,SNR=6.6
GSC Goldstone, Bar 86.11 53 IAmb IAmb 10 54 55.9
comp=Z,15nm,1.3s
GRAC Grapevine Rang 86.14 51 P **P 10 54 55.0 +0.7**
baz=254,SNR=10
KVN Kaiserville 86.17 49 IAmb IAmb 10 54 56.0
comp=Z,11nm,0.9s
SWSC Sam W. Stewart 86.29 56 P **P 10 54 55.6 +0.7**
baz=255,SNR=5.5
B05A Bryant 86.34 40 P **P 10 54 55.3 +0.5**
baz=250
HEC Hector,Ludlow 86.36 54 P **P 10 54 55.7 +0.3**
baz=254,SNR=9.0
FURC Furnace Creek, 86.38 52 P **P 10 54 56.1 +0.7**
baz=254,SNR=9.9
BELC Belle Mtn. Jos 86.40 55 P **P 10 54 56.4 +0.7**
baz=255,SNR=16
I07A Izee 86.67 44 IAmb IAmb 10 54 58.0
comp=Z,8.4nm,0.8s
SHOC Shoshone, Teco 86.69 53 P **P 10 54 57.5 +0.5**
baz=254
BC3 Big Chuckawall 86.75 55 P **P 10 54 58.3 +0.9**
baz=255,SNR=9.0
TUQ Turquoise Moun 86.84 53 P **P 10 54 58.2 +0.4**
baz=255
GMRC Granite Mounta 86.88 54 P **P 10 54 58.5 +0.4**
baz=255,SNR=7.1
TPNV Topopah Spring 86.99 52 P **P 10 54 58.9 +0.4**
baz=254
GLA Glamis 87.11 56 P **P 10 55 00.2 +1.1**
baz=255
GLA Glamis 87.11 56 IAmb IAmb 10 55 01.4
comp=Z,22nm,0.9s
IRM Iron Mountain 87.13 55 P **P 10 54 59.9 +0.7**
baz=255,SNR=13
J08A Circle Bar Ran 87.16 45 IAmb IAmb 10 55 00.8
comp=Z,14nm,1.0s
G08A Pilot Rock 87.41 43 IAmb IAmb 10 55 01.9
comp=Z,12nm,1.0s
EPYK Eagle Plains 87.45 20 P **P 10 55 00.6 +0.6**
baz=236
EPYK Eagle Plains 87.45 20 P **P 10 54 59.8 -0.2**
EPYK IAmb IAmb 10 55 01.9
comp=Z,17nm,0.8s
NEE2 Needles Airpor 87.70 54 P **P 10 55 02.5 +0.7**
baz=256
E08A Dider Farm, El 87.72 42 IAmb IAmb 10 55 03.5
comp=Z,15nm,1.0s
R11A Troy Canyon, C 87.87 51 P **P 10 55 03.1 +0.4**
baz=255,SNR=8.8
113A Mohawk Valley, 87.90 56 IAmb IAmb 10 55 05.0
comp=Z,11nm,1.1s
PDMCI Parker Dam,Lak 87.97 55 P **P 10 55 03.9 +0.8**
baz=256,SNR=8.4
PRN Pahroc Range 88.03 52 IAmb IAmb 10 55 05.7
comp=Z,18nm,1.1s
B08A Colville Reser 88.12 40 IAmb IAmb 10 55 04.1
comp=Z,12nm,1.3s
E09A Wod Farm, Sta 88.32 42 IAmb IAmb 10 55 07.3
comp=Z,15nm,1.5s
W13A Hualapai Mount 88.37 54 IAmb IAmb 10 55 07.4
comp=Z,23nm,1.4s
214A Organ Pipe Nat 88.50 57 P **P 10 55 06.9 +1.2**
baz=257
214A Organ Pipe Nat 88.50 57 IAmb IAmb 10 55 08.3
comp=Z,24nm,1.1s
WMQ Urumqi 88.72 315 *e* P **P 10 55 06.3 -0.2**
WMQ sP pwP 10 55 25.3 +6.2
WMQ PP **PP 10 58 40.4 +4.7**
WMQ S **SKKSac 11 05 43.5 -1.6**
WMQ sS sS 11 06 12.4 +5.4
WMQ SS **SS 11 11 40.4 -3.4**
WMQ pmax pmax
comp=Z,33nm,3.7s
WMQ LR LR
comp=Z,680nm,29.2s
WMQ LR LR
comp=Z,910nm,29.2s
WMQ LR LR
comp=Z,560nm,21.5s
F10A Beach Ranch, E 88.78 43 P **P 10 55 06.1 -0.7**
F10A IAmb IAmb 10 55 08.0
comp=Z,7.5nm,0.8s
Y14A Wickenburg 88.80 55 IAmb IAmb 10 55 09.0
comp=Z,10nm,1.1s
SPR3 Spring Creek 3 88.98 50 IAmb IAmb 10 55 09.9
comp=Z,13nm,1.1s
NEW Newport 89.50 41 P **P 10 55 10.3 +0.2**
baz=254
HLID Hailey 90.06 46 P **P 10 55 14.1 +1.2**
baz=256
HLID Hailey 90.06 46 IAmb IAmb 10 55 14.5
comp=Z,7.2nm,0.9s
PKCU Pink Cliffs 90.16 52 P **P 10 55 13.8 +0.1**
X16A Lo Mia Camp, P 90.17 55 IAmb IAmb 10 55 16.0
comp=Z,12nm,0.9s
TUC Tucson 90.25 57 P **P 10 55 15.7 +1.7**
TUC pmax pmax
comp=Z,8.0nm,0.9s
TUC Tucson 90.25 57 P **P 10 55 15.1 +1.1**
baz=258
TUC Tucson 90.25 57 P **P 10 55 15.7 +1.7**
TUC IAmb IAmb 10 55 16.4
comp=Z,8.3nm,0.9s
DUG Dugway, Tooele 90.41 49 P **P 10 55 15.2 +0.6**
baz=256
DUG Dugway, Tooele 90.41 49 IAmb IAmb 10 55 26.3
comp=Z,12nm,1.2s
WUAZ Wupatki 90.46 54 P **P 10 55 16.3 +1.3**
baz=257
WUAZ Wupatki 90.46 54 IAmb IAmb 10 55 17.2
comp=Z,14nm,0.9s
BELA Belgrano 2 90.92 176 P **P 10 55 15.9 -0.2**
MPU Maple Canyon 91.25 50 P **P 10 55 17.9 -0.7**
ZSN Zaisan 91.57 318 *e* P **P 10 55 18.4 -1.3**
comp=Z,3.8nm,1.1s,baz=318
ZSN Zaisan 91.57 318 *e* P **P 10 55 18.4 -1.3**
ZSN pmax pmax
comp=Z,4.0nm,1.1s
W18A Petrified Fore 91.69 55 P **P 10 55 21.8 +1.1**
baz=258
WALA Waterton Lakes 91.76 40 IAmb IAmb 10 55 21.9
comp=Z,14nm,1.2s
SYO Syowa Base 92.16 197 ‖ *e* P **P 10 55 22.2 +0.2**
BOZ Bozeman (W) 92.47 44 P **P 10 55 24.9 +0.8**
baz=257
BOZ Bozeman (W) 92.47 44 IAmb IAmb 10 55 25.9
comp=Z,11nm,0.9s
TPAW Teton Pass 92.50 46 IAmb IAmb 10 55 28.0
comp=Z,4.6nm,0.8s
REDW Red Top Meadow 92.54 46 P **P 10 55 23.9 -0.7**
REDW IAmb IAmb 10 55 39.0
comp=Z,7.3nm,1.1s
IMW Indian Meadow 92.59 46 IAmb IAmb 10 55 26.6
comp=Z,5.7nm,0.8s
SNOW Snow King Moun 92.63 46 IAmb IAmb 10 55 27.1
comp=Z,4.7nm,0.7s
121A Cookes Peak, D 92.78 58 P **P 10 55 27.2 +1.3**
baz=259
121A Cookes Peak, D 92.78 58 IAmb IAmb 10 55 27.9
comp=Z,6.3nm,0.9s
FLWY Flagg Ranch 92.80 46 IAmb IAmb 10 55 28.2
comp=Z,4.9nm,0.8s
PV14 Lion Creek, Pa 92.89 52 IAmb IAmb 10 55 28.7
comp=Z,5.7nm,0.7s
PV19 Morning Glory 92.91 52 IAmb IAmb 10 55 29.4
comp=Z,7.3nm,0.9s
PV23 Carpenter Ridg 92.92 52 P **P 10 55 26.2 -0.3**
PV17 East Wray Mesa 92.92 52 IAmb IAmb 10 55 29.4
comp=Z,5.7nm,0.8s
PV20 West Nyswonger 92.93 52 IAmb IAmb 10 55 28.9
comp=Z,5.3nm,0.7s
H17A Grant Village 92.95 46 P **P 10 55 27.8 +1.4**
baz=258
H17A Grant Village 92.95 46 IAmb IAmb 10 55 29.2
comp=Z,5.3nm,0.8s
PV04 Paradox Valley 92.99 52 IAmb IAmb 10 55 29.0
comp=Z,5.9nm,0.8s
PV12 Saucer Basin, 93.05 52 IAmb IAmb 10 55 29.2
comp=Z,7.4nm,0.8s
C36M Paulatuk 93.07 20 P **P 10 55 25.5 -0.5**
baz=248
C36M Paulatuk 93.07 20 IAmb IAmb 10 55 26.4
comp=Z,8.3nm,0.9s
PV22 Blue Mesa, Par 93.11 52 IAmb IAmb 10 55 29.7
comp=Z,4.8nm,0.8s
MK31 Makanchi Array 93.14 317 *ce* P **P 10 55 26.6 -0.4**
MKAR Makanchi Array 93.14 317 P **P 10 55 26.7 -0.3**
comp=Z,9.7nm,0.9s,baz=101,slow=6.3,SNR=45
MKAR PKiKP **PKiKP 11 00 12.8 -1.2**
comp=Z,0.9nm,0.8s,baz=82,slow=2.7,SNR=4.6
MKAR Makanchi Array 93.14 317 P **P 10 55 26.3 -0.7**
MKAR Makanchi Array 93.14 317 P **P 10 55 26.3 -0.7**
ZAA0 Zalesovo Array 93.15 324 IAmb IAmb 10 55 26.5
comp=Z,14nm,1.1s
ZALV Zalesovo Beam 93.15 324 P **P 10 55 25.6 -1.1**
comp=Z,11nm,1.0s,baz=104,slow=4.7,SNR=27
ZALV PKKP **PKKPdf 11 12 35.0 -1.1**
comp=Z,1.1nm,0.6s,baz=268,slow=2.2,SNR=4.9
ZALV Zalesovo Beam 93.15 324 P **P 10 55 24.8 -2.0**
PV07 Paradox Valley 93.20 52 IAmb IAmb 10 55 29.7
comp=Z,6.0nm,0.8s
PV01 Paradox Valley 93.20 52 P **P 10 55 28.8 +1.0**
BW06 Boulder Array 93.35 47 P **P 10 55 28.9 +0.6**
baz=259
PDAR Pinedale Array 93.35 47 P **P 10 55 28.4 0.0**
comp=Z,3.5nm,0.9s,baz=254,slow=2.4,SNR=22
PDAR Pinedale Array 93.35 47 P **P 10 55 27.9 -0.4**
MAKZ Makanchi 93.35 317 P **P 10 55 27.7 -0.2**
MAKZ pmax pmax
comp=Z,30nm,1.2s
MAKZ Makanchi 93.35 317 P **P 10 55 27.7 -0.2**
O20A White River Ci 93.82 50 P **P 10 55 30.7 +0.2**
baz=259
RLMT Red Lodge 94.01 45 P **P 10 55 32.1 +0.8**
baz=259
EGMT Eagleton 94.23 42 P **P 10 55 32.6 +0.5**
baz=259
EGMT Eagleton 94.23 42 IAmb IAmb 10 55 33.3
comp=Z,8.1nm,0.8s
ANMO Albuquerque 94.30 55 *ce* P **P 10 55 33.4 +0.6**
ANMO pmax pmax
comp=Z,4.0nm,1.0s
ANMO Albuquerque 94.30 55 P **P 10 55 33.0 +0.2**
baz=260
ANMO Albuquerque 94.30 55 P **P 10 55 33.4 +0.6**
SHLS Shalkode 94.40 313 *eP* **P 10 55 30.4 -2.6**
comp=Z,4.2nm,1.0s,baz=313
SHLS Shalkode 94.40 313 *eP* **P 10 55 30.4 -2.6**
SHLS pmax pmax
comp=Z,4.0nm,1.0s
S22A 4UR Ranch, Cre 94.48 53 P **P 10 55 34.2 +0.5**
baz=260
MNTX Cornudas Mount 94.64 59 P **P 10 55 34.4 +0.2**
baz=260
YKA Yellowknife Ar 94.65 27 P **P 10 55 32.4 -1.1**
comp=Z,2.6nm,0.7s,baz=262,slow=4.3,SNR=14
KPKS Kokpek 95.01 313 *eP* **P 10 55 34.1 -1.6**
comp=Z,3.7nm,1.4s,baz=313
KPKS Kokpek 95.01 313 *eP* **P 10 55 34.1 -1.6**
KPKS pmax pmax
comp=Z,4.0nm,1.4s
TDK Taldyqorghan 95.47 315 *eP* **P 10 55 35.4 -2.3**
baz=315
TDK LR LR 11 39 33.8
comp=Z,295nm,18.4s,baz=315
TDK Taldyqorghan 95.47 315 *eP* **P 10 55 35.4 -2.3**
TDK MLR MLR
comp=Z,295nm,18.0s
N23A Red Feather La 95.68 50 P **P 10 55 39.5 +0.4**
baz=261
NRIK Noril'sk 95.69 340 P **P 10 55 37.5 -0.6**
comp=Z,7.3nm,0.9s,baz=140,slow=5.5,SNR=8.0
NRIK Noril'sk 95.69 340 *ce* P **P 10 55 37.3 -0.8**
NRIK pmax pmax
comp=Z,18nm,1.4s
TXAR Lajitas Array 95.72 61 P **P 10 55 39.9 +0.5**
comp=Z,0.7nm,0.7s,baz=206,slow=8.3,SNR=4.6
TXAR PP **PP 10 59 33.0 +1.7**
comp=Z,0.7nm,0.9s,baz=256,slow=5.0,SNR=4.3
TXAR Lajitas Array 95.72 61 P **P 10 55 38.0 -1.3**
TXAR Lajitas Array 95.72 61 P **P 10 55 38.0 -1.3**
ISCO Idaho Springs 95.76 51 P **P 10 55 39.7 +0.1**
baz=261
MDOK Medeo 96.14 313 *eP* **P 10 55 38.6 -2.4**
baz=313
MDOK LR LR 11 38 54.1
comp=Z,185nm,18.8s,baz=313
MDOK Medeo 96.14 313 *eP* **P 10 55 38.6 -2.4**
MDOK MLR MLR
comp=Z,185nm,19.0s
KURK Kurchatov 96.24 320 *ce* P **P 10 55 39.8 -1.2**
KURK pmax pmax
comp=Z,14nm,1.6s
KURK Kurchatov 96.24 320 P **P 10 55 39.4 -1.6**
KURBB Kurchatov Arra 96.28 320 P **P 10 55 39.9 -1.3**
comp=Z,1.3nm,0.8s,baz=91,slow=4.1,SNR=10
KURBB PKiKP **PKiKP 11 00 18.4 -0.7**
comp=Z,0.6nm,0.8s,baz=134,slow=2.2,SNR=5.0
KSH Kashi 96.40 309 *eP* **P 10 55 45.1 +2.9**
KSH pmax pmax
comp=Z,380nm,5.6s
KUU Kurty 96.76 313 *eP* **P 10 55 41.7 -1.9**
comp=Z,3.9nm,0.9s,baz=313
KUU Kurty 96.76 313 *eP* **P 10 55 41.7 -1.9**
KUU pmax pmax
comp=Z,4.0nm,0.9s
NVL N'lazarevskaya 96.87 188 *eP* **P 10 55 42.7 -0.8**
NVL *eS* **SKSac 11 06 18.5 +0.4**
NVL pmax pmax
comp=Z,9.0nm,0.9s
SNAA Sanae 97.53 184 P **P 10 55 46.6 -0.1**
SNAA Sanae 97.53 184 *ce* P Pdif 10 55 46.8 +0.1
SNAA pmax pmax
comp=Z,13nm,1.2s
SNAA Sanae 97.53 184 P **P 10 55 46.5 -0.2**
AAK Ala-Archa 97.93 312 *i* P **P 10 55 48.0 -1.1**
AAK pmax pmax
comp=Z,5.0nm,1.0s
DGMT Dagmar 97.97 42 P Pdif 10 55 49.2 +0.2
baz=263
AMTX Amarillo 98.17 56 P Pdif 10 55 50.5 +0.1
baz=263
VNA3 Neumayer Olymp 98.26 182 P **P 10 55 49.5 -0.4**
VNA2 Neumayer--Watz 98.50 182 P **P 10 55 50.9 -0.1**
baz=169,slow=4.4
BTLS Baital 98.53 314 *eP* **P 10 55 49.6 -1.9**
baz=314
BTLS Baital 98.53 314 *eP* **P 10 55 49.6 -1.9**
VNA1 Neumayer--Stat 98.81 182 P Pdif 10 55 53.1 +0.8
BRZS Berezniki 99.94 319 *eP* **Pdif 10 55 56.7 -1.0**
baz=319
BRZS *eS* **SKSac 11 06 32.7 -1.6**
baz=319
BRZS Berezniki 99.94 319 *eP* **Pdif 10 55 56.7 -1.0**
BRZS *eS* **SKSac 11 06 32.6 -1.6**
IUG Iuzhnay 101.17 311 *eP* **Pdif 10 56 02.0 -1.5**
baz=311
IUG Iuzhnay 101.17 311 *eP* **Pdif 10 56 02.0 -1.5**
BVAR Borovoye Array 101.55 322 P **Pdif 10 56 03.6 -1.2**
comp=Z,0.4nm,0.5s,baz=236,slow=24,SNR=7.1
BRVK Borovoye 101.61 322 *i* P **Pdif 10 56 03.8 -1.2**
BRVK pmax pmax
comp=Z,13nm,2.4s
V55A Taylorsville 114.89 55 P PKPdf 11 00 53.3 -0.7
baz=275
V56A Mocksville 115.47 55 P **PKPdf 11 00 54.4 -0.7**
baz=275

R55A	Marlinton	115.51	53	P		PKPdf	11 00 54.3 -0.9
	baz=277						
ALGO	Algonquin Park	115.80	44	P		PKiKP	11 00 54.2 -1.2
	baz=282						
ARCES	ARCESS Array B	115.90	345	PKP		PKiKP	11 00 54.3 -0.7
	comp=Z,8.0nm,0.7s,baz=68,slow=1.6,SNR=30						
W57A	Gilead	115.94	56	P		PKPdf	11 00 55.1 -0.9
	baz=275						
M56A	Emporium	116.54	49	P		PKPdf	11 00 56.7 -0.3
	baz=280						
L56A	Greenwood	116.88	48	P		PKPdf	11 00 56.1 -1.6
	baz=280						
K56A	Middlesex	116.95	47	P		PKPdf	11 00 56.6 -1.2
	baz=281						
O57A	Amberson	117.16	50	P		PKiKP	11 00 58.3 +0.1
	baz=279						
J56A	Wolcott	117.18	47	P		PKPdf	11 00 57.2 -0.9
	baz=282						
D55A	Sainte-Anne-du	117.29	42	P		PKPdf	11 00 57.3 -1.0
	baz=284						
M57A	Sunshine Farm,	117.34	49	P		PKPdf	11 00 57.9 -0.6
	baz=280						
L57A	Andrews Acres	117.43	48	P		PKPdf	11 00 57.7 -1.0
	baz=281						
MAK	Makhachkala	117.68	313	*e*P		Pdif	10 57 16.6 -0.1
MAK				*i*			11 00 57.9
MAK				*e*			11 02 10.9
MAK				*e*PPP	PPP		11 04 37.7
MAK				*e*SS	SS		11 18 23.1 +0.6
MAK				*e*SSS	SSS		11 22 44.2
MAK				pmax	pmax		
	comp=Z,411nm,1.2s						
O58A	Lewisberry	117.71	50	P		PKPdf	11 00 59.0 -0.2
	baz=280						
N58A	Sunbury	117.74	49	P		PKPdf	11 00 58.7 -0.6
	baz=280						
J57A	Williamstown	117.76	46	P		PKPdf	11 00 58.7 -0.5
	baz=282						
L58A	Harry Jones Me	118.15	48	P		PKPdf	11 00 59.6 -0.4
	baz=282						
O59A	Robesonia	118.23	50	P		PKPdf	11 00 59.6 -0.7
	baz=280						
J58A	Remsen	118.28	46	P		PKPdf	11 00 59.5 -0.8
	baz=283						
E57A	Chemin Saint G	118.33	43	P		PKPdf	11 00 59.4 -0.9
	baz=285						
L59A	Walton	118.71	48	P		PKPdf	11 01 00.3 -0.9
	baz=282						
K59A	Cooperstown	118.72	47	P		PKPdf	11 01 00.0 -1.1
	baz=283						
J59A	Piesco	118.81	46	P		PKPdf	11 01 00.3 -1.0
	baz=283						
O60A	Telford	118.82	50	P		PKPdf	11 01 00.7 -0.6
	baz=281						
E58A	La Victoria	118.92	43	P		PKPdf	11 01 00.6 -0.8
	baz=286						
N60A	Cedar Hill Far	118.94	49	P		PKPdf	11 01 00.6 -1.0
	baz=282						
VRH	Novokhopyorsk	119.17	323	*e*PKIKP		PKPdf	11 01 00.6 -1.1
VRH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
I60A	Shoreham	119.58	45	P		PKPdf	11 01 02.4 -0.4
	baz=285						
J60A	Lant Hill Farm	119.63	46	P		PKPdf	11 01 02.1 -0.8
	baz=284						
SCHQ	Scheffer ville	119.73	32	PKP		PKPdf	11 01 01.1 -1.6
	comp=Z,4.8nm,0.9s,baz=243,slow=6.3,SNR=3.0						
M61A	Granite Spring	119.83	48	P		PKPdf	11 01 02.5 -0.8
	baz=283						
K61A	Williamstown	119.88	47	P		PKPdf	11 01 02.6 -0.8
	baz=284						
F60A	Warwick	119.92	43	P		PKPdf	11 01 02.3 -1.1
	baz=287						
E60A	Ste Agathe de	120.14	42	P		PKPdf	11 01 03.4 -0.3
	baz=288						
LPSR	Galich'ya Gora	120.23	326	*e*PKIKP		PKPdf	11 01 02.6 -1.1
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
I61A	Oroboro, Fairl	120.31	45	P		PKPdf	11 01 03.9 -0.2
	baz=286						
OBN	Obninsk	120.38	329	*i* PKIKP		PKPdf	11 01 03.2 -0.7
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
G61A	St-Isidore-de-	120.40	43	P		PKPdf	11 01 04.1 -0.2
	baz=287						
LPAZ	La Paz	120.47	116	PKP		PKiKP	11 01 06.3 +0.2
	comp=Z,5.0nm,0.7s,baz=317,slow=2.1,SNR=17						
LPAZ	La Paz	120.47	116	PKiKP		PKiKP	11 01 06.1 0.0
LPAZ	La Paz	120.47	116	PKPdf		PKiKP	11 01 06.1 0.0
K62A	Royalston	120.62	47	P		PKPdf	11 01 04.4 -0.4
	baz=285						
VSR	Storozhevoye	120.65	324	*e*PKIKP		PKPdf	11 01 03.3 -1.3
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
D61A	St Aubert, Com	120.70	41	P		PKiKP	11 01 04.8 0.0
	baz=289						
E61A	Lac Etchemin	120.75	42	P		PKPdf	11 01 04.4 -0.6
	baz=288						
KBZ	Khabaz	120.76	315	*c i* PKIKP		PKPdf	11 01 05.0 0.0
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIV	Kislovodsk	120.85	315	*e*PKIKP		PKPdf	11 01 04.7 -0.6
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
J63A	Strafford	121.28	46	P		PKPdf	11 01 05.2 -0.8
	baz=286						
E62A	Clayton Lake	121.32	41	P		PKPdf	11 01 05.3 -0.7
	baz=289						
FINES	FINESS Array B	121.34	339	PKP		PKPdf	11 01 05.2 -0.4
	comp=Z,4.3nm,0.8s,baz=11,slow=3.9,SNR=10						
D62A	Allapoint, All	121.47	41	P		PKPdf	11 01 05.4 -0.9
	baz=290						
RAYN	Ar Rayn	121.71	291	PKiKP		PKPdf	11 01 07.5 0.0
RAYN	Ar Rayn	121.71	291			PKPdf	11 01 07.5 0.0
G63A	Kingsbury	121.74	43	P		PKPdf	11 01 06.1 -0.8
	baz=288						
PKME	Peaks-Kenny Pk	121.91	43	P		PKPdf	11 01 06.3 -0.9
	baz=289						
GEVA	Gevas	121.97	309	PKPdf		PKiKP	11 01 08.1 +0.2
F64A	Sherman	122.34	42	P		PKPdf	11 01 07.2 -0.7
	baz=290						
CPUP	Villa Florida	124.39	132	PKP		PKPdf	11 01 12.5 0.0
	comp=Z,9.5nm,0.8s,baz=300,slow=2.1,SNR=18						
SDV	Santo Domingo	124.58	86	PKPdf		PKPdf	11 01 12.9 -0.6
NACGM	Naroch	125.24	332	*e*		PKPdf	11 01 12.0 -1.3
BOSA	Boshof	125.35	223	PKP		PKiKP	11 01 14.7 -0.2
	comp=Z,9.5nm,0.7s,baz=114,slow=4.6,SNR=15						
NB2	NORSAR Subarra	126.26	345	PKPdf		PKPdf	11 01 14.4 -0.7
	comp=Z,4.5nm,0.8s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.26	345	PKP		PKPdf	11 01 14.7 -0.5
	comp=Z,4.1nm,0.7s,baz=34,slow=2.0,SNR=12						
AKASG	Malin Array Be	126.45	327	PKP		PKPdf	11 01 14.8 -0.9
	comp=Z,3.7nm,0.7s,baz=60,slow=2.2,SNR=13						
AKASG	Malin Array Be	126.45	327	PKiKP		PKPdf	11 01 15.1 -0.6
AKASG	Malin Array Be	126.45	327	PKPdf		PKPdf	11 01 15.1 -0.6
AKBB	Malin Array Si	126.45	327	*c i* PKiKP		PKPdf	11 01 13.8 -1.9
KIEV	Kiev	126.46	327	PKiKP		PKPdf	11 01 13.0 -2.7
KMBO	Kilima Mbogo	127.35	260	PKP		PKiKP	11 01 20.8 +1.4
	comp=Z,0.8nm,0.3s,baz=55,slow=6.1,SNR=4.1						
BRTR	Keskin Array B	128.59	313	PKP		PKPdf	11 01 19.7 -0.7
	comp=Z,3.8nm,0.9s,baz=186,slow=4.3,SNR=8.5						
BRTR	Keskin Array B	128.59	313	PKiKP		PKPdf	11 01 18.8 -1.6
BRTR	Keskin Array B	128.59	313	PKPdf		PKPdf	11 01 18.8 -1.6
KMPD	K-Podol'skiy	129.12	326	PKiKP		PKPdf	11 01 19.0 -1.9
SJG	San Juan	129.42	75	PKiKP		PKPdf	11 01 22.1 -0.2
SJG	San Juan	129.42	75			PKPdf	11 01 22.1 -0.2
BUR08	Bucovina Ar. S	130.34	326	PKPdf		PKiKP	11 01 25.1 +0.9
CDVI	St. Croix	130.75	76	PKPdf		PKPdf	11 01 24.9 +0.1
KOLS	Kolonicke sedl	131.13	328	*e*PKIKP		PKiKP	11 01 25.8 +0.1
KOLS	Kolonicke sedl	131.13	328	*e*PKP		PKiKP	11 01 25.8 +0.1
CRVS	Cervenica-Dubn	131.57	329	*e*PKIKP		PKPdf	11 01 25.7 +0.1
CRVS	Cervenica-Dubn	131.57	329	*e*PKP		PKPdf	11 01 25.7 +0.1
OSTC	Ostas	132.91	334	*e*PKPDF		PKiKP	11 01 29.0 -0.2
KRLC	Kraliky	133.01	333	*e*PKIKP		PKiKP	11 01 29.2 -0.3
KRLC	Kraliky	133.01	333	*e*PKPDF		PKiKP	11 01 29.2 -0.3
CLL	Collm	133.67	336	*i* PKPdf		PKiKP	11 01 29.5 +0.1
	comp=Z,11nm,1.3s						
CLL				*e*PP		PP	11 03 57.0 -0.7
CLL	Collm	133.67	336	*i* PKIKP		PKPdf	11 01 29.5 +0.1
CLL				pmax	pmax		
	comp=Z,11nm,1.3s						
MODS	Modra-Piesok	133.99	331	*e*PKIKP		PKPdf	11 01 30.4 +0.3
MODS	Modra-Piesok	133.99	331	*e*PKP		PKPdf	11 01 30.4 +0.3
PRU	Pruhonice	134.05	334	*e*PKIKP		PKPdf	11 01 30.7 +0.5
PRU	Pruhonice	134.05	334	*e*PKPDF		PKPdf	11 01 30.7 +0.5
NKC	Novy Kostel	134.73	336	*e*PKIKP		PKiKP	11 01 33.5 +0.6
NKC	Novy Kostel	134.73	336	*e*PKPDF		PKiKP	11 01 33.5 +0.6
CONA	Conrad Observa	134.97	331	*e*P		PKiKP	11 01 33.5 0.0
	comp=Z,5.3nm,0.7s						
KHC	Kasperske Hory	135.11	334	*e*PKIKP		PKPdf	11 01 32.1 -0.2
KHC	Kasperske Hory	135.11	334	*e*PKPDF		PKPdf	11 01 32.1 -0.2
GEC2	GERESS Array S	135.28	334	PKPdf		PKPdf	11 01 33.2 +0.5
GERES	GERESS Array B	135.28	334	PKhKP	PKPpre		11 01 22.2
	comp=Z,0.8nm,0.8s,baz=35,slow=4.9,SNR=3.5						
GERES				PKP		PKPdf	11 01 33.1 +0.5
	comp=Z,3.3nm,0.8s,baz=48,slow=2.0,SNR=19						
GERES	GERESS Array B	135.28	334	PKHKP	PKPpre		11 01 22.2
GERES							11 01 32.1
SOKA	Soboth	136.26	331	*e*P		PKiKP	11 01 35.3 -0.9
	comp=Z,4.9nm,1.0s						
IDI	Anoyia	136.72	311	PKP		PKPdf	11 01 35.5 -0.2
	comp=Z,6.7nm,0.9s,baz=162,slow=3.2,SNR=3.4						
KBA	Koelnbreinsper	136.76	332	*e*P		PKiKP	11 01 36.8 -0.5
	comp=Z,8.2nm,1.1s						
WTTA	Wattenberg	137.38	334	*e*P		PKPdf	11 01 36.6 -0.2
	comp=Z,6.1nm,0.7s						
ABTA	Abfaltersbach	137.38	333	*e*P		PKPdf	11 01 35.9 -0.7
	comp=Z,6.6nm,0.8s						
MOTA	Moosalm	137.54	334	*e*P		PKiKP	11 01 38.3 -0.6
	comp=Z,3.2nm,0.6s						
SQTA	Sankt Quirin	137.60	334	*e*P		PKiKP	11 01 38.5 -0.5
	comp=Z,7.2nm,1.0s						
BDFB	Brasilia	137.68	128	PKP		PKPdf	11 01 38.0 0.0
	comp=Z,11nm,0.9s,baz=186,slow=2.0,SNR=10						
BDFB	Brasilia	137.68	128	PKiKP		PKPdf	11 01 37.0 -1.1
CIMO	Cimolais	137.75	332	PKPdf		PKPdf	11 01 34.8 -2.4
FETA	Feichten	137.96	334	*e*P		PKiKP	11 01 38.8 -1.0
	comp=Z,5.3nm,0.8s						
TUE	Stuetta	138.97	335			PKPdf	11 01 37.1 -2.6
VSL	Villasalto	144.32	328	PKPdf		PKPab	11 01 46.5 -0.7
KEST	Kesra	147.01	323	PKPbc		PKPbc	11 01 56.5 +0.4
	comp=Z,28nm,0.8s,baz=270,slow=1.0,SNR=21						
KEST	Kesra	147.01	323			PKPdf	11 01 54.0 0.0
PBRG	Braganca	148.22	349	*e*PKPbc		PKPbc	11 01 59.0 -0.1
PGAV	Gavieira, Arco	148.32	351	*e*LR		LR	11 36 18.7
	comp=Z,1µm,20.0s						
POLO	Lamas de Olo	148.82	350	*e*PKPbc		PKPbc	11 02 00.7 -0.1
MVO	Moncorvo	148.90	349	*e*PKPbc		PKPbc	11 02 00.3 -0.6
MVO	Moncorvo	148.90	349	*e*LR		LR	11 36 28.3
	comp=Z,1µm,22.0s						
PVRL	Vila Real	148.91	350	*e*PKPbc		PKPbc	11 02 01.2 +0.3
PVIS	Viseu	149.48	350	*e*PKPbc		PKPbc	11 02 02.2 -0.2
ESDC	Sonseca Array	149.62	344	PKP		PKPdf	11 01 58.4 +0.2
	comp=Z,5.8nm,0.9s,baz=4.1,slow=2.9,SNR=5.1						
ESDC				PKPbc		PKPbc	11 02 02.9 +0.2
	comp=Z,5.2nm,0.8s,baz=4.2,slow=2.5,SNR=19						
ESDC	Sonseca Array	149.62	344			PKPdf	11 01 58.3 +0.1
MTE	Manteigas	149.73	350	*e*LR		LR	11 36 52.8
	comp=Z,1µm,20.0s						
PCAS	Casmilo, Conde	150.23	351	*e*PKPbc		PKPbc	11 02 04.0 -0.1
PCBR	Castelo Branco	150.26	349	*e*PKPbc		PKPbc	11 02 03.9 -0.3
PMRV	Marv??o	150.65	349	*e*PKPbc		PKPbc	11 02 05.4 +0.2
PMRV	Marv??o	150.65	349	*e*LR		LR	11 37 36.8
	comp=Z,1µm,22.0s						
PSBE	So Bento	150.80	351	*e*PKPbc		PKiKP	11 02 05.9 -0.3
PMTG	Montargil	151.14	350	*e*PKPbc		PKPbc	11 02 05.0 -1.3
PBEJ	Beja	152.09	349	*e*PKPbc		PKiKP	11 02 08.8 -0.1
PVAQ	Vaqueiros	152.67	348	*e*LR		LR	11 38 12.5
	comp=Z,1µm,20.0s						
MORF	Marmelete	152.93	350	*e*PKPbc		PKPbc	11 02 09.2 -1.3
RCBR	Riachuelo	153.04	126	PKiKP		PKPdf	11 02 04.3 +0.2
RCBR	Riachuelo	153.04	126	PKPdf		PKPdf	11 02 04.3 +0.2
RCBR						PKPbc	11 02 11.4 0.0
MDT	Midelt	156.15	339	PKP		PKPdf	11 02 08.1 +0.2
	comp=Z,3.3nm,0.9s,baz=72,slow=3.9,SNR=4.9						
PMOZ	Porto Moniz, M	157.75	6	*e*LR		LR	11 43 37.0
	comp=Z,1µm,20.0s						
TORD	Torodi Ar. Bea	164.08	281	PKP		PKPdf	11 02 16.6 -0.6
	comp=Z,5.9nm,0.9s,baz=15,slow=1.3,SNR=24						
TORD				PKPab		PKPab	11 03 09.7 -0.8
	comp=Z,3.6nm,1.0s,baz=62,slow=5.1,SNR=5.9						
TORD				PP		PP	11 06 59.6 +3.0
	comp=Z,1.7nm,1.2s,baz=45,slow=2.3,SNR=4.2						
KOWA	Kowa	169.19	292			PKPdf	11 02 20.2 -0.8
KIC	Kosan Boka	169.58	247	*e*PKIKP		PKPdf	11 02 20.2 -1.1
	comp=Z,48nm,1.2s						
LIC	Lamto	169.78	245	*e*PKIKP		PKPdf	11 02 20.4 -1.1
	comp=Z,56nm,1.2s						
DBIC	Dimbokro	169.81	248	PKP		PKPdf	11 02 20.8 -0.7
	comp=Z,7.5nm,0.8s,baz=135,slow=2.6,SNR=8.5						
DBIC	Dimbokro	169.81	248	PKiKP		PKPdf	11 02 21.0 -0.5
DBIC	Dimbokro	169.81	248			PKPdf	11 02 21.0 -0.5
TIC	Toumodi	169.95	248	*e*PKIKP		PKPdf	11 02 20.4 -1.2

*IDC **13** 10:44:39.5±2.5, 58°.03N×17°.64E, h0km, mb1 3.4/4, mb1mx3.1/50, mbtmp3.3/4, ML2.5/4, Error ellipse: s-maj=28.1km s-min=10.8km az=179.0*
*UPP **13** 10:44:40.9±0.1, 58°.33N×17°.58E, h0km, ML1.9, Explosion*
*NAO **13** 10:44:40.8±2.8, 58°.20N×17°.73E, ML2.3*
*HEL **13** 10:44:42.7±0.1, 58°.13N×18°.40E, h0km, ML1.8, Explosion*
*BER **13** 10:44:44.6±6.7, 58°.55N×17°.62E, h0km, ML2.2, ML1.9(UPP), Suspected explosion*

ISC 13 10:44:39.2±0.7, 58°.31N±0°.02×17°.65E±0°.02, h0km, n52, σ1§68/86, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIKU	Vikbolandet	0.54	291	P	Pg	10 44 50.4	+0.9
VIKU				S	Sg	10 44 56.9	+0.5
VIKU	Vikbolandet	0.54	291	P	Pg	10 44 50.4	+0.9
VIKU				S	Sg	10 44 56.9	+0.5
NYNU	Nynaeshamn	0.72	15	P	Pb	10 44 54.4	-0.2
NYNU				S	Sg	10 45 03.5	+1.2
NYNU	Nynaeshamn	0.72	15	P	Pb	10 44 54.4	-0.2
NYNU				S	Sg	10 45 03.5	+1.2
GOTU	Gotland	0.80	142	P	Pb	10 44 56.4	+0.5
GOTU				S	Sb	10 45 07.0	-0.2
GOTU	Gotland	0.80	142	P	Pb	10 44 56.4	+0.5
GOTU				S	Sb	10 45 07.0	-0.2
VSTU	Vaestervik	0.89	223	P	Pb	10 44 57.4	0.0
VSTU				S	Sg	10 45 09.1	+1.5
VSTU	Vaestervik	0.89	223	P	Pb	10 44 57.4	0.0
VSTU				S	Sg	10 45 09.1	+1.5
BYXU	Byxelkrok	1.08	199	P	Pb	10 45 01.3	+0.6
BYXU	Byxelkrok	1.08	199	P	Pb	10 45 01.3	+0.6
ESKU	Eskilstuna	1.13	325	P	Pg	10 45 01.5	+0.6
ESKU	Eskilstuna	1.13	325	P	Pg	10 45 01.5	+0.6
LNKU	Linkoeping	1.14	266	P	Pg	10 45 01.4	+0.4
LNKU	Linkoeping	1.14	266	P	Pg	10 45 01.4	+0.4
OSKU	Oskarshamn	1.40	217	P	Pb	10 45 06.8	+0.6
OSKU	Oskarshamn	1.40	217	P	Pb	10 45 06.8	+0.6
UPP	Uppsala	1.55	360	P	Pg	10 45 08.8	+0.9
BACU	Backbrunna	1.57	350	P	Pg	10 45 09.8	+0.5
BACU	Backbrunna	1.57	350	P	Pg	10 45 09.8	+0.5
AAL	Aland	2.22	32	*e*P	Pb	10 45 20.6	+0.3
AAL				*e*S	Sb	10 45 48.3	+0.1
BORU	Boraas	2.69	257	*i* P	Pb	10 45 26.8	-1.4
BORU				*i* S	Sb	10 46 01.6	0.0
HFS	Hagfors	2.73	314	Pn	Pb	10 45 27.1	-1.8
	2.6nm,0.3s,baz=137,slow=16,SNR=28						
HFS				Sn	Sb	10 46 03.5	+0.6
	7.5nm,0.3s,baz=133,slow=28,SNR=11						
HFS	Hagfors	2.73	314	Pn	Pn	10 45 26.7	+2.4
	baz=144,slow=16						
HFS				Sn	Sb	10 46 02.8	-0.1
	baz=124,slow=37						
HFS	Hagfors	2.73	314	Pn	Pn	10 45 26.7	+2.4
	baz=144,slow=16						
HFS				Sn	Sb	10 46 02.8	-0.1
	baz=124,slow=37						
DEL	Delary	2.76	230	*i* P	Pn	10 45 26.8	+2.2
DEL				*i* S	Sb	10 46 01.6	-2.0
DEL				IAML		10 46 18.7	
	comp=Z,17nm,0.3s						
FABU	Falkenberg	2.96	246	*i* P	Pb	10 45 31.8	-1.0
FABU				*e*S	Sb	10 46 09.1	-0.3
RAF	Rauma	3.43	36	*e*P	Pn	10 45 36.8	+3.0
RAF				*e*S	Sn	10 46 16.1	+1.0
RAF				MSG		10 46 39.1	
	comp=Z,3.2nm,0.1s						
BSD	Bornholm Skovb	3.54	206	*e*P	Pn	10 45 37.2	+1.7
BSD				*e*S	Sg	10 46 31.4	-1.7
BSD				IAML		10 46 47.6	
	comp=Z,19nm,0.3s						
BSD	Bornholm Skovb	3.54	206	*i* P	Pn	10 45 37.1	+1.7
BSD				*e*S	Sg	10 46 31.3	-1.7
BSD	Bornholm Skovb	3.54	206	*e*P	Pn	10 45 37.2	+1.7
BSD				*e*S	Sg	10 46 31.4	-1.7
BSD				IAML		10 46 47.6	
	comp=Z,19nm,0.3s						
NRA0	NORESS Array S	3.95	311	Pn	Pn	10 45 42.8	+1.8
	baz=114,slow=10						
NRA0				Sn	Sn	10 46 31.6	+3.7
	baz=127,slow=18						
NRA0	NORESS Array S	3.95	311	Pn	Pn	10 45 42.8	+1.8
	baz=114,slow=10						
NRA0				Sn	Sn	10 46 31.6	+3.7
	baz=127,slow=18						
NB2	NORSAR Subarra	4.26	313	Pn	Pn	10 45 46.6	+1.3
	baz=133,slow=14						
NB2	NORSAR Subarra	4.26	313	Pn	Pn	10 45 46.6	+1.3
	baz=133,slow=14						
NOA	NORSAR Array B	4.26	313	Pn	Pn	10 45 47.0	+1.7
	comp=Z,0.1nm,0.3s,baz=134,slow=12,SNR=13						
NOA				Sn	Sn	10 46 37.8	+2.2
	comp=Z,0.1nm,0.3s,baz=121,slow=21,SNR=3.3						
PVF	Pernaja	4.75	58	*e*P	Pn	10 45 53.0	+1.0
PVF				*e*S	Sn	10 46 43.5	-4.2
PVF				MSG		10 47 07.9	
	comp=Z,0.8nm,0.1s						
VSU	Vasula	4.78	84	Sn	Sn	10 46 50.3	+1.8
VSU				Lg	Lg	10 47 10.9	
VSU	Vasula	4.78	84	Sn	Sn	10 46 50.3	+1.8
VSU				Sg	Sg	10 47 10.9	-1.8
HOMB	Homborsund	4.83	273	*i* P	Pn	10 45 54.0	+0.9
HOMB				*i* S	Sn	10 46 47.9	-1.6
HOMB	Homborsund	4.83	273	*i* P	Pn	10 45 54.0	+0.9
HOMB				*i* S	Sn	10 46 47.9	-1.6
FIA0	FINESS Array S	5.28	50	Pn	Pn	10 46 01.3	+2.1
	baz=225,slow=12						
FIA0				Sn	Sn	10 47 02.0	+1.4
	baz=248,slow=28						
FIA0	FINESS Array S	5.28	50	*e*P	Pn	10 46 00.7	+1.5
FIA0				*e*S	Sn	10 46 57.9	-2.8
FIA0	FINESS Array S	5.28	50	Pn	Pn	10 46 01.3	+2.1
	baz=225,slow=12						
FIA0				Sn	Sn	10 47 02.0	+1.4
	baz=248,slow=28						
FINES	FINESS Array B	5.28	50	Pn	Pn	10 46 02.1	+2.9
	comp=Z,0.4nm,0.3s,baz=235,slow=9.0,SNR=7.2						
FINES				Sn	Sn	10 47 04.1	+3.5
	comp=Z,1.2nm,0.3s,baz=246,slow=24,SNR=8.5						
KEF	Keuruu	5.28	40	*e*P	Pn	10 46 00.8	+1.6
KEF				*e*S	Sn	10 46 59.3	-1.4
FIA1	FINESS Array S	5.28	50	*e*P	Pn	10 46 00.7	+1.5
FIA1				*e*S	Sn	10 46 57.9	-2.8
KAF	Kangasniemi	5.75	45	*e*P	Pn	10 46 07.3	+1.5
KAF				*e*S	Sn	10 47 09.9	-2.5
APA0	Apatity Array	11.60	30	Pn	Pn	10 47 26.0	+0.2
	baz=202,slow=12						
APA0	Apatity Array	11.60	30	Pn	Pn	10 47 26.0	+0.2
	baz=202,slow=12						
ARA0	ARCESS Array S	11.77	14	Pn	Pn	10 47 27.4	-0.7
	baz=200,slow=14						
ARA0	ARCESS Array S	11.77	14	Pn	Pn	10 47 27.4	-0.7
	baz=200,slow=14						
ARCES	ARCESS Array B	11.77	14	Pn	Pn	10 47 27.7	-0.4
	baz=190,slow=13,SNR=4.2						
ARCES				Sn	Sn	10 49 35.7	-4.3
	baz=198,slow=22,SNR=1.3						

MAN 13 10:49:35.8, 17°.39N×122°.06E, h31km, mb4.4, ML3.2, MS2.9, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	Callao Caves	0.39	325	⇓*i* P	Pn	10 49 45.4	+0.1
CVP				*i* S	Sb	10 49 50.1	-0.5
APYP	Conner	0.91	302	*e*P	Pn	10 49 52.7	+0.2
APYP				*e*S	Sb	10 50 05.2	+0.4
ABRA	Dolores	1.31	282	*e*P	Pn	10 49 58.4	+0.5
ABRA				*e*S	Sn	10 50 14.4	0.0
BALP	Baler	1.70	196	*e*P	Pn	10 50 03.1	-0.2
BALP				*e*S	Sn	10 50 24.8	+0.8
SMPP	San Manuel, Pa	1.80	227	*e*P	Pn	10 50 05.5	+0.8
SMPP				*e*S	Sn	10 50 26.9	+0.3

*SOME **13** 10:54:55.6, 40°.40N×72°.67E, h20km*
*NNC **13** 10:54:56.1±4.9, 40°.46N×72°.73E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=37.7km s-min=16.5km az=165.0*
*KRNET **13** 10:54:56.5±0.1, 40°.57N×72°.59E, h9km, mb2.2*

ISC 13 10:54:56.5±1.0, 40°.48N±0°.04×72°.67E±0°.04, h13km±7km, n15, σ1§19/26, 16C-6D, Kyrgyzstan

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

JHRM	**Jahrom**	**0.47**	**67**	*e*			10 59 20.1	
JHRM				*e*Pg	**Pb**		**10 59 07.6**	**-1.9**
LMD1	**Lamerd**	**0.98**	**176**	*e*Pg	Pn		10 59 20.8	+1.9
LMD1				*e*			10 59 53.1	
LAR1	**LAR**	**1.31**	**120**	*e*Pg	Pg		10 59 26.9	+2.5
SHI	**Shiraz**	**1.41**	**339**	*e*Pg	**Pn**		**10 59 23.2**	**-1.7**
SHI				*e*			10 59 52.5	
AHBU	**AHRAM**	**1.67**	**289**	*e*Pg	**Pb**		**10 59 28.6**	**-1.3**
KLNJ	**Kolanjah**	**2.98**	**334**	*e*	**Sg**		**11 00 43.5**	**+8.7**
IRAM	**Rameshеh**	**3.53**	**350**	*e*Pn	**Pn**		**10 59 53.5**	**-0.6**
KHGB	**Koh Gabri**	**3.59**	**55**	*e*	**Sg**		**11 01 01.1**	**+6.3**
YZKH	**Yazd**	**4.25**	**17**	*e*Pn	**Pn**		**11 00 03.3**	**-0.7**
YZKH	**Yazd**	**4.25**	**17**	*e*Pn	**Pn**		**11 00 03.3**	**-0.7**
NASN	**Na'in**	**4.47**	**357**	*e*Pn	**Pn**		**11 00 06.7**	**-0.4**
NASN				*e*S	**Sn**		**11 00 58.0**	**-1.2**
NASN	**Na'in**	**4.47**	**357**	*e*Pn	**Pn**		**11 00 06.7**	**-0.4**
TABS	**Tabas**	**6.33**	**32**	*e*Pn	**Pn**		**11 00 31.6**	**-1.0**
TABS	**Tabas**	**6.33**	**32**	*e*Pn	**Pn**		**11 00 31.6**	**-1.0**

*THE **13** 11:07:29.8,38°.40N×20°.45E,h8km,ML2.6/7, Error ellipse: s-maj=0.9km s-min=0.3km az=265.0*

ISC 13 11:07:28.2±1.0,38°.43N±0°.04×20°.37E±0°.05,h15km±6km, n19,σ1§19/33,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.16**	**80**	P	**Pg**		**11 07 32.2**	**0.0**
FSK				S	**Sg**		**11 07 34.3**	**-0.6**
	10μm,0.3s							
KEF5	**Kardakata, Kep**	**0.17**	**152**	P	**Pg**		**11 07 32.4**	**-0.1**
KEF5				S	**Sg**		**11 07 34.9**	**-0.4**
KEF4	**Livadi, Kephal**	**0.18**	**165**	P	**Pg**		**11 07 32.8**	**+0.2**
KEF4				S	**Sg**		**11 07 35.6**	**+0.2**
DMLN	**Damoulianata-K**	**0.19**	**178**	P	**Pg**		**11 07 33.2**	**+0.4**
DMLN				S	**Sg**		**11 07 36.3**	**+0.5**
EVGI	**Lefkada island**	**0.30**	**50**	P	**Pb**		**11 07 35.1**	**-0.2**
EVGI				S	**Sb**		**11 07 39.6**	**-0.4**
	2μm,0.1s							
VLS	**Valsamata**	**0.31**	**145**	P	**Pg**		**11 07 34.4**	**-0.3**
VLS				S	**Sg**		**11 07 38.2**	**-0.9**
	4μm,0.1s							
PSDA	**Pessada-Kefalo**	**0.36**	**151**	P	**Pg**		**11 07 35.3**	**-0.3**
PSDA				S	**Sg**		**11 07 40.2**	**-0.4**
NYDR	**Nydri-Lefkada**	**0.38**	**43**	P	**Pb**		**11 07 36.6**	**-0.2**
NYDR				S	**Sb**		**11 07 42.4**	**-0.1**
	2μm,0.3s							
LKD2	**Lefkada island**	**0.42**	**33**	P	**Pb**		**11 07 37.7**	**+0.2**
LKD2				S	**Sb**		**11 07 43.6**	**-0.1**
	528nm,0.4s							
TSLK	**Tsoukalades, L**	**0.45**	**30**	P	**Pn**		**11 07 38.5**	**-1.7**
TSLK				S	**Sb**		**11 07 45.3**	**+0.8**
	732nm,0.4s							
VLMS	**Volimes, Zakyn**	**0.60**	**157**	P	**Sg**		**11 07 39.5**	**-0.6**
VLMS				S	**Sg**		**11 07 48.6**	**+0.5**
	902nm,0.2s							
PDO	**Prodromos**	**0.66**	**75**	P	**Pg**		**11 07 40.9**	**-0.3**
PDO				S	**Sg**		**11 07 50.4**	**+0.4**
IGT	**Igoumenitsa**	**1.10**	**359**	P	**Pn**		**11 07 50.8**	**+1.7**
IGT				S	**Sn**		**11 08 08.3**	**+4.2**
SERG	**Sergoula**	**1.33**	**90**	P	**Pn**		**11 07 52.4**	**+0.1**
SERG				S	**Sb**		**11 08 11.4**	**+1.6**
KLV	**Kalavryta, Ach**	**1.46**	**105**	P	**Pn**		**11 07 54.2**	**+0.1**
LSTV	**Lastovo**	**5.07**	**330**	Sn	**Sn**		**11 09 39.5**	**-2.5**
RICI	**Ricice**	**5.62**	**335**	Sn	**Sn**		**11 09 54.0**	**-1.5**
MORI	**Morici**	**6.47**	**329**	Sn	**Sn**		**11 10 16.5**	**+0.2**
DUGI	**Dugi Otok**	**6.84**	**326**	Sn	**Sn**		**11 10 24.2**	**-1.4**

*IDC **13** 11:16:21.3±3.5,57°.47N×17°.59E,h0km,mb1 2.7/3, mb1mx2.6/47,mbtmp2.7/3,ML2.3/4, Error ellipse: s-maj=41.9km s-min=17.0km az=175.0*
*NAO **13** 11:16:27.4±3.4,58°.13N×17°.68E,ML2.6*
*UPP **13** 11:16:28.3±0.1,58°.33N×17°.57E,h0km,ML2.3, Explosion*
*HEL **13** 11:16:29.0±0.1,58°.33N×17°.58E,h0km,ML1.8, ML2.3(UPP), Explosion*
*BER **13** 11:16:30.5±3.7,58°.39N×17°.56E,h0km,ML2.1, ML2.3(UPP),Suspected explosion*

ISC 13 11:16:28.3±0.7,58°.33N±0°.02×17°.54E±0°.02,h0km,n77, σ1§49/93,Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VIKU	**Vikbolandet**	**0.48**	**292**	P	**Pg**		**11 16 37.6**	**+0.2**
VIKU				S	**Sg**		**11 16 44.3**	**+0.7**
VIKU	**Vikbolandet**	**0.48**	**292**	*i* P	**Pg**		**11 16 37.6**	**+0.2**
VIKU				*i* S	**Sg**		**11 16 44.3**	**+0.7**
VIKU	**Vikbolandet**	**0.48**	**292**	P	**Pg**		**11 16 37.6**	**+0.2**
VIKU				S	**Sg**		**11 16 44.3**	**+0.7**
VIKU	**Vikbolandet**	**0.48**	**292**	S	**Sg**		**11 16 44.3**	**+0.7**
VIKU	**Vikbolandet**	**0.48**	**292**	P	**Pg**		**11 16 37.6**	**+0.2**
NYNU	**Nynaeshamn**	**0.72**	**19**	P	**Pg**		**11 16 41.8**	**-0.3**
NYNU				S	**Sg**		**11 16 50.9**	**-0.5**
NYNU	**Nynaeshamn**	**0.72**	**19**	*i* P	**Pg**		**11 16 41.8**	**-0.3**
NYNU				*i* S	**Sg**		**11 16 50.9**	**-0.5**
NYNU	**Nynaeshamn**	**0.72**	**19**	P	**Pg**		**11 16 41.8**	**-0.3**
NYNU				S	**Sg**		**11 16 50.9**	**-0.5**
NYNU	**Nynaeshamn**	**0.72**	**19**	S	**Sg**		**11 16 50.9**	**-0.5**
NYNU	**Nynaeshamn**	**0.72**	**19**	P	**Pg**		**11 16 41.8**	**-0.3**
GOTU	**Gotland**	**0.85**	**139**	P	**Pg**		**11 16 43.9**	**-0.5**
GOTU	**Gotland**	**0.85**	**139**	*i* P	**Pg**		**11 16 43.9**	**-0.5**
GOTU	**Gotland**	**0.85**	**139**	P	**Pg**		**11 16 43.9**	**-0.5**
GOTU	**Gotland**	**0.85**	**139**	P	**Pg**		**11 16 43.9**	**-0.5**
VSTU	**Vaestervik**	**0.86**	**219**	P	**Pg**		**11 16 44.7**	**0.0**
VSTU	**Vaestervik**	**0.86**	**219**	*i* P	**Pg**		**11 16 44.7**	**0.0**
VSTU	**Vaestervik**	**0.86**	**219**	P	**Pg**		**11 16 44.7**	**0.0**
BYXU	**Byxelkrok**	**1.08**	**196**	P	**Pg**		**11 16 48.6**	**-0.3**
BYXU	**Byxelkrok**	**1.08**	**196**	*e*P	**Pg**		**11 16 48.6**	**-0.3**
BYXU	**Byxelkrok**	**1.08**	**196**	P	**Pg**		**11 16 48.6**	**-0.3**
BYXU	**Byxelkrok**	**1.08**	**196**	P	**Pg**		**11 16 48.6**	**-0.3**
LNKU	**Linkoeping**	**1.08**	**265**	P	**Pg**		**11 16 48.6**	**-0.3**
LNKU	**Linkoeping**	**1.08**	**265**	*e*P	**Pg**		**11 16 48.6**	**-0.3**
LNKU	**Linkoeping**	**1.08**	**265**	P	**Pg**		**11 16 48.6**	**-0.3**
ESKU	**Eskilstuna**	**1.08**	**327**	P	**Pg**		**11 16 48.9**	**-0.2**
ESKU	**Eskilstuna**	**1.08**	**327**	*e*P	**Pg**		**11 16 48.9**	**-0.2**
ESKU	**Eskilstuna**	**1.08**	**327**	P	**Pg**		**11 16 48.9**	**-0.2**
ESKU	**Eskilstuna**	**1.08**	**327**	P	**Pg**		**11 16 48.9**	**-0.2**
OSKU	**Oskarshamn**	**1.37**	**215**	P	**Pg**		**11 16 54.0**	**-0.5**
OSKU	**Oskarshamn**	**1.37**	**215**	*e*P	**Pg**		**11 16 54.0**	**-0.5**
OSKU	**Oskarshamn**	**1.37**	**215**	P	**Pg**		**11 16 54.0**	**-0.5**
OSKU	**Oskarshamn**	**1.37**	**215**	P	**Pg**		**11 16 54.0**	**-0.5**
EKSU	**Eksjoe**	**1.41**	**239**	P	**Pn**		**11 16 54.5**	**-0.7**
EKSU	**Eksjoe**	**1.41**	**239**	*e*P	**Pn**		**11 16 54.5**	**-0.7**
EKSU	**Eksjoe**	**1.41**	**239**	P	**Pn**		**11 16 54.5**	**-0.7**
EKSU	**Eksjoe**	**1.41**	**239**	P	**Pn**		**11 16 54.5**	**-0.7**
ASKU	**Askersund**	**1.53**	**293**	P	**Pn**		**11 16 56.7**	**-0.1**
ASKU	**Askersund**	**1.53**	**293**	*e*P	**Pn**		**11 16 56.7**	**-0.1**
ASKU	**Askersund**	**1.53**	**293**	P	**Pn**		**11 16 56.7**	**-0.1**
ASKU	**Askersund**	**1.53**	**293**	P	**Pn**		**11 16 56.7**	**-0.1**
BACU	**Backbrunna**	**1.55**	**352**	P	**Pn**		**11 16 57.1**	**0.0**
BACU	**Backbrunna**	**1.55**	**352**	*e*P	**Pn**		**11 16 57.1**	**0.0**
BACU	**Backbrunna**	**1.55**	**352**	P	**Pn**		**11 16 57.1**	**0.0**
BACU	**Backbrunna**	**1.55**	**352**	P	**Pn**		**11 16 57.1**	**0.0**
AAL	**Aland**	**2.24**	**33**	*e*P	**Pn**		**11 17 07.3**	**+0.7**
AAL				*e*S	**Sb**		**11 17 37.4**	**-0.5**
SLIT	**Slitere, Latvi**	**2.63**	**103**	*e*P	**Pg**		**11 17 23.2**	**+4.7**
SLIT				*e*S	**Sn**		**11 17 37.7**	**-6.7**
SLIT				IAML			11 18 17.5	
	comp=Z,185nm,0.3s							
BORU	**Boraas**	**2.63**	**257**	*i* P	**Pn**		**11 17 14.1**	**+2.1**
BORU				*i*			11 17 24.7	
HFS	**Hagfors**	**2.68**	**314**	Pn	**Pn**		**11 17 14.3**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=141,slow=14,SNR=13							
HFS				Sn	**Sb**		**11 17 49.7**	**-0.8**
	comp=Z,3.9nm,0.3s,baz=133,slow=28,SNR=5.2							
HFS	**Hagfors**	**2.68**	**314**	Pn	**Pn**		**11 17 14.4**	**+1.7**
	baz=126,slow=14							
HFS				Sn	**Sb**		**11 17 49.4**	**-1.1**
	baz=132,slow=37							
HFS	**Hagfors**	**2.68**	**314**	Pn	**Pn**		**11 17 14.4**	**+1.7**
	baz=126,slow=14							
DEL	**Delary**	**2.72**	**228**	*i* P	**Pn**		**11 17 14.5**	**+1.3**
DEL				*i*			11 17 25.1	
DEL				IAML			11 18 15.6	
	comp=Z,18nm,0.3s							
RAF	**Rauma**	**3.45**	**37**	*e*P	**Pn**		**11 17 23.7**	**+0.5**
RAF				*e*S	**Sn**		**11 18 05.1**	**+0.4**
NRA0	**NORESS Array S**	**3.89**	**311**	Pn	**Pn**		**11 17 30.2**	**+0.9**
NRA0				Sn	**Sn**		**11 18 19.7**	**+4.0**
	baz=103,slow=22							
NRA0	**NORESS Array S**	**3.89**	**311**	Pn	**Pn**		**11 17 30.2**	**+0.9**
NB2	**NORSAR Subarra**	**4.20**	**313**	Pn	**Pn**		**11 17 33.8**	**+0.2**
	baz=132,slow=14							
NB2	**NORSAR Subarra**	**4.20**	**313**	Pn	**Pn**		**11 17 33.8**	**+0.2**
	baz=132,slow=14							
NOA	**NORSAR Array B**	**4.20**	**313**	Pn	**Pn**		**11 17 34.7**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=131,slow=12,SNR=7.1							
PABE	**Paberze**	**4.52**	**126**	*e*P	**Pg**		**11 17 58.2**	**+3.4**
PABE				IAML			11 18 18.6	
	comp=Z,8.5nm,0.3s							
VSU	**Vasula**	**4.84**	**84**	*e*P	**Pn**		**11 17 45.2**	**+2.9**
VSU	**Vasula**	**4.84**	**84**	Sn	**Sn**		**11 18 39.3**	**+0.3**
VSU				Lg	Lg		11 19 00.0	
VSU	**Vasula**	**4.84**	**84**	Sn	**Sn**		**11 18 39.3**	**+0.3**
VSU				Sg	**Sg**		**11 19 00.0**	**-3.6**
KEF	**Keuruu**	**5.30**	**40**	*e*P	**Pn**		**11 17 48.9**	**+0.3**
KEF				*e*S	**Sn**		**11 18 48.7**	**-1.7**
KEF				MSG			11 19 13.6	
	comp=Z,1.1nm,0.1s							
FIA0	**FINESS Array S**	**5.31**	**50**	Pn	**Pn**		**11 17 48.8**	**0.0**
	baz=252,slow=14							
FIA0	**FINESS Array S**	**5.31**	**50**	Pn	**Pn**		**11 17 48.8**	**0.0**
	baz=252,slow=14							
FINES	**FINESS Array B**	**5.31**	**50**	Pn	**Pn**		**11 17 49.2**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=230,slow=12,SNR=9.0							
IZAR	**Zarasai**	**5.41**	**115**	*e*P	**Pb**		**11 18 04.0**	**+0.4**
ISAL	**Salakas**	**5.45**	**117**	*e*P	**Pb**		**11 18 05.8**	**+1.5**
IIGN	**Ignalina**	**5.62**	**118**	*e*P	**Pb**		**11 18 09.1**	**+1.9**
IIGN				IAML			11 18 23.0	
	comp=Z,9.6nm,0.4s							
KAF	**Kangasniemi**	**5.79**	**45**	*e*P	**Pn**		**11 17 55.2**	**-0.1**
KAF				*e*S	**Sn**		**11 18 59.0**	**-3.2**
KAF				MSG			11 19 10.5	
	comp=Z,0.5nm,0.1s							
IDID	**Didziasalis**	**5.88**	**117**	*e*P	Pg		11 18 26.0	+5.1
SUF	**Sumiainen**	**6.12**	**40**	*e*P	**Pn**		**11 17 59.2**	**-0.6**
SUF				*e*S	**Sn**		**11 19 08.7**	**-1.8**
APA0	**Apatity Array**	**11.62**	**30**	Pn	**Pn**		**11 19 12.9**	**-2.3**
APA0	**Apatity Array**	**11.62**	**30**	Pn	**Pn**		**11 19 12.9**	**-2.3**
ARA0	**ARCESS Array S**	**11.77**	**14**	Pn	**Pn**		**11 19 14.4**	**-2.8**
	baz=189,slow=14							
ARA0	**ARCESS Array S**	**11.77**	**14**	Pn	**Pn**		**11 19 14.4**	**-2.8**
	baz=189,slow=14							
ARCES	**ARCESS Array B**	**11.77**	**14**	Pn	**Pn**		**11 19 17.0**	**-0.2**
	baz=188,slow=13,SNR=5.6							
ARCES				Sn	**Sn**		**11 21 31.2**	**+2.2**
	baz=204,slow=22,SNR=2.9							
MKAR	**Makanchi Array**	**39.48**	**78**	P	**P**		**11 23 59.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=328,slow=6.8,SNR=2.2							

*IDC **13** 11:16:27.4±3.3,57°.03N×17°.69E,h0km,mb3.3/1, mb1 3.4/5,mb1mx3.2/48,mbtmp3.4/5,ML2.9/4, Error ellipse: s-maj=45.2km s-min=16.4km az=10.0*
*UPP **13** 11:16:39.3±0.1,58°.33N×17°.57E,h0km,ML2.8, Explosion*
*DNK **13** 11:16:39.7±0.5,58°.33N×17°.58E,h0km,ML2.8(UPP), Explosion*

ISC 13 11:16:38.7±0.8,58°.33N±0°.03×17°.57E±0°.04,h0km,n24, σ1§61/33,Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.72**	**18**	P	**Pg**		**11 16 52.8**	**+0.4**
NYNU				S	**Sg**		**11 17 02.1**	**+0.4**
NYNU	**Nynaeshamn**	**0.72**	**18**	P	**Pg**		**11 16 52.8**	**+0.4**
NYNU				S	**Sg**		**11 17 02.1**	**+0.4**
GOTU	**Gotland**	**0.83**	**140**	P	**Pg**		**11 16 54.9**	**+0.2**
GOTU	**Gotland**	**0.83**	**140**	P	**Pg**		**11 16 54.9**	**+0.2**
VSTU	**Vaestervik**	**0.87**	**220**	P	**Pg**		**11 16 55.6**	**+0.4**
VSTU	**Vaestervik**	**0.87**	**220**	P	**Pg**		**11 16 55.6**	**+0.4**
BYXU	**Byxelkrok**	**1.08**	**196**	P	**Pg**		**11 16 59.7**	**+0.3**
BYXU	**Byxelkrok**	**1.08**	**196**	P	**Pg**		**11 16 59.7**	**+0.3**
ESKU	**Eskilstuna**	**1.09**	**326**	P	**Pg**		**11 16 59.9**	**+0.2**
ESKU	**Eskilstuna**	**1.09**	**326**	P	**Pg**		**11 16 59.9**	**+0.2**
LNKU	**Linkoeping**	**1.10**	**265**	P	**Pg**		**11 16 59.6**	**-0.1**
LNKU	**Linkoeping**	**1.10**	**265**	P	**Pg**		**11 16 59.6**	**-0.1**
OSKU	**Oskarshamn**	**1.38**	**215**	P	**Pg**		**11 17 05.0**	**-0.1**
OSKU				S	**Sb**		**11 17 23.7**	**+0.2**
OSKU	**Oskarshamn**	**1.38**	**215**	P	**Pg**		**11 17 05.0**	**-0.1**
OSKU				S	**Sb**		**11 17 23.7**	**+0.2**
EKSU	**Eksjoe**	**1.43**	**239**	P	**Pn**		**11 17 05.2**	**-0.6**
EKSU	**Eksjoe**	**1.43**	**239**	P	**Pn**		**11 17 05.2**	**-0.6**
ASKU	**Askersund**	**1.54**	**293**	P	**Pn**		**11 17 07.6**	**+0.2**
ASKU	**Askersund**	**1.54**	**293**	P	**Pn**		**11 17 07.6**	**+0.2**
HFS	**Hagfors**	**2.69**	**314**	Pn	**Pb**		**11 17 26.1**	**-1.6**
	4.0nm,0.3s,baz=143,slow=15,SNR=33							
HFS				Sn	**Sb**		**11 18 02.5**	**+1.2**
	12nm,0.3s,baz=132,slow=28,SNR=11							
BSD	**Bornholm Skovb**	**3.54**	**206**	*i* P	**Pn**		**11 17 32.0**	**-2.8**
BSD				*e*S	**Sn**		**11 18 21.2**	**+4.0**
BSD	**Bornholm Skovb**	**3.54**	**206**	*i* P	**Pn**		**11 17 32.0**	**-2.8**
BSD				*e*S	**Sn**		**11 18 21.3**	**+4.0**
BSD				IAML			11 18 43.7	
	comp=Z,27nm,0.3s							
NOA	**NORSAR Array B**	**4.22**	**313**	Pn	**Pn**		**11 17 45.5**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=131,slow=12,SNR=12							
NOA				Sn	**Sb**		**11 18 40.8**	**-4.3**
	comp=Z,0.3nm,0.3s,baz=131,slow=8.8,SNR=5.1							
FINES	**FINESS Array B**	**5.30**	**50**	Pn	**Pn**		**11 18 00.3**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=235,slow=12,SNR=12							
FINES				Sn	**Sn**		**11 19 01.7**	**+1.0**
	comp=Z,1.9nm,0.3s,baz=247,slow=22,SNR=7.1							
ARCES	**ARCESS Array B**	**11.76**	**14**	Pn	**Pn**		**11 19 26.1**	**-1.5**
	baz=197,slow=15,SNR=8.6							

*THE **13** 11:30:15.6,38°.40N×20°.45E,h4km±1km,ML2.7/5, Error ellipse: s-maj=1.3km s-min=0.5km az=239.0*
*ATH **13** 11:30:15.0,38°.39N×20°.48E,h14km±1km,ML3.0/7, Error ellipse: s-maj=1.8km s-min=0.7km az=278.0*

ISC 13 11:30:14.6±0.8,38°.40N±0°.02×20°.42E±0°.03,h16km±5km, n45,σ0§97/79,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.13**	**62**	P	**Pg**		**11 30 18.0**	**-0.3**
FSK				S	**Sg**		**11 30 19.4**	**-1.4**
FSK				AML	AML		11 30 20.3	
	comp=N,19710μm,0.3s							
FSK				AML	AML		11 30 21.0	
	comp=E,27666μm,0.2s							
KEF5	**Kardakata, Kep**	**0.13**	**162**	P	**Pg**		**11 30 18.2**	**-0.1**
KEF5				S	**Sg**		**11 30 20.4**	**-0.4**
KEF5	**Kardakata, Kep**	**0.13**	**162**	P	**Pg**		**11 30 18.2**	**-0.1**
KEF5				S	**Sg**		**11 30 20.5**	**-0.3**
KEF4	**Livadi, Kephal**	**0.14**	**178**	P	**Pg**		**11 30 18.6**	**+0.1**
KEF4				S	**Sg**		**11 30 21.1**	**+0.1**
KEF4	**Livadi, Kephal**	**0.14**	**178**	P	**Pg**		**11 30 18.6**	**+0.1**
KEF4				S	**Sg**		**11 30 20.7**	**-0.3**
LXRA	**Lixouri, Kepha**	**0.20**	**176**	P	**Pg**		**11 30 19.5**	**+0.2**
LXRA				S	**Sg**		**11 30 22.6**	**+0.2**
ARGA	**Argostoli. Kep**	**0.23**	**168**	P	**Pg**		**11 30 19.8**	**0.0**
ARGA				S	**Sg**		**11 30 23.0**	**-0.2**
VLS	**Valsamata**	**0.26**	**149**	P	**Pg**		**11 30 20.2**	**-0.2**
VLS				S	**Sg**		**11 30 23.9**	**-0.3**
VLS				AML	AML		11 30 24.7	
	comp=N,9072μm,0.2s							
VLS				AML	AML		11 30 25.1	
	comp=E,9704μm,0.1s							
VLS	**Valsamata**	**0.26**	**149**	P	**Pg**		**11 30 20.1**	**-0.2**
VLS				S	**Sg**		**11 30 24.3**	**+0.1**
	comp=E,5μm,0.1s							
EVGI	**Lefkada island**	**0.29**	**40**	P	**Pg**		**11 30 21.0**	**+0.2**
EVGI				S	**Sg**		**11 30 25.2**	**+0.1**
PSDA	**Pessada-Kefalo**	**0.31**	**155**	P	**Pg**		**11 30 21.2**	**-0.1**
PSDA				S	**Sg**		**11 30 25.6**	**-0.1**
MGNA	**Meganis**	**0.39**	**49**	P	**Pg**		**11 30 22.4**	**-0.2**
MGNA				S	**Sg**		**11 30 27.5**	**-0.4**
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**		**11 30 23.4**	**0.0**
LKD2				S	**Sg**		**11 30 28.9**	**-0.4**
LKD2				AML	AML		11 30 31.0	
	comp=N,2150μm,0.2s							
LKD2				AML	AML		11 30 32.0	
	comp=E,2143μm,0.2s							
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**		**11 30 23.4**	**0.0**
LKD2				S	**Sb**		**11 30 30.4**	**+0.1**
	comp=E,1μm,0.3s							
TSLK	**Tsoukalades, L**	**0.46**	**24**	P	**Pg**		**11 30 24.1**	**+0.2**
TSLK				S	**Sg**		**11 30 30.3**	**+0.1**
TSLK				AML	AML		11 30 32.3	
	comp=N,3330μm,0.5s							
TSLK				AML	AML		11 30 35.0	
	comp=E,3989μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P	**Pg**		**11 30 25.4**	**-0.3**
VLMS				S	**Sg**		**11 30 32.6**	**-0.5**
VLMS				AML	AML		11 30 35.9	
	comp=E,4514μm,0.2s							
VLMS				AML	AML		11 30 36.2	
	comp=N,6294μm,0.2s							
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P	**Pg**		**11 30 25.3**	**-0.3**
VLMS				S	**Sb**		**11 30 34.4**	**+0.6**
PDO	**Prodromos**	**0.63**	**72**	P	**Pg**		**11 30 26.8**	**-0.3**
PDO				S	**Sg**		**11 30 34.7**	**-0.8**
PDO	**Prodromos**	**0.63**	**72**	P	**Pg**		**11 30 26.8**	**-0.3**
PDO				S	**Sb**		**11 30 36.1**	**+0.1**
RLS	**Riolos of Patr**	**0.89**	**112**	P	**Pg**		**11 30 31.9**	**-0.1**
RLS				S	**Sg**		**11 30 42.3**	**-1.4**
DRO	**Drossia**	**1.11**	**113**	P	**Pg**		**11 30 35.3**	**-0.8**
DRO				S	**Sg**		**11 30 49.6**	**-1.1**
IGT	**Igoumenitsa**	**1.13**	**357**	P	**Pb**		**11 30 36.4**	**+0.5**
IGT				S	**Sn**		**11 30 53.4**	**+2.2**
	comp=N,300nm,0.4s							
ANX	**Ano Chora**	**1.20**	**80**	P	**Pb**		**11 30 36.9**	**-0.1**
ANX				S	**Sb**		**11 30 53.2**	**+0.9**
ANX				AML	AML		11 30 59.9	
	comp=N,2007μm,0.6s							
ANX				AML	AML		11 31 00.9	
	comp=E,2578μm,0.6s							
EVR	**Evrytania**	**1.21**	**64**	P	**Pb**		**11 30 36.9**	**-0.3**
EVR	**Evrytania**	**1.21**	**64**	P	**Pb**		**11 30 37.1**	**-0.1**
SERG	**Sergoula**	**1.29**	**89**	P	**Pn**		**11 30 38.1**	**+0.1**
SERG				S	**Sn**		**11 30 56.3**	**+1.3**
SERG				AML	AML		11 31 01.4	
	comp=N,1213μm,0.7s							
SERG				AML	AML		11 31 01.8	
	comp=E,1403μm,0.8s							
TRIZ	**Trizonia**	**1.30**	**91**	P	**Pn**		**11 30 38.2**	**0.0**
TRIZ				S	**Sg**		**11 30 56.1**	**-0.6**
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pb**		**11 30 40.2**	**+0.8**
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**		**11 30 38.9**	**-0.1**
KEK	**Kerkira**	**1.40**	**340**	P	**Pn**		**11 30 41.3**	**+1.8**
KEK				S	**Sg**		**11 31 00.6**	**+0.9**
KLV	**Kalavryta, Ach**	**1.41**	**104**	P	**Pn**		**11 30 40.1**	**+0.3**
KLV	**Kalavryta, Ach**	**1.41**	**104**	P	**Pn**		**11 30 40.1**	**+0.3**
KLV				S	**Sg**		**11 31 00.3**	**+0.1**
	comp=E,130nm,0.5s							
MAKR	**Makrakomi, Fth**	**1.47**	**65**	P	**Pn**		**11 30 42.0**	**+1.4**
MAKR				S	**Sg**		**11 31 04.6**	**+2.4**
GUR	**Goura**	**1.59**	**106**	P	**Pn**		**11 30 43.1**	**+0.9**
GUR				S	**Sg**		**11 31 06.0**	**+0.2**
AGG	**Agios Georgios**	**1.62**	**67**	P	**Pb**		**11 30 44.6**	**+0.4**
AGG				S	**Sg**		**11 31 06.5**	**-0.4**
	comp=E,242nm,0.7s							
DSF	**Desfina**	**1.66**	**89**	P	**Pb**		**11 30 44.9**	**0.0**
ITM	**Thomi**	**1.71**	**135**	P	**Pg**		**11 30 47.0**	**-0.5**
PYL	**PYLOS**	**1.83**	**145**	P	**Pn**		**11 30 46.9**	**+1.4**
STON	**Ston**	**4.92**	**336**	*e*Pn	**Pn**		**11 31 28.0**	**+0.1**
STON				Sn	**Sn**		**11 32 21.9**	**-2.6**
LSTV	**Lastovo**	**5.12**	**330**	*e*Pn	**Pn**		**11 31 30.9**	**+0.1**
LSTV				Sn	**Sn**		**11 32 25.5**	**-4.0**
MAKA	**Makarska**	**5.52**	**333**	*e*Pn	**Pn**		**11 31 36.0**	**-0.2**
MAKA				Sn	**Sn**		**11 32 36.9**	**-2.4**
RICI	**Ricice**	**5.66**	**335**	*e*Pn	**Pn**		**11 31 38.8

WR0	**Warramunga Arr**	**40.51**	**122**	P	**P**		**11 39 04.3**	**-2.1**
FORT	**Forrest**	**41.59**	**140**	P	**P**		**11 39 15.3**	**+0.1**
FORT				IAmb	IAmb		11 39 28.3	
	comp=Z,23nm,0.9s							
ASAR	**Alice Springs**	**41.68**	**127**	P	**P**		**11 39 14.7**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=300,slow=7.7,SNR=31							
AS31	**Alice Springs**	**41.68**	**127**	P	**P**		**11 39 13.8**	**-2.2**
KSRS	**Korea Array**	**46.01**	**33**	P	**P**		**11 39 49.3**	**-1.2**
	comp=Z,2.0nm,0.5s,baz=224,slow=7.8,SNR=10							
KS19	**Wonju Array Si**	**46.02**	**33**	P	**P**		**11 39 49.4**	**-1.2**
JMN	**Monobe**	**47.09**	**41**	P	**P**		**11 39 58.4**	**-0.8**
JHS	**Saijyo**	**47.39**	**39**	P	**P**		**11 40 00.0**	**-1.4**
SONM	**Songino Array**	**48.03**	**7**	P	**P**		**11 40 07.0**	**+0.7**
	comp=Z,4.1nm,0.6s,baz=190,slow=9.5,SNR=21							
SONM				PcP	**PcP**		11 41 34.3	+0.6
	comp=Z,0.9nm,0.4s,baz=186,slow=4.0,SNR=2.6							
SONM	**Songino Array**	**48.03**	**7**	P	**P**		**11 40 06.5**	**+0.2**
ULN	**Ulaanbaatar**	**48.14**	**8**	P	**P**		**11 40 07.6**	**+0.4**
ULN				IAmb	IAmb		11 40 09.8	
	comp=Z,5.0nm,0.7s							
MK31	**Makanchi Array**	**48.62**	**345**	P	**P**		**11 40 10.7**	**0.0**
MK31				IAmb	IAmb		11 40 11.9	
	comp=Z,3.1nm,0.6s							
MKAR	**Makanchi Array**	**48.62**	**345**	P	**P**		**11 40 11.4**	**+0.6**
	comp=Z,4.5nm,0.5s,baz=155,slow=9.1,SNR=55							
MKAR	**Makanchi Array**	**48.62**	**345**	P	**P**		**11 40 10.6**	**-0.2**
MAKZ	**Makanchi**	**48.72**	**345**	P	**P**		**11 40 10.9**	**-0.6**
MAKZ				IAmb	IAmb		11 40 12.5	
	comp=Z,2.3nm,0.6s							
JWT	**Wachi**	**49.04**	**41**	P	**P**		**11 40 12.0**	**-2.1**
MJAR	**Matsushiro Arr**	**51.62**	**41**	P	**P**		**11 40 32.1**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=238,slow=5.9,SNR=4.8							
STKA	**Stephens Creek**	**51.64**	**132**	P	**P**		**11 40 34.9**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=308,slow=6.6,SNR=5.1							
STKA	**Stephens Creek**	**51.64**	**132**	P	**P**		**11 40 33.0**	**-0.8**
USRK	**Ussuriysk Ar.**	**53.03**	**30**	P	**P**		**11 40 43.8**	**-0.2**
	comp=Z,4.5nm,0.8s,baz=256,slow=3.4,SNR=8.2							
USRK	**Ussuriysk Ar.**	**53.03**	**30**	P	**P**		**11 40 43.1**	**-0.9**
ZAA0	**Zalesovo Array**	**54.85**	**350**	P	**P**		**11 40 57.0**	**0.0**
ZAA0				IAmb	IAmb		11 40 57.4	
	comp=Z,3.4nm,0.6s							
ZALV	**Zalesovo Beam**	**54.85**	**350**	P	**P**		**11 40 57.0**	**0.0**
	comp=Z,4.0nm,0.4s,baz=166,slow=6.8,SNR=13							
ZALV	**Zalesovo Beam**	**54.85**	**350**	P	**P**		**11 40 56.8**	**-0.2**
ABKAR	**Akbulak array**	**59.10**	**332**	P	**P**		**11 41 26.9**	**-0.3**
ABKAR	**Akbulak array**	**59.10**	**332**	P	**P**		**11 41 26.9**	**-0.3**
ABKAR				IAmb	IAmb		11 41 43.9	
	comp=Z,2.9nm,1.2s							
TIXI	**Tiksi**	**74.03**	**10**	P	**P**		**11 43 01.6**	**-0.5**
BKZ	**Black Stump Fm**	**80.74**	**130**	P	**P**		**11 43 39.7**	**-0.6**
FINES	**FINESS Array B**	**81.58**	**332**	P	**P**		**11 43 44.6**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=106,slow=6.2,SNR=12							
FINES	**FINESS Array B**	**81.58**	**332**	P	**P**		**11 43 44.2**	**0.0**
ARCES	**ARCESS Array B**	**84.01**	**340**	P	**P**		**11 43 56.9**	**+0.2**
	comp=Z,8nm,1.0s,baz=97,slow=4.9,SNR=8.9							
TXAR	**Lajitas Array**	**143.86**	**34**	PKP	PKPbc		11 51 03.0	+2.7
	comp=Z,0.4nm,0.6s,baz=8.5,slow=1.8,SNR=2.6							
CPUP	**Villa Florida**	**145.06**	**220**	PKPbc	**PKPbc**		**11 51 05.7**	**+1.6**
	comp=Z,1.5nm,0.6s,baz=149,slow=5.9,SNR=2.8							

WEL 13 11:45:01.8,41°S±2°×17°4E±°, h50km±3km, M2.9/14, ML3.1/14, MLv2.9/14, Error ellipse: s-maj=0.0km s-min=0.0km az=120.2, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	**Tuamarina**	**0.08**	**76**	P	Pn	11 45 10.0	+0.4
TUWZ				S	Sn	11 45 14.9	-0.1
BSWZ	**Blackbirch Sta**	**0.27**	**174**	P	Pn	11 45 11.1	+0.4
TCW	**Tory Channel**	**0.41**	**54**	P	Pn	11 45 12.6	+0.5
TCW				S	Sn	11 45 19.7	+0.4
CMWZ	**Cape Campbell**	**0.41**	**137**	P	Pn	11 45 13.5	+1.4
NNZ	**Nelson**	**0.41**	**304**	P	Pn	11 45 12.4	+0.3
DUWZ	**D'Urville Isla**	**0.65**	**6**	P	Pn	11 45 15.3	+0.3
DUWZ				S	Sn	11 45 24.8	+0.3
WEL	**Wellington**	**0.72**	**77**	P	Pn	11 45 17.0	+1.2
WEL				S	Sn	11 45 27.2	+1.3
THZ	**Tophouse**	**0.77**	**246**	P	Pn	11 45 16.8	+0.3
BHW	**Baring Head**	**0.78**	**87**	P	Pn	11 45 17.0	+0.5
BHW				S	Sn	11 45 29.1	+1.7
CAW	**Cannon Point**	**0.99**	**70**	P	Pn	11 45 20.1	+0.7
KHZ	**Kahutara**	**0.99**	**193**	P	Pn	11 45 20.1	+0.7
KIW	**Kapiti Island**	**1.00**	**54**	P	Pn	11 45 20.7	+1.1
MSWZ	**Moikau Station**	**1.06**	**89**	P	Pn	11 45 20.5	+0.1
PLWZ	**Palliser**	**1.07**	**97**	P	Pn	11 45 20.4	-0.2
QRZ	**Quartz Range**	**1.17**	**302**	P	Pn	11 45 23.2	+1.4
OGWZ	**Otaki Gorge**	**1.19**	**58**	P	Pn	11 45 23.0	+0.9
PAWZ	**Paruwai Farm**	**1.20**	**87**	P	Pn	11 45 22.0	-0.3
MTW	**Mount Morrison**	**1.29**	**78**	P	Pn	11 45 23.2	-0.2
HOWZ	**Holdsworth Sta**	**1.38**	**67**	P	Pn	11 45 25.0	+0.2
MRZ	**Mangatainoka R**	**1.54**	**60**	P	Pn	11 45 27.0	+0.2
DSZ	**Denniston Nort**	**1.55**	**258**	P	Pn	11 45 28.5	+1.4
TMWZ	**Te Maipa**	**1.59**	**78**	P	Pn	11 45 30.9	+3.4
GVZ	**Greta Valley S**	**1.60**	**201**	P	Pn	11 45 28.1	0.0
TIWZ	**Tintock**	**1.69**	**61**	P	Pn	11 45 29.9	+0.2
LTZ	**Lake Taylor**	**1.77**	**221**	P	Pn	11 45 30.3	+0.2
POWZ	**Post Office Ro**	**1.81**	**55**	P	Pn	11 45 34.5	+4.0
PRWZ	**Pori Road**	**1.85**	**62**	P	Pn	11 45 35.1	+4.0
WAZ	**Wanganui**	**1.91**	**28**	P	Pn	11 45 34.1	+2.2
AMCZ	**Amberley**	**1.94**	**207**	P	Pn	11 45 31.8	-0.4
BFZ	**Birch Farm**	**1.98**	**68**	P	Pn	11 45 32.1	-0.8
DVHZ	**Dannevirke**	**2.11**	**58**	P	Pn	11 45 36.8	+2.1
TSZ	**Takapari Road**	**2.13**	**50**	P	Pn	11 45 37.3	+2.3
KHEZ	**Kahui Hut**	**2.16**	**4**	P	Pn	11 45 38.5	+3.1
NEZ	**North Egmont**	**2.19**	**5**	P	Pn	11 45 38.7	+2.9
INZ	**Inchbonnie**	**2.19**	**234**	P	Pn	11 45 36.2	+0.5
DREZ	**Durham Road**	**2.27**	**7**	P	Pn	11 45 39.6	+2.6
OXZ	**Oxford**	**2.30**	**215**	P	Pn	11 45 36.2	-1.1
OKCZ	**Okains Bay**	**2.34**	**194**	P	Pn	11 45 36.8	-1.1
PNHZ	**Pukenui**	**2.36**	**50**	P	Pn	11 45 40.2	+2.1
WPHZ	**Waipukurau**	**2.41**	**56**	P	Pn	11 45 45.3	+6.4
MQZ	**McQueen's Vall**	**2.42**	**201**	P	Pn	11 45 37.0	-1.8
VRZ	**Vera Road**	**2.43**	**17**	P	Pn	11 45 41.7	+2.7
MOVZ	**Moawhango**	**2.51**	**36**	P	Pn	11 45 43.2	+2.9
WNVZ	**Wahianoa**	**2.51**	**33**	P	Pn	11 45 44.0	+3.7
WHVZ	**Whangaehu Hut**	**2.54**	**32**	P	Pn	11 45 44.4	+3.5
TUVZ	**Tukino**	**2.58**	**33**	P	Pn	11 45 44.4	+3.1
BHHZ	**Black Hill Sta**	**2.59**	**42**	P	Pn	11 45 43.4	+2.1
RACZ	**Rakaia**	**2.60**	**208**	P	Pn	11 45 39.8	-1.6
NGZ	**Ngauruhoe**	**2.64**	**31**	P	Pn	11 45 46.0	+3.9
KRHZ	**Kereru**	**2.64**	**48**	P	Pn	11 45 48.4	+6.4
MHCZ	**Mount Hutt**	**2.67**	**218**	P	Pn	11 45 41.2	-1.2
TWVZ	**Taurewa**	**2.67**	**28**	P	Pn	11 45 46.9	+4.4
ETVZ	**East Tongariro**	**2.72**	**32**	P	Pn	11 45 46.6	+3.4
KRVZ	**Karewarewa**	**2.73**	**31**	P	Pn	11 45 48.3	+5.1
TMVZ	**Te Maari**	**2.73**	**32**	P	Pn	11 45 47.8	+4.5
WVZ	**Waitaha Valley**	**2.82**	**234**	P	Pn	11 45 53.3	+1.0
HIZ	**Hauiti**	**3.04**	**15**	P	Pn	11 45 49.8	+2.5
BKZ	**Black Stump Fm**	**3.05**	**43**	P	Pn	11 45 50.3	+2.7
RPZ	**Rata Peaks**	**3.06**	**221**	P	Pn	11 45 51.3	+3.6
NMHZ	**Nmhz**	**3.27**	**45**	P	Pn	11 45 52.9	+2.3
TLZ	**Tolley Road**	**3.38**	**23**	P	Pn	11 45 55.1	+3.0
FOZ	**Fox Glacier**	**3.63**	**234**	P	Pn	11 45 55.7	+0.3
TOZ	**Tahuroa Road**	**3.93**	**20**	P	Pn	11 46 00.3	+0.6
ODZ	**Otahua Downs**	**4.28**	**212**	P	Pn	11 46 02.6	-1.9
JCZ	**Jackson Bay**	**4.55**	**233**	P	Pn	11 46 08.1	-0.1
ETAZ	**East Tamaki Re**	**4.57**	**11**	P	Pn	11 46 11.0	+2.7

*GCG **13** 11:47:35.4±0.4, 13°.45N×90°.86W, h8km, MD3.6*
*SNET **13** 11:47:37.6±1.1, 13°.54N×90°.71W, h23km±3km, ML3.5*
*UCR **13** 11:47:37.7±1.0, 13°.55N×90°.71W, h24km±3km, ML3.5*
ISC 13 11:47:36.0±2.3, 13°.51N±0°.09×90°.75W±0°.07, h15km±10km, n33, σ0°.64/50, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCG	**Pacaya**	**0.89**	**9**	*eP*	**Pg**	**11 47 53.9**	**+0.6**
FUG	**Fuego 3**	**0.94**	**355**	*eP*	**Pg**	**11 47 54.3**	**+0.1**
NUBE	**Las Nubes**	**1.02**	**68**	*eP*	**Pg**	**11 47 55.2**	**-0.7**
NUBE				*eS*	**Sg**	**11 48 08.5**	**-0.7**
NUBE	**Las Nubes**	**1.02**	**68**	*eP*	**Pg**	**11 47 55.2**	**-0.7**
NUBE				*eS*	**Sg**	**11 48 08.5**	**-0.7**
NBG	**Las Nubes**	**1.14**	**20**	*eP*	**Pb**	**11 47 58.6**	**+1.1**
NBG				*eS*	**Sg**	**11 48 14.1**	**+1.1**
RTR	**El Retiro**	**1.14**	**70**	*eP*	**Pn**	**11 47 57.5**	**-0.1**
RTR	**El Retiro**	**1.14**	**70**	*eP*	**Pn**	**11 47 57.5**	**-0.1**
SBLS	**San Blas**	**1.15**	**73**	*eP*	**Pn**	**11 47 57.3**	**-0.4**
SBLS	**San Blas**	**1.15**	**73**	*eP*	**Pn**	**11 47 57.3**	**-0.4**
SNJE	**San Jose**	**1.17**	**72**	*eP*	**Pn**	**11 47 57.7**	**-0.3**
SNJE	**San Jose**	**1.17**	**72**	*eP*	**Pn**	**11 47 57.7**	**-0.3**
CEDA	**San Andres**	**1.35**	**77**	*eP*	**Pn**	**11 48 00.1**	**-0.2**
CEDA				*eS*	**Sn**	**11 48 17.7**	**-0.3**
CEDA				IAML		11 48 20.8	
	comp=Z,2μm,0.3s						
CEDA	**San Andres**	**1.35**	**77**	*eP*	**Pn**	**11 48 00.1**	**-0.2**
CEDA				*eS*	**Sn**	**11 48 17.7**	**-0.3**
CEDA				IAML		11 48 20.8	
	comp=Z,2μm,0.3s						
STG3	**Santiaguito 3,**	**1.43**	**326**	*eP*	**Pn**	**11 48 01.4**	**-0.2**
STG3				*eS*	**Sb**	**11 48 18.2**	**-2.4**
TACO	**Tacachico**	**1.43**	**71**	*eP*	**Pn**	**11 48 01.6**	**+0.1**
TACO				*eS*	**Sn**	**11 48 20.1**	**0.0**
TACO	**Tacachico**	**1.43**	**71**	*eP*	**Pn**	**11 48 01.6**	**+0.1**
TACO				*eS*	**Sn**	**11 48 20.1**	**0.0**
BOQS	**Boqueron**	**1.45**	**81**	*eP*	**Pn**	**11 48 02.0**	**+0.2**
BOQS	**Boqueron**	**1.45**	**81**	*eP*	**Pn**	**11 48 02.0**	**+0.2**
UEES	**Universidad Ev**	**1.49**	**82**	*eP*	**Pn**	**11 48 02.5**	**+0.3**
UEES				*eS*	**Sn**	**11 48 21.7**	**+0.2**
UEES				IAML		11 48 23.2	
	comp=Z,1μm,0.2s						
UEES	**Universidad Ev**	**1.49**	**82**	*eP*	**Pn**	**11 48 02.5**	**+0.3**
UEES				*eS*	**Sn**	**11 48 21.7**	**+0.2**
UEES				IAML		11 48 23.2	
	comp=Z,1μm,0.2s						
SNET	**Serv Nac Est T**	**1.49**	**83**	*eP*	**Pn**	**11 48 02.5**	**+0.2**
SNET				*eS*	**Sn**	**11 48 21.3**	**-0.2**
SNET				IAML		11 48 22.4	
	comp=Z,2μm,0.3s						
SNET	**Serv Nac Est T**	**1.49**	**83**	*eP*	**Pn**	**11 48 02.5**	**+0.2**
SNET				*eS*	**Sn**	**11 48 21.3**	**-0.2**
SNET				IAML		11 48 22.4	
	comp=Z,2μm,0.3s						
MTO3	**Montecristo**	**1.61**	**57**	*eP*	**Pn**	**11 48 03.6**	**-0.5**
MTO3				*eS*	**Sn**	**11 48 25.6**	**+0.9**
MTO3				IAML		11 48 27.6	
	comp=Z,309nm,0.3s						
MTO3	**Montecristo**	**1.61**	**57**	*eP*	**Pn**	**11 48 03.6**	**-0.5**
MTO3				*eS*	**Sn**	**11 48 25.6**	**+0.9**
MTO3				IAML		11 48 27.6	
	comp=Z,309nm,0.3s						
LFRS	**El Faro**	**1.65**	**86**	*eP*	**Pn**	**11 48 04.9**	**+0.4**
LFRS	**El Faro**	**1.65**	**86**	*eP*	**Pn**	**11 48 04.9**	**+0.4**
LBRS	**Las Brisas**	**1.68**	**82**	*eP*	**Pn**	**11 48 05.4**	**+0.5**
LBRS	**Las Brisas**	**1.68**	**82**	*eP*	**Pn**	**11 48 05.4**	**+0.5**
ESQI	**Esquipulas**	**1.72**	**53**	*eP*	**Pn**	**11 48 05.4**	**-0.1**
ESQI				*eS*	**Sn**	**11 48 27.9**	**+0.6**
ESQI				IAML		11 48 31.8	
	comp=Z,168nm,0.5s						
PAVA	**Las Pavas**	**1.78**	**83**	*eP*	**Pn**	**11 48 06.5**	**+0.2**
PAVA	**Las Pavas**	**1.78**	**83**	*eP*	**Pn**	**11 48 06.5**	**+0.2**
LCND	**La Caada**	**2.79**	**94**	*eP*	**Pn**	**11 48 21.5**	**+1.3**
LCND				*eS*	**Sn**	**11 48 53.5**	**-0.1**
LCND				IAML		11 48 58.3	
	comp=Z,160nm,0.4s						
LCND	**La Caada**	**2.79**	**94**	*eP*	**Pn**	**11 48 21.5**	**+1.3**
LCND				*eS*	**Sn**	**11 48 53.5**	**-0.1**
LCND				IAML		11 48 58.3	
	comp=Z,160nm,0.4s						

IDC 13 11:59:15.7±2.1, 0°.63S×24°.56W, h0km, mb3.6/1, mb1 4.0/2, mb1mx3.5/43, mbtmp4.0/2, ML4.2/1, Error ellipse: s-maj=139.2km s-min=34.0km az=149.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	**12.32**	**126**	T	T	12 14 12.1	
	baz=304,slow=74,SNR=671						
H10N2	**ASCENSION HYDR**	**12.32**	**126**	T	T	12 14 11.7	
	baz=304,slow=74,SNR=558						
H10N1	**ASCENSION HYDR**	**12.34**	**126**	T	T	12 14 11.1	
	baz=304,slow=74,SNR=813						
RCBR	**Riachuelo**	**12.45**	**245**	Pn	Pn	12 02 14.5	+0.1
	1.4nm,0.3s,baz=64,slow=14,SNR=7.6						
H10S3	**ASCENSION HYDR**	**12.86**	**130**	T	T	12 14 51.5	
	baz=308,slow=74,SNR=169						
H10S2	**ASCENSION HYDR**	**12.88**	**130**	T	T	12 14 51.7	
	baz=272,slow=74,SNR=39						
TORD	**Torodi Ar. Bea**	**29.41**	**61**	P	P	12 05 21.2	+0.1
	0.7nm,0.9s,baz=251,slow=9.0,SNR=3.4						
ASAR	**Alice Springs**	**148.04**	**141**	PKPbc	PKPbc	12 19 03.8	-0.5
	1.4nm,0.5s,baz=208,slow=2.2,SNR=31						
WRA	**Warramunga Arr**	**150.92**	**136**	PKPbc	PKPbc	12 19 10.8	-0.6
	0.2nm,0.7s,baz=235,slow=2.3,SNR=5.8						

HEL 13 12:14:16.0±0.1, 61°.04N×26°.43E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIA0	**FINESS Array S**	**0.44**	**338**	PG	Pg	12 14 23.5	-0.9
	baz=160						
FIA0				SG	Sg	12 14 29.8	-0.3
PVF	**Pernaja**	**0.57**	**210**	PG	Pg	12 14 26.0	-0.8
PVF				SG	Sg	12 14 33.7	-0.5
VJF	**Virojoki**	**0.75**	**132**	PG	Pg	12 14 29.4	-0.9
	baz=314						
KAF	**Kangasniemi**	**1.08**	**357**	SB	Sg	12 14 50.2	-0.5
KEF	**Keuruu**	**1.36**	**327**	PG	Pg	12 14 40.6	-1.4
KEF				MSG		12 14 57.0	
	comp=Z,1.1nm,0.2s						
SUF	**Sumiainen**	**1.69**	**356**	MSG		12 15 06.5	
	comp=Z,1.0nm,0.2s						
SUF				SN	Sn	12 15 08.8	-0.3
RAF	**Rauma**	**2.27**	**272**	MSG		12 15 23.1	
	comp=Z,1.9nm,0.2s						
RAF				SG	Sb	12 15 26.4	+0.1

*HEL **13** 12:15:04.4±0.3, 57°.67N×16°.98E, h0km, ML2.1, Explosion*
*IDC **13** 12:15:10.2±2.4, 57°.86N×17°.48E, h0km, mb3.0/1, mb1 3.1/5, mb1mx3.0/41, mbtmp3.1/5, ML2.1/4, Error ellipse: s-maj=33.0km s-min=14.3km az=1.0*
*UPP **13** 12:15:13.0±0.1, 58°.33N×17°.58E, h0km, ML2.2, Explosion*
ISC 13 12:15:13.0±0.7, 58°.28N±0°.02×17°.50E±0°.03, h0km, n45, σ1§57/62, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VIKU	**Vikbolandet**	**0.48**	**298**	P	**Pg**	**12 15 22.5**	**+0.3**
VIKU				S	**Sg**	**12 15 29.0**	**+0.7**
VIKU	**Vikbolandet**	**0.48**	**298**	P	**Pg**	**12 15 22.5**	**+0.3**
VIKU				S	**Sg**	**12 15 29.0**	**+0.7**
NYNU	**Nynaeshamn**	**0.77**	**20**	P	**Pg**	**12 15 26.4**	**-1.4**
NYNU	**Nynaeshamn**	**0.77**	**20**	P	**Pg**	**12 15 26.4**	**-1.4**
VSTU	**Vaestervik**	**0.81**	**220**	P	**Pb**	**12 15 29.5**	**-0.4**
VSTU				S	**Sg**	**12 15 40.3**	**+1.3**
VSTU	**Vaestervik**	**0.81**	**220**	P	**Pb**	**12 15 29.5**	**-0.4**
VSTU				S	**Sg**	**12 15 40.3**	**+1.3**
GOTU	**Gotland**	**0.82**	**136**	P	**Pg**	**12 15 28.6**	**-0.2**
GOTU	**Gotland**	**0.82**	**136**	P	**Pg**	**12 15 28.6**	**-0.2**
BYXU	**Byxelkrok**	**1.03**	**195**	P	**Pb**	**12 15 33.4**	**-0.3**
BYXU	**Byxelkrok**	**1.03**	**195**	P	**Pb**	**12 15 33.4**	**-0.3**
LNKU	**Linkoeping**	**1.06**	**268**	P	**Pg**	**12 15 33.4**	**+0.1**
LNKU				S	**Sb**	**12 15 48.8**	**+0.2**
LNKU	**Linkoeping**	**1.06**	**268**	P	**Pg**	**12 15 33.4**	**+0.1**
LNKU				S	**Sb**	**12 15 48.8**	**+0.2**
ESKU	**Eskilstuna**	**1.11**	**329**	P	**Pg**	**12 15 33.5**	**-0.9**
ESKU				S	**Sg**	**12 15 48.5**	**-0.3**
ESKU	**Eskilstuna**	**1.11**	**329**	P	**Pg**	**12 15 33.5**	**-0.9**
ESKU				S	**Sg**	**12 15 48.5**	**-0.3**
OSKU	**Oskarshamn**	**1.32**	**215**	P	**Pn**	**12 15 38.7**	**0.0**
OSKU				S	**Sn**	**12 15 57.7**	**+0.7**
OSKU	**Oskarshamn**	**1.32**	**215**	P	**Pn**	**12 15 38.7**	**0.0**
OSKU				S	**Sn**	**12 15 57.7**	**+0.7**
EKSU	**Eksjoe**	**1.37**	**240**	P	**Pg**	**12 15 39.3**	**-0.1**
EKSU	**Eksjoe**	**1.37**	**240**	P	**Pg**	**12 15 39.3**	**-0.1**
ASKU	**Askersund**	**1.53**	**295**	P	**Pn**	**12 15 41.4**	**-0.2**
ASKU	**Askersund**	**1.53**	**295**	P	**Pn**	**12 15 41.4**	**-0.2**
UPP	**Uppsala**	**1.58**	**2**	P	**Pn**	**12 15 42.3**	**0.0**
BACU	**Backbrunna**	**1.59**	**353**	P	**Pn**	**12 15 41.6**	**-0.8**
BACU	**Backbrunna**	**1.59**	**353**	P	**Pn**	**12 15 41.6**	**-0.8**
FIBU	**Brunna**	**1.63**	**357**	P	**Pn**	**12 15 42.4**	**-0.5**
FIBU	**Brunna**	**1.63**	**357**	P	**Pn**	**12 15 42.4**	**-0.5**
AAL	**Aland**	**2.29**	**33**	SB	**Pn**	**12 15 52.2**	**+0.2**
AAL	**Aland**	**2.29**	**33**	*eP*	**Pn**	**12 15 52.7**	**+0.6**
AAL				*eS*	**Sg**	**12 16 27.9**	**+1.3**
HFS	**Hagfors**	**2.70**	**315**	Pn	**Pn**	**12 15 58.8**	**+1.1**
	0.6nm,0.3s,baz=137,slow=12,SNR=12						
BSD	**Bornholm Skovb**	**3.48**	**205**	IAML		12 17 33.3	
	comp=Z,25nm,0.3s						
BSD	**Bornholm Skovb**	**3.48**	**205**	*i* P	**Pn**	**12 16 05.9**	**-2.4**
BSD	**Bornholm Skovb**	**3.48**	**205**	*eP*	**Pn**	**12 16 06.0**	**-2.4**
BSD				IAML		12 17 33.3	
	comp=Z,25nm,0.3s						
BSD	**Bornholm Skovb**	**3.48**	**205**	*eP*	**Pn**	**12 16 06.0**	**-2.4**
RAF	**Rauma**	**3.50**	**36**	*eP*	**Pn**	**12 16 08.7**	**+0.1**
RAF				*eS*	**Sb**	**12 16 56.9**	**-1.9**
RAF				MSG		12 17 11.8	
	comp=Z,2.4nm,0.1s						
NOA	**NORSAR Array B**	**4.22**	**314**	Pn	**Pn**	**12 16 19.3**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=144,slow=22,SNR=4.1						
PVF	**Pernaja**	**4.83**	**58**	*eS*	**Sn**	**12 17 26.2**	**+2.7**
KEF	**Keuruu**	**5.35**	**40**	*eP*	**Pn**	**12 16 34.0**	**-0.1**
KEF				*eS*	**Sn**	**12 17 40.0**	**+3.6**
KEF				MSG		12 18 13.3	
	comp=Z,1.9nm,0.1s						
FIA0	**FINESS Array S**	**5.36**	**50**	*eP*	**Pn**	**12 16 34.0**	**-0.1**
FIA0				*eS*	**Sn**	**12 17 40.2**	**+3.7**
FINES	**FINESS Array B**	**5.36**	**50**	Pn	**Pn**	**12 16 33.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=235,slow=15,SNR=1.5						
FINES				Sn	**Sn**	**12 17 40.8**	**+4.4**
	comp=Z,1.0nm,0.3s,baz=236,slow=10,SNR=4.0						
FIA1	**FINESS Array S**	**5.36**	**50**	*eP*	**Pn**	**12 16 34.0**	**-0.1**
FIA1				*eS*	**Sn**	**12 17 40.2**	**+3.7**
KAF	**Kangasniemi**	**5.83**	**45**	*eP*	**Pn**	**12 16 40.2**	**-0.5**
KAF				*eS*	**Sn**	**12 17 52.3**	**+4.1**
SUF	**Sumiainen**	**6.17**	**40**	*eP*	**Pn**	**12 16 44.1**	**-1.1**
SUF				*eS*	**Sn**	**12 17 59.8**	**+3.4**
OBF0	**Syolatti, Pyha**	**7.02**	**25**	*eP*	**Pn**	**12 16 56.4**	**-0.5**
OUF	**Merijarvi**	**7.02**	**27**	*eP*	**Pn**	**12 16 56.4**	**-0.5**
ARCES	**ARCESS Array B**	**11.82**	**14**	Pn	**Pn**	**12 18 00.0**	**-2.6**
	baz=206,slow=14,SNR=5.8						
MKAR	**Makanchi Array**	**39.51**	**78**	P	**P**	**12 22 43.5**	**-1.6**
	comp=Z,0.1nm,0.5s,baz=327,slow=6.2,SNR=2.3						

*IDC **13** 12:15:23.8±1.0, 58°.37N×17°.88E, h0km, mb3.2/1, mb1 3.2/5, mb1mx3.1/40, mbtmp3.1/5, ML2.4/4, Error ellipse: s-maj=14.5km s-min=4.9km az=11.0*
*UPP **13** 12:15:24.0±0.1, 58°.32N×17°.52E, h0km, ML2.5, Explosion*
*DNK **13** 12:15:24.6±0.3, 58°.31N×17°.51E, h0km, ML2.5(UPP), Explosion*
*BER **13** 12:15:25.4±2.7, 58°.28N×17°.57E, h0km, ML2.2, ML2.5(UPP), Suspected explosion*
ISC 13 12:15:22.9±0.9, 58°.33N±0°.04×17°.52E±0°.03, h0km, n38, σ1§16/43, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOTU	**Gotland**	**0.85**	**139**	P	**Pg**	**12 15 39.9**	**+0.6**
GOTU	**Gotland**	**0.85**	**139**	P	**Pg**	**12 15 39.9**	**+0.6**
GOTU	**Gotland**	**0.85**	**139**	P	**Pg**	**12 15 39.9**	**+0.6**
LNKU	**Linkoeping**	**1.07**	**265**	P	**Pg**	**12 15 43.9**	**+0.6**
LNKU				S	**Sg**	**12 15 58.1**	**+0.9**
LNKU	**Linkoeping**	**1.07**	**265**	P	**Pg**	**12 15 43.9**	**+0.6**
LNKU				S	**Sg**	**12 15 58.1**	**+0.9**
LNKU	**Linkoeping**	**1.07**	**265**	P	**Pg**	**12 15 43.9

$M_{\theta\theta}$-1.24; $M_{\phi\phi}$0.76; M_{rr}2.22; $M_{\theta\phi}$-1.04; $M_{\theta r}$-0.90; Fault plane solution: M_o2.83000×10^{17} NP1:ϕ_s207.00000°, δ31.00000°, λ11.00000°. NP2:ϕ_s108.00000°, δ84.00000°, λ121.00000°. Principal axes: T 2.8533, Plg42.0000°, Azm47.0000°; N -0.0549, Plg30.0000°, Azm284.0000°; P -2.7983, Plg32.0000°, Azm173.0000°;

*MOS **13** 12:21:12.9$_S$1.1, 18°.52S×168°.98E, h284km, mb5.6/61*

Error ellipse: s-maj=8.3km s-min=6.4km az=71.8

ISC 13 12:21:06.5±0.3,**18°.49S**±0°.03×**169°.19E**±0°.03,**h218**km±2km, **h219**km:**pP-P,n1416,**σ1§**46**/1455,**mb5.5**/267,**75C-13D,**

Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.57**	**328**			**Pn**	**12 22 04.4**	**+0.7**
SANVU				S		**S**	**12 22 47.4**	**-1.2**
DZM	**Mont Dzumac**	**4.40**	**215**	P		**Pn**	**12 22 14.2**	**+0.3**
	508nm,0.3s,baz=52,slow=15,SNR=1695							
DZM				S		**S**	**12 23 05.5**	**-1.4**
	98nm,0.3s,baz=19,slow=14,SNR=6.5							
DZM	**Mont Dzumac**	**4.40**	**215**	*e*Pn		**Pn**	**12 22 14.2**	**+0.3**
	21μm,1.2s							
DZM				*e*Sn		**S**	**12 23 05.2**	**-1.7**
	19μm,1.6s							
DZM	**Mont Dzumac**	**4.40**	**215**			**Pn**	**12 22 13.8**	**-0.1**
DZM				S		**S**	**12 23 07.3**	**+0.4**
MSVF	**Nonsavu**	**8.46**	**86**	*c i*P		**Pn**	**12 23 08.8**	**+3.0**
MSVF	**Nonsavu**	**8.46**	**86**			**Pn**	**12 23 09.9**	**+4.1**
NFK	**Norfolk Island**	**10.57**	**186**	P		**Pn**	**12 23 33.9**	**+1.2**
	baz=11,SNR=3.8							
NFK				S		**S**	**12 25 36.2**	**+5.1**
	baz=11							
HNR	**Honiara**	**12.70**	**314**	P		**Pn**	**12 24 00.3**	**+0.5**
	44nm,0.3s,baz=172,slow=2.8,SNR=24							
HNR				S		**S**	**12 26 21.5**	**+1.1**
	4.9nm,0.3s,baz=135,slow=8.6,SNR=2.4							
HNR	**Honiara**	**12.70**	**314**	Pn		**Pn**	**12 23 58.9**	**-0.9**
FUNA	**Funafuti**	**13.88**	**46**			**P**	**12 24 15.7**	**-0.2**
LHI	**Lord Howe Isla**	**15.88**	**213**	P		**Pn**	**12 24 39.5**	**+1.0**
	baz=16,SNR=28							
LHI	**Lord Howe Isla**	**15.88**	**213**	P		**Pn**	**12 24 38.6**	**+0.1**
RAO	**Raoul Island**	**15.92**	**135**	P		**Pn**	**12 24 40.4**	**+1.4**
	27nm,0.3s,baz=106,slow=18,SNR=3.8							
RAO	**Raoul Island**	**15.92**	**135**	P		**Pn**	**12 24 39.4**	**+0.3**
OUZ	**Omahuta**	**17.12**	**168**	P		**Pn**	**12 24 53.9**	**+0.7**
OUZ	**Omahuta**	**17.12**	**168**	P		**Pn**	**12 24 53.2**	**0.0**
WCZ	**Waipu Caves**	**17.97**	**166**	P		**Pn**	**12 25 03.7**	**+0.5**
EIDS	**Eidsvold**	**18.13**	**245**	P		**Pn**	**12 25 04.5**	**-0.7**
	baz=18,SNR=90							
EIDS	**Eidsvold**	**18.13**	**245**			**Pn**	**12 25 04.3**	**-0.8**
EIDS				IAmb		IAmb	**12 25 08.6**	
	comp=Z,137nm,0.6s							
GRZ	**Great Barrier**	**18.54**	**164**	P		**Pn**	**12 25 09.4**	**-0.4**
ABAZ	**Army Bay**	**18.72**	**166**	P		**Pn**	**12 25 11.7**	**-0.2**
RVAZ	**Riverhead Bore**	**18.82**	**166**	P		**Pn**	**12 25 12.3**	**-0.8**
AFI	**Afiamalu**	**18.84**	**79**	P		**P**	**12 25 11.0**	**+0.6**
	comp=Z,7.4nm,0.3s,baz=45,slow=5.5,SNR=18							
AFI	**Afiamalu**	**18.84**	**79**	P		**P**	**12 25 11.0**	**+0.6**
AFI	**Afiamalu**	**18.84**	**79**	P		**P**	**12 25 09.7**	**-0.7**
AFI				IAmb		IAmb	**12 25 19.6**	
	comp=Z,185nm,0.7s							
MBAZ	**Motutapu North**	**18.89**	**166**	P		**Pn**	**12 25 13.1**	**-0.8**
HBAZ	**Herne Bay Bore**	**18.93**	**166**	P		**Pn**	**12 25 13.4**	**-1.0**
EPAZ	**Eden Park BICE**	**18.96**	**166**	P		**Pn**	**12 25 13.7**	**-1.0**
WIAZ	**Waiheke Island**	**18.97**	**165**	P		**Pn**	**12 25 13.8**	**-1.1**
WTAZ	**Waiatarua**	**18.98**	**167**	P		**Pn**	**12 25 14.1**	**-0.9**
ETAZ	**East Tamaki Re**	**19.08**	**166**	P		**Pn**	**12 25 14.9**	**-1.3**
KUZ	**Kuaotunu**	**19.08**	**164**	P		**Pn**	**12 25 14.5**	**-1.6**
AWAZ	**Awhitu Peninsu**	**19.12**	**167**	P		**Pn**	**12 25 15.5**	**-1.1**
MKAZ	**Moumakai**	**19.28**	**165**	P		**Pn**	**12 25 16.8**	**-1.7**
NIUE	**Niue**	**19.79**	**95**	P		**P**	**12 25 20.4**	**-0.1**
	baz=20,SNR=5.9							
NIUE	**Niue**	**19.79**	**95**			**P**	**12 25 20.6**	**+0.2**
ARMA	**Armidale**	**19.88**	**230**	P		**P**	**12 25 23.0**	**+1.6**
	baz=20,SNR=95							
ARMA	**Armidale**	**19.88**	**230**	P		**P**	**12 25 22.2**	**+0.8**
ARMA				IAmb		IAmb	**12 25 25.5**	
	comp=Z,257nm,1.0s							
TARA	**Tarawa**	**20.06**	**11**	P		**P**	**12 25 23.2**	**-0.2**
TGRZ	**Tauranga**	**20.15**	**164**	P		**P**	**12 25 25.9**	**+1.8**
KMRZ	**Kaimai**	**20.17**	**164**	P		**P**	**12 25 26.4**	**+1.9**
RMQ	**Roma**	**20.46**	**243**	P		**P**	**12 25 29.1**	**+1.5**
	baz=20,SNR=172							
TLZ	**Tolley Road**	**20.53**	**166**	P		**P**	**12 25 30.1**	**+1.8**
HIZ	**Hauiti**	**20.56**	**167**	P		**P**	**12 25 30.7**	**+2.2**
HIZ	**Hauiti**	**20.56**	**167**	P		**P**	**12 25 28.7**	**+0.2**
MXZ	**Matakaoa Point**	**20.62**	**159**	P		**P**	**12 25 30.2**	**+1.1**
MXZ	**Matakaoa Point**	**20.62**	**159**			**P**	**12 25 29.8**	**+0.7**
HAZ	**Te Kaha**	**20.62**	**160**	P		**P**	**12 25 30.3**	**+1.2**
URZ	**Urewera**	**20.88**	**162**	P		**P**	**12 25 33.0**	**+1.1**
	comp=Z,445nm,0.7s,baz=334,slow=4.7,SNR=196							
URZ				S		**S**	**12 29 12.3**	**+0.8**
	comp=Z,23nm,0.6s,baz=197,slow=20,SNR=4.4							
URZ				ScP		**ScP**	**12 32 46.3**	**-0.3**
	comp=Z,21nm,1.1s,baz=152,slow=5.6,SNR=3.6							
URZ	**Urewera**	**20.88**	**162**			**P**	**12 25 32.5**	**+0.6**
BKZ	**Black Stump Fm**	**21.56**	**164**	P		**P**	**12 25 39.7**	**+0.8**
BKZ						**S**	**12 29 23.6**	**+0.6**
CTA	**Charters Tower**	**21.70**	**262**	P		**P**	**12 25 40.1**	**-0.3**
	comp=Z,37nm,0.5s,baz=85,slow=10,SNR=76							
CTA				pP		**pP**	**12 26 16.8**	**+0.9**
	comp=Z,67nm,0.9s,baz=85,slow=13,SNR=6.0							
CTA				S		**S**	**12 29 26.8**	**+1.3**
	comp=Z,28nm,1.1s,baz=218,slow=19,SNR=12							
CTA				ScP		**ScP**	**12 32 50.2**	**+1.1**
	comp=Z,21nm,1.0s,baz=68,slow=2.3,SNR=7.1							
CTAO	**Charters Tower**	**21.70**	**262**	P		**P**	**12 25 40.1**	**-0.3**
CTAO				pmax		pmax		
	comp=Z,63nm,0.7s							
CTAO	**Charters Tower**	**21.70**	**262**	P		**P**	**12 25 40.1**	**-0.3**
MGCD	**Mangrove Creek**	**21.85**	**224**	P		**P**	**12 25 42.9**	**+1.2**
	baz=22,SNR=45							
RABL	**Rabaul**	**21.88**	**308**	P		**P**	**12 25 39.8**	**-2.4**
RABL				IAmb		IAmb	**12 26 05.6**	
	comp=Z,73nm,0.5s							
KRVT	**Keravat (AS076**	**21.91**	**308**	P		**P**	**12 25 41.2**	**-1.2**
	comp=Z,39nm,0.5s,baz=44,slow=2.2,SNR=14							
RIV	**Riverview**	**22.20**	**223**	P		**P**	**12 25 46.4**	**+1.4**
	baz=22,SNR=20							
QRZ	**Quartz Range**	**22.45**	**173**	P		**P**	**12 25 47.5**	**+0.4**
NNZ	**Nelson**	**22.94**	**172**	P		**P**	**12 25 52.3**	**+0.8**
BFZ	**Birch Farm**	**22.94**	**166**	P		**P**	**12 25 51.7**	**+0.1**
BFZ						**S**	**12 29 48.8**	**+3.8**
PMG	**Port Moresby**	**23.18**	**290**	P		**P**	**12 25 55.3**	**+1.2**
	comp=Z,96nm,0.8s,baz=101,slow=6.7,SNR=26							
PMG				S		**S**	**12 29 51.0**	**+1.6**
	comp=Z,9.2nm,0.8s,baz=349,slow=16,SNR=3.5							
PMG	**Port Moresby**	**23.18**	**290**	P		**P**	**12 25 53.8**	**-0.3**
PMG				IAmb		IAmb	**12 25 56.3**	
	comp=Z,90nm,0.8s							
TUWZ	**Tuamarina**	**23.23**	**171**	P		**P**	**12 25 55.1**	**+1.0**
SNZO	**South Karori**	**23.23**	**169**	P		**P**	**12 25 54.3**	**+0.1**
BHW	**Baring Head**	**23.36**	**169**	P		**P**	**12 25 54.9**	**-0.4**
THZ	**Tophouse**	**23.41**	**173**	P		**P**	**12 25 56.1**	**+0.1**
MSWZ	**Moikau Station**	**23.43**	**168**	P		**P**	**12 25 55.8**	**-0.3**
BSWZ	**Blackbirch Sta**	**23.50**	**171**	P		**P**	**12 25 56.6**	**-0.1**
CMWZ	**Cape Campbell**	**23.58**	**171**	P		**P**	**12 25 57.0**	**-0.4**
PLWZ	**Palliser**	**23.58**	**169**	P		**P**	**12 25 57.5**	**0.0**
MTSU	**Mount Surprise**	**23.61**	**267**	P		**P**	**12 25 59.6**	**+1.6**
	baz=24,SNR=92							
KHZ	**Kahutara**	**24.14**	**172**	P		**P**	**12 26 02.7**	**+0.2**
CNB	**Canberra Magne**	**24.28**	**222**	P		**P**	**12 26 05.0**	**+1.0**
	baz=24,SNR=80							
YNG	**Young**	**24.31**	**226**	P		**P**	**12 26 05.3**	**+1.1**
	baz=24,SNR=26							
LTZ	**Lake Taylor**	**24.36**	**174**	P		**P**	**12 26 05.4**	**+0.9**
KNTN	**Kanton**	**24.37**	**52**	P		**P**	**12 26 04.5**	**-0.3**
QLP	**Quilpie**	**24.38**	**246**	P		**P**	**12 26 05.3**	**+0.4**
	baz=24,SNR=136							
CMSA	**Cobar Meteorol**	**24.88**	**234**	P		**P**	**12 26 09.7**	**+0.4**
	baz=25,SNR=319							
OXZ	**Oxford**	**24.88**	**175**	P		**P**	**12 26 08.9**	**-0.3**
FOZ	**Fox Glacier**	**24.97**	**179**	P		**P**	**12 26 11.3**	**+1.3**
RPZ	**Rata Peaks**	**25.20**	**177**	P		**P**	**12 26 12.3**	**+0.3**
	comp=Z,205nm,0.8s,baz=297,slow=1.7,SNR=58							
RPZ				ScP		**ScP**	**12 32 59.2**	**+1.1**
	comp=Z,52nm,1.1s,baz=155,slow=8.5,SNR=5.3							
RPZ	**Rata Peaks**	**25.20**	**177**	P		**P**	**12 26 12.8**	**+0.7**
MQZ	**McQueen's Vall**	**25.31**	**174**	P		**P**	**12 26 13.5**	**+0.5**
MQZ				IAmb		IAmb	**12 26 14.5**	
	comp=Z,249nm,1.1s							
COEN	**Coen**	**25.36**	**276**	P		**P**	**12 26 14.5**	**+0.6**
	baz=25,SNR=6.9							
COEN	**Coen**	**25.36**	**276**	P		**P**	**12 26 14.7**	**+0.8**
LBZ	**Lake Benmore**	**25.83**	**178**	P		**P**	**12 26 17.6**	**-0.2**
WKZ	**Wanaka**	**26.26**	**180**	P		**P**	**12 26 23.7**	**+2.0**
ODZ	**Otahua Downs**	**26.51**	**178**	P		**P**	**12 26 23.9**	**+0.1**
ODZ				IAmb		IAmb	**12 26 28.2**	
	comp=Z,88nm,0.8s							
MLZ	**Mavora Lakes**	**26.82**	**182**	P		**P**	**12 26 27.6**	**+1.0**
MLZ				IAmb		IAmb	**12 26 28.3**	
	comp=Z,207nm,1.0s							
DCZ	**Deep Cove**	**26.95**	**183**	P		**P**	**12 26 28.4**	**+0.6**
WHZ	**Wether Hill Ro**	**27.35**	**182**	P		**P**	**12 26 30.2**	**-1.0**
WHZ				IAmb		IAmb	**12 26 32.5**	
	comp=Z,166nm,0.9s							
PATS	**Pohnpei**	**27.36**	**336**	P		**P**	**12 26 31.9**	**+0.2**
	baz=28,SNR=4.3							
PATS	**Pohnpei**	**27.36**	**336**	P		**P**	**12 26 31.1**	**-0.5**
PATS				IAmb		IAmb	**12 26 36.7**	
	comp=Z,146nm,0.8s							
QIS	**Mount Isa**	**27.94**	**261**	P		**P**	**12 26 37.2**	**+0.3**
	baz=28,SNR=21							
TOO	**Toolangi**	**28.13**	**223**	P		**P**	**12 26 38.9**	**+0.5**
	baz=28,SNR=56							
TOO	**Toolangi**	**28.13**	**223**	P		**P**	**12 26 38.3**	**-0.1**
TOO				pmax		pmax		
	comp=Z,94nm,1.1s							
TOO	**Toolangi**	**28.13**	**223**	P		**P**	**12 26 38.3**	**-0.1**
TOO				IAmb		IAmb	**12 26 40.2**	
	comp=Z,94nm,1.1s							
STKA	**Stephens Creek**	**28.21**	**236**	P		**P**	**12 26 39.9**	**+0.8**
	comp=Z,155nm,0.7s,baz=67,slow=8.9,SNR=280							
STKA				ScP		**ScP**	**12 33 08.3**	**+1.1**
	comp=Z,20nm,1.0s,baz=48,slow=4.8,SNR=7.6							
STKA				P3KPbc			**12 58 57.8**	
	comp=Z,1.8nm,0.6s,baz=31,slow=3.3,SNR=4.0							
STKA	**Stephens Creek**	**28.21**	**236**	P		**P**	**12 26 40.0**	**+0.9**
	baz=28,SNR=98							
STKA	**Stephens Creek**	**28.21**	**236**	*d i*P		**P**	**12 26 39.3**	**+0.2**
STKA	**Stephens Creek**	**28.21**	**236**	P		**P**	**12 26 39.0**	**-0.1**
RAR	**Rarotonga**	**29.30**	**101**	P		**P**	**12 26 49.1**	**+0.3**
	comp=Z,11nm,0.5s,baz=244,slow=5.8,SNR=7.1							
RAR	**Rarotonga**	**29.30**	**101**	P		**P**	**12 26 48.8**	**0.0**
ARPS	**Mount Arapiles**	**30.15**	**227**	P		**P**	**12 26 56.8**	**+0.6**
	baz=30,SNR=58							
MOO	**Moorlands**	**30.31**	**213**	P		**P**	**12 26 58.5**	**+1.0**
	baz=30,SNR=37							
TAU	**Tasmania Unive**	**30.58**	**213**	P		**P**	**12 27 00.0**	**+0.2**
TAU				pmax		pmax		
	comp=Z,83nm,0.8s							
TAU	**Tasmania Unive**	**30.58**	**213**	P		**P**	**12 27 00.0**	**+0.2**
TAU				IAmb		IAmb	**12 27 01.5**	
	comp=Z,83nm,0.8s							
HTT	**Hallett**	**30.87**	**235**	P		**P**	**12 27 03.1**	**+0.4**
	baz=31,SNR=77							
GENI	**Genyem**	**32.52**	**296**	P		**P**	**12 27 18.2**	**+1.1**
	comp=Z,3μmcomp=Z,255nm,1.3s							
WR0	**Warramunga Arr**	**32.71**	**262**	P		**P**	**12 27 17.8**	**-1.0**
WB0	**Warramunga Arr**	**32.86**	**262**	P		**P**	**12 27 19.1**	**-1.0**
WB2	**Warramunga Arr**	**32.89**	**262**	P		**P**	**12 27 19.5**	**-0.8**
	baz=33							
WB2	**Warramunga Arr**	**32.89**	**262**	P		**P**	**12 27 19.6**	**-0.8**
WRAB	**Tennant Creek**	**32.89**	**262**	*d* iP		**P**	**12 27 19.4**	**-1.0**
WRAB				pmax		pmax		
	comp=Z,72nm,1.0s							
WRAB	**Tennant Creek**	**32.89**	**262**	P		**P**	**12 27 19.0**	**-1.4**
WRA	**Warramunga Arr**	**32.90**	**262**	P		**P**	**12 27 19.3**	**-1.2**
	comp=Z,35nm,0.6s,baz=95,slow=6.8,SNR=153							
WRA				pP		**pP**	**12 28 03.5**	**+0.4**
	comp=Z,13nm,0.7s,baz=90,slow=8.7,SNR=2.0							
WRA				S		**S**	**12 32 17.2**	**-4.9**
	comp=Z,31nm,1.1s,baz=96,slow=14,SNR=14							
WRA				ScP		**ScP**	**12 33 23.9**	**+0.9**
	comp=Z,17nm,0.9s,baz=90,slow=3.6,SNR=12							
WRA				PKiKP		**PKiKP**	**12 37 24.6**	**-1.3**
	comp=Z,2.2nm,1.0s,baz=25,slow=0.1,SNR=9.0							
WRA				P3KPbc			**12 58 36.5**	
	comp=Z,3.5nm,0.9s,baz=288,slow=2.8,SNR=20							
WRA	**Warramunga Arr**	**32.90**	**262**	P		**P**	**12 27 17.9**	**-2.5**
BBOO	**Buckleboo**	**32.94**	**238**	P		**P**	**12 27 20.7**	**+0.1**
	baz=33,SNR=149							
BBOO	**Buckleboo**	**32.94**	**238**	P		**P**	**12 27 20.2**	**-0.3**
AS31	**Alice Springs**	**33.26**	**255**	P		**P**	**12 27 22.6**	**-1.0**
AS31				IAmb		IAmb	**12 27 24.5**	
	comp=Z,134nm,0.6s							
ASAR	**Alice Springs**	**33.27**	**255**	P		**P**	**12 27 23.3**	**-0.3**
	comp=Z,336nm,0.6s,baz=84,slow=8.7,SNR=1930							
ASAR				S		**S**	**12 32 24.9**	**-2.7**
	comp=Z,23nm,0.9s,baz=85,slow=18,SNR=21							
ASAR				ScP		**ScP**	**12 33 24.9**	**+0.7**
	comp=Z,11nm,1.0s,baz=99,slow=3.8,SNR=8.8							
ASAR				P3KPbc			**12 58 35.4**	
	comp=Z,1.6nm,0.7s,baz=272,slow=4.1,SNR=14							
ASAR	**Alice Springs**	**33.27**	**255**	P		**P**	**12 27 22.3**	**-1.3**
SMPI	**Sarmi**	**34.08**	**295**	P		**P**	**12 27 33.2**	**+2.6**
	comp=Z,31nm,1.7s							
BAKI	**Biak**	**36.72**	**294**	P		**P**	**12 27 55.6**	**+2.5**
	comp=Z,2μmcomp=Z,166nm,1.3s							
MCQ	**Macquarie Isla**	**36.79**	**190**	P		**P**	**12 27 54.0**	**+0.9**
	baz=37,SNR=4.2							
MCQ	**Macquarie Isla**	**36.79**	**190**	P		**P**	**12 27 53.7**	**+0.5**
MCQ				pmax		pmax		
	comp=Z,235nm,1.1s							
MCQ	**Macquarie Isla**	**36.79**	**190**	P		**P**	**12 27 53.7**	**+0.5**
MCQ				IAmb		IAmb	**12 27 55.1**	
	comp=Z,235nm,1.1s							
WRKA	**Warakurna**	**38.42**	**253**	P		**P**	**12 28 07.2**	**-0.2**
	baz=38,SNR=97							
XMAS	**Kiritimati**	**38.66**	**62**	P		**P**	**12 28 09.8**	**+0.5**
XMAS				IAmb		IAmb	**12 28 11.4**	
	comp=Z,121nm,0.9s							
KNRA	**Kununurra**	**38.69**	**268**	P		**P**	**12 28 09.3**	**-0.2**
	baz=39,SNR=28							
KNRA	**Kununurra**	**38.69**	**268**	P		**P**	**12 28 09.0**	**-0.6**
KNRA				IAmb		IAmb	**12 28 10.2**	
	comp=Z,70nm,0.7s							
TBI	**Tubuai**	**38.84**	**104**	*e*S		**S**	**12 33 50.2**	**-2.0**
	comp=Z,599nm,24.9s							
FORT	**Forrest**	**39.13**	**244**	P		**P**	**12 28 12.9**	**-0.1**
	baz=39,SNR=19							
FORT	**Forrest**	**39.13**	**244**	P		**P**	**12 28 12.5**	**-0.5**
FORT				IAmb		IAmb	**12 28 13.8**	
	comp=Z,240nm,0.8s							
PAE	**Paea**	**39.15**	**95**	*e*P		**P**	**12 28 13.0**	**-0.4**
	comp=Z,11nm,0.8s							
PPT2	**Papeete2**	**39.16**	**95**	*e*P		**P**	**12 28 13.6**	**0.0**
	comp=Z,66nm,0.8s							
PPT2				*e*S		**S**	**12 33 57.0**	**-0.3**
	comp=Z,509nm,27.9s							
PPT	**Papeete**	**39.17**	**95**	P		**P**	**12 28 13.8**	**+0.3**
	comp=Z,84nm,0.8s,baz=156,slow=6.0,SNR=11							
PPTF	**Pamatai, Papee**	**39.17**	**95**	P		**P**	**12 28 14.2**	**+0.5**
PPTF				IAmb		IAmb	**12 28 17.8**	
	comp=Z,80nm,0.8s							
FAKI	**Fak Fak**	**39.33**	**289**	P		**P**	**12 28 14.3**	**-0.6**
TIAR	**Tiarei**	**39.38**	**95**	*e*P		**P**	**12 28 15.3**	**-0.1**
	comp=Z,18nm,0.8s							
TVO	**Taravao**	**39.44**	**96**	*e*P		**P**	**12 28 15.8**	**-0.1**
	comp=Z,13nm,0.9s							
GUMO	**Guam**	**39.88**	**321**	P		**P**	**12 28 19.5**	**+0.1**
GUMO				pmax		pmax		
	comp=Z,99nm,1.0s							
GUMO	**Guam**	**39.88**	**321**	P		**P**	**12 28 19.5**	**+0.1**
MEH	**Mehetia**	**40.55**	**96**	*e*P		**P**	**12 28 24.8**	**-0.1**
	comp=Z,20nm,0.9s							
JOHN	**Johnston Islan**	**40.79**	**32**	P		**P**	**12 28 28.1**	**+1.4**
BNDI	**Bandanaira**	**40.80**	**285**	P		**P**	**12 28 37.8**	**+11**
SIJI	**Sorong**	**41.12**	**291**	P		**P**	**12 28 29.8**	**+0.2**
	baz=111,slow=8.6							
SIJI				ScP		**ScP**	**12 33 56.2**	**+2.4**
	comp=Z,3.9nm,0.5s,baz=76,slow=4.1,SNR=4.6							
PMOR	**Pomariorio Ree**	**41.18**	**92**	*e*P		**P**	**12 28 30.2**	**+0.2**
	comp=Z,194nm,1.0s							
FITZ	**Fitzroy Crossi**	**41.27**	**263**	P		**P**	**12 28 31.1**	**+0.4**
	comp=Z,94nm,0.8s,baz=114,slow=7.7,SNR=12							
FITZ				pP		**pP**	**12 29 15.2**	**+0.2**
	comp=Z,50nm,0.9s,baz=120,slow=6.4,SNR=4.7							
FITZ				S		**S**	**12 34 25.6**	**-2.8**
	comp=Z,2.1nm,0.7s,baz=68,slow=6.3,SNR=5.7							
FITZ	**Fitzroy Crossi**	**41.27**	**263**	P		**P**	**12 28 31.2**	**+0.4**
	baz=41,SNR=111							
FITZ	**Fitzroy Crossi**	**41.27**	**263**	P		**P**	**12 28 31.3**	**+0.5**
FITZ				IAmb		IAmb	**12 28 32.3**	
	comp=Z,109nm,0.8s							
NLAI	**Namlea**	**43.87**	**285**	P		**P**	**12 28 53.4**	**+1.7**
	comp=Z,34nm,0.6s							
SOEI	**Soe**	**44.32**	**275**	P		P	**12 29 03.6**	**+8.2**
KMBL	**Kambalda**	**44.46**	**244**	P		**P**	**12 28 55.7**	**-0.5**
	baz=44,SNR=32							
BATI	**Baumata**	**44.76**	**274**	P		**P**	**12 29 00.0**	**+1.2**
	comp=Z,41nm,0.7s,baz=140,slow=2.9							
BATI				pP		**pP**	**12 29 43.8**	**-0.2**
	comp=Z,59nm,0.7s,baz=146,slow=2.1,SNR=3.9							
BATI	**Baumata**	**44.76**	**274**	P		**P**	**12 29 00.9**	**+2.1**
	comp=Z,1μmcomp=Z,31nm,0.8s							
PSA00	**Pilbara Seismi**	**46.31**	**258**	P		**P**	**12 29 11.1**	**+0.2**
PSA00				IAmb		IAmb	**12 29 12.0**	
	comp=Z,135nm,0.8s							
PSA00	**Pilbara Seismi**	**46.31**	**258**	P		**P**	**12 29 10.0**	**-0.8**
PSA00				IAmb		IAmb	**12 29 11.0**	
	comp=Z,60nm,0.8s							
EDFI	**Ende, Flores**	**47.04**	**275**	P		**P**	**12 29 17.9**	**+1.2**
	comp=Z,400nmcomp=Z,8.7nm,0.7s							
MEEK	**Meekatharra**	**47.15**	**251**	P		**P**	**12 29 17.3**	**0.0**
	baz=47,SNR=179							
KLBR	**Kellerberrin**	**47.99**	**244**	P		**P**	**12 29 23.0**	**-0.7**
	baz=48,SNR=20							
NWAO	**Narrogin (SRO)**	**48.51**	**242**	PKiKP		**PKiKP**	**12 37 38.0**	**-1.2**
	comp=Z,32nm,1.1s,baz=55,slow=3.0,SNR=3.7							
NWAO	**Narrogin (SRO)**	**48.51**	**242**	P		**P**	**12 29 27.1**	**-0.5**
	baz=48,SNR=31							
NWAO	**Narrogin (SRO)**	**48.51**	**242**	P		**P**	**12 29 27.2**	**-0.5**
NWAO				pmax		pmax		
	comp=Z,178nm,0.9s							
NWAO	**Narrogin (SRO)**	**48.51**	**242**	P		**P**	**12 29 27.2**	**-0.5**
NWAO				IAmb		IAmb	**12 29 28.2**	
	comp=Z,178nm,0.9s							
NWAO	**Narrogin (SRO)**	**48.51**	**242**	P		**P**	**12 29 27.2**	**-0.5**
NWAO				IAmb		IAmb	**12 29 28.2**	
	comp=Z,142nm,0.9s							
LUWI	**Luwuk**	**48.71**	**285**	P		**P**	**12 29 31.4**	**+2.1**
	comp=Z,4μmcomp=Z,73nm,0.5s							
BLDU	**Ballidu**	**48.85**	**245**	P		**P**	**12 29 29.6**	**-0.6**
	baz=49,SNR=16							
RKGY	**Rocky Gully**	**48.86**	**240**	P		**P**	**12 29 30.3**	**0.0**
	baz=49,SNR=21							
WBSI	**Waikabubak, Su**	**48.96**	**273**	P		**P**	**12 29 33.1**	**+1.8**
	comp=Z,1μmcomp=Z,66nm,0.8s							
MUN	**Mundaring**	**49.33**	**243**	P		**P**	**12 29 33.1**	**-0.7**
	baz=49,SNR=6.8							
MORW	**Morawa**	**49.41**	**247**	P		**P**	**12 29 34.1**	**-0.4**
	baz=49,SNR=17							
MORW	**Morawa**	**49.41**	**247**	P		**P**	**12 29 34.0**	**-0.4**
MORW				IAmb		IAmb	**12 29 35.2**	
	comp=Z,120nm,0.8s							
APSI	**Ampana**	**49.79**	**285**	P		**P**	**12 29 39.8**	**+2.3**
	comp=Z,488nmcomp=Z,26nm,1.0s							
BNSI	**Bone**	**49.92**	**280**	P		**P**	**12 29 40.8**	**+2.3**
	comp=Z,656nmcomp=Z,20nm,0.8s							
TAOE	**Nuku Hiva Isla**	**50.01**	**86**	*e*P		**P**	**12 29 39.5**	**+0.2**
	comp=Z,404nm,1.0s							
TAOE	**Nuku Hiva Isla**	**50.01**	**86**	P		**P**	**12 29 40.0**	**+0.6**
TAOE				IAmb		IAmb	**12 29 41.1**	
	comp=Z,147nm,0.8s							
HON	**Honolulu**	**50.97**	**41**	P		**P**	**12 29 46.9**	**+0.7**
HON				pmax		pmax		
	comp=Z,180nm,0.8s							
HON	**Honolulu**	**50

LWLI Liwa 64.84 273 P **P** 12 31 25.2 +2.3
comp=Z,69nm,0.8s
MDSI Maura Dua 64.90 274 P **P** 12 31 23.1 0.0
comp=Z,16nm,1.0s
JKA Kamikawa-asahi 66.88 339 P **P** 12 31 36.7 +1.6
JKA IAmb IAmb 12 31 38.2
comp=Z,144nm,0.9s
ASAJ Asahikawa 66.88 339 P **P** 12 31 36.7 +1.7
ASAJ pmax pmax
comp=Z,144nm,0.9s
MYKOM Kota Tinggi 67.29 280 P **P** 12 31 39.0 +0.7
TJN Taejon 67.38 324 *ce*P **P** 12 31 38.2 -0.1
KSRS Korea Array 67.86 325 P **P** 12 31 42.0 +0.8
comp=Z,9.2nm,0.8s,baz=143,slow=6.2,SNR=25
QIZ Qiongzhong 69.17 299 P **P** 12 31 50.1 +0.3
QIZ pP **pP** 12 32 40.4 0.0
QIZ S **S** 12 40 40.0 +2.0
QIZ sS **sS** 12 42 07.5 +3.1
QIZ pmax pmax
comp=Z,480nm,2.8s
YSS Yuzh-Sakhalins 69.36 341 *ce*P **P** 12 31 52.2 +1.9
YSS pmax pmax
comp=Z,161nm,1.3s
YSS Yuzh-Sakhalins 69.36 341 P **P** 12 31 51.8 +1.4
YSS IAmb IAmb 12 31 53.6
comp=Z,104nm,0.9s
NJ2 Nanjing 69.64 316⇑ *i*P **P** 12 31 53.0 +0.6
NJ2 pmax pmax
comp=Z,49nm,1.0s
VLA Vladivostok 70.24 332 *i* P **P** 12 31 55.9 +0.1
VLA pmax pmax
comp=Z,44nm,1.0s
IPM Ipoh 70.88 282 P **P** 12 31 59.9 -0.5
IPM Ipoh 70.88 282 P **P** 12 32 01.0 +0.6
MNSI Mandailing Nat 70.95 277 P **P** 12 32 01.1 +0.3
comp=Z,26nm,0.5s
SMY Shemya 71.05 3 P **P** 12 32 01.4 +1.0
SMY pmax pmax
comp=Z,627nm,1.2s
SMY Shemya 71.05 3 P **P** 12 32 01.4 +1.0
USA0B Ussuriysk Arra 71.05 333 *i* P **P** 12 32 01.5 +0.8
USA0B Ussuriysk Arra 71.05 333 P **P** 12 32 01.8 +1.1
USA0B IAmb IAmb 12 32 03.3
comp=Z,115nm,1.3s
USRK Ussuriysk Ar. 71.05 333 P **P** 12 32 01.9 +1.2
comp=Z,28nm,0.8s,baz=146,slow=5.1,SNR=34
ADK Adak 71.15 9 P **P** 12 32 02.0 +0.9
ADK pmax pmax
comp=Z,204nm,0.9s
ADK Adak 71.15 9 P **P** 12 32 02.0 +0.9
GSTR Great Sitkin T 71.45 10 P **P** 12 32 03.5 +0.6
KULM Kulim 71.52 282 P **P** 12 32 04.3 +0.1
KULM Kulim 71.52 282 P **P** 12 32 05.0 +0.8
QSPA South Pole Qui 71.56 180 P **P** 12 32 03.6 0.0
PET Petropavlovsk 71.80 353 *ce*P **P** 12 32 05.7 +0.8
PET pmax pmax
comp=Z,1µm,1.4s
PET Petropavlovsk 71.80 353 P **P** 12 32 05.2 +0.3
WHN Wuhan 71.81 312 ⇑P **P** 12 32 06.4 +0.9
WHN pmax pmax
comp=Z,80nm,0.7s
ATKA Atka Island 71.87 11 P **P** 12 32 05.8 +0.4
PEA0B Petropavlovsk- 71.99 353 *ce*P **P** 12 32 07.4 +1.3
PEA0B Petropavlovsk- 71.99 353 P **P** 12 32 07.6 +1.5
PETK Petropavlovsk- 71.99 353 P **P** 12 32 07.5 +1.4
comp=Z,187nm,0.8s,baz=134,slow=5.6,SNR=112
PETK pP **pP** 12 32 57.5 +0.7
comp=Z,10nm,0.8s,baz=133,slow=6.3,SNR=1.3
DL2 Dalian 72.39 323 ⇑P **P** 12 32 10.0 +1.2
DL2 S **S** 12 41 16.8 +2.5
DL2 sS **sS** 12 42 42.1 -2.0
DL2 pmax pmax
comp=Z,160nm,0.9s
MDJ Mudanjiang 72.44 331 P **P** 12 32 10.3 +1.3
MDJ sP sP 12 33 21.8 -1.5
MDJ S **SKiKP** 12 41 18.9 -2.4
MDJ pmax pmax
comp=Z,80nm,1.0s
MDJ pmax pmax
comp=Z,220nm,3.8s
MDJ Mudanjiang 72.44 331 P **P** 12 32 09.2 +0.3
MDJ IAmb IAmb 12 32 11.5
comp=Z,109nm,1.1s
TYV Tymovskoe 72.89 343 *e*P **P** 12 32 13.3 +1.9
TYV pmax pmax
comp=Z,57nm,1.7s
TYV pmax pmax
comp=Z,200nm,3.2s
GSI Gunungsitoli 73.01 277 P **P** 12 32 13.5 +0.4
TIA Tai'an 73.35 318 P **P** 12 32 14.9 +0.4
TIA pmax pmax
comp=Z,66nm,1.0s
KCSI Kotacane, Aceh 73.58 279 P **P** 12 32 16.1 -0.3
comp=Z,15nm,1.1s
NIKH Nikolski High 73.66 14 P **P** 12 32 16.4 +0.5
CN2 Changchun 73.79 329 *e*P **P** 12 32 17.0 +0.1
CN2 *es*P sP 12 33 27.8 -3.6
CN2 *e*S **S** 12 41 30.9 +0.9
CN2 pmax pmax
comp=Z,90nm,1.2s
CN2 pmax pmax
comp=Z,380nm,4.0s
NONG Nongkai 74.36 295 P **P** 12 32 21.9 +1.2
CHAI Chaiyaphum 74.45 293 P **P** 12 32 22.0 +0.7
GRNR Gornyy 74.74 339⇑ *i*P **P** 12 32 24.3 +2.1
GRNR pmax pmax
comp=N,30nm,1.0s
GRNR pmax pmax
comp=Z,110nm,1.0s
GRNR MLR MLR
comp=Z,340nm,15.0s
UNV Unalaska Valle 75.01 15 P **P** 12 32 23.6 0.0
ENH Enshi 75.16 309 P **P** 12 32 24.8 -0.3
KLR Kul'dur 75.17 336 *ce*P **P** 12 32 26.1 +1.4
KLR pmax pmax
comp=Z,100nm,1.3s
GYA Guiyang 75.35 305 ⇑P **P** 12 32 27.3 +0.9
GYA pP pP 12 33 23.8 +5.9
GYA S **S** 12 41 50.5 +2.3
GYA sS sS 12 43 20.5 +4.5
GYA pmax pmax
comp=Z,29nm,1.2s
GYA pmax pmax
comp=Z,220nm,3.5s
AKUT Akutan 75.46 15 P **P** 12 32 25.8 -0.3
AKUT IAmb IAmb 12 32 32.8
comp=Z,117nm,0.8s
BJT Baijiatuau 76.32 321 P **P** 12 32 31.9 +0.5
BJT pmax pmax
comp=Z,43nm,0.8s
BJT Baijiatuau 76.32 321 P **P** 12 32 31.9 +0.5
BJI Beijing 76.33 321 P **P** 12 32 32.6 +1.2
BJI S **S** 12 42 01.5 +3.5
BJI sS **sS** 12 43 31.5 +3.0
BJI pmax pmax
comp=Z,59nm,0.8s
BJI LR LR
comp=Z,130nm,4.9s
BJI LR LR
comp=Z,160nm,7.2s
PHIT Phitsanulok 76.35 294 P **P** 12 32 33.0 +0.9
UTTA Uttaradit 76.46 294 P **P** 12 32 34.1 +1.4
UTHA Uthaitani 76.54 292 P **P** 12 32 35.1 +1.9
comp=Z,0.1nmcomp=Z,354nmcomp=Z,39nm,1.1s
FALS False Pass 76.70 16 P **P** 12 32 33.1 0.0
SUKH Sukhothai 77.16 293 P **P** 12 32 38.0 +1.5
comp=Z,0.2nmcomp=Z,47nm,0.5s
TIY Taiyuan 77.25 317 *e*P **P** 12 32 38.4 +1.6
TIY pmax pmax
comp=Z,240nm,4.3s
SPIA Saint Paul Isl 77.32 11 P **P** 12 32 37.1 +0.5
XAN Xi'an 77.57 312 P **P** 12 32 39.5 +0.9
XAN S **S** 12 42 11.3 -0.5
XAN sS sS 12 43 42.5 +2.0
XAN pmax pmax
comp=Z,91nm,0.9s
XAN pmax pmax
comp=Z,330nm,7.3s
XAN Xi'an 77.57 312 P **P** 12 32 39.0 +0.4
XAN pmax pmax
comp=Z,81nm,1.0s
XAN Xi'an 77.57 312 P **P** 12 32 39.0 +0.4
XAN IAmb IAmb 12 32 40.6
comp=Z,81nm,1.0s

LAMP Lampang 77.58 294 P **P** 12 32 40.7 +1.8
comp=Z,0.2nmcomp=Z,686nmcomp=Z,81nm,1.0s
PAYA Payao 77.72 295 P **P** 12 32 41.0 +1.3
comp=Z,1.4nmcomp=Z,5µmcomp=Z,499nm,0.9s
KMI Kunming 77.84 302⇓ *e*P **P** 12 32 42.1 +1.6
KMI pP pP 12 33 34.9 +2.7
KMI sP sP 12 33 58.3 +3.1
KMI S **S** 12 42 16.6 +1.2
KMI pmax pmax
comp=Z,86nm,1.1s
KMI pmax pmax
comp=Z,160nm,3.5s
KMI LR LR
comp=Z,190nm,8.4s
KMI LR LR
comp=Z,160nm,4.9s
SDPT Sand Point 77.93 17 P **P** 12 32 40.0 0.0
CMAR Chiang Mai Arr 78.15 294 P **P** 12 32 43.4 +1.3
comp=Z,21nm,0.9s,baz=129,slow=4.2,SNR=101
CMAR pP **pP** 12 33 34.4 +0.6
comp=Z,4.0nm,0.8s,baz=138,slow=4.9,SNR=2.7
CMAR PKKPbc **PKKPbc** 12 51 39.7 +0.1
comp=Z,0.5nm,0.4s,baz=295,slow=3.9,SNR=4.5
CMAR PKPPKP **P'P'df** 12 59 47.0 +3.7
comp=Z,0.6nm,0.3s,baz=288,slow=4.7,SNR=6.7
CMAR Chiang Mai Arr 78.15 294 *ce*P **P** 12 32 43.7 +1.6
CMAR pmax pmax
comp=Z,21nm,0.9s
CMAR Chiang Mai Arr 78.15 294 P **P** 12 32 42.8 +0.7
CHTO Chiang Mai 78.30 294 P **P** 12 32 44.0 +1.1
CHTO pmax pmax
comp=Z,72nm,1.4s
CHTO Chiang Mai 78.30 294 P **P** 12 32 44.0 +1.1
MHMT Maesarieng 78.92 293 P **P** 12 32 48.0 +1.8
comp=Z,0.1nmcomp=Z,697nmcomp=Z,43nm,1.1s
MAW Mawson 79.11 202 P **P** 12 32 47.5 +1.2
comp=Z,112nm,0.9s,baz=113,slow=6.2,SNR=115
MAW Mawson 79.11 202 P **P** 12 32 47.5 +1.2
baz=79,SNR=73
MAW Mawson 79.11 202 P **P** 12 32 47.3 +1.0
MA2 Magadan 79.23 351 *ce*P **P** 12 32 47.3 +0.3
MA2 pmax pmax
comp=Z,131nm,1.0s
MA2 Magadan 79.23 351 P **P** 12 32 47.3 +0.3
MA2 IAmb IAmb 12 32 48.5
comp=Z,142nm,1.0s
HHC Hu-ho-hao-te 79.62 319 *e*P **P** 12 32 51.3 +1.6
HHC sP sP 12 34 06.5 +1.7
HHC S **S** 12 42 35.3 +1.9
HHC pmax pmax
comp=Z,53nm,1.1s
HHC pmax pmax
comp=Z,170nm,5.7s
CD2 Chengdu 79.74 307 P **P** 12 32 51.0 +0.5
CD2 PcP **PcP** 12 32 57.0 -0.5
CD2 S **S** 12 42 35.4 +0.4
CD2 sS sS 12 44 07.9 +3.9
CD2 pmax pmax
comp=Z,60nm,1.2s
CD2 pmax pmax
comp=Z,230nm,13.7s
CD2 LR LR
comp=Z,470nm,18.8s
CD2 LR LR
comp=Z,360nm,23.5s
CD2 LR LR
comp=Z,350nm,27.1s
BTO Baotou 80.44 318 *e*P **P** 12 32 55.4 +1.3
ZEA Zeya 80.45 336⇑ *e*P **P** 12 32 55.3 +1.6
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,50nm,1.2s
SII Sitkinak Islan 80.84 20 P **P** 12 32 56.6 +0.9
OHAK Old Harbor 81.67 20 P **P** 12 33 01.2 +1.3
LZH Lanzhou 82.19 312 *e*P **P** 12 33 05.1 +1.6
LZH pP pP 12 33 57.3 +1.4
LZH S **S** 12 43 00.6 +0.3
LZH sS sS 12 44 31.6 +2.0
LZH SS **SS** 12 48 26.6 +0.7
LZH pmax pmax
comp=Z,81nm,1.0s
SEY Seymchan 82.22 352 *i* P **P** 12 33 03.4 +0.7
KDAK Kodiak Island 82.35 20 P **P** 12 33 04.2 +0.7
KDAK pmax pmax
comp=Z,194nm,1.0s
KDAK Kodiak Island 82.35 20 P **P** 12 33 04.2 +0.7
KDAK IAmb IAmb 12 33 06.0
comp=Z,194nm,1.0s
BELA Belgrano 2 82.85 175 P **P** 12 33 05.4 -0.6
HOM Homer 84.15 19 P **P** 12 33 14.1 +1.4
baz=217,SNR=5.5
CNPM China Poot 84.17 19 P **P** 12 33 13.3 +0.5
SVW2 Sparrevohn 84.20 16 P **P** 12 33 14.0 +1.1
RSO Redoubt South 84.46 18 P **P** 12 33 14.8 +0.3
BRLK Bradley Lake 84.47 19 P **P** 12 33 15.3 +1.0
BRLK IAmb IAmb 12 33 16.3
comp=Z,134nm,0.8s
SAIH SAIHA 84.86 296 *e*P **P** 12 33 17.7 +0.4
SAIH IAmb IAmb 12 33 21.4
comp=Z,27nm,0.8s
SAIH *i* pP **pP** 12 34 10.7 +0.8
MOKO MOKOCHONG 85.06 300 *e*P **P** 12 33 18.1 -0.1
MOKO IAmb IAmb 12 33 19.6
comp=Z,143nm,0.6s
MOKO *i* pP **pP** 12 34 11.4 +0.5
ANM Nome 85.08 11 P **P** 12 33 18.8 +1.6
ANM pmax pmax
comp=Z,130nm,1.0s
ANM Nome 85.08 11 P **P** 12 33 18.8 +1.6
ANM IAmb IAmb 12 33 20.1
comp=Z,130nm,1.0s
KOHI KOHIMA 85.16 299 *e*P **P** 12 33 18.4 -0.4
SEW Seward 85.18 19 P **P** 12 33 18.4 +0.6
SNCC San Nicolas Is 85.23 53 P **P** 12 33 20.1 +1.4
baz=244
SNCC San Nicolas Is 85.23 53 P **P** 12 33 19.8 +1.1
SNCC IAmb IAmb 12 33 21.4
comp=Z,108nm,0.8s
KCPM Cahto Peak 85.24 46 P **P** 12 33 20.3 +1.5
HOPS Hopland Field 85.26 46 P **P** 12 33 19.7 +0.9
HOPS IAmb IAmb 12 33 21.5
comp=Z,168nm,1.1s
GDXM Geysers 85.37 47 P **P** 12 33 21.1 +1.8
GDXM IAmb IAmb 12 33 22.5
comp=Z,112nm,1.2s
SAO San Andreas Ge 85.37 49 P **P** 12 33 20.8 +1.4
SAO pmax pmax
comp=Z,114nm,1.0s
SAO San Andreas Ge 85.37 49 P **P** 12 33 20.8 +1.4
SAO IAmb IAmb 12 33 22.1
comp=Z,114nm,0.9s
O22K Cooper Landing 85.39 19 P **P** 12 33 19.6 +0.8
baz=219
O22K Cooper Landing 85.39 19 P **P** 12 33 19.3 +0.5
O22K IAmb IAmb 12 33 32.0
comp=Z,132nm,0.8s
KMRM Mail Ridge 85.42 45 P **P** 12 33 21.3 +1.8
SCZ2 Santa Cruz Isl 85.47 52 P **P** 12 33 21.1 +1.1
baz=244,SNR=5.3
JCC Jacoby Creek, 85.49 44 P **P** 12 33 21.7 +2.0
JCC IAmb IAmb 12 33 22.3
comp=Z,110nm,0.9s
TNA Tin City 85.58 9 P **P** 12 33 20.9 +1.3
baz=202
TNA Tin City 85.58 9 P **P** 12 33 21.1 +1.5
PMPB Monarch Peak 85.59 50 P **P** 12 33 22.1 +1.6
PMPB IAmb IAmb 12 33 23.5
comp=Z,102nm,1.0s
SBC Santa Barbara 85.61 52 P **P** 12 33 22.1 +1.5
baz=244
TTA Tatalina 85.63 15 P **P** 12 33 21.3 +1.2
TTA pmax pmax
comp=Z,49nm,1.0s
TTA Tatalina 85.63 15 P **P** 12 33 21.3 +1.2
SYO Syowa Base 85.64 196⇑ *i*P **P** 12 33 18.3 -1.8
SYO Syowa Base 85.64 196⇓ *i*PcP **PcP** 12 33 22.4 -0.2
KHMM Horse Mountain 85.71 44 P **P** 12 33 23.1 +2.0
PKM Mcpherson Peak 85.73 51 P **P** 12 33 23.0 +1.6
baz=244,SNR=19
PAGB Antelope Grade 85.78 50 P **P** 12 33 22.5 +1.1
PAGB IAmb IAmb 12 33 23.7
comp=Z,46nm,0.8s
SMMC Simmler 85.78 51 P **P** 12 33 23.2 +1.8
baz=244,SNR=18

SUA Susitna One 85.86 18 P **P** 12 33 21.2 -0.1
SUA IAmb IAmb 12 33 24.6
comp=Z,92nm,1.0s
SCI2 San Clemente I 85.86 53 P **P** 12 33 23.1 +1.2
baz=245,SNR=5.0
RC01 Rabbit Creek A 85.86 19 P **P** 12 33 21.1 -0.1
baz=219,SNR=9.0
KRMB Red Mountain 85.91 44 P **P** 12 33 23.7 +1.6
KRMB IAmb IAmb 12 33 25.2
comp=Z,126nm,1.1s
SKT Skwentna 86.04 17 P **P** 12 33 20.9 -1.1
ZIRO ZIRO 86.07 301 *e*P **P** 12 33 23.5 +0.3
ZIRO IAmb IAmb 12 33 26.1
comp=Z,15nm,0.6s
ZIRO *i* pP **pP** 12 34 16.6 +0.6
CIS Catalina Islan 86.14 53 P **P** 12 33 23.8 +0.6
baz=245
YAK Yakutsk 86.14 343 *c i*P **P** 12 33 22.9 +0.4
YAK *e* 12 36 53.6
YAK *e*PPP PPP 12 38 41.1
YAK *e*S **SKSac** 12 43 26.7 -0.4
YAK *e*'SS **sS** 12 45 08.6 -1.5
YAK *e*SS **SS** 12 49 21.2 -1.4
YAK *e*SSS SSS 12 52 56.2
YAK pmax pmax
comp=Z,211nm,0.9s
YAK pmax pmax
comp=N,35nm,1.1s
YAK pmax pmax
comp=E,33nm,1.1s
YAK pmax pmax
comp=Z,275nm,3.7s
YAK pmax pmax
comp=N,244nm,3.4s
YAK pmax pmax
comp=E,330nm,3.4s
YAK smax smax
comp=N,190nm,3.0s
YAK smax smax
comp=E,226nm,2.6s
YAK Yakutsk 86.14 343 P **P** 12 33 22.6 +0.1
ULN Ulaanbaatar 86.23 323 *ce*P **P** 12 33 24.2 +0.7
ULN pmax pmax
comp=Z,95nm,1.1s
ULN Ulaanbaatar 86.23 323 P **P** 12 33 24.5 +1.0
ULN IAmb IAmb 12 33 25.6
comp=Z,86nm,1.1s
KEBM Edson Butte 86.29 42 P **P** 12 33 25.3 +1.5
KEBM IAmb IAmb 12 33 26.6
comp=Z,154nm,1.0s
BILL Bilibino 86.30 359 *c i*P **P** 12 33 23.9 +0.7
BILL *i* *PP pwP 12 34 28.1 +9.4
BILL pmax pmax
comp=Z,205nm,0.9s
HIN Hinchinbrook I 86.36 20 P **P** 12 33 22.6 -1.0
HIN IAmb IAmb 12 33 25.9
comp=Z,100nm,1.0s
FMP Fort Macarthur 86.36 53 P **P** 12 33 25.5 +1.2
baz=245,SNR=7.7
WDC Whiskeytown Da 86.37 45 P **P** 12 33 25.7 +1.6
WDC pmax pmax
comp=Z,118nm,1.0s
WDC Whiskeytown Da 86.37 45 P **P** 12 33 25.7 +1.6
WDC IAmb IAmb 12 33 27.0
comp=Z,118nm,1.0s
L02E Cave Junction 86.42 43 P **P** 12 33 26.2 +1.8
baz=241,SNR=9.4
OSI Osito Audit: C 86.42 52 P **P** 12 33 25.6 +0.9
baz=245
PMR Palmer 86.44 19 P **P** 12 33 24.0 +0.1
PMR pmax pmax
comp=Z,54nm,1.0s
PMR Palmer 86.44 19 P **P** 12 33 23.9 +0.1
N02D Trinity Center 86.44 45 P **P** 12 33 26.8 +2.2
baz=242,SNR=49
GLI Glacier Island 86.53 20 P **P** 12 33 23.5 -0.9
GLI IAmb IAmb 12 33 26.1
comp=Z,100nm,1.0s
M02C Callahan 86.54 44 P **P** 12 33 27.3 +2.2
baz=242,SNR=56
ARVC Arvin 86.56 51 P **P** 12 33 26.5 +1.3
baz=245,SNR=18
DECC Green Verdugo 86.56 52 P **P** 12 33 26.0 +0.7
baz=245
GTA Gaotai 86.58 313 ⇑P **P** 12 33 26.1 +0.8
GTA pP pP 12 34 19.3 +1.0
GTA sP sP 12 34 43.8 +2.7
GTA S **S** 12 43 44.5 +1.0
GTA sS sS 12 45 19.0 +4.4
GTA pmax pmax
comp=Z,48nm,1.0s
GTA pmax pmax
comp=Z,150nm,7.0s
GTA LR LR
comp=Z,160nm,21.4s
GTA LR LR
comp=Z,95nm,20.4s
GTA LR LR
comp=Z,170nm,20.0s
TEZP TEZPUR 86.59 299 *e*P **P** 12 33 25.1 -0.4
TEZP *i* pP **pP** 12 34 18.7 +0.3
SONM Songino Array 86.59 323 P **P** 12 33 25.8 +0.6
comp=Z,30nm,0.7s,baz=143,slow=5.7,SNR=133
SONM pP **pP** 12 34 19.9 +1.7
comp=Z,15nm,0.9s,baz=138,slow=4.4,SNR=5.6
SONM PKKPbc **PKKPbc** 12 51 20.2 -1.7
comp=Z,0.2nm,0.4s,baz=112,slow=0.8,SNR=3.8
SONM Songino Array 86.59 323 P **P** 12 33 25.6 +0.4
PPLA Purkeypile 86.59 17 P **P** 12 33 24.8 -0.1
ORV Oroville 86.60 46 P **P** 12 33 26.2 +0.9
ORV pmax pmax
comp=Z,120nm,0.9s
ORV Oroville 86.60 46 P **P** 12 33 26.2 +0.9
ORV IAmb IAmb 12 33 27.7
comp=Z,120nm,0.9s
FID Port Fidalgo 86.63 20 P **P** 12 33 24.4 -0.5
FID IAmb IAmb 12 33 27.0
comp=Z,99nm,1.0s
K02D Willamette Mer 86.63 43 P **P** 12 33 27.1 +1.6
baz=241,SNR=11
PASC Pasadena Art C 86.64 52 P **P** 12 33 25.7 +0.1
PASC IAmb IAmb 12 33 27.5
comp=Z,58nm,0.8s
GHO Glory Hole Cre 86.64 19 P **P** 12 33 24.7 -0.3
GHO IAmb IAmb 12 33 29.0
comp=Z,46nm,0.8s
VOG Valley Oaks Go 86.67 50 P **P** 12 33 26.5 +0.9
baz=244
VES Vestal, Richgr 86.68 51 P **P** 12 33 26.6 +0.9
baz=244,SNR=27
J01E Myrtle Point 86.69 42 P **P** 12 33 27.2 +1.6
baz=241,SNR=7.4
AFDM Forest Hills D 86.69 47 P **P** 12 33 27.1 +1.3
AFDM IAmb IAmb 12 33 28.2
comp=Z,154nm,0.9s
CMB Columbia Colle 86.70 48 P **P** 12 33 26.7 +0.8
CMB pmax pmax
comp=Z,127nm,0.9s
CMB Columbia Colle 86.70 48 P **P** 12 33 26.7 +0.8
CMB IAmb IAmb 12 33 28.2
comp=Z,127nm,0.9s
EYAK Cordova Ski Ar 86.72 21 P **P** 12 33 25.5 +0.2
EYAK IAmb IAmb 12 33 27.2
comp=Z,66nm,1.0s
O03E Paynes Creek 86.74 46 P **P** 12 33 27.3 +1.2
baz=243,SNR=66
CUT Chulitna 86.74 18 P **P** 12 33 24.6 -0.7
baz=218,SNR=13
MWC Mount Wilson 86.75 52 P **P** 12 33 27.1 +0.7
MWC pmax pmax
comp=Z,61nm,0.7s
MWC Mount Wilson 86.75 52 P **P** 12 33 27.1 +0.7
MWC IAmb IAmb 12 33 28.0
comp=Z,61nm,0.7s
YBH Yreka Blue Hor 86.80 44 P **P** 12 33 27.6 +1.3
YBH pmax pmax
comp=Z,121nm,1.0s
YBH Yreka Blue Hor 86.80 44 P **P** 12 33 27.6 +1.3
YBH IAmb IAmb 12 33 29.3
comp=Z,121nm,1.0s
SML Sawmill 86.85 19 P **P** 12 33 26.4 +0.4
SML pmax pmax
comp=Z,45nm,0.8s
SML Sawmill 86.85 19 P **P** 12 33 26.4 +0.4
CCX Cicese 86.85 55 P **P** 12 33 28.4 +1.7
CCX IAmb IAmb 12 33 29.1

comp=Z,58nm,0.9s
109C Camp Elliot, M 86.93 54 P P 12 33 28.0 +1.0
baz=246,SNR=7.7
RAGM Ragged Mountai 86.96 21 P P 12 33 27.3 +0.8
RAGM IAmb IAmb 12 33 28.7
comp=Z,97nm,1.1s
CBX Cerro Bola 87.03 55 P P 12 33 28.9 +1.2
ISA Isabella, Lake 87.05 51 P P 12 33 29.0 +1.4
ISA pmax pmax
comp=Z,81nm,0.9s
ISA Isabella, Lake 87.05 51 P P 12 33 29.0 +1.4
baz=245,SNR=62
ISA Isabella, Lake 87.05 51 P P 12 33 29.0 +1.4
ISA IAmb IAmb 12 33 30.2
comp=Z,81nm,0.9s
HUMO Hull Mountain 87.05 43 P P 12 33 29.3 +1.9
HUMO IAmb IAmb 12 33 30.5
comp=Z,129nm,0.9s
BFSC Mount Baldy Ra 87.06 53 P P 12 33 28.7 +0.9
baz=245,SNR=42
HMT Hamilton 87.07 21 P P 12 33 26.9 -0.1
HMT IAmb IAmb 12 33 29.1
comp=Z,109nm,1.1s
EDW2 Edwards Air Fo 87.08 52 P P 12 33 29.1 +1.3
baz=245,SNR=34
MURC Murrieta 87.15 53 P P 12 33 29.2 +1.1
baz=246,SNR=27
BAR Barrett 87.17 54 P P 12 33 28.4 +0.2
SCM Sheep Creek Mo 87.18 19 P P 12 33 27.4 -0.2
SCM pmax pmax
comp=Z,53nm,0.8s
SCM Sheep Creek Mo 87.18 19 P P 12 33 27.4 -0.2
SCM IAmb IAmb 12 33 31.1
comp=Z,53nm,0.8s
TKX Tecate 87.18 54 P P 12 33 28.6 +0.3
I02D Swisshome 87.20 42 P P 12 33 29.8 +1.8
baz=241
DIB Dawson Inlet, 87.26 31 P P 12 33 29.3 +1.2
DIB IAmb IAmb 12 33 30.6
comp=Z,99nm,1.0s
L04D Klamath Falls 87.29 44 P P 12 33 30.2 +1.5
baz=242,SNR=30
RUBR Rubicon Trail 87.31 47 P P 12 33 29.6 +0.6
RUBR IAmb IAmb 12 33 34.5
comp=Z,90nm,0.9s
I03D Drain, OR 87.32 42 P P 12 33 30.1 +1.5
baz=241,SNR=8.2
KLU Klutina 87.36 20 P P 12 33 28.6 +0.1
KLU IAmb IAmb 12 33 30.6
comp=Z,55nm,1.0s
M04C Macdoel 87.40 44 P P 12 33 30.7 +1.5
baz=242,SNR=34
MDPB Devils Postpil 87.45 49 P P 12 33 30.6 +0.8
MDPB IAmb IAmb 12 33 32.3
comp=Z,90nm,1.0s
MONP2 Monument Peak 87.45 54 P P 12 33 31.2 +1.4
baz=246,SNR=50
SPX San Pedro Mart 87.46 56 P P 12 33 31.4 +1.4
ESJX Sierra Juarez 87.46 55 P P 12 33 30.4 +0.5
KTH Kantishna Hill 87.47 17 P P 12 33 27.9 -1.0
KTH IAmb IAmb 12 33 31.2
comp=Z,51nm,0.8s
OMMB Old Mammoth Mi 87.50 49 P P 12 33 30.9 +0.9
OMMB IAmb IAmb 12 33 32.7
comp=Z,93nm,1.3s
BEKR Beckworth 87.53 47 P P 12 33 31.4 +1.4
BEKR IAmb IAmb 12 33 32.5
comp=Z,103nm,1.0s
LRMC Laurel Mtn Rad 87.56 51 P P 12 33 31.5 +1.3
baz=245,SNR=27
WAKR Walker 87.57 48 P P 12 33 31.6 +1.3
WAKR IAmb IAmb 12 33 33.2
comp=Z,214nm,1.4s
IKP In-Ko-Pah, Jac 87.60 55 P P 12 33 31.7 +1.4
baz=246,SNR=24
MLAC Mammoth, Mammo 87.62 49 P P 12 33 32.2 +1.6
baz=245,SNR=11
BBRC Big Bear Solar 87.63 53 P P 12 33 31.8 +1.1
baz=246,SNR=26
PMSA Palmer Station 87.63 160 *e*P P 12 33 30.6 +0.8
CWC Cottonwood Cre 87.67 50 P P 12 33 31.9 +1.3
baz=245
PFO Pinyon Flats O 87.71 54 *i* P P 12 33 31.0 +0.1
PFO pmax pmax
comp=Z,40nm,0.8s
PFO Pinyon Flats O 87.71 54 P P 12 33 32.0 +1.1
baz=246,SNR=27
PFO Pinyon Flats O 87.71 54 P P 12 33 31.3 +0.4
PNTR Pine Nut 87.71 48 P P 12 33 32.4 +1.4
PNTR IAmb IAmb 12 33 33.6
comp=Z,91nm,0.9s
TPFO Pinon Flats 87.72 54 P P 12 33 32.0 +1.1
baz=246,SNR=23
M24K Tolsona, Glenn 87.74 19 P P 12 33 30.5 +0.3
baz=222,SNR=11
M24K Tolsona, Glenn 87.74 19 P P 12 33 30.9 +0.6
M24K IAmb IAmb 12 33 33.6
comp=Z,160nm,1.4s
CRQM Cirque 87.75 21 P P 12 33 30.7 +0.2
CRQM IAmb IAmb 12 33 32.0
comp=Z,66nm,1.0s
MESA MESA 87.76 22 P P 12 33 31.3 +0.7
MESA IAmb IAmb 12 33 33.6
comp=Z,64nm,0.8s
VCNR Virginia City 87.77 47 P P 12 33 32.5 +1.3
TIN Tinemaha, Big 87.82 50 P P 12 33 32.9 +1.6
baz=245,SNR=8.0
RRX Edison Barstow 87.82 52 P P 12 33 32.2 +0.9
baz=246
K04D Chiloquin, OR 87.84 44 P P 12 33 32.6 +1.3
baz=242
TGL Tana Glacier 87.86 21 P P 12 33 30.1 -0.8
TGL IAmb IAmb 12 33 33.0
comp=Z,80nm,1.3s
N25K Chitina, Valde 87.88 20 P P 12 33 30.9 0.0
baz=223,SNR=19
N25K Chitina, Valde 87.88 20 P P 12 33 30.5 -0.5
N25K IAmb IAmb 12 33 33.8
comp=Z,93nm,1.4s
BPAW Bear Paw Mtn. 87.88 16 P P 12 33 30.1 -0.8
J04D Umpqua Nationa 87.90 43 P P 12 33 33.2 +1.5
baz=242,SNR=8.1
ISLE Juniper Island 87.92 22 P P 12 33 31.2 0.0
ISLE IAmb IAmb 12 33 32.1
comp=Z,52nm,0.9s
RND Reindeer 87.93 18 P P 12 33 30.6 -0.5
RND pmax pmax
comp=Z,69nm,0.8s
RND Reindeer 87.93 18 P P 12 33 30.6 -0.5
RND IAmb IAmb 12 33 33.0
comp=Z,69nm,0.8s
MPMC Manual Prospec 87.94 51 P P 12 33 33.4 +1.4
baz=245,SNR=58
SFX San Felipe 87.95 56 P P 12 33 33.4 +1.6
SWSC Sam W. Stewart 87.95 54 P P 12 33 33.4 +1.5
baz=246,SNR=20
I04A Tendick Farm, 87.96 42 P P 12 33 33.0 +1.2
baz=242,SNR=17
YAH Yahtse 87.97 22 P P 12 33 31.7 +0.1
VRDI Verde Repeater 87.98 21 P P 12 33 31.1 -0.5
GLB Gilahina Butte 88.02 21 P P 12 33 31.1 -0.4
G03D McMinnville, O 88.10 41 P P 12 33 33.9 +1.7
baz=241,SNR=7.9
H04D Lebanon 88.10 42 P P 12 33 33.9 +1.6
baz=242,SNR=11
DHY Denali Highway 88.11 18 P P 12 33 32.0 -0.1
LHV Little Huntoon 88.13 49 P P 12 33 34.4 +1.9
LHV IAmb IAmb 12 33 35.7
comp=Z,176nm,1.4s
PAHR Pah Rah Range 88.13 47 P P 12 33 34.2 +1.4
PAHR IAmb IAmb 12 33 35.5
comp=Z,172nm,1.2s
GSC Goldstone, Bar 88.14 52 P P 12 33 33.4 +0.6
GSC pmax pmax
comp=Z,73nm,1.4s
GSC Goldstone, Bar 88.14 52 P P 12 33 34.0 +1.2
baz=246,SNR=25
GSC Goldstone, Bar 88.14 52 P P 12 33 33.4 +0.6
GSC IAmb IAmb 12 33 36.5
comp=Z,73nm,1.4s
MCK McKinley 88.16 17 P P 12 33 31.4 -0.8
baz=219,SNR=17
BELC Belle Mtn. Jos 88.22 53 P P 12 33 34.7 +1.4
baz=246,SNR=106
BALM Baldy 88.23 21 P P 12 33 32.8 +0.1
BALM pmax pmax
comp=Z,45nm,1.0s
BALM Baldy 88.23 21 P P 12 33 32.4 -0.2
TABL Table Mountain 88.23 22 P P 12 33 33.2 +0.4
TABL IAmb IAmb 12 33 35.7
comp=Z,66nm,0.8s
MCARA McCarthy VSAT 88.24 21 P P 12 33 32.8 +0.3
MCARA IAmb IAmb 12 33 35.3
comp=Z,87nm,1.1s
RYN Ryan 88.27 48 P P 12 33 34.8 +1.4
RYN IAmb IAmb 12 33 36.1
comp=Z,69nm,1.0s
HEC Hector,Ludlow 88.30 52 P P 12 33 34.7 +1.1
baz=246,SNR=16
PCA Pinnacle 88.32 23 P P 12 33 33.3 +0.2
PCA IAmb IAmb 12 33 33.9
comp=Z,54nm,0.9s
NVAR Mina Array Bea 88.34 49 P P 12 33 35.2 +1.3
comp=Z,38nm,0.8s,baz=227,slow=8.1,SNR=232
NVAR pP **pwP** 12 34 30.2 +1.1
comp=Z,9.9nm,0.9s,baz=222,slow=9.5,SNR=2.7
BWN Browne 88.35 17 P P 12 33 32.9 -0.1
GRAC Grapevine Rang 88.42 50 P P 12 33 35.7 +1.7
baz=246,SNR=44
NV11 Mina Array Sit 88.45 49 P P 12 33 35.3 +1.0
NV11 IAmb IAmb 12 33 36.9
comp=Z,90nm,1.1s
K05A Summer Lake 88.45 44 P P 12 33 35.8 +1.6
K05A **PcP** 12 33 36.2 +0.4
MOD Modoc Plateau 88.47 45 P P 12 33 35.5 +1.2
BARN Barnard Glacie 88.48 22 P P 12 33 33.7 -0.2
BARN **PcP** 12 33 34.4 -1.0
BARN IAmb IAmb 12 33 35.1
comp=Z,60nm,0.9s
J05D Fort Rock, OR 88.48 43 P P 12 33 36.2 +1.8
baz=243,SNR=104
BC3 Big Chuckawall 88.50 54 P P 12 33 36.1 +1.5
baz=247,SNR=26
H04A Detroit Lake 88.52 42 P P 12 33 35.5 +1.1
CTGM Chitina Glacie 88.53 22 P P 12 33 34.2 +0.1
CTGM IAmb IAmb 12 33 35.2
comp=Z,60nm,0.8s
E03A Lebam 88.56 40 P P 12 33 34.9 +0.5
FURC Furnace Creek, 88.57 51 P P 12 33 36.2 +1.6
baz=246,SNR=56
PAX Paxson 88.60 19 P P 12 33 33.4 -0.9
PAX pmax pmax
comp=Z,30nm,1.4s
PAX Paxson 88.60 19 P P 12 33 33.4 -0.9
F04D Rainier, OR 88.67 40 P P 12 33 37.0 +2.1
baz=242,SNR=6.7
RDOG Red Dog Mine 88.67 10 P P 12 33 35.5 +1.0
RDOG IAmb IAmb 12 33 37.7
comp=Z,46nm,1.0s
MLY Manley 88.69 16 P P 12 33 34.0 -0.6
baz=218,SNR=15
IMAR Indian Mountai 88.72 14 P P 12 33 35.5 +0.8
GLA Glamis 88.75 55 P P 12 33 36.4 +0.7
GLA pmax pmax
comp=Z,69nm,0.9s
GLA Glamis 88.75 55 P P 12 33 37.6 +1.9
baz=247,SNR=13
GLA Glamis 88.75 55 P P 12 33 36.4 +0.7
GLA IAmb IAmb 12 33 38.2
comp=Z,69nm,0.9s
KVN Kaiserville 88.75 48 P P 12 33 37.0 +1.2
KVN pmax pmax
comp=Z,63nm,0.8s
KVN Kaiserville 88.75 48 P P 12 33 37.0 +1.2
KVN IAmb IAmb 12 33 38.2
comp=Z,63nm,0.8s
SHOC Shoshone, Teco 88.77 52 P P 12 33 36.9 +1.2
baz=246,SNR=43
GMRC Granite Mounta 88.79 53 P P 12 33 37.2 +1.2
baz=246,SNR=25
NEA2 Nenana 88.79 17 P P 12 33 34.0 -1.1
baz=219,SNR=18
TUQ Turquoise Moun 88.85 52 P P 12 33 37.5 +1.3
baz=246,SNR=25
BBB Bella Bella 88.88 33 P P 12 33 37.3 +1.5
comp=Z,78nm,0.9s,baz=270,slow=5.6,SNR=15
BBB Bella Bella 88.88 33 P P 12 33 37.2 +1.5
BBB IAmb IAmb 12 33 38.4
comp=Z,109nm,1.0s
I05D Terrebonne, OR 88.90 42 P P 12 33 37.7 +1.6
baz=243,SNR=27
PINE Pine Mountain 88.91 43 P P 12 33 37.8 +1.4
IRM Iron Mountain 88.93 53 P P 12 33 38.2 +1.6
baz=247,SNR=40
F04A Amboy 88.96 40 P P 12 33 37.4 +1.1
WRH Wood River Hil 88.97 17 P P 12 33 35.1 -0.8
WRH IAmb IAmb 12 33 38.1
comp=Z,57nm,1.1s
TPH Tonopah 88.97 49 P P 12 33 37.5 +0.7
TPH pmax pmax
comp=Z,448nm,1.3s
TPH Tonopah 88.97 49 P P 12 33 37.5 +0.7
LSA Lhasa 89.09 302 P P 12 33 38.8 +0.9
LSA pmax pmax
comp=Z,76nm,0.6s
MENT Mentasta 89.13 20 P P 12 33 36.4 -0.4
I23K Minto, Yukon-K 89.14 16 P P 12 33 36.0 -0.7
baz=219,SNR=9.9
I23K Minto, Yukon-K 89.14 16 P P 12 33 36.3 -0.4
E04D Cinebar 89.17 40 P P 12 33 39.2 +1.9
baz=242,SNR=21
CCB Clear Creek Bu 89.18 17 P P 12 33 36.0 -0.8
WRAK Wrangell Islan 89.21 28 P P 12 33 38.5 +1.3
WRAK IAmb IAmb 12 33 39.5
comp=Z,126nm,1.2s
TPNV Topopah Spring 89.22 51 P P 12 33 39.6 +1.6
TPNV pmax pmax
comp=Z,100nm,1.0s
TPNV Topopah Spring 89.22 51 P P 12 33 39.4 +1.4
baz=246,SNR=90
TPNV Topopah Spring 89.22 51 P P 12 33 39.6 +1.6
TPNV IAmb IAmb 12 33 40.5
comp=Z,100nm,1.0s
HDA Harding Lake 89.24 18 P P 12 33 36.6 -0.6
baz=221,SNR=18
HDA Harding Lake 89.24 18 P P 12 33 36.8 -0.4
HDA IAmb IAmb 12 33 37.8
comp=Z,50nm,0.8s
PIX Pinacate 89.25 56 P P 12 33 39.6 +1.6
PIX IAmb IAmb 12 33 40.2
comp=Z,40nm,0.8s
MDM Murphy Dome 89.30 17 P P 12 33 36.6 -0.9
MDM IAmb IAmb 12 33 38.2
comp=Z,106nm,1.3s
SLBS Sierra La Lagu 89.31 65 P P 12 33 40.9 +2.4
L26K Log Cabin Wild 89.31 20 P P 12 33 37.6 0.0
baz=224,SNR=21
D03D Eldon 89.32 39 P P 12 33 39.8 +1.9
baz=241,SNR=20
G05D Wamic, OR 89.33 41 P P 12 33 39.5 +1.4
baz=243,SNR=14
D04E Lakebay 89.34 39 P P 12 33 40.0 +2.1
baz=242
TCOL CIGO, UAF Yank 89.34 17 P P 12 33 36.8 -0.8
baz=220,SNR=28
TCOL CIGO, UAF Yank 89.34 17 P P 12 33 37.2 -0.4
TCOL IAmb IAmb 12 33 38.4
comp=Z,75nm,0.9s
COLA College 89.34 17 *c* *i* P P 12 33 36.8 -0.8
COLA pmax pmax
comp=Z,84nm,1.1s
COLA College 89.34 17 P P 12 33 36.7 -0.8
COLA IAmb IAmb 12 33 38.4
comp=Z,75nm,0.9s
BESE Bessie Mountai 89.44 26 P P 12 33 39.7 +1.4
JIS Juneau Island 89.45 26 P P 12 33 39.2 +1.0
JIS IAmb IAmb 12 33 40.3
comp=Z,70nm,1.1s
113A Mohawk Valley, 89.46 55 P P 12 33 40.4 +1.5
F05D White Salmon 89.53 41 P P 12 33 40.5 +1.5
baz=243,SNR=20
IL31 89.53 17 P P 12 33 37.5 -0.9
IL31 IAmb IAmb 12 33 40.8
comp=Z,37nm,0.8s
ILAR Eielson Array 89.53 17 P P 12 33 37.6 -0.9
comp=Z,28nm,0.6s,baz=236,slow=4.8,SNR=184
ILAR PKKP **PKKPdf** 12 51 11.4 +0.8
comp=Z,0.3nm,0.7s,baz=330,slow=2.6,SNR=4.6
ILAR Eielson Array 89.53 17 P P 12 33 37.7 -0.8
DOT Dot Lake 89.54 19 P P 12 33 38.4 -0.2
DOT IAmb IAmb 12 33 40.9
comp=Z,41nm,0.8s
NEE2 Needles Airpor 89.57 53 P P 12 33 41.0 +1.5
baz=247,SNR=9.5
NVL N'lazarevskaya 89.59 187 *e*P P 12 33 37.5 -1.4
NVL *e*S **SKSac** 12 43 45.1 -2.9
NVL pmax pmax
comp=Z,87nm,0.7s
POKR Poker Plat Res 89.64 17 P P 12 33 38.0 -1.0
baz=221,SNR=12
POKR Poker Plat Res 89.64 17 P P 12 33 38.1 -1.0
ZAK Zakamensk 89.66 324 *e*P P 12 33 38.7 -0.9
ZAK pmax pmax
comp=Z,29nm,1.5s
LON Longmire 89.72 40 P P 12 33 40.0 +0.1
LON pmax pmax
comp=Z,131nm,1.5s
LON Longmire 89.72 40 P P 12 33 40.0 +0.1
LON IAmb IAmb 12 33 42.1
comp=Z,131nm,1.4s
PDMCI Parker Dam,Lak 89.76 54 P P 12 33 41.9 +1.6
baz=247,SNR=43
SCRK Sand Creek 89.80 19 P P 12 33 39.8 -0.1
baz=224,SNR=45
D05A Enumclaw 89.81 39 P P 12 33 42.3 +2.1
HYT Haines Junctio 89.83 23 P P 12 33 40.3 +0.1
BCAR Beaver Creek A 89.84 20 P P 12 33 39.7 -0.4
SHPR Sheep Range 89.84 51 P P 12 33 42.5 +1.6
SHPR IAmb IAmb 12 33 43.7
comp=Z,98nm,1.3s
214A Organ Pipe Nat 89.91 56 P P 12 33 42.8 +1.7
baz=248,SNR=28
214A Organ Pipe Nat 89.91 56 P P 12 33 42.8 +1.7
214A IAmb IAmb 12 33 44.0
comp=Z,93nm,1.2s
SNAA Sanae 89.91 183 P P 12 33 39.8 -0.6
SNAA Sanae 89.91 183 pP pP 12 34 33.5 -0.1
SNAA Sanae 89.91 183 *d* *i* P P 12 33 39.6 -0.9
SNAA pmax pmax
comp=Z,106nm,0.9s
SNAA Sanae 89.91 183 P P 12 33 39.9 -0.6
SNAA IAmb IAmb 12 33 40.9
comp=Z,87nm,0.8s
I07A Izee 89.96 43 P P 12 33 42.8 +1.6
A04D Lummi Island 90.11 38 P P 12 33 43.5 +2.0
baz=242,SNR=14
TLY Talaya 90.11 325 *c* *i* P P 12 33 41.9 +0.3
TLY pmax pmax
comp=Z,57nm,0.8s
TLY Talaya 90.11 325 P P 12 33 42.1 +0.5
TLY IAmb IAmb 12 33 43.1
comp=Z,59nm,1.4s
B05A Bryant 90.25 39 P P 12 33 43.9 +1.6
baz=242,SNR=49
W13A Hualapai Mount 90.25 53 P P 12 33 44.3 +1.4
W13A IAmb IAmb 12 33 45.6
comp=Z,59nm,0.8s
R11A Troy Canyon, C 90.26 49 P P 12 33 43.8 +1.0
baz=247,SNR=53
R11A Troy Canyon, C 90.26 49 P P 12 33 43.7 +0.9
PRN Pahroc Range 90.28 51 P P 12 33 44.6 +1.7
J08A Circle Bar Ran 90.32 44 P P 12 33 44.3 +1.4
K27K Chicken 90.43 19 P P 12 33 43.1 +0.5
baz=226,SNR=36
K27K Chicken 90.43 19 P P 12 33 43.2 +0.5
K27K IAmb IAmb 12 33 45.3
comp=Z,37nm,0.8s
PRP Porcupine Dome 90.47 17 P P 12 33 42.2 -0.9
Y14A Wickenburg 90.49 54 P P 12 33 45.2 +1.4
F07A Phinny Hill Vi 90.49 41 P P 12 33 45.1 +1.7
VNA3 Neumayer Olymp 90.50 180 P P 12 33 42.5 -0.7
VNA3 Neumayer Olymp 90.50 180 pP pP 12 34 36.3 -0.1
COLD Coldfoot 90.57 15 P P 12 33 44.5 +1.2
baz=218
COLD Coldfoot 90.57 15 P P 12 33 44.4 +1.2
COLD IAmb IAmb 12 33 45.5
comp=Z,68nm,1.0s
LTY Liberty 90.64 40 P P 12 33 45.4 +1.2
LTY IAmb IAmb 12 33 46.4
comp=Z,92nm,0.9s
WHY Whitehorse 90.72 24 P P 12 33 44.5 +0.2
WHY IAmb IAmb 12 33 45.6
comp=Z,57nm,1.1s
B06A Marblemount 90.73 38 P P 12 33 45.9 +1.5
B06A IAmb IAmb 12 33 46.5
comp=Z,77nm,0.9s
VNA2 Neumayer--Watz 90.79 181 P P 12 33 44.0 -0.5
baz=158,slow=5.5
VNA2 Neumayer--Watz 90.79 181 pP pP 12 34 37.9 +0.1
C06D Leavenworth 90.81 39 P P 12 33 45.8 +1.0
baz=243,SNR=6.0
E07A Sunnyside 90.83 41 P P 12 33 45.9 +0.9
G08A Pilot Rock 90.84 42 P P 12 33 46.5 +1.3
HAWA Hanford 90.96 41 P P 12 33 47.2 +1.6
VNA1 Neumayer--Stat 91.08 181 P P 12 33 45.2 -0.6
VNA1 Neumayer--Stat 91.08 181 pP pP 12 34 39.5 +0.4
TAPN Taplejung 91.08 298 *e*P P 12 33 46.7 -0.3
comp=Z,43nm,1.1s
ODAN Odare 91.18 298 *e*P P 12 33 47.6 +0.2
comp=Z,68nm,1.1s
EGAK Eagle 91.23 19 P P 12 33 46.5 +0.1
EGAK IAmb IAmb 12 33 48.3
comp=Z,56nm,0.8s
E08A Dider Farm, El 91.30 41 P P 12 33 48.7 +1.6
DAWY Dawson 91.31 20 P P 12 33 46.9 0.0
DLBC Dease Lake 91.40 27 P P 12 33 48.5 +1.0
comp=Z,88nm,1.0s,baz=234,slow=4.7,SNR=78
DLBC Dease Lake 91.40 27 PP P 12 33 48.4 +1.0
SPR3 Spring Creek 3 91.42 49 P P 12 33 49.3 +1.0
ELK Elko 91.45 47 PP PP 12 37 29.6 0.0
comp=Z,2.5nm,1.0s,baz=214,slow=7.5,SNR=3.7
ELK Elko 91.45 47 P P 12 33 48.7 +0.3
ELK IAmb IAmb 12 33 50.7
comp=Z,41nm,1.1s
ELK PP 12 37 30.2 +0.6
LCMT Little Creek M 91.46 51 P P 12 33 49.8 +1.4
MOY Mondy 91.55 325 *e*P P 12 33 48.7 +0.3
MOY pmax pmax
comp=Z,58nm,1.9s
CCUT Cedar City 91.57 51 P P 12 33 50.7 +1.7
PSUT Pine Spring 91.58 50 P P 12 33 50.1 +1.2
D08A Wollman Farm, 91.63 41 P P 12 33 50.0 +1.3
D08A IAmb IAmb 12 33 50.6
comp=Z,44nm,0.9s
TUC Tucson 91.64 57 P P 12 33 50.7 +1.5
TUC pmax pmax
comp=Z,64nm,1.0s
TUC Tucson 91.64 57 P P 12 33 50.9 +1.7
baz=249
TUC Tucson 91.64 57 P P 12 33 50.7 +1.5
TUC IAmb IAmb 12 33 52.2
comp=Z,64nm,1.0s
BMO Blue Mountains 91.72 43 P P 12 33 50.0 +0.7
BMO pmax pmax
comp=Z,65nm,1.5s
BMO Blue Mountains 91.72 43 P P 12 33 50.0 +0.7
BMO IAmb IAmb 12 33 51.5
comp=Z,65nm,1.5s
KNB Kanab 91.77 52 P P 12 33 51.5 +1.6
KNB pmax pmax
comp=Z,79nm,1.0s
KNB Kanab 91.77 52 P P 12 33 51.5 +1.6
SZCU Shurtz Canyon 91.79 51 P P 12 33 51.0 +1.0
TOLK Toolik Lake Re 91.83 14 P P 12 33 50.0 +0.8
baz=219
TOLK Toolik Lake Re 91.83 14 P P 12 33 50.0 +0.8
TOLK IAmb IAmb 12 33 51.1
comp=Z,46nm,1.1s
X16A Lo Mia Camp, P 91.87 54 P P 12 33 52.1 +1.7
X16A IAmb IAmb 12 33 53.4
comp=Z,84nm,0.9s
E09A Wood Farm, Sta 91.88 41 P P 12 33 51.2 +1.4
E09A IAmb IAmb 12 33 52.1
comp=Z,99nm,1.4s
RAMN Ramite 91.88 298 *e*P P 12 33 50.6 0.0
comp=Z,19nm,0.9s
B08A Colville Reser 91.94 39 P P 12 33 50.3 +0.2
B08A IAmb IAmb 12 33 52.0
comp=Z,55nm,1.1s
U15A North Rim 91.95 52 P P 12 33 52.6 +1.8
MFID Camas Ranch 92.11 45 P P 12 33 52.3 +1.2
MFID IAmb IAmb 12 33 53.4
comp=Z,43nm,0.8s
BMAR Burnt Mountain 92.14 16 P P 12 33 50.7 0.0
F10A Beach Ranch, E 92.23 42 P P 12 33 52.3 +0.7
F10A IAmb IAmb 12 33 55.6
comp=Z,36nm,0.8s

PKCU	**Pink Cliffs**	**92.31**	**51**	P	**P**	**12 33 54.9**	**+2.4**		
WUAZ	**Wupatki**	**92.32**	**53**	P	**P**	**12 33 53.9**	**+1.5**		
	baz=249,SNR=43								
WUAZ	**Wupatki**	**92.32**	**53**	P	**P**	**12 33 52.7**	**+0.3**		
WUAZ				IAmb	IAmb	12 33 55.1			
	comp=Z,71nm,1.0s								
C09A	**Chrisman Ranch**	**92.34**	**40**	P	**P**	**12 33 52.2**	**+0.2**		
319A	**Douglas**	**92.51**	**58**	P	**P**	**12 33 55.2**	**+1.9**		
A21K	**Barrow**	**92.61**	**10**	P	**P**	**12 33 53.4**	**+0.8**		
	baz=212								
A21K	**Barrow**	**92.61**	**10**	P	**P**	**12 33 53.5**	**+0.8**		
A21K				IAmb	IAmb	12 33 54.8			
	comp=Z,113nm,1.3s								
MTPU	**Mount Pierson**	**92.62**	**51**	P	**P**	**12 33 56.0**	**+2.0**		
TCRU	**Three Creeks R**	**92.64**	**50**	P	**P**	**12 33 55.8**	**+1.9**		
TCRU					**pP**	**12 34 45.6**	**-1.3**		
PLID	**Pearl Lake**	**92.66**	**43**	P	**P**	**12 33 54.4**	**+0.6**		
MVU	**Marysvale**	**92.77**	**50**	P	**P**	**12 33 56.2**	**+1.7**		
MSU	**Marysvale**	**92.80**	**50**	P	**P**	**12 33 56.3**	**+1.7**		
MSU	**Marysvale**	**92.80**	**50**	P	**P**	**12 33 56.3**	**+1.7**		
GUN	**Gumba**	**92.80**	**298**	*eP*	**P**	**12 33 54.8**	**-0.2**		
DUG	**Dugway, Tooele**	**92.95**	**49**	P	**P**	**12 33 56.2**	**+1.0**		
DUG				pmax	pmax				
	comp=Z,14nm,0.9s								
DUG	**Dugway, Tooele**	**92.95**	**49**	P	**P**	**12 33 56.1**	**+1.0**		
	baz=248,SNR=13								
DUG	**Dugway, Tooele**	**92.95**	**49**	P	**P**	**12 33 56.1**	**+1.0**		
BGU	**Big Grassy Mou**	**93.07**	**48**	P	**P**	**12 33 56.3**	**+0.6**		
PKI	**Pulchoki**	**93.08**	**298**	*eP*	**P**	**12 33 56.0**	**-0.3**		
	comp=Z,53nm,1.1s								
PKIN	**Phulchoki**	**93.09**	**298**	*eP*	**P**	**12 33 55.9**	**-0.4**		
HLID	**Hailey**	**93.11**	**45**	P	**P**	**12 33 57.0**	**+1.2**		
	baz=248								
HLID	**Hailey**	**93.11**	**45**	P	**P**	**12 33 57.0**	**+1.2**		
HLID				IAmb	IAmb	12 33 58.2			
	comp=Z,32nm,0.8s								
NEW	**Newport**	**93.24**	**40**	P	**P**	**12 33 56.6**	**+0.4**		
	comp=Z,17nm,0.9s,baz=240,slow=3.6,SNR=9.0								
NEW	**Newport**	**93.24**	**40**	P	**P**	**12 33 56.6**	**+0.4**		
NEW				pmax	pmax				
	comp=Z,16nm,0.9s								
NEW	**Newport**	**93.24**	**40**	P	**P**	**12 33 56.7**	**+0.6**		
	baz=246,SNR=15								
NEW	**Newport**	**93.24**	**40**	IAmb	IAmb	12 33 59.4			
	comp=Z,16nm,0.9s								
KKN	**Kakani**	**93.26**	**298**	*eP*	**P**	**12 33 56.8**	**-0.2**		
DMN	**Daman**	**93.35**	**298**	*eP*	**P**	**12 33 57.4**	**0.0**		
	comp=Z,86nm,1.1s								
NLU	**North Lily Min**	**93.39**	**49**	P	**P**	**12 33 58.8**	**+1.5**		
W18A	**Petrified Fore**	**93.43**	**54**	P	**P**	**12 33 58.7**	**+1.2**		
	baz=250,SNR=8.1								
W18A	**Petrified Fore**	**93.43**	**54**	P	**P**	**12 33 59.0**	**+1.4**		
W18A				IAmb	IAmb	12 34 00.0			
	comp=Z,44nm,1.1s								
HVU	**Hansel Valley**	**93.56**	**47**	P	**P**	**12 33 59.5**	**+1.6**		
HVU				pmax	pmax				
	comp=Z,33nm,0.9s								
HVU	**Hansel Valley**	**93.56**	**47**	P	**P**	**12 33 59.5**	**+1.6**		
SPUT	**South Promonto**	**93.62**	**48**	P	**P**	**12 33 59.6**	**+1.4**		
EPYK	**Eagle Plains**	**93.68**	**19**	P	**P**	**12 33 57.8**	**+0.1**		
	baz=230								
EPYK	**Eagle Plains**	**93.68**	**19**	P	**P**	**12 33 57.6**	**-0.1**		
EPYK				IAmb	IAmb	12 33 59.3			
	comp=Z,55nm,0.9s								
MPU	**Maple Canyon**	**93.73**	**49**	P	**P**	**12 34 00.3**	**+1.5**		
TMUT	**Trail Mountain**	**93.78**	**50**	P	**P**	**12 33 60.0**	**+0.8**		
GKN	**Gorkha**	**93.87**	**298**	*eP*	**P**	**12 33 58.9**	**-0.8**		
CTU	**Camp Tracy**	**93.89**	**48**	P	**P**	**12 34 00.4**	**+0.9**		
TIXI	**Tiksi**	**94.00**	**348**	*ceP*	**P**	**12 33 58.6**	**-0.4**		
TIXI				pmax	pmax				
	comp=Z,57nm,1.3s								
HPIG		**94.04**	**63**	P	**P**	**12 34 01.5**	**+1.0**		
BCYI	**Bear Canyon**	**94.07**	**45**	P	**P**	**12 34 01.2**	**+0.9**		
JLU	**Jordanelle**	**94.07**	**49**	P	**P**	**12 34 01.8**	**+1.3**		
121A	**Cookes Peak, D**	**94.10**	**57**	P	**P**	**12 34 02.1**	**+1.5**		
	baz=251,SNR=16								
121A	**Cookes Peak, D**	**94.10**	**57**	P	**P**	**12 34 02.1**	**+1.5**		
121A				IAmb	IAmb	12 34 03.5			
	comp=Z,32nm,1.1s								
SRU	**San Rafael Swe**	**94.22**	**50**	P	**P**	**12 34 01.9**	**+0.8**		
SRU				pmax	pmax				
	comp=Z,22nm,1.0s								
SRU	**San Rafael Swe**	**94.22**	**50**	P	**P**	**12 34 01.9**	**+0.8**		
TCUT	**Toone Canyon**	**94.28**	**48**	P	**P**	**12 34 02.1**	**+0.7**		
MCMT	**McKenzie Canyo**	**94.63**	**44**	P	**P**	**12 34 03.9**	**+1.0**		
MSO	**Missoula**	**94.66**	**42**	P	**P**	**12 34 03.1**	**+0.3**		
KOLN	**Koldanda**	**94.67**	**298**	*eP*	**P**	**12 34 02.5**	**-0.9**		
	comp=Z,42nm,1.2s								
DANN	**Dangsing**	**94.71**	**298**	*eP*	**P**	**12 34 02.6**	**-1.1**		
DLMT	**Dillon**	**94.99**	**44**	P	**P**	**12 34 05.3**	**+1.0**		
DLMT				IAmb	IAmb	12 34 06.4			
	comp=Z,32nm,1.2s								
PV10	**Paradox Valley**	**95.06**	**51**	P	**P**	**12 34 06.5**	**+1.5**		
PV10				IAmb	IAmb	12 34 08.3			
	comp=Z,22nm,0.8s								
PV14	**Lion Creek, Pa**	**95.07**	**51**	P	**P**	**12 34 06.0**	**+0.9**		
PV14				IAmb	IAmb	12 34 09.0			
	comp=Z,20nm,0.9s								
AHID	**Auburn Hatcher**	**95.08**	**47**	P	**P**	**12 34 05.9**	**+1.0**		
MVCO	**Mesa Verde**	**95.08**	**53**	P	**P**	**12 34 05.9**	**+0.8**		
	baz=251								
MVCO	**Mesa Verde**	**95.08**	**53**	P	**P**	**12 34 04.0**	**-1.1**		
PV19	**Morning Glory**	**95.08**	**51**	P	**P**	**12 34 06.7**	**+1.6**		
PV17	**East Wray Mesa**	**95.09**	**51**	P	**P**	**12 34 05.4**	**+0.3**		
PV20	**West Nyswonger**	**95.10**	**51**	P	**P**	**12 34 05.8**	**+0.7**		
PV20				IAmb	IAmb	12 34 09.6			
	comp=Z,30nm,1.1s								
PV23	**Carpenter Ridg**	**95.11**	**51**	P	**P**	**12 34 05.8**	**+0.6**		
PV23				IAmb	IAmb	12 34 07.4			
	comp=Z,32nm,1.1s								
PV18	**Skein Mesa, Pa**	**95.11**	**52**	P	**P**	**12 34 05.5**	**+0.3**		
PV16	**Nyswonger Mesa**	**95.13**	**51**	P	**P**	**12 34 06.0**	**+0.7**		
PV11	**David Mesa, Pa**	**95.16**	**51**	P	**P**	**12 34 05.7**	**+0.3**		
PV03	**Paradox Valley**	**95.16**	**52**	P	**P**	**12 34 05.7**	**+0.3**		
PV04	**Paradox Valley**	**95.16**	**51**	P	**P**	**12 34 06.4**	**+1.0**		
PV04				IAmb	IAmb	12 34 09.4			
	comp=Z,16nm,0.7s								
PV12	**Saucer Basin,**	**95.22**	**51**	P	**P**	**12 34 06.2**	**+0.5**		
PV12				IAmb	IAmb	12 34 07.8			
	comp=Z,25nm,1.1s								
PV02	**Paradox Valley**	**95.23**	**52**	P	**P**	**12 34 06.0**	**+0.3**		
LRM	**Limekiln Ridge**	**95.25**	**43**	P	**P**	**12 34 06.3**	**+0.6**		
LENM	**Lemitar**	**95.27**	**56**	P	**P**	**12 34 06.5**	**+0.5**		
Y22D	**IRIS PASSCAL I**	**95.28**	**56**	P	**P**	**12 34 07.0**	**+1.0**		
	baz=251								
PYUN	**Piuthan**	**95.28**	**298**	*eP*	**P**	**12 34 05.3**	**-0.9**		
	comp=Z,36nm,1.0s								
PV22	**Blue Mesa, Par**	**95.30**	**51**	P	**P**	**12 34 07.3**	**+1.2**		
PV22				IAmb	IAmb	12 34 08.1			
	comp=Z,35nm,1.3s								
PV01	**Paradox Valley**	**95.33**	**52**	P	**P**	**12 34 06.9**	**+0.7**		
PV07	**Paradox Valley**	**95.37**	**51**	P	**P**	**12 34 06.7**	**+0.3**		
PV07				IAmb	IAmb	12 34 08.4			
	comp=Z,36nm,1.5s								
ZAIG	**Zacatecas**	**95.42**	**68**	P	**P**	**12 34 08.6**	**+1.6**		
ZAIG				IAmb	IAmb	12 34 10.2			
	comp=Z,16nm,0.8s								
TPAW	**Teton Pass**	**95.43**	**46**	P	**P**	**12 34 07.5**	**+0.9**		
REDW	**Red Top Meadow**	**95.45**	**46**	P	**P**	**12 34 07.4**	**+0.8**		
REDW				IAmb	IAmb	12 34 08.7			
	comp=Z,31nm,1.1s								
PV15	**Paradox Valley**	**95.46**	**52**	P	**P**	**12 34 07.4**	**+0.5**		
PV15				IAmb	IAmb	12 34 08.8			
	comp=Z,31nm,1.4s								
WALA	**Waterton Lakes**	**95.51**	**40**	P	**P**	**12 34 06.4**	**-0.2**		
BNM	**Barren Site**	**95.53**	**56**	P	**P**	**12 34 08.0**	**+0.8**		
SNOW	**Snow King Moun**	**95.55**	**46**	P	**P**	**12 34 08.0**	**+0.9**		
SNOW				IAmb	IAmb	12 34 09.2			
	comp=Z,31nm,1.4s								
QLMT	**Earthquake Lak**	**95.57**	**45**	P	**P**	**12 34 08.8**	**+1.7**		
IMW	**Indian Meadow**	**95.58**	**46**	P	**P**	**12 34 08.3**	**+1.0**		
IMW				IAmb	IAmb	12 34 09.4			
	comp=Z,19nm,0.9s								
YHB	**Horse Butte**	**95.70**	**45**	P	**P**	**12 34 08.9**	**+1.2**		
BOZ	**Bozeman (W)**	**95.71**	**44**	P	**P**	**12 34 08.4**	**+0.8**		
BOZ				pmax	pmax				
	comp=Z,24nm,1.2s								
BOZ	**Bozeman (W)**	**95.71**	**44**	P	**P**	**12 34 08.5**	**+0.8**		
	baz=250,SNR=21								
BOZ	**Bozeman (W)**	**95.71**	**44**	P	**P**	**12 34 08.3**	**+0.8**		
BOZ				IAmb	IAmb	12 34 09.7			
	comp=Z,24nm,1.1s								
YHL	**Hebgen Lake**	**95.74**	**45**	P	**P**	**12 34 09.4**	**+1.4**		
MNTX	**Cornudas Mount**	**95.76**	**59**	P	**P**	**12 34 09.0**	**+0.9**		
	baz=252								
MNTX	**Cornudas Mount**	**95.76**	**59**	P	**P**	**12 34 08.6**	**+0.6**		
FLWY	**Flagg Ranch**	**95.80**	**46**	P	**P**	**12 34 08.9**	**+0.6**		
YMR	**Madison River**	**95.83**	**45**	P	**P**	**12 34 09.1**	**+0.8**		
INK	**Inuvik**	**95.85**	**18**	P	**P**	**12 34 07.4**	**-0.1**		
	comp=Z,30nm,0.9s,baz=232,slow=3.9,SNR=89								
INK				PKKPbc	**PKKPbc**	**12 50 55.0**	**-3.8**		
	comp=Z,0.5nm,0.4s,baz=87,slow=2.9,SNR=8.4								
INK	**Inuvik**	**95.85**	**18**	P	**P**	**12 34 07.4**	**-0.1**		
INK				pmax	pmax				
	comp=Z,64nm,1.2s								
INK	**Inuvik**	**95.85**	**18**	P	**P**	**12 34 07.4**	**-0.1**		
INK				IAmb	IAmb	12 34 08.6			
	comp=Z,64nm,1.1s								
ANMO	**Albuquerque**	**95.92**	**55**	*ceP*	**P**	**12 34 09.6**	**+0.7**		
ANMO				pmax	pmax				
	comp=Z,14nm,1.3s								
ANMO	**Albuquerque**	**95.92**	**55**	P	**P**	**12 34 09.4**	**+0.5**		
	baz=252								
ANMO	**Albuquerque**	**95.92**	**55**	P	**P**	**12 34 09.6**	**+0.7**		
ANMO				IAmb	IAmb	12 34 10.8			
	comp=Z,32nm,1.5s								
YHH	**Holmes Hill**	**95.94**	**45**	P	**P**	**12 34 09.6**	**+0.7**		
HRY	**Holter Researc**	**95.97**	**43**	P	**P**	**12 34 09.4**	**+0.6**		
H17A	**Grant Village**	**95.99**	**45**	P	**P**	**12 34 11.0**	**+1.8**		
	baz=250,SNR=7.9								
H17A	**Grant Village**	**95.99**	**45**	P	**P**	**12 34 10.9**	**+1.8**		
YNR	**Norris Junctio**	**96.03**	**45**	P	**P**	**12 34 11.0**	**+1.7**		
BW06	**Boulder Array**	**96.14**	**47**	P	**P**	**12 34 09.9**	**+0.1**		
	baz=251,SNR=18								
BW06	**Boulder Array**	**96.14**	**47**	P	**P**	**12 34 09.5**	**-0.3**		
PD31	**Pinedale Array**	**96.14**	**47**	P	**P**	**12 34 09.9**	**0.0**		
PDAR	**Pinedale Array**	**96.14**	**47**	P	**P**	**12 34 09.7**	**-0.1**		
	comp=Z,5.2nm,1.0s,baz=222,slow=2.0,SNR=25								
PDAR				PP	**PP**	**12 38 00.8**	**-5.3**		
	comp=Z,2.9nm,0.9s,baz=237,slow=7.1,SNR=6.7								
PDAR	**Pinedale Array**	**96.14**	**47**	P	**P**	**12 34 09.4**	**-0.4**		
PDAR					**PP**	**12 38 00.7**	**-5.4**		
O20A	**White River Ci**	**96.22**	**50**	P	**P**	**12 34 11.0**	**+0.8**		
	baz=251,SNR=13								
O20A	**White River Ci**	**96.22**	**50**	P	**P**	**12 34 10.9**	**+0.8**		
O20A				IAmb	IAmb	12 34 14.5			
	comp=Z,13nm,0.8s								
YMP	**Mirror Lake Pl**	**96.39**	**45**	P	**P**	**12 34 12.8**	**+1.8**		
TX31	**Lajitas Ar. Si**	**96.45**	**61**	P	**P**	**12 34 12.7**	**+1.3**		
TX32	**Lajitas Array**	**96.45**	**61**	P	**P**	**12 34 12.8**	**+1.4**		
TX32				IAmb	IAmb	12 34 13.9			
	comp=Z,33nm,1.1s								
TXAR	**Lajitas Array**	**96.45**	**61**	P	**P**	**12 34 12.7**	**+1.4**		
	comp=Z,15nm,0.8s,baz=227,slow=5.0,SNR=69								
TXAR	**Lajitas Array**	**96.45**	**61**	P	**P**	**12 34 12.5**	**+1.2**		
S22A	**4UR Ranch, Cre**	**96.51**	**53**	P	**P**	**12 34 12.6**	**+1.0**		
	baz=252,SNR=12								
S22A	**4UR Ranch, Cre**	**96.51**	**53**	P	**P**	**12 34 12.6**	**+1.0**		
YNE	**Yellowstone No**	**96.58**	**45**	P	**P**	**12 34 12.3**	**+0.5**		
WMQ	**Urumqi**	**96.65**	**314**	*eP*	**P**	**12 34 12.3**	**+0.4**		
WMQ				pmax	pmax				
	comp=Z,26nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,130nm,3.6s								
WMQ				LR	LR				
	comp=Z,1μm,29.0s								
WMQ				LR	LR				
	comp=Z,2μm,29.2s								
WMQ				LR	LR				
	comp=Z,150nm,26.7s								
GDL2	**Guadalupe Moun**	**96.74**	**58**	P	**P**	**12 34 13.6**	**+1.0**		
SMCO	**Snowmass**	**96.84**	**51**	P	**P**	**12 34 14.0**	**+0.7**		
GCMT	**Greycliff**	**97.07**	**44**	P	Pdif	12 34 14.7	+0.8		
RLMT	**Red Lodge**	**97.11**	**45**	P	Pdif	12 34 15.0	+0.9		
	baz=251,SNR=8.1								
RLMT	**Red Lodge**	**97.11**	**45**	P	Pdif	12 34 14.5	+0.3		
RWWY	**Rawlins**	**97.45**	**49**	P	Pdif	12 34 16.0	+0.2		
RWWY				IAmb	IAmb	12 34 17.3			
	comp=Z,25nm,1.1s								
SDCO	**Great Sand Dun**	**97.51**	**53**	P	**P**	**12 34 15.5**	**-0.6**		
	baz=253,SNR=7.9								
SDCO	**Great Sand Dun**	**97.51**	**53**	P	Pdif	12 34 16.2	0.0		
EGMT	**Eagleton**	**97.74**	**42**	P	Pdif	12 34 17.0	+0.3		
	baz=251,SNR=5.8								
EGMT	**Eagleton**	**97.74**	**42**	P	**P**	**12 34 16.6**	**-0.1**		
ISCO	**Idaho Springs**	**98.04**	**51**	P	Pdif	12 34 19.7	+1.2		
ISCO				pmax	pmax				
	comp=Z,4.0nm,1.0s								
ISCO	**Idaho Springs**	**98.04**	**51**	P	Pdif	12 34 18.6	0.0		
	baz=253								
ISCO	**Idaho Springs**	**98.04**	**51**	P	Pdif	12 34 19.7	+1.2		
N23A	**Red Feather La**	**98.12**	**50**	P	Pdif	12 34 19.7	+0.9		
	baz=253,SNR=13								
N23A	**Red Feather La**	**98.12**	**50**	P	**P**	**12 34 18.8**	**0.0**		
N23A				IAmb	IAmb	12 34 24.5			
	comp=Z,15nm,0.8s								
Q24A	**Divide**	**98.13**	**52**	P	Pdif	12 34 19.7	+0.7		
	baz=253								
Q24A	**Divide**	**98.13**	**52**	P	Pdif	12 34 19.8	+0.8		
T25A	**Trinidad**	**98.16**	**54**	P	Pdif	12 34 19.1	+0.1		
	baz=253								
T25A	**Trinidad**	**98.16**	**54**	P	Pdif	12 34 19.2	+0.2		
K22A	**Casper**	**98.23**	**48**	P	Pdif	12 34 19.5	+0.4		
	baz=253								
K22A	**Casper**	**98.23**	**48**	P	Pdif	12 34 19.2	+0.1		
MSTX	**Muleshoe**	**98.53**	**57**	P	Pdif	12 34 20.7	+0.1		
	baz=254								
MSTX	**Muleshoe**	**98.53**	**57**		Pdif	12 34 20.9	+0.3		
MSTX				IAmb	IAmb	12 34 22.0			
	comp=Z,13nm,0.8s								
PLCA	**Paso Flores**	**99.12**	**138**	P	**Pdif**	**12 34 26.0**	**+2.8**		
	comp=Z,1.6nm,0.9s,baz=260,slow=6.1,SNR=2.8								
C36M	**Paulatuk**	**99.31**	**19**	P	**Pdif**	**12 34 23.0**	**0.0**		
	baz=242								
LAO	**LASA Array**	**99.62**	**44**	P	**Pdif**	**12 34 26.4**	**+1.3**		
	baz=253								
AMTX	**Amarillo**	**99.65**	**56**	P	**Pdif**	**12 34 25.8**	**+0.3**		
	baz=254								
ZSN	**Zaisan**	**99.66**	**317**	*eP*	**Pdif**	**12 34 24.7**	**-0.5**		
	baz=317								
ZSN	**Zaisan**	**99.66**	**317**	*eP*	**Pdif**	**12 34 24.6**	**-0.5**		
JCT	**Junction City**	**100.00**	**61**	P	**Pdif**	**12 34 28.0**	**+0.9**		
	baz=254								
YKA	**Yellowknife Ar**	**100.03**	**27**	P	**Pdif**	**12 34 27.2**	**+0.8**		
	comp=Z,20nm,0.7s,baz=253,slow=4.0,SNR=78								
YKA				PP	**PP**	**12 38 36.6**	**+1.8**		
	comp=Z,3.3nm,0.9s,baz=250,slow=7.4,SNR=4.5								
KSCO	**Kaye Shedlock'**	**100.03**	**52**	P	**Pdif**	**12 34 28.0**	**+0.8**		
	baz=254								
RSSD	**Black Hills**	**100.39**	**47**	P	**Pdif**	**12 34 29.5**	**+0.7**		
RSSD	**Black Hills**	**100.39**	**47**	P	**Pdif**	**12 34 29.4**	**+0.7**		
	baz=254								
ABTX	**Abilene, Hawle**	**100.69**	**59**	P	**Pdif**	**12 34 30.6**	**+0.5**		
	baz=255								
MKAR	**Makanchi Array**	**101.17**	**316**	P	**Pdif**	**12 34 32.8**	**+0.8**		
	comp=Z,6.0nm,0.5s,baz=95,slow=6.1,SNR=37								
MKAR				PP	**PP**	**12 38 41.0**	**-2.9**		
	comp=Z,1.5nm,0.9s,baz=97,slow=7.9,SNR=6.1								
MKAR				PKiKP	**PKiKP**	**12 38 55.2**	**-0.3**		
	comp=Z,0.4nm,0.4s,baz=199,slow=1.9,SNR=5.9								
MKAR				PKKPbc	**PKKPbc**	**12 50 40.3**	**-2.9**		
	comp=Z,0.4nm,0.5s,baz=276,slow=1.9,SNR=7.5								
MKAR	**Makanchi Array**	**101.17**	**316**	*i* P	**Pdif**	**12 34 32.5**	**+0.6**		
MKAR				pmax	pmax				
	comp=Z,6.0nm,0.5s								
MKAR	**Makanchi Array**	**101.17**	**316**	Pdif	**Pdif**	**12 34 32.0**	**+0.1**		
MKAR				PP	**PP**	**12 38 40.4**	**-3.5**		
ZALV	**Zalesovo Beam**	**101.49**	**323**	P	**Pdif**	**12 34 32.8**	**-0.3**		
	comp=Z,2.1nm,0.7s,baz=108,slow=4.8,SNR=12								
ZALV				pP	pP	12 35 27.3	+0.7		
	comp=Z,2.2nm,0.8s,baz=110,slow=6.6,SNR=2.7								
ZALV				PP	**PP**	**12 38 45.8**	**-0.3**		
	comp=Z,0.6nm,0.2s,baz=95,slow=4.8,SNR=3.8								
ZALV	**Zalesovo Beam**	**101.49**	**323**		**Pdif**	**12 34 32.5**	**-0.5**		
WMOK	**Wichita Mounta**	**101.92**	**57**	P	**Pdif**	**12 34 35.7**	**+0.2**		
	baz=256								
CBKS	**Cedar Bluff**	**102.16**	**53**	P	**Pdif**	**12 34 36.4**	**-0.2**		
	baz=256								
SHLS	**Shalkode**	**102.21**	**312**	*eP*	**Pdif**	**12 34 34.5**	**-2.3**		
	baz=312								
SHLS	**Shalkode**	**102.21**	**312**	*eP*	**Pdif**	**12 34 34.5**	**-2.3**		
TDK	**Taldyqorghan**	**103.37**	**313**	*e*PKiKP	**PKiKP**	**12 38 58.4**	**-1.2**		
	baz=313								
NRIK	**Noril'sk**	**104.22**	**339**	Pdiff	**Pdif**	**12 34 45.4**	**+0.5**		
	comp=Z,12nm,1.0s,baz=104,slow=4.5,SNR=12								
NRIK				PP	**PKiKP**	**12 38 58.0**	**-2.4**		
	comp=Z,3.6nm,1.0s,baz=120,slow=8.1,SNR=2.7								
NRIK				PKKP	**PKKPdf**	**12 50 42.3**	**-1.5**		
	comp=Z,1.4nm,0.4s,baz=86,slow=1.3,SNR=3.8								
KURK	**Kurchatov**	**104.43**	**319**		PKKPbc	12 50 32.3	-1.2		
KURBB	**Kurchatov Arra**	**104.47**	**319**	PKKPbc	PKKPbc	12 50 32.3	-1.1		
	comp=Z,1.0nm,0.8s,baz=290,slow=3.8,SNR=8.7								
BTLS	**Baital**	**106.41**	**313**	*e*PKiKP	**PKiKP**	**12 39 04.0**	**-1.2**		
	baz=313								
BTLS				*e*PP	**PP**	**12 39 20.8**	**-2.0**		
	baz=313								
DZA	**Taraz**	**108.00**	**310**	*e*PP	**PP**	**12 39 32.3**	**-2.3**		
	baz=310								
BRZS	**Berezniki**	**108.07**	**318**	*e*PKiKP	**PKiKP**	**12 39 07.1**	**-1.1**		
	baz=318								
BRZS				*e*PP	**PP**	**12 39 33.0**	**-1.8**		
	baz=318								
IUG	**Iuzhnay**	**108.84**	**309**	*e*PP	**PP**	**12 39 39.1**	**-1.7**		
	baz=309								
RES	**Resolute Bay**	**109.26**	**16**	Pdiff	**Pdif**	**12 35 07.7**	**+0.5**		
	comp=Z,4.8nm,1.2s,baz=255,slow=5.7,SNR=3.1								
RES				PKiKP	**PKiKP**	**12 39 08.8**	**-0.8**		
	comp=Z,1.5nm,0.9s,baz=54,slow=3.3,SNR=3.5								
LRAL	**Lakeview Retre**	**111.19**	**61**	P	**PKiKP**	**12 39 14.1**	**-0.5**		
	baz=261								
OPO	**Ambohidratompo**	**112.16**	**240**	PKKPbc	PKKPbc	12 50 09.2	+0.8		
	comp=Z,3.6nm,0.8s,baz=116,slow=5.0,SNR=3.9								
P49A	**Miami Univ. Ec**	**113.79**	**54**	P	**PKiKP**	**12 39 18.9**	**-0.4**		
	baz=265								
LPAZ	**La Paz**	**113.85**	**118**	PKiKP	**PKiKP**	**12 39 20.7**	**-0.2**		
	comp=Z,1.1nm,0.6s,baz=46,slow=4.5,SNR=5.0								
GOGA	**Godfrey**	**114.17**	**61**	P	PKPdf	12 39 19.5	-0.7		
	baz=263								
ACSO	**Alum Creek Sta**	**115.17**	**54**	P	**PKPdf**	**12 39 21.0**	**-1.0**		
	baz=267								
X54A	**Belton**	**115.20**	**60**	P	**PKPdf**	**12 39 21.4**	**-0.8**		
	baz=264								
T53A	**Wise**	**115.29**	**57**	P	**PKPdf**	**12 39 22.0**	**-0.4**		
	baz=265								
X55A	**Gracelyn & Ava**	**115.80**	**60**	P	**PKPdf**	**12 39 22.5**	**-0.8**		
	baz=265								
O52A	**Adamsville**	**116.04**	**54**	P	**PKPdf**	**12 39 22.6**	**-1.0**		
	baz=267								
T54A	**Tazewell**	**116.06**	**57**	P	**PKPdf**	**12 39 23.0**	**-0.8**		
	baz=266								
KMSC	**Kings Mountain**	**116.10**	**59**	P	**PKPdf**	**12 39 23.4**	**-0.5**		
	baz=265								
V55A	**Taylorsville**	**116.26**	**59**	P	**PKPdf**	**12 39 23.2**	**-1.0**		
	baz=266								
X56A	**White Oak**	**116.30**	**60**	P	**PKPdf**	**12 39 23.1**	**-1.1**		
	baz=265								
ABKAR	**Akbulak array**	**116.30**	**316**	PKPdf	**PKPdf**	**12 39 23.5**	**-0.3**		
ABKAR	**Akbulak array**	**116.30**	**316**	PKPdf	**PKPdf**	**12 39 22.4**	**-1.4**		
P53A	**Whipple**	**116.35**	**55**	P	**PKPdf**	**12 39 23.2**	**-1.0**		
	baz=267								
Z57A	**Bowman**	**116.46**	**61**	P	**PKPdf**	**12 39 24.0**	**-0.6**		
	baz=264								
ARU	**Arti**	**116.60**	**324**	*c i* PKIKP	**PKPdf**	**12 39 23.9**	**-0.3**		
ARU				pmax	pmax				
	comp=Z,19nm,1.7s								
**ARU

	baz=276								
M59A	Waymart	120.91	52		P		PKPdf	12 39 31.8	-1.2
	baz=272								
CHGQ	Chibougamau	120.91	42		P		PKPdf	12 39 30.7	-2.0
	baz=278								
J58A	Remsen	120.93	50		P		PKPdf	12 39 31.7	-1.2
	baz=273								
O60A	Telford	120.97	54		P		PKPdf	12 39 30.9	-2.2
	baz=272								
D56A	ZEC Mazanza, M	121.00	46		P		PKPdf	12 39 31.6	-1.4
	baz=276								
KIRV	Kirov	121.02	328	c	iPKIKP		PKiKP	12 39 32.9	+0.2
G57A	Newington	121.02	48		P		PKPdf	12 39 32.0	-1.0
	baz=275								
R61A	Willards	121.05	56		P		PKPdf	12 39 32.1	-1.2
	baz=270								
I58A	Old Forge	121.13	50		P		PKPdf	12 39 32.2	-1.1
	baz=274								
L59A	Walton	121.17	51		P		PKPdf	12 39 32.4	-1.1
	baz=273								
N60A	Cedar Hill Far	121.18	53		P		PKPdf	12 39 32.3	-1.2
	baz=272								
PTGB	Pitanga	121.19	135		eP		PKiKP	12 39 34.7	+0.4
K59A	Cooperstown	121.28	51		P		PKPdf	12 39 32.4	-1.3
	baz=273								
SDV	Santo Domingo	121.32	91		PKPdf		PKPdf	12 39 34.1	-0.7
LONY	Lake Ozonia	121.35	49		P		PKPdf	12 39 32.3	-1.4
	baz=275								
E57A	Chemin Saint G	121.48	46		P		PKPdf	12 39 32.5	-1.4
	baz=276								
J59A	Piesco	121.49	50		P		PKPdf	12 39 32.7	-1.4
	baz=274								
DAG	Danmarks Havn	121.55	2	i	PKIKP		PKPdf	12 39 31.6	-1.6
DAG					pmax		pmax		
	comp=Z,6.0nm,0.6s								
DAG	Danmarks Havn	121.55	2	i	P		PKPdf	12 39 31.6	-1.6
	comp=Z,5.5nm,0.6s								
DAG	Danmarks Havn	121.55	2	i	P		PKPdf	12 39 31.6	-1.6
DAG					IAmb		IAmb	12 39 32.3	
	comp=Z,5.5nm,0.6s								
BOSA	Boshof	121.62	217		PKP		PKiKP	12 39 35.5	+0.3
	comp=Z,4.8nm,0.4s,baz=156,slow=1.4,SNR=27								
BOSA					pPKP		pPKPdf	12 40 30.6	-0.6
	comp=Z,3.7nm,0.8s,baz=9.9,slow=3.2,SNR=2.5								
BOSA					PKKPbc		PKKPbc	12 49 34.7	-0.9
	comp=Z,9.7nm,0.9s,baz=305,slow=4.7,SNR=11								
BOSA					SKKP		SKKPdf	12 53 14.3	-9.2
	comp=Z,4.1nm,0.9s,baz=352,slow=4.0,SNR=3.1								
H58A	Gabriels	121.65	49		P		PKPdf	12 39 33.0	-1.4
	baz=275								
G58A	Ormstown	121.67	48		P		PKPdf	12 39 33.1	-1.1
	baz=275								
PTLB	Pontes e Lacer	121.67	122		eP		PKiKP	12 39 36.8	+1.4
L60A	Shokan	121.79	52		P		PKPdf	12 39 33.1	-1.5
	baz=273								
I59A	Olmsteadville	121.92	50		P		PKPdf	12 39 33.5	-1.4
	baz=275								
PAL	Palisades	122.08	53		P		PKPdf	12 39 34.0	-1.2
	baz=273								
E58A	La Victoria	122.09	46		P		PKPdf	12 39 34.1	-0.9
	baz=277								
TRCB	Terra Rica	122.09	133		eP		PKiKP	12 39 37.2	+1.1
VILB	Vilhena	122.15	119		eP		PKiKP	12 39 37.4	+1.1
M61A	Granite Spring	122.17	52		P		PKPdf	12 39 34.3	-1.1
	baz=273								
D58A	Chemin du LacG	122.27	46		P		PKPdf	12 39 34.1	-1.3
	baz=278								
LATQ	La Tuque	122.30	45		P		PKPdf	12 39 34.3	-1.1
	baz=278								
I60A	Shoreham	122.34	49		P		PKPdf	12 39 35.1	-0.5
	baz=275								
K61A	Williamstown	122.45	51		P		PKPdf	12 39 35.3	-0.6
	baz=274								
F59A	Saint Guilaume	122.49	47		P		PKPdf	12 39 34.3	-1.5
	baz=277								
H60A	Morristown	122.69	49		P		PKPdf	12 39 35.1	-1.2
	baz=276								
TIJ01	Guaruva-PR	122.75	138		eP		PKiKP	12 39 38.8	+1.4
M62A	Hamden	122.81	52		P		PKPdf	12 39 35.3	-1.3
	baz=274								
L61B	Northampton	122.90	51		P		PKPdf	12 39 35.8	-0.9
	baz=275								
J61A	Chester	122.92	50		P		PKPdf	12 39 35.5	-1.2
	baz=275								
SDDR	Presa de Saban	122.99	79		PKPdf		PKPdf	12 39 36.8	-0.8
F60A	Warwick	123.05	47		P		PKPdf	12 39 35.9	-1.1
	baz=278								
I61A	Oroboro, Fairl	123.11	49		P		PKPdf	12 39 36.2	-0.9
	baz=276								
K62A	Royalston	123.21	51		P		PKPdf	12 39 36.9	-0.5
	baz=275								
H61A	Lyndonville	123.24	48		P		PKPdf	12 39 36.9	-0.5
	baz=277								
E60A	Ste Agathe de	123.34	46		P		PKPdf	12 39 36.5	-0.9
	baz=278								
M63A	Gales Ferry	123.45	52		P		PKPdf	12 39 36.9	-0.9
	baz=274								
J62A	Henniker	123.47	50		P		PKPdf	12 39 36.7	-1.1
	baz=276								
D60A	Saint Jean D'O	123.62	46		P		PKPdf	12 39 36.8	-1.1
	baz=279								
SUMG	Summit	123.63	10		ePKIKP		PKPdf	12 39 37.2	-0.6
SUMG					pmax		pmax		
	comp=Z,110nm,1.4s								
SUMG	Summit	123.63	10				PKPdf	12 39 36.9	-0.9
SUMG	Summit	123.63	10	i	P		PKPdf	12 39 37.2	-0.6
	comp=Z,106nm,1.4s								
SUMG	Summit	123.63	10		eP		PKPdf	12 39 37.2	-0.6
SUMG					IAmb		IAmb	12 39 39.0	
	comp=Z,106nm,1.4s								
F61A	St Evariste	123.71	47		P		PKPdf	12 39 37.2	-1.0
	baz=278								
H62A	Milan	123.79	48		P		PKPdf	12 39 37.8	-0.6
	baz=277								
TMCR	Tamitsa	123.85	337		ePKIKP		PKPdf	12 39 36.9	-0.9
TMCR					pmax		pmax		
	comp=Z,29nm,1.2s								
HAMF	Hammerfest	123.91	347		ePKPdf		PKPdf	12 39 37.5	-0.3
DBG	Daneborg	123.93	3	i	P		PKPdf	12 39 36.9	-0.9
DBG					IAmb		IAmb	12 39 38.1	
	comp=Z,10nm,0.9s								
E61A	Lac Etchemin	123.99	46		P		PKPdf	12 39 38.2	-0.5
	baz=279								
G62A	West of Eustis	124.14	48		P		PKPdf	12 39 38.3	-0.8
	baz=278								
I63A	Otisfield	124.26	49		P		PKPdf	12 39 39.3	0.0
	baz=277								
ARD9	ARCESS Array S	124.33	345				PKPdf	12 39 38.6	-0.1
SCHQ	Schefferville	124.33	36		PKP		PKPdf	12 39 37.9	-1.2
	comp=Z,6.6nm,0.7s,baz=293,slow=2.0,SNR=7.0								
SCHQ					PP		PP	12 41 25.1	-2.6
	comp=Z,5.0nm,0.8s,baz=289,slow=6.7,SNR=4.8								
SCHQ	Schefferville	124.33	36				PKPdf	12 39 37.3	-1.8
ARCES	ARCESS Array B	124.33	345		PKP		PKPdf	12 39 38.5	-0.3
	comp=Z,11nm,0.4s,baz=77,slow=2.0,SNR=181								
ARCES					PKKPab		PKKPab	12 49 22.6	+0.6
	comp=Z,6.4nm,1.0s,baz=236,slow=4.1,SNR=12								
E62A	Clayton Lake	124.62	46		P		PKPdf	12 39 39.4	-0.5
	baz=280								
G63A	Kingsbury	124.80	48		P		PKPdf	12 39 38.9	-1.4
	baz=279								
KLMR	Klimovskoe	124.85	333		ePKIKP		PKPdf	12 39 37.7	-2.1
KLMR					e			12 40 44.8	
KLMR					pmax		pmax		
	comp=Z,32nm,1.2s								
KLMR	Klimovskoe	124.85	333		ePKPdf		PKPdf	12 39 37.8	-2.1
KLMR					AMP			12 39 40.2	
	comp=Z,32nm,1.2s								
KLMR					eSKP			12 40 44.9	
D62A	Allapoint, All	124.86	45		P		PKPdf	12 39 38.9	-1.4
	baz=281								
D62A	Allapoint, All	124.86	45				PKPdf	12 39 39.4	-1.0
M66A	Nantucket	124.90	52		P		PKPdf	12 39 39.2	-1.4
	baz=276								
I64A	Boothbay	124.95	49		P		PKPdf	12 39 39.7	-0.9
	baz=278								
PKME	Peaks-Kenny Pk	125.00	47		P		PKPdf	12 39 39.9	-0.8
	baz=279								
F63A	Nahmakanta, Br	125.06	47		P		PKPdf	12 39 40.1	-0.7
	baz=280								
H64A	Troy	125.15	48		P		PKPdf	12 39 40.1	-0.9
	baz=279								
SFJD	Kangerlussuaq	125.20	18		PKP		PKPdf	12 39 39.9	-0.5
	comp=Z,7.2nm,0.8s,baz=225,slow=2.9,SNR=2.0								
KTK1	Kautokeino	125.26	346		ePKPdf		PKPdf	12 39 39.8	-0.6
G64A	Maxfield	125.38	47		P		PKPdf	12 39 40.9	-0.4
	baz=280								
E63A	Oxbow	125.40	46		P		PKPdf	12 39 40.1	-1.3
	baz=281								
MAK	Makhachkala	125.44	310		eP		Pdif	12 36 18.2	-1.7
MAK					i			12 39 40.9	
MAK					e			12 41 33.0	
MAK					ePPP		PPP	12 44 19.2	
MAK					e			12 46 24.0	
MAK					ePS		PS	12 51 38.3	-1.4
MAK					eSS		SS	12 58 14.0	-2.7
MAK					eSSS		SSS	13 02 55.2	
MAK					pmax		pmax		
	comp=Z,619nm,2.0s								
D63A	Stockholm	125.50	45		P		PKPdf	12 39 40.7	-0.9
	baz=281								
F64A	Sherman	125.55	46		P		PKPdf	12 39 40.5	-1.2
	baz=280								
F64A	Sherman	125.55	46				PKPdf	12 39 41.0	-0.7
PQI	Presque Isle	125.63	45				PKPdf	12 39 40.9	-0.9
TRO	Tromso	125.71	348		ePKPdf		PKPdf	12 39 40.5	-0.8
E64A	Bridgewater	125.81	46		P		PKPdf	12 39 40.8	-1.3
	baz=281								
H65A	Eastbrook	125.82	48		P		PKPdf	12 39 41.0	-1.2
	baz=280								
G65A	Princeton	126.22	47		P		PKPdf	12 39 42.1	-0.9
	baz=280								
G65A	Princeton	126.22	47				PKPdf	12 39 42.6	-0.4
ICESG	Greenland Ices	126.34	12		eP		PKPdf	12 39 42.1	-0.9
CRPR	Cabo Rojo, PR	126.73	81				PKPdf	12 39 43.6	-1.1
MPR	Mayaguez	126.73	81				PKPdf	12 39 44.1	-0.6
CLDB	Colider	126.89	120		eP		PKPdf	12 39 44.5	-0.7
AOPR	Arecibo Observ	127.12	81				PKPdf	12 39 44.4	-1.1
OBIP	Obispado Ponce	127.21	81		PKPdf		PKPdf	12 39 44.8	-0.8
ARAG	Araguaiana, MT	127.23	127		eP		PKiKP	12 39 46.2	-0.1
ESAR	Angra dos Reis	127.26	140		eP		PKiKP	12 39 47.7	+1.4
VRH	Novokhopyorsk	127.46	321		ePKIKP		PKPdf	12 39 44.7	-0.5
VRH					pmax		pmax		
	comp=Z,50nm,1.4s								
RAYN	Ar Rayn	127.46	286		PKIKP		PKPdf	12 39 45.8	-0.3
RAYN	Ar Rayn	127.46	286		PKPdf		PKPdf	12 39 45.8	-0.3
SJG	San Juan	127.64	81		PKIKP		PKPdf	12 39 45.9	-0.6
SJG	San Juan	127.64	81				PKPdf	12 39 45.9	-0.6
GCPR	Guaynabo City	127.74	81				PKPpre	12 39 33.5	
PDPR	Patillas Dam,	127.75	81				PKPdf	12 39 46.0	-0.7
GNI	Garni	127.87	307	c	iPKIKP		PKiKP	12 39 48.8	+1.6
GNI					pmax		pmax		
	comp=Z,17nm,1.3s								
STEI	Steigen	127.88	348		ePKPdf		PKPdf	12 39 45.5	+0.1
HUMP	Col San Antoni	127.93	81		PKPdf		PKPdf	12 39 46.8	-0.3
CBYP	Canovanas	127.95	81				PKPdf	12 39 47.2	+0.1
LMN	Caledonia Moun	127.98	46		PKPdf		PKPdf	12 39 45.7	-0.7
FAUS	Fauske	128.34	347		ePKPdf		PKPdf	12 39 44.3	-2.1
LPSR	Galich'ya Gora	128.60	323		ePKIKP		PKPdf	12 39 47.4	+0.1
LPSR					pmax		pmax		
	comp=Z,60nm,1.0s								
KBZ	Khabaz	128.63	312		PKP		PKiKP	12 39 50.2	+1.9
	comp=Z,4.3nm,1.0s,baz=56,slow=24,SNR=4.3								
KIV	Kislovodsk	128.73	312		ePKIKP		PKiKP	12 39 49.5	+0.8
KIV					pmax		pmax		
	comp=Z,31nm,1.0s								
OBN	Obninsk	128.84	327	i	PKIKP		PKPdf	12 39 46.8	-0.8
OBN				i				12 40 52.6	
OBN				i	SS		SS	12 58 51.6	-6.0
OBN					pmax		pmax		
	comp=Z,26nm,1.0s								
KMBO	Kilima Mbogo	128.90	253		PKP		PKiKP	12 39 52.4	+2.2
	comp=Z,1.0nm,0.3s,baz=355,slow=2.5,SNR=6.0								
KMBO					SKPab		SKPab	12 42 52.1	
	comp=Z,0.8nm,0.3s,baz=122,slow=13,SNR=4.7								
KMBO	Kilima Mbogo	128.90	253		PKIKP		PKiKP	12 39 51.9	+1.8
KMBO	Kilima Mbogo	128.90	253				PKiKP	12 39 51.9	+1.8
VSR	Storozhevoye	128.97	322		ePKIKP		PKPdf	12 39 47.7	-0.3
VSR					pmax		pmax		
	comp=Z,30nm,1.3s								
NPGB	Novo Progresso	129.27	116		eP		PKPdf	12 39 49.7	-0.1
KONS	Konsvik	129.54	348		ePKPdf		PKiKP	12 39 49.0	-0.4
MOR8	Moi Rana	129.55	347		ePKPdf		PKPdf	12 39 48.1	-0.6
FINES	FINESS Array B	129.88	338		PKhKP		PKPpre	12 39 37.0	
	comp=Z,1.1nm,0.6s,baz=86,slow=3.9,SNR=5.5								
FINES					PKP		PKiKP	12 39 50.2	0.0
	comp=Z,2.3nm,0.4s,baz=60,slow=1.8,SNR=14								
FINES					SKPab		SKPab	12 42 50.7	-0.5
	comp=Z,25nm,0.8s,baz=83,slow=6.1,SNR=25								
FINES	FINESS Array B	129.88	338	c	iPKIKP		PKPdf	12 39 49.7	+0.2
FINES					pmax		pmax		
	comp=Z,2.0nm,0.4s								
FINES	FINESS Array B	129.88	338				PKPdf	12 39 46.5	-2.9
SNDB	Serra Nova Dou	129.90	124		eP		PKiKP	12 39 52.0	+0.2
BDFB	Brasilia	130.08	130		PKP		PKPdf	12 39 51.4	-0.1
	comp=Z,17nm,1.1s,baz=56,slow=3.4,SNR=9.2								
BDFB					SKPab		SKPab	12 42 54.6	+0.9
	comp=Z,7.1nm,0.8s,baz=182,slow=1.8,SNR=7.2								
BDFB	Brasilia	130.08	130		PKIKP		PKPdf	12 39 51.8	+0.4
BDFB	Brasilia	130.08	130		PKPdf		PKPdf	12 39 51.8	+0.4
ITTB	Itaituba	130.26	113		eP		PKPdf	12 39 51.8	+0.2
NSS	Namsos	131.50	347		ePKPdf		PKPdf	12 39 52.6	+0.1
VSU	Vasula	131.58	335		eP		SKPbc	12 42 58.5	+0.9
FDF	Fort de France	131.74	87		PKIKP		PKPdf	12 39 54.9	+0.5
FDF	Fort de France	131.74	87		PKPdf		PKPdf	12 39 54.9	+0.5
MALT	Malatya	133.00	305		eP		PKiKP	12 39 57.5	0.0
IZAR	Zarasai	133.49	332		eP		SKPbc	12 43 05.5	+1.2
IDID	Didziasalis	133.53	331		eP		SKPbc	12 43 05.8	+1.3
ISAL	Salakas	133.65	332		eP		SKPbc	12 43 05.8	+0.9
DARE	Darende-Malaty	133.68	306		eP		PKPdf	12 39 57.9	+0.4
IIGN	Ignalina	133.74	332		eP		SKPbc	12 43 05.8	+0.6
NACGM	Naroch	133.75	331		e		PKPdf	12 39 57.0	0.0
SVSK	Karacayir	133.76	308		eP		PKiKP	12 39 58.2	-0.6
GAZ	Gaziantep	134.16	304		eP		PKPdf	12 39 58.8	+0.4
DOMB	Dombas	134.31	347		ePKPdf		PKiKP	12 39 59.2	-0.1
SARI	SarD1z-Kayseri	134.53	306		eP		PKiKP	12 40 00.8	+0.1
AKN	Aaknes	134.61	348		ePKPdf		PKPdf	12 39 58.5	+0.1
NB2	NORSAR Subarra	134.71	345		PKP		PKPdf	12 39 59.3	+0.6
	comp=Z,1.5nm,0.4s,baz=42,slow=3.0								
NOA	NORSAR Array B	134.71	345		PKP		PKiKP	12 39 59.6	-0.5
	comp=Z,2.0nm,0.5s,baz=63,slow=1.9,SNR=10								
NOA					SKPbc		SKPbc	12 43 07.8	-0.4
	comp=Z,4.0nm,1.1s,baz=16,slow=4.8,SNR=2.8								
HFS	Hagfors	134.84	343		PKhKP		PKPpre	12 39 50.2	
	comp=Z,1.1nm,0.4s,baz=106,slow=5.4,SNR=4.9								
HFS					PKP		PKPdf	12 39 59.4	+0.5
	comp=Z,2.1nm,0.4s,baz=119,slow=5.2,SNR=11								
AKASG	Malin Array Be	134.85	325		PKhKP		PKPpre	12 39 56.0	
	comp=Z,1.6nm,0.4s,baz=50,slow=2.6,SNR=8.2								
AKASG					PKP		PKPdf	12 39 59.0	-0.1
	comp=Z,2.2nm,0.5s,baz=75,slow=1.8,SNR=12								
AKASG					SKPbc		SKPbc	12 43 08.6	-0.3
	comp=Z,25nm,0.9s,baz=44,slow=4.0,SNR=19								
AKASG	Malin Array Be	134.85	325		PKPdf		PKPdf	12 39 58.8	-0.3
AKBB	Malin Array Si	134.85	325	c	iPKIKP		PKPdf	12 39 59.2	0.0
NC602	NORSAR Array S	134.89	345		ePKPdf		PKiKP	12 39 59.9	-0.6
MBAR	Mbarara	134.98	250	c	iPKIKP		PKiKP	12 40 04.0	+1.7
MBAR					pmax		pmax		
	comp=Z,4.0nm,1.3s								
CORM	Corum	135.45	309		iP		PKPdf	12 40 01.6	+0.8
CMRD	Camardi-Nigde	135.79	305		eP		PKiKP	12 40 02.7	-0.5
KARA	Karaisali	135.83	305		eP		PKPdf	12 39 59.3	-2.2
MMAI	Mount Meron Ar	136.27	299		PKP		PKiKP	12 40 04.1	-0.2
	comp=Z,2.5nm,0.3s,baz=94,slow=5.9,SNR=6.0								
MMAI					SKPbc		SKPbc	12 43 15.3	+1.3
	comp=Z,17nm,0.9s,baz=65,slow=4.0,SNR=11								
BRTR	Keskin Array B	136.31	309		PKP		PKiKP	12 40 03.6	-0.6
	comp=Z,2.1nm,0.4s,baz=120,slow=4.9,SNR=8.7								
BRTR					SKPbc		SKPbc	12 43 14.3	+0.3
	comp=Z,4.5nm,0.9s,baz=134,slow=3.6,SNR=6.2								
BRTR	Keskin Array B	136.31	309		eP		PKPdf	12 40 01.6	-0.9
BRTR	Keskin Array B	136.31	309		PKPdf		PKPdf	12 39 57.3	-5.2
MERS	Mersin	136.33	304		eP		PKPdf	12 40 03.3	+0.8
ASK	Askoy	136.51	349		ePKPdf		PKPdf	12 40 02.8	+0.8
BER	Bergen	136.58	348		ePKPdf		PKPdf	12 40 01.8	-0.3
AFSR	Afar-Bala (An	136.81	308		eP		PKPdf	12 40 02.9	-0.4
MILM	Milestii Mici	136.93	320		⇑P		PKPdf	12 40 00.5	-2.7
MILM	Milestii Mici	136.93	320		⇑P		SKPbc	12 43 15.7	+0.2
EIL	Elat	137.00	294		PKP		PKPdf	12 40 04.0	+0.1
	comp=Z,6.3nm,0.7s,baz=333,slow=5.8,SNR=6.2								
EIL					SKPbc		SKPbc	12 43 15.5	-0.7
	comp=Z,6.7nm,0.9s,baz=109,slow=3.7,SNR=5.8								
IKL	Isikli	137.12	304		eP		PKPdf	12 40 00.3	-3.5
BERE	Bereket-Mersin	137.46	304		iP		PKPdf	12 40 04.8	+0.1
KIZT	Kizilcal	137.85	308		eP		PKiKP	12 40 06.4	-0.9
MDUB	Mudurnu	137.88	310				PKPdf	12 40 02.1	-3.2
TPGR	Topolog	138.11	318		⇑P		SKPdf	12 43 19.1	-0.4
CFR	Carcaliu	138.14	318		⇑P		SKPbc	12 43 19.2	+0.2
TIRR	Tirgusor	138.28	317		⇑P		SKPbc	12 43 20.7	+1.3
SEYD	Seydisehir-KON	138.28	306		P		PKiKP	12 40 07.9	-0.4
BIZ	Bicaz	138.54	322		⇑P		SKPbc	12 43 21.1	+1.0
VRI	Vrincioaia	138.70	320		⇓P		SKPbc	12 43 20.7	+0.1
BURAR	Bucovina Array	138.71	323		⇑P		PKiKP	12 40 07.9	-0.8
BURAR	Bucovina Array	138.71	323		⇑P		SKPbc	12 43 22.4	+1.7
PLOR	Plostina	138.76	320		⇑P		SKPab	12 43 27.9	-2.5
MLR	Muntele Rosu	139.36	320		PKhKP		PKPdf	12 40 03.0	-4.9
	comp=Z,2.1nm,0.5s,baz=352,slow=7.1,SNR=3.6								
MLR					SKPbc		SKPbc	12 43 22.7	+0.2
	comp=Z,10nm,1.0s,baz=37,slow=2.6,SNR=6.5								
MLR	Muntele Rosu	139.36	320		⇑P		PKPdf	12 40 01.9	-6.0
MLR	Muntele Rosu	139.36	320		⇑P		SKPbc	12 43 22.9	+0.4
MLR	Muntele Rosu	139.36	320		PKIKP		PKPdf	12 40 05.0	-2.9
MLR	Muntele Rosu	139.36	320				PKPdf	12 40 05.0	-2.9
DOPR	Dopca	139.46	321		⇓P		SKPbc	12 43 23.5	+0.8
TVSB	Tavsanli	139.47	310		eP		PKPdf	12 40 05.3	-2.9
ARMT	Armutlu	139.52	311		eP		PKPdf	12 40 07.6	-0.6
KORT	Korkueli	139.54	306		P		PKPdf	12 40 08.8	+0.3
KOLS	Kolonicke sedl	139.58	326		ePKIKP		PKPdf	12 40 05.9	-2.1
KOLS	Kolonicke sedl	139.58	326		ePKP		PKPdf	12 40 05.9	-2.1
KOLS					e			12 43 23.7	
VOIR		139.94	320		⇑P		PKPdf	12 40 02.9	-5.9
VOIR		139.94	320		⇑P		SKPbc	12 43 24.0	-0.1
OJC	Ojcow	140.02	329		ePKP		PKiKP	12 40 11.9	+0.6
CRVS	Cervenica-Dubn	140.02	327		ePKIKP		PKPdf	12 40 04.9	-3.9
CRVS	Cervenica-Dubn	140.02	327		ePKP		PKPdf	12 40 04.9	-3.9
CRVS					e			12 43 24.0	
AYDB	Zeytinkoy-Aydi	141.12	308		eP		PKPdf	12 40 03.3	-8.0
KSP	Ksiaz	141.20	333		ePKP		PKPdf	12 40 04.9	-6.0
GZR	Gura Zlata	141.32	321		⇓P		PKPdf	12 40 06.3	-5.1
GZR	Gura Zlata	141.32	321		⇑P		SKPbc	12 43 27.4	-0.3
MORC	Moravsky Berou	141.39	330		⇑P		PKPdf	12 40 07.2	-4.1
MORC	Moravsky Berou	141.39	330		⇑P		SKPbc	12 43 28.1	+0.5
MORC	Moravsky Berou	141.39	330		ePKP		PKPdf	12 40 07.5	-3.8
MORC					e			12 43 27.9	
MORC					e			12 51 52.5	
MORC	Moravsky Berou	141.39	330		PKHKP		PKPdf	12 40 05.2	-6.1
MORC	Moravsky Berou	141.39	330				PKPdf	12 40 05.2	-6.1
OSTC	Ostas	141.44	332		ePKP		PKPdf	12 40 06.9	-4.4
OSTC					eSKP		SKPbc	12 43 27.9	+0.2
SIRR	Siria	141.48	323		⇑P		PKPdf	12 40 07.6	-3.9
SIRR	Siria	141.48	323		⇑P		SKPbc	12 43 28.4	+0.4
CHVC	Chvalec	141.49	332		ePKP		PKPdf	12 40 06.6	-4.8
KRLC	Kraliky	141.53	331		ePKP		PKPdf	12 40 05.9	-5.6
KRLC					eSKP		SKPbc	12 43 27.7	-0.3
DPC	Dobruska-Polom	141.54	332		ePKP		PKPdf	12 40 06.4	-5.2
DPC					eSKP		SKPbc	12 43 28.0	0.0
UPC	Upice	141.57	332		ePKIKP		PKPdf	12 40 07.1	-4.4
UPC	Upice	141.57	332		ePKP		PKPdf	12 40 07.1	-4.4
VYHS	Vyhne	141.62	328		ePKIKP		PKPdf	12 40 07.6	-4.1
VYHS					e			12 43 27.1	
VYHS	Vyhne	141.62	328		ePKP		PKPdf	12 40 07.6	-4.1
VYHS					e			12 43 27.1	
HERR	Herculane	141.82	321		⇓P		PKPdf	12 40 07.4	-4.7
HERR

XOR	Xorichti	144.00 312		P		PKPab	12 40 13.1	-1.1
NEO	Neokhori	144.00 312		P		PKPab	12 40 14.0	-0.2
PTL	Penteli	144.06 310		P		PKPab	12 40 14.2	-0.2
ARSA	Arzberg	144.11 329	*i*	P		PKPbc	12 40 15.4	+0.6
	comp=Z,116nm,1.2s,SNR=32							
BUG	Bochum--Univer	144.14 341	*e*	PKPbc			12 41 23.2	
ATHU	Athens Univers	144.15 310		P		PKPab	12 40 13.9	-0.9
LIT	Litokhoron	144.16 314		P		PKPab	12 40 14.5	-0.2
BBLS	Lazići	144.17 322	⇑	*i*	P	PKPdf	12 40 15.8	-0.6
VLY	Voula,Athens	144.18 310		P		PKPab	12 40 14.0	-0.9
GRA1	Grafenberg Arr	144.19 335			PKPbc	PKPbc	12 40 15.3	+0.4
GRF	Grafenberg Arr	144.19 335		PKIKP		PKPbc	12 40 15.3	+0.4
GRF	Grafenberg Arr	144.19 335	*e*	PKPbc		PKPdf	12 40 15.6	-0.6
	baz=38,slow=3.2							
IDI	Anoyia	144.26 305		PKP		PKPbc	12 40 15.6	-0.1
	comp=Z,53nm,0.5s,baz=40,slow=7.2,SNR=64							
IDI				SKPbc		SKiKP	12 43 35.6	-0.3
	comp=Z,19nm,0.9s,baz=349,slow=5.2,SNR=4.8							
IDI	Anoyia	144.26 305				PKPbc	12 40 15.7	0.0
IDI	Anoyia	144.26 305		P		PKPab	12 40 15.3	-0.1
MOA	Molln	144.28 331	*i*	P		PKPdf	12 40 16.1	-0.4
	comp=Z,241nm,1.2s,SNR=54							
KOGS	Kog	144.30 327	*i*	PKPbc		PKPbc	12 40 15.5	+0.1
HAPS	Han Pijesak,BI	144.31 322	*e*	P		PKPab	12 40 15.2	-0.1
RUDO	Rudo	144.34 321	⇑	*i*	P	PKPbc	12 40 15.9	+0.3
ATAL	Atalanti	144.40 312		P		PKPab	12 40 14.7	-1.0
VILL	Villia	144.41 311		P		PKPab	12 40 14.7	-1.1
SIVA	Sivas	144.41 305		P		PKPdf	12 40 16.6	-0.4
LKR	Lokris	144.43 311		P		PKPab	12 40 14.8	-1.0
IVA	Berane	144.44 320	⇑	*i*	PKP	PKPdf	12 40 16.9	-0.1
PLE	Pljevlja	144.49 321	⇑	*i*	PKP	PKPdf	12 40 17.1	0.0
PRNS	Prines Rethymn	144.54 305		P		PKPdf	12 40 17.6	+0.4
AXAR	Agios Charalam	144.63 312		P		PKPab	12 40 15.9	-0.7
WACR	West Acre	144.68 348	*e*	P		PKPbc	12 40 16.4	+0.1
WACR				IAmb		IAmb	12 40 17.6	
	comp=Z,408nm,0.9s							
KOME	Kolasin	144.68 320	⇓	*i*	PKP	PKPdf	12 40 17.2	-0.2
LTK	Loutraki	144.72 311		P		PKPab	12 40 15.5	-1.4
LOUT	Loutraki	144.72 310		P		PKPbc	12 40 15.6	-1.2
THL	Klokotos Trika	144.72 313		P		PKPbc	12 40 15.4	-1.5
PHP	Peshkopia	144.74 318		P		PKPab	12 40 17.1	+0.2
AGG	Agios Georgios	144.75 312		PKIKP		PKPbc	12 40 16.2	-0.8
AGG	Agios Georgios	144.75 312				PKPbc	12 40 16.2	-0.8
AGG	Agios Georgios	144.75 312		P		PKPbc	12 40 16.1	-0.9
SOKA	Soboth	144.75 329	*i*	P		PKPdf	12 40 17.2	-0.1
	comp=Z,117nm,0.6s,SNR=78							
VAM	Vamos	144.76 306		P		PKPdf	12 40 17.8	+0.2
EPID	Epidavros	144.77 310		P		PKPbc	12 40 15.8	-1.3
TNS	Taunus Mts	144.79 338	*e*	PKPbc		PKPdf	12 40 17.1	-0.1
	baz=38,slow=3.2							
WME	Myndd Eilian	144.79 353	*e*	P		PKPbc	12 40 16.5	-0.1
KRND	KRANIDI	144.84 309		P		PKPbc	12 40 16.1	-1.2
ZAG	Zagreb	144.85 327	*e*	P		PKPab	12 40 18.0	+0.6
UPM	Unac-Piva	144.85 321	⇑	*i*	PKP	PKPbc	12 40 17.3	-0.1
UPM	Unac-Piva	144.85 321	⇑	*i*	P	PKPbc	12 40 17.2	-0.2
DSF	Desfina	144.87 311		P		PKPbc	12 40 16.3	-1.2
BLY	Banja Luka	144.91 324	⇑	*i*	P	PKPdf	12 40 18.1	+0.5
IMMV	Iera Moni Meta	144.91 306		P		PKPdf	12 40 17.9	0.0
WLF1	Llynfaes	144.91 353	*e*	P		PKPbc	12 40 16.9	0.0
WLF1				IAmb		IAmb	12 40 17.8	
	comp=Z,458nm,0.9s							
THAL	Thalero	144.93 311		P		PKPbc	12 40 17.1	-0.5
YRC	Rhoscolyn	144.97 353	*e*	P		PKPbc	12 40 17.1	0.0
AHRW	Bad Neuenahr-A	144.98 340	*e*	PKPbc		PKPdf	12 40 17.8	+0.3
	baz=38,slow=3.2							
NEST	Nestorio	144.98 315		P		PKPbc	12 40 17.6	-0.2
KPRO	Kipourio	144.99 314		P		PKPbc	12 40 17.1	-0.7
CWF	Charnwood Fore	145.02 350	*e*	P		PKPbc	12 40 17.3	-0.1
CWF				IAmb		IAmb	12 40 18.2	
	comp=Z,165nm,0.7s							
NKY	Niksic	145.02 320	⇑	*i*	PKP	PKPab	12 40 18.2	+0.1
GVDS	Gavdos	145.03 305		P		PKPbc	12 40 18.0	0.0
YLL	Llanberis	145.03 353	*e*	P		PKPbc	12 40 17.4	0.0
RJOB	Jochberg	145.04 332	*e*	PKPbc		PKPbc	12 40 17.1	-0.6
	baz=38,slow=3.2							
NKME	Niksic	145.07 320	⇑	*i*	PKP	PKPbc	12 40 17.9	0.0
PDG	Podgorica	145.08 320	⇑	*i*	P	PKPab	12 40 18.1	0.0
PDG	Podgorica	145.08 320				PKPbc	12 40 17.0	-0.9
OBKA	Obir	145.11 329	*i*	P		PKPbc	12 40 18.0	0.0
	comp=Z,118nm,0.8s,SNR=23							
CRES	Cresnjev	145.12 327	⇑	*i*	P	PKPab	12 40 18.4	+0.2
DSB	Dublin	145.14 355				PKPab	12 40 18.2	+0.2
KALE	Kalithea	145.16 312		P		PKPdf	12 40 18.0	-0.3
FOEL	Foel Wylfa	145.16 352	*e*	P		PKPab	12 40 18.1	+0.1
FOEL				IAmb		IAmb	12 40 19.0	
	comp=Z,368nm,1.1s							
EVR	Evrytania	145.16 313		P		PKPdf	12 40 17.8	-0.5
MGRS	Mrkonjic Grad	145.17 324	*e*	P		PKiKP	12 40 33.1	+11
BEBN	Eben Emael	145.19 342		PKPab		PKPbc	12 40 18.0	+0.1
GUR	Goura	145.20 311		P		PKPdf	12 40 18.4	0.0
SERG	Sergoula	145.21 312		P		PKPbc	12 40 18.4	-0.1
KNDR	Palaiochora Ch	145.21 306		P		PKPab	12 40 19.0	+0.2
TRIZ	Trizonia	145.21 312		P		PKPbc	12 40 18.4	0.0
CEME	Cevo	145.22 320	⇑	PKP		PKPbc	12 40 18.4	0.0
ANX	Ano Chora	145.22 312		P		PKPab	12 40 19.0	+0.1
BTNL	Ternell	145.24 341		PKPab		PKPab	12 40 18.4	-0.1
BRY	Bratogost	145.25 321	⇑	*i*	P	PKPdf	12 40 18.3	-0.1
VLI	Veliai	145.25 308		P		PKPdf	12 40 17.1	-1.3
LLW	Llanuwychllyn	145.26 352	*e*	P		PKPdf	12 40 17.6	-0.3
LLW				IAmb		IAmb	12 40 19.1	
	comp=Z,143nm,1.0s							
DRME	Dracevica, Mon	145.26 319	⇓	*i*	PKP	PKPab	12 40 18.9	+0.1
DRME	Dracevica, Mon	145.26 319	⇑	*i*	P	PKPab	12 40 18.7	-0.1
MEM	Membach	145.26 341		PKPab		PKPab	12 40 18.5	0.0
KBA	Koelnbreinsper	145.27 331	*i*	P		PKPdf	12 40 17.9	-0.5
	comp=Z,142nm,1.3s,SNR=36							
KBA	Koelnbreinsper	145.27 331		PKP2		PKPdf	12 40 18.1	-0.3
TIR	Tirane	145.28 318		PKP2		PKPab	12 40 19.3	+0.4
TIR	Tirane	145.28 318				PKPab	12 40 19.3	+0.4
TIR	Tirane	145.28 318		P		PKPbc	12 40 19.0	+0.1
ANKY	Antikythira Is	145.29 307		P		PKPbc	12 40 18.8	+0.1
KLV	Kalavryta, Ach	145.29 311		P		PKPdf	12 40 18.5	0.0
KTHA	Kythira Island	145.33 308		P		PKPdf	12 40 18.7	+0.1
ULC	Ulcinj	145.34 319	⇓	*i*	PKP	PKPab	12 40 19.2	0.0
FUR	Furstenfeldbru	145.37 334	*e*	PKPbc		PKPab	12 40 19.5	+0.4
	baz=38,slow=3.2							
VLX	Vlachokerasia	145.41 310		P		PKPbc	12 40 19.1	-0.1
LSK	Leskovik	145.41 315		P		PKPab	12 40 19.6	0.0
BSTI	Sart Tilman	145.41 342		PKPab		PKPab	12 40 19.1	+0.1
RCBR	Riachuelo	145.42 132		PKIKP		PKPdf	12 40 18.8	-0.6
RCBR	Riachuelo	145.42 132		PKPdf		PKPdf	12 40 18.8	-0.6
TRIP	Tripoli	145.42 310		P		PKPab	12 40 19.7	0.0
LJU	Ljubljana	145.44 328	*i*	PKPbc		PKPab	12 40 19.2	-0.2
LJU					*ep*	PKPdf	12 41 17.4	+3.0
LJU				*i*	pPKPbc	sPKPab	12 41 25.6	-10
LJU				*i*	SKPbc	SKPbc	12 43 37.4	-0.1
LJU	Ljubljana	145.44 328	⇑	*i*	P	PKPab	12 40 19.4	0.0
MYKA	Terra Mystica	145.46 330	*i*	P		PKPdf	12 40 18.7	+0.1
	comp=Z,56nm,0.5s,SNR=27							
TREB	Trebinje	145.47 321	*e*	P		PKPdf	12 40 18.8	+0.2
HLM1	Long Mynd	145.47 351	*e*	P		PKPbc	12 40 18.9	+0.1
HLM1				IAmb		IAmb	12 40 19.9	
	comp=Z,170nm,1.1s							
JAN	Janina	145.48 314		P		PKPab	12 40 19.8	0.0
BHOU	Houvegnez	145.48 341		PKPab		PKPab	12 40 19.5	+0.1
BHOU				PKIKP		PKiKP	12 40 22.5	+0.1
HCY	Herceg Novi	145.53 320	⇓	*i*	PKP	PKPab	12 40 19.6	-0.3
HCY	Herceg Novi	145.53 320	⇑	*i*	P	PKPbc	12 40 19.2	-0.1
UCC	Uccle	145.57 343		PKPab		PKPab	12 40 19.5	-0.2
UCC	Uccle	145.57 343		PKP2		PKPab	12 40 19.9	+0.2
UCC	Uccle	145.57 343				PKPab	12 40 19.9	+0.2
PRED	Cave del Predi	145.63 330				PKPdf	12 40 19.1	+0.3
BCLA	Clavier	145.64 342		PKPab		PKPbc	12 40 19.5	+0.2
DRO	Drossia	145.65 311		P		PKPbc	12 40 20.1	+0.3
CEY	Cerknica	145.71 328	*i*	PKPbc		PKPbc	12 40 20.1	+0.3
CEY					*ep*	PKPdf	12 41 17.4	+2.5
CEY					*ep*	PKPbc	sPKPdf	12 41 26.9	-10
CEY					*e*	SKPdf	SKPdf	12 43 30.3	-2.1
CEY					*e*	SKPbc	SKPbc	12 43 37.4	-0.7
CEY	Cerknica	145.71 328	⇑	*i*	P	PKPbc	12 40 20.0	+0.3
STU	Stuttgart	145.72 336		PKP2		PKPab	12 40 20.2	-0.1
STU	Stuttgart	145.72 336	*e*	PKPbc		PKPbc	12 40 20.0	+0.3
	baz=38,slow=3.2							
STU					*ep*	PKPbc	sPKPab	12 41 27.7	-9.0
STU	Stuttgart	145.72 336				PKPab	12 40 20.2	-0.1
BGES	Gesves	145.73 342		PKPab		PKPab	12 40 20.0	-0.3
PDO	Prodromos	145.74 312		P		PKPab	12 40 20.5	-0.3
STON	Ston	145.76 321	⇑	*i*	P	PKPbc	12 40 19.5	-0.4
RLS	Riolos of Patr	145.78 311		P		PKPab	12 40 20.9	0.0
ITM	Ithomi	145.81 310		PKPdf		PKPbc	12 40 19.9	-0.4
ITM	Ithomi	145.81 310		P		PKPbc	12 40 20.3	0.0
AMT	Artemida-Makis	145.83 310		P		PKPbc	12 40 20.3	-0.1
ZOU	Zoufplan	145.83 330		PKPdf		PKPdf	12 40 19.8	+0.5
SNF	Seneffe	145.85 343		PKPab		PKPab	12 40 20.4	-0.4
WATA	Walderalm	145.88 332	*i*	P		PKPbc	12 40 20.6	+0.2
	comp=Z,72nm,1.1s,SNR=12							
WATA					*e*	P	pPKPab	12 41 19.3	+3.9
	comp=Z,34nm,1.1s							
IGT	Igoumenitsa	145.89 314		P		PKPbc	12 40 20.3	-0.2
BMRD	Maredsous	145.90 342		PKPab		PKPab	12 40 20.7	-0.2
ABTA	Abfaltersbach	145.90 331	*e*	P		PKPdf	12 40 18.0	-1.4
	comp=Z,7.2nm,1.2s							
ABTA					*e*	P	PKPbc	12 40 20.1	-0.3
	comp=Z,64nm,0.7s,SNR=24							
ABTA					*e*	P	pPKPab	12 41 18.9	+3.3
	comp=Z,51nm,1.2s							
ABTA					*e*	P	PP	12 43 37.7	-5.4
	comp=Z,11nm,0.9s							
WTTA	Wattenberg	145.91 332	*e*	P		PKPdf	12 40 19.4	-0.1
	comp=Z,17nm,1.1s							
WTTA					*i*	P	PKPbc	12 40 20.9	+0.4
	comp=Z,89nm,1.0s,SNR=23							
WTTA					*e*	P	pPKPab	12 41 19.7	+4.1
	comp=Z,45nm,1.2s							
WTTA					*e*	P	PP	12 43 38.3	-4.9
	comp=Z,13nm,0.8s							
WTTA	Wattenberg	145.91 332		PKP2		PKPab	12 40 21.0	-0.4
RIY	Rijeka	145.97 327	⇑	*i*	P	PKPbc	12 40 20.4	-0.1
MCH1	Michaelchurch	146.00 351	*e*	P		PKPbc	12 40 20.0	-0.3
MCH1					IAmb	IAmb	12 40 20.8	
	comp=Z,113nm,0.9s							
TSLK	Tsoukalades, L	146.00 313		P		PKPbc	12 40 21.2	+0.4
LKD2	Lefkada island	146.02 313		P		PKPbc	12 40 20.9	0.0
NYDR	Nydri-Lefkada	146.02 313		P		PKPbc	12 40 20.9	0.0
WLF	Walferdange	146.04 340		PKPab		PKPab	12 40 21.7	+0.2
WLF	Walferdange	146.04 340		PKP2		PKPbc	12 40 20.4	-0.1
WLF	Walferdange	146.04 340	*e*	PKPbc		PKPab	12 40 21.3	-0.2
	baz=38,slow=3.2							
WLF					*e*	pPKPbc	sPKPdf	12 41 29.6	-7.7
WLF	Walferdange	146.04 340				PKPbc	12 40 20.4	-0.1
PYL	PYLOS	146.06 309		P		PKPdf	12 40 20.0	+0.2
MOTA	Moosalm	146.08 333	*i*	P		PKPbc	12 40 21.2	+0.2
	comp=Z,177nm,1.1s,SNR=53							
MOTA					*e*	P	pPKPbc	12 41 20.0	+4.1
	comp=Z,40nm,1.2s							
STRD	Stroud	146.09 350	*e*	P		PKPbc	12 40 20.3	-0.3
STRD				IAmb		IAmb	12 40 22.3	
	comp=Z,147nm,0.6s							
RETA	Reutte	146.12 333	*i*	P		PKPbc	12 40 21.3	+0.3
	comp=Z,121nm,1.5s,SNR=21							
MONM	Monmouth	146.12 351	*e*	P		PKPbc	12 40 20.7	0.0
MONM				IAmb		IAmb	12 40 22.5	
	comp=Z,148nm,0.9s							
SQTA	Sankt Quirin	146.13 333	*i*	P		PKPbc	12 40 21.5	+0.3
	comp=Z,166nm,1.2s,SNR=33							
SQTA					*e*	P	pPKPbc	12 41 18.8	+2.7
	comp=Z,48nm,1.4s							
SQTA					*e*	P	PP	12 43 39.1	-5.3
	comp=Z,14nm,1.1s							
SQTA	Sankt Quirin	146.13 333		PKP2		PKPbc	12 40 21.4	+0.3
DOU	Dourbes	146.13 342		PKPab		PKPbc	12 40 21.3	+0.5
KEK	Kerkira	146.16 315		P		PKPbc	12 40 21.0	-0.3
STAL	STALIGIAL	146.17 330				PKPdf	12 40 19.1	-0.6
UBR	Ueberruh	146.24 334	*e*	PKPbc		PKPbc	12 40 21.6	+0.3
	baz=38,slow=3.2							
CIMO	Cimolais	146.26 330		PKPdf		PKPdf	12 40 19.8	-0.1
WOL	Wolverton	146.38 349	*e*	P		PKPbc	12 40 21.2	-0.2
WOL				IAmb		IAmb	12 40 22.3	
	comp=Z,243nm,0.9s							
BFO	Black Forest	146.41 337		PKP2		PKPbc	12 40 21.9	+0.2
BFO	Black Forest	146.41 337	*e*	PKPbc		PKPbc	12 40 21.5	-0.2
	baz=38,slow=3.2							
BFO	Black Forest	146.41 337				PKPbc	12 40 21.9	+0.2
FETA	Feichten	146.49 333	*e*	P		PKPdf	12 40 20.4	0.0
	comp=Z,9.9nm,1.2s							
FETA					*i*	P	PKPbc	12 40 22.8	+0.6
	comp=Z,93nm,1.0s,SNR=32							
FETA					*e*	P	pPKPab	12 41 20.1	+2.2
	comp=Z,41nm,1.0s							
FETA					*e*	P	PP	12 43 39.1	-7.5
	comp=Z,16nm,1.1s							
DAVA	Damuels	146.64 334	*i*	P		PKPbc	12 40 23.0	+0.4
	comp=Z,217nm,1.2s,SNR=30							
CTI	Castel Tesino	146.82 331		PKP2		PKPbc	12 40 22.4	-0.7
CTI	Castel Tesino	146.82 331				PKPbc	12 40 22.4	-0.7
SCTE	Santa Cesarea	146.85 317				PKPbc	12 40 23.8	+0.6
ECH	Echery	146.94 338		PKP2		PKPbc	12 40 23.2	0.0
ECH	Echery	146.94 338				PKPbc	12 40 23.2	0.0
FUORN	Ofenpass-Fuorn	147.01 333				PKPbc	12 40 24.4	+0.6
DAVOX	Davos/Dischmat	147.04 333		PKPbc		PKPbc	12 40 24.4	+0.6
	comp=Z,56nm,0.5s,baz=333,slow=0.4,SNR=71							
TEOL	Teolo	147.33 330				PKPbc	12 40 24.3	-0.1
TUE	Stuetta	147.51 334				PKPdf	12 40 21.7	-0.5
SGRT	San Giovanni R	147.59 321				PKPbc	12 40 24.5	-0.8
NRCA	Norcia	148.39 325				PKPdf	12 40 23.2	-0.4
ZCCA	Zocca	148.41 329				PKPbc	12 40 26.3	-0.9
MURB	Monte Urbino	148.41 326				PKPdf	12 40 23.0	-0.6
PRMA	PARMA	148.41 331				PKiKP	12 40 28.4	-0.3
SENIN	Lac Senin/Sane	148.43 336				PKPbc	12 40 27.8	+0.3
TIP	Timpagrande	148.45 317				PKPbc	12 40 28.2	+0.6
INTR	Introdacqua	148.50 323		PKPdf		PKPdf	12 40 22.9	-0.8
AQU	L'Aquila	148.55 324		PKP2		PKPbc	12 40 27.6	-0.1
AQU	L'Aquila	148.55 324	*e*	P		PKiKP	12 40 28.5	-0.6
AQU	L'Aquila	148.55 324				PKPbc	12 40 27.6	-0.1
CLF	Chambon-Foret	148.67 343				PKPbc	12 40 28.1	+0.4
PAOL	Paolisi	148.74 321				PKPbc	12 40 28.0	-0.3
VLC	Villacollemand	148.83 330				PKPbc	12 40 28.1	-0.3
OSSC	Osservatorio P	148.88 328				PKPbc	12 40 27.9	-0.6
MSSA	Maissana	149.12 331				PKPbc	12 40 28.1	-1.0
LATE	Laterza	149.24 326		PKPdf		PKPdf	12 40 24.5	-0.4
CEL	Celeste	149.51 316				PKPbc	12 40 29.4	-0.9
CASP	Castiglione de	149.60 327				PKPbc	12 40 29.5	-0.8
BNI	Bardonecchia	149.76 335		PKP2		PKiKP	12 40 31.4	-0.2
BNI	Bardonecchia	149.76 335				PKiKP	12 40 31.4	-0.2
SSB	Saint Sauveur	150.38 338		PKIKP		PKPbc	12 40 31.3	-0.8
SSB	Saint Sauveur	150.38 338				PKPbc	12 40 31.3	-0.8
VAE	Valguarnera	150.92 316		PKPab		PKPab	12 40 42.5	+0.8
	comp=Z,47nm,0.8s,baz=194,slow=13,SNR=5.2							
CLTB	Caltabellotta	151.65 317				PKPdf	12 40 31.2	+2.3
VSL	Villasalto	152.73 324				PKiKP	12 40 37.9	+0.2
KEST	Kesra	155.24 318		PKPab		PKPab	12 41 01.2	+1.1
	comp=Z,19nm,1.0s,baz=346,slow=1.0,SNR=5.6							
PGAV	Gavieira, Arco	156.50 355			*e*	PKPab	12 41 05.9	+0.7
PBRG	Braganca	156.50 352			*e*	PKPab	12 41 05.9	+0.7
PCAB	Cabril	156.73 355			*e*	PKPab	12 41 07.1	+0.9
POLO	Lamas de Olo	157.04 354			*e*	PKPab	12 41 08.5	+0.9
PVRL	Vila Real	157.13 354			*e*	PKPab	12 41 09.1	+1.2
MVO	Moncorvo	157.17 353			*e*	PKPab	12 41 08.8	+0.7
PVIS	Viseu	157.71 354			*e*	PKPab	12 41 11.3	+0.9
MTE	Manteigas	157.98 353			*e*	PKPab	12 41 12.5	+0.8
ESDC	Sonseca Array	158.07 346		PKPab		PKPab	12 41 12.5	+0.4
	comp=Z,6.5nm,0.7s,baz=7.2,slow=3.0,SNR=12							
ESDC						PP	PP	12 44 54.6	+3.0
	comp=Z,2.7nm,1.0s,baz=346,slow=5.4,SNR=5.3							
ESDC	Sonseca Array	158.07 346				PP	12 44 55.1	+3.5
COI	Coimbra	158.25 355			*e*	PKPab	12 41 14.0	+1.3
PCAS	Casmilo, Conde	158.42 355			*e*	PKPab	12 41 14.3	+0.8
PCBR	Castelo Branco	158.53 353			*e*	PKPab	12 41 14.7	+0.8
PMRV	Marv??o	158.92 353			*e*	PKPab	12 41 17.2	+1.5
PMTG	Montargil	159.37 354			*e*	PKPab	12 41 18.4	+0.8
EVO	Evora	159.88 354			*e*	PKPab	12 41 20.8	+0.9
PBEJ	Beja	160.36 353			*e*	PKPab	12 41 23.4	+1.4
PCVE	Castro Verde	160.77 353			*e*	PKPab	12 41 24.8	+1.0
PVAQ	Vaqueiros	160.96 352			*e*	PKPab	12 41 26.2	+1.6
PBDV	Barranco-do-Ve	161.14 353			*e*	PKPab	12 41 27.2	+1.8
TAF	Taforalt	162.10 337		P		PKPab	12 41 31.1	+1.3
	SNR=7.4							
JBK	JBK	162.59 337		P		PKPab	12 41 33.3	+1.2
	SNR=9.7							
FIGM	Figuig	163.91 329		P		PKPab	12 41 39.7	+1.7
	SNR=21							
TAM	Tamanrasset	164.12 288		PKIKP		PKPdf	12 40 44.7	+0.1
TAM	Tamanrasset	164.12 288		PKPdf		PKPdf	12 40 44.7	+0.1
MDT	Midelt	164.68 340		PKP		PKPdf	12 40 44.5	-0.2
	comp=Z,1.0nm,0.8s,baz=154,slow=0.9,SNR=3.6							
MDT						PKPab	PKPab	12 41 41.6	+0.4
	comp=Z,3.6nm,0.7s,baz=32,slow=5.0,SNR=8.4							
LIC	Lamto	166.57 206		ePKIKP		PKPdf	12 40 45.6	-1.1
	comp=Z,56nm,1.4s							
LIC	Lamto	166.57 206		ePKP2		PKPab	12 41 50.2	+0.4
	comp=Z,100nm,1.1s							
LIC	Lamto	166.57 206		*e*PKP2		pPKPab	12 42 45.0	+1.7
	comp=Z,99nm,1.6s							
LIC	Lamto	166.57 206		*e*PKIKP		PP	12 45 40.1	+3.4
	comp=Z,31nm,1.2s							
KIC	Kosan Boka	166.57 207		*e*PKIKP		PKPdf	12 40 45.9	-0.8
	comp=Z,55nm,1.4s							
KIC	Kosan Boka	166.57 207		*e*PKP2		PKPab	12 41 50.2	+0.3
	comp=Z,41nm,0.9s							
KIC	Kosan Boka	166.57 207		*e*PKP2		pPKPab	12 42 44.3	+1.0
	comp=Z,12nm,0.8s							
KIC	Kosan Boka	166.57 207		*e*PKIKP		PP	12 45 40.6	+3.8
	comp=Z,35nm,1.3s							
TOA0	Torodi Ar. Sit	166.84 248				PKPdf	12 40 45.9	-0.9
TORD	Torodi Ar. Bea	166.84 248		PKP		PKPdf	12 40 46.3	-0.5
	comp=Z,14nm,1.0s,baz=108,slow=0.5,SNR=43							
TORD					pPKP	pPKPdf	12 41 43.2	0.0
	comp=Z,2.8nm,1.0s,baz=14,slow=0.5,SNR=2.4							
TORD					PKPab	PKPab	12 41 51.3	0.0
	comp=Z,3.3nm,0.9s,baz=95,slow=3.4,SNR=5.0							
TORD					pPKPab	pPKPab	12 42 43.2	-1.7
	comp=Z,3.6nm,1.0s,baz=109,slow=3.3,SNR=2.6							
TORD	Torodi Ar. Bea	166.84 248				PKPdf	12 40 46.1	-0.7
DBIC	Dimbokro	166.90 207		PKP		PKPdf	12 40 46.8	-0.1
	comp=Z,4.1nm,0.9s,baz=115,slow=5.2,SNR=4.3							
DBIC					PKPab	PKPab	12 41 51.6	+0.3
	comp=Z,17nm,0.8s,baz=138,slow=7.5,SNR=15							
DBIC					pPKPab	pPKPab	12 42 42.0	-2.7
	comp=Z,15nm,1.2s,baz=143,slow=9.2,SNR=2.2							
DBIC					PP	PP	12 45 40.0	+1.6
	comp=Z,6.3nm,0.9s,baz=64,slow=1.8,SNR=4.0							
TIC	Toumodi	166.94 206		ePKIKP		PKPdf	12 40 46.1	-0.9
TIC	Toumodi	166.94 206		ePKP2		PKPab	12 41 51.8	+0.3
TIC	Toumodi	166.94 206		ePKP2		pPKPab	12 42 45.7	+0.7
TIC	Toumodi	166.94 206		ePKIKP		PP	12 45 40.1	+1.4
OUK	Oukaimeden	167.06 349		P		PKPab	12 41 54.0	+2.0
	SNR=8.9							
OUZM	OUZ	167.10 344		P		PKPab	12 41 54.0	+2.0
	SNR=7.2							
ZGR	Zagora	167.49 339		P		PKPab	12 41 55.0	+1.3
	SNR=12							
KOWA	Kowa	172.37 240		PKP		PKPdf	12 40 49.4	-0.6
	comp=Z,7.3nm,0.9s,baz=296,slow=0.6,SNR=15							
K

FITZ	**Fitzroy Crossi**	**40.11**	**259**	P	**P**	**13**	**30**	**23.9 -1.8**
FITZ				IAmb	IAmb	13	30	28.0
	comp=Z,4.8nm,1.1s							
VNDA	**Vanda**	**62.94**	**181**	P	**P**	**13**	**33**	**15.0 +0.2**
	comp=Z,0.7nm,0.5s,baz=1.0,slow=8.1,SNR=12							
VNDA	**Vanda**	**62.94**	**181**	P	**P**	**13**	**33**	**14.0 -0.8**
VNDA				IAmb	IAmb	13	33	23.3
	comp=Z,1.7nm,1.1s							
QSPA	**South Pole Qui**	**75.37**	**180**	P	**P**	**13**	**34**	**31.9 0.0**
QSPA				IAmb	IAmb	13	34	34.5
	comp=Z,4.5nm,0.9s							
MAW	**Mawson**	**81.98**	**202**	P	**P**	**13**	**35**	**07.3 -0.6**
ARCES	**ARCESS Array B**	**120.20**	**345**	PKP	**PKiKP**	**13**	**41**	**38.4 +0.1**
	comp=Z,3.7nm,1.0s,baz=58,slow=2.2,SNR=2.9							

IDC ***13*** *13:41:13.3±2.3,27.°68N×105.°54W,h0km,mb3.6/2, mb1 3.8/7,mb1mx3.6/52,mbtmp3.5/7,ML3.4/5,MS2.8/2, Ms1 2.8/2,ms1mx2.5/40,Error ellipse: s-maj=28.6km s-min=11.7km az=161.0*

NEIC ***13*** *13:41:13.8±3.2,27.°74N±0.°07×105.°61W±0.°03,h16km±7km, mb3.7/4,Error ellipse: s-maj=10.5km s-min=4.2km az=175.0*

MEX ***13*** *13:41:14.5±0.6,27.°84N×105.°59W,h14km±10km,MD4.3*

ISC 13 13:41:12.9±0.7,27.°76N±0.°04×105.°65W±0.°05,h10km,n48, σ1℘86/52,Northern Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BCIG	**La Boquilla**	**0.30**	**136**	*eP*		**Pb**	**13 41 20.5**	**+0.1**
BCIG				*i* S		**Sb**	**13 41 26.1**	**+0.7**
HPIG		**0.82**	**181**	*eP*		**Pb**	**13 41 29.4**	**0.0**
HPIG				*i* S		**Sg**	**13 41 39.9**	**+0.4**
HPIG		**0.82**	**181**			**Pb**	**13 41 29.4**	**0.0**
HPIG		**0.82**	**181**			**Sg**	**13 41 39.9**	**+0.4**
TX31	**Lajitas Ar. Si**	**2.34**	**48**	Pn		**Pn**	**13 41 52.1**	**+0.5**
TX32	**Lajitas Array**	**2.34**	**48**			**Pn**	**13 41 52.4**	**+0.9**
TXAR	**Lajitas Array**	**2.34**	**48**	Pn		**Pn**	**13 41 52.2**	**+0.6**
	9.9nm,0.3s,baz=222,slow=14,SNR=69							
TXAR				Lg		Lg	13 42 27.3	
	34nm,0.3s,baz=224,slow=27,SNR=11							
TXAR	**Lajitas Array**	**2.34**	**48**	Pn		**Pn**	**13 41 52.0**	**+0.4**
CSIG	**Choix**	**2.60**	**250**	*eP*		**Pn**	**13 41 54.3**	**-0.6**
CSIG				*i* S		**Sn**	**13 42 25.3**	**-1.2**
PDIG	**Papasquiaro**	**2.72**	**175**	*i* P		**Pn**	**13 41 56.9**	**+0.1**
PDIG				*i* S		**Sn**	**13 42 28.3**	**-1.5**
MNTX	**Cornudas Mount**	**3.93**	**3**			**Pn**	**13 42 13.7**	**+0.4**
NZIG	**Nacozari, Sono**	**4.30**	**308**	*i* P		**Pn**	**13 42 17.6**	**-0.9**
NZIG				*i* S		**Sn**	**13 43 05.7**	**-3.1**
GUYB	**Guaymas**	**4.63**	**273**	*i* P		**Pn**	**13 42 22.8**	**-0.1**
GUYB				*i* S		**Sn**	**13 43 14.9**	**-1.8**
319A	**Douglas**	**4.80**	**320**	Pn		**Pn**	**13 42 26.2**	**+1.0**
HSIG		**4.84**	**286**	Pn		**Pn**	**13 42 29.1**	**+3.4**
121A	**Cookes Peak, D**	**5.10**	**339**	Pn		**Pn**	**13 42 29.8**	**+0.2**
MNIG	**Monterrey**	**5.25**	**113**	*i* P		**Pn**	**13 42 31.0**	**-0.5**
LPIG	**La Paz**	**5.56**	**230**	LR		LR	13 44 29.1	
	comp=Z,60nm,19.2s,baz=82,slow=35							
JCT	**Junction City**	**5.78**	**61**			**Pn**	**13 42 40.4**	**+1.6**
TUC	**Tucson**	**6.36**	**317**	Pn		**Pn**	**13 42 50.5**	**+3.8**
BNM	**Barren Site**	**6.42**	**353**	Pn		**Pn**	**13 42 49.5**	**+1.7**
LENM	**Lemitar**	**6.49**	**350**			**Pn**	**13 42 48.6**	**+0.1**
MSTX	**Muleshoe**	**6.66**	**21**	Pn		**Pn**	**13 42 52.1**	**+1.2**
ANMO	**Albuquerque**	**7.20**	**355**	Pn		**Pn**	**13 43 02.3**	**+4.0**
	0.3nm,0.3s,baz=170,slow=12,SNR=6.0							
ANMO				Lg		Lg	13 44 57.5	
	0.5nm,0.3s,baz=323,slow=12,SNR=3.3							
ANMO	**Albuquerque**	**7.20**	**355**			**Pn**	**13 43 02.4**	**+4.1**
214A	**Organ Pipe Nat**	**7.50**	**306**	Pn		**Pn**	**13 43 05.0**	**+2.6**
X18A	**Snowflake**	**7.69**	**332**	Pn		**Pn**	**13 43 07.5**	**+2.4**
X16A	**Lo Mia Camp, P**	**8.29**	**325**			**Pn**	**13 43 14.4**	**+1.1**
Y14A	**Wickenburg**	**8.82**	**316**	Pn		**Pn**	**13 43 21.3**	**+0.7**
WMOK	**Wichita Mounta**	**9.10**	**38**	Pn		**Pn**	**13 43 24.6**	**+0.3**
WUAZ	**Wupatki**	**9.14**	**329**	Pn		**Pn**	**13 43 27.0**	**+2.0**
MVCO	**Mesa Verde**	**9.72**	**346**	Pn		**Pn**	**13 43 32.5**	**-0.5**
FNO	**Franklin**	**10.26**	**41**	Pn		**Pn**	**13 43 37.2**	**-2.9**
W35A	**Tecumseh**	**10.50**	**43**	Pn		**Pn**	**13 43 44.1**	**+0.6**
TJX	**Tijuana**	**10.95**	**298**	Pn		**Pn**	**13 43 49.5**	**-0.1**
PFO	**Pinyon Flats O**	**10.98**	**305**	Pn		**Pn**	**13 43 49.8**	**-0.3**
CMIG	**Matias Romero**	**14.54**	**135**	LR		LR	13 50 36.7	
	comp=Z,53nm,19.9s,baz=264,slow=39							
MGMO	**Mountain Grove**	**14.66**	**47**	P		**Pn**	**13 44 37.8**	**-2.5**
NVAR	**Mina Array Bea**	**15.01**	**318**	Pn		**P**	**13 44 52.7**	**+2.0**
	0.1nm,0.3s,baz=136,slow=15,SNR=5.2							
NVAR	**Mina Array Bea**	**15.01**	**318**			**Pn**	**13 44 42.5**	**-2.8**
ELK	**Elko**	**15.17**	**331**	Pn		**P**	**13 44 53.1**	**+0.5**
	0.1nm,0.3s,baz=149,slow=12,SNR=2.2							
RYN	**Ryan**	**15.27**	**318**	Pn		**Pn**	**13 44 46.4**	**-2.2**
RYN				IAmb		IAmb	13 45 02.0	
	comp=Z,2.4nm,1.0s							
PD31	**Pinedale Array**	**15.31**	**349**			**Pn**	**13 44 46.8**	**-2.4**
PDAR	**Pinedale Array**	**15.31**	**349**	Pn		**P**	**13 44 54.0**	**0.0**
	comp=Z,0.0nm,0.3s,baz=153,slow=10.0,SNR=4.7							
R40A	**Maddies Static**	**15.35**	**43**			**Pn**	**13 44 46.5**	**-3.0**
R40A				IAmb		IAmb	13 44 50.9	
	comp=Z,5.1nm,0.8s							
T42A	**Van Buren**	**15.36**	**49**	P		**Pn**	**13 44 48.2**	**-1.5**
TKL	**Tuckaleechee C**	**20.18**	**62**	P		**P**	**13 45 48.6**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=195,slow=12,SNR=3.9							
ILAR	**Eielson Array**	**45.23**	**337**	P		**P**	**13 49 33.5**	**+3.5**
	comp=Z,0.8nm,1.0s,baz=146,slow=6.6,SNR=6.0							

JMA ***13*** *13:49:30.6±0.2,24.°16N×126.°48E,h106km±4km,M3.3*

NEIC ***13*** *13:49:31.7±1.6,24.°1N±0.°1×126.°54E±0.°07,h42km±14km, mb4.3/5,Error ellipse: s-maj=19.1km s-min=3.8km az=153.0*

IDC ***13*** *13:49:32.7±1.1,23.°98N×126.°62E,h39km±7km,mb3.7/5, mb1 3.9/6,mb1mx3.4/53,mbtmp4.0/6,ML4.2/1,MS3.0/2, Ms1 3.1/2,ms1mx2.5/50,Error ellipse: s-maj=52.3km s-min=15.6km az=70.0*

ISC 13 13:49:31.3±0.8,24.°02N±0.°06×126.°67E±0.°05,h40km±9km, n44,σ1℘93/61,mb4.0/7,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JOGS	**Gusukube**	**1.37**	**303**	P		**Pn**	**13 49 53.3**	**-0.7**
JOGS				*eS*		**Sn**	**13 50 10.1**	**-0.8**
JMJ2	**Miyako jima3**	**1.42**	**301**	P		**Pn**	**13 49 53.8**	**-0.9**
JMJ2				S		**Sn**	**13 50 11.7**	**-0.5**
JIKM	**Ikemajima**	**1.58**	**305**	P		**Pn**	**13 49 56.1**	**-0.7**
JIKM				*eS*		**Sn**	**13 50 15.1**	**-1.0**
JIRB	**Irabujima**	**1.59**	**301**	P		**Pn**	**13 49 56.0**	**-0.9**
JIRB				*eS*		**Sn**	**13 50 14.6**	**-1.6**
JTJ	**Tarama**	**1.90**	**289**	P		**Pn**	**13 49 59.9**	**-1.3**
JTJ				S		**Sn**	**13 50 21.1**	**-2.9**
JISG	**Ishigakijimahi**	**2.23**	**285**	P		**Pn**	**13 50 04.0**	**-1.7**
JISG				S		**Sn**	**13 50 29.8**	**-2.2**
JKE	**Kume jima 2**	**2.30**	**3**	P		**Pn**	**13 50 06.4**	**-0.3**
JKE				*eS*		**Sn**	**13 50 33.3**	**-0.5**
JIJ	**Ishigaki jima**	**2.34**	**279**	P		**Pn**	**13 50 05.7**	**-1.5**
JIJ				S		**Sn**	**13 50 31.3**	**-3.4**
JJT3	**Tamagusuku3**	**2.34**	**25**	P		**Pn**	**13 50 07.5**	**+0.2**
JJT3				S		**Sn**	**13 50 36.6**	**+1.7**
JKRS	**Kuro-shima**	**2.44**	**276**	P		**Pn**	**13 50 07.6**	**-1.1**
JKRS				S		**Sn**	**13 50 34.3**	**-3.1**
HATJ	**Hateruma jima**	**2.62**	**271**	P		**Pn**	**13 50 09.8**	**-1.4**
HATJ				*eS*		**Sn**	**13 50 37.5**	**-4.3**
IRIF	**Iriomote-Funau**	**2.71**	**277**	P		**Pn**	**13 50 10.7**	**-1.6**
JNTH	**Nagotoyohara**	**2.77**	**26**	P		**Pn**	**13 50 13.0**	**-0.2**
JOW	**Kunigami**	**3.15**	**27**	P		**Pn**	**13 50 18.8**	**+0.3**
JOW				*eS*		**Sn**	**13 50 54.2**	**-0.7**
JIH	**Iheya**	**3.22**	**21**	P		**Pn**	**13 50 19.8**	**+0.4**
JIH				S		**Sn**	**13 50 55.5**	**-1.0**
JYRO	**Yoronjima**	**3.40**	**28**	P		**Pn**	**13 50 21.4**	**-0.4**
JOKE	**Okinoerabujima**	**3.74**	**27**	P		**Pn**	**13 50 26.6**	**0.0**
JTK	**Tokunoshima**	**4.27**	**28**	P		**Pn**	**13 50 33.7**	**-0.2**
JMZ	**Minamidaito 2**	**4.50**	**66**	P		**Pn**	**13 50 34.8**	**-2.2**
JMZ				*eS*		**Sn**	**13 51 24.2**	**-3.9**
JMZ	**Minamidaito 2**	**4.50**	**66**	Pn		**Pn**	**13 50 34.8**	**-2.2**
JKDJ	**Kitadaitoujima**	**4.62**	**64**	P		**Pn**	**13 50 36.6**	**-1.9**
JKDJ				*eS*		**Sn**	**13 51 26.6**	**-4.3**
NACB	**Ninganchiao**	**4.64**	**273**	Pn		**Pn**	**13 50 36.2**	**-2.7**
JAMN	**Amaminishikomi**	**4.77**	**28**	P		**Pn**	**13 50 40.0**	**-0.7**
YULB	**Yu-li**	**4.97**	**264**	Pn		**Pn**	**13 50 42.2**	**-1.2**
TPUB	**Ta-pu**	**5.59**	**264**	Pn		**Pn**	**13 50 51.1**	**-0.9**
JSU	**Suzuyama**	**8.17**	**23**	Pn		**Pn**	**13 51 27.8**	**+0.4**
JNU	**Nakatsue**	**9.79**	**21**	Pn		**Pn**	**13 51 50.4**	**+0.8**
	1.8nm,0.3s,baz=345,slow=4.1,SNR=16							
JNU						Sn	**13 53 34.1**	**-4.2**
	0.5nm,0.3s,baz=26,slow=16,SNR=3.1							
JNU	**Nakatsue**	**9.79**	**21**			**Pn**	**13 51 50.3**	**+0.7**

JMN	**Monobe**	**11.55**	**31**	Pn		**Pn**	**13 52 12.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**26.41**	**263**	LR		LR	14 05 41.2	
	comp=Z,14nm,18.7s,baz=70,slow=37							
FITZ	**Fitzroy Crossi**	**41.87**	**181**	P		**P**	**13 57 18.1**	**+0.4**
	2.2nm,0.9s,baz=354,slow=9.2,SNR=4.7							
FITZ				pP		**pP**	**13 57 29.1**	**+2.0**
	1.6nm,0.7s,baz=355,slow=5.4,SNR=2.6							
FITZ	**Fitzroy Crossi**	**41.87**	**181**	P		**P**	**13 57 18.0**	**+0.2**
FITZ				IAmb		IAmb	13 57 20.8	
	comp=Z,7.8nm,1.4s							
MKAR	**Makanchi Array**	**42.00**	**314**	P		**P**	**13 57 19.6**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=105,slow=9.9,SNR=6.1							
MKAR				pP		**pwP**	**13 57 31.2**	**-3.1**
	comp=Z,0.4nm,0.5s,baz=97,slow=11,SNR=4.0							
MKAR	**Makanchi Array**	**42.00**	**314**	P		**P**	**13 57 17.1**	**-1.5**
ZALV	**Zalesovo Beam**	**43.19**	**325**	P		**P**	**13 57 30.4**	**+2.3**
	comp=Z,0.7nm,0.5s,baz=113,slow=11,SNR=2.1							
WRA	**Warramunga Arr**	**44.33**	**170**	P		**P**	**13 57 38.8**	**+1.2**
	comp=Z,3.8nm,0.7s,baz=349,slow=9.1,SNR=41							
WRA				pP		**pP**	**13 57 49.8**	**+2.7**
	comp=Z,4.3nm,0.7s,baz=352,slow=8.7,SNR=15							
WRA	**Warramunga Arr**	**44.33**	**170**	P		**P**	**13 57 38.1**	**+0.5**
WB2	**Warramunga Arr**	**44.33**	**170**	P		**P**	**13 57 38.6**	**+1.0**
WB2				IAmb		IAmb	13 57 50.7	
	comp=Z,5.9nm,0.8s							
WR0	**Warramunga Arr**	**44.38**	**169**	P		**P**	**13 57 39.2**	**+1.2**
KURBB	**Kurchatov Arra**	**45.52**	**318**	pP		pP	13 57 59.1	+2.1
	comp=Z,0.6nm,0.7s,baz=111,slow=9.2,SNR=4.1							
AS31	**Alice Springs**	**47.92**	**171**	P		**P**	**13 58 07.5**	**+1.6**
ASAR	**Alice Springs**	**47.92**	**171**	P		**P**	**13 58 07.4**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=355,slow=12,SNR=16							
ASAR				pP		**pP**	**13 58 19.4**	**+4.2**
	comp=Z,0.6nm,0.5s,baz=351,slow=8.1,SNR=4.2							
ASAR	**Alice Springs**	**47.92**	**171**	P		**P**	**13 58 06.8**	**+1.0**
AKTO	**Aktyubinsk**	**58.40**	**316**	LR		LR	14 24 49.5	
	comp=Z,29nm,18.0s,baz=357,slow=36							

NEIC ***13*** *14:07:56.0±0.3,13.°2N±0.°1×143.°7E±0.°2,h207km±14km, mb4.2/9,Error ellipse: s-maj=28.8km s-min=13.3km az=72.0*

IDC ***13*** *14:07:56.2±1.4,13.°01N×143.°44E,h185km±17km,mb3.5/5, mb1 3.7/5,mb1mx3.1/56,mbtmp4.0/5,Error ellipse: s-maj=38.5km s-min=17.2km az=97.0*

ISC 13 14:07:56.2±0.8,13.°1N±0.°1×143.°6E±0.°1,h200km,n18, σ1℘25/19,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**1.36**	**69**	P		**Pn**	**14 08 29.5**	**+0.9**
	16nm,0.3s,baz=310,slow=7.9,SNR=43							
GUMO				S		**Sn**	**14 08 53.6**	**-0.2**
	107nm,0.3s,baz=158,slow=24,SNR=18							
GUMO	**Guam**	**1.36**	**69**			**Pn**	**14 08 29.0**	**+0.3**
JCJ	**Chichijima**	**13.97**	**355**	Pn		**Pn**	**14 11 04.0**	**-1.8**
PATS	**Pohnpei**	**15.80**	**112**	P		**P**	**14 11 25.7**	**-2.4**
NACB	**Ninganchiao**	**23.51**	**301**	P		**P**	**14 12 46.6**	**-1.6**
WB0	**Warramunga Arr**	**33.90**	**196**	P		**P**	**14 14 20.7**	**+0.4**
WB0				IAmb		IAmb	14 14 21.0	
	comp=Z,3.7nm,0.6s							
WR0	**Warramunga Arr**	**34.04**	**195**	P		**P**	**14 14 21.9**	**+0.4**
WR0				IAmb		IAmb	14 14 22.4	
	comp=Z,3.0nm,0.5s							
WRAB	**Tennant Creek**	**34.07**	**196**	P		**P**	**14 14 22.1**	**+0.3**
WRAB				IAmb		IAmb	14 14 22.4	
	comp=Z,4.4nm,0.7s							
WB2	**Warramunga Arr**	**34.08**	**196**	P		**P**	**14 14 22.3**	**+0.5**
WB2				IAmb		IAmb	14 14 22.9	
	comp=Z,4.6nm,0.7s							
WRA	**Warramunga Arr**	**34.08**	**196**	P		**P**	**14 14 22.2**	**+0.3**
	comp=Z,3.7nm,0.6s,baz=16,slow=9.3,SNR=58							
WRA	**Warramunga Arr**	**34.08**	**196**	P		**P**	**14 14 21.1**	**-0.7**
FITZ	**Fitzroy Crossi**	**35.70**	**210**	P		**P**	**14 14 36.2**	**+0.5**
AS31	**Alice Springs**	**37.75**	**195**	P		**P**	**14 14 53.4**	**+0.3**
ASAR	**Alice Springs**	**37.75**	**195**	P		**P**	**14 14 53.5**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=18,slow=13,SNR=28							
STKA	**Stephens Creek**	**44.77**	**182**	P		**P**	**14 15 49.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=1.9,slow=12,SNR=2.8							
STKA	**Stephens Creek**	**44.77**	**182**	P		**P**	**14 15 48.8**	**-1.2**
KURBB	**Kurchatov Arra**	**64.17**	**320**	P		**P**	**14 18 11.0**	**+1.7**
	comp=Z,1.5nm,0.3s,baz=103,slow=6.8,SNR=9.1							
NVAR	**Mina Array Bea**	**88.21**	**51**	P		**P**	**14 20 27.8**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=282,slow=4.5,SNR=2.5							

IDC ***13*** *14:17:35.8±1.4,23.°31N×100.°49E,h0km,mb3.4/3, mb1 3.5/4,mb1mx3.2/60,mbtmp3.3/4,ML3.1/1,MS2.7/2, Ms1 2.8/2,ms1mx2.5/29,Error ellipse: s-maj=34.9km s-min=20.2km az=87.0*

ISC 13 14:17:37.5±1.5,23.°3N±0.°1×100.°6E±0.°2,h10km,n20, σ3℘23/20,mb3.5/3,Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PAYA	**Payao**	**3.97**	**189**	P		**Pg**	**14 18 51.3**	**-2.3**
	6.6nm15µm355nm,0.5s							
CM33	**Chiang Mai Arr**	**4.71**	**199**	P		**Pb**	**14 19 02.0**	**+1.9**
CMMT	**Chiang Mai**	**4.71**	**199**	P		**Pb**	**14 19 03.6**	**+3.4**
	0.2nm189nm20nm,1.0s							
CM35	**Chiang Mai Arr**	**4.78**	**196**	P		**Pb**	**14 19 04.0**	**+2.6**
CM32	**Chiang Mai Arr**	**4.89**	**199**	P		**Pg**	**14 19 08.0**	**-3.2**
CM36	**Chiang Mai Arr**	**4.95**	**196**	P		**Pg**	**14 19 09.0**	**-3.3**
CM09	**Chiang Mai Arr**	**5.05**	**197**	P		**Pg**	**14 19 11.0**	**-3.2**
	0.3nm292nm32nm,0.8s							
CM31	**Chiang Mai Arr**	**5.05**	**198**	P		**Pb**	**14 19 10.2**	**+4.2**
	4.9nm11µm1µm,0.7s							
CMAR	**Chiang Mai Arr**	**5.05**	**198**	Pn		**Pn**	**14 18 52.5**	**-0.8**
	0.2nm,0.3s,baz=13,slow=13,SNR=7.7							
CMAR				Pg		**Pb**	**14 19 08.7**	**+2.7**
	1.2nm,0.3s,baz=9.1,slow=17,SNR=47							
CMAR				Lg		Lg	14 20 14.9	
	1.1nm,0.3s,baz=11,slow=16,SNR=7.9							
CMAR				LR		LR	14 21 09.5	
	comp=Z,45nm,19.2s,baz=35,slow=42							
CM15	**Chiang Mai Arr**	**5.06**	**198**	P		**Pb**	**14 19 10.1**	**+3.9**
	0.2nm285nm31nm,0.9s							
CM02	**Chiang Mai Arr**	**5.07**	**198**	P		**Pb**	**14 19 10.0**	**+3.7**
	0.3nm295nm40nm,0.8s							
CM01	**Chiang Mai Arr**	**5.08**	**197**	P		**Pb**	**14 19 11.0**	**+4.5**
	0.5nm291nm33nm,0.9s							
CM04	**Chiang Mai Arr**	**5.09**	**197**	P		**Pb**	**14 19 10.8**	**+4.1**
	0.4nm290nm33nm,0.8s							
CM13	**Chiang Mai Arr**	**5.09**	**198**	P		**Pb**	**14 19 10.5**	**+3.8**
	0.2nm264nm27nm,0.8s							
CM05	**Chiang Mai Arr**	**5.10**	**198**	P		**Pg**	**14 19 12.1**	**-3.1**
	0.2nm283nm30nm,1.0s							
MHMT	**Maesarieng**	**5.66**	**206**	P		**Pg**	**14 19 24.3**	**-1.6**
KSRS	**Korea Array**	**27.38**	**53**	LR		LR	14 34 28.6	
	comp=Z,31nm,18.8s,baz=64,slow=37							
MKAR	**Makanchi Array**	**27.67**	**332**	P		**P**	**14 23 25.0**	**-0.6**
	0.2nm,0.6s,baz=134,slow=8.3,SNR=2.5							
WRA	**Warramunga Arr**	**54.16**	**140**	P		**P**	**14 27 03.0**	**-0.2**
	0.3nm,0.6s,baz=328,slow=8.1,SNR=4.5							
ASAR	**Alice Springs**	**56.82**	**143**	P		**P**	**14 27 22.9**	**+0.6**
	0.4nm,0.7s,baz=328,slow=7.2,SNR=5.6							

IDC ***13*** *14:26:42.3±4.2,18.°30S×169.°08E,h213km±45km,mb3.5/6, mb1 3.7/7,mb1mx3.4/35,mbtmp4.0/7,Error ellipse: s-maj=75.2km s-min=21.6km az=161.0*

ISC 13 14:26:41.1±1.2,18.°4S±0.°2×169.°1E±0.°2,h201km,n8, σ1℘72/9,mb3.7/6,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**4.43**	**214**	P		**Pn**	**14 27 50.3**	**+1.9**
	2.4nm,0.3s,baz=288,slow=5.8,SNR=57							
DZM				S		**S**	**14 28 37.9**	**-2.9**
	baz=139,slow=19,SNR=2.4							
CTA	**Charters Tower**	**21.66**	**262**	P		**P**	**14 31 17.2**	**+1.1**
	2.9nm,0.6s,baz=80,slow=11,SNR=4.2							
STKA	**Stephens Creek**	**28.21**	**236**	P		**P**	**14 32 16.0**	**+0.8**
	1.3nm,0.7s,baz=87,slow=13,SNR=3.5							
WRA	**Warramunga Arr**	**32.87**	**262**	P		**P**	**14 32 55.5**	**-0.8**
	1.0nm,0.6s,baz=86,slow=8.4,SNR=24							
ASAR	**Alice Springs**	**33.24**	**255**	P		**P**	**14 32 59.2**	**-0.2**
	6.9nm,0.5s,baz=82,slow=8.7,SNR=259							
NVAR	**Mina Array Bea**	**88.33**	**49**	P		**P**	**14 39 11.0**	**+0.7**
	0.2nm,0.5s,baz=243,slow=7.0,SNR=2.7							
ILAR	**Eielson Array**	**89.48**	**17**	P		**P**	**14 39 13.7**	**-1.1**
	0.3nm,0.5s,baz=240,slow=4.9,SNR=7.6							
ARCES	**ARCESS Array B**	**124.25**	**345**	PKP		**PKPdf**	**14 45 13.9**	**-1.3**
	10nm,1.0s,baz=26,slow=2.5,SNR=5.1							

IDC ***13*** *14:35:30.9±5.2,36.°81N×144.°19E,h0km,mb3.2/2, mb1 3.6/4,mb1mx3.3/45,mbtmp3.5/4,ML3.1/2,Error ellipse: s-maj=100.9km s-min=45.1km az=19.0*

JMA ***13*** *14:35:35.8±0.3,37.°04N×143.°82E,h56km,M3.7*

ISC 13 14:35:35.6±3.4,37.°05N±0.°09×143.°9E±0.°2,h43km±39km, n17,σ2℘18/29,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**2.29**	**304**	P		**Pn**	**14 36 11.6**	**+0.8**
JIKH				S		**Sn**	**14 36 38.1**	**+0.4**
JFK	**Kawauchi**	**2.41**	**279**	*eS*		**Sn**	**14 36 41.3**	**+0.5**
JIO	**Ouri**	**2.44**	**306**	P		**Pn**	**14 36 14.0**	**+1.1**
JIO				S		**Sn**	**14 36 42.3**	**+0.8**
ONAJ	**Iwakimizuishiy**	**2.45**	**272**	P		**Pn**	**14 36 13.7**	**+0.5**
ONAJ				*eS*		**Sn**	**14 36 42.4**	**+0.5**
JMST	**Minamisoumatoc**	**2.47**	**287**	P		**Pn**	**14 36 14.0**	**+0.7**
JMST				*eS*		**Sn**	**14 36 42.6**	**+0.4**
JMK	**Ichinoseki**	**2.83**	**313**	P		**Pn**	**14 36 19.3**	**+1.1**
JMK				*eS*		**Sn**	**14 36 51.9**	**+0.9**
JFT	**Otama**	**2.85**	**281**	P		**Pn**	**14 36 20.5**	**+1.9**
JFT				S		**Sn**	**14 36 53.5**	**+1.7**
JOM	**Ohasama**	**3.16**	**321**	P		**Pn**	**14 36 24.1**	**+1.3**
JOM				*eS*		**Sn**	**14 36 59.3**	**+0.1**
JAG	**Ashikaga**	**3.60**	**261**	P		**Pn**	**14 36 29.8**	**+1.0**
JAG				*eS*		**Sn**	**14 37 10.4**	**+0.2**
JRY	**Ryogami san**	**4.13**	**257**	P		**Pn**	**14 36 36.6**	**+0.5**
JRY				*eS*		**Sn**	**14 37 22.6**	**-0.6**
MJAR	**Matsushiro Arr**	**4.57**	**265**	Pn		**Pn**	**14 36 44.0**	**+1.8**
	0.2nm,0.3s,baz=87,slow=14,SNR=6.7							
JHJ2	**Mitsune**	**5.14**	**221**	P		**Pn**	**14 36 49.9**	**-0.1**
JHJ	**Hachijo jima 2**	**5.15**	**222**	Pn		**Pn**	**14 36 49.8**	**-0.4**
	10nm,0.3s,baz=2.6,slow=20,SNR=5.2							
JHJ						Sn	**14 37 41.1**	**-7.2**
	13nm,0.3s,baz=90,slow=20,SNR=2.9							
JCH	**Churui**	**5.58**	**356**	P		**Pn**	**14 36 55.1**	**-0.9**
JCH				*eS*		**Sn**	**14 37 54.0**	**-4.7**
JTKR	**Abashiri--Toko**	**6.92**	**0**	P		**Pn**	**14 37 13.0**	**-1.4**
JTKR				*eS*		**Sn**	**14 38 27.0**	**-4.7**
WRA	**Warramunga Arr**	**57.39**	**191**	P		**P**	**14 45 19.5**	**-0.2**
	0.2nm,0.6s,baz=8.9,slow=7.5,SNR=4.5							
ASAR	**Alice Springs**	**61.11**	**190**	P		**P**	**14 45 45.9**	**+0.4**
	0.2nm,0.8s,baz=6.8,slow=7.3,SNR=3.4							

IDC ***13*** *14:56:23.9±1.6,18.°01S×178.°19W,h541km±20km,mb3.3/6, mb1 3.5/8,mb1mx3.1/36,mbtmp4.2/8,Error ellipse: s-maj=87.6km s-min=12.9km az=149.0*

NEIC ***13*** *14:56:24±1.0,18.°3S±0.°2×177.°

	comp=N,6μm,0.1s							
EVGI	**Lefkada island**	**0.27**	**37**	P	**Pg**	**15 10 36.2**	**+0.4**
EVGI				S	**Sg**	**15 10 40.4**	**+0.4**
EVGI	**Lefkada island**	**0.27**	**37**	P	**Pg**	**15 10 36.2**	**+0.4**
EVGI				S	**Sg**	**15 10 40.4**	**+0.4**
	comp=N,485nm,0.1s							
PSDA	**Pessada-Kefalo**	**0.31**	**159**	P	**Pg**	**15 10 36.4**	**+0.1**
PSDA				S	**Sg**	**15 10 40.9**	**0.0**
PSDA	**Pessada-Kefalo**	**0.31**	**159**	P	**Pg**	**15 10 36.4**	**+0.1**
PSDA				S	**Sg**	**15 10 41.2**	**+0.4**
NYDR	**Nydri-Lefkada**	**0.37**	**32**	P	**Pg**	**15 10 37.7**	**+0.3**
NYDR				S	**Sg**	**15 10 43.2**	**+0.5**
	comp=N,502nm,0.4s							
MGNA	**Meganis**	**0.37**	**46**	P	**Pg**	**15 10 37.5**	**+0.1**
LKD2	**Lefkada island**	**0.42**	**23**	P	**Pg**	**15 10 38.5**	**+0.2**
LKD2				S	**Sg**	**15 10 45.1**	**+0.9**
LKD2				AML	AML	15 10 50.1	
	comp=N,627μm,0.2s							
LKD2				AML	AML	15 10 50.4	
	comp=E,638μm,0.2s							
LKD2	**Lefkada island**	**0.42**	**23**	P	**Pg**	**15 10 38.5**	**+0.2**
LKD2				S	**Sb**	**15 10 45.5**	**+0.8**
	comp=E,175nm,0.3s							
TSLK	**Tsoukalades, L**	**0.45**	**21**	P	**Pg**	**15 10 39.4**	**+0.5**
TSLK				S	**Sb**	**15 10 46.4**	**+0.9**
TSLK				AML	AML	15 10 48.5	
	comp=E,642μm,0.3s							
TSLK				AML	AML	15 10 49.1	
	comp=N,556μm,0.4s							
TSLK	**Tsoukalades, L**	**0.45**	**21**	P	**Pg**	**15 10 39.4**	**+0.5**
TSLK				S	**Sb**	**15 10 46.5**	**+0.9**
	comp=N,252nm,0.4s							
VLMS	**Volimes, Zakyn**	**0.55**	**162**	P	**Pg**	**15 10 40.7**	**-0.1**
VLMS				S	**Sb**	**15 10 48.8**	**+0.6**
VLMS	**Volimes, Zakyn**	**0.55**	**162**	P	**Pg**	**15 10 40.6**	**-0.1**
VLMS				S	**Sb**	**15 10 49.1**	**+0.9**
	comp=N,292nm,0.3s							
PDO	**Prodromos**	**0.61**	**71**	P	**Pg**	**15 10 41.9**	**+0.1**
RLS	**Riolos of Patr**	**0.87**	**113**	P	**Pg**	**15 10 46.4**	**-0.3**
RLS	**Riolos of Patr**	**0.87**	**113**	P	**Pg**	**15 10 46.4**	**-0.3**
DRO	**Drossia**	**1.09**	**114**	P	**Pb**	**15 10 50.5**	**+0.4**
DRO	**Drossia**	**1.09**	**114**	P	**Pb**	**15 10 50.4**	**+0.4**
EFP	**Efpalio**	**1.15**	**88**	P	**Pb**	**15 10 51.0**	**+0.1**
ANX	**Ano Chora**	**1.17**	**80**	P	**Pn**	**15 10 52.0**	**+0.8**
ANX				S	**Sb**	**15 11 06.7**	**+0.5**
ANX				AML	AML	15 11 14.4	
	comp=E,405μm,0.6s							
ANX				AML	AML	15 11 14.6	
	comp=N,559μm,0.5s							
TRIZ	**Trizonia**	**1.28**	**91**	P	**Pn**	**15 10 53.1**	**+0.5**
KLV	**Kalavryta, Ach**	**1.39**	**104**	P	**Pn**	**15 10 54.8**	**+0.6**
GUR	**Goura**	**1.56**	**107**	P	**Pb**	**15 10 58.0**	**-0.1**
GUR				S	**Sb**	**15 11 18.5**	**+0.9**
LSTV	**Lastovo**	**5.13**	**329**	Sn	**Sn**	**15 12 41.3**	**-3.0**
KIJV	**Kijevo**	**6.37**	**333**	*e*Pn	**Pn**	**15 12 04.6**	**+1.9**
KIJV				Sn	**Sn**	**15 13 13.0**	**-1.9**
MORI	**Morici**	**6.53**	**328**	*e*Pn	**Pn**	**15 12 06.0**	**+1.3**
MORI				Sn	**Sn**	**15 13 14.4**	**-4.3**
DUGI	**Dugi Otok**	**6.91**	**326**	Sn	**Sn**	**15 13 25.3**	**-2.7**

*IDC **13** 15:11:10.5±1.4,23°.29N×100°.47E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/36, mbtmp3.3/4, ML3.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/39, Error ellipse: s-maj=33.3km s-min=20.1km az=86.0*

ISC 13 15:11:10.4±0.8, 23°.32N±0°.06×100°.6E±0°.1, h10km±n39, σ2s98/40, mb3.5/3, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAYA	**Payao**	**3.99**	**190**	P	**Pb**	**15 12 23.1**	**+2.2**
PAYA	**Payao**	**3.99**	**190**	P	**Pg**	**15 12 27.8**	**+0.9**
PAYA				Sg	**Sg**	**15 13 14.8**	**-3.9**
CM34	**Chiang Mai Arr**	**4.64**	**197**	P	**Pg**	**15 12 38.7**	**-0.6**
CM33	**Chiang Mai Arr**	**4.73**	**199**	P	**Pg**	**15 12 37.0**	**-4.0**
CM33	**Chiang Mai Arr**	**4.73**	**199**	P	**Pg**	**15 12 37.4**	**-3.6**
CMMT	**Chiang Mai**	**4.73**	**199**	P	**Pg**	**15 12 37.5**	**-3.5**
	302nm24nm,1.1s						
CMMT	**Chiang Mai**	**4.73**	**199**	P	**Pg**	**15 12 37.4**	**-3.7**
CM35	**Chiang Mai Arr**	**4.80**	**196**	P	**Pg**	**15 12 41.2**	**-1.3**
LAMP	**Lampang**	**4.85**	**191**	P	**Pg**	**15 12 44.7**	**+1.4**
LAMP	**Lampang**	**4.85**	**191**	P	**Pg**	**15 12 44.3**	**+1.0**
CM32	**Chiang Mai Arr**	**4.91**	**199**	P	**Pg**	**15 12 42.7**	**-1.8**
CM36	**Chiang Mai Arr**	**4.97**	**196**	P	**Pg**	**15 12 42.0**	**-3.7**
CM36	**Chiang Mai Arr**	**4.97**	**196**	P	**Pg**	**15 12 44.6**	**-1.1**
CM09	**Chiang Mai Arr**	**5.07**	**197**	P	**Pg**	**15 12 46.2**	**-1.3**
	369nm38nm,0.8s						
CM09	**Chiang Mai Arr**	**5.07**	**197**	P	**Pg**	**15 12 46.2**	**-1.3**
CM31	**Chiang Mai Arr**	**5.07**	**198**	P	**Pg**	**15 12 44.4**	**-3.1**
	18μm2μm,1.0s						
CM31	**Chiang Mai Arr**	**5.07**	**198**	P	**Pg**	**15 12 45.2**	**-2.4**
CMAR	**Chiang Mai Arr**	**5.07**	**198**	Pn	**Pn**	**15 12 27.1**	**+0.6**
	0.3nm,0.3s,baz=11,slow=13,SNR=7.9						
CMAR				Pg	**Pb**	**15 12 42.9**	**+3.6**
	2.8nm,0.3s,baz=8.6,slow=16,SNR=46						
CMAR				Lg	Lg	15 13 48.5	
	2.3nm,0.3s,baz=13,slow=16,SNR=4.1						
CMAR				LR	LR	15 14 35.7	
	comp=Z,44nm,19.1s,baz=315,slow=41						
CM15	**Chiang Mai Arr**	**5.08**	**198**	P	**Pg**	**15 12 44.1**	**-3.6**
	365nm38nm,0.8s						
CM15	**Chiang Mai Arr**	**5.08**	**198**	P	**Pg**	**15 12 45.0**	**-2.7**
CM02	**Chiang Mai Arr**	**5.09**	**198**	P	**Pg**	**15 12 44.1**	**-3.8**
	413nm48nm,0.8s						
CM02	**Chiang Mai Arr**	**5.09**	**198**	P	**Pg**	**15 12 44.2**	**-3.8**
CM01	**Chiang Mai Arr**	**5.10**	**197**	P	**Pg**	**15 12 45.2**	**-2.9**
	302nm44nm,0.8s						
CM01	**Chiang Mai Arr**	**5.10**	**197**	P	**Pg**	**15 12 46.6**	**-1.5**
CM04	**Chiang Mai Arr**	**5.11**	**197**	P	**Pg**	**15 12 45.0**	**-3.4**
	355nm39nm,0.7s						
CM04	**Chiang Mai Arr**	**5.11**	**197**	P	**Pg**	**15 12 47.2**	**-1.2**
CM13	**Chiang Mai Arr**	**5.11**	**198**	P	**Pg**	**15 12 45.0**	**-3.5**
	334nm35nm,0.8s						
CM13	**Chiang Mai Arr**	**5.11**	**198**	P	**Pg**	**15 12 44.5**	**-3.9**
CM05	**Chiang Mai Arr**	**5.12**	**198**	P	**Pg**	**15 12 45.0**	**-3.6**
	322nm34nm,0.8s						
CM05	**Chiang Mai Arr**	**5.12**	**198**	P	**Pb**	**15 12 43.6**	**+3.5**
MHMT	**Maesarieng**	**5.68**	**206**	P	**Pg**	**15 12 58.2**	**-1.1**
GYA	**Guiyang**	**6.36**	**59**	*e*Pn	Pb	15 12 54.4	-6.8
GYA				Pg	Pg	15 13 25.8	+14
GYA				Sn	**Sb**	**15 14 12.3**	**-5.1**
GYA				Sg	Sg	15 14 52.5	+18
GYA				smax	smax		
	comp=N,13nm,1.3s						
GYA				smax	smax		
	comp=E,13nm,1.1s						
GYA				LR	LR		
	comp=N,150nm,4.0s						
GYA				LR	LR		
	comp=E,110nm,3.8s						
GYA				LR	LR		
	comp=Z,130nm,4.6s						
CD2	**Chengdu**	**8.08**	**20**	Pg	**Pg**	**15 13 42.6**	**-2.5**
CD2				Sg	**Sg**	**15 15 34.8**	**+5.1**
CD2				smax	smax		
	comp=N,50nm,1.5s						
CD2				smax	smax		
	comp=E,60nm,1.8s						
WMQ	**Urumqi**	**23.04**	**336**	*e*P	**P**	**15 16 13.6**	**-2.2**
SONM	**Songino Array**	**24.91**	**9**	LR	LR	15 27 46.8	
	comp=E,32nm,20.5s,baz=56,slow=40						
MKAR	**Makanchi Array**	**27.66**	**332**	P	**P**	**15 16 59.6**	**+1.2**
	comp=E,0.4nm,0.7s,baz=156,slow=7.4,SNR=3.3						
ZALV	**Zalesovo Beam**	**32.81**	**343**	LR	LR	15 30 58.3	
	comp=E,19nm,19.0s,baz=46,slow=36						
WRA	**Warramunga Arr**	**54.16**	**140**	P	**P**	**15 20 38.0**	**+1.8**
	comp=E,0.4nm,0.7s,baz=329,slow=8.1,SNR=4.2						
ASAR	**Alice Springs**	**56.83**	**143**	P	**P**	**15 20 57.6**	**+2.3**
	comp=E,0.4nm,0.8s,baz=333,slow=8.0,SNR=3.7						

*JSN **13** 15:17:23.9±0.5, 19°.74N×76°.36W, h12km±13km, MD3.2*
*SSNC **13** 15:17:23.8±1.3, 19°.70N×76°.33W, h2km±8km, MD3.0, ML2.5, MW2.7*

ISC 13 15:17:22.9±1.2, 19°.70N±0°.06×76°.33W±0°.03, h15km±11km, n12, σ0s73/18, 2C-4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCC	**Rio Carpintero**	**0.66**	**64**	⇓*i*P	**Pg**	**15 17 36.3**	**+0.3**
RCC				*e*S	**Sg**	**15 17 45.8**	**+1.1**
RCC				IAML		15 17 46.8	
	comp=N,104nm,0.2s						
RCC				IAML		15 17 48.0	
	comp=E,76nm,0.1s						
LMGC	**Las Mercedes**	**0.73**	**300**	*e*P	**Pg**	**15 17 36.9**	**-0.3**
LMGC				*e*S	**Sg**	**15 17 46.4**	**-0.5**
LMGC				IAML		15 17 46.7	
	comp=N,624nm,0.1s						
LMGC				IAML		15 17 47.0	
	comp=E,296nm,0.1s						
GTBY	**Guantanamo Bay**	**1.17**	**79**	⇓*i*P	**Pg**	**15 17 44.8**	**-0.7**
GTBY				*i* S	**Sg**	**15 18 00.2**	**-0.6**
GTMO	**Guantanamo**	**1.18**	**71**	*e*P	**Pg**	**15 17 45.4**	**-0.3**
GTMO				*e*S	**Sg**	**15 18 01.8**	**+0.6**
GTMO				IAML		15 18 08.1	
	comp=E,410nm,0.5s						
GTMO				IAML		15 18 10.2	
	comp=N,562nm,0.4s						
BNJ	**Bonny Gate**	**1.49**	**203**	*i* P	**Pn**	**15 17 49.5**	**+0.3**
BBJ	**Bamboo Saint A**	**1.58**	**214**	⇑*i*P	**Pn**	**15 17 50.6**	**+0.1**
MOAC	**Moa**	**1.60**	**53**	*e*P	**Pn**	**15 17 51.4**	**+0.7**
MOAC				*e*S	**Sn**	**15 18 12.0**	**+0.9**
MOAC				IAML		15 18 16.2	
	comp=N,26nm,0.3s						
MOAC				IAML		15 18 21.2	
	comp=E,32nm,0.4s						
STH	**Stony Hill**	**1.68**	**196**	⇓*i*P	**Pn**	**15 17 51.8**	**0.0**
MTDJ	**Mount Denham**	**1.86**	**218**	⇑*i*P	**Pn**	**15 17 54.5**	**+0.1**
CCCC	**Cccc**	**2.01**	**318**	*e*P	Pn	15 17 53.6	-2.7
CCCC				*e*S	Sn	15 18 15.2	-6.0
CCCC				IAML		15 18 21.0	
	comp=E,17nm,0.2s						
CCCC				IAML		15 18 22.1	
	comp=N,20nm,0.3s						
MASC	**Masc**	**2.03**	**76**	*e*P	**Pn**	**15 17 55.9**	**-0.7**
MASC				*e*S	**Sn**	**15 18 20.3**	**-1.4**
MASC				IAML		15 18 27.2	
	comp=N,11nm,0.2s						
MASC				IAML		15 18 27.9	
	comp=E,17nm,0.2s						
PCJ	**Portland Cotta**	**2.10**	**202**	⇓*i*P	**Pn**	**15 17 58.3**	**+0.7**
PCJ				*i* S	**Sn**	**15 18 23.7**	**+0.3**

*IDC **13** 15:25:31.8±1.2, 13°.00N×122°.35E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/52, mbtmp3.7/6, MS3.2/8, Ms1 3.3/8, ms1mx2.9/44, Error ellipse: s-maj=42.1km s-min=12.2km az=52.0*
*MAN **13** 15:25:33.5, 13°.23N×122°.35E, h5km, mb4.8, ML3.7, MS3.6*
MAN Intensity III - Boac, Marinduque.

ISC 13 15:25:33.7±1.2, 13°.23N±0°.03×122°.41E±0°.03, h6km±9km, n43, σ2s92/54, mb3.8/12, MS3.4/6, 3C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.59**	**292**	*e*P	**Pg**	**15 25 44.8**	**-0.3**
BOAC				*e*S	**Sg**	**15 25 53.6**	**+0.8**
GQP	**Guinayangan**	**0.67**	**3**	⇑*e*P	**Pg**	**15 25 46.2**	**-0.4**
GQP				*e*S	**Sg**	**15 25 55.0**	**-0.3**
OTRP	**Odiongan**	**0.94**	**204**	*e*P	**Pg**	**15 25 51.5**	**-0.3**
JCNP	**Jose Panganiba**	**1.09**	**15**	*e*P	**Pg**	**15 25 54.1**	**-0.5**
JCNP				*e*S	**Sn**	**15 26 09.6**	**-1.3**
SCSP	**San Jose Seism**	**1.16**	**69**	*e*P	**Pn**	**15 25 56.2**	**-0.3**
SCSP				*e*S	**Sn**	**15 26 14.7**	**+2.0**
LQP	**Lukban**	**1.21**	**316**	*e*P	**Pn**	**15 25 54.7**	**-2.8**
LQP				*i* S	**Sb**	**15 26 12.4**	**-0.9**
PGP	**Puerto Galera**	**1.44**	**281**	⇑*e*P	**Pn**	**15 25 59.2**	**-1.2**
PGP				*e*S	**Sn**	**15 26 18.1**	**-1.6**
SJMP	**San Jose**	**1.47**	**239**	*e*P	**Pn**	**15 26 00.2**	**-0.6**
SJMP				*e*S	**Sn**	**15 26 20.3**	**-0.1**
POLP	**Polilio Island**	**1.55**	**343**	*e*P	**Pn**	**15 26 01.1**	**-0.8**
POLP				*e*S	**Sg**	**15 26 23.3**	**-0.3**
TGY	**Tagaytay City**	**1.67**	**301**	Pn	**Pn**	**15 26 03.9**	**+0.2**
	373nm,0.3s,baz=160,slow=3.4,SNR=28						
TGY				Lg	Lg	15 26 26.6	
	317nm,0.3s,baz=167,slow=19,SNR=37						
TGY	**Tagaytay City**	**1.67**	**301**	⇑*i*P	**Pn**	**15 26 04.0**	**+0.4**
TGY				*i* S	**Sn**	**15 26 24.7**	**-0.8**
PVCP	**Virac**	**1.74**	**78**	*e*P	**Pb**	**15 26 05.2**	**-0.8**
PVCP				*e*S	**Sg**	**15 26 29.0**	**-0.6**
LUBP	**Lubang**	**2.16**	**284**	*e*P	**Pn**	**15 26 09.1**	**-1.2**
LUBP				*e*S	**Sn**	**15 26 36.9**	**-0.6**
CNP	**Catarman**	**2.31**	**108**	*e*P	**Pn**	**15 26 11.5**	**-0.9**
CNP				*e*S	**Sg**	**15 26 49.1**	**+1.0**
BUSP	**Coron**	**2.48**	**241**	*e*P	**Pn**	**15 26 13.8**	**-0.8**
BUSP				*e*S	**Sn**	**15 26 43.0**	**-2.3**
GUIM	**Jordan**	**2.60**	**176**	*e*P	**Pn**	**15 26 16.4**	**+0.1**
GUIM				*e*S	**Sn**	**15 26 49.1**	**+0.9**
BALP	**Baler**	**2.62**	**342**	*e*P	**Pn**	**15 26 17.0**	**+0.4**
BALP				*e*S	**Sn**	**15 26 49.4**	**+0.6**
SMPP	**San Manuel, Pa**	**3.35**	**330**	*e*P	**Pn**	**15 26 27.3**	**+0.7**
SMPP				*e*S	**Sn**	**15 27 03.3**	**-3.5**
ENPP	**El Nido**	**3.54**	**236**	*e*P	**Pn**	**15 26 28.6**	**-0.8**
ENPP				*e*S	**Sn**	**15 27 08.8**	**-2.9**
APYP	**Conner**	**4.74**	**346**	*e*P	**Pn**	**15 26 45.8**	**+0.1**
APYP				*e*S	**Sn**	**15 27 36.6**	**-4.5**
SIJI	**Sorong**	**16.54**	**147**	LR	LR	15 36 54.0	
	comp=Z,40nm,19.6s,baz=201,slow=42						
KAPI	**Kappang**	**18.32**	**188**	LR	LR	15 37 17.6	
	comp=Z,41nm,19.0s,baz=29,slow=39						
CHAI	**Chaiyaphum**	**19.94**	**280**	P	**Pn**	**15 30 12.9**	**+4.6**
	15nm,1.3s						
GUMO	**Guam**	**21.85**	**86**	LR	LR	15 37 02.0	
	comp=Z,24nm,21.1s,baz=70,slow=32						
PAYA	**Payao**	**22.46**	**289**	P	**P**	**15 30 39.6**	**+5.7**
	121nm,0.8s						
CM35	**Chiang Mai Arr**	**22.99**	**287**	P	**P**	**15 30 46.5**	**+7.0**
CM36	**Chiang Mai Arr**	**23.02**	**286**	P	**P**	**15 30 44.0**	**+4.2**
CM09	**Chiang Mai Arr**	**23.11**	**286**	P	**P**	**15 30 46.5**	**+5.8**
	4.9nm,1.2s						
CM04	**Chiang Mai Arr**	**23.11**	**286**	P	**P**	**15 30 46.0**	**+5.3**
	3.9nm,1.4s						
CM01	**Chiang Mai Arr**	**23.13**	**286**	P	**P**	**15 30 47.0**	**+6.1**
	4.1nm,1.1s						
CM02	**Chiang Mai Arr**	**23.14**	**286**	P	**P**	**15 30 46.8**	**+5.7**
	5.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**23.15**	**286**	P	**P**	**15 30 40.6**	**-0.5**
	0.7nm,0.6s,baz=106,slow=8.6,SNR=7.5						
CM15	**Chiang Mai Arr**	**23.17**	**286**	P	**P**	**15 30 46.5**	**+5.2**
	56nm4.7nm,0.9s						
CM13	**Chiang Mai Arr**	**23.18**	**286**	P	**P**	**15 30 47.0**	**+5.6**
BATI	**Baumata**	**23.32**	**177**	P	**P**	**15 30 37.5**	**-5.4**
	13nm,0.7s,baz=79,slow=5.2,SNR=2.6						
WRA	**Warramunga Arr**	**35.00**	**160**	P	**P**	**15 32 24.4**	**-2.8**
	0.6nm,1.0s,baz=342,slow=9.4,SNR=5.8						
SONM	**Songino Array**	**36.99**	**342**	P	**P**	**15 32 44.2**	**0.0**
	0.6nm,0.8s,baz=146,slow=10,SNR=3.7						
SONM				LR	LR	15 49 33.6	
	comp=Z,53nm,18.3s,baz=175,slow=39						
ASAR	**Alice Springs**	**38.36**	**163**	P	**P**	**15 32 53.9**	**-2.0**
	1.0nm,0.9s,baz=349,slow=7.5,SNR=7.6						
TLY	**Talaya**	**41.23**	**342**	LR	LR	15 50 42.5	
	comp=Z,53nm,18.6s,baz=127,slow=36						
MKAR	**Makanchi Array**	**47.40**	**323**	P	**P**	**15 34 09.6**	**+0.7**
	0.3nm,0.7s,baz=134,slow=10,SNR=2.7						
ZALV	**Zalesovo Beam**	**50.24**	**332**	LR	LR	15 54 59.5	
	comp=Z,20nm,18.1s,baz=56,slow=35						
ARCES	**ARCESS Array B**	**80.11**	**339**	LR	LR	16 15 44.9	
	comp=Z,40nm,18.1s,baz=275,slow=38						
NOA	**NORSAR Array B**	**88.43**	**333**	LR	LR	16 20 50.8	
	comp=Z,30nm,19.0s,baz=290,slow=38						

IDC 13 15:26:31.8±5.2, 18°.26S×175°.53W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/49, mbtmp3.9/4, Error ellipse: s-maj=104.4km s-min=51.7km az=66.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**20.94**	**196**	P	P	15 31 16.2	+0.1
	15nm,1.1s,baz=103,slow=14,SNR=8.1						
STKA	**Stephens Creek**	**40.88**	**242**	P	P	15 34 16.2	+0.4
	1.5nm,0.8s,baz=103,slow=14,SNR=3.0						
WRA	**Warramunga Arr**	**47.26**	**259**	P	P	15 35 07.5	+0.2
	0.4nm,0.7s,baz=97,slow=7.5,SNR=15						
ASAR	**Alice Springs**	**47.34**	**254**	P	P	15 35 06.8	-1.0
	0.7nm,0.5s,baz=93,slow=8.1,SNR=23						
ASAR				PcP	PcP	15 36 38.5	-0.3
	0.4nm,1.0s,baz=101,slow=4.8,SNR=2.2						

*NIED **13** 15:56:36.2, 36°.70N×140°.63E, h5km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=2.59; $M_{\theta\theta}$=0.82; $M_{\phi\phi}$=1.77; $M_{r\theta}$=0.32; $M_{\theta\phi}$=0.86; $M_{\phi r}$=0.13; Fault plane solution: M_o2.45000×10^{14} NP1: ϕ_s143.00000°, δ46.00000°, λ-99.00000°. NP2: ϕ_s336.00000°, δ45.00000°, λ-80.00000°.*
*JMA **13** 15:56:36.2, 36°.70N×140°.63E, h5km±1km, M3.5*
JMA Felt I J1.
*NEIC **13** 15:56:39.3±2.7, 36°.77N±0°.05×140°.78E±0°.10, h40km±9km, mb4.5/5, Error ellipse: s-maj=11.5km s-min=6.1km az=107.0*
*IDC **13** 15:56:40.5±4.7, 36°.77N×140°.64E, h47km±41km, mb3.5/3, mb1 3.8/4, mb1mx3.4/42, mbtmp3.9/4, ML3.4/1, MS2.2/1, Ms1 2.2/1, ms1mx2.0/47, Error ellipse: s-maj=42.3km s-min=21.1km az=50.0*

ISC 13 15:56:35.2±1.3, 36°.77N±0°.04×140°.65E±0°.04, h1km±9km, n40, σ1s38/42, mb4.1/6, 5C-1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.17**	**201**	⇑P	**Pg**	**15 56 38.3**	**-0.2**
JHO				S	**Sg**	**15 56 40.0**	**-0.8**
JFFD	**Fukushimafurud**	**0.32**	**348**	⇓P	**Pb**	**15 56 44.0**	**+0.2**
JFFD				S	**Sb**	**15 56 49.3**	**-0.2**
ONAJ	**Iwakimizuishiy**	**0.35**	**21**	⇑P	**Pb**	**15 56 44.6**	**+0.3**
ONAJ				S	**Sb**	**15 56 50.8**	**+0.5**
JHYU	**Hitachinakayam**	**0.43**	**186**	⇑P	**Pg**	**15 56 43.3**	**-0.2**
JHYU				S	**Sg**	**15 56 48.6**	**-0.5**
JSB	**Shiboa**	**0.61**	**289**	P	**Pb**	**15 56 49.1**	**+0.4**
JSB				S	**Sb**	**15 56 58.0**	**+0.1**
JFK	**Kawauchi**	**0.62**	**17**	⇑P	**Pb**	**15 56 49.4**	**+0.5**
JFK				S	**Sb**	**15 56 58.8**	**+0.7**
JYT	**Yasato**	**0.66**	**214**	⇑P	**Pg**	**15 56 47.3**	**-0.4**
JYT				S	**Sg**	**15 56 55.7**	**-0.5**
JMM	**Marumori**	**1.10**	**6**		**Pn**	**15 56 57.6**	**-0.1**
JMM				Sn	**Sn**	**15 57 12.7**	**-0.8**
MJAR	**Matsushiro Arr**	**1.97**	**264**	P	**Pn**	**15 57 09.9**	**+0.2**
	2.4nm,0.3s,baz=82,slow=13,SNR=92						
MJAR				S	**Sn**	**15 57 34.8**	**-0.4**
	8.8nm,0.3s,baz=104,slow=29,SNR=26						
MJAR				LR	LR	15 58 18.6	
	comp=Z,39nm,20.8s,baz=50,slow=50						
MJAR	**Matsushiro Arr**	**1.97**	**264**		**Pn**	**15 57 09.2**	**-0.6**
MAJO	**Matsushiro**	**1.97**	**264**		**Pn**	**15 57 10.6**	**+0.8**
MAJO				Sn	**Sb**	**15 57 36.4**	**-0.6**
MAT	**Matsushiro**	**1.97**	**264**	P	**Pn**	**15 57 10.2**	**+0.4**
MAT				S	**Sn**	**15 57 36.3**	**+1.2**
MJB9	**Matsu-Tunnel**	**1.98**	**264**	Pn	**Pg**	**15 57 13.0**	**-0.1**
JSD	**Sado**	**2.28**	**304**		**Pb**	**15 57 16.7**	**-0.5**
JGF	**Kuroka**	**2.91**	**247**		**Pn**	**15 57 25.0**	**+2.4**
INU	**Inuyama**	**3.27**	**245**		**Pn**	**15 57 30.0**	**+2.5**
JHJ	**Hachijo jima 2**	**3.71**	**191**	P	**Pn**	**15 57 36.5**	**+2.9**
	8.9nm,0.3s,baz=50,slow=18,SNR=2.4						
JHJ				S	**Sn**	**15 58 15.6**	**-2.5**
	10nm,0.3s,baz=107,slow=19,SNR=2.6						
JHJ2	**Mitsune**	**3.72**	**191**		**Pn**	**15 57 34.6**	**+0.9**
JTM	**Tenmabayashi**	**4.02**	**5**	Pn	**Pn**	**15 57 41.1**	**+3.3**
JWT	**Wachi**	**4.50**	**252**	Pn	**Pn**	**15 57 45.4**	**+0.9**
JMN	**Monobe**	**6.31**	**243**	Pn	**Pn**	**15 58 13.8**	**+4.3**
JHS	**Saijyo**	**6.36**	**256**	Pn	**Pn**	**15 58 12.0**	**+1.9**
KSRS	**Korea Array**	**10.18**	**278**	LR	LR	16 03 08.1	
	comp=Z,12nm,20.4s,baz=80,slow=38						
H11N2	**WAKE ISLAND Hy**	**28.55**	**119**	T	T	16 32 14.5	
	baz=312,slow=75,SNR=41						
H11N1	**WAKE ISLAND Hy**	**28.56**	**119**	T	T	16 32 15.1	
	baz=312,slow=75,SNR=56						
H11N3	**WAKE ISLAND Hy**	**28.57**	**119**	T	T	16 32 16.3	
	baz=312,slow=75,SNR=53						
H11S1	**WAKE ISLAND Hy**	**29.24**	**121**	T	T	16 33 06.7	
	baz=314,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**29.24**	**121**	T	T	16 33 06.5	
	baz=314,slow=76,SNR=65						
H11S2	**WAKE ISLAND Hy**	**29.26**	**121**	T	T	16 33 07.2	
	baz=314,slow=76,SNR=60						
ZALV	**Zalesovo Beam**	**41.64**	**313**	P	**P**	**16 04 24.0**	**-0.7**
	1.3nm,0.6s,baz=95,slow=6.2,SNR=5.5						
KURK	**Kurchatov**	**45.61**	**308**	P	**P**	**16 04 56.1**	**-0.7**
KURK				IAmb	IAmb	16 04 56.9	
	comp=Z,2.9nm,0.8s						
ILAR	**Eielson Array**	**50.04**	**32**	P	P	16 05 25.3	-5.7
WR0	**Warramunga Arr**	**56.72**	**187**	P	**P**	**16 06 20.8**	**+0.3**
WR0				IAmb	IAmb	16 06 34.4	
	comp=Z,7.0nm,1.4s						
WB2	**Warramunga Arr**	**56.72**	**187**	P	**P**	**16 06 20.0**	**-

PYZ				S	Sn	16 06 47.9	+0.4	
WKZ	**Wanaka**	**1.36**	**72**	P	Pn	16 06 40.5	+0.5	
WKZ				S	Sn	16 06 57.8	+1.0	
EAZ	**Earnscleugh**	**1.49**	**90**	P	Pn	16 06 42.2	+0.5	
EAZ				S	Sn	16 06 59.9	-0.1	
JCZ	**Jackson Bay**	**1.64**	**44**	P	Pn	16 06 43.0	-0.8	
APZ	**The Paps**	**1.67**	**161**	P	Pn	16 06 43.9	-0.3	
TUZ	**Tuapeka**	**1.85**	**113**	P	Pn	16 06 46.6	+0.1	
SYZ	**Scrubby Hill**	**1.87**	**134**	P	Pn	16 06 46.6	-0.3	
LBZ	**Lake Benmore**	**2.30**	**69**	P	Pn	16 06 51.7	-1.1	
ODZ	**Otahua Downs**	**2.45**	**86**	P	Pn	16 06 54.0	-0.8	
FOZ	**Fox Glacier**	**2.55**	**48**	P	Pn	16 06 55.2	-1.0	
ARCZ	**Arundel**	**3.13**	**67**	P	Pn	16 07 02.0	-2.2	
RPZ	**Rata Peaks**	**3.16**	**62**	P	Pn	16 07 02.6	-2.0	
WACZ	**Wakanui South**	**3.57**	**70**	P	Pn	16 07 08.0	-2.1	
MHCZ	**Mount Hutt**	**3.58**	**63**	P	Pn	16 07 07.8	-2.6	
OXZ	**Oxford**	**3.98**	**63**	P	Pn	16 07 12.6	-3.2	
MQZ	**McQueen's Vall**	**4.20**	**70**	P	Pn	16 07 16.3	-2.6	
LTZ	**Lake Taylor**	**4.42**	**58**	P	Pn	16 07 18.8	-3.1	
ALRZ	**Allen Road**	**9.54**	**49**	P	Pn	16 08 30.4	-1.8	

IDC ***13*** *16:08:25.5±18.0, 19°40′S×177°29′W, h520km±158km, mb3.0/4, mb1 3.2/5, mb1mx2.9/33, mbtmp4.0/5, Error ellipse: s-maj=169.7km s-min=30.6km az=42.0*
NEIC ***13*** *16:08:29.6±1.6, 19°1.5′S±0.2′×177°26′W±0.09, h596km±12km, mb4.4/17, Error ellipse: s-maj=26.3km s-min=10.8km az=164.0*

ISC 13 16:08:27.3±1.0**, 19°4.5′S±0.2′×177°2′W±0.2′, h550km, n17, σ1ᵗ58/21, mb4.1**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.84**	**289**	**P**	**P**	**16 09 59.2**	**+3.3**
URZ	**Urewera**	**19.48**	**194**	**P**	**P**	**16 12 17.5**	**-1.0**
	0.5nm,0.3s,baz=323,slow=15,SNR=3.3						
URZ	**Urewera**	**19.48**	**194**	P	**P**	**16 12 18.0**	**-0.5**
XMAS	**Kiritimati**	**28.76**	**44**	P	**P**	**16 13 40.2**	**-1.1**
CTA	**Charters Tower**	**34.41**	**263**	P	**P**	**16 14 28.8**	**-0.7**
	3.8nm,1.1s,baz=107,slow=14,SNR=2.6						
STKA	**Stephens Creek**	**39.01**	**243**	P	**P**	**16 15 06.1**	**-0.9**
	1.6nm,0.9s,baz=94,slow=15,SNR=2.5						
BBOO	**Buckleboo**	**43.77**	**243**	P	**P**	**16 15 44.2**	**-0.5**
BBOO				IAmb	IAmb	16 15 59.2	
	comp=Z,21nm,1.4s						
WR0	**Warramunga Arr**	**45.37**	**261**	P	**P**	**16 15 55.6**	**-1.6**
WR0				IAmb	IAmb	16 16 16.4	
	comp=Z,11nm,1.6s						
WB0	**Warramunga Arr**	**45.54**	**261**	P	**P**	**16 15 57.0**	**-1.4**
WB0				PcP	**PcP**	**16 17 26.1**	**+0.5**
WB2	**Warramunga Arr**	**45.55**	**261**	P	**P**	**16 15 57.1**	**-1.5**
WB2				IAmb	IAmb	16 16 11.0	
	comp=Z,16nm,1.6s						
WB2				PcP	**PcP**	**16 17 26.3**	**+0.7**
WRAB	**Tennant Creek**	**45.55**	**261**	P	**P**	**16 15 57.0**	**-1.6**
WRAB				IAmb	IAmb	16 16 07.3	
	comp=Z,14nm,1.6s						
WRA	**Warramunga Arr**	**45.56**	**261**	P	**P**	**16 15 57.2**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=98,slow=7.8,SNR=34						
WRA				PcP	**PcP**	**16 17 26.0**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=102,slow=3.3,SNR=4.0						
AS31	**Alice Springs**	**45.57**	**256**	P	**P**	**16 15 57.8**	**-0.9**
ASAR	**Alice Springs**	**45.57**	**256**	P	**P**	**16 15 57.7**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=86,slow=8.4,SNR=53						
ASAR				PcP	**PcP**	**16 17 25.9**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=108,slow=4.0,SNR=7.2						
KNRA	**Kununurra**	**51.54**	**265**	P	**P**	**16 16 39.9**	**-3.1**
KNRA				IAmb	IAmb	16 16 42.7	
	comp=Z,27nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.98**	**261**	P	**P**	**16 16 60.0**	**-0.4**
FITZ				IAmb	IAmb	16 17 26.1	
	comp=Z,13nm,1.5s						
QSPA	**South Pole Qui**	**70.70**	**180**	P	**P**	**16 18 50.2**	**+2.4**

UCR ***13*** *16:13:59.9±1.4, 13°.03N×87°.67W, h187km±6km, ML4.5, MW4.5, mb5.2(NEIC)*
INET ***13*** *16:13:59.4, 13°.13N×87°.64W, h195km, ML4.8*
SNET ***13*** *16:13:59.6±1.0, 13°.04N×87°.71W, h193km±4km, ML4.7*
IDC ***13*** *16:13:60.0±0.7, 13°.23N×87°.40W, h200km±5km, mb4.1/27, mb1 4.2/29, mb1mx4.2/42, mbtmp4.6/29, Error ellipse: s-maj=12.9km s-min=6.7km az=59.0*
NEIC ***13*** *16:14:00.1±1.7, 13°.12N±0°.04×87°.58W±0°.06, h200km±4km, mb5.2/372, Md4.7(SNET), Error ellipse: s-maj=9.6km s-min=4.8km az=68.0*
GCG ***13*** *16:14:01.5±2.6, 13°.09N×87°.74W, h209km±156km, MD4.5*

ISC 13 16:13:59.7±0.5**, 13°16′N±0′.04×87°60′W±0′.04, h200**km±3km**, n719, σ1ᵗ09/647, mb5.1**/173**, 18C-2D, Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	**0.18**	**167**		**Pn**	**16 14 25.1**	**-1.2**
LCND	**La Caada**	**0.32**	**298**	⇑*i*	**Pn**	**16 14 25.5**	**-0.9**
LCND				IAML		16 14 26.3	
	comp=Z,8μm,0.4s						
LCND	**La Caada**	**0.32**	**298**	⇑*i*	**Pn**	**16 14 25.5**	**-0.9**
LCND				IAML		16 14 26.3	
	comp=Z,8μm,0.4s						
JUCU	**Jucuarın**	**0.64**	**279**	⇑*i*	**Pn**	**16 14 26.3**	**-1.3**
JUCU				*e*S	**S**	**16 14 47.1**	**-1.9**
JUCU				IAML		16 14 53.6	
	comp=Z,7μm,0.5s						
JUCU	**Jucuarın**	**0.64**	**279**	⇑*i*	**Pn**	**16 14 26.3**	**-1.3**
JUCU				*e*S	**S**	**16 14 47.1**	**-1.9**
JUCU				IAML		16 14 53.6	
	comp=Z,7μm,0.5s						
CRIN	**San Cristobal**	**0.70**	**130**		**Pn**	**16 14 27.5**	**-0.4**
VSM	**San Miguel**	**0.71**	**292**	*e*P	**Pn**	**16 14 27.5**	**-0.7**
VSM	**San Miguel**	**0.71**	**292**	*e*P	**Pn**	**16 14 27.5**	**-0.7**
LCY	**Lacayo**	**0.73**	**292**	*e*P	**Pn**	**16 14 27.5**	**-0.5**
LCY	**Lacayo**	**0.73**	**292**	*e*P	**Pn**	**16 14 27.5**	**-0.5**
PACA	**Pacayal**	**0.77**	**294**	*e*P	**Pn**	**16 14 28.0**	**-0.3**
PACA	**Pacayal**	**0.77**	**294**	*e*P	**Pn**	**16 14 28.0**	**-0.3**
TECA	**Tecapa**	**0.94**	**291**	⇑*i*P	**Pn**	**16 14 28.8**	**-0.6**
TECA	**Tecapa**	**0.94**	**291**	⇑*i*P	**Pn**	**16 14 28.8**	**-0.6**
TGUH	**Tegucigalpa,Un**	**0.95**	**20**	⇓*i*P	**Pn**	**16 14 29.4**	**0.0**
TGUH	**Tegucigalpa,Un**	**0.95**	**20**	⇓*i*P	**Pn**	**16 14 29.4**	**0.0**
TGUH	**Tegucigalpa,Un**	**0.95**	**20**	Pn	**Pn**	**16 14 29.2**	**-0.1**
ALJI	**Alcalda de J**	**0.96**	**280**	⇑*i*P	**Pn**	**16 14 28.4**	**-0.8**
ALJI				IAML		16 14 29.3	
	comp=Z,12μm,0.5s						
ALJI				*e*S	**S**	**16 14 51.1**	**-0.8**
ALJI	**Alcalda de J**	**0.96**	**280**	⇑*i*P	**Pn**	**16 14 28.4**	**-0.8**
ALJI				IAML		16 14 29.3	
	comp=Z,12μm,0.5s						
ALJI				*e*S	**S**	**16 14 51.1**	**-0.8**
CNGN	**Cerro Negro**	**1.10**	**126**	*e*P	**Pn**	**16 14 29.6**	**-0.7**
CNGN	**Cerro Negro**	**1.10**	**126**	*e*P	**Pn**	**16 14 29.6**	**-0.7**
COEG	**Centro de Oper**	**1.33**	**290**	⇑*i*P	**Pn**	**16 14 31.7**	**-0.4**
COEG				IAML		16 14 32.9	
	comp=Z,6μm,0.5s						
COEG				*e*S	**S**	**16 14 56.9**	**+0.1**
COEG	**Centro de Oper**	**1.33**	**290**	⇑*i*P	**Pn**	**16 14 31.7**	**-0.4**
COEG				IAML		16 14 32.9	
	comp=Z,6μm,0.5s						
COEG				*e*S	**S**	**16 14 56.9**	**+0.1**
PAVA	**Las Pavas**	**1.41**	**293**	⇑*i*P	**Pn**	**16 14 32.4**	**-0.5**
PAVA				*e*S	**S**	**16 14 58.5**	**+0.4**
PAVA	**Las Pavas**	**1.41**	**293**	⇑*i*P	**Pn**	**16 14 32.4**	**-0.5**
PAVA				*e*S	**S**	**16 14 58.5**	**+0.4**
LFRS	**El Faro**	**1.50**	**288**	*e*P	**Pn**	**16 14 32.9**	**-0.6**
LFRS	**El Faro**	**1.50**	**288**	*e*P	**Pn**	**16 14 32.9**	**-0.6**
LBRS	**Las Brisas**	**1.52**	**293**	⇑*i*P	**Pn**	**16 14 33.5**	**-0.3**
LBRS	**Las Brisas**	**1.52**	**293**	⇑*i*P	**Pn**	**16 14 33.5**	**-0.3**
MATN	**Matagalpa**	**1.65**	**98**	*e*P	**Pn**	**16 14 34.7**	**-0.2**
MATN	**Matagalpa**	**1.65**	**98**	Pn	**Pn**	**16 14 34.7**	**-0.2**
OPAM	**Oficina de Pla**	**1.65**	**290**	*e*P	**Pn**	**16 14 34.5**	**-0.4**
OPAM				*e*S	**S**	**16 15 02.4**	**+0.6**
OPAM	**Oficina de Pla**	**1.65**	**290**	*e*P	**Pn**	**16 14 34.5**	**-0.4**
OPAM				*e*S	**S**	**16 15 02.4**	**+0.6**
SNET	**Serv Nac Est T**	**1.67**	**289**	*e*P	**Pn**	**16 14 34.5**	**-0.6**
SNET				*e*S	**S**	**16 15 01.7**	**-0.4**
SNET	**Serv Nac Est T**	**1.67**	**289**	*e*P	**Pn**	**16 14 34.5**	**-0.6**
SNET				*e*S	**S**	**16 15 01.7**	**-0.4**
SNET	**Serv Nac Est T**	**1.67**	**289**		**Pn**	**16 14 34.4**	**-0.8**
UEES	**Universidad Ev**	**1.69**	**289**	*e*P	**Pn**	**16 14 34.8**	**-0.5**
UEES	**Universidad Ev**	**1.69**	**289**	*e*P	**Pn**	**16 14 34.8**	**-0.5**
BOQS	**Boqueron**	**1.73**	**290**	*e*P	**Pn**	**16 14 35.2**	**-0.6**
BOQS	**Boqueron**	**1.73**	**290**	*e*P	**Pn**	**16 14 35.2**	**-0.6**
MASN	**Masaya**	**1.83**	**129**	*e*P	**Pn**	**16 14 36.0**	**-0.7**
CEDA	**San Andres**	**1.86**	**290**	*e*P	**Pn**	**16 14 36.3**	**-0.6**
CEDA				*e*S	**S**	**16 15 04.7**	**-0.5**
CEDA				IAML		16 15 18.2	
	comp=Z,4μm,0.3s						
CEDA	**San Andres**	**1.86**	**290**	*e*P	**Pn**	**16 14 36.3**	**-0.6**
CEDA				*e*S	**S**	**16 15 04.7**	**-0.5**
CEDA				IAML		16 15 18.2	
	comp=Z,4μm,0.3s						
TACO	**Tacachico**	**1.89**	**296**	⇑*i*P	**Pn**	**16 14 37.0**	**-0.2**
TACO				IAML		16 14 38.1	
	comp=Z,2μm,0.3s						
TACO				*e*S	**S**	**16 15 05.1**	**-0.6**
TACO	**Tacachico**	**1.89**	**296**	⇑*i*P	**Pn**	**16 14 37.0**	**-0.2**
TACO				IAML		16 14 38.1	
	comp=Z,2μm,0.3s						
TACO				*e*S	**S**	**16 15 05.1**	**-0.6**
SNJE	**San Jose**	**2.08**	**290**	*e*P	**Pn**	**16 14 39.0**	**-0.2**
SNJE	**San Jose**	**2.08**	**290**	*e*P	**Pn**	**16 14 39.0**	**-0.2**
SBLS	**San Blas**	**2.08**	**289**	*e*P	**Pn**	**16 14 39.3**	**-0.1**
SBLS	**San Blas**	**2.08**	**289**	*e*P	**Pn**	**16 14 39.3**	**-0.1**
MTO3	**Montecristo**	**2.11**	**306**	*e*P	**Pn**	**16 14 40.0**	**+0.3**
MTO3	**Montecristo**	**2.11**	**306**	*e*P	**Pn**	**16 14 40.0**	**+0.3**
MTO3	**Montecristo**	**2.11**	**306**		**Pn**	**16 14 39.8**	**+0.2**
RTR	**El Retiro**	**2.12**	**291**	*e*P	**Pn**	**16 14 39.8**	**0.0**
RTR	**El Retiro**	**2.12**	**291**	*e*P	**Pn**	**16 14 39.8**	**0.0**
ESQI	**Esquipulas**	**2.19**	**310**	*e*P	**Pn**	**16 14 41.3**	**+0.9**
ESQI				*e*S	**S**	**16 15 12.3**	**+0.8**
ESQI	**Esquipulas**	**2.19**	**310**		**Pn**	**16 14 41.1**	**+0.7**
NUBE	**Las Nubes**	**2.25**	**290**	⇑*i*P	**Pn**	**16 14 40.6**	**-0.4**
NUBE				*e*S	**S**	**16 15 12.3**	**-0.2**
NUBE	**Las Nubes**	**2.25**	**290**	⇑*i*P	**Pn**	**16 14 40.6**	**-0.4**
NUBE				*e*S	**S**	**16 15 12.3**	**-0.2**
ACON	**Acoyapa**	**2.65**	**116**		**Pn**	**16 14 45.1**	**-0.2**
MRL	**Marmol**	**2.78**	**314**	*e*P	**Pn**	**16 14 48.2**	**+1.1**
MRL	**Marmol**	**2.78**	**314**	*e*P	**Pn**	**16 14 48.2**	**+1.1**
MRL	**Marmol**	**2.78**	**314**	*e*P	**Pn**	**16 14 49.1**	**+2.0**
MRL				*e*S	**S**	**16 15 26.8**	**+3.4**
NBG	**Las Nubes**	**3.02**	**298**	*e*P	**Pn**	**16 14 51.6**	**+1.7**
HZTE	**Horizontes, Gu**	**3.12**	**141**	*e*P	**Pn**	**16 14 51.5**	**+0.6**
GB1A	**Borinquen Arri**	**3.17**	**137**	*i* P	**Pn**	**16 14 51.8**	**+0.2**
PCG	**Pacaya**	**3.17**	**293**	*e*P	**Pn**	**16 14 53.0**	**+1.4**
PCG				*e*S	**S**	**16 15 33.9**	**+2.3**
BUAI	**Buenos Aires**	**3.17**	**135**	*i* P	**Pn**	**16 14 51.6**	**+0.1**
BUAI				*i* S	**S**	**16 15 29.2**	**-2.1**
BUEV	**Buena Vista**	**3.18**	**137**	*e*P	**Pn**	**16 14 52.0**	**+0.4**
GPS2	**Hotel Rincn d**	**3.25**	**137**	*i* P	**Pn**	**16 14 52.7**	**+0.2**
LIM1	**Limonal**	**3.35**	**136**	*i* P	**Pn**	**16 14 53.9**	**+0.1**
ESPN	**Las Esperanzas**	**3.36**	**106**		**Pn**	**16 14 53.6**	**-0.1**
GUAB	**Guayabo de Bag**	**3.36**	**136**	*i* P	**Pn**	**16 14 53.9**	**+0.1**
HORNC	**Hornillas**	**3.39**	**135**	*i* P	**Pn**	**16 14 54.1**	**-0.1**
FUG	**Fuego 3**	**3.40**	**293**	*e*P	**Pn**	**16 14 55.2**	**+0.8**
FUG				*e*S	**S**	**16 15 39.5**	**+3.0**
COLC	**Colonia**	**3.41**	**136**	*i* P	**Pn**	**16 14 54.5**	**+0.1**
CUI	**Cuipilapa**	**3.44**	**136**	*e*P	**Pn**	**16 14 55.2**	**+0.4**
ORTG	**Ortega, Santa**	**3.48**	**143**	*e*P	**Pn**	**16 14 55.9**	**+0.6**
DUNO	**Dulce Nombre,**	**3.69**	**146**	*e*P	**Pn**	**16 14 58.3**	**+0.5**
JTS	**Las Juntas de**	**3.85**	**137**	P	**Pn**	**16 14 59.5**	**-0.3**
	comp=Z,72nm,0.3s,baz=11,slow=14,SNR=44						
JTS				S	**S**	**16 15 42.5**	**-3.8**
	comp=Z,94nm,0.3s,baz=6.0,slow=7.9,SNR=7.2						
JTS	**Las Juntas de**	**3.85**	**137**	*e*P	**Pn**	**16 14 59.9**	**+0.1**
CEDE	**Laguna Cedeo**	**3.88**	**133**	*e*P	**Pn**	**16 15 01.1**	**+0.8**
ARE1	**Arenal 1**	**3.89**	**133**	*e*P	**Pn**	**16 15 00.8**	**+0.6**
ERG	**Entre ros, C**	**4.06**	**289**	*e*P	**Pn**	**16 15 03.4**	**+1.1**
STG3	**Santiaguito 3,**	**4.15**	**292**	*e*P	**Pn**	**16 15 04.6**	**+1.0**
STG3				*e*S	**S**	**16 15 52.6**	**-0.6**
RTAL	**Retalhuleu**	**4.20**	**289**		**Pn**	**16 15 04.1**	**0.0**
LAFE	**Finca La Fe, P**	**4.25**	**141**	*e*P	**Pn**	**16 15 05.0**	**+0.3**
SRA1	**San Ramn**	**4.32**	**135**	*e*P	**Pn**	**16 15 07.3**	**+1.6**
PETF	**Flores**	**4.33**	**330**		**Pn**	**16 15 05.7**	**0.0**
HUEH	**Huehuetenango**	**4.35**	**300**	Pn	**Pn**	**16 15 07.1**	**+1.0**
JACO	**JACO, Garabito**	**4.51**	**140**	*e*P	**Pn**	**16 15 08.7**	**+0.6**
HDC	**Heredia**	**4.64**	**132**	*e*P	**Pn**	**16 15 10.4**	**+0.7**
HDC	**Heredia**	**4.64**	**132**		**Pn**	**16 15 10.1**	**+0.4**
CVTR	**Volcan Turrial**	**4.89**	**129**	*e*P	**Pn**	**16 15 15.9**	**+2.7**
LCR2	**La Lucha 2**	**4.89**	**134**	*e*P	**Pn**	**16 15 14.1**	**+1.0**
RIMA	**Rio Macho**	**4.98**	**132**	*e*P	**Pn**	**16 15 15.3**	**+1.2**
CDM	**Cerro de Muert**	**5.19**	**133**	*e*P	**Pn**	**16 15 18.5**	**+1.4**
EDDO	**Dominical**	**5.34**	**136**	*e*P	**Pn**	**16 15 20.3**	**+1.8**
PEZE	**Perez Zeledon,**	**5.37**	**134**	*e*P	**Pn**	**16 15 20.3**	**+1.2**
CCIG	**Comitan**	**5.38**	**306**		**Pn**	**16 15 20.2**	**+1.1**
DRK0	**Durika**	**5.76**	**132**	*e*P	**Pn**	**16 15 25.6**	**+1.4**
RIOS	**Rincon, Osa**	**5.97**	**137**	*e*P	**Pn**	**16 15 27.0**	**+0.2**
BRU2	**Volcan**	**6.48**	**131**	*e*P	**Pn**	**16 15 34.4**	**+0.9**
TEIG	**Tepich**	**7.06**	**355**		**Pn**	**16 15 41.6**	**+0.8**
CMIG	**Matias Romero**	**8.05**	**300**	P	**Pn**	**16 15 53.6**	**0.0**
	comp=Z,1.7nm,0.3s,baz=101,slow=9.2,SNR=21						
CMIG				S	**S**	**16 17 15.5**	**-8.8**
	comp=Z,2.6nm,0.3s,baz=135,slow=16,SNR=4.1						
BCIP	**Isla Barro Col**	**8.59**	**117**	Pn	**Pn**	**16 16 00.1**	**-0.6**
MTDJ	**Mount Denham**	**10.92**	**61**	Pn	**Pn**	**16 16 31.0**	**0.0**
TLIG	**Tlapa**	**11.45**	**294**	Pn	**Pn**	**16 16 38.1**	**+0.3**
GTBY	**Guantanamo Bay**	**13.73**	**59**	Pn	**Pn**	**16 17 06.0**	**-0.4**
PAYG	**Puerto Ayora**	**14.00**	**191**		**P**	**16 17 13.5**	**+1.9**
061Z	**Ochoppi**	**14.12**	**25**	P	**P**	**16 17 14.1**	**+1.2**
LGNH	**Logne**	**15.38**	**68**	P	**P**	**16 17 27.6**	**+0.7**
LGNH				IAmb	IAmb	16 17 41.8	
	comp=Z,52nm,0.8s						
060A	**Indiantown**	**15.38**	**25**	P	**P**	**16 17 27.0**	**+0.2**
ROSC	**El Rosal**	**15.49**	**121**	P	**P**	**16 17 30.7**	**+2.0**
	comp=Z,2.7nm,0.3s,baz=6.1,slow=11,SNR=4.5						
ROSC	**El Rosal**	**15.49**	**121**	P	**P**	**16 17 32.0**	**+3.4**
SDDR	**Presa de Saban**	**16.71**	**68**	Pn	**Pn**	**16 17 43.3**	**+0.6**
656A	**Willston**	**16.80**	**15**	P	**Pn**	**16 17 44.2**	**+0.6**
SDV	**Santo Domingo**	**17.18**	**103**	P	**P**	**16 17 47.7**	**+0.7**
	comp=Z,9.1nm,0.3s,baz=290,slow=6.3,SNR=84						
SDV				S	**S**	**16 20 55.3**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=37,slow=19,SNR=5.5						
SDV	**Santo Domingo**	**17.18**	**103**	P	**P**	**16 17 47.4**	**+0.4**
SDV				IAmb	IAmb	16 17 50.7	
	comp=Z,103nm,0.8s						
553A	**Crawfordville**	**17.20**	**9**		**Pn**	**16 17 49.6**	**+1.2**
SC01	**Santiago de Io**	**17.35**	**67**	P	**Pn**	**16 17 52.0**	**+1.8**
SC01				IAmb	IAmb	16 17 53.2	
	comp=Z,90nm,0.6s						
BANI	**BANI**	**17.39**	**70**	P	**Pn**	**16 17 51.7**	**+0.9**
451A	**Vernon**	**17.46**	**5**		**Pn**	**16 17 52.6**	**+1.2**
GRTK	**Grand Turk**	**17.77**	**60**	Pn	**Pn**	**16 17 55.5**	**+0.3**
GRTK				IAmb	IAmb	16 18 08.1	
	comp=Z,282nm,1.5s						
BRAL	**Brewton**	**17.93**	**2**	P	**Pn**	**16 17 57.0**	**0.0**
	baz=182,SNR=5.8						
BRAL	**Brewton**	**17.93**	**2**		**Pn**	**16 17 57.5**	**+0.6**
346A	**Big Creek Wild**	**18.23**	**355**	P	**Pn**	**16 18 00.5**	**+0.2**
346A				IAmb	IAmb	16 18 01.3	
	comp=Z,115nm,0.8s						
456A	**Hilliard**	**18.23**	**16**	P	**Pn**	**16 18 00.5**	**+0.1**
441A	**DeRidder**	**18.25**	**344**	P	**Pn**	**16 18 00.5**	**-0.2**
HKT	**Hockley**	**18.37**	**337**	P	**Pn**	**16 18 01.2**	**-0.8**
HKT				IAmb	IAmb	16 18 02.8	
	comp=Z,59nm,1.0s						
DR12	**Loma Pena Alta**	**18.39**	**70**	P	**P**	**16 18 01.0**	**+1.1**
352A	**Blakely**	**18.40**	**7**	P	**Pn**	**16 18 02.0**	**-0.4**
344A	**Westbrook Farm**	**18.44**	**352**	P	**Pn**	**16 18 02.4**	**-0.4**
TIGA	**Tifton**	**18.57**	**11**	P	**Pn**	**16 18 04.0**	**-0.4**
	baz=192,SNR=19						
TIGA	**Tifton**	**18.57**	**11**	P	**Pn**	**16 18 03.6**	**-0.8**
342A	**Flagon Creek P**	**18.65**	**347**	P	**Pn**	**16 18 04.1**	**-1.2**
833A	**Chaparral WMA,**	**18.67**	**326**	P	**P**	**16 18 03.5**	**+0.7**
	baz=142,SNR=10.0						
833A	**Chaparral WMA,**	**18.67**	**326**	P	**P**	**16 18 02.6**	**-0.2**
833A				IAmb	IAmb	16 18 04.8	
	comp=Z,63nm,0.7s						
250A	**Grady**	**18.77**	**4**	P	**P**	**16 18 05.3**	**+1.4**
250A				IAmb	IAmb	16 18 10.1	
	comp=Z,60nm,0.8s						
255A	**Hazlehurst**	**19.27**	**13**	P	**P**	**16 18 10.2**	**+1.0**
146A	**Union**	**19.44**	**356**	P	**P**	**16 18 11.2**	**+0.2**
146A				IAmb	IAmb	16 18 16.4	
	comp=Z,63nm,0.8s						
152A	**Waverly Hall**	**19.60**	**7**	P	**P**	**16 18 14.7**	**+1.9**
NATX	**Nacogdoches**	**19.62**	**342**	P	**P**	**16 18 14.5**	**+1.5**
	baz=159						
NATX	**Nacogdoches**	**19.62**	**342**	P	**P**	**16 18 13.3**	**+0.2**
257A	**Skidaway Islan**	**19.68**	**17**	P	**P**	**16 18 14.1**	**+0.4**
LRAL	**Lakeview Retre**	**19.80**	**1**	P	**P**	**16 18 16.4**	**+1.5**
	baz=182,SNR=44						
LRAL	**Lakeview Retre**	**19.80**	**1**	P	**P**	**16 18 16.3**	**+1.4**
LRAL				IAmb	IAmb	16 18 19.7	
	comp=Z,125nm,1.1s						
154A	**Montrose**	**19.80**	**11**	P	**P**	**16 18 15.4**	**+0.5**
435B	**Jarrell**	**19.81**	**334**	P	**P**	**16 18 15.7**	**+0.6**
	baz=150						
435B	**Jarrell**	**19.81**	**334**	P	**P**	**16 18 15.4**	**+0.2**
435B				IAmb	IAmb	16 18 23.3	
	comp=Z,43nm,0.5s						
Z47A	**Carrollton**	**19.96**	**359**	P	**P**	**16 18 17.9**	**+1.3**
Z51A	**Franklin**	**20.19**	**6**	P	**P**	**16 18 19.8**	**+0.7**
Z51A				IAmb	IAmb	16 18 23.5	
	comp=Z,126nm,0.9s						
237A	**Washetta, Mont**	**20.21**	**339**	P	**P**	**16 18 20.9**	**+1.5**
237A				IAmb	IAmb	16 18 28.2	
	comp=Z,59nm,0.8s						
CRPR	**Cabo Rojo, PR**	**20.31**	**74**	P	**P**	**16 18 20.5**	**0.0**
CRPR				IAmb	IAmb	16 18 27.6	
	comp=Z,37nm,0.8s						
MPR	**Mayaguez**	**20.32**	**73**	P	**P**	**16 18 21.0**	**+0.3**
MPR				IAmb	IAmb	16 18 36.4	
	comp=Z,22nm,0.6s						
157A	**Early Branch**	**20.35**	**16**	P	**P**	**16 18 22.2**	**+1.4**
	baz=199,SNR=12						
MLPR	**Magueyes Islan**	**20.37**	**74**	P	**P**	**16 18 21.3**	**+0.1**
MLPR				IAmb	IAmb	16 18 23.9	
	comp=Z,43nm,0.6s						
AGPR	**Aguadilla, PR**	**20.40**	**72**	P	**P**	**16 18 21.6**	**0.0**
AGPR				IAmb	IAmb	16 18 23.7	
	comp=Z,168nm,1.4s						
GOGA	**Godfrey**	**20.51**	**10**	P	**P**	**16 18 23.6**	**+1.0**
	baz=191,SNR=131						
GOGA	**Godfrey**	**20.51**	**10**	P	**P**	**16 18 23.7**	**+1.1**
Z41A	**Richland Creek**	**20.57**	**348**	P	**P**	**16 18 23.5**	**+0.4**
	baz=165,SNR=8.5						
Z41A	**Richland Creek**	**20.57**	**348**	P	**P**	**16 18 24.0**	**+0.9**
JCT	**Junction City**	**20.60**	**329**	P	**P**	**16 18 24.8**	**+1.3**
	baz=144						
JCT	**Junction City**	**20.60**	**329**	P	**P**	**16 18 23.0**	**-0.6**
158A	**Hollywood**	**20.64**	**18**	P	**P**	**16 18 24.8**	**+0.9**
	baz=201						
Y49A	**Blount Mountai**	**20.64**	**3**	P	**P**	**16 18 25.3**	**+1.4**
Y45A	**Yeager Farm, C**	**20.69**	**355**	P	**P**	**16 18 25.1**	**+0.7**
Y45A				IAmb	IAmb	16 18 27.7	
	comp=Z,71nm,0.8s						
AOPR	**Arecibo Observ**	**20.71**	**73**	P	**P**	**16 18 25.1**	**+0.3**
AOPR				IAmb	IAmb	16 18 27.9	
	comp=Z,39nm,0.5s						
OBIP	**Obispado Ponce**	**20.79**	**74**	P	**P**	**16 18 26.0**	**+0.3**
OBIP				IAmb	IAmb	16 18 28.7	
	comp=Z,32nm,0.5s						
RGRS	**Roger Stewart**	**20.79**	**18**	P	**P**	**16 18 26.6**	**+1.1**
WHTX	**Lake Whitney,**	**20.82**	**336**	P	**P**	**16 18 26.6**	**+0.8**

	comp=Z,52nm,0.6s							
X58A	**Rowland**	22.58	18	P	P	16 18 44.5	+1.2	
	baz=201,SNR=6.7							
KMSC	**Kings Mountain**	22.61	13	P	P	16 18 44.8	+1.3	
	baz=196,SNR=38							
KMSC	**Kings Mountain**	22.61	13	IAmb	IAmb	16 18 45.9		
	comp=Z,94nm,0.8s							
W39A	**Magazine**	22.64	347	P	P	16 18 44.6	+0.7	
	baz=164,SNR=16							
W39A	**Magazine**	22.64	347	P	P	16 18 44.6	+0.7	
W39A				IAmb	IAmb	16 18 46.6		
	comp=Z,20nm,0.5s							
TKL	**Tuckaleechee C**	22.67	8	P	P	16 18 45.3	+1.2	
	comp=Z,141nm,0.8s,baz=172,slow=7.8,SNR=103							
PCRV	**Puerto La Cruz**	22.68	95	P	P	16 18 44.6	+0.1	
	comp=Z,34nm,0.5s,baz=244,slow=3.6,SNR=22							
PLCV	**Puerto La Cruz**	22.73	95	P	P	16 18 44.6	-0.3	
W56A	**Indian Trail**	22.79	15	P	P	16 18 46.2	+1.1	
	baz=198,SNR=19							
X59A	**McDuffie Farm,**	22.83	19	P	P	16 18 46.5	+1.0	
	baz=203,SNR=13							
V52A	**Sevierville**	22.87	8	IAmb	IAmb	16 18 49.3		
	comp=Z,89nm,1.1s							
WVT	**Waverly**	22.88	360	P	P	16 18 45.5	-0.4	
	baz=179							
WVT	**Waverly**	22.88	360	P	P	16 18 45.8	-0.1	
WVT				IAmb	IAmb	16 18 47.3		
	comp=Z,22nm,0.5s							
W57A	**Gilead**	22.96	16	P	P	16 18 47.6	+1.0	
	baz=199,SNR=60							
FCAR	**Ozark Folk Cen**	23.00	351	IAmb	IAmb	16 18 47.8		
	comp=Z,55nm,0.5s							
LCAR	**Lake Charles**	23.04	353	P	P	16 18 47.2	-0.2	
LCAR				IAmb	IAmb	16 18 48.0		
	comp=Z,71nm,0.6s							
X60A	**Albert Glenn T**	23.04	21	P	P	16 18 48.6	+1.1	
	baz=204,SNR=13							
W58A	**Raeford**	23.05	18	P	P	16 18 48.6	+1.2	
	baz=201,SNR=36							
V54A	**Nebo**	23.09	12	P	P	16 18 49.5	+1.6	
	baz=194,SNR=100							
U49A	**Red Boiling Sp**	23.32	4	IAmb	IAmb	16 18 52.7		
	comp=Z,49nm,0.8s							
V55A	**Taylorsville**	23.32	13	P	P	16 18 51.2	+1.3	
	baz=196,SNR=29							
V55A	**Taylorsville**	23.32	13	IAmb	IAmb	16 18 53.6		
	comp=Z,69nm,0.8s							
W59A	**Clinton**	23.43	19	P	P	16 18 51.5	+0.6	
	baz=203							
V56A	**Mocksville**	23.45	15	P	P	16 18 52.3	+1.2	
	baz=198,SNR=38							
W60A	**Pink Hill**	23.56	21	P	P	16 18 53.3	+1.2	
	baz=205,SNR=14							
TZTN	**Tazewell**	23.57	8	P	P	16 18 53.3	+1.1	
	baz=190,SNR=36							
TZTN	**Tazewell**	23.57	8	P	P	16 18 53.4	+1.1	
U40A	**Yellville**	23.58	349	P	P	16 18 52.7	+0.4	
	baz=167,SNR=53							
U40A	**Yellville**	23.58	349	IAmb	IAmb	16 18 53.6		
	comp=Z,66nm,0.7s							
CNNC	**Cliffs of the**	23.67	20	P	P	16 18 54.3	+1.1	
	baz=204							
V57A	**Coltrane Farms**	23.71	16	P	P	16 18 54.6	+1.2	
	baz=199,SNR=45							
HHAR	**Hobbs**	23.72	347	IAmb	IAmb	16 18 56.8		
	comp=Z,23nm,0.5s							
T47A	**Sharon Grove**	23.74	1	P	P	16 18 53.8	+0.1	
WMOK	**Wichita Mounta**	23.75	337	P	P	16 18 54.3	+0.3	
	baz=152,SNR=64							
WMOK	**Wichita Mounta**	23.75	337	P	P	16 18 54.8	+0.8	
WMOK				IAmb	IAmb	16 18 57.4		
	comp=Z,71nm,0.9s							
V58A	**Windy Hill, Pi**	23.80	17	P	P	16 18 55.5	+1.2	
	baz=201,SNR=73							
V58A	**Windy Hill, Pi**	23.80	17	P	P	16 18 55.5	+1.2	
TUL1	**Leonard**	23.83	343	P	P	16 18 54.7	+0.1	
	baz=160,SNR=30							
U54A	**Nelsons Funny**	23.84	12	P	P	16 18 56.0	+1.3	
	baz=194,SNR=71							
T50A	**Nancy**	23.89	5	IAmb	IAmb	16 18 58.4		
	comp=Z,36nm,0.5s							
W61A	**Ground Anchor**	23.93	22	P	P	16 18 56.9	+1.5	
	baz=206							
U38A	**Gravette**	23.97	346	IAmb	IAmb	16 18 57.0		
	comp=Z,26nm,0.8s							
U56A	**King**	23.99	14	P	P	16 18 57.5	+1.5	
	baz=197,SNR=13							
U56A	**King**	23.99	14	P	P	16 18 57.6	+1.5	
U56A				IAmb	IAmb	16 19 00.4		
	comp=Z,88nm,1.1s							
OK025	**Westminster Rd**	23.99	340	IAmb	IAmb	16 19 17.9		
	comp=Z,34nm,0.7s							
V59A	**Middlesex**	24.04	19	P	P	16 18 57.6	+1.1	
	baz=203,SNR=22							
OK030	**Cody Creek RV**	24.14	342	IAmb	IAmb	16 18 58.0		
	comp=Z,72nm,0.7s							
T53A	**Wise**	24.16	10	P	P	16 18 58.7	+1.0	
	baz=192,SNR=14							
OK031	**S. Brethren Rd**	24.18	341	IAmb	IAmb	16 18 58.4		
	comp=Z,83nm,0.7s							
MGMO	**Mountain Grove**	24.26	351	IAmb	IAmb	16 18 59.6		
	comp=Z,43nm,0.9s							
SKI	**Saint Kitts**	24.34	77	P	P	16 18 59.0	-0.5	
U57A	**Blanch**	24.34	16	P	P	16 19 00.4	+1.3	
	baz=200,SNR=36							
V60A	**Jim Taylor Roa**	24.36	21	P	P	16 19 00.6	+1.2	
	baz=205,SNR=15							
T54A	**Tazewell**	24.41	12	P	P	16 19 00.9	+1.0	
	baz=194,SNR=26							
S44A	**Carbondale**	24.48	357	IAmb	IAmb	16 19 01.6		
	comp=Z,60nm,0.8s							
U58A	**Oxford**	24.53	18	P	P	16 19 01.7	+0.8	
	baz=202,SNR=19							
T55A	**Pulaski**	24.63	13	P	P	16 19 03.2	+1.3	
	baz=196,SNR=13							
V61A	**Roper**	24.63	22	P	P	16 19 03.2	+1.4	
	baz=206							
V61A	**Roper**	24.63	22	P	P	16 19 01.8	0.0	
S51A	**Beattyville**	24.64	8	IAmb	IAmb	16 19 06.7		
	comp=Z,62nm,0.6s							
V62A	**Hyde County Ai**	24.66	23	P	P	16 19 03.6	+1.5	
	baz=208							
USIN	**University of**	24.71	360	P	P	16 19 02.2	-0.3	
USIN				IAmb	IAmb	16 19 03.3		
	comp=Z,59nm,0.7s							
T56A	**Rocky Mt**	24.72	15	P	P	16 19 04.0	+1.3	
	baz=198,SNR=8.7							
U59A	**Littleton**	24.72	19	P	P	16 19 03.7	+1.1	
	baz=203							
BLA	**Blacksburg**	24.80	14	P	P	16 19 04.8	+1.4	
	baz=197,SNR=9.2							
BLA	**Blacksburg**	24.80	14	IAmb	IAmb	16 19 05.8		
	comp=Z,43nm,0.7s							
MSTX	**Muleshoe**	24.89	329	P	P	16 19 04.8	+0.4	
	baz=143,SNR=32							
MSTX	**Muleshoe**	24.89	329	IAmb	IAmb	16 19 06.3		
	comp=Z,68nm,0.8s							
T57A	**Hurt**	24.89	16	P	P	16 19 05.4	+1.2	
	baz=200,SNR=19							
T57A	**Hurt**	24.89	16	IAmb	IAmb	16 19 06.3		
	comp=Z,52nm,0.8s							
S53A	**Williamson**	24.91	10	P	P	16 19 05.2	+0.8	
	baz=193							
T35A	**Sooner Cattle**	24.97	343	IAmb	IAmb	16 19 08.5		
	comp=Z,33nm,0.9s							
WCI	**Wyandotte Cave**	25.00	2	P	P	16 19 05.1	0.0	
	baz=183							
WCI	**Wyandotte Cave**	25.00	2	P	P	16 19 05.2	0.0	
WCI				IAmb	IAmb	16 19 07.0		
	comp=Z,47nm,0.8s							
CCM	**Cathedral Cave**	25.01	353	P	P	16 19 05.0	-0.3	
	baz=172							
CCM	**Cathedral Cave**	25.01	353	P	P	16 19 04.9	-0.4	
CCM				IAmb	IAmb	16 19 07.1		
	comp=Z,47nm,0.6s							
U60A	**Pendleton**	25.04	20	P	P	16 19 06.6	+1.1	
	baz=204							
T58A	**Grand View Acr**	25.04	17	P	P	16 19 06.3	+0.7	
	baz=201,SNR=15							
AMTX	**Amarillo**	25.11	332	P	P	16 19 06.9	+0.6	
	baz=146							
AMTX	**Amarillo**	25.11	332	IAmb	IAmb	16 19 10.6		
	comp=Z,49nm,0.6s							
R49A	**Shelbyville**	25.13	5	IAmb	IAmb	16 19 07.2		
	comp=Z,25nm,0.5s							
S54A	**Dingess, Beckl**	25.18	12	P	P	16 19 07.5	+0.7	
	baz=194,SNR=7.0							
S54A	**Dingess, Beckl**	25.18	12	IAmb	IAmb	16 19 08.1		
	comp=Z,24nm,0.7s							
U32A	**Winter Ranch,**	25.29	338	IAmb	IAmb	16 19 09.2		
	comp=Z,68nm,0.8s							
S55A	**Lewisburg**	25.32	13	P	P	16 19 09.3	+1.2	
	baz=196,SNR=18							
T59A	**Double "B" Far**	25.37	19	P	P	16 19 09.4	+1.0	
	baz=203,SNR=12							
T59A	**Double "B" Far**	25.37	19	IAmb	IAmb	16 19 10.6		
	comp=Z,44nm,1.1s							
R40A	**Maddies Statio**	25.38	351	IAmb	IAmb	16 19 09.0		
	comp=Z,44nm,0.7s							
S56A	**Natural Bridge**	25.45	15	P	P	16 19 10.5	+1.2	
	baz=198,SNR=14							
OLIL	**Olney**	25.48	359	IAmb	IAmb	16 19 10.5		
	comp=Z,49nm,0.6s							
R53A	**Hurricane**	25.57	10	P	P	16 19 11.1	+0.8	
	baz=193,SNR=14							
R53A	**Hurricane**	25.57	10	IAmb	IAmb	16 19 12.6		
	comp=Z,56nm,0.6s							
R54A	**Victor**	25.61	12	P	P	16 19 11.6	+0.9	
	baz=195,SNR=18							
S57A	**Dark Hollow, R**	25.69	16	P	P	16 19 12.2	+0.8	
	baz=200,SNR=12							
S57A	**Dark Hollow, R**	25.69	16	P	P	16 19 11.1	-0.3	
S57A				IAmb	IAmb	16 19 14.6		
	comp=Z,21nm,0.7s							
T60A	**Surry**	25.79	20	P	P	16 19 13.4	+1.2	
	baz=205							
S58A	**Poland Farm, P**	25.80	18	P	P	16 19 13.3	+0.9	
	baz=202,SNR=9.2							
S58A	**Poland Farm, P**	25.80	18	IAmb	IAmb	16 19 14.2		
	comp=Z,25nm,0.6s							
R55A	**Marlinton**	25.89	14	P	P	16 19 14.7	+1.4	
	baz=197,SNR=21							
R55A	**Marlinton**	25.89	14	IAmb	IAmb	16 19 15.6		
	comp=Z,55nm,0.6s							
Q52A	**Bidwell**	26.13	9	P	P	16 19 16.1	+0.8	
	baz=192,SNR=20							
Q53A	**Leroy**	26.16	11	P	P	16 19 16.3	+0.7	
	baz=193,SNR=15							
S59A	**Mechanicsville**	26.17	19	P	P	16 19 16.8	+1.1	
	baz=203							
R58B	**Mineral**	26.18	18	P	P	16 19 16.8	+1.0	
	baz=202,SNR=11							
R58B	**Mineral**	26.18	18	IAmb	IAmb	16 19 19.2		
	comp=Z,25nm,0.8s							
R56A	**Bull Pasture M**	26.18	15	P	P	16 19 17.2	+1.3	
	baz=198,SNR=15							
P48A	**Milroy**	26.27	4	IAmb	IAmb	16 19 17.0		
	comp=Z,31nm,0.7s							
R57A	**Stanardsville**	26.31	16	P	P	16 19 18.1	+1.2	
	baz=200,SNR=30							
S60A	**Water View**	26.33	20	P	P	16 19 17.5	+0.5	
	baz=204							
P46A	**Rosedale**	26.36	1	IAmb	IAmb	16 19 17.7		
	comp=Z,21nm,0.6s							
P49A	**Miami Univ. Ec**	26.40	5	P	P	16 19 17.5	-0.3	
	baz=186							
P49A	**Miami Univ. Ec**	26.40	5	IAmb	IAmb	16 19 18.3		
	comp=Z,25nm,0.7s							
Q54A	**Coxs Mills**	26.41	12	P	P	16 19 19.0	+1.1	
	baz=195,SNR=44							
P43A	**Skaggs, Pawnee**	26.43	357	IAmb	IAmb	16 19 19.3		
	comp=Z,18nm,0.7s							
R58A	**Rapidan**	26.45	17	P	P	16 19 19.3	+1.1	
	baz=201,SNR=12							
P51A	**Williamsport**	26.53	8	P	P	16 19 18.9	+0.1	
	baz=190							
CBN	**Corbin Frederi**	26.55	18	P	P	16 19 20.6	+1.5	
	baz=203							
Q55A	**Buckhannon**	26.58	13	P	P	16 19 20.7	+1.2	
	baz=196,SNR=18							
R59A	**King George, V**	26.63	19	P	P	16 19 21.3	+1.6	
	baz=203							
121A	**Cookes Peak, D**	26.70	320	P	P	16 19 22.7	+1.9	
	baz=132							
P53A	**Whipple**	26.80	11	P	P	16 19 22.5	+1.2	
	baz=193,SNR=31							
P52A	**Corning**	26.81	9	P	P	16 19 21.9	+0.5	
	baz=192,SNR=12							
Q56A	**Snyder Ridge,**	26.84	15	P	P	16 19 23.3	+1.6	
	baz=198,SNR=16							
Q56A	**Snyder Ridge,**	26.84	15	IAmb	IAmb	16 19 23.9		
	comp=Z,42nm,0.6s							
R60A	**Leonardtown, M**	26.86	19	P	P	16 19 23.4	+1.6	
	baz=204							
Q57A	**Strasburg**	27.03	16	P	P	16 19 24.6	+1.3	
	baz=200,SNR=11							
R32A	**Long Quarter,**	27.03	341	IAmb	IAmb	16 19 24.5		
	comp=Z,34nm,0.7s							
KSU1	**Kansas State U**	27.04	344	P	P	16 19 23.6	+0.1	
	baz=160,SNR=9.1							
O49A	**Covington**	27.08	6	IAmb	IAmb	16 19 24.7		
	comp=Z,39nm,0.7s							
P54A	**Burton**	27.08	12	P	P	16 19 24.6	+0.7	
	baz=195,SNR=13							
SFIN	**Lafayette**	27.12	1	P	P	16 19 23.5	-0.6	
	baz=181,SNR=6.2							
SFIN	**Lafayette**	27.12	1	IAmb	IAmb	16 19 24.4		
	comp=Z,29nm,0.6s							
P55A	**Reedsville**	27.13	13	P	P	16 19 24.8	+0.5	
	baz=197,SNR=6.9							
Q58A	**Fox Den Farm,**	27.14	17	P	P	16 19 25.5	+1.1	
	baz=201,SNR=8.6							
O51A	**Pataskala**	27.24	8	P	P	16 19 25.6	+0.3	
	baz=191,SNR=13							
MCWV	**Mont Chateau**	27.27	13	P	P	16 19 26.5	+1.0	
	baz=197,SNR=8.9							
ACSO	**Alum Creek Sta**	27.27	8	P	P	16 19 26.0	+0.5	
	baz=190,SNR=15							
O52A	**Adamsville**	27.33	10	P	P	16 19 26.6	+0.5	
	baz=192,SNR=14							
O52A	**Adamsville**	27.33	10	IAmb	IAmb	16 19 27.5		
	comp=Z,65nm,0.8s							
HDIL	**Hopedale**	27.34	357	P	P	16 19 25.9	-0.1	
	baz=176							
HDIL	**Hopedale**	27.34	357	IAmb	IAmb	16 19 27.2		
	comp=Z,53nm,1.1s							
P56A	**Dayton Farm, R**	27.36	15	P	P	16 19 27.9	+1.6	
	baz=199,SNR=14							
P57A	**Homestead Farm**	27.56	16	P	P	16 19 29.5	+1.5	
	baz=200,SNR=26							
P57A	**Homestead Farm**	27.56	16	P	P	16 19 29.6	+1.5	
P57A				IAmb	IAmb	16 19 30.6		
	comp=Z,73nm,0.8s							
O53A	**New Philadelph**	27.57	11	P	P	16 19 28.8	+0.7	
	baz=193,SNR=14							
N41A	**Harden Mtn**	27.59	355	IAmb	IAmb	16 19 28.4		
	comp=Z,44nm,1.1s							
ANMO	**Albuquerque**	27.60	325	P	P	16 19 30.5	+1.8	
	comp=Z,3.2nm,0.7s,baz=154,slow=8.2,SNR=9.1							
ANMO	**Albuquerque**	27.60	325	P	P	16 19 30.6	+1.8	
	baz=137							
ANMO	**Albuquerque**	27.60	325	P	P	16 19 30.2	+1.5	
O54A	**Avella**	27.66	12	P	P	16 19 29.4	+0.4	
	baz=195,SNR=10							
N47A	**Urbana**	27.67	3	IAmb	IAmb	16 19 29.6		
	comp=Z,32nm,0.5s							
CBKS	**Cedar Bluff**	27.73	339	P	P	16 19 30.2	+0.5	
	baz=154							
CBKS	**Cedar Bluff**	27.73	339	IAmb	IAmb	16 19 31.0		
	comp=Z,25nm,0.6s							
P58A	**Pank, Wackersv**	27.76	17	P	P	16 19 31.2	+1.4	
	baz=202,SNR=14							
N49A	**Columbus Grove**	27.82	6	IAmb	IAmb	16 19 31.7		
	comp=Z,43nm,0.6s							
SDMD	**Soldier's Deli**	27.83	18	IAmb	IAmb	16 19 32.4		
	comp=Z,28nm,0.6s							
O55A	**Ligonier**	27.92	14	P	P	16 19 31.8	+0.6	
	baz=197							
N51A	**Ashland**	28.03	8	P	P	16 19 32.5	+0.3	
N51A				IAmb	IAmb	16 19 34.4		
	comp=Z,29nm,0.6s							
P59A	**Jarrettsville**	28.13	19	P	P	16 19 34.3	+1.2	
	baz=203,SNR=8.8							
O56A	**Blue Knob Stat**	28.15	15	P	P	16 19 34.4	+1.1	
	baz=199							
N53A	**Lisbon**	28.18	11	IAmb	IAmb	16 19 35.7		
	comp=Z,42nm,0.7s							
T25A	**Trinidad**	28.22	331	P	P	16 19 36.4	+2.1	
	baz=144							
O57A	**Amberson**	28.34	16	P	P	16 19 36.0	+1.0	
	baz=201,SNR=14							
BBSR	**BB Station**	28.38	44	P	P	16 19 37.1	+1.7	
BBSR				IAmb	IAmb	16 19 38.0		
	comp=Z,60nm,0.8s							
O58A	**Lewisberry**	28.46	17	P	P	16 19 37.2	+1.2	
	baz=202,SNR=7.9							
N35A	**Tabor**	28.48	347	IAmb	IAmb	16 19 37.3		
	comp=Z,106nm,1.2s							
N54A	**Moraine State**	28.49	12	P	P	16 19 37.1	+0.8	
	baz=196,SNR=18							
MVL	**Millersville**	28.52	18	IAmb	IAmb	16 19 39.0		
	comp=Z,30nm,0.6s							
P60A	**Greenville**	28.57	20	P	P	16 19 38.1	+1.1	
	baz=205,SNR=7.7							
P60A	**Greenville**	28.57	20	P	P	16 19 37.7	+0.7	
P60A				IAmb	IAmb	16 19 38.9		
	comp=Z,30nm,0.6s							
PAGS	**Pennsylvania G**	28.61	18	IAmb	IAmb	16 19 39.5		
	comp=Z,60nm,0.7s							
PSUB	**Penn St. - Bra**	28.73	20	IAmb	IAmb	16 19 40.0		
	comp=Z,19nm,0.6s							
L48A	**N Adams**	28.81	5	IAmb	IAmb	16 19 40.0		
	comp=Z,30nm,0.7s							
M53A	**WI Miller and**	28.82	11	P	P	16 19 39.6	+0.4	
	baz=194,SNR=7.2							
M53A	**WI Miller and**	28.82	11	IAmb	IAmb	16 19 43.9		
	comp=Z,35nm,0.9s							
N56A	**West Decatur**	28.83	15	P	P	16 19 40.3	+0.9	
	baz=199,SNR=9.6							
O59A	**Robesonia**	28.85	18	P	P	16 19 41.0	+1.5	
	baz=203,SNR=19							
N57A	**Milroy**	28.87	16	P	P	16 19 40.1	+0.4	
	baz=200,SNR=12							
L44A	**Lake County Fo**	28.92	360	P	P	16 19 39.4	-0.7	
	baz=179							
L40A	**Anamosa**	28.97	354	IAmb	IAmb	16 19 41.4		
	comp=Z,30nm,0.6s							
KSCO	**Kaye Shedlock'**	28.99	335	P	P	16 19 41.8	+0.9	
	baz=149							
SCIA	**State Center**	29.06	351	P	P	16 19 42.1	+0.8	
	baz=169							
M54A	**Oil Creek Stat**	29.08	12	P	P	16 19 42.2	+0.7	
	baz=196,SNR=36							
O60A	**Telford**	29.10	19	P	P	16 19 42.9	+1.2	
	baz=205,SNR=5.5							
ALLY	**Alegheny Colle**	29.12	12	IAmb	IAmb	16 19 43.3		
	comp=Z,45nm,0.6s							
N58A	**Sunbury**	29.18	17	P	P	16 19 43.3	+0.9	
	baz=202,SNR=8.8							
N58A	**Sunbury**	29.18	17	IAmb	IAmb	16 19 44.4		
	comp=Z,32nm,0.9s							
SDCO	**Great Sand Dun**	29.23	330	P	P	16 19 45.0	+1.7	
	baz=142,SNR=14							
SDCO	**Great Sand Dun**	29.23	330	P	P	16 19 44.8	+1.6	
AAM	**Ann Arbor**	29.24	6	P	P	16 19 43.3	+0.4	
	baz=188							
M55A	**Ridgway**	29.24	14	IAmb	IAmb	16 19 44.4		
	comp=Z,37nm,1.1s							
LUPA	**Lehigh Univers**	29.37	19	IAmb	IAmb	16 19 46.4		
	comp=Z,46nm,0.6s							
L53A	**Girard**	29.39	11	P	P	16 19 44.6	+0.3	
	baz=195,SNR=5.4							
M56A	**Emporium**	29.39	15	P	P	16 19 45.0	+0.6	
	baz=199,SNR=9.7							
M56A	**Emporium**	29.39	15	IAmb	IAmb	16 19 45.7		
	comp=Z,39nm,1.1s							
M57A	**Sunshine Farm,**	29.53	16	P	P	16 19 46.7	+1.2	
	baz=201,SNR=13							
M57A	**Sunshine Farm,**	29.53	16	IAmb	IAmb	16 19 47.5		
	comp=Z,46nm,0.6s							
N59A	**State Game Lan**	29.53	18	P	P	16 19 47.0	+1.4	
	baz=204,SNR=22							
N59A	**State Game Lan**	29.53	18	P	P	16 19 46.9	+1.4	
ERPA	**Erie**	29.60	12	P	P	16 19 46.5	+0.3	
	baz=195,SNR=6.4							
BGNE	**Belgrade**	29.61	344	P	P	16 19 46.8	+0.5	
	baz=159,SNR=10.0							
W18A	**Petrified Fore**	29.63	321	P	P	16 19 48.3	+1.6	
	baz=132							
N60A	**Cedar Hill Far**	29.70	19	P	P	16 19 48.1	+1.1	
	baz=205,SNR=8.8							
K38A	**Parkersburg**	29.72	352	IAmb	IAmb	16 19 47.5		
	comp=Z,51nm,0.6s							
JFWS	**Jewell Farm**	29.74	356	P	P	16 19 48.1	+0.8	
	baz=175							
JFWS	**Jewell Farm**	29.74	356	IAmb	IAmb	16 19 49.8		
	comp=Z,20nm,0.5s							
214A	**Organ Pipe Nat**	29.74	313	P	P	16 19 48.9	+1.4	
	baz=123							
M58A	**Price's Panora**	29.75	17	P	P	16 19 48.5	+1.1	
	baz=202,SNR=8.9							
N61A	**South Mountain**	29.86	21	P	P	16 19 49.7	+1.3	
	baz=207							
S22A	**4UR Ranch, Cre**	29.89	328	P	P	16 19 51.2	+2.1	
	baz=140							
ODNJ	**Ogdensburg**	30.05	20	IAmb	IAmb	16 19 51.5		
	comp=Z,31nm,0.5s							
KSPA	**Keystone Colle**	30.12	18	IAmb	IAmb	16 19 52.1		
	comp=Z,24nm,0.7s							
L56A	**Greenwood**	30.16	15	P	P	16 19 51.7	+0.5	
	baz=200,SNR=6.2							
L56A	**Greenwood**	30.16	15	IAmb	IAmb	16 19 52.6		
	comp=Z,35nm,1.1s							
WVNY	**West Valley, N**	30.17	13	IAmb	IAmb	16 19 52.5		
	comp=Z,32nm,0.8s							
M59A	**Waymart**	30.21	18	P	P	16 19 52.8	+1.3	
	baz=204,SNR=13							
PAL	**Palisades**	30.22	21	P	P	16 19 52.7	+1.2	
	baz=207							
PAL	**Palisades**	30.22	21	IAmb	IAmb	16 19 53.4		
	comp=Z,31nm,0.8s							
L57A	**Andrews Acres**	30.22	16	P	P	16 19 52.2	+0.6	
	baz=201,SNR=8.1							
X16A	**Lo Mia Camp, P**	30.25	318		P	16 19 53.6	+1.4	
M60A	**Port Jervis**	30.27	20	P	P	16 19 52.8	+0.8	
	baz=206,SNR=17							
MVCO	**Mesa Verde**	30.38	326	P	P	16 19 54.6	+1.3	
	baz=137							
M61A	**Granite Spring**	30.54	21	P	P	16 19 55.4	+1.0	
	baz=207,SNR=8.1							
L58A	**Harry Jones Me**	30.54	17	P	P	16 19 55.4	+1.0	
	baz=203,SNR=13							
MMNY	**Mt. Morris Dam**	30.64	14	IAmb	IAmb	16 19 56.0		
	comp=Z,25nm,0.5s							
BINY	**Binghamton**	30.65	17	P	P	16 19 56.2	+0.8	
	baz=202,SNR=9.0							
BINY	**Binghamton**	30.65	17	IAmb	IAmb	16 19 56.7		
	comp=

J56A	Wolcott	31.41	15	P	P	16 20 02.1	+0.1	
	baz=200,SNR=10							
ECSD	EROS Data Cent	31.44	347	P	P	16 20 01.7	-0.6	
	baz=163,SNR=36							
ECSD	EROS Data Cent	31.44	347	IAmb	IAmb	16 20 03.1		
	comp=Z,43nm,0.6s							
PV19	Morning Glory	31.44	327	IAmb	IAmb	16 20 04.9		
	comp=Z,19nm,0.5s							
PV20	West Nyswonger	31.45	327	IAmb	IAmb	16 20 05.0		
	comp=Z,15nm,0.6s							
K59A	Cooperstown	31.51	18	P	P	16 20 03.5	+0.6	
	baz=204,SNR=6.8							
PV10	Paradox Valley	31.52	327	IAmb	IAmb	16 20 05.1		
	comp=Z,18nm,0.6s							
GLMI	Grayling	31.66	4	P	P	16 20 04.2	0.0	
	baz=186							
K60A	Five Rivers En	31.67	19	P	P	16 20 05.5	+1.2	
	baz=206							
M64A	Tiverton	31.70	24	P	P	16 20 05.7	+1.2	
	baz=211							
J57A	Williamstown	31.76	16	P	P	16 20 05.3	+0.2	
	baz=202							
J57A	Williamstown	31.76	16	IAmb	IAmb	16 20 05.8		
	comp=Z,28nm,0.8s							
L63A	North Scituate	31.81	23	P	P	16 20 06.5	+1.0	
	baz=210							
TRY	Troy	31.84	20	IAmb	IAmb	16 20 08.0		
	comp=Z,47nm,0.8s							
QUA2	Belchertown	31.89	22	IAmb	IAmb	16 20 08.1		
	comp=Z,27nm,1.0s							
J58A	Remsen	31.91	17	P	P	16 20 06.8	+0.4	
	baz=203,SNR=7.8							
J58A	Remsen	31.91	17	IAmb	IAmb	16 20 07.7		
	comp=Z,22nm,0.6s							
K61A	Williamstown	31.92	20	P	P	16 20 07.6	+1.1	
	baz=207,SNR=7.4							
L61B	Northampton	31.93	21	P	P	16 20 07.1	+0.6	
	baz=208,SNR=6.6							
N23A	Red Feather La	31.96	333	P	P	16 20 08.2	+1.0	
	baz=145							
PDMCI	Parker Dam,Lak	31.98	316	P	P	16 20 08.7	+1.6	
	baz=125							
G40A	Rib Lake	32.08	357	IAmb	IAmb	16 20 08.2		
	comp=Z,29nm,1.0s							
L64A	Middleborough	32.17	24	P	P	16 20 09.7	+1.1	
	baz=212							
J59A	Piesco	32.24	18	P	P	16 20 09.6	+0.3	
	baz=204,SNR=5.4							
J59A	Piesco	32.24	18	IAmb	IAmb	16 20 10.7		
	comp=Z,33nm,1.2s							
H53A	Bobcaygeon	32.25	12	P	P	16 20 09.4	+0.1	
	baz=196,SNR=8.4							
SPMN	Marine on St.	32.27	353	P	P	16 20 08.6	-0.8	
	baz=170,SNR=6.7							
K62A	Royalston	32.27	21	P	P	16 20 10.3	+0.8	
	baz=209							
I58A	Old Forge	32.31	17	P	P	16 20 10.1	+0.2	
	baz=203,SNR=9.0							
SADO	Sadowa	32.32	11	P	P	16 20 09.9	0.0	
	comp=Z,44nm,0.5s,baz=214,slow=9.2,SNR=37							
SADO	Sadowa	32.32	11	IAmb	IAmb	16 20 11.2		
	comp=Z,46nm,0.6s							
I57A	Carthage	32.34	16	P	P	16 20 10.2	+0.1	
	baz=202							
HRV	Adam Dziewonsk	32.38	22	P	P	16 20 11.7	+1.2	
	baz=210							
J60A	Lant Hill Farm	32.38	20	P	P	16 20 11.5	+1.0	
	baz=206							
DELO	Deloro Mine	32.40	13	IAmb	IAmb	16 20 11.5		
	comp=Z,19nm,0.4s							
SWSC	Sam W. Stewart	32.41	312	P	P	16 20 12.1	+1.2	
	baz=121							
O20A	White River Ci	32.43	330	P	P	16 20 13.0	+1.8	
	baz=140,SNR=8.3							
O20A	White River Ci	32.43	330	P	P	16 20 12.7	+1.6	
BC3	Big Chuckawall	32.53	314	P	P	16 20 14.3	+2.2	
	baz=122							
K63A	Dunstable	32.55	22	P	P	16 20 13.3	+1.3	
	baz=210							
NEE2	Needles Airpor	32.56	316	P	P	16 20 14.1	+1.9	
	baz=125							
IRM	Iron Mountain	32.58	315	P	P	16 20 13.8	+1.3	
	baz=123							
SUSD	Miller	32.66	345	P	P	16 20 12.5	-0.5	
	baz=159,SNR=16							
I59A	Olmsteadville	32.73	19	P	P	16 20 13.8	+0.2	
	baz=205,SNR=7.5							
J61A	Chester	32.76	20	P	P	16 20 14.8	+1.0	
	baz=208							
MONP2	Monument Peak	32.83	312	P	P	16 20 15.8	+1.0	
	baz=120							
COWI	Conover	32.86	358	IAmb	IAmb	16 20 14.6		
	comp=Z,28nm,0.8s							
H57A	Richville	32.90	16	P	P	16 20 15.3	+0.3	
	baz=202							
J62A	Henniker	32.91	21	P	P	16 20 16.6	+1.5	
	baz=209,SNR=5.6							
I60A	Shoreham	32.96	19	P	P	16 20 16.7	+1.3	
	baz=206							
F36A	Milaca	32.98	352	IAmb	IAmb	16 20 15.6		
	comp=Z,22nm,0.7s							
BELC	Belle Mtn. Jos	33.10	314	P	P	16 20 18.4	+1.4	
	baz=122							
G54A	Lake Saint Pet	33.14	12	P	P	16 20 16.6	-0.4	
	baz=197,SNR=7.3							
RWWY	Rawlins	33.16	333	P	P	16 20 18.6	+0.9	
H58A	Gabriels	33.20	18	P	P	16 20 18.0	+0.4	
	baz=204,SNR=7.5							
TPFO	Pinon Flats	33.22	313	P	P	16 20 19.5	+1.5	
	baz=121							
J63A	Strafford	33.23	22	P	P	16 20 18.6	+0.8	
	baz=210							
LONY	Lake Ozonia	33.27	17	P	P	16 20 18.5	+0.3	
	baz=204,SNR=8.7							
LONY	Lake Ozonia	33.27	17	IAmb	IAmb	16 20 19.0		
	comp=Z,25nm,0.7s							
GMRC	Granite Mounta	33.28	315	P	P	16 20 20.3	+1.7	
	baz=124							
I61A	Oroboro, Fairl	33.40	20	P	P	16 20 20.2	+0.9	
	baz=208							
F33A	5 Mile Ranch,	33.40	349	IAmb	IAmb	16 20 19.4		
	comp=Z,86nm,0.9s							
H59A	Cadyville	33.56	18	P	P	16 20 21.1	+0.5	
	baz=205							
G57A	Newington	33.60	16	P	P	16 20 21.1	+0.1	
	baz=202							
K22A	Casper	33.65	334	P	P	16 20 22.8	+1.1	
	baz=145,SNR=7.2							
K22A	Casper	33.65	334	IAmb	IAmb	16 20 23.9		
	comp=Z,13nm,0.8s							
K22A	Casper	33.65	334	P	P	16 20 23.0	+1.3	
I62A	Tamworth	33.65	21	P	P	16 20 22.8	+1.3	
	baz=209,SNR=5.3							
I62A	Tamworth	33.65	21	IAmb	IAmb	16 20 23.7		
	comp=Z,54nm,0.9s							
ALGO	Algonquin Park	33.68	12	P	P	16 20 21.5	-0.2	
	baz=197							
MURC	Murrieta	33.74	312	P	P	16 20 24.2	+1.7	
	baz=120							
LBNH	Lisbon	33.76	20	P	P	16 20 22.9	+0.5	
	baz=208							
HEC	Hector,Ludlow	33.77	315	P	P	16 20 23.8	+1.0	
	baz=123							
H60A	Morristown	33.79	19	P	P	16 20 23.1	+0.4	
	baz=207							
G58A	Ormstown	33.91	17	P	P	16 20 23.9	+0.3	
	baz=204							
RSSD	Black Hills	33.92	339	P	P	16 20 25.1	+1.1	
	baz=150							
RSSD	Black Hills	33.92	339	P	P	16 20 25.6	+1.5	
RSSD				IAmb	IAmb	16 20 27.1		
	comp=Z,18nm,0.5s							
H61A	Lyndonville	34.02	20	P	P	16 20 25.3	+0.7	
	baz=208							
I63A	Otisfield	34.07	22	P	P	16 20 26.1	+1.1	
	baz=210							
I64A	Boothbay	34.32	23	P	P	16 20 28.3	+1.1	
	baz=212							
H62A	Milan	34.32	21	P	P	16 20 28.1	+0.9	
	baz=209							
G60A	Masonville	34.39	19	P	P	16 20 27.8	-0.1	
	baz=207							
E55A	Montcerf-Lytto	34.59	14	P	P	16 20 29.4	-0.1	
	baz=200							
H63A	New Sharon	34.80	22	P	P	16 20 32.8	+1.5	
	baz=211							
G61A	St-Isidore-de-	34.82	20	P	P	16 20 32.4	+1.0	
	baz=208							

EYMN	Ely	34.84	355	P	P	16 20 30.6	-1.1	
	baz=173							
EYMN	Ely	34.84	355	IAmb	IAmb	16 20 31.3		
	comp=Z,56nm,1.5s							
DUG	Dugway, Tooele	34.87	325	P	P	16 20 33.8	+1.6	
	baz=134,SNR=5.2							
TPNV	Topopah Spring	34.90	318	P	P	16 20 34.4	+1.9	
F59A	Saint Guilaume	34.92	18	P	P	16 20 32.8	+0.5	
	baz=206							
E56A	St. Veronique	34.93	15	P	P	16 20 32.8	+0.4	
	baz=202							
LPAZ	La Paz	35.02	146	P	P	16 20 35.1	+0.9	
	comp=Z,3.4nm,0.3s,baz=323,slow=4.8,SNR=18							
LPAZ				PcP	PcP	16 23 02.2	+0.3	
	comp=Z,1.2nm,0.5s,baz=321,slow=6.5,SNR=3.4							
LPAZ				ScP	ScP	16 26 28.7	+0.2	
	comp=Z,1.2nm,0.7s,baz=329,slow=6.6,SNR=4.5							
LPAZ	La Paz	35.02	146	P	P	16 20 35.1	+0.9	
LPAZ					ScP	16 26 29.9	+1.4	
FURC	Furnace Creek,	35.03	317	P	P	16 20 35.5	+2.2	
	baz=124							
E57A	Chemin Saint G	35.04	16	P	P	16 20 33.4	0.0	
	baz=203							
BW06	Boulder Array	35.09	331	P	P	16 20 34.8	+0.7	
	baz=141,SNR=14							
PDAR	Pinedale Array	35.09	331	P	P	16 20 35.0	+0.9	
	comp=Z,7.0nm,0.6s,baz=129,slow=10,SNR=74							
PDAR				PcP	PcP	16 23 00.0	-1.2	
	comp=Z,0.4nm,0.3s,baz=119,slow=7.3,SNR=4.0							
PDAR				ScP	ScP	16 26 27.6	-0.3	
	comp=Z,0.3nm,0.5s,baz=111,slow=4.7,SNR=4.2							
PDAR	Pinedale Array	35.09	331	P	P	16 20 34.3	+0.2	
H64A	Troy	35.09	23	P	P	16 20 35.1	+1.4	
	baz=212							
G62A	West of Eustis	35.10	21	P	P	16 20 35.1	+1.1	
	baz=210,SNR=9.5							
G62A	West of Eustis	35.10	21	IAmb	IAmb	16 20 35.6		
	comp=Z,43nm,0.6s							
MPMC	Manual Prospec	35.23	316	P	P	16 20 36.8	+1.4	
	baz=123							
E58A	La Victoria	35.25	17	P	P	16 20 35.3	+0.2	
	baz=205,SNR=5.6							
D55A	Sainte-Anne-du	35.26	14	P	P	16 20 35.3	0.0	
	baz=201,SNR=7.4							
F60A	Warwick	35.29	19	P	P	16 20 35.5	0.0	
	baz=207							
G63A	Kingsbury	35.34	22	P	P	16 20 37.1	+1.2	
	baz=211							
MDP	Montagnes des	35.40	100	ScP	ScP	16 26 28.9	-0.3	
	comp=Z,7.5nm,0.5s,baz=220,slow=4.1,SNR=4.5							
D56A	ZEC Mazanza, M	35.47	15	P	P	16 20 37.6	+0.6	
	baz=202							
H65A	Eastbrook	35.51	24	P	P	16 20 38.8	+1.4	
	baz=214							
PKME	Peaks-Kenny Pk	35.59	22	P	P	16 20 39.2	+1.2	
	baz=212							
PKME	Peaks-Kenny Pk	35.59	22	IAmb	IAmb	16 20 39.6		
	comp=Z,34nm,0.8s							
GRAC	Grapevine Rang	35.66	317	P	P	16 20 40.9	+2.1	
	baz=124							
ISA	Isabella, Lake	35.70	314	P	P	16 20 40.5	+1.2	
	baz=121							
AGMN	Agassiz Nation	35.70	351	P	P	16 20 38.4	-0.6	
	baz=166,SNR=13							
AGMN	Agassiz Nation	35.70	351	IAmb	IAmb	16 20 39.5		
	comp=Z,33nm,0.6s							
G64A	Maxfield	35.78	23	P	P	16 20 40.4	+0.7	
	baz=212							
E60A	Ste Agathe de	35.80	19	P	P	16 20 39.8	-0.1	
	baz=208							
AHID	Auburn Hatcher	35.82	330	IAmb	IAmb	16 20 42.7		
	comp=Z,15nm,0.6s							
CWC	Cottonwood Cre	35.84	316	P	P	16 20 39.7	-0.8	
	baz=122							
H66A	Whiting	35.96	25	P	P	16 20 42.5	+1.3	
	baz=215							
MDND	Maddock	36.01	346	P	P	16 20 41.8	+0.2	
	baz=160,SNR=24							
D58A	Chemin du LacG	36.02	17	P	P	16 20 41.9	+0.2	
	baz=205,SNR=7.4							
PB16	IPOC Station P	36.02	150	P	P	16 20 43.4	+0.7	
F63A	Nahmakanta, Br	36.03	22	P	P	16 20 42.6	+0.8	
	baz=212							
REDW	Red Top Meadow	36.15	331	IAmb	IAmb	16 20 45.4		
	comp=Z,46nm,0.8s							
E61A	Lac Etchemin	36.17	20	P	P	16 20 44.4	+1.3	
	baz=209							
SNOW	Snow King Moun	36.18	331	IAmb	IAmb	16 20 45.9		
	comp=Z,37nm,0.7s							
G65A	Princeton	36.20	24	P	P	16 20 44.5	+1.3	
	baz=214,SNR=6.0							
G65A	Princeton	36.20	24	IAmb	IAmb	16 20 45.7		
	comp=Z,57nm,1.2s							
TPAW	Teton Pass	36.30	331	pP	pP	16 21 27.5	+0.9	
LATQ	La Tuque	36.31	17	P	P	16 20 44.4	+0.3	
	baz=205							
F64A	Sherman	36.45	23	P	P	16 20 46.1	+0.8	
	baz=213							
F64A	Sherman	36.45	23	IAmb	IAmb	16 20 47.1		
	comp=Z,20nm,0.7s							
D60A	Saint Jean D'O	36.45	19	P	P	16 20 46.0	+0.7	
	baz=208							
MNMC	Minye Minye	36.66	151	P	P	16 20 49.4	+1.7	
E62A	Clayton Lake	36.67	21	P	P	16 20 47.8	+0.7	
	baz=210							
RLMT	Red Lodge	36.81	334	P	P	16 20 49.4	+0.7	
	baz=143,SNR=10							
LSQQ	Lebel-sur-Quev	36.86	12	P	P	16 20 48.5	-0.2	
	baz=197							
E63A	Oxbow	36.89	22	P	P	16 20 50.1	+1.0	
	baz=212							
LAO	LASA Array	36.92	339	P	P	16 20 50.1	+0.7	
	baz=149,SNR=7.3							
NVAR	Mina Array Bea	37.08	318	P	P	16 20 52.5	+1.5	
	comp=Z,2.9nm,0.7s,baz=133,slow=7.6,SNR=25							
NVAR				PcP	PcP	16 23 07.3	+0.1	
	comp=Z,1.7nm,0.7s,baz=140,slow=3.8,SNR=7.0							
NVAR				ScP	ScP	16 26 35.4	+0.1	
	comp=Z,2.0nm,0.7s,baz=114,slow=4.0,SNR=14							
NVAR	Mina Array Bea	37.08	318		ScP	16 26 34.8	-0.5	
NVAR	Mina Array Bea	37.08	318	P	P	16 20 52.8	+1.8	
E64A	Bridgewater	37.11	23	P	P	16 20 52.0	+1.1	
	baz=213							
D62A	Allapoint, All	37.23	21	P	P	16 20 52.6	+0.7	
	baz=211							
GO01	Chusmiza	37.31	151	P	P	16 20 55.1	+1.6	
D63A	Stockholm	37.53	22	P	P	16 20 55.1	+0.7	
	baz=212							
ULM	Lac du Bonnet	37.60	351	P	P	16 20 54.0	-1.0	
	comp=Z,36nm,0.4s,baz=167,slow=9.4,SNR=73							
ULM	Lac du Bonnet	37.60	351	IAmb	IAmb	16 20 54.6		
	comp=Z,88nm,1.3s							
DGMT	Dagmar	37.81	342	P	P	16 20 57.7	+0.9	
	baz=153							
LMN	Caledonia Moun	37.87	26	IAmb	IAmb	16 20 59.0		
	comp=Z,54nm,0.8s							
HLID	Hailey	38.07	328	P	P	16 21 00.3	+1.1	
	baz=135,SNR=9.0							
MCMT	McKenzie Canyo	38.20	331	P	P	16 21 02.2	+1.8	
MCMT					pP	16 21 44.9	+1.8	
BOZ	Bozeman (W)	38.22	332	P	P	16 21 01.5	+1.1	
	baz=140,SNR=15							
CHGQ	Chibougamau	38.22	14	P	P	16 21 00.1	-0.1	
	baz=201							
SIV	San Ignacio	39.08	137	P	P	16 21 06.1	-1.7	
	comp=Z,2.5nm,0.4s,baz=320,slow=8.4,SNR=18							
SIV				PcP	PcP	16 23 14.0	+0.4	
	comp=Z,5.1nm,0.6s,baz=305,slow=3.7,SNR=8.1							
SIV				ScP	ScP	16 26 44.6	+1.6	
	comp=Z,1.1nm,0.5s,baz=317,slow=2.0,SNR=4.5							
EGMT	Eagleton	39.35	336	P	P	16 21 10.6	+0.8	
	baz=145,SNR=5.2							
ORV	Oroville	39.78	318	P	P	16 21 14.5	+1.2	
MSO	Missoula	40.20	332	P	P	16 21 17.4	+0.6	
	baz=138							
O03E	Paynes Creek	40.37	318	P	P	16 21 18.2	0.0	
	baz=122							
PINE	Pine Mountain	41.82	323	P	P	16 21 30.3	+0.2	
GO02	Mina Guanaco	41.94	155	P	P	16 21 32.1	+0.7	
GO02					PcP	16 23 23.8	+0.8	
HAWA	Hanford	42.66	327	P	P	16 21 37.1	+0.5	
I04A	Tendick Farm,	42.68	322	P	P	16 21 37.3	+0.4	
	baz=125							
NEW	Newport	42.72	331	P	P	16 21 37.4	+0.2	
	baz=135							
G05D	Wamic, OR	42.90	325	P	P	16 21 39.9	+1.3	
	baz=128							

E07A	Sunnyside	42.93	327	P	P	16 21 39.5	+0.7	
FFC	Flin Flon	42.98	348	P	P	16 21 39.4	+0.4	
FFC				IAmb	IAmb	16 21 40.2		
	comp=Z,41nm,0.7s							
F05D	White Salmon	43.38	325	P	P	16 21 43.4	+1.0	
	baz=128							
DRLN	Deer Lake	43.70	28	P	P	16 21 44.4	-0.4	
DRLN				IAmb	IAmb	16 21 45.2		
	comp=Z,41nm,0.8s							
G03D	McMinnville, O	43.99	324	P	P	16 21 47.7	+0.4	
	baz=125							
C06D	Leavenworth	44.36	328	P	P	16 21 50.9	+0.8	
	baz=130							
SCHQ	Schefferville	44.65	17	P	P	16 21 51.9	-0.5	
	comp=Z,48nm,0.5s,baz=216,slow=6.1,SNR=50							
SCHQ	Schefferville	44.65	17	P	P	16 21 51.6	-0.7	
SCHQ				IAmb	IAmb	16 21 52.7		
	comp=Z,56nm,0.7s							
D03D	Eldon	45.27	326	P	P	16 21 57.8	+0.5	
	baz=127							
BDFB	Brasilia	48.50	125	P	P	16 22 20.4	-2.4	
	comp=Z,1.7nm,0.4s,baz=299,slow=10,SNR=2.3							
CPUP	Villa Florida	49.06	143	P	P	16 22 25.0	-1.9	
	comp=Z,1.5nm,0.4s,baz=347,slow=7.6,SNR=5.9							
YKA	Yellowknife Ar	52.90	345	P	P	16 22 54.5	-0.4	
	comp=Z,7.1nm,0.7s,baz=137,slow=7.5,SNR=28							
YKA				pP	pP	16 23 40.6	+0.5	
	comp=Z,5.5nm,0.8s,baz=139,slow=7.5,SNR=5.4							
YKA				ScP	ScP	16 27 38.6	-0.9	
	comp=Z,1.1nm,0.5s,baz=138,slow=5.8,SNR=6.2							
PLCA	Paso Flores	55.90	164	P	P	16 23 17.4	+0.6	
	comp=Z,4.5nm,0.7s,baz=336,slow=7.4,SNR=9.3							
PLCA				PcP	PcP	16 24 13.9	+0.8	
	comp=Z,3.6nm,0.7s,baz=7.0,slow=6.5,SNR=4.6							
PLCA	Paso Flores	55.90	164	IAmb	IAmb	16 23 18.6		
	comp=Z,7.1nm,0.8s							
SFJD	Kangerlussuaq	59.08	16	P	P	16 23 37.9	-0.7	
	comp=Z,13nm,0.7s,baz=272,slow=3.5,SNR=5.3							
SFJD	Kangerlussuaq	59.08	16	IAmb	IAmb	16 23 38.4		
	comp=Z,19nm,0.8s							
RES	Resolute Bay	61.65	358	IAmb	IAmb	16 23 56.7		
	comp=Z,18nm,0.6s							
EPYK	Eagle Plains	62.36	340	P	P	16 24 00.9	+0.1	
	baz=124							
INK	Inuvik	62.49	342	P	P	16 24 01.5	-0.1	
	comp=Z,8.6nm,1.0s,baz=116,slow=10.0,SNR=18							
INK	Inuvik	62.49	342	P	P	16 24 01.5	-0.1	
K27K	Chicken	63.11	336	P	P	16 24 06.0	+0.3	
	baz=117							
N25K	Chitina, Valde	63.11	333	P	P	16 24 06.2	+0.3	
	baz=114							
SCRK	Sand Creek	63.84	336	P	P	16 24 10.6	-0.1	
	baz=115							
PRP	Porcupine Dome	65.09	337	P	P	16 24 18.4	-0.4	
HDA	Harding Lake	65.20	336	P	P	16 24 19.1	-0.2	
	baz=113							
ILAR	Eielson Array	65.32	336	P	P	16 24 19.5	-0.6	
	comp=Z,2.9nm,0.7s,baz=157,slow=4.6,SNR=61							
ILAR				pP	pP	16 25 08.2	+1.0	
	comp=Z,1.8nm,1.0s,baz=127,slow=4.1,SNR=3.1							
ILAR				PP	PP	16 26 47.4	+1.1	
	comp=Z,0.8nm,0.8s,baz=111,slow=6.9,SNR=5.1							
ILAR	Eielson Array	65.32	336	pP	pP	16 25 07.4	+0.2	
RND	Reindeer	65.62	334	IAmb	IAmb	16 24 23.0		
	comp=Z,15nm,0.7s							
POKR	Poker Plat Res	65.67	336	P	P	16 24 22.1	-0.3	
	baz=112							
MCK	McKinley	65.77	335	P	P	16 24 23.2	+0.2	
	baz=110							
CUT	Chulitna	65.89	333	P	P	16 24 23.4	-0.4	
	baz=109							
SUMG	Summit	65.94	14	P	P	16 24 23.9	-0.5	
SUMG				IAmb	IAmb	16 24 26.7		
	comp=Z,33nm,1.2s							
I23K	Minto, Yukon-K	66.44	336	P	P	16 24 27.0	-0.2	
	baz=111							
MLY	Manley	66.95	336	P	P	16 24 30.0	-0.5	
	baz=109,SNR=6.9							
COLD	Coldfoot	67.49	338	P	P	16 24 34.5	+0.7	
	baz=111							
COLD	Coldfoot	67.49	338	P	P	16 24 34.5	+0.7	
TOLK	Toolik Lake Re	67.78	340	P	P	16 24 35.5	-0.2	
	baz=112							
TOLK	Toolik Lake Re	67.78	340	P	P	16 24 35.5	-0.2	
ESDC	Sonseca Array	76.87	52	P	P	16 25 28.6	-1.4	
	comp=Z,1.9nm,0.7s,baz=289,slow=6.0,SNR=7.7							
MDT	Midelt	77.17	59	P	P	16 25 32.2	+0.3	
	comp=Z,0.8nm,0.5s,baz=228,slow=6.4,SNR=3.6							
DBIC	Dimbokro	81.47	85	P	P	16 25 53.5	-1.8	
	comp=Z,4.7nm,1.1s,baz=270,slow=7.0,SNR=4.4							
NOA	NORSAR Array B	82.82	29	P	P	16 26 00.1	-1.4	
	comp=Z,1.4nm,0.8s,baz=286,slow=5.0,SNR=3.3							
ARCES	ARCESS Array B	85.57	19	P	P	16 26 13.9	-1.2	
	comp=Z,5.1nm,0.8s,baz=292,slow=4.7,SNR=9.2							
CLL	Collm	86.36	38	eP	P	16 26 20.0	+0.7	
TORD	Torodi Ar. Bea	86.40	77	P	P	16 26 17.7	-2.5	
	comp=Z,0.8nm,0.5s,baz=303,slow=5.3,SNR=8.0							
TORD				PKKPbc	PKKPbc	16 44 17.7	+1.8	
	comp=Z,0.8nm,0.7s,baz=84,slow=2.2,SNR=4.6							
GERES	GERESS Array B	87.50	40	P	P	16 26 25.3	+0.3	
	comp=Z,0.8nm,0.6s,baz=289,slow=4.1,SNR=7.2							
GERES				pP	pP	16 27 14.8	+0.3	
	comp=Z,0.6nm,0.7s,baz=252,slow=2.7,SNR=2.9							
FINES	FINESS Array B	89.41	26	P	P	16 26 31.5	-2.1	
	comp=Z,2.9nm,1.0s,baz=217,slow=3.5,SNR=3.4							
ZALV	Zalesovo Beam	112.85	5	PP	PP	16 33 00.3	-2.4	
	comp=Z,2.1nm,0.6s,baz=354,slow=6.7,SNR=8.6							
BOSA	Boshof	116.13	116	PKP	PKPdf	16 32 18.8	-1.0	
	comp=Z,2.6nm,0.9s,baz=225,slow=2.9,SNR=2.7							
SONM	Songino Array	118.01	349	PKP	PKPdf	16 32 21.6	-1.4	
	comp=Z,0.2nm,0.3s,baz=301,slow=1.0,SNR=5.1							
SONM				PKKPbc	PKKPbc	16 42 42.7	-2.3	
	comp=Z,0.5nm,0.6s,baz=210,slow=3.7,SNR=5.2							
KSRS	Korea Array	119.60	328	PKP	PKPdf	16 32 25.1	-1.0	
	comp=Z,1.1nm,0.6s,baz=48,slow=1.4,SNR=5.1							
MKAR	Makanchi Array	119.64

comp=Z,2.3nm,0.7s,baz=305,slow=2.0,SNR=14
CMAR PKPbc **PKPbc 16 33 21.1 -1.2**
comp=Z,2.2nm,0.7s,baz=339,slow=3.6,SNR=17
CMAR Chiang Mai Arr 147.93 348 PKPdf 16 33 17.8 -1.2
SOEI Soe 148.60 273 PKiKP 16 33 26.0 +0.4
NWAO Narrogin (SRO) 149.98 225 PKP **PKPdf 16 33 22.4 +0.5**
comp=Z,6.8nm,0.8s,baz=214,slow=3.6,SNR=2.8
NWAO PKPbc **PKiKP 16 33 27.5 -0.3**
comp=Z,15nm,0.7s,baz=109,slow=4.9,SNR=6.7

ISK ***13*** *16:18:18.2, 37.29N×42.55E, h5km, ML2.7/14*
DDA ***13*** *16:18:18.4, 37.29N×42.61E, h3km±1km, ML2.6*
ATA ***13*** *16:18:21.9±0.3, 37.76N×42.87E, h15km, ML1.9, MW3.9*
ISC 13 16:18:18.8±1.3, 37.31N±0.04×42.64E±0.02, h5km±10km, n31, σ1§15/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SIRT	**Sirnak**	**0.25**	**320**	PG		**Pg**	**16 18 23.7**	**0.0**
SIRT				SG		**Sb**	**16 18 28.5**	**-2.2**
SIRN	**Sırnak**	**0.26**	**316**	*i* P		**Pg**	**16 18 24.0**	**0.0**
SIRN				*i* S		**Sg**	**16 18 28.1**	**+0.7**
SIRN				IAML			16 18 35.0	
	comp=E,2μm,1.0s							
CUKT	**Cukurca**	**0.77**	**94**	PG		**Pb**	**16 18 35.3**	**+0.5**
CUKT				SG		**Sn**	**16 18 48.6**	**0.0**
CUKT	**Cukurca**	**0.77**	**94**	*i* P		**Pg**	**16 18 33.8**	**+0.2**
CUKT				*i* S		**Sn**	**16 18 47.9**	**-0.6**
CUKT				IAML			16 19 01.0	
	comp=E,151nm,0.4s							
HAKT	**HAKKARI**	**0.88**	**73**	*i* P		**Pb**	**16 18 36.5**	**-0.3**
SRTM	**Siirt_Merkez**	**0.89**	**320**	*i* P		**Pg**	**16 18 35.5**	**-0.3**
SRTM				*i* S		**Sn**	**16 18 51.7**	**+0.1**
SRTM				IAML			16 18 55.0	
	comp=E,108nm,0.5s							
SRTM				IAML			16 18 58.0	
	comp=N,113nm,0.5s							
AKDM	**Akdamar-Van**	**1.05**	**15**	PN		**Pb**	**16 18 39.6**	**0.0**
AKDM				SN		**Sn**	**16 18 56.1**	**+0.5**
GEVA	**Gevas**	**1.05**	**18**	*e*P		Pg	16 18 33.6	-5.5
GEVA				IAML			16 19 00.1	
	comp=Z,38nm,0.5s							
GEVA	**Gevas**	**1.05**	**18**	*i* P		**Pb**	**16 18 39.5**	**-0.2**
GEVA				*i* S		**Sb**	**16 18 54.3**	**+0.4**
BLIS	**Bitlis-Merkez**	**1.18**	**339**	*e*P		**Pg**	**16 18 39.2**	**-2.2**
BLIS				IAML			16 19 06.5	
	comp=Z,30nm,0.5s							
BLIS	**Bitlis-Merkez**	**1.18**	**339**	*i* P		**Pn**	**16 18 42.5**	**+0.3**
BLIS				*i* S		**Sn**	**16 18 58.2**	**-0.6**
BTMN	**Batman**	**1.24**	**298**	*i* P		**Pn**	**16 18 43.5**	**+0.7**
BTMN				*i* S		**Sn**	**16 19 02.0**	**+2.0**
BTMN				IAML			16 19 04.0	
	comp=N,210nm,0.8s							
BTMN				IAML			16 19 04.0	
	comp=E,193nm,0.4s							
BASK	**Baskale_VAN**	**1.31**	**55**	*e*P		**Pn**	**16 18 40.5**	**-3.5**
GURO	**Guroymak-BITLI**	**1.33**	**339**	PN		**Pg**	**16 18 44.9**	**+0.6**
GURO				SN		**Sn**	**16 19 04.4**	**+1.9**
YOVA	**Hakkari_Yksek**	**1.34**	**78**	*i* P		**Pg**	**16 18 44.8**	**+0.3**
YOVA				*i* S		**Sn**	**16 19 04.6**	**+1.9**
YOVA				IAML			16 19 10.0	
	comp=E,66nm,0.5s							
TVAN	**Van**	**1.36**	**26**	*i* P		**Pg**	**16 18 46.8**	**+1.9**
TVAN				*i* S		**Sn**	**16 19 05.7**	**+2.4**
VANB	**Van**	**1.41**	**24**	PN		**Pg**	**16 18 46.1**	**+0.2**
SVAN	**Silvan-Diyarba**	**1.42**	**307**	PN		**Pg**	**16 18 45.5**	**-0.6**
SVAN				SN		**Sn**	**16 19 05.4**	**+0.9**
SVAN	**Silvan-Diyarba**	**1.42**	**307**	*i* P		**Pg**	**16 18 46.0**	**-0.1**
MARD	**Mardin**	**1.49**	**271**	*i* P		**Pg**	**16 18 47.2**	**-0.1**
MARD				*i* S		**Sg**	**16 19 07.5**	**+0.9**
MARD				IAML			16 19 10.0	
	comp=E,263nm,0.5s							
MARD				IAML			16 19 11.0	
	comp=N,394nm,0.6s							
MUSM	**Mu-Merkez**	**1.67**	**328**	*i* P		**Pb**	**16 18 50.0**	**-0.2**
MUSM				*i* S		**Sn**	**16 19 10.8**	**-0.1**
MAZI	**Mazidag**	**1.76**	**276**	PN		**Pb**	**16 18 50.4**	**-1.2**
VRTB	**Varto-Mus**	**2.07**	**334**	PN		**Pb**	**16 18 55.6**	**-1.4**
VRTB	**Varto-Mus**	**2.07**	**334**	*i* P		**Pb**	**16 18 57.1**	**+0.1**
DYBB	**Diyarbakir**	**2.09**	**289**	PN		**Pn**	**16 18 54.3**	**-0.3**
HANI	**Diyarbakir_Han**	**2.09**	**303**	*i* P		**Pb**	**16 18 57.3**	**0.0**
AGRB	**Hanur-Agry**	**2.28**	**7**	PN		**Pb**	**16 18 59.5**	**-1.1**
BNGB	**Bingl**	**2.29**	**318**	PN		**Pn**	**16 18 58.1**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.85**	**293**	PN		**Pn**	**16 19 05.3**	**+0.2**
PTK	**Pertek**	**3.01**	**303**	PN		**Pn**	**16 19 08.1**	**+0.7**
URFA	**Urfa**	**3.05**	**274**	PN		**Pn**	**16 19 08.1**	**+0.3**

IDC ***13*** *16:20:12.5±2.6, 15.33S×173.08E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.9/28, mbtmp4.1/7, ML3.5/1, MS3.5/15, Ms1 3.5/15, ms1mx3.3/27, Error ellipse: s-maj=90.7km s-min=27.8km az=134.0*
NEIC ***13*** *16:20:13.8±1.8, 15.10S±0.07×173.05E±0.08, h16km±5km, mb4.5/9, Error ellipse: s-maj=11.7km s-min=9.3km az=123.0*
ISC 13 16:20:15.1±0.7, 15.41S±0.10×172.92E±0.07, h10km, n36, σ1§72/26, mb4.3/10, MS3.4/14, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**5.44**	**116**			**Pn**	**16 21 34.8**	**-1.5**
SANVU	**Saraoutou**	**5.51**	**269**			**Pn**	**16 21 36.6**	**-0.7**
SANVU				Sn		**Sn**	**16 22 40.0**	**-0.7**
DZM	**Mont Dzumac**	**9.02**	**222**	Pn		**Pn**	**16 22 27.0**	**+1.4**
	0.5nm,0.3s,baz=110,slow=13,SNR=10.0							
DZM				Sn		**Sn**	**16 24 06.0**	**-1.4**
	0.3nm,0.3s,baz=270,slow=20,SNR=3.3							
DZM				LR		LR	16 25 35.2	
	comp=Z,467nm,20.3s,baz=48,slow=35							
DZM	**Mont Dzumac**	**9.02**	**222**	*e*Pn		**Pn**	**16 22 28.3**	**+2.7**
	1.7nm,0.2s							
DZM				*e*Sn		**Sn**	**16 24 03.6**	**-3.8**
	0.7nm,0.2s							
DZM				*e*LR		LR	16 24 40.4	
	comp=Z,773nm,26.6s							
DZM	**Mont Dzumac**	**9.02**	**222**			**Pn**	**16 22 27.6**	**+2.0**
FUNA	**Funafuti**	**9.20**	**43**			Pn	16 22 20.3	-7.6
HNR	**Honiara**	**13.99**	**294**	LR		LR	16 28 23.8	
	comp=Z,59nm,20.1s,baz=134,slow=35							
AFI	**Afiamalu**	**14.89**	**86**	LR		LR	16 27 42.9	
	comp=Z,104nm,19.8s,baz=261,slow=31							
AFI	**Afiamalu**	**14.89**	**86**			**Pn**	**16 23 46.3**	**+0.5**
URZ	**Urewera**	**23.06**	**172**	LR		LR	16 32 12.6	
	comp=Z,96nm,19.5s,baz=32,slow=31							
KRVT	**Keravat (AS076**	**23.32**	**296**	LR		LR	16 34 01.0	
	comp=Z,105nm,20.4s,baz=107,slow=35							
ARMA	**Armidale**	**24.58**	**229**	P		**P**	**16 25 37.6**	**+2.0**
CTA	**Charters Tower**	**25.80**	**256**	P		**P**	**16 25 46.4**	**-0.2**
	4.3nm,0.9s,baz=90,slow=11,SNR=3.3							
CTAO	**Charters Tower**	**25.80**	**256**	P		**P**	**16 25 48.3**	**+1.7**
CTAO				IAmb		IAmb	16 26 10.7	
	comp=Z,11nm,1.1s							
PMG	**Port Moresby**	**25.84**	**280**	LR		LR	16 35 06.9	
	comp=Z,72nm,18.4s,baz=34,slow=34							
STKA	**Stephens Creek**	**32.88**	**235**	P		**P**	**16 26 51.0**	**+1.5**
	comp=Z,3.3nm,0.9s,baz=80,slow=6.1,SNR=3.8							
STKA				LR		LR	16 38 02.6	
	comp=Z,73nm,20.3s,baz=28,slow=32							
STKA	**Stephens Creek**	**32.88**	**235**	P		**P**	**16 26 50.3**	**+0.8**
PPT2	**Papeete2**	**35.99**	**99**	*e*LR		LR	16 36 51.3	
	comp=Z,88nm,30.2s							
TBI	**Tubuai**	**36.27**	**109**	*e*LR		LR	16 37 19.5	
	comp=Z,130nm,31.8s							
WB0	**Warramunga Arr**	**36.92**	**258**	P		**P**	**16 27 24.2**	**-0.4**
WB0				IAmb		IAmb	16 28 01.3	
	comp=Z,12nm,1.6s							
WB2	**Warramunga Arr**	**36.97**	**257**	P		**P**	**16 27 25.2**	**+0.3**
WB2				IAmb		IAmb	16 27 31.1	
	comp=Z,18nm,1.5s							
WRA	**Warramunga Arr**	**36.98**	**257**	P		**P**	**16 27 24.2**	**-0.8**
	comp=Z,1.2nm,1.0s,baz=91,slow=9.4,SNR=6.7							
AS31	**Alice Springs**	**37.58**	**251**	P		**P**	**16 27 29.9**	**-0.2**
ASAR	**Alice Springs**	**37.58**	**251**	P		**P**	**16 27 30.2**	**+0.1**
	comp=Z,5.3nm,0.8s,baz=78,slow=9.0,SNR=64							
ASAR				LR		LR	16 41 42.7	
	comp=Z,62nm,20.2s,baz=81,slow=34							
ASAR	**Alice Springs**	**37.58**	**251**	P		**P**	**16 27 29.4**	**-0.7**
BBOO	**Buckleboo**	**37.60**	**236**	P		**P**	**16 27 30.3**	**+0.2**
SIJI	**Sorong**	**43.57**	**285**	LR		LR	16 45 42.9	
	comp=Z,36nm,21.7s,baz=140,slow=35							
VNDA	**Vanda**	**62.38**	**183**	LR		LR	16 53 18.1	
	comp=Z,42nm,20.6s,baz=39,slow=32							
KSRS	**Korea Array**	**67.49**	**322**	LR		LR	16 57 53.1	
	comp=Z,13nm,20.3s,baz=215,slow=34							
QSPA	**South Pole Qui**	**74.62**	**180**	P		**P**	**16 31 53.0**	**-1.5**
QSPA				IAmb		IAmb	16 32 04.6	
	comp=Z,3.9nm,1.1s							
CMAR	**Chiang Mai Arr**	**80.23**	**292**	P		**P**	**16 32 28.0**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=117,slow=3.8,SNR=5.8							
NVAR	**Mina Array Bea**	**83.64**	**47**	P		**P**	**16 32 46.9**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=229,slow=6.9,SNR=3.7							
NVAR				LR		LR	17 02 31.4	
	comp=Z,52nm,19.2s,baz=262,slow=30							
ILAR	**Eielson Array**	**85.58**	**16**	P		**P**	**16 32 50.9**	**-2.3**
	comp=Z,1.2nm,0.7s,baz=230,slow=5.7,SNR=6.4							
ILAR				LR		LR	17 05 19.2	
	comp=Z,39nm,19.9s,baz=292,slow=32							
ILAR	**Eielson Array**	**85.58**	**16**	P		**P**	**16 32 50.4**	**-2.8**
PDAR	**Pinedale Array**	**91.45**	**46**	LR		LR	17 13 04.8	
	comp=Z,50nm,18.1s,baz=64,slow=35							
YKA	**Yellowknife Ar**	**95.69**	**26**	LR		LR	17 08 19.6	
	comp=Z,38nm,21.8s,baz=0.0,slow=30							

IDC ***13*** *16:32:10.6±3.9, 20.48S×178.06W, h450km±31km, mb2.9/4, mb1 3.3/5, mb1mx3.0/37, mbtmp3.9/5, Error ellipse: s-maj=112.5km s-min=20.9km az=148.0*
NEIC ***13*** *16:32:11.9±1.5, 20.3S±0.2×178.0W±0.2, h471km±7km, mb4.3/8, Error ellipse: s-maj=26.9km s-min=18.6km az=138.0*
ISC 13 16:32:10.4±0.7, 20.3S±0.1×178.1W±0.1, h450km, n37, σ1§75/38, mb3.8/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.43**	**304**	P		P	16 33 39.2	+10
NIUE	**Niue**	**7.81**	**82**	P		**P**	**16 34 06.6**	**+2.7**
AFI	**Afiamalu**	**8.78**	**45**	P		**P**	**16 34 16.4**	**+2.0**
	8.7nm,0.3s,baz=253,slow=7.0,SNR=11							
AFI				S		**S**	**16 35 54.2**	**-2.0**
	1.8nm,0.3s,baz=324,slow=19,SNR=2.6							
OUZ	**Omahuta**	**16.57**	**204**	P		**P**	**16 35 39.0**	**+0.9**
OUZ	**Omahuta**	**16.57**	**204**	P		**P**	**16 35 39.2**	**+1.2**
WCZ	**Waipu Caves**	**16.94**	**201**	P		**P**	**16 35 42.9**	**+1.0**
KUZ	**Kuaotunu**	**17.26**	**197**	P		**P**	**16 35 45.5**	**+0.2**
WIAZ	**Waiheke Island**	**17.47**	**198**	P		**P**	**16 35 47.5**	**-0.1**
MXZ	**Matakaoa Point**	**17.49**	**189**	P		**P**	**16 35 44.7**	**-3.0**
WMGZ	**Waiomatatini S**	**17.72**	**189**	P		**P**	**16 35 53.1**	**+2.9**
MKAZ	**Moumakai**	**17.75**	**198**	P		**P**	**16 35 50.2**	**-0.2**
HAZ	**Te Kaha**	**17.77**	**191**	P		**P**	**16 35 49.9**	**-0.7**
RUGZ	**Raukumara Rang**	**17.99**	**191**	P		**P**	**16 35 50.4**	**-2.6**
PUZ	**Puketiti**	**18.00**	**189**	P		**P**	**16 35 52.8**	**-0.2**
TOZ	**Tahuroa Road**	**18.24**	**196**	P		**P**	**16 35 55.1**	**-0.3**
MWZ	**Matawai**	**18.37**	**191**	P		**P**	**16 35 53.9**	**-2.8**
URZ	**Urewera**	**18.38**	**192**	P		**P**	**16 35 53.0**	**-3.6**
TLZ	**Tolley Road**	**18.80**	**196**	P		**P**	**16 36 00.9**	**+0.2**
HIZ	**Hauiti**	**19.15**	**197**	P		**P**	**16 36 04.0**	**+0.1**
BKZ	**Black Stump Fm**	**19.38**	**193**	P		**P**	**16 36 02.4**	**-3.6**
QRZ	**Quartz Range**	**21.97**	**199**	P		**P**	**16 36 29.5**	**0.0**
WR0	**Warramunga Arr**	**44.33**	**262**	P		**P**	**16 39 39.8**	**+0.4**
WR0				IAmb		IAmb	16 40 01.0	
	comp=Z,10nm,1.5s							
AS31	**Alice Springs**	**44.46**	**257**	P		**P**	**16 39 41.5**	**+1.1**
ASAR	**Alice Springs**	**44.46**	**257**	P		**P**	**16 39 40.3**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=89,slow=8.0,SNR=11							
ASAR				PcP		**PcP**	**16 41 14.1**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=105,slow=4.0,SNR=9.7							
ASAR	**Alice Springs**	**44.46**	**257**	P		**P**	**16 39 40.6**	**+0.2**
WB0	**Warramunga Arr**	**44.50**	**262**	P		**P**	**16 39 40.6**	**-0.1**
WB0				IAmb		IAmb	16 40 02.4	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**44.52**	**262**	P		**P**	**16 39 40.9**	**0.0**
	comp=Z,0.2nm,0.2s,baz=97,slow=7.5,SNR=13							
WRA				PcP		**PcP**	**16 41 14.7**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=93,slow=3.4,SNR=2.8							
KNRA	**Kununurra**	**50.56**	**266**	P		**P**	**16 40 26.7**	**+0.2**
KNRA				IAmb		IAmb	16 40 34.2	
	comp=Z,21nm,1.4s							
SSLB	**Suanglung**	**73.77**	**304**	P		**P**	**16 42 58.0**	**0.0**
SSLB				IAmb		IAmb	16 43 15.2	
	comp=Z,68nm,1.6s							
ILAR	**Eielson Array**	**88.14**	**13**	P		**P**	**16 44 11.6**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=219,slow=5.1,SNR=5.5							
CMAR	**Chiang Mai Arr**	**89.94**	**290**	P		**P**	**16 44 23.4**	**+2.2**
	comp=Z,0.6nm,1.0s,baz=121,slow=3.3,SNR=4.8							
HFS	**Hagfors**	**139.32**	**191**	PKhKP	PKPpre		16 50 39.0	
	comp=Z,1.5nm,0.7s,baz=42,slow=2.3,SNR=4.5							
AKASG	**Malin Array Be**	**142.78**	**331**	PKhKP		**PKPdf**	**16 50 47.9**	**-3.5**
	comp=Z,1.7nm,0.5s,baz=44,slow=4.2,SNR=11							
AKASG	**Malin Array Be**	**142.78**	**331**			**PKPdf**	**16 50 48.4**	**-3.0**
MMAI	**Mount Meron Ar**	**147.62**	**300**	PKPbc		**PKiKP**	**16 51 04.5**	**-0.9**
	comp=Z,1.9nm,0.5s,baz=73,slow=5.3,SNR=8.6							
CLL	**Collm**	**147.84**	**347**	*e*PKPbc		**PKPbc**	**16 51 04.0**	**+0.3**
GERES	**GERESS Array B**	**149.97**	**344**	PKPbc		**PKPbc**	**16 51 08.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=40,slow=3.2,SNR=3.0							

IDC ***13*** *16:35:23.1±2.1, 45.85S×75.73W, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.8/22, mbtmp3.9/6, ML3.7/1, MS3.6/5, Ms1 3.6/5, ms1mx3.3/19, Error ellipse: s-maj=89.1km s-min=20.3km az=114.0*
NEIC ***13*** *16:35:26.6±2.8, 45.7S±0.1×75.9W±0.4, h35km±7km, mb4.3/8, Error ellipse: s-maj=36.0km s-min=15.5km az=101.0*
ISC 13 16:35:27.3±1.1, 45.7S±0.1×76.0W±0.3, h35km, n33, σ1§47/25, mb4.1/5, MS3.3/4, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
LL01	**San Ignacio de**	**4.19**	**39**			**Pn**	**16 36 27.6**	**-1.1**
PLCA	**Paso Flores**	**6.34**	**41**	Pn		**Pn**	**16 36 58.9**	**+0.5**
	0.4nm,0.3s,baz=234,slow=15,SNR=8.9							
PLCA				LR		LR	16 39 30.6	
	comp=Z,857nm,20.1s,baz=168,slow=39							
PLCA	**Paso Flores**	**6.34**	**41**			**Pn**	**16 36 57.5**	**-0.8**
LC01	**Cunco**	**7.44**	**26**			**Pn**	**16 37 13.5**	**+0.2**
BI03	**Tigo**	**9.11**	**15**			**Pn**	**16 37 36.4**	**+0.1**
BI02	**San Fabin de**	**9.69**	**23**			**Pn**	**16 37 44.1**	**-0.1**
BO02	**Sierra Bellavi**	**11.58**	**22**			**Pn**	**16 38 09.2**	**-1.0**
H03S1	**Juan Fernandez**	**12.04**	**348**	T		T	16 50 52.5	
	baz=166,slow=74,SNR=1655							
H03S2	**Juan Fernandez**	**12.05**	**348**	T		T	16 51 00.3	
	baz=166,slow=74,SNR=983							
H03S3	**Juan Fernandez**	**12.06**	**348**	T		T	16 50 54.7	
	baz=166,slow=74,SNR=1534							
MT05	**Renca**	**12.93**	**20**	Pn		**Pn**	**16 38 26.3**	**-2.2**
MT02	**Curacav**	**12.96**	**18**	Pn		**Pn**	**16 38 25.7**	**-3.2**
PEL	**Peldehue**	**13.18**	**20**			**Pn**	**16 38 29.4**	**-2.5**
ROC1	**El Roble**	**13.26**	**18**			**Pn**	**16 38 31.2**	**-2.1**
CO02	**Combarbal**	**14.97**	**17**	Pn		**Pn**	**16 38 55.0**	**-1.5**
CO03	**El Pedregal**	**15.39**	**17**	Pn		**Pn**	**16 39 00.1**	**-1.8**
GO04	**Tololo Observa**	**16.01**	**16**	Pn		**Pn**	**16 39 08.4**	**-1.7**
GO04				IAmb		IAmb	16 39 15.6	
	comp=Z,41nm,1.4s							
GO02	**Mina Guanaco**	**21.12**	**16**	P		**P**	**16 40 10.1**	**+0.9**
LVC	**Limon Verde**	**23.73**	**16**	LR		LR	16 49 27.4	
	comp=Z,100nm,19.8s,baz=210,slow=35							
CPUP	**Villa Florida**	**24.40**	**44**	P		**P**	**16 40 43.5**	**+1.2**
	comp=Z,3.4nm,0.7s,baz=216,slow=10.0,SNR=7.0							
CPUP				LR		LR	16 51 00.5	
	comp=Z,285nm,18.6s,baz=218,slow=38							
CPUP	**Villa Florida**	**24.40**	**44**	P		**P**	**16 40 43.6**	**+1.2**
CPUP				IAmb		IAmb	16 40 50.0	
	comp=Z,10nm,1.0s							
PB07	**IPOC Station P**	**24.42**	**14**	P		**P**	**16 40 44.1**	**+1.4**
PSGCX	**Pisagua**	**26.47**	**12**	P		**P**	**16 41 02.7**	**+1.5**
BDFB	**Brasilia**	**38.04**	**47**	P		**P**	**16 42 42.6**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=190,slow=11,SNR=4.1							
SNAA	**Sanae**	**42.19**	**153**	P		**P**	**16 43 15.2**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=296,slow=9.3,SNR=4.8							
SNAA				LR		LR	16 58 04.9	
	comp=Z,44nm,20.6s,baz=13,slow=32							
SNAA	**Sanae**	**42.19**	**153**	P		**P**	**16 43 15.9**	**-0.4**
SNAA				IAmb		IAmb	16 43 23.3	
	comp=Z,6.3nm,1.0s							
QSPA	**South Pole Qui**	**44.56**	**180**	P		**P**	**16 43 34.8**	**-0.7**
	comp=Z,1.6nm,1.0s,baz=157,slow=3.8,SNR=3.6							
QSPA				LR		LR	17 00 31.2	
	comp=Z,34nm,19.4s,baz=70,slow=34							
QSPA	**South Pole Qui**	**44.56**	**180**	IAmb		IAmb	16 43 43.0	
	comp=Z,8.3nm,1.5s							
VNDA	**Vanda**	**52.05**	**194**	P		**P**	**16 44 33.8**	**+0.9**
	comp=Z,1.2nm,1.1s,baz=138,slow=5.5,SNR=3.8							
H11S2	**WAKE ISLAND Hyl**	**22.01**	**264**	T		T	19 08 42.2	
	baz=136,slow=75,SNR=14							
H11S1	**WAKE ISLAND Hyl**	**22.03**	**264**	T		T	19 08 44.1	
	baz=136,slow=75,SNR=6.4							
H11S3	**WAKE ISLAND Hyl**	**22.03**	**264**	T		T	19 08 29.7	
	baz=136,slow=75,SNR=13							
CMAR	**Chiang Mai Arr**	**152.52**	**170**	PKPbc		**PKiKP**	**16 55 20.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=203,slow=3.8,SNR=4.8							

WEL 13 16:35:55.3, 39°S±3°×17°6E±°, h143km±4km, M2.1/22, MLv2.1/22, Error ellipse: s-maj=0.0km s-min=0.0km az=128.8, North Island

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KATZ	**Kakaramea**	**0.25**	**188**	P		Pn	16 36 17.4	+2.4
WPRZ	**Whakapapatariri**	**0.39**	**58**	P		Pn	16 36 15.5	0.0
WTVZ	**West Tongariro**	**0.40**	**196**	P		Pn	16 36 15.3	-0.3
TWVZ	**Taurewa**	**0.41**	**214**	P		Pn	16 36 15.7	+0.1
TLZ	**Tolley Road**	**0.43**	**339**	P		Pn	16 36 17.1	+1.5
OTVZ	**Otukere**	**0.44**	**187**	P		Pn	16 36 16.3	+0.5
NGZ	**Ngauruhoe**	**0.46**	**193**	P		Pn	16 36 16.2	+0.3
TUVZ	**Tukino**	**0.54**	**187**	P		Pn	16 36 16.5	+0.2
FWVZ	**Far West T-bar**	**0.55**	**195**	P		Pn	16 36 16.4	0.0
DRZ	**Dome Shelter**	**0.56**	**194**	P		Pn	16 36 14.8	-1.8
WHVZ	**Whangaehu Hut**	**0.57**	**192**	P		Pn	16 36 17.0	+0.5
WNVZ	**Wahianoa**	**0.61**	**190**	P		Pn	16 36 16.9	+0.2
WNVZ				S		Sn	16 36 33.0	-0.1
PKVZ	**Pokaka**	**0.64**	**208**	P		Pn	16 36 17.0	+0.2
MOVZ	**Moawhango**	**0.68**	**179**	P		Pn	16 36 17.2	+0.2
MOVZ				S		Sn	16 36 32.6	-1.0
MTVZ	**Mangateitei**	**0.69**	**197**	P		Pn	16 36 17.4	+0.3
BKZ	**Black Stump Fm**	**0.73**	**127**	P		Pn	16 36 17.3	0.0
BKZ				S		Sn	16 36 33.2	-1.0
BHHZ	**Black Hill Sta**	**0.80**	**162**	P		Pn	16 36 18.1	+0.2
BHHZ				S		Sn	16 36 34.2	-1.0
VRZ	**Vera Road**	**0.86**	**242**	P		Pn	16 36 18.0	-0.2
MTHZ	**Maungataniwha**	**0.87**	**99**	P		Pn	16 36 18.2	-0.2
MTHZ				S		Sn	16 36 35.1	-0.6
KWHZ	**Kaweka Forest**	**0.88**	**143**	S		Sn	16 36 36.5	+0.4
TOZ	**Tahuroa Road**	**1.01**	**349**	P		Pn	16 36 19.2	-0.3
MCHZ	**McNeill Hill**	**1.03**	**134**	P		Pn	16 36 18.7	-1.0
MCHZ				S		Sn	16 36 38.3	-0.1
KRHZ	**Kereru**	**1.04**	**152**	P		Pn	16 36 20.0	+0.2
KRHZ				S		Sn	16 36 38.1	-0.4
RAHZ	**Arahi**	**1.07**	**101**	P		Pn	16 36 20.3	+0.3
RAHZ				S		Sn	16 36 39.7	+0.8
ARHZ	**Aropaoanui**	**1.12**	**119**	P		Pn	16 36 21.1	+0.7
ARHZ				S		Sn	16 36 39.9	+0.2
MHEZ	**Mangahewa**	**1.16**	**252**	P		Pn	16 36 21.5	+0.6
URZ	**Urewera**	**1.18**	**67**	S		Sn	16 36 38.7	-1.8
WAZ	**Wanganui**	**1.18**	**209**	P		Pn	16 36 22.1	+1.0
PNHZ	**Pukenui**	**1.24**	**163**	P		Pn	16 36 21.6	-0.1
PNHZ				S		Sn	16 36 41.0	-0.9
SNGZ	**Shannon Statio**	**1.25**	**93**	P		Pn	16 36 22.2	+0.4
DREZ	**Durham Road**	**1.28**	**248**	S		Sn	16 36 45.4	+2.8
TSZ	**Takapari Road**	**1.34**	**173**	P		Pn	16 36 23.0	+0.3
TSZ				S		Sn	16 36 42.4	-1.3
KAHZ	**Kahuranaki**	**1.39**	**141**	P		Pn	16 36 23.8	+0.6
NEZ	**North Egmont**	**1.39**	**247**	P		Pn	16 36 23.6	+0.3
CKHZ	**Cape Kidnapper**	**1.40**	**132**	S		Sn	16 36 43.5	-1.1
PKE	**Pukeiti**	**1.44**	**251**	P		Pn	16 36 24.1	+0.

comp=Z,299nm,20.3s,baz=186,slow=38
SNAA Sanae 42.08 153 P **P 16 58 04.2 -0.3**
comp=Z,4.8nm,1.0s,baz=253,slow=9.6,SNR=5.2
SNAA Sanae 42.08 153 P **P 16 58 03.0 -1.5**
SNAA IAmb IAmb 16 58 14.5
comp=Z,10nm,1.1s
QSPA South Pole Qui 44.55 180 P **P 16 58 24.4 -0.2**
comp=Z,3.3nm,0.9s,baz=134,slow=5.6,SNR=3.3
QSPA South Pole Qui 44.55 180 P **P 16 58 24.5 -0.1**
QSPA IAmb IAmb 16 58 30.2
comp=Z,9.0nm,1.2s
VNDA Vanda 52.10 193 P **P 16 59 22.8 +0.4**
comp=Z,1.6nm,0.9s,baz=140,slow=6.0,SNR=6.2
VNDA LR LR 17 19 04.0
comp=Z,44nm,18.8s,baz=138,slow=33
VNDA Vanda 52.10 193 P **P 16 59 22.8 +0.4**
VNDA IAmb IAmb 16 59 32.0
comp=Z,6.6nm,1.6s
MAW Mawson 62.76 163 LR LR 17 28 27.9
comp=Z,87nm,18.8s,baz=234,slow=37
CASY Casey 68.26 183 P **P 17 01 15.0 +1.9**
BOSA Boshof 77.09 118 LR LR 17 32 16.1
comp=Z,63nm,19.9s,baz=232,slow=33
STKA Stephens Creek 95.74 211 LR LR 17 38 13.4
comp=Z,43nm,19.2s,baz=30,slow=30
PETK Petropavlovsk- 145.23 302 PKPbc **PKPab 17 09 49.8 +0.5**
comp=Z,13nm,1.0s,baz=95,slow=3.5,SNR=2.4
ABKAR Akbulak array 150.09 67 **PKiKP 17 10 02.6 -0.8**
CMAR Chiang Mai Arr 152.47 169 PKPbc **PKiKP 17 10 08.8 -0.5**
comp=Z,0.4nm,0.5s,baz=211,slow=4.2,SNR=6.7
CMAR Chiang Mai Arr 152.47 169 **PKPbc 17 10 06.5 -2.6**

*REY **13** 16:50:22.1, 64.°67N × 17.°37W, h9km*
*IDC **13** 16:50:23.1±0.9, 64.°36N × 17.°71W, h0km, mb3.6/7, mb1 3.9/9, mb1mx3.6/57, mbtmp3.6/9, ML3.4/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/44, Error ellipse: s-maj=31.4km s-min=15.5km az=20.0*
*NEIC **13** 16:50:24.5±2.1, 64.°5N±0.°1 × 17.°7W±0.°1, h8km±5km, mb4.3/9, Error ellipse: s-maj=14.5km s-min=8.7km az=186.0*
ISC 13 16:50:23.2±0.5, 64.°67N±0.°02 × 17.°37W±0.°03, h10km, n53, σ25.°21/53, mb3.9/11, MS3.1/3, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**1**	P		**Pg**	**16 50 24.9**	**-1.4**
	baz=0.5							
IDYN				S		**Sg**	**16 50 27.4**	**-1.0**
	baz=0.5							
IVON	**Vonarskard**	**0.17**	**272**	P		**Pg**	**16 50 25.8**	**-1.1**
	baz=273							
IGRF	**Grimsfjall**	**0.27**	**170**	P		**Pg**	**16 50 27.4**	**-1.3**
	baz=170							
IHAM	**Hamarinn**	**0.27**	**226**	P		**Pg**	**16 50 27.4**	**-1.3**
	baz=227							
IKVE	**Kverkfjoll**	**0.30**	**88**	P		**Pb**	**16 50 28.2**	**-2.6**
	baz=87							
IHUS	**Husbondi**	**0.39**	**198**	P		**Pg**	**16 50 29.8**	**-1.2**
	baz=199							
THOR	**Thorvaldshraun**	**0.40**	**48**	P		**Pb**	**16 50 29.7**	**-2.7**
	baz=47							
IVOT	**Vottur**	**0.41**	**168**	P		**Pg**	**16 50 29.5**	**-1.7**
	baz=168							
IKRE	**Kreppuhraun**	**0.44**	**74**	P		**Pg**	**16 50 30.4**	**-1.5**
	baz=74							
IKRE				S		**Sb**	**16 50 36.9**	**-2.9**
	baz=74							
ISKR	**Skrokkalda**	**0.45**	**257**	P		**Pg**	**16 50 30.6**	**-1.4**
	baz=257							
IASK	**Askja**	**0.49**	**38**	P		**Pg**	**16 50 31.1**	**-1.8**
	baz=38							
IMKO	**Mokollar**	**0.54**	**54**	P		**Pg**	**16 50 32.1**	**-1.6**
	baz=54							
IKSK	**Karasker**	**0.64**	**142**	P		**Pg**	**16 50 32.9**	**-2.7**
	baz=142							
IKSK				S		**Sg**	**16 50 42.1**	**-1.9**
	baz=142							
IIEY	**Innrieyrar**	**0.66**	**210**	P		**Pg**	**16 50 33.6**	**-2.4**
	baz=210							
ISVA	**Svartarkot**	**0.67**	**4**	P		**Pg**	**16 50 34.1**	**-2.2**
	baz=4.1							
ISVA				S		**Sb**	**16 50 43.7**	**-2.7**
	baz=4.1							
IVSH	**V-Sauoahnukur**	**0.72**	**78**	P		**Pg**	**16 50 35.0**	**-2.2**
	baz=78							
IKAL	**Kalfafell**	**0.73**	**191**	P		**Pg**	**16 50 35.0**	**-2.4**
	baz=191							
IKAL				S		**Sg**	**16 50 45.0**	**-1.9**
	baz=191							
IVAT	**Vatnsfell**	**0.83**	**235**	P		**Pg**	**16 50 36.9**	**-2.2**
	baz=235							
IADA	**Aoalbol**	**0.85**	**65**	P		**Pg**	**16 50 37.0**	**-2.5**
	baz=64							
IFAG	**Fagurholsmyri**	**0.85**	**158**	P		**Pg**	**16 50 37.2**	**-2.4**
	baz=158							
IFAG				S		**Sg**	**16 50 49.0**	**-1.8**
	baz=158							
IMEL	**Melhnausar**	**0.96**	**18**	P		**Pg**	**16 50 38.8**	**-2.8**
	baz=18							
IREN	**Reynihlio**	**1.00**	**11**	P		**Pg**	**16 50 39.5**	**-3.0**
	baz=11							
IKVO	**Krokottuvotn**	**1.07**	**11**	P		**Pg**	**16 50 40.6**	**-3.2**
	baz=11							
ISNB	**Snabyli**	**1.08**	**211**	P		**Pb**	**16 50 41.1**	**-2.9**
	baz=211							
IGRS	**Grimsstaoir**	**1.11**	**28**	P		**Pb**	**16 50 42.2**	**-2.3**
	baz=28							
BORG	**Borgarnes**	**1.70**	**274**	Pn		**Pn**	**16 50 50.8**	**-2.0**
	20nm,0.3s,baz=99,slow=7.7,SNR=39							
BORG				Sn		**Sg**	**16 51 15.0**	**-2.8**
	9.1nm,0.3s,baz=16,slow=8.3,SNR=6.1							
BORG	**Borgarnes**	**1.70**	**274**			**Pn**	**16 50 50.9**	**-2.0**
BORG				Sn		**Sn**	**16 51 11.3**	**-3.4**
SCO	**Scoresbysund**	**6.10**	**345**			Pn	16 51 55.9	+2.6
SCO				Sn		Sb	16 53 10.2	-12
ANGG	**Ammassalik, Gr**	**8.58**	**285**			Pn	**16 52 28.7**	**+1.5**
EKA	**Eskdalemuir Ar**	**11.72**	**136**			**Pn**	**16 53 09.5**	**-0.8**
	baz=249,slow=16,SNR=4.1							
NOA	**NORSAR Array B**	**13.48**	**92**	Pn		**Pn**	**16 53 34.1**	**-0.1**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.8							
CLL	**Collm**	**20.66**	**116**	*e*P		Pn	16 55 04.0	-1.0
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P		**P**	**16 55 12.0**	**+1.7**
	8.6nm,1.3s							
BRG				*e*			16 55 20.4	
	19nm,1.7s							
GEC2	**GERESS Array S**	**22.91**	**119**	P		**P**	**16 55 29.3**	**+2.3**
GERES	**GERESS Array B**	**22.91**	**119**	P		**P**	**16 55 28.9**	**+1.9**
	1.0nm,0.9s,baz=332,slow=8.0,SNR=4.5							
GERES				LR		LR	17 04 37.6	
	comp=Z,92nm,18.1s,baz=310,slow=37							
VRAC	**Vranov**	**23.64**	**114**	LR		LR	17 05 15.3	
	comp=Z,64nm,19.0s,baz=310,slow=38							
KWP	**Kalwaria Pacla**	**25.86**	**106**	P		**P**	**16 55 57.5**	**+2.9**
PSZ	**Piszkesteto**	**26.07**	**112**	P		**P**	**16 55 59.7**	**+3.1**
PSZ				IAmb		IAmb	16 56 01.3	
	comp=Z,8.3nm,1.0s							
KIRV	**Kirov**	**30.93**	**69**	LR		LR	17 07 39.8	
	comp=Z,41nm,19.9s,baz=337,slow=33							
INK	**Inuvik**	**39.87**	**329**	P		**P**	**16 57 58.2**	**+1.9**
BMAR	**Burnt Mountain**	**42.92**	**333**	P		P	16 58 24.9	+3.4
ILAR	**Eielson Array**	**45.71**	**332**	P		P	16 58 48.1	+4.4
	comp=Z,1.5nm,1.0s,baz=24,slow=5.6,SNR=8.8							
ILAR				PcP		**PcP**	**17 00 23.6**	**+2.3**
	comp=Z,0.9nm,1.0s,baz=324,slow=2.8,SNR=4.5							
ILAR	**Eielson Array**	**45.71**	**332**	P		P	16 58 47.0	+3.3
KURK	**Kurchatov**	**48.07**	**58**	P		**P**	**16 59 04.9**	**+2.7**
MKAR	**Makanchi Array**	**52.68**	**58**	P		P	16 59 40.4	+3.1
	comp=Z,0.7nm,0.9s,baz=345,slow=7.5,SNR=4.8							
TORD	**Torodi Ar. Bea**	**53.12**	**157**	P		**P**	**16 59 41.2**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=349,slow=9.2,SNR=2.9							
BW06	**Boulder Array**	**53.23**	**293**	P		**P**	**16 59 43.6**	**+2.0**
BW06				IAmb		IAmb	16 59 45.9	
	comp=Z,4.2nm,1.0s							
PD31	**Pinedale Array**	**53.23**	**293**	P		**P**	**16 59 43.4**	**+1.7**
PD31				IAmb		IAmb	16 59 45.9	
	comp=Z,3.9nm,1.1s							
PDAR	**Pinedale Array**	**53.23**	**293**	P		**P**	**16 59 43.3**	**+1.7**
	comp=Z,1.4nm,0.8s,baz=56,slow=8.0,SNR=9.9							
PDAR	**Pinedale Array**	**53.23**	**293**	P		**P**	**16 59 42.8**	**+1.1**
BTK	**Batken**	**53.91**	**72**	P		P	**16 59 48.7**	**+2.3**
BTK				IAmb		IAmb	16 59 51.4	
	comp=Z,4.5nm,1.1s							
SONM	**Songino Array**	**59.60**	**40**	P		P	17 00 31.0	+4.1
	comp=Z,0.8nm,1.1s,baz=357,slow=10,SNR=2.8							
CMAR	**Chiang Mai Arr**	**84.09**	**59**	P		**P**	**17 02 55.8**	**+1.7**

comp=Z,0.3nm,0.5s,baz=321,slow=7.5,SNR=5.2

*IPEC **13** 16:55:35.0±0.3, 51.°48N × 16.°42E, h0km, ML2.8/3, Error ellipse: s-maj=3.1km s-min=1.8km az=58.0*
*IDC **13** 16:55:36.1±0.7, 51.°45N × 16.°13E, h0km, mb1 3.5/8, mb1mx3.3/51, mbtmp3.4/8, ML2.9/8, Error ellipse: s-maj=12.8km s-min=7.1km az=105.0*
*PRU **13** 16:55:36.1±0.0, 51.°44N × 16.°18E, h0km*
*DNK **13** 16:55:37.0±1.2, 51.°68N × 16.°31E, h0km±117km, ML2.2*
ISC 13 16:55:34.0±0.8, 51.°53N±0.°03 × 16.°25E±0.°03, h0km, n45, σ0.°99/84, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**178**	*i* P		**Pg**	**16 55 47.7**	**+0.6**
KSP				*e*Sg		**Sg**	**16 55 55.1**	**-0.9**
CHVC	**Chvalec**	**0.95**	**188**	*e*PG		**Pg**	**16 55 52.6**	**+0.5**
CHVC				*e*SG		**Sg**	**16 56 03.6**	**-0.8**
	comp=Z,72nm,0.5s							
OSTC	**Ostas**	**0.97**	**181**	*e*PG		**Pg**	**16 55 52.8**	**+0.2**
OSTC				*e*SG		**Sg**	**16 56 04.6**	**-0.6**
	comp=Z,70nm,0.6s							
UPC	**Upice**	**1.03**	**189**	*e*PG		**Pg**	**16 55 53.8**	**+0.1**
UPC				*e*SG		**Sg**	**16 56 06.0**	**-1.1**
	comp=Z,186nm,0.4s							
DPC	**Dobruska-Polom**	**1.18**	**178**	*e*PG		**Pg**	**16 55 56.2**	**-0.3**
DPC				*e*SG		**Sg**	**16 56 10.7**	**-1.1**
	comp=Z,74nm,0.5s							
PVCC	**Panska Ves**	**1.46**	**227**	*e*PG		**Pn**	**16 56 01.8**	**+0.2**
PVCC				*e*SG		**Sg**	**16 56 20.3**	**-0.5**
	comp=Z,210nm,0.4s							
KRLC	**Kraliky**	**1.49**	**167**	*e*PG		**Pn**	**16 56 02.1**	**0.0**
KRLC				*e*SG		**Sg**	**16 56 20.8**	**-1.1**
	comp=Z,51nm,0.6s							
BRG	**Berggiesshubel**	**1.59**	**247**	PN		**Pn**	**16 56 03.4**	**0.0**
BRG				PG		**Pg**	**16 56 05.2**	**+0.8**
BRG				SG		**Sn**	**16 56 25.5**	**+0.8**
	156nm,0.6s							
PRA	**Prague**	**1.86**	**219**	*e*PG		**Pn**	**16 56 07.6**	**+0.5**
PRA				*e*SG		**Sn**	**16 56 31.4**	**+0.2**
	comp=Z,25nm,0.8s							
PRU	**Pruhonice**	**1.89**	**216**	*e*PG		**Pb**	**16 56 08.9**	**-0.3**
PRU				*e*SG		**Sb**	**16 56 33.0**	**-0.3**
	comp=Z,67nm,0.8s							
MORC	**Moravsky Berou**	**1.94**	**154**	*e*PN		**Pn**	**16 56 08.1**	**-0.1**
MORC				*e*SG		**Sn**	**16 56 32.8**	**-0.4**
MORC	**Moravsky Berou**	**1.94**	**154**	*e*Pn		**Pn**	**16 56 08.0**	**-0.1**
	baz=338							
MORC				*e*Sg		**Sn**	**16 56 32.8**	**-0.4**
	75nm,1.2s,baz=338							
CLL	**Collm**	**2.05**	**265**	*e*Pn		**Pn**	**16 56 10.0**	**+0.4**
CLL				*e*Pg		**Pb**	**16 56 13.0**	**+1.0**
CLL				*e*			16 56 28.0	
CLL				*e*Sg		**Sg**	**16 56 41.0**	**+1.4**
	comp=Z,30nm,0.7s							
OKC	**Ostrava-Krasne**	**2.08**	**144**	*e*PG		**Pg**	**16 56 13.5**	**-0.3**
OKC				*e*SG		**Sg**	**16 56 39.7**	**-1.0**
	comp=Z,52nm,0.6s							
VRAC	**Vranov**	**2.23**	**174**	Pn		**Pn**	**16 56 13.1**	**+0.9**
	comp=Z,2.9nm,0.3s,baz=341,slow=13,SNR=20							
VRAC				Lg		Lg	16 56 44.2	
	comp=Z,6.8nm,0.3s,baz=73,slow=22,SNR=11							
VRAC	**Vranov**	**2.23**	**174**	*e*PN		**Pn**	**16 56 12.6**	**+0.4**
VRAC				*e*SG		**Sb**	**16 56 43.2**	**-0.1**
VRAC	**Vranov**	**2.23**	**174**	*e*Pn		**Pn**	**16 56 12.6**	**+0.4**
	baz=357							
VRAC				*e*Sg		**Sb**	**16 56 43.2**	**-0.1**
	comp=Z,46nm,0.9s,baz=357							
PBCC	**Pribram**	**2.34**	**219**	*e*PG		**Pb**	**16 56 17.1**	**+0.1**
PBCC				*e*SG		**Sb**	**16 56 47.1**	**+0.7**
KRUC	**Moravsky**	**2.47**	**178**	*e*PN		**Pn**	**16 56 15.7**	**+0.2**
KRUC				*e*SG		**Sb**	**16 56 50.9**	**+0.7**
KRUC	**Moravsky**	**2.47**	**178**	*e*Pn		**Pn**	**16 56 15.7**	**+0.2**
	baz=0.3							
KRUC				*e*Sg		**Sb**	**16 56 50.9**	**+0.7**
	comp=Z,44nm,1.1s,baz=0.3							
OJC	**Ojcow**	**2.60**	**119**	*e*Pg		**Pg**	**16 56 24.4**	**+0.7**
OJC				*e*Sg		**Sg**	**16 56 58.9**	**+1.5**
NKC	**Novy Kostel**	**2.74**	**243**	*e*PN		**Pn**	**16 56 20.1**	**+1.0**
NKC				*e*PG		**Pb**	**16 56 25.3**	**+1.6**
NKC				*e*SG		**Sg**	**16 57 01.1**	**-0.7**
	comp=Z,41nm,0.6s							
JAVC	**Velka Javorina**	**2.82**	**161**	*e*PN		**Pn**	**16 56 20.7**	**+0.3**
KHC	**Kasperske Hory**	**2.95**	**217**	*e*PN		**Pn**	**16 56 22.7**	**+0.8**
KHC				*e*PG		**Pb**	**16 56 28.2**	**+0.8**
KHC				*e*SG		**Sg**	**16 57 07.3**	**-1.3**
	comp=Z,18nm,0.5s							
SMOL	**Smolenice**	**3.11**	**165**	*e*PG		**Pg**	**16 56 34.0**	**+0.4**
SMOL				*e*SG		**Sg**	**16 57 14.4**	**+0.5**
SMOL				*e*LG		Lg	16 57 19.5	
GERES	**GERESS Array B**	**3.15**	**212**	Pn		**Pn**	**16 56 26.0**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=33,slow=13,SNR=26							
GERES				Pg		**Pb**	**16 56 31.9**	**+1.1**
	comp=Z,8.2nm,0.3s,baz=31,slow=19,SNR=83							
GERES				Lg		Lg	16 57 10.8	
	comp=Z,7.4nm,0.3s,baz=34,slow=29,SNR=9.9							
LANS	**Liptovska Anna**	**3.15**	**138**	*e*SG		**Sg**	**16 57 16.3**	**+1.3**
LANS				*e*LG		Lg	16 57 31.2	
MODS	**Modra-Piesok**	**3.23**	**168**	*e*PN		**Pn**	**16 56 27.0**	**+1.1**
MODS				*e*PG		**Pg**	**16 56 35.1**	**-0.7**
MODS				*e*SG		**Sg**	**16 57 17.0**	**-0.6**
MODS				*e*LG		Lg	16 57 21.5	
VYHS	**Vyhne**	**3.46**	**150**	*e*PN		**Pn**	**16 56 29.2**	**+0.1**
VYHS				*e*PG		**Pg**	**16 56 41.3**	**+1.0**
VYHS				*e*SG		**Sg**	**16 57 24.4**	**-0.8**
CONA	**Conrad Observa**	**3.61**	**184**	*i* Pn		**Pn**	**16 56 32.6**	**+1.4**
	comp=Z,0.8nm,0.3s							
CONA				*e*Pg		**Pg**	**16 56 41.1**	**-2.0**
	comp=Z,2.8nm,0.2s							
CONA				*e*Sg		**Sg**	**16 57 28.4**	**-1.5**
	comp=Z,17nm,0.3s							
BSD	**Bornholm Skovb**	**3.68**	**348**	*e*		**Pn**	**16 56 31.7**	**-0.3**
	baz=165,slow=11							
BSD				*i* P		Pb	16 56 33.2	-6.6
BSD				*i* S		**Sn**	**16 57 14.6**	**-1.5**
BSD				IAML			16 57 17.7	
	comp=Z,2.7nm,0.3s							
MOA	**Molln**	**3.90**	**200**	*e*Pn		**Pn**	**16 56 36.1**	**+1.0**
	comp=Z,3.4nm,0.3s							
MOA				*e*Pg		**Pg**	**16 56 48.3**	**-0.4**
	comp=Z,5.1nm,0.3s							
MOA				*e*Sg		**Sg**	**16 57 39.6**	**+0.3**
	comp=Z,12nm,0.4s							
ARSA	**Arzberg**	**4.31**	**187**	*i* Pn		**Pn**	**16 56 43.7**	**+3.0**
	comp=Z,1.1nm,0.3s							
ARSA				*e*Sg		**Sg**	**16 57 52.5**	**+0.2**
	comp=Z,9.3nm,0.6s							
KOLS	**Kolonicke sedl**	**4.66**	**122**	*e*PN		**Pn**	**16 56 46.0**	**+0.5**
WATA	**Walderalm**	**5.19**	**218**	*i* Pn		**Pn**	**16 56 54.8**	**+1.9**
	comp=Z,2.2nm,0.3s							
WTTA	**Wattenberg**	**5.22**	**217**	*e*Sg		**Sg**	**16 58 21.2**	**-0.5**
	comp=Z,9.3nm,0.6s							
MOTA	**Moosalm**	**5.37**	**221**	*e*Pn		**Pn**	**16 56 58.1**	**+2.7**
	comp=Z,0.7nm,0.2s							
RETA	**Reutte**	**5.40**	**224**	*e*Pn		**Pn**	**16 56 56.5**	**+0.8**
	comp=Z,1.4nm,0.3s							
RETA				Sg		**Sg**	**16 58 25.7**	**-1.6**
	comp=Z,8.7nm,0.7s							
SQTA	**Sankt Quirin**	**5.42**	**219**	*e*Pn		**Pn**	**16 56 58.1**	**+1.9**
	comp=Z,2.2nm,0.2s							
DAVOX	**Davos/Dischmat**	**6.33**	**224**	Pn		**Pn**	**16 57 09.9**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=348,slow=20,SNR=2.7							
DAVOX				Lg		Lg	16 58 53.0	
	comp=Z,0.3nm,0.3s,baz=198,slow=20,SNR=2.5							
AKASG	**Malin Array Be**	**8.21**	**91**	Pn		**Pn**	**16 57 33.9**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=279,slow=12,SNR=6.5							
HFS	**Hagfors**	**8.74**	**352**	Pn		**Pn**	**16 57 41.5**	**0.0**
	comp=Z,0.1nm,0.3s,baz=168,slow=15,SNR=4.7							
NOA	**NORSAR Array B**	**9.93**	**346**	Pn		**Pn**	**16 57 57.5**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=162,slow=12,SNR=3.9							
FINES	**FINESS Array B**	**11.31**	**25**	Pn		**Pn**	**16 58 16.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=214,slow=12,SNR=6.5							
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn		**P**	**16 59 50.1**	**-2.2**
	baz=193,slow=12,SNR=8.2							

MEX 13 17:09:14.1±0.8, 27.°94N × 105.°28W, h10km, MD3.8, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BCIG	**La Boquilla**	**0.41**	**196**	*e*P		Pg	17 09 22.5	+0.3
BCIG				*i* S		Sg	17 09 27.6	0.0
HPIG		**1.06**	**199**	*i* P		Pg	17 09 30.7	-3.7
HPIG				*i* S		Sg	17 09 44.8	-3.4
CSIG	**Choix**	**2.96**	**249**	*i* P		Pn	17 09 58.3	-2.9
CSIG				*e*S		Sn	17 10 33.1	-3.6
CGIG		**3.38**	**316**	*e*P		Pn	17 10 05.1	-1.9
CGIG				*i* S		Sn	17 10 44.4	-2.9
HSIG		**5.10**	**284**	*e*P		Pn	17 10 28.6	-2.0

*UPP **13** 18:05:07.6±0.1, 67.°05N × 20.°93E, h0km, ML2.3, Explosion*
*IDC **13** 18:05:07.9±0.5, 67.°02N × 21.°06E, h0km, mb1 3.2/5, mb1mx3.0/56, mbtmp3.2/5, ML1.8/4, Error ellipse: s-maj=11.5km s-min=3.9km az=99.0*
*NAO **13** 18:05:08.2±0.9, 67.°05N × 21.°24E, ML2.3*
*BER **13** 18:05:09.7±3.1, 66.°97N × 21.°06E, h0km, ML1.8, ML2.3(NAO), Suspected explosion*
*KOLA **13** 18:05:22.1, 67.°81N × 23.°41E, h0km*
ISC 13 18:05:07.1±0.8, 67.°05N±0.°03 × 21.°01E±0.°03, h0km, n41, σ0.°92/50, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.56**	**43**	P		**Pb**	**18 05 18.8**	**-0.9**
PAJU	**Pajala**	**0.82**	**91**	P		**Pg**	**18 05 23.3**	**+0.5**
PAJU				S		**Sb**	**18 05 35.0**	**-0.9**
HARU	**Harads**	**0.89**	**181**	P		**Pg**	**18 05 24.2**	**+0.1**
KUA	**Kurravaara**	**0.94**	**344**	P		**Pg**	**18 05 24.9**	**-0.2**
RATU	**Laukkuluspa**	**0.95**	**325**	P		**Pg**	**18 05 25.0**	**-0.3**
SALU	**Saltoluokta**	**1.03**	**290**	P		**Pg**	**18 05 26.5**	**-0.3**
LANU	**Lannavaara**	**1.07**	**20**	P		**Pg**	**18 05 27.6**	**0.0**
KOVU	**Salmi**	**1.22**	**345**	P		**Pg**	**18 05 29.9**	**-0.5**
SJUU	**Sjulsmark**	**1.57**	**171**	P		**Pb**	**18 05 36.4**	**-0.5**
KIF	**Kilpisjarvi**	**1.96**	**358**	Pn		**Pb**	**18 05 43.7**	**0.0**
KIF				Sn		**Sg**	**18 06 10.9**	**+0.8**
KIF	**Kilpisjarvi**	**1.96**	**358**	*e*P		**Pb**	**18 05 43.6**	**0.0**
KIF				*e*S		**Sg**	**18 06 10.4**	**+0.3**
KTK1	**Kautokeino**	**2.14**	**22**	*e*P		**Pb**	**18 05 46.2**	**-0.5**
KTK1				*e*S		**Sb**	**18 06 14.2**	**+0.4**
KTK1				IAML			18 06 17.7	
	comp=Z,7.5nm,0.3s							
I37NO	**I37NO**	**2.23**	**337**	*i*			18 20 50.0	
	baz=151,slow=324,SNR=5.5							
FAUS	**Fauske**	**2.25**	**281**	*e*P		**Pn**	**18 05 46.7**	**+1.2**
FAUS				*e*S		**Sn**	**18 06 15.3**	**+1.4**
FAUS				IAML			18 06 20.6	
	comp=Z,22nm,0.4s							
STEI	**Steigen**	**2.39**	**294**	*e*P		**Pn**	**18 05 48.4**	**+1.0**
MOR8	**Moi Rana**	**2.77**	**254**	*e*P		**Pn**	**18 05 50.5**	**-2.1**
ARA0	**ARCESS Array S**	**3.00**	**32**	Pn		**Pn**	**18 05 56.8**	**+0.9**
	baz=207,slow=14							
ARA0				Sn		**Sn**	**18 06 32.1**	**-0.4**
	baz=215,slow=16							
ARA0	**ARCESS Array S**	**3.00**	**32**	Pn		**Pn**	**18 05 56.8**	**+0.9**
	baz=207,slow=14							
ARA0				Sn		**Sn**	**18 06 32.1**	**-0.4**
	baz=215,slow=16							
ARCES	**ARCESS Array B**	**3.00**	**32**	Pn		**Pn**	**18 05 57.0**	**+1.1**
	baz=212,slow=14,SNR=26							
ARCES				Sn		**Sn**	**18 06 34.4**	**+1.9**
	baz=216,slow=22,SNR=1.6							
LOF	**Lofoten**	**3.06**	**294**	*e*P		**Pn**	**18 05 57.5**	**+0.9**
LOF				IAML			18 06 58.2	
	comp=Z,5.8nm,0.4s							
KONS	**Konsvik**	**3.18**	**264**	*e*P		**Pn**	**18 05 58.6**	**+0.4**
NSS	**Namsos**	**4.50**	**240**	*e*P		**Pn**	**18 06 15.6**	**-0.8**
APA0	**Apatity Array**	**4.67**	**78**	P		**Pn**	**18 06 19.1**	**+0.4**
APA0				S		Sn	18 07 01.8	-12
APA0	**Apatity Array**	**4.67**	**78**	Pn		**Pn**	**18 06 17.6**	**-1.1**
APA0				Sn		**Sn**	**18 07 12.6**	**-0.9**
	baz=271,slow=16							
APA0	**Apatity Array**	**4.67**	**78**	Pn		**Pn**	**18 06 17.6**	**-1.1**
APA0				Sn		**Sn**	**18 07 12.6**	**-0.9**
	baz=271,slow=16							
APA0	**Apatity Array**	**4.67**	**78**	P		**Sn**	**18 07 12.6**	**-0.9**
FIA0	**FINESS Array S**	**6.04**	**156**	Pn		**Pn**	**18 06 39.2**	**+1.7**
	baz=346,slow=16							
FIA0	**FINESS Array S**	**6.04**	**156**	Pn		**Pn**	**18 06 39.2**	**+1.7**
	baz=346,slow=16							
FINES	**FINESS Array B**	**6.04**	**156**	Pn		**Pn**	**18 06 39.1**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=4.4							
FINES				Sn		**Sn**	**18 07 47.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=344,slow=19,SNR=5.1							
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn		**Pn**	**18 06 56.7**	**+0.5**
	baz=25,slow=14							
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn		**Pn**	**18 06 56.7**	**+0.5**
	baz=25,slow=14							
NOA	**NORSAR Array B**	**7.40**	**220**	Pn		**Pn**	**18 06 56.5**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=27,slow=18,SNR=2.8							
NRA0	**NORESS Array S**	**7.58**	**218**	Pn		**Pn**	**18

TAOE	**Nuku Hiva Isla**	**38.94**	**83**	P	P	18 15 30.9	-7.3
BBOO	**Buckleboo**	**43.00**	**240**	P	**P**	**18 16 09.9**	**-0.3**
WR0	**Warramunga Arr**	**43.76**	**259**	P	**P**	**18 16 15.8**	**-0.4**
WR0				IAmb	IAmb	18 16 38.1	
	comp=Z,6.2nm,1.4s						
WB0	**Warramunga Arr**	**43.92**	**259**	P	**P**	**18 16 17.1**	**-0.3**
WB0				IAmb	IAmb	18 16 31.0	
	comp=Z,6.6nm,1.4s						
WC3	**Warramunga Arr**	**43.92**	**259**	P	**P**	**18 16 16.9**	**-0.6**
WC3				IAmb	IAmb	18 16 21.6	
	comp=Z,4.8nm,1.1s						
WB2	**Warramunga Arr**	**43.94**	**259**	P	**P**	**18 16 17.0**	**-0.6**
WB2				IAmb	IAmb	18 16 26.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**43.95**	**259**	P	**P**	**18 16 17.1**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=95,slow=7.8,SNR=9.6						
WRA	**Warramunga Arr**	**43.95**	**259**	P	**P**	**18 16 17.0**	**-0.7**
AS31	**Alice Springs**	**44.18**	**254**	P	**P**	**18 16 19.5**	**0.0**
ASAR	**Alice Springs**	**44.19**	**254**	P	**P**	**18 16 19.5**	**0.0**
	comp=Z,3.5nm,0.5s,baz=89,slow=7.9,SNR=74						
ASAR	**Alice Springs**	**44.19**	**254**	P	**P**	**18 16 19.3**	**-0.2**
GUMO	**Guam**	**46.87**	**309**	LR	LR	18 31 02.2	
	comp=Z,21nm,21.9s,baz=102,slow=30						
MTN	**Manton Dam**	**48.01**	**268**	P	**P**	**18 16 49.2**	**+0.5**
MTN				IAmb	IAmb	18 17 07.1	
	comp=Z,23nm,1.3s						
KNRA	**Kununurra**	**49.75**	**264**	P	**P**	**18 17 01.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**52.34**	**260**	P	**P**	**18 17 21.0**	**+0.9**
PSAD1	**Pilbara Seismi**	**57.31**	**255**	P	**P**	**18 17 55.0**	**+0.1**
PSAD1				IAmb	IAmb	18 18 20.2	
	comp=Z,24nm,1.2s						
PSAD3	**Pilbara Seismi**	**57.34**	**255**	P	**P**	**18 17 55.5**	**+0.4**
PSAD3				IAmb	IAmb	18 18 14.4	
	comp=Z,22nm,1.3s						
NVAR	**Mina Array Bea**	**79.55**	**44**	P	**P**	**18 20 09.3**	**0.0**
	comp=Z,0.4nm,0.6s,baz=234,slow=8.8,SNR=2.9						
GLB	**Gilahina Butte**	**83.41**	**16**	P	**P**	**18 20 28.3**	**0.0**
GLB				IAmb	IAmb	18 20 29.3	
	comp=Z,12nm,1.4s						
TXAR	**Lajitas Array**	**86.35**	**58**	LR	LR	18 48 36.1	
	comp=Z,38nm,20.7s,baz=0.0,slow=28						
YKA	**Yellowknife Ar**	**94.12**	**25**	LR	LR	19 02 41.7	
	comp=Z,25nm,18.0s,baz=0.0,slow=35						

CNRM ***13*** *18:26:34.1,33.42N×5.03W, h2km*
MDD ***13*** *18:26:37.0±2.9,33.72N×5.08W, h4km±114km, mb3.2/5, Error ellipse: s-maj=142.0km s-min=21.0km az=2.0, PRXIMO*
SFS ***13*** *18:26:36.0,33.74N×5.06W, ML3.7, SEFRON (MARRUECOS)*
INMG ***13*** *18:26:38.9±1.2,33.90N×5.13W, h0km, ML2.3, Error ellipse: s-maj=6.4km s-min=3.4km az=129.0*

ISC 13 18:26:33.7±0.9, 33.54N±0.02×4.97W±0.03, h16km±5km, n40, σ2.922/64, 1D, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IFR	**Ifrane**	**0.14**	**259**	⇓*i*P	**Pg**	**18 26 37.4**	**-0.3**
IFR				*e*S	**Sg**	**18 26 39.9**	**-0.5**
LCRM	**LCR**	**0.17**	**32**	P	**Pg**	**18 26 37.8**	**-0.4**
LCRM				S	**Sg**	**18 26 41.4**	**+0.4**
SICH	**Sidi Chahed**	**0.63**	**333**	P	**Pb**	**18 26 47.0**	**+0.6**
SICH				S	**Sn**	**18 26 57.4**	**-0.6**
MD31	**MD31**	**0.70**	**165**	P	**Pg**	**18 26 46.0**	**-1.4**
MD31				S	**Sg**	**18 26 54.3**	**-2.3**
MDT	**Midelt**	**0.79**	**157**	P	**Pg**	**18 26 47.7**	**-1.4**
	SNR=777						
MDT				S	**Sg**	**18 26 56.8**	**-2.6**
RSA	**Sarsar**	**1.51**	**332**	P	**Pg**	**18 27 01.7**	**-1.2**
RSA				S	**Sg**	**18 27 25.6**	**+3.0**
PVLZ	**Peæn de**	**1.72**	**19**	*e*Pn	**Pg**	**18 27 05.8**	**-1.0**
PVLZ	**Peæn de**	**1.72**	**19**	*e*Pg	**Pg**	**18 27 07.6**	**+0.8**
PVLZ				*e*S	**Sg**	**18 27 28.5**	**-0.5**
GOLM	**Goulmima**	**1.83**	**180**	P	**Pn**	**18 27 07.5**	**+2.7**
GOLM				S	**Sn**	**18 27 29.8**	**+2.1**
PALE	**Palemas**	**1.87**	**27**	P	**Pg**	**18 27 10.0**	**+0.2**
AVE	**Averroes**	**2.06**	**264**	P	**Pn**	**18 27 11.1**	**+3.3**
AVE				S	**Sb**	**18 27 38.8**	**+2.6**
AVE	**Averroes**	**2.06**	**264**	*e*P	**Pn**	**18 27 11.0**	**+3.3**
AVE				*e*S	**Sn**	**18 27 34.5**	**+1.3**
JBK	**JBK**	**2.15**	**68**	P	**Pn**	**18 27 08.8**	**-0.3**
ARF	**Arif**	**2.20**	**163**	P	**Pn**	**18 27 13.0**	**+3.2**
GOG	**Mont Gurugu**	**2.34**	**44**	Pg	**Pg**	**18 27 22.4**	**+3.8**
CEU	**Ceuta**	**2.37**	**352**	*e*P	**Pn**	**18 27 13.3**	**+1.3**
CEU				*e*S	**Sn**	**18 27 41.7**	**+0.8**
TZRR	**Tazzarine**	**2.80**	**191**	P	**Pn**	**18 27 18.4**	**+0.4**
OUZM	**OUZ**	**3.03**	**211**	P	**Pn**	**18 27 21.9**	**+0.6**
OUK	**Oukaimeden**	**3.38**	**227**	P	**Pn**	**18 27 25.0**	**-1.3**
OUK				Lg	Lg	18 28 16.3	
ZGR	**Zagora**	**3.46**	**189**	P	**Pn**	**18 27 28.7**	**+1.6**
ELGU	**Los Guajares,**	**3.49**	**18**	P	**Pn**	**18 27 28.0**	**+0.5**
	0.6nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**18 28 06.9**	**-1.8**
	1.2nm,0.1s,SNR=7.9						
EBER	**Berja**	**3.75**	**26**	P	**Pn**	**18 27 34.2**	**+2.9**
	0.5nm,0.2s,SNR=7.9						
EBER				S	**Sn**	**18 28 15.0**	**-0.3**
	1.0nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**3.86**	**18**	P	**Pn**	**18 27 35.1**	**+2.5**
	0.3nm,0.2s,SNR=7.9						
EQUE				S	**Sn**	**18 28 16.1**	**-1.6**
	0.3nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**4.42**	**328**	*e*Pn	**Pn**	**18 27 41.0**	**+0.8**
PBDV				*e*Sn	**Sn**	**18 28 27.6**	**-3.7**
EMIN	**Mina Concepcio**	**4.44**	**342**	S	**Sn**	**18 28 28.2**	**-3.6**
	1.5nm,0.1s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.46**	**331**	*e*Pn	**Pn**	**18 27 40.3**	**-0.4**
PVAQ				*e*Sn	**Sn**	**18 28 28.6**	**-3.7**
PVAQ				A	A	18 28 29.8	
	5.2nm,0.9s						
EGRO	**El Granado**	**4.48**	**333**	P	**Pn**	**18 27 41.4**	**+0.4**
	3.6nm,0.1s,SNR=23						
EGRO				S	**Sn**	**18 28 29.7**	**-3.1**
	0.9nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**4.54**	**355**	P	**Pn**	**18 27 42.6**	**+0.7**
	0.5nm,0.1s,SNR=6.4						
ECAB				S	**Sn**	**18 28 30.1**	**-4.3**
	0.3nm,0.2s,SNR=8.5						
EADA	**Adamuz**	**4.62**	**4**	P	**Pn**	**18 27 44.4**	**+1.4**
	0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 28 34.1**	**-2.4**
	1.4nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**4.77**	**320**	*e*Pn	**Pn**	**18 27 46.0**	**+0.9**
PCVE	**Castro Verde**	**4.79**	**329**	*e*Pn	**Pn**	**18 27 45.9**	**+0.7**
PCVE				*e*Sn	**Sn**	**18 28 36.7**	**-3.7**
PCVE				A	A	18 28 40.8	
	3.1nm,0.3s						
MORF	**Marmelete**	**4.81**	**322**	*e*Pn	**Pn**	**18 27 45.9**	**+0.3**
SESP	**Santiago Espad**	**4.97**	**23**	S	**Sn**	**18 28 43.2**	**-2.1**
	2.9nm,0.3s,SNR=7.9						
PTEO	**Sao Teotonio**	**5.03**	**324**	*e*Pn	**Pn**	**18 27 49.3**	**+0.7**
PTEO				*e*Sn	**Sn**	**18 28 44.4**	**-2.1**
PNCL	**Nicolau / Gran**	**5.40**	**329**	*e*Pn	**Pn**	**18 27 54.0**	**+0.3**
PNCL				*e*Sn	**Sn**	**18 28 54.4**	**-1.1**
EVO	**Evora**	**5.56**	**335**	*e*Pn	**Pn**	**18 27 55.9**	**+0.1**
PAB	**San Pablo**	**6.01**	**5**	S	**Sn**	**18 29 05.7**	**-5.0**
	0.3nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**6.11**	**335**	*e*Pn	**Pn**	**18 28 03.5**	**+0.1**
PMTG				*e*Sn	**Sn**	**18 29 10.1**	**-2.9**
ESDC	**Sonseca Array**	**6.17**	**7**	S	**Sn**	**18 29 10.1**	**-4.5**
	baz=194,slow=23,SNR=7.9						
PMRV	**Marv??o**	**6.19**	**342**	*e*Pn	**Pn**	**18 28 05.3**	**+0.8**
PMRV				*e*Sn	**Sn**	**18 29 11.3**	**-3.7**

IDC 13 18:34:51.1±5.0, 5.93S×151.12E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/36, mbtmp3.2/3, Error ellipse: s-maj=110.9km s-min=18.4km az=92.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.45**	**228**	P	P	18 39 40.1	-1.1
	0.4nm,0.7s,baz=59,slow=9.2,SNR=4.8						
ASAR	**Alice Springs**	**24.20**	**221**	P	P	18 40 10.2	+0.6
	0.2nm,0.5s,baz=60,slow=8.8,SNR=2.9						
CMAR	**Chiang Mai Arr**	**56.86**	**296**	P	P	18 44 38.0	-0.2
	0.7nm,0.8s,baz=117,slow=4.8,SNR=6.7						

MEX 13 18:47:42.6±0.6, 27.91N×105.29W, h10km, MD3.8, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BCIG	**La Boquilla**	**0.38**	**197**	*i*P	Pg	18 47 49.6	-0.7
BCIG				*i*S	Sg	18 47 55.5	+0.2
HPIG		**1.03**	**199**	*i*P	Pg	18 47 58.7	-3.8
HPIG				*e*S	Sg	18 48 12.7	-3.2
CSIG	**Choix**	**2.95**	**249**	*i*P	Pn	18 48 27.1	-2.4
CSIG				*i*S	Sn	18 49 00.6	-4.3

IDC ***13*** *18:48:10.3±3.8, 37.64N×72.44E, h61km±33km, mb3.5/6, mb1 3.6/12, mb1mx3.3/57, mbtmp3.7/12, ML3.4/6, Error ellipse: s-maj=31.5km s-min=24.5km az=171.0*
BJI ***13*** *18:48:15.0±0.0, 37.90N×72.30E, h106km, mB4.6/5, mb4.5/8*
NEIC ***13*** *18:48:17.0±2.3, 37.87N±0.06×72.18E±0.09, h122km±9km, mb4.1/6, Error ellipse: s-maj=11.0km s-min=8.1km az=111.0*
NNC ***13*** *18:48:26.3±9.7, 38.89N×72.64E, h289km±88km, mb2.6, mpv3.9, Error ellipse: s-maj=105.9km s-min=56.7km az=7.0*

ISC 13 18:48:15.2±0.5, 37.78N±0.05×72.35E±0.05, h119km, n69, σ2.551/80, mb3.9/8, 3C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.01**	**308**		**Pn**	**18 48 49.1**	**+0.3**
GAR				Sn	**Sn**	**18 49 12.7**	**-1.8**
BTK	**Batken**	**2.57**	**333**		**Pn**	**18 48 57.0**	**+1.1**
BTK				Sn	**Sn**	**18 49 26.8**	**-0.4**
CHGR	**Chuyangaron**	**2.66**	**290**	Pn	**Pn**	**18 48 56.7**	**-0.4**
KSH	**Kashi**	**3.32**	**57**	P	**Pn**	**18 49 03.5**	**-2.3**
KSH				S	**Sn**	**18 49 38.0**	**-6.9**
KSH				smax	smax		
	comp=N,10μm,0.3s						
KSH				smax	smax		
	comp=E,5μm,0.2s						
CEP	**Cherat**	**3.97**	**185**	P	**Pn**	**18 49 18.1**	**+3.7**
CEP				S	**Sn**	**18 50 05.0**	**+4.7**
NIL	**Nilore**	**4.19**	**170**	Pn	**Pn**	**18 49 21.6**	**+4.4**
KBL	**Kabul**	**4.20**	**221**	Pn	**Pn**	**18 49 18.4**	**+0.9**
AML	**Almayashu**	**4.46**	**13**	P	**Pn**	**18 49 22.1**	**+0.8**
	SNR=247						
UCH	**Uchtor**	**4.74**	**20**	P	**Pn**	**18 49 26.1**	**+1.1**
	SNR=17						
EKS2	**Erkin-Say**	**5.00**	**12**	P	**Pn**	**18 49 29.5**	**+1.4**
	SNR=100						
THW	**Thamme Wali**	**5.00**	**186**	P	**Pn**	**18 49 30.8**	**+2.6**
AAK	**Ala-Archa**	**5.12**	**18**	P	**Pn**	**18 49 31.3**	**+1.5**
	SNR=33						
AAK	**Ala-Archa**	**5.12**	**18**	⇑P	**Pn**	**18 49 31.0**	**+1.1**
	13nm,0.4s						
AAK				⇓S	**Sn**	**18 50 26.9**	**-1.0**
	37nm,0.6s						
AAK	**Ala-Archa**	**5.12**	**18**	Pn	**Pn**	**18 49 31.4**	**+1.5**
KBK	**Karagaybulak**	**5.26**	**21**	P	**Pn**	**18 49 33.3**	**+1.6**
	SNR=13						
FRU1	**Bishkek**	**5.32**	**18**		**Pn**	**18 49 30.7**	**-1.7**
ULHL	**Ulahol**	**5.37**	**33**	P	**Pn**	**18 49 34.2**	**+1.0**
	SNR=22						
BOOM	**Boomeskoye usch**	**5.45**	**29**	Pn	**Pn**	**18 49 35.5**	**+1.2**
KK31	**Karatay Array**	**5.50**	**346**	⇑P	**Pn**	**18 49 34.9**	**+0.1**
	21nm,0.5s,baz=152,slow=11,SNR=143						
KK31				⇓S	**Sn**	**18 50 32.9**	**-3.9**
	51nm,0.5s,baz=142,slow=22,SNR=17						
KK31	**Karatay Array**	**5.50**	**346**	Pn	**Pn**	**18 49 34.8**	**+0.1**
KKAR	**Karatay Array**	**5.50**	**346**	Pn	**Pn**	**18 49 34.8**	**0.0**
KKAR	**Karatay Array**	**5.50**	**346**	Pn	**Pn**	**18 49 34.6**	**-0.2**
CHMS	**Chumysh**	**5.52**	**19**	P	**Pn**	**18 49 36.4**	**+1.2**
	SNR=29						
TKM2	**Tokmak 2**	**5.70**	**25**	P	**Pn**	**18 49 39.1**	**+1.4**
	SNR=2						
TKM2	**Tokmak 2**	**5.70**	**25**	⇑P	**Pn**	**18 49 38.5**	**+0.8**
	2.8nm,0.3s						
TKM2				⇓S	**Sn**	**18 50 39.5**	**-2.5**
	16nm,0.6s						
KDJ	**Kajisay**	**5.71**	**39**	Pn	**Pn**	**18 49 39.2**	**+1.4**
USP	**Ospenovka**	**5.72**	**16**	P	**Pn**	**18 49 38.6**	**+0.8**
	SNR=10						
DHRM	**DHARAMSHALA**	**6.40**	**148**	*e*P	**Pn**	**18 49 48.8**	**+1.6**
DHRM				*e*S	**Sn**	**18 50 56.8**	**-2.2**
DHRM				IAML		18 51 00.8	
	comp=E,272nm,0.0s						
DHRM				IAML		18 51 01.5	
	comp=N,344nm,0.9s						
PRZ	**Przheval'sk**	**6.60**	**43**	Pn	**Pn**	**18 49 51.2**	**+1.5**
SMLA	**Simla**	**7.74**	**148**	*e*P	**Pn**	**18 50 06.5**	**+1.4**
SMLA				*e*S	**Sn**	**18 51 26.6**	**-4.5**
SMLA				IAML		18 51 27.3	
	comp=N,166nm,0.3s						
SMLA				IAML		18 51 33.6	
	comp=E,217nm,1.0s						
HRA	**Herat**	**8.86**	**251**	Pn	**Pn**	**18 50 20.9**	**+0.5**
KUDL	**Kundal**	**10.22**	**159**	*e*P	**Pn**	**18 50 37.9**	**-0.7**
KUDL				*e*S	**Sn**	**18 52 23.6**	**-7.7**
GEYT	**Alibeck**	**11.26**	**275**	P	**Pn**	**18 50 49.9**	**-2.7**
	comp=E,1.8nm,0.3s,baz=116,slow=8.2,SNR=20						
GEYT				S	**Sn**	**18 52 47.9**	**-8.5**
	comp=E,1.7nm,0.3s,baz=154,slow=24,SNR=5.7						
GYA0B	**ALIBECK ARRAY**	**11.26**	**275**	Pn	**Pn**	**18 50 49.9**	**-2.7**
MAKZ	**Makanchi**	**11.49**	**35**	Pn	**Pn**	**18 50 56.0**	**+0.5**
MK31	**Makanchi Array**	**11.62**	**36**	Pn	**Pn**	**18 50 58.2**	**+0.9**
MKAR	**Makanchi Array**	**11.62**	**36**	P	**Pn**	**18 50 54.4**	**-2.9**
	comp=E,0.2nm,0.3s,baz=207,slow=13,SNR=10						
MKAR	**Makanchi Array**	**11.62**	**36**	Pn	**Pn**	**18 50 57.4**	**+0.1**
WMQ	**Urumqi**	**13.09**	**58**	*e*P	**Pn**	**18 51 19.5**	**+2.9**
PYUN	**Piuthan**	**13.14**	**134**	*e*P	**Pn**	**18 51 15.9**	**-1.6**
	comp=E,13nm,0.3s						
DANN	**Dangsing**	**13.40**	**131**	*e*P	**Pn**	**18 51 19.6**	**-1.4**
	comp=E,8.8nm,0.3s						
KURBB	**Kurchatov Arra**	**13.57**	**17**	P	**Pn**	**18 51 19.4**	**-3.3**
	comp=E,0.0nm,0.3s,baz=207,slow=12,SNR=2.5						
KOLN	**Koldanda**	**13.74**	**133**	*e*P	**Pn**	**18 51 23.8**	**-1.5**
	comp=E,5.4nm,0.2s						
GKN	**Gorkha**	**14.19**	**130**	*e*P	**Pn**	**18 51 29.7**	**-1.2**
	comp=E,12nm,0.3s						
AB31	**Akbulak array**	**14.56**	**326**	P	**Pn**	**18 51 31.7**	**-3.6**
	comp=E,1.5nm,0.5s,baz=137,slow=11,SNR=34						
AB31				⇓S	Sn	18 54 04.0	-12
	comp=E,5.7nm,0.7s,baz=145,slow=22,SNR=11						
ABKAR	**Akbulak array**	**14.56**	**326**	Pn	**Pn**	**18 51 33.3**	**-2.0**
KKN	**Kakani**	**14.73**	**129**	*e*P	**Pn**	**18 51 36.7**	**-1.2**
	comp=E,5.4nm,0.4s						
PKIN	**Phulchoki**	**14.96**	**129**	*e*P	**Pn**	**18 51 40.8**	**0.0**
	comp=E,4.6nm,0.2s						
PKI	**Pulchoki**	**14.97**	**129**	*e*P	**Pn**	**18 51 41.0**	**0.0**
GUN	**Gumba**	**15.02**	**127**	*e*P	**Pn**	**18 51 41.9**	**+0.2**
	comp=E,8.7nm,0.3s						
BVAR	**Borovoye Array**	**15.31**	**356**	P	**Pn**	**18 51 42.8**	**-1.8**
	comp=E,0.2nm,0.3s,baz=291,slow=24,SNR=2.4						
BRVK	**Borovoye**	**15.35**	**355**	Pn	**Pn**	**18 51 43.5**	**-1.7**
BRVK				IAmb	IAmb	18 51 50.2	
	comp=Z,4.4nm,1.2s						
AKTO	**Aktyubinsk**	**16.27**	**326**	P	**P**	**18 51 58.3**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=128,slow=9.4,SNR=6.3						
AKTO	**Aktyubinsk**	**16.27**	**326**	⇓P	**Pn**	**18 51 52.1**	**-4.5**
	comp=Z,4.1nm,0.8s						
AKTO				⇓S	Sn	18 54 41.1	-16
	comp=Z,4.1nm,0.8s						
ZALV	**Zalesovo Beam**	**18.30**	**24**	P	**Pn**	**18 52 21.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=216,slow=7.3,SNR=4.7						
HHC	**Hu-ho-hao-te**	**30.32**	**72**	*e*P	**P**	**18 54 18.6**	**+3.2**
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
AKASG	**Malin Array Be**	**33.01**	**307**	P	**P**	**18 54 41.2**	**+2.5**
	comp=Z,0.6nm,0.4s,baz=112,slow=8.2,SNR=4.2						
AKASG	**Malin Array Be**	**33.01**	**307**	P	**P**	**18 54 40.8**	**+2.1**
LVZ	**Lovozero**	**36.68**	**337**	P	**P**	**18 55 12.1**	**+1.9**
FINES	**FINESS Array B**	**37.04**	**325**	P	**P**	**18 55 15.2**	**+2.1**
	comp=Z,1.7nm,0.7s,baz=113,slow=9.0,SNR=8.5						
FINES	**FINESS Array B**	**37.04**	**325**	P	**P**	**18 55 15.0**	**+1.8**
KWP	**Kalwaria Pacla**	**37.15**	**305**	P	**P**	**18 55 16.9**	**+2.6**
KWP				IAmb	IAmb	18 55 17.6	
	comp=Z,13nm,1.4s						
ARCES	**ARCESS Array B**	**40.39**	**337**	P	**P**	**18 55 43.2**	**+2.2**
	comp=Z,3.4nm,0.9s,baz=113,slow=9.2,SNR=7.0						
NOA	**NORSAR Array B**	**44.02**	**322**	P	**P**	**18 56 11.8**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=114,slow=7.8,SNR=3.3						
NC204	**NORSAR Array S**	**44.25**	**322**	P	**P**	**18 56 14.1**	**+1.7**
TORD	**Torodi Ar. Bea**	**66.83**	**269**	P	**P**	**18 58 55.9**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=49,slow=5.6,SNR=7.6						
TORD	**Torodi Ar. Bea**	**66.83**	**269**	P	**P**	**18 58 55.3**	**+0.8**
IMAR	**Indian Mountai**	**70.62**	**18**	P	**P**	**18 59 19.2**	**+2.0**
WRA	**Warramunga Arr**	**81.76**	**123**	P	**P**	**19 00 22.2**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=328,slow=4.9,SNR=1.8						

DDA 13 19:18:08.1, 39.04N×26.53E, h7km±2km, ML1.5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.29**	**25**	*i*P	Pg	19 18 13.8	-0.1
AYVA				*i*S	Sg	19 18 18.7	+1.0
ZEDA	**zmir-Bergama**	**0.43**	**100**	*i*P	Pg	19 18 17.1	+0.6
ZEDA				*i*S	Sg	19 18 22.8	+0.7
BAYC	**CANAKKALE_Bayr**	**0.70**	**1**	*i*P	Pb	19 18 22.8	+0.2
BAYC				*i*S	Sg	19 18 31.4	+0.8
STEP	**BALIKESIR_Sava**	**0.98**	**70**	*i*P	Pb	19 18 27.7	+0.2
STEP				*i*S	Sb	19 18 41.0	+0.4
STEP				IAML		19 18 43.0	
	comp=N,13nm,1.0s						
STEP				IAML		19 18 43.0	
	comp=E,13nm,0.8s						

IDC ***13*** *19:25:40.7±4.6, 36.57S×179.46W, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.5/26, mbtmp3.4/3, ML3.0/1, Error ellipse: s-maj=106.7km s-min=55.6km az=135.0*
WEL ***13*** *19:25:44.9±1.1, 37.8°×17.9W±°, h33km, M3.7/12, ML4.0/12, MLv3.7/12, Error ellipse: s-maj=0.0km s-min=0.0km az=13.1*

ISC 13 19:25:43.7±1.6, 37.1S±0.1×179.14W±0.07, h35km, n18, σ0.998/32, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**2.08**	**249**	P	**Pn**	**19 26 16.0**	**0.0**
WMGZ				S	**Sn**	**19 26 41.6**	**+0.9**
MXZ	**Matakaoa Point**	**2.09**	**256**	P	**Pn**	**19 26 15.2**	**-1.0**
MXZ				S	**Sn**	**19 26 40.0**	**-1.0**
PUZ	**Puketiti**	**2.29**	**244**	P	**Pn**	**19 26 18.8**	**-0.1**
PUZ				S	**Sn**	**19 26 46.5**	**+0.7**
CNGZ	**Carnagh Statio**	**2.52**	**236**	P	**Pn**	**19 26 23.1**	**+1.0**
TWGZ	**Tauwhareparae**	**2.53**	**244**	P	**Pn**	**19 26 23.3**	**+1.0**
TWGZ				S	**Sn**	**19 26 53.3**	**+1.4**
RUGZ	**Raukumara Rang**	**2.67**	**250**	P	**Pn**	**19 26 24.1**	**-0.3**
RUGZ				S	**Sn**	**19 26 54.8**	**-0.8**
MWZ	**Matawai**	**2.92**	**244**	P	**Pn**	**19 26 27.5**	**-0.2**
MWZ				S	**Sn**	**19 27 01.4**	**-0.1**
RIGZ	**Rimuhau**	**2.93**	**236**	P	**Pn**	**19 26 27.5**	**-0.3**
RIGZ				S	**Sn**	**19 27 02.4**	**+0.6**
RAGZ	**Rawiri**	**3.07**	**242**	P	**Pn**	**19 26 30.5**	**+0.8**
RAGZ				S	**Sn**	**19 27 05.0**	**-0.2**
MHGZ	**Mahia Peninsul**	**3.11**	**228**	P	**Pn**	**19 26 30.7**	**+0.5**
MHGZ				S	**Sn**	**19 27 04.5**	**-1.5**
URZ	**Urewera**	**3.19**	**248**	Pn	**Pn**	**19 26 31.2**	**-0.2**
	1.6nm,0.3s,baz=274,slow=6.3,SNR=17						
URZ				Sn	**Sn**	**19 27 08.2**	**0.0**
	16nm,0.3s,baz=288,slow=21,SNR=31						
URZ	**Urewera**	**3.19**	**248**	P	**Pn**	**19 26 31.4**	**0.0**
URZ				S	**Sn**	**19 27 07.8**	**-0.4**
RTZ	**Ruatahuna**	**3.43**	**243**	P	**Pn**	**19 26 34.8**	**+0.2**
RTZ				S	**Sn**	**19 27 14.4**	**+0.3**
MUGZ	**Murupara**	**3.52**	**246**	P	**Pn**	**19 26 36.3**	**+0.3**
MUGZ				S	**Sn**	**19 27 14.4**	**-2.0**
CTZ	**Chatham Island**	**6.91**	**165**	P	**Pn**	**19 27 23.8**	**+1.4**
CTZ				S	**Sn**	**19 28 36.8**	**-2.9**
ASAR	**Alice Springs**	**42.26**	**275**	P	**P**	**19 33 34.1**	**+0.3**
	0.4nm,0.6s,baz=118,slow=8.1,SNR=8.6						
WRA	**Warramunga Arr**	**43.84**	**280**	P	**P**	**19 33 45.8**	**-0.8**
	0.3nm,0.5s,baz=120,slow=7.8,SNR=6.7						
ARCES	**ARCESS Array B**	**144.86**	**345**	PKP	**PKPdf**	**19 45 16.7**	**+0.8**
	2.1nm,0.7s,baz=35,slow=3.3,SNR=4.1						

IDC 13 19:37:06.5±9.4, 20.93S×178.93W, h694km±121km, mb2.5/5, mb1 2.9/5, mb1mx2.7/32, mbtmp3.5/5, Error ellipse: s-maj=161.1km s-min=41.0km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.57**	**257**	P	P	19 44 13.9	+0.1
	0.2nm,0.6s,baz=94,slow=7.5,SNR=3.4						
WRA	**Warramunga Arr**	**43.68**	**263**	P	P	19 44 14.3	-0.3
	0.2nm,0.6s,baz=101,slow=7.7,SNR=3.5						
NVAR	**Mina Array Bea**	**81.94**	**44**	P	P	19

comp=N,2µm,0.5s
GRPR Tuman 0.95 67 *e*PN **Pn** **19 48 05.8 -1.1**
GRPR *i* S **Sn** **19 48 19.2 -1.3**
GRPR pmax pmax
comp=Z,731nm,0.3s
GRPR pmax pmax
comp=N,474nm,0.2s
GRPR pmax pmax
comp=E,526nm,0.1s
GRPR smax smax
comp=N,1µm,0.2s
GRPR smax smax
comp=E,2µm,0.3s
YUK Yuzh-Kuril'sk 1.03 67 *i* P **Pn** **19 48 07.0 -1.0**
YUK AMB AMB 19 48 08.0
comp=E,126nm,0.2s
YUK *i* S **Sn** **19 48 21.0 -1.3**
YUK A A 19 48 21.0
comp=E,2µm,0.4s
YUK A A 19 48 21.0
comp=E,1µm,0.4s
YUK Yuzh-Kuril'sk 1.03 67*d i*PN **Pn** **19 48 07.0 -1.0**
YUK *i* S **Sn** **19 48 21.3 -1.0**
YUK pmax pmax
comp=N,239nm,0.2s
YUK pmax pmax
comp=E,552µm,0.2s
YUK pmax pmax
comp=Z,1268µm,0.2s
YUK smax smax
comp=N,2µm,0.2s
YUK smax smax
comp=E,1µm,0.2s
JKA Kamikawa-asahi 1.49 290 *e*P **Pn** **19 48 14.6 +0.2**
JKA Kamikawa-asahi 1.49 290 **Pn** **19 48 14.6 +0.2**
ASAJ Asahikawa 1.50 290 Pg **Pn** **19 48 14.8 +0.4**
comp=E,338nm,0.3s,baz=89,slow=20,SNR=356
ASAJ Lg Lg 19 48 34.2
comp=E,664nm,0.3s,baz=348,slow=32,SNR=46
ASAJ Asahikawa 1.50 290 PN **Pn** **19 48 14.6 +0.2**
JEM Erimo 1.92 213 Pn **Pn** **19 48 15.5 -4.7**
ERM Erimo 1.92 213 PN **Pn** **19 48 20.6 +0.4**
ERM Erimo 1.92 213 **Pn** **19 48 20.6 +0.4**
JEW Eniwo 2.40 252 **Pn** **19 48 27.5 +0.6**
KUR Kuril'sk 2.86 55 *i* P **Pn** **19 48 34.0 +0.8**
KUR AMB AMB 19 48 40.0
comp=E,230nm,0.8s
KUR Kuril'sk 2.86 55*d i*PN **Pn** **19 48 34.4 +1.2**
KUR pmax pmax
comp=Z,230nm,0.8s
KUR pmax pmax
comp=N,78nm,0.6s
KUR pmax pmax
comp=E,56nm,0.4s
YSS Yuzh-Sakhalins 3.56 340 *e*P **Pn** **19 48 42.6 -0.1**
YSS AMB AMB 19 48 46.7
comp=E,30nm,1.0s
YSS Yuzh-Sakhalins 3.56 340 *e*PN **Pn** **19 48 42.6 -0.1**
YSS *e*S **Sn** **19 49 23.1 -1.6**
YSS pmax pmax
comp=Z,30nm,1.3s
YSS smax smax
comp=N,50nm,1.2s
YSS smax smax
comp=E,60nm,1.5s
YSS Yuzh-Sakhalins 3.56 340 Pn **Pn** **19 48 42.8 +0.1**
JTM Tenmabayashi 3.85 223 **Pn** **19 48 47.3 +0.6**
JMM Marumori 6.43 208 Pn **Pn** **19 49 20.3 -1.9**
MJAR Matsushiro Arr 8.59 217 Pn **Pn** **19 49 51.2 -0.6**
comp=E,0.1nm,0.3s,baz=28,slow=13,SNR=4.9
MJAR LR LR 19 53 36.9
comp=E,207nm,18.2s,baz=25,slow=41
MJAR Matsushiro Arr 8.59 217 PN **Pn** **19 49 52.4 +0.5**
MJAR Matsushiro Arr 8.59 217 **Pn** **19 49 52.4 +0.5**
MAJO Matsushiro 8.59 217 PN **Pn** **19 49 53.3 +1.4**
MAJO Matsushiro 8.59 217 Pn **Pn** **19 49 53.3 +1.4**
JGF Kuroka 9.75 217 Pn **Pn** **19 50 09.0 +1.1**
INU Inuyama 10.11 218 Pn **Pn** **19 50 13.6 +0.9**
JWT Wachi 10.93 223 Pn **Pn** **19 50 25.1 +1.2**
KSRS Korea Array 14.06 250 LR LR 19 56 11.0
comp=E,51nm,18.0s,baz=48,slow=36
MA2 Magadan 16.41 11 LR LR 19 58 08.2
comp=E,59nm,20.0s,baz=152,slow=38
SEY Seymchan 19.86 11 P **Pn** **19 52 21.3 +1.2**
comp=E,0.5nm,0.3s,baz=178,slow=7.4,SNR=11
SEY LR LR 20 00 08.9
comp=E,83nm,20.2s,baz=143,slow=37
YAK Yakutsk 20.41 340 LR LR 20 00 47.8
comp=E,128nm,18.7s,baz=93,slow=38
SONM Songino Array 26.78 292 P **P** **19 53 28.2 +0.7**
comp=E,2.3nm,0.9s,baz=96,slow=8.1,SNR=7.9
SONM LR LR 20 05 00.2
comp=E,83nm,20.6s,baz=85,slow=39
SONM Songino Array 26.78 292 P **P** **19 53 28.1 +0.6**
SONM pmax pmax
comp=Z,3.0nm,1.1s
SONM Songino Array 26.78 292 P **P** **19 53 28.1 +0.6**
H11N2 WAKE ISLAND Hy 30.30 135 T T 20 25 01.4
baz=328,slow=75,SNR=937
H11N1 WAKE ISLAND Hy 30.31 135 T T 20 25 01.3
baz=328,slow=75,SNR=579
H11N3 WAKE ISLAND Hy 30.32 135 T T 20 25 01.4
baz=328,slow=75,SNR=702
H11S1 WAKE ISLAND Hy 31.23 136 T T 20 26 13.0
baz=329,slow=76,SNR=1046
H11S3 WAKE ISLAND Hy 31.23 136 T T 20 26 12.9
baz=329,slow=76,SNR=817
H11S2 WAKE ISLAND Hy 31.24 136 T T 20 26 12.8
baz=329,slow=76,SNR=824
NRIK Noril'sk 38.45 331 LR LR 20 12 24.2
comp=Z,74nm,18.2s,baz=26,slow=38
ZALV Zalesovo Beam 39.56 307 P **P** **19 55 16.6 -1.9**
comp=Z,0.4nm,0.4s,baz=106,slow=15,SNR=2.9
ZALV PcP **PcP** **19 57 25.4 -0.1**
comp=Z,0.5nm,0.4s,baz=110,slow=2.1,SNR=2.6
ZALV LR LR 20 13 17.2
comp=Z,24nm,18.6s,baz=52,slow=39
IMAR Indian Mountai 39.80 34 P **P** **19 55 21.5 +1.2**
DHY Denali Highway 42.64 39 P **P** **19 55 44.1 +0.3**
DHY IAmb IAmb 19 55 59.3
comp=Z,6.3nm,1.3s
IL31 42.69 36 P **P** **19 55 45.3 +1.3**
IL31 IAmb IAmb 19 55 49.9
comp=Z,2.8nm,0.9s
ILAR Eielson Array 42.69 36 P **P** **19 55 45.4 +1.3**
comp=Z,1.5nm,0.8s,baz=258,slow=6.0,SNR=12
ILAR Eielson Array 42.69 36 P **P** **19 55 44.6 +0.6**
ILAR Eielson Array 42.69 36 P **P** **19 55 44.6 +0.6**
MKAR Makanchi Array 42.96 297 P **P** **19 55 46.9 +0.3**
comp=Z,0.8nm,0.8s,baz=80,slow=9.6,SNR=5.4
MKAR LR LR 20 16 03.2
comp=Z,32nm,18.0s,baz=74,slow=40
MKAR Makanchi Array 42.96 297 *e*P **P** **19 55 45.1 -1.4**
MKAR Makanchi Array 42.96 297 P **P** **19 55 45.1 -1.4**
MKAR Makanchi Array 42.96 297 P **P** **19 55 45.1 -1.4**
MAKZ Makanchi 43.16 297 P **P** **19 55 47.9 -0.2**
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
MAKZ Makanchi 43.16 297 P **P** **19 55 47.9 -0.2**
K27K Chicken 44.86 37 P **P** **19 56 02.4 +0.9**
BCAR Beaver Creek A 45.16 38 P **P** **19 56 05.3 +1.4**
CMAR Chiang Mai Arr 45.69 251 P **P** **19 56 09.2 +0.6**
comp=Z,0.4nm,0.8s,baz=35,slow=7.3,SNR=4.2
CMAR LR LR 20 16 48.0
comp=Z,23nm,18.5s,baz=205,slow=38
ABKAR Akbulak array 55.66 308 P **P** **19 57 23.4 0.0**
ABKAR IAmb IAmb 19 57 26.6
comp=Z,1.7nm,0.7s
ABKAR Akbulak array 55.66 308 P **P** **19 57 23.2 -0.3**
AKTO Aktyubinsk 56.17 310 LR LR 20 22 25.7
comp=Z,22nm,19.4s,baz=49,slow=37
WRA Warramunga Arr 63.95 191 P **P** **19 58 20.4 -0.4**
comp=Z,0.6nm,0.6s,baz=9.9,slow=7.0,SNR=7.7
FINES FINESS Array B 64.11 332 P **P** **19 58 20.4 -1.0**
comp=Z,2.0nm,0.5s,baz=35,slow=7.0,SNR=9.2
FINES FINESS Array B 64.11 332 P **P** **19 58 20.6 -0.8**
ASAR Alice Springs 67.68 191 P **P** **19 58 45.6 +0.9**
comp=Z,1.0nm,0.9s,baz=6.9,slow=5.2,SNR=9.9
ASAR Alice Springs 67.68 191 P **P** **19 58 45.9 +1.2**
NOA NORSAR Array B 69.01 338 P **P** **19 58 51.6 -1.1**
comp=Z,0.7nm,0.7s,baz=34,slow=6.4,SNR=3.4
PDAR Pinedale Array 71.41 48 P **P** **19 59 10.4 +2.5**
comp=Z,0.4nm,0.6s,baz=270,slow=1.5,SNR=4.0
PDAR Pinedale Array 71.41 48 P **P** **19 59 08.3 +0.3**
TXAR Lajitas Array 84.27 55 P **P** **20 00 21.5 +1.9**
comp=Z,0.8nm,0.8s,baz=302,slow=3.0,SNR=5.1
TXAR Lajitas Array 84.27 55 P **P** **20 00 20.7 +1.1**
TXAR Lajitas Array 84.27 55 P **P** **20 00 20.6 +1.1**

KRSC ***13*** *19:59:13.5±1.3, 53.57N×161.77E, h49km±22km, ML4.6*
IDC ***13*** *19:59:25.0±3.0, 53.61N×160.65E, h89km±24km, mb3.3/7, mb1 3.5/7, mb1mx3.2/36, mbtmp3.6/7, MS2.8/1, Ms1 2.8/1, ms1mx2.3/32, Error ellipse: s-maj=38.4km s-min=23.4km az=134.0*
ISC 13 19:59:12.5±3.2, 53.60N±0.04×161.68E±0.07, h9km±21km, n50, σ1.947/73, mb3.7/8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.96**	**2**	*e*P		**Pb**		**19 59 31.7**	**+0.4**
MKZ				*e*S		**Sb**		**19 59 44.2**	**0.0**
KII	**Karymskiy**	**1.39**	**289**	*e*P		**Pn**		**19 59 38.3**	**+0.1**
NLC	**Nalytchevo**	**1.46**	**254**	*e*P		**Pn**		**19 59 39.8**	**+0.8**
NLC				*e*S		**Sn**		**19 59 58.6**	**+0.3**
SDLR	**Sedlovina**	**1.70**	**260**	*e*P		**Pn**		**19 59 43.4**	**+0.9**
SDLR				*e*S		**Sn**		**20 00 04.7**	**+0.2**
KZV	**Kizimen**	**1.72**	**332**	*e*P		**Pn**		**19 59 44.4**	**+1.6**
KZV				*e*S		**Sn**		**20 00 05.3**	**+0.3**
UGLR	**Uglovaya**	**1.75**	**258**	*e*P		**Pn**		**19 59 44.6**	**+1.4**
UGLR				*e*S		**Sn**		**20 00 07.0**	**+1.3**
SMAR	**Somma**	**1.75**	**260**	*e*P		**Pn**		**19 59 44.1**	**+0.8**
SMAR				*e*S		**Sn**		**20 00 06.2**	**+0.3**
TUMD	**Tumrok D**	**1.78**	**336**	*e*P		**Pn**		**19 59 44.1**	**+0.7**
TUMD				*e*S		**Sn**		**20 00 05.6**	**-0.6**
KRER	**Koryakskii**	**1.78**	**262**	*e*P		**Pn**		**19 59 44.9**	**+1.3**
KRER				*e*S		**Sn**		**20 00 07.4**	**+1.0**
AVH	**Avacha**	**1.79**	**261**	*e*P		**Pn**		**19 59 45.1**	**+1.4**
AVH				*e*S		**Sb**		**20 00 08.5**	**+0.4**
KRX	**Arik**	**1.83**	**264**	*e*P		**Pn**		**19 59 45.2**	**+1.0**
KRX				*e*S		**Sn**		**20 00 07.6**	**0.0**
DALK	**Dalny**	**1.84**	**253**	*e*P		**Pn**		**19 59 45.5**	**+1.2**
DALK				*e*S		**Sn**		**20 00 08.7**	**+0.9**
KOK	**Koryaka**	**1.85**	**262**	*e*P		**Pn**		**19 59 45.5**	**+1.1**
KOK				*e*S		**Sn**		**20 00 08.6**	**+0.6**
PET	**Petropavlovsk**	**1.90**	**254**	*e*P		**Pn**		**19 59 46.5**	**+1.4**
PET				*e*S		**Sn**		**20 00 09.9**	**+0.7**
TUMR	**Tumrok**	**1.91**	**333**	*e*P		**Pn**		**19 59 46.8**	**+1.4**
TUMR				*e*S		**Sn**		**20 00 10.1**	**+0.4**
GNL	**Ganaly**	**2.23**	**274**	*e*P		**Pn**		**19 59 51.5**	**+1.8**
GNL				*e*S		**Sn**		**20 00 18.2**	**+0.8**
RUS	**Russkaya**	**2.24**	**240**	*e*P		**Pn**		**19 59 51.2**	**+1.5**
RUS				*e*S		**Sn**		**20 00 17.8**	**+0.3**
KMNR	**Kamenistaya**	**2.32**	**339**	*e*P		**Pb**		**19 59 53.6**	**-1.0**
KMNR				*e*S		**Sb**		**20 00 23.0**	**-0.4**
GRL	**Gorelyy**	**2.41**	**246**	*e*P		**Pn**		**19 59 54.4**	**+2.1**
GRL				*e*S		**Sn**		**20 00 23.7**	**+1.7**
BZGR	**Bezymyannyi-Gr**	**2.42**	**347**	*e*P		**Pn**		**19 59 53.8**	**+1.5**
PETK	**Petropavlovsk-** 15nm,0.3s,baz=88,slow=20,SNR=58	**2.44**	**260**	P		**Pn**		**19 59 54.8**	**+2.3**
PETK				S		**Sb**		**20 00 25.2**	**-1.3**
	35nm,0.3s,baz=88,slow=22,SNR=3.1								
BZWR	**Bezymyannyi-We**	**2.47**	**344**	*e*P		**Pn**		**19 59 55.5**	**+2.4**
ZLN	**Zelenaya**	**2.48**	**349**	*e*P		**Pn**		**19 59 55.0**	**+1.9**
ZLN				*e*S		**Sn**		**20 00 24.4**	**+0.8**
KIRR	**Kirishev**	**2.49**	**342**	*e*P		**Pb**		**19 59 56.6**	**-0.8**
KIRR				*e*S		**Sb**		**20 00 26.8**	**-1.4**
LGNR	**Loginova**	**2.56**	**347**	*e*P		**Pn**		**19 59 56.9**	**+2.5**
LGNR				*e*S		**Sn**		**20 00 27.8**	**+2.0**
CIRR	**Tsirk**	**2.58**	**348**	*e*P		**Pn**		**19 59 57.0**	**+2.4**
ASAK	**Asacha**	**2.59**	**244**	*e*P		**Pn**		**19 59 57.0**	**+2.4**
ASAK				*e*S		**Sn**		**20 00 27.8**	**+1.6**
KOZ	**Kozyrevsk**	**2.68**	**338**	*e*P		**Pn**		**19 59 58.1**	**+2.3**
KOZ				*e*S		**Sn**		**20 00 30.2**	**+1.8**
KBTR	**Krutoberegovo**	**2.70**	**14**	*e*P		**Pn**		**19 59 56.7**	**+0.6**
KRSR	**Krestovskiy**	**2.70**	**347**	*e*P		**Pn**		**19 59 58.7**	**+2.5**
KBG	**Krutoberegovo**	**2.73**	**12**	*e*P		**Pn**		**19 59 57.4**	**+0.9**
KLY	**Klyuchi**	**2.79**	**348**	*e*P		**Pn**		**19 59 59.5**	**+2.2**
KLY				*e*S		**Sn**		**20 00 33.0**	**+2.0**
APC	**Apacha**	**2.80**	**258**	*e*P		**Pn**		**20 00 00.4**	**+3.0**
APC				*e*S		**Sn**		**20 00 33.7**	**+2.4**
KDTR	**Khodutka, Kamc**	**2.83**	**232**	*e*P		**Pn**		**19 59 59.1**	**+1.3**
KDTR				*e*S		**Sn**		**20 00 31.5**	**-0.5**
ESO	**Esso**	**2.90**	**325**	*e*P		**Pn**		**20 00 00.6**	**+1.7**
ESO				*e*S		**Sn**		**20 00 34.6**	**+0.7**
SRDR	**Sredinnyy**	**2.95**	**338**	*e*P		**Pn**		**20 00 01.1**	**+1.5**
BDR	**Baidarnaya**	**2.99**	**355**	*e*P		**Pn**		**20 00 00.6**	**+0.4**
SMKR	**Semkarok**	**3.00**	**358**	*e*P		**Pn**		**20 00 01.9**	**+1.7**
PAU	**Pauzhetka**	**3.66**	**236**	*e*P		**Pn**		**20 00 11.5**	**+2.3**
MJAR	**Matsushiro Arr** 2.3nm,0.7s,baz=18,slow=11,SNR=3.0	**23.61**	**233**	P		**P**		**20 04 23.0**	**-0.6**
MJAR				LR		LR		20 15 41.1	
	comp=Z,22nm,19.1s,baz=320,slow=42								
ILAR	**Eielson Array** 0.9nm,0.9s,baz=263,slow=7.8,SNR=2.6	**27.78**	**46**	P		P		20 05 09.8	+8.4
H11N2	**WAKE ISLAND Hy** baz=355,slow=76,SNR=97	**34.04**	**171**	T		T		20 43 12.6	
H11N3	**WAKE ISLAND Hy** baz=355,slow=76,SNR=98	**34.06**	**171**	T		T		20 43 11.5	
H11N1	**WAKE ISLAND Hy** baz=355,slow=76,SNR=98	**34.06**	**171**	T		T		20 43 16.6	
SONM	**Songino Array** 0.2nm,0.4s,baz=40,slow=7.6,SNR=2.3	**34.71**	**283**	P		**P**		**20 06 02.4**	**-0.2**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=57,slow=7.1,SNR=5.8	**48.79**	**296**	P		**P**		**20 07 54.5**	**-3.1**
CMAR	**Chiang Mai Arr** 0.6nm,0.7s,baz=32,slow=7.1,SNR=6.4	**59.21**	**259**	P		**P**		**20 09 14.3**	**+0.3**
FINES	**FINESS Array B** 0.7nm,0.5s,baz=0.9,slow=8.5,SNR=3.7	**60.03**	**337**	P		P		20 09 25.4	+6.3
NOA	**NORSAR Array B** 0.7nm,0.9s,baz=22,slow=6.7,SNR=1.7	**63.32**	**344**	P		**P**		**20 09 41.8**	**+0.5**
WRA	**Warramunga Arr** 0.4nm,1.0s,baz=79,slow=9.5,SNR=2.5	**76.95**	**206**	P		**P**		**20 11 04.9**	**-0.3**

IDC ***13*** *20:12:14.1±2.9, 36.26N×70.72E, h170km±28km, mb3.6/13, mb1 3.6/18, mb1mx3.4/56, mbtmp4.1/18, Error ellipse: s-maj=18.5km s-min=12.0km az=28.0*
BJI ***13*** *20:12:15.8±0.0, 36.61N×70.79E, h180km, mB4.6/10, mb4.3/12*
MOS ***13*** *20:12:15.4±0.9, 36.51N×70.82E, h189km, mb4.2/8, Error ellipse: s-maj=10.5km s-min=4.7km az=83.1*
NEIC ***13*** *20:12:16.1±2.4, 36.50N±0.05×70.66E±0.09, h189km±6km, mb4.2/16, Error ellipse: s-maj=11.0km s-min=5.4km az=60.0*
NNC ***13*** *20:12:17.2±3.7, 36.71N×70.51E, h179km±35km, mb3.3, mpv4.2, Error ellipse: s-maj=34.9km s-min=17.7km az=161.0*
ISC 13 20:12:16.9±0.4, 36.50N±0.04×70.71E±0.04, h200km, n148, σ1.881/164, mb4.0/22, 14C-10D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.38**	**215**	PN		**Pn**		**20 12 58.9**	**-0.8**
KBL								20 13 29.8	
KBL	**Kabul**	**2.38**	**215**	Pn		**Pn**		**20 12 58.9**	**-0.8**
KBL				Sn		**Sn**		**20 13 29.8**	**-3.1**
CHGR	**Chuyangaron**	**2.48**	**331**	Pn		**Pn**		**20 12 59.6**	**-1.0**
CHGR				Sn		**Sn**		**20 13 30.9**	**-4.0**
GAR	**Garm**	**2.52**	**353**	Pn		**Pn**		**20 13 00.2**	**-0.8**
CEP	**Cherat**	**2.84**	**159**	P		**Pn**		**20 13 04.1**	**-0.8**
CEP				S		**Sn**		**20 13 39.0**	**-3.3**
NIL	**Nilore**	**3.52**	**143**	PN		**Pn**		**20 13 12.4**	**-0.5**
NIL	**Nilore**	**3.52**	**143**	Pn		**Pn**		**20 13 12.4**	**-0.5**
BTK	**Batken**	**3.56**	**1**	PN		**Pn**		**20 13 13.2**	**0.0**
BTK	**Batken**	**3.56**	**1**	Pn		**Pn**		**20 13 13.2**	**0.0**
THW	**Thamme Wali**	**3.79**	**167**	P		**Pn**		**20 13 15.3**	**-0.8**
TAS	**Tashkent**	**4.95**	**348**	PN		**Pn**		**20 13 30.2**	**-0.3**
TAS	**Tashkent**	**4.95**	**348**	Pn		**Pn**		**20 13 30.2**	**-0.3**
KSH	**Kashi**	**5.14**	**52**	P		**Pn**		20 13 27.4	-5.7
KSH				S		Sn		20 14 19.6	-14
KSH				smax	smax				
	comp=N,3µm,0.3s								
KSH				smax	smax				
	comp=E,2µm,0.3s								
IUG	**luzhnay** 12nm,0.5s,baz=355	**5.67**	**355**	*e*P		**Pn**		**20 13 38.4**	**-1.5**
IUG	**luzhnay**	**5.67**	**355**	*e*PN		**Pn**		**20 13 38.4**	**-1.5**
IUG				pmax	pmax				
	comp=Z,12nm,0.5s								
AML	**Almayashu** SNR=98	**6.09**	**21**	P		**Pn**		**20 13 44.6**	**-1.0**
DHRM	**DHARAMSHALA**	**6.27**	**131**	*e*P		**Pn**		**20 13 46.3**	**-1.6**
DHRM				*e*S		**Sn**		**20 14 54.0**	**-5.8**
DHRM				IAML				20 14 56.2	
	comp=E,628nm,0.3s								
DHRM				IAML				20 14 57.0	
	comp=N,739nm,0.3s								
DZA	**Taraz**	**6.41**	**4**	*e*P		**Pn**		**20 13 48.3**	**-1.1**
	comp=N,14nm,0.6s,baz=4.2								
DZA	**Taraz**	**6.41**	**4**	*e*PN		**Pn**		**20 13 48.2**	**-1.1**
DZA				pmax	pmax				
	comp=Z,15nm,0.6s								
UCH	**Uchtor** SNR=9.8	**6.44**	**26**	P		**Pn**		**20 13 49.5**	**-0.7**
EKS2	**Erkin-Say** SNR=21	**6.60**	**20**	P		**Pn**		**20 13 51.0**	**-0.9**
KK31	**Karatay Array** comp=Z,4.5nm,0.3s,baz=178,slow=12,SNR=307	**6.60**	**359**	⇓P		**Pn**		**20 13 51.0**	**-0.8**
KK31				⇑S		**Sn**		**20 15 01.6**	**-5.6**
	comp=Z,88nm,0.6s,baz=188,slow=23,SNR=30								
KK31	**Karatay Array**	**6.60**	**359**	PN		**Pn**		**20 13 50.9**	**-0.9**
KK31	**Karatay Array**	**6.60**	**359**	Pn		**Pn**		**20 13 50.9**	**-0.9**
KKAR	**Karatay Array**	**6.60**	**359**	PN		**Pn**		**20 13 50.5**	**-1.4**
KKAR	**Karatay Array**	**6.60**	**359**	Pn		**Pn**		**20 13 50.9**	**-0.9**
KKAR	**Karatay Array**	**6.60**	**359**	Pn		**Pn**		**20 13 50.5**	**-1.4**
AAK	**Ala-Archa** SNR=15	**6.80**	**24**	P		**Pn**		**20 13 53.8**	**-0.7**
AAK	**Ala-Archa** comp=Z,5.1nm,0.4s	**6.80**	**24**	⇑P		**Pn**		**20 13 53.6**	**-0.9**
AAK				⇓S		**Sn**		**20 15 08.9**	**-3.1**
	comp=Z,19nm,0.5s								
AAK	**Ala-Archa**	**6.80**	**24**	*c*ePN		**Pn**		**20 13 53.8**	**-0.7**
AAK				pmax	pmax				
	comp=Z,12nm,0.5s								
AAK	**Ala-Archa**	**6.80**	**24**	Pn		**Pn**		**20 13 53.8**	**-0.7**
KBK	**Karagaybulak** SNR=9.6	**6.97**	**27**	P		**Pn**		**20 13 56.3**	**-0.5**
FRU1	**Bishkek**	**7.00**	**24**	PN		**Pn**		**20 13 56.4**	**-0.6**
FRU1	**Bishkek**	**7.00**	**24**			**Pn**		**20 13 56.4**	**-0.6**
CHMS	**Chumysh** SNR=5.6	**7.20**	**24**	P		**Pn**		**20 13 58.7**	**-1.0**
HRA	**Herat**	**7.22**	**256**	Pn		**Pn**		**20 13 57.6**	**-2.5**
BOOM	**Boomskoye usch**	**7.22**	**32**	PN		**Pn**		**20 13 59.6**	**-0.5**
BOOM	**Boomskoye usch**	**7.22**	**32**	Pn		**Pn**		**20 13 59.6**	**-0.5**
USP	**Osepenovka** SNR=19	**7.37**	**22**	P		**Pn**		**20 14 00.7**	**-1.1**
TKM2	**Tokmak 2** SNR=27	**7.44**	**29**	P		**Pn**		**20 14 02.1**	**-0.9**
TKM2	**Tokmak 2** comp=Z,11nm,0.5s	**7.44**	**29**	⇑P		**Pn**		**20 14 01.8**	**-1.2**
TKM2				⇓S		**Sn**		**20 15 24.0**	**-3.3**
	comp=Z,13nm,0.8s								
TKM2	**Tokmak 2**	**7.44**	**29**	*i* PN		**Pn**		**20 14 01.7**	**-1.2**
TKM2				pmax	pmax				
	comp=Z,11nm,0.4s								
SGDS	**Sogindy** comp=Z,2.0nm,0.5s,baz=22	**7.57**	**22**	*e*P		**Pn**		**20 14 02.2**	**-2.4**
SGDS	**Sogindy**	**7.57**	**22**	*e*PN		**Pn**		**20 14 02.1**	**-2.4**
SGDS				pmax	pmax				
	comp=Z,2.0nm,0.5s								
SMLA	**Simla**	**7.59**	**133**	*e*P		**Pn**		**20 14 02.7**	**-2.0**
SMLA				*e*S		**Sn**		**20 15 24.3**	**-6.2**
SMLA				IAML				20 15 27.6	
	comp=E,234nm,0.3s								
SMLA				IAML				20 15 27.6	
	comp=N,210nm,0.2s								
AAA	**Alma-Ata** baz=33	**8.23**	**34**	*e*P		**Pn**		**20 14 12.4**	**-0.7**
AAA	**Alma-Ata**	**8.23**	**34**	*e*PN		**Pn**		**20 14 12.4**	**-0.7**
MDOK	**Medeo** baz=34	**8.25**	**34**	*e*P		**Pn**		**20 14 11.4**	**-2.1**
MDOK	**Medeo**	**8.25**	**34**	*e*PN		**Pn**		**20 14 11.3**	**-2.1**
KUU	**Kurty** baz=28	**8.55**	**29**	*e*P		**Pn**		**20 14 14.8**	**-2.4**
KUU	**Kurty**	**8.55**	**29**	*e*PN		**Pn**		**20 14 14.8**	**-2.4**
DDI	**Dehra Dun**	**8.70**	**133**	*e*P		**Pn**		**20 14 19.6**	**+0.4**
BTLS	**Baital** baz=15	**8.90**	**15**	*e*P		**Pn**		**20 14 19.7**	**-2.1**
BTLS	**Baital**	**8.90**	**15**	*e*PN		**Pn**		**20 14 19.6**	**-2.1**
KPKS	**Kokpek** baz=38	**9.27**	**39**	*e*P		**Pn**		**20 14 25.6**	**-1.1**
KPKS	**Kokpek**	**9.27**	**39**	*e*P		**Pn**		**20 14 25.5**	**-1.1**
SHLS	**Shalkode** baz=43	**9.46**	**43**	*e*P		**Pn**		**20 14 29.1**	**-0.1**
SHLS	**Shalkode**	**9.46**	**43**	*e*P		**Pn**		**20 14 29.1**	**-0.1**
KUDL	**Kundal**	**9.65**	**148**	*e*P		**Pn**		**20 14 30.1**	**-1.6**
KUDL				AMP				20 14 34.0	
	comp=Z,44nm,0.2s								
KUDL				⇓*ex*		x		20 14 36.2	
KUDL				*e*S		Sn		20 16 10.0	-10
GEYT	**Alibeck** comp=Z,0.6nm,0.3s,baz=97,slow=10.0,SNR=6.4	**10.14**	**282**	P		**Pn**		**20 14 37.1**	**-0.8**
GEYT				S		**Sn**		**20 16 28.6**	**-2.7**
	comp=Z,1.8nm,0.3s,baz=127,slow=17,SNR=4.6								
GEYT	**Alibeck**	**10.14**	**282**			**Pn**		**20 14 36.6**	**-1.3**
GYA0B	**ALIBECK ARRAY**	**10.14**	**282**	⇓P		**Pn**		**20 14 35.9**	**-2.1**
GYA0B				⇓S		**Sn**		**20 16 26.8**	**-4.4**
GYA0B	**ALIBECK ARRAY**	**10.14**	**282**	Pn		**Pn**		**20 14 35.2**	**-2.7**
MAKZ	**Makanchi** comp=Z,3.5nm,0.4s	**13.30**	**36**	⇓P		**Pn**		**20 15 17.1**	**-0.8**
MAKZ	**Makanchi**	**13.30**	**36**	P		**Pn**		**20 15 16.8**	**-1.1**
MAKZ	**Makanchi**	**13.30**	**36**			**Pn**		**20 15 16.8**	**-1.1**
PYUN	**Piuthan** comp=Z,40nm,0.3s	**13.33**	**125**	*e*P		**Pn**		**20 15 15.8**	**-3.0**
MK31	**Makanchi Array** comp=Z,1.2nm,0.5s,baz=218,slow=11,SNR=23	**13.44**	**36**	P		**Pn**		**20 15 19.2**	**-0.5**
MK31	**Makanchi Array**	**13.44**	**36**	*i* P		**Pn**		**20 15 19.9**	**+0.2**
MK31	**Makanchi Array**	**13.44**	**36**	Pn		**Pn**		**20 15 19.5**	**-0.2**
MKAR	**Makanchi Array** comp=Z,0.4nm,0.3s,baz=205,slow=11,SNR=16	**13.44**	**36**	P		**Pn**		**20 15 19.6**	**-0.1**
MKAR	**Makanchi Array**	**13.44**	**36**	*c*eP		**Pn**		**20 15 20.2**	**+0.5**
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
DANN	**Dangsing** comp=Z,64nm,0.5s	**13.69**	**123**	*e*P		**Pn**		**20 15 21.5**	**-1.7**
KOLN	**Koldanda** comp=Z,20nm,0.3s	**13.96**	**125**	*e*P		**Pn**		**20 15 24.1**	**-2.4**
BHPL	**Bhopal**	**14.43**	**154**	*e*PG		**P**		**20 15 35.5**	**+1.9**
BHPL				*e*SG		S		20 18 02.7	-10
GKN	**Gorkha** comp=Z,108nm,0.4s	**14.50**	**122**	*e*P		**Pn**		**20 15 31.4**	**-1.8**
WMQ	**Urumqi**	**14.89**	**55**	*e*P		**P**		**20 15 39.5**	**+1.0**
AB31	**Akbulak array** comp=Z,3.0nm,0.5s,baz=146,slow=12,SNR=109	**14.

	comp=Z,50nm,0.7s							
LSA	**Lhasa**	**18.41**	**106**	P		**Pn**	**20 16 20.5**	**+0.4**
LSA				pmax		pmax		
	comp=Z,36nm,1.0s							
LSA	**Lhasa**	**18.41**	**106**	P		**P**	**20 16 16.9**	**-0.7**
LSA				pmax		pmax		
	comp=Z,7.0nm,0.8s							
LSA	**Lhasa**	**18.41**	**106**	P		**P**	**20 16 16.9**	**-0.7**
LSA				IAmb		IAmb	20 16 21.6	
	comp=Z,6.9nm,0.8s							
ZAA0	**Zalesovo Array**	**20.02**	**25**	⇑P		**P**	**20 16 33.2**	**-1.0**
	comp=Z,1.0nm,0.7s							
ZAA0	**Zalesovo Array**	**20.02**	**25**	P		**P**	**20 16 34.6**	**+0.4**
ZAA0				IAmb		IAmb	20 16 35.6	
	comp=Z,7.2nm,0.7s							
ZALV	**Zalesovo Beam**	**20.02**	**25**	P		**P**	**20 16 34.9**	**+0.8**
	comp=Z,7.1nm,0.3s,baz=220,slow=12,SNR=26							
ZALV				S		**S**	**20 20 06.7**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=215,slow=17,SNR=2.8							
ZALV	**Zalesovo Beam**	**20.02**	**25**	*i* P		**P**	**20 16 35.0**	**+0.8**
ZALV				pmax		pmax		
	comp=Z,7.0nm,0.3s							
ARU	**Arti**	**21.56**	**341**	P		**P**	**20 16 52.1**	**+1.7**
	comp=Z,1.3nm,0.6s,baz=170,slow=11,SNR=5.0							
ARU	**Arti**	**21.56**	**341**	*c i* P		**P**	**20 16 52.2**	**+1.8**
ARU							20 17 28.7	
ARU				S		**S**	**20 20 42.9**	**+7.2**
ARU				pmax		pmax		
	comp=Z,8.0nm,0.9s							
ARU	**Arti**	**21.56**	**341**	P		**P**	**20 16 50.3**	**-0.1**
ARU				IAmb		IAmb	20 16 54.0	
	comp=Z,6.1nm,0.9s							
KIV	**Kislovodsk**	**22.58**	**298**	*e*P		**P**	**20 17 01.4**	**+1.0**
KIV				pmax		pmax		
	comp=Z,10.0nm,1.1s							
GTA	**Gaotai**	**23.09**	**74**	*e*P		**P**	**20 17 06.9**	**+1.8**
GTA				pP		pP	20 17 43.6	+0.8
GTA				sP		sP	20 18 06.0	-2.0
SONM	**Songino Array**	**28.53**	**55**	P		**P**	**20 17 55.2**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=267,slow=9.5,SNR=3.9							
OBN	**Obninsk**	**29.79**	**320**	*i* P		**P**	**20 18 05.5**	**+0.9**
OBN				pmax		pmax		
	comp=Z,6.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**30.66**	**118**	P		**P**	**20 18 13.5**	**+0.7**
	comp=Z,1.7nm,1.0s,baz=297,slow=8.4,SNR=12							
CMAR	**Chiang Mai Arr**	**30.66**	**118**	*ce*P		**P**	**20 18 13.8**	**+1.0**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**30.66**	**118**	P		**P**	**20 18 14.4**	**+1.6**
HHC	**Hu-ho-hao-te**	**31.99**	**70**	*e*P		**P**	**20 18 26.4**	**+2.1**
HHC				pmax		pmax		
	comp=Z,15nm,1.0s							
HHC				pmax		pmax		
	comp=Z,200nm,5.3s							
AKASG	**Malin Array Be**	**32.76**	**309**	P		**P**	**20 18 32.8**	**+2.0**
	comp=Z,1.9nm,0.5s,baz=80,slow=7.1,SNR=7.9							
AKBB	**Malin Array Si**	**32.76**	**309**	P		**P**	**20 18 32.5**	**+1.7**
AKBB				pmax		pmax		
	comp=Z,3.0nm,0.7s							
AKBB	**Malin Array Si**	**32.76**	**309**	P		**P**	**20 18 32.5**	**+1.7**
AKBB				IAmb		IAmb	20 18 33.3	
	comp=Z,3.2nm,0.7s							
BURAR	**Bucovina Array**	**35.09**	**303**	P		**P**	**20 18 52.7**	**+1.8**
BUR08	**Bucovina Ar. S**	**35.10**	**303**	P		**P**	**20 18 53.9**	**+2.8**
BUR08				IAmb		IAmb	20 18 57.7	
	comp=Z,6.2nm,1.5s							
FINES	**FINESS Array B**	**37.35**	**326**	P		**P**	**20 19 11.9**	**+2.2**
	comp=Z,1.0nm,0.3s,baz=121,slow=10,SNR=16							
FINES	**FINESS Array B**	**37.35**	**326**	*ce*P		**P**	**20 19 12.0**	**+2.2**
FINES				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ARCES	**ARCESS Array B**	**41.06**	**338**	P		**P**	**20 19 42.7**	**+2.3**
	comp=Z,2.3nm,0.5s,baz=115,slow=8.2,SNR=15							
NORES	**NORESS Array B**	**44.05**	**323**	P		**P**	**20 20 06.2**	**+1.7**
NORES				pmax		pmax		
	comp=Z,1.0nm,0.3s							
NB2	**NORSAR Subarra**	**44.24**	**323**	P		**P**	**20 20 07.6**	**+1.5**
	comp=Z,1.3nm,0.5s,baz=96,slow=7.9							
NOA	**NORSAR Array B**	**44.24**	**323**	P		**P**	**20 20 08.0**	**+1.9**
	comp=Z,1.4nm,0.5s,baz=97,slow=7.7,SNR=7.3							
NOA	**NORSAR Array B**	**44.24**	**323**	P		**P**	**20 20 08.0**	**+1.9**
TIXI	**Tiksi**	**45.87**	**22**	P		**P**	**20 20 20.4**	**+1.8**
TIXI				pmax		pmax		
	comp=Z,3.0nm,0.4s							
TIXI	**Tiksi**	**45.87**	**22**	P		**P**	**20 20 20.4**	**+1.8**
TIXI				IAmb		IAmb	20 20 21.1	
	comp=Z,2.9nm,0.4s							
TOA0	**Torodi Ar. Sit**	**65.48**	**268**	P		**P**	**20 22 39.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**65.48**	**268**	P		**P**	**20 22 38.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=48,slow=6.1,SNR=8.2							
TORD	**Torodi Ar. Bea**	**65.48**	**268**	P		**P**	**20 22 38.8**	**-0.1**
BATI	**Baumata**	**68.06**	**122**	P		**P**	**20 22 53.4**	**-1.8**
	comp=Z,6.5nm,0.5s,baz=297,slow=4.5,SNR=1.9							
TOLK	**Toolik Lake Re**	**70.99**	**15**	P		**P**	**20 23 14.4**	**+2.1**
AIS	**Amsterdam Isla**	**74.19**	**174**	P		**P**	**20 23 31.2**	**-0.1**
CTGM	**Chitina Glacie**	**79.42**	**15**	P		**P**	**20 24 01.0**	**+0.4**
CTGM				IAmb		IAmb	20 24 18.6	
	comp=Z,8.1nm,1.2s							
YKA	**Yellowknife Ar**	**81.26**	**2**	P		**P**	**20 24 12.2**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=0.8,slow=5.2,SNR=4.2							
WB0	**Warramunga Arr**	**82.11**	**122**	P		**P**	**20 24 14.9**	**-0.4**
WRA	**Warramunga Arr**	**82.19**	**122**	P		**P**	**20 24 15.4**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=326,slow=5.0,SNR=25							
WRA	**Warramunga Arr**	**82.19**	**122**	*ce*P		**P**	**20 24 14.8**	**-0.9**
WRA				pmax		pmax		
	comp=Z,1.0nm,0.5s							
WB2	**Warramunga Arr**	**82.20**	**122**	P		**P**	**20 24 15.3**	**-0.4**
WB2				IAmb		IAmb	20 24 30.6	
	comp=Z,7.7nm,1.3s							
WR0	**Warramunga Arr**	**82.34**	**122**	P		**P**	**20 24 15.9**	**-0.6**
WR0				IAmb		IAmb	20 24 39.7	
	comp=Z,9.2nm,1.5s							
ASAR	**Alice Springs**	**84.45**	**125**	P		**P**	**20 24 26.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=310,slow=4.8,SNR=15							
ASAR	**Alice Springs**	**84.45**	**125**	P		**P**	**20 24 27.2**	**0.0**
ASAR	**Alice Springs**	**84.45**	**125**	P		**P**	**20 24 27.2**	**0.0**

TAP ***13*** *20:33:28.8,24.˚24N×122.˚80E,h47km,ML2.7,D*
JMA ***13*** *20:33:29.2±0.1,24.˚27N×122.˚78E,h49km±2km,M2.3*

ISC 13 20:33:29.7±1.7,24.˚19N±0.˙04×122.˚79E±0.˙02,h36km±2km, n64,σ0s96/91,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.30**	**29**	P		**Pn**		**20 33 37.6**	**-0.1**
JYNG				S		**Sn**		**20 33 43.5**	**-0.5**
YOJ	**Yonaguni jima**	**0.34**	**37**	P		**Pn**		**20 33 38.1**	**0.0**
	baz=31								
YOJ				S		**Sn**		**20 33 44.5**	**+0.2**
	baz=31								
YOJ	**Yonaguni jima**	**0.34**	**37**	P		**Pn**		**20 33 38.1**	**0.0**
YOJ				*e*S		**Sn**		**20 33 44.3**	**-0.1**
IRIF	**Iriomote-Funau**	**0.87**	**80**	P		**Pn**		**20 33 44.9**	**-0.5**
IRIF				S		**Sn**		**20 33 56.6**	**-0.3**
HATJ	**Hateruma jima**	**0.94**	**98**	P		**Pn**		**20 33 47.2**	**+0.9**
HATJ				*e*S		**Sn**		**20 34 00.5**	**+2.0**
TWC	**Suao**	**0.95**	**296**	*i* P		**Pn**		**20 33 45.7**	**-0.9**
	baz=303								
TWC				S		**Sn**		**20 33 58.9**	**-0.1**
	baz=303								
NACB	**Ninganchiao**	**1.09**	**269**	P		**Pn**		**20 33 47.6**	**-0.8**
	baz=253								
NACB				S		**Sn**		**20 34 02.8**	**+0.4**
	baz=253								
NTC	**Toucheng**	**1.10**	**307**	*e*P		**Pn**		**20 33 48.1**	**-0.4**
	baz=305								
JKRS	**Kuro-shima**	**1.11**	**87**	P		**Pn**		**20 33 49.0**	**+0.2**
JKRS				S		**Sn**		**20 34 03.7**	**+0.8**
TWE	**Neicheng**	**1.15**	**298**	*i* P		**Pn**		**20 33 49.1**	**-0.2**
	baz=303								
TWE				*i* S		**Sn**		**20 34 03.6**	**-0.3**
	baz=303								
TIPB	**Shuangxi**	**1.17**	**312**	*i* P		**Pn**		**20 33 48.8**	**-0.9**
	baz=310								
TIPB				*i* S		**Sn**		**20 34 03.2**	**-1.2**
	baz=310								
ETLH	**Xiulin Townshi**	**1.19**	**271**	*e*P		**Pn**		**20 33 49.4**	**-0.5**
	baz=267								
ETLH				S		**Sn**		**20 34 05.4**	**+0.3**
	baz=267								
NDT	**Datong Townshi**	**1.23**	**290**	P		**Pn**		**20 33 51.9**	**+1.4**
	baz=275								
NDT				S		**Sn**		**20 34 07.6**	**+1.7**
	baz=275								
JIJ	**Ishigaki jima**	**1.25**	**82**	P		**Pn**		**20 33 50.2**	**-0.4**
JIJ				*e*S		**Sn**		**20 34 05.5**	**-0.7**
NWF	**Wu-fen Shan**	**1.27**	**314**	P		**Pn**		**20 33 49.9**	**-1.1**
	baz=313								
WFSB	**Wu-fen Shan**	**1.27**	**314**	P		**Pn**		**20 33 50.2**	**-0.7**
	baz=313								
ESL	**Shilin**	**1.30**	**254**	*e*P		**Pn**		**20 33 50.2**	**-1.0**
	baz=250								
ESL				S		**Sn**		**20 34 06.2**	**-1.2**
	baz=250								
NNSB	**Datong**	**1.30**	**281**	*e*P		**Pn**		**20 33 51.0**	**-0.5**
	baz=277								
NNSH	**Datong**	**1.30**	**281**	*e*P		**Pn**		**20 33 51.4**	**-0.2**
	baz=266								
NWLT	**Wulai**	**1.31**	**297**	*e*P		**Pn**		**20 33 52.0**	**+0.5**
	baz=306								
NWLT				*e*S		**Sn**		**20 34 08.3**	**+0.5**
	baz=306								
NNS	**Nan Shan**	**1.32**	**281**	P		**Pn**		**20 33 51.7**	**0.0**
	baz=267								
NNS				S		**Sn**		**20 34 08.9**	**+0.9**
	baz=267								
TWA	**Mucha**	**1.35**	**306**	P		**Pn**		**20 33 51.5**	**-0.5**
	baz=304								
TWA				S		**Sn**		**20 34 08.8**	**0.0**
	baz=304								
YHNB	**Yeheng**	**1.38**	**291**	P		**Pn**		**20 33 52.8**	**+0.4**
	baz=274								
YHNB				*e*S		**Sn**		**20 34 10.6**	**+1.1**
	baz=274								
NHDH	**Xindian Distri**	**1.39**	**304**	*e*P		**Pn**		**20 33 52.4**	**-0.2**
	baz=303								
NSK	**Sanguang**	**1.39**	**291**	P		**Pn**		**20 33 52.8**	**+0.2**
	baz=274								
NSK				S		**Sn**		**20 34 09.9**	**+0.1**
	baz=274								
WHF	**Hehuan Shan**	**1.39**	**269**	P		**Pn**		**20 33 52.7**	**-0.3**
	baz=265								
FUSS	**Fushou**	**1.41**	**273**	*e*P		**Pn**		**20 33 53.5**	**+0.4**
	baz=270								
TATO	**Taipei**	**1.42**	**304**	P		**Pn**		**20 33 52.5**	**-0.5**
	baz=302								
TATO				S		**Sn**		**20 34 10.1**	**-0.4**
	baz=302								
HGSD	**Ruisui**	**1.43**	**241**	*e*P		**Pn**		**20 33 51.7**	**-1.4**
	baz=238								
JISG	**Ishigakijimahi**	**1.44**	**74**	P		**Pn**		**20 33 52.7**	**-0.6**
JISG				S		**Sn**		**20 34 10.7**	**-0.3**
YM01	**YM01**	**1.46**	**311**	*e*P		**Pn**		**20 33 53.0**	**-0.6**
	baz=310								
YM01				S		**Sn**		**20 34 09.6**	**-2.0**
	baz=310								
TWT	**Tachien**	**1.48**	**273**	*e*P		**Pn**		**20 33 54.0**	**+0.1**
	baz=261								
YM10	**YM10**	**1.48**	**311**	*e*P		**Pn**		**20 33 53.0**	**-0.8**
	baz=310								
CHGB	**Renai**	**1.48**	**265**	*e*P		**Pn**		**20 33 53.8**	**-0.2**
	baz=253								
TDCB	**Techi**	**1.49**	**273**	*e*P		**Pn**		**20 33 53.5**	**-0.6**
	baz=261								
YM04	**YM04**	**1.49**	**310**	P		**Pn**		**20 33 53.2**	**-0.8**
	baz=310								
EHY	**Hungye**	**1.51**	**243**	P		**Pn**		**20 33 53.3**	**-0.9**
	baz=252								
EHY				S		**Sn**		**20 34 12.4**	**-0.2**
	baz=252								
YULB	**Yu-li**	**1.58**	**240**	P		**Pn**		**20 33 54.6**	**-0.6**
	baz=237								
EYUL	**Yuli**	**1.59**	**238**	*e*P		**Pn**		**20 33 54.6**	**-0.7**
	baz=235								
EYUL				*e*S		**Sn**		**20 34 14.1**	**-0.4**
	baz=235								
TWF1	**Yuli**	**1.60**	**239**	P		**Pn**		**20 33 54.5**	**-1.0**
	baz=236								
LIOB	**Emei**	**1.68**	**286**	*e*P		**Pn**		**20 33 57.2**	**+0.6**
	baz=283								
WHP	**Taichung City**	**1.69**	**273**	P		**Pn**		**20 33 58.5**	**+1.8**
	baz=260								
WHP				*e*S		**Sn**		**20 34 18.7**	**+1.6**
	baz=260								
FULB	**Fuli**	**1.69**	**235**	*e*P		**Pn**		**20 33 55.4**	**-1.3**
	baz=232								
NSTT	**Nanjuang**	**1.69**	**285**	P		**Pn**		**20 33 58.2**	**+1.5**
	baz=282								
CHKT	**Chengkung**	**1.70**	**231**	P		**Pn**		**20 33 55.4**	**-1.4**
	baz=218								
CHKT				S		**Sn**		**20 34 15.9**	**-1.4**
	baz=218								
SSLB	**Suanglung**	**1.73**	**257**	*e*P		**Pn**		**20 33 56.8**	**-0.5**
	baz=254								
SMLT	**Sun Moon Lake**	**1.75**	**260**	*e*P		**Pn**		**20 33 57.2**	**-0.5**
	baz=257								
TYC	**Yuchi**	**1.79**	**261**	*e*P		**Pn**		**20 33 57.9**	**-0.2**
	baz=258								
JTJ	**Tarama**	**1.80**	**75**	P		**Pn**		**20 33 58.3**	**+0.1**
JTJ				*e*S		**Sn**		**20 34 18.9**	**-0.9**
EDH	**Donghe**	**1.82**	**229**	*e*S		**Sn**		**20 34 18.2**	**-2.2**
	baz=219								
ELDTW	**Lidau**	**1.91**	**239**	P		**Pn**		**20 33 59.0**	**-0.8**
	baz=236								
ALS	**Alishan**	**1.94**	**250**	*e*P		**Pn**		**20 34 00.2**	**-0.2**
	baz=247								
WNT	**Mingjian**	**1.95**	**261**	*e*P		**Pn**		**20 34 01.9**	**+1.7**
	baz=258								
CHN5	**Tsauling**	**2.02**	**253**	*e*P		**Pn**		**20 34 03.2**	**+1.9**
	baz=250								
STYT	**Tauyuan**	**2.12**	**242**	*e*P		**Pn**		**20 34 03.2**	**+0.5**
	baz=230								
CHN4	**Tsaushan**	**2.18**	**248**	*e*P		**Pn**		**20 34 05.2**	**+1.8**
	baz=245								
WTP	**Ta-pu**	**2.20**	**245**	*e*P		**Pn**		**20 34 05.4**	**+1.5**
	baz=242								
JIRB	**Irabujima**	**2.26**	**73**	S		**Sn**		**20 34 30.2**	**-1.0**
SLGT	**Liugui**	**2.30**	**239**	*e*P		**Pn**		**20 34 05.8**	**+0.8**
	baz=229								
TWK	**Hsinying**	**2.30**	**247**	*e*P		**Pn**		**20 34 07.0**	**+1.8**
	baz=243								
CHN1	**Nanshi**	**2.30**	**245**	*e*P		**Pn**		**20 34 07.0**	**+1.8**
	baz=241								
SGST	**Jiashian**	**2.30**	**242**	*e*P		**Pn**		**20 34 06.5**	**+1.3**
	baz=238								
TSMG	**Majia**	**2.46**	**234**	*e*P		**Pn**		**20 34 08.4**	**+1.1**
	baz=225								
MASBT	**Mashibuluo**	**2.53**	**232**	*e*P		**Pn**		**20 34 08.1**	**-0.1**
	baz=222								

IDC ***13*** *20:37:32.6±4.2,21.˚12S×178.˚70W,h545km±47km, mb3.3/11,mb1 3.6/12,mb1mx3.4/35,mbtmp4.3/12,Error ellipse: s-maj=25.3km s-min=19.2km az=0.0*
NEIC ***13*** *20:37:32.5±1.1,21.˚28S±0.˚09×178.˚6W±0.˚2,h558km±8km, mb4.4/30,Error ellipse: s-maj=23.3km s-min=11.2km az=105.0*

ISC 13 20:37:32.1±0.6,21.˚2S±0.˚1×178.˚6W±0.˚1,h550km,n78, σ0s97/79,mb4.2/24,13C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.71**	**317**	P		**P**		**20 39 00.6**	**+0.8**
FUNA	**Funafuti**	**12.81**	**350**	P		**P**		**20 40 18.0**	**-1.1**
OUZ	**Omahutia**	**15.54**	**205**	P		**P**		**20 40 46.9**	**-0.1**
URZ	**Urewera**	**17.38**	**191**	P		**P**		**20 41 04.4**	**+0.3**
	1.1nm,0.3s,baz=315,slow=4.3,SNR=4.4								
URZ	**Urewera**	**17.38**	**191**	P		**P**		**20 41 01.8**	**-2.2**
URZ				IAmb		IAmb		20 41 23.2	
	comp=Z,28nm,1.2s								
BKZ	**Black Stump Fm**	**18.37**	**192**	P		**P**		**20 41 11.3**	**-1.9**
QRZ	**Quartz Range**	**20.95**	**199**	P		**P**		**20 41 36.8**	**+0.3**
NNZ	**Nelson**	**21.06**	**197**	P		**P**		**20 41 37.3**	**-0.3**
THZ	**Tophouse**	**21.70**	**197**	P		**P**		**20 41 43.7**	**+0.3**
KHZ	**Kahutara**	**22.14**	**196**	P		**P**		**20 41 46.8**	**-0.4**
LTZ	**Lake Taylor**	**22.82**	**198**	P		**P**		**20 41 52.2**	**-1.2**
EIDS	**Eidsvold**	**28.14**	**256**	P		**P**		**20 42 41.1**	**+0.6**
EIDS				IAmb		IAmb		20 42 53.7	
	comp=Z,6.9nm,1.2s								
CTA	**Charters Tower**	**32.89**	**266**	P		**P**		**20 43 21.5**	**+0.1**
	comp=Z,3.0nm,0.4s,baz=89,slow=11,SNR=8.6								
CTAO	**Charters Tower**	**32.89**	**266**	P		**P**		**20 43 21.6**	**+0.2**
CTAO				IAmb		IAmb		20 43 25.9	
	comp=Z,13nm,1.4s								
STKA	**Stephens Creek**	**36.99**	**245**	P		**P**		**20 43 55.8**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=66,slow=10,SNR=5.4								
STKA	**Stephens Creek**	**36.99**	**245**	P		**P**		**20 43 55.6**	**+0.2**
COEN	**Coen**	**37.10**	**275**	P		**P**		**20 43 57.0**	**+0.5**
COEN				IAmb		IAmb		20 44 15.0	
	comp=Z,5.5nm,1.0s								
BBOO	**Buckleboo**	**41.74**	**244**	P		**P**		**20 44 33.5**	**-0.1**
BBOO				IAmb		IAmb		20 44 34.3	
	comp=Z,14nm,1.0s								
WR0	**Warramunga Arr**	**43.78**	**263**	P		**P**		**20 44 49.1**	**-0.6**
AS31	**Alice Springs**	**43.83**	**258**	P		**P**		**20 44 50.2**	**+0.1**
ASAR	**Alice Springs**	**43.83**	**258**	P		**P**		**20 44 50.1**	**0.0**
	comp=Z,4.7nm,0.5s,baz=97,slow=7.9,SNR=68								
ASAR				PcP		**PcP**		**20 46 24.7**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=104,slow=3.9,SNR=8.4								
ASAR	**Alice Springs**	**43.83**	**258**	P		**P**		**20 44 49.9**	**-0.2**
WB0	**Warramunga Arr**	**43.95**	**263**	P		**P**		**20 44 50.6**	**-0.4**
WB2	**Warramunga Arr**	**43.96**	**263**	P		**P**		**20 44 50.5**	**-0.6**
WB2				IAmb		IAmb		20 44 57.9	
	comp=Z,9.6nm,1.4s								
WRA	**Warramunga Arr**	**43.97**	**263**	P		**P**		**20 44 50.6**	**-0.6**
	comp=Z,1.1nm,0.2s,baz=97,slow=7.5,SNR=94								
WRA				PcP		**PcP**		**20 46 25.5**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=91,slow=3.4,SNR=3.5								
WRA	**Warramunga Arr**	**43.97**	**263**	P		**P**		**20 44 50.6**	**-0.6**
KNRA	**Kununurra**	**50.08**	**267**	P		**P**		**20 45 37.0**	**-0.2**
KNRA				IAmb		IAmb		20 45 57.2	
	comp=Z,28nm,1.5s								
FITZ	**Fitzroy Crossi**	**52.40**	**263**	P		**P**		**20 45 54.2**	**+0.3**
SIJI	**Sorong**	**52.91**	**286**	P		**P**		**20 45 57.5**	**-0.1**
	comp=Z,13nm,0.7s,baz=69,slow=5.9,SNR=10								
VNDA	**Vanda**	**57.14**	**185**	P		**P**		**20 46 28.8**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=7.6,slow=7.7,SNR=2.8								
VNDA	**Vanda**	**57.14**	**185**	P		**P**		**20 46 24.6**	**-1.5**
NVAR	**Mina Array Bea**	**81.92**	**44**	P		**P**		**20 48 56.5**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=222,slow=8.2,SNR=7.4								
NVAR	**Mina Array Bea**	**81.92**	**44**	P		**P**		**20 48 54.8**	**0.0**
KVN	**Kaiserville**	**82.41**	**43**	P		**P**		**20 48 57.1**	**-0.1**
G08A	**Pilot Rock**	**85.52**	**38**	P		**P**		**20 49 12.1**	**-0.2**
G08A				IAmb		IAmb		20 49 14.7	
	comp=Z,12nm,1.5s								
N25K	**Chitina, Valde**	**86.93**	**16**	P		**P**		**20 49 19.0**	**+0.5**
N25K				IAmb		IAmb		20 49 39.7	
	comp=Z,6.0nm,1.2s								
GLB	**Gilahina Butte**	**86.99**	**16**	P		**P**		**20 49 19.3**	**+0.5**
GLB				IAmb		IAmb		20 49 25.4	
	comp=Z,14nm,1.5s								
BALM	**Baldy**	**87.03**	**17**	P		**P**		**20 49 19.7**	**+0.7**
BALM				IAmb		IAmb		20 49 20.0	
	comp=Z,9.1nm,1.1s								
BARN	**Barnard Glacie**	**87.23**	**17**	P		**P**		**20 49 21.4**	**+1.3**
BARN				IAmb		IAmb		20 49 33.4	
	comp=Z,13nm,1.4s								
TRF	**Thorofare Moun**	**87.27**	**12**	P		**P**		**20 49 20.3**	**+0.1**
TRF				IAmb		IAmb		20 49 20.8	
	comp=Z,6.9nm,0.8s								
RND	**Reindeer**	**87.53**	**13**	P		**P**		**20 49 21.8**	**+0.6**
RND				IAmb		IAmb		20 49 22.2	
	comp=Z,6.6nm,0.8s								
TXAR	**Lajitas Array**	**87.90**	**58**	P		**P**		**20 49 25.6**	**+1.7**
	comp=Z,1.0nm,0.9s,baz=217,slow=6.0,SNR=5.8								
CCB	**Clear Creek Bu**	**88.84**	**13**	P		**P**		**20 49 26.9**	**-0.4**
CCB				IAmb		IAmb		20 49 27.6	
	comp=Z,2.8nm,0.7s								
IMAR	**Indian Mountai**	**88.96**	**10**	P		**P**		**20 49 28.2**	**+0.4**
ILAR	**Eielson Array**	**89.14**	**13**	P		**P**		**20 49 28.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=224,slow=5.7,SNR=12								
CMAR	**Chiang Mai Arr**	**89.85**	**290**	P		**P**		**20 49 34.6**	**+1.5**
	comp=Z,0.8nm,0.9s,baz=132,slow=3.9,SNR=6.2								
CMAR	**Chiang Mai Arr**	**89.85**	**290**	P		**P**		**20 49 32.7**	**-0.3**
PDAR	**Pinedale Array**	**89.86**	**43**	P		**P**		**20 49 33.5**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=224,slow=4.1,SNR=9.0								
PDAR	**Pinedale Array**	**89.86**	**43**	P		**P**		**20 49 32.6**	**-0.2**
KKAR	**Karatay Array**	**119.28**	**308**			**PKPdf**		**20 55 18.5**	**-0.6**
ARCES	**ARCESS Array B**	**129.54**	**349**	PKP		**PKPdf**		**20 55 37.2**	**-0.8**
	comp=Z,5.0nm,0.9s,baz=31,slow=2.2,SNR=7.5								
FINES	**FINESS Array B**	**136.31**	**343**	PKP		**PKPdf**		**20 55 49.7**	**-1.2**
	comp=Z,2.2nm,0.9s,baz=49,slow=2.8,SNR=4.3								
AKASG	**Malin Array Be**	**143.38**	**330**	PKP		PKPab		20 56 01.9	-0.4
	comp=Z,2.6nm,0.5s,baz=42,slow=4.3,SNR=38								
AKBB	**Malin Array Si**	**143.38**	**330**			PKPab		20 56 01.9	-0.4
SORM	**Soroca**	**145.54**	**328**	⇑P		**PKPdf**		**20 56 07.9**	**+0.1**
BRTR	**Keskin Array B**	**146.92**	**311**	PKPbc		**PKPbc**		**20 56 13.4**	**0.0**
	comp=Z,1.7nm,0.6s,baz=134,slow=3.3,SNR=6.0								
**BRT

baz=136
IVSH V-Sauoahnukur 0.75 86 P **Pg** **20 46 32.3 -3.4**
baz=78
IKAL Kalfafell 0.82 186 P Pg 20 46 31.0 -6.0
baz=186
IKAL S Sg 20 46 40.7 -7.0
baz=186
IVAT Vatnsfell 0.85 228 P Pg 20 46 32.0 -5.5
baz=233
IADA Aoalbol 0.85 72 P **Pg** **20 46 34.2 -3.3**
baz=65
IMEL Melhnausar 0.88 23 P **Pg** **20 46 35.6 -2.5**
baz=22
IHVE Hveravellir 0.90 278 P Pg 20 46 34.0 -4.5
baz=285
IHVE S **Sg** **20 46 45.5 -4.6**
baz=285
IREN Reynihlio 0.92 15 P **Pg** **20 46 36.2 -2.6**
baz=15
IFAG Fagurholsmyri 0.96 158 P Pg 20 46 33.8 -5.9
baz=153
IFAG S Sg 20 46 46.0 -6.2
baz=153
IKVO Krokottuvotn 0.99 15 P **Pg** **20 46 37.4 -2.7**
baz=14
IGRS Grimsstaoir 1.05 33 P **Pg** **20 46 39.1 -2.1**
baz=30
ISKI Skildingahlsh 1.13 10 P **Pg** **20 46 39.8 -3.0**
baz=9.6
IGHA Grjothals 1.14 17 P **Pg** **20 46 39.8 -3.2**
baz=17
ISNB Snabyli 1.15 206 P Pn 20 46 36.8 -6.5
baz=208
ISNB S Sb 20 46 50.5 -7.5
baz=208
IGRA Granastaoir 1.16 358 P **Pg** **20 46 40.0 -3.4**
baz=359
IGRA S **Sb** **20 46 56.8 -1.5**
baz=359
IFED Fedgar 1.21 233 P Pn 20 46 38.2 -6.0
baz=237
IDIM Dimmadalss 1.22 11 P **Pb** **20 46 41.2 -3.1**
baz=11
IRJU Rjupnafell 1.27 205 P Pn 20 46 38.7 -6.2
baz=206
IGYG Gygjarholskot 1.28 249 P Pn 20 46 39.6 -5.4
baz=254
IHED Heoinshofoi 1.32 3 P **Pn** **20 46 42.8 -2.9**
baz=3.6
IHAU Haukadalur 1.34 235 P Pn 20 46 40.4 -5.5
baz=238
IBRE Brettingsstaoi 1.38 353 P **Pn** **20 46 43.5 -2.8**
baz=354
IHVO Lagu-Hvolar 1.38 206 P Pn 20 46 40.8 -5.7
baz=208
IGIL Gilhagi 1.40 19 P **Pn** **20 46 43.6 -3.1**
baz=18
IALF Alftagrof 1.48 211 P Pn 20 46 42.3 -5.5
baz=213
ISIG Siglufjorour 1.50 337 P **Pn** **20 46 45.1 -2.9**
baz=339
IESK Eystri-Skogar 1.52 216 P Pn 20 46 42.7 -5.6
baz=218
BORG Borgarnes 1.65 271 Pn Pn 20 46 46.1 -4.0
32nm,0.3s,baz=89,slow=6.9,SNR=104
BORG Sn **Sn** **20 47 09.5 -1.8**
41nm,0.3s,baz=47,slow=19,SNR=8.6
IKRO Krokur 1.71 249 P Pn 20 46 46.2 -4.8
baz=252
SCO Scoresbysund 5.99 345 *e* **Pn** **20 47 48.0 -1.7**
baz=193,slow=5.9
SCO *i* P **Pn** **20 47 50.0 +0.3**
SCO *i* S **Sn** **20 49 03.9 +5.7**
SCO IAML 20 49 08.8
comp=Z,2.3nm,0.5s
JMIC Jan Mayen 7.10 24 LR LR 20 50 23.0
comp=Z,843nm,18.1s,baz=246,slow=34
EKA Eskdalemuir Ar 11.82 136 Pn **Pn** **20 49 07.9 -1.8**
baz=322,slow=13,SNR=13
EKB2 Eskdalemuir Ar 11.84 136 Pn **Pn** **20 49 08.9 -0.9**
EKR5 Eskdalemuir Ar 11.84 136 Pn **Pn** **20 49 08.7 -1.1**
EKR7 Eskdalemuir Ar 11.86 136 Pn **Pn** **20 49 09.9 -0.2**
NOA NORSAR Array B 13.53 93 Pn **Pn** **20 49 30.8 -2.1**
comp=Z,0.0nm,0.3s,baz=310,slow=14,SNR=2.9
NOA LR LR 20 54 22.7
comp=Z,58nm,21.0s,baz=295,slow=35
KONO Kongsberg 13.56 100 *i* P **Pn** **20 49 33.6 +0.3**
HFS Hagfors 15.04 93 Pn **P** **20 50 00.1 +1.2**
comp=Z,0.1nm,0.3s,baz=335,slow=6.6,SNR=12
ARCES ARCESS Array B 17.05 55 LR LR 20 55 50.0
comp=Z,256nm,18.1s,baz=285,slow=33
BSEG Bad Segeberg 17.67 115 P **Pn** **20 50 27.2 +0.2**
BSEG pmax pmax
comp=Z,22nm,2.1s
BAIF Baives 18.65 132 *e*P **Pn** **20 50 41.2 +2.1**
BAIF pmax pmax
comp=Z,227nm,2.7s
GRR Gorron 18.69 143 *e*P **P** **20 50 39.4 +0.2**
GRR pmax pmax
comp=Z,82nm,1.8s
FINES FINESS Array B 19.68 80 P **Pn** **20 50 51.0 -0.3**
comp=Z,0.1nm,0.3s,baz=316,slow=13,SNR=5.9
FINES LR LR 20 58 02.1
comp=Z,144nm,21.2s,baz=240,slow=35
FINES FINESS Array B 19.68 80 P **Pn** **20 50 50.8 -0.6**
LVZ Lovozero 20.64 58 *i* P **P** **20 51 01.1 +0.7**
LVZ pmax pmax
comp=Z,47nm,1.2s
CLL Collm 20.74 116 *e*P **P** **20 51 02.0 +0.4**
comp=Z,16nm,1.2s
CLL *i* 20 51 05.5
comp=Z,52nm,1.9s
CLL *e* 20 51 11.0
CLL *e*SSS SSS 20 55 24.0
CLL Lm MLR 20 57 00.0
comp=N,100nm,20.1s
CLL Lm MLR 20 57 00.0
comp=E,200nm,20.7s
CLL Lm MLR 20 57 00.0
comp=Z,100nm,18.3s
CLL Collm 20.74 116 *e*P **P** **20 51 02.0 +0.4**
CLL *i* 20 51 05.5
CLL pmax pmax
comp=Z,16nm,1.2s
CLL Collm 20.74 116 P **P** **20 51 01.8 +0.2**
MOX Moxa 20.75 119 P **P** **20 51 03.3 +1.7**
MOX pmax pmax
comp=Z,14nm,1.6s
LOR Lormes 21.02 136 *e*P **P** **20 51 05.7 +1.1**
LOR pmax pmax
comp=Z,42nm,1.7s
CDF Champ du Feu 21.08 129 *e*P **P** **20 51 06.7 +1.3**
CDF pmax pmax
comp=Z,13nm,1.2s
SSF Saint Saulge 21.10 137 *e*P **P** **20 51 05.5 0.0**
SSF pmax pmax
comp=Z,11nm,1.0s
HAU Haudompre 21.13 131 *e*P **P** **20 51 07.0 +1.2**
HAU pmax pmax
comp=Z,14nm,1.0s
ECH Echery 21.21 130 P **P** **20 51 07.6 +0.9**
ECH pmax pmax
comp=Z,16nm,1.1s
ECH Echery 21.21 130 P **P** **20 51 07.6 +0.9**
AVF Avril sur Loir 21.30 138 *e*P **P** **20 51 07.5 -0.1**
AVF pmax pmax
comp=Z,55nm,1.6s
BGF Bois d'Agland 21.37 139 *e*P **P** **20 51 09.2 +0.8**
BGF pmax pmax
comp=Z,49nm,1.4s
GRA1 Grafenberg Arr 21.38 121 P **P** **20 51 08.7 +0.2**
GRA1 IAmb IAmb 20 51 23.0
comp=Z,26nm,1.3s
GRF Grafenberg Arr 21.38 121 P **P** **20 51 08.7 +0.2**
GRF pmax pmax
comp=Z,26nm,1.3s
GRF Grafenberg Arr 21.38 121 *e*P **P** **20 51 08.2 -0.3**
comp=Z,13nm,1.2s,baz=324,slow=10
NKC Novy Kostel 21.39 119 *e*P **P** **20 51 11.5 +2.9**
NKC Novy Kostel 21.39 119 *e*P **P** **20 51 11.5 +2.9**
TCF Toulx Ste Croi 21.44 140 *e*P **P** **20 51 10.3 +1.2**
TCF pmax pmax
comp=Z,30nm,1.4s
BRG Berggiesshubel 21.45 115 *e*P **P** **20 51 09.5 +0.3**
comp=Z,21nm,1.5s
BRG Berggiesshubel 21.45 115 *e*P **P** **20 51 09.5 +0.3**
BRG pmax pmax
comp=Z,21nm,1.5s
HINF Hinteralfeld 21.46 131 *e*P **P** **20 51 10.5 +1.1**
HINF pmax pmax
comp=Z,54nm,2.2s
BFO Black Forest 21.50 128 P **P** **20 51 07.9 -1.9**
BFO pmax pmax
comp=Z,23nm,1.4s
BFO Black Forest 21.50 128 P **P** **20 51 07.9 -1.9**
BFO IAmb IAmb 20 51 24.3
comp=Z,23nm,1.4s
VSU Vasula 21.55 86 *e*P **P** **20 51 11.5 +1.3**
VSU Vasula 21.55 86 *i* P **P** **20 51 12.0 +1.8**
VSU pmax pmax
comp=Z,64nm,0.9s
SMF Signal de Mont 21.57 137 *e*P **P** **20 51 10.6 0.0**
SMF pmax pmax
comp=Z,21nm,1.1s
GRB1 Grafenberg Arr 21.78 121 P **P** **20 51 13.4 +0.6**
GRB1 pmax pmax
comp=Z,28nm,1.1s
SLE Schleitheim 22.05 128 P **P** **20 51 20.0 +4.3**
SLE pmax pmax
comp=Z,16nm,1.4s
RJF Les Rejaudoux 22.16 142 *e*P **P** **20 51 20.0 +3.1**
RJF pmax pmax
comp=Z,24nm,1.2s
PABE Paberze 22.21 95 *e*P **P** **20 51 17.4 +0.1**
PRU Pruhonice 22.39 116 *e*P **P** **20 51 19.5 +0.2**
PRU Pruhonice 22.39 116 *e*P **P** **20 51 19.5 +0.2**
KSP Ksiaz 22.39 112 P **P** **20 51 22.3 +2.9**
KSP pmax pmax
comp=Z,19nm,1.0s
WET Wettzell 22.44 120 P **P** **20 51 19.4 -0.5**
WET pmax pmax
comp=Z,9.0nm,1.2s
CHVC Chvalec 22.50 113 *e*P **P** **20 51 22.2 +1.7**
UPC Upice 22.55 113 *e*P **P** **20 51 23.4 +2.4**
UPC Upice 22.55 113 *e*P **P** **20 51 23.4 +2.4**
OSTC Ostas 22.59 113 *e*P **P** **20 51 23.8 +2.4**
CAF Calviac 22.66 142 *e*P **P** **20 51 23.3 +1.1**
CAF pmax pmax
comp=Z,46nm,1.5s
KHC Kasperske Hory 22.71 119 *e*P **P** **20 51 22.4 -0.4**
KHC Kasperske Hory 22.71 119 *e*P **P** **20 51 22.4 -0.4**
DPC Dobruska-Polom 22.79 113 *e*P **P** **20 51 24.7 +1.1**
DPC Dobruska-Polom 22.79 113 *e*P **P** **20 51 24.7 +1.1**
SUW Suwalki 22.89 99 P **P** **20 51 24.6 0.0**
SUW pmax pmax
comp=Z,32nm,1.1s
SUW Suwalki 22.89 99 P **P** **20 51 24.6 0.0**
SUW IAmb IAmb 20 51 27.4
comp=Z,32nm,1.1s
DAVA Damuels 22.93 127 *e*P **P** **20 51 30.0 +4.7**
comp=Z,20nm,1.4s
GEC2 GERESS Array S 23.00 119 P **P** **20 51 27.0 +1.1**
GEC2 IAmb IAmb 20 51 36.8
comp=Z,15nm,1.2s
GERES GERESS Array B 23.00 119 P **P** **20 51 26.9 +1.1**
comp=Z,3.0nm,0.9s,baz=333,slow=7.6,SNR=15
GERES LR LR 21 00 19.3
comp=Z,60nm,20.3s,baz=324,slow=36
GERES GERESS Array B 23.00 119 P **P** **20 51 26.6 +0.7**
RETA Reutte 23.07 125 *e*P **P** **20 51 28.0 +1.4**
comp=Z,9.6nm,1.2s
ISAL Salakas 23.09 93 *e*P **P** **20 51 27.0 +0.4**
KRLC Kraliky 23.19 113 *e*P **P** **20 51 27.7 -0.1**
KRLC Kraliky 23.19 113 *e*P **P** **20 51 27.7 -0.1**
IIGN Ignalina 23.28 93 *e*P **P** **20 51 29.4 +0.8**
TMCR Tamitsa 23.30 66 *e*P **P** **20 51 28.4 -0.2**
TMCR pmax pmax
comp=Z,20nm,0.8s
DAVOX Davos/Dischmat 23.37 127 P **P** **20 51 30.6 +0.8**
comp=Z,2.8nm,0.9s,baz=312,slow=13,SNR=3.8
SQTA Sankt Quirin 23.45 125 *e*P **P** **20 51 32.5 +2.0**
comp=Z,12nm,1.1s
TUE Stuetta 23.46 128 P **P** **20 51 31.0 +0.3**
LPL La Plagne 23.46 134 *e*P **P** **20 51 33.2 +2.5**
LPL pmax pmax
comp=Z,11nm,1.2s
LPG La Plagne 23.48 134 *e*P **P** **20 51 33.7 +2.7**
LPG pmax pmax
comp=Z,10.0nm,1.2s
WATA Walderalm 23.49 124 *e*P **P** **20 51 33.2 +2.4**
comp=Z,8.9nm,1.1s
IDID Didziasalis 23.52 93 *e*P **P** **20 51 31.0 +0.1**
WTTA Wattenberg 23.57 124 *e*P **P** **20 51 34.6 +2.9**
comp=Z,11nm,1.2s
WTTA Wattenberg 23.57 124 P **P** **20 51 32.9 +1.2**
WTTA pmax pmax
comp=Z,9.0nm,1.0s
MORC Moravsky Berou 23.73 112 *e*P **P** **20 51 34.3 +1.2**
MORC Moravsky Berou 23.73 112 P **P** **20 51 35.0 +1.9**
VRAC Vranov 23.73 114 P **P** **20 51 34.4 +1.3**
comp=Z,2.7nm,0.7s,baz=328,slow=11,SNR=4.0
VRAC Vranov 23.73 114 *e*P **P** **20 51 34.4 +1.3**
ORIF Oris-en-Rattie 23.74 136 *e*P **P** **20 51 37.3 +4.0**
ORIF pmax pmax
comp=Z,25nm,1.7s
NACGM Naroch 23.82 93 *e* **P** **20 51 35.0 +1.2**
KRUC Moravsky 23.85 115 *e*P **P** **20 51 34.6 +0.4**
MTLF Montolieu 24.17 143 *e*P **P** **20 51 40.0 +2.7**
MTLF pmax pmax
comp=Z,20nm,1.4s
JAVC Velka Javorina 24.51 114 *e*P **P** **20 51 42.0 +1.6**
CONA Conrad Observa 24.57 117 *e*P **P** **20 51 42.2 +1.2**
comp=Z,9.1nm,1.0s
CIMO Cimolais 24.67 124 P **P** **20 51 41.2 -0.7**
SMOL Smolenice 24.70 114 *e*P **P** **20 51 43.2 +1.2**
SMOL pmax pmax
comp=Z,7.0nm,0.9s
SMOL Smolenice 24.70 114 *e*P **P** **20 51 43.2 +1.2**
MODS Modra-Piesok 24.75 115 *e*P **P** **20 51 43.8 +1.3**
MODS Modra-Piesok 24.75 115 *e*P **P** **20 51 43.8 +1.3**
PRED Cave del Predi 24.96 122 P **P** **20 51 41.6 -2.9**
PRED IAmb IAmb 20 51 48.9
comp=Z,14nm,1.3s
LANS Liptovska Anna 24.99 111 *e*P **P** **20 51 46.0 +1.3**
LANS pmax pmax
comp=Z,9.0nm,1.0s
LANS Liptovska Anna 24.99 111 *e*P **P** **20 51 46.0 +1.3**
ARSA Arzberg 25.00 119 *e*P **P** **20 51 46.3 +1.5**
comp=Z,6.3nm,0.9s
NIE Niedzica 25.11 109 P **P** **20 51 47.9 +2.1**
VYHS Vyhne 25.27 113 *e*P **P** **20 51 48.2 +1.0**
VYHS Vyhne 25.27 113 *e*P **P** **20 51 48.2 +1.0**
SOKA Soboth 25.30 120 *e*P **P** **20 51 48.1 +0.6**
comp=Z,8.0nm,1.5s
KLMR Klimovskoe 25.57 72 *e*P **P** **20 51 48.8 -0.9**
KLMR pmax pmax
comp=Z,30nm,1.4s
KLMR Klimovskoe 25.57 72 *e*P **P** **20 51 48.9 -0.8**
KLMR AMP 20 51 51.2
comp=Z,30nm,1.4s
KWP Kalwaria Pacla 25.93 106 P **P** **20 51 54.1 +0.9**
KWP pmax pmax
comp=Z,27nm,1.1s
KWP Kalwaria Pacla 25.93 106 P **P** **20 51 54.1 +0.9**
SCHQ Schefferville 26.04 271 LR LR 21 00 46.1
comp=Z,134nm,20.0s,baz=42,slow=33
PSZ Piszkesteto 26.15 112 P **P** **20 51 55.8 +0.6**
PSZ pmax pmax
comp=Z,12nm,1.2s
PSZ Piszkesteto 26.15 112 P **P** **20 51 55.8 +0.6**
PSZ IAmb IAmb 20 52 12.5
comp=Z,12nm,1.2s
KOLS Kolonicke sedl 26.30 108 *e*P **P** **20 51 57.1 +0.6**
KOLS Kolonicke sedl 26.30 108 *e*P **P** **20 51 57.1 +0.6**
LVV L'vov 26.33 105 *e*P **P** **20 51 57.1 +0.3**
ESDC Sonseca Array 26.34 156 P **P** **20 51 56.8 -0.2**
comp=Z,1.4nm,0.8s,baz=343,slow=10,SNR=5.8
ESDC LR LR 21 02 13.5
comp=Z,116nm,18.4s,baz=345,slow=36
OSSC Osservatorio P 26.70 129 P **P** **20 52 03.0 +2.8**
OSSC IAmb IAmb 20 52 15.4
comp=Z,18nm,1.2s
KIEV Kiev 27.85 98 P **P** **20 52 11.0 +0.6**
AKASG Malin Array Be 27.85 98 P **P** **20 52 10.3 -0.1**
comp=Z,2.0nm,0.8s,baz=321,slow=10,SNR=5.5
AKASG Malin Array Be 27.85 98*ce*P **P** **20 52 13.8 +3.4**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKBB Malin Array Si 27.85 98*ce*P **P** **20 52 10.0 -0.4**
OBN Obninsk 27.86 84⇑*e*P **P** **20 52 11.7 +1.2**
OBN pmax pmax
comp=Z,35nm,1.2s
KMPD K-Podol'skiy 28.32 104 P **P** **20 52 14.0 -0.6**
KIRV Kirov 30.94 70*ce*P **P** **20 52 39.2 +1.5**
KEST Kesra 33.23 138 LR LR 21 04 37.5
comp=Z,50nm,21.6s,baz=304,slow=33
ARU Arti 36.04 66*d i*P **P** **20 53 22.4 +0.3**
ARU 20 54 39.3
ARU S **S** **20 58 58.7 -1.9**
ARU pmax pmax
comp=Z,12nm,1.8s
NRIK Noril'sk 36.37 35 LR LR 21 10 16.6
comp=Z,108nm,18.4s,baz=20,slow=39
NRIK Noril'sk 36.37 35*ce*P **P** **20 53 26.1 +1.3**
NRIK pmax pmax
comp=Z,3.0nm,1.0s
GOF Gofitskoye 38.11 91⇑*e*P **P** **20 53 42.4 +2.6**
GOF pmax pmax
comp=Z,34nm,1.5s
BR131 Keskin Array S 38.50 105 P **P** **20 53 43.8 +0.5**
BR131 pmax pmax
comp=Z,9.0nm,1.0s
BR131 Keskin Array S 38.50 105 P **P** **20 53 43.8 +0.5**
BR131 IAmb IAmb 20 53 47.0
comp=Z,8.9nm,0.9s
BRTR Keskin Array B 38.50 105 P **P** **20 53 44.7 +1.4**
comp=Z,3.3nm,0.8s,baz=347,slow=8.1,SNR=11
BRTR Keskin Array B 38.50 105*ce*P **P** **20 53 46.2 +2.9**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 38.50 105 P **P** **20 53 44.3 +1.0**
SADO Sadowa 38.83 270 LR LR 21 08 18.4
comp=Z,130nm,19.1s,baz=72,slow=34
KIV Kislovodsk 38.84 93 *e*P **P** **20 53 48.3 +2.2**
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,103nm,16.0s
KBZ Khabaz 39.11 93 LR LR 21 10 20.1
comp=Z,62nm,18.4s,baz=111,slow=37
KBZ Khabaz 39.11 93*ce*P **P** **20 53 52.1 +3.9**
AKH Akhalkalaki 41.26 94 P **P** **20 54 07.5 +1.3**
AKH pmax pmax
comp=Z,18nm,1.0s
AKH Akhalkalaki 41.26 94 P **P** **20 54 07.5 +1.3**
AKH IAmb IAmb 20 54 10.4
comp=Z,18nm,1.0s
MAK Makhachkala 41.71 89 *e*P **P** **20 54 06.4 -3.3**
MAK *e*S **S** **21 00 20.1 -6.1**
MAK *e*SS **SS** **21 03 26.7 -4.6**
TIXI Tiksi 41.93 15 *i* P P 20 54 16.4 +5.2
ABKAR Akbulak array 41.95 73 P **P** **20 54 12.0 +0.3**
BRVK Borovoye 43.08 62*ce*P **P** **20 54 22.9 +2.1**
BRVK pmax pmax
comp=Z,4.0nm,1.3s
ILAR Eielson Array 45.60 332 P **P** **20 54 41.8 +1.0**
comp=Z,0.3nm,0.5s,baz=20,slow=5.8,SNR=2.7
ILAR PcP **PcP** **20 56 19.8 +0.9**
comp=Z,0.7nm,0.8s,baz=356,slow=3.0,SNR=4.6
ILAR LR LR 21 15 33.6
comp=Z,31nm,18.4s,baz=18,slow=38
BILL Bilibino 47.45 358 *i* P P 20 55 02.4 +7.1
BILL pmax pmax
comp=Z,7.0nm,1.3s
ZALV Zalesovo Beam 47.57 51 P **P** **20 54 57.5 +1.2**
comp=Z,0.8nm,0.5s,baz=317,slow=6.3,SNR=4.5
ZALV LR LR 21 17 36.4
comp=Z,32nm,18.6s,baz=345,slow=39
ZALV Zalesovo Beam 47.57 51 *i* P **P** **20 54 57.9 +1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 47.57 51 P **P** **20 54 57.0 +0.7**
KURK Kurchatov 48.05 58*ce*P **P** **20 55 01.6 +1.5**
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURK Kurchatov 48.05 58 P **P** **20 55 00.3 +0.2**
KURK IAmb IAmb 20 55 01.4
comp=Z,6.4nm,1.2s
EGMT Eagleton 48.84 297 P **P** **20 55 08.9 +2.6**
KK31 Karatay Array 51.23 70 P **P** **20 55 23.9 -0.6**
KK31 pmax pmax
comp=Z,5.0nm,1.3s
KK31 Karatay Array 51.23 70 P **P** **20 55 23.9 -0.6**
KKAR Karatay Array 51.23 70 P **P** **20 55 23.8 -0.7**
KKAR pmax pmax
comp=Z,5.0nm,1.3s
KKAR Karatay Array 51.23 70 P **P** **20 55 23.8 -0.7**
KKAR IAmb IAmb 20 55 31.1
comp=Z,5.0nm,1.2s
YNE Yellowstone No 51.44 295 P **P** **20 55 27.6 +1.3**
BOZ Bozeman (W) 51.57 297 P **P** **20 55 28.5 +1.3**
BOZ pmax pmax
comp=Z,7.0nm,1.1s
BOZ Bozeman (W) 51.57 297 P **P** **20 55 28.5 +1.3**
BOZ IAmb IAmb 20 55 31.1
comp=Z,7.0nm,1.1s
YPP Pitchstone Pla 52.36 295 P **P** **20 55 36.7 +3.4**
MK31 Makanchi Array 52.67 58*ce*P **P** **20 55 36.7 +1.6**
MK31 Makanchi Array 52.67 58 P **P** **20 55 35.5 +0.4**
MKAR Makanchi Array 52.67 58 P **P** **20 55 35.4 +0.3**
comp=Z,1.7nm,1.0s,baz=359,slow=6.6,SNR=7.2
MKAR Makanchi Array 52.67 58*ce*P **P** **20 55 38.2 +3.1**
MKAR pmax pmax
comp=Z,3.0nm,1.1s
BW06 Boulder Array 53.14 293 P **P** **20 55 38.4 -0.6**
BW06 IAmb IAmb 20 55 41.2
comp=Z,6.0nm,1.1s
PD31 Pinedale Array 53.14 293 P **P** **20 55 38.5 -0.5**
PD31 IAmb IAmb 20 55 41.2
comp=Z,5.5nm,1.1s
PDAR Pinedale Array 53.14 293 P **P** **20 55 38.8 -0.2**
comp=Z,2.9nm,1.0s,baz=64,slow=6.6,SNR=13
PDAR Pinedale Array 53.14 293 P **P** **20 55 38.7 -0.3**
AAK Ala-Archa 53.21 67*ce*P **P** **20 55 42.6 +3.2**
AAK pmax pmax
comp=Z,20nm,1.3s
TOA0 Torodi Ar. Sit 53.23 156 P **P** **20 55 39.1 -0.4**
TOA0 IAmb IAmb 20 55 40.3
comp=Z,5.8nm,1.1s
TORD Torodi Ar. Bea 53.23 156 P **P** **20 55 38.1 -1.4**
comp=Z,2.7nm,0.9s,baz=344,slow=7.2,SNR=12
TORD LR LR 21 18 00.7
comp=Z,32nm,19.9s,baz=320,slow=36
TORD Torodi Ar. Bea 53.23 156 P **P** **20 55 37.9 -1.7**
BTK Batken 53.92 72 P **P** **20 55 45.5 +1.0**
BTK pmax pmax
comp=Z,13nm,1.1s
BTK Batken 53.92 72 P **P** **20 55 45.5 +1.0**
CHGR Chuyangaron 54.43 74 P **P** **20 55 49.6 +1.4**
GAR Garm 54.61 73 P **P** **20 55 50.8 +1.2**
KSH Kashi 56.45 68 *e*P P 20 56 07.9 +5.0
KSH pmax pmax
comp=Z,12nm,0.7s
KSH pmax pmax
comp=Z,240nm,4.6s
PV13 Radium Mtn., P 56.77 290 P **P** **20 56 06.7 +1.4**
WMQ Urumqi 57.17 56 *e*P **P** **20 56 11.1 +3.3**
MVU Marysvale 57.83 293 P **P** **20 56 15.0 +2.3**
DBIC Dimbokro 58.68 165 LR LR 21 22 04.0
comp=Z,51nm,18.5s,baz=352,slow=37
SONM Songino Array 59.56 40 P **P** **20 56 25.2 +0.7**
comp=Z,0.8nm,1.0s,baz=347,slow=5.9,SNR=3.4
SONM LR LR 21 24 21.4
comp=Z,96nm,19.4s,baz=342,slow=38
SONM Songino Array 59.56 40 P **P** **20 56 25.0 +0.5**
ULN Ulaanbaatar 59.72 40*ce*P P 20 56 30.7 +5.1
ULN pmax pmax
comp=Z,4.0nm,1.7s
NIL Nilore 60.41 74 P **P** **20 56 32.0 +1.6**
NIL pmax pmax
comp=Z,13nm,1.2s
NIL Nilore 60.41 74 P **P** **20 56 32.0 +1.6**
TXAR Lajitas Array 62.27 280 P **P** **20 56 43.1 -0.1**
comp=Z,1.2nm,1.0s,baz=52,slow=4.7,SNR=5.0
TXAR LR LR 21 22 23.4
comp=Z,70nm,20.6s,baz=0.0,slow=35
GTA Gaotai 65.23 49 *e*P **P** **20 57 03.8 +1.3**
GTA pP pP 20 57 06.8 +0.7
GTA sP sP 20 57 09.6 +2.2
GTA pmax pmax
comp=Z,1.0nm,1.0s
HHC Hu-ho-hao-te 67.43 40 *e*P **P** **20 57 19.0 +2.4**
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,160nm,6.0s

USRK	**Ussuriysk Ar.**	**68.77**	**23**	LR	LR	21 29 38.5		
	comp=Z,27nm,21.1s,baz=22,slow=38							
KSRS	**Korea Array**	**74.56**	**28**	LR	LR	21 34 45.6		
	comp=Z,31nm,18.3s,baz=2.0,slow=39							
NJ2	**Nanjing**	**77.65**	**37**	*e*P	**P**	**20 58 17.3**	**-0.1**	
NJ2				pmax	pmax			
	comp=Z,15nm,0.5s							
BDFB	**Brasilia**	**83.47**	**210**	LR	LR	21 29 46.1		
	comp=Z,52nm,19.0s,baz=157,slow=31							
CHTO	**Chiang Mai**	**83.75**	**59**	P	**P**	**20 58 51.8**	**+1.6**	
CHTO				pmax	pmax			
	comp=Z,5.0nm,1.3s							
CHTO	**Chiang Mai**	**83.75**	**59**	P	**P**	**20 58 51.8**	**+1.6**	
CHTO				IAmb	IAmb	20 58 53.5		
	comp=Z,5.2nm,1.2s							
CMAR	**Chiang Mai Arr**	**84.08**	**59**	P	**P**	**20 58 53.0**	**+1.1**	
	comp=Z,1.8nm,1.1s,baz=317,slow=6.0,SNR=7.1							
CMAR				LR	LR	21 36 29.4		
	comp=Z,24nm,18.1s,baz=343,slow=36							
CMAR	**Chiang Mai Arr**	**84.08**	**59**	*ce*P	P	20 58 57.0	+5.1	
CMAR				pmax	pmax			
	comp=Z,1.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**84.08**	**59**	P	**P**	**20 58 51.7**	**-0.2**	
BOSA	**Boshof**	**98.84**	**143**	LR	LR	21 46 10.7		
	comp=Z,48nm,18.4s,baz=7.5,slow=36							

IDC ***13*** *20:48:36.8±1.2,21˚.41S×69˚.99W, h0km, mb4.1/1, mb1 4.1/2, mb1mx3.6/26, mbtmp4.0/2, ML3.8/1, MS3.4/1, Ms1 3.3/1, ms1mx2.6/18, Error ellipse: s-maj=51.0km s-min=9.0km az=99.0*

SJA ***13*** *20:48:40.9±0.6,20˚.53S×70˚.37W, h28km±1km, ML4.0, MW4.0*

GUC ***13*** *20:48:43.4±0.7,20˚.53S×70˚.38W, h33km±1km, ML3.8*

ISC 13 20:48:42.2±1.1, 20˚.54S±0˚.02×70˚.43W±0˚.06, h28km±6km, n51, σ1s02/62, 3C-12D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.23**	**97**	⇓	*i*P	**Pn**		**20 48 48.9**	**-0.8**
TA01					*i*S	**Sn**		**20 48 53.3**	**+0.3**
TA02	**Huaiquique**	**0.38**	**46**	⇓	*i*P	**Pb**		**20 48 50.7**	**0.0**
TA02					*i*S	**Sb**		**20 48 56.6**	**+0.1**
PB02	**IPOC Station P**	**0.92**	**148**	⇓	*i*P	**Pn**		**20 48 58.9**	**-0.5**
PB02					*i*S	**Sn**		**20 49 11.2**	**-0.5**
PB02	**IPOC Station P**	**0.92**	**148**		*e*P	**Pn**		**20 48 58.9**	**-0.5**
PB02					*e*S	**Sn**		**20 49 11.5**	**-0.2**
PB02					IAML			20 49 14.1	
	comp=Z,13μm,0.5s								
PSGC	**Pisagua**	**0.98**	**17**	⇓	*i*P	**Pn**		**20 48 59.6**	**-0.5**
PSGC					*i*S	**Sn**		**20 49 12.0**	**-1.1**
PSGC					IAML			20 49 13.1	
	comp=N,4μm,0.2s								
PSGCX	**Pisagua**	**0.98**	**17**		*e*P	**Pn**		**20 48 59.7**	**-0.5**
PSGCX					*e*S	**Sn**		**20 49 12.8**	**-0.2**
PB01	**IPOC Station P**	**1.01**	**120**	⇓	*i*P	**Pn**		**20 49 00.1**	**-0.5**
PB01					*i*S	**Sn**		**20 49 12.9**	**-1.0**
PB01					IAML			20 49 17.3	
	comp=N,8μm,0.4s								
PB01	**IPOC Station P**	**1.01**	**120**		*e*P	**Pn**		**20 49 00.1**	**-0.5**
PB01					*e*S	**Sn**		**20 49 13.6**	**-0.3**
PB01					IAML			20 49 17.1	
	comp=Z,5μm,0.2s								
PB11	**IPOC Station P**	**1.06**	**43**	⇓	*i*P	**Pn**		**20 49 01.0**	**-0.3**
PB11					*i*S	**Sn**		**20 49 14.8**	**-0.4**
PB11					IAML			20 49 18.0	
	comp=N,6μm,0.3s								
PB11	**IPOC Station P**	**1.06**	**43**		*e*P	**Pn**		**20 49 01.0**	**-0.3**
PB11					*e*S	**Sb**		**20 49 15.5**	**0.0**
PB11					IAML			20 49 17.8	
	comp=Z,3μm,0.6s								
PB08	**IPOC Station P**	**1.26**	**72**	⇓	*i*P	**Pn**		**20 49 04.4**	**+0.2**
PB08					*i*S	**Sn**		**20 49 20.7**	**+0.3**
PB08					IAML			20 49 21.8	
	comp=E,3μm,0.7s								
PB08	**IPOC Station P**	**1.26**	**72**		*e*P	**Pn**		**20 49 04.4**	**+0.2**
PB08					*e*S	**Sb**		**20 49 21.1**	**-0.4**
PB08					IAML			20 49 23.2	
	comp=Z,2μm,0.4s								
PB07	**IPOC Station P**	**1.29**	**157**	⇑	*i*P	**Pn**		**20 49 04.7**	**+0.2**
PB07					*i*S	**Sn**		**20 49 21.1**	**+0.3**
PB07					IAML			20 49 24.6	
	comp=N,3μm,0.6s								
PB07	**IPOC Station P**	**1.29**	**157**		*e*P	**Pn**		**20 49 04.8**	**+0.4**
PB07					IAML			20 49 31.4	
	comp=Z,3μm,0.6s								
MNMC	**Minye Minye**	**1.60**	**29**	⇓	*i*P	**Pn**		**20 49 09.5**	**+0.6**
MNMC					*i*S	**Sn**		**20 49 29.9**	**+1.1**
MNMCX	**Minye Minye**	**1.60**	**29**		*e*P	**Pn**		**20 49 09.4**	**+0.6**
PB03	**IPOC Station P**	**1.63**	**157**	⇓	*i*P	**Pn**		**20 49 09.7**	**+0.6**
PB03					*i*S	**Sn**		**20 49 31.0**	**+1.7**
PB03					IAML			20 49 35.9	
	comp=E,2μm,0.5s								
PB03	**IPOC Station P**	**1.63**	**157**		*e*P	**Pn**		**20 49 09.7**	**+0.6**
PB03					*e*S	**Sb**		**20 49 31.4**	**-0.5**
PB03					IAML			20 49 37.6	
	comp=Z,2μm,0.5s								
PB09	**IPOC Station P**	**1.67**	**139**		*e*P	**Pn**		**20 49 11.2**	**+1.5**
PB09					*e*S	**Sb**		**20 49 32.7**	**-0.4**
PB09	**IPOC Station P**	**1.67**	**139**		*e*P	**Pn**		**20 49 11.3**	**+1.6**
PB09					IAML			20 49 35.8	
	comp=Z,4μm,0.7s								
PB04	**IPOC Station P**	**1.81**	**172**	⇓	*i*P	**Pn**		**20 49 11.3**	**-0.3**
PB04					*i*S	**Sn**		**20 49 35.3**	**+1.6**
PB04					IAML			20 49 43.7	
	comp=N,2μm,0.8s								
PB04	**IPOC Station P**	**1.81**	**172**		*e*P	**Pn**		**20 49 11.6**	**0.0**
PB04					*e*S	**Sn**		**20 49 36.0**	**+2.4**
PB04					IAML			20 49 43.5	
	comp=Z,2μm,0.3s								
AP01	**Chacalluta**	**2.16**	**2**		*e*P	**Pn**		**20 49 17.6**	**+1.4**
AP01					IAML			20 49 56.3	
	comp=E,2μm,0.7s								
PB06	**IPOC Station P**	**2.30**	**160**	⇓	*i*P	**Pn**		**20 49 18.4**	**0.0**
PB06					*i*S	**Sn**		**20 49 47.3**	**+1.5**
PB06	**IPOC Station P**	**2.30**	**160**		*e*P	**Pn**		**20 49 18.4**	**0.0**
PB06					IAML			20 49 55.0	
	comp=Z,888nm,0.9s								
PB05	**IPOC Station P**	**2.31**	**175**	⇑	*i*P	**Pn**		**20 49 17.7**	**-0.8**
PB05	**IPOC Station P**	**2.31**	**175**		*e*P	**Pn**		**20 49 17.8**	**-0.8**
PB05					IAML			20 49 58.2	
	comp=Z,682nm,0.6s								
PB16	**IPOC Station P**	**2.36**	**22**	⇑	*i*P	**Pn**		**20 49 20.6**	**+1.1**
PB16					*e*S	**Sn**		**20 49 50.2**	**+2.4**
PB16	**IPOC Station P**	**2.36**	**22**		*e*P	**Pn**		**20 49 20.6**	**+1.1**
LVC	**Limon Verde**	**2.50**	**146**		*e*P	**Pn**		**20 49 23.3**	**+2.0**
LVC					*e*S	**Sn**		**20 49 53.4**	**+2.4**
LVC	**Limon Verde**	**2.50**	**146**		*e*P	**Pn**		**20 49 23.6**	**+2.4**
LVC					*e*S	**Sb**		**20 49 57.5**	**+0.4**
LVC					IAML			20 50 06.0	
	comp=Z,373nm,0.9s								
PB15	**IPOC Station P**	**2.80**	**162**	⇓	*i*P	**Pn**		**20 49 25.5**	**+0.2**
PB15	**IPOC Station P**	**2.80**	**162**		*e*P	**Pn**		**20 49 25.6**	**+0.3**
PB15					IAML			20 50 24.2	
	comp=Z,1μm,0.4s								
PB10	**IPOC Station P**	**2.96**	**182**		*e*P	**Pn**		**20 49 27.2**	**-0.1**
PB10					IAML			20 50 27.2	
	comp=N,218nm,0.4s								
PB10	**IPOC Station P**	**2.96**	**182**		*e*P	**Pn**		**20 49 26.2**	**-1.2**
PB14	**IPOC Station P**	**4.07**	**180**		*e*P	**Pn**		**20 49 41.2**	**-1.7**
PB14					IAML			20 50 59.3	
	comp=Z,123nm,1.0s								
LPAZ	**La Paz**	**4.75**	**28**	Pn		Pn		20 49 59.0	+6.5
	comp=Z,1.7nm,0.3s,baz=201,slow=8.0,SNR=25								
HJA	**Humahuaca**	**5.36**	**121**		*e*P	Pn		20 50 08.2	+7.5
H03N1	**Juan Fernandez**	**14.90**	**209**		T	T		21 07 12.6	
	baz=34,slow=72,SNR=151								
H03N2	**Juan Fernandez**	**14.91**	**209**		T	T		21 07 11.9	
	baz=34,slow=72,SNR=192								
H03N3	**Juan Fernandez**	**14.92**	**209**		T	T		21 07 14.3	
	baz=34,slow=72,SNR=164								
BDFB	**Brasilia**	**21.85**	**81**		LR	LR		21 03 31.1	
	comp=Z,92nm,18.8s,baz=174,slow=41								
TORD	**Torodi Ar. Bea**	**78.38**	**71**		P	**P**		**21 00 39.2**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=264,slow=5.9,SNR=6.7								
H11S2	**WAKE ISLAND Hyd**	**26.34**	**278**		T	T		23 26 57.3	
	baz=102,slow=74,SNR=157								
H11S1	**WAKE ISLAND Hyd**	**26.35**	**278**		T	T		23 26 57.9	
	baz=102,slow=74,SNR=83								
H11S3	**WAKE ISLAND Hyd**	**26.36**	**278**		T	T		23 26 55.1	
	baz=102,slow=74,SNR=84								
H11N3	**WAKE ISLAND Hyd**	**26.41**	**280**		T	T		23 26 59.7	
	baz=102,slow=75,SNR=31								
H11N2	**WAKE ISLAND Hyd**	**26.42**	**280**		T	T		23 27 02.9	
	baz=102,slow=75,SNR=27								
H11N1	**WAKE ISLAND Hyd**	**26.42**	**280**		T	T		23 27 00.2	
	baz=102,slow=75,SNR=26								
ZALV	**Zalesovo Beam**	**141.66**	**24**		PKP	**PKPdf**		**21 08 10.4**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=297,slow=1.3,SNR=3.5								
MKAR	**Makanchi Array**	**145.66**	**34**		PKPbc	**PKPdf**		**21 08 18.2**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=329,slow=3.8,SNR=7.3								

IDC ***13*** *21:09:56.3±0.8,52˚.57S×20˚.17E, h0km, mb4.0/7, mb1 4.1/7, mb1mx3.9/31, mbtmp4.0/7, MS2.9/5, Ms1 2.9/5, ms1mx2.7/23, Error ellipse: s-maj=38.6km s-min=20.4km az=88.0*

NEIC ***13*** *21:09:57.1±1.3,52˚.5S±0˚.1×20˚.0E±0˚.2, h10km±1km, mb4.7/18, Error ellipse: s-maj=18.7km s-min=16.0km az=184.0*

ISC 13 21:09:57.1±0.5, 52˚.41S±0˚.07×19˚.9E±0˚.1, h10km, n39, σ2s00/37, mb4.3/14, MS2.8/5, 1C-2D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**19.08**	**158**	⇑	*e*P	**P**		**21 14 17.0**	**-2.3**
SYO	**Syowa Base**	**19.08**	**158**		*e*P	**Pn**		**21 14 25.0**	**+4.9**
SYO	**Syowa Base**	**19.08**	**158**	⇓	pP	pP		21 14 27.3	+6.0
SUR	**Sutherland**	**20.03**	**2**		P	**Pn**		**21 14 36.6**	**+4.7**
	6.0nm,0.7s,baz=170,slow=13,SNR=19								
SUR					S	**S**		**21 18 08.4**	**-6.9**
	7.1nm,1.0s,baz=53,slow=20,SNR=3.6								
SUR					LR	LR		21 21 21.9	
	comp=Z,22nm,18.0s,baz=177,slow=34								
SUR	**Sutherland**	**20.03**	**2**		P	**Pn**		**21 14 33.5**	**+1.6**
SUR					IAmb	IAmb		21 14 35.9	
	comp=Z,16nm,1.1s								
SNAA	**Sanae**	**21.78**	**199**		P	**P**		**21 14 49.3**	**+0.6**
SNAA	**Sanae**	**21.78**	**199**		P	**P**		**21 14 48.9**	**+0.2**
	comp=Z,7.0nm,0.8s,baz=41,slow=9.0,SNR=23								
SNAA					LR	LR		21 20 45.1	
	comp=Z,51nm,21.4s,baz=10.0,slow=30								
SNAA	**Sanae**	**21.78**	**199**		P	**P**		**21 14 48.3**	**-0.4**
VNA2	**Neumayer--Stat**	**22.26**	**203**		P	**P**		**21 14 53.9**	**+0.1**
	baz=42,slow=11								
VNA1	**Neumayer--Stat**	**22.29**	**204**		P	**P**		**21 14 54.2**	**+0.1**
VNA3	**Neumayer Olymp**	**23.03**	**204**		P	**P**		**21 15 02.2**	**+0.3**
BOSA	**Boshof**	**24.11**	**12**		P	**P**		**21 15 15.8**	**+2.9**
	comp=Z,2.4nm,0.9s,baz=180,slow=13,SNR=2.2								
BOSA					LR	LR		21 22 55.0	
	comp=Z,30nm,21.8s,baz=203,slow=32								
BOSA	**Boshof**	**24.11**	**12**		P	**P**		**21 15 13.6**	**+0.7**
MAW	**Mawson**	**25.61**	**143**		LR	LR		21 24 46.0	
	comp=Z,29nm,18.7s,baz=61,slow=35								
LBTB	**Lobatse**	**27.70**	**11**		LR	LR		21 25 43.6	
	comp=Z,26nm,21.4s,baz=200,slow=34								
BELA	**Belgrano 2**	**32.03**	**199**		P	**P**		**21 16 23.2**	**0.0**
FOMA	**Nahampoana Res**	**34.23**	**47**		P	**P**		**21 16 42.4**	**-0.4**
FOMA					IAmb	IAmb		21 16 55.8	
	comp=Z,23nm,1.0s								
QSPA	**South Pole Qui**	**37.82**	**180**		P	**P**		**21 17 12.7**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=258,slow=8.7,SNR=8.8								
QSPA	**South Pole Qui**	**37.82**	**180**		P	**P**		**21 17 12.8**	**-0.6**
SHEL	**Horse Pasture**	**41.64**	**321**		P	**P**		**21 17 46.9**	**+1.4**
RER	**Riviere de l'E**	**41.67**	**55**		P	**P**		**21 17 44.2**	**-1.6**
CASY	**Casey**	**43.95**	**144**		P	**P**		**21 18 03.5**	**-0.1**
CASY					IAmb	IAmb		21 18 13.1	
	comp=Z,23nm,1.0s								
VNDA	**Vanda**	**48.20**	**170**		P	**P**		**21 18 36.4**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=221,slow=9.3,SNR=2.2								
VNDA	**Vanda**	**48.20**	**170**		P	**P**		**21 18 36.8**	**-0.2**
ASCN	**Ascension**	**52.40**	**315**		P	**P**		**21 19 10.4**	**+0.9**
LC01	**Cunco**	**61.33**	**243**		P	**P**		**21 20 09.1**	**-3.6**
LC01					IAmb	IAmb		21 20 16.2	
	comp=Z,7.1nm,1.1s								
CPUP	**Villa Florida**	**61.93**	**263**		P	**P**		**21 20 17.1**	**+0.2**
CPUP					IAmb	IAmb		21 20 20.6	
	comp=Z,11nm,1.0s								
CO01	**Juntas del Tor**	**66.84**	**251**		P	**P**		**21 20 50.2**	**+0.9**
CO01					IAmb	IAmb		21 20 58.2	
	comp=Z,6.8nm,1.1s								
TORD	**Torodi Ar. Bea**	**67.15**	**341**		P	**P**		**21 20 52.2**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=201,slow=5.3,SNR=3.8								
TORD	**Torodi Ar. Bea**	**67.15**	**341**		P	**P**		**21 20 50.1**	**-0.8**
GO02	**Mina Guanaco**	**70.16**	**254**		P	**P**		**21 21 10.1**	**-0.1**
GO02					IAmb	IAmb		21 21 23.1	
	comp=Z,7.4nm,0.7s								
SAML	**Samuel**	**78.73**	**270**		P	**P**		**21 22 00.2**	**+0.5**
SAML					IAmb	IAmb		21 22 01.3	
	comp=Z,2.6nm,0.8s								
ASAR	**Alice Springs**	**85.03**	**123**		P	**P**		**21 22 32.5**	**-0.4**
	comp=Z,2.4nm,1.0s,baz=210,slow=3.8,SNR=12								
WRA	**Warramunga Arr**	**88.32**	**121**		P	**P**		**21 22 48.4**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=211,slow=4.2,SNR=8.9								
TXAR	**Lajitas Array**	**132.90**	**264**		PKP	**PKiKP**		**21 29 13.5**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=138,slow=6.1,SNR=3.8								
PDAR	**Pinedale Array**	**145.21**	**275**		PKPbc	**PKPdf**		**21 29 34.3**	**-0.1**
	comp=Z,5.6nm,0.8s,baz=119,slow=5.2,SNR=28								
PDAR	**Pinedale Array**	**145.21**	**275**		PKPbc	**PKPbc**		**21 29 33.9**	**-0.2**
NVAR	**Mina Array Bea**	**147.97**	**261**		PKPbc	**PKiKP**		**21 29 43.5**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=135,slow=3.4,SNR=11								
NVAR	**Mina Array Bea**	**147.97**	**261**				**PKiKP**	**21 29 43.2**	**-0.9**

IDC ***13*** *21:13:35.6±3.0,31˚.66S×69˚.33W, h106km±26km, mb3.6/5, mb1 3.8/9, mb1mx3.6/25, mbtmp3.9/9, Error ellipse: s-maj=30.8km s-min=24.6km az=100.0*

NEIC ***13*** *21:13:35.9±1.3,31˚.58S±0˚.05×69˚.4W±0˚.1, h109km±9km, mb4.5/7, Error ellipse: s-maj=15.5km s-min=6.7km az=84.0*

GUC ***13*** *21:13:36.5±0.8,31˚.57S×69˚.82W, h149km±7km, ML4.2*

ISC 13 21:13:36.2±0.8, 31˚.60S±0˚.04×69˚.50W±0˚.09, h115km±8km, n63, σ0s86/69, mb3.9/9, 6C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CO03	**El Pedregal**	**1.27**	**306**		*i*P	**Pn**		**21 14 00.7**	**-0.1**
CO03					*i*S	**Sn**		**21 14 19.3**	**0.0**
CO03					IAML			21 14 20.3	
	comp=E,4μm,0.2s								
CO03	**El Pedregal**	**1.27**	**306**			**Pn**		**21 14 00.9**	**+0.1**
CO03					Sn	**Sn**		**21 14 20.1**	**+0.7**
CO02	**Combarbal**	**1.34**	**287**	⇑	*i*P	**Pn**		**21 14 01.3**	**-0.3**
CO02					*i*S	**Sn**		**21 14 20.6**	**-0.3**
CO02	**Combarbal**	**1.34**	**287**			**Pn**		**21 14 01.4**	**-0.3**
CO02					Sn	**Sn**		**21 14 20.6**	**-0.3**
VA03	**San Esteban**	**1.46**	**217**	⇓	*i*P	**Pn**		**21 14 03.6**	**+0.7**
VA03					*i*S	**Sn**		**21 14 22.2**	**+0.8**
VA03					IAML			21 14 27.2	
	comp=E,4μm,0.3s								
VA03	**San Esteban**	**1.46**	**217**			**Pn**		**21 14 03.7**	**+0.7**
VA03					Sn	**Sn**		**21 14 24.1**	**+0.8**
CO01	**Juntas del Tor**	**1.69**	**342**	⇑	*i*P	**Pn**		**21 14 07.0**	**+1.1**
CO01					*i*S	**Sn**		**21 14 30.0**	**+1.5**
CO01					IAML			21 14 32.1	
	comp=E,607nm,0.2s								
CO01	**Juntas del Tor**	**1.69**	**342**			**Pn**		**21 14 07.0**	**+1.1**
GO04	**Tololo Observa**	**1.80**	**322**	⇑	*i*P	**Pn**		**21 14 06.7**	**-0.6**
GO04					*i*S	**Sn**		**21 14 30.2**	**-0.7**
GO04	**Tololo Observa**	**1.80**	**322**			**Pn**		**21 14 06.8**	**-0.5**
PEL	**Peldehue**	**1.84**	**213**	⇓	*i*P	**Pn**		**21 14 07.7**	**+0.2**
PEL					*i*S	**Sn**		**21 14 31.6**	**+0.3**
PEL					IAML			21 14 34.5	
	comp=E,1μm,0.4s								
PEL	**Peldehue**	**1.84**	**213**		Pn	**Pn**		**21 14 07.7**	**+0.2**
ROCH	**El Roble**	**1.87**	**223**	⇑	*i*P	**Pn**		**21 14 07.9**	**-0.2**
ROCH					*i*S	**Sn**		**21 14 32.5**	**+0.1**
ROCH					IAML			21 14 37.6	
	comp=N,1μm,0.4s								
ROC1	**El Roble**	**1.88**	**223**			**Pn**		**21 14 07.9**	**-0.3**
MT05	**Renca**	**2.07**	**210**		*e*P	**Pn**		**21 14 11.1**	**+0.6**
MT05					*i*S	**Sn**		**21 14 37.0**	**+0.4**
MT05					IAML			21 14 39.3	
	comp=E,5μm,0.3s								
MT05	**Renca**	**2.07**	**210**			**Pn**		**21 14 11.0**	**+0.6**
MT03	**Universidad Ad**	**2.07**	**204**		*e*P	**Pn**		**21 14 11.4**	**+0.9**
MT03					*i*S	**Sn**		**21 14 37.4**	**+0.7**
MT03					IAML			21 14 42.3	
	comp=N,2μm,0.2s								
MT02	**Curacav**	**2.16**	**219**		*e*P	**Pn**		**21 14 10.9**	**-0.5**
MT02					*i*S	**Sn**		**21 14 37.7**	**-0.7**
MT02	**Curacav**	**2.16**	**219**			**Pn**		**21 14 11.6**	**+0.1**
VA01	**Torpederas**	**2.31**	**231**		IAML			21 14 49.1	
	comp=E,1μm,0.1s								
VA01	**Torpederas**	**2.31**	**231**		Pn	**Pn**		**21 14 11.4**	**-1.8**
LMEL	**Las Melosas**	**2.32**	**195**		*e*P	**Pn**		**21 14 14.7**	**+1.0**
LMEL					IAML			21 14 52.7	
	comp=N,815nm,0.3s								
MT09	**Talagante**	**2.51**	**210**	⇑	*i*P	**Pn**		**21 14 15.6**	**-0.5**
MT09					*i*S	**Sn**		**21 14 46.5**	**-0.2**
MT09					IAML			21 14 49.2	
	comp=N,1μm,0.3s								
VA05	**Santo Domingo**	**2.72**	**220**		*e*P	**Pn**		**21 14 17.5**	**-1.1**
VA05					*i*S	**Sn**		**21 14 50.4**	**-0.9**
AC05	**El Transito**	**2.83**	**346**	⇑	*i*P	**Pn**		**21 14 20.6**	**+0.3**
AC05					IAML			21 14 56.9	
	comp=E,599nm,0.3s								
AC05	**El Transito**	**2.83**	**346**			**Pn**		**21 14 20.7**	**+0.4**
BO02	**Sierra Bellavi**	**3.36**	**198**			**Pn**		**21 14 27.1**	**-0.2**
AC04	**Llanos de Chal**	**3.65**	**338**			**Pn**		**21 14 29.6**	**-1.3**
GO03	**Copiap**	**4.04**	**351**			**Pn**		**21 14 35.8**	**-0.5**
BI02	**San Fabin de**	**5.26**	**196**			**Pn**		**21 14 51.9**	**-0.8**
AC01	**Pan de Azucar**	**5.51**	**350**		Pn	**Pn**		**21 14 56.0**	**-0.1**
GO02	**Mina Guanaco**	**6.41**	**359**			Pn		21 15 03.4	-5.1
LC01	**Cunco**	**7.54**	**194**		Pn	**Pn**		**21 15 21.9**	**-1.5**
PB10	**IPOC Station P**	**8.11**	**353**		Pn	**Pn**		**21 15 32.8**	**+1.6**
H03N1	**Juan Fernandez**	**8.16**	**254**		T	T		21 22 24.7	
	baz=70,slow=72,SNR=209								
H03N3	**Juan Fernandez**	**8.17**	**254**		T	T		21 22 30.8	
	baz=70,slow=72,SNR=247								
H03N2	**Juan Fernandez**	**8.17**	**255**		T	T		21 22 29.9	
	baz=70,slow=72,SNR=232								
H03S3	**Juan Fernandez**	**8.23**	**252**		T	T		21 22 21.3	
	baz=85,slow=75,SNR=15								
H03S1	**Juan Fernandez**	**8.23**	**252**		T	T		21 22 19.9	
	baz=85,slow=75,SNR=12								
H03S2	**Juan Fernandez**	**8.25**	**252**		T	T		21 22 18.4	
	baz=85,slow=75,SNR=23								
PLCA	**Paso Flores**	**9.16**	**185**		P	**Pn**		**21 15 45.0**	**-0.3**
	comp=E,0.1nm,0.3s,baz=353,slow=16,SNR=2.1								
CPUP	**Villa Florida**	**11.88**	**67**		P	**Pn**		**21 16 18.3**	**-3.6**
	comp=E,0.2nm,0.3s,baz=256,slow=11,SNR=4.5								
LPAZ	**La Paz**	**15.29**	**5**		P	**P**		**21 17 08.1**	**-0.7**
	comp=E,0.5nm,0.3s,baz=196,slow=7.7,SNR=10								
LPAZ	**La Paz**	**15.29**	**5**		P	**Pn**		**21 17 06.3**	**-0.3**
SIV	**San Ignacio**	**17.33**	**28**		P	**P**		**21 17 30.4**	**-0.3**
	comp=E,0.5nm,0.3s,baz=228,slow=14,SNR=9.3								
EFI	**East Falkland**	**21.76**	**161**		IAmb	IAmb		21 18 33.5	
	comp=Z,35nm,1.1s								
EFI	**East Falkland**	**21.76**	**161**		P	**P**		**21 18 19.0**	**+0.6**
EFI					IAmb	IAmb		21 18 33.5	
	comp=Z,35nm,1.1s								
EFI	**East Falkland**	**21.76**	**161**		P	**P**		**21 18 19.0**	**+0.6**
SAML	**Samuel**	**23.29**	**16**		P	**P**		**21 18 33.8**	**-0.1**
SAML					IAmb	IAmb		21 18 34.8	
	comp=Z,2.8nm,0.6s								
MLPR	**Magueyes Islan**	**49.34**	**3**		P	**P**		**21 22 13.7**	**-0.2**
MLPR					IAmb	IAmb		21 22 19.0	
	comp=Z,7.8nm,0.9s								
CRPR	**Cabo Rojo, PR**	**49.37**	**3**		P	**P**		**21 22 13.8**	**-0.3**
CRPR					IAmb	IAmb		21 22 14.2	
	comp=Z,8.5nm,0.7s								
TXAR	**Lajitas Array**	**68.75**	**328**		P	**P**		**21 24 29.1**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=148,slow=8.4,SNR=7.0								
TXAR	**Lajitas Array**	**68.75**	**328**		P	**P**		**21 24 28.1**	**+0.3**
R40A	**Maddies Statio**	**72.70**	**341**		P	**P**		**21 24 52.1**	**+

WB0	**Warramunga Arr**	**58.49**	**136**	P	**P**	**21 39 12.3**	**+0.4**
WB0				IAmb	IAmb	21 39 12.4	
	comp=Z,2.2nm,0.6s						
FIA1	**FINESS Array S**	**58.57**	**328**	P	**P**	**21 39 13.3**	**+1.5**
FINES	**FINESS Array B**	**58.57**	**328**	P	**P**	**21 39 12.9**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=97,slow=6.3,SNR=11						
WRA	**Warramunga Arr**	**58.58**	**136**	P	**P**	**21 39 12.9**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=320,slow=7.6,SNR=38						
WRA	**Warramunga Arr**	**58.58**	**136**	IAmb	IAmb	21 39 13.3	
	comp=Z,0.1nm,0.8s						
WB2	**Warramunga Arr**	**58.59**	**136**	P	**P**	**21 39 12.9**	**+0.3**
WB2				IAmb	IAmb	21 39 22.2	
	comp=Z,3.4nm,1.1s						
KARP	**Karpathos**	**58.70**	**298**	P	**P**	**21 39 13.4**	**+0.2**
WR0	**Warramunga Arr**	**58.72**	**136**	P	**P**	**21 39 13.3**	**-0.1**
WR0				IAmb	IAmb	21 39 22.0	
	comp=Z,2.8nm,1.0s						
BURAR	**Bucovina Array**	**58.79**	**312**	P	**P**	**21 39 15.1**	**+1.3**
BUR08	**Bucovina Ar. S**	**58.80**	**312**	P	**P**	**21 39 14.7**	**+0.9**
BUR08				IAmb	IAmb	21 39 18.2	
	comp=Z,2.3nm,1.1s						
ARCES	**ARCESS Array B**	**59.92**	**338**	P	**P**	**21 39 21.7**	**+0.6**
	comp=Z,3.2nm,1.0s,baz=105,slow=6.9,SNR=1.1						
KWP	**Kalwaria Pacla**	**60.32**	**314**	P	**P**	**21 39 25.5**	**+1.4**
KWP				IAmb	IAmb	21 39 25.9	
	comp=Z,3.3nm,0.5s						
IDI	**Anoyia**	**60.57**	**298**	P	**P**	**21 39 26.8**	**+0.7**
IDI				IAmb	IAmb	21 39 34.1	
	comp=Z,8.9nm,1.0s						
COEN	**Coen**	**60.66**	**124**	P	**P**	**21 39 26.1**	**-0.7**
COEN				IAmb	IAmb	21 39 27.1	
	comp=Z,6.5nm,1.1s						
ASAR	**Alice Springs**	**61.09**	**139**	P	**P**	**21 39 30.1**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=326,slow=6.6,SNR=10						
ASAR				PcP	**PcP**	**21 40 11.2**	**0.0**
	comp=Z,0.3nm,0.5s,baz=323,slow=4.4,SNR=4.5						
NWAO	**Narrogin (SRO)**	**61.11**	**159**	P	**P**	**21 39 29.5**	**0.0**
NWAO				IAmb	IAmb	21 39 41.2	
	comp=Z,10nm,1.1s						
NC405	**NORSAR Array S**	**65.49**	**328**	P	**P**	**21 39 58.9**	**+0.8**
NOA	**NORSAR Array B**	**65.75**	**328**	P	**P**	**21 40 00.5**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=110,slow=6.2,SNR=1.9						
NC204	**NORSAR Array S**	**65.93**	**328**	P	**P**	**21 40 01.4**	**+0.4**
GERES	**GERESS Array B**	**66.27**	**314**	P	**P**	**21 40 04.9**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=67,slow=6.4,SNR=8.6						
SGRT	**San Giovanni R**	**66.30**	**307**	P	**P**	**21 40 04.5**	**+0.8**
TORD	**Torodi Ar. Bea**	**87.61**	**283**	P	**P**	**21 42 05.1**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=52,slow=4.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**87.61**	**283**	IAmb	IAmb	21 42 05.4	
	comp=Z,0.6nm,0.8s						

IDC 13 21:41:23.8±7.1, 5°.06S×128°.86E, h127$^{km}_{\pm 83km}$, mb2.9/1, mb1 3.0/3, mb1mx2.8/23, mbtmp3.3/3, Error ellipse: s-maj=159.3km s-min=28.7km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.73**	**161**	P	Pn	21 44 58.5	0.0
	0.1nm,0.3s,baz=343,slow=13,SNR=6.6						
ASAR	**Alice Springs**	**19.13**	**166**	P	P	21 45 37.1	0.0
	0.1nm,0.3s,baz=348,slow=12,SNR=6.9						
MKAR	**Makanchi Array**	**65.99**	**327**	P	P	21 51 56.6	0.0
	0.1nm,0.3s,baz=118,slow=7.7,SNR=3.9						

*IDC **13** 22:14:30.5±2.7, 1°.13N×26°.18W, h0^{km}, mb3.8/3, mb1 3.9/3, mb1mx3.5/38, mbtmp3.9/3, MS3.4/9, Ms1 3.3/9, ms1mx3.1/39, Error ellipse: s-maj=89.7km s-min=54.7km az=145.0*

*NEIC **13** 22:14:31.3±2.4, 1°.1N±0°.1×26°.2W±0°.1, h10$^{km}_{\pm 1km}$, mb4.7/18, Error ellipse: s-maj=25.2km s-min=6.7km az=132.0*

ISC 13 22:14:31.2±0.7, 1°.1N±0°.1×26°.2W±0°.1, h10^{km}, n36, σ1^{s}41/24, mb4.6/10, MS3.3/8, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**11.89**	**234**	LR	LR	22 20 36.2	
	comp=Z,172nm,21.3s,baz=47,slow=31						
RCBR	**Riachuelo**	**11.89**	**234**	Pn	**Pn**	**22 17 21.1**	**+0.2**
SACV	**Santiago Islan**	**14.00**	**10**	Pn	**Pn**	**22 17 50.5**	**+0.6**
H10N3	**ASCENSION HYDR**	**14.68**	**128**	T	T	22 32 38.6	
	baz=305,slow=75,SNR=50						
H10N2	**ASCENSION HYDR**	**14.68**	**127**	T	T	22 32 39.1	
	baz=305,slow=75,SNR=51						
H10N1	**ASCENSION HYDR**	**14.70**	**127**	T	T	22 32 39.6	
	baz=305,slow=75,SNR=52						
H10S3	**ASCENSION HYDR**	**15.24**	**131**	T	T	22 33 16.9	
	baz=306,slow=74,SNR=9.7						
H10S2	**ASCENSION HYDR**	**15.26**	**131**	T	T	22 33 18.2	
	baz=274,slow=74,SNR=6.6						
DBIC	**Dimbokro**	**22.00**	**75**	P	**P**	**22 19 26.3**	**+0.5**
	4.2nm,0.9s,baz=262,slow=10,SNR=2.6						
DBIC				LR	LR	22 26 01.8	
	comp=Z,70nm,18.5s,baz=260,slow=32						
DBIC	**Dimbokro**	**22.00**	**75**	P	**P**	**22 19 25.6**	**-0.2**
KOWA	**Kowa**	**25.65**	**58**	LR	LR	22 28 39.8	
	comp=Z,91nm,19.7s,baz=246,slow=33						
BDFB	**Brasilia**	**27.23**	**231**	LR	LR	22 29 36.9	
	comp=Z,89nm,22.0s,baz=65,slow=33						
TOA0	**Torodi Ar. Sit**	**30.11**	**65**	P	**P**	**22 20 41.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**30.11**	**65**	P	**P**	**22 20 41.7**	**+0.4**
	0.8nm,0.7s,baz=253,slow=8.1,SNR=3.7						
TORD				LR	LR	22 31 05.2	
	comp=Z,41nm,18.0s,baz=175,slow=33						
MCLT	**Moule a Chique**	**36.57**	**292**	P	**P**	**22 21 36.9**	**-0.8**
CPUP	**Villa Florida**	**40.57**	**225**	LR	LR	22 38 26.5	
	comp=Z,51nm,18.6s,baz=40,slow=35						
LPAZ	**La Paz**	**44.84**	**245**	LR	LR	22 40 48.5	
	comp=Z,33nm,21.9s,baz=62,slow=35						
NNA	**Nana**	**51.94**	**254**	P	**P**	**22 23 40.6**	**-0.3**
NNA				IAmb	IAmb	22 23 42.7	
	comp=Z,17nm,1.1s						
OSSC	**Osservatorio P**	**53.80**	**33**	P	**P**	**22 23 51.5**	**-2.6**
OSSC				IAmb	IAmb	22 23 59.8	
	comp=Z,5.9nm,1.0s						
GBN	**Guysborough**	**53.95**	**330**	P	**P**	**22 23 55.3**	**+0.1**
BOSA	**Boshof**	**57.42**	**125**	LR	LR	22 45 27.2	
	comp=Z,19nm,18.5s,baz=266,slow=32						
R58B	**Mineral**	**59.87**	**314**	P	**P**	**22 24 36.3**	**-1.0**
T57A	**Hurt**	**60.48**	**313**	P	**P**	**22 24 42.4**	**+0.9**
T57A				IAmb	IAmb	22 24 57.0	
	comp=Z,4.8nm,1.1s						
K58A	**Earlville**	**60.54**	**320**	P	**P**	**22 24 43.9**	**+2.0**
K58A				IAmb	IAmb	22 24 44.5	
	comp=Z,7.0nm,1.1s						
PECO	**Prince Edward**	**61.96**	**321**	P	**P**	**22 24 50.1**	**-1.3**
451A	**Vernon**	**63.46**	**304**	P	**P**	**22 24 59.6**	**-2.1**
SADO	**Sadowa**	**63.72**	**321**	LR	LR	22 48 24.0	
	comp=Z,56nm,19.7s,baz=188,slow=32						
GO09	**Cerro Castillo**	**65.15**	**210**	P	**P**	**22 25 13.0**	**+0.6**
AKASG	**Malin Array Be**	**67.93**	**34**	P	**P**	**22 25 31.0**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=239,slow=6.5,SNR=2.2						
MGMO	**Mountain Grove**	**70.38**	**309**	P	**P**	**22 25 47.8**	**+2.1**
MGMO				IAmb	IAmb	22 26 05.2	
	comp=Z,10.0nm,1.1s						
P40A	**Paris**	**70.81**	**312**	P	**P**	**22 25 51.0**	**+2.8**
P40A				IAmb	IAmb	22 25 52.3	
	comp=Z,9.7nm,0.7s						
KIV	**Kislovodsk**	**74.13**	**44**	P	**P**	**22 26 08.8**	**+0.7**
LRM	**Limekiln Ridge**	**86.58**	**316**	P	**P**	**22 27 15.6**	**+0.3**
PIX	**Pinacate**	**87.08**	**301**	P	**P**	**22 27 17.4**	**-0.3**
PIX				IAmb	IAmb	22 27 19.6	
	comp=Z,4.8nm,1.0s						
BCYI	**Bear Canyon**	**87.22**	**314**	P	**P**	**22 27 15.6**	**-2.8**
ASAR	**Alice Springs**	**150.43**	**141**	PKPbc	**PKiKP**	**22 34 24.6**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=219,slow=1.2,SNR=1.8						

*IDC **13** 22:23:50.0±0.8, 31°.72N×40°.68W, h0^{km}, mb3.9/16, mb1 4.1/16, mb1mx3.9/57, mbtmp3.9/16, MS3.5/7, Ms1 3.5/7, ms1mx3.0/43, Error ellipse: s-maj=27.6km s-min=15.7km az=161.0*

*NEIC **13** 22:23:51.6±1.2, 31°.8N±0°.2×40°.7W±0°.1, h10$^{km}_{\pm 1km}$, mb4.6/20, Error ellipse: s-maj=27.1km s-min=16.1km az=168.0*

ISC 13 22:23:51.5±0.6, 31°.8N±0°.1×40°.68W±0°.08, h10^{km}, n50, σ0^{s}89/38, mb4.2/23, MS3.5/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ROSA	**Rosais**	**12.30**	**52**	Pn	**Pn**	**22 26 45.1**	**-1.7**
PMOZ	**Porto Moniz, M**	**19.88**	**81**	P	**P**	**22 28 22.2**	**-0.8**
OBIP	**Obispado Ponce**	**27.11**	**246**	P	**P**	**22 29 34.8**	**+0.1**
OBIP				IAmb	IAmb	22 29 50.6	
	comp=Z,9.7nm,0.9s						
YLE	**Yale**	**27.48**	**299**	P	**P**	**22 29 37.0**	**-0.8**
MDP	**Montagnes des**	**28.80**	**205**	LR	LR	22 38 33.6	
	comp=Z,50nm,19.1s,baz=32,slow=31						
SFS	**San Fernando**	**28.83**	**71**	P	**P**	**22 29 50.6**	**+0.6**
N51A	**Ashland**	**34.53**	**297**	P	**P**	**22 30 39.7**	**-0.4**
HODGE	**Hodges**	**34.79**	**285**	P	**P**	**22 30 42.4**	**+0.1**
TKL	**Tuckaleechee C**	**35.85**	**288**	LR	LR	22 44 53.6	
	comp=Z,58nm,18.1s,baz=60,slow=35						
SDV	**Santo Domingo**	**35.94**	**237**	P	**P**	**22 30 52.6**	**+0.1**
	comp=Z,6.5nm,0.7s,baz=48,slow=5.6,SNR=7.2						
SDV	**Santo Domingo**	**35.94**	**237**	P	**P**	**22 30 52.1**	**-0.5**
SDV				IAmb	IAmb	22 30 54.7	
	comp=Z,9.5nm,0.8s						
DAVOX	**Davos/Dischmat**	**41.20**	**54**	P	**P**	**22 31 37.3**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=320,slow=11,SNR=2.6						
DBIC	**Dimbokro**	**41.71**	**119**	LR	LR	22 47 39.5	
	comp=Z,44nm,18.5s,baz=290,slow=34						
TAM	**Tamanrasset**	**41.77**	**91**	P	**P**	**22 31 42.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**43.00**	**106**	P	**P**	**22 31 51.1**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=303,slow=5.4,SNR=7.0						
TORD	**Torodi Ar. Bea**	**43.00**	**106**	IAmb	IAmb	22 31 52.4	
	comp=Z,1.6nm,1.1s						
GERES	**GERESS Array B**	**43.86**	**51**	P	**P**	**22 31 58.3**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=268,slow=7.6,SNR=2.3						
NOA	**NORSAR Array B**	**44.48**	**33**	P	**P**	**22 32 02.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=251,slow=8.2,SNR=2.2						
H10N2	**ASCENSION HYDR**	**46.65**	**143**	T	T	23 21 57.2	
	baz=328,slow=75,SNR=16						
H10N3	**ASCENSION HYDR**	**46.66**	**143**	T	T	23 21 57.4	
	baz=328,slow=75,SNR=16						
H10N1	**ASCENSION HYDR**	**46.67**	**143**	T	T	23 21 58.4	
	baz=328,slow=75,SNR=13						
H10S3	**ASCENSION HYDR**	**47.52**	**144**	T	T	23 23 17.3	
	baz=252,slow=74,SNR=17						
H10S2	**ASCENSION HYDR**	**47.54**	**144**	T	T	23 23 15.2	
	baz=328,slow=74,SNR=9.2						
FINES	**FINESS Array B**	**51.62**	**34**	P	**P**	**22 32 57.8**	**0.0**
	comp=Z,2.9nm,0.9s,baz=252,slow=6.5,SNR=1.9						
MLR	**Muntele Rosu**	**52.41**	**55**	P	**P**	**22 33 04.0**	**-0.2**
	comp=Z,4.0nm,1.0s,baz=356,slow=2.2,SNR=3.9						
TXAR	**Lajitas Array**	**53.62**	**285**	P	**P**	**22 33 13.3**	**0.0**
	comp=Z,0.9nm,1.0s,baz=98,slow=7.7,SNR=5.0						
TX31	**Lajitas Ar. Si**	**53.62**	**285**	P	**P**	**22 33 12.7**	**-0.6**
AKASG	**Malin Array Be**	**53.81**	**48**	P	**P**	**22 33 14.2**	**0.0**
	comp=Z,2.2nm,0.6s,baz=275,slow=6.4,SNR=12						
AKASG	**Malin Array Be**	**53.81**	**48**	IAmb	IAmb	22 33 15.7	
	comp=Z,1.3nm,1.2s						
ANMO	**Albuquerque**	**54.14**	**292**	LR	LR	22 54 40.6	
	comp=Z,62nm,19.2s,baz=70,slow=34						
BW06	**Boulder Array**	**54.52**	**302**	P	**P**	**22 33 19.9**	**+0.1**
BW06				IAmb	IAmb	22 33 21.2	
	comp=Z,5.7nm,1.2s						
PD31	**Pinedale Array**	**54.52**	**302**	P	**P**	**22 33 20.0**	**+0.1**
PDAR	**Pinedale Array**	**54.52**	**302**	P	**P**	**22 33 19.8**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=73,slow=6.5,SNR=10						
PDAR				LR	LR	22 56 08.7	
	comp=Z,38nm,18.7s,baz=44,slow=36						
PDAR	**Pinedale Array**	**54.52**	**302**	P	**P**	**22 33 19.6**	**-0.2**
YMP	**Mirror Lake PI**	**54.53**	**305**	P	**P**	**22 33 20.6**	**+0.6**
LPAZ	**La Paz**	**54.55**	**213**	P	**P**	**22 33 20.5**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=349,slow=5.2,SNR=2.2						
YKA	**Yellowknife Ar**	**55.01**	**327**	LR	LR	22 55 50.2	
	comp=Z,67nm,18.2s,baz=0.0,slow=35						
YMR	**Madison River**	**55.11**	**305**	P	**P**	**22 33 24.4**	**+0.3**
PV23	**Carpenter Ridg**	**55.15**	**297**	P	**P**	**22 33 21.0**	**-3.6**
PV23				IAmb	IAmb	22 33 39.9	
	comp=Z,3.9nm,0.8s						
IMW	**Indian Meadow**	**55.25**	**304**	P	**P**	**22 33 26.5**	**+1.2**
BRTR	**Keskin Array B**	**59.27**	**60**	P	**P**	**22 33 53.2**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=258,slow=7.2,SNR=3.3						
PIX	**Pinacate**	**60.78**	**291**	P	**P**	**22 34 04.3**	**+0.5**
PIX				IAmb	IAmb	22 34 06.7	
	comp=Z,7.3nm,1.2s						
TPNV	**Topopah Spring**	**61.08**	**298**	P	**P**	**22 34 06.9**	**+0.9**
TPNV				IAmb	IAmb	22 34 08.4	
	comp=Z,5.0nm,1.4s						
INK	**Inuvik**	**61.93**	**335**	P	**P**	**22 34 11.0**	**+0.1**
INK				IAmb	IAmb	22 34 22.8	
	comp=Z,5.1nm,0.9s						
NVAR	**Mina Array Bea**	**62.12**	**300**	P	**P**	**22 34 13.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=78,slow=8.4,SNR=2.9						
NVAR				LR	LR	23 00 45.1	
	comp=Z,65nm,18.1s,baz=82,slow=36						
PAHR	**Pah Rah Range**	**62.48**	**301**	P	**P**	**22 34 14.3**	**-1.0**
PAHR				IAmb	IAmb	22 34 16.3	
	comp=Z,7.5nm,1.4s						
ILAR	**Eielson Array**	**68.20**	**334**	P	**P**	**22 34 52.6**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=39,slow=4.5,SNR=5.6						
ZALV	**Zalesovo Beam**	**82.52**	**29**	P	**P**	**22 36 15.2**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=304,slow=6.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**82.52**	**29**	P	**P**	**22 36 15.4**	**+1.1**
MKAR	**Makanchi Array**	**86.44**	**35**	P	**P**	**22 36 35.3**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=311,slow=6.7,SNR=2.8						

IDC 13 22:26:27.1±4.5, 5°.25S×148°.90E, h0^{km}, mb3.3/2, mb1 3.7/2, mb1mx3.4/22, mbtmp3.4/2, Error ellipse: s-maj=159.5km s-min=52.8km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.35**	**223**	P	P	22 31 05.1	-0.2
	0.5nm,0.4s,baz=49,slow=11,SNR=10.0						
ASAR	**Alice Springs**	**23.33**	**217**	P	P	22 31 37.4	+0.2
	0.6nm,0.5s,baz=51,slow=9.6,SNR=5.3						
TORD	**Torodi Ar. Bea**	**146.72**	**286**	PKPbc	PKPdf	22 46 11.2	+0.7
	0.2nm,0.6s,baz=89,slow=2.9,SNR=1.6						

*ROM **13** 22:32:45.9±0.2, 40°.117N±0°.010×15°.61E±0°.02, h298$^{km}_{\pm 1km}$, ML3.7/1, Error ellipse: s-maj=1.9km s-min=0.6km az=87.0*

*LDG **13** 22:32:46.6, 40°.21N×15°.51E, h297^{km}*

*IDC **13** 22:32:48.8±0.9, 40°.22N×15°.45E, h300$^{km}_{\pm 11km}$, mb3.4/12, mb1 3.4/25, mb1mx3.3/59, mbtmp4.0/25, Error ellipse: s-maj=12.5km s-min=8.5km az=108.0*

*PDG **13** 22:32:56.0±5.1, 40°.62N×14°.91E, h40$^{km}_{\pm 38km}$, ML3.5/10, Error ellipse: s-maj=5.3km s-min=11.1km az=0.0*

ISC 13 22:32:47.3±0.5, 40°.19N±0°.04×15°.53E±0°.05, h285$^{km}_{\pm 5km}$, n235, σ1^{s}37/267, mb3.8/12, 30C-45D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGR	**Morigerati**	**0.06**	**160**	⇓P	**Pn**	**22 33 24.6**	**+1.0**
MGR				S	**S**	**22 33 52.9**	**+0.5**
MGR				AML	AML		
	comp=E,330μm,0.6s						
MGR				AML	AML		
	comp=N,512μm,0.4s						
BULG	**Bulgheria - Ca**	**0.16**	**225**	⇓P	**Pn**	**22 33 24.9**	**+1.2**
BULG				S	**S**	**22 33 53.9**	**+1.3**
BULG				AML	AML		
	comp=N,706μm,0.4s						
BULG				AML	AML		
	comp=E,349μm,0.3s						
BULG				AML	AML		
	comp=N,706μm,0.4s						
MTSN	**Montesano sull**	**0.19**	**67**	⇓P	**Pn**	**22 33 24.5**	**+0.8**
MTSN				AML	AML		
	comp=N,262μm,0.5s						
MTSN				AML	AML		
	comp=E,264μm,0.4s						
CMPR	**Campora**	**0.21**	**306**	P	**Pn**	**22 33 24.7**	**+1.0**
SLCN	**Sala Consilina**	**0.21**	**22**	⇓P	**Pn**	**22 33 24.9**	**+1.2**
SLCN				AML	AML		
	comp=N,421μm,0.3s						
SLCN				AML	AML		
	comp=N,268μm,1.6s						
SLCN				AML	AML		
	comp=E,214μm,1.6s						
SLCN				AML	AML		
	comp=N,420μm,0.3s						
SLCN				AML	AML		
	comp=E,757μm,0.4s						
MCEL	**Monticello**	**0.25**	**58**	⇓P	**Pn**	**22 33 25.4**	**+1.6**
MCEL				AML	AML		
	comp=E,481μm,0.5s						
MCEL				AML	AML		
	comp=N,272μm,0.9s						
MCEL				AML	AML		
	comp=E,490μm,0.5s						
MCEL				AML	AML		
	comp=E,480μm,0.5s						
MCEL				AML	AML		
	comp=N,271μm,0.9s						
MCEL				AML	AML		
	comp=N,275μm,0.9s						
SIRI	**Monte Sirino -**	**0.26**	**92**	⇓P	**Pn**	**22 33 24.6**	**+0.8**
SIRI				AML	AML		
	comp=E,274μm,0.3s						
SIRI				AML	AML		
	comp=N,273μm,0.8s						
SIRI				AML	AML		
	comp=E,284μm,0.3s						
SIRI				AML	AML		
	comp=N,282μm,0.8s						
CUC	**Castrocucco**	**0.30**	**132**	⇓P	**Pn**	**22 33 24.5**	**+0.6**
CUC				S	**S**	**22 33 52.5**	**-0.4**
CUC				AML	AML		
	comp=E,352μm,0.5s						
CUC				AML	AML		
	comp=N,182μm,1.0s						
CDRU	**Civita di Ruta**	**0.34**	**330**	⇓P	**Pn**	**22 33 25.1**	**+1.2**
CDRU				AML	AML		
	comp=N,178μm,0.4s						
CDRU				AML	AML		
	comp=E,204μm,0.3s						
T0721	**Laino Castello**	**0.43**	**126**	⇓P	**Pn**	**22 33 24.9**	**+0.8**
T0721				S	**S**	**22 33 53.4**	**+0.1**
T0721				AML	AML		
	comp=E,722μm,0.7s						
T0721				AML	AML		
	comp=N,734μm,1.0s						
T0721				AML	AML		
	comp=E,690μm,0.8s						
T0721				AML	AML		
	comp=N,567μm,1.0s						
T0721				AML	AML		
	comp=E,722μm,0.8s						
T0721				AML	AML		
	comp=N,734μm,1.0s						
MMN	**Mormanno**	**0.47**	**130**	⇓P	**Pn**	**22 33 24.8**	**+0.7**
MMN				S	**S**	**22 33 53.4**	**+0.1**
MMN				AML	AML		
	comp=E,122μm,0.4s						
MMN				AML	AML		
	comp=N,294μm,0.3s						
T0701	**Viggianello (P**	**0.50**	**114**	P	**Pn**	**22 33 25.4**	**+1.1**
MRLC	**Muro Lucano**	**0.56**	**357**	⇓P	**Pn**	**22 33 25.7**	**+1.4**
MRLC				AML	AML		
	comp=N,296μm,0.3s						
MRLC				AML	AML		
	comp=E,252μm,1.5s						
T0702	**Acquaformosa (**	**0.64**	**138**	⇓P	**Pn**	**22 33 25.1**	**+0.4**
T0702				S	**S**	**22 33 53.6**	**-0.8**
MCRV	**Calabrutti - M**	**0.65**	**335**	⇓P	**Pn**	**22 33 26.1**	**+1.4**
ACER	**Acerenza**	**0.67**	**28**	⇓P	**Pn**	**22 33 25.4**	**+0.7**
ACER				AML	AML		
	comp=N,205μm,1.1s						
ACER				AML	AML		
	comp=E,186μm,1.2s						
ACER				AML	AML		
	comp=N,204μm,1.1s						
SALB	**San Lorenzo Be**	**0.70**	**116**	⇓P	**Pn**	**22 33 25.6**	**+0.6**
SALB				S	**S**	**22 33 54.7**	**-0.1**
SALB				AML	AML		
	comp=E,258μm,1.2s						
SALB				AML	AML		
	comp=N,162μm,0.5s						
SALB				AML	AML		
	comp=E,284μm,1.2s						
SALB				AML	AML		
	comp=N,162μm,0.5s						
SALB				AML	AML		
	comp=E,506μm,1.3s						
SALB				AML	AML		
	comp=N,328μm,0.3s						
SALB				AML	AML		
	comp=N,350μm,0.3s						
SALB				AML	AML		
	comp=N,328μm,0.3s						
SALB				AML	AML		
	comp=E,532μm,1.3s						
CRAC	**Craco**	**0.72**	**76**	⇓P	**Pn**	**22 33 25.8**	**+1.0**
CRAC				S	**S**	**22 33 55.4**	**+0.8**
CRAC				AML	AML		
	comp=N,556μm,1.3s						
CRAC				AML	AML		
	comp=E,744μm,0.5s						
ORI	**Oriolo Calabro**	**0.72**	**100**	⇓P	**Pn**	**22 33 26.1**	**+1.2**
ORI				S	**S**	**22 33 55.6**	**+0.9**
ORI				AML	AML		
	comp=E,835μm,0.3s						
ORI				AML	AML		
	comp=N,1120μm,0.4s						
CET2	**Cetraro**	**0.74**	**153**	P	**Pn**	**22 33 25.4**	**+0.3**
CET2				S	**S**	**22 33 54.1**	**-0.9**
CET2				AML	AML		
	comp=E,3175μm,1.0s						
CET2				AML	AML		
	comp=N,2795μm,0.6s						
CET2				AML	AML		
	comp=N,2800μm,0.6s						
CET2				AML	AML		
	comp=E,3170μm,1.0s						
VULT	**Monte Vulture**	**0.76**	**5**	P	**Pn**	**22 33 26.0**	**+0.9**
SNAL	**S. Angelo Dei**	**0.77**	**342**	⇓P	**Pn**	**22 33 26.6**	**+1.5**
SNAL				AML	AML		
	comp=E,434μm,1.4s						
SNAL				AML	AML		
	comp=N,350μm,1.4s						
SNAL				AML	AML		
	comp=E,439μm,1.4s						
SNAL				AML	AML		
	comp=N,338μm,1.4s						
SNAL				AML	AML		
	comp=N,338μm,1.4s						
MIGL	**Miglionico**	**0.81**	**59**	P	**Pn**	**22 33 26.0**	**+0.8**
MIGL				AML	AML		
	comp=E,492μm,1.0s						
MIGL				AML	AML		
	comp=N,816μm,1.0s						
MIGL				AML	AML		
	comp=E,869μm,0.8s						
MIGL				AML	AML		
	comp=N,926μm,0.9s						
MIGL				AML	AML		
	comp=N,926μm,0.9s						
MIGL				AML	AML		
	comp=E,870μm,0.8s						
PALZ	**Palazzo San Ge**	**0.82**	**24**	⇓P	**Pn**	**22 33 26.2**	**+1.0**
PALZ				AML	AML		
	comp=E,387μm,1.6s						
PALZ				AML	AML		
	comp=N,330μm,1

comp=N,1466µm,0.4s
CAR1 AML AML
AMUR Altamura 1.09 49 AML AML
comp=N,1390µm,0.4s
AMUR AML AML
comp=N,1180µm,0.5s
AMUR AML AML
comp=N,179µm,0.5s
AMUR AML AML
comp=E,251µm,1.6s
CELI Celico 1.09 136 ⇓P **Pn 22 33 28.0 +1.3**
CELI S **S 22 33 58.8 +0.8**
CELI AML AML
comp=E,2880µm,0.5s
CELI AML AML
comp=N,1335µm,1.0s
CELI AML AML
comp=E,1186µm,0.5s
CELI AML AML
comp=N,3395µm,1.0s
PAOL Paolisi 1.11 319 AML AML
comp=N,156µm,0.6s
PAOL AML AML
comp=E,99µm,1.2s
PAOL AML AML
comp=E,99µm,1.2s
VITU Vitulano (BN) 1.20 326 AML AML
comp=E,368µm,0.3s
VITU AML AML
comp=N,350µm,1.3s
PIPA Pietrapaola 1.22 125 AML AML
comp=N,740µm,0.3s
PIPA AML AML
comp=E,721µm,1.4s
PIPA AML AML
comp=N,722µm,0.3s
PIPA AML AML
comp=E,664µm,0.9s
PIPA AML AML
comp=N,724µm,0.3s
PIPA AML AML
comp=E,760µm,1.5s
PIPA AML AML
comp=N,776µm,0.3s
PIPA AML AML
comp=E,778µm,1.4s
NOCI Noci 1.31 63 AML AML
comp=E,393µm,0.4s
NOCI AML AML
comp=N,318µm,0.7s
TAR1 Taranto 1.38 76 *e*Pn **Pn 22 33 29.1 +1.0**
TIP Timpagrande 1.39 136 ⇓P **Pn 22 33 29.1 +0.7**
TIP S **S 22 33 59.8 -1.2**
TIP AML AML
comp=E,1016µm,0.7s
TIP AML AML
comp=N,683µm,0.4s
TIP AML AML
comp=N,548µm,1.6s
TIP AML AML
comp=E,872µm,0.7s
LADO San Nicola del 1.44 129 ⇓P **Pn 22 33 29.3 +0.6**
LADO AML AML
comp=E,75µm,0.3s
LADO AML AML
comp=N,65µm,0.4s
LADO AML AML
comp=E,75µm,0.3s
SERS Sersale 1.46 142 ⇓P **Pn 22 33 29.6 +0.6**
SERS S **S 22 34 00.9 -1.1**
SERS AML AML
comp=E,1710µm,0.9s
SERS AML AML
comp=N,1780µm,0.9s
SERS AML AML
comp=N,1510µm,0.4s
SERS AML AML
comp=E,1445µm,0.3s
SGG Gregorio Mates 1.48 324 ⇓P **Pn 22 33 30.4 +1.6**
SGG AML AML
comp=N,85µm,1.4s
SGG AML AML
comp=E,103µm,0.7s
BSSO Busso 1.53 333 ⇓P **Pn 22 33 31.0 +1.8**
BSSO AML AML
comp=E,54µm,1.6s
BSSO AML AML
comp=N,74µm,0.8s
GRI Girifalco 1.53 153 P **Pn 22 33 30.0 +0.7**
GRI S **S 22 34 01.9 -0.8**
GRI AML AML
comp=N,2160µm,0.5s
GRI AML AML
comp=E,1910µm,0.4s
MELA Melanico ??? S 1.54 349 ⇓P **Pn 22 33 30.2 +1.1**
MELA AML AML
comp=E,296µm,1.6s
MELA AML AML
comp=N,334µm,0.8s
MSAG Monte S. Angel 1.54 11 ⇓P **Pn 22 33 30.3 +1.0**
MSAG AML AML
comp=E,218µm,0.7s
MSAG AML AML
comp=E,218µm,0.7s
MSAG AML AML
comp=N,483µm,0.3s
SGRT San Giovanni R 1.57 6 ⇓P **Pn 22 33 30.5 +1.0**
SGRT S **S 22 34 03.3 +0.3**
SGRT AML AML
comp=E,396µm,1.3s
SGRT AML AML
comp=N,298µm,0.7s
JOPP Joppolo 1.61 170 ⇑P **Pn 22 33 29.7 -0.2**
JOPP S **S 22 34 01.8 -1.9**
JOPP AML AML
comp=N,1195µm,0.7s
JOPP AML AML
comp=E,1230µm,1.2s
MIDA Miranda 1.74 327 P **Pn 22 33 32.4 +1.7**
IFIL Filicudi I Eol 1.79 205 P **Pn 22 33 32.2 +1.1**
PLAC Placanica 1.88 158 ⇑P **Pn 22 33 32.1 +0.2**
PLAC S **S 22 34 05.4 -1.9**
PLAC AML AML
comp=N,2200µm,0.3s
PLAC AML AML
comp=N,2750µm,0.7s
PLAC AML AML
comp=E,2305µm,0.3s
PLAC AML AML
comp=E,2675µm,0.7s
TREM Isole Tremiti 1.93 360 P **Pn 22 33 33.4 +1.3**
CEL Celeste 1.95 171 AML AML
comp=N,1078µm,1.2s
CEL AML AML
comp=N,882µm,1.2s
CEL AML AML
comp=E,726µm,1.1s
CEL AML AML
comp=E,877µm,1.1s
GMB Gambarie 2.04 173 P **Pn 22 33 32.8 -0.4**
GMB S **S 22 34 07.6 -2.2**
GMB AML AML
comp=E,4625µm,0.6s
GMB AML AML
comp=N,3600µm,0.9s
MCSR Castroreale 2.14 186 ⇑P **Pn 22 33 34.5 +0.4**
MCSR AML AML
comp=E,648µm,0.3s
MCSR AML AML
comp=N,914µm,1.2s
SOI Samo 2.16 169 ⇑P **Pn 22 33 34.1 0.0**
SOI S **S 22 34 08.6 -2.8**
SOI AML AML
comp=E,440µm,0.8s
SOI AML AML
comp=N,664µm,1.0s
NOV Novara 2.18 188 ⇑P **Pn 22 33 35.4 +1.0**
NOV AML AML
comp=E,417µm,0.5s
NOV AML AML
comp=N,616µm,0.9s
MTTG Motta San Giov 2.19 177 P **Pn 22 33 34.6 +0.1**
MTTG AML AML
comp=N,1078µm,0.6s
MTTG AML AML
comp=E,649µm,0.8s
MUCR Ucria 2.21 194 AML AML
comp=N,274µm,0.5s
MUCR AML AML
comp=E,194µm,0.6s
AIO Antillo 2.23 186 P **Pn 22 33 35.5 +0.6**
SCTE Santa Cesarea 2.26 92 ⇓P **Pn 22 33 35.9 +1.0**
SCTE S **S 22 34 11.4 -1.4**
SCTE AML AML
comp=E,370µm,0.9s
SCTE AML AML
comp=N,427µm,0.8s
MPAZ Palizzi 2.27 170 ⇑P **Pn 22 33 35.2 0.0**
MPAZ S **S 22 34 10.6 -2.6**
MPAZ AML AML
comp=E,755µm,0.9s
MPAZ AML AML
comp=N,838µm,0.8s
EMSG Monte Spagnolo 2.41 191 P **Pn 22 33 38.9 +2.3**
EPZF Pizzo Felice 2.42 193 P **Pn 22 33 38.1 +1.5**
EPZF AML AML
comp=N,520µm,0.6s
EPZF AML AML
comp=E,366µm,1.1s
MPG Monte Pellegri 2.64 220 P **Pn 22 33 39.9 +1.3**
LSTV Lastovo 2.77 21 *e*Pn **Pn 22 33 40.5 +0.9**
RESU Resuttano 2.79 205 ⇑P **Pn 22 33 42.8 +2.7**
ALJA Alia 2.80 210 P **Pn 22 33 42.1 +2.0**
ALJA AML AML
comp=E,219µm,0.3s
ALJA AML AML
comp=N,212µm,0.3s
VAE Valguarnera 2.85 198 P **Pn 22 33 44.0 +3.4**
comp=N,7.7nm,0.3s,baz=1,1,slow=9.2,SNR=20
CORL Corleone 2.88 218 ⇑P **Pn 22 33 42.7 +1.9**
CORL AML AML
comp=E,262µm,1.1s
CORL AML AML
comp=N,296µm,1.3s
HLNI Lentini 2.89 190 P **Pn 22 33 41.4 +0.5**
HLNI AML AML
comp=E,104µm,0.9s
HLNI AML AML
comp=N,128µm,1.6s
AGST Augusta-Monte 2.94 185 P **Pn 22 33 40.7 -0.8**
SSY Sortino 3.06 187 P **Pn 22 33 42.4 -0.3**
STON Ston 3.13 31 ⇓P **Pn 22 33 44.4 +1.2**
STON AML AML
comp=E,34µm,0.7s
STON AML AML
comp=N,56µm,1.4s
STON Ston 3.13 31 *e*Pn **Pn 22 33 44.2 +1.0**
STON Ston 3.13 31 *i* Pn **Pn 22 33 44.5 +1.2**
HCY Herceg Novi 3.17 44 ⇓*i*Pn **Pn 22 33 44.5 +0.8**
HCY *e*Sn **S 22 34 28.1 -0.6**
HCY Herceg Novi 3.17 44 *e*Pn **Pn 22 33 44.7 +1.0**
HAVL Avola 3.24 186 P **Pn 22 33 44.0 -0.6**
CLTA Licata 3.27 202 P **Pn 22 33 46.3 +1.4**
CLTA AML AML
comp=E,531µm,0.2s
CLTA AML AML
comp=N,711µm,1.5s
HMDC Modica 3.28 190 P **Pn 22 33 45.4 +0.3**
MAKA Makarska 3.29 19 *e*Pn **Pn 22 33 45.9 +1.0**
TREB Trebinje 3.30 39 *e*Pn **Pn 22 33 46.1 +1.1**
BUM Brajici-Budva 3.30 49 ⇓*i*Pn **Pn 22 33 45.8 +0.7**
BUM *i* Sn **S 22 34 30.4 -0.8**
KEK Kerkira 3.32 97 P **Pn 22 33 45.7 +0.5**
ULC Ulcinj 3.32 57 *e*Pn **Pn 22 33 46.3 +1.0**
ULC *i* Sn **S 22 34 30.7 -0.9**
DRME Dracevica, Mon 3.40 53 ⇓*i*Pn **Pn 22 33 47.0 +0.9**
DRME *i* Sn **S 22 34 32.3 -0.8**
DRME Dracevica, Mon 3.40 53 ⇓*i*Pn **Pn 22 33 47.7 +1.6**
CEME Cevo 3.47 46 *e*Pn **Pn 22 33 47.8 +0.9**
CEME *i* Sn **S 22 34 33.6 -0.9**
TIR Tirane 3.49 69 ⇓P **Pn 22 33 48.9 +1.8**
TIR AML AML
comp=N,126µm,0.5s
TIR AML AML
comp=E,114µm,0.4s
HPAC Pachino 3.51 185 P **Pn 22 33 47.4 +0.1**
HPAC AML AML
comp=E,248µm,1.6s
HPAC AML AML
comp=N,303µm,1.6s
RICI Ricice 3.51 19 *e*Pn **Pn 22 33 48.5 +1.3**
BRY Bratogost 3.53 39 *e*Pn **Pn 22 33 48.3 +0.7**
BRY *i* Sn **S 22 34 34.7 -1.0**
BRY Bratogost 3.53 39 ⇓*i*Pn **Pn 22 33 48.4 +0.8**
PDG Podgorica 3.59 50 ⇓P **Pn 22 33 49.7 +1.6**
PDG Podgorica 3.59 50 ⇓*i*Pn **Pn 22 33 49.4 +1.3**
TTG Podgorica 3.59 50 *e*Pn **Pn 22 33 49.1 +1.0**
TTG *i* Sn **S 22 34 35.9 -0.8**
EL6 Elcito 3.62 331 AML AML
comp=N,78µm,1.6s
EL6 AML AML
comp=E,115µm,1.6s
NKME Niksic 3.64 44 *e*Pn **Pn 22 33 49.4 +0.7**
NKME *i* Sn **S 22 34 36.7 -1.1**
MORI Morici 3.67 2 *e*Pn **Pn 22 33 49.9 +1.0**
PUK Puka 3.78 59 ⇓P **Pn 22 33 52.0 +1.8**
PUK AML AML
comp=N,78µm,0.6s
PUK AML AML
comp=E,95µm,0.4s
DUGI Dugi Otok 3.81 355 *e*Pn **Pn 22 33 51.7 +1.2**
KIJV Kijevo 3.87 9 *e*Pn **Pn 22 33 52.0 +0.8**
UPM Unac-Piva 3.93 39 ⇓*i*Pn **Pn 22 33 53.8 +1.8**
UPM Unac-Piva 3.93 39 *e*Pn **Pn 22 33 53.8 +1.8**
KOME Kolasin 4.00 47 ⇓*i*Pn **Pn 22 33 53.9 +1.1**
KOME *e*Sn **S 22 34 44.1 -1.0**
PVY Plav 4.11 53 ⇑*i*Pn **Pn 22 33 55.0 +1.0**
PVY *i* Sn **S 22 34 46.2 -1.1**
OHR Ohrid 4.11 75 *i* P **Pn 22 33 56.1 +2.1**
PE3 Peglio 4.17 328 AML AML
comp=N,105µm,0.4s
PE3 AML AML
comp=E,123µm,0.6s
IVA Berane 4.23 49 *e*Pn **Pn 22 33 56.6 +1.3**
IVA *i* Sn **S 22 34 48.8 -1.0**
MGRS Mrkonjic Grad 4.38 15 *e*Pn Pn 22 34 11.5 +15
NVLJ Novalja 4.39 354 *e*Pn **Pn 22 33 58.5 +1.4**
RUDO Rudo 4.46 39 *e*Pn **Pn 22 33 55.3 -2.6**
HAPS Han Pijesak,BI 4.65 32 *e*Pn **Pn 22 34 00.7 +0.6**
BBLS Lazići 4.67 37 *e*Pn **Pn 22 34 01.6 +1.0**
BLY Banja Luka 4.71 15 *e*Pn **Pn 22 34 00.0 -0.8**
DIVS Divibare 5.12 39 *e*Pn **Pn 22 34 07.2 +1.5**
RIY Rijeka 5.19 352 *e*Pn **Pn 22 34 07.4 +1.1**
STIP Stip 5.26 71 *i* P **Pn 22 34 10.6 +3.3**
BOJS Bojanci 5.31 358 *i* P **Pn 22 34 09.5 +1.7**
OZLJ Ozalj 5.42 360 *e*Pn **Pn 22 34 10.2 +1.2**
PGF Pioggiola 5.45 298 *e*P **Pn 22 34 09.2 -0.4**
VAY Valandovo 5.47 76 *i* P **Pn 22 34 10.9 +1.2**
MOSL Moslavina 5.49 9 *e*Pn **Pn 22 34 10.3 +0.4**
CEY Cerknica 5.60 352 *e*Pn **Pn 22 34 12.0 +0.7**
VISS Visnje 5.63 355 *i* P **Pn 22 34 13.1 +1.5**
CRES Cresnjev 5.63 360 *e*Pn **Pn 22 34 12.8 +1.2**
GCIS Gornji Cirnik 5.67 1 *i* P **Pn 22 34 13.4 +1.3**
PTJ Puntijarka 5.72 3 *e*Pn **Pn 22 34 13.5 +0.7**
FRGS Fruska Gora 5.88 31 *e*Pn **Pn 22 34 15.9 +1.3**
LJU Ljubljana 5.89 353 *i* P **Pn 22 34 16.4 +1.6**
LJU Ljubljana 5.89 353 *e*Pn **Pn 22 34 15.2 +0.4**
KALN Kalnik 5.97 6 *e*Pn **Pn 22 34 16.4 +0.6**
BEHE Becsehely 6.34 8 *e*Pn **Pn 22 34 24.5 +4.3**
OBKA Obir 6.35 354 Pn **Pn 22 34 22.0 +1.5**
comp=E,14nm,0.6s,SNR=6.5
MORH Mrgy, Hungar 6.43 20 *e*Pn **Pn 22 34 22.3 +1.0**
MDVR Moldovita 6.47 43 ⇑P **Pn 22 34 22.3 +0.4**
SOKA Soboth 6.49 357 Pn **Pn 22 34 23.3 +1.2**
comp=E,9.1nm,0.4s,SNR=19
MYKA Terra Mystica 6.58 349 *e*Pn **Pn 22 34 24.6 +1.4**
comp=E,5.0nm,0.6s
MYKA *e*Sn **S 22 35 40.9 +0.5**
comp=E,2.2nm,0.3s
KEST Kesra 6.61 230 P **Pn 22 34 25.4 +1.7**
comp=E,0.3nm,0.3s,baz=343,slow=2.5,SNR=6.5
ABTA Abfaltersbach 6.91 343 Pn **Pn 22 34 28.9 +1.7**
comp=E,18nm,0.7s,SNR=17
ABTA *e*Sn **S 22 35 50.1 +2.3**
comp=E,2.4nm,0.6s
HERR Herculane 6.92 45 ⇑P **Pn 22 34 28.8 +1.6**
BZS Buzias 7.03 38 ⇑P **Pn 22 34 29.4 +0.8**
SBF Sospel 7.05 304 *e*P **Pn 22 34 29.3 +0.3**
ARSA Arzberg 7.06 360 Pn **Pn 22 34 30.4 +1.5**
comp=E,3.8nm,0.5s,SNR=6.0
KBA Koelnbreinsper 7.06 348 Pn **Pn 22 34 30.8 +1.6**
comp=E,10nm,0.7s,SNR=7.7
LMR La Mourre 7.43 298 *e*P **Pn 22 34 32.3 -1.4**
GZR Gura Zlata 7.44 43 ⇑P **Pn 22 34 35.5 +1.7**
SIRR Siria 7.54 34 ⇑P **Pn 22 34 36.0 +1.1**
WTTA Wattenberg 7.61 340 Pn **Pn 22 34 38.6 +2.7**
comp=E,3.6nm,0.5s,SNR=6.0
SQTA Sankt Quirin 7.69 337 Pn **Pn 22 34 39.1 +2.2**
comp=E,4.6nm,0.4s,SNR=8.9
WATA Walderalm 7.69 340 *i* Pn **Pn 22 34 39.4 +2.5**
comp=E,9.0nm,0.6s,SNR=7.6
MOA Molln 7.71 354 *i* Pn **Pn 22 34 38.8 +1.8**
comp=E,12nm,0.5s,SNR=11
CONA Conrad Observa 7.74 2 *i* Pn **Pn 22 34 38.9 +1.5**
comp=E,8.7nm,0.8s,SNR=12
DAVOX Davos/Dischmat 7.76 330 P **Pn 22 34 40.2 +2.4**
comp=E,1.4nm,0.3s,baz=164,slow=13,SNR=21
MOTA Moosalm 7.83 337 *i* Pn **Pn 22 34 40.4 +1.8**
comp=E,9.9nm,1.1s,SNR=7.3
MBDF Montbardon 7.90 308 *e*P **Pn 22 34 40.1 +0.6**
LOT Lotru 8.02 46 ⇑P **Pn 22 34 43.2 +2.2**
ZST Bratislava 8.08 8 *e*PN **Pn 22 34 43.0 +1.4**
DAVA Damuels 8.18 332 *i* Pn **Pn 22 34 44.4 +1.4**
comp=E,6.6nm,0.6s,SNR=6.7
MODS Modra-Piesok 8.28 8 *e*PN **Pn 22 34 43.7 -0.3**
PSZ Piszkesteto 8.34 21 ⇑P **Pn 22 34 46.0 +1.2**
LPG La Plagne 8.34 312 *e*P **Pn 22 34 46.1 +0.9**
LPG *e*Sn **S 22 36 20.5 -0.1**
comp=E,2.6nm,0.6s
LPL La Plagne 8.37 312 *e*P **Pn 22 34 45.3 -0.1**
LPL *e*Sn **S 22 36 21.1 +0.1**
comp=E,1.2nm,0.5s
SMOL Smolenice 8.43 9 *e*PN **Pn 22 34 47.3 +1.4**
ARR Arges 8.46 49 ⇑P **Pn 22 34 47.8 +1.5**
ORIF Oris-en-Rattie 8.54 307 *e*P **Pn 22 34 47.8 +0.4**
VYHS Vyhne 8.63 15 *e*PN **Pn 22 34 49.6 +1.2**
VOIR 8.74 50 ⇑P **P 22 34 53.0 -2.7**
GERES GERESS Array B 8.75 352 P **Pn 22 34 51.0 +1.1**
comp=E,2.0nm,0.3s,baz=168,slow=13,SNR=79
JAVC Velka Javorina 8.80 9 *e*P **Pn 22 34 52.3 +1.8**
IDI Anoyia 8.88 120 P **Pn 22 34 52.8 +1.0**
comp=E,0.2nm,0.3s,baz=277,slow=16,SNR=1.5
IDI S **S 22 36 40.3 +7.5**
comp=E,0.1nm,0.3s,baz=292,slow=19,SNR=1.1
KRUC Moravsky 8.89 4 *e*P **Pn 22 34 52.8 +1.2**
KHC Kasperske Hory 9.04 352 *e*PN **Pn 22 34 54.5 +1.0**
VRAC Vranov 9.15 4 P **Pn 22 34 56.1 +1.3**
comp=E,1.8nm,0.3s,baz=190,slow=12,SNR=20
VRAC Vranov 9.15 4 ⇑P **P 22 34 57.3 -2.8**
VRAC Vranov 9.15 4 *e*P **Pn 22 34 56.1 +1.3**
DOPR Dopca 9.24 48 ⇓P **Pn 22 34 57.9 +1.9**
MLR Muntele Rosu 9.30 52 P **P 22 34 60.0 -2.0**
comp=E,1.5nm,0.3s,baz=312,slow=5.4,SNR=11
MLR Muntele Rosu 9.30 52 ⇑P **P 22 35 00.7 -1.3**
MLR ⇑P **P 22 35 00.7 -1.3**
LANS Liptovska Anna 9.38 16 *e*PN **Pn 22 34 59.5 +1.7**
CABF La Chapelle 9.39 316 *e*P **Pn 22 34 57.2 -0.8**
NEHR Nehoiu 9.48 53 ⇑P **P 22 35 03.5 -0.4**
OZUR 9.54 48 ⇑P **P 22 35 02.3 -2.2**
MORC Moravsky Berou 9.69 8 ⇑P **P 22 35 04.0 -2.1**
MORC Moravsky Berou 9.69 8 *e*P **Pn 22 35 03.2 +1.7**
OKC Ostrava-Krasne 9.82 10 *e*PN **Pn 22 35 04.1 +1.0**
PRU Pruhonice 9.82 356 *e*PN **Pn 22 35 04.7 +1.6**
PRU *ex* x 22 35 09.3
HINF Hinteralfeld 9.85 324 *e*P **Pn 22 35 03.1 -0.4**
PLOR Plostina 9.91 52 ⇑P **P 22 35 07.4 -1.3**
KRLC Kraliky 9.92 5 *e*PN **Pn 22 35 05.7 +1.3**
KOLS Kolonicke sedl 9.97 27 *e*PN **Pn 22 35 04.0 -1.0**
GRF Grafenberg Arr 9.97 344 *e*P **Pn 22 35 05.0 0.0**
baz=161,slow=12
CDF Champ du Feu 10.12 327 *e*P **Pn 22 35 07.5 +0.6**
DPC Dobruska-Polom 10.17 3 *e*PN **Pn 22 35 08.7 +1.2**
DPC *ex* x 22 35 13.5
BURAR Bucovina Array 10.19 40 ⇑P **P 22 35 10.2 -1.5**
BIZ Bicaz 10.21 45 ⇑P **P 22 35 10.7 -1.2**
HAU Haudompre 10.22 323 *e*P **Pn 22 35 08.2 +0.1**
NKC Novy Kostel 10.27 349 *e*PN **P 22 35 14.8 +2.2**
UPC Upice 10.32 2 *e*PN **P 22 35 11.2 -1.9**
UPC *ex* x 22 35 14.9
PVCC Panska Ves 10.36 357 *e*PN **P 22 35 11.3 -2.2**
OSTC Ostas 10.38 2 *e*PN **Pn 22 35 10.2 +0.2**
OSTC *ex* x 22 35 15.9
CHVC Chvalec 10.40 2 *e*PN **P 22 35 12.6 -1.4**
CFR Carcaliu 10.53 58 ⇑P **P 22 35 17.5 +2.0**
PRAR RASCA 10.54 44 ⇑P **P 22 35 15.5 -0.1**
LOR Lormes 11.01 314 *e*P **Pn 22 35 17.5 -0.3**
baz=134
SSF Saint Saulge 11.09 312 *e*P **Pn 22 35 19.4 +0.7**
CLL Collm 11.25 352 *i* P **P 22 35 22.7 -0.7**
comp=E,8.0nm,0.8s
CLL *i* 22 35 25.8
comp=E,11nm,0.9s
CLL *i* 22 35 32.0
SORM Soroca 12.15 45 ⇑P **P 22 35 35.0 +1.6**
AKASG Malin Array Be 14.22 38 P **Pn 22 35 56.8 +0.2**
comp=E,9.6nm,0.3s,baz=231,slow=11,SNR=60
AKASG S **S 22 38 31.6 -1.3**
comp=E,0.3nm,0.3s,baz=234,slow=20,SNR=1.9
ESDC Sonseca Array 14.96 274 P **Pn 22 36 05.5 -0.3**
comp=E,0.3nm,0.3s,baz=74,slow=11,SNR=26
PABE Paberze 16.32 17 *e*P **Pn 22 36 20.3 -1.0**
NACGM Naroch 16.53 23 *e* **P 22 36 21.0 -0.6**
IIGN Ignalina 16.75 22 *e*P **P 22 36 23.9 0.0**
IIGN IAmb IAmb 22 36 29.7
comp=E,8.5nm,0.6s
IDID Didziasalis 16.87 23 *e*P **P 22 36 24.0 -1.2**
ISAL Salakas 16.92 21 *e*P **P 22 36 25.3 -0.5**
ISAL IAmb IAmb 22 36 27.6
comp=Z,13nm,0.5s
IZAR Zarasai 17.11 21 *e*P **P 22 36 27.2 -0.6**
IZAR IAmb IAmb 22 36 29.7
comp=Z,19nm,0.7s
MMAI Mount Meron Ar 17.47 108 P **P 22 36 33.1 +0.9**
comp=Z,0.2nm,0.3s,baz=304,slow=10,SNR=2.4
MDT Midelt 17.76 252 P **P 22 36 35.2 -0.1**
comp=Z,0.3nm,0.3s,baz=320,slow=6.5,SNR=7.1
SLIT Slitere, Latvi 17.99 12 *e*P **P 22 36 37.1 -0.2**
SLIT IAmb IAmb 22 36 38.4
comp=Z,289nm,0.6s
EKA Eskdalemuir Ar 19.58 327 P **P 22 36 54.1 -0.2**
baz=127,slow=9.6,SNR=5.8
VSU Vasula 19.64 18 *e*P **P 22 36 54.8 -0.1**
HFS Hagfors 20.00 357 P **P 22 36 58.2 -0.5**
comp=Z,1.2nm,0.3s,baz=177,slow=8.9,SNR=26
NB2 NORSAR Subarra 21.04 354 P **P 22 37 08.4 -1.0**
comp=Z,2.0nm,0.5s,baz=171,slow=11
NOA NORSAR Array B 21.04 354 P **P 22 37 08.1 -1.3**
comp=Z,0.7nm,0.4s,baz=163,slow=9.6,SNR=11
FINES FINESS Array B 22.24 13 P **P 22 37 20.5 +0.3**
comp=Z,10nm,0.6s,baz=189,slow=9.2,SNR=40
FINES PcP **PcP 22 41 05.7 0.0**
comp=Z,2.3nm,0.8s,baz=234,slow=4.7,SNR=3.9
TORD Torodi Ar. Bea 29.56 208 P **P 22 38 26.0 -0.1**
comp=Z,1.1nm,0.5s,baz=17,slow=9.6,SNR=17
ARCES ARCESS Array B 29.88 7 P **P 22 38 27.9 -0.5**
comp=Z,5.7nm,1.1s,baz=186,slow=7.8,SNR=21
DBIC Dimbokro 38.05 214 P **P 22 39 38.6 -0.4**
comp=Z,4.3nm,0.5s,baz=16,slow=11,SNR=12
SPITS Spitsbergen Ar 38.10 0 P **P 22 39 38.8 +0.1**
comp=Z,2.2nm,0.5s,baz=170,slow=10,SNR=7.8
ZALV Zalesovo Beam 47.27 49 P **P 22 40 52.5 +0.4**
comp=Z,1.8nm,0.5s,baz=292,slow=7.9,SNR=6.4
MKAR Makanchi Array 47.57 59 P **P 22 40 55.2 +0.6**
comp=Z,1.1nm,0.4s,baz=282,slow=7.2,SNR=31
SCHQ Schefferville 54.32 315 P **P 22 41 44.2 -0.2**
comp=Z,1.6nm,0.4s,baz=73,slow=4.5,SNR=6.3
SONM Songino Array 62.15 50 P **P 22 42 38.9 +0.3**
comp=Z,0.3nm,0.6s,baz=298,slow=5.3,SNR=2.6
BOSA Boshof 69.05 171 P **P 22 43 23.0 +0.5**
comp=Z,0.9nm,0.4s,baz=360,slow=6.1,SNR=4.1
TXAR Lajitas Array 90.74 310 P **P 22 45 19.8 +1.5**
comp=Z,0.2nm,0.6s,baz=61,slow=3.3,SNR=2.2
WRA Warramunga Arr 124.42 88 PKP **PKiKP 22 51 12.1 -1.0**
comp=Z,0.2nm,0.6s,baz=326,slow=2.2,SNR=1.5

JSN ***13*** *22:50:31.7±0.6, 19°.71N×76°.28W, h16km±153km, MD4.6*
SSNC ***13*** *22:50:31.1±1.6, 19°.72N×76°.34W, h5km±6km, MD3.3, ML3.3, MW3.3*

ISC 13 22:50:31.2±1.1, 19°.79N±0°.04×76°.37W±0°.03, h31km±12km**, n18,σ0°99/29, 5D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMGC	**Las Mercedes**	**0.65**	**295**	*e*P	**Pb**	**22 50 44.3**	**+0.1**

LMGC					eS	Sb	22 50 53.7	+0.7	
LMGC					IAML		22 50 54.1		
	comp=N,1μm,0.1s								
LMGC					IAML		22 50 54.5		
	comp=E,1μm,0.0s								
RCC	**Rio Carpintero**	**0.67**	**72**	eP		**Pb**	**22 50 43.7**	**-0.7**	
RCC				eS		**Sb**	**22 50 53.0**	**-0.5**	
RCC				IAML			22 50 53.4		
	comp=E,834nm,0.2s								
RCC				IAML			22 50 54.1		
	comp=N,811nm,0.2s								
GTMO	**Guantanamo**	**1.19**	**76**	eP		**Pn**	**22 50 52.7**	**+1.0**	
GTMO				eS		**Sb**	**22 51 08.6**	**+0.2**	
GTMO				IAML			22 51 14.4		
	comp=N,3μm,0.4s								
GTMO				IAML			22 51 15.5		
	comp=E,3μm,0.3s								
BNJ	**Bonny Gate**	**1.56**	**201**	i P		**Pn**	**22 50 57.0**	**+0.1**	
MOAC	**Moa**	**1.58**	**57**	eP		**Pn**	**22 50 57.1**	**0.0**	
MOAC				eS		**Sn**	**22 51 18.3**	**+1.8**	
MOAC				IAML			22 51 22.5		
	comp=N,323nm,0.4s								
MOAC				IAML			22 51 23.3		
	comp=E,268nm,0.3s								
BBJ	**Bamboo Saint A**	**1.64**	**211**	i P		**Pn**	**22 50 58.0**	**+0.1**	
CMJ	**Castle Mountai**	**1.65**	**180**	i P		**Pn**	**22 50 57.6**	**-0.4**	
GWJ	**Greenwich**	**1.74**	**191**	i P		**Pn**	**22 50 58.9**	**-0.5**	
STH	**Stony Hill**	**1.76**	**194**	i P		**Pn**	**22 50 59.6**	**+0.1**	
HOJ	**Hope**	**1.81**	**191**	i P		**Pn**	**22 51 00.4**	**+0.1**	
MTDJ	**Mount Denham**	**1.91**	**215**	i P		**Pn**	**22 51 01.8**	**+0.1**	
MTDJ				eS		**Sn**	**22 51 23.8**	**-0.9**	
CCCC	**Cccc**	**1.92**	**317**	eP		**Pn**	**22 51 00.7**	**-1.0**	
CCCC				eS		**Sn**	**22 51 22.0**	**-2.7**	
CCCC				IAML			22 51 25.4		
	comp=E,167nm,0.5s								
CCCC				IAML			22 51 26.4		
	comp=N,120nm,0.4s								
MASC	**Masc**	**2.05**	**79**	eP		**Pn**	**22 51 03.2**	**-0.3**	
MASC				eS		**Sn**	**22 51 27.6**	**-0.4**	
MASC				IAML			22 51 35.4		
	comp=E,204nm,0.3s								
MASC				IAML			22 51 38.2		
	comp=N,118nm,0.1s								
PCJ	**Portland Cotta**	**2.17**	**200**	i P		**Pn**	**22 51 05.7**	**+0.5**	
PCJ				i S		**Sn**	**22 51 39.9**	**-0.1**	
MCJ	**Malvern**	**2.24**	**214**	i P		**Pn**	**22 51 07.2**	**+1.0**	
MGV	**Manicaragua**	**4.08**	**305**	eP		**Pn**	**22 51 33.2**	**+1.7**	
MGV				eS		**Sn**	**22 52 19.0**	**+0.7**	
MGV				IAML			22 52 28.8		
	comp=E,7.2nm,0.3s								
MGV				IAML			22 52 32.8		
	comp=N,13nm,0.5s								
SDDR	**Presa de Saban**	**4.87**	**99**	eP		**Pn**	**22 51 43.9**	**+1.6**	
SDDR				eS		**Sn**	**22 52 37.6**	**-0.1**	
GRTK	**Grand Turk**	**5.20**	**70**	eP		**Pn**	**22 51 47.0**	**+0.2**	
GRTK				eS		**Sn**	**22 52 44.1**	**-1.5**	

DJA ***13*** *22:54:42.2±0.5, 1°N±4′×12°2E±°, h10km, M3.6/6, MLv3.6/6*
ISC 13 22:54:41.5±1.6, 1°46N±0.09×122°18E±0.09, h10km, n7, σ0s77/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.01**	**193**	P	**Pg**	**22 55 00.5**	**-0.4**
MRSI				S	**Sg**	**22 55 13.6**	**-0.4**
KMSI	**Cibinong**	**2.01**	**116**	P	**Pn**	**22 55 15.6**	**+0.1**
APSI	**Ampana**	**2.42**	**193**	P	**Pb**	**22 55 24.8**	**-0.3**
MPSI	**Mapaga**	**2.54**	**244**	P	**Pn**	**22 55 23.2**	**+0.5**
LUWI	**Luwuk**	**2.56**	**167**	P	**Pn**	**22 55 24.3**	**+1.3**
SGSI	**Sangihe**	**4.01**	**57**	P	**Pn**	**22 55 43.4**	**+0.4**
BNSI	**Bone**	**6.18**	**200**	P	Pn	22 56 18.7	+5.8

IDC 13 22:56:36.3±2.6, 3°54S×133°29E, h0km, mb3.4/2, mb1 3.7/5, mb1mx3.5/39, mbtmp3.5/5, ML3.1/3, Error ellipse: s-maj=84.6km s-min=22.5km az=72.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.33**	**323**	Pn	Pn	22 57 31.6	+1.9
	2.1nm,0.3s,baz=221,slow=19,SNR=13						
SIJI				Sn	Sn	22 58 11.6	+1.5
	4.4nm,0.3s,baz=287,slow=19,SNR=6.7						
FITZ	**Fitzroy Crossi**	**16.30**	**207**	Pn	Pn	23 00 26.6	-0.1
	0.2nm,0.3s,baz=30,slow=12,SNR=6.6						
FITZ				Sn	Sn	23 03 23.9	-4.4
	0.1nm,0.3s,baz=297,slow=21,SNR=1.5						
WRA	**Warramunga Arr**	**16.34**	**176**	Pn	Pn	23 00 26.8	-0.5
	0.0nm,0.3s,baz=355,slow=40,SNR=1.8						
WRA				Sn	Sn	23 03 20.1	-9.3
	0.0nm,0.3s,baz=359,slow=24,SNR=1.2						
ASAR	**Alice Springs**	**20.02**	**178**	P	P	23 01 11.7	+0.8
	1.5nm,0.7s,baz=6.3,slow=12,SNR=13						
MKAR	**Makanchi Array**	**67.23**	**325**	P	P	23 07 31.5	-1.1
	0.2nm,0.7s,baz=112,slow=7.9,SNR=1.5						

REY ***13*** *23:08:43.0, 64°.68N×17°.44W, h4km*
IDC ***13*** *23:08:43.6±0.5, 64°.54N×17°.78W, h0km, mb4.0/20, mb1 4.2/23, mb1mx4.1/55, mbtmp4.0/23, ML3.2/3, MS3.7/36, Ms1 3.8/36, ms1mx3.7/52, Error ellipse: s-maj=17.3km s-min=10.6km az=17.0*
BGS ***13*** *23:08:44.4±2.8, 64°.64N×17°.50W, h5km, mb4.6(NEIC)*
MOS ***13*** *23:08:47.5±1.1, 64°.62N×17°.59W, h10km, mb4.8/51, MS4.2/14, Error ellipse: s-maj=9.8km s-min=4.7km az=116.0*
GCMT ***13*** *23:08:49.9±0.3, 64°.85N±0°.04×17°.57W±0°.05, h14km±1km, MW4.7/89, Moment Tensor Solution. s17,c18; s89,c122; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.43±.13; Mθθ=0.24±.08; Mφφ=1.19±.08; Mrθ=0.08±.22; Mrφ=-0.61±.04; Mθφ=0.12±.15; Best double couple: M₀=1.46900×10¹⁶ NP1:ϕs=329.00000°, δ47.00000°, λ-97.00000°. NP2: ϕs=159.00000°, δ47.00000°, λ-83.00000°. Principal axes: T 1.4950, Plg1.0000°, Azm244.0000°; N -0.0480, Plg5.0000°, Azm334.0000°; P -1.4430, Plg85.0000°, Azm138.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***13*** *23:08:49.9±1.6, 64°.64N±0°.08×17°.5W±0°.1, h11km±4km, mb4.6/179 Error ellipse: s-maj=11.3km s-min=8.9km az=193.0*
ISC 13 23:08:48.9±0.3, 64°.70N±0°.04×17°.46W±0°.03, h10km, n497, σ1s95/449, mb4.6/170, MS3.8/41, 10C-2D, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.10**	**25**	P	Pg	23 08 45.6	-5.9
	baz=15						
IDYN				S	**Sg**	**23 08 47.9**	**-5.6**
	baz=15						
IHAM	**Hamarinn**	**0.27**	**215**	P	Pg	23 08 48.1	-6.4
	baz=220						
IGRF	**Grimsfjall**	**0.31**	**164**	P	Pg	23 08 48.8	-6.4
	baz=165						
IKVE	**Kverkfjoll**	**0.34**	**94**	P	Pg	23 08 49.6	-6.1
	baz=89						
IKVE				S	**Sg**	**23 08 54.4**	**-5.8**
	baz=89						
THOR	**Thorvaldshraun**	**0.41**	**55**	P	Pg	23 08 50.7	-6.2
	baz=51						
THOR				S	**Sg**	**23 08 57.3**	**-5.0**
	baz=51						
IHUS	**Husbondi**	**0.42**	**192**	P	Pg	23 08 50.5	-6.6
	baz=194						
ISKR	**Skrokkalda**	**0.42**	**250**	P	Pg	23 08 51.0	-6.2
	baz=255						
IKRE	**Kreppuhraun**	**0.47**	**80**	P	Pg	23 08 51.4	-6.7
	baz=76						
IKRE				S	**Sg**	**23 08 58.3**	**-6.0**
	baz=76						
IASK	**Askja**	**0.49**	**44**	P	Pg	23 08 52.4	-6.1
	baz=41						
IASK				S	**Sg**	**23 08 59.5**	**-5.5**
	baz=41						
IJOK	**Jokulheimar**	**0.51**	**221**	P	Pg	23 08 51.9	-7.0
	baz=224						
IMKO	**Mokollar**	**0.55**	**60**	P	Pg	23 08 53.2	-6.5
	baz=57						
IKSK	**Karasker**	**0.69**	**141**	P	Pg	23 08 54.5	-7.8
	baz=140						

IVSH	**V-Sauoahnukur**	**0.75**	**81**	P		Pg	23 08 56.0	-7.4	
	baz=79								
IVSH				S		**Sg**	**23 09 06.4**	**-6.8**	
	baz=79								
IKAL	**Kalfafell**	**0.77**	**187**	P		Pg	23 08 56.0	-7.7	
	baz=188								
IADA	**Aoalbol**	**0.86**	**68**	P		Pg	23 08 58.2	-7.3	
	baz=66								
IHVE	**Hveravellir**	**0.92**	**281**	P		Pg	23 08 59.4	-7.2	
	baz=283								
IMEL	**Melhnausar**	**0.93**	**21**	P		Pg	23 08 59.8	-7.0	
	baz=20								
IREN	**Reynihlio**	**0.97**	**14**	P		Pg	23 09 00.5	-7.1	
	baz=13								
IKVO	**Krokottuvotn**	**1.04**	**13**	P		Pb	23 09 01.7	-7.3	
	baz=12								
IGRS	**Grimsstaoir**	**1.09**	**30**	P		Pb	23 09 03.2	-6.7	
	baz=29								
ISKI	**Skildingahlsh**	**1.19**	**9**	P		Pn	23 09 04.1	-7.4	
	baz=8.0								
IGHA	**Grjothals**	**1.19**	**16**	P		Pn	23 09 04.1	-7.5	
	baz=15								
IGRA	**Granastaoir**	**1.22**	**358**	P		Pn	23 09 04.7	-7.3	
	baz=357								
ISIG	**Siglufjorour**	**1.56**	**338**	P		Pn	23 09 10.0	-6.6	
	baz=338								
ISIG				S		**Sn**	**23 09 30.6**	**-6.2**	
	baz=338								
BORG	**Borgarnes**	**1.66**	**273**	Pn		Pn	23 09 10.8	-7.2	
	27nm,0.3s,baz=102,slow=11,SNR=50								
BORG					Sn	**Sn**	**23 09 35.3**	**-4.0**	
	29nm,0.3s,baz=210,slow=20,SNR=6.6								
BORG	**Borgarnes**	**1.66**	**273**	P		**Pn**	**23 09 14.8**	**-3.2**	
BORG	**Borgarnes**	**1.66**	**273**	Pn		**Pn**	**23 09 14.8**	**-3.2**	
ILEI	**Leirhofn**	**1.76**	**13**	P		Pn	23 09 13.0	-6.3	
	baz=12								
SCO	**Scoresbysund**	**6.05**	**346**	P		**Pn**	**23 10 17.0**	**-1.3**	
SCO	**Scoresbysund**	**6.05**	**346**	Pn		**Pn**	**23 10 17.0**	**-1.3**	
SCO	**Scoresbysund**	**6.05**	**346**	*e*		Pn	23 10 12.7	-5.6	
	baz=164,slow=7.4								
SCO				*i* P		Pn	23 10 14.5	-3.8	
SCO				*i* S		**Sn**	**23 11 30.0**	**+2.5**	
SCO				IAML			23 11 40.1		
	comp=Z,2.6nm,0.5s								
JMIC	**Jan Mayen**	**7.15**	**24**	LR		LR	23 12 41.8		
	comp=Z,324nm,21.2s,baz=188,slow=32								
LEWI	**Lewis, Hebride**	**8.30**	**138**	*e*P		**Pn**	**23 10 45.4**	**-3.8**	
LINV	**Loch Inver, As**	**8.81**	**133**	*e*P		**Pn**	**23 10 52.6**	**-3.5**	
KAC	**Achnashellach**	**9.30**	**135**	*e*P		**Pn**	**23 10 59.1**	**-3.8**	
KPL	**Plockton**	**9.33**	**137**	*e*P		Pn	23 10 58.1	-5.2	
DBG	**Daneborg**	**9.70**	**356**	*e*P		Pn	23 11 14.1	+5.9	
INVG	**Invergeldie, C**	**10.58**	**135**	*e*P		Pn	23 11 15.2	-5.2	
SUMG	**Summit**	**10.92**	**325**	P		**Pn**	**23 11 25.8**	**+0.5**	
SUMG	**Summit**	**10.92**	**325**	Pn		**Pn**	**23 11 25.8**	**+0.5**	
PGBU	**Glenifferbraes**	**10.98**	**138**	*e*P		**Pn**	**23 11 21.8**	**-4.0**	
EKB10	**Eskdalemuir Ar**	**11.75**	**136**	Pn		**Pn**	**23 11 35.6**	**-0.8**	
EKB9	**Eskdalemuir Ar**	**11.75**	**136**	Pn		**Pn**	**23 11 36.1**	**-0.3**	
EKB8	**Eskdalemuir Ar**	**11.76**	**136**	Pn		**Pn**	**23 11 36.4**	**-0.1**	
EKB7	**Eskdalemuir Ar**	**11.76**	**136**	Pn		**Pn**	**23 11 35.9**	**-0.6**	
EKB	**Eskdalemuir**	**11.76**	**136**	Pn		**Pn**	**23 11 37.8**	**+1.2**	
EKR1	**Eskdalemuir Ar**	**11.77**	**136**	Pn		**Pn**	**23 11 37.0**	**+0.4**	
EKB6	**Eskdalemuir Ar**	**11.77**	**136**	Pn		**Pn**	**23 11 36.5**	**0.0**	
EKB5	**Eskdalemuir Ar**	**11.77**	**136**	Pn		**Pn**	**23 11 36.5**	**-0.2**	
EKR2	**Eskdalemuir Ar**	**11.77**	**136**	Pn		**Pn**	**23 11 36.6**	**-0.1**	
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn		Pn	23 11 31.6	-5.1	
	baz=324,slow=12,SNR=2.7								
EKB4	**Eskdalemuir Ar**	**11.78**	**136**	Pn		**Pn**	**23 11 37.0**	**+0.2**	
ESK	**Eskdalemuir**	**11.78**	**136**	P		**Pn**	**23 11 36.9**	**+0.2**	
ESK	**Eskdalemuir**	**11.78**	**136**			**Pn**	**23 11 36.9**	**+0.2**	
EKB3	**Eskdalemuir Ar**	**11.78**	**136**	Pn		**Pn**	**23 11 36.6**	**-0.2**	
EKR3	**Eskdalemuir Ar**	**11.78**	**136**	Pn		**Pn**	**23 11 37.1**	**+0.4**	
EKB2	**Eskdalemuir Ar**	**11.79**	**136**	Pn		**Pn**	**23 11 36.4**	**-0.5**	
EKR4	**Eskdalemuir Ar**	**11.79**	**136**	Pn		**Pn**	**23 11 37.1**	**+0.2**	
EKB1	**Eskdalemuir Ar**	**11.79**	**136**	Pn		**Pn**	**23 11 36.6**	**-0.3**	
EKR5	**Eskdalemuir Ar**	**11.79**	**136**	Pn		**Pn**	**23 11 37.3**	**+0.4**	
EKR6	**Eskdalemuir Ar**	**11.80**	**136**	Pn		**Pn**	**23 11 36.7**	**-0.3**	
EKR7	**Eskdalemuir Ar**	**11.80**	**136**	Pn		**Pn**	**23 11 37.5**	**+0.4**	
EKR8	**Eskdalemuir Ar**	**11.81**	**136**	Pn		**Pn**	**23 11 38.3**	**+1.1**	
EKR9	**Eskdalemuir Ar**	**11.82**	**136**	Pn		**Pn**	**23 11 37.7**	**+0.4**	
EKR10	**Eskdalemuir Ar**	**11.82**	**136**	Pn		**Pn**	**23 11 36.9**	**-0.5**	
DAG	**Danmarks Havn**	**12.14**	**359**	*i* P		**Pn**	**23 11 45.3**	**+3.8**	
DAG	**Danmarks Havn**	**12.14**	**359**	*i* P		**Pn**	**23 11 45.3**	**+3.8**	
DAG	**Danmarks Havn**	**12.14**	**359**	*i* P		**Pn**	**23 11 45.4**	**+3.8**	
DSB	**Dublin**	**12.81**	**149**	Pn		**Pn**	**23 11 51.7**	**+1.0**	
NC204	**NORSAR Array S**	**13.21**	**92**	Pn		**Pn**	**23 11 56.0**	**-0.4**	
NBO00	**NORSAR Array S**	**13.34**	**93**	Pn		**Pn**	**23 11 58.1**	**+0.1**	
NOA	**NORSAR Array B**	**13.52**	**93**	Pn		Pn	23 11 56.5	-4.0	
	comp=Z,0.0nm,0.3s,baz=302,slow=11,SNR=4.4								
NOA					LR	LR	23 17 25.0		
	comp=Z,308nm,19.4s,baz=295,slow=38								
NB201	**NORSAR Array S**	**13.55**	**92**	Pn		**Pn**	**23 11 57.6**	**-3.3**	
NC405	**NORSAR Array S**	**13.70**	**92**	Pn		**Pn**	**23 12 00.8**	**-2.1**	
NC602	**NORSAR Array S**	**13.81**	**93**	Pn		**Pn**	**23 12 03.6**	**-0.8**	
HFS	**Hagfors**	**15.03**	**93**	LR		LR	23 18 11.7		
	comp=Z,361nm,19.4s,baz=292,slow=38								
SPITS	**Spitsbergen Ar**	**16.83**	**23**	LR		LR	23 17 18.4		
	comp=Z,178nm,21.2s,baz=195,slow=30								
ARCES	**ARCESS Array B**	**17.08**	**55**	Pn		**Pn**	**23 12 45.6**	**-1.8**	
	baz=300,slow=11,SNR=3.0								
ARCES					LR	LR	23 17 56.2		
	comp=Z,243nm,18.0s,baz=290,slow=32								
BSEG	**Bad Segeberg**	**17.64**	**115**	P		**Pn**	**23 12 54.2**	**-0.2**	
BSEG				pmax		pmax			
	comp=Z,36nm,1.5s								
RGN	**Rugen**	**18.38**	**109**			**Pn**	**23 13 04.1**	**+0.6**	
FLN	**La Foliniere**	**18.39**	**142**	*e*P		**Pn**	**23 13 02.7**	**-0.9**	
FLN				pmax		pmax			
	comp=Z,20nm,2.1s								
BUG	**Bochum--Univer**	**18.47**	**124**	P		**Pn**	**23 13 05.3**	**+0.7**	
BUG				pmax		pmax			
	comp=Z,45nm,1.6s								
BMRD	**Maredsous**	**18.57**	**130**	pPn		**Pn**	**23 13 08.0**	**+2.1**	
BAIF	**Baives**	**18.60**	**132**	*e*P		**Pn**	**23 13 07.3**	**+1.1**	
BAIF				pmax		pmax			
	comp=Z,62nm,1.4s								
GRR	**Gorron**	**18.63**	**143**	*e*P		**P**	**23 13 05.7**	**-0.7**	
GRR				pmax		pmax			
	comp=Z,66nm,1.2s								
BCLA	**Clavier**	**18.65**	**129**	pPn		**Pn**	**23 13 08.2**	**+1.4**	
DOU	**Dourbes**	**18.69**	**131**	Pn		**P**	**23 13 06.7**	**-0.4**	
MEM	**Membach**	**18.72**	**128**	Pn		**P**	**23 13 07.4**	**0.0**	
MEM				x		x	23 13 12.8		
MEM	**Membach**	**18.72**	**128**	P		**P**	**23 13 07.8**	**+0.5**	
MEM				pmax		pmax			
	comp=Z,48nm,2.9s								
BTNL	**Ternell**	**18.78**	**128**	pPn		**Pn**	**23 13 09.9**	**+1.4**	
WLF	**Walferdange**	**19.58**	**129**	pPn		**Pn**	**23 13 19.5**	**+1.5**	
WLF	**Walferdange**	**19.58**	**129**	P		**P**	**23 13 16.1**	**-0.6**	
WLF	**Walferdange**	**19.58**	**129**			**P**	**23 13 16.1**	**-0.6**	
FINES	**FINESS Array B**	**19.68**	**79**	LR		LR	23 19 50.5		
	comp=Z,214nm,21.8s,baz=307,slow=34								
FINES	**FINESS Array B**	**19.68**	**79**	P		**P**	**23 13 19.5**	**+1.8**	
FINES	**FINESS Array B**	**19.68**	**79**	P		**P**	**23 13 19.5**	**+1.8**	
TULEG	**Thule**	**19.83**	**327**	P		**P**	**23 13 20.8**	**+1.6**	
MFF	**Saint Martin d**	**20.47**	**144**	P		**P**	**23 13 27.7**	**+1.3**	
CLL	**Collm**	**20.71**	**116**	*e*P		**P**	**23 13 29.0**	**0.0**	
	comp=Z,41nm,1.2s								
CLL				*i* sP		**sP**	**23 13 33.9**	**+0.3**	
CLL				*i*			23 13 39.7		
CLL				*e*S		Sn	23 17 24.0	-0.6	
CLL				*e*SSS		SSS	23 17 54.0		
CLL	**Collm**	**20.71**	**116**	P		**P**	**23 13 28.8**	**-0.1**	
CLL				pmax		pmax			
	comp=Z,26nm,1.1s								
CLL	**Collm**	**20.71**	**116**	P		**P**	**23 13 28.8**	**-0.1**	
CLL				IAmb		IAmb	23 13 31.6		
	comp=Z,26nm,1.1s								
MOX	**Moxa**	**20.71**	**119**	P		**P**	**23 13 29.6**	**+0.6**	
MOX				pmax		pmax			
	comp=Z,28nm,1.5s								
LOR	**Lormes**	**20.96**	**136**	P		**P**	**23 13 31.4**	**-0.4**	
LOR				pmax		pmax			
	comp=Z,34nm,1.2s								
CDF	**Champ du Feu**	**21.03**	**129**	*e*P		**P**	**23 13 32.8**	**+0.2**	
CDF				pmax		pmax			
	comp=Z,38nm,1.3s								
ECH	**Echery**	**21.16**	**129**	P		**P**	**23 13 34.6**	**+0.6**	
ECH				pmax		pmax			
	comp=Z,28nm,1.1s								
ECH	**Echery**	**21.16**	**129**	P		**P**	**23 13 34.6**	**+0.6**	
ECH				IAmb		IAmb	23 13 37.3		
	comp=Z,28nm,1.1s								
AVF	**Avril sur Loir**	**21.25**	**138**	*e*P		**P**	**23 13 33.7**	**-1.1**	
AVF				pmax		pmax			
	comp=Z,54nm,1.5s								
BGF	**Bois d'Agland**	**21.31**	**139**	*e*P		**P**	**23 13 34.4**	**-1.2**	
BGF				pmax		pmax			
	comp=Z,21nm,0.8s								
GRA1	**Grafenberg Arr**	**21.34**	**121**	P		**P**	**23 13 36.3**	**+0.5**	
GRA1				IAmb		IAmb	23 13 46.3		
	comp=Z,25nm,1.1s								
GRF	**Grafenberg Arr**	**21.34**	**121**	P		**P**	**23 13 36.3**	**+0.5**	
GRF				pmax		pmax			
	comp=Z,25nm,1.1s								
GRF	**Grafenberg Arr**	**21.34**	**121**	*e*P		**P**	**23 13 36.1**	**+0.3**	
	comp=Z,38nm,1.4s,baz=326,slow=9.4								
NKC	**Novy Kostel**	**21.35**	**118**	*e*P		**P**	**23 13 36.5**	**+0.5**	
NKC				MLR		MLR			
	comp=Z,800nm,7.8s								
NKC	**Novy Kostel**	**21.35**	**118**	*e*P		**P**	**23 13 36.5**	**+0.5**	
NKC				AMS		AMS	23 26 00.0		
	comp=Z,800nm,7.8s								
STU	**Stuttgart**	**21.38**	**126**	P		**P**	**23 13 37.4**	**+1.1**	
STU				pmax		pmax			
	comp=Z,49nm,1.1s								
STU	**Stuttgart**	**21.38**	**126**	P		**P**	**23 13 37.4**	**+1.1**	
TCF	**Toulx Ste Croi**	**21.38**	**140**	*e*P		**P**	**23 13 35.5**	**-0.8**	
TCF				pmax		pmax			
	comp=Z,63nm,1.2s								
HINF	**Hinteralfeld**	**21.41**	**131**	*e*P		**P**	**23 13 37.6**	**+1.0**	
HINF				pmax		pmax			
	comp=Z,89nm,2.1s								
BRG	**Berggiesshubel**	**21.41**	**115**	*i* P		**P**	**23 13 37.2**	**+0.6**	
	comp=Z,64nm,1.5s								
BRG				S		Sn	23 17 45.0	+3.3	
	comp=N,541nm,14.5s								
	comp=E,501nm,15.5s								
	comp=Z,601nm,17.8s								
BRG	**Berggiesshubel**	**21.41**	**115**	*i* P		**P**	**23 13 37.2**	**+0.6**	
BRG				S		Sn	23 17 45.0	+3.3	
BRG				pmax		pmax			
	comp=Z,64nm,1.5s								
BRG				MLR		MLR			
	comp=N,541nm,14.5s								
BRG				MLR		MLR			
	comp=E,501nm,15.5s								
BRG				MLR		MLR			
	comp=Z,601nm,17.8s								
BFO	**Black Forest**	**21.46**	**127**	P		**P**	**23 13 38.2**	**+1.0**	
BFO				pmax		pmax			
	comp=Z,19nm,1.0s								
BFO	**Black Forest**	**21.46**	**127**	P		**P**	**23 13 38.2**	**+1.0**	
BFO				IAmb		IAmb	23 13 40.0		
	comp=Z,20nm,1.0s								
SMF	**Signal de Mont**	**21.52**	**137**	*e*P		**P**	**23 13 37.8**	**0.0**	
SMF				pmax		pmax			
	comp=Z,59nm,1.3s								
VSU	**Vasula**	**21.55**	**86**	*e*P		**P**	**23 13 38.1**	**+0.2**	
FRB	**Frobisher Bay**	**21.75**	**291**	LR		LR	23 21 30.4		
	comp=Z,278nm,21.8s,baz=45,slow=35								
PVCC	**Panska Ves**	**21.93**	**115**	*e*P		**P**	**23 13 47.9**	**+5.8**	
PVCC				MLR		MLR			
	comp=Z,600nm,9.4s								
PVCC	**Panska Ves**	**21.93**	**115**	*e*P		**P**	**23 13 47.9**	**+5.8**	
PVCC				*e*S		Sn	23 17 52.7	-1.4	
PVCC				AMS		AMS	23 26 30.0		
	comp=Z,600nm,9.4s								
SLE	**Schleitheim**	**22.00**	**128**	P		**P**	**23 13 45.4**	**+2.4**	
SLE				pmax		pmax			
	comp=Z,36nm,1.5s								
RJF	**Les Rejaudoux**	**22.11**	**142**	*e*P		**P**	**23 13 43.2**	**-0.9**	
RJF				pmax		pmax			
	comp=Z,96nm,1.6s								
PABE	**Paberze**	**22.20**	**95**	*e*P		**P**	**23 13 44.8**	**-0.1**	
PRA	**Prague**	**22.24**	**116**	*e*P		**P**	**23 13 47.5**	**+2.0**	
PRA				MLR		MLR			
	comp=Z,300nm,12.1s								
PRA	**Prague**	**22.24**	**116**	*e*P		**P**	**23 13 47.5**	**+2.0**	
PRA				*e*S		**S**	**23 17 56.1**	**+6.1**	
PRA				AMS		AMS	23 26 20.0		
	comp=Z,300nm,12.1s								
LFF	**La Frestale**	**22.25**	**144**	*e*P		**P**	**23 13 46.4**	**+0.9**	
LFF				pmax		pmax			
	comp=Z,76nm,1.3s								
PRU	**Pruhonice**	**22.35**	**116**	*e*P		**P**	**23 13 45.1**	**-1.5**	
PRU				*e*S		**S**	**23 17 56.4**	**+4.4**	
PRU				MLR		MLR			
	comp=Z,600nm,11.0s								
PRU	**Pruhonice**	**22.35**	**116**	*e*P		**P**	**23 13 45.1**	**-1.5**	
PRU				*e*S		**S**	**23 17 56.4**	**+4.4**	
PRU				AMS		AMS	23 26 10.0		
	comp=Z,600nm,11.0s								
KSP	**Ksiaz**	**22.36**	**112**	*e*P		**P**	**23 13 49.2**	**+2.5**	
KSP	**Ksiaz**	**22.36**	**112**	P		**P**	**23 13 45.8**	**-1.0**	
KSP				pmax		pmax			
	comp=Z,39nm,1.3s			

LPL La Plagne 23.41 134 *e*P **P** **23 13 58.2 +0.2**
LPL pmax pmax
comp=Z,28nm,1.4s
FETA Feichten 23.41 126 *e*P **P** **23 14 00.2 +2.3**
comp=Z,6.0nm,1.2s
TUE Stuetta 23.42 128 P **P** **23 13 59.2 +1.2**
LPG La Plagne 23.44 134 *e*P **P** **23 13 59.7 +1.4**
LPG pmax pmax
comp=Z,32nm,1.3s
WATA Walderalm 23.44 124 *e*P **P** **23 13 59.6 +1.5**
comp=Z,18nm,1.3s
IDID Didziasalis 23.51 93 *e*P **P** **23 13 56.7 -1.9**
WTTA Wattenberg 23.53 124 *e*P **P** **23 14 00.3 +1.2**
comp=Z,19nm,1.2s
WTTA Wattenberg 23.53 124 P **P** **23 14 00.5 +1.4**
WTTA pmax pmax
comp=Z,23nm,1.5s
FUORN Ofenpass-Fuorn 23.60 127 P **P** **23 14 00.4 +0.5**
EUNU Eureka 23.64 336 P **P** **23 13 59.1 -0.7**
EUNU IAmb IAmb 23 14 06.0
comp=Z,13nm,0.9s
ORIF Oris-en-Rattie 23.69 136 *e*P **P** **23 14 02.6 +2.0**
ORIF pmax pmax
comp=Z,30nm,1.4s
VRAC Vranov 23.70 114 LR LR 23 24 29.5
comp=Z,308nm,18.2s,baz=332,slow=40
VRAC Vranov 23.70 114 *e*P **P** **23 14 01.0 +0.5**
MORC Moravsky Berou 23.70 112 *e*P **P** **23 14 00.8 +0.3**
MORC Moravsky Berou 23.70 112 P **P** **23 14 00.9 +0.3**
MORC Moravsky Berou 23.70 112 P **P** **23 14 00.9 +0.3**
BNI Bardonecchia 23.81 134 P **P** **23 14 02.4 +0.6**
BNI pmax pmax
comp=Z,10.0nm,1.1s
BNI Bardonecchia 23.81 134 P **P** **23 14 02.4 +0.6**
KRUC Moravsky 23.82 115 *e*P **P** **23 14 01.4 -0.2**
OKC Ostrava-Krasne 23.89 111 *e*S **S** **23 18 26.4 +8.2**
OKC AMS AMS 23 26 40.0
comp=Z,500nm,9.3s
MOA Molln 24.00 119 *e*P **P** **23 14 03.5 +0.1**
comp=Z,18nm,1.4s
MTLF Montolieu 24.12 143 *e*P **P** **23 14 06.3 +1.8**
MTLF pmax pmax
comp=Z,121nm,2.1s
OJC Ojcow 24.26 109 P **P** **23 14 05.1 -0.7**
OJC Ojcow 24.26 109 P **P** **23 14 05.1 -0.7**
ABTA Abfaltersbach 24.28 123 *e*P **P** **23 14 09.0 +2.9**
comp=Z,8.9nm,1.1s
KBA Koelnbreinsper 24.30 122 *e*P **P** **23 14 10.0 +3.6**
comp=Z,15nm,1.2s
JAVC Velka Javorina 24.48 113 *e*P **P** **23 14 08.5 +0.6**
CONA Conrad Observa 24.53 117 *e*P **P** **23 14 08.8 +0.4**
comp=Z,13nm,0.9s
CTI Castel Tesino 24.57 125 P **P** **23 14 09.8 +1.0**
CTI pmax pmax
comp=Z,7.0nm,0.8s
CTI Castel Tesino 24.57 125 P **P** **23 14 09.8 +1.0**
ZOU Zoufplan 24.61 123 IAmb IAmb 23 14 30.2
comp=Z,16nm,1.2s
CIMO Cimolais 24.63 124 IAmb IAmb 23 14 18.8
comp=Z,12nm,1.1s
SMOL Smolenice 24.66 114 *e*P **P** **23 14 10.5 +1.0**
SMOL pmax pmax
comp=Z,16nm,1.4s
SMOL Smolenice 24.66 114 *e*P **P** **23 14 10.5 +1.0**
MODS Modra-Piesok 24.72 115 *e*P **P** **23 14 09.1 -0.9**
MODS pmax pmax
comp=Z,45nm,1.5s
MODS Modra-Piesok 24.72 115 *e*P **P** **23 14 09.1 -0.9**
STAL STALIGIAL 24.77 124 IAmb IAmb 23 14 13.5
comp=Z,20nm,1.1s
PRED Cave del Predi 24.92 122 IAmb IAmb 23 14 17.1
comp=Z,14nm,1.2s
LANS Liptovska Anna 24.96 111 *e*P **P** **23 14 13.5 +1.3**
LANS pmax pmax
comp=Z,8.0nm,0.9s
LANS Liptovska Anna 24.96 111 *e*P **P** **23 14 13.5 +1.3**
ARSA Arzberg 24.97 119 *e*P **P** **23 14 13.8 +1.5**
comp=Z,11nm,1.1s
NIE Niedzica 25.09 109 *e*P **P** **23 14 14.8 +1.5**
NIE Niedzica 25.09 109 P **P** **23 14 14.8 +1.5**
FRF La Foret Royal 25.15 136 *e*P **P** **23 14 14.2 +0.3**
FRF pmax pmax
comp=Z,17nm,1.2s
TEOL Teolo 25.18 126 P **P** **23 14 14.5 +0.4**
OBKA Obir 25.22 121 *e*P **P** **23 14 17.2 +2.6**
comp=Z,14nm,1.3s
VYHS Vyhne 25.23 113 *e*P **P** **23 14 15.5 +0.9**
VYHS pmax pmax
comp=Z,34nm,1.6s
VYHS Vyhne 25.23 113 *e*P **P** **23 14 15.5 +0.9**
SOKA Soboth 25.26 120 *e*P **P** **23 14 16.1 +1.1**
comp=Z,9.3nm,1.2s
KLMR Klimovskoe 25.58 72 *e*P **P** **23 14 17.8 +0.2**
KLMR *e*S **S** **23 18 48.5 +3.5**
KLMR pmax pmax
comp=Z,49nm,1.3s
KLMR Klimovskoe 25.58 72 *e*P **P** **23 14 17.9 +0.3**
KLMR AMP 23 14 21.4
comp=Z,49nm,1.3s
KLMR *e*S **S** **23 18 48.5 +3.5**
KLMR *e*S **S** **23 18 48.5 +3.5**
KLMR LQ LQ 23 21 26.3
KLMR LQ LQ 23 21 26.3
KLMR LR LR 23 23 15.7
ZCCA Zocca 25.83 128 P **P** **23 14 21.1 +1.0**
KWP Kalwaria Pacla 25.91 106 *e*P **P** **23 14 22.2 +1.5**
KWP Kalwaria Pacla 25.91 106 P **P** **23 14 22.0 +1.3**
KWP pmax pmax
comp=Z,28nm,1.1s
KWP Kalwaria Pacla 25.91 106 P **P** **23 14 22.0 +1.3**
CRVS Cervenica-Dubn 25.96 109 *e*P **P** **23 14 22.1 +0.8**
CRVS Cervenica-Dubn 25.96 109 *e*P **P** **23 14 22.1 +0.8**
SCHQ Schefferville 26.05 271 P **P** **23 14 17.0 -5.0**
comp=Z,4.5nm,0.8s,baz=62,slow=11,SNR=2.1
SCHQ LR LR 23 23 13.8
comp=Z,240nm,21.9s,baz=38,slow=34
PSZ Piszkesteto 26.12 112 P **P** **23 14 22.9 +0.2**
PSZ Piszkesteto 26.12 112 P **P** **23 14 22.9 +0.2**
KOLS Kolonicke sedl 26.27 108 *e*P **P** **23 14 24.9 +0.9**
KOLS Kolonicke sedl 26.27 108 *e*P **P** **23 14 24.9 +0.9**
ESDC Sonseca Array 26.28 156 P **P** **23 14 18.6 -5.7**
comp=Z,0.9nm,0.8s,baz=348,slow=9.8,SNR=3.0
ESDC LR LR 23 24 33.3
comp=Z,240nm,18.0s,baz=325,slow=36
ESDC Sonseca Array 26.28 156 P **P** **23 14 24.7 +0.5**
LVV L'vov 26.31 104 *e*P **P** **23 14 24.1 -0.2**
LVV *e*S **S** **23 18 53.5 -3.3**
LVV pmax pmax
comp=Z,120nm,1.4s
LVV MLR MLR
comp=N,300nm,12.0s
LVV MLR MLR
comp=E,200nm,12.0s
LVV MLR MLR
comp=Z,300nm,12.0s
PAB San Pablo 26.34 157 P **P** **23 14 24.3 -0.5**
PAB pmax pmax
comp=Z,11nm,1.2s
PAB San Pablo 26.34 157 P **P** **23 14 24.3 -0.5**
PAB IAmb IAmb 23 14 37.4
comp=Z,11nm,1.1s
UZH Uzhgorod 26.52 108⇓ *i*P **P** **23 14 25.0 -1.2**
UZH *e* 23 14 27.1
UZH *i* 23 14 32.5
UZH *e* 23 15 25.8
UZH *e*S **S** **23 18 54.2 -5.8**
UZH MLR MLR
comp=Z,60nm,14.0s
OSSC Osservatorio P 26.65 129 P **P** **23 14 29.2 +1.7**
PGF Pioggiola 26.80 133 *e*P **P** **23 14 33.4 +4.5**
PGF pmax pmax
comp=Z,39nm,1.1s
AKASG Malin Array Be 27.83 98 P **P** **23 14 34.2 -3.7**
comp=Z,1.7nm,0.7s,baz=321,slow=9.4,SNR=4.0
AKASG LR LR 23 26 00.5
comp=Z,153nm,19.4s,baz=315,slow=37
AKASG Malin Array Be 27.83 98 *i*P **P** **23 14 39.5 +1.5**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKBB Malin Array Si 27.83 98 *i*P **P** **23 14 37.8 -0.2**
AKBB Malin Array Si 27.83 98 IAmb IAmb 23 14 44.8
comp=Z,8.6nm,1.1s
OBN Obninsk 27.86 84 LR LR 23 24 57.6
comp=Z,23nm,18.3s,baz=3.0,slow=35
OBN Obninsk 27.86 84 *i*P **P** **23 14 39.6 +1.4**
OBN pmax pmax
comp=Z,35nm,1.3s
OBN Obninsk 27.86 84 P **P** **23 14 39.4 +1.2**
NRCA Norcia 27.89 127 P **P** **23 14 39.3 +0.5**
MOS Moscow 27.90 82 *e*P **P** **23 14 39.0 +0.5**
MOS *e* 23 15 24.1
BUR08 Bucovina Ar. S 28.49 106 P **P** **23 14 45.0 +0.9**
BURAR Bucovina Array 28.52 106 P **P** **23 14 44.6 +0.3**
MLR Muntele Rosu 30.53 108 P **P** **23 15 03.6 +1.5**
MLR Muntele Rosu 30.53 108 P **P** **23 15 03.6 +1.5**
LPSR Galich'ya Gora 30.61 86 *e*P **P** **23 15 03.7 +1.1**
LPSR pmax pmax
comp=Z,10.0nm,1.4s
KIRV Kirov 30.95 69*ce*P **P** **23 15 07.3 +1.7**
VSR Storozhevoye 31.71 88 *e*P **P** **23 15 13.6 +1.2**
VSR pmax pmax
comp=Z,30nm,1.6s
VRH Novokhopyorsk 32.82 85 *e*P **P** **23 15 21.6 -0.4**
VRH pmax pmax
comp=Z,10.0nm,0.9s
SRS Serrai 33.24 115 P **P** **23 15 26.4 +0.5**
ALN Alexandroupoli 34.40 113 P **P** **23 15 36.0 +0.2**
ALN Alexandroupoli 34.40 113 P **P** **23 15 36.0 +0.2**
AGG Agios Georgios 34.57 119 P **P** **23 15 39.5 +2.0**
FCC Fort Churchill 34.67 297 P **P** **23 15 39.1 +1.1**
FCC pmax pmax
comp=Z,35nm,1.1s
FCC Fort Churchill 34.67 297 P **P** **23 15 39.1 +1.1**
MOQ Mont Orford 35.45 264 P **P** **23 15 45.0 0.0**
ANN Anapa 35.90 97 *e*P P 23 15 40.4 -8.4
ANN pmax pmax
comp=Z,22nm,1.0s
ARU Arti 36.05 66*d i*P **P** **23 15 52.1 +2.1**
ARU 23 17 08.6
ARU S **S** **23 21 35.2 +6.6**
ARU SS **SnSn** **23 23 48.1 -4.6**
ARU pmax pmax
comp=Z,19nm,1.6s
ARU Arti 36.05 66 P **P** **23 15 51.5 +1.5**
NRIK Noril'sk 36.42 35 P **P** **23 15 51.5 -1.4**
comp=Z,9.8nm,1.1s,baz=290,slow=7.0,SNR=8.7
NRIK LR LR 23 32 50.2
comp=Z,47nm,19.4s,baz=20,slow=40
NRIK Noril'sk 36.42 35 *i*P **P** **23 15 54.2 +1.2**
NRIK pmax pmax
comp=Z,12nm,1.2s
MACI Morro de la Ar 36.47 179 P **P** **23 15 54.8 +0.8**
SVE Sverdlovsk 36.58 65 *e*P **P** **23 15 54.8 +0.3**
SVE pmax pmax
comp=Z,12nm,1.3s
SOC Sochi 37.85 96 *e*P **P** **23 16 04.7 -0.7**
SOC *e* 23 17 30.7
SOC *e*S **S** **23 21 56.1 -0.2**
SOC *e*SSS SSS 23 25 06.4
SOC MLR MLR
comp=Z,180nm,13.0s
GOF Gofitskoye 38.10 91⇑ *e*P **P** **23 16 10.3 +2.8**
GOF pmax pmax
comp=Z,68nm,1.4s
BR131 Keskin Array S 38.47 105 P **P** **23 16 11.2 +0.3**
BR131 pmax pmax
comp=Z,6.0nm,1.0s
BR131 Keskin Array S 38.47 105 P **P** **23 16 11.2 +0.3**
BRTR Keskin Array B 38.47 105 P **P** **23 16 09.0 -1.9**
comp=Z,3.3nm,0.8s,baz=316,slow=6.9,SNR=12
BRTR LR LR 23 32 30.6
comp=Z,32nm,18.0s,baz=330,slow=37
BRTR Keskin Array B 38.47 105 *i*P **P** **23 16 12.6 +1.7**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
BRTR Keskin Array B 38.47 105 P **P** **23 16 12.3 +1.4**
KIV Kislovodsk 38.83 93 *e*P **P** **23 16 16.3 +2.6**
KIV pmax pmax
comp=Z,18nm,1.0s
KIV MLR MLR
comp=Z,313nm,16.0s
KIV Kislovodsk 38.83 93 P **P** **23 16 14.6 +0.8**
SADO Sadowa 38.83 270 P **P** **23 16 13.7 0.0**
SADO IAmb IAmb 23 16 17.4
comp=Z,20nm,1.1s
KBZ Khabaz 39.10 93 P **P** **23 16 14.6 -1.3**
comp=Z,2.4nm,0.8s,baz=53,slow=20,SNR=3.9
KBZ LR LR 23 32 39.8
comp=Z,225nm,20.7s,baz=134,slow=37
KBZ Khabaz 39.10 93*ce*P **P** **23 16 17.7 +1.8**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
YKA Yellowknife Ar 39.20 313 P P 23 16 12.7 -3.8
comp=Z,2.8nm,1.0s,baz=42,slow=9.3,SNR=3.1
YKA LR LR 23 31 38.5
comp=Z,106nm,18.7s,baz=0.0,slow=35
YKA Yellowknife Ar 39.20 313 *i*P **P** **23 16 17.1 +0.6**
YKA pmax pmax
comp=Z,3.0nm,1.0s
ELL Elmali 39.50 112 P P 23 16 25.3 +5.9
INK Inuvik 39.82 329 P **P** **23 16 23.2 +1.6**
INK pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 39.82 329 P **P** **23 16 23.2 +1.6**
AKAS Kas 39.82 112 P **P** **23 16 22.9 +0.7**
AKAS IAmb IAmb 23 16 24.4
comp=Z,15nm,1.1s
N58A Sunbury 40.98 264 P **P** **23 16 33.7 +2.1**
KOPT Kop Dagi 41.11 98 P **P** **23 16 34.8 +1.9**
KOPT IAmb IAmb 23 16 52.4
comp=Z,8.4nm,0.6s
AKH Akhalkalaki 41.24 94 P **P** **23 16 35.0 +1.1**
AKH pmax pmax
comp=Z,23nm,1.0s
AKH Akhalkalaki 41.24 94 P **P** **23 16 35.0 +1.1**
A21K Barrow 41.40 341 P **P** **23 16 36.4 +1.8**
ULM Lac du Bonnet 41.60 289 LR LR 23 33 33.8
comp=Z,204nm,18.5s,baz=33,slow=36
MAK Makhachkala 41.70 89 *e*P **P** **23 16 36.0 -1.4**
MAK *e*S **S** **23 22 52.5 -1.3**
MAK *e*SS **SS** **23 25 59.6 +0.7**
MAK MLR MLR
comp=Z,117nm,11.0s
ABKAR Akbulak array 41.96 73 P **P** **23 16 37.3 -2.2**
ABKAR Akbulak array 41.96 73 IAmb IAmb 23 16 44.5
comp=Z,9.6nm,1.1s
TIXI Tiksi 41.99 15 *i*P **P** **23 16 40.3 +0.9**
TIXI Tiksi 41.99 15 P **P** **23 16 38.3 -1.2**
TIXI IAmb IAmb 23 16 46.1
comp=Z,17nm,1.1s
GAZ Gaziantep 42.12 104 P **P** **23 16 42.1 +1.1**
GAZ IAmb IAmb 23 16 46.8
comp=Z,11nm,1.1s
N54A Moraine State 42.29 267 P **P** **23 16 43.8 +1.6**
N54A IAmb IAmb 23 16 53.9
comp=Z,11nm,1.1s
TOLK Toolik Lake Re 42.72 336 **P** **23 16 46.8 +1.3**
TOLK Toolik Lake Re 42.72 336 P **P** **23 16 45.4 -0.1**
TOLK IAmb IAmb 23 16 51.4
comp=Z,25nm,1.1s
GNI Garni 42.82 94*ce*P **P** **23 16 49.6 +2.9**
GNI pmax pmax
comp=Z,14nm,1.2s
GNI Garni 42.82 94 P **P** **23 16 48.8 +2.0**
GNI IAmb IAmb 23 16 57.1
comp=Z,15nm,1.1s
BMAR Burnt Mountain 42.87 333 P **P** **23 16 48.5 +1.8**
O54A Avella 43.10 267 P **P** **23 16 50.0 +1.2**
BRVK Borovoye 43.10 62*ce*P **P** **23 16 50.6 +1.9**
BRVK pmax pmax
comp=Z,19nm,1.7s
BRVK Borovoye 43.10 62 P **P** **23 16 50.3 +1.6**
N51A Ashland 43.35 269 P **P** **23 16 51.5 +0.7**
GEVA Gevas 43.63 97 P **P** **23 16 53.3 0.0**
GEVA IAmb IAmb 23 17 02.3
comp=Z,9.3nm,1.0s
I42A Draeger Farm, 43.73 277 P **P** **23 16 54.4 +0.6**
I42A IAmb IAmb 23 16 54.6
comp=Z,16nm,1.1s
COLD Coldfoot 44.09 336 P **P** **23 16 58.2 +1.7**
TAM Tamanrasset 44.53 149 P **P** **23 17 01.7 +1.0**
TAM pmax pmax
comp=Z,5.0nm,1.1s
TAM Tamanrasset 44.53 149 P **P** **23 17 01.7 +1.0**
DAWY Dawson 44.68 328 IAmb IAmb 23 17 06.8
comp=Z,7.8nm,1.1s
L44A Lake County Fo 44.69 275 P **P** **23 17 02.9 +1.3**
PRP Porcupine Dome 44.73 332 P **P** **23 17 03.8 +2.0**
PRP IAmb IAmb 23 17 10.8
comp=Z,7.8nm,1.2s
RCRC Randolf Colleg 44.92 264 P **P** **23 17 04.8 +1.4**
MDND Maddock 45.01 289 P **P** **23 17 06.1 +2.0**
RDOG Red Dog Mine 45.27 343 P **P** **23 17 08.0 +2.1**
Q51A Peebles 45.33 269 P **P** **23 17 07.4 +0.7**
Q51A IAmb IAmb 23 17 08.3
comp=Z,6.7nm,0.9s
IL31 45.66 332 P **P** **23 17 10.7 +1.7**
IL31 IAmb IAmb 23 17 15.2
comp=Z,9.8nm,1.1s
ILAR Eielson Array 45.66 332 P **P** **23 17 06.0 -3.0**
comp=Z,2.2nm,1.1s,baz=28,slow=6.1,SNR=6.3
ILAR PcP **PcP** **23 18 43.2 -3.6**
comp=Z,1.7nm,0.9s,baz=336,slow=2.0,SNR=7.6
ILAR LR LR 23 37 24.3
comp=Z,75nm,20.4s,baz=44,slow=38
ILAR Eielson Array 45.66 332 P **P** **23 17 08.5 -0.5**
ILAR Eielson Array 45.66 332 P **P** **23 17 08.5 -0.5**
MDM Murphy Dome 45.76 333 P **P** **23 17 11.6 +1.8**
COLA College 45.76 333 *i*P **P** **23 17 09.5 -0.2**
COLA pmax pmax
comp=Z,23nm,1.6s
COLA College 45.76 333 P **P** **23 17 11.7 +2.0**
TCOL CIGO, UAF Yank 45.76 333 P **P** **23 17 11.6 +1.8**
I23K Minto, Yukon-K 45.80 334 P **P** **23 17 12.7 +2.6**
SFIN Lafayette 45.82 273 P **P** **23 17 10.3 -0.3**
SFIN IAmb IAmb 23 17 11.2
comp=Z,8.2nm,0.8s
IMAR Indian Mountai 45.83 337 P **P** **23 17 11.6 +1.3**
CCB Clear Creek Bu 45.95 333 P **P** **23 17 12.6 +1.3**
CCB IAmb IAmb 23 17 17.9
comp=Z,4.9nm,1.1s
HDA Harding Lake 45.99 332 P **P** **23 17 13.3 +1.6**
DOT Dot Lake 46.07 330 P **P** **23 17 10.8 -1.5**
DOT IAmb IAmb 23 17 11.3
comp=Z,9.4nm,1.0s
BCAR Beaver Creek A 46.08 329 P **P** **23 17 14.2 +1.8**
PAX Paxson 46.97 330 IAmb IAmb 23 17 25.6
comp=Z,6.8nm,1.2s
HYT Haines Junctio 47.02 325 P **P** **23 17 23.0 +3.1**
BPAW Bear Paw Mtn. 47.05 334 P **P** **23 17 22.0 +2.0**
V55A Taylorsville 47.09 264 P **P** **23 17 21.6 +1.1**
WCI Wyandotte Cave 47.26 271 P **P** **23 17 22.6 +0.7**
WCI pmax pmax
comp=Z,10.0nm,0.9s
WCI Wyandotte Cave 47.26 271 P **P** **23 17 22.6 +0.7**
ZAA0 Zalesovo Array 47.60 51 IAmb IAmb 23 17 28.9
comp=Z,5.2nm,1.0s
ZALV Zalesovo Beam 47.60 51 P **P** **23 17 21.7 -2.6**
comp=Z,0.5nm,0.4s,baz=317,slow=8.1,SNR=9.0
ZALV LR LR 23 39 11.7
comp=Z,40nm,18.5s,baz=80,slow=38
ZALV Zalesovo Beam 47.60 51 *i*P **P** **23 17 25.5 +1.2**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 47.60 51 P **P** **23 17 24.4 +0.2**
KURK Kurchatov 48.08 58 *i*P **P** **23 17 30.0 +1.9**
KURK pmax pmax
comp=Z,10.0nm,1.0s
KURK Kurchatov 48.08 58 P **P** **23 17 28.9 +0.9**
BCPM Bancas Point 48.30 325 P **P** **23 17 27.5 -2.2**
TKL Tuckaleechee C 48.35 266 LR LR 23 35 56.3
comp=Z,268nm,19.4s,baz=30,slow=34
BG3 Lake Jocassee 48.55 265 P **P** **23 17 33.6 +1.6**
BG3 IAmb IAmb 23 17 35.6
comp=Z,6.5nm,1.2s
SML Sawmill 48.61 331 P **P** **23 17 33.8 +1.6**
SML IAmb IAmb 23 17 45.8
comp=Z,4.9nm,0.6s
EGMT Eagleton 48.87 297 P **P** **23 17 35.4 +1.0**
W50A Signal Mountai 49.40 268 IAmb IAmb 23 17 40.3
comp=Z,7.7nm,0.9s
Y52A Lilburn 50.00 266 P **P** **23 17 44.5 +1.5**
Y52A IAmb IAmb 23 17 47.8
comp=Z,2.9nm,0.6s
GEYT Alibeck 50.40 84 P **P** **23 17 43.3 -2.8**
comp=Z,1.2nm,0.7s,baz=304,slow=8.8,SNR=2.7
GEYT LR LR 23 41 15.0
comp=Z,84nm,18.2s,baz=345,slow=39
GEYT Alibeck 50.40 84 P **P** **23 17 47.2 +1.1**
GYA0B ALIBECK ARRAY 50.40 84 P **P** **23 17 47.5 +1.4**
GYA0B IAmb IAmb 23 17 50.5
comp=Z,5.1nm,1.1s
HRY Holter Researc 50.75 298 P **P** **23 17 50.0 +1.3**
X48A Hartselle 50.78 269 P **P** **23 17 47.7 -1.2**
X48A IAmb IAmb 23 17 51.4
comp=Z,5.2nm,1.0s
JTMT Jette 50.81 300 P **P** **23 17 50.9 +1.7**
KOWA Kowa 51.00 163 P **P** **23 17 50.0 -0.6**
KOWA IAmb IAmb 23 17 51.7
comp=Z,6.9nm,1.1s
RLMT Red Lodge 51.09 295 P **P** **23 17 52.7 +1.3**
KK31 Karatay Array 51.25 70 P **P** **23 17 53.8 +1.5**
KK31 pmax pmax
comp=Z,8.0nm,1.2s
KK31 Karatay Array 51.25 70 P **P** **23 17 53.8 +1.5**
KK31 IAmb IAmb 23 17 57.6
comp=Z,8.3nm,1.1s
KKAR Karatay Array 51.25 70 P **P** **23 17 53.2 +0.9**
KKAR 23 17 54.1
KKAR pmax pmax
comp=Z,8.0nm,1.2s
KKAR Karatay Array 51.25 70 P **P** **23 17 53.2 +0.9**
KKAR Karatay Array 51.25 70 P **P** **23 17 54.1 +1.8**
KKAR IAmb IAmb 23 17 57.6
comp=Z,8.3nm,1.1s
YNE Yellowstone No 51.47 295 P **P** **23 17 53.8 -0.5**
BOZ Bozeman (W) 51.60 297 P **P** **23 17 55.0 -0.2**
BOZ pmax pmax
comp=Z,10.0nm,1.2s
BOZ Bozeman (W) 51.60 297 P **P** **23 17 55.0 -0.2**
BOZ IAmb IAmb 23 18 00.4
comp=Z,10nm,1.1s
LRM Limekiln Ridge 51.73 297 P **P** **23 17 57.6 +1.4**
YMP Mirror Lake Pl 51.75 295 P **P** **23 17 57.5 +1.0**
YHH Holmes Hill 51.98 296 P **P** **23 18 00.1 +1.9**
YHB Horse Butte 52.15 296 P **P** **23 18 00.6 +1.3**
H17A Grant Village 52.20 295 P **P** **23 18 01.2 +1.4**
YPP Pitchstone Pla 52.40 295 P **P** **23 18 03.3 +2.0**
MAKZ Makanchi 52.56 59 P **P** **23 18 04.7 +2.6**
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MAKZ Makanchi 52.56 59 P **P** **23 18 04.7 +2.6**
MAKZ IAmb IAmb 23 18 05.3
comp=Z,5.9nm,1.1s
MK31 Makanchi Array 52.69 58*ce*P **P** **23 18 04.5 +1.4**
MKAR Makanchi Array 52.69 58 P **P** **23 18 00.3 -2.8**
comp=Z,1.9nm,0.9s,baz=340,slow=5.3,SNR=12
MKAR Makanchi Array 52.69 58*ce*P **P** **23 18 03.5 +0.4**
MKAR pmax pmax
comp=Z,7.0nm,1.2s
MKAR Makanchi Array 52.69 58 P **P** **23 18 03.1 +0.1**
TPAW Teton Pass 53.11 295 IAmb IAmb 23 18 10.7
comp=Z,6.1nm,1.1s
FRU1 Bishkek 53.14 67 P **P** **23 18 08.6 +2.1**
FRU1 pmax pmax
comp=Z,8.0nm,0.8s
FRU1 Bishkek 53.14 67 P **P** **23 18 08.6 +2.1**
FRU1 IAmb IAmb 23 18 12.0
comp=Z,8.1nm,0.8s
TOA0 Torodi Ar. Sit 53.17 156 P **P** **23 18 05.5 -1.4**
TOA0 IAmb IAmb 23 18 07.4
comp=Z,6.6nm,1.0s
TORD Torodi Ar. Bea 53.17 156 P P 23 18 01.9 -4.9
comp=Z,5.8nm,1.0s,baz=339,slow=8.7,SNR=18
TORD LR LR 23 40 47.4
comp=Z,54nm,18.3s,baz=320,slow=36
TORD Torodi Ar. Bea 53.17 156 P **P** **23 18 04.8 -2.0**
BW06 Boulder Array 53.18 293 P **P** **23 18 07.8 +0.8**
BW06 IAmb IAmb 23 18 11.3
comp=Z,8.6nm,0.9s
PD31 Pinedale Array 53.18 293 P **P** **23 18 06.8 -0.2**
PD31 IAmb IAmb 23 18 11.3
comp=Z,7.8nm,0.9s
PDAR Pinedale Array 53.18 293 P P 23 18 02.4 -4.6
comp=Z,3.1nm,0.8s,baz=45,slow=8.8,SNR=9.6
PDAR LR LR 23 40 23.2
comp=Z,81nm,18.7s,baz=33,slow=36
PDAR Pinedale Array 53.18 293 P **P** **23 18 05.9 -1.1**
AAK Ala-Archa 53.23 67*ce*P **P** **23 18 08.3 +1.0**
AAK pmax pmax
comp=Z,16nm,1.0s
N23A Red Feather La 53.31 289 P **P** **23 18 08.3 +0.3**
BCYI Bear Canyon 53.37 297 P **P** **23 18 10.2 +1.8**

KSCO	**Kaye Shedlock'**	**53.54**	**285**	P	**P**	**23 18 12.0 +2.5**
KSCO				IAmb	IAmb	23 18 13.8	
	comp=Z,7.7nm,0.9s						
BOOM	**Boomskoye usch**	**53.92**	**66**	P	**P**	**23 18 13.4 +1.0**
BOOM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BOOM	**Boomskoye usch**	**53.92**	**66**	P	**P**	**23 18 13.4 +1.0**
BOOM				IAmb	IAmb	23 18 17.9	
	comp=Z,6.4nm,1.1s						
BTK	**Batken**	**53.93**	**72**	P	**P**	**23 18 13.3 +0.9**
BTK				pmax	pmax		
	comp=Z,28nm,1.2s						
BTK	**Batken**	**53.93**	**72**	P	**P**	**23 18 13.3 +0.9**
BMO	**Blue Mountains**	**54.38**	**300**	P	**P**	**23 18 16.7 +1.2**
BMO				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BMO	**Blue Mountains**	**54.38**	**300**	P	**P**	**23 18 16.7 +1.2**
HWUT	**Hardware Ranch**	**54.95**	**294**	P	**P**	**23 18 21.0 +1.2**
HWUT				IAmb	IAmb	23 18 24.2	
	comp=Z,9.6nm,1.0s						
HRA	**Herat**	**55.17**	**82**	P	**P**	**23 18 22.9 +1.3**
TLY	**Talaya**	**55.36**	**40**	*i* P	**P**	**23 18 23.8 +1.3**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMOK	**Wichita Mounta**	**55.55**	**279**	IAmb	IAmb	23 18 27.4	
	comp=Z,5.3nm,1.1s						
T25A	**Trinidad**	**55.87**	**285**	P	**P**	**23 18 27.6 +1.1**
BGU	**Big Grassy Mou**	**56.10**	**295**	P	**P**	**23 18 29.2 +1.0**
SEUS	**St. Eustatius**	**56.15**	**235**	P	**P**	**23 18 27.8 -0.6**
MPU	**Maple Canyon**	**56.34**	**293**	P	**P**	**23 18 31.1 +1.2**
ZAK	**Zakamensk**	**56.42**	**41**	*e*P	**P**	**23 18 27.6 -2.6**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
P17A	**Butcher Ranch,**	**56.45**	**292**	P	**P**	**23 18 31.6 +1.0**
KSH	**Kashi**	**56.47**	**68**	P	P	23 18 35.8 +5.1	
KSH				S	**S**	**23 26 21.9 +0.3**	
KSH				sS	sS	23 26 30.3 +2.6	
KSH				pmax	pmax		
	comp=Z,55nm,1.2s						
KSH				pmax	pmax		
	comp=Z,300nm,4.2s						
KSH				LR	LR		
	comp=N,380nm,4.6s						
KSH				LR	LR		
	comp=E,290nm,5.2s						
KSH				LR	LR		
	comp=Z,290nm,8.0s						
MTP	**Monte Pirata**	**56.51**	**238**	P	**P**	**23 18 31.9 +0.8**
MTP				IAmb	IAmb	23 18 33.7	
	comp=Z,8.7nm,1.1s						
PV23	**Carpenter Ridg**	**56.63**	**290**	IAmb	IAmb	23 18 33.8	
	comp=Z,6.9nm,0.9s						
PV04	**Paradox Valley**	**56.63**	**290**	P	**P**	**23 18 33.9 +2.0**
PV04				IAmb	IAmb	23 18 53.2	
	comp=Z,8.2nm,1.2s						
DUG	**Dugway, Tooele**	**56.65**	**294**	P	**P**	**23 18 32.7 +0.7**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
DUG	**Dugway, Tooele**	**56.65**	**294**	P	**P**	**23 18 32.7 +0.7**
PV12	**Saucer Basin,**	**56.66**	**290**	P	**P**	**23 18 33.0 +0.8**
PV12				IAmb	IAmb	23 18 43.3	
	comp=Z,6.4nm,1.0s						
PV14	**Lion Creek, Pa**	**56.70**	**290**	P	**P**	**23 18 31.7 -0.8**
PV14				IAmb	IAmb	23 18 37.2	
	comp=Z,6.2nm,0.8s						
PV20	**West Nyswonger**	**56.70**	**290**	P	**P**	**23 18 32.7 +0.2**
PV20				IAmb	IAmb	23 18 35.4	
	comp=Z,6.3nm,1.0s						
PV01	**Paradox Valley**	**56.72**	**289**	IAmb	IAmb	23 18 34.4	
	comp=Z,5.7nm,1.0s						
PV02	**Paradox Valley**	**56.73**	**290**	IAmb	IAmb	23 18 36.4	
	comp=Z,7.7nm,0.9s						
PV03	**Paradox Valley**	**56.73**	**290**	IAmb	IAmb	23 18 37.5	
	comp=Z,6.1nm,1.0s						
PV19	**Morning Glory**	**56.74**	**290**	P	**P**	**23 18 32.5 -0.3**
PV19				IAmb	IAmb	23 18 35.6	
	comp=Z,4.8nm,0.9s						
AGPR	**Aguadilla, PR**	**56.75**	**240**	P	**P**	**23 18 33.1 +0.4**
PV17	**East Wray Mesa**	**56.75**	**290**	IAmb	IAmb	23 18 37.6	
	comp=Z,8.5nm,0.9s						
PDPR	**Patillas Dam,**	**56.76**	**239**	P	**P**	**23 18 32.9 +0.1**
PDPR				IAmb	IAmb	23 18 36.3	
	comp=Z,7.5nm,0.9s						
PV18	**Skein Mesa, Pa**	**56.76**	**290**	IAmb	IAmb	23 18 44.6	
	comp=Z,7.7nm,1.0s						
TMUT	**Trail Mountain**	**56.78**	**292**	P	**P**	**23 18 31.8 -1.3**
Q16A	**Castle Valley**	**57.09**	**292**	P	**P**	**23 18 36.8 +1.5**
ELK	**Elko**	**57.12**	**296**	P	**P**	**23 18 36.9 +1.5**
ELK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ELK	**Elko**	**57.12**	**296**	P	**P**	**23 18 36.9 +1.5**
WMQ	**Urumqi**	**57.20**	**56**	*e*P	**P**	**23 18 40.3 +4.6**
RAYN	**Ar Rayn**	**57.48**	**104**	P	**P**	**23 18 38.8 +0.9**
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
RAYN	**Ar Rayn**	**57.48**	**104**	P	**P**	**23 18 38.8 +0.9**
ABTX	**Abilene, Hawle**	**57.74**	**279**	P	**P**	**23 18 40.9 +1.3**
ABTX				IAmb	IAmb	23 18 44.1	
	comp=Z,8.0nm,1.1s						
MVU	**Marysvale**	**57.86**	**293**	P	**P**	**23 18 41.6 +0.9**
SDDR	**Presa de Saban**	**57.86**	**244**	P	**P**	**23 18 41.8 +1.1**
SDDR				IAmb	IAmb	23 18 52.2	
	comp=Z,8.5nm,1.1s						
TCRU	**Three Creeks R**	**57.87**	**293**	P	**P**	**23 18 42.2 +1.4**
KBL	**Kabul**	**57.91**	**77**	P	**P**	**23 18 41.9 +0.9**
KBL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KBL	**Kabul**	**57.91**	**77**	P	**P**	**23 18 41.9 +0.9**
KBL				IAmb	IAmb	23 18 44.1	
	comp=Z,5.3nm,1.1s						
MTPU	**Mount Pierson**	**58.25**	**292**	P	**P**	**23 18 44.9 +1.3**
SPR3	**Spring Creek 3**	**58.27**	**295**	P	**P**	**23 18 44.1 +0.4**
PSUT	**Pine Spring**	**58.49**	**294**	P	**P**	**23 18 46.0 +0.9**
ANMO	**Albuquerque**	**58.59**	**286**	*i* P	**P**	**23 18 44.7 -1.1**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.5s						
DBIC	**Dimbokro**	**58.62**	**165**	P	P	23 18 41.1 -4.8	
	comp=Z,9.4nm,1.1s,baz=314,slow=5.5,SNR=3.7						
DBIC				LR	LR	23 44 31.0	
	comp=Z,106nm,18.2s,baz=334,slow=37						
DBIC	**Dimbokro**	**58.62**	**165**	P	**P**	**23 18 43.2 -2.7**
DBIC				pmax	pmax		
	comp=Z,15nm,1.2s						
DBIC	**Dimbokro**	**58.62**	**165**	P	**P**	**23 18 43.2 -2.7**
LGNH	**Logne**	**58.80**	**246**	P	**P**	**23 18 48.0 +0.8**
R11A	**Troy Canyon, C**	**59.32**	**295**	IAmb	IAmb	23 18 52.6	
	comp=Z,4.2nm,1.1s						
BNM	**Barren Site**	**59.35**	**285**	P	**P**	**23 18 51.6 +0.4**
KNB	**Kanab**	**59.39**	**292**	P	**P**	**23 18 53.4 +2.1**
KNB	**Kanab**	**59.39**	**292**	P	**P**	**23 18 53.4 +2.1**
PAHR	**Pah Rah Range**	**59.59**	**299**	P	**P**	**23 18 53.0 +0.4**
PAHR				IAmb	IAmb	23 19 01.7	
	comp=Z,5.1nm,1.1s						
SONM	**Songino Array**	**59.60**	**40**	P	**P**	**23 18 49.5 -3.0**
	comp=Z,1.0nm,1.0s,baz=329,slow=4.9,SNR=4.0						
SONM				LR	LR	23 47 19.9	
	comp=Z,42nm,19.0s,baz=335,slow=39						
SONM	**Songino Array**	**59.60**	**40**	P	**P**	**23 18 54.2 +1.7**
SONM				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	**Songino Array**	**59.60**	**40**	P	**P**	**23 18 54.2 +1.7**
JCT	**Junction City**	**59.66**	**278**	P	**P**	**23 18 53.6 +0.5**
JCT				pmax	pmax		
	comp=Z,11nm,1.1s						
JCT	**Junction City**	**59.66**	**278**	P	**P**	**23 18 53.6 +0.5**
KVN	**Kaiserville**	**59.68**	**298**	IAmb	IAmb	23 18 57.1	
	comp=Z,4.7nm,1.1s						
U15A	**North Rim**	**59.69**	**291**	IAmb	IAmb	23 18 57.1	
	comp=Z,5.0nm,1.1s						
ULN	**Ulaanbaatar**	**59.76**	**40**	*ce*P	**P**	**23 18 53.8 +0.2**
ULN				pmax	pmax		
	comp=Z,13nm,2.5s						
WUAZ	**Wupatki**	**60.11**	**290**	P	**P**	**23 18 57.6 +1.4**
NVAR	**Mina Array Bea**	**60.30**	**297**	P	**P**	**23 18 54.0 -3.6**
	comp=Z,0.3nm,0.5s,baz=39,slow=5.8,SNR=2.5						
NVAR				LR	LR	23 44 04.3	
	comp=Z,219nm,20.8s,baz=40,slow=35						
NIL	**Nilore**	**60.42**	**74**	P	**P**	**23 19 00.0 +1.8**
NIL				pmax	pmax		
	comp=Z,19nm,1.2s						
NIL	**Nilore**	**60.42**	**74**	P	**P**	**23 19 00.0 +1.8**
SHPR	**Sheep Range**	**60.76**	**294**	P	**P**	**23 19 01.9 +1.2**
SHPR				IAmb	IAmb	23 19 05.2	
	comp=Z,4.7nm,1.1s						
X16A	**Lo Mia Camp, P**	**61.09**	**290**	P	**P**	**23 19 04.5 +1.5**
X16A				IAmb	IAmb	23 19 09.2	
	comp=Z,5.0nm,1.1s						
OMMB	**Old Mammoth Mi**	**61.28**	**297**	P	**P**	**23 19 05.4 +1.1**
OMMB				IAmb	IAmb	23 19 08.9	
	comp=Z,5.8nm,1.2s						
W13A	**Hualapai Mount**	**61.48**	**292**	P	**P**	**23 19 05.8 +0.2**
TXAR	**Lajitas Array**	**62.29**	**280**	P	**P**	**23 19 08.0 -3.0**
	comp=Z,1.2nm,0.9s,baz=76,slow=5.3,SNR=7.0						
TXAR				LR	LR	23 45 35.0	
	comp=Z,202nm,18.1s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**62.29**	**280**	P	**P**	**23 19 08.0 -3.0**
TUC	**Tucson**	**62.66**	**288**	P	**P**	**23 19 14.3 +0.9**
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	**Tucson**	**62.66**	**288**	P	**P**	**23 19 14.3 +0.9**
TUC				IAmb	IAmb	23 19 19.1	
	comp=Z,3.8nm,1.0s						
ISA	**Isabella, Lake**	**62.79**	**296**	P	**P**	**23 19 14.9 +0.6**
ISA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ISA	**Isabella, Lake**	**62.79**	**296**	P	**P**	**23 19 14.8 +0.6**
ISA				IAmb	IAmb	23 19 19.8	
	comp=Z,6.3nm,1.1s						
319A	**Douglas**	**62.86**	**286**	P	**P**	**23 19 15.7 +0.8**
GLA	**Glamis**	**63.65**	**292**	P	**P**	**23 19 22.1 +2.2**
GLA				pmax	pmax		
	comp=Z,12nm,0.9s						
GLA	**Glamis**	**63.65**	**292**	P	**P**	**23 19 22.1 +2.2**
GTA	**Gaotai**	**65.26**	**49**	P	**P**	**23 19 29.8 -0.7**
GTA				pP	pP	23 19 33.8 -0.5	
GTA				sP	sP	23 19 36.9 +1.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
HHC	**Hu-ho-hao-te**	**67.47**	**40**	*e*P	**P**	**23 19 46.8 +2.2**
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,7.2s						
CMIG	**Matias Romero**	**69.31**	**266**	LR	LR	23 48 11.7	
	comp=Z,44nm,21.5s,baz=22,slow=34						
LZH	**Lanzhou**	**69.59**	**48**	*e*P	**P**	**23 19 59.5 +1.5**
LZH				pP	sP	23 20 04.8 +1.7	
LZH				sP	pP	23 20 07.8 +6.1	
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
XAN	**Xi'an**	**73.05**	**44**	P	**P**	**23 20 20.8 +2.0**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,5.2s						
KSRS	**Korea Array**	**74.61**	**28**	LR	LR	23 56 00.9	
	comp=Z,41nm,18.0s,baz=359,slow=38						
MJAR	**Matsushiro Arr**	**77.29**	**20**	LR	LR	23 55 51.9	
	comp=Z,21nm,19.1s,baz=350,slow=36						
NJ2	**Nanjing**	**77.70**	**37**	*e*P	**P**	**23 20 46.6 +1.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CHTO	**Chiang Mai**	**83.77**	**59**	P	**P**	**23 21 18.4 +0.3**
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHTO	**Chiang Mai**	**83.77**	**59**	P	**P**	**23 21 18.4 +0.3**
CHTO				IAmb	IAmb	23 21 21.2	
	comp=Z,5.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**84.10**	**59**	P	**P**	**23 21 16.8 -3.0**
	comp=Z,1.8nm,0.9s,baz=318,slow=6.2,SNR=7.9						
CMAR				LR	LR	00 01 30.4	
	comp=Z,31nm,18.4s,baz=325,slow=38						
CMAR	**Chiang Mai Arr**	**84.10**	**59**	*ce*P	**P**	**23 21 20.1 +0.3**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**84.10**	**59**	P	**P**	**23 21 19.6 -0.2**
LPAZ	**La Paz**	**89.44**	**228**	LR	LR	23 58 16.3	
	comp=Z,27nm,20.5s,baz=354,slow=33						
TGY	**Tagaytay City**	**95.34**	**40**	LR	LR	00 09 16.7	
	comp=Z,182nm,18.9s,baz=134,slow=38						
CPUP	**Villa Florida**	**95.88**	**215**	LR	LR	00 01 05.1	
	comp=Z,31nm,18.2s,baz=24,slow=33						
BOSA	**Boshof**	**98.78**	**143**	LR	LR	00 08 58.9	
	comp=Z,98nm,19.3s,baz=286,slow=37						
USHA	**Ushuaia**	**125.45**	**213**	PKP	**PKPdf**	**23 27 45.0 -3.5**
	comp=Z,15nm,0.4s,baz=330,slow=2.2,SNR=4.2						
ASAR	**Alice Springs**	**134.93**	**38**	PKP	**PKPdf**	**23 28 03.3 -4.3**
	comp=Z,0.9nm,0.9s,baz=323,slow=2.9,SNR=2.6						

*SSNC **13** 23:09:02.9±3.8, 19°.69N×76°.32W, h2km±23km, MD3.0, ML2.4, MW2.8*
*JSN **13** 23:09:05.5±2.9, 19°.52N×76°.08W, h31km±999km, MD3.5*

ISC 13 23:09:03.1±1.5, 19.77N±0°.05×76.40W±0°.04, h34km±3km, n10, σ1s48/18, 1C-2D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMGC	**Las Mercedes**	**0.64**	**297**	*e*P	**Pb**	**23 09 16.2**	**+0.2**
LMGC				*e*S	**Sn**	**23 09 25.7**	**+0.9**
LMGC				IAML		23 09 26.1	
	comp=N,289nm,0.1s						
LMGC				IAML		23 09 26.2	
	comp=E,129nm,0.2s						
RCC	**Rio Carpintero**	**0.70**	**71**	*e*P	**Pn**	**23 09 15.7**	**-0.9**
RCC				*e*S	**Sb**	**23 09 25.3**	**-1.2**
RCC				IAML		23 09 26.1	
	comp=N,92nm,0.2s						
RCC				IAML		23 09 26.3	
	comp=E,52nm,0.1s						
GTMO	**Guantanamo**	**1.23**	**75**	*e*P	**Pn**	**23 09 24.7**	**+0.8**
GTMO				*e*S	**Sn**	**23 09 40.8**	**+1.5**
GTMO				IAML		23 09 46.0	
	comp=E,344nm,0.3s						
GTMO				IAML		23 09 46.2	
	comp=N,439nm,0.5s						
BNJ	**Bonny Gate**	**1.53**	**200**	⇓*i*P	**Pn**	**23 09 28.9**	**+0.8**
BBJ	**Bamboo Saint A**	**1.60**	**211**	⇑*i*P	**Pn**	**23 09 30.0**	**+0.8**
MOAC	**Moa**	**1.62**	**57**	*e*P	**Pn**	**23 09 31.1**	**+1.9**
MOAC				*e*S	**Sb**	**23 09 52.6**	**+0.1**
MOAC				IAML		23 09 54.3	
	comp=N,26nm,0.2s						
MOAC				IAML		23 09 55.0	
	comp=E,20nm,0.3s						
STH	**Stony Hill**	**1.73**	**193**	⇓*i*P	**Pn**	**23 09 31.2**	**+0.3**
STH				*i* S	**Sn**	**23 09 48.0**	**-3.8**
CCCC	**Cccc**	**1.91**	**318**	*e*P	**Pn**	**23 09 32.4**	**-1.0**
CCCC				*e*S	**Sn**	**23 09 55.5**	**-0.7**
CCCC				IAML		23 09 57.4	
	comp=E,18nm,0.5s						
CCCC				IAML		23 09 57.8	
	comp=N,12nm,0.4s						
MASC	**Masc**	**2.08**	**78**	*e*P	**Pn**	**23 09 35.6**	**-0.1**
MASC				*e*S	**Sn**	**23 09 59.1**	**-1.3**
MASC				IAML		23 10 06.5	
	comp=N,13nm,0.2s						
MASC				IAML		23 10 07.3	
	comp=E,22nm,0.3s						
PCJ	**Portland Cotta**	**2.14**	**200**	*i* P	**Pn**	**23 09 37.7**	**+1.2**
PCJ				*i* S	**Sn**	**23 10 02.8**	**+0.9**

IDC 13 23:54:55.0±2.8, 6°.49S×130°.16E, h112km±38km, mb3.1/1, mb1 3.3/5, mb1mx3.0/41, mbtmp3.6/5, Error ellipse: s-maj=71.0km s-min=21.6km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.69**	**11**	P	Pn	23 56 17.4	+0.3
	2.3nm,0.3s,baz=198,slow=20,SNR=15						
SIJI				S	Sn	23 57 16.0	-5.3
	1.5nm,0.3s,baz=263,slow=23,SNR=1.8						
FITZ	**Fitzroy Crossi**	**12.36**	**201**	P	Pn	23 57 46.4	-0.7
	0.2nm,0.3s,baz=23,slow=11,SNR=19						
FITZ				S	Sn	23 59 56.0	-7.1
	0.2nm,0.3s,baz=108,slow=19,SNR=1.7						
WRA	**Warramunga Arr**	**13.98**	**164**	P	Pn	23 58 07.3	-0.9
	0.4nm,0.3s,baz=348,slow=13,SNR=6.2						
WRA				S	Sn	00 00 33.1	-9.3
	0.3nm,0.3s,baz=350,slow=24,SNR=7.1						
ASAR	**Alice Springs**	**17.46**	**169**	P	Pn	23 58 52.5	+0.9
	0.2nm,0.3s,baz=347,slow=9.8,SNR=11						
MKAR	**Makanchi Array**	**67.89**	**327**	P	P	00 05 41.4	-0.1
	0.2nm,0.4s,baz=110,slow=7.6,SNR=5.0						

*MEX **14** 00:01:43.4±0.6, 14°.24N×92°.94W, h16km±56km, MD4.0*
*GCG **14** 00:01:44.7±0.5, 14°.57N×92°.76W, h83km±18km, MD3.9*

ISC 14 00:01:44.0±3.0, 14°.4N±0°.2×93°.0W±0°.1, h35km, n9, σ0s89/14, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.86**	**50**	*e*P	**Pn**	**00 01 58.4**	**-1.2**
ERG	**Entre ros, C**	**1.34**	**86**	*e*P	**Pn**	**00 02 06.0**	**-0.2**
PCIG		**1.37**	**349**	*e*P	**Pn**	**00 02 05.4**	**-1.1**
PCIG				*i* S	**Sn**	**00 02 23.2**	**-0.2**
STG3	**Santiaguito 3,**	**1.38**	**75**	*e*P	**Pn**	**00 02 06.4**	**-0.5**
STG3				*e*S	**Sn**	**00 02 23.9**	**-0.2**
FUG	**Fuego 3**	**2.04**	**87**	*e*P	**Pn**	**00 02 15.8**	**-0.3**
FUG				*e*S	**Sn**	**00 02 39.7**	**-0.7**
CCIG	**Comitan**	**2.07**	**22**	*e*P	**Pn**	**00 02 16.6**	**+0.2**
CCIG				*e*S	**Sn**	**00 02 41.5**	**+0.5**
PCG	**Pacaya**	**2.27**	**89**	*e*P	**Pn**	**00 02 19.2**	**0.0**
TGIG		**2.41**	**356**	*e*P	**Pn**	**00 02 21.3**	**+0.3**
TGIG				*e*S	**Sn**	**00 02 50.7**	**+1.3**
NBG	**Las Nubes**	**2.53**	**84**	*e*P	**Pn**	**00 02 24.6**	**+1.8**

*KRNET **14** 00:23:54.3±0.1, 42°.55N×79°.63E, h19km, mb3.7*
*SOME **14** 00:23:54.2, 42°.55N×79°.57E, h10km*
*NNC **14** 00:23:54.7±0.6, 42°.58N×79°.57E, h0km, mb4.1, mpv4.0,*
Error ellipse: s-maj=4.0km s-min=2.2km az=144.0

ISC 14 00:23:54.7±1.5, 42°.58N±0°.04×79°.61E±0°.04, h8km±9km, n71, σ1s86/127, 46C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.59**	**350**	⇓*i*P	**Pg**	**00 24 07.4**	**+1.3**
	184nm,0.1s						
SHLS				⇑*i*S	**Sn**	**00 24 16.7**	**-2.5**
	327nm,0.1s						
SHLS	**Shalkode**	**0.59**	**350**	P	**Pg**	**00 24 07.4**	**+1.3**
	184nm,0.1s						
SHLS				S	**Sn**	**00 24 16.8**	**-2.5**
	327nm,0.1s						
UZB	**Uzynbulak**	**0.71**	**323**	⇑*i*P	**Pb**	**00 24 08.6**	**-0.8**
	baz=23						
UZB				⇑*i*S	**Sb**	**00 24 18.8**	**-0.6**
	baz=23						
UZB	**Uzynbulak**	**0.71**	**323**	⇑*i*P	**Pb**	**00 24 08.6**	**-0.8**
	113nm,0.2s						
UZB				⇑*i*S	**Sb**	**00 24 18.8**	**-0.6**
	301nm,0.2s						
UZB	**Uzynbulak**	**0.71**	**323**	P	**Pb**	**00 24 08.6**	**-0.8**
	113nm,0.2s						
UZB				S	**Sb**	**00 24 18.8**	**-0.6**
	221nm,0.1s						
PDGK	**Podgornoye**	**0.76**	**354**	P	**Pb**	**00 24 09.4**	**-0.8**
	24nm,0.1s						
PDGK				S	**Sg**	**00 24 20.0**	**+0.9**
	174nm,0.2s						
PDGK	**Podgornoye**	**0.76**	**354**	⇑P	**Pb**	**00 24 09.3**	**-0.8**
	6.6nm,0.2s						
PDGK				⇑S	**Sg**	**00 24 20.0**	**+0.9**
	138nm,0.3s						
PRZ	**Przheval'sk**	**0.90**	**264**	⇑*e*P	**Pb**	**00 24 11.7**	**-0.9**
	baz=66						
PRZ				⇑*i*S	**Sb**	**00 24 23.8**	**-0.9**
	baz=66						
SATY	**Saty**	**1.00**	**299**	*e*P	**Pn**	**00 24 14.0**	**-1.2**
	baz=0.0						
SATY				*e*S	**Sn**	**00 24 27.7**	**-1.9**
	baz=0.0						
SATY	**Saty**	**1.00**	**299**	*e*P	**Pn**	**00 24 14.0**	**-1.2**
	46nm,0.1s						
SATY				*e*S	**Sn**	**00 24 27.7**	**-1.9**
	220nm,0.1s						
SATY	**Saty**	**1.00**	**299**	P	**Pn**	**00 24 14.0**	**-1.2**
	46nm,0.1s						
SATY				S	**Sn**	**00 24 27.7**	**-1.9**
	220nm,0.1s						
KTMS	**Ketmen**	**1.02**	**32**	*e*P	**Pn**	**00 24 14.0**	**-1.5**
	baz=30						
KTMS				*e*S	**Sn**	**00 24 27.9**	**-2.2**
	baz=30						
KTMS	**Ketmen**	**1.02**	**32**	*e*P	**Pn**	**00 24 14.0**	**-1.5**
	11nm,0.1s						
KTMS				*e*S	**Sn**	**00 24 27.9**	**-2.2**
	90nm,0.1s						
KTMS	**Ketmen**	**1.02**	**32**	P	**Pn**	**00 24 14.0**	**-1.5**
	11nm,0.1s						
KTMS				S	**Sn**	**00 24 27.9**	**-2.2**
	90nm,0.1s						
ZHN	**Zhinishke**	**1.04**	**305**	⇓*i*P	**Pb**	**00 24 14.2**	**-0.9**
	baz=5.0						
ZHN				⇓*i*S	**Sb**	**00 24 28.1**	**-0.9**
	baz=5.0						
ZHN	**Zhinishke**	**1.04**	**305**	⇓*i*P	**Pb**	**00 24 14.2**	**-0.9**
	44nm,0.2s						
ZHN				⇓*i*S	**Sb**	**00 24 28.0**	**-0.9**
	97nm,0.2s						
ZHN	**Zhinishke**	**1.04**	**305**	P	**Pb**	**00 24 14.2**	**-0.9**
	44nm,0.1s						
ZHN				S	**Sb**	**00 24 28.0**	**-0.9**
	94nm,0.2s						
KPKS	**Kokpek**	**1.11**	**323**	⇑*i*P	**Pb**	**00 24 15.8**	**-0.5**
	baz=23						
KPKS				⇓*i*S	**Sn**	**00 24 31.0**	**-1.3**
	baz=23						
KPKS	**Kokpek**	**1.11**	**323**	⇑*i*P	**Pb**	**00 24 15.8**	**-0.5**
	110nm,0.1s						
KPKS				⇓*i*S	**Sn**	**00 24 31.0**	**-1.3**
	249nm,0.2s						
KURS	**Kuram**	**1.39**	**311**	*e*P	**Pb**	**00 24 21.0**	**+0.1**
	baz=12						
KURS				*e*S	**Sg**	**00 24 39.7**	**+0.3**
	baz=12						
KURS	**Kuram**	**1.39**	**311**	*e*P	**Pb**	**00 24 21.0**	**+0.1**
	23nm,0.3s						
KURS				*e*S	**Sg**	**00 24 39.8**	**+0.3**
	40nm,0.2s						
KURS	**Kuram**	**1.39**	**311**	P	**Pb**	**00 24 21.1**	**+0.1**
	18nm,0.2s						
KURS				S	**Sg**	**00 24 39.7**	**+0.3**
	35nm,0.2s						
ANVS	**Anan'yevo**	**1.44**	**279**	⇑*i*P	**Pb**	**00 24 21.7**	**-0.2**
	baz=80						
ANVS				⇑*i*S	**Sb**	**00 24 40.4**	**-0.1**
	baz=80						
MNBS	**Baschi**	**1.74**	**330**	*e*P	**Pb**	**00 24 27.2**	**+0.3**
	105nm,0.2s						
MNBS				*e*S	**Sg**	**00 24 50.6**	**0.0**
	263nm,0.2s						
DJR	**Jarkent**	**1.76**	**4**

TNSS				Lg	Lg	00 24 57.8		
	62nm,0.2s							
ARXS	**Arharly**	**2.08**	**322**	*eP*	**Pb**	**00 24 32.6**	**-0.1**
ARXS	112nm,0.4s			*eS*	**Sg**	**00 25 00.5**	**-1.1**
	149nm,0.4s							
ARXS	**Arharly**	**2.08**	**322**	Pg	**Pb**	**00 24 33.5**	**+0.7**
ARXS	67nm,0.3s			Lg	Lg	00 25 00.9		
	149nm,0.4s							
IZV	**Izvestkoviy**	**2.25**	**283**	*eP*	**Pb**	**00 24 35.6**	**0.0**
IZV	77nm,0.2s			*eS*	**Sg**	**00 25 05.5**	**-1.4**
	290nm,0.4s							
IZV	**Izvestkoviy**	**2.25**	**283**	Pg	**Pb**	**00 24 36.0**	**+0.4**
IZV	77nm,0.2s			Lg	Lg	00 25 05.5		
	290nm,0.4s							
MTBS	**Maitube**	**2.40**	**284**	*eP*	**Pb**	**00 24 38.3**	**+0.2**
MTBS	79nm,0.1s			*eS*	**Sg**	**00 25 09.8**	**-1.9**
	156nm,0.3s							
MTBS	**Maitube**	**2.40**	**284**	Pg	**Pb**	**00 24 38.8**	**+0.6**
MTBS	79nm,0.1s			Lg	Lg	00 25 10.0		
	57nm,0.3s							
KTBS	**Karatobe**	**2.42**	**299**	*eP*	**Pb**	**00 24 38.1**	**-0.4**
KTBS	18nm,0.2s			*eS*	**Sg**	**00 25 10.5**	**-2.0**
	234nm,0.3s							
KTBS	**Karatobe**	**2.42**	**299**	Pg	**Pb**	**00 24 38.9**	**+0.4**
KTBS	18nm,0.2s			Lg	Lg	00 25 10.5		
	234nm,0.3s							
ULHL	**Ulahol**	**2.51**	**264**	⇑*iP*	**Pb**	**00 24 38.6**	**-1.5**
ULHL	baz=64			⇑*iS*	**Sb**	**00 25 10.5**	**-0.8**
	baz=64							
TDK	**Taldyqorghan**	**2.57**	**341**	*eP*	**Pb**	**00 24 41.0**	**-0.1**
TDK	53nm,0.3s			*eS*	**Sg**	**00 25 15.2**	**-2.1**
	142nm,0.5s							
TDK	**Taldyqorghan**	**2.57**	**341**	Pg	**Pb**	**00 24 41.0**	**-0.1**
TDK	53nm,0.3s			Lg	Lg	00 25 14.0		
	142nm,0.5s							
BOOM	**Boomskoye usch**	**2.71**	**269**	⇑*eP*	**Pb**	**00 24 41.5**	**-2.0**
BOOM	baz=70			⇑*iS*	**Sb**	**00 25 14.0**	**-2.9**
	baz=70							
KST	**Kastek**	**2.72**	**281**	*eP*	**Pb**	**00 24 43.6**	**0.0**
KST	46nm,0.4s			*eS*	**Sg**	**00 25 19.9**	**-2.1**
	101nm,0.6s							
KST	**Kastek**	**2.72**	**281**	Pg	**Pb**	**00 24 44.4**	**+0.8**
KST	41nm,0.2s			Lg	Lg	00 25 19.3		
	101nm,0.6s							
KUU	**Kurty**	**2.72**	**300**	*eP*	**Pb**	**00 24 42.9**	**-0.7**
KUU	6.2nm,0.3s			*eS*	**Sb**	**00 25 18.8**	**+1.6**
	80nm,0.3s							
KUU	**Kurty**	**2.72**	**300**	Pg	**Pb**	**00 24 43.6**	**-0.1**
KUU	7.9nm,0.2s			Lg	Lg	00 25 18.8		
	80nm,0.3s							
DGS	**Degeres**	**2.89**	**285**	*eP*	**Pb**	**00 24 46.1**	**-0.4**
DGS	43nm,0.4s			*eS*	**Sb**	**00 25 24.1**	**+2.0**
	130nm,0.4s							
DGS	**Degeres**	**2.89**	**285**	Pg	**Pb**	**00 24 47.2**	**+0.7**
DGS	35nm,0.3s			Lg	Lg	00 25 23.8		
	85nm,0.5s							
TKM2	**Tokmak 2**	**2.97**	**278**	⇑*iP*	**Pb**	**00 24 45.6**	**-2.4**
TKM2	baz=78			⇑*iS*	**Sb**	**00 25 21.6**	**-2.9**
	baz=78							
TKM2	**Tokmak 2**	**2.97**	**278**	⇓Pg	**Pb**	**00 24 45.4**	**-2.6**
TKM2	4.9nm,0.3s			⇑Lg	Lg	00 25 26.6		
	43nm,0.5s							
KRBS	**Karabastau**	**3.08**	**293**	*eP*	**Pb**	**00 24 49.8**	**0.0**
KRBS	10.0nm,0.2s			*eS*	**Sg**	**00 25 30.7**	**-3.0**
	63nm,0.3s							
KRBS	**Karabastau**	**3.08**	**293**	Pg	**Pb**	**00 24 50.7**	**+0.9**
KRBS	10.0nm,0.2s			Lg	Lg	00 25 29.8		
	63nm,0.3s							
KBK	**Karagaybulak**	**3.44**	**273**	⇑*eP*	**Pb**	**00 24 51.7**	**-4.2**
KBK	baz=73			⇑*iS*	**Sb**	**00 25 33.4**	**-4.5**
	baz=73							
CHMS	**Chumysh**	**3.60**	**278**	⇑*iP*	**Pb**	**00 24 54.0**	**-4.5**
CHMS	baz=79			⇑*iS*	**Sn**	**00 25 36.2**	**+2.8**
	baz=79							
AAK	**Ala-Archa**	**3.77**	**273**	⇑*iP*	Pb	00 24 56.6	-5.0
AAK	baz=73			⇑*iS*	**Sb**	**00 25 41.4**	**-6.1**
	baz=73							
AAK	**Ala-Archa**	**3.77**	**273**	⇑Pg	**Pb**	**00 25 03.5**	**+1.9**
AAK	2.5nm,0.3s			⇑Lg	Lg	00 25 51.8		
	15nm,0.6s							
UCH	**Uchtor**	**3.79**	**266**	⇑*iP*	**Pn**	**00 24 56.6**	**+2.9**
UCH	baz=67			⇑*iS*	**Sn**	**00 25 41.4**	**+2.7**
	baz=67							
USP	**Ospenovka**	**3.81**	**282**	⇑*iP*	**Pn**	**00 24 56.7**	**+3.0**
USP	baz=82			⇑*iS*	**Sn**	**00 25 41.8**	**+3.1**
	baz=82							
ARLS	**Aral**	**3.99**	**261**	⇑*iP*	**Pn**	**00 24 58.4**	**+2.2**
ARLS	baz=62			⇑*iS*	**Sn**	**00 25 44.6**	**+1.4**
	baz=62							
EKS2	**Erkin-Say**	**4.30**	**273**	⇑*iP*	**Pn**	**00 25 03.8**	**+3.3**
EKS2	baz=73			⇑*iS*	**Sn**	**00 25 53.6**	**+2.7**
	baz=73							
AML	**Almayashu**	**4.40**	**266**	⇑*eP*	**Pn**	**00 25 05.5**	**+3.4**
AML	baz=67			⇑*iS*	**Sn**	**00 25 56.6**	**+2.8**
	baz=67							
MAKZ	**Makanchi**	**4.55**	**21**	⇓Pn	**Pn**	**00 25 06.5**	**+2.6**
MAKZ	1.4nm,0.3s			⇑Sn	**Sn**	**00 26 00.2**	**+3.3**
	3.5nm,0.7s							
MAKZ				⇓Lg	Lg	00 26 18.9		
	2.8nm,0.5s							
MK31	**Makanchi Array**	**4.63**	**24**	Pn	**Pn**	**00 25 07.3**	**+2.4**
MK31	0.6nm,0.2s,baz=204,slow=14,SNR=86			⇑Sn	**Sn**	**00 26 00.9**	**+2.1**
	0.9nm,0.3s,baz=210,slow=23,SNR=4.6							
MK31				⇑Lg	Lg	00 26 22.4		
	2.6nm,0.4s,baz=205,slow=27,SNR=4.1							
MRKS	**Merke**	**4.71**	**274**	*eP*	**Pb**	**00 25 19.9**	**+2.5**
MRKS	7.2nm,0.2s			*eS*	**Sg**	**00 26 21.6**	**-4.1**
	9.6nm,0.3s							
BTLS	**Baital**	**4.72**	**303**	*eP*	**Pb**	**00 25 20.0**	**+2.4**
BTLS	2.2nm,0.3s			*eS*	**Sg**	**00 26 21.4**	**-4.6**
	5.2nm,0.5s							
KK31	**Karatay Array**	**6.71**	**278**	⇑Pg	**Pb**	**00 25 54.1**	**+2.7**
KK31	0.8nm,0.5s,baz=86,slow=15,SNR=6.1			⇑Lg	Lg	00 27 25.2		
	3.1nm,0.6s,baz=92,slow=29,SNR=9.9							

SOME ***14*** *00:25:52.7, 42°.58N×79°.50E, h15km*
NNC ***14*** *00:25:52.1±0.8, 42°.56N×79°.59E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=4.7km s-min=2.7km az=141.0*
KRNET ***14*** *00:25:53.1±0.1, 42°.58N×79°.59E, h18km, mb3.6*
ISC 14 00:25:52.0±1.4, **42°.55N**±0°.05×**79°.62E**±0°.04, **h16**km±9km, **n58**, σ1°**24**/104, **25C-7D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SHLS	**Shalkode**	**0.62**	**350**	⇓*iP*	**Pb**	**00 26 05.4**	**+0.8**
SHLS	baz=20			⇑*iS*	**Sn**	**00 26 14.7**	**-1.3**
	baz=20						
SHLS	**Shalkode**	**0.62**	**350**	⇓*iP*	**Pb**	**00 26 05.4**	**+0.8**
SHLS	76nm,0.2s			⇑*iS*	**Sn**	**00 26 14.7**	**-1.3**
	242nm,0.4s						
SHLS	**Shalkode**	**0.62**	**350**	P	**Pb**	**00 26 05.4**	**+0.8**
SHLS	72nm,0.1s			S	**Sn**	**00 26 14.7**	**-1.3**
	120nm,0.1s						
UZB	**Uzynbulak**	**0.74**	**324**	⇑*iP*	**Pg**	**00 26 06.6**	**0.0**
UZB	baz=24			⇑*iS*	**Sb**	**00 26 16.8**	**+0.2**
	baz=24						
UZB	**Uzynbulak**	**0.74**	**324**	⇑*iP*	**Pg**	**00 26 06.6**	**0.0**
UZB	52nm,0.2s			⇑*iS*	**Sb**	**00 26 16.8**	**+0.2**
	116nm,0.2s						
UZB	**Uzynbulak**	**0.74**	**324**	P	**Pg**	**00 26 06.5**	**0.0**
UZB	47nm,0.2s			S	**Sb**	**00 26 16.7**	**+0.2**
	116nm,0.2s						
PDGK	**Podgornoye**	**0.79**	**353**	P	**Pg**	**00 26 07.3**	**-0.1**
PDGK	14nm,0.1s			S	**Sb**	**00 26 18.1**	**+0.2**
	24nm,0.1s						
PDGK	**Podgornoye**	**0.79**	**353**	⇑P	**Pg**	**00 26 06.6**	**-0.8**
PDGK	3.2nm,0.2s			⇓S	**Sb**	**00 26 18.1**	**+0.2**
	53nm,0.3s						
PRZ	**Przheval'sk**	**0.90**	**266**	⇑*iP*	**Pb**	**00 26 09.9**	**+0.5**
PRZ	baz=64			⇑*iS*	**Sb**	**00 26 22.0**	**+0.8**
	baz=64						
SATY	**Saty**	**1.03**	**300**	*eP*	**Pn**	**00 26 12.3**	**+0.4**
SATY	baz=99			⇑*iS*	**Sn**	**00 26 26.0**	**0.0**
	baz=99						
SATY	**Saty**	**1.03**	**300**	*eP*	**Pn**	**00 26 12.3**	**+0.4**
SATY	28nm,0.1s			⇑*iS*	**Sn**	**00 26 26.0**	**0.0**
	105nm,0.1s						
SATY	**Saty**	**1.03**	**300**	P	**Pn**	**00 26 12.3**	**+0.4**
SATY	24nm,0.1s			S	**Sn**	**00 26 26.0**	**0.0**
	103nm,0.1s						
KTMS	**Ketmen**	**1.05**	**31**	*eP*	**Pb**	**00 26 12.1**	**+0.2**
KTMS	baz=33			*eS*	**Sg**	**00 26 25.9**	**-0.2**
	baz=33						
KTMS	**Ketmen**	**1.05**	**31**	*eP*	**Pb**	**00 26 12.1**	**+0.2**
KTMS	5.6nm,0.1s			*eS*	**Sg**	**00 26 25.9**	**-0.2**
	37nm,0.2s						
KTMS	**Ketmen**	**1.05**	**31**	P	**Pb**	**00 26 12.1**	**+0.2**
KTMS	5.6nm,0.1s			S	**Sg**	**00 26 25.9**	**-0.2**
	37nm,0.2s						
ZHN	**Zhinishke**	**1.07**	**306**	*eP*	**Pb**	**00 26 12.3**	**+0.1**
ZHN	baz=5.0			*eS*	**Sg**	**00 26 26.6**	**-0.1**
	baz=5.0						
ZHN	**Zhinishke**	**1.07**	**306**	*eP*	**Pb**	**00 26 12.3**	**+0.1**
ZHN	34nm,0.4s			*eS*	**Sg**	**00 26 26.6**	**-0.1**
	40nm,0.2s						
ZHN	**Zhinishke**	**1.07**	**306**	P	**Pb**	**00 26 12.3**	**+0.1**
ZHN	17nm,0.1s			S	**Sg**	**00 26 26.6**	**-0.1**
	40nm,0.2s						
KPKS	**Kokpek**	**1.15**	**324**	⇑*iP*	**Pn**	**00 26 13.7**	**+0.2**
KPKS	baz=23			⇑*iS*	**Sn**	**00 26 28.9**	**0.0**
	baz=23						
KPKS	**Kokpek**	**1.15**	**324**	⇑*iP*	**Pn**	**00 26 13.7**	**+0.2**
KPKS	54nm,0.1s			⇑*iS*	**Sn**	**00 26 28.9**	**0.0**
	106nm,0.2s						
KURS	**Kuram**	**1.42**	**312**	*eP*	**Pg**	**00 26 19.2**	**-0.1**
KURS	baz=11			*eS*	**Sg**	**00 26 37.8**	**0.0**
	baz=11						
KURS	**Kuram**	**1.42**	**312**	*eP*	**Pg**	**00 26 19.2**	**-0.1**
KURS	12nm,0.1s			*eS*	**Sg**	**00 26 37.8**	**0.0**
	20nm,0.2s						
KURS	**Kuram**	**1.42**	**312**	P	**Pg**	**00 26 19.2**	**-0.1**
KURS	11nm,0.2s			S	**Sg**	**00 26 37.8**	**0.0**
	16nm,0.2s						
ANVS	**Anan'yevo**	**1.46**	**280**	⇓*iP*	**Pg**	**00 26 19.8**	**-0.3**
ANVS	baz=79			⇓*iS*	**Sg**	**00 26 40.2**	**+1.2**
	baz=79						
MNBS	**Baschi**	**1.77**	**330**	*eP*	**Pg**	**00 26 25.6**	**-0.4**
MNBS	46nm,0.2s			*eS*	**Sg**	**00 26 48.6**	**-0.4**
	114nm,0.1s						
DJR	**Jarkent**	**1.79**	**4**	*eP*	**Pg**	**00 26 25.9**	**-0.5**
DJR	7.1nm,0.1s			*eS*	**Sg**	**00 26 49.4**	**-0.3**
	61nm,0.2s						
DJR	**Jarkent**	**1.79**	**4**	P	**Pg**	**00 26 25.9**	**-0.5**
DJR	7.1nm,0.1s			S	**Sg**	**00 26 49.4**	**-0.3**
	61nm,0.2s						
KDJ	**Kajisay**	**1.85**	**258**	⇑*iP*	**Pb**	**00 26 26.6**	**+1.0**
KDJ	baz=56			⇑*iS*	**Sg**	**00 26 51.7**	**0.0**
	baz=56						
KOTS	**Kotyrbulak**	**1.96**	**291**	*eP*	**Pg**	**00 26 29.1**	**-0.6**
KOTS	baz=90			*eS*	**Sg**	**00 26 54.8**	**-0.4**
	baz=90						
KOTS	**Kotyrbulak**	**1.96**	**291**	*eP*	**Pg**	**00 26 29.1**	**-0.6**
KOTS	75nm,0.2s			*eS*	**Sg**	**00 26 54.8**	**-0.4**
	68nm,0.2s						
MDOK	**Medeo**	**1.99**	**289**	*eP*	**Pb**	**00 26 29.1**	**+1.3**
MDOK	baz=88			*eS*	**Sg**	**00 26 54.9**	**-1.0**
	baz=88						
MDOK	**Medeo**	**1.99**	**289**	*eP*	**Pb**	**00 26 29.1**	**+1.3**
MDOK	19nm,0.2s			*eS*	**Sg**	**00 26 54.9**	**-1.0**
	36nm,0.5s						
MDOK	**Medeo**	**1.99**	**289**	Pg	**Pb**	**00 26 29.1**	**+1.3**
MDOK	19nm,0.2s			Lg	Lg	00 26 54.9	
	26nm,0.2s						
TNSS	**Tian-Shan**	**2.02**	**285**	*eP*	**Pb**	**00 26 29.4**	**+0.8**
TNSS	baz=84			*eS*	**Sg**	**00 26 55.7**	**-1.5**
	baz=84						
TNSS	**Tian-Shan**	**2.02**	**285**	*eP*	**Pb**	**00 26 29.4**	**+0.8**
TNSS	31nm,0.3s			*eS*	**Sg**	**00 26 55.8**	**-1.5**
	26nm,0.2s						
TNSS	**Tian-Shan**	**2.02**	**285**	Pg	**Pb**	**00 26 29.4**	**+0.8**
TNSS	28nm,0.2s			Lg	Lg	00 26 55.8	
	21nm,0.2s						
ARXS	**Arharly**	**2.12**	**323**	*eP*	**Pb**	**00 26 30.8**	**+0.7**
ARXS	48nm,0.4s			*eS*	**Sg**	**00 26 58.8**	**-1.3**
	64nm,0.4s						
ARXS	**Arharly**	**2.12**	**323**	Pg	**Pb**	**00 26 31.2**	**+1.2**
ARXS	22nm,0.3s			Lg	Lg	00 26 58.8	
	64nm,0.4s						
IZV	**Izvestkoviy**	**2.26**	**284**	*eP*	**Pb**	**00 26 33.8**	**+1.2**
IZV	baz=83			*eS*	**Sg**	**00 27 03.4**	**-1.4**
	baz=83						
IZV	**Izvestkoviy**	**2.26**	**284**	*eP*	**Pb**	**00 26 33.8**	**+1.2**
IZV	36nm,0.2s			*eS*	**Sg**	**00 27 03.5**	**-1.4**
	99nm,0.2s						
IZV	**Izvestkoviy**	**2.26**	**284**	Pg	**Pb**	**00 26 34.0**	**+1.4**
IZV	31nm,0.1s			Lg	Lg	00 27 03.5	
	99nm,0.2s						
MTBS	**Maitube**	**2.42**	**285**	*eP*	**Pb**	**00 26 36.5**	**+1.3**
MTBS	36nm,0.1s			*eS*	**Sg**	**00 27 07.9**	**-1.7**
	61nm,0.4s						
MTBS	**Maitube**	**2.42**	**285**	Pg	**Pb**	**00 26 36.5**	**+1.3**
MTBS	36nm,0.1s			Lg	Lg	00 27 07.5	
	57nm,0.3s						
ULHL	**Ulahol**	**2.52**	**264**	⇑*eP*	**Pb**	**00 26 36.9**	**0.0**
ULHL	baz=63			⇑*iS*	**Sb**	**00 27 08.9**	**+1.2**
	baz=63						
TDK	**Taldyqorghan**	**2.61**	**341**	*eP*	**Pb**	**00 26 39.3**	**+1.0**
TDK	16nm,0.1s			*eS*	**Sg**	**00 27 13.0**	**-2.7**
	56nm,0.4s						
TDK	**Taldyqorghan**	**2.61**	**341**	Pg	**Pb**	**00 26 39.3**	**+1.0**
TDK	12nm,0.1s			Lg	Lg	00 27 13.0	
	56nm,0.4s						
BOOM	**Boomskoye usch**	**2.72**	**270**	⇑*iP*	**Pb**	**00 26 39.5**	**-0.8**
BOOM	baz=69			⇑*iS*	**Sb**	**00 27 14.3**	**+0.8**
	baz=69						
KST	**Kastek**	**2.73**	**282**	*eP*	**Pb**	**00 26 42.3**	**+1.7**
KST	26nm,0.3s			*eS*	**Sg**	**00 27 17.3**	**-2.5**
	42nm,0.6s						
KST	**Kastek**	**2.73**	**282**	Pg	**Pb**	**00 26 42.3**	**+1.7**
KST	23nm,0.3s			Lg	Lg	00 27 17.3	
	40nm,0.6s						
KUU	**Kurty**	**2.75**	**300**	*eP*	**Pb**	**00 26 41.9**	**+1.2**
KUU	3.0nm,0.1s			*eS*	**Sb**	**00 27 17.0**	**+2.8**
	32nm,0.2s						
KUU	**Kurty**	**2.75**	**300**	Pg	**Pb**	**00 26 41.9**	**+1.2**
KUU	3.0nm,0.1s			Lg	Lg	00 27 17.0	
	32nm,0.2s						
DGS	**Degeres**	**2.91**	**285**	*eP*	**Pb**	**00 26 45.1**	**+1.6**
DGS	19nm,0.4s			*eS*	**Sg**	**00 27 22.5**	**-2.9**
	53nm,0.4s						
TKM2	**Tokmak 2**	**2.98**	**279**	⇑*eP*	**Pb**	**00 26 43.2**	**-1.7**
TKM2	baz=78			⇑*iS*	**Sb**	**00 27 19.5**	**-1.7**
	baz=78						
TKM2	**Tokmak 2**	**2.98**	**279**	⇓Pg	**Pb**	**00 26 44.5**	**-0.4**
TKM2	2.8nm,0.4s			⇑Lg	Lg	00 27 24.1	
	14nm,0.5s						
SGDS	**Sogindy**	**3.77**	**286**	Pg	**Pb**	**00 26 59.1**	**+0.9**
SGDS	5.3nm,0.3s			Lg	Lg	00 27 47.0	
	11nm,0.2s						
AAK	**Ala-Archa**	**3.78**	**273**	⇓Pg	**Pb**	**00 27 00.2**	**+1.7**
AAK	1.1nm,0.4s			⇑Lg	Lg	00 27 53.6	
	5.8nm,0.5s						
MRKS	**Merke**	**4.72**	**275**	*eP*	**Pb**	**00 27 17.6**	**+3.2**
MRKS	3.1nm,0.4s			*eS*	**Sg**	**00 28 17.9**	**-5.5**
	7.8nm,0.4s						
MRKS	**Merke**	**4.72**	**275**	Pg	**Pb**	**00 27 17.6**	**+3.2**
MRKS	2.7nm,0.2s			Lg	Lg	00 28 17.9	
	6.2nm,0.3s						

IDC ***14*** *00:31:12.0±2.6, 25°.32S×179°.45E, h535km±34km, mb3.3/3, mb1 3.7/4, mb1mx3.2/21, mbtmp4.3/4, Error ellipse: s-maj=53.5km s-min=23.0km az=175.0*
NEIC ***14*** *00:31:12.5±2.0, 25°.5S±0°.1×179°.5E±0°.2, h540km±4km, mb4.5/20, Error ellipse: s-maj=21.5km s-min=18.9km az=104.0*
ISC 14 00:31:13.1±0.8, **25°.48S**±0°.09×**179°.4E**±0°.1, **h550**km, **n34**, σ1°**31**/33, **mb4.2**/10, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
RAO	**Raoul Island**	**4.43**	**149**	P	**P**	**00 32 37.2**	**-0.9**
	223nm,0.3s,baz=77,slow=9.0,SNR=14						
MXZ	**Matakaoa Point**	**12.08**	**184**	P	**P**	**00 33 52.6**	**+0.4**
DZM	**Mont Dzumac**	**12.38**	**283**	P	**P**	**00 33 55.7**	**0.0**
URZ	**Urewera**	**12.89**	**188**	P	**P**	**00 34 00.7**	**+0.1**
	1.4nm,0.3s,baz=207,slow=3.8,SNR=5.8						
URZ				S	**S**	**00 36 19.6**	**+1.0**
	1.2nm,0.3s,baz=68,slow=20,SNR=3.0						
BKZ	**Black Stump Fm**	**13.87**	**190**	P	**P**	**00 34 09.8**	**-1.0**
QRZ	**Quartz Range**	**16.35**	**199**	P	**P**	**00 34 37.6**	**+1.9**
NNZ	**Nelson**	**16.48**	**196**	P	**P**	**00 34 36.9**	**0.0**
NNZ				IAmb	IAmb	00 34 54.1	
	comp=Z,31nm,1.2s						
THZ	**Tophouse**	**17.12**	**197**	P	**P**	**00 34 41.8**	**-0.9**
THZ				IAmb	IAmb	00 34 59.7	
	comp=Z,16nm,1.0s						
KHZ	**Kahutara**	**17.58**	**195**	P	**P**	**00 34 42.2**	**-4.7**
KHZ				IAmb	IAmb	00 34 57.7	
	comp=Z,28nm,1.1s						
OXZ	**Oxford**	**18.81**	**197**	P	**P**	**00 34 59.3**	**+1.2**
OXZ				IAmb	IAmb	00 35 04.9	
	comp=Z,12nm,0.5s						
FOZ	**Fox Glacier**	**19.65**	**201**	P	**P**	**00 35 08.7**	**+2.9**
EIDS	**Eidsvold**	**25.60**	**264**	P	**P**	**00 35 57.7**	**-1.5**
TARA	**Tarawa**	**27.41**	**346**	P	**P**	**00 36 15.7**	**+0.5**
CTAO	**Charters Tower**	**31.02**	**273**	P	**P**	**00 36 47.1**	**+0.7**
CTAO				IAmb	IAmb	00 36 47.3	
	comp=Z,10.0nm,0.7s						
COEN	**Coen**	**35.90**	**282**	P	**P**	**00 37 27.8**	**+0.2**
COEN				IAmb	IAmb	00 37 28.9	
	comp=Z,6.2nm,0.8s						
BBOO	**Buckleboo**	**38.38**	**249**	P	**P**	**00 37 47.0**	**-0.7**
BBOO				IAmb	IAmb	00 37 58.6	
	comp=Z,5.1nm,0.9s						
AS31	**Alice Springs**	**41.30**	**263**	P	**P**	**00 38 12.0**	**+0.8**
ASAR	**Alice Springs**	**41.30**	**263**	P	**P**	**00 38 11.7**	**+0.4**
	comp=Z,3.8nm,0.8s,baz=99,slow=8.2,SNR=21						
ASAR	**Alice Springs**	**41.30**	**263**	P	**P**	**00 38 10.6**	**-0.6**
WR0	**Warramunga Arr**	**41.63**	**268**	P	**P**	**00 38 13.8**	**-0.1**
WB2	**Warramunga Arr**	**41.81**	**268**	P	**P**	**00 38 15.2**	**0.0**
WB2				IAmb	IAmb	00 38 16.0	
	comp=Z,4.5nm,0.7s						
WB0	**Warramunga Arr**	**41.82**	**268**	P	**P**	**00 38 15.4**	**+0.1**
WB0				IAmb	IAmb	00 38 16.5	
	comp=Z,4.6nm,0.7s						
WRA	**Warramunga Arr**	**41.82**	**268**	P	**P**	**00 38 14.9**	**-0.4**
	comp=Z,3.4nm,0.5s,baz=104,slow=7.9,SNR=52						
WRA	**Warramunga Arr**	**41.82**	**268**	P	**P**	**00 38 14.9**	**-0.4**
KNRA	**Kununurra**	**48.20**	**271**	P	**P**	**00 39 04.3**	**+0.1**
KNRA				IAmb	IAmb	00 39 05.4	
	comp=Z,9.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**50.22**	**267**	P	**P**	**00 39 19.7**	**+0.6**
JWT	**Wachi**	**73.41**	**324**	P	**P**	**00 41 49.3**	**-0.2**
JWT				IAmb	IAmb	00 42 08.3	
	comp=Z,12nm,1.0s						
TXAR	**Lajitas Array**	**91.69**	**58**	P	**P**	**00 43 22.8**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=210,slow=5.2,SNR=4.4						
PV14	**Lon Creek, Pa**	**92.26**	**48**	P	**P**	**00 43 23.0**	**-2.0**
PV02	**Paradox Valley**	**92.37**	**49**	P	**P**	**00 43 26.9**	**+1.5**
YMR	**Madison River**	**94.29**	**42**		pP	**00 45 33.3**	**-1.7**
HFS	**Hagfors**	**143.98**	**348**	PKP	PKPbc	00 49 43.4	-1.6
	comp=Z,4.0nm,0.8s,baz=64,slow=3.4,SNR=10						
ASF	**Jabal al Asfar**	**146.64**	**290**	PKPbc	**PKPdf**	**00 49 51.6**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=289,slow=2.3,SNR=3.3						
MMAI	**Mount Meron Ar**	**147.85**	**292**	PKPbc	**PKiKP**	**00 49 58.4**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=61,slow=8.7,SNR=5.2						

HEL ***14*** *00:34:39.4, 67°.86N×20°.00E, h0km, ML1.6, Explosion*
UPP 14 00:34:40.3±0.0, **67°.83N**×**20°.20E**, **h0**km, **ML2.4, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	00 34 43.2	+0.2
KUA				S	Sg	00 34 45.3	+0.5
KUA	**Kurravaara**	**0.14**	**22**	*i* P	Pg	00 34 43.2	+0.2
KUA				*i* S	Sg	00 34 45.3	+0.5
RATU	**Laukkuluspa**	**0.23**	**270**	P	Pg	00 34 44.9	+0.2
RATU	**Laukkuluspa**	**0.23**	**270**	*i* P	Pg	00 34 44.9	+0.2
KOVU	**Salmi**	**0.40**	**358**	P	Pg	00 34 48.0	+0.1
KOVU	**Salmi**	**0.40**	**358**	*i* P	Pg	00 34 48.0	+0.1
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 34 53.6	-0.3
LANU	**Lannavaara**	**0.71**	**71**	*eP*	Pg	00 34 53.6	-0.3
	baz=257						
LANU				*eS*	Sg	00 35 03.5	+0.4
DUNU	**Dundret**	**0.72**	**168**	P	Pg	00 34 53.8	-0.3
DUNU	**Dundret**	**0.72**	**168**	*i* P	Pg	00 34 53.8	-0.3
MASU	**Masugnsbyn**	**0.78**	**117**	P	Pg	00 34 55.1	-0.2
MASU	**Masugnsbyn**	**0.78**	**117**	*i* P	Pg	00 34 55.1	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 34 55.2	-0.1
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	00 34 55.2	-0.1
KIF	**Kilpis

KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pg	00 35 03.2	-0.2
PAJU	**Pajala**	**1.38**	**124**	P	Pg	00 35 05.5	-1.2
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pn	00 35 05.4	-1.4
	baz=309						
ERTU	**Ertsjaerv**	**1.49**	**148**	P	Pn	00 35 07.5	-0.9
ERTU	**Ertsjaerv**	**1.49**	**148**	*e*PG	Pn	00 35 07.6	-0.7
	baz=329						
HARU	**Harads**	**1.70**	**169**	P	Pn	00 35 11.0	-0.1
HARU	**Harads**	**1.70**	**169**	*e*P	Pn	00 35 11.0	-0.1
KALU	**Kalix**	**2.34**	**146**	*e*P	Pn	00 35 20.2	+0.3
	baz=323						
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	00 35 22.0	+1.4
	baz=312						
TOF				MSG		00 35 52.5	
	comp=Z,2.3nm,0.2s						
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pb	00 35 23.4	-1.8
	baz=286						
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pn	00 35 25.0	+1.9
	baz=303						
RNF				*e*SG	Sb	00 35 59.5	+0.2
ARA0	**ARCESS Array S**	**2.59**	**46**	*e*P	Pn	00 35 24.4	+1.0
MSF	**Maaselka**	**3.98**	**115**	*e*PG	Pb	00 35 51.9	+0.7

UPP 14 00:34:51.0±0.1, **67°.82N**×**20°.20E**, **h0**km, **ML2.2, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.15**	**20**	P	Pg	00 34 54.0	+0.2
KUA				S	Sg	00 34 56.1	+0.4
RATU	**Laukkuluspa**	**0.23**	**272**	P	Pg	00 34 55.7	+0.2
DUNU	**Dundret**	**0.71**	**168**	P	Pg	00 35 04.2	-0.4
MASU	**Masugnsbyn**	**0.78**	**117**	P	Pg	00 35 05.8	0.0
PAJU	**Pajala**	**1.38**	**124**	P	Pg	00 35 16.2	-1.2

HEL ***14*** *00:38:22.9, 67°.88N×20°.15E, h0km, ML1.7, Explosion*

UPP 14 00:38:23.7±0.1, **67°.83N**×**20°.21E**, **h1**km±8km, **ML2.1, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**22**	P	Pg	00 38 26.1	-0.2
KUA				S	Sg	00 38 27.6	-0.3
KUA	**Kurravaara**	**0.13**	**22**	*i* P	Pg	00 38 26.1	-0.2
KUA				*i* S	Sg	00 38 27.6	-0.3
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	00 38 27.9	-0.2
RATU				S	Sg	00 38 31.3	+0.1
RATU	**Laukkuluspa**	**0.23**	**268**	*i* P	Pg	00 38 27.9	-0.2
RATU				*i* S	Sg	00 38 31.3	+0.1
KOVU	**Salmi**	**0.39**	**358**	P	Pg	00 38 30.9	-0.2
KOVU	**Salmi**	**0.39**	**358**	*i* P	Pg	00 38 30.9	-0.2
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	00 38 36.6	-0.6
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	00 38 36.6	-0.6
	baz=255						
LANU				*e*S	Sg	00 38 46.1	-0.2
DUNU	**Dundret**	**0.73**	**169**	P	Pg	00 38 36.9	-0.7
DUNU	**Dundret**	**0.73**	**169**	*i* P	Pg	00 38 36.9	-0.7
MASU	**Masugnsbyn**	**0.78**	**118**	P	Pg	00 38 38.2	-0.4
MASU	**Masugnsbyn**	**0.78**	**118**	*i* P	Pg	00 38 38.2	-0.4
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	00 38 38.5	-0.3
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	00 38 38.5	-0.3
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*PB	Pg	00 38 46.7	0.0
	baz=179						
KIF				*e*S	Sg	00 38 59.1	-3.0
KIF				MSG		00 38 59.2	
	comp=Z,6.4nm,0.2s						
KIF	**Kilpisjarvi**	**1.20**	**10**	*e*P	Pg	00 38 45.2	-1.4
PAJU	**Pajala**	**1.39**	**125**	P	Pn	00 38 48.7	-1.4
PAJU	**Pajala**	**1.39**	**125**	*e*PG	Pn	00 38 48.7	-1.5
	baz=304						
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	00 38 50.6	-1.1
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*PG	Pn	00 38 50.6	-1.1
	baz=318						
ERTU				*e*SN	Sb	00 39 11.6	-0.2
KALU	**Kalix**	**2.34**	**146**	*e*P	Pn	00 39 02.8	-0.4
	baz=338						
KALU				*e*SB	Sn	00 39 33.7	+1.2
TOF	**Tornio**	**2.39**	**135**	*e*PB	Pn	00 39 05.2	+1.2
	baz=323						
TOF				MSG		00 39 35.2	
	comp=Z,2.5nm,0.2s						
TOF				*e*SB	Sb	00 39 36.5	-0.9
RNF	**Rovaniemi**	**2.57**	**116**	*e*PB	Pn	00 39 08.1	+1.7
RNF				*e*SG	Sb	00 39 42.6	0.0
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*PB	Pn	00 39 07.7	+1.1
	baz=229						
ARA0	**ARCESS Array S**	**2.58**	**46**	*e*P	Pn	00 39 07.7	+1.1

UPP 14 00:38:28.5±0.5, **67°.83N**×**20°.22E**, **h2**km±6km, **ML2.7, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.13**	**20**	P	Pg	00 38 31.1	0.0
KUA				S	Sg	00 38 33.0	+0.2
RATU	**Laukkuluspa**	**0.24**	**269**	P	Pg	00 38 33.1	0.0
KOVU	**Salmi**	**0.40**	**357**	P	Pg	00 38 35.9	-0.1
PAJU	**Pajala**	**1.38**	**125**	P	Pn	00 38 53.9	-0.9

SOME ***14*** *00:56:33.3, 42°.50N×79°.55E, h10km*
KRNET ***14*** *00:56:34.2±0.1, 42°.57N×79°.56E, h19km, mb2.5*
NNC ***14*** *00:56:35.2±1.9, 42°.62N×79°.58E, h0km, mb2.7, mpv2.5, Error ellipse: s-maj=11.4km s-min=7.6km az=133.0*

ISC 14 00:56:34.6±1.8, **42°.59N**±0°.06×**79°.51E**±0°.06, **h5**km±13km, **n25**, σ0°**65**/49, **10C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.57**	**356**	*e*P	**Pg**	**00 56 46.1**	**+0.6**
	baz=22						
SHLS				*e*S	**Sb**	**00 56 55.7**	**+0.2**
	baz=22						
SHLS	**Shalkode**	**0.57**	**356**	*e*P	**Pg**	**00 56 46.1**	**+0.6**
	2.7nm,0.1s						
SHLS				*e*S	**Sb**	**00 56 55.7**	**+0.2**
	10nm,0.2s						
SHLS	**Shalkode**	**0.57**	**356**	P	**Pg**	**00 56 46.1**	**+0.6**
	2.7nm,0.1s						
SHLS				S	**Sb**	**00 56 55.7**	**+0.2**
	10nm,0.2s						
UZB	**Uzynbulak**	**0.66**	**327**	*e*P	**Pg**	**00 56 47.3**	**-0.1**
	baz=26						
UZB				*e*S	**Sb**	**00 56 57.6**	**-0.7**
	baz=26						
UZB	**Uzynbulak**	**0.66**	**327**	*e*P	**Pg**	**00 56 47.2**	**-0.1**
	2.3nm,0.2s						
UZB				*e*S	**Sb**	**00 56 57.6**	**-0.7**
	4.1nm,0.1s						
UZB	**Uzynbulak**	**0.66**	**327**	P	**Pg**	**00 56 47.3**	**-0.1**
	1.8nm,0.1s						
UZB				S	**Sb**	**00 56 57.6**	**-0.7**
	3.8nm,0.1s						
PDGK	**Podgornoye**	**0.74**	**359**	P	**Pg**	**00 56 48.0**	**-0.8**
	0.8nm,0.1s						
PDGK				S	**Sg**	**00 56 58.8**	**+0.4**
	2.9nm,0.2s						
PDGK	**Podgornoye**	**0.74**	**359**	⇓P	**Pg**	**00 56 48.9**	**+0.1**
	2.7nm,1.2s						
PDGK				⇑S	**Sg**	**00 56 58.8**	**+0.4**
	5.2nm,0.8s						
PRZ	**Przheval'sk**	**0.83**	**263**	⇑*i*P	**Pg**	**00 56 50.8**	**+0.3**
	baz=64						
PRZ				⇑*i*S	**Sb**	**00 57 02.5**	**-0.5**
	baz=64						
SATY	**Saty**	**0.94**	**300**	*e*P	**Pg**	**00 56 52.1**	**-0.5**
	baz=0.0						
SATY				*e*S	**Sg**	**00 57 05.6**	**+0.8**
	baz=0.0						
SATY	**Saty**	**0.94**	**300**	*e*P	**Pg**	**00 56 52.1**	**-0.5**
	0.5nm,0.1s						
SATY				*e*S	**Sg**	**00 57 05.6**	**+0.8**
	3.8nm,0.1s						
SATY	**Saty**	**0.94**	**300**	P	**Pb**	**00 56 53.1**	**-0.2**
	1.5nm,0.1s						
SATY				S	**Sb**	**00 57 06.7**	**+0.5**
	3.8nm,0.1s						
KPKS	**Kokpek**	**1.06**	**326**	*e*P	**Pg**	**00 56 54.5**	**-0.5**
	baz=25						
KPKS				*e*S	**Sb**	**00 57 09.8**	**0.0**
	baz=25						
KPKS	**Kokpek**	**1.06**	**326**	*e*P	**Pg**	**00 56 54.5**	**-0.5**
	3.3nm,0.2s						
KPKS				*e*S	**Sb**	**00 57 09.8**	**0.0**
	2.1nm,0.3s						
ANVS	**Anan'yevo**	**1.37**	**279**	⇑*i*P	**Pb**	**00 57 00.4**	**-0.4**
	baz=79						
ANVS				⇑*i*S	**Sg**	**00 57 19.9**	**+1.2**
	baz=79						
MNBS	**Baschi**	**1.69**	**332**	*e*P	**Pb**	**00 57 05.7**	**-0.6**
	1.9nm,0.2s						
MNBS				*e*S	**Sg**	**00 57 29.0**	**0.0**
	3.4nm,0.2s						
MNBS	**Baschi**	**1.69**	**332**	P	**Pb**	**00 57 05.7**	**-0.6**
	1.9nm,0.1s						
MNBS				S	**Sg**	**00 57 29.0**	**0.0**
	3.4nm,0.2s						
DJR	**Jarkent**	**1.75**	**7**	*e*P	**Pb**	**00 57 06.5**	**-0.8**
	0.6nm,0.1s						
DJR				*e*S	**Sg**	**00 57 30.1**	**-0.8**
	1.6nm,0.3s						
DJR	**Jarkent**	**1.75**	**7**	P	**Pb**	**00 57 06.5**	**-0.8**
	0.6nm,0.1s						
DJR				S	**Sg**	**00 57 30.1**	**-0.8**
	1.5nm,0.2s						
KDJ	**Kajisay**	**1.79**	**256**	⇑*i*P	**Pb**	**00 57 07.0**	**-0.9**
	baz=57						
KDJ				⇑*i*S	**Sg**	**00 57 31.7**	**-0.3**
	baz=57						
KOTS	**Kotyrbulak**	**1.88**	**291**	*e*P	**Pb**	**00 57 09.1**	**-0.3**
	baz=91						
KOTS				*e*S	**Sg**	**00 57 34.7**	**-0.1**
	baz=91						
KOTS	**Kotyrbulak**	**1.88**	**291**	*e*P	**Pb**	**00 57 09.1**	**-0.3**
	3.3nm,0.3s						
KOTS				*e*S	**Sg**	**00 57 34.7**	**-0.1**
	1.5nm,0.2s						
KTBS	**Karatobe**	**2.35**	**299**	*e*P	**Pb**	**00 57 17.6**	**+0.1**
	0.6nm,0.3s						
KTBS				*e*S	**Sg**	**00 57 49.3**	**-0.8**
	2.4nm,0.3s						
BOOM	**Boomskoye usch**	**2.64**	**269**	⇑*i*P	**Pn**	**00 57 19.5**	**+1.5**
	baz=69						
BOOM				⇑*i*S	**Sb**	**00 57 53.4**	**-1.8**
	baz=69						
TKM2	**Tokmak 2**	**2.90**	**278**	⇑Pg	**Pg**	**00 57 29.8**	**-0.4**
	1.4nm,0.9s						
TKM2				⇓Lg	Lg	00 58 10.5	
	1.3nm,0.8s						

IDC ***14*** *01:06:43.8±4.2, 4°.34S×125°.46E, h424km±53km, mb2.8/3, mb1 2.9/6, mb1mx2.7/40, mbtmp3.7/6, Error ellipse: s-maj=78.7km s-min=17.0km az=54.0*

ISC 14 01:06:45.0±1.4, **4°.5S**±0°.1×**125°.4E**±0°.2, **h441**km, **n7,** σ0°**88**/8, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.62**	**264**	P	**P**	**01 08 16.0**	**+1.0**
	2.1nm,0.3s,baz=113,slow=5.8,SNR=7.9						
BATI	**Baumata**	**5.94**	**196**	P	**P**	**01 08 17.9**	**-0.4**
	18nm,0.3s,baz=360,slow=0.6,SNR=5.5						
BATI				S	**S**	**01 09 33.9**	**-0.7**
	4.3nm,0.3s,baz=122,slow=22,SNR=1.5						
FITZ	**Fitzroy Crossi**	**13.54**	**179**	P	**P**	**01 09 40.6**	**0.0**
	0.2nm,0.3s,baz=347,slow=7.1,SNR=23						
WRA	**Warramunga Arr**	**17.68**	**151**	P	**P**	**01 10 25.1**	**+0.2**
	0.4nm,0.3s,baz=333,slow=10,SNR=29						
ASAR	**Alice Springs**	**20.78**	**157**	P	**P**	**01 10 55.3**	**+1.2**
	0.3nm,0.3s,baz=344,slow=15,SNR=8.8						
MKAR	**Makanchi Array**	**63.64**	**328**	P	**P**	**01 16 31.4**	**-0.1**
	0.3nm,0.4s,baz=120,slow=9.1,SNR=6.6						
ZALV	**Zalesovo Beam**	**67.34**	**335**	P	**P**	**01 16 53.7**	**-0.9**
	0.4nm,0.3s,baz=119,slow=12,SNR=1.2						

TEH ***14*** *01:12:47.6, 32°.63N×47°.70E, h8km, ML4.1*
THR ***14*** *01:12:48.4±0.6, 32°.50N×47°.67E, h15km, ML4.0*
MOS ***14*** *01:12:48.6±1.4, 32°.59N×47°.83E, h24km, mb4.3/9, Error ellipse: s-maj=9.4km s-min=6.0km az=101.8*
IDC ***14*** *01:12:48.1±1.0, 32°.76N×47°.82E, h0km, mb3.9/17, mb1 3.9/23, mb1mx3.8/42, mbtmp3.8/23, ML3.6/6, MS4.8/1, Ms1 4.8/1, ms1mx2.7/44, Error ellipse: s-maj=19.8km s-min=11.3km az=151.0*
NEIC ***14*** *01:12:49.0±2.0, 32°.57N±0°.04×47°.81E±0°.06, h10km±1km, mb4.1/17, mb_Lg4.1(TEH), ML3.9(THR), Error ellipse: s-maj=9.5km s-min=5.0km az=114.0*
OMAN ***14*** *01:12:56.7±0.6, 32°.01N×47°.76E, h40km±6km, mb5.0/18, ms2.7/7, Error ellipse: s-maj=11.4km s-min=5.8km az=134.0*
DSN ***14*** *01:12:56.5±1.4, 32°.05N×47°.97E, h15km, ML3.9/1, Error ellipse: s-maj=13.9km s-min=6.5km az=152.0*

ISC 14 01:12:48.5±0.4, **32°.54N**±0°.04×**47°.82E**±0°.04, **h10**km, **n233,** σ1§**93**/256, **mb4.1**/35, **6C-10D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.98**	**1**	*e*		01 13 24.5	
IKFM				*e*Pg	**Pg**	**01 13 05.6**	**-1.7**
IKMR	**Kamar-syah**	**1.08**	**26**	*e*		01 13 25.5	
IKMR				*e*Pg	**Pb**	**01 13 07.6**	**-1.6**
IDOB	**Doab**	**1.27**	**13**	*e*Pg	**Pn**	**01 13 10.5**	**-2.1**
BMDN	**Meydan**	**1.40**	**37**	*e*Pg	**Pn**	**01 13 14.1**	**-0.3**
BMDN				*e*		01 13 18.3	
BMDN	**Meydan**	**1.40**	**37**		**Pn**	**01 13 14.0**	**-0.3**
IKOM	**Komasi**	**1.65**	**351**	*e*Pg	**Pn**	**01 13 18.3**	**+0.7**
IKOM				*e*		01 13 20.7	
IKOM				*e*Sg	**Sn**	**01 13 39.2**	**+0.2**
HSAM	**Samen**	**1.79**	**21**	*e*Pn	**Pn**	**01 13 19.8**	**+0.2**
HSAM				*e*		01 13 24.5	
HSAM	**Samen**	**1.79**	**21**	Pn	**Pn**	**01 13 19.8**	**+0.2**
KCHF	**Cheshme Sefid,**	**1.85**	**339**	*e*Pg	**Pn**	**01 13 21.3**	**+0.9**
KCHF				*e*		01 13 46.8	
KCHF	**Cheshme Sefid,**	**1.85**	**339**		**Pn**	**01 13 21.2**	**+0.9**
IBZA	**Bozab**	**1.92**	**1**	*e*Pg	**Pn**	**01 13 23.0**	**+1.5**
IBZA				*e*		01 13 25.1	
KER	**Kermanshah**	**1.93**	**343**	*e*Pn	**Pn**	**01 13 22.1**	**+0.9**
IGHG	**Ghaleghazi**	**2.07**	**330**	*e*Pn	**Pn**	**01 13 24.8**	**+1.3**
IGHG				*e*		01 14 04.9	
IVIS	**Veis**	**2.14**	**338**	*e*Pn	**Pn**	**01 13 25.2**	**+0.9**
IVIS				*e*		01 14 00.4	
KHMZ	**Khomeyn**	**2.15**	**56**	*e*Pn	**Pb**	**01 13 27.9**	**+0.2**
KHMZ	**Khomeyn**	**2.15**	**56**	*e*Pn	**Pb**	**01 13 27.9**	**+0.2**
KHMZ	**Khomeyn**	**2.15**	**56**	Pn	**Pb**	**01 13 27.9**	**+0.2**
IALM	**Almabolaq**	**2.33**	**7**	*e*Pn	**Pn**	**01 13 28.9**	**+1.8**
IDHR	**Dehrash**	**2.46**	**331**	*e*Pn	**Pn**	**01 13 29.8**	**+0.9**
IDHR				*e*		01 13 34.6	
ILIN	**Lien**	**2.48**	**343**	*e*Pn	**Pn**	**01 13 30.3**	**+1.2**
ILIN				*e*		01 14 11.2	
IPIR	**Pirpir**	**2.59**	**86**	*e*Pn	**Pn**	**01 13 34.3**	**+3.5**
IPIR				*e*		01 14 12.2	
ASAO	**Ashtian**	**2.72**	**42**	*e*Pn	**Pn**	**01 13 35.3**	**+2.9**
ASAO	**Ashtian**	**2.72**	**42**	*e*Pn	**Pn**	**01 13 35.3**	**+2.9**
HSRG	**Sareghieh**	**2.72**	**8**	*e*Pn	**Pn**	**01 13 33.9**	**+1.4**
HSRG	**Sareghieh**	**2.72**	**8**	Pn	**Pn**	**01 13 33.9**	**+1.4**
ROKH	**ROKH**	**2.72**	**93**	*e*Pn	**Pn**	**01 13 36.0**	**+3.5**
ROKH				*e*		01 14 26.6	
IKLH	**Kolahrood**	**3.25**	**75**	*e*Pn	**Pn**	**01 13 42.7**	**+2.9**
IKLH				*e*		01 14 33.0	
IRAZ	**Razeghan**	**3.35**	**31**	*e*Pn	**Pn**	**01 13 43.7**	**+2.6**
QABG	**Abgarm-Qazvin**	**3.48**	**24**	*e*Pn	**Pn**	**01 13 44.1**	**+1.2**
GHVR	**GHOM**	**3.48**	**55**	*e*Pn	**Pn**	**01 13 45.9**	**+3.0**
GHVR	**GHOM**	**3.48**	**55**	*e*Pn	**Pn**	**01 13 45.9**	**+3.0**
GHVR	**GHOM**	**3.48**	**55**	Pn	**Pn**	**01 13 45.8**	**+3.0**
KLNJ	**Kolanjah**	**3.56**	**114**	*e*Pn	**Pn**	**01 13 47.6**	**+3.5**
KLNJ				*e*		01 15 00.8	
IGAR	**Gharneh**	**3.57**	**91**	*e*Pn	**Pn**	**01 13 47.5**	**+3.4**
IGAR				*e*		01 14 32.7	
IZEF	**Zefreh**	**3.81**	**84**	*e*Pn	**Pn**	**01 13 51.2**	**+3.7**
KRSH	**Karshahi**	**3.88**	**67**	*e*Pn	**Pn**	**01 13 51.3**	**+2.9**
IMHD	**Mahdasht**	**3.92**	**36**	*e*Pn	**Pn**	**01 13 50.6**	**+1.7**
IRAM	**Ramesheh**	**3.94**	**100**	*e*Pn	**Pn**	**01 13 52.1**	**+3.0**
IHSB	**Hasanabad**	**4.07**	**44**	*e*Pn	**Pn**	**01 13 53.0**	**+2.1**
QSDN	**Sirdan**	**4.11**	**15**	*e*Pn	**Pn**	**01 13 53.8**	**+2.3**
ZNJK	**Zanjan**	**4.18**	**10**	*e*Pn	**Pn**	**01 13 54.7**	**+2.2**
ZNJK	**Zanjan**	**4.18**	**10**	*e*Pn	**Pn**	**01 13 54.7**	**+2.2**
NASN	**Na'in**	**4.21**	**85**	*e*Pn	**Pn**	**01 13 55.7**	**+2.6**
NASN	**Na'in**	**4.21**	**85**	*e*Pn	**Pn**	**01 13 55.7**	**+2.6**
IGZV	**Ghazvin**	**4.31**	**27**	*e*Pn	**Pn**	**01 13 56.2**	**+1.8**
QALM	**Alamut, Qazvin**	**4.53**	**30**	*e*Pn	**Pn**	**01 13 58.6**	**+1.3**
MAHB	**Mahabad**	**4.56**	**338**	*e*Pn	**Pn**	**01 13 58.6**	**+1.0**
IDMV	**Damavand**	**4.62**	**48**	*e*Pn	**Pn**	**01 14 00.4**	**+1.8**
AHBU	**AHRAM**	**4.73**	**140**	*e*Pn	**Pn**	**01 14 02.1**	**+2.2**
ISAD	**Sadrabad**	**5.01**	**96**	*e*Pn	**Pn**	**01 14 06.6**	**+2.6**
ANAR	**Anarak**	**5.01**	**81**	*e*Pn	**Pn**	**01 14 06.1**	**+2.2**
ILAS	**Lasjerd**	**5.12**	**55**	*e*Pn	**Pn**	**01 14 07.4**	**+1.9**
IFIR	**Firoozkooh**	**5.13**	**52**	*e*Pn	**Pn**	**01 14 07.3**	**+1.7**
IPRN	**Peran**	**5.25**	**44**	*e*Pn	**Pn**	**01 14 09.8**	**+2.7**
ISRB	**Sarab**	**5.27**	**359**	*e*Pn	**Pn**	**01 14 09.1**	**+1.6**
IAZR	**Azarshahr**	**5.34**	**344**	*e*Pn	**Pn**	**01 14 08.9**	**+0.4**
IALA	**Alasht**	**5.43**	**48**	*e*Pn	**Pn**	**01 14 12.6**	**+2.8**
ICHK	**Chekchek**	**5.58**	**91**	*e*Pn	**Pn**	**01 14 14.1**	**+2.4**
ISHM	**Shahmirzad**	**5.58**	**53**	*e*Pn	**Pn**	**01 14 14.7**	**+2.9**
IHRS	**Heris**	**5.80**	**354**	*e*Pn	**Pn**	**01 14 15.9**	**+1.2**
CUKT	**Cukurca**	**5.83**	**325**	*e*P	**Pn**	**01 14 15.0**	**-0.1**
IANJ	**Anjilo**	**5.84**	**58**	*e*Pn	**Pn**	**01 14 17.8**	**+2.5**
ITBZ	**Tabriz**	**5.84**	**347**	*e*Pn	**Pn**	**01 14 15.5**	**+0.2**
IMEH	**Mehriz**	**5.88**	**99**	*e*Pn	**Pn**	**01 14 19.0**	**+3.0**
AHAR	**Ahar**	**5.97**	**354**	*e*Pn	**Pn**	**01 14 18.8**	**+1.8**
QIR1	**Qir**	**6.06**	**131**	*e*Pn	**Pn**	**01 14 22.3**	**+4.1**
IGLO	**Ghaloghah**	**6.34**	**50**	*e*Pn	**Pn**	**01 14 25.1**	**+2.9**
SIRT	**Sirnak**	**6.63**	**320**	*e*P	**Pn**	**01 14 25.9**	**-0.1**
GEVA	**Gevas**	**6.95**	**327**		**Pn**	**01 14 31.4**	**+0.9**
AKDM	**Akdamar-Van**	**6.99**	**327**	*e*P	**Pn**	**01 14 31.9**	**+0.8**
VANB	**Van**	**7.04**	**330**	*e*P	**Pn**	**01 14 32.5**	**+0.9**
CLDR	**Caldiran**	**7.31**	**335**	*e*P	**Pn**	**01 14 37.2**	**+1.7**
TPRV	**Parvadeh(Tabas**	**7.48**	**84**	*e*Pn	**Pn**	**01 14 40.2**	**+2.5**
MARD	**Mardin**	**7.49**	**311**		**Pn**	**01 14 37.2**	**-0.7**
TNSJ	**Nastanj**	**7.50**	**77**	*e*Pn	**Pn**	**01 14 40.4**	**+2.5**
GURO	**Guroymak-BITLI**	**7.63**	**323**	*e*P	**Pn**	**01 14 40.2**	**+0.4**
MAZI	**Mazidag**	**7.79**	**311**	*e*P	**Pn**	**01 14 41.6**	**-0.4**
TKDS	**Koohdasht(Taba**	**7.88**	**80**	*e*Pn	**Pn**	**01 14 45.4**	**+2.2**
GNI	**Garni**	**7.99**	**343**	Pn	**Pn**	**01 14 49.4**	**+4.7**
	0.2nm,0.3s,baz=176,slow=14,SNR=2.5						
GNI	**Garni**	**7.99**	**343**	P	**Pn**	**01 14 43.0**	**-1.7**
GNI	**Garni**	**7.99**	**343**	Pn	**Pn**	**01 14 43.0**	**-1.7**
AGRB	**Hanur-Agry**	**8.03**	**332**	*e*P	**Pn**	**01 14 46.3**	**+0.9**
VRTB	**Varto-Mus**	**8.38**	**324**	*e*P	**Pn**	**01 14 50.1**	**0.0**
BNGB	**Bingl**	**8.66**	**320**	*e*P	**Pn**	**01 14 53.2**	**-0.8**
URFA	**Urfa**	**8.85**	**306**	*e*P	**Pn**	**01 14 55.9**	**-0.6**
SBZV	**Sabzevar**	**8.94**	**62**	*e*Pn	**Pn**	**01 15 00.1**	**+2.2**
YEDI	**Yedisu-Bingol**	**9.06**	**321**	*e*P	**Pn**	**01 14 58.9**	**-0.5**
SLWR	**Sila**	**9.10**	**157**	*e*Pn	**Pn**	**01 15 03.0**	**+3.1**
RAYN	**Ar Rayn**	**9.22**	**193**	P	**Pn**	**01 15 02.7**	**+1.1**
RAYN				S	**Sn**	**01 16 43.1**	**-2.3**
RAYN	**Ar Rayn**	**9.22**	**193**	P	**Pn**	**01 15 02.4**	**+0.9**
RAYN	**Ar Rayn**	**9.22**	**193**	Pn	**Pn**	**01 15 02.4**	**+0.9**
ASF	**Jabal al Asfar**	**9.25**	**271**	Pn	**Pn**	**01 15 02.2**	**+0.2**
	0.1nm,0.3s,baz=278,slow=2.7,SNR=8.0						
ASF				Sn	**Sn**	**01 16 40.5**	**-5.7**
	0.2nm,0.3s,baz=330,slow=23,SNR=1.0						
ASF				Lg	Lg	01 17 51.4	
	0.3nm,0.3s,baz=60,slow=23,SNR=2.0						
PTK	**Pertek**	**9.33**	**315**	*e*P	**Pn**	**01 15 02.2**	**-1.0**
ISFR	**Sfrayin**	**9.50**	**59**	*e*Pn	**Pn**	**01 15 07.6**	**+2.0**
KOPT	**Kop Dagi**	**9.51**	**324**	Pn	**Pn**	**01 15 07.0**	**+1.2**
SHME	**Shamm**	**9.72**	**130**	P	**Pn**	**01 15 09.7**	**+1.2**
SHME	**Shamm**	**9.72**	**130**	*e*Pn	**Pn**	**01 15 10.1**	**+1.7**
BANOM	**Banah**	**9.91**	**130**	P	**Pn**	**01 15 12.4**	**+1.4**
BANOM				S	**Sn**	**01 16 00.0**	**-2.5**
GEYT	**Alibeck**	**9.98**	**55**	Pn	**Pn**	**01 15 09.9**	**-2.1**
	0.2nm,0.3s,baz=228,slow=19,SNR=1.3						
GEYT				LR	LR	01 19 32.9	
	comp=Z,78nm,20.4s,baz=245,slow=41						
AJN	**Ajban**	**10.14**	**140**	*i* P	**Pn**	**01 15 16.3**	**+2.2**
	SNR=7.6						
AJN	**Ajban**	**10.14**	**140**	P	**Pn**	**01 15 17.3**	**+3.2**
AJN				S	**Sn**	**01 17 08.3**	**+0.4**
AJN	**Ajban**	**10.14**	**140**	*e*Pn	**Pn**	**01 15 16.8**	**+2.7**
NAZ	**Nazwa, Dubai**	**10.19**	**136**	P	**Pn**	**01 15 17.1**	**+2.3**
NAZ	**Nazwa, Dubai**	**10.19**	**136**	P	**Pn**	**01 15 17.1**	**+2.3**
NAZ				P	**Pn**	**01 15 17.1**	**+2.3**
NAZ				S	**Sn**	**01 17 07.7**	**-1.5**
NAZ				S	**Sn**	**01 17 07.7**	**-1.5**
NAZ	**Nazwa, Dubai**	**10.19**	**136**	*e*Pn	**Pn**	**01 15 16.9**	**+2.0**
MSFE	**Esma-Masafi**	**10.22**	**132**	P	**Pn**	**01 15 17.3**	**+2.0**
MSFE	**Esma-Masafi**

KK31					pmax	pmax			
	comp=Z,7.0nm,1.5s								
KK31	**Karatay Array**	**20.73**	**53**		**P**	**P**	**01 17 30.1**	**+1.0**	
KK31					IAmb	IAmb	01 17 35.1		
	comp=Z,6.8nm,1.4s								
KKAR	**Karatay Array**	**20.73**	**53**	P	**P**		**01 17 30.1**	**+1.0**	
KKAR					pmax	pmax			
	comp=Z,7.0nm,1.5s								
KKAR	**Karatay Array**	**20.73**	**53**	P	**P**		**01 17 30.1**	**+1.0**	
KKAR	**Karatay Array**	**20.73**	**53**	P	**P**		**01 17 30.0**	**+0.8**	
VRI	**Vrincioaia**	**21.00**	**315**	⇓P	**P**		**01 17 32.9**	**+0.9**	
VRI	**Vrincioaia**	**21.00**	**315**	⇓P	**P**		**01 17 32.9**	**+0.9**	
NEHR	**Nehoiu**	**21.03**	**314**	⇑P	**P**		**01 17 33.3**	**+0.9**	
LPSR	**Galich'ya Gora**	**21.06**	**345**	*e*P	**P**		**01 17 29.9**	**-2.6**	
LPSR					pmax	pmax			
	comp=Z,10.0nm,0.6s								
MLR	**Muntele Rosu**	**21.27**	**314**	P	**P**		**01 17 37.8**	**+2.7**	
	comp=Z,10nm,0.7s,baz=190,slow=5.8,SNR=18								
MLR	**Muntele Rosu**	**21.27**	**314**	⇓P	**P**		**01 17 40.7**	**+5.6**	
MLR	**Muntele Rosu**	**21.27**	**314**	P	**P**		**01 17 37.2**	**+2.1**	
MLR	**Muntele Rosu**	**21.27**	**314**	P	**P**		**01 17 37.2**	**+2.1**	
NIL	**Nilore**	**21.32**	**80**	P	**P**		**01 17 35.3**	**-0.3**	
NIL					pmax	pmax			
	comp=Z,6.0nm,0.6s								
NIL	**Nilore**	**21.32**	**80**	P	**P**		**01 17 35.3**	**-0.3**	
NIL					IAmb	IAmb	01 17 43.4		
	comp=Z,5.8nm,0.6s								
TESR	**Tescani**	**21.39**	**317**	⇑P	**P**		**01 17 36.3**	**+0.1**	
BIZ	**Bicaz**	**21.94**	**317**	⇓P	**P**		**01 17 45.5**	**+3.4**	
ARR	**Arges**	**22.02**	**312**	⇓P	**P**		**01 17 46.5**	**+3.4**	
MDB	**Medias**	**22.55**	**314**	⇑P	**P**		**01 17 52.2**	**+3.6**	
MDB	**Medias**	**22.55**	**314**	⇑P	**P**		**01 17 52.2**	**+3.6**	
LOT	**Lotru**	**22.60**	**312**	⇓P	**P**		**01 17 49.6**	**+0.3**	
KMPD	**K-Podol'skiy**	**22.68**	**321**	P	**P**		**01 17 48.0**	**-1.9**	
AKASG	**Malin Array Be**	**22.75**	**328**	P	**P**		**01 17 48.5**	**-2.1**	
	comp=Z,2.3nm,0.5s,baz=135,slow=9.5,SNR=19								
AKASG	**Malin Array Be**	**22.75**	**328**	P	**P**		**01 17 48.7**	**-1.9**	
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.5s								
AKASG	**Malin Array Be**	**22.75**	**328**	P	**P**		**01 17 48.6**	**-1.9**	
AKBB	**Malin Array Si**	**22.75**	**328**	P	**P**		**01 17 50.1**	**-0.5**	
AKBB					pmax	pmax			
	comp=Z,7.0nm,0.9s								
AKBB	**Malin Array Si**	**22.75**	**328**	P	**P**		**01 17 50.1**	**-0.5**	
AKBB					IAmb	IAmb	01 17 54.6		
	comp=Z,6.9nm,0.9s								
KIEV	**Kiev**	**22.75**	**328**	P	**P**		**01 17 48.0**	**-2.6**	
BURAR	**Bucovina Array**	**22.81**	**318**	⇑P	**P**		**01 17 52.6**	**+1.1**	
BURAR	**Bucovina Array**	**22.81**	**318**	⇑P	**P**		**01 17 52.6**	**+1.1**	
BURAR	**Bucovina Array**	**22.81**	**318**	P	**P**		**01 17 50.8**	**-0.7**	
BUR08	**Bucovina Ar. S**	**22.84**	**318**	P	**P**		**01 17 51.6**	**-0.2**	
GZR	**Gura Zlata**	**23.21**	**311**	⇓P	**P**		**01 17 55.2**	**-0.4**	
SIRR	**Siria**	**24.29**	**312**	⇓P	**P**		**01 18 07.4**	**+1.5**	
ARU	**Arti**	**25.02**	**14**	P	**P**		**01 18 12.6**	**+0.1**	
	comp=Z,1.8nm,0.8s,baz=185,slow=11,SNR=5.5								
ARU	**Arti**	**25.02**	**14**	P	**P**		**01 18 12.4**	**0.0**	
ARU	**Arti**	**25.02**	**14**	P	**P**		**01 18 12.5**	**+0.1**	
KOLS	**Kolonicke sedl**	**25.18**	**318**	*e*P	**P**		**01 18 15.4**	**+1.4**	
KOLS					pmax	pmax			
	comp=Z,14nm,1.3s								
KOLS	**Kolonicke sedl**	**25.18**	**318**	*e*P	**P**		**01 18 15.4**	**+1.4**	
CRVS	**Cervenica-Dubn**	**25.62**	**317**	*e*P	**P**		**01 18 19.8**	**+1.8**	
CRVS					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CRVS	**Cervenica-Dubn**	**25.62**	**317**	*e*P	**P**		**01 18 19.8**	**+1.8**	
KECS	**Kecovo**	**25.99**	**316**	*e*P	**P**		**01 18 22.7**	**+1.4**	
KECS					pmax	pmax			
	comp=Z,5.0nm,0.7s								
KECS	**Kecovo**	**25.99**	**316**	*e*P	**P**		**01 18 22.7**	**+1.4**	
KIRV	**Kirov**	**26.07**	**2**	P	**P**		**01 18 21.6**	**-0.3**	
	comp=Z,15nm,0.5s,baz=165,slow=0.8,SNR=10								
PSZ	**Piszkesteto**	**26.09**	**314**	⇓P	**P**		**01 18 25.0**	**+2.7**	
PSZ	**Piszkesteto**	**26.09**	**314**	⇓P	**P**		**01 18 25.0**	**+2.7**	
PSZ	**Piszkesteto**	**26.09**	**314**	P	**P**		**01 18 23.4**	**+1.2**	
BVAR	**Borovoye Array**	**26.13**	**32**	P	**P**		**01 18 22.5**	**0.0**	
	comp=Z,1.5nm,0.7s,baz=223,slow=38,SNR=5.5								
VYHS	**Vyhne**	**26.98**	**315**	*e*P	**P**		**01 18 32.1**	**+1.9**	
VYHS	**Vyhne**	**26.98**	**315**	*e*P	**P**		**01 18 32.1**	**+1.9**	
CONA	**Conrad Observa**	**28.58**	**312**	*e*P	**P**		**01 18 48.4**	**+3.7**	
	comp=Z,0.7nm,0.4s								
KURBB	**Kurchatov Arra**	**28.92**	**42**	P	**P**		**01 18 47.0**	**-0.6**	
	comp=Z,0.7nm,0.6s,baz=246,slow=9.4,SNR=7.0								
KURK	**Kurchatov**	**29.02**	**42**	P	**P**		**01 18 47.0**	**-1.4**	
KURK					pmax	pmax			
	comp=Z,5.0nm,1.5s								
KURK	**Kurchatov**	**29.02**	**42**	P	**P**		**01 18 47.0**	**-1.4**	
KURK	**Kurchatov**	**29.02**	**42**	IAmb	IAmb		01 19 16.2		
	comp=Z,5.2nm,1.4s								
MOA	**Molln**	**29.57**	**311**	*e*P	**P**		**01 18 54.4**	**+1.0**	
	comp=Z,1.9nm,0.7s								
MK31	**Makanchi Array**	**29.84**	**51**	P	**P**		**01 18 57.3**	**+1.5**	
MK31					pmax	pmax			
	comp=Z,5.0nm,1.4s								
MK31	**Makanchi Array**	**29.84**	**51**	P	**P**		**01 18 57.3**	**+1.5**	
MK31					IAmb	IAmb	01 19 09.5		
	comp=Z,5.2nm,1.4s								
MKAR	**Makanchi Array**	**29.84**	**51**	P	**P**		**01 18 56.6**	**+0.8**	
	comp=Z,1.8nm,0.8s,baz=248,slow=8.0,SNR=10								
MKAR	**Makanchi Array**	**29.84**	**51**	P	**P**		**01 18 56.9**	**+1.1**	
GERES	**GERESS Array B**	**30.25**	**313**	P	**P**		**01 18 59.0**	**-0.5**	
	comp=Z,0.6nm,0.6s,baz=103,slow=8.9,SNR=6.7								
WTTA	**Wattenberg**	**31.10**	**309**	*e*P	**P**		**01 19 09.7**	**+2.6**	
	comp=Z,5.0nm,0.7s								
SQTA	**Sankt Quirin**	**31.37**	**309**	*e*P	**P**		**01 19 09.4**	**0.0**	
	comp=Z,3.1nm,0.5s								
FETA	**Feichten**	**31.64**	**308**	*e*P	**P**		**01 19 12.1**	**+0.2**	
	comp=Z,1.4nm,0.5s								
RETA	**Reutte**	**31.73**	**309**	*e*P	**P**		**01 19 12.0**	**-0.5**	
	comp=Z,0.8nm,0.3s								
FINES	**FINESS Array B**	**32.17**	**340**	P	**P**		**01 19 15.6**	**-0.5**	
	comp=Z,2.6nm,0.5s,baz=144,slow=9.0,SNR=24								
DAVA	**Damuels**	**32.26**	**308**	*e*P	**P**		**01 19 17.1**	**-0.2**	
	comp=Z,3.3nm,0.4s								
ZALV	**Zalesovo Beam**	**33.84**	**40**	P	**P**		**01 19 30.1**	**-0.7**	
	comp=Z,0.8nm,0.4s,baz=258,slow=7.4,SNR=4.6								
ZALV	**Zalesovo Beam**	**33.84**	**40**	P	**P**		**01 19 30.7**	**-0.1**	
ZALV	**Zalesovo Beam**	**33.84**	**40**	P	**P**		**01 19 30.7**	**-0.1**	
BNI	**Bardonecchia**	**34.06**	**304**	P	**P**		**01 19 33.3**	**+0.3**	
BNI					pmax	pmax			
	comp=Z,38nm,1.7s								
BNI	**Bardonecchia**	**34.06**	**304**	P	**P**		**01 19 33.3**	**+0.3**	
NB2	**NORSAR Subarra**	**37.09**	**331**	P	**P**		**01 19 57.3**	**-1.4**	
	comp=Z,1.7nm,0.7s,baz=123,slow=8.6								
NOA	**NORSAR Array B**	**37.09**	**331**	P	**P**		**01 19 57.1**	**-1.7**	
	comp=Z,0.8nm,0.5s,baz=123,slow=8.5,SNR=7.8								
ARCES	**ARCESS Array B**	**39.11**	**348**	P	**P**		**01 20 14.7**	**-0.8**	
	comp=Z,3.2nm,0.7s,baz=164,slow=9.9,SNR=14								
ESDC	**Sonseca Array**	**41.95**	**295**	P	**P**		**01 20 40.3**	**+0.7**	
	comp=Z,0.8nm,0.9s,baz=77,slow=8.8,SNR=5.6								
NRIK	**Noril'sk**	**43.02**	**19**	P	**P**		**01 20 48.4**	**+0.6**	
	comp=Z,1.9nm,0.5s,baz=217,slow=3.6,SNR=4.2								
SONM	**Songino Array**	**46.18**	**53**	P	**P**		**01 21 13.8**	**+0.3**	
	comp=Z,0.3nm,0.5s,baz=294,slow=11,SNR=2.9								
TORD	**Torodi Ar. Bea**	**46.27**	**256**	P	**P**		**01 21 15.3**	**+0.9**	
	comp=Z,0.3nm,0.4s,baz=65,slow=7.1,SNR=4.5								
SPITS	**Spitsbergen Ar**	**47.74**	**352**	LR	LR		01 42 44.5		
	comp=Z,986nm,21.2s,baz=125,slow=38								
SPITS	**Spitsbergen Ar**	**47.74**	**352**	P	**P**		**01 21 25.5**	**+0.4**	
USRK	**Ussuriysk Ar.**	**64.30**	**53**	P	**P**		**01 23 22.8**	**-1.2**	
	comp=Z,1.5nm,0.8s,baz=297,slow=7.3,SNR=2.1								
ILAR	**Eielson Array**	**82.32**	**6**	P	**P**		**01 25 10.8**	**+0.8**	
	comp=Z,0.4nm,0.9s,baz=341,slow=4.8,SNR=2.5								
WRA	**Warramunga Arr**	**97.66**	**109**	P	**P**		**01 26 24.9**	**+1.2**	
	comp=Z,0.2nm,0.8s,baz=324,slow=3.9,SNR=1.6								

WEL 14 01:14:02.6,42°S±1°×17°2E±°,h16km±2km,M3.3/16,ML3.5/16,MLv3.3/16,Error ellipse: s-maj=0.0km s-min=0.0km az=99.6,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSZ	**Denniston Nort**	**0.15**	**247**	P	Pb	01 14 07.5	+0.4
DSZ				S	Sb	01 14 10.3	+0.2
THZ	**Tophouse**	**0.69**	**97**	P	Pg	01 14 15.7	-0.4
THZ				S	Sg	01 14 24.8	-0.4
QRZ	**Quartz Range**	**0.95**	**25**	P	Pn	01 14 21.2	-0.1
QRZ				S	Sn	01 14 34.0	-0.5
INZ	**Inchbonnie**	**1.11**	**201**	P	Pb	01 14 23.4	-0.1
INZ				S	Sn	01 14 38.5	-0.1
LTZ	**Lake Taylor**	**1.11**	**169**	P	Pg	01 14 24.2	+0.1
LTZ				S	Sb	01 14 38.2	+0.4
NNZ	**Nelson**	**1.14**	**66**	P	Pb	01 14 24.0	0.0
NNZ				S	Sn	01 14 39.0	-0.3
KHZ	**Kahutara**	**1.36**	**123**	P	Pg	01 14 28.7	-0.1
BSWZ	**Blackbirch Sta**	**1.41**	**92**	P	Pg	01 14 29.2	-0.5
TUWZ	**Tuamarina**	**1.49**	**81**	P	Pb	01 14 29.8	-0.1
GVZ	**Greta Valley S**	**1.50**	**149**	P	Pb	01 14 30.0	0.0
GVZ				S	Sb	01 14 49.6	+0.8
AMCZ	**Amberley**	**1.57**	**162**	P	Pb	01 14 31.1	-0.1
OXZ	**Oxford**	**1.64**	**179**	P	Pb	01 14 31.8	-0.7
CMWZ	**Cape Campbell**	**1.67**	**93**	P	Pg	01 14 34.4	-0.2
WVZ	**Waitaha Valley**	**1.67**	**213**	P	Pn	01 14 31.7	+0.6
DUWZ	**D'Urville Isla**	**1.70**	**59**	P	Pb	01 14 33.0	-0.5
DUWZ				S	Sb	01 14 55.0	+0.3
TCW	**Tory Channel**	**1.78**	**75**	P	Pb	01 14 35.0	+0.1
MHCZ	**Mount Hutt**	**1.87**	**189**	P	Pn	01 14 34.9	+0.9
GCSZ	**Gaunt Creek Bo**	**2.04**	**217**	P	Pn	01 14 36.8	+0.5
RACZ	**Rakaia**	**2.04**	**177**	P	Pn	01 14 36.7	+0.4
MOZ	**McQueen's Vall**	**2.08**	**167**	P	Pn	01 14 37.0	+0.2
RPZ	**Rata Peaks**	**2.14**	**198**	P	Pn	01 14 38.7	+1.0
BHW	**Baring Head**	**2.18**	**84**	P	Pb	01 14 40.6	-1.0
OKCZ	**Okains Bay**	**2.18**	**159**	P	Pn	01 14 38.7	+0.5
WACZ	**Wakanui South**	**2.26**	**183**	P	Pn	01 14 40.5	+1.3
ARCZ	**Arundel**	**2.34**	**195**	P	Pn	01 14 40.7	+0.3
KIW	**Kapiti Island**	**2.35**	**70**	P	Pb	01 14 43.2	-1.4
CAW	**Cannon Point**	**2.38**	**77**	P	Pn	01 14 42.9	+1.9
FOZ	**Fox Glacier**	**2.45**	**220**	P	Pn	01 14 42.0	+0.2
PLWZ	**Palliser**	**2.45**	**88**	P	Pn	01 14 43.0	+1.0
MSWZ	**Moikau Station**	**2.46**	**85**	P	Pn	01 14 43.1	+1.1
OGWZ	**Otaki Gorge**	**2.55**	**71**	P	Pb	01 14 45.6	-2.3
PAWZ	**Paruwai Farm**	**2.60**	**84**	P	Pn	01 14 45.1	+1.1
HOWZ	**Holdsworth Sta**	**2.77**	**75**	P	Pn	01 14 47.5	+1.2
KHEZ	**Kahui Hut**	**2.84**	**34**	P	Pn	01 14 49.3	+1.9
MRZ	**Mangatainoka R**	**2.90**	**70**	P	Pn	01 14 49.5	+1.5
NEZ	**North Egmont**	**2.90**	**34**	P	Pn	01 14 50.8	+2.6
PKE	**Pukeiti**	**2.92**	**32**	P	Pn	01 14 50.6	+2.2
WAZ	**Wanganui**	**2.98**	**171**	P	Pn	01 14 51.9	+2.7
LBZ	**Lake Benmore**	**3.01**	**206**	P	Pn	01 14 51.1	+1.6
VRZ	**Vera Road**	**3.32**	**40**	P	Pn	01 14 55.7	+1.9
JCZ	**Jackson Bay**	**3.35**	**224**	P	Pn	01 14 54.4	0.0
ODZ	**Otahua Downs**	**3.50**	**196**	P	Pn	01 14 56.3	0.0
WNVZ	**Wahianoa**	**3.62**	**51**	P	Pn	01 15 01.3	+3.1
FWVZ	**Far West T-bar**	**3.64**	**49**	P	Pn	01 15 00.5	+2.0
WHVZ	**Whangaehu Hut**	**3.65**	**50**	P	Pn	01 15 01.7	+3.2
MOVZ	**Moawhango**	**3.66**	**53**	P	Pn	01 15 01.0	+2.4
TUVZ	**Tukino**	**3.69**	**50**	P	Pn	01 15 02.4	+3.2
NGZ	**Ngauruhoe**	**3.73**	**49**	P	Pn	01 15 02.5	+3.0
ETVZ	**East Tongariro**	**3.81**	**49**	P	Pn	01 15 00.1	-0.7
TMVZ	**Te Maari**	**3.82**	**49**	P	Pn	01 15 04.4	+3.5
HIZ	**Hauiti**	**3.86**	**36**	P	Pn	01 15 02.0	+0.8
WCZ	**Waipu Caves**	**6.03**	**19**	P	Pn	01 15 33.3	+2.3

*MDD **14** 01:21:30.8±1.7,37.°57N×12.°74W,h30km,mb3.7/11,Error ellipse: s-maj=15.7km s-min=11.9km az=54.0,PRXIMO*
*IGIL **14** 01:21:31.5,37.°68N×12.°76W,h31km,ML2.2*
*INMG **14** 01:21:32.4±1.0,37.°53N×12.°88W,h10km,ML2.4,Error ellipse: s-maj=6.1km s-min=4.7km az=69.0*

ISC 14 01:21:28.4±3.3,37.°67N±0.°08×12.°6W±0.°2,h10km,n54,σ1°§61/93,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**2.90**	**63**	P	**Pn**	**01 22 16.1**	**+1.6**
	2.7nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**01 22 49.2**	**-0.3**
	40nm,0.4s,SNR=6.5						
PMAFR	**Mafra**	**2.90**	**63**	*e*Pn	**Pn**	**01 22 16.2**	**+1.6**
PMAFR				*e*Sn	**Sn**	**01 22 49.3**	**-0.1**
PMAFR				A	A	01 22 53.8	
	16nm,0.7s						
LIS	**Lisbon**	**2.90**	**68**	P	**Pn**	**01 22 15.9**	**+1.3**
LIS	**Lisbon**	**2.90**	**68**	*e*Pn	**Pn**	**01 22 15.9**	**+1.3**
PFVI	**Vila Bisbo**	**3.04**	**99**	P	**Pn**	**01 22 17.6**	**+1.1**
	0.6nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**01 22 50.8**	**-2.1**
	2.2nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.04**	**99**	*e*Pn	**Pn**	**01 22 17.1**	**+0.6**
PFVI				*e*Sn	**Sn**	**01 22 50.9**	**-2.0**
PTEO	**Sao Teotonio**	**3.06**	**91**	P	**Pn**	**01 22 18.9**	**+2.0**
PTEO				S	**Sn**	**01 22 52.3**	**-1.3**
PTEO	**Sao Teotonio**	**3.06**	**91**	*e*Pn	**Pn**	**01 22 18.9**	**+2.0**
PTEO				*e*Sn	**Sn**	**01 22 52.3**	**-1.3**
MORF	**Marmelete**	**3.15**	**95**	*e*P	**Pn**	**01 22 19.0**	**+1.0**
MORF				*e*S	**Sn**	**01 22 53.4**	**-2.3**
MORF				AML	AML	01 22 58.9	
	comp=N,7.4nm,0.2s						
MORF	**Marmelete**	**3.15**	**95**	P	**Pn**	**01 22 19.3**	**+1.3**
MORF				S	**Sn**	**01 22 53.4**	**-2.3**
MORF	**Marmelete**	**3.15**	**95**	*e*Pn	**Pn**	**01 22 19.3**	**+1.3**
MORF				*e*Sn	**Sn**	**01 22 53.4**	**-2.3**
PNCL	**Nicolau / Gran**	**3.23**	**81**	P	**Pn**	**01 22 20.6**	**+1.4**
PNCL				S	**Sn**	**01 22 56.5**	**-1.3**
	comp=N,3.3nm,0.2s						
PNCL	**Nicolau / Gran**	**3.23**	**81**	*e*Pn	**Pn**	**01 22 20.6**	**+1.4**
PNCL				*e*Sn	**Sn**	**01 22 56.5**	**-1.3**
PNCL				A	A	01 23 04.3	
	comp=N,3.3nm,0.2s						
PSBE	**So Bento**	**3.49**	**57**	*e*Pn	**Pn**	**01 22 25.4**	**+2.6**
PSBE				*e*Sn	**Sn**	**01 23 04.6**	**+0.4**
PCVE	**Castro Verde**	**3.60**	**89**	P	**Pn**	**01 22 25.7**	**+1.4**
PCVE				S	**Sn**	**01 23 04.5**	**-2.4**
	comp=N,3.2nm,0.5s						
PCVE	**Castro Verde**	**3.60**	**89**	*e*Pn	**Pn**	**01 22 25.7**	**+1.4**
PCVE				*e*Sn	**Sn**	**01 23 04.5**	**-2.4**
PCVE				A	A	01 23 12.7	
	comp=N,3.2nm,0.5s						
PMTG	**Montargil**	**3.70**	**66**	P	**Pn**	**01 22 27.3**	**+1.7**
PMTG				S	**Sn**	**01 23 08.3**	**-0.9**
	comp=N,3.8nm,0.5s						
PMTG	**Montargil**	**3.70**	**66**	*e*Pn	**Pn**	**01 22 27.3**	**+1.7**
PMTG				*e*Sn	**Sn**	**01 23 08.3**	**-0.9**
PMTG				A	A	01 23 12.0	
	comp=N,3.8nm,0.5s						
EVO	**Evora**	**3.70**	**75**	P	**Pn**	**01 22 26.5**	**+0.8**
EVO				S	**Sn**	**01 23 09.2**	**-0.2**
	comp=N,8.5nm,0.7s						
EVO	**Evora**	**3.70**	**75**	*e*Pn	**Pn**	**01 22 26.5**	**+0.8**
EVO				*e*Sn	**Sn**	**01 23 09.2**	**-0.2**
EVO				A	A	01 23 13.1	
	comp=N,8.5nm,0.7s						
PBDV	**Barranco-do-Ve**	**3.72**	**95**	P	**Pn**	**01 22 27.4**	**+1.4**
PBDV				S	**Sn**	**01 23 08.6**	**-1.3**
	comp=N,4.8nm,0.2s						
PBDV	**Barranco-do-Ve**	**3.72**	**95**	*e*Pn	**Pn**	**01 22 27.4**	**+1.4**
PBDV				*e*Sn	**Sn**	**01 23 08.6**	**-1.3**
PBDV				A	A	01 23 13.8	
	comp=N,4.8nm,0.2s						
PBEJ	**Beja**	**3.75**	**83**	S	**Sn**	**01 23 09.2**	**-1.3**
	comp=N,4.8nm,0.2s						
PBEJ	**Beja**	**3.75**	**83**	*e*Sn	**Sn**	**01 23 09.2**	**-1.3**
PBEJ				A	A	01 23 14.1	
	comp=N,9.7nm,0.2s						
PVAQ	**Vaqueiros**	**3.87**	**92**	P	**Pn**	**01 22 29.3**	**+1.3**
PVAQ				S	**Sn**	**01 23 11.9**	**-1.7**
	comp=N,5.4nm,0.1s						
PVAQ	**Vaqueiros**	**3.87**	**92**	*e*Pn	**Pn**	**01 22 29.3**	**+1.3**
PVAQ				*e*Sn	**Sn**	**01 23 11.9**	**-1.7**
PVAQ				A	A	01 23 16.7	
	comp=N,5.4nm,0.1s						
PCAS	**Casmilo, Conde**	**3.98**	**52**	P	**Pn**	**01 22 31.1**	**+1.6**
PCAS				S	**Sn**	**01 23 15.2**	**-1.0**
	comp=N,3.6nm,0.8s						
PCAS	**Casmilo, Conde**	**3.98**	**52**	*e*Pn	**Pn**	**01 22 31.1**	**+1.6**
PCAS				*e*Sn	**Sn**	**01 23 15.2**	**-1.0**
PCAS				A	A	01 23 18.2	
	comp=N,3.6nm,0.8s						
EGRO	**El Granado**	**4.05**	**90**	P	**Pn**	**01 22 31.4**	**+1.0**
	comp=N,0.2nm,0.1s,SNR=4.0						
EGRO				S	**Sn**	**01 23 19.3**	**+1.4**
	comp=N,1.3nm,0.2s,SNR=8.2						
PMRV	**Marv??o**	**4.43**	**65**	P	**Pn**	**01 22 37.4**	**+1.7**
PMRV				S	**Sn**	**01 23 26.2**	**-1.1**
	comp=N,2.4nm,0.5s						
PMRV	**Marv??o**	**4.43**	**65**	*e*Pn	**Pn**	**01 22 37.4**	**+1.7**
PMRV				*e*Sn	**Sn**	**01 23 26.2**	**-1.1**
PMRV				A	A	01 23 29.9	
	comp=N,2.4nm,0.5s						
PCBR	**Castelo Branco**	**4.54**	**60**	P	**Pn**	**01 22 39.2**	**+2.0**
PCBR				S	**Sn**	**01 23 29.8**	**-0.2**
	comp=N,1.2nm,0.5s						
PCBR	**Castelo Branco**	**4.54**	**60**	*e*Pn	**Pn**	**01 22 39.2**	**+2.0**
PCBR				*e*Sn	**Sn**	**01 23 29.8**	**-0.2**
PCBR				A	A	01 23 32.5	
	comp=N,2.3nm,0.5s						
EMIN	**Mina Concepcio**	**4.69**	**87**	P	**Pn**	**01 22 40.5**	**+1.3**
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**01 23 34.3**	**+0.7**
	comp=N,1.0nm,0.1s,SNR=7.8						
PVIS	**Viseu**	**4.75**	**49**	P	**Pn**	**01 22 41.7**	**+1.7**
PVIS				S	**Sn**	**01 23 34.0**	**-1.1**
	comp=N,1.9nm,0.7s						
PVIS	**Viseu**	**4.75**	**49**	*e*Pn	**Pn**	**01 22 41.7**	**+1.7**
PVIS				*e*Sn	**Sn**	**01 23 34.0**	**-1.1**
PVIS				A	A	01 23 41.6	
	comp=N,3.7nm,0.7s						
MTE	**Manteigas**	**4.78**	**54**	P	**Pn**	**01 22 42.6**	**+2.1**
MTE	**Manteigas**	**4.78**	**54**	*e*Pn	**Pn**	**01 22 42.6**	**+2.1**
POLO	**Lamas de Olo**	**5.23**	**43**	P	**Pn**	**01 22 47.8**	**+1.0**
POLO	**Lamas de Olo**	**5.23**	**43**	*e*Pn	**Pn**	**01 22 47.8**	**+1.0**
EZAM	**Zamans**	**5.38**	**32**	S	**Sn**	**01 23 49.3**	**-1.5**
	comp=N,1.8nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.43**	**36**	P	**Pn**	**01 22 51.0**	**+1.6**
PGAV	**Gavieira, Arco**	**5.43**	**36**	*e*Pn	**Pn**	**01 22 51.0**	**+1.6**
ELOB	**Lobios**	**5.45**	**38**	P	**Pn**	**01 22 50.9**	**+1.1**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**01 23 49.8**	**-2.8**
	comp=N,0.5nm,0.0s,SNR=7.9						
MVO	**Moncorvo**	**5.54**	**49**	P	**Pn**	**01 22 51.9**	**+0.9**
	comp=N,1.2nm,0.1s,SNR=5.5						
MVO				S	**Sn**	**01 23 52.9**	**-1.8**
	comp=N,1.6nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.54**	**49**	*e*Pn	**Pn**	**01 22 52.4**	**+1.4**
EPLA	**Plasencia**	**5.61**	**63**	P	**Pn**	**01 22 54.0**	**+2.1**
	comp=N,0.6nm,0.3s,SNR=7.9						
EPLA				S	**Sn**	**01 23 55.5**	**-0.9**
	comp=N,0.7nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.68**	**84**	P	**Pn**	**01 22 54.8**	**+1.9**
	comp=N,0.3nm,0.2s,SNR=7.9						
ECAB				S	**Sn**	**01 23 56.3**	**-1.9**
	comp=N,2.9nm,0.2s,SNR=6.8						
PBRG	**Braganca**	**6.11**	**46**	P	**Pn**	**01 23 00.4**	**+1.6**
PBRG	**Braganca**	**6.11**	**46**	*e*Pn	**Pn**	**01 23 00.4**	**+1.6**
EAGO	**Agolada(Pontev**	**6.17**	**32**	P	**Pn**	**01 22 59.9**	**+0.3**
	comp=N,1.0nm,0.2s,SNR=7.9						
EAGO				S	**Sn**	**01 24 05.5**	**-4.8**
	comp=N,1.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.35**	**83**	P	**Pn**	**01 23 03.7**	**+1.7**
	comp=N,0.5nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**01 24 12.7**	**-1.9**
	comp=N,0.5nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**6.71**	**71**	P	**Pn**	**01 23 08.2**	**+1.1**
	comp=N,0.1nm,0.1s,SNR=7.9						
PAB			

PRZ Przheval'sk 0.97 67 Pb 01 24 34.8 -0.1
BOOM Boomskoye usch 1.00 293⇓iP Pb 01 24 35.3 -0.1
baz=92
BOOM ⇓iS Sg 01 24 48.8 +0.3
baz=92
BOOM Boomskoye usch 1.00 293 PG Pb 01 24 35.1 -0.3
BOOM Boomskoye usch 1.00 293 Pg Pb 01 24 35.1 -0.3
IZV Izvestkoviy 1.02 335⇓iP Pg 01 24 35.9 +0.2
baz=34
IZV ⇑iS Sg 01 24 49.9 +0.9
baz=34
IZV Izvestkoviy 1.02 335⇓iP Pg 01 24 35.9 +0.2
2µm,0.7s
IZV ⇑iS Sg 01 24 49.9 +0.9
2µm,0.9s
IZV Izvestkoviy 1.02 335 P Pg 01 24 35.9 +0.2
1µm,0.2s
IZV S Sg 01 24 50.0 +0.9
2µm,0.7s
IZV Izvestkoviy 1.02 335⇓iPG Pg 01 24 35.9 +0.2
IZV iS Sg 01 24 49.9 +0.9
MDOK Medeo 1.06 354⇑iP Pb 01 24 36.3 0.0
baz=53
MDOK ⇓iS Sg 01 24 50.5 +0.2
baz=53
MDOK Medeo 1.06 354⇑iP Pb 01 24 36.2 0.0
52µm,0.9s
MDOK ⇓iS Sg 01 24 50.4 +0.2
63µm,0.8s
MDOK Medeo 1.06 354 Pg Pb 01 24 36.3 0.0
35µm,0.8s
MDOK Lg Lg 01 24 50.7
63µm,0.7s
MDOK Medeo 1.06 354⇑iPG Pb 01 24 36.3 0.0
MDOK iS Sg 01 24 50.4 +0.2
AAA Alma-Ata 1.12 350⇓iP Pg 01 24 38.0 +0.4
baz=48
AAA ⇓iS Sn 01 24 53.3 +0.5
baz=48
AAA Alma-Ata 1.12 350⇓iP Pg 01 24 38.0 +0.4
76µm,0.5s
AAA ⇓iS Sn 01 24 53.3 +0.5
97µm,0.6s
AAA Alma-Ata 1.12 350⇓iPG Pg 01 24 38.0 +0.4
AAA iS Sn 01 24 53.3 +0.5
KNDC Almaty 1.12 352 ⇓P Pg 01 24 37.7 +0.1
KNDC ⇓S Sn 01 24 54.3 +1.5
KNDC Almaty 1.12 352 PG Pg 01 24 37.6 +0.1
KNDC S Sn 01 24 54.5 +1.7
KOTS Kotyrbulak 1.12 357⇓iP Pn 01 24 37.6 -0.1
baz=56
KOTS ⇓iS Sg 01 24 52.6 +0.2
baz=56
KOTS Kotyrbulak 1.12 357⇓iP Pn 01 24 37.6 -0.1
98µm,0.4s
KOTS ⇓iS Sg 01 24 52.6 +0.2
49µm,0.4s
KOTS Kotyrbulak 1.12 357 P Pn 01 24 37.6 -0.1
79µm,0.3s
KOTS S Sg 01 24 52.5 +0.1
49µm,0.4s
KOTS Kotyrbulak 1.12 357⇓iPG Pn 01 24 37.6 -0.1
KOTS iS Sg 01 24 52.6 +0.2
MTBS Maitube 1.16 331⇓iP Pn 01 24 38.3 +0.1
baz=30
MTBS ⇑iS Sg 01 24 53.9 +0.3
baz=30
MTBS Maitube 1.16 331⇓iP Pn 01 24 38.3 +0.1
36µm,0.2s
MTBS ⇑iS Sg 01 24 53.9 +0.3
71µm,0.3s
MTBS Maitube 1.16 331 P Pg 01 24 38.4 0.0
36µm,0.2s
MTBS S Sn 01 24 54.0 +0.1
71µm,0.3s
MTBS Maitube 1.16 331⇓iPG Pn 01 24 38.3 +0.1
MTBS iS Sg 01 24 53.9 +0.3
KST Kastek 1.30 316⇓iP Pb 01 24 40.9 +0.5
baz=15
KST ⇑iS Sg 01 24 58.2 +0.2
baz=15
KST Kastek 1.30 316⇓iP Pb 01 24 40.9 +0.5
91µm,0.7s
KST ⇑iS Sg 01 24 58.2 +0.2
244µm,0.8s
KST Kastek 1.30 316 P Pb 01 24 40.9 +0.5
91µm,0.7s
KST S Sg 01 24 58.7 +0.8
18µm,0.8s
KST Kastek 1.30 316⇓iPG Pb 01 24 40.9 +0.5
KST iS Sg 01 24 58.2 +0.2
SATY Saty 1.30 43⇓iP Pn 01 24 40.0 -0.1
baz=43
SATY ⇑iS Sb 01 24 57.0 -0.2
baz=43
SATY Saty 1.30 43⇓iP Pn 01 24 40.0 -0.1
15µm,0.5s
SATY ⇑iS Sb 01 24 57.0 -0.2
41µm,0.3s
SATY Saty 1.30 43 P Pn 01 24 40.1 0.0
15µm,0.5s
SATY S Sb 01 24 57.0 -0.2
41µm,0.3s
SATY Saty 1.30 43⇓iPG Pn 01 24 40.0 -0.1
SATY iS Sb 01 24 57.0 -0.2
ZHN Zhinishke 1.40 41⇓iP Pn 01 24 41.6 +0.2
baz=40
ZHN ⇑iS Sb 01 25 00.0 0.0
baz=40
ZHN Zhinishke 1.40 41⇓iP Pn 01 24 41.6 +0.2
3µm,0.5s
ZHN ⇑iS Sb 01 25 00.0 0.0
36µm,0.2s
ZHN Zhinishke 1.40 41 P Pb 01 24 41.7 -0.4
3µm,0.2s
ZHN S Sb 01 25 00.2 +0.2
36µm,0.2s
ZHN Zhinishke 1.40 41⇓iPG Pn 01 24 41.6 +0.2
ZHN iS Sb 01 25 00.0 0.0
TKM2 Tokmak 2 1.43 305⇑iP Pb 01 24 42.9 +0.2
baz=4.0
TKM2 ⇑iS Sg 01 25 02.1 0.0
baz=4.0
TKM2 Tokmak 2 1.43 305 ⇑P Pb 01 24 43.1 +0.4
11µm,0.4s,SNR=7746
TKM2 ⇓S Sg 01 25 03.2 +1.1
89µm,0.2s
TKM2 Tokmak 2 1.43 305 ⇑P Pb 01 24 43.2 +0.4
TKM2 ⇑S Sg 01 25 02.9 +0.8
TKM2 Tokmak 2 1.43 305 PN Pb 01 24 43.1 +0.4
TKM2 S Sg 01 25 03.1 +1.0
DGS Degeres 1.54 318⇓iP Pb 01 24 45.1 +0.6
baz=17
DGS ⇑iS Sg 01 25 05.6 -0.1
baz=17
DGS Degeres 1.54 318⇓iP Pb 01 24 45.1 +0.6
33µm,0.7s
DGS ⇑iS Sg 01 25 05.5 -0.1
144µm,0.6s
DGS Degeres 1.54 318 P Pg 01 24 45.6 0.0
30µm,0.4s
DGS S Sg 01 25 06.2 +0.6
14µm,0.5s
DGS Degeres 1.54 318⇓iPN Pb 01 24 45.1 +0.6
DGS iS Sg 01 25 05.5 -0.1
KURS Kuram 1.55 27⇓iP Pb 01 24 44.7 0.0
baz=27
KURS ⇓iS Sb 01 25 04.1 -0.2
baz=27
KURS Kuram 1.55 27⇓iP Pb 01 24 44.7 0.0
12µm,0.8s
KURS ⇓iS Sb 01 25 04.1 -0.2
31µm,0.5s
KURS Kuram 1.55 27 P Pb 01 24 44.6 0.0
12µm,0.5s
KURS S Sb 01 25 04.5 +0.2
30µm,0.5s
KURS Kuram 1.55 27⇓iPN Pb 01 24 44.7 0.0
KURS iS Sb 01 25 04.1 -0.2
KTBS Karatobe 1.64 347⇓iP Pb 01 24 46.8 +0.5
baz=46
KTBS ⇑iS Sg 01 25 09.2 +0.2
baz=46
KTBS Karatobe 1.64 347⇓iP Pb 01 24 46.8 +0.5
25µm,0.7s
KTBS ⇑iS Sg 01 25 09.1 +0.2
92µm,0.4s
KTBS Karatobe 1.64 347 P Pg 01 24 47.1 -0.4
23µm,0.5s
KTBS S Sg 01 25 09.1 +0.2
87µm,0.3s
KTBS Karatobe 1.64 347⇓iPN Pb 01 24 46.8 +0.5
KTBS iS Sg 01 25 09.1 +0.2
UZB Uzynbulak 1.70 52⇓iP Pb 01 24 46.7 -0.6
baz=52
UZB ⇑iS Sb 01 25 08.4 -0.3
baz=52
UZB Uzynbulak 1.70 52⇓iP Pb 01 24 46.7 -0.6
6µm,0.6s
UZB ⇑iS Sb 01 25 08.4 -0.3
44µm,0.4s
UZB Uzynbulak 1.70 52 P Pb 01 24 46.7 -0.6
4µm,0.3s
UZB S Sb 01 25 08.5 -0.3
37µm,0.3s
UZB Uzynbulak 1.70 52⇓iPN Pb 01 24 46.7 -0.6
UZB iS Sb 01 25 08.4 -0.3
KPKS Kokpek 1.74 39⇓iP Pb 01 24 47.7 -0.3
baz=38
KPKS ⇓iS Sb 01 25 10.2 +0.3
baz=38
KPKS Kokpek 1.74 39⇓iP Pb 01 24 47.7 -0.3
15µm,0.6s
KPKS ⇓iS Sb 01 25 10.2 +0.3
98µm,0.4s
KPKS Kokpek 1.74 39⇓iPN Pb 01 24 47.7 -0.3
KPKS iS Sb 01 25 10.2 +0.3
KBK Karagaybulak 1.75 289⇓eP Pb 01 24 48.6 +0.5
baz=88
KBK ⇓iS Sg 01 25 11.9 -0.4
baz=88
KBK Karagaybulak 1.75 289 P Pb 01 24 48.9 +0.8
30µm,0.7s
KBK ⇓S Sg 01 25 12.2 -0.2
197µm,0.5s
KUU Kurty 1.89 341⇓iP Pb 01 24 51.0 +0.6
baz=40
KUU ⇑iS Sg 01 25 15.7 -1.1
baz=40
KUU Kurty 1.89 341⇓iP Pb 01 24 51.0 +0.6
27µm,1.0s
KUU ⇑iS Sg 01 25 15.6 -1.1
102µm,0.9s
KUU Kurty 1.89 341 P Pb 01 24 51.1 +0.7
23µm,0.7s
KUU S Sg 01 25 16.1 -0.6
99µm,0.8s
KUU Kurty 1.89 341⇓iPN Pb 01 24 51.0 +0.6
KUU iS Sg 01 25 15.6 -1.1
KRBS Karabastau 1.94 325 eP Pb 01 24 51.9 +0.6
baz=25
KRBS eS Sg 01 25 17.5 -0.8
baz=25
KRBS Karabastau 1.94 325 eP Pb 01 24 51.9 +0.6
33µm,0.4s
KRBS eS Sg 01 25 17.5 -0.8
92µm,0.9s
KRBS Karabastau 1.94 325 Pg Pg 01 24 52.5 -0.7
33µm,0.4s
KRBS Lg Lg 01 25 18.0
69µm,0.7s
KRBS Karabastau 1.94 325 ePN Pb 01 24 51.9 +0.6
KRBS eS Sg 01 25 17.5 -0.8
SHLS Shalkode 1.98 57 eP Pg 01 24 56.4 +2.5
9µm,0.4s
SHLS eS Sg 01 25 25.6 +6.1
75µm,0.5s
SHLS Shalkode 1.98 57 Pg Pg 01 24 56.7 +2.8
9µm,0.4s
SHLS Lg Lg 01 25 25.6
75µm,0.5s
SHLS Shalkode 1.98 57 ePN Pg 01 24 56.4 +2.5
SHLS eS Sg 01 25 25.6 +6.1
UCH Uchtor 1.99 274⇓iP Pb 01 24 52.0 -0.5
baz=74
UCH ⇓iS Sb 01 25 18.3 +0.9
baz=74
UCH Uchtor 1.99 274 P Pb 01 24 53.0 +0.6
4µm,0.5s,SNR=4611
UCH ⇓S Sg 01 25 20.3 +0.1
32µm,0.8s
CHMS Chumysh 2.01 297⇑iP Pb 01 24 52.1 -0.4
baz=96
CHMS ⇑iS Sb 01 25 17.6 +0.2
baz=96
CHMS Chumysh 2.01 297 ⇓P Pb 01 24 52.6 +0.2
7µm,0.6s,SNR=8314
CHMS ⇓S Sg 01 25 20.0 -0.7
167µm,0.6s
FRU1 Bishkek 2.02 291⇑iP Pb 01 24 52.3 -0.4
baz=91
FRU1 ⇑iS Sb 01 25 18.0 +0.2
baz=91
FRU1 Bishkek 2.02 291 PN Pb 01 24 53.1 +0.4
FRU1 Bishkek 2.02 291 Pb 01 24 53.0 +0.4
AAK Ala-Archa 2.07 286⇑iP Pb 01 24 53.1 -0.4
baz=85
AAK ⇑iS Sb 01 25 19.6 +0.4
baz=85
AAK Ala-Archa 2.07 286 P Pb 01 24 54.1 +0.6
7µm,0.4s,SNR=5152
AAK ⇑S Sg 01 25 22.1 -0.3
171µm,0.5s
AAK Ala-Archa 2.07 286 eP Pb 01 24 54.3 +0.8
AAK Ala-Archa 2.07 286 ⇓Pn Pb 01 24 54.1 +0.6
11µm,0.7s
AAK ⇑Sn Sg 01 25 22.2 -0.3
89µm,0.6s
AAK Ala-Archa 2.07 286 P Pb 01 24 54.5 +0.9
AAK S Sg 01 25 22.5 0.0
AAK Ala-Archa 2.07 286 PN Pb 01 24 53.9 +0.4
AAK 01 25 22.3
PDGK Podgornoye 2.09 54 Pg Pb 01 24 53.9 +0.1
2µm,0.3s
PDGK Lg Lg 01 25 20.6
43µm,0.7s
PDGK Podgornoye 2.09 54 ⇑Pn Pb 01 24 52.6 -1.2
8µm,0.8s
PDGK ⇓Sn Sb 01 25 20.2 +0.5
11µm,0.8s
PDGK Podgornoye 2.09 54 PN Pb 01 24 52.9 -0.9
PDGK 01 25 20.9
ARXS Arharly 2.15 12 eP Pb 01 24 55.5 +0.5
20µm,0.3s
ARXS eS Sb 01 25 23.2 +1.6
47µm,0.4s
ARXS Arharly 2.15 12 Pg Pb 01 24 55.6 +0.7
20µm,0.3s
ARXS Lg Lg 01 25 23.4
37µm,0.4s
ARXS Arharly 2.15 12 ePN Pb 01 24 55.5 +0.5
ARXS eS Sb 01 25 23.2 +1.6
ARLS Aral 2.15 264⇓iP Pb 01 24 54.0 -1.0
baz=64
ARLS ⇓iS Sb 01 25 21.4 -0.3
baz=64
MNBS Baschi 2.16 24 eP Pb 01 24 55.4 +0.4
11µm,0.6s
MNBS eS Sg 01 25 23.7 -1.7
110µm,0.5s
MNBS Baschi 2.16 24 ePN Pb 01 24 55.4 +0.4
MNBS eS Sg 01 25 23.7 -1.7
USP Ospenovka 2.30 301⇑iP Pb 01 24 56.0 -1.4
baz=1.0
USP ⇑iS Sb 01 25 24.7 -1.0
baz=1.0
USP Ospenovka 2.30 301 P Pb 01 24 56.6 -0.7
11µm,0.7s,SNR=1697
SGDS Sogindy 2.31 306 Pg Pb 01 24 58.8 +1.1
9µm,0.5s
SGDS Lg Lg 01 25 29.0
95µm,0.6s
EKS2 Erkin-Say 2.59 283⇑iP Pb 01 25 00.3 -2.1
baz=83
EKS2 ⇑iS Sn 01 25 31.9 +2.7
baz=83
EKS2 Erkin-Say 2.59 283 ⇓P Pb 01 25 01.9 -0.5
5µm,0.5s,SNR=8475
AML Almayashu 2.60 272⇓iP Pb 01 25 00.9 -1.9
baz=71
AML ⇓iS Sb 01 25 32.8 -2.0
baz=71
AML Almayashu 2.60 272 P Pb 01 25 02.1 -0.7
6µm,0.6s,SNR=6294
KTMS Ketmen 2.68 59 eP Pb 01 25 04.1 +0.1
324nm,0.3s
KTMS eS Sb 01 25 38.1 +1.2
2µm,0.5s
KTMS Ketmen 2.68 59 Pg Pb 01 25 03.3 -0.7
330nm,0.2s
KTMS Lg Lg 01 25 36.6
2µm,0.6s
KTMS Ketmen 2.68 59 ePN Pb 01 25 04.1 +0.1
KTMS eS Sb 01 25 38.1 +1.2
KSH Kashi 2.75 200⇓iPn Pg 01 25 09.3 +0.5
KSH Sn Sg 01 25 47.6 +3.2
KSH LR LR
comp=N,146µm,4.5s
KSH LR LR
comp=E,187µm,3.3s
DJR Jarkent 2.92 40 eP Pb 01 25 08.1 0.0
3µm,0.4s
DJR eS Sb 01 25 44.7 +1.0
12µm,0.5s
DJR Jarkent 2.92 40 Pg Pb 01 25 08.6 +0.5
3µm,0.4s
DJR Lg Lg 01 25 45.8
10µm,0.4s
DJR Jarkent 2.92 40 ePN Pb 01 25 08.1 0.0
DJR eS Sb 01 25 44.7 +1.0
MRKS Merke 3.00 284 eP Pb 01 25 11.3 +1.8
7µm,0.5s
MRKS eS Sg 01 25 51.3 -1.2
54µm,0.7s
MRKS Merke 3.00 284 ePN Pb 01 25 11.3 +1.8
MRKS eS Sg 01 25 51.3 -1.2
TDK Taldyqorghan 3.02 17 eP Pb 01 25 10.1 +0.4
23µm,0.6s
TDK eS Sb 01 25 49.2 +2.7
89µm,0.8s
TDK Taldyqorghan 3.02 17 Pg Pb 01 25 11.2 +1.5
23µm,0.6s
TDK Lg Lg 01 25 50.1
89µm,0.8s
TDK Taldyqorghan 3.02 17 ePN Pb 01 25 10.1 +0.4
TDK eS Sb 01 25 49.2 +2.7
ARSB Arslanbob 3.25 257⇑eP Pn 01 25 09.6 +2.8
baz=57
ARSB ⇑iS Sn 01 25 48.3 +2.8
baz=57
SFK Sufi-Kurgan 3.49 234⇑eP Pn 01 25 13.2 +3.0
baz=35
SFK ⇑iS Sn 01 25 53.7 +2.2
baz=35
MNAS Manas 3.50 278⇓eP Pn 01 25 12.9 +2.6
baz=78
MNAS ⇓iS Sn 01 25 53.9 +2.3
baz=78
OHH Osh 3.68 246⇑eP Pn 01 25 15.6 +2.9
baz=46
OHH ⇑iS Sn 01 25 58.5 +2.5
baz=46
BTLS Baital 3.71 323 eP Pb 01 25 24.1 +2.6
3µm,0.7s
BTLS eS Sg 01 26 12.6 -2.7
18µm,0.7s
BTLS Baital 3.71 323 Pg Pb 01 25 23.8 +2.3
3µm,0.8s
BTLS Lg Lg 01 26 11.7
5µm,0.8s
BTLS Baital 3.71 323 ePN Pb 01 25 24.1 +2.6
BTLS eS Sg 01 26 12.6 -2.7
DZA Taraz 4.40 282 eP Pb 01 25 36.6 +3.3
5µm,0.6s
DZA eS Sg 01 26 34.1 -3.3
43µm,0.8s
KK31 Karatay Array 5.03 284 ⇑Pn Pn 01 25 34.9 +3.7
160nm,0.9s,baz=100,slow=17
KK31 ⇓Pg Pb 01 25 48.2 +4.3
4µm,0.8s,baz=99,slow=15,SNR=133
KK31 ⇓Lg Lg 01 26 56.5
10µm,0.6s,baz=106,slow=28,SNR=24
KK31 Karatay Array 5.03 284 ePN Pn 01 25 34.6 +3.4
KK31 01 25 48.8
KK31 01 26 53.1
KK31 Karatay Array 5.03 284 Pn Pn 01 25 32.0 +0.8
KKAR Karatay Array 5.03 284 PN Pn 01 25 32.0 +0.8
KKAR Karatay Array 5.03 284 Pn 01 25 32.0 +0.8
KKAR Karatay Array 5.03 284 Pn 01 25 33.7 +2.5
BTK Batken 5.23 249 PN Pn 01 25 34.7 +0.6
BTK Batken 5.23 249 Pn Pn 01 25 34.7 +0.6
IUG Iuzhnay 5.33 273 eP Pg 01 25 54.8 -3.2
5µm,0.8s
IUG eS Sg 01 27 05.1 -1.8
33µm,1.2s
IUG Iuzhnay 5.33 273 Pg Pg 01 25 54.8 -3.2
5µm,0.8s
IUG Lg Lg 01 27 04.4
23µm,0.6s
BRLS Borolday 5.51 282 eP Pg 01 25 59.8 -1.7
624nm,0.7s
BRLS eS Sg 01 27 14.5 +1.7
12µm,0.6s
BRLS Borolday 5.51 282 Pg Pg 01 25 59.8 -1.7
634nm,0.6s
BRLS Lg Lg 01 27 11.5
12µm,0.6s
CHM Chimkent 5.64 275 eP Pg 01 26 01.8 -2.2
1µm,0.8s
CHM eS Sg 01 27 17.5 +0.5
20µm,1.0s
MAKZ Makanchi 5.81 34 ⇓Pn Pn 01 25 43.5 +1.5
195nm,1.0s
MAKZ ⇓Pg Pg 01 26 02.9 -4.4
2µm,1.4s
MAKZ ⇓Lg Lg 01 27 20.9
6µm,1.5s
MAKZ Makanchi 5.81 34 PN Pn 01 25 41.8 -0.2
MAKZ Makanchi 5.81 34 Pn 01 25 41.8 -0.2
MK31 Makanchi Array 5.94 36 Pn Pn 01 25 45.4 +1.8
94nm,0.3s,baz=214,slow=11,SNR=3897
MK31 ⇑Pg Pg 01 26 04.4 -5.2
356nm,0.6s
MK31 ⇑Lg Lg 01 27 23.5
1µm,0.7s,baz=246,slow=32,SNR=5.4
MK31 Makanchi Array 5.94 36 i Pn Pn 01 25 45.4 +1.8
MK31 Makanchi Array 5.94 36 Pn Pn 01 25 43.5 -0.2
MKAR Makanchi Array 5.94 36 Pn Pn 01 25 45.6 +1.9
14nm,0.3s,baz=210,slow=15,SNR=553
MKAR Sn Sn 01 26 52.5 +1.0
64nm,0.3s,baz=228,slow=17,SNR=2.0
MKAR Lg Lg 01 27 20.9
172nm,0.3s,baz=337,slow=30,SNR=6.2
MKAR LR LR 01 28 24.6
comp=Z,11µm,20.8s,baz=221,slow=42
MKAR Makanchi Array 5.94 36 i PN Pn 01 25 45.5 +1.9
MKAR pmax pmax
comp=Z,105nm,0.7s
MKAR Makanchi Array 5.94 36 Pn Pn 01 25 44.4 +0.8
TAS Tashkent 5.96 265 PN Pn 01 25 47.0 +3.0
TAS Tashkent 5.96 265 Pn 01 25 47.0 +3.0
GAR Garm 6.09 242 Pn Pn 01 25 48.9 +3.1
CHGR Chuyangaron 7.04 243 Pn 01 26 01.2 +2.4
WMQ Urumqi 7.89 74 ePn Pn 01 26 10.8 +0.3
WMQ Sn Sn 01 27 40.3 +0.6
WMQ smax smax
comp=Z,2µm,1.5s
WMQ smax smax
comp=Z,2µm,1.1s
WMQ Urumqi 7.89 74 P Pn 01 26 10.1 -0.5
WMQ Urumqi 7.89 74 Pn Pn 01 26 10.1 -0.5
KURBB Kurchatov Arra 8.56 6 Pn Pn 01 26 20.4 +0.7
comp=Z,1.7nm,0.3s,baz=191,slow=12,SNR=98
KURBB Sn Sn 01 27 55.4 -0.7
comp=Z,7.8nm,0.3s,baz=184,slow=28,SNR=4.5
KURBB Lg Lg 01 28 43.9
comp=Z,14nm,0.3s,baz=191,slow=29,SNR=4.9
KURBB Kurchatov Arra 8.56 6 ⇑Pn Pn 01 26 20.4 +0.7
comp=Z,209nm,0.6s
KURBB ⇑Lg Lg 01 28 50.4
comp=Z,9µm,1.0s
KURK Kurchatov 8.66 6 ⇓Pn Pn 01 26 21.7 +0.6
comp=Z,521nm,1.1s
KURK ⇑Lg Lg 01 28 50.1
comp=Z,13µm,1.2s
KURK Kurchatov 8.66 6 S Sn 01 28 15.1 +17
KURK Kurchatov 8.66 6 eP Pn 01 26 21.4 +0.4
KURK pmax pmax
comp=Z,67nm,1.3s
KURK MLR MLR

comp=Z,21µm,10.0s
KURK Kurchatov 8.66 6 Pn **Pn 01 26 20.9 -0.1**
NIL Nilore 9.00 201 P **Pn 01 26 26.4 +0.6**
NIL Nilore 9.00 201 Pn **Pn 01 26 26.4 +0.6**
CEP Cherat 9.26 208 P **Pn 01 26 30.6 +1.2**
CEP S **Sn 01 28 17.0 +3.4**
DHRM DHARAMSHALA 9.87 184 *ex* **Pn 01 26 39.3 +1.5**
DHRM *ex* x 01 26 39.4
DHRM *eP* **Pn 01 26 39.8 +1.9**
DHRM *i* x x 01 26 44.4
DHRM *ex* x 01 28 20.3
DHRM *eS* **Sn 01 28 21.9 -6.7**
KBL Kabul 9.90 223 P **Pn 01 26 39.3 +1.1**
SNR=54
KBL Kabul 9.90 223 P **Pn 01 26 39.4 +1.1**
KBL Kabul 9.90 223 **Pn 01 26 39.4 +1.1**
THW Thamme Wali 10.26 207 P **Pn 01 26 43.3 +0.4**
SARP Sargodha 10.79 201 P **Pn 01 26 50.0 -0.2**
DDI Dehra Dun 11.79 176 *ex* Pn 01 27 09.2 +5.3
DDI *ex* x 01 27 09.5
DDI *ex* x 01 29 06.1
BVAR Borovoye Array 11.84 340 Pn **Pn 01 27 04.0 -0.5**
comp=Z,7.3nm,0.3s,baz=148,slow=19,SNR=76
BVAR Sn **Sn 01 29 18.0 +1.6**
comp=Z,12nm,0.3s,baz=142,slow=24,SNR=2.3
BVAR Lg Lg 01 30 32.2
comp=Z,55nm,0.3s,baz=116,slow=28,SNR=4.9
BRVK Borovoye 11.90 339 ⇓Pn **Pn 01 27 05.0 -0.2**
comp=Z,526nm,1.1s
BRVK ⇓Lg Lg 01 30 37.4
comp=Z,10µm,1.2s
BRVK Borovoye 11.90 339*deP* **Pn 01 27 04.6 -0.7**
BRVK pmax pmax
comp=Z,68nm,0.8s
BRVK MLR MLR
comp=Z,20µm,10.0s
BRVK Borovoye 11.90 339 **Pn 01 27 05.1 -0.2**
ZAA0 Zalesovo Array 12.89 21 **Pn 01 27 18.0 -0.8**
ZALV Zalesovo Beam 12.89 21 Pn **Pn 01 27 19.8 +1.0**
comp=Z,2.6nm,0.3s,baz=211,slow=15,SNR=49
ZALV Sn **Sn 01 29 39.9 -2.0**
comp=Z,10nm,0.3s,baz=213,slow=17,SNR=4.1
ZALV Lg Lg 01 31 02.5
comp=Z,7.2nm,0.3s,baz=200,slow=22,SNR=5.7
ZALV Zalesovo Beam 12.89 21 **Pn 01 27 18.1 -0.7**
AB31 Akbulak array 14.00 307 ⇓Pn **Pn 01 27 38.0 +4.0**
comp=Z,183nm,0.7s,baz=116,slow=13,SNR=1257
AB31 Sn **Sn 01 30 14.4 +5.3**
comp=Z,267nm,0.7s,baz=280,slow=25,SNR=4.5
AB31 ⇑Lg Lg 01 31 41.9
comp=Z,2µm,1.1s
AB31 Akbulak array 14.00 307 *eP* **Pn 01 27 33.7 -0.3**
ABKAR Akbulak array 14.00 307 **Pn 01 27 32.7 -1.2**
HRA Herat 14.04 242 Pn **Pn 01 27 32.3 -2.5**
DANN Dangsing 14.73 157 *eP* **Pn 01 27 41.2 -3.2**
comp=Z,656nm,1.2s
PYUN Piuthan 14.76 159 *eP* **Pn 01 27 42.0 -2.7**
comp=Z,652nm,0.8s
ASHT Ashkhabad 14.99 260 P **Pn 01 27 46.9 -0.7**
ASHT pmax pmax
comp=Z,500nm,1.4s
ASHT Ashkhabad 14.99 260 Pn **Pn 01 27 46.9 -0.7**
GEYT Alibeck 15.20 260 Pn **Pn 01 27 48.0 -2.4**
comp=Z,1.0nm,0.3s,baz=91,slow=10,SNR=37
GEYT Lg Lg 01 32 22.2
comp=Z,4.4nm,0.3s,baz=55,slow=18,SNR=3.8
GEYT LR LR 01 34 54.7
comp=Z,7µm,18.4s,baz=55,slow=42
GYA0B ALIBECK ARRAY 15.20 260 Pn **Pn 01 27 48.5 -1.9**
GYA0B IAmb IAmb 01 28 42.4
comp=Z,171nm,0.9s
KOLN Koldanda 15.23 158 *eP* **Pn 01 27 48.4 -2.7**
comp=Z,340nm,0.9s
GKN Gorkha 15.33 154 *eP* **Pn 01 27 49.8 -2.5**
comp=Z,334nm,0.9s
AKTO Aktyubinsk 15.62 309 Pn **Pn 01 27 55.1 -0.7**
comp=Z,1.2nm,0.3s,baz=110,slow=12,SNR=30
AKTO Sn **Sn 01 30 46.2 -2.5**
baz=120,slow=18,SNR=1.6
AKTO Lg Lg 01 32 32.4
comp=Z,5.9nm,0.3s,baz=11,slow=21,SNR=4.8
AKTO LR LR 01 34 20.0
comp=Z,6µm,19.2s,baz=121,slow=38
AKTO Aktyubinsk 15.62 309 ⇑Pn **P 01 27 59.1 -0.9**
comp=Z,322nm,0.8s
AKTO ⇓Sn **Sn 01 30 52.7 +4.0**
comp=Z,414nm,1.2s
AKTO ⇑Lg Lg 01 32 31.5
comp=Z,2µm,1.3s
KKN Kakani 15.74 153 *eP* **Pn 01 27 54.5 -3.2**
comp=Z,187nm,0.7s
GUN Gumba 15.84 151 *eP* **Pn 01 27 56.7 -2.4**
comp=Z,1µm,1.2s
DMN Daman 15.85 153 *eP* **Pn 01 27 56.8 -2.3**
comp=Z,457nm,1.2s
PKIN Phulchoki 15.97 153 *eP* **Pn 01 27 58.2 -2.6**
comp=Z,805nm,1.4s
PKI Pulchoki 15.98 153 *eP* **Pn 01 27 57.9 -3.0**
comp=Z,255nm,0.8s
LSA Lhasa 16.74 133 P **P 01 28 12.4 -0.6**
LSA pP **pP 01 28 15.4 -2.1**
LSA S **Sn 01 31 21.8 +5.0**
LSA pmax pmax
comp=Z,130nm,1.6s
LSA LR LR
comp=Z,11µm,15.0s
LSA LR LR
comp=Z,10µm,15.0s
LSA LR LR
comp=Z,24µm,15.7s
LSA Lhasa 16.74 133 P **Pn 01 28 11.4 +0.7**
LSA Lhasa 16.74 133 P **P 01 28 11.8 -1.2**
LSA pmax pmax
comp=Z,139nm,1.3s
LSA Lhasa 16.74 133 P **P 01 28 11.8 -1.2**
RAMN Ramite 16.98 150 *eP* **Pn 01 28 11.6 -1.9**
comp=Z,719nm,1.0s
TAPN Taplejung 17.05 146 *eP* **Pn 01 28 12.6 -1.9**
comp=Z,575nm,1.2s
GTA Gaotai 17.34 91 P **Pn 01 28 15.3 -2.6**
GTA pP P 01 28 19.8 +0.5
GTA sP pP 01 28 22.1 -1.3
GTA S **Sn 01 31 28.6 -2.2**
GTA sS S 01 31 36.6 -2.9
GTA pmax pmax
comp=Z,26nm,1.1s
GTA pmax pmax
comp=Z,260nm,4.3s
GTA LR LR
comp=Z,6µm,11.6s
GTA LR LR
comp=Z,10µm,12.7s
GTA LR LR
comp=Z,9µm,15.3s
ODAN Odare 17.36 148 *eP* **Pn 01 28 16.5 -1.8**
comp=Z,653nm,1.1s
GTK Tadong 17.46 144 *ex* **Pn 01 28 18.9 -0.5**
GTK IAmb IAmb 01 28 25.7
comp=Z,35nm,0.6s
GTK *ex* x 01 31 41.2
GTK *i* x x 01 35 17.5
SVE Sverdlovsk 18.16 330*deP* **Pn 01 28 26.9 -0.9**
SVE *eS* **Sn 01 31 49.7 -0.4**
SVE pmax pmax
comp=Z,392nm,1.3s
SVE MLR MLR
comp=Z,10µm,11.0s
ARU Arti 18.70 326 P **Pn 01 28 34.4 +0.1**
comp=Z,0.0nm,0.3s,baz=134,slow=8.1,SNR=31
ARU S **Sn 01 31 59.7 -3.4**
comp=Z,0.0nm,0.3s,baz=345,slow=20,SNR=1.9
ARU Lg Lg 01 34 01.2
comp=Z,0.0nm,0.3s,baz=343,slow=23,SNR=3.9
ARU LR LR 01 36 04.5
comp=Z,7µm,18.7s,baz=128,slow=38
ARU Arti 18.70 326 P **P 01 28 33.7 -0.2**
ARU S **Sn 01 32 04.2 +1.1**
ARU MLR MLR
comp=Z,5µm,10.0s
ARU Arti 18.70 326 P **P 01 28 33.9 -0.1**
ARU IAmb IAmb 01 28 45.9
comp=Z,435nm,0.9s
MOY Mondy 18.79 51 *eP* **Pn 01 28 35.3 -0.3**
MOY pmax pmax
comp=Z,168nm,3.1s
BHPL Bhopal 18.82 179 *eP* **P 01 28 33.4 -2.1**
BHPL *ex* x 01 31 46.6
BOK Bokaro 19.65 156 *eP* **P 01 28 44.1 -0.5**
BOK IAmb IAmb 01 28 46.1
comp=Z,100nm,0.8s
BOK *ex* x 01 32 21.4
BOK *eS* **S 01 32 22.3 -3.7**
BOK *i* x x 01 36 50.7
ZAK Zakamensk 19.77 56 *eP* **P 01 28 45.7 -0.1**
ZAK pmax pmax
comp=Z,97nm,1.3s
GUWA GUWAHATI 19.86 139 *eP* **P 01 28 46.7 0.0**
GUWA IAmb IAmb 01 28 55.0
comp=Z,231nm,1.3s
GUWA *ex* x 01 32 25.0
GUWA *ex* x 01 32 27.4
GUWA *eS* **S 01 32 27.5 -2.6**
GUWA *i* x x 01 36 50.7
ZIRO ZIRO 19.92 132 *eP* **P 01 28 47.9 +0.3**
ZIRO IAmb IAmb 01 28 54.4
comp=Z,129nm,1.0s
TEZP TEZPUR 20.07 135 *eP* **P 01 28 49.5 +0.4**
TEZP IAmb IAmb 01 28 52.0
comp=Z,182nm,1.1s
TEZP *i* x x 01 36 59.2
TLY Talaya 20.35 53 P **P 01 28 51.5 -0.6**
comp=Z,6.4nm,0.5s,baz=270,slow=20,SNR=2.0
TLY Lg Lg 01 34 46.8
comp=Z,20nm,1.0s,baz=48,slow=13,SNR=3.6
TLY Talaya 20.35 53*c iP* Pn 01 28 57.6 +3.5
TLY *e* 01 29 13.8
TLY *e*PPP PPP 01 29 17.0
TLY *eS* **S 01 32 38.7 -1.1**
TLY *e*SS **SnSn 01 33 01.4 +3.9**
TLY pmax pmax
comp=Z,159nm,1.0s
TLY MLR MLR
comp=Z,10µm,13.0s
TLY Talaya 20.35 53 P **P 01 28 50.1 -1.9**
SHL Shillong 20.47 139 *eP* **P 01 28 54.1 +0.3**
SHL IAmb IAmb 01 29 00.5
comp=Z,96nm,0.9s
SHL *eS* **S 01 32 40.9 -1.9**
SHL *i* x x 01 37 07.6
SHL Shillong 20.47 139 P **P 01 28 53.7 -0.1**
SNR=73
SHL S **S 01 32 40.6 -2.2**
SHL Shillong 20.47 139 P **P 01 28 52.8 -0.9**
SHL pmax pmax
comp=Z,158nm,0.9s
SHL MLR MLR
comp=Z,1µm,22.0s
SHL Shillong 20.47 139 P **P 01 28 52.8 -0.9**
SHL IAmb IAmb 01 29 28.9
comp=Z,158nm,0.9s
JORH JORHAT 20.75 132 *eP* **P 01 28 57.3 +0.8**
JORH IAmb IAmb 01 28 58.3
comp=Z,276nm,0.3s
JORH *ex* x 01 32 50.2
IRK Irkutsk 20.89 52 *eP* **P 01 28 57.3 -0.6**
IRK pmax pmax
comp=Z,259nm,2.3s
NGP Nagpur 20.96 175 *eP* **P 01 28 57.7 -1.1**
NGP IAmb IAmb 01 29 09.0
comp=Z,194nm,0.5s
LKP Lekhapani 21.20 128 *ex* **P 01 29 02.1 +0.7**
LKP IAmb IAmb 01 29 06.7
comp=Z,153nm,0.7s
LKP *ex* x 01 32 58.7
MOKO MOKOCHONG 21.23 132 *eP* **P 01 29 01.8 -0.1**
MOKO IAmb IAmb 01 29 06.9
comp=Z,226nm,1.2s
MOKO *ex* x 01 32 56.6
SONM Songino Array 21.36 64 P **P 01 29 03.3 +0.2**
comp=Z,41nm,0.9s,baz=263,slow=12,SNR=152
SONM Lg Lg 01 35 27.5
comp=Z,15nm,1.1s,baz=261,slow=25,SNR=1.8
SONM LR LR 01 38 18.0
comp=Z,14µm,18.1s,baz=266,slow=40
SONM Songino Array 21.36 64 P **P 01 29 02.3 -0.9**
KOHI KOHIMA 21.48 134 IAmb IAmb 01 29 09.3
comp=Z,328nm,1.0s
KOHI *ex* **S 01 33 02.9 +0.2**
KOHI *i* x x 01 37 55.7
LZH Lanzhou 21.50 97 *eP* **P 01 29 05.4 +0.7**
LZH pP sP 01 29 09.8 -1.0
LZH sP pP 01 29 13.3 +4.4
LZH S **S 01 33 04.6 +1.7**
LZH sS pS 01 33 12.5 +1.3
LZH SS **SnSn 01 33 35.0 +9.0**
LZH pmax pmax
comp=Z,170nm,1.4s
LZH pmax pmax
comp=Z,1µm,4.9s
LZH LR LR
comp=Z,8µm,11.9s
LZH LR LR
comp=Z,9µm,13.6s
LZH LR LR
comp=Z,10µm,14.6s
SILR SILCHAR 21.58 138 *eP* **P 01 29 07.6 +2.1**
SILR IAmb IAmb 01 29 09.7
comp=Z,338nm,0.6s
AGT Agartala 21.61 143 *eP* **P 01 29 07.2 +1.4**
AGT *ex* x 01 33 05.3
AGT *ex* x 01 33 09.8
ULN Ulaanbaatar 21.81 64*ceP* **P 01 29 07.7 -0.2**
ULN pmax pmax
comp=Z,150nm,1.8s
ULN MLR MLR
comp=Z,11µm,15.0s
ULN Ulaanbaatar 21.81 64 P **P 01 29 06.7 -1.2**
ULN IAmb IAmb 01 29 19.1
comp=Z,196nm,1.3s
MAK Makhachkala 21.84 282 *eP* **P 01 29 05.1 -3.1**
MAK *eS* **S 01 33 06.6 -2.6**
MAK pmax pmax
comp=Z,442nm,1.3s
MAK MLR MLR
comp=Z,4µm,12.0s
LKRN Lenkeran, Azer 21.86 271 P **P 01 29 09.2 +0.9**
BELO BELONIA 22.25 143 *eP* **P 01 29 11.0 -1.6**
BELO *ex* x 01 33 21.9
BELO *ex* x 01 33 22.0
SEKA Sheki 22.38 278 P **P 01 29 15.1 +1.1**
ZKTA Zakatala 22.71 279 P **P 01 29 18.6 +1.1**
BWNR Bhubaneshwar 22.94 159 *eP* **P 01 29 18.6 -1.3**
BWNR IAmb IAmb 01 29 26.6
comp=Z,143nm,0.9s
LGD Lagodekhi 22.95 280 P **P 01 29 21.2 +1.2**
GROC Groznyy 23.05 283 *eP* **P 01 29 24.5 +3.5**
GROC *eS* **S 01 33 36.0 +4.5**
RPR Rampur 23.25 175 *eP* **P 01 29 23.9 +0.7**
comp=Z,2µm,11.6s
RPR IVmS_BB IVmS_BB 01 39 04.2
comp=Z,2µm,11.6s
BANOM Banah 23.58 233 P **P 01 29 27.5 +1.0**
BANOM Banah 23.58 233 P **P 01 29 27.3 +0.8**
SNR=19
BANOM P **P 01 29 27.3 +0.8**
SNR=19
SHME Shamm 23.58 234 *i* P **P 01 29 26.3 -0.1**
SNR=17
SAIH SAIHA 23.61 141 *ex* **P 01 29 27.3 +0.4**
SAIH IAmb IAmb 01 29 30.0
comp=Z,171nm,1.2s
POO Poona 23.68 188 *ex* **P 01 29 27.0 -0.4**
POO IAmb IAmb 01 29 34.2
comp=Z,609nm,1.6s
KIRV Kirov 23.94 323 P **P 01 29 30.2 +0.6**
comp=Z,48nm,0.9s,baz=119,slow=4.7,SNR=14
KIRV Lg Lg 01 36 52.9
comp=Z,53nm,0.9s,baz=238,slow=22,SNR=1.1
KIRV Kirov 23.94 323*ceP* **P 01 29 30.1 +0.5**
KLRI Killari 23.97 181 *eP* **P 01 29 29.9 -0.4**
KLRI IVmB_BB 01 29 36.7
comp=Z,3µm,1.6s
KLRI IVmS_BB IVmS_BB 01 39 27.4
comp=Z,3µm,12.3s
CD2 Chengdu 24.01 109 ⇑*iP* **P 01 29 31.5 +0.9**
CD2 S **S 01 33 46.8 -0.4**
CD2 sS sS 01 33 54.6 +0.1
CD2 SS **SnSn 01 34 35.6 +8.1**
CD2 pmax pmax
comp=Z,160nm,1.0s
CD2 pmax pmax
comp=Z,1µm,5.7s
CD2 LR LR
comp=Z,5µm,13.5s
CD2 LR LR
comp=Z,6µm,16.5s
CD2 LR LR
comp=Z,8µm,14.7s
MDH Madha 24.05 232 P **P 01 29 31.8 +0.9**
MDH Madha 24.05 232 P **P 01 29 32.0 +1.0**
SNR=19
MDH P **P 01 29 32.0 +1.0**
SNR=19
MDH S **S 01 33 53.1 +5.2**
MDH S **S 01 33 53.1 +5.2**
MSFE Esma-Masafi 24.09 233 P **P 01 29 32.9 +1.6**
MSFE *i* P **P 01 29 33.8 +2.5**
SNR=24
GUDG Gudauri 24.13 282 P **P 01 29 33.8 +2.0**
NAX Nakhchivan 24.16 274 P **P 01 29 33.1 +1.1**
CHLP Challavanipeta 24.25 164 *eP* **P 01 29 32.0 -0.7**
CHLP IVmB_BB 01 29 49.0
comp=Z,1µm,2.1s
CHLP IVMs_BB IVMs_BB 01 39 57.9
comp=Z,2µm,10.0s
UMQ Umm Al-Quwin 24.26 234 *i* P **P 01 29 35.3 +2.4**
SNR=8.7
UMQ Umm Al-Quwin 24.26 234 P **P 01 29 35.7 +2.9**
SNR=7.0
UMQ P **P 01 29 35.7 +2.9**
SNR=7.0
GGR Gangavaram 24.34 173 *eP* **P 01 29 33.3 -0.4**
GGR IVmB_BB 01 29 40.7
comp=Z,1µm,1.3s
GGR IVMs_BB IVMs_BB 01 39 40.3
comp=Z,3µm,13.5s
WSAR Wadi Sarin 24.36 225 P **P 01 29 34.8 +0.9**
comp=Z,40nm,1.1s,baz=61,slow=8.9,SNR=25
WSAR LR LR 01 41 09.0
comp=Z,2µm,19.6s,baz=98,slow=42
UOSS Minazif 24.37 232 *i* P **P 01 29 33.7 -0.3**
SNR=43
UOSS Minazif 24.37 232 P **P 01 29 33.5 -0.4**
UOSS P **P 01 29 33.5 -0.4**
UOSS S **S 01 33 55.6 +2.5**
UOSS S **S 01 33 55.6 +2.5**
UOSS Minazif 24.37 232 P **P 01 29 33.5 -0.4**
UOSS IAmb IAmb 01 29 42.0
comp=Z,88nm,0.9s
KZRT Kazreti 24.40 279 P **P 01 29 35.7 +1.6**
BIDO Bidbid 24.41 227 P **P 01 29 35.4 +1.2**
SNR=16
BIDO P **P 01 29 35.4 +1.2**
SNR=16
GNI Garni 24.44 276 P **P 01 29 37.2 +2.5**
comp=Z,274nm,1.0s,baz=101,slow=1.5,SNR=100
GNI LR LR 01 40 24.0
comp=Z,3µm,19.1s,baz=58,slow=40
GNI Garni 24.44 276 P **P 01 29 36.5 +1.8**
GNI Garni 24.44 276*ceP* **P 01 29 36.9 +2.2**
GNI pmax pmax
comp=Z,524nm,1.3s
GNI MLR MLR
comp=Z,3µm,20.0s
GNI Garni 24.44 276 P **P 01 29 36.3 +1.6**
ZEI Tsey 24.49 283 *eP* **P 01 29 33.8 -1.3**
ZEI pmax pmax
comp=Z,69nm,1.4s
HATD Hatta, Dubai 24.51 232 *i* P **P 01 29 36.0 +0.8**
SNR=28
HATD Hatta, Dubai 24.51 232 P **P 01 29 36.0 +0.8**
SNR=31
HATD P **P 01 29 36.0 +0.8**
SNR=31
HATD S **S 01 34 03.4 +8.1**
HATD S **S 01 34 03.4 +8.1**
BTO Baotou 24.61 82 *eP* **P 01 29 31.1 -5.0**
BTO S S 01 33 45.5 -11
HYBB Hyderabad (bro 24.64 177 *eP* **P 01 29 35.7 -0.7**
HYBB IVmBBB 01 29 43.0
comp=Z,784nm,1.0s
HYBB IVMsBB 01 39 41.7
comp=Z,1µm,8.7s
HYB Hyderabad 24.64 177 *i* P **P 01 29 35.0 -1.4**
HYB *eS* **S 01 34 00.0 +2.5**
NAZ Nazwa, Dubai 24.66 233 *i* P **P 01 29 37.6 +1.0**
SNR=22
NAZ Nazwa, Dubai 24.66 233 P **P 01 29 37.7 +1.2**
SNR=17
NAZ P **P 01 29 37.7 +1.2**
SNR=17
NAZ S **S 01 34 06.8 +9.1**
NAZ S **S 01 34 06.8 +9.1**
WBK Wadi Bani Khal 24.70 224 P **P 01 29 38.6 +1.6**
SNR=15
WBK P **P 01 29 38.6 +1.6**
SNR=15
CUPL Choutuppal 24.78 176 *eP* **P 01 29 36.5 -1.1**
CUPL IVmB_BB 01 29 44.4
comp=Z,613nm,2.1s
CUPL IVMs_BB IVMs_BB 01 39 48.2
comp=Z,2µm,12.4s
HOQ Hoqain 24.80 228 P **P 01 29 39.0 +1.1**
SNR=46
HOQ P **P 01 29 39.0 +1.1**
SNR=46
GOF Gofitskoye 24.80 288⇑*iP* **P 01 29 39.0 +1.3**
GOF pmax pmax
comp=Z,364nm,1.0s
SOHO SOHO 24.81 230 P **P 01 29 36.9 -0.9**
SOHO SOHO 24.81 230 P **P 01 29 36.4 -1.4**
SOHO P **P 01 29 36.4 -1.4**
SMDO Samad 24.82 226 P **P 01 29 39.5 +1.4**
SNR=25
SMDO P **P 01 29 39.5 +1.4**
SNR=25
ONI Oni 24.85 283 P **P 01 29 40.5 +2.3**
FAQ Al Faqa, Dubai 24.89 233 *i* P **P 01 29 39.3 +0.8**
SNR=18
FAQ Al Faqa, Dubai 24.89 233 P **P 01 29 39.6 +1.1**
SNR=19
FAQ P **P 01 29 39.6 +1.1**
SNR=19
BGD Bogdanovka 25.01 279 P **P 01 29 42.8 +2.9**
AKH Akhalkalaki 25.06 280 P **P 01 29 40.8 +0.6**
AKH pmax pmax
comp=Z,270nm,1.3s
AKH MLR MLR
comp=Z,5µm,20.0s
AKH Akhalkalaki 25.06 280 P **P 01 29 40.8 +0.6**
AKH IAMs_20 IAMs_20 01 41 03.0
comp=Z,5µm,20.0s
KBZ Khabaz 25.07 285 P **P 01 29 41.4 +1.4**
comp=Z,34nm,0.9s,baz=56,slow=24,SNR=30
KBZ LR LR 01 40 51.7
comp=Z,2µm,19.5s,baz=255,slow=40
KBZ Khabaz 25.07 285*ceP* **P 01 29 40.5 +0.5**
KBZ pmax pmax
comp=Z,46nm,1.2s
KBZ MLR MLR
comp=Z,3µm,13.0s
PVM Polavaram 25.07 170 *eP* **P 01 29 39.8 -0.4**
PVM IVmB_BB 01 29 47.5
comp=Z,474nm,2.0s
PVM IVMs_BB IVMs_BB 01 40 09.8
comp=Z,4µm,12.1s
ASUD Al Ashush, Dub 25.13 233 *i* P **P 01 29 41.9 +1.1**
SNR=22
ASUD Al Ashush, Dub 25.13 233 P **P 01 29 42.5 +1.7**
SNR=16
ASUD P **P 01 29 42.5 +1.7**
SNR=16
KVAR Kislovodsk Arr 25.18 286 P **P 01 29 42.9 +1.7**
comp=Z,15nm,0.7s,baz=270,slow=20,SNR=11
KVAR LR LR 01 40 14.2
comp=Z,4µm,19.2s,baz=216,slow=38
KIV Kislovodsk 25.18 286 *i* P **P 01 29 41.7 +0.5**
SNR=22
KIV Kislovodsk 25.18 286 *eP* **P 01 29 42.1 +0.9**
KIV *eS* **S 01 34 08.8 +2.7**
KIV pmax pmax
comp=Z,321nm,4.3s
KIV pmax pmax
comp=Z,350nm,1.0s
KIV MLR MLR
comp=Z,7µm,15.0s

KIV **Kislovodsk** 25.18 286 P **P** **01 29 42.2 +0.9**
ALNE **Al Ain** 25.32 231 *i* P **P** **01 29 43.4 +0.9**
SNR=20
JMDO **Jabal Madar** 25.35 225 P **P** **01 29 44.2 +1.4**
SNR=18
JMDO P **P** **01 29 44.2 +1.4**
SNR=18
AJN **Ajban** 25.38 233 *i* P **P** **01 29 43.5 +0.4**
SNR=13
AJN **Ajban** 25.38 233 P **P** **01 29 43.1 0.0**
SNR=13
AJN P **P** **01 29 43.1 0.0**
SNR=13
ARQ **Araqi** 25.44 229 P **P** **01 29 45.5 +1.9**
SNR=39
ARQ P **P** **01 29 45.5 +1.9**
SNR=39
MYLAV **Mylavaram** 25.45 172 *e*P **P** **01 29 43.3 -0.4**
MYLAV IVmB_BB 01 30 06.6
comp=Z,665nm,2.1s
MYLAV IVMs_BB IVMs_BB 01 40 14.0
comp=Z,2μm,16.6s
BSY **Bisya** 25.53 227 P **P** **01 29 46.3 +1.9**
SNR=17
BSY P **P** **01 29 46.3 +1.9**
SNR=17
NJS **Nagarjunasagar** 25.54 175 *e*P **P** **01 29 43.5 -0.9**
NJS IVmB_BB 01 30 46.4
comp=Z,423nm,2.2s
NJS IVMs_BB IVMs_BB 01 40 21.3
comp=Z,1μm,11.5s
KARS **Kars** 25.55 278 P **P** **01 29 47.4 +2.8**
HHC **Hu-ho-hao-te** 25.68 81 *e*P **P** **01 29 46.1 +0.3**
HHC pP pP 01 29 50.6 +0.3
HHC S **S** **01 34 20.4 +6.3**
HHC sS sS 01 34 24.3 +2.7
HHC pmax pmax
comp=Z,42nm,1.2s
HHC pmax pmax
comp=Z,700nm,6.6s
HHC LR LR
comp=Z,5μm,13.4s
HHC LR LR
comp=Z,4μm,11.5s
HHC LR LR
comp=Z,6μm,12.1s
VRH **Novokhopyorsk** 25.77 303 *e*P **P** **01 29 46.0 -0.3**
VRH *e*S **S** **01 34 16.2 +1.2**
VRH pmax pmax
comp=Z,50nm,1.0s
VRH MLR MLR
comp=Z,2μm,9.0s
XAN **Xi'an** 26.13 97 P **P** **01 29 49.4 -0.5**
XAN pP pP 01 29 54.9 +0.6
XAN sP sP 01 29 57.6 +1.4
XAN pmax pmax
comp=Z,68nm,1.0s
XAN pmax pmax
comp=Z,730nm,6.8s
XAN LR LR
comp=Z,7μm,11.9s
XAN LR LR
comp=Z,6μm,13.8s
XAN LR LR
comp=Z,9μm,14.1s
XAN **Xi'an** 26.13 97 P **P** **01 29 48.8 -1.1**
XAN pmax pmax
comp=Z,92nm,1.2s
XAN **Xi'an** 26.13 97 P **P** **01 29 48.8 -1.1**
GEVA **Gevas** 26.24 273 P **P** **01 29 52.0 +1.1**
GEVA IAmb IAmb 01 30 02.0
comp=Z,241nm,1.5s
ADKI **Addanki** 26.29 174 *e*P **P** **01 29 50.4 -0.8**
ADKI IVmB_BB 01 30 14.6
comp=Z,404nm,1.6s
ADKI IVMs_BB IVMs_BB 01 40 47.7
comp=Z,2μm,13.6s
CIT **Chita** 26.42 55 *e*P **P** **01 29 52.3 0.0**
CIT *e* 01 30 38.0
CIT *e* 01 30 46.4
CIT pmax pmax
comp=Z,307nm,1.6s
MHTO **MHTO** 26.57 223 P **P** **01 29 55.1 +1.3**
SNR=18
MHTO P **P** **01 29 55.1 +1.3**
SNR=18
GOA **Goa** 26.68 187 *ex* **P** **01 29 54.9 +0.1**
GOA IAmb IAmb 01 30 01.6
comp=Z,260nm,1.4s
GOA *ex* x 01 34 35.8
KMI **Kunming** 27.05 121 ⇓*i*P **P** **01 29 58.8 +0.4**
KMI pP sP 01 30 04.3 -0.4
KMI sP pP 01 30 06.5 +3.2
KMI S **S** **01 34 36.6 +0.6**
KMI sS sS 01 34 49.3 +5.1
KMI pmax pmax
comp=Z,43nm,0.9s
KMI pmax pmax
comp=Z,550nm,3.7s
KMI LR LR
comp=Z,2μm,16.8s
KMI LR LR
comp=Z,1μm,18.4s
KMI LR LR
comp=Z,2μm,18.2s
KMI **Kunming** 27.05 121 IAMs_20 IAMs_20 01 42 07.6
comp=Z,7μm,18.0s
URV **Uravakonda** 27.07 180 *e*P **P** **01 29 57.6 -0.8**
URV IVmB_BB 01 30 03.5
comp=Z,456nm,1.3s
URV IVMsBB 01 41 10.0
comp=Z,2μm,13.3s
TIY **Taiyuan** 27.26 87 *e*P **P** **01 30 00.0 -0.1**
TIY PP **PnPn** **01 30 51.3 +7.7**
TIY S **S** **01 34 39.5 +0.5**
TIY pmax pmax
comp=Z,53nm,0.9s
TIY LR LR
comp=Z,3μm,8.3s
TIY LR LR
comp=Z,870nm,6.9s
TIY LR LR
comp=Z,4μm,12.9s
VORD **Divnogorie** 27.27 302 *e*P **P** **01 30 00.3 +0.4**
VORD pmax pmax
comp=Z,160nm,1.6s
SOC **Sochi** 27.37 286 *c*i P **P** **01 30 01.4 +0.6**
SOC *e* 01 30 46.6
SOC *e*S **S** **01 34 43.5 +3.1**
SOC *e*SS **SnSn** **01 35 56.4 +7.1**
SOC pmax pmax
comp=Z,39nm,1.1s
SOC MLR MLR
comp=Z,4μm,20.0s
VSR **Storozhevoye** 27.37 303 *e*P **P** **01 30 00.5 -0.3**
VSR *e*S **S** **01 34 41.0 +0.7**
VSR pmax pmax
comp=Z,20nm,0.8s
VSR MLR MLR
comp=Z,2μm,11.0s
VORR **Voronezh** 27.38 304 *e*P **P** **01 30 01.0 +0.1**
VORR pmax pmax
comp=Z,250nm,2.2s
LPSR **Galich'ya Gora** 27.65 306 *e*P **P** **01 30 03.2 -0.1**
LPSR *e*S **S** **01 34 45.7 +1.0**
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR MLR MLR
comp=Z,2μm,11.0s
NRIK **Noril'sk** 27.83 8 P **P** **01 30 05.1 +0.4**
comp=Z,51nm,1.0s,baz=190,slow=6.9,SNR=54
NRIK LR LR 01 42 23.0
comp=Z,2μm,18.0s,baz=225,slow=39
NRIK **Noril'sk** 27.83 8 *ce*P **P** **01 30 04.9 +0.2**
NRIK pmax pmax
comp=Z,129nm,1.4s
NRIK MLR MLR
comp=Z,2μm,15.0s
BOD **Bodaibo** 27.97 43 *e*P **P** **01 30 04.5 -1.6**
BOD pmax pmax
comp=Z,85nm,1.6s
MARD **Mardin** 28.27 272 P **P** **01 30 10.3 +1.1**
MARD IAmb IAmb 01 30 18.2
comp=Z,111nm,0.9s
SKHT **Srikalahasti** 28.35 175 *e*P **P** **01 30 09.5 -0.3**
SKHT IVmB_BB 01 30 41.3
comp=Z,295nm,2.0s
SKHT IVMs_BB IVMs_BB 01 42 38.0
comp=Z,1μm,8.6s
ENH **Enshi** 28.45 104 P **P** **01 30 09.1 -1.6**
ENH IAmb IAmb 01 31 02.2
comp=Z,81nm,1.2s
GYA **Guiyang** 28.74 113 ⇑P **P** **01 30 13.5 +0.1**
GYA sP sP 01 30 27.5 +7.8
GYA PcP **PcP** **01 33 29.0 +5.5**
GYA S **S** **01 35 02.1 -0.5**
GYA pmax pmax
comp=Z,39nm,1.8s
GYA pmax pmax
comp=Z,400nm,3.5s
GYA LR LR
comp=Z,2μm,18.0s
GYA LR LR
comp=Z,2μm,12.1s
GYA LR LR
comp=Z,3μm,19.0s
ANN **Anapa** 28.79 289 *c*i P **P** **01 30 13.7 +0.2**
ANN *e**PP **pP** **01 30 16.9 -1.1**
ANN *e*PPP PPP 01 31 12.3
ANN *e*S **S** **01 35 05.0 +2.3**
ANN pmax pmax
comp=Z,96nm,1.1s
ANN MLR MLR
comp=E,7μm,16.0s
ANN MLR MLR
comp=N,7μm,15.0s
ANN MLR MLR
comp=Z,6μm,15.0s
MOS **Moscow** 28.91 312 *e*P **P** **01 30 11.8 -2.7**
MOS *e* 01 31 25.6
MOS *e*S **S** **01 35 01.4 -3.0**
MOS pmax pmax
comp=Z,49nm,1.2s
MOS pmax pmax
comp=Z,100nm,1.5s
MOS MLR MLR
comp=E,3μm,17.0s
MOS MLR MLR
comp=Z,4μm,17.0s
BJI **Beijing** 29.29 81 P **P** **01 30 18.6 +0.6**
BJI PcP **PcP** **01 33 24.0 -0.5**
BJI S **S** **01 35 11.9 +1.2**
BJI pmax pmax
comp=Z,15nm,1.0s
BJI LR LR
comp=Z,3μm,15.1s
BJI LR LR
comp=Z,3μm,18.0s
BJI LR LR
comp=Z,3μm,22.2s
BJT **Baijiatuan** 29.29 81 P **P** **01 30 16.7 -1.3**
BJT pmax pmax
comp=Z,37nm,1.4s
BJT MLR MLR
comp=Z,4μm,20.0s
BJT **Baijiatuan** 29.29 81 P **P** **01 30 16.7 -1.3**
OBN **Obninsk** 29.39 310 P **P** **01 30 18.6 -0.1**
comp=Z,1.6nm,0.4s,baz=70,slow=15,SNR=5.7
OBN **Obninsk** 29.39 310 *ce*P **P** **01 30 18.9 +0.2**
OBN *e* 01 31 20.8
OBN *i*S **S** **01 35 15.7 +3.8**
OBN pmax pmax
comp=Z,41nm,1.5s
OBN MLR MLR
comp=Z,2μm,9.0s
OBN **Obninsk** 29.39 310 P **P** **01 30 18.5 -0.2**
OBN IAmb IAmb 01 30 56.4
comp=Z,111nm,1.0s
KLMR **Klimovskoe** 29.44 323 *e*P **P** **01 30 17.0 -2.1**
KLMR *e*S **S** **01 35 11.7 -0.9**
KLMR pmax pmax
comp=Z,92nm,1.2s
KLMR MLR MLR
comp=Z,6μm,10.0s
KLMR **Klimovskoe** 29.44 323 *e*P **P** **01 30 17.1 -2.1**
KLMR AMP 01 30 30.2
comp=Z,92nm,1.2s
KLMR *e*S **S** **01 35 11.7 -0.9**
KLMR *e*S **S** **01 35 11.7 -0.9**
KLMR LQ LQ 01 39 25.5
KLMR LQ LQ 01 39 25.5
KLMR LR LR 01 41 32.1
KLMR AMP 01 42 16.9
comp=Z,6μm,9.9s
MALT **Malatya** 29.67 276 P **P** **01 30 24.2 +2.6**
CHTO **Chiang Mai** 29.68 135 P **P** **01 30 20.1 -1.5**
CHTO pmax pmax
comp=Z,86nm,1.7s
CHTO **Chiang Mai** 29.68 135 P **P** **01 30 20.1 -1.5**
CMMT **Chiang Mai** 29.68 135 P **P** **01 30 21.0 -0.7**
comp=Z,326nmcomp=Z,13nm,1.4s
MHMT **Maesarieng** 29.69 137 P **P** **01 30 22.0 +0.3**
comp=Z,881nmcomp=Z,63nm,1.4s
PAYA **Payao** 29.73 133 P **P** **01 30 22.9 +0.8**
comp=Z,8μmcomp=Z,858nm,1.1s
CM34 **Chiang Mai Arr** 29.76 134 P **P** **01 30 22.0 -0.3**
CM32 **Chiang Mai Arr** 29.76 135 P **P** **01 30 22.0 -0.4**
CM35 **Chiang Mai Arr** 29.91 135 P **P** **01 30 23.0 -0.6**
CM15 **Chiang Mai Arr** 29.97 135 P **P** **01 30 24.0 -0.2**
comp=Z,16nm,1.0s
CM31 **Chiang Mai Arr** 29.98 135 P **P** **01 30 24.3 +0.1**
comp=Z,542nm,1.2s
CM31 **Chiang Mai Arr** 29.98 135 P **P** **01 30 23.5 -0.7**
CMAR **Chiang Mai Arr** 29.98 135 P **P** **01 30 23.9 -0.3**
comp=Z,5.5nm,0.6s,baz=316,slow=9.7,SNR=40
CMAR **Chiang Mai Arr** 29.98 135 *i* P **P** **01 30 24.0 -0.3**
CMAR pmax pmax
comp=Z,6.0nm,0.6s
CMAR **Chiang Mai Arr** 29.98 135 P **P** **01 30 23.4 -0.9**
CM13 **Chiang Mai Arr** 29.99 135 P **P** **01 30 24.3 -0.1**
comp=Z,174nmcomp=Z,12nm,0.8s
CM02 **Chiang Mai Arr** 30.00 135 P **P** **01 30 24.4 0.0**
comp=Z,160nmcomp=Z,17nm,1.0s
CM36 **Chiang Mai Arr** 30.01 135 P **P** **01 30 24.0 -0.5**
CM09 **Chiang Mai Arr** 30.01 135 P **P** **01 30 24.6 0.0**
comp=Z,161nmcomp=Z,18nm,0.8s
CM01 **Chiang Mai Arr** 30.02 135 P **P** **01 30 24.0 -0.6**
comp=Z,449nmcomp=Z,20nm,1.1s
CM05 **Chiang Mai Arr** 30.02 135 P **P** **01 30 24.6 -0.1**
comp=Z,133nmcomp=Z,14nm,0.8s
CM04 **Chiang Mai Arr** 30.04 135 P **P** **01 30 24.0 -0.9**
comp=Z,142nmcomp=Z,16nm,1.1s
SHAO **Shalim** 30.24 224 P **P** **01 30 27.3 +0.7**
HIA **Hailar** 30.25 62 P **P** **01 30 25.7 -0.8**
HIA pmax pmax
comp=Z,23nm,1.0s
HIA MLR MLR
comp=Z,5μm,21.0s
HIA **Hailar** 30.25 62 P **P** **01 30 25.7 -0.8**
HIA **Hailar** 30.25 62 IAMs_20 IAMs_20 01 43 35.5
comp=Z,5μm,21.0s
LAMP **Lampang** 30.29 134 P **P** **01 30 27.0 0.0**
comp=Z,998nmcomp=Z,130nm,0.9s
TOKA **Tokat** 30.48 281 P **P** **01 30 29.4 +0.8**
SLVN **Son La** 30.54 124 P **P** **01 30 29.4 +0.2**
SLVN IAmb IAmb 01 30 37.5
comp=Z,79nm,1.2s
KVT **Kavak** 30.58 282 P **P** **01 30 31.7 +2.2**
GAZ **Gaziantep** 30.98 274 IAmb IAmb 01 30 42.7
comp=Z,102nm,1.0s
SIM **Simferopol'** 31.09 290 *e*P **P** **01 30 33.6 -0.3**
SIM pmax pmax
comp=Z,63nm,0.8s
SUKH **Sukhothai** 31.15 135 P **P** **01 30 35.0 +0.5**
comp=Z,44nm,0.9s
TIA **Tai'an** 31.31 87 P **P** **01 30 36.3 +0.4**
TIA S **S** **01 35 44.4 +1.9**
TIA pmax pmax
comp=Z,26nm,1.7s
TIA pmax pmax
comp=Z,360nm,7.8s
TIA LR LR
comp=Z,3μm,18.2s
TIA LR LR
comp=Z,3μm,16.9s
TIA LR LR
comp=Z,5μm,12.8s
WHFO **Wadi Hawf** 31.31 227 P **P** **01 30 36.2 +0.1**
SNR=18
WHFO P **P** **01 30 36.2 +0.1**
SNR=18
RBK **Rabkut** 31.42 226 P **P** **01 30 37.2 +0.1**
SNR=9.8
RBK P **P** **01 30 37.2 +0.1**
SNR=9.8
UTTA **Uttaradit** 31.42 134 P **P** **01 30 37.5 +0.5**
comp=Z,894nmcomp=Z,76nm,1.1s
TMCR **Tamitsa** 31.42 328 *e*P **P** **01 30 35.6 -0.9**
TMCR pmax pmax
comp=Z,91nm,1.1s
PHIT **Phitsanulok** 31.80 134 P **P** **01 30 41.6 +1.3**
comp=Z,2μmcomp=Z,101nm,1.1s
WHN **Wuhan** 31.85 99 ⇑*i*P **P** **01 30 41.1 +0.4**
WHN pP **sP** **01 30 47.4 +0.4**
WHN S **S** **01 35 53.6 +2.7**
WHN pmax pmax
comp=Z,120nm,0.7s
WHN pmax pmax
comp=Z,820nm,5.1s
WHN LR LR
comp=Z,10μm,11.2s
WHN LR LR
comp=Z,5μm,10.0s
WHN LR LR
comp=Z,13μm,11.9s
ABTO **Aybut** 32.03 227 P **P** **01 30 42.3 -0.1**
SNR=14
ABTO P **P** **01 30 42.3 -0.1**
SNR=14
RAYN **Ar Rayn** 32.19 245 *i* P **P** **01 30 44.3 +0.4**
SNR=21
RAYN **Ar Rayn** 32.19 245 P **P** **01 30 43.8 0.0**
RAYN pmax pmax
comp=Z,137nm,1.0s
RAYN MLR MLR
comp=Z,3μm,19.0s
RAYN **Ar Rayn** 32.19 245 P **P** **01 30 43.8 0.0**
NONG **Nongkai** 32.61 129 P **P** **01 30 48.1 +0.6**
comp=Z,100nm,1.9s
UTHA **Uthaitani** 32.67 137 P **P** **01 30 48.8 +0.8**
comp=Z,707nmcomp=Z,78nm,1.2s
BR131 **Keskin Array S** 32.73 281 *c*i P **P** **01 30 49.6 +1.0**
BR131 **Keskin Array S** 32.73 281 P **P** **01 30 49.2 +0.6**
BRTR **Keskin Array B** 32.73 281 P **P** **01 30 49.8 +1.2**
comp=Z,28nm,0.8s,baz=93,slow=7.7,SNR=101
BRTR **Keskin Array B** 32.73 281 *i* P **P** **01 30 49.7 +1.2**
BRTR pmax pmax
comp=Z,31nm,0.9s
BRTR **Keskin Array B** 32.73 281 P **P** **01 30 49.1 +0.5**
PBA **Port Blair** 33.24 151 *e*P P 01 30 50.7 -2.2
PBA IAmb IAmb 01 31 06.7
comp=Z,217nm,1.4s
PBA **Port Blair** 33.24 151 P P 01 30 53.3 +0.3
PBA IAMs_20 IAMs_20 01 46 15.0
comp=Z,4μm,19.0s
BR231 **Keskin MP Arra** 33.33 281 P **P** **01 30 54.1 +0.4**
ASF **Jabal al Asfar** 33.35 266 P **P** **01 30 56.3 +2.4**
comp=Z,2.6nm,0.8s,baz=29,slow=22,SNR=9.3
TRD **Trivandrum** 33.47 180 *ex* P 01 30 59.8 +4.9
TRD IAmb IAmb 01 31 02.9
comp=Z,96nm,1.3s
PUL **Pulkovo** 33.52 318 *i* P **P** **01 30 55.0 0.0**
PUL pmax pmax
comp=Z,142nm,0.4s
PUL MLR MLR
comp=Z,4μm,18.0s
AKASG **Malin Array Be** 33.65 302 P **P** **01 30 56.2 0.0**
comp=Z,10nm,0.9s,baz=74,slow=8.7,SNR=38
AKASG PP **PnPn** **01 32 06.8 -1.1**
comp=Z,9.4nm,0.7s,baz=89,slow=13,SNR=4.4
AKASG **Malin Array Be** 33.65 302 *i* P **P** **01 30 56.2 0.0**
AKASG pmax pmax
comp=Z,13nm,0.8s
AKBB **Malin Array Si** 33.65 302 *ce*P **P** **01 30 56.3 0.0**
AKBB **Malin Array Si** 33.65 302 IAMs_20 IAMs_20 01 47 13.8
comp=Z,3μm,18.0s
DL2 **Dalian** 33.65 80 P **P** **01 30 53.1 -3.3**
DL2 S **S** **01 36 11.3 -7.5**
DL2 pmax pmax
comp=Z,58nm,1.9s
DL2 pmax pmax
comp=Z,420nm,5.6s
DL2 LR LR
comp=N,2μm,14.2s
DL2 LR LR
comp=E,3μm,12.8s
DL2 LR LR
comp=Z,3μm,17.1s
KIEV **Kiev** 33.66 302 P **P** **01 30 55.0 -1.3**
PURM **Purcari** 33.74 294 ⇑P **P** **01 30 58.9 +1.8**
JOF **Joensuu** 33.79 324 P **P** **01 30 58.0 +0.7**
JOF pmax pmax
comp=Z,95nm,1.0s
KHON **Khomkaen** 33.81 132 P **P** **01 30 59.1 +1.1**
comp=Z,165nm,1.1s
MMAI **Mount Meron Ar** 34.06 268 P **P** **01 31 02.4 +2.3**
comp=Z,62nm,1.2s,baz=74,slow=15,SNR=42
MMAI PcP **PcP** **01 33 37.6 0.0**
comp=Z,10nm,0.9s,baz=54,slow=4.2,SNR=4.8
MMAI LR LR 01 47 50.3
comp=Z,2μm,19.0s,baz=50,slow=41
MDUB **Mudurnu** 34.28 283 P **P** **01 31 02.7 +0.7**
MDUB IAMs_20 IAMs_20 01 47 16.0
comp=Z,3μm,20.0s
LVZ **Lovozero** 34.32 333 *ce*P **P** **01 31 03.0 +1.0**
LVZ pmax pmax
comp=Z,167nm,1.4s
LVZ MLR MLR
comp=Z,6μm,14.0s
LVZ **Lovozero** 34.32 333 P **P** **01 31 02.1 +0.2**
MICGM **Minsk** 34.35 308 ⇓*e*P **P** **01 31 03.0 +0.8**
MICGM PM 01 31 04.0
comp=Z,0.2nm,1.0s
MICGM *e*PP **PP** **01 32 20.0 +0.1**
MICGM *e*PPP PPP 01 32 30.0
MICGM *e*PcP PcP 01 33 28.0 -10
MICGM *e*S **S** **01 36 30.0 +0.7**
MICGM *e*SS SnSn 01 38 14.0 -25
MICGM *e*SSS SSS 01 39 34.0
MICGM *e*ScS **ScS** **01 41 25.0 +0.1**
MICGM *e*LQ LQ 01 42 44.0
MICGM *e*LR LR 01 44 02.0
MICGM LRM MLR 01 46 04.0
comp=E,4.5nm,10.0s
MICGM LRM MLR 01 46 06.0
comp=Z,5.1nm,10.0s
MNK **Minsk** 34.35 308 *e*P **P** **01 31 03.0 +0.8**
MNK *e* 01 32 20.0
MNK *e*S **S** **01 36 30.0 +0.7**
MNK pmax pmax
comp=Z,150nm,1.0s
MNK MLR MLR
comp=Z,5μm,10.0s
KIS **Kishinev** 34.37 295 ⇑*i*P **P** **01 31 02.4 -0.2**
KIS **Kishinev** 34.37 295 *e*PP PP 01 32 21.0 +0.7
KIS **Kishinev** 34.37 295 *c*i P **P** **01 31 02.4 -0.2**
KIS *e* 01 32 21.0
KIS *e*PPP PPP 01 32 44.0
KIS *e* 01 36 31.0
KIS *e*SS SS 01 38 49.0 -9.5
KIS MLR MLR
comp=Z,1μm,13.0s
KIS MLR MLR
comp=N,1μm,14.5s
MILM **Milestii Mici** 34.39 295 ⇓P **P** **01 31 03.2 +0.5**
NJ2 **Nanjing** 34.42 93 ⇑P **P** **01 31 03.4 +0.2**
NJ2 pP **pP** **01 31 08.0 +0.3**
NJ2 PP **PnPn** **01 32 18.4 +0.5**
NJ2 S **S** **01 36 32.4 +1.5**
NJ2 sS **sS** **01 36 39.6 +1.2**
NJ2 pmax pmax
comp=N,24nm,0.6s
NJ2 pmax pmax
comp=N,470nm,6.2s
NJ2 LR LR
comp=N,4μm,14.2s
NJ2 LR LR
comp=N,3μm,14.7s
NJ2 LR LR
comp=N,4μm,14.2s
SORM **Soroca** 34.50 297 ⇑P **P** **01 31 03.7 0.0**
SORM **Soroca** 34.50 297 P **P** **01 31 03.7 0.0**
APA **Apatity** 34.61 332 ⇓*i*P **P** **01 31 02.4 -1.9**
APA *i* 01 32 22.9
APA *i*S **S** **01 36 33.0 0.0**
APA pmax pmax
comp=Z,20nm,1.1s

APA MLR MLR
comp=Z,15µm,11.0s
TLCR **34.73 292** ⇓P **P** **01 31 06.7 +1.0**
TLCR **34.73 292** P **P** **01 31 06.6 +1.0**
CSS **Mathiatis** **34.74 273** P **P** **01 31 06.7 +0.8**
ZEA **Zeya** **34.79 53** *eP* **P** **01 31 06.9 +0.8**
ZEA pmax pmax
comp=E,30nm,1.3s
ZEA pmax pmax
comp=Z,60nm,1.1s
ZEA MLR MLR
comp=E,2µm,13.0s
ZEA MLR MLR
comp=Z,3µm,15.0s
PALK **Pallekele** **34.83 174** P **P** **01 31 06.8 0.0**
comp=Z,2.9nm,0.6s,baz=70,slow=12,SNR=2.2
PALK LR LR 01 45 13.8
comp=Z,2µm,21.2s,baz=97,slow=36
PALK **Pallekele** **34.83 174** IAMs_20 IAMs_20 01 45 55.2
comp=Z,5µm,19.0s
CN2 **Changchun** **34.96 71** *eP* P 01 31 02.9 -4.8
CN2 LR LR
comp=N,3µm,15.1s
CN2 LR LR
comp=E,6µm,16.3s
CN2 LR LR
comp=Z,8µm,16.8s
NACGM **Naroch** **34.99 309** *eP* **P** **01 31 07.0 -0.8**
NACGM *e*PP **PnPn** **01 32 21.0 -3.6**
NACGM eS **S** **01 36 36.0 -3.1**
NACGM eSS **SnSn** **01 38 42.0 -12**
NACGM eSSS SSS 01 39 18.0
NACGM eScS ScS 01 41 14.0 -14
NACGM eLQ LQ 01 43 26.0
NACGM eLR LR 01 45 12.0
NACGM LRM MLR 01 48 48.0
comp=Z,4.8nm,16.0s
LEF **Lefka** **35.00 273** ⇑P **P** **01 31 09.9 +1.8**
IDID **Didziasalis** **35.02 310** *eP* **P** **01 31 08.8 +0.8**
PHET **Kaeng Krachan** **35.02 140** P **P** **01 31 09.0 +0.5**
comp=Z,832nmcomp=Z,76nm,0.9s
TPGR **Topolog** **35.07 291** ⇓P **P** **01 31 10.0 +1.3**
VSU **Vasula** **35.18 315** *eP* **P** **01 31 09.7 +0.3**
VSU **Vasula** **35.18 315** *i* P **P** **01 31 09.7 +0.3**
VSU pmax pmax
comp=Z,173nm,1.3s
VSU MLR MLR
comp=Z,17µm,12.0s
IAS **Iasi** **35.18 296** P **P** **01 31 11.1 +1.5**
IAS pmax pmax
comp=Z,13nm,0.8s
CFR **Carcaliu** **35.20 292** ⇑P **P** **01 31 10.6 +0.9**
CFR **Carcaliu** **35.20 292** P **P** **01 31 11.1 +1.4**
CFR pmax pmax
comp=Z,47nm,1.2s
IZAR **Zarasai** **35.30 311** *eP* **P** **01 31 11.6 +1.2**
SRAK **Srakaew** **35.30 135** P **P** **01 31 14.4 +3.5**
comp=Z,8µmcomp=Z,937nm,1.0s
IIGN **Ignalina** **35.31 310** *eP* **P** **01 31 11.6 +1.1**
ISAL **Salakas** **35.37 310** *eP* **P** **01 31 12.2 +1.1**
HARR **Harsova** **35.45 291** ⇑P **P** **01 31 12.8 +0.9**
HARR **Harsova** **35.45 291** P **P** **01 31 12.8 +0.9**
ISK **Istanbul-Kandi** **35.64 285** P **P** **01 31 14.7 +1.2**
ISK **Istanbul-Kandi** **35.64 285** P **P** **01 31 14.7 +1.2**
ISP **Isparta** **35.68 279** P **P** **01 31 15.4 +1.3**
ISP **Isparta** **35.68 279** IAmb IAmb 01 31 21.5
comp=Z,80nm,0.9s
KMPD **K-Podol'skiy** **35.69 298** P **P** **01 31 13.0 -0.8**
FIA1 **FINESS Array S** **35.87 320** P **P** **01 31 15.8 +0.5**
FINES **FINESS Array B** **35.87 320** P **P** **01 31 15.7 +0.4**
comp=Z,11nm,0.6s,baz=108,slow=8.8,SNR=42
FINES PP PP 01 32 24.6 -12
comp=Z,14nm,0.8s,baz=110,slow=10,SNR=4.1
FINES LR LR 01 46 39.9
comp=Z,4µm,20.6s,baz=102,slow=37
TESR **Tescani** **35.93 295** ⇑P **P** **01 31 16.9 +0.9**
QIZ **Qiongzhong** **35.98 120** P **P** **01 31 15.0 -1.7**
QIZ S **S** **01 36 54.8 -0.3**
QIZ pmax pmax
comp=Z,42nm,2.6s
QIZ LR LR
comp=Z,3µm,17.7s
QIZ LR LR
comp=Z,3µm,17.5s
QIZ LR LR
comp=Z,4µm,18.3s
QIZ **Qiongzhong** **35.98 120** IAMs_20 IAMs_20 01 47 43.3
comp=Z,5µm,19.0s
VRI **Vrincioaia** **36.01 294** ⇑P **P** **01 31 18.2 +1.5**
VRI **Vrincioaia** **36.01 294** P **P** **01 31 18.3 +1.5**
VRI pmax pmax
comp=Z,54nm,1.2s
SOCY **Socotra** **36.02 221** P **P** **01 31 15.0 -2.2**
SOCY **Socotra** **36.02 221** P **P** **01 31 15.4 -1.7**
PRAR **RASCA** **36.05 296** ⇑P **P** **01 31 17.4 +0.4**
SUF **Sumiainen** **36.05 322** P **P** **01 31 17.6 +0.8**
SUF pmax pmax
comp=Z,55nm,0.9s
EIL **Elat** **36.05 264** P **P** **01 31 19.2 +2.0**
comp=Z,85nm,1.1s,baz=52,slow=3.1,SNR=57
EIL LR LR 01 47 22.5
comp=Z,1µm,21.8s,baz=66,slow=38
PLOR **Plostina** **36.07 294** ⇑P **P** **01 31 19.0 +1.8**
PLOR **Plostina** **36.07 294** P **P** **01 31 19.0 +1.8**
BISRR **Bisoca** **36.09 293** ⇑P **P** **01 31 19.5 +2.0**
BIZ **Bicaz** **36.21 296** ⇑P **P** **01 31 19.6 +1.2**
NEHR **Nehoiu** **36.41 293** ⇑P **P** **01 31 22.3 +2.1**
ELL **Elmali** **36.54 278** P **P** **01 31 23.4 +1.9**
ELL **Elmali** **36.54 278** IAmb IAmb 01 31 31.0
comp=Z,109nm,0.9s
ELL IAMs_20 IAMs_20 01 48 27.8
comp=Z,4µm,19.0s
PABE **Paberze** **36.59 310** *eP* **P** **01 31 22.6 +1.1**
YAK **Yakutsk** **36.60 39** P **P** **01 31 20.9 -0.6**
comp=Z,53nm,0.8s,baz=215,slow=3.1,SNR=21
YAK **Yakutsk** **36.60 39** *eP* **P** **01 31 19.9 -1.6**
YAK *e**PP **sP** **01 31 29.4 +1.4**
YAK eS **S** **01 36 59.1 -4.6**
YAK pmax pmax
comp=Z,118nm,0.9s
YAK pmax pmax
comp=N,15nm,1.0s
YAK pmax pmax
comp=E,55nm,1.1s
YAK smax smax
comp=N,1µm,4.3s
YAK smax smax
comp=E,966nm,3.3s
YAK MLR MLR
comp=Z,4µm,17.0s
YAK MLR MLR
comp=N,1µm,19.0s
YAK MLR MLR
comp=E,4µm,18.0s
YAK **Yakutsk** **36.60 39** P **P** **01 31 20.9 -0.6**
YAK IAmb IAmb 01 31 21.9
comp=Z,111nm,0.9s
YAK IAMs_20 IAMs_20 01 47 08.8
comp=Z,4µm,21.0s
HKPS **Hong Kong Po S** **36.62 111** IAMs_20 IAMs_20 01 48 27.0
comp=Z,3µm,18.0s
SSE **Sheshan** **36.63 93** P **P** **01 31 22.8 +0.7**
SSE sP **sP** **01 31 28.0 -0.5**
SSE S **S** **01 37 07.4 +2.7**
SSE pmax pmax
comp=Z,50nm,0.8s
SSE pmax pmax
comp=Z,150nm,3.9s
SSE LR LR
comp=Z,820nm,13.3s
MLR **Muntele Rosu** **36.63 293** P **P** **01 31 23.9 +1.7**
comp=Z,25nm,0.8s,baz=8.8,slow=8.3,SNR=32
MLR PP **PP** **01 32 48.1 +2.7**
comp=Z,36nm,1.1s,baz=70,slow=7.5,SNR=3.4
MLR **Muntele Rosu** **36.63 293** ⇓P **P** **01 31 23.7 +1.5**
SECR **36.66 292** ⇑P **P** **01 31 24.3 +2.1**
BURAR **Bucovina Array** **36.67 297** ⇑P **P** **01 31 23.5 +1.1**
BURAR **Bucovina Array** **36.67 297** P **P** **01 31 23.5 +1.1**
BURAR **Bucovina Array** **36.67 297** P **P** **01 31 23.1 +0.7**
EDC **Edincik** **36.73 284** P **P** **01 31 25.4 +2.5**
KULA **Kula-Manisa** **36.79 281** P **P** **01 31 24.2 +0.7**
MANT **Manisa** **36.87 281** P **P** **01 31 25.6 +1.2**
DOPR **Dopca** **36.90 294** ⇑P **P** **01 31 25.9 +1.6**
JMB **Yambol** **36.98 288** *eP* **P** **01 31 26.3 +1.3**
LVV **L'vov** **37.06 301** *eP* **P** **01 31 25.4 -0.2**
LVV eS **S** **01 37 05.5 -5.6**
LVV MLR MLR
comp=Z,3µm,15.0s
SUW **Suwalki** **37.12 308** *eP* **P** **01 31 26.1 +0.1**
SUW **Suwalki** **37.12 308** IAMs_20 IAMs_20 01 47 14.2
comp=Z,3µm,21.0s
SZH **Strazhica** **37.21 290** *eP* **P** **01 31 27.3 +0.3**
VOIR **37.26 293** ⇑P **P** **01 31 27.9 +0.4**
VOIR **37.26 293** P **P** **01 31 27.8 +0.4**
ARCR **ARCALIA** **37.35 296** ⇑P **P** **01 31 30.3 +2.2**
COPA **Copaceanca** **37.47 291** ⇓P **P** **01 31 30.9 +1.7**
ARR **Arges** **37.56 293** ⇑P **P** **01 31 31.4 +1.4**
KEV **Kevo** **37.61 334** P **P** **01 31 30.4 +0.4**
KEV pmax pmax
comp=Z,69nm,1.1s
KEV MLR MLR
comp=Z,6µm,19.0s
KEV **Kevo** **37.61 334** P **P** **01 31 30.4 +0.4**
MDJ **Mudanjiang** **37.64 68** P **P** **01 31 32.8 +2.2**
MDJ pmax pmax
comp=Z,21nm,1.3s
MDJ pmax pmax
comp=Z,620nm,4.6s
PBUR **Paburge** **37.73 311** *eP* **P** **01 31 32.5 +1.3**
INCN **Inchon** **37.84 80** P **P** **01 31 31.7 -0.7**
INCN pmax pmax
comp=Z,59nm,0.9s
INCN MLR MLR
comp=Z,2µm,18.0s
INCN **Inchon** **37.84 80** P **P** **01 31 31.7 -0.7**
INCN IAmb IAmb 01 31 39.0
comp=Z,59nm,0.9s
DIM **Dimitrovgrad** **37.85 288** *eP* **P** **01 31 33.8 +1.4**
ALN **Alexandroupoli** **37.85 286** P **P** **01 31 34.7 +2.3**
ALN pmax pmax
comp=Z,40nm,1.4s
ALN **Alexandroupoli** **37.85 286** P **P** **01 31 32.6 +0.2**
KWP **Kalwaria Pacla** **37.94 301** *eP* **P** **01 31 34.2 +1.2**
KWP **Kalwaria Pacla** **37.94 301** P **P** **01 31 34.3 +1.2**
KWP pmax pmax
comp=Z,143nm,1.3s
KWP **Kalwaria Pacla** **37.94 301** IAMs_20 IAMs_20 01 49 51.3
comp=Z,4µm,18.0s
EZN **Ezine** **38.02 284** P **P** **01 31 35.0 +1.2**
EZN **Ezine** **38.02 284** P **P** **01 31 35.0 +1.2**
ARD3 **ARCESS Array S** **38.02 333** IAmb IAmb 01 31 44.9
comp=Z,77nm,1.1s
ARA0 **ARCESS Array S** **38.03 333** ⇑*i*P **P** **01 31 34.0 +0.4**
ARB1 **ARCESS Array S** **38.03 333** IAmb IAmb 01 31 35.3
comp=Z,103nm,1.1s
ARCES **ARCESS Array B** **38.03 333** P **P** **01 31 34.1 +0.5**
comp=Z,40nm,0.8s,baz=102,slow=8.9,SNR=96
ARCES PP **PP** **01 33 06.1 +5.8**
comp=Z,27nm,1.0s,baz=104,slow=13,SNR=5.3
ARCES **ARCESS Array B** **38.03 333** *eP* **P** **01 31 33.8 +0.2**
ARD8 **ARCESS Array S** **38.05 333** IAmb IAmb 01 31 35.4
comp=Z,122nm,1.2s
KLR **Kul'dur** **38.06 60** P **P** **01 31 34.5 +0.4**
comp=Z,24nm,0.7s,baz=280,slow=7.8,SNR=53
KLR **Kul'dur** **38.06 60** *ce*P **P** **01 31 34.3 +0.2**
KLR pmax pmax
comp=Z,41nm,1.1s
KLR MLR MLR
comp=Z,2µm,10.0s
QZH **Quanzhou** **38.11 103** *eP* **P** **01 31 34.8 +0.1**
QZH PP **PnPn** **01 33 08.1 +4.9**
QZH eS **S** **01 37 25.5 -1.8**
QZH LR LR
comp=Z,2µm,13.3s
QZH LR LR
comp=Z,2µm,13.7s
QZH LR LR
comp=Z,2µm,13.3s
LOT **Lotru** **38.13 294** ⇑P **P** **01 31 36.2 +1.3**
RDO **Rodhopi** **38.14 286** P **P** **01 31 36.3 +1.5**
PRK **Paraskevi** **38.26 283** P **P** **01 31 37.6 +1.7**
KOLS **Kolonicke sedl** **38.35 300** *eP* **P** **01 31 37.1 +0.5**
KOLS pmax pmax
comp=Z,14nm,1.2s
KOLS **Kolonicke sedl** **38.35 300** *eP* **P** **01 31 37.0 +0.5**
KOLS *e*PP **PnPn** **01 33 14.8 +9.0**
KOLS *e*L L 01 50 13.8
UZH **Uzhgorod** **38.39 299** *eP* **P** **01 31 35.2 -1.7**
UZH *e* 01 31 43.0
UZH eS **S** **01 37 26.7 -4.5**
UZH MLR MLR
comp=Z,400nm,14.0s
PLD **Plovdiv** **38.42 288** P **P** **01 31 38.9 +1.7**
PLD pmax pmax
comp=Z,148nm,1.1s
PLD **Plovdiv** **38.42 288** *eP* **P** **01 31 37.7 +0.5**
RZN **Rozhen** **38.55 288** *eP* **P** **01 31 39.2 +0.7**
KTK1 **Kautokeino** **38.65 332** ⇑*i*P **P** **01 31 38.9 0.0**
PGB **Panagyurishte** **38.66 289** *eP* **P** **01 31 41.3 +2.0**
TIXI **Tiksi** **38.75 23** *ce*P **P** **01 31 39.1 -0.5**
TIXI pmax pmax
comp=Z,375nm,1.7s
TIXI **Tiksi** **38.75 23** P **P** **01 31 38.4 -1.2**
BEL **Belsk** **38.79 304** *eP* **P** **01 31 41.4 +1.2**
KSRS **Korea Array** **38.80 80** P **P** **01 31 39.5 -0.8**
comp=Z,8.2nm,0.8s,baz=283,slow=8.0,SNR=18
KSRS PcP **PcP** **01 33 50.7 -0.9**
comp=Z,3.5nm,0.8s,baz=292,slow=5.0,SNR=2.3
KSRS LR LR 01 48 37.8
comp=Z,1µm,20.4s,baz=294,slow=38
BAIL **Bailesti** **38.80 292** ⇓P **P** **01 31 42.4 +2.1**
PKDT **Phuket** **38.86 145** P **P** **01 31 41.0 -0.1**
CRVS **Cervenica-Dubn** **38.88 300** *eP* **P** **01 31 41.6 +0.6**
CRVS eS **S** **01 37 42.0 +3.4**
CRVS MLR MLR
comp=Z,3µm,18.4s
CRVS **Cervenica-Dubn** **38.88 300** *eP* **P** **01 31 41.6 +0.6**
CRVS eS **S** **01 37 42.0 +3.4**
CRVS eL L 01 50 33.1
KAVA **Kavala** **38.91 287** P **P** **01 31 42.4 +1.0**
HAMF **Hammerfest** **38.98 335** *eP* **P** **01 31 42.2 +0.7**
KARP **Karpathos** **39.06 277** P **P** **01 31 43.3 +0.6**
KARP IAmb IAmb 01 31 49.6
comp=Z,102nm,1.1s
KARP **Karpathos** **39.06 277** P **P** **01 31 42.6 -0.1**
HERR **Herculane** **39.20 293** ⇑P **P** **01 31 44.3 +0.6**
NVR **Nevrokopi** **39.26 287** P **P** **01 31 44.8 +0.5**
MMB **Musomiste** **39.28 288** *eP* **P** **01 31 45.4 +1.0**
VTS **Vitosha** **39.30 290** *eP* **P** **01 31 46.2 +1.5**
SIRR **Siria** **39.35 296** ⇑P **P** **01 31 46.5 +1.5**
USA0B **Ussuriysk Arra** **39.41 68** *i* P **P** **01 31 44.8 -0.6**
USA0B **Ussuriysk Arra** **39.41 68** IAMs_20 IAMs_20 01 49 02.8
comp=Z,4µm,20.0s
USRK **Ussuriysk Ar.** **39.41 68** P **P** **01 31 45.5 +0.1**
comp=Z,6.4nm,0.8s,baz=295,slow=9.3,SNR=11
USRK LR LR 01 49 13.2
comp=Z,4µm,20.1s,baz=278,slow=38
USRK **Ussuriysk Ar.** **39.41 68** P **P** **01 31 44.6 -0.8**
NIE **Niedzica** **39.52 301** *eP* **P** **01 31 48.1 +1.7**
NIE **Niedzica** **39.52 301** P **P** **01 31 47.8 +1.4**
NIE pmax pmax
comp=Z,29nm,0.9s
OUR **Ouranopolis** **39.52 286** P P 01 31 51.5 +5.1
SRS **Serrai** **39.53 287** P **P** **01 31 47.7 +1.2**
SRS pmax pmax
comp=Z,44nm,0.9s
SRS **Serrai** **39.53 287** P **P** **01 31 47.0 +0.5**
BZS **Buzias** **39.54 295** ⇑P **P** **01 31 48.1 +1.5**
BZS **Buzias** **39.54 295** P **P** **01 31 47.7 +1.1**
BZS pmax pmax
comp=Z,58nm,1.6s
KECS **Kecovo** **39.60 299** *eP* **P** **01 31 48.2 +1.2**
KECS pmax pmax
comp=Z,16nm,0.9s
KECS **Kecovo** **39.60 299** *eP* **P** **01 31 48.2 +1.2**
APE **Apeiranthos** **39.63 280** *i* P **P** **01 31 48.2 +0.8**
APE pmax pmax
comp=Z,119nm,1.2s
APE **Apeiranthos** **39.63 280** P **P** **01 31 48.2 +0.8**
OJC **Ojcow** **39.68 302** *eP* **P** **01 31 48.5 +0.8**
MDVR **Moldovita** **39.71 293** ⇓P **P** **01 31 49.3 +1.3**
SOH **Sokhos** **39.80 287** P **P** **01 31 51.5 +2.7**
SOH pmax pmax
comp=Z,20nm,1.6s
SOH **Sokhos** **39.80 287** P **P** **01 31 49.6 +0.8**
PAIG **Paliouri** **39.88 285** P **P** **01 31 51.5 +2.1**
PAIG pmax pmax
comp=Z,51nm,0.9s
PAIG **Paliouri** **39.88 285** P **P** **01 31 49.9 +0.5**
PLG **Polygyros** **39.89 286** P **P** **01 31 49.8 +0.2**
PLG **Polygyros** **39.89 286** P **P** **01 31 49.8 +0.2**
STIA **Sitia Lasithi** **40.00 277** P **P** **01 31 51.1 +0.6**
HORT **Hortiatis** **40.06 287** P **P** **01 31 51.6 +0.6**
PSZ **Piszkesteto** **40.11 299** ⇓P **P** **01 31 53.1 +1.8**
PSZ **Piszkesteto** **40.11 299** P **P** **01 31 51.5 +0.1**
PSZ pmax pmax
comp=Z,56nm,1.3s
PSZ MLR MLR
comp=Z,2µm,18.0s
PSZ **Piszkesteto** **40.11 299** P **P** **01 31 51.5 +0.1**
PSZ IAMs_20 IAMs_20 01 49 51.8
comp=Z,3µm,18.0s
THE **Thessaloniki** **40.14 287** P **P** **01 31 54.6 +3.0**
THE pmax pmax
comp=Z,20nm,1.4s
VAY **Valandovo** **40.19 288** *i* P **P** **01 31 53.2 +1.2**
VAY **Valandovo** **40.19 288** P **P** **01 31 53.4 +1.5**
VAY pmax pmax
comp=Z,59nm,1.2s
TRO **Tromso** **40.28 333** *eP* **P** **01 31 52.6 +0.3**
NPS **Neapolis** **40.33 278** P **P** **01 31 53.3 +0.1**
NPS **Neapolis** **40.33 278** P **P** **01 31 53.3 +0.1**
STIP **Stip** **40.33 289** *i* P **P** **01 31 52.9 -0.3**
GRG **Griva** **40.43 287** P **P** **01 31 54.6 +0.6**
GRG **Griva** **40.43 287** P **P** **01 31 54.6 +0.6**
NEO **Neokhori** **40.44 285** P **P** **01 31 54.6 +0.5**
XOR **Xorichti** **40.44 285** P **P** **01 31 54.4 +0.3**
LAST **Lasithi** **40.47 278** P **P** **01 31 55.0 +0.5**
SSLB **Suanglung** **40.52 103** P **P** **01 31 54.2 -0.7**
ATHU **Athens Univers** **40.55 283** P **P** **01 31 55.4 +0.4**
VLY **Voula,Athens** **40.59 282** P **P** **01 31 55.8 +0.5**
ATH **Athens Observa** **40.59 283** P **P** **01 31 55.9 +0.6**
ATH **Athens Observa** **40.59 283** P **P** **01 31 55.9 +0.6**
VYHS **Vyhne** **40.67 300** *eP* **P** **01 31 57.1 +1.2**
VYHS pmax pmax
comp=Z,38nm,1.3s
VYHS **Vyhne** **40.67 300** *eP* **P** **01 31 57.0 +1.2**
VYHS eL L 01 50 14.0
LIT **Litokhoron** **40.67 286** P **P** **01 31 57.5 +1.5**
LIT pmax pmax
comp=Z,40nm,1.3s
LIT **Litokhoron** **40.67 286** P **P** **01 31 56.2 +0.2**
GKP **Gorka Klasztor** **40.72 307** *eP* **P** **01 31 57.1 +0.9**
GKP **Gorka Klasztor** **40.72 307** P **P** **01 31 57.3 +1.1**
GKP pmax pmax
comp=Z,94nm,1.4s
LHMI **Lhok Sumawe** **40.72 149** P **P** **01 31 57.6 +1.0**
comp=Z,2µmcomp=Z,130nm,1.0s
LHMI **Lhok Sumawe** **40.72 149** P **P** **01 31 56.0 -0.5**
LHMI IAmb IAmb 01 32 03.5
comp=Z,140nm,1.1s
GRNR **Gornyy** **40.73 57** ⇓*i*P **P** **01 31 56.3 0.0**
GRNR pmax pmax
comp=Z,20nm,0.7s
GRNR MLR MLR
comp=E,2µm,13.0s
GRNR MLR MLR
comp=N,950nm,12.0s
GRNR MLR MLR
comp=Z,2µm,14.0s
BUD **Budapest** **40.79 298** P **P** **01 31 59.0 +2.1**
BUD pmax pmax
comp=Z,46nm,1.1s
OKC **Ostrava-Krasne** **40.80 302** *eP* **P** **01 31 58.2 +1.3**
OKC *e* 01 32 03.4
OKC MLR MLR
comp=Z,2µm,15.1s
OKC **Ostrava-Krasne** **40.80 302** *eP* **P** **01 31 58.2 +1.3**
OKC *ep*P **sP** **01 32 03.4 0.0**
OKC AMS AMS 01 51 40.0
comp=Z,2µm,15.1s
VILL **Villia** **40.81 283** P **P** **01 31 56.4 -0.8**
ATAL **Atalanti** **40.82 284** P **P** **01 31 57.4 +0.2**
HOPEN **Hopen** **40.84 344** *eP* **P** **01 31 58.1 +1.2**
IDI **Anoyia** **40.85 278** P **P** **01 31 57.7 +0.1**
comp=Z,29nm,0.9s,baz=74,slow=8.4,SNR=17
IDI **Anoyia** **40.85 278** P **P** **01 31 57.0 -0.6**
IDI IAmb IAmb 01 32 11.4
comp=Z,78nm,0.9s
IDI **Anoyia** **40.85 278** P **P** **01 31 56.8 -0.8**
LKR **Lokris** **40.85 284** P **P** **01 31 57.5 0.0**
FRGS **Fruska Gora** **40.90 294** ⇑*i*P **P** **01 31 58.6 +0.8**
YULB **Yu-li** **41.01 103** IAMs_20 IAMs_20 01 50 34.6
comp=Z,2µm,19.0s
DIVS **Divibare** **41.09 293** ⇑*i*P **P** **01 32 00.3 +0.8**
DIVS **Divibare** **41.09 293** IAmb IAmb 01 32 06.8
comp=Z,72nm,1.0s
KZN **Kozani** **41.11 287** P **P** **01 31 59.5 -0.2**
KZN **Kozani** **41.11 287** P **P** **01 31 59.5 -0.2**
JTU **Tsushima** **41.11 83** IAMs_20 IAMs_20 01 50 20.2
comp=Z,3µm,20.0s
AGG **Agios Georgios** **41.19 285** IAmb IAmb 01 32 01.9
comp=Z,95nm,1.3s
AGG **Agios Georgios** **41.19 285** P **P** **01 31 59.0 -1.3**
TWG **Pinlang** **41.19 104** P **P** **01 32 01.1 +0.7**
TWG IAmb IAmb 01 32 09.6
comp=Z,110nm,1.2s
MORC **Moravsky Berou** **41.20 302** ⇓P **P** **01 32 01.2 +0.8**
MORC **Moravsky Berou** **41.20 302** *eP* **P** **01 32 01.1 +0.8**
MORC **Moravsky Berou** **41.20 302** P **P** **01 32 01.1 +0.8**
MORC pmax pmax
comp=Z,46nm,1.1s
MORC MLR MLR
comp=Z,2µm,18.0s
MORC **Moravsky Berou** **41.20 302** P **P** **01 32 01.1 +0.8**
MORC IAMs_20 IAMs_20 01 50 03.4
comp=Z,2µm,18.0s
THL **Klokotos Trika** **41.21 286** P **P** **01 32 00.4 0.0**
TEKS **Tekeris** **41.27 294** *eP* **P** **01 32 00.3 -0.6**
FAUS **Fauske** **41.27 329** ⇑*i*P **P** **01 32 00.8 +0.3**
VAM **Vamos** **41.30 279** P **P** **01 32 00.8 -0.4**
VAM **Vamos** **41.30 279** P **P** **01 32 00.8 -0.4**
JAVC **Velka Javorina** **41.33 300** *eP* **P** **01 32 03.4 +2.0**
MAKR **Makrakomi, Fth** **41.34 285** P **P** **01 32 02.1 +0.6**
STEI **Steigen** **41.34 330** ⇑*i*P **P** **01 32 01.2 +0.1**
MORH **Mrgy, Hungar** **41.38 296** ⇑*i*P **P** **01 32 02.3 +0.6**
IMMV **Iera Moni Meta** **41.44 279** P **P** **01 32 01.6 -0.8**
MOR8 **Moi Rana** **41.51 327** ⇑*i*P **P** **01 32 01.7 -0.9**
IVA **Berane** **41.55 291** ⇑*i*P **P** **01 32 01.2 -2.1**
BBLS **Lazići** **41.56 293** ⇑*i*P **P** **01 32 04.3 +0.9**
SMOL **Smolenice** **41.57 300** *eP* **P** **01 32 04.7 +1.4**
SMOL pmax pmax
comp=Z,22nm,1.1s
SMOL **Smolenice** **41.57 300** *eP* **P** **01 32 04.7 +1.4**
KALE **Kalithea** **41.57 284** P **P** **01 32 00.6 -2.9**
PVY **Plav** **41.59 291** ⇓*i*P **P** **01 32 04.3 +0.6**
EVR **Evrytania** **41.60 285** P **P** **01 32 03.1 -0.7**
KRLC **Kraliky** **41.61 302** *eP* **P** **01 32 04.3 +0.6**
KRLC *e* 01 32 09.8
KRLC MLR MLR
comp=Z,2µm,14.0s
KRLC **Kraliky** **41.61 302** *eP* **P** **01 32 04.3 +0.6**
KRLC *ep*P **sP** **01 32 09.8 -0.4**
KRLC AMS AMS 01 50 10.0
comp=Z,2µm,14.0s
TRIZ **Trizonia** **41.63 284** P **P** **01 32 03.8 -0.1**
GVD **Gavdhos** **41.64 278** P **P** **01 32 04.1 +0.1**
KLV **Kalavryta, Ach** **41.70 283** P **P** **01 32 04.8 +0.2**
MODS **Modra-Piesok** **41.70 300** *eP* **P** **01 32 04.5 +0.1**
MODS pmax pmax
comp=Z,43nm,1.2s
MODS **Modra-Piesok** **41.70 300** *eP* **P** **01 32 04.5 +0.1**
MODS *e*S **S** **01 38 28.1 +7.3**
MODS *e*L L 01 50 51.3
PLE **Pljevlja** **41.74 292** ⇓*i*P **P** **01 32 07.1 +2.2**
KSP **Ksiaz** **41.75 304** *eP* **P** **01 32 05.5 +0.8**
KSP **Ksiaz** **41.75 304** P **P** **01 32 05.5 +0.8**
KSP pmax pmax
comp=Z,37nm,1.1s
KNDR **Palaiochora Ch** **41.76 279** P **P** **01 32 08.2 +3.3**
HAPS **Han Pijesak,Bl** **41.80 293** *eP* **P** **01 32 05.2 -0.2**
KOME **Kolasin** **41.81 291** ⇑*i*P **P** **01 32 06.3 +0.8**
DPC **Dobruska-Polom** **41.84 303** *eP* **P** **01 32 06.7 +1.2**
DPC MLR MLR
comp=Z,3µm,12.6s
DPC **Dobruska-Polom** **41.84 303** *eP* **P** **01 32 06.7 +1.2**
DPC AMS AMS 01 50 20.0
comp=Z,3µm,12.6s
OSTC **Ostas** **41.86 303** *eP* **P** **01 32 06.5 +0.9**
OSTC AMS AMS 01 50 20.0
comp=Z,3µm,16.0s
ZST **Bratislava** **41.86 300** *eP* **P** **01 32 06.9 +1.3**

ZST e 01 33 52.8
ZST Bratislava 41.86 300 eP **P** **01 32 06.9 +1.3**
ZST ePP **PnPn** **01 33 52.8 +5.5**
HFS Hagfors 41.88 318 P **P** **01 32 06.2 +0.5**
comp=Z,31nm,0.9s,baz=103,slow=11,SNR=23
HFS PcP **PcP** **01 34 02.2 +1.1**
comp=Z,24nm,0.9s,baz=111,slow=3.2,SNR=3.1
VRAC Vranov 41.91 301 P **P** **01 32 07.2 +1.1**
comp=Z,14nm,1.0s,baz=76,slow=8.6,SNR=18
VRAC Vranov 41.91 305 ⇓P **P** **01 32 07.2 +1.1**
VRAC Vranov 41.91 301 eP **P** **01 32 07.2 +1.1**
CHVC Chvalec 41.95 303 eP **P** **01 32 07.3 +0.9**
CHVC AMS AMS 01 50 20.0
comp=Z,2µm,15.4s
UPC Upice 41.99 303 eP **P** **01 32 07.8 +1.1**
UPC MLR MLR
comp=Z,3µm,14.6s
UPC Upice 41.99 303 eP **P** **01 32 07.8 +1.1**
UPC AMS AMS 01 50 30.0
comp=Z,3µm,14.6s
LOF Lofoten 42.00 330 eP **P** **01 32 06.0 -0.5**
KONS Konsvik 42.06 327 eP **P** **01 32 08.2 +1.2**
TIR Tirane 42.09 289 P **P** **01 32 11.5 +3.9**
KRUC Moravsky 42.10 301 eP **P** **01 32 08.8 +1.2**
UPM Unac-Piva 42.12 292⇑ iP **P** **01 32 09.4 +1.3**
UPM Unac-Piva 42.12 292⇑ iP **P** **01 32 09.2 +1.1**
PDG Podgorica 42.14 291 ⇑P **P** **01 32 09.0 +1.0**
PDG Podgorica 42.14 291⇑ iP **P** **01 32 08.7 +0.7**
PDG Podgorica 42.14 291 P **P** **01 32 08.6 +0.7**
TTG Podgorica 42.14 291⇑ iP **P** **01 32 09.0 +1.0**
NKY Niksic 42.19 291 ⇓ iP **P** **01 32 10.2 +1.7**
KULM Kulim 42.19 144 P **P** **01 32 08.6 0.0**
KULM IAmb IAmb 01 32 09.8
comp=Z,198nm,2.0s
KULM Kulim 42.19 144 P **P** **01 32 09.0 +0.4**
NKME Niksic 42.23 291 eP **P** **01 32 09.9 +1.1**
DRME Dracevica, Mon 42.27 290⇑ iP **P** **01 32 09.8 +0.7**
DRME Dracevica, Mon 42.27 290⇑ iP **P** **01 32 09.9 +0.8**
ULC Ulcinj 42.30 290 eP **P** **01 32 09.7 +0.3**
CEME Cevo 42.33 291⇑ iP **P** **01 32 10.5 +0.8**
SOP Sopron 42.35 299 P **P** **01 32 10.8 +1.2**
SOP pmax pmax
comp=Z,47nm,1.2s
IGT Igoumenitsa 42.43 286 P **P** **01 32 10.1 -0.3**
IGT pmax pmax
comp=Z,76nm,1.1s
IGT Igoumenitsa 42.43 286 P **P** **01 32 08.9 -1.5**
BUM Brajici-Budva 42.43 291⇑ iP **P** **01 32 11.3 +0.8**
BRY Bratogost 42.47 292 eP **P** **01 32 11.6 +0.7**
BRY Bratogost 42.47 292⇑ iP **P** **01 32 11.6 +0.7**
LKD2 Lefkada island 42.48 285 P **P** **01 32 10.2 -0.7**
NYDR Nydri-Lefkada 42.48 285 P **P** **01 32 08.7 -2.1**
NSS Namsos 42.50 324 eP **P** **01 32 09.8 -0.9**
BEHE Becsehely 42.55 297⇑ iP **P** **01 32 14.5 +3.2**
KCSI Kotacane, Aceh 42.60 149 P P 01 32 23.8 +12
TREC Trest 42.62 302 eP **P** **01 32 12.2 +0.4**
TREC MLR MLR
comp=Z,3µm,16.8s
TREC Trest 42.62 302 eP **P** **01 32 12.2 +0.4**
TREC AMS AMS 01 52 50.0
comp=Z,3µm,16.8s
TPTI 42.62 150 P **P** **01 32 11.2 -0.9**
comp=Z,448nmcomp=Z,33nm,1.2s
HCY Herceg Novi 42.66 291⇑ iP **P** **01 32 12.8 +0.5**
HCY Herceg Novi 42.66 291 eP **P** **01 32 13.1 +0.8**
TREB Trebinje 42.67 291⇑ iP **P** **01 32 12.7 +0.4**
ATD Arta Tunnel 42.71 235 P **P** **01 32 14.9 +2.0**
comp=Z,37nm,1.0s,baz=52,slow=3.3,SNR=9.3
ATD Arta Tunnel 42.71 235 P **P** **01 32 13.8 +0.8**
ATD IAmb IAmb 01 32 21.2
comp=Z,153nm,1.0s
CONA Conrad Observa 42.73 300 *i* P **P** **01 32 14.2 +1.3**
comp=Z,67nm,1.2s,SNR=29
RGN Rugen 42.78 310 eP **P** **01 32 14.7 +1.6**
RGN Rugen 42.78 310 eP **P** **01 32 14.4 +1.4**
comp=Z,235nm,1.2s,baz=75,slow=7.9
BLY Banja Luka 42.80 295⇑ iP **P** **01 32 13.9 +0.6**
JNU Nakatsue 42.85 84 P **P** **01 32 13.2 -0.7**
comp=Z,14nm,1.0s,baz=270,slow=4.0,SNR=2.6
JNU Nakatsue 42.85 84 IAMs_20 IAMs_20 01 51 24.2
comp=Z,3µm,19.0s
PVCC Panska Ves 42.89 304 eP **P** **01 32 15.2 +1.2**
PVCC e 01 32 20.6
PVCC MLR MLR
comp=Z,2µm,13.6s
PVCC Panska Ves 42.89 304 eP **P** **01 32 15.2 +1.2**
PVCC epP **sP** **01 32 20.6 +0.1**
PVCC AMS AMS 01 50 40.0
comp=Z,2µm,13.6s
NC602 NORSAR Array S 42.89 319 IAmb IAmb 01 32 14.7
comp=Z,161nm,1.1s
NC602 NORSAR Array S 42.89 319⇑ iP **P** **01 32 13.8 -0.1**
NORES NORESS Array B 42.89 319 eP **P** **01 32 14.3 +0.4**
RUE Ruedersdorf 42.92 307 eP **P** **01 32 14.7 +0.5**
NB2 NORSAR Subarra 43.02 319 P **P** **01 32 14.9 -0.1**
comp=Z,95nm,1.1s,baz=86,slow=8.6
NB2 NORSAR Subarra 43.02 319 P **P** **01 32 14.9 -0.1**
baz=86,slow=8.6
NOA NORSAR Array B 43.02 319 P **P** **01 32 15.1 0.0**
comp=Z,32nm,0.9s,baz=86,slow=8.1,SNR=59
NOA PP **PcP** **01 34 07.5 +2.5**
comp=Z,27nm,0.9s,baz=89,slow=9.4,SNR=6.5
NOA LR LR 01 50 52.0
comp=Z,3µm,20.0s,baz=95,slow=37
PRU Pruhonice 43.03 303 eP **P** **01 32 16.2 +1.0**
PRU e 01 32 21.2
PRU MLR MLR
comp=Z,3µm,13.8s
PRU Pruhonice 43.03 303 eP **P** **01 32 16.2 +1.0**
PRU epP **sP** **01 32 21.2 -0.5**
PRU ex x 01 34 08.5
PRU AMS AMS 01 51 00.0
comp=Z,3µm,13.8s
HSPB Hornsund (broa 43.05 343 eP **P** **01 32 14.3 -0.7**
STON Ston 43.06 292⇑ iP **P** **01 32 14.9 -0.6**
IPM Ipoh 43.08 144 P **P** **01 32 15.5 -0.4**
IPM Ipoh 43.08 144 P **P** **01 32 15.0 -0.9**
PRA Prague 43.08 303 eP **P** **01 32 16.6 +1.0**
PRA MLR MLR
comp=Z,1µm,13.8s
PRA Prague 43.08 303 eP **P** **01 32 16.6 +1.0**
PRA AMS AMS 01 51 00.0
comp=Z,1µm,13.8s
ARSA Arzberg 43.14 299 *i* P **P** **01 32 16.9 +0.8**
comp=Z,21nm,1.1s,SNR=7.2
BRG Berggiesshubel 43.19 304 *i* P **P** **01 32 17.2 +0.8**
comp=Z,54nm,1.4s
BRG PP **PP** **01 33 59.0 +2.4**
BRG SCP **ScP** **01 38 00.7 +4.2**
comp=Z,13nm,1.2s
BRG S **S** **01 38 46.0 +3.4**
BRG SS **SS** **01 41 51.0 -4.2**
comp=N,1µm,13.5s
comp=E,2µm,13.6s
comp=Z,4µm,17.9s
BRG Berggiesshubel 43.19 304 *i* P **P** **01 32 17.2 +0.8**
BRG 01 33 59.0
BRG S **S** **01 38 46.0 +3.4**
BRG SS **SS** **01 41 51.0 -4.2**
BRG pmax pmax
comp=Z,54nm,1.4s
BRG MLR MLR
comp=N,1µm,13.5s
BRG MLR MLR
comp=E,2µm,13.6s
BRG MLR MLR
comp=Z,4µm,17.9s
BRG Berggiesshubel 43.19 304 eP **P** **01 32 17.3 +0.9**
comp=Z,54nm,1.4s,baz=75,slow=7.9
NAO01 NORSAR Array S 43.20 319 P **P** **01 32 16.7 +0.3**
NAO01 IAmb IAmb 01 32 45.6
comp=Z,148nm,1.2s
NC204 NORSAR Array S 43.22 320 IAmb IAmb 01 32 26.9
comp=Z,128nm,1.1s
SPA0 Spitsbergen Ar 43.24 345 P **P** **01 32 16.8 +0.3**
SPA0 Spitsbergen Ar 43.24 345⇑ iP **P** **01 32 17.2 +0.7**
SPITS Spitsbergen Ar 43.24 345 P **P** **01 32 17.8 +1.3**
comp=Z,20nm,0.9s,baz=114,slow=10,SNR=16
SPITS PP **PcP** **01 34 03.6 -1.8**
comp=Z,23nm,0.9s,baz=111,slow=9.3,SNR=4.5
ZAG Zagreb 43.26 297⇑ iP **P** **01 32 18.1 +1.0**
OSL Oslo 43.38 318⇑ iP **P** **01 32 18.0 +0.2**
GROS Grobnik 43.39 298 *i* P **P** **01 32 18.5 +0.3**
GROS epP **pP** **01 32 22.6 -0.3**

PBCC Pribram 43.45 303 *ex* P 01 32 24.9 +6.3
FBE Freiberg 43.54 304 eP **P** **01 32 20.4 +1.2**
comp=Z,92nm,1.4s,baz=75,slow=7.9
CRES Cresnjev 43.62 297⇑ iP **P** **01 32 20.3 +0.4**
SOKA Soboth 43.63 298 *i* P **P** **01 32 20.9 +0.8**
comp=Z,65nm,1.3s,SNR=23
CLL Collm 43.66 305⇑ iP **P** **01 32 20.6 +0.4**
comp=Z,50nm,1.1s
CLL *i* sP **pP** **01 32 25.6 +0.7**
CLL ePP **PP** **01 34 01.0 -0.6**
CLL *i* (sPcP) 01 34 11.8
CLL *i* 01 34 21.3
CLL eS **S** **01 38 53.0 +3.5**
CLL eSS **SS** **01 41 54.0 -10**
CLL eSSS SSS 01 42 44.0
CLL Lmax 01 53 00.0
CLL Collm 43.66 305⇑ iP **P** **01 32 20.6 +0.4**
CLL *i* *PP **pP** **01 32 25.6 +0.7**
CLL eS **S** **01 38 53.0 +3.5**
CLL pmax pmax
comp=Z,50nm,1.1s
CLL Collm 43.66 305 eP **P** **01 32 20.7 +0.5**
comp=Z,50nm,1.1s,baz=75,slow=7.9
CLL Collm 43.66 305 IAMs_20 IAMs_20 01 53 51.3
comp=Z,3µm,18.0s
PSI Prapat 43.71 148 P **P** **01 32 19.7 -1.4**
PSI pmax pmax
comp=Z,39nm,1.0s
MOA Molln 43.79 300 *i* P **P** **01 32 21.9 +0.6**
comp=Z,19nm,1.0s,SNR=7.5
RPSI Rantau Prapat 43.81 148 P **P** **01 32 19.7 -2.0**
PDKS Podkum 43.85 297 eP **P** **01 32 21.9 +0.1**
KHC Kasperske Hory 43.87 302 eP **P** **01 32 22.7 +0.7**
KHC *e* 01 32 28.1
KHC MLR MLR
comp=Z,3µm,16.3s
KHC Kasperske Hory 43.87 302 eP **P** **01 32 22.7 +0.7**
KHC epP **sP** **01 32 28.1 -0.4**
KHC AMS AMS 01 53 50.0
comp=Z,3µm,16.3s
GEC2 GERESS Array S 43.87 301 eP **P** **01 32 23.2 +1.1**
comp=Z,102nm,1.5s,baz=75,slow=7.9
GEC2B GERESS ARRAY S 43.87 301 P **P** **01 32 22.1 0.0**
GERES GERESS Array B 43.87 301 P **P** **01 32 23.1 +1.0**
comp=Z,11nm,0.8s,baz=75,slow=7.1,SNR=78
GERES PcP **PcP** **01 34 07.8 -0.3**
comp=Z,5.2nm,0.9s,baz=46,slow=4.2,SNR=1.8
GERES S **S** **01 38 53.5 +0.7**
comp=Z,0.4nm,0.2s,baz=86,slow=17,SNR=5.6
GERES GERESS Array B 43.87 301 P **P** **01 32 22.3 +0.3**
DOMB Dombas 43.95 321⇑ iP **P** **01 32 22.8 +0.3**
KONO Kongsberg 43.98 317 *ce*P **P** **01 32 23.4 +0.7**
KONO pmax pmax
comp=Z,96nm,2.5s
KONO Kongsberg 43.98 317 P **P** **01 32 22.8 +0.2**
KONO IAmb IAmb 01 32 24.2
comp=Z,70nm,1.1s
KONO Kongsberg 43.98 317⇑ iP **P** **01 32 23.1 +0.4**
OBKA Obir 44.00 298 *i* P **P** **01 32 24.2 +1.0**
comp=Z,46nm,1.2s,SNR=9.5
LJU Ljubljana 44.16 297 *i* P **P** **01 32 25.2 +0.8**
LJU *i* pP **pP** **01 32 29.2 +0.2**
LJU Ljubljana 44.16 297⇑ iP **P** **01 32 25.1 +0.8**
TANN Tannenbergstha 44.22 304 eP **P** **01 32 25.7 +0.9**
comp=Z,122nm,1.3s,baz=75,slow=7.9
NKC Novy Kostel 44.27 304 eP **P** **01 32 26.2 +1.0**
NKC MLR MLR
comp=Z,2µm,13.1s
NKC Novy Kostel 44.27 304 eP **P** **01 32 26.2 +1.0**
NKC AMS AMS 01 51 30.0
comp=Z,2µm,13.1s
KBS Kingsbay 44.30 345 P **P** **01 32 25.3 +0.3**
KBS pmax pmax
comp=Z,204nm,1.9s
KBS Kingsbay 44.30 345 P **P** **01 32 25.3 +0.3**
KBS IAmb IAmb 01 32 32.3
comp=Z,204nm,1.9s
KBS Kingsbay 44.30 345⇑ iP **P** **01 32 25.8 +0.8**
WET Wettzell 44.30 302 eP **P** **01 32 26.5 +1.1**
comp=Z,39nm,1.2s,baz=75,slow=7.9
WERN Wernitzgruen 44.30 304 eP **P** **01 32 26.4 +1.0**
comp=Z,50nm,1.5s,baz=75,slow=7.9
GUNZ Gunzen 44.31 304 eP **P** **01 32 26.6 +1.0**
comp=Z,58nm,1.2s,baz=75,slow=7.9
CEY Cerknica 44.33 297⇑ iP **P** **01 32 26.2 +0.5**
PLN Plauen 44.39 304 eP **P** **01 32 26.9 +0.9**
comp=Z,36nm,1.2s,baz=75,slow=7.9
RIY Rijeka 44.42 296⇑ iP **P** **01 32 26.7 +0.3**
KNDS Knezji Dol 44.42 297 *i* P **P** **01 32 27.4 +0.8**
NEUB Neuenburg 44.43 305 eP **P** **01 32 27.3 +0.9**
comp=Z,56nm,1.1s,baz=75,slow=7.9
SKAR Skarslia 44.48 319⇑ iP **P** **01 32 27.7 +1.0**
ROTZ Rotzenmuhle 44.55 303 eP **P** **01 32 28.5 +1.1**
comp=Z,60nm,1.7s,baz=75,slow=7.9
MANZ Manzenberg 44.55 303 eP **P** **01 32 28.5 +1.1**
comp=Z,37nm,1.2s,baz=75,slow=7.9
MYKA Terra Mystica 44.56 298 eP **P** **01 32 27.9 +0.3**
comp=Z,18nm,1.0s
GSI Gunungsitoli 44.57 150 P **P** **01 32 28.1 +0.3**
comp=Z,4µmcomp=Z,166nm,1.3s
GSI Gunungsitoli 44.57 150 P **P** **01 32 27.3 -0.5**
MOL Molde 44.60 322⇑ iP **P** **01 32 28.2 +0.6**
KBA Koelnbreinsper 44.61 299 *i* P **P** **01 32 28.7 +0.6**
comp=Z,30nm,1.4s,SNR=9.7
KBA Koelnbreinsper 44.61 299 P **P** **01 32 28.7 +0.6**
BSEG Bad Segeberg 44.64 309 eP **P** **01 32 29.4 +1.4**
comp=Z,85nm,1.1s,baz=75,slow=7.9
MOX Moxa 44.68 304 eP **P** **01 32 29.3 +0.9**
comp=Z,64nm,1.3s,baz=75,slow=7.9
MOX eL L 01 52 44.6
comp=Z,1µm,21.2s
MUD Monsted U'grnd 44.74 313 ⇓ iP **P** **01 32 29.8 +1.1**
MUD pmax pmax
comp=Z,44nm,1.0s
MUD Monsted U'grnd 44.74 313 ⇓ iP **P** **01 32 29.8 +1.1**
comp=Z,44nm,1.0s
MUD Monsted U'grnd 44.74 313 ⇓ iP **P** **01 32 29.9 +1.1**
MUD IAmb IAmb 01 32 30.8
comp=Z,44nm,1.0s
RJOB Jochberg 44.77 300 eP **P** **01 32 28.9 -0.3**
comp=Z,21nm,1.4s,baz=75,slow=7.9
JMN Monobe 44.78 81 P **P** **01 32 28.5 -0.9**
ASSE Asse, Remlinge 44.86 307 eP **P** **01 32 30.2 +0.5**
comp=Z,110nm,2.0s,baz=75,slow=7.9
AKN Aaknes 44.91 321 eP **P** **01 32 31.0 +0.9**
NRDL Niedersach Rie 45.10 307 eP **P** **01 32 33.0 +1.4**
comp=Z,116nm,1.2s,baz=75,slow=7.9
TIP Timpagrande 45.11 287 ⇓P **P** **01 32 33.1 +1.1**
CLZ Clausthal 45.12 306 eP **P** **01 32 32.7 +0.8**
comp=Z,44nm,1.3s,baz=75,slow=7.9
JWT Wachi 45.18 79 IAMs_20 IAMs_20 01 52 50.8
comp=Z,3µm,20.0s
GRF Grafenberg Arr 45.19 303 eP **P** **01 32 34.0 +1.5**
comp=Z,112nm,1.1s,baz=75,slow=7.9
GRF eL L 01 54 45.5
comp=Z,2µm,18.7s
ABTA Abfaltersbach 45.26 299 *i* P **P** **01 32 32.7 -0.5**
comp=Z,24nm,1.2s,SNR=6.8
STAL STALIGIAL 45.29 298 P **P** **01 32 33.1 -0.2**
SNART Snartemo 45.42 316 *i* P **P** **01 32 34.9 +0.8**
FUR Furstenfeldbru 45.51 301 eP **P** **01 32 37.4 +1.6**
comp=Z,122nm,1.0s,baz=75,slow=7.9
UBBA Unterbreizbach 45.62 305 eP **P** **01 32 36.5 +0.8**
comp=Z,51nm,1.5s,baz=75,slow=7.9
WTTA Wattenberg 45.66 300 *i* P **P** **01 32 36.8 +0.3**
comp=Z,65nm,1.1s,SNR=19
WTTA Wattenberg 45.66 300 P **P** **01 32 36.7 +0.3**
WATA Walderalm 45.68 300 *i* P **P** **01 32 36.8 +0.3**
comp=Z,60nm,1.2s,SNR=17
YSS Yuzh-Sakhalins 45.77 61 eP **P** **01 32 36.3 -0.7**
YSS pmax pmax
comp=Z,24nm,1.2s
YSS MLR MLR
comp=Z,2µm,16.0s
YSS Yuzh-Sakhalins 45.77 61 IAMs_20 IAMs_20 01 53 58.1
comp=Z,2µm,18.0s
MNSI Mandailing Nat 45.80 148 P **P** **01 32 37.0 -0.6**
comp=Z,67nm,1.4s
FOO Floro 45.91 321 eP **P** **01 32 38.5 +0.6**
PAOL Paolisi 45.91 291 IAmb IAmb 01 32 46.4
comp=Z,114nm,1.6s
SQTA Sankt Quirin 45.95 300 *i* P **P** **01 32 38.8 +0.1**
comp=Z,50nm,1.3s,SNR=14
HLG Helgoland 45.97 310 eP **P** **01 32 39.7 +1.2**
comp=Z,210nm,1.4s,baz=75,slow=7.9

BER Bergen 45.98 319⇑ iP **P** **01 32 39.0 +0.5**
MOTA Moosalm 45.98 300 *i* P **P** **01 32 39.2 +0.2**
comp=Z,73nm,1.0s,SNR=20
ASK Askoy 46.03 319 eP **P** **01 32 39.5 +0.6**
ANKE Ethiopia-Afar 46.12 236 eP **P** **01 32 42.3 +1.6**
RETA Reutte 46.15 300 *i* P **P** **01 32 40.9 +0.7**
comp=Z,70nm,1.0s,SNR=16
AQU L'Aquila 46.21 293 P **P** **01 32 42.2 +1.5**
AQU pmax pmax
comp=Z,126nm,1.0s
AQU L'Aquila 46.21 293⇑ iP **P** **01 32 41.4 +0.7**
AQU L'Aquila 46.21 293 IAMs_20 IAMs_20 01 54 49.3
comp=Z,2µm,19.0s
NRCA Norcia 46.22 294 IAmb IAmb 01 32 51.2
comp=Z,49nm,1.1s
FETA Feichten 46.33 300 *i* P **P** **01 32 41.9 +0.2**
comp=Z,46nm,1.1s,SNR=14
UBR Ueberruh 46.51 301 eP **P** **01 32 44.0 +1.0**
comp=Z,131nm,1.4s,baz=75,slow=7.9
IBBN Ibbenburen 46.54 308 eP **P** **01 32 44.0 +0.9**
comp=Z,78nm,1.1s,baz=75,slow=7.9
ASAJ Asahikawa 46.65 64 P **P** **01 32 42.1 -1.9**
comp=Z,24nm,1.0s,baz=102,slow=28,SNR=2.7
MAJO Matsushiro 46.65 76 IAMs_20 IAMs_20 01 54 03.6
comp=Z,2µm,18.0s
MAT Matsushiro 46.65 76 P **P** **01 32 42.3 -1.9**
MAT eS **S** **01 39 28.4 -4.7**
MJAR Matsushiro Arr 46.65 76 P **P** **01 32 43.0 -1.2**
comp=Z,8.0nm,0.8s,baz=287,slow=8.3,SNR=12
MJAR LR LR 01 53 00.6
comp=Z,765nm,20.1s,baz=295,slow=37
MJAR Matsushiro Arr 46.65 76 P **P** **01 32 43.0 -1.2**
MJAR Matsushiro Arr 46.65 76 P **P** **01 32 46.0 +1.8**
STU Stuttgart 46.73 303 P **P** **01 32 44.6 0.0**
STU pmax pmax
comp=Z,83nm,1.2s
STU MLR MLR
comp=Z,2µm,18.0s
STU Stuttgart 46.73 303 eP **P** **01 32 45.5 +0.9**
comp=Z,87nm,1.3s,baz=75,slow=7.9
STU Stuttgart 46.73 303 P **P** **01 32 44.6 0.0**
STU IAmb IAmb 01 33 01.2
comp=Z,83nm,1.2s
STU IAMs_20 IAMs_20 01 55 36.7
comp=Z,2µm,18.0s
TNS Taunus Mts 46.74 305 eP **P** **01 32 45.5 +0.8**
comp=Z,31nm,1.2s,baz=75,slow=7.9
FUORN Ofenpass-Fuorn 46.76 299 IAmb IAmb 01 32 52.9
comp=Z,49nm,0.9s
DAVA Damuels 46.78 300 *i* P **P** **01 32 45.8 +0.6**
comp=Z,97nm,1.1s,SNR=19
DAVOX Davos/Dischmat 46.96 300 P **P** **01 32 46.9 +0.2**
comp=Z,30nm,0.8s,baz=96,slow=6.6,SNR=56
MA2 Magadan 46.99 42 eP **P** **01 32 45.7 -0.8**
MA2 pmax pmax
comp=Z,68nm,1.5s
MA2 MLR MLR
comp=Z,3µm,17.0s
SEY Seymchan 47.07 37 P **P** **01 32 46.7 -0.3**
comp=Z,12nm,0.9s,baz=297,slow=11,SNR=4.7
SEY Seymchan 47.07 37 *i* P **P** **01 32 47.4 +0.3**
BUG Bochum--Univer 47.08 307 eP **P** **01 32 48.3 +1.0**
comp=Z,76nm,1.3s,baz=75,slow=7.9
ZCCA Zocca 47.10 296 IAmb IAmb 01 33 01.4
comp=Z,60nm,0.9s
OSSC Osservatorio P 47.23 295 IAmb IAmb 01 32 57.2
comp=Z,54nm,0.9s
PRMA PARMA 47.39 297 IAmb IAmb 01 33 17.0
comp=Z,34nm,0.9s
TUE Stuetta 47.41 300 IAmb IAmb 01 33 03.3
comp=Z,46nm,1.1s
TUE IAMs_20 IAMs_20 01 55 37.7
comp=Z,2µm,18.0s
BFO Black Forest 47.42 302 P **P** **01 32 50.1 +0.1**
BFO pmax pmax
comp=Z,57nm,1.1s
BFO MLR MLR
comp=Z,2µm,18.0s
BFO Black Forest 47.42 302 eP **P** **01 32 50.7 +0.6**
comp=Z,62nm,1.2s,baz=75,slow=7.9
BFO Black Forest 47.42 302 P **P** **01 32 50.1 +0.1**
BFO IAmb IAmb 01 32 51.9
comp=Z,56nm,1.1s
BFO IAMs_20 IAMs_20 01 56 06.9
comp=Z,2µm,18.0s
AHRW Bad Neuenahr-A 47.48 305 eP **P** **01 32 51.5 +1.1**
comp=Z,45nm,1.0s,baz=75,slow=7.9
SISI Saibi 47.56 150 P **P** **01 32 52.9 +1.5**
comp=Z,1µmcomp=Z,92nm,1.5s
VLC Villacollemand 47.56 296 IAMs_20 IAMs_20 01 55 19.1
comp=Z,2µm,19.0s
JMM Marumori 47.92 73 IAMs_20 IAMs_20 01 54 17.1
comp=Z,2µm,19.0s
BTNL Ternell 48.03 306 P **P** **01 32 55.2 +0.4**
CDF Champ du Feu 48.05 303 eP **P** **01 32 54.5 -0.5**
CDF pmax pmax
comp=Z,59nm,1.2s
MEM Membach 48.10 306 P **P** **01 32 55.6 +0.4**
MEM PcP **PcP** **01 34 23.1 +0.4**
SDSI Sungai Dareh 48.12 147 P **P** **01 32 57.3 +1.6**
comp=Z,15nm,0.9s
ECH Echery 48.19 303 P **P** **01 32 56.0 0.0**
ECH pmax pmax
comp=Z,49nm,1.0s
ECH MLR MLR
comp=Z,1µm,20.0s
ECH Echery 48.19 303 P **P** **01 32 56.0 0.0**
ECH IAmb IAmb 01 32 57.7
comp=Z,49nm,1.0s
WLF Walferdange 48.32 305 P **P** **01 32 55.1 -1.9**
WLF Walferdange 48.32 305 eP **P** **01 32 58.1 +1.1**
comp=Z,82nm,1.1s,baz=75,slow=7.9
WLF Walferdange 48.32 305 IAmb IAmb 01 32 59.3
comp=Z,73nm,1.1s
WLF IAMs_20 IAMs_20 01 56 24.7
comp=Z,2µm,18.0s
HINF Hinteralfeld 48.52 302 eP **P** **01 32 58.1 -0.5**
HINF pmax pmax
comp=Z,80nm,1.2s
BCLA Clavier 48.59 306 P **P** **01 32 59.0 0.0**
BGES Gesves 48.73 306 P **P** **01 33 00.2 +0.1**
BGES x x 01 33 15.9
BGES PcP **PcP** **01 34 19.6 -5.4**
SENIN Lac Senin/Sane 48.77 300 IAMs_20 IAMs_20 01 56 29.7
comp=Z,2µm,19.0s
HAU Haudompre 48.78 302 eP **P** **01 33 00.0 -0.5**
HAU pmax pmax
comp=Z,44nm,1.0s
BMRD Maredsous 48.95 306 P **P** **01 33 02.8 +1.0**
BMRD x x 01 33 08.0
GIVF Givet 48.98 306 eP **P** **01 33 02.0 -0.1**
GIVF pmax pmax
comp=Z,63nm,1.2s
DSRI Dabo 49.07 142 P **P** **01 33 05.3 +2.2**
comp=Z,3µmcomp=Z,46nm,1.4s
DOU Dourbes 49.12 306 P **P** **01 33 03.9 +0.7**
DOU x x 01 33 09.3
SNF Seneffe 49.17 306 P **P** **01 33 04.4 +0.9**
BAIF Baives 49.37 306 eP **P** **01 33 05.0 0.0**
BAIF pmax pmax
comp=Z,41nm,1.0s
LPG La Plagne 49.45 299 eP **P** **01 33 05.8 -0.2**
LPG pmax pmax
comp=Z,91nm,1.3s
LPL La Plagne 49.45 299 eP **P** **01 33 05.8 -0.2**
LPL pmax pmax
comp=Z,103nm,1.2s
BNI Bardonecchia 49.67 299 P **P** **01 33 07.9 +0.3**
BNI pmax pmax
comp=Z,99nm,1.2s
BNI Bardonecchia 49.67 299 IAmb IAmb 01 33 16.3
comp=Z,89nm,1.0s
MBDF Montbardon 49.74 298 eP **P** **01 33 07.0 -1.1**
MBDF pmax pmax
comp=Z,35nm,0.8s
KKM Kota Kinabalu 49.85 125 P **P** **01 33 09.5 +0.3**
KSM Kuching 50.20 135 P **P** **01 33 11.4 -0.3**
KSM Kuching 50.20 135 P **P** **01 33 12.0 +0.3**
LOR Lormes 50.61 302 eP **P** **01 33 13.2 -1.3**
LOR pmax pmax
comp=Z,25nm,1.2s
DAG Danmarks Havn 50.75 343 *i* P **P** **01 33 15.2 +0.1**
DAG pmax pmax
comp=Z,37nm,0.8s
DAG Danmarks Havn 50.75 343 *i* P **P** **01 33 15.2 +0.1**
comp=Z,37nm,0.8s

DAG Danmarks Havn 50.75 343 *i* P **P** **01 33 15.2 +0.1**
DAG IAmb IAmb 01 33 15.7
comp=Z,37nm,0.8s
SSB Saint Sauveur 50.97 300 P **P** **01 33 17.5 +0.3**
SSB pmax pmax
comp=Z,55nm,1.3s
SSB Saint Sauveur 50.97 300 P **P** **01 33 17.5 +0.3**
KSI Kapahiang 51.06 147 P **P** **01 33 17.8 -0.4**
comp=Z,127nm,1.4s
AVF Avril sur Loir 51.12 302 *e*P **P** **01 33 17.5 -0.8**
AVF pmax pmax
comp=Z,97nm,0.9s
PPBI Pangkal Pinang 51.27 142 P **P** **01 33 20.4 +0.7**
LHSI Lahat 51.60 146 P **P** **01 33 20.4 -1.8**
comp=Z,60nm,1.5s
EKA Eskdalemuir Ar 51.72 314 P **P** **01 33 22.5 -0.2**
EKA pmax pmax
comp=Z,3.0nm,0.7s
ESK Eskdalemuir 51.75 314 P **P** **01 33 23.2 +0.3**
ESK pmax pmax
comp=Z,65nm,1.0s
ESK Eskdalemuir 51.75 314 P **P** **01 33 23.2 +0.3**
ESK IAmb IAmb 01 33 24.1
comp=Z,65nm,1.0s
DBG Daneborg 51.92 340 *i* P **P** **01 33 24.3 +0.4**
KEST Kesra 51.92 287 P **P** **01 33 25.1 +0.6**
comp=Z,18nm,0.9s,baz=317,slow=2.0,SNR=10.0
KEST LR LR 02 00 46.9
comp=Z,320nm,18.3s,baz=16,slow=42
MYLDM Lahad Datu 51.93 123 P **P** **01 33 24.7 0.0**
MDSI Maura Dua 52.47 145 P **P** **01 33 25.9 -2.8**
comp=Z,19nm,1.2s
TPI Tanjungpandan 52.50 140 P **P** **01 33 29.3 +0.4**
comp=Z,916nmcomp=Z,64nm,1.5s
PETK Petropavlovsk- 52.63 48 P **P** **01 33 29.2 -0.3**
comp=Z,17nm,0.9s,baz=268,slow=4.5,SNR=8.5
PETK LR LR 01 56 52.7
comp=Z,1μm,19.2s,baz=292,slow=37
PETK Petropavlovsk- 52.63 48 P **P** **01 33 28.5 -1.0**
FLN La Foliniere 52.70 306 *e*P **P** **01 33 28.9 -1.1**
FLN pmax pmax
comp=Z,38nm,1.1s
CAF Calviac 52.71 300 *e*P **P** **01 33 30.0 -0.2**
CAF pmax pmax
comp=Z,53nm,1.3s
KLSI 52.89 145 P **P** **01 33 29.4 -2.4**
comp=Z,21nm,1.5s
RJF Les Rejaudoux 52.90 301 *e*P **P** **01 33 31.4 -0.2**
RJF pmax pmax
comp=Z,100nm,1.2s
LWLI Liwa 52.90 146 P P 01 33 40.7 +8.7
GRR Gorron 53.08 305 *e*P **P** **01 33 31.7 -1.2**
GRR pmax pmax
comp=Z,137nm,1.3s
PET Petropavlovsk 53.19 48 *e*P **P** **01 33 37.4 +3.8**
PET *e*S **S** **01 41 02.8 -1.1**
KASI Kota Agung 53.54 145 P **P** **01 33 40.0 +3.5**
SET Setif 54.48 289 P **P** **01 33 43.0 -0.5**
QUIF Quistinic 54.68 306 *e*P **P** **01 33 43.5 -1.0**
QUIF pmax pmax
comp=Z,44nm,0.9s
MTKI Muara Teweh, K 54.71 131 P P 01 33 52.4 +7.2
LEM Lembang 56.07 143 P **P** **01 33 54.9 -0.1**
comp=Z,15nm,0.4s,baz=319,slow=19,SNR=1.5
KMBO Kilima Mbogo 56.13 231 P **P** **01 33 56.6 +0.9**
comp=Z,3.3nm,0.8s,baz=22,slow=8.2,SNR=13
KMBO Kilima Mbogo 56.13 231 *i* P **P** **01 33 55.3 -0.4**
SNR=9.8
KMBO Kilima Mbogo 56.13 231 P **P** **01 33 55.2 -0.4**
KMBO IAmb IAmb 01 34 03.1
comp=Z,77nm,1.5s
MPSI Mapaga 56.59 126 P **P** **01 33 59.4 +0.8**
comp=Z,1μmcomp=Z,97nm,1.3s
BBKI Banjar Baru 56.77 133 P P 01 34 06.8 +6.9
KPJI Karang Pucung 57.11 142 P P 01 34 08.4 +6.1
EBNR Beni Rached 57.14 291 P **P** **01 34 03.8 +1.3**
SUMG Summit 57.31 341 *i* P **P** **01 34 04.2 +0.7**
SUMG pmax pmax
comp=Z,76nm,1.0s
SUMG Summit 57.31 341 P **P** **01 34 02.6 -1.0**
SUMG IAmb IAmb 01 34 12.0
comp=Z,58nm,1.0s
SUMG Summit 57.31 341 *i* P **P** **01 34 04.2 +0.7**
comp=Z,76nm,1.0s
SUMG Summit 57.31 341 *i* P **P** **01 34 04.3 +0.7**
SUMG IAmb IAmb 01 34 05.0
comp=Z,76nm,1.0s
ECHA Ech Chlef 57.33 291 P **P** **01 34 04.5 +0.8**
KBKI Kotabaru 57.36 132 P **P** **01 34 04.8 +0.7**
comp=Z,40nm,1.1s
SMRI Semarang 57.58 140 P P 01 34 16.6 +11
SMRI Semarang 57.58 140 P **P** **01 34 05.1 -0.5**
EANR 'Ain N'Sour 57.61 291 P **P** **01 34 06.7 +0.9**
MRSI Marisa 57.73 124 P **P** **01 34 07.3 +0.6**
comp=Z,2μmcomp=Z,161nm,1.3s
EUNU Eureka 57.74 357 P **P** **01 34 05.6 -0.5**
ETRT Tiaret 57.77 290 P **P** **01 34 08.2 +1.2**
TBJI Tambak Boyo 58.06 138 P P 01 34 17.3 +8.3
APSI Ampana 58.63 125 P **P** **01 34 16.7 +3.6**
KMSI Cibinong 58.93 122 P P 01 34 22.2 +7.1
PWJI Pagerwojo 59.08 139 P P 01 34 24.8 +8.7
ESDC Sonseca Array 59.13 297 P **P** **01 34 16.3 0.0**
comp=Z,17nm,0.9s,baz=55,slow=7.1,SNR=62
ESDC LR LR 02 02 19.3
comp=Z,521nm,18.4s,baz=50,slow=39
TTSI Tana Toraja 59.24 128 P **P** **01 34 17.1 -0.1**
comp=Z,1μmcomp=Z,50nm,1.0s
LUWI Luwuk 59.43 124 P P 01 34 25.0 +6.4
LUWI Luwuk 59.43 124 P **P** **01 34 17.9 -0.7**
PAB San Pablo 59.45 297 P **P** **01 34 18.7 +0.1**
PAB pmax pmax
comp=Z,22nm,1.1s
PAB San Pablo 59.45 297 P **P** **01 34 18.7 +0.1**
MBAR Mbarara 59.63 237 P **P** **01 34 19.7 -0.5**
MBAR pmax pmax
comp=Z,56nm,1.3s
MBAR MLR MLR
comp=Z,1μm,18.0s
MBAR Mbarara 59.63 237 P **P** **01 34 19.7 -0.5**
MBAR IAmb IAmb 01 34 26.3
comp=Z,56nm,1.3s
MBAR Mbarara 59.63 237 IAMs_20 IAMs_20 02 03 12.5
comp=Z,1μm,18.0s
TULEG Thule 59.67 351 IAmb IAmb 01 34 20.3
comp=Z,96nm,1.5s
TULEG Thule 59.67 351 *i* P **P** **01 34 18.8 -0.7**
TULEG IAmb IAmb 01 34 20.1
comp=Z,53nm,1.4s
BLJI Banyuglugur 59.73 137 P **P** **01 34 20.9 +0.3**
comp=Z,2μmcomp=Z,82nm,1.6s
ICESG Greenland Ices 59.80 338 *i* P **P** **01 34 21.3 +0.4**
ICESG IAmb IAmb 01 34 22.2
comp=Z,46nm,1.0s
PBRG Braganca 59.84 301 *e*P **P** **01 34 22.0 +0.8**
comp=Z,88nm,1.8s
SPSI Sidrap Palu 59.95 129 P P 01 34 27.8 +5.7
KOND Kondoa 60.04 230 *i* P **P** **01 34 18.3 -4.7**
GMJI Gumukmas 60.11 138 P P 01 34 29.3 +6.1
MVO Moncorvo 60.35 300 *e*P **P** **01 34 25.3 +0.5**
comp=Z,68nm,1.8s
A21K Barrow 60.60 17 P **P** **01 34 25.7 -0.1**
baz=316,SNR=16
JAGI Jajag, Banyuwa 60.63 137 P **P** **01 34 27.7 +0.9**
PCAB Cabril 60.71 301 *e*P **P** **01 34 28.0 +0.9**
comp=Z,133nm,1.3s
PGAV Gavieira, Arco 60.73 302 *e*P **P** **01 34 28.1 +0.8**
comp=Z,141nm,1.4s
PGAV Gavieira, Arco 60.73 302 *e*LR LR 02 01 57.6
comp=Z,602nm,16.0s
KAPI Kappang 60.79 129 P **P** **01 34 26.0 -1.9**
comp=Z,6.3nm,0.4s,baz=276,slow=2.4,SNR=5.9
KAPI Kappang 60.79 129 P **P** **01 34 26.0 -1.9**
KAPI pmax pmax
comp=Z,89nm,1.7s
KAPI MLR MLR
comp=Z,700nm,22.0s
KAPI Kappang 60.79 129 IAmb IAmb 01 34 35.2
comp=Z,89nm,1.7s
SRBI Singaraja 60.85 136 P P 01 34 34.8 +6.5
TNTI Ternate 60.96 119 P **P** **01 34 29.4 +0.3**
comp=Z,2μmcomp=Z,112nm,1.1s
TNTI Ternate 60.96 119 P **P** **01 34 28.5 -0.6**
MTE Manteigas 61.09 300 *e*P **P** **01 34 30.6 +0.8**
comp=Z,70nm,2.4s
MTE Manteigas 61.09 300 *e*LR LR 02 00 20.1
comp=Z,502nm,20.0s
PVIS Viseu 61.15 300 *e*P **P** **01 34 30.9 +0.7**
comp=Z,124nm,1.4s
BKSI Bulukumba 61.25 129 P P 01 34 36.2 +5.2
RDOG Red Dog Mine 61.34 22 IAMs_20 IAMs_20 02 04 31.8
comp=Z,1μm,18.0s
PCBR Castelo Branco 61.34 299 *e*P **P** **01 34 32.2 +0.8**
comp=Z,69nm,2.1s
TNA Tin City 61.49 25 P **P** **01 34 32.6 +0.7**
baz=310
TNA Tin City 61.49 25 P **P** **01 34 32.3 +0.4**
TNA IAMs_20 IAMs_20 02 02 41.9
comp=Z,1μm,19.0s
PMRV Marv??o 61.51 299 *e*P **P** **01 34 33.2 +0.6**
comp=Z,102nm,1.3s
PMRV Marv??o 61.51 299 *e*LR LR 01 59 29.1
comp=Z,430nm,16.0s
TAM Tamanrasset 61.75 276 P **P** **01 34 35.0 +0.4**
TAM pmax pmax
comp=Z,32nm,1.2s
TAM Tamanrasset 61.75 276 P **P** **01 34 35.0 +0.4**
TAM IAmb IAmb 01 34 36.6
comp=Z,32nm,1.2s
COI Coimbra 61.75 300 P **P** **01 34 34.7 +0.5**
COI pmax pmax
comp=Z,86nm,0.9s
COI Coimbra 61.75 300 *e*P **P** **01 34 35.2 +1.0**
comp=Z,142nm,1.2s
COI Coimbra 61.75 300 P **P** **01 34 34.7 +0.5**
PCAS Casmilo, Conde 61.89 300 *e*P **P** **01 34 36.0 +0.9**
LBMI Labuha 62.11 119 P **P** **01 34 39.0 +2.1**
comp=Z,2μmcomp=Z,80nm,1.1s
PMTG Montargil 62.25 299 *e*P **P** **01 34 36.7 -0.8**
comp=Z,62nm,1.6s
EVO Evora 62.40 298 *e*P **P** **01 34 39.0 +0.4**
comp=Z,61nm,2.1s
PBEJ Beja 62.58 298 *e*P **P** **01 34 40.4 +0.6**
comp=Z,97nm,1.7s
ILULI Ilulissat 62.65 342 *i* P **P** **01 34 39.4 -0.3**
ILULI pmax pmax
comp=Z,28nm,1.0s
ILULI Ilulissat 62.65 342 P **P** **01 34 39.5 -0.1**
ILULI Ilulissat 62.65 342 *i* P **P** **01 34 39.4 -0.3**
comp=Z,28nm,1.0s
ILULI Ilulissat 62.65 342 *i* P **P** **01 34 39.4 -0.3**
ILULI IAmb IAmb 01 34 40.5
comp=Z,28nm,1.0s
PVAQ Vaqueiros 62.83 297 *e*S **S** **01 43 15.5 +5.1**
PVAQ Vaqueiros 62.83 297 *e*LR LR 02 01 44.1
comp=Z,822nm,20.0s
ANM Nome 62.97 25 IAmb IAmb 01 34 43.6
comp=Z,40nm,0.8s
ANM IAMs_20 IAMs_20 02 02 00.8
comp=Z,1μm,19.0s
PBDV Barranco-do-Ve 63.06 297 *e*P **P** **01 34 44.3 +1.3**
comp=Z,166nm,1.5s
RES Resolute Bay 63.37 358 P **P** **01 34 44.4 0.0**
RES pmax pmax
comp=Z,14nm,1.0s
RES Resolute Bay 63.37 358 P **P** **01 34 44.4 0.0**
TOLK Toolik Lake Re 64.22 17 P **P** **01 34 50.2 0.0**
baz=323,SNR=15
TOLK Toolik Lake Re 64.22 17 IAmb IAmb 01 34 50.8
comp=Z,35nm,0.9s
WBSI Waikabubak, Su 64.38 133 P P 01 34 56.6 +4.7
AMKA Amchitka 64.99 43 P **P** **01 34 54.5 -0.9**
MSAI Masohi 65.08 120 P P 01 35 02.6 +6.1
MMRI Maumere 65.15 130 P **P** **01 34 54.6 -2.3**
COLD Coldfoot 65.21 18 P **P** **01 34 56.6 0.0**
baz=323,SNR=42
COLD Coldfoot 65.21 18 IAMs_20 IAMs_20 02 07 13.2
comp=Z,1μm,18.0s
BMAR Burnt Mountain 66.29 16 P **P** **01 35 03.3 -0.4**
ABPO Ambohimpanom 66.83 211 P **P** **01 35 07.8 +0.1**
ABPO pmax pmax
comp=Z,30nm,1.0s
ABPO Ambohimpanom 66.83 211 P **P** **01 35 07.8 +0.1**
ABPO IAmb IAmb 01 35 14.3
comp=Z,30nm,1.0s
MLY Manley 66.84 20 P **P** **01 35 06.9 -0.3**
baz=323,SNR=18
FAKI Fak Fak 66.93 117 P **P** **01 35 08.9 +0.5**
comp=Z,1μmcomp=Z,95nm,1.1s
FAKI Fak Fak 66.93 117 P **P** **01 35 07.7 -0.7**
TTA Tatalina 67.03 23 P **P** **01 35 08.1 -0.4**
TTA pmax pmax
comp=Z,78nm,1.4s
TTA Tatalina 67.03 23 P **P** **01 35 08.1 -0.4**
TTA IAmb IAmb 01 35 10.3
comp=Z,78nm,1.4s
NRS Narsarsuaq 67.05 334 P **P** **01 35 09.4 +0.9**
NRS pmax pmax
comp=Z,58nm,0.9s
NRS Narsarsuaq 67.05 334 P **P** **01 35 09.4 +0.9**
I23K Minto, Yukon-K 67.09 19 P **P** **01 35 08.8 +0.1**
baz=324,SNR=30
SOEI Soe 67.23 128 P **P** **01 35 08.5 -1.9**
comp=Z,1μmcomp=Z,72nm,1.5s
SOEI Soe 67.23 128 P **P** **01 35 08.2 -2.2**
BATI Baumata 67.24 129 P P 01 35 16.3 +6.0
INK Inuvik 67.52 12 P **P** **01 35 11.3 0.0**
comp=Z,30nm,0.8s,baz=346,slow=7.6,SNR=59
MDM Murphy Dome 67.53 19 IAmb IAmb 01 35 18.3
comp=Z,73nm,1.5s
MDM IAMs_20 IAMs_20 02 08 55.4
comp=Z,2μm,19.0s
POKR Poker Plat Res 67.59 19 P **P** **01 35 12.0 +0.1**
baz=326,SNR=17
POKR Poker Plat Res 67.59 19 IAMs_20 IAMs_20 02 06 40.0
comp=Z,1μm,21.0s
NEA2 Nenana 67.62 20 P **P** **01 35 11.5 -0.6**
baz=324,SNR=13
TCOL CLO, UAF Yank 67.69 19 P **P** **01 35 12.1 -0.3**
baz=325,SNR=5.8
COLA College 67.69 19 P **P** **01 35 12.3 -0.2**
COLA pmax pmax
comp=Z,94nm,1.3s
COLA MLR MLR
comp=Z,2μm,18.0s
COLA College 67.69 19 P **P** **01 35 12.3 -0.2**
PRP Porcupine Dome 67.70 18 P **P** **01 35 12.6 -0.1**
PRP IAmb IAmb 01 35 19.2
comp=Z,26nm,1.1s
C36M Paulatuk 67.75 8 P **P** **01 35 12.1 -0.7**
baz=343
CCB Clear Creek Bu 67.89 19 IAmb IAmb 01 35 14.4
comp=Z,56nm,1.4s
IL31 68.00 19 IAmb IAmb 01 35 20.5
comp=Z,38nm,1.1s
ILAR Eielson Array 68.00 19 P **P** **01 35 13.6 -0.9**
comp=Z,17nm,0.9s,baz=315,slow=4.9,SNR=135
ILAR PKP2bc 02 03 33.2
comp=Z,1.6nm,1.1s,baz=155,slow=2.6,SNR=5.7
ILAR LR LR 02 06 53.7
comp=Z,977nm,21.0s,baz=318,slow=38
TRF Thorofare Moun 68.23 21 P **P** **01 35 15.7 -0.5**
TRF IAmb IAmb 01 35 16.9
comp=Z,101nm,2.0s
BAKI Biak 68.27 113 P P 01 35 23.9 +7.1
HDA Harding Lake 68.29 19 P **P** **01 35 14.8 -1.5**
baz=326,SNR=8.6
MCK McKinley 68.36 20 P **P** **01 35 16.3 -0.4**
baz=325
SVW2 Sparrevohn 68.58 25 IAmb IAmb 01 35 25.8
comp=Z,47nm,1.2s
RND Reindeer 68.64 20 IAmb IAmb 01 35 24.4
comp=Z,76nm,1.8s
CUT Chulitna 69.09 22 P **P** **01 35 20.4 -0.9**
baz=324
EGAK Eagle 69.29 17 IAmb IAmb 01 35 23.6
comp=Z,53nm,1.4s
DHY Denali Highway 69.30 20 IAmb IAmb 01 35 28.5
comp=Z,25nm,0.9s
SCRK Sand Creek 69.36 18 P **P** **01 35 22.4 -0.7**
baz=328,SNR=29
DOT Dot Lake 69.62 18 IAmb IAmb 01 35 25.4
comp=Z,90nm,1.8s
SUA Susitna One 69.72 22 IAmb IAmb 01 35 36.6
comp=Z,32nm,0.8s
K27K Chicken 69.75 17 P **P** **01 35 24.9 -0.5**
baz=330
K27K Chicken 69.75 17 IAmb IAmb 01 35 26.8
comp=Z,62nm,1.3s
K27K IAMs_20 IAMs_20 02 07 54.0
comp=Z,1μm,20.0s
PAX Paxson 69.86 19 IAmb IAmb 01 35 26.8
comp=Z,78nm,1.3s
PMR Palmer 70.06 22 IAmb IAmb 01 35 33.4
comp=Z,71nm,1.2s
PMR IAMs_20 IAMs_20 02 09 07.4
comp=Z,1μm,20.0s
SAUI Saumlaki 70.13 121 P **P** **01 35 28.2 -0.1**
CAPN Captain Cook N 70.16 23 P **P** **01 35 26.6 -1.3**
baz=324
DAWY Dawson 70.29 16 IAmb IAmb 01 35 29.5
comp=Z,51nm,1.3s
RC01 Rabbit Creek A 70.31 22 P **P** **01 35 28.1 -0.7**
baz=325,SNR=9.8
L26K Log Cabin Wild 70.32 18 P **P** **01 35 28.6 -0.3**
baz=329,SNR=15
M24K Tolsona, Glenn 70.42 20 P **P** **01 35 29.7 +0.2**
baz=327,SNR=12
TORD Torodi Ar. Bea 70.58 270 P **P** **01 35 30.6 -0.6**
comp=Z,69nm,0.9s,baz=41,slow=6.0,SNR=243
TORD LR LR 02 12 20.8
comp=Z,293nm,18.9s,baz=95,slow=41
TORD Torodi Ar. Bea 70.58 270 P **P** **01 35 30.5 -0.6**
SMPI Sarmi 70.64 111 P **P** **01 35 32.7 +1.2**
comp=Z,2μmcomp=Z,47nm,1.2s
BCAR Beaver Creek A 70.65 18 P **P** **01 35 30.3 -0.7**
O22K Cooper Landing 70.81 23 P **P** **01 35 30.9 -1.0**
baz=325
GLI Glacier Island 71.21 21 IAmb IAmb 01 35 34.4
comp=Z,39nm,0.9s
N25K Chitina, Valde 71.24 20 P **P** **01 35 34.6 0.0**
baz=328,SNR=18
GLB Gilahina Butte 71.58 19 IAmb IAmb 01 35 37.9
comp=Z,67nm,1.6s
MCARA McCarthy VSAT 71.82 19 IAmb IAmb 01 35 49.8
comp=Z,34nm,1.0s
EYAK Cordova Ski Ar 71.84 21 IAmb IAmb 01 35 45.0
comp=Z,45nm,1.1s
VRDI Verde Repeater 71.85 19 P **P** **01 35 38.4 0.0**
VRDI IAmb IAmb 01 35 39.5
comp=Z,64nm,1.2s
GENI Genyem 72.08 111 P P 01 35 47.9 +7.7
BALM Baldy 72.28 19 IAmb IAmb 01 35 42.3
comp=Z,62nm,1.2s
TGL Tana Glacier 72.41 19 IAmb IAmb 01 35 42.9
comp=Z,93nm,1.4s
BARN Barnard Glacie 72.43 19 IAmb IAmb 01 35 48.9
comp=Z,63nm,1.3s
BARN IAMs_20 IAMs_20 02 12 12.0
comp=Z,1μm,18.0s
CTGM Chitina Glacie 72.59 19 IAmb IAmb 01 35 44.3
comp=Z,50nm,1.1s
CTGM IAMs_20 IAMs_20 02 09 12.3
comp=Z,923nm,21.0s
ISLE Juniper Island 72.66 19 IAmb IAmb 01 35 44.2
comp=Z,56nm,1.2s
LSZ Lusaka 72.77 230 P **P** **01 35 43.7 -0.7**
LSZ pmax pmax
comp=Z,22nm,1.0s
LSZ MLR MLR
comp=Z,900nm,19.0s
LSZ Lusaka 72.77 230 P **P** **01 35 43.7 -0.7**
LSZ Lusaka 72.77 230 IAMs_20 IAMs_20 02 10 08.9
comp=Z,866nm,19.0s
HYT Haines Junctio 73.58 17 IAmb IAmb 01 35 50.0
comp=Z,67nm,1.0s
PCA Pinnacle 73.61 19 IAmb IAmb 01 35 50.0
comp=Z,59nm,1.1s
MTN Manton Dam 73.76 125 IAmb IAmb 01 35 57.2
comp=Z,102nm,1.9s
KOWA Kowa 73.96 275 P **P** **01 35 51.2 -0.2**
MACI Morro de la Ar 74.20 294 P **P** **01 35 53.1 +0.1**
KNRA Kununurra 74.57 128 P **P** **01 35 54.4 -0.4**
PSAC2 Pilbara Seismi 74.64 139 IAMs_20 IAMs_20 02 14 01.6
comp=Z,978nm,20.0s
FITZ Fitzroy Crossi 74.74 132 P **P** **01 35 55.0 -0.8**
comp=Z,27nm,1.0s,baz=334,slow=4.4,SNR=27
FITZ Fitzroy Crossi 74.74 132 P **P** **01 35 54.9 -0.8**
FITZ IAmb IAmb 01 35 56.2
comp=Z,81nm,1.6s
SKAG Skagway 75.28 16 IAmb IAmb 01 36 00.1
comp=Z,76nm,1.2s
YKA Yellowknife Ar 75.31 6 P **P** **01 35 58.0 -0.5**
comp=Z,21nm,0.8s,baz=348,slow=5.8,SNR=48
YKA LR LR 02 13 17.6
comp=Z,438nm,18.9s,baz=0.0,slow=39
YKA Yellowknife Ar 75.31 6 *i* P **P** **01 35 58.0 -0.5**
YKA pmax pmax
comp=Z,21nm,0.9s
BESE Bessie Mountai 76.19 17 IAmb IAmb 01 36 11.1
comp=Z,68nm,1.2s
SCHQ Schefferville 78.67 340 P **P** **01 36 16.8 -0.8**
comp=Z,11nm,1.0s,baz=95,slow=10.0,SNR=3.7
SCHQ LR LR 02 15 05.0
comp=Z,276nm,18.9s,baz=54,slow=39
SCHQ Schefferville 78.67 340 P **P** **01 36 16.7 -0.8**
SCHQ IAmb IAmb 01 36 36.5
comp=Z,71nm,1.4s
DBIC Dimbokro 79.67 270 P **P** **01 36 22.9 -0.6**
comp=Z,13nm,0.8s,baz=28,slow=5.8,SNR=9.3
DBIC LR LR 02 17 47.1
comp=Z,280nm,18.3s,baz=49,slow=40
DBIC Dimbokro 79.67 270 P **P** **01 36 23.0 -0.6**
DBIC pmax pmax
comp=Z,58nm,1.1s
DBIC Dimbokro 79.67 270 P **P** **01 36 23.0 -0.6**
DBIC IAmb IAmb 01 36 29.8
comp=Z,58nm,1.1s
WB0 Warramunga Arr 81.08 127 IAmb IAmb 01 36 31.3
comp=Z,85nm,1.1s
WRAB Tennant Creek 81.19 127 P **P** **01 36 30.6 -0.9**
WRAB pmax pmax
comp=Z,164nm,1.4s
WRAB Tennant Creek 81.19 127 P **P** **01 36 30.6 -0.9**
WRA Warramunga Arr 81.19 127 P **P** **01 36 30.6 -1.0**
comp=Z,44nm,0.8s,baz=324,slow=5.0,SNR=298
WRA PKKPbc **PKKPbc 01 55 07.3 +0.6**
comp=Z,1.9nm,0.7s,baz=144,slow=2.1,SNR=21
WRA PKPPKP **P'P'df 02 03 09.9 +1.6**
comp=Z,1.7nm,1.1s,baz=178,slow=1.7,SNR=5.1
WRA LR LR 02 17 09.7
comp=Z,112nm,21.1s,baz=330,slow=39
WRA Warramunga Arr 81.19 127 P **P** **01 36 30.1 -1.5**
PMG Port Moresby 81.78 111 P **P** **01 36 34.2 -0.6**
PMG pmax pmax
comp=Z,49nm,1.0s
PMG Port Moresby 81.78 111 P **P** **01 36 34.2 -0.6**
PMG IAmb IAmb 01 36 41.4
comp=Z,49nm,0.9s
LBTB Lobatse 82.04 226 P **P** **01 36 35.8 -0.3**
LBTB pmax pmax
comp=Z,29nm,1.0s
LBTB Lobatse 82.04 226 P **P** **01 36 35.8 -0.3**
TSUM Tsumeb 82.11 235 P **P** **01 36 35.9 -0.7**
TSUM Tsumeb 82.11 235 IAMs_20 IAMs_20 02 16 38.3
comp=Z,1μm,20.0s
COEN Coen 82.31 117 P **P** **01 36 36.0 -1.6**
COEN IAmb IAmb 01 36 43.7
comp=Z,39nm,0.9s
NWAO Narrogin (SRO) 83.24 147 P **P** **01 36 40.6 -1.4**
NWAO pmax pmax
comp=Z,136nm,1.3s
NWAO Narrogin (SRO) 83.24 147 P **P** **01 36 40.6 -1.4**
MBO M'Bour 83.52 283 P **P** **01 36 44.5 +0.5**
FFC Flin Flon 83.53 360 P **P** **01 36 43.0 -0.4**
FFC pmax pmax
comp=Z,68nm,1.2s
FFC Flin Flon 83.53 360 P **P** **01 36 43.0 -0.4**
ASAR Alice Springs 83.81 130 P **P** **01 36 44.0 -1.2**
comp=Z,17nm,1.0s,baz=326,slow=4.9,SNR=64
ASAR PP **PP 01 39 55.7 -3.1**
comp=Z,2.2nm,0.9s,baz=318,slow=4.0,SNR=2.2
ASAR PKKPbc **PKKPbc 01 55 00.7 -0.2**
comp=Z,0.7nm,0.9s,baz=199,slow=22,SNR=5.7
ASAR PKPPKP **P'P'df 02 03 06.5 +3.3**
comp=Z,2.1nm,1.1s,baz=144,slow=2.9,SNR=5.6
ASAR Alice Springs 83.81 130 P **P** **01 36 43.4 -1.9**
CHGQ Chibougamau 85.03 342 P **P** **01 36 50.0 -1.2**
baz=21
BOSA Boshof 85.12 224 P **P** **01 36 50.0 -1.9**
comp=Z,5.0nm,0.9s,baz=31,slow=3.4,SNR=6.1
BOSA LR LR 02 13 52.1
comp=Z,336nm,21.1s,baz=41,slow=35
BOSA Boshof 85.12 224 P **P** **01 36 51.3 -0.6**
BOSA pmax pmax
comp=Z,28nm,1.1s
BOSA Boshof 85.12 224 P **P** **01 36 51.3 -0.6**
BOSA IAmb IAmb 01 36 58.6
comp=Z,28nm,1.1s
BATG Bathurst New B 85.22 336 IAmb IAmb 01 36 53.8

comp=Z,61nm,1.4s
D63A Stockholm 86.05 337 P P 01 36 56.0 -0.2
baz=25,SNR=5.5
D62A Allapoint, All 86.28 338 P P 01 36 57.3 -0.1
baz=24
FORT Forrest 86.33 138 P P 01 36 56.8 -0.9
PQI Presque Isle 86.35 337 IAmb IAmb 01 36 59.0
comp=Z,33nm,1.0s
LSQQ Lebel-sur-Quev 86.41 343 P P 01 36 57.2 -0.8
baz=19
D61A St Aubert, Com 86.48 338 P P 01 36 58.5 +0.2
baz=24
E64A Bridgewater 86.52 337 P P 01 36 58.3 -0.3
baz=25,SNR=5.0
E63A Oxbow 86.69 337 P P 01 36 59.5 0.0
baz=25
HAL Halifax 86.78 333 IAMs_20 IAMs_20 02 21 25.7
comp=Z,772nm,19.0s
E62A Clayton Lake 86.83 338 P P 01 36 59.9 -0.2
baz=24
LATQ La Tuque 87.00 340 P P 01 37 00.4 -0.5
baz=22
D59A Saint-Raymond 87.10 339 P P 01 37 01.3 -0.1
baz=22
F64A Sherman 87.18 337 P P 01 37 01.7 -0.1
baz=25
F64A Sherman 87.18 337 IAmb IAmb 01 37 02.7
comp=Z,44nm,1.4s
E61A Lac Etchemin 87.27 338 P P 01 37 02.3 0.0
baz=23
D58A Chemin du LacG 87.29 340 P P 01 37 02.0 -0.3
baz=22
GGN Saint George 87.40 335 IAMs_20 IAMs_20 02 18 27.3
comp=Z,919nm,21.0s
VLDQ Val d'Or 87.41 343 IAmb IAmb 01 37 03.9
comp=Z,23nm,0.8s
G65A Princeton 87.55 336 P P 01 37 03.9 +0.4
baz=25
G65A Princeton 87.55 336 IAmb IAmb 01 37 16.3
comp=Z,30nm,1.0s
F63A Nahmakanta, Br 87.55 337 P P 01 37 03.3 -0.3
baz=24
D56A ZEC Mazanza, M 87.80 341 P P 01 37 04.3 -0.5
baz=20,SNR=5.3
PGC Sidney 87.81 14 P P 01 37 04.4 -0.3
PGC IAmb IAmb 01 37 17.1
comp=Z,23nm,1.0s
ULM Lac du Bonnet 87.82 356 P P 01 37 03.9 -0.9
comp=Z,14nm,0.9s,baz=20,slow=3.6,SNR=11
ULM LR LR 02 20 00.6
comp=Z,1μm,19.6s,baz=358,slow=38
ULM Lac du Bonnet 87.82 356 IAmb IAmb 01 37 10.5
comp=Z,32nm,1.1s
F61A St Evariste 87.83 338 P P 01 37 05.5 +0.5
baz=23
H66A Whiting 87.84 336 P P 01 37 05.3 +0.4
baz=26
G64A Maxfield 87.85 337 P P 01 37 05.2 +0.2
baz=24
A04D Lummi Island 87.86 13 P P 01 37 04.7 -0.3
baz=345
D55A Sainte-Anne-du 88.00 342 P P 01 37 05.4 -0.3
baz=20,SNR=6.4
PKME Peaks-Kenny Pk 88.00 337 P P 01 37 06.0 +0.3
baz=24
E58A La Victoria 88.06 340 P P 01 37 05.6 -0.4
baz=21,SNR=6.1
F60A Warwick 88.09 339 P P 01 37 05.9 -0.3
baz=22
H65A Eastbrook 88.21 336 P P 01 37 06.6 -0.1
baz=25
G63A Kingsbury 88.23 337 P P 01 37 07.0 +0.2
baz=24
E57A Chemin Saint G 88.25 341 P P 01 37 06.7 -0.3
baz=21,SNR=5.6
B06A Marblemount 88.26 12 IAmb IAmb 01 37 12.8
comp=Z,43nm,1.3s
E56A St. Veronique 88.34 341 P P 01 37 06.9 -0.4
baz=20
G62A West of Eustis 88.40 338 P P 01 37 07.8 +0.1
baz=23
B05A Bryant 88.41 13 P P 01 37 07.0 -0.7
baz=346,SNR=9.4
F59A Saint Guilaume 88.42 340 P P 01 37 07.7 0.0
baz=22
H64A Troy 88.55 337 P P 01 37 07.7 -0.6
baz=24
G61A St-Isidore-de- 88.61 338 P P 01 37 09.0 +0.3
baz=23,SNR=5.4
E55A Montcerf-Lytto 88.66 342 P P 01 37 08.1 -0.8
baz=20
WALA Waterton Lakes 88.69 7 IAmb IAmb 01 37 15.1
comp=Z,39nm,1.1s
B08A Colville Reser 88.74 11 IAmb IAmb 01 37 15.8
comp=Z,37nm,1.1s
CTAO Charters Tower 88.75 119 P P 01 37 08.7 -0.8
CTAO pmax pmax
comp=Z,35nm,0.7s
CTAO Charters Tower 88.75 119 P P 01 37 08.7 -0.8
H63A New Sharon 88.77 337 P P 01 37 08.9 -0.5
baz=24
C06D Leavenworth 88.93 12 P P 01 37 09.4 -0.8
baz=347
F57A Harrington 88.94 341 P P 01 37 10.0 -0.1
baz=20
NLWA Neilton Lookou 88.94 14 IAmb IAmb 01 37 17.8
comp=Z,43nm,1.1s
D03D Eldon 88.95 14 P P 01 37 10.6 +0.4
baz=345,SNR=5.9
G60A Masonville 89.00 339 P P 01 37 10.3 -0.2
baz=22
NEW Newport 89.12 10 LR LR 02 21 46.2
comp=Z,333nm,19.8s,baz=324,slow=39
NEW Newport 89.12 10 P P 01 37 10.5 -0.5
baz=349,SNR=14
NEW Newport 89.12 10 IAmb IAmb 01 37 11.8
comp=Z,20nm,0.8s
H62A Milan 89.16 338 P P 01 37 11.0 -0.3
baz=23
I64A Boothbay 89.33 337 P P 01 37 11.5 -0.5
baz=24
D04E Lakebay 89.35 13 P P 01 37 11.3 -0.7
baz=345
G58A Ormstown 89.40 340 P P 01 37 11.9 -0.4
baz=21
H61A Lyndonville 89.41 338 P P 01 37 12.5 0.0
baz=22
C09A Chrisman Ranch 89.43 10 IAmb IAmb 01 37 12.9
comp=Z,30nm,0.8s
I63A Otisfield 89.48 337 P P 01 37 12.7 -0.1
baz=23
ALGO Algonquin Park 89.58 343 P P 01 37 12.7 -0.5
baz=18
H60A Morristown 89.60 339 P P 01 37 13.3 -0.1
baz=22
G57A Newington 89.68 341 P P 01 37 13.6 -0.1
baz=20
LBNH Lisbon 89.69 338 P P 01 37 13.5 -0.2
baz=22
AGMN Agassiz Nation 89.77 355 P P 01 37 13.4 -0.6
baz=5.1
AGMN Agassiz Nation 89.77 355 IAmb IAmb 01 37 14.4
comp=Z,26nm,0.9s
EYMN Ely 89.77 352 P P 01 37 13.3 -0.8
baz=8.3
H59A Cadyville 89.78 340 P P 01 37 13.9 -0.2
baz=21
DGMT Dagmar 89.79 1 P P 01 37 14.0 -0.2
baz=359
I62A Tamworth 89.86 338 P P 01 37 14.6 +0.1
baz=23
JTMT Jette 89.95 8 P P 01 37 13.4 -1.7
JTMT IAmb IAmb 01 37 21.6
comp=Z,36nm,1.1s
JTMT IAMs_20 IAMs_20 02 21 14.7
comp=Z,574nm,18.0s
E04D Cinebar 89.98 13 P P 01 37 15.3 +0.3
baz=345
LONY Lake Ozonia 90.03 340 P P 01 37 15.4 +0.1
baz=20
LONY Lake Ozonia 90.03 340 IAmb IAmb 01 37 28.0
comp=Z,39nm,1.2s
EGMT Eagleton 90.04 5 P P 01 37 14.9 -0.5
baz=355
EGMT Eagleton 90.04 5 IAmb IAmb 01 37 21.8
comp=Z,54nm,1.1s
I61A Oroboro, Fairl 90.05 338 P P 01 37 15.6 +0.1
baz=22
H58A Gabriels 90.12 340 P P 01 37 15.4 -0.4
baz=21
G54A Lake Saint Pet 90.12 343 P P 01 37 15.1 -0.6
baz=18
PLVO Plevna 90.23 342 IAmb IAmb 01 37 17.5
comp=Z,52nm,1.5s
J63A Strafford 90.33 337 P P 01 37 16.5 -0.3
baz=23
H57A Richville 90.38 341 P P 01 37 16.6 -0.3
baz=20
MDND Maddock 90.38 358 P P 01 37 16.3 -0.6
baz=2.3
MDND Maddock 90.38 358 IAMs_20 IAMs_20 02 21 47.2
comp=Z,1μm,20.0s
I60A Shoreham 90.42 339 P P 01 37 17.0 -0.1
baz=21
J62A Henniker 90.59 338 P P 01 37 18.0 0.0
baz=22
E08A Dider Farm, El 90.60 11 IAmb IAmb 01 37 19.1
comp=Z,44nm,1.3s
F04A Amboy 90.61 14 IAmb IAmb 01 37 18.5
comp=Z,22nm,0.9s
I59A Olmsteadville 90.62 339 P P 01 37 17.9 -0.2
baz=21
HAWA Hanford 90.63 11 IAMs_20 IAMs_20 02 24 40.7
comp=Z,923nm,19.0s
J61A Chester 90.68 338 P P 01 37 18.8 +0.4
baz=22
F05D White Salmon 90.82 13 P P 01 37 18.9 -0.1
baz=346
MSO Missoula 90.89 8 P P 01 37 18.4 -1.0
baz=352,SNR=9.0
MSO Missoula 90.89 8 IAmb IAmb 01 37 20.0
comp=Z,40nm,1.4s
I57A Carthage 90.94 341 P P 01 37 19.5 -0.1
baz=20
I58A Old Forge 91.00 340 P P 01 37 19.6 -0.3
baz=20,SNR=5.6
K63A Dunstable 91.00 337 P P 01 37 19.0 -0.8
baz=23
H53A Bobcaygeon 91.01 343 P P 01 37 19.6 -0.3
baz=18
J60A Lant Hill Farm 91.01 339 P P 01 37 19.7 -0.2
baz=21
F07A Phinny Hill Vi 91.06 12 IAmb IAmb 01 37 21.6
comp=Z,32nm,1.2s
J59A Piesco 91.09 340 P P 01 37 20.2 -0.1
baz=21,SNR=5.3
J59A Piesco 91.09 340 IAmb IAmb 01 37 56.2
comp=Z,52nm,1.4s
G03D McMinnville, O 91.16 14 P P 01 37 20.9 +0.4
baz=345
HRV Adam Dziewonsk 91.18 337 P P 01 37 20.1 -0.6
baz=23
K62A Royalston 91.23 338 P P 01 37 20.8 -0.1
baz=22
F10A Beach Ranch, E 91.36 10 P P 01 37 20.6 -1.0
F10A IAmb IAmb 01 37 28.3
comp=Z,28nm,1.1s
J58A Remsen 91.39 340 P P 01 37 21.5 -0.1
baz=20
G05D Wamic, OR 91.47 13 P P 01 37 21.4 -0.6
baz=346
L64A Middleborough 91.50 337 P P 01 37 21.8 -0.4
baz=23
K61A Williamstown 91.51 339 P P 01 37 21.2 -1.0
baz=21
J57A Williamstown 91.52 341 P P 01 37 21.9 -0.4
baz=20
LAO LASA Array 91.53 2 P P 01 37 22.2 -0.2
baz=357
L61B Northampton 91.55 338 P P 01 37 23.1 +0.7
baz=22
L63A North Scituate 91.79 337 P P 01 37 23.3 -0.2
baz=23
K59A Cooperstown 91.83 340 P P 01 37 23.5 -0.2
baz=20
H04D Lebanon 91.92 14 P P 01 37 24.5 +0.4
baz=345
GLMI Grayling 91.93 347 P P 01 37 23.6 -0.6
baz=13
M64A Riverton 91.96 337 P P 01 37 23.9 -0.4
baz=23
L61A Hillsdale 1, H 92.03 339 P P 01 37 24.1 -0.5
baz=21
K58A Earlville 92.04 340 P P 01 37 24.8 +0.1
baz=20
J55A Hilton 92.08 342 IAMs_20 IAMs_20 02 18 44.0
comp=Z,869nm,21.0s
I02D Swisshome 92.12 15 P P 01 37 25.4 +0.4
baz=344
F33A 5 Mile Ranch, 92.24 355 IAmb IAmb 01 37 31.9
comp=Z,21nm,1.1s
G40A Rib Lake 92.28 351 IAMs_20 IAMs_20 02 19 17.9
comp=Z,845nm,18.0s
K57A Scipio Center 92.28 341 P P 01 37 25.8 -0.1
baz=19
BOZ Bozeman (W) 92.32 6 P P 01 37 25.9 -0.2
baz=353,SNR=31
BOZ Bozeman (W) 92.32 6 IAmb IAmb 01 37 32.9
comp=Z,27nm,1.1s
MEDO Medina 92.33 342 IAMs_20 IAMs_20 02 19 14.6
comp=Z,732nm,19.0s
M63A Gales Ferry 92.34 337 P P 01 37 26.0 0.0
baz=22
I05D Terrebonne, OR 92.35 13 P P 01 37 26.2 +0.1
baz=346
PLID Pearl Lake 92.39 9 IAmb IAmb 01 37 26.8
comp=Z,15nm,0.8s
L60A Shokan 92.40 339 P P 01 37 25.9 -0.5
baz=21
L59A Walton 92.42 340 P P 01 37 25.7 -0.9
baz=20
DLMT Dillon 92.47 7 IAmb IAmb 01 37 28.0
comp=Z,44nm,1.4s
DLMT IAMs_20 IAMs_20 02 26 21.3
comp=Z,706nm,18.0s
K56A Middlesex 92.51 341 P P 01 37 26.4 -0.5
baz=19
SPMN Marine on St. 92.59 353 P P 01 37 26.8 -0.3
baz=7.4
BINY Binghamton 92.65 340 P P 01 37 27.4 -0.1
baz=20
I04A Tendick Farm, 92.69 14 P P 01 37 26.7 -1.0
baz=346
L58A Harry Jones Me 92.77 340 P P 01 37 27.8 -0.2
baz=20
I07A Izee 92.89 12 IAmb IAmb 01 37 35.9
comp=Z,14nm,1.0s
PINE Pine Mountain 92.94 13 IAmb IAmb 01 37 36.5
comp=Z,22nm,1.0s
RLMT Red Lodge 92.96 5 P P 01 37 28.7 -0.5
baz=355,SNR=18
YNE Yellowstone No 93.03 5 P P 01 37 29.3 -0.3
L57A Andrews Acres 93.05 341 P P 01 37 28.8 -0.7
baz=19
L56A Greenwood 93.09 341 P P 01 37 29.0 -0.7
baz=18,SNR=5.1
M60A Port Jervis 93.12 339 P P 01 37 29.6 -0.1
baz=20
M59A Waymart 93.13 340 P P 01 37 29.1 -0.6
baz=20
J04D Umpqua Nationa 93.28 14 P P 01 37 30.5 -0.2
baz=346
J05D Fort Rock, OR 93.39 13 P P 01 37 31.1 0.0
baz=346
K02D Willamette Mer 93.51 15 P P 01 37 31.8 +0.2
baz=345
M58A Price's Panora 93.55 340 P P 01 37 32.1 +0.4
baz=19
H17A Grant Village 93.60 6 P P 01 37 33.2 +1.1
baz=354,SNR=12
H17A Grant Village 93.60 6 IAmb IAmb 01 37 35.0
comp=Z,21nm,1.1s
N60A Cedar Hill Far 93.67 339 P P 01 37 32.8 +0.6
baz=20
I40A Norwalk 93.68 351 IAMs_20 IAMs_20 02 20 56.9
comp=Z,1μm,22.0s
M57A Sunshine Farm, 93.75 341 P P 01 37 32.1 -0.5
baz=19
M57A Sunshine Farm, 93.75 341 IAmb IAmb 01 37 44.9
comp=Z,29nm,1.2s
J08A Circle Bar Ran 93.76 11 IAmb IAmb 01 37 33.8
comp=Z,32nm,1.3s
SUSD Miller 93.76 357 P P 01 37 31.7 -1.0
baz=2.8
SUSD Miller 93.76 357 P P 01 37 31.9 -0.8
SUSD IAmb IAmb 01 37 33.2
comp=Z,30nm,0.8s
SUSD IAMs_20 IAMs_20 02 23 39.8
comp=Z,986nm,19.0s
N59A State Game Lan 93.81 340 P P 01 37 31.9 -1.0
baz=20
M56A Emporium 93.86 342 P P 01 37 32.8 -0.4
baz=18
L53A Girard 93.88 343 P P 01 37 32.5 -0.7
baz=16
FLWY Flagg Ranch 93.90 6 IAmb IAmb 01 37 41.2
comp=Z,23nm,1.0s
K04D Chiloquin, OR 93.94 14 P P 01 37 33.3 -0.3
baz=346
K05A Summer Lake 93.99 13 IAmb IAmb 01 37 35.5
comp=Z,46nm,1.4s
L02E Cave Junction 94.04 15 P P 01 37 32.9 -1.1
baz=345
IMW Indian Meadow 94.06 6 IAmb IAmb 01 37 36.2
comp=Z,19nm,0.9s
HLID Hailey 94.08 8 P P 01 37 33.9 -0.4
baz=351
N58A Sunbury 94.12 340 P P 01 37 33.3 -0.9
baz=19
RSSD Black Hills 94.14 1 P P 01 37 34.7 +0.1
RSSD pmax pmax
comp=Z,29nm,1.0s
RSSD Black Hills 94.14 1 P P 01 37 34.5 -0.2
baz=359
RSSD Black Hills 94.14 1 P P 01 37 34.7 +0.1
RSSD IAmb IAmb 01 37 41.5
comp=Z,28nm,0.9s
RSSD Black Hills 94.14 1 IAMs_20 IAMs_20 02 25 00.8
comp=Z,990nm,19.0s
M54A Oil Creek Stat 94.17 343 P P 01 37 33.7 -0.9
baz=17
L04D Klamath Falls 94.23 14 P P 01 37 34.2 -0.8
baz=346
ECSD EROS Data Cent 94.36 356 P P 01 37 34.7 -0.6
baz=4.5,SNR=10
ECSD EROS Data Cent 94.36 356 IAmb IAmb 01 37 36.1
comp=Z,29nm,1.1s
N57A Milroy 94.40 341 P P 01 37 34.9 -0.8
baz=18
N56A West Decatur 94.43 342 P P 01 37 34.7 -1.0
baz=18
STKA Stephens Creek 94.45 130 P P 01 37 33.8 -2.0
comp=Z,5.6nm,0.9s,baz=240,slow=4.1,SNR=5.1
STKA LR LR 02 26 26.5
comp=Z,268nm,19.3s,baz=316,slow=40
STKA Stephens Creek 94.45 130 P P 01 37 34.5 -1.2
STKA pmax pmax
comp=Z,7.0nm,1.5s
STKA Stephens Creek 94.45 130 P P 01 37 34.5 -1.2
JFWS Jewell Farm 94.61 351 P P 01 37 35.2 -1.3
baz=9.3,SNR=5.1
JFWS Jewell Farm 94.61 351 IAmb IAmb 01 37 36.8
comp=Z,29nm,0.8s
YBH Yreka Blue Hor 94.62 15 LR LR 02 25 19.8
comp=Z,446nm,18.6s,baz=339,slow=39
M04C Macdoel 94.74 14 P P 01 37 36.8 -0.5
baz=346
N54A Moraine State 94.77 343 P P 01 37 36.7 -0.6
baz=17
P60A Greenville 94.81 339 P P 01 37 37.1 -0.4
baz=20
O58A Lewisberry 94.84 340 P P 01 37 36.6 -1.0
baz=19
M02C Callahan 94.93 15 P P 01 37 38.1 0.0
baz=345
O57A Amberson 94.94 341 P P 01 37 37.5 -0.6
baz=18
O56A Blue Knob Stat 95.11 342 P P 01 37 38.0 -0.9
baz=18
AHID Auburn Hatcher 95.18 6 IAmb IAmb 01 37 45.9
comp=Z,23nm,1.1s
BW06 Boulder Array 95.29 5 P P 01 37 38.9 -1.1
baz=355,SNR=7.4
PD31 Pinedale Array 95.29 5 P P 01 37 38.7 -1.2
PDAR Pinedale Array 95.29 5 P P 01 37 39.1 -0.8
comp=Z,3.7nm,0.7s,baz=47,slow=3.0,SNR=43
PDAR PP PP 01 41 31.2 +2.3
comp=Z,0.6nm,0.8s,baz=1.3,slow=4.1,SNR=2.0
PDAR LR LR 02 25 15.7
comp=Z,451nm,19.8s,baz=353,slow=38
PDAR Pinedale Array 95.29 5 P P 01 37 38.6 -1.3
O55A Ligonier 95.33 342 P P 01 37 39.6 -0.3
baz=17
N02D Trinity Center 95.36 15 P P 01 37 40.1 0.0
baz=345
K22A Casper 95.56 3 P P 01 37 40.3 -0.7
baz=357,SNR=6.8
K22A Casper 95.56 3 IAmb IAmb 01 37 47.1
comp=Z,14nm,1.0s
K22A IAMs_20 IAMs_20 02 23 54.0
comp=Z,742nm,18.0s
L40A Anamosa 95.56 351 IAMs_20 IAMs_20 02 21 17.6
comp=Z,822nm,21.0s
O54A Avella 95.60 343 P P 01 37 40.6 -0.5
baz=16
EIDS Eidsvold 95.62 119 P P 01 37 40.0 -1.2
EIDS IAmb IAmb 01 37 47.3
comp=Z,23nm,1.2s
O53A New Philadelph 95.71 344 P P 01 37 41.0 -0.6
baz=16
P56A Dayton Farm, R 95.90 342 P P 01 37 42.0 -0.4
baz=18
SCIA State Center 95.92 353 P P 01 37 42.0 -0.6
baz=7.1
MCWV Mont Chateau 95.98 342 P P 01 37 42.4 -0.4
baz=17
ACSO Alum Creek Sta 96.09 345 P P 01 37 42.6 -0.7
baz=15
O51A Pataskala 96.10 345 P P 01 37 43.2 -0.1
baz=15
P55A Reedsville 96.12 342 P P 01 37 43.3 -0.2
baz=17
P54A Burton 96.18 343 P P 01 37 43.6 -0.1
baz=16
O03E Paynes Creek 96.19 15 P P 01 37 43.5 -0.4
baz=346
Q57A Strasburg 96.24 341 P P 01 37 43.4 -0.6
baz=18
HWUT Hardware Ranch 96.29 7 IAMs_20 IAMs_20 02 28 44.6
comp=Z,650nm,20.0s
O49A Covington 96.39 346 IAmb IAmb 01 37 56.4
comp=Z,28nm,1.1s
Q56A Snyder Ridge, 96.42 342 P P 01 37 44.5 -0.4
baz=17
P53A Whipple 96.48 343 P P 01 37 44.5 -0.6
baz=16
P52A Corning 96.50 344 P P 01 37 44.4 -0.8
baz=15
Q55A Buckhannon 96.67 342 P P 01 37 46.2 +0.1
baz=17
ELK Elko 96.76 9 P P 01 37 46.3 -0.4
ELK pmax pmax
comp=Z,7.0nm,0.9s
ELK Elko 96.76 9 P P 01 37 46.3 -0.4
HDIL Hopedale 96.81 350 P P 01 37 45.9 -0.6
baz=10.0
PHWY Pilot Hill 96.94 2 IAmb IAmb 01 37 54.2
comp=Z,14nm,1.0s
P49A Miami Univ. Ec 97.09 346 P P 01 37 46.6 -1.2
baz=13
Q53A Leroy 97.11 343 P P 01 37 47.8 -0.3
baz=16
R58B Mineral 97.13 340 P P 01 37 47.2 -0.8
baz=18
Q52A Bidwell 97.17 344 P P 01 37 47.4 -0.9
baz=15
N23A Red Feather La 97.33 2 P Pdif 01 37 49.3 0.0
baz=358,SNR=7.3
N23A Red Feather La 97.33 2 IAmb IAmb 01 37 50.7
comp=Z,15nm,1.2s
S58A Poland Farm, P 97.50 340 IAMs_20 IAMs_20 02 22 24.0
comp=Z,684nm,22.0s
DUG Dugway, Tooele 97.57 8 P Pdif 01 37 50.4 +0.1
baz=352
DUG Dugway, Tooele 97.57 8 IAmb IAmb 01 37 57.3
comp=Z,16nm,1.1s
DUG IAMs_20 IAMs_20 02 28 45.3
comp=Z,508nm,18.0s
S57A Dark Hollow, R 97.58 341 P P 01 37 49.9 -0.3
baz=18
S57A Dark Hollow, R 97.58 341 IAMs_20 IAMs_20 02 23 03.0
comp=Z,866nm,20.0s
S55A Lewisburg 97.93 342 P P 01 37 50.3 -1.5
baz=16

T59A	**Double "B" Far**	**97.98**	**340**	IAMs_20	IAMs_20	02 22 39.7		
	comp=Z,530nm,19.0s							
O20A	**White River Ci**	**97.99**	**4**	P	**P**	**01 37 51.8**	**-0.4**	
	baz=356							
O20A	**White River Ci**	**97.99**	**4**	IAmb	IAmb	01 37 59.2		
	comp=Z,24nm,1.2s							
P40A	**Paris**	**98.15**	**352**	IAmb	IAmb	01 37 53.2		
	comp=Z,14nm,1.0s							
T58A	**Grand View Acr**	**98.25**	**341**	P	**P**	**01 37 52.5**	**-0.6**	
	baz=18							
U60A	**Pendleton**	**98.35**	**339**	P	**P**	**01 37 53.4**	**-0.2**	
	baz=19							
T57A	**Hurt**	**98.38**	**341**	P	**P**	**01 37 53.5**	**-0.3**	
	baz=17							
T57A	**Hurt**	**98.38**	**341**	IAMs_20	IAMs_20	02 24 23.1		
	comp=Z,728nm,19.0s							
ISCO	**Idaho Springs**	**98.43**	**2**	P	**P**	**01 37 54.1**	**-0.2**	
ISCO				pmax	pmax			
	comp=Z,7.0nm,1.1s							
ISCO	**Idaho Springs**	**98.43**	**2**	P	**P**	**01 37 54.0**	**-0.3**	
	baz=358							
ISCO	**Idaho Springs**	**98.43**	**2**	P	**P**	**01 37 54.1**	**-0.2**	
T56A	**Rocky Mt**	**98.53**	**342**	P	**P**	**01 37 54.2**	**-0.2**	
	baz=17							
SPR3	**Spring Creek 3**	**98.59**	**9**	IAmb	IAmb	01 37 57.0		
	comp=Z,12nm,1.1s							
NVAR	**Mina Array Bea**	**98.61**	**12**	P	Pdif	01 37 55.0	0.0	
	comp=Z,1.1nm,0.7s,baz=0.9,slow=3.8,SNR=11							
NVAR				PP	**PP**	**01 41 54.6**	**+0.1**	
	comp=Z,1.5nm,1.0s,baz=16,slow=4.7,SNR=2.0							
NVAR				LR	LR	02 25 48.9		
	comp=Z,444nm,21.9s,baz=328,slow=38							
NVAR	**Mina Array Bea**	**98.61**	**12**	P	**P**	**01 37 54.7**	**-0.3**	
U59A	**Littleton**	**98.63**	**340**	IAMs_20	IAMs_20	02 22 31.0		
	comp=Z,880nm,21.0s							
LHV	**Little Huntoon**	**98.75**	**12**	IAmb	IAmb	01 37 57.3		
	comp=Z,15nm,1.5s							
U58A	**Oxford**	**98.78**	**340**	P	**P**	**01 37 55.1**	**-0.4**	
	baz=18							
V61A	**Roper**	**98.84**	**339**	IAMs_20	IAMs_20	02 25 43.5		
	comp=Z,779nm,18.0s							
T54A	**Tazewell**	**98.85**	**343**	P	**P**	**01 37 55.4**	**-0.5**	
	baz=16							
V60A	**Jim Taylor Roa**	**99.05**	**339**	IAMs_20	IAMs_20	02 22 46.0		
	comp=Z,522nm,20.0s							
R11A	**Troy Canyon, C**	**99.08**	**10**	P	**Pdif**	**01 37 56.7**	**-0.4**	
	baz=359							
KSCO	**Kaye Shedlock'**	**99.26**	**360**	P	**Pdif**	**01 37 57.2**	**-0.6**	
	baz=0.1							
U56A	**King**	**99.27**	**342**	IAMs_20	IAMs_20	02 22 56.6		
	comp=Z,786nm,21.0s							
Q24A	**Divide**	**99.28**	**2**	P	**Pdif**	**01 37 57.4**	**-0.7**	
	baz=358							
CBKS	**Cedar Bluff**	**99.41**	**358**	P	**Pdif**	**01 37 57.6**	**-0.7**	
	baz=2.2							
U54A	**Nelsons Funny**	**99.42**	**343**	P	**Pdif**	**01 37 58.0**	**-0.5**	
	baz=16							
U54A	**Nelsons Funny**	**99.42**	**343**	IAMs_20	IAMs_20	02 23 33.6		
	comp=Z,774nm,19.0s							
ARMA	**Armidale**	**99.45**	**122**	P	**Pdif**	**01 37 57.4**	**-1.1**	
CCM	**Cathedral Cave**	**99.52**	**351**	P	**Pdif**	**01 37 58.4**	**-0.4**	
	baz=8.6							
PV22	**Blue Mesa, Par**	**99.55**	**5**	P	**Pdif**	**01 37 58.7**	**-0.5**	
PV22				IAmb	IAmb	01 38 00.6		
	comp=Z,17nm,1.2s							
PV22				IAMs_20	IAMs_20	02 28 53.7		
	comp=Z,952nm,20.0s							
V57A	**Coltrane Farms**	**99.56**	**341**	P	**Pdif**	**01 37 58.8**	**-0.3**	
	baz=17							
PV16	**Nyswonger Mesa**	**99.76**	**5**	IAMs_20	IAMs_20	02 30 15.4		
	comp=Z,753nm,18.0s							
PV12	**Saucer Basin,**	**99.76**	**5**	IAMs_20	IAMs_20	02 27 14.4		
	comp=Z,1µm,22.0s							
PV03	**Paradox Valley**	**99.82**	**5**	Pdif	**Pdif**	**01 38 00.7**	**+0.3**	
PV03				IAMs_20	IAMs_20	02 29 01.0		
	comp=Z,664nm,21.0s							
V55A	**Taylorsville**	**99.93**	**342**	P	**Pdif**	**01 38 00.4**	**-0.3**	
	baz=16							
PRN	**Pahroc Range**	**100.07**	**10**	Pdif	**Pdif**	**01 38 01.5**	**+0.1**	
S39A	**Bolivar**	**100.11**	**352**	IAMs_20	IAMs_20	02 27 30.0		
	comp=Z,904nm,20.0s							
V54A	**Nebo**	**100.17**	**343**	P	**Pdif**	**01 38 00.9**	**-0.8**	
	baz=16							
W57A	**Gilead**	**100.32**	**341**	P	**Pdif**	**01 38 02.0**	**-0.3**	
	baz=17							
W57A	**Gilead**	**100.32**	**341**	IAMs_20	IAMs_20	02 24 10.4		
	comp=Z,459nm,18.0s							
S22A	**4UR Ranch, Cre**	**100.44**	**3**	P	**Pdif**	**01 38 02.9**	**-0.4**	
	baz=357							
S22A	**4UR Ranch, Cre**	**100.44**	**3**	Pdif	**Pdif**	**01 38 03.9**	**+0.7**	
W56A	**Indian Trail**	**100.47**	**342**	P	**Pdif**	**01 38 02.6**	**-0.5**	
	baz=16							
SDCO	**Great Sand Dun**	**100.48**	**2**	P	**Pdif**	**01 38 02.9**	**-0.5**	
	baz=358							
SDCO	**Great Sand Dun**	**100.48**	**2**	IAMs_20	IAMs_20	02 27 23.5		
	comp=Z,813nm,21.0s							
MGMO	**Mountain Grove**	**100.53**	**351**	Pdif	**Pdif**	**01 38 02.9**	**-0.5**	
CWC	**Cottonwood Cre**	**100.59**	**12**	P	**Pdif**	**01 38 03.7**	**-0.1**	
	baz=348							
HENM	**Henderson Moun**	**100.61**	**349**	IAMs_20	IAMs_20	02 27 57.5		
	comp=Z,845nm,19.0s							
KMSC	**Kings Mountain**	**100.64**	**342**	P	**Pdif**	**01 38 03.3**	**-0.5**	
	baz=16							
KMSC	**Kings Mountain**	**100.64**	**342**	IAMs_20	IAMs_20	02 23 48.7		
	comp=Z,814nm,20.0s							
PENMO	**Penman**	**100.89**	**349**	IAMs_20	IAMs_20	02 28 06.0		
	comp=Z,865nm,19.0s							
BIRD	**Birdtown, Kers**	**100.91**	**341**	IAMs_20	IAMs_20	02 27 55.2		
	comp=Z,624nm,19.0s							
WVT	**Waverly**	**100.94**	**348**	P	**Pdif**	**01 38 04.7**	**-0.4**	
	baz=11							
Y60A	**Bolivia**	**100.96**	**339**	IAMs_20	IAMs_20	02 23 24.6		
	comp=Z,631nm,21.0s							
MPMC	**Manual Prospec**	**101.05**	**12**	P	**Pdif**	**01 38 05.9**	**-0.1**	
	baz=349							
T25A	**Trinidad**	**101.11**	**1**	P	**Pdif**	**01 38 06.0**	**-0.2**	
	baz=359							
Y59A	**Loris**	**101.15**	**340**	IAMs_20	IAMs_20	02 24 47.5		
	comp=Z,622nm,20.0s							
V48A	**Smith Brothers**	**101.15**	**347**	IAMs_20	IAMs_20	02 26 21.1		
	comp=Z,805nm,21.0s							
X56A	**White Oak**	**101.19**	**342**	P	**Pdif**	**01 38 06.1**	**-0.2**	
	baz=16							
PEBM	**Pemiscott Bayo**	**101.25**	**349**	IAMs_20	IAMs_20	02 28 26.6		
	comp=Z,837nm,19.0s							
X55A	**Gracelyn & Ava**	**101.35**	**342**	P	**Pdif**	**01 38 06.6**	**-0.4**	
	baz=16							
U40A	**Yellville**	**101.38**	**352**	P	**Pdif**	**01 38 06.4**	**-0.7**	
	baz=7.5							
HALT	**Halls**	**101.38**	**349**	IAMs_20	IAMs_20	02 28 49.9		
	comp=Z,825nm,19.0s							
W50A	**Signal Mountai**	**101.41**	**345**	IAMs_20	IAMs_20	02 28 44.0		
	comp=Z,777nm,19.0s							
Y58A	**Scranton**	**101.42**	**341**	P	**Pdif**	**01 38 05.8**	**-1.5**	
	baz=17							
Y57A	**Sumter**	**101.50**	**341**	IAMs_20	IAMs_20	02 24 45.6		
	comp=Z,718nm,22.0s							
SWET	**Sewanee**	**101.51**	**346**	IAMs_20	IAMs_20	02 29 42.5		
	comp=Z,895nm,19.0s							
HODGE	**Hodges**	**101.72**	**343**	IAMs_20	IAMs_20	02 24 43.3		
	comp=Z,670nm,21.0s							
PLAL	**Pickwick Lake**	**102.10**	**348**	IAMs_20	IAMs_20	02 26 25.1		
	comp=Z,771nm,20.0s							
Z56A	**Williston**	**102.39**	**342**	IAMs_20	IAMs_20	02 28 15.2		
	comp=Z,792nm,20.0s							
X48A	**Hartselle**	**102.45**	**347**	IAMs_20	IAMs_20	02 29 11.4		
	comp=Z,748nm,19.0s							
OKCFA	**Oklahoma City**	**102.69**	**356**	IAMs_20	IAMs_20	02 29 04.3		
	comp=Z,716nm,20.0s							
OXF	**Oxford**	**102.76**	**349**	IAMs_20	IAMs_20	02 27 51.6		
	comp=Z,880nm,19.0s							
X40A	**Basin Creek Fa**	**103.22**	**352**	P	**Pdif**	**01 38 14.4**	**-1.0**	
	baz=7.5							
ANMO	**Albuquerque**	**103.24**	**3**	IAMs_20	IAMs_20	02 30 47.5		
	comp=Z,697nm,18.0s							
Z47A	**Carrollton**	**103.84**	**347**	IAMs_20	IAMs_20	02 30 01.3		
	comp=Z,832nm,19.0s							
255A	**Hazlehurst**	**103.99**	**342**	IAMs_20	IAMs_20	02 29 14.5		
	comp=Z,710nm,21.0s							
MSTX	**Muleshoe**	**104.29**	**360**	IAMs_20	IAMs_20	02 29 31.5		
	comp=Z,904nm,20.0s							
250A	**Grady**	**104.72**	**346**	IAMs_20	IAMs_20	02 28 49.6		
	comp=Z,808nm,20.0s							
CPBX	**Cerro Prieto**	**104.95**	**11**	IAMs_20	IAMs_20	02 15 57.5		
	comp=Z,590nm,19.0s							
SPX	**San Pedro Mart**	**106.28**	**11**	IAMs_20	IAMs_20	02 29 30.7		
	comp=Z,526nm,19.0s							
SFX	**San Felipe**	**106.37**	**11**	IAMs_20	IAMs_20	02 23 47.2		
	comp=Z,557nm,18.0s							
TXAR	**Lajitas Array**	**108.91**	**1**	Pdiff	**Pdif**	**01 38 41.2**	**+0.4**	
	comp=Z,0.3nm,0.8s,baz=68,slow=5.1,SNR=3.1							
TXAR				PKiKP	**PKiKP**	**01 42 43.3**	**-2.2**	
	comp=Z,1.3nm,1.0s,baz=350,slow=3.7,SNR=5.2							
TXAR				PP	**PP**	**01 43 16.0**	**+4.8**	
	comp=Z,1.0nm,0.8s,baz=320,slow=3.3,SNR=3.7							
TXAR				PKKPbc	**PKKPbc**	**01 53 51.3**	**-0.8**	
	comp=Z,0.1nm,0.3s,baz=155,slow=6.8,SNR=1.8							
061Z	**Ochoppi**	**109.40**	**339**	IAMs_20	IAMs_20	02 33 11.1		
	comp=Z,718nm,22.0s							
SC01	**Santiago de lo**	**111.97**	**327**	IAMs_20	IAMs_20	02 35 02.4		
	comp=Z,509nm,20.0s							
TEIG	**Tepich**	**116.54**	**345**	IAMs_20	IAMs_20	02 34 03.7		
	comp=Z,494nm,22.0s							
PETF	**Flores**	**120.07**	**346**	IAMs_20	IAMs_20	02 38 47.9		
	comp=Z,532nm,20.0s							
MQZ	**McQueen's Vall**	**120.75**	**123**	IAMs_20	IAMs_20	02 39 33.5		
	comp=Z,640nm,20.0s							
PRPB	**Parauapebas**	**121.11**	**292**	*e*P	**PKPdf**	**01 43 08.3**	**-0.6**	
SDV	**Santo Domingo**	**121.32**	**322**	PKPdf	**PKPdf**	**01 43 08.6**	**-1.1**	
SDV	**Santo Domingo**	**121.32**	**322**	*e*P	**PKPdf**	**01 43 08.9**	**-0.7**	
SMTB	**Santa Maria do**	**121.45**	**288**	*e*P	**PKiKP**	**01 43 10.3**	**+0.6**	
SDBA	**SAO DESIDERIO**	**121.93**	**283**	*e*P	**PKPdf**	**01 43 10.0**	**-0.5**	
ESQI	**Esquipulas**	**122.26**	**345**	IAMs_20	IAMs_20	02 39 42.7		
	comp=Z,507nm,22.0s							
TGUH	**Tegucigalpa,Un**	**122.31**	**342**		**PKPdf**	**01 43 11.4**	**0.0**	
TGUH				IAMs_20	IAMs_20	02 39 32.0		
	comp=Z,352nm,19.0s							
SNET	**Serv Nac Est T**	**123.09**	**344**	IAMs_20	IAMs_20	02 40 32.3		
	comp=Z,432nm,20.0s							
ITTB	**Itaituba**	**123.77**	**299**	*e*P	**PKPdf**	**01 43 14.0**	**-0.1**	
TAMC	**Tame, Arauca**	**124.01**	**322**	*e*P	**PKPdf**	**01 43 14.1**	**-0.5**	
PEXB	**Peixe**	**124.18**	**286**	*e*P	**PKPdf**	**01 43 14.8**	**0.0**	
RUSC	**La Rusia**	**125.08**	**323**	*e*P	**PKPdf**	**01 43 15.1**	**-2.2**	
PTBC	**PUERTO BERRIO**	**125.10**	**325**	*e*P	**PKPdf**	**01 43 15.1**	**-1.6**	
HDC	**Heredia**	**125.38**	**337**	IAMs_20	IAMs_20	02 35 23.5		
	comp=Z,510nm,22.0s							
DBBC	**Dabeiba**	**125.40**	**327**	*e*P	**PKPdf**	**01 43 16.9**	**-0.5**	
NPGB	**Novo Progresso**	**125.51**	**296**	*e*P	**PKPdf**	**01 43 17.1**	**-0.4**	
SPBC	**San Pablo de B**	**125.73**	**324**	*e*P	**PKPdf**	**01 43 17.5**	**-0.5**	
NORC	**Norcasia**	**126.15**	**325**	*e*P	**PKPdf**	**01 43 17.5**	**-1.3**	
SNDB	**Serra Nova Dou**	**126.22**	**288**	*e*P	**PKiKP**	**01 43 19.0**	**-0.1**	
BDFB	**Brasília**	**126.32**	**282**	PKP	**PKPdf**	**01 43 18.8**	**-0.2**	
	comp=Z,1.5nm,0.7s,baz=100,slow=1.5,SNR=3.9							
BDFB				PP	**PP**	**01 45 12.7**	**-1.3**	
	comp=Z,3.4nm,0.9s,baz=37,slow=5.1,SNR=2.8							
SNAA	**Sanae**	**126.37**	**203**	PKiKP	**PKPdf**	**01 43 16.1**	**-1.3**	
SNAA	**Sanae**	**126.37**	**203**		**PKPdf**	**01 43 16.1**	**-1.3**	
CHIC	**Chingaza**	**126.49**	**323**	*e*P	**PKPdf**	**01 43 18.4**	**-1.5**	
ROSC	**El Rosal**	**126.56**	**324**	PKP	**PKiKP**	**01 43 20.8**	**+0.3**	
	comp=Z,25nm,0.9s,baz=174,slow=3.2,SNR=10							
ROSC	**El Rosal**	**126.56**	**324**	PKPdf	**PKPdf**	**01 43 20.0**	**0.0**	
TOLC	**Tolima**	**127.22**	**325**	*e*P	**PKPdf**	**01 43 20.2**	**-1.0**	
CLDB	**Colider**	**128.58**	**293**	*e*P	**PKPdf**	**01 43 21.6**	**-1.7**	
ARAG	**Araguaiana, MT**	**129.11**	**285**	*e*P	**PKPdf**	**01 43 24.1**	**-0.1**	
GARC	**Garzon, Huila**	**129.44**	**324**	*e*P	**PKPdf**	**01 43 24.4**	**-0.8**	
VNDA	**Vanda**	**129.57**	**164**	PKP	**PKPdf**	**01 43 22.7**	**-0.5**	
	comp=Z,1.2nm,0.9s,baz=278,slow=3.2,SNR=5.1							
VNDA				PP	**PP**	**01 45 31.8**	**-2.5**	
	comp=Z,2.9nm,1.1s,baz=294,slow=7.9,SNR=6.3							
VNDA	**Vanda**	**129.57**	**164**	PKPdf	**PKPdf**	**01 43 22.0**	**-1.2**	
POPC	**Popayan, Colom**	**129.64**	**325**	*e*P	**PKPdf**	**01 43 24.3**	**-1.3**	
PCON	**Cinco Dias**	**129.71**	**325**	*e*P	**PKPdf**	**01 43 26.1**	**-0.1**	
BB19B	**Bebedouro**	**130.12**	**277**	*e*P	**PKPdf**	**01 43 26.0**	**0.0**	
VAO	**Valinhos**	**130.13**	**274**	*e*P	**PKiKP**	**01 43 27.4**	**+0.6**	
PTLC	**Puerto Leguiza**	**130.91**	**322**	*e*P	**PKPdf**	**01 43 26.4**	**-1.4**	
PUAC	**Puerto Asis, P**	**131.38**	**324**	*e*P	**PKPdf**	**01 43 28.2**	**-0.5**	
QSPA	**South Pole Qui**	**131.89**	**180**	PKPdf	**PKPdf**	**01 43 27.3**	**-0.7**	
SAML	**Samuel**	**132.03**	**302**	*e*P	**PKPdf**	**01 43 28.7**	**-1.1**	
SAML	**Samuel**	**132.03**	**302**	PKiKP	**PKPdf**	**01 43 29.3**	**-0.5**	
SAML				MLR	MLR			
	comp=Z,500nm,21.0s							
SAML	**Samuel**	**132.03**	**302**		**PKPdf**	**01 43 29.3**	**-0.5**	
SAML	**Samuel**	**132.03**	**302**	IAMs_20	IAMs_20	02 39 02.2		
	comp=Z,452nm,21.0s							
SAML	**Samuel**	**132.03**	**302**	*e*P	**PKPdf**	**01 43 30.2**	**+0.5**	
PCMB	**Pacaembu**	**132.47**	**279**	*e*P	**PKPdf**	**01 43 30.2**	**-0.1**	
VILB	**Vilhena**	**133.05**	**295**	*e*P	**PKiKP**	**01 43 32.5**	**-0.4**	
PPT2	**Papeete2**	**133.38**	**73**	*e*LR	LR	02 26 07.2		
	comp=Z,392nm,23.2s							
TAOE	**Nuku Hiva Isla**	**133.38**	**56**	*e*LR	LR	02 26 06.2		
	comp=Z,632nm,24.1s							
PTLB	**Pontes e Lacer**	**134.09**	**292**	*e*P	**PKPdf**	**01 43 33.3**	**-0.2**	
TRCB	**Terra Rica**	**134.20**	**279**	*e*P	**PKiKP**	**01 43 35.0**	**0.0**	
ETMB	**Extrema**	**134.58**	**304**	*e*P	**PKPdf**	**01 43 33.1**	**-1.5**	
PTGB	**Pitanga**	**134.91**	**276**	*e*P	**PKiKP**	**01 43 37.3**	**+0.8**	
AQDB	**Aquidauana**	**135.00**	**284**	*e*P	**PKiKP**	**01 43 36.4**	**-0.2**	
SIV	**San Ignacio**	**135.80**	**293**	PKP	**PKPdf**	**01 43 36.4**	**-0.4**	
	comp=Z,11nm,0.9s,baz=86,slow=2.7							
TBI	**Tubuai**	**137.11**	**79**	*e*LR	LR	02 27 48.0		
	comp=Z,336nm,21.5s							
CPUP	**Villa Florida**	**139.72**	**278**	PKhKP	PKPpre	01 43 39.9		
	comp=Z,6.3nm,0.9s,baz=53,slow=4.2,SNR=6.9							
CPUP				PP	**PP**	**01 46 44.0**	**+4.3**	
	comp=Z,2.9nm,0.8s,baz=51,slow=7.9,SNR=4.0							
CPUP	**Villa Florida**	**139.72**	**278**	PKiKP	**PKPdf**	**01 43 42.5**	**-1.2**	
CPUP	**Villa Florida**	**139.72**	**278**	PKPdf	**PKPdf**	**01 43 42.5**	**-1.2**	
CPUP	**Villa Florida**	**139.72**	**278**	*e*P	**PKPdf**	**01 43 43.5**	**-0.3**	
PLTB	**Pedras Altas**	**139.83**	**268**	*e*P	**PKPdf**	**01 43 44.3**	**+0.5**	
LPAZ	**La Paz**	**140.70**	**300**	PKhKP	**PKPdf**	**01 43 42.3**	**-4.3**	
	comp=Z,5.7nm,1.0s,baz=33,slow=4.0,SNR=13							
LPAZ	**La Paz**	**140.70**	**300**	*e*P	**PKPdf**	**01 43 43.3**	**-3.3**	
LPAZ	**La Paz**	**140.70**	**300**	PKiKP	**PKPdf**	**01 43 43.9**	**-2.6**	
LPAZ	**La Paz**	**140.70**	**300**	PKPdf	**PKPdf**	**01 43 43.9**	**-2.6**	
ITQB	**Itaqui**	**141.02**	**273**	*e*P	**PKPdf**	**01 43 46.0**	**0.0**	
PB16	**IPOC Station P**	**143.09**	**300**	PKPdf	**PKPdf**	**01 43 49.7**	**-1.0**	
MNMC	**Minye Minye**	**143.73**	**299**	PKPdf	**PKPdf**	**01 43 50.6**	**-0.8**	
PB11	**IPOC Station P**	**144.22**	**298**	PKPdf	PKPbc	01 43 50.4	+0.1	
PB01	**IPOC Station P**	**145.01**	**297**		**PKPab**	**01 43 52.9**	**+0.2**	
LVC	**Limon Verde**	**145.70**	**294**	PKP2	**PKPab**	**01 43 55.6**	**0.0**	
LVC	**Limon Verde**	**145.70**	**294**		**PKPab**	**01 43 55.5**	**0.0**	
LVC	**Limon Verde**	**145.70**	**294**	*e*P	**PKPab**	**01 43 55.5**	**0.0**	
AHML	**Horco Molle**	**145.83**	**284**	*i* P	**PKPdf**	**01 43 53.8**	**-0.8**	
CYA	**Choya**	**147.12**	**282**	*i* P	**PKPdf**	**01 43 56.4**	**-0.3**	
TCA	**Tanti**	**147.78**	**277**	*i* P	**PKPdf**	**01 43 57.4**	**-0.4**	
PB14	**IPOC Station P**	**148.06**	**293**	*i* P	**PKPdf**	**01 43 58.2**	**-0.5**	
EFI	**East Falkland**	**148.41**	**237**	PKP2	**PKPbc**	**01 44 00.6**	**-0.9**	
EFI	**East Falkland**	**148.41**	**237**		**PKPbc**	**01 44 00.6**	**-0.9**	
PMSA	**Palmer Station**	**148.46**	**211**		**PKPbc**	**01 44 01.0**	**-0.2**	
PMSA	**Palmer Station**	**148.46**	**211**	*e*P	**PKPbc**	**01 44 00.0**	**-1.2**	
ACLC	**CERRO LA CRUZ**	**148.50**	**282**	*i* P	**PKPdf**	**01 43 58.8**	**-0.4**	
VCA	**Vinchina**	**149.03**	**284**	*i* P	**PKPdf**	**01 44 00.1**	**+0.1**	
MRA	**San Martin**	**149.14**	**276**	*i* P	**PKPdf**	**01 43 59.5**	**-0.5**	
AVFE	**Valle Fertil**	**149.53**	**280**	*i* P	**PKPdf**	**01 44 00.3**	**-0.4**	
ACCO	**Cerro Coronel**	**150.67**	**282**	*i* P	**PKPdf**	**01 44 02.5**	**-0.3**	
AC04	**Llanos de Chal**	**150.77**	**288**	PKPdf	**PKPdf**	**01 44 02.0**	**-0.5**	
AC04				PKPbc	**sPKPdf**	**01 44 09.2**	**-0.2**	
AC04				PKPab	**sPKPbc**	**01 44 15.1**	**+0.1**	
RTCV	**Cerro Valdivia**	**150.95**	**279**	*i* P	**PKPdf**	**01 44 02.8**	**0.0**	
ASAL	**Salagasta**	**151.53**	**278**	*i* P	**PKPdf**	**01 44 03.7**	**0.0**	
AUSP	**Uspallata**	**151.75**	**279**	*i* P	**PKPdf**	**01 44 04.5**	**+0.2**	
AAGR	**Agrelo**	**151.76**	**277**	*i* P	**PKPdf**	**01 44 03.8**	**-0.3**	
CO02	**Combarbal**	**152.41**	**283**		**PKPbc**	**01 44 11.2**	**-0.8**	
CO02					**PKPab**	**01 44 22.3**	**+0.1**	
PLCA	**Paso Flores**	**155.84**	**262**	PKP	**PKPdf**	**01 44 09.1**	**-0.5**	
	comp=Z,3.5nm,0.9s,baz=210,slow=2.8,SNR=5.4							
PLCA				PKPab	**PKPab**	**01 44 35.9**	**-0.6**	
	comp=Z,5.0nm,0.9s,baz=125,slow=3.5,SNR=6.7							
PLCA	**Paso Flores**	**155.84**	**262**	PKPdf	**PKPdf**	**01 44 09.5**	**-0.1**	
PLCA	**Paso Flores**	**155.84**	**262**	*e*P	**PKPdf**	**01 44 09.9**	**+0.3**	
LC01	**Cunco**	**156.33**	**267**	IAMs_20	IAMs_20	02 49 53.9		
	comp=Z,417nm,19.0s							

KRNET ***14*** *01:44:53.9±0.1, 42.09N×77.22E, h22km, mb3.1*
SOME ***14*** *01:44:53.5, 42.07N×77.20E, h15km*
NNC ***14*** *01:44:54.7±0.5, 42.15N×77.23E, h0km, mb3.4, mpv3.6,*
Error ellipse: s-maj=3.9km s-min=1.8km az=177.0

ISC 14 01:44:53.5±1.0, 42.10N±0.04×77.14E±0.02, h18km±5km,
n60, σ1.9 s08/108, 33C-21D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.04**	**41**	⇑	*i*P	**Pg**	**01 44 57.0**	**0.0**
	baz=36							
KDJ				⇑	*i*S	**Sg**	**01 44 59.5**	**+0.2**
	baz=36							
ULHL	**Ulahol**	**0.69**	**283**	⇑	*i*P	**Pn**	**01 45 08.1**	**-0.5**
	baz=83							
ULHL				⇑	*i*S	**Sn**	**01 45 18.6**	**-0.4**
	baz=83							
ANVS	**Anan'yevo**	**0.79**	**29**	⇑	*i*P	**Pb**	**01 45 08.6**	**-0.3**
	baz=25							
ANVS				⇑	*i*S	**Sb**	**01 45 19.2**	**-0.1**
	baz=25							
TNSS	**Tian-Shan**	**0.95**	**351**	⇓	*i*P	**Pn**	**01 45 12.1**	**-0.3**
	52nm,0.1s							
TNSS				⇓	*i*S	**Sn**	**01 45 25.2**	**-0.6**
	29nm,0.2s							
TNSS	**Tian-Shan**	**0.95**	**351**	P		**Pn**	**01 45 12.1**	**-0.3**
	52nm,0.1s							
TNSS				S		**Sn**	**01 45 25.2**	**-0.6**
	29nm,0.1s							
BOOM	**Boomskoye usch**	**0.97**	**294**	⇓	*i*P	**Pn**	**01 45 13.1**	**+0.5**
	baz=94							
BOOM				⇓	*i*S	**Sn**	**01 45 27.2**	**+1.2**
	baz=94							
PRZ	**Przheval'sk**	**1.01**	**67**	⇓	*i*P	**Pb**	**01 45 12.0**	**-0.6**
	baz=66							
PRZ				⇓	*i*S	**Sg**	**01 45 25.6**	**-0.9**
	baz=66							
IZV	**Izvestkoviy**	**1.02**	**338**	⇓	*i*P	**Pg**	**01 45 13.6**	**+0.3**
	53nm,0.1s							
IZV				⇓	*i*S	**Sn**	**01 45 28.4**	**+1.4**
	56nm,0.1s							
IZV	**Izvestkoviy**	**1.02**	**338**	P		**Pg**	**01 45 13.6**	**+0.3**
	53nm,0.1s							
IZV				S		**Sn**	**01 45 28.5**	**+1.4**
	54nm,0.1s							
MDOK	**Medeo**	**1.07**	**356**	⇑	*i*P	**Pg**	**01 45 14.0**	**-0.2**
	38nm,0.2s							
MDOK				⇓	*i*S	**Sn**	**01 45 28.7**	**+0.4**
	38nm,0.3s							
MDOK	**Medeo**	**1.07**	**356**	Pg		**Pg**	**01 45 14.0**	**-0.2**
	38nm,0.2s							
MDOK				Lg		Lg	01 45 28.9	
	29nm,0.3s							
KOTS	**Kotyrbulak**	**1.14**	**359**	⇓	*i*P	**Pg**	**01 45 15.3**	**-0.2**
	169nm,0.3s							
KOTS				⇑	*i*S	**Sg**	**01 45 31.0**	**+0.6**
	130nm,0.2s							
KOTS	**Kotyrbulak**	**1.14**	**359**	P		**Pg**	**01 45 15.4**	**-0.1**
	158nm,0.2s							
KOTS				S		**Sg**	**01 45 31.2**	**+0.8**
	38nm,0.3s							
MTBS	**Ma

PDGK					Lg	Lg	01 45 58.0		
	22nm,0.3s								
PDGK	**Podgornoye**	**2.12**	**54**	⇓Pn	**Pb**	**01 45 30.5**	**-1.0**
PDGK	5.8nm,0.6s			⇑Sn	**Sb**	**01 45 58.2**	**+0.6**
	19nm,0.3s						
ARXS	**Arharly**	**2.17**	**13**	*e*P	**Pb**	**01 45 32.8**	**+0.4**
ARXS	25nm,0.3s			*e*S	**Sg**	**01 46 01.4**	**-2.1**
	72nm,0.3s						
ARXS	**Arharly**	**2.17**	**13**	Pg	**Pb**	**01 45 32.8**	**+0.4**
ARXS	24nm,0.3s			Lg	Lg	01 46 01.4	
	66nm,0.1s						
MNBS	**Baschi**	**2.18**	**25**	*e*P	**Pb**	**01 45 33.1**	**+0.5**
MNBS	5.3nm,0.1s			*e*S	**Sg**	**01 46 01.9**	**-1.9**
	82nm,0.3s						
MNBS	**Baschi**	**2.18**	**25**	Pg	**Pb**	**01 45 33.1**	**+0.5**
MNBS	5.3nm,0.1s			Lg	Lg	01 46 01.9	
	82nm,0.3s						
USP	**Ospenovka**	**2.27**	**302**	⇑*i*P	**Pb**	**01 45 33.4**	**-0.7**
USP	baz=1.0			⇑*i*S	**Sb**	**01 46 02.2**	**+0.3**
	baz=1.0						
SGDS	**Sogindy**	**2.29**	**307**	Pg	**Pg**	**01 45 36.1**	**-1.5**
SGDS	2.3nm,0.2s			Lg	Lg	01 46 06.4	
	22nm,0.2s						
EKS2	**Erkin-Say**	**2.56**	**284**	⇑*i*P	**Pb**	**01 45 37.5**	**-1.5**
EKS2	baz=84			⇑*i*S	**Sb**	**01 46 09.2**	**-0.9**
	baz=84						
AML	**Almayashu**	**2.57**	**272**	⇑*i*P	**Pb**	**01 45 37.9**	**-1.4**
AML	baz=72			⇑*i*S	**Sb**	**01 46 09.9**	**-0.8**
	baz=72						
KTMS	**Ketmen**	**2.72**	**59**	*e*P	**Pb**	**01 45 41.3**	**-0.4**
KTMS	1.9nm,0.3s			*e*S	**Sb**	**01 46 15.6**	**+0.7**
	24nm,0.2s						
KTMS	**Ketmen**	**2.72**	**59**	Pg	**Pb**	**01 45 41.3**	**-0.4**
KTMS	1.9nm,0.3s			Lg	Lg	01 46 15.6	
	24nm,0.2s						
DJR	**Jarkent**	**2.95**	**40**	*e*P	**Pb**	**01 45 46.1**	**+0.4**
DJR	3.1nm,0.2s			*e*S	**Sb**	**01 46 23.5**	**+1.9**
	19nm,0.5s						
DJR	**Jarkent**	**2.95**	**40**	Pg	**Pb**	**01 45 46.1**	**+0.4**
DJR	3.1nm,0.2s			Lg	Lg	01 46 23.4	
	19nm,0.5s						
TDK	**Taldyqorghan**	**3.04**	**17**	*e*P	**Pb**	**01 45 48.6**	**+1.3**
TDK	23nm,0.2s			*e*S	**Sg**	**01 46 28.1**	**-3.2**
	31nm,0.5s						
KK31	**Karatay Array**	**5.00**	**284**	⇓Lg	Lg	01 47 34.7	
	1.5nm,0.6s,baz=102,slow=28,SNR=7.4						

*SOME **14** 01:47:49.4,42˚.15N×77˚.20E,h10km*
*KRNET **14** 01:47:49.6±0.1,42˚.12N×77˚.21E,h20km,mb3.3*
*NNC **14** 01:47:50.0±0.5,42˚.15N×77˚.23E,h0km,mb3.4,mpv3.5,*
Error ellipse: s-maj=3.5km s-min=2.0km az=177.0
ISC 14 01:47:50.2±0.9,**42˚.17N**±0˚.03×**77˚.18E**±0˚.02,**h10**km±6km,
n73,σ**t**0**98**/135,**41C-39D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KDJ	**Kajisay**	**0.04**	**177**	⇑*i*P	**Pg**	**01 47 52.2**	**-0.1**
KDJ	baz=9.0			⇑*i*S	**Sg**	**01 47 54.3**	**+0.5**
	baz=9.0						
ULHL	**Ulahol**	**0.70**	**277**	⇑*i*P	**Pg**	**01 48 03.4**	**-0.4**
ULHL	baz=80			⇑*i*S	**Sg**	**01 48 13.8**	**+0.8**
	baz=80						
ANVS	**Anan'yevo**	**0.71**	**30**	⇓*i*P	**Pg**	**01 48 03.8**	**-0.2**
ANVS	baz=27			⇓*i*S	**Sb**	**01 48 14.1**	**-0.7**
	baz=27						
TNSS	**Tian-Shan**	**0.89**	**349**	⇓*i*P	**Pg**	**01 48 07.4**	**+0.1**
TNSS	baz=48			⇑*i*S	**Sb**	**01 48 20.1**	**+0.1**
	baz=48						
TNSS	**Tian-Shan**	**0.89**	**349**	⇓*i*P	**Pg**	**01 48 07.4**	**+0.1**
TNSS	24nm,0.2s			⇑*i*S	**Sb**	**01 48 20.1**	**+0.1**
	51nm,0.2s						
TNSS	**Tian-Shan**	**0.89**	**349**	P	**Pg**	**01 48 07.4**	**+0.1**
TNSS	21nm,0.1s			S	**Sb**	**01 48 20.1**	**+0.1**
	30nm,0.2s						
PRZ	**Przheval'sk**	**0.96**	**70**	⇑*i*P	**Pg**	**01 48 07.9**	**-0.8**
PRZ	baz=67			⇑*i*S	**Sb**	**01 48 21.3**	**-0.6**
	baz=67						
IZV	**Izvestkoviy**	**0.96**	**335**	⇓*i*P	**Pb**	**01 48 08.9**	**-0.2**
IZV	baz=34			⇑*e*S	**Sb**	**01 48 22.9**	**+0.9**
	baz=34						
IZV	**Izvestkoviy**	**0.96**	**335**	⇓*i*P	**Pb**	**01 48 08.9**	**-0.2**
IZV	34nm,0.2s			⇑*e*S	**Sb**	**01 48 22.9**	**+0.9**
	68nm,0.1s						
IZV	**Izvestkoviy**	**0.96**	**335**	P	**Pb**	**01 48 08.9**	**-0.2**
IZV	28nm,0.1s			S	**Sb**	**01 48 22.9**	**+0.9**
	68nm,0.1s						
BOOM	**Boomskoye usch**	**0.97**	**290**	⇑*i*P	**Pg**	**01 48 08.4**	**-0.5**
BOOM	baz=92			⇑*i*S	**Sb**	**01 48 22.3**	**0.0**
	baz=92						
MDOK	**Medeo**	**1.00**	**355**	⇓*i*P	**Pg**	**01 48 09.2**	**-0.3**
MDOK	baz=53			⇑*i*S	**Sb**	**01 48 23.5**	**+0.4**
	baz=53						
MDOK	**Medeo**	**1.00**	**355**	⇓*i*P	**Pg**	**01 48 09.2**	**-0.3**
MDOK	30nm,0.1s			⇑*i*S	**Sb**	**01 48 23.4**	**+0.4**
	41nm,0.4s						
MDOK	**Medeo**	**1.00**	**355**	Pg	**Pg**	**01 48 09.4**	**-0.1**
MDOK	30nm,0.1s			Lg	Lg	01 48 23.4	
	32nm,0.3s						
KNDC	**Almaty**	**1.06**	**352**	⇑P	**Pn**	**01 48 10.8**	**-0.5**
KNDC	25nm,0.3s			⇑S	**Sn**	**01 48 26.7**	**+0.6**
	61nm,0.6s						
KOTS	**Kotyrbulak**	**1.07**	**357**	⇓*i*P	**Pb**	**01 48 10.6**	**-0.3**
KOTS	baz=56			⇑*e*S	**Sn**	**01 48 25.7**	**-0.7**
	baz=56						
KOTS	**Kotyrbulak**	**1.07**	**357**	⇓*i*P	**Pb**	**01 48 10.6**	**-0.3**
KOTS	71nm,0.2s			⇑*e*S	**Sn**	**01 48 25.8**	**-0.7**
	57nm,0.2s						
KOTS	**Kotyrbulak**	**1.07**	**357**	P	**Pn**	**01 48 11.0**	**-0.5**
KOTS	71nm,0.2s			S	**Sn**	**01 48 25.8**	**-0.6**
	57nm,0.2s						
MTBS	**Maitube**	**1.11**	**330**	⇓*i*P	**Pb**	**01 48 11.4**	**-0.2**
MTBS	baz=31			⇑*i*S	**Sn**	**01 48 27.2**	**-0.2**
	baz=31						
MTBS	**Maitube**	**1.11**	**330**	⇓*i*P	**Pb**	**01 48 11.3**	**-0.2**
MTBS	38nm,0.2s			⇑*i*S	**Sn**	**01 48 27.2**	**-0.2**
	77nm,0.2s						
MTBS	**Maitube**	**1.11**	**330**	P	**Pb**	**01 48 11.4**	**-0.2**
MTBS	34nm,0.1s			S	**Sn**	**01 48 27.2**	**-0.2**
	33nm,0.1s						
KST	**Kastek**	**1.25**	**315**	⇓*i*P	**Pn**	**01 48 13.7**	**-0.2**
KST	baz=16			⇓*i*S	**Sn**	**01 48 31.6**	**+0.6**
	baz=16						
KST	**Kastek**	**1.25**	**315**	⇓*i*P	**Pn**	**01 48 13.7**	**-0.2**
KST	26nm,0.2s			⇓*i*S	**Sn**	**01 48 31.6**	**+0.6**
	29nm,0.3s						
KST	**Kastek**	**1.25**	**315**	P	**Pb**	**01 48 13.9**	**-0.1**
KST	24nm,0.2s			S	**Sn**	**01 48 31.6**	**+0.6**
	29nm,0.3s						
SATY	**Saty**	**1.27**	**45**	⇓*i*P	**Pn**	**01 48 13.5**	**-0.7**
SATY	baz=43			⇓*i*S	**Sb**	**01 48 30.2**	**-0.6**
	baz=43						
SATY	**Saty**	**1.27**	**45**	⇓*i*P	**Pn**	**01 48 13.5**	**-0.7**
SATY	8.2nm,0.1s			⇓*i*S	**Sb**	**01 48 30.2**	**-0.6**
	118nm,0.1s						
SATY	**Saty**	**1.27**	**45**	P	**Pn**	**01 48 13.3**	**-0.9**
SATY	8.2nm,0.1s			S	**Sb**	**01 48 30.2**	**-0.6**
	118nm,0.1s						
TKM2	**Tokmak 2**	**1.39**	**303**	⇓*i*P	**Pb**	**01 48 16.2**	**-0.3**
TKM2	baz=4.0			⇓*i*S	**Sg**	**01 48 35.3**	**+0.4**
	baz=4.0						
TKM2	**Tokmak 2**	**1.39**	**303**	⇓*i*P	**Pb**	**01 48 16.1**	**-0.3**
TKM2	4.0nm,0.2s			⇑*i*S	**Sg**	**01 48 36.0**	**+1.0**
	14nm,0.4s						
DGS	**Degeres**	**1.49**	**316**	*e*P	**Pb**	**01 48 17.9**	**-0.2**
DGS	baz=17			*e*S	**Sb**	**01 48 38.0**	**+0.8**
	baz=17						
DGS	**Degeres**	**1.49**	**316**	*e*P	**Pb**	**01 48 17.9**	**-0.2**
DGS	5.4nm,0.1s			*e*S	**Sb**	**01 48 38.0**	**+0.8**
	14nm,0.2s						
DGS	**Degeres**	**1.49**	**316**	P	**Pb**	**01 48 17.9**	**-0.2**
DGS	5.4nm,0.1s			S	**Sb**	**01 48 38.0**	**+0.8**
	14nm,0.2s						
KURS	**Kuram**	**1.51**	**29**	*e*P	**Pb**	**01 48 18.1**	**-0.2**
KURS	baz=27			*e*S	**Sg**	**01 48 38.3**	**-0.4**
	baz=27						
KURS	**Kuram**	**1.51**	**29**	*e*P	**Pb**	**01 48 18.1**	**-0.2**
KURS	2.6nm,0.1s			*e*S	**Sg**	**01 48 38.4**	**-0.4**
	22nm,0.3s						
KURS	**Kuram**	**1.51**	**29**	P	**Pb**	**01 48 18.1**	**-0.2**
KURS	2.6nm,0.1s			S	**Sg**	**01 48 38.3**	**-0.4**
	17nm,0.3s						
KTBS	**Karatobe**	**1.58**	**347**	⇓*i*P	**Pb**	**01 48 19.8**	**+0.1**
KTBS	baz=46			⇓*i*S	**Sg**	**01 48 41.7**	**+0.5**
	baz=46						
KTBS	**Karatobe**	**1.58**	**347**	⇓*i*P	**Pb**	**01 48 19.8**	**+0.1**
KTBS	8.9nm,0.1s			⇓*i*S	**Sg**	**01 48 41.7**	**+0.5**
	27nm,0.2s						
KTBS	**Karatobe**	**1.58**	**347**	P	**Pb**	**01 48 19.8**	**+0.1**
KTBS	8.9nm,0.1s			S	**Sg**	**01 48 41.7**	**+0.5**
	27nm,0.2s						
UZB	**Uzynbulak**	**1.68**	**54**	⇓*i*P	**Pb**	**01 48 20.1**	**-1.1**
UZB	8.0nm,0.3s			⇓*e*S	**Sb**	**01 48 42.0**	**-0.5**
	52nm,0.3s						
UZB	**Uzynbulak**	**1.68**	**54**	P	**Pb**	**01 48 20.1**	**-1.1**
UZB	8.0nm,0.3s			S	**Sb**	**01 48 42.1**	**-0.5**
	44nm,0.2s						
KPKS	**Kokpek**	**1.71**	**40**	⇑*i*P	**Pb**	**01 48 21.2**	**-0.6**
KPKS	baz=38			⇑*i*S	**Sg**	**01 48 43.6**	**-1.5**
	baz=38						
KPKS	**Kokpek**	**1.71**	**40**	⇑*i*P	**Pb**	**01 48 21.1**	**-0.6**
KPKS	23nm,0.1s			⇑*i*S	**Sg**	**01 48 43.6**	**-1.5**
	164nm,0.3s						
KBK	**Karagaybulak**	**1.72**	**287**	⇑*i*P	**Pb**	**01 48 21.7**	**-0.4**
KBK	baz=89			⇑*i*S	**Sb**	**01 48 44.9**	**+1.1**
	baz=89						
KUU	**Kurty**	**1.83**	**341**	⇓*i*P	**Pb**	**01 48 23.9**	**0.0**
KUU	baz=40			⇑*i*S	**Sg**	**01 48 49.0**	**0.0**
	baz=40						
KUU	**Kurty**	**1.83**	**341**	⇓*i*P	**Pb**	**01 48 23.9**	**0.0**
KUU	11nm,0.3s			⇑*i*S	**Sg**	**01 48 49.0**	**0.0**
	31nm,0.3s						
KUU	**Kurty**	**1.83**	**341**	P	**Pb**	**01 48 23.8**	**0.0**
KUU	11nm,0.3s			S	**Sg**	**01 48 49.0**	**0.0**
	30nm,0.2s						
KRBS	**Karabastau**	**1.88**	**325**	*e*P	**Pb**	**01 48 25.0**	**+0.2**
KRBS	baz=25			*e*S	**Sg**	**01 48 50.5**	**-0.3**
	baz=25						
KRBS	**Karabastau**	**1.88**	**325**	*e*P	**Pb**	**01 48 24.9**	**+0.2**
KRBS	40nm,0.2s			*e*S	**Sg**	**01 48 50.5**	**-0.3**
	36nm,0.2s						
KRBS	**Karabastau**	**1.88**	**325**	Pg	**Pb**	**01 48 24.9**	**+0.2**
KRBS	40nm,0.2s			Lg	Lg	01 48 50.5	
	36nm,0.2s						
SHLS	**Shalkode**	**1.95**	**59**	*e*P	**Pg**	**01 48 30.0**	**+2.4**
SHLS	11nm,0.4s			*e*S	**Sg**	**01 48 59.0**	**+6.0**
	54nm,0.2s						
SHLS	**Shalkode**	**1.95**	**59**	Pg	**Pg**	**01 48 30.4**	**+2.8**
SHLS	5.4nm,0.1s			Lg	Lg	01 48 59.0	
	54nm,0.2s						
CHMS	**Chumysh**	**1.97**	**296**	⇓*i*P	**Pb**	**01 48 25.1**	**-1.2**
CHMS	baz=97			⇓*i*S	**Sb**	**01 48 51.1**	**+0.1**
	baz=97						
FRU1	**Bishkek**	**1.99**	**290**	⇓*i*P	**Pb**	**01 48 25.3**	**-1.3**
FRU1	baz=91			⇓*i*S	**Sb**	**01 48 51.5**	**0.0**
	baz=91						
AAK	**Ala-Archa**	**2.04**	**284**	⇑*i*P	**Pb**	**01 48 26.2**	**-1.3**
AAK	baz=85			⇑*i*S	**Sb**	**01 48 52.6**	**-0.4**
	baz=85						
AAK	**Ala-Archa**	**2.04**	**284**	⇑Pn	**Pb**	**01 48 27.1**	**-0.4**
AAK	5.5nm,0.9s			⇑Sn	**Sg**	**01 48 55.4**	**-0.4**
	16nm,0.6s						
PDGK	**Podgornoye**	**2.06**	**55**	Pg	**Pb**	**01 48 27.3**	**-0.5**
PDGK	1.6nm,0.1s			Lg	Lg	01 48 53.9	
	16nm,0.4s						
PDGK	**Podgornoye**	**2.06**	**55**	⇑Pn	**Pb**	**01 48 26.2**	**-1.7**
PDGK	6.5nm,0.8s			⇓Sn	**Sb**	**01 48 53.4**	**-0.2**
	14nm,0.5s						
ARXS	**Arharly**	**2.10**	**13**	*e*P	**Pb**	**01 48 28.2**	**-0.2**
ARXS	18nm,0.4s			*e*S	**Sg**	**01 48 56.7**	**-0.9**
	94nm,0.1s						
ARXS	**Arharly**	**2.10**	**13**	Pg	**Pb**	**01 48 28.8**	**+0.4**
ARXS	7.3nm,0.3s			Lg	Lg	01 48 56.7	
	94nm,0.1s						
MNBS	**Baschi**	**2.11**	**25**	*e*P	**Pb**	**01 48 29.0**	**+0.3**
MNBS	5.5nm,0.2s			*e*S	**Sg**	**01 48 57.6**	**-0.4**
	114nm,0.3s						
MNBS	**Baschi**	**2.11**	**25**	Pg	**Pb**	**01 48 29.1**	**+0.4**
MNBS	3.9nm,0.1s			Lg	Lg	01 48 57.6	
	77nm,0.2s						
ARLS	**Aral**	**2.15**	**263**	⇑*i*P	**Pn**	**01 48 27.1**	**+0.8**
ARLS	baz=64			⇑*i*S	**Sb**	**01 48 54.6**	**-1.5**
	baz=64						
USP	**Ospenovka**	**2.26**	**300**	⇑*i*P	**Pn**	**01 48 29.0**	**+1.3**
USP	baz=1.0			⇑*i*S	**Sb**	**01 48 58.1**	**-1.0**
	baz=1.0						
SGDS	**Sogindy**	**2.27**	**305**	Pg	**Pb**	**01 48 31.6**	**+0.2**
SGDS	2.6nm,0.1s			Lg	Lg	01 49 01.7	
	12nm,0.4s						
EKS2	**Erkin-Say**	**2.57**	**282**	⇓*i*P	**Pn**	**01 48 33.3**	**+1.3**
EKS2	baz=83			⇓*i*S	**Sn**	**01 49 05.2**	**+1.9**
	baz=83						
AML	**Almayashu**	**2.59**	**270**	⇑*i*P	**Pn**	**01 48 33.7**	**+1.1**
AML	baz=71			⇑*i*S	**Sn**	**01 49 05.9**	**+1.6**
	baz=71						
KTMS	**Ketmen**	**2.66**	**60**	*e*P	**Pb**	**01 48 37.1**	**-1.0**
KTMS	1.4nm,0.1s			*e*S	**Sb**	**01 49 10.9**	**0.0**
	16nm,0.2s						
KTMS	**Ketmen**	**2.66**	**60**	Pg	**Pb**	**01 48 37.1**	**-1.0**
KTMS	1.4nm,0.1s			Lg	Lg	01 49 10.9	
	16nm,0.2s						
DJR	**Jarkent**	**2.88**	**41**	*e*P	**Pb**	**01 48 41.9**	**+0.1**
DJR	2.1nm,0.1s			*e*S	**Sb**	**01 49 19.0**	**+1.8**
	12nm,0.4s						
DJR	**Jarkent**	**2.88**	**41**	Pg	**Pb**	**01 48 41.9**	**+0.1**
DJR	2.1nm,0.1s			Lg	Lg	01 49 19.0	
	12nm,0.4s						
TDK	**Taldyqorghan**	**2.97**	**17**	*e*P	**Pb**	**01 48 43.9**	**+0.7**
TDK	21nm,0.2s			*e*S	**Sg**	**01 49 22.6**	**-2.9**
	36nm,0.3s						
TDK	**Taldyqorghan**	**2.97**	**17**	Pg	**Pb**	**01 48 43.9**	**+0.7**
TDK	16nm,0.2s			Lg	Lg	01 49 22.7	
	36nm,0.3s						
KK31	**Karatay Array**	**5.01**	**283**	⇓Pg	**Pg**	**01 49 23.0**	**-3.1**
	0.7nm,0.7s,baz=98,slow=16						
KK31				⇑Lg	Lg	01 50 28.9	
	2.2nm,0.7s,baz=103,slow=28,SNR=11						

*SOME **14** 01:56:39.4,42˚.13N×77˚.23E,h15km*
*NNC **14** 01:56:39.7±0.6,42˚.15N×77˚.23E,h0km,mb4.0,mpv4.0,*
Error ellipse: s-maj=4.1km s-min=2.3km az=178.0
*KRNET **14** 01:56:39.5±0.1,42˚.13N×77˚.21E,h20km,mb3.9*
ISC 14 01:56:40.2±0.8,**42˚.17N**±0˚.03×**77˚.18E**±0˚.02,**h9**km±6km,
n92,σ**t**9**09**/165,**47C-40D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
KDJ	**Kajisay**	**0.04**	**185**	⇑*i*P	**Pg**	**01 56 41.9**	**-0.3**
KDJ	baz=64			⇑*i*S	**Sg**	**01 56 44.2**	**+0.6**
	baz=64						
ULHL	**Ulahol**	**0.70**	**277**	⇑*i*P	**Pg**	**01 56 53.2**	**-0.6**
ULHL	baz=80			⇑*i*S	**Sg**	**01 57 03.4**	**+0.4**
	baz=80						
ANVS	**Anan'yevo**	**0.71**	**30**	⇓*i*P	**Pg**	**01 56 53.5**	**-0.4**
ANVS	baz=27			⇓*i*S	**Sb**	**01 57 03.9**	**-0.9**
	baz=27						
TNSS	**Tian-Shan**	**0.89**	**349**	⇓*i*P	**Pb**	**01 56 57.0**	**-1.0**
TNSS	baz=48			⇑*i*S	**Sg**	**01 57 09.7**	**+0.8**
	baz=48						
TNSS	**Tian-Shan**	**0.89**	**349**	⇓*i*P	**Pb**	**01 56 57.0**	**-1.0**
TNSS	143nm,0.1s			⇑*i*S	**Sg**	**01 57 09.7**	**+0.8**
	103nm,0.3s						
TNSS	**Tian-Shan**	**0.89**	**349**	P	**Pb**	**01 56 57.0**	**-1.0**
TNSS	143nm,0.1s			S	**Sg**	**01 57 09.8**	**+0.8**
	109nm,0.2s						
PRZ	**Przheval'sk**	**0.95**	**70**	⇓*i*P	**Pb**	**01 56 57.6**	**-1.4**
PRZ	baz=68			⇓*i*S	**Sg**	**01 57 10.7**	**-0.3**
	baz=68						
IZV	**Izvestkoviy**	**0.96**	**334**	⇓*i*P	**Pb**	**01 56 58.5**	**-0.6**
IZV	baz=34			⇓*e*S	**Sg**	**01 57 12.3**	**+1.0**
	baz=34						
IZV	**Izvestkoviy**	**0.96**	**334**	⇓*i*P	**Pb**	**01 56 58.5**	**-0.6**
IZV	187nm,0.2s			⇓*e*S	**Sg**	**01 57 12.3**	**+1.0**
	308nm,0.2s						
IZV	**Izvestkoviy**	**0.96**	**334**	P	**Pb**	**01 56 58.6**	**-0.6**
IZV	187nm,0.2s			S	**Sg**	**01 57 12.3**	**+1.0**
	308nm,0.2s						
BOOM	**Boomskoye usch**	**0.98**	**290**	⇑*i*P	**Pb**	**01 56 58.2**	**-1.2**
BOOM	baz=92			⇑*i*S	**Sb**	**01 57 12.1**	**-0.3**
	baz=92						
MDOK	**Medeo**	**1.00**	**354**	⇑*i*P	**Pb**	**01 56 59.0**	**-0.8**
MDOK	baz=54			⇑*i*S	**Sg**	**01 57 13.2**	**+0.7**
	baz=54						
MDOK	**Medeo**	**1.00**	**354**	⇑*i*P	**Pb**	**01 56 59.0**	**-0.8**
MDOK	140nm,0.2s			⇑*i*S	**Sg**	**01 57 13.1**	**+0.7**
	138nm,0.4s						
MDOK	**Medeo**	**1.00**	**354**	Pg	**Pb**	**01 56 59.0**	**-0.8**
MDOK	140nm,0.1s			Lg	Lg	01 57 13.1	
	144nm,0.5s						
AAA	**Alma-Ata**	**1.06**	**349**	⇓*i*P	**Pn**	**01 57 00.6**	**-0.7**
AAA	baz=49			⇓*e*S	**Sn**	**01 57 15.7**	**-0.5**
	baz=49						
AAA	**Alma-Ata**	**1.06**	**349**	⇓*i*P	**Pn**	**01 57 00.6**	**-0.7**
AAA	483nm,0.2s			⇓*e*S	**Sn**	**01 57 15.7**	**-0.5**
	227nm,0.2s						
KNDC	**Almaty**	**1.06**	**351**	⇓P	**Pn**	**01 57 00.5**	**-0.8**
KNDC	145nm,0.3s			⇑S	**Sn**	**01 57 16.7**	**+0.5**
	196nm,0.4s						
KOTS	**Kotyrbulak**	**1.07**	**357**	⇓*i*P	**Pb**	**01 57 00.3**	**-0.6**
KOTS	baz=56			⇑*e*S	**Sg**	**01 57 15.5**	**+0.9**
	baz=56						
KOTS	**Kotyrbulak**	**1.07**	**357**	⇓*i*P	**Pb**	**01 57 00.3**	**-0.6**
KOTS	478nm,0.3s			⇑*e*S	**Sg**	**01 57 15.5**	**+0.9**
	175nm,0.3s						
KOTS	**Kotyrbulak**	**1.07**	**357**	P	**Pb**	**01 57 00.3**	**-0.6**
KOTS	397nm,0.2s			S	**Sn**	**01 57 15.7**	**-0.8**
	388nm,0.4s						
MTBS	**Maitube**	**1.11**	**330**	⇓*i*P	**Pn**	**01 57 01.0**	**-1.0**
MTBS	baz=30			⇑*i*S	**Sn**	**01 57 16.7**	**-0.8**
	baz=30						
MTBS	**Maitube**	**1.11**	**330**	⇓*i*P	**Pn**	**01 57 01.0**	**-1.0**
MTBS	161nm,0.2s			⇑*i*S	**Sn**	**01 57 16.7**	**-0.8**
	518nm,0.2s						
MTBS	**Maitube**	**1.11**	**330**	P	**Pn**	**01 57 01.0**	**-1.0**
MTBS	155nm,0.2s			S	**Sb**	**01 57 16.4**	**+0.2**
	490nm,0.2s						
KST	**Kastek**	**1.26**	**315**	⇓*i*P	**Pn**	**01 57 03.5**	**-0.5**
KST	baz=15			⇑*e*S	**Sg**	**01 57 21.2**	**+0.6**
	baz=15						
KST	**Kastek**	**1.26**	**315**	⇓*i*P	**Pn**	**01 57 03.5**	**-0.5**
KST	68nm,0.4s			⇑*e*S	**Sg**	**01 57 21.2**	**+0.6**
	473nm,0.3s						
KST	**Kastek**	**1.26**	**315**	P	**Pb**	**01 57 03.6**	**-0.5**
KST	58nm,0.2s			S	**Sg**	**01 57 21.4**	**+0.8**
	473nm,0.3s						
SATY	**Saty**	**1.27**	**45**	⇓*i*P	**Pn**	**01 57 02.8**	**-1.3**
SATY	baz=43			⇓*e*S	**Sn**	**01 57 20.0**	**-1.4**
	baz=43						
SATY	**Saty**	**1.27**	**45**	⇓*i*P	**Pn**	**01 57 02.8**	**-1.3**
SATY	79nm,0.2s			*e*S	**Sn**	**01 57 20.0**	**-1.4**
	338nm,0.1s						
SATY	**Saty**	**1.27**	**45**	P	**Pn**	**01 57 02.9**	**-1.3**
SATY	79nm,0.2s			S	**Sn**	**01 57 20.0**	**-1.4**
	338nm,0.1s						
ZHN	**Zhinishke**	**1.36**	**42**	*e*P	**Pb**	**01 57 04.6**	**-1.3**
ZHN	baz=41			*e*S	**Sb**	**01 57 22.6**	**-0.8**
	baz=41						
ZHN	**Zhinishke**	**1.36**	**42**	*e*P	**Pb**	**01 57 04.6**	**-1.3**
ZHN	37nm,0.1s			*e*S	**Sb**	**01 57 22.6**	**-0.8**
	101nm,0.2s						
ZHN	**Zhinishke**	**1.36**	**42**	P	**Pb**	**01 57 04.6**	**-1.3**
ZHN	37nm,0.1s			S	**Sb**	**01 57 22.6**	**-0.8**
	101nm,0.2s						
TKM2	**Tokmak 2**	**1.39**	**303**	⇑*i*P	**Pb**	**01 57 05.9**	**-0.6**
TKM2	baz=4.0			⇑*i*S	**Sb**	**01 57 25.2**	**+0.7**

baz=4.0
TKM2 Tokmak 2 1.39 303 P Pb 01 57 06.0 -0.6
SNR=72
TKM2 Tokmak 2 1.39 303 ⇑P Pb 01 57 05.9 -0.6
22nm,0.5s
TKM2 ⇑S Sg 01 57 25.4 +0.4
85nm,0.2s
DGS Degeres 1.50 316 *e*P Pb 01 57 08.3 +0.1
baz=17
DGS *e*S Sg 01 57 28.6 +0.3
baz=17
DGS Degeres 1.50 316 *e*P Pb 01 57 08.3 +0.1
31nm,0.2s
DGS *e*S Sg 01 57 28.6 +0.3
301nm,0.5s
DGS Degeres 1.50 316 P Pb 01 57 08.3 +0.1
26nm,0.2s
DGS S Sg 01 57 28.7 +0.3
267nm,0.4s
KURS Kuram 1.51 28 ⇓*i*P Pb 01 57 07.5 -0.8
baz=27
KURS ⇓*i*S Sb 01 57 27.5 -0.1
baz=27
KURS Kuram 1.51 28 ⇓*i*P Pb 01 57 07.5 -0.8
62nm,0.6s
KURS ⇓*i*S Sb 01 57 27.4 -0.1
124nm,0.5s
KURS Kuram 1.51 28 P Pb 01 57 07.5 -0.8
39nm,0.3s
KURS S Sb 01 57 27.5 -0.1
86nm,0.5s
KTBS Karatobe 1.59 347 *e*P Pb 01 57 09.6 -0.1
baz=46
KTBS *e*S Sg 01 57 31.2 0.0
baz=46
KTBS Karatobe 1.59 347 *e*P Pb 01 57 09.6 -0.1
34nm,0.2s
KTBS *e*S Sg 01 57 31.1 0.0
215nm,0.3s
KTBS Karatobe 1.59 347 P Pb 01 57 09.6 -0.1
34nm,0.2s
KTBS S Sg 01 57 31.2 0.0
215nm,0.3s
UZB Uzynbulak 1.67 54 *e*P Pb 01 57 09.7 -1.5
baz=52
UZB *e*S Sb 01 57 31.4 -1.0
baz=52
UZB Uzynbulak 1.67 54 *e*P Pb 01 57 09.7 -1.5
38nm,0.2s
UZB *e*S Sb 01 57 31.4 -1.0
334nm,0.3s
UZB Uzynbulak 1.67 54 P Pb 01 57 09.7 -1.5
38nm,0.2s
UZB S Sb 01 57 31.4 -1.0
334nm,0.3s
KPKS Kokpek 1.70 40 ⇓*i*P Pb 01 57 10.5 -1.2
baz=39
KPKS ⇑*e*S Sb 01 57 32.7 -0.6
baz=39
KPKS Kokpek 1.70 40 ⇓*i*P Pb 01 57 10.5 -1.2
106nm,0.1s
KPKS ⇑*e*S Sb 01 57 32.7 -0.6
670nm,0.2s
KBK Karagaybulak 1.73 287 ⇑*i*P Pb 01 57 11.6 -0.6
baz=88
KBK ⇑*i*S Sb 01 57 34.8 +0.8
baz=88
KBK Karagaybulak 1.73 287 P Pb 01 57 11.8 -0.4
SNR=54
KUU Kurty 1.83 341 *e*P Pb 01 57 13.9 0.0
baz=40
KUU *e*S Sg 01 57 38.6 -0.5
baz=40
KUU Kurty 1.83 341 *e*P Pb 01 57 13.9 0.0
24nm,0.2s
KUU *e*S Sg 01 57 38.6 -0.5
196nm,0.3s
KUU Kurty 1.83 341 P Pb 01 57 14.2 +0.3
24nm,0.2s
KUU S Sg 01 57 38.6 -0.5
196nm,0.3s
KRBS Karabastau 1.89 325 *e*P Pb 01 57 15.0 +0.2
baz=25
KRBS *e*S Sg 01 57 40.5 -0.4
baz=25
KRBS Karabastau 1.89 325 *e*P Pb 01 57 15.0 +0.2
64nm,0.4s
KRBS *e*S Sg 01 57 40.5 -0.4
429nm,0.5s
KRBS Karabastau 1.89 325 P Pb 01 57 15.1 +0.2
59nm,0.3s
KRBS S Sg 01 57 40.5 -0.4
384nm,0.3s
SHLS Shalkode 1.95 59 *e*P Pg 01 57 19.9 +2.3
31nm,0.2s
SHLS *e*S Sg 01 57 48.6 +5.8
287nm,0.3s
SHLS Shalkode 1.95 59 Pg Pg 01 57 19.9 +2.3
31nm,0.2s
SHLS Lg Lg 01 57 48.6
287nm,0.3s
CHMS Chumysh 1.98 296 ⇓*i*P Pb 01 57 15.1 -1.3
baz=96
CHMS ⇓*i*S Sb 01 57 41.1 0.0
baz=96
CHMS Chumysh 1.98 296 P Pb 01 57 15.5 -0.9
SNR=13
UCH Uchtor 1.98 273 ⇓*i*P Pb 01 57 15.1 -1.6
baz=74
UCH ⇓*i*S Sb 01 57 41.1 -0.6
baz=74
UCH Uchtor 1.98 273 P Pb 01 57 16.2 -0.5
SNR=9.9
FRU1 Bishkek 2.00 290 ⇓*i*P Pb 01 57 15.2 -1.5
baz=91
FRU1 ⇓*i*S Sb 01 57 41.4 -0.2
baz=91
AAK Ala-Archa 2.05 284 ⇑*i*P Pb 01 57 15.8 -1.8
baz=85
AAK ⇑*i*S Sb 01 57 42.4 -0.8
baz=85
AAK Ala-Archa 2.05 284 P Pb 01 57 16.8 -0.8
SNR=50
AAK Ala-Archa 2.05 284 ⇑Pn Pb 01 57 16.8 -0.8
12nm,0.2s
AAK ⇑Sn Sb 01 57 44.8 +1.6
108nm,0.6s
PDGK Podgornoye 2.06 55 Pg Pb 01 57 16.5 -1.3
9.8nm,0.3s
PDGK Lg Lg 01 57 42.9
77nm,0.4s
PDGK Podgornoye 2.06 55 ⇑Pn Pb 01 57 15.9 -1.9
10.0nm,0.4s
PDGK ⇑Sn Sb 01 57 43.5 0.0
112nm,0.6s
ARXS Arharly 2.10 13 *e*P Pb 01 57 18.5 +0.1
131nm,0.3s
ARXS *e*S Sg 01 57 46.2 -1.4
227nm,0.3s
ARXS Arharly 2.10 13 Pg Pb 01 57 18.5 +0.1
131nm,0.3s
ARXS Lg Lg 01 57 46.2
206nm,0.5s
MNBS Baschi 2.11 25 *e*P Pb 01 57 18.9 +0.2
36nm,0.1s
MNBS *e*S Sg 01 57 46.9 -1.0
287nm,0.4s
MNBS Baschi 2.11 25 Pg Pb 01 57 18.9 +0.2
36nm,0.1s
MNBS Lg Lg 01 57 46.9
287nm,0.4s
ARLS Aral 2.15 263 ⇑*i*P Pn 01 57 16.9 +0.5
baz=64
ARLS ⇑*i*S Sb 01 57 44.5 -1.8
baz=64
USP Ospenovka 2.26 300 ⇑*i*P Pb 01 57 19.1 -2.1
baz=1.0
USP ⇑*i*S Sb 01 57 47.8 -1.5
baz=1.0
USP Ospenovka 2.26 300 P Pb 01 57 20.0 -1.2
SNR=13
SGDS Sogindy 2.28 305 Pg Pb 01 57 21.4 -0.1
8.0nm,0.2s
SGDS Lg Lg 01 57 51.4
84nm,0.3s
EKS2 Erkin-Say 2.57 282 ⇓*i*P Pn 01 57 23.3 +1.2
baz=83
EKS2 ⇓*i*S Sn 01 57 55.0 +1.5
baz=83
EKS2 Erkin-Say 2.57 282 P Pb 01 57 25.1 -1.4
SNR=28
AML Almayashu 2.59 270 ⇑*i*P Pn 01 57 23.5 +0.8
baz=71
AML ⇑*i*S Sn 01 57 55.7 +1.2
baz=71
AML Almayashu 2.59 270 P Pb 01 57 26.8 -0.2
SNR=68
KTMS Ketmen 2.66 60 *e*P Pb 01 57 27.0 -1.0
6.1nm,0.3s
KTMS *e*S Sb 01 58 00.9 +0.2
88nm,0.3s
KTMS Ketmen 2.66 60 Pg Pb 01 57 27.0 -1.0
6.1nm,0.3s
KTMS Lg Lg 01 57 59.9
88nm,0.3s
DJR Jarkent 2.88 40 *e*P Pb 01 57 31.3 -0.5
14nm,0.3s
DJR *e*S Sb 01 58 08.0 +0.9
40nm,0.3s
DJR Jarkent 2.88 40 Pg Pb 01 57 31.2 -0.5
10nm,0.2s
DJR Lg Lg 01 58 08.0
40nm,0.3s
TDK Taldyqorghan 2.97 17 *e*P Pb 01 57 33.2 0.0
54nm,0.4s
TDK *e*S Sb 01 58 11.9 +2.3
215nm,0.4s
MRKS Merke 2.98 282 *e*P Pb 01 57 34.0 +0.5
12nm,0.6s
MRKS *e*S Sb 01 58 13.3 +3.1
131nm,0.4s
ARSB Arslanbob 3.25 256 ⇓*e*P Pn 01 57 32.0 +0.5
baz=57
ARSB ⇓*i*S Sn 01 58 11.0 +0.6
baz=57
MNAS Manas 3.48 277 ⇑*i*P Pn 01 57 35.6 +0.9
baz=77
MNAS ⇑*i*S Sn 01 58 16.8 +0.7
baz=77
KK31 Karatay Array 5.01 283 ⇑Pg Pg 01 58 14.2 -1.9
0.8nm,0.3s,baz=100,slow=15,SNR=13
KK31 ⇑Lg Lg 01 59 20.5
5.9nm,0.4s,baz=98,slow=29,SNR=14
MAKZ Makanchi 5.77 35 ⇑Pn Pn 01 58 08.7 +2.8
2.1nm,1.1s
MAKZ ⇑Lg Lg 01 59 41.6
2.7nm,0.5s
MK31 Makanchi Array 5.89 37 ⇑Pn Pn 01 58 09.6 +2.0
0.5nm,0.2s,baz=183,slow=13,SNR=40
MK31 ⇑Lg Lg 01 59 46.5
1.3nm,0.4s,baz=214,slow=28,SNR=4.9

KRNET ***14*** *02:08:49.5±0.1, 42.°09N×77.°14E, h26km, mb3.1*
SOME ***14*** *02:08:52.5, 42.°10N×77.°20E, h20km*
ISC 14 02:08:51.2±1.1, 42.°07N±0.°04×77.°10E±0.°02, h19km±3km, n44, σ1s20/75, 20C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KDJ	**Kajisay**	**0.08**	**46**	⇑*i*P		**Pg**	**02 08 53.9**	**-1.3**
	baz=51							
KDJ				⇑*i*S		**Sg**	**02 08 57.2**	**-0.7**
	baz=51							
ULHL	**Ulahol**	**0.66**	**286**	⇑*i*P		**Pb**	**02 09 02.6**	**-1.6**
	baz=83							
ULHL				⇑*i*S		**Sb**	**02 09 12.6**	**-0.4**
	baz=83							
ULHL	**Ulahol**	**0.66**	**286**	P		**Pb**	**02 09 02.9**	**-1.3**
	SNR=9.3							
ANVS	**Anan'yevo**	**0.83**	**30**	⇑*i*P		**Pb**	**02 09 04.2**	**-2.8**
	baz=29							
ANVS				⇑*i*S		**Sb**	**02 09 16.2**	**-1.6**
	baz=29							
BOOM	**Boomskoye usch**	**0.96**	**296**	⇑*i*P		**Pb**	**02 09 07.7**	**-1.6**
	baz=95							
BOOM				⇑*i*S		**Sb**	**02 09 21.3**	**-0.3**
	baz=95							
TNSS	**Tian-Shan**	**0.97**	**353**	*e*P		**Pb**	**02 09 07.3**	**-2.4**
	baz=51							
TNSS				*e*S		**Sb**	**02 09 20.1**	**-2.1**
	baz=51							
TNSS	**Tian-Shan**	**0.97**	**353**	*e*P		**Pg**	**02 09 10.2**	**+0.5**
	45nm,0.1s							
TNSS				*e*S		**Sg**	**02 09 22.8**	**-0.3**
	75nm,0.2s							
IZV	**Izvestkoviy**	**1.03**	**340**	*e*P		**Pg**	**02 09 11.5**	**+0.2**
	78nm,0.2s							
IZV				*e*S		**Sg**	**02 09 24.8**	**-0.1**
	197nm,0.1s							
PRZ	**Przheval'sk**	**1.05**	**66**	⇑*i*P		**Pb**	**02 09 08.5**	**-2.3**
	baz=67							
PRZ				⇑*i*S		**Sb**	**02 09 22.3**	**-2.0**
	baz=67							
MDOK	**Medeo**	**1.09**	**358**	*e*P		**Pb**	**02 09 09.2**	**-2.4**
	baz=56							
MDOK				*e*S		**Sb**	**02 09 23.1**	**-2.4**
	baz=56							
MDOK	**Medeo**	**1.09**	**358**	*e*P		**Pn**	**02 09 12.2**	**+0.6**
	33nm,0.2s							
MDOK				*e*S		**Sn**	**02 09 26.0**	**-0.2**
	97nm,0.3s							
KOTS	**Kotyrbulak**	**1.16**	**0**	*e*P		**Pg**	**02 09 13.4**	**+0.6**
	140nm,0.1s							
KOTS				*e*S		**Sn**	**02 09 28.2**	**+0.2**
	262nm,0.2s							
MTBS	**Maitube**	**1.17**	**335**	*e*P		**Pn**	**02 09 11.3**	**-1.3**
	baz=33							
MTBS				*e*S		**Sb**	**02 09 26.6**	**-1.0**
	baz=33							
MTBS	**Maitube**	**1.17**	**335**	*e*P		**Pg**	**02 09 14.0**	**+0.1**
	36nm,0.2s							
MTBS				*e*S		**Sg**	**02 09 29.5**	**+0.3**
	212nm,0.1s							
KST	**Kastek**	**1.28**	**320**	*e*P		**Pn**	**02 09 13.2**	**-1.0**
	baz=18							
KST				*e*S		**Sb**	**02 09 29.9**	**-1.1**
	baz=18							
KST	**Kastek**	**1.28**	**320**	*e*P		**Pg**	**02 09 16.2**	**+0.1**
	57nm,0.2s							
KST				*e*S		**Sg**	**02 09 33.3**	**+0.4**
	156nm,0.3s							
SATY	**Saty**	**1.38**	**44**	*e*P		**Pn**	**02 09 16.5**	**+0.9**
	37nm,0.3s							
SATY				*e*S		**Sn**	**02 09 33.5**	**+0.1**
	156nm,0.1s							
TKM2	**Tokmak 2**	**1.40**	**308**	⇑*i*P		**Pn**	**02 09 15.5**	**-0.4**
	baz=6.0							
TKM2				⇑*i*S		**Sn**	**02 09 34.1**	**+0.2**
	baz=6.0							
TKM2	**Tokmak 2**	**1.40**	**308**	P		**Pb**	**02 09 15.6**	**-1.2**
	SNR=33							
ZHN	**Zhinishke**	**1.47**	**42**	*e*P		**Pb**	**02 09 18.3**	**+0.3**
	37nm,0.1s							
ZHN				*e*S		**Sb**	**02 09 36.9**	**+0.5**
	131nm,0.1s							
DGS	**Degeres**	**1.52**	**321**	*e*P		**Pg**	**02 09 20.5**	**-0.2**
	21nm,0.2s							
DGS				*e*S		**Sg**	**02 09 40.7**	**+0.1**
	140nm,0.3s							
KURS	**Kuram**	**1.62**	**29**	*e*P		**Pn**	**02 09 18.6**	**-0.2**
	baz=28							
KURS				*e*S		**Sn**	**02 09 39.3**	**+0.2**
	baz=28							
KURS	**Kuram**	**1.62**	**29**	*e*P		**Pb**	**02 09 21.1**	**+0.6**
	11nm,0.2s							
KTBS	**Karatobe**	**1.67**	**350**	*e*P		**Pb**	**02 09 22.5**	**+1.2**
	14nm,0.2s							
KBK	**Karagaybulak**	**1.70**	**291**	⇑*i*P		**Pn**	**02 09 20.2**	**+0.2**
	baz=90							
KBK				⇑*i*S		**Sn**	**02 09 42.4**	**+1.2**
	baz=90							
KBK	**Karagaybulak**	**1.70**	**291**	P		**Pg**	**02 09 24.4**	**+0.5**
	SNR=21							
UZB	**Uzynbulak**	**1.78**	**52**	*e*P		**Pn**	**02 09 20.4**	**-0.7**
	baz=52							
UZB				*e*S		**Sn**	**02 09 42.2**	**-1.0**
	baz=52							
UZB	**Uzynbulak**	**1.78**	**52**	*e*P		**Pb**	**02 09 23.0**	**-0.3**
	62nm,0.3s							
KPKS	**Kokpek**	**1.82**	**39**	*e*P		**Pn**	**02 09 21.3**	**-0.2**
	baz=39							
KPKS				*e*S		**Sn**	**02 09 44.1**	**0.0**
	baz=39							
KPKS	**Kokpek**	**1.82**	**39**	*e*P		**Pb**	**02 09 23.6**	**-0.3**
	100nm,0.3s							
KUU	**Kurty**	**1.90**	**343**	*e*P		**Pb**	**02 09 26.3**	**+0.9**
	28nm,0.2s							
KUU				*e*S		**Sb**	**02 09 50.4**	**+1.6**
	292nm,0.3s							
UCH	**Uchtor**	**1.93**	**275**	⇑*i*P		**Pn**	**02 09 23.6**	**+0.2**
	baz=75							
UCH				⇑*i*S		**Sn**	**02 09 48.1**	**+0.8**
	baz=75							
UCH	**Uchtor**	**1.93**	**275**	P		**Pg**	**02 09 29.2**	**+0.9**
	SNR=5.2							
KRBS	**Karabastau**	**1.93**	**328**	*e*P		**Pg**	**02 09 27.5**	**-0.8**
	87nm,0.2s							
KRBS				*e*S		**Sg**	**02 09 53.0**	**-0.5**
	224nm,0.2s							
CHMS	**Chumysh**	**1.97**	**299**	⇑*i*P		**Pn**	**02 09 23.8**	**+0.3**
	baz=98							
CHMS				⇑*i*S		**Sn**	**02 09 48.0**	**+0.3**
	baz=98							
CHMS	**Chumysh**	**1.97**	**299**	P		**Pb**	**02 09 28.1**	**+1.7**
	SNR=7.3							
AAK	**Ala-Archa**	**2.01**	**287**	P		**Pg**	**02 09 29.6**	**-0.3**
	SNR=21							
SHLS	**Shalkode**	**2.05**	**57**	*e*P		**Pg**	**02 09 32.6**	**+1.9**
	75nm,0.2s							
SHLS				*e*S		**Sg**	**02 10 01.7**	**+4.3**
	316nm,0.2s							
ARLS	**Aral**	**2.08**	**265**	⇑*i*P		**Pn**	**02 09 25.0**	**-0.2**
	baz=65							
ARLS				⇑*i*S		**Sn**	**02 09 50.8**	**+0.1**
	baz=65							
ARXS	**Arharly**	**2.21**	**14**	*e*P		**Pb**	**02 09 31.2**	**+0.7**
	19nm,0.2s							
ARXS				*e*S		**Sb**	**02 09 59.2**	**+1.8**
	150nm,0.2s							
MNBS	**Baschi**	**2.22**	**25**	*e*P		**Pb**	**02 09 30.7**	**-0.1**
	11nm,0.4s							
MNBS				*e*S		**Sb**	**02 09 58.4**	**+0.5**
	184nm,0.3s							
USP	**Ospenovka**	**2.26**	**303**	P		**Pb**	**02 09 32.6**	**+1.3**
	SNR=24							
EKS2	**Erkin-Say**	**2.53**	**285**	P		**Pg**	**02 09 39.8**	**0.0**
	SNR=9.3							
AML	**Almayashu**	**2.54**	**272**	P		**Pb**	**02 09 36.8**	**+0.5**
	SNR=22							

KRNET 14 02:08:58.1±0.1, 42.°09N×77.°15E, h21km, mb3.3, 14C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KDJ	**Kajisay**	**0.04**	**28**	⇓*i*P		Pb	02 09 00.5	-1.6
	baz=42							
KDJ				⇓*i*S		Sb	02 09 02.7	-2.1
	baz=42							
ULHL	**Ulahol**	**0.69**	**283**	⇑*i*P		Pb	02 09 11.3	-0.4
	baz=83							
ULHL				⇑*i*S		Sb	02 09 21.3	+0.3
	baz=83							
ANVS	**Anan'yevo**	**0.79**	**29**	⇓*i*P		Pb	02 09 13.0	-0.2
	baz=29							
ANVS				⇓*i*S		Sb	02 09 24.3	+0.8
	baz=29							
BOOM	**Boomskoye usch**	**0.98**	**294**	⇑*i*P		Pb	02 09 16.7	+0.1
	baz=94							
BOOM				⇑*i*S		Sb	02 09 29.6	+0.4
	baz=94							
PRZ	**Przheval'sk**	**1.00**	**67**	⇓*i*P		Pn	02 09 17.2	+0.1
	baz=67							
PRZ				⇓*i*S		Sn	02 09 30.6	-0.1
	baz=67							
TKM2	**Tokmak 2**	**1.42**	**306**	⇑*i*P		Pb	02 09 24.3	+0.3
	baz=6.0							
TKM2				⇑*i*S		Sb	02 09 43.1	+1.4
	baz=6.0							
KBK	**Karagaybulak**	**1.73**	**290**	⇑*i*P		Pb	02 09 29.8	+0.6
	baz=90							
KBK				⇑*i*S		Sb	02 09 52.7	+2.1
	baz=90							
UCH	**Uchtor**	**1.97**	**275**	⇑*i*P		Pb	02 09 33.5	0.0
	baz=75							
UCH				⇑*i*S		Sb	02 09 59.1	+1.4
	baz=75							
FRU1	**Bishkek**	**2.00**	**292**	⇑*e*P		Pb	02 09 33.7	-0.1
	baz=92							
FRU1				⇑*e*S		Sb	02 09 59.4	+1.1
	baz=92							
ARLS	**Aral**	**2.12**	**265**	⇑*i*P		Pb	02 09 35.1	-0.9
	baz=65							
ARLS				⇑*i*S		Sb	02 10 02.8	+0.9
	baz=65							

IDC ***14*** *02:09:11.4±1.3, 41.°94N×77.°23E, h0km, mb3.7/2, mb1 3.7/7, mb1mx3.4/47, mbtmp3.6/7, ML3.4/5, MS3.3/1, Ms1 3.3/1, ms1mx2.6/39, Error ellipse: s-maj=19.7km s-min=15.4km az=127.0*
MOS ***14*** *02:09:13.7±1.1, 42.°06N×77.°15E, h11km, mb3.9/3, Error ellipse: s-maj=6.8km s-min=3.8km az=81.6*
SOME ***14*** *02:09:13.8, 42.°08N×77.°18E, h15km, MS3.3*
NNC ***14*** *02:09:14.6±0.7, 42.°13N×77.°16E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=4.9km s-min=3.1km az=167.0*
NEIC ***14*** *02:09:15.0±1.5, 42.°23N±0.°06×77.°13E±0.°03, h10km±2km, mb4.3/2, Error ellipse: s-maj=9.9km s-min=3.0km az=162.0*
KRNET ***14*** *02:09:14.4±0.1, 42.°12N×77.°16E, h22km, mb4.7*
ISC 14 02:09:14.3±0.7, 42.°15N±0.°02×77.°13E±0.°01, h14km±4km, n154, σ1s51/243, 73C-51D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KDJ	**Kajisay**	**0.04**	**111**	⇑*i*P		**Pg**	**02 09 16.9**	**-0.3**
	baz=76							
KDJ				⇑*i*S		**Sg**	**02 09 19.0**	**-0.2**
	baz=76							
KDJ	**Kajisay**	**0.04**	**111**	PG		**Pg**	**02 09 16.6**	**-0.6**
KDJ	**Kajisay**	**0.04**	**111**	Pg		**Pg**	**02 09 16.6**	**-0.6**
KDJ				Sg		**Sg**	**02 09 19.6**	**+0.5**
ULHL	**Ulahol**	**0.67**	**279**	⇑*i*P		**Pg**	**02 09 27.3**	**-0.1**
	baz=81							
ULHL				⇑*i*S		**Sb**	**02 09 37.2**	**+0.2**
	baz=81							
ANVS	**Anan'yevo**	**0.75**	**32**	⇑*i*P		**Pg**	**02 09 28.7**	**-0.3**
	baz=29							
ANVS				⇑*i*S		**Sg**	**02 09 39.4**	**+0.5**
	baz=29							
TNSS	**Tian-Shan**	**0.90**	**352**	⇓*i*P		**Pg**	**02 09 32.0**	**+0.2**
	baz=50							
TNSS				⇓*i*S		**Sb**	**02 09 44.8**	**+0.9**
	baz=50							
TNSS	**Tian-Shan**	**0.90**	**352**	⇓*i*P		**Pg**	**02 09 32.0**	**+0.2**
	677nm,0.1s							
TNSS				⇓*i*S		**Sb**	**02 09 44.8**	**+0.9**
	1μm,0.2s							
TNSS	**Tian-Shan**	**0.90**	**352**	⇓*i*PG		**Pg**	**02 09 32.0**	**+0.2**
TNSS				*i* S		**Sb**	**02 09 44.8**	**+0.9**
BOOM	**Boomskoye usch**	**0.95**	**292**	⇓*e*P		**Pb**	**02 09 32.3**	**-0.2**
	baz=93							
BOOM				⇓*i*S		**Sg**	**02 09 45.6**	**+0.5**
	baz=93							
BOOM	**Boomskoye usch**	**0.95**	**292**	Pg		**Pb**	**02 09 32.5**	**0.0**
BOOM				Sg		**Sg**	**02 09 45.3**	**+0.2**
IZV	**Izvestkoviy**	**0.97**	**337**	⇓*i*P		**Pb**	**02 09 33.2**	**+0.3**
	baz=36							
IZV				⇓*i*S		**Sg**	**02 09 47.1**	**+1.3**
	baz=36							
IZV	**Izvestkoviy**	**0.97**	**337**	⇓*i*P		**Pb**	**02 09 33.2**	**+0.3**
	403nm,0.2s							
IZV				⇓*i*S		**Sg**	**02 09 47.1**	**+1.3**
	1μm,0.3s							
IZV	**Izvestkoviy**	**0.97**	**337**	⇓*i*PG		**Pb**	**02 09 33.2**	**+0.3**
IZV				*i* S		**Sg**	**02 09 47.1**	**+1.3**
PRZ	**Przheval'sk**	**1.00**	**70**	⇑*i*P		**Pb**	**02 09 33.1**	**-0.4**
	baz=68							
PRZ				⇑*i*S		**Sg**	**02 09 46.8**	**0.0**
	baz=68							
PRZ	**Przheval'sk**	**1.00**	**70**	PG		**Pb**	**02 09 32.7**	**-0.8**
PRZ							02 09 46.4	
PRZ	**Przheval'sk**	**1.00**	**70**	Pg		**Pb**	**02 09 32.7**	**-0.8**
PRZ				Sg		**Sb**	**02 09 46.4**	**-0.2**
MDOK	**Medeo**	**1.02**	**357**	⇑*i*P		**Pb**	**02 09 34.0**	**+0.2**
	baz=56							
MDOK				⇑*i*S		**Sg**	**02 09 48.1**	**+0.7**
	baz=56							
MDOK	**Medeo**	**1.02**	**357**	⇑*i*P		**Pb**	**02 09 34.0**	**+0.2**
	494nm,0.3s							
MDOK				⇑*i*S		**Sg**	**02 09 48.1**	**+0.7**

1μm,0.5s
MDOK Medeo 1.02 357⇑*i*PG Pb 02 09 34.0 +0.2
MDOK *i*S Sg 02 09 48.1 +0.7
AAA Alma-Ata 1.07 352⇓*i*P Pg 02 09 35.6 +0.5
3μm,0.3s
AAA *e*S Sn 02 09 51.0 +1.3
2μm,0.4s
AAA Alma-Ata 1.07 352⇓*i*PG Pg 02 09 35.6 +0.5
AAA *e*S Sn 02 09 51.0 +1.3
KNDC Almaty 1.08 354⇑P Pb 02 09 35.4 +0.6
646nm,0.4s
KNDC ⇑S Sn 02 09 51.0 +1.2
4μm,0.7s
KNDC Almaty 1.08 354 PG Pg 02 09 35.7 +0.6
KNDC S Sn 02 09 51.4 +1.6
KOTS Kotyrbulak 1.09 359⇓*i*P Pb 02 09 35.2 +0.2
baz=58
KOTS ⇓*i*S Sn 02 09 50.7 +0.5
baz=58
KOTS Kotyrbulak 1.09 359⇓*i*P Pb 02 09 35.2 +0.2
2μm,0.1s
KOTS ⇓*i*S Sn 02 09 50.7 +0.5
5μm,0.2s
KOTS Kotyrbulak 1.09 359⇓*i*PG Pb 02 09 35.2 +0.2
MTBS Maitube 1.11 333⇓*i*P Pb 02 09 35.6 +0.3
baz=32
MTBS ⇑*i*S Sn 02 09 51.4 +0.7
baz=32
MTBS Maitube 1.11 333⇓*i*P Pb 02 09 35.6 +0.3
525nm,0.2s
MTBS ⇑*i*S Sn 02 09 51.3 +0.7
3μm,0.3s
MTBS Maitube 1.11 333⇓*i*PG Pb 02 09 35.6 +0.3
MTBS *i*S Sn 02 09 51.3 +0.7
KST Kastek 1.24 317⇓*i*P Pn 02 09 37.9 +0.6
baz=17
KST ⇑*i*S Sg 02 09 55.6 +1.1
baz=17
KST Kastek 1.24 317⇓*i*P Pn 02 09 37.9 +0.6
967nm,0.3s
KST ⇑*i*S Sg 02 09 55.6 +1.1
3μm,0.4s
KST Kastek 1.24 317⇓*i*PG Pn 02 09 37.9 +0.6
KST *i*S Sg 02 09 55.6 +1.1
SATY Saty 1.31 45⇑*i*P Pn 02 09 38.3 0.0
baz=44
SATY ⇓*i*S Sn 02 09 56.2 +0.5
baz=44
SATY Saty 1.31 45⇑*i*P Pn 02 09 38.3 0.0
634nm,0.4s
SATY ⇓*i*S Sn 02 09 56.2 +0.5
3μm,0.1s
SATY Saty 1.31 45⇑*i*PG Pn 02 09 38.3 0.0
SATY *i*S Sn 02 09 56.2 +0.5
TKM2 Tokmak 2 1.37 305⇑*i*P Pb 02 09 40.1 +0.3
baz=5.0
TKM2 ⇑*i*S Sg 02 09 59.2 +0.6
baz=5.0
TKM2 Tokmak 2 1.37 305 ⇑P Pb 02 09 40.1 +0.3
225nm,0.2s
TKM2 ⇑S Sg 02 09 59.4 +0.8
1μm,0.4s
TKM2 Tokmak 2 1.37 305 PG Pn 02 09 39.9 +0.7
TKM2 S Sg 02 09 59.3 +0.6
ZHN Zhinishke 1.41 43⇑*i*P Pn 02 09 39.7 +0.2
baz=42
ZHN ⇓*i*S Sb 02 09 58.5 +0.4
baz=42
ZHN Zhinishke 1.41 43⇑*i*P Pn 02 09 39.7 +0.2
272nm,0.1s
ZHN ⇓*i*S Sb 02 09 58.5 +0.4
2μm,0.1s
ZHN Zhinishke 1.41 43⇑*i*PG Pn 02 09 39.7 +0.2
ZHN *i*S Sb 02 09 58.5 +0.4
DGS Degeres 1.48 318⇑*i*P Pb 02 09 42.4 +0.7
baz=18
DGS ⇓*i*S Sg 02 10 02.8 +0.7
baz=18
DGS Degeres 1.48 318⇑*i*P Pb 02 09 42.4 +0.7
280nm,0.1s
DGS ⇓*i*S Sg 02 10 02.8 +0.7
2μm,0.4s
DGS Degeres 1.48 318⇑*i*PN Pb 02 09 42.4 +0.7
DGS *i*S Sg 02 10 02.8 +0.7
KURS Kuram 1.55 29⇑*i*P Pn 02 09 41.9 +0.5
baz=28
KURS ⇓*e*S Sb 02 10 03.0 +0.9
baz=28
KURS Kuram 1.55 29⇑*i*P Pn 02 09 41.9 +0.5
102nm,0.2s
KURS ⇓*e*S Sb 02 10 03.0 +0.9
1μm,0.6s
KURS Kuram 1.55 29⇑*i*PN Pn 02 09 41.9 +0.5
KURS *e*S Sb 02 10 03.0 +0.9
KURS Kuram 1.55 29 *e*S Pn 02 09 41.5 +0.1
102nm,0.4s
KTBS Karatobe 1.60 348⇓*i*P Pb 02 09 44.2 +0.6
baz=48
KTBS ⇓*i*S Sg 02 10 06.2 +0.4
baz=48
KTBS Karatobe 1.60 348⇓*i*P Pb 02 09 44.2 +0.6
225nm,0.2s
KTBS ⇓*i*S Sg 02 10 06.3 +0.4
6μm,0.4s
KTBS Karatobe 1.60 348⇓*i*PN Pb 02 09 44.2 +0.6
KTBS *i*S Sg 02 10 06.3 +0.4
KTBS Karatobe 1.60 348 *e*S Pb 02 09 44.2 +0.6
234nm,0.3s
KBK Karagaybulak 1.69 288⇓*i*P Pb 02 09 45.7 +0.4
baz=89
KBK ⇓*i*S Sg 02 10 08.9 0.0
baz=89
UZB Uzynbulak 1.72 54⇑*i*P Pn 02 09 44.9 +1.0
baz=53
UZB ⇓*i*S Sb 02 10 07.5 +0.3
baz=53
UZB Uzynbulak 1.72 54⇑*i*P Pn 02 09 44.9 +1.0
916nm,0.5s
UZB ⇓*i*S Sb 02 10 07.5 +0.3
3μm,0.4s
UZB Uzynbulak 1.72 54⇑*i*PN Pn 02 09 44.9 +1.0
UZB *i*S Sb 02 10 07.5 +0.3
UZB Uzynbulak 1.72 54 *e*S Pn 02 09 44.8 +1.0
900nm,0.4s
KPKS Kokpek 1.75 40⇑*i*P Pb 02 09 45.9 -0.3
KPKS ⇓*i*S Sb 02 10 08.5 +0.5
6μm,0.4s
KPKS Kokpek 1.75 40⇑*i*PN Pb 02 09 45.9 -0.3
KPKS *i*S Sb 02 10 08.5 +0.5
KPKS Kokpek 1.75 40 *e*S Pb 02 09 45.9 -0.3
499nm,0.3s
KUU Kurty 1.84 342 *e*P Pb 02 09 48.4 +0.7
baz=42
KUU *e*S Sg 02 10 13.0 -0.5
baz=42
KUU Kurty 1.84 342 *e*P Pb 02 09 48.4 +0.7
520nm,0.2s
KUU *e*S Sg 02 10 13.0 -0.5
968nm,0.3s
KUU Kurty 1.84 342 *e*PN Pb 02 09 48.4 +0.7
KUU *e*S Sg 02 10 13.0 -0.5
KRBS Karabastau 1.88 326 *e*P Pb 02 09 49.3 +0.9
baz=26
KRBS *e*S Sg 02 10 14.6 -0.3
baz=26
KRBS Karabastau 1.88 326 *e*P Pb 02 09 49.3 +0.9
2μm,0.2s
KRBS *e*S Sg 02 10 14.6 -0.3
1μm,0.3s
KRBS Karabastau 1.88 326 *e*PN Pb 02 09 49.3 +0.9
KRBS *e*S Sg 02 10 14.6 -0.3
UCH Uchtor 1.94 273⇑*i*P Pb 02 09 49.5 -0.2
baz=74
UCH ⇑*i*S Sb 02 10 14.8 +0.8
baz=74
CHMS Chumysh 1.95 297⇑*i*P Pb 02 09 49.5 -0.1
baz=97
CHMS ⇑*i*S Sb 02 10 14.9 +1.1
baz=97
FRU1 Bishkek 1.96 291⇓*i*P Pb 02 09 49.6 -0.2
baz=91
FRU1 ⇓*i*S Sb 02 10 15.1 +0.9
baz=91
FRU1 Bishkek 1.96 291 PN Pb 02 09 49.9 +0.1
FRU1 Bishkek 1.96 291 Pb 02 09 49.9 +0.1
SHLS Shalkode 2.00 59 *e*P Pg 02 09 54.7 +2.1
1μm,0.2s
SHLS *e*S Sg 02 10 24.3 +5.8
3μm,0.4s
SHLS Shalkode 2.00 59 *e*PN Pg 02 09 54.7 +2.1
SHLS *e*S Sg 02 10 24.3 +5.8
AAK Ala-Archa 2.01 285⇑*i*P Pb 02 09 50.4 -0.3
baz=86
AAK ⇑*i*S Sb 02 10 16.3 +0.6
baz=86
AAK Ala-Archa 2.01 285 ⇑Pn Pb 02 09 50.9 +0.2
156nm,0.4s
AAK ⇑Sn Sg 02 10 18.7 -0.4
638nm,0.5s
AAK Ala-Archa 2.01 285*d*iPN Pb 02 09 50.9 +0.2
AAK Ala-Archa 2.01 285 Pn Pb 02 09 50.6 -0.1
PDGK Podgornoye 2.10 55 ⇑Pn Pn 02 09 50.8 +1.7
413nm,0.5s
PDGK ⇑Sn Sb 02 10 19.1 +0.8
534nm,0.5s
PDGK Podgornoye 2.10 55 PN Pb 02 09 51.0 -1.2
PDGK 02 10 19.3
ARLS Aral 2.11 263⇓*i*P Pb 02 09 51.4 -1.0
baz=64
ARLS ⇓*e*S Sb 02 10 18.4 -0.1
baz=64
ARXS Arharly 2.13 14 *e*P Pb 02 09 53.3 +0.7
270nm,0.4s
ARXS *e*S Sg 02 10 21.7 -1.1
2μm,0.4s
ARXS Arharly 2.13 14 *e*PN Pb 02 09 53.3 +0.7
ARXS *e*S Sg 02 10 21.7 -1.1
MNBS Baschi 2.15 25 *e*P Pb 02 09 53.5 +0.6
93nm,0.3s
MNBS *e*S Sg 02 10 22.3 -1.0
4μm,0.5s
MNBS Baschi 2.15 25 *e*PN Pb 02 09 53.5 +0.6
MNBS *e*S Sg 02 10 22.3 -1.0
USP Ospenovka 2.24 301⇑*i*P Pb 02 09 53.5 -1.0
baz=1.0
USP ⇑*i*S Sb 02 10 21.8 -0.2
baz=1.0
EKS2 Erkin-Say 2.54 283⇑*i*P Pn 02 09 57.5 +2.4
baz=83
EKS2 ⇑*i*S Sn 02 10 28.6 +2.8
baz=83
AML Almayashu 2.55 271⇑*i*P Pn 02 09 57.9 +2.3
baz=71
AML ⇑*i*S Sn 02 10 29.5 +2.9
baz=71
KTMS Ketmen 2.71 60 *e*P Pb 02 10 01.8 -0.7
264nm,0.2s
KTMS *e*S Sb 02 10 36.4 +0.8
1μm,0.5s
KTMS Ketmen 2.71 60 *e*PN Pb 02 10 01.8 -0.7
KTMS *e*S Sb 02 10 36.4 +0.8
DJR Jarkent 2.93 41 *e*P Pb 02 10 06.2 0.0
115nm,0.3s
DJR *e*S Sb 02 10 44.1 +2.2
594nm,0.4s
DJR Jarkent 2.93 41 *e*PN Pb 02 10 06.2 0.0
DJR *e*S Sb 02 10 44.1 +2.2
MRKS Merke 2.95 283 *e*P Pb 02 10 08.7 +2.0
133nm,0.6s
MRKS *e*S Sg 02 10 48.1 -0.9
974nm,0.3s
MRKS Merke 2.95 283 *e*PN Pb 02 10 08.7 +2.0
MRKS *e*S Sg 02 10 48.1 -0.9
TDK Taldyqorghan 3.00 18 *e*P Pb 02 10 07.7 +0.2
62nm,0.2s
TDK *e*S Sb 02 10 46.6 +2.6
1μm,0.4s
TDK Taldyqorghan 3.00 18 *e*PN Pb 02 10 07.7 +0.2
TDK *e*S Sb 02 10 46.6 +2.6
ARSB Arslanbob 3.21 257⇑*i*P Pn 02 10 06.8 +2.4
baz=57
ARSB ⇑*i*S Sn 02 10 45.3 +2.9
baz=57
MNAS Manas 3.45 277⇑*i*P Pn 02 10 10.4 +2.8
baz=78
MNAS ⇑*i*S Sn 02 10 50.8 +2.5
baz=78
SFK Sufi-Kurgan 3.47 233⇑*i*P Pn 02 10 10.3 +2.3
baz=34
SFK ⇑*i*S Sn 02 10 50.6 +1.6
baz=34
KK31 Karatay Array 4.98 283 ⇑Pg Pb 02 10 45.6 +4.5
27nm,0.5s,baz=95,slow=16,SNR=10.0
KK31 ⇓Lg Lg 02 11 54.6
53nm,0.5s,baz=102,slow=29,SNR=17
KK31 Karatay Array 4.98 283 PN Pn 02 10 29.8 +1.3
KK31 Karatay Array 4.98 283 Pn Pn 02 10 29.8 +1.3
KKAR Karatay Array 4.98 283 PN Pn 02 10 29.3 +0.8
KKAR Karatay Array 4.98 283 Pn Pn 02 10 29.3 +0.8
KKAR Karatay Array 4.98 283 Pn Pn 02 10 28.7 +0.2
BTK Batken 5.20 248⇑*i*P Pn 02 10 34.2 +2.5
baz=49
BTK ⇑*i*S Sn 02 11 32.1 +0.6
baz=49
BTK Batken 5.20 248 PN Pn 02 10 33.5 +1.8
BTK Batken 5.20 248 Pn Pn 02 10 33.5 +1.8
MAKZ Makanchi 5.81 35 ⇑Pn Pn 02 10 42.0 +2.0
1.6nm,0.3s
MAKZ ⇑Lg Lg 02 12 19.2
41nm,0.9s
MAKZ Makanchi 5.81 35 PN Pn 02 10 40.1 +0.1
MAKZ Makanchi 5.81 35 Pn 02 10 40.1 +0.1
TAS Tashkent 5.92 265 PN Pn 02 10 43.5 +2.1
TAS Tashkent 5.92 265 Pn Pn 02 10 43.5 +2.1
MK31 Makanchi Array 5.94 37 ⇑Pn Pn 02 10 43.6 +1.9
6.8nm,0.6s,baz=211,slow=14,SNR=36
MK31 ⇑Lg Lg 02 12 21.6
13nm,0.5s
MK31 Makanchi Array 5.94 37 *e*PN Pn 02 10 43.4 +1.7
MK31 02 12 12.4
MK31 Makanchi Array 5.94 37 Pn 02 10 42.6 +0.9
MKAR Makanchi Array 5.94 37 Pn Pn 02 10 43.9 +2.2
2.8nm,0.3s,baz=215,slow=15,SNR=64
MKAR Sn Sn 02 11 53.0 +3.6
2.7nm,0.3s,baz=219,slow=26,SNR=4.7
MKAR Lg Lg 02 12 12.3
4.7nm,0.3s,baz=217,slow=24,SNR=4.6
MKAR Makanchi Array 5.94 37 Pn Pn 02 10 42.3 +0.6
GAR Garm 6.06 241 Pn Pn 02 10 46.0 +2.5
CHGR Chuyangaron 7.01 243 Pn 02 10 58.1 +1.6
WMQ Urumqi 7.93 74 P Pn 02 11 09.5 +0.4
WMQ Urumqi 7.93 74 Pn Pn 02 11 09.5 +0.4
KURBB Kurchatov Arra 8.54 6 Pn Pn 02 11 18.2 +0.9
0.1nm,0.3s,baz=192,slow=12,SNR=5.3
KURBB Sn Sn 02 12 50.2 -3.0
0.2nm,0.3s,baz=3.5,slow=3.0,SNR=4.4
KURBB Lg Lg 02 13 36.0
0.4nm,0.3s,baz=7.0,slow=16,SNR=5.5
KURBB Kurchatov Arra 8.54 6 ⇓Pn Pn 02 11 18.8 +1.5
2.5nm,0.7s
KURBB ⇓Lg Lg 02 13 43.6
89nm,0.6s
KURBB Kurchatov Arra 8.54 6 P Pn 02 11 18.8 +1.5
KURK Kurchatov 8.63 6 ⇑Pn Pn 02 11 19.6 +1.0
3.1nm,0.9s
KURK ⇑Lg Lg 02 13 49.8
67nm,1.0s
KURK Kurchatov 8.63 6 *i*P Pn 02 11 19.8 +1.2
NIL Nilore 9.02 201 P Pn 02 11 26.2 +2.2
NIL Nilore 9.02 201 Pn Pn 02 11 26.2 +2.2
KBL Kabul 9.89 223 P Pn 02 11 38.2 +2.0
KBL Kabul 9.89 223 Pn Pn 02 11 38.2 +2.0
BVAR Borovoye Array 11.79 340 Pn Pn 02 12 01.2 -0.7
0.8nm,0.3s,baz=117,slow=12,SNR=15
BVAR Sn Sn 02 14 22.7 +10
0.6nm,0.3s,baz=155,slow=21,SNR=3.9
BVAR Lg Lg 02 15 28.1
1.0nm,0.3s,baz=140,slow=23,SNR=3.4
BRVK Borovoye 11.85 339 ⇓Pn Pn 02 12 02.2 -0.4
3.2nm,0.6s
BRVK ⇓Lg Lg 02 15 29.0
15nm,0.7s
BRVK Borovoye 11.85 339 *i*P Pn 02 12 02.7 +0.1
BRVK pmax pmax
comp=Z,2.0nm,0.5s
BRVK Borovoye 11.85 339 Pn 02 12 02.2 -0.4
ZAA0 Zalesovo Array 12.87 21 Pn Pn 02 12 16.9 +0.3
ZALV Zalesovo Beam 12.87 21 Pn Pn 02 12 19.1 +2.6
comp=Z,0.2nm,0.3s,baz=207,slow=16,SNR=4.5
ZALV Sn Sn 02 14 34.2 -5.3
comp=Z,0.2nm,0.3s,baz=209,slow=15,SNR=1.8
ZALV Lg Lg 02 16 04.3
comp=Z,0.2nm,0.3s,baz=210,slow=20,SNR=5.1
ZALV Zalesovo Beam 12.87 21 Pn Pn 02 12 16.6 0.0
AB31 Akbulak array 13.94 307 *e*P Pn 02 12 30.8 -0.4
ABKAR Akbulak array 13.94 307 Pn Pn 02 12 30.7 -0.5
AKTO Aktyubinsk 15.56 309 Pn Pn 02 12 52.7 -0.4
comp=Z,0.2nm,0.3s,baz=101,slow=12,SNR=6.6
AKTO Sn Sn 02 15 48.6 +3.5
comp=Z,0.1nm,0.3s,baz=58,slow=15,SNR=1.6
AKTO Lg Lg 02 17 24.9
comp=Z,0.0nm,0.3s,baz=156,slow=18,SNR=2.4
AKTO Aktyubinsk 15.56 309 *i*P Pn 02 12 52.5 -0.6
AKTO pmax pmax
comp=Z,1.0nm,0.5s
ARU Arti 18.64 326 Lg Lg 02 18 56.7
comp=Z,0.0nm,0.3s,baz=311,slow=20,SNR=1.8
ARU Arti 18.64 326 P P 02 13 26.4 -4.9
ARU S Sn **02 16 50.1 -10**
TLY Talaya 20.37 53 *i*P P 02 13 49.5 -0.7
TLY pmax pmax
comp=Z,3.0nm,0.8s
SHL Shillong 20.53 139 P Pn 02 13 54.4 -0.1
SHL pmax pmax
comp=Z,4.0nm,0.9s
SHL Shillong 20.53 139 P Pn 02 13 54.4 -0.1
SHL IAmb IAmb 02 14 07.5
comp=Z,3.6nm,0.9s
SONM Songino Array 21.39 65 P P 02 13 58.1 -3.3
comp=Z,0.7nm,0.5s,baz=262,slow=12,SNR=7.5
SONM Songino Array 21.39 65 *e*P P 02 14 02.1 +0.7
SONM pmax pmax
comp=Z,1.0nm,0.5s
MAK Makhachkala 21.79 282 *e*P P 02 14 04.2 -1.4
MAK *e*S S **02 18 04.8 -1.3**
MAK MLR MLR
comp=Z,137nm,16.0s
WSAR Wadi Sarin 24.36 225 LR LR 02 26 18.5
comp=Z,68nm,19.4s,baz=40,slow=42
TORD Torodi Ar. Bea 70.53 270 P P 02 20 28.4 -0.5
comp=Z,0.2nm,0.4s,baz=41,slow=5.7,SNR=1.5
TGL Tana Glacier 72.39 19 P P 02 20 41.0 +1.5
TGL IAmb IAmb 02 20 44.1
comp=Z,10nm,1.0s
WRA Warramunga Arr 81.24 127 P P 02 21 28.4 -1.4
comp=Z,0.6nm,0.6s,baz=326,slow=5.1,SNR=12
WRA Warramunga Arr 81.24 127 *e*P P 02 21 29.6 -0.2

KRNET ***14*** *02:11:05.6±0.1, 42.°13N×77.°22E, h15km, mb3.6*
NNC ***14*** *02:11:06.1±1.0, 42.°18N×77.°23E, h0km, mb3.6, mpv3.7,*
Error ellipse: s-maj=6.7km s-min=4.2km az=175.0
SOME ***14*** *02:11:06.2, 42.°10N×77.°20E, h15km*
ISC 14 02:11:05.7±1.0, 42.°13N±0.°05×77.°20E±0.°02, h13km±6km,
n24, σ0°43/46, 12C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.02**	**264**	⇑*i*P		**Pg**	**02 11 08.1**	**-0.1**
	baz=69							
KDJ				⇑*i*S		**Sg**	**02 11 10.2**	**+0.3**
	baz=69							
ULHL	**Ulahol**	**0.72**	**279**	⇑*i*P		**Pg**	**02 11 19.4**	**-0.4**
	baz=80							
ULHL				⇑*i*S		**Sg**	**02 11 29.7**	**+0.3**
	baz=80							
ANVS	**Anan'yevo**	**0.73**	**28**	⇓*i*P		**Pg**	**02 11 19.3**	**-0.7**
	baz=27							
ANVS				⇓*i*S		**Sg**	**02 11 29.5**	**-0.2**
	baz=27							
TNSS	**Tian-Shan**	**0.92**	**348**	*e*P		**Pb**	**02 11 23.7**	**-0.2**
	baz=48							
TNSS				*e*S		**Sg**	**02 11 36.0**	**+0.2**
	baz=48							
TNSS	**Tian-Shan**	**0.92**	**348**	*e*P		**Pb**	**02 11 23.7**	**-0.2**
	70nm,0.3s							
TNSS				*e*S		**Sg**	**02 11 36.0**	**+0.2**
	53nm,0.4s							
TNSS	**Tian-Shan**	**0.92**	**348**	P		**Pb**	**02 11 23.8**	**-0.2**
	33nm,0.2s							
TNSS				S		**Sg**	**02 11 36.1**	**+0.2**
	29nm,0.1s							
PRZ	**Przheval'sk**	**0.95**	**68**	⇓*i*P		**Pb**	**02 11 23.7**	**-0.6**
	baz=68							
PRZ				⇓*i*S		**Sb**	**02 11 36.5**	**-0.4**
	baz=68							
BOOM	**Boomskoye usch**	**1.00**	**291**	⇑*i*P		**Pb**	**02 11 24.4**	**-0.7**
	baz=91							
BOOM				⇑*i*S		**Sb**	**02 11 37.9**	**-0.4**
	baz=91							
MDOK	**Medeo**	**1.04**	**354**	*e*P		**Pb**	**02 11 25.4**	**-0.3**
	baz=53							
MDOK				*e*S		**Sb**	**02 11 39.1**	**-0.2**
	baz=53							
MDOK	**Medeo**	**1.04**	**354**	*e*P		**Pb**	**02 11 25.4**	**-0.3**
	24nm,0.2s							
MDOK				*e*S		**Sb**	**02 11 39.1**	**-0.2**
	29nm,0.2s							
KNDC	**Almaty**	**1.10**	**351**	⇑P		**Pb**	**02 11 26.5**	**-0.2**
	58nm,0.6s							
KNDC				⇓S		**Sb**	**02 11 40.9**	**-0.1**
	123nm,0.7s							
MTBS	**Maitube**	**1.15**	**330**	*e*P		**Pn**	**02 11 27.5**	**-0.2**
	baz=30							
MTBS				*e*S		**Sb**	**02 11 42.7**	**+0.3**
	baz=30							
MTBS	**Maitube**	**1.15**	**330**	*e*P		**Pn**	**02 11 27.5**	**-0.2**
	18nm,0.2s							
MTBS				*e*S		**Sb**	**02 11 42.7**	**+0.3**
	142nm,0.2s							
MTBS	**Maitube**	**1.15**	**330**	P		**Pn**	**02 11 27.4**	**-0.3**
	19nm,0.1s							
MTBS				S		**Sb**	**02 11 43.1**	**+0.6**
	142nm,0.2s							
SATY	**Saty**	**1.28**	**43**	*e*P		**Pn**	**02 11 29.6**	**0.0**
	baz=43							
SATY				*e*S		**Sb**	**02 11 45.9**	**-0.4**
	baz=43							
SATY	**Saty**	**1.28**	**43**	*e*P		**Pn**	**02 11 29.6**	**0.0**
	34nm,0.2s							
SATY				*e*S		**Sb**	**02 11 45.9**	**-0.4**
	91nm,0.1s							
SATY	**Saty**	**1.28**	**43**	P		**Pb**	**02 11 30.1**	**+0.2**
	32nm,0.1s							
SATY				S		**Sn**	**02 11 46.8**	**+0.1**
	91nm,0.1s							
TKM2	**Tokmak 2**	**1.43**	**304**	⇑*i*P		**Pn**	**02 11 32.0**	**+0.4**
	baz=4.0							
TKM2				⇑*i*S		**Sb**	**02 11 51.7**	**+1.2**
	baz=4.0							
TKM2	**Tokmak 2**	**1.43**	**304**	⇓P		**Pg**	**02 11 33.5**	**+0.4**
	16nm,0.5s							
TKM2				⇑S		**Sg**	**02 11 51.9**	**+0.2**
	44nm,0.5s							
UZB	**Uzynbulak**	**1.68**	**52**	*e*P		**Pb**	**02 11 36.7**	**0.0**
	baz=52							
UZB				*e*S		**Sb**	**02 11 58.2**	**+0.4**
	baz=52							
UZB	**Uzynbulak**	**1.68**	**52**	*e*P		**Pb**	**02 11 36.7**	**0.0**
	11nm,0.2s							
UZB				*e*S		**Sb**	**02 11 58.2**	**+0.4**
	31nm,0.2s							
UZB	**Uzynbulak**	**1.68**	**52**	P		**Pb**	**02 11 36.7**	**0.0**
	9.5nm,0.2s							
UZB				S		**Sb**	**02 11 58.2**	**+0.4**
	29nm,0.2s							
PDGK	**Podgornoye**	**2.07**	**54**	⇓Pg		**Pn**	**02 11 41.5**	**+1.1**
	38nm,1.0s							
PDGK				⇑Lg		Lg	02 12 07.8	
	60nm,0.7s							
AAK	**Ala-Archa**	**2.07**	**285**	⇓Pg		**Pb**	**02 11 42.7**	**-0.6**
	14nm,0.5s							
AAK				⇑Lg		Lg	02 12 09.8	
	17nm,0.5s							

NNC ***14*** *02:12:42.9±0.8, 42.°09N×77.°27E, h0km, mb3.5, mpv3.7,*
Error ellipse: s-maj=5.5km s-min=3.3km az=176.0
KRNET ***14*** *02:12:44.1±0.1, 42.°11N×77.°27E, h20km, mb3.5*
SOME ***14*** *02:12:44.0, 42.°12N×77.°25E, h10km*
ISC 14 02:12:44.6±0.9, 42.°14N±0.°04×77.°25E±0.°02, h12km±6km,
n63, σ0°73/117, 27C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.05**	**263**	⇑*i*P		**Pg**	**02 12 47.0**	**-0.1**
	baz=86							
KDJ				⇑*i*S		**Sg**	**02 12 49.3**	**+0.4**
	baz=86							
ANVS	**Anan'yevo**	**0.72**	**26**	⇓*i*P		**Pg**	**02 12 58.2**	**-0.3**

	baz=24								
ANVS				⇓*i*S		**Sg**	**02 13 08.4**	**+0.4**	
	baz=24								
ULHL	**Ulahol**	**0.75**	**279**	⇑*i*P		**Pg**	**02 12 58.4**	**-0.8**	
	baz=80								
ULHL				⇑*i*S		**Sg**	**02 13 09.3**	**+0.2**	
	baz=80								
PRZ	**Przheval'sk**	**0.93**	**68**	⇑*i*P		**Pg**	**02 13 01.7**	**-0.7**	
	baz=66								
PRZ				⇑*i*S		**Sb**	**02 13 14.7**	**-0.3**	
	baz=66								
TNSS	**Tian-Shan**	**0.93**	**346**	*e*P		**Pg**	**02 13 02.1**	**-0.5**	
	baz=46								
TNSS				*e*S		**Sg**	**02 13 15.1**	**+0.3**	
	baz=46								
TNSS	**Tian-Shan**	**0.93**	**346**	*e*P		**Pg**	**02 13 02.0**	**-0.5**	
	24nm,0.2s								
TNSS				*e*S		**Sg**	**02 13 15.0**	**+0.3**	
	29nm,0.2s								
TNSS	**Tian-Shan**	**0.93**	**346**	P		**Pg**	**02 13 02.1**	**-0.5**	
	23nm,0.1s								
TNSS				S		**Sg**	**02 13 15.0**	**+0.3**	
	29nm,0.2s								
IZV	**Izvestkoviy**	**1.01**	**333**	*e*P		**Pg**	**02 13 03.6**	**-0.5**	
	baz=33								
IZV				*e*S		**Sg**	**02 13 17.5**	**+0.2**	
	baz=33								
IZV	**Izvestkoviy**	**1.01**	**333**	*e*P		**Pg**	**02 13 03.6**	**-0.5**	
	14nm,0.1s								
IZV				*e*S		**Sg**	**02 13 17.5**	**+0.2**	
	46nm,0.1s								
IZV	**Izvestkoviy**	**1.01**	**333**	P		**Pg**	**02 13 03.6**	**-0.5**	
	14nm,0.1s								
IZV				S		**Sg**	**02 13 17.5**	**+0.2**	
	46nm,0.1s								
BOOM	**Boomskoye usch**	**1.03**	**291**	⇑*i*P		**Pg**	**02 13 03.5**	**-0.9**	
	baz=92								
BOOM				⇑*i*S		**Sg**	**02 13 17.7**	**-0.2**	
	baz=92								
MDOK	**Medeo**	**1.04**	**352**	⇑*i*P		**Pg**	**02 13 03.9**	**-0.7**	
	baz=51								
MDOK				⇑*i*S		**Sg**	**02 13 18.1**	**0.0**	
	baz=51								
MDOK	**Medeo**	**1.04**	**352**	⇑*i*P		**Pg**	**02 13 03.9**	**-0.7**	
	25nm,0.2s								
MDOK				⇑*i*S		**Sg**	**02 13 18.1**	**0.0**	
	29nm,0.5s								
MDOK	**Medeo**	**1.04**	**352**	Pg		**Pg**	**02 13 03.9**	**-0.7**	
	23nm,0.1s								
MDOK				Lg		Lg	02 13 17.8		
	29nm,0.4s								
KNDC	**Almaty**	**1.10**	**349**	⇓P		**Pb**	**02 13 04.8**	**-0.8**	
	25nm,0.4s								
KNDC				⇓S		**Sb**	**02 13 20.8**	**+0.9**	
	73nm,0.6s								
KOTS	**Kotyrbulak**	**1.10**	**355**	*e*P		**Pg**	**02 13 05.2**	**-0.6**	
	baz=54								
KOTS				*e*S		**Sg**	**02 13 20.3**	**+0.2**	
	baz=54								
KOTS	**Kotyrbulak**	**1.10**	**355**	*e*P		**Pg**	**02 13 05.2**	**-0.6**	
	80nm,0.1s								
KOTS				*e*S		**Sg**	**02 13 20.4**	**+0.2**	
	64nm,0.1s								
KOTS	**Kotyrbulak**	**1.10**	**355**	P		**Pg**	**02 13 05.3**	**-0.6**	
	80nm,0.1s								
KOTS				S		**Sg**	**02 13 20.4**	**+0.2**	
	64nm,0.1s								
MTBS	**Maitube**	**1.16**	**329**	⇓*i*P		**Pb**	**02 13 06.1**	**-0.6**	
	baz=29								
MTBS				⇑*i*S		**Sb**	**02 13 21.9**	**+0.1**	
	baz=29								
MTBS	**Maitube**	**1.16**	**329**	⇓*i*P		**Pb**	**02 13 06.1**	**-0.6**	
	20nm,0.1s								
MTBS				⇑*i*S		**Sb**	**02 13 21.9**	**+0.1**	
	53nm,0.1s								
MTBS	**Maitube**	**1.16**	**329**	P		**Pb**	**02 13 06.1**	**-0.6**	
	20nm,0.1s								
MTBS				S		**Sb**	**02 13 21.8**	**+0.1**	
	53nm,0.1s								
SATY	**Saty**	**1.26**	**43**	*e*P		**Pn**	**02 13 07.4**	**-0.8**	
	baz=41								
SATY				*e*S		**Sb**	**02 13 24.4**	**-0.3**	
	baz=41								
SATY	**Saty**	**1.26**	**43**	*e*P		**Pn**	**02 13 07.4**	**-0.8**	
	20nm,0.2s								
SATY				*e*S		**Sb**	**02 13 24.4**	**-0.3**	
	70nm,0.1s								
SATY	**Saty**	**1.26**	**43**	P		**Pn**	**02 13 07.4**	**-0.8**	
	13nm,0.1s								
SATY				S		**Sb**	**02 13 24.3**	**-0.3**	
	70nm,0.1s								
KST	**Kastek**	**1.31**	**314**	*e*P		**Pn**	**02 13 09.1**	**+0.2**	
	baz=15								
KST				*e*S		**Sg**	**02 13 27.2**	**+0.4**	
	baz=15								
KST	**Kastek**	**1.31**	**314**	*e*P		**Pn**	**02 13 09.1**	**+0.2**	
	13nm,0.1s								
KST				*e*S		**Sg**	**02 13 27.2**	**+0.4**	
	23nm,0.1s								
KST	**Kastek**	**1.31**	**314**	P		**Pn**	**02 13 09.1**	**+0.2**	
	13nm,0.1s								
KST				S		**Sg**	**02 13 27.2**	**+0.4**	
	23nm,0.1s								
ZHN	**Zhinishke**	**1.35**	**40**	*e*P		**Pn**	**02 13 09.1**	**-0.4**	
	baz=39								
ZHN				*e*S		**Sb**	**02 13 27.0**	**-0.4**	
	baz=39								
ZHN	**Zhinishke**	**1.35**	**40**	*e*P		**Pn**	**02 13 09.1**	**-0.4**	
	12nm,0.1s								
ZHN				*e*S		**Sb**	**02 13 27.0**	**-0.4**	
	27nm,0.1s								
ZHN	**Zhinishke**	**1.35**	**40**	P		**Pn**	**02 13 09.1**	**-0.4**	
	10nm,0.1s								
ZHN				S		**Sb**	**02 13 27.0**	**-0.4**	
	27nm,0.1s								
TKM2	**Tokmak 2**	**1.45**	**303**	⇑*i*P		**Pb**	**02 13 11.4**	**-0.3**	
	baz=4.0								
TKM2				⇑*i*S		**Sg**	**02 13 31.5**	**+0.2**	
	baz=4.0								
TKM2	**Tokmak 2**	**1.45**	**303**	⇓P		**Pn**	**02 13 10.5**	**-0.4**	
	5.3nm,0.5s								
TKM2				⇑S		**Sg**	**02 13 31.2**	**-0.1**	
	7.2nm,0.2s								
KURS	**Kuram**	**1.51**	**26**	*e*P		**Pb**	**02 13 12.3**	**-0.4**	
	baz=26								
KURS				*e*S		**Sb**	**02 13 32.3**	**+0.4**	
	baz=26								
KURS	**Kuram**	**1.51**	**26**	*e*P		**Pb**	**02 13 12.3**	**-0.4**	
	8.4nm,0.2s								
KURS				*e*S		**Sb**	**02 13 32.2**	**+0.4**	
	13nm,0.3s								
KURS	**Kuram**	**1.51**	**26**	P		**Pb**	**02 13 12.3**	**-0.4**	
	4.1nm,0.1s								
KURS				S		**Sb**	**02 13 32.2**	**+0.4**	
	12nm,0.3s								
DGS	**Degeres**	**1.55**	**316**	*e*P		**Pb**	**02 13 13.4**	**+0.1**	
	baz=16								
DGS				*e*S		**Sg**	**02 13 34.3**	**-0.2**	
	baz=16								
DGS	**Degeres**	**1.55**	**316**	*e*P		**Pb**	**02 13 13.4**	**+0.1**	
	18nm,0.4s								
DGS				*e*S		**Sg**	**02 13 34.3**	**-0.2**	
	21nm,0.1s								
KTBS	**Karatobe**	**1.63**	**345**	*e*P		**Pb**	**02 13 14.7**	**+0.1**	
	baz=45								
KTBS				*e*S		**Sg**	**02 13 36.6**	**-0.4**	
	baz=45								
KTBS	**Karatobe**	**1.63**	**345**	*e*P		**Pb**	**02 13 14.7**	**+0.1**	
	7.2nm,0.2s								
KTBS				*e*S		**Sg**	**02 13 36.6**	**-0.4**	
	70nm,0.2s								
KTBS	**Karatobe**	**1.63**	**345**	P		**Pb**	**02 13 14.7**	**+0.1**	
	7.2nm,0.2s								
KTBS				S		**Sg**	**02 13 36.6**	**-0.4**	
	70nm,0.2s								
UZB	**Uzynbulak**	**1.66**	**52**	*e*P		**Pb**	**02 13 14.1**	**-1.0**	
	baz=51								
UZB				*e*S		**Sb**	**02 13 35.9**	**-0.1**	
	baz=51								
UZB	**Uzynbulak**	**1.66**	**52**	*e*P		**Pb**	**02 13 14.1**	**-1.0**	
	11nm,0.2s								
UZB				*e*S		**Sb**	**02 13 35.9**	**-0.1**	
	59nm,0.2s								
KPKS	**Kokpek**	**1.70**	**38**	*e*P		**Pb**	**02 13 15.1**	**-0.8**	
	baz=37								
KPKS				*e*S		**Sb**	**02 13 37.5**	**+0.2**	
	baz=37								
KPKS	**Kokpek**	**1.70**	**38**	*e*P		**Pb**	**02 13 15.1**	**-0.8**	
	24nm,0.1s								
KPKS				*e*S		**Sb**	**02 13 37.5**	**+0.2**	
	76nm,0.2s								
KBK	**Karagaybulak**	**1.78**	**288**	⇑*i*P		**Pb**	**02 13 16.6**	**-0.7**	
	baz=88								
KBK				⇑*i*S		**Sb**	**02 13 40.3**	**+0.7**	
	baz=88								
KUU	**Kurty**	**1.88**	**340**	*e*P		**Pb**	**02 13 18.8**	**-0.1**	
	baz=39								
KUU				*e*S		**Sb**	**02 13 43.7**	**+1.3**	
	baz=39								
KUU	**Kurty**	**1.88**	**340**	*e*P		**Pb**	**02 13 18.8**	**-0.1**	
	6.7nm,0.1s								
KUU				*e*S		**Sb**	**02 13 43.6**	**+1.3**	
	29nm,0.3s								
KUU	**Kurty**	**1.88**	**340**	P		**Pb**	**02 13 18.8**	**-0.1**	
	6.7nm,0.1s								
KUU				S		**Sb**	**02 13 43.6**	**+1.3**	
	29nm,0.3s								
SHLS	**Shalkode**	**1.93**	**57**	*e*P		**Pg**	**02 13 23.1**	**+1.5**	
	22nm,0.2s								
SHLS				*e*S		**Sg**	**02 13 51.1**	**+4.5**	
	56nm,0.4s								
SHLS	**Shalkode**	**1.93**	**57**	Pg		**Pg**	**02 13 22.2**	**+0.6**	
	22nm,0.2s								
SHLS				Lg		Lg	02 13 49.1		
	56nm,0.4s								
KRBS	**Karabastau**	**1.94**	**324**	*e*P		**Pb**	**02 13 19.8**	**-0.1**	
	4.8nm,0.1s								
KRBS				*e*S		**Sb**	**02 13 45.6**	**+1.5**	
	30nm,0.2s								
KRBS	**Karabastau**	**1.94**	**324**	Pg		**Pb**	**02 13 19.8**	**-0.1**	
	4.8nm,0.1s								
KRBS				Lg		Lg	02 13 45.6		
	30nm,0.2s								
UCH	**Uchtor**	**2.03**	**273**	⇑*i*P		**Pn**	**02 13 20.1**	**+1.0**	
	baz=74								
UCH				⇑*i*S		**Sb**	**02 13 46.3**	**-0.9**	
	baz=74								
CHMS	**Chumysh**	**2.03**	**296**	⇑*i*P		**Pb**	**02 13 20.7**	**-0.8**	
	baz=96								
CHMS				⇑*i*S		**Sb**	**02 13 47.3**	**+0.5**	
	baz=96								
PDGK	**Podgornoye**	**2.04**	**53**	Pg		**Pb**	**02 13 20.5**	**-1.1**	
	3.6nm,0.1s								
PDGK				Lg		Lg	02 13 47.9		
	21nm,0.5s								
PDGK	**Podgornoye**	**2.04**	**53**	⇑Pg		**Pn**	**02 13 17.9**	**-1.0**	
	19nm,1.2s								
PDGK				⇓Lg		Lg	02 13 46.5		
	12nm,0.4s								
AAK	**Ala-Archa**	**2.10**	**285**	⇓Pg		**Pn**	**02 13 19.2**	**-0.5**	
	8.4nm,0.8s								
AAK				⇑Lg		Lg	02 13 50.0		
	9.2nm,0.5s								
ARXS	**Arharly**	**2.12**	**11**	*e*P		**Pb**	**02 13 23.1**	**+0.1**	
	12nm,0.2s								
ARXS				*e*S		**Sb**	**02 13 50.9**	**+1.6**	
	37nm,0.2s								
ARXS	**Arharly**	**2.12**	**11**	Pg		**Pb**	**02 13 23.1**	**+0.1**	
	12nm,0.2s								
ARXS				Lg		Lg	02 13 50.9		
	37nm,0.2s								
MNBS	**Baschi**	**2.12**	**23**	*e*P		**Pb**	**02 13 23.2**	**+0.2**	
	9.2nm,0.2s								
MNBS				*e*S		**Sg**	**02 13 51.4**	**-1.3**	
	28nm,0.2s								
MNBS	**Baschi**	**2.12**	**23**	Pg		**Pb**	**02 13 23.2**	**+0.2**	
	9.2nm,0.2s								
MNBS				Lg		Lg	02 13 51.4		
	28nm,0.2s								
ARLS	**Aral**	**2.19**	**264**	⇑*i*P		**Pn**	**02 13 21.8**	**+0.7**	
	baz=65								
ARLS				⇑*i*S		**Sn**	**02 13 49.1**	**+0.8**	
	baz=65								
SGDS	**Sogindy**	**2.33**	**305**	Pg		**Pb**	**02 13 26.4**	**-0.2**	
	3.6nm,0.3s								
SGDS				Lg		Lg	02 13 56.5		
	12nm,0.4s								

SOME 14 02:42:47.1, 42°.13N × 77°.15E, h20km, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.92**	**351**	*e*P		Pb	02 43 04.5	-0.1
	1.6nm,0.1s							
TNSS				*e*S		Sb	02 43 17.1	+0.7
	2.8nm,0.2s							
KOTS	**Kotyrbulak**	**1.10**	**359**	*e*P		Pb	02 43 07.7	+0.2
	4.4nm,0.2s							
KOTS				*e*S		Sn	02 43 22.4	+0.2
	8.9nm,0.3s							
MTBS	**Maitube**	**1.13**	**332**	*e*P		Pn	02 43 07.5	-0.4
	2.3nm,0.1s							
MTBS				*e*S		Sb	02 43 22.3	0.0
	2.5nm,0.2s							
SATY	**Saty**	**1.31**	**45**	*e*P		Pb	02 43 10.9	-0.2
	0.4nm,0.1s							
SATY				*e*S		Sb	02 43 28.1	+0.5
	7.2nm,0.1s							
KRBS	**Karabastau**	**1.90**	**326**	*e*P		Pb	02 43 21.6	+0.5
	1.2nm,0.3s							
KRBS				*e*S		Sb	02 43 46.3	+1.9
	0.9nm,0.2s							

WEL 14 02:42:49.2, 45°S ±2° × 17°0E ±°, h5km ±3km, M2.5/7, ML2.5/7, MLv2.5/7, Error ellipse: s-maj=0.0km s-min=0.0km az=57.8, South Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ODZ	**Otahua Downs**	**0.33**	**35**	P		Pb	02 42 57.1	-0.4
HHSZ	**Highcliff Hill**	**0.59**	**165**	P		Pn	02 43 04.3	-0.1
EAZ	**Earnscleugh**	**0.76**	**276**	P		Pb	02 43 05.1	+0.2
TUZ	**Tuapeka**	**0.83**	**219**	P		Pb	02 43 06.2	+0.1
LBZ	**Lake Benmore**	**0.94**	**351**	P		Pb	02 43 08.3	+0.4
WKZ	**Wanaka**	**1.08**	**296**	P		Pn	02 43 11.4	+0.3
WKZ				S		Sn	02 43 26.6	+0.2
ARCZ	**Arundel**	**1.48**	**23**	P		Pb	02 43 17.2	0.0
SYZ	**Scrubby Hill**	**1.50**	**215**	P		Pb	02 43 17.5	0.0
MLZ	**Mavora Lakes**	**1.60**	**267**	P		Pg	02 43 20.1	+0.2
RPZ	**Rata Peaks**	**1.67**	**17**	P		Pg	02 43 20.8	-0.4
JCZ	**Jackson Bay**	**1.68**	**317**	P		Pg	02 43 23.0	+1.5
DCZ	**Deep Cove**	**2.28**	**265**	P		Pb	02 43 29.4	-1.4

*SOME **14** 02:43:05.2, 42°.05N × 77°.18E, h20km*
*KRNET **14** 02:43:05.2 ± 0.1, 42°.10N × 77°.21E, h20km, mb3.0*
*NNC **14** 02:43:06.3 ± 0.5, 42°.17N × 77°.20E, h0km, mb3.1, mpv3.2, Error ellipse: s-maj=4.0km s-min=1.9km az=176.0*

ISC 14 02:43:04.8 ± 1.0, **42°.05N** ± 0°.04 × **77°.16E** ± 0°.02, **h13**km ± 6km, **n74**, σ0=**.96**/138, **39C-27D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.08**	**12**	⇑*i*P		**Pg**	**02 43 08.0**	**+0.2**
	baz=47							
KDJ				⇑*i*S		**Sg**	**02 43 10.1**	**+0.1**
	baz=47							
ULHL	**Ulahol**	**0.71**	**286**	⇑*i*P		**Pb**	**02 43 19.2**	**0.0**
	baz=82							
ULHL				⇑*i*S		**Sg**	**02 43 29.0**	**+1.0**
	baz=82							
ANVS	**Anan'yevo**	**0.82**	**27**	⇑*i*P		**Pg**	**02 43 19.5**	**-1.3**
	baz=26							
ANVS				⇑*i*S		**Sg**	**02 43 30.5**	**-1.1**
	baz=26							
TNSS	**Tian-Shan**	**1.00**	**351**	⇓*i*P		**Pb**	**02 43 23.2**	**-1.0**
	baz=49							
TNSS				⇓*i*S		**Sb**	**02 43 36.2**	**-1.2**
	baz=49							
TNSS	**Tian-Shan**	**1.00**	**351**	⇓*i*P		**Pb**	**02 43 23.2**	**-1.0**
	5.2nm,0.1s							
TNSS				⇓*i*S		**Sb**	**02 43 36.2**	**-1.2**
	14nm,0.1s							
TNSS	**Tian-Shan**	**1.00**	**351**	P		**Pb**	**02 43 23.2**	**-1.0**
	5.2nm,0.1s							
TNSS				S		**Sb**	**02 43 36.2**	**-1.2**
	14nm,0.1s							
BOOM	**Boomskoye usch**	**1.00**	**296**	⇓*i*P		**Pb**	**02 43 24.1**	**-0.1**
	baz=93							
BOOM				⇓*i*S		**Sg**	**02 43 38.0**	**+0.6**
	baz=93							
PRZ	**Przheval'sk**	**1.02**	**65**	⇑*i*P		**Pb**	**02 43 23.7**	**-0.7**
	baz=66							
PRZ				⇑*i*S		**Sg**	**02 43 37.0**	**-0.8**
	baz=66							
IZV	**Izvestkoviy**	**1.06**	**338**	⇓*i*P		**Pb**	**02 43 24.7**	**-0.5**
	baz=35							
IZV				⇓*e*S		**Sb**	**02 43 38.5**	**-0.6**
	baz=35							
IZV	**Izvestkoviy**	**1.06**	**338**	⇓*i*P		**Pb**	**02 43 24.7**	**-0.5**
	15nm,0.3s							
IZV				*e*S		**Sb**	**02 43 38.5**	**-0.6**
	12nm,0.2s							
IZV	**Izvestkoviy**	**1.06**	**338**	P		**Pb**	**02 43 24.7**	**-0.5**
	14nm,0.2s							
IZV				S		**Sb**	**02 43 38.5**	**-0.6**
	12nm,0.2s							
MDOK	**Medeo**	**1.11**	**356**	⇑*i*P		**Pb**	**02 43 25.2**	**-0.8**
	baz=54							
MDOK				⇑*i*S		**Sb**	**02 43 39.3**	**-1.2**
	baz=54							
MDOK	**Medeo**	**1.11**	**356**	⇑*i*P		**Pb**	**02 43 25.2**	**-0.8**
	5.6nm,0.3s							
MDOK				⇑*i*S		**Sb**	**02 43 39.3**	**-1.2**
	17nm,0.3s							
MDOK	**Medeo**	**1.11**	**356**	Pg		**Pb**	**02 43 25.2**	**-0.8**
	4.9nm,0.1s							
MDOK				Lg		Lg	02 43 39.4	
	17nm,0.3s							
KOTS	**Kotyrbulak**	**1.18**	**358**	⇓*i*P		**Pn**	**02 43 26.6**	**-0.6**
	baz=57							
KOTS				⇓*e*S		**Sb**	**02 43 41.9**	**-0.6**
	baz=57							
KOTS	**Kotyrbulak**	**1.18**	**358**	⇓*i*P		**Pn**	**02 43 26.6**	**-0.6**
	26nm,0.2s							
KOTS				⇓*e*S		**Sb**	**02 43 41.9**	**-0.6**
	52nm,0.2s							
KOTS	**Kotyrbulak**	**1.18**	**358**	P		**Pn**	**02 43 26.7**	**-0.5**
	26nm,0.2s							
KOTS				S		**Sb**	**02 43 41.9**	**-0.6**
	52nm,0.2s							
MTBS	**Maitube**	**1.20**	**334**	⇓*i*P		**Pn**	**02 43 27.1**	**-0.4**
	baz=31							
MTBS				⇑*i*S		**Sb**	**02 43 42.4**	**-0.7**
	baz=31							
MTBS	**Maitube**	**1.20**	**334**	⇓*i*P		**Pn**	**02 43 27.1**	**-0.4**
	9.9nm,0.2s							
MTBS				⇑*i*S		**Sb**	**02 43 42.4**	**-0.7**
	24nm,0.2s							
MTBS	**Maitube**	**1.20**	**334**	P		**Pn**	**02 43 27.1**	**-0.4**
	9.9nm,0.2s							
MTBS				S		**Sb**	**02 43 42.3**	**-0.8**
	24nm,0.2s							
KST	**Kastek**	**1.33**	**319**	⇓*i*P		**Pb**	**02 43 29.6**	**-0.1**
	baz=16							
KST				⇓*e*S		**Sb**	**02 43 47.3**	**+0.7**
	baz=16							
KST	**Kastek**	**1.33**	**319**	⇓*i*P		**Pb**	**02 43 29.6**	**-0.1**
	11nm,0.3s							
KST				⇓*e*S		**Sb**	**02 43 47.3**	**+0.7**
	11nm,0.5s							
KST	**Kastek**	**1.33**	**319**	P		**Pb**	**02 43 29.5**	**-0.1**
	11nm,0.3s							
KST				S		**Sb**	**02 43 47.5**	**+0.8**
	8.3nm,0.1s							
SATY	**Saty**	**1.36**	**42**	*e*P		**Pb**	**02 43 29.6**	**-0.7**
	baz=42							
SATY				*e*S		**Sb**	**02 43 47.0**	**-0.7**
	baz=42							
SATY	**Saty**	**1.36**	**42**	*e*P		**Pb**	**02 43 29.6**	**-0.7**
	7.2nm,0.1s							
SATY				*e*S		**Sb**	**02 43 47.0**	**-0.7**
	52nm,0.1s							
SATY	**Saty**	**1.36**	**42**	P		**Pn**	**02 43 29.3**	**-0.4**
	7.2nm,0.1s							
SATY				S		**Sb**	**02 43 47.0**	**-0.7**
	52nm,0.1s							
TKM2	**Tokmak 2**	**1.45**	**307**	⇑*i*P		**Pb**	**02 43 31.9**	**+0.2**
	baz=5.0							
TKM2				⇑*i*S		**Sg**	**02 43 51.4**	**-0.1**
	baz=5.0							
TKM2	**Tokmak 2**	**1.45**	**307**	⇓P		**Pb**	**02 43 31.8**	**0.0**
	1.7nm,0.3s							
TKM2				⇓S		**Sg**	**02 43 51.4**	**-0.1**
	4.4nm,0.2s							
ZHN	**Zhinishke**	**1.46**	**40**	*e*P		**Pb**	**02 43 30.9**	**-1.0**
	baz=40							
ZHN				*e*S		**Sb**	**02 43 49.7**	**-0.7**
	baz=40							
ZHN	**Zhinishke**	**1.46**	**40**	*e*P		**Pb**	**02 43 30.9**	**-1.0**
	16nm,0.1s							
ZHN				*e*S		**Sb**	**02 43 49.7**	**-0.7**
	8.5nm,0.2s							
ZHN	**Zhinishke**	**1.46**	**40**	P		**Pb**	**02 43 30.9**	**-1.0**
	14nm,0.1s							
ZHN				S		**Sb**	**02 43 49.7**	**-0.7**
	7.9nm,0.1s							
DGS	**Degeres**	**1.57**	**320**	*e*P		**Pb**	**02 43 34.2**	**+0.4**
	baz=18							
DGS				*e*S		**Sb**	**02 43 54.8**	**+1.2**
	baz=18							
DGS	**Degeres**	**1.57**	**320**	*e*P		**Pb**	**02 43 34.2**	**+0.4**
	1.6nm,0.1s							
DGS				*e*S		**Sb**	**02 43 54.7**	**+1.2**
	10nm,0.2s							
DGS	**Degeres**	**1.57**	**320**	P		**Pb**	**02 43 34.3**	**+0.4**
	1.6nm,0.1s							
DGS				S		**Sb**	**02 43 54.7**	**+1.2**
	10nm,0.2s							
KURS	**Kuram**	**1.62**	**27**	*e*P		**Pb**	**02 43 34.4**	**-0.2**
	baz=27							
KURS				*e*S		**Sb**	**02 43 54.6**	**-0.3**
	baz=27							
KURS	**Kuram**	**1.62**	**27**	*e*P		**Pb**	**02 43 34.4**	**-0.2**
	1.6nm,0.2s							
KURS				*e*S		**Sb**	**02 43 54.6**	**-0.3**
	9.6nm,0.4s							
KURS	**Kuram**	**1.62**	**27**	P		**Pb**	**02 43 34.4**	**-0.2**
	1.6nm,0.2s							
KURS				S		**Sb**	**02 43 54.6**	**-0.3**
	9.6nm,0.4s							
KTBS	**Karatobe**	**1.69**	**348**	*e*P		**Pb**	**02 43 35.9**	**0.0**
	baz=47							
KTBS				*e*S		**Sb**	**02 43 58.0**	**+0.8**
	baz=47							
KTBS	**Karatobe**	**1.69**	**348**	*e*P		**Pb**	**02 43 35.9**	**0.0**
	4.2nm,0.2s							
KTBS				*e*S		**Sb**	**02 43 57.9**	**+0.8**
	46nm,0.3s							
KTBS	**Karatobe**	**1.69**	**348**	P		**Pb**	**02 43 35.9**	**0.0**
	4.2nm,0.2s							
KTBS				S		**Sb**	**02 43 57.9**	**+0.8**
	45nm,0.3s							
KBK	**Karagaybulak**	**1.75**	**291**	⇑*i*P		**Pb**	**02 43 37.2**	**+0.4**
	baz=89							
KBK				⇑*i*S		**Sg**	**02 44 00.5**	**-0.5**
	baz=89							
UZB	**Uzynbulak**	**1.76**	**51**	⇓*e*P		**Pb**	**02 43 36.0**	**-1.0**
	baz=51							
UZB				⇓*i*S		**Sb**	**02 43 58.4**	**-0.6**
	baz=51							
**UZB

KRBS				*e*S	**Sb**	**02 44 06.1**	**+0.9**
	baz=25								
KRBS	**Karabastau**	**1.97**	**327**	*e*P	**Pb**	**02 43 40.7**	**+0.1**
	13nm,0.3s								
KRBS				*e*S	**Sb**	**02 44 06.0**	**+0.9**
	15nm,0.3s								
KRBS	**Karabastau**	**1.97**	**327**	P	**Pb**	**02 43 40.7**	**+0.1**
	12nm,0.3s								
KRBS				S	**Sb**	**02 44 05.2**	**+0.1**
	15nm,0.3s								
UCH	**Uchtor**	**1.98**	**276**	⇑*i*P	**Pb**	**02 43 40.8**	**-0.1**
	baz=75								
UCH				⇑*i*S	**Sb**	**02 44 06.5**	**+0.9**
	baz=75								
CHMS	**Chumysh**	**2.02**	**299**	⇑*i*P	**Pb**	**02 43 41.1**	**-0.2**
	baz=97								
CHMS				⇑*i*S	**Sb**	**02 44 07.1**	**+0.8**
	baz=97								
SHLS	**Shalkode**	**2.03**	**56**	*e*P	**Pg**	**02 43 46.3**	**+2.5**
	11nm,0.2s								
SHLS				*e*S	**Sg**	**02 44 15.3**	**+5.3**
	18nm,0.2s								
SHLS	**Shalkode**	**2.03**	**56**	Pg	**Pg**	**02 43 45.6**	**+1.9**
	11nm,0.2s								
SHLS				Lg	Lg	02 44 15.3			
	18nm,0.2s								
AAK	**Ala-Archa**	**2.06**	**287**	⇑*i*P	**Pb**	**02 43 41.7**	**-0.5**
	baz=86								
AAK				⇑*i*S	**Sb**	**02 44 08.3**	**+0.5**
	baz=86								
AAK	**Ala-Archa**	**2.06**	**287**	⇑Pn	**Pb**	**02 43 43.5**	**+1.3**
	0.6nm,0.3s								
AAK				⇑Sn	**Sg**	**02 44 10.4**	**-0.7**
	3.6nm,0.3s								
ARLS	**Aral**	**2.12**	**266**	⇑*i*P	**Pb**	**02 43 42.7**	**-0.6**
	baz=65								
ARLS				⇑*i*S	**Sb**	**02 44 09.8**	**+0.2**
	baz=65								
PDGK	**Podgornoye**	**2.14**	**53**	Pg	**Pb**	**02 43 43.0**	**-0.5**
	1.3nm,0.2s								
PDGK				Lg	Lg	02 44 09.4			
	5.2nm,0.3s								
PDGK	**Podgornoye**	**2.14**	**53**	⇑Pn	**Pb**	**02 43 42.0**	**-1.5**
	2.8nm,0.7s								
PDGK				⇑Sn	**Sb**	**02 44 09.5**	**-0.5**
	7.1nm,0.5s								
ARXS	**Arharly**	**2.21**	**13**	*e*P	**Pb**	**02 43 44.8**	**+0.1**
	1.6nm,0.1s								
ARXS				*e*S	**Sb**	**02 44 12.9**	**+0.7**
	30nm,0.1s								
ARXS	**Arharly**	**2.21**	**13**	Pg	**Pb**	**02 43 44.8**	**+0.1**
	1.0nm,0.1s								
ARXS				Lg	Lg	02 44 12.9			
	30nm,0.1s								
MNBS	**Baschi**	**2.22**	**24**	*e*P	**Pb**	**02 43 45.2**	**+0.3**
	1.8nm,0.2s								
MNBS				*e*S	**Sb**	**02 44 13.7**	**+1.3**
	41nm,0.3s								
MNBS	**Baschi**	**2.22**	**24**	Pg	**Pb**	**02 43 45.2**	**+0.3**
	1.8nm,0.2s								
MNBS				Lg	Lg	02 44 13.7			
	41nm,0.3s								
USP	**Ospenovka**	**2.31**	**303**	⇑*i*P	**Pb**	**02 43 44.9**	**-1.4**
	baz=1.0								
USP				⇑*i*S	**Sb**	**02 44 14.1**	**-0.6**
	baz=1.0								
SGDS	**Sogindy**	**2.33**	**308**	Pg	**Pb**	**02 43 47.2**	**+0.5**
	2.0nm,0.3s								
SGDS				Lg	Lg	02 44 17.2			
	7.6nm,0.3s								
EKS2	**Erkin-Say**	**2.58**	**285**	⇑*e*P	**Pb**	**02 43 48.9**	**-2.1**
	baz=84								
EKS2				⇑*i*S	**Sb**	**02 44 20.7**	**-2.0**
	baz=84								
AML	**Almayashu**	**2.58**	**273**	⇑*i*P	**Pb**	**02 43 49.2**	**-2.0**
	baz=72								
AML				⇑*i*S	**Sb**	**02 44 21.4**	**-1.5**
	baz=72								
DJR	**Jarkent**	**2.98**	**39**	*e*P	**Pb**	**02 43 58.3**	**+0.5**
	1.4nm,0.3s								
DJR				*e*S	**Sb**	**02 44 35.2**	**+1.0**
	3.1nm,0.2s								
DJR	**Jarkent**	**2.98**	**39**	Pg	**Pb**	**02 43 57.9**	**0.0**
	1.3nm,0.2s								
DJR				Lg	Lg	02 44 35.0			
	3.1nm,0.2s								
MRKS	**Merke**	**2.99**	**285**	*e*P	**Pb**	**02 43 60.0**	**+1.9**
	1.0nm,0.1s								
MRKS				*e*S	**Sg**	**02 44 39.1**	**-1.9**
	5.8nm,0.3s								
MRKS	**Merke**	**2.99**	**285**	Pg	**Pb**	**02 43 59.5**	**+1.4**
	1.0nm,0.1s								
MRKS				Lg	Lg	02 44 39.1			
	5.5nm,0.3s								
KK31	**Karatay Array**	**5.02**	**284**	⇑Lg	Lg	02 45 42.1			
	0.7nm,0.6s,baz=94,slow=26,SNR=4.5								

KRNET 14 02:43:51.2±0.1, 42°.05N×77°.19E, h17km, mb2.4, 8C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.08**	**354**	⇑*i*P	Pg	02 43 54.1	-0.7
	baz=2.0						
KDJ				⇑*i*S	Sg	02 43 56.2	-1.0
	baz=2.0						
ULHL	**Ulahol**	**0.73**	**286**	⇑*i*P	Pg	02 44 05.0	-0.6
	baz=86						
ULHL				⇑*i*S	Sg	02 44 15.4	0.0
	baz=86						
BOOM	**Boomskoye usch**	**1.03**	**296**	⇑*i*P	Pb	02 44 10.4	-0.3
	baz=96						
BOOM				⇑*i*S	Sb	02 44 24.2	+0.3
	baz=96						
TKM2	**Tokmak 2**	**1.46**	**307**	⇑*i*P	Pb	02 44 18.2	+0.1
	baz=7.0						
TKM2				⇑*i*S	Sg	02 44 37.7	-0.9
	baz=7.0						

WEL 14 02:47:54.6, 40°S±1°×17°4E±°, h107km±5km, M2.9/35, ML3.0/8, MLv2.9/35, Error ellipse: s-maj=0.0km s-min=0.0km az=73.4, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.37**	**184**	P	Pn	02 48 10.6	+0.2
TCW	**Tory Channel**	**0.82**	**163**	P	Pn	02 48 14.6	+0.8
KIW	**Kapiti Island**	**0.84**	**121**	P	Pn	02 48 14.2	+0.2
NNZ	**Nelson**	**0.90**	**209**	P	Pn	02 48 15.1	+0.5
TUWZ	**Tuamarina**	**1.00**	**181**	P	Pn	02 48 16.1	+0.6
OGWZ	**Otaki Gorge**	**1.00**	**113**	P	Pn	02 48 16.0	+0.4
WAZ	**Wanganui**	**1.04**	**50**	P	Pn	02 48 16.8	+0.8
CAW	**Cannon Point**	**1.08**	**129**	P	Pn	02 48 17.0	+0.6
KHEZ	**Kahui Hut**	**1.13**	**2**	P	Pn	02 48 17.3	+0.2
QRZ	**Quartz Range**	**1.16**	**249**	P	Pn	02 48 17.0	-0.3
PKE	**Pukeiti**	**1.23**	**1**	P	Pn	02 48 18.4	+0.3
MRZ	**Mangatainoka R**	**1.26**	**101**	P	Pn	02 48 18.6	+0.2
HOWZ	**Holdsworth Sta**	**1.27**	**112**	P	Pn	02 48 18.8	+0.2
BSWZ	**Blackbirch Sta**	**1.29**	**183**	P	Pn	02 48 20.0	+1.3
MTW	**Mount Morrison**	**1.38**	**122**	P	Pn	02 48 20.1	+0.3
VRZ	**Vera Road**	**1.44**	**26**	P	Pn	02 48 20.9	+0.4
PAWZ	**Paruwai Farm**	**1.47**	**131**	P	Pn	02 48 21.3	+0.5
PLWZ	**Palliser**	**1.50**	**140**	P	Pn	02 48 21.8	+0.5
THZ	**Tophouse**	**1.55**	**210**	P	Pn	02 48 22.6	+0.7
PKVZ	**Pokaka**	**1.56**	**44**	P	Pn	02 48 22.6	+0.5
MTVZ	**Mangateitei**	**1.56**	**49**	P	Pn	02 48 28.7	+6.7
TSZ	**Takapari Road**	**1.58**	**77**	P	Pn	02 48 21.2	-1.0
TMWZ	**Te Maipa**	**1.62**	**115**	P	Pn	02 48 23.0	+0.3
WNVZ	**Wahianoa**	**1.67**	**49**	P	Pn	02 48 23.9	+0.3
FWVZ	**Far West T-bar**	**1.70**	**47**	P	Pn	02 48 24.5	+0.7
WHVZ	**Whangaehu Hut**	**1.70**	**48**	P	Pn	02 48 24.2	+0.3
TUVZ	**Tukino**	**1.75**	**49**	P	Pn	02 48 25.3	+0.9
BFZ	**Birch Farm**	**1.76**	**99**	P	Pn	02 48 24.4	-0.1
NGZ	**Ngauruhoe**	**1.78**	**46**	P	Pn	02 48 25.4	+0.6
PNHZ	**Pukenui**	**1.79**	**74**	P	Pn	02 48 24.7	-0.2
WTVZ	**West Tongariro**	**1.82**	**44**	P	Pn	02 48 25.6	+0.4
KRVZ	**Karewarewa**	**1.86**	**45**	P	Pn	02 48 26.7	+0.9
ETVZ	**East Tongariro**	**1.87**	**47**	P	Pn	02 48 26.6	+0.7
BHHZ	**Black Hill Sta**	**1.87**	**61**	P	Pn	02 48 26.4	+0.6
TMVZ	**Te Maari**	**1.88**	**46**	P	Pn	02 48 26.5	+0.4
ANWZ	**Angora Road**	**1.92**	**92**	P	Pn	02 48 26.3	-0.1
KHZ	**Kahutara**	**2.01**	**189**	P	Pn	02 48 28.4	+0.8
HIZ	**Hauiti**	**2.04**	**20**	P	Pn	02 48 27.8	-0.1
PRHZ	**Porangahau**	**2.05**	**86**	P	Pn	02 48 27.9	-0.2
DSZ	**Denniston Nort**	**2.09**	**230**	P	Pn	02 48 29.0	+0.3
TLZ	**Tolley Road**	**2.43**	**31**	P	Pn	02 48 32.9	-0.1
INZ	**Inchbonnie**	**2.97**	**219**	P	Pn	02 48 40.5	+0.5
OKCZ	**Okains Bay**	**3.36**	**191**	P	Pn	02 48 44.4	-0.9
MQZ	**McQueen's Vall**	**3.42**	**196**	P	Pn	02 48 44.4	-1.6
MHCZ	**Mount Hutt**	**3.58**	**209**	P	Pn	02 48 48.9	+0.7
FOZ	**Fox Glacier**	**4.38**	**224**	P	Pn	02 48 59.1	+0.3
JCZ	**Jackson Bay**	**5.29**	**225**	P	Pn	02 49 11.0	-0.4

KRNET 14 02:48:27.6±0.1, 42°.09N×77°.23E, h20km, mb4.1
NNC 14 02:48:27.5±2.8, 42°.17N×77°.30E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=19.2km s-min=12.6km az=174.0
SOME 14 02:48:27.4, 42°.05N×77°.25E, h20km, MS2.9

ISC 14 02:48:28.1±0.9, 42°.18N±0°.03×77°.24E±0°.02, h12km±6km, n73, σ1§42/132, 44C-46D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.07**	**221**	⇑*i*P	**Pg**	**02 48 30.6**	**-0.1**
	baz=21						
KDJ				⇑*i*S	**Sg**	**02 48 33.0**	**+0.3**
	baz=21						
ANVS	**Anan'yevo**	**0.68**	**28**	⇑*i*P	**Pb**	**02 48 42.2**	**+0.2**
	baz=25						
ANVS				⇑*i*S	**Sb**	**02 48 52.5**	**+1.1**
	baz=25						
ULHL	**Ulahol**	**0.75**	**275**	⇑*i*P	**Pg**	**02 48 41.8**	**-0.7**
	baz=82						
ULHL				⇑*i*S	**Sg**	**02 48 51.7**	**-0.7**
	baz=82						
TNSS	**Tian-Shan**	**0.88**	**346**	⇓*i*P	**Pb**	**02 48 45.8**	**+0.2**
	baz=47						
TNSS				⇓*i*S	**Sn**	**02 48 58.7**	**-1.0**
	baz=47						
TNSS	**Tian-Shan**	**0.88**	**346**	⇓*i*P	**Pb**	**02 48 45.8**	**+0.2**
	434nm,0.1s						
TNSS				⇓*i*S	**Sn**	**02 48 58.7**	**-1.0**
	557nm,0.2s						
TNSS	**Tian-Shan**	**0.88**	**346**	P	Pg	02 48 40.2	-5.0
	7.4nm,0.1s						
TNSS				S	**Sg**	**02 48 53.4**	**-3.4**
	77nm,0.2s						
PRZ	**Przheval'sk**	**0.91**	**70**	⇑*i*P	**Pb**	**02 48 46.0**	**+0.1**
	baz=66						
PRZ				⇑*i*S	**Sn**	**02 48 59.5**	**-0.6**
	baz=66						
IZV	**Izvestkoviy**	**0.97**	**332**	⇓*i*P	**Pn**	**02 48 47.3**	**-0.4**
	baz=34						
IZV				⇓*i*S	**Sn**	**02 49 01.1**	**-0.5**
	baz=34						
IZV	**Izvestkoviy**	**0.97**	**332**	⇓*i*P	**Pn**	**02 48 47.3**	**-0.4**
	253nm,0.2s						
IZV				⇓*i*S	**Sn**	**02 49 01.1**	**-0.5**
	866nm,0.1s						
MDOK	**Medeo**	**0.99**	**352**	⇑*i*P	**Pn**	**02 48 47.8**	**-0.2**
	baz=53						
MDOK				⇑*i*S	**Sn**	**02 49 02.2**	**+0.2**
	baz=53						
MDOK	**Medeo**	**0.99**	**352**	⇑*i*P	**Pn**	**02 48 47.8**	**-0.2**
	367nm,0.1s						
MDOK				⇑*i*S	**Sn**	**02 49 02.2**	**+0.2**
	773nm,0.5s						
MDOK	**Medeo**	**0.99**	**352**	Pg	Pg	02 48 42.0	-5.2
	5.9nm,0.1s						
MDOK				Lg	Lg	02 48 56.2	
	76nm,0.3s						
BOOM	**Boomskoye usch**	**1.01**	**288**	⇑*i*P	**Pg**	**02 48 46.7**	**-0.9**
	baz=93						
BOOM				⇑*i*S	**Sg**	**02 49 00.7**	**-0.1**
	baz=93						
AAA	**Alma-Ata**	**1.05**	**347**	⇓*i*P	**Pn**	**02 48 49.4**	**+0.6**
	2μm,0.2s						
AAA				⇓*i*S	**Sn**	**02 49 05.2**	**+1.7**
	695nm,0.3s						
KNDC	**Almaty**	**1.05**	**349**	⇓P	**Pn**	**02 48 49.2**	**+0.4**
	403nm,0.4s						
KNDC				⇓S	**Sn**	**02 49 05.5**	**+2.0**
	501nm,0.3s						
KOTS	**Kotyrbulak**	**1.05**	**355**	⇓*i*P	**Pn**	**02 48 49.1**	**+0.2**
	baz=56						
KOTS				⇓*i*S	**Sn**	**02 49 04.5**	**+0.9**
	baz=56						
KOTS	**Kotyrbulak**	**1.05**	**355**	⇓*i*P	**Pn**	**02 48 49.1**	**+0.2**
	2μm,0.2s						
KOTS				⇓*i*S	**Sn**	**02 49 04.5**	**+0.9**
	2μm,0.2s						
KOTS	**Kotyrbulak**	**1.05**	**355**	P	Pb	02 48 43.5	-4.9
	22nm,0.2s						
KOTS				S	**Sg**	**02 48 59.0**	**-3.1**
	363nm,0.1s						
MTBS	**Maitube**	**1.12**	**328**	⇓*i*P	**Pg**	**02 48 49.6**	**-0.1**
	baz=30						
MTBS				⇓*i*S	**Sn**	**02 49 05.5**	**+0.4**
	baz=30						
MTBS	**Maitube**	**1.12**	**328**	⇓*i*P	**Pg**	**02 48 49.6**	**-0.1**
	231nm,0.1s						
MTBS				⇓*i*S	**Sn**	**02 49 05.5**	**+0.4**
	2μm,0.2s						
SATY	**Saty**	**1.23**	**44**	⇓*i*P	**Pg**	**02 48 51.4**	**-0.3**
	baz=42						
SATY				⇓*i*S	**Sn**	**02 49 08.8**	**+1.0**
	baz=42						
SATY	**Saty**	**1.23**	**44**	⇓*i*P	**Pg**	**02 48 51.4**	**-0.3**
	156nm,0.5s						
SATY				⇓*i*S	**Sn**	**02 49 08.8**	**+1.0**
	816nm,0.3s						
KST	**Kastek**	**1.28**	**313**	⇓*i*P	**Pb**	**02 48 52.1**	**-0.1**
	baz=16						
KST				⇓*i*S	**Sg**	**02 49 10.0**	**+0.7**
	baz=16						
KST	**Kastek**	**1.28**	**313**	⇓*i*P	**Pb**	**02 48 52.1**	**-0.1**
	138nm,0.2s						
KST				⇓*i*S	**Sg**	**02 49 10.0**	**+0.7**
	1μm,0.5s						
ZHN	**Zhinishke**	**1.32**	**41**	⇑*i*P	**Pg**	**02 48 53.2**	**-0.3**
	baz=39						
ZHN				⇓*i*S	**Sg**	**02 49 11.5**	**+0.9**
	baz=39						
ZHN	**Zhinishke**	**1.32**	**41**	⇑*i*P	**Pg**	**02 48 53.2**	**-0.3**
	101nm,0.2s						
ZHN				⇓*i*S	**Sg**	**02 49 11.5**	**+0.9**
	365nm,0.2s						
TKM2	**Tokmak 2**	**1.42**	**302**	⇑*i*P	**Pb**	**02 48 54.4**	**-0.3**
	baz=5.0						
TKM2				⇑*i*S	**Sg**	**02 49 13.7**	**-0.2**
	baz=5.0						
TKM2	**Tokmak 2**	**1.42**	**302**	P	Pb	**02 48 54.5**	**-0.2**
	SNR=64						
TKM2	**Tokmak 2**	**1.42**	**302**	⇓P	Pb	**02 48 54.4**	**-0.3**
	51nm,0.3s						
TKM2				⇑S	**Sg**	**02 49 14.4**	**+0.5**
	582nm,0.5s						
KURS	**Kuram**	**1.47**	**27**	⇓*i*P	**Pg**	**02 48 56.1**	**-0.3**
	baz=26						
KURS				⇑*i*S	**Sg**	**02 49 16.5**	**+1.0**
	baz=26						
KURS	**Kuram**	**1.47**	**27**	⇓*i*P	**Pg**	**02 48 56.1**	**-0.3**
	103nm,0.6s						
KURS				⇑*i*S	**Sg**	**02 49 16.5**	**+1.0**
	296nm,0.5s						
DGS	**Degeres**	**1.52**	**315**	*e*P	**Pg**	**02 48 56.7**	**-0.5**
	baz=17						
DGS				⇑*i*S	**Sg**	**02 49 17.7**	**+0.9**
	baz=17						
DGS	**Degeres**	**1.52**	**315**	*e*P	**Pg**	**02 48 56.7**	**-0.5**
	65nm,0.2s						
DGS				⇑*i*S	**Sg**	**02 49 17.7**	**+0.9**
	525nm,0.4s						
KTBS	**Karatobe**	**1.58**	**345**	*e*P	**Pg**	**02 48 58.4**	**-0.1**
	baz=46						
KTBS				*e*S	**Sg**	**02 49 20.3**	**+1.3**
	baz=46						
KTBS	**Karatobe**	**1.58**	**345**	*e*P	**Pg**	**02 48 58.4**	**-0.1**
	178nm,0.3s						
KTBS				*e*S	**Sg**	**02 49 20.3**	**+1.3**
	3μm,0.2s						
UZB	**Uzynbulak**	**1.63**	**53**	⇓*i*P	**Pb**	**02 48 57.9**	**-0.3**
	baz=51						
UZB				⇓*e*S	**Sg**	**02 49 20.2**	**-0.3**
	baz=51						
UZB	**Uzynbulak**	**1.63**	**53**	⇓*i*P	**Pb**	**02 48 57.9**	**-0.3**
	113nm,0.3s						
UZB				*e*S	**Sg**	**02 49 20.2**	**-0.3**
	910nm,0.3s						
UZB	**Uzynbulak**	**1.63**	**53**	P	**Pn**	**02 48 52.2**	**-4.6**
	2.1nm,0.1s						
UZB				S	**Sn**	**02 49 13.6**	**-4.1**
	72nm,0.3s						
KPKS	**Kokpek**	**1.67**	**39**	*e*P	**Pb**	**02 48 59.2**	**+0.5**
	baz=37						
KPKS				*e*S	**Sg**	**02 49 21.7**	**+0.1**
	baz=37						
KPKS	**Kokpek**	**1.67**	**39**	*e*P	**Pb**	**02 48 59.2**	**+0.5**
	335nm,0.2s						
KPKS				*e*S	**Sg**	**02 49 21.8**	**+0.1**
	1μm,0.3s						
KBK	**Karagaybulak**	**1.76**	**286**	⇑*i*P	**Pb**	**02 49 00.1**	**-0.4**
	baz=89						
KBK				⇑*i*S	**Sb**	**02 49 23.2**	**+0.5**
	baz=89						
KBK	**Karagaybulak**	**1.76**	**286**	P	**Pb**	**02 49 00.2**	**-0.2**
	SNR=29						
KUU	**Kurty**	**1.83**	**339**	*e*P	**Pb**	**02 49 02.2**	**+0.6**
	baz=40						
KUU				*e*S	**Sg**	**02 49 27.6**	**+0.6**
	baz=40						
KUU	**Kurty**	**1.83**	**339**	*e*P	**Pb**	**02 49 02.2**	**+0.6**
	144nm,0.3s						
KUU				*e*S	**Sg**	**02 49 27.7**	**+0.6**
	575nm,0.2s						
KRBS	**Karabastau**	**1.90**	**323**	*e*P	**Pb**	**02 49 03.2**	**+0.5**
	baz=25						
KRBS				*e*S	**Sg**	**02 49 29.3**	**+0.1**
	baz=25						
KRBS	**Karabastau**	**1.90**	**323**	*e*P	**Pb**	**02 49 03.2**	**+0.5**
	292nm,0.3s						
KRBS				*e*S	**Sg**	**02 49 29.3**	**+0.1**
	490nm,0.4s						
SHLS	**Shalkode**	**1.91**	**59**	*e*P	**Pg**	**02 49 08.2**	**+3.6**
	58nm,0.2s						
SHLS				*e*S	**Sg**	**02 49 37.0**	**+7.7**
	549nm,0.4s						
CHMS	**Chumysh**	**2.01**	**295**	⇓*i*P	**Pb**	**02 49 03.6**	**-1.0**
	baz=97						
CHMS				⇓*i*S	**Sb**	**02 49 29.4**	**-0.3**
	baz=97						
CHMS	**Chumysh**	**2.01**	**295**	P	Pb	**02 49 04.0**	**-0.6**
	SNR=18						
PDGK	**Podgornoye**	**2.01**	**55**	⇑Pn	**Pb**	**02 49 03.9**	**-0.9**
	83nm,0.8s						
PDGK				⇑Sn	**Sg**	**02 49 31.8**	**-1.0**
	355nm,0.5s						
UCH	**Uchtor**	**2.03**	**272**	⇑*e*P	**Pn**	**02 49 03.6**	**+1.1**
	baz=75						
UCH				⇑*i*S	**Sb**	**02 49 29.4**	**-1.1**
	baz=75						
UCH	**Uchtor**	**2.03**	**272**	P	Pb	**02 49 04.6**	**-0.5**
	SNR=7.3						
FRU1	**Bishkek**	**2.03**	**289**	⇑*i*P	**Pb**	**02 49 03.6**	**-1.4**
	baz=91						
FRU1				⇑*i*S	**Sb**	**02 49 29.5**	**-0.7**
	baz=91						
ARXS	**Arharly**	**2.07**	**12**	*e*P	**Pg**	**02 49 07.2**	**-0.7**
	276nm,0.3s						
ARXS				*e*S	**Sg**	**02 49 35.3**	**+0.6**
	636nm,0.1s						
MNBS	**Baschi**	**2.08**	**24**	*e*P	**Pg**	**02 49 07.4**	**-0.5**
	45nm,0.1s						
MNBS				*e*S	**Sg**	**02 49 35.9**	**+1.1**
	583nm,0.2s						
AAK	**Ala-Archa**	**2.08**	**284**	P	Pb	**02 49 05.4**	**-0.5**
	SNR=33						
AAK	**Ala-Archa**	**2.08**	**284**	⇑Pn	**Pb**	**02 49 05.2**	**-0.7**
	12nm,0.2s						
AAK				⇓Sn	**Sg**	**02 49 34.0**	**-1.1**
	118nm,0.3s						
ARLS	**Aral**	**2.20**	**263**	⇑*e*P	**Pn**	**02 49 05.5**	**+0.9**
	baz=65						
ARLS				⇑*i*S	**Sn**	**02 49 33.1**	**+1.3**
	baz=65						
USP	**Ospenovka**	**2.29**	**299**	⇑*i*P	**Pb**	**02 49 07.5**	**-1.9**
	baz=1.0						
USP				⇑*i*S	**Sb**	**02 49 36.2**	**-1.6**
	baz=1.0						
USP	**Ospenovka**	**2.29**	**299**	P	Pb	**02 49 08.7**	**-0.8**
	SNR=33						
EKS2	**Erkin-Say**	**2.61**	**282**	⇑*e*P	**Pn**	**02 49 11.6**	**+1.4**
	baz=84						
EKS2				⇑*i*S	**Sn**	**02 49 43.3**	**+1.4**
	baz=84						
EKS2	**Erkin-Say**	**2.61**	**282**	P	Pb	**02 49 15.3**	**+0.5**
	SNR=28						
KTMS	**Ketmen**	**2.61**	**60**	*e*P	**Pb**	**02 49 15.4**	**+0.5**
KTMS				*e*S	**Sg**	**02 49 49.5**	**-2.5**
AML	**Almayashu**	**2.64**	**270**	⇓*i*P	**Pn**	**02 49 11.9**	**+1.0**
	baz=72						
AML				⇓*i*S	**Sn**	**02 49 44.0**	**+1.0**
	baz=72						
AML	**Almayashu**	**2.64**	**270**	P	Pb	**02 49 15.6**	**+0.1**
	SNR=37						
DJR	**Jarkent**	**2.84**	**40**	*e*P	**Pb**	**02 49 19.9**	**+1.1**
	53nm,0.3s						
DJR				*e*S	**Sg**	**02 49 57.4**	**-2.0**
	80nm,0.5s						
TDK	**Taldyqorghan**	**2.94**	**16**	*e*P	**Pb**	**02 49 21.9**	**+1.5**
	188nm,0.4s						
TDK				*e*S	**Sg**	**02 50 00.7**	**-1.9**
	388nm,0.5s						
MRKS	**Merke**	**3.02**	**282**	*e*P	**Pb**	**02 49 22.6**	**+0.7**
	16nm,0.3s						
MRKS				*e*S	**Sg**	**02 50 02.1**	**-3.1**
	136nm,0.2s						
ARSB	**Arslanbob**	**3.30**	**256**	⇑*i*P	**Pn**	**02 49 20.9**	**+1.2**
	baz=58						
ARSB				⇑*i*S	**Sn**	**02 49 58.9**	**-0.1**
	baz=58						
SFK	**Sufi-Kurgan**	**3.56**	**234**	⇓*i*P	**Pn**	**02 49 23.8**	**+0.4**
	baz=35						
SFK				⇓*i*S	**Sn**	**02 50 04.7**	**-0.8**
	baz=35						
KK31	**Karatay Array**	**5.05**	**283**	⇓Pg	**Pb**	**02 50 00.1**	**+3.7**
	2.5nm,0.5s,baz=95,slow=16,SNR=30						
KK31				⇑Lg	Lg	02 51 09.0	
	10nm,0.5s,baz=103,slow=27,SNR=11						
MAKZ	**Makanchi**	**5.73**	**35**	⇓Pn	**Pn**	**02 49 55.4**	**+2.4**
	0.7nm,0.3s						
MAKZ				⇓Pg	**Pg**	**02 50 14.3**	**-3.5**
	6.1nm,0.8s						
MAKZ				⇑Lg	Lg	02 51 30.2	
	9.6nm,0.8s						
MK31	**Makanchi Array**	**5.86**	**36**	⇑Pn	**Pn**	**02 49 57.1**	**+2.4**
	0.8nm,0.2s,baz=211,slow=14,SNR=106						
MK31				⇑Lg	Lg	02 51 34.3	
	3.0nm,0.4s						

*IDC 14 02:58:35.2±0.9, 64°.52N×17°.81W, h0km, mb3.5

	0.8nm,0.8s,baz=337,slow=6.9,SNR=4.4								
SONM	**Songino Array**	**59.71**	**40**	P		**P**	**03 08 41.8**	**+1.2**	
	0.3nm,0.6s,baz=359,slow=5.8,SNR=2.2								

SOME **14** *03:13:01.7, 40.02N×69.53E, h5km*
KRNET **14** *03:13:02.3±0.1, 39.96N×69.49E, h35km, mb2.7*
NNC **14** *03:13:07.6±16.0, 40.19N×68.71E, h0km, mb3.2, mpv3.2, Error ellipse: s-maj=120.9km s-min=113.7km az=102.0*
ISC 14 03:13:01.1±1.3, 40.03N±0.03×69.51E±0.05, h12km±10km, n17, σ1℗40/31, 14C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.00**	**88**	⇑*i* P	**Pg**	**03 13 21.5**	**+1.0**
	baz=84						
BTK				⇑*i* S	**Sg**	**03 13 35.3**	**+1.7**
	baz=84						
GAR	**Garm**	**1.21**	**149**	⇑*i* P	**Pg**	**03 13 23.9**	**-0.4**
	baz=46						
GAR				⇑*i* S	**Sn**	**03 13 39.3**	**-1.0**
	baz=46						
CHGR	**Chuyangaron**	**1.40**	**191**	⇑*i* P	**Pb**	**03 13 26.5**	**-0.8**
	baz=91						
CHGR				⇑*i* S	**Sb**	**03 13 43.9**	**-1.2**
	baz=91						
DRK	**Karamyk**	**1.85**	**107**	⇑*i* P	**Pb**	**03 13 34.6**	**-0.4**
	baz=4.0						
DRK				⇑*i* S	**Sb**	**03 13 58.1**	**-0.2**
	baz=4.0						
TRKS	**Terek-Say**	**1.94**	**39**	⇓*i* P	**Pb**	**03 13 36.2**	**-0.3**
	baz=40						
TRKS				⇓*i* S	**Sb**	**03 14 00.7**	**-0.1**
	baz=40						
IUG	**Iuzhnay**	**2.15**	**10**	*e*P	**Pg**	**03 13 42.5**	**+0.2**
	2.6nm,0.2s						
IUG				*e*S	**Sg**	**03 14 12.3**	**+2.1**
	20nm,0.3s						
IUG	**Iuzhnay**	**2.15**	**10**	Pg	**Pg**	**03 13 42.5**	**+0.2**
	2.7nm,0.1s						
IUG				Lg	Lg	03 14 12.3	
	18nm,0.2s						
ARSB	**Arslanbob**	**2.94**	**63**	⇓*e*P	**Pb**	**03 13 50.6**	**-2.9**
	baz=62						
ARSB				⇓*i* S	**Sn**	**03 14 24.8**	**+1.7**
	baz=62						
BRLS	**Boroldav**	**3.00**	**5**	*e*P	**Pb**	**03 13 53.4**	**-1.2**
	5.4nm,0.1s						
BRLS				*e*S	**Sb**	**03 14 30.5**	**-0.7**
	11nm,0.1s						
BRLS	**Boroldav**	**3.00**	**5**	Pg	**Pg**	**03 13 53.4**	**-1.2**
	4.8nm,0.1s						
BRLS				Lg	Lg	03 14 30.5	
	11nm,0.1s						
SFK	**Sufi-Kurgan**	**3.07**	**89**	⇑*i* P	**Pn**	**03 13 51.6**	**+2.0**
	baz=88						
SFK				⇑*i* S	**Sn**	**03 14 27.5**	**+1.2**
	baz=88						
KK31	**Karatay Array**	**3.16**	**13**	⇓Pn	**Pg**	**03 14 01.5**	**-0.1**
	0.6nm,0.6s,baz=205,slow=16,SNR=5.8						
KK31				Sn	**Sg**	**03 14 43.2**	**+0.6**
	2.8nm,0.3s,baz=205,slow=26,SNR=13						
AML	**Almayashu**	**3.79**	**55**	⇑*i* P	**Pn**	**03 14 01.4**	**+1.6**
	baz=54						
AML				⇑*i* S	**Sn**	**03 14 44.5**	**0.0**
	baz=54						
MRKS	**Merke**	**3.89**	**45**	*e*P	**Pg**	**03 14 14.0**	**-1.7**
	1.5nm,0.1s						
MRKS				*e*S	**Sg**	**03 15 06.0**	**-0.1**
	3.7nm,0.3s						
MRKS	**Merke**	**3.89**	**45**	Pg	**Pg**	**03 14 14.0**	**-1.7**
	1.5nm,0.2s						
MRKS				Lg	Lg	03 15 06.0	
	3.6nm,0.4s						
UCH	**Uchtor**	**4.37**	**58**	⇑*i* P	**Pn**	**03 14 09.4**	**+1.7**
	baz=58						
UCH				⇑*i* S	**Sn**	**03 14 58.3**	**-0.5**
	baz=58						
DGS	**Degeres**	**5.68**	**54**	*e*P	**Pg**	**03 14 47.0**	**-2.9**
	1.1nm,0.5s						
DGS				*e*S	**Sg**	**03 16 02.6**	**-0.8**
	2.0nm,0.7s						

IDC **14** *03:24:45.0±1.3, 57.25S×25.12W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.8/16, mbtmp3.8/4, MS3.2/1, Ms1 3.2/1, ms1mx2.8/16, Error ellipse: s-maj=44.1km s-min=33.6km az=71.0*
NEIC **14** *03:24:50.0±1.0, 57.5S±0.2×25.2W±0.3, h43km±8km, mb4.1/6, Error ellipse: s-maj=30.1km s-min=14.1km az=220.0*
ISC 14 03:24:46.7±1.0, 57.4S±0.1×25.0W±0.2, h15km, n10, σ0℗90/9, mb3.9/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.19**	**291**	Pn	**Pn**	**03 26 31.6**	**+0.5**
SNAA	**Sanae**	**17.04**	**156**		**Pn**	**03 28 43.4**	**-0.7**
SNAA				IAmb	IAmb	03 28 46.3	
	comp=Z,10nm,1.4s						
BELA	**Belgrano 2**	**20.87**	**186**	P	**P**	**03 29 26.8**	**-0.9**
PLCA	**Paso Flores**	**33.44**	**280**	LR	LR	03 43 13.8	
	comp=Z,39nm,20.9s,baz=148,slow=33						
CPUP	**Villa Florida**	**36.60**	**310**	P	**P**	**03 32 08.1**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=160,slow=9.0,SNR=4.5						
VNDA	**Vanda**	**45.31**	**182**	P	**P**	**03 33 04.5**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=189,slow=7.5,SNR=2.2						
LPAZ	**La Paz**	**52.13**	**304**	P	**P**	**03 33 56.8**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=166,slow=4.2,SNR=5.5						
SAML	**Samuel**	**56.60**	**313**	P	**P**	**03 34 28.2**	**-0.6**
SAML				IAmb	IAmb	03 34 29.6	
	comp=Z,3.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**73.63**	**27**	P	**P**	**03 36 19.7**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=203,slow=6.6,SNR=7.3						
ILAR	**Eielson Array**	**151.90**	**309**	PKPbc	**PKPbc**	**03 44 39.8**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=101,slow=2.5,SNR=4.1						

IDC **14** *03:42:32.6±0.9, 15.66S×174.07W, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.0/30, mbtmp4.0/7, Error ellipse: s-maj=38.9km s-min=20.7km az=129.0*
NEIC **14** *03:42:46.6±1.9, 15.9S±0.1×174.1W±0.2, h113km±8km, mb4.3/7, Error ellipse: s-maj=23.1km s-min=14.7km az=104.0*
ISC 14 03:42:46.8±0.8, 15.9S±0.1×174.0W±0.1, h115km, n24, σ0℗67/16, mb3.9/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.95**	**48**		**Pn**	**03 43 33.0**	**+0.6**
NIUE	**Niue**	**5.03**	**129**		**Pn**	**03 43 59.8**	**-0.3**
URZ	**Urewera**	**23.59**	**198**	P	**P**	**03 47 48.5**	**+1.4**
	2.9nm,0.3s,baz=258,slow=2.6,SNR=9.3						
URZ	**Urewera**	**23.59**	**198**	IAmb	IAmb	03 47 56.0	
	comp=Z,26nm,1.1s						
BKZ	**Black Stump Fm**	**24.61**	**198**	P	**P**	**03 47 57.1**	**+0.7**
H11S2	**WAKE ISLAND Hy**	**39.09**	**330**	T	T	04 31 09.6	
	baz=146,slow=76,SNR=8.5						
H11S3	**WAKE ISLAND Hy**	**39.10**	**330**	T	T	04 30 50.5	
	baz=146,slow=76,SNR=9.6						
H11S1	**WAKE ISLAND Hy**	**39.11**	**330**	T	T	04 30 51.6	
	baz=146,slow=76,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**40.06**	**331**	T	T	04 31 57.4	
	baz=145						
H11N1	**WAKE ISLAND Hy**	**40.06**	**331**	T	T	04 31 58.2	
	baz=145						
H11N2	**WAKE ISLAND Hy**	**40.08**	**331**	T	T	04 32 01.9	
	baz=145						
WRA	**Warramunga Arr**	**49.14**	**257**	P	**P**	**03 51 22.7**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=97,slow=6.2,SNR=20						
WRA	**Warramunga Arr**	**49.14**	**257**	IAmb	IAmb	03 51 23.9	
	comp=Z,0.3nm,1.2s						
AS31	**Alice Springs**	**49.38**	**252**	P	**P**	**03 51 25.4**	**+0.3**
AS31				IAmb	IAmb	03 51 26.9	
	comp=Z,1.5nm,1.0s						
ASAR	**Alice Springs**	**49.38**	**252**	P	**P**	**03 51 24.2**	**-0.9**
	comp=Z,4.9nm,0.8s,baz=86,slow=8.4,SNR=36						
ASAR	**Alice Springs**	**49.38**	**252**	P	**P**	**03 51 24.8**	**-0.3**
VNDA	**Vanda**	**62.81**	**186**	P	**P**	**03 53 00.1**	**+0.4**
	comp=Z,1.3nm,0.9s,baz=1.5,slow=4.9,SNR=6.5						
QSPA	**South Pole Qui**	**74.14**	**180**	P	**P**	**03 54 10.5**	**0.0**
QSPA				IAmb	IAmb	03 54 12.3	
	comp=Z,6.8nm,1.2s						
NVAR	**Mina Array Bea**	**75.11**	**42**	P	**P**	**03 54 16.2**	**-0.5**
	comp=Z,1.0nm,1.0s,baz=232,slow=9.2,SNR=4.6						
PD31	**Pinedale Array**	**83.05**	**42**	P	**P**	**03 54 59.2**	**-0.7**
PD31				IAmb	IAmb	03 55 10.3	
	comp=Z,13nm,2.0s						
PDAR	**Pinedale Array**	**83.05**	**42**	P	**P**	**03 54 59.7**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=214,slow=3.4,SNR=11						
PDAR	**Pinedale Array**	**83.05**	**42**	P	**P**	**03 54 59.2**	**-0.7**
IL31		**83.06**	**11**	P	**P**	**03 54 59.2**	**+0.2**
ILAR	**Eielson Array**	**83.06**	**11**	P	**P**	**03 54 58.5**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=227,slow=7.0,SNR=6.0						

SOME **14** *03:53:36.5, 42.18N×71.58E, h0km*
KRNET **14** *03:53:37.5±0.1, 42.11N×71.59E, h13km, mb2.5*
NNC **14** *03:53:40.0±1.0, 42.37N×71.51E, h0km, mb3.0, mpv3.1, Error ellipse: s-maj=10.6km s-min=4.7km az=10.0*
ISC 14 03:53:36.5±1.3, 42.13N±0.03×71.55E±0.02, h3km±12km, n32, σ1℗28/60, 24C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.67**	**207**	⇑*i* P	**Pb**	**03 53 51.6**	**+0.7**
	baz=6.0						
TRKS				⇑*i* S	**Sb**	**03 54 01.8**	**+1.1**
	baz=6.0						
DZA	**Taraz**	**0.78**	**348**	*e*P	**Pg**	**03 53 50.9**	**-0.7**
DZA				*e*S	**Sg**	**03 54 00.9**	**-0.9**
MNAS	**Manas**	**0.79**	**63**	⇑*i* P	**Pg**	**03 53 52.3**	**+0.5**
	baz=61						
MNAS				⇑*i* S	**Sg**	**03 54 02.4**	**+0.3**
	baz=61						
IUG	**Iuzhnay**	**1.13**	**272**	*e*P	**Pb**	**03 53 59.3**	**+0.5**
	baz=72						
IUG				*e*S	**Sn**	**03 54 15.3**	**-0.2**
	baz=72						
IUG	**Iuzhnay**	**1.13**	**272**	*e*P	**Pb**	**03 53 59.3**	**+0.5**
	16nm,0.1s						
IUG				*e*S	**Sn**	**03 54 15.2**	**-0.2**
	18nm,0.3s						
IUG	**Iuzhnay**	**1.13**	**272**	P	**Pb**	**03 53 59.3**	**+0.5**
	16nm,0.1s						
IUG				S	**Sn**	**03 54 15.2**	**-0.2**
	18nm,0.3s						
KK31	**Karatay Array**	**1.24**	**322**	P	**Pn**	**03 53 59.7**	**-1.1**
	1.5nm,0.2s,baz=136,slow=17,SNR=52						
KK31				⇓S	**Sb**	**03 54 14.6**	**-2.4**
	2.3nm,0.2s,baz=130,slow=30,SNR=14						
ARSB	**Arslanbob**	**1.34**	**126**	⇑*i* P	**Pb**	**03 54 02.2**	**-0.1**
	baz=27						
ARSB				⇑*i* S	**Sg**	**03 54 19.8**	**+0.3**
	baz=27						
MRKS	**Merke**	**1.39**	**63**	*e*P	**Pg**	**03 54 03.6**	**+0.5**
	baz=62						
MRKS				*e*S	**Sg**	**03 54 22.2**	**+1.1**
	baz=62						
MRKS	**Merke**	**1.39**	**63**	*e*P	**Pg**	**03 54 03.6**	**+0.5**
	1.7nm,0.1s						
MRKS				*e*S	**Sg**	**03 54 22.2**	**+1.1**
	8.0nm,0.2s						
MRKS	**Merke**	**1.39**	**63**	P	**Pg**	**03 54 03.6**	**+0.5**
	1.7nm,0.1s						
MRKS				S	**Sg**	**03 54 22.0**	**+1.0**
	14nm,0.2s						
BRLS	**Boroldav**	**1.56**	**306**	*e*P	**Pn**	**03 54 05.9**	**+0.8**
	11nm,0.2s						
BRLS				*e*S	**Sb**	**03 54 27.1**	**+1.1**
	19nm,0.1s						
BRLS	**Boroldav**	**1.56**	**306**	P	**Pn**	**03 54 05.8**	**+0.8**
	23nm,0.1s						
BRLS				S	**Sn**	**03 54 25.8**	**-0.1**
	29nm,0.1s						
AML	**Almayashu**	**1.59**	**89**	⇑*e*P	**Pg**	**03 54 07.2**	**+0.1**
	baz=89						
AML				⇑*i* S	**Sg**	**03 54 28.4**	**+0.6**
	baz=89						
EKS2	**Erkin-Say**	**1.73**	**71**	⇑*i* P	**Pb**	**03 54 09.6**	**+0.5**
	baz=71						
EKS2				⇑*i* S	**Sg**	**03 54 32.2**	**0.0**
	baz=71						
OHH	**Osh**	**1.85**	**149**	⇑*i* P	**Pb**	**03 54 11.2**	**+0.2**
	baz=50						
OHH				⇑*i* S	**Sg**	**03 54 36.0**	**0.0**
	baz=50						
ARLS	**Aral**	**2.08**	**96**	⇓*i* P	**Pb**	**03 54 15.0**	**0.0**
	baz=96						
ARLS				⇓*i* S	**Sg**	**03 54 42.2**	**-1.2**
	baz=96						
UCH	**Uchtor**	**2.20**	**86**	⇑*i* P	**Pb**	**03 54 17.8**	**+0.5**
	baz=86						
UCH				⇑*i* S	**Sg**	**03 54 46.3**	**-1.1**
	baz=86						
AAK	**Ala-Archa**	**2.24**	**76**	⇓*i* P	**Pb**	**03 54 18.0**	**+0.3**
	baz=75						
AAK				⇓*i* S	**Sb**	**03 54 46.6**	**+0.7**
	baz=75						
AAK	**Ala-Archa**	**2.24**	**76**	⇑Pn	**Pg**	**03 54 18.8**	**-0.6**
	2.0nm,0.4s						
AAK				⇓Sn	**Sg**	**03 54 48.8**	**+0.3**
	2.4nm,0.3s						
USP	**Ospenovka**	**2.45**	**61**	⇑*i* P	**Pb**	**03 54 20.9**	**-0.4**
	baz=61						
USP				⇑*i* S	**Sb**	**03 54 51.4**	**-0.5**
	baz=61						
CHMS	**Chumysh**	**2.52**	**69**	⇑*i* P	**Pb**	**03 54 21.5**	**-0.9**
	baz=68						
CHMS				⇑*i* S	**Sb**	**03 54 53.4**	**-0.4**
	baz=68						
SFK	**Sufi-Kurgan**	**2.58**	**144**	⇑*i* P	**Pb**	**03 54 22.1**	**-1.4**
	baz=45						
SFK				⇑*i* S	**Sb**	**03 54 54.4**	**-1.2**
	baz=45						
SGDS	**Sogindy**	**2.62**	**59**	Pg	**Pb**	**03 54 23.5**	**-0.7**
	1.1nm,0.1s						
SGDS				Lg	Lg	03 54 56.1	
	9.0nm,0.2s						
TKM2	**Tokmak 2**	**3.09**	**74**	⇑*i* P	**Pb**	**03 54 29.8**	**-2.5**
	baz=73						
TKM2				⇑*i* S	**Sb**	**03 55 07.3**	**-3.2**
	baz=73						
TKM2	**Tokmak 2**	**3.09**	**74**	⇓Pn	**Pb**	**03 54 32.8**	**+0.5**
	2.4nm,1.1s						
TKM2				⇑Sn	**Sb**	**03 55 11.2**	**+0.7**
	4.1nm,0.6s						
DGS	**Degeres**	**3.31**	**69**	*e*P	**Pb**	**03 54 37.4**	**+1.5**
	1.2nm,0.2s						
DGS				*e*S	**Sg**	**03 55 19.7**	**-3.0**
	5.7nm,0.2s						
DGS	**Degeres**	**3.31**	**69**	Pg	**Pb**	**03 54 37.4**	**+1.5**
	1.2nm,0.2s						
DGS				Lg	Lg	03 55 19.7	
	5.7nm,0.2s						
KST	**Kastek**	**3.38**	**73**	*e*P	**Pb**	**03 54 39.4**	**+2.2**
	1.2nm,0.1s						
KST				*e*S	**Sg**	**03 55 22.6**	**-2.6**
	3.5nm,0.4s						
KST	**Kastek**	**3.38**	**73**	Pg	**Pb**	**03 54 39.4**	**+2.2**
	1.2nm,0.1s						
KST				Lg	Lg	03 55 21.8	
	3.5nm,0.4s						
KUU	**Kurty**	**3.93**	**62**	*e*P	**Pb**	**03 54 47.8**	**+1.4**
	1.4nm,0.4s						
KUU				*e*S	**Sb**	**03 55 37.9**	**+3.5**
	3.3nm,0.6s						
KUU	**Kurty**	**3.93**	**62**	Pg	**Pb**	**03 54 47.8**	**+1.4**
	1.4nm,0.4s						
KUU				Lg	Lg	03 55 37.8	
	3.3nm,0.6s						

BJI **14** *04:16:03.7±0.0, 45.20N×151.08E, h9km, mB5.2/61, mb5.5/76, Ms5.4/87, Ms7 5.3/80*
IDC **14** *04:16:04.8±0.3, 45.20N×151.07E, h0km, mb5.4/44, mb1 5.4/50, mb1mx5.4/55, mbtmp5.3/50, ML4.2/6, MS5.1/32, Ms1 5.1/32, ms1mx5.1/37, Error ellipse: s-maj=11.1km s-min=8.8km az=149.0*
NIED **14** *04:16:05.7, 45.29N×151.39E, h30km, MW5.5, Moment Tensor Solution. s3 Moment tensor: Scale 1017Nm; Mrr1.51; Mθθ-1.17; Mφφ-0.35; Mrθ-1.21; Mθφ-0.27; Mφr-0.55; Fault plane solution: M0 1.92000×1017 NP1: φs248.00000°, δ67.00000°, λ87.00000°. NP2:φs76.00000°, δ23.00000°, λ97.00000°.*
JMA **14** *04:16:05.6±0.6, 45.29N×151.39E, h30km, M5.4*
SKHL **14** *04:16:06.9±0.5, 44.97N×151.39E, h34km±4km, mb5.9/2, Ms5.5/6, msh5.8/1, msh5.2/2*
SKHL Felt (II-III) at Reidovo.

NEIC **14** *04:16:06.4, 45.21N×151.00E, h20km, Moment Tensor Solution. Moment tensor: Scale 1016Nm; Mrr8.57; Mθθ-4.51; Mφφ-4.06; Mrθ-2.95; Mθφ-4.07; Mφr-1.64; Fault plane solution: M0 9.11000×1016 NP1:φs231.73000°, δ55.76000°, λ95.69000°. NP2:φs41.68000°, δ34.65000°, λ81.71000°. Principal axes: T 9.2508, Plg78.0000°, Azm162.0000°; N -0.2821, Plg5.0000°, Azm49.0000°; P -8.9687, Plg11.0000°, Azm318.0000°;*
NEIC **14** *04:16:07.9±1.5, 45.21N±0.07×150.97E±0.10, h20km±1km, mb5.7/734, Ms_20 5.2/416, Mwb5.2/59, Mww5.3, Mwc5.3(GCMT) Error ellipse: s-maj=12.9km s-min=10.0km az=137.0*
GCMT **14** *04:16:09.9±0.1, 45.34N±0.01×151.13E±0.01, h28km, MW5.3/136, Moment Tensor Solution. s123,c214; s136,c228; Duration: 1ꜝ1 Moment tensor: Scale 1017 Nm; Mrr1.00±.02; Mθθ-0.40±.01; Mφφ-0.59±.01; Mrθ-0.61±.02; Mθφ-0.48±.01; Mφr-0.48±.02; Best double couple: M0 1.25900×1017 NP1:φs32.00000°, δ27.00000°, λ76.00000°. NP2:φs227.00000°, δ64.00000°, λ97.00000°. Principal axes: T 1.2730, Plg70.0000°, Azm151.0000°; N -0.0300, Plg6.0000°, Azm44.0000°; P -1.2450, Plg19.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS **14** *04:16:10.1±0.9, 45.16N×150.97E, h56km, mb5.9/135, MS5.2/62 Error ellipse: s-maj=5.6km s-min=5.0km az=130.4*
MOS Felt (II-III) at Reydovo.
NEIC **14** *04:16:11, 45.25N×151.19E, h24km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr1.00; Mθθ-0.42; Mφφ-0.58; Mrθ-0.40; Mθφ-0.51; Mφr-0.24; Fault plane solution: M0 1.11000×1017 NP1:φs33.00000°, δ34.00000°, λ77.00000°. NP2:φs228.00000°, δ57.00000°, λ98.00000°. Principal axes: T 1.1129, Plg76.0000°, Azm164.0000°; N -0.0063, Plg7.0000°, Azm44.0000°; P -1.1066, Plg12.0000°, Azm312.0000°;*
NEIC **14** *04:16:13, 45.12N×150.93E, h22km, Moment Tensor Solution. Moment tensor: Scale 1017Nm; Mrr1.15; Mθθ-0.65; Mφφ-0.51; Mrθ-0.47; Mθφ-0.52; Mφr-0.01; Fault plane solution: M0 1.22000×1017 NP1:φs37.00000°, δ37.00000°, λ70.00000°. NP2:φs242.00000°, δ55.00000°, λ105.00000°. Principal axes: T 1.2731, Plg75.0000°, Azm195.0000°; N -0.1134, Plg12.0000°, Azm53.0000°; P -1.1597, Plg9.0000°, Azm321.0000°;*
BGR **14** *04:16:20.3±0.0, 46.57N×149.94E, h33km, mb6.0, Ms5.5*
ISC 14 04:16:08.6±0.3, 45.16N±0.03×151.00E±0.03, h26km±2km, h26km:pP-P, n2007, σ1℗47/1809, mb5.7/593, MS5.2/302, 105C-35D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.21**	**273**	*i* P	**Pn**	**04 16 45.0**	**+1.3**
KUR				AMB	AMB	04 16 48.0	
	3μm,0.4s						
KUR				*i* S	**Sb**	**04 17 13.5**	**-1.3**
KUR				A	A	04 17 16.0	
	62μm,1.2s						
KUR				A	A	04 17 16.0	
	16μm,1.2s						
KUR				A	A	04 17 20.0	
	20μm,0.7s						
KUR				A	A	04 17 20.0	
	10μm,0.7s						
KUR	**Kuril'sk**	**2.21**	**273**	*c i* PN	**Pn**	**04 16 44.9**	**+1.3**
KUR				*i* S	**Sb**	**04 17 13.5**	**-1.3**
KUR				pmax	pmax		
	comp=N,642nm,0.4s						
KUR				pmax	pmax		
	comp=Z,3μm,0.4s						
KUR				pmax	pmax		
	comp=E,429nm,0.5s						
KUR				smax	smax		
	comp=N,18μm,0.7s						
KUR				smax	smax		
	comp=E,8μm,0.4s						
KUR				MLR	MLR		
	comp=Z,64μm,14.0s						
YUK	**Yuzh-Kuril'sk**	**3.83**	**255**	*e*P	**Pn**	**04 17 08.0**	**+2.1**
YUK				AMB	AMB	04 17 16.0	
	comp=Z,2μm,0.9s						
YUK				*i* S	**Sn**	**04 17 53.0**	**+2.9**
YUK				A	A	04 18 03.0	
	comp=Z,8μm,0.8s						
YUK				A	A	04 18 03.0	
	comp=Z,18μm,0.8s						
YUK				A	A	04 18 08.0	
	comp=Z,24μm,0.9s						
YUK				A	A	04 18 08.0	
	comp=Z,32μm,0.9s						
YUK	**Yuzh-Kuril'sk**	**3.83**	**255**	*e*PN	**Pn**	**04 17 08.2**	**+2.3**
YUK				*i* S	**Sn**	**04 17 54.4**	**+4.3**
YUK				pmax	pmax		
	comp=Z,2μm,0.9s						
YUK				pmax	pmax		
	comp=N,2μm,0.7s						
YUK				pmax	pmax		
	comp=E,2μm,0.4s						
YUK				smax	smax		
	comp=N,8μm,0.5s						
YUK				smax	smax		
	comp=E,18μm,0.8s						
YUK				smax	smax		
	comp=E,32μm,0.9s						
YUK				smax	smax		
	comp=N,24μm,1.0s						
GRPR	**Tuman**	**3.91**	**254**	*e*P	**Pn**	**04 17 09.0**	**+2.0**
GRPR				AMB	AMB	04 17 14.0	
	comp=N,2μm,0.4s						
GRPR				*i* S	**Sn**	**04 17 56.0**	**+4.0**
GRPR				A	A	04 17 59.0	
	comp=N,2μm,0.4s						
GRPR				A	A	04 17 59.0	
	comp=N,5μm,0.4s						
GRPR	**Tuman**	**3.91**	**254**	*e*PN	**Pn**	**04 17 09.5**	**+2.5**
GRPR				*i* S	**Sn**	**04 17 56.0**	**+4.0**
GRPR				pmax	pmax		
	comp=E,490nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,2μm,0.4s						
GRPR				pmax	pmax		
	comp=N,587nm,0.2s						
GRPR				smax	smax		
	comp=N,2μm,0.4s						
GRPR				smax	smax		
	comp=E,5μm,0.4s						
GLVR	**Golovnino**	**4.17**	**252**	*e*P	**Pn**	**04 17 13.0**	**+2.5**
GLVR				AMB	AMB	04 17 20.0	
	comp=E,1μm,0.6s						
GLVR				*i* S	**Sn**	**04 18 02.0**	**+3.6**
GLVR				A	A	04 18 07.0	
	comp=E,4μm,0.6s						
GLVR				A	A	04 18 07.0	
	comp=E,5μm,0.6s						
GLVR	**Golovnino**	**4.17**	**252**	*e*PN	**Pn**	**04 17 13.2**	**+2.7**
GLVR				*i* S	**Sn**	**04 18 02.9**	**+4.5**
GLVR				pmax	pmax		
	comp=Z,1μm,0.6s						
GLVR				pmax	pmax		
	comp=N,744nm,0.4s						
GLVR				pmax	pmax		
	comp=E,819nm,0.4s						
GLVR				smax	smax		
	comp=E,5μm,0.5s						
GLVR				smax	smax		
	comp=N,4μm,0.6s						
NEM2	**Nemuro 2**	**4.18**	**246**	P	**Pn**	**04 17 10.6**	**0.0**
NEM2				*e*S	**Sn**	**04 17 58.9**	**+0.3**
NMR	**Nemuro--Hokkai**	**4.18**	**247**	*e*P	**Pn**	**04 17 11.0**	**+0.3**
NMR				*i* S	**Sn**	**04 17 59.0**	**+0.2**
NMR	**Nemuro--Hokkai**	**4.18**	**247**	*e*PN	**Pn**	**04 17 11.0**	**+0.3**
NMR				*i* S	**Sn**	**04 17 59.2**	**+0.4**
JRA	**Rausu**	**4.37**	**256**	P	**Pn**	**04 17 15.7**	**+2.4**
JNK	**Nakash**	**4.77**	**253**	P	**Pn**	**04 17 20.0**	**+1.2**
JNK				*e*S	**Sn**	**04 18 14.9**	**+1.8**
JAK	**Akkeshi**	**5.03**	**247**	P	**Pn**	**04 17 22.3**	**0.0**
JAK				*e*S	**Sn**	**04 18 18.8**	**-0.7**
JTKR	**Abashiri--Toko**	**5.20**	**259**	P	**Pn**	**04 17 27.3**	**+2.6**
JAR	**Ashorobuto**	**5.52**	**253**	P	**Pn**	**04 17 31.0**	**+2.0**

JMP	**Maruseppu**	**5.57**	**261**	P		**Pn**	**04 17 32.6**	**+2.7**
JOB	**Onbets**	**5.63**	**249**	P		**Pn**	**04 17 31.5**	**+0.9**
JOB				*e*S		**Sn**	**04 18 35.6**	**+1.1**
JSE	**Soyaes**	**5.96**	**271**	P		**Pn**	**04 17 38.8**	**+3.7**
YSS	**Yuzh-Sakhalins**	**6.01**	**290**	*e*P		**Pn**	**04 17 39.0**	**+3.2**
YSS				AMB	AMB		04 17 41.7	
	comp=N,100nm,0.7s							
YSS				*e*rx	rx		04 17 43.4	
YSS				*e*S	**Sn**		**04 18 47.9**	**+4.2**
YSS				A	A		04 18 53.6	
	comp=N,370nm,1.2s							
YSS				AMS	AMS		04 20 04.0	
	comp=N,9µm,15.0s							
YSS				AMS	AMS		04 20 04.0	
	comp=N,19µm,15.0s							
YSS				AMS	AMS		04 20 04.0	
	comp=N,29µm,15.0s							
YSS	**Yuzh-Sakhalins**	**6.01**	**290**	*e*PN		**Pn**	**04 17 39.0**	**+3.2**
YSS				*e*S		**Sn**	**04 18 47.9**	**+4.2**
YSS				pmax	pmax			
	comp=Z,100nm,0.7s							
YSS				smax	smax			
	comp=E,370nm,1.2s							
YSS				MLR	MLR			
	comp=Z,29µm,15.0s							
YSS				MLR	MLR			
	comp=N,9µm,14.0s							
YSS				MLR	MLR			
	comp=E,19µm,15.0s							
YSS	**Yuzh-Sakhalins**	**6.01**	**290**	Pn		**Pn**	**04 17 35.1**	**-0.7**
JKK2	**Kamakawa 2**	**6.04**	**261**	P		**Pn**	**04 17 39.3**	**+3.1**
JCH	**Churui**	**6.07**	**248**	P		**Pn**	**04 17 37.1**	**+0.4**
JCH				*e*S		**Sn**	**04 18 45.5**	**+0.2**
JKA	**Kamikawa-asahi**	**6.08**	**263**	Pn		**Pn**	**04 17 38.9**	**+2.1**
ASAJ	**Asahikawa**	**6.08**	**263**	Pn		**Pn**	**04 17 39.4**	**+2.6**
	comp=E,20nm,0.3s,baz=88,slow=13,SNR=61							
ASAJ				LR	LR		04 20 13.0	
	comp=E,21µm,19.4s,baz=92,slow=40							
ASAJ	**Asahikawa**	**6.08**	**263**	P		**Pn**	**04 17 40.3**	**+3.5**
ASAJ	**Asahikawa**	**6.08**	**263**	PN		**Pn**	**04 17 38.9**	**+2.1**
JFR	**Furan**	**6.36**	**255**	P		**Pn**	**04 17 42.7**	**+2.0**
JFR				*e*S		**Sn**	**04 18 55.2**	**+2.7**
JWK2	**Keihoku**	**6.43**	**275**	P		**Pn**	**04 17 46.3**	**+4.8**
ERM	**Erimo**	**6.50**	**244**	*c i*PN		**Pn**	**04 17 45.3**	**+2.7**
ERM	**Erimo**	**6.50**	**244**	Pn		**Pn**	**04 17 43.5**	**+1.0**
JEM	**Erimo**	**6.50**	**244**	P		**Pn**	**04 17 44.7**	**+2.2**
JEM	**Erimo**	**6.50**	**244**	Pn		Pn	04 17 36.1	-6.4
JAB	**Ashibetsu**	**6.50**	**258**	P		**Pn**	**04 17 46.1**	**+3.5**
SKR	**Severo-Kuril's**	**6.51**	**30**	*e*P		**Pn**	**04 17 42.0**	**-0.6**
SKR				AMB	AMB		04 17 45.0	
	comp=E,2µm,0.6s							
SKR				*e*S		**Sn**	**04 18 54.0**	**-1.9**
SKR				A	A		04 19 16.0	
	comp=E,1µm,0.9s							
SKR				A	A		04 19 16.0	
	comp=E,2µm,0.9s							
SKR				AMS	AMS		04 20 20.0	
	comp=E,14µm,14.0s							
SKR				AMS	AMS		04 20 24.0	
	comp=E,16µm,14.0s							
SKR	**Severo-Kuril's**	**6.51**	**30**	*e*PN		**Pn**	**04 17 42.0**	**-0.6**
SKR				pmax	pmax			
	comp=Z,2µm,0.6s							
SKR				MLR	MLR			
	comp=Z,14µm,14.0s							
SKR				MLR	MLR			
	comp=Z,16µm,14.0s							
JNBK	**Urakawa-nobuka**	**6.63**	**247**	P		**Pn**	**04 17 44.8**	**+0.5**
JBT2	**Biratori 2**	**6.67**	**252**	P		**Pn**	**04 17 45.8**	**+1.0**
JBT2				*e*S		**Sn**	**04 19 00.9**	**+1.0**
JHR	**Hokuryu**	**6.79**	**261**	P		**Pn**	**04 17 49.9**	**+3.4**
JRBN	**Rebuntou**	**7.01**	**276**	P		**Pn**	**04 17 54.2**	**+4.7**
UGL	**Uglegorsk**	**7.24**	**306**	*e*P		**Pn**	**04 17 57.1**	**+4.4**
UGL				AMB	AMB		04 18 00.0	
	comp=Z,516nm,1.0s							
UGL				*e*S		**Sn**	**04 19 18.1**	**+4.1**
UGL				A	A		04 19 20.0	
	comp=Z,698nm,0.6s							
UGL				AMS	AMS		04 20 54.0	
	comp=Z,20µm,14.0s							
UGL				AMS	AMS		04 20 54.0	
	comp=Z,26µm,14.0s							
UGL				AMS	AMS		04 20 54.0	
	comp=Z,28µm,14.0s							
UGL	**Uglegorsk**	**7.24**	**306**	*e*PN		**Pn**	**04 17 49.6**	**-3.1**
UGL				pmax	pmax			
	comp=Z,516nm,1.0s							
UGL				MLR	MLR			
	comp=Z,28µm,14.0s							
UGL				MLR	MLR			
	comp=N,20µm,16.0s							
JEW	**Eniwo**	**7.26**	**255**	P		**Pn**	**04 17 55.4**	**+2.4**
JEW	**Eniwo**	**7.26**	**255**	Pn		**Pn**	**04 17 53.8**	**+0.7**
PAU	**Pauzhetka**	**7.41**	**29**	*e*P		**Pn**	**04 17 54.4**	**-0.5**
PAU				AMB	AMB		04 18 15.5	
	comp=N,1µm,0.6s							
PAU				*e*S		**Sn**	**04 19 14.7**	**-3.3**
PAU				A	A		04 19 27.9	
	comp=N,2µm,0.6s							
PAU				A	A		04 19 27.9	
	comp=N,2µm,0.6s							
JNB	**Noboribetsu**	**7.69**	**253**	P		**Pn**	**04 18 00.0**	**+1.2**
JNB				*e*S		**Sn**	**04 19 23.4**	**-1.6**
JKB	**Kayabe**	**7.94**	**249**	P		**Pn**	**04 18 02.6**	**+0.3**
TYV	**Tymovskoe**	**7.99**	**319**	*e*P		**Pn**	**04 18 07.0**	**+4.1**
TYV				AMB	AMB		04 18 08.0	
	comp=N,137nm,1.0s							
TYV				AMB	AMB		04 18 08.0	
	comp=N,1µm,4.0s							
TYV				*e*S		**Sn**	**04 19 36.0**	**+3.7**
TYV				A	A		04 19 38.0	
	comp=N,192nm,1.0s							
TYV				A	A		04 19 39.0	
	comp=N,2µm,4.0s							
TYV				AMS	AMS		04 21 19.0	
	comp=N,13µm,15.0s							
TYV				AMS	AMS		04 21 19.0	
	comp=N,26µm,15.0s							
TYV	**Tymovskoe**	**7.99**	**319**	*e*PN		**Pn**	**04 18 07.4**	**+4.5**
TYV				*e*S		**Sn**	**04 19 36.4**	**+4.1**
TYV				pmax	pmax			
	comp=Z,137nm,1.0s							
TYV				pmax	pmax			
	comp=Z,1µm,3.7s							
TYV				smax	smax			
	comp=E,192nm,1.0s							
TYV				smax	smax			
	comp=N,2µm,3.7s							
TYV				MLR	MLR			
	comp=Z,26µm,16.0s							
TYV				MLR	MLR			
	comp=N,13µm,16.0s							
JYM2	**Yakumo 2**	**8.28**	**252**	P		**Pn**	**04 18 07.9**	**+0.9**
JSH	**Shimam**	**8.30**	**256**	P		**Pn**	**04 18 10.6**	**+3.4**
JANG	**Nango**	**8.45**	**239**	P		**Pn**	**04 18 07.6**	**-1.8**
JANG				*e*S		**Sn**	**04 19 35.7**	**-8.2**
JTM	**Tenmabayashi**	**8.49**	**242**	P		**Pn**	**04 18 09.0**	**-0.8**
JTM				*e*S		**Sn**	**04 19 39.2**	**-5.5**
JTM	**Tenmabayashi**	**8.49**	**242**	Pn		**Pn**	**04 18 09.6**	**-0.2**
JTH	**Tanohata**	**8.52**	**235**	P		**Pn**	**04 18 08.8**	**-1.5**
JTH				*e*S		**Sn**	**04 19 37.4**	**-8.2**
JOSM	**Okushiri--Mats**	**8.90**	**254**	P		**Pn**	**04 18 16.8**	**+1.3**
PEA0B	**Petropavlovsk-**	**9.08**	**26**	*ce*PN		**Pn**	**04 18 18.7**	**+0.8**
PEA0B	**Petropavlovsk-**	**9.08**	**26**	Pn		**Pn**	**04 18 17.0**	**-1.0**
PETK	**Petropavlovsk-**	**9.08**	**26**	Pn		**Pn**	**04 18 17.6**	**-0.3**
	comp=N,4.6nm,0.3s,baz=186,slow=12,SNR=48							
PETK				LR	LR		04 21 59.0	
	comp=N,18µm,18.2s,baz=206,slow=39							
OFUJ	**Ofunato**	**9.21**	**232**	P		**Pn**	**04 18 18.2**	**-1.6**
OFUJ				*e*S		**Sn**	**04 19 54.2**	**-8.3**
PET	**Petropavlovsk**	**9.33**	**30**	*e*P		**Pn**	**04 18 21.5**	**+0.2**
PET				AMB	AMB		04 18 31.5	
	comp=N,190nm,0.8s							
PET				AMS	AMS		04 23 42.7	
	comp=N,11µm,12.0s							
PET	**Petropavlovsk**	**9.33**	**30**	*e*PN		**Pn**	**04 18 20.6**	**-0.7**
PET				pmax	pmax			
	comp=Z,192nm,0.8s							
PET				MLR	MLR			
	comp=Z,11µm,12.0s							
PET				MLR	MLR			
	comp=Z,10µm,15.0s							
PET	**Petropavlovsk**	**9.33**	**30**			**Pn**	**04 18 21.9**	**+0.6**
JRG	**Rokugo**	**9.60**	**237**	P		**Pn**	**04 18 24.4**	**-0.6**
JRG				*e*S		**Sn**	**04 20 07.3**	**-4.6**

JIO	**Ouri**	**9.83**	**230**	P		**Pn**	**04 18 26.4**	**-1.8**
JIO				*e*S		**Sn**	**04 20 09.9**	**-7.8**
OKH	**Okha**	**9.90**	**331**	*e*P		Pn	04 18 34.1	+5.0
OKH				AMB	AMB		04 18 36.1	
	comp=Z,240nm,0.9s							
OKH				*e*S		**Sn**	**04 20 22.0**	**+2.7**
OKH				A	A		04 20 26.6	
	comp=Z,1µm,19.0s							
OKH				A	A		04 20 26.7	
	comp=Z,60nm,0.8s							
OKH				A	A		04 20 26.7	
	comp=Z,90nm,0.8s							
OKH				AMS	AMS		04 23 45.0	
	comp=Z,7µm,15.0s							
OKH				AMS	AMS		04 23 45.0	
	comp=Z,11µm,15.0s							
OKH				AMS	AMS		04 23 45.0	
	comp=Z,13µm,15.0s							
TEY	**Ternei**	**10.18**	**274**	*i* P		**Pn**	**04 18 37.2**	**+4.2**
TEY				AMB	AMB		04 18 41.5	
	comp=Z,160nm,1.3s							
TEY				AMS	AMS		04 23 53.2	
	comp=Z,16µm,15.0s							
TEY				AMS	AMS		04 23 53.2	
	comp=Z,13µm,15.0s							
TEY				AMS	AMS		04 23 53.2	
	comp=Z,600nm,15.0s							
TEY	**Ternei**	**10.18**	**274**	⇓ *i*PN		Pn	04 18 40.5	+7.5
TEY				pmax	pmax			
	comp=N,20nm,1.0s							
TEY				pmax	pmax			
	comp=Z,160nm,1.3s							
TEY				pmax	pmax			
	comp=E,220nm,1.3s							
JMM	**Marumori**	**10.56**	**230**	Pn		**Pn**	**04 18 35.7**	**-2.5**
JFK	**Kawauchi**	**10.88**	**228**	P		**Pn**	**04 18 40.5**	**-2.2**
JFK				*e*S		**Sn**	**04 20 35.0**	**-8.6**
GRNR	**Gornyy**	**11.26**	**305**	*e*P		Pn	04 18 52.7	+4.9
GRNR				AMB	AMB		04 18 54.5	
	comp=E,20nm,1.0s							
GRNR				AMB	AMB		04 18 54.5	
	comp=E,50nm,1.0s							
GRNR				AMB	AMB		04 18 54.5	
	comp=E,50nm,1.0s							
GRNR	**Gornyy**	**11.26**	**305**	⇓ *i*PN		Pn	04 18 52.7	+4.9
GRNR				*e*S		Sn	04 21 02.9	+10
GRNR				pmax	pmax			
	comp=N,20nm,1.1s							
GRNR				pmax	pmax			
	comp=E,50nm,1.1s							
GRNR				pmax	pmax			
	comp=Z,50nm,1.1s							
GRNR				smax	smax			
	comp=N,20nm,0.9s							
GRNR				MLR	MLR			
	comp=N,5µm,14.0s							
GRNR				MLR	MLR			
	comp=E,8µm,14.0s							
GRNR				MLR	MLR			
	comp=Z,11µm,14.0s							
JSD	**Sado**	**11.89**	**238**	Pn		**Pn**	**04 18 55.8**	**-0.6**
JYT	**Yasato**	**12.11**	**226**			**Pn**	**04 18 56.0**	**-3.4**
JAG	**Ashikaga**	**12.34**	**229**	P		**Pn**	**04 19 00.9**	**-1.7**
MAJO	**Matsushiro**	**12.94**	**233**	*i* PN		**Pn**	**04 19 10.9**	**+0.1**
MAJO	**Matsushiro**	**12.94**	**233**	Pn		**Pn**	**04 19 09.5**	**-1.3**
MAT	**Matsushiro**	**12.94**	**233**	P		**Pn**	**04 19 10.1**	**-0.7**
MAT				*e*S		**Sn**	**04 21 37.9**	**+4.0**
MJAR	**Matsushiro Arr**	**12.94**	**233**	Pn		**Pn**	**04 19 09.7**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=31,slow=12,SNR=29							
MJAR	**Matsushiro Arr**	**12.94**	**233**	PN		**Pn**	**04 19 10.9**	**+0.1**
MJAR	**Matsushiro Arr**	**12.94**	**233**			**Pn**	**04 19 10.9**	**+0.1**
JNG	**Nsakai**	**13.10**	**233**	P		**Pn**	**04 19 11.6**	**-1.4**
USA0B	**Ussuriysk Arra**	**13.56**	**273**	*i* P		**Pn**	**04 19 20.6**	**+1.4**
USA0B	**Ussuriysk Arra**	**13.56**	**273**	Pn		**Pn**	**04 19 19.1**	**-0.1**
USRK	**Ussuriysk Ar.**	**13.56**	**273**	Pn		**Pn**	**04 19 19.2**	**+0.1**
	baz=81,slow=12,SNR=41							
USRK				LR	LR		04 24 52.5	
	comp=Z,11µm,18.1s,baz=71,slow=39							
USRK	**Ussuriysk Ar.**	**13.56**	**273**	P		**Pn**	**04 19 20.2**	**+1.0**
USRK	**Ussuriysk Ar.**	**13.56**	**273**			**Pn**	**04 19 20.2**	**+1.0**
KLR	**Kul'dur**	**13.70**	**294**	Pn		**Pn**	**04 19 23.8**	**+2.7**
	comp=Z,1.2nm,0.3s,baz=102,slow=14,SNR=47							
KLR				LR	LR		04 25 02.0	
	comp=Z,12µm,19.2s,baz=102,slow=39							
KLR	**Kul'dur**	**13.70**	**294**	*e*P		**Pn**	**04 19 23.5**	**+2.5**
KLR	**Kul'dur**	**13.70**	**294**	*ce*P		**Pn**	**04 19 24.9**	**+3.9**
KLR				pmax	pmax			
	comp=Z,190nm,1.0s							
KLR				MLR	MLR			
	comp=Z,12µm,18.0s							
VLA	**Vladivostok**	**13.88**	**268**	*e*P		**Pn**	**04 19 24.9**	**+1.4**
VLA	**Vladivostok**	**13.88**	**268**	*i* P		**Pn**	**04 19 24.9**	**+1.4**
VLA				pmax	pmax			
	comp=Z,121nm,0.8s							
VLA				MLR	MLR			
	comp=Z,8µm,16.0s							
JGF	**Kuroka**	**14.10**	**232**	Pn		**Pn**	**04 19 26.6**	**0.0**
EKMR	**Ekimchan**	**14.19**	**310**	*e*P		**Pn**	**04 19 29.9**	**+2.1**
EKMR				AMB	AMB		04 19 43.9	
	comp=Z,86nm,1.0s							
EKMR				AMB	AMB		04 19 43.9	
	comp=Z,67nm,1.0s							
EKMR				AMB	AMB		04 19 43.9	
	comp=Z,150nm,1.0s							
MA2	**Magadan**	**14.44**	**360**	LR	LR		04 25 08.3	
	comp=Z,8µm,19.1s,baz=184,slow=38							
MA2	**Magadan**	**14.44**	**360**	P		**Pn**	**04 19 28.8**	**-2.3**
MA2	**Magadan**	**14.44**	**360**	Pn		**Pn**	**04 19 28.8**	**-2.3**
INU	**Inuyama**	**14.47**	**232**			**Pn**	**04 19 30.8**	**-0.9**
JHJ	**Hachijo jima 2**	**14.82**	**220**	LR	LR		04 27 23.2	
	comp=Z,2µm,19.7s,baz=86,slow=46							
MDJ	**Mudanjiang**	**15.18**	**276**	P		**Pn**	**04 19 41.3**	**+0.2**
MDJ				pP	P		04 19 46.0	0.0
MDJ				sP	pP		04 19 48.8	-3.6
MDJ				S	**S**		**04 22 39.3**	**-5.5**
MDJ				pmax	pmax			
	comp=Z,410nm,5.6s							
MDJ				LR	LR			
	comp=Z,12µm,17.0s							
MDJ				LR	LR			
	comp=Z,10µm,18.4s							
MDJ				LR	LR			
	comp=Z,14µm,19.7s							
JWT	**Wachi**	**15.44**	**236**	IAmb	IAmb		04 19 53.9	
	comp=Z,461nm,1.0s							
SMY	**Shemya**	**16.91**	**55**	P		**Pn**	**04 20 01.3**	**-2.0**
SMY				pmax	pmax			
	comp=Z,474nm,1.2s							
SMY	**Shemya**	**16.91**	**55**	Pn		**Pn**	**04 20 01.3**	**-2.0**
JHS	**Saijyo**	**17.00**	**240**	Pn		**Pn**	**04 20 04.3**	**-0.3**
BMKR	**Bomnak**	**17.10**	**312**	*e*P		**Pn**	**04 20 05.8**	**+0.2**
BMKR				AMB	AMB		04 20 22.8	
	comp=Z,75nm,0.5s							
ZEA	**Zeya**	**17.60**	**308**	*e*P		**P**	**04 20 12.4**	**-0.3**
ZEA				AMB	AMB		04 20 16.4	
	comp=Z,130nm,1.0s							
ZEA				AMB	AMB		04 20 16.4	
	comp=Z,120nm,1.0s							
ZEA				AMB	AMB		04 20 16.4	
	comp=Z,200nm,1.0s							
ZEA				AMB	AMB		04 20 21.3	
	comp=Z,800nm,5.0s							
ZEA				AMB	AMB		04 20 21.3	
	comp=Z,800nm,5.0s							
ZEA				AMB	AMB		04 20 21.3	
	comp=Z,1µm,5.0s							
ZEA				AMS	AMS		04 27 29.0	
	comp=Z,4µm,16.0s							
ZEA				AMS	AMS		04 27 29.0	
	comp=Z,5µm,16.0s							
ZEA				AMS	AMS		04 27 29.0	
	comp=Z,7µm,16.0s							
SEY	**Seymchan**	**17.83**	**2**	P		**Pn**	**04 20 13.7**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=172,slow=10,SNR=24							
SEY				LR	LR		04 27 17.3	
	comp=Z,9µm,19.3s,baz=181,slow=38							
SEY	**Seymchan**	**17.83**	**2**	*e*P		**Pn**	**04 20 14.8**	**+0.2**
SEY	**Seymchan**	**17.83**	**2**	*i* P		**Pn**	**04 20 14.8**	**+0.2**
KROS	**Kirovskiy**	**17.99**	**310**	*e*P		**P**	**04 20 18.0**	**+1.0**
KROS				AMB	AMB		04 20 21.1	
	comp=Z,27nm,0.3s							
KROS				AMB	AMB		04 20 21.1	
	comp=Z,60nm,0.3s							
KROS				AMB	AMB		04 20 21.1	
	comp=Z,86nm,0.3s							
HHU	**Hamhung**	**18.04**	**261**	P		**P**	**04 20 17.9**	**+0.3**

CN2	**Changchun**	**18.26**	**275**	*e*P		**Pn**	**04 20 18.8**	**-1.3**
CN2				sP	pP		04 20 25.6	-0.9
CN2				*e*S		**Sn**	**04 23 36.3**	**-6.8**
CN2				SS		**SnSn**	**04 24 03.8**	**+7.2**
CN2				pmax	pmax			
	comp=Z,90nm,0.8s							
CN2				LR	LR			
	comp=Z,10µm,16.6s							
CN2				LR	LR			
	comp=Z,10µm,17.1s							
CN2				LR	LR			
	comp=Z,10µm,15.1s							
KSRS	**Korea Array**	**18.92**	**254**	P		**Pn**	**04 20 29.1**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=62,slow=11,SNR=34							
KSRS				PcP		**PcP**	**04 24 54.8**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=85,slow=0.5,SNR=7.9							
KSRS				LR	LR		04 27 47.0	
	comp=Z,4µm,18.1s,baz=60,slow=37							
KS19	**Wonju Array Si**	**18.94**	**254**	P		**P**	**04 20 27.5**	**-0.1**
KSAR	**Wonju Array Be**	**18.96**	**254**	P		**P**	**04 20 26.2**	**-1.5**
KSAR	**Wonju Array Be**	**18.96**	**254**	P		**P**	**04 20 26.2**	**-1.5**
JCJ	**Chichijima**	**19.36**	**204**	P		**P**	**04 20 31.6**	**-0.6**
JCJ				IAmb	IAmb		04 20 56.3	
	comp=Z,510nm,1.4s							
PYS	**Pyongsong**	**19.50**	**261**	P		**Pn**	**04 20 34.4**	**-0.6**
PYS				pP		**pP**	**04 20 40.2**	**+0.7**
PYS				sP		**pwP**	**04 20 44.0**	**-0.9**
JTU	**Tsushima**	**19.64**	**245**	P		**P**	**04 20 35.8**	**+0.6**
JNU	**Nakatsue**	**19.64**	**239**	P		**Pn**	**04 20 37.0**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=46,slow=13,SNR=11							
JNU				LR	LR		04 29 51.2	
	comp=Z,6µm,18.5s,baz=42,slow=42							
PYAG	**Pyongyang**	**19.65**	**261**	P		**Pn**	**04 20 36.7**	**-0.1**
PYAG				pP		**sP**	**04 20 42.7**	**-1.4**
PYAG				sP		**pwP**	**04 20 50.2**	**+3.6**
PYAG				S		Sn	04 24 29.3	+13
AMKA	**Amchitka**	**19.77**	**62**	P		**P**	**04 20 36.5**	**+0.1**
INCN	**Inchon**	**19.79**	**256**	P		**Pn**	**04 20 39.7**	**+1.2**
INCN				P		**Pn**	**04 20 39.7**	**+1.2**
INCN	**Inchon**	**19.79**	**256**	P		**P**	**04 20 36.5**	**-0.4**
INCN				pmax	pmax			
	comp=Z,147nm,1.0s							
INCN	**Inchon**	**19.79**	**256**	P		**P**	**04 20 36.5**	**-0.4**
TJN	**Taejon**	**19.88**	**252**	*ce*P		**Pn**	**04 20 40.6**	**+1.1**
SUJ	**Sinuiju**	**20.10**	**265**	P		**P**	**04 20 40.5**	**+0.3**
SUJ				pP		**sP**	**04 20 49.1**	**+0.2**
SUJ				S		**S**	**04 24 15.9**	**-8.7**
SNY	**Shenyang**	**20.13**	**270**	⇑ P		**P**	**04 20 41.1**	**+0.6**
SNY				S		**S**	**04 24 24.4**	**-0.8**
SNY				pmax	pmax			
	comp=Z,150nm,1.0s							
SNY				pmax	pmax			
	comp=Z,320nm,4.2s							
SNY				LR	LR			
	comp=Z,3µm,14.1s							
SNY				LR	LR			
	comp=Z,6µm,15.3s							
SNY				LR	LR			
	comp=Z,9µm,17.7s							
YAK	**Yakutsk**	**20.94**	**331**	P		**P**	**04 20 50.2**	**+1.1**
	comp=Z,135nm,0.6s,baz=27,slow=0.5,SNR=52							
YAK				LR	LR		04 28 56.5	
	comp=Z,7µm,20.8s,baz=120,slow=37							
YAK	**Yakutsk**	**20.94**	**331**	*e*P		**P**	**04 20 50.1**	**+1.0**
YAK	**Yakutsk**	**20.94**	**331**	*e*P		**P**	**04 20 50.1**	**+1.0**
YAK				*e*			04 21 14.7	
YAK				*e*S		**S**	**04 24 41.2**	**+0.4**
YAK				*e*SS		**pS**	**04 24 56.9**	**+4.2**
YAK				*e*SS		SnSn	04 25 23.3	+21
YAK				pmax	pmax			
	comp=Z,514nm,0.9s							
YAK				pmax	pmax			
	comp=N,185nm,1.1s							
YAK				pmax	pmax			
	comp=E,371nm,1.5s							
YAK				pmax	pmax			
	comp=Z,2µm,5.0s							
YAK				pmax	pmax			
	comp=N,2µm,4.8s							
YAK				pmax	pmax			
	comp=E,1µm,4.6s							
YAK				smax	smax			
	comp=N,655nm,2.3s							
YAK				smax	smax			
	comp=E,673nm,2.0s							
YAK				MLR	MLR			
	comp=Z,8µm,23.0s							
YAK				MLR	MLR			
	comp=N,3µm,18.0s							
YAK				MLR	MLR			
	comp=E,3µm,18.0s							
YAK	**Yakutsk**	**20.94**	**331**	P		**P**	**04 20 49.3**	**+0.3**
YAK				IAMs_20	IAMs_20		04 28 44.9	
	comp=Z,7µm,20.0s							
JSU	**Suzuyama**	**21.03**	**237**	P		**P**	**04 20 50.5**	**+0.1**
JSU				IAmb	IAmb		04 20 58.7	
	comp=Z,323nm,1.2s							
HIA	**Hailar**	**21.54**	**292**	P		**P**	**04 20 53.0**	**-2.7**
HIA				pmax	pmax			
	comp=Z,54nm,0.8s							
HIA				MLR	MLR			
	comp=Z,9µm,18.0s							
HIA	**Hailar**	**21.54**	**292**	P		**P**	**04 20 53.0**	**-2.7**
HIA	**Hailar**	**21.54**	**292**	IAMs_20	IAMs_20		04 29 54.8	
	comp=Z,9µm,18.0s							
ADK	**Adak**	**22.31**	**61**	P		**P**	**04 21 03.7**	**-0.1**
ADK				pmax	pmax			
	comp=Z,266nm,1.3s							
ADK				MLR	MLR			
	comp=Z,4µm,22.0s							
ADK	**Adak**	**22.31**	**61**	P		**P**	**04 21 03.7**	**-0.1**
ADK				IAmb	IAmb		04 21 05.3	
	comp=Z,266nm,1.2s							
DL2	**Dalian**	**22.61**	**264**	P		**P**	**04 21 08.0**	**+0.7**
DL2				S		**S**	**04 25 16.3**	**+2.9**
DL2				pmax	pmax			
	comp=Z,170nm,1.1s							
DL2				pmax	pmax			
	comp=Z,440nm,3.9s							
DL2				LR	LR			
	comp=Z,2µm,14.9s							
DL2				LR	LR			
	comp=Z,1µm,13.4s							
DL2				LR	LR			
	comp=Z,2µm,15.7s							
ATKA	**Atka Island**	**23.86**	**60**	P		**P**	**04 21 19.1**	**-0.6**
ATKA				IAmb	IAmb		04 21 21.7	
	comp=Z,246nm,1.0s							
BOD	**Bodaibo**	**25.92**	**313**	*e*P		**P**	**04 21 36.8**	**-1.5**
BOD				pmax	pmax			
	comp=Z,68nm,1.8s							
BJI	**Beijing**	**26.00**	**271**	P	

SSE pmax pmax
comp=Z,73nm,0.8s
SSE pmax pmax
comp=Z,300nm,3.6s
SSE LR LR
comp=Z,1μm,17.2s
SSE Sheshan 27.15 249 IAmb IAmb 04 21 53.5
comp=Z,124nm,0.8s
SSE Sheshan 27.15 249 IAMs_20 IAMs_20 04 33 34.3
comp=Z,4μm,18.0s
NJ2 Nanjing 28.12 253 *e*P **P** **04 21 58.8 +0.4**
NJ2 pP **pP** **04 22 02.9 -2.0**
NJ2 sP **sP** **04 22 04.8 -2.5**
NJ2 PP **PnPn** **04 22 48.8 +2.4**
NJ2 PcP **PcP** **04 25 13.8 +1.7**
NJ2 S **S** **04 26 43.5 +1.6**
NJ2 sS **pS** **04 26 49.1 -0.3**
NJ2 pmax pmax
comp=Z,14nm,0.5s
NJ2 pmax pmax
comp=Z,500nm,6.4s
NJ2 LR LR
comp=Z,7μm,14.2s
NJ2 LR LR
comp=Z,6μm,15.1s
NJ2 LR LR
comp=Z,8μm,15.1s
H11N2 WAKE ISLAND Hy 28.58 147 T T 04 53 44.8
baz=339
H11N1 WAKE ISLAND Hy 28.59 147 T T 04 53 49.7
baz=339,slow=74
H11N3 WAKE ISLAND Hy 28.60 147 T T 04 53 50.4
baz=339,slow=74
TIXI Tiksi 28.61 346 *e*P **P** **04 22 00.5 -1.8**
TIXI Tiksi 28.61 346 P **P** **04 22 00.6 -1.7**
HHC Hu-ho-hao-te 28.95 276 *e*P **P** **04 22 06.8 +0.9**
HHC pP pP 04 22 11.9 -0.8
HHC S **S** **04 26 49.5 -5.6**
HHC pmax pmax
comp=Z,49nm,0.8s
HHC pmax pmax
comp=Z,710nm,5.7s
HHC LR LR
comp=Z,3μm,15.2s
HHC LR LR
comp=Z,10μm,16.0s
HHC LR LR
comp=Z,12μm,16.2s
H11S1 WAKE ISLAND Hy 29.62 149 T T 04 55 02.5
baz=337,slow=76
TIY Taiyuan 29.63 269 *e*P **P** **04 22 14.6 +2.8**
TIY pP **pP** **04 22 18.6 +0.4**
TIY S **S** **04 27 05.1 -0.6**
TIY sS **pS** **04 27 12.1 -1.2**
TIY pmax pmax
comp=Z,35nm,0.5s
TIY LR LR
comp=Z,580nm,10.4s
TIY LR LR
comp=Z,2μm,15.0s
TIY LR LR
comp=Z,2μm,16.5s
H11S3 WAKE ISLAND Hy 29.63 149 T T 04 54 25.5
baz=337
H11S2 WAKE ISLAND Hy 29.64 149 T T 04 54 06.7
baz=337,slow=76
ULN Ulaanbaatar 30.06 291 *e*P **P** **04 22 16.1 +0.5**
ULN Ulaanbaatar 30.06 291 P **P** **04 22 16.9 +1.2**
ULN Ulaanbaatar 30.06 291 *de*P **P** **04 22 16.1 +0.5**
ULN pmax pmax
comp=Z,84nm,1.3s
ULN Ulaanbaatar 30.06 291 P **P** **04 22 15.5 -0.1**
ULN PcP **PcP** **04 25 17.3 +0.4**
ULN Ulaanbaatar 30.06 291 IAMs_20 IAMs_20 04 35 10.8
comp=Z,5μm,19.0s
BTO Baotou 30.13 276 *e*P **P** **04 22 14.4 -1.9**
BTO S **S** **04 27 08.5 -5.1**
SONM Songino Array 30.50 291 P **P** **04 22 19.8 +0.3**
comp=Z,21nm,0.8s,baz=78,slow=6.4,SNR=48
SONM PcP **PcP** **04 25 19.1 +1.0**
comp=Z,12nm,0.9s,baz=105,slow=1.8,SNR=6.6
SONM LR LR 04 35 36.9
comp=Z,5μm,19.6s,baz=86,slow=38
SONM Songino Array 30.50 291 P **P** **04 22 18.5 -1.0**
SONM PcP **PcP** **04 25 18.4 +0.4**
TATO Taipei 31.18 240 IAMs_20 IAMs_20 04 35 41.7
comp=Z,5μm,20.0s
YHNB Yeheng 31.47 239 IAMs_20 IAMs_20 04 35 51.6
comp=Z,6μm,20.0s
TLY Talaya 31.63 299 P **P** **04 22 30.2 +0.9**
comp=Z,13nm,0.8s,baz=268,slow=11,SNR=3.5
TLY PcP **PcP** **04 25 23.0 +2.1**
comp=Z,12nm,0.8s,baz=299,slow=2.9,SNR=5.8
TLY LR LR 04 36 23.1
comp=Z,7μm,18.8s,baz=70,slow=38
TLY Talaya 31.63 299 *e*P **P** **04 22 30.2 +0.9**
TLY *e* 04 23 42.0
TLY *e*S **S** **04 27 41.3 +4.7**
TLY pmax pmax
comp=Z,43nm,0.9s
TLY MLR MLR
comp=Z,16μm,15.0s
TLY Talaya 31.63 299 P **P** **04 22 29.5 +0.2**
TLY PcP **PcP** **04 25 20.9 +0.1**
NACB Ninganchiao 31.71 239 IAMs_20 IAMs_20 04 35 21.9
comp=Z,4μm,22.0s
ZAK Zakamensk 32.04 297 *e*P **P** **04 22 32.6 -0.4**
ZAK *e* 04 23 51.7
ZAK *e* 04 25 22.4
ZAK pmax pmax
comp=Z,27nm,1.2s
WHN Wuhan 32.10 256 P **P** **04 22 33.6 0.0**
WHN sP **pwP** **04 22 47.8 +2.7**
WHN S **S** **04 27 45.8 +1.5**
WHN LR LR
comp=Z,2μm,11.7s
WHN LR LR
comp=Z,10μm,18.3s
WHN LR LR
comp=Z,12μm,18.0s
RDOG Red Dog Mine 32.93 30 P **P** **04 22 40.3 -0.2**
RDOG PcP **PcP** **04 25 25.2 +1.1**
TPUB Ta-pu 32.94 239 P **P** **04 22 41.2 +0.2**
TPUB IAMs_20 IAMs_20 04 37 29.9
comp=Z,5μm,19.0s
QZH Quanzhou 33.00 243 P **P** **04 22 44.1 +2.6**
QZH S **S** **04 28 01.8 +3.5**
QZH LR LR
comp=Z,1μm,18.5s
QZH LR LR
comp=Z,2μm,17.5s
QZH LR LR
comp=Z,2μm,18.0s
TWG Pinlang 33.04 238 P **P** **04 22 42.4 +0.5**
TWG IAmb IAmb 04 22 53.1
comp=Z,132nm,1.0s
MOY Mondy 33.27 300 *e*P **P** **04 22 46.9 +3.2**
MOY pmax pmax
comp=Z,19nm,1.8s
XAN Xi'an 33.91 266 P **P** **04 22 49.3 -0.2**
XAN pP pP 04 22 54.8 -1.1
XAN sP sP 04 22 57.8 -0.6
XAN PP **PnPn** **04 24 03.0 +0.4**
XAN S **S** **04 28 11.9 -0.7**
XAN sS pS 04 28 19.3 -1.1
XAN SS **SnSn** **04 30 18.6 -0.6**
XAN ScS **ScS** **04 33 11.5 -0.8**
XAN pmax pmax
comp=Z,52nm,1.1s
XAN pmax pmax
comp=Z,200nm,4.1s
XAN LR LR
comp=Z,2μm,14.9s
XAN LR LR
comp=Z,3μm,16.5s
XAN LR LR
comp=Z,4μm,16.5s
XAN Xi'an 33.91 266 P **P** **04 22 49.9 +0.4**
XAN pmax pmax
comp=Z,38nm,0.9s
XAN MLR MLR
comp=Z,3μm,18.0s
XAN Xi'an 33.91 266 P **P** **04 22 49.9 +0.4**
TTA Tatalina 34.59 40 P **P** **04 22 55.3 +0.2**
TTA 04 25 29.5
TTA pmax pmax
comp=Z,81nm,1.0s
TTA MLR MLR
comp=Z,2μm,20.0s
TTA Tatalina 34.59 40 P **P** **04 22 55.3 +0.2**
TTA IAmb IAmb 04 22 57.4
comp=Z,81nm,1.0s
TTA PcP **PcP** **04 25 29.5 +0.5**
ENH Enshi 35.63 260 P **P** **04 23 04.1 -0.2**
ENH IAmb IAmb 04 23 06.4
comp=Z,83nm,1.0s
IMAR Indian Mountai 35.92 35 P **P** **04 23 04.7 -1.6**
OHAK Old Harbor 35.92 50 IAmb IAmb 04 23 09.2
comp=Z,169nm,1.2s
OHAK IAMs_20 IAMs_20 04 38 25.7
comp=Z,4μm,19.0s
A21K Barrow 36.09 26 P **P** **04 23 06.9 -0.8**
baz=252,SNR=139
A21K Barrow 36.09 26 P **P** **04 23 07.2 -0.5**
A21K PcP **PcP** **04 25 33.8 +0.7**
A21K IAMs_20 IAMs_20 04 38 59.1
comp=Z,4μm,20.0s
KDAK Kodiak Island 36.26 49 P **P** **04 23 08.5 -0.8**
KDAK pmax pmax
comp=Z,409nm,1.7s
KDAK MLR MLR
comp=Z,4μm,21.0s
KDAK Kodiak Island 36.26 49 P **P** **04 23 08.5 -0.8**
KDAK IAMs_20 IAMs_20 04 38 07.4
comp=Z,4μm,21.0s
LZH Lanzhou 36.47 272 *e*P **P** **04 23 12.8 +1.2**
LZH pP pP 04 23 18.6 +0.6
LZH sP sP 04 23 20.9 +0.4
LZH S **S** **04 28 50.0 -2.0**
LZH sS sS 04 29 02.6 -1.2
LZH pmax pmax
comp=Z,260nm,1.3s
LZH pmax pmax
comp=Z,520nm,6.0s
LZH LR LR
comp=Z,3μm,13.6s
LZH LR LR
comp=Z,3μm,17.3s
LZH LR LR
comp=Z,3μm,16.8s
HOM Homer 36.62 46 P **P** **04 23 12.4 0.0**
baz=273
CNPM China Poot 36.84 46 IAmb IAmb 04 23 16.0
comp=Z,96nm,0.9s
BPAW Bear Paw Mtn. 36.92 38 P **P** **04 23 15.4 +0.4**
BPAW PcP **PcP** **04 25 36.7 +0.9**
BPAW IAMs_20 IAMs_20 04 39 53.5
comp=Z,3μm,20.0s
SUA Susitna One 37.00 43 P **P** **04 23 15.3 -0.5**
SUA PcP **PcP** **04 25 36.4 +0.2**
MLY Manley 37.08 37 P **P** **04 23 16.4 +0.1**
baz=267,SNR=51
CUT Chulitna 37.21 41 P **P** **04 23 17.8 +0.4**
baz=270,SNR=7.0
COLD Coldfoot 37.48 33 P **P** **04 23 19.4 -0.2**
baz=264,SNR=18
RC01 Rabbit Creek A 37.50 43 P **P** **04 23 19.4 -0.5**
baz=273,SNR=19
O22K Cooper Landing 37.54 44 P **P** **04 23 19.2 -0.9**
baz=274
O22K Cooper Landing 37.54 44 IAmb IAmb 04 23 33.8
comp=Z,145nm,0.8s
O22K IAMs_20 IAMs_20 04 39 51.3
comp=Z,2μm,19.0s
BWN Browne 37.59 38 IAMs_20 IAMs_20 04 40 53.2
comp=Z,3μm,18.0s
I23K Minto, Yukon-K 37.66 37 P **P** **04 23 21.3 +0.1**
baz=268,SNR=26
NEA2 Nenana 37.77 38 P **P** **04 23 21.8 -0.3**
baz=269,SNR=25
PMR Palmer 37.77 42 P **P** **04 23 22.3 +0.2**
PMR 04 25 38.2
PMR pmax pmax
comp=Z,92nm,1.0s
PMR MLR MLR
comp=Z,2μm,21.0s
PMR Palmer 37.77 42 P **P** **04 23 22.3 +0.2**
PMR IAmb IAmb 04 23 24.4
comp=Z,92nm,1.0s
PMR PcP **PcP** **04 25 38.2 -0.2**
GTA Gaotai 37.77 280 ⇑P **P** **04 23 23.6 +1.0**
GTA pP pP 04 23 28.6 -0.9
GTA sP sP 04 23 31.8 -0.2
GTA PcP **PcP** **04 25 41.5 +2.5**
GTA S **S** **04 29 12.5 +0.8**
GTA PcS **PcS** **04 29 29.4 +1.6**
GTA SS **SnSn** **04 31 48.8 -3.7**
GTA ScS **ScS** **04 33 33.6 +0.1**
GTA pmax pmax
comp=Z,44nm,1.0s
GTA pmax pmax
comp=Z,240nm,4.4s
GTA LR LR
comp=Z,3μm,15.3s
GTA LR LR
comp=Z,3μm,13.8s
GTA LR LR
comp=Z,4μm,13.1s
MCK McKinley 37.82 39 P **P** **04 23 22.0 -0.5**
baz=270,SNR=55
RND Reindeer 37.85 40 IAmb IAmb 04 23 24.7
comp=Z,172nm,1.0s
GHO Glory Hole Cre 37.86 42 IAmb IAmb 04 23 25.0
comp=Z,105nm,1.0s
TOLK Toolik Lake Re 37.87 31 P **P** **04 23 22.7 -0.2**
baz=263,SNR=51
TOLK Toolik Lake Re 37.87 31 P **P** **04 23 22.7 -0.2**
TOLK PcP **PcP** **04 25 40.1 +1.4**
MDM Murphy Dome 38.14 37 IAmb IAmb 04 23 27.7
comp=Z,106nm,0.9s
WRH Wood River Hil 38.19 38 IAMs_20 IAMs_20 04 41 09.1
comp=Z,4μm,19.0s
TCOL CIGO, UAF Yank 38.29 37 P **P** **04 23 26.4 -0.1**
baz=269,SNR=32
TCOL CIGO, UAF Yank 38.29 37 IAmb IAmb 04 23 29.0
comp=Z,164nm,0.8s
COLA College 38.30 37 *c i*P **P** **04 23 26.5 0.0**
COLA pmax pmax
comp=Z,181nm,0.9s
COLA College 38.30 37 P **P** **04 23 26.5 0.0**
COLA IAmb IAmb 04 23 29.1
comp=Z,173nm,0.8s
POKR Poker Plat Res 38.48 37 P **P** **04 23 27.9 -0.2**
baz=270,SNR=137
DHY Denali Highway 38.53 40 IAmb IAmb 04 23 30.6
comp=Z,136nm,1.0s
SCM Sheep Creek Mo 38.62 42 IAmb IAmb 04 23 31.5
comp=Z,177nm,1.0s
HDA Harding Lake 38.69 38 P **P** **04 23 29.0 -0.8**
baz=271,SNR=55
HDA Harding Lake 38.69 38 IAMs_20 IAMs_20 04 41 05.3
comp=Z,3μm,20.0s
PATS Pohnpei 38.70 168 P **P** **04 23 31.1 +0.7**
PATS PcP **PcP** **04 25 42.1 +0.2**
IL31 **38.71 37** IAmb IAmb 04 23 32.6
comp=Z,161nm,1.2s
ILAR Eielson Array 38.71 37 P **P** **04 23 29.1 -0.9**
comp=Z,101nm,1.1s,baz=256,slow=6.2,SNR=143
ILAR PcP **PcP** **04 25 40.9 -0.4**
comp=Z,3.0nm,0.8s,baz=290,slow=3.4,SNR=4.1
ILAR LR LR 04 41 35.7
comp=Z,2μm,19.1s,baz=288,slow=40
GLI Glacier Island 38.80 44 IAmb IAmb 04 23 32.4
comp=Z,104nm,0.9s
KWAJ Kwajalein Atol 38.97 153 IAMs_20 IAMs_20 04 41 36.3
comp=Z,3μm,19.0s
FID Port Fidalgo 39.11 44 IAmb IAmb 04 23 35.1
comp=Z,151nm,1.2s
HIN Hinchinbrook I 39.14 44 IAmb IAmb 04 23 35.9
comp=Z,135nm,1.1s
M24K Tolsona, Glenn 39.14 42 P **P** **04 23 33.9 +0.1**
baz=274,SNR=32
M24K Tolsona, Glenn 39.14 42 IAmb IAmb 04 23 36.6
comp=Z,228nm,0.9s
CD2 Chengdu 39.27 265 P **P** **04 23 35.5 +0.3**
CD2 S **S** **04 29 33.0 -1.4**
CD2 sS pS 04 29 42.5 +0.2
CD2 SS **SS** **04 32 20.6 -7.4**
CD2 ScS **ScS** **04 33 42.5 +0.3**
CD2 pmax pmax
comp=Z,90nm,0.8s
CD2 pmax pmax
comp=Z,440nm,7.7s
CD2 LR LR
comp=Z,3μm,15.7s
CD2 LR LR
comp=Z,2μm,15.9s
CD2 LR LR
comp=Z,3μm,17.1s
PRP Porcupine Dome 39.28 36 P **P** **04 23 35.3 +0.4**
KLU Klutina 39.31 42 IAmb IAmb 04 23 38.2
comp=Z,212nm,1.1s
NRIK Noril'sk 39.38 330 P **P** **04 23 34.2 -1.3**
comp=Z,11nm,0.6s,baz=101,slow=7.5,SNR=19
NRIK PcP **PcP** **04 25 44.9 +1.6**
comp=Z,16nm,0.7s,baz=89,slow=7.6,SNR=5.1
NRIK LR LR 04 40 38.0
comp=Z,3μm,19.3s,baz=84,slow=37
NRIK Noril'sk 39.38 330 *ce*P **P** **04 23 34.1 -1.4**
NRIK pmax pmax
comp=Z,33nm,1.2s
NRIK MLR MLR
comp=Z,4μm,15.0s
RIDG Independent Ri 39.63 39 IAmb IAmb 04 23 40.0
comp=Z,153nm,1.0s
RIDG IAMs_20 IAMs_20 04 42 07.4
comp=Z,3μm,20.0s
BMAR Burnt Mountain 39.66 33 P **P** **04 23 37.9 0.0**
GYA Guiyang 39.93 257 ⇓P **P** **04 23 40.8 +0.1**
GYA PcP **PcP** **04 25 46.9 +1.0**
GYA S **S** **04 29 37.3 -7.1**
GYA pmax pmax
comp=Z,66nm,0.9s
GYA LR LR
comp=Z,2μm,14.8s
GYA LR LR
comp=Z,3μm,18.0s
GYA LR LR
comp=Z,4μm,17.8s
N25K Chitina, Valde 39.93 42 P **P** **04 23 40.5 +0.2**
baz=276,SNR=23
DOT Dot Lake 39.99 39 P **P** **04 23 40.0 -0.7**
DOT IAMs_20 IAMs_20 04 42 17.6
comp=Z,3μm,19.0s
SCRK Sand Creek 40.00 38 P **P** **04 23 40.0 -0.9**
baz=274,SNR=42
KAIM Kayak Island 40.23 45 P **P** **04 23 43.5 +0.8**
KAIM IAmb IAmb 04 23 46.5
comp=Z,283nm,1.2s
HMT Hamilton 40.25 44 IAmb IAmb 04 23 45.8
comp=Z,173nm,1.2s
L26K Log Cabin Wild 40.37 40 P **P** **04 23 44.3 +0.5**
baz=276,SNR=90
VRDI Verde Repeater 40.52 43 P **P** **04 23 46.0 +0.6**
VRDI IAmb IAmb 04 23 48.1
comp=Z,128nm,0.9s
CRQM Cirque 40.74 43 IAMs_20 IAMs_20 04 40 13.5
comp=Z,3μm,22.0s
K27K Chicken 40.84 38 P **P** **04 23 48.4 +0.8**
baz=276
K27K Chicken 40.84 38 IAmb IAmb 04 23 50.5
comp=Z,269nm,1.0s
K27K IAMs_20 IAMs_20 04 42 41.3
comp=Z,2μm,19.0s
TGL Tana Glacier 40.89 43 IAmb IAmb 04 23 51.3
comp=Z,248nm,1.2s
TGL IAMs_20 IAMs_20 04 40 15.9
comp=Z,3μm,22.0s
BCAR Beaver Creek A 41.07 40 P **P** **04 23 49.2 -0.4**
BALM Baldy 41.08 43 IAmb IAmb 04 23 52.8
comp=Z,190nm,1.1s
ISLE Juniper Island 41.15 44 IAmb IAmb 04 23 56.2
comp=Z,175nm,1.0s
EGAK Eagle 41.16 37 P **P** **04 23 49.6 -0.7**
EGAK IAmb IAmb 04 23 52.2
comp=Z,187nm,1.1s
BARN Barnard Glacie 41.41 43 IAmb IAmb 04 23 55.7
comp=Z,202nm,1.0s
MESA MESA 41.41 44 IAmb IAmb 04 23 55.9
comp=Z,232nm,1.4s
YAH Yahtse 41.48 44 IAmb IAmb 04 23 56.4
comp=Z,174nm,1.0s
TABL Table Mountain 41.76 44 IAmb IAmb 04 23 58.3
comp=Z,218nm,1.1s
DAWY Dawson 42.01 38 P **P** **04 23 57.5 +0.2**
DAWY IAMs_20 IAMs_20 04 43 26.9
comp=Z,2μm,20.0s
PCA Pinnacle 42.26 44 IAmb IAmb 04 24 02.1
comp=Z,178nm,1.3s
ZAA0 Zalesovo Array 42.36 307 P **P** **04 23 59.4 -0.9**
ZAA0 PcP **PcP** **04 25 53.1 -0.1**
ZALV Zalesovo Beam 42.36 307 P **P** **04 23 58.8 -1.5**
comp=Z,6.9nm,0.6s,baz=60,slow=8.8,SNR=19
ZALV PcP **PcP** **04 25 53.6 +0.4**
comp=Z,53nm,0.8s,baz=72,slow=3.1,SNR=27
ZALV LR LR 04 42 42.8
comp=Z,4μm,20.6s,baz=71,slow=38
ZALV Zalesovo Beam 42.36 307 *i*P **P** **04 24 00.0 -0.2**
ZALV pmax pmax
comp=Z,7.0nm,0.6s
ZALV Zalesovo Beam 42.36 307 P **P** **04 23 59.4 -0.9**
ZALV PcP **PcP** **04 25 53.9 +0.7**
QIZ Qiongzhong 42.86 246 P **P** **04 24 04.6 -0.1**
QIZ S **S** **04 30 30.3 +2.6**
QIZ LR LR
comp=Z,900nm,22.7s
QIZ LR LR
comp=Z,2μm,15.5s
QIZ LR LR
comp=Z,2μm,16.4s
HYT Haines Junctio 43.44 43 P **P** **04 24 09.5 +0.3**
HYT IAMs_20 IAMs_20 04 44 10.4
comp=Z,2μm,18.0s
JOHN Johnston Islan 43.49 118 P **P** **04 24 10.6 +0.8**
JOHN IAmb IAmb 04 24 10.9
comp=Z,466nm,1.9s
KMI Kunming 43.50 259 ⇓*i*P **P** **04 24 11.0 +0.9**
KMI S **S** **04 30 32.6 -4.8**
KMI SS **SS** **04 33 43.3 -8.8**
KMI pmax pmax
comp=Z,68nm,1.1s
KMI pmax pmax
comp=Z,320nm,4.0s
KMI LR LR
comp=Z,2μm,16.8s
KMI LR LR
comp=Z,1μm,18.4s
KMI LR LR
comp=Z,2μm,18.2s
INK Inuvik 43.78 31 P **P** **04 24 12.0 +0.5**
comp=Z,92nm,0.9s,baz=302,slow=4.9,SNR=18
INK Inuvik 43.78 31 P **P** **04 24 12.0 +0.5**
INK Inuvik 43.78 31 IAmb IAmb 04 24 14.3
comp=Z,111nm,0.9s
INK IAMs_20 IAMs_20 04 45 27.9
comp=Z,3μm,20.0s
WMQ Urumqi 44.13 292 *e*P **P** **04 24 17.0 +2.2**
WMQ pP pP 04 24 22.5 +0.9
WMQ PP **PcP** **04 26 01.5 +2.0**
WMQ S **S** **04 30 44.8 -1.3**
WMQ SS **SS** **04 33 57.9 -5.8**
WMQ pmax pmax
comp=Z,60nm,1.1s
WMQ pmax pmax
comp=Z,89nm,3.7s
WMQ LR LR
comp=Z,4μm,22.7s
WMQ LR LR
comp=Z,5μm,13.3s
WMQ LR LR
comp=Z,7μm,20.3s
ZSN Zaisan 44.49 298 *i*P **P** **04 24 17.3 -0.4**
comp=Z,12nm,1.0s,baz=297
ZSN Zaisan 44.49 298 *i*P **P** **04 24 17.2 -0.4**
ZSN pmax pmax
comp=Z,12nm,1.0s
WHY Whitehorse 44.73 42 IAmb IAmb 04 24 23.0
comp=Z,143nm,1.2s
SLVN Son La 45.20 254 P **P** **04 24 23.5 0.0**
SLVN IAMs_20 IAMs_20 04 44 54.3
comp=Z,2μm,18.0s
BESE Bessie Mountai 45.32 45 IAmb IAmb 04 24 27.6
comp=Z,227nm,1.7s
BESE IAMs_20 IAMs_20 04 46 06.3
comp=Z,2μm,19.0s
JIS Juneau Island 45.64 45 IAmb IAmb 04 24 30.1
comp=Z,79nm,0.9s
SEM Semipalatinsk 46.18 303 *e*P **P** **04 24 30.6 -0.6**

comp=Z,12nm,0.5s,baz=303
SEM Semipalatinsk 46.18 303 *e*P **P** **04 24 30.5 -0.6**
SEM pmax pmax
comp=Z,12nm,0.5s
MK31 Makanchi Array 46.37 298 *i* P **P** **04 24 32.3 -0.2**
MK31 Makanchi Array 46.37 298 P **P** **04 24 32.1 -0.4**
MK31 IAmb IAmb 04 24 35.2
comp=Z,73nm,0.8s
MKAR Makanchi Array 46.37 298 P **P** **04 24 32.3 -0.2**
comp=Z,87nm,0.8s,baz=71,slow=7.7,SNR=173
MKAR PcP **PcP** **04 26 08.1 +1.0**
comp=Z,26nm,0.7s,baz=71,slow=1.4,SNR=6.6
MKAR PKiKP **PKiKP** **04 33 01.4 -0.6**
comp=Z,0.3nm,0.5s,baz=90,slow=1.4,SNR=1.8
MKAR LR LR 04 45 09.1
comp=Z,6μm,19.9s,baz=66,slow=38
MKAR Makanchi Array 46.37 298 P **P** **04 24 32.0 -0.5**
MKAR **PcP** **04 26 08.8 +1.7**
MAKZ Makanchi 46.56 298 P **P** **04 24 33.7 -0.2**
MAKZ Makanchi 46.56 298 P **P** **04 24 33.4 -0.6**
MAKZ IAmb IAmb 04 24 36.7
comp=Z,60nm,0.8s
C36M Paulatuk 46.93 29 P **P** **04 24 36.3 -0.2**
baz=285,SNR=45
KURK Kurchatov 47.02 304 P **P** **04 24 36.5 -1.0**
KURK Kurchatov 47.02 304 *ce*P **P** **04 24 36.0 -1.5**
KURK pmax pmax
comp=Z,69nm,0.7s
KURK Kurchatov 47.02 304 **PcP** **04 26 09.3 0.0**
KURK Kurchatov 47.02 304 P **P** **04 24 36.1 -1.3**
KURK IAmb IAmb 04 24 40.2
comp=Z,71nm,0.8s
MANU Manus Island 47.11 185 P **P** **04 24 39.3 +0.8**
KURBB Kurchatov Arra 47.11 304 P **P** **04 24 37.0 -1.2**
comp=Z,69nm,0.8s,baz=70,slow=8.4,SNR=64
KURBB PcP **PcP** **04 26 09.3 -0.3**
comp=Z,21nm,0.8s,baz=74,slow=3.4,SNR=9.6
KURBB Kurchatov Arra 47.11 304 P **P** **04 24 36.8 -1.4**
CRAG Craig 47.22 49 IAmb IAmb 04 24 42.7
comp=Z,65nm,1.0s
TARA Tarawa 47.72 150 IAMs_20 IAMs_20 04 40 24.5
comp=Z,3μm,20.0s
DLBC Dease Lake 47.76 44 P **P** **04 24 44.6 +1.4**
comp=Z,44nm,0.9s,baz=294,slow=7.5,SNR=56
DLBC Dease Lake 47.76 44 IAmb IAmb 04 24 47.1
comp=Z,75nm,1.1s
KIP Kipapa 47.81 102 *i* P **P** **04 24 45.1 +1.1**
KIP pmax pmax
comp=Z,53nm,1.0s
KIP Kipapa 47.81 102 P **P** **04 24 44.5 +0.5**
KIP IAmb IAmb 04 25 28.3
comp=Z,138nm,1.4s
NONG Nongkai 47.97 252 P **P** **04 24 47.7 +2.5**
comp=Z,89nm,0.9s
SMPI Sarmi 48.20 197 P **P** **04 24 48.6 +1.7**
comp=Z,23nm,1.3s
ZIRO ZIRO 48.26 269 *e*P **P** **04 24 49.7 +2.1**
DIB Dawson Inlet, 48.42 51 IAmb IAmb 04 24 51.0
comp=Z,67nm,1.0s
GENI Genyem 48.51 195 P **P** **04 24 51.3 +2.0**
comp=Z,3μmcomp=Z,86nm,1.1s
MOKO MOKOCHONG 48.52 267 *e*P **P** **04 24 50.8 +1.2**
MOKO IAmb IAmb 04 24 56.4
comp=Z,126nm,0.7s
MYLDM Lahad Datu 48.87 225 IAmb IAmb 04 25 17.6
comp=Z,110nm,1.5s
LSA Lhasa 48.88 273 P **P** **04 24 54.8 +2.1**
LSA pP **pP** **04 24 59.3 +0.1**
LSA sP **pwP** **04 25 07.5 +2.3**
LSA S **S** **04 31 50.3 -4.8**
LSA pmax pmax
comp=Z,260nm,1.4s
LSA LR LR
comp=Z,4μm,17.1s
LSA LR LR
comp=Z,4μm,17.8s
LSA LR LR
comp=Z,8μm,17.8s
LSA Lhasa 48.88 273 P **P** **04 24 54.1 +1.4**
LSA P **P** **04 24 54.1 +1.4**
LSA Lhasa 48.88 273 P **P** **04 24 53.4 +0.7**
LSA pmax pmax
comp=Z,58nm,0.8s
LSA MLR MLR
comp=Z,2μm,21.0s
LSA Lhasa 48.88 273 P **P** **04 24 53.4 +0.7**
LSA IAmb IAmb 04 25 02.6
comp=Z,58nm,0.8s
TNTI Ternate 48.88 212 P **P** **04 24 53.4 +1.2**
comp=Z,1μmcomp=Z,40nm,1.1s
TNTI Ternate 48.88 212 P **P** **04 24 52.9 +0.6**
TNTI IAmb IAmb 04 25 01.1
comp=Z,81nm,1.4s
DLV T Lat 49.02 241 IAmb IAmb 04 24 57.7
comp=Z,61nm,1.0s
RABL Rabaul 49.14 178 IAMs_20 IAMs_20 04 48 03.3
comp=Z,2μm,18.0s
PAYA Payao 49.30 256 P **P** **04 24 58.1 +2.7**
comp=Z,532nm,0.8s
KKM Kota Kinabalu 49.32 228 P **P** **04 24 55.1 -0.6**
KHON Khomkaen 49.41 250 P **P** **04 24 59.2 +2.9**
comp=Z,130nm,1.1s
TEZP TEZPUR 49.55 269 *e*P **P** **04 24 57.5 +0.2**
TEZP IAmb IAmb 04 24 59.8
comp=Z,79nm,1.4s
TDK Taldyqorghan 49.59 297 *i* P **P** **04 24 58.2 +0.8**
comp=Z,169nm,1.0s,baz=297
TDK LR LR 04 45 48.8
comp=Z,6μm,15.7s,baz=297
TDK Taldyqorghan 49.59 297 *i* P **P** **04 24 58.2 +0.8**
TDK pmax pmax
comp=Z,169nm,1.0s
TDK MLR MLR
comp=Z,6μm,16.0s
PDGK Podgornoye 49.69 295 P **P** **04 24 59.0 +0.7**
SHLS Shalkode 49.78 295 *e*P **P** **04 24 57.2 -1.8**
comp=Z,34nm,0.7s,baz=294
SHLS LR LR 04 46 20.6
comp=Z,478nm,14.6s,baz=294
SHLS Shalkode 49.78 295 *e*P **P** **04 24 57.2 -1.8**
SHLS pmax pmax
comp=Z,35nm,0.7s
SHLS MLR MLR
comp=Z,477nm,15.0s
UTTA Uttaradit 49.95 254 P **P** **04 25 02.7 +2.3**
comp=Z,354nmcomp=Z,34nm,0.8s
LAMP Lampang 50.04 255 P **P** **04 25 04.0 +3.0**
comp=Z,71nm,0.9s
LBMI Labuha 50.13 211 P **P** **04 25 00.2 -1.6**
comp=Z,67nm,0.9s
CM34 Chiang Mai Arr 50.14 256 P **P** **04 25 03.0 +1.1**
CM35 Chiang Mai Arr 50.26 256 P **P** **04 25 04.2 +1.5**
CHAI Chaiyaphum 50.28 251 P **P** **04 25 04.4 +1.5**
comp=Z,666nmcomp=Z,81nm,0.9s
CM33 Chiang Mai Arr 50.30 256 P **P** **04 25 03.0 -0.1**
CHTO Chiang Mai 50.31 256 P **P** **04 25 04.5 +1.4**
CHTO P **P** **04 25 04.5 +1.4**
CHTO Chiang Mai 50.31 256 P **P** **04 25 03.1 0.0**
CHTO pmax pmax
comp=Z,46nm,1.0s
CHTO MLR MLR
comp=Z,2μm,18.0s
CHTO Chiang Mai 50.31 256 P **P** **04 25 03.1 0.0**
CHTO Chiang Mai 50.31 256 IAMs_20 IAMs_20 04 48 15.5
comp=Z,2μm,18.0s
HPAH Hawaii Prepara 50.35 102 P **P** **04 25 04.1 +0.6**
HPAH IAmb IAmb 04 25 34.8
comp=Z,109nm,1.1s
CM36 Chiang Mai Arr 50.41 256 P **P** **04 25 05.0 +1.1**
KMSI Cibinong 50.41 216 P **P** **04 25 05.6 +1.8**
comp=Z,81nm,1.0s
PHIT Phitsanulok 50.43 253 P **P** **04 25 07.0 +3.0**
comp=Z,114nm,1.0s
CM32 Chiang Mai Arr 50.48 256 P **P** **04 25 07.0 +2.5**
KHLU Kahalu`u 50.51 102 P **P** **04 25 05.3 +0.6**
KHLU IAmb IAmb 04 25 06.5
comp=Z,116nm,0.9s
SATY Saty 50.51 295⇑ *i*P **P** **04 25 05.3 +0.8**
comp=Z,40nm,0.8s,baz=295
SATY *e*S **S** **04 32 17.8 +0.8**
baz=295
SATY Saty 50.51 295 *c i*P **P** **04 25 05.3 +0.8**
SATY *e*S **S** **04 32 17.7 +0.8**
SATY pmax pmax
comp=Z,40nm,0.8s
CM09 Chiang Mai Arr 50.53 256 P **P** **04 25 07.5 +2.7**
comp=Z,210ncomp=Z,21nm,1.0s
CM31 Chiang Mai Arr 50.55 256 P **P** **04 25 07.7 +2.7**
comp=Z,12μmcomp=Z,468nm,0.7s
CM31 Chiang Mai Arr 50.55 256 P **P** **04 25 05.8 +0.8**
CM31 PcP **PcP** **04 26 24.6 +2.0**
CMAR Chiang Mai Arr 50.55 256 P **P** **04 25 06.3 +1.4**
comp=Z,11nm,0.8s,baz=38,slow=7.5,SNR=51
CMAR PcP **PcP** **04 26 23.5 +0.9**
comp=Z,8.7nm,0.7s,baz=24,slow=2.1,SNR=8.1
CMAR LR LR 04 48 32.9
comp=Z,2μm,19.0s,baz=87,slow=38
CMAR Chiang Mai Arr 50.55 256 P **P** **04 25 04.5 -0.5**
CMAR PcP **PcP** **04 26 23.8 +1.2**
CM02 Chiang Mai Arr 50.57 256 P **P** **04 25 07.5 +2.4**
comp=Z,201nmcomp=Z,26nm,1.0s
CM01 Chiang Mai Arr 50.57 256 P **P** **04 25 07.8 +2.7**
comp=Z,217nmcomp=Z,21nm,0.9s
CM04 Chiang Mai Arr 50.57 256 P **P** **04 25 07.7 +2.6**
comp=Z,17nmcomp=Z,20nm,1.1s
CM15 Chiang Mai Arr 50.57 256 P **P** **04 25 07.8 +2.7**
comp=Z,25nm,0.9s
CM05 Chiang Mai Arr 50.59 256 P **P** **04 25 07.9 +2.6**
comp=Z,150nmcomp=Z,17nm,1.2s
CM13 Chiang Mai Arr 50.60 256 P **P** **04 25 08.0 +2.6**
comp=Z,186nmcomp=Z,22nm,1.0s
POHA Pohakuloa 50.65 102 P **P** **04 25 06.6 +0.7**
FAKI Fak Fak 50.70 205 P **P** **04 25 06.0 0.0**
comp=Z,1μmcomp=Z,116nm,1.4s
FAKI Fak Fak 50.70 205 P **P** **04 25 05.8 -0.2**
FAKI IAmb IAmb 04 25 23.0
comp=Z,150nm,1.2s
BVAR Borovoye Array 50.73 310 P **P** **04 25 05.4 -0.5**
comp=Z,6.1nm,0.8s,baz=246,slow=18,SNR=36
BVAR PcP **PcP** **04 26 23.4 +0.7**
comp=Z,16nm,0.8s,baz=240,slow=22,SNR=9.5
SUKH Sukhothai 50.76 254 P **P** **04 25 09.0 +2.6**
comp=Z,46nm,0.8s
GTOI Gorontalo 50.76 217 P **P** **04 25 06.6 +0.1**
comp=Z,21nm,1.4s
BRVK Borovoye 50.77 310 *ce*P **P** **04 25 05.3 -0.9**
BRVK pmax pmax
comp=Z,22nm,0.8s
BRVK Borovoye 50.77 310 P **P** **04 25 05.6 -0.6**
BRVK PcP **PcP** **04 26 23.4 +0.6**
PRZ Przheval'sk 50.80 294 IAmb IAmb 04 25 10.6
comp=Z,130nm,0.8s
PRZ IAMs_20 IAMs_20 04 48 07.8
comp=Z,2μm,18.0s
SHL Shillong 50.85 268 *e*P **P** **04 25 07.3 0.0**
SHL IAmb IAmb 04 25 09.8
comp=Z,80nm,0.9s
SHL Shillong 50.85 268 P **P** **04 25 07.0 -0.3**
SHL pmax pmax
comp=Z,130nm,0.8s
SHL Shillong 50.85 268 P **P** **04 25 07.0 -0.3**
EUNU Eureka 50.97 11 IAmb IAmb 04 25 09.1
comp=Z,156nm,1.1s
BBB Bella Bella 51.26 51 IAmb IAmb 04 25 12.4
comp=Z,90nm,1.2s
MDOK Medeo 51.33 296 *i* P **P** **04 25 11.5 +0.7**
baz=295
MDOK *e*S **S** **04 32 28.9 +0.6**
baz=295
MDOK LR LR 04 47 27.7
comp=Z,1μm,17.9s,baz=295
MDOK Medeo 51.33 296 *i* P **P** **04 25 11.4 +0.7**
MDOK *e*S **S** **04 32 28.8 +0.5**
MDOK MLR MLR
comp=Z,1μm,18.0s
MRSI Marisa 51.37 218 P **P** **04 25 11.0 -0.1**
comp=Z,1μmcomp=Z,148nm,1.4s
AAA Alma-Ata 51.39 296 *e*P **P** **04 25 12.1 +0.9**
comp=Z,109nm,1.0s,baz=296
AAA *e*S **S** **04 32 30.5 +1.4**
baz=296
AAA LR LR 04 47 03.6
comp=Z,1μm,15.4s,baz=296
AAA Alma-Ata 51.39 296 *e*P **P** **04 25 12.0 +0.9**
AAA Alma-Ata 51.39 296 *e*P **P** **04 25 12.0 +0.9**
AAA *e*S **S** **04 32 30.4 +1.4**
AAA pmax pmax
comp=Z,109nm,1.0s
AAA MLR MLR
comp=Z,1μm,15.0s
KUU Kurty 51.42 297⇑ *i*P **P** **04 25 11.0 -0.3**
comp=Z,79nm,0.9s,baz=297
KUU LR LR 04 47 16.9
comp=Z,3μm,14.4s,baz=297
KUU Kurty 51.42 297 *c i*P **P** **04 25 10.9 -0.3**
KUU pmax pmax
comp=Z,79nm,0.9s
KUU MLR MLR
comp=Z,3μm,14.0s
MHMT Maesarieng 51.44 256 P **P** **04 25 14.2 +2.5**
comp=Z,2μmcomp=Z,91nm,1.1s
SRAK Srakaew 51.61 249 P **P** **04 25 11.8 -1.1**
comp=Z,6μmcomp=Z,809nm,0.8s
KDJ Kajisay 51.76 295 P **P** **04 25 14.3 +0.3**
KDJ Kajisay 51.76 295 P **P** **04 25 14.3 +0.3**
KDJ IAMs_20 IAMs_20 04 48 29.3
comp=Z,2μm,19.0s
SAIH SAIHA 52.02 264 *e*P **P** **04 25 16.2 +0.1**
SAIH IAmb IAmb 04 25 18.8
comp=Z,165nm,0.9s
GTK Tadong 52.10 272 *e*P **P** **04 25 18.0 +1.4**
MSAI Masohi 52.15 208 P **P** **04 25 18.5 +1.6**
comp=Z,24nm,1.7s
UTHA Uthaitani 52.24 253 P **P** **04 25 20.6 +3.0**
comp=Z,374nmcomp=Z,46nm,0.9s
BTLS Baital 52.29 299 *i* P **P** **04 25 17.7 0.0**
comp=Z,25nm,1.7s,baz=299
BTLS LR LR 04 48 09.2
comp=Z,391nm,13.7s,baz=299
BTLS Baital 52.29 299 *i* P **P** **04 25 17.6 0.0**
BTLS pmax pmax
comp=Z,25nm,1.7s
BTLS MLR MLR
comp=Z,391nm,14.0s
ULHL Ulahol 52.30 295 P **P** **04 25 19.0 +0.9**
SNR=96
BOOM Boomskoye usch 52.37 296 P **P** **04 25 18.9 +0.4**
BOOM pmax pmax
comp=Z,108nm,0.8s
BOOM MLR MLR
comp=Z,4μm,18.0s
BOOM Boomskoye usch 52.37 296 P **P** **04 25 18.9 +0.4**
BOOM IAmb IAmb 04 25 21.9
comp=Z,108nm,0.8s
TKM2 Tokmak 2 52.37 296 P **P** **04 25 19.3 +0.7**
SNR=61
TKM2 Tokmak 2 52.37 296 P **P** **04 25 18.2 -0.4**
LUWI Luwuk 52.37 217 P **P** **04 25 17.7 -0.9**
comp=Z,83nm,0.6s
LUWI Luwuk 52.37 217 P **P** **04 25 17.6 -0.9**
LUWI IAmb IAmb 04 25 28.3
comp=Z,53nm,0.6s
MPSI Mapaga 52.41 221 P **P** **04 25 17.9 -0.9**
comp=Z,27nm,1.1s
NLAI Namlea 52.69 211 P **P** **04 25 22.4 +1.6**
comp=Z,507ncomp=Z,6μmcomp=Z,30nm,1.0s
TAPN Taplejung 52.71 273 *e*P **P** **04 25 22.4 +1.0**
comp=Z,282nm,0.8s
SGDS Sogindy 52.72 297⇑ *i*P **P** **04 25 21.6 +0.6**
comp=Z,46nm,0.9s,baz=297
SGDS *e*S **S** **04 32 48.5 +1.3**
baz=297
SGDS LR LR 04 48 18.4
comp=Z,1μm,14.8s,baz=297
SGDS Sogindy 52.72 297 *c i*P **P** **04 25 21.5 +0.6**
SGDS *e*S **S** **04 32 48.4 +1.3**
SGDS pmax pmax
comp=Z,46nm,0.9s
SGDS MLR MLR
comp=Z,1μm,15.0s
AAI Ambon 52.72 209 P **P** **04 25 21.7 +0.6**
comp=Z,75nm,1.2s
APSI Ampana 52.74 218 P **P** **04 25 21.4 +0.2**
comp=Z,858nmcomp=Z,83nm,1.0s
RES Resolute Bay 52.81 18 P **P** **04 25 22.0 +1.0**
comp=Z,62nm,0.9s,baz=331,slow=8.5,SNR=51
RES Resolute Bay 52.81 18 IAmb IAmb 04 25 24.1
comp=Z,70nm,0.9s
CHMS Chumysh 52.87 297 P **P** **04 25 23.6 +1.6**
SNR=15
USP Ospenovka 52.89 297 P **P** **04 25 23.1 +0.8**
SNR=71
KBK Karagaybulak 52.92 296 P **P** **04 25 25.2 +2.6**
SNR=10
BNDI Bandanaira 52.93 207 P **P** **04 25 22.6 -0.1**
comp=Z,4μmcomp=Z,178nm,1.4s
FRU1 Bishkek 53.04 296 P **P** **04 25 23.6 +0.2**
FRU1 pmax pmax
comp=Z,89nm,0.7s
FRU1 MLR MLR
comp=Z,5μm,18.0s
FRU1 Bishkek 53.04 296 P **P** **04 25 23.6 +0.2**
FRU1 IAmb IAmb 04 25 26.5
comp=Z,89nm,0.7s
YKA Yellowknife Ar 53.08 35 P **P** **04 25 23.2 0.0**
comp=Z,31nm,0.9s,baz=300,slow=7.3,SNR=50
AAK Ala-Archa 53.21 296 P **P** **04 25 25.4 +0.6**
SNR=87
AAK Ala-Archa 53.21 296 *i* P **P** **04 25 25.4 +0.6**
SNR=102
AAK Ala-Archa 53.21 296 *e*P **P** **04 25 25.1 +0.3**
AAK Ala-Archa 53.21 296 P **P** **04 25 25.6 +0.8**
AAK P **P** **04 25 25.6 +0.8**
AAK Ala-Archa 53.21 296 *ce*P **P** **04 25 25.1 +0.3**
AAK pmax pmax
comp=Z,281nm,0.8s
ODAN Odare 53.23 273 *e*P **P** **04 25 26.3 +1.1**
comp=Z,234nm,0.9s
UCH Uchtor 53.41 296 P P 04 25 33.5 +7.0
SNR=5.8
EKS2 Erkin-Say 53.66 297 P **P** **04 25 28.7 +0.8**
SNR=64
GUN Gumba 53.66 275 *e*P **P** **04 25 29.0 +0.6**
comp=Z,286nm,0.8s
RAMN Ramite 53.74 273 *e*P **P** **04 25 29.4 +0.5**
comp=Z,426nm,0.9s
KBS Kingsbay 53.84 351 *ce*P **P** **04 25 29.4 +0.8**
KBS pmax pmax
comp=Z,39nm,1.3s
KBS Kingsbay 53.84 351 P **P** **04 25 28.2 -0.4**
KBS IAmb IAmb 04 25 30.6
comp=Z,69nm,0.8s
KBS Kingsbay 53.84 351⇑ *i*P **P** **04 25 28.9 +0.3**
KBS Kingsbay 53.84 351⇑ *i*P **P** **04 25 29.1 +0.5**
KBS IAmb IAmb 04 25 30.3
comp=Z,156nm,0.8s
KSH Kashi 53.89 292 P **P** **04 25 34.3 +4.6**
KSH S **S** **04 33 08.6 +5.2**
KSH ScS **ScS** **04 35 20.4 +3.0**
KSH pmax pmax
comp=Z,130nm,0.7s
KSH pmax pmax
comp=Z,580nm,4.4s
KSH LR LR
comp=Z,10μm,18.0s
KSH LR LR
comp=Z,6μm,13.5s
KSH LR LR
comp=Z,9μm,21.4s
SPA0 Spitsbergen Ar 53.91 350⇑ *i*P **P** **04 25 28.5 -0.7**
SPITS Spitsbergen Ar 53.91 350 P **P** **04 25 28.2 -1.0**
AML Almayashu 53.98 296 P **P** **04 25 31.1 +0.4**
SNR=109
SVE Sverdlovsk 53.99 317 *e*P **P** **04 25 29.9 -0.1**
SVE Sverdlovsk 53.99 317 *e*P **P** **04 25 29.9 -0.1**
SVE pmax pmax
comp=Z,44nm,0.9s
SVE MLR MLR
comp=Z,2μm,17.0s
PHET Kaeng Krachan 54.01 250 P **P** **04 25 34.1 +3.4**
comp=Z,686nmcomp=Z,71nm,0.9s
KKN Kakani 54.16 275 *e*P **P** **04 25 33.2 +1.3**
comp=Z,262nm,0.9s
PKI Pulchoki 54.20 275 *e*P **P** **04 25 32.8 +0.4**
comp=Z,235nm,0.9s
PKIN Phulchoki 54.20 275 *e*P **P** **04 25 32.7 +0.4**
comp=Z,245nm,1.0s
DMN Daman 54.39 275 *e*P **P** **04 25 34.6 +0.9**
comp=Z,342nm,0.9s
PMG Port Moresby 54.42 185 P **P** **04 25 33.9 +0.4**
PMG pmax pmax
comp=Z,166nm,1.8s
PMG Port Moresby 54.42 185 P **P** **04 25 33.9 +0.4**
PMG IAmb IAmb 04 25 50.6
comp=Z,166nm,1.8s
SBUM Sibu 54.47 230 P **P** **04 25 34.5 +0.5**
SBUM IAMs_20 IAMs_20 04 49 52.8
comp=Z,2μm,20.0s
GKN Gorkha 54.48 276 *e*P **P** **04 25 35.1 +0.9**
comp=Z,441nm,0.9s
DANN Dangsing 54.89 277 *e*P **P** **04 25 38.4 +1.1**
comp=Z,206nm,0.6s
HNR Honiara 54.94 169 IAMs_20 IAMs_20 04 52 27.0
comp=Z,2μm,19.0s
HSPB Hornsund (broa 54.95 349⇑ *i*P **P** **04 25 36.4 -0.3**
DZA Taraz 55.07 298 *e*P **P** **04 25 38.5 +0.4**
comp=Z,37nm,0.8s,baz=298
DZA LR LR 04 49 33.2
comp=Z,1μm,15.4s,baz=298
DZA Taraz 55.07 298 *e*P **P** **04 25 38.5 +0.4**
DZA pmax pmax
comp=Z,37nm,0.8s
DZA MLR MLR
comp=Z,1μm,15.0s
ARU Arti 55.19 317 P **P** **04 25 38.0 -0.7**
comp=Z,13nm,0.5s,baz=66,slow=3.4,SNR=50
ARU Arti 55.19 317 *c i*P **P** **04 25 37.8 -0.9**
ARU 04 26 38.0
ARU 04 27 37.2
ARU S **S** **04 33 19.0 -1.0**
ARU SS **SS** **04 37 00.0 -3.5**
ARU pmax pmax
comp=Z,30nm,0.6s
ARU MLR MLR
comp=Z,3μm,20.0s
ARU Arti 55.19 317 P **P** **04 25 37.2 -1.5**
ARU IAmb IAmb 04 25 39.4
comp=Z,42nm,0.5s
BKB Balikpapan 55.23 223 P **P** **04 25 39.5 +0.1**
BKB IAmb IAmb 04 25 42.6
comp=Z,154nm,1.2s
KOLN Koldanda 55.35 276 *e*P **P** **04 25 41.5 +0.9**
comp=Z,427nm,0.9s
TTSI Tana Toraja 55.45 219 P P 04 25 53.0 +12
KK31 Karatay Array 55.47 299 *i* P **P** **04 25 40.8 -0.2**
KK31 Karatay Array 55.47 299 P **P** **04 25 41.0 +0.1**
KK31 IAmb IAmb 04 25 43.4
comp=Z,71nm,0.8s
KKAR Karatay Array 55.47 299 P **P** **04 25 40.5 -0.5**
KKAR Karatay Array 55.47 299 P **P** **04 25 40.5 -0.5**
PGC Sidney 55.58 53 P **P** **04 25 42.4 +0.8**
PYUN Piuthan 55.58 277 *e*P **P** **04 25 43.1 +0.9**
comp=Z,797nm,1.1s
SAUI Saumlaki 55.79 204 P **P** **04 25 44.1 +0.7**
TULEG Thule 55.96 10 P **P** **04 25 43.5 -0.5**
TULEG IAmb IAmb 04 25 45.1
comp=Z,81nm,0.9s
TULEG IAMs_20 IAMs_20 04 50 18.7
comp=Z,2μm,21.0s
TULEG Thule 55.96 10 *i* P **P** **04 25 43.7 -0.3**
TULEG IAmb IAmb 04 25 44.9
comp=Z,76nm,0.8s
BOK Bokaro 56.20 271 *e*P **P** **04 25 46.9 +0.5**
BOK IAmb IAmb 04 25 50.4
comp=Z,42nm,0.5s
IUG Iuzhnay 56.28 298 *e*P **P** **04 25 47.7 +0.7**
comp=Z,73nm,0.8s,baz=298
IUG LR LR 04 50 12.3
comp=Z,1μm,16.5s,baz=298
IUG Iuzhnay 56.28 298 *e*P **P** **04 25 47.6 +0.7**
IUG pmax pmax
comp=Z,73nm,0.8s
IUG MLR MLR
comp=Z,1μm,16.0s
SPSI Sidrap Palu 56.29 218 P **P** **04 25 47.8 +0.8**
KSM Kuching 56.33 232 P **P** **04 25 47.6 +0.2**
KSM Kuching 56.33 232 P **P** **04 25 49.0 +1.6**
D03D Eldon 56.37 54 P **P** **04 25 47.5 +0.2**
baz=302,SNR=10
BNSI Bone 56.53 218 P **P** **04 25 51.4 +2.7**
B05A Bryant 56.55 53 P **P** **04 25 48.2 -0.4**
baz=302,SNR=12
LGTI Lohaghat 56.69 280 *e*P **P** **04 25 50.9 +1.1**
D04E Lakebay 56.74 54 P **P** **04 25 49.9 0.0**
baz=303
E04D Cinebar 57.19 55 P **P** **04 25 53.2 +0.1**
baz=303,SNR=6.7
TAS Tashkent 57.19 298 P **P** **04 25 54.3 +1.0**
TAS pmax pmax

comp=Z,125nm,0.7s
TAS Tashkent 57.19 298 P P 04 25 54.2 +1.0
KAPI Kappang 57.23 218 P P 04 25 54.2 +0.4
comp=Z,49nm,1.0s,baz=19,slow=4.5,SNR=22
KAPI Kappang 57.23 218 P P 04 25 54.1 +0.4
KAPI P P 04 25 54.1 +0.4
KAPI Kappang 57.23 218 P P 04 25 54.5 +0.8
KAPI IAmb IAmb 04 25 56.8
comp=Z,68nm,1.1s
BKSI Bulukumba 57.35 217 P P 04 25 54.9 +0.4
C06D Leavenworth 57.41 53 P P 04 25 54.8 +0.1
baz=303
SURT Suratani 57.47 248 P P 04 25 59.0 +3.5
comp=Z,1.1nm,1.1s
G03D McMinnville, O 57.52 57 P P 04 25 55.4 0.0
baz=303
LVZ Lovozero 57.63 336 *i* P P **04 25 56.5 +0.5**
LVZ pmax pmax
comp=Z,40nm,0.9s
LVZ MLR MLR
comp=Z,2µm,21.0s
DDI Dehra Dun 57.69 282 *e*P P **04 25 58.0 +1.0**
DDI IAmb IAmb 04 26 04.1
comp=Z,215nm,0.7s
TRTT Trang 57.73 246 P P 04 26 00.0 +2.7
comp=Z,44nm,1.4s
DHRM DHARAMSHALA 57.76 285 *e*P P **04 25 58.0 +0.4**
DHRM IAmb IAmb 04 26 00.6
comp=Z,222nm,0.9s
I02D Swisshome 57.78 58 P P 04 25 57.1 -0.2
baz=304
SMLA Simla 57.82 283 *e*P P **04 25 58.2 +0.4**
COR Corvallis 57.84 57 P P 04 26 00.0 +2.3
COR pmax pmax
comp=Z,608nm,1.1s
BSSI Bau Bau, Buton 57.93 217 P P 04 26 00.3 +1.7
BBKI Banjar Baru 58.14 224 P P 04 26 01.2 +1.1
comp=Z,41nm,1.2s
KIRV Kirov 58.16 323 P P 04 25 59.6 -0.1
comp=Z,23nm,0.6s,baz=133,slow=1.3,SNR=9.1
KIRV PcP **PcP 04 26 51.9 +0.9**
comp=Z,44nm,0.8s,baz=104,slow=1.2,SNR=8.6
KIRV Kirov 58.16 323 *ce*P P **04 25 58.8 -0.9**
BHK Bhakra 58.17 284 *e*P P **04 26 02.0 +1.7**
DAG Danmarks Havn 58.17 357⇑ *i*P P **04 25 59.7 +0.2**
DAG pmax pmax
comp=Z,120nm,1.1s
DAG Danmarks Havn 58.17 357⇑ *i*P P **04 25 59.7 +0.2**
comp=Z,122nm,1.1s
DAG Danmarks Havn 58.17 357⇑ *i*P P **04 25 59.7 +0.2**
DAG IAmb IAmb 04 26 00.6
comp=Z,122nm,1.1s
F05D White Salmon 58.20 55 P P 04 26 00.6 +0.3
baz=304,SNR=5.5
APA Apatity 58.21 336⇑ *i*P P **04 25 59.3 -0.7**
APA *i* 04 26 51.0
APA *i* 04 28 17.0
APA *i* S **S 04 33 56.0 -3.6**
APA *i* PS **PnS 04 34 08.0 -4.7**
APA *i* 04 35 38.0
APA pmax pmax
comp=Z,27nm,0.8s
H04D Lebanon 58.21 57 P P 04 26 00.7 +0.3
baz=304,SNR=5.0
J01E Myrtle Point 58.25 59 P P 04 25 59.6 -1.0
baz=304
AB31 Akbulak array 58.31 310 *e*P P **04 26 00.0 -0.9**
ABKAR Akbulak array 58.31 310 P P 04 26 00.6 -0.3
I03D Drain, OR 58.31 58 P P 04 26 01.7 +0.7
baz=304
KEV Kevo 58.34 340 IAMs_20 IAMs_20 04 54 31.6
comp=Z,2µm,20.0s
H04A Detroit Lake 58.45 57 IAmb IAmb 04 26 04.7
comp=Z,81nm,1.0s
HAMF Hammerfest 58.45 342⇑ *i*P P **04 25 59.6 -2.0**
BWNR Bhubaneshwar 58.51 268 *e*P P **04 26 02.8 +0.1**
BWNR IAmb IAmb 04 26 05.4
comp=Z,49nm,0.8s
PKDT Phuket 58.57 247 P P 04 26 06.0 +2.8
G05D Wamic, OR 58.65 56 P P 04 26 03.7 +0.2
baz=304,SNR=18
K02D Willamette Mer 58.68 59 P P 04 26 04.3 +0.6
baz=304,SNR=6.3
AKTO Aktyubinsk 58.68 312 P P 04 26 03.7 +0.2
comp=Z,9.1nm,0.6s,baz=57,slow=8.2,SNR=30
AKTO PcP **PcP 04 26 54.3 +1.0**
comp=Z,17nm,0.8s,baz=49,slow=1.7,SNR=7.4
E07A Sunnyside 58.75 54 IAmb IAmb 04 26 06.7
comp=Z,76nm,1.4s
I04A Tendick Farm, 58.81 58 P P 04 26 04.2 -0.4
baz=304
ARD2 ARCESS Array S 58.85 340 IAmb IAmb 04 28 09.1
comp=Z,188nm,2.0s
ARD1 ARCESS Array S 58.85 340 IAmb IAmb 04 28 09.1
comp=Z,122nm,1.8s
ARC2 ARCESS Array S 58.85 340 P P 04 26 05.3 +0.8
ARC2 IAmb IAmb 04 27 44.3
comp=Z,141nm,1.7s
ARC1 ARCESS Array S 58.86 340 P P 04 26 04.7 +0.2
ARC1 IAmb IAmb 04 27 44.2
comp=Z,151nm,1.8s
ARB1 ARCESS Array S 58.86 340 IAmb IAmb 04 27 44.3
comp=Z,178nm,1.9s
ARD9 ARCESS Array S 58.86 340 IAmb IAmb 04 26 50.9
comp=Z,120nm,1.7s
ARA1 ARCESS Array S 58.86 340 IAmb IAmb 04 27 44.4
comp=Z,176nm,1.9s
ARA0 ARCESS Array S 58.86 340 *e*P P **04 26 05.3 +0.8**
ARCES ARCESS Array B 58.86 340 P P **04 26 04.6 +0.1**
comp=Z,19nm,1.0s,baz=35,slow=6.5,SNR=35
ARCES PcP **PcP 04 26 54.9 +1.2**
comp=Z,15nm,0.8s,baz=46,slow=5.2,SNR=7.4
ARCES LR LR 04 56 40.7
comp=Z,2µm,18.1s,baz=345,slow=41
C09A Chrisman Ranch 58.95 52 IAmb IAmb 04 26 07.4
comp=Z,70nm,1.4s
NIL Nilore 59.00 288 P P 04 26 06.5 +0.4
NIL pmax pmax
comp=Z,422nm,0.9s
NIL MLR MLR
comp=Z,2µm,19.0s
NIL Nilore 59.00 288 P P 04 26 06.5 +0.4
NIL Nilore 59.00 288 IAMs_20 IAMs_20 04 55 15.9
comp=Z,2µm,19.0s
L02E Cave Junction 59.02 60 P P 04 26 05.9 -0.1
baz=305
HAWA Hanford 59.03 54 IAmb IAmb 04 26 08.6
comp=Z,63nm,1.3s
KULM Kulim 59.05 243 P P 04 26 06.9 +0.4
KULM IAmb IAmb 04 26 10.3
comp=Z,82nm,0.8s
KULM Kulim 59.05 243 P P 04 26 08.0 +1.5
TMCR Tamitsa 59.05 332 *e*P P **04 26 04.5 -1.3**
TMCR pmax pmax
comp=Z,67nm,0.6s
F07A Phinny Hill Vi 59.09 54 IAmb IAmb 04 26 09.1
comp=Z,64nm,0.8s
I05D Terrebonne, OR 59.14 57 P P 04 26 06.8 -0.1
baz=305,SNR=6.4
COEN Coen 59.26 189 P P 04 26 07.9 +0.1
NDI New Delhi 59.26 281 *e*P P **04 26 06.0 -1.9**
J04D Umpqua Nationa 59.31 58 P P 04 26 08.0 -0.3
baz=305
NEW Newport 59.32 51 P P 04 26 07.6 -0.4
comp=Z,21nm,1.1s,baz=305,slow=7.1,SNR=17
NEW Newport 59.32 51 P P 04 26 07.5 -0.6
baz=305,SNR=15
IPM Ipoh 59.44 242 P P 04 26 10.0 +0.8
MMRI Maumere 59.48 214 P P 04 26 08.7 -0.7
comp=Z,3µmcomp=Z,87nm,0.7s
PBA Port Blair 59.56 255 IAMs_20 IAMs_20 04 55 08.9
comp=Z,2µm,20.0s
KHMM Horse Mountain 59.67 61 IAmb IAmb 04 26 14.0
comp=Z,58nm,1.0s
PINE Pine Mountain 59.69 57 IAmb IAmb 04 26 14.0
comp=Z,48nm,0.8s
SOEI Soe 59.74 211 P P 04 26 12.1 +0.8
comp=Z,1µmcomp=Z,124nm,1.0s
SOEI Soe 59.74 211 P P 04 26 10.2 -1.2
SOEI IAmb IAmb 04 26 36.5
comp=Z,71nm,0.7s
E09A Wood Farm, Sta 59.75 53 IAmb IAmb 04 26 13.4
comp=Z,88nm,1.4s
L04D Klamath Falls 59.78 59 P P 04 26 11.4 -0.1
baz=305,SNR=12
KTK1 Kautokeino 59.79 341 *e*P P **04 26 11.6 +0.7**

EDFI Ende, Flores 59.80 214 P P 04 26 12.2 +0.5
J05D Fort Rock, OR 59.81 58 P P 04 26 11.6 0.0
baz=305,SNR=8.9
MYKOM Kota Tinggi 59.81 238 P P 04 26 12.3 +0.6
MYKOM IAmb IAmb 04 26 28.7
comp=Z,51nm,1.0s
MYKOM Kota Tinggi 59.81 238 P P 04 26 15.0 +3.3
YBH Yreka Blue Hor 59.81 60 P P 04 26 11.9 +0.3
comp=Z,21nm,0.9s,baz=285,slow=1.6,SNR=28
K04D Chiloquin, OR 59.88 58 P P 04 26 11.8 -0.3
baz=305
M02C Callahan 59.92 60 P P 04 26 12.8 +0.5
baz=306,SNR=13
N02D Trinity Center 60.25 60 P P 04 26 15.1 +0.5
baz=306,SNR=14
TRO Tromso 60.26 343⇑ *i*P P **04 26 13.9 -0.2**
M04C Macdoel 60.31 59 P P 04 26 15.4 +0.3
baz=306,SNR=15
K05A Summer Lake 60.33 58 IAmb IAmb 04 26 18.4
comp=Z,56nm,1.0s
KCPM Cahto Peak 60.46 62 IAmb IAmb 04 26 18.9
comp=Z,46nm,0.8s
MTN Manton Dam 60.47 202 P P 04 26 16.8 +0.7
WDC Whiskeytown Da 60.58 61 P P 04 26 17.3 +0.5
WDC pmax pmax
comp=Z,39nm,1.0s
WDC Whiskeytown Da 60.58 61 P P 04 26 17.3 +0.5
WALA Waterton Lakes 60.59 49 IAmb IAmb 04 26 19.2
comp=Z,87nm,1.3s
DBG Daneborg 60.68 357⇑ *i*P P **04 26 16.9 0.0**
DBG IAmb IAmb 04 26 17.8
comp=Z,36nm,0.9s
KLMR Klimovskoe 60.70 329 *e*P P **04 26 14.8 -2.4**
KLMR *e*SS SS 04 38 33.4 +3.6
KLMR pmax pmax
comp=Z,50nm,0.9s
KLMR Klimovskoe 60.70 329 *e*P P **04 26 14.9 -2.3**
KLMR AMP 04 26 18.6
comp=Z,50nm,0.9s
KLMR *e*SS **SS 04 38 33.5 +3.7**
KLMR *e*SS **SS 04 38 33.5 +3.7**
KLMR LQ LQ 04 47 46.2
KLMR LQ LQ 04 47 46.2
KLMR LR LR 04 51 59.4
UPNV Upernavik 60.85 9 *i* P P **04 26 17.6 -0.5**
UPNV IAmb IAmb 04 26 20.0
comp=Z,58nm,0.8s
CHLP Challavanipeta 60.92 267 *e*P P **04 26 20.2 +0.8**
CHLP IVmBBB 04 26 23.6
comp=Z,353nm,1.0s
CHLP IVMs_BB IVMs_BB 05 00 28.5
comp=Z,136nm,19.1s
MOD Modoc Plateau 61.17 58 IAmb IAmb 04 26 23.5
comp=Z,54nm,1.1s
HOPS Hopland Field 61.19 63 IAmb IAmb 04 26 23.4
comp=Z,76nm,1.4s
O03E Paynes Creek 61.21 61 P P 04 26 20.7 -0.5
baz=306,SNR=38
KBL Kabul 61.27 291 P P 04 26 21.3 -0.5
KBL P P **04 26 21.3 -0.5**
KBL Kabul 61.27 291 P P 04 26 21.5 -0.3
KBL pmax pmax
comp=Z,198nm,0.8s
KBL MLR MLR
comp=Z,4µm,19.0s
KBL Kabul 61.27 291 P P 04 26 21.5 -0.3
TPI Tanjungpandan 61.30 231 P P 04 26 24.1 +2.2
PPBI Pangkal Pinang 61.66 233 P P 04 26 27.0 +2.7
PLID Pearl Lake 61.80 53 IAmb IAmb 04 26 27.4
comp=Z,51nm,1.1s
ORV Oroville 61.83 61 P P 04 26 24.9 -0.4
ORV pmax pmax
comp=Z,27nm,1.0s
ORV Oroville 61.83 61 P P 04 26 24.9 -0.4
MSO Missoula 61.91 51 P P 04 26 25.3 -0.5
baz=307,SNR=36
MSO Missoula 61.91 51 IAmb IAmb 04 26 28.1
comp=Z,159nm,1.6s
PSI Prapat 62.05 243 P P 04 26 27.4 +0.2
PSI pmax pmax
comp=Z,54nm,1.0s
PSI MLR MLR
comp=Z,700nm,21.0s
SANVU Saraoutou 62.09 162 P P 04 26 27.5 +0.5
SANVU IAmb IAmb 04 26 29.1
comp=Z,94nm,1.2s
RPSI Rantau Prapat 62.13 243 P P 04 26 27.4 -0.1
RPSI IAmb IAmb 04 26 30.7
comp=Z,54nm,1.0s
KCSI Kotacane, Aceh 62.23 245 P P 04 26 29.2 +1.0
N2IH Innhavet 62.26 342 *e*P P **04 26 27.1 -0.5**
BEKR Beckworth 62.35 60 IAmb IAmb 04 26 31.1
comp=Z,44nm,1.0s
SUMG Summit 62.38 3 *i* P P **04 26 30.0 +1.1**
SUMG pmax pmax
comp=Z,520nm,0.8s
SUMG Summit 62.38 3 P P 04 26 28.9 0.0
SUMG Summit 62.38 3 *i* P P **04 26 30.0 +1.1**
comp=Z,523nm,0.8s
SUMG Summit 62.38 3 *i* P P **04 26 30.0 +1.1**
SUMG IAmb IAmb 04 26 31.7
comp=Z,524nm,0.8s
AJM Ajmer 62.42 281 *e*P P **04 26 29.0 -0.4**
STEI Steigen 62.43 343 *e*P P **04 26 28.7 -0.1**
AFDM Forest Hills D 62.52 61 P P **04 26 30.0 0.0**
BHPL Bhopal 62.53 276 *e*P P **04 26 30.0 -0.2**
BHPL IAmb IAmb 04 26 36.4
comp=Z,145nm,1.1s
LOF Lofoten 62.62 343 *e*P P **04 26 30.6 +0.6**
BKNI Bangkinang 62.66 240 P P 04 26 34.6 +3.5
BKNI Bangkinang 62.66 240 P P 04 26 31.3 +0.2
NGP Nagpur 62.73 273 *e*P P **04 26 31.3 -0.2**
NGP IAmb IAmb 04 26 34.0
comp=Z,92nm,0.9s
N2TV Tʏrnvik 62.76 343 *e*P P **04 26 32.4 +1.4**
TPTI 62.81 245 P P 04 26 33.3 +1.2
N2ST Straumen 62.84 342 *e*P P **04 26 31.3 -0.3**
FAUS Fauske 62.88 342⇑ *i*P P **04 26 32.1 +0.3**
FFC Flin Flon 62.90 39 P P 04 26 32.0 -0.2
FFC pmax pmax
comp=Z,156nm,1.0s
FFC MLR MLR
comp=Z,800nm,19.0s
FFC Flin Flon 62.90 39 P P 04 26 32.0 -0.2
PAHR Pah Rah Range 63.04 60 IAmb IAmb 04 26 35.8
comp=Z,47nm,1.1s
VCNR Virginia City 63.13 60 P P 04 26 34.1 -0.1
VCNR IAmb IAmb 04 26 36.7
comp=Z,38nm,0.9s
N2VA Vr,y 63.18 343⇑ *i*P P **04 26 33.5 -0.3**
MNSI Mandailing Nat 63.20 241 P P 04 26 37.0 +2.4
PNTR Pine Nut 63.29 61 IAmb IAmb 04 26 37.8
comp=Z,47nm,0.8s
FCC Fort Churchill 63.40 32 IAMs_20 IAMs_20 04 55 31.8
comp=Z,2µm,19.0s
EGMT Eagleton 63.42 48 P P 04 26 35.4 -0.5
baz=309,SNR=43
EGMT Eagleton 63.42 48 IAMs_20 IAMs_20 04 52 08.2
comp=Z,1µm,20.0s
SMRI Semarang 63.42 226 P P 04 26 36.9 +0.8
N2RO R,st 63.42 344⇑ *i*P P **04 26 35.5 +0.1**
SDSI Sungai Dareh 63.42 238 P P 04 26 37.4 +1.3
NBB05 Inndyr 63.44 343 *e*P P **04 26 35.3 -0.2**
PVM Polavaram 63.48 268 *e*P P **04 26 37.1 +0.5**
PVM IVmB_BB 04 26 39.0
comp=Z,555nm,0.9s
PVM IVMs_BB IVMs_BB 05 01 56.7
comp=Z,150nm,16.2s
DLMT Dillon 63.54 51 IAmb IAmb 04 26 40.1
comp=Z,100nm,1.8s
NBB30 Finnes 63.56 343 *i*P P **04 26 36.5 +0.3**
PWJI Pagerwojo 63.57 224 P P 04 26 37.9 +0.9
HLID Hailey 63.63 54 P P 04 26 37.2 -0.3
baz=308,SNR=24
KNRA Kununurra 63.83 204 P P 04 26 38.8 +0.1
BOZ Bozeman (W) 63.93 51 P P 04 26 39.2 -0.2
baz=309,SNR=62
BOZ Bozeman (W) 63.93 51 IAmb IAmb 04 26 42.0
comp=Z,45nm,0.9s
GSI Gunungsitoli 64.06 243 P P 04 26 42.7 +2.4
GSI Gunungsitoli 64.06 243 P P 04 26 39.9 -0.4
GSI IAmb IAmb 04 26 56.5
comp=Z,39nm,0.8s
MOR8 Moi Rana 64.08 342 *e*P P **04 26 38.1 -1.7**
KONS Konsvik 64.09 343 *e*P P **04 26 40.0 +0.3**

GGR Gangavaram 64.11 270 *e*P P **04 26 40.8 +0.1**
GGR IVmB_BB 04 26 42.7
comp=Z,511nm,0.7s
GGR IVMs_BB IVMs_BB 04 59 29.2
comp=Z,148nm,18.3s
KVN Kaiserville 64.23 60 IAmb IAmb 04 26 43.9
comp=Z,63nm,1.0s
LHV Little Huntoon 64.48 61 IAmb IAmb 04 26 45.9
comp=Z,93nm,1.0s
NVAR Mina Array Bea 64.49 60 P P 04 26 43.1 -0.1
comp=Z,22nm,0.7s,baz=294,slow=6.3,SNR=96
NVAR Mina Array Bea 64.49 60 P P 04 26 42.6 -0.6
MYLAV Mylavaram 64.52 268 *e*P P **04 26 44.1 +0.8**
MYLAV IVmB_BB 04 26 46.1
comp=Z,898nm,0.9s
MYLAV IVMs_BB IVMs_BB 05 02 20.5
comp=Z,171nm,17.3s
KLSI 64.53 233 P P 04 26 44.7 +1.3
SCO Scoresbysund 64.56 357 P P 04 26 43.2 +0.4
SCO pmax pmax
comp=Z,62nm,1.0s
SCO Scoresbysund 64.56 357 P P 04 26 43.2 +0.4
SCO IAmb IAmb 04 26 45.0
comp=Z,62nm,1.0s
SCO Scoresbysund 64.56 357 *i* P P **04 26 44.0 +1.2**
comp=Z,50nm,0.9s
SCO Scoresbysund 64.56 357 *i* P P **04 26 44.0 +1.2**
SCO IAmb IAmb 04 26 45.3
comp=Z,50nm,0.9s
MLAC Mammoth, Mammo 64.66 61 P P 04 26 44.9 +0.5
baz=309,SNR=7.5
MDSI Maura Dua 64.67 234 P P 04 26 46.4 +2.1
MASI Maura Aman, Be 64.70 236 P P 04 26 50.3 +5.7
LEM Lembang 64.71 229 P P 04 26 44.0 -0.8
comp=Z,30nm,0.7s,baz=161,slow=5.5,SNR=6.1
LEM Lembang 64.71 229 P P 04 26 44.0 -0.8
PUL Pulkovo 64.72 331 *e*P P **04 26 45.1 +1.0**
PUL Pulkovo 64.72 331 *ce*P P **04 26 45.1 +1.0**
PUL pmax pmax
comp=Z,62nm,0.4s
PUL MLR MLR
comp=Z,1µm,18.0s
ILULI Ilulissat 64.78 9 P P 04 26 43.9 -0.3
ILULI pmax pmax
comp=Z,72nm,0.9s
ILULI Ilulissat 64.78 9 P P 04 26 43.9 -0.3
ILULI IAmb IAmb 04 26 46.2
comp=Z,72nm,0.9s
ILULI Ilulissat 64.78 9 *i* P P **04 26 44.5 +0.3**
comp=Z,74nm,0.9s
ILULI Ilulissat 64.78 9 *i* P P **04 26 44.5 +0.3**
ILULI IAmb IAmb 04 26 45.9
comp=Z,74nm,0.9s
FIA1 FINESS Array S 64.84 334 P P 04 26 44.0 -0.8
FIA1 IAmb IAmb 04 26 46.3
comp=Z,66nm,0.9s
FINES FINESS Array B 64.84 334 P P 04 26 43.5 -1.3
comp=Z,53nm,0.6s,baz=46,slow=5.5,SNR=138
FINES LR LR 04 57 35.0
comp=Z,3µm,19.9s,baz=30,slow=38
FINES FINESS Array B 64.84 334 *i* P P **04 26 43.5 -1.3**
FINES pmax pmax
comp=Z,51nm,0.6s
FINES FINESS Array B 64.84 334 P P 04 26 43.2 -1.5
PAGB Antelope Grade 64.95 64 IAmb IAmb 04 26 48.4
comp=Z,84nm,1.5s
CTAO Charters Tower 65.08 185 P P 04 26 47.0 +0.2
CTAO pmax pmax
comp=Z,51nm,1.4s
CTAO Charters Tower 65.08 185 P P 04 26 47.0 +0.2
H17A Grant Village 65.27 51 P P 04 26 49.5 +1.3
baz=310,SNR=32
H17A Grant Village 65.27 51 IAmb IAmb 04 26 53.1
comp=Z,70nm,1.1s
CUPL Choutuppal 65.36 270 *e*P P **04 26 49.0 +0.1**
CUPL IVmB_BB 04 26 50.7
comp=Z,450nm,0.9s
CUPL IVMs_BB IVMs_BB 05 00 31.1
comp=Z,126nm,10.1s
SMMC Simmler 65.37 64 P P 04 26 48.7 -0.1
baz=309,SNR=5.6
IMW Indian Meadow 65.38 52 P P 04 26 49.1 +0.1
IMW IAmb IAmb 04 26 52.2
comp=Z,63nm,1.3s
FLWY Flagg Ranch 65.40 52 IAmb IAmb 04 26 52.6
comp=Z,96nm,1.8s
RLMT Red Lodge 65.52 50 P P 04 26 49.7 -0.1
baz=310,SNR=53
RLMT Red Lodge 65.52 50 IAmb IAmb 04 26 52.6
comp=Z,78nm,1.2s
HYBB Hyderabad (bro 65.54 270 *e*P P **04 26 50.0 0.0**
HYBB IVmB_BB 04 26 51.7
comp=Z,458nm,0.7s
HYBB IVMs_BB IVMs_BB 04 57 19.0
comp=Z,146nm,19.7s
HYB Hyderabad 65.54 270 *i* P P **04 26 49.0 -1.1**
NJS Nagarjunasagar 65.59 269 *e*P P **04 26 50.3 0.0**
NJS IVmB_BB 04 26 52.1
comp=Z,395nm,0.8s
NJS IVMs_BB IVMs_BB 05 00 52.9
comp=Z,131nm,19.5s
ADKI Addanki 65.60 268 *e*P P **04 26 51.2 +0.9**
VES Vestal, Richgr 65.62 63 P P **04 26 49.2 -1.1**
baz=309
TPAW Teton Pass 65.64 52 IAmb IAmb 04 26 54.6
comp=Z,79nm,1.1s
PKM Mcpherson Peak 65.76 64 P P 04 26 51.3 -0.1
baz=309,SNR=10
SNOW Snow King Moun 65.76 52 IAmb IAmb 04 26 54.7
comp=Z,133nm,1.6s
OBN Obninsk 65.77 325 *e*P P **04 26 50.7 -0.2**
OBN Obninsk 65.77 325 *e*P P **04 26 50.7 -0.2**
OBN *e* 04 29 16.1
OBN *e*S **S 04 35 36.2 +0.8**
OBN pmax pmax
comp=Z,40nm,0.9s
OBN MLR MLR
comp=Z,2µm,16.0s
OBN Obninsk 65.77 325 P P 04 26 51.6 +0.7
OBN IAmb IAmb 04 26 53.5
comp=Z,40nm,0.8s
OBN IAMs_20 IAMs_20 04 57 36.6
comp=Z,2µm,18.0s
REDW Red Top Meadow 65.77 52 IAmb IAmb 04 26 55.2
comp=Z,119nm,1.2s
HRA Herat 65.79 295 P P 04 26 52.4 +0.7
HRA IAmb IAmb 04 26 54.8
comp=Z,61nm,0.8s
ICESG Greenland Ices 65.80 4 *i* P P **04 26 52.4 +1.1**
ICESG IAmb IAmb 04 26 53.7
comp=Z,136nm,1.0s
CWC Cottonwood Cre 65.87 62 P P 04 26 51.6 -0.5
baz=309
ASHT Ashkhabad 65.97 300 P P 04 26 53.9 +1.4
ASHT pmax pmax
comp=Z,183nm,0.4s
ASHT MLR MLR
comp=Z,2µm,22.0s
ASHT Ashkhabad 65.97 300 P P 04 26 53.9 +1.4
ASHT IAMs_20 IAMs_20 04 58 04.1
comp=Z,2µm,22.0s
GRAC Grapevine Rang 65.97 61 P P 04 26 52.6 0.0
baz=309,SNR=24
DGMT Dagmar 65.97 45 P P 04 26 51.9 -0.5
baz=312
DGMT Dagmar 65.97 45 IAMs_20 IAMs_20 04 55 05.3
comp=Z,2µm,20.0s
NSS Namsos 66.03 342⇑ *i*P P **04 26 52.3 -0.1**
ISA Isabella, Lake 66.12 63 P P 04 26 52.2 -1.4
baz=310,SNR=12
LAO LASA Array 66.12 47 P P 04 26 53.2 -0.2
baz=311,SNR=50
LAO LASA Array 66.12 47 IAMs_20 IAMs_20 04 54 46.6
comp=Z,1µm,20.0s
GEYT Alibeck 66.14 300 P P 04 26 54.5 +0.8
comp=Z,92nm,0.8s,baz=36,slow=2.8,SNR=84
GEYT LR LR 05 00 15.6
comp=Z,1µm,18.4s,baz=95,slow=40
GEYT Alibeck 66.14 300 P P 04 26 54.2 +0.5
R11A Troy Canyon, C 66.20 59 P P 04 26 53.9 -0.4
baz=310,SNR=75
ARVC Arvin 66.23 64 P P 04 26 53.3 -1.0
baz=310,SNR=7.7
VRH Novokhopyorsk 66.27 320 *e*P P **04 26 53.8 -0.4**
VRH pmax pmax
comp=Z,60nm,0.7s

VRH MLR MLR
comp=Z,4µm,17.0s
SCZ2 Santa Cruz Isl 66.44 65 P **P** **04 26 54.8 -0.8**
baz=310
MPMC Manual Prospec 66.49 62 P **P** **04 26 55.5 -0.6**
baz=310,SNR=35
KLRI Killari 66.49 272 *e*P **P** **04 26 55.8 -0.4**
KLRI IVmB_BB 04 26 57.6
comp=Z,661nm,0.7s
KLRI IVMsBB 04 59 14.8
comp=Z,266nm,14.8s
WR6 Warramunga Arr 66.53 197 IAMs_20 IAMs_20 04 51 48.0
comp=Z,1µm,22.0s
WRAB Tennant Creek 66.53 197 *i* P **P** **04 26 56.4 +0.3**
WRAB *i* *PP **pwP** **04 27 09.9 +0.6**
WRAB pmax pmax
comp=Z,137nm,1.1s
WRAB MLR MLR
comp=Z,544nm,22.0s
WRAB Tennant Creek 66.53 197 P **P** **04 26 55.8 -0.4**
WB2 Warramunga Arr 66.54 197 P **P** **04 26 55.9 -0.3**
WRA Warramunga Arr 66.54 197 P **P** **04 26 55.9 -0.3**
comp=Z,81nm,1.0s,baz=15,slow=6.6,SNR=51
WRA LR LR 04 54 03.5
comp=Z,479nm,21.9s,baz=5.0,slow=34
WRA PKP2bc 04 55 27.5
comp=Z,4.4nm,0.8s,baz=200,slow=2.7,SNR=14
LPSR Galich'ya Gora 66.55 322 *e*P **P** **04 26 56.6 +0.6**
LPSR pmax pmax
comp=Z,60nm,0.8s
LPSR MLR MLR
comp=Z,3µm,17.0s
FURC Furnace Creek, 66.61 61 P **P** **04 26 56.4 -0.2**
baz=310,SNR=47
OSI Osito Audit: C 66.62 64 P **P** **04 26 56.3 -0.5**
baz=310
OSI Osito Audit: C 66.62 64 P **P** **04 26 56.9 0.0**
OSI IAmb IAmb 04 26 58.9
comp=Z,39nm,0.8s
DUG Dugway, Tooele 66.68 56 P **P** **04 26 57.1 -0.1**
baz=310,SNR=47
TPNV Topopah Spring 66.69 61 P **P** **04 26 57.0 -0.3**
baz=310,SNR=38
TPNV Topopah Spring 66.69 61 IAmb IAmb 04 26 59.5
comp=Z,47nm,1.0s
LRMC Laurel Mtn Rad 66.73 63 P **P** **04 26 56.5 -1.1**
baz=310
BW06 Boulder Array 66.88 52 P **P** **04 26 58.0 -0.6**
baz=311,SNR=40
BW06 Boulder Array 66.88 52 IAmb IAmb 04 27 00.7
comp=Z,150nm,1.8s
PD31 Pinedale Array 66.88 52 IAmb IAmb 04 27 00.7
comp=Z,136nm,1.8s
PDAR Pinedale Array 66.88 52 P **P** **04 26 58.0 -0.7**
comp=Z,21nm,0.9s,baz=274,slow=1.5,SNR=53
PDAR LR LR 04 52 10.5
comp=Z,297nm,21.5s,baz=341,slow=32
PDAR PKPPKP **P'P'df** **04 55 27.0 -5.6**
comp=Z,1.3nm,0.9s,baz=125,slow=2.7,SNR=6.3
PDAR Pinedale Array 66.88 52 P **P** **04 26 57.7 -0.9**
EDW2 Edwards Air Fo 66.92 63 P **P** **04 26 58.3 -0.5**
baz=310,SNR=18
VSU Vasula 66.93 332 *e*P **P** **04 26 57.4 -0.9**
VSU Vasula 66.93 332 *i* P **P** **04 26 58.9 +0.6**
VSU pmax pmax
comp=Z,156nm,1.0s
VSU MLR MLR
comp=Z,2µm,17.0s
SFJD Kangerlussuaq 66.96 9 *i* P **P** **04 26 58.3 -0.1**
SFJD Kangerlussuaq 66.96 9 P **P** **04 26 58.2 -0.1**
SFJD IAmb IAmb 04 27 00.2
comp=Z,44nm,1.0s
SFJD Kangerlussuaq 66.96 9 *i* P **P** **04 26 58.3 -0.1**
comp=Z,2.2nm,0.7s
SFJD Kangerlussuaq 66.96 9 *i* P **P** **04 26 58.3 -0.1**
SFJD IAmb IAmb 04 27 00.1
comp=Z,2.2nm,0.7s
SNCC San Nicolas Is 66.98 66 P **P** **04 26 58.4 -0.7**
baz=310
FITZ Fitzroy Crossi 67.05 206 P **P** **04 27 00.1 +0.6**
FITZ IAmb IAmb 04 27 02.9
comp=Z,74nm,1.4s
DECC Green Verdugo 67.10 64 P **P** **04 26 59.4 -0.5**
baz=310
SKHT Srikalahasti 67.21 267 *e*P **P** **04 27 01.4 +0.7**
SKHT IVmB_BB 04 27 03.3
comp=Z,510nm,1.0s
SKHT IVMs_BB IVMs_BB 05 01 27.7
comp=Z,101nm,8.1s
MSVF Nonsavu 67.26 152 P **P** **04 27 01.8 +0.9**
MSVF pmax pmax
comp=Z,38nm,1.2s
MSVF Nonsavu 67.26 152 P **P** **04 27 01.8 +0.9**
MDRS Chennai 67.29 266 *e*P **P** **04 27 03.7 +2.5**
MDRS IAmb IAmb 04 27 05.9
comp=Z,36nm,0.8s
MWC Mount Wilson 67.30 64 IAmb IAmb 04 27 03.1
comp=Z,62nm,1.4s
SHOC Shoshone, Teco 67.34 61 P **P** **04 27 00.8 -0.5**
baz=310
GSC Goldstone, Bar 67.40 62 P **P** **04 27 01.1 -0.7**
baz=310,SNR=9.7
VSR Storozhevoye 67.42 321 *e*P **P** **04 27 01.6 +0.1**
VSR pmax pmax
comp=Z,60nm,0.6s
VSR MLR MLR
comp=Z,2µm,14.0s
TBLU Trondheim 67.52 342 *e*P **P** **04 27 01.4 -0.5**
VORD Divnogorie 67.54 321 *e*P **P** **04 27 02.2 -0.1**
VORD pmax pmax
comp=Z,40nm,0.7s
BFSC Mount Baldy Ra 67.54 64 P **P** **04 27 01.9 -0.9**
baz=310,SNR=17
CIS Catalina Islan 67.60 65 P **P** **04 27 02.2 -0.8**
baz=310,SNR=6.9
SHPR Sheep Range 67.64 60 IAmb IAmb 04 27 05.8
comp=Z,48nm,1.1s
AFI Afiamalu 67.78 141 P **P** **04 27 05.7 +1.5**
AFI pmax pmax
comp=Z,349nm,2.2s
TUQ Turquoise Moun 67.86 62 P **P** **04 27 04.1 -0.7**
baz=310,SNR=14
BBRC Big Bear Solar 67.99 63 P **P** **04 27 04.8 -0.9**
baz=310
HEC Hector,Ludlow 68.00 62 P **P** **04 27 04.9 -0.7**
baz=310,SNR=12
CCUT Cedar City 68.06 59 P **P** **04 27 06.0 -0.2**
URV Uravakonda 68.12 269 *e*P **P** **04 27 06.5 0.0**
URV IVmB_BB 04 27 08.0
comp=Z,356nm,0.8s
URV IVMsBB 05 04 10.9
comp=Z,132nm,15.7s
POO Poona 68.13 275 *e*P **P** **04 27 06.8 +0.3**
MURC Murrieta 68.25 64 P **P** **04 27 06.2 -0.9**
baz=311,SNR=15
DZM Mont Dzumac 68.37 165 *e*P **P** **04 27 09.0 +1.2**
comp=Z,149nm,1.4s
DZM *e*S **S** **04 36 09.3 +1.8**
comp=Z,323nm,24.1s
DZM Mont Dzumac 68.37 165 *e*LR LR 04 47 46.9
comp=Z,2µm,22.1s
DZM Mont Dzumac 68.37 165 P **P** **04 27 08.6 +0.7**
DZM IAmb IAmb 04 27 12.1
comp=Z,66nm,1.2s
GMRC Granite Mounta 68.45 62 P **P** **04 27 08.0 -0.4**
baz=311,SNR=22
K22A Casper 68.64 51 P **P** **04 27 08.7 -0.8**
baz=312,SNR=32
K22A Casper 68.64 51 IAmb IAmb 04 27 11.5
comp=Z,60nm,1.1s
MDND Maddock 68.65 43 P **P** **04 27 09.0 -0.4**
baz=314,SNR=16
MDND Maddock 68.65 43 IAMs_20 IAMs_20 05 00 15.4
comp=Z,1µm,19.0s
ULM Lac du Bonnet 68.69 39 P **P** **04 27 08.8 -0.8**
comp=Z,39nm,0.7s,baz=315,slow=6.7,SNR=46
ULM Lac du Bonnet 68.69 39 *i* P **P** **04 27 08.9 -0.6**
ULM Lac du Bonnet 68.69 39 IAmb IAmb 04 27 10.9
comp=Z,54nm,0.8s
PFO Pinyon Flats O 68.70 63 *i* P **P** **04 27 09.3 -0.8**
PFO pmax pmax
comp=Z,15nm,0.9s
PFO Pinyon Flats O 68.70 63 P **P** **04 27 09.3 -0.8**
baz=311,SNR=13
PFO Pinyon Flats O 68.70 63 P **P** **04 27 09.5 -0.6**
MOL Molde 68.71 343 *e*P **P** **04 27 10.2 +0.8**
TPFO Pinon Flats 68.71 63 P **P** **04 27 09.1 -1.0**
baz=311,SNR=13
BELC Belle Mtn. Jos 68.74 63 P **P** **04 27 09.2 -1.1**
baz=311,SNR=14
109C Camp Elliot, M 68.77 64 P **P** **04 27 09.6 -0.6**
baz=311
DOMB Dombas 68.85 342 ⇑ *i* P **P** **04 27 10.8 +0.5**
RWWY Rawlins 68.90 52 IAmb IAmb 04 27 13.1
comp=Z,106nm,1.6s
MAK Makhachkala 68.98 310 *d* *i* P **P** **04 27 10.4 -1.0**
MAK *e*PPP PPP 04 31 22.8
MAK *e*S **S** **04 36 15.5 +1.2**
MAK *e*SS **SS** **04 40 43.5 +4.2**
MAK pmax pmax
comp=Z,362nm,1.0s
MAK MLR MLR
comp=Z,2µm,17.0s
RSSD Black Hills 68.98 48 P **P** **04 27 10.9 -0.9**
RSSD pmax pmax
comp=Z,101nm,1.2s
RSSD MLR MLR
comp=Z,1µm,19.0s
RSSD Black Hills 68.98 48 P **P** **04 27 10.7 -1.0**
baz=313
RSSD Black Hills 68.98 48 P **P** **04 27 10.9 -0.9**
RSSD IAmb IAmb 04 27 13.5
comp=Z,101nm,1.1s
RSSD Black Hills 68.98 48 IAMs_20 IAMs_20 05 01 08.4
comp=Z,1µm,19.0s
E28A Huff 69.00 45 IAMs_20 IAMs_20 04 57 00.8
comp=Z,2µm,20.0s
SLIT Slitere, Latvi 69.04 333 *e*P **P** **04 27 12.0 +0.5**
NEE2 Needles Airpor 69.11 61 P **P** **04 27 11.6 -0.8**
baz=311
AKN Aaknes 69.17 343 *e*P **P** **04 27 13.6 +1.2**
BAR Barrett 69.18 64 P **P** **04 27 12.6 -0.3**
IRM Iron Mountain 69.18 62 P **P** **04 27 12.2 -0.7**
baz=311,SNR=40
MONP2 Monument Peak 69.20 64 P **P** **04 27 12.4 -0.8**
baz=311,SNR=8.2
IZAR Zarasai 69.21 330 *e*P **P** **04 27 13.3 +0.6**
NB2 NORSAR Subarra 69.24 340 P **P** **04 27 12.0 -0.9**
comp=Z,85nm,0.6s,baz=30,slow=6.5
NB2 NORSAR Subarra 69.24 340 P **P** **04 27 12.0 -0.9**
baz=30,slow=6.5
NOA NORSAR Array B 69.24 340 P **P** **04 27 11.9 -0.9**
comp=Z,67nm,0.7s,baz=28,slow=6.5,SNR=220
NOA LR LR 05 02 37.2
comp=Z,1µm,18.1s,baz=20,slow=40
BC3 Big Chuckawall 69.31 63 P **P** **04 27 12.9 -0.9**
baz=311,SNR=22
ISOG Isortoq, Green 69.36 4 *i* P **P** **04 27 14.5 +1.1**
O20A White River Ci 69.36 54 P **P** **04 27 13.3 -0.9**
baz=312,SNR=9.6
IDID Didziasalis 69.38 330 *e*P **P** **04 27 14.3 +0.6**
ISAL Salakas 69.39 330 *e*P **P** **04 27 14.7 +0.9**
NC602 NORSAR Array S 69.43 340 *e*P **P** **04 27 13.1 -0.9**
NORES NORESS Array B 69.43 340 P **P** **04 27 13.5 -0.4**
NORES pmax pmax
comp=Z,23nm,0.3s
U15A North Rim 69.44 59 IAmb IAmb 04 27 17.4
comp=Z,50nm,0.9s
NAO01 NORSAR Array S 69.49 340 P **P** **04 27 14.2 -0.1**
IIGN Ignalina 69.53 330 *e*P **P** **04 27 15.1 +0.4**
NUUK Nuuk 69.54 10 *i* P **P** **04 27 15.2 +0.7**
IKP In-Ko-Pah, Jac 69.56 64 P **P** **04 27 14.7 -0.6**
baz=311,SNR=11
SWSC Sam W. Stewart 69.56 64 P **P** **04 27 14.3 -0.9**
baz=311,SNR=6.4
MICGM Minsk 69.60 329 ⇓ *e*P **P** **04 27 16.0 +0.9**
MICGM PM 04 27 17.0
comp=Z,0.4nm,0.8s
MICGM *e*LR LR 04 56 54.0
MICGM LRM MLR 05 00 46.0
comp=Z,3.4nm,17.0s
MNK Minsk 69.60 329 *e*P **P** **04 27 16.0 +0.9**
MNK pmax pmax
comp=Z,380nm,0.8s
NACGM Naroch 69.68 329 *e*P **P** **04 27 15.0 -0.6**
NACGM PM 04 27 17.0
comp=Z,0.4nm,1.0s
NACGM *e*LR LR 04 55 06.0
NACGM LRM MLR 05 00 28.0
comp=Z,5.0nm,18.0s
PDMCI Parker Dam,Lak 69.71 62 P **P** **04 27 15.3 -0.8**
baz=312,SNR=19
GROC Groznyy 69.73 311 *e*P **P** **04 27 17.1 +1.0**
GROC *e* 04 27 40.1
GROC *e* 04 29 51.9
GROC *e*S **S** **04 36 27.0 +3.8**
GROC pmax pmax
comp=Z,112nm,0.8s
GOF Gofitskoye 69.88 314 ⇑ *e*P **P** **04 27 18.7 +1.7**
GOF pmax pmax
comp=Z,585nm,0.9s
PV23 Carpenter Ridg 70.05 55 IAmb IAmb 04 27 20.6
comp=Z,97nm,1.5s
PV10 Paradox Valley 70.08 55 IAmb IAmb 04 27 21.0
comp=Z,64nm,0.9s
PV14 Lion Creek, Pa 70.09 55 IAmb IAmb 04 27 20.7
comp=Z,122nm,1.6s
FOO Floro 70.10 343 ⇑ *i* P **P** **04 27 18.6 +0.6**
AGMN Agassiz Nation 70.10 41 P **P** **04 27 17.1 -1.2**
baz=316,SNR=50
GLA Glamis 70.10 63 P **P** **04 27 18.2 -0.4**
baz=312,SNR=12
N23A Red Feather La 70.14 52 P **P** **04 27 18.6 -0.4**
baz=313,SNR=33
N23A Red Feather La 70.14 52 IAmb IAmb 04 27 21.5
comp=Z,79nm,1.2s
GOA Goa 70.18 272 *e*P **P** **04 27 20.8 +1.6**
EIDS Eidsvold 70.19 180 P **P** **04 27 19.7 +0.8**
EIDS IAMs_20 IAMs_20 04 52 48.0
comp=Z,1µm,22.0s
PABE Paberze 70.20 331 *e*P **P** **04 27 19.0 +0.3**
PV11 David Mesa, Pa 70.23 55 IAmb IAmb 04 27 21.6
comp=Z,107nm,1.3s
SKAR Skarslia 70.23 342 ⇑ *i* P **P** **04 27 19.7 +0.8**
AS31 Alice Springs 70.25 197 P **P** **04 27 20.3 +0.9**
ASAR Alice Springs 70.25 197 P **P** **04 27 20.6 +1.2**
comp=Z,65nm,0.8s,baz=14,slow=5.6,SNR=170
ASAR PKP2bc 04 55 19.8
comp=Z,3.9nm,1.1s,baz=187,slow=4.5,SNR=11
ASAR LR LR 04 57 12.2
comp=Z,290nm,20.1s,baz=29,slow=35
ASAR Alice Springs 70.25 197 P **P** **04 27 19.9 +0.6**
ASAR Alice Springs 70.25 197 P **P** **04 27 19.9 +0.6**
HYA Hoyanger 70.25 343 *e*P **P** **04 27 20.1 +1.1**
PV03 Paradox Valley 70.27 55 IAMs_20 IAMs_20 05 03 01.1
comp=Z,988nm,21.0s
OSL Oslo 70.33 340 *e*P **P** **04 27 20.7 +1.3**
SEKA Sheki 70.34 309 P **P** **04 27 21.4 +1.4**
ZKTA Zakatala 70.36 310 P **P** **04 27 20.8 +0.8**
D32A Dogwood Acres, 70.40 42 IAMs_20 IAMs_20 05 00 57.5
comp=Z,991nm,20.0s
LGD Lagodekhi 70.43 310 P **P** **04 27 21.0 +0.6**
PBUR Paburge 70.46 332 *e*P **P** **04 27 20.2 -0.1**
WUAZ Wupatki 70.60 59 P **P** **04 27 21.6 -0.2**
baz=312,SNR=15
SUE Sulen 70.65 343 ⇑ *i* P **P** **04 27 22.4 +1.0**
MNGR Mingechevir, A 70.70 309 P **P** **04 27 23.0 +1.0**
KVAR Kislovodsk Arr 70.83 313 P **P** **04 27 25.2 +2.3**
comp=Z,89nm,0.8s,baz=260,slow=18,SNR=36
KIV Kislovodsk 70.83 313 *i* P **P** **04 27 24.3 +1.3**
SNR=24
KIV Kislovodsk 70.83 313 *e*P **P** **04 27 23.9 +0.9**
KIV Kislovodsk 70.83 313 P **P** **04 27 23.8 +0.9**
KIV P **P** **04 27 23.8 +0.9**
KIV Kislovodsk 70.83 313 *e*P **P** **04 27 23.9 +0.9**
KIV *e*S **S** **04 36 37.1 +0.8**
KIV pmax pmax
comp=Z,905nm,1.1s
KIV pmax pmax
comp=Z,120nm,3.8s
KIV MLR MLR
comp=Z,8µm,18.0s
KIV Kislovodsk 70.83 313 P **P** **04 27 23.6 +0.6**
KONO Kongsberg 70.85 340 *ce*P **P** **04 27 24.0 +1.3**
KONO pmax pmax
comp=Z,37nm,0.8s
KONO Kongsberg 70.85 340 P **P** **04 27 22.6 0.0**
KONO IAmb IAmb 04 27 24.4
comp=Z,69nm,0.9s
KONO Kongsberg 70.85 340 ⇑ *i* P **P** **04 27 23.1 +0.5**
KBZ Khabaz 70.89 313 P **P** **04 27 23.9 +0.8**
comp=Z,244nm,0.8s
KBZ LR LR 05 02 25.9
comp=Z,5µm,20.2s,baz=315,slow=39
KBZ Khabaz 70.89 313 *e*P **P** **04 27 24.3 +1.2**
KBZ Khabaz 70.89 313 *e*P **P** **04 27 24.3 +1.2**
KBZ pmax pmax
comp=Z,300nm,0.9s
GUDG Gudauri 70.94 311 P **P** **04 27 24.4 +0.6**
PALK Pallekele 71.00 261 P **P** **04 27 25.0 +0.7**
comp=Z,21nm,0.9s,baz=126,slow=5.3,SNR=12
PALK Pallekele 71.00 261 *i* P **P** **04 27 25.3 +1.0**
PALK pmax pmax
comp=Z,21nm,0.8s
PALK Pallekele 71.00 261 P **P** **04 27 24.5 +0.2**
ZEI Tsey 71.02 312 *e*P **P** **04 27 21.8 -2.5**
ZEI pmax pmax
comp=Z,116nm,0.8s
B35A Bob, Littlefor 71.03 40 IAmb IAmb 04 27 25.2
comp=Z,93nm,1.0s
ISCO Idaho Springs 71.08 52 P **P** **04 27 24.5 -0.3**
baz=314,SNR=29
ISCO Idaho Springs 71.08 52 IAmb IAmb 04 27 27.2
comp=Z,85nm,1.6s
ASK Askoy 71.08 343 *e*P **P** **04 27 24.9 +0.9**
BER Bergen 71.14 343 *e*P **P** **04 27 25.5 +1.1**
LKRN Lenkeran, Azer 71.15 306 P **P** **04 27 26.3 +1.5**
MVCO Mesa Verde 71.18 56 P **P** **04 27 24.7 -0.7**
baz=313,SNR=18
MVCO Mesa Verde 71.18 56 P **P** **04 27 25.0 -0.4**
GANJ Ganja 71.20 309 P **P** **04 27 26.0 +0.8**
ODD1 Odda 71.29 342 *e*P **P** **04 27 26.6 +1.2**
X16A Lo Mia Camp, P 71.30 60 IAmb IAmb 04 27 28.6
comp=Z,46nm,0.9s
SUSD Miller 71.37 45 P **P** **04 27 25.1 -1.0**
baz=316,SNR=10
SUSD Miller 71.37 45 IAMs_20 IAMs_20 05 02 11.5
comp=Z,1µm,20.0s
ONI Oni 71.39 312 P **P** **04 27 27.8 +1.4**
SUW Suwalki 71.67 331 *e*P **P** **04 27 27.7 0.0**
F33A 5 Mile Ranch, 71.68 43 IAMs_20 IAMs_20 05 01 28.4
comp=Z,1µm,20.0s
KZRT Kazreti 71.73 311 P **P** **04 27 29.3 +0.9**
BLS5 Blasjo 71.77 342 *e*P **P** **04 27 29.3 +1.0**
S22A 4UR Ranch, Cre 71.79 55 P **P** **04 27 29.1 0.0**
baz=313,SNR=33
W18A Petrified Fore 71.86 58 P **P** **04 27 29.3 -0.2**
baz=313
Q24A Divide 71.91 53 P **P** **04 27 29.2 -0.7**
baz=314,SNR=7.7
AKASG Malin Array Be 72.03 325 P **P** **04 27 29.0 -0.9**
comp=Z,40nm,0.4s,baz=36,slow=6.3,SNR=140
AKASG LR LR 05 01 44.1
comp=Z,3µm,18.6s,baz=25,slow=38
AKASG Malin Array Be 72.03 325 *i* P **P** **04 27 29.0 -0.9**
AKASG pmax pmax
comp=Z,40nm,0.4s
AKASG Malin Array Be 72.03 325 P **P** **04 27 29.1 -0.8**
AKBB Malin Array Si 72.03 325 *ce*P **P** **04 27 28.9 -1.0**
AKBB Malin Array Si 72.03 325 P **P** **04 27 29.0 -1.0**
AKBB IAmb IAmb 04 27 31.2
comp=Z,90nm,0.8s
KIEV Kiev 72.04 325 P **P** **04 27 28.0 -2.0**
214A Organ Pipe Nat 72.10 63 P **P** **04 27 30.4 -0.4**
baz=312,SNR=20
AKH Akhalkalaki 72.20 311 ⇑ P **P** **04 27 33.5 +2.1**
AKH Akhalkalaki 72.20 311 P **P** **04 27 33.5 +2.1**
PSAD2 Pilbara Seismi 72.23 210 IAMs_20 IAMs_20 05 03 03.8
comp=Z,2µm,21.0s
BGD Bogdanovka 72.25 311 P **P** **04 27 34.4 +2.7**
EYMN Ely 72.33 39 P **P** **04 27 30.6 -1.2**
baz=319,SNR=27
EYMN Ely 72.33 39 IAMs_20 IAMs_20 05 03 36.6
comp=Z,1µm,19.0s
GNI Garni 72.42 309 P **P** **04 27 34.6 +2.0**
comp=Z,104nm,0.8s,baz=171,slow=2.9,SNR=46
GNI Garni 72.42 309 *ce*P **P** **04 27 34.8 +2.1**
GNI pmax pmax
comp=Z,199nm,1.0s
GNI Garni 72.42 309 P **P** **04 27 33.6 +0.9**
SDCO Great Sand Dun 72.55 54 P **P** **04 27 32.9 -0.7**
baz=314,SNR=22
SNART Snartemo 72.58 341 ⇑ *i* P **P** **04 27 34.1 +1.1**
SNART Snartemo 72.58 341 *i* P **P** **04 27 33.3 +0.3**
SOC Sochi 72.61 315 *e*P **P** **04 27 32.9 -0.6**
SOC *e* 04 30 10.5
SOC *e*PPP PPP 04 32 00.7
SOC *e*S **S** **04 36 57.4 +0.9**
SOC pmax pmax
comp=Z,135nm,0.8s
SOC MLR MLR
comp=Z,2µm,18.0s
NAX Nakhchivan 72.68 308 P **P** **04 27 35.3 +1.1**
TRD Trivandrum 72.76 265 *e*P **P** **04 27 35.1 +0.3**
TRD IAmb IAmb 04 27 38.8
comp=Z,134nm,1.0s
K31A O'Neill 72.78 46 IAMs_20 IAMs_20 05 00 00.8
comp=Z,1µm,19.0s
ANN Anapa 72.85 317 *e*P **P** **04 27 34.4 -0.5**
ANN Anapa 72.85 317 *e*P **P** **04 27 34.4 -0.5**
ANN *e*S **S** **04 36 59.1 -0.1**
ANN pmax pmax
comp=Z,141nm,0.7s
F36A Milaca 72.97 41 IAmb IAmb 04 27 36.6
comp=Z,110nm,1.5s
KARS Kars 72.98 311 P **P** **04 27 37.9 +1.9**
ECSD EROS Data Cent 73.05 44 P **P** **04 27 35.0 -1.2**
baz=317,SNR=107
TUC Tucson 73.13 61 P **P** **04 27 36.4 -0.5**
TUC pmax pmax
comp=Z,24nm,1.1s
TUC Tucson 73.13 61 P **P** **04 27 36.4 -0.5**
baz=313
TUC Tucson 73.13 61 P **P** **04 27 36.4 -0.5**
NIUE Niue 73.15 141 P **P** **04 27 38.3 +1.5**
NRS Narsarsuaq 73.20 8 P **P** **04 27 37.0 +0.3**
NRS pmax pmax
comp=Z,71nm,1.1s
NRS Narsarsuaq 73.20 8 P **P** **04 27 37.0 +0.3**
NRS IAmb IAmb 04 27 39.0
comp=Z,71nm,1.1s
GOET G??ttrup 73.27 339 *i* P **P** **04 27 38.8 +1.7**
comp=Z,575nm,0.9s
GOET G??ttrup 73.27 339 *i* P **P** **04 27 38.8 +1.7**
GOET IAmb IAmb 04 27 39.7
comp=Z,576nm,0.9s
KSCO Kaye Shedlock' 73.28 51 P **P** **04 27 36.9 -0.9**
baz=315,SNR=9.9
KSCO Kaye Shedlock' 73.28 51 IAmb IAmb 04 27 40.2
comp=Z,154nm,1.4s
BSD Bornholm Skovb 73.40 335 ⇑ *i* P **P** **04 27 38.4 +0.4**
BSD pmax pmax
comp=Z,110nm,0.7s
BSD Bornholm Skovb 73.40 335 ⇑ *i* P **P** **04 27 38.4 +0.4**
comp=Z,109nm,0.7s
BSD Bornholm Skovb 73.40 335 ⇑ *i* P **P** **04 27 38.4 +0.4**
BSD IAmb IAmb 04 27 39.2
comp=Z,109nm,0.7s
T25A Trinidad 73.60 54 P **P** **04 27 39.1 -0.7**
baz=315,SNR=21
T25A Trinidad 73.60 54 IAmb IAmb 04 27 41.8
comp=Z,84nm,1.4s
COP Copenhagen 73.61 337 *i* P **P** **04 27 39.7 +0.5**
COP pmax pmax
comp=Z,95nm,0.8s
COP Copenhagen 73.61 337 *i* P **P** **04 27 39.7 +0.5**
comp=Z,95nm,0.8s
COP Copenhagen 73.61 337 *i* P **P** **04 27 39.8 +0.5**
COP IAmb IAmb 04 27 40.7
comp=Z,95nm,0.8s
SPMN Marine on St. 73.78 41 P **P** **04 27 39.3 -1.2**
baz=319,SNR=28
SPMN Marine on St. 73.78 41 IAmb IAmb 04 27 41.8
comp=Z,122nm,1.0s
MUD Monsted U'grnd 73.80 339 ⇓ *i* P **P** **04 27 40.8 +0.6**
MUD pmax pmax
comp=Z,56nm,0.8s
MUD Monsted U'grnd 73.80 339 ⇓ *i* P **P** **04 27 40.8 +0.6**
comp=Z,56nm,0.8s
MUD Monsted U'grnd 73.80 339 ⇓ *i* P **P** **04 27 40.9 +0.6**
MUD *i* P **P** **04 27 40.9 +0.6**
MUD IAmb IAmb 04 27 42.0
comp=Z,56nm,0.8s
ANMO Albuquerque 73.94 57 *i* P **P** **04 27 41.5 -0.3**
ANMO pmax pmax
comp=Z,18nm,1.2s
ANMO Albuquerque 73.94 57 P **P** **04 27 41.5 -0.3**

baz=314
ANMO Albuquerque 73.94 57 P P 04 27 41.4 -0.4
BGNE Belgrade 73.97 47 P P 04 27 40.3 -1.3
baz=317,SNR=19
BGNE Belgrade 73.97 47 IAmb IAmb 04 27 43.3
BGNE comp=Z,132nm,1.1s IAMs_20 IAMs_20 05 06 01.3
comp=Z,1µm,20.0s
GKP Gorka Klasztor 74.27 333 *e*P **P 04 27 42.6 -0.4**
BEL Belsk 74.29 331 *e*P **P 04 27 44.6 +1.4**
SIM Simferopol' 74.31 319 *e*P **P 04 27 44.1 +0.6**
SIM pmax pmax
comp=Z,232nm,0.8s
HORU Horodok 74.32 326 P P **04 27 44.0 +0.5**
RGN Rugen 74.36 336 *e*P **P 04 27 44.3 +0.7**
I37A Lemond, Waseca 74.41 42 IAMs_20 IAMs_20 05 03 19.7
comp=Z,1µm,20.0s
GEVA Gevas 74.64 309 P P **04 27 46.7 +0.9**
GEVA IAmb IAmb 04 27 53.7
comp=Z,59nm,0.9s
GEVA IAMs_20 IAMs_20 05 03 25.0
comp=Z,1µm,22.0s
319A Douglas 74.70 61 IAmb IAmb 04 27 48.3
comp=Z,79nm,0.8s
LVV L'vov 74.76 328 *e*P **P 04 27 46.0 0.0**
LVV *e*S **S 04 37 17.0 -3.6**
LVV MLR MLR
comp=Z,2µm,19.0s
COWI Conover 74.79 39 IAmb IAmb 04 27 47.5
comp=Z,113nm,1.2s
KOPT Kop Dagi 74.79 312 P P **04 27 47.8 +1.0**
KOPT IAmb IAmb 04 27 53.8
comp=Z,88nm,0.8s
121A Cookes Peak, D 74.81 59 P P **04 27 46.9 0.0**
baz=314,SNR=26
N33A J Bar K, Exete 74.82 47 IAmb IAmb 04 27 47.6
comp=Z,129nm,1.1s
N33A IAMs_20 IAMs_20 05 00 40.8
comp=Z,1µm,22.0s
KMPD K-Podol'skiy 74.82 325 P P **04 27 45.0 -1.4**
G40A Rib Lake 74.95 40 IAmb IAmb 04 27 48.4
comp=Z,76nm,0.8s
CBKS Cedar Bluff 75.00 50 P P **04 27 46.0 -1.7**
baz=316,SNR=18
CBKS Cedar Bluff 75.00 50 IAmb IAmb 04 27 49.2
comp=Z,82nm,1.1s
PURM Purcari 75.00 322 ⇑P P **04 27 49.4 +2.0**
KIS Kishinev 75.09 323 ⇓*e*P P **04 27 48.0 0.0**
comp=Z,180nm,0.9s
KIS Kishinev 75.09 323 *e*PcP **PcP 04 27 58.0 -3.5**
KIS *e*S **S 04 37 21.0 -3.4**
KIS *e*LR LR 05 02 18.0
comp=Z,1µm,19.0s
KIS Kishinev 75.09 323 ⇓P P **04 27 49.1 +1.1**
KIS Kishinev 75.09 323 *de*P P **04 27 48.0 0.0**
KIS *e* 04 27 58.0
KIS *e*S **S 04 37 21.0 -3.4**
KIS pmax pmax
comp=Z,180nm,0.9s
BANOM Banah 75.22 292 P P **04 27 50.4 +1.3**
BANOM Banah 75.22 292 P P **04 27 50.5 +1.4**
SNR=11
BANOM P P **04 27 50.5 +1.4**
SNR=11
ARMA Armidale 75.22 179 IAmb IAmb 04 27 53.3
comp=Z,48nm,0.8s
ARMA IAMs_20 IAMs_20 04 56 02.2
comp=Z,1µm,22.0s
SHME Shamm 75.24 292 *i* P P **04 27 50.4 +1.2**
SNR=13
SCHQ Schefferville 75.34 22 P P **04 27 49.1 -0.2**
comp=Z,60nm,0.9s,baz=358,slow=5.1,SNR=28
SCHQ LR LR 05 03 38.8
comp=Z,1µm,20.0s,baz=350,slow=38
SCHQ Schefferville 75.34 22 IAmb IAmb 04 27 51.2
comp=Z,75nm,0.9s
MORS Morshin 75.37 327 P P **04 27 50.1 +0.5**
MCD Coleburn Disti 75.39 346 *e*P P **04 27 50.2 +0.7**
KWP Kalwaria Pacla 75.41 328 *e*P P **04 27 50.3 +0.5**
KWP Kalwaria Pacla 75.41 328 P P **04 27 50.3 +0.5**
IAS Iasi 75.46 324 ⇑P P **04 27 51.3 +1.1**
IAS Iasi 75.46 324 P P **04 27 51.2 +1.1**
F42A Maple Grove Fa 75.49 38 IAmb IAmb 04 27 51.8
comp=Z,104nm,1.1s
WSAR Wadi Sarin 75.50 288 P P **04 27 53.0 +2.2**
comp=Z,27nm,1.0s,baz=86,slow=8.0,SNR=13
E43A Lone Tree Farm 75.50 37 IAmb IAmb 04 27 51.8
comp=Z,134nm,1.1s
KSV Kosov 75.58 326 P P **04 27 51.0 +0.2**
SRIG Santa Rosalia 75.61 66 P P **04 27 51.3 0.0**
BIDO Bidbid 75.64 289 P P **04 27 55.0 +3.4**
SNR=7.6
MDH Madha 75.65 291 P P **04 27 52.8 +1.2**
MDH Madha 75.65 291 P P **04 27 53.0 +1.4**
MDH P P **04 27 53.0 +1.4**
MSFE Esma-Masafi 75.70 292 *i* P P **04 27 53.8 +1.9**
SNR=10.0
WBK Wadi Bani Khal 75.70 288 P P **04 27 54.7 +2.8**
SNR=5.5
WBK P P **04 27 54.7 +2.8**
SNR=5.5
JLN Jalan Bani Buh 75.71 287 P P **04 27 55.1 +3.1**
SNR=5.3
JLN P P **04 27 55.1 +3.1**
SNR=5.3
MDO Dochfour 75.72 347 *e*P P **04 27 51.2 -0.2**
BSEG Bad Segeberg 75.74 337 *e*P P **04 27 51.9 +0.3**
comp=Z,115nm,1.0s,baz=28,slow=5.6
K38A Parkersburg 75.74 43 IAmb IAmb 04 27 52.9
comp=Z,117nm,1.1s
K38A IAMs_20 IAMs_20 05 04 14.0
comp=Z,1µm,19.0s
VASR Vaslui 75.80 324 ⇑P P **04 27 52.9 +0.8**
KAC Achnashellach 75.81 347 *e*P P **04 27 52.3 +0.4**
I40A Norwalk 75.81 41 IAmb IAmb 04 27 53.4
comp=Z,154nm,1.2s
PRAR RASCA 75.88 325 ⇓P P **04 27 53.6 +1.1**
UOSS Minazif 75.95 291 *i* P P **04 27 54.5 +1.2**
SNR=23
UOSS Minazif 75.95 291 P P **04 27 55.1 +1.8**
UOSS P P **04 27 55.1 +1.8**
UOSS Minazif 75.95 291 P P **04 27 52.7 -0.6**
OJC Ojcow 75.98 330 *e*P P **04 27 52.9 -0.1**
OJC Ojcow 75.98 330 P P **04 27 53.2 +0.2**
SMDO Samad 76.01 289 P P **04 27 56.0 +2.2**
SNR=7.1
SMDO P P **04 27 56.0 +2.2**
SNR=7.1
KPL Plockton 76.02 347 *e*P P **04 27 53.4 +0.3**
KPL IAmb IAmb 04 27 54.9
comp=Z,196nm,1.2s
RUE Ruedersdorf 76.02 335 *e*P P **04 27 54.3 +1.1**
HATD Hatta, Dubai 76.08 291 *i* P P **04 27 55.7 +1.6**
SNR=22
BURAR Bucovina Array 76.08 326 ⇑P P **04 27 54.0 +0.2**
BURAR Bucovina Array 76.08 326 P P **04 27 54.0 +0.2**
BURAR Bucovina Array 76.08 326 P P **04 27 53.3 -0.5**
SCIA State Center 76.08 44 P P **04 27 52.9 -0.9**
baz=319,SNR=15
SCIA State Center 76.08 44 IAMs_20 IAMs_20 04 58 57.1
comp=Z,1µm,22.0s
HOQ Hoqain 76.15 289 P P **04 27 56.1 +1.6**
SNR=9.3
HOQ P P **04 27 56.1 +1.6**
SNR=9.3
KOLS Kolonicke sedl 76.15 328 *e*P P **04 27 54.3 +0.3**
KOLS pmax pmax
comp=Z,121nm,0.9s
KOLS Kolonicke sedl 76.15 328 *e*P P **04 27 54.3 +0.3**
KOLS *e*S **S 04 37 32.9 -3.2**
KOLS *e*L L 05 04 01.0
BIR Birlad 76.17 323 ⇓P P **04 27 56.4 +2.2**
BIR Birlad 76.17 323 P P **04 27 56.3 +2.2**
DIKM Dikmen 76.25 316 ⇓P P **04 27 57.5 +2.7**
BIZ Bicaz 76.27 325 ⇓P P **04 27 55.4 +0.6**
NAZ Nazwa, Dubai 76.28 292 *i* P P **04 27 56.7 +1.5**
SNR=7.7
SOHO SOHO 76.29 290 P P **04 27 56.4 +1.2**
SOHO SOHO 76.29 290 P P **04 27 56.4 +1.2**
SOHO P P **04 27 56.4 +1.2**
KVT Kavak 76.29 315 P P **04 27 56.6 +1.6**
VARL Varlezi 76.37 323 ⇑P P **04 27 56.1 +0.8**
TESR Tescani 76.38 324 ⇑P P **04 27 55.8 +0.4**
UZH Uzhgorod 76.39 328 *e*P P **04 27 55.0 -0.4**
UZH *e*S **S 04 37 38.0 -0.7**

JMDO Jabal Madar 76.44 288 P P **04 27 57.4 +1.3**
SNR=7.3
JMDO P P **04 27 57.4 +1.3**
SNR=7.3
KSU1 Kansas State U 76.46 48 P P **04 27 53.9 -2.1**
baz=318,SNR=16
KSU1 Kansas State U 76.46 48 IAMs_20 IAMs_20 05 02 08.3
comp=Z,1µm,21.0s
NIE Niedzica 76.47 329 *e*P P **04 27 56.8 +0.9**
CRVS Cervenica-Dubn 76.48 328 *e*P P **04 27 56.3 +0.4**
CRVS pmax pmax
comp=Z,163nm,0.9s
CRVS Cervenica-Dubn 76.48 328 *e*P P **04 27 56.3 +0.4**
CRVS *e*L L 05 03 18.7
FAQ Al Faqa, Dubai 76.49 291 *i* P P **04 27 57.8 +1.4**
SNR=11
FAQ Al Faqa, Dubai 76.49 291 P P **04 27 57.5 +1.1**
FAQ P P **04 27 57.5 +1.1**
TLCR 76.52 322 ⇓P P **04 27 56.6 +0.4**
TLCR 76.52 322 P P **04 27 56.5 +0.4**
GIUM Giurgiulesti 76.54 323 ⇑P P **04 27 58.5 +2.3**
TRSU Trosnyk 76.58 327 P P **04 27 57.4 +1.0**
I42A Draeger Farm, 76.60 40 IAmb IAmb 04 27 57.8
comp=Z,72nm,0.7s
MARD Mardin 76.61 310 IAmb IAmb 04 28 00.7
comp=Z,122nm,1.0s
BZK Bozkurt 76.63 317 ⇑P P **04 27 59.5 +2.6**
INVG Invergeldie, C 76.63 346 *e*P P **04 27 56.9 +0.3**
TOKA Tokat 76.64 314 P P **04 27 57.6 +0.6**
TOKA IAmb IAmb 04 28 00.4
comp=Z,76nm,0.9s
KSP Ksiaz 76.64 332 *e*P P **04 27 56.9 +0.1**
KSP Ksiaz 76.64 332 P P **04 27 57.0 +0.2**
E46A Sault Ste Mari 76.65 36 IAmb IAmb 04 27 57.9
comp=Z,109nm,1.1s
E46A IAMs_20 IAMs_20 05 02 40.5
comp=Z,1µm,21.0s
SCHL Schela 76.69 323 ⇓P P **04 27 59.0 +1.8**
BMR Baia Mare 76.71 327 ⇑P P **04 27 59.1 +1.9**
BMR Baia Mare 76.71 327 P P **04 27 59.1 +1.9**
JFWS Jewell Farm 76.74 41 P P **04 27 55.4 -2.1**
baz=321,SNR=9.8
JFWS Jewell Farm 76.74 41 IAmb IAmb 04 27 58.1
comp=Z,45nm,0.8s
JFWS Jewell Farm 76.74 41 IAMs_20 IAMs_20 05 00 56.2
comp=Z,1µm,22.0s
ASUD Al Ashush, Dub 76.75 291 *i* P P **04 27 59.6 +1.9**
SNR=7.8
AMTX Amarillo 76.75 54 P P **04 27 57.2 -0.6**
baz=316
AMTX Amarillo 76.75 54 P P **04 27 57.7 -0.1**
AMTX IAmb IAmb 04 27 59.8
comp=Z,61nm,1.1s
PETR Petresti 76.77 323 ⇑P P **04 28 00.1 +2.5**
MSTX Muleshoe 76.78 55 P P **04 27 57.0 -1.0**
baz=316,SNR=22
BSY Bisya 76.80 289 P P **04 27 59.5 +1.4**
SNR=8.1
BSY P P **04 27 59.5 +1.4**
SNR=8.1
CFR Carcaliu 76.81 322 ⇑P P **04 27 58.3 +0.5**
CFR Carcaliu 76.81 322 P P **04 27 58.3 +0.5**
ARQ Araqi 76.84 290 P P **04 27 59.6 +1.3**
SNR=7.7
ARQ P P **04 27 59.6 +1.3**
SNR=7.7
MNTX Cornudas Mount 76.85 58 P P **04 27 57.7 -0.6**
baz=315,SNR=47
ARCR ARCALIA 76.86 326 ⇑P P **04 27 59.7 +1.6**
ALNE Al Ain 76.86 291 *i* P P **04 28 00.2 +1.8**
SNR=10
ESY Stoneypath 76.86 345 *e*P P **04 27 58.7 +0.8**
VRI Vrincioaia 76.87 324 ⇓P P **04 27 59.9 +1.8**
VRI Vrincioaia 76.87 324 P P **04 27 59.9 +1.8**
OKC Ostrava-Krasne 76.88 331 *e*P P **04 27 58.6 +0.5**
OKC MLR MLR
comp=Z,2µm,17.4s
OKC Ostrava-Krasne 76.88 331 *e*P P **04 27 58.6 +0.5**
OKC AMS AMS 05 08 20.0
comp=Z,2µm,17.4s
PLOR Plostina 76.91 324 ⇓P P **04 28 00.2 +1.8**
OSTC Ostas 76.92 332 *e*P P **04 27 58.5 +0.1**
OSTC AMS AMS 05 09 50.0
comp=Z,2µm,16.9s
L40A Anamosa 76.93 43 IAMs_20 IAMs_20 05 05 38.4
comp=Z,1µm,20.0s
CHVC Chvalec 76.94 332 *e*P P **04 27 58.5 0.0**
CHVC AMS AMS 05 09 50.0
comp=Z,2µm,17.7s
TPGR Topolog 76.95 322 ⇓P P **04 27 59.1 +0.5**
LANS Liptovska Anna 76.99 330 *e*P P **04 28 00.2 +1.3**
LANS pmax pmax
comp=Z,161nm,0.8s
LANS Liptovska Anna 76.99 330 *e*P P **04 28 00.2 +1.3**
LAWE Loch Awe, Argy 77.02 347 *e*P P **04 27 59.1 +0.4**
LAWE IAmb IAmb 04 28 00.6
comp=Z,74nm,0.9s
UPC Upice 77.02 332 *e*P P **04 27 59.7 +0.7**
UPC MLR MLR
comp=Z,2µm,15.9s
UPC Upice 77.02 332 *e*P P **04 27 59.7 +0.7**
UPC AMS AMS 05 09 50.0
comp=Z,2µm,15.9s
DPC Dobruska-Polom 77.06 332 *e*P P **04 27 59.8 +0.6**
DPC MLR MLR
comp=Z,2µm,15.7s
DPC Dobruska-Polom 77.06 332 *e*P P **04 27 59.8 +0.6**
DPC AMS AMS 05 05 20.0
comp=Z,2µm,15.7s
OZUR 77.08 324 ⇑P P **04 28 00.9 +1.5**
EBL Broad Law 77.08 345 *e*P P **04 27 60.0 +0.8**
NRDL Niedersach Rie 77.08 337 *e*P P **04 27 59.5 +0.4**
comp=Z,97nm,1.0s,baz=28,slow=5.6
BISRR Bisoca 77.13 323 ⇑P P **04 28 01.1 +1.4**
MALT Malatya 77.13 312 P P **04 28 02.0 +2.1**
G45A Suttons Bay 77.14 37 IAMs_20 IAMs_20 05 04 35.5
comp=Z,1µm,20.0s
MORC Moravsky Berou 77.14 331 ⇑P P **04 28 00.6 +1.0**
MORC Moravsky Berou 77.14 331 *e*P P **04 28 00.0 +0.3**
MORC Moravsky Berou 77.14 331 P P **04 27 59.9 +0.3**
MORC pmax pmax
comp=Z,216nm,0.9s
MORC MLR MLR
comp=Z,2µm,20.0s
MORC Moravsky Berou 77.14 331 P P **04 27 59.9 +0.3**
KRLC Kraliky 77.14 332 *e*P P **04 28 00.0 +0.3**
KRLC MLR MLR
comp=Z,2µm,17.5s
KRLC Kraliky 77.14 332 *e*P P **04 28 00.0 +0.3**
KRLC AMS AMS 05 10 00.0
comp=Z,2µm,17.5s
STKA Stephens Creek 77.15 188 P P **04 28 01.1 +1.5**
comp=Z,33nm,1.1s,baz=343,slow=7.3,SNR=13
STKA LR LR 05 03 49.5
comp=Z,429nm,19.7s,baz=14,slow=37
STKA Stephens Creek 77.15 188 P P **04 28 00.2 +0.6**
GRER 77.15 323 ⇓P P **04 28 02.4 +2.7**
U32A Winter Ranch, 77.17 51 IAmb IAmb 04 28 01.6
comp=Z,72nm,1.2s
KECS Kecovo 77.18 329 *e*P P **04 28 00.3 +0.4**
KECS pmax pmax
comp=Z,70nm,0.9s
KECS Kecovo 77.18 329 *e*P P **04 28 00.3 +0.4**
ASSE Asse, Remlinge 77.24 336 *e*P P **04 28 00.3 +0.2**
comp=Z,87nm,1.0s,baz=28,slow=5.6
LSQQ Lebel-sur-Quev 77.25 30 P P **04 27 59.0 -1.3**
baz=328
TIRR Tirgusor 77.27 322 ⇑P P **04 28 02.4 +2.0**
TIRR Tirgusor 77.27 322 ⇑P P **04 28 02.4 +2.0**
TIRR Tirgusor 77.27 322 P P **04 28 02.4 +2.0**
TIRR pmax pmax
comp=Z,210nm,0.9s
CLL Collm 77.28 334 *i* P P **04 28 00.2 -0.1**
comp=Z,256nm,0.9s
CLL *i* pP **pP 04 28 05.4 -1.9**
CLL *e*(S) S 04 38 00.0 +12
CLL *e*SS SS 04 43 06.0 +21
CLL *e*(SSS) 04 46 36.0
CLL *e*SSSS 04 48 30.0
CLL Lm MLR 05 05 00.0
comp=N,2µm,19.8s
CLL Lm MLR 05 05 00.0
comp=E,1µm,18.1s
CLL Lm MLR 05 05 00.0
comp=Z,2µm,19.6s

CLL Collm 77.28 334 *i* P P **04 28 00.2 -0.1**
CLL *i* 04 28 05.4
CLL *e*S S 04 37 38.0 -10
CLL pmax pmax
comp=Z,256nm,0.9s
CLL MLR MLR
comp=Z,2µm,19.6s
CLL Collm 77.28 334 *e*P P **04 28 00.3 -0.1**
comp=Z,256nm,0.9s,baz=28,slow=5.6
HARR Harsova 77.29 322 ⇓P P **04 28 01.5 +1.0**
HARR Harsova 77.29 322 P P **04 28 01.1 +0.6**
PGBU Glenifferbraes 77.29 346 *e*P P **04 28 01.3 +1.0**
PGBU IAmb IAmb 04 28 02.9
comp=Z,148nm,0.9s
DOPR Dopca 77.34 324 ⇑P P **04 28 02.3 +1.4**
TLBR Topalu 77.36 322 ⇑P P **04 28 01.4 +0.5**
BRG Berggiesshubel 77.37 334 *i* P P **04 28 01.1 +0.2**
comp=Z,88nm,1.0s
BRG S S **04 37 48.0 -1.3**
BRG SS SS **04 42 44.0 -2.7**
comp=N,2µm,17.1s
comp=E,2µm,17.2s
comp=Z,2µm,21.5s
BRG Berggiesshubel 77.37 334 *i* P P **04 28 01.1 +0.2**
BRG S S **04 37 48.0 -1.3**
BRG SS SS **04 42 44.0 -2.7**
BRG pmax pmax
comp=Z,88nm,1.0s
BRG MLR MLR
comp=N,2µm,17.1s
BRG MLR MLR
comp=E,2µm,17.2s
BRG MLR MLR
comp=Z,2µm,21.5s
BRG Berggiesshubel 77.37 334 *e*P P **04 28 01.0 +0.1**
comp=Z,88nm,1.0s,baz=28,slow=5.6
CHGQ Chibougamau 77.42 28 P P **04 27 59.9 -1.2**
baz=329,SNR=42
CJR Cluj-Napoca 77.46 326 ⇑P P **04 28 02.9 +1.3**
CJR Cluj-Napoca 77.46 326 P P **04 28 02.8 +1.3**
PVCC Panska Ves 77.47 333 *e*P P **04 28 02.8 +1.3**
PVCC MLR MLR
comp=Z,3µm,19.9s
PVCC Panska Ves 77.47 333 *e*P P **04 28 02.8 +1.3**
PVCC AMS AMS 05 05 40.0
comp=Z,3µm,19.9s
MHTO MHTO 77.48 287 P P **04 28 03.3 +1.3**
SNR=11
MHTO P P **04 28 03.3 +1.3**
SNR=11
MLR Muntele Rosu 77.50 324 ⇑P P **04 28 03.4 +1.5**
MLR Muntele Rosu 77.50 324 P P **04 28 03.0 +1.1**
MLR pmax pmax
comp=Z,169nm,0.9s
FBE Freiberg 77.51 334 *e*P P **04 28 01.9 +0.2**
comp=Z,164nm,0.9s,baz=28,slow=5.6
EKA Eskdalemuir Ar 77.52 345 P P **04 28 01.2 -0.4**
PGOR Pogoanele 77.53 323 ⇓P P **04 28 04.3 +2.5**
ESK Eskdalemuir 77.54 345 *e*P P **04 28 02.1 +0.4**
ESK Eskdalemuir 77.54 345 P P **04 28 01.9 +0.2**
ESK pmax pmax
comp=Z,78nm,1.1s
ESK Eskdalemuir 77.54 345 P P **04 28 01.9 +0.2**
ESK IAmb IAmb 04 28 03.9
comp=Z,78nm,1.1s
ISR Istrita 77.54 323 ⇑P P **04 28 03.5 +1.5**
ISR Istrita 77.54 323 P P **04 28 03.5 +1.5**
CLZ Clausthal 77.59 336 *e*P P **04 28 02.7 +0.6**
comp=Z,223nm,1.1s,baz=28,slow=5.6
AMRR Amara 77.61 323 ⇑P P **04 28 03.9 +1.6**
MDB Medias 77.61 325 ⇑P P **04 28 04.4 +2.0**
P38A Dawn 77.65 46 IAmb IAmb 04 28 03.9
comp=Z,114nm,0.9s
P38A IAMs_20 IAMs_20 05 06 12.6
comp=Z,1µm,19.0s
L42A Oliver, Polo 77.71 42 IAmb IAmb 04 28 03.6
comp=Z,98nm,0.8s
L42A IAMs_20 IAMs_20 05 00 38.1
comp=Z,1µm,22.0s
NEUB Neuenburg 77.74 335 *e*P P **04 28 03.0 +0.1**
comp=Z,200nm,1.0s,baz=28,slow=5.6
GLMI Grayling 77.75 37 P P **04 28 02.3 -0.8**
baz=323,SNR=16
GLMI Grayling 77.75 37 IAMs_20 IAMs_20 05 05 10.8
comp=Z,1µm,20.0s
EDMD Edmundbyers 77.77 344 *e*P P **04 28 03.4 +0.4**
EDMD IAmb IAmb 04 28 06.5
comp=Z,117nm,1.0s
VYHS Vyhne 77.77 330 *e*P P **04 28 04.0 +0.8**
VYHS pmax pmax
comp=Z,141nm,1.0s
VYHS Vyhne 77.77 330 *e*P P **04 28 04.0 +0.8**
SECR 77.81 324 ⇑P P **04 28 04.9 +1.4**
VRAC Vranov 77.86 331 ⇓P P **04 28 04.8 +1.1**
VRAC Vranov 77.86 331 *e*P P **04 28 04.3 +0.6**
VRAC Vranov 77.86 331 P P **04 28 04.7 +1.1**
JAVC Velka Javorina 77.87 331 *e*P P **04 28 05.1 +1.3**
PSZ Piszkesteto 77.87 329 ⇑P P **04 28 05.1 +1.3**
PSZ Piszkesteto 77.87 329 P P **04 28 04.4 +0.6**
PSZ pmax pmax
comp=Z,130nm,0.9s
PSZ MLR MLR
comp=Z,3µm,18.0s
PSZ Piszkesteto 77.87 329 P P **04 28 04.4 +0.6**
VOIR 77.91 324 ⇓P P **04 28 05.0 +0.9**
VOIR 77.91 324 P P **04 28 05.0 +0.9**
NEWG New Galloway 77.91 346 *e*P P **04 28 04.0 +0.2**
PRA Prague 77.91 333 AMS AMS 05 06 00.0
comp=Z,2µm,16.7s
GDLE Glaisdale, N Y 77.93 344 *e*P P **04 28 05.4 +1.5**
GDLE IAmb IAmb 04 28 05.8
comp=Z,110nm,1.0s
PRU Pruhonice 77.95 333 *e*P P **04 28 03.9 -0.2**
PRU MLR MLR
comp=Z,3µm,18.3s
PRU Pruhonice 77.95 333 *e*P P **04 28 03.9 -0.2**
PRU AMS AMS 05 06 00.0
comp=Z,3µm,18.3s
RASA Rasa 78.01 322 ⇑P P **04 28 07.0 +2.4**
SULR 78.02 323 ⇑P P **04 28 05.6 +1.0**
MTUR Matau 78.08 324 ⇑P P **04 28 06.4 +1.4**
T35A Sooner Cattle 78.13 49 IAmb IAmb 04 28 06.7
comp=Z,99nm,1.0s
KRUC Moravsky 78.14 331 *e*P P **04 28 05.6 +0.4**
KRUC Moravsky 78.14 331 P P **04 28 05.8 +0.6**
ARR Arges 78.14 325 ⇓P P **04 28 07.7 +2.4**
KESW Keswick, Cumbr 78.21 345 *e*P P **04 28 05.8 +0.3**
KESW IAmb IAmb 04 28 07.7
comp=Z,251nm,1.1s
TANN Tannenbergstha 78.23 334 *e*P P **04 28 06.0 +0.3**
comp=Z,99nm,1.0s,baz=28,slow=5.6
TREC Trest 78.24 332 *e*P P **04 28 06.5 +0.7**
TREC Trest 78.24 332 *e*P P **04 28 06.5 +0.7**
SMOL Smolenice 78.25 331 *e*P P **04 28 07.0 +1.1**
SMOL pmax pmax
comp=Z,85nm,0.9s
SMOL Smolenice 78.25 331 *e*P P **04 28 06.9 +1.1**
PLN Plauen 78.26 335 *e*P P **04 28 06.2 +0.3**
comp=Z,82nm,1.0s,baz=28,slow=5.6
MOX Moxa 78.28 335 P P **04 28 06.6 +0.6**
MOX Moxa 78.28 335 *e*P P **04 28 06.2 +0.2**
comp=Z,106nm,1.0s,baz=28,slow=5.6
MOX *e*L L 05 05 48.6
comp=Z,2µm,20.0s
GUNZ Gunzen 78.31 334 *e*P P **04 28 06.6 +0.4**
comp=Z,107nm,0.9s,baz=28,slow=5.6
WERN Wernitzgruen 78.37 334 *e*P P **04 28 06.9 +0.4**
comp=Z,130nm,0.9s,baz=28,slow=5.6
PBCC Pribram 78.39 333 *e*P P **04 28 07.1 +0.5**
L44A Lake County Fo 78.39 41 P P **04 28 05.5 -1.2**
baz=322
NKC Novy Kostel 78.39 334 *e*P P **04 28 07.6 +1.0**
NKC MLR MLR
comp=Z,2µm,17.2s
NKC Novy Kostel 78.39 334 *e*P P **04 28 07.6 +1.0**
NKC AMS AMS 05 06 40.0
comp=Z,2µm,17.2s
FORT Forrest 78.41 200 P P **04 28 07.3 +0.7**
FORT IAmb IAmb 04 28 10.1
comp=Z,110nm,0.8s
DEV Deva 78.42 326 ⇑P P **04 28 08.7 +1.9**
DEV Deva 78.42 326 P P **04 28 08.7 +1.9**
MODS Modra-Piesok 78.42 331 *e*P P **04 28 06.8 0.0**
MODS pmax pmax
comp=Z,178nm,1.0s

MODS **Modra-Piesok** 78.42 331 *e*P **P** 04 28 06.8 0.0
MODS *e*S **S** 04 37 56.7 -4.1
MODS *e*L L 05 11 32.4
LOT Lotru 78.42 325 ⇓P **P** 04 28 07.9 +0.9
OK029 Liberty Lake 78.45 51 IAmb IAmb 04 28 08.8
comp=Z,81nm,1.2s
OK029 IAMs_20 IAMs_20 05 05 17.1
comp=Z,872nm,21.0s
WMOK Wichita Mounta 78.50 52 P **P** 04 28 06.4 -1.0
baz=318,SNR=29
SGRR Singureni 78.50 323 ⇑P **P** 04 28 08.6 +1.4
BR131 Keskin Array S 78.51 316 *i* P **P** 04 28 08.1 +0.5
BRTR Keskin Array B 78.51 316 P **P** 04 28 08.9 +1.3
comp=Z,36nm,0.9s,baz=72,slow=3.1,SNR=86
BRTR LR LR 05 08 08.8
comp=Z,725nm,19.5s,baz=48,slow=40
BRTR Keskin Array B 78.51 316 *i* P **P** 04 28 08.8 +1.2
BRTR pmax pmax
comp=Z,44nm,0.9s
BRTR Keskin Array B 78.51 316 P **P** 04 28 07.6 0.0
BUD Budapest 78.56 329 P **P** 04 28 09.0 +1.5
BUD pmax pmax
comp=Z,196nm,1.0s
QUOK Quay 78.58 50 IAmb IAmb 04 28 09.3
comp=Z,95nm,1.1s
SIRR Siria 78.58 327 ⇑P **P** 04 28 08.5 +0.7
GAZ Gaziantep 78.62 312 P **P** 04 28 08.7 +0.5
ZST Bratislava 78.64 331 *e*P **P** 04 28 09.6 +1.7
ZST pmax pmax
comp=Z,288nm,1.1s
ZST Bratislava 78.64 331 *e*P **P** 04 28 09.6 +1.7
ZST *e*S **S** 04 37 55.4 -7.6
OK031 S. Brethren Rd 78.67 50 IAmb IAmb 04 28 09.9
comp=Z,89nm,1.1s
OK025 Westminster Rd 78.67 51 IAmb IAmb 04 28 09.9
comp=Z,75nm,1.0s
OK030 Cody Creek RV 78.72 50 IAmb IAmb 04 28 10.2
comp=Z,86nm,1.3s
MANZ Manzenberg 78.72 334 *e*P **P** 04 28 08.6 +0.2
comp=Z,83nm,1.0s,baz=28,slow=5.6
HQIL Hanson Quary C 78.72 41 IAmb IAmb 04 28 09.7
comp=Z,112nm,0.9s
OKCFA Oklahoma City 78.73 51 IAmb IAmb 04 28 10.4
comp=Z,82nm,1.0s
BUG Bochum--Univer 78.80 338 *e*P **P** 04 28 08.8 0.0
comp=Z,171nm,1.0s,baz=28,slow=5.6
RAZG Razgrad 78.81 322 ⇑P **P** 04 28 10.0 +1.0
ANTO Ankara 78.82 316 IAMs_20 IAMs_20 05 09 52.2
comp=Z,1μm,20.0s
BR231 Keskin MP Arra 78.85 316 P **P** 04 28 10.5 +1.0
BR231 IAmb IAmb 04 28 12.6
comp=Z,103nm,0.9s
GZR Gura Zlata 78.87 326 ⇑P **P** 04 28 10.1 +0.7
ROTZ Rotzenmuhle 78.88 334 *e*P **P** 04 28 09.9 +0.6
comp=Z,121nm,1.0s,baz=28,slow=5.6
COPA Copaceanca 78.90 323 ⇑P **P** 04 28 09.9 +0.5
KHC Kasperske Hory 79.01 333 *e*P **P** 04 28 10.2 +0.2
KHC *e* 04 28 22.0
KHC MLR MLR
comp=Z,3μm,17.3s
KHC Kasperske Hory 79.01 333 *e*P **P** 04 28 10.2 +0.2
KHC *ex* x 04 28 22.0
KHC AMS AMS 05 06 40.0
comp=Z,3μm,17.3s
HDIL Hopedale 79.02 42 P **P** 04 28 09.1 -1.1
baz=321,SNR=55
HDIL Hopedale 79.02 42 IAMs_20 IAMs_20 05 01 28.6
comp=Z,1μm,22.0s
BZS Buzias 79.14 326 ⇑P **P** 04 28 11.2 +0.4
BZS Buzias 79.14 326 P **P** 04 28 11.2 +0.4
BZS pmax pmax
comp=Z,190nm,1.1s
GEC2 GERESS Array S 79.22 333 *e*P **P** 04 28 11.5 +0.2
comp=Z,78nm,0.9s,baz=28,slow=5.6
GEC2 GERESS Array S 79.22 333 P **P** 04 28 11.8 +0.5
GEC2 IAmb IAmb 04 28 13.3
comp=Z,64nm,0.8s
GEC2 IAMs_20 IAMs_20 05 09 33.8
comp=Z,1μm,20.0s
GERES GERESS Array B 79.22 333 P **P** 04 28 11.7 +0.5
comp=Z,50nm,0.8s,baz=35,slow=4.9,SNR=239
GERES PKKPbc **PKKPbc** 04 47 00.6 +0.1
comp=Z,0.4nm,0.6s,baz=241,slow=2.0,SNR=4.8
GERES GERESS Array B 79.22 333 P **P** 04 28 10.6 -0.7
GERES GERESS Array B 79.22 333 P **P** 04 28 10.6 -0.7
WET Wettzell 79.22 333 P **P** 04 28 11.8 +0.7
WET Wettzell 79.22 333 *e*P **P** 04 28 11.8 +0.7
comp=Z,174nm,1.0s,baz=28,slow=5.6
S39A Bolivar 79.22 47 IAmb IAmb 04 28 11.9
comp=Z,72nm,0.9s
S39A IAMs_20 IAMs_20 05 07 07.3
comp=Z,1μm,19.0s
I49A Point Hope 79.22 36 IAMs_20 IAMs_20 05 07 40.7
comp=Z,1μm,20.0s
WACR West Acre 79.23 342 *e*P **P** 04 28 11.9 +0.9
WACR IAmb IAmb 04 28 13.3
comp=Z,324nm,1.0s
GRF Grafenberg Arr 79.25 335 P **P** 04 28 12.2 +0.9
GRF Grafenberg Arr 79.25 335 *e*P **P** 04 28 12.0 +0.7
comp=Z,243nm,0.9s,baz=28,slow=5.6
GRF *e*L L 05 06 17.9
comp=Z,2μm,19.9s
TUL1 Leonard 79.26 49 P **P** 04 28 10.4 -1.3
baz=319,SNR=15
TUL1 Leonard 79.26 49 P **P** 04 28 11.0 -0.7
TUL1 IAmb IAmb 04 28 13.1
comp=Z,164nm,1.6s
TUL1 IAMs_20 IAMs_20 05 07 14.7
comp=Z,1μm,18.0s
SOP Sopron 79.27 331 P **P** 04 28 12.9 +1.5
SOP pmax pmax
comp=Z,168nm,1.0s
CONA Conrad Observa 79.29 331 *i* P **P** 04 28 13.0 +1.3
comp=Z,95nm,0.9s,SNR=46
SZH Strazhica 79.29 323 *e*P **P** 04 28 11.8 +0.1
SRE Strehaia 79.30 325 ⇓P **P** 04 28 13.5 +1.8
SRE Strehaia 79.30 325 P **P** 04 28 13.4 +1.8
R40A Maddies Statio 79.30 46 IAmb IAmb 04 28 12.8
comp=Z,108nm,0.8s
R40A IAMs_20 IAMs_20 05 07 21.4
comp=Z,1μm,18.0s
VLAD Vladila 79.35 324 ⇓P **P** 04 28 13.0 +1.1
HERR Herculane 79.44 326 ⇓P **P** 04 28 12.7 +0.3
ALGO Algonquin Park 79.47 32 P **P** 04 28 10.6 -2.0
baz=327,SNR=8.6
D55A Sainte-Anne-du 79.51 30 P **P** 04 28 11.4 -1.4
baz=329
BANR Banloc 79.53 327 ⇓P **P** 04 28 14.6 +1.8
ABTX Abilene, Hawle 79.56 54 P **P** 04 28 12.5 -0.8
baz=317,SNR=19
ABTX Abilene, Hawle 79.56 54 IAMs_20 IAMs_20 05 04 22.8
comp=Z,859nm,19.0s
TX31 Lajitas Ar. Si 79.57 59 IAmb IAmb 04 28 15.3
comp=Z,115nm,0.9s
TXAR Lajitas Array 79.57 59 P **P** 04 28 12.8 -0.8
comp=Z,25nm,0.8s,baz=299,slow=3.8,SNR=108
TXAR PKKPbc **PKKPbc** 04 47 01.7 +2.4
comp=Z,0.8nm,0.7s,baz=137,slow=4.1,SNR=10.0
TNS Taunus Mts 79.58 337 P **P** 04 28 14.8 +1.6
TNS Taunus Mts 79.58 337 *e*P **P** 04 28 13.7 +0.5
comp=Z,115nm,1.0s,baz=28,slow=5.6
U38A Gravette 79.61 48 IAMs_20 IAMs_20 05 05 56.9
comp=Z,1μm,21.0s
P43A Skaggs, Pawnee 79.62 43 IAmb IAmb 04 28 14.7
comp=Z,119nm,0.9s
P43A IAMs_20 IAMs_20 05 01 31.6
comp=Z,1μm,21.0s
CWF Charnwood Fore 79.62 343 *e*P **P** 04 28 13.8 +0.6
SLBS Sierra La Lagu 79.62 67 P **P** 04 28 14.1 +0.3
AHRW Bad Neuenahr-A 79.67 338 *e*P **P** 04 28 14.0 +0.5
comp=Z,160nm,1.1s,baz=28,slow=5.6
O44A Mansfield 79.72 42 IAMs_20 IAMs_20 05 02 47.3
comp=Z,1μm,21.0s
PUNG Punghina 79.72 325 ⇑P **P** 04 28 15.6 +1.7
D56A ZEC Mazanza, M 79.74 30 P **P** 04 28 12.9 -1.1
baz=329,SNR=20
GRC1 Grafenberg Arr 79.77 334 P **P** 04 28 15.1 +0.9
MORH Mrgy, Hungar 79.77 329 *e*P **P** 04 28 12.9 -1.3
E55A Montcerf-Lytto 79.79 31 P **P** 04 28 12.8 -1.5
baz=328,SNR=8.3
MDVR Moldovita 79.80 326 ⇑P **P** 04 28 14.8 +0.4
BEBN Eben Emael 79.81 338 P **P** 04 28 14.8 +0.5
comp=Z,230nm,1.0s
BEBN PcP **pP** 04 28 19.1 -2.1
FOEL Foel Wylfa 79.85 344 *e*P **P** 04 28 15.4 +0.9
FOEL IAmb IAmb 04 28 17.4
comp=Z,280nm,1.4s
BTNL Ternell 79.88 338 P **P** 04 28 15.6 +0.8
comp=Z,108nm,1.1s
BTNL PcP **pP** 04 28 20.6 -1.1
MEM Membach 79.89 338 P **P** 04 28 15.4 +0.7
comp=Z,133nm,0.9s
MEM Membach 79.89 338 P **P** 04 28 15.7 +0.9
MOA Molln 79.90 332 *i* P **P** 04 28 15.8 +0.9
comp=Z,44nm,0.8s,SNR=24
G54A Lake Saint Pet 79.92 33 P **P** 04 28 13.4 -1.6
baz=327,SNR=6.7
HHAR Hobbs 79.97 48 IAMs_20 IAMs_20 05 06 39.2
comp=Z,1μm,20.0s
LLW Llanuwchllyn 79.97 345 *e*P **P** 04 28 16.2 +1.0
ARSA Arzberg 80.00 331 *i* P **P** 04 28 16.7 +1.3
comp=Z,56nm,1.2s,SNR=18
CCM Cathedral Cave 80.00 45 P **P** 04 28 14.3 -1.3
CCM pmax pmax
comp=Z,125nm,0.9s
CCM MLR MLR
comp=Z,1μm,19.0s
CCM Cathedral Cave 80.00 45 P **P** 04 28 14.2 -1.3
baz=321
CCM Cathedral Cave 80.00 45 P **P** 04 28 14.3 -1.3
CCM IAmb IAmb 04 28 16.8
comp=Z,125nm,0.9s
CCM Cathedral Cave 80.00 45 IAMs_20 IAMs_20 05 06 34.8
comp=Z,1μm,19.0s
BSTI Sart Tilman 80.03 338 P **P** 04 28 16.4 +0.9
BSTI pP **pP** 04 28 19.6 -2.9
SLM Saint Louis 80.05 44 IAMs_20 IAMs_20 05 06 40.1
comp=Z,1μm,19.0s
E56A St. Veronique 80.08 30 P **P** 04 28 14.5 -1.3
baz=329,SNR=15
I51A Listowel 80.08 35 P **P** 04 28 15.1 -0.8
baz=326
BHOU Houvegnez 80.13 338 P **P** 04 28 17.0 +0.9
BHOU PcP **pP** 04 28 22.1 -1.0
LATQ La Tuque 80.14 29 P **P** 04 28 15.2 -0.9
baz=330,SNR=8.2
HLM1 Long Mynd 80.14 344 *e*P **P** 04 28 17.2 +1.1
HLM1 IAmb IAmb 04 28 22.6
comp=Z,107nm,1.1s
UCC Uccle 80.14 339 P **P** 04 28 16.7 +0.7
UCC PcP **pP** 04 28 21.8 -1.3
UCC Uccle 80.14 339 IAmb IAmb 04 28 18.1
comp=Z,65nm,1.0s
L48A N Adams 80.15 39 IAMs_20 IAMs_20 05 05 37.3
comp=Z,984nm,21.0s
MGMO Mountain Grove 80.17 46 IAmb IAmb 04 28 17.4
comp=Z,92nm,1.2s
MGMO IAMs_20 IAMs_20 05 07 34.5
comp=Z,1μm,20.0s
SFIN Lafayette 80.19 41 P **P** 04 28 15.3 -1.2
baz=323,SNR=19
SFIN Lafayette 80.19 41 P **P** 04 28 15.8 -0.8
SFIN IAmb IAmb 04 28 17.9
comp=Z,101nm,0.8s
AAM Ann Arbor 80.20 38 P **P** 04 28 15.8 -0.7
baz=324,SNR=7.2
AAM Ann Arbor 80.20 38 IAmb IAmb 04 28 18.2
comp=Z,106nm,1.1s
AAM IAMs_20 IAMs_20 05 06 37.6
comp=Z,1μm,21.0s
FRGS Fruska Gora 80.22 327 *e*P **P** 04 28 16.2 -0.5
BEHE Becsehely 80.23 330 *e*P **P** 04 28 19.0 +2.3
BCLA Clavier 80.25 339 P **P** 04 28 17.4 +0.8
BCLA pP **pP** 04 28 19.7 -4.0
BCLA sP **PcP** 04 28 21.6 -2.3
BCLA PcP **sP** 04 28 24.2 -2.1
K50A Casco 80.26 37 IAmb IAmb 04 28 18.5
comp=Z,178nm,1.3s
K50A IAMs_20 IAMs_20 05 07 34.0
comp=Z,1μm,18.0s
BGES Gesves 80.34 339 P **P** 04 28 17.7 +0.5
BGES PcP **pP** 04 28 22.6 -1.6
D58A Chemin du LacG 80.35 29 P **P** 04 28 16.0 -1.4
baz=330,SNR=16
Z35A Perchaven, San 80.39 52 IAMs_20 IAMs_20 05 08 47.6
comp=Z,967nm,20.0s
H53A Bobcaygeon 80.42 33 P **P** 04 28 16.2 -1.5
baz=324,SNR=9.4
SNF Seneffe 80.43 339 P **P** 04 28 18.4 +0.8
SNF PcP **PcP** 04 28 23.2 -1.4
N47A Urbana 80.44 40 IAmb IAmb 04 28 18.9
comp=Z,132nm,0.9s
Q44A Meyer Farm, Va 80.44 43 IAMs_20 IAMs_20 05 03 47.3
comp=Z,1μm,22.0s
MORW Morawa 80.44 211 P **P** 04 28 18.2 +0.4
DIM Dimitrovgrad 80.45 322 *e*P **P** 04 28 18.8 +0.9
FVM French Village 80.46 45 IAmb IAmb 04 28 19.4
comp=Z,87nm,0.8s
FVM IAMs_20 IAMs_20 05 06 45.1
comp=Z,1μm,18.0s
RJOB Jochberg 80.48 333 *e*P **P** 04 28 17.9 -0.1
comp=Z,62nm,1.0s,baz=28,slow=5.6
U40A Yellville 80.48 47 P **P** 04 28 16.7 -1.5
baz=320,SNR=89
U40A Yellville 80.48 47 IAMs_20 IAMs_20 05 07 59.7
comp=Z,1μm,19.0s
BMRD Maredsous 80.50 339 P **P** 04 28 18.8 +0.8
KTD Kalmit 80.50 336 P **P** 04 28 19.7 +1.6
E57A Chemin Saint G 80.50 30 P **P** 04 28 17.1 -1.1
baz=330,SNR=23
FUR Furstenfeldbru 80.58 334 P **P** 04 28 20.3 +1.7
FUR Furstenfeldbru 80.58 334 *e*P **P** 04 28 19.1 +0.6
comp=Z,176nm,1.1s,baz=28,slow=5.6
PLVO Plevna 80.61 32 P **P** 04 28 17.9 -0.9
PLVO IAmb IAmb 04 28 19.6
comp=Z,71nm,1.1s
PLVO IAMs_20 IAMs_20 05 04 33.1
comp=Z,1μm,20.0s
PGB Panagyurishte 80.63 323 *e*P **P** 04 28 19.3 +0.3
MCH1 Michaelchurch 80.66 344 *e*P **P** 04 28 20.1 +1.2
MCH1 IAmb IAmb 04 28 21.4
comp=Z,117nm,1.1s
SOKA Soboth 80.66 331 *i* P **P** 04 28 20.1 +1.0
comp=Z,105nm,1.0s,SNR=47
GIVF Givet 80.67 339 *e*P **P** 04 28 19.9 +1.0
GIVF pmax pmax
comp=Z,113nm,1.2s
PERS Pernice 80.67 331 *e*P **P** 04 28 19.6 +0.5
STU Stuttgart 80.67 336 P **P** 04 28 19.8 +0.8
STU pmax pmax
comp=Z,101nm,1.0s
STU Stuttgart 80.67 336 P **P** 04 28 19.8 +0.8
STU IAmb IAmb 04 28 21.3
comp=Z,101nm,1.0s
GROS Grobnik 80.69 331 *e*P **P** 04 28 19.1 -0.1
STRD Stroud 80.70 343 *e*P **P** 04 28 20.4 +1.3
STRD IAmb IAmb 04 28 21.3
comp=Z,215nm,0.9s
WLF Walferdange 80.72 338 P **P** 04 28 19.6 +0.4
WLF Walferdange 80.72 338 P **P** 04 28 22.2 +3.0
WLF pmax pmax
comp=Z,348nm,1.1s
WLF Walferdange 80.72 338 IAmb IAmb 04 28 23.0
comp=Z,60nm,0.9s
DOU Dourbes 80.73 339 P **P** 04 28 20.2 +0.9
DOU pP **PcP** 04 28 22.6 -3.4
DOU x x 04 28 32.0
PLD Plovdiv 80.77 323 P **P** 04 28 20.8 +1.2
PLD pmax pmax
comp=Z,310nm,1.2s
MONM Monmouth 80.77 344 *e*P **P** 04 28 20.7 +1.2
MONM IAmb IAmb 04 28 21.2
comp=Z,128nm,0.9s
D59A Saint-Raymond 80.78 28 P **P** 04 28 18.6 -0.9
baz=331,SNR=5.8
KDZ Kurdzhali 80.83 322 *e*P **P** 04 28 19.3 -0.7
DELO Deloro Mine 80.84 33 IAmb IAmb 04 28 21.0
comp=Z,111nm,1.3s
E58A La Victoria 80.84 29 P **P** 04 28 19.0 -1.0
baz=330,SNR=28
TEKS Tekeris 80.84 327 *e*P **P** 04 28 20.6 +0.6
BAIF Baives 80.86 339 *e*P **P** 04 28 20.3 +0.3
BAIF pmax pmax
comp=Z,98nm,1.2s
T42A Van Buren 80.87 46 IAmb IAmb 04 28 21.3
comp=Z,62nm,0.9s
T42A IAMs_20 IAMs_20 05 07 36.8
comp=Z,1μm,20.0s
W39A Magazine 80.88 49 P **P** 04 28 19.0 -1.3
baz=320,SNR=20
W39A Magazine 80.88 49 IAmb IAmb 04 28 21.6
comp=Z,75nm,1.2s
KBA Koelnbreinsper 80.88 332 *i* P **P** 04 28 21.8 +1.4
comp=Z,100nm,0.9s,SNR=39
KBA Koelnbreinsper 80.88 332 P **P** 04 28 21.4 +1.0
SWN1 Swindon 80.88 343 *e*P **P** 04 28 21.4 +1.3
SWN1 IAmb IAmb 04 28 26.9
comp=Z,329nm,0.9s
WOL Wolverton 80.95 343 *e*P **P** 04 28 21.1 +0.7
VTS Vitosha 80.97 324 *e*P **P** 04 28 21.4 +0.5
OBKA Obir 80.97 331 *i* P **P** 04 28 21.6 +0.8
comp=Z,29nm,0.8s,SNR=11
E59A St. Maurice 81.01 29 P **P** 04 28 19.8 -1.0
baz=331
OLIL Olney 81.02 43 IAMs_20 IAMs_20 05 02 16.6
comp=Z,1μm,19.0s
JCT Junction City 81.04 56 P **P** 04 28 20.3 -1.1
baz=318,SNR=25
JCT Junction City 81.04 56 IAmb IAmb 04 28 23.6
comp=Z,69nm,1.1s
DIVS Divibare 81.05 327 *e*P **P** 04 28 20.1 -1.1
DIVS Divibare 81.05 327 IAmb IAmb 04 28 27.4
comp=Z,59nm,1.0s
ZAG Zagreb 81.06 330 *e*P **P** 04 28 22.0 +0.9
N49A Columbus Grove 81.08 39 IAmb IAmb 04 28 22.7
comp=Z,98nm,0.9s
RZN Rozhen 81.10 322 *e*P **P** 04 28 21.9 +0.2
D61A St Aubert, Com 81.15 27 P **P** 04 28 20.9 -0.6
baz=332
ALN Alexandroupoli 81.16 321 P **P** 04 28 22.2 +0.5
ALN MLR MLR
comp=Z,2μm,20.0s
ALN Alexandroupoli 81.16 321 P **P** 04 28 22.2 +0.5
ALN Alexandroupoli 81.16 321 P **P** 04 28 22.0 +0.3
D60A Saint Jean D'O 81.16 28 P **P** 04 28 20.4 -1.2
baz=332,SNR=13
MYKA Terra Mystica 81.17 332 *i* P **P** 04 28 22.2 +0.4
comp=Z,43nm,1.1s,SNR=12
RDO Rodhopi 81.18 322 P **P** 04 28 22.4 +0.6
M50A Fremont 81.19 38 IAmb IAmb 04 28 23.2
comp=Z,67nm,0.8s
M50A IAMs_20 IAMs_20 05 06 48.0
comp=Z,914nm,19.0s
FCAR Ozark Folk Cen 81.22 47 IAmb IAmb 04 28 22.9
comp=Z,65nm,0.8s
WATA Walderalm 81.22 333 *i* P **P** 04 28 23.4 +1.2
comp=Z,138nm,1.3s,SNR=37
CRES Cresnjev 81.25 330 ⇑*i* P **P** 04 28 22.6 +0.4
WTTA Wattenberg 81.27 333 *i* P **P** 04 28 23.8 +1.4
comp=Z,76nm,0.7s,SNR=32
WTTA Wattenberg 81.27 333 P **P** 04 28 23.7 +1.3
S44A Carbondale 81.27 44 IAMs_20 IAMs_20 05 01 43.4
comp=Z,1μm,22.0s
WHTX Lake Whitney, 81.27 53 P **P** 04 28 21.7 -0.8
baz=318,SNR=9.7
WHTX Lake Whitney, 81.27 53 IAMs_20 IAMs_20 05 09 25.1
comp=Z,851nm,20.0s
BFO Black Forest 81.32 336 P **P** 04 28 22.3 -0.2
BFO pmax pmax
comp=Z,71nm,1.0s
BFO Black Forest 81.32 336 *e*P **P** 04 28 22.8 +0.3
comp=Z,86nm,1.0s,baz=28,slow=5.6
BFO Black Forest 81.32 336 P **P** 04 28 22.3 -0.2
BFO IAmb IAmb 04 28 24.8
comp=Z,71nm,1.0s
G57A Newington 81.33 31 P **P** 04 28 21.0 -1.6
baz=329,SNR=15
RETA Reutte 81.34 334 *i* P **P** 04 28 23.6 +0.9
comp=Z,58nm,1.0s,SNR=20
PRED Cave del Predi 81.36 332 IAmb IAmb 04 28 28.5
comp=Z,68nm,1.0s
MOTA Moosalm 81.36 334 *i* P **P** 04 28 24.0 +1.1
comp=Z,136nm,1.1s,SNR=35
LJU Ljubljana 81.38 331 ⇑*i* P **P** 04 28 23.1 +0.2
PBMO Poplar Bluff 81.40 45 IAMs_20 IAMs_20 05 07 18.8
comp=Z,978nm,20.0s
BLO Bloomington 81.42 42 IAmb IAmb 04 28 24.1
comp=Z,58nm,0.8s
BLO IAMs_20 IAMs_20 05 02 41.1
comp=Z,1μm,20.0s
SQTA Sankt Quirin 81.44 334 *i* P **P** 04 28 24.6 +1.3
comp=Z,124nm,1.1s,SNR=21
SQTA Sankt Quirin 81.44 334 P **P** 04 28 24.6 +1.3
ABTA Abfaltersbach 81.44 333 *i* P **P** 04 28 23.6 +0.3
comp=Z,38nm,1.2s,SNR=11
HAPS Han Pijesak,Bl 81.46 327 *e*P **P** 04 28 22.4 -1.0
ZOU Zoufplan 81.46 332 P **P** 04 28 22.8 -0.6
PMOR Pomariorio Ree 81.46 121 *e*P **P** 04 28 24.0 +0.5
PMOR Pomariorio Ree 81.46 121 *e*T T 05 58 14.4
comp=Z,30nm,0.2s
F59A Saint Guilaume 81.47 29 P **P** 04 28 22.0 -1.2
baz=330,SNR=16
BBLS Lazić 81.47 327 *e*P **P** 04 28 23.0 -0.4
E60A Ste Agathe de 81.47 28 P **P** 04 28 21.8 -1.4
baz=331,SNR=12
MIAR Mount Ida 81.48 49 P **P** 04 28 22.6 -1.0
baz=320,SNR=38
MIAR Mount Ida 81.48 49 IAmb IAmb 04 28 25.1
comp=Z,67nm,0.8s
MIAR IAMs_20 IAMs_20 05 06 55.3
comp=Z,956nm,19.0s
J54A Appleton 81.49 34 IAMs_20 IAMs_20 05 07 30.5
comp=Z,996nm,19.0s
ISP Isparta 81.52 316 P **P** 04 28 24.1 +0.2
ISP pmax pmax
comp=Z,40nm,0.9s
ISP Isparta 81.52 316 P **P** 04 28 24.1 +0.2
CDF Champ du Feu 81.55 337 *e*P **P** 04 28 23.9 +0.1
CDF pmax pmax
comp=Z,85nm,1.0s
BLY Banja Luka 81.56 329 *e*P **P** 04 28 22.1 -1.7
PECO Prince Edward 81.57 33 IAmb IAmb 04 28 24.7
comp=Z,58nm,0.7s
PECO IAMs_20 IAMs_20 05 05 40.7
comp=Z,1μm,21.0s
LCAR Lake Charles 81.58 46 IAmb IAmb 04 28 25.1
comp=Z,137nm,1.7s
LCAR IAMs_20 IAMs_20 05 07 40.7
comp=Z,993nm,20.0s
WHAR Wooly Hollow 81.59 48 IAmb IAmb 04 28 25.4
comp=Z,102nm,1.0s
BOJS Bojanci 81.60 330 *e*P **P** 04 28 24.0 0.0
MMB Musomiste 81.61 323 *e*P **P** 04 28 25.0 +0.8
O49A Covington 81.61 40 IAmb IAmb 04 28 25.5
comp=Z,98nm,1.1s
D62A Allapoint, All 81.62 26 P **P** 04 28 22.9 -1.2
baz=333
G58A Ormstown 81.63 30 P **P** 04 28 22.5 -1.6
baz=330,SNR=19
M51A Elyria 81.63 38 P **P** 04 28 23.4 -0.8
baz=325
F60A Warwick 81.65 29 P **P** 04 28 22.8 -1.4
baz=331
KKB Krupnik 81.65 323 *e*P **P** 04 28 24.5 +0.1
MEDO Medina 81.65 34 IAMs_20 IAMs_20 05 08 25.8
comp=Z,1μm,20.0s
CEY Cerknica 81.68 331 ⇑*i*P **P** 04 28 24.7 +0.2
RUDO Rudo 81.69 327 *e*P **P** 04 28 24.8 +0.3
Z38A Mt. Pleasant 81.69 51 IAmb IAmb 04 28 26.2
comp=Z,109nm,1.1s
P48A Milroy 81.70 41 IAmb IAmb 04 28 25.8
comp=Z,101nm,0.9s
W41B Gary Mavity, V 81.70 48 P **P** 04 28 23.3 -1.4
baz=320,SNR=33
W41B Gary Mavity, V 81.70 48 IAmb IAmb 04 28 26.0
comp=Z,80nm,0.9s
W41B IAMs_20 IAMs_20 05 08 39.1
comp=Z,1μm,19.0s
TAOE Nuku Hiva Isla 81.71 111 *e*LR LR 04 53 53.7
comp=Z,1μm,23.3s
H57A Richville 81.73 32 P **P** 04 28 23.1 -1.6
baz=329,SNR=15
E61A Lac Etchemin 81.73 28 P **P** 04 28 23.0 -1.7
baz=332
NVR Nevrokopi 81.75 323 P **P** 04 28 25.1 +0.2
ECH Echery 81.76 336 P **P** 04 28 24.6 -0.2
ECH pmax pmax
comp=Z,81nm,1.1s
ECH Echery 81.76 336 P **P** 04 28 24.6 -0.2
ECH IAmb IAmb 04 28 26.9
comp=Z,81nm,1.1s
FETA Feichten 81.77 334 *i* P **P** 04 28 26.3 +1.2
comp=Z,79nm,1.1s,SNR=22
SLE Schleitheim 81.78 335 P **P** 04 28 26.3 +1.3
DAVA Damuels 81.79 334 *i* P **P** 04 28 26.3 +1.1
comp=Z,70nm,1.1s,SNR=13
VAH Vaihoa 81.80 121 *e*P **P** 04 28 25.7 +0.4
comp=Z,82nm,1.2s

M52A Chesterland 81.81 37 IAMs_20 IAMs_20 05 04 54.1
comp=Z,1µm,21.0s
J55A Hilton 81.82 34 IAmb IAmb 04 28 26.3
comp=Z,102nm,0.9s
PARMO Parma 81.83 45 IAMs_20 IAMs_20 05 07 49.2
comp=Z,889nm,19.0s
USIN University of 81.83 43 IAMs_20 IAMs_20 05 02 27.2
comp=Z,1µm,21.0s
KULA Kula-Manisa 81.87 318 P P 04 28 26.8 +1.1
E62A Clayton Lake 81.88 27 P P 04 28 24.4 -1.0
baz=332,SNR=15
E62A Clayton Lake 81.88 27 IAmb IAmb 04 28 26.9
comp=Z,70nm,0.9s
LONY Lake Ozonia 81.89 31 P P 04 28 23.8 -1.8
baz=329,SNR=9.1
LONY Lake Ozonia 81.89 31 IAMs_20 IAMs_20 05 03 44.0
comp=Z,1µm,22.0s
EZN Ezine 81.90 320 P P 04 28 25.7 0.0
ERPA Erie 81.90 36 P P 04 28 24.7 -0.9
baz=326,SNR=9.4
ERPA Erie 81.90 36 IAMs_20 IAMs_20 05 05 40.6
comp=Z,1µm,20.0s
X40A Basin Creek Fa 81.92 48 P P 04 28 24.9 -0.9
baz=320,SNR=19
HENM Henderson Moun 81.93 45 IAMs_20 IAMs_20 05 07 32.8
comp=Z,1µm,20.0s
L53A Girard 81.93 36 P P 04 28 25.0 -0.8
baz=326,SNR=12
PLE Pljevlja 81.93 327 *i* P P 04 28 26.1 +0.2
MANT Manisa 81.94 318 P P 04 28 26.5 +0.3
D63A Stockholm 81.95 26 P P 04 28 24.8 -1.0
baz=333,SNR=11
P49A Miami Univ. Ec 81.96 40 P P 04 28 24.8 -1.2
baz=324,SNR=31
F61A St Evariste 81.97 28 P P 04 28 25.5 -0.4
baz=332,SNR=18
RIY Rijeka 82.02 331 *e*P P 04 28 26.0 -0.2
SRS Serrai 82.05 323 P P 04 28 27.5 +1.0
SRS pmax pmax
comp=Z,87nm,1.2s
SRS Serrai 82.05 323 P P 04 28 27.3 +0.8
I57A Carthage 82.08 32 P P 04 28 24.9 -1.6
baz=329,SNR=7.8
435B Jarrell 82.09 54 IAMs_20 IAMs_20 05 10 54.0
comp=Z,995nm,18.0s
MOF Molkenrain 82.09 336 P P 04 28 27.6 +0.9
T45A Paducah 82.10 44 IAMs_20 IAMs_20 05 07 35.4
comp=Z,1µm,20.0s
IVA Berane 82.12 326 *e*P P 04 28 26.4 -0.5
STIP Stip 82.17 324 *i* P P 04 28 26.0 -1.0
HAU Haudompre 82.17 337 *e*P P 04 28 26.9 -0.1
HAU pmax pmax
comp=Z,86nm,1.4s
ACSO Alum Creek Sta 82.18 39 P P 04 28 25.9 -1.2
baz=325,SNR=20
ACSO Alum Creek Sta 82.18 39 P P 04 28 26.6 -0.5
ACSO IAmb IAmb 04 28 28.6
comp=Z,104nm,0.9s
ACSO IAMs_20 IAMs_20 05 06 59.0
comp=Z,948nm,21.0s
M53A WI Miller and 82.18 37 P P 04 28 26.3 -0.8
baz=326,SNR=14
M53A WI Miller and 82.18 37 IAMs_20 IAMs_20 05 05 59.0
comp=Z,1µm,20.0s
HICK Hickman 82.18 45 IAMs_20 IAMs_20 05 09 13.6
comp=Z,907nm,18.0s
J56A Wolcott 82.18 33 P P 04 28 25.4 -1.7
baz=328
J56A Wolcott 82.18 33 IAmb IAmb 04 28 28.0
comp=Z,87nm,0.8s
H59A Cadyville 82.19 30 P P 04 28 25.6 -1.6
baz=330,SNR=14
HINF Hinteralfeld 82.21 337 *e*P P 04 28 28.0 +0.8
HINF pmax pmax
comp=Z,18nm,0.8s
H58A Gabriels 82.21 31 P P 04 28 25.5 -1.7
baz=330,SNR=16
UPM Unac-Piva 82.22 327 *e*P P 04 28 26.8 -0.8
UPM Unac-Piva 82.22 327 *e*P P 04 28 27.2 -0.4
MMNY Mt. Morris Dam 82.23 34 IAMs_20 IAMs_20 05 08 31.2
comp=Z,1µm,18.0s
GNAR Gosnell 82.24 46 IAMs_20 IAMs_20 05 08 06.1
comp=Z,1µm,20.0s
SKO Skopje 82.25 325 *i* P P 04 28 28.9 +1.5
SKO Skopje 82.25 325 P P 04 28 31.3 +3.8
SKO pmax pmax
comp=Z,133nm,1.0s
FUORN Ofenpass-Fuorn 82.27 334 IAmb IAmb 04 28 30.6
comp=Z,72nm,1.1s
WCI Wyandotte Cave 82.28 42 P P 04 28 27.4 -0.3
WCI pmax pmax
comp=Z,123nm,0.9s
WCI MLR MLR
comp=Z,1µm,21.0s
WCI Wyandotte Cave 82.28 42 P P 04 28 26.8 -0.8
baz=323
WCI Wyandotte Cave 82.28 42 P P 04 28 27.4 -0.3
WCI IAMs_20 IAMs_20 05 04 36.9
comp=Z,1µm,21.0s
G60A Masonville 82.28 29 P P 04 28 26.0 -1.5
baz=331
PQI Presque Isle 82.31 26 IAmb IAmb 04 28 29.0
comp=Z,60nm,1.0s
VAY Valandovo 82.32 323 *i* P P 04 28 28.2 +0.3
PVY Plav 82.32 326 ⇑*i* P P 04 28 28.3 +0.3
DYA Yadsworthy 82.33 344 *e*P P 04 28 28.6 +0.9
CSS Mathiatis 82.34 313 P P 04 28 28.5 +0.4
CSS IAmb IAmb 04 28 33.1
comp=Z,57nm,0.7s
BATG Bathurst New B 82.35 24 IAmb IAmb 04 28 29.7
comp=Z,79nm,1.0s
LIA Limnos Island 82.36 321 P P 04 28 29.2 +1.2
GLAT Glass 82.37 45 IAMs_20 IAMs_20 05 08 05.5
comp=Z,1µm,18.0s
WLAR White Oak Lake 82.38 49 IAmb IAmb 04 28 30.0
comp=Z,98nm,0.8s
G61A St-Isidore-de- 82.39 29 P P 04 28 27.5 -0.7
baz=331,SNR=29
PRK Paraskevi 82.39 320 P P 04 28 30.6 +2.3
LNXT Lenox 82.40 45 IAMs_20 IAMs_20 05 04 28.3
comp=Z,908nm,21.0s
SOH Sokhos 82.40 323 P P 04 28 28.9 +0.6
J57A Williamstown 82.40 33 P P 04 28 26.5 -1.7
baz=329,SNR=7.0
J57A Williamstown 82.40 33 IAmb IAmb 04 28 30.1
comp=Z,73nm,1.1s
J57A IAMs_20 IAMs_20 05 04 39.5
comp=Z,1µm,22.0s
E63A Oxbow 82.40 26 P P 04 28 26.8 -1.4
baz=333,SNR=12
E63A Oxbow 82.40 26 IAmb IAmb 04 28 29.4
comp=Z,70nm,1.1s
O51A Pataskala 82.41 38 P P 04 28 27.5 -0.9
baz=325,SNR=17
PPT Papeete 82.46 124 LR LR 05 04 27.2
comp=Z,1µm,18.0s,baz=272,slow=35
PPT2 Papeete2 82.47 124 *e*P P 04 28 29.7 +0.8
comp=Z,69nm,1.2s
PPT2 Papeete2 82.47 124 *e*S S 04 38 44.4 +0.5
comp=Z,891nm,32.5s
PPT2 Papeete2 82.47 124 *e*LR LR 04 54 17.0
comp=Z,2µm,22.2s,baz=320
PPT2 Papeete2 82.47 124 *e*T T 05 59 31.0
comp=Z,9.0nm,0.3s
KIJV Kijevo 82.48 329 *i* Pn P 04 28 29.6 +0.9
K56A Middlesex 82.49 34 P P 04 28 27.4 -1.4
baz=328,SNR=14
OUR Ouranopolis 82.53 322 P P 04 28 29.6 +0.7
PAE Paea 82.53 124 *e*T T 05 59 34.0
comp=Z,1.5nm,0.3s
I58A Old Forge 82.55 32 P P 04 28 27.3 -1.7
baz=329,SNR=5.6
M54A Oil Creek Stat 82.55 36 P P 04 28 28.1 -0.9
baz=327,SNR=14
M54A Oil Creek Stat 82.55 36 IAMs_20 IAMs_20 05 06 00.6
comp=Z,1µm,20.0s
NVLJ Novalja 82.55 330 *e*Pn P 04 28 28.8 -0.2
NKME Niksic 82.58 327 ⇓*i* P P 04 28 29.2 0.0
NCB Newcomb 82.58 31 IAmb IAmb 04 28 30.4
comp=Z,70nm,1.2s
TIAR Tiarei 82.58 124 *e*P P 04 28 29.9 +0.5
comp=Z,18nm,0.9s
TIAR Tiarei 82.58 124 *e*T T 05 59 38.6
comp=Z,2.9nm,0.2s
E64A Bridgewater 82.59 26 P P 04 28 27.7 -1.4
baz=334
H60A Morristown 82.62 30 P P 04 28 28.2 -1.2
baz=331,SNR=6.8
BRY Bratogost 82.62 327 *e*P P 04 28 28.9 -0.7
BRY Bratogost 82.62 327 *e*P P 04 28 28.6 -1.0
N53A Lisbon 82.64 37 P P 04 28 28.9 -0.6
RICI Ricice 82.65 328 *i* Pn P 04 28 29.7 +0.2
ELL Elmali 82.67 316 P P 04 28 30.2 +0.3
ELL pmax pmax
comp=Z,183nm,1.1s
ELL Elmali 82.67 316 P P 04 28 30.2 +0.3
TUE Stuetta 82.69 334 IAmb IAmb 04 28 35.6
comp=Z,52nm,0.8s
GRG Griva 82.69 323 P P 04 28 28.7 -1.2
HORT Hortiatis 82.69 323 P P 04 28 29.9 0.0
J58A Remsen 82.71 32 P P 04 28 28.6 -1.3
baz=329,SNR=18
J58A Remsen 82.71 32 IAmb IAmb 04 28 31.0
comp=Z,118nm,1.1s
PLG Polygyros 82.73 322 P P 04 28 28.8 -1.3
DRLN Deer Lake 82.73 18 IAmb IAmb 04 28 32.7
comp=Z,55nm,1.1s
PDG Podgorica 82.74 326 ⇑P P 04 28 29.9 -0.1
PDG Podgorica 82.74 326 *e*P P 04 28 28.8 -1.2
PDG Podgorica 82.74 326 P P 04 28 28.9 -1.1
PDG IAmb IAmb 04 28 36.1
comp=Z,100nm,1.1s
TTG Podgorica 82.74 326 *e*P P 04 28 30.6 +0.6
P51A Williamsport 82.75 39 P P 04 28 28.9 -1.3
baz=325,SNR=18
R49A Shelbyville 82.75 41 IAMs_20 IAMs_20 05 03 46.5
comp=Z,1µm,22.0s
CEME Cevo 82.78 326 ⇑*i* P P 04 28 30.3 0.0
O52A Adamsville 82.78 38 P P 04 28 29.3 -1.0
baz=326,SNR=19
O52A Adamsville 82.78 38 IAMs_20 IAMs_20 05 12 23.8
comp=Z,941nm,20.0s
K57A Scipio Center 82.78 33 P P 04 28 28.8 -1.5
baz=328
G62A West of Eustis 82.78 28 P P 04 28 29.8 -0.4
baz=332,SNR=23
VT1 Waterbury 82.80 30 IAmb IAmb 04 28 31.9
comp=Z,67nm,1.0s
TVO Taravao 82.82 124 *e*P P 04 28 31.3 +0.6
comp=Z,23nm,1.2s
F63A Nahmakanta, Br 82.83 27 P P 04 28 29.4 -1.1
baz=333
F63A Nahmakanta, Br 82.83 27 IAmb IAmb 04 28 32.1
comp=Z,86nm,1.3s
TREB Trebinje 82.85 327 *e*P P 04 28 28.7 -1.9
MORI Morici 82.86 329 *e*Pn P 04 28 31.1 +0.5
I59A Olmsteadville 82.86 31 P P 04 28 29.3 -1.4
baz=330,SNR=15
833A Chaparral WMA, 82.86 57 P P 04 28 30.3 -0.6
baz=318
N54A Moraine State 82.86 36 P P 04 28 30.0 -0.7
baz=326,SNR=18
N54A Moraine State 82.86 36 IAMs_20 IAMs_20 05 06 32.1
comp=Z,1µm,21.0s
MAKA Makarska 82.87 328 *e*Pn P 04 28 30.3 -0.4
L56A Greenwood 82.87 34 P P 04 28 29.6 -1.2
baz=328,SNR=14
L56A Greenwood 82.87 34 P P 04 28 30.0 -0.8
T47A Sharon Grove 82.88 43 IAMs_20 IAMs_20 05 05 33.8
comp=Z,891nm,20.0s
Z41A Richland Creek 82.88 49 P P 04 28 30.2 -0.7
baz=320
PHP Peshkopia 82.90 325 P P 04 28 31.3 +0.4
H61A Lyndonville 82.91 29 P P 04 28 29.8 -1.1
baz=331,SNR=26
J59A Piesco 82.91 32 P P 04 28 29.5 -1.5
baz=330,SNR=17
J59A Piesco 82.91 32 IAmb IAmb 04 28 32.0
comp=Z,66nm,0.9s
X43A Marvell 82.92 47 P P 04 28 30.2 -0.8
baz=321,SNR=7.5
F64A Sherman 82.92 27 P P 04 28 29.8 -1.1
baz=333,SNR=14
F64A Sherman 82.92 27 IAmb IAmb 04 28 32.4
comp=Z,68nm,1.1s
O53A New Philadelph 82.94 38 P P 04 28 30.2 -0.9
baz=326,SNR=19
O53A New Philadelph 82.94 38 IAmb IAmb 04 28 32.5
comp=Z,94nm,0.9s
TEOL Teolo 82.94 332 P P 04 28 30.8 -0.3
TEOL IAmb IAmb 04 28 36.4
comp=Z,124nm,1.3s
STON Ston 82.97 327 *e*P P 04 28 27.0 -4.2
STON Ston 82.97 327 *e*Pn P 04 28 31.4 +0.3
DRME Dracevica, Mon 82.98 326 ⇑*i*P P 04 28 31.8 +0.5
DRME Dracevica, Mon 82.98 326 ⇑*i*P P 04 28 30.3 -1.0
DUGI Dugi Otok 82.98 330 *e*Pn P 04 28 31.9 +0.6
BUM Brajici-Budva 82.99 326 ⇑*i*P P 04 28 31.6 +0.2
PAIG Paliouri 82.99 322 P P 04 28 31.3 -0.1
NATX Nacogdoches 83.01 51 P P 04 28 31.4 -0.2
baz=320,SNR=6.5
NATX Nacogdoches 83.01 51 IAmb IAmb 04 28 33.8
NATX IAMs_20 IAMs_20 05 03 38.9
comp=Z,153nm,1.4s
comp=Z,815nm,20.0s
HCY Herceg Novi 83.03 327 ⇑*i*P P 04 28 31.4 -0.1
HCY Herceg Novi 83.03 327 *e*P P 04 28 30.4 -1.1
I60A Shoreham 83.03 31 P P 04 28 30.3 -1.2
baz=330,SNR=10.0
P52A Corning 83.04 38 P P 04 28 30.3 -1.3
baz=325,SNR=15
P52A Corning 83.04 38 IAmb IAmb 04 28 32.7
comp=Z,144nm,1.4s
P52A IAMs_20 IAMs_20 05 07 44.9
comp=Z,1µm,22.0s
K58A Earlville 83.09 33 P P 04 28 30.7 -1.1
baz=329,SNR=17
K58A Earlville 83.09 33 IAmb IAmb 04 28 33.2
comp=Z,107nm,1.1s
H62A Milan 83.14 29 P P 04 28 31.4 -0.6
baz=332,SNR=36
ULC Ulcinj 83.14 326 ⇑*i*P P 04 28 32.3 +0.2
R50A Paris 83.15 41 IAmb IAmb 04 28 34.0
comp=Z,62nm,1.1s
PKME Peaks-Kenny Pk 83.15 27 P P 04 28 31.4 -0.7
baz=333,SNR=12
PKME Peaks-Kenny Pk 83.15 27 IAmb IAmb 04 28 34.0
comp=Z,67nm,1.1s
ABTO Aybut 83.17 288 P P 04 28 34.1 +1.4
ABTO SNR=9.3 P P 04 28 34.1 +1.4
SNR=9.3
LBNH Lisbon 83.17 30 P P 04 28 31.5 -0.8
baz=331,SNR=7.4
M56A Emporium 83.17 35 P P 04 28 31.3 -1.0
baz=328,SNR=14
G63A Kingsbury 83.18 28 P P 04 28 31.6 -0.7
baz=332,SNR=14
WVT Waverly 83.20 44 P P 04 28 31.6 -0.9
WVT pmax pmax
comp=Z,64nm,0.9s
WVT MLR MLR
comp=Z,1µm,19.0s
WVT Waverly 83.20 44 P P 04 28 31.7 -0.8
baz=323
WVT Waverly 83.20 44 P P 04 28 31.6 -0.9
WVT IAmb IAmb 04 28 34.2
comp=Z,64nm,0.9s
WVT Waverly 83.20 44 IAMs_20 IAMs_20 05 08 27.6
comp=Z,1µm,19.0s
AKAS Kas 83.23 316 IAMs_20 IAMs_20 05 10 45.9
comp=Z,830nm,20.0s
CLF Chambon-Foret 83.23 339 P P 04 28 32.8 +0.4
OHR Ohrid 83.23 324 *i* P P 04 28 33.3 +0.6
OHR Ohrid 83.23 324 P P 04 28 33.7 +1.0
OHR pmax pmax
comp=Z,87nm,1.0s
LDF La Druitiere 83.27 341 *e*P P 04 28 32.6 0.0
LDF pmax pmax
comp=Z,48nm,1.0s
L57A Andrews Acres 83.27 34 P P 04 28 31.6 -1.2
baz=328,SNR=11
ACCN Adirondack Com 83.29 31 IAmb IAmb 04 28 34.2
comp=Z,71nm,1.1s
W45A Hickory Valley 83.29 46 IAMs_20 IAMs_20 05 08 56.0
comp=Z,1µm,19.0s
G64A Maxfield 83.34 27 P P 04 28 32.3 -0.7
baz=333,SNR=17
I61A Oroboro, Fairl 83.34 30 P P 04 28 32.4 -0.7
baz=331,SNR=14
O54A Avella 83.35 37 P P 04 28 32.4 -0.8
baz=326,SNR=18
LSTV Lastovo 83.36 328 *e*Pn P 04 28 33.3 +0.1
K59A Cooperstown 83.38 32 P P 04 28 32.1 -1.2
baz=329,SNR=30
SENIN Lac Senin/Sane 83.40 336 P P 04 28 34.0 +0.3
SENIN IAmb IAmb 04 28 40.3
comp=Z,59nm,1.0s
TIR Tirane 83.41 325 ⇑P P 04 28 34.4 +0.8
TIR Tirane 83.41 325 P P 04 28 34.8 +1.3
TIR pmax pmax
comp=Z,119nm,0.8s
TIR Tirane 83.41 325 P P 04 28 33.9 +0.4
BINY Binghamton 83.44 33 P P 04 28 32.6 -1.1
baz=329,SNR=9.4
BINY Binghamton 83.44 33 IAmb IAmb 04 28 35.0
comp=Z,72nm,1.2s
H63A New Sharon 83.44 28 P P 04 28 32.6 -1.0
baz=332
P53A Whipple 83.49 38 P P 04 28 32.9 -1.0
baz=326,SNR=14
P53A Whipple 83.49 38 IAmb IAmb 04 28 35.5
comp=Z,113nm,1.4s
KZN Kozani 83.50 323 P P 04 28 33.9 -0.2
J60A Lant Hill Farm 83.50 31 P P 04 28 33.0 -1.0
baz=330,SNR=9.9
HNH Hanover 83.51 30 IAmb IAmb 04 28 35.8
comp=Z,46nm,0.9s
CABF La Chapelle 83.52 336 *e*P P 04 28 35.0 +0.9
CABF pmax pmax
comp=Z,51nm,1.1s
LOR Lormes 83.52 338 *e*P P 04 28 34.1 +0.1
LOR pmax pmax
comp=Z,146nm,1.4s
AOS Alonnisos 83.53 321 P P 04 28 35.0 +0.8
Q52A Bidwell 83.53 39 P P 04 28 33.1 -1.1
baz=325,SNR=10.0
NWAO Narrogin (SRO) 83.55 208 P P 04 28 34.8 +0.8
NWAO pmax pmax
comp=Z,40nm,1.0s
NWAO Narrogin (SRO) 83.55 208 P P 04 28 34.8 +0.8
NWAO IAmb IAmb 04 28 49.0
comp=Z,40nm,0.9s
MEH Mehetia 83.59 123 *e*P P 04 28 35.0 +0.4
comp=Z,15nm,0.9s
MEH Mehetia 83.59 123 *e*T T 06 00 53.6
comp=Z,17nm,0.3s
N56A West Decatur 83.60 35 P P 04 28 33.7 -0.8
baz=328,SNR=22
L58A Harry Jones Me 83.62 33 P P 04 28 33.6 -1.0
baz=329,SNR=16
GRR Gorron 83.63 342 *e*P P 04 28 34.8 +0.3
GRR pmax pmax
comp=Z,68nm,0.7s
OXF Oxford 83.68 46 P P 04 28 34.1 -0.9
baz=322,SNR=28
OXF Oxford 83.68 46 IAMs_20 IAMs_20 05 09 12.4
comp=Z,1µm,20.0s
I62A Tamworth 83.69 29 P P 04 28 33.8 -1.1
baz=332
I62A Tamworth 83.69 29 IAmb IAmb 04 28 36.9
comp=Z,66nm,1.4s
NEO Neokhori 83.70 322 P P 04 28 35.1 0.0
NEST Nestorio 83.71 324 P P 04 28 35.7 +0.5
HKT Hockley 83.72 53 *i* P P 04 28 35.4 +0.2
HKT pmax pmax
comp=Z,32nm,1.6s
HKT Hockley 83.72 53 P P 04 28 36.0 +0.8
M57A Sunshine Farm, 83.72 34 P P 04 28 34.4 -0.7
baz=328,SNR=29
J61A Chester 83.73 30 P P 04 28 34.2 -0.9
baz=331,SNR=14
H64A Troy 83.73 28 P P 04 28 34.2 -0.9
baz=333,SNR=15
O55A Ligonier 83.78 36 P P 04 28 34.4 -1.0
baz=327,SNR=15
P54A Burton 83.79 37 P P 04 28 34.6 -0.9
baz=326
I63A Otisfield 83.80 29 P P 04 28 35.1 -0.3
baz=332,SNR=25
L59A Walton 83.81 33 P P 04 28 34.6 -1.0
baz=329,SNR=24
SSF Saint Saulge 83.81 338 *e*P P 04 28 35.6 +0.1
SSF pmax pmax
comp=Z,36nm,0.7s
TRY Troy 83.86 31 IAmb IAmb 04 28 37.2
comp=Z,46nm,1.0s
RAYN Ar Rayn 83.86 297 *i* P P 04 28 36.7 +0.6
SNR=9.0
RAYN Ar Rayn 83.86 297 P P 04 28 35.8 -0.4
RAYN pmax pmax
comp=Z,63nm,1.2s
RAYN MLR MLR
comp=Z,1µm,21.0s
RAYN Ar Rayn 83.86 297 P P 04 28 35.8 -0.4
RAYN IAmb IAmb 04 28 39.3
comp=Z,63nm,1.2s
RAYN IAMs_20 IAMs_20 05 10 25.0
comp=Z,1µm,21.0s
K60A Five Rivers En 83.87 32 P P 04 28 34.7 -1.1
baz=330,SNR=10
FFD Franklin Falls 83.94 30 P P 04 28 36.3 +0.2
FFD IAmb IAmb 04 28 38.2
comp=Z,66nm,0.9s
Q53A Leroy 83.95 39 P P 04 28 35.7 -0.6
baz=326,SNR=40
M58A Price's Panora 83.96 34 P P 04 28 35.3 -1.1
baz=328,SNR=16
KPRO Kipourio 83.96 323 P P 04 28 37.7 +1.2
CLTN Cedars of Leba 83.97 43 IAMs_20 IAMs_20 05 04 15.7
comp=Z,964nm,21.0s
PLAL Pickwick Lake 83.99 45 IAmb IAmb 04 28 37.7
comp=Z,112nm,1.4s
H65A Eastbrook 84.00 27 P P 04 28 35.2 -1.2
baz=333
V48A Smith Brothers 84.01 44 IAmb IAmb 04 28 38.1
comp=Z,65nm,0.8s
V48A IAMs_20 IAMs_20 05 05 10.8
comp=Z,955nm,21.0s
LMN Caledonia Moun 84.01 24 IAmb IAmb 04 28 38.3
comp=Z,86nm,1.1s
MCWV Mont Chateau 84.01 37 P P 04 28 36.2 -0.4
baz=327,SNR=5.4
MCWV Mont Chateau 84.01 37 IAmb IAmb 04 28 38.2
comp=Z,34nm,0.8s
S51A Beattyville 84.01 41 IAmb IAmb 04 28 38.1
comp=Z,73nm,0.8s
O56A Blue Knob Stat 84.04 36 P P 04 28 36.0 -0.8
baz=327,SNR=21
O56A Blue Knob Stat 84.04 36 IAmb IAmb 04 28 38.4
comp=Z,71nm,0.8s
O56A IAMs_20 IAMs_20 05 07 07.1
comp=Z,1µm,22.0s
N57A Milroy 84.04 35 P P 04 28 35.9 -0.9
baz=328,SNR=31
143A Socs Landing, 84.05 49 IAmb IAmb 04 28 39.1
comp=Z,65nm,1.2s
143A IAMs_20 IAMs_20 05 10 08.4
comp=Z,1µm,19.0s
K61A Williamstown 84.06 31 P P 04 28 35.9 -1.0
baz=330,SNR=18
GGN Saint George 84.06 26 P P 04 28 36.7 -0.1
GGN IAmb IAmb 04 28 38.4
comp=Z,93nm,1.1s
ZCCA Zocca 84.06 332 P P 04 28 38.0 +1.1
KSPA Keystone Colle 84.07 33 IAmb IAmb 04 28 38.1
comp=Z,119nm,1.4s
J62A Henniker 84.09 30 P P 04 28 36.3 -0.6
baz=331,SNR=14
AVF Avril sur Loir 84.10 338 *e*P P 04 28 36.4 -0.5
AVF pmax pmax
comp=Z,171nm,1.3s
SMF Signal de Mont 84.10 338 *e*P P 04 28 37.3 +0.3
SMF pmax pmax
comp=Z,168nm,1.1s
LSK Leskovik 84.12 324 P P 04 28 38.5 +1.2
P55A Reedsville 84.14 37 P P 04 28 37.0 -0.4
baz=327,SNR=38
Q54A Coxs Mills 84.15 38 P P 04 28 36.7 -0.7
baz=326,SNR=21
R53A Hurricane 84.19 39 P P 04 28 36.8 -0.7
baz=326,SNR=10
H66A Whiting 84.21 26 P P 04 28 36.4 -1.1
baz=334,SNR=11
M59A Waymart 84.21 33 P P 04 28 36.4 -1.2
baz=329,SNR=16
I64A Boothbay 84.23 28 P P 04 28 37.0 -0.6
baz=332,SNR=7.8
EMMW East Machias 84.24 26 IAmb IAmb 04 28 40.0
comp=Z,93nm,1.1s

L60A	**Shokan**	84.29	32	P	P	04 28 37.0	-1.0		
	baz=330,SNR=14								
ATAL	**Atalanti**	84.30	322	P	P	04 28 36.5	-1.6		
J63A	**Strafford**	84.31	29	P	P	04 28 37.4	-0.6		
	baz=332,SNR=13								
N58A	**Sunbury**	84.31	34	P	P	04 28 37.1	-1.0		
	baz=328,SNR=21								
AGG	**Agios Georgios**	84.33	322	P	P	04 28 37.8	-0.5		
AGG				MLR	MLR				
	comp=Z,2µm,20.0s								
AGG	**Agios Georgios**	84.33	322	P	P	04 28 37.8	-0.5		
AGG	**Agios Georgios**	84.33	322	P	P	04 28 37.9	-0.4		
LPL	**La Plagne**	84.33	336	eP	P	04 28 39.1	+0.7		
LPL				pmax	pmax				
	comp=Z,53nm,0.9s								
LKR	**Lokris**	84.34	322	P	P	04 28 38.2	-0.1		
LPG	**La Plagne**	84.34	336	eP	P	04 28 39.3	+0.7		
LPG				pmax	pmax				
	comp=Z,48nm,0.8s								
L61A	**Hillsdale 1, H**	84.36	32	P	P	04 28 37.3	-1.0		
	baz=330,SNR=13								
VLC	**Villacollemand**	84.43	333	IAmb	IAmb	04 28 45.8			
	comp=Z,49nm,0.9s								
JAN	**Janina**	84.43	324	P	P	04 28 39.3	+0.5		
K62A	**Royalston**	84.44	31	P	P	04 28 37.8	-1.0		
	baz=331								
BGF	**Bois d'Agland**	84.45	339	eP	P	04 28 39.5	+0.8		
BGF				pmax	pmax				
	comp=Z,166nm,1.5s								
L61B	**Northampton**	84.46	31	P	P	04 28 37.6	-1.3		
	baz=331,SNR=6.8								
Q55A	**Buckhannon**	84.46	38	P	P	04 28 38.5	-0.5		
	baz=327,SNR=14								
O57A	**Amberson**	84.47	35	P	P	04 28 38.3	-0.7		
	baz=328,SNR=28								
P56A	**Dayton Farm, R**	84.57	36	P	P	04 28 38.9	-0.5		
	baz=327,SNR=43								
QUIF	**Quistinic**	84.57	343	eP	P	04 28 40.2	+0.9		
QUIF				pmax	pmax				
	comp=Z,48nm,0.9s								
VILL	**Villia**	84.61	321	P	P	04 28 39.1	-0.6		
N59A	**State Game Lan**	84.62	34	P	P	04 28 39.1	-0.6		
	baz=329,SNR=23								
S53A	**Williamson**	84.65	40	P	P	04 28 39.0	-1.0		
	baz=326								
K63A	**Dunstable**	84.67	30	P	P	04 28 39.4	-0.5		
	baz=331,SNR=12								
M60A	**Port Jervis**	84.71	33	P	P	04 28 39.1	-1.0		
	baz=330,SNR=15								
OSSC	**Osservatorio P**	84.71	332	IAmb	IAmb	04 28 46.3			
	comp=Z,52nm,1.1s								
QUA2	**Belchertown**	84.73	31	IAmb	IAmb	04 28 41.7			
	comp=Z,45nm,1.1s								
R54A	**Victor**	84.74	39	P	P	04 28 39.6	-0.8		
	baz=326,SNR=25								
IGT	**Igoumenitsa**	84.75	324	P	P	04 28 42.1	+1.7		
IGT				pmax	pmax				
	comp=Z,75nm,1.6s								
IGT	**Igoumenitsa**	84.75	324	P	P	04 28 40.8	+0.4		
KSCT	**Kent School, K**	84.79	32	IAmb	IAmb	04 28 42.0			
	comp=Z,56nm,1.3s								
Q56A	**Snyder Ridge,**	84.81	37	P	P	04 28 39.7	-1.0		
	baz=327,SNR=15								
Q56A	**Snyder Ridge,**	84.81	37	IAmb	IAmb	04 28 42.5			
	comp=Z,81nm,1.0s								
Q56A				IAMs_20	IAMs_20	05 12 49.5			
	comp=Z,1µm,18.0s								
HRV	**Adam Dziewonsk**	84.81	30	P	P	04 28 40.5	-0.1		
HRV				pmax	pmax				
	comp=Z,87nm,1.0s								
HRV	**Adam Dziewonsk**	84.81	30	P	P	04 28 39.8	-0.8		
	baz=331								
HRV	**Adam Dziewonsk**	84.81	30	P	P	04 28 40.5	-0.1		
HRV				IAmb	IAmb	04 28 42.6			
	comp=Z,87nm,1.0s								
KEK	**Kerkira**	84.82	324	P	P	04 28 41.2	+0.5		
L62A	**Suffield**	84.83	31	P	P	04 28 39.8	-0.9		
	baz=331								
O58A	**Lewisberry**	84.83	35	P	P	04 28 39.8	-1.0		
	baz=328,SNR=27								
TCF	**Toulx Ste Croi**	84.86	339	eP	P	04 28 41.4	+0.6		
TCF				pmax	pmax				
	comp=Z,83nm,1.2s								
SWET	**Sewanee**	84.86	44	IAMs_20	IAMs_20	05 03 32.4			
	comp=Z,1µm,22.0s								
VBMS	**Vicksburg**	84.90	48	P	P	04 28 41.0	-0.2		
	baz=322,SNR=9.6								
S54A	**Dingess, Beckl**	84.91	39	P	P	04 28 40.3	-1.0		
	baz=326,SNR=16								
N60A	**Cedar Hill Far**	84.92	33	P	P	04 28 40.0	-1.2		
	baz=329,SNR=8.9								
X48A	**Hartselle**	84.92	45	IAmb	IAmb	04 28 42.3			
	comp=Z,41nm,0.9s								
X48A				IAMs_20	IAMs_20	05 03 39.1			
	comp=Z,810nm,20.0s								
TZTN	**Tazewell**	84.92	41	P	P	04 28 40.8	-0.6		
	baz=325,SNR=23								
ODNJ	**Ogdensburg**	84.93	33	IAmb	IAmb	04 28 42.5			
	comp=Z,50nm,1.0s								
P57A	**Homestead Farm**	84.93	36	P	P	04 28 40.6	-0.6		
	baz=328,SNR=14								
P57A	**Homestead Farm**	84.93	36	IAmb	IAmb	04 28 43.0			
	comp=Z,82nm,1.1s								
KALE	**Kalithea**	84.94	322	P	P	04 28 40.9	-0.5		
KARP	**Karpathos**	84.96	317	P	P	04 28 41.8	+0.3		
O59A	**Robesonia**	84.97	34	P	P	04 28 40.6	-0.9		
	baz=329								
ZAIG	**Zacatecas**	85.00	63	P	P	04 28 42.2	-0.1		
ZAIG				IAMs_20	IAMs_20	05 00 47.6			
	comp=Z,835nm,20.0s								
AQU	**L'Aquila**	85.00	330	P	P	04 28 43.6	+1.9		
AQU				pmax	pmax				
	comp=Z,143nm,1.1s								
AQU	**L'Aquila**	85.00	330	eP	P	04 28 40.3	-1.4		
T53A	**Wise**	85.03	40	P	P	04 28 41.3	-0.7		
	baz=325,SNR=19								
MBDF	**Montbardon**	85.04	335	eP	P	04 28 43.3	+1.4		
MBDF				pmax	pmax				
	comp=Z,33nm,0.9s								
R55A	**Marlinton**	85.04	38	P	P	04 28 41.2	-0.7		
	baz=327,SNR=37								
LUPA	**Lehigh Univers**	85.05	34	IAMs_20	IAMs_20	05 08 23.6			
	comp=Z,1µm,20.0s								
M61A	**Granite Spring**	85.05	32	P	P	04 28 40.7	-1.2		
	baz=330,SNR=13								
SCTE	**Santa Cesarea**	85.06	325	P	P	04 28 42.9	+1.0		
BCX	**Boston College**	85.10	30	P	P	04 28 42.5	+0.4		
BCX				IAmb	IAmb	04 28 43.8			
	comp=Z,74nm,0.9s								
INTR	**Introdacqua**	85.12	329	IAmb	IAmb	04 28 49.2			
	comp=Z,62nm,0.9s								
ORIF	**Oris-en-Rattie**	85.12	336	eP	P	04 28 43.0	+0.7		
ORIF				pmax	pmax				
	comp=Z,30nm,0.7s								
Q57A	**Strasburg**	85.14	36	P	P	04 28 41.3	-1.1		
	baz=328,SNR=9.9								
MVL	**Millersville**	85.17	35	IAmb	IAmb	04 28 44.1			
	comp=Z,60nm,0.8s								
SSB	**Saint Sauveur**	85.17	337	IAmb	IAmb	04 28 45.4			
	comp=Z,109nm,1.4s								
W50A	**Signal Mountai**	85.17	43	IAmb	IAmb	04 28 44.1			
	comp=Z,50nm,0.8s								
P58A	**Pank, Wackersv**	85.22	35	P	P	04 28 42.0	-0.7		
	baz=328,SNR=32								
KLV	**Kalavryta, Ach**	85.22	322	P	P	04 28 42.0	-0.8		
GUR	**Goura**	85.22	322	P	P	04 28 42.1	-0.8		
R56A	**Bull Pasture M**	85.24	37	P	P	04 28 42.0	-1.0		
	baz=327,SNR=12								
MATE	**Matera**	85.26	327	⇑P	P	04 28 43.6	+0.8		
PAL	**Palisades**	85.26	32	P	P	04 28 42.1	-0.7		
	baz=330,SNR=11								
M62A	**Hamden**	85.26	32	P	P	04 28 41.8	-1.0		
	baz=331								
O60A	**Telford**	85.27	34	P	P	04 28 42.1	-0.8		
	baz=329,SNR=9.0								
NYDR	**Nydri-Lefkada**	85.28	323	P	P	04 28 42.0	-1.0		
BRNJ	**Basking Ridge**	85.29	33	P	P	04 28 42.7	-0.3		
S55A	**Lewisburg**	85.30	38	P	P	04 28 42.2	-1.0		
	baz=326,SNR=9.3								
LATE	**Laterza**	85.33	331	P	P	04 28 43.1	-0.1		
LATE				IAmb	IAmb	04 28 50.3			
	comp=Z,53nm,1.3s								
N61A	**South Mountain**	85.33	33	P	P	04 28 42.6	-0.7		
	baz=330,SNR=8.7								
WSPT	**Westport, CT**	85.33	32	IAmb	IAmb	04 28 44.5			
	comp=Z,60nm,1.0s								
GBN	**Guysborough**	85.34	22	IAmb	IAmb	04 28 45.8			
	comp=Z,66nm,1.1s								
CPCT	**Cooper Cave**	85.35	42	P	P	04 28 42.4	-1.1		
CPCT				IAmb	IAmb	04 28 45.0			
	comp=Z,78nm,0.9s								
CPCT				IAMs_20	IAMs_20	05 06 21.4			
	comp=Z,928nm,20.0s								
L63A	**North Scituate**	85.36	30	P	P	04 28 42.6	-0.8		
	baz=331,SNR=9.6								
Z47A	**Carrollton**	85.40	46	IAMs_20	IAMs_20	05 09 54.9			
	comp=Z,1µm,19.0s								
T54A	**Tazewell**	85.41	40	P	P	04 28 43.1	-0.7		
	baz=326,SNR=35								
HAL	**Halifax**	85.47	24	IAMs_20	IAMs_20	05 08 26.2			
	comp=Z,1µm,20.0s								
P59A	**Jarrettsville**	85.47	35	P	P	04 28 43.0	-1.0		
	baz=329,SNR=19								
SDMD	**Soldier's Deli**	85.47	35	IAmb	IAmb	04 28 45.6			
	comp=Z,47nm,1.1s								
N62A	**Caumsett State**	85.49	32	P	P	04 28 43.1	-0.9		
	baz=330								
Q58A	**Fox Den Farm,**	85.52	36	P	P	04 28 43.5	-0.8		
	baz=328,SNR=19								
WUPA	**West Chester U**	85.52	34	IAmb	IAmb	04 28 46.9			
	comp=Z,46nm,1.2s								
WUPA				IAMs_20	IAMs_20	05 06 55.3			
	comp=Z,710nm,20.0s								
VIVF	**Saint-Julien-l**	85.53	337	eP	P	04 28 46.1	+1.9		
VIVF				pmax	pmax				
	comp=Z,51nm,1.0s								
EIL	**Elat**	85.54	308	P	P	04 28 45.2	+0.7		
	comp=Z,22nm,0.6s,baz=34,slow=1.9,SNR=28								
FPAL	**Fort Paine**	85.56	44	IAmb	IAmb	04 28 45.9			
	comp=Z,59nm,0.9s								
FPAL				IAMs_20	IAMs_20	05 05 57.9			
	comp=Z,968nm,21.0s								
L64A	**Middleborough**	85.57	30	P	P	04 28 43.8	-0.5		
	baz=332,SNR=14								
PSUB	**Penn St. - Bra**	85.59	34	IAmb	IAmb	04 28 45.9			
	comp=Z,53nm,0.8s								
PSUB				IAMs_20	IAMs_20	05 09 59.0			
	comp=Z,1µm,19.0s								
M63A	**Gales Ferry**	85.61	31	P	P	04 28 43.6	-1.0		
	baz=331,SNR=10								
P60A	**Greenville**	85.61	34	P	P	04 28 43.8	-0.9		
	baz=329,SNR=13								
SBF	**Sospel**	85.62	334	eP	P	04 28 45.2	+0.4		
SBF				pmax	pmax				
	comp=Z,80nm,1.0s								
VLX	**Vlachokerasia**	85.68	321	P	P	04 28 44.6	-0.6		
Y49A	**Blount Mountai**	85.71	45	IAmb	IAmb	04 28 46.5			
	comp=Z,47nm,0.9s								
R57A	**Stanardsville**	85.71	37	P	P	04 28 44.7	-0.5		
	baz=328,SNR=21								
T55A	**Pulaski**	85.71	39	P	P	04 28 44.6	-0.7		
	baz=326,SNR=28								
PAOL	**Paolisi**	85.73	328	P	P	04 28 44.6	-0.7		
U54A	**Nelsons Funny**	85.74	40	P	P	04 28 44.8	-0.7		
	baz=326,SNR=17								
U54A	**Nelsons Funny**	85.74	40	IAmb	IAmb	04 28 47.1			
	comp=Z,76nm,1.0s								
STIA	**Sitia Lasithi**	85.75	318	P	P	04 28 46.2	+0.8		
ZKR	**Zakros**	85.77	318	P	P	04 28 46.3	+0.8		
S56A	**Natural Bridge**	85.78	38	P	P	04 28 44.9	-0.7		
	baz=327,SNR=7.4								
BLA	**Blacksburg**	85.80	39	P	P	04 28 44.9	-0.8		
	baz=326,SNR=26								
O61A	**Allentown**	85.80	33	P	P	04 28 44.7	-0.9		
	baz=330,SNR=8.0								
X51A	**Calhoun**	85.91	43	IAMs_20	IAMs_20	05 05 04.1			
	comp=Z,875nm,22.0s								
W52A	**Murphy**	85.92	42	IAMs_20	IAMs_20	05 07 01.5			
	comp=Z,1µm,20.0s								
R58A	**Rapidan**	85.93	37	P	P	04 28 45.6	-0.6		
	baz=328,SNR=14								
RJF	**Les Rejaudoux**	85.95	339	eP	P	04 28 47.0	+0.7		
RJF				pmax	pmax				
	comp=Z,60nm,1.1s								
S57A	**Dark Hollow, R**	85.98	37	P	P	04 28 46.0	-0.5		
	baz=327,SNR=18								
S57A	**Dark Hollow, R**	85.98	37	IAmb	IAmb	04 28 48.5			
	comp=Z,52nm,0.9s								
V53A	**Saluda**	85.98	41	IAmb	IAmb	04 28 48.4			
	comp=Z,53nm,1.1s								
V53A				IAMs_20	IAMs_20	05 07 48.9			
	comp=Z,994nm,21.0s								
Q59A	**Harwood**	86.01	35	P	P	04 28 46.2	-0.5		
	baz=328,SNR=6.3								
ITM	**Ithomi**	86.04	322	IAmb	IAmb	04 28 52.5			
	comp=Z,67nm,0.9s								
ITM	**Ithomi**	86.04	322	P	P	04 28 45.9	-1.0		
P61A	**Hammonton**	86.07	34	P	P	04 28 46.0	-0.9		
	baz=330								
LRAL	**Lakeview Retre**	86.08	46	P	P	04 28 45.9	-1.2		
	baz=323,SNR=11								
LAST	**Lasithi**	86.08	318	P	P	04 28 46.5	-0.7		
346A	**Big Creek Wild**	86.10	48	IAmb	IAmb	04 29 04.2			
	comp=Z,73nm,0.9s								
RCRC	**Randolf Colleg**	86.12	38	P	P	04 28 46.7	-0.5		
T56A	**Rocky Mt**	86.12	39	P	P	04 28 46.3	-1.0		
	baz=327,SNR=8.4								
FRF	**La Foret Royal**	86.14	335	eP	P	04 28 47.8	+0.6		
FRF				pmax	pmax				
	comp=Z,56nm,1.2s								
CAF	**Calviac**	86.17	338	eP	P	04 28 47.6	+0.2		
CAF				pmax	pmax				
	comp=Z,95nm,1.2s								
Q60A	**Greensboro**	86.22	35	P	P	04 28 46.8	-0.9		
	baz=329								
IDI	**Anoyia**	86.25	319	P	P	04 28 47.6	-0.5		
	comp=Z,22nm,0.5s,baz=39,slow=11,SNR=25								
IDI	**Anoyia**	86.25	319	P	P	04 28 47.7	-0.3		
IDI				IAmb	IAmb	04 29 02.4			
	comp=Z,35nm,0.9s								
IDI	**Anoyia**	86.25	319	P	P	04 28 47.5	-0.5		
R58B	**Mineral**	86.27	37	P	P	04 28 47.0	-0.9		
	baz=328,SNR=15								
R58B	**Mineral**	86.27	37	IAmb	IAmb	04 28 49.7			
	comp=Z,43nm,0.9s								
CBN	**Corbin Frederi**	86.28	36	P	P	04 28 47.2	-0.8		
	baz=328,SNR=14								
V54A	**Nebo**	86.29	41	P	P	04 28 47.2	-1.0		
	baz=326,SNR=11								
PGF	**Pioggiola**	86.32	333	eP	P	04 28 48.1	-0.2		
PGF				pmax	pmax				
	comp=Z,81nm,1.3s								
SOCY	**Socotra**	86.34	283	P	P	04 28 47.7	-1.1		
SOCY				IAmb	IAmb	04 28 49.9			
	comp=Z,87nm,1.0s								
SOCY				IAMs_20	IAMs_20	05 10 51.6			
	comp=Z,767nm,20.0s								
LMR	**La Mourre**	86.39	335	eP	P	04 28 48.7	+0.3		
LMR				pmax	pmax				
	comp=Z,116nm,1.2s								
R59A	**King George, V**	86.39	36	P	P	04 28 47.7	-0.8		
	baz=328,SNR=8.5								
BG3	**Lake Jocassee**	86.48	42	IAmb	IAmb	04 28 51.1			
	comp=Z,70nm,0.9s								
BG3				IAMs_20	IAMs_20	05 07 52.1			
	comp=Z,810nm,20.0s								
T57A	**Hurt**	86.49	38	P	P	04 28 48.1	-1.0		
	baz=327,SNR=19								
T57A	**Hurt**	86.49	38	IAmb	IAmb	04 28 50.6			
	comp=Z,51nm,0.8s								
S58A	**Poland Farm, P**	86.49	37	P	P	04 28 48.2	-0.8		
	baz=328,SNR=13								
S58A	**Poland Farm, P**	86.49	37	IAmb	IAmb	04 28 50.5			
	comp=Z,47nm,0.8s								
TIP	**Timpagrande**	86.50	326	⇑P	P	04 28 49.2	+0.1		
TIP	**Timpagrande**	86.50	326	IAmb	IAmb	04 28 55.8			
	comp=Z,132nm,1.6s								
U56A	**King**	86.53	39	P	P	04 28 48.4	-0.9		
	baz=326,SNR=11								
U56A	**King**	86.53	39	IAmb	IAmb	04 28 51.1			
	comp=Z,61nm,0.9s								
U56A				IAMs_20	IAMs_20	05 09 10.3			
	comp=Z,710nm,20.0s								
IMMV	**Iera Moni Meta**	86.53	319	P	P	04 28 50.2	+0.9		
R60A	**Leonardtown, M**	86.55	36	P	P	04 28 48.2	-1.1		
	baz=329								
V55A	**Taylorsville**	86.57	40	P	P	04 28 48.7	-0.8		
	baz=326,SNR=9.4								
V55A	**Taylorsville**	86.57	40	IAmb	IAmb	04 28 51.1			
	comp=Z,57nm,1.2s								
S59A	**Mechanicsville**	86.68	36	P	P	04 28 49.3	-0.7		
	baz=328,SNR=17								
W54A	**Cherokee Point**	86.75	41	P	P	04 28 49.7	-0.7		
	baz=326,SNR=14								
Z51A	**Franklin**	86.76	44	IAmb	IAmb	04 28 51.7			
	comp=Z,68nm,0.8s								
Z51A				IAMs_20	IAMs_20	05 07 19.7			
	comp=Z,888nm,21.0s								
T58A	**Grand View Acr**	86.84	38	P	P	04 28 49.9	-0.9		
	baz=328,SNR=18								
Y52A	**Lilburn**	86.86	43	IAmb	IAmb	04 28 52.8			
	comp=Z,64nm,1.0s								
Y52A				IAMs_20	IAMs_20	05 05 21.3			
	comp=Z,932nm,22.0s								
U57A	**Blanch**	86.92	38	P	P	04 28 50.5	-0.7		
	baz=327,SNR=19								
V56A	**Mocksville**	86.93	40	P	P	04 28 50.5	-0.7		
	baz=326,SNR=20								
S60A	**Water View**	87.00	36	P	P	04 28 50.8	-0.7		
	baz=329								
TBI	**Tubuai**	87.07	128	eS	S	04 39 29.5	+0.3		
	comp=Z,270nm,27.5s								
TBI	**Tubuai**	87.07	128	eLR	LR	04 56 17.2			
	comp=Z,2µm,23.0s,baz=321								
TBI	**Tubuai**	87.07	128	eT	T	06 05 14.2			
	comp=Z,9.2nm,0.3s								
KMSC	**Kings Mountain**	87.10	41	P	P	04 28 51.2	-0.9		
	baz=326,SNR=14								
KMSC	**Kings Mountain**	87.10	41	P	P	04 28 51.1	-1.0		
KMSC				IAmb	IAmb	04 28 53.7			
	comp=Z,96nm,1.1s								
X54A	**Belton**	87.11	42	P	P	04 28 51.7	-0.4		
	baz=326,SNR=20								
PAULI	**Pauline**	87.14	41	IAMs_20	IAMs_20	05 10 50.6			
	comp=Z,1µm,20.0s								
V57A	**Coltrane Farms**	87.19	39	P	P	04 28 51.8	-0.7		
	baz=327,SNR=18								
DGAR	**Diego Garcia**	87.20	257	ceP	P	04 28 55.3	+2.5		
DGAR				pmax	pmax				
	comp=Z,306nm,2.5s								
T59A	**Double "B" Far**	87.24	37	P	P	04 28 52.0	-0.7		
	baz=328,SNR=15								
T59A	**Double "B" Far**	87.24	37	IAmb	IAmb	04 28 54.7			
	comp=Z,83nm,1.1s								
U58A	**Oxford**	87.30	38	P	P	04 28 52.2	-0.8		
	baz=328,SNR=24								
S61A	**Accomac**	87.42	35	P	P	04 28 52.7	-0.9		
	baz=329								
W56A	**Indian Trail**	87.45	40	P	P	04 28 52.7	-1.1		
	baz=326,SNR=18								
152A	**Waverly Hall**	87.51	44	IAmb	IAmb	04 28 55.5			
	comp=Z,69nm,1.1s								
152A				IAMs_20	IAMs_20	05 05 02.5			
	comp=Z,1µm,21.0s								
GOGA	**Godfrey**	87.52	43	P	P	04 28 53.4	-0.7		
	baz=325,SNR=18								
GOGA	**Godfrey**	87.52	43	IAMs_20	IAMs_20	05 05 53.6			
	comp=Z,970nm,22.0s								
X55A	**Gracelyn & Ava**	87.52	41	P	P	04 28 53.4	-0.7		
	baz=326,SNR=18								
BRAL	**Brewton**	87.53	47	P	P	04 28 53.9	-0.3		
	baz=323,SNR=6.7								
V58A	**Windy Hill, Pi**	87.56	39	P	P	04 28 53.6	-0.7		
	baz=327,SNR=18								
V58A	**Windy Hill, Pi**	87.56	39	IAMs_20	IAMs_20	05 13 24.4			
	comp=Z,1µm,19.0s								
MTLF	**Montolieu**	87.60	338	eP	P	04 28 55.2	+0.9		
MTLF				pmax	pmax				
	comp=Z,46nm,1.1s								
U59A	**Littleton**	87.66	37	P	P	04 28 54.0	-0.7		
	baz=328,SNR=13								
U59A	**Littleton**	87.66	37	IAmb	IAmb	04 28 56.7			
	comp=Z,67nm,1.1s								
U59A				IAMs_20	IAMs_20	05 09 10.2			
	comp=Z,731nm,21.0s								
W57A	**Gilead**	87.70	40	P	P	04 28 54.2	-0.8		
	baz=327,SNR=14								
X56A	**White Oak**	87.78	41	P	P	04 28 54.5	-0.9		
	baz=326,SNR=21								
U60A	**Pendleton**	87.83	37	P	P	04 28 54.8	-0.8		
	baz=328,SNR=6.7								
JSC	**Jenkinsville**	87.84	41	IAmb	IAmb	04 28 57.4			
	comp=Z,34nm,1.1s								
BIRD	**Birdtown, Kers**	87.91	40	P	P	04 28 55.0	-1.0		
BIRD				IAMs_20	IAMs_20	05 13 04.9			
	comp=Z,1µm,20.0s								
V59A	**Middlesex**	87.97	38	P	P	04 28 55.5	-0.7		
	baz=328,SNR=18								
W58A	**Raeford**	88.15	39	P	P	04 28 56.1	-1.0		
	baz=327,SNR=20								
X57A	**Johnson Farm,**	88.23	40	P	P	04 28 57.0	-0.5		
	baz=327,SNR=14								
Y56A	**Pelion**	88.23	41	P	P	04 28 57.0	-0.5		
	baz=326								
U61A	**Possum Corner**	88.25	37	P	P	04 28 56.8	-0.7		
	baz=329								
154A	**Montrose**	88.34	43	IAMs_20	IAMs_20	05 06 28.5			
	comp=Z,749nm,22.0s								
W59A	**Clinton**	88.38	39	P	P	04 28 57.5	-0.7		
	baz=328,SNR=6.8								
V60A	**Jim Taylor Roa**	88.39	37	P	P	04 28 57.3	-0.9		
	baz=328,SNR=7.8								
V60A	**Jim Taylor Roa**	88.39	37	IAmb	IAmb	04 28 59.9			
	comp=Z,54nm,0.9s								
V60A				IAMs_20	IAMs_20	05 08 45.3			
	comp=Z,819nm,21.0s								
Y57A	**Sumter**	88.46	40	P	P	04 28 58.0	-0.6		
	baz=327,SNR=6.6								
X58A	**Rowland**	88.49	39	P	P	04 28 58.2	-0.6		
	baz=327,SNR=8.9								
X58A	**Rowland**	88.49	39	IAMs_20	IAMs_20	05 14 11.3			
	comp=Z,897nm,20.0s								
CNNC	**Cliffs of the**	88.56	38	P	P	04 28 58.6	-0.4		
	baz=328,SNR=

POLO	Lamas de Olo	91.78	344	*e*P		P		04 29 13.7	-0.4
MVO	Moncorvo	91.83	344	*e*P		P		04 29 13.8	-0.5
	comp=Z,59nm,1.4s								
MVO	Moncorvo	91.83	344	*e*LR		LR		05 13 31.6	
	comp=Z,1μm,20.0s								
KEST	Kesra	92.32	330	P		P		04 29 17.2	+0.6
	comp=Z,21nm,1.0s,baz=2.5,slow=2.2,SNR=9.9								
KEST				LR		LR		05 15 50.1	
	comp=Z,1μm,18.6s,baz=339,slow=39								
KEST	Kesra	92.32	330	IAmb		IAmb		04 29 19.2	
	comp=Z,38nm,1.1s								
PVIS	Viseu	92.44	344	*e*P		P		04 29 16.9	-0.2
	comp=Z,62nm,1.8s								
ESDC	Sonseca Array	92.60	341	P		P		04 29 17.6	-0.2
	comp=Z,5.2nm,0.9s,baz=7.3,slow=4.0,SNR=16								
ESDC				LR		LR		05 14 17.2	
	comp=Z,694nm,21.6s,baz=20,slow=38								
ESDC	Sonseca Array	92.60	341	P		P		04 29 16.7	-1.1
MTE	Manteigas	92.67	344	*e*P		P		04 29 18.3	+0.1
	comp=Z,64nm,1.3s								
MTE	Manteigas	92.67	344	*e*LR		LR		05 15 02.3	
	comp=Z,1μm,20.0s								
COI	Coimbra	93.03	344	*e*P		P		04 29 15.4	-4.3
	comp=Z,115nm,1.6s								
PMRV	Marv??o	93.58	343	*e*LR		LR		05 13 47.6	
	comp=Z,1μm,20.0s								
060A	Indiantown	94.28	44	IAMs_20		IAMs_20		05 11 17.7	
	comp=Z,819nm,21.0s								
ATD	Arta Tunnel	94.34	291	IAMs_20		IAMs_20		05 17 39.3	
	comp=Z,720nm,18.0s								
061Z	Ochoppi	94.97	45	IAMs_20		IAMs_20		05 20 01.3	
	comp=Z,757nm,20.0s								
PVAQ	Vaqueiros	95.60	343	*e*LR		LR		05 13 19.8	
	comp=Z,688nm,18.0s								
GTBY	Guantanamo Bay	102.83	44	IAMs_20		IAMs_20		05 24 21.4	
	comp=Z,642nm,20.0s								
TAM	Tamanrasset	105.41	327	IAMs_20		IAMs_20		05 26 52.5	
	comp=Z,752nm,19.0s								
SDDR	Presa de Saban	105.47	41	IAMs_20		IAMs_20		05 26 55.2	
	comp=Z,652nm,20.0s								
KMBO	Kilima Mbogo	107.37	286	IAMs_20		IAMs_20		05 26 26.1	
	comp=Z,652nm,18.0s								
SJG	San Juan	108.54	37	IAMs_20		IAMs_20		05 28 45.2	
	comp=Z,537nm,20.0s								
BCIP	Isla Barro Col	109.23	54	IAMs_20		IAMs_20		05 30 50.9	
	comp=Z,468nm,19.0s								
MBAR	Mbarara	111.34	292	IAMs_20		IAMs_20		05 26 46.6	
	comp=Z,729nm,20.0s								
FDF	Fort de France	113.64	34	IAMs_20		IAMs_20		05 25 58.9	
	comp=Z,685nm,19.0s								
SDV	Santo Domingo	114.46	46	IAMs_20		IAMs_20		05 31 02.9	
	comp=Z,492nm,20.0s								
SVB	Belmont	114.92	35	IAMs_20		IAMs_20		05 25 24.9	
	comp=Z,709nm,21.0s								
TOC1	Torodi Ar. Sit	115.62	327	IAMs_20		IAMs_20		05 29 34.1	
	comp=Z,663nm,20.0s								
TOC2	Torodi Ar. Sit	115.63	326	IAMs_20		IAMs_20		05 29 34.3	
	comp=Z,571nm,21.0s								
TOB1	Torodi Ar. Sit	115.64	327	IAMs_20		IAMs_20		05 29 34.5	
	comp=Z,598nm,21.0s								
TOC7	Torodi Ar. Sit	115.64	327	IAMs_20		IAMs_20		05 29 33.5	
	comp=Z,579nm,19.0s								
TOA0	Torodi Ar. Sit	115.65	327			PKiKP		04 34 47.9	-0.9
TOA0				IAMs_20		IAMs_20		05 29 34.8	
	comp=Z,556nm,19.0s								
TOB5	Torodi Ar. Sit	115.65	327	IAMs_20		IAMs_20		05 29 35.8	
	comp=Z,598nm,19.0s								
TOC3	Torodi Ar. Sit	115.65	326	IAMs_20		IAMs_20		05 29 34.8	
	comp=Z,537nm,20.0s								
TORD	Torodi Ar. Bea	115.65	327	PKP		PKiKP		04 34 47.9	-1.0
	comp=Z,2.8nm,0.4s,baz=19,slow=2.3,SNR=37								
TORD				PKKPab		PKKPab		04 45 24.7	-4.1
	comp=Z,2.2nm,0.9s,baz=227,slow=3.2,SNR=6.5								
TOA3	Torodi Ar. Sit	115.66	327	IAMs_20		IAMs_20		05 29 34.9	
	comp=Z,565nm,20.0s								
TOB3	Torodi Ar. Sit	115.66	327	IAMs_20		IAMs_20		05 29 44.9	
	comp=Z,559nm,21.0s								
TOB4	Torodi Ar. Sit	115.66	327	IAMs_20		IAMs_20		05 29 36.1	
	comp=Z,582nm,19.0s								
TOC4	Torodi Ar. Sit	115.67	326	IAMs_20		IAMs_20		05 29 35.4	
	comp=Z,561nm,19.0s								
TOC5	Torodi Ar. Sit	115.68	327	IAMs_20		IAMs_20		05 29 35.4	
	comp=Z,674nm,19.0s								
GRGR	Grenville	115.78	36	IAMs_20		IAMs_20		05 22 43.9	
	comp=Z,597nm,22.0s								
ROSC	El Rosal	115.88	52	IAMs_20		IAMs_20		05 33 39.9	
	comp=Z,511nm,20.0s								
KOWA	Kowa	116.44	333	PKKPbc		PKKPbc		04 45 17.3	+0.3
	comp=Z,1.5nm,0.8s,baz=356,slow=1.7,SNR=3.9								
KOWA	Kowa	116.44	333	PKPdf		PKPdf		04 34 49.8	-0.5
VNDA	Vanda	122.59	177	PKP		PKPdf		04 34 58.7	-1.5
	comp=Z,5.8nm,0.8s,baz=337,slow=3.8,SNR=31								
VNDA				PKKPbc		PKKPbc		04 44 56.3	+1.1
	comp=Z,3.9nm,0.9s,baz=206,slow=2.4,SNR=20								
VNDA	Vanda	122.59	177	PKPdf		PKPdf		04 34 59.9	-0.3
LSZ	Lusaka	123.71	283	PKiKP		PKiKP		04 35 05.3	+0.7
LSZ	Lusaka	123.71	283			PKiKP		04 35 05.3	+0.7
DBIC	Dimbokro	124.04	331	PKP		PKPdf		04 35 04.2	-0.8
	comp=Z,18nm,0.7s,baz=24,slow=1.2,SNR=22								
DBIC	Dimbokro	124.04	331	PKPdf		PKPdf		04 35 04.3	-0.6
TIC	Toumodi	124.12	331	*e*P		PKPdf		04 35 02.5	-2.7
KIC	Kosan Boka	124.28	330	*e*P		PKPdf		04 35 04.0	-1.5
	comp=Z,42nm,0.8s								
LIC	Lamto	124.51	331	*e*P		PKPdf		04 35 06.0	+0.1
	comp=Z,68nm,0.9s								
MDP	Montagnes des	125.67	29	PKP		PKPdf		04 35 07.8	-0.4
	comp=Z,19nm,1.0s								
CZSB	Cruzeiro do Su	126.97	59	*e*P		PKPdf		04 35 09.4	-1.2
NNA	Nana	127.63	66	PKiKP		PKPdf		04 35 11.3	-0.5
NNA	Nana	127.63	66	PKPdf		PKPdf		04 35 11.3	-0.5
MAW	Mawson	130.08	210	PKP		PKiKP		04 35 15.5	-0.1
	comp=Z,8.6nm,0.6s,baz=101,slow=2.6,SNR=23								
MAW	Mawson	130.08	210	PKPdf		PKiKP		04 35 16.0	+0.4
LBTB	Lobatse	131.99	276	PKiKP		PKiKP		04 35 20.8	-0.1
LBTB	Lobatse	131.99	276			PKiKP		04 35 20.8	-0.1
SAML	Samuel	133.43	50	IAMs_20		IAMs_20		05 34 45.4	
	comp=Z,442nm,22.0s								
TSUM	Tsumeb	133.67	288	PKPdf		PKPdf		04 35 23.5	+0.2
BOSA	Boshof	134.43	272	PKP		PKiKP		04 35 26.0	+0.2
	comp=Z,4.4nm,0.8s,baz=334,slow=1.3,SNR=6.5								
QSPA	South Pole Qui	134.90	180	PKPdf		PKPdf		04 35 24.7	+0.7
LPAZ	La Paz	136.39	61	PKP		PKPdf		04 35 29.5	+0.5
	comp=Z,7.3nm,0.8s,baz=2.3,slow=2.8,SNR=13								
LPAZ	La Paz	136.39	61	PKiKP		PKPdf		04 35 27.6	-1.4
LPAZ	La Paz	136.39	61			PKPdf		04 35 27.6	-1.4
H03N2	Juan Fernandez	140.22	91	T		T		07 12 28.3	
	baz=307,slow=77,SNR=150								
H03N3	Juan Fernandez	140.23	91	T		T		07 12 28.0	
	baz=307,slow=77,SNR=162								
H03N1	Juan Fernandez	140.23	91	T		T		07 12 28.5	
	baz=307,slow=77,SNR=169								
RCBR	Riachuelo	140.36	11	PKhKP		PKPpre		04 35 27.4	
	comp=Z,8.1nm,0.9s,baz=74,slow=8.2,SNR=2.0								
RCBR	Riachuelo	140.36	11	PKiKP		PKPdf		04 35 34.3	-1.4
RCBR	Riachuelo	140.36	11	PKPdf		PKPdf		04 35 34.3	-1.4
SIV	San Ignacio	140.37	53	PKhKP		PKPpre		04 35 27.7	
	comp=Z,6.5nm,0.7s,baz=290,slow=3.3,SNR=10								
LVC	Limon Verde	140.50	69	PKiKP		PKPdf		04 35 36.2	+0.1
LVC	Limon Verde	140.50	69			PKPdf		04 35 36.2	+0.1
GO04	Tololo Observa	144.12	80	*i* P		PKPab		04 35 37.7	-2.0
SLA	San Lorenzo	144.21	68	*i* P		PKPab		04 35 39.4	-0.8
SHEL	Horse Pasture	144.92	319	PKiKP		PKPdf		04 35 44.2	+0.5
SHEL	Horse Pasture	144.92	319			PKPdf		04 35 44.2	+0.5
AROD	Rodeo	145.03	79	*i* P		PKPbc		04 35 43.1	-0.2
VCA	Vinchina	145.04	76	*i* P		PKPbc		04 35 41.6	-1.5
VA01	Torpederas	145.14	85			PKPbc		04 35 42.7	-0.3
ACDV	Cuesta del Vie	145.28	78	*i* P		PKPbc		04 35 43.2	-0.7
ROC1	El Roble	145.56	84	*i* P		PKPdf		04 35 41.1	-3.5
ACCO	Cerro Coronel	145.57	79	*i* P		PKPdf		04 35 44.3	-0.4
AHML	Horco Molle	145.72	70	*i* P		PKPdf		04 35 44.0	-0.7
PEL	Peldehue	145.88	84	*i* P		PKPbc		04 35 45.5	0.0
AANI	Anillaco	145.95	74	*i* P		PKPdf		04 35 44.1	-1.1
RTLS	Leoncito	146.11	81	*i* P		PKPdf		04 35 45.7	+0.1
AUSP	Uspallata	146.29	82	*i* P		PKPbc		04 35 46.7	-0.4
ACLC	CERRO LA CRUZ	146.32	75	*i* P		PKPdf		04 35 46.2	+0.4
CYA	Choya	146.49	73	*i* P		PKPdf		04 35 46.1	+0.1
BDFB	Brasília	146.49	35	PKPbc		PKPbc		04 35 47.2	-0.6
	comp=Z,83nm,0.9s,baz=292,slow=2.2,SNR=59								
BDFB	Brasília	146.49	35	PKPbc		PKPbc		04 35 47.4	-0.4
BDFB				IAMs_20		IAMs_20		05 42 20.6	
	comp=Z,451nm,19.0s								
RTCV	Cerro Valdivia	146.67	80	*i* P		PKPdf		04 35 46.4	+0.2
AVFE	Valle Fertil	146.72	78	*i* P		PKPdf		04 35 46.2	-0.1
ASAL	Salagasta	146.88	82	*i* P		PKPdf		04 35 47.0	+0.5
ARCO	CERRO ARCO	146.95	82	*i* P		PKPbc		04 35 49.5	+0.7
BELA	Belgrano 2	147.10	178	PKPbc		PKPbc		04 35 46.8	-0.9
AAGR	Agrelo	147.16	82	*i* P		PKPdf		04 35 47.7	+0.6
APLL	PUNTA DE LOS L	147.21	76	*i* P		PKPdf		04 35 48.0	+0.8
ACHE	Chepes	147.57	78	*i* P		PKPbc		04 35 49.3	-1.3
NVL	N'lazarevskaya	147.58	204	*e*PKP2		PKPbc		04 35 47.8	-1.3
NVL				pmax		pmax			
	comp=Z,88nm,1.1s								
EDS3	Malargue	148.15	87	*i* P		PKPdf		04 35 50.0	+1.3
RFA	San Rafael	148.31	85	*i* P		PKPdf		04 35 49.1	+0.2
LL01	San Ignacio de	148.81	101	PKPbc		PKPdf		04 35 51.1	+1.8
MRA	San Martin	148.95	79	*i* P		PKPdf		04 35 50.3	+0.2
TCA	Tanti	149.10	76	*i* P		PKPdf		04 35 52.0	+1.7
PLCA	Paso Flores	149.51	97	PKPbc		PKPbc		04 35 54.8	-0.4
	comp=Z,51nm,0.7s,baz=276,slow=2.7,SNR=39								
PLCA	Paso Flores	149.51	97	PKPdf		PKPdf		04 35 50.3	-0.4
PLCA				PKPbc		PKiKP		04 35 56.0	-0.2
CPUP	Villa Florida	150.54	60	PKPbc		PKPbc		04 35 57.2	-0.7
	comp=Z,51nm,0.8s,baz=330,slow=2.8,SNR=13								
CPUP	Villa Florida	150.54	60	PKIKP		PKPdf		04 35 51.7	-0.9
CPUP								04 35 58.6	
CPUP	Villa Florida	150.54	60			PKPdf		04 35 51.7	-0.9
CPUP				PKPbc		PKiKP		04 35 58.6	-0.1
SNAA	Sanae	150.61	197	IAMs_20		IAMs_20		05 46 27.6	
	comp=Z,338nm,19.0s								
GO09	Cerro Castillo	150.83	118			PKPbc		04 35 58.0	+0.1

IDC 14 05:15:01.7±2.9, 30°14S×138°58E, h0km, mb1 3.2/3, mb1mx3.1/29, mbtmp2.9/3, ML3.0/3, Error ellipse: s-maj=73.8km s-min=15.3km az=46.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.12	125	Pn		Pn		05 15 50.5	-1.7
	0.7nm,0.3s,baz=305,slow=13,SNR=8.3								
STKA				Pg		Pb		05 15 58.9	+0.9
	3.1nm,0.3s,baz=303,slow=14,SNR=23								
STKA				Sn		Sn		05 16 28.3	-1.8
	2.4nm,0.3s,baz=294,slow=18,SNR=5.4								
STKA				Lg		Lg		05 16 42.0	
	4.0nm,0.3s,baz=193,slow=23,SNR=7.2								
ASAR	Alice Springs	7.68	326	Pn		Pn		05 16 55.6	+0.7
	0.2nm,0.3s,baz=149,slow=12,SNR=8.7								
ASAR				Sn		Sn		05 18 24.6	+1.9
	0.2nm,0.3s,baz=152,slow=22,SNR=4.9								
WRA	Warramunga Arr	10.85	338	Pn		Pn		05 17 38.5	+0.1
	0.2nm,0.3s,baz=155,slow=13,SNR=16								
WRA				Sn		Sn		05 19 40.7	+0.1
	0.1nm,0.3s,baz=158,slow=23,SNR=3.0								

NEIC 14 05:22:41.4±1.7, 21°.2S±0°.1×171°.83E±0°.07, h7km±7km, mb4.4/8, Error ellipse: s-maj=19.2km s-min=9.8km az=173.0
IDC 14 05:22:55.2±5.0, 20°.12S×170°.07E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.8/28, mbtmp3.9/5, ML3.7/1, MS3.4/3, Ms1 3.4/3, ms1mx3.0/28, Error ellipse: s-maj=164.0km s-min=31.5km az=138.0
ISC 14 05:22:42.2±0.7, 21°.3S±0°.1×171°.87E±0°.09, h10km, n19, σ2s00/16, mb4.2/8, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.10	260	Pn		Pn		05 23 58.0	-0.8
	5.7nm,0.3s,baz=107,slow=13,SNR=89								
DZM				LR		LR		05 24 42.5	
	comp=Z,218nm,19.7s,baz=40,slow=28								
DZM				Sn		Sn		05 24 43.4	-15
	17nm,0.3s,baz=129,slow=23,SNR=12								
DZM	Mont Dzumac	5.10	260			Pn		05 23 58.1	-0.8
MSVF	Nonsavu	6.82	60			Pn		05 24 21.5	-1.0
OUZ	Omahuta	13.96	174	Pn		Pn		05 26 00.0	0.0
NIUE	Niue	17.23	86	P		Pn		05 26 42.1	-1.1
NIUE				IAmb		IAmb		05 27 03.5	
	comp=Z,85nm,0.8s								
EIDS	Eidsvold	19.51	254	P		P		05 27 08.9	-0.8
STKA	Stephens Creek	28.96	242	LR		LR		05 37 56.4	
	comp=Z,103nm,19.8s,baz=6.2,slow=32								
WR0	Warramunga Arr	34.91	265	P		P		05 29 33.7	-0.6
WR0				IAmb		IAmb		05 29 56.9	
	comp=Z,6.8nm,1.4s								
ASAR	Alice Springs	35.09	259	P		P		05 29 38.5	+2.6
	comp=Z,1.9nm,0.6s,baz=85,slow=9.2,SNR=29								
ASAR	Alice Springs	35.09	259	P		P		05 29 36.5	+0.5
WRA	Warramunga Arr	35.10	265	P		P		05 29 35.3	-0.7
	comp=Z,0.2nm,0.6s,baz=97,slow=8.3,SNR=1.6								
WRA				LR		LR		05 41 48.5	
	comp=Z,85nm,18.8s,baz=0.0,slow=34								
WRA	Warramunga Arr	35.10	265	P		P		05 29 37.0	+1.0
XMAS	Kiritimati	37.94	56	P		P		05 30 00.4	+0.1
FITZ	Fitzroy Crossi	43.52	266	P		P		05 30 46.3	-0.1
FITZ				IAmb		IAmb		05 30 55.9	
	comp=Z,2.7nm,0.8s								
KAPI	Kappang	53.00	280	P		P		05 31 58.4	-1.3
KAPI				IAmb		IAmb		05 32 06.2	
	comp=Z,6.2nm,0.9s								
QSPA	South Pole Qui	68.77	180	P		P		05 33 46.5	+0.1
QSPA				IAmb		IAmb		05 34 08.5	
	comp=Z,2.0nm,1.0s								
CMAR	Chiang Mai Arr	81.59	293	P		P		05 35 05.3	+4.5
	comp=Z,0.9nm,0.3s,baz=147,slow=5.4,SNR=2.4								
SONM	Songino Array	90.34	322	P		P		05 35 49.3	+5.6
	comp=Z,0.5nm,0.6s,baz=134,slow=8.3,SNR=3.6								
GERES	GERESS Array B	147.45	333	PKPbc		PKiKP		05 42 34.8	+6.1
	comp=Z,0.7nm,0.7s,baz=48,slow=4.0,SNR=6.4								

KRNET 14 05:25:49.0±0.1, 42°.20N×77°.08E, h14km, mb3.1
SOME 14 05:25:49.3, 42°.13N×77°.08E, h20km
NNC 14 05:25:52.5±2.1, 42°.31N×76°.99E, h0km, mb2.7, mpv2.5, Error ellipse: s-maj=26.9km s-min=7.5km az=1.0
ISC 14 05:25:49.0±1.0, 42°.20N±0°.03×77°.07E±0°.02, h7km±9km, n38, σ1s18/74, 13C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDJ	Kajisay	0.11	131	⇑*i*P		Pg		05 25 51.0	-0.5
	baz=33								
KDJ				⇑*i*S		Sg		05 25 52.6	-0.7
	baz=33								
ULHL	Ulahol	0.61	274	⇑*i*P		Pg		05 26 01.2	+0.3
	baz=74								
ULHL				⇑*i*S		Sg		05 26 09.9	+1.0
	baz=74								
ANVS	Anan'yevo	0.73	37	⇑*i*P		Pg		05 26 03.0	0.0
	baz=36								
ANVS				⇑*i*S		Sg		05 26 13.2	+0.6
	baz=36								
TNSS	Tian-Shan	0.84	354	*e*P		Pg		05 26 05.5	+0.4
	baz=53								
TNSS				*e*S		Sb		05 26 17.2	-0.6
	baz=53								
TNSS	Tian-Shan	0.84	354	*e*P		Pg		05 26 05.5	+0.4
	6.7nm,0.1s								
TNSS				*e*S		Sb		05 26 17.2	-0.6
	15nm,0.1s								
BOOM	Boomskoye usch	0.88	289	⇓*i*P		Pg		05 26 06.1	+0.1
	baz=89								
BOOM				⇓*i*S		Sb		05 26 18.6	-0.2
	baz=89								
MDOK	Medeo	0.96	359	*e*P		Pb		05 26 07.5	-0.6
	baz=58								
MDOK				*e*S		Sb		05 26 20.4	-0.6
	baz=58								
MDOK	Medeo	0.96	359	*e*P		Pb		05 26 07.5	-0.6
	4.2nm,0.1s								
MDOK				*e*S		Sb		05 26 20.4	-0.6
	9.1nm,0.2s								
PRZ	Przheval'sk	1.03	74	⇓*i*P		Pb		05 26 08.8	-0.4
	baz=74								
PRZ				⇓*i*S		Sn		05 26 23.4	-1.3
	baz=74								
PRZ	Przheval'sk	1.03	74	⇑*i*S		Sn		05 26 23.6	-1.1
	baz=65								
KOTS	Kotyrbulak	1.03	2	*e*P		Pb		05 26 08.9	-0.4
	baz=1.0								
KOTS				*e*S		Sg		05 26 22.8	+0.6
	baz=1.0								
KOTS	Kotyrbulak	1.03	2	*e*P		Pb		05 26 08.9	-0.4
	22nm,0.1s								
KOTS				*e*S		Sg		05 26 22.8	+0.6
	64nm,0.2s								
MTBS	Maitube	1.04	333	*e*P		Pb		05 26 09.0	-0.3
	baz=33								
MTBS				*e*S		Sb		05 26 22.9	-0.3
	baz=33								
MTBS	Maitube	1.04	333	*e*P		Pb		05 26 09.0	-0.3
	6.6nm,0.1s								
MTBS				*e*S		Sb		05 26 22.9	-0.3
	17nm,0.2s								
KST	Kastek	1.17	316	*e*P		Pb		05 26 11.7	+0.1
	baz=16								
KST				*e*S		Sg		05 26 27.4	+0.7
	baz=16								
KST	Kastek	1.17	316	*e*P		Pb		05 26 11.7	+0.1
	6.8nm,0.1s								
KST				*e*S		Sg		05 26 27.3	+0.7
	9.7nm,0.2s								
TKM2	Tokmak 2	1.30	304	⇑*i*P		Pb		05 26 13.8	-0.1
	baz=4.0								
TKM2				⇑*i*S		Sg		05 26 32.1	+1.2
	baz=4.0								
TKM2	Tokmak 2	1.30	304	⇑P		Pb		05 26 13.8	-0.1
	3.5nm,0.3s								
TKM2				⇓S		Sg		05 26 32.0	+1.2
	5.0nm,0.3s								
SATY	Saty	1.31	49	*e*P		Pb		05 26 13.9	-0.1
	baz=48								
SATY				*e*S		Sg		05 26 31.1	+0.1
	baz=48								
SATY	Saty	1.31	49	*e*P		Pb		05 26 13.9	-0.1
	3.4nm,0.1s								
SATY				*e*S		Sg		05 26 31.1	+0.1
	30nm,0.1s								
DGS	Degeres	1.41	318	*e*P		Pg		05 26 16.1	+0.1
	baz=17								
DGS				*e*S		Sg		05 26 35.1	+0.8
	baz=17								
DGS	Degeres	1.41	318	*e*P		Pg		05 26 16.1	+0.1
	5.1nm,0.1s								
DGS				*e*S		Sg		05 26 35.1	+0.8
	7.7nm,0.1s								
KURS	Kuram	1.52	32	*e*P		Pb		05 26 17.7	+0.2
	baz=32								
KURS				*e*S		Sg		05 26 37.8	0.0
	baz=32								
KURS	Kuram	1.52	32	*e*P		Pb		05 26 17.7	+0.2
	1.7nm,0.2s								
KURS				*e*S		Sg		05 26 37.8	0.0
	4.8nm,0.3s								
KTBS	Karatobe	1.54	350	*e*P		Pg		05 26 18.3	-0.1
	baz=49								
KTBS				*e*S		Sg		05 26 38.8	+0.5
	baz=49								
KTBS	Karatobe	1.54	350	*e*P		Pg		05 26 18.3	-0.1
	7.8nm,0.1s								
KTBS				*e*S		Sg		05 26 38.9	+0.5
	18nm,0.2s								
UZB	Uzynbulak	1.72	56	*e*P		Pb		05 26 20.8	-0.2
	baz=56								
UZB				*e*S		Sg		05 26 43.7	-0.6
	baz=56								
UZB	Uzynbulak	1.72	56	*e*P		Pb		05 26 20.8	-0.2
	3.2nm,0.1s								
UZB				*e*S		Sg		05 26 43.7	-0.6
	12nm,0.3s								
KPKS	Kokpek	1.73	43	*e*P		Pb		05 26 21.4	+0.2
	baz=42								
KPKS				*e*S		Sg		05 26 44.1	-0.6
	baz=42								
KPKS	Kokpek	1.73	43	*e*P		Pb		05 26 21.4	+0.2
	6.6nm,0.1s								
KPKS				*e*S		Sg		05 26 44.0	-0.6
	57nm,0.4s								
KUU	Kurty	1.77	343	*e*P		Pb		05 26 22.4	+0.6
	baz=42								
KUU				*e*S		Sg		05 26 46.4	+0.5
	baz=42								
KUU	Kurty	1.77	343	*e*P		Pb		05 26 22.4	+0.6
	4.4nm,0.2s								
KUU				*e*S		Sg		05 26 46.4	+0.5
	16nm,0.5s								
AAK	Ala-Archa	1.95	284	⇓Pn		Pb		05 26 25.1	+0.1
	1.7nm,0.3s								
AAK				⇑Sn		Sg		05 26 52.5	+0.8
	6.5nm,0.6s								
SHLS	Shalkode	2.01	61	*e*P		Pg		05 26 31.4	+3.9
	4.2nm,0.1s								
SHLS				*e*S		Sg		05 27 01.3	+7.8

ULHL	**Ulahol**	**0.71**	**288**	⇑	*e*P		Pb	05 26 21.8	-0.2
	baz=88								
ULHL				⇑	*i*S		Sb	05 26 31.7	+0.3
	baz=88								
ANVS	**Anan'yevo**	**0.84**	**27**	⇓	*i*P		Pb	05 26 24.2	-0.1
	baz=27								
ANVS				⇓	*i*S		Sn	05 26 36.1	-0.1
	baz=27								
BOOM	**Boomskoye usch**	**1.01**	**298**	⇑	*i*P		Pb	05 26 27.1	+0.1
	baz=98								
BOOM				⇑	*i*S		Sn	05 26 40.6	+0.4
	baz=98								
BOOM	**Boomskoye usch**	**1.01**	**298**	⇓	*i*S		Pb	05 26 27.1	+0.1
	baz=95								
PRZ	**Przheval'sk**	**1.03**	**64**	⇑	*i*P		Pb	05 26 27.3	-0.2
	baz=64								
PRZ				⇑	*i*S		Sn	05 26 41.8	+1.0
	baz=64								
TKM2	**Tokmak 2**	**1.45**	**308**	⇑	*i*P		Pb	05 26 34.4	-0.2
	baz=8.0								
TKM2				⇑	*i*S		Sb	05 26 53.3	+0.6
	baz=8.0								

KRNET ***14*** *05:26:41.1±0.1, 42°.17N×77°.09E, h18km, mb3.4*
SOME ***14*** *05:26:41.8, 42°.15N×77°.07E, h20km*
NNC ***14*** *05:26:42.9±0.6, 42°.26N×77°.05E, h0km, mb3.5, mpv3.7, Error ellipse: s-maj=4.5km s-min=2.1km az=177.0*

ISC 14 05:26:41.1±1.0**, 42°.15N**±0°.04×**77°.04E**±0°.02**, h8**km±8km, **n62,** σ1§**14**/116**, 20C-23D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.10**	**103**	⇓	*i*P	**Pg**	**05 26 43.5**	**-0.2**
	baz=18							
KDJ				⇓	*i*S	**Sg**	**05 26 45.1**	**-0.5**
	baz=18							
ULHL	**Ulahol**	**0.60**	**279**	⇓	*i*P	**Pg**	**05 26 53.3**	**+0.5**
	baz=77							
ULHL				⇓	*i*S	**Sg**	**05 27 02.2**	**+1.5**
	baz=77							
ANVS	**Anan'yevo**	**0.78**	**36**	⇓	*i*P	**Pb**	**05 26 55.5**	**-1.5**
	baz=35							
ANVS				⇓	*i*S	**Sb**	**05 27 06.1**	**-1.7**
	baz=35							
BOOM	**Boomskoye usch**	**0.89**	**293**	⇑	*e*P	**Pb**	**05 26 58.3**	**-0.5**
	baz=91							
BOOM				⇑	*i*S	**Sb**	**05 27 10.7**	**-0.1**
	baz=91							
TNSS	**Tian-Shan**	**0.89**	**355**	⇓	*i*P	**Pb**	**05 26 57.7**	**-1.3**
	baz=53							
TNSS				⇓	*i*S	**Sb**	**05 27 09.2**	**-1.9**
	baz=53							
TNSS	**Tian-Shan**	**0.89**	**355**	⇓	*i*P	**Pb**	**05 26 57.7**	**-1.3**
	13nm,0.2s							
TNSS				⇓	*i*S	**Sb**	**05 27 09.2**	**-1.9**
	37nm,0.1s							
TNSS	**Tian-Shan**	**0.89**	**355**		P	**Pb**	**05 26 57.7**	**-1.3**
	11nm,0.1s							
TNSS					S	**Sb**	**05 27 09.3**	**-1.9**
	37nm,0.1s							
MDOK	**Medeo**	**1.01**	**0**	⇑	*i*P	**Pb**	**05 26 59.8**	**-1.1**
	baz=58							
MDOK				⇓	*i*S	**Sb**	**05 27 13.0**	**-1.4**
	baz=58							
MDOK	**Medeo**	**1.01**	**0**	⇑	*i*P	**Pb**	**05 26 59.8**	**-1.1**
	13nm,0.1s							
MDOK				⇓	*i*S	**Sb**	**05 27 12.9**	**-1.4**
	31nm,0.4s							
MDOK	**Medeo**	**1.01**	**0**		Pg	**Pb**	**05 26 59.7**	**-1.1**
	13nm,0.1s							
MDOK					Lg	Lg	05 27 13.2	
	31nm,0.4s							
PRZ	**Przheval'sk**	**1.06**	**71**	⇓	*i*P	**Pb**	**05 27 00.4**	**-1.4**
	baz=72							
PRZ				⇓	*i*S	**Sb**	**05 27 14.2**	**-1.6**
	baz=72							
MTBS	**Maitube**	**1.08**	**335**	⇓	*i*P	**Pb**	**05 27 01.3**	**-0.7**
	baz=33							
MTBS				⇓	*i*S	**Sb**	**05 27 15.6**	**-0.7**
	baz=33							
MTBS	**Maitube**	**1.08**	**335**	⇓	*i*P	**Pb**	**05 27 01.3**	**-0.7**
	22nm,0.1s							
MTBS				⇓	*i*S	**Sb**	**05 27 15.6**	**-0.7**
	41nm,0.2s							
MTBS	**Maitube**	**1.08**	**335**		P	**Pb**	**05 27 01.3**	**-0.7**
	22nm,0.1s							
MTBS					S	**Sb**	**05 27 15.8**	**-0.5**
	41nm,0.2s							
KOTS	**Kotyrbulak**	**1.08**	**3**		*e*P	**Pb**	**05 27 01.2**	**-0.9**
	baz=1.0							
KOTS					*e*S	**Sb**	**05 27 15.2**	**-1.3**
	baz=1.0							
KOTS	**Kotyrbulak**	**1.08**	**3**		*e*P	**Pb**	**05 27 01.1**	**-0.9**
	51nm,0.1s							
KOTS					*e*S	**Sb**	**05 27 15.2**	**-1.3**
	132nm,0.2s							
KOTS	**Kotyrbulak**	**1.08**	**3**		P	**Pb**	**05 27 01.2**	**-0.9**
	51nm,0.1s							
KOTS					S	**Sb**	**05 27 15.2**	**-1.3**
	132nm,0.2s							
KST	**Kastek**	**1.19**	**318**		*e*P	**Pb**	**05 27 03.9**	**-0.2**
	baz=17							
KST					*e*S	**Sn**	**05 27 19.6**	**-1.1**
	baz=17							
KST	**Kastek**	**1.19**	**318**		*e*P	**Pb**	**05 27 03.9**	**-0.2**
	20nm,0.1s							
KST					*e*S	**Sn**	**05 27 19.6**	**-1.1**
	11nm,0.3s							
KST	**Kastek**	**1.19**	**318**		P	**Pb**	**05 27 03.9**	**-0.2**
	20nm,0.1s							
KST					S	**Sn**	**05 27 19.5**	**-1.1**
	11nm,0.3s							
TKM2	**Tokmak 2**	**1.32**	**306**	⇑	*i*P	**Pb**	**05 27 06.0**	**-0.1**
	baz=5.0							
TKM2				⇑	*i*S	**Sg**	**05 27 24.0**	**+0.5**
	baz=5.0							
TKM2	**Tokmak 2**	**1.32**	**306**	⇑	P	**Pb**	**05 27 06.0**	**-0.1**
	4.4nm,0.2s							
TKM2				⇑	S	**Sg**	**05 27 24.2**	**+0.8**
	9.3nm,0.2s							
SATY	**Saty**	**1.35**	**48**		*e*P	**Pb**	**05 27 06.4**	**-0.4**
	baz=47							
SATY					*e*S	**Sg**	**05 27 24.1**	**-0.5**
	baz=47							
SATY	**Saty**	**1.35**	**48**		*e*P	**Pb**	**05 27 06.4**	**-0.4**
	5.0nm,0.1s							
SATY					*e*S	**Sg**	**05 27 24.1**	**-0.5**
	57nm,0.1s							
SATY	**Saty**	**1.35**	**48**		P	**Pb**	**05 27 06.4**	**-0.4**
	5.0nm,0.1s							
SATY					S	**Sg**	**05 27 24.1**	**-0.5**
	57nm,0.1s							
DGS	**Degeres**	**1.44**	**320**		*e*P	**Pb**	**05 27 08.4**	**+0.3**
	baz=18							
DGS					*e*S	**Sg**	**05 27 27.5**	**+0.2**
	baz=18							
DGS	**Degeres**	**1.44**	**320**		*e*P	**Pb**	**05 27 08.4**	**+0.3**
	15nm,0.1s							
DGS					*e*S	**Sg**	**05 27 27.5**	**+0.2**
	28nm,0.2s							
DGS	**Degeres**	**1.44**	**320**		P	**Pb**	**05 27 08.4**	**+0.3**
	15nm,0.1s							
DGS					S	**Sg**	**05 27 27.5**	**+0.2**
	28nm,0.2s							
KURS	**Kuram**	**1.57**	**31**		*e*P	**Pb**	**05 27 09.8**	**-0.6**
	baz=31							
KURS					*e*S	**Sb**	**05 27 29.8**	**-0.6**
	baz=31							
KURS	**Kuram**	**1.57**	**31**		*e*P	**Pb**	**05 27 09.8**	**-0.6**
	4.6nm,0.3s							
KURS					*e*S	**Sb**	**05 27 29.8**	**-0.6**
	21nm,0.7s							
KTBS	**Karatobe**	**1.58**	**350**		*e*P	**Pb**	**05 27 10.7**	**+0.2**
	baz=49							
KTBS					*e*S	**Sg**	**05 27 31.2**	**-0.7**
	baz=49							
KTBS	**Karatobe**	**1.58**	**350**		*e*P	**Pb**	**05 27 10.7**	**+0.2**
	13nm,0.1s							
KTBS					*e*S	**Sg**	**05 27 31.2**	**-0.7**
	53nm,0.3s							
KTBS	**Karatobe**	**1.58**	**350**		P	**Pb**	**05 27 10.7**	**+0.2**
	13nm,0.1s							
KTBS					S	**Sb**	**05 27 30.9**	**+0.2**
	53nm,0.3s							
KBK	**Karagaybulak**	**1.63**	**289**	⇑	*i*P	**Pb**	**05 27 11.4**	**-0.1**
	baz=88							
KBK				⇑	*i*S	**Sg**	**05 27 33.5**	**-0.1**
	baz=88							
UZB	**Uzynbulak**	**1.77**	**55**		*e*P	**Pb**	**05 27 13.1**	**-0.7**
	baz=55							
UZB					*e*S	**Sb**	**05 27 35.5**	**-0.6**
	baz=55							
UZB	**Uzynbulak**	**1.77**	**55**		*e*P	**Pb**	**05 27 13.1**	**-0.7**
	5.1nm,0.1s							
UZB					*e*S	**Sb**	**05 27 35.5**	**-0.6**
	34nm,0.2s							
UZB	**Uzynbulak**	**1.77**	**55**		P	**Pb**	**05 27 13.1**	**-0.7**
	5.1nm,0.1s							
UZB					S	**Sb**	**05 27 35.5**	**-0.6**
	34nm,0.2s							
KPKS	**Kokpek**	**1.78**	**42**		*e*P	**Pb**	**05 27 13.6**	**-0.4**
	baz=42							
KPKS					*e*S	**Sb**	**05 27 36.4**	**-0.2**
	baz=42							
KPKS	**Kokpek**	**1.78**	**42**		*e*P	**Pb**	**05 27 13.6**	**-0.4**
	13nm,0.1s							
KPKS					*e*S	**Sb**	**05 27 36.4**	**-0.2**
	109nm,0.3s							
KUU	**Kurty**	**1.81**	**344**		*e*P	**Pb**	**05 27 14.6**	**+0.1**
	baz=43							
KUU					*e*S	**Sb**	**05 27 38.0**	**+0.6**
	baz=43							
KUU	**Kurty**	**1.81**	**344**		*e*P	**Pb**	**05 27 14.6**	**+0.1**
	17nm,0.2s							
KUU					*e*S	**Sb**	**05 27 38.0**	**+0.6**
	37nm,0.3s							
KUU	**Kurty**	**1.81**	**344**		P	**Pb**	**05 27 14.6**	**+0.1**
	17nm,0.2s							
KUU					S	**Sb**	**05 27 38.0**	**+0.6**
	37nm,0.3s							
KRBS	**Karabastau**	**1.84**	**327**		*e*P	**Pb**	**05 27 15.5**	**+0.5**
	baz=26							
KRBS					*e*S	**Sg**	**05 27 39.4**	**-0.8**
	baz=26							
KRBS	**Karabastau**	**1.84**	**327**		*e*P	**Pb**	**05 27 15.4**	**+0.5**
	33nm,0.2s							
KRBS					*e*S	**Sg**	**05 27 39.3**	**-0.9**
	35nm,0.5s							
UCH	**Uchtor**	**1.88**	**273**	⇑	*i*P	**Pb**	**05 27 15.5**	**-0.5**
	baz=73							
UCH				⇑	*e*S	**Sg**	**05 27 41.8**	**+0.2**
	baz=73							
CHMS	**Chumysh**	**1.89**	**297**	⇓	*e*P	**Pb**	**05 27 15.5**	**-0.4**
	baz=96							
CHMS				⇓	*e*S	**Sb**	**05 27 40.8**	**+1.1**
	baz=96							
AAK	**Ala-Archa**	**1.95**	**285**	⇓	Pn	**Pb**	**05 27 16.4**	**-0.5**
	4.8nm,0.3s							
AAK				⇓	Sn	**Sg**	**05 27 43.9**	**+0.1**
	9.8nm,0.3s							
SHLS	**Shalkode**	**2.05**	**60**		*e*P	**Pg**	**05 27 23.3**	**+3.0**
	14nm,0.2s							
SHLS					*e*S	**Sg**	**05 27 52.9**	**+6.1**
	57nm,0.2s							
SHLS	**Shalkode**	**2.05**	**60**		Pg	**Pg**	**05 27 23.9**	**+3.6**
	14nm,0.2s							
SHLS					Lg	Lg	05 27 53.8	
	57nm,0.2s							
ARLS	**Aral**	**2.05**	**263**	⇑	*e*P	**Pb**	**05 27 17.6**	**-1.0**
	baz=63							
ARLS				⇑	*i*S	**Sb**	**05 27 45.2**	**+0.9**
	baz=63							
ARXS	**Arharly**	**2.14**	**15**		*e*P	**Pb**	**05 27 19.9**	**-0.2**
	33nm,0.3s							
ARXS					*e*S	**Sb**	**05 27 47.3**	**+0.5**
	30nm,0.2s							
ARXS	**Arharly**	**2.14**	**15**		Pg	**Pb**	**05 27 19.9**	**-0.2**
	33nm,0.3s							
ARXS					Lg	Lg	05 27 47.3	
	30nm,0.2s							
PDGK	**Podgornoye**	**2.15**	**56**		Pg	**Pb**	**05 27 20.1**	**-0.2**
	2.8nm,0.3s							
PDGK					Lg	Lg	05 27 48.1	
	20nm,0.4s							
PDGK	**Podgornoye**	**2.15**	**56**	⇑	Pn	**Pb**	**05 27 19.7**	**-0.7**
	4.9nm,0.5s							
PDGK				⇑	Sn	**Sg**	**05 27 48.2**	**-2.0**
	64nm,1.1s							
MNBS	**Baschi**	**2.17**	**27**		*e*P	**Pb**	**05 27 21.1**	**+0.5**
	13nm,0.1s							
MNBS					*e*S	**Sg**	**05 27 49.2**	**-1.5**
	80nm,0.3s							
MNBS	**Baschi**	**2.17**	**27**		Pg	**Pb**	**05 27 21.1**	**+0.5**
	13nm,0.1s							
MNBS					Lg	Lg	05 27 49.2	
	80nm,0.3s							
USP	**Ospenovka**	**2.18**	**302**	⇑	*e*P	**Pb**	**05 27 19.4**	**-1.4**
	baz=1.0							
USP				⇑	*i*S	**Sb**	**05 27 47.8**	**-0.2**
	baz=1.0							
SGDS	**Sogindy**	**2.20**	**307**		Pg	**Pb**	**05 27 21.4**	**+0.2**
	30nm,0.1s							
SGDS					Lg	Lg	05 27 50.3	
	23nm,0.2s							
AML	**Almayashu**	**2.49**	**271**	⇑	*e*P	**Pb**	**05 27 24.3**	**-2.0**
	baz=70							
AML				⇑	*i*S	**Sb**	**05 27 55.8**	**-1.5**
	baz=70							
MRKS	**Merke**	**2.89**	**283**		*e*P	**Pb**	**05 27 34.3**	**+1.4**
	8.1nm,0.3s							
MRKS					*e*S	**Sg**	**05 28 12.4**	**-1.4**
	28nm,0.5s							
DJR	**Jarkent**	**2.96**	**42**		*e*P	**Pb**	**05 27 34.5**	**+0.4**
	3.7nm,0.3s							
DJR					*e*S	**Sb**	**05 28 11.9**	**+1.5**
	23nm,0.4s							
KK31	**Karatay Array**	**4.91**	**283**	⇓	Lg	Lg	05 29 19.7	
	2.7nm,0.6s,baz=93,slow=27,SNR=6.0							

KRNET 14 05:33:59.5±0.1**, 41°.99N×77°.08E, mb1.5, 8C, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KDJ	**Kajisay**	**0.16**	**29**	⇑	*i*P	Pg	05 34 03.4	+0.8
	baz=32							
KDJ				⇑	*i*S	Sg	05 34 05.8	+1.1
	baz=32							
KDJ	**Kajisay**	**0.16**	**29**	⇑	*i*P	Pg	05 34 03.5	+0.9
	baz=96							
KDJ				⇑	*i*S	Sg	05 34 05.8	+1.1
	baz=96							
ULHL	**Ulahol**	**0.67**	**293**	⇑	*i*P	Pg	05 34 12.4	0.0
	baz=93							
ULHL				⇑	*i*S	Sg	05 34 21.9	+0.8
	baz=93							
BOOM	**Boomskoye usch**	**0.98**	**301**	⇑	*i*P	Pg	05 34 17.9	-0.5
	baz=1.0							
BOOM				⇑	*i*S	Sg	05 34 31.6	+0.5
	baz=1.0							

KRNET 14 05:34:01.8±0.1**, 42°.09N×77°.30E, mb1.2, 4C, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**0.80**	**282**	⇑	*i*P	Pg	05 34 17.3	+0.2
	baz=82							
ULHL				⇑	*i*S	Sg	05 34 28.0	+0.5
	baz=82							
BOOM	**Boomskoye usch**	**1.08**	**292**	⇑	*i*P	Pg	05 34 22.5	-0.1
	baz=92							
BOOM				⇑	*i*S	Sg	05 34 37.1	+0.5
	baz=92							

NAO ***14*** *05:34:05.9±1.6, 67°.63N×33°.75E, ML2.6*
HEL ***14*** *05:34:05.4±0.4, 67°.66N×33°.84E, h0km, ML1.9, Explosion*
IDC ***14*** *05:34:08.9±2.4, 67°.66N×33°.35E, h0km, mb1 3.4/4, mb1mx3.1/44, mbtmp3.3/4, ML2.3/3, Error ellipse: s-maj=28.6km s-min=9.5km az=70.0*

ISC 14 05:34:03.8±1.7**, 67°.66N**±0°.04×**34°.01E**±0°.09**, h0**km**, n24,** σ2§**19**/44**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**0.40**	**262**		Pg	**Pg**	**05 34 11.6**	**+0.2**
	baz=85,slow=16							
APA0					Lg	Lg	05 34 15.6	
	baz=81,slow=37							
APA0					Rg	Rg	05 34 17.3	
	baz=76,slow=37							
APA0	**Apatity Array**	**0.40**	**262**		Pg	**Pg**	**05 34 11.6**	**+0.2**
	baz=85,slow=16							
APA0					Sg	**Sg**	**05 34 15.6**	**-0.8**
	baz=81,slow=37							
VRF	**Varrio**	**1.68**	**275**		PG	**Pn**	**05 34 34.4**	**0.0**
VRF					MSG		05 34 53.9	
	comp=Z,11nm,0.2s							
VRF					SG	**Sn**	**05 34 54.5**	**-2.2**
KU6	**Riekki**	**2.31**	**227**		PG	**Pb**	**05 34 46.3**	**0.0**
KU6					MSG		05 35 12.5	
	comp=Z,5.5nm,0.2s							
MSF	**Maaselka**	**2.64**	**231**		PB	**Pn**	**05 34 49.8**	**+2.2**
MSF					SG	**Sb**	**05 35 25.2**	**+0.4**
SGF	**Sodankyl**	**2.88**	**269**		PN	**Pn**	**05 34 51.6**	**+0.7**
	baz=83							
SGF					SB	**Sb**	**05 35 30.1**	**-1.7**
RNF	**Rovaniemi**	**3.30**	**255**		PN	**Pn**	**05 34 57.6**	**+1.0**
ARA0	**ARCESS Array S**	**3.64**	**305**		Pn	**Pn**	**05 35 02.2**	**+0.9**
	baz=123,slow=16							
ARA0					Pg	**Pb**	**05 35 10.8**	**+1.8**
	baz=121,slow=16							
ARA0					Sn	**Sn**	**05 35 43.4**	**-1.6**
	baz=118,slow=28							
ARA0					Lg	Lg	05 35 55.1	
	baz=112,slow=37							
ARA0	**ARCESS Array S**	**3.64**	**305**		PN	**Pn**	**05 35 02.3**	**+0.9**
	baz=121							
ARA0					SN	**Sn**	**05 35 43.4**	**-1.6**
ARA0	**ARCESS Array S**	**3.64**	**305**		Pn	**Pn**	**05 35 02.2**	**+0.9**
	baz=123,slow=16							
ARA0					Pg	**Pb**	**05 35 10.8**	**+1.8**
	baz=121,slow=16							
ARA0					Sn	**Sn**	**05 35 43.4**	**-1.6**
	baz=118,slow=28							
ARA0					Sg	**Sb**	**05 35 55.1**	**+1.5**
	baz=112,slow=37							
ARCES	**ARCESS Array B**	**3.64**	**305**		Pn	**Pn**	**05 35 02.3**	**+1.0**
	baz=120,slow=15,SNR=128							
ARCES					Pg	**Pb**	**05 35 10.9**	**+2.0**
	baz=116,slow=15,SNR=20							
ARCES					Sn	**Sn**	**05 35 43.2**	**-1.8**
	baz=120,slow=24,SNR=11							
ARCES					Lg	Lg	05 35 55.3	
	baz=116,slow=28,SNR=13							
TOF	**Tornio**	**4.14**	**252**		PG	**Pb**	**05 35 17.6**	**+0.2**
OUL	**Oulu**	**4.17**	**235**		PG	**Pb**	**05 35 20.4**	**+2.5**
PAJU	**Pajala**	**4.26**	**266**		PN	**Pn**	**05 35 10.3**	**+0.4**
PAJU					SG	**Sb**	**05 36 15.1**	**+3.6**
LANU	**Lannavaara**	**4.57**	**280**		PN	**Pn**	**05 35 13.8**	**-0.3**
LANU					SG	**Sb**	**05 36 22.1**	**+1.8**
KALU	**Kalix**	**4.59**	**252**		SG	**Sb**	**05 36 23.2**	**+2.3**
ERTU	**Ertsjaerv**	**4.75**	**262**		PN	**Pn**	**05 35 16.4**	**-0.2**
ERTU					SN	**Sn**	**05 36 11.0**	**-1.2**
KIF	**Kilpisjarvi**	**5.08**	**291**		Pn	**Pn**	**05 35 21.5**	**+0.5**
KIF					Sn	**Sn**	**05 36 17.8**	**-2.5**
KIF					Lg	Lg	05 36 36.6	
KIF	**Kilpisjarvi**	**5.08**	**291**		Pn	**Pn**	**05 35 21.5**	**+0.5**
KIF					Sn	**Sn**	**05 36 17.8**	**-2.5**
KIF					Sg	**Sb**	**05 36 36.6**	**+1.8**
FIA0	**FINESS Array S**	**7.11**	**212**		Sn	**Sn**	**05 37 07.4**	**-3.0**
FIA0					Lg	Lg	05 37 41.0	
	baz=32,slow=22							
FIA0	**FINESS Array S**	**7.11**	**212**		Sn	**Sn**	**05 37 07.4**	**-3.0**
FIA0					Sg	**Sb**	**05 37 41.0**	**+7.7**
	baz=32,slow=22							
FINES	**FINESS Array B**	**7.11**	**212**		Pn	**Pn**	**05 35 49.7**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=4.0							
FINES					Sn	**Sn**	**05 37 06.2**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=22,slow=23,SNR=2.4							
FINES					Lg	Lg	05 37 43.0	
	comp=Z,0.6nm,0.3s,baz=34,slow=25,SNR=11							
NOA	**NORSAR Array B**	**11.84**	**247**		Pn	**Pn**	**05 36 53.4**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=54,slow=9.9,SNR=1.8							
AKASG	**Malin Array Be**	**17.18**	**190**		Pn	**Pn**	**05 38 01.0**	**-3.9**
	comp=Z,0.3nm,0.3s,baz=10,slow=13,SNR=2.1							

IDC ***14*** *05:34:42.4±3.6, 37°.29N×72°.19E, h83km±30km, mb3.6/11, mb1 3.7/17, mb1mx3.5/49, mbtmp3.9/17, Error ellipse: s-maj=26.7km s-min=19.4km az=165.0*
NEIC ***14*** *05:34:49.0±2.1, 37°.63N±0°.05×71°.87E±0°.09, h135km±9km, mb4.3/12, Error ellipse: s-maj=10.9km s-min=6.9km az=72.0*
NNC ***14*** *05:34:50.7±3.2, 38°.08N×71°.85E, h0km, mb4.4, mpv3.9, Error ellipse: s-maj=24.7km s-min=16.8km az=171.0*

ISC 14 05:34:47.5±0.5**, 37°.55N**±0°.04×**72°.10E**±0°.05**, h130**km**, n73,** σ2§**24**/87**, mb3.9**/14**, 8C-2D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.02**	**317**		Pn	**Pn**	**05 35 21.3**	**-0.5**
GAR					Sn	**Sn**	**05 35 46.1**	**-1.9**
CHGR	**Chuyangaron**	**2.57**	**296**			**Pn**	**05 35 27.7**	**-1.0**
CHGR					Sn	**Sn**	**05 35 57.2**	**-3.1**
KBL	**Kabul**	**3.89**	**220**		Pn	**Pn**	**05 35 47.5**	**+1.5**
KBL					Sn	**Sn**	**05 36 32.0**	**+0.8**
NIL	**Nilore**	**4.00**	**166**		Pn	**Pn**	**05 35 50.4**	**+3.1**
NIL					Sn	**Sn**	**05 36 35.9**	**+2.3**
AML	**Almayashu**	**4.74**	**14**		P	**Pn**	**05 35 58.5**	**+1.1**
	SNR=67							
UCH	**Uchtor**	**5.03**	**21**		P	**Pn**	**05 36 02.6**	**+1.3**
	SNR=8.1							
EKS2	**Erkin-Say**	**5.27**	**14**		P	**Pn**	**05 36 05.7**	**+1.5**
	SNR=38							
AAK	**Ala-Archa**	**5.41**	**19**		P	**Pn**	**05 36 07.8**	**+1.7**
	SNR=21							
AAK	**Ala-Archa**	**5.41**	**19**	⇑	P	**Pn**	**05 36 07.7**	**+1.6**
	6.8nm,0.3s							
AAK				⇑	S	**Sn**	**05 37 06.2**	**-1.2**
	32nm,0.6s							
KK31	**Karatay Array**	**5.68**	**348**	⇓	P	**Pn**	**05 36 10.1**	**+0.4**
	8.1nm,0.3s,baz=163,slow=11,SNR=108							
KK31				⇑	S	**Sn**	**05 37 10.4**	**-3.4**
	16nm,0.3s,baz=163,slow=18,SNR=14							
KK31	**Karatay Array**	**5.68**	**348**		Pn	**Pn**	**05 36 09.8**	**+0.1**
KK31					Sn	**Sn**	**05 37 10.6**	**-3.2**
KKAR	**Karatay Array**	**5.68**	**348**			**Pn**	**05 36 10.1**	**+0.4**
KKAR	**Karatay Array**	**5.68**	**348**			**Pn**	**05 36 09.7**	**+0.3**
KKAR					Sn	**Sn**	**05 37 12.7**	**-1.1**
BOOM	**Boomskoye usch**	**5.75**	**30**		Pn	**Pn**	**05 36 13.2**	**+2.5**
CHMS	**Chumysh**	**5.81**	**20**		P	**Pn**	**05 36 13.0**	**+1.6**
	SNR=6.9							
TKM2	**Tokmak 2**	**6.00**	**25**		P	**Pn**	**05 36 15.3**	**+1.2**
	SNR=12							
TKM2	**Tokmak 2**	**6.00**	**25**	⇑	P	**Pn**	**05 36 15.0**	**+0.9**
	4.1nm,0.4s							
TKM2				⇑	S	**Sn**	**05 37 21.5**	**-0.1**
	7.5nm,0.7s							
DHRM	**DHARAMSHALA**	**6.31**	**146**		*e*P	**Pn**	**05 36 20.0**	**+1.6**
DHRM					*e*S	**Sn**	**05 37 25.5**	**-3.8**

GKN				*e*Sn	Sn	05 40 28.1	-12
	comp=N,26nm,0.3s						
AB31	**Akbulak array**	**14.64 327**	⇑P		**P**	**05 38 10.8**	**-0.1**
	comp=N,5.0nm,0.7s,baz=136,slow=13,SNR=47						
AB31			⇑S		**Sn**	**05 40 48.3**	**-1.7**
	comp=N,7.3nm,0.6s,baz=131,slow=25,SNR=17						
ABKAR	**Akbulak array**	**14.64 327**		Pn	**Pn**	**05 38 07.3**	**-0.8**
DMN	**Daman**	**14.76 128**		*e*Pn	**Pn**	**05 38 08.2**	**-1.9**
DMN				*e*Sn	Sn	05 40 41.3	-12
	comp=N,51nm,0.8s						
PKI	**Pulchoki**	**14.98 128**		*e*Pn	**Pn**	**05 38 10.6**	**-2.3**
PKI				*e*Sn	Sn	05 40 45.7	-13
	comp=N,19nm,0.5s						
GUN	**Gumba**	**15.04 126**		*e*Pn	**Pn**	**05 38 11.4**	**-2.3**
GUN				*e*Sn	Sn	05 40 48.6	-12
BVAR	**Borovoye Array**	**15.53 356**		P	**Pn**	**05 38 20.1**	**+0.9**
	comp=N,1.4nm,0.3s,baz=153,slow=13,SNR=12						
BRVK	**Borovoye**	**15.56 356**		Pn	**Pn**	**05 38 18.9**	**-0.7**
BRVK				IAmb	IAmb	05 38 23.2	
	comp=Z,8.0nm,1.0s						
RAMN	**Ramite**	**16.17 127**		*e*Pn	**Pn**	**05 38 26.6**	**-0.9**
AKTO	**Aktyubinsk**	**16.36 326**		P	**P**	**05 38 30.2**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=127,slow=14,SNR=18						
AKTO				S	**Sn**	**05 41 21.5**	**-10**
	comp=Z,0.8nm,0.3s,baz=7.0,slow=20,SNR=9.3						
AKTO	**Aktyubinsk**	**16.36 326**	⇑P		**P**	**05 38 30.9**	**+1.0**
	comp=Z,3.9nm,0.5s						
AKTO			⇓S		**Sn**	**05 41 27.9**	**-3.3**
	comp=Z,7.6nm,0.6s						
TAPN	**Taplejung**	**16.62 123**		*e*Pn	**Pn**	**05 38 32.4**	**-0.7**
ODAN	**Odare**	**16.74 125**		*e*Pn	**Pn**	**05 38 34.1**	**-0.4**
ZAA0	**Zalesovo Array**	**18.60 24**		P	**P**	**05 38 54.9**	**+0.4**
ZALV	**Zalesovo Beam**	**18.60 24**		P	**P**	**05 38 54.6**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=220,slow=10,SNR=11						
ZALV	**Zalesovo Beam**	**18.60 24**		P	**P**	**05 38 55.4**	**+0.9**
SHL	**Shillong**	**20.61 120**		P	**P**	**05 39 18.1**	**+1.5**
SHL				IAmb	IAmb	05 39 19.6	
	comp=Z,11nm,1.5s						
ARU	**Arti**	**20.95 339**		P	**P**	**05 39 21.0**	**+1.1**
	comp=Z,1.6nm,0.2s,baz=158,slow=7.6,SNR=5.5						
ARU	**Arti**	**20.95 339**		P	**P**	**05 39 20.3**	**+0.4**
ARU				IAmb	IAmb	05 39 21.7	
	comp=Z,7.6nm,0.7s						
BRTR	**Keskin Array B**	**29.97 286**		P	**P**	**05 40 45.7**	**+2.0**
	comp=Z,1.0nm,0.5s,baz=115,slow=8.3,SNR=4.6						
NRIK	**Noril'sk**	**32.94 10**		P	**P**	**05 41 10.6**	**+1.5**
	comp=Z,1.4nm,0.4s,baz=154,slow=4.2,SNR=3.9						
AKASG	**Malin Array Be**	**32.99 307**		P	**P**	**05 41 11.6**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=110,slow=8.5,SNR=4.9						
AKASG	**Malin Array Be**	**32.99 307**		P	**P**	**05 41 09.9**	**+0.1**
BJT	**Baijiatuan**	**34.18 72**		P	**P**	**05 41 24.6**	**+4.3**
BJT				IAmb	IAmb	05 41 27.1	
	comp=Z,13nm,0.9s						
MLR	**Muntele Rosu**	**35.05 298**		P	**P**	**05 41 29.2**	**+1.4**
BURAR	**Bucovina Array**	**35.47 302**		P	**P**	**05 41 32.4**	**+1.0**
FIA1	**FINESS Array S**	**37.12 325**		P	**P**	**05 41 46.4**	**+1.3**
FIA1				IAmb	IAmb	05 42 03.9	
	comp=Z,20nm,1.3s						
FINES	**FINESS Array B**	**37.12 325**		P	**P**	**05 41 46.6**	**+1.6**
	comp=Z,1.6nm,0.3s,baz=118,slow=9.6,SNR=15						
FINES	**FINESS Array B**	**37.12 325**		P	**P**	**05 41 45.7**	**+0.7**
ARD2	**ARCESS Array S**	**40.52 337**		P	**P**	**05 42 15.1**	**+1.8**
ARCES	**ARCESS Array B**	**40.52 337**		P	**P**	**05 42 14.9**	**+1.6**
	comp=Z,1.5nm,0.5s,baz=117,slow=8.6,SNR=14						
GERES	**GERESS Array B**	**43.05 304**		P	**P**	**05 42 35.8**	**+1.5**
NB201	**NORSAR Array S**	**44.05 322**		P	**P**	**05 42 43.1**	**+1.1**
NB2	**NORSAR Subarra**	**44.08 322**		P	**P**	**05 42 43.4**	**+1.1**
	comp=Z,1.0nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.08 322**		P	**P**	**05 42 43.4**	**+1.1**
	comp=Z,1.8nm,0.7s,baz=93,slow=7.7,SNR=5.8						
NC204	**NORSAR Array S**	**44.32 323**		P	**P**	**05 42 45.1**	**+0.9**
ZCCA	**Zocca**	**45.72 299**		P	**P**	**05 42 54.8**	**-0.8**
ZCCA				IAmb	IAmb	05 42 59.9	
	comp=Z,33nm,1.5s						
SENIN	**Lac Senin/Sane**	**47.77 302**		P	**P**	**05 43 09.6**	**-2.1**
SENIN				IAmb	IAmb	05 43 36.9	
	comp=Z,3.3nm,1.0s						
ESDC	**Sonseca Array**	**57.75 298**		P	**P**	**05 44 26.2**	**+1.3**
	comp=Z,0.7nm,0.7s,baz=52,slow=6.7,SNR=4.8						
TORD	**Torodi Ar. Bea**	**66.62 269**		P	**P**	**05 45 24.1**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=52,slow=6.1,SNR=5.4						
YKA	**Yellowknife Ar**	**80.16 3**		P	**P**	**05 46 44.3**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=1.1,slow=5.3,SNR=6.8						
WRA	**Warramunga Arr**	**81.81 123**		P	**P**	**05 46 51.5**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=323,slow=4.3,SNR=5.4						

IDC ***14*** *05:40:46.9±1.2,22.°62S×171.°44E,h0km,mb4.0/6, mb1 4.3/8,mb1mx4.1/24,mbtmp4.1/8,ML3.8/2,MS3.5/1, Ms1 3.5/1,ms1mx2.9/29,Error ellipse: s-maj=46.6km s-min=23.2km az=168.0*

NEIC ***14*** *05:40:46.3±1.6,22.°53S±0.°07×171.°7E±0.°1,h10km±2km, mb4.4/12,Error ellipse: s-maj=19.4km s-min=7.6km az=121.0*

ISC 14 05:40:47.7±0.7,22.°62S±0.°09×171.°52E±0.°09,h10km,n29, σ1§03/29,mb4.3/10,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.73**	**276**	Pn	**Pn**	**05 41 59.9**	**+0.6**
DZM	5.1nm,0.3s,baz=116,slow=20,SNR=40			Sn	**Sn**	**05 42 52.9**	**-1.3**
	9.7nm,0.3s,baz=199,slow=21,SNR=5.7						
DZM	**Mont Dzumac**	**4.73**	**276**		**Pn**	**05 42 00.5**	**+1.2**
RAO	**Raoul Island**	**11.57**	**127**	LR	LR	05 46 07.2	
	comp=Z,69nm,20.6s,baz=314,slow=28						
OUZ	**Omahuta**	**12.68**	**172**	Pn	**Pn**	**05 43 47.7**	**-0.4**
LHI	**Lord Howe Isla**	**14.19**	**229**	Pn	**Pn**	**05 44 09.6**	**+0.8**
URZ	**Urewera**	**16.31**	**164**	Pn	**Pn**	**05 44 37.6**	**+0.8**
	0.4nm,0.3s,baz=352,slow=22,SNR=3.0						
URZ				LR	LR	05 49 16.2	
	comp=Z,202nm,21.6s,baz=31,slow=31						
THZ	**Tophouse**	**19.12**	**177**		**P**	**05 45 08.5**	**-2.4**
THZ				IAmb	IAmb	05 45 19.8	
	comp=Z,21nm,1.0s						
PLWZ	**Palliser**	**19.15**	**171**	P	**P**	**05 45 10.6**	**-0.6**
KHZ	**Kahutara**	**19.81**	**176**	P	**P**	**05 45 17.8**	**-0.5**
LTZ	**Lake Taylor**	**20.11**	**178**	P	**P**	**05 45 22.7**	**+1.0**
LTZ				IAmb	IAmb	05 45 23.0	
	comp=Z,18nm,0.7s						
RPZ	**Rata Peaks**	**21.04**	**181**	P	**P**	**05 45 31.4**	**-0.3**
RPZ				IAmb	IAmb	05 45 39.3	
	comp=Z,23nm,1.0s						
WR0	**Warramunga Arr**	**34.50**	**267**	P	**P**	**05 47 35.4**	**-0.9**
ASAR	**Alice Springs**	**34.54**	**261**	P	**P**	**05 47 36.6**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=90,slow=8.8,SNR=7.7						
WB0	**Warramunga Arr**	**34.68**	**268**	P	**P**	**05 47 37.0**	**-0.9**
WB0				IAmb	IAmb	05 47 49.0	
	comp=Z,7.2nm,1.5s						
WB2	**Warramunga Arr**	**34.68**	**267**	P	**P**	**05 47 36.7**	**-1.2**
WRA	**Warramunga Arr**	**34.69**	**267**	P	**P**	**05 47 37.0**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=97,slow=8.2,SNR=14						
MTN	**Manton Dam**	**39.57**	**277**	P	**P**	**05 48 19.5**	**+0.1**
MTN				IAmb	IAmb	05 48 19.9	
	comp=Z,5.9nm,0.8s						
WAKE	**Wake Island**	**41.92**	**353**	P	**P**	**05 48 36.6**	**-2.0**
FITZ	**Fitzroy Crossi**	**43.12**	**267**	P	**P**	**05 48 49.1**	**+0.5**
FITZ				IAmb	IAmb	05 49 08.8	
	comp=Z,7.2nm,1.1s						
VNDA	**Vanda**	**55.15**	**183**	P	**P**	**05 50 19.9**	**0.0**
QSPA	**South Pole Qui**	**67.45**	**180**	P	**P**	**05 51 42.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**81.82**	**294**	P	**P**	**05 53 09.3**	**+1.8**
	comp=Z,2.1nm,0.3s,baz=144,slow=4.8,SNR=6.2						
NVAR	**Mina Array Bea**	**89.47**	**48**	P	**P**	**05 53 47.0**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=224,slow=7.6,SNR=12						
SONM	**Songino Array**	**91.19**	**322**	P	**P**	**05 53 53.4**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=145,slow=5.3,SNR=3.6						
ILAR	**Eielson Array**	**92.83**	**17**	P	**P**	**05 53 59.4**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=214,slow=4.4,SNR=1.8						
DPC	**Dobruska-Polom**	**146.20**	**331**	*e*PKP	**PKPab**	**06 00 29.2**	**+0.2**
KHC	**Kasperske Hory**	**148.31**	**332**	*e*PKP	**PKPbc**	**06 00 34.4**	**+0.2**
GERES	**GERESS Array B**	**148.47**	**332**	PKPbc	**PKPbc**	**06 00 35.0**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=36,slow=2.5,SNR=7.7						
DAVOX	**Davos/Dischmat**	**151.70**	**333**	PKPbc	**PKPbc**	**06 00 42.9**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=247,slow=2.4,SNR=6.0						

CNRM ***14*** *05:56:56.5±1.2,36.°99N×8.°28W,h60km±17km,Error ellipse: s-maj=15.7km s-min=4.8km az=143.0*

INMG ***14*** *05:56:58.7±1.6,36.°89N×8.°27W,h22km±3km,MD2.3, ML2.5,Error ellipse: s-maj=3.8km s-min=2.5km az=54.0*

IGIL ***14*** *05:56:58.9,36.°88N×8.°27W,h24km,ML3.1*

MDD ***14*** *05:56:58.9±0.6,36.°92N×8.°28W,h29km±5km,mbLg2.6/19, Error ellipse: s-maj=6.8km s-min=3.7km az=10.0,PRXIMO SFS* ***14*** *05:56:59.0,36.°97N×8.°23W,h23km,ML2.8,GOLFO DE CADIZ*

ISC 14 05:56:57.7±1.3,36.°91N±0.°05×8.°26W±0.°03,h41km±12km, n76,σ1§39/142,2C-7D,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.42**	**38**	P	**Pn**	**05 57 08.0**	**+0.5**
PBDV	comp=N,14nm,0.3s,SNR=85			S	**Sn**	**05 57 14.3**	**0.0**
PBDV	**Barranco-do-Ve**	**0.42**	**38**	⇓*e*Pg	**Pn**	**05 57 08.0**	**+0.5**
PBDV				*e*Sg	**Sn**	**05 57 14.3**	**0.0**
MORF	**Marmelete**	**0.50**	**321**	*e*P	**Pn**	**05 57 08.8**	**+0.2**
MORF				*e*S	**Sn**	**05 57 15.8**	**-0.5**
MORF				AML	AML	05 57 17.4	
	comp=N,1μm,0.2s						
MORF	**Marmelete**	**0.50**	**321**	P	**Pn**	**05 57 08.8**	**+0.2**
MORF				S	**Sn**	**05 57 15.8**	**-0.5**
	comp=N,1μm,0.2s						
MORF	**Marmelete**	**0.50**	**321**	⇓*e*Pg	**Pn**	**05 57 08.8**	**+0.2**
MORF				*e*Sg	**Sn**	**05 57 15.9**	**-0.4**
MORF				A	A	05 57 16.4	
	comp=N,679nm,0.2s						
PFVI	**Vila Bisbo**	**0.51**	**296**	P	**Pn**	**05 57 08.7**	**+0.2**
PFVI	comp=N,14nm,0.3s,SNR=85			S	**Sn**	**05 57 15.7**	**-0.5**
	comp=N,508nm,0.1s,SNR=5.6						
PFVI	**Vila Bisbo**	**0.51**	**296**	P	**Pn**	**05 57 08.7**	**+0.2**
PFVI				S	**Sn**	**05 57 15.6**	**-0.6**
PFVI	**Vila Bisbo**	**0.51**	**296**	*e*Pg	**Pn**	**05 57 08.8**	**+0.2**
PFVI				*e*Sg	**Sn**	**05 57 15.8**	**-0.5**
PFVI				A	A	05 57 16.9	
	comp=N,218nm,0.1s						
PVAQ	**Vaqueiros**	**0.65**	**41**	P	**Pn**	**05 57 11.1**	**+0.6**
PVAQ				S	**Sn**	**05 57 20.5**	**+0.8**
	comp=N,303nm,0.4s						
PVAQ	**Vaqueiros**	**0.65**	**41**	P	**Pn**	**05 57 11.0**	**+0.4**
PVAQ				S	**Sn**	**05 57 19.8**	**+0.1**
PVAQ	**Vaqueiros**	**0.65**	**41**	⇓*i*Pg	**Pn**	**05 57 11.1**	**+0.6**
PVAQ				*e*Sg	**Sn**	**05 57 20.5**	**+0.8**
PVAQ				A	A	05 57 20.8	
	comp=N,303nm,0.4s						
PTEO	**Sao Teotonio**	**0.73**	**330**	P	**Pn**	**05 57 12.4**	**+0.8**
PTEO				S	**Sn**	**05 57 21.9**	**+0.3**
	comp=N,31nm,0.2s						
PTEO	**Sao Teotonio**	**0.73**	**330**	*e*Pg	**Pn**	**05 57 12.4**	**+0.8**
PTEO				*e*Sg	**Sn**	**05 57 21.9**	**+0.3**
PTEO				A	A	05 57 24.4	
	comp=N,62nm,0.2s						
PCVE	**Castro Verde**	**0.74**	**14**	P	**Pn**	**05 57 12.5**	**+0.8**
PCVE				S	**Sn**	**05 57 22.9**	**+1.1**
	comp=N,104nm,0.2s						
PCVE	**Castro Verde**	**0.74**	**14**	⇓*i*Pg	**Pn**	**05 57 12.5**	**+0.8**
PCVE				*e*Sg	**Sn**	**05 57 22.9**	**+1.1**
PCVE				A	A	05 57 24.0	
	comp=N,104nm,0.2s						
EGRO	**El Granado**	**0.87**	**45**	P	**Pn**	**05 57 14.3**	**+0.7**
	comp=N,6.9nm,0.3s,SNR=115						
EGRO				S	**Sn**	**05 57 25.3**	**+0.2**
	comp=N,126nm,0.1s,SNR=4.9						
PBEJ	**Beja**	**1.15**	**15**	P	**Pn**	**05 57 17.9**	**+0.5**
PBEJ	**Beja**	**1.15**	**15**	*e*P	**Pn**	**05 57 17.9**	**+0.5**
PBEJ				A	A	05 57 45.3	
	comp=N,50nm,0.7s						
PNCL	**Nicolau / Gran**	**1.22**	**350**	P	**Pn**	**05 57 18.8**	**+0.6**
PNCL				S	**Sn**	**05 57 35.9**	**+2.4**
	comp=N,34nm,0.1s						
PNCL	**Nicolau / Gran**	**1.22**	**350**	⇓*e*P	**Pn**	**05 57 18.8**	**+0.6**
PNCL				*e*S	**Sn**	**05 57 35.9**	**+2.4**
PNCL				A	A	05 57 41.8	
	comp=N,34nm,0.1s						
EMIN	**Mina Concepcio**	**1.52**	**56**	P	**Pn**	**05 57 22.8**	**+0.3**
	comp=N,2.2nm,0.3s,SNR=12						
EMIN				S	**Sn**	**05 57 41.9**	**+0.8**
	comp=N,16nm,0.1s,SNR=5.6						
PBAR	**Barrancos**	**1.59**	**37**	P	**Pn**	**05 57 24.3**	**+0.9**
PBAR				S	**Sn**	**05 57 43.3**	**+0.6**
	comp=N,44nm,0.6s						
PBAR	**Barrancos**	**1.59**	**37**	*e*P	**Pn**	**05 57 24.3**	**+0.9**
PBAR				*e*S	**Sn**	**05 57 43.3**	**+0.6**
PBAR				A	A	05 57 54.0	
	comp=N,44nm,0.6s						
EVO	**Evora**	**1.63**	**7**	P	**Pn**	**05 57 24.5**	**+0.6**
EVO				S	**Sn**	**05 57 49.9**	**+6.2**
EVO	**Evora**	**1.63**	**7**	*e*P	**Pn**	**05 57 24.4**	**+0.5**
EVO				*e*S	**Sn**	**05 57 49.9**	**+6.2**
EVO	**Evora**	**1.63**	**7**	*e*P	**Pn**	**05 57 24.5**	**+0.6**
EVO				A	A	05 57 55.8	
	comp=N,37nm,0.4s						
ESPR	**Espera**	**1.93**	**91**	P	**Pn**	**05 57 29.3**	**+1.4**
	comp=N,3.0nm,0.3s,SNR=6.7						
ESPR				S	**Sn**	**05 57 51.5**	**+0.6**
	comp=N,20nm,0.2s						
PMTG	**Montargil**	**2.15**	**1**	P	**Pn**	**05 57 31.6**	**+0.5**
PMTG				S	**Sn**	**05 57 57.0**	**+0.4**
	comp=N,14nm,0.6s						
PMTG	**Montargil**	**2.15**	**1**	⇓*e*Pn	**Pn**	**05 57 31.6**	**+0.5**
PMTG				*e*Sn	**Sn**	**05 57 57.0**	**+0.4**
PMTG				A	A	05 58 13.9	
	comp=N,14nm,0.6s						
PMAFR	**Mafra**	**2.19**	**339**	P	**Pn**	**05 57 32.5**	**+0.8**
	comp=N,39nm,1.0s,SNR=11						
PMAFR				S	**Sn**	**05 57 56.7**	**-0.9**
	comp=N,13nm,0.2s,SNR=5.7						
PMAFR	**Mafra**	**2.19**	**339**	*e*Pn	**Pn**	**05 57 32.8**	**+1.1**
PMAFR				*e*Sn	**Sn**	**05 57 58.0**	**+0.4**
PMAFR				A	A	05 58 19.1	
	comp=N,25nm,0.6s						
ECAB	**El Cabril**	**2.54**	**62**	P	**Pn**	**05 57 37.2**	**+0.7**
	comp=N,3.7nm,0.9s,SNR=16						
ECAB				S	**Sn**	**05 58 04.6**	**-1.5**
	comp=N,4.1nm,0.3s,SNR=6.5						
HORN	**Hornachuelos**	**2.56**	**68**	P	**Pn**	**05 57 36.8**	**0.0**
HORN				S	**Sn**	**05 58 05.7**	**-1.0**
PMRV	**Marv??o**	**2.60**	**15**	P	**Pn**	**05 57 37.7**	**+0.4**
PMRV				S	**Sn**	**05 58 07.9**	**+0.2**
	comp=N,16nm,0.4s						
PMRV	**Marv??o**	**2.60**	**15**	⇓*e*Pn	**Pn**	**05 57 37.7**	**+0.4**
PMRV				*e*Sn	**Sn**	**05 58 07.9**	**+0.2**
PMRV				A	A	05 58 23.7	
	comp=N,16nm,0.4s						
PSBE	**So Bento**	**2.63**	**351**	*e*Pn	**Pn**	**05 57 38.7**	**+1.0**
PSBE				*e*Sn	**Sn**	**05 58 08.6**	**+0.2**
PSBE				A	A	05 58 29.5	
	comp=N,11nm,0.3s						
PCBR	**Castelo Branco**	**2.98**	**12**	P	**Pn**	**05 57 43.0**	**+0.5**
PCBR				S	**Sn**	**05 58 17.0**	**-0.1**
	comp=N,5.3nm,0.6s						
PCBR	**Castelo Branco**	**2.98**	**12**	*e*Pn	**Pn**	**05 57 43.0**	**+0.5**
PCBR				*e*Sn	**Sn**	**05 58 17.0**	**-0.1**
PCBR				A	A	05 58 41.6	
	comp=N,11nm,0.6s						
PCAS	**Casmilo, Conde**	**3.14**	**357**	P	**Pn**	**05 57 45.6**	**+0.9**
PCAS				S	**Sn**	**05 58 20.8**	**-0.1**
	comp=N,9.3nm,0.6s						
PCAS	**Casmilo, Conde**	**3.14**	**357**	*e*Pn	**Pn**	**05 57 45.6**	**+0.9**
PCAS				*e*Sn	**Sn**	**05 58 20.8**	**-0.1**
PCAS				A	A	05 58 43.2	
	comp=N,9.3nm,0.6s						
EADA	**Adamuz**	**3.18**	**66**	P	**Pn**	**05 57 45.8**	**+0.6**
	comp=N,0.7nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**05 58 20.2**	**-1.8**
	comp=N,6.1nm,0.1s,SNR=7.9						
COI	**Coimbra**	**3.29**	**358**	P	**Pn**	**05 57 47.8**	**+1.1**
COI	**Coimbra**	**3.29**	**358**	*e*Pn	**Pn**	**05 57 47.8**	**+1.1**
MTE	**Manteigas**	**3.52**	**9**	P	**Pn**	**05 57 50.4**	**+0.4**
MTE				S	**Sn**	**05 58 30.1**	**-0.4**
	comp=N,9.4nm,0.6s						
MTE	**Manteigas**	**3.52**	**9**	*e*Pn	**Pn**	**05 57 50.4**	**+0.4**
MTE				*e*Sn	**Sn**	**05 58 30.1**	**-0.4**
MTE				A	A	05 58 57.7	
	comp=N,19nm,0.6s						
EPLA	**Plasencia**	**3.58**	**28**	P	**Pn**	**05 57 51.1**	**+0.3**
	comp=N,8.4nm,1.1s,SNR=6.7						
EPLA				S	**Sn**	**05 58 29.7**	**-2.1**
	comp=N,2.8nm,0.1s,SNR=9.4						
ELGU	**Los Guajares,**	**3.71**	**89**	P	**Pn**	**05 57 55.6**	**+3.0**
	comp=N,0.5nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**05 58 37.8**	**+2.7**
	comp=N,1.8nm,0.1s,SNR=7.9						
PVIS	**Viseu**	**3.81**	**4**	P	**Pn**	**05 57 54.5**	**+0.6**
PVIS				S	**Sn**	**05 58 37.4**	**0.0**
	comp=N,2.5nm,0.3s						
PVIS	**Viseu**	**3.81**	**4**	*e*Pn	**Pn**	**05 57 54.5**	**+0.6**
PVIS				*e*Sn	**Sn**	**05 58 37.4**	**0.0**
PVIS				A	A	05 59 04.7	
	comp=N,5.0nm,0.3s						
EQUE	**Quentar**	**3.86**	**84**	P	**Pn**	**05 57 56.9**	**+2.1**
	comp=N,0.5nm,0.3s,SNR=7.9						
EQUE				S	**Sn**	**05 58 39.4**	**+0.5**
	comp=N,1.7nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**4.05**	**48**	⇑P	**Pn**	**05 57 57.9**	**+0.7**
	comp=N,2.9nm,0.1s,SNR=18						
PAB				S	**Sn**	**05 58 41.7**	**-1.6**
	comp=N,2.6nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.22**	**76**	P	**Pn**	**05 58 00.4**	**+0.7**
	comp=N,1.2nm,0.6s,SNR=9.8						
EQES				S	**Sn**	**05 58 46.4**	**-1.4**
	comp=N,5.6nm,0.2s						
MVO	**Moncorvo**	**4.35**	**12**	P	**Pn**	**05 58 01.6**	**+0.2**
	comp=N,7.5nm,0.9s,SNR=9.1						
MVO				S	**Sn**	**05 58 47.8**	**-3.1**
	comp=N,2.7nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**4.35**	**12**	*e*Pn	**Pn**	**05 58 01.6**	**+0.2**
MVO				*e*Sn	**Sn**	**05 58 48.9**	**-1.9**
MVO				A	A	05 59 26.1	
	comp=N,6.6nm,0.5s						
ESDC	**Sonseca Array**	**4.36**	**49**	P	**Pn**	**05 58 02.0**	**+0.6**
	comp=N,0.4nm,0.2s,baz=237,slow=13,SNR=12						
ESDC				S	**Sn**	**05 58 50.0**	**-1.0**
	baz=234,slow=24,SNR=7.9						
PVRL	**Vila Real**	**4.38**	**5**	P	**Pn**	**05 58 02.1**	**+0.4**
PVRL				S	**Sn**	**05 58 49.8**	**-1.6**
	comp=N,2.3nm,0.4s						
PVRL	**Vila Real**	**4.38**	**5**	*e*Pn	**Pn**	**05 58 02.1**	**+0.4**
PVRL				*e*Sn	**Sn**	**05 58 49.8**	**-1.6**
PVRL				A	A	05 59 26.8	
	comp=N,4.7nm,0.4s						
POLO	**Lamas de Olo**	**4.47**	**4**	P	**Pn**	**05 58 03.5**	**+0.5**
POLO				S	**Sn**	**05 58 52.6**	**-1.2**
	comp=N,2.1nm,0.6s						
POLO	**Lamas de Olo**	**4.47**	**4**	*e*Pn	**Pn**	**05 58 03.5**	**+0.5**
POLO				*e*Sn	**Sn**	**05 58 52.6**	**-1.2**
POLO				A	A	05 59 27.0	
	comp=N,2.1nm,0.6s						
SESP	**Santiago Espad**	**4.70**	**73**	S	**Sn**	**05 58 58.4**	**-1.2**
	comp=N,5.3nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**4.70**	**73**	P	**Pn**	**05 58 03.6**	**-2.6**
SESP				S	**Sn**	**05 58 57.2**	**-2.3**
PCAB	**Cabril**	**4.79**	**2**	P	**Pn**	**05 58 08.1**	**+0.7**
PCAB				S	**Sn**	**05 59 01.2**	**-0.5**
PCAB	**Cabril**	**4.79**	**2**	⇑*e*Pn	**Pn**	**05 58 08.1**	**+0.7**
PCAB				*e*Sn	**Sn**	**05 59 01.2**	**-0.5**
ELOB	**Lobios**	**4.95**	**2**	P	**Pn**	**05 58 10.2**	**+0.6**
	comp=N,8.1nm,0.9s,SNR=7.1						
ELOB				S	**Sn**	**05 59 03.0**	**-2.6**
	comp=N,1.7nm,0.2s,SNR=7.9						
MD31	**MD31**	**4.96**	**144**	P	**Pn**	**05 58 09.6**	**-0.1**
PBRG	**Braganca**	**5.02**	**13**	P	**Pn**	**05 58 11.0**	**+0.4**
PBRG				S	**Sn**	**05 59 04.1**	**-3.3**
	comp=N,1.9nm,0.6s						
PBRG	**Braganca**	**5.02**	**13**	*e*Pn	**Pn**	**05 58 11.0**	**+0.4**
PBRG				*e*Sn	**Sn**	**05 59 04.1**	**-3.3**
PBRG				A	A	05 59 50.5	
	comp=N,3.8nm,0.6s						
PGAV	**Gavieira, Arco**	**5.04**	**360**	P	**Pn**	**05 58 11.6**	**+0.7**
PGAV				S	**Sn**	**05 59 06.4**	**-1.6**
PGAV	**Gavieira, Arco**	**5.04**	**360**	*e*Pn	**Pn**	**05 58 11.6**	**+0.7**
PGAV				*e*Sn	**Sn**	**05 59 06.4**	**-1.6**
MDT	**Midelt**	**5.07**	**143**	P	**Pn**	**05 58 11.4**	**+0.1**
ECAL	**Calabor**	**5.16**	**13**	P	**Pn**	**05 58 12.4**	**-0.1**
	comp=N,2.1nm,0.3s,SNR=7.9						
ECAL				S	**Sn**	**05 59 08.2**	**-2.5**
	comp=N,2.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.59**	**70**	P	**Pn**	**05 58 18.4**	**+0.1**
	comp=N,5.0nm,1.0s,SNR=6.5						
ETOB				S	**Sn**	**05 59 19.3**	**-2.1**
	comp=N,1.9nm,0.3s,SNR=7.9						
OUK	**

SKT	Skwentna	5.24	8		Pn	06 05 49.9	-0.5
EYAK	Cordova Ski Ar	5.32	42		Pn	06 05 50.8	-0.7
JPK	Jack Peak	5.39	35		Pn	06 05 51.7	-0.8
GHO	Glory Hole Cre	5.39	21		Pn	06 05 51.3	-1.3
KAIM	Kayak Island	5.49	52	Pn	Pn	06 05 53.5	-0.3
SML	Sawmill	5.55	24		Pn	06 05 54.0	-0.7
RAGM	Ragged Mountai	5.64	47		Pn	06 05 54.9	-1.0
DIV	Divide	5.72	38		Pn	06 05 55.6	-1.4
GOAT	Goat Mountain	5.73	45		Pn	06 05 56.4	-0.8
HMT	Hamilton	5.78	49	Pn	Pn	06 05 56.3	-1.4
SCM	Sheep Creek Mo	5.81	28		Pn	06 05 58.3	0.0
KLU	Klutina	5.94	35		Pn	06 05 59.4	-0.6
BMRM	Bremner River	6.02	43		Pn	06 06 00.6	-0.6
PPLA	Purkeypile	6.12	3	Pn	Pn	06 06 03.3	+0.7
TT01	Tatalina	6.30	347		Pn	06 06 05.0	+0.1
TTA	Tatalina	6.32	347		Pn	06 06 05.4	+0.1
M24K	Tolsona, Glenn	6.34	30		Pn	06 06 06.1	+0.5
KULT	Kultieth River	6.39	53		Pn	06 06 06.0	-0.2
WAT7	Susitna Watana	6.39	17		Pn	06 06 06.0	-0.3
N25K	Chitina, Valde	6.46	38		Pn	06 06 07.4	+0.2
CRQM	Cirque	6.47	48		Pn	06 06 07.9	+0.4
WAT2	Susitna Watana	6.56	18		Pn	06 06 08.4	-0.2
TGL	Tana Glacier	6.60	49		Pn	06 06 09.4	+0.3
VRDI	Verde Repeater	6.62	44		Pn	06 06 09.0	-0.5
GLB	Gilahina Butte	6.62	42		Pn	06 06 09.2	-0.3
CAST	Castle Rocks	6.64	4	Pn	Pn	06 06 10.2	+0.6
MESA	MESA	6.70	55		Pn	06 06 11.5	+0.9
ISLE	Juniper Island	6.73	51		Pn	06 06 10.6	-0.3
TRF	Thorofare Moun	6.80	10		Pn	06 06 11.9	0.0
KTH	Kantishna Hill	6.84	8	Pn	Pn	06 06 12.3	-0.1
YAH	Yahtse	6.87	54		Pn	06 06 13.2	+0.1
MCARA	McCarthy VSAT	6.88	44		Pn	06 06 12.8	-0.1
KIAG	Kiagna River	6.88	49		Pn	06 06 13.1	0.0
DHY	Denali Highway	6.89	22		Pn	06 06 13.3	+0.2
RND	Reindeer	6.93	16		Pn	06 06 13.6	-0.1
BALM	Baldy	6.95	48		Pn	06 06 14.2	+0.2
PTPK	Patty Peak	6.99	47		Pn	06 06 14.1	-0.4
GRNC	Granite Creek	7.04	51		Pn	06 06 15.2	-0.2
TABL	Table Mountain	7.18	55		Pn	06 06 17.9	+0.8
MCK	McKinley	7.23	15		Pn	06 06 17.1	-0.5
PAX	Paxson	7.24	28		Pn	06 06 18.0	+0.1
BARN	Barnard Glacie	7.25	49		Pn	06 06 17.6	-0.5
CTGM	Chitina Glacie	7.33	51		Pn	06 06 19.0	-0.2
BPAW	Bear Paw Mtn.	7.38	7		Pn	06 06 19.1	-0.7
LOGN	Logan Glacier	7.41	52		Pn	06 06 20.0	-0.3
PCA	Pinnacle	7.45	58		Pn	06 06 22.2	+1.4
BCPM	Bancas Point	7.70	60		Pn	06 06 23.9	-0.1
MENT	Mentasta	7.71	33		Pn	06 06 24.6	+0.3
PNL	Peninsula	7.73	63		Pn	06 06 24.4	-0.1
YUK2	White River	7.97	46		Pn	06 06 28.3	+0.4
WRH	Wood River Hil	8.05	15		Pn	06 06 28.2	-0.8
YUK3	Moose Creek	8.11	47		Pn	06 06 30.2	+0.3
HDA	Harding Lake	8.18	19		Pn	06 06 30.9	+0.2
CCB	Clear Creek Bu	8.26	16		Pn	06 06 31.0	-0.7
TCOL	CIGO, UAF Yank	8.46	15		Pn	06 06 35.7	+1.1
COLA	College	8.47	15		Pn	06 06 35.8	+1.2
MDM	Murphy Dome	8.50	14		Pn	06 06 34.1	-1.0
IL31		8.52	18		Pn	06 06 35.3	0.0
ILAR	Eielson Array	8.52	18	P	Pn	06 06 34.9	-0.5
	1.4nm,0.3s,baz=204,slow=13,SNR=52						
ILAR				S	Sn	06 08 05.4	-6.0
	0.7nm,0.3s,baz=12,slow=18,SNR=1.5						
ILAR				LR	LR	06 10 16.7	
	comp=Z,410nm,19.0s,baz=226,slow=41						
ILAR	Eielson Array	8.52	18	Pn	Pn	06 06 36.1	+0.7
YUK4	Talbot Arm	8.67	52		Pn	06 06 38.9	+1.3
PLBC	Pleasant Camp	9.19	66		Pn	06 06 44.4	-0.1
IM03		9.21	358		Pn	06 06 44.5	-0.3
PRP	Porcupine Dome	9.44	19		Pn	06 06 48.5	+0.4
EGAK	Eagle	9.85	31	Pn	Pn	06 06 54.4	+0.9
BESE	Bessie Mountai	9.87	72	Pn	Pn	06 06 54.8	+0.9
DAWY	Dawson	9.88	37	Pn	Pn	06 06 54.5	+0.4
JIS	Juneau Island	10.11	74	Pn	Pn	06 06 58.0	+0.8
WHY	Whitehorse	10.16	60		Pn	06 06 59.1	+1.1
FYU	Fort Yukon	10.45	17	Pn	Pn	06 07 02.1	+0.4
COLD	Coldfoot	10.53	6	Pn	Pn	06 07 02.1	-0.8
BM03	Burnt Mountain	11.33	17		Pn	06 07 12.0	-1.9
BMAR	Burnt Mountain	11.34	17		Pn	06 07 15.0	+1.0
DLBC	Dease Lake	12.40	73	P	Pn	06 07 30.0	+1.4
	0.1nm,0.3s,baz=269,slow=9.3,SNR=1.7						
DLBC				S	Sn	06 09 44.3	-2.4
	0.1nm,0.3s,baz=250,slow=23,SNR=2.0						
INK	Inuvik	14.51	30	P	Pn	06 07 58.4	+1.2
	0.2nm,0.3s,baz=234,slow=18,SNR=5.8						
INK	Inuvik	14.51	30		Pn	06 07 58.0	+0.8
A21K	Barrow	14.65	355	Pn	Pn	06 07 58.7	-0.4
C36M	Paulatuk	17.89	34	P	P	06 08 41.2	-0.1
C36M				IAmb	IAmb	06 08 43.4	
	comp=Z,11nm,0.8s						
YKA	Yellowknife Ar	19.98	58	P	Pn	06 09 05.3	-0.6
	comp=Z,0.1nm,0.3s,baz=270,slow=9.7,SNR=8.1						
YKA				LR	LR	06 18 28.3	
	comp=Z,110nm,19.1s,baz=0.0,slow=42						
YBH	Yreka Blue Hor	24.59	115	LR	LR	06 17 17.5	
	comp=Z,54nm,19.4s,baz=333,slow=31						
NVAR	Mina Array Bea	29.30	114	P	P	06 10 37.4	+2.8
	comp=Z,0.5nm,0.8s,baz=313,slow=9.2,SNR=2.3						
PDAR	Pinedale Array	30.78	98	P	P	06 10 50.7	+2.8
	comp=Z,0.3nm,0.6s,baz=34,slow=4.5,SNR=3.2						
TXAR	Lajitas Array	43.94	107	P	P	06 12 41.7	+2.5
	comp=Z,0.2nm,0.7s,baz=318,slow=3.9,SNR=3.5						
NRIK	Noril'sk	46.77	335	P	P	06 13 00.7	-0.3
	comp=Z,3.7nm,0.8s,baz=40,slow=6.8,SNR=4.8						
ARCES	ARCESS Array B	53.95	1	P	P	06 13 54.8	-0.5
	comp=Z,2.6nm,0.8s,baz=6.3,slow=9.1,SNR=1.6						
SONM	Songino Array	56.70	308	P	P	06 14 15.0	-0.6
	comp=Z,1.8nm,0.8s,baz=47,slow=7.8,SNR=6.3						
HHC	Hu-ho-hao-te	59.69	299	*e*P	P	06 14 39.0	+2.5
HHC				pmax	pmax		
	comp=Z,22nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,6.6s						
ZALV	Zalesovo Beam	59.97	325	P	P	06 14 37.0	-1.0
	comp=Z,1.5nm,0.8s,baz=12,slow=7.7,SNR=5.0						
NB2	NORSAR Subarra	61.83	9	P	P	06 14 50.3	-0.4
	comp=Z,3.7nm,0.9s,baz=349,slow=6.9						
MKAR	Makanchi Array	66.94	322	P	P	06 15 22.6	-1.8
	comp=Z,1.3nm,0.9s,baz=46,slow=5.5,SNR=7.8						
AKASG	Malin Array Be	72.84	359	P	P	06 15 59.1	-1.4
	comp=Z,0.2nm,0.3s,baz=4.3,slow=5.9,SNR=5.2						
GERES	GERESS Array B	74.13	9	P	P	06 16 07.7	-0.5
	comp=Z,0.8nm,0.8s,baz=347,slow=4.0,SNR=3.8						

IDC ***14*** *06:09:40.2±0.5,52.°35N×160.°90E,h0km,mb4.5/33, mb1 4.7/38,mb1mx4.6/54,mbtmp4.5/38,ML4.3/4,MS4.2/27, Ms1 4.2/27,ms1mx4.1/36,Error ellipse: s-maj=14.6km s-min=10.1km az=169.0*

KRSC ***14*** *06:09:40.5±2.2,52.°13N×161.°16E,h62km±32km,ML4.9*

MOS ***14*** *06:09:43.8±1.1,52.°23N×160.°91E,h44km,mb5.2/67, MS4.7/18,Error ellipse: s-maj=5.7km s-min=3.0km az=107.4*

NEIC ***14*** *06:09:45.5±1.4,52.°33N±0.°09×160.°91E±0.°09,h42km±7km, mb5.0/160,Ms_20 4.6/74,Error ellipse: s-maj=13.4km s-min=7.7km az=182.0*

GCMT ***14*** *06:09:45.5±0.5,52.°28N±0.°03×161.°70E±0.°05,h19km±1km, MW4.8/69,Moment Tensor Solution. s19,c25; s69,c91; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.67±.15; Mθθ-0.77±.10; Mφφ-0.89±.09; Mrθ-0.05±.22; Mrφ-1.11±.06; Mθφ1.09±.20; Best double couple: Mo2.12500×10^16 NP1:φs245.00000°,δ38.00000°,λ126.00000°. NP2: φs22.00000°,δ60.00000°,λ65.00000°. Principal axes: T 2.1410, Plg65.0000°, Azm247.0000°; N -0.0290, Plg21.0000°, Azm35.0000°; P -2.1090, Plg12.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***14*** *06:09:45.9±0.0,52.°56N×160.°31E,h40km,mB5.2/53, mb4.9/56,Ms5.3/53,Ms7 5.1/49*

BGR ***14*** *06:09:52.4±0.0,53.°28N×161.°09E,h33km,mb5.4*

ISC 14 06:09:45.1±0.4,52.°28N±0.°04×160.°97E±0.°04,h38km±2km, h39km;pP-P,n756,σ1922/757,mb5.0/191,MS4.5/89, 29C-13D,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	1.00	325	*e*P	Pn	06 10 01.0	-1.6
SPN	Mys Shipunski	1.00	325	PN	Pn	06 10 01.0	-1.6
NLC	Nalytchevo	1.33	313	*e*P	Pn	06 10 06.5	-0.6
NLC				*e*S	Sn	06 10 25.5	+1.9
NLC	Nalytchevo	1.33	313	PN	Pn	06 10 06.5	-0.6
NLC				S	Sn	06 10 25.5	+1.9
RUS	Russkaya	1.51	277	*e*P	Pn	06 10 09.4	-0.2
RUS	Russkaya	1.51	277	PN	Pn	06 10 09.4	-0.2
DALK	Dalny	1.55	300	*e*P	Pn	06 10 09.8	-0.3
DALK	Dalny	1.55	300	PN	Pn	06 10 09.8	-0.3
PET	Petropavlovsk	1.60	299	*e*P	Pn	06 10 10.9	+0.1
PET	Petropavlovsk	1.60	299	*i*PN	Pn	06 10 10.7	-0.1
PET				*e*S	Sn	06 10 26.3	-3.8
PET				pmax	pmax		
	comp=Z,1μm,0.5s						
PET				smax	smax		
	comp=E,6μm,0.5s						
PET				smax	smax		
	comp=N,5μm,0.6s						
PET	Petropavlovsk	1.60	299		Pn	06 10 11.1	+0.3
PET				Sn	Sn	06 10 26.5	-3.6
UGLR	Uglovaya	1.60	306	*e*P	Pn	06 10 11.2	+0.2
UGLR	Uglovaya	1.60	306	PN	Pn	06 10 11.2	+0.2
SDLR	Sedlovina	1.61	309	*e*P	Pn	06 10 10.9	-0.3
SDLR	Sedlovina	1.61	309	PN	Pn	06 10 10.9	-0.3
SMAR	Somma	1.65	308	*e*P	Pn	06 10 11.1	-0.6
SMAR	Somma	1.65	308	PN	Pn	06 10 11.1	-0.6
AVH	Avacha	1.68	307	*e*P	Pn	06 10 12.2	+0.2
AVH	Avacha	1.68	307	PN	Pn	06 10 12.2	+0.2
KRER	Koryakskii	1.69	308	*e*P	Pn	06 10 12.5	+0.2
KRER	Koryakskii	1.69	308	PN	Pn	06 10 12.5	+0.2
KOK	Koryaka	1.74	307	*e*P	Pn	06 10 13.0	+0.1
KOK	Koryaka	1.74	307	PN	Pn	06 10 13.0	+0.1
KRX	Arik	1.78	309	*e*P	Pn	06 10 13.2	-0.2
KRX	Arik	1.78	309	PN	Pn	06 10 13.2	-0.2
GRL	Gorelyy	1.79	280	*e*P	Pn	06 10 14.9	+1.3
GRL	Gorelyy	1.79	280	PN	Pn	06 10 14.9	+1.3
KRMR	Karymshinskiy	1.82	289	*e*P	Pn	06 10 14.3	+0.5
KRMR	Karymshinskiy	1.82	289	PN	Pn	06 10 14.3	+0.5
KDTR	Khodutka, Kamc	1.85	256	*e*P	Pn	06 10 13.2	-1.0
KDTR				*e*S	Sn	06 10 36.1	-0.1
KDTR	Khodutka, Kamc	1.85	256	PN	Pn	06 10 13.2	-1.0
KDTR				S	Sn	06 10 36.1	-0.1
ASAK	Asacha	1.89	274	*e*P	Pn	06 10 15.2	+0.4
ASAK	Asacha	1.89	274	PN	Pn	06 10 15.2	+0.4
KII	Karymskiy	1.98	333	*e*P	Pn	06 10 15.9	-0.3
KII	Karymskiy	1.98	333	PN	Pn	06 10 15.9	-0.3
PEA0B	Petropavlovsk-	2.16	294	PN	Pn	06 10 19.3	+0.8
PEA0B	Petropavlovsk-	2.16	294	Pn	Pn	06 10 19.3	+0.8
PETK	Petropavlovsk-	2.16	294	Pn	Pn	06 10 18.5	0.0
	comp=N,54nm,0.3s,baz=113,slow=17,SNR=338						
PETK				LR	LR	06 11 23.2	
	comp=N,5μm,21.3s,baz=21,slow=49						
PETK	Petropavlovsk-	2.16	294	PN	Pn	06 10 19.0	+0.5
PETK	Petropavlovsk-	2.16	294		Pn	06 10 19.0	+0.5
GNL	Ganaly	2.32	309	*e*P	Pn	06 10 22.0	+1.2
GNL	Ganaly	2.32	309	PN	Pn	06 10 22.0	+1.2
APC	Apacha	2.41	287	*e*P	Pn	06 10 23.2	+1.2
APC				*e*S	Sn	06 10 53.5	+3.3
APC	Apacha	2.41	287	PN	Pn	06 10 23.2	+1.2
APC				S	Sn	06 10 53.5	+3.3
PAU	Pauzhetka	2.70	254	*e*P	Pn	06 10 25.2	-0.7
PAU	Pauzhetka	2.70	254	PN	Pn	06 10 25.2	-0.7
KZV	Kizimen	2.87	352	*e*P	Pn	06 10 27.6	-0.8
KZV	Kizimen	2.87	352	PN	Pn	06 10 27.6	-0.8
TUMD	Tumrok D	2.95	354	*e*P	Pn	06 10 28.6	-0.8
TUMR	Tumrok	3.05	351	*e*P	Pn	06 10 30.8	-0.1
TUMR	Tumrok	3.05	351	PN	Pn	06 10 30.8	-0.1
SKR	Severo-Kuril's	3.43	244	*e*P	Pn	06 10 34.9	-1.0
SKR				*e*S	Sn	06 11 14.3	-0.9
SKR	Severo-Kuril's	3.43	244	*e*PN	Pn	06 10 34.3	-1.6
SKR				pmax	pmax		
	comp=Z,124nm,0.7s						
SKR				MLR	MLR		
	comp=Z,5μm,13.0s						
KMNR	Kamenistaya	3.51	353	*e*P	Pn	06 10 38.4	+1.2
KMNR	Kamenistaya	3.51	353	PN	Pn	06 10 38.4	+1.2
BZGR	Bezymyannyi-Gr	3.67	358	*e*P	Pn	06 10 39.2	-0.2
BZGR	Bezymyannyi-Gr	3.67	358	PN	Pn	06 10 39.2	-0.2
KIRR	Kirishev	3.70	355	*e*P	Pn	06 10 39.7	-0.1
KIRR	Kirishev	3.70	355	PN	Pn	06 10 39.7	-0.1
BZWR	Bezymyannyi-We	3.71	356	*e*P	Pn	06 10 40.7	+0.8
BZWR	Bezymyannyi-We	3.71	356	PN	Pn	06 10 40.7	+0.8
ZLN	Zelenaya	3.75	359	*e*P	Pn	06 10 42.5	+2.1
ZLN	Zelenaya	3.75	359	PN	Pn	06 10 42.5	+2.1
LGNR	Loginova	3.82	358	*e*P	Pn	06 10 42.1	+0.6
LGNR	Loginova	3.82	358	PN	Pn	06 10 42.1	+0.6
KOZ	Kozyrevsk	3.84	351	*e*P	Pn	06 10 42.7	+1.0
KOZ	Kozyrevsk	3.84	351	PN	Pn	06 10 42.7	+1.0
CIRR	Tsirk	3.85	358	*e*P	Pn	06 10 44.4	+2.6
CIRR	Tsirk	3.85	358	PN	Pn	06 10 44.4	+2.6
ESO	Esso	3.89	341	*e*P	Pn	06 10 42.8	+0.5
ESO	Esso	3.89	341	PN	Pn	06 10 42.8	+0.5
KRSR	Krestovskiy	3.96	357	*e*P	Pn	06 10 43.5	+0.2
KRSR	Krestovskiy	3.96	357	PN	Pn	06 10 43.5	+0.2
KLY	Klyuchi	4.05	358	*e*P	Pn	06 10 48.2	+3.8
KLY	Klyuchi	4.05	358	PN	Pn	06 10 48.2	+3.8
KBTR	Krutoberegovo	4.09	15	*e*P	Pn	06 10 43.8	-1.2
KBTR	Krutoberegovo	4.09	15	PN	Pn	06 10 43.8	-1.2
SRDR	Sredinnyy	4.11	350	*e*P	Pn	06 10 45.5	+0.1
SRDR	Sredinnyy	4.11	350	PN	Pn	06 10 45.5	+0.1
BDR	Baidarnaya	4.30	2	*e*P	Pn	06 10 49.8	+1.8
BDR	Baidarnaya	4.30	2	PN	Pn	06 10 49.8	+1.8
SRKR	Sorokina	4.39	1	*e*P	Pn	06 10 49.8	+0.6
SRKR	Sorokina	4.39	1	PN	Pn	06 10 49.8	+0.6
SMY	Shemya	8.03	82	PN	Pn	06 11 36.6	-2.5
SMY	Shemya	8.03	82	Pn	Pn	06 11 36.6	-2.5
SMY				Sn	Sn	06 13 09.2	+0.7
MA2	Magadan	9.28	326	LR	LR	06 16 25.1	
	comp=Z,982nm,18.2s,baz=116,slow=44						
MA2	Magadan	9.28	326	*i*PN	Pn	06 11 55.5	-0.6
MA2				pmax	pmax		
	comp=Z,14nm,0.8s						
SEY	Seymchan	11.62	340	Pn	Pn	06 12 30.0	+1.9
	baz=195,slow=23,SNR=3.4						
SEY	Seymchan	11.62	340	*i*PN	Pn	06 12 30.2	+2.1
YSS	Yuzh-Sakhalins	12.94	253	*e*PN	Pn	06 12 46.4	+0.1
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				MLR	MLR		
	comp=Z,9μm,14.0s						
YSS				MLR	MLR		
	comp=N,4μm,11.0s						
YSS				MLR	MLR		
	comp=E,4μm,11.0s						
JKA	Kamikawa-asahi	14.69	244	Pn	Pn	06 13 09.1	-1.0
ASAJ	Asahikawa	14.69	244	Pn	Pn	06 13 09.0	-1.1
	comp=E,1.3nm,0.3s,baz=79,slow=17,SNR=7.3						
ASAJ				LR	LR	06 19 13.3	
	comp=E,929nm,18.0s,baz=72,slow=39						
ASAJ	Asahikawa	14.69	244	P	Pn	06 13 09.0	-1.1
GRNR	Gornyy	15.34	274	*i*P	Pn	06 13 19.4	+0.8
GRNR				*e*S	Sn	06 16 09.0	+1.9
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
GRNR				smax	smax		
	comp=N,7.0nm,0.9s						
GRNR				MLR	MLR		
	comp=E,3μm,12.0s						
GRNR				MLR	MLR		
	comp=N,2μm,14.0s						
GRNR				MLR	MLR		
	comp=Z,5μm,13.0s						
KLR	Kul'dur	18.68	272	P	P	06 13 59.9	+0.2
	comp=Z,0.3nm,0.3s,baz=81,slow=9.2,SNR=8.7						
KLR	Kul'dur	18.68	272	*c*eP	P	06 13 59.0	-0.7
KLR				pmax	pmax		
	comp=Z,94nm,2.8s						
KLR				MLR	MLR		
	comp=Z,2μm,15.0s						
YAK	Yakutsk	19.38	312	P	P	06 14 05.3	-1.9
	comp=Z,0.2nm,0.3s,baz=22,slow=0.7,SNR=16						
YAK				LR	LR	06 21 23.0	
	comp=Z,475nm,19.6s,baz=91,slow=36						
YAK	Yakutsk	19.38	312	*e*P	P	06 14 05.5	-1.8
YAK				*e*S	S	06 17 42.8	-1.3
YAK				pmax	pmax		
	comp=Z,135nm,1.2s						
YAK				pmax	pmax		
	comp=N,37nm,1.4s						
YAK				pmax	pmax		
	comp=E,97nm,1.3s						
YAK				smax	smax		
	comp=E,934nm,3.5s						
YAK				smax	smax		
	comp=N,244nm,3.0s						
YAK				MLR	MLR		
	comp=Z,2μm,17.0s						
YAK				MLR	MLR		
	comp=N,1μm,18.0s						
YAK				MLR	MLR		
	comp=E,2μm,16.0s						
YAK	Yakutsk	19.38	312	P	P	06 14 05.2	-2.0
YAK				IAmb	IAmb	06 14 19.4	
	comp=Z,127nm,0.9s						
JMM	Marumori	20.17	232	P	Pn	06 14 17.9	-0.2
JMM				IAmb	IAmb	06 14 41.3	
	comp=Z,101nm,1.0s						
TNA	Tin City	20.56	38	P	P	06 14 20.5	+0.4
	baz=245						
USA0B	Ussuriysk Arra	20.81	259	*i*P	P	06 14 22.0	-1.0
USA0B	Ussuriysk Arra	20.81	259	P	P	06 14 21.7	-1.3
USA0B				IAmb	IAmb	06 14 44.9	
	comp=Z,72nm,1.4s						
USA0B				IAMs_20	IAMs_20	06 23 33.5	
	comp=Z,2μm,18.0s						
USRK	Ussuriysk Ar.	20.81	259	P	P	06 14 21.4	-1.6
	comp=Z,18nm,1.0s,baz=56,slow=9.8,SNR=11						
USRK				LR	LR	06 23 18.6	
	comp=Z,794nm,18.2s,baz=55,slow=39						
USRK	Ussuriysk Ar.	20.81	259	P	P	06 14 20.0	-3.0
JYT	Yasato	21.76	231	P	P	06 14 33.3	+0.1
JYT				IAmb	IAmb	06 14 54.7	
	comp=Z,71nm,1.1s						
MDJ	Mudanjiang	22.04	262	P	P	06 14 34.5	-1.7
MDJ				pmax	pmax		
	comp=Z,12nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,220nm,3.2s						
MDJ	Mudanjiang	22.04	262	IAMs_20	IAMs_20	06 23 48.9	
	comp=Z,1μm,18.0s						
MJAR	Matsushiro Arr	22.48	235	P	P	06 14 42.7	+1.7
	comp=Z,12nm,0.8s,baz=28,slow=8.5,SNR=21						
MJAR				LR	LR	06 24 35.1	
	comp=Z,1μm,18.7s,baz=45,slow=40						
MJAR	Matsushiro Arr	22.48	235	P	P	06 14 41.0	0.0
MJAR	Matsushiro Arr	22.48	235	P	P	06 14 41.0	0.0
MJB9	Matsu-Tunnel	22.48	235	P	P	06 14 42.2	+1.2
MAJO	Matsushiro	22.48	235	*i*P	P	06 14 41.7	+0.7
MAJO				pmax	pmax		
	comp=Z,76nm,1.0s						
MAJO	Matsushiro	22.48	235	P	P	06 14 42.1	+1.1
MAJO				IAmb	IAmb	06 15 04.5	
	comp=Z,98nm,1.2s						
MAJO	Matsushiro	22.48	235	IAMs_20	IAMs_20	06 24 15.4	
	comp=Z,1μm,19.0s						
MAT	Matsushiro	22.48	235	P	P	06 14 41.9	+0.9
MAT				S	S	06 18 48.0	+2.9
INU	Inuyama	24.01	235	P	P	06 14 56.2	+0.1
INU				IAmb	IAmb	06 15 22.0	
	comp=Z,50nm,0.9s						
TIXI	Tiksi	24.05	336	*c*eP	P	06 14 54.8	-1.3
TIXI				pmax	pmax		
	comp=Z,322nm,1.3s						
TIXI	Tiksi	24.05	336	P	P	06 14 54.6	-1.5
TIXI				IAmb	IAmb	06 14 56.6	
	comp=Z,57nm,1.0s						
JHJ	Hachijo jima 2	24.52	227	LR	LR	06 26 20.8	
	comp=Z,204nm,19.0s,baz=16,slow=41						
HIA	Hailar	25.99	280	P	P	06 15 12.2	-1.9
HIA				pmax	pmax		
	comp=Z,49nm,0.9s						
HIA	Hailar	25.99	280	P	P	06 15 12.2	-1.9
HIA				IAmb	IAmb	06 15 14.8	
	comp=Z,49nm,0.9s						
RSO	Redoubt South	26.40	54	P	P	06 15 17.2	-0.6
A21K	Barrow	26.74	29	P	P	06 15 20.8	+0.3
	baz=247						
A21K	Barrow	26.74	29	P	P	06 15 20.2	-0.3
A21K				IAmb	IAmb	06 15 42.0	
	comp=Z,51nm,1.4s						
SKT	Skwentna	26.94	50	P	P	06 15 22.7	+0.2
BOD	Bodaibo	27.01	301	*e*P	P	06 15 20.6	-2.5
BOD				pmax	pmax		
	comp=Z,66nm,1.4s						
BPAW	Bear Paw Mtn.	27.22	46	P	P	06 15 25.1	+0.1
KTH	Kantishna Hill	27.23	47	P	P	06 15 26.1	+1.0
KTH				IAmb	IAmb	06 15 41.4	
	comp=Z,36nm,1.3s						
MLY	Manley	27.39	44	P	P	06 15 27.1	+0.6
	baz=266						
KSRS	Korea Array	27.42	250	P	P	06 15 28.5	+1.5
	comp=Z,2.9nm,0.8s,baz=50,slow=9.1,SNR=7.0						
KSRS				LR	LR	06 27 41.1	
	comp=Z,739nm,18.0s,baz=54,slow=39						
KSAR	Wonju Array Be	27.45	250	P	P	06 15 27.0	-0.3
KSAR	Wonju Array Be	27.45	250	P	P	06 15 27.0	-0.3
TRF	Thorofare Moun	27.51	47	P	P	06 15 28.0	+0.2
CUT	Chulitna	27.52	49	P	P	06 15 27.1	-0.6
	baz=271						

comp=Z,888nm,19.0s
INK Inuvik 34.20 37 P P 06 16 26.1 -0.2
INK pmax pmax
comp=Z,52nm,0.4s
INK Inuvik 34.20 37 P P 06 16 26.1 -0.2
ULN Ulaanbaatar 34.21 285 *ce*P **P 06 16 26.3 -0.6**
ULN pmax pmax
comp=Z,20nm,1.3s
ULN Ulaanbaatar 34.21 285 P P 06 16 25.6 -1.3
ULN lAmb lAmb 06 16 27.4
comp=Z,20nm,1.2s
TLY Talaya 34.52 292 P P 06 16 29.5 +0.1
comp=Z,1.8nm,0.4s,baz=57,slow=7.9,SNR=13
TLY Talaya 34.52 292 *i* P **P 06 16 29.0 -0.4**
TLY pmax pmax
comp=Z,28nm,1.4s
TLY MLR MLR
comp=Z,1μm,15.0s
TLY Talaya 34.52 292 P P 06 16 29.4 +0.1
TLY lAmb lAmb 06 16 30.5
comp=Z,28nm,1.3s
SONM Songino Array 34.62 285 P P 06 16 30.0 -0.4
comp=Z,3.3nm,0.8s,baz=62,slow=7.7,SNR=14
SONM PcP **PcP 06 19 04.9 +1.0**
comp=Z,1.4nm,0.7s,baz=46,slow=2.6,SNR=2.9
SONM Songino Array 34.62 285 P P 06 16 29.8 -0.6
SONM pmax pmax
comp=Z,8.0nm,1.1s
SONM Songino Array 34.62 285 P P 06 16 29.8 -0.6
TIA Tai'an 34.67 260 P P 06 16 31.0 +0.2
TIA pmax pmax
comp=Z,13nm,1.3s
TIA LR LR
comp=Z,930nm,16.7s
TIA LR LR
comp=Z,2μm,13.2s
TIA LR LR
comp=Z,2μm,11.8s
HHC Hu-ho-hao-te 35.18 271 *eP* **P 06 16 36.0 +0.7**
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,170nm,6.6s
HHC LR LR
comp=Z,2μm,12.3s
HHC LR LR
comp=Z,2μm,15.4s
ZAK Zakamensk 35.28 290 *eP* **P 06 16 35.7 -0.3**
ZAK pmax pmax
comp=Z,16nm,1.4s
SSE Sheshan 35.85 250 P P 06 16 40.3 -0.7
SSE S **S 06 22 21.0 +5.0**
SSE pmax pmax
comp=Z,15nm,0.7s
SSE pmax pmax
comp=Z,120nm,3.5s
SSE LR LR
comp=Z,270nm,13.0s
SSE LR LR
comp=Z,440nm,12.4s
MOY Mondy 36.02 294 *eP* **P 06 16 42.0 -0.4**
MOY pmax pmax
comp=Z,42nm,1.3s
NJ2 Nanjing 36.51 253 *eP* **P 06 16 45.0 -1.6**
NJ2 sP **pwP 06 17 01.0 -0.4**
NJ2 S **S 06 22 24.4 -1.7**
NJ2 sS **sS 06 22 41.8 +0.5**
NJ2 pmax pmax
comp=Z,24nm,0.6s
NJ2 pmax pmax
comp=Z,360nm,6.2s
NJ2 LR LR
comp=Z,2μm,13.2s
NJ2 LR LR
comp=Z,1μm,12.2s
NJ2 LR LR
comp=Z,2μm,14.7s
NRIK Noril'sk 36.88 325 P P 06 16 48.7 -0.7
comp=Z,4.5nm,1.0s,baz=106,slow=6.0,SNR=7.2
NRIK Noril'sk 36.88 325 *ce*P **P 06 16 48.5 -0.9**
NRIK pmax pmax
comp=Z,13nm,1.5s
C36M Paulatuk 37.42 34 P P 06 16 53.6 -0.3
baz=283,SNR=11
C36M Paulatuk 37.42 34 P P 06 16 53.8 0.0
C36M lAmb lAmb 06 17 11.0
comp=Z,14nm,0.9s
DLBC Dease Lake 38.11 53 P P 06 17 01.6 +1.6
comp=Z,1.8nm,0.7s,baz=286,slow=14,SNR=5.2
DLBC LR LR 06 34 49.0
comp=Z,258nm,18.1s,baz=300,slow=40
WHN Wuhan 40.27 256 P P 06 17 20.3 +2.1
WHN LR LR
comp=Z,4μm,14.9s
WHN LR LR
comp=Z,2μm,10.3s
WHN LR LR
comp=Z,2μm,12.3s
XAN Xi'an 41.12 265 P P 06 17 26.0 +0.8
XAN pP sP 06 17 38.4 -1.4
XAN sP pwP 06 17 43.4 +3.4
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN pmax pmax
comp=Z,77nm,6.0s
XAN LR LR
comp=Z,2μm,13.6s
XAN LR LR
comp=Z,2μm,13.8s
XAN LR LR
comp=Z,4μm,13.8s
XAN Xi'an 41.12 265 IAMs_20 IAMs_20 06 37 03.7
comp=Z,666nm,21.0s
SSLB Suanglung 41.62 242 IAMs_20 IAMs_20 06 35 54.1
comp=Z,938nm,19.0s
BBB Bella Bella 41.81 61 LR LR 06 35 25.5
comp=Z,179nm,18.4s,baz=292,slow=37
EUNU Eureka 42.62 14 P P 06 17 37.1 +0.2
EUNU IAMs_20 IAMs_20 06 30 01.6
comp=Z,441nm,18.0s
LZH Lanzhou 42.88 271 *eP* **P 06 17 40.3 +0.6**
LZH pP sP 06 17 51.8 -2.5
LZH sP pwP 06 17 57.1 +2.6
LZH pmax pmax
comp=Z,32nm,1.4s
LZH pmax pmax
comp=Z,180nm,5.4s
LZH LR LR
comp=Z,1μm,9.8s
LZH LR LR
comp=Z,1μm,13.6s
LZH LR LR
comp=Z,2μm,13.0s
GTA Gaotai 43.23 278 P P 06 17 42.8 +0.3
GTA pP sP 06 17 55.4 -1.6
GTA sP pwP 06 18 00.0 +2.6
GTA S **S 06 24 05.3 -1.5**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,140nm,4.2s
GTA LR LR
comp=Z,2μm,13.5s
GTA LR LR
comp=Z,2μm,14.5s
GTA LR LR
comp=Z,2μm,13.5s
ENH Enshi 43.38 260 IAMs_20 IAMs_20 06 37 32.7
comp=Z,469nm,19.0s
YKA Yellowknife Ar 43.41 42 P P 06 17 42.6 -0.9
comp=Z,3.8nm,0.9s,baz=299,slow=7.9,SNR=7.1
YKA Yellowknife Ar 43.41 42 *i* P **P 06 17 43.9 +0.5**
YKA pmax pmax
comp=Z,4.0nm,0.9s
ZAA0 Zalesovo Array 43.67 304 P P 06 17 43.7 -1.9
ZAA0 IAMs_20 IAMs_20 06 36 08.6
comp=Z,514nm,18.0s
ZALV Zalesovo Beam 43.67 304 P P 06 17 44.1 -1.6
comp=Z,4.1nm,0.7s,baz=63,slow=6.8,SNR=13
ZALV LR LR 06 36 19.1
comp=Z,437nm,18.2s,baz=89,slow=37
RES Resolute Bay 43.88 22 LR LR 06 36 38.3
comp=Z,148nm,21.5s,baz=287,slow=37
RES Resolute Bay 43.88 22 P P 06 17 50.0 +2.9
RES pmax pmax
comp=Z,13nm,0.7s

CD2 Chengdu 46.43 266 P P 06 18 06.1 -1.8
CD2 PP **PP 06 19 54.8 -2.4**
CD2 S **S 06 24 53.8 +0.8**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,230nm,11.6s
CD2 LR LR
comp=Z,2μm,14.9s
CD2 LR LR
comp=Z,2μm,15.7s
CD2 LR LR
comp=Z,2μm,14.3s
A04D Lummi Island 46.58 62 P P 06 18 09.6 +0.8
baz=305
D03D Eldon 47.05 64 P P 06 18 13.0 +0.5
baz=306
B05A Bryant 47.17 63 P P 06 18 14.1 +0.7
baz=306
ZSN Zaisan 47.19 296 *eP* **P 06 18 12.5 -1.1**
comp=Z,3.9nm,1.3s,baz=296
ZSN Zaisan 47.19 296 *eP* **P 06 18 12.5 -1.1**
ZSN pmax pmax
comp=Z,4.0nm,1.3s
WMQ Urumqi 47.75 291 *eP* **P 06 18 18.5 +0.4**
WMQ pP pwP 06 18 33.6 +0.1
WMQ sP sP 06 18 38.6 +5.9
WMQ PcP **PcP 06 19 47.9 +1.2**
WMQ pmax pmax
comp=Z,31nm,1.1s
WMQ pmax pmax
comp=Z,120nm,3.7s
WMQ LR LR
comp=Z,2μm,18.5s
WMQ LR LR
comp=Z,2μm,13.9s
WMQ LR LR
comp=Z,1μm,17.1s
WMQ Urumqi 47.75 291 IAMs_20 IAMs_20 06 42 07.0
comp=Z,652nm,21.0s
GYA Guiyang 47.85 259 ||P **P 06 18 20.0 +0.8**
GYA S **S 06 25 15.1 +1.5**
GYA pmax pmax
comp=Z,25nm,1.0s
GYA pmax pmax
comp=Z,220nm,3.6s
GYA LR LR
comp=Z,820nm,13.5s
GYA LR LR
comp=Z,750nm,13.7s
GYA LR LR
comp=Z,900nm,15.1s
E04D Cinebar 47.91 65 P **P 06 18 20.2 +1.0**
baz=307
SEM Semipalatinsk 47.95 302 *e*P **P 06 18 16.6 -3.2**
comp=Z,6.1nm,1.1s,baz=302
SEM Semipalatinsk 47.95 302 *e*P **P 06 18 16.6 -3.2**
SEM pmax pmax
comp=Z,6.0nm,1.1s
SPA0 Spitsbergen Ar 48.03 351 P **P 06 18 18.1 -1.6**
B08A Colville Reser 48.61 61 P **P 06 18 23.8 -0.9**
KURK Kurchatov 48.62 303 *ce*P **P 06 18 23.8 -0.8**
KURK pmax pmax
comp=Z,65nm,1.3s
KURK Kurchatov 48.62 303 P **P 06 18 23.6 -1.0**
KURK Kurchatov 48.62 303 IAMs_20 IAMs_20 06 42 41.6
comp=Z,652nm,18.0s
KURBB Kurchatov Arra 48.72 303 P **P 06 18 24.3 -1.1**
comp=Z,20nm,1.1s,baz=61,slow=8.0,SNR=56
F05D White Salmon 48.93 65 P **P 06 18 28.0 +0.9**
baz=307
MK31 Makanchi Array 48.99 297 *ce*P **P 06 18 26.5 -1.1**
MK31 Makanchi Array 48.99 297 P **P 06 18 26.3 -1.3**
MK31 lAmb lAmb 06 18 50.8
comp=Z,27nm,1.4s
MKAR Makanchi Array 48.99 297 P **P 06 18 26.4 -1.2**
comp=Z,2.2nm,0.5s,baz=56,slow=7.3,SNR=22
MKAR Makanchi Array 48.99 297 *ce*P **P 06 18 26.3 -1.3**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 48.99 297 P **P 06 18 26.1 -1.4**
MAKZ Makanchi 49.16 297 P **P 06 18 27.9 -1.0**
MAKZ pmax pmax
comp=Z,11nm,1.0s
MAKZ Makanchi 49.16 297 P **P 06 18 27.9 -1.0**
MAKZ lAmb lAmb 06 18 47.9
comp=Z,11nm,1.0s
G05D Wamic, OR 49.40 65 P **P 06 18 32.1 +1.3**
baz=308
C09A Chrisman Ranch 49.52 61 P **P 06 18 31.9 +0.3**
C09A lAmb lAmb 06 18 33.4
comp=Z,17nm,1.4s
I04A Tendick Farm, 49.68 68 P **P 06 18 33.2 +0.3**
baz=309
F07A Phinny Hill Vi 49.77 64 P **P 06 18 34.1 +0.6**
F07A lAmb lAmb 06 18 35.2
comp=Z,9.2nm,0.8s
NEW Newport 49.85 60 P **P 06 18 34.5 +0.3**
NEW pmax pmax
comp=Z,6.0nm,1.0s
NEW Newport 49.85 60 P **P 06 18 34.3 +0.2**
baz=307
NEW Newport 49.85 60 P **P 06 18 34.5 +0.3**
I05D Terrebonne, OR 49.95 66 P **P 06 18 35.9 +1.0**
baz=308
E09A Wood Farm, Sta 50.37 62 P **P 06 18 38.5 +0.5**
E09A lAmb lAmb 06 18 39.3
comp=Z,11nm,1.0s
J05D Fort Rock, OR 50.66 67 P **P 06 18 40.9 +0.4**
baz=309
L04D Klamath Falls 50.73 69 P **P 06 18 41.9 +0.9**
baz=310
K04D Chiloquin, OR 50.79 68 P **P 06 18 41.9 +0.5**
baz=310
YBH Yreka Blue Hor 50.80 70 P **P 06 18 42.9 +1.4**
comp=Z,7.7nm,1.0s,baz=6.8,slow=2.0,SNR=9.5
YBH Yreka Blue Hor 50.80 70 P **P 06 18 42.2 +0.7**
YBH pmax pmax
comp=Z,23nm,1.5s
YBH Yreka Blue Hor 50.80 70 P **P 06 18 42.2 +0.7**
YBH lAmb lAmb 06 19 10.1
comp=Z,23nm,1.4s
M02C Callahan 50.94 70 P **P 06 18 43.0 +0.5**
baz=310
WALA Waterton Lakes 51.05 57 P **P 06 18 42.1 -1.2**
WALA lAmb lAmb 06 19 03.8
comp=Z,20nm,1.4s
KMI Kunming 51.22 261 ||*i*P **P 06 18 46.4 +1.5**
KMI pP pP 06 18 53.1 -1.8
KMI S **S 06 26 01.0 +0.2**
KMI pmax pmax
comp=Z,21nm,0.8s
KMI pmax pmax
comp=Z,170nm,4.0s
KMI LR LR
comp=Z,870nm,14.7s
KMI LR LR
comp=Z,800nm,13.4s
KMI LR LR
comp=Z,520nm,17.7s
KMI Kunming 51.22 261 IAMs_20 IAMs_20 06 43 12.2
comp=Z,518nm,18.0s
DAG Danmarks Havn 51.22 360 P **P 06 18 44.7 +0.7**
DAG pmax pmax
comp=Z,21nm,1.1s
M04C Macdoel 51.27 69 P **P 06 18 46.0 +0.9**
baz=310
N02D Trinity Center 51.29 71 P **P 06 18 45.8 +0.6**
baz=310
BVAR Borovoye Array 51.31 309 P **P 06 18 44.1 -1.0**
comp=Z,17nm,0.6s,baz=209,slow=24,SNR=22
BRVK Borovoye 51.34 309 *ce*P **P 06 18 44.5 -0.8**
BRVK pmax pmax
comp=Z,23nm,1.7s
BRVK Borovoye 51.34 309 P **P 06 18 44.6 -0.6**
BRVK lAmb lAmb 06 19 08.9
comp=Z,20nm,1.1s
BRVK Borovoye 51.34 309 IAMs_20 IAMs_20 06 42 37.4
comp=Z,360nm,18.0s
WDC Whiskeytown Da 51.64 71 P **P 06 18 48.5 +0.9**
WDC pmax pmax
comp=Z,16nm,1.4s
WDC Whiskeytown Da 51.64 71 P **P 06 18 48.5 +0.9**
WDC lAmb lAmb 06 18 50.1
comp=Z,16nm,1.4s
QIZ Qiongzhong 51.65 250 P **P 06 18 47.3 -0.6**

QIZ S **S 06 26 05.6 -0.8**
QIZ LR LR
comp=Z,380nm,10.7s
QIZ LR LR
comp=Z,950nm,13.1s
QIZ LR LR
comp=Z,510nm,16.1s
BMO Blue Mountains 51.87 63 P **P 06 18 48.8 -0.6**
BMO pmax pmax
comp=Z,6.0nm,1.2s
BMO Blue Mountains 51.87 63 P **P 06 18 48.8 -0.6**
MOD Modoc Plateau 52.08 68 P **P 06 18 51.7 +0.7**
MOD lAmb lAmb 06 18 53.2
comp=Z,13nm,1.0s
BRZS Berezniki 52.09 305 *e*P **P 06 18 49.6 -1.3**
comp=Z,21nm,1.6s,baz=305
BRZS *e*S **S 06 26 09.7 -2.3**
baz=305
BRZS Berezniki 52.09 305 *e*P **P 06 18 49.6 -1.3**
BRZS *e*S **S 06 26 09.6 -2.3**
BRZS pmax pmax
comp=Z,21nm,1.6s
TDK Taldyqorghan 52.23 297 *e*P **P 06 18 50.4 -1.7**
baz=297
TDK LR LR 06 41 53.6
comp=Z,854nm,13.6s
TDK Taldyqorghan 52.23 297 *e*P **P 06 18 50.3 -1.7**
TDK MLR MLR
comp=Z,854nm,14.0s
O03E Paynes Creek 52.26 71 P **P 06 18 52.2 -0.1**
baz=311,SNR=8.1
MSO Missoula 52.43 60 P **P 06 18 54.0 +0.4**
baz=310
PDGK Podgornoye 52.71 295 P **P 06 18 54.5 -1.2**
SHLS Shalkode 52.83 295 *e*P **P 06 18 53.7 -2.9**
baz=294
SHLS Shalkode 52.83 295 *e*P **P 06 18 53.7 -2.9**
ORV Oroville 52.92 71 P **P 06 18 56.9 -0.2**
ORV pmax pmax
comp=Z,5.0nm,0.9s
ORV Oroville 52.92 71 P **P 06 18 56.9 -0.2**
KPKS Kokpek 53.06 295 *e*P **P 06 18 57.2 -1.1**
comp=Z,4.6nm,0.8s,baz=295
KPKS Kokpek 53.06 295 *e*P **P 06 18 57.1 -1.2**
KPKS pmax pmax
comp=Z,5.0nm,0.8s
SLVN Son La 53.36 257 P **P 06 19 00.2 -0.4**
SLVN IAMs_20 IAMs_20 06 43 40.4
comp=Z,390nm,18.0s
BEKR Beckworth 53.37 70 P **P 06 19 01.0 +0.2**
BEKR lAmb lAmb 06 19 03.1
comp=Z,13nm,1.2s
SATY Saty 53.48 295 *e*P **P 06 19 00.6 -0.9**
comp=Z,9.3nm,1.2s,baz=295
SATY Saty 53.48 295 *e*P **P 06 19 00.5 -0.9**
SATY pmax pmax
comp=Z,9.0nm,1.2s
HRY Holter Researc 53.62 59 P **P 06 19 02.1 -0.3**
AFDM Forest Hills D 53.62 71 P **P 06 19 03.1 +0.7**
EGMT Eagleton 53.84 56 P **P 06 19 04.0 +0.1**
baz=311
EGMT Eagleton 53.84 56 P **P 06 19 03.0 -0.9**
KUU Kurty 54.08 297 *e*P **P 06 19 03.6 -2.1**
comp=Z,23nm,1.2s,baz=297
KUU *e*S **S 06 26 36.0 -3.2**
baz=297
KUU LR LR 06 42 33.8
comp=Z,377nm,12.3s
KUU Kurty 54.08 297 *e*P **P 06 19 03.5 -2.1**
KUU *e*S **S 06 26 35.9 -3.2**
KUU pmax pmax
comp=Z,23nm,1.2s
KUU MLR MLR
comp=Z,377nm,12.0s
VCNR Virginia City 54.16 70 P **P 06 19 06.2 -0.3**
VCNR lAmb lAmb 06 19 08.8
comp=Z,10nm,0.9s
MDOK Medeo 54.17 296 *e*P **P 06 19 05.2 -1.2**
comp=Z,78nm,1.2s,baz=296
MDOK LR LR 06 42 46.4
comp=Z,566nm,13.8s
MDOK Medeo 54.17 296 *e*P **P 06 19 05.2 -1.2**
MDOK pmax pmax
comp=Z,78nm,1.2s
MDOK MLR MLR
comp=Z,566nm,14.0s
APA Apatity 54.21 338 ||*i*P **P 06 19 06.0 -0.2**
APA pmax pmax
comp=Z,15nm,1.1s
AAA Alma-Ata 54.21 296 *e*P **P 06 19 05.6 -1.1**
baz=296
AAA LR LR 06 43 20.5
comp=Z,428nm,12.9s
AAA Alma-Ata 54.21 296 *e*P **P 06 19 05.5 -1.1**
AAA MLR MLR
comp=Z,428nm,13.0s
ARC2 ARCESS Array S 54.22 342 P **P 06 19 05.1 -1.2**
ARCES ARCESS Array B 54.23 342 P **P 06 19 06.3 0.0**
comp=Z,22nm,1.1s,baz=20,slow=4.0,SNR=10
ARCES LR LR 06 46 13.4
comp=Z,198nm,18.7s,baz=30,slow=40
HLID Hailey 54.29 63 P **P 06 19 07.8 +0.4**
baz=311
HLID Hailey 54.29 63 P **P 06 19 06.9 -0.5**
MCMT McKenzie Canyo 54.31 61 P **P 06 19 07.3 -0.3**
PNTR Pine Nut 54.33 70 P **P 06 19 07.1 -0.6**
PNTR lAmb lAmb 06 19 10.1
comp=Z,16nm,0.9s
BCYI Bear Canyon 54.35 62 P **P 06 19 07.6 -0.3**
ARU Arti 54.36 318 P **P 06 19 07.3 -0.1**
comp=Z,5.5nm,0.7s,baz=28,slow=2.8,SNR=18
ARU Arti 54.36 318 *d*/*i*P **P 06 19 08.1 +0.7**
ARU 06 21 07.3
ARU S **S 06 26 43.7 +1.2**
ARU SS **SS 06 30 23.0 -1.1**
ARU pmax pmax
comp=Z,27nm,0.9s
ARU Arti 54.36 318 P **P 06 19 06.5 -1.0**
BOZ Bozeman (W) 54.45 60 P **P 06 19 08.7 +0.2**
baz=311,SNR=6.8
BTLS Baital 54.56 300 *e*P **P 06 19 07.3 -1.8**
comp=Z,6.2nm,1.0s,baz=299
BTLS *e*S **S 06 26 42.6 -2.9**
baz=299
BTLS Baital 54.56 300 *e*P **P 06 19 07.3 -1.8**
BTLS *e*S **S 06 26 42.6 -2.9**
BTLS pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 54.71 7 P **P 06 19 10.0 -0.2**
SUMG Summit 54.71 7 P **P 06 19 10.0 -0.2**
KDJ Kajisay 54.78 295 P **P 06 19 09.3 -1.6**
KDJ pmax pmax
comp=Z,20nm,0.9s
KDJ Kajisay 54.78 295 P **P 06 19 09.3 -1.6**
KDJ lAmb lAmb 06 19 12.6
comp=Z,20nm,0.9s
LSA Lhasa 55.02 275 IAMs_20 IAMs_20 06 45 17.5
comp=Z,598nm,21.0s
QLMT Earthquake Lak 55.06 60 P **P 06 19 12.5 -0.5**
TKM2 Tokmak 2 55.13 297 P **P 06 19 13.1 -0.4**
SNR=11
TKM2 Tokmak 2 55.13 297 P **P 06 19 12.6 -0.9**
KVN Kaiserville 55.22 69 P **P 06 19 13.8 -0.3**
KVN pmax pmax
comp=Z,13nm,1.0s
KVN Kaiserville 55.22 69 P **P 06 19 13.8 -0.3**
KVN lAmb lAmb 06 19 16.5
comp=Z,13nm,1.0s
ULHL Ulahol 55.22 296 P **P 06 19 14.2 0.0**
SNR=9.1
BOOM Boomskoye usch 55.22 296 P **P 06 19 13.9 -0.3**
BOOM pmax pmax
comp=Z,30nm,1.2s
BOOM MLR MLR
comp=Z,500nm,21.0s
BOOM Boomskoye usch 55.22 296 P **P 06 19 13.9 -0.3**
BOOM IAMs_20 IAMs_20 06 46 06.6
comp=Z,536nm,21.0s
YHB Horse Butte 55.24 60 P **P 06 19 14.1 -0.3**
RYN Ryan 55.26 70 P **P 06 19 13.7 -0.7**
SGDS Sogindy 55.30 298 *e*P **P 06 19 13.2 -1.3**
comp=Z,8.5nm,1.1s,baz=298
SGDS Sogindy 55.30 298 *e*P **P 06 19 13.2 -1.3**
SGDS pmax pmax
comp=Z,8.0nm,1.1s
GCMT Greycliff 55.36 58 P **P 06 19 14.8 -0.2**

YHH Holmes Hill 55.40 60 P P 06 19 15.2 -0.3
USP Ospenovka 55.49 298 P P 06 19 16.2 +0.3
SNR=10
NVAR Mina Array Bea 55.52 70 P P 06 19 17.5 +1.1
comp=Z,4.2nm,0.8s,baz=300,slow=14,SNR=4.9
NVAR LR LR 06 42 12.8
comp=Z,101nm,19.5s,baz=312,slow=35
NVAR Mina Array Bea 55.52 70 P P 06 19 17.2 +0.8
LHV Little Huntoon 55.52 70 P P 06 19 16.4 +0.4
LHV IAmb IAmb 06 19 19.1
comp=Z,16nm,1.1s
CHMS Chumysh 55.54 297 P P 06 19 16.0 -0.2
SNR=6.0
KBK Karagaybulak 55.66 297 P P 06 19 17.3 +0.1
SNR=11
YNE Yellowstone No 55.70 59 P P 06 19 17.6 -0.1
ELK Elko 55.70 66 P P 06 19 18.0 +0.3
ELK pmax pmax
comp=Z,5.0nm,0.9s
ELK Elko 55.70 66 P P 06 19 18.0 +0.3
FRU1 Bishkek 55.73 297 P P 06 19 17.3 -0.3
FRU1 pmax pmax
comp=Z,84nm,1.2s
FRU1 MLR MLR
comp=Z,700nm,19.0s
FRU1 Bishkek 55.73 297 P P 06 19 17.3 -0.3
FRU1 IAMs_20 IAMs_20 06 45 25.9
comp=Z,686nm,19.0s
TMCR Tamitsa 55.75 334 *e*P P 06 19 17.8 +0.5
TMCR pmax pmax
comp=Z,65nm,0.6s
H17A Grant Village 55.81 60 P P 06 19 19.8 +1.3
baz=312
SGF Sodankyl 55.81 341 P P 06 19 19.0 +1.3
SGF pmax pmax
comp=Z,32nm,1.4s
AAK Ala-Archa 55.92 297 P P 06 19 19.0 -0.1
SNR=19
AAK Ala-Archa 55.92 297 *ce*P P 06 19 19.2 +0.1
AAK pmax pmax
comp=Z,99nm,1.3s
IMW Indian Meadow 55.95 61 P P 06 19 19.5 +0.1
RLMT Red Lodge 56.01 59 P P 06 19 20.8 +1.0
baz=312,SNR=6.2
RLMT Red Lodge 56.01 59 P P 06 19 19.8 0.0
TPAW Teton Pass 56.22 61 P P 06 19 20.8 -0.5
EKS2 Erkin-Say 56.29 298 P P 06 19 21.9 +0.1
SNR=19
REDW Red Top Meadow 56.36 61 P P 06 19 23.0 +0.7
REDW IAmb IAmb 06 19 27.1
comp=Z,23nm,1.5s
KIRV Kirov 56.37 324 *ce*P P 06 19 22.6 +0.8
TPH Tonopah 56.38 70 P P 06 19 23.1 +0.5
TPH pmax pmax
comp=Z,77nm,1.1s
TPH Tonopah 56.38 70 P P 06 19 23.1 +0.5
LAO LASA Array 56.53 56 P P 06 19 24.2 +1.0
baz=313
LAO LASA Array 56.53 56 P P 06 19 23.9 +0.6
LAO IAmb IAmb 06 19 36.6
comp=Z,10nm,1.1s
MSF Maaselka 56.57 339 P P 06 19 24.6 +1.4
MSF pmax pmax
comp=Z,78nm,1.5s
AHID Auburn Hatcher 56.63 62 P P 06 19 25.1 +0.9
AHID IAmb IAmb 06 19 27.0
comp=Z,14nm,1.1s
SMMC Simmler 56.66 74 P P 06 19 25.7 +1.4
baz=314
AML Almayashu 56.70 297 P P 06 19 25.6 +0.6
SNR=14
VES Vestal, Richgr 56.83 73 P P 06 19 26.2 +0.7
baz=314
SPUT South Promonto 56.88 64 P P 06 19 26.0 +0.1
CWC Cottonwood Cre 57.01 72 P P 06 19 27.8 +0.8
baz=314
PKM Mcpherson Peak 57.06 74 P P 06 19 28.6 +1.2
baz=314
R11A Troy Canyon, C 57.14 68 P P 06 19 28.7 +0.9
baz=314,SNR=10
R11A Troy Canyon, C 57.14 68 P P 06 19 27.9 +0.1
HWUT Hardware Ranch 57.16 63 P P 06 19 28.4 +0.4
HWUT IAmb IAmb 06 19 31.1
comp=Z,16nm,1.2s
KSH Kashi 57.22 294 P P 06 19 32.3 +4.0
KSH S S 06 27 25.9 +4.7
KSH pmax pmax
comp=Z,66nm,1.4s
KSH pmax pmax
comp=Z,340nm,4.6s
KSH LR LR
comp=Z,1μm,10.4s
KSH LR LR
comp=Z,2μm,13.8s
KSH LR LR
comp=Z,2μm,13.3s
PAYA Payao 57.29 259 P P 06 19 31.4 +2.5
comp=Z,6μmcomp=Z,279nm,0.8s
ISA Isabella, Lake 57.31 73 P P 06 19 29.0 0.0
baz=314
SPR3 Spring Creek 3 57.40 67 P P 06 19 31.4 +1.5
SPR3 IAmb IAmb 06 19 33.3
comp=Z,11nm,1.2s
DUG Dugway, Tooele 57.44 65 P P 06 19 30.0 +0.1
DUG pmax pmax
comp=Z,16nm,1.3s
DUG Dugway, Tooele 57.44 65 P P 06 19 30.7 +0.8
baz=314,SNR=10
DUG Dugway, Tooele 57.44 65 P P 06 19 30.0 +0.1
DUG IAmb IAmb 06 19 33.0
comp=Z,16nm,1.2s
BW06 Boulder Array 57.46 61 P P 06 19 31.1 +1.0
baz=313,SNR=10
BW06 Boulder Array 57.46 61 P P 06 19 29.9 -0.2
BW06 IAmb IAmb 06 19 32.8
comp=Z,18nm,1.4s
PD31 Pinedale Array 57.46 61 P P 06 19 30.2 +0.1
PD31 IAmb IAmb 06 19 32.8
comp=Z,16nm,1.4s
PDAR Pinedale Array 57.46 61 P P 06 19 31.1 +0.9
comp=Z,4.7nm,0.8s,baz=310,slow=2.7,SNR=38
PDAR LR LR 06 44 43.0
comp=Z,169nm,18.2s,baz=345,slow=37
DZA Taraz 57.46 299 *e*P P 06 19 29.3 -0.6
baz=299
DZA Taraz 57.46 299 *e*P P 06 19 29.2 -0.6
SHL Shillong 57.54 271 P P 06 19 30.8 0.0
SHL pmax pmax
comp=Z,53nm,1.2s
SHL MLR MLR
comp=Z,400nm,21.0s
SHL Shillong 57.54 271 P P 06 19 30.8 0.0
SHL IAMs_20 IAMs_20 06 46 52.6
comp=Z,373nm,21.0s
MPMC Manual Prospec 57.62 72 P P 06 19 32.2 +0.9
baz=314,SNR=5.9
FURC Furnace Creek, 57.70 71 P P 06 19 32.9 +1.4
baz=314,SNR=9.2
TPNV Topopah Spring 57.72 70 P P 06 19 33.0 +1.0
TPNV pmax pmax
comp=Z,11nm,1.1s
TPNV Topopah Spring 57.72 70 P P 06 19 32.4 +0.4
baz=314,SNR=11
TPNV Topopah Spring 57.72 70 P P 06 19 33.0 +1.0
TPNV IAmb IAmb 06 19 34.6
comp=Z,11nm,1.1s
KK31 Karatay Array 57.75 300 *i* P P 06 19 31.3 -0.6
KK31 Karatay Array 57.75 300 P P 06 19 31.3 -0.6
KKAR Karatay Array 57.75 300 P P 06 19 31.5 -0.4
KKAR pmax pmax
comp=Z,24nm,1.0s
KKAR Karatay Array 57.75 300 P P 06 19 31.5 -0.4
KKAR Karatay Array 57.75 300 P P 06 19 31.0 -0.9
LRMC Laurel Mtn Rad 57.91 72 P P 06 19 34.1 +0.9
baz=314
JLU Jordanelle 57.91 64 P P 06 19 33.1 -0.2
KLMR Klimovskoe 57.92 330 *e*P P 06 19 31.1 -1.7
KLMR pmax pmax
comp=Z,90nm,1.4s
KLMR Klimovskoe 57.92 330 *e*P P 06 19 31.1 -1.7
KLMR AMP 06 19 47.0
comp=Z,90nm,1.4s
KLMR LQ LQ 06 41 40.7
KLMR LQ LQ 06 41 40.7
KLMR LR LR 06 46 05.5
OUL Oulu 57.97 339 P P 06 19 33.6 +0.6
OUL pmax pmax
comp=Z,35nm,1.3s
PSUT Pine Spring 57.99 67 P P 06 19 35.1 +1.1
PRN Pahroc Range 58.09 69 P P 06 19 35.3 +0.8
PRN IAmb IAmb 06 19 56.1
comp=Z,10.0nm,1.1s
CM34 Chiang Mai Arr 58.12 259 P P 06 19 36.0 +1.3
EDW2 Edwards Air Fo 58.14 73 P P 06 19 35.7 +0.9
baz=315
CM35 Chiang Mai Arr 58.25 259 P P 06 19 37.0 +1.4
CM33 Chiang Mai Arr 58.27 260 P P 06 19 37.0 +1.2
CHTO Chiang Mai 58.27 260 P P 06 19 36.7 +0.9
CHTO pmax pmax
comp=Z,31nm,1.0s
CHTO MLR MLR
comp=Z,500nm,18.0s
CHTO Chiang Mai 58.27 260 P P 06 19 36.7 +0.9
CHTO Chiang Mai 58.27 260 IAMs_20 IAMs_20 06 47 19.2
comp=Z,470nm,18.0s
CM36 Chiang Mai Arr 58.40 259 P P 06 19 38.0 +1.3
SHOC Shoshone, Teco 58.43 71 P P 06 19 38.0 +1.2
baz=314
CM32 Chiang Mai Arr 58.45 260 P P 06 19 40.0 +2.9
CM09 Chiang Mai Arr 58.52 259 P P 06 19 40.0 +2.4
comp=Z,134nmcomp=Z,16nm,1.4s
JOF Joensuu 58.53 336 P P 06 19 37.7 +0.7
JOF pmax pmax
comp=Z,54nm,1.1s
GSC Goldstone, Bar 58.54 72 P P 06 19 38.5 +0.9
baz=315,SNR=5.1
CM31 Chiang Mai Arr 58.54 259 P P 06 19 45.5 +7.8
CMAR Chiang Mai Arr 58.54 259 P P 06 19 39.8 +2.0
comp=Z,8.0nm,1.0s,baz=24,slow=7.1,SNR=29
CMAR LR LR 06 47 47.3
comp=Z,346nm,19.2s,baz=93,slow=39
CM02 Chiang Mai Arr 58.56 259 P P 06 19 40.0 +2.2
comp=Z,131nmcomp=Z,17nm,0.9s
CM15 Chiang Mai Arr 58.56 259 P P 06 19 40.6 +2.8
comp=Z,12nm,0.8s
CM01 Chiang Mai Arr 58.56 259 P P 06 19 40.8 +2.9
comp=Z,180nmcomp=Z,19nm,1.4s
MWC Mount Wilson 58.56 74 P P 06 19 38.2 +0.3
MWC pmax pmax
comp=Z,18nm,1.2s
MWC Mount Wilson 58.56 74 P P 06 19 38.2 +0.3
MWC IAmb IAmb 06 19 40.2
comp=Z,18nm,1.2s
CM04 Chiang Mai Arr 58.57 259 P P 06 19 40.0 +2.1
comp=Z,150nmcomp=Z,15nm,1.2s
CM05 Chiang Mai Arr 58.59 259 P P 06 19 40.3 +2.3
comp=Z,121nmcomp=Z,11nm,1.1s
CM13 Chiang Mai Arr 58.59 259 P P 06 19 40.4 +2.3
comp=Z,99nmcomp=Z,11nm,0.8s
SHPR Sheep Range 58.66 70 P P 06 19 37.8 -0.7
IUG luzhnay 58.67 299 *e*P P 06 19 37.8 -0.7
comp=Z,31nm,1.1s,baz=299
IUG luzhnay 58.67 299 *e*P P 06 19 37.7 -0.7
IUG pmax pmax
comp=Z,31nm,1.1s
CHAI Chaiyaphum 58.70 255 P P 06 19 40.0 +1.2
comp=Z,17nm,1.4s
AB31 Akbulak array 58.73 311 *i* P P 06 19 38.2 -0.4
ABKAR Akbulak array 58.73 311 P P 06 19 38.4 -0.2
TCRU Three Creeks R 58.74 66 P P 06 19 38.7 -0.5
AKTO Aktyubinsk 58.77 313 P P 06 19 39.4 +0.5
comp=Z,7.4nm,0.8s,baz=42,slow=6.8,SNR=22
AKTO Aktyubinsk 58.77 313 *i* P P 06 19 37.5 -1.4
AKTO pmax pmax
comp=Z,24nm,1.1s
BFSC Mount Baldy Ra 58.79 73 P P 06 19 40.6 +1.2
baz=315
TAPN Taplejung 58.80 275 *e*P P 06 19 40.5 +0.7
comp=Z,50nm,0.8s
TMUT Trail Mountain 58.95 65 P P 06 19 41.8 +1.1
MSU Marysvale 58.95 66 P P 06 19 41.5 +0.8
MSU Marysvale 58.95 66 P P 06 19 41.5 +0.8
RDMU Red Mountain 58.97 63 P P 06 19 41.1 +0.4
ULM Lac du Bonnet 58.99 47 LR LR 06 44 48.0
comp=Z,150nm,20.5s,baz=333,slow=36
P17A Butcher Ranch, 59.09 64 P P 06 19 41.7 +0.2
HEC Hector,Ludlow 59.15 72 P P 06 19 43.2 +1.3
baz=315
K22A Casper 59.15 59 P P 06 19 42.7 +0.9
baz=314
Q16A Castle Valley 59.23 65 P P 06 19 42.8 +0.3
ODAN Odare 59.35 275 *e*P P 06 19 44.6 +1.1
comp=Z,64nm,1.3s
MHMT Maesarieng 59.37 260 P P 06 19 46.0 +2.6
comp=Z,1μmcomp=Z,24nm,1.0s
LCMT Little Creek M 59.40 68 P P 06 19 43.9 +0.2
RSSD Black Hills 59.41 56 P P 06 19 43.8 +0.1
RSSD pmax pmax
comp=Z,12nm,0.9s
RSSD Black Hills 59.41 56 P P 06 19 44.6 +0.8
baz=315
RSSD Black Hills 59.41 56 P P 06 19 43.8 +0.1
RSSD IAmb IAmb 06 20 00.6
comp=Z,12nm,0.9s
MURC Murrieta 59.51 73 P P 06 19 45.0 +0.7
baz=315
GUN Gumba 59.52 277 *e*P P 06 19 45.2 +0.4
comp=Z,25nm,0.7s
GMRC Granite Mounta 59.57 71 P P 06 19 45.8 +1.0
baz=315,SNR=6.5
RAMN Ramite 59.77 276 *e*P P 06 19 46.9 +0.5
comp=Z,96nm,1.0s
BELC Belle Mtn. Jos 59.93 72 P P 06 19 47.8 +0.5
baz=315
SUF Sumiainen 59.95 338 P P 06 19 48.3 +1.5
SUF pmax pmax
comp=Z,67nm,1.1s
KKN Kakani 59.97 277 *e*P P 06 19 48.6 +0.9
comp=Z,38nm,0.8s
O20A White River Ci 59.99 62 P P 06 19 48.4 +0.6
baz=315
PKI Pulchoki 60.05 277 *e*P P 06 19 49.0 +0.6
comp=Z,94nm,1.1s
PKIN Phulchowki 60.05 277 *e*P P 06 19 48.7 +0.3
comp=Z,49nm,0.8s
FAKI Fak Fak 60.12 214 P P 06 19 48.6 +0.1
FAKI IAmb IAmb 06 20 14.2
comp=Z,18nm,1.3s
DMN Daman 60.20 277 *e*P P 06 19 50.3 +0.9
comp=Z,97nm,1.1s
GKN Gorkha 60.20 278 *e*P P 06 19 50.4 +1.1
comp=Z,104nm,1.1s
IRM Iron Mountain 60.32 72 P P 06 19 50.7 +0.8
baz=316,SNR=8.4
W13A Hualapai Mount 60.38 70 P P 06 19 49.2 -1.3
VAF Ylistaro 60.45 340 P P 06 19 51.5 +1.3
VAF pmax pmax
comp=Z,40nm,1.7s
UTHA Uthaitani 60.48 257 P P 06 19 54.0 +2.9
DANN Dangsing 60.49 279 *e*P P 06 19 52.3 +0.9
comp=Z,71nm,0.9s
BC3 Big Chuckawall 60.49 72 P P 06 19 51.4 +0.3
baz=316
N23A Red Feather La 60.70 60 P P 06 19 53.6 +0.9
baz=316
GAR Garm 60.72 297 P P 06 19 52.1 -0.5
PDMCI Parker Dam,Lak 60.80 71 P P 06 19 54.5 +1.5
baz=316
PV10 Paradox Valley 60.80 64 P P 06 19 54.0 +0.6
IKP In-Ko-Pah, Jac 60.82 74 P P 06 19 54.1 +0.7
baz=316
PV20 West Nyswonger 60.87 64 P P 06 19 54.1 +0.4
PV20 IAmb IAmb 06 20 09.4
comp=Z,18nm,1.2s
PV17 East Wray Mesa 60.91 64 P P 06 19 55.0 +0.9
PV11 David Mesa, Pa 60.95 64 P P 06 19 55.1 +0.9
PV11 IAmb IAmb 06 19 57.4
comp=Z,13nm,0.9s
PV11 IAMs_20 IAMs_20 06 48 53.8
comp=Z,763nm,20.0s
KOLN Kolonda 61.00 279 *e*P P 06 19 55.4 +0.6
comp=Z,85nm,1.1s
FINES FINESS Array B 61.08 337 P P 06 19 55.0 +0.5
comp=Z,15nm,0.7s,baz=34,slow=7.8,SNR=25
FINES LR LR 06 50 46.5
comp=Z,347nm,18.3s,baz=29,slow=40
FINES FINESS Array B 61.08 337 P P 06 19 54.0 -0.6
PYUN Piuthan 61.13 279 *e*P P 06 19 56.8 +1.1
comp=Z,249nm,1.2s
GLA Glamis 61.29 72 P P 06 19 56.8 +0.3
GLA pmax pmax
comp=Z,14nm,1.2s
GLA Glamis 61.29 72 P P 06 19 57.6 +1.1
baz=316
GLA Glamis 61.29 72 P P 06 19 56.8 +0.3
GLA IAmb IAmb 06 19 59.0
comp=Z,14nm,1.1s
CPBX Cerro Prieto 61.46 73 IAMs_20 IAMs_20 06 51 50.1
comp=Z,416nm,21.0s
WUAZ Wupatki 61.52 68 P P 06 19 59.6 +1.4
baz=316
WUAZ Wupatki 61.52 68 P P 06 19 58.5 +0.3
WUAZ IAmb IAmb 06 20 01.2
comp=Z,12nm,1.2s
CHGR Chuyangaron 61.60 297 P P 06 19 58.1 -0.5
ISCO Idaho Springs 61.65 61 P P 06 19 59.8 +0.7
ISCO pmax pmax
comp=Z,13nm,1.3s
ISCO Idaho Springs 61.65 61 P P 06 20 00.3 +1.1
baz=316,SNR=9.1
ISCO Idaho Springs 61.65 61 P P 06 19 59.8 +0.7
ISCO IAmb IAmb 06 20 19.5
comp=Z,12nm,1.2s
Y14A Wickenburg 61.72 70 P P 06 19 59.1 -0.2
MVCO Mesa Verde 61.93 65 P P 06 20 02.0 +1.1
baz=316
MVCO Mesa Verde 61.93 65 P P 06 20 01.2 +0.2
MVCO IAmb IAmb 06 20 29.7
comp=Z,8.6nm,1.1s
113A Mohawk Valley, 62.11 72 P P 06 20 02.2 +0.3
X16A Lo Mia Camp, P 62.27 69 P P 06 20 03.4 +0.1
S22A 4UR Ranch, Cre 62.47 63 P P 06 20 05.7 +1.0
baz=316,SNR=9.7
MOS Moscow 62.63 328 *e*P P 06 20 04.6 -0.4
MOS *e* 06 20 14.1
MOS *e* 06 20 38.0
MOS pmax pmax
comp=Z,200nm,1.9s
MOS pmax pmax
comp=Z,95nm,1.3s
MOS MLR MLR
comp=Z,700nm,17.0s
NIL Nilore 62.90 291 P P 06 20 07.2 0.0
NIL pmax pmax
comp=Z,38nm,0.9s
NIL MLR MLR
comp=Z,200nm,18.0s
NIL Nilore 62.90 291 P P 06 20 07.2 0.0
SDCO Great Sand Dun 63.20 62 P P 06 20 10.6 +1.2
baz=317,SNR=7.0
SDCO Great Sand Dun 63.20 62 P P 06 20 09.7 +0.3
214A Organ Pipe Nat 63.26 72 P P 06 20 10.5 +0.9
baz=317,SNR=6.3
214A Organ Pipe Nat 63.26 72 P P 06 20 09.8 +0.2
ECSD EROS Data Cent 63.40 52 P P 06 20 10.3 -0.1
baz=318
OBN Obninsk 63.49 328 *ce*P P 06 20 11.2 +0.5
OBN *i* 06 20 24.5
OBN *i* 06 20 45.8
OBN *e*S S 06 28 41.4 +0.7
OBN pmax pmax
comp=Z,74nm,1.3s
OBN MLR MLR
comp=Z,468nm,15.0s
VSU Vasula 63.52 335 *e*P P 06 20 11.7 +0.9
SBUM Sibu 64.01 237 P P 06 20 14.9 +0.2
SBUM IAmb IAmb 06 20 39.7
comp=Z,28nm,1.5s
SBUM IAMs_20 IAMs_20 06 50 50.5
comp=Z,332nm,19.0s
SPMN Marine on St. 64.10 49 P P 06 20 15.1 +0.2
baz=319
TUC Tucson 64.18 70 P P 06 20 15.9 +0.1
TUC pmax pmax
comp=Z,4.0nm,1.1s
TUC Tucson 64.18 70 P P 06 20 16.8 +1.0
baz=317
TUC Tucson 64.18 70 P P 06 20 15.8 +0.1
T25A Trinidad 64.23 62 P P 06 20 16.9 +0.7
baz=317
BGNE Belgrade 64.37 55 P P 06 20 17.7 +0.9
baz=318
NB201 NORSAR Array S 64.45 344 P P 06 20 16.6 -0.5
NB2 NORSAR Subarra 64.47 344 P P 06 20 17.4 +0.2
comp=Z,3.8nm,0.8s,baz=22,slow=6.9
NOA NORSAR Array B 64.47 344 P P 06 20 17.4 +0.2
comp=Z,17nm,1.1s,baz=20,slow=6.7,SNR=17
NOA LR LR 06 52 08.2
comp=Z,203nm,18.7s,baz=20,slow=40
KBL Kabul 64.64 294 P P 06 20 17.8 -1.1
KBL pmax pmax
comp=Z,12nm,0.7s
KBL MLR MLR
comp=Z,200nm,18.0s
KBL Kabul 64.64 294 P P 06 20 17.8 -1.1
KBL IAmb IAmb 06 20 29.8
comp=Z,12nm,0.7s
NORES NORESS Array B 64.71 344 P P 06 20 21.0 +2.4
NORES pmax pmax
comp=Z,1.0nm,0.3s
ANMO Albuquerque 64.71 65 P P 06 20 20.2 +0.9
comp=Z,2.6nm,1.0s,baz=309,slow=7.7,SNR=7.9
ANMO Albuquerque 64.71 65 *i* P P 06 20 21.0 +1.7
ANMO pmax pmax
comp=Z,3.0nm,1.1s
ANMO Albuquerque 64.71 65 P P 06 20 20.3 +0.9
baz=317
ANMO Albuquerque 64.71 65 P P 06 20 20.0 +0.6
LPSR Galich'ya Gora 64.76 325 *e*P P 06 20 19.3 +0.2
LPSR pmax pmax
comp=Z,50nm,0.8s
VRH Novokhopyorsk 64.89 323 *e*P P 06 20 19.4 -0.5
VRH pmax pmax
comp=Z,70nm,0.9s
BNM Barren Site 65.20 66 P P 06 20 22.9 +0.3
CBKS Cedar Bluff 65.48 58 P P 06 20 24.5 +0.4
baz=318
MTKI Muara Teweh, K 65.59 232 P P 06 20 27.5 +2.6
319A Douglas 65.73 70 P P 06 20 26.4 +0.5
319A IAmb IAmb 06 20 37.8
comp=Z,12nm,1.1s
VSR Storozhevoye 65.81 324 *e*P P 06 20 25.9 0.0
VSR pmax pmax
comp=Z,70nm,1.1s
VORD Divnogorie 65.97 324 *e*P P 06 20 27.3 +0.3
VORD pmax pmax
comp=Z,50nm,1.2s
IZAR Zarasai 66.03 334 *e*P P 06 20 27.8 +0.6
ISAL Salakas 66.22 334 *e*P P 06 20 28.6 +0.1
IDID Didziasalis 66.27 333 *e*P P 06 20 29.5 +0.6
IIGN Ignalina 66.38 334 *e*P P 06 20 29.0 -0.6
SCIA State Center 66.42 52 P P 06 20 30.2 +0.1
NACGM Naroch 66.62 333 *e* P 06 20 30.0 -1.1
NACGM *e*LR LR 06 53 36.0
MICGM Minsk 66.67 332 *e* P 06 20 32.0 +0.6
MNK Minsk 66.67 332 *e*P P 06 20 32.0 +0.6
PABE Paberze 66.84 335 *e*P P 06 20 33.0 +0.5
MSTX Muleshoe 67.47 63 P P 06 20 37.8 +0.8
baz=319
MSTX Muleshoe 67.47 63 P P 06 20 36.1 -0.9
MSTX IAmb IAmb 06 20 39.6
comp=Z,11nm,1.1s
PBA Port Blair 67.56 260 IAMs_20 IAMs_20 06 54 24.5
comp=Z,582nm,18.0s
LSQQ Lebel-sur-Quev 67.68 37 P P 06 20 37.1 -0.8
baz=326
MNTX Cornudas Mount 67.72 67 P P 06 20 39.5 +1.0
baz=319,SNR=7.9
ASHT Ashkhabad 67.84 304 IAMs_20 IAMs_20 06 54 17.0
comp=Z,323nm,20.0s
GDL2 Guadalupe Moun 67.91 66 P P 06 20 40.0 +0.2
GEYT Alibeck 67.98 304 P P 06 20 41.0 +1.0
comp=Z,9.1nm,0.7s,baz=66,slow=1.8,SNR=14
GEYT LR LR 06 52 53.1
comp=Z,467nm,18.1s,baz=35,slow=38
GYA0B ALIBECK ARRAY 67.98 304 P P 06 20 40.1 +0.1
GYA0B IAmb IAmb 06 20 42.1
comp=Z,22nm,1.1s
GYA0B IAMs_20 IAMs_20 06 52 42.9
comp=Z,558nm,18.0s
SUW Suwalki 68.39 335 *e*P P 06 20 42.8 +0.6
SUW Suwalki 68.39 335 P P 06 20 42.1 -0.1
SUW Suwalki 68.39 335 P P 06 20 42.1 -0.1
HRA Herat 68.50 299 P P 06 20 43.6 0.0
HRA IAMs_20 IAMs_20 06 51 49.9
comp=Z,261nm,19.0s
MYKOM Kota Tinggi 69.03 244 IAMs_20 IAMs_20 06 53 53.2

comp=Z,309nm,20.0s
WMOK Wichita Mounta 69.05 60 P P 06 20 47.1 +0.3
WMOK pmax pmax
comp=Z,11nm,1.1s
WMOK Wichita Mounta 69.05 60 P P 06 20 46.7 0.0
baz=320,SNR=9.8
WMOK Wichita Mounta 69.05 60 P P 06 20 47.1 +0.3
MAK Makhachkala 69.13 314 *c iP* **P 06 20 46.5 -0.6**
MAK *e* 06 23 18.0
MAK *eS* **S 06 29 50.2 +0.6**
MAK *eSS* **SS 06 34 21.2 +6.0**
HDIL Hopedale 69.33 50 P **P 06 20 48.5 +0.1**
baz=322
GOF Gofitskoye 69.35 318⇑ *eP* **P 06 20 49.8 +1.4**
GOF pmax pmax
comp=Z,86nm,0.6s
AKASG Malin Array Be 69.59 330 P **P 06 20 49.9 +0.1**
comp=Z,24nm,0.8s,baz=30,slow=6.3,SNR=39
AKASG LR LR 06 55 04.1
comp=Z,248nm,18.2s,baz=0.0,slow=39
AKASG Malin Array Be 69.59 330 P **P 06 20 49.0 -0.8**
AKBB Malin Array Si 69.59 330 *c e* P **P 06 20 50.2 +0.5**
AKBB Malin Array Si 69.59 330 P **P 06 20 49.2 -0.6**
KIEV Kiev 69.60 330 P **P 06 20 48.0 -1.8**
TUL1 Leonard 69.73 57 P **P 06 20 51.0 +0.1**
baz=321
ABTX Abilene, Hawle 70.20 62 P **P 06 20 53.3 -0.6**
baz=320,SNR=6.2
ABTX Abilene, Hawle 70.20 62 P **P 06 20 53.6 -0.2**
ABTX IAmb IAmb 06 20 55.9
comp=Z,15nm,1.2s
CCM Cathedral Cave 70.36 53 P **P 06 20 53.4 -1.3**
baz=322
KIV Kislovodsk 70.40 318 *eP* **P 06 20 55.7 +0.7**
KIV pmax pmax
comp=Z,40nm,1.0s
KIV Kislovodsk 70.40 318 IAMs_20 IAMs_20 06 53 15.1
comp=Z,310nm,19.0s
TX31 Lajitas Ar. Si 70.46 67 P **P 06 20 55.8 +0.1**
TX32 Lajitas Array 70.46 67 P **P 06 20 56.2 +0.6**
TX32 IAmb IAmb 06 20 57.8
comp=Z,20nm,1.4s
TXAR Lajitas Array 70.47 67 P **P 06 20 56.3 +0.7**
comp=Z,4.2nm,0.7s,baz=298,slow=4.2,SNR=57
TXAR Lajitas Array 70.47 67 P **P 06 20 55.1 -0.5**
TXAR Lajitas Array 70.47 67 P **P 06 20 55.1 -0.5**
KBZ Khabaz 70.50 317 P **P 06 20 56.0 +0.6**
comp=Z,29nm,1.0s,baz=58,slow=23,SNR=23
KBZ Khabaz 70.50 317 *ce* P **P 06 20 56.5 +1.1**
KBZ pmax pmax
comp=Z,54nm,1.1s
ZEI Tsey 70.84 316 *eP* **P 06 20 56.8 -1.0**
ZEI pmax pmax
comp=Z,24nm,1.2s
U40A Yellville 70.88 55 P **P 06 20 57.9 -0.1**
baz=322
U40A Yellville 70.88 55 P **P 06 20 57.2 -0.7**
U40A IAmb IAmb 06 21 16.4
comp=Z,12nm,1.1s
HPIG 71.14 70 P **P 06 20 59.3 -0.5**
JCT Junction City 71.75 64 P **P 06 21 03.1 -0.2**
JCT pmax pmax
comp=Z,17nm,1.3s
JCT Junction City 71.75 64 P **P 06 21 03.9 +0.6**
baz=320
JCT Junction City 71.75 64 P **P 06 21 03.1 -0.2**
JCT IAmb IAmb 06 21 05.8
comp=Z,17nm,1.3s
HORU Horodok 71.76 331 P **P 06 21 03.0 0.0**
ANN Anapa 71.80 321 *eP* **P 06 20 59.0 -4.3**
HYB Hyderabad 71.81 275 *i P* **P 06 21 03.0 -0.8**
SOC Sochi 71.92 319 *c iP* **P 06 21 04.5 +0.5**
SOC *e**PP **sP 06 21 16.4 -2.6**
SOC *e* 06 23 40.4
SOC *e*PPP PPP 06 25 22.1
SOC *eS* **S 06 30 24.4 +2.4**
SOC *eSS* **SS 06 35 03.8 +5.9**
SOC pmax pmax
comp=Z,18nm,1.0s
LVV L'vov 71.92 332 *eP* **P 06 21 04.0 0.0**
LVV *eS* **S 06 30 23.0 +1.1**
MIAR Mount Ida 71.93 57 P **P 06 21 04.5 +0.3**
baz=322
SORM Soroca 72.11 329⇑P **P 06 21 05.0 -0.1**
W41B Gary Mavity, V 72.11 56 P **P 06 21 05.5 +0.2**
baz=322
AKH Akhalkalaki 72.14 315⇑P **P 06 21 07.1 +1.5**
AKH Akhalkalaki 72.14 315 P **P 06 21 06.1 +0.5**
AKH pmax pmax
comp=Z,129nm,1.1s
AKH Akhalkalaki 72.14 315 P **P 06 21 06.1 +0.5**
L53A Girard 72.25 43 P **P 06 21 07.0 +1.0**
baz=326
KMPD K-Podol'skiy 72.32 330 P **P 06 21 06.0 -0.4**
E62A Clayton Lake 72.41 34 P **P 06 21 07.1 +0.1**
baz=330
KWP Kalwaria Pacla 72.46 333 *eP* **P 06 21 08.6 +1.3**
KWP Kalwaria Pacla 72.46 333 P **P 06 21 06.4 -0.8**
KWP Kalwaria Pacla 72.46 333 P **P 06 21 06.4 -0.8**
MORS Morshin 72.58 332 P **P 06 21 08.9 +1.0**
GNI Garni 72.63 314 *ce* P **P 06 21 10.5 +1.9**
GNI pmax pmax
comp=Z,77nm,1.4s
GNI Garni 72.63 314 P **P 06 21 08.8 +0.2**
OJC Ojcow 72.71 335 *eP* **P 06 21 09.9 +1.2**
OJC Ojcow 72.71 335 P **P 06 21 09.5 +0.8**
OJC Ojcow 72.71 335 P **P 06 21 09.5 +0.8**
O51A Pataskala 72.72 46 P **P 06 21 09.2 +0.3**
baz=325
K56A Middlesex 72.84 41 P **P 06 21 10.0 +0.4**
baz=327
KSV Kosov 72.97 331 P **P 06 21 09.7 -0.5**
KSP Ksiaz 73.00 337 *eP* **P 06 21 11.7 +1.3**
O52A Adamsville 73.08 45 P **P 06 21 10.7 -0.3**
baz=325
KOLS Kolonicke sedl 73.22 333 *eP* **P 06 21 12.7 +1.0**
KOLS pmax pmax
comp=Z,17nm,1.4s
KOLS Kolonicke sedl 73.22 333 *eP* **P 06 21 12.7 +1.0**
G62A West of Eustis 73.27 35 P **P 06 21 12.3 +0.2**
baz=330
OSTC Ostas 73.29 337 AMS AMS 07 00 40.0
comp=Z,800nm,12.4s
CHVC Chvalec 73.30 338 *eP* **P 06 21 13.4 +1.2**
CLL Collm 73.31 340⇑ *iP* **P 06 21 12.5 +0.3**
comp=Z,29nm,0.9s
CLL *i* pP **pP 06 21 23.6 +1.2**
CLL *i* 06 21 27.8
CLL *eS* **S 06 30 33.0 -4.6**
CLL *e*PPS PPS 06 31 24.0
CLL *e*(SS) 06 35 06.0
CLL *e* 06 36 34.0
CLL Collm 73.31 340 P **P 06 21 11.5 -0.6**
CLL pmax pmax
comp=Z,21nm,0.8s
CLL Collm 73.31 340 P **P 06 21 11.5 -0.6**
CLL IAmb IAmb 06 21 16.9
comp=Z,21nm,0.8s
NIE Niedzica 73.31 334 *eP* **P 06 21 13.9 +1.6**
UPC Upice 73.38 338 AMS AMS 07 00 40.0
comp=Z,800nm,17.2s
DPC Dobruska-Polom 73.45 337 *eP* **P 06 21 14.7 +1.6**
DPC MLR MLR
comp=Z,700nm,15.0s
DPC Dobruska-Polom 73.45 337 *eP* **P 06 21 14.7 +1.6**
DPC AMS AMS 07 00 40.0
comp=Z,700nm,15.0s
CRVS Cervenica-Dubn 73.47 333 *eP* **P 06 21 12.8 -0.4**
CRVS pmax pmax
comp=Z,25nm,1.3s
CRVS Cervenica-Dubn 73.47 333 *eP* **P 06 21 12.8 -0.4**
OKC Ostrava-Krasne 73.48 336 AMS AMS 07 00 00.0
comp=Z,800nm,20.4s
BRG Berggiesshubel 73.51 339 *eP* **P 06 21 14.2 +0.8**
comp=Z,14nm,1.3s
BRG Berggiesshubel 73.51 339 *eP* **P 06 21 14.1 +0.8**
BRG pmax pmax
comp=Z,14nm,1.3s
BUR08 Bucovina Ar. S 73.53 331 P **P 06 21 13.4 -0.3**
BUR08 IAmb IAmb 06 21 30.2
comp=Z,14nm,0.8s
WVT Waverly 73.55 52 P **P 06 21 13.1 -0.7**
baz=324
BURAR Bucovina Array 73.55 331 ⇓P **P 06 21 14.2 +0.4**
BURAR Bucovina Array 73.55 331 P **P 06 21 13.7 -0.1**
KRLC Kraliky 73.60 337 *eP* **P 06 21 14.9 +0.9**
KRLC *e* 06 21 25.7
KRLC Kraliky 73.60 337 *eP* **P 06 21 14.9 +0.9**
KRLC *ep*P **pP 06 21 25.7 +1.5**
PKME Peaks-Kenny Pk 73.67 34 P **P 06 21 14.4 0.0**
baz=331
G63A Kingsbury 73.69 35 P **P 06 21 15.2 +0.7**
baz=330
MORC Moravsky Berou 73.69 336⇑P **P 06 21 15.0 +0.5**
MORC Moravsky Berou 73.69 336 *eP* **P 06 21 15.3 +0.8**
MORC Moravsky Berou 73.69 336 P **P 06 21 13.4 -1.1**
MORC Moravsky Berou 73.69 336 P **P 06 21 13.4 -1.1**
PVCC Panska Ves 73.69 338 AMS AMS 07 00 20.0
comp=Z,900nm,13.9s
LANS Liptovska Anna 73.78 335 *eP* **P 06 21 17.1 +2.1**
LANS *e* 06 21 28.4
LANS pmax pmax
comp=Z,17nm,1.3s
LANS Liptovska Anna 73.78 335 *eP* **P 06 21 17.1 +2.1**
LANS *e* 06 21 28.4
TRSU Trosnyk 73.78 332 P **P 06 21 16.1 +1.1**
BINY Binghamton 73.80 40 P **P 06 21 15.7 +0.4**
baz=328
BIZ Bicaz 73.88 330⇑P **P 06 21 15.9 +0.3**
OXF Oxford 74.06 54 P **P 06 21 17.7 +0.8**
baz=323
TESR Tescani 74.09 329⇑P **P 06 21 17.5 +0.7**
PRU Pruhonice 74.20 338 *eP* **P 06 21 18.5 +1.0**
PRU *e* 06 21 29.6
PRU MLR MLR
comp=Z,1μm,13.0s
PRU Pruhonice 74.20 338 *eP* **P 06 21 18.5 +1.0**
PRU *ep*P **sP 06 21 29.6 -2.9**
PRU AMS AMS 07 00 50.0
comp=Z,1μm,13.0s
Q53A Leroy 74.25 46 P **P 06 21 17.6 -0.4**
baz=326
VRAC Vranov 74.36 337 *eP* **P 06 21 19.8 +1.4**
N57A Milroy 74.38 42 P **P 06 21 18.4 -0.2**
baz=327
P55A Reedsville 74.45 45 P **P 06 21 19.2 0.0**
baz=326
JAVC Velka Javorina 74.51 336 *eP* **P 06 21 20.7 +1.4**
H65A Eastbrook 74.53 34 P **P 06 21 20.3 +0.9**
baz=331
VYHS Vyhne 74.55 335 *eP* **P 06 21 20.6 +1.1**
VYHS *e* 06 21 34.8
VYHS pmax pmax
comp=Z,25nm,1.6s
VYHS Vyhne 74.55 335 *eP* **P 06 21 20.6 +1.1**
VYHS *e* 06 21 34.8
KOPT Kop Dagi 74.57 317 P **P 06 21 20.6 +0.5**
KOPT IAmb IAmb 06 21 48.6
comp=Z,21nm,0.8s
PBCC Pribram 74.61 338 *eP* **P 06 21 21.1 +1.2**
KRUC Moravsky 74.63 337 *eP* **P 06 21 21.0 +1.0**
VRI Vrincioaia 74.64 329 ⇓P **P 06 21 20.4 +0.3**
N58A Sunbury 74.65 42 P **P 06 21 20.3 +0.2**
baz=328
CFR Carcaliu 74.79 327⇑P **P 06 21 21.5 +0.6**
PSZ Piszkesteto 74.79 334 P **P 06 21 21.3 +0.3**
PSZ Piszkesteto 74.79 334 P **P 06 21 21.3 +0.3**
GEVA Gevas 74.88 314 P **P 06 21 21.8 0.0**
GEVA IAmb IAmb 06 21 24.5
comp=Z,37nm,1.3s
P56A Dayton Farm, R 74.88 44 P **P 06 21 21.4 -0.2**
baz=327
SMOL Smolenice 74.89 336 *eP* **P 06 21 23.6 +2.1**
SMOL Smolenice 74.89 336 *eP* **P 06 21 23.6 +2.1**
TPGR Topolog 74.98 327 ⇓P **P 06 21 22.5 +0.4**
MODS Modra-Piesok 75.06 336 *eP* **P 06 21 23.4 +1.0**
MODS pmax pmax
comp=Z,19nm,1.3s
MODS Modra-Piesok 75.06 336 *eP* **P 06 21 23.4 +1.0**
GRA1 Grafenberg Arr 75.21 340 P **P 06 21 22.8 -0.5**
GRA1 IAmb IAmb 06 21 29.2
comp=Z,24nm,0.9s
GRF Grafenberg Arr 75.21 340 P **P 06 21 22.8 -0.5**
GRF pmax pmax
comp=Z,24nm,0.9s
GRF Grafenberg Arr 75.21 340 *eP* **P 06 21 24.8 +1.5**
comp=Z,59nm,1.5s,baz=19,slow=5.1
MLR Muntele Rosu 75.22 329 ⇓P **P 06 21 24.2 +0.6**
KHC Kasperske Hory 75.23 339 *eP* **P 06 21 25.1 +1.6**
KHC *e* 06 21 34.5
KHC MLR MLR
comp=Z,1μm,15.7s
KHC Kasperske Hory 75.23 339 *eP* **P 06 21 25.1 +1.6**
KHC *ep*P **pP 06 21 34.5 +0.8**
KHC AMS AMS 07 01 20.0
comp=Z,1μm,15.7s
HRV Adam Dziewonsk 75.24 37 P **P 06 21 22.9 -0.6**
baz=330
MEM Membach 75.32 344 PcP **PcP 06 21 35.7 -1.3**
MEM Membach 75.32 344 P **P 06 21 24.9 +1.1**
BTNL Ternell 75.32 344 x x 06 21 29.4
BTNL Ternell 75.32 344 P **P 06 21 25.3 +1.3**
WET Wettzell 75.37 339 P **P 06 21 26.1 +1.8**
GEC2 GERESS Array S 75.47 338 P **P 06 21 24.4 -0.5**
GEC2 IAmb IAmb 06 21 27.2
comp=Z,16nm,1.4s
GERES GERESS Array B 75.47 338 P **P 06 21 26.0 +1.1**
comp=Z,2.5nm,0.7s,baz=36,slow=5.6,SNR=15
GERES LR LR 06 59 22.6
comp=Z,92nm,18.7s,baz=34,slow=40
GERES GERESS Array B 75.47 338 P **P 06 21 25.1 +0.2**
GERES GERESS Array B 75.47 338 P **P 06 21 25.1 +0.2**
KVT Kavak 75.49 320 P **P 06 21 27.1 +2.0**
VOIR 75.55 330⇑P **P 06 21 26.2 +0.8**
WC1 Warramunga Arr 75.55 206 IAMs_20 IAMs_20 06 55 48.7
comp=Z,306nm,18.0s
WB2 Warramunga Arr 75.57 206 P **P 06 21 25.8 +0.2**
WB2 IAmb IAmb 06 21 52.3
comp=Z,12nm,1.0s
WRA Warramunga Arr 75.57 206 P **P 06 21 25.6 0.0**
comp=Z,5.4nm,1.1s,baz=20,slow=6.2,SNR=13
WRA LR LR 06 56 29.6
comp=Z,55nm,18.9s,baz=215,slow=37
WRA Warramunga Arr 75.57 206 P **P 06 21 25.8 +0.2**
ARR Arges 75.74 330⇑P **P 06 21 27.4 +0.9**
L63A North Scituate 75.78 38 P **P 06 21 27.5 +0.8**
baz=330
P59A Jarrettsville 75.80 42 P **P 06 21 25.9 -0.9**
baz=328
CONA Conrad Observa 75.82 337 *i* P **P 06 21 28.7 +1.8**
comp=Z,26nm,1.7s,SNR=8.5
BMRD Maredsous 75.82 345 PcP **PcP 06 21 38.3 -0.9**
BMRD Maredsous 75.82 345 P P 06 21 31.5 +4.7
ICOR Ion Corvin 75.84 327 ⇓P **P 06 21 27.4 +0.4**
TOKA Tokat 75.96 319 IAMs_20 IAMs_20 06 58 44.3
comp=Z,196nm,19.0s
MOA Molln 76.27 338 *eP* **P 06 21 31.6 +2.2**
comp=Z,8.7nm,0.8s
GZR Gura Zlata 76.28 331 ⇓P **P 06 21 29.7 +0.1**
ILGA Ilgaz 76.41 322 P **P 06 21 30.2 -0.4**
BZS Buzias 76.42 332 P **P 06 21 31.4 +1.2**
ARSA Arzberg 76.53 337 *eP* **P 06 21 32.8 +1.8**
comp=Z,10nm,1.1s
MARD Mardin 76.71 315 P **P 06 21 33.1 +0.9**
HERR Herculiane 76.85 331⇑P **P 06 21 33.1 +0.4**
MALT Malatya 76.87 317 P **P 06 21 35.1 +2.0**
SOKA Soboth 77.19 337 *i* P **P 06 21 36.2 +1.5**
comp=Z,25nm,1.7s,SNR=6.8
PERS Pernice 77.21 337 *eP* **P 06 21 36.1 +1.4**
KBA Koelnbreinsper 77.21 338 *i* P **P 06 21 36.9 +2.0**
comp=Z,53nm,0.9s,SNR=26
KBA Koelnbreinsper 77.21 338 P **P 06 21 36.9 +2.0**
GROS Grobnik 77.28 336 *eP* **P 06 21 36.2 +1.1**
WATA Walderalm 77.37 339 *eP* **P 06 21 37.4 +1.6**
comp=Z,21nm,1.2s
RETA Reutte 77.40 340 *eP* **P 06 21 37.2 +1.4**
comp=Z,6.9nm,1.0s
WTTA Wattenberg 77.42 339 *i* P **P 06 21 38.2 +2.1**
comp=Z,26nm,1.3s,SNR=5.9
WTTA Wattenberg 77.42 339 P **P 06 21 38.3 +2.1**
MOTA Moosalm 77.46 340 *i* P **P 06 21 37.7 +1.4**
comp=Z,24nm,1.1s,SNR=6.1
OBKA Obir 77.47 337 *eP* **P 06 21 38.5 +2.2**
comp=Z,32nm,1.3s
SQTA Sankt Quirin 77.56 339 *eP* **P 06 21 38.5 +1.7**
comp=Z,16nm,1.0s
MYKA Terra Mystica 77.57 338 *eP* **P 06 21 37.9 +1.1**
comp=Z,11nm,1.1s
BR131 Keskin Array S 77.59 321 *i* P **P 06 21 37.7 +0.6**
BR131 Keskin Array S 77.59 321 P **P 06 21 37.1 0.0**
BR131 IAmb IAmb 06 21 39.1
comp=Z,16nm,1.2s
BRTR Keskin Array B 77.59 321 P **P 06 21 38.2 +1.1**
comp=Z,23nm,1.2s,baz=46,slow=3.6,SNR=26
BRTR Keskin Array B 77.59 321 P **P 06 21 37.7 +0.6**
ABTA Abfaltersbach 77.72 338 *eP* **P 06 21 39.1 +1.5**
comp=Z,19nm,1.2s
S61A Accomac 77.75 43 P **P 06 21 38.7 +0.9**
baz=328
PRED Cave del Predi 77.76 338 P **P 06 21 36.9 -0.9**
PRED IAmb IAmb 06 21 43.4
comp=Z,12nm,0.9s
DAVA Damuels 77.77 340 *eP* **P 06 21 39.3 +1.2**
comp=Z,13nm,1.0s
LEGS Legarje 77.80 336 *i* P **P 06 21 38.8 +0.8**
X55A Gracelyn & Ava 77.82 49 P **P 06 21 38.5 +0.2**
baz=326
FETA Feichten 77.85 340 *i* P **P 06 21 39.9 +1.5**
comp=Z,19nm,1.1s,SNR=5.2
MDUB Mudurnu 77.86 323 P **P 06 21 39.0 +0.4**
FUORN Ofenpass-Fuorn 78.33 340 P **P 06 21 41.7 +0.5**
FUORN IAmb IAmb 06 22 01.6
comp=Z,26nm,1.2s
W58A Raeford 78.45 47 P **P 06 21 41.5 -0.3**
baz=327
CTI Castel Tesino 78.57 339 P **P 06 21 41.4 -1.0**
CTI pmax pmax
comp=Z,15nm,1.2s
CTI Castel Tesino 78.57 339 P **P 06 21 41.4 -1.0**
CTI IAmb IAmb 06 21 47.8
comp=Z,15nm,1.2s
TUE Stuetta 78.66 340 P **P 06 21 43.1 +0.1**
UOSS Minazif 79.12 297 P **P 06 21 44.5 -1.1**
Y58A Scranton 79.19 48 P **P 06 21 45.5 -0.4**
baz=327
ASAR Alice Springs 79.24 205 P **P 06 21 47.0 +1.0**
comp=Z,1.9nm,0.8s,baz=13,slow=4.5,SNR=12
ASAR LR LR 07 00 05.5
comp=Z,82nm,18.2s,baz=270,slow=38
ASAR Alice Springs 79.24 205 P **P 06 21 45.9 -0.1**
ASAR Alice Springs 79.24 205 P **P 06 21 45.9 -0.1**
PDG Podgorica 80.02 332 IAMs_20 IAMs_20 07 00 43.1
comp=Z,338nm,19.0s
NRCA Norcia 81.27 337 P **P 06 21 56.0 -1.0**
NRCA IAmb IAmb 06 22 14.0
comp=Z,21nm,0.8s
PPT Papeete 81.70 133 LR LR 06 55 35.4
comp=Z,133nm,18.8s,baz=290,slow=34
SCTE Santa Cesarea 82.42 332 IAMs_20 IAMs_20 06 47 31.8
comp=Z,212nm,19.0s
RAYN Ar Rayn 85.95 304 P **P 06 22 20.1 -1.2**
RAYN pmax pmax
comp=Z,20nm,1.3s
RAYN Ar Rayn 85.95 304 P **P 06 22 20.1 -1.2**
RAYN IAmb IAmb 06 22 42.9
comp=Z,20nm,1.2s
ESDC Sonseca Array 87.49 348 P **P 06 22 29.3 +0.8**
comp=Z,2.8nm,0.9s,baz=6.1,slow=4.3,SNR=7.7
KEST Kesra 88.92 337 P **P 06 22 35.9 +0.4**
comp=Z,4.1nm,0.9s,baz=320,slow=11,SNR=4.1
KEST LR LR 07 07 13.3
comp=Z,191nm,18.7s,baz=302,slow=39
SDV Santo Domingo 104.83 53 IAMs_20 IAMs_20 07 20 52.5
comp=Z,189nm,18.0s
TORD Torodi Ar. Bea 112.42 338 PP PP 06 28 51.9 -10
comp=Z,1.2nm,1.0s,baz=356,slow=6.6,SNR=3.9
SAML Samuel 123.88 56 IAMs_20 IAMs_20 07 18 02.5
comp=Z,122nm,21.0s
SYO Syowa Base 148.35 216⇓ *e*PKPdf **PKPbc 06 29 24.4 -1.2**
SYO Syowa Base 148.35 216⇑ *ep*PKPbc pPKPbc 06 29 40.4 +4.2
SYO Syowa Base 148.35 216⇓ *ep*PKPab pPKPab 06 29 43.0 +3.4

NNC ***14*** *06:10:21.9±1.2,44°.83N×78°.98E,h0km,mb2.3,mpv2.8, Error ellipse: s-maj=7.7km s-min=5.7km az=174.0*
SOME ***14*** *06:10:22.2,44°.82N×79°.02E,h0km*
ISC 14 06:10:22.8±1.3,44°.80N±0°.04×79°.00E±0°.03,h3km±11km, n18,σ0s60/34,6C-7D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
TDK	**Taldyqorghan**	**0.47**	**296**	*eP*		**Pg**	**06 10 31.7**	**-0.1**
	34nm,0.2s							
TDK				*eS*		**Sg**	**06 10 38.5**	**+0.6**
	63nm,0.2s							
DJR	**Jarkent**	**0.73**	**129**	⇓*eP*		**Pg**	**06 10 36.2**	**-0.5**
	1.7nm,0.1s							
DJR				⇓*iS*		**Sg**	**06 10 45.9**	**-0.4**
	8.6nm,0.2s							
DJR	**Jarkent**	**0.73**	**129**	P		**Pg**	**06 10 36.3**	**-0.5**
	1.7nm,0.1s							
DJR				S		**Sg**	**06 10 45.8**	**-0.4**
	8.6nm,0.2s							
MNBS	**Baschi**	**0.84**	**211**	⇑*iP*		**Pg**	**06 10 38.7**	**0.0**
	1.6nm,0.1s							
MNBS				⇑*iS*		**Sg**	**06 10 50.5**	**+0.9**
	17nm,0.1s							
MNBS	**Baschi**	**0.84**	**211**	P		**Pg**	**06 10 38.8**	**0.0**
	1.7nm,0.1s							
MNBS				S		**Sg**	**06 10 50.5**	**+0.9**
	16nm,0.1s							
ARXS	**Arharly**	**1.02**	**236**	⇓*iP*		**Pb**	**06 10 42.4**	**-0.7**
	2.8nm,0.1s							
ARXS				*i* S		**Sb**	**06 10 56.5**	**-0.6**
	7.9nm,0.4s							
ARXS	**Arharly**	**1.02**	**236**	P		**Pb**	**06 10 42.4**	**-0.7**
	2.8nm,0.1s							
ARXS				S		**Sb**	**06 10 56.4**	**-0.6**
	5.9nm,0.2s							
KPKS	**Kokpek**	**1.35**	**190**	⇑*iP*		**Pn**	**06 10 48.5**	**-0.1**
	4.6nm,0.1s							
KPKS				*eS*		**Sn**	**06 11 07.3**	**+0.2**
	30nm,0.2s							
KURS	**Kuram**	**1.44**	**205**	*eP*		**Pn**	**06 10 49.5**	**-0.3**
	2.4nm,0.2s							
KURS				*eS*		**Sg**	**06 11 08.8**	**-0.1**
	2.3nm,0.3s							
PDGK	**Podgornoye**	**1.51**	**166**	⇓P		**Pn**	**06 10 50.4**	**-0.4**
	2.6nm,0.9s							
PDGK				⇑S		**Sn**	**06 11 11.6**	**+0.5**
	3.4nm,0.5s							
UZB	**Uzynbulak**	**1.65**	**179**	⇓*iP*		**Pn**	**06 10 53.3**	**+0.5**
	1.4nm,0.2s							
UZB				⇑*iS*		**Sg**	**06 11 15.7**	**+0.1**
	3.1nm,0.2s							
UZB	**Uzynbulak**	**1.65**	**179**	P		**Pn**	**06 10 53.3**	**+0.5**
	1.4nm,0.2s							
UZB				S		**Sg**	**06 11 15.8**	**+0.1**
	3.1nm,0.2s							
SHLS	**Shalkode**	**1.67**	**168**	*eP*		**Pg**	**06 10 54.8**	**0.0**
	3.8nm,0.2s							
SHLS				*eS*		**Sg**	**06 11 18.1**	**+1.7**
	6.2nm,0.3s							
SATY	**Saty**	**1.79**	**194**	⇓*iP*		**Pb**	**06 10 56.3**	**0.0**
	0.7nm,0.1s							
SATY				*eS*		**Sg**	**06 11 20.8**	**+0.6**
	15nm,0.2s							
SATY	**Saty**	**1.79**	**194**	P		**Pb**	**06 10 56.3**	**0.0**
	0.7nm,0.1s							
SATY				S		**Sg**	**06 11 20.8**	**+0.6**
	12nm,0.1s							
KTBS	**Karatobe**	**1.99**	**238**	*eP*		**Pb**	**06 10 59.1**	**-0.5**
	0.6nm,0.1s							
KTBS				*eS*		**Sb**	**06 11 25.5**	**+0.7**
	7.7nm,0.3s							
KTBS	**Karatobe**	**1.99**	**238**	Pg		**Pb**	**06 10 58.6**	**-1.0**
	0.6nm,0.1s							
KTBS				Lg		Lg	06 11 24.4	
	14nm,0.3s							
MK31	**Makanchi Array**	**3.05**	**48**	⇑Pg		**Pb**	**06 11 18.1**	**+0.4**
	0.5nm,0.7s							
MK31				⇓Lg		Lg	06 11 56.0	
	0.2nm,0.4s,baz=224,slow=32,SNR=6.1							

IDC ***14*** *06:12:14.5±2.7, 18°.85S×170°.33E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.7/34, mbtmp3.9/4, MS3.6/1, Ms1 3.6/1, ms1mx3.0/19, Error ellipse: s-maj=136.3km s-min=30.9km az=146.0*
NEIC ***14*** *06:12:49.8±0.6, 18°.99S±0°.03×169°.5E±0°.1, h293km±12km, mb4.1/11, Error ellipse: s-maj=16.5km s-min=4.2km az=91.0*
ISC 14 06:12:50.0±0.7, 18°.97S±0°.10×169°.5E±0°.1, h300km, n22,

σ0§66/22, **mb3.9/8, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.14**	**328**		**Pn**	**06 13 57.1**	**-0.7**
DZM	**Mont Dzumac**	**4.21**	**222**		**Pn**	**06 13 57.8**	**-0.9**
MSVF	**Nonsavu**	**8.21**	**83**	Pn	**Pn**	**06 14 46.3**	**0.0**
OUZ	**Omahuta**	**16.59**	**168**	P	**P**	**06 16 24.6**	**+0.3**
ARMA	**Armidale**	**19.81**	**231**	P	**P**	**06 16 59.4**	**+0.3**
ARMA				IAmb	IAmb	06 17 02.1	
	comp=Z,10nm,1.2s						
BKZ	**Black Stump Fm**	**21.02**	**165**	P	**P**	**06 17 11.2**	**+0.2**
TUWZ	**Tuamarina**	**22.70**	**171**	P	**P**	**06 17 27.1**	**+0.8**
STKA	**Stephens Creek**	**28.20**	**237**	P	**P**	**06 18 16.2**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=86,slow=9.3,SNR=3.9						
STKA	**Stephens Creek**	**28.20**	**237**	P	**P**	**06 18 15.2**	**-0.4**
WB0	**Warramunga Arr**	**33.10**	**263**	P	**P**	**06 18 58.9**	**+0.2**
WB0				IAmb	IAmb	06 19 09.3	
	comp=Z,13nm,1.4s						
WC3	**Warramunga Arr**	**33.11**	**262**	P	**P**	**06 18 58.6**	**-0.1**
WC3				IAmb	IAmb	06 18 59.0	
	comp=Z,3.9nm,1.1s						
WRA	**Warramunga Arr**	**33.14**	**262**	P	**P**	**06 18 59.2**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=83,slow=5.9,SNR=11						
WRA				LR	LR	06 32 16.9	
	comp=Z,84nm,18.8s,baz=80,slow=35						
WRA	**Warramunga Arr**	**33.14**	**262**	P	**P**	**06 18 59.7**	**+0.7**
AS31	**Alice Springs**	**33.44**	**256**	P	**P**	**06 19 02.4**	**+0.9**
AS31				IAmb	IAmb	06 19 03.0	
	comp=Z,2.8nm,0.3s						
ASAR	**Alice Springs**	**33.44**	**256**	P	**P**	**06 19 02.5**	**+0.9**
	comp=Z,3.1nm,0.6s,baz=82,slow=9.1,SNR=30						
ASAR	**Alice Springs**	**33.44**	**256**	P	**P**	**06 19 02.0**	**+0.4**
VNDA	**Vanda**	**58.71**	**182**	P	**P**	**06 22 16.6**	**+0.4**
QSPA	**South Pole Qui**	**71.08**	**180**	P	**P**	**06 23 36.1**	**+0.3**
QSPA				IAmb	IAmb	06 23 36.8	
	comp=Z,5.3nm,1.2s						
BELA	**Belgrano 2**	**82.34**	**175**	P	**P**	**06 24 36.4**	**-1.7**
ILAR	**Eielson Array**	**89.90**	**17**	P	**P**	**06 25 14.8**	**0.0**
	comp=Z,0.3nm,0.7s,baz=229,slow=6.8,SNR=4.2						
ARCES	**ARCESS Array B**	**124.87**	**345**	PKP	**PKiKP**	**06 31 14.3**	**+0.3**
	comp=Z,3.6nm,1.1s,baz=90,slow=1.8,SNR=1.2						
GERES	**GERESS Array B**	**144.37**	**332**	PKP	**PKPdf**	**06 31 51.3**	**+0.7**
	comp=Z,0.2nm,0.2s,baz=42,slow=6.0,SNR=3.7						

LJU 14 06:19:39.0, 45.92N×14.19E, h0km, ML0.3, 1C Artificial, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAVS	**Javornik**	**0.09**	**255**	⇑*i* Pg	Pg	06 19 40.9	+0.1
JAVS				*i* Sg	Sg	06 19 42.5	+0.6
	comp=Z,12nm,0.2s						
GBAS	**Gorenja Brezov**	**0.17**	**84**	*i* Pg	Pg	06 19 42.3	-0.1
GBAS				*i* Sg	Sg	06 19 45.0	+0.4
	comp=Z,3.0nm,0.1s						
CEY	**Cerknica**	**0.24**	**138**	*i* Sg	Sg	06 19 47.9	+1.1
	comp=Z,5.0nm,0.2s						
VOJS	**Vojsko**	**0.24**	**298**	*i* Pg	Pg	06 19 43.5	-0.1
VOJS				*i* Sg	Sg	06 19 47.7	+0.8
SKDS	**Skadanscina**	**0.39**	**199**	*i* Pg	Pg	06 19 46.0	-0.5
	comp=Z,2.0nm,0.1s						

*SNET **14** 06:34:23.1±0.9, 13.36N×90.58W, h15km±6km, ML2.4*
*GCG **14** 06:34:24.0±0.3, 13.69N×90.93W, h8km±31km, MD4.3*
ISC 14 06:34:20.1±2.8, 13.5N±0.1×90.78W±0.07, h13km±12km, n9, σ0§97/16, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.97**	**356**	*e*P	**Pg**	**06 34 39.0**	**0.0**
NUBE	**Las Nubes**	**1.06**	**66**	*e*P	**Pg**	**06 34 40.1**	**-0.4**
NUBE				*e*S	**Sg**	**06 34 53.2**	**-1.2**
NBG	**Las Nubes**	**1.18**	**21**	*e*P	**Pb**	**06 34 44.2**	**+1.5**
NBG				*e*S	**Sb**	**06 34 58.6**	**+0.6**
STG3	**Santiaguito 3,**	**1.45**	**328**	*e*P	**Pn**	**06 34 46.2**	**-0.1**
STG3				*e*S	**Sn**	**06 35 03.4**	**-1.8**
TACO	**Tacachico**	**1.47**	**70**	*e*P	**Pn**	**06 34 46.2**	**-0.2**
TACO				*e*S	**Sn**	**06 35 04.7**	**-0.7**
UEES	**Universidad Ev**	**1.51**	**81**	*e*P	**Pn**	**06 34 47.0**	**0.0**
UEES				*e*S	**Sn**	**06 35 06.2**	**-0.5**
OPAM	**Oficina de Pla**	**1.55**	**81**	*e*S	**Sn**	**06 35 07.2**	**-0.4**
COEG	**Centro de Oper**	**1.85**	**85**	*e*P	**Pn**	**06 34 52.4**	**+0.8**
COEG				*e*S	**Sn**	**06 35 14.1**	**-0.8**
COEB	**Comit de Eme**	**2.18**	**89**	*e*P	**Pn**	**06 34 56.7**	**+0.4**
COEB				*e*S	**Sn**	**06 35 22.3**	**-1.0**
COEB				IAML		06 35 25.8	
	comp=Z,32nm,0.4s						

*NNC **14** 06:39:40.2±0.2, 43.34N×77.93E, h0km, mb1.5, mpv2.8,*
Error ellipse: s-maj=6.0km s-min=1.2km az=175.0
SOME 14 06:39:40.3, 43.37N×77.90E, h10km, 7C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURS	**Kuram**	**0.23**	**58**	*e*P	Pg	06 39 45.0	-0.1
	1.6nm,0.1s						
KURS				*e*S	Sg	06 39 48.5	+0.1
	6.3nm,0.1s						
SATY	**Saty**	**0.48**	**130**	⇓*e*P	Pg	06 39 49.2	-0.5
	4.1nm,0.1s						
SATY				⇑*i*S	Sg	06 39 55.9	-0.2
	28nm,0.1s						
SATY	**Saty**	**0.48**	**130**	P	Pg	06 39 49.3	-0.4
	3.8nm,0.1s						
SATY				S	Sg	06 39 55.8	-0.3
	28nm,0.1s						
KPKS	**Kokpek**	**0.58**	**80**	⇓*e*P	Pg	06 39 51.1	-0.4
	5.5nm,0.1s						
KPKS				⇓*i*S	Sg	06 39 59.1	-0.1
	9.5nm,0.2s						
KOTS	**Kotyrbulak**	**0.59**	**257**	⇓*e*P	Pg	06 39 51.6	-0.2
	6.6nm,0.1s						
KOTS				*e*S	Sg	06 39 59.9	+0.3
	10nm,0.3s						
MDOK	**Medeo**	**0.66**	**252**	*e*P	Pg	06 39 52.6	-0.4
	2.3nm,0.2s						
MDOK				*e*S	Sg	06 40 01.3	-0.3
	3.1nm,0.2s						
KNDC	**Almaty**	**0.70**	**258**	⇑P	Pb	06 39 54.3	-0.3
	10nm,0.3s						
KNDC				⇑S	Sb	06 40 04.4	+0.1
	22nm,0.3s						
TNSS	**Tian-Shan**	**0.77**	**245**	*e*P	Pg	06 39 54.7	-0.5
	0.5nm,0.1s						
TNSS				*e*S	Sg	06 40 05.2	-0.2
	1.4nm,0.3s						
MNBS	**Baschi**	**0.80**	**27**	*e*P	Pg	06 39 55.7	-0.1
	1.2nm,0.1s						
MNBS				*e*S	Sg	06 40 06.7	+0.6
	2.3nm,0.3s						
ARXS	**Arharly**	**0.85**	**356**	*e*P	Pg	06 39 56.1	-0.6
	0.9nm,0.1s						
ARXS				*e*S	Sg	06 40 07.3	-0.4
	3.5nm,0.2s						
UZB	**Uzynbulak**	**0.85**	**105**	⇑*e*P	Pg	06 39 55.9	-0.8
	2.5nm,0.0s						
UZB				⇑*e*S	Sg	06 40 07.0	-0.7
	1.6nm,0.1s						
UZB	**Uzynbulak**	**0.85**	**105**	P	Pg	06 39 56.0	-0.7
	2.5nm,0.0s						
UZB				S	Sg	06 40 07.0	-0.7
	1.2nm,0.1s						
PDGK	**Podgornoye**	**1.16**	**91**	⇓P	Pb	06 40 02.0	-0.6
	1.1nm,0.7s						
PDGK				⇑S	Sb	06 40 17.5	-0.2
	0.4nm,0.3s						
DJR	**Jarkent**	**1.67**	**54**	*e*P	Pb	06 40 11.0	-0.2
	0.9nm,0.2s						
DJR				*e*S	Sb	06 40 32.9	+0.5
	1.9nm,0.2s						
DJR	**Jarkent**	**1.67**	**54**	P	Pb	06 40 11.0	-0.3
	0.6nm,0.1s						
DJR				S	Sb	06 40 32.9	+0.5
	1.8nm,0.2s						
TKM2	**Tokmak 2**	**1.74**	**256**	⇑P	Pb	06 40 12.3	-0.2
TKM2				⇓S	Sb	06 40 34.9	+0.4
	1.3nm,0.7s						

KRNET 14 06:40:07.2±0.1, 43.44N×76.37E, h30km, mb1.8, 6C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**0.77**	**227**	⇑*e*P	Pb	06 40 22.2	0.0
	baz=27						
TKM2				⇑*i*S	Sn	06 40 33.0	+0.2
	baz=27						
BOOM	**Boomskoye usch**	**1.00**	**198**	⇓*i*P	Pb	06 40 25.8	-0.3
	baz=98						
BOOM				⇓*i*S	Sb	06 40 39.4	+0.4
	baz=98						
ANVS	**Anan'yevo**	**1.16**	**124**	⇑*i*P	Pb	06 40 28.4	-0.3
	baz=24						
ANVS				⇑*i*S	Sb	06 40 44.0	+0.5
	baz=24						
ULHL	**Ulahol**	**1.20**	**184**	⇓*i*P	Pb	06 40 29.4	-0.1
	baz=84						
ULHL				⇓*i*S	Sb	06 40 45.3	+0.6
	baz=84						
KDJ	**Kajisay**	**1.44**	**155**	⇑*i*P	Pb	06 40 32.8	-0.7
	baz=55						
KDJ				⇑*i*S	Sb	06 40 52.0	+0.4
	baz=55						

*IDC **14** 07:00:20.1±4.8, 16.81N×146.71E, h63km±42km, mb3.2/5,*
mb1 3.4/6, mb1mx3.3/54, mbtmp3.5/6, ML3.9/1, MS3.1/2,
Ms1 3.1/2, ms1mx2.7/21, Error ellipse: s-maj=50.9km
s-min=22.9km az=94.0
ISC 14 07:00:20.4±1.4, 16.8N±0.1×146.7E±0.3, h68km, n14, σ0§44/7, mb3.6/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.66**	**209**	P	**Pn**	**07 01 14.8**	**+0.2**
	10nm,0.3s,baz=150,slow=12,SNR=5.6						
GUMO				S	**Sn**	**07 01 56.5**	**-0.2**
	14nm,0.3s,baz=170,slow=21,SNR=2.4						
JHJ	**Hachijo jima 2**	**17.40**	**340**	LR	LR	07 09 25.5	
	comp=Z,76nm,21.7s,baz=97,slow=31						
H11S3	**WAKE ISLAND Hy**	**19.11**	**82**	T	T	07 25 28.2	
	baz=262						
H11S1	**WAKE ISLAND Hy**	**19.12**	**82**	T	T	07 25 38.8	
	baz=262						
H11S2	**WAKE ISLAND Hy**	**19.13**	**82**	T	T	07 25 47.2	
	baz=262						
H11N1	**WAKE ISLAND Hy**	**19.38**	**78**	T	T	07 26 01.2	
	baz=265,slow=74,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**19.39**	**78**	T	T	07 25 46.2	
	baz=265,slow=74,SNR=3.9						
H11N3	**WAKE ISLAND Hy**	**19.40**	**78**	T	T	07 25 45.9	
	baz=265,slow=74,SNR=5.0						
KLR	**Kul'dur**	**34.55**	**343**	LR	LR	07 18 31.5	
	comp=Z,28nm,21.7s,baz=268,slow=32						
WRA	**Warramunga Arr**	**38.49**	**199**	P	**P**	**07 07 36.7**	**+0.5**
	0.5nm,0.6s,baz=30,slow=8.9,SNR=15						
ASAR	**Alice Springs**	**42.13**	**198**	P	**P**	**07 08 05.6**	**-0.6**
	0.4nm,0.8s,baz=34,slow=6.7,SNR=2.0						
SONM	**Songino Array**	**45.22**	**322**	P	**P**	**07 08 31.1**	**+0.2**
	0.6nm,0.4s,baz=138,slow=7.9,SNR=4.1						
MKAR	**Makanchi Array**	**60.46**	**315**	P	**P**	**07 10 23.0**	**-0.2**
	0.2nm,0.4s,baz=104,slow=4.6,SNR=1.8						
ILAR	**Eielson Array**	**64.91**	**26**	P	**P**	**07 10 52.5**	**0.0**
	0.2nm,0.5s,baz=255,slow=5.8,SNR=4.4						

*DDA **14** 07:02:05.2, 41.06N×38.69E, h28km±1km, ML2.3*
*ISK **14** 07:02:06.5, 41.03N×38.70E, h20km, ML2.7/10*
ISC 14 07:02:04.1±1.3, 41.16N±0.06×38.69E±0.02, h13km±9km, n23, σ0§77/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPY	**Espiye-Giresun**	**0.24**	**174**	PG	**Pb**	**07 02 10.8**	**+0.5**
ESPY				SG	**Sg**	**07 02 14.1**	**+1.3**
ORDU	**Ordu-Boztepe**	**0.65**	**256**	*i* P	**Pn**	**07 02 18.8**	**-0.3**
ORDU				*i* S	**Sb**	**07 02 27.3**	**+1.0**
ORDU				IAML		07 02 30.0	
	comp=E,230nm,0.1s						
ORDU				IAML		07 02 32.0	
	comp=N,187nm,0.4s						
MACK	**Trabzon**	**0.84**	**104**	*i* P	**Pn**	**07 02 21.8**	**+0.1**
MACK				*i* S	**Sn**	**07 02 33.6**	**-0.3**
MACK				IAML		07 02 35.0	
	comp=E,378nm,0.4s						
MACK				IAML		07 02 35.0	
	comp=N,493nm,0.2s						
SUSE	**Susehri**	**1.02**	**202**	*i* P	**Pb**	**07 02 23.6**	**-0.1**
SUSE				*i* S	**Sb**	**07 02 36.9**	**-0.1**
SUSE				IAML		07 02 37.0	
	comp=E,347nm,0.3s						
SUSE				IAML		07 02 39.0	
	comp=N,327nm,0.4s						
KELT	**Kelkit**	**1.09**	**157**	*i* P	**Pb**	**07 02 24.8**	**-0.2**
KELT				*i* S	**Sg**	**07 02 38.1**	**-1.5**
KELT				IAML		07 02 39.0	
	comp=N,188nm,0.3s						
KELT				IAML		07 02 40.0	
	comp=E,209nm,0.3s						
RSDY	**Resadiye-TOKAT**	**1.28**	**234**	PN	**Pg**	**07 02 28.8**	**-0.1**
RSDY				SN	**Sg**	**07 02 45.5**	**-0.1**
BAYT	**Aydıntepe-Bayb**	**1.34**	**124**	PN	**Pg**	**07 02 29.7**	**-0.2**
BAYT				SN	**Sg**	**07 02 46.6**	**-0.7**
CUZAR	**Zara_SIVAS**	**1.45**	**209**	*i* P	**Pb**	**07 02 30.9**	**-0.1**
CUZAR				*i* S	**Sg**	**07 02 50.1**	**-0.8**
CUZAR				IAML		07 02 51.0	
	comp=N,119nm,0.3s						
CUZAR				IAML		07 02 51.0	
	comp=E,115nm,0.3s						
BAYB	**BAYBURT**	**1.49**	**126**	*i* P	**Pg**	**07 02 32.2**	**-0.6**
BAYB				IAML		07 02 51.0	
	comp=N,105nm,0.2s						
BAYB				*i* S	**Sg**	**07 02 51.1**	**-1.1**
BAYB				IAML		07 02 53.0	
	comp=E,133nm,0.4s						
ERBA	**Erbaa**	**1.54**	**253**	*i* P	**Pb**	**07 02 32.5**	**-0.1**
ERBA				*i* S	**Sn**	**07 02 50.5**	**-0.7**
ERBA				IAML		07 02 53.0	
	comp=N,16nm,0.3s						
CHOM	**Cayeli-Rize**	**1.56**	**91**	PN	**Pg**	**07 02 33.9**	**-0.3**
REFA	**Refahiye_ERZN**	**1.76**	**178**	*i* P	Pn	07 02 26.9	-7.5
REFA				*i* S	Sn	07 02 43.8	-13
REFA				IAML		07 02 47.0	
	comp=E,27nm,0.6s						
REFA				IAML		07 02 47.0	
	comp=N,44nm,0.5s						
KOPT	**Kop Dagi**	**1.78**	**129**	*i* P	**Pg**	**07 02 37.8**	**-0.6**
KOPT				*i* S	**Sb**	**07 02 58.5**	**-0.6**
KOPT				IAML		07 03 04.0	
	comp=N,36nm,0.5s						
KOPT				IAML		07 03 05.0	
	comp=E,47nm,0.7s						
SVSK	**Karacayir**	**1.79**	**227**	PN	**Pb**	**07 02 36.1**	**-0.6**
TOKT	**Tokat**	**1.83**	**244**	PN	**Pb**	**07 02 37.2**	**-0.3**
KRIK	**Erzurum-spir**	**1.88**	**115**	*i* P	**Pg**	**07 02 39.6**	**-0.7**
KRIK				*i* S	**Sb**	**07 03 03.0**	**+1.0**
KRIK				IAML		07 03 05.0	
	comp=E,14nm,0.4s						
KRIK				IAML		07 03 08.0	
	comp=N,8.2nm,0.7s						
KVT	**Kavak**	**2.00**	**269**	PN	**Pb**	**07 02 40.3**	**-0.1**
DBAD	**Bademkaya**	**2.27**	**92**	*i* P	**Pn**	**07 02 42.3**	**+0.8**
DBAD				*i* S	**Sn**	**07 03 08.9**	**-0.4**
DBAD				IAML		07 03 10.0	
	comp=E,19nm,0.5s						
DBAD				IAML		07 03 14.0	
	comp=N,20nm,0.5s						
PTK	**Pertek**	**2.32**	**166**	PN	**Pn**	**07 02 43.1**	**+0.9**
HEKM	**Malatya_Hekimh**	**2.34**	**194**	*i* P	**Pb**	**07 02 47.1**	**+0.8**
DAGI	**Agillar**	**2.44**	**91**	*i* P	**Pn**	**07 02 45.5**	**+1.9**
DAGI				*i* S	**Sn**	**07 03 13.3**	**-0.1**
DAGI				IAML		07 03 24.0	
	comp=E,7.0nm,0.8s						
DARE	**Darende-Malaty**	**2.74**	**200**	PN	**Pn**	**07 02 49.0**	**+1.1**
MALT	**Malatya**	**2.85**	**184**	PN	**Pn**	**07 02 50.3**	**+1.0**

TAP 14 07:02:37.9, 24.28N×121.46E, h8km±1km, ML1.3, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNSB	**Datong**	**0.17**	**334**	*e*P	Pg	07 02 41.4	-0.1
	baz=334						
NNSB				*e*S	Sg	07 02 43.9	0.0
	baz=334						
NNSH	**Datong**	**0.17**	**334**	P	Pg	07 02 41.5	0.0
	baz=334						
NNS	**Nan Shan**	**0.18**	**333**	P	Pg	07 02 41.5	-0.2
	baz=335						
NNS				S	Sg	07 02 44.4	0.0
	baz=335						
FUSS	**Fushou**	**0.20**	**262**	*e*P	Pg	07 02 42.2	+0.1
	baz=262						
WHF	**Hehuan Shan**	**0.22**	**234**	*e*P	Pg	07 02 42.2	-0.3
	baz=233						
WHF				*e*S	Sg	07 02 45.5	-0.1
	baz=233						
TWT	**Tachien**	**0.26**	**265**	*e*P	Pg	07 02 43.3	+0.1
	baz=264						
TDCB	**Techi**	**0.28**	**266**	*e*P	Pg	07 02 43.5	0.0
	baz=265						

*ANF **14** 07:06:51.4±0.4, 36.81N×97.86W, h0km, ML4.0/8, Error*
ellipse: s-maj=5.1km s-min=3.8km az=103.0
*TUL **14** 07:06:51±1.2, 36.85N±0.02×97.88W±0.02, h5km±7km,*
ML3.3, Error ellipse: s-maj=2.8km s-min=2.2km az=92.0
*NEIC **14** 07:06:51.3±0.9, 36.82N±0.02×97.86W±0.02, h5km±6km,*
Error ellipse: s-maj=2.7km s-min=2.2km az=84.0
ISC 14 07:06:51.3±0.9, 36.82N±0.02×97.87W±0.02, h5km±6km, n60, σ0§67/78, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.03**	**20**		**Pg**	**07 06 52.4**	**-0.1**
GC02				Sg	**Sg**	**07 06 53.3**	**0.0**
KAN05	**Bluff City Nor**	**0.29**	**0**		**Pg**	**07 06 56.7**	**-0.2**
CROK	**Carrier**	**0.33**	**196**		**Pg**	**07 06 58.1**	**+0.4**
CROK				Sg	**Sg**	**07 07 03.2**	**+1.1**
KAN10	**Anthony SW Sta**	**0.35**	**329**		**Pg**	**07 06 57.9**	**-0.2**
KAN10				Sg	**Sg**	**07 07 02.7**	**-0.1**
KAN13	**South Haven SW**	**0.37**	**59**		**Pg**	**07 06 58.5**	**0.0**
KAN13				Sg	**Sg**	**07 07 03.4**	**+0.1**
KAN09	**Caldwell North**	**0.37**	**33**		**Pg**	**07 06 58.4**	**-0.2**
KAN09				Sg	**Sg**	**07 07 03.3**	**-0.2**
KAN08	**Anthony NE Sta**	**0.41**	**349**		**Pg**	**07 06 59.0**	**-0.3**
KAN08				Sg	**Sg**	**07 07 04.7**	**-0.1**
KAN12	**Harper NE Stat**	**0.48**	**348**		**Pg**	**07 07 00.4**	**-0.3**
KAN12				Sg	**Sg**	**07 07 06.7**	**-0.3**
U32A	**Winter Ranch,**	**1.01**	**244**		**Pg**	**07 07 10.1**	**-0.6**
U32A				Sg	**Sg**	**07 07 23.8**	**0.0**
OK029	**Liberty Lake**	**1.08**	**162**		**Pg**	**07 07 11.7**	**-0.3**
OK029				Sg	**Sb**	**07 07 26.4**	**-0.4**
T35A	**Sooner Cattle**	**1.09**	**85**		**Pg**	**07 07 11.7**	**-0.6**
T35A				Sg	**Sg**	**07 07 26.1**	**-0.4**
QUOK	**Quay**	**1.14**	**124**		**Pg**	**07 07 13.0**	**-0.2**
QUOK				Sg	**Sg**	**07 07 27.7**	**-0.3**
BCOK	**Bluff Creek, N**	**1.18**	**170**		**Pg**	**07 07 13.3**	**-0.7**
BCOK				Sg	**Sb**	**07 07 29.7**	**-0.1**
OK031	**S. Brethren Rd**	**1.20**	**136**		**Pg**	**07 07 13.9**	**-0.5**
OK031				Sg	**Sb**	**07 07 30.1**	**-0.3**
OK030	**Cody Creek RV**	**1.25**	**135**		**Pg**	**07 07 14.8**	**-0.5**
OK030				Sg	**Sb**	**07 07 31.8**	**-0.1**
OK025	**Westminster Rd**	**1.31**	**161**	Pn	**Pn**	**07 07 15.8**	**-0.4**
OKCFA	**Oklahoma City**	**1.45**	**166**		**Pn**	**07 07 18.0**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.46**	**166**		**Pn**	**07 07 18.0**	**-0.3**
FNO	**Franklin**	**1.61**	**166**		**Pn**	**07 07 20.5**	**+0.1**
R32A	**Long Quarter,**	**1.73**	**338**		**Pn**	**07 07 22.2**	**+0.1**
W35A	**Tecumseh**	**1.85**	**154**		**Pn**	**07 07 24.1**	**+0.4**
TUL1	**Leonard**	**1.91**	**118**	P	**Pn**	**07 07 25.2**	**+0.7**
TUL1	baz=300			S	**Sb**	**07 07 51.4**	**+0.6**
	baz=300						
TUL1	**Leonard**	**1.91**	**118**		**Pn**	**07 07 25.0**	**+0.5**
WMOK	**Wichita Mounta**	**2.21**	**200**	P	**Pn**	**07 07 29.7**	**+1.1**
	baz=19						
WMOK				S	**Sn**	**07 07 57.4**	**+1.1**
	baz=19						
WMOK	**Wichita Mounta**	**2.21**	**200**		**Pn**	**07 07 28.8**	**+0.2**
CBKS	**Cedar Bluff**	**2.48**	**324**	P	**Pn**	**07 07 34.3**	**+1.9**
	baz=143						
CBKS				S	**Sb**	**07 08 06.6**	**-0.6**
	baz=143						
KSU1	**Kansas State U**	**2.48**	**23**	P	**Pn**	**07 07 32.8**	**+0.3**
	baz=204						
KSU1				S	**Sb**	**07 08 06.8**	**-0.5**
	baz=204						
U38A	**Gravette**	**2.83**	**97**		**Pn**	**07 07 37.2**	**+0.1**
X37A	**Clayton**	**3.02**	**137**		**Pn**	**07 07 39.6**	**-0.1**
HHAR	**Hobbs**	**3.21**	**98**		**Pn**	**07 07 42.6**	**+0.1**
Z35A	**Perchaven, San**	**3.52**	**172**	Pn	**Pn**	**07 07 47.0**	**+0.3**
AMTX	**Amarillo**	**3.65**	**239**	Sb	**Sg**	**07 08 45.6**	**-2.9**
	baz=56						
AMTX	**Amarillo**	**3.65**	**239**	Pn	**Pn**	**07 07 48.6**	**+0.1**
N35A	**Tabor**	**4.39**	**23**		**Pn**	**07 07 58.5**	**-0.1**
P38A	**Dawn**	**4.42**	**49**	Pn	**Pn**	**07 07 58.9**	**-0.1**
ABTX	**Abilene, Hawle**	**4.43**	**200**	Pb	**Pb**	**07 08 10.0**	**+0.3**
	baz=18						
ABTX	**Abilene, Hawle**	**4.43**	**200**		**Pn**	**07 07 59.7**	**+0.4**
BGNE	**Belgrade**	**4.58**	**357**	P	**Pn**	**07 08 01.3**	**0.0**
	baz=177						
BGNE	**Belgrade**	**4.58**	**357**		**Pn**	**07 08 01.3**	**0.0**
R40A	**Maddies Statio**	**4.69**	**70**		**Pn**	**07 08 02.9**	**+0.2**
X40A	**Basin Creek Fa**	**4.72**	**118**		**Pn**	**07 08 02.9**	**-0.2**
FCAR	**Ozark Folk Cen**	**4.73**	**100**		**Pn**	**07 08 03.6**	**+0.3**
WHAR	**Wooly Hollow**	**4.78**	**107**	Pn	**Pn**	**07 08 03.4**	**-0.5**
WHTX	**Lake Whitney,**	**4.83**	**176**	P	**Pn**	**07 08 04.7**	**0.0**
	baz=356						
WHTX	**Lake Whitney,**	**4.83**	**176**	Pn	**Pn**	**07 08 04.7**	**0.0**
W41B	**Gary Mavity, V**	**4.85**	**108**		**Pn**	**07 08 05.0**	**+0.1**
237A	**Washetta, Mont**	**5.10**	**160**	Pn	**Pn**	**07 08 08.0**	**-0.4**
T25A	**Trinidad**	**5.24**	**275**	Pn	**Pn**	**07 08 10.4**	**-0.2**
P40A	**Paris**	**5.33**	**58**	Pn	**Pn**	**07 08 12.6**	**+1.1**
N38A	**Joes South For**	**5.37**	**41**	Pn	**Pn**	**07 08 12.8**	**+0.8**
T42A	**Van Buren**	**5.44**	**86**	Pn	**Pn**	**07 08 14.3**	**+1.4**
LCAR	**Lake Charles**	**5.47**	**96**		**Pn**	**07 08 14.4**	**+1.0**
K31A	**O'Neill**	**5.83**	**354**	Pn	**Pn**	**07 08 18.6**	**+0.1**
Q24A	**Divide**	**6.14**	**293**	Pn	**Pn**	**07 08 21.9**	**-1.0**
SDCO	**Great Sand Dun**	**6.15**	**281**	P	**Pn**	**07 08 23.9**	**+0.8**
	baz=96						
SDCO

OK031				Sg	**Sg**	07 35 35.8	**0.0**	
OK030	**Cody Creek RV**	**1.25**	**135**		**Pg**	07 35 20.5	**-0.7**	
OK030				Sg	**Sb**	07 35 38.0	**+0.1**	
OK025	**Westminster Rd**	**1.31**	**161**		**Pn**	07 35 21.7	**-0.7**	
OK025				Sg	**Sb**	07 35 39.7	**+0.1**	
OKCFA	**Oklahoma City**	**1.44**	**166**		**Pn**	07 35 23.9	**-0.3**	
OKCSW	**OKLAHOMA CITY**	**1.46**	**166**		**Pn**	07 35 24.0	**-0.4**	
FNO	**Franklin**	**1.61**	**166**		**Pn**	07 35 26.3	**-0.2**	
R32A	**Long Quarter,**	**1.73**	**337**		**Pn**	07 35 27.9	**-0.3**	
W35A	**Tecumseh**	**1.85**	**154**		**Pn**	07 35 29.7	**-0.1**	
TUL1	**Leonard**	**1.91**	**118**	P	**Pn**	07 35 30.9	**+0.4**	
	baz=300							
TUL1				S	**Sb**	07 35 56.9	**+0.2**	
	baz=300							
TUL1	**Leonard**	**1.91**	**118**		**Pn**	07 35 31.1	**+0.6**	
WMOK	**Wichita Mounta**	**2.21**	**200**	P	**Pn**	07 35 34.6	**-0.2**	
	baz=19							
WMOK				S	**Sn**	07 36 03.4	**+0.8**	
	baz=19							
WMOK	**Wichita Mounta**	**2.21**	**200**		**Pn**	07 35 34.3	**-0.5**	
CBKS	**Cedar Bluff**	**2.48**	**324**	P	**Pn**	07 35 39.8	**+1.3**	
	baz=143							
CBKS				S	**Sb**	07 36 12.5	**-0.9**	
	baz=143							
CBKS	**Cedar Bluff**	**2.48**	**324**		**Pn**	07 35 37.9	**-0.6**	
KSU1	**Kansas State U**	**2.48**	**23**	S	**Sb**	07 36 12.4	**-0.9**	
	baz=204							
U38A	**Gravette**	**2.82**	**97**		**Pn**	07 35 43.7	**+0.5**	
X37A	**Clayton**	**3.01**	**137**		**Pn**	07 35 46.4	**+0.6**	
HHAR	**Hobbs**	**3.21**	**99**		**Pn**	07 35 48.5	**0.0**	
AMTX	**Amarillo**	**3.65**	**239**	Sb	**Sg**	07 36 50.8	**-3.9**	
	baz=56							
W39A	**Magazine**	**3.69**	**115**	Pb	**Pb**	07 36 04.3	**+1.4**	
	baz=298							
S39A	**Bolivar**	**3.73**	**75**		**Pn**	07 35 56.6	**+1.0**	
U40A	**Yellville**	**4.06**	**95**	P	**Pn**	07 36 01.4	**+1.2**	
	baz=278							
U40A	**Yellville**	**4.06**	**95**	Pn	**Pn**	07 36 00.9	**+0.7**	
MIAR	**Mount Ida**	**4.17**	**122**		**Pn**	07 36 02.7	**+1.0**	
Z38A	**Mt. Pleasant**	**4.27**	**146**	Pn	**Pn**	07 36 03.2	**+0.1**	
N35A	**Tabor**	**4.39**	**23**		**Pn**	07 36 05.1	**+0.4**	
ABTX	**Abilene, Hawle**	**4.44**	**200**	Pn	**Pn**	07 36 04.6	**-0.9**	
MGMO	**Mountain Grove**	**4.49**	**84**		**Pn**	07 36 06.8	**+0.7**	
BGNE	**Belgrade**	**4.58**	**357**	Pn	**Pn**	07 36 06.2	**-1.3**	
R40A	**Maddies Statio**	**4.68**	**70**		**Pn**	07 36 09.4	**+0.7**	
X40A	**Basin Creek Fa**	**4.71**	**118**		**Pn**	07 36 09.2	**0.0**	
FCAR	**Ozark Folk Cen**	**4.73**	**100**		**Pn**	07 36 09.6	**+0.3**	
WHAR	**Wooly Hollow**	**4.77**	**107**		**Pn**	07 36 10.3	**+0.4**	
WHTX	**Lake Whitney,**	**4.83**	**176**	P	**Pn**	07 36 10.5	**-0.3**	
	baz=356							
WHTX	**Lake Whitney,**	**4.83**	**176**		**Pn**	07 36 10.3	**-0.5**	
W41B	**Gary Mavity, V**	**4.84**	**108**	Sb	**Sg**	07 37 27.1	**-5.7**	
	baz=292							
W41B	**Gary Mavity, V**	**4.84**	**108**		**Pn**	07 36 10.8	**-0.1**	
MSTX	**Muleshoe**	**4.92**	**236**	Sb	**Sb**	07 37 28.1	**+4.5**	
	baz=53							
MSTX	**Muleshoe**	**4.92**	**236**		**Pn**	07 36 12.0	**0.0**	
T25A	**Trinidad**	**5.25**	**275**	Pn	**Pn**	07 36 16.1	**-0.7**	
CCM	**Cathedral Cave**	**5.41**	**75**	Pn	**Pn**	07 36 19.6	**+0.8**	
LCAR	**Lake Charles**	**5.46**	**96**	Pn	**Pn**	07 36 20.5	**+1.1**	
SDCO	**Great Sand Dun**	**6.16**	**281**	P	**Pn**	07 36 29.6	**+0.3**	
	baz=96							
SDCO	**Great Sand Dun**	**6.16**	**281**	Pn	**Pn**	07 36 29.0	**-0.3**	
ISCO	**Idaho Springs**	**6.78**	**298**	Pn	**Pn**	07 36 37.2	**-0.6**	
ECSD	**EROS Data Cent**	**6.97**	**7**	Pn	**Pn**	07 36 38.8	**-1.3**	
OXF	**Oxford**	**7.26**	**106**	Pn	**Pn**	07 36 45.2	**+1.1**	

IDC ***14*** *07:52:18.0±0.7,3.˚90S×142.˚90E,h32km±4km,mb4.5/21, mb1 4.7/24,mb1mx4.6/33,mbtmp4.8/24,ML4.6/3,MS4.0/30, Ms1 4.0/30,ms1mx4.0/38,Error ellipse: s-maj=15.3km s-min=7.9km az=108.0*

GCMT ***14*** *07:52:21.4±0.3,3.˚78S±0.˚02×142.˚73E±0.˚02, h48km±2km, MW4.9/50,Moment Tension Solution. s42,c54; s50,c59; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.37±.17; Mθθ2.64±.10; Mφφ-0.27±.13; Mrθ0.86±.15; Mφθ0.90±.09; Mφr-0.64±.13; Best double couple: Mo2.87200×10^16 NP1:φs54.00000˚,δ42.00000˚,λ-121.00000˚. NP2: φs273.00000˚,δ55.00000˚,λ-65.00000˚. Principal axes: T 2.9780, Plg7.0000˚, Azm346.0000˚; N -0.2120, Plg20.0000˚, Azm79.0000˚; P -2.7670, Plg68.0000˚, Azm237.0000˚; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***14*** *07:52:22.0±0.0,4.˚00S×142.˚70E,h80km,mB5.2/34, mb5.1/54,Ms4.8/14,Ms7 4.5/12*

NEIC ***14*** *07:52:23.4±1.7,3.˚99S±0.˚08×142.˚65E±0.˚08,h83km±6km, mb5.0/63,Error ellipse: s-maj=11.6km s-min=10.8km az=205.0*

DJA ***14*** *07:52:24.2±0.3,4.˚S±3.˚×14.˚3E±.˚,h71km±3km,M4.9/51, mb5.0/51,mB5.3/22,MLv5.3/6,Mw(mB)4.7/22*

ISC 14 07:52:18.6±0.3,3.˚85S±0.˚04×142.˚81E±0.˚05,h35km,n239, σ1s38/235,mb5.0/72,MS4.2/31,3C-1D,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**2.91**	**295**	P	**Pn**	**07 53 04.7**	**+2.3**
SMPI	**Sarmi**	**4.49**	**294**	P	**Pn**	**07 53 28.3**	**+4.2**
MANU	**Manus Island**	**4.89**	**69**		Pn	07 53 36.9	+7.2
MMPI	**Merauke**	**5.18**	**208**	P	**Pn**	**07 53 37.5**	**+3.8**
	7.1nm2μm,0.6s						
PMG	**Port Moresby**	**7.01**	**142**	Pn	**Pn**	**07 54 00.4**	**+1.5**
	17nm,0.3s,baz=343,slow=5.4,SNR=23						
PMG				Sn	**Sn**	**07 55 20.0**	**+2.6**
	baz=342,slow=16,SNR=1.6						
PMG				Lg	Lg	07 55 55.3	
	5.9nm,0.3s,baz=173,slow=23,SNR=4.5						
PMG				LR	LR	07 57 36.2	
	comp=Z,3μm,18.8s,baz=352,slow=46						
PMG	**Port Moresby**	**7.01**	**142**	Pn	**Pn**	**07 54 00.5**	**+1.7**
BAKI	**Biak**	**7.19**	**291**	P	**Pn**	**07 54 01.6**	**+0.3**
KRVT	**Keravat (AS076**	**9.21**	**93**	Pn	**Pn**	**07 54 27.0**	**-2.0**
	19nm,0.3s,baz=142,slow=4.3,SNR=4.8						
RABL	**Rabaul**	**9.34**	**92**	Pn	Pn	07 54 37.8	+7.0
COEN	**Coen**	**10.05**	**178**	P	Pn	07 54 44.9	+4.3
	baz=10,SNR=17						
COEN	**Coen**	**10.05**	**178**	Pn	**Pn**	**07 54 44.1**	**+3.5**
FAKI	**Fak Fak**	**10.58**	**275**	P	**Pn**	**07 54 49.6**	**+1.8**
	61nm,1.0s						
FAKI	**Fak Fak**	**10.58**	**275**	Pn	**Pn**	**07 54 49.0**	**+1.2**
SIJI	**Sorong**	**11.90**	**284**	Pn	**Pn**	**07 55 07.0**	**+1.1**
	0.6nm,0.3s,baz=60,slow=7.2,SNR=4.6						
SAUI	**Saumlaki**	**12.16**	**250**	P	**P**	**07 55 24.1**	**+2.6**
KDU	**Kakadu**	**13.47**	**229**	P	**Pn**	**07 55 27.4**	**0.0**
	baz=13,SNR=14						
MTSU	**Mount Surprise**	**14.28**	**174**	P	**P**	**07 55 41.8**	**-3.3**
	baz=14,SNR=11						
MTN	**Manton Dam**	**14.60**	**232**	P	**Pn**	**07 55 42.8**	**+0.1**
	baz=15,SNR=18						
MTN	**Manton Dam**	**14.60**	**232**	Pn	**Pn**	**07 55 40.4**	**-2.3**
LBMI	**Labuha**	**15.62**	**281**	P	**Pn**	**07 55 56.4**	**+0.1**
	43nm,0.9s						
NLAI	**Namlea**	**15.69**	**272**	P	P	07 56 10.0	+9.2
TNTI	**Ternate**	**16.10**	**286**	Pn	**Pn**	**07 56 03.7**	**+1.4**
TNTI				IAmb	IAmb	07 56 27.1	
	comp=Z,87nm,1.2s						
CTA	**Charters Tower**	**16.49**	**169**	Pn	**P**	**07 56 09.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=326,slow=13,SNR=4.0						
CTA				LR	LR	08 02 51.6	
	comp=Z,760nm,19.0s,baz=352,slow=39						
CTAO	**Charters Tower**	**16.49**	**169**	Pn	**P**	**07 56 08.1**	**-1.6**
QIS	**Mount Isa**	**16.90**	**190**	P	**P**	**07 56 14.3**	**0.0**
	baz=17,SNR=13						
GUMO	**Guam**	**17.44**	**7**	LR	LR	08 02 42.6	
	comp=Z,294nm,18.4s,baz=174,slow=36						
WB0	**Warramunga Arr**	**17.83**	**207**		**Pn**	**07 56 23.0**	**-1.1**
WB0				IAmb	IAmb	07 56 38.3	
	comp=Z,100nm,1.2s						
HNR	**Honiara**	**17.90**	**109**	P	**P**	**07 56 28.5**	**+3.2**
	comp=Z,22nm,0.3s,baz=275,slow=12,SNR=1.7						
HNR				LR	LR	08 02 58.4	
	comp=Z,206nm,21.5s,baz=271,slow=36						
HNR	**Honiara**	**17.90**	**109**	P	**P**	**07 56 28.3**	**+2.9**
WR0	**Warramunga Arr**	**17.93**	**206**		**Pn**	**07 56 24.1**	**-1.2**
WR0				IAmb	IAmb	07 56 39.0	
	comp=Z,92nm,0.6s						
WRAB	**Tennant Creek**	**17.99**	**207**	P	**Pn**	**07 56 25.2**	**-0.8**
WRAB				IAmb	IAmb	07 56 28.6	
	comp=Z,107nm,0.9s						
WB2	**Warramunga Arr**	**18.00**	**207**		**Pn**	**07 56 24.7**	**-1.4**
WB2				IAmb	IAmb	07 56 28.8	
	comp=Z,96nm,0.9s						
WRA	**Warramunga Arr**	**18.00**	**207**	P	**Pn**	**07 56 25.1**	**-1.1**
	comp=Z,2.8nm,0.3s,baz=25,slow=12,SNR=80						
WRA				S	**S**	**07 59 49.1**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=25,slow=21,SNR=3.6						
WRA				LR	LR	08 03 45.1	
	comp=Z,800nm,20.3s,baz=30,slow=38						
WRA	**Warramunga Arr**	**18.00**	**207**	P	**Pn**	**07 56 24.9**	**-1.3**
KNRA	**Kununurra**	**18.14**	**229**	P	**P**	**07 56 28.5**	**+0.5**
	baz=18,SNR=16						
KNRA	**Kununurra**	**18.14**	**229**	P	**Pn**	**07 56 26.5**	**-1.4**
KNRA				IAmb	IAmb	07 56 30.9	
	comp=Z,74nm,0.8s						
SOEI	**Soe**	**19.32**	**251**	P	**Pn**	**07 56 42.9**	**+0.6**
	comp=Z,4μmcomp=Z,378nm,0.9s						
SOEI	**Soe**	**19.32**	**251**	P	**P**	**07 56 40.2**	**-0.8**
KMSI	**Cibinong**	**19.32**	**283**	P	**Pn**	**07 56 42.6**	**+0.4**
	comp=Z,157nm,0.5s						
BATI	**Baunata**	**20.01**	**251**	P	**P**	**07 56 49.1**	**+0.6**
	comp=Z,103nm,0.7s,baz=91,slow=2.1,SNR=9.9						
BATI	**Baumata**	**20.01**	**251**	P	**P**	**07 56 49.7**	**+1.1**
	comp=Z,1μmcomp=Z,151nm,0.8s						
LUWI	**Luwuk**	**20.21**	**277**	P	**P**	**07 56 52.0**	**+1.4**
	comp=Z,133nm,1.2s						
LUWI	**Luwuk**	**20.21**	**277**	P	**P**	**07 56 50.4**	**-0.3**
LUWI				IAmb	IAmb	07 57 03.8	
	comp=Z,97nm,0.9s						
DAV	**Davao City (W)**	**20.33**	**302**	LR	LR	08 05 24.4	
	comp=Z,263nm,18.3s,baz=112,slow=38						
MRSI	**Marisa**	**21.29**	**281**	P	**P**	**07 57 03.4**	**+1.1**
	comp=Z,2μmcomp=Z,63nm,0.9s						
APSI	**Ampana**	**21.34**	**277**	P	**P**	**07 57 04.1**	**+1.3**
	comp=Z,998nmcomp=Z,95nm,1.2s						
AS31	**Alice Springs**	**21.50**	**203**	P	**P**	**07 57 04.2**	**-0.3**
ASAR	**Alice Springs**	**21.50**	**203**	P	**P**	**07 57 03.9**	**-0.7**
	comp=Z,3.9nm,0.6s,baz=32,slow=10,SNR=32						
ASAR				S	**S**	**08 01 01.4**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=24,slow=25,SNR=4.0						
ASAR				LR	LR	08 05 55.7	
	comp=Z,1μm,18.8s,baz=24,slow=38						
ASAR	**Alice Springs**	**21.50**	**203**	P	**P**	**07 57 04.0**	**-0.6**
EDFI	**Ende, Flores**	**21.54**	**256**	P	**P**	**07 57 03.8**	**-1.3**
	comp=Z,29nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.98**	**229**	P	**P**	**07 57 08.2**	**-1.5**
	comp=Z,59nm,1.0s,baz=62,slow=3.5,SNR=72						
FITZ				S	**S**	**08 01 09.2**	**-1.3**
	comp=Z,8.4nm,0.8s,baz=82,slow=17,SNR=2.2						
FITZ				LR	LR	08 06 12.6	
	comp=Z,797nm,18.2s,baz=52,slow=38						
FITZ	**Fitzroy Crossi**	**21.98**	**229**	P	**P**	**07 57 08.5**	**-1.2**
	baz=22,SNR=50						
FITZ	**Fitzroy Crossi**	**21.98**	**229**	P	**P**	**07 57 08.0**	**-1.7**
FITZ				IAmb	IAmb	07 57 24.2	
	comp=Z,64nm,0.9s						
BSSI	**Bau Bau, Buton**	**22.35**	**263**	P	**P**	**07 57 16.1**	**+2.4**
	comp=Z,941nmcomp=Z,78nm,1.1s						
BNSI	**Bone**	**22.65**	**268**	P	**P**	**07 57 16.4**	**-0.5**
	comp=Z,851nmcomp=Z,86nm,1.1s						
BKSI	**Bulukumba**	**22.66**	**265**	P	**P**	**07 57 17.5**	**+0.5**
	comp=Z,964nmcomp=Z,85nm,1.0s						
EIDS	**Eidsvold**	**22.83**	**160**	P	**P**	**07 57 20.7**	**+2.0**
	baz=23,SNR=8.8						
EIDS	**Eidsvold**	**22.83**	**160**	P	**P**	**07 57 18.2**	**-0.5**
EIDS				IAmb	IAmb	07 57 21.9	
	comp=Z,49nm,0.8s						
BASI	**Baing, Sumba**	**22.94**	**253**	P	**P**	**07 57 21.5**	**+1.5**
	comp=Z,2μmcomp=Z,240nm,1.1s						
TTSI	**Tana Toraja**	**22.96**	**271**	P	**P**	**07 57 21.2**	**+1.0**
	comp=Z,2μmcomp=Z,70nm,1.4s						
SPSI	**Sidrap Palu**	**22.98**	**269**	P	**P**	**07 57 21.2**	**+0.8**
	comp=Z,689nmcomp=Z,35nm,1.8s						
KAPI	**Kappang**	**23.02**	**266**	P	**P**	**07 57 22.5**	**+1.8**
	comp=Z,8.3nm,0.3s,baz=76,slow=5.6,SNR=7.3						
KAPI				LR	LR	08 09 23.2	
	comp=Z,111nm,18.4s,baz=82,slow=44						
KAPI	**Kappang**	**23.02**	**266**	P	**P**	**07 57 19.9**	**-0.8**
RMQ	**Roma**	**23.22**	**166**	P	**P**	**07 57 24.9**	**+2.2**
	baz=23,SNR=23						
MPSI	**Mapaga**	**23.27**	**280**	P	**P**	**07 57 23.2**	**-0.1**
	comp=Z,24nm,1.2s						
WBSI	**Waikabubak, Su**	**23.95**	**255**	P	**P**	**07 57 29.7**	**-0.1**
	comp=Z,1μmcomp=Z,103nm,1.0s						
WRKA	**Warakurna**	**25.27**	**212**	P	**P**	**07 57 41.8**	**-0.1**
	baz=25,SNR=46						
CMSA	**Coral Meteorol**	**27.68**	**175**	P	**P**	**07 58 04.4**	**+1.1**
	baz=28,SNR=7.8						
ARMA	**Armidale**	**27.71**	**163**	P	**P**	**07 58 04.6**	**+0.7**
	baz=28,SNR=5.4						
STKA	**Stephens Creek**	**27.91**	**182**	P	**P**	**07 58 05.2**	**-0.3**
	comp=Z,4.7nm,0.8s,baz=352,slow=8.7,SNR=8.4						
STKA				LR	LR	08 10 48.6	
	comp=Z,708nm,18.8s,baz=360,slow=40						
STKA	**Stephens Creek**	**27.91**	**182**	P	**P**	**07 58 05.5**	**+0.1**
	baz=28,SNR=5.5						
STKA	**Stephens Creek**	**27.91**	**182**	P	**P**	**07 58 03.7**	**-1.8**
PSA00	**Pilbara Seismi**	**28.42**	**230**	P	**P**	**07 58 06.9**	**-3.2**
PSA00				IAmb	IAmb	07 58 11.3	
	comp=Z,50nm,1.1s						
PSA00	**Pilbara Seismi**	**28.42**	**230**	P	**P**	**07 58 07.1**	**-3.0**
PSA00				IAmb	IAmb	07 58 09.7	
	comp=Z,18nm,1.1s						
DZM	**Mont Dzumac**	**29.22**	**130**	P	**P**	**07 58 16.5**	**-0.8**
	comp=Z,6.4nm,0.7s,baz=190,slow=8.4,SNR=3.1						
DZM				LR	LR	08 09 39.3	
	comp=Z,440nm,20.2s,baz=302,slow=36						
DZM	**Mont Dzumac**	**29.22**	**130**	*e*P	**P**	**07 58 19.8**	**+2.5**
	comp=Z,78nm,1.6s						
DZM				*e*LR	LR	08 05 47.0	
	comp=Z,1μm,24.9s						
BBOO	**Buckleboo**	**29.50**	**192**	P	**P**	**07 58 20.8**	**+1.2**
	baz=30,SNR=6.3						
FORT	**Forrest**	**30.19**	**206**	P	**P**	**07 58 27.4**	**+1.7**
	baz=30,SNR=17						
YNG	**Young**	**30.74**	**171**	P	**P**	**07 58 32.1**	**+1.6**
	baz=31,SNR=5.0						
SBUM	**Sibu**	**31.20**	**281**	P	**P**	**07 58 34.9**	**0.0**
H11S3	**WAKE ISLAND Hy**	**32.35**	**46**	T	T	08 32 35.1	
	baz=229,slow=75,SNR=74						
H11S2	**WAKE ISLAND Hy**	**32.36**	**46**	T	T	08 32 33.0	
	baz=229,slow=75,SNR=68						
H11S1	**WAKE ISLAND Hy**	**32.37**	**46**	T	T	08 32 28.2	
	baz=229,slow=75,SNR=76						
MEEK	**Meekatharra**	**32.40**	**223**	P	**P**	**07 58 45.0**	**-0.3**
	baz=32,SNR=17						
ARPS	**Mount Arapiles**	**32.78**	**181**	P	**P**	**07 58 49.4**	**+1.0**
	baz=33,SNR=6.4						
KSM	**Kuching**	**32.91**	**279**	P	**P**	**07 58 49.4**	**-0.5**
KSM				IAmb	IAmb	07 58 51.2	
	comp=Z,26nm,1.2s						
TOO	**Toolangi**	**33.66**	**176**	P	**P**	**07 58 57.8**	**+1.7**
	baz=34,SNR=4.2						
KMBL	**Kambalda**	**33.73**	**213**	P	**P**	**07 58 56.7**	**-0.1**
	baz=34,SNR=22						
MORW	**Morawa**	**35.70**	**223**	P	**P**	**07 59 13.9**	**0.0**
	baz=36,SNR=8.9						
MORW	**Morawa**	**35.70**	**223**	P	**P**	**07 59 12.3**	**-1.5**
BLDU	**Ballidu**	**36.27**	**220**	P	**P**	**07 59 18.6**	**-0.1**
	baz=36,SNR=8.8						
KLBR	**Kellerberrin**	**36.28**	**218**	P	**P**	**07 59 18.9**	**+0.1**
	baz=36,SNR=8.7						
NWAO	**Narrogin (SRO)**	**37.53**	**217**	P	**P**	**07 59 29.0**	**-0.5**
	comp=Z,9.8nm,0.8s,baz=49,slow=9.9,SNR=2.8						
NWAO				LR	LR	08 16 05.6	
	comp=Z,425nm,18.4s,baz=50,slow=38						
NWAO	**Narrogin (SRO)**	**37.53**	**217**	P	**P**	**07 59 28.4**	**-1.0**
JNU	**Nakatsue**	**38.46**	**344**	PcP	**PcP**	**08 01 49.6**	**-0.4**
	comp=Z,9.0nm,0.8s,baz=76,slow=6.6,SNR=2.4						
JWT	**Wachi**	**39.54**	**350**	P	**P**	**07 59 46.8**	**+0.6**
MJAR	**Matsushiro Arr**	**40.41**	**354**	P	**P**	**07 59 53.2**	**-0.2**
	comp=Z,4.2nm,0.9s,baz=179,slow=9.0,SNR=5.5						
SDSI	**Sungai Dareh**	**41.44**	**273**	P	**P**	**08 00 01.8**	**-0.5**
	comp=Z,13nm,0.8s						
NJ2	**Nanjing**	**42.34**	**329**	*e*P	**P**	**08 00 11.1**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
KSRS	**Korea Array**	**43.36**	**343**	P	**P**	**08 00 18.8**	**+1.3**
	comp=Z,6.8nm,1.0s,baz=161,slow=9.4,SNR=12						
KSRS				PcP	**PcP**	**08 02 05.8**	**0.0**
	comp=Z,6.2nm,0.9s,baz=171,slow=4.3,SNR=9.5						
KSRS				LR	LR	08 15 47.7	
	comp=Z,148nm,19.9s,baz=166,slow=32						
KSAR	**Wonju Array Be**	**43.36**	**343**	P	**P**	**08 00 18.5**	**+1.0**
WHN	**Wuhan**	**43.69**	**323**	P	**P**	**08 00 24.1**	**+3.8**
RPSI	**Rantau Prapat**	**44.34**	**278**	P	**P**	**08 00 23.9**	**-1.9**
RAO	**Raoul Island**	**44.98**	**128**	LR	LR	08 17 26.3	
	comp=Z,154nm,19.2s,baz=272,slow=34						
SLVN	**Son La**	**45.59**	**305**	P	**P**	**08 00 33.9**	**-1.8**
GYA	**Guiyang**	**46.15**	**313**	⇑P	**P**	**08 00 42.4**	**+2.3**
GYA				pmax	pmax		
	comp=Z,19nm,1.0s						
GYA				pmax	pmax		
	comp=Z,190nm,3.7s						
URZ	**Urewera**	**46.38**	**142**	LR	LR	08 18 58.9	
	comp=Z,268nm,19.4s,baz=31,slow=35						
TUWZ	**Tuamarina**	**46.68**	**148**	P	**P**	**08 00 43.5**	**-0.3**
BSWZ	**Blackbirch Sta**	**46.84**	**148**	P	**P**	**08 00 44.5**	**-0.7**
RPZ	**Rata Peaks**	**46.91**	**152**	LR	LR	08 19 30.7	
	comp=Z,363nm,18.5s,baz=298,slow=35						
KMI	**Kunming**	**48.39**	**309**	⇓*i*P	**P**	**08 00 59.8**	**+2.1**
KMI				pmax	pmax		
	comp=Z,31nm,1.3s						
KMI				pmax	pmax		
	comp=Z,83nm,4.1s						
KMI				LR	LR		
	comp=Z,180nm,10.5s						
KMI				LR	LR		
	comp=Z,140nm,9.5s						
KMI				LR	LR		
	comp=Z,220nm,11.1s						
CMAR	**Chiang Mai Arr**	**48.56**	**299**	P	**P**	**08 00 59.2**	**+0.4**
	comp=Z,10nm,0.9s,baz=123,slow=6.2,SNR=48						
CMAR				LR	LR	08 19 36.0	
	comp=Z,69nm,21.8s,baz=162,slow=34						
CMAR	**Chiang Mai Arr**	**48.56**	**299**	P	**P**	**08 00 58.6**	**-0.3**
CHTO	**Chiang Mai**	**48.69**	**299**	P	**P**	**08 01 00.0**	**+0.1**
CHTO				IAmb	IAmb	08 01 01.4	
	comp=Z,15nm,1.1s						
USA0B	**Ussuriysk Arra**	**48.80**	**350**	P	**P**	**08 01 01.2**	**+1.0**
USA0B				IAmb	IAmb	08 01 02.3	
	comp=Z,20nm,0.9s						
USRK	**Ussuriysk Ar.**	**48.80**	**350**	P	**P**	**08 01 01.0**	**+0.7**
	comp=Z,17nm,0.8s,baz=166,slow=9.0,SNR=21						
USRK				LR	LR	08 19 16.5	
	comp=Z,186nm,19.7s,baz=157,slow=33						
USRK	**Ussuriysk Ar.**	**48.80**	**350**	P	**P**	**08 01 00.5**	**+0.2**
XAN	**Xi'an**	**49.41**	**322**	P	**P**	**08 01 06.3**	**+1.2**
XAN				pmax	pmax		
	comp=Z,26nm,1.1s						
XAN				pmax	pmax		
	comp=Z,200nm,7.1s						
XAN	**Xi'an**	**49.41**	**322**	P	**P**	**08 01 03.3**	**-1.9**
XAN				IAmb	IAmb	08 01 06.9	
	comp=Z,28nm,1.2s						
MDJ	**Mudanjiang**	**49.68**	**348**	P	**P**	**08 01 05.4**	**-1.5**
MDJ				IAmb	IAmb	08 01 09.8	
	comp=Z,11nm,0.8s						
CD2	**Chengdu**	**50.80**	**316**	⇑*i*P	**P**	**08 01 17.5**	**+1.7**
CD2				S	**S**	**08 08 27.9**	**-1.7**
CD2				pmax	pmax		
	comp=Z,40nm,1.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.5s						
CD2				LR	LR		
	comp=Z,280nm,14.1s						
CD2				LR	LR		
	comp=Z,250nm,13.1s						
CD2				LR	LR		
	comp=Z,500nm,14.7s						
HHC	**Hu-ho-hao-te**	**52.86**	**330**	*e*P	**P**	**08 01 33.5**	**+2.4**
HHC				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
LZH	**Lanzhou**	**53.89**	**321**	*e*P	**P**	**08 01 40.9**	**+2.1**
LZH				pP	sP	08 01 57.1	+3.6
LZH				pmax	pmax		
	comp=Z,33nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.7s						
SHL	**Shillong**	**57.35**	**304**	P	**P**	**08 02 04.3**	**+0.5**
PETK	**Petropavlovsk-**	**58.12**	**11**	P	**P**	**08 02 09.7**	**+1.2**
	comp=Z,19nm,0.9s,baz=169,slow=5.5,SNR=16						
PETK				LR	LR	08 23 45.2	
	comp=Z,88nm,21.9s,baz=215,slow=32						
GTA	**Gaotai**	**58.45**	**322**	⇑P	**P**	**08 02 12.9**	**+1.7**
GTA				pmax	pmax		
	comp=Z,19nm,1.3s						
GTA				pmax	pmax		
	comp=Z,210nm,6.3s						
GTA				LR	LR		
	comp=Z,130nm,15.6s						
GTA				LR	LR		
	comp=Z,560nm,17.1s						
GTA				LR	LR		
	comp=Z,160nm,16.4s						
LSA	**Lhasa**	**59.62**	**308**	P	**

VNDA LR LR 08 34 41.3
comp=Z,111nm,20.1s,baz=349,slow=34
VNDA Vanda 74.33 176 P P 08 03 51.5 -0.5
VNDA IAmb IAmb 08 04 08.8
comp=Z,16nm,1.3s
KDJ Kajisay 74.82 315 P P 08 03 54.0 -1.8
KDJ IAmb IAmb 08 03 57.9
comp=Z,27nm,1.0s
KSH Kashi 74.85 313 *eP* **P 08 03 57.9 +2.0**
KSH pmax pmax
comp=Z,38nm,1.1s
KSH pmax pmax
comp=Z,360nm,4.7s
TDK Taldyqorghan 74.99 319 *eP* **P 08 03 57.4 +0.9**
comp=Z,36nm,0.9s,baz=318
ZAA0 Zalesovo Array 74.99 329 P P 08 03 55.6 -0.7
ZAA0 IAmb IAmb 08 03 57.0
comp=Z,13nm,0.9s
ZALV Zalesovo Beam 74.99 329 P P 08 03 56.2 0.0
comp=Z,9.7nm,0.8s,baz=104,slow=6.3,SNR=35
ZALV LR LR 08 35 49.1
comp=Z,90nm,21.6s,baz=116,slow=35
ZALV Zalesovo Beam 74.99 329 P P 08 03 55.1 -1.2
MDOK Medeo 75.27 316 *eP* **P 08 03 59.0 +0.7**
baz=316
MDOK *eS* **S 08 13 33.9 -1.5**
baz=316
NIL Nilore 75.29 306 P P 08 03 57.8 -0.7
AAA Alma-Ata 75.37 316 *eP* **P 08 03 59.8 +1.0**
comp=Z,19nm,0.5s,baz=316
AAA *eS* **S 08 13 35.4 -0.9**
baz=316
BOOM Boomskoye usch 75.81 315 P P 08 04 01.3 -0.1
BOOM IAmb IAmb 08 04 03.4
comp=Z,21nm,0.8s
KUU Kurty 76.00 317 *eP* **P 08 04 02.5 +0.2**
comp=Z,54nm,1.1s,baz=317
TKM2 Tokmak 2 76.19 316 P P 08 04 04.2 +0.6
SNR=15
KBK Karagaybulak 76.56 315 P P 08 04 06.9 +1.2
SNR=5.9
UCH Uchtor 76.73 315 P P 08 04 08.8 +1.7
SNR=5.1
CHMS Chumysh 76.80 316 P P 08 04 07.4 +0.5
SNR=5.9
AAK Ala-Archa 76.87 315 P P 08 04 08.2 +0.8
SNR=8.0
KURK Kurchatov 77.01 324 P P 08 04 06.7 -1.1
KURK IAmb IAmb 08 04 09.2
comp=Z,37nm,1.1s
SGDS Sogindy 77.03 316 *i* P **P 08 04 08.4 +0.2**
comp=Z,3.5nm,0.6s,baz=316
USP Ospenovka 77.06 316 P P 08 04 08.6 +0.2
SNR=21
AML Almayashu 77.28 315 P P 08 04 11.6 +1.5
SNR=31
EKS2 Erkin-Say 77.38 315 P P 08 04 11.7 +1.4
SNR=15
BTLS Baital 77.92 317 *i* P **P 08 04 13.3 +0.3**
comp=Z,13nm,0.9s,baz=317
KBL Kabul 78.89 306 P P 08 04 17.9 -1.0
GAR Garm 78.92 311 P P 08 04 17.9 -1.0
GAR IAmb IAmb 08 04 20.1
comp=Z,20nm,0.7s
DZA Taraz 79.18 315 *eP* **P 08 04 20.4 +0.3**
comp=Z,11nm,0.8s,baz=315
CHGR Chuyangaron 79.72 310 P P 08 04 22.9 -0.3
KK31 Karatay Array 79.81 315 P P 08 04 23.3 -0.2
KK31 IAmb IAmb 08 04 24.9
comp=Z,38nm,1.5s
KKAR Karatay Array 79.81 315 P P 08 04 22.8 -0.7
KKAR IAmb IAmb 08 04 24.9
comp=Z,38nm,1.5s
IUG Iuzhnay 79.91 314 *eP* **P 08 04 24.6 +0.4**
comp=Z,20nm,1.6s,baz=314
BRZS Berezniki 80.32 322 *i* P **P 08 04 26.1 -0.1**
comp=Z,8.5nm,0.9s,baz=322
NRIK Noril'sk 81.98 343 P P 08 04 34.6 +0.1
comp=Z,19nm,0.8s,baz=125,slow=4.7,SNR=37
NRIK LR LR 08 39 02.8
comp=Z,141nm,21.5s,baz=195,slow=34
MAW Mawson 82.63 202 P P 08 04 37.4 -0.5
comp=Z,7.5nm,1.0s,baz=65,slow=7.5,SNR=6.1
MAW LR LR 08 39 45.7
comp=Z,50nm,18.1s,baz=60,slow=34
MAW Mawson 82.63 202 P P 08 04 38.0 +0.1
baz=83
MAW Mawson 82.63 202 P P 08 04 36.7 -1.2
BRVK Borovoye 82.66 325 P P 08 04 38.1 -0.3
RC01 Rabbit Creek A 82.67 27 P P 08 04 38.2 -0.1
baz=248
IMAR Indian Mountai 83.00 22 P P 08 04 38.5 -1.4
MLY Manley 83.75 23 P P 08 04 44.2 +0.4
baz=247
MCK McKinley 83.98 25 P P 08 04 44.2 -0.8
baz=249
I23K Minto, Yukon-K 84.33 23 P P 08 04 46.4 -0.3
baz=248
I23K Minto, Yukon-K 84.33 23 P P 08 04 45.1 -1.6
DHY Denali Highway 84.41 25 P P 08 04 47.7 +0.3
DHY IAmb IAmb 08 05 05.6
comp=Z,19nm,1.2s
M24K Tolsona, Glenn 84.61 27 P P 08 04 49.4 +1.0
baz=251
COLD Coldfoot 84.81 21 P P 08 04 50.4 +1.3
HDA Harding Lake 85.04 24 P P 08 04 49.4 -0.9
baz=251
ILAR Eielson Array 85.19 24 P P 08 04 49.4 -1.6
comp=Z,5.6nm,0.7s,baz=257,slow=4.7,SNR=75
ILAR pP **pP 08 04 59.3 -2.9**
comp=Z,4.2nm,0.7s,baz=258,slow=5.1,SNR=12
ILAR LR LR 08 39 32.7
comp=Z,54nm,20.0s,baz=256,slow=33
TOLK Toolik Lake Re 85.57 20 P P 08 04 54.2 +1.2
baz=248
QSPA South Pole Qui 86.11 180 P P 08 04 53.1 -2.7
L26K Log Cabin Wild 86.14 26 P P 08 04 56.4 +0.5
baz=254
K27K Chicken 86.96 25 P P 08 05 01.0 +1.1
baz=255
K27K Chicken 86.96 25 P P 08 04 59.4 -0.4
K27K IAmb IAmb 08 05 19.8
comp=Z,15nm,1.1s
GEYT Alibeck 88.15 308 P P 08 05 05.2 -0.9
comp=Z,5.3nm,0.8s,baz=86,slow=1.9,SNR=9.3
GEYT pP **pP 08 05 17.4 +0.1**
comp=Z,3.2nm,0.5s,baz=222,slow=2.0,SNR=4.3
GEYT Alibeck 88.15 308 P P 08 05 05.3 -0.9
ABKAR Akbulak array 88.23 319 P P 08 05 04.6 -1.6
HYT Haines Junctio 88.31 29 P P 08 05 06.5 0.0
HYT IAmb IAmb 08 05 26.0
comp=Z,20nm,1.2s
WHY Whitehorse 89.56 29 P P 08 05 11.2 -1.2
WHY IAmb IAmb 08 05 12.8
comp=Z,8.4nm,1.2s
ARU Arti 89.99 326 LR LR 08 47 55.0
comp=Z,83nm,18.8s,baz=94,slow=37
BELA Belgrano 2 98.37 181 P P 08 05 51.5 -0.9
YKA Yellowknife Ar 99.20 27 LR LR 08 48 40.6
comp=Z,76nm,20.4s,baz=0.0,slow=34
NVAR Mina Array Bea 99.34 52 P Pdif 08 05 57.3 -0.5
comp=Z,0.7nm,0.9s,baz=272,slow=6.7,SNR=3.8
NVAR LR LR 08 41 49.2
comp=Z,95nm,22.0s,baz=253,slow=30
KBZ Khabaz 99.81 314 LR LR 08 55 10.0
comp=Z,33nm,19.8s,baz=108,slow=38
TXAR Lajitas Array 112.35 60 PKiKP **PKiKP**
08 10 51.0 -0.7
comp=Z,0.4nm,1.0s,baz=347,slow=2.8,SNR=4.5
TXAR PKKP **PKKPdf 08 22 09.2 +6.9**
comp=Z,0.2nm,0.7s,baz=120,slow=3.6,SNR=3.6
U40A Yellville 119.58 50 P PKPdf 08 11 03.9 -1.3
baz=289
CCM Cathedral Cave 120.22 48 P PKPdf 08 11 05.2 -1.2
baz=291
PLCA Paso Flores 126.16 149 PKP **PKiKP**
08 11 18.3 0.0
comp=Z,1.1nm,0.5s,baz=217,slow=3.6,SNR=6.4
PLCA pPKP **pPKPdf 08 11 27.4 -1.9**
comp=Z,1.8nm,0.9s,baz=278,slow=4.8,SNR=2.2
TORD Torodi Ar. Bea 140.50 286 PKP **PKPdf**
08 11 45.3 0.0
comp=Z,0.7nm,0.8s,baz=66,slow=3.4,SNR=3.5
TOLC Tolima 141.97 87 *eP* **PKPdf 08 11 47.3 -1.1**
ROSC El Rosal 142.97 87 PKhKP **PKPdf**
08 11 48.2 -2.1
comp=Z,4.6nm,0.5s,baz=89,slow=5.5,SNR=4.6
LPAZ La Paz 143.45 124 PKhKP PKPbc 08 11 48.4 -0.1
comp=Z,1.5nm,0.7s,baz=4.2,slow=4.5,SNR=4.5
OCAC Ocana 143.82 81 *eP* PKPab 08 11 48.3 -0.2
CPUP Villa Florida 144.22 148 PKP PKPbc 08 11 50.0 +0.2
comp=Z,2.3nm,0.9s,baz=198,slow=3.2,SNR=3.1
PAMC Pamplona, Colo 144.50 83 *eP* **PKPab 08 11 51.0 -0.4**
URIC Uribia, Colomb 144.68 75 *eP* **PKPab 08 11 50.5 -0.9**
SDV Santo Domingo 146.41 80 *eP* **PKPdf 08 11 56.2 +0.3**
KIC Kosan Boka 147.58 276 *eP* **PKPbc 08 12 00.6 +0.2**
comp=Z,9.6nm,0.7s
DBIC Dimbokro 147.68 276 PKPbc **PKPbc 08 12 00.2 -0.4**
comp=Z,9.1nm,0.9s,baz=80,slow=2.1,SNR=7.3
DBIC pPKPbc **pPKPbc 08 12 12.0 0.0**
comp=Z,6.2nm,0.6s,baz=55,slow=3.5,SNR=4.7
TIC Toumodi 147.85 276 *eP* **PKPdf 08 11 59.3 +1.2**
LIC Lamto 147.88 276 *eP* **PKPdf 08 11 58.3 +0.1**
comp=Z,37nm,1.0s
SJG San Juan 148.31 61 *eP* **PKPbc 08 12 00.5 -1.6**

MEX 14 08:02:36.5±0.4, 14°90N×93°26W, h155km±43km, MD3.6, Near coast of Chiapas

NEIC ***14*** *08:06:49.1±1.6, 64°.5N±0°.1×17°.8W±0°.1, h8km±4km, mb4.3/11, Error ellipse: s-maj=16.0km s-min=6.8km az=183.0*
REY ***14*** *08:06:49.1, 64°.67N×17°.47W, h4km*
IDC ***14*** *08:06:49.9±0.9, 64°.49N×17°.66W, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.6/38, mbtmp3.6/7, ML3.7/1, Error ellipse: s-maj=32.2km s-min=11.9km az=16.0*
ISC 14 08:06:49.8±0.5, 64°68N±0°02×17°46W±0°02, h10km, n61, σ1§82/79, mb3.9/11, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.12**	**20**	P		**Pg**	**08 06 52.0**	**-0.7**
	baz=20							
IDYN				S		**Sg**	**08 06 54.6**	**-0.2**
	baz=20							
IVON	**Vonarskard**	**0.13**	**267**	P		**Pg**	**08 06 51.6**	**-1.2**
	baz=270							
IHAM	**Hamarinn**	**0.25**	**218**	P		**Pg**	**08 06 54.1**	**-0.9**
	baz=219							
IHAM				S		**Sg**	**08 06 57.8**	**-0.6**
	baz=219							
IGRF	**Grimsfjall**	**0.29**	**163**	P		**Pg**	**08 06 54.8**	**-0.8**
	baz=162							
IGRF				S		**Sg**	**08 06 59.2**	**-0.3**
	baz=162							
IKVE	**Kverkfjoll**	**0.34**	**90**	P		**Pg**	**08 06 55.6**	**-0.9**
	baz=89							
IHUS	**Husbondi**	**0.39**	**192**	P		**Pg**	**08 06 56.5**	**-1.0**
	baz=192							
ISKR	**Skrokkalda**	**0.41**	**254**	P		**Pg**	**08 06 56.7**	**-1.2**
	baz=254							
THOR	**Thorvaldshraun**	**0.42**	**53**	P		**Pg**	**08 06 57.0**	**-1.1**
	baz=52							
THOR				S		**Sg**	**08 07 03.7**	**0.0**
	baz=52							
IKRE	**Kreppuhraun**	**0.48**	**77**	P		**Pg**	**08 06 57.7**	**-1.4**
	baz=76							
IKRE				S		**Sg**	**08 07 04.7**	**-0.7**
	baz=76							
IJOK	**Jokulheimar**	**0.49**	**222**	P		**Pg**	**08 06 58.0**	**-1.4**
	baz=223							
IASK	**Askja**	**0.51**	**43**	P		**Pg**	**08 06 58.4**	**-1.3**
	baz=42							
IASK				S		**Sg**	**08 07 05.5**	**-0.9**
	baz=42							
IMKO	**Mokollar**	**0.57**	**58**	P		**Pg**	**08 06 59.3**	**-1.5**
	baz=57							
IMKO				S		**Sg**	**08 07 07.7**	**-0.5**
	baz=57							
ISVA	**Svartarkot**	**0.67**	**8**	P		**Pg**	**08 07 01.2**	**-1.4**
	baz=7.6							
ISVA				S		**Sg**	**08 07 10.6**	**-0.8**
	baz=7.6							
IKSK	**Karasker**	**0.68**	**140**	P		**Pg**	**08 07 00.5**	**-2.3**
	baz=140							
IKSK				S		**Sg**	**08 07 10.2**	**-1.5**
	baz=140							
IKAL	**Kalfafell**	**0.74**	**188**	P		**Pg**	**08 07 02.2**	**-1.9**
	baz=188							
IVSH	**V-Sauoahnukur**	**0.76**	**79**	P		**Pg**	**08 07 02.3**	**-2.1**
	baz=79							
IVSH				S		**Sg**	**08 07 12.9**	**-1.3**
	baz=79							
IVAT	**Vatnsfell**	**0.80**	**233**	P		**Pg**	**08 07 03.4**	**-1.8**
	baz=233							
IADA	**Aoalbol**	**0.88**	**66**	P		**Pg**	**08 07 04.3**	**-2.3**
	baz=66							
IADA				S		**Sg**	**08 07 16.6**	**-1.5**
	baz=66							
IFAG	**Fagurholsmyri**	**0.88**	**156**	P		**Pg**	**08 07 04.4**	**-2.3**
	baz=156							
IHVE	**Hveravellir**	**0.92**	**283**	P		**Pg**	**08 07 05.1**	**-2.4**
	baz=283							
IMEL	**Melhnausar**	**0.96**	**21**	P		**Pg**	**08 07 05.7**	**-2.4**
	baz=20							
IREN	**Reynihlio**	**1.00**	**13**	P		**Pg**	**08 07 06.7**	**-2.3**
	baz=13							
IKVO	**Krokottuvotn**	**1.07**	**13**	P		**Pg**	**08 07 07.8**	**-2.5**
	baz=13							
ISKI	**Skildingahlsh**	**1.21**	**9**	P		**Pn**	**08 07 10.1**	**-2.6**
	baz=8.5							
ISKI				S		**Sb**	**08 07 26.8**	**-1.6**
	baz=8.5							
IGHA	**Grjothals**	**1.22**	**16**	P		**Pn**	**08 07 10.1**	**-2.8**
	baz=16							
IGRA	**Granastaoir**	**1.25**	**358**	P		**Pn**	**08 07 10.6**	**-2.6**
	baz=358							
IDIM	**Dimmadalss**	**1.31**	**10**	P		**Pn**	**08 07 11.7**	**-2.3**
	baz=9.6							
IHLA	**Hella**	**1.33**	**343**	P		**Pn**	**08 07 12.2**	**-2.1**
	baz=344							
IHED	**Heoinshofoi**	**1.41**	**3**	P		**Pn**	**08 07 13.3**	**-2.1**
	baz=2.6							
IHED				S		**Sn**	**08 07 32.2**	**-1.8**
	baz=2.6							
IBRE	**Brettingsstaoi**	**1.46**	**353**	P		**Pn**	**08 07 14.1**	**-2.1**
	baz=353							
IGIL	**Gilhagi**	**1.48**	**18**	P		**Pn**	**08 07 14.2**	**-2.2**
	baz=18							
ISIG	**Siglufjorour**	**1.58**	**338**	P		**Pn**	**08 07 16.0**	**-1.8**
	baz=338							
BORG	**Borgarnes**	**1.66**	**274**	Pg		**Pn**	**08 07 16.9**	**-1.9**
	12nm,0.3s,baz=88,slow=7.4,SNR=40							
BORG				Lg		Lg	08 07 41.2	
	19nm,0.3s,baz=237,slow=21,SNR=12							
BORG	**Borgarnes**	**1.66**	**274**			**Pn**	**08 07 17.3**	**-1.6**
BORG				Sn		**Sn**	**08 07 37.0**	**-3.2**
ILEI	**Leirhofn**	**1.78**	**13**	P		**Pn**	**08 07 19.0**	**-1.6**
	baz=13							
IHRN	**Hraun**	**1.82**	**323**	P		**Pn**	**08 07 19.8**	**-1.3**
	baz=324							
SCO	**Scoresbysund**	**6.08**	**346**			**Pn**	**08 08 20.5**	**+1.0**
SCO	**Scoresbysund**	**6.08**	**346**	*e*		**Pn**	**08 08 19.2**	**-0.3**
	baz=166,slow=8.6							
SCO				*eP*		**Pn**	**08 08 20.9**	**+1.4**
SCO				*i* P		**Pn**	**08 08 22.0**	**+2.5**
SCO				*eS*		**Sn**	**08 09 34.0**	**+5.1**
SCO				IAML			08 09 40.3	
	comp=Z,0.9nm,0.5s							
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn		**Pn**	**08 09 38.1**	**+0.8**
	baz=324,slow=12,SNR=3.6							
NOA	**NORSAR Array B**	**13.52**	**92**	Pn		**Pn**	**08 09 59.5**	**-1.9**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.8							
ARD6	**ARCESS Array S**	**17.09**	**55**	P		**P**	**08 10 51.4**	**+1.2**
ARD6				IAmb		IAmb	08 11 09.0	
	comp=Z,34nm,1.4s							
ARC5	**ARCESS Array S**	**17.10**	**55**	P		**P**	**08 10 51.4**	**+1.3**
ARC5				IAmb		IAmb	08 11 07.8	
	comp=Z,25nm,1.2s							
BRG	**Berggiesshubel**	**21.41**	**115**	*e*PKP		**P**	**08 11 40.5**	**+3.1**
	comp=Z,14nm,1.4s							
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**	**08 11 55.0**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=342,slow=7.0,SNR=3.6							
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**	**08 11 53.7**	**-0.3**
TUE	**Stuetta**	**23.40**	**128**	P		**P**	**08 11 58.2**	**-0.5**
MORC	**Moravsky Berou**	**23.69**	**112**	P		**P**	**08 12 00.8**	**-0.5**
MORC				IAmb		IAmb	08 12 29.9	
	comp=Z,7.7nm,1.4s							
KWP	**Kalwaria Pacla**	**25.90**	**106**	P		**P**	**08 12 22.1**	**+0.6**
AKASG	**Malin Array Be**	**27.83**	**98**	P		**P**	**08 12 40.1**	**+1.2**
	comp=Z,0.2nm,0.2s,baz=319,slow=9.8,SNR=1.1							
C36M	**Paulatuk**	**36.82**	**325**	P		**P**	**08 13 57.1**	**-0.1**
C36M				IAmb		IAmb	08 14 14.4	
	comp=Z,6.9nm,1.4s							
ABKAR	**Akbulak array**	**41.97**	**73**	P		**P**	**08 14 41.4**	**+1.0**
AGMN	**Agassiz Nation**	**43.13**	**287**	P		**P**	**08 14 47.5**	**-2.4**
AGMN				IAmb		IAmb	08 15 11.7	
	comp=Z,9.1nm,1.3s							
I42A	**Draeger Farm,**	**43.73**	**277**	P		**P**	**08 14 53.5**	**-1.3**
IL31		**45.68**	**332**	P		**P**	**08 15 11.2**	**+1.3**
ILAR	**Eielson Array**	**45.68**	**332**	P		**P**	**08 15 12.9**	**+2.9**
	comp=Z,1.1nm,1.1s,baz=24,slow=6.8,SNR=7.5							
ILAR				PcP		**PcP**	**08 16 50.5**	**+2.8**
	comp=Z,0.5nm,1.0s,baz=347,slow=3.7,SNR=5.5							
ILAR	**Eielson Array**	**45.68**	**332**	P		**P**	**08 15 11.0**	**+1.0**
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P		**P**	**08 16 08.4**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=348,slow=10,SNR=3.7							
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**	**08 16 10.1**	**+2.2**
	comp=Z,1.3nm,1.0s,baz=55,slow=7.1,SNR=7.8							
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**	**08 16 06.8**	**-1.1**
SMCO	**Snowmass**	**55.19**	**289**	P		**P**	**08 16 20.9**	**-1.8**
SMCO				IAmb		IAmb	08 16 27.2	
	comp=Z,6.8nm,0.7s							
SONM	**Songino Array**	**59.62**	**40**	P		**P**	**08 16 56.1**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=316,slow=10,SNR=1.7							

IDC 14 08:08:27.8±1.8, 3°85S×143°17E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.7/29, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=66.9km s-min=23.3km az=109.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.16**	**208**	P		Pn	08 12 41.8	+0.1
	0.4nm,0.3s,baz=26,slow=12,SNR=31							
ASAR	**Alice Springs**	**21.64**	**204**	P		P	08 13 19.9	0.0
	0.2nm,0.5s,baz=34,slow=11,SNR=4.5							
FITZ	**Fitzroy Crossi**	**22.25**	**229**	P		P	08 13 26.3	-0.2
	3.1nm,0.8s,baz=60,slow=6.9,SNR=9.6							
H11S3	**WAKE ISLAND Hy**	**32.10**	**45**	T		T	08 48 52.8	
	baz=229,slow=75,SNR=4.8							
H11S2	**WAKE ISLAND Hy**	**32.11**	**45**	T		T	08 48 50.4	
	baz=229,slow=75,SNR=4.2							
H11S1	**WAKE ISLAND Hy**	**32.11**	**45**	T		T	08 48 48.7	
	baz=229,slow=75,SNR=4.5							
MKAR	**Makanchi Array**	**73.43**	**321**	P		P	08 20 02.3	+0.2
	1.0nm,0.8s,baz=113,slow=8.0,SNR=7.2							
ZALV	**Zalesovo Beam**	**75.19**	**329**	P		P	08 20 12.1	0.0
	0.5nm,0.3s,baz=101,slow=7.8,SNR=6.8							
ILAR	**Eielson Array**	**85.05**	**24**	P		P	08 21 05.1	-0.1
	0.2nm,0.6s,baz=243,slow=5.6,SNR=4.8							

NEIC ***14*** *08:10:31.1±1.4, 64°.52N±0°.08×17°.8W±0°.1, h10km±5km, mb4.7/17, Error ellipse: s-maj=14.1km s-min=2.5km az=216.0*
IDC ***14*** *08:10:32.3±1.5, 64°.45N×17°.80W, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.5/38, mbtmp3.6/4, ML4.0/1, MS3.7/3, Ms1 3.7/3, ms1mx2.9/43, Error ellipse: s-maj=42.8km s-min=15.3km az=22.0*
ISC 14 08:10:31.5±0.6, 64°55N±0°09×17°83W±0°06, h10km, n31, σ1§25/28, mb4.7/10, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.52**	**279**	Pg		**Pb**	**08 10 59.2**	**-0.4**
	15nm,0.3s,baz=101,slow=9.7,SNR=21							
BORG				Lg		Lg	08 11 22.7	
	6.0nm,0.3s,baz=78,slow=19,SNR=9.0							
BORG	**Borgarnes**	**1.52**	**279**			**Pb**	**08 10 59.5**	**-0.1**
SCO	**Scoresbysund**	**6.16**	**347**			**Pn**	**08 12 03.6**	**+1.3**
EKA	**Eskdalemuir Ar**	**11.78**	**135**	Pn		**Pn**	**08 13 20.8**	**+1.5**
	baz=321,slow=14,SNR=4.7							
NRS	**Narsarsuaq**	**12.99**	**268**	Pn		**Pn**	**08 13 35.6**	**-0.1**
SFJD	**Kangerlussuaq**	**13.58**	**295**	LR		LR	08 18 27.9	
	comp=Z,124nm,19.6s,baz=112,slow=35							
KBS	**Kingsbay**	**16.79**	**19**	P		**Pn**	**08 14 24.9**	**-1.4**
KBS				IAmb		IAmb	08 14 25.6	
	comp=Z,36nm,1.4s							
ARD8	**ARCESS Array S**	**17.29**	**54**	P		**Pn**	**08 14 31.3**	**-1.3**
ARA0	**ARCESS Array S**	**17.30**	**54**	P		**P**	**08 14 34.6**	**+0.4**
CLF	**Chambon-Foret**	**19.81**	**137**	P		**P**	**08 14 59.6**	**-2.2**
CLF				IAmb		IAmb	08 15 01.6	
	comp=Z,70nm,1.5s							
OSSC	**Osservatorio P**	**26.68**	**128**	P		**P**	**08 16 09.3**	**-1.0**
OSSC				IAmb		IAmb	08 16 17.1	
	comp=Z,19nm,1.5s							
AKBB	**Malin Array Si**	**27.97**	**97**	P		**P**	**08 16 21.1**	**-0.7**
LMN	**Caledonia Moun**	**31.67**	**257**	P		**P**	**08 16 54.3**	**-0.4**
LMN				IAmb		IAmb	08 17 05.1	
	comp=Z,14nm,1.3s							
TIRR	**Tirgusor**	**32.49**	**106**	P		**P**	**08 17 01.3**	**-0.5**
D62A	**Allapoint, All**	**32.51**	**262**	P		**P**	**08 17 02.0**	**+0.1**
INK	**Inuvik**	**39.86**	**328**	P		**P**	**08 18 04.1**	**-0.4**
INK				IAmb		IAmb	08 18 05.3	
	comp=Z,6.8nm,0.4s							
PSUB	**Penn St. - Bra**	**41.02**	**262**	P		**P**	**08 18 14.1**	**-0.3**
PSUB				IAmb		IAmb	08 18 30.7	
	comp=Z,17nm,1.1s							
CSS	**Mathiatis**	**42.53**	**109**	P		**P**	**08 18 26.7**	**-0.1**
CSS				IAmb		IAmb	08 18 28.8	
	comp=Z,26nm,1.3s							
L48A	**N Adams**	**43.23**	**272**	P		**P**	**08 18 31.6**	**-0.9**
L48A				IAmb		IAmb	08 18 38.6	
	comp=Z,28nm,1.2s							
D32A	**Dogwood Acres,**	**44.41**	**287**	P		**P**	**08 18 41.1**	**-0.8**
U61A	**Possum Corner**	**44.47**	**260**	P		**P**	**08 18 40.8**	**-1.6**
ILAR	**Eielson Array**	**45.72**	**332**	P		**P**	**08 18 55.2**	**+3.2**
	comp=Z,0.7nm,1.0s,baz=21,slow=9.0,SNR=4.4							
ILAR	**Eielson Array**	**45.72**	**332**			**P**	**08 18 52.5**	**+0.4**
CNNC	**Cliffs of the**	**46.01**	**260**	P		**P**	**08 18 54.4**	**-0.3**
BARN	**Barnard Glacie**	**47.85**	**327**	P		**P**	**08 19 09.0**	**0.0**
BARN				IAmb		IAmb	08 19 10.4	
	comp=Z,19nm,1.4s							
P40A	**Paris**	**48.50**	**276**	P		**P**	**08 19 14.2**	**+0.1**
NEW	**Newport**	**51.36**	**302**	LR		LR	08 40 10.8	
	comp=Z,134nm,19.7s,baz=290,slow=35							
PDAR	**Pinedale Array**	**53.09**	**293**	P		**P**	**08 19 51.4**	**+2.5**
	comp=Z,0.7nm,0.9s,baz=68,slow=9.8,SNR=4.7							
PDAR	**Pinedale Array**	**53.09**	**293**	P		**P**	**08 19 47.9**	**-1.0**
TORD	**Torodi Ar. Bea**	**53.10**	**156**	P		**P**	**08 19 50.7**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=348,slow=9.4,SNR=2.0							
TXAR	**Lajitas Array**	**62.16**	**280**	LR		LR	08 48 14.0	
	comp=Z,92nm,18.9s,baz=0.0,slow=36							

SNET ***14*** *08:13:21.9±1.3, 13°.83N×91°.34W, h13km±8km, ML3.4*
GCG ***14*** *08:13:25.7±0.6, 14°.28N×91°.27W, h62km±19km, MD4.1*
ISC 14 08:13:21.8±2.6, 13°9N±0°.1×91°3W±0°.1, h10km±18km, n15, σ0§82/17, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.62**	**337**	*eP*		**Pn**	**08 13 36.3**	**-0.4**
FUG	**Fuego 3**	**0.74**	**39**	*eP*		**Pb**	**08 13 37.9**	**+1.0**
PCG	**Pacaya**	**0.87**	**53**	*eP*		**Pn**	**08 13 40.3**	**-0.1**
STG3	**Santiaguito 3,**	**0.88**	**344**	*eP*		**Pg**	**08 13 38.6**	**-0.1**
NBG	**Las Nubes**	**1.19**	**53**	*eP*		**Pn**	**08 13 44.5**	**-0.2**
NBG				*eS*		**Sn**	**08 14 01.3**	**+0.2**
NUBE	**Las Nubes**	**1.50**	**88**	*eP*		**Pn**	**08 13 48.7**	**-0.2**
NUBE				*eS*		**Sn**	**08 14 07.9**	**-0.6**
NUBE				IAML			08 14 09.6	
	comp=Z,549nm,0.6s							
CEDA	**San Andres**	**1.87**	**92**	*eS*		**Sn**	**08 14 18.6**	**+1.0**
CEDA				IAML			08 14 29.3	
	comp=Z,430nm,0.5s							
TACO	**Tacachico**	**1.91**	**87**	*eP*		**Pn**	**08 13 53.5**	**-1.0**
TACO				*eS*		**Sn**	**08 14 19.8**	**+1.2**
MRL	**Marmol**	**1.99**	**52**	*eP*		**Pn**	**08 13 54.3**	**-1.5**
UEES	**Universidad Ev**	**2.03**	**94**	IAML			08 14 31.9	
	comp=Z,455nm,0.3s	

ISC 14 08:23:13.4±2.9, 42°.8N±0°.1×83°.5E±0°.1, h10km, n9, σ1°.41/19, 5C, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.40**	**286**	*eP*	**Pg**	**08 23 59.6**	**+0.3**
	7.2nm,0.1s						
KTMS				*eS*	**Sg**	**08 24 32.0**	**+1.5**
	118nm,0.4s						
PDGK	**Podgornoye**	**3.00**	**281**	⇑Pn	**Pg**	**08 24 09.1**	**-1.7**
	1.0nm,0.3s						
PDGK				⇑Sn	**Sg**	**08 24 50.7**	**+1.1**
	12nm,0.3s						
SHLS	**Shalkode**	**3.00**	**278**	*eP*	**Pb**	**08 24 05.8**	**-1.1**
	7.9nm,0.2s						
SHLS				*eS*	**Sb**	**08 24 42.9**	**-0.7**
	69nm,0.4s						
DJR	**Jarkent**	**3.10**	**300**	*eP*	**Pb**	**08 24 08.3**	**-0.3**
	5.0nm,0.3s						
DJR				*eS*	**Sb**	**08 24 47.3**	**+0.8**
	25nm,0.6s						
UZB	**Uzynbulak**	**3.32**	**277**	*eP*	**Pg**	**08 24 15.4**	**-1.6**
	1.4nm,0.3s						
UZB				*eS*	**Sg**	**08 24 59.1**	**-0.8**
	12nm,0.3s						
KPKS	**Kokpek**	**3.60**	**282**	*eP*	**Pg**	**08 24 20.6**	**-1.7**
	2.7nm,0.2s						
KPKS				*eS*	**Sg**	**08 25 08.1**	**-0.8**
	32nm,0.3s						
SATY	**Saty**	**3.76**	**275**	*eP*	**Pg**	**08 24 25.0**	**-0.4**
	2.0nm,0.1s						
SATY				*eS*	**Sg**	**08 25 15.9**	**+1.7**
	17nm,0.2s						
MK31	**Makanchi Array**	**4.05**	**348**	Pn	**Pn**	**08 24 18.1**	**+2.6**
	0.1nm,0.2s,baz=99,slow=17,SNR=38						
MK31				Pg	**Pg**	**08 24 29.3**	**-1.7**
	0.3nm,0.2s,baz=162,slow=17,SNR=16						
MK31				⇑Sn	**Sb**	**08 25 12.6**	**-1.3**
	8.1nm,0.5s,baz=163,slow=26,SNR=5.7						
MAKZ	**Makanchi**	**4.12**	**345**	⇑Pg	**Pg**	**08 24 31.5**	**-0.8**
	1.3nm,0.6s						
MAKZ				⇑Sn	**Sb**	**08 25 15.1**	**-0.7**
	8.9nm,0.6s						

*IDC **14** 08:27:39.1±2.6, 14°.08N×145°.50E, h57km±22km, mb3.5/6, mb1 3.7/6, mb1mx3.3/46, mbtmp3.8/6, MS3.6/1, Ms1 3.6/1, ms1mx2.5/36, Error ellipse: s-maj=41.9km s-min=27.9km az=96.0*

ISC 14 08:27:37.9±1.3, 14°.1N±0°.2×145°.7E±0°.2, h50km, n14, σ0°.92/8, mb3.6/6, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.92**	**238**	P	**Pn**	**08 27 55.0**	**+0.4**
	701nm,0.3s,baz=40,slow=2.0,SNR=634						
GUMO				S	**Sn**	**08 28 06.4**	**-0.4**
	421nm,0.3s,baz=247,slow=21,SNR=9.7						
H11S3	**WAKE ISLAND Hy**	**20.64**	**75**	T	T	08 54 18.7	
	baz=261,slow=74,SNR=4.8						
H11S1	**WAKE ISLAND Hy**	**20.65**	**75**	T	T	08 54 18.5	
	baz=261,slow=74,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**20.65**	**75**	T	T	08 54 07.4	
	baz=261,slow=74,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**21.05**	**72**	T	T	08 55 05.4	
	baz=260,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	**21.06**	**72**	T	T	08 55 18.9	
	baz=260						
H11N3	**WAKE ISLAND Hy**	**21.07**	**72**	T	T	08 55 15.2	
	baz=260						
KSRS	**Korea Array**	**28.14**	**329**	P	**P**	**08 33 26.3**	**+1.0**
	0.8nm,0.5s,baz=138,slow=9.6,SNR=2.3						
WRA	**Warramunga Arr**	**35.60**	**199**	P	**P**	**08 34 31.1**	**+0.2**
	0.3nm,0.7s,baz=7.3,slow=8.6,SNR=4.8						
DZM	**Mont Dzumac**	**41.29**	**150**	LR	LR	08 50 11.5	
	comp=Z,72nm,18.3s,baz=62,slow=33						
MKAR	**Makanchi Array**	**61.69**	**316**	P	**P**	**08 37 51.2**	**+0.2**
	0.2nm,0.4s,baz=85,slow=9.9,SNR=6.1						
KURBB	**Kurchatov Arra**	**64.76**	**320**	P	**P**	**08 38 10.3**	**-0.8**
	0.3nm,0.3s,baz=94,slow=7.5,SNR=1.8						
ILAR	**Eielson Array**	**67.80**	**25**	P	**P**	**08 38 30.8**	**+0.4**
	0.4nm,0.6s,baz=248,slow=6.4,SNR=7.0						
FINES	**FINESS Array B**	**91.05**	**335**	P	**P**	**08 40 35.4**	**-1.4**
	2.5nm,1.0s,baz=94,slow=1.8,SNR=3.4						

*IDC **14** 08:55:51.3±2.2, 51°.76N×173°.98W, h0km, mb3.6/6, mb1 3.7/7, mb1mx3.5/46, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=72.1km s-min=24.0km az=13.0*
*AEIC **14** 08:56:00.1±2.2, 51°.77N±0°.08×173°.63W±0°.03, h48km±10km, ML3.3, Error ellipse: s-maj=11.6km s-min=1.2km az=169.0*
*NEIC **14** 08:56:02.0±1.3, 51°.9N±0°.4×173°.7W±0°.2, h66km±36km, Error ellipse: s-maj=57.0km s-min=7.0km az=167.0*

ISC 14 08:56:01.7±1.4, 52°.0N±0°.2×173°.68W±0°.06, h73km±9km, n32, σ0°.67/31, mb3.6/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.40**	**307**		**Pn**	**08 56 12.9**	**-1.0**
ATKA	**Atka Island**	**0.40**	**307**		**Sn**	**08 56 22.0**	**-0.7**
KOFP	**Korovin Flat P**	**0.41**	**321**		**Pn**	**08 56 13.7**	**-0.3**
KOSE	**Korovin Southe**	**0.45**	**329**		**Pn**	**08 56 14.3**	**0.0**
KOSE					**Sn**	**08 56 24.5**	**+0.9**
KONE	**Korovin Northe**	**0.51**	**328**		**Pn**	**08 56 15.1**	**+0.2**
KONE					**Sn**	**08 56 25.5**	**+1.0**
KOWE	**Korovin West**	**0.54**	**319**		**Pn**	**08 56 15.4**	**+0.3**
GSMY	**Great Sitkin M**	**1.47**	**274**		**Pn**	**08 56 26.0**	**-0.3**
GSMY					**Sn**	**08 56 46.1**	**+1.2**
GSTR	**Great Sitkin T**	**1.48**	**276**		**Pn**	**08 56 26.6**	**+0.2**
GSTD	**Great Sitkin T**	**1.53**	**275**		**Pn**	**08 56 27.0**	**-0.1**
GSTD					**Sn**	**08 56 47.1**	**+0.8**
ADAG	**Mount Adagdak**	**1.81**	**272**		**Pn**	**08 56 31.4**	**+0.7**
ADK	**Adak**	**1.86**	**269**		**Pn**	**08 56 31.2**	**-0.3**
KIKV	**Kanaga Island**	**2.17**	**269**		**Pn**	**08 56 36.1**	**+0.6**
KIMD	**Kanaga Island**	**2.21**	**266**		**Pn**	**08 56 36.5**	**+0.3**
TAFP	**Tanaga Falls P**	**2.67**	**270**		**Pn**	**08 56 42.8**	**+0.5**
TAFP					**Sn**	**08 57 14.7**	**+1.1**
TASE	**Tanaga Southea**	**2.70**	**269**		**Pn**	**08 56 43.6**	**+0.7**
NIKH	**Nikolski High**	**3.12**	**69**		**Pn**	**08 56 48.4**	**0.0**
NIKH	**Nikolski High**	**3.12**	**69**		**Sn**	**08 57 24.7**	**+0.2**
AMKA	**Amchitka**	**4.41**	**265**	Pn	**Pn**	**08 57 05.2**	**-0.8**
UNV	**Unalaska Valle**	**4.74**	**64**	Pn	**Pn**	**08 57 11.1**	**+0.7**
ILAR	**Eielson Array**	**18.83**	**37**	P	**P**	**09 00 15.4**	**+0.2**
	0.1nm,0.3s,baz=227,slow=9.2,SNR=9.1						
H11N2	**WAKE ISLAND Hy**	**35.58**	**213**	T	T	09 41 01.7	
	baz=21,slow=76,SNR=16						
H11N3	**WAKE ISLAND Hy**	**35.58**	**213**	T	T	09 40 57.3	
	baz=21,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	**35.59**	**213**	T	T	09 40 58.2	
	baz=21,slow=76,SNR=10						
H11S1	**WAKE ISLAND Hy**	**36.78**	**212**	T	T	09 41 57.2	
	baz=20,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	**36.80**	**212**	T	T	09 41 58.5	
	baz=20,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**36.80**	**212**	T	T	09 41 58.6	
	baz=20,slow=76,SNR=26						
PDAR	**Pinedale Array**	**43.08**	**76**	P	**P**	**09 03 55.0**	**+0.4**
	0.5nm,0.9s,baz=270,slow=2.2,SNR=4.5						
TXAR	**Lajitas Array**	**55.42**	**85**	P	**P**	**09 05 28.8**	**+0.2**
	0.2nm,0.5s,baz=304,slow=6.3,SNR=6.7						
KURBB	**Kurchatov Arra**	**60.98**	**316**	P	**P**	**09 06 06.5**	**-0.4**
	0.4nm,0.5s,baz=44,slow=7.0,SNR=2.7						
MKAR	**Makanchi Array**	**62.12**	**311**	P	**P**	**09 06 13.6**	**-1.1**
	0.2nm,0.5s,baz=40,slow=6.2,SNR=2.3						
BVAR	**Borovoye Array**	**62.45**	**322**	P	**P**	**09 06 16.1**	**-0.7**
	0.6nm,0.5s,baz=45,slow=15,SNR=3.8						
AKTO	**Aktyubinsk**	**68.98**	**327**	P	**P**	**09 06 58.2**	**-0.6**
	1.0nm,0.4s,baz=15,slow=6.3,SNR=3.6						

WEL 14 09:30:57.0±1.1, 34°S±6°×18°0W±1°4, h33km, M4.3/16, mB4.8/2, ML4.5/16, MLv4.3/16, Mw(mB)4.0/2, Error ellipse: s-maj=0.0km s-min=0.0km az=103.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.41**	**203**	P	Pn	09 32 01.8	+0.3
MXZ				S	Sn	09 32 54.1	+2.3
WMGZ	**Waiomatatini S**	**4.61**	**201**	P	Pn	09 32 06.9	+2.5
WMGZ				S	Sn	09 33 00.1	+3.3
HAZ	**Te Kaha**	**4.77**	**206**	P	Pn	09 32 07.0	+0.5
HAZ				S	Sn	09 33 01.8	+1.3
PKGZ	**Pakihiroa**	**4.78**	**203**	P	Pn	09 32 06.1	-0.7
PKGZ				S	Sn	09 33 00.9	-0.1
PUZ	**Puketiti**	**4.89**	**201**	P	Pn	09 32 07.0	-1.3
PUZ				S	Sn	09 33 05.6	+1.8
GRZ	**Great Barrier**	**4.94**	**235**	P	Pn	09 32 09.3	+0.4
RUGZ	**Raukumara Rang**	**4.99**	**206**	P	Pn	09 32 09.1	-0.6
RUGZ				S	Sn	09 33 06.1	-0.2
KUZ	**Kuaotunu**	**5.05**	**229**	P	Pn	09 32 11.8	+1.4
TWGZ	**Tauwhareparae**	**5.08**	**203**	P	Pn	09 32 12.5	+1.7
TWGZ				S	Sn	09 33 11.5	+3.2
CNGZ	**Carnagh Statio**	**5.29**	**200**	P	Pn	09 32 13.9	+0.2
TKGZ	**Te Karaka**	**5.36**	**203**	P	Pn	09 32 14.5	-0.1
TKGZ				S	Sn	09 33 16.7	+1.5
OPRZ	**Ohinepanea**	**5.37**	**215**	P	Pn	09 32 15.2	+0.4
MWZ	**Matawai**	**5.37**	**205**	P	Pn	09 32 13.3	-1.6
MWZ				S	Sn	09 33 15.5	-0.1
URZ	**Urewera**	**5.47**	**209**	P	Pn	09 32 15.0	-1.1
URZ				S	Sn	09 33 15.7	-2.0
WCZ	**Waipu Caves**	**5.59**	**243**	P	Pn	09 32 17.8	0.0
MKAZ	**Moumakai**	**5.63**	**229**	P	Pn	09 32 20.0	+1.8
RIGZ	**Rimuhau**	**5.63**	**202**	P	Pn	09 32 18.0	-0.3
RIGZ				S	Sn	09 33 20.4	-1.4
MUGZ	**Murupara**	**5.79**	**210**	P	Pn	09 32 19.4	-1.2
MUGZ				S	Sn	09 33 26.4	+0.6
SNGZ	**Shannon Statio**	**5.84**	**205**	P	Pn	09 32 21.0	-0.2
SNGZ				S	Sn	09 33 28.1	+1.1
RAHZ	**Arahi**	**6.05**	**206**	P	Pn	09 32 22.1	-2.0
RAHZ				S	Sn	09 33 31.6	-0.6

*NCEDC **14** 09:42:45.5±2.3, 37°.47N±0°.03×118°.84W±0°.05, h8km±6km, ML3.2/26, Error ellipse: s-maj=5.6km s-min=4.1km az=116.0*
*ANF **14** 09:42:45.3±0.2, 37°.44N×118°.85W, h0km±1km, ML3.0/21, Error ellipse: s-maj=1.7km s-min=1.4km az=86.0*
*NEIC **14** 09:42:45.9±1.6, 37°.46N±0°.03×118°.79W±0°.02, h4km±9km, Error ellipse: s-maj=4.7km s-min=0.4km az=158.0*

ISC 14 09:42:45.7±1.0, 37°.47N±0°.02×118°.83W±0°.02, h7km±9km, n82, σ0°.86/95, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLAC	**Mammoth, Mammo**	**0.16**	**358**	P	**Pg**	**09 42 49.2**	**0.0**
	baz=182						
MLAC				S	**Sg**	**09 42 52.1**	**+0.5**
	baz=182						
MDRNC	**Doe Ridge**	**0.17**	**358**		**Pg**	**09 42 49.4**	**+0.1**
OMMB	**Old Mammoth Mi**	**0.20**	**316**		**Pg**	**09 42 49.5**	**-0.4**
MRDM	**Red Cones**	**0.22**	**305**		**Pg**	**09 42 50.1**	**-0.2**
MTUM	**Tungsten Hills**	**0.24**	**119**		**Pg**	**09 42 50.6**	**0.0**
MDPB	**Devils Postpil**	**0.26**	**309**		**Pg**	**09 42 50.6**	**-0.3**
MDCM	**Deadman Creek**	**0.29**	**325**		**Pg**	**09 42 51.3**	**-0.4**
TIN	**Tinemaha, Big**	**0.63**	**131**	P	**Pg**	**09 42 57.8**	**-0.1**
	baz=310,SNR=38						
TIN				S	**Sg**	**09 43 06.6**	**+0.4**
	baz=310						
HELL	**Mitchell Peak,**	**0.80**	**191**		**Pg**	**09 43 00.4**	**-0.8**
HELL					**Sg**	**09 43 10.7**	**-0.9**
LHV	**Little Huntoon**	**0.82**	**18**		**Pg**	**09 43 01.3**	**-0.3**
NVAR	**Mina Array Bea**	**1.04**	**23**	Pg	**Pg**	**09 43 04.8**	**-1.0**
NV11	**Mina Array Sit**	**1.10**	**29**		**Pg**	**09 43 06.2**	**-0.6**
WAKR	**Walker**	**1.14**	**335**		**Pg**	**09 43 07.2**	**-0.5**
RYN	**Ryan**	**1.18**	**12**		**Pg**	**09 43 08.0**	**-0.5**
CWC	**Cottonwood Cre**	**1.19**	**150**	P	**Pg**	**09 43 07.6**	**-1.0**
	baz=330						
VOG	**Valley Oaks Go**	**1.23**	**201**	P	**Pg**	**09 43 08.1**	**-1.2**
	baz=20						
VOG				S	**Sg**	**09 43 24.7**	**-0.5**
	baz=20						
GRAC	**Grapevine Rang**	**1.26**	**112**	P	**Pb**	**09 43 09.6**	**-0.2**
	baz=292,SNR=30						
GRAC				S	**Sb**	**09 43 26.4**	**+0.1**
	baz=292						
CMB	**Columbia Colle**	**1.36**	**295**		**Pn**	**09 43 10.1**	**-1.1**
CMB	**Columbia Colle**	**1.36**	**295**	Pn	**Pn**	**09 43 09.9**	**-1.2**
TPH	**Tonopah**	**1.41**	**64**	Pn	**Pn**	**09 43 11.7**	**-0.2**
VES	**Vestal, Richgr**	**1.64**	**187**	P	**Pn**	**09 43 15.0**	**+0.1**
	baz=6.8						
VES				S	**Sn**	**09 43 36.6**	**+0.4**
	baz=6.8						
KVN	**Kaiserville**	**1.68**	**20**		**Pn**	**09 43 16.1**	**+0.4**
PNTR	**Pine Nut**	**1.73**	**340**		**Pn**	**09 43 16.7**	**+0.4**
MPMC	**Manual Prospec**	**1.77**	**142**	P	**Pn**	**09 43 16.9**	**0.0**
	baz=323,SNR=48						
MPMC				S	**Sb**	**09 43 41.1**	**0.0**
	baz=323						
EMB	**Emerald Bay**	**1.81**	**327**		**Pn**	**09 43 18.8**	**+1.3**
ISA	**Isabella, Lake**	**1.83**	**171**	Pb	**Pb**	**09 43 18.8**	**-0.7**
	baz=351,SNR=51						
ISA				S	**Sb**	**09 43 42.3**	**-0.3**
	baz=351						
ISA	**Isabella, Lake**	**1.83**	**171**		**Pn**	**09 43 18.6**	**+1.0**
FURC	**Furnace Creek,**	**1.86**	**122**	Pb	**Pg**	**09 43 20.5**	**-1.0**
	baz=303						
FURC				Sb	**Sg**	**09 43 45.8**	**+0.1**
	baz=303						
RUBR	**Rubicon Trail**	**1.89**	**327**	Pn	**Pn**	**09 43 18.7**	**+0.1**
VCNR	**Virginia City**	**1.93**	**341**		**Pn**	**09 43 19.4**	**+0.2**
PACP	**Pacheco Peak**	**2.02**	**258**		**Pn**	**09 43 21.1**	**+0.9**
PMPB	**Monarch Peak**	**2.02**	**232**		**Pn**	**09 43 20.6**	**+0.4**
LRV	**Little Rabbit**	**2.04**	**240**		**Pn**	**09 43 21.5**	**+1.0**
PKD	**Bear Valley Ra**	**2.05**	**223**		**Pn**	**09 43 21.1**	**+0.4**
THIS	**South End of C**	**2.08**	**213**		**Pn**	**09 43 21.7**	**+0.7**
PAGB	**Antelope Grade**	**2.08**	**214**		**Pn**	**09 43 20.2**	**-0.8**
HFEM	**San Felipe**	**2.11**	**257**		**Pn**	**09 43 22.6**	**+1.2**
GHS	**Gilroy Hot Spr**	**2.12**	**261**		**Pn**	**09 43 22.6**	**+1.0**
TPNV	**Topopah Spring**	**2.12**	**103**	P	**Pn**	**09 43 21.8**	**0.0**
	baz=285,SNR=19						
TPNV				Sg	**Sg**	**09 43 54.9**	**+0.9**
	baz=285						
TPNV	**Topopah Spring**	**2.12**	**103**	Pn	**Pn**	**09 43 21.5**	**-0.2**
TRAM	**Private Proper**	**2.13**	**213**		**Pn**	**09 43 22.5**	**+0.7**
TCHL	**Shandon**	**2.18**	**216**		**Pn**	**09 43 22.6**	**+0.1**
LRMC	**Laurel Mtn Rad**	**2.19**	**155**	Pb	**Pb**	**09 43 25.7**	**0.0**
	baz=335						
LRMC				Sb	**Sg**	**09 43 54.9**	**-1.2**
	baz=335						
SAO	**San Andreas Ge**	**2.21**	**252**		**Pn**	**09 43 23.8**	**+1.0**
SAO	**San Andreas Ge**	**2.21**	**252**	Pn	**Pn**	**09 43 21.6**	**-1.2**
SCZ	**Santa Cruz**	**2.24**	**248**		**Pn**	**09 43 23.9**	**+0.8**
AFDM	**Forest Hills D**	**2.24**	**312**		**Pn**	**09 43 24.4**	**+1.1**
MHC	**Mount Hamilton**	**2.25**	**268**		**Pn**	**09 43 24.6**	**+1.2**
PAHR	**Pah Rah Range**	**2.28**	**349**	Pn	**Pn**	**09 43 23.9**	**+0.1**
TSCN	**Private Proper**	**2.28**	**213**		**Pn**	**09 43 24.9**	**+1.1**
PEAR	**Peavine Mounta**	**2.31**	**338**		**Pn**	**09 43 26.4**	**+2.0**
WENL	**Wente Vineyard**	**2.33**	**275**		**Pn**	**09 43 26.4**	**+1.9**
ARVC	**Arvin**	**2.34**	**180**	Pb	**Pb**	**09 43 27.8**	**-0.4**
	baz=360						
BSMM	**Soledad Missio**	**2.35**	**243**		**Pn**	**09 43 25.7**	**+0.9**
SMMC	**Simmler**	**2.35**	**204**	P	**Pn**	**09 43 25.3**	**+0.6**
	baz=23						
HCOM	**Corn Cob Canyo**	**2.37**	**257**		**Pn**	**09 43 25.7**	**+0.7**
HAST	**Hastings Reser**	**2.43**	**245**		**Pn**	**09 43 26.7**	**+0.8**
BDM	**Black Diamond**	**2.46**	**282**		**Pn**	**09 43 28.0**	**+1.8**
RAMR	**Ramage Ranch**	**2.46**	**223**		**Pn**	**09 43 27.1**	**+0.9**
PAPM	**Alder Peak**	**2.56**	**233**		**Pn**	**09 43 28.0**	**+0.3**
SHOC	**Shoshone, Teco**	**2.58**	**127**	Pb	**Pb**	**09 43 32.7**	**+0.3**
	baz=308						
EDW2	**Edwards Air Fo**	**2.67**	**165**	Pb	**Pb**	**09 43 34.0**	**+0.1**
	baz=345						
EDW2				Sb	**Sb**	**09 44 08.7**	**+1.8**
	baz=345						
BRIB	**Briones**	**2.67**	**281**		**Pn**	**09 43 30.3**	**+1.2**
PKM	**Mcpherson Peak**	**2.70**	**197**	P	**Pn**	**09 43 30.1**	**+0.4**
	baz=17						
GSC	**Goldstone, Bar**	**2.71**	**142**	Pb	**Pb**	**09 43 35.2**	**+0.6**
	baz=324						
GSC	**Goldstone, Bar**	**2.71**	**142**	Pn	**Pn**	**09 43 30.0**	**+0.3**
R11A	**Troy Canyon, C**	**2.71**	**70**	P	**Pn**	**09 43 29.9**	**0.0**
	baz=252,SNR=23						
R11A				Sb	**Sg**	**09 44 11.5**	**-1.3**
	baz=252						
R11A	**Troy Canyon, C**	**2.71**	**70**	Pn	**Pn**	**09 43 30.2**	**+0.3**
ORV	**Oroville**	**2.95**	**316**	Pn	**Pn**	**09 43 34.1**	**+1.1**
PRN	**Pahroc Range**	**3.01**	**90**		**Pn**	**09 43 34.5**	**+0.6**
SHPR	**Sheep Range**	**3.09**	**107**	Pn	**Pn**	**09 43 36.4**	**+1.3**
TUQ	**Turquoise Moun**	**3.10**	**130**	Pb	**Pb**	**09 43 41.7**	**+0.5**
	baz=312						
MWC	**Mount Wilson**	**3.30**	**169**	Pn	**Pn**	**09 43 39.6**	**+1.7**
PASC	**Pasadena Art C**	**3.33**	**171**	Pn	**Pn**	**09 43 37.7**	**-0.5**
LCMM	**Colby Mountain**	**3.40**	**323**		**Pb**	**09 43 44.3**	**-2.2**
O03E	**Paynes Creek**	**3.65**	**321**	Pb	**Pb**	**09 43 51.1**	**+0.5**
	baz=140						
BELC	**Belle Mtn. Jos**	**4.16**	**146**	P	**Pn**	**09 43 50.1**	**+0.4**
	baz=327						
ELK	**Elko**	**4.30**	**39**	Pn	**Pn**	**09 43 51.7**	**-0.1**
PFO	**Pinyon Flats O**	**4.31**	**153**	Pn	**Pn**	**09 43 52.8**	**+1.1**
BAR	**Barrett**	**5.09**	**159**	Pn	**Pn**	**09 44 04.4**	**+1.9**
DUG	**Dugway, Tooele**	**5.43**	**58**	Pn	**Pn**	**09 44 07.1**	**-0.1**
BGU	**Big Grassy Mou**	**5.67**	**51**	Pn	**Pn**	**09 44 10.3**	**-0.3**

*BJI **14** 09:51:29.7±0.0, 52°.29N×176°.50E, h73km, mB5.2/38, mb5.2/56, Ms4.8/11, Ms7 4.4/14*
*MOS **14** 09:51:30.4±1.0, 52°.05N±0°.76×176°.76E, h85km, mb5.1/71, Error ellipse: s-maj=7.0km s-min=5.2km az=110.8*
*AEIC **14** 09:51:30.1±1.7, 51°.95N±0°.09×176°.79E±0°.07, h83km±4km, ML5.0, mb5.0/251(NEIC), Error ellipse: s-maj=12.9km s-min=5.7km az=190.0*
*NEIC **14** 09:51:30.2±2.2, 51°.97N±0°.09×176°.72E±0°.07, h72km±4km, Error ellipse: s-maj=13.5km s-min=5.7km az=191.0*
*IDC **14** 09:51:31.3±0.5, 52°.09N×176°.83E, h75km±3km, mb4.5/41, mb1 4.6/43, mb1mx4.4/64, mbtmp4.8/43, MS3.7/31, Ms1 3.7/31, ms1mx3.6/45, Error ellipse: s-maj=11.8km s-min=8.1km az=159.0*
*GCMT **14** 09:51:32.0±0.2, 52°.06N±0°.02×176°.76E±0°.02, h47km±2km, MW5.0/114, Moment Tension Solution. s49,c58; s114,c174; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.33±.15; Mθθ-2.33±.13; Mϕϕ2.65±.11; Mrθ-2.02±.11; Mθϕ-1.46±.08; Mϕr-2.21±.10; Best double couple: Mo4.13800×10^16 NP1:ϕs124.00000°, δ45.00000°, λ-174.00000°. NP2:ϕs30.00000°, δ85.00000°, λ-45.00000°. Principal axes: T 3.8490, Plg26.0000°, Azm86.0000°; N 0.5730, Plg45.0000°, Azm205.0000°; P -4.4280, Plg34.0000°, Azm337.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 09:51:31.3±0.4, 51°.98N±0°.06×176°.72E±0°.03, h80km±3km, h80km:pP-P, n850, σ1°.02/861, mb5.0/220, 26C-21D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSSA	**Little Sitkin**	**1.11**	**91**		**Pn**	**09 51 51.6**	**-0.1**
LSNW	**Little Sitkin**	**1.11**	**90**		**Pn**	**09 51 51.6**	**-0.1**
LSPA	**Little Sitkin**	**1.15**	**91**		**Pn**	**09 51 52.1**	**-0.1**
CETU	**Semis' Tuman**	**1.72**	**89**		**Pn**	**09 51 59.8**	**+0.3**
AMKA	**Amchitka**	**1.72**	**110**		**Pn**	**09 51 58.7**	**-0.8**
AMKA	**Amchitka**	**1.72**	**110**		**Sn**	**09 52 19.5**	**-1.3**
CESW	**Semis' Southwe**	**1.76**	**92**		**Pn**	**09 51 59.6**	**-0.4**
CEAP	**Semis' Anvil P**	**1.77**	**88**		**Pn**	**09 52 00.2**	**+0.1**
SMY	**Shemya**	**1.77**	**296**	P	**Pn**	**09 51 59.5**	**-0.6**
SMY						09 52 22.1	
SMY	**Shemya**	**1.77**	**296**		**Pn**	**09 51 59.5**	**-0.6**
CERB	**Semis' Cerberu**	**1.80**	**90**		**Sn**	**09 52 23.3**	**+0.5**
CERAA	**Semis' Rag'd T**	**1.84**	**91**		**Pn**	**09 52 00.6**	**-0.4**
GALAA	**Gareloi Lava P**	**2.80**	**93**		**Pn**	**09 52 14.4**	**+0.4**
TASE	**Tanaga Southea**	**3.25**	**91**		**Pn**	**09 52 20.3**	**+0.2**
TASE					**Sn**	**09 52 58.1**	**+0.4**
TAFP	**Tanaga Falls P**	**3.28**	**89**		**Pn**	**09 52 20.5**	**+0.1**
TAFP					**Sn**	**09 52 58.6**	**+0.3**
KIMD	**Kanaga Island**	**3.75**	**91**		**Pn**	**09 52 27.3**	**+0.5**
KIMD					**Sn**	**09 53 09.8**	**0.0**
KICM	**Kanaga Island**	**3.77**	**89**		**Pn**	**09 52 27.6**	**+0.7**
KIKV	**Kanaga Island**	**3.78**	**89**		**Pn**	**09 52 27.7**	**+0.4**
ADK	**Adak**	**4.08**	**89**	P	**Pn**	**09 52 30.9**	**-0.4**
ADK	**Adak**	**4.08**	**89**	Pn	**Pn**	**09 52 30.9**	**-0.4**
GSTD	**Great Sitkin T**	**4.41**	**86**		**Sn**	**09 53 28.2**	**+2.3**
GSTR	**Great Sitkin T**	**4.46**	**86**		**Pn**	**09 52 36.4**	**-0.1**
GSMY	**Great Sitkin M**	**4.46**	**86**		**Pn**	**09 52 36.4**	**-0.1**
ATKA	**Atka Island**	**5.61**	**84**	Pn	**Pn**	**09 52 52.7**	**+0.7**
KOFP	**Korovin Flat P**	**5.67**	**83**		**Pn**	**09 52 53.5**	**+0.6**
KOSE	**Korovin Southe**	**5.69**	**83**		**Pn**	**09 52 54.6**	**+1.3**
NIKH	**Nikolski High**	**8.86**	**78**	Pn	Pn	09 53 40.6	+4.2
SPIA	**Saint Paul Isl**	**9.18**	**50**		**Pn**	**09 53 42.4**	**+1.7**
OKSP	**Okmok Steeple**	**9.21**	**76**		**Pn**	**09 53 43.4**	**+2.1**
OKFG	**Magazine Ridge**	**9.44**	**75**		**Pn**	**09 53 46.3**	**+1.9**
UNV	**Unalaska Valle**	**10.30**	**73**	Pn	**Pn**	**09 53 58.5**	**+2.5**
AKUT	**Akutan**	**10.76**

SML IAmb IAmb 09 56 13.7
comp=Z,120nm,0.9s
BWN Browne 21.33 42 P **P** **09 56 11.1 -0.3**
BWN IAmb IAmb 09 56 35.5
comp=Z,196nm,1.4s
RND Reindeer 21.36 44 P **P** **09 56 12.4 +0.6**
RND pmax pmax
comp=Z,38nm,1.3s
RND Reindeer 21.36 44 P **P** **09 56 12.4 +0.6**
MCK McKinley 21.42 43 P **P** **09 56 12.5 +0.2**
baz=253
NEA2 Nenana 21.63 41 P **P** **09 56 15.3 +0.7**
baz=251,SNR=22
GLI Glacier Island 21.63 52 P **P** **09 56 14.5 -0.1**
SCM Sheep Creek Mo 21.68 49 P **P** **09 56 15.4 +0.2**
SCM pmax pmax
comp=Z,76nm,0.8s
SCM Sheep Creek Mo 21.68 49 P **P** **09 56 15.4 +0.2**
SCM IAmb IAmb 09 56 19.4
comp=Z,76nm,0.8s
I23K Minto, Yukon-K 21.71 40 P **P** **09 56 16.8 +1.4**
baz=249,SNR=8.4
I23K Minto, Yukon-K 21.71 40 P **P** **09 56 17.1 +1.7**
HIN Hinchinbrook I 21.86 53 P **P** **09 56 16.9 -0.3**
HIN IAmb IAmb 09 56 18.5
comp=Z,101nm,1.1s
FID Port Fidalgo 21.92 52 P **P** **09 56 17.3 -0.3**
FID IAmb IAmb 09 56 19.2
comp=Z,108nm,1.0s
DHY Denali Highway 21.92 46 P **P** **09 56 16.4 -1.4**
DHY IAmb IAmb 09 56 39.8
comp=Z,42nm,1.0s
WRH Wood River Hil 21.99 42 P **P** **09 56 18.1 -0.4**
WRH IAmb IAmb 09 56 44.6
comp=Z,81nm,1.6s
MDM Murphy Dome 22.09 41 P **P** **09 56 20.2 +0.7**
CCB Clear Creek Bu 22.16 41 P **P** **09 56 20.6 +0.3**
TCOL CIGO, UAF Yank 22.21 41 P **P** **09 56 21.0 +0.2**
baz=252
TCOL CIGO, UAF Yank 22.21 41 P **P** **09 56 21.8 +1.0**
COLA College 22.22 41 *i*P **P** **09 56 21.4 +0.6**
COLA pmax pmax
comp=Z,16nm,0.9s
COLA College 22.22 41 P **P** **09 56 21.8 +1.0**
COLD Coldfoot 22.25 34 P **P** **09 56 20.8 -0.3**
baz=243
COLD Coldfoot 22.25 34 P **P** **09 56 21.0 -0.2**
EYAK Cordova Ski Ar 22.25 53 P **P** **09 56 21.3 0.0**
EYAK IAmb IAmb 09 56 50.2
comp=Z,176nm,1.7s
M24K Tolsona, Glenn 22.26 48 P **P** **09 56 22.1 +0.7**
baz=260,SNR=11
M24K Tolsona, Glenn 22.26 48 P **P** **09 56 21.7 +0.2**
M24K IAmb IAmb 09 56 46.5
comp=Z,121nm,1.1s
KLU Klutina 22.28 50 P **P** **09 56 21.1 -0.6**
KLU IAmb IAmb 09 56 47.3
comp=Z,49nm,1.0s
HDA Harding Lake 22.45 42 P **P** **09 56 22.4 -1.0**
baz=254,SNR=6.4
HDA Harding Lake 22.45 42 P **P** **09 56 21.8 -1.5**
POKR Poker Plat Res 22.46 40 P **P** **09 56 23.0 -0.5**
baz=252,SNR=7.1
POKR Poker Plat Res 22.46 40 P **P** **09 56 22.3 -1.3**
YSS Yuzh-Sakhalins 22.50 271 *e*P **P** **09 56 22.3 -1.8**
IL31 22.58 41 P **P** **09 56 23.3 -1.3**
ILAR Eielson Array 22.58 41 P **P** **09 56 23.1 -1.6**
comp=Z,5.9nm,0.6s,baz=245,slow=8.9,SNR=64
ILAR S **S** **10 00 22.7 -3.5**
comp=Z,0.9nm,0.9s,baz=232,slow=16,SNR=3.0
ILAR ScP **ScP** **10 03 44.5 -0.4**
comp=Z,0.9nm,0.4s,baz=283,slow=3.7,SNR=9.1
ILAR Eielson Array 22.58 41 P **P** **09 56 23.5 -1.3**
PAX Paxson 22.74 46 P **P** **09 56 26.2 -0.4**
PAX pmax pmax
comp=Z,47nm,1.0s
PAX Paxson 22.74 46 P **P** **09 56 26.2 -0.4**
PAX IAmb IAmb 09 56 48.2
comp=Z,47nm,1.0s
RAGM Ragged Mountai 22.77 53 P **P** **09 56 25.5 -1.3**
A21K Barrow 22.78 22 P **P** **09 56 26.0 -0.7**
baz=226,SNR=17
A21K Barrow 22.78 22 P **P** **09 56 25.8 -0.9**
A21K IAmb IAmb 09 56 27.4
comp=Z,33nm,0.5s
KAIM Kayak Island 22.87 54 P **P** **09 56 27.8 +0.1**
N25K Chitina, Valde 22.93 50 P **P** **09 56 28.1 -0.4**
baz=263,SNR=18
N25K Chitina, Valde 22.93 50 P **P** **09 56 28.4 0.0**
N25K IAmb IAmb 09 56 30.9
comp=Z,43nm,1.1s
HMT Hamilton 22.97 53 P **P** **09 56 28.6 -0.2**
TOLK Toolik Lake Re 23.12 31 P **P** **09 56 30.6 +0.4**
baz=241,SNR=21
TOLK Toolik Lake Re 23.12 31 P **P** **09 56 30.2 0.0**
GLB Gilahina Butte 23.28 51 P **P** **09 56 31.5 -0.3**
GLB IAmb IAmb 09 56 34.3
comp=Z,120nm,1.1s
PRP Porcupine Dome 23.35 40 P **P** **09 56 31.9 -0.5**
DOT Dot Lake 23.50 45 P **P** **09 56 33.9 +0.2**
MENT Mentasta 23.52 47 P **P** **09 56 34.4 +0.5**
MENT IAmb IAmb 09 56 36.9
comp=Z,128nm,1.8s
CRQM Cirque 23.55 52 P **P** **09 56 35.1 +0.7**
SCRK Sand Creek 23.60 44 P **P** **09 56 34.3 -0.5**
baz=258,SNR=17
MCARA McCarthy VSAT 23.65 51 P **P** **09 56 36.1 +1.0**
TGL Tana Glacier 23.70 52 P **P** **09 56 36.6 +0.9**
L26K Log Cabin Wild 23.71 47 P **P** **09 56 36.8 +1.3**
baz=261,SNR=28
ISLE Juniper Island 23.93 53 P **P** **09 56 38.0 +0.2**
ISLE IAmb IAmb 09 56 40.1
comp=Z,116nm,1.1s
JKA Kamikawa-asahi 23.95 264 P **P** **09 56 38.6 +0.8**
JKA IAmb IAmb 09 56 59.3
comp=Z,152nm,1.4s
ASAJ Asahikawa 23.95 264 P **P** **09 56 39.5 +1.7**
comp=Z,25nm,0.7s,baz=74,slow=6.8,SNR=19
ASAJ pP **pP** **09 56 57.4 +1.6**
comp=Z,23nm,0.8s,baz=66,slow=21,SNR=4.0
ASAJ sP **sP** **09 57 05.3 +0.1**
comp=Z,58nm,1.1s,baz=88,slow=2.5,SNR=5.2
BALM Baldy 23.96 52 P **P** **09 56 37.9 0.0**
BALM pmax pmax
comp=Z,52nm,0.8s
BALM Baldy 23.96 52 P **P** **09 56 37.9 0.0**
BALM IAmb IAmb 09 56 40.1
comp=Z,52nm,0.8s
MESA MESA 24.11 54 P **P** **09 56 39.8 +0.4**
YAH Yahtse 24.22 53 P **P** **09 56 40.9 +0.4**
BARN Barnard Glacie 24.29 52 P **P** **09 56 41.7 +0.7**
BMAR Burnt Mountain 24.32 36 P **P** **09 56 40.6 -0.5**
BCAR Beaver Creek A 24.42 47 P **P** **09 56 42.1 +0.1**
K27K Chicken 24.44 45 P **P** **09 56 41.6 -0.5**
baz=260
K27K Chicken 24.44 45 P **P** **09 56 42.1 +0.1**
CTGM Chitina Glacie 24.44 52 P **P** **09 56 42.8 +0.4**
TABL Table Mountain 24.52 53 P **P** **09 56 44.0 +0.9**
ERM Erimo 24.76 260 *i*P **P** **09 56 45.7 +0.5**
ERM pmax pmax
comp=Z,91nm,1.1s
PCA Pinnacle 24.96 54 P **P** **09 56 45.6 -1.4**
EGAK Eagle 24.96 43 P **P** **09 56 46.5 -0.3**
EGAK IAmb IAmb 09 56 48.6
comp=Z,39nm,0.8s
GRNR Gornyy 24.96 283↓ *i*P **P** **09 56 47.9 +0.9**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR MLR MLR
comp=E,870nm,14.0s
GRNR MLR MLR
comp=Z,720nm,14.0s
BCPM Bancas Point 25.27 54 P **P** **09 56 49.2 -0.5**
DAWY Dawson 25.61 45 P **P** **09 56 53.6 +0.8**
HYT Haines Junctio 26.31 52 P **P** **09 57 00.1 +0.8**
YAK Yakutsk 26.91 310 P **P** **09 57 03.9 -0.6**
comp=Z,15nm,0.2s,baz=84,slow=4.4,SNR=23
YAK Yakutsk 26.91 310 *e*P **P** **09 57 03.7 -0.7**
YAK *e**PP **pP** **09 57 21.2 -1.6**
YAK *e* 09 57 49.2
YAK *e*S **S** **10 01 32.9 -2.2**
YAK *e**SS **sS** **10 02 11.4 +4.5**
YAK pmax pmax
comp=Z,90nm,1.1s
YAK pmax pmax
comp=E,34nm,1.3s
YAK pmax pmax
comp=N,14nm,1.2s
YAK pmax pmax
comp=Z,1μm,5.0s
YAK pmax pmax
comp=N,733nm,3.7s
YAK pmax pmax
comp=E,1μm,3.9s
YAK smax smax
comp=N,2μm,5.0s
YAK smax smax
comp=E,1μm,4.5s
YAK Yakutsk 26.91 310 P **P** **09 57 03.0 -1.4**
YAK IAmb IAmb 09 57 04.6
comp=Z,64nm,0.7s
EPYK Eagle Plains 27.06 40 P **P** **09 57 06.1 +0.3**
baz=261
EPYK Eagle Plains 27.06 40 P **P** **09 57 05.8 0.0**
KLR Kul'dur 28.33 282 P **P** **09 57 17.7 +0.4**
comp=Z,8.3nm,0.4s,baz=67,slow=8.0,SNR=38
KLR LR LR 10 08 27.4
comp=Z,150nm,21.6s,baz=40,slow=36
KLR Kul'dur 28.33 282 *ce*P **P** **09 57 16.9 -0.4**
KLR pmax pmax
comp=Z,30nm,1.3s
INK Inuvik 28.59 36 P **P** **09 57 19.4 0.0**
comp=Z,2.4nm,0.8s,baz=275,slow=12,SNR=5.0
INK Inuvik 28.59 36 P **P** **09 57 19.0 -0.4**
TIXI Tiksi 28.74 331 *ce*P **P** **09 57 19.5 -1.2**
TIXI Tiksi 28.74 331 P **P** **09 57 19.5 -1.2**
TIXI **PcP** **10 00 28.8 +0.2**
ZEA Zeya 29.44 293 *e*P **P** **09 57 26.8 -0.2**
DLBC Dease Lake 30.35 57 P **P** **09 57 34.0 -1.2**
USRK Ussuriysk Ar. 30.46 273 P **P** **09 57 36.6 +0.4**
comp=Z,6.5nm,0.5s,baz=59,slow=10,SNR=37
USRK PcP **PcP** **10 00 35.0 +1.5**
comp=Z,1.3nm,0.6s,baz=20,slow=6.1,SNR=4.2
USRK LR LR 10 08 35.4
comp=Z,148nm,21.2s,baz=58,slow=34
USRK Ussuriysk Ar. 30.46 273 P **P** **09 57 36.1 -0.1**
USRK PcP **PcP** **10 00 34.7 +1.2**
MJAR Matsushiro Arr 31.18 256 LR LR 10 15 56.5
comp=Z,15nm,18.2s,baz=60,slow=47
H11N2 WAKE ISLAND Hy 33.09 197 T T 10 33 22.6
baz=11,slow=76,SNR=294
H11N3 WAKE ISLAND Hy 33.10 197 T T 10 33 22.5
baz=11,slow=76,SNR=507
H11N1 WAKE ISLAND Hy 33.11 197 T T 10 33 21.2
baz=11,slow=76,SNR=469
H11S1 WAKE ISLAND Hy 34.32 197 T T 10 34 48.7
baz=11,slow=76,SNR=214
H11S3 WAKE ISLAND Hy 34.34 197 T T 10 34 50.0
baz=11,slow=76,SNR=195
H11S2 WAKE ISLAND Hy 34.34 197 T T 10 34 48.8
baz=11,slow=76,SNR=156
BOD Bodaibo 35.36 305 *e*P **P** **09 58 17.5 -1.2**
BOD pmax pmax
comp=Z,99nm,0.7s
HIA Hailar 35.46 289 P **P** **09 58 19.5 -0.2**
HIA pmax pmax
comp=Z,28nm,0.5s
HIA Hailar 35.46 289 P **P** **09 58 19.5 -0.2**
KIP Kipapa 36.25 138 *ce*P **P** **09 58 29.0 +2.4**
KIP pmax pmax
comp=Z,130nm,1.3s
KIP Kipapa 36.25 138 P **P** **09 58 29.0 +2.4**
YKA Yellowknife Ar 36.83 46 P **P** **09 58 32.2 +1.0**
comp=Z,1.9nm,0.4s,baz=280,slow=7.8,SNR=23
YKA ScP **ScP** **10 04 31.7 +1.1**
comp=Z,4.0nm,0.9s,baz=285,slow=2.6,SNR=10
YKA LR LR 10 16 29.7
comp=Z,158nm,18.7s,baz=0.0,slow=41
KSRS Korea Array 36.86 266 P **P** **09 58 33.9 +2.1**
comp=Z,3.0nm,0.7s,baz=55,slow=8.0,SNR=13
KSRS pP **pP** **09 58 51.0 +0.4**
comp=Z,4.2nm,1.0s,baz=48,slow=8.8,SNR=4.5
KSAR Wonju Array Be 36.90 266 P **P** **09 58 31.8 -0.2**
KSAR Wonju Array Be 36.90 266 P **P** **09 58 31.8 -0.2**
JNU Nakatsue 37.91 258 LR LR 10 17 10.1
comp=Z,107nm,18.1s,baz=50,slow=40
D03D Eldon 38.16 72 P **P** **09 58 42.7 +0.1**
baz=300
B05A Bryant 38.39 71 P **P** **09 58 44.4 -0.1**
baz=299
LTY Liberty 39.72 71 P **P** **09 58 55.0 -0.7**
B08A Colville Reser 39.94 69 P **P** **09 58 55.3 -2.2**
H04A Detroit Lake 40.19 75 P **P** **09 58 58.6 -0.9**
H04A IAmb IAmb 09 59 04.3
comp=Z,24nm,1.2s
RES Resolute Bay 40.34 24 P **P** **09 59 01.2 +0.8**
RES pmax pmax
comp=Z,9.0nm,1.6s
G05D Wamic, OR 40.40 74 P **P** **09 59 01.5 +0.2**
baz=303
EUNU Eureka 40.45 15 P **P** **09 59 01.9 +0.6**
EUNU IAmb IAmb 09 59 42.1
comp=Z,29nm,1.6s
I04A Tendick Farm, 40.54 77 P **P** **09 59 02.1 -0.4**
baz=304
L02E Cave Junction 40.74 80 P **P** **09 59 04.8 +0.6**
baz=305
HAWA Hanford 40.84 72 P **P** **09 59 02.6 -2.3**
F07A Phinny Hill Vi 40.87 73 P **P** **09 59 03.9 -1.3**
HUMO Hull Mountain 40.88 79 P **P** **09 59 04.5 -0.7**
HUMO IAmb IAmb 09 59 59.7
comp=Z,31nm,1.6s
I05D Terrebonne, OR 40.88 75 P **P** **09 59 05.0 -0.3**
baz=304
NEW Newport 41.26 68 P **P** **09 59 07.2 -1.2**
NEW pmax pmax
comp=Z,9.0nm,0.9s
NEW Newport 41.26 68 P **P** **09 59 07.2 -1.2**
baz=301,SNR=8.5
NEW Newport 41.26 68 P **P** **09 59 07.2 -1.2**
PINE Pine Mountain 41.42 76 P **P** **09 59 09.3 -0.7**
PINE IAmb IAmb 09 59 15.1
comp=Z,25nm,1.4s
L04D Klamath Falls 41.50 79 P **P** **09 59 10.0 -0.4**
baz=306
YBH Yreka Blue Hor 41.53 79 P **P** **09 59 11.8 +1.1**
YBH pmax pmax
comp=Z,9.0nm,0.9s
YBH Yreka Blue Hor 41.53 79 P **P** **09 59 11.8 +1.1**
J05D Fort Rock, OR 41.53 77 P **P** **09 59 10.8 0.0**
baz=305
K04D Chiloquin, OR 41.60 78 P **P** **09 59 11.0 -0.2**
baz=305
N02D Trinity Center 41.98 80 P **P** **09 59 14.9 +0.6**
baz=307
M04C Macdoel 42.03 79 P **P** **09 59 15.2 +0.4**
baz=306
K05A Summer Lake 42.06 77 P **P** **09 59 14.6 -0.5**
K05A IAmb IAmb 09 59 19.1
comp=Z,17nm,1.0s
I07A Izee 42.12 75 P **P** **09 59 14.1 -1.4**
WDC Whiskeytown Da 42.32 81 P **P** **09 59 15.9 -1.1**
WDC pmax pmax
comp=Z,12nm,1.2s
WDC Whiskeytown Da 42.32 81 P **P** **09 59 15.8 -1.1**
F10A Beach Ranch, E 42.42 71 P **P** **09 59 15.5 -2.3**
NRIK Noril'sk 42.45 328 P **P** **09 59 17.3 -0.4**
comp=Z,12nm,0.9s,baz=72,slow=8.3,SNR=17
NRIK ScP **ScP** **10 04 54.2 +1.9**
comp=Z,1.3nm,0.6s,baz=87,slow=1.8,SNR=6.5
NRIK LR LR 10 18 18.9
comp=Z,102nm,18.8s,baz=22,slow=38
NRIK Noril'sk 42.45 328 *ce*P **P** **09 59 17.0 -0.7**
NRIK pmax pmax
comp=Z,17nm,1.0s
BJI Beijing 42.52 278 P **P** **09 59 19.8 +1.2**
BJI pmax pmax
comp=Z,12nm,0.7s
BJT Baijiatuau 42.54 278 P **P** **09 59 15.9 -2.9**
BJT pmax pmax
comp=Z,25nm,1.3s
BJT Baijiatuau 42.54 278 P **P** **09 59 15.9 -2.9**
BJT IAmb IAmb 09 59 23.5
comp=Z,25nm,1.3s
WALA Waterton Lakes 42.67 65 P **P** **09 59 18.8 -1.2**
WALA IAmb IAmb 09 59 21.5
comp=Z,14nm,1.0s
MOD Modoc Plateau 42.89 78 P **P** **09 59 21.6 -0.2**
MOD IAmb IAmb 09 59 25.9
comp=Z,16nm,1.2s
O03E Paynes Creek 42.94 81 P **P** **09 59 21.8 -0.3**
baz=307
BMO Blue Mountains 42.99 72 P **P** **09 59 21.7 -0.8**
BMO pmax pmax
comp=Z,7.0nm,1.1s
BMO Blue Mountains 42.99 72 P **P** **09 59 21.7 -0.8**
J08A Circle Bar Ran 43.15 75 P **P** **09 59 23.9 +0.1**
GDXM Geysers 43.24 83 P **P** **09 59 24.2 -0.3**
GDXM IAmb IAmb 09 59 28.1
comp=Z,21nm,1.2s
TLY Talaya 43.36 300↓ *e*P **P** **09 59 25.7 +0.4**
TLY pmax pmax
comp=Z,74nm,1.2s
TLY MLR MLR
comp=Z,196nm,6.0s
TLY Talaya 43.36 300 P **P** **09 59 25.9 +0.6**
TLY IAmb IAmb 09 59 27.0
comp=Z,60nm,1.5s
ULN Ulaanbaatar 43.48 293 *ce*P **P** **09 59 26.7 +0.3**
ULN pmax pmax
comp=Z,29nm,1.0s
ULN Ulaanbaatar 43.48 293 P **P** **09 59 27.5 +1.1**
ULN IAmb IAmb 09 59 28.3
comp=Z,25nm,0.9s
MSO Missoula 43.85 68 P **P** **09 59 27.6 -1.9**
baz=304,SNR=6.0
MSO Missoula 43.85 68 P **P** **09 59 28.3 -1.2**
SONM Songino Array 43.87 294 P **P** **09 59 30.5 +1.0**
comp=Z,23nm,0.5s,baz=63,slow=7.7,SNR=129
SONM pP **pP** **09 59 49.2 +0.3**
comp=Z,3.1nm,0.5s,baz=57,slow=7.2,SNR=2.6
SONM PcP **PcP** **10 01 15.3 +0.9**
comp=Z,1.6nm,0.5s,baz=85,slow=2.2,SNR=2.4
SONM LR LR 10 18 41.6
SONM Songino Array 43.87 294 P **P** **09 59 30.8 +1.3**
SONM pmax pmax
comp=Z,18nm,0.6s
SONM Songino Array 43.87 294 P **P** **09 59 30.8 +1.3**
ZAK Zakamensk 44.23 298 *e*P **P** **09 59 32.6 +0.2**
ZAK pmax pmax
comp=Z,25nm,1.4s
MFID Camas Ranch 44.69 73 P **P** **09 59 35.0 -1.1**
MOY Mondy 44.78 301 *e*P **P** **09 59 36.4 -0.4**
MOY pmax pmax
comp=Z,48nm,1.1s
HHC Hu-ho-hao-te 44.84 282 *e*P **P** **09 59 39.3 +2.0**
HHC pmax pmax
comp=Z,36nm,0.9s
HHC pmax pmax
comp=Z,170nm,6.6s
HRY Holter Researc 45.12 67 P **P** **09 59 38.3 -1.2**
LRM Limekiln Ridge 45.27 68 P **P** **09 59 38.6 -2.3**
EGMT Eagleton 45.56 64 P **P** **09 59 41.5 -1.4**
baz=304
EGMT Eagleton 45.56 64 P **P** **09 59 41.3 -1.6**
BCYI Bear Canyon 45.59 71 P **P** **09 59 42.0 -1.4**
MCMT McKenzie Canyo 45.61 70 P **P** **09 59 41.9 -1.7**
BOZ Bozeman (W) 45.87 68 P **P** **09 59 44.3 -1.2**
BOZ pmax pmax
comp=Z,6.0nm,0.6s
BOZ Bozeman (W) 45.87 68 P **P** **09 59 44.3 -1.2**
baz=305,SNR=11
BOZ Bozeman (W) 45.87 68 P **P** **09 59 44.3 -1.2**
NJ2 Nanjing 46.02 268 *e*P **P** **09 59 46.6 0.0**
NJ2 pmax pmax
comp=Z,11nm,1.3s
NVAR Mina Array Bea 46.22 80 P **P** **09 59 49.2 +0.7**
comp=Z,11nm,0.8s,baz=291,slow=8.3,SNR=5.0
NVAR ScP **ScP** **10 05 09.2 +0.6**
comp=Z,1.4nm,0.9s,baz=293,slow=3.3,SNR=5.2
NVAR LR LR 10 16 06.7
comp=Z,128nm,21.8s,baz=295,slow=32
QLMT Earthquake Lak 46.43 69 P **P** **09 59 49.4 -0.6**
YHL Hebgen Lake 46.56 69 P **P** **09 59 50.3 -0.8**
YHB Horse Butte 46.61 69 P **P** **09 59 50.4 -1.0**
ELK Elko 46.64 76 P **P** **09 59 50.9 -0.8**
ELK pmax pmax
comp=Z,4.0nm,0.6s
ELK Elko 46.64 76 P **P** **09 59 50.9 -0.8**
YHH Holmes Hill 46.79 69 P **P** **09 59 52.0 -0.9**
YMR Madison River 46.80 69 P **P** **09 59 51.7 -1.1**
GCMT Greycliff 46.88 67 P **P** **09 59 53.3 -0.1**
YNE Yellowstone No 47.15 68 P **P** **09 59 54.2 -1.4**
H17A Grant Village 47.18 69 P **P** **09 59 55.3 -0.6**
baz=307,SNR=5.5
H17A Grant Village 47.18 69 P **P** **09 59 56.3 +0.4**
IMW Indian Meadow 47.27 70 P **P** **09 59 54.1 -2.5**
FLWY Flagg Ranch 47.30 69 P **P** **09 59 56.6 -0.2**
VES Vestal, Richgr 47.40 84 P **P** **09 59 57.3 -0.1**
baz=311
RLMT Red Lodge 47.50 67 P **P** **09 59 56.4 -1.9**
baz=306,SNR=5.9
CWC Cottonwood Cre 47.63 82 P **P** **09 59 59.3 -0.1**
baz=311
BGU Big Grassy Mou 47.84 74 P **P** **09 59 59.2 -1.7**
R11A Troy Canyon, C 47.92 79 P **P** **10 00 01.4 -0.2**
baz=310
MPMC Manual Prospec 48.24 82 P **P** **10 00 03.3 -0.8**
baz=311
LAO LASA Array 48.29 64 P **P** **10 00 03.2 -1.1**
baz=306
LAO LASA Array 48.29 64 P **P** **10 00 04.2 0.0**
LAO IAmb IAmb 10 01 23.2
comp=Z,26nm,1.6s
DUG Dugway, Tooele 48.43 75 P **P** **10 00 05.3 -0.2**
DUG pmax pmax
comp=Z,14nm,1.2s
DUG Dugway, Tooele 48.43 75 P **P** **10 00 04.7 -0.7**
baz=309,SNR=5.8
DUG Dugway, Tooele 48.43 75 P **P** **10 00 05.2 -0.2**
DUG IAmb IAmb 10 00 09.2
comp=Z,14nm,1.1s
BW06 Boulder Array 48.75 70 P **P** **10 00 06.5 -1.5**
baz=308,SNR=8.8
BW06 Boulder Array 48.75 70 P **P** **10 00 07.0 -1.1**
PD31 Pinedale Array 48.75 70 P **P** **10 00 07.0 -1.1**
PDAR Pinedale Array 48.75 70 P **P** **10 00 06.9 -1.1**
comp=Z,4.7nm,0.5s,baz=318,slow=3.4,SNR=46
PDAR pP **pP** **10 00 27.5 -0.1**
comp=Z,4.2nm,0.8s,baz=308,slow=4.9,SNR=6.5
PDAR ScP **ScP** **10 05 19.1 -0.1**
comp=Z,0.3nm,0.5s,baz=53,slow=0.7,SNR=3.9
PDAR LR LR 10 19 32.1
comp=Z,32nm,19.0s,baz=314,slow=34
PDAR Pinedale Array 48.75 70 P **P** **10 00 07.0 -1.0**
PSUT Pine Spring 48.85 77 P **P** **10 00 08.5 -0.3**
KBS Kingsbay 49.03 356 *e*P **P** **10 00 09.7 +0.3**
SHOC Shoshone, Teco 49.09 81 P **P** **10 00 10.3 -0.1**
baz=311
GSC Goldstone, Bar 49.16 82 P **P** **10 00 10.7 -0.3**
baz=312,SNR=6.4
BFSC Mount Baldy Ra 49.34 84 P **P** **10 00 12.7 +0.2**
baz=312
SPB5 Spitsbergen Ar 49.54 355 P **P** **10 00 12.9 -0.3**
SPB5 IAmb IAmb 10 00 37.0
comp=Z,36nm,1.2s
SPB1 Spitsbergen Ar 49.54 355 P **P** **10 00 12.4 -0.9**
SPA0 Spitsbergen Ar 49.55 355 P **P** **10 00 12.9 -0.4**
SPA0 IAmb IAmb 10 00 37.0
comp=Z,38nm,1.2s
SPA0 Spitsbergen Ar 49.55 355 *e*P **P** **10 00 12.8 -0.6**
SPB4 Spitsbergen Ar 49.55 355 P **P** **10 00 13.2 -0.1**
SPITS Spitsbergen Ar 49.55 355 P **P** **10 00 12.9 -0.4**
comp=Z,9.3nm,0.4s,baz=42,slow=6.7,SNR=180
SPB2 Spitsbergen Ar 49.55 355 P **P** **10 00 13.3 0.0**
SPB3 Spitsbergen Ar 49.55 355 P **P** **10 00 13.2 -0.1**
SPB3 IAmb IAmb 10 00 13.5
comp=Z,18nm,0.6s
SCI2 San Clemente I 49.64 86 P **P** **10 00 14.4 -0.2**
baz=313
HEC Hector Ludlow 49.76 83 P **P** **10 00 15.4 -0.2**
baz=312
CCUT Cedar City 49.78 78 P **P** **10 00 15.2 -0.8**
WHN Wuhan 49.85 270 P **P** **10 00 17.0 +0.8**
WHN S **S** **10 07 19.3 -0.6**
WHN LR LR
comp=Z,480nm,11.0s
MVU Marysvale 49.86 76 P **P** **10 00 16.2 -0.4**
TMUT Trail Mountain 49.95 75 P **P** **10 00 16.1 -1.2**
MURC Murrieta 50.05 84 P **P** **10 00 18.3 +0.5**
baz=313,SNR=6.6
RDMU Red Mountain 50.12 72 P **P** **10 00 17.8 -0.5**
P17A Butcher Ranch, 50.12 74 P **P** **10 00 17.3 -1.1**
GMRC Granite Mounta 50.20 82 P **P** **10 00 18.4 -0.6**
baz=312,SNR=6.9

LCMT Little Creek M 50.20 78 P **P 10 00 18.9 -0.1**
Q16A Castle Valley 50.22 75 P **P 10 00 18.1 -1.1**
KNB Kanab 50.46 78 P **P 10 00 19.8 -1.1**
KNB pmax pmax
comp=Z,18nm,1.3s
KNB Kanab 50.46 78 P **P 10 00 19.8 -1.1**
SRU San Rafael Swe 50.48 74 P **P 10 00 20.6 -0.5**
SRU pmax pmax
comp=Z,11nm,1.0s
SRU San Rafael Swe 50.48 74 P **P 10 00 20.6 -0.5**
PFO Pinyon Flats O 50.50 84 *i* P **P 10 00 20.8 -0.4**
PFO pmax pmax
comp=Z,11nm,1.0s
PFO Pinyon Flats O 50.50 84 P **P 10 00 21.2 -0.1**
baz=313
PFO Pinyon Flats O 50.50 84 P **P 10 00 20.5 -0.7**
PFO IAmb IAmb 10 00 22.7
comp=Z,11nm,1.1s
TPFO Pinon Flats 50.50 84 P **P 10 00 20.9 -0.4**
baz=313
HOPEN Hopen 50.51 352 *eP* **P 10 00 20.6 +0.1**
BELC Belle Mtn. Jos 50.52 83 P **P 10 00 20.7 -0.7**
baz=313
K22A Casper 50.58 68 P **P 10 00 20.7 -1.0**
baz=309
K22A Casper 50.58 68 P **P 10 00 20.6 -1.2**
K22A IAmb IAmb 10 01 40.1
comp=Z,14nm,1.2s
109C Camp Elliot, M 50.59 85 P **P 10 00 21.7 0.0**
baz=313
109C Camp Elliot, M 50.59 85 P **P 10 00 21.2 -0.6**
109C IAmb IAmb 10 00 24.2
comp=Z,41nm,1.4s
HSPB Hornsund (broa 50.73 355 *eP* **P 10 00 22.4 +0.1**
XAN Xi'an 50.81 277 P **P 10 00 23.9 +0.4**
XAN pmax pmax
comp=Z,13nm,1.2s
XAN pmax pmax
comp=Z,120nm,3.8s
IRM Iron Mountain 50.94 82 P **P 10 00 24.3 -0.2**
baz=312,SNR=11
BAR Barrett 51.00 85 P **P 10 00 24.4 -0.5**
BAR IAmb IAmb 10 00 26.5
comp=Z,15nm,0.9s
MONP2 Monument Peak 51.01 85 P **P 10 00 25.3 +0.1**
baz=313
RSSD Black Hills 51.08 65 P **P 10 00 24.2 -1.4**
baz=309
W13A Hualapai Mount 51.08 81 P **P 10 00 25.3 -0.4**
BC3 Big Chuckawall 51.09 83 P **P 10 00 25.1 -0.6**
baz=313
DAG Danmarks Havn 51.15 4 *i* P **P 10 00 24.7 -0.6**
DAG Danmarks Havn 51.15 4 *e* **P 10 00 20.7 -4.7**
baz=13,slow=9.3
DAG *i* P **P 10 00 24.8 -0.6**
DAG IAML 10 01 26.4
comp=Z,0.8nm,0.4s
DAG Danmarks Havn 51.15 4 *i* P **P 10 00 24.7 -0.6**
DAG Danmarks Havn 51.15 4 IAML 10 01 26.4
comp=Z,0.8nm,0.4s
DAG Danmarks Havn 51.15 4 *e* **P 10 00 20.7 -4.7**
baz=13,slow=9.3
DAG Danmarks Havn 51.15 4 *i* P **P 10 00 24.8 -0.6**
U15A North Rim 51.16 78 P **P 10 00 26.0 -0.4**
U15A IAmb IAmb 10 01 06.8
comp=Z,8.2nm,0.8s
O20A White River Ci 51.17 72 P **P 10 00 24.5 -1.8**
baz=310,SNR=6.3
O20A White River Ci 51.17 72 P **P 10 00 25.0 -1.3**
O20A IAmb IAmb 10 01 26.6
comp=Z,20nm,1.4s
MDND Maddock 51.19 59 P **P 10 00 25.5 -0.7**
baz=308,SNR=6.8
MDND Maddock 51.19 59 P **P 10 00 25.9 -0.2**
CBX Cerro Bola 51.25 85 P **P 10 00 27.0 +0.1**
CBX IAmb IAmb 10 00 29.1
comp=Z,7.5nm,0.8s
SWSC Sam W. Stewart 51.35 84 P **P 10 00 27.3 -0.2**
baz=313
IKP In-Ko-Pah, Jac 51.36 84 P **P 10 00 27.7 0.0**
baz=313
PDMCI Parker Dam,Lak 51.45 82 P **P 10 00 28.0 -0.2**
baz=313
ZAA0 Zalesovo Array 51.56 311 P **P 10 00 26.9 -1.9**
ZAA0 IAmb IAmb 10 00 29.3
comp=Z,18nm,1.4s
ZALV Zalesovo Beam 51.56 311 P **P 10 00 27.7 -1.0**
comp=Z,4.6nm,0.5s,baz=48,slow=6.9,SNR=17
ZALV PcP **PcP 10 01 42.1 +0.5**
comp=Z,3.8nm,0.5s,baz=39,slow=4.0,SNR=5.0
ZALV LR LR 10 24 08.8
comp=Z,86nm,18.0s,baz=48,slow=38
ZALV Zalesovo Beam 51.56 311 *i* P **P 10 00 28.2 -0.5**
ZALV pmax pmax
comp=Z,5.0nm,0.5s
ULM Lac du Bonnet 51.65 55 P **P 10 00 29.1 -0.4**
comp=Z,5.4nm,0.4s,baz=310,slow=7.3,SNR=16
ULM LR LR 10 21 33.4
comp=Z,119nm,19.8s,baz=326,slow=35
ULM Lac du Bonnet 51.65 55 P **P 10 00 28.5 -0.9**
ULM IAmb IAmb 10 00 30.9
comp=Z,14nm,1.1s
PV23 Carpenter Ridg 51.81 74 P **P 10 00 31.2 0.0**
PV23 IAmb IAmb 10 00 34.3
comp=Z,7.3nm,0.7s
PV14 Lion Creek, Pa 51.85 74 P **P 10 00 30.7 -0.7**
PV14 IAmb IAmb 10 00 34.0
comp=Z,8.0nm,0.9s
GLA Glamis 51.88 83 P **P 10 00 31.3 -0.2**
GLA pmax pmax
comp=Z,16nm,0.9s
GLA Glamis 51.88 83 P **P 10 00 31.3 -0.2**
baz=313,SNR=6.1
GLA Glamis 51.88 83 P **P 10 00 31.3 -0.2**
GLA IAmb IAmb 10 00 33.1
comp=Z,16nm,0.9s
PV22 Blue Mesa, Par 51.89 74 P **P 10 00 30.3 -1.4**
PV22 IAmb IAmb 10 00 33.1
comp=Z,7.8nm,0.9s
PV17 East Wray Mesa 51.95 74 P **P 10 00 30.5 -1.7**
PV17 IAmb IAmb 10 00 35.8
comp=Z,18nm,1.0s
N23A Red Feather La 52.03 70 P **P 10 00 31.4 -1.4**
baz=310
PV13 Radium Mtn., P 52.11 74 P **P 10 00 32.2 -1.2**
PV13 IAmb IAmb 10 00 37.0
comp=Z,22nm,0.8s
WUAZ Wupatki 52.33 78 P **P 10 00 34.2 -0.7**
baz=312
WUAZ Wupatki 52.33 78 P **P 10 00 32.6 -2.3**
Y14A Wickenburg 52.39 81 P **P 10 00 34.7 -0.6**
LZH Lanzhou 52.53 283 *eP* **P 10 00 38.1 +1.7**
LZH pP pP 10 00 56.8 +0.5
LZH sP sP 10 01 05.3 0.0
LZH pmax pmax
comp=Z,40nm,1.0s
LZH pmax pmax
comp=Z,140nm,5.6s
113A Mohawk Valley, 52.72 83 P **P 10 00 36.6 -1.1**
GTA Gaotai 52.74 289 ⇓P **P 10 00 39.0 +1.1**
GTA pP pP 10 00 57.6 -0.1
GTA sP sP 10 01 06.4 -0.2
GTA pmax pmax
comp=Z,60nm,0.9s
GTA pmax pmax
comp=Z,160nm,5.8s
GTA LR LR
comp=Z,130nm,18.9s
GTA LR LR
comp=Z,190nm,19.3s
GTA LR LR
comp=Z,150nm,18.5s
AGMN Agassiz Nation 52.88 57 P **P 10 00 37.4 -1.2**
baz=309
AGMN Agassiz Nation 52.88 57 P **P 10 00 38.0 -0.6**
AGMN IAmb IAmb 10 00 40.1
comp=Z,13nm,0.9s
MVCO Mesa Verde 52.93 75 P **P 10 00 38.8 -0.6**
baz=312
MVCO Mesa Verde 52.93 75 P **P 10 00 38.4 -1.0**
ISCO Idaho Springs 52.93 71 P **P 10 00 38.3 -1.1**
baz=311
X16A Lo Mia Camp, P 53.02 80 P **P 10 00 40.0 -0.1**
ENH Enshi 53.04 273 P **P 10 00 40.6 +0.5**
ENH IAmb IAmb 10 00 40.8
comp=Z,9.1nm,0.7s

SUMG Summit 53.34 12 P **P 10 00 41.8 -0.4**
SUMG pmax pmax
comp=Z,14nm,0.8s
SUMG Summit 53.34 12 P **P 10 00 41.8 -0.4**
SUMG IAmb IAmb 10 00 43.0
comp=Z,14nm,0.8s
S22A 4UR Ranch, Cre 53.57 73 P **P 10 00 43.6 -0.5**
baz=312
S22A 4UR Ranch, Cre 53.57 73 P **P 10 00 43.8 -0.4**
SUSD Miller 53.69 62 P **P 10 00 43.7 -0.9**
baz=310
SUSD Miller 53.69 62 P **P 10 00 43.0 -1.7**
SUSD IAmb IAmb 10 00 45.8
comp=Z,18nm,0.9s
214A Organ Pipe Nat 53.87 83 P **P 10 00 45.8 -0.3**
baz=314,SNR=8.5
214A Organ Pipe Nat 53.87 83 P **P 10 00 45.2 -0.9**
214A IAmb IAmb 10 00 47.8
comp=Z,12nm,1.0s
F33A 5 Mile Ranch, 54.22 59 P **P 10 00 47.5 -1.0**
F33A IAmb IAmb 10 01 42.2
comp=Z,25nm,1.6s
SDCO Great Sand Dun 54.35 72 P **P 10 00 49.4 -0.5**
baz=312
SDCO Great Sand Dun 54.35 72 P **P 10 00 49.6 -0.3**
TUC Tucson 54.86 81 P **P 10 00 52.4 -1.0**
TUC pmax pmax
comp=Z,8.0nm,1.1s
TUC Tucson 54.86 81 P **P 10 00 53.6 +0.2**
baz=314
TUC Tucson 54.86 81 P **P 10 00 52.4 -1.0**
KSCO Kaye Shedlock' 55.19 69 P **P 10 00 55.1 -0.6**
baz=312
EYMN Ely 55.34 55 P **P 10 00 55.6 -0.9**
baz=311
T25A Trinidad 55.40 72 P **P 10 00 56.3 -1.1**
baz=313
T25A Trinidad 55.40 72 P **P 10 00 56.2 -1.1**
ECSD EROS Data Cent 55.43 61 P **P 10 00 56.0 -1.2**
baz=312
ECSD EROS Data Cent 55.43 61 P **P 10 00 56.7 -0.5**
ECSD IAmb IAmb 10 00 58.2
comp=Z,11nm,1.2s
ANMO Albuquerque 55.67 76 *ceP* **P 10 00 59.0 -0.3**
ANMO pmax pmax
comp=Z,3.0nm,0.8s
ANMO Albuquerque 55.67 76 P **P 10 00 59.0 -0.3**
baz=313
ANMO Albuquerque 55.67 76 P **P 10 00 58.6 -0.7**
ZSN Zaisan 55.70 305 *eP* **P 10 00 59.5 +0.3**
comp=Z,59nm,1.6s,baz=305
ZSN Zaisan 55.70 305 *eP* **P 10 00 59.4 +0.3**
ZSN pmax pmax
comp=Z,59nm,1.6s
TVZX PASSCAL Wareho 55.99 77 P **P 10 01 01.8 +0.5**
baz=314
CD2 Chengdu 56.12 278 P **P 10 01 03.1 +0.7**
CD2 S **S 10 08 43.8 -1.4**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 pmax pmax
comp=Z,270nm,8.9s
CD2 LR LR
comp=Z,150nm,9.1s
CD2 LR LR
comp=Z,260nm,11.9s
CD2 LR LR
comp=Z,390nm,11.4s
BGNE Belgrade 56.13 65 P **P 10 01 01.5 -0.8**
baz=312
SPMN Marine on St. 56.47 58 P **P 10 01 04.1 -0.5**
baz=312
SPMN Marine on St. 56.47 58 P **P 10 01 02.4 -2.3**
SPMN IAmb IAmb 10 01 06.6
comp=Z,11nm,0.5s
KURK Kurchatov 56.55 311 *ceP* **P 10 01 05.1 0.0**
KURK pmax pmax
comp=Z,155nm,1.3s
KURK Kurchatov 56.55 311 P **P 10 01 05.2 +0.1**
WMQ Urumqi 56.65 300 *eP* **P 10 01 06.8 +0.8**
WMQ PcP **PcP 10 01 58.8 -2.5**
WMQ pmax pmax
comp=Z,62nm,0.9s
WMQ pmax pmax
comp=Z,130nm,3.6s
WMQ LR LR
comp=Z,220nm,29.0s
WMQ LR LR
comp=Z,2μm,28.8s
WMQ LR LR
comp=Z,680nm,27.7s
KURBB Kurchatov Arra 56.66 311 P **P 10 01 06.2 +0.4**
comp=Z,38nm,0.6s,baz=42,slow=6.9,SNR=33
KURBB Kurchatov Arra 56.66 311 P **P 10 01 05.5 -0.3**
L34A Svendsen Farm, 56.74 63 P **P 10 01 05.2 -1.4**
L34A IAmb IAmb 10 01 07.9
comp=Z,21nm,0.8s
I37A Lemond, Waseca 56.97 59 P **P 10 01 07.5 -0.7**
I37A IAmb IAmb 10 01 09.6
comp=Z,21nm,0.8s
ARCES ARCESS Array B 56.98 348 P **P 10 01 07.5 -0.4**
comp=Z,2.3nm,0.4s,baz=32,slow=8.6,SNR=67
ARCES LR LR 10 25 54.7
comp=Z,66nm,21.6s,baz=325,slow=36
CBKS Cedar Bluff 56.98 68 P **P 10 01 08.0 -0.4**
CBKS pmax pmax
comp=Z,13nm,1.0s
CBKS Cedar Bluff 56.98 68 P **P 10 01 07.6 -0.8**
baz=313
CBKS Cedar Bluff 56.98 68 P **P 10 01 08.0 -0.4**
CBKS IAmb IAmb 10 01 09.0
comp=Z,13nm,0.9s
LVZ Lovozero 57.13 344 *ceP* **P 10 01 08.2 -0.8**
LVZ pmax pmax
comp=Z,90nm,1.7s
MK31 Makanchi Array 57.44 306 P **P 10 01 11.1 -0.4**
MK31 pmax pmax
comp=Z,52nm,1.5s
MK31 Makanchi Array 57.44 306 P **P 10 01 11.1 -0.4**
MKAR Makanchi Array 57.44 306 P **P 10 01 11.1 -0.4**
comp=Z,16nm,0.6s,baz=53,slow=5.8,SNR=213
MKAR LR LR 10 26 43.2
comp=Z,164nm,20.8s,baz=42,slow=37
GYA Guiyang 57.50 272 *eP* **P 10 01 13.4 +1.2**
GYA pmax pmax
comp=Z,12nm,0.5s
MAKZ Makanchi 57.59 306 P **P 10 01 12.1 -0.4**
MAKZ Makanchi 57.59 306 P **P 10 01 12.1 -0.4**
TRO Tromso 57.61 351 *eP* **P 10 01 13.2 +1.0**
KTK1 Kautokeino 57.75 349 ⇑*iP* **P 10 01 13.0 -0.2**
R32A Long Quarter, 57.84 67 P **P 10 01 13.1 -1.2**
R32A IAmb IAmb 10 01 15.2
comp=Z,18nm,1.1s
N35A Tabor 57.90 63 P **P 10 01 13.4 -1.3**
SCIA State Center 58.51 61 P **P 10 01 18.1 -0.9**
baz=314
SCIA State Center 58.51 61 P **P 10 01 17.6 -1.4**
MSTX Muleshoe 58.55 74 P **P 10 01 18.0 -1.4**
baz=315
AMTX Amarillo 58.56 72 P **P 10 01 19.0 -0.5**
baz=314
KSU1 Kansas State U 58.56 66 P **P 10 01 18.4 -1.0**
baz=314
MNTX Cornudas Mount 58.57 78 P **P 10 01 19.2 -0.4**
baz=315,SNR=9.1
MNTX Cornudas Mount 58.57 78 P **P 10 01 19.7 +0.1**
MNTX IAmb IAmb 10 01 42.3
comp=Z,9.8nm,1.1s
BVAR Borovoye Array 58.59 317 P **P 10 01 19.1 -0.2**
comp=Z,27nm,0.5s,baz=213,slow=24,SNR=208
BRVK Borovoye 58.61 317 P **P 10 01 20.0 +0.6**
BRVK pmax pmax
comp=Z,78nm,0.5s
BRVK Borovoye 58.61 317 P **P 10 01 20.0 +0.6**
JFWS Jewell Farm 59.40 58 P **P 10 01 23.7 -1.4**
JFWS pmax pmax
comp=Z,31nm,1.2s
JFWS Jewell Farm 59.40 58 P **P 10 01 24.0 -1.1**
baz=314
JFWS Jewell Farm 59.40 58 P **P 10 01 23.7 -1.4**
I42A Draeger Farm, 59.41 57 P **P 10 01 25.0 -0.2**
L40A Anamosa 59.47 60 P **P 10 01 24.3 -1.4**
L40A IAmb IAmb 10 01 26.5
comp=Z,16nm,1.1s
KAN13 South Haven SW 59.52 68 P **P 10 01 25.2 -0.8**
SVE Sverdlovsk 59.54 325 ⇑*eP* **P 10 01 27.1 +1.3**

SVE pmax pmax
comp=Z,43nm,1.1s
LOF Lofoten 59.55 353 ⇑*iP* **P 10 01 25.4 -0.3**
STEI Steigen 59.61 352 *eP* **P 10 01 26.3 +0.2**
BRZS Berezniki 59.78 314 *i* P **P 10 01 27.7 0.0**
comp=Z,31nm,1.2s,baz=314
BRZS Berezniki 59.78 314 *i* P **P 10 01 27.7 0.0**
BRZS pmax pmax
comp=Z,31nm,1.2s
TMCR Tamitsa 59.81 340 *eP* **P 10 01 25.7 -1.9**
TMCR pmax pmax
comp=Z,22nm,0.5s
MSF Maaselka 59.86 345 pmax pmax
comp=Z,50nm,1.1s
P38A Dawn 59.92 63 P **P 10 01 26.5 -2.2**
P38A IAmb IAmb 10 01 52.7
comp=Z,9.7nm,0.8s
FAUS Fauske 60.14 352 *eP* **P 10 01 30.4 +0.6**
WMOK Wichita Mounta 60.36 71 P **P 10 01 31.1 -0.7**
WMOK pmax pmax
comp=Z,7.0nm,1.1s
WMOK Wichita Mounta 60.36 71 P **P 10 01 31.6 -0.2**
baz=315,SNR=8.0
WMOK Wichita Mounta 60.36 71 P **P 10 01 31.1 -0.7**
WMOK IAmb IAmb 10 02 39.1
comp=Z,7.1nm,1.1s
ARU Arti 60.58 326 P **P 10 01 33.7 +0.8**
comp=Z,9.1nm,0.5s,baz=24,slow=4.2,SNR=31
ARU LR LR 10 29 15.2
comp=Z,39nm,19.5s,baz=359,slow=37
ARU Arti 60.58 326 *d iP* **P 10 01 33.2 +0.2**
ARU 10 02 15.0
ARU S **S 10 09 45.8 +3.5**
ARU SS **SS 10 13 41.0 +0.2**
ARU pmax pmax
comp=Z,79nm,1.4s
ARU Arti 60.58 326 P **P 10 01 33.1 +0.2**
OK031 S. Brethren Rd 60.63 68 P **P 10 01 32.6 -1.0**
OK031 IAmb IAmb 10 01 34.7
comp=Z,12nm,1.1s
TDK Taldyqorghan 60.64 306 *eP* **P 10 01 33.8 +0.2**
comp=Z,14nm,0.5s,baz=306
TDK Taldyqorghan 60.64 306 *eP* **P 10 01 33.8 +0.2**
TDK pmax pmax
comp=Z,14nm,0.5s
P40A Paris 60.80 62 P **P 10 01 33.7 -1.0**
P40A IAmb IAmb 10 01 36.0
comp=Z,12nm,0.8s
KMI Kunming 60.89 274 ⇓*eP* **P 10 01 36.5 +0.7**
KMI pmax pmax
comp=Z,11nm,0.5s
KMI pmax pmax
comp=Z,150nm,4.9s
KMI LR LR
comp=Z,170nm,8.9s
KMI LR LR
comp=Z,120nm,8.2s
KMI LR LR
comp=Z,150nm,8.7s
LPIG La Paz 61.01 87 LR LR 10 23 23.8
comp=Z,58nm,19.2s,baz=296,slow=31
KONS Konsvik 61.19 353 *eP* **P 10 01 38.3 +1.4**
SCHQ Schefferville 61.21 36 P **P 10 01 37.4 +0.1**
comp=Z,3.8nm,0.7s,baz=1.8,slow=7.1,SNR=5.4
SCHQ Schefferville 61.21 36 P **P 10 01 37.9 +0.6**
SCHQ IAmb IAmb 10 02 23.2
comp=Z,26nm,1.3s
DAV Davao City (W) 61.24 242 LR LR 10 25 44.2
comp=Z,19nm,19.4s,baz=152,slow=34
TUL1 Leonard 61.26 68 P **P 10 01 37.2 -0.7**
baz=315
PDGK Podgornoye 61.28 304 *i* P **P 10 01 37.6 -0.5**
PDGK pmax pmax
comp=Z,33nm,1.1s
TX31 Lajitas Ar. Si 61.29 78 P **P 10 01 37.6 -0.7**
TX31 IAmb IAmb 10 01 40.3
comp=Z,24nm,1.0s
TX32 Lajitas Array 61.29 78 P **P 10 01 37.8 -0.5**
TX32 IAmb IAmb 10 01 40.3
comp=Z,8.4nm,1.0s
TXAR Lajitas Array 61.29 78 P **P 10 01 38.0 -0.3**
comp=Z,2.5nm,0.4s,baz=299,slow=5.9,SNR=49
TXAR ScP **ScP 10 06 13.5 -0.6**
comp=Z,2.5nm,1.2s,baz=289,slow=3.8,SNR=4.7
TXAR LR LR 10 24 59.7
comp=Z,68nm,21.7s,baz=0.0,slow=33
TXAR Lajitas Array 61.29 78 P **P 10 01 37.8 -0.5**
ABTX Abilene, Hawle 61.35 73 P **P 10 01 38.6 0.0**
baz=316,SNR=6.9
ABTX Abilene, Hawle 61.35 73 P **P 10 01 36.7 -1.9**
ABTX IAmb IAmb 10 01 42.4
comp=Z,13nm,0.9s
MOR8 Moi Rana 61.40 352 ⇑*iP* **P 10 01 37.3 -1.1**
SHLS Shalkode 61.42 304 *eP* **P 10 01 37.8 -1.2**
comp=Z,19nm,0.7s,baz=304
SHLS Shalkode 61.42 304 *eP* **P 10 01 37.8 -1.2**
SHLS pmax pmax
comp=Z,19nm,0.7s
LSQQ Lebel-sur-Quev 61.47 46 P **P 10 01 37.8 -1.2**
baz=318
R40A Maddies Statio 61.55 63 P **P 10 01 37.6 -2.2**
HDIL Hopedale 61.56 60 P **P 10 01 38.6 -1.2**
baz=316
KPKS Kokpek 61.59 305 *i* P **P 10 01 40.7 +0.5**
comp=Z,37nm,1.2s,baz=305
KPKS Kokpek 61.59 305 *i* P **P 10 01 40.6 +0.5**
KPKS pmax pmax
comp=Z,37nm,1.2s
KIRV Kirov 61.77 332 P **P 10 01 41.8 +0.9**
comp=Z,33nm,0.5s,baz=30,slow=4.2,SNR=12
KIRV Kirov 61.77 332 *d iP* **P 10 01 41.4 +0.5**
HPIG 61.80 82 P **P 10 01 41.2 -0.7**
HPIG IAmb IAmb 10 01 44.4
comp=Z,25nm,1.6s
CHGQ Chibougamau 61.97 44 P **P 10 01 40.3 -2.1**
baz=319
SATY Saty 62.03 305 ⇓*iP* **P 10 01 43.7 +0.6**
comp=Z,16nm,1.2s,baz=305
SATY Saty 62.03 305 *d iP* **P 10 01 43.7 +0.6**
SATY pmax pmax
comp=Z,16nm,1.2s
CHKK Chushkaly 62.17 306 *eP* **P 10 01 43.4 -0.6**
baz=306
CHKK Chushkaly 62.17 306 *eP* **P 10 01 43.3 -0.6**
CCM Cathedral Cave 62.29 63 P **P 10 01 43.1 -1.7**
baz=316
KLMR Klimovskoe 62.41 338 *eP* **P 10 01 43.5 -1.7**
KLMR pmax pmax
comp=Z,17nm,0.7s
KLMR Klimovskoe 62.41 338 *eP* **P 10 01 43.6 -1.7**
KLMR AMP 10 01 45.9
comp=Z,17nm,0.7s
PRZ Przheval'sk 62.45 304 P **P 10 01 46.2 +0.2**
PRZ pmax pmax
comp=Z,26nm,0.6s
PRZ Przheval'sk 62.45 304 P **P 10 01 46.2 +0.2**
KUU Kurty 62.46 307 ⇓*iP* **P 10 01 45.4 -0.5**
comp=Z,7.9nm,0.6s,baz=307
KUU Kurty 62.46 307 *d iP* **P 10 01 45.3 -0.5**
KUU pmax pmax
comp=Z,8.0nm,0.6s
U40A Yellville 62.61 65 P **P 10 01 45.4 -1.5**
baz=316,SNR=6.1
U40A Yellville 62.61 65 P **P 10 01 45.4 -1.5**
U40A IAmb IAmb 10 01 47.8
comp=Z,14nm,1.2s
MDOK Medeo 62.64 306 *i* P **P 10 01 47.6 +0.4**
baz=306
MDOK Medeo 62.64 306 *i* P **P 10 01 47.6 +0.4**
AAA Alma-Ata 62.67 306 *eP* **P 10 01 47.8 +0.5**
comp=Z,12nm,0.4s,baz=306
AAA Alma-Ata 62.67 306 *eP* **P 10 01 47.8 +0.5**
AAA pmax pmax
comp=Z,12nm,0.4s
BTLS Baital 62.74 309 ⇓*iP* **P 10 01 47.9 +0.2**
comp=Z,23nm,1.3s,baz=309
BTLS Baital 62.74 309 *d iP* **P 10 01 47.8 +0.1**
BTLS pmax pmax
comp=Z,23nm,1.3s
TNSS Tian-Shan 62.78 306 *eP* **P 10 01 49.0 +0.4**
baz=306
TNSS Tian-Shan 62.78 306 *eP* **P 10 01 48.9 +0.4**
JCT Junction City 62.79 75 P **P 10 01 46.0 -2.3**
JCT pmax pmax
comp=Z,9.0nm,0.9s
JCT Junction City 62.79 75 P **P 10 01 47.7 -0.6**

baz=316
JCT Junction City 62.79 75 P P 10 01 46.0 -2.3
JCT IAmb IAmb 10 01 50.7
comp=Z,8.8nm,0.9s
SFIN Lafayette 62.86 59 P P 10 01 47.2 -1.3
baz=316,SNR=5.6
SFIN Lafayette 62.86 59 P P 10 01 48.0 -0.5
W39A Magazine 62.91 67 P P 10 01 47.9 -1.0
baz=316
SLVN Son La 62.96 270 P P 10 01 49.5 0.0
SLVN IAmb IAmb 10 01 52.0
comp=Z,24nm,1.3s
WHTX Lake Whitney, 63.09 72 P P 10 01 50.2 0.0
baz=316
NSS Namsos 63.22 353 eP P 10 01 50.8 +0.3
AAM Ann Arbor 63.24 55 P P 10 01 50.1 -0.9
baz=317
KDJ Kajisay 63.32 305 P P 10 01 52.0 +0.2
KDJ pmax pmax
comp=Z,29nm,0.6s
KDJ Kajisay 63.32 305 P P 10 01 52.0 +0.2
FCAR Ozark Folk Cen 63.35 65 P P 10 01 50.0 -1.9
FCAR IAmb IAmb 10 01 52.2
comp=Z,22nm,1.1s
MIAR Mount Ida 63.50 67 P P 10 01 52.4 -0.4
MIAR pmax pmax
comp=Z,18nm,1.3s
MIAR Mount Ida 63.50 67 P P 10 01 52.5 -0.4
baz=316
MIAR Mount Ida 63.50 67 P P 10 01 52.4 -0.4
MIAR IAmb IAmb 10 01 53.4
comp=Z,18nm,1.2s
TKM2 Tokmak 2 63.54 306 P P 10 01 54.0 +0.7
SNR=30
TKM2 Tokmak 2 63.54 306 P P 10 01 53.5 +0.2
SGDS Sogindy 63.63 307 i P P 10 01 54.2 +0.5
comp=Z,26nm,1.6s,baz=307
SGDS Sogindy 63.63 307 i P P 10 01 54.2 +0.5
SGDS pmax pmax
comp=Z,26nm,1.6s
S44A Carbondale 63.64 62 P P 10 01 51.7 -2.0
S44A IAmb IAmb 10 01 54.6
comp=Z,12nm,1.1s
PBMO Poplar Bluff 63.66 63 P P 10 01 51.8 -2.0
PBMO IAmb IAmb 10 01 54.5
comp=Z,13nm,1.0s
D55A Sainte-Anne-du 63.66 47 P P 10 01 52.7 -1.1
baz=319
BOOM Boomskoye usch 63.69 306 P P 10 01 53.8 -0.4
BOOM pmax pmax
comp=Z,70nm,1.4s
BOOM Boomskoye usch 63.69 306 P P 10 01 53.8 -0.4
ULHL Ulahol 63.71 305 P P 10 01 55.7 +1.2
SNR=7.9
W41B Gary Mavity, V 63.80 66 P P 10 01 53.8 -1.0
baz=317
W41B Gary Mavity, V 63.80 66 P P 10 01 53.0 -1.7
W41B IAmb IAmb 10 02 59.6
comp=Z,41nm,1.8s
USP Ospenovka 63.83 307 P P 10 01 56.0 +1.0
SNR=27
CHMS Chumysh 63.90 307 P P 10 01 56.3 +0.8
SNR=8.3
D56A ZEC Mazanza, M 63.96 46 P P 10 01 54.4 -1.3
baz=319
X40A Basin Creek Fa 63.96 67 P P 10 01 55.0 -0.9
baz=317
KBK Karagaybulak 64.06 307 P P 10 01 57.6 +1.0
SNR=24
E56A St. Veronique 64.22 47 P P 10 01 55.8 -1.6
baz=319
AAK Ala-Archa 64.30 307 P P 10 01 59.2 +1.0
SNR=7.7
AAK Ala-Archa 64.30 307 P P 10 01 58.8 +0.6
P48A Milroy 64.41 58 P P 10 01 57.1 -1.7
P48A IAmb IAmb 10 01 58.5
comp=Z,31nm,1.2s
FIA1 FINESS Array S 64.52 345 P P 10 01 59.0 -0.1
FINES FINESS Array B 64.52 345 P P 10 01 58.7 -0.4
comp=Z,16nm,0.6s,baz=25,slow=7.6,SNR=124
FINES LR LR 10 32 35.5
comp=Z,47nm,21.5s,baz=23,slow=38
FINES FINESS Array B 64.52 345 P P 10 01 58.2 -0.8
LATQ La Tuque 64.58 45 P P 10 01 58.4 -1.3
baz=320
833A Chaparral WMA, 64.60 76 P P 10 02 00.0 -0.1
baz=317
EKS2 Erkin-Say 64.63 307 P P 10 02 01.4 +1.1
SNR=40
E57A Chemin Saint G 64.72 46 P P 10 01 59.2 -1.4
baz=320
P49A Miami Univ. Ec 64.72 58 P P 10 01 59.3 -1.5
baz=318
D58A Chemin du LacG 64.75 45 P P 10 01 59.4 -1.4
baz=320
WCI Wyandotte Cave 64.85 60 P P 10 02 00.7 -0.9
baz=318
SIJI Sorong 65.04 232 P P 10 02 04.0 +0.9
comp=Z,15nm,0.8s,baz=13,slow=5.1,SNR=5.5
SIJI LR LR 10 25 03.9
comp=Z,44nm,20.8s,baz=51,slow=31
AML Almayashu 65.07 307 P P 10 02 04.8 +1.3
SNR=59
E58A La Victoria 65.13 46 P P 10 02 02.1 -1.3
baz=320
ERPA Erie 65.21 53 P P 10 02 02.7 -1.2
baz=319
T47A Sharon Grove 65.32 61 P P 10 02 04.0 -0.7
T47A IAmb IAmb 10 02 06.9
comp=Z,17nm,0.9s
O51A Pataskala 65.36 56 P P 10 02 04.1 -0.9
baz=318
M53A WI Miller and 65.38 54 P P 10 02 04.4 -0.6
baz=319
MOL Molde 65.47 355 eP P 10 02 05.6 +0.4
W45A Hickory Valley 65.53 64 P P 10 02 05.5 -0.5
W45A IAmb IAmb 10 02 08.5
comp=Z,29nm,1.1s
AKTO Aktyubinsk 65.53 322 P P 10 02 06.7 +0.8
comp=Z,32nm,0.5s,baz=61,slow=8.1,SNR=106
AKTO LR LR 10 33 03.7
comp=Z,121nm,19.2s,baz=34,slow=38
WVT Waverly 65.56 62 P P 10 02 05.2 -1.0
WVT pmax pmax
comp=Z,14nm,1.3s
WVT Waverly 65.56 62 P P 10 02 05.6 -0.6
baz=318
WVT Waverly 65.56 62 P P 10 02 05.2 -1.0
WVT IAmb IAmb 10 02 07.1
comp=Z,14nm,1.2s
DZA Taraz 65.65 309 eP P 10 02 07.3 +0.4
baz=309
DZA Taraz 65.65 309 eP P 10 02 07.2 +0.4
AB06 Akbulak array 65.71 320 P P 10 02 07.5 +0.5
G58A Ormstown 65.72 47 P P 10 02 05.5 -1.7
baz=320
AB31 Akbulak array 65.73 320 P P 10 02 07.5 +0.5
AB31 Akbulak array 65.73 320 P P 10 02 07.6 +0.5
ABKAR Akbulak array 65.73 320 P P 10 02 07.5 +0.4
D60A Saint Jean D'O 65.74 44 P P 10 02 05.6 -1.6
baz=321
F59A Saint Guilaume 65.75 46 P P 10 02 06.2 -1.1
baz=321
O52A Adamsville 65.78 56 P P 10 02 06.7 -0.9
baz=318
Q51A Peebles 65.81 57 P P 10 02 07.2 -0.7
M54A Oil Creek Stat 65.83 53 P P 10 02 07.2 -0.8
baz=319
D61A St Aubert, Com 65.83 43 P P 10 02 06.8 -1.0
baz=322
KSH Kashi 65.87 304 P P 10 02 12.5 +4.1
KSH pP sP 10 02 34.8 -2.9
KSH pmax pmax
comp=Z,78nm,0.6s
KSH pmax pmax
comp=Z,220nm,4.3s
OXF Oxford 65.88 65 P P 10 02 07.0 -1.3
OXF pmax pmax
comp=Z,53nm,1.2s
OXF Oxford 65.88 65 P P 10 02 07.8 -0.5
baz=318,SNR=7.0
OXF Oxford 65.88 65 P P 10 02 07.0 -1.3
KK31 Karatay Array 65.88 310 P P 10 02 08.5 +0.2
KK31 pmax pmax
comp=Z,24nm,0.6s
KK31 Karatay Array 65.88 310 P P 10 02 08.5 +0.2
KKAR Karatay Array 65.88 310 P P 10 02 08.5 +0.2
KKAR pmax pmax
comp=Z,24nm,0.6s
KKAR Karatay Array 65.88 310 P P 10 02 08.5 +0.2
AKN Aaknes 65.89 355 eP P 10 02 08.5 +0.5
DOMB Dombas 65.90 354 eP P 10 02 08.2 +0.2
E60A Ste Agathe de 65.94 45 P P 10 02 07.7 -0.8
baz=321
P52A Corning 65.99 56 P P 10 02 08.2 -0.8
baz=319
O53A New Philadelph 66.00 55 P P 10 02 08.2 -0.8
baz=319
K56A Middlesex 66.07 51 P P 10 02 08.6 -0.9
baz=320
N54A Moraine State 66.08 54 P P 10 02 08.6 -0.9
baz=319
J57A Williamstown 66.16 50 P P 10 02 09.3 -0.6
baz=320
PLAL Pickwick Lake 66.27 63 P P 10 02 09.6 -1.2
PLAL IAmb IAmb 10 02 11.8
comp=Z,13nm,1.1s
Y45A Yeager Farm, C 66.28 65 P P 10 02 10.1 -0.8
Y45A IAmb IAmb 10 02 12.4
comp=Z,27nm,1.1s
H59A Cadyville 66.28 47 P P 10 02 09.5 -1.3
baz=321
L56A Greenwood 66.38 51 P P 10 02 10.7 -0.8
baz=320
CLTN Cedars of Leba 66.41 61 P P 10 02 10.9 -0.8
CLTN IAmb IAmb 10 02 12.3
comp=Z,20nm,1.0s
D62A Allapoint, All 66.41 43 P P 10 02 10.8 -0.7
baz=322
Q52A Bidwell 66.42 57 P P 10 02 10.5 -1.2
baz=319
NC204 NORSAR Array S 66.53 353 P P 10 02 11.6 -0.6
NC303 NORSAR Array S 66.53 352 P P 10 02 11.0 -1.1
M56A Emporium 66.58 52 P P 10 02 12.2 -0.5
baz=320
NC405 NORSAR Array S 66.62 352 P P 10 02 12.1 -0.5
S51A Beattyville 66.72 58 P P 10 02 12.5 -1.1
S51A IAmb IAmb 10 02 19.2
comp=Z,46nm,1.8s
NB2 NORSAR Subarra 66.73 352 P P 10 02 13.2 -0.2
comp=Z,4.7nm,0.5s,baz=8.3,slow=6.2
NB2 NORSAR Subarra 66.73 352 P P 10 02 13.2 -0.2
baz=8.3,slow=6.2
NOA NORSAR Array B 66.73 352 P P 10 02 13.2 -0.2
comp=Z,3.5nm,0.4s,baz=13,slow=5.9,SNR=83
NOA LR LR 10 31 44.3
comp=Z,31nm,20.6s,baz=295,slow=36
ZAIG Zacatecas 66.76 82 P P 10 02 14.2 -0.2
ZAIG IAmb IAmb 10 02 36.4
comp=Z,12nm,1.0s
J59A Piesco 66.81 49 P P 10 02 13.0 -1.2
baz=321
L57A Andrews Acres 66.83 51 P P 10 02 13.1 -1.2
baz=320
IUG luznay 66.84 309 eP P 10 02 15.5 +1.0
comp=Z,22nm,1.3s,baz=309
IUG luznay 66.84 309 eP P 10 02 15.5 +1.0
IUG pmax pmax
comp=Z,22nm,1.3s
I59A Olmsteadville 66.85 48 P P 10 02 13.0 -1.4
baz=321
P54A Burton 66.86 55 P P 10 02 13.5 -1.0
baz=319
Q53A Leroy 66.88 56 P P 10 02 13.9 -0.7
baz=319
HYA Hoyanger 66.95 355 eP P 10 02 15.0 +0.4
N56A West Decatur 66.95 53 P P 10 02 14.5 -0.6
baz=320
NC602 NORSAR Array S 67.00 352 eP P 10 02 15.3 +0.2
R53A Hurricane 67.06 57 P P 10 02 15.1 -0.7
baz=319
Q54A Coxs Mills 67.14 56 P P 10 02 15.4 -0.9
baz=319
E63A Oxbow 67.19 43 P P 10 02 15.6 -0.9
baz=323
SHL Shillong 67.20 283 P P 10 02 16.9 -0.2
SHL pmax pmax
comp=Z,34nm,1.2s
SHL Shillong 67.20 283 P P 10 02 16.9 -0.2
SHL IAmb IAmb 10 02 18.3
comp=Z,34nm,1.2s
M57A Sunshine Farm, 67.20 52 P P 10 02 16.1 -0.5
baz=320
VSU Vasula 67.23 343 eP P 10 02 16.7 +0.2
G62A West of Eustis 67.24 45 P P 10 02 15.9 -1.0
baz=322
P55A Reedsville 67.26 55 P P 10 02 16.4 -0.7
baz=320
L58A Harry Jones Me 67.27 50 P P 10 02 16.2 -0.9
baz=320
SKAR Skarslia 67.30 354 eP P 10 02 17.5 +0.4
O56A Blue Knob Stat 67.31 53 P P 10 02 16.4 -1.0
baz=320
SSPA Standing Stone 67.37 53 P P 10 02 17.2 -0.5
SSPA IAmb IAmb 10 02 18.3
comp=Z,14nm,0.6s
HFS Hagfors 67.40 351 P P 10 02 16.5 -1.1
comp=Z,3.6nm,0.4s,baz=20,slow=4.7,SNR=30
MOS Moscow 67.44 336 eP P 10 02 16.9 -0.9
N57A Milroy 67.44 52 P P 10 02 17.4 -0.7
baz=320
E64A Bridgewater 67.45 43 P P 10 02 16.9 -1.2
baz=323
S53A Williamson 67.45 57 P P 10 02 17.5 -0.9
baz=319
H62A Milan 67.47 46 P P 10 02 17.5 -0.8
baz=322
F63A Nahmakanta, Br 67.47 44 P P 10 02 17.2 -1.1
baz=322
J60A Lant Hill Farm 67.48 48 P P 10 02 17.5 -0.9
baz=321
M58A Price's Panora 67.50 51 P P 10 02 17.6 -1.0
baz=320
Q55A Buckhannon 67.52 55 P P 10 02 18.0 -0.7
baz=320
L59A Walton 67.55 50 P P 10 02 18.0 -0.8
baz=321
TZTN Tazewell 67.56 59 P P 10 02 18.0 -1.0
baz=319
R54A Victor 67.67 56 P P 10 02 19.0 -0.7
baz=319
F64A Sherman 67.67 43 P P 10 02 18.7 -0.8
baz=323
G63A Kingsbury 67.72 44 P P 10 02 19.0 -0.8
baz=322
P56A Dayton Farm, R 67.76 54 P P 10 02 19.5 -0.7
baz=320
T53A Wise 67.77 58 P P 10 02 20.1 -0.3
baz=319
N58A Sunbury 67.78 52 P P 10 02 19.7 -0.6
baz=320
J61A Chester 67.80 47 P P 10 02 19.8 -0.6
baz=322
O57A Amberson 67.81 53 P P 10 02 19.9 -0.6
baz=320
M59A Waymart 67.86 50 P P 10 02 19.9 -0.9
baz=321
CHTO Chiang Mai 67.92 273 P P 10 02 22.3 +0.8
CHTO pmax pmax
comp=Z,19nm,1.2s
I62A Tamworth 67.94 46 P P 10 02 20.2 -1.0
baz=322
K61A Williamstown 68.00 48 P P 10 02 20.9 -0.8
baz=321
R55A Marlinton 68.04 56 P P 10 02 21.3 -0.7
baz=320
N59A State Game Lan 68.18 51 P P 10 02 22.2 -0.7
baz=321
P57A Homestead Farm 68.18 54 P P 10 02 22.1 -0.8
baz=320
CM31 Chiang Mai Arr 68.19 272 P P 10 02 23.9 +0.7
CM31 IAmb IAmb 10 02 24.5
comp=Z,9.7nm,0.6s
CMAR Chiang Mai Arr 68.19 272 P P 10 02 23.6 +0.5
comp=Z,3.5nm,0.4s,baz=26,slow=6.9,SNR=24
CMAR LR LR 10 32 43.2
comp=Z,23nm,21.9s,baz=78,slow=36
CMAR Chiang Mai Arr 68.19 272 P P 10 02 23.9 +0.7
CMAR Chiang Mai Arr 68.19 272 P P 10 02 23.9 +0.7
T54A Tazewell 68.21 58 P P 10 02 22.6 -0.6
baz=320,SNR=6.3
O58A Lewisberry 68.23 52 P P 10 02 22.1 -1.1
baz=320
OBN Obninsk 68.26 337 deP P 10 02 22.9 -0.1
OBN e 10 02 48.0
OBN eS S 10 11 19.4 +2.5
OBN pmax pmax
comp=Z,12nm,0.4s
R56A Bull Pasture M 68.31 55 P P 10 02 22.3 -1.4
baz=320
LRAL Lakeview Retre 68.31 64 P P 10 02 22.6 -1.1
baz=319
Q57A Strasburg 68.33 54 P P 10 02 22.9 -0.9
baz=320
TAPN Taplejung 68.37 287 eP P 10 02 25.7 +1.1
M60A Port Jervis 68.41 50 P P 10 02 23.1 -1.1
baz=321
L61B Northampton 68.44 48 P P 10 02 23.2 -1.2
baz=322
O59A Robesonia 68.45 52 P P 10 02 23.9 -0.6
baz=321
U54A Nelsons Funny 68.49 58 P P 10 02 24.4 -0.5
baz=320
G65A Princeton 68.53 43 P P 10 02 24.3 -0.6
baz=323
P58A Pank, Wackersv 68.53 53 P P 10 02 24.3 -0.7
baz=320
N60A Cedar Hill Far 68.54 51 P P 10 02 24.3 -0.7
baz=321
T55A Pulaski 68.58 57 P P 10 02 24.9 -0.5
baz=320
H65A Eastbrook 68.64 44 P P 10 02 25.0 -0.6
baz=323
Q58A Fox Den Farm, 68.76 54 P P 10 02 25.8 -0.7
baz=320
S56A Natural Bridge 68.78 56 P P 10 02 26.0 -0.6
baz=320
R57A Stanardsville 68.84 55 P P 10 02 26.2 -0.8
baz=320
P59A Jarrettsville 68.87 52 P P 10 02 26.5 -0.6
baz=321
ODAN Odare 68.92 287 eP P 10 02 28.9 +1.0
comp=Z,20nm,0.4s
H66A Whiting 68.97 43 P P 10 02 26.8 -0.8
baz=324
V54A Nebo 68.99 59 P P 10 02 27.7 -0.2
baz=320
PAL Palisades 69.00 50 P P 10 02 27.3 -0.6
baz=322
S57A Dark Hollow, R 69.03 55 P P 10 02 27.7 -0.4
baz=320
GUN Gumba 69.03 289 eP P 10 02 29.9 +1.2
comp=Z,141nm,0.5s
GAR Garm 69.12 307 P P 10 02 29.3 +0.4
V55A Taylorsville 69.32 58 P P 10 02 29.5 -0.4
baz=320
RAMN Ramite 69.32 287 eP P 10 02 31.4 +1.0
comp=Z,84nm,0.5s
U56A King 69.38 57 P P 10 02 30.0 -0.4
baz=320
W54A Cherokee Point 69.39 59 P P 10 02 30.1 -0.3
baz=320
O61A Allentown 69.40 51 P P 10 02 29.9 -0.5
baz=321
R58B Mineral 69.42 54 P P 10 02 30.1 -0.4
baz=321
T57A Hurt 69.46 56 P P 10 02 30.1 -0.7
baz=320
KKN Kakani 69.47 289 eP P 10 02 32.3 +1.0
comp=Z,57nm,0.5s
PKI Pulchoki 69.56 289 eP P 10 02 32.9 +0.9
comp=Z,78nm,0.5s
PKIN Phulchoki 69.56 289 eP P 10 02 32.8 +0.9
comp=Z,102nm,0.5s
S58A Poland Farm, P 69.60 55 P P 10 02 30.7 -0.9
baz=321
GKN Gorkha 69.69 290 eP P 10 02 33.3 +0.8
comp=Z,78nm,0.8s
X54A Belton 69.69 60 P P 10 02 32.0 -0.2
baz=320
DMN Daman 69.71 289 eP P 10 02 34.0 +1.2
comp=Z,38nm,0.5s
V56A Mocksville 69.73 58 P P 10 02 31.9 -0.5
baz=320
KMSC Kings Mountain 69.80 59 P P 10 02 32.2 -0.8
baz=320
KMSC Kings Mountain 69.80 59 P P 10 02 32.1 -0.8
KMSC IAmb IAmb 10 02 33.3
comp=Z,14nm,0.7s
T58A Grand View Acr 69.87 56 P P 10 02 32.4 -0.9
baz=321
DANN Dangsing 69.94 290 eP P 10 02 35.3 +1.1
comp=Z,55nm,0.6s
CHGR Chuyangaron 69.96 307 P P 10 02 33.7 -0.2
GOGA Godfrey 69.97 61 P P 10 02 33.0 -1.0
baz=320
ISAL Salakas 70.08 343 eP P 10 02 34.3 +0.1
X55A Gracelyn & Ava 70.15 59 P P 10 02 34.7 -0.4
baz=320
IDID Didziasalis 70.21 342 eP P 10 02 35.0 0.0
IIGN Ignalina 70.27 343 eP P 10 02 35.8 +0.3
U58A Oxford 70.28 56 P P 10 02 35.6 -0.2
baz=321
X56A White Oak 70.45 59 P P 10 02 36.3 -0.6
baz=320
V58A Windy Hill, Pi 70.46 57 P P 10 02 36.5 -0.4
baz=321
KOLN Koldanda 70.47 290 eP P 10 02 38.2 +0.8
comp=Z,46nm,0.8s
W57A Gilead 70.49 58 P P 10 02 36.5 -0.6
baz=320
PABE Paberze 70.52 344 eP P 10 02 37.0 +0.1
PYUN Piuthan 70.57 291 eP P 10 02 38.4 +0.4
comp=Z,92nm,0.6s
U59A Littleton 70.70 56 P P 10 02 37.6 -0.8
baz=321
V59A Middlesex 70.93 56 P P 10 02 39.1 -0.7
baz=321
W58A Raeford 70.99 57 P P 10 02 39.6 -0.5
baz=321
Z57A Bowman 71.54 60 P P 10 02 43.2 -0.3
baz=321
Y58A Scranton 71.62 58 P P 10 02 44.0 0.0
baz=321
NIL Nilore 71.75 301 P P 10 02 45.9 +1.1
W60A Pink Hill 71.75 56 P P 10 02 44.5 -0.2
baz=321
157A Early Branch 71.86 60 P P 10 02 45.3 -0.2
baz=321
X60A Albert Glenn T 71.99 57 P P 10 02 45.2 -1.0
baz=321
EKA Eskdalemuir Ar 73.05 360 P P 10 02 52.2 +0.1
comp=Z,3.3nm,0.5s,baz=355,slow=4.6,SNR=15
KBL Kabul 73.23 305 P P 10 02 53.4 -0.5
KBL pmax pmax
comp=Z,36nm,0.8s
KBL Kabul 73.23 305 P P 10 02 53.4 -0.5
PMOR Pomariorio Ree 73.44 144 eT T 11 23 28.6
comp=Z,32nm,0.2s
AKASG Malin Array Be 74.05 339 P P 10 02 58.1 0.0
comp=Z,15nm,0.6s,baz=25,slow=6.2,SNR=18
AKASG pP pP 10 03 18.3 -0.4
comp=Z,2.1nm,0.4s,baz=23,slow=6.0,SNR=2.6
AKASG LR LR 10 37 48.4
comp=Z,47nm,22.0s,baz=300,slow=38
AKASG Malin Array Be 74.05 339 P P 10 02 57.5 -0.6
AKBB Malin Array Si 74.05 339 P P 10 02 56.6 -1.4
AKBB pmax pmax
comp=Z,46nm,1.4s
AKBB Malin Array Si 74.05 339 P P 10 02 56.6 -1.4
AKBB IAmb IAmb 10 02 59.2
comp=Z,46nm,1.4s
DZM Mont Dzumac 74.28 190 LR LR 10 28 08.8
comp=Z,150nm,21.0s,baz=28,slow=30
DZM Mont Dzumac 74.28 190 eLR LR 10 25 48.7
comp=Z,275nm,25.1s
PPT Papete 75.22 147 LR LR 10 30 28.1
comp=Z,98nm,19.9s,baz=277,slow=31
PPT2 Papeete2 75.24 147 eLR LR 10 26 10.9
comp=Z,447nm,30.0s
PPT2 Papeete2 75.24 147 eT T 11 25 43.0
comp=Z,3.1nm,0.2s
PAE Paea 75.31 147 eT T 11 25 47.5
comp=Z,0.8nm,0.3s
GOF Gofitskoye 75.43 328 eP P 10 03 06.8 +0.7
GOF pmax pmax
comp=Z,70nm,0.7s
GYA2 ALIBECK ARRAY 75.70 314 P P 10 03 08.5 +0.6
GYA2 IAmb IAmb 10 03 10.1
comp=Z,28nm,1.2s

GEYT Alibeck 75.71 314 P P 10 03 09.1 +1.1
comp=Z,12nm,0.9s,baz=343,slow=3.1,SNR=16
GEYT pP **pP 10 03 29.4 +0.6**
comp=Z,4.3nm,0.8s,baz=336,slow=3.3,SNR=2.7
GEYT LR LR 10 39 24.3
comp=Z,123nm,20.1s,baz=35,slow=38
GEYT Alibeck 75.71 314 P P 10 03 08.4 +0.5
GYA0B ALIBECK ARRAY 75.71 314 P P 10 03 08.7 +0.7
GYA0B IAmb IAmb 10 03 10.2
comp=Z,19nm,0.9s
LVV L'vov 75.95 342 *e*P **P 10 03 09.4 +0.4**
OJC Ojcow 76.31 345 P P 10 03 11.3 +0.3
OJC pmax pmax
comp=Z,28nm,1.2s
OJC Ojcow 76.31 345 P P 10 03 11.3 +0.3
OJC IAmb IAmb 10 03 12.7
comp=Z,28nm,1.2s
KWP Kalwaria Pacla 76.38 343 P P 10 03 12.1 +0.6
KWP pmax pmax
comp=Z,111nm,1.2s
KWP Kalwaria Pacla 76.38 343 P P 10 03 12.1 +0.6
CHVC Chvalec 76.50 347 *e*P **P 10 03 13.3 +1.1**
KIV Kislovodsk 76.52 328 *e*P **P 10 03 13.0 +0.5**
KIV pmax pmax
comp=Z,42nm,1.1s
EDFI Ende, Flores 76.61 236 P P 10 03 10.4 -2.9
KBZ Khabaz 76.65 327 P P 10 03 14.0 +0.9
comp=Z,6.8nm,0.9s
KBZ LR LR 10 42 13.9
comp=Z,57nm,18.5s,baz=145,slow=40
KBZ Khabaz 76.65 327 *c*e**P P 10 03 14.2 +1.1**
KBZ pmax pmax
comp=Z,11nm,1.0s
SORM Soroca 76.66 339 ⇓P **P 10 03 13.2 +0.2**
DPC Dobruska-Polom 76.69 347 *e*P **P 10 03 11.1 -2.2**
HRA Herat 76.71 309 P P 10 03 14.1 +0.2
HRA IAmb IAmb 10 03 16.3
comp=Z,62nm,1.5s
KRLC Kraliky 76.90 347 *e*P **P 10 03 14.8 +0.3**
MORC Moravsky Berou 77.08 346 ⇑P **P 10 03 16.8 +1.3**
MORC Moravsky Berou 77.08 346 *e*P **P 10 03 16.1 +0.6**
MORC Moravsky Berou 77.08 346 P P 10 03 16.8 +1.3
KOLS Kolonicke sedl 77.13 343 *e*P **P 10 03 16.6 +0.9**
KOLS pmax pmax
comp=Z,22nm,1.2s
KOLS Kolonicke sedl 77.13 343 *e*P **P 10 03 16.6 +0.9**
ZEI Tsey 77.15 326 *e*P **P 10 03 15.9 -0.3**
ZEI pmax pmax
comp=Z,24nm,1.2s
CRVS Cervenica-Dubn 77.30 344 *e*P **P 10 03 17.4 +0.7**
CRVS pmax pmax
comp=Z,21nm,0.8s
CRVS Cervenica-Dubn 77.30 344 *e*P **P 10 03 17.4 +0.7**
LANS Liptovska Anna 77.40 345 *e*P **P 10 03 18.6 +1.4**
LANS pmax pmax
comp=Z,18nm,1.3s
LANS Liptovska Anna 77.40 345 *e*P **P 10 03 18.6 +1.4**
VRAC Vranov 77.68 347 *e*P **P 10 03 19.0 +0.3**
comp=Z,3.4nm,0.6s,baz=20,slow=5.5,SNR=5.1
VRAC Vranov 77.68 347 *e*P **P 10 03 19.6 +0.8**
BUR08 Bucovina Ar. S 77.80 341 P P 10 03 19.4 -0.2
BUR08 IAmb IAmb 10 03 21.5
comp=Z,23nm,0.9s
BURAR Bucovina Array 77.83 341 ⇓P **P 10 03 20.4 +0.6**
BURAR Bucovina Array 77.83 341 P P 10 03 19.4 -0.3
KECS Kecovo 77.87 344 *e*P **P 10 03 20.5 +0.6**
KECS pmax pmax
comp=Z,8.0nm,0.9s
KECS Kecovo 77.87 344 *e*P **P 10 03 20.5 +0.6**
KRUC Moravsky 77.94 347 *e*P **P 10 03 21.2 +1.0**
JAVC Velka Javorina 77.96 346 *e*P **P 10 03 22.4 +2.0**
VYHS Vyhne 78.13 345 *e*P **P 10 03 21.6 +0.3**
VYHS pmax pmax
comp=Z,17nm,1.4s
VYHS Vyhne 78.13 345 *e*P **P 10 03 21.6 +0.3**
BIZ Bicaz 78.28 340 ⇓P **P 10 03 23.3 +1.1**
MODS Modra-Piesok 78.49 346 *e*P **P 10 03 23.3 0.0**
MODS pmax pmax
comp=Z,19nm,1.4s
MODS Modra-Piesok 78.49 346 *e*P **P 10 03 23.3 0.0**
GERES GERESS Array B 78.51 349 P P 10 03 20.0 -3.5
GERES GERESS Array B 78.51 349 P P 10 03 20.0 -3.5
PSZ Piszkesteto 78.52 344 ⇑P **P 10 03 25.0 +1.5**
PSZ Piszkesteto 78.52 344 P P 10 03 25.7 +2.2
PSZ Piszkesteto 78.52 344 P P 10 03 20.1 -3.4
PSZ IAmb IAmb 10 03 26.0
comp=Z,12nm,0.8s
CJR Cluj-Napoca 79.01 342 ⇑P **P 10 03 26.5 +0.3**
VRI Vrincioaia 79.17 339 ⇓P **P 10 03 27.1 0.0**
GNI Garni 79.19 325 P P 10 03 29.0 +1.6
comp=Z,5.9nm,0.4s,baz=190,slow=9.6,SNR=5.2
GNI Garni 79.19 325 *c*e**P P 10 03 27.9 +0.5**
GNI pmax pmax
comp=Z,17nm,1.3s
GNI Garni 79.19 325 P P 10 03 27.4 -0.1
GNI IAmb IAmb 10 03 30.7
comp=Z,22nm,1.1s
PLOR Plostina 79.20 339 ⇓P **P 10 03 27.9 +0.7**
TLCR 79.33 338 ⇑P **P 10 03 28.3 +0.4**
CFR Carcaliu 79.50 338 ⇑P **P 10 03 29.6 +0.8**
MLR Muntele Rosu 79.69 340 P P 10 03 31.8 +1.8
comp=Z,8.8nm,0.7s,baz=226,slow=2.8,SNR=8.6
MLR Muntele Rosu 79.69 340 ⇑P **P 10 03 30.7 +0.7**
MLR Muntele Rosu 79.69 340 P P 10 03 31.1 +1.0
MLR IAmb IAmb 10 03 33.0
comp=Z,31nm,1.3s
TPGR Topolog 79.74 338 P P 10 03 29.8 -0.4
SIRR Siria 79.81 343 ⇓P **P 10 03 31.7 +1.2**
ARSA Arzberg 79.84 347 *e*P **P 10 03 32.0 +1.4**
comp=Z,7.1nm,0.9s
VOIR 79.94 340 ⇓P **P 10 03 32.1 +0.8**
ARR Arges 80.09 340 ⇓P **P 10 03 32.5 +0.3**
RETA Reutte 80.18 350 *e*P **P 10 03 33.8 +1.2**
comp=Z,9.3nm,1.3s
WATA Walderalm 80.24 350 *e*P **P 10 03 34.2 +1.2**
comp=Z,19nm,1.2s
MOTA Moosalm 80.29 350 *e*P **P 10 03 34.0 +0.7**
comp=Z,11nm,1.1s
KBA Koelnbreinsper 80.29 349 *e*P **P 10 03 34.0 +0.7**
comp=Z,23nm,1.0s
WTTA Wattenberg 80.31 350 *e*P **P 10 03 34.5 +1.1**
comp=Z,26nm,1.5s
SQTA Sankt Quirin 80.40 350 *e*P **P 10 03 34.8 +1.0**
comp=Z,12nm,1.1s
GZR Gura Zlata 80.44 342 ⇑P **P 10 03 33.8 -0.2**
BZS Buzias 80.44 343 ⇑P **P 10 03 34.2 +0.3**
SOKA Soboth 80.47 347 *e*P **P 10 03 35.4 +1.2**
comp=Z,13nm,0.9s
PERS Pernice 80.50 347 *i* P **P 10 03 35.0 +0.8**
WRA Warramunga Arr 80.60 220 P P 10 03 35.6 +0.7
comp=Z,1.9nm,0.7s,baz=31,slow=5.9,SNR=26
WRA pP **pP 10 03 54.7 -0.9**
comp=Z,2.6nm,0.6s,baz=30,slow=6.0,SNR=8.4
WRA Warramunga Arr 80.60 220 P P 10 03 30.2 -4.7
GROS Grobnik 80.62 347 *i* P **P 10 03 35.4 +0.5**
FETA Feichten 80.64 350 *e*P **P 10 03 36.0 +0.8**
comp=Z,9.9nm,1.1s
TBI Tubuai 80.64 149 *e*LR LR 10 28 28.1
comp=Z,287nm,35.0s
OBKA Obir 80.70 348 *e*P **P 10 03 36.6 +1.2**
comp=Z,15nm,0.9s
ABTA Abfaltersbach 80.72 349 *e*P **P 10 03 36.3 +0.8**
comp=Z,12nm,1.1s
PRED Cave del Predi 80.89 348 P P 10 03 35.5 -0.9
DAVOX Davos/Dischmat 80.97 351 P P 10 03 38.7 +1.8
comp=Z,2.5nm,0.4s,baz=28,slow=1.7,SNR=5.1
GBRS Gornja Briga 81.62 347 *i* P **P 10 03 40.5 +0.3**
TEOL Teolo 82.18 349 P P 10 03 43.7 +0.6
TEOL IAmb IAmb 10 03 44.6
comp=Z,28nm,0.8s
DIVS Divibare 82.21 343 P P 10 03 43.6 +0.2
DIVS IAmb IAmb 10 03 45.1
comp=Z,18nm,1.2s
FITZ Fitzroy Crossi 82.71 228 P P 10 03 47.7 +1.7
comp=Z,1.6nm,0.7s,baz=5.7,slow=4.2,SNR=7.1
FITZ pP **pP 10 04 06.1 -0.6**
comp=Z,5.1nm,0.9s,baz=24,slow=7.1,SNR=5.1
BRTR Keskin Array B 83.17 332 P P 10 03 49.1 +0.6
comp=Z,3.8nm,1.0s,baz=44,slow=3.9,SNR=10.0
BRTR LR LR 10 44 23.9
comp=Z,25nm,18.4s,baz=344,slow=38
MSSA Maissana 83.44 351 P P 10 03 49.5 -0.2
PDG Podgorica 83.95 343 ⇑P **P 10 03 52.6 +0.3**
ASAR Alice Springs 84.13 219 P P 10 03 54.5 +1.2
comp=Z,1.1nm,0.8s,baz=21,slow=5.3,SNR=14
ASAR pP **pwP 10 04 14.2 -2.7**
comp=Z,1.2nm,0.6s,baz=20,slow=5.1,SNR=5.7
UOSS Minazif 87.45 308 P P 10 04 09.2 -0.7
UOSS IAmb IAmb 10 04 09.9
comp=Z,30nm,1.6s
IDI Anoyia 89.66 337 LR LR 10 49 29.1
comp=Z,23nm,18.6s,baz=60,slow=39
EIL Elat 92.05 327 LR LR 10 52 04.8
comp=Z,45nm,18.2s,baz=48,slow=40
TORD Torodi Ar. Bea 115.00 355 PKP **PKiKP 10 10 02.2 -0.9**
comp=Z,0.6nm,0.5s,baz=0.6,slow=2.2,SNR=5.5
TORD PP **PP 10 11 02.0 -0.1**
comp=Z,1.4nm,1.1s,baz=11,slow=7.6,SNR=3.7
DBIC Dimbokro 121.56 2 PKP **PKPdf 10 10 15.2 -0.5**
comp=Z,1.5nm,0.5s,baz=349,slow=5.0,SNR=3.7
DBIC Dimbokro 121.56 2 **PKPdf 10 10 14.4 -1.4**
VNDA Vanda 129.57 184 SKPbc SKPbc 10 13 45.2 +1.5
comp=Z,1.8nm,1.0s,baz=330,slow=4.5,SNR=8.6
CPUP Villa Florida 132.26 79 SKPbc **SKPbc 10 13 55.1 +0.1**
comp=Z,1.9nm,0.7s,baz=315,slow=1.4,SNR=3.5
PLCA Paso Flores 133.82 104 PKP **PKiKP 10 10 39.7 +0.1**
comp=Z,0.6nm,0.5s,baz=301,slow=5.9,SNR=4.6
PLCA Paso Flores 133.82 104 **PKPdf 10 10 38.0 -0.3**
MAW Mawson 145.25 218 PKPbc **PKPab 10 10 59.2 +1.0**
comp=Z,1.8nm,0.5s,baz=98,slow=3.6,SNR=14
MAW pPKPbc **pPKPdf 10 11 19.4 -1.2**
comp=Z,3.8nm,0.5s,baz=95,slow=4.2,SNR=3.6
MAW Mawson 145.25 218 PKIKP **PKPab 10 10 58.8 +0.6**
MAW Mawson 145.25 218 **PKPab 10 10 58.8 +0.6**
BOSA Boshof 148.44 307 PKPbc **PKPbc 10 11 08.5 0.0**
comp=Z,5.5nm,0.5s,baz=35,slow=3.2,SNR=21
BOSA Boshof 148.44 307 PKP2 **PKiKP 10 11 09.3 -0.7**
BOSA Boshof 148.44 307 **PKiKP 10 11 09.3 -0.7**
SYO Syowa Base 153.68 214 ⇑*e*PKPab **PKPab 10 11 32.4 -0.1**
SYO Syowa Base 153.68 214 ⇑*e*pPKPbc pPKPbc 10 11 41.0 -0.3

HEL 14 10:00:10.5±0.4, 67.61N×33.98E, h0km, ML1.9,
Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**1.67**	**277**	PG	Pn	10 00 40.8	-0.2
	baz=93						
VRF				MSG		10 01 00.5	
	comp=Z,12nm,0.2s						
VRF				SG	Sn	10 01 02.1	-1.1
KU6	**Riekki**	**2.27**	**227**	PG	Pb	10 00 51.3	-1.0
	baz=46						
KU6				MSG		10 01 17.6	
	comp=Z,3.8nm,0.2s						
KU6				SG	Sg	10 01 23.0	-0.3
MSF	**Maaselka**	**2.60**	**231**	PG	Pb	10 00 56.8	-1.0
	baz=45						
MSF				SB	Sn	10 01 27.8	+1.8
MSF	**Maaselka**	**2.60**	**231**	P	Sn	10 01 28.1	+2.2
SGF	**Sodankyl**	**2.87**	**270**	PG	Pb	10 01 01.5	-0.9
	baz=82						
RNF	**Rovaniemi**	**3.27**	**256**	PN	Pn	10 01 03.3	+0.4
	baz=71						
ARA0	**ARCESS Array S**	**3.66**	**306**	PN	Pn	10 01 07.9	-0.4
	baz=118						
ARA0				SB	Sb	10 01 57.2	-3.6
ARA0	**ARCESS Array S**	**3.66**	**306**	*e*P	Pn	10 01 08.1	-0.2
PAJU	**Pajala**	**4.25**	**267**	PN	Pn	10 01 16.5	+0.1
KALU	**Kalix**	**4.56**	**252**	PG	Pb	10 01 32.3	+1.0
LANU	**Lannavaara**	**4.56**	**281**	PN	Pn	10 01 19.9	-0.9
LANU				SN	Sn	10 02 11.5	-2.9
ERTU	**Ertsjaerv**	**4.73**	**263**	PN	Pn	10 01 22.4	-0.6

SKO 14 10:01:19.3, 41.39N×22.52E, h8km, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.08**	**151**	⇑*i*Pg	Pg	10 01 21.5	+0.1
VAY				*i* Sg	Sg	10 01 22.7	-0.2
VAY				*e*Lg	Lg	10 01 22.8	
	comp=E,86nm,0.2s						
STIP	**Stip**	**0.39**	**321**	⇓*i*Pg	Pg	10 01 27.0	-0.1
STIP				*i* Sg	Sg	10 01 32.5	+0.2
STIP				*e*Lg	Lg	10 01 32.6	
	comp=E,3.1nm,0.3s						

*JMA **14** 10:11:02.6±0.2, 24.92N×123.37E, h27km, M2.7*
*IDC **14** 10:11:06.7±5.0, 24.26N×123.69E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.3/47, mbtmp3.7/3, ML3.0/1, Error ellipse: s-maj=272.2km s-min=39.8km az=95.0*
*NEIC **14** 10:11:06.5±0.9, 24.26N±0.08×123.35E±0.07, h10km±2km, mb4.2/6, Error ellipse: s-maj=17.0km s-min=4.9km az=36.0*

ISC 14 10:11:04.3±1.4, 24.75N±0.08×123.44E±0.04, h14km±9km, n22, σ0.84/29, mb4.2/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.49**	**233**	P	**Pg**	**10 11 13.7**	**-0.3**
YOJ				S	**Sg**	**10 11 21.3**	**+0.8**
YOJ	**Yonaguni jima**	**0.49**	**233**		**Pg**	**10 11 13.6**	**-0.4**
IRIF	**Iriomote-Funau**	**0.49**	**147**	P	**Pb**	**10 11 15.4**	**+0.6**
IRIF				S	**Sn**	**10 11 24.6**	**-0.7**
JYNG	**Yonagunijimaku**	**0.54**	**236**	P	**Pg**	**10 11 14.4**	**-0.6**
JYNG				S	**Sg**	**10 11 22.1**	**-0.1**
JKRS	**Kuro-shima**	**0.73**	**135**	P	**Pb**	**10 11 19.3**	**+0.5**
JKRS				S	**Sn**	**10 11 31.0**	**-0.1**
JIJ	**Ishigaki jima**	**0.75**	**121**	P	**Pg**	**10 11 18.7**	**-0.2**
JIJ				S	**Sb**	**10 11 29.9**	**+0.7**
HATJ	**Hateruma jima**	**0.77**	**154**	P	**Pb**	**10 11 20.1**	**+0.6**
HATJ				S	**Sn**	**10 11 32.7**	**+0.6**
JISG	**Ishigakijimahi**	**0.81**	**102**	P	**Pg**	**10 11 19.4**	**-0.7**
JISG				*e*S	**Sb**	**10 11 31.5**	**+0.5**
NACB	**Ninganchiao**	**1.78**	**251**	Pn	**Pn**	**10 11 33.5**	**-1.1**
YHNB	**Yeheng**	**1.88**	**268**	Pn	**Pn**	**10 11 37.9**	**+1.9**
YULB	**Yu-li**	**2.38**	**236**	Pn	**Pn**	**10 11 41.3**	**-1.6**
TPUB	**Ta-pu**	**2.95**	**241**	Pn	**Pn**	**10 11 50.8**	**+0.1**
KSRS	**Korea Array**	**13.23**	**16**	Pn	**P**	**10 14 20.9**	**-0.6**
	0.1nm,0.3s,baz=197,slow=14,SNR=5.2						
WB0	**Warramunga Arr**	**45.52**	**165**	P	**P**	**10 19 23.0**	**-0.5**
WB0				IAmb	IAmb	10 19 42.7	
	comp=Z,3.6nm,1.1s						
WRAB	**Tennant Creek**	**45.67**	**166**	P	**P**	**10 19 23.7**	**-1.1**
WRAB				IAmb	IAmb	10 19 40.2	
	comp=Z,3.8nm,1.1s						
WRA	**Warramunga Arr**	**45.68**	**166**	P	**P**	**10 19 24.6**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=347,slow=8.8,SNR=13						
WRA	**Warramunga Arr**	**45.68**	**166**	P	**P**	**10 19 23.8**	**-1.0**
WB2	**Warramunga Arr**	**45.68**	**166**	P	**P**	**10 19 25.2**	**+0.4**
WB2				IAmb	IAmb	10 19 32.1	
	comp=Z,4.0nm,1.3s						
WR0	**Warramunga Arr**	**45.74**	**165**	P	**P**	**10 19 24.6**	**-0.7**
AS31	**Alice Springs**	**49.19**	**167**	P	**P**	**10 19 53.1**	**+0.9**
ASAR	**Alice Springs**	**49.19**	**167**	P	**P**	**10 19 53.1**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=350,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**49.19**	**167**	P	**P**	**10 19 52.6**	**+0.5**

*IDC **14** 10:15:34.7±1.1, 29.36S×178.90W, h333km±11km, mb2.7/2, mb1 3.2/4, mb1mx3.0/29, mbtmp3.9/4, Error ellipse: s-maj=32.1km s-min=26.5km az=166.0*

ISC 14 10:15:33.9±0.8, 29.58S±0.08×179.0W±0.1, h315km, n27, σ1.9/62/44, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**0.99**	**71**	P	**Pn**	**10 16 18.1**	**+2.3**
RIZ				S	**S**	**10 16 46.6**	**-2.7**
GLKZ	**Green Lake**	**1.00**	**72**	P	**Pn**	**10 16 17.9**	**+2.1**
GLKZ				S	**S**	**10 16 49.8**	**+0.5**
RAO	**Raoul Island**	**1.00**	**71**	P	**Pn**	**10 16 18.1**	**+2.2**
	107nm,0.3s,baz=61,slow=8.1,SNR=5.5						
RAO				S	**S**	**10 16 49.2**	**-0.2**
	99nm,0.3s,baz=102,slow=23,SNR=2.2						
WCZ	**Waipu Caves**	**8.46**	**220**	P	**P**	**10 17 39.9**	**+2.5**
HAZ	**Te Kaha**	**8.58**	**197**	P	**P**	**10 17 36.0**	**-3.0**
HAZ				S	**S**	**10 19 15.0**	**+2.2**
PKGZ	**Pakihiroa**	**8.64**	**196**	P	**P**	**10 17 37.7**	**-2.0**
PKGZ				S	**S**	**10 19 12.9**	**-1.3**
PUZ	**Puketiti**	**8.77**	**194**	P	**Pn**	**10 17 36.0**	**-0.9**
PUZ				S	**S**	**10 19 16.7**	**-0.4**
RUGZ	**Raukumara Rang**	**8.81**	**197**	P	**P**	**10 17 39.1**	**-2.6**
RUGZ				S	**S**	**10 19 16.4**	**-1.7**
TWGZ	**Tauwhareparae**	**8.94**	**195**	P	**P**	**10 17 44.2**	**+1.2**
TWGZ				S	**S**	**10 19 20.5**	**-0.3**
CNGZ	**Carnagh Statio**	**9.18**	**194**	P	**P**	**10 17 46.9**	**+1.2**
MWZ	**Matawai**	**9.20**	**197**	P	**Pn**	**10 17 42.4**	**+0.3**
MWZ				S	**S**	**10 19 26.9**	**+0.3**
TKGZ	**Te Karaka**	**9.22**	**196**	P	**P**	**10 17 45.7**	**-0.3**
URZ	**Urewera**	**9.24**	**199**	P	**P**	**10 17 45.8**	**-0.5**
	3.7nm,0.3s,baz=266,slow=4.8,SNR=38						
URZ				S	**S**	**10 19 27.4**	**-0.1**
	1.9nm,0.3s,baz=60,slow=16,SNR=13						
URZ	**Urewera**	**9.24**	**199**	P	**P**	**10 17 43.9**	**-2.4**
URZ				S	**P**	**10 19 28.8**	**+1.3**
RIGZ	**Rimuhau**	**9.49**	**196**	P	**P**	**10 17 49.8**	**+0.7**
RIGZ				S	**S**	**10 19 33.9**	**+0.7**
MUGZ	**Murupara**	**9.54**	**200**	P	**P**	**10 17 46.6**	**-3.1**
MUGZ				S	**S**	**10 19 35.3**	**+1.0**
SNGZ	**Shannon Statio**	**9.67**	**197**	P	**P**	**10 17 49.6**	**-1.4**
SNGZ				S	**S**	**10 19 36.5**	**-0.7**
MTHZ	**Maungataniwha**	**9.87**	**199**	P	**P**	**10 17 54.2**	**+0.8**
MTHZ				S	**S**	**10 19 42.9**	**+1.2**
MHGZ	**Mahia Peninsul**	**9.88**	**194**	P	**P**	**10 17 54.9**	**+1.4**
MHGZ				S	**S**	**10 19 44.7**	**+2.6**
ARHZ	**Aropaoanui**	**10.21**	**198**	P	**P**	**10 17 55.4**	**-1.7**
ARHZ				S	**S**	**10 19 49.2**	**-0.1**
DZM	**Mont Dzumac**	**15.08**	**296**	P	**Pn**	**10 18 52.8**	**-0.1**
	1.3nm,0.3s,baz=188,slow=16,SNR=11						
ASAR	**Alice Springs**	**42.29**	**266**	P	**P**	**10 22 57.5**	**-0.2**
	0.2nm,0.4s,baz=104,slow=7.1,SNR=7.2						
WRA	**Warramunga Arr**	**43.20**	**272**	P	**P**	**10 23 04.2**	**-0.7**
	0.4nm,0.6s,baz=111,slow=6.3,SNR=7.1						
FINES	**FINESS Array B**	**144.08**	**340**	PKP	**PKPab**	**10 34 28.0**	**-2.0**
	2.8nm,0.5s,baz=54,slow=3.9,SNR=25						
NOA	**NORSAR Array B**	**147.81**	**351**	PKPbc	**PKPdf**	**10 34 39.2**	**+1.3**
	0.9nm,0.7s,baz=14,slow=4.2,SNR=3.3						
AKASG	**Malin Array Be**	**150.12**	**323**	PKPbc	**PKPbc**	**10 34 45.2**	**-1.9**
	0.6nm,0.4s,baz=52,slow=2.4,SNR=4.1						
TORD	**Torodi Ar. Bea**	**163.64**	**182**	PKPab	**PKPab**	**10 35 54.1**	**+0.7**
	0.5nm,0.8s,baz=259,slow=2.9,SNR=2.1						

IDC 14 10:23:18.1±10.0, 4.75S×148.65E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/23, mbtmp3.3/3, Error ellipse: s-maj=159.1km s-min=97.2km az=8.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.55**	**221**	P	P	10 27 57.6	-0.9
	0.2nm,0.5s,baz=48,slow=11,SNR=2.0						
ASAR	**Alice Springs**	**23.58**	**216**	P	P	10 28 29.9	-0.8
	0.3nm,0.5s,baz=54,slow=9.1,SNR=8.2						
STKA	**Stephens Creek**	**27.79**	**193**	P	P	10 29 10.3	+1.4
	1.3nm,0.7s,baz=16,slow=15,SNR=3.0						

*IDC **14** 10:44:18.5±0.8, 49.71N×18.49E, h0km, mb3.2/2, mb1 3.5/9, mb1mx3.4/40, mbtmp3.4/9, ML3.1/7, Error ellipse: s-maj=14.2km s-min=7.2km az=155.0*
*IPEC **14** 10:44:18.1±0.1, 49.87N×18.48E, h1km, ML3.6/3, Error ellipse: s-maj=1.4km s-min=1.1km az=160.0, Mining induced.*
*BGR **14** 10:44:18.6±0.2, 49.88N×18.39E, h1km, ML3.8/20, Error ellipse: s-maj=6.7km s-min=3.3km az=13.0*
*VIE **14** 10:44:19.4±0.8, 49.71N×18.34E, h0km, mb2.9/8, ml3.1/10, Error ellipse: s-maj=5.8km s-min=4.2km az=55.0 15 km SSE of Ostrava Suspected Mining induced.*

ISC 14 10:44:17.0±0.6, 49.88N±0.02×18.42E±0.02, h0km, n83, σ1.8/30/144, 7C-5D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.18**	**255**	*e*PG	**Pg**	**10 44 22.8**	**+2.4**
OKC				*e*SG	**Sg**	**10 44 25.7**	**+3.0**
	comp=Z,5μm,0.8s						
MORC	**Moravsky Berou**	**0.57**	**260**	⇓P	**Pb**	**10 44 29.5**	**-0.5**
MORC				S	**Sb**	**10 44 38.1**	**-0.6**
MORC	**Moravsky Berou**	**0.57**	**260**	⇓*i*PG	**Pb**	**10 44 29.5**	**-0.5**
MORC				*e*SG	**Sg**	**10 44 37.4**	**+2.0**
MORC	**Moravsky Berou**	**0.57**	**260**	*e*Pg	**Pb**	**10 44 29.5**	**-0.5**
MORC				*e*Sg	**Sb**	**10 44 38.1**	**-0.6**
MORC	**Moravsky Berou**	**0.57**	**260**	⇓*i*Pg	**Pb**	**10 44 29.4**	**-0.5**
	baz=81						
MORC				*e*Sg	**Sg**	**10 44 37.3**	**+1.9**
	2μm,1.6s,baz=81						
OJC	**Ojcow**	**0.95**	**69**	*e*Pg	**Pg**	**10 44 35.6**	**+0.4**
OJC				*e*Sg	**Sb**	**10 44 48.5**	**-1.0**
OJC	**Ojcow**	**0.95**	**69**	*e*Pg	**Pg**	**10 44 35.7**	**+0.4**
OJC				*e*Sg	**Sb**	**10 44 48.8**	**-0.8**
LANS	**Liptovska Anna**	**1.00**	**137**	*e*PG	**Pb**	**10 44 37.1**	**-0.2**
LANS				*e*SG	**Sb**	**10 44 51.2**	**+0.2**
LANS				*e*LG	Lg	10 44 54.4	
KRLC	**Kraliky**	**1.07**	**281**	*e*PG	**Pg**	**10 44 38.2**	**+0.7**
KRLC				*e*SG	**Sb**	**10 44 53.8**	**+0.8**
	comp=Z,452nm,0.5s						
KRLC				AMS	AMS	10 45 00.0	
	comp=Z,1μm,3.6s						
JAVC	**Velka Javorina**	**1.13**	**206**	*e*PG	**Pn**	**10 44 40.3**	**+0.1**
JAVC	**Velka Javorina**	**1.13**	**206**	*e*Pg	**Pn**	**10 44 40.2**	**+0.1**
	baz=27						
NIE	**Niedzica**	**1.31**	**110**	*e*Pg	**Pb**	**10 44 42.4**	**-0.1**
NIE				*e*Sg	**Sn**	**10 45 00.6**	**-0.2**
NIE	**Niedzica**	**1.31**	**110**	*e*Pg	**Pb**	**10 44 42.4**	**-0.1**
NIE				*e*Sg	**Sn**	**10 45 02.1**	**+1.4**
VRAC	**Vranov**	**1.32**	**245**	Pg	**Pn**	**10 44 43.2**	**+0.6**
	98nm,0.3s,baz=68,slow=15,SNR=255						
VRAC				Lg	Lg	10 45 01.6	
	69nm,0.3s,baz=354,slow=18,SNR=7.3						
VRAC	**Vranov**	**1.32**	**245**	⇓P	**Pg**	**10 44 41.7**	**-0.5**
VRAC				⇑S	**Sg**	**10 44 58.9**	**-0.3**
VRAC	**Vranov**	**1.32**	**245**	*e*PG	**Pn**	**10 44 43.3**	**+0.7**
VRAC				*e*SG	**Sb**	**10 45 00.5**	**+0.4**
VRAC	**Vranov**	**1.32**	**245**	*e*Pg	**Pn**	**10 44 43.3**	**+0.7**
	baz=65						
VRAC				*e*Sg	**Sb**	**10 45 00.4**	**+0.4**
	660nm,1.1s,baz=65						
VYHS	**Vyhne**	**1.42**	**169**	*e*PG	**Pn**	**10 44 43.8**	**-0.2**
VYHS				*e*SG	**Sn**	**10 45 03.2**	**-0.2**
DPC	**Dobruska-Polom**	**1.43**	**290**	*e*PG	**Pb**	**10 44 44.9**	**+0.4**
DPC				*e*SG	**Sn**	**10 45 05.3**	**+1.6**
	comp=Z,313nm,0.9s						
SMOL	**Smolenice**	**1.52**	**206**	*e*PG	**Pb**	**10 44 45.8**	**-0.1**
SMOL				*e*SG	**Sg**	**10 45 05.8**	**+0.2**
SMOL				*e*LG	Lg	10 45 08.9	
KRUC	**Moravsky**	**1.55**	**239**	*e*PG	**Pb**	**10 44 46.7**	**+0.1**
KRUC				*e*SG	**Sg**	**10 45 07.8**	**+0.9**
KRUC	**Moravsky**	**1.55**	**239**	*e*Pg	**Pb**	**10 44 46.7**	**+0.1**
	baz=58						
KRUC				*e*Sg	**Sg**	**10 45 07.7**	**+0.9**
	455nm,0.9s,baz=58						
OSTC	**Ostas**	**1.57**	**296**	*e*PG	**Pn**	**10 44 46.6**	**+0.5**
OSTC				*e*SG	**Sg**	**10 45 09.6**	**+2.3**
	comp=Z,710nm,1.1s						
OSTC				AMS	AMS	10 45 30.0	
	comp=Z,2μm,3.2s						
KSP	**Ksiaz**	**1.67**	**306**	*

	comp=Z,59nm,0.6s							
CONA	**Conrad Observa**	**2.58**	**222**	*e*Pn		**Pn**	**10 45 00.2**	**+0.1**
	12nm,0.5s,SNR=13							
CONA				Sn		**Sn**	**10 45 33.5**	**+1.3**
	34nm,0.4s							
KOLS	**Kolonicke sedl**	**2.69**	**109**	*e*PN		**Pn**	**10 45 02.0**	**+0.5**
PBCC	**Pribram**	**2.87**	**268**	*e*PG		**Pg**	**10 45 11.5**	**-0.5**
BRG	**Berggiesshubel**	**3.03**	**291**	PG		**Pg**	**10 45 13.9**	**-1.2**
BRG				SG		**Sg**	**10 45 55.0**	**+0.8**
	201nm,1.4s							
BRG	**Berggiesshubel**	**3.03**	**291**	*e*Pg		**Pg**	**10 45 14.0**	**-1.0**
BRG				*e*SG		**Sg**	**10 45 55.4**	**+1.2**
KHC	**Kasperske Hory**	**3.24**	**258**	*e*PN		**Pn**	**10 45 09.2**	**+0.1**
KHC				*e*PG		**Pb**	**10 45 16.1**	**+0.7**
KHC				*e*SG		**Sg**	**10 46 01.0**	**-0.1**
	comp=Z,272nm,1.4s							
GEC2	**GERESS Array S**	**3.25**	**253**	*e*Pn		**Pn**	**10 45 10.1**	**+0.8**
GEC2				*e*Pg		**Pg**	**10 45 18.9**	**-0.4**
GEC2				*e*Sg		**Sb**	**10 45 58.1**	**+2.4**
GERES	**GERESS Array B**	**3.25**	**253**	Pn		**Pn**	**10 45 09.8**	**+0.5**
	1.4nm,0.3s,baz=62,slow=14,SNR=20							
GERES				Pg		**Pg**	**10 45 18.2**	**-1.0**
	7.1nm,0.3s,baz=57,slow=17,SNR=50							
GERES				Lg		Lg	10 46 00.6	
	9.4nm,0.3s,baz=71,slow=26,SNR=10							
ARSA	**Arzberg**	**3.26**	**217**	*e*Pn		**Pn**	**10 45 09.6**	**+0.2**
	3.9nm,0.3s							
FBE	**Freiberg**	**3.40**	**290**	*e*Pg		**Pg**	**10 45 21.1**	**-1.0**
FBE				*e*SG		**Sg**	**10 46 05.6**	**-0.6**
MOA	**Molln**	**3.41**	**235**	*i* Pn		**Pn**	**10 45 12.2**	**+0.8**
	1.3nm,0.2s							
MOA				*i* Pg		**Pg**	**10 45 21.2**	**-1.2**
	15nm,0.4s							
MOA				*e*Sg		**Sg**	**10 46 06.4**	**-0.1**
	55nm,0.4s							
WET	**Wettzell**	**3.68**	**261**	*e*Pn		**Pn**	**10 45 15.7**	**+0.5**
WET				*e*Pg		**Pg**	**10 45 27.2**	**-0.4**
WET				*e*Sg		**Sg**	**10 46 16.2**	**+1.0**
CLL	**Collm**	**3.73**	**295**	*e*Pn		**Pn**	**10 45 17.0**	**+1.2**
CLL				*i* Pg		**Pg**	**10 45 28.0**	**-0.5**
CLL				*e*Sg		**Sg**	**10 46 18.0**	**+1.2**
	comp=Z,213nm,1.4s							
CLL	**Collm**	**3.73**	**295**	*e*Pn		**Pn**	**10 45 16.9**	**+1.1**
CLL				*e*Pg		**Pg**	**10 45 28.0**	**-0.5**
NKC	**Novy Kostel**	**3.86**	**277**	*e*PG		**Pg**	**10 45 29.4**	**-1.5**
TANN	**Tannenbergstha**	**3.87**	**280**	*e*Pn		**Pn**	**10 45 18.5**	**+0.8**
TANN				*e*Pg		**Pg**	**10 45 29.9**	**-1.2**
TANN				*e*Sg		**Sg**	**10 46 21.9**	**+0.8**
WERN	**Wernitzgruen**	**3.91**	**278**	*e*Pn		**Pn**	**10 45 19.8**	**+1.5**
WERN				*e*Pg		**Pg**	**10 45 31.3**	**-0.6**
GUNZ	**Gunzen**	**3.94**	**279**	*e*Pn		**Pn**	**10 45 18.1**	**-0.6**
GUNZ				*e*Pg		**Pg**	**10 45 31.6**	**-0.9**
GUNZ				*e*Sg		**Sg**	**10 46 23.7**	**+0.1**
ROTZ	**Rotzenmuhle**	**4.02**	**271**	*e*Pn		**Pn**	**10 45 19.5**	**-0.3**
ROTZ				*e*Sg		**Sg**	**10 46 25.9**	**-0.2**
PLN	**Plauen**	**4.07**	**281**	*e*Pg		**Pg**	**10 45 33.7**	**-1.1**
PLN				*e*Sg		**Sg**	**10 46 26.9**	**-0.7**
MANZ	**Manzenberg**	**4.08**	**274**	*e*Pg		**Pg**	**10 45 34.7**	**-0.4**
MANZ				*e*Sg		**Sg**	**10 46 27.7**	**-0.2**
SIRR	**Siria**	**4.22**	**148**	⇑P		**Pn**	**10 45 21.9**	**-0.6**
OBKA	**Obir**	**4.25**	**219**	*e*Pn		**Pn**	**10 45 24.1**	**+1.1**
	comp=Z,5.5nm,0.5s							
RJOB	**Jochberg**	**4.29**	**242**	*e*Pg		**Pb**	**10 45 34.7**	**+1.4**
RJOB				*e*Sg		**Sg**	**10 46 36.5**	**+1.8**
KBA	**Koelnbreinsper**	**4.39**	**232**	*e*Pn		**Pn**	**10 45 26.2**	**+1.2**
	comp=Z,3.8nm,0.3s,SNR=7.9							
MOX	**Moxa**	**4.43**	**283**	*e*Pg		**Pg**	**10 45 42.4**	**+0.6**
MOX				*e*Sg		**Sg**	**10 46 39.1**	**0.0**
NEUB	**Neuenburg**	**4.44**	**290**	*e*Sg		**Sg**	**10 46 41.3**	**+1.8**
GRF	**Grafenberg Arr**	**4.67**	**270**	*e*Pn		Pn	10 45 23.9	-4.7
BZS	**Buzias**	**4.78**	**152**	⇑P		**Pn**	**10 45 29.3**	**-0.9**
BURAR	**Bucovina Array**	**5.04**	**114**	⇑P		**Pn**	**10 45 34.2**	**+0.4**
WTTA	**Wattenberg**	**5.21**	**242**	*e*Pg		**Pg**	**10 45 55.2**	**-1.5**
	comp=Z,7.1nm,0.6s							
WTTA				Sg		**Sg**	**10 47 05.2**	**+1.1**
	comp=Z,39nm,0.6s							
GZR	**Gura Zlata**	**5.37**	**145**	⇑P		**Pn**	**10 45 37.7**	**-0.7**
GZR				⇓S		**Sn**	**10 46 39.3**	**-1.7**
SQTA	**Sankt Quirin**	**5.48**	**244**	*e*Pg		**Pg**	**10 46 02.0**	**+0.2**
	comp=Z,3.1nm,0.3s							
SQTA				*e*Sg		**Sg**	**10 47 14.9**	**+2.1**
	comp=Z,24nm,0.5s							
MDVR	**Moldovita**	**5.57**	**155**	⇑P		**Pn**	**10 45 39.6**	**-1.5**
RETA	**Reutte**	**5.61**	**248**	Sg		**Sg**	**10 47 20.8**	**+3.8**
	comp=Z,71nm,0.9s							
BSD	**Bornholm Skovb**	**5.66**	**339**	*e*		**Pn**	**10 45 41.9**	**-0.3**
	baz=141,slow=12							
BSD				*i* P		**Pn**	**10 45 42.6**	**+0.4**
BSD				IAML			10 46 31.0	
	comp=Z,3.6nm,0.4s							
BSD				*i* S		**Sn**	**10 46 41.1**	**-6.7**
DAVOX	**Davos/Dischmat**	**6.48**	**245**	Pn		**Pn**	**10 45 55.7**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=94,slow=12,SNR=5.9							
DAVOX				Lg		Lg	10 47 46.5	
	comp=Z,1.4nm,0.3s,baz=49,slow=15,SNR=3.4							
AKASG	**Malin Array Be**	**6.97**	**79**	Pn		**Pn**	**10 45 58.7**	**-1.6**
	comp=Z,1.0nm,0.3s,baz=263,slow=13,SNR=5.2							
AKASG				Pg		Pb	10 46 23.9	+5.0
	comp=Z,1.3nm,0.3s,baz=272,slow=15,SNR=4.5							
AKASG				Lg		Lg	10 48 02.6	
	comp=Z,1.2nm,0.3s,baz=268,slow=26,SNR=4.9							
NACGM	**Naroch**	**7.17**	**42**	*e*		**Pn**	**10 46 03.0**	**0.0**
HFS	**Hagfors**	**10.62**	**347**	Pn		**Pn**	**10 46 49.6**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=173,slow=15,SNR=7.5							
NOA	**NORSAR Array B**	**11.89**	**343**	Pn		**Pn**	**10 47 05.8**	**-1.9**
	comp=Z,0.0nm,0.3s,baz=159,slow=11,SNR=5.0							
FINES	**FINESS Array B**	**12.36**	**17**	Pn		**Pn**	**10 47 10.8**	**-3.1**
	comp=Z,0.5nm,0.3s,baz=186,slow=12,SNR=16							
BRTR	**Keskin Array B**	**14.80**	**128**	Pn		**Pn**	**10 47 48.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=334,slow=13,SNR=1.5							
ARCES	**ARCESS Array B**	**20.01**	**7**	Pn		**P**	**10 48 49.0**	**-1.9**
	comp=Z,5.0nm,1.0s,baz=193,slow=11,SNR=13							
TORD	**Torodi Ar. Bea**	**39.12**	**206**	P		**P**	**10 51 46.5**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=14,slow=8.8,SNR=2.4							
MKAR	**Makanchi Array**	**41.43**	**69**	P		**P**	**10 52 07.5**	**+2.5**
	comp=Z,0.2nm,0.6s,baz=289,slow=8.7,SNR=1.7							

JMA ***14*** *10:51:38.5±0.9, 45°.35N×151°.09E, h30km, M4.2*
SKHL ***14*** *10:51:39.5±0.5, 44°.76N×151°.18E, h34km±3km, mb4.2/3*
IDC ***14*** *10:51:42.2±1.3, 46°.51N×150°.49E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/30, mbtmp3.7/5, Error ellipse: s-maj=42.6km s-min=33.7km az=78.0*

ISC 14 10:51:35.9±1.3, 44°.6N±0°.1×151°.48E±0°.10, h35km, n26, σ2§41/29, mb4.0/3, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.63**	**284**	*e*P	**Pn**	**10 52 15.6**	**-0.3**
KUR				AMB	AMB	10 52 19.0	
	13nm,0.2s						
KUR				*i* S	**Sn**	**10 52 43.0**	**-3.6**
KUR				A	A	10 52 46.0	
	358nm,0.3s						
KUR				A	A	10 52 46.0	
	227nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.08**	**263**	*e*P	**Pn**	**10 52 38.0**	**+2.3**
YUK				AMB	AMB	10 52 42.0	
	12nm,0.2s						
YUK				*e*S	**Sn**	**10 53 23.0**	**+0.8**
YUK				A	A	10 53 29.0	
	168nm,0.4s						
YUK				A	A	10 53 29.0	
	129nm,0.4s						
GRPR	**Tuman**	**4.15**	**263**	*e*P	**Pn**	**10 52 40.0**	**+3.3**
GRPR				AMB	AMB	10 52 43.0	
	70nm,0.4s						
GRPR				*i* S	**Sn**	**10 53 25.0**	**+1.1**
GRPR				A	A	10 53 28.0	
	189nm,0.4s						
GRPR				A	A	10 53 28.0	
	118nm,0.4s						
NEM2	**Nemuro 2**	**4.33**	**255**	P	**Pn**	**10 52 41.2**	**+2.0**
NEM2				*e*S	**Sn**	**10 53 27.4**	**-1.0**
NMR	**Nemuro--Hokkai**	**4.34**	**255**	*e*P	**Pn**	**10 52 41.0**	**+1.7**
NMR				*i* S	**Sn**	**10 53 28.0**	**-0.7**
GLVR	**Golovnino**	**4.38**	**260**	*e*S	**Sn**	**10 53 31.0**	**+1.3**
JRA	**Rausu**	**4.62**	**263**	P	**Pn**	**10 52 46.5**	**+3.3**
JNK	**Nakash**	**4.98**	**260**	P	**Pn**	**10 52 50.7**	**+2.5**
JNK				*e*S	**Sn**	**10 53 44.3**	**-0.2**
JAK	**Akkeshi**	**5.18**	**254**	P	**Pn**	**10 52 52.8**	**+2.0**
JTKR	**Abashiri--Toko**	**5.48**	**266**	P	**Pn**	**10 52 57.6**	**+2.7**
JAR	**Ashorobuto**	**5.72**	**259**	P	**Pn**	**10 53 01.6**	**+3.2**
JAR				*e*S	**Sn**	**10 54 03.5**	**+0.7**
JOB	**Onbets**	**5.80**	**255**	P	**Pn**	**10 53 02.2**	**+2.8**
JCH	**Churui**	**6.23**	**254**	P	**Pn**	**10 53 07.8**	**+2.5**
JCH				*e*S	**Sn**	**10 54 13.8**	**-1.4**
JANG	**Nango**	**8.51**	**243**	P	**Pn**	**10 53 37.9**	**+1.4**
JANG				*e*S	**Sn**	**10 55 06.6**	**-4.6**
JTH	**Tanohata**	**8.53**	**240**	*e*S	**Sn**	**10 55 07.0**	**-4.9**
H11N2	**WAKE ISLAND Hy**	**27.96**	**148**	T	T	11 28 24.3	
	baz=336,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**27.97**	**148**	T	T	11 28 25.5	
	baz=336,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**27.97**	**148**	T	T	11 28 25.8	
	baz=336,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**29.00**	**149**	T	T	11 29 36.7	
	baz=336,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	**29.01**	**149**	T	T	11 29 49.0	
	baz=336,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**29.02**	**149**	T	T	11 29 46.9	
	baz=336,slow=76,SNR=17						
MKAR	**Makanchi Array**	**46.92**	**298**	P	**P**	**11 00 02.0**	**-0.8**
	0.5nm,0.7s,baz=81,slow=7.6,SNR=4.5						
FINES	**FINESS Array B**	**65.46**	**334**	P	**P**	**11 02 13.3**	**-1.5**
	1.7nm,0.9s,baz=33,slow=8.3,SNR=1.8						
NOA	**NORSAR Array B**	**69.85**	**341**	P	**P**	**11 02 42.4**	**-0.2**
	1.1nm,0.7s,baz=27,slow=6.3,SNR=3.8						
ASAR	**Alice Springs**	**69.85**	**197**	P	**PcP**	**11 03 04.5**	**-0.8**
	1.0nm,0.8s,baz=14,slow=5.9,SNR=5.4						
TXAR	**Lajitas Array**	**79.54**	**59**	P	**PcP**	**11 03 48.9**	**+1.6**
	0.1nm,0.6s,baz=308,slow=5.0,SNR=3.8						

GUC ***14*** *11:05:35.2±0.6, 21°.23S×68°.07W, h178km±5km, ML3.6*
SCB ***14*** *11:05:39.6±2.0, 21°.26S×67°.97W, h118km±22km, ML3.5/3, Error ellipse: s-maj=6.3km s-min=4.1km az=0.0*

ISC 14 11:05:33.8±1.6, 21°.27S±0°.04×67°.97W±0°.04, h170km±14km, n30, σ1§48/49, 8D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.29**	**246**	⇓*i*P	**Pn**	**11 06 04.5**	**+1.3**
PB09				*e*S	**Sn**	**11 06 26.9**	**+1.1**
PB09	**IPOC Station P**	**1.29**	**246**	P	**Pn**	**11 06 04.6**	**+1.4**
PB01	**IPOC Station P**	**1.43**	**279**	⇓*i*P	**Pn**	**11 06 04.7**	**+0.3**
PB01				*e*S	**Sn**	**11 06 27.9**	**0.0**
PB01				IAML		11 06 29.7	
	comp=E,484nm,0.2s						
PB01	**IPOC Station P**	**1.43**	**279**	P	**Pn**	**11 06 05.4**	**+1.0**
PB08	**IPOC Station P**	**1.57**	**315**	⇓*i*P	**Pn**	**11 06 07.1**	**+0.9**
PB08				*e*S	**Sn**	**11 06 31.2**	**+0.2**
PB08				IAML		11 06 32.3	
	comp=N,357nm,0.3s						
PB08	**IPOC Station P**	**1.57**	**315**	P	**Pn**	**11 06 07.3**	**+1.2**
PB03	**IPOC Station P**	**1.83**	**244**	*i* P	**Pn**	**11 06 09.3**	**+0.7**
PB03				*e*S	**Sn**	**11 06 35.3**	**-0.1**
PB03				IAML		11 06 36.2	
	comp=E,703nm,0.2s						
PB07	**IPOC Station P**	**1.84**	**255**	⇓*i*P	**Pn**	**11 06 09.4**	**+0.7**
PB07				*i* S	**Sn**	**11 06 34.9**	**-0.7**
PB07				IAML		11 06 36.3	
	comp=N,774nm,0.2s						
PB06	**IPOC Station P**	**2.06**	**226**	*e*P	**Pn**	**11 06 12.1**	**+1.0**
PB06				*e*S	**Sn**	**11 06 40.5**	**+0.5**
PB06				IAML		11 06 42.0	
	comp=N,432nm,0.1s						
PB06	**IPOC Station P**	**2.06**	**226**	P	**Pn**	**11 06 12.3**	**+1.2**
PB11	**IPOC Station P**	**2.17**	**313**	⇓*i*P	**Pn**	**11 06 12.5**	**+0.1**
PB11				*e*S	**Sn**	**11 06 40.9**	**-1.3**
PB11				IAML		11 06 42.4	
	comp=N,433nm,0.3s						
MOCB	**Mochara**	**2.18**	**90**	P	**Pn**	**11 06 14.1**	**+1.4**
MOCB				S	**Sn**	**11 06 39.8**	**-2.9**
MOCB				IAML		11 06 44.6	
	comp=N,56nm,0.4s						
TA01	**Diego Aracena**	**2.18**	**288**	*e*P	**Pn**	**11 06 12.0**	**-0.2**
TA01				*e*S	**Sn**	**11 06 40.3**	**-1.6**
TA01				IAML		11 06 41.2	
	comp=E,157nm,0.2s						
PB04	**IPOC Station P**	**2.29**	**242**	⇓*i*P	**Pn**	**11 06 14.3**	**+0.6**
PB04				*e*S	**Sn**	**11 06 43.7**	**-0.8**
PB04				IAML		11 06 47.2	
	comp=N,447nm,0.2s						
PB04	**IPOC Station P**	**2.29**	**242**	P	**Pn**	**11 06 14.3**	**+0.6**
PB04				S	**Sn**	**11 06 41.4**	**-3.1**
PB04				IAML		11 06 49.8	
	comp=N,342nm,0.2s						
PB15	**IPOC Station P**	**2.38**	**215**	*e*P	**Pn**	**11 06 16.2**	**+1.4**
PB15				*e*S	**Sn**	**11 06 47.5**	**+0.9**
YJA	**Yavi**	**2.46**	**112**	P	**Pn**	**11 06 17.2**	**+1.3**
YJA				S	**Sn**	**11 06 45.3**	**-3.2**
PB05	**IPOC Station P**	**2.60**	**232**	⇓*e*P	**Pn**	**11 06 18.0**	**+0.7**
PB05				*e*S	**Sn**	**11 06 49.9**	**-1.2**
PB05				IAML		11 06 52.6	
	comp=E,169nm,0.3s						
PSGC	**Pisagua**	**2.61**	**309**	*e*P	**Pn**	**11 06 16.7**	**-0.8**
PSGC				*e*S	**Sn**	**11 06 49.1**	**-2.1**
PSGC				IAML		11 06 52.0	
	comp=E,125nm,0.3s						
MNMC	**Minye Minye**	**2.61**	**324**	⇓*e*P	**Pn**	**11 06 18.2**	**+0.6**
MNMC				*e*S	**Sn**	**11 06 51.1**	**-0.5**
MNMC	**Minye Minye**	**2.61**	**324**	P	**Pn**	**11 06 18.5**	**+0.8**
MNMC				S	**Sn**	**11 06 48.1**	**-3.5**
MNMC				IAML		11 06 54.1	
	comp=E,416nm,0.2s						
PB16	**IPOC Station P**	**3.25**	**333**	*e*P	**Pn**	**11 06 27.1**	**+1.3**
PB16				*i* S	**Sn**	**11 07 05.0**	**-1.1**
PB16				IAML		11 07 08.4	
	comp=N,49nm,0.4s						
PB10	**IPOC Station P**	**3.27**	**226**	*e*P	**Pn**	**11 06 25.8**	**+0.4**
PB10				IAML		11 07 05.6	
	comp=N,79nm,0.4s						
PB10	**IPOC Station P**	**3.27**	**226**	P	**Pn**	**11 06 25.9**	**+0.4**
GO02	**Mina Guanaco**	**4.16**	**201**	*e*P	**Pn**	**11 06 37.4**	**+0.5**
GO02				*i* S	**Sn**	**11 07 24.5**	**-1.8**
BBOJ	**La Paz, Jacaqu**	**4.27**	**357**	P	**Pn**	**11 06 40.9**	**+2.2**
BBOE	**La Paz, Chanca**	**4.43**	**360**	P	**Pn**	**11 06 43.0**	**+2.2**
BBOD	**La Paz, Gloria**	**4.64**	**353**	P	**Pn**	**11 06 45.5**	**+2.0**
LPAZ	**La Paz**	**4.95**	**358**	P	**Pn**	**11 06 49.2**	**+1.6**
BBOB	**La Paz, Bander**	**5.10**	**358**	P	**Pn**	**11 06 51.1**	**+1.7**

IDC ***14*** *11:12:50.6±4.0, 5°.63S×153°.98E, h72km±35km, mb3.6/11, mb1 3.8/12, mb1mx3.6/43, mbtmp4.0/12, ML3.0/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/32, Error ellipse: s-maj=23.3km s-min=19.1km az=79.0*
NEIC ***14*** *11:12:53.1±1.6, 5°.6S±0°.1×153°.99E±0°.10, h98km±6km, mb4.1/10, Error ellipse: s-maj=19.5km s-min=7.6km az=221.0*

ISC 14 11:12:53.1±0.6, 5°.68S±0°.07×153°.97E±0°.09, h100km, n34, σ1§25/35, mb4.0/14, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.33**	**309**		**Pn**	**11 13 29.0**	**-1.0**
RABL				Sn	**Sn**	**11 14 00.2**	**+2.0**
HNR	**Honiara**	**7.00**	**123**	LR	LR	11 17 39.8	
	comp=Z,71nm,19.9s,baz=250,slow=41						
PMG	**Port Moresby**	**7.70**	**241**	P	**Pn**	**11 14 39.6**	**-2.9**
	11nm,0.3s,baz=44,slow=3.3,SNR=13						
PMG				S	**Sn**	**11 16 07.9**	**-0.3**
	2.3nm,0.3s,baz=109,slow=24,SNR=1.3						
PMG	**Port Moresby**	**7.70**	**241**		**Pn**	**11 14 40.1**	**-2.4**
PATS	**Pohnpei**	**13.17**	**19**	Pn	**Pn**	**11 15 53.2**	**-3.1**
DZM	**Mont Dzumac**	**20.28**	**145**	P	**P**	**11 17 21.5**	**+0.6**
	9.7nm,0.4s,baz=268,slow=8.8,SNR=26						
DZM	**Mont Dzumac**	**20.28**	**145**	P	**P**	**11 17 21.6**	**+0.7**
WR0	**Warramunga Arr**	**23.63**	**231**	P	**P**	**11 17 56.3**	**+0.9**
WR0				IAmb	IAmb	11 17 57.7	
	comp=Z,11nm,1.4s						
WB0	**Warramunga Arr**	**23.64**	**232**	P	**P**	**11 17 56.2**	**+0.7**
WRAB	**Tennant Creek**	**23.76**	**232**	P	**P**	**11 17 55.7**	**-0.8**
WRAB				IAmb	IAmb	11 18 12.8	
	comp=Z,6.8nm,1.4s						
WB2	**Warramunga Arr**	**23.77**	**232**	P	**P**	**11 17 57.5**	**+0.8**
WB2				IAmb	IAmb	11 18 25.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**23.78**	**232**	P	**P**	**11 17 57.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=56,slow=9.8,SNR=16						
WRA				PcP	**PcP**	**11 21 39.3**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=54,slow=2.4,SNR=6.7						
WRA	**Warramunga Arr**	**23.78**	**232**	P	**P**	**11 17 56.2**	**-0.5**
ARMA	**Armidale**	**24.71**	**185**	P	**P**	**11 18 06.0**	**+0.9**
ARMA				IAmb	IAmb	11 18 18.1	
	comp=Z,9.8nm,1.2s						
ASAR	**Alice Springs**	**26.32**	**225**	P	**P**	**11 18 20.8**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=58,slow=9.8,SNR=6.7						
ASAR				PcP	**PcP**	**11 21 44.8**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=61,slow=2.8,SNR=8.5						
KNRA	**Kununurra**	**26.66**	**246**	P	**P**	**11 18 22.0**	**-0.8**
H11S3	**WAKE ISLAND Hy**	**27.10**	**27**	T	T	11 46 39.5	
	baz=206,slow=73,SNR=40						
H11S2	**WAKE ISLAND Hy**	**27.10**	**27**	T	T	11 46 44.1	
	baz=206,slow=73,SNR=30						
H11S1	**WAKE ISLAND Hy**	**27.11**	**27**	T	T	11 46 38.6	
	baz=206,slow=73,SNR=29						
FITZ	**Fitzroy Crossi**	**30.29**	**244**	P	**P**	**11 18 54.9**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=59,slow=8.3,SNR=9.3						
FITZ	**Fitzroy Crossi**	**30.29**	**244**	P	**P**	**11 18 55.3**	**+0.2**
FITZ				IAmb	IAmb	11 19 21.6	
	comp=Z,5.8nm,1.2s						
NWAO	**Narrogin (SRO)**	**43.62**	**227**	LR	LR	11 39 24.8	
	comp=Z,34nm,19.6s,baz=106,slow=36						
PETK	**Petropavlovsk-**	**58.65**	**3**	P	**P**	**11 22 41.4**	**+1.7**
	comp=Z,2.3nm,0.8s,baz=168,slow=8.2,SNR=5.0						
CMAR	**Chiang Mai Arr**	**59.30**	**295**	P	**P**	**11 22 45.7**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=111,slow=5.1,SNR=8.1						
CMAR	**Chiang Mai Arr**	**59.30**	**295**	P	**P**	**11 22 45.4**	**+0.5**
SONM	**Songino Array**	**67.69**	**327**	P	**P**	**11 23 40.5**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=133,slow=5.6,SNR=3.0						
VNDA	**Vanda**	**71.92**	**178**	P	**P**	**11 24 05.6**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=352,slow=5.8,SNR=12						
VNDA	**Vanda**	**71.92**	**178**	P	**P**	**11 24 06.1**	**+1.1**
MKAR	**Makanchi Array**	**81.75**	**319**	P	**P**	**11 25 01.0**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=102,slow=7.4,SNR=4.3						
MKAR	**Makanchi Array**	**81.75**	**319**	P	**P**	**11 25 00.2**	**-0.6**
ZALV	**Zalesovo Beam**	**82.53**	**326**	P	**P**	**11 25 04.1**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=107,slow=8.6,SNR=3.6						
ILAR	**Eielson Array**	**82.53**	**22**	P	**P**	**11 25 03.1**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=257,slow=4.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**151.68**	**287**	PKBpc	**PKiKP**	**11 32 37.4**	**0.0**
	comp=Z,0.3nm,0.3s,baz=91,slow=1.8,SNR=7.7						
TORD	**Torodi Ar. Bea**	**151.68**	**287**	PKPdf	**PKPdf**	**11 32 29.5**	**-1.1**
TORD					**PKiKP**	**11 32 37.2**	**-0.1**
TORD				PKPab	**PKPab**	**11 32 47.0**	**+1.0**

WEL ***14*** *11:16:16.2±0.4, 33°.5S×5°.18°0W±1°.2, h338km±7km, M4.2/44, mB4.8/26, MLv5.1/44, Mw(mB)4.1/26, Error ellipse: s-maj=0.0km s-min=0.0km az=111.6*
IDC ***14*** *11:16:19.1±4.9, 33°.09S×179°.86E, h393km±59km, mb3.3/6, mb1 3.6/7, mb1mx3.3/36, mbtmp4.2/7, Error ellipse: s-maj=76.0km s-min=22.8km az=4.0*

ISC 14 11:16:15.0±0°.7, 32°.71S±0°.06×179°.9W±0°.1, h350km, n86, σ1§77/114, mb3.6/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.84**	**27**	P	**Pn**	**11 17 22.0**	**-0.5**
GLKZ				S	**S**	**11 18 13.8**	**-3.0**
RIZ	**Raoul Island**	**3.86**	**27**	P	**Pn**	**11 17 20.6**	**-2.0**
RIZ				S	**S**	**11 18 17.2**	**+0.2**
MXZ	**Matakaoa Point**	**5.05**	**196**	P	**Pn**	**11 17 37.8**	**+2.8**
MXZ				S	**S**	**11 18 40.8**	**+1.0**
HAZ	**Te Kaha**	**5.37**	**200**	P	**Pn**	**11 17 41.5**	**+2.9**
HAZ				S	**S**	**11 18 47.3**	**+1.1**
PUZ	**Puketiti**	**5.55**	**195**	P	**Pn**	**11 17 43.9**	**+3.3**
PUZ				S	**S**	**11 18 50.0**	**0.0**
WCZ	**Waipu Caves**	**5.73**	**234**	P	**Pn**	**11 17 46.6**	**+4.0**
OUZ	**Omahuta**	**5.94**	**243**	P	**Pn**	**11 17 47.5**	**+2.6**
MWZ	**Matawai**	**5.98**	**200**	P	**Pn**	**11 17 46.0**	**+0.5**
MWZ				S	**S**	**11 18 58.4**	**-0.5**
URZ	**Urewera**	**6.04**	**203**	P	**Pn**	**11 17 46.9**	**+0.8**

CTA	**Charters Tower**	**32.65**	**284**	P	**P**	**11 22 15.8**	**+0.2**
	3.1nm,0.8s,baz=120,slow=8.7,SNR=5.1						
ASAR	**Alice Springs**	**41.41**	**270**	P	**P**	**11 23 27.6**	**-1.0**
	1.6nm,0.6s,baz=107,slow=7.7,SNR=27						
ASAR				pP	**pP**	**11 24 38.1**	**+1.7**
	0.4nm,0.7s,baz=100,slow=6.8,SNR=2.1						
WRA	**Warramunga Arr**	**42.61**	**276**	P	**P**	**11 23 36.8**	**-1.4**
	2.5nm,0.5s,baz=113,slow=7.9,SNR=38						
FITZ	**Fitzroy Crossi**	**50.77**	**273**	P	**P**	**11 24 39.5**	**-1.3**
	1.9nm,1.1s,baz=99,slow=6.2,SNR=1.5						
NVAR	**Mina Array Bea**	**91.04**	**44**	P	**P**	**11 28 43.1**	**+2.7**
	0.5nm,0.7s,baz=232,slow=7.3,SNR=4.6						
FINES	**FINESS Array B**	**146.69**	**337**	PKPbc	**PKPbc**	**11 35 14.8**	**-0.4**
	3.3nm,0.6s,baz=51,slow=4.9,SNR=5.0						
NB2	**NORSAR Subarra**	**150.74**	**349**	PKP	**PKiKP**	**11 35 25.9**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.74**	**349**	PKPbc	**PKPbc**	**11 35 24.7**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=14,slow=4.0,SNR=5.0						
HFS	**Hagfors**	**151.13**	**346**	PKPbc	**PKPbc**	**11 35 25.4**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=241,slow=4.9,SNR=5.4						

*IDC **14** 11:22:05.2±0.7, 6.79N×73.01W, h159km±10km, mb3.3/7, mb1 3.7/10, mb1mx3.4/41, mbtmp3.9/10, MS3.2/1, Ms1 3.2/1, ms1mx2.3/24, Error ellipse: s-maj=26.1km s-min=7.8km az=134.0*

*NEIC **14** 11:22:06.1±1.5, 6.8N±0.1×73.0W±0.1, h167km±11km, mb4.3/10, Error ellipse: s-maj=21.1km s-min=11.3km az=136.0*

*RSNC **14** 11:22:06.1±1.2, 6.84N×73.17W, h154km±4km, ML3.7, Fault plane solution: NP1:φs58.00000°, δ20.00000°, λ68.00000°.*

ISC 14 11:22:05.5±0.7, 6.85N±0.03×73.09W±0.04, h158km±5km, n71, σ1s33/96, mb4.0/13, 3C-6D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**199**	*i* P		**Pn**		**11 22 27.0**	**-0.2**
BARC				*e*S		**Sn**		**11 22 42.3**	**-1.5**
BARC				*i*				11 22 44.7	
	comp=Z,1μm,0.3s								
PAMC	**Pamplona, Colo**	**0.62**	**39**	*i* P		**Pn**		**11 22 29.8**	**+0.8**
PAMC				*e*S		**Sn**		**11 22 47.2**	**+0.3**
PAMC				*i*				11 22 49.0	
	comp=Z,1μm,0.2s								
BRRC	**Barranca, Sant**	**0.67**	**293**	*e*P		**Pn**		**11 22 28.8**	**+0.2**
BRRC				*e*S		**Sn**		**11 22 46.1**	**-0.2**
BRRC				*i*				11 22 48.4	
	comp=Z,611nm,0.2s								
RUSC	**La Rusia**	**0.95**	**179**	*i* P		**Pn**		**11 22 30.8**	**-0.4**
RUSC				*e*S		**Sn**		**11 22 49.5**	**-1.4**
RUSC				*i*				11 22 50.8	
	comp=Z,455nm,0.4s								
TAMC	**Tame, Arauca**	**1.36**	**108**	*i* P		**Pn**		**11 22 35.2**	**+0.9**
TAMC				*i*				11 22 56.0	
	comp=Z,528nm,0.4s								
TAMC				*e*S		**Sn**		**11 22 57.0**	**+0.6**
PTBC	**PUERTO BERRIO,**	**1.39**	**257**	*e*P		**Pn**		**11 22 33.5**	**-1.1**
PTBC				*e*S		**Sn**		**11 22 54.6**	**-2.3**
PTBC				*i*				11 23 00.8	
	comp=Z,1μm,0.2s								
OCAC	**Ocana**	**1.40**	**351**	*e*P		**Pn**		**11 22 34.9**	**+0.1**
OCAC				*e*S		**Sn**		**11 22 56.8**	**-0.7**
SPBC	**San Pablo de B**	**1.54**	**219**	*e*P		**Pn**		**11 22 35.9**	**-0.3**
SPBC				*e*S		**Sn**		**11 22 58.6**	**-1.1**
SPBC				*i*				11 23 05.0	
	comp=Z,1μm,0.4s								
NORC	**Norcasia**	**2.18**	**234**	*e*P		**Pn**		**11 22 42.8**	**-0.5**
NORC				*e*S		**Sn**		**11 23 11.5**	**-0.9**
NORC				*i*				11 23 14.7	
	comp=Z,562nm,0.7s								
CHIC	**Chingaza**	**2.29**	**196**	*i* P		**Pn**		**11 22 44.6**	**-0.4**
CHIC				*e*S		**Sn**		**11 23 14.1**	**-1.4**
CHIC				*i*				11 23 20.2	
	comp=Z,237nm,0.3s								
ROSC	**El Rosal**	**2.34**	**212**	P		**Pn**		**11 22 46.6**	**+1.1**
	comp=Z,143nm,0.3s,baz=307,slow=8.0,SNR=77								
ROSC				S		**Sn**		**11 23 15.9**	**-0.4**
	comp=Z,142nm,0.3s,baz=88,slow=18,SNR=8.9								
ROSC	**El Rosal**	**2.34**	**212**			**Pn**		**11 22 46.4**	**+0.9**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	*e*P		**Pn**		**11 22 47.1**	**-0.6**
UREC	**San Jos de Ur**	**2.58**	**290**	*e*P		**Pn**		**11 22 46.9**	**-1.2**
UREC				*e*S		**Sn**		**11 23 17.8**	**-3.1**
UREC				*i*				11 23 27.8	
	comp=Z,377nm,0.2s								
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*e*P		**Pn**		**11 22 49.7**	**-1.0**
PTGC				*e*S		**Sn**		**11 23 23.3**	**-2.5**
CBOC	**Ciudad Bolivar**	**3.06**	**252**	*e*P		**Pn**		**11 22 54.3**	**+0.1**
CBOC				*i*				11 23 40.1	
	comp=Z,109nm,0.4s								
DBBC	**Dabeiba**	**3.10**	**273**	*e*P		**Pn**		**11 22 54.5**	**-0.1**
DBBC				*e*S		Sn		11 23 24.3	-8.2
TOLC	**Tolima**	**3.16**	**225**	*e*P		**Pn**		**11 22 55.4**	**-0.1**
TOLC				*e*S		**Sn**		**11 23 34.1**	**-0.2**
SDV	**Santo Domingo**	**3.17**	**50**	P		**Pn**		**11 22 56.1**	**+0.6**
	comp=Z,106nm,0.3s,baz=221,slow=5.2,SNR=194								
SDV				S		**Sn**		**11 23 33.5**	**-0.8**
	comp=Z,32nm,0.3s,baz=68,slow=19,SNR=7.9								
SDV	**Santo Domingo**	**3.17**	**50**	*e*P		**Pn**		**11 22 56.1**	**+0.6**
SDV				*e*S		**Sn**		**11 23 34.0**	**-0.2**
SDV	**Santo Domingo**	**3.17**	**50**			**Pn**		**11 22 55.9**	**+0.3**
SDV					Sn	**Sn**		**11 23 33.4**	**-0.9**
MOTC	**Monteria, Cord**	**3.19**	**307**	*e*P		**Pn**		**11 22 54.1**	**-1.5**
MOTC				*e*S		**Sn**		**11 23 33.1**	**-1.3**
MOTC				*i*				11 23 35.2	
	comp=Z,157nm,0.4s								
ARGC	**Ariguani, Magd**	**3.20**	**339**	*e*P		**Pn**		**11 22 57.0**	**+1.2**
ARGC				*e*S		**Sn**		**11 23 34.4**	**-0.3**
ARGC				*i*				11 23 43.9	
	comp=Z,138nm,0.2s								
ANIL	**Santa Ana**	**3.28**	**225**	*e*P		**Pn**		**11 22 57.5**	**+0.4**
ANIL				*e*S		**Sn**		**11 23 37.6**	**+0.5**
ANIL				*i*				11 23 41.1	
	comp=Z,84nm,0.4s								
PRAC	**Prado**	**3.59**	**210**	*e*P		**Pn**		**11 22 59.9**	**-0.8**
PRAC				*e*S		**Sn**		**11 23 42.1**	**-1.7**
PRAC				*i*				11 23 48.5	
	comp=Z,331nm,0.6s								
ORTC	**Ortega, Tolima**	**3.62**	**216**	*e*P		**Pn**		**11 23 01.0**	**-0.2**
ORTC				*e*S		**Sn**		**11 23 44.2**	**-0.3**
ORTC				*i*				11 23 51.6	
	comp=Z,214nm,0.6s								
CVALL	**Valledupar, Ce**	**3.64**	**357**	*e*P		**Pn**		**11 23 00.7**	**-0.7**
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P		**Pn**		**11 23 00.7**	**-1.1**
SJCC				*e*S		**Sn**		**11 23 41.8**	**-3.7**
SJCC				*i*				11 23 54.9	
	comp=Z,92nm,0.3s								
YOTC	**Yotoco, Valle**	**4.31**	**229**	*e*P		**Pn**		**11 23 09.6**	**-0.6**
SOLC	**Bahia Solano**	**4.33**	**262**	*e*P		**Pn**		**11 23 10.9**	**+0.5**
SMRC	**Santa Marta, M**	**4.43**	**345**	*e*P		**Pn**		**11 23 11.4**	**-0.2**
CAPC	**Capurgana**	**4.58**	**293**	*e*P		**Pn**		**11 23 10.9**	**-2.6**
PIZC	**Pizarro, Choco**	**4.64**	**246**	*e*P		**Pn**		**11 23 15.1**	**+0.7**
MACC	**Macarena, Meta**	**4.73**	**189**	*e*P		**Pn**		**11 23 13.5**	**-2.2**
MACC				*e*S		**Sn**		**11 24 03.9**	**-6.5**
MACC				*i*				11 24 27.2	
	comp=N,115nm,0.3s								
BETC	**Betania**	**4.76**	**210**	*e*P		**Pn**		**11 23 14.8**	**-1.2**
MARP	**Paez Belalcaza**	**4.90**	**216**	*e*P		**Pn**		**11 23 17.6**	**-0.5**
URIC	**Uribia, Colomb**	**4.94**	**13**	*e*P		**Pn**		**11 23 17.1**	**-1.2**
MALC	**Bahia Malaga**	**5.08**	**237**	*e*P		**Pn**		**11 23 21.1**	**+1.0**
GARC	**Garzon, Huila**	**5.21**	**207**	*e*P		**Pn**		**11 23 20.8**	**-1.4**
PCON	**Cinco Dias**	**5.57**	**216**	*e*P		**Pn**		**11 23 27.7**	**+0.5**
POPC	**Popayan, Colom**	**5.57**	**220**	*e*P		**Pn**		**11 23 26.6**	**-0.3**
SOTA	**Rioblanco**	**5.85**	**217**	*e*P		**Pn**		**11 23 32.5**	**+1.6**
GCUF	**Volcan Galeras**	**7.01**	**217**	*e*P		**Pn**		**11 23 46.7**	**+0.4**
BCIP	**Isla Barro Col**	**7.07**	**289**	Pn		**Pn**		**11 23 46.0**	**-0.6**
PCRV	**Puerto La Cruz**	**8.99**	**68**	P		**Pn**		**11 24 12.3**	**+0.1**
	comp=N,1.7nm,0.3s,baz=317,slow=4.8,SNR=7.8								
PCRV				S		**Sn**		**11 25 50.5**	**-1.7**
	comp=N,0.7nm,0.3s,baz=34,slow=9.0,SNR=1.3								
PLCV	**Puerto La Cruz**	**9.03**	**68**			**Pn**		**11 24 12.3**	**-0.4**
PLCV						**Sn**		**11 25 50.5**	**-2.6**
MTDJ	**Mount Denham**	**12.11**	**339**	Pn		**Pn**		**11 24 56.2**	**+3.1**
CMIG	**Matias Romero**	**23.60**	**298**	LR		LR		11 37 48.0	
	comp=N,52nm,18.5s,baz=53,slow=40								
PBMO	**Poplar Bluff**	**33.73**	**334**	P		**P**		**11 28 33.6**	**+1.6**
PBMO				IAmb		IAmb		11 28 34.4	
	comp=Z,4.9nm,0.7s								
FCAR	**Ozark Folk Cen**	**33.76**	**332**	P		**P**		**11 28 32.3**	**0.0**
FCAR				IAmb		IAmb		11 28 33.6	
	comp=Z,3.3nm,0.9s								
U40A	**Yellville**	**34.48**	**331**	P		**P**		**11 28 39.2**	**+0.7**
U40A				IAmb		IAmb		11 28 40.3	
	comp=Z,7.2nm,0.8s								
CCM	**Cathedral Cave**	**35.16**	**335**	P		**P**		**11 28 45.5**	**+1.3**
CCM				IAmb		IAmb		11 28 45.8	
	comp=Z,5.7nm,0.7s								
TXAR	**Lajitas Array**	**36.47**	**312**	P		**P**		**11 28 56.0**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=125,slow=8.9,SNR=14								
TXAR	**Lajitas Array**	**36.47**	**312**	P		**P**		**11 28 55.8**	**+0.2**
TX31	**Lajitas Ar. Si**	**36.47**	**312**	P		**P**		**11 28 56.0**	**+0.3**
TX31				IAmb		IAmb		11 29 17.3	
	comp=Z,8.9nm,1.5s								
TX32	**Lajitas Array**	**36.47**	**312**	P		**P**		**11 28 57.0**	**+1.3**
MNTX	**Cornudas Mount**	**38.97**	**314**	P		**P**		**11 29 17.6**	**+1.0**
ECSD	**EROS Data Cent**	**42.13**	**334**	P		**P**		**11 29 42.4**	**+0.1**
ECSD				IAmb		IAmb		11 29 50.2	
	comp=Z,7.8nm,1.4s								
SUSD	**Miller**	**43.72**	**333**	P		**P**		**11 29 54.6**	**-0.5**
ULM	**Lac du Bonnet**	**47.27**	**340**	P		**P**		**11 30 22.7**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=129,slow=8.2,SNR=7.2								
PDAR	**Pinedale Array**	**48.07**	**324**	P		**P**		**11 30 29.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=127,slow=10,SNR=5.7								
PDAR	**Pinedale Array**	**48.07**	**324**	P		**P**		**11 30 30.1**	**+0.7**
NVAR	**Mina Array Bea**	**51.48**	**315**	P		**P**		**11 30 54.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=129,slow=4.0,SNR=4.7								
LRM	**Limekiln Ridge**	**51.57**	**326**	P		**P**		**11 30 56.5**	**+0.7**
YKA	**Yellowknife Ar**	**63.25**	**340**	P		**P**		**11 32 17.1**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=129,slow=7.7,SNR=9.2								
INK	**Inuvik**	**73.01**	**340**	P		**P**		**11 33 18.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=101,slow=1.8,SNR=1.9								
INK	**Inuvik**	**73.01**	**340**	P		**P**		**11 33 18.0**	**+0.3**
ILAR	**Eielson Array**	**76.95**	**335**	P		**P**		**11 33 40.5**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=122,slow=6.9,SNR=2.3								
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc		**PKPbc**		**11 41 35.2**	**-1.0**
	comp=Z,0.4nm,0.9s,baz=264,slow=37,SNR=1.3								
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc		**PKPbc**		**11 41 38.4**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=108,slow=2.8,SNR=14								
WRA	**Warramunga Ar**	**150.38**	**241**			**PKPbc**		**11 41 38.2**	**-1.0**

*BGR **14** 11:25:40.6±0.0, 65.64N×18.33W, h10km, mb5.2, Ms4.8*

*BJI **14** 11:25:46.3±0.0, 64.84N×17.34W, h3km, mB5.7/52, mb4.9/53, Ms5.5/47, Ms7 5.3/44*

*REY **14** 11:25:46.5, 64.61N×17.43W, h3km*

*MOS **14** 11:25:48.4±1.2, 64.57N×17.40W, h10km, mb5.2/132, MS5.0/70, Error ellipse: s-maj=6.8km s-min=3.8km az=109.8*

*IDC **14** 11:25:48.4±0.4, 64.54N×17.44W, h0km, mb4.6/36, mb1 4.7/41, mb1mx4.6/51, mbtmp4.6/41, ML3.1/4, MS5.0/47, Ms1 5.1/47, ms1mx5.0/50, Error ellipse: s-maj=11.8km s-min=7.2km az=13.0*

*NEIC **14** 11:25:49.8±1.7, 64.54N±0.06×17.3W±0.1, h8km±3km, mb5.2/411, Ms_20 5.1/704, Error ellipse: s-maj=9.0km s-min=7.8km az=57.0*

*GCMT **14** 11:25:50.8±0.1, 64.62N±0.01×17.17W±0.01, h12km, MW5.4/154, Moment Tensor Solution. s96,c147; s154,c318; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr~1.78±.01; Mθθ 1.16±.01; Mφφ 0.62±.01; Mrθ 0.17±.04; Mθφ~0.09±.01; Mφr~0.53±.04; Best double couple: Mo1.54800×10^17 NP1:φs92.00000°, δ41.00000°, λ-107.00000°. NP2:φs293.00000°, δ51.00000°, λ-76.00000°. Principal axes: T 1.1970, Plg5.0000°, Azm14.0000°; N 0.7020, Plg11.0000°, Azm105.0000°; P -1.8990, Plg78.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DNK **14** 11:25:51.7±5.5, 64.84N×16.84W, h0km±105km, ML3.0*

ISC 14 11:25:50.4±0.2, 64.59N±0.02×17.38W±0.02, h10km, n1518, σ1s69/1348, mb5.2/355, MS5.1/469, 41C-16D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IGRF	**Grimsfjall**	**0.19**	**165**	P		**Pg**		**11 25 51.1**	**-3.3**
	baz=161								
IDYN	**Dyngjuhals**	**0.20**	**2**	P		Pg		11 25 50.4	-4.2
	baz=9.1								
IHAM	**Hamarinn**	**0.22**	**240**	P		Pg		11 25 50.9	-4.1
	baz=232								
IHAM				S		**Sg**		**11 25 54.4**	**-3.7**
	baz=232								
IKVE	**Kverkfjoll**	**0.32**	**73**	P		**Pg**		**11 25 53.1**	**-3.6**
	baz=78								
IHUS	**Husbondi**	**0.32**	**202**	P		**Pg**		**11 25 53.1**	**-3.6**
	baz=197								
IHUS				S		**Sg**		**11 25 58.0**	**-3.0**
	baz=197								
IVOT	**Vottur**	**0.33**	**165**	P		**Pg**		**11 25 53.4**	**-3.6**
	baz=162								
ISKR	**Skrokkalda**	**0.43**	**266**	S		**Sg**		**11 26 00.0**	**-4.6**
	baz=263								
ISKR				P		Pg		11 25 54.2	-4.6
	baz=263								
IJOK	**Jokulheimar**	**0.46**	**233**	P		Pg		11 25 55.0	-4.3
	baz=229								
THOR	**Thorvaldshraun**	**0.46**	**41**	P		**Pg**		**11 25 55.3**	**-4.1**
	baz=45								
THOR				S		**Sg**		**11 26 02.0**	**-3.4**
	baz=45								
IKRE	**Kreppuhraun**	**0.47**	**65**	S		**Sg**		**11 26 01.9**	**-3.9**
	baz=69								
IASK	**Askja**	**0.56**	**34**	P		Pg		11 25 56.6	-4.6
	baz=37								
IASK				S		**Sg**		**11 26 04.5**	**-4.1**
	baz=37								
IKSK	**Karasker**	**0.58**	**137**	P		**Pg**		**11 25 57.3**	**-4.4**
	baz=137								
IIEY	**Innrieyrar**	**0.59**	**213**	P		**Pg**		**11 25 57.6**	**-4.3**
	baz=210								
IIEY				S		**Sg**		**11 26 06.3**	**-3.3**
	baz=210								
IKAL	**Kalfafell**	**0.66**	**192**	P		**Pg**		**11 25 58.9**	**-4.2**
	baz=190								
IKAL				S		**Sg**		**11 26 08.9**	**-2.8**
	baz=190								
IVSH	**V-Sauoahnukur**	**0.74**	**72**	P		**Pg**		**11 26 00.1**	**-4.5**
	baz=74								
ISVA	**Svartarkot**	**0.75**	**4**	P		Pg		11 25 59.5	-5.3
	baz=5.9								
IVAT	**Vatnsfell**	**0.78**	**239**	P		Pg		11 26 00.5	-4.9
	baz=237								
IVAT				S		**Sg**		**11 26 11.2**	**-4.4**
	baz=237								
IADA	**Aoalbol**	**0.89**	**60**	P		Pg		11 26 02.1	-5.3
	baz=62								
IHVE	**Hveravellir**	**0.98**	**288**	P		Pg		11 26 03.0	-6.2
	baz=287								
ISNB	**Snabyli**	**1.02**	**213**	P		Pg		11 26 04.6	-5.3
	baz=211								
IMEL	**Melhnausar**	**1.03**	**17**	P		Pg		11 26 04.2	-6.0
	baz=18								
IMEL				S		**Sg**		**11 26 17.7**	**-5.8**
	baz=18								
IREN	**Reynihlio**	**1.08**	**11**	P		Pb		11 26 04.9	-6.2
	baz=12								
IRJU	**Rjupnafell**	**1.13**	**211**	P		Pb		11 26 06.7	-5.2
	baz=209								
IKVO	**Krokottuvotn**	**1.15**	**10**	P		Pb		11 26 06.1	-6.2
	baz=12								
IFED	**Fedgar**	**1.16**	**242**	P		Pb		11 26 06.8	-5.6
	baz=240								
IGRS	**Grimsstaoir**	**1.18**	**26**	P		Pb		11 26 07.7	-5.1
	baz=28								
IMJO	**Mjoaskard**	**1.20**	**238**	P		Pn		11 26 07.4	-5.8
	baz=236								
IHVO	**Lagu-Hvolar**	**1.25**	**212**	P		Pn		11 26 08.7	-5.1
	baz=210								
IGYG	**Gygjarholskot**	**1.27**	**257**	P		Pn		11 26 08.1	-6.0
	baz=256								
IGYG				S		**Sb**		**11 26 24.9**	**-5.7**
	baz=256								
IHAU	**Haukadalur**	**1.29**	**242**	P		Pn		11 26 09.0	-5.3
	baz=241								
ISKI	**Skildingahlsh**	**1.29**	**6**	P		Pn		11 26 08.4	-6.0
	baz=7.5								
IGHA	**Grjothals**	**1.29**	**13**	P		Pn		11 26 08.2	-6.2
	baz=14								
IGRA	**Granastaoir**	**1.34**	**357**	P		Pn		11 26 08.9	-6.1
	baz=357								
IALF	**Alftagrof**	**1.36**	**217**	P		Pn		11 26 10.3	-5.0
	baz=215								
IDIM	**Dimmadalss**	**1.39**	**8**	P		Pn		11 26 10.1	-5.7
	baz=8.6								
IHLA	**Hella**	**1.42**	**343**	P		Pn		11 26 10.5	-5.7
	baz=344								
IMID	**Miomork**	**1.44**	**231**	P		Pn		11 26 11.4	-5.1
	baz=229								
IHED	**Heoinshofoi**	**1.50**	**1**	P		Pn		11 26 11.6	-5.7
	baz=2.0								
IBRE	**Brettingsstaoi**	**1.56**	**352**	P		Pn		11 26 12.5	-5.5
	baz=353								
IGIL	**Gilhagi**	**1.56**	**16**	P		Pn		11 26 12.4	-5.6
	baz=17								
IGIL				S		**Sn**		**11 26 32.1**	**-6.1**
	baz=17								
IASM	**Asmuli**	**1.60**	**243**	P		Pn		11 26 13.9	-4.8
	baz=242								
ISIG	**Siglufjorour**	**1.68**	**338**	P		Pn		11 26 14.2	-5.5
	baz=338								
ISOL	**Solvholt**	**1.69**	**248**	P		Pn		11 26 14.7	-5.2
	baz=248								
IKRO	**Krokur**	**1.70**	**255**	P		Pn		11 26 14.7	-5.3
	baz=254								
BORG	**Borgarnes**	**1.71**	**277**	Pg		**Pn**		**11 26 17.2**	**-2.9**
	82nm,0.3s,baz=102,slow=10,SNR=154								
BORG				Lg		Lg		11 26 39.9	
	116nm,0.3s,baz=275,slow=18,SNR=13								
BORG				LR		LR		11 27 05.2	
	comp=Z,31μm,20.3s,baz=64,slow=46								
BORG	**Borgarnes**	**1.71**	**277**			**Pn**		11 26 14.5	-5.5
BORG					Sn	**Sn**		**11 26 37.5**	**-4.4**
IHEI	**Heioarbar**	**1.72**	**259**	P		Pn		11 26 15.3	-5.0
	baz=258								
SOFL	**Sornfelli, Far**	**5.33**	**114**	*e*P		**Pn**		**11 27 08.3**	**-1.7**
SCO	**Scoresbysund**	**6.17**	**346**	*e*		Pn		11 27 12.1	-9.2
	baz=166,slow=8.6								
SCO				*i* P		**Pn**		**11 27 19.0**	**-2.4**
SCO				*i* S		**Sn**		**11 28 33.7**	**+1.8**
SCO				IAML				11 28 44.8	
	comp=Z,8.8nm,0.6s								
JMIC	**Jan Mayen**	**7.24**	**24**	Pn		**Pn**		**11 27 39.0**	**+3.0**
	baz=210,slow=1.9,SNR=3.9								
JMIC				LR		LR		11 29 53.7	
	comp=Z,22μm,18.3s,baz=240,slow=34								
JMIC	**Jan Mayen**	**7.24**	**24**	Pn		**Pn**		**11 27 40.4**	**+4.3**
LEWI	**Lewis, Hebride**	**8.19**	**137**	*e*P		**Pn**		**11 27 46.8**	**-2.3**
LINV	**Loch Inver, As**	**8.70**	**132**	*e*P		**Pn**		**11 27 52.9**	**-3.3**
KAC	**Achnashellach**	**9.20**	**135**	*e*P		**Pn**		**11 27 59.9**	**-3.0**
KPL	**Plockton**	**9.23**	**137**	*e*P		**Pn**		**11 28 01.2**	**-2.1**
KPL					IAMs_20	IAMs_20		11 31 32.3	
	comp=Z,10μm,14.0s								
MDO	**Dochfour**	**9.54**	**133**	*e*P		**Pn**		**11 28 05.2**	**-2.4**
DBG	**Daneborg**	**9.81**	**355**	Pn		**Pn**		**11 28 15.3**	**+4.0**
DBG	**Daneborg**	**9.81**	**355**	*i* P		Pn		11 28 19.9	+8.6
LAWE	**Loch Awe, Argy**	**10.22**	**139**	*e*P		**Pn**		**11 28 15.2**	**-1.7**
LAWE					IAMs_20	IAMs_20		11 32 33.3	
	comp=Z,10μm,13.2s								
INVG	**Invergeldie, C**	**10.47**	**135**	*e*P		**Pn**		**11 28 17.8**	**-2.6**
INVG					IAMs_20	IAMs_20		11 32 26.6	
	comp=Z,11μm,16.2s								
FOO	**Floro**	**10.57**	**96**	*e*P		**Pn**		**11 28 20.8**	**-0.9**
SUE	**Sulen**	**10.70**	**99**	*e*P		**Pn**		**11 28 21.5**	**-1.9**
SUMG	**Summit**	**11.03**	**326**	P		**Pn**		**11 28 31.0**	**+2.7**
SUMG	**Summit**	**11.03**	**326**	Pn		**Pn**		**11 28 31.0**	**+2.7**
SUMG	**Summit**	**11.03**	**326**	*i* P		**Pn**		**11 28 29.9**	**+1.6**
SUMG	**Summit**	**11.03**	**326**	*i* P		**Pn**		**11 28 30.0**	**+1.6**
EDI	**Edinburgh**	**11.16**	**135**	*e*P		**Pn**		**11 28 25.5**	**-4.2**
EDI					IAMs_20	IAMs_20		11 32 41.0	
	comp=Z,9μm,14.3s								
AKN	**Aaknes**	**11.17**	**91**	Pn		**Pn**		**11 28 29.0**	**-0.9**
AKN	**Aaknes**	**11.17**	**91**	*e*P		**Pn**		**11 28 29.0**	**-0.9**
ASK	**Askoy**	**11.18**	**101**	*e*P		**Pn**		**11 28 29.9**	**-0.1**
MOL	**Molde**	**11.26**	**89**	*e*P		**Pn**		**11 28 30.9**	**-0.1**
HYA	**Hoyanger**	**11.26**	**97**	*e*P		**Pn**		**11 28 29.6**	**-1.5**
BER	**Bergen**	**11.29**	**101**	*e*P		**Pn**		**11 28 30.0**	**-1.4**
EBL	**Broad Law**	**11.33**	**135**	*e*P		**Pn**		**11 28 28.0**	**-4.1**
NEWG	**New Galloway**	**11.54**	**139**	*e*P		**Pn**		**11 28 34.0**	**-1.0**
GAL1	**Galloway**	**11.63**	**141**	*e*P		**Pn**		**11 28 34.3**	**-1.9**
GAL1					IAMs_20	IAMs_20		11 33 32.4	
	comp=Z,13μm,15.2s					

VAF pmax pmax
comp=Z,46nm,1.2s
BSEG Bad Segeberg 17.56 114 P **Pn 11 29 53.9 -0.9**
BSEG pmax pmax
comp=Z,85nm,1.6s
BSEG Bad Segeberg 17.56 114 *e*P **Pn 11 29 53.7 -1.1**
comp=Z,206nm,1.6s,baz=327,slow=11
KEV Kevo 17.63 54 P **Pn 11 29 55.6 0.0**
KEV pmax pmax
comp=Z,57nm,1.1s
KEV Kevo 17.63 54 P **Pn 11 29 55.6 0.0**
SGF Sodankyl 17.78 61 P **Pn 11 29 57.3 -0.3**
SGF pmax pmax
comp=Z,76nm,1.7s
HOPEN Hopen 17.87 31 P **P 11 30 01.4 +2.1**
OUL Oulu 18.15 69 P **Pn 11 30 01.2 -0.8**
OUL pmax pmax
comp=Z,58nm,0.9s
SGMF Saint Gilles 18.23 147 *e*P **P 11 30 04.0 +0.7**
SGMF pmax pmax
comp=Z,202nm,1.4s
FLN La Foliniere 18.27 142 *e*P **Pn 11 30 02.4 -1.3**
FLN pmax pmax
comp=Z,35nm,1.0s
RGN Rugen 18.31 109 *e*P **P 11 30 04.4 +0.1**
BUG Bochum--Univer 18.37 124 P **Pn 11 30 03.4 -1.5**
BUG pmax pmax
comp=Z,43nm,1.0s
BUG Bochum--Univer 18.37 124 *e*P **Pn 11 30 04.1 -0.8**
comp=Z,481nm,2.5s,baz=327,slow=11
QUIF Quistinic 18.40 148 *e*P **P 11 30 06.3 +1.0**
QUIF pmax pmax
comp=Z,266nm,2.0s
BMRD Maredsous 18.47 130 Pn **P 11 30 01.7 -4.4**
BMRD Maredsous 18.47 130 P **Pn 11 30 12.3 +6.2**
BAIF Baives 18.50 132 *e*P **Pn 11 30 06.9 +0.5**
BAIF pmax pmax
comp=Z,64nm,1.1s
BGES Gesves 18.51 130 Pn **P 11 30 05.4 -1.1**
GRR Gorron 18.52 143 *e*P **P 11 30 05.3 -1.3**
GRR pmax pmax
comp=Z,127nm,1.3s
LDF La Druitiere 18.53 142 *e*P **P 11 30 06.1 -0.5**
LDF pmax pmax
comp=Z,65nm,1.2s
BCLA Clavier 18.55 129 Pn **P 11 30 06.0 -0.9**
NRDL Niedersach Rie 18.58 118 *e*P **P 11 30 05.9 -1.3**
comp=Z,134nm,1.4s,baz=327,slow=11
DOU Dourbes 18.59 131 pPn **Pn 11 30 07.8 +0.2**
DOU Dourbes 18.59 131 P **Pn 11 30 13.7 +6.1**
DOU Dourbes 18.59 131 P **Pn 11 30 09.6 +2.0**
DOU pmax pmax
comp=Z,32nm,1.4s
MEM Membach 18.63 128 Pn **P 11 30 07.2 -0.5**
MEM Membach 18.63 128 P **Pn 11 30 07.8 -0.2**
MEM pmax pmax
comp=Z,68nm,2.0s
BTNL Ternell 18.69 127 Pn **P 11 30 06.6 -1.9**
RCHB Rochefort 18.75 130 Pn **Pn 11 30 09.1 -0.4**
BHOU Houvegnez 18.84 128 Pn **P 11 30 08.2 -1.9**
BHOU Houvegnez 18.84 128 P **Pn 11 30 15.5 +4.9**
AHRW Bad Neuenahr-A 19.05 126 *e*P **Pn 11 30 14.4 +1.3**
comp=Z,149nm,1.5s,baz=327,slow=11
ASSE Asse, Remlinge 19.08 118 *e*P **P 11 30 11.9 -0.8**
comp=Z,666nm,2.8s,baz=327,slow=11
SUF Sumiainen 19.13 76 P **P 11 30 12.9 -0.2**
SUF pmax pmax
comp=Z,57nm,0.9s
MSF Maaselka 19.14 65 P **Pn 11 30 13.8 -0.3**
MSF pmax pmax
comp=Z,89nm,1.4s
CLZ Clausthal 19.19 119 *e*P **P 11 30 13.5 -0.5**
comp=Z,539nm,2.4s,baz=327,slow=11
WLF Walferdange 19.48 129 Pn **Pn 11 30 18.6 +0.3**
WLF Walferdange 19.48 129 P **P 11 30 15.1 -2.0**
WLF pmax pmax
comp=Z,160nm,1.9s
WLF Walferdange 19.48 129 **P 11 30 15.1 -2.0**
FIA0 FINESS Array S 19.67 79 P **P 11 30 19.2 +0.2**
baz=317,slow=12
FINES FINESS Array B 19.67 79 P **P 11 30 18.9 -0.1**
comp=Z,0.2nm,0.3s,baz=325,slow=9.7,SNR=17
FINES LR LR 11 37 30.5
comp=Z,4μm,21.1s,baz=302,slow=36
FINES FINESS Array B 19.67 79 P **P 11 30 18.0 -1.0**
FIA1 FINESS Array S 19.67 79 P **P 11 30 19.0 -0.1**
CLF Chambon-Foret 19.70 138 P **P 11 30 17.8 -1.7**
TNS Taunus Mts 19.80 124 *e*P **P 11 30 19.8 -0.9**
comp=Z,60nm,1.3s,baz=327,slow=11
UBBA Unterbreizbach 19.88 121 *e*P **P 11 30 21.1 -0.2**
comp=Z,299nm,2.1s,baz=327,slow=11
TULEG Thule 19.94 328 P **P 11 30 23.0 +1.1**
TULEG IAmb IAmb 11 30 40.0
comp=Z,209nm,1.6s
TULEG IAMs_20 IAMs_20 11 37 40.4
comp=Z,10μm,18.0s
TULEG Thule 19.94 328 *e*P **P 11 30 22.2 +0.2**
RUE Ruedersdorf 20.03 112 *e*P **P 11 30 22.5 -0.5**
SLIT Slitere, Latvi 20.09 92 *e*P **P 11 30 23.0 -0.7**
APA0 Apatity Array 20.16 59 P **P 11 30 23.8 -0.6**
NEUB Neuenburg 20.23 118 *e*P **P 11 30 24.7 -0.6**
comp=Z,168nm,1.2s,baz=327,slow=11
APA Apatity 20.32 59 ⇓*i*P Pn 11 30 27.4 -0.8
APA *i* S **S 11 34 11.0 -2.5**
APA pmax pmax
comp=Z,35nm,0.8s
MFF Saint Martin d 20.36 144 *e*P Pn 11 30 27.5 -1.2
MFF pmax pmax
comp=Z,273nm,2.0s
MOX Moxa 20.62 119 P **P 11 30 28.8 -0.7**
MOX pmax pmax
comp=Z,64nm,1.3s
MOX Moxa 20.62 119 *e*P **P 11 30 28.9 -0.6**
comp=Z,92nm,1.3s,baz=327,slow=11
MOX *e*L L 11 38 30.7
comp=Z,5μm,21.6s
CLL Collm 20.63 116 ⇓*i*P **P 11 30 28.3 -1.2**
comp=Z,81nm,1.3s
CLL *e*Pmax 11 30 32.0
CLL *i* 11 30 36.6
CLL *e*S Sn 11 34 26.0 +1.8
CLL Lmax 11 42 00.0
CLL Collm 20.63 116 ⇓*i*P **P 11 30 28.3 -1.2**
CLL *i* 11 30 36.6
CLL pmax pmax
comp=Z,81nm,1.3s
CLL Collm 20.63 116 *e*P **P 11 30 28.5 -1.1**
comp=Z,92nm,1.4s,baz=327,slow=11
CLL Collm 20.63 116 P **P 11 30 28.4 -1.1**
LVZ Lovozero 20.69 58 IAMs_20 IAMs_20 11 37 09.6
comp=Z,7μm,20.0s
LOR Lormes 20.86 136 P **P 11 30 31.2 -0.9**
LOR pmax pmax
comp=Z,76nm,1.6s
PBUR Paburge 20.94 96 *e*P **P 11 30 31.8 -1.1**
PLN Plauen 20.95 118 *e*P **P 11 30 32.1 -1.0**
comp=Z,81nm,1.0s,baz=327,slow=11
HAU Haudompre 20.98 131 *e*P **P 11 30 31.7 -1.7**
HAU pmax pmax
comp=Z,50nm,0.9s
ECH Echery 21.07 129 P **P 11 30 33.5 -0.8**
ECH pmax pmax
comp=Z,57nm,1.2s
ECH MLR MLR
comp=Z,3μm,19.0s
ECH Echery 21.07 129 P **P 11 30 33.5 -0.8**
FBE Freiberg 21.07 116 *e*P **P 11 30 33.5 -0.8**
comp=Z,493nm,2.1s,baz=327,slow=11
GUNZ Gunzen 21.12 118 *e*P **P 11 30 34.0 -1.0**
comp=Z,818nm,2.7s,baz=327,slow=11
TANN Tannenbergstha 21.13 118 *e*P **P 11 30 33.9 -1.2**
comp=Z,327nm,1.6s,baz=327,slow=11
AVF Avril sur Loir 21.14 138 *e*P **P 11 30 34.4 -0.7**
AVF pmax pmax
comp=Z,58nm,1.1s
JOF Joensuu 21.18 72 P **P 11 30 35.1 -0.3**
JOF pmax pmax
comp=Z,83nm,1.1s
BGF Bois d'Agland 21.20 139 *e*P **P 11 30 34.0 -1.8**
BGF pmax pmax
comp=Z,68nm,1.0s
GRA1 Grafenberg Arr 21.25 121 P **P 11 30 35.1 -1.1**
GRA1 IAmb IAmb 11 30 51.5
comp=Z,126nm,1.3s
GRF Grafenberg Arr 21.25 121 P **P 11 30 35.2 -1.1**
GRF pmax pmax
comp=Z,126nm,1.3s
GRF MLR MLR
comp=Z,4μm,21.0s
GRF Grafenberg Arr 21.25 121 *e*P **P 11 30 35.7 -0.6**
comp=Z,121nm,1.3s,baz=327,slow=11
GRF *e*L L 11 38 51.6
comp=Z,3μm,21.8s
NKC Novy Kostel 21.27 118 *e*P **P 11 30 37.7 +1.2**
NKC *e*S Sn 11 34 44.4 +4.7
NKC MLR MLR
comp=Z,5μm,18.3s
NKC Novy Kostel 21.27 118 *e*P **P 11 30 37.7 +1.2**
NKC *e*S Sn 11 34 44.4 +4.7
NKC AMS AMS 11 39 40.0
comp=Z,5μm,18.3s
STU Stuttgart 21.29 125 P **P 11 30 35.8 -0.9**
STU pmax pmax
comp=Z,91nm,1.0s
STU MLR MLR
comp=Z,5μm,18.0s
STU Stuttgart 21.29 125 *e*P **P 11 30 36.7 0.0**
comp=Z,90nm,1.0s,baz=327,slow=11
STU Stuttgart 21.29 125 **P 11 30 35.8 -0.9**
STU IAmb IAmb 11 30 44.9
comp=Z,91nm,1.0s
HINF Hinteralfeld 21.31 130 *e*P **P 11 30 38.3 +1.3**
HINF pmax pmax
comp=Z,107nm,1.8s
BRG Berggiesshubel 21.33 115 *i* P **P 11 30 36.5 -0.7**
comp=Z,74nm,1.1s
BRG S Sn 11 34 43.0 +1.8
comp=N,5μm,17.4s
comp=E,3μm,13.2s
comp=Z,7μm,17.6s
BRG Berggiesshubel 21.33 115 *i* P **P 11 30 36.5 -0.7**
BRG S Sn 11 34 43.0 +1.8
BRG pmax pmax
comp=Z,74nm,1.1s
BRG MLR MLR
comp=N,5μm,17.4s
BRG MLR MLR
comp=E,3μm,13.2s
BRG MLR MLR
comp=Z,7μm,17.6s
BRG Berggiesshubel 21.33 115 *e*P **P 11 30 35.9 -1.2**
comp=Z,124nm,1.3s,baz=327,slow=11
MANZ Manzenberg 21.34 119 *e*P **P 11 30 36.2 -1.1**
comp=Z,98nm,1.5s,baz=327,slow=11
BFO Black Forest 21.36 127 P **P 11 30 35.4 -2.2**
BFO pmax pmax
comp=Z,153nm,1.5s
BFO MLR MLR
comp=Z,3μm,18.0s
BFO Black Forest 21.36 127 *e*P **P 11 30 37.3 -0.3**
comp=Z,165nm,1.5s,baz=327,slow=11
BFO Black Forest 21.36 127 P **P 11 30 35.4 -2.2**
BFO IAmb IAmb 11 30 54.7
comp=Z,153nm,1.5s
SMF Signal de Mont 21.41 137 *e*P **P 11 30 38.5 +0.4**
SMF pmax pmax
comp=Z,93nm,1.2s
VSU Vasula 21.52 86 *e*P **P 11 30 37.7 -1.4**
VSU Vasula 21.52 86 P **P 11 30 36.3 -2.8**
VSU pmax pmax
comp=Z,273nm,1.0s
ROTZ Rotzenmuhle 21.56 119 *e*P **P 11 30 38.3 -1.3**
comp=Z,270nm,2.3s,baz=327,slow=11
FRB Frobisher Bay 21.82 291 P **P 11 30 42.1 -0.2**
comp=Z,21nm,1.0s,baz=96,slow=12,SNR=2.3
FRB LR LR 11 38 40.6
comp=Z,5μm,19.2s,baz=70,slow=35
PVCC Panska Ves 21.85 115 *e*P **P 11 30 44.4 +1.7**
PVCC MLR MLR
comp=Z,5μm,17.1s
PVCC Panska Ves 21.85 115 *e*P **P 11 30 44.4 +1.7**
PVCC AMS AMS 11 40 10.0
comp=Z,5μm,17.1s
SLE Schleitheim 21.91 128 P **P 11 30 43.1 -0.3**
SLE pmax pmax
comp=Z,67nm,1.2s
RJF Les Rejaudoux 21.99 142 *e*P **P 11 30 42.9 -1.4**
RJF pmax pmax
comp=Z,111nm,1.2s
CABF La Chapelle 22.13 133 *e*P **P 11 30 47.0 +1.1**
CABF pmax pmax
comp=Z,46nm,1.2s
PABE Paberze 22.15 95 *e*P **P 11 30 45.8 -0.1**
PRA Prague 22.16 116 *e*S Sn 11 34 56.5 -4.5
PRA AMS AMS 11 40 30.0
comp=Z,2μm,17.1s
PRU Pruhonice 22.27 116 *e*P **P 11 30 48.2 +1.0**
PRU MLR MLR
comp=Z,4μm,17.7s
PRU Pruhonice 22.27 116 *e*P **P 11 30 48.2 +1.0**
PRU *e*S Sn 11 34 56.9 -6.7
PRU AMS AMS 11 40 30.0
comp=Z,4μm,17.7s
KSP Ksiaz 22.29 112 *e*P **P 11 30 46.6 -0.9**
KSP Ksiaz 22.29 112 P **P 11 30 46.7 -0.7**
KSP pmax pmax
comp=Z,69nm,1.0s
PBCC Pribram 22.30 117 *e*P **P 11 30 46.8 -0.8**
WET Wettzell 22.32 119 P **P 11 30 49.5 +1.7**
WET Wettzell 22.32 119 *e*P **P 11 30 46.8 -1.0**
comp=Z,137nm,1.7s,baz=327,slow=11
CHVC Chvalec 22.39 113 *e*P **P 11 30 49.0 +0.4**
CHVC *e*S Sn 11 35 02.8 -3.8
CHVC AMS AMS 11 39 30.0
comp=Z,5μm,19.5s
UPC Upice 22.44 113 *e*P **P 11 30 46.7 -2.3**
UPC MLR MLR
comp=Z,5μm,18.9s
UPC Upice 22.44 113 *e*P **P 11 30 46.7 -2.3**
UPC *e*S Sn 11 35 01.5 -6.1
UPC AMS AMS 11 39 30.0
comp=Z,5μm,18.9s
OSTC Ostas 22.48 113 *e*P **P 11 30 50.0 +0.5**
OSTC *e*S Sn 11 35 02.0 -6.7
OSTC AMS AMS 11 39 40.0
comp=Z,5μm,20.7s
CAF Calviac 22.49 142 *e*P **P 11 30 49.0 -0.7**
CAF pmax pmax
comp=Z,48nm,1.2s
KHC Kasperske Hory 22.59 118 *e*P **P 11 30 51.0 +0.3**
KHC MLR MLR
comp=Z,4μm,19.3s
KHC Kasperske Hory 22.59 118 *e*P **P 11 30 51.0 +0.3**
KHC *e*S Sn 11 35 06.9 -4.5
KHC AMS AMS 11 40 00.0
comp=Z,4μm,19.3s
DPC Dobruska-Polom 22.68 113 *e*P **P 11 30 52.8 +1.1**
DPC *e* 11 30 53.0
DPC MLR MLR
comp=Z,4μm,20.4s
DPC Dobruska-Polom 22.68 113 *e*P **P 11 30 52.8 +1.1**
DPC *e*S **S 11 35 05.2 +5.5**
DPC AMS AMS 11 39 50.0
comp=Z,4μm,20.4s
SENIN Lac Senin/Sane 22.73 132 P **P 11 30 50.5 -2.0**
SENIN IAmb IAmb 11 31 06.1
comp=Z,156nm,1.5s
DAVA Damuels 22.80 126 *e*P **P 11 30 53.5 +0.4**
comp=Z,43nm,1.7s,SNR=7.5
SUW Suwalki 22.82 98 *e*P **P 11 30 51.3 -1.8**
SUW Suwalki 22.82 98 P **P 11 30 51.2 -1.8**
SUW pmax pmax
comp=Z,147nm,1.1s
SUW MLR MLR
comp=Z,2μm,21.0s
SUW Suwalki 22.82 98 P **P 11 30 51.2 -1.8**
SSB Saint Sauveur 22.86 137 P **P 11 30 50.8 -2.8**
SSB pmax pmax
comp=Z,104nm,1.3s
SSB MLR MLR
comp=Z,6μm,18.0s
SSB Saint Sauveur 22.86 137 P **P 11 30 50.8 -2.8**
SSB IAmb IAmb 11 31 07.7
comp=Z,104nm,1.3s
SSB Saint Sauveur 22.86 137 IAMs_20 IAMs_20 11 40 26.9
comp=Z,6μm,18.0s
GEC2 GERESS Array S 22.87 119 *e*P **P 11 30 52.7 -1.0**
comp=Z,388nm,2.2s,baz=327,slow=11
GEC2 GERESS Array S 22.87 119 P **P 11 30 52.0 -1.8**
GEC2 IAmb IAmb 11 31 12.1
comp=Z,108nm,1.6s
GERES GERESS Array B 22.87 119 P **P 11 30 53.3 -0.5**
comp=Z,9.5nm,1.0s,baz=330,slow=7.7,SNR=31
GERES LR LR 11 40 50.8
comp=Z,4μm,19.2s,baz=323,slow=40
IZAR Zarasai 22.98 92 *e*P **P 11 30 54.4 -0.2**
ISAL Salakas 23.04 92 *e*P **P 11 30 55.2 -0.1**
KRLC Kraliky 23.08 113 *e*P **P 11 30 55.3 -0.6**
KRLC MLR MLR
comp=Z,4μm,20.2s
KRLC Kraliky 23.08 113 *e*P **P 11 30 55.3 -0.6**
KRLC *e*S **S 11 35 13.6 +6.9**
KRLC AMS AMS 11 40 00.0
comp=Z,4μm,20.2s
MOTA Moosalm 23.18 124 *e*P **P 11 30 57.4 +0.5**
comp=Z,82nm,1.4s,SNR=14
TREC Trest 23.19 116 AMS AMS 11 41 00.0
comp=Z,4μm,16.8s
IIGN Ignalina 23.23 93 *e*P **P 11 30 56.8 -0.4**
DAVOX Davos/Dischmat 23.23 127 P **P 11 30 56.8 -0.8**
comp=Z,12nm,0.8s,baz=317,slow=11,SNR=18
DAVOX LR LR 11 41 08.1
comp=Z,4μm,18.5s,baz=289,slow=40
PGAV Gavieira, Arco 23.26 163 *e*S S 11 34 54.4 -15
PGAV *e*LR LR 11 36 38.0
comp=Z,6μm,20.0s
VIVF Saint-Julien-l 23.28 137 *e*P **P 11 31 00.1 +2.2**
VIVF pmax pmax
comp=Z,68nm,1.3s
LPL La Plagne 23.31 133 *e*P **P 11 30 58.9 +0.5**
LPL pmax pmax
comp=Z,46nm,1.2s
SQTA Sankt Quirin 23.32 125 *e*P **P 11 30 59.0 +0.7**
comp=Z,16nm,0.9s
TUE Stuetta 23.32 128 P **P 11 30 57.0 -1.4**
TUE IAmb IAmb 11 31 20.5
comp=Z,108nm,1.2s
FETA Feichten 23.32 125 *e*P **P 11 30 59.2 +0.8**
comp=Z,49nm,1.4s
LPG La Plagne 23.33 133 *e*P **P 11 30 58.3 -0.4**
LPG pmax pmax
comp=Z,77nm,1.3s
WATA Walderalm 23.35 124 *e*P **P 11 30 58.3 -0.4**
comp=Z,49nm,1.3s,SNR=13
BEL Belsk 23.37 105 *e*P **P 11 30 58.3 -0.4**
BEL Belsk 23.37 105 P **P 11 30 58.6 -0.1**
BEL pmax pmax
comp=Z,175nm,1.2s
SJPF Ste Jean 23.39 149 *e*P **P 11 31 01.5 +2.5**
SJPF pmax pmax
comp=Z,36nm,1.2s
WTTA Wattenberg 23.43 124 *e*P **P 11 30 59.4 -0.2**
comp=Z,72nm,1.3s,SNR=14
WTTA Wattenberg 23.43 124 P **P 11 31 00.5 +0.9**
RJOB Jochberg 23.45 122 *e*P **P 11 30 57.9 -1.7**
comp=Z,158nm,1.7s,baz=327,slow=11
IDID Didziasalis 23.47 92 *e*P **P 11 30 59.2 -0.5**
FUORN Ofenpass-Fuorn 23.50 127 P **P 11 30 58.3 -2.1**
FUORN IAmb IAmb 11 31 41.1
comp=Z,119nm,1.6s
ORIF Oris-en-Rattie 23.59 135 *e*P **P 11 31 02.2 +1.2**
ORIF pmax pmax
comp=Z,80nm,1.4s
VRAC Vranov 23.62 114 P **P 11 31 00.2 -1.0**
comp=Z,13nm,0.9s,baz=338,slow=13,SNR=12
VRAC LR LR 11 41 34.5
comp=Z,5μm,18.1s,baz=326,slow=40
VRAC Vranov 23.62 114 ⇓P **P 11 30 59.8 -1.3**
VRAC Vranov 23.62 114 *e*P **P 11 31 00.3 -0.9**
VRAC *e*S **S 11 35 22.0 +6.6**
MORC Moravsky Berou 23.62 112 ⇓P **P 11 30 59.7 -1.6**
MORC Moravsky Berou 23.62 112 *e*P **P 11 30 59.7 -1.6**
MORC *e*S **S 11 35 20.3 +4.8**
MORC Moravsky Berou 23.62 112 P **P 11 31 00.4 -0.8**
MORC pmax pmax
comp=Z,197nm,1.7s
MORC MLR MLR
comp=Z,4μm,20.0s
MORC Moravsky Berou 23.62 112 P **P 11 31 00.4 -0.8**
PBRG Braganca 23.63 160 *e*S **S 11 35 23.0 +7.2**
KRUC Moravsky 23.74 115 *e*P **P 11 31 00.8 -1.5**
KRUC *e*S **S 11 35 24.2 +7.0**
ETSF Etsaut 23.75 148 *e*P **P 11 31 05.6 +3.1**
ETSF pmax pmax
comp=Z,34nm,1.2s
EUNU Eureka 23.76 336 P **P 11 31 02.5 +0.2**
EUNU IAmb IAmb 11 31 06.2
comp=Z,108nm,1.2s
NACGM Naroch 23.76 93 *e*P **P 11 31 02.0 -0.5**
NACGM *e*S **S 11 35 14.0 -3.5**
NACGM *e*LQ LQ 11 39 06.0
NACGM *e*LR LR 11 41 02.0
NACGM LRM MLR 11 42 10.0
comp=Z,5.2nm,13.0s
OKC Ostrava-Krasne 23.82 111 *e*P **P 11 31 02.8 -0.3**
OKC MLR MLR
comp=Z,3μm,20.1s
OKC Ostrava-Krasne 23.82 111 *e*P **P 11 31 02.8 -0.3**
OKC AMS AMS 11 40 30.0
comp=Z,3μm,20.1s
POLO Lamas de Olo 23.91 162 *e*P **P 11 31 07.1 +3.0**
comp=Z,72nm,1.5s
POLO *e*S **S 11 35 28.0 +7.8**
MOA Molln 23.91 119 *i* P **P 11 31 04.6 +0.6**
comp=Z,17nm,1.2s,SNR=9.2
MTLF Montolieu 24.00 143 *e*P **P 11 31 07.2 +2.3**
MTLF pmax pmax
comp=Z,144nm,2.1s
PVRL Vila Real 24.01 162 *e*P **P 11 31 08.2 +3.1**
MBDF Montbardon 24.03 134 *e*P **P 11 31 06.6 +1.3**
MBDF pmax pmax
comp=Z,42nm,1.3s
OJC Ojcow 24.19 109 *e*P **P 11 31 05.3 -1.3**
OJC Ojcow 24.19 109 P **P 11 31 05.0 -1.6**
OJC pmax pmax
comp=Z,114nm,1.7s
OJC Ojcow 24.19 109 P **P 11 31 05.0 -1.6**
OJC IAmb IAmb 11 31 13.3
comp=Z,114nm,1.7s
ABTA Abfaltersbach 24.19 123 *e*P **P 11 31 06.8 +0.1**
comp=Z,31nm,1.4s
KBA Koelnbreinsper 24.21 122 *i* P **P 11 31 07.4 +0.4**
comp=Z,38nm,1.6s,SNR=7.6
MVO Moncorvo 24.22 161 *e*P **P 11 31 10.0 +3.0**
comp=Z,101nm,1.2s
MVO *e*S **S 11 35 34.0 +8.9**
MVO *e*LR LR 11 37 46.9
comp=Z,4μm,18.0s
JAVC Velka Javorina 24.40 113 *e*P **P 11 31 07.7 -0.9**
JAVC *e*S S 11 35 40.1 +12
CONA Conrad Observa 24.45 117 *i* P **P 11 31 09.5 +0.4**
comp=Z,22nm,0.9s,SNR=9.3
CTI Castel Tesino 24.48 125 P **P 11 31 07.4 -2.0**
CTI pmax pmax
comp=Z,58nm,1.1s
CTI MLR MLR
comp=Z,2μm,18.0s
CTI Castel Tesino 24.48 125 P **P 11 31 07.4 -2.0**
CTI IAmb IAmb 11 31 27.0
comp=Z,58nm,1.1s
MICGM Minsk 24.51 93 ⇓*e*P **P 11 31 09.0 -0.4**
MICGM ⇓*e*P **P 11 31 09.0 -0.4**
MICGM PM 11 31 10.0
comp=Z,0.1nm,1.1s
MICGM PM 11 31 10.0
comp=Z,2.6nm,5.0s
MICGM *e*PP **PnPn 11 31 34.0 -6.0**
MICGM *e*S **S 11 35 30.0 +0.6**
MICGM SM 11 35 38.0
comp=E,4.5nm,9.0s
MICGM *e*SS **SnSn 11 36 10.0 -3.4**
MICGM *e*LR LR 11 39 16.0
MICGM LRM MLR 11 42 36.0
comp=Z,3.4nm,14.0s
MICGM LRM MLR 11 42 42.0
comp=E,1.5nm,13.0s
MNK Minsk 24.51 93 *e*P **P 11 31 09.0 -0.4**
MNK *e*S **S 11 35 30.0 +0.6**
MNK pmax pmax
comp=Z,140nm,1.1s
MNK smax smax
comp=E,4μm,9.0s
MNK MLR MLR
comp=Z,3μm,14.0s
ZOU Zoufplan 24.52 123 P **P 11 31 08.7 -1.1**
CIMO Cimolais 24.54 124 P **P 11 31 08.9 -0.9**

PVIS Viseu 24.54 162 *e*P **P 11 31 12.9 +3.0**
SMOL Smolenice 24.58 114 *e*P **P 11 31 10.9 +0.7**
SMOL pmax pmax
comp=Z,26nm,1.1s
SMOL Smolenice 24.58 114 *e*P **P 11 31 10.9 +0.7**
MODS Modra-Piesok 24.64 115 *e*P **P 11 31 10.1 -0.6**
MODS pmax pmax
comp=Z,106nm,1.6s
MODS Modra-Piesok 24.64 115 *e*P **P 11 31 10.1 -0.6**
STAL STALIGIAL 24.68 124 P **P 11 31 10.0 -1.1**
STAL IAmb IAmb 11 31 58.9
comp=Z,105nm,1.5s
MYKA Terra Mystica 24.70 122 *e*P **P 11 31 13.3 +1.9**
comp=Z,21nm,1.1s
PRED Cave del Predi 24.83 122 P **P 11 31 11.3 -1.2**
PRED IAmb IAmb 11 31 29.1
comp=Z,86nm,1.3s
ARSA Arzberg 24.88 118 *i* P **P 11 31 13.6 +0.7**
comp=Z,38nm,1.4s,SNR=9.7
LANS Liptovska Anna 24.89 111 *e*P **P 11 31 14.0 +1.0**
LANS pmax pmax
comp=Z,18nm,1.0s
LANS Liptovska Anna 24.89 111 *e*P **P 11 31 14.0 +1.0**
MTE Manteigas 24.90 162 *e*P **P 11 31 16.3 +3.1**
comp=Z,128nm,1.3s
MTE *e*S S 11 35 47.8 +12
MTE *e*LR LR 11 37 53.1
comp=Z,6µm,20.0s
MTE Manteigas 24.90 162 IAMs_20 IAMs_20 11 39 52.0
comp=Z,7µm,19.0s
COI Coimbra 24.98 164 IAMs_20 IAMs_20 11 39 11.1
comp=Z,6µm,20.0s
ROBS Robic 24.98 122 *e*P **P 11 31 14.8 +1.0**
SBF Sospel 25.02 134 *e*P **P 11 31 17.8 +3.6**
SBF pmax pmax
comp=Z,26nm,1.1s
NIE Niedzica 25.02 109 *e*P **P 11 31 14.6 +0.5**
NIE Niedzica 25.02 109 P **P 11 31 15.2 +1.1**
FRF La Foret Royal 25.05 136 *e*P **P 11 31 15.9 +1.5**
FRF pmax pmax
comp=Z,61nm,1.6s
TEOL Teolo 25.08 126 P **P 11 31 14.2 -0.6**
TEOL IAmb IAmb 11 31 25.8
comp=Z,56nm,1.0s
PCAS Casmilo, Conde 25.12 164 *e*P **P 11 31 19.1 +4.0**
comp=Z,113nm,1.3s
PCAS *e*S **S 11 35 44.8 +5.3**
OBKA Obir 25.14 121 *e*P **P 11 31 16.9 +1.6**
comp=Z,30nm,1.3s
VYHS Vyhne 25.16 112 *e*P **P 11 31 16.0 +0.6**
VYHS pmax pmax
comp=Z,89nm,1.5s
VYHS Vyhne 25.16 112 *e*P **P 11 31 16.0 +0.6**
SOKA Soboth 25.17 120 *i* P **P 11 31 15.0 -0.6**
comp=Z,18nm,1.0s,SNR=12
PERS Pernice 25.24 120 *e*P **P 11 31 16.9 +0.7**
PCBR Castelo Branco 25.46 162 *e*P **P 11 31 21.4 +3.3**
comp=Z,78nm,1.3s
LJU Ljubljana 25.52 121 *e*P **P 11 31 19.5 +0.8**
GROS Grobnik 25.53 119 *i* P **P 11 31 19.1 +0.2**
KLMR Klimovskoe 25.58 72 *e*P **P 11 31 17.5 -1.5**
KLMR *e* 11 34 51.3
KLMR *e*S **S 11 35 46.6 +0.1**
KLMR pmax pmax
comp=Z,104nm,1.2s
KLMR MLR MLR
comp=Z,1µm,13.0s
KLMR Klimovskoe 25.58 72 *e*P **P 11 31 17.6 -1.5**
KLMR AMP 11 31 24.3
comp=Z,104nm,1.2s
KLMR *e*PcP **PcP 11 34 51.3 +1.8**
KLMR *e*S **S 11 35 46.6 +0.1**
KLMR *e*S **S 11 35 46.6 +0.1**
KLMR LQ LQ 11 38 33.7
KLMR LQ LQ 11 38 33.7
KLMR LR LR 11 39 37.0
KLMR AMP 11 41 07.2
comp=Z,1µm,13.4s
PSBE So Bento 25.61 165 *e*S S 11 36 02.5 +15
UCM Universidad Co 25.68 154 *e*P **P 11 31 16.6 -3.6**
UCM *e*S **S 11 35 58.2 +10**
VLC Villacollemand 25.70 129 P **P 11 31 18.5 -1.9**
VLC IAmb IAmb 11 31 41.3
comp=Z,85nm,1.3s
ZCCA Zocca 25.73 128 IAMs_20 IAMs_20 11 41 30.9
comp=Z,4µm,18.0s
KECS Kecovo 25.83 110 *e*P **P 11 31 22.7 +1.2**
KECS pmax pmax
comp=Z,24nm,1.3s
KECS Kecovo 25.83 110 *e*P **P 11 31 22.7 +1.2**
KWP Kalwaria Pacla 25.84 106 *e*P **P 11 31 22.8 +1.3**
KWP Kalwaria Pacla 25.84 106 P **P 11 31 21.2 -0.3**
KWP pmax pmax
comp=Z,399nm,1.7s
KWP MLR MLR
comp=Z,3µm,21.0s
KWP Kalwaria Pacla 25.84 106 P **P 11 31 21.2 -0.3**
PMRV Marv??o 25.87 162 *e*P **P 11 31 23.4 +1.4**
PMRV *e*S S 11 36 02.5 +11
PMRV *e*LR LR 11 38 32.4
comp=Z,6µm,20.0s
CRVS Cervenica-Dubn 25.89 109 *e*P **P 11 31 22.4 +0.3**
CRVS pmax pmax
comp=Z,136nm,1.7s
CRVS Cervenica-Dubn 25.89 109 *e*P **P 11 31 22.4 +0.3**
PSZ Piszkesteto 26.04 112 ⇓P **P 11 31 24.1 +0.6**
PSZ Piszkesteto 26.04 112 P **P 11 31 21.2 -2.3**
PSZ pmax pmax
comp=Z,162nm,1.4s
PSZ MLR MLR
comp=Z,3µm,20.0s
PSZ Piszkesteto 26.04 112 P **P 11 31 21.2 -2.3**
SCHQ Schefferville 26.09 272 P **P 11 31 23.4 -0.4**
comp=Z,55nm,0.9s,baz=47,slow=8.2,SNR=12
SCHQ LR LR 11 40 42.9
comp=Z,2µm,18.6s,baz=48,slow=34
SCHQ Schefferville 26.09 272 P **P 11 31 24.0 +0.2**
SCHQ IAmb IAmb 11 31 28.5
comp=Z,72nm,0.9s
PMAFR Mafra 26.11 166 *e*S S 11 36 06.7 +11
PMTG Montargil 26.12 164 *e*S S 11 36 09.3 +14
ESBB Sonseca Array 26.16 156 P **P 11 31 23.2 -1.4**
ESBB IAMs_20 IAMs_20 11 41 39.4
comp=Z,5µm,18.0s
ESDC Sonseca Array 26.16 156 P **P 11 31 22.8 -1.8**
comp=Z,8.8nm,0.9s,baz=349,slow=8.7,SNR=22
ESDC LR LR 11 41 42.3
comp=Z,5µm,18.1s,baz=345,slow=36
KOLS Kolonicke sedl 26.20 108 *e*P **P 11 31 25.8 +0.9**
KOLS pmax pmax
comp=Z,87nm,1.5s
KOLS Kolonicke sedl 26.20 108 *e*P **P 11 31 25.8 +0.9**
LVV L'vov 26.25 104 *e*P **P 11 31 24.1 -1.1**
LVV *e* 11 32 10.5
LVV *e*S **S 11 35 54.1 -3.1**
LVV pmax pmax
comp=Z,550nm,1.6s
LVV MLR MLR
comp=N,1µm,15.0s
LVV MLR MLR
comp=E,700nm,15.0s
LVV MLR MLR
comp=Z,2µm,15.0s
LIS Lisbon 26.36 165 *e*S **S 11 35 59.4 +0.3**
LIS AMS AMS 11 40 43.5
comp=Z,4µm,20.4s
UZH Uzhgorod 26.45 108 *e*P **P 11 31 24.4 -2.6**
UZH *i* 11 31 27.7
UZH *e* 11 32 04.8
UZH *i* 11 34 55.1
UZH *i*S **S 11 35 52.4 -8.0**
OSSC Osservatorio P 26.55 129 P **P 11 31 28.9 +0.9**
OSSC IAmb IAmb 11 31 37.4
comp=Z,100nm,1.3s
RES Resolute Bay 26.56 325 P **P 11 31 27.6 -0.1**
comp=Z,4.0nm,1.0s,baz=262,slow=20,SNR=3.7
RES LR LR 11 41 49.0
comp=Z,4µm,19.8s,baz=67,slow=36
RES Resolute Bay 26.56 325 P **P 11 31 27.4 -0.3**
RES IAMs_20 IAMs_20 11 41 37.9
comp=Z,4µm,19.0s
EVO Evora 26.68 163 *e*S S 11 36 14.7 +11
PGF Pioggiola 26.69 133 *e*P **P 11 31 33.0 +3.6**
PGF pmax pmax
comp=Z,47nm,0.9s

MORS Morshin 26.72 105 P **P 11 31 30.8 +1.3**
PNCL Nicolau / Gran 27.03 165 *e*S S 11 36 24.1 +14
CASP Castiglione de 27.08 130 P **P 11 31 32.2 -0.6**
TRSU Trosnyk 27.14 108 P **P 11 31 34.4 +1.1**
MURB Monte Urbino 27.22 127 P **P 11 31 32.4 -1.8**
MURB IAmb IAmb 11 31 47.4
comp=Z,63nm,1.1s
LATE Laterza 27.55 129 P **P 11 31 35.5 -1.6**
HORU Horodok 27.71 103 P **P 11 31 37.9 -0.5**
MAHO Mahon 27.77 142 *e*P **P 11 31 36.3 -2.6**
MAHO *e*S **S 11 36 31.5 +10**
KIEV Kiev 27.78 98 P **P 11 31 37.0 -2.0**
AKASG Malin Array Be 27.78 98 P **P 11 31 37.7 -1.3**
comp=Z,5.7nm,0.8s,baz=324,slow=9.7,SNR=15
AKASG PcP **PcP 11 34 54.4 -0.5**
comp=Z,0.2nm,0.3s,baz=280,slow=3.1,SNR=1.8
AKASG LR LR 11 42 24.0
comp=Z,2µm,21.8s,baz=315,slow=36
AKASG Malin Array Be 27.78 98*c**e*P **P 11 31 38.7 -0.3**
AKASG pmax pmax
comp=Z,7.0nm,0.8s
AKASG Malin Array Be 27.78 98 P **P 11 31 37.9 -1.1**
AKBB Malin Array Si 27.78 98*c**e*P **P 11 31 38.4 -0.6**
AKBB Malin Array Si 27.78 98 P **P 11 31 37.0 -2.0**
NRCA Norcia 27.80 127 P **P 11 31 37.0 -2.3**
NRCA IAmb IAmb 11 31 53.1
comp=Z,45nm,1.3s
MORF Marmelete 27.81 165 *e*P **P 11 31 39.0 -0.5**
MORF *e*S **S 11 36 22.4 +0.3**
MORF AMS AMS 11 41 37.3
comp=Z,5µm,20.8s
MORF Marmelete 27.81 165 *e*P **P 11 31 39.0 -0.5**
MORF *e*S **S 11 36 22.5 +0.3**
MORF Marmelete 27.81 165 *e*S S 11 36 35.4 +13
PVAQ Vaqueiros 27.83 163 *e*S **S 11 36 31.8 +10**
PVAQ *e*LR LR 11 39 21.2
comp=Z,5µm,20.0s
PVAQ Vaqueiros 27.83 163 IAMs_20 IAMs_20 11 40 57.6
comp=Z,6µm,20.0s
OBN Obninsk 27.84 84*c* *i*P **P 11 31 38.9 -0.5**
OBN *e* 11 32 29.8
OBN *e* 11 34 55.4
OBN *e*SS SS 11 37 36.7 -42
OBN pmax pmax
comp=Z,80nm,1.3s
OBN MLR MLR
comp=Z,2µm,17.0s
OBN Obninsk 27.84 84 P **P 11 31 38.5 -0.9**
KSV Kosov 27.84 105 P **P 11 31 38.8 -0.8**
MOS Moscow 27.88 82 *e*P **P 11 31 43.9 +4.1**
MOS *e*SS SS 11 37 49.0 -31
MOS pmax pmax
comp=Z,83nm,1.1s
MOS MLR MLR
comp=Z,2µm,20.0s
PBDV Barranco-do-Ve 27.96 164 *e*S S 11 36 39.0 +15
PFVI Vila Bisbo 27.96 165 *e*S S 11 36 38.9 +14
PFVI Vila Bisbo 27.96 165 IAMs_20 IAMs_20 11 40 44.3
comp=Z,4µm,21.0s
SIRR Siria 28.09 112 ⇑P **P 11 31 42.3 +0.5**
KMPD K-Podol'skiy 28.23 103 P **P 11 31 40.0 -3.0**
AQU L'Aquila 28.32 127 P **P 11 31 43.1 -0.9**
AQU pmax pmax
comp=Z,37nm,1.1s
AQU MLR MLR
comp=Z,4µm,19.0s
AQU L'Aquila 28.32 127 P **P 11 31 43.1 -0.9**
AQU IAmb IAmb 11 32 05.2
comp=Z,37nm,1.1s
AQU IAMs_20 IAMs_20 11 44 31.6
comp=Z,4µm,19.0s
BUR08 Bucovina Ar. S 28.43 106 P **P 11 31 45.9 +0.9**
BURAR Bucovina Array 28.45 106 ⇑P **P 11 31 45.8 +0.6**
BURAR Bucovina Array 28.45 106 P **P 11 31 48.5 +3.3**
BURAR Bucovina Array 28.45 106 P **P 11 31 44.4 -0.8**
CJR Cluj-Napoca 28.51 109 ⇓P **P 11 31 46.4 +0.8**
BZS Buzias 28.60 113 ⇓P **P 11 31 46.4 0.0**
BZS Buzias 28.60 113 P **P 11 31 48.6 +2.2**
CART Cartagena 28.74 152 *e*P **P 11 31 48.3 +0.6**
CART *e*S S 11 36 49.1 +12
INTR Introdacqua 28.80 127 P **P 11 31 49.1 +0.8**
SFS San Fernando 28.95 161 *e*P **P 11 31 50.2 +0.8**
SFS *e*S S 11 36 54.4 +14
DIVS Divibare 29.23 116 P **P 11 31 53.0 +1.0**
GZR Gura Zlata 29.25 112 ⇑P **P 11 31 52.1 -0.1**
MDVR Moldovita 29.33 114 ⇑P **P 11 31 53.5 +0.5**
BIZ Bicaz 29.36 106 ⇑P **P 11 31 54.4 +1.3**
SORM Soroca 29.36 102 ⇑P **P 11 31 53.0 0.0**
HERR Herculane 29.53 113 ⇑P **P 11 31 55.1 +0.5**
VSL Villasalto 29.59 135 IAMs_20 IAMs_20 11 44 24.1
comp=Z,5µm,18.0s
CEU Ceuta 29.62 160 *e*P **P 11 31 55.4 -0.1**
CEU *e*S S 11 37 02.7 +12
PAOL Paolisi 29.90 127 IAMs_20 IAMs_20 11 46 02.9
comp=Z,5µm,18.0s
TESR Tescani 29.93 106 ⇓P **P 11 31 58.9 +0.7**
ARR Arges 30.02 109 ⇑P **P 11 31 59.5 +0.4**
VOIR 30.14 109 ⇓P **P 11 32 00.8 +0.7**
PDG Podgorica 30.37 119 ⇑P **P 11 32 02.3 +0.3**
PDG Podgorica 30.37 119 P **P 11 32 01.7 -0.3**
KIS Kishinev 30.45 103 *i* P **P 11 32 01.5 -1.2**
comp=Z,300nm,6.0s
KIS Kishinev 30.45 103 *e*PP PP 11 32 59.0 -12
KIS *e*LR LR 11 44 28.0
comp=Z,2µm,16.5s
KIS Kishinev 30.45 103 *i* P **P 11 32 01.5 -1.2**
KIS *e* 11 32 59.0
KIS pmax pmax
comp=Z,300nm,6.0s
KIS MLR MLR
comp=Z,2µm,16.0s
PLOR Plostina 30.46 107 ⇑P **P 11 32 03.3 +0.5**
MLR Muntele Rosu 30.46 108 ⇓P **P 11 32 03.4 +0.5**
MLR Muntele Rosu 30.46 108 P **P 11 32 01.0 -2.0**
MLR pmax pmax
comp=Z,48nm,1.4s
MLR MLR
comp=Z,2µm,20.0s
MLR Muntele Rosu 30.46 108 P **P 11 32 01.0 -2.0**
MLR IAmb IAmb 11 32 11.5
comp=Z,48nm,1.4s
VRI Vrincioaia 30.48 106 ⇑P **P 11 32 03.8 +0.8**
VRI Vrincioaia 30.48 106 P **P 11 32 05.4 +2.4**
PVLZ Peæn de 30.50 159 *e*P **P 11 31 59.5 -3.8**
PVLZ *e*S S 11 37 14.6 +10
LPSR Galich'ya Gora 30.59 86 *e*P **P 11 32 02.9 -0.9**
LPSR *e*S **S 11 37 06.2 +0.8**
LPSR pmax pmax
comp=Z,20nm,1.1s
LPSR smax smax
comp=E,720nm,10.3s
LPSR MLR MLR
comp=Z,950nm,12.0s
MELI Melilla 30.61 156 *e*P **P 11 32 05.0 +0.8**
MELI *e*S **S 11 37 11.6 +5.6**
NEHR Nehoiu 30.65 107 ⇑P **P 11 32 06.0 +1.4**
BISRR Bisoca 30.73 107 ⇑P **P 11 32 06.4 +1.1**
KIRV Kirov 30.96 69*c**e*P **P 11 32 06.0 -1.1**
MATE Matera 30.99 124 ⇓P **P 11 32 07.5 0.0**
BATG Bathurst New B 31.28 260 IAMs_20 IAMs_20 11 42 39.8
comp=Z,4µm,20.0s
TIR Tirane 31.54 119 P **P 11 32 12.8 +0.4**
TIR pmax pmax
comp=Z,52nm,1.2s
TIR MLR MLR
comp=Z,3µm,20.0s
TIR Tirane 31.54 119 P **P 11 32 12.8 +0.4**
TIR IAmb IAmb 11 32 21.7
comp=Z,52nm,1.2s
CFR Carcaliu 31.62 106 ⇑P **P 11 32 12.9 -0.1**
VSR Storozhevoye 31.68 88 *e*P **P 11 32 12.9 -0.6**
VSR *e*S **S 11 37 21.4 -1.2**
VSR pmax pmax
comp=Z,30nm,1.0s
VSR smax smax
comp=N,410nm,7.5s
VSR MLR MLR
comp=Z,1µm,16.0s
VTS Vitosha 31.75 114 *e*P **P 11 32 17.1 +2.7**
PMOZ Porto Moniz, M 31.79 180 *e*LR LR 11 41 19.2
comp=Z,3µm,20.0s
AVE Averroes 31.91 164 *e*P **P 11 32 14.4 -1.3**
AVE *e*S **S 11 37 34.9 +8.5**

TPGR Topolog 32.00 106 ⇓P **P 11 32 16.3 -0.1**
IFR Ifrane 32.00 160 *e*P P 11 32 11.1 -5.6
IFR *e*S **S 11 37 33.2 +5.0**
OHR Ohrid 32.09 118 *i* P **P 11 32 21.6 +4.3**
SCTE Santa Cesarea 32.13 122 IAMs_20 IAMs_20 11 47 39.4
comp=Z,3µm,18.0s
CORL Corleone 32.29 131 P **P 11 32 18.9 -0.2**
KKB Krupnik 32.33 115 *e*P **P 11 32 18.6 -0.7**
D63A Stockholm 32.34 262 P **P 11 32 18.7 -0.6**
baz=39
CLTB Caltabellotta 32.55 131 P **P 11 32 21.9 +0.5**
CLTB IAMs_20 IAMs_20 11 45 35.5
comp=Z,4µm,20.0s
PQI Presque Isle 32.59 261 IAMs_20 IAMs_20 11 43 30.4
comp=Z,3µm,19.0s
VAY Valandovo 32.59 116 *i* P **P 11 32 22.7 +1.1**
E64A Bridgewater 32.70 261 P **P 11 32 21.8 -0.7**
baz=38
D62A Allapoint, All 32.70 263 P **P 11 32 22.4 -0.1**
baz=39
PLD Plovdiv 32.76 113 *e*P **P 11 32 22.0 -1.1**
VRH Novokhopyorsk 32.79 85 *e*P **P 11 32 22.3 -1.0**
VRH *e*S **S 11 37 37.6 -2.2**
VRH pmax pmax
comp=Z,30nm,0.9s
VRH smax smax
comp=E,720nm,10.0s
VRH MLR MLR
comp=Z,2µm,23.0s
MMB Musomiste 32.81 114 *e*P **P 11 32 24.3 +0.7**
CHGQ Chibougamau 32.84 271 P **P 11 32 23.9 +0.1**
baz=32,SNR=6.4
E63A Oxbow 32.95 261 IAMs_20 IAMs_20 11 43 43.2
comp=Z,3µm,20.0s
KEST Kesra 33.07 138 P **P 11 32 25.8 -0.1**
comp=Z,6.7nm,0.9s,baz=319,slow=4.2,SNR=6.9
KEST LR LR 11 45 54.2
comp=Z,3µm,18.3s,baz=308,slow=36
KEST Kesra 33.07 138 P **P 11 32 24.1 -1.8**
KEST IAmb IAmb 11 32 33.3
comp=Z,44nm,1.4s
KEST IAMs_20 IAMs_20 11 45 43.9
comp=Z,3µm,18.0s
RZN Rozhen 33.12 113 *e*P **P 11 32 25.1 -1.4**
E62A Clayton Lake 33.27 263 P **P 11 32 27.6 +0.2**
baz=38
E62A Clayton Lake 33.27 263 IAMs_20 IAMs_20 11 43 43.5
comp=Z,3µm,22.0s
GGN Saint George 33.32 258 IAMs_20 IAMs_20 11 43 50.5
comp=Z,3µm,19.0s
F64A Sherman 33.36 261 P **P 11 32 28.8 +0.5**
baz=38
F64A Sherman 33.36 261 IAMs_20 IAMs_20 11 43 53.0
comp=Z,4µm,19.0s
G65A Princeton 33.56 259 P **P 11 32 30.8 +0.8**
baz=37
G65A Princeton 33.56 259 IAMs_20 IAMs_20 11 44 09.1
comp=Z,4µm,19.0s
D60A Saint Jean D'O 33.64 264 P **P 11 32 31.2 +0.5**
baz=39
H66A Whiting 33.78 259 P **P 11 32 32.7 +0.8**
baz=36
F63A Nahmakanta, Br 33.81 261 P **P 11 32 32.7 +0.5**
baz=38
F63A Nahmakanta, Br 33.81 261 IAMs_20 IAMs_20 11 44 08.9
comp=Z,4µm,20.0s
E61A Lac Etchemin 33.83 264 P **P 11 32 32.7 +0.3**
baz=38
D59A Saint-Raymond 33.96 265 P **P 11 32 34.2 +0.7**
baz=39
G64A Maxfield 34.02 260 P **P 11 32 34.8 +0.7**
baz=37
LATQ La Tuque 34.07 267 P **P 11 32 35.5 +1.1**
baz=39
LATQ La Tuque 34.07 267 P **P 11 32 34.2 -0.3**
PKME Peaks-Kenny Pk 34.24 261 P **P 11 32 36.7 +0.7**
baz=37
PKME Peaks-Kenny Pk 34.24 261 P **P 11 32 36.6 +0.7**
PKME IAmb IAmb 11 32 42.1
comp=Z,55nm,1.2s
PKME IAMs_20 IAMs_20 11 44 41.2
comp=Z,3µm,19.0s
E60A Ste Agathe de 34.29 264 P **P 11 32 36.8 +0.5**
baz=38
ALN Alexandroupoli 34.32 112 P **P 11 32 37.2 +0.5**
ALN pmax pmax
comp=Z,123nm,1.7s
ALN MLR MLR
comp=Z,2µm,18.0s
ALN Alexandroupoli 34.32 112 P **P 11 32 37.2 +0.5**
D58A Chemin du LacG 34.34 267 P **P 11 32 37.6 +0.8**
baz=39
F61A St Evariste 34.41 263 P **P 11 32 38.0 +0.6**
baz=38
AGG Agios Georgios 34.49 118 P **P 11 32 36.3 -1.9**
AGG pmax pmax
comp=Z,109nm,1.5s
AGG MLR MLR
comp=Z,4µm,19.0s
AGG Agios Georgios 34.49 118 P **P 11 32 36.3 -1.9**
AGG IAMs_20 IAMs_20 11 48 57.9
comp=Z,4µm,19.0s
LSQQ Lebel-sur-Quev 34.60 272 P **P 11 32 39.8 +0.8**
baz=41
H64A Troy 34.71 260 P **P 11 32 41.4 +1.4**
baz=37
G62A West of Eustis 34.81 262 P **P 11 32 42.1 +1.3**
baz=37
G62A West of Eustis 34.81 262 IAMs_20 IAMs_20 11 44 40.2
comp=Z,3µm,20.0s
F60A Warwick 34.82 264 P **P 11 32 42.7 +1.7**
baz=38
WVL Waterville 34.96 261 IAMs_20 IAMs_20 11 44 52.2
comp=Z,3µm,21.0s
E58A La Victoria 35.07 266 P **P 11 32 43.8 +0.7**
baz=38
G61A St-Isidore-de- 35.18 263 P **P 11 32 45.5 +1.4**
baz=37
D56A ZEC Mazanza, M 35.19 268 P **P 11 32 45.0 +0.9**
baz=39,SNR=7.3
E57A Chemin Saint G 35.42 267 P **P 11 32 47.4 +1.3**
baz=38,SNR=6.3
D55A Sainte-Anne-du 35.52 269 P **P 11 32 47.8 +0.8**
baz=39
VLDQ Val d'Or 35.53 272 P **P 11 32 49.0 +2.1**
VLDQ IAmb IAmb 11 32 49.5
comp=Z,66nm,1.6s
VLDQ IAMs_20 IAMs_20 11 46 08.4
comp=Z,3µm,18.0s
H62A Milan 35.59 262 P **P 11 32 49.1 +1.5**
baz=37
H62A Milan 35.59 262 IAMs_20 IAMs_20 11 45 04.9
comp=Z,3µm,19.0s
G60A Masonville 35.67 264 P **P 11 32 49.8 +1.4**
baz=37
E56A St. Veronique 35.70 268 P **P 11 32 49.8 +1.3**
baz=39,SNR=8.1
I63A Otisfield 35.77 261 P **P 11 32 49.5 +0.5**
baz=36
I63A Otisfield 35.77 261 IAMs_20 IAMs_20 11 45 17.5
comp=Z,3µm,20.0s
ANN Anapa 35.85 97 *e*P **P 11 32 47.3 -2.5**
ANN *e* 11 34 07.3
ANN *e*S **S 11 38 23.9 -3.3**
ANN *e*SS **SnSn 11 40 40.8 -8.9**
ANN pmax pmax
comp=Z,78nm,1.4s
ANN MLR MLR
comp=Z,3µm,14.0s
ANN MLR MLR
comp=N,925nm,17.0s
ITM Ithomi 35.95 120 IAMs_20 IAMs_20 11 50 15.6
comp=Z,2µm,19.0s
G59A Clarenceville 36.05 265 P **P 11 32 51.6 +0.1**
baz=37
ARU Arti 36.07 66 P **P 11 32 51.8 +0.3**
comp=Z,0.9nm,0.3s,baz=298,slow=7.4,SNR=5.4
ARU Arti 36.07 66*d* *i*P **P 11 32 50.0 -1.5**
ARU 11 35 16.4
ARU S **S 11 38 29.9 -0.3**
ARU pmax pmax
comp=Z,20nm,2.0s
ARU MLR MLR
comp=Z,5µm,19.0s
ARU Arti 36.07 66 P **P 11 32 50.2 -1.4**
F57A Harrington 36.12 267 P **P 11 32 52.9 +0.8**
baz=38

LBNH Lisbon 36.19 263 P P 11 32 54.4 +1.7
baz=36
LBNH Lisbon 36.19 263 IAMs_20 IAMs_20 11 45 43.7
comp=Z,3µm,20.0s
E55A Montcerf-Lytto 36.21 269 P P 11 32 53.6 +0.8
baz=39
I62A Tamworth 36.23 262 P P 11 32 53.7 +0.7
baz=36
I62A Tamworth 36.23 262 IAMs_20 IAMs_20 11 45 32.8
comp=Z,3µm,21.0s
H60A Morristown 36.26 264 P P 11 32 54.4 +1.1
baz=37
G58A Ormstown 36.37 266 P P 11 32 55.4 +1.2
baz=38
FRNY Flat Rock 36.42 265 P P 11 32 54.9 +0.2
FRNY IAmb IAmb 11 33 01.6
comp=Z,48nm,1.2s
VT1 Waterbury 36.47 263 IAMs_20 IAMs_20 11 45 53.4
comp=Z,3µm,19.0s
NRIK Noril'sk 36.49 35 P P 11 32 55.2 +0.2
comp=Z,19nm,1.0s,baz=312,slow=4.9,SNR=17
NRIK LR LR 11 49 47.8
comp=Z,3µm,18.3s,baz=344,slow=39
NRIK Noril'sk 36.49 35*ceP* P 11 32 54.0 -1.0
NRIK pmax pmax
comp=Z,21nm,1.0s
I61A Oroboro, Fairl 36.55 263 P P 11 32 56.4 +0.5
baz=36
SVE Sverdlovsk 36.60 64 *eP* P 11 32 56.2 +0.1
SVE *eS* S 11 38 42.7 +4.3
SVE pmax pmax
comp=Z,31nm,1.5s
SVE MLR MLR
comp=Z,4µm,18.0s
H59A Cadyville 36.62 265 P P 11 32 57.2 +0.8
baz=37
FFD Franklin Falls 36.69 262 IAMs_20 IAMs_20 11 45 47.1
comp=Z,3µm,21.0s
HNH Hanover 36.77 262 IAMs_20 IAMs_20 11 46 02.2
comp=Z,3µm,20.0s
MDUB Mudurnu 36.77 107 P P 11 32 57.7 -0.1
MDUB IAMs_20 IAMs_20 11 50 24.4
comp=Z,4µm,20.0s
G57A Newington 36.81 266 P P 11 32 59.8 +1.8
baz=38,SNR=6.9
C36M Paulatuk 36.92 326 P P 11 32 59.3 +0.7
baz=43,SNR=6.6
C36M Paulatuk 36.92 326 P P 11 32 59.1 +0.5
C36M IAmb IAmb 11 33 02.0
comp=Z,77nm,1.6s
J62A Henniker 36.96 261 P P 11 33 00.1 +0.8
baz=36
H58A Gabriels 37.01 265 P P 11 33 00.1 +0.4
baz=37
LONY Lake Ozonia 37.02 266 P P 11 33 01.0 +1.1
baz=37
LONY Lake Ozonia 37.02 266 P P 11 33 00.2 +0.3
J61A Chester 37.18 262 P P 11 33 02.0 +0.9
baz=36
ILGA Ilgaz 37.33 104 P P 11 33 02.1 -0.7
BCX Boston College 37.41 260 IAMs_20 IAMs_20 11 47 04.0
comp=Z,3µm,21.0s
APE Apeiranthos 37.42 116 *i* P P 11 33 02.7 -0.6
APE pmax pmax
comp=Z,47nm,1.3s
WES Weston 37.43 260 IAMs_20 IAMs_20 11 46 23.7
comp=Z,2µm,19.0s
HRV Adam Dziewonsk 37.44 261 IAMs_20 IAMs_20 11 46 34.7
comp=Z,3µm,18.0s
ALGO Algonquin Park 37.46 270 P P 11 33 03.9 +0.4
baz=38
H57A Richville 37.50 266 P P 11 33 04.5 +0.7
baz=37
K62A Royalston 37.59 261 P P 11 33 05.3 +0.7
baz=35
K62A Royalston 37.59 261 IAMs_20 IAMs_20 11 46 32.9
comp=Z,3µm,20.0s
PLVO Plevna 37.76 268 IAMs_20 IAMs_20 11 46 34.6
comp=Z,4µm,22.0s
SOC Sochi 37.81 96 *eP* P 11 33 05.5 -1.0
SOC *eS* S 11 38 58.7 +1.7
SOC *eS* S 11 38 59.5 +2.5
SOC pmax pmax
comp=Z,8.0nm,0.4s
SOC MLR MLR
comp=Z,2µm,15.0s
G54A Lake Saint Pet 37.92 270 P P 11 33 08.2 +0.7
baz=38
J59A Piesco 37.92 264 P P 11 33 07.8 +0.4
baz=36
I58A Old Forge 37.94 265 P P 11 33 09.0 +1.4
baz=36
QUA2 Belchertown 37.96 261 IAMs_20 IAMs_20 11 46 43.6
comp=Z,3µm,19.0s
K61A Williamstown 38.03 262 P P 11 33 08.6 +0.2
baz=35
I57A Carthage 38.03 266 P P 11 33 09.1 +0.7
baz=37
GOF Gofitskoye 38.06 91⇑ *eP* P 11 33 08.7 +0.1
GOF pmax pmax
comp=Z,160nm,1.0s
TRY Troy 38.15 263 IAMs_20 IAMs_20 11 46 43.7
comp=Z,3µm,21.0s
KVT Kavak 38.29 102 P P 11 33 13.7 +3.1
BR131 Keskin Array S 38.41 105*c i* P P 11 33 12.3 +0.5
BR131 Keskin Array S 38.41 105 P P 11 33 11.8 0.0
BRTR Keskin Array B 38.41 105 P P 11 33 11.9 +0.1
comp=Z,11nm,0.8s,baz=328,slow=5.6,SNR=37
BRTR LR LR 11 51 38.0
comp=Z,516nm,18.9s,baz=299,slow=40
BRTR Keskin Array B 38.41 105*ceP* P 11 33 13.3 +1.5
BRTR pmax pmax
comp=Z,11nm,0.8s
BRTR Keskin Array B 38.41 105 P P 11 33 12.6 +0.8
DELO Deloro Mine 38.41 268 IAMs_20 IAMs_20 11 46 54.8
comp=Z,4µm,21.0s
L61A Hillsdale 1, H 38.54 262 P P 11 33 12.3 -0.4
baz=35
K59A Cooperstown 38.62 264 P P 11 33 13.2 -0.2
baz=36
IDI Anoyia 38.74 118 P P 11 33 12.9 -1.5
IDI IAmb IAmb 11 33 27.4
comp=Z,61nm,1.3s
H53A Bobcaygeon 38.78 269 P P 11 33 15.2 +0.5
baz=37
KIV Kislovodsk 38.79 92 *i* P P 11 33 13.9 -0.9
SNR=10
KIV Kislovodsk 38.79 92 *eP* P 11 33 15.6 +0.7
KIV *e* 11 34 44.1
KIV *eS* S 11 39 13.3 +1.3
KIV pmax pmax
comp=Z,325nm,3.8s
KIV pmax pmax
comp=Z,57nm,1.0s
KIV MLR MLR
comp=Z,4µm,16.0s
KIV Kislovodsk 38.79 92 P P 11 33 14.9 0.0
SADO Sadowa 38.87 270 IAMs_20 IAMs_20 11 47 07.9
comp=Z,3µm,20.0s
M62A Hamden 38.88 261 P P 11 33 16.6 +1.1
baz=34
KSCT Kent School, K 38.90 262 IAMs_20 IAMs_20 11 47 13.4
comp=Z,2µm,19.0s
K58A Earlville 38.98 265 IAMs_20 IAMs_20 11 47 10.6
comp=Z,2µm,21.0s
L60A Shokan 38.99 263 P P 11 33 17.5 +1.0
baz=35
YLE Yale 39.00 261 IAMs_20 IAMs_20 11 47 48.1
comp=Z,2µm,18.0s
KBZ Khabaz 39.06 92 P P 11 33 18.1 +1.1
comp=Z,17nm,0.9s,baz=56,slow=24,SNR=22
KBZ LR LR 11 49 56.0
comp=Z,2µm,19.8s,baz=331,slow=37
KBZ Khabaz 39.06 92*ceP* P 11 33 18.4 +1.4
KBZ pmax pmax
comp=Z,21nm,0.9s
L59A Walton 39.18 264 IAMs_20 IAMs_20 11 47 16.0
comp=Z,3µm,21.0s
WSPT Westport, CT 39.29 261 IAMs_20 IAMs_20 11 47 57.7
comp=Z,2µm,18.0s
YKA Yellowknife Ar 39.30 313 P P 11 33 19.2 +0.4
comp=Z,5.1nm,0.9s,baz=45,slow=8.9,SNR=8.3
YKA PcP PcP 11 35 27.5 +0.4
comp=Z,5.7nm,1.0s,baz=46,slow=4.2,SNR=6.4
YKA LR LR 11 49 37.1
comp=Z,2µm,18.0s,baz=0.0,slow=36
YKA Yellowknife Ar 39.30 313*ceP* P 11 33 19.6 +0.8
YKA pmax pmax
comp=Z,5.0nm,0.9s
J55A Hilton 39.50 267 IAMs_20 IAMs_20 11 47 27.6
comp=Z,2µm,21.0s
BINY Binghamton 39.58 265 IAMs_20 IAMs_20 11 47 37.6
comp=Z,2µm,19.0s
PAL Palisades 39.67 261 IAMs_20 IAMs_20 11 48 19.9
comp=Z,2µm,18.0s
TRNY Table Rock, Ra 39.69 262 IAMs_20 IAMs_20 11 47 28.4
comp=Z,2µm,20.0s
M60A Port Jervis 39.71 262 P P 11 33 23.5 +1.1
baz=35
E46A Sault Ste Mari 39.83 276 P P 11 33 23.1 -0.3
E46A IAMs_20 IAMs_20 11 48 22.4
comp=Z,3µm,20.0s
J54A Appleton 39.85 268 IAMs_20 IAMs_20 11 47 48.8
comp=Z,3µm,21.0s
MEDO Medina 39.86 268 IAMs_20 IAMs_20 11 47 49.0
comp=Z,3µm,22.0s
M59A Waymart 39.88 263 P P 11 33 24.5 +0.6
baz=35
ODNJ Ogdensburg 39.90 262 IAMs_20 IAMs_20 11 47 46.1
comp=Z,3µm,19.0s
INK Inuvik 39.93 329 P P 11 33 24.2 +0.2
comp=Z,12nm,1.1s,baz=32,slow=11,SNR=16
INK Inuvik 39.93 329 P P 11 33 24.8 +0.8
INK pmax pmax
comp=Z,24nm,1.2s
INK MLR MLR
comp=Z,3µm,22.0s
INK Inuvik 39.93 329 P P 11 33 24.8 +0.8
INK IAmb IAmb 11 33 28.7
comp=Z,24nm,1.2s
INK IAMs_20 IAMs_20 11 50 46.3
comp=Z,3µm,22.0s
MMNY Mt. Morris Dam 39.97 267 IAMs_20 IAMs_20 11 48 05.0
comp=Z,2µm,21.0s
KSPA Keystone Colle 40.01 264 IAMs_20 IAMs_20 11 47 52.0
comp=Z,3µm,20.0s
L57A Andrews Acres 40.11 265 P P 11 33 26.3 +0.5
baz=35
BRNJ Basking Ridge 40.22 262 IAMs_20 IAMs_20 11 47 45.4
comp=Z,2µm,20.0s
ONI Oni 40.22 93 P P 11 33 30.8 +4.0
ZEI Tsey 40.25 92 *eP* P 11 33 28.2 +1.0
ZEI pmax pmax
comp=Z,16nm,1.3s
AKTO Aktyubinsk 40.26 73 P P 11 33 26.3 -0.6
comp=Z,12nm,1.0s,baz=314,slow=9.3,SNR=19
N60A Cedar Hill Far 40.29 263 P P 11 33 27.9 +0.6
baz=34
L56A Greenwood 40.31 266 P P 11 33 28.4 +0.9
baz=35
WVNY West Valley, N 40.54 267 P P 11 33 30.4 +1.0
WVNY IAMs_20 IAMs_20 11 48 09.0
comp=Z,2µm,21.0s
N59A State Game Lan 40.54 263 P P 11 33 30.0 +0.6
baz=34
LUPA Lehigh Univers 40.63 263 P P 11 33 28.7 -1.4
LUPA IAMs_20 IAMs_20 11 48 18.3
comp=Z,3µm,20.0s
FFC Flin Flon 40.68 298 P P 11 33 30.5 +0.2
FFC pmax pmax
comp=Z,81nm,1.6s
FFC MLR MLR
comp=Z,5µm,19.0s
FFC Flin Flon 40.68 298 P P 11 33 30.5 +0.2
FFC IAmb IAmb 11 33 36.6
comp=Z,81nm,1.6s
GUDG Gudauri 40.76 92 P P 11 33 34.6 +3.2
M57A Sunshine Farm, 40.77 265 P P 11 33 32.6 +1.3
baz=35
M57A Sunshine Farm, 40.77 265 P P 11 33 31.3 0.0
M57A IAmb IAmb 11 33 38.0
comp=Z,64nm,1.5s
E43A Lone Tree Farm 40.98 278 IAMs_20 IAMs_20 11 48 48.8
comp=Z,3µm,21.0s
N58A Sunbury 41.01 264 P P 11 33 34.7 +1.5
baz=34
N58A Sunbury 41.01 264 P P 11 33 33.6 +0.5
N58A IAMs_20 IAMs_20 11 48 34.3
comp=Z,3µm,20.0s
KOPT Kop Dagi 41.06 98 P P 11 33 33.2 -0.8
D41A Chassel 41.10 280 P P 11 33 36.2 +2.3
D41A IAmb IAmb 11 34 26.7
comp=Z,59nm,1.1s
D41A IAMs_20 IAMs_20 11 48 53.2
comp=Z,2µm,21.0s
M56A Emporium 41.11 266 P P 11 33 35.2 +1.1
baz=35
M56A Emporium 41.11 266 P P 11 33 34.9 +0.8
M56A IAmb IAmb 11 33 40.5
comp=Z,71nm,1.5s
M56A IAMs_20 IAMs_20 11 48 38.1
comp=Z,2µm,21.0s
GLMI Grayling 41.18 275 P P 11 33 35.9 +1.3
baz=37
GLMI Grayling 41.18 275 IAMs_20 IAMs_20 11 49 48.2
comp=Z,3µm,18.0s
AKH Akhalkalaki 41.20 94 P P 11 33 34.9 -0.1
AKH pmax pmax
comp=Z,452nm,1.8s
AKH MLR MLR
comp=Z,5µm,22.0s
AKH Akhalkalaki 41.20 94 P P 11 33 34.9 -0.1
O59A Robesonia 41.22 263 P P 11 33 35.2 +0.3
baz=34
PSUB Penn St. - Bra 41.22 262 IAMs_20 IAMs_20 11 48 35.9
comp=Z,2µm,19.0s
BGD Bogdanovka 41.37 94 P P 11 33 40.3 +3.9
ERPA Erie 41.37 268 IAMs_20 IAMs_20 11 48 46.0
comp=Z,3µm,22.0s
M55A Ridgway 41.37 267 IAMs_20 IAMs_20 11 48 11.0
comp=Z,2µm,21.0s
P60A Greenville 41.40 262 IAMs_20 IAMs_20 11 48 41.6
comp=Z,2µm,19.0s
N57A Milroy 41.44 265 P P 11 33 38.1 +1.4
baz=34
G45A Suttons Bay 41.46 276 IAMs_20 IAMs_20 11 49 20.5
comp=Z,2µm,20.0s
A21K Barrow 41.52 341 P P 11 33 38.6 +1.6
baz=25,SNR=28
A21K Barrow 41.52 341 P P 11 33 37.8 +0.8
MALT Malatya 41.61 102 P P 11 33 40.8 +2.5
KZRT Kazreti 41.61 93 P P 11 33 41.1 +2.9
N56A West Decatur 41.62 266 P P 11 33 39.8 +1.5
baz=35
EYMN Ely 41.65 283 P P 11 33 39.3 +0.9
baz=39
EYMN Ely 41.65 283 IAMs_20 IAMs_20 11 49 49.7
comp=Z,2µm,19.0s
MAK Makhachkala 41.67 89 *eP* P 11 33 34.0 -4.6
MAK *e* 11 35 13.3
MAK *eS* S 11 39 49.0 -5.8
MAK *eSS* SS 11 42 57.1 -2.6
MAK MLR MLR
comp=Z,2µm,19.0s
ULM Lac du Bonnet 41.67 289 P P 11 33 38.1 -0.4
comp=Z,4.9nm,0.9s,baz=32,slow=11,SNR=4.0
ULM LR LR 11 49 47.0
comp=Z,1µm,19.4s,baz=42,slow=34
ULM Lac du Bonnet 41.67 289 P P 11 33 38.9 +0.3
ULM pmax pmax
comp=Z,43nm,1.5s
ULM MLR MLR
comp=Z,2µm,18.0s
ULM Lac du Bonnet 41.67 289 P P 11 33 38.9 +0.3
O58A Lewisberry 41.69 264 P P 11 33 39.2 +0.4
baz=34
M54A Oil Creek Stat 41.73 267 P P 11 33 40.6 +1.5
baz=35,SNR=6.2
M54A Oil Creek Stat 41.73 267 P P 11 33 39.4 +0.2
M54A IAmb IAmb 11 33 45.0
comp=Z,55nm,1.1s
M54A IAMs_20 IAMs_20 11 49 09.5
comp=Z,2µm,21.0s
ALLY Alegheny Colle 41.82 268 IAMs_20 IAMs_20 11 48 58.9
comp=Z,3µm,22.0s
P59A Jarrettsville 41.90 263 P P 11 33 42.2 +1.6
baz=34
O57A Amberson 41.92 264 P P 11 33 42.1 +1.4
baz=34
F42A Maple Grove Fa 41.95 279 IAMs_20 IAMs_20 11 49 40.5
comp=Z,3µm,20.0s
ABKAR Akbulak array 41.97 73 P P 11 33 40.8 -0.2
ABKAR IAmb IAmb 11 33 46.8
comp=Z,58nm,1.5s
ABKAR Akbulak array 41.97 73 P P 11 33 40.1 -0.9
K50A Casco 41.97 271 P P 11 33 42.0 +1.0
K50A IAmb IAmb 11 33 47.5
comp=Z,62nm,1.1s
TIXI Tiksi 42.09 15*ceP* P 11 33 42.1 +0.4
TIXI Tiksi 42.09 15 P P 11 33 41.6 -0.1
COWI Conover 42.10 280 IAMs_20 IAMs_20 11 49 44.7
comp=Z,3µm,21.0s
M53A WI Miller and 42.22 268 IAMs_20 IAMs_20 11 49 21.5
comp=Z,3µm,21.0s
EPYK Eagle Plains 42.23 328 P P 11 33 44.5 +1.5
B35A Bob, Littlefor 42.26 285 IAMs_20 IAMs_20 11 50 35.8
comp=Z,3µm,18.0s
O56A Blue Knob Stat 42.27 265 P P 11 33 44.2 +0.5
baz=34
O56A Blue Knob Stat 42.27 265 P P 11 33 44.7 +1.1
N54A Moraine State 42.31 267 P P 11 33 44.9 +1.0
baz=35,SNR=5.2
N54A Moraine State 42.31 267 IAMs_20 IAMs_20 11 49 27.0
comp=Z,3µm,22.0s
CSS Mathiatis 42.35 109 P P 11 33 44.5 +0.2
CSS IAmb IAmb 11 33 55.2
comp=Z,77nm,1.7s
P58A Pank, Wackersv 42.38 263 P P 11 33 45.4 +1.0
baz=34
M52A Chesterland 42.43 269 IAMs_20 IAMs_20 11 49 29.1
comp=Z,3µm,20.0s
I45A Fountain 42.51 275 IAMs_20 IAMs_20 11 50 30.3
comp=Z,2µm,18.0s
O55A Ligonier 42.64 266 P P 11 33 48.4 +1.8
baz=34
P57A Homestead Farm 42.69 264 P P 11 33 48.4 +1.5
baz=34
P57A Homestead Farm 42.69 264 IAMs_20 IAMs_20 11 49 35.8
comp=Z,3µm,19.0s
E38A The Farm, Brul 42.73 282 IAMs_20 IAMs_20 11 50 41.2
comp=Z,2µm,18.0s
GNI Garni 42.77 94 P P 11 33 45.8 -2.1
GNI Garni 42.77 94*ceP* P 11 33 49.0 +1.1
GNI pmax pmax
comp=Z,90nm,1.3s
GNI Garni 42.77 94 P P 11 33 46.9 -1.0
N53A Lisbon 42.81 268 P P 11 33 47.9 -0.1
N53A IAMs_20 IAMs_20 11 49 30.1
comp=Z,2µm,21.0s
H43A Windswept, Lux 42.82 277 IAMs_20 IAMs_20 11 50 04.6
comp=Z,3µm,20.0s
TOLK Toolik Lake Re 42.84 336 P P 11 33 49.3 +1.4
baz=28,SNR=31
TOLK Toolik Lake Re 42.84 336 P P 11 33 47.6 -0.3
TOLK IAMs_20 IAMs_20 11 53 25.0
comp=Z,3µm,20.0s
M51A Elyria 42.96 270 P P 11 33 49.8 +0.7
baz=35
Q58A Fox Den Farm, 42.99 263 P P 11 33 51.3 +1.8
baz=33
P56A Dayton Farm, R 43.02 265 P P 11 33 51.3 +1.7
baz=34
BRVK Borovoye 43.12 62*ceP* P 11 33 49.7 -0.7
BRVK pmax pmax
comp=Z,18nm,1.3s
BRVK Borovoye 43.12 62 P P 11 33 49.6 -0.7
BRVK IAmb IAmb 11 33 56.6
comp=Z,99nm,2.0s
BRVK Borovoye 43.12 62 IAMs_20 IAMs_20 11 51 51.4
comp=Z,2µm,18.0s
O54A Avella 43.12 267 P P 11 33 52.1 +1.6
baz=34
O54A Avella 43.12 267 P P 11 33 50.7 +0.2
O54A IAMs_20 IAMs_20 11 50 02.4
comp=Z,3µm,21.0s
AGMN Agassiz Nation 43.19 287 P P 11 33 52.5 +1.5
baz=38
AGMN Agassiz Nation 43.19 287 P P 11 33 51.5 +0.6
AGMN IAmb IAmb 11 33 57.0
comp=Z,53nm,1.4s
AGMN IAMs_20 IAMs_20 11 50 43.5
comp=Z,2µm,19.0s
G40A Rib Lake 43.22 280 P P 11 33 51.5 +0.3
G40A IAmb IAmb 11 33 57.3
comp=Z,82nm,1.6s
G40A IAMs_20 IAMs_20 11 50 19.1
comp=Z,2µm,21.0s
Q57A Strasburg 43.23 264 P P 11 33 53.0 +1.6
baz=33
M50A Fremont 43.27 270 P P 11 33 50.9 -0.7
M50A IAmb IAmb 11 33 58.1
comp=Z,73nm,1.1s
M50A IAMs_20 IAMs_20 11 49 55.3
comp=Z,2µm,20.0s
N51A Ashland 43.38 269 P P 11 33 54.5 +2.0
N51A IAmb IAmb 11 33 56.4
comp=Z,36nm,1.0s
N51A IAMs_20 IAMs_20 11 50 08.2
comp=Z,3µm,20.0s
O53A New Philadelph 43.43 268 P P 11 33 54.9 +1.9
baz=34
O53A New Philadelph 43.43 268 P P 11 33 53.8 +0.9
O53A IAMs_20 IAMs_20 11 50 00.5
comp=Z,3µm,22.0s
P55A Reedsville 43.45 266 P P 11 33 54.4 +1.2
baz=34
CBN Corbin Frederi 43.48 263 IAMs_20 IAMs_20 11 49 53.8
comp=Z,2µm,19.0s
Q56A Snyder Ridge, 43.56 265 P P 11 33 55.4 +1.4
baz=34
Q56A Snyder Ridge, 43.56 265 IAMs_20 IAMs_20 11 49 52.9
comp=Z,2µm,22.0s
GEVA Gevas 43.58 97 P P 11 33 53.8 -0.6
GEVA IAmb IAmb 11 34 01.7
comp=Z,56nm,1.5s
P54A Burton 43.65 267 P P 11 33 56.4 +1.7
baz=34
R58A Rapidan 43.67 263 P P 11 33 56.1 +1.2
baz=33
O52A Adamsville 43.81 268 P P 11 33 57.1 +1.1
baz=34
O52A Adamsville 43.81 268 P P 11 33 55.6 -0.4
O52A IAmb IAmb 11 33 59.5
comp=Z,34nm,0.9s
O52A IAMs_20 IAMs_20 11 50 11.6
comp=Z,3µm,22.0s
FYU Fort Yukon 43.87 333 P P 11 33 57.8 +1.7
R57A Stanardsville 43.89 264 P P 11 33 58.3 +1.6
baz=33
R58B Mineral 43.90 263 P P 11 33 57.9 +1.1
baz=33
R58B Mineral 43.90 263 IAMs_20 IAMs_20 11 50 07.8
comp=Z,3µm,20.0s
Q55A Buckhannon 43.98 266 P P 11 33 58.5 +1.0
baz=34
O51A Pataskala 44.11 269 P P 11 34 00.6 +2.1
baz=34,SNR=8.0
P53A Whipple 44.14 267 P P 11 34 00.9 +2.3
baz=34,SNR=8.5
P53A Whipple 44.14 267 P P 11 33 58.4 -0.2
P53A IAmb IAmb 11 34 05.5
comp=Z,70nm,1.2s
P53A IAMs_20 IAMs_20 11 50 45.2
comp=Z,2µm,20.0s
F36A Milaca 44.15 283 P P 11 34 00.8 +2.2
N49A Columbus Grove 44.16 271 P P 11 33 58.1 -0.7
N49A IAMs_20 IAMs_20 11 50 43.8
comp=Z,2µm,19.0s
L46A Eue Claire 44.17 274 P P 11 34 01.4 +2.5
R56A Bull Pasture M 44.18 265 P P 11 34 01.0 +1.9
baz=33
ACSO Alum Creek Sta 44.21 269 P P 11 34 01.1 +1.9
baz=34,SNR=5.1
ACSO Alum Creek Sta 44.21 269 P P 11 33 59.4 +0.2
ACSO IAmb IAmb 11 34 01.9
comp=Z,46nm,1.1s
ACSO IAMs_20 IAMs_20 11 50 44.1
comp=Z,3µm,20.0s
COLD Coldfoot 44.21 336 P P 11 34 01.0 +2.1
baz=27,SNR=13
COLD Coldfoot 44.21 336 P P 11 34 00.7 +1.8
COLD IAMs_20 IAMs_20 11 54 32.2
comp=Z,2µm,20.0s
S58A Poland Farm, P 44.27 263 IAMs_20 IAMs_20 11 50 28.6
comp=Z,2µm,20.0s
Q54A Coxs Mills 44.31 266 P P 11 34 01.4 +1.3
baz=34
Q54A Coxs Mills 44.31 266 P P 11 34 00.2 +0.2
Q54A IAmb IAmb 11 34 06.8
comp=Z,80nm,1.6s
Q54A IAMs_20 IAMs_20 11 50 38.9

comp=Z,2µm,21.0s
P52A Corning 44.33 268 P **P** **11 34 01.6 +1.4**
baz=34
P52A Corning 44.33 268 IAMs_20 IAMs_20 11 50 28.5
comp=Z,3µm,21.0s
SPMN Marine on St. 44.36 282 P **P** **11 34 01.6 +1.2**
baz=37
SPMN Marine on St. 44.36 282 P **P** **11 34 01.1 +0.8**
SPMN IAmb IAmb 11 34 06.6
comp=Z,68nm,1.6s
TAM Tamanrasset 44.42 149 P **P** **11 34 00.4 -0.8**
TAM pmax pmax
comp=Z,46nm,1.8s
TAM MLR MLR
comp=Z,2µm,21.0s
TAM Tamanrasset 44.42 149 P **P** **11 34 00.4 -0.8**
TAM IAMs_20 IAMs_20 11 52 25.8
comp=Z,2µm,21.0s
K43A Burlington 44.49 276 IAMs_20 IAMs_20 11 51 41.6
comp=Z,3µm,18.0s
S57A Dark Hollow, R 44.53 264 P **P** **11 34 02.8 +1.1**
baz=33
S57A Dark Hollow, R 44.53 264 P **P** **11 34 02.9 +1.1**
S57A IAmb IAmb 11 34 08.6
comp=Z,65nm,1.6s
EGAK Eagle 44.57 330 P **P** **11 34 02.3 +0.4**
EGAK IAmb IAmb 11 34 04.7
comp=Z,36nm,1.4s
R55A Marlinton 44.59 265 P **P** **11 34 02.9 +0.5**
baz=33
R55A Marlinton 44.59 265 IAMs_20 IAMs_20 11 50 37.3
comp=Z,2µm,22.0s
T59A Double "B" Far 44.59 262 P **P** **11 34 03.0 +0.7**
baz=32
Q53A Leroy 44.72 267 P **P** **11 34 05.4 +2.1**
baz=34,SNR=5.2
L44A Lake County Fo 44.73 275 P **P** **11 34 04.8 +1.4**
baz=35
L44A Lake County Fo 44.73 275 IAMs_20 IAMs_20 11 51 48.2
comp=Z,2µm,18.0s
DAWY Dawson 44.79 328 P **P** **11 34 04.6 +0.9**
DAWY IAmb IAmb 11 34 07.1
comp=Z,41nm,1.4s
O49A Covington 44.83 271 P **P** **11 34 03.4 -0.7**
O49A IAMs_20 IAMs_20 11 50 54.6
comp=Z,3µm,20.0s
N47A Urbana 44.84 272 P **P** **11 34 04.9 +0.7**
N47A IAmb IAmb 11 34 10.1
comp=Z,40nm,1.2s
PRP Porcupine Dome 44.84 332 P **P** **11 34 06.7 +2.5**
PRP IAmb IAmb 11 34 08.6
comp=Z,44nm,1.3s
PRP IAMs_20 IAMs_20 11 55 09.1
comp=Z,2µm,20.0s
P51A Williamsport 44.86 269 P **P** **11 34 05.7 +1.3**
baz=34
P51A Williamsport 44.86 269 P **P** **11 34 03.4 -1.0**
P51A IAMs_20 IAMs_20 11 50 54.4
comp=Z,2µm,21.0s
Q52A Bidwell 44.95 268 P **P** **11 34 06.9 +1.7**
baz=34
HQIL Hanson Quary C 45.02 275 IAMs_20 IAMs_20 11 51 45.7
comp=Z,2µm,20.0s
R54A Victor 45.05 266 P **P** **11 34 07.3 +1.3**
baz=33
MDND Maddock 45.08 290 P **P** **11 34 06.9 +0.8**
baz=37,SNR=5.4
MDND Maddock 45.08 290 P **P** **11 34 07.3 +1.3**
S55A Lewisburg 45.18 265 P **P** **11 34 08.5 +1.4**
baz=33
U59A Littleton 45.22 261 P **P** **11 34 08.9 +1.6**
baz=32
T57A Hurt 45.30 263 P **P** **11 34 09.4 +1.4**
baz=32
F33A 5 Mile Ranch, 45.33 285 P **P** **11 34 07.9 -0.1**
F33A IAmb IAmb 11 34 14.4
comp=Z,47nm,1.3s
F33A IAMs_20 IAMs_20 11 51 50.0
comp=Z,2µm,19.0s
R53A Hurricane 45.34 267 P **P** **11 34 09.8 +1.5**
baz=33
R53A Hurricane 45.34 267 P **P** **11 34 08.8 +0.6**
R53A IAMs_20 IAMs_20 11 51 21.1
comp=Z,3µm,20.0s
Q51A Peebles 45.36 269 P **P** **11 34 07.4 -1.0**
Q51A IAmb IAmb 11 34 11.5
comp=Z,38nm,1.1s
Q51A IAMs_20 IAMs_20 11 51 09.7
comp=Z,2µm,21.0s
RDOG Red Dog Mine 45.39 343 P **P** **11 34 08.0 -0.3**
K27K Chicken 45.42 329 P **P** **11 34 10.4 +1.8**
baz=30
K27K Chicken 45.42 329 P **P** **11 34 08.8 +0.2**
K27K IAmb IAmb 11 34 12.4
comp=Z,35nm,1.4s
M44A Midewin, Midew 45.44 275 IAMs_20 IAMs_20 11 51 49.8
comp=Z,2µm,18.0s
U58A Oxford 45.51 262 P **P** **11 34 10.3 +0.7**
baz=32
S54A Dingess, Beckl 45.51 266 P **P** **11 34 11.0 +1.3**
baz=33
P49A Miami Univ. Ec 45.53 270 P **P** **11 34 10.4 +0.7**
baz=34
P49A Miami Univ. Ec 45.53 270 P **P** **11 34 09.4 -0.3**
P49A IAMs_20 IAMs_20 11 51 36.2
comp=Z,3µm,20.0s
POKR Poker Plat Res 45.58 333 P **P** **11 34 11.6 +1.7**
baz=28,SNR=6.6
POKR Poker Plat Res 45.58 333 P **P** **11 34 09.7 -0.1**
POKR IAmb IAmb 11 34 14.1
comp=Z,32nm,1.3s
POKR IAMs_20 IAMs_20 11 54 10.4
comp=Z,2µm,22.0s
I37A Lemond, Waseca 45.58 281 IAMs_20 IAMs_20 11 51 53.7
comp=Z,2µm,20.0s
T56A Rocky Mt 45.61 264 P **P** **11 34 10.1 -0.3**
baz=32
L42A Oliver, Polo 45.63 277 P **P** **11 34 10.4 -0.1**
L42A IAmb IAmb 11 34 16.7
comp=Z,22nm,0.9s
L42A IAMs_20 IAMs_20 11 51 49.9
comp=Z,3µm,20.0s
IL31 45.78 333 P **P** **11 34 12.1 +0.8**
IL31 IAmb IAmb 11 34 15.2
comp=Z,50nm,1.4s
IL31 PcP **PcP** **11 35 49.5 +0.9**
ILAR Eielson Array 45.78 333 P **P** **11 34 10.9 -0.4**
comp=Z,15nm,1.1s,baz=22,slow=6.0,SNR=65
ILAR PcP **PcP** **11 35 48.0 -0.7**
comp=Z,9.0nm,1.0s,baz=356,slow=2.7,SNR=20
ILAR LR LR 11 55 47.6
comp=Z,2µm,19.7s,baz=32,slow=39
ILAR Eielson Array 45.78 333 P **P** **11 34 12.7 +1.3**
ILAR 11 35 49.1
ILAR Eielson Array 45.78 333 P **P** **11 34 12.7 +1.3**
ILAR PcP **PcP** **11 35 49.1 +0.4**
U57A Blanch 45.81 263 P **P** **11 34 13.4 +1.4**
baz=32
T55A Pulaski 45.86 265 P **P** **11 34 14.1 +1.7**
baz=32
SFIN Lafayette 45.86 273 P **P** **11 34 14.4 +2.1**
baz=34
SFIN Lafayette 45.86 273 P **P** **11 34 12.9 +0.6**
SFIN IAmb IAmb 11 34 15.0
comp=Z,41nm,1.3s
SFIN IAMs_20 IAMs_20 11 52 13.9
comp=Z,2µm,18.0s
MDM Murphy Dome 45.87 333 P **P** **11 34 14.5 +2.4**
MDM IAMs_20 IAMs_20 11 56 23.2
comp=Z,2µm,19.0s
COLA College 45.88 333 P **P** **11 34 13.7 +1.6**
COLA pmax pmax
comp=Z,56nm,1.2s
COLA MLR MLR
comp=Z,2µm,22.0s
COLA College 45.88 333 P **P** **11 34 13.7 +1.6**
TCOL CIGO, UAF Yank 45.88 333 P **P** **11 34 14.6 +2.4**
baz=27,SNR=7.1
TCOL CIGO, UAF Yank 45.88 333 P **P** **11 34 13.8 +1.7**
TCOL IAMs_20 IAMs_20 11 53 56.4
comp=Z,2µm,22.0s
SCRK Sand Creek 45.88 330 P **P** **11 34 14.3 +1.9**
baz=29,SNR=6.0
P48A Milroy 45.90 271 P **P** **11 34 12.2 -0.5**
P48A IAMs_20 IAMs_20 11 51 37.9
comp=Z,2µm,20.0s
I23K Minto, Yukon-K 45.92 334 P **P** **11 34 14.8 +2.3**
baz=26,SNR=6.9
I23K Minto, Yukon-K 45.92 334 P **P** **11 34 15.0 +2.5**
I23K IAMs_20 IAMs_20 11 55 50.5
comp=Z,2µm,19.0s
CCB Clear Creek Bu 46.07 333 P **P** **11 34 16.0 +2.4**
CCB IAmb IAmb 11 34 17.3
comp=Z,41nm,1.4s
HDA Harding Lake 46.11 332 P **P** **11 34 16.0 +1.9**
baz=27,SNR=14
HDA Harding Lake 46.11 332 P **P** **11 34 15.7 +1.6**
HDA IAmb IAmb 11 34 17.7
comp=Z,51nm,1.4s
HDA IAMs_20 IAMs_20 11 55 45.6
comp=Z,2µm,20.0s
DOT Dot Lake 46.19 330 P **P** **11 34 17.1 +2.4**
DOT IAMs_20 IAMs_20 11 56 55.6
comp=Z,2µm,19.0s
T54A Tazewell 46.24 266 P **P** **11 34 16.1 +0.6**
baz=32,SNR=7.2
V58A Windy Hill, Pi 46.26 262 IAMs_20 IAMs_20 11 52 29.3
comp=Z,2µm,18.0s
RIDG Independent Ri 46.27 331 IAMs_20 IAMs_20 11 54 34.8
comp=Z,2µm,20.0s
MLY Manley 46.28 335 P **P** **11 34 17.5 +2.1**
baz=26,SNR=18
WRH Wood River Hil 46.28 333 P **P** **11 34 16.9 +1.5**
WRH IAmb IAmb 11 34 21.2
comp=Z,49nm,1.8s
U56A King 46.33 264 P **P** **11 34 17.4 +1.3**
baz=32
NEA2 Nenana 46.36 334 P **P** **11 34 17.5 +1.5**
baz=26,SNR=8.9
R50A Paris 46.41 269 P **P** **11 34 17.1 +0.5**
R50A IAmb IAmb 11 34 21.9
comp=Z,32nm,1.4s
R50A IAMs_20 IAMs_20 11 51 41.3
comp=Z,2µm,21.0s
DGMT Dagmar 46.42 293 P **P** **11 34 17.9 +1.1**
baz=36
DGMT Dagmar 46.42 293 P **P** **11 34 18.3 +1.5**
DGMT Dagmar 46.42 293 IAMs_20 IAMs_20 11 52 48.1
comp=Z,3µm,21.0s
K38A Parkersburg 46.43 280 P **P** **11 34 18.8 +2.0**
K38A IAMs_20 IAMs_20 11 52 18.1
comp=Z,3µm,21.0s
V57A Coltrane Farms 46.46 263 P **P** **11 34 19.1 +2.0**
baz=32
BRZS Berezniki 46.47 63 *i* P **P** **11 34 17.1 0.0**
comp=Z,8.5nm,0.9s,baz=63
BRZS *e*PP **PP** **11 36 06.2 +0.2**
baz=63
BRZS *e*S **S** **11 41 05.4 +0.6**
baz=63
BRZS *e*SS **SS** **11 44 32.6 +2.7**
baz=63
BRZS LR LR 11 53 01.1
comp=Z,279nm,13.8s,baz=63
BRZS Berezniki 46.47 63 *i* P **P** **11 34 17.1 0.0**
BRZS *e* 11 36 06.1
BRZS *e*S **S** **11 41 05.3 +0.6**
BRZS pmax pmax
comp=Z,8.0nm,0.9s
BRZS MLR MLR
comp=Z,279nm,14.0s
E28A Huff 46.55 289 P **P** **11 34 18.6 +0.9**
L26K Log Cabin Wild 46.58 329 P **P** **11 34 20.6 +2.8**
baz=29
WHY Whitehorse 46.60 323 P **P** **11 34 19.3 +1.2**
WHY IAmb IAmb 11 34 21.1
comp=Z,34nm,1.6s
BLO Bloomington 46.61 272 IAMs_20 IAMs_20 11 52 12.8
comp=Z,2µm,19.0s
S51A Beattyville 46.63 268 P **P** **11 34 19.0 +0.6**
S51A IAMs_20 IAMs_20 11 52 11.2
comp=Z,2µm,21.0s
O44A Mansfield 46.64 274 P **P** **11 34 19.1 +0.7**
HDIL Hopedale 46.66 275 P **P** **11 34 20.9 +2.3**
baz=34
HDIL Hopedale 46.66 275 P **P** **11 34 19.4 +0.8**
T53A Wise 46.72 266 P **P** **11 34 20.3 +1.1**
baz=32,SNR=7.0
MENT Mentasta 46.74 330 P **P** **11 34 22.1 +3.1**
MENT IAmb IAmb 11 34 27.2
comp=Z,18nm,1.1s
MENT IAMs_20 IAMs_20 11 55 07.2
comp=Z,2µm,18.0s
R49A Shelbyville 46.76 270 P **P** **11 34 20.6 +1.2**
R49A IAMs_20 IAMs_20 11 52 03.8
comp=Z,3µm,20.0s
U54A Nelsons Funny 46.80 265 P **P** **11 34 21.8 +1.9**
baz=32
U54A Nelsons Funny 46.80 265 P **P** **11 34 22.5 +2.6**
U54A IAmb IAmb 11 34 33.6
comp=Z,32nm,1.3s
BWN Browne 46.82 334 IAMs_20 IAMs_20 11 56 31.4
comp=Z,2µm,18.0s
V56A Mocksville 46.84 264 P **P** **11 34 21.7 +1.7**
baz=32,SNR=7.8
PAX Paxson 47.09 331 P **P** **11 34 23.8 +2.0**
PAX pmax pmax
comp=Z,40nm,1.4s
PAX MLR MLR
comp=Z,2µm,18.0s
PAX Paxson 47.09 331 P **P** **11 34 23.8 +2.0**
PAX IAmb IAmb 11 34 25.8
comp=Z,40nm,1.4s
PAX IAMs_20 IAMs_20 11 55 30.4
comp=Z,2µm,18.0s
V55A Taylorsville 47.11 264 P **P** **11 34 23.8 +1.6**
baz=32
V55A Taylorsville 47.11 264 P **P** **11 34 23.9 +1.7**
MCK McKinley 47.11 333 P **P** **11 34 23.5 +1.6**
baz=26,SNR=14
HYT Haines Junctio 47.13 325 P **P** **11 34 24.6 +2.4**
HYT IAMs_20 IAMs_20 11 54 14.6
comp=Z,3µm,20.0s
DLBC Dease Lake 47.16 319 IAMs_20 IAMs_20 11 54 24.6
comp=Z,2µm,20.0s
ECSD EROS Data Cent 47.16 284 P **P** **11 34 23.4 +0.9**
baz=35,SNR=8.2
ECSD EROS Data Cent 47.16 284 P **P** **11 34 23.3 +0.8**
ECSD IAmb IAmb 11 34 25.8
comp=Z,21nm,1.2s
ECSD EROS Data Cent 47.16 284 IAMs_20 IAMs_20 11 52 57.6
comp=Z,3µm,20.0s
BPAW Bear Paw Mtn. 47.17 334 P **P** **11 34 24.5 +2.1**
W57A Gilead 47.18 263 P **P** **11 34 24.5 +1.8**
baz=32
W57A Gilead 47.18 263 IAMs_20 IAMs_20 11 52 58.7
comp=Z,2µm,18.0s
N41A Harden Midland 47.20 277 P **P** **11 34 22.7 -0.1**
N41A IAmb IAmb 11 34 29.8
comp=Z,35nm,1.3s
N41A IAMs_20 IAMs_20 11 52 37.6
comp=Z,2µm,21.0s
SCIA State Center 47.22 280 P **P** **11 34 24.2 +1.2**
baz=35
SCIA State Center 47.22 280 P **P** **11 34 22.4 -0.7**
SCIA IAMs_20 IAMs_20 11 52 43.1
comp=Z,3µm,21.0s
WCI Wyandotte Cave 47.30 271 P **P** **11 34 23.9 +0.3**
WCI pmax pmax
comp=Z,30nm,0.9s
WCI Wyandotte Cave 47.30 271 P **P** **11 34 25.7 +2.1**
baz=33
WCI Wyandotte Cave 47.30 271 P **P** **11 34 23.9 +0.3**
WCI IAMs_20 IAMs_20 11 52 31.0
comp=Z,3µm,19.0s
DHY Denali Highway 47.39 332 P **P** **11 34 25.1 +0.8**
DHY IAmb IAmb 11 35 57.9
comp=Z,29nm,1.2s
DHY IAMs_20 IAMs_20 11 55 34.4
comp=Z,2µm,19.0s
RND Reindeer 47.39 333 P **P** **11 34 25.8 +1.6**
RND pmax pmax
comp=Z,20nm,1.3s
RND MLR MLR
comp=Z,2µm,20.0s
RND Reindeer 47.39 333 P **P** **11 34 25.8 +1.6**
RND IAmb IAmb 11 34 33.1
comp=Z,20nm,1.3s
RND IAMs_20 IAMs_20 11 56 25.4
comp=Z,2µm,20.0s
W56A Indian Trail 47.45 263 P **P** **11 34 25.7 +0.9**
baz=32
V54A Nebo 47.49 265 P **P** **11 34 26.9 +1.7**
baz=32,SNR=9.0
P43A Skaggs, Pawnee 47.51 275 P **P** **11 34 26.5 +1.2**
P43A IAMs_20 IAMs_20 11 53 41.7
comp=Z,2µm,18.0s
TZTN Tazewell 47.53 267 P **P** **11 34 27.3 +1.8**
baz=32
TZTN Tazewell 47.53 267 IAMs_20 IAMs_20 11 52 40.0
comp=Z,2µm,20.0s
SUSD Miller 47.56 286 P **P** **11 34 26.8 +1.1**
baz=35
SUSD Miller 47.56 286 P **P** **11 34 25.9 +0.2**
SUSD PcP **PcP** **11 35 56.6 +1.3**
SUSD IAmb IAmb 11 35 57.9
comp=Z,32nm,1.1s
SUSD IAMs_20 IAMs_20 11 53 37.1
comp=Z,2µm,20.0s
TRF Thorofare Moun 47.63 334 P **P** **11 34 27.3 +1.2**
TRF IAmb IAmb 11 34 35.3
comp=Z,31nm,1.2s
TRF IAMs_20 IAMs_20 11 55 57.7
comp=Z,2µm,19.0s
ZAA0 Zalesovo Array 47.64 51 P **P** **11 34 25.7 -0.4**
ZAA0 IAmb IAmb 11 34 32.5
comp=Z,20nm,1.2s
ZALV Zalesovo Beam 47.64 51 P **P** **11 34 25.7 -0.4**
comp=Z,7.8nm,0.9s,baz=330,slow=8.7,SNR=21
ZALV PcP **PcP** **11 35 55.7 +0.3**
comp=Z,7.0nm,1.1s,baz=323,slow=4.7,SNR=4.0
ZALV LR LR 11 57 25.8
comp=Z,985nm,18.3s,baz=322,slow=40
ZALV Zalesovo Beam 47.64 51 P **P** **11 34 24.5 -1.6**
OLIL Olney 47.66 273 P **P** **11 34 26.9 +0.5**
KTH Kantishna Hill 47.66 334 P **P** **11 34 27.8 +1.5**
KTH PcP **PcP** **11 35 56.6 +1.2**
KTH IAmb IAmb 11 35 57.4
comp=Z,28nm,1.2s
KTH IAMs_20 IAMs_20 11 55 58.4
comp=Z,2µm,21.0s
T50A Nancy 47.68 269 P **P** **11 34 28.0 +1.4**
T50A IAmb IAmb 11 34 32.0
comp=Z,36nm,1.5s
T50A IAMs_20 IAMs_20 11 52 22.1
comp=Z,2µm,22.0s
KMSC Kings Mountain 47.76 264 P **P** **11 34 29.7 +2.4**
baz=32
KMSC Kings Mountain 47.76 264 P **P** **11 34 26.4 -0.9**
KMSC IAMs_20 IAMs_20 11 52 29.2
comp=Z,2µm,19.0s
Q44A Meyer Farm, Va 47.91 274 P **P** **11 34 29.3 +0.9**
Q44A IAMs_20 IAMs_20 11 53 27.2
comp=Z,2µm,20.0s
BARN Barnard Glacie 47.93 327 IAMs_20 IAMs_20 11 55 01.7
comp=Z,2µm,19.0s
CTGM Chitina Glacie 47.94 327 IAMs_20 IAMs_20 11 55 35.9
comp=Z,3µm,19.0s
V53A Saluda 47.95 266 P **P** **11 34 30.6 +1.8**
V53A IAmb IAmb 11 34 31.4
comp=Z,37nm,1.6s
MCARA McCarthy VSAT 47.96 328 P **P** **11 34 30.5 +2.0**
MCARA IAmb IAmb 11 36 00.0
comp=Z,37nm,1.2s
CAST Castle Rocks 48.00 335 P **P** **11 34 29.2 +0.4**
CAST IAmb IAmb 11 34 32.3
comp=Z,19nm,1.1s
M24K Tolsona, Glenn 48.01 330 P **P** **11 34 29.1 +0.2**
baz=27
GLB Gilahina Butte 48.08 329 P **P** **11 34 30.7 +1.2**
GLB IAmb IAmb 11 34 32.6
comp=Z,31nm,1.4s
GLB IAMs_20 IAMs_20 11 55 35.8
comp=Z,2µm,19.0s
BALM Baldy 48.11 328 IAMs_20 IAMs_20 11 55 18.5
comp=Z,2µm,20.0s
KURK Kurchatov 48.11 58*ce*P **P** **11 34 29.2 -0.6**
KURK pmax pmax
comp=Z,29nm,0.8s
KURK Kurchatov 48.11 58 P **P** **11 34 29.1 -0.6**
KURK Kurchatov 48.11 58 IAMs_20 IAMs_20 11 54 56.4
comp=Z,3µm,20.0s
USIN University of 48.11 272 P **P** **11 34 30.8 +0.9**
N25K Chitina, Valde 48.11 329 P **P** **11 34 31.1 +1.3**
baz=27,SNR=5.9
N25K Chitina, Valde 48.11 329 P **P** **11 34 30.4 +0.6**
N25K IAmb IAmb 11 34 33.5
comp=Z,33nm,1.4s
V52A Sevierville 48.14 267 P **P** **11 34 31.2 +1.0**
V52A IAmb IAmb 11 34 32.9
comp=Z,36nm,1.4s
V52A IAMs_20 IAMs_20 11 53 01.3
comp=Z,3µm,21.0s
W54A Cherokee Point 48.18 265 P **P** **11 34 32.6 +2.1**
baz=32,SNR=7.2
X56A Whitk Oak 48.19 263 P **P** **11 34 32.0 +1.5**
baz=31,SNR=5.4
VRDI Verde Repeater 48.19 328 IAMs_20 IAMs_20 11 55 38.7
comp=Z,3µm,19.0s
PAULI Pauline 48.24 264 P **P** **11 34 31.9 +0.9**
PAULI IAMs_20 IAMs_20 11 53 12.9
comp=Z,2µm,18.0s
TKL Tuckaleechee C 48.37 267 P **P** **11 34 33.0 +1.0**
comp=Z,7.9nm,1.0s,baz=54,slow=10.0,SNR=5.4
TKL LR LR 11 53 18.9
comp=Z,2µm,21.6s,baz=8.5,slow=34
TKL Tuckaleechee C 48.37 267 P **P** **11 34 33.0 +1.0**
TKL pmax pmax
comp=Z,18nm,1.2s
TKL Tuckaleechee C 48.37 267 P **P** **11 34 33.0 +1.0**
TKL IAmb IAmb 11 34 35.8
comp=Z,18nm,1.1s
TKL IAMs_20 IAMs_20 11 53 07.4
comp=Z,2µm,21.0s
TNA Tin City 48.39 344 IAMs_20 IAMs_20 11 53 50.6
comp=Z,2µm,22.0s
PCA Pinnacle 48.44 326 IAMs_20 IAMs_20 11 55 45.3
comp=Z,2µm,20.0s
X55A Gracelyn & Ava 48.46 264 P **P** **11 34 34.1 +1.4**
baz=31
TGL Tana Glacier 48.47 328 IAMs_20 IAMs_20 11 55 39.0
comp=Z,2µm,19.0s
ISLE Juniper Island 48.49 327 IAMs_20 IAMs_20 11 55 30.6
comp=Z,2µm,20.0s
PPLA Purkeypile 48.50 334 P **P** **11 34 33.1 +0.4**
SCM Sheep Creek Mo 48.50 331 P **P** **11 34 34.1 +1.4**
SCM pmax pmax
comp=Z,42nm,1.2s
SCM MLR MLR
comp=Z,2µm,20.0s
SCM Sheep Creek Mo 48.50 331 P **P** **11 34 34.1 +1.4**
V51A Loudon 48.50 267 P **P** **11 34 34.4 +1.4**
V51A IAmb IAmb 11 34 38.8
comp=Z,33nm,1.2s
V51A IAMs_20 IAMs_20 11 53 19.7
comp=Z,2µm,20.0s
KLU Klutina 48.50 330 IAMs_20 IAMs_20 11 55 10.8
comp=Z,2µm,20.0s
L34A Svendsen Farm, 48.51 282 IAMs_20 IAMs_20 11 53 43.3
comp=Z,2µm,18.0s
JIS Juneau Island 48.52 321 IAMs_20 IAMs_20 11 55 24.3
comp=Z,3µm,19.0s
U49A Red Boiling Sp 48.52 269 P **P** **11 34 33.5 +0.4**
U49A IAmb IAmb 11 34 38.4
comp=Z,31nm,1.2s
U49A IAMs_20 IAMs_20 11 52 58.2
comp=Z,2µm,20.0s
CRQM Cirque 48.54 328 IAMs_20 IAMs_20 11 55 41.6
comp=Z,2µm,20.0s
BG3 Lake Jocassee 48.58 265 P **P** **11 34 34.6 +1.1**
BG3 IAMs_20 IAMs_20 11 53 00.7
comp=Z,3µm,21.0s
CUT Chulitna 48.58 333 P **P** **11 34 34.1 +0.9**
baz=25
LAO LASA Array 48.67 294 P **P** **11 34 35.1 +0.8**
baz=35,SNR=12
LAO LASA Array 48.67 294 P **P** **11 34 35.0 +0.8**
T47A Sharon Grove 48.69 271 P **P** **11 34 34.6 +0.2**
T47A IAMs_20 IAMs_20 11 53 23.8
comp=Z,2µm,20.0s
P40A Paris 48.69 277 P **P** **11 34 34.1 -0.3**
P40A IAmb IAmb 11 36 01.4
comp=Z,27nm,1.4s
P40A IAMs_20 IAMs_20 11 53 33.9
comp=Z,2µm,21.0s
X54A Belton 48.72 265 P **P** **11 34 36.3 +1.6**
baz=31
SML Sawmill 48.73 331 IAMs_20 IAMs_20 11 56 14.8
comp=Z,2µm,18.0s
CPCT Cooper Cave 48.87 267 P **P** **11 34 36.9 +1.1**

CPCT IAmb IAmb 11 34 43.4
comp=Z,40nm,1.5s
CPCT IAMs_20 IAMs_20 11 53 32.6
comp=Z,2µm,19.0s
GHO Glory Hole Cre 48.88 332 IAMs_20 IAMs_20 11 56 20.8
comp=Z,2µm,21.0s
HODGE Hodges 48.94 264 P **P** **11 34 37.4 +1.1**
HODGE IAmb IAmb 11 34 40.6
comp=Z,20nm,1.0s
HODGE IAMs_20 IAMs_20 11 53 06.2
comp=Z,2µm,20.0s
EGMT Eagleton 48.95 297 P **P** **11 34 37.2 +0.7**
baz=35,SNR=27
EGMT Eagleton 48.95 297 P **P** **11 34 36.3 -0.2**
K31A O'Neill 48.97 285 P **P** **11 34 36.7 +0.2**
K31A IAmb IAmb 11 36 03.2
comp=Z,36nm,1.1s
K31A IAMs_20 IAMs_20 11 54 04.4
comp=Z,3µm,20.0s
NHSC New Hope 49.01 261 P **P** **11 34 38.6 +1.7**
baz=30
S44A Carbondale 49.02 273 P **P** **11 34 38.3 +1.3**
S44A IAmb IAmb 11 34 42.1
comp=Z,23nm,1.0s
S44A IAMs_20 IAMs_20 11 54 12.7
comp=Z,2µm,18.0s
Z57A Bowman 49.07 262 P **P** **11 34 39.5 +2.2**
baz=31
PMR Palmer 49.09 332 P **P** **11 34 37.4 +0.3**
PMR pmax pmax
comp=Z,54nm,1.4s
PMR Palmer 49.09 332 P **P** **11 34 37.4 +0.3**
PMR IAmb IAmb 11 34 40.7
comp=Z,54nm,1.4s
CLTN Cedars of Leba 49.11 269 P **P** **11 34 37.7 0.0**
CLTN IAmb IAmb 11 34 43.0
comp=Z,29nm,1.2s
CLTN IAMs_20 IAMs_20 11 53 15.9
comp=Z,2µm,21.0s
KNK Knik Glacier 49.11 331 IAMs_20 IAMs_20 11 56 16.9
comp=Z,2µm,21.0s
N35A Tabor 49.12 281 IAMs_20 IAMs_20 11 53 46.3
comp=Z,2µm,20.0s
TTA Tatalina 49.15 336 P **P** **11 34 38.7 +1.0**
TTA pmax pmax
comp=Z,84nm,1.8s
TTA MLR MLR
comp=Z,2µm,20.0s
TTA Tatalina 49.15 336 P **P** **11 34 38.7 +1.0**
TTA IAMs_20 IAMs_20 11 55 58.9
comp=Z,2µm,20.0s
SKT Skwentna 49.21 333 P **P** **11 34 39.3 +1.2**
SKT IAmb IAmb 11 34 40.7
comp=Z,44nm,1.4s
SKT IAMs_20 IAMs_20 11 58 06.5
comp=Z,2µm,20.0s
FVM French Village 49.28 274 P **P** **11 34 39.4 +0.4**
FVM pmax pmax
comp=Z,37nm,1.4s
FVM French Village 49.28 274 P **P** **11 34 39.4 +0.4**
FVM IAmb IAmb 11 34 44.8
comp=Z,37nm,1.4s
FVM IAMs_20 IAMs_20 11 54 29.7
comp=Z,1µm,18.0s
FID Port Fidalgo 49.29 330 IAMs_20 IAMs_20 11 56 42.9
comp=Z,2µm,18.0s
GLI Glacier Island 49.31 330 IAMs_20 IAMs_20 11 56 52.1
comp=Z,1µm,19.0s
Z56A Williston 49.33 263 P **P** **11 34 42.0 +2.7**
baz=31
W50A Signal Mountai 49.42 268 P **P** **11 34 40.5 +0.3**
W50A IAmb IAmb 11 34 50.4
comp=Z,40nm,1.1s
W50A IAMs_20 IAMs_20 11 53 49.2
comp=Z,2µm,20.0s
SUA Susitna One 49.53 333 P **P** **11 34 41.3 +0.7**
SUA IAMs_20 IAMs_20 11 57 32.9
comp=Z,2µm,20.0s
CCM Cathedral Cave 49.58 275 P **P** **11 34 40.9 -0.3**
CCM pmax pmax
comp=Z,46nm,2.0s
CCM Cathedral Cave 49.58 275 P **P** **11 34 41.4 +0.2**
baz=33
CCM Cathedral Cave 49.58 275 P **P** **11 34 40.9 -0.3**
CCM IAmb IAmb 11 34 50.3
comp=Z,46nm,2.0s
V48A Smith Brothers 49.62 269 P **P** **11 34 42.0 +0.5**
V48A IAMs_20 IAMs_20 11 53 42.4
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 49.67 332 P **P** **11 34 43.6 +2.0**
baz=25,SNR=6.6
WALA Waterton Lakes 49.67 301 P **P** **11 34 42.8 +0.9**
SWET Sewanee 49.68 268 P **P** **11 34 43.0 +0.9**
SWET IAmb IAmb 11 34 47.0
comp=Z,26nm,1.2s
SWET IAMs_20 IAMs_20 11 53 56.0
comp=Z,2µm,21.0s
BGNE Belgrade 49.72 283 P **P** **11 34 42.6 +0.3**
BGNE IAmb IAmb 11 36 05.7
comp=Z,25nm,1.1s
BGNE IAMs_20 IAMs_20 11 54 18.3
comp=Z,2µm,20.0s
WVT Waverly 49.72 271 P **P** **11 34 41.8 -0.5**
WVT Waverly 49.72 271 P **P** **11 34 42.6 +0.3**
baz=32
WVT Waverly 49.72 271 IAMs_20 IAMs_20 11 53 56.2
comp=Z,2µm,20.0s
SACV Santiago Islan 49.75 188 IAMs_20 IAMs_20 11 50 20.8
comp=Z,2µm,20.0s
X51A Calhoun 49.77 267 P **P** **11 34 45.0 +2.3**
X51A IAMs_20 IAMs_20 11 54 01.3
comp=Z,2µm,20.0s
R40A Maddies Statio 49.82 276 P **P** **11 34 43.4 +0.4**
R40A IAMs_20 IAMs_20 11 55 04.8
comp=Z,2µm,18.0s
SIT Sitka 49.83 321 IAMs_20 IAMs_20 11 56 13.9
comp=Z,2µm,19.0s
RSSD Black Hills 49.91 290 P **P** **11 34 44.2 +0.3**
RSSD pmax pmax
comp=Z,10.0nm,1.1s
RSSD Black Hills 49.91 290 P **P** **11 34 45.3 +1.4**
baz=34
RSSD Black Hills 49.91 290 P **P** **11 34 44.2 +0.3**
RSSD Black Hills 49.91 290 IAMs_20 IAMs_20 11 54 34.3
comp=Z,2µm,19.0s
Y52A Lilburn 50.02 266 P **P** **11 34 44.3 -0.3**
Y52A IAmb IAmb 11 34 55.0
comp=Z,36nm,1.2s
PARMO Parma 50.10 273 IAMs_20 IAMs_20 11 54 45.2
comp=Z,1µm,19.0s
FPAL Fort Paine 50.11 268 P **P** **11 34 46.3 +0.9**
FPAL IAmb IAmb 11 34 51.3
comp=Z,62nm,1.6s
FPAL IAMs_20 IAMs_20 11 53 59.5
comp=Z,2µm,22.0s
GOGA Godfrey 50.15 265 P **P** **11 34 46.8 +1.2**
GOGA pmax pmax
comp=Z,42nm,1.4s
GOGA Godfrey 50.15 265 P **P** **11 34 47.5 +1.9**
baz=31,SNR=5.5
GOGA Godfrey 50.15 265 P **P** **11 34 46.8 +1.2**
GOGA IAmb IAmb 11 34 55.0
comp=Z,42nm,1.4s
GOGA Godfrey 50.15 265 IAMs_20 IAMs_20 11 53 44.5
comp=Z,2µm,21.0s
PBMO Poplar Bluff 50.30 273 P **P** **11 34 46.9 +0.2**
PBMO IAmb IAmb 11 34 52.5
comp=Z,46nm,1.6s
PBMO IAMs_20 IAMs_20 11 55 09.4
comp=Z,2µm,18.0s
257A Skidaway Islan 50.34 262 IAMs_20 IAMs_20 11 54 04.5
comp=Z,2µm,20.0s
T42A Van Buren 50.37 274 P **P** **11 34 47.5 +0.2**
T42A IAmb IAmb 11 34 52.6
comp=Z,53nm,1.6s
T42A IAMs_20 IAMs_20 11 55 19.4
comp=Z,1µm,18.0s
GEYT Alibeck 50.38 84 P **P** **11 34 48.2 +0.8**
comp=Z,6.3nm,0.9s,baz=347,slow=4.4,SNR=8.2
GEYT LR LR 11 58 31.3
comp=Z,2µm,18.6s,baz=355,slow=39
GEYT Alibeck 50.38 84 P **P** **11 34 47.0 -0.4**
GYA0B ALIBECK ARRAY 50.38 84 P **P** **11 34 47.1 -0.3**
GYA0B IAMs_20 IAMs_20 11 58 21.1
comp=Z,2µm,18.0s
ASHT Ashkhabad 50.49 83 IAMs_20 IAMs_20 11 56 50.8
comp=Z,1µm,20.0s

154A Montrose 50.68 264 P **P** **11 34 49.5 -0.2**
154A IAmb IAmb 11 34 53.3
comp=Z,45nm,1.0s
154A IAMs_20 IAMs_20 11 54 16.5
comp=Z,1µm,19.0s
GCMT Greycliff 50.77 295 P **P** **11 34 50.8 +0.5**
MGMO Mountain Grove 50.77 275 P **P** **11 34 50.8 +0.5**
MGMO IAMs_20 IAMs_20 11 55 26.0
comp=Z,2µm,19.0s
S39A Bolivar 50.77 277 P **P** **11 34 51.0 +0.7**
S39A IAMs_20 IAMs_20 11 55 36.1
comp=Z,2µm,18.0s
PLAL Pickwick Lake 50.80 270 P **P** **11 34 51.6 +1.1**
PLAL IAmb IAmb 11 34 55.5
comp=Z,29nm,1.3s
PLAL IAMs_20 IAMs_20 11 54 28.7
comp=Z,2µm,21.0s
GNAR Gosnell 50.81 273 P **P** **11 34 51.5 +1.0**
GNAR IAMs_20 IAMs_20 11 55 17.9
comp=Z,2µm,18.0s
X48A Hartselle 50.81 269 P **P** **11 34 51.3 +0.7**
X48A IAmb IAmb 11 34 59.8
comp=Z,67nm,1.7s
X48A IAMs_20 IAMs_20 11 54 18.9
comp=Z,2µm,21.0s
HRY Holter Researc 50.84 298 P **P** **11 34 51.4 +0.6**
KOWA Kowa 50.88 163 P **P** **11 34 50.5 -0.7**
KOWA IAmb IAmb 11 34 56.8
comp=Z,45nm,1.4s
KOWA IAMs_20 IAMs_20 11 57 14.1
comp=Z,2µm,18.0s
Z51A Franklin 50.97 266 P **P** **11 34 52.2 +0.4**
Z51A IAmb IAmb 11 35 05.4
comp=Z,39nm,1.4s
KSU1 Kansas State U 50.99 280 P **P** **11 34 53.7 +1.8**
baz=33,SNR=5.5
255A Hazlehurst 51.00 263 P **P** **11 34 53.1 +1.0**
255A IAMs_20 IAMs_20 11 55 08.0
comp=Z,1µm,18.0s
Y49A Blount Mountai 51.04 268 P **P** **11 34 52.5 +0.1**
Y49A IAmb IAmb 11 34 58.1
comp=Z,61nm,1.8s
Y49A IAMs_20 IAMs_20 11 54 48.0
comp=Z,2µm,20.0s
BRLS Borolday 51.04 70 *e*P **P** **11 34 53.9 +1.6**
baz=71
BRLS LR LR 11 55 54.5
comp=Z,349nm,15.8s,baz=71
BRLS Borolday 51.04 70 *e*P **P** **11 34 53.8 +1.6**
BRLS MLR MLR
comp=Z,349nm,16.0s
BTLS Baital 51.05 66 *i* P **P** **11 34 53.0 +0.6**
comp=Z,6.1nm,0.9s,baz=66
BTLS *e*S **S** **11 42 10.5 +1.1**
baz=66
BTLS LR LR 11 55 26.6
comp=Z,396nm,15.4s,baz=66
BTLS Baital 51.05 66 *i* P **P** **11 34 52.9 +0.6**
BTLS *e*S **S** **11 42 10.4 +1.1**
BTLS pmax pmax
comp=Z,6.0nm,0.9s
BTLS MLR MLR
comp=Z,395nm,15.0s
BRLK Bradley Lake 51.12 332 IAMs_20 IAMs_20 11 55 45.3
comp=Z,3µm,22.0s
W45A Hickory Valley 51.13 271 IAMs_20 IAMs_20 11 55 00.5
comp=Z,2µm,20.0s
RLMT Red Lodge 51.17 295 P **P** **11 34 52.7 -0.8**
baz=34,SNR=26
RLMT Red Lodge 51.17 295 P **P** **11 34 52.6 -0.8**
LCAR Lake Charles 51.21 274 P **P** **11 34 54.6 +1.0**
LCAR IAMs_20 IAMs_20 11 55 28.5
comp=Z,2µm,18.0s
KK31 Karatay Array 51.26 70 P **P** **11 34 54.9 +1.0**
KK31 pmax pmax
comp=Z,113nm,1.9s
KK31 Karatay Array 51.26 70 P **P** **11 34 54.9 +1.0**
KKAR Karatay Array 51.26 70 P **P** **11 34 53.9 +0.1**
KKAR 11 34 54.5
KKAR Karatay Array 51.26 70 P **P** **11 34 54.5 +0.6**
KKAR Karatay Array 51.26 70 P **P** **11 34 53.9 +0.1**
YAK Yakutsk 51.33 19 *i* P **P** **11 34 54.4 +0.3**
YAK pmax pmax
comp=Z,14nm,1.0s
152A Waverly Hall 51.33 265 P **P** **11 34 55.9 +1.4**
HBAR Harrisburg 51.43 273 IAMs_20 IAMs_20 11 55 36.4
comp=Z,1µm,18.0s
NEW Newport 51.51 303 LR LR 11 56 51.7
comp=Z,2µm,19.0s,baz=26,slow=36
NEW Newport 51.51 303 P **P** **11 34 55.7 -0.1**
baz=33
NEW Newport 51.51 303 IAMs_20 IAMs_20 11 56 41.6
comp=Z,2µm,19.0s
MSO Missoula 51.53 299 P **P** **11 34 55.8 -0.2**
baz=33,SNR=7.2
MSO Missoula 51.53 299 P **P** **11 34 56.0 -0.1**
YNE Yellowstone No 51.55 295 P **P** **11 34 56.0 -0.3**
BOZ Bozeman (W) 51.69 297 P **P** **11 34 57.3 +0.1**
BOZ pmax pmax
comp=Z,43nm,1.2s
BOZ MLR MLR
comp=Z,5µm,20.0s
BOZ Bozeman (W) 51.69 297 P **P** **11 34 57.2 -0.1**
baz=33,SNR=28
BOZ Bozeman (W) 51.69 297 P **P** **11 34 57.3 +0.1**
BOZ IAmb IAmb 11 35 00.5
comp=Z,43nm,1.1s
U40A Yellville 51.70 275 P **P** **11 34 56.6 -0.6**
baz=32,SNR=6.8
U40A Yellville 51.70 275 P **P** **11 34 56.6 -0.6**
U40A IAMs_20 IAMs_20 11 56 04.5
comp=Z,2µm,18.0s
DZA Taraz 51.76 69 *e*P **P** **11 34 58.6 +0.9**
comp=Z,12nm,0.7s,baz=70
DZA LR LR 11 56 16.2
comp=Z,660nm,16.3s,baz=70
DZA Taraz 51.76 69 *e*P **P** **11 34 58.5 +0.9**
DZA pmax pmax
comp=Z,12nm,0.7s
DZA MLR MLR
comp=Z,660nm,16.0s
FCAR Ozark Folk Cen 51.78 274 P **P** **11 34 58.4 +0.6**
OXF Oxford 51.78 271 IAMs_20 IAMs_20 11 55 18.6
comp=Z,2µm,20.0s
LRM Limekiln Ridge 51.81 298 P **P** **11 34 58.6 +0.3**
YMP Mirror Lake Pl 51.83 295 P **P** **11 34 58.2 -0.3**
456A Hilliard 51.85 262 IAMs_20 IAMs_20 11 55 10.3
comp=Z,2µm,20.0s
IUG Iuzhnay 51.86 71 LR LR 11 56 24.6
comp=Z,202nm,13.8s,baz=71
BBB Bella Bella 51.91 313 IAMs_20 IAMs_20 12 01 03.2
comp=Z,1µm,18.0s
LRAL Lakeview Retre 52.00 268 P **P** **11 35 00.1 +0.7**
baz=31,SNR=5.4
LRAL Lakeview Retre 52.00 268 P **P** **11 34 59.3 -0.1**
YHH Holmes Hill 52.06 296 P **P** **11 35 01.0 +0.8**
K22A Casper 52.14 291 P **P** **11 35 00.3 -0.4**
baz=33,SNR=9.8
K22A Casper 52.14 291 P **P** **11 34 59.9 -0.7**
K22A IAmb IAmb 11 35 05.1
comp=Z,27nm,1.1s
K22A IAMs_20 IAMs_20 11 56 06.3
comp=Z,2µm,20.0s
YHL Hebgen Lake 52.14 296 P **P** **11 35 00.6 -0.2**
YMR Madison River 52.21 296 P **P** **11 35 01.4 +0.2**
B08A Colville Reser 52.22 304 P **P** **11 35 01.3 +0.3**
B08A IAMs_20 IAMs_20 11 56 31.5
comp=Z,2µm,19.0s
HHAR Hobbs 52.23 276 P **P** **11 35 01.1 -0.1**
YHB Horse Butte 52.23 296 P **P** **11 35 02.2 +0.8**
QLMT Earthquake Lak 52.25 296 P **P** **11 35 03.2 +1.7**
DLMT Dillon 52.26 297 P **P** **11 35 02.3 +0.8**
DLMT IAmb IAmb 11 35 12.0
comp=Z,56nm,1.9s
U38A Gravette 52.28 277 P **P** **11 35 00.8 -0.8**
U38A IAMs_20 IAMs_20 11 55 59.0
comp=Z,1µm,19.0s
H17A Grant Village 52.28 295 P **P** **11 35 03.3 +1.5**
baz=33,SNR=13
H17A Grant Village 52.28 295 P **P** **11 35 01.9 +0.1**
H17A IAmb IAmb 11 35 06.9
comp=Z,31nm,1.1s
C09A Chrisman Ranch 52.31 303 P **P** **11 35 02.0 +0.3**
WHAR Wooly Hollow 52.36 274 P **P** **11 35 02.5 +0.3**
WHAR IAmb IAmb 11 35 04.1
comp=Z,33nm,1.4s

WHAR IAMs_20 IAMs_20 11 56 14.9
comp=Z,2µm,18.0s
X43A Marvell 52.41 272 IAMs_20 IAMs_20 11 56 16.2
comp=Z,2µm,18.0s
W41B Gary Mavity, V 52.44 274 P **P** **11 35 02.9 +0.2**
baz=32
W41B Gary Mavity, V 52.44 274 P **P** **11 35 02.8 +0.1**
W41B IAmb IAmb 11 35 24.1
comp=Z,43nm,1.9s
W41B IAMs_20 IAMs_20 11 56 16.1
comp=Z,2µm,18.0s
352A Blakely 52.44 265 IAMs_20 IAMs_20 11 55 41.1
comp=Z,1µm,18.0s
R32A Long Quarter, 52.45 282 P **P** **11 35 02.1 -0.7**
R32A IAMs_20 IAMs_20 11 56 00.6
comp=Z,1µm,20.0s
YPP Pitchstone Pla 52.48 295 P **P** **11 35 04.5 +1.1**
CBKS Cedar Bluff 52.56 283 P **P** **11 35 03.1 -0.6**
CBKS 11 36 14.3
CBKS pmax pmax
comp=Z,51nm,1.4s
CBKS Cedar Bluff 52.56 283 P **P** **11 35 03.8 +0.2**
baz=32
CBKS Cedar Bluff 52.56 283 P **P** **11 35 03.0 -0.6**
CBKS PcP **PcP** **11 36 14.3 +0.5**
CBKS IAmb IAmb 11 36 16.7
comp=Z,50nm,1.4s
CBKS IAMs_20 IAMs_20 11 55 58.3
comp=Z,2µm,20.0s
SEY Seymchan 52.56 6 *i* P **P** **11 35 01.4 -1.8**
MAKZ Makanchi 52.59 59 P **P** **11 35 03.1 -0.7**
MAKZ pmax pmax
comp=Z,26nm,1.3s
MAKZ MLR MLR
comp=Z,1µm,20.0s
MAKZ Makanchi 52.59 59 P **P** **11 35 03.1 -0.7**
SGDS Sogindy 52.61 66 *e*P **P** **11 35 03.7 -0.4**
comp=Z,6.2nm,1.1s,baz=67
SGDS *e*PP **PP** **11 37 03.1 +0.4**
baz=67
SGDS *e*S **S** **11 42 31.0 0.0**
baz=67
SGDS *e*SS **SS** **11 46 10.8 +2.3**
baz=67
SGDS LR LR 11 56 35.1
comp=Z,531nm,17.9s,baz=67
SGDS Sogindy 52.61 66 *e*P **P** **11 35 03.6 -0.4**
SGDS *e* 11 37 03.1
SGDS *e*S **S** **11 42 30.9 0.0**
SGDS *e*SS **SS** **11 46 10.8 +2.3**
SGDS pmax pmax
comp=Z,6.0nm,1.1s
SGDS MLR MLR
comp=Z,531nm,18.0s
USP Ospenovka 52.72 67 P **P** **11 35 05.5 +0.7**
SNR=6.3
MK31 Makanchi Array 52.72 58 *ce*P **P** **11 35 04.5 -0.2**
MK31 Makanchi Array 52.72 58 P **P** **11 35 03.9 -0.8**
MKAR Makanchi Array 52.72 58 P **P** **11 35 04.2 -0.6**
comp=Z,9.7nm,0.9s,baz=328,slow=5.7,SNR=48
MKAR LR LR 11 57 45.2
comp=Z,1µm,21.1s,baz=316,slow=36
MKAR Makanchi Array 52.72 58 *ce*P **P** **11 35 04.5 -0.2**
MKAR pmax pmax
comp=Z,10.0nm,0.9s
MKAR Makanchi Array 52.72 58 P **P** **11 35 03.4 -1.4**
TDK Taldyqorghan 52.78 62 *i* P **P** **11 35 05.4 +0.2**
comp=Z,13nm,1.0s,baz=63
TDK *e*S **S** **11 42 33.9 +0.8**
baz=63
TDK LR LR 11 56 34.4
comp=Z,1µm,16.5s,baz=63
TDK Taldyqorghan 52.78 62 *i* P **P** **11 35 05.3 +0.2**
TDK *e*S **S** **11 42 33.8 +0.8**
TDK pmax pmax
comp=Z,13nm,1.0s
TDK MLR MLR
comp=Z,1µm,17.0s
T35A Sooner Cattle 52.79 279 P **P** **11 35 06.0 +0.6**
MCMT McKenzie Canyo 52.80 297 P **P** **11 35 05.8 +0.1**
PHWY Pilot Hill 52.84 289 P **P** **11 35 05.3 -0.7**
PHWY IAmb IAmb 11 35 13.1
comp=Z,24nm,1.1s
PHWY IAMs_20 IAMs_20 11 57 08.8
comp=Z,2µm,19.0s
IMW Indian Meadow 52.84 295 P **P** **11 35 06.5 +0.5**
KUU Kurty 52.91 65 *e*P **P** **11 35 06.6 +0.4**
comp=Z,12nm,1.0s,baz=65
KUU LR LR 11 56 47.0
comp=Z,2µm,15.3s,baz=65
KUU Kurty 52.91 65 *e*P **P** **11 35 06.6 +0.4**
KUU pmax pmax
comp=Z,12nm,1.0s
KUU MLR MLR
comp=Z,2µm,15.0s
EKS2 Erkin-Say 52.94 68 P **P** **11 35 09.2 +2.6**
SNR=14
TOC1 Torodi Ar. Sit 53.03 157 IAMs_20 IAMs_20 11 57 29.0
comp=Z,1µm,19.0s
TOB1 Torodi Ar. Sit 53.04 157 IAMs_20 IAMs_20 11 57 37.2
comp=Z,1µm,18.0s
TOC2 Torodi Ar. Sit 53.05 156 IAMs_20 IAMs_20 11 57 37.5
comp=Z,1µm,18.0s
TOA0 Torodi Ar. Sit 53.05 157 P **P** **11 35 06.8 -0.6**
TOA0 IAmb IAmb 11 35 12.4
comp=Z,39nm,1.3s
TOA0 IAMs_20 IAMs_20 11 57 37.6
comp=Z,1µm,18.0s
TORD Torodi Ar. Bea 53.05 157 P **P** **11 35 05.0 -2.4**
comp=Z,14nm,1.1s,baz=337,slow=7.3,SNR=25
TORD LR LR 11 57 48.8
comp=Z,1µm,18.9s,baz=350,slow=36
TORD Torodi Ar. Bea 53.05 157 P **P** **11 35 05.0 -2.4**
TOA2 Torodi Ar. Sit 53.05 157 IAMs_20 IAMs_20 11 57 37.6
comp=Z,1µm,19.0s
TOB4 Torodi Ar. Sit 53.06 157 IAMs_20 IAMs_20 11 57 37.8
comp=Z,1µm,18.0s
TOC3 Torodi Ar. Sit 53.07 156 IAMs_20 IAMs_20 11 57 39.0
comp=Z,1µm,18.0s
TOC5 Torodi Ar. Sit 53.07 157 IAMs_20 IAMs_20 11 57 38.0
comp=Z,1µm,18.0s
TOC4 Torodi Ar. Sit 53.08 157 IAMs_20 IAMs_20 11 57 38.3
comp=Z,1µm,18.0s
W39A Magazine 53.08 275 P **P** **11 35 07.9 +0.4**
baz=32
W39A Magazine 53.08 275 P **P** **11 35 08.8 +1.3**
W39A IAmb IAmb 11 35 21.3
comp=Z,61nm,1.8s
ZSN Zaisan 53.10 56 *e*P **P** **11 35 07.3 -0.3**
comp=Z,55nm,2.4s,baz=56
ZSN LR LR 11 57 21.2
comp=Z,406nm,13.5s,baz=56
ZSN Zaisan 53.10 56 *e*P **P** **11 35 07.2 -0.3**
ZSN pmax pmax
comp=Z,55nm,2.4s
ZSN MLR MLR
comp=Z,406nm,14.0s
KAN12 Harper NE Stat 53.10 280 P **P** **11 35 07.9 +0.2**
KAN13 South Haven SW 53.12 280 P **P** **11 35 08.4 +0.6**
SNOW Snow King Moun 53.14 295 P **P** **11 35 08.5 +0.4**
KAN08 Anthony NE Sta 53.15 280 P **P** **11 35 07.4 -0.6**
D08A Wollman Farm, 53.18 303 IAMs_20 IAMs_20 11 57 42.8
comp=Z,2µm,20.0s
TPAW Teton Pass 53.19 295 P **P** **11 35 08.9 +0.3**
CHKK Chushkaly 53.20 64 *e*P **P** **11 35 08.4 +0.1**
baz=64
CHKK LR LR 11 56 42.1
comp=Z,2µm,15.8s,baz=64
CHKK Chushkaly 53.20 64 *e*P **P** **11 35 08.4 +0.1**
CHKK MLR MLR
comp=Z,2µm,16.0s
KAN05 Bluff City Nor 53.21 280 P **P** **11 35 07.7 -0.7**
RWWY Rawlins 53.22 291 P **P** **11 35 07.7 -1.1**
RWWY IAmb IAmb 11 35 10.8
comp=Z,33nm,1.1s
656A Willston 53.24 261 IAMs_20 IAMs_20 11 56 29.2
comp=Z,1µm,19.0s
AAK Ala-Archa 53.24 67 P **P** **11 35 10.0 +1.2**
SNR=10
AAK Ala-Archa 53.24 67 *i* P **P** **11 35 08.0 -0.8**
SNR=28
AAK Ala-Archa 53.24 67 *ce*P **P** **11 35 08.9 +0.1**
AAK pmax pmax
comp=Z,95nm,1.3s
AAK Ala-Archa 53.24 67 P **P** **11 35 09.7 +0.9**
PD31 Pinedale Array 53.25 293 P **P** **11 35 07.5 -1.5**

PD31 IAmb IAmb 11 35 11.2
comp=Z,33nm,1.1s
PDAR Pinedale Array 53.25 293 P **P** **11 35 07.0 -1.9**
comp=Z,20nm,1.0s,baz=51,slow=5.4,SNR=46
PDAR LR LR 11 57 36.7
comp=Z,2μm,18.1s,baz=26,slow=36
PDAR Pinedale Array 53.25 293 P **P** **11 35 06.9 -2.1**
BW06 Boulder Array 53.25 293 P **P** **11 35 07.7 -1.3**
baz=32,SNR=27
BW06 Boulder Array 53.25 293 P **P** **11 35 07.0 -2.0**
BW06 IAmb IAmb 11 35 11.3
comp=Z,37nm,1.1s
BW06 IAMs_20 IAMs_20 11 56 43.8
comp=Z,3μm,22.0s
REDW Red Top Meadow 53.26 295 P **P** **11 35 08.7 -0.4**
REDW IAmb IAmb 11 35 12.4
comp=Z,25nm,1.1s
X40A Basin Creek Fa 53.27 274 P **P** **11 35 09.7 +0.7**
baz=31
X40A Basin Creek Fa 53.27 274 P **P** **11 35 09.6 +0.7**
X40A IAMs_20 IAMs_20 11 56 53.2
comp=Z,2μm,18.0s
CCAR Cane Creek 53.30 273 IAMs_20 IAMs_20 11 56 45.0
comp=Z,2μm,18.0s
553A Crawfordville 53.34 264 IAMs_20 IAMs_20 11 56 58.9
comp=Z,2μm,18.0s
AML Almayashu 53.35 68 P **P** **11 35 11.4 +1.5**
SNR=24
E09A Wood Farm, Sta 53.36 302 IAMs_20 IAMs_20 11 57 43.5
comp=Z,1μm,18.0s
N23A Red Feather La 53.38 289 P **P** **11 35 10.5 +0.6**
baz=32,SNR=17
N23A Red Feather La 53.38 289 P **P** **11 35 09.4 -0.5**
N23A IAMs_20 IAMs_20 11 57 26.1
comp=Z,2μm,20.0s
KBK Karagaybulak 53.41 67 P **P** **11 35 11.9 +1.8**
SNR=6.8
PGC Sidney 53.41 307 IAMs_20 IAMs_20 11 57 32.9
comp=Z,2μm,21.0s
TKM2 Tokmak 2 53.44 66 P **P** **11 35 11.5 +1.2**
SNR=18
BCYI Bear Canyon 53.45 297 P **P** **11 35 09.7 -0.7**
F10A Beach Ranch, E 53.48 301 P **P** **11 35 10.1 -0.3**
451A Vernon 53.54 265 IAMs_20 IAMs_20 11 56 43.1
comp=Z,2μm,18.0s
MIAR Mount Ida 53.54 275 P **P** **11 35 11.8 +0.9**
MIAR pmax pmax
comp=Z,21nm,1.3s
MIAR Mount Ida 53.54 275 P **P** **11 35 11.8 +0.9**
baz=31,SNR=5.1
MIAR Mount Ida 53.54 275 P **P** **11 35 11.8 +0.9**
MIAR IAMs_20 IAMs_20 11 57 03.4
comp=Z,2μm,18.0s
UCH Uchtor 53.60 67 P **P** **11 35 14.1 +2.4**
SNR=8.4
KSCO Kaye Shedlock' 53.60 285 P **P** **11 35 12.2 +0.7**
baz=32
KSCO Kaye Shedlock' 53.60 285 P **P** **11 35 10.5 -1.0**
LTY Liberty 53.63 305 IAMs_20 IAMs_20 11 58 10.8
comp=Z,1μm,20.0s
E08A Dider Farm, El 53.71 303 IAMs_20 IAMs_20 11 58 07.8
comp=Z,2μm,19.0s
AAA Alma-Ata 53.71 65 *eP* **P** **11 35 13.2 +1.1**
comp=Z,11nm,0.5s,baz=65
AAA LR LR 11 57 03.8
comp=Z,2μm,16.2s,baz=65
AAA Alma-Ata 53.71 65 *eP* **P** **11 35 13.2 +1.1**
AAA pmax pmax
comp=Z,11nm,0.5s
AAA MLR MLR
comp=Z,2μm,16.0s
ECR Eagle Creek 53.73 295 P **P** **11 35 12.9 +0.5**
OK030 Cody Creek RV 53.74 278 P **P** **11 35 11.6 -0.7**
OK030 IAmb IAmb 11 35 17.2
comp=Z,51nm,1.6s
OK031 S. Brethren Rd 53.74 278 P **P** **11 35 11.9 -0.5**
OK031 IAmb IAmb 11 35 14.9
comp=Z,28nm,1.3s
PLID Pearl Lake 53.78 300 P **P** **11 35 12.5 -0.2**
PLID IAmb IAmb 11 35 17.2
comp=Z,42nm,1.4s
MDOK Medeo 53.80 65 *i* P **P** **11 35 13.8 +0.8**
baz=65
MDOK LR LR 11 57 04.5
comp=Z,2μm,16.4s,baz=65
MDOK Medeo 53.80 65 *i* P **P** **11 35 13.7 +0.8**
MDOK MLR MLR
comp=Z,2μm,16.0s
TNSS Tian-Shan 53.87 65 *eP* **P** **11 35 14.7 +0.9**
baz=65
TNSS Tian-Shan 53.87 65 *eP* **P** **11 35 14.6 +0.9**
HAWA Hanford 53.97 303 IAMs_20 IAMs_20 11 58 16.6
comp=Z,2μm,20.0s
OK029 Liberty Lake 54.14 279 P **P** **11 35 16.7 +1.4**
OK029 IAmb IAmb 11 35 17.4
comp=Z,33nm,1.2s
D05A Enumclaw 54.16 305 IAMs_20 IAMs_20 11 58 36.7
comp=Z,2μm,20.0s
ISCO Idaho Springs 54.17 288 P **P** **11 35 15.9 +0.1**
ISCO Idaho Springs 54.17 288 P **P** **11 35 16.2 +0.4**
baz=32
ISCO Idaho Springs 54.17 288 P **P** **11 35 15.9 +0.1**
143A Socs Landing, 54.18 272 IAMs_20 IAMs_20 11 56 54.2
comp=Z,2μm,20.0s
KPKS Kokpek 54.18 63 *i* P **P** **11 35 16.2 +0.6**
comp=Z,12nm,0.9s,baz=64
KPKS LR LR 11 57 39.4
comp=Z,426nm,13.8s,baz=64
KPKS Kokpek 54.18 63 *i* P **P** **11 35 16.1 +0.6**
KPKS pmax pmax
comp=Z,12nm,0.9s
KPKS MLR MLR
comp=Z,426nm,14.0s
VBMS Vicksburg 54.22 271 IAMs_20 IAMs_20 11 57 04.1
comp=Z,2μm,19.0s
D03D Eldon 54.25 307 P **P** **11 35 15.8 -0.1**
baz=31
X37A Clayton 54.28 276 IAMs_20 IAMs_20 11 56 36.8
comp=Z,2μm,20.0s
U32A Winter Ranch, 54.30 281 P **P** **11 35 16.3 -0.2**
U32A IAmb IAmb 11 35 19.5
comp=Z,33nm,1.2s
Z41A Richland Creek 54.31 273 IAMs_20 IAMs_20 11 57 34.6
comp=Z,2μm,18.0s
BCOK Bluff Creek, N 54.33 279 P **P** **11 35 16.7 +0.1**
SATY Saty 54.42 64 ‖ *i* P **P** **11 35 17.9 +0.5**
comp=Z,36nm,1.8s,baz=64
SATY *eS* **S** **11 42 56.5 +0.9**
baz=64
SATY LR LR 11 57 39.4
comp=Z,644nm,15.8s,baz=64
SATY Saty 54.42 64 *c i* P **P** **11 35 17.8 +0.5**
SATY *eS* **S** **11 42 56.5 +0.9**
SATY pmax pmax
comp=Z,36nm,1.8s
SATY MLR MLR
comp=Z,644nm,16.0s
W35A Tecumseh 54.44 278 P **P** **11 35 17.7 +0.2**
BMO Blue Mountains 54.46 301 P **P** **11 35 16.2 -1.4**
BMO pmax pmax
comp=Z,23nm,1.3s
BMO MLR MLR
comp=Z,4μm,19.0s
BMO Blue Mountains 54.46 301 P **P** **11 35 16.2 -1.4**
LON Longmire 54.47 305 IAMs_20 IAMs_20 11 57 53.0
comp=Z,2μm,21.0s
346A Big Creek Wild 54.48 269 IAMs_20 IAMs_20 11 57 06.0
comp=Z,2μm,20.0s
F07A Phinny Hill Vi 54.53 303 P **P** **11 35 19.4 +1.5**
F07A IAmb IAmb 11 35 23.6
comp=Z,52nm,1.5s
NLWA Neilton Lookou 54.64 307 IAMs_20 IAMs_20 11 58 44.4
comp=Z,2μm,19.0s
MOY Mondy 54.68 42 *eP* **P** **11 35 20.6 +1.5**
MOY pmax pmax
comp=Z,121nm,2.7s
Q24A Divide 54.68 287 P **P** **11 35 20.6 +1.0**
baz=32
Q24A Divide 54.68 287 P **P** **11 35 20.3 +0.7**
Q24A IAMs_20 IAMs_20 11 58 14.6
comp=Z,2μm,22.0s
SHLS Shalkode 54.74 63 *eP* **P** **11 35 22.1 +2.4**
comp=Z,12nm,0.9s,baz=63
SHLS LR LR 11 58 08.1
comp=Z,268nm,15.8s,baz=63
SHLS Shalkode 54.74 63 *eP* **P** **11 35 22.1 +2.4**
SHLS pmax pmax
comp=Z,12nm,0.9s
SHLS MLR MLR
comp=Z,268nm,16.0s
O20A White River Ci 54.95 291 P **P** **11 35 21.5 +0.2**
baz=32,SNR=17
O20A White River Ci 54.95 291 P **P** **11 35 21.9 +0.5**
O20A IAMs_20 IAMs_20 11 57 37.7
comp=Z,1μm,21.0s
344A Westbrook Farm 54.97 270 IAMs_20 IAMs_20 11 57 12.0
comp=Z,2μm,19.0s
HWUT Hardware Ranch 55.03 294 P **P** **11 35 21.5 -0.4**
HWUT IAmb IAmb 11 35 24.9
comp=Z,34nm,1.1s
IRK Irkutsk 55.09 40 *eP* **P** **11 35 20.2 -1.8**
IRK pmax pmax
comp=Z,71nm,1.5s
MFID Camas Ranch 55.13 299 P **P** **11 35 22.1 -0.4**
HRA Herat 55.15 82 P **P** **11 35 22.8 -0.1**
HRA IAmb IAmb 11 35 29.3
comp=Z,57nm,1.6s
Z38A Mt. Pleasant 55.25 275 P **P** **11 35 23.2 -0.1**
Z38A IAmb IAmb 11 35 25.6
comp=Z,18nm,0.8s
SMCO Snowmass 55.25 289 P **P** **11 35 24.6 +0.8**
SMCO IAMs_20 IAMs_20 11 58 18.6
comp=Z,2μm,19.0s
TCUT Toone Canyon 55.38 294 P **P** **11 35 24.8 +0.3**
TLY Talaya 55.42 40 *eP* **P** **11 35 25.5 +1.1**
TLY *eS* **S** **11 43 13.9 +5.3**
TLY *eSS* **SS** **11 46 49.5 -2.8**
TLY pmax pmax
comp=Z,16nm,0.9s
TLY MLR MLR
comp=Z,7μm,17.0s
GRTK Grand Turk 55.50 246 IAMs_20 IAMs_20 11 55 04.7
comp=Z,2μm,20.0s
WMOK Wichita Mounta 55.61 279 P **P** **11 35 25.8 -0.1**
WMOK pmax pmax
comp=Z,22nm,1.2s
WMOK Wichita Mounta 55.61 279 P **P** **11 35 26.7 +0.8**
baz=31,SNR=14
WMOK Wichita Mounta 55.61 279 P **P** **11 35 25.8 -0.1**
WMOK IAmb IAmb 11 35 29.3
comp=Z,22nm,1.2s
WMOK Wichita Mounta 55.61 279 IAMs_20 IAMs_20 11 58 05.1
comp=Z,2μm,20.0s
SPUT South Promonto 55.63 295 P **P** **11 35 26.1 -0.1**
JLU Jordanelle 55.84 293 P **P** **11 35 28.4 +0.6**
SDCO Great Sand Dun 55.87 287 P **P** **11 35 28.2 +0.1**
baz=31
SDCO Great Sand Dun 55.87 287 P **P** **11 35 28.0 -0.1**
T25A Trinidad 55.93 286 P **P** **11 35 28.4 0.0**
baz=31
T25A Trinidad 55.93 286 IAMs_20 IAMs_20 11 58 23.6
comp=Z,2μm,18.0s
Z35A Perchaven, San 56.16 277 P **P** **11 35 29.8 -0.1**
Z35A IAmb IAmb 11 35 33.6
comp=Z,34nm,1.1s
Z35A IAMs_20 IAMs_20 11 58 09.6
comp=Z,1μm,19.0s
BGU Big Grassy Mou 56.18 295 P **P** **11 35 30.1 -0.1**
H04A Detroit Lake 56.39 304 P **P** **11 35 32.2 +0.8**
H04A IAmb IAmb 11 35 36.0
comp=Z,32nm,1.5s
H04A IAMs_20 IAMs_20 11 59 55.7
comp=Z,2μm,20.0s
S22A 4UR Ranch, Cre 56.41 288 P **P** **11 35 32.8 +0.8**
baz=31,SNR=7.0
S22A 4UR Ranch, Cre 56.41 288 P **P** **11 35 32.6 +0.6**
MPU Maple Canyon 56.41 293 P **P** **11 35 32.6 +0.8**
CBYP Canovanas 56.43 239 P **P** **11 35 32.1 +0.2**
CBYP IAmb IAmb 11 35 34.4
comp=Z,30nm,1.0s
KSH Kashi 56.48 68 P **P** **11 35 35.0 +2.8**
KSH S **S** **11 43 22.0 -1.2**
KSH sS sS 11 43 30.1 +0.8
KSH pmax pmax
comp=Z,90nm,1.2s
KSH pmax pmax
comp=Z,1μm,4.2s
KSH LR LR
comp=Z,3μm,13.6s
KSH LR LR
comp=Z,3μm,15.9s
KSH LR LR
comp=Z,4μm,16.8s
MTP Monte Pirata 56.48 238 P **P** **11 35 31.8 -0.4**
ZAK Zakamensk 56.48 41 *eP* **P** **11 35 32.0 -0.1**
ZAK pmax pmax
comp=Z,20nm,1.3s
P17A Butcher Ranch, 56.52 292 P **P** **11 35 32.3 -0.3**
PV22 Blue Mesa, Par 56.54 290 P **P** **11 35 32.2 -0.5**
PV22 IAMs_20 IAMs_20 11 59 58.7
comp=Z,2μm,18.0s
HUMP Col San Antoni 56.55 239 P **P** **11 35 34.2 +1.5**
HUMP IAmb IAmb 11 35 36.4
comp=Z,41nm,1.2s
PV07 Paradox Valley 56.56 290 P **P** **11 35 32.8 -0.1**
PV15 Paradox Valley 56.58 290 P **P** **11 35 32.7 -0.4**
441A DeRidder 56.63 272 IAMs_20 IAMs_20 11 59 12.1
comp=Z,2μm,18.0s
NLU North Lily Min 56.64 293 P **P** **11 35 34.0 +0.5**
237A Washetta, Mont 56.68 275 IAMs_20 IAMs_20 11 59 21.4
comp=Z,2μm,19.0s
AOPR Arecibo Observ 56.70 240 P **P** **11 35 34.2 +0.3**
AOPR IAmb IAmb 11 35 36.3
comp=Z,36nm,1.1s
PV23 Carpenter Ridg 56.70 290 P **P** **11 35 32.7 -1.3**
PV23 IAmb IAmb 11 35 36.1
comp=Z,29nm,1.1s
PV04 Paradox Valley 56.70 290 P **P** **11 35 33.2 -0.7**
PV04 IAmb IAmb 11 35 38.9
comp=Z,25nm,1.1s
AMTX Amarillo 56.71 282 IAMs_20 IAMs_20 11 58 35.3
comp=Z,2μm,20.0s
DUG Dugway, Tooele 56.73 294 P **P** **11 35 33.8 -0.2**
DUG pmax pmax
comp=Z,47nm,1.5s
DUG MLR MLR
comp=Z,2μm,20.0s
DUG Dugway, Tooele 56.73 294 P **P** **11 35 35.0 +1.0**
baz=31,SNR=12
DUG Dugway, Tooele 56.73 294 P **P** **11 35 33.8 -0.2**
DUG IAmb IAmb 11 35 40.7
comp=Z,46nm,1.5s
DUG IAMs_20 IAMs_20 11 59 30.6
comp=Z,2μm,20.0s
PDPR Patillas Dam, 56.73 239 P **P** **11 35 33.0 -1.0**
PDPR IAmb IAmb 11 35 39.5
comp=Z,33nm,1.3s
PV12 Saucer Basin, 56.73 290 P **P** **11 35 33.5 -0.7**
PV12 IAmb IAmb 11 35 44.0
comp=Z,37nm,1.3s
PV12 IAMs_20 IAMs_20 12 01 37.7
comp=Z,2μm,18.0s
SRU San Rafael Swe 56.74 292 P **P** **11 35 33.5 -0.7**
SRU pmax pmax
comp=Z,23nm,1.1s
SRU San Rafael Swe 56.74 292 P **P** **11 35 33.5 -0.7**
PV14 Lion Creek, Pa 56.77 290 P **P** **11 35 33.3 -1.2**
PV14 IAmb IAmb 11 35 36.6
comp=Z,34nm,1.2s
PV11 David Mesa, Pa 56.77 290 P **P** **11 35 34.1 -0.4**
PV11 IAmb IAmb 11 35 39.5
comp=Z,36nm,1.1s
PV10 Paradox Valley 56.77 290 P **P** **11 35 34.1 -0.4**
PV10 IAmb IAmb 11 35 37.9
comp=Z,35nm,1.1s
PV20 West Nyswonger 56.77 290 P **P** **11 35 34.6 +0.2**
PV20 IAmb IAmb 11 35 36.6
comp=Z,21nm,1.2s
PV20 IAMs_20 IAMs_20 11 59 57.0
comp=Z,2μm,19.0s
PV16 Nyswonger Mesa 56.78 290 P **P** **11 35 34.3 -0.2**
PV16 IAmb IAmb 11 35 36.8
comp=Z,27nm,1.2s
PV16 IAMs_20 IAMs_20 11 59 59.1
comp=Z,2μm,20.0s
PV01 Paradox Valley 56.79 290 P **P** **11 35 34.3 -0.3**
PV01 IAmb IAmb 11 35 37.7
comp=Z,30nm,1.1s
PV01 IAMs_20 IAMs_20 12 00 05.4
comp=Z,2μm,21.0s
PV02 Paradox Valley 56.80 290 P **P** **11 35 33.7 -0.9**
PV02 IAmb IAmb 11 35 37.6
comp=Z,37nm,1.0s
PV03 Paradox Valley 56.80 290 P **P** **11 35 34.1 -0.5**
PV03 IAmb IAmb 11 35 37.5
comp=Z,27nm,1.1s
PV19 Morning Glory 56.81 290 P **P** **11 35 33.1 -1.6**
PV19 IAmb IAmb 11 35 39.6
comp=Z,20nm,1.1s
PV17 East Wray Mesa 56.82 290 P **P** **11 35 34.3 -0.5**
PV17 IAmb IAmb 11 35 37.6
comp=Z,28nm,1.1s
PV17 IAMs_20 IAMs_20 12 04 33.3
comp=Z,2μm,19.0s
PV18 Skein Mesa, Pa 56.83 290 P **P** **11 35 34.6 -0.2**
PV18 IAmb IAmb 11 35 40.0
comp=Z,34nm,1.1s
TMUT Trail Mountain 56.86 292 P **P** **11 35 34.5 -0.6**
PV13 Radium Mtn., P 56.87 290 P **P** **11 35 34.2 -0.9**
PV05 Paradox Valley 57.05 290 P **P** **11 35 34.9 -1.6**
ELK Elko 57.20 296 P **P** **11 35 37.1 -0.4**
ELK pmax pmax
comp=Z,17nm,1.4s
ELK MLR MLR
comp=Z,5μm,18.0s
ELK Elko 57.20 296 P **P** **11 35 37.1 -0.4**
WMQ Urumqi 57.23 56 *eP* **P** **11 35 38.3 +0.9**
WMQ pP sP 11 35 42.3 -0.2
WMQ S **S** **11 43 31.6 -1.3**
WMQ ScS **ScS** **11 45 21.3 -5.2**
WMQ pmax pmax
comp=Z,23nm,0.7s
WMQ pmax pmax
comp=Z,770nm,3.8s
WMQ LR LR
comp=Z,2μm,18.9s
WMQ LR LR
comp=Z,3μm,18.9s
WMQ LR LR
comp=Z,3μm,22.7s
WMQ Urumqi 57.23 56 IAMs_20 IAMs_20 12 00 46.1
comp=Z,2μm,20.0s
J05D Fort Rock, OR 57.26 303 P **P** **11 35 38.7 +1.0**
baz=30
WHTX Lake Whitney, 57.40 276 P **P** **11 35 40.5 +1.9**
baz=30
WHTX Lake Whitney, 57.40 276 IAMs_20 IAMs_20 11 58 36.4
comp=Z,2μm,21.0s
RAYN Ar Rayn 57.42 104 P **P** **11 35 38.0 -1.0**
RAYN Ar Rayn 57.42 104 P **P** **11 35 38.0 -1.0**
RAYN pmax pmax
comp=Z,25nm,1.5s
RAYN MLR MLR
comp=Z,700nm,22.0s
RAYN Ar Rayn 57.42 104 P **P** **11 35 38.0 -1.0**
DLPL La Plaine 57.51 232 IAMs_20 IAMs_20 11 58 36.6
comp=Z,2μm,20.0s
MVCO Mesa Verde 57.55 289 P **P** **11 35 41.4 +1.4**
baz=31,SNR=8.6
MVCO Mesa Verde 57.55 289 P **P** **11 35 41.2 +1.2**
MVCO IAmb IAmb 11 35 45.6
comp=Z,36nm,1.6s
ABTX Abilene, Hawle 57.79 279 P **P** **11 35 41.9 +0.4**
baz=30,SNR=10
ABTX Abilene, Hawle 57.79 279 P **P** **11 35 41.6 +0.1**
ABTX IAmb IAmb 11 35 44.2
comp=Z,27nm,1.2s
SDDR Presa de Saban 57.85 245 P **P** **11 35 41.8 -0.2**
SDDR IAmb IAmb 11 35 45.3
comp=Z,31nm,1.0s
KBL Kabul 57.90 77 P **P** **11 35 40.8 -1.7**
KBL pmax pmax
comp=Z,13nm,1.2s
KBL MLR MLR
comp=Z,2μm,20.0s
KBL Kabul 57.90 77 P **P** **11 35 40.8 -1.7**
KBL IAMs_20 IAMs_20 12 01 05.2
comp=Z,2μm,20.0s
MSU Marysvale 57.92 293 P **P** **11 35 41.6 -0.9**
MSU Marysvale 57.92 293 P **P** **11 35 41.6 -0.9**
MVU Marysvale 57.94 293 P **P** **11 35 42.9 +0.2**
MSTX Muleshoe 57.96 282 P **P** **11 35 43.7 +1.0**
baz=30,SNR=6.1
MSTX Muleshoe 57.96 282 P **P** **11 35 43.3 +0.6**
MSTX IAMs_20 IAMs_20 11 59 26.3
comp=Z,1μm,21.0s
FDF Fort de France 58.03 232 P **P** **11 35 43.6 +0.3**
FDF pmax pmax
comp=Z,105nm,1.2s
FDF Fort de France 58.03 232 P **P** **11 35 43.6 +0.3**
FDF IAMs_20 IAMs_20 11 57 11.4
comp=Z,1μm,20.0s
MOD Modoc Plateau 58.11 301 P **P** **11 35 43.4 -0.3**
MTPU Mount Pierson 58.33 292 P **P** **11 35 45.4 -0.1**
SPR3 Spring Creek 3 58.35 295 P **P** **11 35 44.8 -0.9**
SPR3 IAmb IAmb 11 35 49.9
comp=Z,35nm,1.3s
HKT Hockley 58.46 274 *i* P **P** **11 35 44.6 -1.4**
HKT pmax pmax
comp=Z,8.0nm,1.3s
435B Jarrell 58.49 276 P **P** **11 35 46.2 -0.1**
435B IAmb IAmb 11 35 48.1
comp=Z,38nm,1.6s
435B IAMs_20 IAMs_20 11 59 19.5
comp=Z,1μm,22.0s
DBIC Dimbokro 58.50 165 P **P** **11 35 45.7 -0.8**
comp=Z,17nm,1.1s,baz=346,slow=6.0,SNR=10
DBIC LR LR 12 01 32.8
comp=Z,2μm,18.8s,baz=340,slow=37
DBIC Dimbokro 58.50 165 P **P** **11 35 45.3 -1.2**
DBIC IAmb IAmb 11 35 51.3
comp=Z,23nm,1.1s
GTBY Guantanamo Bay 58.51 249 IAMs_20 IAMs_20 11 56 30.5
comp=Z,2μm,21.0s
TIC Toumodi 58.51 166 *eP* **P** **11 35 45.8 -0.8**
PSUT Pine Spring 58.56 294 P **P** **11 35 47.0 -0.1**
L04D Klamath Falls 58.57 303 P **P** **11 35 47.8 +0.8**
baz=29
K02D Willamette Mer 58.65 304 P **P** **11 35 48.7 +1.3**
baz=29
ANMO Albuquerque 58.66 286 LR LR 12 00 44.6
comp=Z,2μm,18.7s,baz=44,slow=36
ANMO Albuquerque 58.66 286 *ceP* **P** **11 35 48.8 +1.1**
ANMO pmax pmax
comp=Z,24nm,2.5s
ANMO Albuquerque 58.66 286 P **P** **11 35 48.9 +1.2**
baz=30
ANMO Albuquerque 58.66 286 P **P** **11 35 47.6 -0.1**
M04C Macdoel 58.78 302 P **P** **11 35 49.2 +0.8**
baz=29
KIC Kosan Boka 58.82 165 *eP* **P** **11 35 47.5 -1.2**
comp=Z,142nm,1.6s
PKCU Pink Cliffs 58.89 292 P **P** **11 35 50.0 +0.6**
LIC Lamto 58.92 166 *eP* **P** **11 35 48.2 -1.2**
comp=Z,103nm,1.6s
SZCU Shurtz Canyon 59.07 293 P **P** **11 35 50.2 -0.4**
YBH Yreka Blue Hor 59.14 303 LR LR 12 01 41.9
comp=Z,1μm,18.9s,baz=25,slow=36
CCUT Cedar City 59.22 293 P **P** **11 35 51.9 +0.3**
R11A Troy Canyon, C 59.40 295 P **P** **11 35 53.3 +0.5**
baz=30,SNR=21
R11A Troy Canyon, C 59.40 295 P **P** **11 35 52.1 -0.7**
BNM Barren Site 59.42 286 P **P** **11 35 53.4 +0.3**
KNB Kanab 59.47 292 P **P** **11 35 53.6 +0.3**
KNB pmax pmax
comp=Z,23nm,1.3s
KNB Kanab 59.47 292 P **P** **11 35 53.6 +0.3**
M02C Callahan 59.49 303 P **P** **11 35 54.5 +1.2**
baz=29
LCMT Little Creek M 59.64 293 P **P** **11 35 54.5 +0.1**
SONM Songino Array 59.67 40 P **P** **11 35 54.3 -0.2**
comp=Z,6.6nm,0.9s,baz=330,slow=7.0,SNR=20
SONM LR LR 12 04 02.1
comp=Z,3μm,20.2s,baz=340,slow=38
SONM Songino Array 59.67 40 P **P** **11 35 53.7 -0.7**
PAHR Pah Rah Range 59.68 299 P **P** **11 35 55.0 +0.3**
PAHR IAmb IAmb 11 36 00.2
comp=Z,24nm,1.4s
JCT Junction City 59.71 278 P **P** **11 35 54.0 -0.9**
JCT pmax pmax
comp=Z,43nm,1.1s
JCT Junction City 59.71 278 P **P** **11 35 56.5 +1.6**
baz=30,SNR=18
JCT Junction City 59.71 278 P **P** **11 35 54.0 -0.9**
JCT IAMs_20 IAMs_20 12 00 19.6
comp=Z,2μm,20.0s
SHME Shamm 59.73 93 P **P** **11 35 53.6 -1.3**
U15A North Rim 59.76 292 P **P** **11 35 54.4 -1.0**

U15A IAmb IAmb 11 35 57.3
comp=Z,24nm,1.1s
U15A IAMs_20 IAMs_20 12 02 09.1
comp=Z,1µm,19.0s
KVN Kaiserville 59.76 298 P **P** **11 35 54.5 -0.8**
KVN pmax pmax
comp=Z,17nm,1.1s
KVN MLR MLR
comp=Z,5µm,18.0s
KVN Kaiserville 59.76 298 P **P** **11 35 54.5 -0.8**
KVN IAmb IAmb 11 36 00.4
comp=Z,17nm,1.1s
N02D Trinity Center 59.80 302 P **P** **11 35 56.0 +0.6**
baz=29
ULN Ulaanbaatar 59.82 40 *ce*P **P** **11 35 54.9 -0.6**
ULN pmax pmax
comp=Z,56nm,2.5s
ULN Ulaanbaatar 59.82 40 P **P** **11 35 55.4 -0.2**
ULN IAmb IAmb 11 36 01.5
comp=Z,37nm,1.4s
W18A Petrified Fore 59.86 289 P **P** **11 35 56.4 +0.4**
baz=30
W18A Petrified Fore 59.86 289 P **P** **11 35 56.6 +0.6**
W18A IAmb IAmb 11 36 03.2
comp=Z,20nm,1.3s
BANOM Banah 59.91 93 P **P** **11 35 55.3 -1.0**
BEKR Beckworth 59.91 300 P **P** **11 35 56.4 +0.1**
PRN Pahroc Range 60.01 294 P **P** **11 35 57.8 +0.8**
PRN IAmb IAmb 11 36 04.1
comp=Z,36nm,1.4s
O03E Paynes Creek 60.07 301 P **P** **11 35 57.7 +0.5**
baz=29
VCNR Virginia City 60.14 299 P **P** **11 35 58.5 +0.6**
VCNR IAmb IAmb 11 36 04.1
comp=Z,30nm,1.7s
WUAZ Wupatki 60.18 290 P **P** **11 35 58.8 +0.6**
baz=30,SNR=18
WUAZ Wupatki 60.18 290 P **P** **11 35 57.4 -0.8**
735A Kenedy 60.26 275 IAMs_20 IAMs_20 12 01 56.2
comp=Z,1µm,19.0s
KHMM Horse Mountain 60.26 303 P **P** **11 35 59.4 +0.7**
KHMM IAmb IAmb 11 36 07.4
comp=Z,36nm,1.3s
TPH Tonopah 60.28 296 P **P** **11 35 58.0 -0.9**
TPH pmax pmax
comp=Z,47nm,1.3s
TPH Tonopah 60.28 296 P **P** **11 35 58.0 -0.9**
NV11 Mina Array Sit 60.32 297 P **P** **11 35 58.3 -0.8**
MSFE Esma-Masafi 60.34 93 *i* P **P** **11 35 58.1 -1.1**
SNR=6.5
NVAR Mina Array Bea 60.38 297 P **P** **11 35 59.7 +0.1**
comp=Z,2.6nm,0.9s,baz=52,slow=4.6,SNR=17
NVAR LR LR 12 02 09.8
comp=Z,5µm,18.9s,baz=24,slow=36
NVAR Mina Array Bea 60.38 297 P **P** **11 35 59.0 -0.6**
NIL Nilore 60.42 74 P **P** **11 35 59.4 -0.3**
NIL pmax pmax
comp=Z,76nm,1.4s
NIL MLR MLR
comp=Z,900nm,20.0s
NIL Nilore 60.42 74 P **P** **11 35 59.4 -0.3**
MDH Madha 60.45 93 P **P** **11 35 59.2 -0.7**
X18A Snowflake 60.46 289 P **P** **11 35 59.4 -0.7**
ORV Oroville 60.60 301 P **P** **11 36 00.6 -0.2**
ORV pmax pmax
comp=Z,20nm,1.6s
ORV MLR MLR
comp=Z,4µm,18.0s
ORV Oroville 60.60 301 P **P** **11 36 00.6 -0.2**
LHV Little Huntoon 60.62 298 P **P** **11 36 01.8 +0.9**
ASUD Al Ashush, Dub 60.62 94 P **P** **11 36 01.7 +0.6**
FAQ Al Faqa, Dubai 60.63 94 P **P** **11 36 01.5 +0.3**
UOSS Minazif 60.72 93 *i* P **P** **11 36 02.3 +0.5**
SNR=6.4
UOSS Minazif 60.72 93 P **P** **11 36 01.1 -0.7**
HATD Hatta, Dubai 60.80 93 *i* P **P** **11 36 00.1 -2.2**
SNR=8.3
KMRM Mail Ridge 60.83 303 IAMs_20 IAMs_20 12 03 51.7
comp=Z,1µm,19.0s
SHPR Sheep Range 60.84 294 P **P** **11 36 02.3 -0.3**
SHPR IAmb IAmb 11 36 05.8
comp=Z,21nm,1.2s
SHPR IAMs_20 IAMs_20 12 02 15.5
comp=Z,1µm,20.0s
TPNV Topopah Spring 60.88 295 P **P** **11 36 02.8 -0.1**
TPNV pmax pmax
comp=Z,35nm,1.6s
TPNV MLR MLR
comp=Z,2µm,20.0s
TPNV Topopah Spring 60.88 295 P **P** **11 36 03.5 +0.5**
baz=29,SNR=10
TPNV Topopah Spring 60.88 295 P **P** **11 36 02.8 -0.1**
TPNV IAmb IAmb 11 36 22.1
comp=Z,35nm,1.6s
TPNV IAMs_20 IAMs_20 12 02 14.6
comp=Z,2µm,20.0s
AFDM Forest Hills D 60.94 300 P **P** **11 36 03.9 +0.7**
MNTX Cornudas Mount 61.02 283 P **P** **11 36 04.9 +1.2**
baz=30,SNR=11
MNTX Cornudas Mount 61.02 283 P **P** **11 36 03.6 -0.1**
MNTX IAMs_20 IAMs_20 12 01 54.3
comp=Z,1µm,18.0s
MTDJ Mount Denham 61.02 250 IAMs_20 IAMs_20 11 59 07.0
comp=Z,1µm,20.0s
X16A Lo Mia Camp, P 61.16 290 P **P** **11 36 05.5 +0.5**
X16A IAmb IAmb 11 36 07.9
comp=Z,24nm,1.2s
X16A IAMs_20 IAMs_20 12 02 11.1
comp=Z,1µm,19.0s
GRAC Grapevine Rang 61.27 296 P **P** **11 36 05.9 +0.5**
baz=29
121A Cookes Peak, D 61.30 286 P **P** **11 36 07.2 +1.4**
baz=29,SNR=7.7
121A Cookes Peak, D 61.30 286 P **P** **11 36 06.1 +0.3**
121A IAmb IAmb 11 36 11.7
comp=Z,19nm,1.2s
121A IAMs_20 IAMs_20 12 01 59.7
comp=Z,1µm,19.0s
OMMB Old Mammoth Mi 61.36 298 P **P** **11 36 05.9 -0.5**
OMMB IAmb IAmb 11 36 09.7
comp=Z,18nm,1.4s
833A Chaparral WMA, 61.40 276 P **P** **11 36 08.8 +2.4**
baz=29
833A Chaparral WMA, 61.40 276 IAMs_20 IAMs_20 12 02 20.3
comp=Z,1µm,18.0s
FURC Furnace Creek, 61.54 295 P **P** **11 36 08.0 +0.9**
baz=29
W13A Hualapai Mount 61.55 292 P **P** **11 36 07.3 -0.3**
SOHO SOHO 61.57 93 P **P** **11 36 05.3 -2.2**
HIA Hailar 61.67 30 *i* P **P** **11 36 08.2 +0.3**
HIA pmax pmax
comp=Z,10.0nm,1.0s
SHOC Shoshone, Teco 61.80 294 P **P** **11 36 10.1 +1.1**
baz=29
CWC Cottonwood Cre 62.03 296 P **P** **11 36 11.9 +1.2**
baz=29
TUQ Turquoise Moun 62.07 294 P **P** **11 36 12.1 +1.1**
baz=29
MPMC Manual Prospec 62.14 296 P **P** **11 36 12.7 +1.2**
baz=29,SNR=6.7
Y14A Wickenburg 62.21 291 P **P** **11 36 11.5 -0.4**
Y14A IAMs_20 IAMs_20 12 02 39.0
comp=Z,1µm,19.0s
TX31 Lajitas Ar. Si 62.35 280 P **P** **11 36 13.5 +0.7**
TX31 IAmb IAmb 11 36 16.4
comp=Z,27nm,1.1s
TX32 Lajitas Array 62.35 280 P **P** **11 36 13.7 +0.8**
TXAR Lajitas Array 62.35 280 P **P** **11 36 13.2 +0.3**
comp=Z,6.1nm,1.0s,baz=55,slow=3.8,SNR=33
TXAR LR LR 12 02 33.8
comp=Z,2µm,20.2s,baz=0.0,slow=35
TXAR Lajitas Array 62.35 280 P **P** **11 36 13.0 +0.1**
PDMCI Parker Dam,Lak 62.35 292 P **P** **11 36 13.9 +1.2**
baz=29,SNR=6.7
GSC Goldstone, Bar 62.53 295 P **P** **11 36 13.5 -0.5**
GSC pmax pmax
comp=Z,21nm,1.5s
GSC Goldstone, Bar 62.53 295 P **P** **11 36 15.4 +1.3**
baz=29,SNR=5.5
GSC Goldstone, Bar 62.53 295 P **P** **11 36 13.5 -0.5**
GSC IAmb IAmb 11 36 25.9
comp=Z,21nm,1.5s
GMRC Granite Mounta 62.54 293 P **P** **11 36 15.0 +0.9**
baz=29,SNR=11
PEA0B Petropavlovsk- 62.57 3 *ce*P **P** **11 36 12.0 -1.9**
PETK Petropavlovsk- 62.57 3 P **P** **11 36 13.6 -0.4**
comp=Z,16nm,1.1s,baz=51,slow=5.9,SNR=5.4
PETK Petropavlovsk- 62.57 3 P **P** **11 36 14.8 +0.9**
PETK Petropavlovsk- 62.57 3 P **P** **11 36 14.8 +0.9**
PET Petropavlovsk 62.68 3 *i* P **P** **11 36 13.4 -1.2**
PET pmax pmax
comp=Z,182nm,1.2s
LRMC Laurel Mtn Rad 62.72 295 P **P** **11 36 15.5 +0.2**
baz=28
TUC Tucson 62.73 288 P **P** **11 36 16.4 +1.1**
TUC MLR MLR
comp=Z,1µm,19.0s
TUC Tucson 62.73 288 P **P** **11 36 16.9 +1.5**
baz=29
TUC Tucson 62.73 288 P **P** **11 36 16.4 +1.1**
TUC IAmb IAmb 11 36 18.6
comp=Z,15nm,1.1s
TUC Tucson 62.73 288 IAMs_20 IAMs_20 12 03 00.6
comp=Z,1µm,19.0s
ISA Isabella, Lake 62.87 296 P **P** **11 36 16.8 +0.6**
ISA pmax pmax
comp=Z,15nm,1.2s
ISA MLR MLR
comp=Z,3µm,18.0s
ISA Isabella, Lake 62.87 296 P **P** **11 36 17.4 +1.1**
baz=28,SNR=6.1
ISA Isabella, Lake 62.87 296 P **P** **11 36 16.8 +0.6**
ISA IAmb IAmb 11 36 19.2
comp=Z,15nm,1.1s
IRM Iron Mountain 62.88 293 P **P** **11 36 17.4 +1.1**
baz=29,SNR=9.5
319A Douglas 62.92 286 P **P** **11 36 17.3 +0.6**
319A IAMs_20 IAMs_20 12 03 31.8
comp=Z,2µm,20.0s
BELC Belle Mtn. Jos 63.36 293 P **P** **11 36 21.4 +1.8**
baz=28,SNR=11
EDW2 Edwards Air Fo 63.37 295 P **P** **11 36 21.5 +1.9**
baz=28
BC3 Big Chuckawall 63.44 293 P **P** **11 36 21.9 +1.8**
baz=28,SNR=8.0
113A Mohawk Valley, 63.54 291 P **P** **11 36 20.7 +0.1**
113A IAmb IAmb 11 36 23.3
comp=Z,22nm,1.4s
GLA Glamis 63.72 292 P **P** **11 36 22.6 +0.7**
GLA pmax pmax
comp=Z,68nm,1.8s
GLA Glamis 63.72 292 P **P** **11 36 22.6 +0.7**
baz=28
GLA Glamis 63.72 292 P **P** **11 36 22.6 +0.7**
GLA IAMs_20 IAMs_20 12 03 00.9
comp=Z,1µm,20.0s
TEIG Tepich 63.73 262 IAMs_20 IAMs_20 12 03 05.9
comp=Z,1µm,19.0s
BFSC Mount Baldy Ra 63.80 295 P **P** **11 36 23.4 +0.9**
baz=28
214A Organ Pipe Nat 63.87 290 P **P** **11 36 23.4 +0.5**
baz=28
214A Organ Pipe Nat 63.87 290 P **P** **11 36 21.6 -1.2**
214A IAmb IAmb 11 36 25.5
comp=Z,21nm,1.6s
214A IAMs_20 IAMs_20 12 03 50.8
comp=Z,1µm,20.0s
PFO Pinyon Flats O 63.88 293 LR LR 12 04 31.6
comp=Z,2µm,18.8s,baz=23,slow=36
PFO Pinyon Flats O 63.88 293 *i* P **P** **11 36 24.5 +1.5**
PFO pmax pmax
comp=Z,7.0nm,1.0s
KLR Kul'dur 63.99 22 *i* P **P** **11 36 22.2 -1.1**
KLR pmax pmax
comp=Z,6.0nm,1.2s
MURC Murrieta 64.18 294 P **P** **11 36 25.4 +0.6**
baz=28
SWSC Sam W. Stewart 64.20 293 P **P** **11 36 25.5 +0.6**
baz=28
CPBX Cerro Prieto 64.47 292 IAMs_20 IAMs_20 12 03 22.6
comp=Z,1µm,18.0s
MDP Montagnes des 64.49 220 P **P** **11 36 26.4 -0.6**
comp=Z,12nm,0.9s,baz=18,slow=7.0,SNR=3.3
MONP2 Monument Peak 64.50 293 P **P** **11 36 28.0 +0.8**
baz=28
IKP In-Ko-Pah, Jac 64.59 293 P **P** **11 36 28.8 +1.3**
baz=28
109C Camp Elliot, M 64.77 294 P **P** **11 36 30.3 +1.6**
baz=28
ESJX Sierra Juarez 65.09 292 IAMs_20 IAMs_20 12 03 54.1
comp=Z,1µm,20.0s
HPIG 65.29 281 P **P** **11 36 31.4 -1.0**
GTA Gaotai 65.31 49 ⇑P **P** **11 36 32.5 +0.2**
GTA pP pP 11 36 36.0 0.0
GTA sP sP 11 36 38.6 +1.2
GTA sS sS 11 45 22.0 0.0
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA pmax pmax
comp=Z,470nm,5.5s
GTA LR LR
comp=Z,1µm,17.5s
GTA LR LR
comp=Z,1µm,18.2s
GTA LR LR
comp=Z,2µm,17.8s
HSIG 65.68 286 P **P** **11 36 34.4 -0.3**
HSIG IAmb IAmb 11 36 37.0
comp=Z,23nm,1.1s
SPX San Pedro Mart 65.75 291 P **P** **11 36 35.3 -0.1**
SPX IAmb IAmb 11 36 38.6
comp=Z,16nm,1.1s
SDV Santo Domingo 66.83 239 P **P** **11 36 40.9 -1.4**
SDV IAmb IAmb 11 36 45.1
comp=Z,18nm,0.8s
SDV Santo Domingo 66.83 239 *e*P **P** **11 36 43.5 +1.2**
PETF Flores 67.34 262 IAMs_20 IAMs_20 12 05 07.8
comp=Z,912nm,19.0s
HHC Hu-ho-hao-te 67.54 40 *e*P **P** **11 36 48.1 +1.6**
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,240nm,6.6s
HHC LR LR
comp=Z,530nm,13.3s
HHC LR LR
comp=Z,960nm,12.9s
HHC LR LR
comp=Z,520nm,14.2s
ZAIG Zacatecas 67.63 276 P **P** **11 36 47.2 -0.3**
ZAIG IAmb IAmb 11 36 51.1
comp=Z,15nm,1.1s
CN2 Changchun 68.08 28 *e*P **P** **11 36 49.6 -0.1**
CN2 pmax pmax
comp=Z,380nm,5.0s
USRK Ussuriysk Ar. 68.92 23 P **P** **11 36 54.5 -0.4**
comp=Z,1.8nm,0.8s,baz=95,slow=4.6,SNR=4.2
USRK LR LR 12 09 15.2
comp=Z,493nm,18.1s,baz=333,slow=38
MATN Matagalpa 69.24 256 IAMs_20 IAMs_20 12 05 04.0
comp=Z,1µm,20.0s
PYUN Piuthan 69.26 68 *e*P **P** **11 36 57.6 0.0**
comp=Z,108nm,1.1s
CMIG Matias Romero 69.34 266 LR LR 12 06 52.5
comp=Z,526nm,21.2s,baz=2.0,slow=36
DANN Dangsing 69.35 68 *e*P **P** **11 36 58.4 +0.2**
comp=Z,72nm,1.1s
HUEH Huehuetenango 69.47 262 IAMs_20 IAMs_20 12 06 40.1
comp=Z,1µm,22.0s
MCPB Macapa, AP 69.56 217 *e*P **P** **11 36 59.6 +0.3**
LZH Lanzhou 69.64 48 *e*P **P** **11 37 01.1 +1.3**
LZH pP sP 11 37 05.9 +1.0
LZH S **S** **11 46 12.5 +4.5**
LZH SS **SS** **11 50 30.8 -4.1**
LZH pmax pmax
comp=Z,30nm,1.0s
LZH pmax pmax
comp=Z,590nm,4.3s
LZH LR LR
comp=Z,400nm,12.5s
LZH LR LR
comp=Z,280nm,14.6s
LZH LR LR
comp=Z,200nm,13.0s
NBMO Morrinhos-CE 69.77 204 *e*P **P** **11 37 02.4 +1.9**
ACON Acoyapa 69.79 255 IAMs_20 IAMs_20 12 04 38.6
comp=Z,1µm,21.0s
KOLN Koldanda 69.80 68 *e*P **P** **11 37 00.8 -0.1**
comp=Z,132nm,1.3s
GKN Gorkha 70.01 67 *e*P **P** **11 37 01.7 -0.4**
comp=Z,180nm,1.6s
KKN Kakani 70.45 67 *e*P **P** **11 37 05.0 +0.1**
comp=Z,89nm,1.3s
TLIG Tlapa 70.51 270 P **P** **11 37 04.0 -1.2**
TLIG IAmb IAmb 11 37 11.0
comp=Z,27nm,1.3s
DMN Daman 70.54 67 *e*P **P** **11 37 05.4 -0.1**
comp=Z,94nm,1.4s
GUN Gumba 70.58 66 *e*P **P** **11 37 05.6 -0.2**
comp=Z,88nm,1.2s
PKIN Phulchoki 70.69 67 *e*P **P** **11 37 06.7 +0.3**
comp=Z,73nm,1.5s
PKI Pulchoki 70.70 67 *e*P **P** **11 37 06.0 -0.5**
comp=Z,63nm,1.3s
YUK Yuzh-Kuril'sk 70.92 13 P P 11 37 00.5 -6.7
YUK S **S** **11 46 24.6 +2.4**
LSA Lhasa 71.01 61 P **P** **11 37 10.4 +1.8**
HDC Heredia 71.12 253 IAMs_20 IAMs_20 12 05 25.8
comp=Z,1µm,20.0s
MALB Monte Alegre 71.58 219 *e*P **P** **11 37 14.0 +2.5**
RAMN Ramite 71.72 66 *e*P **P** **11 37 12.3 -0.3**
comp=Z,96nm,1.5s
TAPN Taplejung 71.80 65 *e*P **P** **11 37 12.8 -0.4**
comp=Z,81nm,1.4s
DL2 Dalian 71.93 33 P **P** **11 37 15.3 +1.9**
DL2 S **S** **11 46 38.6 +4.5**
DL2 pmax pmax
comp=Z,24nm,1.4s
DL2 pmax pmax
comp=Z,280nm,6.8s
DL2 LR LR
comp=Z,2µm,15.3s
DL2 LR LR
comp=Z,670nm,17.1s
DL2 LR LR
comp=Z,2µm,17.7s
ROSC El Rosal 71.93 241 P **P** **11 37 13.8 -0.3**
comp=Z,9.8nm,0.5s,baz=74,slow=6.7,SNR=6.5
ROSC LR LR 12 05 15.3
comp=Z,1µm,21.8s,baz=23,slow=33
ROSC El Rosal 71.93 241 P **P** **11 37 13.4 -0.7**
ROSC IAMs_20 IAMs_20 12 04 53.0
comp=Z,1µm,22.0s
ODAN Odare 72.11 65 *e*P **P** **11 37 14.7 -0.3**
comp=Z,192nm,1.4s
XAN Xi'an 73.11 44 P **P** **11 37 19.9 -0.7**
XAN pP pP 11 37 24.8 +0.4
XAN sP sP 11 37 27.5 +1.7
XAN PP **PP** **11 40 08.1 +5.4**
XAN S **SKiKP** **11 46 53.1 +0.8**
XAN pmax pmax
comp=Z,11nm,1.1s
XAN pmax pmax
comp=Z,480nm,5.1s
XAN LR LR
comp=Z,2µm,20.1s
XAN LR LR
comp=Z,2µm,19.0s
XAN LR LR
comp=Z,3µm,23.3s
XAN Xi'an 73.11 44 P **P** **11 37 20.1 -0.5**
XAN pmax pmax
comp=Z,20nm,1.3s
XAN MLR MLR
comp=Z,2µm,22.0s
XAN Xi'an 73.11 44 P **P** **11 37 20.1 -0.5**
CD2 Chengdu 74.37 50 P **P** **11 37 28.3 +0.3**
CD2 PP **PP** **11 40 15.8 +2.2**
CD2 S **S** **11 46 59.5 -2.7**
CD2 SS **SS** **11 51 47.8 +0.6**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 pmax pmax
comp=Z,540nm,5.1s
CD2 LR LR
comp=Z,2µm,16.7s
CD2 LR LR
comp=Z,2µm,21.0s
CD2 LR LR
comp=Z,2µm,23.9s
ITTB Itaituba 74.39 220 *e*P **P** **11 37 29.0 +0.8**
INCN Inchon 74.40 29 IAMs_20 IAMs_20 12 11 19.6
comp=Z,1µm,21.0s
PRPB Parauapebas 74.59 214 *e*P **P** **11 37 29.8 +0.5**
KSRS Korea Array 74.69 28 P **P** **11 37 29.3 -0.4**
comp=Z,2.2nm,0.9s,baz=333,slow=4.9,SNR=4.5
KSRS LR LR 12 13 49.0
comp=Z,782nm,18.3s,baz=342,slow=38
KSAR Wonju Array Be 74.70 28 P **P** **11 37 29.2 -0.5**
KSAR Wonju Array Be 74.70 28 P **P** **11 37 29.2 -0.5**
SHL Shillong 75.01 62 P **P** **11 37 31.6 -0.4**
SHL pmax pmax
comp=Z,43nm,1.3s
KMBO Kilima Mbogo 76.58 123 LR LR 12 14 40.2
comp=Z,812nm,19.4s,baz=280,slow=38
KMBO Kilima Mbogo 76.58 123 IAMs_20 IAMs_20 12 14 36.0
comp=Z,870nm,20.0s
ENH Enshi 76.79 45 P **P** **11 37 42.0 +0.1**
NPGB Novo Progresso 76.84 219 *e*P **P** **11 37 43.6 +1.4**
MAT Matsushiro 77.38 20 P **P** **11 37 45.9 +0.8**
MAT S **S** **11 47 38.0 +2.8**
MJAR Matsushiro Arr 77.38 20 P **P** **11 37 43.9 -1.2**
comp=Z,1.9nm,0.8s,baz=32,slow=4.4,SNR=3.0
NJ2 Nanjing 77.77 37 *e*P **P** **11 37 45.8 -1.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 pmax pmax
comp=Z,250nm,4.7s
NJ2 LR LR
comp=Z,2µm,16.7s
NJ2 LR LR
comp=Z,570nm,16.5s
NJ2 LR LR
comp=Z,2µm,17.1s
JTU Tsushima 77.82 28 IAMs_20 IAMs_20 12 15 43.1
comp=Z,859nm,19.0s
WHN Wuhan 77.97 41 P **P** **11 37 49.0 +0.6**
WHN S **S** **11 47 46.1 +4.5**
WHN LR LR
comp=Z,2µm,15.0s
WHN LR LR
comp=Z,2µm,19.7s
WHN LR LR
comp=Z,3µm,20.3s
SSE Sheshan 79.27 35 P **P** **11 37 56.8 +1.2**
SSE S **S** **11 47 56.8 +1.3**
SSE pmax pmax
comp=Z,13nm,0.7s
SSE pmax pmax
comp=Z,200nm,3.9s
SSE LR LR
comp=Z,650nm,18.0s
SSE LR LR
comp=Z,410nm,18.1s
KMI Kunming 79.36 53 ⇑*e*P **P** **11 37 58.4 +2.0**
KMI pP sP 11 38 02.3 +0.6
KMI sP PcP 11 38 04.8 +0.2
KMI PP **PP** **11 40 59.4 +3.6**
KMI S **S** **11 47 56.8 -0.3**
KMI sS pS 11 48 02.4 +0.4
KMI SS **SS** **11 53 03.3 +0.2**
KMI pmax pmax
comp=Z,18nm,0.7s
KMI pmax pmax
comp=Z,310nm,4.9s
KMI LR LR
comp=Z,580nm,23.0s
KMI LR LR
comp=Z,580nm,16.5s
KMI LR LR
comp=Z,860nm,27.2s
KMI Kunming 79.36 53 IAMs_20 IAMs_20 12 18 35.7
comp=Z,937nm,19.0s
GYA Guiyang 79.44 49 ⇑P **P** **11 37 57.8 +1.1**
GYA S **S** **11 47 59.8 +2.1**
GYA pmax pmax
comp=Z,9.0nm,1.2s
GYA pmax pmax
comp=Z,430nm,3.5s
GYA LR LR
comp=Z,640nm,14.8s
GYA LR LR
comp=Z,500nm,16.0s
GYA LR LR
comp=Z,760nm,14.6s
SAML Samuel 80.92 226 P **P** **11 38 03.8 -0.8**
SAML pmax pmax
comp=Z,10.0nm,1.1s
SAML Samuel 80.92 226 P **P** **11 38 03.8 -0.8**

SAML	**Samuel**	**80.92**	**226**		IAMs_20	IAMs_20	12 07 52.0		
	comp=Z,850nm,22.0s								
SAML	**Samuel**	**80.92**	**226**	*eP*	**P**		**11 38 05.8**	**+1.3**	
JSU	**Suzuyama**	**80.96**	**27**		IAMs_20	IAMs_20	12 19 02.1		
	comp=Z,829nm,20.0s								
ETMB	**Extrema**	**82.70**	**228**	*eP*	**P**		**11 38 14.5**	**+0.6**	
BDFB	**Brasilia**	**83.34**	**210**	LR	LR		12 09 08.2		
	comp=Z,1µm,21.8s,baz=334,slow=31								
CHTO	**Chiang Mai**	**83.80**	**59**	P	**P**		**11 38 18.7**	**-1.0**	
CHTO				pmax	pmax				
	comp=Z,23nm,1.3s								
CHTO				MLR	MLR				
	comp=Z,800nm,19.0s								
CHTO	**Chiang Mai**	**83.80**	**59**	P	**P**		**11 38 18.7**	**-1.0**	
CHTO				IAmb	IAmb		11 38 25.0		
	comp=Z,23nm,1.2s								
CHTO	**Chiang Mai**	**83.80**	**59**		IAMs_20	IAMs_20	12 18 12.4		
	comp=Z,783nm,19.0s								
CMAR	**Chiang Mai Arr**	**84.13**	**59**	P	**P**		**11 38 20.8**	**-0.6**	
	comp=Z,4.2nm,0.9s,baz=319,slow=6.5,SNR=24								
CMAR				PP	**PP**		**11 41 33.0**	**-2.0**	
	comp=Z,0.5nm,0.3s,baz=333,slow=9.3,SNR=4.4								
CMAR				LR	LR		12 18 41.8		
	comp=Z,635nm,19.1s,baz=360,slow=38								
CMAR	**Chiang Mai Arr**	**84.13**	**59**	*ce*P	**P**		**11 38 21.7**	**+0.3**	
CMAR				pmax	pmax				
	comp=Z,4.0nm,0.9s								
IPMB	**Ipameri, GO**	**85.66**	**209**	*eP*	**P**		**11 38 28.8**	**-0.1**	
PALK	**Pallekele**	**86.95**	**80**		IAMs_20	IAMs_20	12 19 12.7		
	comp=Z,947nm,20.0s								
SIV	**San Ignacio**	**86.96**	**222**	P	**P**		**11 38 36.6**	**+1.3**	
	comp=Z,5.8nm,1.2s,baz=123,slow=1.3,SNR=5.2								
QIZ	**Qiongzhong**	**87.39**	**49**	P	**P**		**11 38 36.3**	**-1.3**	
QIZ				S	**S**		**11 49 16.8**	**-1.3**	
QIZ				LR	LR				
	comp=Z,320nm,8.3s								
QIZ				LR	LR				
	comp=Z,860nm,19.2s								
QIZ				LR	LR				
	comp=Z,1µm,18.6s								
NNA	**Nana**	**88.38**	**237**		IAMs_20	IAMs_20	12 17 52.8		
	comp=Z,636nm,20.0s								
LPAZ	**La Paz**	**89.39**	**228**	LR	LR		12 16 13.9		
	comp=Z,292nm,19.6s,baz=7.5,slow=34								
PB16	**IPOC Station P**	**91.75**	**229**	P	**P**		**11 38 57.3**	**-1.2**	
PB16				IAmb	IAmb		11 39 08.6		
	comp=Z,24nm,1.6s								
MNMC	**Minye Minye**	**92.52**	**228**	P	**P**		**11 39 01.9**	**+0.2**	
MNMC				IAmb	IAmb		11 39 08.2		
	comp=Z,16nm,1.2s								
DLV	**T Lat**	**93.55**	**53**		IAMs_20	IAMs_20	12 25 53.4		
	comp=Z,871nm,21.0s								
ITAB	**Concordia**	**95.45**	**211**	*eP*	**P**		**11 39 16.6**	**+2.0**	
CPUP	**Villa Florida**	**95.81**	**215**	LR	LR		12 18 21.0		
	comp=Z,697nm,19.1s,baz=19,slow=33								
KULM	**Kulim**	**96.85**	**62**		IAMs_20	IAMs_20	12 31 59.1		
	comp=Z,672nm,18.0s								
IPM	**Ipoh**	**97.74**	**62**		IAMs_20	IAMs_20	12 28 24.7		
	comp=Z,743nm,22.0s								
BOSA	**Boshof**	**98.67**	**143**	LR	LR		12 26 29.2		
	comp=Z,2µm,18.3s,baz=345,slow=37								
AC02	**Maricunga**	**99.58**	**225**		IAMs_20	IAMs_20	12 20 28.3		
	comp=Z,798nm,20.0s								
MYKOM	**Kota Tinggi**	**101.28**	**61**		IAMs_20	IAMs_20	12 29 32.4		
	comp=Z,676nm,20.0s								
BKNI	**Bangkinang**	**101.55**	**64**		IAMs_20	IAMs_20	12 29 31.7		
	comp=Z,724nm,22.0s								
KKM	**Kota Kinabalu**	**101.62**	**47**		IAMs_20	IAMs_20	12 27 49.7		
	comp=Z,627nm,21.0s								
DAV	**Davao City (W)**	**103.39**	**38**		IAMs_20	IAMs_20	12 29 22.3		
	comp=Z,624nm,18.0s								
SBUM	**Sibu**	**103.68**	**52**		IAMs_20	IAMs_20	12 29 07.0		
	comp=Z,668nm,22.0s								
KSM	**Kuching**	**103.92**	**55**		IAMs_20	IAMs_20	12 30 56.6		
	comp=Z,622nm,21.0s								
PMBI	**Palembang**	**105.97**	**62**		IAMs_20	IAMs_20	12 37 25.4		
	comp=Z,403nm,19.0s								
CISI	**Cisompet, Garu**	**111.37**	**60**		IAMs_20	IAMs_20	12 37 59.0		
	comp=Z,657nm,21.0s								
FAKI	**Fak Fak**	**114.67**	**34**		IAMs_20	IAMs_20	12 35 53.5		
	comp=Z,444nm,22.0s								
SOEI	**Soe**	**119.04**	**44**		IAMs_20	IAMs_20	12 44 02.2		
	comp=Z,639nm,22.0s								
RKT	**Rikitea**	**122.42**	**285**	*e*LR	LR		12 22 31.4		
	comp=Z,715nm,24.0s								
PPT2	**Papeete2**	**123.19**	**302**	*e*LR	LR		12 23 07.2		
	comp=Z,843nm,22.0s								
KNRA	**Kununurra**	**125.97**	**42**		IAMs_20	IAMs_20	12 36 48.9		
	comp=Z,444nm,21.0s								
TBI	**Tubuai**	**128.41**	**299**	*e*LR	LR		12 25 26.0		
	comp=Z,810nm,23.5s								
WRAB	**Tennant Creek**	**131.55**	**37**	*i* PKIKP	**PKPdf**		**11 45 03.3**	**+0.5**	
WRAB	**Tennant Creek**	**131.55**	**37**		**PKPdf**		**11 45 03.7**	**+0.9**	
WRA	**Warramunga Arr**	**131.55**	**37**	PKP	**PKPdf**		**11 45 03.0**	**+0.1**	
	comp=Z,3.0nm,1.1s,baz=340,slow=2.6,SNR=10								
WRA	**Warramunga Arr**	**131.55**	**37***c*	*i*PKIKP	**PKiKP**		**11 45 04.0**	**+0.2**	
WRA				pmax	pmax				
	comp=Z,4.0nm,1.1s								
WB2	**Warramunga Arr**	**131.56**	**37**		**PKPdf**		**11 45 03.5**	**+0.7**	
ASAR	**Alice Springs**	**134.99**	**39**	PKhKP	PKPpre		11 44 59.2		
	comp=Z,0.7nm,1.0s,baz=17,slow=1.3,SNR=3.5								
ASAR				PKP	**PKPdf**		**11 45 08.9**	**-0.3**	
	comp=Z,2.5nm,1.0s,baz=356,slow=2.4,SNR=13								
ASAR	**Alice Springs**	**134.99**	**39**	PKPdf	**PKPdf**		**11 45 07.9**	**-1.3**	
SNAA	**Sanae**	**136.36**	**173**	PKIKP	**PKPdf**		**11 45 10.1**	**-0.2**	
SNAA	**Sanae**	**136.36**	**173**	PKPdf	**PKPdf**		**11 45 10.1**	**-0.2**	
SNAA				IAMs_20	IAMs_20		12 33 37.5		
	comp=Z,388nm,22.0s								
DZM	**Mont Dzumac**	**137.42**	**355**	*e*LR	LR		12 29 38.4		
	comp=Z,1µm,25.3s								
STKA	**Stephens Creek**	**144.76**	**32**	PKP	**PKPab**		**11 45 23.8**	**-1.7**	
	comp=Z,10nm,0.9s,baz=323,slow=5.6,SNR=6.4								
STKA	**Stephens Creek**	**144.76**	**32**	PKIKP	**PKPab**		**11 45 25.8**	**+0.3**	
STKA	**Stephens Creek**	**144.76**	**32**	PKPdf	**PKPab**		**11 45 25.8**	**+0.3**	
QSPA	**South Pole Qui**	**154.51**	**180**	PKPdf	**PKPdf**		**11 45 41.1**	**+0.1**	
QSPA					**pPKPbc**		**11 45 51.9**	**-1.5**	
QSPA				PKPab	**PKPab**		**11 46 05.5**	**+1.4**	

*IDC **14** 11:26:41.6±2.8,21°.50S×170°.04E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.8/28, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=105.9km s-min=36.7km az=155.0*

ISC 14 11:26:45.7±2.2,21°.5S±0°.6×170°.1E±0°.2, h36km, n7, σ0§42/7, mb3.9/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.48**	**260**	Pn	**Pn**	**11 27 37.3**	**-0.2**
	5.7nm,0.3s,baz=116,slow=13,SNR=157						
DZM				Sn	**Sn**	**11 28 17.5**	**+0.1**
	7.0nm,0.3s,baz=310,slow=21,SNR=11						
STKA	**Stephens Creek**	**27.44**	**242**	P	**P**	**11 32 28.1**	**-0.2**
	2.9nm,0.7s,baz=45,slow=10.0,SNR=3.0						
ASAR	**Alice Springs**	**33.47**	**259**	P	**P**	**11 33 21.6**	**-0.1**
	0.8nm,0.8s,baz=79,slow=9.4,SNR=6.9						
WRA	**Warramunga Arr**	**33.48**	**266**	P	**P**	**11 33 21.5**	**-0.3**
	0.9nm,0.6s,baz=98,slow=8.3,SNR=14						
PPT2	**Papeete2**	**38.09**	**91**	*e*LR	LR	11 34 10.8	
	comp=Z,156nm,29.2s						
FITZ	**Fitzroy Crossi**	**41.90**	**267**	P	**P**	**11 34 33.6**	**+0.7**
	2.7nm,0.9s,baz=95,slow=11,SNR=4.0						
GERES	**GERESS Array B**	**146.87**	**331**	PKPbc	**PKPab**	**11 46 25.4**	**-0.2**
	1.1nm,0.6s,baz=23,slow=4.4,SNR=7.3						

*NORS **14** 11:36:38.9±0.0, 43°.60N×45°.74E, h24km, MPVA4.5*
*MOS **14** 11:36:38.7±0.9, 43°.68N×45°.71E, h12km, mb3.9/3, Error ellipse: s-maj=5.6km s-min=4.3km az=70.2*
*DRS **14** 11:36:41.5±0.0, 43°.49N×45°.49E, h18km*
*TIF **14** 11:36:41.0, 43°.60N×45°.66E, h31km±1km*

ISC 14 11:36:41.2±0.9, 43°.62N±0°.03×45°.71E±0°.02, h30km±9km, n84, σ1§64/140, 5C-7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.42**	**171**	*e*Pg	**Pb**	**11 36 48.6**	**-1.8**
GROC				eSg	Sb	**11 36 56.2**	**-0.6**
GROC	**Groznyy**	**0.42**	**171**	*e*PG	**Pb**	**11 36 48.2**	**-2.2**
GROC				pmax	pmax		
	comp=Z,582nm,0.6s						
TRKR	**Terskaya**	**0.71**	**278**	*e*Pg	**Pb**	**11 36 54.1**	**-1.0**
TRKR				*e*Sg	**Sn**	**11 37 05.2**	**0.0**
TRKR	**Terskaya**	**0.71**	**278**	*i* PG	**Pb**	**11 36 54.1**	**-1.0**
TRKR				pmax	pmax		
	comp=Z,320nm,0.3s						
DVE	**Vedeno**	**0.73**	**155**	*e*Pg	**Pb**	**11 36 53.6**	**-1.9**
DVE				*e*Sg	**Sb**	**11 37 04.3**	**-1.0**
DVE	**Vedeno**	**0.73**	**155**	*e*PG	**Pb**	**11 36 53.8**	**-1.7**
KMGR	**Komgaron**	**0.83**	**228**	*e*Pg	**Pn**	**11 36 56.8**	**-0.2**
KMGR				*e*Sg	**Sb**	**11 37 07.8**	**-0.3**
KMGR	**Komgaron**	**0.83**	**228**	*e*PG	**Pn**	**11 36 55.4**	**-1.6**
KMGR				*e*S	**Sb**	**11 37 07.2**	**-0.9**
BTKR	**Batakoyurt**	**0.88**	**254**	*e*Pg	**Pn**	**11 36 57.6**	**-0.1**
BTKR				*e*Sg	**Sn**	**11 37 11.6**	**+2.2**
BTKR	**Batakoyurt**	**0.88**	**254**	*e*PG	**Pn**	**11 36 57.2**	**-0.4**
BTKR				*e*S	**Sn**	**11 37 09.4**	**0.0**
VLKR	**Vladikavkaz**	**0.95**	**233**	*e*Pg	**Pn**	**11 36 58.1**	**-0.4**
VLKR				*e*Pg	**Pn**	**11 36 58.2**	**-0.4**
VLKR				*e*Sg	**Sb**	**11 37 12.2**	**+0.9**
VLKR				*e*Sg	**Sn**	**11 37 12.4**	**+1.4**
VLKR	**Vladikavkaz**	**0.95**	**233**	*e*PG	**Pn**	**11 36 57.8**	**-0.7**
VLKR				*e*S	**Sb**	**11 37 11.3**	**0.0**
BTLR	**Botlikh**	**1.03**	**158**	*e*Pg	**Pn**	**11 36 58.5**	**-1.2**
	comp=Z,258nm,0.5s						
BTLR				*e*Sg	**Sn**	**11 37 12.6**	**-0.5**
	comp=Z,695nm,0.9s						
BTLR	**Botlikh**	**1.03**	**158**	*e*PG	**Pn**	**11 36 59.1**	**-0.6**
BTLR				*e*S	**Sn**	**11 37 12.6**	**-0.5**
PRTR	**Priterechnaya**	**1.04**	**278**	*e*Pg	**Pn**	**11 36 59.9**	**+0.2**
PRTR				*e*Sg	**Sb**	**11 37 15.4**	**+1.5**
PRTR	**Priterechnaya**	**1.04**	**278**	*e*PG	**Pn**	**11 36 59.8**	**+0.1**
PRTR				*e*S	**Sb**	**11 37 15.0**	**+1.1**
ARNR	**Ardon**	**1.13**	**247**	*e*Pg	**Pb**	**11 37 01.4**	**-0.7**
ARNR				*e*Sg	**Sb**	**11 37 18.1**	**+1.7**
ARNR	**Ardon**	**1.13**	**247**	*e*PG	**Pb**	**11 37 01.4**	**-0.7**
ARNR				*e*S	**Sb**	**11 37 18.1**	**+1.7**
STDR	**Stavd-Durt**	**1.22**	**259**	*i* Pg	**Pb**	**11 37 03.3**	**-0.4**
STDR				*e*Sg	**Sb**	**11 37 21.8**	**+2.7**
STDR	**Stavd-Durt**	**1.22**	**259**	⇓*i*PG	**Pb**	**11 37 03.3**	**-0.4**
STDR				*e*S	**Sb**	**11 37 21.8**	**+2.7**
PNSH	**Pansheti**	**1.27**	**219**	P	**Pn**	**11 37 01.1**	**-2.0**
PNSH				S	**Sn**	**11 37 17.4**	**-1.8**
PNSH	**Pansheti**	**1.27**	**219**	PG	**Pn**	**11 37 01.1**	**-2.0**
BUJR	**Buynaksk**	**1.30**	**127**	*i* Pg	**Pb**	**11 37 05.5**	**+0.5**
	comp=Z,368nm,0.5s						
BUJR				*e*Sg	**Sb**	**11 37 25.3**	**+4.0**
	comp=Z,1µm,0.8s						
BUJR	**Buynaksk**	**1.30**	**127**	⇓*i*PG	**Pb**	**11 37 05.5**	**+0.5**
BUJR				*e*		11 37 25.3	
BUJR				pmax	pmax		
	comp=Z,368nm,0.5s						
BUJR				smax	smax		
	comp=N,1µm,0.8s						
LACR	**Lac**	**1.30**	**233**	*e*Pg	**Pn**	**11 37 03.1**	**-0.4**
LACR				*e*Sg	**Sb**	**11 37 21.1**	**-0.4**
LACR	**Lac**	**1.30**	**233**	*e*PG	**Pn**	**11 37 03.1**	**-0.4**
LACR				*e*S	**Sb**	**11 37 21.1**	**-0.4**
XNZR	**Khunzakh**	**1.30**	**146**	*e*Pg	**Pb**	**11 37 04.9**	**-0.3**
XNZR				*e*Sg	**Sb**	**11 37 22.8**	**+1.1**
KORR	**Kora**	**1.31**	**246**	*e*Pg	**Pn**	**11 37 03.9**	**+0.4**
KORR				*e*Sg	**Sb**	**11 37 23.3**	**+1.6**
KORR	**Kora**	**1.31**	**246**	*i* PG	**Pn**	**11 37 03.9**	**+0.4**
KORR				pmax	pmax		
	comp=Z,158nm,0.3s						
LSNR	**Lesken**	**1.41**	**257**	*e*Pg	**Pn**	**11 37 05.5**	**+0.7**
LSNR				*e*Sg	**Sb**	**11 37 26.1**	**+1.5**
LSNR	**Lesken**	**1.41**	**257**	*e*PG	**Pn**	**11 37 05.6**	**+0.7**
LSNR				*e*S	**Sb**	**11 37 26.1**	**+1.5**
GUDG	**Gudauri**	**1.47**	**218**	P	**Pn**	**11 37 05.6**	**-0.2**
GUDG				S	**Sn**	**11 37 24.2**	**+0.1**
GUDG	**Gudauri**	**1.47**	**218**	PG	**Pn**	**11 37 05.6**	**-0.2**
MAK	**Makhachkala**	**1.47**	**116**	*e*PG	**Pn**	**11 37 05.0**	**-0.6**
MAK				*e*		11 37 26.9	
MAK				pmax	pmax		
	comp=Z,168nm,0.3s						
MAK				smax	smax		
	comp=N,1µm,0.7s						
MAK				smax	smax		
	comp=N,1µm,0.6s						
GNBR	**Gunib**	**1.54**	**143**	*i* Pg	**Pb**	**11 37 08.8**	**-0.3**
	comp=N,264nm,0.8s						
GNBR				*e*Sg	**Sb**	**11 37 30.5**	**+2.2**
	comp=N,726nm,0.9s						
GNBR	**Gunib**	**1.54**	**143**	*e*PG	**Pb**	**11 37 08.8**	**-0.3**
GNBR				*e*S	**Sb**	**11 37 29.9**	**+1.6**
ZEI	**Tsey**	**1.56**	**238**	*i* Pg	**Pn**	**11 37 06.4**	**-0.7**
ZEI				*e*Sg	**Sn**	**11 37 26.8**	**+0.4**
ZEI	**Tsey**	**1.56**	**238**	*i* PG	**Pn**	**11 37 06.4**	**-0.7**
ZEI				pmax	pmax		
	comp=Z,573nm,0.4s						
DIGR	**Digorskoe uzhe**	**1.71**	**246**	*e*Pg	**Pn**	**11 37 09.4**	**+0.2**
DIGR				*e*Sg	**Sn**	**11 37 31.3**	**+1.1**
DIGR	**Digorskoe uzhe**	**1.71**	**246**	*e*PN	**Pn**	**11 37 09.4**	**+0.2**
LGD	**Lagodekhi**	**1.83**	**167**	P	**Pb**	**11 37 12.2**	**-1.8**
LGD				S	**Sb**	**11 37 35.5**	**-1.1**
LGD	**Lagodekhi**	**1.83**	**167**	PN	**Pb**	**11 37 12.2**	**-1.8**
SGKR	**Sergokala**	**1.84**	**128**	*i* Pg	**Pb**	**11 37 13.7**	**-0.6**
SGKR				*e*Sg	**Sb**	**11 37 40.8**	**+3.9**
SGKR	**Sergokala**	**1.84**	**128**	⇓*i*PN	**Pb**	**11 37 13.6**	**-0.6**
SGKR				*e*		11 37 40.7	
ONI	**Oni**	**1.95**	**239**	P	**Pn**	**11 37 13.3**	**+1.0**
ONI				S	**Sb**	**11 37 38.5**	**-1.4**
ONI	**Oni**	**1.95**	**239**	*e*PN	**Pn**	**11 37 12.8**	**+0.5**
URKR	**Urkarakh**	**2.03**	**135**	*i* Pg	**Pb**	**11 37 16.7**	**-0.9**
	comp=Z,166nm,0.6s						
URKR				*e*Sg	**Sb**	**11 37 45.4**	**+3.0**
	comp=Z,352nm,0.7s						
URKR	**Urkarakh**	**2.03**	**135**	⇓*e*PN	**Pb**	**11 37 16.6**	**-0.9**
URKR				*e*		11 37 45.3	
URKR				pmax	pmax		
	comp=Z,166nm,0.6s						
URKR				smax	smax		
	comp=N,352nm,0.7s						
KBZ	**Khabaz**	**2.04**	**274***c*	*i*PN	**Pn**	**11 37 12.4**	**-1.1**
BTNK	**Botanikuri**	**2.05**	**199**	P	**Pn**	**11 37 15.3**	**+1.6**
BTNK				S	**Sb**	**11 37 43.2**	**+0.4**
BTNK	**Botanikuri**	**2.05**	**199**	PN	**Pn**	**11 37 15.3**	**+1.6**
BTNK				S	**Sb**	**11 37 43.2**	**+0.4**
ZKTA	**Zakatala**	**2.10**	**161**	PN	**Pn**	**11 37 16.2**	**+1.9**
BEYR	**Belyy Ugol+**	**2.13**	**282**	*e*PN	**Pn**	**11 37 15.3**	**+0.6**
KIV	**Kislovodsk**	**2.21**	**280**	*i* PN	**Pn**	**11 37 15.5**	**-0.4**
GOF	**Gofitskoye**	**2.39**	**308**	⇑*e*PN	**Pb**	**11 37 23.0**	**-0.5**
GOF				*e*S	**Sb**	**11 37 50.4**	**-2.2**
GOF				pmax	pmax		
	comp=Z,25nm,0.4s						
GOF				smax	smax		
	comp=E,162nm,0.4s						
GOF				smax	smax		
	comp=N,317nm,0.5s						
TRLG	**Trialeti**	**2.40**	**210**	P	**Pn**	**11 37 19.3**	**+0.7**
TRLG				S	**Sb**	**11 37 51.4**	**-1.6**
TRLG	**Trialeti**	**2.40**	**210**	PN	**Pn**	**11 37 19.3**	**+0.7**
TRLG				S	**Sb**	**11 37 51.3**	**-1.6**
KZRT	**Kazreti**	**2.44**	**204**	P	**Pn**	**11 37 19.6**	**+0.6**
KZRT				S	**Sn**	**11 37 49.5**	**+1.8**
KZRT	**Kazreti**	**2.44**	**204**	PN	**Pn**	**11 37 19.6**	**+0.6**
KZRT				S	**Sn**	**11 37 49.5**	**+1.8**
BKRG	**Bakuriani**	**2.46**	**222**	P	**Pn**	**11 37 19.3**	**-0.2**
BKRG				S	**Sn**	**11 37 51.3**	**+2.7**
BKRG	**Bakuriani**	**2.46**	**222**	PN	**Pn**	**11 37 19.3**	**-0.2**
BKRG				S	**Sn**	**11 37 51.3**	**+2.7**
DMNI	**Dmanisi**	**2.55**	**207**	P	**Pn**	**11 37 21.3**	**+0.6**
DMNI				S	**Sb**	**11 37 56.8**	**-0.6**
DMNI	**Dmanisi**	**2.55**	**207**	PN	**Pn**	**11 37 21.3**	**+0.6**
DMNI				S	**Sb**	**11 37 56.7**	**-0.6**
SEKA	**Sheki**	**2.65**	**155**	PN	**Pn**	**11 37 23.9**	**+1.9**
AKH	**Akhalkalaki**	**2.75**	**217**	*e*PN	**Pn**	**11 37 24.2**	**+0.8**
NVNR	**Nevinnomyssk**	**2.87**	**291**	*e*PN	**Pb**	**11 37 28.5**	**-3.2**
NVNR				*e*S	**Sb**	**11 38 06.3**	**-0.1**
DOMR	**Dombai**	**2.99**	**265**	*e*PN	**Pn**	**11 37 27.9**	**+1.2**
DOMR				*e*S	**Sn**	**11 38 03.9**	**+2.3**
GANJ	**Ganja**	**3.01**	**171**	PN	**Pn**	**11 37 28.1**	**+1.2**
ARXR	**Arkhyz**	**3.22**	**270**	*e*PN	**Pb**	**11 37 36.8**	**-0.9**
ARXR				*e*S	**Sn**	**11 38 09.8**	**+2.5**
GNI	**Garni**	**3.54**	**192**	*i* PN	**Pn**	**11 37 36.3**	**+2.0**
RPOR	**Krasnaya Polya**	**3.95**	**273**	*e*PN	**Pn**	**11 37 41.8**	**+2.0**
RPOR				*e*S	**Sb**	**11 38 40.0**	**+2.6**
GUZR	**Guzeripl'**	**4.06**	**277**	*e*PN	**Pn**	**11 37 44.1**	**+2.8**
GUZR				*e*S	**Sn**	**11 38 26.3**	**-1.6**
SOC	**Sochi**	**4.35**	**272**	*e*PN	**Pn**	**11 37 44.9**	**-0.3**
SOC				*e*		11 38 36.5	
SOC				MLR	MLR		
	comp=Z,140nm,8.0s						
AKTO	**Aktyubinsk**	**10.81**	**47**	⇓P	**Pn**	**11 39 17.2**	**+3.4**
	comp=Z,1.7nm,0.7s						
AKTO				⇓S	**Sn**	**11 41 07.4**	**-6.2**
	comp=Z,4.5nm,0.5s						
AKTO	**Aktyubinsk**	**10.81**	**47**	P	**Pn**	**11 39 17.2**	**+3.4**
AB31	**Akbulak array**	**11.32**	**55**	⇓P	**Pn**	**11 39 21.6**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=244,slow=13,SNR=28						
AB31				⇑S	**Sn**	**11 41 21.5**	**-4.6**
	comp=Z,1.2nm,0.4s,baz=248,slow=22,SNR=4.1						
AB31	**Akbulak array**	**11.32**	**55**	P	**Pn**	**11 39 21.6**	**+0.8**
AB31				S	**Sn**	**11 41 21.5**	**-4.6**
CFR	**Carcaliu**	**12.66**	**283**	⇑P	**Pn**	**11 39 41.6**	**+2.4**
CFR				⇑S	**P**	**11 39 51.8**	**+1.7**
OBN	**Obninsk**	**12.94**	**336**	*e*P	**Pn**	**11 39 42.9**	**+0.1**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s						
BRVK	**Borovoye**	**18.78**	**51**	*i* P	**P**	**11 40 57.4**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VSU	**Vasula**	**18.95**	**328**	*i* P	**Pn**	**11 41 01.7**	**+1.3**
AAK	**Ala-Archa**	**20.99**	**83**	*i* P	**P**	**11 41 20.9**	**-1.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	**23.33**	**61**	*i* P	**P**	**11 41 45.1**	**-1.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NRIK	**Noril'sk**	**33.41**	**25**	*i* P	**P**	**11 43 15.3**	**-1.4**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.2s						

WEL 14 11:38:55.1, 44°S±9°×17°3E±5°9, h49km±64km, M2.4/4, ML2.5/3, MLv2.4/4, Error ellipse: s-maj=0.2km s-min=0.1km az=22.3, Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKCZ	**Okains Bay**	**0.28**	**229**	P	Pn	11 39 04.3	+0.4
AKCZ	**Akaroa Harbour**	**0.46**	**223**	P	Pn	11 39 06.2	+0.5
MQZ	**McQueen's Vall**	**0.53**	**252**	P	Pn	11 39 04.0	-2.6
AMCZ	**Amberley**	**0.62**	**306**	P	Pn	11 39 07.9	+0.1
RACZ	**Rakaia**	**0.89**	**258**	P	Pn	11 39 10.8	-0.6
WACZ	**Wakanui South**	**1.16**	**249**	P	Pn	11 39 16.2	+1.2
MHCZ	**Mount Hutt**	**1.29**	**270**	P	Pn	11 39 18.5	+1.8
INZ	**Inchbonnie**	**1.61**	**300**	P	Pn	11 39 24.7	+3.6
ARCZ	**Arundel**	**1.62**	**255**	P	Pn	11 39 22.6	+1.4

*IDC **14** 11:50:35.8±1.3,25°.16N×109°.55W, h0km, mb3.4/1, mb1 3.6/5, mb1mx3.5/40, mbtmp3.2/5, ML3.4/4, MS4.3/1, Ms1 4.3/1, ms1mx3.2/28, Error ellipse: s-maj=33.8km s-min=10.5km az=120.0*
*MEX **14** 11:50:38.7±0.6, 25°.32N×109°.86W, h9km±10km, MD4.0*

ISC 14 11:50:36.5±0.8, 25°.25N±0°.06×109°.82W±0°.06, h10km, n14, σ1§41/19, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSIG	**Topolobambo**	**0.78**	**64**	*e*P	**Pb**	**11 50 51.7**	**-0.6**
TSIG				*i* S	**Sb**	**11 51 02.1**	**-0.8**
LPIG	**La Paz**	**1.23**	**201**	Pn	**Pn**	**11 50 59.7**	**-0.1**
	26nm,0.3s,baz=95,slow=1.4,SNR=8.5						
LPIG				Pg	**Pg**	**11 51 00.5**	**+0.3**
	29nm,0.3s,baz=77,slow=1.9,SNR=19						
LPIG				Lg	Lg	11 51 16.8	
	158nm,0.3s,baz=327,slow=8.3,SNR=6.2						
LPIG				LR	LR	11 51 38.6	
	comp=Z,1µm,18.5s,baz=5.5,slow=50						
LPIG	**La Paz**	**1.23**	**201**	*e*P	**Pn**	**11 50 58.7**	**-1.1**
LPIG				*e*S	**Sb**	**11 51 15.0**	**-0.7**
CSIG	**Choix**	**2.04**	**39**	*e*P	**Pn**	**11 51 10.1**	**-0.9**
CSIG				*i* S	**Sn**	**11 51 33.4**	**-3.2**
SSIG	**Sanalona**	**2.46**	**99**	*i* P	**Pn**	**11 51 16.8**	**-0.1**
SSIG				*e*S	**Sn**	**11 51 47.3**	**+0.3**
PDIG	**Papasquiaro**	**4.01**	**92**	*e*P	**Pn**	**11 51 38.5**	**+0.3**
HPIG		**4.09**	**65**	*i* P	**Pn**	**11 51 40.1**	**+0.7**
HPIG				*i* S	**Sn**	**11 52 26.9**	**-0.6**
CGIG		**5.35**	**17**	*i* P	**Pn**	**11 51 55.9**	**-0.7**
TXAR	**Lajitas Array**	**6.81**	**52**	Pn	**Pn**	**11 52 16.1**	**-0.6**
	0.2nm,0.3s,baz=231,slow=13,SNR=14						
TXAR				Lg

WMOK	**Wichita Mounta**	**2.00**	**200**	P		**Pn**	**11 59 05.6 +1.1**
	baz=20						
WMOK				Sb		**Sb**	**11 59 32.8 +0.8**
	baz=20						
WMOK	**Wichita Mounta**	**2.00**	**200**	Pn		**Pn**	**11 59 05.9 +1.4**
CBKS	**Cedar Bluff**	**2.62**	**328**	P		**Pn**	**11 59 14.1 +1.0**
	baz=147,SNR=26						
CBKS				S		**Sn**	**11 59 47.1 +2.3**
	baz=147						
CBKS	**Cedar Bluff**	**2.62**	**328**	Pn		**Pn**	**11 59 14.8 +1.8**
KSU1	**Kansas State U**	**2.69**	**23**	P		**Pn**	**11 59 15.2 +1.0**
	baz=203,SNR=27						
KSU1				Sb		**Sb**	**11 59 54.5 +2.3**
	baz=203						
U38A	**Gravette**	**2.87**	**92**	Pn		**Pn**	**11 59 18.6 +2.1**
X37A	**Clayton**	**2.91**	**133**			**Pn**	**11 59 18.6 +1.5**
HHAR	**Hobbs**	**3.24**	**95**	Pn		**Pn**	**11 59 23.6 +2.0**
Z35A	**Perchaven, San**	**3.33**	**170**			**Pn**	**11 59 24.6 +1.8**
AMTX	**Amarillo**	**3.50**	**241**	Pb		**Pb**	**11 59 33.5 +0.7**
	baz=59						
AMTX				Sb		**Sb**	**12 00 18.6 +3.3**
	baz=59						
AMTX	**Amarillo**	**3.50**	**241**	Pn		**Pn**	**11 59 28.2 +2.9**
W39A	**Magazine**	**3.66**	**112**	Pb		**Pb**	**11 59 37.3 +1.8**
	baz=294						
W39A	**Magazine**	**3.66**	**112**			**Pn**	**11 59 28.4 +1.0**
S39A	**Bolivar**	**3.84**	**72**	Pn		**Pn**	**11 59 31.7 +1.9**
U40A	**Yellville**	**4.11**	**92**	P		**Pn**	**11 59 35.1 +1.6**
	baz=275						
U40A				S		**Sn**	**12 00 23.1 +1.5**
	baz=275						
U40A	**Yellville**	**4.11**	**92**	Pn		**Pn**	**11 59 35.4 +1.9**
MIAR	**Mount Ida**	**4.11**	**119**	Pb		**Pb**	**11 59 44.7 +1.4**
	baz=301						
MIAR				S		**Sn**	**12 00 23.1 +1.4**
	baz=301						
MIAR	**Mount Ida**	**4.11**	**119**	Pn		**Pn**	**11 59 34.1 +0.5**
N33A	**J Bar K, Exete**	**4.13**	**5**	Pn		**Pn**	**11 59 34.4 +0.5**
Z38A	**Mt. Pleasant**	**4.13**	**143**	Pn		**Pn**	**11 59 35.2 +1.3**
ABTX	**Abilene, Hawle**	**4.22**	**200**	Pn		**Pn**	**11 59 38.3 +3.1**
KSCO	**Kaye Shedlock'**	**4.42**	**304**	P		**Pn**	**11 59 39.0 +1.1**
	baz=122						
KSCO				S		**Sn**	**12 00 30.6 +1.3**
	baz=122						
KSCO	**Kaye Shedlock'**	**4.42**	**304**	Pn		**Pn**	**11 59 38.8 +0.9**
MGMO	**Mountain Grove**	**4.58**	**82**			**Pn**	**11 59 42.0 +1.9**
P38A	**Dawn**	**4.59**	**48**	Pn		**Pn**	**11 59 42.6 +2.4**
N35A	**Tabor**	**4.60**	**22**			**Pn**	**11 59 41.9 +1.6**
WHTX	**Lake Whitney,**	**4.63**	**175**	P		**Pn**	**11 59 41.9 +1.1**
	baz=355						
WHTX				S		**Sn**	**12 00 35.4 +0.9**
	baz=355						
WHTX	**Lake Whitney,**	**4.63**	**175**			**Pn**	**11 59 42.0 +1.3**
X40A	**Basin Creek Fa**	**4.67**	**116**	P		**Pn**	**11 59 43.1 +1.8**
	baz=298						
X40A	**Basin Creek Fa**	**4.67**	**116**			**Pn**	**11 59 43.6 +2.3**
MSTX	**Muleshoe**	**4.75**	**238**	P		**Pn**	**11 59 43.4 +0.9**
	baz=55,SNR=9.4						
MSTX	**Muleshoe**	**4.75**	**238**			**Pn**	**11 59 44.4 +1.9**
FCAR	**Ozark Folk Cen**	**4.76**	**97**			**Pn**	**11 59 44.0 +1.6**
WHAR	**Wooly Hollow**	**4.77**	**104**			**Pn**	**11 59 44.1 +1.5**
BGNE	**Belgrade**	**4.79**	**358**	P		**Pn**	**11 59 43.9 +1.0**
	baz=178						
BGNE	**Belgrade**	**4.79**	**358**	Pn		**Pn**	**11 59 44.0 +1.0**
R40A	**Maddies Statio**	**4.81**	**68**	Pn		**Pn**	**11 59 44.6 +1.4**
W41B	**Gary Mavity, V**	**4.84**	**106**	P		**Pn**	**11 59 44.7 +1.2**
	baz=289,SNR=8.4						
W41B				S		**Sn**	**12 00 39.9 +0.3**
	baz=289						
W41B	**Gary Mavity, V**	**4.84**	**106**	Pn		**Pn**	**11 59 44.6 +1.1**
WLAR	**White Oak Lake**	**4.92**	**125**	Pn		**Pn**	**11 59 46.0 +1.3**
237A	**Washetta, Mont**	**4.93**	**158**			**Pn**	**11 59 45.5 +0.7**
T25A	**Trinidad**	**5.21**	**278**	P		**Pn**	**11 59 50.0 +1.0**
	baz=94,SNR=12						
T25A	**Trinidad**	**5.21**	**278**			**Pn**	**11 59 50.4 +1.5**
Z41A	**Richland Creek**	**5.39**	**127**	S		**Sn**	**12 00 53.0 -0.1**
	baz=310						
L34A	**Svendsen Farm,**	**5.48**	**12**	Pn		**Pn**	**11 59 51.9 -0.5**
P40A	**Paris**	**5.48**	**56**			**Pn**	**11 59 54.1 +1.7**
LCAR	**Lake Charles**	**5.50**	**94**			**Pn**	**11 59 54.1 +1.4**
T42A	**Van Buren**	**5.51**	**84**			**Pn**	**11 59 54.7 +1.9**
CCM	**Cathedral Cave**	**5.53**	**73**	P		**Pn**	**11 59 54.0 +1.0**
	baz=257						
CCM	**Cathedral Cave**	**5.53**	**73**	Pn		**Pn**	**11 59 54.2 +1.2**
NATX	**Nacogdoches**	**5.55**	**150**	S		**Sn**	**12 00 56.5 -0.7**
	baz=332						
N38A	**Joes South For**	**5.56**	**40**	Pn		**Pn**	**11 59 54.5 +1.0**
435B	**Jarrell**	**5.83**	**177**	Pn		**Pn**	**11 59 56.1 -1.0**
K31A	**O'Neill**	**6.03**	**354**	Pn		**Pn**	**12 00 00.2 +0.3**
X43A	**Marvell**	**6.12**	**108**	Pn		**Pn**	**12 00 02.4 +1.2**
SDCO	**Great Sand Dun**	**6.14**	**283**	P		**Pn**	**12 00 03.1 +1.3**
	baz=98,SNR=5.9						
SDCO	**Great Sand Dun**	**6.14**	**283**	Pn		**Pn**	**12 00 03.2 +1.4**
FVM	**French Village**	**6.14**	**75**	Pn		**Pn**	**12 00 00.9 -0.6**
Q24A	**Divide**	**6.17**	**294**	Pn		**Pn**	**12 00 03.5 +1.3**
JCT	**Junction City**	**6.32**	**195**	P		**Pn**	**12 00 04.1 +0.2**
	baz=14						
SCIA	**State Center**	**6.43**	**33**	P		**Pn**	**12 00 06.6 +1.2**
	baz=216						
SCIA	**State Center**	**6.43**	**33**			**Pn**	**12 00 06.0 +0.6**
SLM	**Saint Louis**	**6.44**	**69**	Pn		**Pn**	**12 00 06.2 +0.7**
ISCO	**Idaho Springs**	**6.83**	**300**	P		**Pn**	**12 00 11.8 +0.6**
	baz=116						
ISCO	**Idaho Springs**	**6.83**	**300**	Pn		**Pn**	**12 00 09.5 -1.7**
N41A	**Harden Midland**	**6.88**	**51**	Pn		**Pn**	**12 00 13.8 +2.2**
S44A	**Carbondale**	**7.02**	**79**			**Pn**	**12 00 14.5 +1.0**
ANMO	**Albuquerque**	**7.12**	**259**	Pn		**Pn**	**12 00 16.7 +1.6**
	0.2nm,0.3s,baz=81,slow=15,SNR=3.1						
ANMO				Pg		Pb	12 00 40.1 +5.5
	1.5nm,0.3s,baz=80,slow=17,SNR=7.7						
ANMO				Lg		Lg	12 02 10.1
	2.0nm,0.3s,baz=316,slow=23,SNR=6.2						
ECSD	**EROS Data Cent**	**7.18**	**8**	P		**Pn**	**12 00 15.4 -0.4**
	baz=189						
ECSD	**EROS Data Cent**	**7.18**	**8**	Pn		**Pn**	**12 00 15.0 -0.8**
S22A	**4UR Ranch, Cre**	**7.19**	**282**	Pn		**Pn**	**12 00 17.1 +1.0**
K38A	**Parkersburg**	**7.22**	**32**	Pn		**Pn**	**12 00 19.4 +3.1**
OXF	**Oxford**	**7.26**	**104**	P		**Pn**	**12 00 17.4 +0.5**
	baz=289						
OXF	**Oxford**	**7.26**	**104**			**Pn**	**12 00 16.5 -0.3**
P43A	**Skaggs, Pawnee**	**7.29**	**63**			**Pn**	**12 00 17.4 +0.2**
Q44A	**Meyer Farm, Va**	**7.43**	**69**	Pn		**Pn**	**12 00 19.0 -0.2**
PHWY	**Pilot Hill**	**7.50**	**311**	Pn		**Pn**	**12 00 21.0 +0.7**
BNM	**Barren Site**	**7.51**	**253**			**Pn**	**12 00 19.7 -0.8**
L40A	**Anamosa**	**7.53**	**42**	Pn		**Pn**	**12 00 20.9 +0.4**
N23A	**Red Feather La**	**7.57**	**307**	P		**Pn**	**12 00 22.6 +1.3**
	baz=122,SNR=5.4						
N23A	**Red Feather La**	**7.57**	**307**	Pn		**Pn**	**12 00 23.0 +1.7**
HDIL	**Hopedale**	**7.83**	**57**	P		**Pn**	**12 00 24.4 -0.3**
	baz=242,SNR=7.8						
HDIL	**Hopedale**	**7.83**	**57**	Pn		**Pn**	**12 00 24.9 +0.3**
SUSD	**Miller**	**7.86**	**355**	Pn		**Pn**	**12 00 23.9 -1.1**
MNTX	**Cornudas Mount**	**7.88**	**234**	P		**Pn**	**12 00 26.1 +0.7**
	baz=49						
MNTX	**Cornudas Mount**	**7.88**	**234**	Pn		**Pn**	**12 00 24.9 -0.4**
OLIL	**Olney**	**8.09**	**72**	Pn		**Pn**	**12 00 27.7 -0.4**
WVT	**Waverly**	**8.17**	**90**	P		**Pn**	**12 00 30.1 +0.7**
	baz=276						
WVT	**Waverly**	**8.17**	**90**	Pn		**Pn**	**12 00 30.3 +1.0**
PLAL	**Pickwick Lake**	**8.18**	**99**	Pn		**Pn**	**12 00 30.5 +1.0**
O44A	**Mansfield**	**8.23**	**62**	Pn		**Pn**	**12 00 30.2 +0.1**
L42A	**Oliver, Polo**	**8.37**	**47**			**Pn**	**12 00 31.3 -0.7**
MVCO	**Mesa Verde**	**8.48**	**277**	Pn		**Pn**	**12 00 34.0 +0.3**
PV15	**Paradox Valley**	**8.56**	**285**	Pn		**Pn**	**12 00 34.3 -0.6**
JFWS	**Jewell Farm**	**8.64**	**41**	P		**Pn**	**12 00 35.8 +0.1**
	baz=226,SNR=5.6						
JFWS	**Jewell Farm**	**8.64**	**41**			**Pn**	**12 00 34.5 -1.2**
T47A	**Sharon Grove**	**8.70**	**84**	Pn		**Pn**	**12 00 37.2 +0.6**
TX31	**Lajitas Ar. Si**	**8.71**	**215**	Pn		**Pn**	**12 00 36.6 -0.2**
TX32	**Lajitas Array**	**8.71**	**215**	Pn		**Pn**	**12 00 36.9 +0.1**
TXAR	**Lajitas Array**	**8.71**	**215**	Pn		**Pn**	**12 00 37.4 +0.6**
	0.3nm,0.3s,baz=31,slow=11,SNR=8.3						
TXAR				Pg		Pg	12 01 08.4 -9.2
	0.7nm,0.3s,baz=32,slow=15,SNR=4.2						
TXAR				Lg		Lg	12 03 01.9
	1.7nm,0.3s,baz=29,slow=24,SNR=9.2						
TXAR	**Lajitas Array**	**8.71**	**215**	Pn		**Pn**	**12 00 35.3 -1.6**
RSSD	**Black Hills**	**8.82**	**330**	P		**Pn**	**12 00 39.9 +1.5**
	baz=146						
RSSD	**Black Hills**	**8.82**	**330**	Pn		**Pn**	**12 00 39.9 +1.5**
PV20	**West Nyswonger**	**8.93**	**284**	Pn		**Pn**	**12 00 38.4 -1.6**
K22A	**Casper**	**8.95**	**315**	P		**Pn**	**12 00 40.7 +0.5**
	baz=130						
K22A	**Casper**	**8.95**	**315**	Pn		**Pn**	**12 00 41.0 +0.9**

I40A	**Norwalk**	**9.17**	**35**			**Pn**	**12 00 43.2 +0.2**
BLO	**Bloomington**	**9.38**	**71**			**Pn**	**12 00 45.2 -0.7**
CLTN	**Cedars of Leba**	**9.38**	**90**	Pn		**Pn**	**12 00 46.8 +0.9**
WCI	**Wyandotte Cave**	**9.40**	**77**	P		**Pn**	**12 00 47.0 +0.7**
	baz=264						
WCI	**Wyandotte Cave**	**9.40**	**77**			**Pn**	**12 00 46.9 +0.7**
SPMN	**Marine on St.**	**9.44**	**23**	P		**Pn**	**12 00 47.0 +0.4**
	baz=206						
SPMN	**Marine on St.**	**9.44**	**23**			**Pn**	**12 00 46.6 0.0**
U49A	**Red Boiling Sp**	**9.78**	**87**			**Pn**	**12 00 53.3 +1.8**
FPAL	**Fort Paine**	**10.25**	**98**	Pn		**Pn**	**12 00 59.0 +1.0**
P48A	**Milroy**	**10.27**	**70**	Pn		**Pn**	**12 00 56.9 -1.2**
G40A	**Rib Lake**	**10.43**	**32**	Pn		**Pn**	**12 01 00.7 +0.3**
T50A	**Nancy**	**10.51**	**84**	Pn		**Pn**	**12 01 00.7 -0.7**
P49A	**Miami Univ. Ec**	**10.82**	**70**	P		**Pn**	**12 01 05.1 -0.6**
	baz=258						
P49A	**Miami Univ. Ec**	**10.82**	**70**	Pn		**Pn**	**12 01 05.7 0.0**
BW06	**Boulder Array**	**10.85**	**308**	Pn		**Pn**	**12 01 07.0 +0.7**
PD31	**Pinedale Array**	**10.85**	**308**			**Pn**	**12 01 06.9 +0.6**
PDAR	**Pinedale Array**	**10.85**	**308**	Pn		**Pn**	**12 01 06.2 -0.1**
	0.3nm,0.3s,baz=108,slow=15,SNR=8.3						
PDAR				Lg		Lg	12 04 05.7
	0.8nm,0.3s,baz=313,slow=46,SNR=1.7						
CPCT	**Cooper Cave**	**10.93**	**92**	Pn		**Pn**	**12 01 08.4 +1.3**
R50A	**Paris**	**10.95**	**77**	Pn		**Pn**	**12 01 08.6 +1.1**
H43A	**Windswept, Lux**	**11.01**	**41**	Pn		**Pn**	**12 01 08.1 -0.1**
O49A	**Covington**	**11.26**	**67**	Pn		**Pn**	**12 01 11.2 -0.3**
TKL	**Tuckaleechee C**	**11.50**	**91**	Lg		Lg	12 04 31.2
	2.1nm,0.3s,baz=0.6,slow=23,SNR=8.7						
S51A	**Beattyville**	**11.50**	**81**			**Pn**	**12 01 16.1 +1.2**
COWI	**Conover**	**11.55**	**32**	Pn		**Pn**	**12 01 16.0 +0.4**
N49A	**Columbus Grove**	**11.57**	**64**	Pn		**Pn**	**12 01 15.2 -0.6**
TZTN	**Tazewell**	**11.57**	**86**	Pn		**Pn**	**12 01 16.6 +0.7**
V52A	**Sevierville**	**11.61**	**90**	Pn		**Pn**	**12 01 17.4 +1.0**
L48A	**N Adams**	**11.74**	**59**	Pn		**Pn**	**12 01 16.9 -1.3**
AGMN	**Agassiz Nation**	**11.77**	**7**	Pn		**Pn**	**12 01 16.5 -2.1**
Q51A	**Peebles**	**11.79**	**74**			**Pn**	**12 01 18.8 -0.1**
RLMT	**Red Lodge**	**12.06**	**318**	Pn		**Pn**	**12 01 22.6 -0.2**
V53A	**Saluda**	**12.27**	**90**	Pn		**Pn**	**12 01 25.9 +0.4**
EYMN	**Ely**	**12.28**	**21**	Pn		**Pn**	**12 01 24.6 -1.0**
Q52A	**Bidwell**	**12.62**	**75**	P		**Pn**	**12 01 30.1 -0.1**
	baz=264						
E43A	**Lone Tree Farm**	**12.73**	**37**	Pn		**Pn**	**12 01 29.7 -2.0**
R53A	**Hurricane**	**12.82**	**78**	P		**Pn**	**12 01 33.0 0.0**
	baz=267						
R53A	**Hurricane**	**12.82**	**78**	Pn		**Pn**	**12 01 33.4 +0.4**
N51A	**Ashland**	**12.88**	**66**			**Pn**	**12 01 33.5 -0.3**
U54A	**Nelsons Funny**	**12.96**	**86**	P		**Pn**	**12 01 34.4 -0.6**
	baz=275						
U54A	**Nelsons Funny**	**12.96**	**86**	Pn		**Pn**	**12 01 35.2 +0.2**
Q53A	**Leroy**	**13.19**	**75**	P		**Pn**	**12 01 37.2 -0.8**
	baz=265						
S54A	**Dingess, Beckl**	**13.31**	**80**	Pn		**Pn**	**12 01 40.0 +0.3**
P53A	**Whipple**	**13.36**	**73**	P		**Pn**	**12 01 39.1 -1.1**
	baz=263						
V55A	**Taylorsville**	**13.53**	**88**	Pn		**Pn**	**12 01 42.4 -0.2**
R55A	**Marlinton**	**14.26**	**78**	Pn		**Pn**	**12 01 52.2 -0.5**
ILAR	**Eielson Array**	**40.27**	**330**	P		**P**	**12 06 05.9 -1.5**
	0.2nm,0.6s,baz=101,slow=7.6,SNR=1.9						

IDC ***14*** *11:59:53.7±1.7,21°.29S×173°.36E,h0km,mb3.8/4, mb1 4.1/5,mb1mx3.8/29,mbtmp3.8/5,ML3.0/1,MS4.0/10, Ms1 4.0/10,ms1mx3.7/25,Error ellipse: s-maj=93.0km s-min=28.2km az=159.0*

GCMT ***14*** *12:00:01.0±0.4,21°.01S±0°.05×173°.45E±0°.03,h18km±1km, MW4.9/70,Moment Tensor Solution. s15,c17; s70,c90; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.38±. 19; Mθθ0.71±.13; Mϕϕ1.67±.12; Mrθ-1.41±.42; Mϕϕ-0.31±.09; Mϕr-1.44±.30; Best double couple: Mo2.74800×10¹⁶ NP1:ϕs163.00000°,δ29.00000°,λ-125.00000°. NP2: ϕs21.00000°,δ67.00000°,λ-72.00000°. Principal axes: T 2.1470, Plg20.0000°, Azm98.0000°; N 1.2050, Plg16.0000°, Azm194.0000°; P -3.3490, Plg64.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 14 11:59:55.0±1.7,21°.3S±0°.6×173°.4E±0°.2,h10km,n17, σ0s97/7,mb3.9/4,MS4.1/10,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.53**	**262**	Pn	**Pn**	**12 01 32.3**	**+0.9**
	0.3nm,0.3s,baz=86,slow=18,SNR=2.4						
DZM	**Mont Dzumac**	**6.53**	**262**	*e*LR	LR	12 02 46.4	
	comp=Z,3μm,25.1s						
RAO	**Raoul Island**	**11.12**	**137**	LR	LR	12 05 41.5	
	comp=Z,157nm,20.3s,baz=268,slow=31						
HNR	**Honiara**	**17.55**	**310**	LR	LR	12 10 08.8	
	comp=Z,209nm,19.4s,baz=136,slow=35						
CTA	**Charters Tower**	**25.44**	**268**	LR	LR	12 14 44.9	
	comp=Z,566nm,20.6s,baz=98,slow=35						
PMG	**Port Moresby**	**27.91**	**291**	LR	LR	12 15 28.1	
	comp=Z,211nm,18.1s,baz=128,slow=34						
STKA	**Stephens Creek**	**30.24**	**243**	LR	LR	12 16 49.2	
	comp=Z,221nm,21.7s,baz=57,slow=34						
TBI	**Tubuai**	**34.33**	**100**	*e*LR	LR	12 16 01.0	
	comp=Z,400nm,31.2s						
PPT2	**Papeete2**	**35.03**	**90**	*e*LR	LR	12 16 21.5	
	comp=Z,643nm,28.0s						
ASAR	**Alice Springs**	**36.51**	**259**	P	**P**	**12 07 00.9**	**0.0**
	1.8nm,0.8s,baz=85,slow=8.9,SNR=15						
ASAR				LR	LR	12 21 19.2	
	comp=Z,279nm,20.9s,baz=70,slow=35						
WRA	**Warramunga Arr**	**36.54**	**265**	P	**P**	**12 07 00.2**	**-1.0**
	1.0nm,0.8s,baz=97,slow=8.8,SNR=6.2						
WRA				LR	LR	12 21 54.0	
	comp=Z,525nm,19.8s,baz=90,slow=36						
CMAR	**Chiang Mai Arr**	**82.93**	**293**	P	**P**	**12 12 20.3**	**-0.4**
	0.3nm,0.3s,baz=141,slow=3.3,SNR=1.9						
NVAR	**Mina Array Bea**	**87.29**	**47**	P	**P**	**12 12 43.3**	**+0.9**
	0.9nm,0.9s,baz=242,slow=5.7,SNR=6.3						
NVAR				LR	LR	12 44 06.3	
	comp=Z,137nm,20.6s,baz=265,slow=30						
TXAR	**Lajitas Array**	**94.34**	**60**	LR	LR	12 46 49.3	
	comp=Z,97nm,21.7s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**95.18**	**46**	LR	LR	12 47 40.2	
	comp=Z,63nm,21.4s,baz=316,slow=30						
GERES	**GERESS Array B**	**148.12**	**334**	PKPbc	**PKPbc**	**12 19 40.3**	**-0.8**
	0.0nm,0.7s,baz=28,slow=3.5,SNR=6.0						
TORD	**Torodi Ar. Bea**	**168.67**	**225**	PKPab	**PKPab**	**12 21 12.6**	**-0.4**
	0.9nm,1.0s,baz=158,slow=4.5,SNR=4.1						

ANF ***14*** *12:16:12.8±0.5,41°.89N×119°.57W,h0km,ML3.6/13,Error ellipse: s-maj=4.0km s-min=3.1km az=64.0*

IDC ***14*** *12:16:14.1±1.0,42°.07N×119°.65W,h0km,mb3.5/1, mb1 3.4/5,mb1mx3.3/43,mbtmp3.0/5,ML3.1/4,Error ellipse: s-maj=12.0km s-min=6.5km az=20.0*

REN ***14*** *12:16:15.3±2.3,41°.94N±0°.04×119°.62W±0°.05,h0km±7km, ML3.6/4,ML3.6/51(SEA),Error ellipse: s-maj=6.3km s-min=4.9km az=203.0*

SEA ***14*** *12:16:15.6±3.2,41°.84N±0°.04×119°.64W±0°.05,h0km±7km, Error ellipse: s-maj=6.0km s-min=4.9km az=223.0*

NEIC ***14*** *12:16:15.7±2.1,41°.93N±0°.03×119°.65W±0°.04,h5km±1km, Error ellipse: s-maj=6.3km s-min=4.3km az=146.0*

ISC 14 12:16:16.4±1.4,41°.95N±0°.03×119°.69W±0°.03,h7km±11km, n86,σ1s33/99,Nevada

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.46**	**265**		**Pg**	**12 16 24.8**	**-0.5**
MOD					**Sg**	**12 16 32.1**	**+0.7**
K05A	**Summer Lake**	**1.19**	**311**		**Pg**	**12 16 38.6**	**-0.5**
K05A				Sg	**Sg**	**12 16 55.1**	**+0.6**
M04C	**Macdoel**	**1.62**	**265**	P	**Pn**	**12 16 44.0**	**-1.5**
	baz=84						
M04C				Sb	**Sg**	**12 17 08.4**	**0.0**
	baz=84						
J08A	**Circle Bar Ran**	**1.67**	**32**		**Pn**	**12 16 44.5**	**-1.7**
J08A				Sn	**Sn**	**12 17 07.4**	**-0.6**
K04D	**Chiloquin, OR**	**1.68**	**294**	P	**Pn**	**12 16 45.0**	**-1.3**
	baz=113,SNR=15						
K04D				Sb	**Sg**	**12 17 11.0**	**+0.8**
	baz=113						
J05D	**Fort Rock, OR**	**1.76**	**320**	P	**Pn**	**12 16 46.1**	**-1.3**
	baz=138						
J05D				Sg	**Sg**	**12 17 14.2**	**+1.3**
	baz=138						
L04D	**Klamath Falls**	**1.97**	**279**	P	**Pn**	**12 16 48.7**	**-1.6**
	baz=97,SNR=106						
L04D				Sb	**Sg**	**12 17 19.0**	**-0.6**
	baz=97						
PINE	**Pine Mountain**	**2.06**	**334**		**Pn**	**12 16 52.1**	**+0.4**
I07A	**Izee**	**2.14**	**4**		**Pn**	**12 16 53.7**	**+1.1**
BEKR	**Beckworth**	**2.14**	**194**		**Pn**	**12 16 52.6**	**-0.2**
PAHR	**Pah Rah Range**	**2.25**	**174**	Pn	**Pn**	**12 16 53.1**	**-1.1**
YBH	**Yreka Blue Hor**	**2.27**	**266**	Pn	**Pn**	**12 16 52.7**	**-1.8**
	2.5nm,0.3s,baz=50,slow=12,SNR=60						
YBH				Pg	**Pb**	**12 16 57.5**	**-0.2**
	4.2nm,0.3s,baz=93,slow=12,SNR=25						
YBH				Lg	Lg	12 17 26.6	
	21nm,0.3s,baz=360,slow=12,SNR=13						
O03E	**Paynes Creek**	**2.30**	**225**	P	**Pn**	**12 16 52.5**	**-2.3**
	baz=44,SNR=65						
M02C	**Callahan**	**2.44**	**258**	P	**Pn**	**12 16 54.4**	**-2.3**
	baz=76,SNR=7.8						
M02C				Sb	**Sb**	**12 17 32.2**	**+1.4**
	baz=76						
N02D	**Trinity Center**	**2.47**	**248**	P	**Pn**	**12 16 54.9**	**-2.2**
	baz=66,SNR=16						
N02D				Sb	**Sb**	**12 17 33.6**	**+1.9**
	baz=66						
HUMO	**Hull Mountain**	**2.51**	**286**	Pn	**Pn**	**12 16 56.2**	**-1.6**
WDC	**Whiskeytown Da**	**2.55**	**239**	Pn	**Pn**	**12 16 56.2**	**-1.9**
I04A	**Tendick Farm,**	**2.72**	**314**	Sb	**Sg**	**12 17 42.3**	**-1.6**
	baz=131						
ORV	**Oroville**	**2.76**	**211**	Pn	**Pn**	**12 17 01.5**	**+0.4**
PNTR	**Pine Nut**	**2.86**	**179**		**Pn**	**12 17 01.5**	**-1.1**
RUBR	**Rubicon Trail**	**2.92**	**187**		**Pn**	**12 17 04.2**	**+0.8**
L02E	**Cave Junction**	**2.92**	**275**	P	**Pn**	**12 17 02.1**	**-1.3**
	baz=93,SNR=30						
L02E				Sb	**Sb**	**12 17 46.3**	**+1.4**
	baz=93						
K02D	**Willamette Mer**	**3.04**	**286**	P	**Pn**	**12 17 03.9**	**-1.1**
	baz=103,SNR=83						
K02D				Sb	**Sb**	**12 17 51.1**	**+2.8**
	baz=103						
KVN	**Kaiserville**	**3.14**	**157**		**Pn**	**12 17 05.2**	**-1.2**
AFDM	**Forest Hills D**	**3.15**	**199**		**Pn**	**12 17 07.4**	**+0.9**
KRMB	**Red Mountain**	**3.19**	**264**		**Pn**	**12 17 06.5**	**-0.6**
MFID	**Camas Ranch**	**3.20**	**61**	Pn	**Pn**	**12 17 05.6**	**-1.7**
I03D	**Drain, OR**	**3.21**	**304**	Sb	**Sb**	**12 17 56.6**	**+3.6**
	baz=122						
KHMM	**Horse Mountain**	**3.23**	**252**		**Pn**	**12 17 07.6**	**0.0**
H04A	**Detroit Lake**	**3.29**	**327**		**Pn**	**12 17 08.8**	**+0.4**
BMO	**Blue Mountains**	**3.38**	**30**		**Pn**	**12 17 08.9**	**-0.8**
G08A	**Pilot Rock**	**3.38**	**9**		**Pn**	**12 17 09.8**	**0.0**
KBO	**Bosley Butte**	**3.39**	**276**		**Pn**	**12 17 09.4**	**-0.4**
RYN	**Ryan**	**3.43**	**165**		**Pn**	**12 17 10.8**	**+0.3**
WAKR	**Walker**	**3.44**	**177**		**Pn**	**12 17 10.8**	**+0.1**
JCC	**Jacoby Creek,**	**3.46**	**252**	Pn	**Pn**	**12 17 10.9**	**+0.2**
KMRM	**Mail Ridge**	**3.49**	**242**		**Pn**	**12 17 12.0**	**+0.8**
ELK	**Elko**	**3.56**	**108**	Pn	**Pn**	**12 17 10.2**	**-2.1**
KEBM	**Edson Butte**	**3.56**	**287**	Pn	**Pn**	**12 17 12.1**	**-0.1**
NVAR	**Mina Array Bea**	**3.67**	**163**	Pn	**Pn**	**12 17 13.8**	**0.0**
	0.5nm,0.3s,baz=342,slow=13,SNR=12						
NVAR				Pg	**Pb**	**12 17 22.4**	**+0.7**
	2.9nm,0.3s,baz=342,slow=14,SNR=20						
NVAR				Lg	Lg	12 18 10.0	
	2.6nm,0.3s,baz=23,slow=34,SNR=2.7						
NVAR	**Mina Array Bea**	**3.67**	**163**		**Pn**	**12 17 11.9**	**-1.9**
NV11	**Mina Array Sit**	**3.70**	**161**		**Pn**	**12 17 13.3**	**-0.8**
KCPM	**Cahto

GRPR				*e*S		**Sn**	12 21 03.0	**-0.3**
GRPR				A		A	12 21 16.0	
	157nm,0.4s							
GRPR				A		A	12 21 16.0	
	101nm,0.4s							
NMR	**Nemuro--Hokkai**	**4.41**	**252**	*i* P		**Pn**	**12 20 20.0**	**+1.3**
NMR				*i* S		**Sn**	**12 21 06.0**	**-2.8**
ASAJ	**Asahikawa**	**6.40**	**266**	Pn		**Pn**	**12 20 48.2**	**+2.2**
	0.9nm,0.3s,baz=61,slow=20,SNR=7.6							
PETK	**Petropavlovsk-**	**9.18**	**24**	Pn		**Pn**	**12 21 21.5**	**-2.6**
	0.2nm,0.3s,baz=169,slow=18,SNR=2.3							
H11N2	**WAKE ISLAND Hy**	**28.17**	**148**	T		T	12 56 08.4	
	baz=336,slow=75,SNR=15							
H11N1	**WAKE ISLAND Hy**	**28.18**	**148**	T		T	12 55 59.1	
	baz=336,slow=75,SNR=14							
H11N3	**WAKE ISLAND Hy**	**28.18**	**148**	T		T	12 56 00.7	
	baz=336,slow=75,SNR=13							
H11S1	**WAKE ISLAND Hy**	**29.21**	**149**	T		T	12 57 14.4	
	baz=337,slow=76,SNR=14							
H11S3	**WAKE ISLAND Hy**	**29.22**	**149**	T		T	12 57 17.7	
	baz=337,slow=76,SNR=11							
H11S2	**WAKE ISLAND Hy**	**29.23**	**149**	T		T	12 57 20.3	
	baz=337,slow=76,SNR=15							
SONM	**Songino Array**	**30.92**	**292**	P		**P**	**12 25 26.7**	**-1.0**
	0.2nm,0.3s,baz=77,slow=9.1,SNR=2.8							
ILAR	**Eielson Array**	**38.72**	**37**	P		**P**	**12 26 37.6**	**+3.1**
	0.2nm,0.5s,baz=276,slow=8.1,SNR=2.2							
MKAR	**Makanchi Array**	**46.80**	**298**	P		**P**	**12 27 40.1**	**-0.1**
	0.7nm,0.7s,baz=75,slow=7.8,SNR=5.8							
FINES	**FINESS Array B**	**65.23**	**334**	P		**P**	**12 29 51.4**	**-0.3**
	1.6nm,0.7s,baz=356,slow=7.6,SNR=4.1							
WRA	**Warramunga Arr**	**66.39**	**198**	P		P	12 30 18.6	+19
	0.9nm,1.0s,baz=13,slow=6.3,SNR=3.8							
NB2	**NORSAR Subarra**	**69.61**	**341**	P		**P**	**12 30 20.7**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=28,slow=6.2							
NOA	**NORSAR Array B**	**69.61**	**341**	P		**P**	**12 30 19.6**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=27,slow=6.3,SNR=4.5							
ASAR	**Alice Springs**	**70.09**	**197**	P		**PcP**	**12 30 42.0**	**-2.6**
	comp=Z,0.6nm,0.7s,baz=9.4,slow=5.5,SNR=6.6							
TXAR	**Lajitas Array**	**79.41**	**59**	P		**PcP**	**12 31 24.6**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=308,slow=4.4,SNR=2.0							

*IDC **14** 12:20:38.2±1.4,25°.16N×109°.61W,h0km,mb3.5/1, mb1 3.9/5,mb1mx3.7/37,mbtmp3.5/5,ML3.7/3,MS3.8/10, Ms1 3.8/10,ms1mx3.5/27,Error ellipse: s-maj=33.2km s-min=10.6km az=119.0*

*MEX **14** 12:20:41.2±0.7,25°.33N×109°.90W,h19km±36km,MD4.1*

ISC 14 12:20:38.1±0.8,25°.29N±0°.05×109°.89W±0°.05,h10km,n24, σ1ˢ96/21,MS3.8/6,Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.83**	**68**	*e*P		**Pg**		**12 20 54.0**	**-0.2**
TSIG				*i* S		**Sg**		**12 21 04.4**	**-0.6**
LPIG	**La Paz**	**1.24**	**198**	Pg		**Pg**		**12 21 02.2**	**+0.3**
	31nm,0.3s,baz=144,slow=1.4,SNR=29								
LPIG				Lg		Lg		12 21 17.7	
	134nm,0.3s,baz=218,slow=9.9,SNR=9.7								
LPIG	**La Paz**	**1.24**	**198**	*i* P		**Pg**		**12 21 01.5**	**-0.4**
LPIG				*e*S		**Sb**		**12 21 15.3**	**-2.3**
CSIG	**Choix**	**2.06**	**41**	*i* P		**Pn**		**12 21 12.1**	**-0.7**
CSIG				*i* S		**Sn**		**12 21 36.2**	**-2.4**
SSIG	**Sanalona**	**2.54**	**100**	*i* P		**Pn**		**12 21 18.8**	**-0.6**
GUYB	**Guaymas**	**2.75**	**342**	*i* P		**Pn**		**12 21 20.9**	**-1.3**
GUYB				*i* S		**Sn**		**12 21 51.6**	**-3.8**
PDIG	**Papasquiaro**	**4.08**	**92**	*i* P		**Pn**		**12 21 41.0**	**+0.2**
PDIG				*i* S		**Sn**		**12 22 28.0**	**-0.8**
HPIG		**4.14**	**66**	*i* P		**Pn**		**12 21 42.2**	**+0.6**
HPIG				*i* S		**Sn**		**12 22 28.4**	**-1.8**
CGIG		**5.34**	**18**	*i* P		**Pn**		**12 21 57.5**	**-0.6**
CGIG				*i* S		**Sn**		**12 22 56.5**	**-3.2**
TXAR	**Lajitas Array**	**6.85**	**53**	Pn		**Pn**		**12 22 18.2**	**-0.5**
	0.4nm,0.3s,baz=230,slow=14,SNR=16								
TXAR				Lg		Lg		12 24 09.9	
	0.9nm,0.3s,baz=249,slow=32,SNR=1.7								
ANMO	**Albuquerque**	**10.07**	**16**	Pn		**Pn**		**12 23 06.2**	**+3.2**
	0.1nm,0.3s,baz=189,slow=15,SNR=3.3								
ANMO				Lg		Lg		12 25 59.5	
	0.1nm,0.3s,baz=125,slow=22,SNR=3.1								
ANMO				LR		LR		12 27 23.0	
	comp=Z,765nm,18.4s,baz=164,slow=40								
NVAR	**Mina Array Bea**	**14.91**	**333**	Pn		**P**		**12 24 15.7**	**+0.7**
	baz=162,slow=13,SNR=2.1								
NVAR				LR		LR		12 30 17.5	
	comp=Z,159nm,18.4s,baz=152,slow=38								
CMIG	**Matias Romero**	**16.19**	**117**	LR		LR		12 30 40.6	
	comp=Z,204nm,20.0s,baz=287,slow=38								
PDAR	**Pinedale Array**	**17.44**	**1**	P		**P**		**12 24 44.5**	**+1.5**
	0.1nm,0.3s,baz=163,slow=11,SNR=11								
PDAR				LR		LR		12 30 50.8	
	comp=Z,306nm,18.3s,baz=184,slow=35								
NEW	**Newport**	**23.63**	**348**	LR		LR		12 35 45.2	
	comp=Z,146nm,19.6s,baz=148,slow=38								
TKL	**Tuckaleechee C**	**24.70**	**59**	LR		LR		12 35 51.0	
	comp=Z,228nm,18.4s,baz=256,slow=37								
JTS	**Las Juntas de**	**27.97**	**118**	LR		LR		12 37 39.4	
	comp=Z,167nm,18.6s,baz=26,slow=37								
YKA	**Yellowknife Ar**	**37.33**	**356**	LR		LR		12 42 38.5	
	comp=Z,236nm,18.5s,baz=0.0,slow=35								
ILAR	**Eielson Array**	**46.08**	**339**	P		**P**		**12 29 05.5**	**+3.5**
	0.5nm,0.8s,baz=149,slow=7.6,SNR=6.6								
H03N2	**Juan Fernandez**	**65.41**	**152**	T		T		13 42 40.4	
	baz=330								
H03N1	**Juan Fernandez**	**65.42**	**152**	T		T		13 42 41.0	
	baz=330,slow=74,SNR=5.2								
H03N3	**Juan Fernandez**	**65.43**	**152**	T		T		13 42 37.3	
	baz=330,slow=74,SNR=6.1								
ARCES	**ARCESS Array B**	**80.16**	**15**	LR		LR		13 10 37.1	
	comp=Z,60nm,19.0s,baz=305,slow=37								
MJAR	**Matsushiro Arr**	**91.15**	**312**	LR		LR		13 09 00.6	
	comp=Z,45nm,20.1s,baz=170,slow=32								

SOME 14 12:21:16.6,43°.03N×78°.50E,h0km,1C-2D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.07**	**291**	*e*P		Pg		12 21 18.2	+0.2
	7.6nm,0.1s								
SATY				*e*S		Sg		12 21 19.6	+0.7
	261nm,0.1s								
ZHN	**Zhinishke**	**0.14**	**341**	*e*P		Pg		12 21 19.9	+0.5
	27nm,0.1s								
ZHN				*e*S		Sg		12 21 22.4	+1.1
	31nm,0.2s								
UZB	**Uzynbulak**	**0.40**	**73**	⇑*i*P		Pg		12 21 24.3	+0.1
	3.0nm,0.1s								
UZB				⇓*i*S		Sg		12 21 30.3	+0.9
	41nm,0.2s								
KPKS	**Kokpek**	**0.45**	**17**	⇓*i*P		Pg		12 21 25.8	+0.5
	16nm,0.1s								
KPKS				*e*S		Sg		12 21 32.4	+1.2
	4.9nm,0.1s								
MNBS	**Baschi**	**1.05**	**356**	*e*P		Pg		12 21 37.1	+0.4
	1.8nm,0.1s								
MNBS				*e*S		Sb		12 21 51.8	-0.3
	2.8nm,0.3s								
MDOK	**Medeo**	**1.07**	**277**	*e*P		Pg		12 21 37.5	+0.3
	1.3nm,0.2s								
MDOK				*e*S		Sb		12 21 52.3	-0.4
	1.4nm,0.2s								
DJR	**Jarkent**	**1.60**	**35**	*e*P		Pb		12 21 47.2	+0.1
	1.4nm,0.1s								
DJR				*e*S		Sg		12 22 08.9	+0.9
	3.2nm,0.3s								

KRNET 14 12:21:53.6±0.1,42°.05N×76°.97E,h5km,mb1.6,6C,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.18**	**64**	⇑*i*P		Pg		12 21 57.4	+0.2
	baz=66								
KDJ				⇑*i*S		Sg		12 21 59.9	+0.3
	baz=66								
ULHL	**Ulahol**	**0.57**	**290**	⇑*i*P		Pg		12 22 05.1	+0.4
	baz=90								
ULHL				⇑*i*S		Sg		12 22 12.9	+0.7
	baz=90								
TKM2	**Tokmak 2**	**1.33**	**311**	⇑*i*P		Pb		12 22 19.3	0.0
	baz=11								
TKM2				⇑*i*S		Sn		12 22 37.9	+0.5
	baz=11								

*DJA **14** 12:34:21.3±0.5,7°.S×3°×13°.0E±°,h221km±13km,M4.3/8, mB4.6/3,mb4.2/6,MLv4.4/8,Mw(mB)3.8/3*

*IDC **14** 12:34:22.0±2.2,6°.90S×129°.89E,h127km±25km,mb4.0/1, mb1 3.9/6,mb1mx3.4/32,mbtmp4.3/6,Error ellipse: s-maj=36.0km s-min=20.2km az=95.0*

*NEIC **14** 12:34:23.0±1.7,6°.73S±0°.06×129°.83E±0°.08,h131km±13km, mb4.2/8,Error ellipse: s-maj=12.2km s-min=8.2km az=95.0*

ISC 14 12:34:21.7±0.7,6°.90S±0°.05×130°.02E±0°.07,h150km,n32, σ2ˢ49/37,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.66**	**130**	P		Pn		12 34 57.4	+4.3
SAUI	**Saumlaki**	**1.66**	**130**	Pn		Pn		12 34 56.9	+3.8
FAKI	**Fak Fak**	**4.53**	**29**	P		**Pn**		**12 35 29.1**	**+0.1**
FAKI	**Fak Fak**	**4.53**	**29**			**Pn**		**12 35 28.9**	**-0.1**
FAKI						**Sn**		**12 36 18.5**	**-2.9**
MTN	**Manton Dam**	**6.01**	**170**			**Pn**		**12 35 50.9**	**+2.3**
MTN						**Sn**		**12 36 55.7**	**-0.9**
SIJI	**Sorong**	**6.12**	**12**	P		**Pn**		**12 35 49.9**	**-0.2**
	2.6nm,0.3s,baz=214,slow=23,SNR=20								
SIJI				S		**Sn**		**12 36 53.0**	**-6.2**
	8.0nm,0.3s,baz=236,slow=23,SNR=11								
SOEI	**Soe**	**6.36**	**243**	P		**Pn**		**12 35 54.7**	**+1.3**
	0.2nm41nm,0.6s								
SOEI	**Soe**	**6.36**	**243**			**Pn**		**12 35 53.3**	**-0.1**
SOEI						**Sn**		**12 37 02.8**	**-2.4**
BATI	**Baumata**	**7.09**	**242**	P		**Pn**		**12 36 03.8**	**+0.6**
	12nm,0.3s,baz=61,slow=5.6,SNR=15								
BATI				S		**Sn**		**12 37 18.2**	**-4.4**
	7.7nm,0.3s,baz=19,slow=16,SNR=6.8								
BATI	**Baumata**	**7.09**	**242**	P		**Pn**		**12 36 03.9**	**+0.8**
	0.1nm23nm,0.6s								
EDFI	**Ende, Flores**	**8.46**	**257**	P		**Pn**		**12 36 23.7**	**+2.3**
	7.3nm,0.8s								
KNRA	**Kununurra**	**8.81**	**188**			**Pn**		**12 36 26.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**11.92**	**201**	P		**Pn**		**12 37 06.0**	**-1.0**
	0.5nm,0.3s,baz=30,slow=10,SNR=33								
FITZ				S		Sn		12 39 07.9	-11
	1.9nm,0.3s,baz=85,slow=12,SNR=8.1								
FITZ	**Fitzroy Crossi**	**11.92**	**201**			**Pn**		**12 37 06.6**	**-0.5**
WB0	**Warramunga Arr**	**13.48**	**162**			**Pn**		**12 37 26.6**	**-0.5**
WRAB	**Tennant Creek**	**13.62**	**162**	Pn		**Pn**		**12 37 28.9**	**-0.1**
WRA	**Warramunga Arr**	**13.63**	**163**	P		**Pn**		**12 37 28.8**	**-0.2**
	1.6nm,0.3s,baz=339,slow=13,SNR=35								
WRA				S		**Sn**		**12 39 53.4**	**-6.6**
	1.7nm,0.3s,baz=334,slow=23,SNR=7.3								
WRA	**Warramunga Arr**	**13.63**	**163**			**Pn**		**12 37 29.3**	**+0.2**
WB2	**Warramunga Arr**	**13.63**	**163**			**Pn**		**12 37 29.0**	**-0.1**
WC3	**Warramunga Arr**	**13.65**	**162**	Pn		**Pn**		**12 37 29.2**	**+0.1**
WR0	**Warramunga Arr**	**13.71**	**162**			**Pn**		**12 37 29.7**	**-0.3**
COEN	**Coen**	**14.71**	**120**	Pn		**P**		**12 37 47.5**	**+2.6**
AS31	**Alice Springs**	**17.09**	**168**	P		**Pn**		**12 38 15.3**	**+3.6**
ASAR	**Alice Springs**	**17.09**	**168**	P		**Pn**		**12 38 14.1**	**+2.4**
	0.8nm,0.3s,baz=343,slow=9.5,SNR=54								
ASAR				S		**S**		**12 41 17.9**	**-3.8**
	0.4nm,0.3s,baz=47,slow=27,SNR=5.1								
PSAC2	**Pilbara Seismi**	**17.56**	**213**	P		**Pn**		**12 38 19.7**	**+2.3**
PSAC1	**Pilbara Seismi**	**17.58**	**213**	P		**Pn**		**12 38 19.9**	**+2.2**
PSAA2	**Pilbara Seismi**	**17.59**	**213**	P		**Pn**		**12 38 19.8**	**+2.1**
PSAA2				IAmb		IAmb		12 38 31.2	
	comp=Z,31nm,1.4s								
PSA00	**Pilbara Seismi**	**17.59**	**213**	P		**Pn**		**12 38 18.6**	**+0.8**
PSA00				IAmb		IAmb		12 38 24.9	
	comp=Z,28nm,1.5s								
PSAA3	**Pilbara Seismi**	**17.59**	**213**	P		**Pn**		**12 38 20.2**	**+2.4**
PSAA3				IAmb		IAmb		12 38 27.6	
	comp=Z,7.1nm,1.0s								
MK31	**Makanchi Array**	**68.15**	**327**	P		**P**		**12 45 08.0**	**+2.3**
MKAR	**Makanchi Array**	**68.15**	**327**	P		**P**		**12 45 08.1**	**+2.4**
	comp=Z,1.4nm,0.4s,baz=115,slow=8.1,SNR=28								
MAKZ	**Makanchi**	**68.33**	**327**	P		**P**		**12 45 09.4**	**+2.6**
MAKZ				IAmb		IAmb		12 45 25.7	
	comp=Z,5.5nm,1.4s								

*SKHL **14** 13:05:38.9±0.2,44°.33N×148°.37E,h40km±9km,mb4.4/2*
*JMA **14** 13:05:39.4±0.3,43°.99N×148°.04E,h0km,M3.7*

ISC 14 13:05:37.6±3.4,44°.3N±0°.1×148°.5E±0°.2,h35km,n13, σ1ˢ42/23,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.99**	**335**	*i* P		**Pn**		**13 05 55.0**	**0.0**
KUR				AMB		AMB		13 05 56.0	
	230nm,0.3s								
KUR				*i* S		**Sn**		**13 06 07.0**	**-0.8**
KUR				A		A		13 06 09.0	
	600nm,0.2s								
KUR				A		A		13 06 09.0	
	170nm,0.2s								
YUK	**Yuzh-Kuril'sk**	**1.89**	**262**	*i* P		**Pn**		**13 06 08.0**	**+0.6**
YUK				AMB		AMB		13 06 09.0	
	151nm,0.3s								
YUK				*i* S		**Sn**		**13 06 28.0**	**-1.9**
YUK				A		A		13 06 35.0	
	120nm,0.6s								
YUK				A		A		13 06 35.0	
	180nm,0.6s								
GRPR	**Tuman**	**1.96**	**261**	*e*P		**Pn**		**13 06 08.0**	**-0.4**
GRPR				*e*S		**Sn**		**13 06 31.0**	**-0.7**
GRPR				A		A		13 06 38.0	
	228nm,0.3s								
GRPR				A		A		13 06 38.0	
	82nm,0.3s								
NEM2	**Nemuro 2**	**2.19**	**245**	P		**Pn**		**13 06 11.8**	**+0.3**
NEM2				*e*S		**Sn**		**13 06 35.2**	**-2.1**
NMR	**Nemuro--Hokkai**	**2.20**	**245**	*i* P		**Pn**		**13 06 11.0**	**-0.6**
NMR				*i* S		**Sn**		**13 06 35.0**	**-2.5**
GLVR	**Golovnino**	**2.20**	**255**	*e*P		**Pn**		**13 06 12.0**	**+0.4**
GLVR				*e*S		**Sn**		**13 06 37.0**	**-0.6**
GLVR				A		A		13 06 45.0	
	486nm,0.2s								
GLVR				A		A		13 06 45.0	
	264nm,0.2s								
JRA	**Rausu**	**2.43**	**262**	P		**Pn**		**13 06 16.8**	**+2.0**
JNSB	**Nemuroshibetsu**	**2.55**	**258**	P		**Pn**		**13 06 18.1**	**+1.6**
JKHN	**Kushirohamanak**	**2.70**	**243**	P		**Pn**		**13 06 19.3**	**+0.8**
JNK	**Nakash**	**2.80**	**256**	P		**Pn**		**13 06 21.4**	**+1.5**
JNK				*e*S		**Sn**		**13 06 51.6**	**-0.8**
JAK	**Akkeshi**	**3.04**	**245**	P		**Pn**		**13 06 24.0**	**+0.8**
JAK				*e*S		**Sn**		**13 06 57.1**	**-1.2**
JAR	**Ashorobuto**	**3.55**	**255**	P		**Pn**		**13 06 32.7**	**+2.5**
JAR				*e*S		**Sn**		**13 07 12.0**	**+1.2**
JCH	**Churui**	**4.09**	**247**	P		**Pn**		**13 06 39.0**	**+1.4**
JCH				*e*S		**Sn**		**13 07 23.1**	**-1.0**

IDC 14 13:06:29.3±0.9,60°.55S×31°.34W,h0km,mb4.1/4, mb1 4.1/4,mb1mx3.9/15,mbtmp4.0/4,Error ellipse: s-maj=48.0km s-min=29.0km az=91.0,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**41.94**	**184**	P		P	P	13 14 19.7	-1.2
	1.0nm,0.9s,baz=193,slow=8.9,SNR=7.7								
LPAZ	**La Paz**	**51.51**	**313**	P		P	P	13 15 36.0	-1.3
	0.6nm,0.4s,baz=195,slow=9.1,SNR=2.6								
H10S2	**ASCENSION HYDR**	**52.98**	**21**	T		T	T	14 13 28.9	
	baz=29,slow=74,SNR=7.4								
H10S3	**ASCENSION HYDR**	**52.98**	**21**	T		T	T	14 13 27.4	
	baz=191,slow=74,SNR=17								
H10N1	**ASCENSION HYDR**	**54.09**	**21**	T		T	T	14 14 56.4	
	baz=190,slow=76,SNR=22								
H10N3	**ASCENSION HYDR**	**54.09**	**21**	T		T	T	14 14 55.7	
	baz=190,slow=76,SNR=40								
H10N2	**ASCENSION HYDR**	**54.11**	**21**	T		T	T	14 14 54.8	
	baz=190,slow=76,SNR=28								
TORD	**Torodi Ar. Bea**	**78.05**	**33**	P		P	P	13 18 28.5	-1.0
	3.5nm,0.7s,baz=198,slow=6.3,SNR=22								
ASAR	**Alice Springs**	**95.23**	**166**	P		P	P	13 19 54.9	+0.2
	0.5nm,0.9s,baz=168,slow=4.7,SNR=2.6								
ZALV	**Zalesovo Beam**	**146.10**	**72**	PKPbc		PKPab		13 26 10.9	+0.4
	0.5nm,0.5s,baz=243,slow=6.3,SNR=1.6								
ILAR	**Eielson Array**	**151.26**	**306**	PKP		PKPdf		13 26 16.4	-0.6
	0.7nm,0.9s,baz=152,slow=1.1,SNR=5.2								
ILAR				PKPbc		PKiKP		13 26 24.2	+0.8
	1.0nm,0.6s,baz=146,slow=1.7,SNR=19								

*IDC **14** 13:30:20.6±0.7,6°.51N×73°.35W,h132km±10km,mb3.3/6, mb1 3.8/8,mb1mx3.4/30,mbtmp3.9/8,Error ellipse: s-maj=25.9km s-min=7.4km az=133.0*

*NEIC **14** 13:30:20.9±1.5,6°.62N±0°.09×73°.5W±0°.1,h137km±10km, mb4.5/5,Error ellipse: s-maj=18.1km s-min=11.2km az=121.0*

*RSNC **14** 13:30:21.6±0.9,6°.57N×73°.55W,h112km±3km,ML3.8, Mw3.9,Fault plane solution: NP1:θ=90.00000°, δ58.00000°,λ=-122.00000°.*

ISC 14 13:30:19.6±0.6,6°.61N±0°.03×73°.51W±0°.03,h122km±5km, n72,σ1ˢ54/104,mb3.7/8,7C-5D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.33**	**93**	*i* P		**Pn**		**13 30 38.3**	**+1.2**
BARC				*e*S		**Pn**		**13 30 50.0**	**-0.2**
BRRC	**Barranca, Sant**	**0.53**	**338**	⇓*i*P		**Pn**		**13 30 39.0**	**+1.1**
BRRC				*e*S		**Sn**		**13 30 52.3**	**+0.6**
BRRC				*i*				13 30 53.9	
	comp=Z,1μm,0.1s								
RUSC	**La Rusia**	**0.83**	**149**	⇓*i*P		**Pn**		**13 30 41.3**	**+0.6**
RUSC				*e*S		**Sn**		**13 30 56.8**	**+0.2**
RUSC				*i*				13 31 00.0	
	comp=Z,682nm,0.3s								
PTBC	**PUERTO BERRIO,**	**0.94**	**266**	⇓*i*P		**Pn**		**13 30 41.1**	**0.0**
PTBC				*e*S		**Sn**		**13 30 56.0**	**-1.4**
PTBC				*i*				13 30 57.2	
	comp=Z,3μm,0.2s								
PAMC	**Pamplona, Colo**	**1.09**	**48**	⇑*i*P		**Pn**		**13 30 44.5**	**+1.4**
PAMC				*e*S		**Sn**		**13 31 02.5**	**+1.6**
PAMC				*i*				13 31 03.7	
	comp=Z,1μm,0.4s								
SPBC	**San Pablo de B**	**1.10**	**210**	⇓*e*P		**Pn**		**13 30 43.2**	**+0.4**
SPBC				*e*S		**Sn**		**13 30 59.6**	**-0.8**
SPBC				*i*				13 31 03.4	
	comp=Z,2μm,0.3s								
OCAC	**Ocana**	**1.63**	**7**	⇑*e*P		**Pn**		**13 30 50.2**	**+1.4**
OCAC				*e*S		**Sn**		**13 31 12.4**	**+1.4**
OCAC				*i*				13 31 18.5	
	comp=Z,969nm,0.2s								
NORC	**Norcasia**	**1.70**	**232**	⇑*i*P		**Pn**		**13 30 49.8**	**+0.3**
NORC				*e*S		**Sn**		**13 31 11.6**	**-0.8**
NORC				*i*				13 31 15.3	
	comp=Z,1μm,0.2s								
TAMC	**Tame, Arauca**	**1.72**	**96**	⇑*i*P		**Pn**		**13 30 51.0**	**+1.3**
TAMC				*e*S		**Sn**		**13 31 13.6**	**+0.9**
ROSC	**El Rosal**	**1.93**	**205**	P		**Pn**		**13 30 54.9**	**+2.3**
	comp=Z,54nm,0.3s,baz=298,slow=4.4,SNR=39								
ROSC				S		**Sn**		**13 31 19.9**	**+2.0**
	comp=Z,142nm,0.3s,baz=75,slow=21,SNR=12								
CHIC	**Chingaza**	**1.98**	**186**	*e*P		**Pn**		**13 30 54.0**	**+0.8**
CHIC				*e*S		**Sn**		**13 31 19.7**	**+0.8**
CHIC				*i*				13 31 29.6	
	comp=Z,212nm,0.4s								
CVER	**Cruz Verde, Cu**	**2.15**	**195**	*e*P		**Pn**		**13 30 58.5**	**+3.1**
UREC	**San Jos de Ur**	**2.30**	**300**	*e*P		**Pn**		**13 30 58.3**	**+1.4**
UREC				*e*S		**Sn**		**13 31 26.6**	**+1.0**
UREC				*i*				13 31 28.4	
	comp=Z,894nm,0.2s								
RREF	**El Recreo**	**2.49**	**227**	*e*P		**Pn**		**13 30 57.5**	**-2.4**
RREF				*e*S		**Sn**		**13 31 28.4**	**-2.4**
CBOC	**Ciudad Bolivar**	**2.59**	**254**	*e*P		**Pn**		**13 31 02.7**	**+2.0**
CBOC				*i*				13 31 41.1	
	comp=Z,132nm,0.4s								
TOLC	**Tolima**	**2.70**	**222**	*e*P		**Pn**		**13 31 03.4**	**+1.2**
TOLC				*e*S		**Sn**		**13 31 35.3**	**+0.2**
TOLC				*i*				13 31 44.6	
	comp=Z,866nm,0.5s								
DBBC	**Dabeiba**	**2.71**	**279**	⇓*e*P		**Pn**		**13 31 03.9**	**+1.7**
DBBC				*e*S		**Sn**		**13 31 29.6**	**-5.3**
DBBC				*i*				13 31 41.0	
	comp=Z,742nm,0.7s								
PTGC	**Puerto Gaitan,**	**2.76**	**150**	*e*P		**Pn**		**13 31 02.8**	**0.0**
PTGC				*e*S		**Sn**		**13 31 34.5**	**-1.6**
PTGC				*i*				13 31 40.4	
	comp=Z,222nm,0.2s								
ANIL	**Santa Ana**	**2.82**	**222**	*e*P		**Pn**		**13 31 05.1**	**+1.2**
ANIL				*e*S		**Sn**		**13 31 40.8**	**+2.9**
ANIL				*i*				13 31 48.5	
	comp=Z,121nm,0.3s								
MOTC	**Monteria, Cord**	**3.03**	**315**	⇑*i*P		**Pn**		**13 31 07.0**	**+0.7**
MOTC				*e*S		**Sn**		**13 31 43.4**	**+1.0**
MOTC				*i*				13 31 45.8	
	comp=Z,160nm,0.2s								
PRAC	**Prado**	**3.18**	**205**	*e*P		**Pn**		**13 31 09.4**	**+1.0**
PRAC				*e*S		**Sn**		**13 31 46.1**	**+0.1**
PRAC				*i*				13 31 51.

TXAR	**Lajitas Array**	**36.31**	**312**	P		**P**	**13 37 11.8**	**0.0**
PDAR	**Pinedale Array**	**48.02**	**324**	P		**P**	**13 38 48.3**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=128,slow=8.2,SNR=3.5							
NVAR	**Mina Array Bea**	**51.35**	**315**	P		**P**	**13 39 13.7**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=138,slow=5.7,SNR=2.4							
YKA	**Yellowknife Ar**	**63.33**	**340**	P		**P**	**13 40 35.9**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=127,slow=7.4,SNR=24							
ILAR	**Eielson Array**	**76.99**	**335**	P		**P**	**13 41 59.1**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=97,slow=4.0,SNR=4.4							
ARCES	**ARCESS Array B**	**87.01**	**20**	P		**P**	**13 42 52.0**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=278,slow=4.8,SNR=5.9							
MKAR	**Makanchi Array**	**122.65**	**20**	PKP		**PKPdf**	**13 49 00.5**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=328,slow=3.0,SNR=2.1							
AS31	**Alice Springs**	**148.67**	**234**	PKPbc		**PKPbc**	**13 49 53.3**	**-0.2**
ASAR	**Alice Springs**	**148.67**	**234**	PKPbc		**PKPbc**	**13 49 53.0**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=122,slow=3.5,SNR=19							
ASAR				pPKPbc		**pPKPbc**	**13 50 26.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=113,slow=3.8,SNR=4.3							
WR0	**Warramunga Arr**	**149.71**	**241**	PKPbc		**PKPbc**	**13 49 56.0**	**0.0**
WB2	**Warramunga Arr**	**149.88**	**241**	PKPbc		**PKPbc**	**13 49 56.3**	**-0.1**
WRAB	**Tennant Creek**	**149.89**	**241**	PKPbc		**PKPbc**	**13 49 55.9**	**-0.6**
WRA	**Warramunga Arr**	**149.89**	**241**	PKPbc		**PKPbc**	**13 49 56.4**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=108,slow=2.8,SNR=24							
WRA				pPKPbc		**pPKPbc**	**13 50 28.8**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=111,slow=2.6,SNR=3.4							
WB0	**Warramunga Arr**	**149.91**	**242**	PKPbc		**PKPbc**	**13 49 56.5**	**0.0**

WEL 14 13:41:49.2,44°S±2°×17°2E±°, h8km±1km, M2.5/8, ML2.7/7, MLv2.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=139.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.18**	**113**	P	Pg	13 41 54.3	+1.5
RACZ	**Rakaia**	**0.23**	**246**	P	Pg	13 41 55.7	+2.0
OXZ	**Oxford**	**0.42**	**318**	P	Pb	13 41 58.2	-0.6
AKCZ	**Akaroa Harbour**	**0.42**	**124**	P	Pb	13 41 59.1	+0.2
OKCZ	**Okains Bay**	**0.47**	**101**	P	Pb	13 42 00.0	+0.3
AMCZ	**Amberley**	**0.49**	**20**	P	Pb	13 42 00.1	+0.1
WACZ	**Wakanui South**	**0.52**	**234**	P	Pb	13 42 01.6	+1.0
MHCZ	**Mount Hutt**	**0.63**	**279**	P	Pb	13 42 03.0	+0.5
GVZ	**Greta Valley S**	**0.80**	**34**	P	Pb	13 42 05.3	-0.1
RPZ	**Rata Peaks**	**1.00**	**265**	P	Pn	13 42 09.6	+0.1
INZ	**Inchbonnie**	**1.16**	**321**	P	Pn	13 42 12.3	+0.6
WVZ	**Waitaha Valley**	**1.35**	**294**	P	Pg	13 42 16.6	+1.5
ODZ	**Otahua Downs**	**1.90**	**222**	P	Pg	13 43 26.0	+0.5
DSZ	**Denniston Nort**	**1.94**	**346**	P	Pb	13 42 24.0	-0.9
TSZ	**Takapari Road**	**4.44**	**38**	P	Pn	13 42 59.1	+2.2
PXZ	**Pawanui**	**4.89**	**44**	P	Pn	13 43 06.3	+3.3
DRZ	**Dome Shelter**	**4.95**	**29**	P	Pn	13 43 02.9	-1.3

*IDC **14** 13:48:59.3±2.2,24°.80N×109°.27W, h0km, mb3.3/1, mb1 3.7/4, mb1mx3.5/31, mbtmp3.2/4, ML3.7/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/19, Error ellipse: s-maj=47.6km s-min=11.1km az=134.0*

*MEX **14** 13:48:59.1±0.4,24°.83N×109°.10W, h5km±11km, MD3.9*

ISC 14 13:49:01.0±1.3, 24°.9N±0°.2×109°.3W±0°.2, h17km, n9, σ2s88/9, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSIG	**Topolobambo**	**0.71**	**22**	*i* P	**Pb**	**13 49 12.6**	**-2.3**
TSIG				*i* S	**Sb**	**13 49 22.9**	**-1.6**
LPIG	**La Paz**	**1.21**	**227**	Pg	**Pn**	**13 49 21.6**	**-1.6**
	80nm,0.3s,baz=213,slow=3.5,SNR=14						
LPIG				Lg	Lg	13 49 37.4	
	89nm,0.3s,baz=326,slow=20,SNR=10						
LPIG	**La Paz**	**1.21**	**227**	*i* P	Pn	13 49 20.3	-2.9
LPIG				*i* S	**Sn**	**13 49 37.2**	**-1.9**
CSIG	**Choix**	**2.08**	**25**	*i* P	Pn	13 49 31.6	-3.5
CSIG				*i* S	**Sn**	**13 49 57.2**	**-3.3**
TXAR	**Lajitas Array**	**6.69**	**48**	Pn	**Pn**	**13 50 41.0**	**+2.5**
	0.2nm,0.3s,baz=232,slow=14,SNR=7.6						
TXAR				Lg	Lg	13 52 29.2	
	0.3nm,0.3s,baz=247,slow=28,SNR=1.6						
ANMO	**Albuquerque**	**10.28**	**13**	LR	LR	13 55 33.7	
	comp=Z,88nm,19.9s,baz=220,slow=38						
NVAR	**Mina Array Bea**	**15.45**	**333**	Pn	**P**	**13 52 42.2**	**-0.6**
	0.1nm,0.3s,baz=164,slow=12,SNR=10						
PDAR	**Pinedale Array**	**17.78**	**359**	P	**P**	**13 53 11.6**	**+2.9**
	0.1nm,0.3s,baz=161,slow=10,SNR=3.6						
PDAR				LR	LR	14 00 13.8	
	comp=Z,85nm,19.0s,baz=185,slow=38						
ILAR	**Eielson Array**	**46.58**	**339**	P	**P**	**13 57 30.8**	**+3.1**
	0.4nm,0.8s,baz=145,slow=9.6,SNR=4.6						

*NEIC **14** 14:00:40.1±2.3,55°.89S±0°.09×27°.9W±0°.2, h35km±2km, mb4.4/11, Error ellipse: s-maj=19.4km s-min=9.5km az=134.0*

*IDC **14** 14:00:51.1±0.7,56°.21S×26°.95W, h91km±7km, mb4.1/9, mb1 4.1/10, mb1mx3.9/20, mbtmp4.4/10, MS2.7/1, Ms1 2.7/1, ms1mx2.4/17, Error ellipse: s-maj=24.2km s-min=16.5km az=82.0*

ISC 14 14:00:42.5±0.6, 56°.00S±0°.10×28°.3W±0°.1, h35km, n31, σ2s49/24, mb4.3/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**4.98**	**287**	Pn	**Pn**	**14 01 54.0**	**-0.6**
SNAA	**Sanae**	**19.06**	**155**	P	**P**	**14 04 59.3**	**-2.0**
	0.6nm,0.3s,baz=311,slow=8.5,SNR=25						
SNAA				S	Sn	14 08 16.8	-18
	0.1nm,0.3s,baz=3.5,slow=22,SNR=2.5						
SNAA				LR	LR	14 10 25.3	
	comp=Z,24nm,22.0s,baz=192,slow=31						
SNAA	**Sanae**	**19.06**	**155**	P	**P**	**14 04 58.9**	**-2.4**
SNAA				IAmb	IAmb	14 05 07.0	
	comp=Z,13nm,0.6s						
PMSA	**Palmer Station**	**19.45**	**229**	P	**P**	**14 05 06.9**	**+1.3**
PMSA				IAmb	IAmb	14 05 22.2	
	comp=Z,33nm,0.9s						
BELA	**Belgrano 2**	**22.09**	**184**	P	**P**	**14 05 34.1**	**+0.1**
USHA	**Ushuaia**	**22.57**	**256**	P	P	14 05 51.5	+12
	comp=Z,17nm,0.4s,baz=108,slow=13,SNR=2.5						
GO09	**Cerro Castillo**	**26.16**	**262**	P	**P**	**14 06 13.2**	**0.0**
TRQA	**Tornquist**	**28.71**	**294**	P	**P**	**14 06 35.5**	**-0.6**
QSPA	**South Pole Qui**	**34.26**	**180**	P	**P**	**14 07 25.7**	**+0.9**
	comp=Z,4.7nm,0.5s,baz=2.4,slow=0.3,SNR=6.8						
QSPA	**South Pole Qui**	**34.26**	**180**	P	P	14 07 21.3	-3.5
QSPA				IAmb	IAmb	14 07 28.9	
	comp=Z,6.4nm,0.8s						
CPUP	**Villa Florida**	**36.29**	**313**	P	**P**	**14 07 41.7**	**-0.8**
CPUP				IAmb	IAmb	14 07 45.7	
	comp=Z,1.8nm,1.1s						
ROC1	**El Roble**	**37.31**	**290**	P	**P**	**14 07 49.7**	**-1.6**
MAW	**Mawson**	**40.58**	**144**	P	**P**	**14 08 15.2**	**-2.7**
	comp=Z,1.4nm,0.5s,baz=230,slow=9.0,SNR=8.8						
MAW	**Mawson**	**40.58**	**144**	P	P	14 08 14.0	-3.9
AC01	**Pan de Azucar**	**42.58**	**297**	P	**P**	**14 08 35.7**	**+0.8**
AC01				IAmb	IAmb	14 08 36.5	
	comp=Z,8.9nm,1.1s						
BDFB	**Brasilia**	**43.00**	**332**	P	**P**	**14 08 35.9**	**-2.5**
VNDA	**Vanda**	**46.59**	**183**	P	**P**	**14 09 08.1**	**+1.8**
	comp=Z,6.4nm,0.6s,baz=190,slow=7.0,SNR=85						
VNDA				ScP	**ScP**	**14 14 25.4**	**-4.8**
	comp=Z,0.6nm,0.8s,baz=150,slow=1.7,SNR=3.9						
VNDA	**Vanda**	**46.59**	**183**	P	**P**	**14 09 08.1**	**+1.8**
PB08	**IPOC Station P**	**46.95**	**303**	P	**P**	**14 09 09.3**	**-0.8**
PB08				IAmb	IAmb	14 09 23.2	
	comp=Z,3.4nm,0.9s						
H10S2	**ASCENSION HYDR**	**48.14**	**18**	T	T	15 01 44.8	
	baz=189,slow=74,SNR=2.9						
H10S3	**ASCENSION HYDR**	**48.15**	**18**	T	T	15 01 47.5	
	baz=31,slow=74,SNR=4.3						
H10N1	**ASCENSION HYDR**	**49.26**	**18**	T	T	15 03 17.2	
	baz=192,slow=72,SNR=3.4						
H10N3	**ASCENSION HYDR**	**49.26**	**18**	T	T	15 03 11.5	
	baz=192,slow=72,SNR=13						
H10N2	**ASCENSION HYDR**	**49.28**	**18**	T	T	15 03 11.5	
	baz=192,slow=72,SNR=4.5						
LPAZ	**La Paz**	**49.82**	**306**	P	P	14 09 41.0	+8.5
	comp=Z,0.5nm,0.4s,baz=178,slow=5.4,SNR=2.3						
LPAZ				pP	sP	14 10 03.0	+16
	comp=Z,1.3nm,0.5s,baz=174,slow=14,SNR=3.1						
DBIC	**Dimbokro**	**65.39**	**26**	P	**P**	**14 11 22.4**	**+1.2**
	comp=Z,2.3nm,0.8s,baz=151,slow=10,SNR=2.1						
TORD	**Torodi Ar. Bea**	**73.33**	**31**	P	**P**	**14 12 11.9**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=203,slow=6.8,SNR=7.9						
TORD				pP	PcP	14 12 36.8	+10
	comp=Z,1.4nm,0.6s,baz=200,slow=5.9,SNR=5.2						
STKA	**Stephens Creek**	**92.06**	**171**	P	**P**	**14 13 49.4**	**+1.7**
	comp=Z,2.6nm,0.9s,baz=334,slow=0.9,SNR=2.9						
ASAR	**Alice Springs**	**99.23**	**164**	P	**Pdif**	**14 14 22.1**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=179,slow=3.6,SNR=8.3						
ILAR	**Eielson Array**	**149.60**	**312**	PKPbc	**PKiKP**	**14 20 29.1**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=140,slow=3.9,SNR=11						
ILAR				pPKPbc	**sPKPab**	**14 20 53.6**	**+7.4**
	comp=Z,1.4nm,0.8s,baz=130,slow=0.6,SNR=5.9						
SONM	**Songino Array**	**151.37**	**87**	PKPbc	**PKPbc**	**14 20 30.1**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=215,slow=1.8,SNR=3.2						

*KRSC **14** 14:08:01.7±1.0, 48°.80N×156°.65E, h34km±22km, ML4.0*

*IDC **14** 14:08:04.7±2.5, 49°.52N×154°.42E, h155km±24km, mb3.1/7, mb1 3.3/9, mb1mx3.1/33, mbtmp3.6/9, MS3.0/1, Ms1 3.2/1, ms1mx2.5/13, Error ellipse: s-maj=26.9km s-min=20.5km az=131.0*

ISC 14 14:08:00.1±1.1, 48°.8N±0°.1×155°.4E±0°.2, h100km, n21, σ1s79/21, mb3.4/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.96**	**14**	*e*P	**Pn**	**14 08 33.7**	**+1.6**
SKR				*e*S	**Sn**	**14 08 56.8**	**+0.3**
PAU	**Pauzhetka**	**2.84**	**19**	*e*P	**Pn**	**14 08 44.8**	**+1.1**
PAU				*e*S	**Sn**	**14 09 16.6**	**-0.6**
KDTR	**Khodutka, Kamc**	**3.49**	**29**	*e*P	**Pn**	**14 08 52.9**	**+0.5**
KDTR				*e*S	**Sn**	**14 09 30.4**	**-2.4**
ASAK	**Asacha**	**3.95**	**23**	*e*P	**Pn**	**14 09 00.3**	**+1.7**
RUS	**Russkaya**	**4.17**	**28**	*e*P	**Pn**	**14 09 02.1**	**+0.7**
RUS				*e*S	**Sn**	**14 09 46.3**	**-2.8**
KRMR	**Karymshinskiy**	**4.42**	**23**	*e*S	**Sn**	**14 09 55.2**	**+0.2**
PETK	**Petropavlovsk-**	**4.57**	**18**	P	**Pn**	**14 09 06.7**	**-0.2**
	0.4nm,0.3s,baz=193,slow=12,SNR=12						
DALK	**Dalny**	**4.76**	**26**	*e*P	**Pn**	**14 09 11.6**	**+2.1**
UGLR	**Uglovaya**	**4.94**	**25**	*e*P	**Pn**	**14 09 13.7**	**+1.7**
KOK	**Koryaka**	**4.96**	**23**	*e*P	**Pn**	**14 09 14.6**	**+2.3**
AVH	**Avacha**	**4.97**	**24**	*e*P	**Pn**	**14 09 15.0**	**+2.7**
SDLR	**Sedlovina**	**5.02**	**25**	*e*P	**Pn**	**14 09 14.2**	**+1.1**
KRX	**Arik**	**5.03**	**23**	*e*P	**Pn**	**14 09 15.4**	**+2.2**
ASAJ	**Asahikawa**	**9.96**	**247**	P	**Pn**	**14 10 21.2**	**+1.1**
	0.2nm,0.3s,baz=68,slow=16,SNR=2.1						
ZALV	**Zalesovo Beam**	**42.66**	**305**	P	P	14 15 37.7	-8.7
	0.3nm,0.4s,baz=154,slow=41,SNR=1.9						
MKAR	**Makanchi Array**	**47.36**	**297**	P	P	14 16 16.2	-7.5
	0.4nm,0.6s,baz=206,slow=27,SNR=3.7						
CMAR	**Chiang Mai Ar**	**54.31**	**257**	P	**P**	**14 17 13.2**	**-3.0**
	0.5nm,0.6s,baz=35,slow=8.1,SNR=1.4						
CMAR				LR	LR	14 43 41.2	
	comp=Z,14nm,18.1s,baz=100,slow=40						
FINES	**FINESS Array B**	**62.83**	**335**	P	P	14 18 06.4	-8.2
	3.5nm,1.1s,baz=54,slow=9.7,SNR=4.1						
WRA	**Warramunga Arr**	**70.94**	**201**	P	**P**	**14 19 07.0**	**+0.5**
	0.2nm,0.8s,baz=12,slow=8.4,SNR=1.7						
ASAR	**Alice Springs**	**74.63**	**200**	P	P	14 19 29.4	+1.1
	0.1nm,0.6s,baz=10,slow=4.8,SNR=5.0						
TXAR	**Lajitas Array**	**75.19**	**62**	P	**P**	**14 19 32.1**	**+0.3**
	0.2nm,0.6s,baz=301,slow=2.6,SNR=4.1						

BER 14 14:23:30.3±0.9, 58°.30N×6°.43E, h0km, ML1.5, Explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNART	**Snartemo**	**0.41**	**84**	*e*P	Pg	14 23 37.9	-0.3
SNART				*e*S	Sg	14 23 42.4	-1.1
SNART	**Snartemo**	**0.41**	**84**	*i* S	Pg	14 23 37.9	-0.3
HOMB	**Homborsund**	**1.10**	**91**	*e*P	Pg	14 23 50.4	-0.9
HOMB				*e*S	Sg	14 24 04.9	-0.6
HOMB				IAML		14 24 08.0	
	comp=Z,26nm,0.4s						
BLS5	**Blasjo**	**1.13**	**1**	*e*P	Pg	14 23 50.4	-1.5
BLS5				*e*S	Sg	14 24 05.9	-0.5
BLS5				IAML		14 24 09.2	
	comp=Z,9.8nm,0.3s						
ODD1	**Odda**	**1.62**	**4**	*e*S	Sn	14 24 19.1	-2.6
KONO	**Kongsberg**	**2.13**	**49**	*e*P	Pn	14 24 05.4	-1.6
KONO				*e*S	Sn	14 24 30.2	-4.0
KONO				IAML		14 24 37.2	
	comp=Z,5.7nm,0.4s						
SKAR	**Skarslia**	**2.57**	**21**	*e*P	Pn	14 24 11.5	-1.7
SKAR				*e*S	Sn	14 24 41.7	-3.5
SKAR				IAML		14 24 51.1	
	comp=Z,5.9nm,0.4s						
HYA	**Hoyanger**	**2.88**	**358**	*e*P	Pn	14 24 15.2	-2.2
HYA				IAML		14 25 16.5	
	comp=Z,4.3nm,0.6s						

*ATH **14** 14:25:05.0,41°.82N×22°.86E, h10km±1km, ML2.4/8, Error ellipse: s-maj=3.1km s-min=1.7km az=159.0*

*SKO **14** 14:25:04.2,41°.82N×22°.83E, h24km*

*THE **14** 14:25:06.7,41°.75N×22°.89E, h1km±3km, ML2.4/4, Error ellipse: s-maj=4.1km s-min=0.9km az=326.0*

*BEO **14** 14:25:06.4±0.4,41°.82N×22°.85E, h0km, ML2.5/12*

ISC 14 14:25:03.8±1.2, 41°.82N±0°.02×22°.86E±0°.03, h1km±11km, n36, σ1s40/59, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIP	**Stip**	**0.52**	**256**	↓*i* Pg	**Pg**	**14 25 11.3**	**-2.4**
STIP				*i* Sg	**Sg**	**14 25 15.8**	**-4.6**
STIP				*e*Lg	Lg	14 25 16.4	
	comp=E,188nm,0.3s						
VAY	**Valandovo**	**0.54**	**204**	*e*Pg	**Pb**	**14 25 15.6**	**-0.4**
VAY				*e*Sg	**Sg**	**14 25 22.9**	**+1.8**
VAY	**Valandovo**	**0.54**	**204**	↑*i* Pg	**Pb**	**14 25 15.8**	**-0.2**
VAY				*i* Sg	**Sg**	**14 25 23.5**	**+2.4**
VAY				*e*Lg	Lg	14 25 24.6	
	comp=N,162nm,0.4s						
KNT	**Kendrikon**	**0.66**	**177**	P	**Pb**	**14 25 17.9**	**-0.1**
KNT				S	**Sb**	**14 25 26.9**	**-0.7**
KNT				AML	AML	14 25 28.4	
	comp=N,695μm,0.1s						
KNT				AML	AML	14 25 29.0	
	comp=E,633μm,0.1s						
KNT	**Kendrikon**	**0.66**	**177**	P	**Pb**	**14 25 17.8**	**-0.2**
KNT				S	**Sg**	**14 25 26.1**	**+1.3**
	comp=E,318nm,0.1s						
BOSS	**Bosilegrad**	**0.73**	**338**	*e*Pg	**Pb**	**14 25 19.3**	**-0.1**
BOSS				*e*Sg	**Sb**	**14 25 28.8**	**-1.1**
NVR	**Nevrokopi**	**0.89**	**121**	P	**Pn**	**14 25 22.2**	**-1.3**
NVR				S	**Sb**	**14 25 34.0**	**-0.4**
NVR				AML	AML	14 25 37.9	
	comp=E,461μm,0.2s						
NVR				AML	AML	14 25 38.0	
	comp=N,494μm,0.2s						
NVR	**Nevrokopi**	**0.89**	**121**	P	**Pn**	**14 25 22.2**	**-1.3**
NVR				S	**Sn**	**14 25 34.4**	**-2.6**
	comp=N,248nm,0.2s						
SRS	**Serrai**	**0.89**	**141**	P	**Pb**	**14 25 22.2**	**+0.1**
SRS				S	**Sb**	**14 25 34.9**	**+0.5**
SRS				AML	AML	14 25 38.5	
	comp=N,492μm,0.2s						
SRS				AML	AML	14 25 39.1	
	comp=E,479μm,0.4s						
SRS	**Serrai**	**0.89**	**141**	P	**Pb**	**14 25 22.1**	**+0.1**
SRS				S	**Sb**	**14 25 34.4**	**-0.1**
	comp=E,305nm,0.6s						
PRVS	**Prvonek**	**0.90**	**320**	*e*Pg	**Pb**	**14 25 22.5**	**+0.3**
PRVS				*e*Sg	**Sb**	**14 25 34.4**	**-0.4**
GRG	**Griva**	**0.93**	**202**	P	**Pg**	**14 25 22.5**	**+1.0**
SOH	**Sokhos**	**1.06**	**159**	P	**Pn**	**14 25 25.5**	**-0.3**
SOH				S	**Sb**	**14 25 39.8**	**+0.3**
SOH				AML	AML	14 25 43.3	
	comp=N,1236μm,0.5s						
SOH				AML	AML	14 25 43.6	
	comp=E,846μm,0.5s						
SOH	**Sokhos**	**1.06**	**159**	P	**Pn**	**14 25 25.6**	**-0.3**
SOH				S	**Sb**	**14 25 40.0**	**+0.6**
	comp=E,415nm,0.5s						
THE	**Thessaloniki**	**1.19**	**176**	P	**Pn**	**14 25 27.7**	**+0.2**
THE				S	**Sb**	**14 25 42.8**	**-0.2**
THE	**Thessaloniki**	**1.19**	**176**	P	**Pn**	**14 25 27.8**	**+0.3**
HORT	**Hortiatis**	**1.23**	**171**	P	**Pn**	**14 25 28.5**	**+0.3**
HORT				S	**Sn**	**14 25 46.6**	**+1.1**
HORT				AML	AML	14 25 48.6	
	comp=N,108μm,0.4s						
HORT				AML	AML	14 25 50.9	
	comp=E,124μm,0.4s						
HORT	**Hortiatis**	**1.23**	**171**	P	**Pn**	**14 25 28.2**	**0.0**
ZAPS	**Zavoj**	**1.46**	**354**	*e*Pg	**Pg**	**14 25 33.5**	**+1.7**
ZAPS				*e*Sg	**Sn**	**14 25 53.3**	**+2.1**
KAVA	**Kavala**	**1.49**	**123**	P	**Pg**	**14 25 33.0**	**+0.6**
KAVA				S	**Sg**	**14 25 52.7**	**+1.0**
KAVA				AML	AML	14 25 54.1	
	comp=E,271μm,0.5s						
KAVA				AML	AML	14 25 55.1	
	comp=N,384μm,0.4s						
KAVA	**Kavala**	**1.49**	**123**	P	**Pg**	**14 25 32.9**	**+0.6**
PLG	**Polygyros**	**1.51**	**163**	P	**Pg**	**14 25 33.2**	**+0.5**
PLG				S	**Sg**	**14 25 54.1**	**+1.9**
PLG				AML	AML	14 25 56.8	
	comp=N,100μm,0.4s						
PLG				AML	AML	14 25 59.3	
	comp=E,107μm,0.6s						
PLG	**Polygyros**	**1.51**	**163**	P	**Pg**	**14 25 33.4**	**+0.7**
OUR	**Ouranopolis**	**1.71**	**150**	P	**Pg**	**14 25 36.0**	**-0.5**
OUR				S	**Sg**	**14 26 00.3**	**+1.7**
THAS	**Thassos island**	**1.85**	**130**	P	**Pg**	**14 25 39.8**	**+0.5**
THAS				S	**Sg**	**14 26 04.2**	**+0.8**
SELS	**Selova**	**1.90**	**318**	*e*Pn	**Pb**	**14 25 39.1**	**-0.2**
PAIG	**Paliouri**	**1.99**	**161**	P	**Pb**	**14 25 39.5**	**-1.2**
BOVS	**Bovan**	**2.00**	**335**	*e*Pn	**Pg**	**14 25 41.3**	**-0.9**
BOVS				*e*Sg	**Sg**	**14 26 09.1**	**+0.9**
ZAGS	**Zajecar**	**2.05**	**347**	*e*Pn	**Pb**	**14 25 41.1**	**-0.6**
RDO	**Rodhopi**	**2.12**	**108**	P	**Pg**	**14 25 43.3**	**-1.1**
RDO				S	**Sg**	**14 26 10.9**	**-1.1**
RDO				AML	AML	14 26 15.3	
	comp=E,124μm,0.2s						
RDO				AML	AML	14 26 16.1	
	comp=N,171μm,0.3s						
ALN	**Alexandroupoli**	**2.57**	**110**	P	**Pb**	**14 25 48.0**	**-2.6**
GRUS	**Gruza**	**2.60**	**323**	*e*Pn	**Pb**	**14 25 50.5**	**-0.7**
GRUS				*e*Sg	**Sg**	**14 26 29.8**	**+2.5**
IVAS	**Ivanjica**	**2.66**	**312**	*e*Pn	**Pb**	**14 25 52.1**	**-0.1**
TRUS	**Trudelj**	**3.00**	**324**	*e*Pn	**Pb**	**14 25 56.9**	**-1.1**
DIVS	**Divibare**	**3.10**	**318**	*e*Pn	**Pn**	**14 25 56.5**	**+2.6**
BBLS	**Lazići**	**3.26**	**310**	*e*Pn	**Pb**	**14 25 59.2**	**-3.3**

*IDC **14** 14:28:17.6±1.1, 77°.13N×20°.33E, h0km, mb3.4/1, mb1 3.5/5, mb1mx3.2/49, mbtmp3.5/5, ML2.8/4, MS3.4/1, Ms1 3.4/1, ms1mx2.4/39, Error ellipse: s-maj=35.2km s-min=6.4km az=61.0*

*NAO **14** 14:28:18.8±0.9, 76°.95N×18°.71E, h16km±9km, ML3.7*

*BER **14** 14:28:20.4±3.4, 76°.94N×18°.68E, h15km±14km, ML3.3, MW3.6, ML3.7(NAO), Confirmed Earthquake*

*IEPN **14** 14:28:21.0, 77°.06N×19°.27E, h10km*

ISC 14 14:28:18.7±1.1, 77°.06N±0°.03×18°.96E±0°.03, h14km±9km, n41, σ1s93/57, 3C-1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSPB	**Hornsund (broa**	**0.78**	**267**	↑*i* P	**Pg**	**14 28 33.0**	**-0.8**
HSPB				*i* S	**Sg**	**14 28 42.2**	**-1.8**
HSPB	**Hornsund (broa**	**0.78**	**267**	Pg	**Pg**	**14 28 33.1**	**-0.7**
HSPB				Lg	Lg	14 28 42.9	
HSPB	**Hornsund (broa**	**0.78**	**267**	*e*P	**Pg**	**14 28 33.1**	**-0.7**
HSPB				*e*S	**Sg**	**14 28 42.4**	**-1.5**
HSPB				IAML		14 28 46.5	
	comp=Z,506nm,0.4s						
SPA0	**Spitsbergen Ar**	**1.25**	**335**	↑*i* P	**Pn**	**14 28 42.4**	**+0.6**
SPA0				*e*S	**Sb**	**14 28 59.7**	**+1.6**
SPA0	**Spitsbergen Ar**	**1.25**	**335**	Pn	**Pn**	**14 28 42.4**	**+0.6**
	baz=148,slow=18						
SPA0				Pg	**Pb**	**14 28 43.4**	**+1.3**
SPA0				Lg	Lg	14 29 00.8	
	baz=132,slow=28						
SPA0	**Spitsbergen Ar**	**1.25**	**335**	*e*P	**Pn**	**14 28 42.4**	**+0.6**
SPA0				*e*Sg	**Sg**	**14 29 02.0**	**+2.9**
SPITS	**Spitsbergen Ar**	**1.25**	**335**	Pg	**Pn**	**14 28 42.8**	**+1.0**
	baz=152,slow=18,SNR=4009						
SPITS				Lg	Lg	14 29 00.5	
	baz=148,slow=31,SNR=19						
BRBB	**Barentsburg B**	**1.46**	**318**	Pn	**Pn**	**14 28 45.3**	**+0.7**
BRBB				Pg	**Pb**	**14 28 46.7**	**+1.1**
BRBB				Lg	Lg	14 29 06.0	
BRBB	**Barentsburg B**	**1.46**	**318**	*e*P	**Pn**	**14 28 45.2**	**+0.6**
BRBB				*e*Pg	**Pb**	**14 28 46.8**	**+1.1**
BRBB				*e*S	**Sn**	**14 29 02.1**	**-1.3**
BRBB				*e*Sg	**Sb**	**14 29 06.0**	**+2.0**
HOPEN	**Hopen**	**1.50**	**109**	↓*i* P	**Pn**	**14 28 45.3**	**+0.3**
HOPEN				*i* S	**Sn**	**14 29 04.1**	**-0.2**
HOPEN	**Hopen**

HFS	**Hagfors**	**17.10 189**		P	**Pn**	**14 32 18.1**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=359,slow=10,SNR=2.4							
DAVOX	**Davos/Dischmat**	**30.61 192**		LR	LR	14 48 43.0		
	comp=Z,67nm,18.8s,baz=270,slow=40							
MKAR	**Makanchi Array**	**38.98 103**		P	**P**	**14 35 43.1**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=334,slow=9.6,SNR=2.7							

*IDC **14** 14:38:25.1±2.4, 3.47S×135.74E, h0km, mb3.7/2, mb1 3.9/5, mb1mx3.6/30, mbtmp3.8/5, ML3.5/3, Error ellipse: s-maj=62.9km s-min=25.8km az=77.0*
*DJA **14** 14:38:28.5±0.6, 3.6S×13.6E±1°, h10km, M4.0/5, mb4.3/1, MLv3.8/5*
*NEIC **14** 14:38:32.9±2.8, 3.7S±0.1°×135.3E±0.1°, h42km±20km, mb3.5/4, Error ellipse: s-maj=23.1km s-min=13.5km az=48.0*

ISC 14 14:38:26.9±0.9, 3.59S±0.07°×135.53E±0.07°, h10km, n17, σ3s69/20, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRPI	**Serui, Papua**	**1.85**	**23**	P	**Pn**	**14 38 57.2**	**-1.5**
BAKI	**Biak**	**2.45**	**14**	P	**Pn**	**14 39 06.4**	**-0.6**
FAKI	**Fak Fak**	**3.34**	**281**	P	**Pn**	**14 39 20.8**	**+1.6**
FAKI	**Fak Fak**	**3.34**	**281**		**Pn**	**14 39 20.8**	**+1.6**
SIJI	**Sorong**	**5.04**	**302**	Pn	**Pn**	**14 39 42.8**	**+0.1**
	6.3nm,0.3s,baz=9.7,slow=20,SNR=104							
SIJI				Sn	**Sn**	**14 40 38.3**	**-2.7**
	7.1nm,0.3s,baz=180,slow=23,SNR=7.6							
MTN	**Manton Dam**	**10.17**	**205**		**Pn**	**14 40 56.6**	**+3.6**
COEN	**Coen**	**12.77**	**144**	Pn	**Pn**	**14 41 31.0**	**+2.3**
KNRA	**Kununurra**	**13.73**	**209**	Pn	**Pn**	**14 41 42.1**	**+0.4**
WRAB	**Tennant Creek**	**16.28**	**184**		**P**	**14 42 19.2**	**+0.4**
WRAB				IAmb	IAmb	14 42 26.2		
	comp=Z,3.0nm,0.7s							
WB2	**Warramunga Arr**	**16.29**	**184**	P	**P**	**14 42 21.2**	**+2.3**
WRA	**Warramunga Arr**	**16.29**	**184**	Pn	**Pn**	**14 42 15.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=8.2,slow=13,SNR=14							
WRA				Sn	**Sn**	**14 45 06.6**	**-10**
	comp=Z,0.1nm,0.3s,baz=358,slow=23,SNR=2.4							
WR0	**Warramunga Arr**	**16.30**	**183**	P	**P**	**14 42 20.5**	**+1.5**
WR0				IAmb	IAmb	14 42 34.7		
	comp=Z,4.7nm,1.2s							
FITZ	**Fitzroy Crossi**	**17.37**	**213**	P	**P**	**14 42 30.1**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=27,slow=10,SNR=9.9							
FITZ				S	**Sn**	**14 45 34.3**	**-8.7**
	comp=Z,0.2nm,0.3s,baz=303,slow=19,SNR=2.0							
FITZ	**Fitzroy Crossi**	**17.37**	**213**		**Pn**	**14 42 29.2**	**-0.3**
AS31	**Alice Springs**	**20.02**	**184**	Pn	**Pn**	**14 43 04.2**	**+2.4**
ASAR	**Alice Springs**	**20.02**	**184**	P	**Pn**	**14 43 02.9**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=7.0,slow=12,SNR=33							
MKAR	**Makanchi Array**	**68.58**	**324**	P	**P**	**14 49 30.3**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=104,slow=8.0,SNR=6.7							

*ISN **14** 15:01:22.8±0.8, 36.91N×45.22E, h0km±999km, ML3.7*
*DDA **14** 15:01:23.7, 36.63N×45.45E, h7km±4km, ML3.6*
*TEH **14** 15:01:24.7, 36.88N×45.31E, h8km, ML3.7*
*THR **14** 15:01:27.3±0.3, 36.86N×45.39E, h15km±999km, ML3.1*
*ISK **14** 15:01:28.9, 36.85N×44.89E, h5km, ML3.8/16*
*ATA **14** 15:01:45.4±0.3, 37.69N×44.18E, h31km±8km, ML3.0, MW4.0*

ISC 14 15:01:26.7±0.8, 36.88N±0.03°×45.24E±0.02°, h10km, n83, σ1s54/105, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.39**	**107**	*e*Pg	**Pg**	**15 01 32.0**	**-2.4**
MAHB				*e*		15 01 39.0		
IAZR	**Azarshahr**	**0.99**	**36**	*e*Pg	**Pg**	**15 01 43.8**	**-2.0**
IAZR				*e*Sg	**Sb**	**15 01 58.3**	**-1.0**
IAZR				*e*		15 02 05.3		
YOVA	**Hakkari_Yksek**	**1.04**	**313**	*i* P	**Pg**	**15 01 44.2**	**-2.5**
YOVA				*i* S	**Sg**	**15 01 59.1**	**-1.1**
CUKT	**Cukurca**	**1.36**	**286**	PN	**Pn**	**15 01 50.5**	**-1.3**
CUKT				SN	**Sb**	**15 02 07.6**	**-2.2**
CUKT	**Cukurca**	**1.36**	**286**	*i* P	**Pn**	**15 01 49.9**	**-1.9**
CUKT				*i* S	**Sb**	**15 02 10.4**	**+0.6**
HAKT	**HAKKARI**	**1.40**	**299**	*i* P	**Pn**	**15 01 50.9**	**-1.6**
HAKT				*i* S	**Sb**	**15 02 10.7**	**-0.4**
TABZ	**Tabriz**	**1.46**	**36**	*e*Pg	**Pn**	**15 01 53.1**	**-0.1**
TABZ				*e*		15 02 29.3		
BASK	**Baskale_VAN**	**1.53**	**320**	*e*P	**Pn**	**15 01 54.9**	**+0.6**
BASK	**Baskale_VAN**	**1.53**	**320**	*i* P	**Pn**	**15 01 54.4**	**+0.1**
BASK				*i* S	**Sg**	**15 02 16.9**	**+1.0**
BASK				IAML		15 02 23.0		
	comp=N,267nm,1.0s							
BASK	**Baskale_VAN**	**1.53**	**320**	*e*Pg	**Pn**	**15 01 54.4**	**+0.1**
ITBZ	**Tabriz**	**1.53**	**28**	*e*Pg	**Pn**	**15 01 52.4**	**-1.8**
ITBZ				*e*		15 01 55.0		
IMRD	**Marand**	**1.87**	**11**	*e*Pn	**Pn**	**15 01 58.6**	**-0.3**
IMRD				*e*		15 02 01.3		
IHRS	**Heris**	**2.03**	**44**	*e*Pg	**Pn**	**15 02 01.9**	**+0.8**
IHRS				*e*		15 02 35.5		
ORD	**Ordubad**	**2.13**	**16**	*e*Pg	**Pb**	**15 02 04.4**	**-1.0**
IHSH	**Hashtrud**	**2.15**	**48**	*e*Pg	Pn	15 01 54.9	-7.9
IHSH				*e*		15 02 22.4		
ISRB	**Sarab**	**2.15**	**63**	*e*Pn	**Pn**	**15 02 02.9**	**+0.1**
ISRB				*e*		15 02 39.0		
AHAR	**Ahar**	**2.15**	**41**	*e*	**Sg**	**15 02 39.2**	**+3.3**
TVAN	**Van**	**2.20**	**319**	*e*P	**Pn**	**15 02 05.5**	**+2.0**
TVAN				IAML		15 02 53.6		
	comp=Z,195nm,1.4s							
TVAN	**Van**	**2.20**	**319**	*i* P	**Pb**	**15 02 05.6**	**-1.1**
TVAN				*i* S	**Sg**	**15 02 37.4**	**+0.1**
TVAN				IAML		15 02 42.0		
	comp=E,369nm,0.7s							
TVAN				IAML		15 02 44.0		
	comp=N,370nm,0.8s							
TVAN	**Van**	**2.20**	**319**	*e*Pn	**Pb**	**15 02 05.6**	**-1.1**
GEVA	**Gevas**	**2.25**	**310**	*e*P	**Pn**	**15 02 06.2**	**+2.1**
GEVA				IAML		15 02 45.2		
	comp=Z,161nm,1.1s							
GEVA	**Gevas**	**2.25**	**310**	*i* P	**Pn**	**15 02 05.3**	**+1.2**
GEVA				*i* S	**Sb**	**15 02 35.8**	**+0.3**
GEVA				IAML		15 02 42.0		
	comp=E,224nm,0.7s							
GEVA				IAML		15 02 42.0		
	comp=N,198nm,1.2s							
GEVA	**Gevas**	**2.25**	**310**	*e*Pn	**Pn**	**15 02 05.3**	**+1.2**
VANB	**Van**	**2.26**	**320**	PN	**Pn**	**15 02 05.7**	**+1.5**
VANB				SN	**Sn**	**15 02 32.5**	**+0.4**
VANB	**Van**	**2.26**	**320**	*e*Pn	**Pn**	**15 02 05.7**	**+1.5**
AKDM	**Akdamar-Van**	**2.31**	**310**	PN	**Pn**	**15 02 06.9**	**+2.0**
AKDM				SN	**Sn**	**15 02 34.5**	**+1.0**
AKDM	**Akdamar-Van**	**2.31**	**310**	*e*Pn	**Pn**	**15 02 06.9**	**+2.0**
SIRT	**Sirnak**	**2.32**	**286**	PN	**Pn**	**15 02 06.1**	**+1.0**
SIRT				SN	**Sn**	**15 02 33.1**	**-0.4**
SIRT	**Sirnak**	**2.32**	**286**	*e*Pn	**Pn**	**15 02 06.1**	**+1.0**
SIRN	**Sirnak**	**2.34**	**286**	*i* P	**Pn**	**15 02 07.0**	**+1.7**
SIRN				*i* S	**Sb**	**15 02 37.9**	**-0.2**
SIRN				IAML		15 02 47.0		
	comp=N,670nm,0.8s							
SIRN				IAML		15 02 49.0		
	comp=E,555nm,1.1s							
IDHR	**Dehrash**	**2.37**	**157**	*e*		15 02 48.9		
IDHR				*e*Pn	**Pn**	**15 02 05.8**	**+0.1**
ILIN	**Lien**	**2.40**	**144**	*e*Pn	**Pn**	**15 02 06.5**	**+0.2**
VMUR	**Van-Muradiye**	**2.49**	**328**	*i* P	**Pn**	**15 02 09.5**	**+2.0**
VMUR				*i* S	**Sb**	**15 02 43.6**	**+1.3**
VMUR				IAML		15 03 08.0		
	comp=E,140nm,1.1s							
VMUR	**Van-Muradiye**	**2.49**	**328**	*e*Pn	**Pn**	**15 02 09.4**	**+2.0**
CLDR	**Caldiran**	**2.49**	**336**	PN	**Pb**	**15 02 10.9**	**-0.8**
CLDR				SN	**Sb**	**15 02 41.9**	**-0.6**
CLDR	**Caldiran**	**2.49**	**336**	*i* P	**Pn**	**15 02 07.9**	**+0.4**
CLDR				*i* S	**Sb**	**15 02 40.8**	**-1.7**
CLDR	**Caldiran**	**2.49**	**336**	*e*Pn	**Pn**	**15 02 07.9**	**+0.4**
IVIS	**Veis**	**2.69**	**150**	*e*Pn	**Pn**	**15 02 10.0**	**-0.1**
IVIS				*e*		15 02 58.9		
IGHG	**Ghaleghazi**	**2.76**	**157**	*e*Pn	**Pn**	**15 02 10.5**	**-0.7**
IGHG				*e*		15 03 02.3		
ZNJK	**Zanjan**	**2.77**	**93**	IAML		15 02 55.4		
	comp=E,33nm,0.4s							
GRMI	**Germi**	**2.85**	**47**	*e*Pn	**Pn**	**15 02 13.5**	**+1.2**
GRMI				*e*Sg	**Sb**	**15 02 54.3**	**+1.7**
GRMI				IAML		15 03 00.7		
	comp=E,46nm,0.5s							
GRMI				IAML		15 03 06.9		
	comp=N,56nm,0.6s							
SRTM	**Siirt_Merkez**	**2.87**	**294**	*i* P	**Pn**	**15 02 13.4**	**+0.9**
SRTM				*i* S	**Sb**	**15 02 54.7**	**+1.5**
SRTM	**Siirt_Merkez**	**2.87**	**294**	*e*Pn	**Pn**	**15 02 13.4**	**+0.9**
BLIS	**Bitlis-Merkez**	**2.92**	**303**	*e*P	**Pb**	**15 02 17.3**	**-1.5**
BLIS				IAML		15 03 09.9		
	comp=Z,66nm,0.8s							
BLIS	**Bitlis-Merkez**	**2.92**	**303**	*i* P	**Pn**	**15 02 16.4**	**+3.1**
BLIS				*i* S	**Sg**	**15 02 59.5**	**-0.9**
KER	**Kermanshah**	**2.93**	**148**	*e*Pn	**Pn**	**15 02 13.7**	**+0.3**
HSRG	**Sareghieh**	**2.95**	**123**	*e*Pn	**Pn**	**15 02 14.5**	**+0.6**
HSRG				*e*		15 03 01.9		
KCHF	**Cheshme Sefid,**	**2.98**	**150**	*e*Pn	**Pn**	**15 02 15.3**	**+1.1**
GURO	**Guroymak-BITLI**	**3.04**	**304**	PN	**Pn**	**15 02 17.1**	**+2.1**
IALM	**Almabolaq**	**3.12**	**129**	*e*Pn	**Pn**	**15 02 17.4**	**+1.3**
TASB	**TASBURUN-IGDIR**	**3.20**	**346**	PN	**Pb**	**15 02 21.9**	**-1.7**
IBZA	**Bozab**	**3.21**	**138**	*e*Pn	**Pn**	**15 02 17.6**	**+0.2**
AGRB	**Hanur-Agry**	**3.22**	**327**	PN	**Pn**	**15 02 20.9**	**+3.4**
IKOM	**Komasi**	**3.27**	**145**	*e*Pn	**Pn**	**15 02 18.3**	**+0.1**
GNI	**Garni**	**3.29**	**353**	PN	**Pb**	**15 02 23.8**	**-1.4**
BTMN	**Batman**	**3.32**	**289**	*i* P	**Pb**	**15 02 26.8**	**+1.1**
BTMN				*i* S	**Sb**	**15 03 10.7**	**+4.5**
SVAN	**Silvan-Diyarba**	**3.46**	**293**	PN	**Pn**	**15 02 22.7**	**+2.1**
SVAN	**Silvan-Diyarba**	**3.46**	**293**	*e*Pn	**Pn**	**15 02 22.7**	**+2.1**
MUSM	**Mu-Merkez**	**3.48**	**303**	*i* P	**Pn**	**15 02 19.9**	**-1.1**
MUSM				*i* S	**Sb**	**15 03 13.4**	**+2.5**
MARD	**Mardin**	**3.59**	**278**	*i* P	**Pn**	**15 02 21.2**	**-1.3**
MARD				*i* S	**Sb**	**15 03 15.6**	**+1.5**
MARD				IAML		15 03 23.0		
	comp=N,305nm,0.8s							
MARD				IAML		15 03 25.0		
	comp=E,458nm,0.8s							
BHD	**Baghdad**	**3.67**	**191**	*e*Pn	**Pn**	**15 02 23.0**	**-0.5**
BHD				*e*Sn	**Sn**	**15 03 07.0**	**+0.2**
BHD				AML	AML	15 03 31.9		
	comp=E,361nm,0.4s							
IBDR	**Badra**	**3.80**	**171**	*e*Pn	**Pn**	**15 02 25.0**	**-0.3**
IBDR				*e*Sn	**Sn**	**15 03 11.0**	**+0.9**
IBDR				AML	AML	15 03 35.9		
	comp=E,134nm,0.7s							
IBDR				AML	AML	15 03 36.7		
	comp=N,125nm,0.5s							
HSAM	**Samen**	**3.82**	**133**	*e*Pn	**Pn**	**15 02 26.9**	**+1.1**
MAZI	**Mazidag**	**3.87**	**280**	PN	**Pn**	**15 02 28.2**	**+1.8**
IDOB	**Doab**	**3.91**	**141**	*e*Pn	**Pn**	**15 02 27.4**	**+0.4**
IKFM	**Kafar-mosalman**	**3.97**	**147**	*e*Pn	**Pn**	**15 02 28.0**	**+0.4**
HANI	**Diyarbakir_Han**	**4.14**	**293**	*i* P	**Pb**	**15 02 40.6**	**+0.9**
HANI				*i* S	**Sb**	**15 03 31.9**	**+2.2**
DYBB	**Diyarbakir**	**4.20**	**286**	PN	**Pn**	**15 02 32.8**	**+1.9**
BMDN	**Meydan**	**4.34**	**136**	*e*Pn	**Pn**	**15 02 33.5**	**+0.6**
ASAO	**Ashtian**	**4.53**	**119**	*e*Pn	**Pn**	**15 02 36.2**	**+0.7**
ASAO				*e*Sg	**Sb**	**15 03 44.6**	**+3.3**
ASAO				IAML		15 03 54.7		
	comp=N,20nm,0.8s							
IMHD	**Mahdasht**	**4.54**	**104**	*e*Pn	**Pn**	**15 02 35.1**	**-0.5**
THKV	**Tehran--Karaj**	**4.65**	**100**	IAML		15 04 06.4		
	comp=N,27nm,0.7s							
SVRC	**Sivrice-ELAZID**	**4.94**	**289**	PN	**Pn**	**15 02 43.5**	**+2.3**
PTK	**Pertek**	**5.04**	**295**	PN	**Pn**	**15 02 45.2**	**+2.6**
URFA	**Urfa**	**5.16**	**278**	PN	**Pn**	**15 02 46.5**	**+2.5**
GHVR	**GHOM**	**5.48**	**114**	IAML		15 03 45.5		
	comp=N,8.1nm,0.6s							
MALT	**Malatya**	**5.60**	**287**	PN	**Pn**	**15 02 52.8**	**+2.7**
IDMV	**Damavand**	**5.64**	**101**	*e*Pn	**Pn**	**15 02 51.0**	**+0.2**
NSR	**Nassriya**	**5.90**	**172**	*e*Pn	**Pn**	**15 02 54.0**	**-0.1**
NSR				*e*Sn	**Sn**	**15 04 00.0**	**-1.8**
NSR				AML	AML	15 04 07.2		
	comp=E,197nm,0.4s							
IKLH	**Kolahrood**	**6.29**	**123**	*e*Pn	**Pn**	**15 03 00.3**	**+0.5**
KRSH	**Karshahi**	**6.33**	**115**	*e*Pn	**Pn**	**15 03 00.5**	**+0.3**
TPRV	**Parvadeh(Tabas**	**10.15**	**109**	*e*Pn	**Pn**	**15 03 54.0**	**+1.5**
TKDS	**Koohdasht(Taba**	**10.25**	**105**	*e*Pn	**Pn**	**15 03 54.3**	**+0.4**

*HEL **14** 15:05:48.6±0.7, 67.60N×34.07E, h0km, ML2.2, Explosion*
*KOLA **14** 15:05:48.3, 67.68N×34.08E, h0km*
*IDC **14** 15:05:51.3±2.0, 67.75N×33.77E, h0km, mb1 3.4/5, mb1mx3.1/47, mbtmp3.4/5, ML2.2/5, Error ellipse: s-maj=21.8km s-min=10.1km az=82.0*

ISC 14 15:05:45.6±1.6, 67.67N±0.05°×34.31E±0.09°, h0km, n22, σ1s70/36, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.36**	**254**	P	**Pg**	**15 05 53.3**	**+0.8**
APA				S	**Sg**	**15 05 57.0**	**-0.1**
APA0	**Apatity Array**	**0.51**	**264**	P	**Pg**	**15 05 55.9**	**+0.5**
APA0				S	**Sg**	**15 06 01.4**	**-0.5**
VRF	**Varrio**	**1.79**	**275**	PG	**Pb**	**15 06 19.1**	**-0.2**
	baz=89						
VRF				MSG		15 06 39.7	
	comp=Z,31nm,0.2s						
VRF				SN	**Sn**	**15 06 41.2**	**0.0**
KU6	**Riekki**	**2.40**	**229**	PG	**Pb**	**15 06 28.9**	**-0.8**
	baz=49						
KU6				MSG		15 06 56.2	
	comp=Z,8.7nm,0.2s						
KU6				SG	**Sb**	**15 06 59.7**	**-0.1**
MSF	**Maaselka**	**2.73**	**232**	PB	**Pb**	**15 06 33.3**	**-2.1**
MSF				SG	**Sb**	**15 07 09.2**	**-0.2**
SGF	**Sodankyl**	**3.00**	**269**	PN	**Pn**	**15 06 35.6**	**+1.3**
SGF				SG	**Sb**	**15 07 17.2**	**+0.4**
RNF	**Rovaniemi**	**3.41**	**256**	PN	**Pn**	**15 06 41.2**	**+1.3**
ARA0	**ARCESS Array S**	**3.73**	**304**	PN	**Pn**	**15 06 46.4**	**+2.0**
	baz=116						
ARA0				SN	**Sn**	**15 07 31.8**	**+2.8**
ARA0	**ARCESS Array S**	**3.73**	**304**	*e*P	**Pn**	**15 06 46.6**	**+2.2**
ARA0				*e*S	**Sn**	**15 07 27.9**	**-1.0**
ARA0				IAML		15 07 44.1	
	comp=Z,4.8nm,0.2s						
ARCES	**ARCESS Array B**	**3.73**	**304**	Pn	**Pn**	**15 06 46.5**	**+2.0**
	baz=120,slow=14,SNR=137						
ARCES				Sn	**Sn**	**15 07 29.4**	**+0.4**
	baz=120,slow=25,SNR=10						
ARCES				Lg	Lg	15 07 40.9	
	baz=115,slow=29,SNR=11						
TOF	**Tornio**	**4.25**	**253**	PN	**Pn**	**15 06 54.4**	**+3.0**
OUL	**Oulu**	**4.26**	**236**	PB	**Pb**	**15 06 59.5**	**-1.8**
	baz=49						
KTK1	**Kautokeino**	**4.32**	**293**	*e*P	**Pn**	**15 06 54.0**	**+1.5**
KTK1				*e*S	**Sn**	**15 07 42.0**	**-1.4**
KTK1				IAML		15 08 00.7	
	comp=Z,3.0nm,0.2s						
PAJU	**Pajala**	**4.38**	**267**	PN	**Pn**	**15 06 55.3**	**+2.0**
LANU	**Lannavaara**	**4.68**	**280**	PN	**Pn**	**15 06 58.1**	**+0.7**
HAMF	**Hammerfest**	**4.83**	**313**	*e*P	**Pn**	**15 07 01.8**	**+2.4**
HAMF				*e*S	**Sn**	**15 07 55.4**	**-0.5**
ERTU	**Ertsjaerv**	**4.86**	**262**	PN	**Pn**	**15 07 00.7**	**+0.8**
ERTU				SN	**Sn**	**15 07 57.3**	**+0.4**
KIF	**Kilpisjarvi**	**5.18**	**291**	*e*S	**Sn**	**15 08 02.8**	**-1.8**
FINES	**FINESS Array B**	**7.18**	**213**	Pn	**Pn**	**15 07 34.6**	**+2.9**
	comp=Z,0.1nm,0.3s,baz=31,slow=13,SNR=1.8						
FINES				Sn	**Sn**	**15 08 54.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=19,slow=22,SNR=1.5						
FINES				Lg	Lg	15 09 28.6	
	comp=Z,0.3nm,0.3s,baz=22,slow=30,SNR=5.4						
SPITS	**Spitsbergen Ar**	**11.70**	**342**	Pn	**Pn**	**15 08 33.9**	**+0.3**
	baz=140,slow=20,SNR=1.4						
SPITS				Sn	**Sn**	**15 10 39.8**	**-4.9**
	baz=139,slow=29,SNR=1.1						
HFS	**Hagfors**	**11.75**	**240**	Pn	**Pn**	**15 08 33.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=39,slow=12,SNR=0.9						
NOA	**NORSAR Array B**	**11.94**	**247**	Pn	**Pn**	**15 08 36.6**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=68,slow=13,SNR=2.0						

*SOME **14** 15:09:46.9, 41.48N×83.48E, h5km*
*NNC **14** 15:09:48.3±2.4, 41.44N×83.51E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=17.4km s-min=13.7km az=173.0*

ISC 14 15:09:58.5±2.9, 41.7N±0.1°×83.0E±0.1°, h10km, n16, σ1s44/21, 5C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.67**	**313**	*e*P	**Pb**	**15 10 44.3**	**-2.1**
KTMS				*e*S	**Sg**	**15 11 25.4**	**+1.2**
KTMS	**Ketmen**	**2.67**	**313**	Pg	**Pb**	**15 10 44.3**	**-2.1**
KTMS				Lg	Lg	15 11 25.4	
SHLS	**Shalkode**	**3.04**	**301**	*e*P	**Pn**	**15 10 47.0**	**+0.2**
	22nm,0.5s						
SHLS				*e*S	**Sb**	**15 11 30.1**	**0.0**
	80nm,0.6s						
SHLS	**Shalkode**	**3.04**	**301**	Pg	**Pn**	**15 10 47.0**	**+0.2**
	22nm,0.5s						
SHLS				Lg	Lg	15 11 30.1	
	80nm,0.6s						
PDGK	**Podgornoye**	**3.11**	**304**	Pg	**Pn**	**15 10 50.8**	**+3.1**
	4.1nm,0.7s						
PDGK				Lg	Lg	15 11 37.1	
	11nm,0.4s						
PDGK	**Podgornoye**	**3.11**	**304**	⇑Pg	**Pb**	**15 10 52.8**	**-1.2**
	6.9nm,0.6s						
PDGK				⇑Lg	Lg	15 11 41.1	
	39nm,1.1s						
UZB	**Uzynbulak**	**3.33**	**298**	*e*P	**Pb**	**15 10 56.7**	**-0.9**
	9.0nm,0.5s						
UZB				*e*S	**Sg**	**15 11 47.2**	**+1.9**
	15nm,0.6s						
UZB	**Uzynbulak**	**3.33**	**298**	Pg	**Pb**	**15 10 56.7**	**-0.9**
	9.0nm,0.5s						
UZB				Lg	Lg	15 11 47.2	
	15nm,0.6s						
SATY	**Saty**	**3.71**	**294**	*e*P	**Pb**	**15 11 03.0**	**-1.1**
	10nm,0.7s						
SATY				*e*S	**Sg**	**15 11 57.9**	**+0.3**
	24nm,0.8s						
SATY	**Saty**	**3.71**	**294**	Pg	**Pb**	**15 11 03.0**	**-1.1**
	10nm,0.7s						
SATY				Lg	Lg	15 11 57.9	
	22nm,0.8s						
MNBS	**Baschi**	**4.18**	**307**	*e*P	**Pb**	**15 11 11.3**	**-0.8**
	4.3nm,0.6s						
MNBS				*e*S	**Sg**	**15 12 12.1**	**-0.5**
	9.8nm,0.5s						
MNBS	**Baschi**	**4.18**	**307**	Pg	**Pb**	**15 11 11.3**	**-0.8**
	4.3nm,0.6s						
MNBS				Lg	Lg	15 12 12.1	
	9.8nm,0.5s						
TNSS	**Tian-Shan**	**4.72**	**289**	*e*P	**Pb**	**15 11 20.7**	**-0.9**
	2.1nm,0.7s						
TNSS				*e*S	**Sg**	**15 12 28.3**	**-1.7**
	6.2nm,0.6s						
TNSS	**Tian-Shan**	**4.72**	**289**	Pg	**Pb**	**15 11 20.7**	**-0.9**
	2.1nm,0.7s						
TNSS				Lg	Lg	15 12 28.3	
	6.2nm,0.6s						
MK31	**Makanchi Array**	**5.16**	**354**	⇑Pg	**Pb**	**15 11 27.8**	**-1.0**
	3.2nm,1.1s,baz=164,slow=14,SNR=6.0						
MK31				⇑Lg	Lg	15 12 40.7	
	6.1nm,0.6s,baz=167,slow=30,SNR=7.8						
MAKZ	**Makanchi**	**5.20**	**352**	⇑Lg	Lg	15 12 41.5	
	11nm,0.9s						

*IDC **14** 15:10:25.2±5.6, 17.21S×179.05W, h549km±66km, mb2.8/6, mb1 3.2/7, mb1mx3.0/28, mbtmp3.8/7, Error ellipse: s-maj=83.8km s-min=25.7km az=151.0*

ISC 14 15:10:23.9±1.4, 17.1S±0.6×179.0W±0.4, h533km, n9, σ0s55/10, mb3.1/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**14.53**	**248**	P	**P**	**15 13 29.3**	**+0.5**
	0.3nm,0.3s,baz=94,slow=16,SNR=1.5						
STKA	**Stephens Creek**	**38.48**	**240**	P	**P**	**15 17 00.3**	**-0.1**
	4.0nm,0.7s,baz=85,slow=10,SNR=11						
WRA	**Warramunga Arr**	**44.18**	**259**	P	**P**	**15 17 45.5**	**-0.3**
	0.9nm,0.5s,baz=94,slow=7.8,SNR=49						
ASAR	**Alice Springs**	**44.42**	**254**	P	**P**	**15 17 47.9**	**+0.2**
	13nm,0.6s,baz=89,slow=7.9,SNR=452						
ASAR				PcP	**PcP**	**15 19 18.7**	**-1.1**
	0.3nm,0.6s,baz=101,slow=4.0,SNR=2.6						
NVAR	**Mina Array Bea**	**79.29**	**44**	P	**P**	**15 21 34.7**	**+0.2**
	0.3nm,0.6s,baz=228,slow=8.1,SNR=2.7						
ILAR	**Eielson Array**	**85.28**	**13**	P	**P**	**15 22 04.1**	**+0.2**
	0.1nm,0.3s,baz=222,slow=5.5,SNR=2.4						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**15 22 09.1**	**+0.3**
	0.3nm,0.7s,baz=199,slow=5.3,SNR=3.0						
PDAR	**Pinedale Array**	**87.21**	**44**	P	**P**	**15 22 13.6**	**-0.3**
	0.2nm,0.5s,baz=198,slow=4.7,SNR=2.3						
GERES	**GERESS Array B**	**146.72**	**345**	PKPbc	**PKPbc**	**15 29 05.7**	**-0.3**
	0.4nm,0.5s,baz=30,slow=4.7,SNR=2.4						

*ANF **14** 15:24:34.6±1.0, 31.77N×114.58W, h8km±7km, ML3.7/15, Error ellipse: s-maj=7.7km s-min=3.0km az=18.0*
*PAS **14** 15:24:35.6±3.4, 31.68N±0.02°×114.54W±0.03°, h3km±6km, ML4.0/31, Error ellipse: s-maj=4.3km s-min=2.4km az=114.0*
*NEIC **14** 15:24:35.3±2.7, 31.69N±0.03°×114.54W±0.03°, h12km±6km, Error ellipse: s-maj=4.8km s-

MONP2	**Monument Peak**	**1.99**	**307**	P		**Pn**	**15 25 07.8**	**-1.9**
	baz=127							
MONP2				Sg		**Sg**	**15 25 38.6**	**-0.3**
	baz=127							
BAR	**Barrett**	**2.05**	**299**	Pn		**Pn**	**15 25 09.2**	**-1.3**
BC3	**Big Chuckawall**	**2.10**	**339**	P		**Pn**	**15 25 09.8**	**-1.3**
	baz=158,SNR=15							
BC3				S		**Sn**	**15 25 35.2**	**-2.6**
	baz=158							
TJX	**Tijuana**	**2.28**	**292**			**Pn**	**15 25 13.1**	**-0.3**
109C	**Camp Elliot, M**	**2.47**	**299**	P		**Pn**	**15 25 15.3**	**-0.8**
	baz=118,SNR=12							
109C				S		**Sn**	**15 25 45.2**	**-1.7**
	baz=118							
109C	**Camp Elliot, M**	**2.47**	**299**			**Pn**	**15 25 15.3**	**-0.8**
PFO	**Pinyon Flats O**	**2.50**	**320**	Pn		**Pb**	**15 25 20.4**	**-0.1**
	comp=N,1.8nm,0.3s,baz=142,slow=14,SNR=10							
PFO				Lg	Lg		15 25 58.6	
	comp=N,7.3nm,0.3s,baz=82,slow=23,SNR=3.8							
PFO	**Pinyon Flats O**	**2.50**	**320**	Pg		**Pb**	**15 25 20.5**	**-0.1**
	baz=140							
IRM	**Iron Mountain**	**2.51**	**349**	P		**Pn**	**15 25 15.5**	**-1.1**
	baz=168,SNR=15							
Y14A	**Wickenburg**	**2.59**	**30**			**Pn**	**15 25 17.4**	**-0.4**
PDMCI	**Parker Dam,Lak**	**2.62**	**7**	S		**Sn**	**15 25 49.4**	**-1.2**
	baz=187							
GMRC	**Granite Mounta**	**3.22**	**343**	P		**Pn**	**15 25 25.5**	**-1.1**
	baz=163							
TUC	**Tucson**	**3.25**	**78**	P		**Pn**	**15 25 26.3**	**-0.7**
	baz=260							
TUC	**Tucson**	**3.25**	**78**	*i* P		**Pn**	**15 25 25.3**	**-1.7**
TUC				*i* S		**Sb**	**15 26 13.1**	**-0.4**
TUC	**Tucson**	**3.25**	**78**			**Pn**	**15 25 25.3**	**-1.7**
TUC	**Tucson**	**3.25**	**78**			**Sb**	**15 26 13.1**	**-0.4**
W13A	**Hualapai Mount**	**3.44**	**9**	Pn		**Pn**	**15 25 29.7**	**+0.1**
CIS	**Catalina Islan**	**3.68**	**299**	P		**Pn**	**15 25 31.0**	**-1.9**
	baz=117							
CIS				S		**Sn**	**15 26 15.2**	**-1.6**
	baz=117							
X16A	**Lo Mia Camp, P**	**3.77**	**43**	Pn		**Pn**	**15 25 34.1**	**0.0**
HSIG		**4.10**	**130**	*i* P		**Pn**	**15 25 37.8**	**-0.7**
HSIG		**4.10**	**130**			**Pn**	**15 25 36.7**	**-1.8**
319A	**Douglas**	**4.51**	**93**	Pn		**Pn**	**15 25 43.8**	**-0.5**
WUAZ	**Wupatki**	**4.64**	**34**	P		**Pn**	**15 25 47.1**	**+1.0**
	baz=215,SNR=21							
WUAZ	**Wupatki**	**4.64**	**34**	Pn		**Pn**	**15 25 47.4**	**+1.2**
X18A	**Snowflake**	**4.78**	**53**			**Pn**	**15 25 48.1**	**0.0**
SHPR	**Sheep Range**	**4.83**	**354**	Pn		**Pn**	**15 25 49.2**	**+0.6**
U15A	**North Rim**	**5.08**	**21**	Pn		**Pn**	**15 25 53.6**	**+1.4**
W18A	**Petrified Fore**	**5.28**	**48**	P		**Pn**	**15 25 55.8**	**+0.9**
	baz=231,SNR=24							
W18A	**Petrified Fore**	**5.28**	**48**			**Pn**	**15 25 55.5**	**+0.6**
LCMT	**Little Creek M**	**5.41**	**11**			**Pn**	**15 25 57.9**	**+1.2**
KNB	**Kanab**	**5.50**	**15**	Pn		**Pn**	**15 25 59.7**	**+1.8**
PRN	**Pahroc Range**	**5.71**	**356**			**Pn**	**15 26 02.6**	**+1.8**
121A	**Cookes Peak, D**	**5.80**	**80**	P		**Pn**	**15 26 02.2**	**+0.1**
	baz=263,SNR=26							
121A	**Cookes Peak, D**	**5.80**	**80**	Pn		**Pn**	**15 26 01.8**	**-0.2**
MTPU	**Mount Pierson**	**6.62**	**16**			**Pn**	**15 26 15.0**	**+1.5**
R11A	**Troy Canyon, C**	**6.69**	**353**			**Pn**	**15 26 15.9**	**+1.6**
LENM	**Lemitar**	**6.83**	**67**	Pn		**Pn**	**15 26 13.7**	**-2.5**
BNM	**Barren Site**	**7.09**	**68**			**Pn**	**15 26 19.1**	**-0.8**
NVAR	**Mina Array Bea**	**7.39**	**336**	Pn		Pn	15 26 29.8	+5.8
	baz=161,slow=15,SNR=4.5							
NVAR				Lg		Lg	15 28 39.6	
	baz=148,slow=24,SNR=1.4							
MVCO	**Mesa Verde**	**7.43**	**41**	P		**Pn**	**15 26 25.8**	**+1.3**
	baz=224,SNR=9.4							
MVCO	**Mesa Verde**	**7.43**	**41**	Pn		**Pn**	**15 26 25.7**	**+1.2**
ANMO	**Albuquerque**	**7.51**	**62**	Pg		**Pg**	**15 26 55.3**	**-3.5**
	comp=N,0.2nm,0.3s,baz=240,slow=14,SNR=3.8							
ANMO				Lg		Lg	15 28 30.9	
	comp=N,0.2nm,0.3s,baz=346,slow=22,SNR=1.3							
ANMO				LR		LR	15 29 31.1	
	comp=N,121nm,22.0s,baz=274,slow=39							
MNTX	**Cornudas Mount**	**7.81**	**88**	P		**Pn**	**15 26 29.7**	**+0.3**
	baz=272,SNR=8.3							
MNTX	**Cornudas Mount**	**7.81**	**88**	Pn		**Pn**	**15 26 29.8**	**+0.3**
ELK	**Elko**	**9.05**	**357**	Pn		Pn	15 26 51.3	+4.6
	comp=N,0.1nm,0.3s,baz=181,slow=16,SNR=2.0							
ELK				Lg		Lg	15 29 28.6	
	comp=N,0.1nm,0.3s,baz=209,slow=6.6,SNR=3.3							
TX31	**Lajitas Ar. Si**	**9.67**	**101**	Pn		**Pn**	**15 26 56.4**	**+1.2**
TX32	**Lajitas Array**	**9.68**	**101**			**Pn**	**15 26 56.4**	**+1.2**
TXAR	**Lajitas Array**	**9.68**	**101**	Pn		**Pn**	**15 26 55.8**	**+0.6**
	comp=N,1.3nm,0.3s,baz=282,slow=13,SNR=71							
TXAR				Sn		**Sn**	**15 28 42.4**	**-2.1**
	comp=N,0.1nm,0.3s,baz=284,slow=22,SNR=1.2							
TXAR				Lg		Lg	15 29 37.6	
	comp=N,0.1nm,0.3s,baz=280,slow=29,SNR=3.1							
TXAR				LR		LR	15 30 21.8	
	comp=N,47nm,21.1s,baz=0.0,slow=36							
TXAR	**Lajitas Array**	**9.68**	**101**			**Pn**	**15 26 56.1**	**+1.0**
PDAR	**Pinedale Array**	**11.74**	**18**	Pn		Pn	15 27 31.7	+8.2
	baz=197,slow=15,SNR=2.5							
TKL	**Tuckaleechee C**	**25.86**	**73**	LR		LR	15 39 10.6	
	comp=N,76nm,20.2s,baz=202,slow=34							
DLBC	**Dease Lake**	**28.74**	**343**	P		**P**	**15 30 37.2**	**+3.6**
	comp=N,1.9nm,0.8s,baz=180,slow=8.1,SNR=4.0							
ILAR	**Eielson Array**	**38.64**	**338**	P		**P**	**15 32 02.1**	**+2.8**
	comp=N,1.4nm,1.0s,baz=150,slow=6.8,SNR=8.7							

*THE **14** 15:40:01.8, 38.˚10N×20.˚44E, h14km, ML3.2/3, Error ellipse: s-maj=0.8km s-min=0.3km az=252.0*
*ATH **14** 15:40:01.4, 38.˚10N×20.˚44E, h18km, ML3.1/10, Error ellipse: s-maj=1.6km s-min=0.7km az=59.0*
*IDC **14** 15:40:11.0±10.0, 39.˚00N×22.˚16E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.4/35, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=192.9km s-min=30.8km az=31.0*

ISC 14 15:40:00.9±0.9, 38.˚09N±0.˚03×20.˚38E±0.˚04, h18km±3km, n75, σ1®26/94, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARGA	**Argostoli. Kep**	**0.11**	**42**	P	**Pg**	**15 40 04.7**	**0.0**
ARGA				S	**Sg**	**15 40 06.8**	**-0.5**
LXRA	**Lixouri, Kepha**	**0.12**	**22**	P	**Pg**	**15 40 05.0**	**+0.3**
LXRA				S	**Sg**	**15 40 07.7**	**+0.4**
DMLN	**Damoulianata-K**	**0.15**	**357**	P	**Pg**	**15 40 05.6**	**+0.4**
DMLN				S	**Sb**	**15 40 08.7**	**+1.3**
DMLN	**Damoulianata-K**	**0.15**	**357**	P	**Pg**	**15 40 05.5**	**+0.4**
DMLN				S	**Sg**	**15 40 08.3**	**+0.3**
PSDA	**Pessada-Kefalo**	**0.16**	**82**	P	**Pg**	**15 40 05.0**	**-0.2**
PSDA				S	**Sg**	**15 40 07.7**	**-0.5**
PSDA	**Pessada-Kefalo**	**0.16**	**82**	P	**Pg**	**15 40 05.1**	**-0.2**
PSDA				S	**Sg**	**15 40 07.4**	**-0.8**
	9µm,0.2s						
KEF4	**Livadi, Kephal**	**0.17**	**11**	P	**Pg**	**15 40 05.7**	**+0.3**
KEF4				S	**Sg**	**15 40 09.0**	**+0.5**
KEF4	**Livadi, Kephal**	**0.17**	**11**	P	**Pg**	**15 40 05.6**	**+0.3**
KEF4				S	**Sg**	**15 40 08.9**	**+0.5**
VLS	**Valsamata**	**0.18**	**62**	P	**Pg**	**15 40 05.3**	**-0.3**
VLS				S	**Sg**	**15 40 08.1**	**-0.7**
VLS				AML	AML	15 40 08.3	
VLS				AML	AML	15 40 08.6	
	comp=E,96849µm,0.1s						
VLS	**Valsamata**	**0.18**	**62**	P	**Pg**	**15 40 05.3**	**-0.3**
VLS				S	**Sg**	**15 40 08.2**	**-0.7**
KEF5	**Kardakata, Kep**	**0.20**	**20**	P	**Pg**	**15 40 05.9**	**+0.1**
KEF5				S	**Sg**	**15 40 09.1**	**0.0**
KEF5	**Kardakata, Kep**	**0.20**	**20**	P	**Pg**	**15 40 05.9**	**+0.1**
KEF5				S	**Sg**	**15 40 09.1**	**0.0**
VLMS	**Volimes, Zakyn**	**0.31**	**134**	P	**Pg**	**15 40 07.6**	**0.0**
VLMS				S	**Sg**	**15 40 12.3**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.31**	**134**	P	**Pg**	**15 40 07.6**	**0.0**
VLMS				S	**Sg**	**15 40 12.5**	**+0.4**
	comp=E,9µm,0.5s						
FSK	**Fiskardo**	**0.39**	**21**	P	**Pg**	**15 40 09.0**	**-0.1**
FSK				AML	AML	15 40 16.2	
	comp=E,13531µm,0.2s						
FSK				AML	AML	15 40 18.4	
	comp=N,8772µm,0.6s						
FSK	**Fiskardo**	**0.39**	**21**	P	**Pg**	**15 40 09.0**	**-0.1**
FSK				S	**Sg**	**15 40 14.8**	**+0.3**
	comp=N,5µm,0.3s						
KRI1	**kERI**	**0.55**	**141**	P	**Pg**	**15 40 11.8**	**-0.1**
KRI1				S	**Sb**	**15 40 19.9**	**+0.4**
EVGl	**Lefkada island**	**0.57**	**22**	P	**Pg**	**15 40 12.0**	**-0.3**
EVGl	**Lefkada island**	**0.57**	**22**	P	**Pg**	**15 40 12.0**	**-0.3**
EVGl				S	**Sb**	**15 40 20.3**	**+0.1**
MGNA	**Meganis**	**0.65**	**30**	P	**Pg**	**15 40 13.3**	**-0.4**
MGNA				AML	AML	15 40 26.3	
	comp=E,2274µm,0.3s						
MGNA				AML	AML	15 40 28.8	
	comp=N,3193µm,0.4s						
NYDR	**Nydri-Lefkada**	**0.67**	**22**	P	**Pg**	**15 40 13.6**	**-0.5**
NYDR	**Nydri-Lefkada**	**0.67**	**22**	P	**Pg**	**15 40 13.6**	**-0.5**
LKD2	**Lefkada island**	**0.73**	**17**	P	**Pg**	**15 40 14.7**	**-0.5**
LKD2				AML	AML	15 40 32.4	
	comp=E,2140µm,0.3s						
LKD2				AML	AML	15 40 32.6	
	comp=N,2436µm,0.3s						
LKD2	**Lefkada island**	**0.73**	**17**	P	**Pg**	**15 40 14.9**	**-0.3**
TSLK	**Tsoukalades, L**	**0.76**	**16**	P	**Pg**	**15 40 15.5**	**-0.3**
TSLK	**Tsoukalades, L**	**0.76**	**16**	P	**Pg**	**15 40 15.4**	**-0.4**
PDO	**Prodromos**	**0.81**	**51**	P	**Pg**	**15 40 16.3**	**-0.4**
PDO	**Prodromos**	**0.81**	**51**	P	**Pg**	**15 40 16.2**	**-0.5**
PDO				S	**Sb**	**15 40 27.9**	**+0.9**
RLS	**Riolos of Patr**	**0.86**	**92**	P	**Pg**	**15 40 17.2**	**-0.4**
RLS	**Riolos of Patr**	**0.86**	**92**	P	**Pg**	**15 40 17.1**	**-0.4**
DRO	**Drossia**	**1.06**	**97**	P	**Pg**	**15 40 21.4**	**0.0**
DRO				AML	AML	15 40 42.8	
	comp=N,2084µm,0.8s						
DRO				AML	AML	15 40 44.0	
	comp=E,1380µm,0.3s						
DRO	**Drossia**	**1.06**	**97**	P	**Pb**	**15 40 20.8**	**+0.1**
AMT	**Artemida-Makis**	**1.19**	**118**	P	**Pg**	**15 40 23.9**	**0.0**
AMT				AML	AML	15 40 46.2	
	comp=N,1374µm,0.8s						
AMT				AML	AML	15 40 52.5	
	comp=E,1280µm,0.6s						
EFP	**Efpalio**	**1.24**	**74**	P	**Pn**	**15 40 23.7**	**+0.3**
EFP	**Efpalio**	**1.24**	**74**	P	**Pn**	**15 40 23.2**	**-0.2**
ANX	**Ano Chora**	**1.31**	**67**	P	**Pn**	**15 40 25.0**	**+0.6**
ANX				AML	AML	15 40 51.5	
	comp=E,1346µm,0.7s						
ANX				AML	AML	15 40 52.3	
	comp=N,1514µm,0.5s						
SERG	**Sergoula**	**1.36**	**76**	P	**Pn**	**15 40 25.1**	**+0.1**
SERG	**Sergoula**	**1.36**	**76**	P	**Pn**	**15 40 25.0**	**0.0**
TRIZ	**Trizonia**	**1.36**	**78**	P	**Pn**	**15 40 25.5**	**+0.6**
TRIZ	**Trizonia**	**1.36**	**78**	P	**Pn**	**15 40 24.6**	**-0.4**
EVR	**Evrytania**	**1.39**	**53**	P	**Pg**	**15 40 27.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.40**	**91**	P	**Pn**	**15 40 26.4**	**+0.8**
KALE	**Kalithea**	**1.42**	**77**	P	**Pn**	**15 40 26.2**	**+0.4**
IGT	**Igoumenitsa**	**1.44**	**358**	P	**Pn**	**15 40 27.5**	**+1.4**
IGT	**Igoumenitsa**	**1.44**	**358**	P	**Pn**	**15 40 27.2**	**+1.1**
ITM	**Ithomi**	**1.53**	**126**	P	**Pn**	**15 40 28.8**	**+1.5**
GUR	**Goura**	**1.56**	**95**	P	**Pn**	**15 40 29.1**	**+1.2**
GUR				AML	AML	15 40 57.1	
	comp=N,895µm,0.4s						
GUR				AML	AML	15 40 58.4	
	comp=E,811µm,0.4s						
TRIP	**Tripoli**	**1.60**	**110**	P	**Pg**	**15 40 31.3**	**-0.4**
TRIP				AML	AML	15 41 08.0	
	comp=E,358µm,0.6s						
TRIP				AML	AML	15 41 08.2	
	comp=N,546µm,0.9s						
PYL	**PYLOS**	**1.61**	**137**	P	**Pn**	**15 40 30.1**	**+1.7**
MAKR	**Makrakomi, Fth**	**1.65**	**56**	P	**Pg**	**15 40 32.0**	**-0.7**
MAKR				AML	AML	15 41 05.8	
	comp=E,1482µm,0.9s						
MAKR				AML	AML	15 41 06.0	
	comp=N,1096µm,0.5s						
KEK	**Kerkira**	**1.68**	**344**	P	**Pn**	**15 40 31.2**	**+1.7**
DSF	**Desfina**	**1.72**	**79**	P	**Pn**	**15 40 31.3**	**+1.3**
AGG	**Agios Georgios**	**1.79**	**58**	P	**Pb**	**15 40 33.9**	**+0.7**
THAL	**Thalero**	**1.80**	**91**	P	**Pb**	**15 40 33.6**	**+0.3**
AXAR	**Agios Charalam**	**1.91**	**69**	P	**Pb**	**15 40 36.0**	**+0.7**
KPRO	**Kipourio**	**2.01**	**22**	P	**Pb**	**15 40 37.3**	**+0.3**
LTK	**Loutraki**	**2.04**	**91**	P	**Pn**	**15 40 36.4**	**+2.0**
LOUT	**Loutraki**	**2.05**	**92**	P	**Pn**	**15 40 36.3**	**+1.8**
ATAL	**Atalanti**	**2.16**	**73**	P	**Pn**	**15 40 38.1**	**+2.1**
VIL2	**Platees**	**2.28**	**86**	P	**Pn**	**15 40 39.9**	**+2.2**
KTHA	**Kythira Island**	**2.82**	**130**	P	**Pn**	**15 40 48.6**	**+3.5**
OHR	**Ohrid**	**3.03**	**6**	*i* Pn	**Pn**	**15 40 50.7**	**+2.6**
STIP	**Stip**	**3.85**	**21**	*i* Pn	**Pn**	**15 41 03.1**	**+3.8**
STON	**Ston**	**5.19**	**338**	*e*Pn	**Pn**	**15 41 17.9**	**+0.3**
STON				S	**Sn**	**15 42 12.4**	**-4.7**
LSTV	**Lastovo**	**5.38**	**331**	*e*Pn	**Pn**	**15 41 19.9**	**-0.3**
LSTV				Sn	**Sn**	**15 42 16.1**	**-5.6**
MAKA	**Makarska**	**5.79**	**335**	*e*Pn	**Pn**	**15 41 26.3**	**+0.5**
RICI	**Ricice**	**5.93**	**336**	*e*Pn	**Pn**	**15 41 28.2**	**+0.4**
KIJV	**Kijevo**	**6.63**	**334**	*e*Pn	**Pn**	**15 41 38.7**	**+1.3**
MORI	**Morici**	**6.76**	**330**	*e*Pn	**Pn**	**15 41 40.7**	**+1.4**
DUGI	**Dugi Otok**	**7.13**	**327**	*e*Pn	**Pn**	**15 41 46.6**	**+2.2**
NVLJ	**Novalja**	**7.68**	**329**	*e*Pn	**Pn**	**15 41 53.0**	**+1.2**
GERES	**GERESS Array B**	**11.79**	**338**	Pn	Pn	15 42 58.4	+10
	comp=N,0.2nm,0.3s,baz=152,slow=13,SNR=4.0						
FINES	**FINESS Array B**	**23.64**	**7**	P	**P**	**15 45 12.7**	**+1.8**
	comp=N,3.0nm,1.0s,baz=188,slow=9.3,SNR=4.8						
MKAR	**Makanchi Array**	**45.48**	**58**	P	**P**	**15 48 18.1**	**-0.5**
	comp=N,0.3nm,0.4s,baz=290,slow=6.8,SNR=7.6						
ZALV	**Zalesovo Beam**	**45.83**	**48**	P	**P**	**15 48 21.3**	**-0.3**
	comp=N,0.6nm,0.3s,baz=270,slow=9.2,SNR=2.8						

*IDC **14** 15:42:45.2±1.0, 30.˚60N×138.˚79E, h419km±22km, mb2.8/5, mb1 2.8/8, mb1mx2.7/42, mbtmp3.5/8, Error ellipse: s-maj=58.7km s-min=15.6km az=70.0*

ISC 14 15:42:44.7±1.2, 30.˚5N±0.˚1×138.˚6E±0.˚2, h400km, n8, σ1®06/9, mb3.0/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**2.84**	**21**	P	**Pn**	**15 43 47.7**	**+1.1**
	16nm,0.3s,baz=236,slow=3.6,SNR=5.3						
JHJ				S	**S**	**15 44 37.5**	**+0.8**
	9.6nm,0.3s,baz=247,slow=16,SNR=1.6						
MJAR	**Matsushiro Arr**	**6.07**	**357**	P	**Pn**	**15 44 17.5**	**-0.5**
	0.0nm,0.3s,baz=165,slow=9.1,SNR=1.4						
KSRS	**Korea Array**	**11.24**	**311**	P	**Pn**	**15 45 18.4**	**+1.4**
	0.1nm,0.3s,baz=122,slow=9.7,SNR=2.0						
SONM	**Songino Array**	**30.09**	**314**	P	**P**	**15 48 18.8**	**-0.4**
	0.2nm,0.4s,baz=120,slow=8.5,SNR=1.9						
MKAR	**Makanchi Array**	**45.89**	**307**	P	**P**	**15 50 27.9**	**-1.3**
	0.4nm,0.5s,baz=87,slow=8.9,SNR=3.8						
WRA	**Warramunga Arr**	**50.28**	**185**	P	**P**	**15 51 02.3**	**-0.2**
	0.3nm,0.4s,baz=2.0,slow=8.3,SNR=13						
ASAR	**Alice Springs**	**54.01**	**185**	P	**P**	**15 51 29.7**	**+0.1**
	0.1nm,0.3s,baz=354,slow=5.6,SNR=12						
FINES	**FINESS Array B**	**73.51**	**332**	P	**P**	**15 53 33.7**	**-1.0**
	2.0nm,0.9s,baz=69,slow=7.6,SNR=5.2						

IDC 14 15:49:16.7±22.0, 17.˚63S×178.˚82W, h556km±216km, mb2.9/4, mb1 3.1/4, mb1mx2.8/32, mbtmp3.9/4, Error ellipse: s-maj=152.6km s-min=102.4km az=105.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.42**	**241**	P	P	15 55 51.5	+0.1
	2.4nm,0.8s,baz=92,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**44.30**	**259**	P	P	15 56 37.1	-0.8
	0.3nm,0.6s,baz=96,slow=7.7,SNR=5.9						
ASAR	**Alice Springs**	**44.49**	**254**	P	P	15 56 39.2	-0.2
	2.3nm,0.4s,baz=89,slow=8.0,SNR=39						
ASAR				PcP	PcP	15 58 10.3	-0.4
	0.3nm,0.6s,baz=102,slow=4.0,SNR=2.1						
FITZ	**Fitzroy Crossi**	**52.69**	**260**	P	P	15 57 40.9	+0.7
	1.1nm,0.9s,baz=90,slow=8.1,SNR=1.2						
GERES	**GERESS Array B**	**147.24**	**345**	PKPbc	PKPbc	16 07 57.3	-0.8
	0.2nm,0.3s,baz=34,slow=4.2,SNR=2.3						

*ISK **14** 16:33:07.2, 37.˚31N×42.˚62E, h2km, ML2.7/9*
*DDA **14** 16:33:08.3, 37.˚35N×42.˚61E, h7km±2km, ML2.9*

ISC 14 16:33:08.2±1.2, 37.˚31N±0.˚05×42.˚61E±0.˚03, h7km±9km, n22, σ0®88/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.23**	**323**	PG	**Pg**	**16 33 12.8**	**-0.1**
SIRT				SG	**Sg**	**16 33 17.2**	**+1.1**
SIRN	**Srnak**	**0.24**	**319**	*i* P	**Pg**	**16 33 12.9**	**-0.1**
SIRN				*i* S	**Sg**	**16 33 16.5**	**+0.1**
CUKT	**Cukurca**	**0.80**	**94**	PG	**Pg**	**16 33 23.2**	**-0.3**
CUKT	**Cukurca**	**0.80**	**94**	*i* P	**Pb**	**16 33 24.0**	**-0.5**
CUKT				*i* S	**Sb**	**16 33 34.9**	**-0.6**
SRTM	**Siirt_Merkez**	**0.87**	**321**	*i* P	**Pb**	**16 33 24.8**	**-0.9**
SRTM				*i* S	**Sg**	**16 33 36.0**	**-0.3**
HAKT	**HAKKARI**	**0.90**	**74**	*i* P	**Pb**	**16 33 25.5**	**-0.9**
HAKT				*i* S	**Sn**	**16 33 40.1**	**-0.9**
AKDM	**Akdamar-Van**	**1.05**	**16**	PG	**Pb**	**16 33 28.3**	**-0.6**
AKDM				SG	**Sn**	**16 33 43.6**	**-1.0**
GEVA	**Gevas**	**1.06**	**19**	*i* P	**Pg**	**16 33 27.9**	**-0.6**
GEVA				*i* S	**Sb**	**16 33 42.4**	**-0.7**
BLIS	**Bitlis-Merkez**	**1.17**	**340**	*i* P	**Pn**	**16 33 31.2**	**0.0**
BLIS				*i* S	**Sn**	**16 33 47.5**	**+0.1**
BTMN	**Batman**	**1.21**	**299**	*i* P	**Pn**	**16 33 32.1**	**+0.5**
BTMN				*i* S	**Sn**	**16 33 48.9**	**+0.5**
BTMN				IAML		16 33 52.0	
	comp=N,167nm,0.5s						
BTMN				IAML		16 33 53.0	
	comp=E,201nm,0.4s						
GURO	**Guroymak-BITLI**	**1.32**	**340**	PN	**Pb**	**16 33 33.4**	**0.0**
YOVA	**Hakkari_Yksek**	**1.36**	**78**	*i* P	**Pb**	**16 33 34.2**	**0.0**
YOVA				*i* S	**Sn**	**16 33 53.6**	**+1.3**
TVAN	**Van**	**1.36**	**27**	*i* P	**Pb**	**16 33 35.6**	**+1.3**
TVAN				*i* S	**Sn**	**16 33 55.4**	**+3.0**
SVAN	**Silvan-Diyarba**	**1.40**	**307**	PN	**Pg**	**16 33 34.8**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.40**	**307**	*i* P	**Pg**	**16 33 34.9**	**-0.1**
SVAN				*i* S	**Sb**	**16 33 52.3**	**-0.5**
MARD	**Mardin**	**1.46**	**271**	*i* P	**Pg**	**16 33 36.1**	**-0.1**
MARD				*i* S	**Sb**	**16 33 54.6**	**-0.1**
MARD				IAML		16 33 59.0	
	comp=E,298nm,0.8s						
MARD				IAML		16 34 01.0	
	comp=N,384nm,0.5s						
MUSM	**Mu-Merkez**	**1.66**	**329**	*i* P	**Pb**	**16 33 38.6**	**-0.5**
MUSM				*i* S	**Sn**	**16 33 57.6**	**-1.8**
MAZI	**Mazidag**	**1.73**	**275**	PN	**Pn**	**16 33 39.4**	**+0.6**
DYBB	**Diyarbakir**	**2.06**	**289**	PN	**Pn**	**16 33 44.0**	**+0.6**
HANI	**Diyarbakir_Han**	**2.07**	**303**	*i* P	**Pn**	**16 33 43.6**	**+0.1**
HANI				*i* S	**Sn**	**16 34 10.1**	**+0.6**
BNGB	**Bingl**	**2.27**	**318**	PN	**Pn**	**16 33 46.9**	**+0.7**
SVRC	**Sivrice-ELAZID**	**2.83**	**293**	PN	**Pn**	**16 33 54.5**	**+0.6**

*ATA **14** 16:35:11.6±1.2, 38.˚70N×43.˚15E, h15km±13km, ML2.0, MW2.8*
*ISK **14** 16:35:13.3, 38.˚63N×43.˚17E, h4km, ML2.3/8*
*DDA **14** 16:35:13.6, 38.˚60N×43.˚16E, h7km±2km, ML2.3*

ISC 14 16:35:12.5±1.1, 38.˚66N±0.˚03×43.˚18E±0.˚02, h14km±10km, n23, σ0®67/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**111**	PG	**Pb**	**16 35 18.5**	**+0.8**
VANB				SG	**Sb**	**16 35 22.3**	**+1.2**
TVAN	**Van**	**0.22**	**126**	*e*P	**Pb**	**16 35 18.4**	**0.0**
TVAN				*e*S	**Sb**	**16 35 22.5**	**0.0**
TVAN				IAML		16 35 23.1	
	comp=Z,334nm,0.3s						
TVAN	**Van**	**0.22**	**126**	*i* P	**Pb**	**16 35 18.4**	**0.0**
TVAN				*i* S	**Sb**	**16 35 21.3**	**-1.2**
TVAN				IAML		16 35 22.0	
	comp=E,931nm,0.5s						
TVAN				IAML		16 35 23.0	
	comp=N,518nm,0.3s						
GEVA	**Gevas**	**0.36**	**195**	*e*P	**Pb**	**16 35 20.3**	**-0.5**
GEVA				*e*S	**Sb**	**16 35 27.2**	**+0.8**
GEVA				IAML		16 35 29.5	
	comp=Z,154nm,0.4s						
GEVA	**Gevas**	**0.36**	**195**	*i* P	**Pb**	**16 35 20.3**	**-0.5**
GEVA				*i* S	**Sb**	**16 35 25.6**	**-0.8**
AKDM	**Akdamar-Van**	**0.37**	**205**	PG	**Pb**	**16 35 20.5**	**-0.4**
AKDM				SG	**Sb**	**16 35 26.0**	**-0.6**
ADCV	**BITLIS_Adilcev**	**0.39**	**293**	*i* P	**Pb**	**16 35 22.0**	**+0.8**
ADCV				*i* S	**Sb**	**16 35 27.7**	**+0.5**
ADCV				IAML		16 35 29.0	
	comp=E,242nm,0.2s						
VMUR	**Van-Muradiye**	**0.45**	**43**	*i* P	**Pn**	**16 35 23.6**	**-1.1**
VMUR				*i* S	**Sn**	**16 35 32.0**	**-0.8**
VMUR				IAML		16 35

n96,σ1823/169,32C-30D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		
KDJ	**Kajisay**	**0.09**	**228**	⇑*i*P	**Pg**	**17 13 32.8**	**-0.5**
	baz=8.0						
KDJ				⇑*i*S	**Sg**	**17 13 35.1**	**+0.3**
	baz=8.0						
ANVS	**Anan'yevo**	**0.66**	**26**	⇑*i*P	**Pg**	**17 13 44.1**	**+0.2**
	baz=24						
ANVS				⇑*i*S	**Sb**	**17 13 54.1**	**-0.6**
	baz=24						
ULHL	**Ulahol**	**0.76**	**275**	⇓*i*P	**Pg**	**17 13 44.1**	**-1.7**
	baz=82						
ULHL				⇓*i*S	**Sg**	**17 13 54.7**	**-1.0**
	baz=82						
TNSS	**Tian-Shan**	**0.88**	**345**	⇓*i*P	**Pg**	**17 13 47.8**	**-0.2**
	baz=47						
TNSS				⇓*i*S	**Sb**	**17 14 00.8**	**-0.3**
	baz=47						
TNSS	**Tian-Shan**	**0.88**	**345**	⇓*i*P	**Pg**	**17 13 47.8**	**-0.2**
	23nm,0.2s						
TNSS				⇓*i*S	**Sb**	**17 14 00.9**	**-0.3**
	71nm,0.2s						
TNSS	**Tian-Shan**	**0.88**	**345**	P	**Pg**	**17 13 47.8**	**-0.2**
	23nm,0.2s						
TNSS				S	**Sb**	**17 14 00.8**	**-0.3**
	71nm,0.2s						
PRZ	**Przheval'sk**	**0.89**	**70**	⇓*i*P	**Pg**	**17 13 47.8**	**-0.4**
	baz=66						
PRZ				⇓*i*S	**Sn**	**17 14 01.1**	**-2.4**
	baz=66						
IZV	**Izvestkoviy**	**0.98**	**331**	⇓*i*P	**Pb**	**17 13 49.4**	**-1.0**
	baz=34						
IZV				⇓*e*S	**Sg**	**17 14 03.6**	**+1.1**
	baz=34						
IZV	**Izvestkoviy**	**0.98**	**331**	⇓*i*P	**Pb**	**17 13 49.4**	**-1.0**
	37nm,0.2s						
IZV				*e*S	**Sg**	**17 14 03.6**	**+1.1**
	164nm,0.2s						
IZV	**Izvestkoviy**	**0.98**	**331**	P	**Pb**	**17 13 49.4**	**-1.0**
	37nm,0.2s						
IZV				S	**Sg**	**17 14 03.6**	**+1.1**
	164nm,0.2s						
MDOK	**Medeo**	**0.99**	**351**	*e*P	**Pb**	**17 13 49.7**	**-0.9**
	baz=52						
MDOK				*e*S	**Sn**	**17 14 04.4**	**-1.5**
	baz=52						
MDOK	**Medeo**	**0.99**	**351**	*e*P	**Pb**	**17 13 49.7**	**-0.9**
	16nm,0.2s						
MDOK				*e*S	**Sn**	**17 14 04.4**	**-1.5**
	68nm,0.4s						
MDOK	**Medeo**	**0.99**	**351**	Pg	**Pb**	**17 13 49.7**	**-0.9**
	16nm,0.2s						
MDOK				Lg	Lg	17 14 04.4	
	68nm,0.4s						
BOOM	**Boomskoye usch**	**1.03**	**287**	⇑*i*P	**Pb**	**17 13 49.1**	**-2.2**
	baz=93						
BOOM				⇑*i*S	**Sb**	**17 14 03.8**	**-1.4**
	baz=93						
KNDC	**Almaty**	**1.05**	**348**	⇑P	**Pb**	**17 13 51.6**	**-0.1**
	14nm,0.5s						
KNDC				⇑S	**Sn**	**17 14 07.4**	**0.0**
	51nm,0.3s						
KOTS	**Kotyrbulak**	**1.05**	**354**	*e*P	**Pb**	**17 13 51.2**	**-0.5**
	baz=55						
KOTS				*e*S	**Sn**	**17 14 06.4**	**-1.1**
	baz=55						
KOTS	**Kotyrbulak**	**1.05**	**354**	*e*P	**Pb**	**17 13 51.2**	**-0.5**
	60nm,0.1s						
KOTS				*e*S	**Sn**	**17 14 06.4**	**-1.1**
	198nm,0.4s						
KOTS	**Kotyrbulak**	**1.05**	**354**	P	**Pb**	**17 13 51.2**	**-0.5**
	60nm,0.1s						
KOTS				S	**Sn**	**17 14 06.4**	**-1.1**
	198nm,0.4s						
MTBS	**Maitube**	**1.13**	**327**	⇓*i*P	**Pb**	**17 13 51.9**	**-1.1**
	baz=30						
MTBS				⇑*i*S	**Sb**	**17 14 07.7**	**-0.1**
	baz=30						
MTBS	**Maitube**	**1.13**	**327**	⇓*i*P	**Pb**	**17 13 51.9**	**-1.1**
	34nm,0.2s						
MTBS				⇑*i*S	**Sb**	**17 14 07.7**	**-0.1**
	134nm,0.2s						
MTBS	**Maitube**	**1.13**	**327**	P	**Pb**	**17 13 51.9**	**-1.1**
	34nm,0.2s						
MTBS				S	**Sb**	**17 14 07.7**	**-0.1**
	125nm,0.2s						
SATY	**Saty**	**1.21**	**44**	⇑*i*P	**Pb**	**17 13 53.3**	**-1.1**
	baz=41						
SATY				⇓*i*S	**Sn**	**17 14 10.6**	**-0.7**
	baz=41						
SATY	**Saty**	**1.21**	**44**	⇑*i*P	**Pb**	**17 13 53.2**	**-1.1**
	11nm,0.1s						
SATY				⇓*i*S	**Sn**	**17 14 10.6**	**-0.7**
	180nm,0.1s						
SATY	**Saty**	**1.21**	**44**	P	**Pb**	**17 13 53.5**	**-0.9**
	11nm,0.1s						
SATY				S	**Sn**	**17 14 10.6**	**-0.7**
	180nm,0.1s						
KST	**Kastek**	**1.29**	**312**	⇓*i*P	**Pn**	**17 13 54.4**	**-1.3**
	baz=15						
KST				⇑*i*S	**Sb**	**17 14 12.3**	**-0.2**
	baz=15						
KST	**Kastek**	**1.29**	**312**	⇓*i*P	**Pn**	**17 13 54.4**	**-1.3**
	41nm,0.1s						
KST				⇑*i*S	**Sb**	**17 14 12.3**	**-0.2**
	95nm,0.4s						
KST	**Kastek**	**1.29**	**312**	P	**Pn**	**17 13 54.4**	**-1.3**
	41nm,0.1s						
KST				S	**Sb**	**17 14 12.4**	**-0.2**
	95nm,0.4s						
ZHN	**Zhinishke**	**1.30**	**41**	*e*P	**Pn**	**17 13 54.6**	**-1.3**
	baz=39						
ZHN				*e*S	**Sg**	**17 14 13.1**	**+0.1**
	baz=39						
ZHN	**Zhinishke**	**1.30**	**41**	*e*P	**Pn**	**17 13 54.6**	**-1.3**
	42nm,0.4s						
ZHN				*e*S	**Sg**	**17 14 13.1**	**+0.1**
	93nm,0.2s						
ZHN	**Zhinishke**	**1.30**	**41**	P	**Pn**	**17 13 54.6**	**-1.3**
	42nm,0.4s						
ZHN				S	**Sg**	**17 14 13.1**	**+0.1**
	93nm,0.2s						
TKM2	**Tokmak 2**	**1.44**	**301**	⇓*i*P	**Pn**	**17 13 56.8**	**-1.0**
	baz=5.0						
TKM2				⇓*i*S	**Sn**	**17 14 16.8**	**-0.2**
	baz=5.0						
TKM2	**Tokmak 2**	**1.44**	**301**	P	**Pn**	**17 13 56.8**	**-1.0**
	SNR=300						
TKM2	**Tokmak 2**	**1.44**	**301**	⇑P	**Pn**	**17 13 56.8**	**-1.0**
	16nm,0.3s						
TKM2				⇓S	**Sn**	**17 14 16.6**	**-0.4**
	28nm,0.2s						
KURS	**Kuram**	**1.46**	**27**	*e*P	**Pb**	**17 13 58.0**	**-0.6**
	baz=26						
KURS				*e*S	**Sg**	**17 14 18.4**	**+0.4**
	baz=26						
KURS	**Kuram**	**1.46**	**27**	*e*P	**Pb**	**17 13 58.0**	**-0.6**
	17nm,0.4s						
KURS				*e*S	**Sg**	**17 14 18.3**	**+0.4**
	24nm,0.4s						
KURS	**Kuram**	**1.46**	**27**	P	**Pb**	**17 13 57.9**	**-0.6**
	17nm,0.4s						
KURS				S	**Sg**	**17 14 18.3**	**+0.4**
	24nm,0.4s						
DGS	**Degeres**	**1.52**	**314**	*e*P	**Pn**	**17 13 59.2**	**+0.3**
	baz=17						
DGS				*e*S	**Sb**	**17 14 20.0**	**+0.6**
	baz=17						
DGS	**Degeres**	**1.52**	**314**	*e*P	**Pn**	**17 13 59.2**	**+0.3**
	15nm,0.1s						
DGS				*e*S	**Sb**	**17 14 19.9**	**+0.6**
	92nm,0.4s						
DGS	**Degeres**	**1.52**	**314**	P	**Pn**	**17 13 59.2**	**+0.3**
	15nm,0.1s						
DGS				S	**Sb**	**17 14 19.9**	**+0.6**
	92nm,0.4s						
KTBS	**Karatobe**	**1.58**	**344**	*e*P	**Pb**	**17 14 00.4**	**-0.3**
	baz=46						
KTBS				*e*S	**Sg**	**17 14 22.3**	**+0.4**
	baz=46						
KTBS	**Karatobe**	**1.58**	**344**	*e*P	**Pb**	**17 14 00.4**	**-0.3**
	20nm,0.2s						
KTBS				*e*S	**Sg**	**17 14 22.3**	**+0.4**
	192nm,0.4s						
KTBS	**Karatobe**	**1.58**	**344**	P	**Pb**	**17 14 00.4**	**-0.3**
	20nm,0.2s						
KTBS				S	**Sg**	**17 14 22.3**	**+0.4**
	192nm,0.4s						
UZB	**Uzynbulak**	**1.61**	**53**	*e*P	**Pn**	**17 14 00.0**	**-0.1**
	baz=51						
UZB				*e*S	**Sg**	**17 14 21.8**	**-1.0**
	baz=51						
UZB	**Uzynbulak**	**1.61**	**53**	*e*P	**Pn**	**17 13 60.0**	**-0.1**
	33nm,0.2s						
UZB				*e*S	**Sg**	**17 14 21.8**	**-1.0**
	267nm,0.2s						
UZB	**Uzynbulak**	**1.61**	**53**	P	**Pn**	**17 13 60.0**	**-0.1**
	33nm,0.2s						
UZB				S	**Sg**	**17 14 21.8**	**-1.0**
	267nm,0.2s						
KPKS	**Kokpek**	**1.65**	**39**	*e*P	**Pb**	**17 14 01.0**	**-0.8**
	baz=37						
KPKS				*e*S	**Sg**	**17 14 23.6**	**-0.4**
	baz=37						
KPKS	**Kokpek**	**1.65**	**39**	*e*P	**Pb**	**17 14 01.0**	**-0.8**
	28nm,0.3s						
KPKS				*e*S	**Sg**	**17 14 23.6**	**-0.4**
	218nm,0.4s						
CHKK	**Chushkaly**	**1.68**	**353**	*e*P	**Pb**	**17 14 02.2**	**-0.1**
	baz=54						
CHKK				*e*S	**Sg**	**17 14 25.5**	**+0.5**
	baz=54						
CHKK	**Chushkaly**	**1.68**	**353**	*e*P	**Pb**	**17 14 02.2**	**-0.1**
	21nm,0.3s						
CHKK				*e*S	**Sg**	**17 14 25.4**	**+0.5**
	244nm,0.3s						
CHKK	**Chushkaly**	**1.68**	**353**	P	**Pb**	**17 14 02.2**	**-0.1**
	21nm,0.3s						
CHKK				S	**Sg**	**17 14 25.4**	**+0.5**
	244nm,0.3s						
KBK	**Karagaybulak**	**1.78**	**286**	⇓*i*P	**Pn**	**17 14 02.5**	**0.0**
	baz=89						
KBK				⇓*i*S	**Sn**	**17 14 26.1**	**+0.7**
	baz=89						
KBK	**Karagaybulak**	**1.78**	**286**	P	**Pn**	**17 14 02.7**	**+0.3**
	SNR=25						
KUU	**Kurty**	**1.83**	**339**	*e*P	**Pb**	**17 14 04.7**	**-0.3**
	baz=40						
KUU				*e*S	**Sg**	**17 14 30.1**	**+0.1**
	baz=40						
KUU	**Kurty**	**1.83**	**339**	*e*P	**Pb**	**17 14 04.7**	**-0.3**
	5.4nm,0.3s						
KUU				*e*S	**Sg**	**17 14 30.1**	**+0.1**
	76nm,0.3s						
KUU	**Kurty**	**1.83**	**339**	Pg	**Pb**	**17 14 04.7**	**-0.3**
	5.4nm,0.3s						
KUU				Lg	Lg	17 14 30.1	
	76nm,0.3s						
SHLS	**Shalkode**	**1.89**	**58**	*e*P	**Pg**	**17 14 08.9**	**+1.7**
	baz=61						
SHLS				*e*S	**Sg**	**17 14 37.7**	**+6.0**
	baz=61						
SHLS	**Shalkode**	**1.89**	**58**	*e*P	**Pg**	**17 14 08.9**	**+1.7**
	37nm,0.3s						
SHLS				*e*S	**Sg**	**17 14 37.7**	**+6.0**
	190nm,0.5s						
SHLS	**Shalkode**	**1.89**	**58**	Pg	**Pg**	**17 14 08.9**	**+1.7**
	37nm,0.3s						
SHLS				Lg	Lg	17 14 37.7	
	190nm,0.5s						
KRBS	**Karabastau**	**1.91**	**323**	*e*P	**Pn**	**17 14 05.5**	**+1.4**
	baz=25						
KRBS				*e*S	**Sb**	**17 14 31.5**	**+1.2**
	baz=25						
KRBS	**Karabastau**	**1.91**	**323**	*e*P	**Pn**	**17 14 05.5**	**+1.4**
	15nm,0.1s						
KRBS				*e*S	**Sb**	**17 14 31.5**	**+1.2**
	148nm,0.3s						
KRBS	**Karabastau**	**1.91**	**323**	Pg	**Pn**	**17 14 05.5**	**+1.4**
	15nm,0.1s						
KRBS				Lg	Lg	17 14 31.5	
	148nm,0.3s						
PDGK	**Podgornoye**	**2.00**	**54**	Pg	**Pb**	**17 14 06.3**	**-1.5**
	15nm,0.6s						
PDGK				Lg	Lg	17 14 33.2	
	57nm,0.4s						
PDGK	**Podgornoye**	**2.00**	**54**	⇑Pn	**Pn**	**17 14 06.0**	**+0.6**
	20nm,0.6s						
PDGK				⇑Sn	**Sg**	**17 14 33.3**	**-1.9**
	106nm,0.6s						
CHMS	**Chumysh**	**2.03**	**294**	⇓*i*P	**Pn**	**17 14 06.0**	**+0.3**
	baz=97						
CHMS				⇓*i*S	**Sn**	**17 14 32.0**	**+0.7**
	baz=97						
CHMS	**Chumysh**	**2.03**	**294**	P	**Pn**	**17 14 06.6**	**+0.8**
	SNR=18						
FRU1	**Bishkek**	**2.05**	**289**	⇑*i*P	**Pn**	**17 14 06.3**	**+0.3**
	baz=91						
FRU1				⇑*i*S	**Sn**	**17 14 32.5**	**+0.6**
	baz=91						
UCH	**Uchtor**	**2.05**	**272**	⇑*i*P	**Pn**	**17 14 05.9**	**-0.5**
	baz=75						
UCH				⇑*i*S	**Sn**	**17 14 31.7**	**-0.7**
	baz=75						
UCH	**Uchtor**	**2.05**	**272**	P	**Pn**	**17 14 07.2**	**+0.8**
	SNR=10						
MNBS	**Baschi**	**2.06**	**23**	*e*P	**Pb**	**17 14 08.5**	**-0.5**
	16nm,0.2s						
MNBS				*e*S	**Sg**	**17 14 36.8**	**-0.6**
	206nm,0.3s						
MNBS	**Baschi**	**2.06**	**23**	Pg	**Pb**	**17 14 08.5**	**-0.5**
	16nm,0.2s						
MNBS				Lg	Lg	17 14 36.8	
	206nm,0.3s						
ARXS	**Arharly**	**2.06**	**11**	*e*P	**Pb**	**17 14 08.3**	**-0.7**
	25nm,0.5s						
ARXS				*e*S	**Sg**	**17 14 36.0**	**-1.5**
	99nm,0.5s						
ARXS	**Arharly**	**2.06**	**11**	Pg	**Pb**	**17 14 08.3**	**-0.7**
	25nm,0.5s						
ARXS				Lg	Lg	17 14 36.0	
	99nm,0.5s						
AAK	**Ala-Archa**	**2.10**	**283**	⇑*i*P	**Pn**	**17 14 06.8**	**-0.1**
	baz=86						
AAK				⇑*i*S	**Sn**	**17 14 33.4**	**0.0**
	baz=86						
AAK	**Ala-Archa**	**2.10**	**283**	P	**Pn**	**17 14 07.9**	**+1.0**
	SNR=28						
AAK	**Ala-Archa**	**2.10**	**283**	⇓Pn	**Pn**	**17 14 07.6**	**+0.8**
	8.4nm,0.3s						
AAK				⇑Sn	**Sb**	**17 14 36.7**	**+0.7**
	19nm,0.4s						
ARLS	**Aral**	**2.22**	**263**	⇑*i*P	**Pn**	**17 14 07.6**	**-0.9**
	baz=65						
ARLS				⇑*i*S	**Sn**	**17 14 35.0**	**-1.2**
	baz=65						
USP	**Ospenovka**	**2.31**	**299**	⇑*i*P	**Pn**	**17 14 09.7**	**+0.1**
	baz=1.0						
USP				⇑*i*S	**Sn**	**17 14 39.8**	**+1.5**
	baz=1.0						
USP	**Ospenovka**	**2.31**	**299**	P	**Pb**	**17 14 12.1**	**-0.9**
	SNR=28						
SGDS	**Sogindy**	**2.32**	**304**	Pg	**Pn**	**17 14 11.7**	**+2.0**
	9.2nm,0.3s						
SGDS				Lg	Lg	17 14 42.6	
	35nm,0.3s						
KTMS	**Ketmen**	**2.59**	**60**	*e*P	**Pb**	**17 14 16.4**	**-1.6**
	54nm,0.2s						
KTMS				*e*S	**Sb**	**17 14 50.0**	**-0.2**
	66nm,0.3s						
KTMS	**Ketmen**	**2.59**	**60**	Pg	**Pb**	**17 14 16.4**	**-1.6**
	54nm,0.2s						
KTMS				Lg	Lg	17 14 50.0	
	66nm,0.3s						
EKS2	**Erkin-Say**	**2.63**	**282**	⇓*i*P	**Pn**	**17 14 13.8**	**-0.2**
	baz=84						
EKS2				⇓*i*S	**Sn**	**17 14 46.1**	**-0.2**
	baz=84						
EKS2	**Erkin-Say**	**2.63**	**282**	P	**Pn**	**17 14 16.9**	**+2.9**
	SNR=45						
AML	**Almayashu**	**2.66**	**270**	⇓*i*P	**Pn**	**17 14 14.0**	**-0.7**
	baz=72						
AML				⇓*i*S	**Sn**	**17 14 46.8**	**-0.6**
	baz=72						
AML	**Almayashu**	**2.66**	**270**	P	**Pn**	**17 14 17.6**	**+2.9**
	SNR=34						
DJR	**Jarkent**	**2.83**	**40**	*e*P	**Pb**	**17 14 21.0**	**-0.9**
	6.1nm,0.3s						
DJR				*e*S	**Sb**	**17 14 58.0**	**+1.3**
	16nm,0.4s						
DJR	**Jarkent**	**2.83**	**40**	Pg	**Pb**	**17 14 21.0**	**-0.9**
	6.1nm,0.3s						
DJR				Lg	Lg	17 14 58.1	
	16nm,0.4s						
TDK	**Taldyqorghan**	**2.93**	**16**	*e*P	**Pb**	**17 14 23.9**	**+0.2**
	21nm,0.4s						

KRNET ***14*** *17:13:29.7±0.1, 42.˚10N×77.˚25E, h20km, mb3.7*
SOME ***14*** *17:13:29.5, 42.˚13N×77.˚23E, h10km*
NNC ***14*** *17:13:30.1±0.5, 42.˚14N×77.˚27E, h0km, mb3.8, mpv3.7,*
Error ellipse: s-maj=3.7km s-min=2.1km az=177.0
ISC 14 17:13:31.1±0.9**, 42.˚19N**±0.˚03×**77.˚27E**±0.˚02**, h7**km±7km**,

TDK				*e*S		**Sg**	**17 15 02.8**	**-2.4**
	47nm,0.3s							
TDK	**Taldyqorghan**	**2.93**	**16**	Pg		**Pb**	**17 14 23.7**	**0.0**
	21nm,0.4s							
TDK				Lg		Lg	17 15 02.8	
	47nm,0.3s							
MRKS	**Merke**	**3.04**	**282**	*e*P		**Pb**	**17 14 25.1**	**-0.5**
	6.2nm,0.3s							
MRKS				*e*S		**Sb**	**17 15 05.3**	**+2.3**
	25nm,0.4s							
MRKS	**Merke**	**3.04**	**282**	Pg		**Pb**	**17 14 25.1**	**-0.5**
	6.2nm,0.3s							
MRKS				Lg		Lg	17 15 05.3	
	25nm,0.4s							
MNAS	**Manas**	**3.54**	**276**	⇑*i*P		**Pn**	**17 14 26.4**	**-0.3**
	baz=78							
MNAS				⇑*i*S		**Sn**	**17 15 08.0**	**-0.9**
	baz=78							
BTLS	**Baital**	**3.69**	**322**	*e*P		**Pb**	**17 14 37.2**	**+0.7**
	2.2nm,0.3s							
BTLS				*e*S		**Sg**	**17 15 26.3**	**-3.2**
	15nm,0.7s							
BTLS	**Baital**	**3.69**	**322**	Pg		**Pb**	**17 14 37.2**	**+0.7**
	2.2nm,0.3s							
BTLS				Lg		Lg	17 15 26.3	
	15nm,0.7s							
KK31	**Karatay Array**	**5.07**	**283**	⇓Pg		**Pb**	**17 15 03.9**	**+3.8**
	0.6nm,0.3s,baz=92,slow=15,SNR=11							
KK31				Lg		Lg	17 16 11.8	
	1.6nm,0.4s,baz=98,slow=28,SNR=7.2							
MK31	**Makanchi Array**	**5.84**	**36**	⇑Pn		**Pn**	**17 14 59.2**	**+1.1**
	1.5nm,0.8s,baz=209,slow=15,SNR=3.5							
MK31				⇑Lg		Lg	17 16 38.6	
	0.8nm,0.6s							

IDC 14 17:15:48.4±2.0,2°.19N×127°.15E,h0km,mb3.3/4, mb1 3.6/4,mb1mx3.4/30,mbtmp3.4/4,Error ellipse: s-maj=115.1km s-min=24.9km az=69.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.22**	**184**	P	P	17 20 25.3	+0.2
	0.6nm,0.4s,baz=13,slow=11,SNR=7.3						
WRA	**Warramunga Arr**	**23.10**	**163**	P	P	17 20 55.7	-0.4
	0.7nm,0.6s,baz=341,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.53**	**166**	P	P	17 21 28.3	+0.3
	0.1nm,0.3s,baz=341,slow=9.1,SNR=11						
MKAR	**Makanchi Array**	**59.05**	**326**	P	P	17 25 50.2	-0.1
	0.3nm,0.6s,baz=119,slow=7.4,SNR=4.6						

ISN 14 17:26:21.7±79.0,35°.77N×46°.05E,h15km±546km, ML2.6
TEH 14 17:26:24.4,35°.75N×46°.04E,h4km, ML2.8
ISC 14 17:26:23.4±0.9,35°.75N±0°.03×46°.01E±0°.07,h10km,n12, σ0°74/16,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAHB	**Mahabad**	**1.04**	**346**	*e*Pg	**Pn**	**17 26 44.5**	**+0.3**
MAHB				*e*Sg	**Sn**	**17 26 58.4**	**-0.5**
MAHB				*e*		17 27 04.9	
IDHR	**Dehrash**	**1.09**	**164**	*e*Pg	**Pn**	**17 26 45.1**	**+0.1**
IDHR				*e*Sg	**Sn**	**17 26 59.8**	**-0.5**
IDHR				*e*		17 27 04.0	
ILIN	**Lien**	**1.14**	**137**	*e*Pg	**Pg**	**17 26 45.2**	**-0.1**
ILIN				*e*		17 27 03.6	
IVIS	**Veis**	**1.40**	**150**	*e*Pg	**Pg**	**17 26 50.8**	**+0.5**
IVIS				*e*		17 27 17.8	
IGHG	**Ghaleghazi**	**1.49**	**162**	*e*Pn	**Pg**	**17 26 53.1**	**+1.1**
IGHG				*e*		17 26 56.2	
HSRG	**Sareghieh**	**1.92**	**105**	*e*Pn	**Pb**	**17 26 59.0**	**+0.3**
IAZR	**Azarshahr**	**1.92**	**359**	*e*Pn	**Pg**	**17 27 00.1**	**-0.2**
IAZR				*e*		17 27 39.5	
IALM	**Almabolaq**	**1.97**	**116**	*e*Pn	**Pg**	**17 27 00.6**	**-0.7**
IALM				*e*		17 27 32.8	
IKOM	**Komasi**	**2.00**	**142**	*e*Pn	**Pg**	**17 27 01.1**	**-0.6**
ISRB	**Sarab**	**2.46**	**32**	*e*Pn	**Pb**	**17 27 08.0**	**+0.2**
IBDR	**Badra**	**2.64**	**182**	*e*Pg	**Pb**	**17 27 09.0**	**-1.7**
	baz=2.0						
IBDR				*e*Sg	**Sb**	**17 27 44.0**	**+0.9**
IBDR				AML	AML	17 27 53.5	
	comp=E,13nm,0.5s						
IBDR				AML	AML	17 27 57.8	
	comp=N,16nm,0.5s						
BHD	**Baghdad**	**2.82**	**209**	*e*Pn	**Pn**	**17 27 09.0**	**+0.5**
	baz=28						
BHD				*e*Sn	**Sn**	**17 27 43.0**	**+0.5**
BHD				AML	AML	17 27 50.1	
	comp=E,237nm,0.3s						

IDC 14 18:04:56.9±1.7,4°.01S×133°.75E,h0km,mb3.6/3, mb1 3.9/6,mb1mx3.7/35,mbtmp3.8/6,ML3.8/3,Error ellipse: s-maj=52.4km s-min=22.9km az=63.0
DJA 14 18:04:57.9±0.8,4°.5±5°×13°.4E±°,h10km,M4.3/6,mB4.5/2, mb4.7/2,MLv4.1/6,Mw(mB)3.7/2
ISC 14 18:04:55.8±1.0,4°.21S±0°.06×133°.84E±0°.10,h10km,n12, σ4§40/17,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**0.56**	**346**	P	**Pg**	**18 05 05.6**	**-1.2**
FAKI	**Fak Fak**	**2.04**	**309**	P	**Pn**	**18 05 29.4**	**-0.9**
BNDI	**Bandanaira**	**3.94**	**265**	P	**Pn**	**18 05 59.5**	**+3.2**
SIJI	**Sorong**	**4.20**	**322**	Pn	**Pn**	**18 05 58.9**	**-1.0**
	1.2nm,0.3s,baz=126,slow=3.1,SNR=16						
SIJI				Sn	**Sn**	**18 06 42.9**	**-6.3**
	9.0nm,0.3s,baz=224,slow=22,SNR=11						
MSAI	**Masohi**	**4.97**	**280**	P	**Pb**	**18 06 24.6**	**+1.5**
BATI	**Baumata**	**11.72**	**239**	Pn	**Pn**	**18 07 46.8**	**+3.5**
	2.0nm,0.3s,baz=91,slow=9.7,SNR=4.2						
BATI				Sn	**Sn**	**18 09 55.9**	**+1.6**
	0.8nm,0.3s,baz=342,slow=20,SNR=1.3						
WRA	**Warramunga Arr**	**15.64**	**178**	Pn	**Pn**	**18 08 36.8**	**+0.2**
	0.2nm,0.3s,baz=355,slow=13,SNR=15						
WRA				Sn	**Sn**	**18 11 24.1**	**-6.0**
	0.4nm,0.3s,baz=1.5,slow=23,SNR=9.9						
FITZ	**Fitzroy Crossi**	**15.96**	**210**	Pn	**Pn**	**18 08 40.8**	**+0.1**
	0.5nm,0.3s,baz=36,slow=10.0,SNR=23						
FITZ				Sn	**Sn**	**18 11 30.2**	**-7.6**
	1.2nm,0.3s,baz=171,slow=19,SNR=11						
ASAR	**Alice Springs**	**19.34**	**180**	P	**Pn**	**18 09 25.3**	**+2.7**
	0.4nm,0.3s,baz=3.6,slow=13,SNR=58						
ASAR				S	**Sn**	**18 12 50.8**	**-8.9**
	0.1nm,0.3s,baz=359,slow=26,SNR=6.2						
CTA	**Charters Tower**	**19.88**	**144**	P	**Pn**	**18 09 33.3**	**+4.2**
	2.7nm,0.4s,baz=301,slow=8.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**41.11**	**304**	P	**P**	**18 12 41.5**	**+1.2**
	0.6nm,0.8s,baz=134,slow=7.4,SNR=5.8						
MKAR	**Makanchi Array**	**68.09**	**325**	P	**P**	**18 15 57.0**	**+1.1**
	0.4nm,0.6s,baz=115,slow=7.5,SNR=4.7						

NEIC 14 18:08:59.6±1.1,23°.6S±0°.3×179°.3W±0°.3,h522km±31km, mb4.1/8,Error ellipse: s-maj=41.0km s-min=29.5km az=141.0
IDC 14 18:09:06.9±33.0,22°.93S×179°.70W,h593km±298km, mb3.0/4,mb1 3.1/4,mb1mx2.8/36,mbtmp4.0/4,Error ellipse: s-maj=313.9km s-min=135.0km az=124.0
ISC 14 18:09:00.1±0.9,23°.7S±0°.2×179°.1W±0°.1,h550km,n15, σ0§75/15,mb3.9/7,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.63**	**170**		**P**	**18 10 34.6**	**-0.6**
NIUE	**Niue**	**9.69**	**63**		**P**	**18 11 15.0**	**+0.1**
HNR	**Honiara**	**24.55**	**302**	P	**P**	**18 13 35.9**	**-1.2**
CTA	**Charters Tower**	**32.32**	**270**	P	**P**	**18 14 44.5**	**0.0**
	3.2nm,0.6s,baz=101,slow=10,SNR=7.6						
CTAO	**Charters Tower**	**32.32**	**270**	P	**P**	**18 14 45.1**	**+0.5**
CTAO				IAmb	IAmb	18 14 45.9	
	comp=Z,4.5nm,0.8s						
ASAR	**Alice Springs**	**42.90**	**260**	P	**P**	**18 16 11.2**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.7,SNR=5.5						
ASAR				PcP	**PcP**	**18 17 50.3**	**+1.2**
	comp=Z,0.3nm,0.9s,baz=108,slow=3.6,SNR=1.6						
WR0	**Warramunga Arr**	**43.07**	**266**	P	**P**	**18 16 12.4**	**+0.2**
WR0				IAmb	IAmb	18 16 24.2	
	comp=Z,10nm,1.6s						
WB2	**Warramunga Arr**	**43.25**	**266**	P	**P**	**18 16 13.4**	**-0.1**
WB0	**Warramunga Arr**	**43.26**	**266**	P	**P**	**18 16 13.2**	**-0.4**
WB0				IAmb	IAmb	18 16 14.7	
	comp=Z,4.2nm,1.0s						
WRA	**Warramunga Arr**	**43.26**	**266**	P	**P**	**18 16 13.1**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=103,slow=8.4,SNR=19						
WRA	**Warramunga Arr**	**43.26**	**266**	IAmb	IAmb	18 16 14.3	
	comp=Z,0.1nm,0.6s						
MTN	**Manton Dam**	**48.28**	**274**	P	**P**	**18 16 51.6**	**-0.2**
MTN				IAmb	IAmb	18 17 09.0	
	comp=Z,8.6nm,1.2s						
FITZ	**Fitzroy Crossi**	**51.69**	**265**	P	**P**	**18 17 17.7**	**+0.9**
	comp=Z,1.9nm,1.0s,baz=126,slow=8.7,SNR=2.4						
FITZ	**Fitzroy Crossi**	**51.69**	**265**	P	**P**	**18 17 18.1**	**+1.3**
AKASG	**Malin Array Be**	**145.25**	**328**	PKP	**PKPdf**	**18 27 35.0**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=43,slow=3.9,SNR=1.8						

IDC 14 18:27:44.3±2.4,10°.28N×124°.69E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/36,mbtmp3.4/4,MS2.9/3,Ms1 2.9/3, ms1mx2.5/24,Error ellipse: s-maj=106.1km s-min=24.6km az=56.0
MAN 14 18:27:45.8,9°.95N×124°.09E,h9km,mb4.9,ML3.9,MS3.9
ISC 14 18:27:45.5±1.4,9°.98N±0°.04×124°.09E±0°.03,h2km±10km, n20,σ1§42/30,mb3.3/4,2C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.35**	**340**	⇓*i*P	**Pb**	**18 27 54.1**	**-0.4**
LLP				*i*S	**Sb**	**18 28 00.4**	**-0.1**
TBP	**Tagbilaran**	**0.36**	**218**	⇑*i*P	**Pg**	**18 27 52.8**	**+0.3**
TBP				*i*S	**Sg**	**18 27 57.0**	**-0.2**
MSLP	**Maasin**	**0.78**	**79**	*e*P	**Pb**	**18 28 01.3**	**-0.4**
MSLP				*e*S	**Sn**	**18 28 14.6**	**-1.0**
CNOP	**Candoni, Negro**	**1.43**	**264**	*e*P	**Pn**	**18 28 10.6**	**-1.9**
CNOP				*e*S	**Sb**	**18 28 31.3**	**-0.3**
GUIM	**Jordan**	**1.61**	**294**	*e*P	**Pn**	**18 28 13.8**	**-1.1**
GUIM				*e*S	**Sb**	**18 28 37.2**	**+0.6**
CGP	**Cagayan de Oro**	**1.63**	**158**	⇓*e*P	**Pn**	**18 28 13.4**	**-1.7**
CGP				*e*S	**Sg**	**18 28 39.7**	**+1.7**
GLSP	**General Luna,**	**2.02**	**95**	*e*P	**Pn**	**18 28 20.6**	**0.0**
GLSP				*e*S	**Sg**	**18 28 49.2**	**-1.3**
PAGZ	**Pagadian**	**2.23**	**198**	*e*P	**Pn**	**18 28 21.8**	**-1.7**
PAGZ				*e*S	**Sn**	**18 28 50.9**	**-0.6**
BUKP	**Musuan**	**2.30**	**155**	*e*P	**Pn**	**18 28 23.9**	**-0.5**
BUKP				*e*S	**Sb**	**18 28 56.2**	**-0.4**
KCP	**Kidapawan**	**3.12**	**161**	⇑*e*P	**Pn**	**18 28 37.5**	**+1.8**
KCP				*e*S	**Sb**	**18 29 17.1**	**-3.0**
DAV	**Davao City (W)**	**3.25**	**153**	LR	LR	18 30 10.5	
	comp=Z,155nm,19.1s,baz=357,slow=44						
SKMP	**Bagumbayan, Su**	**3.47**	**172**	*e*P	**Pn**	**18 28 40.3**	**-0.2**
SKMP				*e*S	**Sn**	**18 29 23.3**	**+1.1**
MATI	**Mati**	**3.70**	**144**	*e*P	**Pn**	**18 28 45.5**	**+1.8**
MATI				*e*S	**Sn**	**18 29 25.8**	**-2.1**
DDMP	**Don Marcelino,**	**4.17**	**157**	*e*P	**Pn**	**18 28 50.3**	**+0.1**
DDMP				*e*S	**Sn**	**18 29 40.2**	**+0.7**
GUMO	**Guam**	**20.66**	**78**	LR	LR	18 40 22.4	
	comp=Z,18nm,19.0s,baz=209,slow=38						
CMAR	**Chiang Mai Arr**	**25.76**	**292**	P	**P**	**18 33 21.4**	**+3.5**
	0.3nm,0.6s,baz=110,slow=8.0,SNR=4.3						
WRA	**Warramunga Arr**	**31.40**	**161**	P	**P**	**18 34 07.5**	**-0.6**
	0.4nm,1.1s,baz=340,slow=9.4,SNR=1.8						
ASAR	**Alice Springs**	**34.79**	**164**	P	**P**	**18 34 38.2**	**+0.5**
	0.4nm,0.8s,baz=344,slow=6.8,SNR=6.2						
SONM	**Songino Array**	**40.58**	**342**	LR	LR	18 51 35.5	
	comp=Z,31nm,18.0s,baz=353,slow=35						
MKAR	**Makanchi Array**	**50.97**	**324**	P	**P**	**18 36 48.4**	**-0.3**
	0.4nm,0.7s,baz=138,slow=9.0,SNR=3.5						

IDC 14 18:28:15.4±2.7,32°.66N×140°.62E,h50km±25km, mb3.1/4, mb1 3.4/5,mb1mx3.2/39,mbtmp3.4/5,ML2.9/1,MS2.6/1, Ms1 2.6/1,ms1mx2.2/15,Error ellipse: s-maj=35.5km s-min=18.1km az=90.0
JMA 14 18:28:16.6±0.1,32°.84N×140°.71E,h56km,M3.7
ISC 14 18:28:15.6±1.7,32°.77N±0°.06×140°.8E±0°.1,h53km±16km, n26,σ1§03/32,mb3.5/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**0.87**	**291**	P	**Pn**	**18 28 31.9**	**+0.2**
JHCJ				S	**Sn**	**18 28 42.5**	**-1.0**
JHJ2	**Mitsune**	**0.87**	**294**	P	**Pn**	**18 28 32.0**	**+0.3**
JHJ2				S	**Sn**	**18 28 43.2**	**-0.3**
JAOM	**Aogashimamukai**	**0.90**	**251**	P	**Pn**	**18 28 33.1**	**+1.0**
JAOM				S	**Sn**	**18 28 45.0**	**+0.8**
JHJ	**Hachijo jima 2**	**0.90**	**293**	P	**Pn**	**18 28 31.9**	**-0.1**
	168nm,0.3s,baz=127,slow=20,SNR=177						
JHJ				S	**Sn**	**18 28 42.7**	**-1.4**
	539nm,0.3s,baz=76,slow=23,SNR=13						
JMKN	**Mikurajimanish**	**1.50**	**319**	P	**Pn**	**18 28 40.1**	**+0.1**
JMKN				S	**Sn**	**18 28 57.5**	**-1.0**
BSO1	**Boso 1**	**1.89**	**5**	P	**Pn**	**18 28 45.1**	**+0.1**
JKO	**Kozu shima**	**1.97**	**317**	P	**Pn**	**18 28 47.4**	**+0.9**
JKO				S	**Sn**	**18 29 10.5**	**+0.5**
BSO3	**Boso 3**	**2.04**	**354**	P	**Pn**	**18 28 47.8**	**+0.5**
BSO3				S	**Sn**	**18 29 11.0**	**-0.5**
JTHY	**Toshimahigashi**	**2.15**	**325**	P	**Pn**	**18 28 49.0**	**+0.9**
JTHY				S	**Sn**	**18 29 14.2**	**+0.1**
JIM2	**Oshima 3**	**2.24**	**331**	P	**Pn**	**18 28 50.6**	**+0.3**
JIM2				S	**Sn**	**18 29 15.5**	**-1.3**
BSO4	**Boso 4**	**2.25**	**351**	P	**Pn**	**18 28 50.8**	**+0.6**
BSO4				S	**Sn**	**18 29 17.0**	**+0.3**
JIZS	**Izushimoda**	**2.50**	**322**	P	**Pn**	**18 28 54.8**	**+1.0**
JOD2	**Odawara 2**	**2.86**	**331**	P	**Pn**	**18 28 59.1**	**+0.4**
JOD2				S	**Sn**	**18 29 29.5**	**-2.3**
MJAR	**Matsushiro Arr**	**4.32**	**331**	P	**Pn**	**18 29 20.2**	**+1.5**
	0.7nm,0.3s,baz=161,slow=14,SNR=33						
MJAR				S	**Sn**	**18 30 09.1**	**+1.3**
	0.2nm,0.3s,baz=144,slow=29,SNR=4.4						
MAT	**Matsushiro**	**4.32**	**331**	P	**Pn**	**18 29 21.2**	**+2.5**
MAT				*e*S	**Sn**	**18 30 08.5**	**+0.7**
KLR	**Kul'dur**	**17.78**	**340**	LR	LR	18 39 14.0	
	comp=Z,20nm,20.1s,baz=122,slow=37						
H11N2	**WAKE ISLAND Hy**	**26.70**	**113**	T	T	19 02 48.8	
	baz=305,slow=75,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**26.71**	**113**	T	T	19 02 47.7	
	baz=305,slow=75,SNR=5.8						
H11N3	**WAKE ISLAND Hy**	**26.72**	**113**	T	T	19 02 48.3	
	baz=305,slow=75,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**27.26**	**115**	T	T	19 03 30.4	
	baz=306						
H11S1	**WAKE ISLAND Hy**	**27.26**	**115**	T	T	19 03 24.6	
	baz=306						
H11S2	**WAKE ISLAND Hy**	**27.27**	**115**	T	T	19 03 30.4	
	baz=306						
MKAR	**Makanchi Array**	**46.05**	**306**	P	**P**	**18 36 33.7**	**-0.3**
	0.5nm,0.7s,baz=86,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**52.77**	**188**	P	**P**	**18 37 24.5**	**-0.9**
	0.5nm,0.9s,baz=5.2,slow=7.7,SNR=7.0						
ILAR	**Eielson Array**	**53.40**	**31**	P	**P**	**18 37 30.1**	**+0.5**
	0.2nm,0.6s,baz=273,slow=7.5,SNR=2.4						
ASAR	**Alice Springs**	**56.50**	**188**	P	**P**	**18 37 51.5**	**-0.9**
	0.4nm,1.0s,baz=358,slow=5.0,SNR=4.0						

SJA 14 18:39:24.8±0.6,21°.20S×68°.78W,h136km±3km, ML4.0, MW3.8
NEIC 14 18:39:25.3±1.9,21°.20S±0°.04×68°.76W±0°.09,h132km±5km, Error ellipse: s-maj=11.6km s-min=6.0km az=90.0
IDC 14 18:39:26.1±0.9,21°.28S×68°.18W,h111km±11km,mb3.7/4, mb1 3.7/8,mb1mx3.5/28,mbtmp4.1/8,Error ellipse: s-maj=34.2km s-min=9.7km az=106.0
GUC 14 18:39:26.1±0.7,21°.22S×68°.69W,h129km±3km,ML4.0
VAO 14 18:39:26.6±0.4,21°.26S×68°.32W,h118km±5km,mb4.2
ISC 14 18:39:24.8±0.6,21°.22S±0°.03×68°.74W±0°.05,h132km±6km, n114,σ1§46/160,mb4.2/5,9C-6D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.72**	**284**	⇓*i*P	**Pn**	**18 39 46.3**	**+0.6**
PB01				*i*S	**Sn**	**18 40 01.8**	**+0.4**
PB01				IAML		18 40 02.6	
	comp=N,9μm,0.3s						
PB01	**IPOC Station P**	**0.72**	**284**		**Pn**	**18 39 45.8**	**+0.2**
PB01				Sn	**Sn**	**18 40 01.3**	**-0.1**
PB01	**IPOC Station P**	**0.72**	**284**	*e*P	**Pn**	**18 39 46.2**	**+0.6**
PB01				*e*S	**Sn**	**18 40 02.1**	**+0.7**
PB01				IAML		18 40 03.4	
	comp=Z,2μm,0.2s						
PB09	**IPOC Station P**	**0.74**	**219**	⇑*i*P	**Pn**	**18 39 47.0**	**+1.1**
PB09				*i*S	**Sn**	**18 40 03.0**	**+1.1**
PB09	**IPOC Station P**	**0.74**	**219**		**Pn**	**18 39 47.0**	**+1.1**
PB09				Sn	**Sn**	**18 40 02.7**	**+0.8**
PB09	**IPOC Station P**	**0.74**	**219**	*e*P	**Pn**	**18 39 47.0**	**+1.1**
PB09				*e*S	**Sn**	**18 40 03.1**	**+1.2**
PB09				IAML		18 40 03.6	
	comp=Z,2μm,0.4s						
PB02	**IPOC Station P**	**1.08**	**264**	⇑*i*P	**Pn**	**18 39 49.8**	**+1.0**
PB02				*i*S	**Sn**	**18 40 07.6**	**+0.6**
PB02	**IPOC Station P**	**1.08**	**264**	*e*P	**Pn**	**18 39 49.7**	**+0.9**
PB02				*e*S	**Sn**	**18 40 07.7**	**+0.7**
PB02				IAML		18 40 08.4	
	comp=Z,5μm,0.3s						
PB08	**IPOC Station P**	**1.14**	**340**	⇓*i*P	**Pn**	**18 39 50.6**	**+0.9**
PB08				*i*S	**Sn**	**18 40 09.3**	**+0.8**
PB08				IAML		18 40 10.2	
	comp=E,2μm,0.2s						
PB08	**IPOC Station P**	**1.14**	**340**		**Pn**	**18 39 50.6**	**+0.9**
PB08				Sn	**Sn**	**18 40 09.3**	**+0.8**
PB08	**IPOC Station P**	**1.14**	**340**	*e*P	**Pn**	**18 39 50.6**	**+0.9**
PB08				*e*S	**Sn**	**18 40 09.5**	**+1.0**
PB07	**IPOC Station P**	**1.19**	**244**	⇑*i*P	**Pn**	**18 39 50.9**	**+1.0**
PB07				*i*S	**Sn**	**18 40 09.4**	**+0.4**
PB07				IAML		18 40 10.7	
	comp=N,4μm,0.2s						
PB07	**IPOC Station P**	**1.19**	**244**		**Pn**	**18 39 50.9**	**+1.0**
PB07				Sn	**Sn**	**18 40 09.3**	**+0.4**
PB07	**IPOC Station P**	**1.19**	**244**	*e*P	**Pn**	**18 39 50.9**	**+1.0**
PB07				*e*S	**Sn**	**18 40 09.5**	**+0.6**
PB07				IAML		18 40 11.8	
	comp=Z,3μm,0.5s						
PB03	**IPOC Station P**	**1.26**	**229**	⇑*i*P	**Pn**	**18 39 51.6**	**+1.0**
PB03				*i*S	**Sn**	**18 40 10.6**	**+0.4**
PB03				IAML		18 40 11.6	
	comp=E,2μm,0.2s						
PB03	**IPOC Station P**	**1.26**	**229**	*e*P	**Pn**	**18 39 51.6**	**+1.0**
PB03				*e*S	**Sn**	**18 40 10.9**	**+0.7**
PB03				IAML		18 40 12.6	
	comp=Z,1μm,0.3s						
PATCX	**Punta Patache**	**1.38**	**286**	⇓*i*P	**Pn**	**18 39 53.0**	**+1.2**
PATCX				*i*S	**Sn**	**18 40 13.4**	**+1.0**
PATCX				IAML		18 40 14.8	
	comp=E,4μm,0.2s						
PATCX	**Punta Patache**	**1.38**	**286**		**Pn**	**18 39 53.0**	**+1.2**
PATCX				Sn	**Sn**	**18 40 13.2**	**+0.9**
LVC	**Limon Verde**	**1.40**	**187**	P	**Pn**	**18 39 52.9**	**+0.6**
	comp=E,130nm,0.3s,baz=32,slow=9.3,SNR=562						
LVC				S	**Sn**	**18 40 13.5**	**+0.3**
	comp=E,99nm,0.3s,baz=106,slow=20,SNR=64						
LVC	**Limon Verde**	**1.40**	**187**	⇓*i*P	**Pn**	**18 39 53.3**	**+1.0**
LVC				*i*S	**Sn**	**18 40 13.8**	**+0.6**
LVC	**Limon Verde**	**1.40**	**187**		**Pn**	**18 39 53.1**	**+0.8**
LVC				Sn	**Sn**	**18 40 13.7**	**+0.4**
LVC	**Limon Verde**	**1.40**	**187**	*e*P	**Pn**	**18 39 53.3**	**+1.0**
LVC				*e*S	**Sn**	**18 40 14.3**	**+1.1**
LVC	**Limon Verde**	**1.40**	**187**	*e*P	**Pn**	**18 39 53.3**	**+1.0**
TA01	**Diego Aracena**	**1.50**	**295**	⇓*i*P	**Pn**	**18 39 53.6**	**+0.6**
TA01				*i*S	**Sn**	**18 40 14.4**	**0.0**
TA01				IAML		18 40 17.0	
	comp=E,2μm,0.4s						
TA01	**Diego Aracena**	**1.50**	**295**		**Pn**	**18 39 53.7**	**+0.7**
TA01				Sn	**Sn**	**18 40 14.7**	**+0.3**
TA02	**Huaiquique**	**1.61**	**306**	*e*P	**Pn**	**18 39 55.0**	**+0.8**
TA02				*i*S	**Sn**	**18 40 17.2**	**+0.5**
TA02				IAML		18 40 18.9	
	comp=N,2μm,0.4s						
PB06	**IPOC Station P**	**1.67**	**207**	⇑*i*P	**Pn**	**18 39 56.3**	**+1.1**
PB06				*i*S	**Sn**	**18 40 19.1**	**+0.7**
PB06				IAML		18 40 20.7	
	comp=E,2μm,0.8s						
PB06	**IPOC Station P**	**1.67**	**207**		**Pn**	**18 39 56.1**	**+1.0**
PB06				Sn	**Sn**	**18 40 19.1**	**+0.7**
PB06	**IPOC Station P**	**1.67**	**207**	*e*P	**Pn**	**18 39 56.3**	**+1.1**
PB06				*e*S	**Sn**	**18 40 20.0**	**+1.6**
PB06				IAML		18 40 23.8	
	comp=Z,678nm,0.3s						
PB11	**IPOC Station P**	**1.68**	**329**	*i* P	**Pn**	**18 39 55.8**	**+0.5**
PB11				*i*S	**Sn**	**18 40 19.1**	**+0.5**
PB11				IAML		18 40 20.2	
	comp=E,2μm,0.3s						
PB11	**IPOC Station P**	**1.68**	**329**		**Pn**	**18 39 55.5**	**+0.2**
PB11				Sn	**Sn**	**18 40 19.0**	**+0.5**
PB11	**IPOC Station P**	**1.68**	**329**	*e*P	**Pn**	**18 39 55.8**	**+0.5**
PB11				*e*S	**Sn**	**18 40 19.2**	**+0.6**
PB11				IAML		18 40 21.9	
	comp=Z,991nm,0.4s						
PB04	**IPOC Station P**	**1.72**	**229**	⇑*i*P	**Pn**	**18 39 56.6**	**+0.9**
PB04				*i*S	**Sn**	**18 40 19.4**	**+0.1**
PB04				IAML		18 40 21.1	
	comp=E,819nm,0.5s						
PB04	**IPOC Station P**	**1.72**	**229**		**Pn**	**18 39 56.6**	**+0.9**
PB04	**IPOC Station P**	**1.72**	**229**	*e*P	**Pn**	**18 39 56.7**	**+0.9**
PB04				*e*S	**Sn**	**18 40 22.3**	**+3.0**
PB04				IAML		18 40 28.8	
	comp=Z,625nm,0.3s						
PSGC	**Pisagua**	**2.07**	**

SAML	**Samuel**	**13.32**	**25**	*eP*		**Pn**	**18 42 29.0**	**+0.2**
RFA	**San Rafael**	**13.51**	**179**	*eP*		**Pn**	**18 42 29.0**	**-2.2**
CLDB	**Colider**	**16.12**	**52**	*eP*		**Pn**	**18 43 03.6**	**-0.5**
CPSB	**Cacapava Do Su**	**16.52**	**127**	*eP*		**Pn**	**18 43 06.6**	**-2.3**
ARAG	**Araguaiana, MT**	**16.96**	**74**	*eP*		**P**	**18 43 12.9**	**-1.2**
SNDB	**Serra Nova Dou**	**19.06**	**64**	*eP*		**P**	**18 43 36.8**	**-0.3**
NPGB	**Novo Progresso**	**19.13**	**45**	*eP*		**P**	**18 43 36.3**	**-1.6**
PLCA	**Paso Flores**	**19.52**	**184**	P		**Pn**	**18 43 43.9**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=350,slow=14,SNR=5.2							
PLCA	**Paso Flores**	**19.52**	**184**	P		**Pn**	**18 43 43.8**	**-0.7**
PLCA	**Paso Flores**	**19.52**	**184**	*eP*		**Pn**	**18 43 44.3**	**-0.2**
MACA	**Manacapuru-AM**	**19.58**	**25**	*eP*		**Pn**	**18 43 45.1**	**-0.3**
IPMB	**Ipameri, GO**	**19.60**	**84**	*eP*		**P**	**18 43 42.1**	**-0.9**
BDFB	**Brasilia**	**20.42**	**78**	P		**P**	**18 43 48.6**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=168,slow=12,SNR=3.3							
BDFB	**Brasilia**	**20.42**	**78**	P		**P**	**18 43 52.2**	**+0.3**
BDFB				IAmb		IAmb	18 43 56.4	
	comp=Z,47nm,1.9s							
ITTB	**Itaituba**	**20.98**	**39**	*eP*		**P**	**18 43 56.9**	**-0.8**
PRPB	**Parauapebas**	**23.65**	**53**	*eP*		**P**	**18 44 24.1**	**-0.3**
SMTB	**Santa Maria do**	**23.79**	**62**	*eP*		**P**	**18 44 26.2**	**+0.5**
MALB	**Monte Alegre**	**23.86**	**38**	*eP*		**P**	**18 44 26.5**	**+0.3**
JANB	**Januaria**	**23.99**	**79**	*eP*		**P**	**18 44 27.4**	**-0.1**
SDBA	**SAO DESIDERIO**	**24.41**	**73**	*eP*		**P**	**18 44 31.4**	**+0.1**
MCPB	**Macapa, AP**	**26.36**	**40**	*eP*		**P**	**18 44 50.8**	**+2.0**
GDU01	**Guandu, BA**	**28.76**	**80**	*eP*		**P**	**18 45 10.4**	**+0.1**
MLPR	**Magueyes Islan**	**38.98**	**3**	P		**P**	**18 46 35.8**	**-2.6**
CRPR	**Cabo Rojo, PR**	**39.01**	**2**	P		**P**	**18 46 34.4**	**-4.2**
SNAA	**Sanae**	**62.49**	**161**	P		**P**	**18 49 36.3**	**+2.4**
	comp=Z,1.8nm,0.7s,baz=269,slow=5.3,SNR=6.4							
SNAA	**Sanae**	**62.49**	**161**	IAmb		IAmb	18 49 48.8	
	comp=Z,9.1nm,1.5s							
QSPA	**South Pole Qui**	**68.97**	**180**	P		**P**	**18 50 18.9**	**+3.2**
	comp=Z,1.0nm,0.5s,baz=83,slow=2.0,SNR=5.7							
QSPA	**South Pole Qui**	**68.97**	**180**	IAmb		IAmb	18 51 52.3	
	comp=Z,19nm,1.9s							
TOA0	**Torodi Ar. Sit**	**77.11**	**70**	P		**P**	**18 51 04.8**	**+0.6**
TOA0				IAmb		IAmb	18 53 37.5	
	comp=Z,14nm,1.8s							
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P		**P**	**18 51 05.2**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=261,slow=5.6,SNR=5.2							
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P		**P**	**18 51 05.1**	**+0.9**
MAW	**Mawson**	**84.56**	**163**	P		**P**	**18 51 45.7**	**+2.9**
	comp=Z,0.8nm,0.5s,baz=132,slow=7.8,SNR=2.6							
WRA	**Warramunga Arr**	**133.28**	**210**	PKP		**PKiKP**	**18 58 28.4**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=150,slow=1.8,SNR=5.2							
MKAR	**Makanchi Array**	**145.31**	**36**	PKPbc		**PKiKP**	**18 58 49.7**	**-1.3**
	comp=Z,0.7nm,0.9s,baz=325,slow=3.8,SNR=2.0							

ZUR 14 18:56:24.8, 46°53.N×9°.60E, h5km±2km, ML h0.6/6, 8C-2D, Error ellipse: s-maj=4.5km s-min=0.9km az=67.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VDL	**Val di Lei**	**0.11**	**247**	⇑P		Pg	18 56 27.5	+0.3
VDL				⇑P		Pg	18 56 27.5	+0.3
	0.1nm,SNR=24							
VDL				S		Sg	18 56 29.1	+0.2
SVAM	**Vaz, Muldain**	**0.17**	**344**	⇑P		Pg	18 56 28.5	+0.1
	0.1nm,SNR=13							
SVAM				⇑P		Pg	18 56 28.5	+0.1
SVAM				S		Sg	18 56 30.9	+0.2
SCEL	**Celerina**	**0.18**	**96**	S		Sg	18 56 31.1	+0.3
	0.1nm,SNR=7.2							
SCEL				S		Sg	18 56 31.1	+0.3
TUE	**Stuetta**	**0.18**	**253**	⇓P		Pg	18 56 28.8	+0.4
TUE				⇓P		Pg	18 56 28.8	+0.4
	SNR=21							
TUE				S		Sg	18 56 31.2	+0.4
BERNI	**Berninapass**	**0.32**	**111**	P		Pg	18 56 30.9	-0.1
BERNI				P		Pg	18 56 30.9	-0.1
	SNR=8.8							
DAVOX	**Davos/Dischmat**	**0.32**	**37**	⇑P		Pg	18 56 31.2	+0.1
DAVOX				⇑P		Pg	18 56 31.2	+0.1
	SNR=14							
FUORN	**Ofenpass-Fuorn**	**0.47**	**78**	P		Pg	18 56 34.0	+0.1
FUORN				P		Pg	18 56 34.0	+0.1
	SNR=10							
LLS	**Linth-Limmern**	**0.52**	**309**	⇑P		Pg	18 56 35.0	+0.3
LLS				⇑P		Pg	18 56 35.0	+0.3
	SNR=2.6							
PLONS	**Plons/SG**	**0.54**	**344**	S		Sg	18 56 42.8	+0.4
PLONS				S		Sg	18 56 42.8	+0.4
	SNR=8.2							

LJU 14 18:57:00.4, 46°32N×13°.65E, h9km, ML h0.3, 1C, Austria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CADS	**Cadrg**	**0.11**	**145**	*i* Pg		Pg	18 57 03.1	+0.1
CADS				*i* Sg		Sg	18 57 05.1	+0.2
	comp=Z,4.0nm,0.1s							
ROBS	**Robic**	**0.12**	**232**	*i* Pg		Pg	18 57 03.3	+0.2
ROBS				*i* Sg		Sg	18 57 05.4	+0.3
	comp=Z,4.0nm,0.1s							
GORS	**Gorjuse**	**0.24**	**90**	*i* Pg		Pg	18 57 05.4	+0.1
GORS				*i* Sg		Sg	18 57 09.4	+0.8
	comp=Z,1.0nm,0.1s							

*NEIC **14** 19:00:39.0±1.5, 18°.9N±0°.3×68°.74W±0°.09, h155km±20km, Md3.4/12(RSPR), Error ellipse: s-maj=49.1km s-min=6.9km az=192.0*
*RSPR **14** 19:00:39.0, 18°.90N×68°.55W, h181km±4km, MD3.4/5*
ISC 14 19:00:39.6±1.7, 19°.0N±0°.2×68°.70W±0°.07, h150km, n22, σ0s98/29, 4C-2D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DR12	**Loma Pena Alta**	**0.69**	**251**			**Pn**	**19 01 00.2**	**-1.9**
AGPR	**Aguadilla, PR**	**1.60**	**110**	Pn		**Pn**	**19 01 09.4**	**-0.8**
AGPR				Sn		**Sn**	**19 01 36.9**	**+3.3**
CRPR	**Cabo Rojo, PR**	**1.81**	**123**	⇑*e*P		**Pn**	**19 01 11.9**	**-0.5**
CRPR	**Cabo Rojo, PR**	**1.81**	**123**	*e*S		**Sn**	**19 01 38.4**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.81**	**123**			**Pn**	**19 01 11.9**	**-0.5**
CRPR						**Sn**	**19 01 38.4**	**+0.7**
MLPR	**Magueyes Islan**	**1.88**	**123**	Pn		**Pn**	**19 01 12.5**	**-0.8**
AOPR	**Arecibo Observ**	**1.96**	**109**	⇑*e*P		**Pn**	**19 01 14.3**	**+0.1**
AOPR	**Arecibo Observ**	**1.96**	**109**	*e*S		**Sn**	**19 01 41.9**	**+1.1**
AOPR	**Arecibo Observ**	**1.96**	**109**			**Pn**	**19 01 14.3**	**+0.1**
AOPR						**Sn**	**19 01 41.9**	**+1.1**
EMPR	**Esperanza - Ma**	**2.12**	**104**	⇑*e*P		**Pn**	**19 01 16.2**	**+0.1**
EMPR	**Esperanza - Ma**	**2.12**	**104**	*e*S		**Sn**	**19 01 44.6**	**+0.4**
EMPR	**Esperanza - Ma**	**2.12**	**104**			**Pn**	**19 01 16.2**	**+0.1**
EMPR						**Sn**	**19 01 44.6**	**+0.4**
CELP	**Cerrillos**	**2.21**	**115**	⇑*e*P		**Pn**	**19 01 17.1**	**-0.2**
CELP	**Cerrillos**	**2.21**	**115**	*e*S		**Sn**	**19 01 46.7**	**+0.5**
CELP	**Cerrillos**	**2.21**	**115**			**Pn**	**19 01 17.1**	**-0.2**
CELP						**Sn**	**19 01 46.7**	**+0.5**
SDDR	**Presa de Saban**	**2.45**	**270**	Pn		**Pn**	**19 01 20.9**	**+0.7**
CBYP	**Canovanas**	**2.79**	**105**	⇓*e*P		**Pn**	**19 01 23.3**	**-1.1**
CBYP	**Canovanas**	**2.79**	**105**	*e*S		**Sn**	**19 01 58.1**	**-0.8**
CBYP	**Canovanas**	**2.79**	**105**			**Pn**	**19 01 23.3**	**-1.1**
CBYP						**Sn**	**19 01 58.1**	**-0.8**
MTP	**Monte Pirata**	**3.12**	**106**	⇓*e*P		**Pn**	**19 01 28.1**	**-0.3**
MTP	**Monte Pirata**	**3.12**	**106**	*e*S		**Sn**	**19 02 05.9**	**-0.3**
MTP	**Monte Pirata**	**3.12**	**106**			**Pn**	**19 01 28.1**	**-0.3**
MTP						**Sn**	**19 02 05.9**	**-0.3**

*IDC **14** 19:25:52.6±0.4, 13°.65N×144°.72E, h137km±4km, mb3.4/12, mb1 3.6/12, mb1mx3.5/37, mbtmp3.8/12, Error ellipse: s-maj=22.0km s-min=14.0km az=90.0*
*NEIC **14** 19:25:52.9±1.2, 13°.6N±0°.1×144°.6E±0°.2, h140km±4km, ML3.8/4, Error ellipse: s-maj=29.0km s-min=16.5km az=123.0*
ISC 14 19:25:52.5±0.6, 13°.7N±0°.1×144°.5E±0°.1, h129km, n19, σ1s33/19, mb3.6/12, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.38**	**106**	P		**Pn**	**19 26 12.1**	**+1.4**
	630nm,0.3s,baz=314,slow=4.2,SNR=959							
GUMO				S		**Sn**	**19 26 26.3**	**+1.7**
	678nm,0.3s,baz=0.0,slow=20,SNR=24							
GUMO	**Guam**	**0.38**	**106**			**Pn**	**19 26 12.3**	**+1.5**
GUMO				Sn		**Sn**	**19 26 26.3**	**+1.7**
GUMO				IAML			19 26 26.5	
	3µm,0.2s							
H11N1	**WAKE ISLAND Hy**	**22.26**	**71**	T		T	19 53 52.3	
	baz=256,slow=75,SNR=7.2							
H11N2	**WAKE ISLAND Hy**	**22.27**	**71**	T		T	19 53 50.0	
	baz=256,slow=75,SNR=3.4							
H11N3	**WAKE ISLAND Hy**	**22.28**	**71**	T		T	19 53 51.7	
	baz=256,slow=75,SNR=7.9							
MJAR	**Matsushiro Arr**	**23.44**	**347**	P		**P**	**19 30 50.6**	**+0.4**
	1.0nm,0.5s,baz=60,slow=12,SNR=2.4							
KSRS	**Korea Array**	**27.90**	**331**	P		**P**	**19 31 30.9**	**+0.7**
	0.5nm,0.5s,baz=97,slow=8.5,SNR=1.8							
WRA	**Warramunga Arr**	**34.89**	**197**	P		**P**	**19 32 30.3**	**-1.4**
	0.8nm,0.7s,baz=10,slow=8.7,SNR=15							
WRA				PcP		**PcP**	**19 35 01.8**	**-0.1**
	0.2nm,0.5s,baz=6.4,slow=2.8,SNR=4.6							
ASAR	**Alice Springs**	**38.55**	**196**	P		**P**	**19 33 02.1**	**-0.6**
	0.6nm,0.5s,baz=18,slow=13,SNR=18							
CMAR	**Chiang Mai Arr**	**43.94**	**282**	P		**P**	**19 33 47.9**	**+0.9**
	0.6nm,0.5s,baz=82,slow=6.3,SNR=9.2							
SONM	**Songino Array**	**46.44**	**325**	P		**P**	**19 34 07.2**	**+0.8**
	0.3nm,0.4s,baz=124,slow=7.2,SNR=1.6							
MKAR	**Makanchi Array**	**61.16**	**316**	P		**P**	**19 35 53.7**	**+0.3**
	0.5nm,0.3s,baz=94,slow=8.6,SNR=13							
ILAR	**Eielson Array**	**68.63**	**25**	P		**P**	**19 36 39.4**	**-2.0**
	0.4nm,0.4s,baz=248,slow=5.7,SNR=10							
YKA	**Yellowknife Ar**	**82.93**	**27**	P		**P**	**19 38 01.8**	**-0.9**
	0.4nm,0.8s,baz=282,slow=5.9,SNR=2.2							
ARCES	**ARCESS Array B**	**86.87**	**342**	P		**P**	**19 38 22.5**	**+0.1**
	2.2nm,0.8s,baz=61,slow=9.4,SNR=1.8							
NVAR	**Mina Array Bea**	**87.14**	**51**	P		**P**	**19 38 24.1**	**-0.4**
	0.1nm,0.3s,baz=260,slow=5.4,SNR=4.6							
VNDA	**Vanda**	**91.59**	**176**	P		**P**	**19 38 44.5**	**+0.4**
	0.4nm,0.5s,baz=300,slow=3.1,SNR=7.2							
TORD	**Torodi Ar. Bea**	**134.51**	**304**	PKP		**PKPdf**	**19 44 53.6**	**-2.8**
	0.3nm,0.7s,baz=59,slow=1.1,SNR=1.8							
LPAZ	**La Paz**	**148.40**	**99**	PKPbc		**PKPdf**	**19 45 22.5**	**+0.6**
	1.8nm,0.7s,baz=261,slow=3.6,SNR=6.4							

*JMA **14** 19:46:02.6±0.4, 21°.92N×121°.82E, h8km, M3.6*
*TAP **14** 19:46:04.2, 21°.79N×121°.63E, h12km, ML3.5, C*
ISC 14 19:46:03.0±1.5, 21°.85N±0°.05×121°.77E±0°.04, h17km±8km, n81, σ1s07/107, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LAY	**Lan-yu**	**0.28**	**313**	⇓*i*P		**Pg**	**19 46 10.2**	**+0.9**
	baz=345							
LAY				*i* S		**Sg**	**19 46 14.2**	**+0.8**
	baz=345							
TSEB	**Hengchuen, Pin**	**0.81**	**274**	*e*P		**Pb**	**19 46 19.1**	**+0.4**
	baz=278							
TSEB				S		**Sn**	**19 46 30.8**	**-0.6**
	baz=278							
LDUT	**Ludao**	**0.87**	**341**	*e*P		**Pb**	**19 46 20.7**	**+1.0**
	baz=351							
TWKBT	**Hengchun**	**0.90**	**276**	⇓P		**Pg**	**19 46 19.8**	**-0.7**
	baz=281							
TWKBT				S		**Sg**	**19 46 31.3**	**-1.1**
	baz=281							
TWK1	**Hengchun**	**0.91**	**276**	P		**Pg**	**19 46 19.7**	**-1.0**
	baz=281							
TWK1				S		**Sg**	**19 46 31.4**	**-1.1**
	baz=281							
HEN	**Hengchun**	**0.97**	**280**	P		**Pg**	**19 46 21.0**	**-1.0**
	baz=284							
HEN				*e*S		**Sg**	**19 46 33.4**	**-1.4**
	baz=284							
SLIU	**Shizi**	**0.98**	**292**	*e*P		**Pg**	**19 46 21.0**	**-1.0**
	baz=299							
EAST	**Anshuo**	**1.01**	**302**	P		**Pg**	**19 46 21.8**	**-0.9**
	baz=310							
ECL	**Taimali**	**1.07**	**315**	*e*P		**Pg**	**19 46 22.8**	**-0.9**
	baz=323							
TWG	**Pinlang**	**1.17**	**326**	*e*P		**Pb**	**19 46 24.5**	**-0.3**
	baz=318							
SCZT	**Fangliau**	**1.19**	**296**	*e*P		**Pb**	**19 46 25.2**	**0.0**
	baz=313							
EDH	**Donghe**	**1.20**	**339**	*e*P		**Pb**	**19 46 24.7**	**-0.7**
	baz=346							
LONT	**Longtian**	**1.21**	**331**	*e*P		**Pb**	**19 46 25.7**	**+0.2**
	baz=348							
SSPT	**Xinbi**	**1.29**	**300**	*e*P		**Pg**	**19 46 27.9**	**0.0**
	baz=316							
CHKT	**Chengkung**	**1.30**	**343**	*e*P		**Pn**	**19 46 25.9**	**-0.6**
	baz=350							
MASBT	**Mashibuluo**	**1.30**	**306**	*e*P		**Pn**	**19 46 26.9**	**+0.4**
	baz=324							
TSMG	**Majia**	**1.35**	**309**	*e*P		**Pg**	**19 46 28.6**	**-0.5**
	baz=326							
SSD	**Sandimen**	**1.39**	**310**	*e*P		**Pb**	**19 46 28.6**	**+0.1**
	baz=326							
FULB	**Fuli**	**1.42**	**342**	*e*P		**Pn**	**19 46 28.0**	**-0.1**
	baz=1.0							
ELDTW	**Lidau**	**1.51**	**332**	*e*P		**Pn**	**19 46 29.4**	**-0.1**
	baz=338							
SLGT	**Liugui**	**1.55**	**318**	*e*P		**Pg**	**19 46 32.6**	**-0.2**
	baz=332							
EYUL	**Yuli**	**1.55**	**344**	*e*P		**Pn**	**19 46 30.6**	**+0.6**
	baz=360							
EYUL				*e*S		**Sn**	**19 46 50.8**	**+1.1**
	baz=360							
TWF1	**Yuli**	**1.56**	**344**	*e*P		**Pn**	**19 46 30.3**	**+0.2**
	baz=359							
TWF1				*e*S		**Sn**	**19 46 48.6**	**-1.4**
	baz=359							
SCST	**Cishan**	**1.57**	**311**	*e*P		**Pb**	**19 46 31.9**	**+0.2**
	baz=327							
TWM1	**Shoushan**	**1.58**	**308**	*e*P		**Pg**	**19 46 34.2**	**+0.7**
	baz=324							
YULB	**Yu-li**	**1.60**	**344**	*e*P		**Pn**	**19 46 30.7**	**+0.1**
	baz=359							
YULB				*e*S		**Sn**	**19 46 50.9**	**0.0**
	baz=359							
STYT	**Tauyuan**	**1.61**	**325**	*e*P		**Pb**	**19 46 32.5**	**0.0**
	baz=330							
STYT				*e*S		**Sg**	**19 46 54.6**	**-0.6**
	baz=330							
SGST	**Jiashian**	**1.65**	**318**	P		**Pb**	**19 46 33.8**	**+0.7**
	baz=323							
SGST				*e*S		**Sg**	**19 46 55.4**	**-0.9**
	baz=323							
HGSD	**Ruisui**	**1.67**	**349**	*e*P		**Pn**	**19 46 31.4**	**-0.1**
	baz=3.0							
EHY	**Hungye**	**1.70**	**346**	*e*P		**Pn**	**19 46 32.4**	**+0.4**
	baz=360							
WTP	**Ta-pu**	**1.76**	**323**	*e*P		**Pg**	**19 46 36.0**	**-0.9**
	baz=327							
WTP				*e*S		**Sg**	**19 46 59.5**	**-0.3**
	baz=327							
CHN1	**Nanshi**	**1.76**	**319**	*e*P		**Pg**	**19 46 36.1**	**-0.8**
	baz=324							
CHN1				*e*S		**Sg**	**19 46 59.9**	**+0.1**
	baz=324							
TPUB	**Ta-pu**	**1.79**	**324**	*e*P		**Pb**	**19 46 35.8**	**+0.3**
	baz=329							
TPUB				*e*S		**Sg**	**19 46 59.7**	**-1.1**
	baz=329							
SNST	**Tainan City**	**1.81**	**319**	*e*P		**Pb**	**19 46 36.1**	**+0.4**
	baz=324							
EGFH	**Guangfu**	**1.84**	**350**	*e*P		**Pn**	**19 46 34.3**	**+0.4**
	baz=3.0							
TWK	**Hsinying**	**1.85**	**320**	*e*P		**Pb**	**19 46 37.2**	**+0.8**
	baz=325							
CHN4	**Tsaushan**	**1.85**	**324**	*e*P		**Pb**	**19 46 36.9**	**+0.4**
	baz=329							
CHN4				*e*S		**Sg**	**19 47 02.4**	**-0.4**
	baz=329							
ALS	**Alishan**	**1.88**	**332**	*e*P		**Pb**	**19 46 37.0**	**-0.2**
	baz=337							
ESL	**Shilin**	**1.98**	**351**	*e*P		**Pb**	**19 46 36.2**	**+0.3**
	baz=3.0							
CHN5	**Tsauling**	**2.02**	**330**	*e*P		**Pb**	**19 46 39.4**	**+0.1**
	baz=334							
WHYT	**Xinyi Township**	**2.03**	**335**	*e*P		**Pb**	**19 46 39.1**	**-0.4**
	baz=340							
WHYT				*e*S		**Sb**	**19 47 04.6**	**+0.2**
	baz=340							
CHY	**Chiayi**	**2.06**	**323**	*e*P		**Pg**	**19 46 41.4**	**-1.2**
	baz=327							
SSLB	**Suanglung**	**2.08**	**339**	*e*P		**Pn**	**19 46 39.3**	**+2.2**
	baz=354							
SSLB				*e*S		**Sb**	**19 47 05.7**	**-0.1**
	baz=354							
WLGB	**Puzi**	**2.12**	**320**	*e*P		**Pb**	**19 46 40.7**	**-0.3**
	baz=324							
WGK	**Gukeng**	**2.15**	**329**	*e*P		**Pb**	**19 46 42.2**	**+0.8**
	baz=333							
WDLH	**Douliu**	**2.16**	**328**	*e*P		**Pb**	**19 46 42.8**	**+1.0**
	baz=332							
SMLT	**Sun Moon Lake**	**2.18**	**338**	*e*P		**Pb**	**19 46 41.3**	**-0.9**
	baz=354							
WJS	**Zhushan**	**2.19**	**334**	*e*P		**Pb**	**19 46 42.5**	**+0.2**
	baz=321							
TYC	**Yuchr**	**2.22**	**338**	*e*P		**Pb**	**19 46 41.8**	**-0.8**
	baz=325							
TYC				*e*S		**Sb**	**19 47 11.0**	**+1.2**
	baz=325							
TWD	**Chiawan**	**2.23**	**356**	*e*P		**Pn**	**19 46 40.5**	**+1.2**
	baz=10.0							
WTK	**Tuku**	**2.23**	**325**	*e*P		**Pb**	**19 46 42.4**	**-0.6**
	baz=329							
WNT	**Mingjian**	**2.26**	**334**	*e*P		**Pb**	**19 46 43.4**	**0.0**
	baz=320							
WNT				*e*S		**Sb**	**19 47 11.7**	**+0.6**
	baz=320							
CHGB	**Renai**	**2.27**	**346**	*e*P		**Pn**	**19 46 41.7**	**+1.7**
	baz=1.0							
DPDB	**Guoxing**	**2.31**	**340**	*e*P		**Pb**	**19 46 43.1**	**-1.2**
	baz=356							
DPDB				*e*S		**Sb**	**19 47 12.6**	**-0.1**
	baz=356							
NACB	**Ninganchiao**	**2.32**	**356**	*e*P		**Pn**	**19 46 40.6**	**0.0**
	baz=10.0							
WHF	**Hehuan Shan**	**2.34**	**349**	*e*P		**Pn**	**19 46 42.1**	**+1.0**
	baz=352							
ETLH	**Xiulin Townshi**	**2.37**	**354**	*e*P		**Pn**	**19 46 42.3**	**+1.1**
	baz=8.0							
FUSS	**Fushou**	**2.44**	**349**	*e*P		**Pn**	**19 46 43.6**	**+1.3**
	baz=2.0							
TWT	**Tachien**	**2.46**	**347**	*e*P		**Pn**	**19 46 44.4**	**+1.8**
TDCB	**Techi**	**2.46**	**347**	*e*P		**Pn**	**19 46 44.2**	**+1.6**
WHP	**Taichung City**	**2.54**	**343**	*e*P		**Pb**	**19 46 47.4**	**-0.8**
	baz=358							
WHP				*e*S		**Sb**	**19 47 19.4**	**+0.2**
	baz=358							
NNSB	**Datong**	**2.60**	**352**	*e*P		**Pn**	**19 46 45.4**	**+1.0**
	baz=5.0							
NNS	**Nan Shan**	**2.61**	**352**	*e*P		**Pb**	**19 46 48.2**	**-1.3**
	baz=6.0							
PHUB	**P'eng-hu**	**2.62**	**310**	*e*P		**Pn**	**19 46 46.4**	**+1.7**
	baz=312							
TWQ1	**Liyutan**	**2.66**	**340**	*e*P		**Pb**	**19 46 48.9**	**-1.3**
	baz=326							
TWQ1				*e*S		**Sb**	**19 47 22.8**	**+0.3**
	baz=326							
PNG	**Penghu**	**2.67**	**310**	*e*P		**Pn**	**19 46 47.0**	**+1.7**
	baz=313							
NDT	**Datong Townshi**	**2.75**	**355**	*e*P		**Pn**	**19 46 49.9**	**+3.4**
	baz=358							
YHNB	**Yeheng**	**2.83**	**353**	*e*P		**Pn**	**19 46 49.6**	**+1.9**
	baz=5.0							
NSK	**Sanguang**	**2.84**	**352**	*e*P		**Pn**	**19 46 49.7**	**+2.0**
	baz=5.0							
NSTT	**Nanjuang**	**2.86**	**346**	*e*P		**Pb**	**19 46 51.8**	**-1.9**
	baz=358							
TWE	**Neicheng**	**2.86**	**358**	*e*P		**Pb**	**19 46 52.8**	**-0.9**
	baz=11							
LIOB	**Emei**	**2.87**	**346**	*e*P		**Pb**	**19 46 51.8**	**-2.1**
	baz=358							
NWLT	**Wulai**	**2.93**	**355**	*e*P		**Pn**	**19 46 51.6**	**+2.7**
	baz=358							
IRIF	**Iriomote-Funau**	**3.06**	**36**	P		**Pn**	**19 46 51.8**	**+1.1**
IRIF				*e*S		**Sn**	**19 47 28.1**	**+1.2**
TIPB	**Shuangxi**	**3.11**	**1**	*e*P		**Pn**	**19 46 54.6**	**+3.2**
	baz=13							
JKRS	**Kuro-shima**	**3.15**	**40**	P		**Pn**	**19 46 53.2**	**+1.4**
JKRS				*e*S		**Sn**	**19 47 29.8**	**+0.8**
JIJ	**Ishigaki jima**	**3.32**	**41**	P		**Pn**	**19 46 55.1**	**+0.8**
JIJ				*e*S		**Sn**	**19 47 32.7**	**-0.7**
JISG	**Ishigakijimahi**	**3.59**	**40**	P		**Pn**	**19 46 58.7**	**+0.8**
JISG				*e*S		**Sn**	**19 47 39.1**	**-0.9**
JTJ	**Tarama**	**3.87**	**44**	P		**Pn**	**19 47 03.0**	**+1.2**
JTJ				S		**Sn**	**19 47 47.0**	**+0.1**
JIRB	**Irabujima**	**4.31**	**46**	S		**Sn**	**19 47 56.8**	**-0.9**
JMJ2	**Miyako jima3**	**4.36**	**48**	*e*S		**Sn**	**19 47 58.4**	**-0.5**

*DRS **14** 19:47:28.6±0.0, 41°.34N×46°.25E, h10km*
*MOS **14** 19:47:34.9±0.0, 41°.57N×46°.51E, h8km, MPVA3.5*
*NORS **14** 19:47:35.4±0.0, 41°.46N×46°.81E, h21km, MPVA3.4*
*TIF **14** 19:47:35.7, 41°.55N×46°.53E, h7km±1km*
ISC 14 19:47:36.6±1.6, 41°.56N±0°.06×46°.50E±0°.04, h15km±10km, n21, σ1s03/41, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LGD	**Lagodekhi**	**0.33**	**324**	P		**Pb**	**19 47 43.5**	**-0.9**
LGD				S		**Sb**	**19 47 49.7**	**+0.1**
**LG

0.4nm,0.5s,baz=122,slow=7.0,SNR=2.2
KURBB Kurchatov Arra 73.27 329 P P 20 19 47.5 -1.1
0.6nm,0.5s,baz=135,slow=5.0,SNR=7.5

BJI ***14*** *20:09:43.0±0.0, 18°.93S×169°.82E, h261km, mB5.1/15, mb4.6/21*
IDC ***14*** *20:09:46.4±1.0, 19°.03S×169°.48E, h265km±8km, mb4.2/28, mb1 4.3/30, mb1mx4.2/43, mbtmp4.8/30, Error ellipse: s-maj=11.1km s-min=7.9km az=154.0*
NEIC ***14*** *20:09:46.4±1.4, 18°.98S±0°.07×169°.45E±0°.08, h264km±5km, mb4.9/127, Error ellipse: s-maj=11.6km s-min=9.4km az=96.0*

ISC 14 20:09:44.5±0.3, 18°.98S±0°.05×169°.49E±0°.05, h246km, n298, σ0.96/275, mb4.8/83, 11C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase Op	ID	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.14**	**328**		**Pn**	**20 10 51.6**	**+1.8**
DZM	**Mont Dzumac**	**4.20**	**222**	P	**Pn**	**20 10 53.4**	**+2.8**
	15nm,0.3s,baz=57,slow=17,SNR=109						
DZM				S	**S**	**20 11 43.4**	**+0.5**
	8.9nm,0.3s,baz=345,slow=21,SNR=1.2						
DZM	**Mont Dzumac**	**4.20**	**222**		**Pn**	**20 10 52.9**	**+2.4**
MSVF	**Nonsavu**	**8.22**	**83**		**Pn**	**20 11 43.6**	**+2.9**
HNR	**Honiara**	**13.25**	**314**	P	**P**	**20 12 45.7**	**+0.4**
	23nm,0.3s,baz=176,slow=13,SNR=32						
HNR	**Honiara**	**13.25**	**314**	P	**P**	**20 12 45.5**	**+0.2**
FUNA	**Funafuti**	**14.02**	**43**		**P**	**20 12 54.1**	**+0.2**
RAO	**Raoul Island**	**15.37**	**134**	S	**S**	**20 15 57.3**	**-1.0**
	90nm,0.3s,baz=336,slow=20,SNR=2.4						
OUZ	**Omahuta**	**16.58**	**168**	Pn	**Pn**	**20 13 24.9**	**+1.3**
EIDS	**Eidsvold**	**18.19**	**246**		**Pn**	**20 13 41.6**	**-0.9**
EIDS				IAmb	IAmb	20 13 45.2	
	comp=Z,30nm,0.6s						
ARMA	**Armidale**	**19.80**	**231**	P	**P**	**20 13 58.8**	**+2.1**
ARMA				IAmb	IAmb	20 13 60.0	
	comp=Z,36nm,0.8s						
URZ	**Urewera**	**20.32**	**163**	P	**P**	**20 14 03.3**	**+1.2**
	comp=Z,3.7nm,0.5s,baz=276,slow=10,SNR=1.6						
URZ	**Urewera**	**20.32**	**163**	P	Pn	20 14 06.6	-0.9
URZ				IAmb	IAmb	20 14 11.6	
	comp=Z,40nm,1.5s						
CTA	**Charters Tower**	**21.93**	**263**	P	**P**	**20 14 18.9**	**+0.6**
	comp=Z,24nm,0.6s,baz=91,slow=11,SNR=58						
CTA				S	**S**	**20 18 03.9**	**+1.2**
	comp=Z,4.4nm,1.0s,baz=228,slow=16,SNR=2.3						
CTAO	**Charters Tower**	**21.93**	**263**	P	**P**	**20 14 19.1**	**+0.8**
CTAO				IAmb	IAmb	20 14 20.7	
	comp=Z,47nm,1.0s						
KRVT	**Keravat (AS076**	**22.44**	**308**	P	**P**	**20 14 24.3**	**+1.3**
	comp=Z,19nm,0.4s,baz=196,slow=5.7,SNR=3.9						
MSWZ	**Moikau Station**	**22.90**	**169**	P	**P**	**20 14 27.1**	**+0.2**
PMG	**Port Moresby**	**23.62**	**291**	P	**P**	**20 14 34.7**	**+1.0**
	comp=Z,56nm,0.7s,baz=103,slow=6.8,SNR=16						
PMG	**Port Moresby**	**23.62**	**291**	P	**P**	**20 14 34.6**	**+0.8**
KNTN	**Kanton**	**24.44**	**51**	P	**P**	**20 14 40.3**	**-0.9**
MQZ	**McQueen's Vall**	**24.80**	**175**	P	**P**	**20 14 45.4**	**+1.3**
LBZ	**Lake Benmore**	**25.34**	**179**	P	**P**	**20 14 49.6**	**+0.6**
COEN	**Coen**	**25.71**	**277**	P	**P**	**20 14 53.1**	**+0.5**
TOO	**Toolangi**	**27.97**	**224**	P	**P**	**20 15 13.7**	**+1.1**
TOO				IAmb	IAmb	20 15 30.3	
	comp=Z,49nm,1.8s						
STKA	**Stephens Creek**	**28.18**	**237**	P	**P**	**20 15 15.2**	**+0.7**
	comp=Z,27nm,0.6s,baz=64,slow=8.9,SNR=50						
STKA	**Stephens Creek**	**28.18**	**237**	P	**P**	**20 15 15.3**	**+0.8**
BBOO	**Buckleboo**	**32.92**	**239**	P	**P**	**20 15 56.5**	**+0.5**
BBOO				IAmb	IAmb	20 16 18.1	
	comp=Z,58nm,1.6s						
WR0	**Warramunga Arr**	**32.93**	**262**	P	**P**	**20 15 55.6**	**-0.6**
WR0				IAmb	IAmb	20 15 56.4	
	comp=Z,29nm,1.0s						
WB0	**Warramunga Arr**	**33.09**	**263**	P	**P**	**20 15 56.8**	**-0.8**
WB0				IAmb	IAmb	20 15 57.8	
	comp=Z,32nm,0.6s						
WC3	**Warramunga Arr**	**33.09**	**262**	P	**P**	**20 15 57.2**	**-0.4**
WC3				IAmb	IAmb	20 15 57.9	
	comp=Z,52nm,1.3s						
WB2	**Warramunga Arr**	**33.11**	**262**	P	**P**	**20 15 57.2**	**-0.7**
WB2				IAmb	IAmb	20 15 58.1	
	comp=Z,47nm,1.3s						
WRAB	**Tennant Creek**	**33.11**	**262**	P	**P**	**20 15 57.0**	**-0.9**
WRAB				IAmb	IAmb	20 15 58.0	
	comp=Z,48nm,1.4s						
WRA	**Warramunga Arr**	**33.12**	**262**	P	**P**	**20 15 57.1**	**-0.8**
	comp=Z,7.7nm,0.3s,baz=81,slow=6.0,SNR=46						
WRA				S	**S**	**20 20 55.6**	**-3.3**
	comp=Z,3.3nm,1.1s,baz=90,slow=15,SNR=8.7						
WRA				ScP	**ScP**	**20 21 55.5**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=99,slow=3.3,SNR=4.6						
WRA				PKiKP	**PKiKP**	**20 25 58.5**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=16,slow=0.3,SNR=8.3						
WRA	**Warramunga Arr**	**33.12**	**262**	P	**P**	**20 15 56.9**	**-1.0**
AS31	**Alice Springs**	**33.42**	**256**	P	**P**	**20 16 00.4**	**-0.1**
ASAR	**Alice Springs**	**33.42**	**256**	P	**P**	**20 16 00.5**	**0.0**
	comp=Z,127nm,0.5s,baz=82,slow=9.0,SNR=683						
ASAR				S	**S**	**20 21 00.7**	**-2.7**
	comp=Z,2.1nm,0.7s,baz=81,slow=17,SNR=8.2						
ASAR				ScP	**ScP**	**20 21 56.1**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=102,slow=3.8,SNR=9.1						
ASAR				PKiKP	**PKiKP**	**20 25 58.6**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=96,slow=1.5,SNR=4.5						
MTN	**Manton Dam**	**37.33**	**274**	P	**P**	**20 16 33.5**	**-0.2**
KNRA	**Kununurra**	**38.96**	**268**	P	**P**	**20 16 47.0**	**-0.3**
KNRA				IAmb	IAmb	20 16 47.8	
	comp=Z,76nm,1.2s						
FORT	**Forrest**	**39.17**	**244**	P	**P**	**20 16 49.0**	**+0.1**
FORT				IAmb	IAmb	20 16 52.7	
	comp=Z,63nm,1.4s						
FAKI	**Fak Fak**	**39.76**	**289**	P	**P**	**20 16 54.0**	**+0.1**
	comp=Z,24nm,0.8s						
FAKI	**Fak Fak**	**39.76**	**289**	P	**P**	**20 16 53.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**41.51**	**264**	P	**P**	**20 17 08.6**	**+0.5**
	comp=Z,32nm,0.6s,baz=107,slow=7.1,SNR=74						
FITZ	**Fitzroy Crossi**	**41.51**	**264**	P	**P**	**20 17 08.6**	**+0.5**
FITZ				IAmb	IAmb	20 17 09.6	
	comp=Z,34nm,0.6s						
SIJI	**Sorong**	**41.57**	**291**	P	**P**	**20 17 08.6**	**0.0**
	comp=Z,16nm,0.6s,baz=113,slow=6.4,SNR=18						
SOEI	**Soe**	**44.65**	**275**	P	**P**	**20 17 34.0**	**+0.6**
BATI	**Baumata**	**45.09**	**274**	P	**P**	**20 17 37.6**	**+0.8**
	comp=Z,29nm,0.6s,baz=170,slow=4.3,SNR=6.3						
PSAB2	**Pilbara Seismi**	**46.48**	**258**	P	**P**	**20 17 47.8**	**+0.3**
PSAB2				IAmb	IAmb	20 17 48.6	
	comp=Z,27nm,0.7s						
PSA00	**Pilbara Seismi**	**46.49**	**258**	P	**P**	**20 17 47.6**	**0.0**
PSA00				IAmb	IAmb	20 17 48.7	
	comp=Z,29nm,0.7s						
MMRI	**Maumere**	**46.89**	**276**	P	**P**	**20 17 50.3**	**-0.5**
NWAO	**Narrogin (SRO)**	**48.54**	**243**	P	**P**	**20 18 02.1**	**-1.0**
	comp=Z,14nm,0.7s,baz=101,slow=7.7,SNR=8.4						
NWAO	**Narrogin (SRO)**	**48.54**	**243**	P	**P**	**20 18 03.0**	**-0.2**
NWAO	**Narrogin (SRO)**	**48.54**	**243**	IAmb	IAmb	20 18 02.8	
	comp=Z,54nm,1.6s						
MORW	**Morawa**	**49.49**	**248**	P	**P**	**20 18 05.9**	**-4.5**
GTOI	**Gorontalo**	**49.61**	**288**	P	**P**	**20 18 13.0**	**+1.5**
BKSI	**Bulukumba**	**49.95**	**279**	P	**P**	**20 18 14.7**	**+0.6**
BNSI	**Bone**	**50.29**	**280**	P	**P**	**20 18 18.0**	**+1.4**
KAPI	**Kappang**	**50.41**	**279**	P	**P**	**20 18 18.1**	**+0.7**
	baz=110,slow=9.4						
AIN	**Ainahou**	**51.34**	**44**	P	**P**	**20 18 24.1**	**-0.3**
MLOA	**Mauna Loa Obse**	**51.38**	**44**	P	**P**	**20 18 25.0**	**0.0**
MLH	**Mauna Loa**	**51.47**	**44**	P	**P**	**20 18 25.3**	**-0.2**
HMH	**Humu'ula Sheep**	**51.48**	**44**	P	**P**	**20 18 25.9**	**+0.3**
HMH				IAmb	IAmb	20 18 27.1	
	comp=Z,72nm,0.9s						
MPSI	**Mapaga**	**52.30**	**286**	P	**P**	**20 18 31.5**	**0.0**
KKM	**Kota Kinabalu**	**58.07**	**290**	P	**P**	**20 19 13.1**	**+0.4**
KKM				IAmb	IAmb	20 19 21.5	
	comp=Z,34nm,1.5s						
UGM	**Wanagama**	**58.17**	**272**	P	**P**	**20 19 13.6**	**+0.3**
VNDA	**Vanda**	**58.70**	**182**	P	**P**	**20 19 16.1**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=356,slow=7.4,SNR=16						
VNDA	**Vanda**	**58.70**	**182**	P	**P**	**20 19 15.9**	**0.0**
LEM	**Lembang**	**61.24**	**273**	P	**P**	**20 19 34.7**	**+0.3**
	comp=Z,32nm,0.6s,baz=25,slow=5.4,SNR=12						
KSM	**Kuching**	**61.55**	**282**	P	**P**	**20 19 36.1**	**-0.2**
MJAR	**Matsushiro Arr**	**62.64**	**332**	P	**P**	**20 19 42.5**	**-0.4**
	comp=Z,6.4nm,0.8s,baz=160,slow=7.3,SNR=8.8						
MAJO	**Matsushiro**	**62.64**	**332**	P	**P**	**20 19 42.8**	**-0.2**
MAJO				IAmb	IAmb	20 19 43.2	
	comp=Z,48nm,1.6s						
MAT	**Matsushiro**	**62.64**	**332**	P	**P**	**20 19 42.6**	**-0.4**
JMM	**Marumori**	**62.66**	**335**	P	**P**	**20 19 43.9**	**+0.8**
JMM				IAmb	IAmb	20 19 55.0	
	comp=Z,85nm,1.7s						
JTM	**Tenmabayashi**	**65.07**	**337**	P	**P**	**20 19 58.9**	**+0.2**
MDSI	**Maura Dua**	**65.22**	**274**	P	**P**	**20 20 00.2**	**-0.1**
JKA	**Kamikawa-asahi**	**67.44**	**339**	P	**P**	**20 20 14.9**	**+1.2**
KSRS	**Korea Array**	**68.43**	**325**	P	**P**	**20 20 20.0**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=116,slow=12,SNR=4.3						
NJ2	**Nanjing**	**70.19**	**316**	*e*P	**P**	**20 20 32.8**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
AMKA	**Amchitka**	**70.58**	**7**	P	**P**	**20 20 32.6**	**-0.2**
QSPA	**South Pole Qui**	**71.07**	**180**	P	**P**	**20 20 35.5**	**-0.3**
SMY	**Shemya**	**71.52**	**3**	P	**P**	**20 20 38.3**	**0.0**
USA0B	**Ussuriysk Arra**	**71.62**	**333**	P	**P**	**20 20 38.6**	**-0.5**
USRK	**Ussuriysk Ar.**	**71.62**	**333**	P	**P**	**20 20 39.6**	**+0.5**
	comp=Z,3.9nm,0.9s,baz=135,slow=3.1,SNR=4.5						
ATKA	**Atka Island**	**72.29**	**10**	P	**P**	**20 20 42.0**	**-0.9**
PET	**Petropavlovsk**	**72.31**	**353**	P	**P**	**20 20 43.4**	**+0.4**
PEA0B	**Petropavlovsk-**	**72.51**	**353**	P	**P**	**20 20 45.0**	**+0.8**
PEA0B				IAmb	IAmb	20 20 45.9	
	comp=Z,17nm,0.9s						
PETK	**Petropavlovsk-**	**72.51**	**353**	P	**P**	**20 20 44.7**	**+0.5**
	comp=Z,17nm,0.7s,baz=130,slow=5.6,SNR=36						
NIKH	**Nikolski High**	**74.07**	**13**	P	**P**	**20 20 53.0**	**-0.3**
UNV	**Unalaska Valle**	**75.42**	**14**	P	**P**	**20 20 60.0**	**-1.0**
KLR	**Kul'dur**	**75.73**	**336**	P	**P**	**20 21 03.7**	**+0.8**
	comp=Z,4.6nm,0.7s,baz=125,slow=4.1,SNR=8.4						
AKUT	**Akutan**	**75.86**	**15**	P	**P**	**20 21 02.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**78.62**	**294**	P	**P**	**20 21 20.7**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=130,slow=4.5,SNR=8.8						
CMAR				pP	**pP**	**20 22 21.1**	**+3.5**
	comp=Z,1.2nm,0.9s,baz=131,slow=4.0,SNR=8.8						
MAW	**Mawson**	**78.76**	**202**	P	**P**	**20 21 19.9**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=146,slow=7.3,SNR=2.4						
MAW	**Mawson**	**78.76**	**202**	P	**P**	**20 21 19.4**	**-0.1**
HHC	**Hu-ho-hao-te**	**80.18**	**319**	*e*P	**P**	**20 21 28.9**	**+1.2**
HHC				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC				pmax	pmax		
	comp=Z,250nm,5.7s						
CD2	**Chengdu**	**80.27**	**307**	*e*P	**P**	**20 21 28.3**	**0.0**
CD2				LR	LR		
	comp=Z,330nm,11.1s						
CD2				LR	LR		
	comp=Z,320nm,11.9s						
CD2				LR	LR		
	comp=Z,390nm,12.9s						
OHAK	**Old Harbor**	**82.03**	**19**	P	**P**	**20 21 36.7**	**-0.2**
BELA	**Belgrano 2**	**82.33**	**175**	P	**P**	**20 21 36.9**	**-1.5**
KDAK	**Kodiak Island**	**82.71**	**19**	P	**P**	**20 21 40.8**	**+0.5**
LZH	**Lanzhou**	**82.73**	**312**	*e*P	**P**	**20 21 42.9**	**+1.7**
LZH				pP	pP	20 22 44.0	+4.4
LZH				sP	sP	20 23 08.8	+3.5
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,65nm,4.7s						
SVW2	**Sparrevohn**	**84.59**	**16**	P	**P**	**20 21 50.1**	**+0.3**
SVW2				IAmb	IAmb	20 22 02.4	
	comp=Z,48nm,1.7s						
BRLK	**Bradley Lake**	**84.83**	**19**	P	**P**	**20 21 50.2**	**-0.8**
RSO	**Redoubt South**	**84.84**	**18**	P	**P**	**20 21 51.2**	**-0.1**
SYO	**Syowa Base**	**85.25**	**196**	*e*P	**P**	**20 21 51.2**	**-1.9**
KCPM	**Cahto Peak**	**85.38**	**45**	P	**P**	**20 21 55.2**	**+0.8**
SAO	**San Andreas Ge**	**85.47**	**49**	P	**P**	**20 21 55.1**	**+0.4**
SAO				IAmb	IAmb	20 21 56.3	
	comp=Z,12nm,0.8s						
SCZ2	**Santa Cruz Isl**	**85.55**	**52**	P	**P**	**20 21 53.8**	**-1.4**
	baz=244						
KMRM	**Mail Ridge**	**85.56**	**45**	P	**P**	**20 21 56.0**	**+0.8**
PKM	**Mcpherson Peak**	**85.81**	**51**	P	**P**	**20 21 57.1**	**+0.4**
	baz=244						
KHMM	**Horse Mountain**	**85.86**	**44**	P	**P**	**20 21 57.5**	**+0.8**
KHMM				IAmb	IAmb	20 21 58.7	
	comp=Z,23nm,0.8s						
SMMC	**Simmler**	**85.86**	**51**	P	**P**	**20 21 57.5**	**+0.7**
	baz=243						
SCI2	**San Clemente I**	**85.92**	**53**	P	**P**	**20 21 56.9**	**-0.2**
	baz=244						
RC01	**Rabbit Creek A**	**86.23**	**19**	P	**P**	**20 21 59.0**	**+1.1**
	baz=218						
N02D	**Trinity Center**	**86.59**	**45**	P	**P**	**20 22 01.3**	**+1.1**
	baz=241						
ARVC	**Arvin**	**86.64**	**51**	P	**P**	**20 22 00.6**	**+0.1**
	baz=244						
M02C	**Callahan**	**86.69**	**44**	P	**P**	**20 22 01.7**	**+1.0**
	baz=241						
ORV	**Oroville**	**86.73**	**46**	P	**P**	**20 22 01.1**	**+0.3**
ORV				IAmb	IAmb	20 22 02.1	
	comp=Z,12nm,1.0s						
ULN	**Ulaanbaatar**	**86.80**	**323**	P	**P**	**20 22 01.2**	**0.0**
CMB	**Columbia Colle**	**86.81**	**48**	P	**P**	**20 22 01.4**	**+0.1**
CMB				IAmb	IAmb	20 22 02.5	
	comp=Z,14nm,0.9s						
MWC	**Mount Wilson**	**86.82**	**52**	P	**P**	**20 22 01.7**	**+0.1**
O03E	**Paynes Creek**	**86.87**	**46**	P	**P**	**20 22 01.7**	**+0.1**
	baz=242						
YBH	**Yreka Blue Hor**	**86.95**	**44**	P	**P**	**20 22 02.8**	**+0.8**
	comp=Z,11nm,0.8s,baz=225,slow=1.4,SNR=5.4						
YBH	**Yreka Blue Hor**	**86.95**	**44**	IAmb	IAmb	20 22 03.7	
	comp=Z,20nm,1.1s						
CBX	**Cerro Bola**	**87.08**	**55**	P	**P**	**20 22 02.9**	**0.0**
GTA	**Gaotai**	**87.12**	**313**	P	**P**	**20 22 03.6**	**+0.7**
GTA				pP	pP	20 23 04.1	+2.2
GTA				sP	sP	20 23 32.4	+4.9
BFSC	**Mount Baldy Ra**	**87.13**	**52**	P	**P**	**20 22 02.6**	**-0.5**
	baz=245,SNR=5.5						
ISA	**Isabella, Lake**	**87.13**	**51**	P	**P**	**20 22 03.1**	**+0.1**
	baz=244						
ISA	**Isabella, Lake**	**87.13**	**51**	P	**P**	**20 22 03.3**	**+0.3**
ISA				IAmb	IAmb	20 22 04.4	
	comp=Z,13nm,0.8s						
EDW2	**Edwards Air Fo**	**87.15**	**52**	P	**P**	**20 22 03.4**	**+0.4**
	baz=245,SNR=5.1						
SONM	**Songino Array**	**87.16**	**323**	P	**P**	**20 22 02.7**	**-0.1**
	comp=Z,4.5nm,0.8s,baz=145,slow=6.4,SNR=26						
SONM				pP	**pP**	**20 23 05.0**	**+3.1**
	comp=Z,0.6nm,0.7s,baz=138,slow=6.1,SNR=3.5						
SONM	**Songino Array**	**87.16**	**323**	P	**P**	**20 22 02.5**	**-0.3**
HUMO	**Hull Mountain**	**87.21**	**43**	IAmb	IAmb	20 22 04.5	
	comp=Z,16nm,0.9s						
MURC	**Murrieta**	**87.21**	**53**	P	**P**	**20 22 03.2**	**-0.2**
	baz=245						
L04D	**Klamath Falls**	**87.45**	**44**	P	**P**	**20 22 04.0**	**-0.3**
	baz=242						
I03D	**Drain, OR**	**87.49**	**42**	P	**P**	**20 22 04.7**	**+0.4**
	baz=241						
MONP2	**Monument Peak**	**87.50**	**54**	P	**P**	**20 22 05.0**	**0.0**
	baz=246,SNR=7.9						
M04C	**Macdoel**	**87.55**	**44**	P	**P**	**20 22 05.2**	**+0.3**
	baz=242						
OMMB	**Old Mammoth Mi**	**87.60**	**49**	P	**P**	**20 22 06.0**	**+0.5**
OMMB				IAmb	IAmb	20 22 07.0	
	comp=Z,23nm,1.6s						
LRMC	**Laurel Mtn Rad**	**87.64**	**51**	P	**P**	**20 22 05.8**	**+0.3**
	baz=245						
IKP	**In-Ko-Pah, Jac**	**87.64**	**54**	P	**P**	**20 22 06.0**	**+0.5**
	baz=246						
WAKR	**Walker**	**87.69**	**48**	IAmb	IAmb	20 22 07.4	
	comp=Z,15nm,1.2s						
CWC	**Cottonwood Cre**	**87.75**	**50**	P	**P**	**20 22 06.1**	**+0.1**
	baz=244						
PFO	**Pinyon Flats O**	**87.77**	**53**	P	**P**	**20 22 06.3**	**+0.2**
	comp=Z,6.1nm,0.8s,baz=212,slow=5.8,SNR=7.2						
PFO	**Pinyon Flats O**	**87.77**	**53**	P	**P**	**20 22 05.9**	**-0.2**
	baz=246						
PFO	**Pinyon Flats O**	**87.77**	**53**	P	**P**	**20 22 06.3**	**+0.2**
TPFO	**Pinon Flats**	**87.77**	**53**	P	**P**	**20 22 06.0**	**-0.1**
	baz=246						
TRF	**Thorofare Moun**	**87.94**	**17**	IAmb	IAmb	20 22 09.1	
	comp=Z,10nm,0.9s						
SWSC	**Sam W. Stewart**	**88.00**	**54**	P	**P**	**20 22 07.2**	**+0.2**
	baz=246,SNR=5.0						
MPMC	**Manual Prospec**	**88.02**	**51**	P	**P**	**20 22 07.4**	**+0.1**
	baz=245,SNR=10						
I04A	**Tendick Farm,**	**88.13**	**42**	P	**P**	**20 22 07.5**	**+0.1**
	baz=241						
GSC	**Goldstone, Bar**	**88.21**	**52**	P	**P**	**20 22 08.1**	**0.0**
	baz=245						
LHV	**Little Huntoon**	**88.23**	**49**	IAmb	IAmb	20 22 10.7	
	comp=Z,31nm,1.4s						
N25K	**Chitina, Valde**	**88.24**	**20**	P	**P**	**20 22 08.2**	**+0.7**
	baz=223						
H04D	**Lebanon**	**88.27**	**41**	P	**P**	**20 22 08.4**	**+0.4**
	baz=241						
G03D	**McMinnville, O**	**88.28**	**41**	P	**P**	**20 22 08.3**	**+0.3**
	baz=241						
BELC	**Belle Mtn. Jos**	**88.28**	**53**	P	**P**	**20 22 08.8**	**+0.3**
	baz=246,SNR=12						
HEC	**Hector,Ludlow**	**88.37**	**52**	P	**P**	**20 22 08.6**	**-0.2**
	baz=246						
NVAR	**Mina Array Bea**	**88.45**	**48**	P	**P**	**20 22 09.6**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=226,slow=8.5,SNR=25						
NVAR	**Mina Array Bea**	**88.45**	**48**	P	**P**	**20 22 09.3**	**0.0**
GRAC	**Grapevine Rang**	**88.51**	**50**	P	**P**	**20 22 09.7**	**+0.3**
	baz=245,SNR=5.0						
BC3	**Big Chuckawall**	**88.56**	**54**	P	**P**	**20 22 09.9**	**+0.2**
	baz=246,SNR=7.9						
NV11	**Mina Array Sit**	**88.56**	**48**	IAmb	IAmb	20 22 11.1	
	comp=Z,20nm,1.3s						
J05D	**Fort Rock, OR**	**88.64**	**43**	P	**P**	**20 22 10.3**	**+0.3**
	baz=242,SNR=6.1						
FURC	**Furnace Creek,**	**88.66**	**51**	P	**P**	**20 22 10.1**	**+0.1**
	baz=245						
H04A	**Detroit Lake**	**88.69**	**42**	P	**P**	**20 22 10.1**	**0.0**
H04A				IAmb	IAmb	20 22 11.0	
	comp=Z,39nm,1.4s						
E03A	**Lebam**	**88.75**	**39**	P	**P**	**20 22 10.9**	**+0.7**
GLA	**Glamis**	**88.79**	**54**	P	**P**	**20 22 11.3**	**+0.5**
	baz=246						
GLA	**Glamis**	**88.79**	**54**	IAmb	IAmb	20 22 12.7	
	comp=Z,14nm,0.8s						
SHOC	**Shoshone, Teco**	**88.85**	**51**	P	**P**	**20 22 10.9**	**-0.1**
	baz=246						
F04D	**Rainier, OR**	**88.86**	**40**	P	**P**	**20 22 11.5**	**+0.8**
	baz=241						
KVN	**Kaiserville**	**88.86**	**48**	IAmb	IAmb	20 22 11.9	
	comp=Z,7.4nm,0.7s						
TUQ	**Turquoise Moun**	**88.92**	**52**	P	**P**	**20 22 11.7**	**+0.2**
	baz=246,SNR=8.6						
IRM	**Iron Mountain**	**88.99**	**53**	P	**P**	**20 22 12.1**	**+0.4**
	baz=246,SNR=9.6						
I05D	**Terrebonne, OR**	**89.07**	**42**	P	**P**	**20 22 12.2**	**+0.4**
	baz=242						
MLY	**Manley**	**89.08**	**16**	P	**P**	**20 22 10.9**	**-0.5**
	baz=217						
F04A	**Amboy**	**89.15**	**40**	IAmb	IAmb	20 22 13.4	
	comp=Z,22nm,1.0s						
NEA2	**Nenana**	**89.18**	**17**	P	**P**	**20 22 11.5**	**-0.3**
	baz=219						
SLBS	**Sierra La Lagu**	**89.25**	**65**	P	**P**	**20 22 14.2**	**+1.0**
SLBS				IAmb	IAmb	20 22 15.3	
	comp=Z,15nm,1.1s						
TPNV	**Topopah Spring**	**89.30**	**50**	P	**P**	**20 22 13.2**	**0.0**
	baz=246,SNR=17						
TPNV	**Topopah Spring**	**89.30**	**50**	IAmb	IAmb	20 22 14.7	
	comp=Z,16nm,0.9s						
E04D	**Cinebar**	**89.36**	**40**	P	**P**	**20 22 13.6**	**+0.5**
	baz=241						
SNAA	**Sanae**	**89.43**	**182**	P	**P**	**20 22 11.9**	**-1.2**
113A	**Mohawk Valley,**	**89.50**	**55**	IAmb	IAmb	20 22 15.6	
	comp=Z,28nm,1.5s						
D03D	**Eldon**	**89.52**	**39**	P	**P**	**20 22 14.3**	**+0.6**
	baz=241						
HDA	**Harding Lake**	**89.62**	**17**	P	**P**	**20 22 12.5**	**-1.4**
	baz=221						
L26K	**Log Cabin Wild**	**89.67**	**20**	P	**P**	**20 22 12.8**	**-1.3**
	baz=224						
PDMCI	**Parker Dam,Lak**	**89.81**	**54**	P	**P**	**20 22 15.7**	**+0.2**
	baz=247						
ILAR	**Eielson Array**	**89.91**	**17**	P	**P**	**20 22 13.5**	**-1.7**
	comp=Z,4.6nm,0.9s,baz=235,slow=5.6,SNR=28						
ILAR	**Eielson Array**	**89.91**	**17**	P	**P**	**20 22 12.8**	**-2.5**
SHPR	**Sheep Range**	**89.92**	**51**	P	**P**	**20 22 16.4**	**+0.2**
SHPR				IAmb	IAmb	20 22 17.9	
	comp=Z,13nm,1.1s						
214A	**Organ Pipe Nat**	**89.94**	**56**	P	**P**	**20 22 16.4**	**+0.3**
	baz=248						
214A	**Organ Pipe Nat**	**89.94**	**56**	IAmb	IAmb	20 22 18.0	
	comp=Z,16nm,1.1s						
D05A	**Enumclaw**	**90.00**	**39**	P	**P**	**20 22 17.0**	**+1.0**
SCRK	**Sand Creek**	**90.17**	**19**	P	**P**	**20 22 16.4**	**-0.2**
	baz=223						
W13A	**Hualapai Mount**	**90.32**	**53**	IAmb	IAmb	20 22 19.6	
	comp=Z,10.0nm,0.9s						
R11A	**Troy Canyon, C**	**90.36**	**49**	P	**P**	**20 22 18.3**	**+0.2**
	baz=246,SNR=5.7						
B05A

L61B	**Northampton**	122.98	51	P		PKPdf	20 28 10.5	-1.1
	baz=274							
E61A	**Lac Etchemin**	124.12	46	P		PKPdf	20 28 12.7	-1.0
	baz=278							
SCHQ	**Schefferville**	124.56	36	PKP		PKPdf	20 28 12.3	-1.9
	comp=Z,4.1nm,0.8s,baz=91,slow=12,SNR=2.0							
ARCES	**ARCESS Array B**	124.88	345	PKP		PKPdf	20 28 13.0	-1.5
	comp=Z,2.2nm,0.4s,baz=79,slow=2.7,SNR=47							
FINES	**FINESS Array B**	130.44	338	PKP		PKPdf	20 28 23.6	-1.7
	comp=Z,0.9nm,0.7s,baz=12,slow=2.7,SNR=4.1							
FINES				SKPbc		SKPbc	20 31 22.4	-2.9
	comp=Z,1.4nm,0.5s,baz=59,slow=3.9,SNR=14							
NOA	**NORSAR Array B**	135.26	345	PKP		PKPdf	20 28 34.2	-0.2
	comp=Z,0.8nm,0.7s,baz=42,slow=2.2,SNR=2.5							
AKASG	**Malin Array Be**	135.42	325	PKP		PKPdf	20 28 34.4	-0.5
	comp=Z,0.4nm,0.2s,baz=58,slow=2.3,SNR=4.9							
AKASG				SKPbc		SKPbc	20 31 40.0	-2.7
	comp=Z,0.2nm,0.2s,baz=43,slow=3.2,SNR=4.8							
KOLS	**Kolonicke sedl**	140.15	326	*e*PKP		PKPdf	20 28 44.0	+0.3
PBCC	**Pribram**	143.62	333	*e*PKP		PKPab	20 28 47.6	+0.5
TANN	**Tannenbergstha**	143.69	335	*e*PKPbc		PKPab	20 28 47.5	0.0
	baz=36,slow=3.0							
PLN	**Plauen**	143.76	335	*e*PKPbc		PKPab	20 28 47.7	+0.1
	baz=36,slow=3.0							
GUNZ	**Gunzen**	143.79	335	*e*PKPbc		PKPab	20 28 48.0	+0.2
	baz=36,slow=3.0							
WERN	**Wernitzgruen**	143.83	335	*e*PKPbc		PKPab	20 28 48.2	+0.2
	baz=36,slow=3.0							
CONA	**Conrad Observa**	144.04	329	*i* P		PKPab	20 28 49.0	0.0
	comp=Z,4.3nm,0.8s							
MANZ	**Manzenberg**	144.17	335	*e*PKPbc		PKPab	20 28 49.2	-0.1
	baz=36,slow=3.0							
KHC	**Kasperske Hory**	144.22	333	*e*PKP		PKPab	20 28 49.2	-0.3
ROTZ	**Rotzenmuhle**	144.30	335	*e*PKPbc		PKPab	20 28 49.6	-0.1
	baz=36,slow=3.0							
GEC2	**GERESS Array S**	144.38	332	*e*PKPbc		PKPab	20 28 49.8	-0.4
	baz=36,slow=3.0							
GERES	**GERESS Array B**	144.38	332	PKP		PKPab	20 28 49.7	-0.5
	comp=Z,5.8nm,0.7s,baz=36,slow=4.2,SNR=42							
WET	**Wettzell**	144.51	333	*e*PKPbc		PKPab	20 28 50.2	-0.4
	baz=36,slow=3.0							
ARSA	**Arzberg**	144.68	329	*e*P		PKPab	20 28 50.5	-0.8
	comp=Z,10nm,1.1s							
BUG	**Bochum--Univer**	144.70	341	*e*PKPbc		PKPbc	20 28 50.3	-0.8
	baz=36,slow=3.0							
BBLS	**Lazići**	144.74	321	⇑*i*P		PKPbc	20 28 51.4	-0.3
GRF	**Grafenberg Arr**	144.76	335	*e*PKPbc		PKPbc	20 28 51.0	-0.5
	baz=36,slow=3.0							
MOA	**Molln**	144.85	331	*i* P		PKPbc	20 28 51.5	-0.3
	comp=Z,17nm,0.8s,SNR=7.5							
HAPS	**Han Pijesak,Bl**	144.88	322	⇑*i*P		PKPbc	20 28 49.4	-2.7
SOKA	**Soboth**	145.32	329	*e*P		PKPdf	20 28 52.5	-0.5
	comp=Z,6.8nm,1.0s							
TNS	**Taunus Mts**	145.35	338	*e*PKPbc		PKPdf	20 28 52.7	-0.3
	baz=36,slow=3.0							
UPM	**Unac-Piva**	145.41	321	⇑*i*P		PKPdf	20 28 52.6	-0.9
DOBS	**Dobrina**	145.47	328	*i* PKPbc		PKPdf	20 28 52.9	-0.3
BLY	**Banja Luka**	145.47	324	*e*P		PKPdf	20 28 53.5	+0.3
PDG	**Podgorica**	145.64	319	⇑*i*P		PKPdf	20 28 53.5	-0.1
OBKA	**Obir**	145.68	329	*e*P		PKPdf	20 28 54.1	+0.4
	comp=Z,2.6nm,0.6s							
BRY	**Bratogost**	145.81	321	⇑*i*P		PKPdf	20 28 53.9	-0.2
DRME	**Dracevica, Mon**	145.82	319	⇑*i*P		PKPdf	20 28 54.2	+0.3
KBA	**Koelnbreinsper**	145.84	331	*e*P		PKPdf	20 28 53.8	-0.3
	comp=Z,2.9nm,0.4s							
VNDS	**Vrh nad Dolski**	145.88	328	*i* PKPbc		PKPdf	20 28 54.2	+0.2
LJU	**Ljubljana**	146.01	328	*i* PKPbc		PKPdf	20 28 54.8	-0.6
LJU				*i* PKPab		PKPab	20 28 55.9	-0.5
LJU	**Ljubljana**	146.01	328	⇑*i*P		PKPdf	20 28 54.4	+0.3
MYKA	**Terra Mystica**	146.03	330	*i* P		PKPdf	20 28 53.9	-0.3
	comp=Z,3.8nm,0.5s							
CEY	**Cerknica**	146.28	328	⇑*i*P		PKPdf	20 28 55.4	+0.8
RICI	**Ricice**	146.28	323	*e*Pn		PKPdf	20 28 55.3	+0.6
STON	**Ston**	146.33	321	⇑*i*P		PKPdf	20 28 54.8	+0.1
VOJS	**Vojsko**	146.34	329	*i* PKPbc		PKPdf	20 28 55.2	+0.4
KIJV	**Kijevo**	146.38	324	*e*Pn		PKPdf	20 28 55.3	+0.5
WATA	**Walderalm**	146.45	332	*i* P		PKPdf	20 28 55.8	+0.8
	comp=Z,5.0nm,0.5s							
ABTA	**Abfaltersbach**	146.47	331	*e*P		PKPdf	20 28 55.4	+0.4
	comp=Z,5.6nm,0.5s							
WTTA	**Wattenberg**	146.48	332	*i* P		PKPbc	20 28 56.2	-0.7
	comp=Z,7.3nm,0.8s							
WLF	**Walferdange**	146.60	340	*e*PKPbc		PKPbc	20 28 57.1	+0.2
	baz=36,slow=3.0							
MOTA	**Moosalm**	146.65	333	*e*P		PKPbc	20 28 56.5	-0.9
	comp=Z,13nm,0.8s							
RETA	**Reutte**	146.68	333	*i* P		PKPbc	20 28 56.5	-0.9
	comp=Z,7.8nm,0.9s							
SQTA	**Sankt Quirin**	146.70	333	*i* P		PKPbc	20 28 56.8	-0.6
	comp=Z,13nm,0.6s,SNR=5.9							
UBR	**Ueberruh**	146.80	334	*e*PKPbc		PKPbc	20 28 57.0	-0.7
	baz=36,slow=3.0							
MORI	**Morici**	146.85	324	*e*Pn		PKPbc	20 28 56.9	-0.9
LSTV	**Lastovo**	146.87	322	*e*Pn		PKPdf	20 28 56.0	+0.4
BFO	**Black Forest**	146.98	337	*e*PKPbc		PKPbc	20 28 57.4	-0.7
	baz=36,slow=3.0							
FETA	**Feichten**	147.06	333	*i* P		PKPbc	20 28 58.0	-0.5
	comp=Z,10nm,0.6s							
DUGI	**Dugi Otok**	147.13	325	*e*Pn		PKPbc	20 28 57.6	-1.0
DAVA	**Damuels**	147.21	334	*e*P		PKPbc	20 28 58.2	-0.7
	comp=Z,5.3nm,0.6s							
AQU	**L'Aquila**	149.12	324	⇑*i*P		PKPbc	20 29 02.8	-1.1
TORD	**Torodi Ar. Bea**	166.92	245	PKP		PKPdf	20 29 20.2	-1.3
	comp=Z,2.9nm,0.9s,baz=39,slow=0.8,SNR=13							
TORD	**Torodi Ar. Bea**	166.92	245			PKPdf	20 29 20.5	-1.0

NNC ***14*** *20:35:18.6±3.2,38.6ˇ62N×72.6ˇ16E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=24.6km s-min=16.1km az=174.0*

ISC 14 20:35:17.1±3.7, 38.3ˇN±0.2ˇ×72.1ˇE±0.1ˇ, h25km, n11, σ1s07/15, 6C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	3.99	17	P		Pn	20 36 17.9	+0.8
	SNR=142							
UCH	**Uchtor**	4.31	24	P		Pn	20 36 22.1	+0.6
	SNR=9.9							
EKS2	**Erkin-Say**	4.52	16	P		Pn	20 36 25.3	+1.3
	SNR=12							
AAK	**Ala-Archa**	4.68	22	P		Pn	20 36 27.3	+1.0
	SNR=14							
AAK	**Ala-Archa**	4.68	22	⇑P		Pn	20 36 27.1	+0.9
	3.9nm,0.3s							
AAK				⇑S		Sn	20 37 19.2	-0.6
	19nm,0.7s							
KBK	**Karagaybulak**	4.84	26	P		Pn	20 36 29.0	+0.5
	SNR=5.5							
KK31	**Karatay Array**	4.93	346	⇑P		Pn	20 36 31.4	+1.8
	3.5nm,0.2s,baz=163,slow=13,SNR=60							
KK31				⇑S		Sn	20 37 26.3	+0.6
	3.5nm,0.3s,baz=165,slow=23,SNR=11							
CHMS	**Chumysh**	5.08	22	P		Pn	20 36 32.5	+0.8
	SNR=12							
USP	**Ospenovka**	5.26	19	P		Pn	20 36 34.5	+0.4
	SNR=5.1							
TKM2	**Tokmak 2**	5.30	29	⇓P		Pn	20 36 34.5	-0.4
	1.8nm,0.7s							
TKM2				⇑S		Sn	20 37 36.0	+0.7
	2.9nm,0.6s							
AB31	**Akbulak array**	14.00	325	⇓P		Pn	20 38 33.1	-0.7
	1.5nm,0.5s,baz=221,slow=7.9,SNR=30							
AB31				⇑S		Sn	20 41 06.5	-1.8
	1.9nm,0.8s,baz=136,slow=24,SNR=6.4							

IDC ***14*** *20:50:35.1±0.9,6.6ˇ64N×72.8ˇ80W, h172km±9km, mb2.5/1, mb1 3.2/3, mb1mx2.9/37, mbtmp3.4/3, Error ellipse: s-maj=47.4km s-min=7.9km az=132.0*

RSNC ***14*** *20:50:37.4±1.1,6.83N×73.20W, h140km±5km, ML3.2, Mw3.6*

ISC 14 20:50:35.4±1.0, 6.86N±0.03ˇ×73.13W±0.04, h155km±6km, n27, σ1s77/50, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.27	191	⇑*i*P		Pn	20 50 56.5	-0.3
BARC				*e*S		Sn	20 51 11.1	-2.0
BARC				*i*			20 51 13.6	
	comp=Z,317nm,0.3s							
BRRC	**Barranca, Sant**	0.63	294	*e*P		Pn	20 50 58.5	+0.5
BRRC				*e*S		Sn	20 51 15.1	-0.1
BRRC				*i*			20 51 19.5	
	comp=Z,190nm,0.2s							
PAMC	**Pamplona, Colo**	0.65	42	⇓*i*P		Pn	20 50 59.4	+0.7
PAMC				*e*S		Sn	20 51 16.3	-0.1
PAMC				*i*			20 51 18.7	
	comp=Z,564nm,0.4s							
RUSC	**La Rusia**	0.96	177	*e*P		Pn	20 51 00.7	-0.2
RUSC				*e*S		Sn	20 51 19.2	-1.1
RUSC				*i*			20 51 20.4	
	comp=Z,292nm,0.3s							
PTBC	**PUERTO BERRIO,**	1.35	257	*e*P		Pn	20 51 03.0	-0.9
PTBC				*e*S		Sn	20 51 24.1	-1.6
PTBC				*i*			20 51 31.3	
	comp=Z,183nm,0.3s							
OCAC	**Ocana**	1.39	352	*e*P		Pn	20 51 04.5	+0.1
OCAC				*e*S		Sn	20 51 26.4	-0.2
OCAC				*i*			20 51 31.3	
	comp=Z,199nm,0.5s							
SPBC	**San Pablo de B**	1.52	218	*e*P		Pn	20 51 05.3	-0.3
SPBC				*e*S		Sn	20 51 27.1	-1.7
SPBC				*i*			20 51 30.1	
	comp=Z,321nm,0.4s							
NORC	**Norcasia**	2.15	233	*e*P		Pn	20 51 12.3	-0.4
NORC				*e*S		Sn	20 51 40.1	-1.3
NORC				*i*			20 51 48.4	
	comp=Z,139nm,0.2s							
CHIC	**Chingaza**	2.29	195	*e*P		Pn	20 51 14.6	-0.1
CHIC				*e*S		Sn	20 51 43.7	-1.2
CHIC				*i*			20 51 47.6	
	comp=Z,117nm,0.5s							
ROSC	**El Rosal**	2.33	211	P		Pn	20 51 16.0	+0.9
	comp=Z,58nm,0.3s,baz=90,slow=20,SNR=59							
ROSC				S		Sn	20 51 47.9	+2.2
	comp=Z,64nm,0.3s,baz=17,slow=19,SNR=8.9							
HELC	**Santa Helena**	2.47	255	*e*P		Pn	20 51 17.8	+1.0
HELC				*e*S		Sn	20 51 47.8	-0.8
HELC				*i*			20 51 54.1	
	comp=Z,90nm,0.4s							
UREC	**San Jos de Ur**	2.54	291	*e*P		Pn	20 51 16.8	-0.5
UREC				*e*S		Sn	20 51 48.0	-1.7
UREC				*i*			20 51 59.1	
	comp=Z,113nm,0.2s							
CBOC	**Ciudad Bolivar**	3.03	251	*e*P		Pn	20 51 24.1	+0.6
CBOC				*e*S		Sn	20 51 59.2	-1.5
CBOC				*i*			20 52 16.1	
	comp=Z,32nm,0.7s							
DBBC	**Dabeiba**	3.06	273	*e*P		Pn	20 51 23.8	0.0
DBBC				*e*S		Sn	20 52 00.5	-0.8
TOLC	**Tolima**	3.13	224	*e*P		Pn	20 51 26.1	+1.0
TOLC				*e*S		Sn	20 52 03.0	-0.4
TOLC				*i*			20 52 10.1	
	comp=Z,209nm,0.5s							
MOTC	**Monteria, Cord**	3.15	307	*e*P		Pn	20 51 23.5	-1.4
MOTC				*e*S		Sn	20 52 01.9	-1.5
MOTC				*i*			20 52 18.2	
	comp=Z,30nm,0.6s							
SDV	**Santo Domingo**	3.19	51	P		Pn	20 51 25.7	0.0
	comp=Z,3.3nm,0.3s,baz=230,slow=14,SNR=8.5							
SDV				S		Sn	20 52 03.4	-1.1
	comp=Z,20nm,0.3s,baz=90,slow=20,SNR=40							
ANIL	**Santa Ana**	3.26	224	*e*P		Pn	20 51 27.8	+1.2
ANIL				*e*S		Sn	20 52 05.5	-0.7
ANIL				*i*			20 52 13.4	
	comp=Z,26nm,0.3s							
PRAC	**Prado**	3.58	209	*e*P		Pn	20 51 29.9	-0.5
PRAC				*e*S		Sn	20 52 12.1	-1.0
PRAC				*i*			20 52 21.0	
	comp=Z,63nm,0.5s							
ORTC	**Ortega, Tolima**	3.60	216	*e*P		Pn	20 51 30.8	0.0
ORTC				*e*S		Sn	20 52 14.2	+0.4
ORTC				*i*			20 52 17.9	
	comp=Z,48nm,0.4s							
SJCC	**San Jacinto, C**	3.64	326	*e*P		Pn	20 51 29.2	-2.0
SJCC				*e*S		Sn	20 52 11.7	-2.8
SJCC				*i*			20 52 16.2	
	comp=Z,32nm,0.5s							
SMRC	**Santa Marta, M**	4.42	346	*e*P		Pn	20 51 41.9	+0.6
SMRC				*e*S		Sn	20 52 29.4	-3.2
MACC	**Macarena, Meta**	4.73	189	*e*P		Pn	20 51 43.4	-2.1
MACC				*e*S		Sn	20 52 32.6	-7.5
GARC	**Garzon, Huila**	5.20	207	*e*P		Pn	20 51 50.7	-1.2
TXAR	**Lajitas Array**	36.43	312	P		P	20 57 26.7	+1.2
	comp=Z,0.1nm,0.4s,baz=118,slow=9.5,SNR=2.0							
ASAR	**Alice Springs**	149.12	234	PKPbc		PKPdf	21 10 02.2	+0.1
	comp=Z,0.2nm,0.7s,baz=100,slow=3.2,SNR=4.2							
WRA	**Warramunga Arr**	150.34	241	PKPbc		PKPdf	21 10 08.2	+4.1
	comp=Z,0.1nm,0.4s,baz=108,slow=2.8,SNR=7.1							

IDC ***14*** *20:56:35.7±4.9,30.6ˇ69N×130.6ˇ61E, h54km±61km, mb3.4/4, mb1 3.6/8, mb1mx3.4/47, mbtmp3.6/8, ML3.0/4, Error ellipse: s-maj=62.2km s-min=25.5km az=66.0*

JMA ***14*** *20:56:41.9±0.1, 31.3ˇ38N×130.5ˇ50E, h153km±1km, M3.3*

ISC 14 20:56:41.7±0.9, 31.33N±0.05ˇ×130.49E±0.10, h152km±6km, n17, σ0s76/25, mb3.5/4, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSU	**Suzuyama**	0.18	350	P		Pn	20 57 02.6	+0.3
JSU				S		Sn	20 57 17.9	-0.1
JTSR	**Tashiro 2**	0.40	114	P		Pn	20 57 03.3	+0.4
JTSR				*e*S		Sn	20 57 18.9	-0.1
JSJ	**Shimokoshiki**	0.75	298	P		Pn	20 57 04.5	-0.3
JSJ				S		Sn	20 57 22.3	-0.1
JTZ	**Takazaki**	0.76	42	P		Pn	20 57 05.0	+0.1
JTZ				S		Sn	20 57 21.8	-0.8
JTN	**Tanegashima 3**	0.79	148	P		Pn	20 57 05.8	+0.7
JTN				S		Sn	20 57 23.8	+0.9
JMTN	**Minamitane**	0.99	159	P		Pn	20 57 07.4	+0.7
JMTN				S		Sn	20 57 26.4	+0.7
JYAK	**Yakushimahirau**	1.09	179	P		Pn	20 57 07.9	+0.4
JYAK				S		Sn	20 57 27.2	0.0
JIU3	**Izumi3**	1.25	13	P		Pn	20 57 08.8	-0.1
JIU3				S		Sn	20 57 29.0	-0.8
JNN	**Nakanoshima**	1.58	200	P		Pn	20 57 12.8	+0.5
JNU	**Nakatsue**	1.82	10	P		Pn	20 57 14.4	-0.5
	14nm,0.3s,baz=191,slow=17,SNR=263							
JNU				S		Sn	20 57 41.5	+1.0
	4.3nm,0.3s,baz=213,slow=22,SNR=1.6							
KSRS	**Korea Array**	6.47	342	P		Pn	20 58 16.2	+1.7
	0.2nm,0.3s,baz=160,slow=14,SNR=2.6							
MJAR	**Matsushiro Arr**	8.25	49	P		Pn	20 58 38.8	+0.4
	0.3nm,0.3s,baz=230,slow=16,SNR=24							
USRK	**Ussuriysk Ar.**	12.90	5	P		P	20 59 45.2	+0.9
	baz=178,slow=12,SNR=1.9							
ZALV	**Zalesovo Beam**	39.58	318	P		P	21 04 06.5	+8.7
	0.3nm,0.2s,baz=93,slow=4.9,SNR=1.7							
FITZ	**Fitzroy Crossi**	49.37	186	P		P	21 05 14.5	-1.2
	1.7nm,0.8s,baz=10,slow=6.3,SNR=2.4							
WRA	**Warramunga Arr**	51.11	175	P		P	21 05 28.0	-0.9
	0.3nm,0.4s,baz=354,slow=8.0,SNR=7.5							
ASAR	**Alice Springs**	54.78	176	P		P	21 05 55.0	-0.7
	0.2nm,0.4s,baz=359,slow=6.2,SNR=13							

NEIC ***14*** *21:19:37.1±1.9, 7.38N±0.08ˇ×94.31E±0.04ˇ, h10km±1km, mb4.5/33, Error ellipse: s-maj=13.1km s-min=6.1km az=168.0*

IDC ***14*** *21:19:45.5±5.4, 7.59N×94.59E, h75km±48km, mb3.6/11, mb1 3.7/12, mb1mx3.5/45, mbtmp3.9/12, ML4.1/1, MS3.5/16, Ms1 3.6/16, ms1mx3.4/29, Error ellipse: s-maj=33.1km s-min=14.6km az=52.0*

DJA ***14*** *21:19:50.2±1.7, 7.7ˇN±12.×9.5E±1.3, h12km±14km, M4.1/4, mB4.8/2, mb4.6/4, MLv3.9/2, Mw(mB)4.0/2*

ISC 14 21:19:37.6±0.5, 7.39N±0.05ˇ×94.35E±0.06, h10km, n108, σ1s83/91, mb4.4/28, MS3.5/16, 1C, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	3.35	130	P		Pn	21 20 30.9	+0.8
LHMI	**Lhok Sumawe**	3.35	130	Pn		Pn	21 20 31.2	+1.1
PKDT	**Phuket**	3.98	82	P		Pn	21 20 39.0	+0.3
TPTI		4.97	145	P		Pn	21 20 55.6	+3.2
TRTT	**Trang**	5.31	85	P		Pn	21 20 57.3	+0.3
	0.6nm3µm161nm,0.8s							
SRIT	**Nakonsritamara**	5.34	77	Pn		Pn	21 20 58.6	+1.2
DGPR	**DIGLIPUR**	5.92	346	*e*P		Pn	21 21 07.7	+2.2
DGPR				*e*S		Sn	21 22 16.0	+2.5
RPSI	**Rantau Prapat**	6.51	135			Pn	21 21 14.5	+1.0
KULM	**Kulim**	6.59	108			Pn	21 21 14.3	-0.5
GSI	**Gunungsitoli**	6.84	152	Pn		Pn	21 21 19.4	+1.2
IPM	**Ipoh**	7.24	113			Pn	21 21 22.3	-1.2
MNSI	**Mandailing Nat**	8.37	141	P		Pn	21 21 41.9	+2.9
UTHA	**Uthaitani**	9.53	31	P		Pn	21 22 01.5	+6.5
	10nm,0.8s							
RGRI	**Rengat**	11.06	134	P		Pn	21 22 13.7	-2.3
MHMT	**Maesarieng**	11.28	18	P		Pn	21 22 25.1	+6.1
	1µm8.0nm,0.7s							
PHIT	**Phitsanulok**	11.40	31	P		Pn	21 22 26.3	+5.6
	32nm,0.7s							
CM13	**Chiang Mai Arr**	11.83	22	P		Pn	21 22 31.9	+5.4
	4.3nm,0.9s							
CM01	**Chiang Mai Arr**	11.85	22	P		Pn	21 22 33.0	+6.2
	5.6nm,0.8s							
CM15	**Chiang Mai Arr**	11.87	22	P		Pn	21 22 31.8	+4.7
	6.1nm,0.6s							
CM31	**Chiang Mai Arr**	11.88	22	Pn		Pn	21 22 27.8	+0.6
CMAR	**Chiang Mai Arr**	11.88	22	P		Pn	21 22 28.0	+0.8
	0.4nm,0.3s,baz=215,slow=14,SNR=14							
CMAR				LR		LR	21 27 02.2	
	comp=Z,239nm,19.0s,baz=251,slow=38							
UTTA	**Uttaradit**	11.94	30	P		Pn	21 22 32.7	+4.7
	8.6nm,0.7s							
CHTO	**Chiang Mai**	12.21	21			Pn	21 22 31.6	-0.1
CMMT	**Chiang Mai**	12.21	21	P		Pn	21 22 36.0	+4.3
CM33	**Chiang Mai Arr**	12.21	21	P		Pn	21 22 40.0	+8.2
PAYA	**Payao**	13.05	24	P		Pn	21 23 00.1	+17
PALK	**Pallekele**	13.54	270	LR		LR	21 27 37.2	
	comp=Z,316nm,21.4s,baz=192,slow=34							
SAIH	**SAIHA**	15.07	355	*e*P		Pn	21 23 10.1	-0.8
SAIH				IAmb		IAmb	21 23 20.3	
	comp=Z,3.4nm,0.6s							
KSM	**Kuching**	16.95	110			Pn	21 23 36.4	+1.3
KSM				IAmb		IAmb	21 23 48.4	
	comp=Z,29nm,1.3s							
SHL	**Shillong**	18.23	353	*e*P		Pn	21 23 48.1	-3.0
SHL	**Shillong**	18.23	353			P	21 23 51.2	-0.1
KOHI	**KOHIMA**	18.24	359	*e*P		P	21 23 55.6	+4.2
KOHI				IAmb		IAmb	21 24 01.4	
	comp=Z,10nm,0.5s							
SBUM	**Sibu**	18.46	105	P		Pn	21 23 54.4	+0.6
QIZ	**Qiongzhong**	18.99	51	P		Pn	21 24 00.0	-0.2
QIZ				S		Sn	21 27 32.5	-0.5
QIZ				LR		LR		
	comp=N,920nm,11.4s							
QIZ				LR		LR		
	comp=E,460nm,8.9s							
QIZ				LR		LR		
	comp=Z,150nm,8.0s							
LEM	**Lembang**	19.35	137	LR		LR	21 33 11.8	
	comp=Z,253nm,18.6s,baz=308,slow=42							
ZIRO	**ZIRO**	20.04	359	*e*P		Pn	21 24 15.1	+2.2
ZIRO				IAmb		IAmb	21 24 16.2	
	comp=Z,4.4nm,0.7s							
RAMN	**Ramite**	20.81	340	*e*P		P	21 24 20.5	+1.0
	comp=Z,30nm,0.7s							
KKM	**Kota Kinabalu**	21.75	92	P		P	21 24 29.4	-0.2
KKM				IAmb		IAmb	21 24 37.8	
	comp=Z,23nm,1.1s							
PKI	**Pulchoki**	21.79	338	*e*P		P	21 24 30.1	-0.2
	comp=Z,30nm,0.9s							
PKIN	**Phulchoki**	21.80	338	*e*P		P	21 24 30.2	-0.1
	comp=Z,28nm,1.0s							
GUN	**Gumba**	21.94	340	*e*P		P	21 24 30.7	-1.1
	comp=Z,66nm,1.3s							
GYA	**Guiyang**	22.29	30	⇑P		P	21 24 39.0	+3.6
GYA				pP		pwP	21 25 05.5	+25
GYA				S		S	21 28 35.8	-5.1
GYA				ScP		ScP	21 32 16.8	+7.6
GYA				pmax		pmax		
	comp=Z,6.0nm,1.3s							
GYA				pmax		pmax		
	comp=Z,130nm,4.1s							
GYA				LR		LR		
	comp=N,330nm,10.3s							
GYA				LR		LR		
	comp=E,430nm,14.8s							
GYA				LR		LR		
	comp=Z,250nm,14.6s							
LSA	**Lhasa**	22.40	353	P		P	21 24 38.0	+1.1
LSA				pmax		pmax		
	comp=Z,36nm,1.0s							
LSA	**Lhasa**	22.40	353	P		P	21 24 36.9	0.0
LSA				IAmb		IAmb	21 24 40.2	
	comp=Z,8.1nm,0.8s							
GKN	**Gorkha**	22.48	337	*e*P		P	21 24 36.0	-1.4
	comp=Z,29nm,0.9s							
KOLN	**Koldanda**	22.69	335	*e*P		P	21 24 39.0	-0.7
	comp=Z,53nm,1.3s							
DANN	**Dangsing**	23.13	336	*e*P		P	21 24 43.3	-1.1
	comp=Z,21nm,0.7s			

	comp=Z,43nm,19.8s,baz=292,slow=38						
WRA	**Warramunga Arr**	**47.81**	**125**	P	**P**	**21 28 14.5**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=306,slow=8.7,SNR=23						
WRA				PcP	**PcP**	**21 29 43.6**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=312,slow=3.1,SNR=5.1						
WRA				LR	LR	21 50 09.7	
	comp=Z,81nm,19.6s,baz=320,slow=38						
MJAR	**Matsushiro Arr**	**49.33**	**47**	LR	LR	21 51 42.7	
	comp=Z,46nm,18.1s,baz=255,slow=39						
AS31	**Alice Springs**	**49.44**	**130**	P	**P**	**21 28 27.2**	**-1.1**
ASAR	**Alice Springs**	**49.44**	**130**	P	**P**	**21 28 27.4**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=304,slow=7.5,SNR=7.5						
ASAR				PcP	**PcP**	**21 29 49.8**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=316,slow=3.3,SNR=7.8						
RAYN	**Ar Rayn**	**49.48**	**295**	P	**P**	**21 28 28.4**	**-0.3**
RAYN				IAmb	IAmb	21 28 36.8	
	comp=Z,4.5nm,0.9s						
BRVK	**Borovoye**	**49.58**	**341**	P	**P**	**21 28 28.3**	**-0.5**
BRVK				IAmb	IAmb	21 28 34.3	
	comp=Z,3.4nm,0.9s						
ABKAR	**Akbulak array**	**50.76**	**331**	P	**P**	**21 28 37.9**	**0.0**
ABKAR	**Akbulak array**	**50.76**	**331**	IAmb	IAmb	21 28 44.1	
	comp=Z,13nm,1.4s						
ARU	**Arti**	**56.42**	**337**	P	**P**	**21 29 19.4**	**+0.2**
ARU				IAmb	IAmb	21 29 25.1	
	comp=Z,11nm,1.2s						
KMBO	**Kilima Mbogo**	**57.58**	**264**	P	**P**	**21 29 31.2**	**+2.7**
	comp=Z,1.9nm,0.9s,baz=53,slow=9.1,SNR=5.0						
KMBO	**Kilima Mbogo**	**57.58**	**264**	P	**P**	**21 29 28.0**	**-0.5**
KMBO				IAmb	IAmb	21 29 32.9	
	comp=Z,4.8nm,1.4s						
STKA	**Stephens Creek**	**59.62**	**134**	P	**P**	**21 29 42.5**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=318,slow=11,SNR=3.0						
BRTR	**Keskin Array B**	**62.91**	**311**	LR	LR	22 00 14.8	
	comp=Z,15nm,19.5s,baz=112,slow=39						
MDUB	**Mudurnu**	**64.90**	**311**	P	**P**	**21 30 15.5**	**-2.0**
HNR	**Honiara**	**67.44**	**103**	P	**P**	**21 30 29.9**	**-4.3**
TIXI	**Tiksi**	**67.67**	**11**	P	**P**	**21 30 33.4**	**-1.1**
TIXI				IAmb	IAmb	21 30 40.0	
	comp=Z,5.1nm,0.9s						
AKASG	**Malin Array Be**	**68.67**	**322**	LR	LR	22 05 25.4	
	comp=Z,28nm,18.8s,baz=310,slow=40						
ALN	**Alexandroupoli**	**68.83**	**311**	P	**P**	**21 30 39.5**	**-2.9**
FINES	**FINESS Array B**	**73.24**	**332**	P	**P**	**21 31 07.0**	**-1.8**
	comp=Z,1.3nm,0.8s,baz=108,slow=6.2,SNR=6.8						
DIVS	**Divibare**	**73.67**	**314**	P	**P**	**21 31 10.8**	**-1.0**
BOSA	**Boshof**	**75.50**	**238**	LR	LR	21 59 51.1	
	comp=Z,21nm,20.7s,baz=75,slow=32						
ARCES	**ARCESS Array B**	**75.80**	**340**	LR	LR	22 07 42.5	
	comp=Z,68nm,18.5s,baz=155,slow=38						
ARB4	**ARCESS Array S**	**75.80**	**340**	P	**P**	**21 31 22.7**	**-0.8**
GERES	**GERESS Array B**	**78.33**	**318**	P	**P**	**21 31 37.4**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=96,slow=5.5,SNR=4.1						
STAL	**STALIGIAL**	**78.93**	**316**	P	**P**	**21 31 41.5**	**-0.1**
NB2	**NORSAR Subarra**	**80.26**	**331**	P	**P**	**21 31 46.9**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=92,slow=5.9						
NOA	**NORSAR Array B**	**80.26**	**331**	P	**P**	**21 31 46.6**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=92,slow=5.8,SNR=2.1						
NOA				LR	LR	22 09 17.0	
	comp=Z,28nm,20.3s,baz=0.0,slow=37						
VNDA	**Vanda**	**92.41**	**168**	LR	LR	22 11 46.2	
	comp=Z,29nm,18.9s,baz=352,slow=34						
PLCA	**Paso Flores**	**144.16**	**200**	PKP	**PKPab**	**21 39 12.5**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=262,slow=4.4,SNR=3.5						
CPUP	**Villa Florida**	**147.13**	**232**	PKPbc	**PKPdf**	**21 39 21.2**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=45,slow=2.9,SNR=3.7						

KRSC 14 21:43:13.2±1.4, 49°.67N × 157°.07E, h7km ±21km, ML4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**1.81**	**355**	*e*P	Pn	21 43 44.8	0.0
PAU				*e*S	Sn	21 44 07.7	-0.3
KDTR	**Khodutka, Kamc**	**2.23**	**16**	*e*P	Pn	21 43 52.2	+1.5
KDTR				*e*S	Sb	21 44 21.3	-0.5
ASAK	**Asacha**	**2.77**	**11**	*e*P	Pn	21 44 00.4	+2.3
RUS	**Russkaya**	**2.91**	**18**	*e*P	Pn	21 44 02.3	+2.3
RUS				*e*S	Sb	21 44 38.7	-2.6
GRL	**Gorelyy**	**2.95**	**12**	*e*P	Pn	21 44 02.8	+2.1
GRL				*e*S	Sb	21 44 39.7	-2.9
KRMR	**Karymshinskiy**	**3.23**	**11**	*e*P	Pb	21 44 08.0	-3.0
APC	**Apacha**	**3.26**	**1**	*e*P	Pn	21 44 07.7	+2.9
DALK	**Dalny**	**3.53**	**17**	*e*P	Pn	21 44 11.5	+3.1
DALK				*e*S	Sb	21 44 55.1	-3.9
UGLR	**Uglovaya**	**3.71**	**17**	*e*P	Pn	21 44 15.0	+3.9
AVH	**Avacha**	**3.75**	**16**	*e*P	Pn	21 44 15.4	+3.8
KOK	**Koryaka**	**3.76**	**15**	*e*P	Pn	21 44 15.7	+4.0
SMAR	**Somma**	**3.76**	**16**	*e*P	Pn	21 44 15.6	+3.8
SDLR	**Sedlovina**	**3.79**	**17**	*e*P	Pn	21 44 14.8	+2.7
KRER	**Koryakskii**	**3.79**	**15**	*e*P	Pn	21 44 15.8	+3.6
KRX	**Arik**	**3.82**	**14**	*e*P	Pn	21 44 16.3	+3.6
SPN	**Mys Shipunski**	**3.90**	**27**	*e*P	Pn	21 44 17.0	+3.4
GNL	**Ganaly**	**4.07**	**7**	*e*P	Pn	21 44 19.9	+3.9
KZV	**Kizimen**	**5.80**	**19**	*e*P	Pn	21 44 44.5	+4.7
TUMR	**Tumrok**	**5.93**	**17**	*e*P	Pn	21 44 46.5	+5.0

*IDC **14** 21:44:09.7±2.5, 6°.90S × 128°.59E, h0km, mb3.8/1, mb1 3.8/3, mb1mx3.5/21, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=201.0km s-min=32.9km az=66.0*
*NEIC **14** 21:44:26.5±2.4, 7°.16S±0°.06 × 129°.48E±0°.07, h192km ±12km, mb4.3/5, Error ellipse: s-maj=10.7km s-min=8.0km az=111.0*

ISC 14 21:44:26.2±0.7, 7°.24S±0°.06 × 129°.49E±0°.07, h200km, n22, σ2s59/26, mb4.2/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.94**	**112**	Pn	**Pn**	**21 45 05.1**	**+1.0**
FAKI	**Fak Fak**	**5.10**	**33**	Pn	**Pn**	**21 45 41.3**	**-0.6**
FAKI					**Sn**	**21 46 36.3**	**-5.3**
SOEI	**Soe**	**5.74**	**244**	Pn	**Pn**	**21 45 50.9**	**+0.7**
SOEI					**Sn**	**21 46 52.4**	**-4.1**
MTN	**Manton Dam**	**5.80**	**164**		**Pn**	**21 45 52.6**	**+1.7**
MTN				Sn	**Sn**	**21 46 56.6**	**-1.3**
KNRA	**Kununurra**	**8.42**	**185**	Pn	**Pn**	**21 46 24.7**	**-0.2**
LUWI	**Luwuk**	**9.09**	**312**	Pn	**Pn**	**21 46 32.7**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.43**	**199**	Pn	**Pn**	**21 47 02.4**	**-1.4**
WB0	**Warramunga Arr**	**13.33**	**160**	Pn	**P**	**21 47 29.4**	**-1.3**
WRAB	**Tennant Creek**	**13.47**	**160**	Pn	**P**	**21 47 31.3**	**-0.9**
WRA	**Warramunga Arr**	**13.48**	**160**	Pn	**P**	**21 47 30.3**	**-2.0**
	0.3nm,0.3s,baz=337,slow=9.4,SNR=17						
WRA				Sn	**S**	**21 49 53.5**	**-6.6**
	0.5nm,0.3s,baz=324,slow=24,SNR=7.2						
WRA	**Warramunga Arr**	**13.48**	**160**		**P**	**21 47 30.9**	**-1.4**
WB2	**Warramunga Arr**	**13.48**	**160**	Pn	**P**	**21 47 31.3**	**-1.0**
WR0	**Warramunga Arr**	**13.56**	**159**		**P**	**21 47 34.4**	**+1.1**
COEN	**Coen**	**15.02**	**118**		**P**	**21 47 51.1**	**+1.7**
COEN				IAmb	IAmb	21 48 03.2	
	comp=Z,6.3nm,1.0s						
MBWA	**Marble Bar**	**16.75**	**213**	P	**Pn**	**21 48 10.7**	**+1.2**
AS31	**Alice Springs**	**16.88**	**166**	P	**Pn**	**21 48 13.3**	**+2.2**
ASAR	**Alice Springs**	**16.88**	**166**	P	**Pn**	**21 48 15.1**	**+3.9**
	comp=Z,0.5nm,0.3s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**16.88**	**166**	P	**Pn**	**21 48 14.4**	**+3.3**
GSI	**Gunungsitoli**	**32.95**	**284**	P	**P**	**21 50 44.3**	**+2.1**
GSI				IAmb	IAmb	21 50 46.6	
	comp=Z,15nm,0.8s						
DZM	**Mont Dzumac**	**38.54**	**116**	P	**P**	**21 51 30.4**	**+0.5**
DZM				IAmb	IAmb	21 51 43.1	
	comp=Z,4.8nm,0.8s						
JTM	**Tenmabayashi**	**48.96**	**12**	P	**P**	**21 52 52.8**	**+0.5**
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**	**21 55 07.0**	**+2.3**
	comp=Z,1.2nm,1.1s,baz=124,slow=7.7,SNR=1.6						

MAN 14 21:44:54.6, 5°.82N × 125°.65E, h18km, mb4.3, ML3.1, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.28**	**12**	*e*P	Pb	21 45 02.2	+1.0
DDMP				*e*S	Sn	21 45 11.0	+1.3
SKMP	**Bagumbayan, Su**	**1.30**	**302**	*e*P	Pn	21 45 16.8	-1.1
SKMP				*e*S	Sg	21 45 35.9	-0.9
KCP	**Kidapawan**	**1.30**	**335**⇑	*e*P	Pg	21 45 21.0	+1.2
KCP				*i* S	Sg	21 45 38.9	+2.0

IDC 14 21:46:14.8±2.0, 3°.54S × 127°.32E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/23, mbtmp3.6/3, Error ellipse: s-maj=251.9km s-min=28.9km az=69.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**21.00**	**163**	P	P	21 51 00.1	0.0
	2.6nm,0.9s,baz=339,slow=11,SNR=12						
SONM	**Songino Array**	**54.35**	**343**	P	P	21 55 43.2	-0.1
	0.3nm,0.7s,baz=157,slow=7.8,SNR=1.9						
MKAR	**Makanchi Array**	**63.88**	**327**	P	P	21 56 49.5	0.0
	0.5nm,0.5s,baz=115,slow=8.9,SNR=9.7						

*MAN **14** 21:54:02.4, 6°.95N × 126°.90E, h2km, mb4.6, ML3.5, MS3.4*
*IDC **14** 21:54:06.5±6.2, 7°.27N × 127°.01E, h70km ±56km, mb3.2/3, mb1 3.4/3, mb1mx3.1/31, mbtmp3.5/3, Error ellipse: s-maj=65.2km s-min=26.5km az=60.0*

ISC 14 21:54:02.0±2.4, 6°.88N±0°.06 × 126°.99E±0°.08, h5km ±13km, n12, σ0s84/19, mb3.4/3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.73**	**275**	*e*P	**Pg**	**21 54 15.2**	**-0.9**
MATI				*e*S	**Sg**	**21 54 26.2**	**+0.6**
DAV	**Davao City (W)**	**1.42**	**278**	P	**Pb**	**21 54 29.5**	**+0.5**
	89nm,0.3s,baz=85,slow=14,SNR=6.8						
DAV				S	**Sg**	**21 54 48.8**	**+1.2**
	49nm,0.3s,baz=306,slow=20,SNR=5.6						
DAV				LR	LR	21 55 04.5	
	comp=Z,215nm,20.5s,baz=322,slow=41						
DDMP	**Don Marcelino,**	**1.49**	**239**	*e*P	**Pn**	**21 54 29.1**	**-0.4**
DDMP				*e*S	**Sb**	**21 54 49.9**	**+0.4**
KCP	**Kidapawan**	**1.89**	**274**⇑	*i*P	**Pn**	**21 54 35.4**	**+0.3**
BUKP	**Musuan**	**2.16**	**297**	*e*P	**Pn**	**21 54 37.3**	**-1.4**
BUKP				*e*S	**Sn**	**21 55 06.5**	**+0.6**
SKMP	**Bagumbayan, Su**	**2.46**	**262**	*e*P	**Pn**	**21 54 42.2**	**-0.7**
SKMP				*e*S	**Sn**	**21 55 12.9**	**-0.4**
CGP	**Cagayan de Oro**	**2.76**	**305**⇓	*e*P	**Pn**	**21 54 46.6**	**-0.4**
CGP				*e*S	**Sn**	**21 55 19.9**	**-1.0**
GLSP	**General Luna,**	**3.01**	**343**	*e*P	**Pn**	**21 54 49.8**	**-0.6**
GLSP				*e*S	**Sn**	**21 55 27.9**	**+1.1**
MSLP	**Maasin**	**3.86**	**327**	*e*P	**Pn**	**21 55 02.5**	**+0.4**
MSLP				*e*S	**Sn**	**21 55 46.8**	**-1.1**
WRA	**Warramunga Arr**	**27.62**	**165**	P	**P**	**21 59 50.5**	**-0.2**
	0.4nm,0.9s,baz=343,slow=10,SNR=2.5						
ASAR	**Alice Springs**	**31.11**	**168**	P	**P**	**22 00 22.2**	**+0.5**
	0.2nm,0.4s,baz=344,slow=8.3,SNR=2.0						
MKAR	**Makanchi Array**	**55.15**	**324**	P	P	22 03 29.6	-6.1
	0.7nm,0.8s,baz=125,slow=6.9,SNR=3.0						

*IDC **14** 22:35:43.4±1.2, 51°.41N × 177°.58W, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/50, mbtmp3.6/5, Error ellipse: s-maj=57.0km s-min=24.9km az=155.0*
*AEIC **14** 22:35:51.8±1.6, 51°.6N±0°.1 × 177°.49W±0°.08, h70km ±6km, ML3.4, mb3.7/35(NEIC), Error ellipse: s-maj=20.1km s-min=5.7km az=168.0*
*NEIC **14** 22:35:52.3±1.4, 51°.53N±0°.07 × 177°.47W±0°.08, h70km ±5km, Error ellipse: s-maj=11.3km s-min=4.5km az=149.0*

ISC 14 22:35:49.8±0.8, 51°.30N±0°.10 × 177°.45W±0°.04, h45km, n81, σ1s77/75, mb3.9/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**0.48**	**16**		**Pn**	**22 36 03.0**	**+2.5**
KIKV	**Kanaga Island**	**0.60**	**16**		**Pn**	**22 36 04.2**	**+2.1**
KICM	**Kanaga Island**	**0.64**	**14**		**Pn**	**22 36 04.6**	**+2.0**
TASE	**Tanaga Southea**	**0.65**	**326**		**Pn**	**22 36 04.8**	**+2.0**
TAFP	**Tanaga Falls P**	**0.69**	**331**		**Pn**	**22 36 04.7**	**+1.5**
ADK	**Adak**	**0.75**	**39**		**Pn**	**22 36 05.7**	**+1.6**
ADK	**Adak**	**0.75**	**39**	Sn	**Sn**	**22 36 16.5**	**+2.1**
ETKA	**Kagalaska Isla**	**0.86**	**49**		**Pn**	**22 36 07.4**	**+1.9**
ADAG	**Mount Adagdak**	**0.86**	**37**		**Pn**	**22 36 07.3**	**+1.8**
GAEA	**Gareloi East**	**0.95**	**301**		**Pn**	**22 36 08.7**	**+2.0**
GALAA	**Gareloi Lava P**	**0.95**	**300**		**Pn**	**22 36 08.7**	**+2.0**
GSTD	**Great Sitkin T**	**1.11**	**46**		**Pn**	**22 36 10.6**	**+1.7**
GSTD					**Sn**	**22 36 24.7**	**+1.6**
GSMY	**Great Sitkin M**	**1.14**	**49**		**Pn**	**22 36 11.0**	**+1.6**
GSTR	**Great Sitkin T**	**1.17**	**47**		**Pn**	**22 36 11.6**	**+1.8**
CERAA	**Semis' Rag'd T**	**1.89**	**290**		**Pn**	**22 36 21.1**	**+1.6**
CERB	**Semis' Cerberu**	**1.93**	**290**		**Sn**	**22 36 44.2**	**+1.0**
CESW	**Semis' Southwe**	**1.96**	**289**		**Pn**	**22 36 21.9**	**+1.4**
CEAP	**Semis' Anvil P**	**1.98**	**292**		**Pn**	**22 36 22.5**	**+1.6**
AMKA	**Amchitka**	**2.04**	**273**		**Pn**	**22 36 23.8**	**+2.2**
ATKA	**Atka Island**	**2.21**	**65**		**Pn**	**22 36 26.5**	**+2.5**
ATKA					**Sn**	**22 36 52.2**	**+2.2**
KOWE	**Korovin West**	**2.25**	**60**		**Pn**	**22 36 27.0**	**+2.4**
KOFP	**Korovin Flat P**	**2.30**	**64**		**Pn**	**22 36 27.9**	**+2.7**
LSSE	**Little Sitkin**	**2.56**	**286**		**Pn**	**22 36 30.9**	**+2.1**
LSPA	**Little Sitkin**	**2.57**	**286**		**Pn**	**22 36 30.8**	**+2.0**
LSPA					**Sn**	**22 36 59.7**	**+0.9**
LSNW	**Little Sitkin**	**2.60**	**287**		**Pn**	**22 36 31.1**	**+1.8**
UNV	**Unalaska Valle**	**7.14**	**65**	Pn	**Pn**	**22 37 33.2**	**+1.8**
SPIA	**Saint Paul Isl**	**7.24**	**33**	Pn	**Pn**	**22 37 34.7**	**+1.9**
AKUT	**Akutan**	**7.64**	**64**	Pn	**Pn**	**22 37 35.4**	**-2.9**
OHAK	**Old Harbor**	**15.26**	**58**	Pn	**Pn**	**22 39 20.2**	**-1.7**
PETK	**Petropavlovsk-**	**15.32**	**287**	Pn	**Pn**	**22 39 23.3**	**+0.5**
	0.0nm,0.3s,baz=96,slow=15,SNR=3.1						
SVW2	**Sparrevohn**	**15.55**	**42**	Pn	**Pn**	**22 39 25.0**	**-0.7**
SVW2				IAmb	IAmb	22 39 33.2	
	comp=Z,4.4nm,1.1s						
KDAK	**Kodiak Island**	**15.76**	**56**	Pn	**Pn**	**22 39 28.0**	**-0.3**
TTA	**Tatalina**	**16.36**	**36**	Pn	**Pn**	**22 39 32.6**	**-3.5**
RSO	**Redoubt South**	**16.52**	**47**		**Pn**	**22 39 38.1**	**0.0**
CNPM	**China Poot**	**16.91**	**51**		**Pn**	**22 39 43.2**	**+0.3**
CNPM				IAmb	IAmb	22 40 02.3	
	comp=Z,10.0nm,0.9s						
BRLK	**Bradley Lake**	**17.15**	**50**		**Pn**	**22 39 44.6**	**-1.3**
SKT	**Skwentna**	**17.68**	**43**		**Pn**	**22 39 52.1**	**-0.3**
SKT				IAmb	IAmb	22 39 55.9	
	comp=Z,3.9nm,1.0s						
SUA	**Susitna One**	**17.81**	**45**		**Pn**	**22 39 53.6**	**-0.5**
SUA				IAmb	IAmb	22 40 06.3	
	comp=Z,8.1nm,1.2s						
PPLA	**Purkeypile**	**17.83**	**40**	Pn	**P**	**22 39 55.0**	**+0.4**
PPLA				IAmb	IAmb	22 39 58.6	
	comp=Z,6.2nm,1.1s						
O22K	**Cooper Landing**	**17.93**	**48**	P	**Pn**	**22 39 53.8**	**-1.6**
SEW	**Seward**	**17.94**	**50**	P	**Pn**	**22 39 54.3**	**-1.3**
CAST	**Castle Rocks**	**18.13**	**38**	P	**Pn**	**22 39 58.1**	**+0.3**
KTH	**Kantishna Hill**	**18.65**	**39**	P	**P**	**22 40 02.6**	**-0.9**
KTH				IAmb	IAmb	22 40 04.2	
	comp=Z,7.7nm,1.1s						
TRF	**Thorofare Moun**	**18.85**	**39**	P	**P**	**22 40 04.8**	**-1.0**
BPAW	**Bear Paw Mtn.**	**18.89**	**37**	P	**P**	**22 40 05.8**	**-0.4**
IMAR	**Indian Mountai**	**19.01**	**30**	P	**P**	**22 40 06.6**	**-0.8**
RND	**Reindeer**	**19.41**	**40**	P	**P**	**22 40 10.0**	**-1.9**
RND				IAmb	IAmb	22 40 14.9	
	comp=Z,4.0nm,1.0s						
SCM	**Sheep Creek Mo**	**19.47**	**46**	P	**P**	**22 40 13.2**	**+0.7**
SCM				IAmb	IAmb	22 40 25.3	
	comp=Z,5.6nm,1.0s						
FID	**Port Fidalgo**	**19.54**	**49**	P	**P**	**22 40 12.1**	**-1.2**
DHY	**Denali Highway**	**19.89**	**42**	P	**P**	**22 40 15.4**	**-1.8**
DHY				IAmb	IAmb	22 40 16.8	
	comp=Z,3.5nm,0.6s						
KLU	**Klutina**	**20.00**	**47**	P	**P**	**22 40 18.7**	**+0.3**
KLU				IAmb	IAmb	22 40 31.9	
	comp=Z,3.8nm,1.0s						
I23K	**Minto, Yukon-K**	**20.03**	**36**	P	**P**	**22 40 18.0**	**-0.5**
I23K				IAmb	IAmb	22 40 22.0	
	comp=Z,1.9nm,0.6s						
WRH	**Wood River Hil**	**20.18**	**38**	P	**P**	**22 40 16.9**	**-3.3**
RAGM	**Ragged Mountai**	**20.32**	**51**	P	**P**	**22 40 19.2**	**-2.6**
MDM	**Murphy Dome**	**20.35**	**37**	P	**P**	**22 40 21.1**	**-0.9**
MDM				IAmb	IAmb	22 40 26.2	
	comp=Z,3.3nm,1.0s						
CCB	**Clear Creek Bu**	**20.37**	**38**	P	**P**	**22 40 20.1**	**-2.1**
HDA	**Harding Lake**	**20.60**	**39**	P	**P**	**22 40 23.3**	**-1.4**
HDA				IAmb	IAmb	22 40 24.6	
	comp=Z,2.6nm,0.9s						
N25K	**Chitina, Valde**	**20.64**	**47**	P	**P**	**22 40 25.6**	**+0.3**
N25K				IAmb	IAmb	22 40 40.6	
	comp=Z,3.7nm,1.0s						
PAX	**Paxson**	**20.66**	**43**	P	**P**	**22 40 24.4**	**-1.1**
PAX				IAmb	IAmb	22 40 35.4	
	comp=Z,2.9nm,1.1s						
ILAR	**Eielson Array**	**20.78**	**38**	P	**P**	**22 40 24.7**	**-2.0**
	comp=Z,0.2nm,0.4s,baz=235,slow=9.4,SNR=1.8						
GLB	**Gilahina Butte**	**20.97**	**48**	P	**P**	**22 40 25.6**	**-3.2**
GLB				IAmb	IAmb	22 40 31.4	
	comp=Z,2.3nm,0.9s						
VRDI	**Verde Repeater**	**21.09**	**49**	P	**P**	**22 40 30.0**	**-0.2**
BCAR	**Beaver Creek A**	**22.29**	**44**	P	**P**	**22 40 39.8**	**-3.1**
K27K	**Chicken**	**22.44**	**42**	P	**P**	**22 40 43.0**	**-1.5**
BMAR	**Burnt Mountain**	**22.84**	**33**	P	**P**	**22 40 46.9**	**-1.8**
H11N2	**WAKE ISLAND Hy**	**33.84**	**207**	T	T	23 18 59.8	
	baz=18,slow=76,SNR=475						
H11N3	**WAKE ISLAND Hy**	**33.84**	**207**	T	T	23 19 03.2	
	baz=18,slow=76,SNR=360						
H11N1	**WAKE ISLAND Hy**	**33.85**	**207**	T	T	23 19 05.0	
	baz=18,slow=76,SNR=376						
USRK	**Usuriysk Ar.**	**34.15**	**278**	P	**P**	**22 42 29.2**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=44,slow=9.2,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**35.05**	**207**	T	T	23 20 34.1	
	baz=17,slow=76,SNR=480						
H11S2	**WAKE ISLAND Hy**	**35.06**	**207**	T	T	23 20 35.5	
	baz=17,slow=76,SNR=321						
H11S3	**WAKE ISLAND Hy**	**35.06**	**207**	T	T	23 20 34.4	
	baz=17,slow=76,SNR=248						
TCUT	**Toone Canyon**	**45.37**	**76**	P	**P**	**22 44 02.2**	**-1.5**
PDAR	**Pinedale Array**	**45.52**	**73**	P	**P**	**22 44 05.2**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=306,slow=3.7,SNR=8.2						
LCMT	**Little Creek M**	**46.74**	**82**	P	**P**	**22 44 11.5**	**-3.0**
GLA	**Glamis**	**48.32**	**87**	P	**P**	**22 44 28.8**	**+2.2**
WRA	**Warramunga Arr**	**82.55**	**225**	P	**P**	**22 48 07.6**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=34,slow=5.9,SNR=4.8						
ASAR	**Alice Springs**	**86.01**	**224**	P	**P**	**22 48 25.8**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=22,slow=5.3,SNR=4.6						
H03N2	**Juan Fernandez**	**120.31**	**107**	T	T	01 06 26.6	
	baz=317,slow=78,SNR=21						
H03N1	**Juan Fernandez**	**120.32**	**107**	T	T	01 06 27.4	
	baz=317,slow=78,SNR=22						
H03N3	**Juan Fernandez**	**120.32**	**107**	T	T	01 06 26.7	
	baz=317,slow=78,SNR=27						

*SOME **14** 22:38:00.9, 41°.05N × 72°.03E, h5km*
*KRNET **14** 22:38:02.3±0.1, 40°.98N × 72°.05E, h15km, mb3.1*
*NNC **14** 22:38:03.5±1.9, 41°.06N × 72°.00E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=17.5km s-min=6.4km az=0.0*

ISC 14 22:38:02.4±0.7, 40°.93N±0°.02 × 71°.91E±0°.02, h10km, n59, σ1s58/96, 28C-19D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**0.78**	**121**⇓	*i*P	**Pg**	**22 38 16.0**	**-1.5**
	baz=29						
OHH				⇓*i*S	**Sg**	**22 38 25.8**	**-1.9**
	baz=29						
TRKS	**Terek-Say**	**0.83**	**316**⇑	*i*P	**Pg**	**22 38 17.7**	**-0.9**
	baz=6.0						
TRKS				⇑*i*S	**Sg**	**22 38 29.0**	**-0.4**
	baz=6.0						
ARSB	**Arslanbob**	**0.90**	**64**⇓	*i*P	**Pg**	**22 38 16.9**	**-3.0**
	baz=64						
ARSB				⇓*i*S	**Sg**	**22 38 28.0**	**-3.7**
	baz=64						
BTK	**Batken**	**1.20**	**224**⇓	*i*P	**Pn**	**22 38 27.2**	**+1.8**
	baz=26						
BTK				⇓*i*S	**Sn**	**22 38 45.3**	**+3.5**
	baz=26						
DRK	**Karamyk**	**1.45**	**183**⇑	*i*P	**Pg**	**22 38 30.7**	**+0.4**
	baz=87						
DRK				⇑*i*S	**Sg**	**22 38 50.8**	**+1.7**
	baz=87						
MNAS	**Manas**	**1.62**	**16**⇓	*i*P	**Pn**	**22 38 31.2**	**0.0**
	baz=13						
MNAS				⇓*i*S	**Sn**	**22 38 52.3**	**0.0**
	baz=13						
AML	**Almayashu**	**1.80**	**48**⇑	*i*P	**Pn**	**22 38 33.6**	**-0.4**
	baz=46						
AML				⇑*i*S	**Sn**	**22 38 56.3**	**-0.8**
	baz=46						
AML	**Almayashu**	**1.80**	**48**	P	**Pn**	**22 38 33.6**	**-0.4**
	SNR=61

TKM2	**Tokmak 2**	**3.40**	**53**	P		**Pn**	**22 38 56.8**	**+1.1**
	SNR=7.3								
TKM2	**Tokmak 2**	**3.40**	**53**	⇑Pn		**Pn**	**22 38 56.4**	**+0.7**
	1.7nm,0.8s								
TKM2				⇑Pg		**Pb**	**22 39 03.7**	**+0.8**
	1.4nm,0.3s								
TKM2				⇑Lg		Lg	22 39 47.5		
	12nm,0.5s								
BOOM	**Boomskoye usch**	**3.40**	**61**	⇑*i*P		**Pn**	**22 38 56.8**	**+1.1**
	baz=61								
BOOM				⇑*i*S		**Sn**	**22 39 36.9**	**+0.7**
	baz=61								
ULHL	**Ulahol**	**3.51**	**67**	⇑*e*P		**Pn**	**22 38 58.1**	**+0.9**
	baz=67								
ULHL				⇑*i*S		**Sn**	**22 39 38.2**	**-0.7**
	baz=67								
KST	**Kastek**	**3.69**	**54**	*e*P		**Pb**	**22 39 07.0**	**-0.8**
	3.7nm,0.4s								
KST				*e*S		**Sb**	**22 39 54.5**	**+1.9**
	20nm,0.6s								
KST	**Kastek**	**3.69**	**54**	Pg		**Pb**	**22 39 07.0**	**-0.8**
	3.7nm,0.4s								
KST				Lg		Lg	22 39 54.5		
	10.0nm,0.7s								
DGS	**Degeres**	**3.69**	**50**	*e*P		**Pb**	**22 39 06.2**	**-1.7**
	3.7nm,0.4s								
DGS				*e*S		**Sb**	**22 39 53.0**	**+0.3**
	14nm,0.6s								
DGS	**Degeres**	**3.69**	**50**	Pg		**Pb**	**22 39 06.2**	**-1.7**
	3.7nm,0.4s								
DGS				Lg		Lg	22 39 53.0		
	14nm,0.6s								
KRBS	**Karabastau**	**3.93**	**44**	*e*P		**Pb**	**22 39 10.6**	**-1.2**
	3.8nm,0.3s								
KRBS				*e*S		**Sb**	**22 40 00.8**	**+1.3**
	8.4nm,0.3s								
KRBS	**Karabastau**	**3.93**	**44**	Pg		**Pb**	**22 39 10.6**	**-1.2**
	3.8nm,0.3s								
KRBS				Lg		Lg	22 40 00.8		
	8.4nm,0.3s								
MTBS	**Maitube**	**4.02**	**55**	*e*P		**Pb**	**22 39 13.3**	**-0.1**
	4.1nm,0.2s								
MTBS				*e*S		**Sb**	**22 40 05.3**	**+3.1**
	9.7nm,0.4s								
MTBS	**Maitube**	**4.02**	**55**	Pg		**Pb**	**22 39 13.3**	**-0.1**
	4.1nm,0.2s								
MTBS				Lg		Lg	22 40 05.3		
	9.7nm,0.4s								
TNSS	**Tian-Shan**	**4.31**	**59**	*e*P		**Pb**	**22 39 17.8**	**-0.7**
	2.5nm,0.4s								
TNSS				*e*S		**Sb**	**22 40 13.2**	**+2.5**
	3.3nm,0.5s								
BTLS	**Baital**	**4.40**	**20**	*e*P		**Pb**	**22 39 20.6**	**+0.8**
	4.1nm,0.3s								
BTLS				*e*S		**Sb**	**22 40 17.8**	**+4.9**
	14nm,0.4s								
KUU	**Kurty**	**4.42**	**46**	*e*P		**Pb**	**22 39 20.0**	**-0.1**
	2.1nm,0.3s								
KUU				*e*S		**Sb**	**22 40 17.0**	**+3.5**
	9.8nm,0.5s								
KUU	**Kurty**	**4.42**	**46**	Pg		**Pb**	**22 39 20.0**	**-0.1**
	2.1nm,0.3s								
KUU				Lg		Lg	22 40 17.0		
	9.8nm,0.5s								
MDOK	**Medeo**	**4.43**	**58**	*e*P		**Pb**	**22 39 19.5**	**-1.0**
	3.3nm,0.4s								
MDOK				*e*S		**Sb**	**22 40 15.9**	**+1.9**
	6.6nm,0.6s								
MDOK	**Medeo**	**4.43**	**58**	Pg		**Pb**	**22 39 19.5**	**-1.0**
	3.3nm,0.4s								
MDOK				Lg		Lg	22 40 15.9		
	6.6nm,0.6s								
KTBS	**Karatobe**	**4.50**	**50**	*e*P		**Pb**	**22 39 21.2**	**-0.4**
	0.9nm,0.4s								
KTBS				*e*S		**Sb**	**22 40 19.1**	**+3.2**
	23nm,0.5s								
KTBS	**Karatobe**	**4.50**	**50**	Pg		**Pb**	**22 39 21.2**	**-0.4**
	0.9nm,0.4s								
KTBS				Lg		Lg	22 40 19.1		
	23nm,0.5s								
KOTS	**Kotyrbulak**	**4.51**	**58**	*e*P		**Pb**	**22 39 22.4**	**+0.7**
	8.3nm,0.5s								
KOTS				*e*S		**Sb**	**22 40 21.5**	**+5.3**
	32nm,0.6s								
KOTS	**Kotyrbulak**	**4.51**	**58**	Pg		**Pb**	**22 39 22.4**	**+0.7**
	8.3nm,0.5s								
KOTS				Lg		Lg	22 40 21.5		
	32nm,0.6s								
CHKK	**Chushkaly**	**4.76**	**50**	*e*P		**Pb**	**22 39 26.4**	**+0.4**
	1.0nm,0.1s								
CHKK				*e*S		**Sb**	**22 40 27.7**	**+4.3**
	8.6nm,0.3s								
CHKK	**Chushkaly**	**4.76**	**50**	Pg		**Pb**	**22 39 26.4**	**+0.4**
	1.0nm,0.1s								
CHKK				Lg		Lg	22 40 27.7		
	8.6nm,0.3s								

IDC ***14*** *23:03:14.5±0.5,37.˚13N×103.˚74E, h0km, mb4.4/30, mb1 4.5/35, mb1mx4.3/58, mbtmp4.4/35, ML4.0/5, MS4.2/35, Ms1 4.2/35, ms1mx4.1/49, Error ellipse: s-maj=13.9km s-min=11.3km az=33.0*

MOS ***14*** *23:03:14.4±0.9, 37.˚05N×103.˚77E, h13km, mb4.9/28, MS4.4/10, Error ellipse: s-maj=6.8km s-min=4.4km az=124.4*

BJI ***14*** *23:03:16.2±0.0, 37.˚12N×103.˚74E, h9km, mB5.1/23, mb4.7/36, ML4.8/18, Ms4.9/45, Ms7 4.7/42*

NEIC ***14*** *23:03:16.3±1.9, 37.˚06N±0.˚07×103.˚68E±0.˚09, h10km±1km, mb4.7/73, ML4.9(BJI), Error ellipse: s-maj=12.8km s-min=11.4km az=233.0*

GCMT ***14*** *23:03:16.3±0.2, 37.˚17N±0.˚01×103.˚84E±0.˚01, h17km±1km, MW4.9/114, Moment Tensor Solution. s40,c45; s114,c183; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.14±.09; Mθθ 1.56±.09; Mϕϕ -1.42±.07; Mrθ-0.83±.21; Mθϕ 2.54±.07; Mϕr-0.41±.19; Best double couple: M☉3.07000×10¹⁶ NP1:ϕs194.00000°, δ78.00000°, λ170.00000°. NP2:ϕs286.00000°, δ80.00000°, λ12.00000°. Principal axes: T 3.2640, Plg15.0000°, Azm150.0000°; N -0.3920, Plg75.0000°, Azm326.0000°; P -2.8760, Plg1.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 23:03:16.5±0.3, 37.˚07N±0.˚03×103.˚71E±0.˚03, h10km, n341, σ2s/05/358, mb4.7/94, MS4.3/42, 35C-2D, Gansu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**0.99**	**174**	*i* Pg			**Pg**	**23 03 34.3**	**-1.2**
LZH				Sg			**Sb**	**23 03 48.0**	**-0.9**
LZH				smax			smax		
	comp=N,17μm,1.0s								
LZH				smax			smax		
	comp=E,16μm,1.1s								
GTA	**Gaotai**	**3.85**	**309**	⇑Pn			**Pn**	**23 04 15.4**	**-0.6**
GTA				Pg			**Pb**	**23 04 25.8**	**+1.1**
GTA				Sn			**Sn**	**23 05 03.6**	**+2.2**
GTA				Sg			**Sg**	**23 05 19.5**	**-0.8**
GTA				smax			smax		
	comp=N,12μm,0.9s								
GTA				smax			smax		
	comp=E,12μm,0.8s								
GTA				LR			LR		
	comp=N,16μm,8.5s								
GTA				LR			LR		
	comp=E,16μm,7.6s								
GTA				LR			LR		
	comp=Z,8μm,6.5s								
XAN	**Xi'an**	**5.21**	**124**	Pn			**Pn**	**23 04 34.6**	**0.0**
XAN				Pg			**Pb**	**23 04 49.5**	**+1.7**
XAN				Sn			**Sn**	**23 05 40.3**	**+5.5**
XAN				Sg			**Sg**	**23 05 57.5**	**-6.4**
XAN				smax			smax		
	comp=N,730nm,1.2s								
XAN				smax			smax		
	comp=E,460nm,1.2s								
XAN				LR			LR		
	comp=N,12μm,8.4s								
XAN				LR			LR		
	comp=E,4μm,8.7s								
XAN				LR			LR		
	comp=Z,10μm,10.6s								
XAN	**Xi'an**	**5.21**	**124**	P			**Pn**	**23 04 34.8**	**+0.2**
XAN	**Xi'an**	**5.21**	**124**	Pn			**Pn**	**23 04 34.8**	**+0.2**
BTO	**Baotou**	**6.06**	**52**	*e*Pn			**Pn**	**23 04 46.0**	**-0.3**
BTO				*e*Pg			**Pb**	**23 05 05.4**	**+3.2**
BTO				Sn			**Sn**	**23 05 55.9**	**+0.2**
BTO				Sg			**Sb**	**23 06 16.4**	**+1.5**
CD2	**Chengdu**	**6.14**	**180**	Pn			**Pn**	**23 04 49.4**	**+2.0**
CD2				Sg			**Sg**	**23 06 33.4**	**-0.3**
CD2				smax			smax		
	comp=N,790nm,1.5s								
CD2				smax			smax		
	comp=E,620nm,1.4s								
CD2				LR			LR		
	comp=N,6μm,8.0s								
CD2				LR			LR		
	comp=E,36μm,11.0s								
CD2				LR			LR		
	comp=Z,7μm,9.4s								
TIY	**Taiyuan**	**6.98**	**82**	*e*Pn			**Pn**	**23 04 59.0**	**+0.2**
TIY				Pg			**Pb**	**23 05 21.4**	**+3.6**
TIY				Sg			**Sb**	**23 06 46.4**	**+5.2**
TIY				smax			smax		
	comp=N,820nm,1.1s								
TIY				smax			smax		
	comp=E,560nm,0.8s								
ENH	**Enshi**	**8.31**	**143**	Pn			**Pn**	**23 05 16.6**	**-0.6**
BJT	**Baijiatuau**	**10.19**	**69**	P			**Pn**	**23 05 44.1**	**+1.3**
BJT	**Baijiatuau**	**10.19**	**69**	Pn			**Pn**	**23 05 44.1**	**+1.3**
BJI	**Beijing**	**10.20**	**69**	P			**Pn**	**23 05 45.3**	**+2.3**
TIA	**Tai'an**	**10.81**	**91**	P			**Pn**	**23 05 51.1**	**-0.3**
TIA				LR			LR		
	comp=N,7μm,15.9s								
TIA				LR			LR		
	comp=E,2μm,12.2s								
TIA				LR			LR		
	comp=Z,2μm,19.6s								
GYA	**Guiyang**	**10.87**	**166**	⇓P			**Pn**	**23 05 51.8**	**-0.5**
GYA				S			**Sn**	**23 07 57.4**	**+3.3**
GYA				pmax			pmax		
	comp=Z,36nm,1.4s								
GYA				pmax			pmax		
	comp=Z,190nm,3.5s								
GYA				LR			LR		
	comp=N,2μm,9.5s								
GYA				LR			LR		
	comp=E,2μm,5.5s								
GYA				LR			LR		
	comp=Z,2μm,12.7s								
SONM	**Songino Array**	**10.94**	**10**	Pn			**Pn**	**23 05 53.1**	**0.0**
	2.4nm,0.3s,baz=188,slow=14,SNR=44								
SONM				Lg			Lg	23 09 00.9	
	5.6nm,0.3s,baz=205,slow=30,SNR=6.7								
SONM	**Songino Array**	**10.94**	**10**				**Pn**	**23 05 52.8**	**-0.3**
ULN	**Ulaanbaatar**	**11.07**	**12**	*i* P			**Pn**	**23 05 54.3**	**-0.6**
ULN	**Ulaanbaatar**	**11.07**	**12**				**Pn**	**23 05 54.2**	**-0.6**
KMI	**Kunming**	**11.94**	**184**	⇓*e*P			**Pn**	**23 06 07.3**	**+0.3**
KMI				pP				23 06 13.8	
KMI				sP				23 06 19.8	
KMI				PP			**PnPn**	**23 06 21.3**	**+6.5**
KMI				S			**Sn**	**23 08 24.5**	**+4.2**
KMI				sS				23 08 31.1	
KMI				SS			**SnSn**	**23 08 39.5**	**+7.0**
KMI				pmax			pmax		
	comp=Z,7.0nm,0.8s								
KMI				pmax			pmax		
	comp=Z,73nm,4.1s								
KMI				LR			LR		
	comp=N,3μm,10.8s								
KMI				LR			LR		
	comp=Z,3μm,12.0s								
KMI	**Kunming**	**11.94**	**184**	P			**Pn**	**23 06 05.6**	**-1.4**
KMI	**Kunming**	**11.94**	**184**	Pn			**Pn**	**23 06 05.6**	**-1.4**
LSA	**Lhasa**	**12.80**	**239**	P			**Pn**	**23 06 18.3**	**-0.7**
LSA				pP				23 06 26.3	
LSA				S			**Sn**	**23 08 43.1**	**+1.2**
LSA				pmax			pmax		
	comp=Z,22nm,0.9s								
LSA				LR			LR		
	comp=N,2μm,10.0s								
LSA				LR			LR		
	comp=E,3μm,12.1s								
LSA				LR			LR		
	comp=Z,5μm,13.2s								
LSA	**Lhasa**	**12.80**	**239**	P			**Pn**	**23 06 18.0**	**-1.0**
LSA	**Lhasa**	**12.80**	**239**	Pn			**Pn**	**23 06 18.0**	**-1.0**
ZAK	**Zakamensk**	**13.31**	**359**	*e*P			**Pn**	**23 06 25.0**	**-0.5**
ZAK				pmax			pmax		
	comp=Z,21nm,0.9s								
NJ2	**Nanjing**	**13.45**	**107**	*e*P			**Pn**	**23 06 25.4**	**-1.9**
NJ2				pmax			pmax		
	comp=Z,15nm,0.5s								
NJ2				LR			LR		
	comp=Z,4μm,13.3s								
NJ2				LR			LR		
	comp=Z,5μm,12.3s								
WMQ	**Urumqi**	**13.92**	**304**	*e*P			**Pn**	**23 06 34.5**	**+0.6**
WMQ				pP			P	23 06 36.1	-6.0
WMQ				PP			**PnPn**	**23 06 45.8**	**+4.1**
WMQ				S			**Sn**	**23 09 11.0**	**+2.5**
WMQ				pmax			pmax		
	comp=Z,31nm,1.3s								
WMQ				pmax			pmax		
	comp=Z,260nm,4.3s								
WMQ				LR			LR		
	comp=Z,4μm,9.3s								
WMQ				LR			LR		
	comp=Z,5μm,6.3s								
WMQ				LR			LR		
	comp=Z,3μm,14.5s								
WMQ	**Urumqi**	**13.92**	**304**	P			**Pn**	**23 06 31.7**	**-2.2**
WMQ	**Urumqi**	**13.92**	**304**				**Pn**	**23 06 31.7**	**-2.2**
TLY	**Talaya**	**14.61**	**360**	Pn			**Pn**	**23 06 43.7**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=346,slow=22,SNR=4.1								
TLY				Lg			Lg	23 10 50.2	
	comp=Z,0.0nm,0.3s,baz=259,slow=22,SNR=1.4								
TLY				LR			LR	23 12 46.5	
	comp=Z,1μm,18.7s,baz=169,slow=39								
TLY	**Talaya**	**14.61**	**360**	*e*P			**Pn**	**23 06 44.4**	**+1.2**
TLY				*e*S			**Sn**	**23 09 32.2**	**+7.1**
TLY				pmax			pmax		
	comp=Z,20nm,0.8s								
TLY				MLR			MLR		
	comp=Z,2μm,9.0s								
TLY	**Talaya**	**14.61**	**360**				**Pn**	**23 06 42.9**	**-0.3**
MOY	**Mondy**	**14.72**	**353**	*e*P			**Pn**	**23 06 45.4**	**+0.6**
MOY				pmax			pmax		
	comp=Z,54nm,1.6s								
IRK	**Irkutsk**	**15.18**	**1**	*e*P			**Pn**	**23 06 53.1**	**+2.3**
IRK				pmax			pmax		
	comp=Z,98nm,2.5s								
SHL	**Shillong**	**15.27**	**225**	P			**Pn**	**23 06 48.4**	**-3.9**
SHL				pmax			pmax		
	comp=Z,15nm,0.9s								
SHL	**Shillong**	**15.27**	**225**	Pn			**Pn**	**23 06 48.4**	**-3.9**
SLVN	**Son La**	**15.68**	**179**	Pn			**Pn**	**23 06 56.6**	**-1.1**
SNY	**Shenyang**	**16.06**	**67**	P			**P**	**23 07 06.6**	**+0.9**
SNY				S			**S**	**23 10 10.1**	**-4.0**
SNY				pmax			pmax		
	comp=Z,16nm,0.9s								
SNY				pmax			pmax		
	comp=Z,200nm,5.7s								
SNY				LR			LR		
	comp=Z,3μm,12.8s								
SNY				LR			LR		
	comp=Z,2μm,13.7s								
SNY				LR			LR		
	comp=Z,2μm,13.5s								
TAPN	**Taplejung**	**16.63**	**239**	*e*P			**Pn**	**23 07 08.9**	**-1.1**
	comp=Z,151nm,1.0s								
HIA	**Hailar**	**16.85**	**39**	*i* P			**Pn**	**23 07 12.1**	**-0.3**
HIA	**Hailar**	**16.85**	**39**	P			**Pn**	**23 07 09.7**	**-2.7**
ODAN	**Odare**	**17.16**	**238**	*e*P			**Pn**	**23 07 13.9**	**-2.8**
	comp=Z,64nm,0.7s								
HKPS	**Hong Kong Po S**	**17.29**	**146**	Pn			**Pn**	**23 07 12.7**	**-5.2**
HKPS				IAmb			IAmb	23 07 13.3	
	comp=Z,39nm,0.9s								
ZSN	**Zaisan**	**17.34**	**313**	*e*P			**Pn**	**23 07 19.0**	**+0.5**
	comp=Z,12nm,1.2s,baz=312								
ZSN	**Zaisan**	**17.34**	**313**	*e*P			**Pn**	**23 07 19.0**	**+0.5**
ZSN				pmax			pmax		
	comp=Z,12nm,1.2s								
GUN	**Gumba**	**17.57**	**244**	*e*P			**Pn**	**23 07 18.7**	**-3.2**
	comp=Z,63nm,0.7s								
RAMN	**Ramite**	**17.65**	**240**	*e*P			**Pn**	**23 07 20.0**	**-2.7**
	comp=Z,68nm,1.1s								
PAYA	**Payao**	**17.96**	**192**	P			**P**	**23 07 30.0**	**+3.1**
	comp=Z,10μmcomp=Z,268nm,0.9s								
KKN	**Kakani**	**18.08**	**245**	*e*P			**Pn**	**23 07 25.4**	**-2.6**
	comp=Z,65nm,0.8s								
PKI	**Pulchoki**	**18.11**	**244**	*e*P			**Pn**	**23 07 25.6**	**-2.9**
	comp=Z,106nm,1.2s								
PKIN	**Phulchoki**	**18.12**	**244**	*e*P			**Pn**	**23 07 25.6**	**-2.9**
	comp=Z,27nm,0.6s								
INCN	**Inchon**	**18.25**	**82**	P			**Pn**	**23 07 27.5**	**-2.3**
INCN				pmax			pmax		
	comp=Z,22nm,1.1s								
INCN	**Inchon**	**18.25**	**82**	Pn			**Pn**	**23 07 27.5**	**-2.3**
DMN	**Daman**	**18.31**	**244**	*e*P			**Pn**	**23 07 28.7**	**-2.1**
	comp=Z,47nm,0.7s								
GKN	**Gorkha**	**18.42**	**246**	*e*P			**P**	**23 07 29.9**	**-2.2**
	comp=Z,69nm,1.0s								
CM34	**Chiang Mai Arr**	**18.59**	**194**	P			**Pn**	**23 07 36.0**	**+2.0**
MK31	**Makanchi Array**	**18.61**	**308**	*ce*P			**P**	**23 07 34.1**	**+0.1**
MK31	**Makanchi Array**	**18.61**	**308**	P			**P**	**23 07 33.6**	**-0.4**
MKAR	**Makanchi Array**	**18.61**	**308**	P			**P**	**23 07 32.4**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=104,slow=11,SNR=32								
MKAR				Lg			Lg	23 13 11.7	
	comp=Z,0.2nm,0.3s,baz=122,slow=24,SNR=2.4								
MKAR				LR			LR	23 15 42.9	
	comp=Z,937nm,18.1s,baz=106,slow=40								
MKAR	**Makanchi Array**	**18.61**	**308**	P			**P**	**23 07 33.1**	**-0.9**
MKAR	**Makanchi Array**	**18.61**	**308**	P			**P**	**23 07 33.1**	**-0.9**
CM33	**Chiang Mai Arr**	**18.66**	**194**	P			**Pn**	**23 07 37.0**	**+2.1**
CHTO	**Chiang Mai**	**18.66**	**194**	P			**Pn**	**23 07 35.4**	**+0.5**
CHTO				pmax			pmax		
	comp=Z,9.0nm,0.9s								
CHTO	**Chiang Mai**	**18.66**	**194**				**Pn**	**23 07 35.4**	**+0.5**
CMMT	**Chiang Mai**	**18.66**	**194**	P			**Pn**	**23 07 39.2**	**+4.2**
	comp=Z,7.4nm,0.9s								
CM35	**Chiang Mai Arr**	**18.75**	**194**	P			**Pn**	**23 07 38.0**	**+1.9**
QIZ	**Qiongzhong**	**18.76**	**162**	P			**Pn**	**23 07 36.1**	**0.0**
QIZ				S			**S**	**23 11 09.0**	**-0.3**
QIZ				LR			LR		
	comp=Z,1μm,8.6s								
QIZ				LR			LR		
	comp=Z,1μm,7.3s								
QIZ				LR			LR		
	comp=Z,1μm,12.2s								
QIZ	**Qiongzhong**	**18.76**	**162**	P			**Pn**	**23 07 37.3**	**+1.1**
MAKZ	**Makanchi**	**18.82**	**308**	P			**P**	**23 07 35.7**	**-0.5**
MAKZ				pmax			pmax		
	comp=Z,16nm,0.8s								
MAKZ	**Makanchi**	**18.82**	**308**	P			**P**	**23 07 35.7**	**-0.5**
LAMP	**Lampang**	**18.82**	**192**	P			**Pn**	**23 07 43.0**	**+6.1**
	comp=Z,26nm,0.9s								
CM32	**Chiang Mai Arr**	**18.84**	**194**	P			**Pn**	**23 07 39.0**	**+1.9**
DANN	**Dangsing**	**18.88**	**248**	*e*P			**P**	**23 07 35.5**	**-1.8**
	comp=Z,66nm,0.5s								
CM36	**Chiang Mai Arr**	**18.92**	**194**	P			**Pn**	**23 07 42.0**	**+3.9**
NONG	**Nongkai**	**18.94**	**182**	P			**Pn**	**23 07 40.7**	**+2.4**
	comp=Z,3nm,1.0s								
CM31	**Chiang Mai Arr**	**19.01**	**194**	P			**Pn**	**23 07 45.5**	**+6.3**
	comp=Z,250nm,0.8s								
CM31	**Chiang Mai Arr**	**19.01**	**194**	P			**Pn**	**23 07 40.9**	**+1.8**
CMAR	**Chiang Mai Arr**	**19.01**	**194**	P			**Pn**	**23 07 39.1**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=5.8,slow=9.6,SNR=18								
CMAR				LR			LR	23 15 58.5	
	comp=Z,255nm,18.0s,baz=52,slow=40								
CMAR	**Chiang Mai Arr**	**19.01**	**194**	P			**Pn**	**23 07 39.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**19.01**	**194**	P			**Pn**	**23 07 39.8**	**+0.6**
CM09	**Chiang Mai Arr**	**19.01**	**194**	P			**Pn**	**23 07 45.0**	**+5.7**
	comp=Z,75nmcomp=Z,9.4nm,0.9s								
CM15	**Chiang Mai Arr**	**19.02**	**194**	P			**Pn**	**23 07 45.0**	**+5.7**
	comp=Z,12nm,1.0s								
CM02	**Chiang Mai Arr**	**19.03**	**194**	P			**Pn**	**23 07 45.0**	**+5.6**
	comp=Z,95nmcomp=Z,14nm,0.9s								
CM01	**Chiang Mai Arr**	**19.04**	**194**	P			**Pn**	**23 07 45.8**	**+6.2**
	comp=Z,90nmcomp=Z,10nm,0.9s								
CM13	**Chiang Mai Arr**	**19.05**	**194**	P			**Pn**	**23 07 45.0**	**+5.3**
	comp=Z,62nmcomp=Z,7.0nm,1.1s								
CM04	**Chiang Mai Arr**	**19.06**	**194**	P			**Pn**	**23 07 44.0**	**+4.2**
	comp=Z,79nmcomp=Z,9.0nm,0.9s								
CM05	**Chiang Mai Arr**	**19.06**	**194**	P			**Pn**	**23 07 46.0**	**+6.2**
	comp=Z,64nmcomp=Z,6.4nm,1.0s								
KS19	**Wonju Array Si**	**19.22**	**81**	P			**Pn**	**23 07 41.4**	**-0.2**
KSAR	**Wonju Array Be**	**19.24**	**82**	P			**P**	**23 07 39.6**	**-1.3**
KSAR	**Wonju Array Be**	**19.24**	**82**	P			**P**	**23 07 39.6**	**-1.3**
KSRS	**Korea Array**	**19.27**	**82**	P			**P**	**23 07 41.3**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=274,slow=10,SNR=5.8								
KSRS				LR			LR	23 15 34.9	
	comp=Z,809nm,18.9s,baz=276,slow=39								
KOLN	**Koldanda**	**19.31**	**247**	*e*P			**P**	**23 07 40.3**	**-1.7**
	comp=Z,38nm,0.8s								
SHLS	**Shalkode**	**19.48**	**296**	*e*P			**P**	**23 07 40.6**	**-3.1**
	comp=Z,21nm,1.2s,baz=296								
SHLS				LR			LR	23 13 49.4	
	comp=Z,249nm,12.0s,baz=296								
SHLS	**Shalkode**	**19.48**	**296**	*e*P			**P**	**23 07 40.5**	**-3.1**
SHLS				pmax			pmax		
	comp=Z,21nm,1.2s								
SHLS				MLR			MLR		
	comp=Z,249nm,12.0s								
MHMT	**Maesarieng**	**19.50**	**197**	P			**Pn**	**23 07 51.0**	**+6.0**
	comp=Z,17nm,1.1s								
PYUN	**Piuthan**	**19.59**	**249**	*e*P			**P**	**23 07 43.6**	**-1.4**
	comp=Z,61nm,0.5s								
SUKH	**Sukhothai**	**19.84**	**192**	P			**Pn**	**23 07 53.9**	**+4.8**
	comp=Z,20nm,0.7s								
NACB	**Ninganchiao**	**20.01**	**125**	P			**Pn**	**23 07 50.4**	**-0.7**
NACB				IAmb			IAmb	23 07 56.3	
	comp=Z,26nm,0.9s								
TPUB	**Ta-pu**	**20.01**	**129**	P			**P**	**23 07 49.6**	**+0.2**
PHIT	**Phitsanulok**	**20.02**	**189**	P			**Pn**	**23 07 52.1**	**+0.9**
	comp=Z,79nm,1.2s								
KPKS	**Kokpek**	**20.10**	**296**	*e*P			**P**	**23 07 50.9**	**+0.5**
	comp=Z,15nm,1.2s,baz=296								
KPKS	**Kokpek**	**20.10**	**296**	*e*P			**P**	**23 07 50.8**	**+0.5**
KPKS				pmax			pmax		
	comp=Z,15nm,1.2s								
SATY	**Saty**	**20.23**	**295**	*e*P			**P**	**23 07 52.7**	**+0.9**
	baz=295								
SATY				*e*S			**S**	**23 11 40.8**	**+2.0**
	baz=295								
SATY	**Saty**	**20.23**	**295**	*e*P			**P**	**23 07 52.7**	**+0.9**
SATY				*e*S			**S**	**23 11 40.7**	**+2.0**
TDK	**Taldyqorghan**	**20.61**	**301**	*e*P			**P**	**23 07 56.7**	**+0.9**
	comp=Z,21nm,0.

KUU Kurty 21.84 297 *e*P **P 23 08 09.4 +0.3**
comp=Z,13nm,0.8s,baz=296
KUU *e*S **S 23 12 11.6 +1.1**
baz=296
KUU Kurty 21.84 297 *e*P **P 23 08 09.4 +0.3**
KUU *e*S **S 23 12 11.6 +1.1**
KUU pmax pmax
comp=Z,13nm,0.8s
KSH Kashi 21.87 285 P **P 23 08 16.4 +6.8**
KSH S **S 23 12 16.3 +5.0**
KSH pmax pmax
comp=Z,36nm,1.0s
KSH pmax pmax
comp=Z,410nm,4.6s
KSH LR LR
comp=Z,3μm,13.6s
KSH LR LR
comp=Z,3μm,11.1s
KSH LR LR
comp=Z,4μm,13.9s
KURK Kurchatov 22.51 315*ce*P **P 23 08 13.8 -2.3**
KURK pmax pmax
comp=Z,36nm,1.3s
KURK Kurchatov 22.51 315 P **P 23 08 14.4 -1.7**
KURBB Kurchatov Arra 22.52 315 P **P 23 08 14.5 -1.7**
comp=Z,12nm,0.8s,baz=116,slow=12,SNR=43
KURBB Lg Lg 23 15 06.2
comp=Z,6.4nm,1.1s,baz=112,slow=25,SNR=5.8
USA0B Ussuriysk Arra 22.54 63 P **P 23 08 14.8 -1.7**
USA0B pmax pmax
comp=Z,17nm,1.2s
USA0B Ussuriysk Arra 22.54 63 P **P 23 08 14.8 -1.7**
USRK Ussuriysk Ar. 22.54 63 P **P 23 08 14.7 -1.8**
comp=Z,4.2nm,0.8s,baz=262,slow=12,SNR=8.0
USRK LR LR 23 18 37.0
comp=Z,553nm,19.2s,baz=252,slow=41
USRK Ussuriysk Ar. 22.54 63 P **P 23 08 14.6 -1.9**
JNU Nakatsue 22.55 92 LR LR 23 16 42.6
comp=Z,677nm,19.1s,baz=296,slow=36
SGDS Sogindy 23.02 295 *e*P **P 23 08 22.9 +1.2**
comp=Z,10nm,1.3s,baz=295
SGDS *e*S **S 23 12 34.3 +2.0**
baz=295
SGDS Sogindy 23.02 295 *e*P **P 23 08 22.8 +1.2**
SGDS *e*S **S 23 12 34.2 +2.0**
SGDS pmax pmax
comp=Z,10.0nm,1.3s
AAK Ala-Archa 23.04 293*ce*P **P 23 08 21.8 -0.2**
AAK pmax pmax
comp=Z,38nm,1.3s
ZEA Zeya 23.30 37 *e*P **P 23 08 28.1 +3.8**
ZEA *e*S **S 23 12 34.4 -2.3**
ZEA pmax pmax
comp=Z,10.0nm,0.5s
ZEA smax smax
comp=E,300nm,4.0s
ZEA smax smax
comp=N,700nm,4.1s
ZEA MLR MLR
comp=N,1μm,12.0s
ZEA MLR MLR
comp=Z,1μm,15.0s
BTLS Baital 23.65 299 *e*P **P 23 08 28.3 +0.4**
comp=Z,6.6nm,0.9s,baz=299
BTLS LR LR 23 17 24.8
comp=Z,146nm,10.1s,baz=299
BTLS Baital 23.65 299 *e*P **P 23 08 28.2 +0.4**
BTLS pmax pmax
comp=Z,7.0nm,0.9s
BTLS MLR MLR
comp=Z,146nm,10.0s
KLR Kul'dur 23.65 50 P **P 23 08 27.8 -0.1**
comp=Z,5.0nm,0.7s,baz=267,slow=9.0,SNR=9.9
KLR LR LR 23 18 28.1
comp=Z,1μm,18.4s,baz=266,slow=39
KLR Kul'dur 23.65 50 *i* P **P 23 08 28.2 +0.4**
KLR pmax pmax
comp=Z,9.0nm,1.0s
NIL Nilore 25.02 271 P **P 23 08 40.6 -0.1**
NIL pmax pmax
comp=Z,32nm,0.7s
NIL Nilore 25.02 271 P **P 23 08 40.6 -0.1**
DZA Taraz 25.38 293 *e*P **P 23 08 44.1 +0.2**
baz=293
DZA Taraz 25.38 293 *e*P **P 23 08 44.1 +0.2**
BRZS Berezniki 25.73 310 *e*P **P 23 08 47.0 0.0**
comp=Z,4.2nm,0.8s,baz=310
BRZS Berezniki 25.73 310 *e*P **P 23 08 46.9 0.0**
BRZS pmax pmax
comp=Z,4.0nm,0.8s
KK31 Karatay Array 25.99 294 P **P 23 08 47.9 -1.5**
KK31 pmax pmax
comp=Z,9.0nm,0.8s
KK31 Karatay Array 25.99 294 P **P 23 08 47.9 -1.5**
KK31 IAmb IAmb 23 08 58.2
comp=Z,8.6nm,0.8s
KKAR Karatay Array 25.99 294 P **P 23 08 49.2 -0.2**
KKAR Karatay Array 25.99 294 P **P 23 08 49.0 -0.4**
KKAR IAmb IAmb 23 08 58.2
comp=Z,8.6nm,0.8s
KKAR Karatay Array 25.99 294 P **P 23 08 49.2 -0.2**
KK01 Karatay Array 26.00 294 P **P 23 08 50.4 +0.9**
KK04 Karatay Array 26.00 294 P **P 23 08 49.7 +0.2**
GAR Garm 26.29 284 P **P 23 08 52.7 +0.4**
IUG luzhnay 26.33 292 *e*P **P 23 08 52.6 0.0**
comp=Z,5.2nm,0.8s,baz=291
IUG luzhnay 26.33 292 *e*P **P 23 08 52.5 0.0**
IUG pmax pmax
comp=Z,5.0nm,0.8s
CHGR Chuyangaron 27.23 284 P **P 23 09 01.2 +0.4**
MJAR Matsushiro Arr 27.54 81 LR LR 23 20 03.6
comp=Z,405nm,18.6s,baz=265,slow=37
TGY Tagaytay City 27.56 142 LR LR 23 20 03.5
comp=Z,603nm,18.6s,baz=316,slow=37
BVAR Borovoye Array 28.11 315 P **P 23 09 07.6 -0.7**
comp=Z,3.4nm,0.9s,baz=238,slow=22,SNR=10
KBL Kabul 28.14 275 P **P 23 09 09.3 +0.3**
KBL pmax pmax
comp=Z,7.0nm,0.8s
KBL Kabul 28.14 275 P **P 23 09 09.3 +0.3**
KBL IAmb IAmb 23 09 15.6
comp=Z,6.6nm,0.8s
BRVK Borovoye 28.18 315*ce*P **P 23 09 08.5 -0.4**
BRVK pmax pmax
comp=Z,11nm,1.0s
BRVK Borovoye 28.18 315 P **P 23 09 08.8 -0.2**
BRVK IAmb IAmb 23 09 11.3
comp=Z,9.0nm,0.9s
YAK Yakutsk 29.74 25 LR LR 23 21 55.8
comp=Z,424nm,19.6s,baz=278,slow=38
ASAJ Asahikawa 30.14 64 LR LR 23 20 58.8
comp=Z,543nm,18.3s,baz=47,slow=35
NRIK Noril'sk 33.51 350 P **P 23 09 54.4 -1.3**
comp=Z,6.8nm,0.9s,baz=156,slow=8.9,SNR=9.0
NRIK LR LR 23 24 07.5
comp=Z,567nm,18.5s,baz=182,slow=38
HRA Herat 33.58 278 P **P 23 09 57.1 +0.1**
AB07 Akbulak array 33.70 305 P **P 23 09 57.6 0.0**
AB03 Akbulak array 33.71 305 P **P 23 09 57.1 -0.6**
ABKAR Akbulak array 33.71 305 P **P 23 09 57.2 -0.4**
ABKAR Akbulak array 33.71 305 P **P 23 09 57.5 -0.2**
SVE Sverdlovsk 34.66 319 *e*P **P 23 10 05.5 -0.3**
SVE pmax pmax
comp=Z,23nm,1.0s
SVE MLR MLR
comp=Z,670nm,19.0s
AKTO Aktyubinsk 35.04 307 P **P 23 10 07.7 -1.5**
comp=Z,2.6nm,0.8s,baz=103,slow=8.8,SNR=6.9
ARU Arti 35.66 318 P **P 23 10 13.8 -0.8**
comp=Z,8.8nm,0.9s,baz=106,slow=5.1,SNR=20
ARU Arti 35.66 318*d i*P **P 23 10 13.7 -0.8**
ARU 23 11 29.9
ARU 23 12 39.7
ARU S **S 23 15 52.5 +1.8**
ARU SS **SnSn 23 18 15.0 +3.3**
ARU pmax pmax
comp=Z,30nm,1.0s
ARU Arti 35.66 318 P **P 23 10 13.7 -0.8**
DAV Davao City (W) 35.89 141 LR LR 23 26 21.2
comp=Z,537nm,18.2s,baz=332,slow=39
GYA2 ALIBECK ARRAY 35.90 286 P **P 23 10 18.0 +1.2**
GYB1 ALIBECK ARRAY 35.90 286 P **P 23 10 18.4 +1.6**
GEYT Alibeck 35.91 286 P **P 23 10 17.2 +0.4**
comp=Z,18nm,0.9s,baz=39,slow=5.7,SNR=23
GEYT LR LR 23 26 36.9
comp=Z,493nm,21.3s,baz=205,slow=39

GEYT Alibeck 35.91 286 P **P 23 10 18.0 +1.1**
GYA0B ALIBECK ARRAY 35.91 286 P **P 23 10 17.2 +0.3**
GYA1 ALIBECK ARRAY 35.91 286 P **P 23 10 17.9 +1.0**
GYA3 ALIBECK ARRAY 35.91 286 P **P 23 10 18.1 +1.2**
GYB5 ALIBECK ARRAY 35.91 286 P **P 23 10 18.0 +1.0**
GYB5 IAmb IAmb 23 10 21.5
comp=Z,14nm,0.8s
TIXI Tiksi 37.00 13*ce*P **P 23 10 24.9 -0.8**
SEY Seymchan 39.16 33 LR LR 23 26 56.0
comp=Z,398nm,21.8s,baz=258,slow=36
PETK Petropavlovsk- 40.33 49 P **P 23 10 53.8 -0.1**
comp=Z,5.9nm,0.8s,baz=221,slow=1.6,SNR=6.7
PETK LR LR 23 28 15.9
comp=Z,361nm,19.2s,baz=271,slow=37
KIRV Kirov 40.91 319 P **P 23 10 57.6 -0.9**
comp=Z,21nm,0.9s,baz=30,slow=2.9,SNR=6.9
KIRV Kirov 40.91 319*ce*P **P 23 10 57.5 -1.1**
WSAR Wadi Sarin 40.97 263 P **P 23 11 00.5 +0.9**
comp=Z,4.3nm,0.5s,baz=121,slow=9.6,SNR=3.4
MAK Makhachkala 42.76 296*c i*P P 23 11 07.4 -6.6
MAK *e*S **S 23 17 30.0 -7.7**
MAK *e*SS **SS 23 20 40.7 -7.6**
MAK MLR MLR
comp=Z,526nm,12.0s
GUMO Guam 43.48 112 LR LR 23 31 06.7
comp=Z,152nm,18.0s,baz=18,slow=38
KAPI Kappang 44.47 157 P **P 23 11 27.0 -0.9**
KAPI pmax pmax
comp=Z,13nm,1.1s
KAPI Kappang 44.47 157 P **P 23 11 27.0 -0.9**
KAPI IAmb IAmb 23 11 40.5
comp=Z,13nm,1.1s
GUDG Gudauri 45.05 296 P **P 23 11 37.0 +4.3**
VRH Novokhopyorsk 45.34 309 *e*P **P 23 11 34.2 -0.4**
VRH pmax pmax
comp=Z,20nm,0.7s
ZEI Tsey 45.38 297 *e*P **P 23 11 36.0 +0.7**
ZEI pmax pmax
comp=Z,9.0nm,1.0s
GNI Garni 45.45 293 P **P 23 11 36.6 +0.8**
comp=Z,2.6nm,0.6s,baz=17,slow=20,SNR=3.1
GNI Garni 45.45 293*ce*P **P 23 11 34.1 -1.7**
GNI pmax pmax
comp=Z,16nm,1.3s
GNI Garni 45.45 293 P **P 23 11 36.6 +0.8**
GNI IAmb IAmb 23 11 45.4
comp=Z,11nm,1.0s
GOF Gofitskoye 45.48 300⇑*e*P **P 23 11 37.1 +1.3**
ONI Oni 45.75 296 P **P 23 11 43.0 +4.9**
KBZ Khabaz 45.88 298 P **P 23 11 38.5 -0.4**
comp=Z,4.4nm,0.9s,baz=146,slow=5.2
KBZ LR LR 23 34 12.6
comp=Z,478nm,19.5s,baz=64,slow=40
KBZ Khabaz 45.88 298*ce*P **P 23 11 39.1 +0.2**
KBZ pmax pmax
comp=Z,7.0nm,1.1s
KIV Kislovodsk 45.97 299⇑P **P 23 11 40.4 +0.6**
KIV Kislovodsk 45.97 299 *e*P **P 23 11 38.8 -1.0**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV MLR MLR
comp=Z,887nm,16.0s
KIV Kislovodsk 45.97 299 P **P 23 11 39.3 -0.5**
KIV IAmb IAmb 23 11 47.2
comp=Z,10nm,1.0s
AKH Akhalkalaki 46.02 295⇑P **P 23 11 41.7 +1.3**
AKH Akhalkalaki 46.02 295 P **P 23 11 44.4 +4.0**
KLMR Klimovskoe 46.06 322 *e*P **P 23 11 38.7 -1.4**
KLMR pmax pmax
comp=Z,19nm,0.8s
KLMR Klimovskoe 46.06 322 *e*P **P 23 11 38.7 -1.4**
KLMR AMP 23 11 42.2
comp=Z,19nm,0.8s
KLMR LQ LQ 23 28 09.2
KLMR LQ LQ 23 28 09.2
KLMR LR LR 23 30 44.6
LPSR Galich'ya Gora 46.88 311 *e*P **P 23 11 46.8 +0.1**
LPSR pmax pmax
comp=Z,30nm,1.0s
VORD Divnogorie 46.89 309 *e*P **P 23 11 47.1 +0.3**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 46.93 309 *e*P **P 23 11 46.6 -0.5**
VSR pmax pmax
comp=Z,30nm,0.8s
MOS Moscow 47.28 315 *e*P **P 23 11 50.6 +0.8**
MOS MLR MLR
comp=Z,400nm,20.0s
OBN Obninsk 47.95 315*ce*P **P 23 11 54.0 -0.9**
OBN pmax pmax
comp=Z,17nm,1.0s
OBN MLR MLR
comp=Z,410nm,18.0s
SOC Sochi 48.15 299 *e*P **P 23 11 55.9 -0.8**
SOC *e* 23 13 46.8
SOC *e*PPP PPP 23 14 40.8
SOC *e*S **S 23 18 58.2 +2.7**
SOC *e*SSS SSS 23 23 33.4
SOC pmax pmax
comp=Z,19nm,0.8s
SOC MLR MLR
comp=Z,486nm,19.0s
MALT Malatya 50.68 293 P **P 23 12 19.8 +3.6**
ARD3 ARCESS Array S 51.72 334 P **P 23 12 22.6 -0.8**
ARD3 IAmb IAmb 23 12 32.3
comp=Z,12nm,1.1s
ARD2 ARCESS Array S 51.72 334 P **P 23 12 23.8 +0.4**
ARD2 IAmb IAmb 23 12 31.1
comp=Z,12nm,1.1s
ARD4 ARCESS Array S 51.72 334 P **P 23 12 23.0 -0.5**
ARD4 IAmb IAmb 23 12 32.5
comp=Z,12nm,1.0s
ARC2 ARCESS Array S 51.72 334 P **P 23 12 23.1 -0.4**
ARC2 IAmb IAmb 23 12 42.3
comp=Z,12nm,1.0s
ARA0 ARCESS Array S 51.73 334 P **P 23 12 24.0 +0.5**
ARA0 IAmb IAmb 23 12 42.3
comp=Z,8.3nm,1.1s
ARCES ARCESS Array B 51.73 334 P **P 23 12 22.4 -1.2**
comp=Z,5.2nm,0.8s,baz=81,slow=7.5,SNR=16
ARCES LR LR 23 37 09.7
comp=Z,170nm,18.6s,baz=85,slow=39
FINES FINESS Array B 52.51 324 P **P 23 12 29.3 -0.1**
comp=Z,2.4nm,0.6s,baz=86,slow=7.2,SNR=14
FINES LR LR 23 36 30.7
comp=Z,444nm,19.4s,baz=74,slow=38
AKASG Malin Array Be 53.18 310 P **P 23 12 33.5 -1.0**
comp=Z,6.6nm,0.7s,baz=64,slow=7.3,SNR=12
AKASG LR LR 23 36 04.5
comp=Z,432nm,19.7s,baz=80,slow=37
AKBB Malin Array Si 53.18 310*ce*P **P 23 12 33.0 -1.5**
AKBB Malin Array Si 53.18 310 P **P 23 12 34.4 -0.1**
AKBB IAmb IAmb 23 12 36.7
comp=Z,7.8nm,0.9s
SPB2 Spitsbergen Ar 53.49 345 P **P 23 12 35.2 -1.3**
SPA0 Spitsbergen Ar 53.49 345 P **P 23 12 36.3 -0.1**
BR131 Keskin Array S 53.68 296 P **P 23 12 38.3 -0.3**
BR131 pmax pmax
comp=Z,5.0nm,0.9s
BR131 Keskin Array S 53.68 296 P **P 23 12 38.3 -0.3**
BR131 IAmb IAmb 23 12 42.2
comp=Z,5.3nm,0.8s
BRTR Keskin Array B 53.68 296 P **P 23 12 38.2 -0.3**
comp=Z,4.8nm,0.8s,baz=99,slow=7.6,SNR=16
BRTR LR LR 23 40 20.2
comp=Z,92nm,19.4s,baz=78,slow=42
BRTR Keskin Array B 53.68 296 P **P 23 12 38.9 +0.3**
BRTR Keskin Array B 53.68 296 P **P 23 12 38.9 +0.3**
PURM Purcari 53.99 305⇑P **P 23 12 40.9 +0.4**
SORM Soroca 54.47 307⇑P **P 23 12 43.0 -1.0**
MILM Milestii Mici 54.56 306⇑P **P 23 12 45.0 +0.3**
TPGR Topolog 55.50 303⇑P **P 23 12 52.4 +0.8**
TESR Tescani 56.10 306⇑P **P 23 12 55.6 -0.2**
ICOR Ion Corvin 56.18 303⇑P **P 23 12 56.8 +0.4**
VRI Vrincioaia 56.27 305⇑P **P 23 12 58.5 +1.4**
BIZ Bicaz 56.30 306⇑P **P 23 12 57.0 -0.3**
BURAR Bucovina Array 56.64 307⇑P **P 23 12 59.7 0.0**
BURAR Bucovina Array 56.64 307 P **P 23 13 00.2 +0.5**
BUR08 Bucovina Ar. S 56.64 307 P **P 23 12 60.0 +0.2**
NEHR Nehoiu 56.71 305⇑P **P 23 13 00.8 +0.5**
MLR Muntele Rosu 56.92 305⇑P **P 23 13 01.7 -0.1**
MLR Muntele Rosu 56.92 305 P **P 23 13 01.9 +0.1**
MLR pmax pmax
comp=Z,9.0nm,1.1s

MLR Muntele Rosu 56.92 305 P **P 23 13 01.9 +0.1**
MLR IAmb IAmb 23 13 18.4
comp=Z,8.9nm,1.1s
DOPR Dopca 57.11 306⇑P **P 23 13 03.1 +0.1**
VOIR 57.52 305⇑P **P 23 13 07.4 +1.4**
ARR Arges 57.82 305⇑P **P 23 13 08.1 0.0**
HUMR Humele 57.91 304⇑P **P 23 13 09.7 +1.1**
KOLS Kolonicke sedl 58.01 310 *e*P **P 23 13 09.7 +0.4**
KOLS Kolonicke sedl 58.01 310 *e*P **P 23 13 09.7 +0.4**
GZR Gura Zlata 59.02 306⇑P **P 23 13 16.9 +0.4**
SIRR Siria 59.40 307⇑P **P 23 13 19.2 +0.2**
NORES NORESS Array B 59.48 325 P **P 23 13 19.4 +0.1**
NB2 NORSAR Subarra 59.51 326 P **P 23 13 18.0 -1.6**
comp=Z,3.0nm,0.8s,baz=68,slow=6.9
NOA NORSAR Array B 59.51 326 P **P 23 13 18.4 -1.2**
comp=Z,5.5nm,0.9s,baz=68,slow=6.9,SNR=11
NOA LR LR 23 40 31.0
comp=Z,447nm,19.1s,baz=65,slow=38
NC204 NORSAR Array S 59.62 326 P **P 23 13 18.9 -1.5**
BZS Buzias 59.68 306⇑P **P 23 13 20.5 -0.5**
BZS Buzias 59.68 306 P **P 23 13 21.2 +0.2**
BZS pmax pmax
comp=Z,4.0nm,1.2s
VYHS Vyhne 60.28 310 *e*P **P 23 13 25.7 +0.6**
VYHS Vyhne 60.28 310 *e*P **P 23 13 25.7 +0.6**
MORC Moravsky Berou 60.55 312⇑P **P 23 13 26.6 -0.3**
MORC Moravsky Berou 60.55 312 P **P 23 13 26.9 0.0**
MORC pmax pmax
comp=Z,7.0nm,1.1s
MORC Moravsky Berou 60.55 312 P **P 23 13 26.9 0.0**
MORC IAmb IAmb 23 13 36.9
comp=Z,6.7nm,1.1s
MODS Modra-Piesok 61.28 311 *e*P **P 23 13 34.2 +2.3**
MODS Modra-Piesok 61.28 311 *e*P **P 23 13 34.2 +2.3**
DIVS Divibare 61.36 305 P **P 23 13 31.4 -1.2**
DIVS IAmb IAmb 23 13 39.0
comp=Z,3.4nm,0.9s
IMAR Indian Mountai 61.54 27 P **P 23 13 33.9 +0.6**
TOLK Toolik Lake Re 61.69 23 P **P 23 13 33.3 -1.1**
TOLK IAmb IAmb 23 13 39.9
comp=Z,4.3nm,0.8s
COLD Coldfoot 62.19 25 P **P 23 13 38.3 +0.6**
COLD IAmb IAmb 23 13 48.2
comp=Z,7.7nm,0.9s
BRG Berggiesshubel 62.20 314 *e*P **P 23 13 37.8 -0.2**
comp=Z,7.7nm,1.2s
BRG Berggiesshubel 62.20 314 *e*P **P 23 13 37.8 -0.2**
BRG pmax pmax
comp=Z,8.0nm,1.2s
CONA Conrad Observa 62.33 311 *e*P **P 23 13 41.7 +2.7**
comp=Z,4.7nm,1.0s
CLL Collm 62.55 315 *e*P **P 23 13 41.0 +0.7**
comp=Z,9.0nm,1.1s
CLL *e*SS SS 23 26 42.0 +31
CLL LmV 23 46 00.0
comp=N,100nm,18.7s
CLL LmV 23 46 00.0
comp=E,300nm,20.5s
CLL LmV 23 46 00.0
comp=Z,200nm,19.9s
CLL Collm 62.55 315 *e*P **P 23 13 41.0 +0.7**
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL Collm 62.55 315 P **P 23 13 40.1 -0.2**
CLL IAmb IAmb 23 13 43.2
comp=Z,9.1nm,1.1s
ARSA Arzberg 62.83 310 *i* P **P 23 13 44.2 +1.9**
comp=Z,1.9nm,0.8s
GERES GERESS Array B 63.22 312 P **P 23 13 44.5 -0.5**
comp=Z,1.7nm,1.0s,baz=58,slow=5.0,SNR=8.8
GERES GERESS Array B 63.22 312 P **P 23 13 45.0 0.0**
GERES GERESS Array B 63.22 312 P **P 23 13 45.0 0.0**
MOA Molln 63.33 311 *e*P **P 23 13 47.2 +1.6**
comp=Z,5.4nm,1.0s
SOKA Soboth 63.38 310 *e*P **P 23 13 46.7 +0.6**
comp=Z,6.8nm,1.4s
WRAB Tennant Creek 63.64 148 *i* P **P 23 13 46.9 -0.9**
WRAB pmax pmax
comp=Z,8.0nm,1.3s
WRAB Tennant Creek 63.64 148 P **P 23 13 46.8 -1.1**
WRAB IAmb IAmb 23 13 58.4
comp=Z,7.9nm,1.1s
WRA Warramunga Arr 63.64 148 P **P 23 13 47.2 -0.6**
comp=Z,4.9nm,1.1s,baz=345,slow=6.8,SNR=14
WRA Warramunga Arr 63.64 148 P **P 23 13 46.9 -1.0**
WB2 Warramunga Ar 63.65 148 P **P 23 13 47.3 -0.6**
WB2 IAmb IAmb 23 13 57.5
comp=Z,8.5nm,1.1s
WC3 Warramunga Arr 63.67 148 P **P 23 13 47.0 -1.0**
WC3 IAmb IAmb 23 14 05.0
comp=Z,6.6nm,1.1s
BMAR Burnt Mountain 63.93 24 P **P 23 13 49.4 +0.1**
MDM Murphy Dome 64.05 27 P **P 23 13 50.6 +0.5**
MDM IAmb IAmb 23 13 53.9
comp=Z,3.3nm,0.8s
COLA College 64.23 27 *i* P **P 23 13 51.6 +0.4**
COLA pmax pmax
comp=Z,10.0nm,1.0s
CCB Clear Creek Bu 64.37 27 P **P 23 13 52.1 -0.1**
IL31 64.63 27 P **P 23 13 53.6 -0.2**
IL31 IAmb IAmb 23 13 58.9
comp=Z,5.4nm,1.1s
ILAR Eielson Array 64.63 27 P **P 23 13 52.1 -1.7**
comp=Z,1.9nm,0.8s,baz=286,slow=6.7,SNR=20
ILAR LR LR 23 43 17.4
comp=Z,388nm,19.1s,baz=318,slow=37
ILAR Eielson Array 64.63 27 P **P 23 13 53.5 -0.4**
ILAR Eielson Array 64.63 27 P **P 23 13 53.5 -0.4**
ABTA Abfaltersbach 64.89 311 *e*P **P 23 13 55.9 -0.1**
comp=Z,5.2nm,1.3s
WTTA Wattenberg 65.18 311 *e*P **P 23 13 57.9 0.0**
comp=Z,7.7nm,0.8s
WTTA Wattenberg 65.18 311 P **P 23 13 58.0 0.0**
WTTA pmax pmax
comp=Z,14nm,0.9s
WATA Walderalm 65.18 312 *e*P **P 23 13 58.6 +0.7**
comp=Z,5.5nm,1.1s
SQTA Sankt Quirin 65.46 312 *e*P **P 23 14 00.6 +0.9**
comp=Z,9.9nm,1.3s
MOTA Moosalm 65.46 312 *e*P **P 23 14 01.1 +1.4**
comp=Z,7.3nm,1.0s
FETA Feichten 65.84 312 *e*P **P 23 14 03.8 +1.6**
comp=Z,7.6nm,1.3s
INTR Introdacqua 66.28 306 P **P 23 14 03.2 -1.8**
INTR IAmb IAmb 23 14 14.8
comp=Z,6.7nm,1.1s
FUORN Ofenpass-Fuorn 66.31 311 P **P 23 14 05.6 +0.2**
NRCA Norcia 66.39 307 IAmb IAmb 23 14 19.4
comp=Z,4.8nm,0.8s
INK Inuvik 66.66 20 P **P 23 14 05.9 -0.9**
comp=Z,4.2nm,0.9s,baz=320,slow=10.0,SNR=7.8
INK Inuvik 66.66 20 P **P 23 14 07.6 +0.7**
INK pmax pmax
comp=Z,5.0nm,1.0s
INK Inuvik 66.66 20 P **P 23 14 07.5 +0.7**
INK IAmb IAmb 23 14 20.4
comp=Z,4.5nm,0.9s
K27K Chicken 66.77 26 P **P 23 14 08.3 +0.6**
K27K IAmb IAmb 23 14 15.1
comp=Z,4.5nm,1.1s
ASAR Alice Springs 66.78 150 P **P 23 14 07.8 -0.3**
comp=Z,1.6nm,0.6s,baz=333,slow=6.3,SNR=13
ASAR Alice Springs 66.78 150 P **P 23 14 07.4 -0.8**
BCAR Beaver Creek A 67.46 27 P **P 23 14 11.5 -0.6**
RES Resolute Bay 67.84 5 P **P 23 14 14.8 +0.6**
comp=Z,3.6nm,0.9s,baz=355,slow=7.2,SNR=3.8
RES Resolute Bay 67.84 5 IAmb IAmb 23 14 26.3
comp=Z,4.2nm,1.0s
HYT Haines Junctio 70.46 27 P **P 23 14 31.0 +0.1**
HYT IAmb IAmb 23 14 34.0
comp=Z,6.5nm,1.0s
NWAO Narrogin (SRO) 70.77 168 LR LR 23 46 56.2
comp=Z,106nm,20.2s,baz=84,slow=37
KMBO Kilima Mbogo 72.08 254 LR LR 23 47 19.8
comp=Z,67nm,18.2s,baz=94,slow=37
SKAG Skagway 72.19 27 P **P 23 14 41.5 +0.3**
KEST Kesra 72.58 302 LR LR 23 52 55.5
comp=Z,164nm,18.2s,baz=298,slow=41
SFJD Kangerlussuaq 74.42 350 P **P 23 14 53.0 -1.2**
comp=Z,18nm,1.1s,baz=94,slow=2.3,SNR=3.0
SFJD Kangerlussuaq 74.42 350 P **P 23 14 53.0 -1.2**
SFJD pmax pmax
comp=Z,18nm,1.1s
SFJD Kangerlussuaq 74.42 350 IAmb IAmb 23 14 54.8
comp=Z,18nm,1.1s

YKA	**Yellowknife Ar**	**76.10**	**17**	P	**P**	**23 15 02.8**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=339,slow=4.7,SNR=2.5						
STKA	**Stephens Creek**	**77.19**	**148**	P	**P**	**23 15 09.5**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=241,slow=8.2,SNR=3.2						
ESDC	**Sonseca Array**	**78.80**	**311**	P	**P**	**23 15 19.4**	**-0.3**
	comp=Z,5.2nm,1.1s,baz=56,slow=4.7,SNR=9.2						
ESDC				LR	LR	23 53 05.1	
	comp=Z,106nm,18.2s,baz=35,slow=38						
ESDC	**Sonseca Array**	**78.80**	**311**	P	**P**	**23 15 17.2**	**-2.4**
SCHQ	**Schefferville**	**88.11**	**355**	LR	LR	23 56 24.9	
	comp=Z,98nm,20.6s,baz=360,slow=36						
ULM	**Lac du Bonnet**	**91.35**	**12**	LR	LR	23 58 39.4	
	comp=Z,90nm,21.8s,baz=340,slow=36						
TORD	**Torodi Ar. Bea**	**91.52**	**288**	P	**P**	**23 16 23.1**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=24,slow=4.7,SNR=8.7						
TORD				LR	LR	00 03 49.8	
	comp=Z,112nm,18.9s,baz=345,slow=40						
PDAR	**Pinedale Array**	**94.96**	**24**	LR	LR	00 03 41.3	
	comp=Z,154nm,18.3s,baz=346,slow=38						
NVAR	**Mina Array Bea**	**95.47**	**32**	LR	LR	00 00 33.8	
	comp=Z,108nm,21.3s,baz=284,slow=36						
BOSA	**Boshof**	**98.35**	**241**	LR	LR	00 00 03.3	
	comp=Z,99nm,20.6s,baz=35,slow=35						
BDFB	**Brasilia**	**147.08**	**303**	PKPbc	**PKPbc**	**23 23 00.8**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=6.3,slow=9.2,SNR=2.7						

NNC ***14*** *23:03:40.3±0.5, 42.78N×76.64E, h0km, mb1.8, mpv2.1, Error ellipse: s-maj=4.6km s-min=1.1km az=152.0*

SOME 14 23:03:40.5, 42.78N×76.65E, h10km, 4C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZV	**Izvestkoviy**	**0.25**	**354**	*eP*	Pg	23 03 46.1	+0.3
	2.4nm,0.1s						
IZV				*eS*	Sg	23 03 50.0	+0.6
	9.9nm,0.2s						
IZV	**Izvestkoviy**	**0.25**	**354**	P	Pg	23 03 46.1	+0.3
	2.4nm,0.1s						
IZV				S	Sg	23 03 50.0	+0.6
	9.9nm,0.2s						
TNSS	**Tian-Shan**	**0.34**	**41**	*eP*	Pg	23 03 47.4	+0.1
	0.7nm,0.1s						
TNSS				*eS*	Sg	23 03 52.2	+0.4
	5.1nm,0.2s						
TNSS	**Tian-Shan**	**0.34**	**41**	P	Pg	23 03 47.4	+0.1
	0.7nm,0.1s						
TNSS				S	Sg	23 03 52.2	+0.4
	3.5nm,0.2s						
MDOK	**Medeo**	**0.48**	**37**	*eP*	Pg	23 03 50.0	+0.1
	0.3nm,0.1s						
MDOK				*eS*	Sg	23 03 56.5	+0.3
	1.6nm,0.4s						
KNDC	**Almaty**	**0.49**	**28**	⇓P	Pg	23 03 50.1	0.0
	2.9nm,0.3s						
KNDC				⇑S	Sg	23 03 57.3	+0.6
	6.1nm,0.4s						
KST	**Kastek**	**0.57**	**297**	*eP*	Pg	23 03 51.6	0.0
	3.5nm,0.1s						
KST				*eS*	Sg	23 03 59.2	+0.2
	2.4nm,0.3s						
KST	**Kastek**	**0.57**	**297**	P	Pg	23 03 51.6	0.0
	3.5nm,0.1s						
KST				S	Sg	23 03 59.2	+0.2
	2.4nm,0.3s						
TKM2	**Tokmak 2**	**0.79**	**280**	⇑P	Pg	23 03 55.5	-0.2
	2.9nm,1.4s						
TKM2				⇑S	Sg	23 04 06.3	+0.3
	0.2nm,0.3s						
DGS	**Degeres**	**0.79**	**306**	*eP*	Pg	23 03 55.7	-0.1
	0.5nm,0.2s						
DGS				*eS*	Sg	23 04 06.2	+0.1
	0.6nm,0.2s						
AAK	**Ala-Archa**	**1.60**	**266**	⇑P	Pb	23 04 09.6	-0.6
	0.4nm,0.5s						
AAK				⇓S	Sg	23 04 31.6	-0.2
	1.2nm,1.1s						

KRNET 14 23:03:46.4±0.1, 42.00N×77.08E, mb1.6, 4C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**0.15**	**31**	⇓*iP*	Pg	23 03 50.4	+1.0
	baz=35						
KDJ				⇓*iS*	Sg	23 03 52.4	+1.1
	baz=35						
ULHL	**Ulahol**	**0.67**	**292**	⇑*iP*	Pg	23 03 58.9	-0.3
	baz=92						
ULHL				⇑*iS*	Sg	23 04 08.8	+0.9
	baz=92						
TKM2	**Tokmak 2**	**1.43**	**311**	⇑*iP*	Pg	23 04 12.8	-1.0
	baz=11						
TKM2				⇑*iS*	Sg	23 04 32.2	-0.2
	baz=11						

KRSC ***14*** *23:16:11.6±0.7, 53.66N×159.93E, h86km±8km, ML4.1*
IDC ***14*** *23:16:14.1±1.8, 53.76N×159.59E, h104km±18km, mb3.0/4, mb1 3.3/4, mb1mx3.0/55, mbtmp3.4/4, Error ellipse: s-maj=40.9km s-min=24.3km az=154.0*

ISC 14 23:16:12.8±0.9, 53.67N±0.04×159.87E±0.06, h83km±6km, n47, σ1$42/65, mb3.2/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.45**	**326**	*eP*	**Pn**	**23 16 26.2**	**-0.3**
KII				*eS*	**Sn**	**23 16 37.3**	**+0.7**
SPN	**Mys Shipunski**	**0.58**	**171**	*eP*	**Pn**	**23 16 27.0**	**-0.5**
SPN				*eS*	**Sn**	**23 16 38.0**	**-0.4**
NLC	**Nalytchevo**	**0.59**	**212**	*eP*	**Pn**	**23 16 27.5**	**-0.1**
NLC				*eS*	**Sn**	**23 16 39.4**	**+0.9**
SDLR	**Sedlovina**	**0.70**	**237**	*eP*	**Pn**	**23 16 29.1**	**+0.2**
SDLR				*eS*	**Sn**	**23 16 42.1**	**+1.3**
SMAR	**Somma**	**0.76**	**238**	*eP*	**Pn**	**23 16 29.7**	**+0.2**
SMAR				*eS*	**Sn**	**23 16 43.5**	**+1.6**
KRER	**Koryakskii**	**0.76**	**242**	*eP*	**Pn**	**23 16 29.9**	**+0.3**
KRER				*eS*	**Sn**	**23 16 43.7**	**+1.7**
UGLR	**Uglovaya**	**0.77**	**234**	*eP*	**Pn**	**23 16 29.9**	**+0.3**
UGLR				*eS*	**Sn**	**23 16 44.0**	**+1.9**
AVH	**Avacha**	**0.79**	**240**	*eP*	**Pn**	**23 16 30.3**	**+0.6**
AVH				*eS*	**Sn**	**23 16 45.0**	**+2.8**
KRX	**Arik**	**0.79**	**247**	*eP*	**Pn**	**23 16 30.1**	**+0.3**
KRX				*eS*	**Sn**	**23 16 44.1**	**+1.7**
KOK	**Koryaka**	**0.83**	**243**	*eP*	**Pn**	**23 16 30.5**	**+0.4**
KOK				*eS*	**Sn**	**23 16 44.8**	**+1.8**
DALK	**Dalny**	**0.92**	**227**	*eP*	**Pn**	**23 16 31.4**	**+0.3**
DALK				*eS*	**Sn**	**23 16 46.2**	**+1.5**
PET	**Petropavlovsk**	**0.97**	**229**	*eP*	**Pn**	**23 16 32.1**	**+0.4**
PET				*eS*	**Sn**	**23 16 46.9**	**+1.1**
GNL	**Ganaly**	**1.15**	**272**	*eP*	**Pn**	**23 16 34.1**	**+0.2**
KRMR	**Karymshinskiy**	**1.34**	**232**	*eP*	**Pn**	**23 16 36.8**	**+0.7**
KRMR				*eS*	**Sn**	**23 16 55.3**	**+1.6**
PETK	**Petropavlovsk-**	**1.41**	**248**	P	**Pn**	**23 16 37.4**	**+0.3**
	11nm,0.3s,baz=78,slow=17,SNR=330						
PETK				S	**Sn**	**23 16 56.5**	**+1.1**
	16nm,0.3s,baz=274,slow=27,SNR=7.9						
KZV	**Kizimen**	**1.47**	**10**	*eP*	**Pn**	**23 16 37.7**	**-0.3**
KZV				*eS*	**Sn**	**23 16 57.0**	**0.0**
RUS	**Russkaya**	**1.48**	**214**	*eP*	**Pn**	**23 16 37.8**	**-0.2**
RUS				*eS*	**Sn**	**23 16 57.5**	**+0.5**
GRL	**Gorelyy**	**1.56**	**225**	*eP*	**Pn**	**23 16 40.3**	**+1.3**
GRL				*eS*	**Sn**	**23 17 01.4**	**+2.5**
TUMD	**Tumrok D**	**1.57**	**11**	*eP*	**Pn**	**23 16 38.6**	**-0.5**
TUMD				*eS*	**Sn**	**23 16 58.9**	**-0.2**
TUMR	**Tumrok**	**1.63**	**6**	*eP*	**Pn**	**23 16 40.0**	**0.0**
TUMR				*eS*	**Sn**	**23 17 01.2**	**+0.7**
ASAK	**Asacha**	**1.75**	**223**	*eP*	**Pn**	**23 16 42.3**	**+0.7**
ASAK				*eS*	**Sn**	**23 17 05.1**	**+1.7**
APC	**Apacha**	**1.79**	**247**	*eP*	**Pn**	**23 16 42.8**	**+0.9**
APC				*eS*	**Sn**	**23 17 06.0**	**+1.9**
KMNR	**Kamenistaya**	**2.10**	**6**	*eP*	**Pn**	**23 16 46.8**	**+0.6**
KDTR	**Khodutka, Kamc**	**2.16**	**211**	*eP*	**Pn**	**23 16 46.7**	**-0.1**
KDTR				*eS*	**Sn**	**23 17 12.7**	**-0.1**
KIRR	**Kirishev**	**2.31**	**7**	*eP*	**Pn**	**23 16 49.3**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**2.33**	**12**	*eP*	**Pn**	**23 16 50.3**	**+1.1**
BZWR	**Bezymyannyi-We**	**2.33**	**9**	*eP*	**Pn**	**23 16 49.9**	**+0.6**
ESO	**Esso**	**2.36**	**344**	*eP*	**Pn**	**23 16 49.4**	**-0.2**
KOZ	**Kozyrevsk**	**2.40**	**0**	*eP*	**Pn**	**23 16 50.4**	**+0.4**
ZLN	**Zelenaya**	**2.42**	**13**	*eP*	**Pn**	**23 16 51.1**	**+0.7**
CIRR	**Tsirk**	**2.51**	**11**	*eP*	**Pn**	**23 16 52.6**	**+1.0**
KLY	**Klyuchi**	**2.69**	**9**	*eP*	**Pn**	**23 16 55.1**	**+1.2**
KLY				*eS*	**Sn**	**23 17 27.2**	**+1.7**
PAU	**Pauzhetka**	**2.89**	**221**	*eP*	**Pn**	**23 16 59.3**	**+2.7**
BDR	**Baidarnaya**	**3.01**	**14**	*eP*	**Pn**	**23 17 01.4**	**+3.1**
KBTR	**Krutoberegovo**	**3.06**	**33**	*eP*	**Pn**	**23 16 59.2**	**+0.2**
KBG	**Krutoberegovo**	**3.07**	**31**	*eP*	**Pn**	**23 17 02.2**	**+3.2**
KBG				*eS*	**Sn**	**23 17 38.9**	**+4.3**
SRKR	**Sorokina**	**3.08**	**13**	*eP*	**Pn**	**23 17 00.3**	**+0.9**
MJAR	**Matsushiro Arr**	**22.80**	**230**	P	**P**	**23 21 08.7**	**+0.2**
	2.2nm,0.6s,baz=26,slow=9.0,SNR=5.1						
ILAR	**Eielson Array**	**28.51**	**46**	P	**P**	**23 21 60.0**	**+0.1**
	0.2nm,0.7s,baz=282,slow=8.9,SNR=2.1						
H11N2	**WAKE ISLAND Hy**	**34.30**	**168**	T	T	23 59 25.8	
	baz=354,slow=76,SNR=44						
H11N3	**WAKE ISLAND Hy**	**34.32**	**168**	T	T	23 59 26.7	
	baz=354,slow=76,SNR=44						
H11N1	**WAKE ISLAND Hy**	**34.32**	**168**	T	T	23 59 36.9	
	baz=354,slow=76,SNR=47						
H11S1	**WAKE ISLAND Hy**	**35.49**	**169**	T	T	00 00 53.9	
	baz=356						
H11S3	**WAKE ISLAND Hy**	**35.50**	**169**	T	T	00 00 53.4	
	baz=356						
H11S2	**WAKE ISLAND Hy**	**35.51**	**169**	T	T	00 00 53.8	
	baz=356						
MKAR	**Makanchi Array**	**47.78**	**295**	P	**P**	**23 24 37.4**	**-4.0**
	0.3nm,0.6s,baz=64,slow=7.2,SNR=4.5						
TXAR	**Lajitas Array**	**70.54**	**67**	P	**P**	**23 27 18.9**	**+0.1**
	0.2nm,0.8s,baz=324,slow=4.5,SNR=2.5						

NEIC ***14*** *23:21:54.3±2.7, 6.19S±0.04×130.23E±0.06, h156km±9km, mb4.5/16, Error ellipse: s-maj=9.9km s-min=3.7km az=124.0*
IDC ***14*** *23:21:54.8±2.1, 6.19S×130.26E, h157km±22km, mb3.8/4, mb1 3.8/9, mb1mx3.5/33, mbtmp4.3/9, MS3.4/1, Ms1 3.4/1, ms1mx2.6/36, Error ellipse: s-maj=36.1km s-min=18.1km az=93.0*
DJA ***14*** *23:21:56.0±0.3, 6˚S±3˚×13˚0E±˚, h198km±10km, M4.2/8, mB4.8/5, mb4.5/8, MLv4.2/4, Mw(mB)4.1/5*

ISC 14 23:21:53.5±0.5, 6.25S±0.05×130.23E±0.06, h146km, n51, σ2$05/49, mb4.5/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.74**	**349**	P	**Pn**	**23 22 29.7**	**+4.2**
SAUI	**Saumlaki**	**2.02**	**148**	P	Pn	23 22 37.7	+9.0
SAUI	**Saumlaki**	**2.02**	**148**	Pn	**Pn**	**23 22 29.3**	**+0.5**
SAUI				Sn	**Sn**	**23 22 55.5**	**-0.3**
FAKI	**Fak Fak**	**3.87**	**31**	P	**Pn**	**23 22 53.7**	**+1.7**
FAKI	**Fak Fak**	**3.87**	**31**		**Pn**	**23 22 53.2**	**+1.1**
NLAI	**Namlea**	**4.32**	**314**	P	Pn	23 23 04.3	+6.4
SIJI	**Sorong**	**5.44**	**11**	P	**Pn**	**23 23 13.4**	**+0.6**
	14nm,0.3s,baz=142,slow=19,SNR=82						
SIJI				S	**Sn**	**23 24 10.3**	**-4.4**
	47nm,0.3s,baz=285,slow=20,SNR=20						
RKPI	**Ransiki, Papua**	**6.13**	**40**	P	**Pn**	**23 23 25.0**	**+2.9**
	893nm,0.7s						
LBMI	**Labuha**	**6.20**	**334**	P	Pn	23 23 31.6	+8.6
MTN	**Manton Dam**	**6.62**	**172**		**Pn**	**23 23 31.3**	**+2.8**
SOEI	**Soe**	**6.86**	**239**	P	**Pn**	**23 23 34.8**	**+3.0**
	36nm,0.7s						
SOEI	**Soe**	**6.86**	**239**	Pn	**Pn**	**23 23 34.7**	**+2.8**
BATI	**Baumata**	**7.60**	**238**	P	**Pn**	**23 23 44.2**	**+2.6**
	9.4nm,0.3s,baz=145,slow=1.6,SNR=8.6						
BATI				S	**Sn**	**23 25 05.3**	**-1.2**
	12nm,0.3s,baz=76,slow=21,SNR=5.9						
BATI	**Baumata**	**7.60**	**238**	P	**Pn**	**23 23 44.1**	**+2.5**
	27nm,0.5s						
BAKI	**Biak**	**7.72**	**50**	P	**Pn**	**23 23 46.2**	**+2.9**
	104nm,0.6s						
MMRI	**Maumere**	**8.27**	**253**	Pn	**Pn**	**23 23 51.3**	**+0.7**
WAMI	**Wamena**	**8.77**	**75**	P	**Pn**	**23 23 54.5**	**-2.8**
EDFI	**Ende, Flores**	**8.82**	**253**	P	**Pn**	**23 24 02.8**	**+4.7**
	7.3nm,0.6s						
KNRA	**Kununurra**	**9.48**	**189**		**Pn**	**23 24 08.0**	**+1.2**
KAPI	**Kappang**	**10.50**	**276**	Pn	**Pn**	**23 24 21.3**	**+1.0**
FITZ	**Fitzroy Crossi**	**12.60**	**200**	P	**Pn**	**23 24 48.4**	**+0.5**
	1.8nm,0.3s,baz=37,slow=12,SNR=40						
FITZ				S	Sn	23 26 59.4	-7.7
	0.8nm,0.3s,baz=89,slow=20,SNR=4.1						
WB0	**Warramunga Arr**	**14.04**	**164**	P	**Pn**	**23 25 06.8**	**+0.7**
WRAB	**Tennant Creek**	**14.18**	**164**	Pn	**Pn**	**23 25 08.6**	**+0.6**
WRA	**Warramunga Arr**	**14.19**	**164**	P	**Pn**	**23 25 07.7**	**-0.4**
	0.6nm,0.3s,baz=349,slow=13,SNR=20						
WRA				S	Sn	23 27 36.8	-8.6
	1.9nm,0.3s,baz=354,slow=23,SNR=9.4						
WRA	**Warramunga Arr**	**14.19**	**164**	P	**Pn**	**23 25 08.6**	**+0.6**
WB2	**Warramunga Arr**	**14.19**	**164**	Pn	**Pn**	**23 25 08.2**	**+0.1**
WR0	**Warramunga Arr**	**14.26**	**163**	Pn	**Pn**	**23 25 09.3**	**+0.3**
COEN	**Coen**	**14.86**	**122**		**P**	**23 25 19.1**	**+0.4**
MYLDM	**Lahad Datu**	**16.31**	**314**	Pn	**Pn**	**23 25 31.1**	**-3.3**
MYLDM				IAmb	IAmb	23 25 45.6	
	comp=Z,12nm,1.0s						
AS31	**Alice Springs**	**17.68**	**169**	P	**Pn**	**23 25 51.0**	**+0.2**
ASAR	**Alice Springs**	**17.68**	**169**	P	**Pn**	**23 25 52.2**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=348,slow=8.9,SNR=31						
ASAR				S	**S**	**23 29 00.8**	**-5.1**
	comp=Z,0.4nm,0.3s,baz=355,slow=25,SNR=7.3						
PSA00	**Pilbara Seismi**	**18.25**	**212**	P	**Pn**	**23 25 57.8**	**+0.2**
PSA00				IAmb	IAmb	23 26 10.3	
	comp=Z,8.8nm,1.0s						
KKM	**Kota Kinabalu**	**18.57**	**311**	P	**Pn**	**23 26 00.4**	**-1.1**
KKM				IAmb	IAmb	23 26 07.6	
	comp=Z,16nm,0.9s						
UGM	**Wanagama**	**19.63**	**264**	P	**Pn**	**23 26 13.2**	**-0.6**
UGM				IAmb	IAmb	23 26 26.7	
	comp=Z,56nm,1.1s						
KRVT	**Keravat (AS076**	**21.79**	**86**	LR	LR	23 35 35.1	
	comp=Z,99nm,21.1s,baz=336,slow=38						
GIRL	**Giria**	**22.45**	**222**	P	**P**	**23 26 39.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**39.43**	**309**	P	**P**	**23 29 09.2**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=134,slow=7.7,SNR=1.6						
LTZ	**Lake Taylor**	**51.92**	**141**	P	**P**	**23 30 47.1**	**-0.4**
LTZ				IAmb	IAmb	23 31 02.0	
	comp=Z,20nm,0.9s						
SONM	**Songino Array**	**57.80**	**341**	P	**P**	**23 31 29.8**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=166,slow=7.1,SNR=8.5						
SONM	**Songino Array**	**57.80**	**341**	IAmb	IAmb	23 31 30.2	
	comp=Z,0.8nm,0.7s						
MK31	**Makanchi Array**	**67.73**	**327**	P	**P**	**23 32 35.2**	**-0.1**
MKAR	**Makanchi Array**	**67.73**	**327**	P	**P**	**23 32 35.2**	**-0.1**
	comp=Z,3.7nm,0.4s,baz=114,slow=8.2,SNR=84						
MKAR	**Makanchi Array**	**67.73**	**327**	P	**P**	**23 32 35.0**	**-0.3**
MAKZ	**Makanchi**	**67.91**	**326**	P	**P**	**23 32 36.3**	**-0.1**
MAKZ				IAmb	IAmb	23 32 36.8	
	comp=Z,3.4nm,0.5s						
ZALV	**Zalesovo Beam**	**71.01**	**334**	P	**P**	**23 32 54.4**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=118,slow=4.9,SNR=4.5						
KURK	**Kurchatov**	**72.00**	**328**	P	**P**	**23 33 00.5**	**-0.8**
RAYN	**Ar Rayn**	**87.65**	**294**	P	**P**	**23 34 25.7**	**-0.5**
RAYN				IAmb	IAmb	23 34 27.1	
	comp=Z,2.2nm,1.0s						
GEVA	**Gevas**	**91.61**	**308**	P	**P**	**23 34 44.6**	**+0.1**
GEVA				IAmb	IAmb	23 34 50.0	
	comp=Z,7.7nm,0.8s						
ISLE	**Juniper Island**	**94.13**	**30**	P	**P**	**23 34 56.0**	**+0.5**
MESA	**MESA**	**94.28**	**30**	P	**P**	**23 35 00.3**	**+4.0**
YAH	**Yahtse**	**94.40**	**30**	P	P	23 35 03.5	+6.5
YAH				IAmb	IAmb	23 35 19.4	
	comp=Z,8.2nm,1.2s						

ASRS 14 23:43:13.1±0.2, 52˚N±1˚×9˚6E±˚, h5km, MLh3.1/11, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDJR	**Todzha**	**0.57**	**24**	Pg	Pn	23 43 28.2	+0.3
TDJR				Sg	Sb	23 43 35.8	+1.7
ARDR	**Aradan**	**1.57**	**297**	Pg	Pg	23 43 47.1	+3.9
ARDR				Sg	Sg	23 44 08.4	+4.9
ERNS	**Erzin**	**1.66**	**193**	Pg	Pg	23 43 46.6	+1.8
ERNS				Sg	Sg	23 44 08.6	+2.4
KNGR	**Kungurtug, Tuv**	**1.71**	**138**	Pg	Pg	23 43 47.3	+1.6
KNGR				Sg	Sg	23 44 09.0	+1.2
BLRR	**Bol'shaya Rech**	**2.32**	**301**	Pg	Pg	23 44 00.7	+3.1
BLRR				Sg	Sg	23 44 31.9	+4.2
ORL	**Orlik**	**2.60**	**74**	Pg	Pg	23 44 01.9	-1.0
ORL				Sg	Sb	23 44 33.5	+0.9
DJOS	**Djoyskaya Sosn**	**2.80**	**291**	Pg	Pg	23 44 07.9	+1.2
DJOS				Sg	Sg	23 44 46.7	+3.7
DJO	**Djoy, Khakassi**	**2.90**	**290**	Pg	Pg	23 44 11.6	+2.9
DJO				Sg	Sg	23 44 49.5	+3.3
ORY	**Orie**	**3.15**	**354**	Pg	Pg	23 44 13.2	-0.2
ORY				Sg	Sg	23 44 53.6	-0.6
KTRR	**Kuturchin**	**3.19**	**344**	Pg	Pg	23 44 14.0	-0.2
KTRR				Sg	Sg	23 44 55.9	+0.3
TBTR	**Tabat**	**3.24**	**291**	Pg	Pg	23 44 17.5	+2.5
TBTR				Sg	Sg	23 44 59.4	+2.5
TEL	**Teeli**	**3.56**	**258**	Pg	Pg	23 44 22.8	+1.6
TEL				Sg	Sg	23 45 08.3	+1.1
VEH	**Verkhnyaya Baz**	**3.57**	**295**	Pg	Pg	23 44 22.8	+1.3
VEH				Sg	Sg	23 45 11.3	+3.6
SHRR	**Shira**	**4.24**	**310**	Sg	Sg	23 45 29.3	0.0
CUR	**Chagan-Uzun**	**4.98**	**252**	Pg	Pg	23 44 49.5	+1.0
CUR				Sg	Sg	23 45 52.9	-0.1
ARTR	**Artybash**	**5.23**	**272**	Sg	Sg	23 46 03.0	+2.1
AKAR	**Aktash**	**5.33**	**256**	Sg	Sg	23 46 02.7	-1.6
CHBI	**Chibit, Altay**	**5.41**	**256**	Sg	Sg	23 46 11.0	+4.4
DGZ	**Jazzator, Alta**	**5.69**	**251**	Sg	Sg	23 46 18.0	+2.3
TUNR	**Tungur**	**6.17**	**257**	Sg	Sg	23 46 35.6	+4.6

JMA ***15*** *00:13:25.6, 32.67N×132.31E, h31km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs37.00000°, δ4.00000°, λ-97.00000°. NP2:φs224.00000°, δ86.00000°, λ-90.00000°. Principal axes: T Plg41.0000°, Azm314.0000°; N Plg0.0000°, Azm44.0000°; P Plg49.0000°, Azm135.0000°;*
JMA Felt II J1.
NIED ***15*** *00:13:25.6, 32.67N×132.31E, h31km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr-1.35; Mθθ-1.56; Mφφ2.91; Mrθ4.19; Mrφ-0.63; Mθφ4.40; Fault plane solution: Mo6.57000×10¹⁴ NP1: φs217.00000°, δ85.00000°, λ-69.00000°. NP2: φs320.00000°, δ22.00000°, λ-166.00000°.*
IDC ***15*** *00:13:28.7±1.9, 32.84N×132.28E, h75km±16km, mb3.2/5, mb1 3.4/7, mb1mx3.1/48, mbtmp3.4/7, MS2.8/2, Ms1 2.8/2, ms1mx2.5/18 Error ellipse: s-maj=24.5km s-min=20.7km az=48.0*

ISC 15 00:13:25.2±1.2, 32.66N±0.05×132.33E±0.04, h38km±2km, n24, σ1$45/28, mb3.4/5, 4C-4D, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSKE	**Saikikamae**	**0.39**	**292**	⇓P	**Pn**	**00 13 33.7**	**-0.5**
JSKE				*eS*	**Sn**	**00 13 39.5**	**-1.4**
JTO	**Tosashimizu**	**0.45**	**63**	⇓P	**Pn**	**00 13 35.2**	**+0.2**
JTO				*eS*	**Sn**	**00 13 42.2**	**+0.1**
UWA2	**Uwa jima 2**	**0.61**	**24**	P	**Pn**	**00 13 37.5**	**0.0**
UWA2				S	**Sn**	**00 13 46.1**	**0.0**
JHHC	**Hyugahichiya**	**0.62**	**250**	⇑P	**Pn**	**00 13 37.3**	**-0.3**
JHHC				S	**Sn**	**00 13 46.5**	**+0.1**
JUS	**Usuki**	**0.64**	**310**	⇓P	**Pn**	**00 13 37.7**	**-0.1**
JUS				S	**Sn**	**00 13 46.6**	**-0.1**
JTSN	**Tsuno**	**0.81**	**240**	⇑P	**Pn**	**00 13 40.2**	**+0.1**
JTSN				S	**Sn**	**00 13 51.3**	**+0.4**
JKU	**Kubokawa**	**0.90**	**43**	⇓P	**Pn**	**00 13 41.7**	**+0.4**
JKU				*eS*	**Sn**	**00 13 53.7**	**+0.6**
JNA	**Nagahama**	**0.91**	**8**	⇑P	**Pn**	**00 13 41.8**	**+0.3**
JNA				S	**Sn**	**00 13 54.0**	**+0.6**
JIU3	**Izumi3**	**1.29**	**266**	⇑P	**Pn**	**00 13 47.9**	**+1.3**
JIU3				S	**Sn**	**00 14 04.9**	**+2.3**
JTZ	**Takazaki**	**1.29**	**235**	P	**Pn**	**00 13 47.5**	**+0.8**
JNU	**Nakatsue**	**1.31**	**291**	P	**Pn**	**00 13 48.5**	**+1.6**
	380nm,0.3s,baz=100,slow=3.4,SNR=1699						
JNU				S	**Sn**	**00 14 06.4**	**+3.2**
	96nm,0.3s,baz=204,slow=5.1,SNR=9.6						
JNU				LR	LR	00 14 34.3	
	comp=Z,496nm,18.5s,baz=116,slow=54						
KSRS	**Korea Array**	**6.00**	**324**	P	**Pn**	**00 14 53.3**	**+1.9**
	0.5nm,0.3s,baz=144,slow=14,SNR=2.4						
KSRS				LR	LR	00 16 46.1	
	comp=Z,22nm,21.0s,baz=155,slow=34						
MJAR	**Matsushiro Arr**	**6.21**	**50**	P	**Pn**	**00 14 57.2**	**+3.0**
	0.1nm,0.3s,baz=251,slow=14,SNR=3.3						
SONM	**Songino Array**	**24.78**	**315**	P	**P**	**00 18 40.9**	**-2.5**
	0.2nm,0.4s,baz=123,slow=8.2,SNR=3.2						
SONM				LR	LR	00 29 42.3	
	comp=Z,80nm,18.9s,baz=14,slow=40						
H11N2	**WAKE ISLAND Hy**	**33.43**	**104**	T	T	00 55 01.2	
	baz=300,slow=75,SNR=3.9						
H11N1	**WAKE ISLAND Hy**	**33.44**	**104**	T	T	00 55 01.3	
	baz=300,slow=75,SNR=3.5						
H11N3	**WAKE ISLAND Hy**	**33.44

MTO3 **Montecristo** 1.15 58⇑*iP* Pn 00 15 52.4 -0.6
MTO3 *eS* Sn 00 16 10.2 +1.0
MTO3 Montecristo 1.15 58 Pn 00 15 52.4 -0.6
ESQI Esquipulas 1.25 52⇑*iP* Pn 00 15 54.1 0.0
ESQI *eS* Sn 00 16 12.6 +1.3
ESQI Esquipulas 1.25 52 Pn 00 15 54.1 0.0
LFRS El Faro 1.28 97 *eP* Pn 00 15 53.4 -1.0
LFRS El Faro 1.28 97 *eP* Pn 00 15 53.4 -1.0
LBRS Las Brisas 1.28 92⇓*iP* Pn 00 15 53.9 -0.6
LBRS Las Brisas 1.28 92⇓*iP* Pn 00 15 53.9 -0.6
ERG Entre ros, C 1.34 299⇓*iP* Pn 00 15 54.1 -1.0
PAVA Las Pavas 1.39 93⇓*iP* Pn 00 15 55.4 -0.5
PAVA IAML 00 16 23.8
comp=Z,11µm,0.4s
PAVA Las Pavas 1.39 93⇓*iP* Pn 00 15 55.4 -0.5
PAVA IAML 00 16 23.8
comp=Z,11µm,0.4s
MRL Marmol 1.44 27⇓*iP* Pn 00 15 56.9 +0.3
MRL Marmol 1.44 27⇓*iP* Pn 00 15 56.9 +0.3
MRL Marmol 1.44 27⇓*eP* Pn 00 15 57.8 +1.2
COEG Centro de Oper 1.45 96⇑*iP* Pn 00 15 56.2 -0.3
COEG *eS* Sn 00 16 16.9 +1.4
COEG Centro de Oper 1.45 96⇑*iP* Pn 00 15 56.2 -0.3
COEG *eS* Sn 00 16 16.9 +1.4
RTAL Retalhuleu 1.48 300⇓*iP* Pn 00 15 54.9 -2.0
RTAL IAML 00 16 28.0
comp=Z,15µm,0.6s
RTAL Retalhuleu 1.48 300 Pn 00 15 55.0 -2.0
STG3 Santiaguito 3, 1.49 308⇓*iP* Pn 00 15 56.3 -0.9
ALJI Alcalda de J 1.80 105⇑*eP* Pn 00 16 00.7 -0.3
ALJI IAML 00 16 29.8
comp=Z,9µm,0.4s
ALJI Alcalda de J 1.80 105⇑*eP* Pn 00 16 00.7 -0.3
ALJI IAML 00 16 29.8
comp=Z,9µm,0.4s
COEB Comit de Eme 1.81 99⇓*iP* Pn 00 16 00.9 -0.3
COEB IAML 00 16 01.6
comp=Z,11µm,0.3s
COEB *eS* Sn 00 16 24.1 +0.3
COEB Comit de Eme 1.81 99⇓*iP* Pn 00 16 00.9 -0.3
COEB IAML 00 16 01.6
comp=Z,11µm,0.3s
COEB *eS* Sn 00 16 24.1 +0.3
TECA Tecapa 1.83 99⇓*iP* Pn 00 16 01.2 -0.4
TECA Tecapa 1.83 99⇓*iP* Pn 00 16 01.2 -0.4
HUEH Huehuetenango 1.88 324⇓*iP* Pn 00 16 02.2 0.0
HUEH Huehuetenango 1.88 324 Pn Pn 00 16 01.9 -0.3
PACA Pacayal 2.01 99 *eP* Pn 00 16 03.7 -0.1
PACA Pacayal 2.01 99 *eP* Pn 00 16 03.7 -0.1
LCY Lacayo 2.04 100 *eP* Pn 00 16 04.1 -0.2
LCY Lacayo 2.04 100 *eP* Pn 00 16 04.1 -0.2
JUCU Jucuarɲn 2.12 104⇓*iP* Pn 00 16 04.6 -0.8
JUCU IAML 00 16 43.9
comp=Z,7µm,0.4s
JUCU Jucuarɲn 2.12 104⇓*iP* Pn 00 16 04.6 -0.8
JUCU IAML 00 16 43.9
comp=Z,7µm,0.4s
LCND La Caada 2.45 101⇓*iP* Pn 00 16 09.2 -0.4
LCND *eS* Sn 00 16 40.0 +1.2
LCND La Caada 2.45 101⇓*iP* Pn 00 16 09.2 -0.4
LCND *eS* Sn 00 16 40.0 +1.2
CSGN Cosiguina Volc 2.85 106 Pn Pn 00 16 14.9 0.0
CCIG Comitan 3.01 326 Pn 00 16 18.3 +1.0
TGUH Tegucigalpa,Un 3.01 85⇑*iP* Pn 00 16 17.3 +0.1
TGUH *eS* Sn 00 16 45.4 -7.1
TGUH Tegucigalpa,Un 3.01 85 Pn 00 16 17.1 -0.1
PETF Flores 3.15 9 Pn Pn 00 16 20.2 +1.3
CRIN San Cristobal 3.40 108 Pn Pn 00 16 22.5 0.0
CNGN Cerro Negro 3.79 109 *eP* Pn 00 16 26.9 -0.9
CNGN *eS* Sn 00 17 13.2 +1.8
CNGN Cerro Negro 3.79 109 *eP* Pn 00 16 26.9 -0.9
CNGN *eS* Sn 00 17 13.2 +1.8
MATN Matagalpa 4.40 101 Pn Pn 00 16 34.8 -1.2
ACON Acoyapa 5.38 109 *eP* Pn 00 16 48.1 -1.1
ACON Acoyapa 5.38 109 Pn 00 16 48.0 -1.1
CMIG Matias Romero 5.46 308 P Pn 00 16 49.7 -0.6
comp=Z,38nm,0.3s,baz=92,slow=9.7,SNR=190
CMIG S Sn 00 17 51.5 -0.3
comp=Z,29nm,0.3s,baz=100,slow=18,SNR=2.4
GBS3 Finca Las Img 5.65 121 *eP* Pn 00 16 52.9 -0.1
LAPC Finca la Perla 5.68 121 *eP* Pn 00 16 53.3 -0.1
GB1A Borinquen Arri 5.68 121 *eP* Pn 00 16 52.7 -0.7
BUEV Buena Vista 5.68 121 *eP* Pn 00 16 53.6 +0.1
BUAI Buenos Aires 5.71 120 *eP* Pn 00 16 53.1 -0.7
GPS3 Bodega del ICE 5.74 121 *eP* Pn 00 16 55.0 +0.7
GPS1 Guardaparques 5.74 121 *eP* Pn 00 16 54.8 +0.4
GPS2 Hotel Rincn d 5.75 121 *eP* Pn 00 16 54.8 +0.4
LIM1 Limonal 5.87 121 *eP* Pn 00 16 56.2 +0.2
GUAB Guayabo de Bag 5.88 121 *eP* Pn 00 16 56.5 +0.4
ORTG Ortega, Santa 5.88 125 *eP* Pn 00 16 56.5 +0.3
GUAI GUAI 5.90 126⇓*eP* Pn 00 16 56.6 +0.3
HORNC Hornillas 5.92 121 *eP* Pn 00 16 56.0 -0.7
COLC Colonia 5.92 121 *eP* Pn 00 17 00.0 +3.3
CUI Cuipilapa 5.96 121 *eP* Pn 00 16 57.3 +0.1
DUNO Dulce Nombre, 6.03 127 *eP* Pn 00 16 58.3 +0.2
PTEN Parque Tenorio 6.08 120 *eP* Pn 00 16 58.6 -0.3
ESPN Las Esperanzas 6.12 104 *eP* Pn 00 16 59.5 +0.1
ESPN Las Esperanzas 6.12 104 Pn Pn 00 16 58.2 -1.1
JTS Las Juntas de 6.33 123 P Pn 00 17 02.2 -0.1
comp=Z,50nm,0.3s,baz=9.2,slow=20,SNR=115
JTS S Sn 00 18 14.9 +1.7
comp=Z,5.5nm,0.3s,baz=80,slow=15,SNR=0.8
JTS Las Juntas de 6.33 123 *eP* Pn 00 17 01.2 -1.1
JTS Las Juntas de 6.33 123 *eP* Pn 00 17 02.8 +0.5
ARE1 Arenal 1 6.43 120 *eP* Pn 00 17 04.3 +0.7
CEDE Laguna Cedeo 6.43 120 *eP* Pn 00 17 03.9 +0.2
CASO Castillo 6.44 121 *eP* Pn 00 17 04.0 +0.3
FORC Fortuna 6.47 120 *eP* Pn 00 17 04.8 +0.6
COVE Coope Vega, Sa 6.58 117 *eP* Pn 00 17 05.1 -0.5
LAFE Finca La Fe, P 6.64 126 *eP* Pn 00 17 06.3 -0.2
TEIG Tepich 6.71 17 *eP* Pn 00 17 08.6 +1.3
TEIG Tepich 6.71 17 Pn Pn 00 17 08.5 +1.3
SRA1 San Ramn 6.83 122 *eP* Pn 00 17 09.5 +0.3
JACO JACO, Garabito 6.93 126 *eP* Pn 00 17 10.4 0.0
HDC Heredia 7.18 121 *eP* Pn 00 17 14.2 +0.3
HDC Heredia 7.18 121 Pn 00 17 13.9 0.0
LCR2 La Lucha 2 7.41 122 *eP* Pn 00 17 16.9 -0.3
RIMA Rio Macho 7.51 121 *eP* Pn 00 17 17.8 -0.8
CDM Cerro de Muert 7.71 122 *eP* Pn 00 17 21.1 -0.4
EDDO Dominical 7.80 125 *eP* Pn 00 17 22.8 +0.5
PEZE Perez Zeledon, 7.88 123 *eP* Pn 00 17 23.8 +0.3
EDLM Las Mercedes 8.01 123 *eP* Pn 00 17 26.9 +1.7
EDPN Palmar Norte 8.30 125 *eP* Pn 00 17 30.8 +1.7
DRK0 Durika 8.30 122 *eP* Pn 00 17 29.3 0.0
EDBA Buenos Aires 8.33 123 *eP* Pn 00 17 30.4 +0.8
RIOS Rincon, Osa 8.41 126 *eP* Pn 00 17 29.4 -1.1
PTJ1 Puerto Jimnez 8.67 126 *eP* Pn 00 17 35.6 +1.5
TLIG Tlapa 8.74 296 Pn 00 17 35.4 +0.1
PRVC Isla de Provid 8.76 92 *eP* Pn 00 17 35.6 +0.3
BRU2 Volcan 9.01 123 *eP* Pn 00 17 38.8 -0.2
UNM Universidad Na 10.09 304 Pn Pn 00 17 54.8 +1.1
FSCY Frank Sound, G 10.37 57 Pn 00 17 57.6 +0.3
BCIP Isla Barro Col 11.29 113 *eP* Pn 00 18 07.3 -2.5
BCIP Isla Barro Col 11.29 113 Pn Pn 00 18 07.7 -2.1
LCCY Blossom Villag 11.45 58 Pn Pn 00 18 10.7 -1.3
CBCY The Bluff, Cay 11.75 58 Pn Pn 00 18 14.9 -1.1
MOIG Morelia 11.90 301 Pn Pn 00 18 19.9 +1.5
MTDJ Mount Denham 13.10 69 *eP* Pn 00 18 36.0 +1.8
MTDJ Mount Denham 13.10 69 Pn Pn 00 18 34.7 +0.5
CAPC Capurgana 13.75 111 *eP* Pn 00 18 45.9 +3.2
ZAIG Zacatecas 14.62 309 Pn Pn 00 18 54.7 +0.5
061Z Ochoppi 14.94 35 Pn Pn 00 18 57.8 -0.2
MOTC Monteria, Cord 15.25 108 *eP* Pn 00 18 59.5 -2.5
SJCC San Jacinto, C 15.36 103 *eP* Pn 00 19 03.3 -0.1
KVTX Kingsville 15.39 334 Pn Pn 00 19 05.3 +1.7
KVTX IAmb IAmb 00 19 09.7
comp=Z,80nm,1.1s
DBBC Dabeiba 15.46 114 *eP* Pn 00 19 05.1 +0.4
GTBY Guantanamo Bay 15.82 65 *eP* Pn 00 19 10.0 +0.9
GTBY Guantanamo Bay 15.82 65 Pn 00 19 07.8 -1.3
GTBY IAmb IAmb 00 19 18.9
comp=Z,31nm,0.8s
GR1C Gorgona, Isla 16.13 131 *eP* Pn 00 19 11.2 -1.8
060A Indiantown 16.16 34 P Pn 00 19 13.0 -0.3
PLMC San Jos del P 16.45 121 *eP* Pn 00 19 16.4 -0.7
DWPF Disney Wildern 16.50 29 Pn Pn 00 19 17.9 +0.4
735A Kenedy 16.51 336 Pn 00 19 18.8 +1.2
735A IAmb IAmb 00 19 22.5
comp=Z,35nm,0.8s
833A Chaparral WMA, 16.73 331 P P 00 19 22.6 +1.5
baz=148,SNR=13
833A Chaparral WMA, 16.73 331 IAmb IAmb 00 19 25.3
comp=Z,50nm,0.9s
HKT Hockley 16.86 343 P 00 19 23.6 +1.1
YOTC Yotoco, Valle 16.92 124 *eP* Pn 00 19 22.0 -0.9
441A DeRidder 17.08 352 P P 00 19 27.4 +2.4
656A Willston 17.12 24 P 00 19 26.9 +1.5
553A Crawfordville 17.22 18 P P 00 19 28.7 +2.2
451A Vernon 17.28 14 P 00 19 28.9 +1.6
TOLC Tolima 17.43 120 *eP* P 00 19 31.1 +1.7
346A Big Creek Wild 17.54 3 Pn 00 19 30.1 -0.1
POPC Popayan, Colom 17.55 128 *eP* P 00 19 31.4 +0.8
BRAL Brewton 17.56 9 P Pn 00 19 33.4 +2.9
baz=190
BRAL Brewton 17.56 9 P Pn 00 19 32.5 +1.9
344A Westbrook Farm 17.58 359 P Pn 00 19 32.3 +1.5
342A Flagon Creek P 17.60 354 Pn 00 19 33.4 +2.5
LGNH Logne 17.69 72 P 00 19 32.7 +0.8
LGNH IAmb IAmb 00 19 41.7
comp=Z,34nm,1.1s
ORTC Ortega, Tolima 17.86 122 *eP* Pn 00 19 35.8 +1.4
GCUF Volcan Galeras 17.94 133 *eP* Pn 00 19 37.5 +1.8
ROSC El Rosal 18.14 118 P Pn 00 19 39.4 +1.3
comp=Z,1.0nm,0.3s,baz=36,slow=11,SNR=7.1
ROSC El Rosal 18.14 118 P P 00 19 37.8 +0.4
435B Jarrell 18.17 340 P Pn 00 19 39.5 +1.5
baz=157
435B Jarrell 18.17 340 IAmb IAmb 00 19 45.3
comp=Z,39nm,0.8s
PRAC Prado 18.27 122 *eP* P 00 19 39.0 +0.7
352A Blakely 18.30 15 P P 00 19 40.1 +1.6
352A IAmb IAmb 00 19 42.8
comp=Z,51nm,0.7s
NATX Nacogdoches 18.32 348 P Pn 00 19 40.7 +1.1
baz=167
NATX Nacogdoches 18.32 348 P 00 19 40.3 +1.6
NATX IAmb IAmb 00 19 57.6
comp=Z,44nm,0.7s
VBMS Vicksburg 18.34 360 P Pn 00 19 41.8 +1.9
baz=179,SNR=8.3
VBMS Vicksburg 18.34 360 P Pn 00 19 41.2 +1.2
BETC Betania 18.42 125 *eP* Pn 00 19 42.5 +1.4
250A Grady 18.49 11 P Pn 00 19 43.1 +1.4
250A IAmb IAmb 00 19 46.0
comp=Z,62nm,1.0s
PAMC Pamplona, Colo 18.50 108 *eP* P 00 19 39.3 -2.1
456A Hilliard 18.52 23 P P 00 19 40.3 -0.6
456A IAmb IAmb 00 19 46.2
comp=Z,64nm,0.9s
TIGA Tifton 18.64 18 P Pn 00 19 44.6 +1.1
baz=201,SNR=6.4
TIGA Tifton 18.64 18 P P 00 19 43.5 +1.4
GARC Garzon, Huila 18.68 127 *eP* P 00 19 42.5 -0.6
RUSC La Rusia 18.74 113 *eP* P 00 19 43.8 -0.1
JCT Junction City 18.75 334 P Pn 00 19 46.4 +1.5
baz=150
JCT Junction City 18.75 334 P P 00 19 44.5 +1.0
CHIC Chingaza 18.76 117 *eP* P 00 19 44.4 +0.3
146A Union 18.80 3 P Pn 00 19 46.1 +0.7
237A Washetta, Mont 18.80 346 P P 00 19 43.8 -0.1
237A IAmb IAmb 00 19 56.0
comp=Z,44nm,0.7s
143A Socs Landing, 18.85 357 P P 00 19 46.0 +1.5
FLOC Florencia 18.94 129 *eP* P 00 19 46.5 +0.8
PUAC Puerto Asis, P 18.96 133 *eP* Pn 00 19 48.2 +0.7
WHTX Lake Whitney, 19.25 341 P P 00 19 49.7 +0.9
baz=159,SNR=11
WHTX Lake Whitney, 19.25 341 IAmb IAmb 00 20 02.6
comp=Z,68nm,1.0s
HPIG 19.39 315 P P 00 19 52.1 +1.4
LRAL Lakeview Retre 19.40 9 P P 00 19 52.7 +2.2
baz=190,SNR=21
LRAL Lakeview Retre 19.40 9 P P 00 19 52.3 +1.8
LRAL IAmb IAmb 00 19 58.4
comp=Z,51nm,0.9s
255A Hazlehurst 19.45 21 IAmb IAmb 00 19 58.5
comp=Z,49nm,1.1s
152A Waverly Hall 19.49 14 IAmb IAmb 00 19 55.5
comp=Z,41nm,1.1s
Z41A Richland Creek 19.51 354 P P 00 19 53.6 +1.9
baz=173
Z41A Richland Creek 19.51 354 IAmb IAmb 00 19 57.7
comp=Z,63nm,1.0s
SC01 Santiago de lo 19.63 71 P 00 19 55.2 +2.1
TAMC Tame, Arauca 19.68 110 *eP* P 00 19 51.4 -2.3
TXAR Lajitas Array 19.78 324 P P 00 19 56.8 +2.0
comp=Z,3.8nm,0.7s,baz=153,slow=12,SNR=27
TXAR PcP PcP 00 24 10.5 +0.8
comp=Z,2.0nm,0.8s,baz=151,slow=2.9,SNR=6.0
Z38A Mt. Pleasant 19.84 349 P P 00 19 56.0 +0.8
SDV Santo Domingo 19.95 102 P P 00 19 54.7 -2.1
comp=Z,1.1nm,0.3s,baz=275,slow=8.0,SNR=8.9
SDV Santo Domingo 19.95 102 *eP* P 00 19 52.0 -4.8
SDV Santo Domingo 19.95 102 P P 00 19 54.9 -1.9
SDV IAmb IAmb 00 19 59.9
comp=Z,16nm,0.7s
WLAR White Oak Lake 19.97 353 P P 00 19 58.8 +2.2
Y45A Yeager Farm, C 20.00 2 P P 00 19 59.5 +2.5
Z51A Franklin 20.01 13 P P 00 19 59.3 +2.3
MACC Macarena, Meta 20.01 124 *eP* P 00 19 58.0 +0.7
257A Skidaway Islan 20.02 24 P P 00 19 59.2 +1.9
CCAR Cane Creek 20.08 357 P P 00 19 58.7 +0.8
CCAR IAmb IAmb 00 20 14.8
comp=Z,44nm,0.8s
Y49A Blount Mountai 20.30 10 IAmb IAmb 00 20 04.1
comp=Z,52nm,0.8s
Z35A Perchaven, San 20.44 343 IAmb IAmb 00 20 20.9
comp=Z,32nm,0.8s
PTLC Puerto Leguiza 20.51 130 *eP* Pn 00 20 05.5 -0.2
GOGA Godfrey 20.52 17 P P 00 20 03.2 +0.6
baz=199,SNR=9.1
GOGA Godfrey 20.52 17 P P 00 20 03.0 +0.5
GOGA IAmb IAmb 00 20 08.8
comp=Z,24nm,1.1s
ABTX Abilene, Hawle 20.58 337 P P 00 20 04.3 +1.0
baz=154
ABTX Abilene, Hawle 20.58 337 IAmb IAmb 00 20 23.3
comp=Z,52nm,0.9s
ABTX PcP 00 24 10.6 -0.4
OXF Oxford 20.65 2 P P 00 20 04.8 +0.8
baz=182,SNR=8.9
157A Early Branch 20.66 23 P P 00 20 06.0 +1.9
baz=206,SNR=5.5
X40A Basin Creek Fa 20.73 354 P P 00 20 05.6 +0.8
baz=178
DR12 Loma Pena Alta 20.74 73 P P 00 20 07.0 +1.9
Y52A Lilburn 20.79 15 IAmb IAmb 00 20 23.2
comp=Z,41nm,0.9s
X48A Hartselle 20.79 8 IAmb IAmb 00 20 08.8
comp=Z,52nm,0.8s
MIAR Mount Ida 20.87 353 P P 00 20 06.2 -0.2
baz=171
SLBS Sierra La Lagu 20.97 301 P Pn 00 20 10.3 -0.8
SLBS IAmb IAmb 00 20 12.5
comp=Z,25nm,1.1s
UALR University of 20.97 355 IAmb IAmb 00 20 27.1
comp=Z,29nm,1.0s
Z56A Williston 21.10 21 P P 00 20 10.4 +1.6
baz=205
Z56A Williston 21.10 21 P P 00 20 10.0 +1.1
X37A Clayton 21.20 349 IAmb IAmb 00 20 12.7
comp=Z,42nm,0.9s
X51A Calhoun 21.28 13 IAmb IAmb 00 20 20.6
comp=Z,28nm,0.9s
W45A Hickory Valley 21.30 3 IAmb IAmb 00 20 14.5
comp=Z,40nm,0.7s
Z57A Bowman 21.32 23 P P 00 20 14.0 +2.8
baz=206
NHSC New Hope 21.35 24 P P 00 20 13.0 +1.5
baz=208,SNR=5.6
NHSC New Hope 21.35 24 P P 00 20 14.2 +2.7
W41B Gary Mavity, V 21.36 356 P P 00 20 12.2 +0.6
baz=175
W41B Gary Mavity, V 21.36 356 IAmb IAmb 00 20 22.0
comp=Z,44nm,1.1s
LPIG La Paz 21.45 302 LR LR 00 28 34.9
comp=Z,207nm,20.8s,baz=140,slow=36
WHAR Wooly Hollow 21.48 356 IAmb IAmb 00 20 22.7
comp=Z,36nm,1.1s
W39A Magazine 21.54 352 P P 00 20 13.3 -0.2
baz=171
HODGE Hodges 21.64 18 P P 00 20 15.3 +0.7
Z58A St. Stephen 21.70 24 P P 00 20 16.1 +0.8
baz=206
SWET Sewanee 21.71 10 IAmb IAmb 00 20 17.6
comp=Z,40nm,0.8s
LPAR Lepanto 21.72 0 P P 00 20 17.0 +1.6
W50A Signal Mountai 21.80 11 IAmb IAmb 00 20 18.4
comp=Z,23nm,0.9s
X54A Belton 21.90 18 P P 00 20 17.5 +0.2
baz=201
JSC Jenkinsville 22.01 20 P P 00 20 19.2 +0.7
HALT Halls 22.05 2 P P 00 20 19.9 +1.0
X55A Gracelyn & Ava 22.06 20 P P 00 20 19.4 +0.4
baz=203,SNR=5.9
Y57A Sumter 22.08 22 P P 00 20 19.8 +0.6
baz=206
Y57A Sumter 22.08 22 IAmb IAmb 00 20 22.5
comp=Z,41nm,0.8s
V48A Smith Brothers 22.09 8 IAmb IAmb 00 20 22.6
comp=Z,32nm,0.7s
BG3 Lake Jocassee 22.15 16 IAmb IAmb 00 20 23.4
comp=Z,21nm,0.8s
CPCT Cooper Cave 22.20 13 IAmb IAmb 00 20 24.7
comp=Z,23nm,0.9s
WMOK Wichita Mounta 22.20 341 P P 00 20 20.0 -0.7
baz=158,SNR=5.9
Y58A Scranton 22.26 24 P P 00 20 22.2 +1.1
baz=208
Y58A Scranton 22.26 24 P P 00 20 22.5 +1.3
X56A White Oak 22.28 21 P P 00 20 22.0 +0.6
baz=204
GDL2 Guadalupe Moun 22.36 327 P P 00 20 24.6 +2.1
WVT Waverly 22.36 5 P P 00 20 23.2 +1.0
baz=186
WVT Waverly 22.36 5 P P 00 20 22.8 +0.5
GLAT Glass 22.41 2 P P 00 20 23.4 +0.6
GLAT IAmb IAmb 00 20 25.6
comp=Z,50nm,0.8s
OKCSW OKLAHOMA CITY 22.45 345 P P 00 20 23.5 +0.3
W54A Cherokee Point 22.45 18 P P 00 20 24.1 +0.9
baz=201,SNR=9.1
CLTN Cedars of Leba 22.50 9 IAmb IAmb 00 20 26.5
comp=Z,45nm,0.8s
MNTX Cornudas Mount 22.53 325 P P 00 20 24.8 +0.7
baz=139
TUL1 Leonard 22.56 348 P P 00 20 23.4 -1.0
baz=166,SNR=12
TUL1 Leonard 22.56 348 IAmb IAmb 00 20 24.4
comp=Z,30nm,0.7s
TKL Tuckaleechee C 22.57 14 P P 00 20 24.8 +0.3
comp=Z,24nm,0.6s,baz=182,slow=11,SNR=33
TKL LR LR 00 29 39.4
comp=Z,291nm,20.9s,baz=200,slow=38
TKL Tuckaleechee C 22.57 14 IAmb IAmb 00 20 27.2
comp=Z,26nm,0.7s
V51A Loudon 22.58 13 IAmb IAmb 00 20 29.4
comp=Z,24nm,0.9s
U40A Yellville 22.58 355 P P 00 20 24.0 -0.6
baz=174,SNR=9.0
BIRD Birdtown, Kers 22.61 22 P P 00 20 24.3 -0.6
BIRD IAmb IAmb 00 20 36.4
comp=Z,25nm,1.2s
HHAR Hobbs 22.63 352 IAmb IAmb 00 20 44.0
comp=Z,19nm,0.9s
HICK Hickman 22.68 2 P P 00 20 26.0 +0.4
HICK IAmb IAmb 00 20 29.2
comp=Z,56nm,1.0s
KMSC Kings Mountain 22.77 19 P P 00 20 26.5 0.0
baz=203
V52A Sevierville 22.79 14 IAmb IAmb 00 20 29.3
comp=Z,23nm,1.1s
OK030 Cody Creek RV 22.79 346 IAmb IAmb 00 20 26.4
comp=Z,30nm,0.6s
MLPR Magueyes Islan 22.80 76 P P 00 20 25.3 -1.8
OK029 Liberty Lake 22.82 345 IAmb IAmb 00 20 28.0
comp=Z,43nm,0.8s
OK031 S. Brethren Rd 22.82 346 IAmb IAmb 00 20 26.8
comp=Z,35nm,0.7s
U38A Gravette 22.84 352 IAmb IAmb 00 20 46.3
comp=Z,24nm,0.8s
Y60A Bolivia 22.95 27 P P 00 20 29.2 +0.9
baz=211
Y60A Bolivia 22.95 27 P P 00 20 28.1 -0.2
X58A Rowland 22.96 24 P P 00 20 28.4 0.0
baz=208
X58A Rowland 22.96 24 P P 00 20 28.7 +0.3
X58A IAmb IAmb 00 20 42.7
comp=Z,21nm,0.9s
U49A Red Boiling Sp 23.00 9 IAmb IAmb 00 20 31.1
comp=Z,34nm,0.8s
QUOK Quay 23.00 347 IAmb IAmb 00 20 30.3
comp=Z,34nm,0.8s
W56A Indian Trail 23.01 21 P P 00 20 28.9 -0.1
baz=205
MSTX Muleshoe 23.03 333 P P 00 20 29.4 +0.1
baz=148
AOPR Arecibo Observ 23.13 76 P P 00 20 29.9 -0.3
V54A Nebo 23.17 18 P P 00 20 30.3 -0.2
baz=201,SNR=8.8
T45A Paducah 23.18 3 P P 00 20 31.4 +0.9
W57A Gilead 23.24 22 P P 00 20 30.7 -0.4
baz=206
X59A McDuffie Farm, 23.27 25 P P 00 20 32.0 +0.6
baz=210
AMTX Amarillo 23.36 336 P P 00 20 33.5 +1.2
baz=151
W58A Raeford 23.41 24 P P 00 20 32.4 -0.3
baz=208
V55A Taylorsville 23.46 19 P P 00 20 33.0 -0.1
baz=203
V55A Taylorsville 23.46 19 IAmb IAmb 00 20 35.9
comp=Z,17nm,0.8s
TZTN Tazewell 23.47 14 P P 00 20 33.3 +0.1
baz=197,SNR=8.8
TZTN Tazewell 23.47 14 IAmb IAmb 00 20 36.1
comp=Z,25nm,0.8s
X60A Albert Glenn T 23.54 26 P P 00 20 34.5 +0.7
baz=211,SNR=6.6
V56A Mocksville 23.66 20 P P 00 20 34.6 -0.3
baz=204,SNR=7.2
T50A Nancy 23.66 11 IAmb IAmb 00 20 36.2
comp=Z,16nm,0.8s
T35A Sooner Cattle 23.68 348 IAmb IAmb 00 20 35.7
comp=Z,35nm,0.8s
U32A Winter Ranch, 23.79 343 P P 00 20 36.3 +0.2
U32A IAmb IAmb 00 20 56.3
comp=Z,14nm,0.6s
S44A Carbondale 23.83 2 IAmb IAmb 00 20 39.1
comp=Z,33nm,0.8s
U54A Nelsons Funny 23.90 17 P P 00 20 38.5 +1.4
baz=201,SNR=15
GC02 Grant County # 23.93 345 P P 00 20 35.7 -1.5
S39A Bolivar 23.95 354 IAmb IAmb 00 20 56.7
comp=Z,24nm,0.9s
V57A Coltrane Farms 23.98 22 P P 00 20 37.5 -0.3
baz=206
W60A Pink Hill 24.05 26 P P 00 20 38.6 +0.2
baz=211
FVM French Village 24.10 360 P P 00 20 40.0 +1.2
T53A Wise 24.13 15 P P 00 20 39.4 +0.2
baz=199
V58A Windy Hill, Pi 24.13 23 P P 00 20 38.8 -0.3
baz=207,SNR=7.4
V58A Windy Hill, Pi 24.13 23 P P 00 20 38.4 -0.7
V58A IAmb IAmb 00 20 41.2
comp=Z,32nm,0.7s
KAN09 Caldwell North 24.14 346 P P 00 20 39.2 0.0
CNNC Cliffs of the 24.14 26 P P 00 20 40.6 +1.4
CNNC IAmb IAmb 00 20 43.0
comp=Z,20nm,0.8s
CCM Cathedral Cave 24.18 358 P P 00 20 38.9 -0.6
baz=178
CCM Cathedral Cave 24.18 358 P P 00 20 38.9 -0.6
U56A King 24.18 20 P P 00 20 41.0 +1.4
baz=204
U56A King 24.18 20 P P 00 20 39.9 +0.3
U56A IAmb IAmb 00 20 43.2
comp=Z,25nm,0.8s
MTP Monte Pirata 24.23 77 P P 00 20 38.9 -1.4
MTP IAmb IAmb 00 20 39.4
comp=Z,13nm,0.7s
HSIG 24.37 312 P P 00 20 43.2 +1.8
V59A Middlesex 24.45 24 P P 00 20 41.8 -0.2
baz=209
T54A Tazewell 24.47 17 P P 00 20 41.5 -0.8
baz=201
121A Cookes Peak, D 24.52 322 P P 00 20 45.1 +2.2
baz=136,SNR=9.9
121A Cookes Peak, D 24.52 322 P P 00 20 44.3 +1.3
WCI Wyandotte Cave 24.61 8 P P 00 20 43.1 -0.3
baz=189
WCI Wyandotte Cave 24.61 8 P P 00 20 43.1 -0.3

U57A	Blanch	24.62	22	P		P	00 20 43.0	-0.5
	baz=206							
319A	Douglas	24.66	318	P		P	00 20 46.4	+2.2
T55A	Pulaski	24.76	19	P		P	00 20 46.3	+1.4
	baz=202							
R49A	Shelbyville	24.84	10	IAmb		IAmb	00 20 47.3	
	comp=Z,28nm,0.8s							
V60A	Jim Taylor Roa	24.85	26	P		P	00 20 46.5	+0.8
U58A	Oxford	24.88	23	P		P	00 20 44.8	-1.2
	baz=208							
R50A	Paris	24.98	11	IAmb		IAmb	00 20 49.4	
	comp=Z,20nm,0.8s							
Q44A	Meyer Farm, Va	25.04	2	IAmb		IAmb	00 20 50.5	
	comp=Z,23nm,0.7s							
BNM	Barren Site	25.07	327	P		P	00 20 49.1	+1.1
U59A	Littleton	25.14	24	P		P	00 20 48.0	-0.3
	baz=210							
U59A	Littleton	25.14	24	P		P	00 20 49.3	+1.0
U59A				IAmb		IAmb	00 20 52.2	
	comp=Z,21nm,1.1s							
T57A	Hurt	25.16	21	P		P	00 20 47.4	-1.0
	baz=206							
BLO	Bloomington	25.51	7	P		P	00 20 52.1	+0.5
BLO				IAmb		IAmb	00 20 54.2	
	comp=Z,19nm,0.8s							
ANMO	Albuquerque	25.59	328	LR		LR	00 33 23.4	
	comp=Z,78nm,18.2s,baz=133,slow=42							
R32A	Long Quarter,	25.63	345	IAmb		IAmb	00 20 55.7	
	comp=Z,22nm,0.9s							
P40A	Paris	25.68	357	IAmb		IAmb	00 20 53.8	
	comp=Z,12nm,0.7s							
P43A	Skaggs, Pawnee	25.76	1	P		P	00 20 56.4	+2.5
P43A				IAmb		IAmb	00 20 58.2	
	comp=Z,19nm,0.8s							
T59A	Double "B" Far	25.77	24	P		P	00 20 54.0	0.0
	baz=210							
T59A	Double "B" Far	25.77	24	P		P	00 20 54.0	0.0
KSU1	Kansas State U	25.81	349	P		P	00 20 55.5	+1.2
	baz=166							
KSU1	Kansas State U	25.81	349	IAmb		IAmb	00 21 14.8	
	comp=Z,20nm,0.8s							
P46A	Rosedale	25.88	6	IAmb		IAmb	00 20 59.7	
	comp=Z,22nm,0.8s							
P38A	Dawn	25.89	354	P		P	00 20 56.2	+1.2
Q51A	Peebles	25.89	13	IAmb		IAmb	00 20 57.0	
	comp=Z,21nm,0.7s							
P48A	Milroy	25.94	9	IAmb		IAmb	00 20 56.9	
	comp=Z,24nm,0.8s							
Q52A	Bidwell	26.08	14	P		P	00 20 56.7	0.0
	baz=198							
P49A	Miami Univ. Ec	26.12	10	P		P	00 20 55.7	-1.5
	baz=192							
P49A	Miami Univ. Ec	26.12	10	IAmb		IAmb	00 20 59.1	
	comp=Z,12nm,0.7s							
TUC	Tucson	26.24	318	P		P	00 21 01.2	+2.8
	baz=130							
TUC	Tucson	26.24	318	P		P	00 21 00.0	+1.6
Q54A	Coxs Mills	26.47	17	P		P	00 20 59.8	-0.5
	baz=201							
SFIN	Lafayette	26.64	6	P		P	00 21 00.6	-1.3
	baz=187							
SFIN	Lafayette	26.64	6	IAmb		IAmb	00 21 04.0	
	comp=Z,12nm,0.8s							
ACSO	Alum Creek Sta	27.13	12	P		P	00 21 06.3	+0.1
	baz=196							
ACSO	Alum Creek Sta	27.13	12	IAmb		IAmb	00 21 08.9	
	comp=Z,14nm,1.0s							
O52A	Adamsville	27.27	14	P		P	00 21 07.4	-0.1
	baz=198							
N47A	Urbana	27.30	8	IAmb		IAmb	00 21 08.0	
	comp=Z,22nm,1.1s							
214A	Organ Pipe Nat	27.37	315	P		P	00 21 09.6	+1.1
O53A	New Philadelph	27.55	15	P		P	00 21 09.8	-0.2
	baz=199							
P57A	Homestead Farm	27.81	21	P		P	00 21 11.9	-0.4
	baz=206							
N56A	West Decatur	29.01	19	P		P	00 21 22.6	-0.5
	baz=205							
M56A	Emporium	29.56	19	P		P	00 21 27.1	-0.8
	baz=204							
M57A	Sunshine Farm,	29.77	20	P		P	00 21 29.3	-0.4
	baz=206							
N59A	State Game Lan	29.88	23	P		P	00 21 30.4	-0.3
	baz=209							
M58A	Price's Panora	30.03	21	P		P	00 21 31.5	-0.6
	baz=208							
BC3	Big Chuckawall	30.17	315	P		P	00 21 36.2	+2.7
	baz=125							
MONP2	Monument Peak	30.42	313	P		P	00 21 36.8	+1.0
	baz=123							
109C	Camp Elliot, M	30.91	313	P		P	00 21 40.8	+1.0
109C				IAmb		IAmb	00 21 45.0	
	comp=Z,9.1nm,0.8s							
BINY	Binghamton	30.93	21	P		P	00 21 39.2	-0.7
	baz=208							
K56A	Middlesex	30.93	19	P		P	00 21 38.9	-1.1
	baz=205							
MTPU	Mount Pierson	30.96	325	P		P	00 21 41.8	+1.1
SZCU	Shurtz Canyon	31.16	324	P		P	00 21 43.3	+1.0
K57A	Scipio Center	31.22	20	P		P	00 21 41.2	-1.3
	baz=206							
CCUT	Cedar City	31.29	323	P		P	00 21 44.3	+0.9
L60A	Shokan	31.39	23	P		P	00 21 43.3	-0.7
	baz=211							
SPMN	Marine on St.	31.40	357	IAmb		IAmb	00 21 43.9	
	comp=Z,28nm,1.1s							
SUSD	Miller	31.42	348	P		P	00 21 44.5	+0.3
SUSD				IAmb		IAmb	00 21 45.5	
	comp=Z,14nm,0.8s							
K58A	Earlville	31.54	21	P		P	00 21 44.8	-0.6
	baz=208							
J58A	Remsen	32.20	21	P		P	00 21 50.4	-0.6
	baz=208							
H53A	Bobcaygeon	32.28	16	P		P	00 21 50.9	-0.8
	baz=202							
SADO	Sadowa	32.32	15	P		P	00 21 49.0	-3.1
	comp=Z,5.0nm,0.3s,baz=202,slow=5.4,SNR=14							
SADO	Sadowa	32.32	15	IAmb		IAmb	00 21 52.8	
	comp=Z,12nm,0.8s							
I58A	Old Forge	32.59	21	P		P	00 21 53.5	-1.0
	baz=208							
TPNV	Topopah Spring	32.65	320			PcP	00 24 40.5	+1.1
SPR3	Spring Creek 3	32.84	324			PcP	00 24 41.3	+1.2
MPMC	Manual Prospec	32.92	317	P		P	00 21 59.7	+2.0
	baz=126							
G54A	Lake Saint Pet	33.18	16	P		P	00 21 58.8	-0.8
	baz=202							
PDAR	Pinedale Array	33.29	334	P		P	00 22 00.6	-0.3
	comp=Z,0.1nm,0.3s,baz=162,slow=6.6,SNR=1.9							
PDAR				PcP		PcP	00 24 40.5	-0.8
	comp=Z,0.6nm,0.4s,baz=138,slow=5.8,SNR=5.3							
PDAR				LR		LR	00 37 54.6	
	comp=Z,123nm,20.3s,baz=144,slow=40							
ISA	Isabella, Lake	33.35	316	P		P	00 22 01.7	+0.4
ISA				IAmb		IAmb	00 22 02.6	
	comp=Z,6.2nm,0.8s							
LONY	Lake Ozonia	33.54	21	P		P	00 22 02.0	-0.8
	baz=208							
ALGO	Algonquin Park	33.71	16	P		P	00 22 03.0	-1.1
	baz=202							
AGMN	Agassiz Nation	34.71	354	P		P	00 22 11.8	-1.0
	baz=171,SNR=7.6							
AGMN	Agassiz Nation	34.71	354	IAmb		IAmb	00 22 12.1	
	comp=Z,14nm,1.0s							
NV11	Mina Array Sit	34.75	320			PcP	00 24 46.7	+1.4
IMW	Indian Meadow	34.80	334			PcP	00 24 46.8	+1.2
NVAR	Mina Array Bea	34.84	320	P		P	00 22 16.1	+1.8
	comp=Z,2.5nm,0.6s,baz=132,slow=8.2,SNR=8.2							
NVAR				PcP		PcP	00 24 47.1	+1.4
	comp=Z,3.7nm,0.7s,baz=133,slow=3.5,SNR=7.8							
NVAR				ScP		ScP	00 28 25.5	+2.1
	comp=Z,1.7nm,0.8s,baz=125,slow=5.0,SNR=4.0							
NVAR				LR		LR	00 37 51.1	
	comp=Z,112nm,18.7s,baz=123,slow=38							
NVAR	Mina Array Bea	34.84	320	P		P	00 22 16.8	+2.5
D55A	Sainte-Anne-du	35.40	18	P		P	00 22 17.6	-1.1
	baz=205							
BOZ	Bozeman (W)	36.45	335	P		P	00 22 29.6	+1.6
	baz=144							
ULM	Lac du Bonnet	36.64	354	P		P	00 22 27.2	-2.0
	comp=Z,6.7nm,0.5s,baz=178,slow=9.1,SNR=14							
ULM				LR		LR	00 38 19.0	
	comp=Z,195nm,20.5s,baz=146,slow=38							
LSQQ	Lebel-sur-Quev	36.86	15	P		P	00 22 30.3	-0.9
	baz=202							
O02D	Mt. Diablo Mer	38.69	319	P		P	00 22 47.1	+0.3
	baz=124							
F10A	Beach Ranch, E	39.27	330	IAmb		IAmb	00 22 53.5	
	comp=Z,7.0nm,0.8s							
NEW	Newport	40.90	333	LR		LR	00 42 30.6	
	comp=Z,89nm,20.2s,baz=156,slow=40							
H04A	Detroit Lake	40.99	325	P		P	00 23 06.7	+0.9
H04A				IAmb		IAmb	00 23 07.7	
	comp=Z,7.7nm,1.0s							
SCHQ	Schefferville	44.88	19	P		P	00 23 35.0	-2.1
	comp=Z,10.0nm,0.7s,baz=226,slow=4.8,SNR=21							
SCHQ	Schefferville	44.88	19	IAmb		IAmb	00 23 54.3	
	comp=Z,8.7nm,1.1s							
H03N2	Juan Fernandez	48.21	167	T		T	01 15 41.4	
	baz=348,slow=74							
H03N1	Juan Fernandez	48.22	167	T		T	01 15 24.3	
	baz=348,slow=74							
H03N3	Juan Fernandez	48.23	167	T		T	01 15 37.2	
	baz=348							
YKA	Yellowknife Ar	51.60	346	P		P	00 24 27.4	-1.2
	comp=Z,1.8nm,0.7s,baz=130,slow=8.3,SNR=6.4							
INK	Inuvik	61.10	343	P		P	00 25 35.0	-0.9
	comp=Z,2.0nm,0.9s,baz=74,slow=2.6,SNR=4.2							
INK	Inuvik	61.10	343	IAmb		IAmb	00 25 35.2	
	comp=Z,1.0nm,0.7s							
ILAR	Eielson Array	63.66	336	P		P	00 25 52.2	-0.9
	comp=Z,0.8nm,0.8s,baz=127,slow=5.2,SNR=7.8							
MLY	Manley	65.27	336	P		P	00 26 04.0	+0.4
	baz=112							
ESDC	Sonseca Array	78.60	52	P		P	00 27 20.5	-3.4
	comp=Z,1.3nm,0.7s,baz=288,slow=4.5,SNR=9.2							
ESDC	Sonseca Array	78.60	52	IAmb		IAmb	00 27 23.7	
	comp=Z,2.2nm,0.9s							
DBIC	Dimbokro	84.09	85	P		P	00 27 49.9	-3.4
	comp=Z,3.3nm,0.8s,baz=14,slow=9.3,SNR=2.8							
DBIC	Dimbokro	84.09	85	IAmb		IAmb	00 27 53.8	
	comp=Z,7.5nm,1.1s							
ARCES	ARCESS Array B	85.83	18	P		P	00 27 58.4	-2.5
	comp=Z,1.5nm,0.8s,baz=310,slow=5.8,SNR=4.2							
GERES	GERESS Array B	88.75	40	P		P	00 28 13.1	-2.4
	comp=Z,0.2nm,0.3s,baz=261,slow=5.3,SNR=3.9							
TORD	Torodi Ar. Bea	88.88	77	P		P	00 28 12.2	-4.4
	comp=Z,0.3nm,0.6s,baz=286,slow=5.0,SNR=7.5							
TORD	Torodi Ar. Bea	88.88	77	IAmb		IAmb	00 28 13.0	
	comp=Z,0.6nm,1.1s							
SONM	Songino Array	116.86	347	PKP		PKPdf	00 34 05.5	-0.6
	comp=Z,0.6nm,0.8s,baz=5.7,slow=4.3,SNR=2.4							
KSRS	Korea Array	117.61	326	PKP		PKPdf	00 34 07.8	+0.1
	comp=Z,1.5nm,0.7s,baz=25,slow=4.0,SNR=2.8							
MKAR	Makanchi Array	119.34	6	PKP		PKPdf	00 34 08.2	-2.6
	comp=Z,0.3nm,0.3s,baz=0.1,slow=3.2,SNR=4.0							
WRA	Warramunga Arr	136.88	256	PKP		PKPdf	00 34 44.9	+0.1
	comp=Z,2.0nm,0.8s,baz=90,slow=1.4,SNR=15							
WRA	Warramunga Arr	136.88	256			PKPdf	00 34 45.4	+0.6
ASAR	Alice Springs	137.09	250	PKP		PKPdf	00 34 46.5	+1.5
	comp=Z,0.7nm,0.6s,baz=136,slow=2.5,SNR=6.2							
CMAR	Chiang Mai Arr	146.67	344	PKPbc		PKPdf	00 35 02.9	+0.6
	comp=Z,6.5nm,0.7s,baz=343,slow=3.5,SNR=11							

VAO ***15*** *00:18:35.3±0.3, 12.6°E×76.8°W, h10km, mb5.4*

MOS ***15*** *00:18:37.9±1.2, 12.6°E×76.7°W, h37km, mb5.7/40, Error ellipse: s-maj=9.5km s-min=6.0km az=105.6*

NEIC ***15*** *00:18:39.9±1.4, 12.6°E×76.7°W±0.8, h45km±3km, mb5.6/588, Mwb5.4/18, Mww5.4, ML5.8(ARE), Mwc5.4(GCMT), Error ellipse: s-maj=12.3km s-min=3.8km az=62.0*

BJI ***15*** *00:18:40.0±0.0, 12.7°E×76.8°W, h35km, mB5.5/17, Ms5.5/15, Ms7 5.3/18*

IDC ***15*** *00:18:40.2±0.4, 12.6°E×76.8°W, h46km±3km, mb4.7/29, mb1 4.8/32, mb1mx4.8/35, mbtmp5.0/32, MS4.6/25, Ms1 4.6/25, ms1mx4.5/30, Error ellipse: s-maj=13.0km s-min=9.0km az=66.0*

NEIC ***15*** *00:18:40.1, 12.6°E×76.7°W, h44km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.67; $M_{\theta\theta}$-0.82; $M_{\phi\phi}$0.15; $M_{r\theta}$-1.35; $M_{\theta\phi}$0.23; $M_{\phi r}$1.01; Fault plane solution: $M_0$1.86000×10^{17} NP1:ϕ_s77.61000°, δ16.23000°, λ43.84000°. NP2:ϕ_s304.94000°, δ78.84000°, λ101.86000°. Principal axes: T 1.8393, Plg55.0000°, Azm229.0000°; N 0.0487, Plg12.0000°, Azm123.0000°; P -1.8880, Plg33.0000°, Azm25.0000°;*

GCMT ***15*** *00:18:40.9±0.1, 12.6°E±0.0°×76.7°W±0.0°, h75km±1km, MW5.4/125, Moment Tensor Solution. s121,c212; s125,c216; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.54±.02; $M_{\theta\theta}$-0.25±.02; $M_{\phi\phi}$-0.28±.03; $M_{r\theta}$-0.79±.01; $M_{\theta\phi}$0.16±.02; $M_{\phi r}$1.10±.02; Best double couple: $M_0$1.43800×10^{17} NP1:ϕ_s136.00000°, δ10.00000°, λ83.00000°. NP2:ϕ_s324.00000°, δ80.00000°, λ91.00000°. Principal axes: T 1.4930, Plg55.0000°, Azm236.0000°; N -0.1090, Plg1.0000°, Azm144.0000°; P -1.3840, Plg35.0000°, Azm53.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***15*** *00:18:41, 12.7°E×76.6°W, h61km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.51; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-0.33; $M_{r\theta}$-0.88; $M_{\theta\phi}$0.13; $M_{\phi r}$1.24; Fault plane solution: $M_0$1.59000×10^{17} NP1:ϕ_s153.00000°, δ8.00000°, λ98.00000°. NP2:ϕ_s325.00000°, δ82.00000°, λ89.00000°. Principal axes: T 1.6389, Plg53.0000°, Azm234.0000°; N -0.1039, Plg1.0000°, Azm325.0000°; P -1.5350, Plg37.0000°, Azm56.0000°;*

NEIC ***15*** *00:18:44, 12.6°E×76.6°W, h60km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.28; $M_{\theta\theta}$-0.12; $M_{\phi\phi}$-0.16; $M_{r\theta}$-0.94; $M_{\theta\phi}$-0.01; $M_{\phi r}$1.21; Fault plane solution: $M_0$1.55000×10^{17} NP1:ϕ_s154.00000°, δ4.00000°, λ101.00000°. NP2:ϕ_s322.00000°, δ86.00000°, λ89.00000°. Principal axes: T 1.6156, Plg49.0000°, Azm232.0000°; N -0.1412, Plg1.0000°, Azm323.0000°; P -1.4744, Plg41.0000°, Azm53.0000°;*

ISC 15 00:18:39.9±0.3, 12.7°E±0.0°×76.7°W±0.0°, h47km±2km, h48km: pP-P, n1159, s1932/971, mb5.6/345, MS4.8/36, 5C-10D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NNA	Nana	0.73	356	P		Pn	00 18 53.5	-0.5
	11μm,0.3s,baz=190,slow=13							
NNA				S		Sn	00 19 02.5	-1.7
	47μm,0.3s,baz=192,slow=16,SNR=74							
NNA	Nana	0.73	356	*d* P		Pn	00 18 53.0	-1.0
ATAH	Atahualpa	5.77	344	P		Pn	00 20 05.5	+2.1
	107nm,0.3s,baz=168,slow=4.7,SNR=138							
ATAH				S		Sn	00 21 10.6	+2.1
	142nm,0.3s,baz=182,slow=17,SNR=2.0							
AP01	Chacalluta	8.38	133	*e*P		Pn	00 20 50.3	+12
AP01	Chacalluta	8.38	133	Pn		Pn	00 20 40.4	+1.6
PB16	IPOC Station P	8.97	129	‖ P		Pn	00 20 48.4	+1.0
PB16	IPOC Station P	8.97	129	Pn		Pn	00 20 47.0	-0.5
LPAZ	La Paz	9.11	114	P		Pn	00 20 52.9	+3.5
	6.4nm,0.3s,baz=290,slow=8.5,SNR=49							
LPAZ	La Paz	9.11	114	*e*P		Pn	00 20 52.3	+2.9
LPAZ	La Paz	9.11	114	P		Pn	00 20 50.0	+0.6
LPAZ	La Paz	9.11	114	Pn		Pn	00 20 50.0	+0.6
PSGCX	Pisagua	9.37	138			Pn	00 20 50.4	-2.1
MNMC	Minye Minye	9.41	134			Pn	00 20 51.4	-1.8
PB11	IPOC Station P	9.80	137			Pn	00 20 56.8	-1.6
TA01	Diego Aracena	10.05	142	Pn		Pn	00 21 01.5	-0.2
PATCX	Punta Patache	10.26	143			Pn	00 21 02.9	-1.8
PB08	IPOC Station P	10.40	136			Pn	00 21 06.6	-0.3
ETMB	Extrema	10.77	76	*e*P		Pn	00 21 10.1	-1.5
PB01	IPOC Station P	10.83	141			Pn	00 21 11.3	-1.2
PB07	IPOC Station P	11.12	145			Pn	00 21 15.3	-1.3
PB07	IPOC Station P	11.12	145	*i* P		Pn	00 21 16.4	-0.1
PB03	IPOC Station P	11.45	145	*i* P		Pn	00 21 20.6	-0.4
PB04	IPOC Station P	11.47	147			Pn	00 21 21.0	-0.3
PB04	IPOC Station P	11.47	147	*i* P		Pn	00 21 20.9	-0.4
PB09	IPOC Station P	11.55	142			Pn	00 21 22.7	+0.3
PB09	IPOC Station P	11.55	142	*i* P		Pn	00 21 23.5	+1.1
PB05	IPOC Station P	11.87	149	*i* P		Pn	00 21 25.8	-0.9
PB06	IPOC Station P	12.08	146			Pn	00 21 29.4	-0.2
PB06	IPOC Station P	12.08	146	*i* P		Pn	00 21 29.4	-0.2
PB10	IPOC Station P	12.26	152	Pn		Pn	00 21 31.4	-0.5
PB10	IPOC Station P	12.26	152	*i* P		Pn	00 21 31.4	-0.5
LVC	Limon Verde	12.37	144	P		Pn	00 21 34.0	+0.2
	2.9nm,0.3s,baz=314,slow=9.0,SNR=21							
LVC				S		Sn	00 23 48.0	-2.5
	3.3nm,0.3s,baz=333,slow=11,SNR=1.7							
LVC	Limon Verde	12.37	144	P		Pn	00 21 34.4	+0.6
LVC	Limon Verde	12.37	144	Pn		Pn	00 21 34.4	+0.6
LVC	Limon Verde	12.37	144	*i* P		Pn	00 21 34.4	+0.6

LVC	Limon Verde	12.37	144	*e*P		Pn	00 21 33.5	-0.3
PB15	IPOC Station P	12.54	147			Pn	00 21 35.2	-0.7
PB15	IPOC Station P	12.54	147	*i* P		Pn	00 21 37.6	+1.7
CUSE	Cuicocha Este	13.04	353	*e*P		Pn	00 21 42.8	-0.2
PAC1	Pacto, Paraso	13.05	351	*e*P		Pn	00 21 45.3	+2.4
PUAC	Puerto Asis, P	13.19	1	*e*P		Pn	00 21 42.4	-2.2
PB14	IPOC Station P	13.30	154	Pn		Pn	00 21 45.1	-1.3
PB14	IPOC Station P	13.30	154	*i* P		Pn	00 21 45.2	-1.2
GCUF	Volcan Galeras	13.87	358	*e*P		Pn	00 21 54.3	0.0
SAML	Samuel	13.88	76	*e*P		Pn	00 21 51.0	-3.2
SAML	Samuel	13.88	76	P		Pn	00 21 52.5	-1.6
SAML	Samuel	13.88	76	Pn		Pn	00 21 52.5	-1.6
SAML	Samuel	13.88	76	*e*P		Pn	00 21 52.1	-2.0
GO02	Mina Guanaco	14.12	152			Pn	00 21 57.6	0.0
CRUC	La Cruz	14.20	359	*e*P		Pn	00 22 00.1	+1.4
FLOC	Florencia	14.26	5	*e*P		Pn	00 21 54.9	-4.3
YJA	Yavi	14.28	133	*i* P		Pn	00 22 01.2	+1.4
AC01	Pan de Azucar	14.57	157			Pn	00 22 02.9	-0.4
GARC	Garzon, Huila	14.87	5	*e*P		Pn	00 22 05.5	-2.0
HJA	Humahuaca	15.03	136	*i* P		Pn	00 22 11.6	+2.0
MACC	Macarena, Meta	15.05	11	*e*P		Pn	00 22 05.5	-4.3
POPC	Popayan, Colom	15.16	0	*e*P		P	00 22 14.8	-0.8
BETC	Betania	15.36	5	*e*P		Pn	00 22 11.7	-2.0
SIV	San Ignacio	15.57	104	P		Pn	00 22 17.3	+0.8
	2.0nm,0.3s,baz=296,slow=8.7,SNR=38							
SIV				S		Sn	00 25 09.4	+1.3
	5.8nm,0.3s,baz=212,slow=19,SNR=1.3							
SIV				LR		LR	00 29 03.9	
	comp=Z,6μm,19.8s,baz=306,slow=40							
GR1C	Gorgona, Isla	15.68	355	*e*P		Pn	00 22 18.5	+0.7
GUVC	San Jose del G	15.72	16	*e*P		Pn	00 22 17.0	-1.3
AC02	Maricunga	15.78	154			Pn	00 22 19.1	-0.3
SLA	San Lorenzo	16.01	140	*i* P		P	00 22 24.5	-0.5
GO03	Copiap	16.02	158	P		P	00 22 24.1	-0.8
GO03	Copiap	16.02	158	*i* P		Pn	00 22 23.7	+1.5
VILB	Vilhena	16.18	93	*e*P		Pn	00 22 23.9	-0.4
AC04	Llanos de Chal	16.31	162	P		Pn	00 22 26.7	+1.0
PRAC	Prado	16.44	7	*e*P		Pn	00 22 25.1	-2.4
ORTC	Ortega, Tolima	16.59	5	*e*P		Pn	00 22 28.9	-0.5
YOTC	Yotoco, Valle	16.60	2	*e*P		Pn	00 22 29.8	+0.2
MALC	Bahia Malaga	16.63	358	*e*P		P	00 22 32.7	+1.0
AC05	El Transito	17.15	160	P		P	00 22 38.1	+0.7
AC05				IAmb		IAmb	00 23 03.4	
	comp=Z,1μm,2.0s							
ANIL	Santa Ana	17.15	5	*e*P		P	00 22 39.5	+1.8
TOLC	Tolima	17.25	5	*e*P		Pn	00 22 37.8	-0.1
MAPC	Malpelo	17.29	344	*e*P		P	00 22 38.8	-0.2
CVER	Cruz Verde, Cu	17.34	9	*e*P		P	00 22 42.2	+2.2
PTLB	Pontes e Lacer	17.34	101	*e*P		Pn	00 22 38.5	-0.2
PTGC	Puerto Gaitan,	17.43	16	*e*P		Pn	00 22 37.9	-2.0
CHIC	Chingaza	17.50	10	*e*P		Pn	00 22 38.3	-2.8
PLMC	San Jos del P	17.52	2	*e*P		P	00 22 41.2	-0.4
RREF	El Recreo	17.57	5	*e*P		Pn	00 22 40.4	-1.7
ROSC	El Rosal	17.62	8	P		P	00 22 42.9	-0.1
	comp=Z,1.9nm,0.3s,baz=60,slow=23,SNR=2.4							
ROSC				S		S	00 26 03.8	0.0
	comp=Z,1.1nm,0.3s,baz=90,slow=20,SNR=1.2							
ROSC				LR		LR	00 30 45.6	
	comp=Z,9μm,19.8s,baz=209,slow=41							
ROSC	El Rosal	17.62	8	IAmb		IAmb	00 23 03.1	
	comp=Z,495nm,1.2s							
AHML	Horco Molle	17.65	144	*i* P		P	00 22 43.5	+0.6
VCA	Vinchina	17.83	155	*i* P		P	00 22 45.4	+0.3
PAYG	Puerto Ayora	17.95	311	*e*P		Pn	00 22 46.4	+0.3
PAYG	Puerto Ayora	17.95	311	P		Pn	00 22 46.5	+0.3
GO04	Tololo Observa	18.23	163	P		P	00 22 49.9	+0.3
GO04	Tololo Observa	18.23	163	*i* P		Pn	00 22 50.3	+0.5
CO01	Juntas del Tor	18.26	161	P		Pn	00 22 50.6	+0.5
NORC	Norcasia	18.27	6	*e*P		P	00 22 49.6	-0.2
AGUA	GUANDACOL	18.38	156	*i* P		P	00 22 53.4	+1.9
SPBC	San Pablo de B	18.45	9	*e*P		Pn	00 22 52.7	+0.3
AANI	Anillaco	18.46	152	*i* P		Pn	00 22 53.1	+0.7
CBOC	Ciudad Bolivar	18.48	2	‖ *i* P		P	00 22 49.9	-2.4
MACA	Manacapuru-AM	18.55	61	*e*P		P	00 22 51.4	-1.5
AROD	Rodeo	18.64	160	*i* P		Pn	00 22 56.9	+2.1
CYA	Choya	18.70	148	*i* P		Pn	00 22 55.9	+0.6
ACDV	Cuesta del Vie	18.77	159	*i* P		Pn	00 22 57.0	+0.8
HELC	Santa Helena	18.83	4	*e*P		P	00 22 53.0	-3.3
SOLC	Bahia Solano	18.83	358	*e*P		P

JTS **Las Juntas de** 24.25 340 P **P** 00 23 54.2 +1.5
comp=Z,12nm,0.8s,baz=325,slow=1.6,SNR=6.0
JTS LR LR 00 33 29.8
comp=Z,383nm,20.9s,baz=228,slow=37
JTS Las Juntas de 24.25 340 *e*P **P** **00 23 52.1 -0.6**
JTS Las Juntas de 24.25 340 P **P** **00 23 55.7 +3.0**
JTS pmax pmax
comp=Z,69nm,1.0s
JTS Las Juntas de 24.25 340 P **P** **00 23 55.7 +3.0**
BI02 San Fabin de 24.35 169 P **P** **00 23 54.0 +0.5**
BI02 IAmb IAmb 00 23 56.9
comp=Z,177nm,1.1s
ARAG Araguaiana, MT 24.39 100 *e*P **P** **00 23 54.4 +0.4**
URIC Uribia, Colomb 24.73 11 *e*P **P** **00 23 52.8 -4.2**
MALB Monte Alegre 24.79 66 *e*P **P** **00 23 57.1 -0.5**
SNDB Serra Nova Dou 24.92 91 *e*P **P** **00 23 58.7 -0.2**
TRCB Terra Rica 25.06 117 *e*P **P** **00 24 00.9 +0.8**
ITQB Itaqui 25.19 135 *e*P **P** **00 24 01.7 +0.6**
PCRV Puerto La Cruz 25.75 29 P **P** **00 24 07.8 +1.4**
comp=Z,38nm,0.8s,baz=239,slow=1.9,SNR=22
PCRV S **S** **00 28 39.1 +6.7**
comp=Z,6.1nm,0.7s,baz=180,slow=23,SNR=1.2
PCRV LR LR 00 35 24.3
comp=Z,10µm,18.1s,slow=39
ESPN Las Esperanzas 25.85 343 P **P** **00 24 04.4 -2.8**
ESPN IAmb IAmb 00 24 22.3
comp=Z,361nm,1.3s
ACON Acoyapa 25.90 341 P **P** **00 24 08.1 +0.5**
PCMB Pacaembu 25.91 113 *e*P **P** **00 24 08.8 +1.0**
PTGB Pitanga 26.23 121 *e*P **P** **00 24 11.7 +1.0**
ITRB Iturama 26.29 109 *e*P **P** **00 24 12.2 +0.9**
LC01 Cunco 26.43 171 IAmb IAmb 00 24 13.2
comp=Z,100nm,0.8s
CRIN San Cristobal 27.23 338 P **P** **00 24 19.4 -0.2**
CRIN IAmb IAmb 00 24 37.6
comp=Z,159nm,1.1s
ITAB Concordia 27.23 126 *e*P **P** **00 24 19.7 0.0**
PRPB Parauapebas 27.38 79 *e*P **P** **00 24 20.3 -0.8**
MCPB Macapa, AP 27.43 65 *e*P **P** **00 24 21.1 -0.4**
TPP Pointe-a-Pierr 27.50 34 *e*P **P** **00 24 16.8 -5.2**
TRN Trinidad (W) 27.79 34 *e*P **P** **00 24 24.0 -0.7**
TBH Brigand Hill 27.84 35 *e*P P 00 24 14.2 -11
CPSB Cacapava Do Su 27.86 133 *e*P **P** **00 24 25.1 -0.1**
FRTB Fartura 27.91 116 *e*P **P** **00 24 26.3 +0.5**
IPMB Ipameri, GO 28.04 104 *e*P **P** **00 24 26.4 -0.6**
BDFB Brasilia 28.04 99 P **P** **00 24 26.9 -0.2**
comp=Z,3.5nm,0.5s,baz=264,slow=11,SNR=4.5
BDFB LR LR 00 36 41.1
comp=Z,6µm,19.5s,baz=279,slow=38
BDFB Brasilia 28.04 99 P **P** **00 24 27.4 +0.3**
BDFB pmax pmax
comp=Z,63nm,1.4s
BDFB Brasilia 28.04 99 P **P** **00 24 27.4 +0.3**
BB19B Bebedouro 28.25 111 *e*P **P** **00 24 29.2 +0.3**
PLCA Paso Flores 28.44 170 P **P** **00 24 30.9 +0.6**
comp=Z,78nm,0.7s,baz=344,slow=10,SNR=197
PLCA LR LR 00 33 37.9
comp=Z,944nm,21.6s,baz=338,slow=32
PLCA Paso Flores 28.44 170 P **P** **00 24 31.0 +0.6**
PLCA Paso Flores 28.44 170 P **P** **00 24 30.9 +0.6**
PLCA IAmb IAmb 00 24 32.0
comp=Z,98nm,0.8s
PLCA Paso Flores 28.44 170 *e*P **P** **00 24 30.5 +0.2**
PLTB Pedras Altas 28.52 135 *e*P **P** **00 24 31.1 0.0**
TGUH Tegucigalpa,Un 28.56 338 P **P** **00 24 33.4 +1.7**
TGUH IAmb IAmb 00 24 45.4
comp=Z,170nm,1.1s
TPR Prospect 28.58 34 *e*P **P** **00 24 27.9 -3.8**
GRGR Grenville 28.90 32 *e*P **P** **00 24 34.6 0.0**
GRGR Grenville 28.90 32 *e* P 00 24 46.2 +12
GRGR Grenville 28.90 32 P P **00 24 34.2 -0.4**
SMTB Santa Maria do 28.93 85 *e*P **P** **00 24 35.4 +0.5**
GRHS Sauteurs 28.98 32 *e*P **P** **00 24 32.6 -2.7**
GRHS Sauteurs 28.98 32 *e* P 00 24 47.9 +13
GRSS Sisters 29.06 32 *e*P P 00 24 28.6 -7.4
CNLB Canela 29.20 128 *e*P **P** **00 24 37.4 +0.1**
GCMP Grenada, Carri 29.32 32 *e*P **P** **00 24 37.9 -0.3**
MTO3 Montecristo 29.68 335 P **P** **00 24 40.8 -0.9**
ESQI Esquipulas 29.82 335 P **P** **00 24 42.4 -0.4**
MDP Montagnes des 29.82 55 P **P** **00 24 41.8 -1.0**
comp=Z,21nm,0.7s,baz=235,slow=8.2,SNR=42
MDP LR LR 00 37 09.6
comp=Z,5µm,20.4s,baz=228,slow=37
SPB Sao Paulo 29.86 115 P **P** **00 24 42.5 -0.6**
SVB Belmont 30.07 31 *e*P **P** **00 24 44.5 -0.5**
VAO Valinhos 30.12 114 *e*P **P** **00 24 46.5 +1.1**
SVCV St. Vincent, C 30.13 32 *e*P **P** **00 24 44.0 -1.5**
TMAB Tom-Au,PA,Br 30.21 72 *e*P **P** **00 24 46.7 +0.4**
MCLT Moule a Chique 30.60 31 *e*P **P** **00 24 47.6 -2.0**
MCLT Moule a Chique 30.60 31 P **P** **00 24 51.8 +2.1**
MCLT IAmb IAmb 00 25 16.6
comp=Z,210nm,1.1s
SLPA Patience 30.73 31 *e* **P** **00 24 52.6 +1.8**
MTDJ Mount Denham 30.76 359 P **P** **00 24 52.7 +1.7**
MTDJ IAmb IAmb 00 25 05.5
comp=Z,89nm,0.9s
SLAC Saint Lucia, A 30.78 31 *e*P **P** **00 24 47.5 -3.7**
SLBI Saint Lucia, B 30.85 31 *e*P **P** **00 24 51.7 0.0**
BBGH Gun Hill 30.86 34 *e*P P 00 24 56.8 +4.7
SLW Petit Monier 30.86 31 *e* **P** **00 24 51.8 -0.2**
BBSP Saint Philip 30.88 34 *e*P **P** **00 24 53.1 +1.0**
SDBA SAO DESIDERIO 31.12 93 *e*P **P** **00 24 53.7 -0.6**
BIM Bigot 31.22 30 *e*P **P** **00 24 53.7 -1.4**
MPOM Morne Pois Mar 31.27 31 *e*P **P** **00 24 52.4 -3.1**
LGNH Logne 31.31 8 P **P** **00 24 55.7 -0.1**
LGNH IAmb IAmb 00 25 55.6
comp=Z,104nm,1.1s
FDF Fort de France 31.37 30 *e*P **P** **00 24 53.2 -3.3**
FDF Fort de France 31.37 30 P **P** **00 24 54.5 -1.9**
FDF pmax pmax
comp=Z,152nm,0.6s
FDF Fort de France 31.37 30 IAmb IAmb 00 25 17.1
comp=Z,139nm,0.9s
PARB Paraibuna 31.40 114 *e*P **P** **00 24 57.3 +0.6**
JANB Januaria 31.60 98 *e*P **P** **00 24 57.9 -0.8**
BSCB Bom Sucesso 31.68 109 *e*P **P** **00 25 00.1 +0.9**
SDD Santo Domingo 31.71 12 P **P** **00 24 59.8 +0.4**
SDD IAmb IAmb 00 25 13.6
comp=Z,125nm,0.9s
DLPL La Plaine 31.84 29 P **P** **00 25 00.5 -0.1**
DSLB Salisbury 31.85 29 *e* **P** **00 25 00.6 0.0**
MLPR Magueyes Islan 31.98 18 P **P** **00 25 01.2 -0.5**
MLPR IAmb IAmb 00 25 04.6
comp=Z,55nm,0.7s
CRPR Cabo Rojo, PR 31.99 18 P **P** **00 25 00.7 -1.1**
CRPR IAmb IAmb 00 25 15.4
comp=Z,77nm,1.1s
ICMP Isla Caja de M 32.06 19 P **P** **00 25 02.0 -0.4**
TDBA Terre de Bas, 32.10 28 *e* P 00 25 11.6 +8.8
TDBA Terre de Bas, 32.10 28 *e* P 00 25 11.9 +9.1
PETF Flores 32.16 336 P **P** **00 25 03.8 +0.5**
OBIP Obispado Ponce 32.18 18 IAmb IAmb 00 25 16.1
comp=Z,127nm,1.2s
IGPR InterUniversit 32.26 19 P **P** **00 25 04.1 -0.1**
LCCY Blossom Villag 32.35 354 P **P** **00 25 03.6 -1.3**
ESAR Angra dos Reis 32.38 113 *e*P **P** **00 25 06.1 +0.8**
CBCY The Bluff, Cay 32.38 355 P **P** **00 25 05.2 0.0**
SJG San Juan 32.39 19 P **P** **00 25 04.9 -0.4**
comp=Z,36nm,0.5s,baz=170,slow=9.6,SNR=23
SJG San Juan 32.39 19 *e*P **P** **00 25 03.6 -1.6**
SJG San Juan 32.39 19 P **P** **00 25 04.8 -0.4**
SJG IAmb IAmb 00 25 32.0
comp=Z,127nm,1.3s
AOPR Arecibo Observ 32.42 18 P **P** **00 25 04.8 -0.8**
AOPR IAmb IAmb 00 25 06.5
comp=Z,129nm,1.1s
AGPR Aguadilla, PR 32.43 17 P **P** **00 25 04.8 -0.8**
AGPR IAmb IAmb 00 26 00.0
comp=Z,67nm,0.9s
GTBY Guantanamo Bay 32.48 3 P **P** **00 25 05.6 -0.5**
GTBY IAmb IAmb 00 25 20.3
comp=Z,84nm,1.1s
SC01 Santiago de lo 32.50 11 P **P** **00 25 06.5 +0.2**
SC01 IAmb IAmb 00 25 44.6
comp=Z,164nm,1.1s
CDVI St. Croix 32.52 22 P **P** **00 25 05.7 -0.8**
CDVI IAmb IAmb 00 25 31.5
comp=Z,148nm,0.9s
CCIG Comitan 32.57 332 P **P** **00 25 06.5 -0.6**
MTP Monte Pirata 32.57 20 P **P** **00 25 06.4 -0.5**
EMPR Esperanza - Ma 32.61 18 P **P** **00 25 07.0 -0.2**
EMPR IAmb IAmb 00 25 57.0
comp=Z,93nm,1.0s

CBYP Canovanas 32.63 20 IAmb IAmb 00 25 28.0
comp=Z,47nm,0.7s
ABD La Joyeuse, An 32.72 28 *e*P **P** **00 25 03.9 -4.3**
CUPR Culebra, Puert 32.86 20 IAmb IAmb 00 25 09.7
comp=Z,182nm,1.4s
SKOC St. Kitts, UWI 32.90 25 *e*P **P** **00 25 09.1 -0.7**
SKI Saint Kitts 32.93 25 *e*P **P** **00 25 09.6 -0.5**
SEUS St. Eustatius 32.97 25 P **P** **00 25 09.5 -0.9**
SEUS IAmb IAmb 00 25 39.1
comp=Z,138nm,0.8s
ANBD Bethesda, Anti 33.10 27 *e*P **P** **00 25 09.4 -2.1**
RPN Rapa Nui 33.66 240 P **P** **00 25 16.9 +0.5**
RPN pmax pmax
comp=Z,533nm,1.8s
RPN Rapa Nui 33.66 240 P **P** **00 25 16.9 +0.5**
ROSB Rosrio 33.76 76 *e*P **P** **00 25 16.7 -0.8**
GRTK Grand Turk 34.47 9 P **P** **00 25 23.3 -0.1**
CMIG Matias Romero 34.59 328 P **P** **00 25 24.7 +0.2**
comp=Z,5.8nm,0.7s,baz=86,slow=2.4,SNR=3.4
TEIG Tepich 34.63 341 P **P** **00 25 25.4 +0.6**
SJMB Sao Joao De Ma 34.75 104 *e*P **P** **00 25 25.8 -0.2**
TLIG Tlapa 36.98 324 P **P** **00 25 45.3 +0.2**
NBMO Morrinhos-CE 37.53 79 *e*P **P** **00 25 49.1 -0.6**
GO09 Cerro Castillo 38.62 176 P **P** **00 25 59.1 +0.7**
060A Indiantown 39.67 355 P **P** **00 26 07.1 -0.3**
MOIG Morelia 40.17 323 P **P** **00 26 12.9 +0.9**
MOIG IAmb IAmb 00 26 27.6
comp=Z,132nm,1.2s
RCBR Riachuelo 40.89 84 P **P** **00 26 18.9 +1.0**
comp=Z,7.6nm,0.7s,baz=267,slow=12,SNR=1.9
RCBR Riachuelo 40.89 84 P **P** **00 26 17.2 -0.7**
656A Willston 42.21 353 P **P** **00 26 27.7 -0.6**
656A IAmb IAmb 00 26 41.6
comp=Z,132nm,1.0s
USHA Ushuaia 42.52 173 P **P** **00 26 31.9 +1.3**
comp=Z,27nm,0.8s,baz=345,slow=4.5,SNR=12
MG01 Puerto William 42.72 172 P **P** **00 26 31.9 -0.3**
553A Crawfordville 43.29 350 P **P** **00 26 37.5 +0.4**
456A Hilliard 43.49 353 P **P** **00 26 39.0 +0.4**
456A IAmb IAmb 00 26 51.7
comp=Z,118nm,1.1s
451A Vernon 43.94 349 P **P** **00 26 42.8 +0.5**
TIGA Tifton 44.39 352 P **P** **00 26 46.0 +0.1**
TIGA IAmb IAmb 00 27 24.2
comp=Z,144nm,1.6s
257A Skidaway Islan 44.62 355 P **P** **00 26 46.2 -1.6**
257A IAmb IAmb 00 27 35.5
comp=Z,190nm,1.1s
352A Blakely 44.63 350 IAmb IAmb 00 27 01.1
comp=Z,139nm,1.0s
255A Hazlehurst 44.72 353 P **P** **00 26 47.4 -1.1**
255A IAmb IAmb 00 27 02.0
comp=Z,169nm,1.3s
BRAL Brewton 44.73 347 P **P** **00 26 47.6 -1.0**
BRAL IAmb IAmb 00 27 01.9
comp=Z,171nm,1.1s
KVTX Kingsville 44.95 333 P **P** **00 26 51.2 +0.7**
250A Grady 45.36 349 IAmb IAmb 00 27 06.9
comp=Z,150nm,1.1s
346A Big Creek Wild 45.51 345 P **P** **00 26 55.0 +0.2**
346A IAmb IAmb 00 27 08.5
comp=Z,126nm,1.0s
CSU Charleston Sou 45.56 356 P **P** **00 26 55.1 0.0**
NHSC New Hope 45.68 356 P **P** **00 26 55.7 -0.4**
NHSC IAmb IAmb 00 27 10.4
comp=Z,140nm,1.0s
152A Waverly Hall 45.76 351 IAmb IAmb 00 27 09.7
comp=Z,66nm,0.9s
344A Westbrook Farm 45.91 343 P **P** **00 26 57.5 -0.5**
Z56A Williston 45.99 355 P **P** **00 26 58.2 -0.4**
Z56A IAmb IAmb 00 27 12.3
comp=Z,58nm,0.8s
735A Kenedy 46.05 334 P **P** **00 27 00.7 +1.6**
HKT Hockley 46.22 337 P **P** **00 27 01.0 +0.6**
HKT pmax pmax
comp=Z,204nm,1.8s
HKT Hockley 46.22 337 P **P** **00 27 01.0 +0.6**
HKT IAmb IAmb 00 27 16.1
comp=Z,204nm,1.8s
833A Chaparral WMA, 46.30 332 P **P** **00 27 01.9 +0.8**
833A Chaparral WMA, 46.30 332 IAmb IAmb 00 27 15.5
comp=Z,74nm,1.1s
BBSR BB Station 46.31 14 P **P** **00 27 00.2 -0.8**
BBSR IAmb IAmb 00 27 27.6
comp=Z,84nm,1.4s
GOGA Godfrey 46.31 352 P **P** **00 27 01.2 +0.1**
GOGA pmax pmax
comp=Z,65nm,1.2s
GOGA Godfrey 46.31 352 P **P** **00 27 00.2 -0.9**
comp=171,SNR=8.4
GOGA Godfrey 46.31 352 P **P** **00 27 01.2 +0.1**
Y58A Scranton 46.45 357 P **P** **00 27 02.5 +0.3**
Y58A IAmb IAmb 00 27 15.6
comp=Z,74nm,1.1s
Y60A Bolivia 46.48 358 P **P** **00 27 03.3 +0.9**
Y59A Loris 46.49 358 P **P** **00 27 01.8 -0.7**
Y59A IAmb IAmb 00 27 16.0
comp=Z,92nm,1.2s
LRAL Lakeview Retre 46.53 348 P **P** **00 27 02.1 -0.7**
baz=153,SNR=14
LRAL Lakeview Retre 46.53 348 IAmb IAmb 00 27 15.9
comp=Z,103nm,0.9s
VBMS Vicksburg 46.58 344 P **P** **00 27 04.4 +1.3**
VBMS IAmb IAmb 00 27 16.7
comp=Z,91nm,1.1s
146A Union 46.60 346 P **P** **00 27 03.5 +0.1**
146A IAmb IAmb 00 27 16.5
comp=Z,112nm,1.0s
Y57A Sumter 46.60 356 P **P** **00 27 03.6 +0.3**
Y57A IAmb IAmb 00 27 35.1
comp=Z,86nm,0.7s
Y52A Lilburn 46.84 352 P **P** **00 27 05.2 0.0**
JSC Jenkinsville 46.93 355 P **P** **00 27 05.4 -0.5**
JSC pmax pmax
comp=Z,29nm,1.2s
JSC Jenkinsville 46.93 355 P **P** **00 27 05.4 -0.5**
X58A Rowland 47.08 357 P **P** **00 27 07.4 +0.3**
X56A White Oak 47.12 355 P **P** **00 27 06.1 -1.3**
baz=174,SNR=6.1
X55A Gracelyn & Ava 47.15 355 P **P** **00 27 06.8 -0.9**
baz=174,SNR=6.5
143A Socs Landing, 47.28 343 P **P** **00 27 08.6 0.0**
143A IAmb IAmb 00 27 22.2
comp=Z,184nm,1.5s
X54A Belton 47.30 354 P **P** **00 27 08.1 -0.7**
baz=172,SNR=5.2
NATX Nacogdoches 47.43 339 P **P** **00 27 10.6 +0.8**
baz=156,SNR=7.9
PAULI Pauline 47.52 354 IAmb IAmb 00 27 23.7
comp=Z,48nm,0.9s
W60A Pink Hill 47.52 359 P **P** **00 27 10.7 +0.2**
baz=179
W58A Raeford 47.53 357 P **P** **00 27 10.3 -0.3**
baz=177,SNR=6.6
W61A Ground Anchor 47.63 360 P **P** **00 27 12.5 +1.1**
baz=180,SNR=6.5
X51A Calhoun 47.64 351 P **P** **00 27 11.6 +0.2**
X51A IAmb IAmb 00 27 23.9
comp=Z,58nm,1.1s
435B Jarrell 47.65 336 P **P** **00 27 12.0 +0.4**
baz=152
435B Jarrell 47.65 336 P **P** **00 27 11.2 -0.5**
435B IAmb IAmb 00 27 26.9
comp=Z,42nm,0.8s
W57A Gilead 47.71 356 P **P** **00 27 10.8 -1.1**
baz=176,SNR=5.9
W57A Gilead 47.71 356 IAmb IAmb 00 27 24.6
comp=Z,88nm,1.1s
CNNC Cliffs of the 47.71 359 P **P** **00 27 11.4 -0.5**
CNNC IAmb IAmb 00 27 25.5
comp=Z,93nm,1.1s
FPAL Fort Paine 47.74 350 IAmb IAmb 00 27 24.4
comp=Z,81nm,1.1s
KMSC Kings Mountain 47.79 355 P **P** **00 27 12.0 -0.7**
baz=174,SNR=5.2
KMSC Kings Mountain 47.79 355 IAmb IAmb 00 27 25.9
comp=Z,52nm,0.8s
W54A Cherokee Point 47.82 354 P **P** **00 27 12.9 +0.1**
baz=173,SNR=7.3
X48A Hartselle 47.91 349 IAmb IAmb 00 27 25.9
comp=Z,52nm,1.0s
Z41A Richland Creek 48.20 342 P **P** **00 27 16.7 +0.9**
baz=159,SNR=5.4
V60A Jim Taylor Roa 48.22 359 P **P** **00 27 15.7 -0.2**

V60A IAmb IAmb 00 27 29.8
comp=Z,90nm,0.9s
V59A Middlesex 48.24 358 P **P** **00 27 15.8 -0.2**
baz=178,SNR=6.2
V61A Roper 48.25 0 P **P** **00 27 15.8 -0.3**
V58A Windy Hill, Pi 48.30 357 P **P** **00 27 15.8 -0.7**
baz=177
V58A Windy Hill, Pi 48.30 357 IAmb IAmb 00 27 29.3
comp=Z,55nm,1.0s
JCT Junction City 48.32 333 P **P** **00 27 17.1 +0.2**
baz=149
JCT Junction City 48.32 333 IAmb IAmb 00 28 58.9
comp=Z,133nm,1.4s
W50A Signal Mountai 48.34 351 IAmb IAmb 00 27 52.1
comp=Z,48nm,0.7s
HPIG 48.37 325 IAmb IAmb 00 27 32.3
comp=Z,88nm,1.1s
V56A Mocksville 48.39 356 P **P** **00 27 16.6 -0.6**
baz=175,SNR=5.2
V57A Coltrane Farms 48.42 357 P **P** **00 27 16.8 -0.7**
baz=176
SWET Sewanee 48.45 350 IAmb IAmb 00 27 53.4
comp=Z,33nm,0.7s
V53A Saluda 48.46 353 P **P** **00 27 17.8 0.0**
V53A IAmb IAmb 00 27 51.5
comp=Z,58nm,0.6s
CPCT Cooper Cave 48.46 352 P **P** **00 27 18.1 +0.3**
CPCT IAmb IAmb 00 27 52.6
comp=Z,38nm,0.7s
OXF Oxford 48.48 346 P **P** **00 27 19.5 +1.6**
OXF pmax pmax
comp=Z,76nm,0.9s
OXF Oxford 48.48 346 P **P** **00 27 16.5 -1.4**
baz=163,SNR=6.7
OXF Oxford 48.48 346 P **P** **00 27 19.5 +1.6**
OXF IAmb IAmb 00 27 30.7
comp=Z,76nm,0.9s
V54A Nebo 48.48 354 P **P** **00 27 17.1 -0.8**
baz=173
V55A Taylorsville 48.49 355 P **P** **00 27 16.9 -1.1**
baz=174
V55A Taylorsville 48.49 355 P **P** **00 27 17.7 -0.3**
CCAR Cane Creek 48.52 343 P **P** **00 27 18.6 +0.3**
TKL Tuckaleechee C 48.56 352 P **P** **00 27 18.1 -0.5**
comp=Z,7.0nm,0.9s,baz=186,slow=13,SNR=2.7
TKL Tuckaleechee C 48.56 352 P **P** **00 27 16.1 -2.5**
SLBS Sierra La Lagu 48.58 318 P **P** **00 27 19.8 +0.8**
SLBS IAmb IAmb 00 27 34.1
comp=Z,50nm,1.0s
PLAL Pickwick Lake 48.63 348 IAmb IAmb 00 27 31.6
comp=Z,67nm,0.9s
WHTX Lake Whitney, 48.67 336 P **P** **00 27 19.6 +0.1**
baz=153,SNR=6.0
WLAR White Oak Lake 48.70 342 pP pP 00 27 33.6 +1.0
V52A Sevierville 48.72 353 IAmb IAmb 00 27 53.9
comp=Z,61nm,0.8s
V51A Loudon 48.78 352 IAmb IAmb 00 27 55.0
comp=Z,48nm,0.7s
U59A Littleton 48.82 359 P **P** **00 27 20.5 0.0**
baz=179,SNR=5.6
U59A Littleton 48.82 359 IAmb IAmb 00 27 33.8
comp=Z,76nm,1.1s
X43A Marvell 48.85 345 P **P** **00 27 21.6 +0.8**
X43A IAmb IAmb 00 27 34.2
comp=Z,68nm,0.9s
U58A Oxford 48.88 358 P **P** **00 27 20.7 -0.3**
baz=178
U56A King 48.92 356 P **P** **00 27 20.8 -0.5**
baz=175,SNR=6.7
U56A King 48.92 356 IAmb IAmb 00 27 34.5
comp=Z,81nm,1.1s
U60A Pendleton 48.93 360 P **P** **00 27 21.2 -0.1**
baz=179
U57A Blanch 48.95 357 P **P** **00 27 20.9 -0.6**
baz=177,SNR=5.5
W45A Hickory Valley 49.04 347 P **P** **00 27 21.5 -0.8**
V48A Smith Brothers 49.12 349 IAmb IAmb 00 27 35.6
comp=Z,87nm,0.8s
TXAR Lajitas Array 49.20 329 P **P** **00 27 23.7 -0.1**
comp=Z,4.4nm,0.5s,baz=152,slow=8.9,SNR=76
TXAR pP **pP** **00 27 36.9 +0.2**
comp=Z,25nm,0.9s,baz=148,slow=8.2,SNR=29
U54A Nelsons Funny 49.20 355 P **P** **00 27 22.6 -0.9**
baz=174
U54A Nelsons Funny 49.20 355 P **P** **00 27 23.7 +0.1**
U54A IAmb IAmb 00 27 36.2
comp=Z,68nm,1.1s
X40A Basin Creek Fa 49.36 342 P **P** **00 27 26.9 +2.2**
baz=159,SNR=8.5
X40A Basin Creek Fa 49.36 342 P **P** **00 27 25.9 +1.2**
CLTN Cedars of Leba 49.38 350 P **P** **00 27 25.1 +0.3**
T58A Grand View Acr 49.43 358 P **P** **00 27 24.5 -0.7**
baz=178,SNR=8.5
T59A Double "B" Far 49.43 359 P **P** **00 27 25.1 -0.1**
baz=179,SNR=7.9
T59A Double "B" Far 49.43 359 IAmb IAmb 00 27 38.5
comp=Z,93nm,1.1s
T57A Hurt 49.51 357 P **P** **00 27 25.3 -0.4**
baz=177,SNR=11
T56A Rocky Mt 49.58 357 P **P** **00 27 26.1 -0.2**
baz=176,SNR=5.1
MIAR Mount Ida 49.64 342 P **P** **00 27 26.9 +0.1**
MIAR pmax pmax
comp=Z,352nm,0.9s
MIAR Mount Ida 49.64 342 P **P** **00 27 26.7 -0.1**
baz=158,SNR=19
WVT Waverly 49.69 348 P **P** **00 27 25.3 -1.9**
WVT pmax pmax
comp=Z,44nm,0.9s
WVT Waverly 49.69 348 P **P** **00 27 25.2 -1.9**
baz=166
WVT Waverly 49.69 348 P **P** **00 27 25.3 -1.9**
WVT IAmb IAmb 00 27 39.2
comp=Z,44nm,0.8s
U49A Red Boiling Sp 49.70 351 IAmb IAmb 00 29 03.0
comp=Z,62nm,1.2s
T54A Tazewell 49.72 355 P **P** **00 27 26.4 -1.1**
baz=174
LPAR Lepanto 49.73 346 P **P** **00 27 25.5 +0.1**
T53A Wise 49.73 354 P **P** **00 27 26.6 -1.0**
baz=173
HBAR Harrisburg 49.77 345 P **P** **00 27 27.9 +0.1**
HBAR IAmb IAmb 00 29 03.9
comp=Z,132nm,1.3s
BLA Blacksburg 49.78 356 P **P** **00 27 28.4 +0.5**
BLA pmax pmax
comp=Z,45nm,1.0s
BLA Blacksburg 49.78 356 P **P** **00 27 28.4 +0.5**
BLA IAmb IAmb 00 27 41.0
comp=Z,45nm,0.9s
W41B Gary Mavity, V 49.83 343 P **P** **00 27 28.1 -0.1**
baz=160,SNR=7.1
GNAR Gosnell 50.01 346 P **P** **00 27 29.9 +0.4**
T50A Nancy 50.05 352 P **P** **00 27 31.0 +1.1**
S58A Poland Farm, P 50.08 359 P **P** **00 27 29.9 -0.1**
baz=178,SNR=5.5
S58A Poland Farm, P 50.08 359 IAmb IAmb 00 27 43.7
comp=Z,52nm,0.8s
ABTX Abilene, Hawle 50.10 335 P **P** **00 27 30.3 -0.1**
baz=150,SNR=24
S56A Natural Bridge 50.20 357 P **P** **00 27 30.6 -0.4**
baz=176
S59A Mechanicsville 50.22 359 P **P** **00 27 31.2 +0.1**
baz=179
S57A Dark Hollow, R 50.25 358 P **P** **00 27 30.9 -0.5**
baz=177,SNR=7.4
S57A Dark Hollow, R 50.25 358 IAmb IAmb 00 27 44.5
comp=Z,78nm,1.0s
W39A Magazine 50.30 342 P **P** **00 27 32.1 +0.3**
baz=158,SNR=11
S55A Lewisburg 50.34 356 P **P** **00 27 30.9 -1.3**
baz=175,SNR=6.9
HICK Hickman 50.38 347 P **P** **00 27 32.8 +0.4**
T47A Sharon Grove 50.39 349 P **P** **00 27 31.8 -0.6**
T47A IAmb IAmb 00 29 05.2
comp=Z,47nm,0.8s
LCAR Lake Charles 50.39 345 IAmb IAmb 00 27 45.2
comp=Z,61nm,0.9s
R58B Mineral 50.42 359 P **P** **00 27 32.9 +0.2**
baz=179,SNR=7.9
R58B Mineral 50.42 359 IAmb IAmb 00 27 46.3
comp=Z,114nm,1.1s
S54A Dingess, Beckl 50.43 355 P **P** **00 27 32.8 0.0**
FCAR Ozark Folk Cen 50.47 344 IAmb IAmb 00 27 46.1
comp=Z,82nm,1.0s
S51A Beattyville 50.50 353 IAmb IAmb 00 28 07.0
comp=Z,50nm,0.6s

PARMO	Parma	50.61	347	P	P	00 27 35.0	+0.8		
CBN	Corbin Frederi baz=179	50.66	359	P	P	00 27 34.6	+0.1		
CBN	Corbin Frederi comp=Z,56nm,0.8s	50.66	359	IAmb	IAmb	00 27 49.1			
T45A	Paducah	50.72	348	P	P	00 27 34.0	-0.9		
R58A	Rapidan baz=178,SNR=5.7	50.76	359	P	P	00 27 35.4	+0.2		
R57A	Stanardsville baz=178	50.77	358	P	P	00 27 35.5	+0.2		
R55A	Marlinton baz=176	50.83	357	P	P	00 27 36.0	+0.1		
R55A	Marlinton comp=Z,52nm,1.1s	50.83	357	IAmb	IAmb	00 27 49.2			
PBMO	Poplar Bluff comp=Z,64nm,0.8s	50.88	346	IAmb	IAmb	00 27 49.1			
U40A	Yellville baz=160,SNR=22	51.11	343	P	P	00 27 37.5	-0.4		
R50A	Paris comp=Z,50nm,0.9s	51.22	352	IAmb	IAmb	00 27 51.2			
T42A	Van Buren comp=Z,48nm,0.8s	51.28	345	IAmb	IAmb	00 27 52.6			
R49A	Shelbyville comp=Z,58nm,1.1s	51.35	352	IAmb	IAmb	00 27 51.8			
Q58A	Fox Den Farm, baz=179	51.40	359	P	P	00 27 40.0	0.0		
USIN	University of USIN comp=Z,68nm,0.8s	51.44	349	P IAmb	P IAmb	00 27 41.3 00 27 52.8	+0.9		
WCI	Wyandotte Cave WCI comp=Z,44nm,0.7s	51.46	350	P pmax	P pmax	00 27 40.7	+0.2		
WCI	Wyandotte Cave baz=168	51.46	350	P	P	00 27 41.9	+1.5		
WCI	Wyandotte Cave WCI comp=Z,44nm,0.7s	51.46	350	P IAmb	P IAmb	00 27 40.7 00 28 15.3	+0.2		
Q53A	Leroy baz=174	51.50	355	P	P	00 27 40.1	-0.6		
Q57A	Strasburg baz=178,SNR=5.1	51.51	358	P	P	00 27 41.3	+0.5		
Q55A	Buckhannon baz=176	51.54	357	P	P	00 27 41.2	+0.1		
Q56A	Snyder Ridge, baz=177	51.54	358	P	P	00 27 40.2	-0.9		
Q56A	Snyder Ridge, comp=Z,71nm,1.0s	51.54	358	IAmb	IAmb	00 27 54.7			
Q54A	Coxs Mills baz=175	51.57	356	P	P	00 27 40.0	-1.3		
Q54A	Coxs Mills comp=Z,44nm,0.6s	51.57	356	IAmb	IAmb	00 28 13.5			
TUL1	Leonard baz=156,SNR=17	51.59	340	P	P	00 27 41.1	-0.4		
WMOK	Wichita Mounta WMOK comp=Z,53nm,1.4s	51.61	337	P pmax	P pmax	00 27 40.8	-1.0		
WMOK	Wichita Mounta baz=152,SNR=7.9	51.61	337	P	P	00 27 40.7	-1.0		
Q52A	Bidwell baz=173	51.67	355	P	P	00 27 41.4	-0.6		
CLNB	Carlsbad	51.70	331	P	P	00 27 43.6	+1.0		
OKCFA	Oklahoma City OKCFA comp=Z,104nm,1.1s	51.72	338	P IAmb	P IAmb	00 27 42.5 00 27 55.6	0.0		
P58A	Pank, Wackersv baz=179,SNR=5.2	51.94	360	P	P	00 27 44.0	-0.1		
OK030	Cody Creek RV comp=Z,84nm,0.9s	51.94	339	IAmb	IAmb	00 27 57.3			
MNTX	Cornudas Mount baz=144,SNR=19	51.98	329	P	P	00 27 43.9	-0.6		
MNTX	Cornudas Mount comp=Z,91nm,1.4s	51.98	329	IAmb	IAmb	00 27 58.3			
OK031	S. Brethren Rd comp=Z,96nm,0.9s	51.98	339	IAmb	IAmb	00 27 57.6			
P56A	Dayton Farm, R baz=177	51.99	358	P	P	00 27 44.7	+0.3		
FVM	French Village comp=Z,50nm,0.6s	52.03	346	IAmb	IAmb	00 28 23.6			
QUOK	Quay comp=Z,105nm,1.2s	52.14	340	IAmb	IAmb	00 27 58.9			
HOPE	Hope Point HOPE comp=Z,91nm,0.9s	52.15	151	P pmax	P pmax	00 27 46.0	+0.5		
HOPE	Hope Point HOPE comp=Z,91nm,0.8s	52.15	151	P IAmb	P IAmb	00 27 46.0 00 27 48.0	+0.5		
P54A	Burton baz=175	52.16	356	P	P	00 27 45.2	-0.5		
P51A	Williamsport baz=172	52.26	354	P	P	00 27 43.8	-2.6		
P51A	Williamsport comp=Z,79nm,1.1s	52.26	354	IAmb	IAmb	00 27 60.0			
OLIL	Olney comp=Z,93nm,1.0s	52.27	349	IAmb	IAmb	00 27 58.6			
P60A	Greenville	52.27	1	P	P	00 27 45.5	-0.9		
CCM	Cathedral Cave CCM comp=Z,59nm,0.9s	52.29	346	P pmax	P pmax	00 27 46.2	-0.5		
CCM	Cathedral Cave baz=162	52.29	346	P	P	00 27 45.6	-1.1		
CCM	Cathedral Cave CCM comp=Z,59nm,0.9s	52.29	346	P IAmb	P IAmb	00 27 46.2 00 28 01.3	-0.5		
P52A	Corning baz=173	52.32	355	P	P	00 27 45.3	-1.5		
P52A	Corning comp=Z,51nm,0.6s	52.32	355	IAmb	IAmb	00 28 19.6			
PSUB	Penn St. - Bra PSUB comp=Z,180nm,1.9s	52.39	1	P IAmb	P IAmb	00 27 47.8 00 28 02.4	+0.5		
WUPA	West Chester U	52.39	1	P	P	00 27 47.1	-0.2		
MVL	Millersville MVL comp=Z,78nm,1.2s	52.45	0	P IAmb	P IAmb	00 27 47.7 00 28 01.7	-0.1		
P49A	Miami Univ. Ec baz=170,SNR=6.6	52.51	352	P	P	00 27 46.7	-1.6		
P49A	Miami Univ. Ec comp=Z,78nm,0.9s	52.51	352	IAmb	IAmb	00 28 00.1			
P48A	Milroy comp=Z,44nm,0.8s	52.53	352	IAmb	IAmb	00 28 00.2			
O58A	Lewisberry baz=180	52.57	360	P	P	00 27 49.7	+0.9		
SRIG	Santa Rosalia	52.60	319	P	P	00 27 49.8	+0.6		
MSTX	Muleshoe baz=148,SNR=8.4	52.60	333	P	P	00 27 48.7	-0.5		
MSTX	Muleshoe comp=Z,76nm,1.0s	52.60	333	IAmb	IAmb	00 28 04.0			
O57A	Amberson baz=179,SNR=6.0	52.66	359	P	P	00 27 49.5	+0.1		
PAGS	Pennsylvania G	52.68	0	P	P	00 27 49.5	0.0		
O55A	Ligonier baz=177	52.71	358	P	P	00 27 48.7	-1.1		
PMSA	Palmer Station	52.73	173	P	P	00 27 51.4	+1.8		
PMSA	Palmer Station	52.73	173	eP	P	00 27 50.8	+1.2		
O56A	Blue Knob Stat baz=178	52.74	358	P	P	00 27 50.1	0.0		
R40A	Maddies Statio comp=Z,97nm,0.9s	52.77	345	IAmb	IAmb	00 28 03.1			
O52A	Adamsville comp=Z,59nm,1.0s	52.77	355	IAmb	IAmb	00 28 23.1			
O60A	Telford baz=182	52.78	1	P	P	00 27 50.9	+0.7		
O53A	New Philadelph O53A comp=Z,35nm,0.7s	52.86	356	P IAmb	P IAmb	00 27 50.3 00 28 23.2	-0.5		
O51A	Pataskala baz=173	52.87	354	P	P	00 27 50.3	-0.6		
AMTX	Amarillo AMTX comp=Z,54nm,0.9s	52.91	334	IAmb	P IAmb	00 27 51.4 00 29 16.0	-0.1		
ACSO	Alum Creek Sta baz=172	52.99	354	P	P	00 27 50.3	-1.6		
ACSO	Alum Creek Sta comp=Z,72nm,0.9s	52.99	354	IAmb	IAmb	00 28 04.1			
LUPA	Lehigh Univers	53.06	1	P	P	00 27 52.4	0.0		
O49A	Covington comp=Z,82nm,1.0s	53.10	353	IAmb	IAmb	00 28 04.7			
GC02	Grant County #	53.15	339	P	P	00 27 53.0	-0.1		
N57A	Milroy baz=179	53.21	359	P	P	00 27 52.9	-0.5		
N61A	South Mountain baz=183	53.25	2	P	P	00 27 53.5	-0.2		
N58A	Sunbury baz=180,SNR=7.1	53.29	0	P	P	00 27 54.0	0.0		
N58A	Sunbury comp=Z,54nm,0.8s	53.29	0	IAmb	IAmb	00 28 07.6			
CPNY	Central Park	53.30	3	P	P	00 27 54.4	+0.3		
KAN09	Caldwell North	53.32	339	P	P	00 27 53.5	-0.8		
N59A	State Game Lan baz=181,SNR=6.4	53.37	1	P	P	00 27 55.0	+0.4		
N59A	State Game Lan comp=Z,60nm,0.9s	53.37	1	IAmb	IAmb	00 28 08.7			
N56A	West Decatur baz=178,SNR=5.3	53.38	359	P	P	00 27 54.4	-0.3		
KAN10	Anthony SW Sta	53.48	339	P	P	00 27 55.2	-0.2		
N54A	Moraine State N54A comp=Z,48nm,0.6s	53.49	357	P IAmb	P IAmb	00 27 55.0 00 28 27.7	-0.5		
PAL	Palisades PAL comp=Z,45nm,1.1s	53.52	3	P pmax	P pmax	00 27 54.9	-0.8		
PAL	Palisades baz=183	53.52	3	P	P	00 27 55.0	-0.8		
PAL	Palisades	53.52	3	P	P	00 27 54.9	-0.8		
N51A	Ashland N51A comp=Z,36nm,0.6s	53.62	355	P IAmb	P IAmb	00 27 54.9 00 28 29.1	-1.5		
SFIN	Lafayette baz=168	53.69	350	P	P	00 27 55.0	-1.9		
SFIN	Lafayette comp=Z,56nm,0.9s	53.69	350	IAmb	IAmb	00 28 08.6			
O44A	Mansfield O44A comp=Z,34nm,0.6s	53.71	349	P IAmb	P IAmb	00 27 56.1 00 28 33.1	-0.9		
WSPT	Westport, CT WSPT comp=Z,69nm,1.0s	53.71	3	P IAmb	P IAmb	00 27 57.2 00 28 10.7	+0.1		
M57A	Sunshine Farm, baz=180,SNR=6.5	53.78	360	P	P	00 27 57.8	+0.1		
M57A	Sunshine Farm, comp=Z,66nm,0.8s	53.78	360	IAmb	IAmb	00 28 11.4			
319A	Douglas 319A comp=Z,72nm,0.9s	53.80	325	P IAmb	P IAmb	00 27 57.9 00 28 13.0	-0.2		
N49A	Columbus Grove comp=Z,108nm,1.0s	53.81	353	IAmb	IAmb	00 28 12.0			
M58A	Price's Panora baz=180	53.82	0	P	P	00 27 58.2	+0.3		
M61A	Granite Spring baz=184	53.83	3	P	P	00 27 57.8	-0.2		
121A	Cookes Peak, D baz=142,SNR=18	53.88	327	P	P	00 27 59.5	+0.8		
121A	Cookes Peak, D comp=Z,59nm,0.9s	53.88	327	IAmb	IAmb	00 28 13.8			
M56A	Emporium baz=178	53.95	359	P	P	00 27 58.5	-0.4		
N47A	Urbana comp=Z,85nm,0.9s	53.96	352	IAmb	IAmb	00 28 11.2			
M59A	Waymart baz=182	54.00	1	P	P	00 28 00.2	+0.9		
M62A	Hamden baz=185,SNR=9.0	54.01	4	P	P	00 27 59.9	+0.6		
KSPA	Keystone Colle comp=Z,128nm,1.5s	54.01	1	IAmb	IAmb	00 28 14.5			
M54A	Oil Creek Stat baz=176	54.02	357	P	P	00 27 58.7	-0.7		
M54A	Oil Creek Stat comp=Z,52nm,0.9s	54.02	357	IAmb	IAmb	00 28 12.1			
M63A	Gales Ferry baz=186	54.03	4	P	P	00 27 59.4	+0.1		
HDIL	Hopedale baz=165	54.26	348	P	P	00 27 59.7	-1.4		
HDIL	Hopedale comp=Z,66nm,0.9s	54.26	348	IAmb	IAmb	00 28 13.2			
P38A	Dawn comp=Z,83nm,1.0s	54.36	344	IAmb	IAmb	00 28 14.9			
L57A	Andrews Acres baz=180	54.45	360	P	P	00 28 02.2	-0.3		
L60A	Shokan baz=183	54.49	2	P	P	00 28 02.8	0.0		
L58A	Harry Jones Me baz=181,SNR=9.8	54.50	1	P	P	00 28 03.1	+0.2		
BRYW	Bryant College BRYW comp=Z,155nm,1.5s	54.58	5	P IAmb	P IAmb	00 28 04.1 00 28 17.3	+0.7		
L56A	Greenwood baz=179,SNR=5.4	54.59	359	P	P	00 28 03.2	-0.4		
L56A	Greenwood comp=Z,59nm,0.8s	54.59	359	IAmb	IAmb	00 28 17.8			
BINY	Binghamton baz=181,SNR=6.6	54.65	1	P	P	00 28 04.1	+0.2		
BINY	Binghamton BINY comp=Z,82nm,0.9s	54.65	1	P IAmb	P IAmb	00 28 04.1 00 28 17.7	+0.2		
L59A	Walton baz=182,SNR=7.2	54.66	2	P	P	00 28 04.7	+0.6		
L59A	Walton comp=Z,111nm,1.1s	54.66	2	IAmb	IAmb	00 28 18.0			
L61A	Hillsdale 1, H baz=184	54.72	3	P	P	00 28 04.9	+0.5		
N41A	Harden Midland comp=Z,77nm,0.9s	54.73	347	IAmb	IAmb	00 28 16.8			
KSU1	Kansas State U baz=156	54.77	341	P	P	00 28 03.9	-1.0		
KSU1	Kansas State U comp=Z,60nm,1.1s	54.77	341	IAmb	IAmb	00 28 17.9			
WVNY	West Valley, N comp=Z,57nm,0.8s	54.88	358	IAmb	IAmb	00 28 18.7			
L61B	Northampton baz=185	55.03	4	P	P	00 28 06.4	-0.2		
ANMO	Albuquerque ANMO comp=Z,12nm,0.7s,baz=143,slow=8.6,SNR=28 comp=Z,42nm,0.9s,baz=144,slow=10,SNR=22	55.12	330	P pP	P pP	00 28 07.8 00 28 20.6	+0.1 -0.3		
ANMO	Albuquerque baz=144	55.12	330	P	P	00 28 08.0	+0.3		
ANMO	Albuquerque ANMO comp=Z,61nm,1.1s	55.12	330	P IAmb	P IAmb	00 28 07.8 00 28 22.1	+0.1		
K56A	Middlesex baz=179	55.15	360	P	P	00 28 07.1	-0.5		
HRV	Adam Dziewonsk HRV comp=Z,36nm,0.8s	55.16	5	P pmax	P pmax	00 28 07.7	+0.1		
HRV	Adam Dziewonsk baz=186	55.16	5	P	P	00 28 08.1	+0.5		
HRV	Adam Dziewonsk	55.16	5	P	P	00 28 07.7	+0.1		
K57A	Scipio Center baz=180,SNR=6.3	55.18	0	P	P	00 28 07.6	-0.1		
MMNY	Mt. Morris Dam comp=Z,47nm,0.8s	55.19	359	IAmb	IAmb	00 28 21.9			
K61A	Williamstown baz=184	55.21	3	P	P	00 28 08.7	+0.7		
K58A	Earlville baz=181	55.22	1	P	P	00 28 08.6	+0.6		
K58A	Earlville K58A comp=Z,59nm,1.1s	55.22	1	P IAmb	P IAmb	00 28 07.3 00 28 21.6	-0.8		
K59A	Cooperstown baz=182	55.25	2	P	P	00 28 09.2	+0.9		
TRY	Troy TRY comp=Z,66nm,1.0s	55.25	3	P IAmb	P IAmb	00 28 08.3 00 28 22.4	+0.1		
K62A	Royalston baz=185	55.27	4	P	P	00 28 09.0	+0.6		
TUC	Tucson TUC comp=Z,31nm,1.0s	55.34	325	P pmax	P pmax	00 28 09.4	+0.2		
TUC	Tucson baz=138	55.34	325	P	P	00 28 09.4	+0.2		
TUC	Tucson	55.34	325	P	P	00 28 09.4	+0.2		
K63A	Dunstable baz=186	55.35	5	P	P	00 28 09.6	+0.7		
N38A	Joes South For comp=Z,83nm,0.8s	55.38	345	IAmb	IAmb	00 28 22.0			
CBKS	Cedar Bluff baz=153,SNR=6.0	55.57	338	P	P	00 28 10.5	-0.2		
J56A	Wolcott baz=180	55.72	360	P	P	00 28 11.2	-0.4		
J60A	Lant Hill Farm baz=184	55.77	3	P	P	00 28 12.8	+0.8		
J58A	Remsen baz=182	55.82	1	P	P	00 28 11.0	-1.4		
J57A	Williamstown baz=181	55.86	1	P	P	00 28 11.5	-1.1		
J57A	Williamstown comp=Z,47nm,0.9s	55.86	1	IAmb	IAmb	00 28 25.8			
ACCN	Adirondack Com comp=Z,73nm,1.1s	55.90	3	IAmb	IAmb	00 28 27.1			
J61A	Chester baz=185	55.93	4	P	P	00 28 13.7	+0.6		
J59A	Piesco baz=183	55.95	2	P	P	00 28 13.3	-0.1		
J59A	Piesco	55.95	2	P	P	00 28 13.2	-0.1		
T25A	Trinidad baz=147,SNR=12	55.99	333	P	P	00 28 14.2	+0.3		
T25A	Trinidad comp=Z,66nm,0.8s	55.99	333	IAmb	IAmb	00 28 29.4			
RKT	Rikitea RKT comp=Z,558nm,28.2s comp=Z,2µm,26.8s	56.01	251	eS eLR	S LR	00 35 57.2 00 44 36.8	-2.2		
N35A	Tabor comp=Z,69nm,0.9s	56.09	343	IAmb	IAmb	00 29 27.6			
K43A	Burlington comp=Z,71nm,0.9s	56.16	350	IAmb	IAmb	00 28 28.1			
I58A	Old Forge baz=182	56.16	2	P	P	00 28 15.1	+0.3		
214A	Organ Pipe Nat baz=136,SNR=23	56.24	323	P	P	00 28 16.3	+0.6		
214A	Organ Pipe Nat comp=Z,47nm,0.9s	56.24	323	IAmb	IAmb	00 28 30.6			
HNH	Hanover comp=Z,60nm,1.1s	56.30	4	IAmb	IAmb	00 28 17.6			
I59A	Olmsteadville baz=183,SNR=5.0	56.30	3	P	P	00 28 16.7	+0.9		
I60A	Shoreham baz=184,SNR=7.0	56.38	3	P	P	00 28 16.6	+0.4		
PECO	Prince Edward comp=Z,75nm,1.0s	56.38	360	IAmb	IAmb	00 28 29.1			
NCB	Newcomb	56.47	2	P	P	00 28 17.1	+0.1		
I61A	Oroboro, Fairl baz=185,SNR=6.9	56.53	4	P	P	00 28 18.3	+0.9		
X18A	Snowflake comp=Z,43nm,0.9s	56.56	327	IAmb	IAmb	00 28 34.7			
JFWS	Jewell Farm baz=164	56.72	348	P	P	00 28 21.0	+2.2		
KSCO	Kaye Shedlock' baz=150	56.83	336	P	P	00 28 19.6	-0.2		
LBNH	Lisbon baz=186	56.86	4	P	P	00 28 20.0	+0.3		
LBNH	Lisbon comp=Z,52nm,1.0s	56.86	4	IAmb	IAmb	00 28 35.1			
W18A	Petrified Fore baz=141	56.91	328	P	P	00 28 21.4	+1.0		
W18A	Petrified Fore comp=Z,118nm,1.1s	56.91	328	IAmb	IAmb	00 28 35.4			
H58A	Gabriels baz=183	56.91	2	P	P	00 28 20.1	0.0		
H57A	Richville baz=182,SNR=5.3	56.92	1	P	P	00 28 19.8	-0.3		
DELO	Deloro Mine comp=Z,42nm,0.9s	56.97	359	IAmb	IAmb	00 28 33.1			
SDCO	Great Sand Dun baz=146,SNR=28	56.97	333	P	P	00 28 21.1	+0.1		
SDCO	Great Sand Dun comp=Z,70nm,0.8s	56.97	333	IAmb	IAmb	00 28 36.5			
H53A	Bobcaygeon baz=178	57.04	358	P	P	00 28 19.7	-1.3		
LONY	Lake Ozonia baz=182	57.10	2	P	P	00 28 20.5	-0.9		
LONY	Lake Ozonia comp=Z,172nm,1.9s	57.10	2	IAmb	IAmb	00 28 35.2			
H60A	Morristown baz=185	57.13	3	P	P	00 28 22.4	+0.7		
H61A	Lyndonville baz=186	57.15	4	P	P	00 28 22.5	+0.7		
H59A	Cadyville baz=184	57.16	3	P	P	00 28 22.1	+0.3		
H62A	Milan baz=186	57.25	5	P	P	00 28 22.5	0.0		
H62A	Milan H62A comp=Z,118nm,1.6s	57.25	5	P IAmb	P IAmb	00 28 21.7 00 28 48.1	-0.7		
X16A	Lo Mia Camp, P comp=Z,45nm,0.9s	57.28	326	IAmb	IAmb	00 28 40.0			
FRNY	Flat Rock comp=Z,66nm,0.9s	57.35	3	IAmb	IAmb	00 28 38.2			
BGNE	Belgrade baz=155	57.35	341	P	P	00 28 23.1	-0.3		
I42A	Draeger Farm, comp=Z,50nm,0.8s	57.41	350	IAmb	IAmb	00 28 24.7			
H63A	New Sharon baz=188	57.44	6	P	P	00 28 24.9	+1.1		
H64A	Troy baz=189	57.50	6	P	P	00 28 25.0	+0.8		
S22A	4UR Ranch, Cre baz=145,SNR=14	57.57	332	P	P	00 28 25.2	-0.1		
G57A	Newington baz=182	57.57	2	P	P	00 28 24.7	0.0		
G58A	Ormstown baz=183	57.65	2	P	P	00 28 25.3	0.0		
G60A	Masonville baz=185	57.69	4	P	P	00 28 26.5	+0.9		
Y14A	Wickenburg comp=Z,164nm,2.0s	57.80	325	IAmb	IAmb	00 28 42.8			
Q24A	Divide baz=147,SNR=6.9	57.83	334	P	P	00 28 27.0	0.0		
Q24A	Divide comp=Z,64nm,1.2s	57.83	334	IAmb	IAmb	00 28 41.1			
G54A	Lake Saint Pet baz=178	57.85	359	P	P	00 28 26.2	-0.5		
G61A	St-Isidore-de- baz=186,SNR=11	57.92	4	P	P	00 28 28.2	+0.9		
MVCO	Mesa Verde baz=143	57.92	330	P	P	00 28 27.6	-0.1		
MVCO	Mesa Verde comp=Z,50nm,1.0s	57.92	330	IAmb	IAmb	00 28 43.2			
G63A	Kingsbury baz=188	57.93	6	P	P	00 28 27.5	+0.2		
G62A	West of Eustis baz=187,SNR=8.7	57.94	5	P	P	00 28 28.5	+1.2		
WUAZ	Wupatki baz=139,SNR=12	58.07	327	P	P	00 28 29.6	+1.0		
WUAZ	Wupatki comp=Z,68nm,0.9s	58.07	327	IAmb	IAmb	00 28 45.6			
PKME	Peaks-Kenny Pk baz=188	58.11	6	P	P	00 28 28.9	+0.5		
PKME	Peaks-Kenny Pk comp=Z,106nm,1.4s	58.11	6	IAmb	IAmb	00 28 43.5			
G64A	Maxfield baz=189	58.16	7	P	P	00 28 29.4	+0.6		
GLA	Glamis baz=135	58.22	323	P	P	00 28 30.2	+0.6		
GLA	Glamis comp=Z,48nm,1.1s	58.22	323	IAmb	IAmb	00 29 36.5			
G65A	Princeton baz=190	58.25	8	P	P	00 28 30.2	+0.8		
G65A	Princeton comp=Z,105nm,1.2s	58.25	8	IAmb	IAmb	00 28 44.5			
F59A	Saint Guilaume baz=184	58.41	3	P	P	00 28 30.8	+0.3		
ALGO	Algonquin Park baz=178	58.41	359	P	P	00 28 29.9	-0.7		
F63A	Nahmakanta, Br baz=189	58.56	6	P	P	00 28 32.0	+0.4		
F60A	Warwick baz=186	58.58	4	P	P	00 28 32.4	+0.7		
F61A	St Evariste baz=187	58.65	5	P	P	00 28 32.6	+0.3		
PDMCI	Parker Dam,Lak baz=136,SNR=10	58.71	324	P	P	00 28 33.2	+0.3		
IKP	In-Ko-Pah, Jac baz=134,SNR=5.3	58.71	321	P	P	00 28 33.7	+0.6		
SWSC	Sam W. Stewart baz=134	58.72	322	P	P	00 28 33.7	+0.7		
ISCO	Idaho Springs ISCO comp=Z,50nm,0.9s	58.73	334	P pmax	P pmax	00 28 31.9	-1.4		
ISCO	Idaho Springs baz=147,SNR=16	58.73	334	P	P	00 28 33.2	-0.1		
SMCO	Snowmass comp=Z,42nm,0.9s	58.80	333	IAmb	IAmb	00 28 49.8			
F64A	Sherman baz=190,SNR=5.7	58.80	7	P	P	00 28 34.0	+0.7		
F64A	Sherman comp=Z,49nm,1.1s	58.80	7	IAmb	IAmb	00 28 48.4			
E58A	La Victoria baz=184	58.90	3	P	P	00 28 33.8	-0.2		
PV05	Paradox Valley comp=Z,76nm,1.1s	58.90	330	IAmb	IAmb	00 28 48.6			
E57A	Chemin Saint G baz=183,SNR=8.3	58.91	2	P	P	00 28 34.1	0.0		
PV03	Paradox Valley comp=Z,57nm,1.2s	58.92	331	IAmb	IAmb	00 28 48.8			
PV18	Skein Mesa, Pa comp=Z,53nm,1.1s	58.95	331	IAmb	IAmb	00 28 49.0			
PV12	Saucer Basin, comp=Z,52nm,1.0s	58.95	331	IAmb	IAmb	00 28 55.5			
PV07	Paradox Valley comp=Z,66nm,1.3s	58.97	331	IAmb	IAmb	00 28 49.4			
PV17	East Wray Mesa	59.00	331	IAmb	IAmb	00 28 51.3			

comp=Z,36nm,0.9s
PV16 Nyswonger Mesa 59.00 331 IAmb IAmb 00 28 49.5
comp=Z,145nm,1.8s
E56A St. Veronique 59.01 1 P **P** **00 28 34.6 -0.2**
baz=182,SNR=7.2
BC3 Big Chuckawall 59.01 323 P **P** **00 28 35.7 +0.6**
baz=135,SNR=21
ECSD EROS Data Cent 59.02 343 P **P** **00 28 33.7 -1.2**
baz=157,SNR=15
ECSD EROS Data Cent 59.02 343 IAmb IAmb 00 28 48.9
comp=Z,79nm,1.2s
MONP2 Monument Peak 59.06 321 P **P** **00 28 36.4 +0.7**
baz=134
PV10 Paradox Valley 59.11 331 IAmb IAmb 00 28 48.9
comp=Z,55nm,1.2s
W13A Hualapai Mount 59.14 325 IAmb IAmb 00 28 51.5
comp=Z,67nm,1.1s
E61A Lac Etchemin 59.15 5 P **P** **00 28 36.6 +0.9**
baz=187
IRM Iron Mountain 59.18 323 P **P** **00 28 37.1 +0.9**
baz=135,SNR=58
E46A Sault Ste Mari 59.20 354 IAmb IAmb 00 29 38.7
comp=Z,44nm,1.1s
U15A North Rim 59.25 327 IAmb IAmb 00 28 52.2
comp=Z,44nm,1.1s
E63A Oxbow 59.35 7 P **P** **00 28 37.7 +0.6**
baz=189
E64A Bridgewater 59.41 7 P **P** **00 28 38.1 +0.6**
baz=190
E62A Clayton Lake 59.43 6 P **P** **00 28 38.6 +1.0**
baz=188,SNR=6.3
SPMN Marine on St. 59.47 347 P **P** **00 28 37.1 -0.8**
baz=162,SNR=9.9
SPMN Marine on St. 59.47 347 IAmb IAmb 00 28 51.8
comp=Z,64nm,0.9s
D55A Sainte-Anne-du 59.48 1 P **P** **00 28 37.4 -0.6**
baz=181
D56A ZEC Mazanza, M 59.52 2 P **P** **00 28 37.9 -0.4**
baz=182
TPFO Pinon Flats 59.58 322 P **P** **00 28 39.8 +0.7**
baz=134,SNR=9.6
BELC Belle Mtn. Jos 59.58 322 P **P** **00 28 39.8 +0.6**
baz=134,SNR=16
PFO Pinyon Flats O 59.58 322 P **P** **00 28 39.9 +0.7**
PFO pmax pmax
comp=Z,182nm,2.0s
PFO Pinyon Flats O 59.58 322 P **P** **00 28 39.9 +0.7**
D60A Saint Jean D'O 59.59 5 P **P** **00 28 39.8 +1.1**
baz=187
PQI Presque Isle 59.64 7 IAmb IAmb 00 28 54.1
comp=Z,47nm,1.0s
D58A Chemin du LacG 59.64 3 P **P** **00 28 39.4 +0.2**
baz=184,SNR=9.3
N23A Red Feather La 59.78 335 P **P** **00 28 40.0 -0.6**
baz=147
PHWY Pilot Hill 59.92 335 IAmb IAmb 00 28 55.6
comp=Z,73nm,1.6s
GMRC Granite Mounta 59.93 323 P **P** **00 28 42.4 +0.9**
baz=135,SNR=28
D62A Allapoint, All 59.93 6 P **P** **00 28 41.8 +0.7**
baz=189,SNR=6.1
D62A Allapoint, All 59.93 6 IAmb IAmb 00 28 56.2
comp=Z,60nm,0.9s
LATQ La Tuque 59.94 3 P **P** **00 28 41.3 +0.2**
baz=184,SNR=9.0
D63A Stockholm 59.99 7 P **P** **00 28 42.2 +0.8**
baz=190
MURC Murrieta 60.02 321 P **P** **00 28 43.1 +1.0**
baz=133,SNR=9.0
O20A White River Ci 60.15 333 P **P** **00 28 43.0 0.0**
baz=144,SNR=11
O20A White River Ci 60.15 333 IAmb IAmb 00 28 58.5
comp=Z,42nm,0.8s
HEC Hector,Ludlow 60.35 323 P **P** **00 28 45.4 +1.0**
baz=134,SNR=19
SUSD Miller 60.35 342 P **P** **00 28 43.0 -1.1**
baz=155,SNR=5.6
SCI2 San Clemente I 60.44 320 P **P** **00 28 45.5 +0.6**
baz=132
BATG Bathurst New B 60.49 8 P **P** **00 28 44.5 -0.4**
BATG IAmb IAmb 00 28 60.0
comp=Z,70nm,1.1s
TUQ Turquoise Moun 60.54 324 P **P** **00 28 46.3 +0.6**
baz=135,SNR=15
CIS Catalina Islan 60.64 320 P **P** **00 28 46.7 +0.5**
baz=132
BFSC Mount Baldy Ra 60.74 322 P **P** **00 28 47.8 +0.7**
baz=133,SNR=21
RRX Edison Barstow 60.78 323 P **P** **00 28 48.3 +1.1**
baz=134
SHPR Sheep Range 60.87 325 IAmb IAmb 00 29 03.1
comp=Z,42nm,1.0s
F33A 5 Mile Ranch, 60.88 345 IAmb IAmb 00 29 01.8
comp=Z,88nm,1.2s
GSC Goldstone, Bar 60.96 323 P **P** **00 28 49.4 +0.9**
baz=134,SNR=11
GSC Goldstone, Bar 60.96 323 IAmb IAmb 00 29 03.8
comp=Z,42nm,1.1s
MWC Mount Wilson 60.97 321 IAmb IAmb 00 29 04.0
comp=Z,73nm,1.0s
TCRU Three Creeks 3 60.97 329 P **P** **00 28 49.9 +1.1**
PASC Pasadena Art C 61.01 321 P **P** **00 28 48.9 +0.1**
PASC IAmb IAmb 00 29 04.3
comp=Z,118nm,1.4s
SHOC Shoshone, Teco 61.07 324 P **P** **00 28 50.4 +1.2**
baz=135,SNR=5.9
DECC Green Verdugo 61.16 321 P **P** **00 28 51.0 +1.2**
baz=132,SNR=5.4
EDW2 Edwards Air Fo 61.38 322 P **P** **00 28 51.9 +0.6**
baz=133,SNR=17
PRN Pahroc Range 61.46 326 IAmb IAmb 00 29 50.2
comp=Z,63nm,1.1s
K22A Casper 61.48 335 P **P** **00 28 51.9 -0.1**
baz=147,SNR=11
K22A Casper 61.48 335 IAmb IAmb 00 29 07.1
comp=Z,68nm,0.9s
LSQQ Lebel-sur-Quev 61.51 360 P **P** **00 28 51.2 -0.5**
baz=180
LRMC Laurel Mtn Rad 61.60 323 P **P** **00 28 53.5 +0.7**
baz=134,SNR=5.9
RSSD Black Hills 61.77 338 P **P** **00 28 54.1 +0.1**
RSSD pmax pmax
comp=Z,44nm,0.9s
RSSD Black Hills 61.77 338 P **P** **00 28 53.9 0.0**
baz=150
RSSD Black Hills 61.77 338 P **P** **00 28 54.1 +0.1**
RSSD IAmb IAmb 00 29 09.2
comp=Z,44nm,0.9s
TPNV Topopah Spring 61.80 325 P **P** **00 28 55.2 +1.0**
baz=135,SNR=20
TPNV Topopah Spring 61.80 325 IAmb IAmb 00 29 10.8
comp=Z,45nm,0.9s
EYMN Ely 61.80 349 P **P** **00 28 52.6 -1.2**
baz=164
FURC Furnace Creek, 61.81 324 P **P** **00 28 55.2 +1.2**
baz=135,SNR=9.2
NLU North Lily Min 61.81 330 P **P** **00 28 54.1 -0.2**
MPMC Manual Prospec 61.88 323 P **P** **00 28 55.1 +0.2**
baz=134,SNR=36
ARVC Arvin 62.05 322 P **P** **00 28 57.3 +1.6**
baz=132
ISA Isabella, Lake 62.20 322 P **P** **00 28 57.6 +0.8**
baz=133,SNR=6.9
TAOE Nuku Hiva Isla 62.23 267 *e*S **S** **00 37 20.6 +0.2**
comp=Z,258nm,26.2s
TAOE Nuku Hiva Isla 62.23 267 *e*LR LR 00 47 35.2
comp=Z,3µm,28.0s
SPR3 Spring Creek 3 62.24 328 IAmb IAmb 00 29 13.5
comp=Z,46nm,0.9s
DUG Dugway, Tooele 62.36 329 P **P** **00 28 58.7 +0.8**
DUG pmax pmax
comp=Z,104nm,0.9s
DUG Dugway, Tooele 62.36 329 P **P** **00 28 58.6 +0.8**
baz=140,SNR=42
CHGQ Chibougamau 62.40 2 P **P** **00 29 00.1 +2.4**
baz=183
R11A Troy Canyon, C 62.43 326 P **P** **00 28 59.3 +0.8**
baz=136,SNR=32
R11A Troy Canyon, C 62.43 326 IAmb IAmb 00 29 14.9
comp=Z,40nm,1.1s
GRAC Grapevine Rang 62.46 324 P **P** **00 28 59.4 +0.9**
baz=134,SNR=10
PKM Mcpherson Peak 62.49 321 P **P** **00 28 59.6 +0.7**
baz=131,SNR=10.0
CWC Cottonwood Cre 62.49 323 P **P** **00 28 59.5 +0.7**
baz=134
B35A Bob, Littlefor 62.64 347 IAmb IAmb 00 29 13.5
comp=Z,32nm,0.8s

VES Vestal, Richgr 62.68 322 P **P** **00 29 00.8 +0.9**
baz=132,SNR=5.8
BW06 Boulder Array 62.86 333 P **P** **00 29 00.3 -1.0**
baz=144,SNR=11
PDAR Pinedale Array 62.86 333 P **P** **00 29 00.3 -0.9**
comp=Z,3.5nm,0.6s,baz=120,slow=9.2,SNR=30
PDAR pP **pP** **00 29 14.2 -0.5**
comp=Z,6.1nm,0.7s,baz=143,slow=8.7,SNR=12
PDAR LR LR 00 57 19.2
comp=Z,120nm,19.6s,baz=146,slow=37
PDAR Pinedale Array 62.86 333 P **P** **00 28 59.1 -2.2**
SMMC Simmler 62.88 321 P **P** **00 29 02.3 +0.9**
baz=131,SNR=9.6
TIN Tinemaha, Big 63.00 324 P **P** **00 29 02.9 +0.7**
baz=134
AGMN Agassiz Nation 63.07 346 P **P** **00 29 01.7 -0.5**
baz=159,SNR=16
MDND Maddock 63.63 343 P **P** **00 29 06.1 +0.1**
baz=155,SNR=7.8
MLAC Mammoth, Mammo 63.75 324 P **P** **00 29 08.0 +0.7**
baz=133,SNR=7.5
OMMB Old Mammoth Mi 63.83 324 IAmb IAmb 00 29 24.6
comp=Z,77nm,0.9s
REDW Red Top Meadow 63.90 333 IAmb IAmb 00 29 23.6
comp=Z,119nm,1.6s
PMPB Monarch Peak 63.97 321 IAmb IAmb 00 29 24.0
comp=Z,54nm,1.0s
LHV Little Huntoon 63.98 324 IAmb IAmb 00 29 25.7
comp=Z,60nm,0.8s
NVAR Mina Arroyo Bea 63.99 325 P **P** **00 29 09.4 +0.5**
comp=Z,15nm,0.7s,baz=141,slow=6.9,SNR=49
NVAR pP **pP** **00 29 22.4 +0.1**
comp=Z,32nm,0.8s,baz=136,slow=6.3,SNR=20
NVAR Mina Arroyo Bea 63.99 325 P **P** **00 29 08.7 -0.2**
DRLN Deer Lake 64.01 14 P **P** **00 29 08.8 +0.4**
KVN Kaiserville 64.31 325 IAmb IAmb 00 29 25.7
comp=Z,119nm,1.9s
IMW Indian Meadow 64.36 333 IAmb IAmb 00 29 26.6
comp=Z,69nm,1.5s
FLWY Flagg Ranch 64.41 334 IAmb IAmb 00 29 27.8
comp=Z,107nm,1.1s
H17A Grant Village 64.60 334 P **P** **00 29 13.4 +0.6**
baz=143
RLMT Red Lodge 64.64 335 P **P** **00 29 12.7 -0.3**
baz=145,SNR=12
RLMT Red Lodge 64.64 335 IAmb IAmb 00 29 28.2
comp=Z,80nm,1.4s
WAKR Walker 64.69 324 IAmb IAmb 00 29 29.0
comp=Z,44nm,1.0s
ULM Lac du Bonnet 64.90 347 P **P** **00 29 13.2 -1.0**
comp=Z,30nm,0.8s,baz=159,slow=5.7,SNR=30
ULM LR LR 01 01 35.8
comp=Z,189nm,18.6s,baz=148,slow=40
ULM Lac du Bonnet 64.90 347 *d* *i*P **P** **00 29 12.2 -2.0**
PNTR Pine Nut 65.18 324 IAmb IAmb 00 29 33.2
comp=Z,46nm,0.8s
VCNR Virginia City 65.35 324 IAmb IAmb 00 29 33.1
comp=Z,50nm,1.0s
PAHR Pah Rah Range 65.48 325 IAmb IAmb 00 29 35.0
comp=Z,76nm,0.9s
DGMT Dagmar 65.59 340 P **P** **00 29 18.7 -0.1**
baz=150
HLID Hailey 65.69 331 P **P** **00 29 20.3 +0.5**
baz=139,SNR=27
BOZ Bozeman (W) 66.01 334 P **P** **00 29 21.8 0.0**
baz=142,SNR=13
BOZ Bozeman (W) 66.01 334 IAmb IAmb 00 29 37.2
comp=Z,82nm,1.4s
MFID Camas Ranch 66.27 330 IAmb IAmb 00 29 39.5
comp=Z,78nm,0.9s
EGMT Eagleton 67.20 337 P **P** **00 29 29.1 -0.1**
baz=145
EGMT Eagleton 67.20 337 IAmb IAmb 00 29 45.0
comp=Z,52nm,1.1s
O03E Paynes Creek 67.25 324 P **P** **00 29 29.2 -0.4**
baz=132,SNR=7.8
MOD Modoc Plateau 67.50 326 IAmb IAmb 00 29 47.3
comp=Z,64nm,0.8s
O02D Mt. Diablo Mer 67.74 323 P **P** **00 29 32.6 -0.2**
baz=131
SCHQ Schefferville 67.82 6 P **P** **00 29 33.1 +0.3**
comp=Z,7.7nm,0.5s,baz=198,slow=7.1,SNR=21
SCHQ pP **pP** **00 29 46.0 -0.4**
comp=Z,43nm,0.8s,baz=169,slow=4.8,SNR=14
SCHQ LR LR 01 02 01.4
comp=Z,186nm,18.7s,baz=204,slow=38
SCHQ Schefferville 67.82 6 P **P** **00 29 33.2 +0.4**
SCHQ IAmb IAmb 00 29 47.1
comp=Z,49nm,0.8s
KCPM Cahto Peak 67.89 323 IAmb IAmb 00 29 50.5
comp=Z,73nm,1.0s
MSO Missoula 67.98 333 P **P** **00 29 34.4 +0.3**
baz=141,SNR=12
MSO Missoula 67.98 333 IAmb IAmb 00 29 50.8
comp=Z,93nm,1.1s
N02D Trinity Center 68.21 324 P **P** **00 29 34.6 -1.1**
baz=131,SNR=6.4
M04C Macdoel 68.26 325 P **P** **00 29 36.4 +0.3**
baz=132,SNR=8.1
KMRM Mail Ridge 68.31 323 IAmb IAmb 00 29 53.4
comp=Z,69nm,1.1s
VAH Vaihoa 68.51 258 *e*P **P** **00 29 38.7 +0.7**
comp=Z,140nm,1.3s
VAH *e*pP **pP** **00 29 53.3 +1.8**
comp=Z,109nm,1.3s
M02C Callahan 68.57 324 P **P** **00 29 37.6 -0.4**
baz=131
MEH Mehetia 68.59 256 *e*P **P** **00 29 38.8 +0.3**
comp=Z,36nm,1.2s
MEH Mehetia 68.59 256 *e*T T 01 43 56.0
comp=Z,11nm,0.2s
I07A Izee 68.59 328 IAmb IAmb 00 29 54.3
comp=Z,65nm,0.8s
KHMM Horse Mountain 68.74 324 IAmb IAmb 00 29 58.4
comp=Z,205nm,2.0s
K04D Chiloquin, OR 68.78 326 P **P** **00 29 39.2 0.0**
baz=132
PMOR Pomariorio Ree 68.80 259 *e*P **P** **00 29 40.1 +0.4**
comp=Z,314nm,1.4s
L04D Klamath Falls 68.81 325 P **P** **00 29 39.1 -0.3**
baz=132
J05D Fort Rock, OR 68.94 327 P **P** **00 29 40.7 +0.4**
baz=133,SNR=9.7
PINE Pine Mountain 69.14 327 IAmb IAmb 00 29 58.4
comp=Z,62nm,0.9s
KRMB Red Mountain 69.26 324 IAmb IAmb 00 29 57.1
comp=Z,77nm,1.3s
TBI Tubuai 69.31 250 *e*S **S** **00 38 43.9 -2.4**
comp=Z,229nm,28.0s
TBI Tubuai 69.31 250 *e*LR LR 00 50 41.2
comp=Z,2µm,28.5s
TBI Tubuai 69.31 250 *e*T T 01 44 55.1
comp=Z,57nm,0.3s
J04D Umpqua Nationa 69.39 326 P **P** **00 29 43.5 +0.4**
baz=132,SNR=5.9
L02E Cave Junction 69.50 325 P **P** **00 29 44.2 +0.6**
baz=131
TVO Taravao 69.72 256 *e*P **P** **00 29 46.1 +0.6**
comp=Z,35nm,1.2s
TVO Taravao 69.72 256 *e*T T 01 45 20.6
comp=Z,1.6nm,0.3s
I05D Terrebonne, OR 69.72 328 P **P** **00 29 45.9 +0.9**
baz=133,SNR=10
TIAR Tiarei 69.84 256 *e*T T 01 45 29.4
comp=Z,5.4nm,0.2s
K02D Willamette Mer 69.88 325 P **P** **00 29 46.5 +0.5**
baz=131
I04A Tendick Farm, 69.92 327 P **P** **00 29 45.9 -0.3**
baz=132,SNR=8.3
PAE Paea 70.04 256 *e*P **P** **00 29 48.0 +0.6**
comp=Z,18nm,1.3s
PPT2 Papeete2 70.05 256 *e*P **P** **00 29 48.4 +0.8**
comp=Z,65nm,1.4s
PPT2 *e*S **S** **00 38 52.7 -2.7**
comp=Z,297nm,25.5s
PPT2 Papeete2 70.05 256 *e*LR LR 00 51 06.6
comp=Z,2µm,29.2s
PPT Papeete 70.05 256 P **P** **00 29 47.7 +0.2**
comp=Z,8.5nm,0.4s,baz=84,slow=12,SNR=4.7
PPT LR LR 00 53 37.9
comp=Z,180nm,19.6s,baz=92,slow=30
F07A Phinny Hill Vi 70.08 329 IAmb IAmb 00 30 03.7
comp=Z,48nm,0.9s
G05D Wamic, OR 70.33 328 P **P** **00 29 49.7 +1.1**
baz=133,SNR=5.6
J01E Myrtle Point 70.33 325 P **P** **00 29 49.1 +0.5**
baz=131
I03D Drain, OR 70.36 326 P **P** **00 29 49.4 +0.6**

baz=131
D08A Wollman Farm, 70.42 331 IAmb IAmb 00 30 04.5
comp=Z,106nm,1.9s
NEW Newport 70.47 333 LR LR 01 02 28.8
comp=Z,137nm,19.0s,baz=123,slow=37
NEW Newport 70.47 333 P **P** **00 29 49.7 +0.2**
NEW pmax pmax
comp=Z,57nm,1.0s
NEW Newport 70.47 333 P **P** **00 29 49.7 +0.2**
baz=138,SNR=7.2
FFC Flin Flon 70.49 345 P **P** **00 29 49.0 -0.3**
FFC pmax pmax
comp=Z,35nm,1.0s
FFC Flin Flon 70.49 345 P **P** **00 29 49.0 -0.3**
E07A Sunnyside 70.51 330 IAmb IAmb 00 30 06.2
comp=Z,72nm,0.9s
H04D Lebanon 70.58 327 P **P** **00 29 49.9 -0.3**
baz=132
C09A Chrisman Ranch 70.65 332 IAmb IAmb 00 30 07.1
comp=Z,141nm,1.8s
VNA3 Neumayer Olymp 70.75 162 P **P** **00 29 51.6 +0.7**
F05D White Salmon 70.84 329 P **P** **00 29 52.7 +0.9**
baz=134
COR Corvallis 70.92 327 P **P** **00 29 53.5 +1.3**
COR pmax pmax
comp=Z,129nm,1.1s
COR Corvallis 70.92 327 P **P** **00 29 53.5 +1.3**
COR IAmb IAmb 00 30 08.7
comp=Z,129nm,1.1s
VNA1 Neumayer--Stat 71.02 161 P **P** **00 29 53.5 +1.1**
F04A Amboy 71.36 328 IAmb IAmb 00 30 10.7
comp=Z,87nm,0.9s
VNA2 Neumayer--Watz 71.37 161 P **P** **00 29 55.4 +0.9**
baz=291,slow=6.4
LTY Liberty 71.40 330 IAmb IAmb 00 30 10.6
comp=Z,174nm,1.9s
E04D Cinebar 71.86 329 P **P** **00 29 58.1 +0.3**
baz=133
D05A Emumclaw 72.00 329 IAmb IAmb 00 30 15.1
comp=Z,91nm,0.9s
B06A Marblemount 72.67 331 IAmb IAmb 00 30 18.1
comp=Z,58nm,0.9s
D03D Eldon 72.79 329 P **P** **00 30 03.9 +0.6**
baz=132
B05A Bryant 72.79 330 P **P** **00 30 03.1 -0.2**
baz=134,SNR=5.5
SNAA Sanae 72.97 161 P **P** **00 30 04.6 +0.4**
SNAA Sanae 72.97 161 LR LR 00 58 20.3
comp=Z,303nm,22.0s,baz=355,slow=33
SNAA Sanae 72.97 161 *d* *i*P **P** **00 30 04.0 -0.2**
SNAA pmax pmax
comp=Z,19nm,1.0s
SNAA Sanae 72.97 161 P **P** **00 30 04.3 +0.1**
NLWA Neilton Lookou 73.08 329 IAmb IAmb 00 30 21.9
comp=Z,70nm,1.1s
LIC Lamto 73.74 80 *e*PKP2 **P** **00 30 09.8 +0.1**
comp=Z,22nm,0.6s
TIC Toumodi 73.86 79 *e*PKP2 **P** **00 30 09.4 -1.0**
DBIC Dimbokro 74.02 79 P **P** **00 30 11.5 +0.2**
comp=Z,8.7nm,0.6s,baz=236,slow=6.2,SNR=17
KIC Kosan Boka 74.05 80 *e*PKP2 **P** **00 30 10.9 -0.6**
comp=Z,37nm,0.8s
KOWA Kowa 76.97 72 P **P** **00 30 28.5 +0.3**
KOWA IAmb IAmb 00 30 42.7
comp=Z,57nm,1.1s
QSPA South Pole Qui 77.42 180 P **P** **00 30 31.2 +1.2**
comp=Z,23nm,0.8s,baz=153,slow=3.0,SNR=5.1
QSPA LR LR 00 59 30.9
comp=Z,361nm,19.1s,baz=141,slow=32
QSPA South Pole Qui 77.42 180 IAmb IAmb 00 30 32.7
comp=Z,201nm,1.9s
NVL N'lazarevskaya 77.63 160 *e*P P 00 30 43.7 +13
NVL pmax pmax
comp=Z,53nm,1.4s
RAR Rarotonga 79.05 251 LR LR 00 58 18.6
comp=Z,408nm,18.8s,baz=91,slow=30
RAR Rarotonga 79.05 251 P **P** **00 30 41.9 +2.2**
RAR pmax pmax
comp=Z,53nm,2.6s
YKA Yellowknife Ar 80.55 343 P **P** **00 30 46.1 -0.7**
comp=Z,6.5nm,0.7s,baz=136,slow=6.1,SNR=29
YKA pP **pP** **00 31 00.3 -0.3**
comp=Z,26nm,0.9s,baz=139,slow=5.9,SNR=22
YKA LR LR 01 08 14.3
comp=Z,201nm,20.7s,baz=0.0,slow=37
MORF Marmelete 80.93 49 *e*P **P** **00 30 50.2 +0.7**
MORF AMb AMB 00 30 57.1
comp=Z,153nm,1.7s
MORF Marmelete 80.93 49 *e*P **P** **00 30 51.0 +1.5**
comp=Z,156nm,1.8s
MORF *e*pP **pP** **00 31 04.8 +1.4**
PCVE Castro Verde 81.51 48 *e*P **P** **00 30 55.2 +2.7**
comp=Z,83nm,1.6s
PCVE *e*pP **pP** **00 31 08.0 +1.6**
PSBE So Bento 81.71 46 *e*P **P** **00 30 56.2 +2.6**
comp=Z,161nm,1.3s
PSBE *e*pP **pP** **00 31 08.6 +1.1**
PBEJ Beja 81.79 48 *e*P **P** **00 30 56.5 +2.5**
comp=Z,113nm,1.4s
PBEJ *e*pP **pP** **00 31 09.2 +1.3**
EVO Evora 81.88 48 *e*P **P** **00 30 56.0 +1.5**
comp=Z,80nm,1.6s
EVO *e*pP **pP** **00 31 09.4 +1.1**
TORD Torodi Ar. Bea 81.94 75 P **P** **00 30 55.6 +0.4**
comp=Z,40nm,0.9s,baz=269,slow=4.8,SNR=112
TORD pP **pP** **00 31 08.9 -0.3**
comp=Z,78nm,0.9s,baz=269,slow=5.3,SNR=16
TORD Torodi Ar. Bea 81.94 75 P **P** **00 30 55.5 +0.2**
PMTG Montargil 81.94 47 *e*P **P** **00 30 56.6 +1.8**
comp=Z,192nm,1.3s
PMTG *e*pP **pP** **00 31 09.4 +0.8**
PCAS Casmilo, Conde 82.14 46 *e*P **P** **00 30 57.5 +1.7**
comp=Z,145nm,1.6s
PCAS *e*pP **pP** **00 31 10.5 +0.8**
COI Coimbra 82.26 46 *e*P **P** **00 30 58.3 +1.9**
comp=Z,238nm,1.2s
COI *e*pP **pP** **00 31 11.6 +1.3**
PMRV Marv??o 82.68 47 *e*P **P** **00 31 00.1 +1.5**
comp=Z,60nm,1.6s
PMRV *e*pP **pP** **00 31 12.9 +0.4**
PCBR Castelo Branco 82.78 47 *e*P **P** **00 31 00.8 +1.7**
comp=Z,95nm,1.2s
PCBR *e*pP **pP** **00 31 13.5 +0.5**
PVIS Viseu 82.83 46 *e*P **P** **00 31 01.6 +2.2**
comp=Z,139nm,1.4s
PVIS *e*pP **pP** **00 31 14.1 +0.8**
MTE Manteigas 82.95 46 *e*pP pP 00 31 14.5 +0.5
MTE Manteigas 82.95 46 IAmb IAmb 00 31 15.5
comp=Z,76nm,1.0s
DLBC Dease Lake 83.04 335 IAmb IAmb 00 31 16.5
comp=Z,64nm,1.1s
POLO Lamas de Olo 83.16 45 *e*P **P** **00 31 02.2 +1.0**
comp=Z,60nm,1.4s
POLO *e*pP **pP** **00 31 15.5 +0.4**
MVO Moncorvo 83.61 45 *e*P **P** **00 31 05.2 +1.7**
comp=Z,139nm,1.2s
MVO *e*pP **pP** **00 31 18.0 +0.6**
PBRG Braganca 84.05 45 *e*P **P** **00 31 07.2 +1.5**
comp=Z,94nm,1.4s
PBRG *e*pP **pP** **00 31 19.2 -0.5**
VNDA Vanda 84.08 191 P **P** **00 31 06.6 +1.4**
comp=Z,8.7nm,0.9s,baz=126,slow=5.0,SNR=52
VNDA LR LR 01 00 45.1
comp=Z,518nm,22.0s,baz=124,slow=30
VNDA Vanda 84.08 191 P **P** **00 31 06.1 +0.9**
PAB San Pablo 84.90 48 P **P** **00 31 11.9 +1.8**
PAB pmax pmax
comp=Z,21nm,1.0s
PAB San Pablo 84.90 48 P **P** **00 31 11.9 +1.8**
BESE Bessie Mountai 85.18 334 IAmb IAmb 00 31 27.5
comp=Z,69nm,1.2s
ESDC Sonseca Array 85.23 48 P **P** **00 31 12.8 +1.1**
comp=Z,5.6nm,0.9s,baz=255,slow=4.9,SNR=18
ESDC LR LR 01 05 44.7
comp=Z,649nm,20.8s,baz=260,slow=33
ESDC Sonseca Array 85.23 48 P **P** **00 31 12.3 +0.6**
ICESG Greenland Ices 85.70 13 *i*P **P** **00 31 14.0 +0.3**
ICESG IAmb IAmb 00 31 16.0
comp=Z,46nm,1.0s
ICESG *i* 00 31 26.7
SKAG Skagway 85.87 334 P **P** **00 31 14.1 -0.2**
WHY Whitehorse 86.35 335 P **P** **00 31 17.3 +0.4**
WHY IAmb IAmb 00 31 32.0
comp=Z,48nm,1.4s
KIP Kipapa 86.60 293 *i*P **P** **00 31 15.9 -2.9**
KIP pmax pmax

comp=Z,37nm,1.2s
SYO Syowa Base 87.26 161 ‖ *e*P **P** **00 31 20.0 -1.1**
SYO Syowa Base 87.26 161 ‖ *i*PcP **P** **00 31 22.0 +0.9**
SYO Syowa Base 87.26 161 ‖ *i*pP pP 00 31 34.0 -1.0
HYT Haines Junctio 87.53 335 IAmb IAmb 00 31 38.5
comp=Z,73nm,1.4s
TAM Tamanrasset 87.93 66 P **P** **00 31 27.0 +1.6**
TAM pmax pmax
comp=Z,33nm,1.3s
TAM Tamanrasset 87.93 66 IAmb IAmb 00 31 41.4
comp=Z,55nm,1.3s
RES Resolute Bay 87.96 355 P **P** **00 31 24.2 0.0**
RES pmax pmax
comp=Z,20nm,1.9s
C36M Paulatuk 88.26 345 P **P** **00 31 24.8 -0.9**
baz=134
C36M Paulatuk 88.26 345 P **P** **00 31 27.2 +1.5**
C36M IAmb IAmb 00 34 24.7
comp=Z,52nm,1.9s
SUMG Summit 88.74 11 *i* P **P** **00 31 28.8 +0.4**
SUMG *i* 00 31 42.7
SUMG pmax pmax
comp=Z,110nm,0.9s
SUMG Summit 88.74 11 P **P** **00 31 28.8 +0.4**
SUMG Summit 88.74 11 *i* P **P** **00 31 28.8 +0.4**
comp=Z,111nm,0.9s
SUMG *i* 00 31 42.7
SUMG Summit 88.74 11 *i* P **P** **00 31 28.9 +0.4**
SUMG IAmb IAmb 00 31 29.9
comp=Z,111nm,0.9s
SUMG *i* 00 31 42.7
TABL Table Mountain 88.89 333 IAmb IAmb 00 31 45.2
comp=Z,53nm,1.0s
MESA MESA 89.12 333 P **P** **00 31 30.1 -0.1**
TULEG Thule 89.21 2 P **P** **00 31 30.3 +0.2**
TULEG Thule 89.21 2 *i* P **P** **00 31 30.4 +0.4**
TULEG IAmb IAmb 00 31 30.9
comp=Z,18nm,0.8s
TULEG *i* 00 31 43.8
TSUM Tsumeb 89.94 110 P **P** **00 31 34.6 -0.3**
DAWY Dawson 89.94 337 IAmb IAmb 00 31 49.3
comp=Z,52nm,0.9s
KAIM Kayak Island 90.11 332 P **P** **00 31 33.8 -0.8**
EPYK Eagle Plains 90.18 340 P **P** **00 31 34.6 -0.2**
baz=122
EPYK Eagle Plains 90.18 340 P **P** **00 31 34.8 -0.1**
HMT Hamilton 90.22 333 P **P** **00 31 35.5 +0.4**
HMT **pP** **00 31 49.9 +0.7**
INK Inuvik 90.23 342 P **P** **00 31 34.8 -0.1**
INK pmax pmax
comp=Z,79nm,1.2s
BCAR Beaver Creek A 90.40 336 P **P** **00 31 36.1 +0.1**
RAGM Ragged Mountai 90.42 333 P **P** **00 31 35.7 -0.5**
N25K Chitina, Valde 90.92 334 P **P** **00 31 38.9 +0.5**
baz=115
N25K Chitina, Valde 90.92 334 P **P** **00 31 39.3 +0.9**
N25K IAmb IAmb 00 31 53.4
comp=Z,55nm,1.5s
K27K Chicken 90.96 336 P **P** **00 31 38.9 +0.5**
baz=118,SNR=16
SCO Scoresbysund 90.99 16 *i* P **P** **00 31 39.6 +1.2**
SCO pmax pmax
comp=Z,20nm,1.1s
SCO Scoresbysund 90.99 16 *i* P **P** **00 31 39.6 +1.2**
comp=Z,20nm,1.1s
SCO Scoresbysund 90.99 16 *i* P **P** **00 31 39.6 +1.2**
SCO IAmb IAmb 00 31 42.5
comp=Z,20nm,1.1s
L26K Log Cabin Wild 91.01 335 P **P** **00 31 38.5 -0.2**
baz=116,SNR=12
SCRK Sand Creek 91.69 336 P **P** **00 31 41.5 -0.5**
baz=116,SNR=13
M24K Tolsona, Glenn 91.80 334 P **P** **00 31 42.5 -0.1**
baz=114,SNR=9.9
DHY Denali Highway 92.70 335 IAmb IAmb 00 32 01.9
comp=Z,43nm,1.2s
EUNU Eureka 92.76 358 **P** **00 31 47.7 +1.0**
PRP Porcupine Dome 92.94 337 IAmb IAmb 00 32 03.4
comp=Z,49nm,1.2s
HDA Harding Lake 93.05 336 P **P** **00 31 47.4 -0.8**
baz=113,SNR=5.9
HDA Harding Lake 93.05 336 IAmb IAmb 00 32 03.1
comp=Z,24nm,1.0s
IL18 Eielson Array 93.12 336 P **P** **00 31 48.5 +0.1**
IL31 93.17 336 IAmb IAmb 00 32 03.1
comp=Z,30nm,1.2s
ILAR Eielson Array 93.17 336 P **P** **00 31 47.6 -1.0**
comp=Z,6.6nm,0.7s,baz=147,slow=3.2,SNR=72
ILAR pP **pP** **00 32 02.3 -0.4**
comp=Z,9.5nm,0.8s,baz=138,slow=2.3,SNR=19
ILAR LR LR 01 20 54.6
comp=Z,121nm,18.1s,baz=112,slow=40
ILAR Eielson Array 93.17 336 P **P** **00 31 47.5 -1.2**
BMAR Burnt Mountain 93.41 339 P **P** **00 31 49.9 +0.1**
CCB Clear Creek Bu 93.48 336 IAmb IAmb 00 32 05.2
comp=Z,27nm,0.9s
POKR Poker Plat Res 93.52 336 P **P** **00 31 49.8 -0.5**
baz=113,SNR=11
WRH Wood River Hil 93.53 336 IAmb IAmb 00 32 05.5
comp=Z,28nm,0.8s
COLA College 93.59 336*c* *i*P **P** **00 31 49.4 -1.2**
COLA pmax pmax
comp=Z,19nm,0.9s
TCOL CIGO, UAF Yank 93.59 336 P **P** **00 31 50.3 -0.3**
baz=112
MCK McKinley 93.60 335 P **P** **00 31 50.4 -0.4**
baz=111,SNR=6.0
CUT Chulitna 93.69 333 P **P** **00 31 50.7 -0.4**
baz=110
NEA2 Nenana 93.97 336 P **P** **00 31 51.7 -0.7**
baz=111,SNR=14
TRF Thorofare Moun 94.06 334 IAmb IAmb 00 32 08.5
comp=Z,22nm,0.8s
SNF Seneffe 94.11 39 PcP **P** **00 31 53.8 +0.5**
DOU Dourbes 94.20 40 PcP **P** **00 31 54.1 +0.3**
DOU pP **pP** **00 32 07.3 -0.5**
KEST Kesra 94.23 54 P **P** **00 31 55.7 +1.4**
comp=Z,2.6nm,0.9s,baz=233,slow=17,SNR=1.8
KEST LR LR 01 14 34.3
comp=Z,356nm,19.8s,baz=200,slow=36
I23K Minto, Yukon-K 94.29 336 P **P** **00 31 53.2 -0.6**
baz=111,SNR=14
I23K Minto, Yukon-K 94.29 336 IAmb IAmb 00 32 08.4
comp=Z,19nm,0.9s
BOSA Boshof 94.29 120 P **P** **00 31 53.4 -1.5**
comp=Z,8.4nm,0.9s,baz=264,slow=6.4,SNR=6.4
BOSA LR LR 01 13 16.8
comp=Z,319nm,19.0s,baz=257,slow=35
BOSA Boshof 94.29 120 P **P** **00 31 53.4 -1.5**
BOSA pmax pmax
comp=Z,84nm,1.8s
BMRD Maredsous 94.36 40 pP pP 00 32 08.0 -0.6
MAW Mawson 94.76 166 P **P** **00 31 56.1 +0.1**
comp=Z,3.2nm,0.8s,baz=185,slow=6.1,SNR=13
MAW LR LR 01 11 12.6
comp=Z,460nm,21.8s,baz=233,slow=33
MAW Mawson 94.76 166 P **P** **00 31 56.6 +0.6**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 94.76 166 P **P** **00 31 56.6 +0.6**
MLY Manley 94.79 336 P **P** **00 31 55.5 -0.7**
baz=110,SNR=12
CAST Castle Rocks 94.81 334 P **P** **00 31 55.3 -1.0**
WLF Walferdange 95.07 40 PcP **P** **00 31 58.0 +0.2**
WLF pP **pP** **00 32 11.3 -0.5**
COLD Coldfoot 95.34 338 P **P** **00 31 58.8 +0.2**
baz=110,SNR=9.7
ECH Echery 95.39 42 P **P** **00 31 59.8 +0.5**
ECH pmax pmax
comp=Z,28nm,1.4s
ECH Echery 95.39 42 P **P** **00 31 59.8 +0.5**
ECH IAmb IAmb 00 32 13.7
comp=Z,28nm,1.4s
DAG Danmarks Havn 95.41 11 *i* P **P** **00 31 58.6 -0.1**
DAG *i* 00 32 11.3
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 95.41 11 *i* P **P** **00 31 58.6 -0.1**
comp=Z,4.5nm,0.9s
DAG *i* 00 32 11.3
DAG Danmarks Havn 95.41 11 *i* P **P** **00 31 58.6 -0.1**
DAG IAmb IAmb 00 32 00.1
comp=Z,4.5nm,0.9s
DAG *i* 00 32 11.3
TOLK Toolik Lake Re 95.61 339 P **P** **00 31 59.5 -0.3**
baz=110
SLE Schleitheim 96.17 43 P **P** **00 32 03.4 +0.6**
SLE pmax pmax
comp=Z,17nm,1.3s
DAVA Damuels 96.99 43 *e*P **P** **00 32 07.1 +0.3**
comp=Z,6.4nm,1.1s
DAVA *e*P **pP** **00 32 20.9 +0.1**
comp=Z,19nm,1.2s
FETA Feichten 97.51 44 *e*P Pdif 00 32 09.9 +0.7
comp=Z,8.8nm,1.2s
FETA *e*P pP 00 32 23.1 -0.2
comp=Z,21nm,1.2s
RETA Reutte 97.62 43 *e*P Pdif 00 32 09.9 +0.3
comp=Z,5.9nm,1.1s
RETA *e*P pP 00 32 23.3 -0.2
comp=Z,20nm,1.2s
MOTA Moosalm 97.82 43 *e*P Pdif 00 32 11.2 +0.7
comp=Z,9.7nm,1.0s
MOTA *e*P pP 00 32 24.3 -0.3
comp=Z,17nm,1.0s
SQTA Sankt Quirin 97.87 43 *e*P Pdif 00 32 11.4 +0.7
comp=Z,9.3nm,1.0s,SNR=4.7
SQTA *i* P pP 00 32 24.7 -0.1
comp=Z,25nm,1.1s
CTI Castel Tesino 97.96 45 P Pdif 00 32 11.8 +0.6
CTI pmax pmax
comp=Z,30nm,0.9s
CTI Castel Tesino 97.96 45 P Pdif 00 32 11.8 +0.7
CTI IAmb IAmb 00 32 25.7
comp=Z,30nm,0.9s
WATA Walderalm 98.14 43 *e*P Pdif 00 32 12.3 +0.3
comp=Z,5.1nm,0.8s
WATA *i* P pP 00 32 25.8 -0.2
comp=Z,20nm,1.0s
WTTA Wattenberg 98.16 43 *e*P Pdif 00 32 12.9 +0.8
comp=Z,14nm,1.1s,SNR=5.1
WTTA *e*P pP 00 32 26.3 +0.1
comp=Z,35nm,1.3s
WTTA Wattenberg 98.16 43 P Pdif 00 32 13.0 +0.9
WTTA pmax pmax
comp=Z,35nm,1.2s
ABTA Abfaltersbach 98.67 44 *e*P Pdif 00 32 14.8 +0.6
comp=Z,12nm,1.0s,SNR=8.0
ABTA *e*P pP 00 32 28.3 0.0
comp=Z,40nm,1.1s
STAL STALIGIAL 98.73 45 P Pdif 00 32 14.8 +0.4
INTR Introdacqua 98.90 49 P Pdif 00 32 16.1 +0.7
INTR IAmb IAmb 00 32 30.0
comp=Z,22nm,1.1s
ZOU Zoufplan 98.95 44 IAmb IAmb 00 32 30.3
comp=Z,22nm,1.1s
KBA Koelnbreinsper 99.28 44 *e*P **Pdif** **00 32 17.7 +0.6**
comp=Z,3.1nm,0.6s
KBA *e*P **pP** **00 32 30.8 -0.4**
comp=Z,12nm,1.0s
KBA Koelnbreinsper 99.28 44 P **Pdif** **00 32 17.8 +0.7**
KBA pmax pmax
comp=Z,14nm,1.3s
PRED Cave del Predi 99.34 44 IAmb IAmb 00 32 32.2
comp=Z,28nm,1.4s
MYKA Terra Mystica 99.42 44 *e*P **Pdif** **00 32 18.4 +0.8**
comp=Z,5.7nm,1.0s
MYKA *e*P **pP** **00 32 31.7 0.0**
comp=Z,12nm,0.9s
CLL Collm 99.68 40 *e*Pdif **Pdif** **00 32 19.0 +0.5**
CLL *i* pPdif **pP** **00 32 32.5 -0.1**
comp=Z,44nm,2.1s
CLL *e*(sPdif) 00 32 40.0
CLL *e*SKSac **SKSac** **00 42 51.0 -2.1**
CLL *e*SP **SP** **00 45 12.0 -3.6**
CLL *e*PPS PPS 00 46 06.0
CLL *e*SS **SS** **00 50 41.0 +0.5**
CLL *e*SSS SSS 00 54 32.0
CLL LmV 01 16 00.0
comp=Z,300nm,18.9s
CLL Collm 99.68 40 *e*P **Pdif** **00 32 19.0 +0.5**
CLL *i* 00 32 32.5
CLL *e* 00 42 51.0
CLL MLR MLR
comp=Z,300nm,18.9s
KHC Kasperske Hory 99.74 42 *e*PDIFF **Pdif** **00 32 32.8 +14**
KHC *ex* x 00 32 46.5
KHC *ex* x 00 44 35.3
GERES GERESS Array B 99.78 42 P **Pdif** **00 32 19.2 +0.1**
comp=Z,0.8nm,0.8s,baz=251,slow=3.7,SNR=4.9
GERES PKKPbc **PKKPbc** **00 48 40.5 -0.9**
comp=Z,0.4nm,0.5s,baz=122,slow=1.7,SNR=4.1
GERES LR LR 01 15 44.4
comp=Z,186nm,18.7s,baz=246,slow=34
GERES GERESS Array B 99.78 42 **Pdif** **00 32 18.8 -0.4**
LJU Ljubljana 99.94 45 *i* Pdiff **Pdif** **00 32 20.9 +1.0**
LJU *i* pPdiff **pP** **00 32 32.1 -1.8**
MOA Molln 100.01 43 *e*P **Pdif** **00 32 20.9 +0.8**
comp=Z,6.6nm,1.0s
MOA *e*P **pP** **00 32 34.3 0.0**
comp=Z,20nm,1.3s
OBKA Obir 100.02 45 *e*P **Pdif** **00 32 21.2 +0.9**
comp=Z,2.5nm,0.8s
OBKA *e*P **pP** **00 32 34.4 0.0**
comp=Z,7.5nm,1.1s
NOA NORSAR Array B 100.06 30 P **Pdif** **00 32 21.4 +1.4**
comp=Z,0.4nm,0.7s,baz=261,slow=4.7,SNR=1.4
GBRS Gornja Briga 100.07 46 *i* Pdiff **Pdif** **00 32 20.9 +0.5**
GBRS *i* pPdiff pP 00 32 34.2 -0.3
BRG Berggiesshubel 100.21 40 *e*P **Pdif** **00 32 28.0 +7.1**
comp=Z,15nm,1.6s
BRG *e* 00 32 35.1
comp=Z,10.0nm,1.4s
BRG Berggiesshubel 100.21 40 *e*P **Pdif** **00 32 28.0 +7.1**
BRG pmax pmax
comp=Z,15nm,1.6s
SOKA Soboth 100.37 44 *e*P **Pdif** **00 32 22.1 +0.2**
comp=Z,2.6nm,1.2s
SOKA *i* P pP 00 32 35.6 -0.4
comp=Z,7.0nm,1.3s
PRU Pruhonice 100.47 41 AMS AMS 01 17 00.0
comp=Z,700nm,23.0s
CRES Cresnjev 100.56 45 *i* Pdiff **Pdif** **00 32 23.3 +0.7**
CRES *i* pPdiff pP 00 32 36.4 -0.3
ARSA Arzberg 100.78 44 *e*P **Pdif** **00 32 24.2 +0.6**
comp=Z,5.4nm,1.0s
ARSA *e*P pP 00 32 37.6 -0.2
comp=Z,6.4nm,1.0s
CONA Conrad Observa 101.09 43 *e*P **Pdif** **00 32 26.1 +1.1**
comp=Z,10nm,2.1s
CONA *e*P pP 00 32 39.2 0.0
comp=Z,14nm,1.4s
CHVC Chvalec 101.51 41 *e*S sS 00 44 23.4 -4.4
KRUC Moravsky 101.57 42 *e*PDIFF pP 00 32 41.2 -0.1
OSTC Ostas 101.61 41 *e*PDIFF pP 00 32 41.4 -0.1
DPC Dobruska-Polom 101.65 41 *e*PDIFF pP 00 32 41.9 +0.2
VRAC Vranov 101.72 42 *e*PDIFF pP 00 32 42.1 +0.1
MORC Moravsky Berou 102.38 41 *e*PDIFF pP 00 32 45.4
ARCES ARCESS Array B 106.14 21 PKKPbc PKKPbc 00 48 19.8 -3.2
comp=Z,5.2nm,1.1s,baz=90,slow=2.5,SNR=6.0
FINES FINESS Array B 107.24 29 Pdiff **Pdif** **00 32 52.8 +1.0**
comp=Z,3.3nm,1.0s,baz=213,slow=20,SNR=2.3
FINES PKKPbc **PKKPbc** **00 48 17.2 -2.1**
comp=Z,1.3nm,0.6s,baz=95,slow=4.3,SNR=8.0
FINES PKKP **PKKPdf** **00 48 32.4 +0.2**
comp=Z,2.4nm,0.7s,baz=92,slow=6.5,SNR=5.1
DZM Mont Dzumac 109.02 241 *e*PP **PP** **00 37 31.4 -1.8**
comp=Z,102nm,26.3s
DZM *e*SP SP 00 46 49.9 -4.6
comp=Z,197nm,26.1s
DZM Mont Dzumac 109.02 241 *e*LQ LQ 01 04 25.4
comp=Z,20μm,36.1s
DZM *e*LR LR 01 09 11.3
comp=Z,1μm,30.2s
BRTR Keskin Array B 113.70 52 PKiKP **PKiKP** **00 37 14.4 +0.6**
comp=Z,1.3nm,0.7s,baz=202,slow=3.4,SNR=2.2
ANN Anapa 116.02 46 *e*P **Pdif** **00 33 29.9 -1.4**
ANN *i* 00 37 17.0
ANN pmax pmax
comp=Z,126nm,1.5s
ANN MLR MLR
comp=Z,497nm,23.0s
VSR Storozhevoye 116.02 39 *e*PKIKP PKiKP 00 37 29.4 +12
VSR pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 116.16 39 *e*PKIKP PKiKP 00 37 30.3 +12
VORD pmax pmax
comp=Z,7.0nm,0.8s
SOC Sochi 117.83 47 *i* PKIKP **PKiKP** **00 37 21.7 +0.4**
SOC *e* 00 38 38.4
SOC *e*PPP PPP 00 41 03.2
SOC *e*PS **PKKPdf** **00 48 08.9 -2.9**
SOC *e*SSS SSS 00 59 14.2
H11N3 WAKE ISLAND Hyl 118.73 286 T T 02 47 36.8
baz=96,slow=74,SNR=74
H11N2 WAKE ISLAND Hyl 118.74 286 T T 02 47 38.3
baz=96,slow=74,SNR=172
H11N1 WAKE ISLAND Hyl 118.74 286 T T 02 47 38.1
baz=96,slow=74,SNR=70
H11S2 WAKE ISLAND Hyl 118.83 284 T T 02 46 43.8
baz=94,slow=75,SNR=372
H11S1 WAKE ISLAND Hyl 118.83 284 T T 02 46 44.3
baz=94,slow=75,SNR=741
H11S3 WAKE ISLAND Hyl 118.84 284 T T 02 46 50.9
baz=94,slow=75,SNR=406
SEY Seymchan 119.10 337 PKP **PKPdf** **00 37 23.4 +0.3**
comp=Z,5.5nm,0.6s,baz=92,slow=3.2,SNR=7.4
SEY pPKP **pPKPdf** **00 37 37.4 -0.3**
comp=Z,6.3nm,0.7s,baz=116,slow=4.3,SNR=4.2
KIV Kislovodsk 119.88 46 *i* PKIKP **PKPdf** **00 37 25.2 -0.2**
KIV pmax pmax
comp=Z,12nm,1.1s
KBZ Khabaz 120.07 47 PKP **PKiKP** **00 37 26.4 +0.7**
comp=Z,6.3nm,0.9s,baz=326,slow=0.6
KBZ pPKP **pPKPdf** **00 37 40.6 +0.6**
baz=145,slow=0.6
PETK Petropavlovsk- 121.08 325 PKP **PKPdf** **00 37 27.1 -0.2**
comp=Z,2.4nm,0.5s,baz=54,slow=3.8,SNR=4.3
GNI Garni 122.12 50 *i* PKIKP **PKiKP** **00 37 30.4 +0.3**
STKA Stephens Creek 122.39 219 PKP **PKPdf** **00 37 30.5 0.0**
comp=Z,6.1nm,0.6s,baz=100,slow=2.4,SNR=16
NRIK Noril'sk 122.55 7 *i* PKIKP **PKiKP** **00 37 31.6 +1.8**
MAK Makhachkala 123.52 47 *i* P **Pdif** **00 34 03.7 -1.0**
MAK *i* 00 37 31.3
MAK *e* 00 39 15.9
MAK *e* 00 44 29.8
MAK MLR MLR
comp=Z,145nm,15.0s
RAYN Ar Rayn 124.43 70 PKIKP **PKiKP** **00 37 35.8 +0.8**
RAYN Ar Rayn 124.43 70 PKPdf **PKiKP** **00 37 35.8 +0.8**
RAYN pPKPdf **pPKPdf** **00 37 49.1 -0.1**
ARU Arti 124.58 28 *i* PKIKP **PKPdf** **00 37 32.4 -1.5**
ARU 00 44 40.4
CTAO Charters Tower 126.55 233 PKIKP **PKPdf** **00 37 39.4 +0.6**
CTAO Charters Tower 126.55 233 PKPdf **PKPdf** **00 37 39.4 +0.6**
CTAO pPKPdf **pPKPdf** **00 37 54.7 +1.4**
ABKAR Akbulak array 129.11 35 PKPdf **PKiKP** **00 37 43.3 -0.2**
ABKAR pPKPdf **pPKPdf** **00 37 57.3 0.0**
ABKAR Akbulak array 129.11 35 PKPdf **PKiKP** **00 37 43.8 +0.3**
PMG Port Moresby 131.12 245 *i* PKIKP **PKPdf** **00 37 47.9 +0.3**
BRVK Borovoye 131.97 26 *i* PKIKP **PKiKP** **00 37 49.0 -0.1**
YSS Yuzh-Sakhalins 132.44 324 ‖ *e*PKIKP PKiKP 00 38 03.5 +13
YSS pmax pmax
comp=Z,30nm,0.9s
GEYT Alibeck 132.74 50 PKP **PKPdf** **00 37 50.7 +0.6**
comp=Z,1.8nm,0.7s,baz=254,slow=5.5,SNR=4.0
ASAR Alice Springs 133.00 220 PKP **PKPdf** **00 37 50.7 -0.3**
comp=Z,9.6nm,0.6s,baz=123,slow=2.2,SNR=70
ASAR pPKP **pPKPdf** **00 38 06.2 +0.7**
comp=Z,9.0nm,0.7s,baz=138,slow=2.5,SNR=12
ASAR Alice Springs 133.00 220 PKPdf **PKPdf** **00 37 50.6 -0.4**
ASAR pPKPdf **pPKPdf** **00 38 06.0 +0.5**
UOSS Minazif 134.09 68 PKPdf **PKPdf** **00 37 53.0 0.0**
BRZS Berezniki 135.21 28 *e*PKP **PKPdf** **00 37 52.2 -2.1**
baz=27
BRZS Berezniki 135.21 28 *e*PKIKP **PKPdf** **00 37 52.2 -2.1**
WR0 Warramunga Arr 135.22 224 pPKPdf pPKPdf 00 38 10.0 +0.3
WB2 Warramunga Arr 135.35 224 PKPdf **PKPdf** **00 37 55.5 0.0**
WB2 pPKPdf **pPKPdf** **00 38 10.7 +0.7**
WRAB Tennant Creek 135.36 224 *i* PKIKP **PKPdf** **00 37 54.5 -1.0**
WRAB Tennant Creek 135.36 224 **PKPdf** **00 37 55.9 +0.4**
WRAB pPKPdf **pPKPdf** **00 38 10.5 +0.5**
WRA Warramunga Ar 135.36 224 PKP **PKPdf** **00 37 55.7 +0.1**
comp=Z,19nm,0.6s,baz=131,slow=2.0,SNR=92
WRA PP **PP** **00 40 29.3 -2.0**
comp=Z,7.8nm,1.3s,baz=140,slow=5.6,SNR=8.0
WRA Warramunga Arr 135.36 224 **PKPdf** **00 37 54.4 -1.1**
WRA pPKPdf **pPKPdf** **00 38 11.0 +1.0**
WB0 Warramunga Arr 135.45 224 pPKPdf pPKPdf 00 38 10.3 +0.1
ZALV Zalesovo Beam 136.37 16 PKhKP PKPpre 00 37 50.1
comp=Z,2.4nm,0.8s,baz=332,slow=2.4,SNR=7.3
ZALV PKP **PKPdf** **00 37 56.5 +0.3**
comp=Z,7.1nm,0.7s,baz=278,slow=2.1,SNR=15
ZALV pPKP pPKPdf 00 38 10.8 0.0
comp=Z,26nm,0.8s,baz=319,slow=2.0,SNR=20
ZALV Zalesovo Beam 136.37 16 PKPdf **PKPdf** **00 37 56.8 +0.5**
KLR Kul'dur 136.65 333 PKP **PKPdf** **00 37 57.1 +0.2**
comp=Z,3.9nm,0.6s,baz=95,slow=2.5,SNR=11
KLR pPKP **pPKPdf** **00 38 11.9 +0.5**
comp=Z,9.0nm,0.7s,baz=29,slow=3.2,SNR=10
KLR Kul'dur 136.65 333 *i* PKIKP **PKPdf** **00 37 56.1 -0.9**
HRA Herat 137.09 53 PKPdf **PKPdf** **00 37 59.1 +0.5**
HRA pPKPdf **pPKPdf** **00 38 13.3 +0.2**
KURK Kurchatov 137.13 23 PKIKP **PKPdf** **00 37 58.6 +0.8**
KURK Kurchatov 137.13 23 PKPdf **PKPdf** **00 37 58.6 +0.8**
USRK Ussuriysk Ar. 140.10 327 PKhKP **PKPdf** **00 37 56.4 -7.1**
comp=Z,2.9nm,0.6s,baz=59,slow=2.6,SNR=9.4
USRK Ussuriysk Ar. 140.10 327 PKIKP **PKiKP** **00 38 08.6 +2.7**
USRK Ussuriysk Ar. 140.10 327 PKPdf **PKiKP** **00 38 08.6 +2.7**
MJAR Matsushiro Arr 140.66 313 PKhKP PKPdf 00 37 56.9 -7.9
comp=Z,5.0nm,0.7s,baz=81,slow=3.4,SNR=6.8
MAT Matsushiro 140.66 313 PKP PKPdf 00 37 56.4 -8.4
SGDS Sogindy 140.71 33 *e*PKiKP **PKPdf** **00 38 05.5 +0.8**
baz=33
SGDS Sogindy 140.71 33 *i* PKIKP **PKPdf** **00 38 05.5 +0.8**
MDJ Mudanjiang 141.03 330 PKP **PKPdf** **00 38 05.6 +0.5**
TLY Talaya 141.14 360 PKP **PKPdf** **00 38 05.4 +0.2**
comp=Z,3.4nm,0.6s,baz=225,slow=7.1,SNR=2.5
AAK Ala-Archa 141.18 34 *i* PKIKP **PKPdf** **00 38 05.5 -0.2**
KUU Kurty 141.30 32 *e*PKiKP **PKPdf** **00 38 06.6 +0.9**
baz=31
KUU Kurty 141.30 32 *i* PKIKP **PKPdf** **00 38 06.5 +0.9**
MAKZ Makanchi 141.61 24 PKIKP **PKPdf** **00 38 06.4 +0.3**
MAKZ Makanchi 141.61 24 PKPdf **PKPdf** **00 38 06.4 +0.3**
MKAR Makanchi Array 141.74 23 PKhKP **PKPdf** **00 38 03.5 -2.9**
comp=Z,1.6nm,0.7s,baz=338,slow=1.6,SNR=9.3
MKAR Makanchi Array 141.74 23 PKIKP **PKPdf** **00 38 03.1 -3.3**
MKAR Makanchi Array 141.74 23 PKPdf **PKPdf** **00 38 03.1 -3.3**
AAA Alma-Ata 142.08 32 *e*PKiKP **PKPdf** **00 38 08.5 +1.3**
baz=31
AAA *ep*PKiKP **pPKPdf** **00 38 21.3 -0.3**
baz=31
AAA Alma-Ata 142.08 32 *i* PKIKP **PKPdf** **00 38 08.5 +1.3**
MDOK Medeo 142.18 32 *e*PKiKP **PKPdf** **00 38 08.0 +0.5**
baz=31
MDOK *ep*PKiKP **pPKPdf** **00 38 21.0 -1.0**
baz=31
MDOK Medeo 142.18 32 *i* PKIKP **PKPdf** **00 38 07.9 +0.5**
TNSS Tian-Shan 142.22 32 *e*PKiKP **PKPdf** **00 38 08.6 +0.7**
baz=32
TNSS Tian-Shan 142.22 32 *i* PKIKP **PKPdf** **00 38 08.6 +0.7**
ZAK Zakamensk 142.44 360 *e*PKIKP **PKiKP** **00 38 14.4 +3.7**
ZAK pmax pmax
comp=Z,12nm,1.7s
KPKS Kokpek 142.78 30 *e*PKP **PKPdf** **00 38 05.4 -3.0**
baz=30
KPKS *e*PKiKP **PKiKP** **00 38 09.2 -2.4**
baz=30
KPKS Kokpek 142.78 30 *e*PKIKP **PKPdf** **00 38 05.4 -3.0**
SATY Saty 142.94 31 *e*PKP **PKPdf** **00 38 06.4 -2.4**
baz=30
SATY Saty 142.94 31 *e*PKIKP **PKPdf** **00 38 06.4 -2.4**
SHLS Shalkode 143.39 30 *e*PKP PKPbc 00 38 07.5 +0.7
baz=29
SHLS Shalkode 143.39 30 *e*PKIKP PKPbc 00 38 07.4 +0.6
KSH Kashi 144.07 37 PKP **PKPdf** **00 38 10.4 -0.5**
KSH pPKP pPKPdf 00 38 24.3 -1.1
KSH PP **PP** **00 41 24.6 -0.2**
KSH AMB AMB
comp=Z,380nm,4.8s
KSH LR LR
comp=Z,240nm,4.7s
KSH LR LR
comp=Z,270nm,4.8s
KSH LR LR
comp=Z,250nm,8.1s
BAKI Biak 144.55 249 PKP PKPbc 00 38 12.0 +1.0
ULN Ulaanbaatar 144.82 356 PKPdf PKPbc 00 38 11.4 +0.3
ULN pPKPdf pPKPdf 00 38 25.6 -0.8
SONM Songino Array 144.89 356 PKP PKPbc 00 38 11.5 +0.2
comp=Z,59nm,0.6s,baz=333,slow=2.2,SNR=428
SONM pPKP pPKPdf 00 38 25.9 -0.7
comp=Z,108nm,1.0s,baz=347,slow=1.9,SNR=21
SONM Songino Array 144.89 356 PKPdf **PKPab** **00 38 11.2 0.0**
NIL Nilore 145.68 48 PKP2 **PKPbc** **00 38 14.3 +0.2**
NIL Nilore 145.68 48 **PKPbc** **00 38 14.3 +0.2**

WMQ	**Urumqi**	**146.25**	**20**	*e*PKPbc	**PKPbc**	**00 38 15.3**	**-0.3**
WMQ				sPKP		00 38 29.5	
WMQ				LR	LR		
	comp=Z,2μm,29.0s						
WMQ				LR	LR		
	comp=Z,2μm,29.2s						
WMQ				LR	LR		
	comp=Z,510nm,20.9s						
KSRS	**Korea Array**	**146.92**	**322**	PKPbc	**PKPdf**	**00 38 16.2**	**+0.6**
	comp=Z,9.9nm,0.6s,baz=38,slow=1.7,SNR=18						
KS19	**Wonju Array Si**	**146.92**	**323**			pPKPdf	00 38 32.0	+1.8
KSAR	**Wonju Array Be**	**146.95**	**322**	PKIKP	**PKPdf**	**00 38 15.6**	**-0.1**
KSAR	**Wonju Array Be**	**146.95**	**322**		**PKPdf**	**00 38 15.6**	**-0.1**
FAKI	**Fak Fak**	**147.24**	**244**	PKP	**PKPdf**	**00 38 17.9**	**+1.0**
FAKI	**Fak Fak**	**147.24**	**244**	PKPdf	**PKPdf**	**00 38 17.6**	**+0.7**
JNU	**Nakatsue**	**147.58**	**313**	PKPbc	**PKPdf**	**00 38 18.0**	**+1.0**
	comp=Z,11nm,0.8s,baz=352,slow=11,SNR=5.3						
DL2	**Dalian**	**149.22**	**331**	⇑PKPbc	**PKPbc**	**00 38 22.3**	**-1.3**
DL2				PKPab	**PKPab**	**00 38 30.3**	**+2.2**
DL2				pPKP	**pPKPbc**	**00 38 36.0**	**-2.1**
DL2				sPKP		00 38 40.3	
DL2				AMB	AMB		
	comp=Z,180nm,6.4s						
DL2				LR	LR		
	comp=Z,300nm,21.3s						
DL2				LR	LR		
	comp=Z,250nm,23.3s						
DL2				LR	LR		
	comp=Z,300nm,23.8s						
SOEI	**Soe**	**149.40**	**224**	PKP	**PKiKP**	**00 38 26.2**	**+0.1**
SOEI	**Soe**	**149.40**	**224**		**PKiKP**	**00 38 26.0**	**-0.1**
MSAI	**Masohi**	**149.87**	**240**	PKP	**PKPbc**	**00 38 25.9**	**-0.1**
BJI	**Beijing**	**150.48**	**340**	PKPbc	**PKPbc**	**00 38 26.0**	**-0.7**
BJI				pPKP	**pPKPdf**	**00 38 36.6**	**+0.8**
BJI				sPKP		00 38 39.9	
HHC	**Hu-ho-hao-te**	**151.03**	**347**	*e*PKPbc	**PKPbc**	**00 38 28.5**	**+0.4**
NLAI	**Namlea**	**151.46**	**238**	PKP	**PKPbc**	**00 38 29.9**	**+0.2**
MMRI	**Maumere**	**151.58**	**223**		**PKPbc**	**00 38 29.6**	**-0.4**
BTO	**Baotou**	**151.58**	**349**	*e*PKPbc	**PKPbc**	**00 38 28.4**	**-1.0**
EDFI	**Ende, Flores**	**151.85**	**222**	PKP	**PKPdf**	**00 38 23.9**	**-0.4**
GTA	**Gaotai**	**153.25**	**6**	PKPbc	**PKPdf**	**00 38 26.1**	**+0.4**
GTA				pPKP	PKPbc	00 38 33.3	+0.1
GTA				sPKP		00 38 37.1	
GTA				PP	**PP**	**00 42 24.4**	**+7.0**
GTA				SS	SS	01 01 49.5	+2.3
GTA				LR	LR		
	comp=Z,190nm,21.5s						
GTA				LR	LR		
	comp=Z,160nm,22.9s						
GTA				LR	LR		
	comp=Z,270nm,24.4s						
TIA	**Tai'an**	**153.46**	**334**	P	**PKPab**	**00 38 40.8**	**-5.0**
TIA				pmax	pmax		
	comp=Z,27nm,1.1s						
BSSI	**Bau Bau, Buton**	**154.58**	**223**	PKP	**PKiKP**	**00 38 37.5**	**+0.8**
TWSI	**Taliwang, Sumb**	**154.72**	**213**	PKP	**PKPbc**	**00 38 36.9**	**0.0**
PYUN	**Piuthan**	**155.71**	**48**	*e*P	**PKPdf**	**00 38 29.9**	**+0.3**
HYB	**Hyderabad**	**155.75**	**76**	*i* PKP	PKPab	00 38 44.0	-12
KAPI	**Kappang**	**155.90**	**224**	PKP2	**PKPab**	**00 38 58.1**	**+1.3**
KAPI	**Kappang**	**155.90**	**224**		**PKPab**	**00 38 58.1**	**+1.3**
NJ2	**Nanjing**	**155.98**	**326**	*e*PKP	**PKPdf**	**00 38 27.1**	**-2.4**
NJ2				pPKP	**pPKPdf**	**00 38 43.0**	**-1.0**
NJ2				sPKP		00 38 47.3	
BNSI	**Bone**	**156.10**	**226**	PKP	PKPdf	00 38 40.8	+11
DANN	**Dangsing**	**156.11**	**46**	*e*P	**PKPdf**	**00 38 30.7**	**+0.5**
	comp=Z,44nm,1.0s						
KOLN	**Koldanda**	**156.34**	**48**	*e*P	**PKPdf**	**00 38 30.5**	**+0.1**
	comp=Z,42nm,1.6s						
LZH	**Lanzhou**	**156.73**	**359**	*e*PKP	PKPab	00 38 45.6	-14
LZH				pPKP	sPKPdf	00 38 55.6	+5.3
LZH				PKP	pPKPab	00 39 13.5	-0.5
LZH				PP	PP	00 42 47.6	+11
GKN	**Gorkha**	**156.94**	**46**	*e*P	**PKPdf**	**00 38 31.2**	**+0.1**
	comp=Z,31nm,1.1s						
PALK	**Palilekele**	**157.19**	**102**	PKP	**PKPdf**	**00 38 30.7**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=103,slow=10,SNR=1.8						
DMN	**Daman**	**157.50**	**46**	*e*P	**PKPdf**	**00 38 32.2**	**+0.2**
KKN	**Kakani**	**157.52**	**45**	*e*P	**PKPdf**	**00 38 32.2**	**+0.3**
PKIN	**Phulchoki**	**157.73**	**46**	*e*P	**PKPdf**	**00 38 32.1**	**-0.2**
PKI	**Pulchoki**	**157.74**	**46**	*e*P	**PKPdf**	**00 38 32.4**	**0.0**
GUN	**Gumba**	**157.85**	**44**	*e*P	**PKPdf**	**00 38 32.6**	**+0.1**
XAN	**Xi'an**	**158.15**	**347**	P	PKPdf	00 38 47.3	+15
XAN				pP	sPKPdf	00 38 57.5	+5.5
XAN				pmax	pmax		
	comp=Z,16nm,1.1s						
XAN				AMB	AMB		
	comp=Z,170nm,5.7s						
XAN				LR	LR		
	comp=N,210nm,20.9s						
XAN				LR	LR		
	comp=E,220nm,20.9s						
XAN				LR	LR		
	comp=Z,390nm,21.1s						
RAMN	**Ramite**	**158.96**	**45**	*e*P	**PKPdf**	**00 38 32.4**	**-1.3**
TAPN	**Taplejung**	**159.45**	**43**	*e*P	**PKPdf**	**00 38 32.5**	**-1.9**
WHN	**Wuhan**	**159.49**	**332**	PKP	**PKPdf**	**00 38 32.9**	**-1.0**
WHN				sPKP		00 38 48.8	
ODAN	**Odare**	**159.56**	**44**	*e*P	**PKPdf**	**00 38 32.3**	**-2.1**
CD2	**Chengdu**	**161.89**	**358**	PKP	**PKPdf**	**00 38 33.0**	**-3.6**
CD2				SKS	**SKSdf**	**00 45 34.8**	**-3.1**
CD2				SS	**SS**	**01 03 19.1**	**-0.1**
CD2				AMB	AMB		
	comp=Z,270nm,9.2s						
CD2				LR	LR		
	comp=Z,340nm,28.9s						
CD2				LR	LR		
	comp=Z,490nm,25.0s						
CD2				LR	LR		
	comp=Z,490nm,23.0s						
MDSI	**Maura Dua**	**162.88**	**183**	PKP	PKPdf	00 38 53.1	+15
GYA	**Guiyang**	**165.95**	**347**	⇑PKP	PKPdf	00 38 55.5	+15
GYA				PKPab	pPKPab	00 39 51.8	-2.6
GYA				PP	PP	00 43 36.4	+10
KMI	**Kunming**	**167.65**	**2**	PKP	PKPdf	00 38 30.8	-11
KMI				pPKP	pPKPdf	00 38 54.3	-2.2
KMI				PKP	PKPab	00 39 34.1	-14
KMI				PP	**PP**	**00 43 27.8**	**-7.2**
RPSI	**Rantau Prapat**	**169.18**	**157**		**PKPdf**	**00 38 42.9**	**-0.1**
RPSI				pPKPdf	**pPKPdf**	**00 38 56.6**	**-1.0**
PSI	**Prapat**	**169.27**	**156**	PKIKP	**PKPdf**	**00 38 42.9**	**-0.3**
PSI						00 38 56.6	
BSI	**Banda Aceh**	**169.40**	**132**	PKP	**PKPdf**	**00 38 41.4**	**-1.8**
CM15	**Chiang Mai Arr**	**172.97**	**35**	P	PKPdf	00 39 00.0	+15
	comp=Z,15nm,1.0s						
CMAR	**Chiang Mai Arr**	**172.97**	**35**	PKP	**PKPdf**	**00 38 45.2**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=161,slow=33,SNR=7.5						
CMAR				pPKP	**pPKPdf**	**00 38 59.9**	**+0.5**
	comp=Z,9.9nm,0.8s,baz=283,slow=1.7,SNR=11						
CMAR				PKPab	**PKPab**	**00 40 11.7**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=318,slow=5.8,SNR=6.8						
CMAR	**Chiang Mai Arr**	**172.97**	**35**		**PKPdf**	**00 38 44.9**	**+0.1**
CMAR				pPKPdf	**pPKPdf**	**00 38 59.3**	**-0.1**
CM04	**Chiang Mai Arr**	**173.04**	**35**	P	PKPdf	00 39 00.0	+15
	comp=Z,168nmcomp=Z,19nm,1.1s						

NNC ***15*** *00:23:21.3±4.9, 37°.24N×71°.22E, h178km±103km, mb2.6, mpv3.6, Error ellipse: s-maj=52.3km s-min=25.6km az=12.0*

ISC 15 00:23:19.7±3.7, 37°.1N±0°.2×71°.2E±0°.1, h150km, n9, σ0.971/12, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.38**	**21**	P	**Pn**	**00 24 38.5**	**+0.1**
	SNR=13						
EKS2	**Erkin-Say**	**5.89**	**19**	P	**Pn**	**00 24 46.0**	**+1.0**
	SNR=6.9						
KK31	**Karatay Karay**	**6.00**	**355**	P	**Pn**	**00 24 46.3**	**0.0**
	2.9nm,0.5s,baz=190,slow=13,SNR=34						
KK31				S	**Sn**	**00 25 54.5**	**+0.4**
	5.9nm,0.6s,baz=187,slow=24,SNR=5.5						
AAK	**Ala-Archa**	**6.08**	**24**	P	**Pn**	**00 24 48.2**	**+0.6**
	SNR=10						
AAK	**Ala-Archa**	**6.08**	**24**	⇓P	**Pn**	**00 24 47.7**	**+0.2**
	3.1nm,0.3s						
AAK				⇓S	**Sn**	**00 25 56.9**	**+0.6**
	6.9nm,0.6s						
CHMS	**Chumysh**	**6.49**	**24**	P	**Pn**	**00 24 53.2**	**+0.3**
	SNR=10						
TKM2	**Tokmak 2**	**6.73**	**29**	P	**Pn**	**00 24 56.4**	**+0.3**
	SNR=5.6						
TKM2	**Tokmak 2**	**6.73**	**29**	⇑P	**Pn**	**00 24 56.6**	**+0.4**
	1.7nm,0.4s						
TKM2				⇑S	**Sn**	**00 26 10.3**	**-1.5**
	1.6nm,0.6s						
AB31	**Akbulak array**	**14.61**	**330**	P	**Pn**	**00 26 38.7**	**-0.3**
	0.2nm,0.3s,baz=135,slow=14,SNR=16						

DJA 15 00:24:13.0±0.3, 9°S±4°×112°1E±°, h10km, M3.5/6, MLv3.5/6, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.73**	**213**	P	Pb	00 24 27.7	-0.2
EDFI	**Ende, Flores**	**1.02**	**73**	P	Pg	00 24 32.8	+0.1
EDFI				S	Sb	00 24 47.0	+0.6
BASI	**Baing, Sumba**	**1.17**	**186**	P	Pb	00 24 34.5	-0.8
WBSI	**Waikabubak, Su**	**1.42**	**245**	P	Pn	00 24 36.6	-2.3
MMRI	**Maumere**	**1.57**	**75**	P	Pg	00 24 49.3	+6.1
BSSI	**Bau Bau, Buton**	**2.90**	**356**	P	Pn	00 24 58.3	-0.9
PLAI	**Plampang**	**2.90**	**274**	P	Pn	00 24 59.4	+0.2
TWSI	**Taliwang, Sumb**	**3.79**	**274**	P	Pn	00 25 12.3	+0.8

IDC ***15*** *00:28:02.3±1.4, 23°.31N×100°.40E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/42, mbtmp3.4/4, ML3.5/1, MS2.9/1, Ms1 3.1/1, ms1mx2.6/34, Error ellipse: s-maj=38.8km s-min=18.3km az=94.0*

BJI ***15*** *00:28:03.5±0.0, 23°.30N×100°.48E, h10km, ML3.9/7*

ISC 15 00:28:03.3±0.8, 23°.27N±0°.04×100°.12E±0°.06, h10km, n32, σ1.991/41, mb3.4/3, 1D, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.02**	**52**	⇓*e*Pn	**Pn**	**00 28 52.8**	**+1.4**
KMI				Sg	**Sb**	**00 29 34.9**	**+0.5**
KMI				smax	smax		
	comp=N,210nm,1.3s						
KMI				smax	smax		
	comp=E,210nm,1.1s						
CRAI	**Chiangrai**	**3.03**	**176**	P	**Pg**	**00 29 01.2**	**-0.3**
CRAI				Pg	Pb	00 29 01.4	+4.0
CRAI				Sg	**Sg**	**00 29 40.7**	**-0.1**
PAYA	**Payao**	**3.90**	**184**	Pg	**Pg**	**00 29 17.4**	**-0.6**
PAYA				Pn	**Pn**	**00 29 00.7**	**-2.6**
CM34	**Chiang Mai Arr**	**4.49**	**192**	Pn	**Pn**	**00 29 13.4**	**+2.0**
CM33	**Chiang Mai Arr**	**4.56**	**194**	P	**Pg**	**00 29 29.0**	**-1.8**
CMMT	**Chiang Mai**	**4.57**	**194**	P	**Pg**	**00 29 29.0**	**-1.8**
	248nm33nm,1.0s						
CMMT	**Chiang Mai**	**4.57**	**194**	Pg	**Pg**	**00 29 31.5**	**+0.7**
CMMT				Pn	**Pn**	**00 29 14.7**	**+2.2**
CMMT				Sg	**Sg**	**00 30 31.4**	**+1.3**
CM35	**Chiang Mai Arr**	**4.66**	**191**	P	Pg	00 29 28.0	-4.5
CM32	**Chiang Mai Arr**	**4.74**	**195**	P	**Pg**	**00 29 34.0**	**-0.2**
LAMP	**Lampang**	**4.74**	**186**	P	**Pg**	**00 29 35.5**	**+1.2**
	499nm48nm,0.8s						
CM31	**Chiang Mai Arr**	**4.91**	**193**	P	**Pg**	**00 29 36.4**	**-1.1**
	15μm1μm,0.6s						
CMAR	**Chiang Mai Arr**	**4.91**	**193**	Pn	**Pn**	**00 29 19.1**	**+1.9**
	0.5nm,0.3s,baz=13,slow=12,SNR=5.6						
CMAR				Pg	**Pg**	**00 29 35.5**	**-2.0**
	2.3nm,0.3s,baz=9.0,slow=18,SNR=46						
CMAR				Lg	Lg	00 30 40.3	
	0.8nm,0.3s,baz=13,slow=28,SNR=4.1						
CMAR				LR	LR	00 31 36.6	
	comp=Z,112nm,19.5s,baz=42,slow=43						
CM09	**Chiang Mai Arr**	**4.92**	**193**	P	**Pg**	**00 29 36.0**	**-1.5**
	457nm41nm,0.7s						
CM15	**Chiang Mai Arr**	**4.92**	**193**	P	**Pg**	**00 29 36.8**	**-0.9**
	421nm57nm,0.7s						
CM02	**Chiang Mai Arr**	**4.93**	**193**	P	**Pg**	**00 29 36.0**	**-1.9**
	494nm66nm,0.8s						
CM01	**Chiang Mai Arr**	**4.94**	**193**	P	**Pg**	**00 29 36.0**	**-2.1**
	346nm50nm,0.8s						
CM13	**Chiang Mai Arr**	**4.95**	**193**	P	**Pg**	**00 29 36.6**	**-1.7**
	401nm53nm,0.7s						
CM04	**Chiang Mai Arr**	**4.96**	**193**	P	**Pg**	**00 29 36.0**	**-2.4**
	424nm44nm,0.6s						
CM05	**Chiang Mai Arr**	**4.96**	**193**	P	**Pg**	**00 29 37.0**	**-1.5**
	327nm43nm,0.9s						
CM05	**Chiang Mai Arr**	**4.96**	**193**	Pg	**Pg**	**00 29 37.7**	**-0.8**
MHMT	**Maesarieng**	**5.46**	**202**	Pg	**Pg**	**00 29 49.4**	**+1.4**
UTTA	**Uttaradit**	**5.51**	**176**	P	**Pg**	**00 29 48.7**	**-0.2**
	229nm21nm,0.6s						
NONG	**Nongkai**	**5.90**	**151**	P	**Pg**	**00 29 52.6**	**-3.8**
	22nm,0.8s						
NONG	**Nongkai**	**5.90**	**151**	P	**Pg**	**00 29 52.6**	**-3.8**
PHIT	**Phitsanulok**	**6.05**	**177**	P	**Pg**	**00 29 57.4**	**-1.9**
PHIT	**Phitsanulok**	**6.05**	**177**	Pg	**Pg**	**00 29 56.8**	**-2.5**
GYA	**Guiyang**	**6.74**	**61**	*e*Pn	Pn	00 29 47.3	+4.9
GYA				Pg	**Pg**	**00 30 14.0**	**+1.6**
GYA				Sn	**Sn**	**00 31 01.3**	**+2.0**
GYA				Sg	**Sg**	**00 31 41.0**	**+1.3**
GYA				smax	smax		
	comp=N,16nm,1.0s						
GYA				smax	smax		
	comp=E,20nm,1.3s						
GYA				LR	LR		
	comp=N,200nm,4.1s						
GYA				LR	LR		
	comp=E,260nm,4.3s						
GYA				LR	LR		
	comp=Z,110nm,3.9s						
CD2	**Chengdu**	**8.27**	**22**	Pg	**Pg**	**00 30 38.3**	**-3.4**
CD2				Sn	**Sn**	**00 31 37.0**	**0.0**
CD2				Sg	**Sg**	**00 32 25.0**	**-3.8**
CD2				smax	smax		
	comp=N,60nm,1.6s						
CD2				smax	smax		
	comp=E,70nm,1.5s						
CD2				LR	LR		
	comp=N,540nm,7.8s						
CD2				LR	LR		
	comp=E,600nm,12.8s						
CD2				LR	LR		
	comp=Z,420nm,5.1s						
WMQ	**Urumqi**	**22.92**	**336**	*e*P	**P**	**00 33 05.9**	**-1.6**
SONM	**Songino Array**	**25.02**	**10**	P	**P**	**00 33 28.4**	**+0.8**
	comp=Z,0.9nm,1.0s,baz=186,slow=8.6,SNR=3.8						
MKAR	**Makanchi Array**	**27.52**	**333**	P	**P**	**00 33 50.0**	**0.0**
	comp=Z,0.4nm,0.6s,baz=137,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**54.39**	**139**	P	**P**	**00 37 30.0**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=331,slow=7.8,SNR=4.8						

SKHL ***15*** *00:32:31.5±0.8, 45°.17N×151°.47E, h33km±1km, mb4.8/6*

NIED ***15*** *00:32:32.8, 45°.35N×151°.18E, h30km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^15 Nm; Mrr=0.52; Mθθ=0.43; Mφφ=0.09; Mrθ=-0.49; Mrφ=0.59; Mθφ=-1.22; Fault plane solution: M0=1.52000×10^15 NP1: φs=24.00000°, δ=79.00000°, λ=-110.00000°. NP2: φs=266.00000°, δ=23.00000°, λ=-31.00000°.*

MOS ***15*** *00:32:32.8±1.4, 45°.17N×151°.27E, h39km, mb4.7/13 Error ellipse: s-maj=7.8km s-min=7.1km az=91.6*

JMA ***15*** *00:32:32.8±0.9, 45°.35N×151°.18E, h30km, M4.5*

NEIC ***15*** *00:32:34.8±1.9, 45°.30N±0°.09×151°.2E±0°.1, h35km±2km, mb4.7/31, Error ellipse: s-maj=17.4km s-min=11.9km az=135.0*

IDC ***15*** *00:32:38.1±2.9, 45°.29N×150°.99E, h58km±26km, mb3.8/16, mb1 4.0/19, mb1mx3.9/39, mbtmp4.1/19, ML3.3/3, MS3.7/6, Ms1 3.7/6, ms1mx3.2/51, Error ellipse: s-maj=21.4km s-min=16.3km az=148.0*

ISC 15 00:32:34.5±0.5, 45°.21N±0°.07×151°.19E±0°.06, h35km, n180, σ1.957/176, mb4.5/31, MS4.3/3, 9C-15D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.34**	**272**	*i* P	**Pn**	**00 33 10.3**	**-0.2**
KUR				AMB	AMB	00 33 13.0	
	410nm,0.4s						
KUR				*i* S	**Sn**	**00 33 39.1**	**+1.1**
KUR				A	A	00 33 42.7	
	1μm,0.6s						
KUR				A	A	00 33 42.7	
	1μm,0.6s						
KUR	**Kuril'sk**	**2.34**	**272**	*e*PN	**Pn**	**00 33 09.8**	**-0.7**
KUR				*i* S	**Sn**	**00 33 37.7**	**-0.3**
KUR				pmax	pmax		
	comp=Z,272nm,0.4s						
KUR				pmax	pmax		
	comp=N,122nm,0.3s						
KUR				smax	smax		
	comp=N,1μm,0.5s						
KUR				smax	smax		
	comp=E,527nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.98**	**255**	*i* P	**Pn**	**00 33 33.0**	**+0.1**
YUK				AMB	AMB	00 33 37.1	
	comp=E,260nm,0.3s						
YUK				*i* S	**Sn**	**00 34 20.7**	**+2.4**
YUK				A	A	00 34 34.2	
	comp=E,490nm,0.6s						
YUK				A	A	00 34 34.2	
	comp=E,850nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.98**	**255**	*d* iPN	**Pn**	**00 33 33.8**	**+0.9**
YUK				*i* S	**Sn**	**00 34 21.1**	**+2.8**
YUK				pmax	pmax		
	comp=N,72nm,0.2s						
YUK				pmax	pmax		
	comp=Z,199nm,0.2s						
YUK				pmax	pmax		
	comp=E,148nm,0.3s						
YUK				smax	smax		
	comp=N,563nm,0.4s						
YUK				smax	smax		
	comp=E,389nm,0.4s						
GRPR	**Tuman**	**4.05**	**254**	*e*P	**Pn**	**00 33 36.0**	**+2.0**
GRPR				AMB	AMB	00 33 45.0	
	comp=E,19nm,0.2s						
GRPR				*i* S	**Sn**	**00 34 20.0**	**-0.2**
GRPR				A	A	00 34 30.0	
	comp=E,41nm,0.4s						
GRPR				A	A	00 34 30.0	
	comp=E,189nm,0.4s						
GRPR	**Tuman**	**4.05**	**254**	*e*PN	**Pn**	**00 33 36.4**	**+2.4**
GRPR				*i* S	**Sn**	**00 34 20.7**	**+0.5**
GRPR				pmax	pmax		
	comp=Z,192nm,0.3s						
GRPR				pmax	pmax		
	comp=E,34nm,0.1s						
GRPR				pmax	pmax		
	comp=N,39nm,0.2s						
GRPR				smax	smax		
	comp=N,408nm,0.4s						
GRPR				smax	smax		
	comp=E,189nm,0.3s						
NEM2	**Nemuro 2**	**4.32**	**247**	P	**Pn**	**00 33 36.5**	**-1.2**
NEM2				*e*S	**Sn**	**00 34 23.6**	**-3.2**
NMR	**Nemuro--Hokkai**	**4.33**	**247**	*i* P	**Pn**	**00 33 36.0**	**-1.8**
NMR				*i* S	**Sn**	**00 34 24.0**	**-3.0**
NMR	**Nemuro--Hokkai**	**4.33**	**247**	⇑*i*PN	**Pn**	**00 33 36.3**	**-1.5**
JRA	**Rausu**	**4.51**	**256**	P	**Pn**	**00 33 41.2**	**+0.9**
JNK	**Nakash**	**4.91**	**253**	P	**Pn**	**00 33 45.7**	**-0.1**
JAK	**Akkeshi**	**5.17**	**247**	P	**Pn**	**00 33 47.8**	**-1.5**
JAK				*e*S	**Sn**	**00 34 44.0**	**-3.7**
JTKR	**Abashiri--Toko**	**5.34**	**259**	P	**Pn**	**00 33 52.6**	**+0.9**
JAR	**Ashorobuto**	**5.66**	**253**	P	**Pn**	**00 33 56.6**	**+0.5**
JAR				*e*S	**Sn**	**00 34 58.5**	**-1.3**
JOB	**Onbets**	**5.78**	**249**	P	**Pn**	**00 33 57.2**	**-0.5**
JOB				*e*S	**Sn**	**00 34 59.4**	**-3.3**
YSS	**Yuzh-Sakhalins**	**6.12**	**290**	*e*P	**Pn**	**00 34 03.7**	**+1.4**
YSS				erx	rx	00 34 09.1	
YSS	**Yuzh-Sakhalins**	**6.12**	**290**	⇓*e*PN	**Pn**	**00 34 03.7**	**+1.4**
YSS	**Yuzh-Sakhalins**	**6.12**	**290**	Pn	**Pn**	**00 34 02.1**	**-0.2**
JKK2	**Kamakawa 2**	**6.18**	**260**	P	**Pn**	**00 34 04.7**	**+1.5**
JCH	**Churui**	**6.22**	**248**	P	**Pn**	**00 34 03.3**	**-0.4**
JCH				*e*S	**Sn**	**00 35 10.1**	**-3.4**
JKA	**Kamikawa-asahi**	**6.22**	**263**	*e*P	**Pn**	**00 34 05.7**	**+1.9**
JKA	**Kamikawa-asahi**	**6.22**	**263**		**Pn**	**00 34 05.0**	**+1.3**
ASAJ	**Asahikawa**	**6.22**	**263**	P	**Pn**	**00 34 05.7**	**+1.9**
	comp=E,3.2nm,0.3s,baz=89,slow=17,SNR=7.6						
ASAJ				LR	LR	00 36 34.8	
	comp=E,209nm,19.8s,baz=72,slow=39						
SKR	**Severo-Kuril's**	**6.40**	**29**	*e*P	**Pn**	**00 34 03.2**	**-2.9**
SKR				AMB	AMB	00 34 11.0	
	comp=E,63nm,1.3s						
SKR				*e*S	**Sn**	**00 35 12.7**	**-5.2**
SKR				A	A	00 35 13.6	
	comp=E,41nm,1.0s						
SKR				A	A	00 35 13.6	
	comp=E,89nm,1.0s						
SKR	**Severo-Kuril's**	**6.40**	**29**	*e*PN	**Pn**	**00 34 10.1**	**+4.0**
SKR				pmax	pmax		
	comp=Z,63nm,1.3s						
SKR				MLR	MLR		
	comp=Z,300nm,14.0s						
SKR				MLR	MLR		
	comp=Z,600nm,14.0s						
ERM	**Erimo**	**6.64**	**244**	*i* PN	**Pn**	**00 34 10.4**	**+0.8**
ERM	**Erimo**	**6.64**	**244**	Pn	**Pn**	**00 34 11.0**	**+1.5**
JEM	**Erimo**	**6.64**	**244**	Pn	**Pn**	**00 34 09.2**	**-0.3**
JNBK	**Urakawa-nobuka**	**6.77**	**247**	P	**Pn**	**00 34 10.2**	**-1.1**
JNBK				*e*S	**Sn**	**00 35 24.1**	**-3.1**
JBT2	**Biratori 2**	**6.81**	**252**	P	**Pn**	**00 34 11.3**	**-0.6**
JNB	**Noboribetsu**	**7.83**	**253**	P	**Pn**	**00 34 26.5**	**+0.7**
TYV	**Tymovskoe**	**8.04**	**318**	*e*P	**Pn**	**00 34 31.5**	**+2.9**
TYV				AMB	AMB	00 34 32.0	
	comp=Z,20nm,1.0s						
TYV				*e*S	**Sn**	**00 35 58.2**	**0.0**
TYV				A	A	00 36 03.0	
	comp=Z,32nm,1.4s						
TYV	**Tymovskoe**	**8.04**	**318**	*e*PN	**Pn**	**00 34 32.1**	**+3.5**
TYV				pmax	pmax		
	comp=Z,20nm,1.2s						
JKB	**Kayabe**	**8.09**	**249**	P	**Pn**	**00 34 28.2**	**-1.2**
JKB				*e*S	**Sn**	**00 35 51.9**	**-7.6**
JANG	**Nango**	**8.60**	**239**	*e*S	Sn	00 36 01.0	-11
PEA0B	**Petropavlovsk-**	**8.98**	**26**	PN	**Pn**	**00 34 41.3**	**-0.3**
PEA0B	**Petropavlovsk-**	**8.98**	**26**	Pn	**Pn**	**00 34 41.3**	**-0.3**
PETK	**Petropavlovsk-**	**8.98**	**26**	P	**Pn**	**00 34 45.1**	**+3.6**
	comp=Z,0.5nm,0.3s,baz=192,slow=11,SNR=4.4						
PETK				LR	LR	00 38 31.4	
	comp=Z,96nm,19.9s,baz=212,slow=39						
PETK	**Petropavlovsk-**	**8.98**	**26**		**Pn**	**00 34 42.5**	**+0.9**
PET	**Petropavlovsk**	**9.22**	**29**	PN	**Pn**	**00 34 43.6**	**-1.2**
PET	**Petropavlovsk**	**9.22**	**29**	Pn	**Pn**	**00 34 43.6**	**-1.2**
USA0B	**Ussuriysk Arra**	**13.69**	**273**	P	**Pn**	**00 35 46.0**	**0.0

H11S2 **WAKE ISLAND Hy** **29.62 149** T T 01 11 32.8
baz=340
IMAR Indian Mountai **35.80 35** P **P** **00 39 31.3 +1.3**
A21K Barrow **35.98 26** P **P** **00 39 32.4 +1.0**
A21K IAmb IAmb 00 39 49.6
comp=Z,6.7nm,0.7s
ILAR Eielson Array **38.59 37** P **P** **00 39 54.0 +0.3**
comp=Z,0.4nm,0.8s,baz=285,slow=10,SNR=5.1
ILAR Eielson Array **38.59 37** P **P** **00 39 51.4 -2.2**
ILAR Eielson Array **38.59 37** P **P** **00 39 51.4 -2.2**
IL18 Eielson Array **38.64 37** P **P** **00 39 55.0 +0.9**
GLI Glacier Island **38.67 44** P **P** **00 39 53.6 -0.8**
GLI IAmb IAmb 00 40 00.7
comp=Z,9.7nm,1.0s
BCAR Beaver Creek A **40.94 40** P **P** **00 40 15.2 +1.9**
ZALV Zalesovo Beam **42.44 307** P **P** **00 40 25.7 +0.2**
comp=Z,1.1nm,0.7s,baz=74,slow=5.1,SNR=1.4
INK Inuvik **43.67 31** P **P** **00 40 36.8 +1.5**
comp=Z,1.5nm,0.7s,baz=298,slow=3.2,SNR=5.0
MK31 Makanchi Array **46.46 298** P **P** **00 40 57.1 -0.7**
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array **46.46 298** P **P** **00 40 57.1 -0.7**
MKAR Makanchi Array **46.46 298** P **P** **00 40 58.3 +0.5**
comp=Z,3.4nm,0.7s,baz=70,slow=6.3,SNR=5.6
MKAR Makanchi Array **46.46 298** *eP* **P** **00 40 57.2 -0.6**
MKAR Makanchi Array **46.46 298** *eP* **P** **00 40 57.2 -0.6**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array **46.46 298** P **P** **00 40 57.7 -0.2**
MAKZ Makanchi **46.65 298** P **P** **00 40 59.2 -0.1**
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MAKZ Makanchi **46.65 298** P **P** **00 40 59.1 -0.1**
MAKZ IAmb IAmb 00 41 02.4
comp=Z,6.3nm,1.1s
C36M Paulatuk **46.82 29** P **P** **00 41 01.6 +1.3**
C36M IAmb IAmb 00 41 07.2
comp=Z,6.3nm,1.1s
KURK Kurchatov **47.10 304** *eP* **P** **00 41 02.5 -0.2**
KURK Kurchatov **47.10 304** *i P* **P** **00 41 02.5 -0.2**
KURK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye **50.84 310** *eP* **P** **00 41 30.0 -1.3**
BRVK Borovoye **50.84 310** *i P* **P** **00 41 30.0 -1.3**
BRVK pmax pmax
comp=Z,6.0nm,1.1s
BRVK Borovoye **50.84 310** P **P** **00 41 30.1 -1.3**
BRVK IAmb IAmb 00 41 31.2
comp=Z,7.8nm,1.1s
YKA Yellowknife Ar **52.96 35** P **P** **00 41 47.9 +1.0**
comp=Z,1.1nm,0.8s,baz=302,slow=5.2,SNR=3.0
KK02 Karatay Array **55.56 299** P **P** **00 42 06.2 -0.1**
KK04 Karatay Array **55.56 299** P **P** **00 42 05.3 -0.9**
KK31 Karatay Array **55.56 299** P **P** **00 42 06.0 -0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KK31 Karatay Array **55.56 299** P **P** **00 42 06.0 -0.2**
KK31 IAmb IAmb 00 42 07.0
comp=Z,3.1nm,0.8s
KKAR Karatay Array **55.56 299** P **P** **00 42 05.9 -0.4**
KKAR Karatay Array **55.56 299** P **P** **00 42 05.9 -0.4**
KKAR Karatay Array **55.56 299** IAmb IAmb 00 42 07.0
comp=Z,3.1nm,0.8s
KK01 Karatay Array **55.56 299** P **P** **00 42 05.1 -1.2**
KK03 Karatay Array **55.57 299** P **P** **00 42 05.7 -0.6**
KK07 Karatay Array **55.58 299** P **P** **00 42 05.6 -0.8**
KK08 Karatay Array **55.58 299** P **P** **00 42 05.9 -0.5**
KSM Kuching **56.47 232** P **P** **00 42 14.8 +1.8**
KSM IAmb IAmb 00 42 17.4
comp=Z,11nm,1.1s
BTK Batken **57.03 296** P **P** **00 42 16.3 -0.5**
BTK Batken **57.03 296** P **P** **00 42 16.3 -0.5**
CHGR Chuyangaron **58.88 295** P **P** **00 42 28.6 -1.2**
NIL Nilore **59.11 288** P **P** **00 42 32.0 +0.6**
NIL pmax pmax
comp=Z,14nm,1.0s
NIL Nilore **59.11 288** P **P** **00 42 32.0 +0.6**
KBL Kabul **61.38 291** P **P** **00 42 46.8 -0.4**
KBL pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul **61.38 291** P **P** **00 42 46.8 -0.4**
KBL IAmb IAmb 00 42 47.7
comp=Z,5.7nm,0.8s
GCMT Greycliff **64.74 50** P **P** **00 43 09.4 +0.2**
FINES FINESS Array B **64.85 334** P **P** **00 43 08.7 -0.7**
comp=Z,2.0nm,0.6s,baz=32,slow=7.6,SNR=16
GEYT Alibeck **66.23 300** P **P** **00 43 19.2 +0.3**
comp=Z,3.1nm,0.7s,baz=8.1,slow=2.1,SNR=5.3
GEYT Alibeck **66.23 300** P **P** **00 43 18.8 0.0**
WRA Warramunga Arr **66.63 197** P **P** **00 43 22.0 +0.6**
comp=Z,0.9nm,0.9s,baz=16,slow=6.9,SNR=3.1
WRA Warramunga Arr **66.63 197** P **P** **00 43 22.0 +0.6**
PDAR Pinedale Array **66.75 52** P **P** **00 43 25.4 +3.1**
comp=Z,0.4nm,0.7s,baz=0.0,slow=0.6,SNR=4.2
PDAR Pinedale Array **66.75 52** P **P** **00 43 22.6 +0.3**
NC405 NORSAR Array S **69.06 340** IAmb IAmb 00 43 52.4
comp=Z,10nm,1.1s
NC204 NORSAR Array S **69.14 341** P **P** **00 43 36.6 -0.2**
NC204 IAmb IAmb 00 43 38.4
comp=Z,8.4nm,0.8s
NB2 NORSAR Subarra **69.24 340** P **P** **00 43 37.2 -0.2**
comp=Z,3.4nm,0.7s,baz=30,slow=6.5
NOA NORSAR Array B **69.24 340** P **P** **00 43 37.4 0.0**
comp=Z,2.8nm,0.6s,baz=28,slow=6.5,SNR=16
NOA LR LR 01 16 31.8
comp=Z,97nm,18.1s,baz=265,slow=38
ASAR Alice Springs **70.33 197** P **P** **00 43 45.9 +1.4**
comp=Z,1.3nm,0.8s,baz=24,slow=2.7,SNR=5.0
KIV Kislovodsk **70.90 314** *eP* **P** **00 43 49.6 +1.7**
KIV Kislovodsk **70.90 314** *eP* **P** **00 43 49.6 +1.7**
KIV pmax pmax
comp=Z,26nm,0.9s
KIV Kislovodsk **70.90 314** P **P** **00 43 47.8 -0.1**
KIV IAmb IAmb 00 43 50.5
comp=Z,6.7nm,0.7s
KBZ Khabaz **70.95 313** P **P** **00 43 49.1 +1.0**
comp=Z,5.8nm,0.8s,baz=146,slow=0.6
AKASG **Malin Array Be** **72.06 325** P **P** **00 43 54.5 -0.2**
comp=Z,1.7nm,0.4s,baz=34,slow=5.9,SNR=5.6
SORM Soroca **74.43 324** ⇑P **P** **00 44 08.7 +0.1**
SORM Soroca **74.43 324** ⇑P **P** **00 44 08.7 +0.1**
MILM Milesti Mici **75.19 323** ⇓P **P** **00 44 13.2 +0.1**
BURAR **Bucovina Array** **76.11 326** ⇓P **P** **00 44 19.1 +0.6**
BURAR **Bucovina Array** **76.11 326** ⇓P **P** **00 44 19.1 +0.6**
BURAR **Bucovina Array** **76.11 326** P **P** **00 44 18.9 +0.4**
BIZ Bicaz **76.30 325** ⇓P **P** **00 44 20.4 +0.9**
TESR Tescani **76.42 324** ⇓P **P** **00 44 20.6 +0.5**
BMR Baia Mare **76.74 327** ⇓P P 00 44 13.3 -8.6
BMR Baia Mare **76.74 327** ⇓P P 00 44 13.3 -8.7
ODBI Odobesti **76.85 323** ⇓P **P** **00 44 24.8 +2.2**
ARCR ARCALIA **76.89 326** ⇑P **P** **00 44 24.3 +1.5**
KAN08 **Anthony NE Sta** **76.98 50** P **P** **00 44 24.0 +0.5**
KAN10 **Anthony SW Sta** **76.99 50** P P 00 44 29.6 +6.1
OZUR **77.11 324** ⇓P **P** **00 44 25.7 +1.6**
KAN05 **Bluff City Nor** **77.12 50** P **P** **00 44 23.8 -0.5**
MORC **Moravsky Berou** **77.16 331** ⇓P **P** **00 44 25.2 +0.9**
MORC **Moravsky Berou** **77.16 331** *eP* **P** **00 44 25.0 +0.7**
MORC **Moravsky Berou** **77.16 331** P **P** **00 44 24.4 +0.1**
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou **77.16 331** P **P** **00 44 24.4 +0.1**
MORC IAmb IAmb 00 44 25.9
comp=Z,5.4nm,0.8s
CLL Collm **77.29 335** *i P* **P** **00 44 25.0 0.0**
comp=Z,6.0nm,0.8s
CLL Collm **77.29 335** P **P** **00 44 24.6 -0.4**
CLL pmax pmax
comp=Z,5.0nm,0.7s
CLL Collm **77.29 335** P **P** **00 44 24.6 -0.4**
CLL IAmb IAmb 00 44 26.5
comp=Z,5.3nm,0.7s
KAN13 South Haven SW **77.40 50** P **P** **00 44 26.5 +0.7**
MLR Muntele Rosu **77.53 324** LR LR 01 18 43.7
comp=Z,380nm,21.9s,baz=271,slow=36
K43A Burlington **77.66 41** P **P** **00 44 26.5 -0.7**
VRAC Vranov **77.88 332** ⇑P **P** **00 44 29.8 +1.5**
VRAC Vranov **77.88 332** *eP* **P** **00 44 29.5 +1.2**
VRAC Vranov **77.88 332** ⇑P **P** **00 44 29.8 +1.5**
VOIR **77.95 324** ⇓P **P** **00 44 30.3 +1.4**
VOIR **77.95 324** ⇓P **P** **00 44 30.3 +1.4**
KRUC Moravsky **78.16 332** *eP* **P** **00 44 30.8 +1.0**
ARR Arges **78.17 325** ⇓P **P** **00 44 32.4 +2.3**
GZR Gura Zlata **78.90 326** ⇑P **P** **00 44 34.5 +0.4**
GZR Gura Zlata **78.90 326** ⇑P **P** **00 44 34.5 +0.4**
COPA Copaceanca **78.94 324** ⇑P **P** **00 44 34.3 +0.1**
GEC2 GERESS Array S **79.23 333** P **P** **00 44 36.2 +0.3**
GEC2B **GERESS ARRAY S** **79.23 333** P **P** **00 44 35.7 -0.2**
GERES **GERESS Array B** **79.23 333** P **P** **00 44 36.3 +0.4**
comp=Z,1.1nm,0.6s,baz=29,slow=6.1,SNR=12
GERES **GERESS Array B** **79.23 333** P **P** **00 44 36.0 +0.1**
GERES **GERESS Array B** **79.23 333** P **P** **00 44 36.0 +0.1**
TX32 Lajitas Array **79.43 59** P **P** **00 44 38.2 +0.9**
TXAR Lajitas Array **79.43 59** P **P** **00 44 38.5 +1.3**
comp=Z,0.3nm,0.5s,baz=306,slow=3.6,SNR=5.2
TXAR Lajitas Array **79.43 59** P **P** **00 44 37.0 -0.3**
TXAR Lajitas Array **79.43 59** P **P** **00 44 37.0 -0.3**
MMAI Mount Meron Ar **82.80 310** LR LR 01 27 20.3
comp=Z,127nm,20.9s,baz=330,slow=40
H03N2 Juan Fernandez **140.08 91** T T 03 28 46.4
baz=306,slow=77,SNR=7.9
H03N1 Juan Fernandez **140.10 91** T T 03 28 46.8
baz=306,slow=77,SNR=5.5
H03N3 Juan Fernandez **140.10 91** T T 03 28 49.4
baz=306,slow=77,SNR=4.8

NEIC ***15*** *00:48:35.9±1.0,54.6°S±0.2°×128.9°W±0.2°,h10km±1km, mb4.7/18, Error ellipse: s-maj=25.8km s-min=17.7km az=346.0*

IDC ***15*** *00:48:35.4±0.9,55.16°S×128.76°W,h0km, mb3.8/7, mb1 4.1/7, mb1mx3.9/31, mbtmp3.8/7, MS4.1/8, Ms1 4.1/8, ms1mx4.0/16, Error ellipse: s-maj=38.5km s-min=26.4km az=131.0*

ISC 15 00:48:35.8±0.6, 54.7°S±0.1°×128.9°W±0.1°, h10km, n52, σ1§49/28, mb4.5/13, MS4.3/11, 2C, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMSA	**Palmer Station**	**32.69**	**134**	P	**P**	**00 55 08.2**	**+0.5**
VNDA	**Vanda**	**32.88**	**202**	P	**P**	**00 55 08.7**	**-0.6**
VNDA	**Vanda**	**32.88**	**202**	P	**P**	**00 55 10.0**	**+0.7**
TBI	**Tubuai**	**34.90**	**326**	*e*LR	LR	01 04 50.0	
	comp=Z,630nm,28.8s,baz=164						
TBI	**Tubuai**	**34.90**	**326**	*e*T	T	01 32 57.4	
	15nm,0.3s						
QSPA	**South Pole Qui**	**35.45**	**180**	P	**P**	**00 55 29.0**	**-2.9**
	2.5nm,0.9s,baz=118,slow=4.5,SNR=5.4						
QSPA	**South Pole Qui**	**35.45**	**180**	P	**P**	**00 55 31.0**	**-0.9**
BELA	**Belgrano 2**	**38.09**	**160**	P	**P**	**00 55 55.0**	**+0.9**
LTZ	**Lake Taylor**	**39.44**	**263**	P	**P**	**00 56 05.4**	**-0.4**
LTZ				IAmb	IAmb	00 56 20.2	
	comp=Z,19nm,0.8s						
PPT2	**Papeete2**	**40.33**	**329**	*e*LR	LR	01 07 35.0	
	comp=Z,754nm,26.2s						
PPT	**Papeete**	**40.35**	**329**	LR	LR	01 08 41.9	
	comp=Z,255nm,20.1s,baz=192,slow=30						
H03S2	**Juan Fernandez**	**40.36**	**80**	T	T	01 39 00.5	
	baz=220,slow=74,SNR=57						
H03S1	**Juan Fernandez**	**40.37**	**80**	T	T	01 39 01.8	
	baz=220,slow=74,SNR=48						
H03S3	**Juan Fernandez**	**40.38**	**80**	T	T	01 38 56.9	
	baz=220,slow=74,SNR=53						
H03N3	**Juan Fernandez**	**40.64**	**79**	T	T	01 39 14.9	
	baz=223,slow=72,SNR=52						
H03N2	**Juan Fernandez**	**40.65**	**79**	T	T	01 39 29.9	
	baz=223,slow=72,SNR=50						
H03N1	**Juan Fernandez**	**40.66**	**79**	T	T	01 39 13.5	
	baz=223,slow=72,SNR=53						
VAH	**Vaihoa**	**42.01**	**332**	*e*T	T	01 41 48.8	
	comp=Z,20nm,0.3s						
MT02	**Curacav**	**45.26**	**86**	P	**P**	**00 56 53.0**	**-0.3**
MT02				IAmb	IAmb	00 57 03.1	
	comp=Z,6.3nm,1.1s						
TAOE	**Nuku Hiva Isla**	**46.62**	**345**	*e*LR	LR	01 10 40.4	
	comp=Z,592nm,25.7s						
AC01	**Pan de Azucar**	**50.88**	**80**	P	**P**	**00 57 36.1**	**-0.7**
AC01				IAmb	IAmb	00 57 38.1	
	comp=Z,13nm,1.1s						
PB10	**IPOC Station P**	**52.95**	**78**	P	**P**	**00 57 52.5**	**+0.3**
SYO	**Syowa Base**	**56.28**	**175**⇑	*e*P	**P**	**00 58 15.6**	**-0.2**
SYO	**Syowa Base**	**56.28**	**175**⇑	*e*pP	pP	00 58 17.4	-0.5
PB11	**IPOC Station P**	**56.42**	**76**	P	**P**	**00 58 18.1**	**+0.5**
PB11				IAmb	IAmb	00 58 26.0	
	comp=Z,7.3nm,1.0s						
MAW	**Mawson**	**57.67**	**185**	P	**P**	**00 58 26.5**	**+0.9**
TOO	**Toolangi**	**58.00**	**249**	P	**P**	**00 58 29.3**	**+0.8**
TOO				IAmb	IAmb	00 58 42.7	
	comp=Z,7.2nm,1.0s						
CPUP	**Villa Florida**	**58.41**	**92**	LR	LR	01 20 11.5	
	comp=Z,226nm,18.2s,baz=228,slow=32						
LPAZ	**La Paz**	**60.06**	**75**	P	**P**	**00 58 43.7**	**0.0**
	comp=Z,0.6nm,0.5s,baz=214,slow=7.3,SNR=3.5						
LPAZ				LR	LR	01 17 22.3	
	comp=Z,88nm,19.8s,baz=211,slow=29						
LPAZ	**La Paz**	**60.06**	**75**	IAmb	IAmb	00 58 59.6	
	comp=Z,7.9nm,1.1s						
BDFB	**Brasilia**	**72.14**	**92**	LR	LR	01 29 10.5	
	comp=Z,144nm,18.1s,baz=131,slow=34						
ROSC	**El Rosal**	**74.53**	**57**	LR	LR	01 26 36.2	
	comp=Z,162nm,20.2s,baz=232,slow=30						
ASAR	**Alice Springs**	**75.01**	**250**	P	**P**	**01 00 17.7**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=142,slow=6.3,SNR=5.1						
ASAR	**Alice Springs**	**75.01**	**250**	P	**P**	**01 00 18.1**	**+0.6**
H01W1	**Cape Leeuwin H**	**75.65**	**229**	T	T	02 24 06.6	
	baz=147,slow=76,SNR=12						
H01W2	**Cape Leeuwin H**	**75.65**	**229**	T	T	02 24 12.5	
	baz=147,slow=76,SNR=14						
H01W3	**Cape Leeuwin H**	**75.67**	**229**	T	T	02 24 07.1	
	baz=147,slow=76,SNR=14						
WR0	**Warramunga Arr**	**77.64**	**253**	P	**P**	**01 00 33.0**	**+0.6**
WRA	**Warramunga Arr**	**77.76**	**253**	P	**P**	**01 00 33.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=144,slow=4.7,SNR=5.9						
FITZ	**Fitzroy Crossi**	**84.00**	**247**	P	**P**	**01 01 05.8**	**-0.6**
	comp=Z,2.2nm,1.0s,baz=127,slow=5.1,SNR=3.2						
FITZ	**Fitzroy Crossi**	**84.00**	**247**	IAmb	IAmb	01 01 23.7	
	comp=Z,4.9nm,1.1s						
TX31	**Lajitas Ar. Si**	**86.50**	**22**	P	**P**	**01 01 18.2**	**-0.3**
TX32	**Lajitas Array**	**86.50**	**22**	P	**P**	**01 01 18.5**	**0.0**
TXAR	**Lajitas Array**	**86.50**	**22**	P	**P**	**01 01 22.9**	**+4.4**
	comp=Z,0.2nm,0.7s,baz=186,slow=8.1,SNR=3.1						
PIX	**Pinacate**	**86.96**	**13**	P	**P**	**01 01 18.0**	**-2.5**
PIX				IAmb	IAmb	01 01 19.9	
	comp=Z,4.7nm,1.0s						
BAR	**Barrett**	**87.69**	**10**	P	**P**	**01 01 22.0**	**-2.1**
PMPB	**Monarch Peak**	**90.85**	**7**	P	**P**	**01 01 38.3**	**-0.6**
BOSA	**Boshof**	**94.07**	**157**	LR	LR	01 41 07.5	
	comp=Z,123nm,18.4s,baz=224,slow=34						
ELK	**Elko**	**95.82**	**10**	LR	LR	01 36 50.1	
	comp=Z,52nm,21.8s,baz=239,slow=30						
TKL	**Tuckaleechee C**	**98.02**	**36**	LR	LR	01 40 14.4	
	comp=Z,65nm,21.4s,baz=202,slow=32						
ILAR	**Eielson Array**	**119.97**	**351**	PKP	**PKiKP**	**01 07 27.7**	**+2.7**
	comp=Z,0.4nm,0.8s,baz=194,slow=1.9,SNR=3.2						
SONM	**Songino Array**	**145.53**	**282**	PKPbc	**PKiKP**	**01 08 15.6**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=39,slow=2.4,SNR=4.2						

MOS ***15*** *00:56:42.3±0.9,38.21N×141.94E,h52km,mb4.6/13, Error ellipse: s-maj=8.5km s-min=5.2km az=94.8*

NEIC ***15*** *00:56:43.9±1.7,38.16N±0.02×142.02E±0.10,h55km±6km, mb4.5/26, Error ellipse: s-maj=11.2km s-min=2.0km az=98.0*

IDC ***15*** *00:56:44.4±0.5,38.17N×141.78E,h51km±4km,mb4.0/23, mb1 4.1/31,mb1mx4.0/55,mbtmp4.2/31,MS3.2/5, Ms1 3.2/5,ms1mx2.8/43,Error ellipse: s-maj=13.0km s-min=11.0km az=105.0*

NIED ***15*** *00:56:44.8,38.17N×141.79E,h55km,MW4.2,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.30; Mθθ1.27; Mφφ-2.57; Mrθ1.18; Mφr0.14; Mθr0.08; Fault plane solution: M₀2.53000×10¹⁵ NP1:φs33.00000°, δ60.00000°, λ144.00000°. NP2:φs143.00000°, δ59.00000°, λ35.00000°.*

JMA ***15*** *00:56:44.8,38.17N×141.79E,h55km±1km,M4.2*

JMA Felt II J1.

ISC 15 00:56:43.3±0.5, 38.11N±0.04×142.08E±0.04, h55km±3km, h55km:pP-P,n180, σ1§63/207, mb4.4/44, MS4.2/3, 9C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.52**	**293**	P	**Pn**	**00 56 54.3**	**-0.8**
JIKH				S	**Sn**	**00 57 01.1**	**-2.6**
JIO	**Ouri**	**0.67**	**301**	P	**Pn**	**00 56 55.8**	**-1.1**
JIO				S	**Sn**	**00 57 03.6**	**-3.1**
JKMT	**Kesennumamotoy**	**0.85**	**326**	P	**Pn**	**00 56 58.5**	**-0.7**
JKMT				S	**Sn**	**00 57 08.4**	**-2.4**
JMM	**Marumori**	**1.04**	**257**	P	**Pn**	**00 57 00.3**	**-1.4**
JMM				S	**Sn**	**00 57 11.9**	**-3.4**
JMM	**Marumori**	**1.04**	**257**		**Pn**	**00 57 00.4**	**-1.4**
JMK	**Ichinoseki**	**1.08**	**322**	P	**Pn**	**00 57 01.5**	**-0.7**
JMK				S	**Sn**	**00 57 13.5**	**-2.7**
JOU	**Okura**	**1.14**	**283**	P	**Pn**	**00 57 01.7**	**-1.4**
JOU				S	**Sn**	**00 57 14.2**	**-3.6**
JFK	**Kawauchi**	**1.21**	**232**	P	**Pn**	**00 57 03.6**	**-0.4**
JFK				S	**Sn**	**00 57 17.2**	**-2.1**
JOM	**Ohasama**	**1.49**	**336**	P	**Pn**	**00 57 07.8**	**0.0**
JOM				S	**Sn**	**00 57 24.8**	**-1.5**
JFT	**Otama**	**1.50**	**247**	P	**Pn**	**00 57 07.5**	**-0.4**
JFT				S	**Sn**	**00 57 24.2**	**-2.2**
JYK	**Kaneyama**	**1.57**	**302**	P	**Pn**	**00 57 07.6**	**-1.3**
JYK				*e*S	**Sn**	**00 57 24.8**	**-3.3**
JYS	**Shirataka**	**1.59**	**275**	P	**Pn**	**00 57 07.9**	**-1.2**
JYS				*e*S	**Sn**	**00 57 25.6**	**-3.0**
JRG	**Rokugo**	**1.71**	**319**	P	**Pn**	**00 57 10.4**	**-0.4**
JRG				S	**Sn**	**00 57 30.6**	**-0.9**
JYA	**Atsumi**	**1.92**	**285**	P	**Pn**	**00 57 12.4**	**-1.2**
JYT	**Yasato**	**2.40**	**219**		**Pn**	**00 57 20.8**	**+0.6**
JTM	**Tenmabayashi**	**2.79**	**344**	Pn	**Pn**	**00 57 25.9**	**+0.5**
JSD	**Sado**	**3.01**	**270**		**Pn**	**00 57 27.2**	**-1.4**
MAJO	**Matsushiro**	**3.46**	**244**	*i* P	**Pn**	**00 57 34.7**	**0.0**
MAJO	**Matsushiro**	**3.46**	**244**		**Pn**	**00 57 35.8**	**+1.1**
MAT	**Matsushiro**	**3.46**	**244**	P	**Pn**	**00 57 35.6**	**+0.9**
MAT				*e*S	**Sn**	**00 58 15.2**	**+0.8**
MJAR	**Matsushiro Arr**	**3.46**	**244**	P	**Pn**	**00 57 34.2**	**-0.4**
	1.4nm,0.3s,baz=63,slow=11,SNR=82						
MJAR				S	**Sn**	**00 58 19.7**	**+5.3**
	1.4nm,0.3s,baz=71,slow=25,SNR=2.1						
MJAR				LR	LR	00 59 12.1	
	comp=Z,335nm,20.9s,baz=75,slow=45						
MJAR	**Matsushiro Arr**	**3.46**	**244**	P	**Pn**	**00 57 35.5**	**+0.8**
MJAR	**Matsushiro Arr**	**3.46**	**244**		**Pn**	**00 57 35.5**	**+0.8**
MJB9	**Matsu-Tunnel**	**3.46**	**244**		**Pn**	**00 57 36.5**	**+1.8**
ERM	**Erimo**	**3.99**	**12**	*i* P	**Pn**	**00 57 41.8**	**-0.1**
ERM	**Erimo**	**3.99**	**12**	Pn	**Pn**	**00 57 40.8**	**-1.2**
JGF	**Kuroka**	**4.54**	**238**		**Pn**	**00 57 50.7**	**+1.2**
JSG	**Sagara**	**4.65**	**224**	Pn	**Pn**	**00 57 52.9**	**+1.9**
JEW	**Eniwo**	**4.75**	**354**	Pn	**Pn**	**00 57 52.9**	**+0.6**
INU	**Inuyama**	**4.91**	**237**		**Pn**	**00 57 56.0**	**+1.4**
JHJ	**Hachijo jima 2**	**5.32**	**201**	P	**Pn**	**00 58 01.0**	**+0.8**
	18nm,0.3s,baz=313,slow=22,SNR=6.4						
JHJ				S	**Sn**	**00 58 57.3**	**-2.8**
	40nm,0.3s,baz=100,slow=24,SNR=6.4						
NMR	**Nemuro--Hokkai**	**5.94**	**27**⇑	*i* P	**Pn**	**00 58 08.0**	**-0.7**
NMR				*i* S	**Sn**	**00 59 10.2**	**-5.1**
JKA	**Kamikawa-asahi**	**6.01**	**4**	Pn	**Pn**	**00 58 08.6**	**-1.0**
JKA	**Kamikawa-asahi**	**6.01**	**4**		**Sn**	**00 59 15.6**	**-1.6**
ASAJ	**Asahikawa**	**6.02**	**4**	P	**Pn**	**00 58 09.7**	**0.0**
	6.7nm,0.3s,baz=200,slow=12,SNR=5.5						
ASAJ				S	**Sn**	**00 59 15.6**	**-1.6**
	1.8nm,0.3s,baz=162,slow=20,SNR=2.3						
JWT	**Wachi**	**6.06**	**244**	Pn	**Pn**	**00 58 11.0**	**+0.7**
GLVR	**Golovnino**	**6.20**	**24**	*e*P	**Pn**	**00 58 11.9**	**-0.3**
GLVR				*e*S	**Sn**	**00 59 18.8**	**-2.8**
GLVR				pmax	pmax		
	comp=Z,368nm,0.6s						
GLVR				smax	smax		
	comp=N,939nm,0.9s						
GLVR				smax	smax		
	comp=E,711nm,0.2s						
GRPR	**Tuman**	**6.51**	**24**	P	**Pn**	**00 58 17.1**	**+0.7**
GRPR				*e*S	**Sn**	**00 59 24.2**	**-5.1**
GRPR				pmax	pmax		
	comp=Z,101nm,0.4s						
GRPR				smax	smax		
	comp=N,586nm,0.3s						
GRPR				smax	smax		
	comp=E,492nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**6.58**	**25**	*e*P	**Pn**	**00 58 18.4**	**+1.1**
YUK				*i* S	**Sn**	**00 59 28.1**	**-2.8**
YUK				pmax	pmax		
	comp=Z,230nm,0.2s						
YUK				smax	smax		
	comp=N,677nm,0.5s						
YUK				smax	smax		
	comp=E,247nm,0.3s						
JHS	**Saijyo**	**7.85**	**249**	Pn	**Pn**	**00 58 36.6**	**+1.7**
JMN	**Monobe**	**7.96**	**239**	Pn	**Pn**	**00 58 37.5**	**+1.1**
TEY	**Ternei**	**8.04**	**331**⇑	*e*P	**Pn**	**00 58 41.8**	**+4.4**
TEY				pmax	pmax		
	comp=E,40nm,0.8s						
TEY				pmax	pmax		
	comp=N,90nm,0.7s						
TEY				pmax	pmax		
	comp=Z,60nm,0.7s						
KUR	**Kuril'sk**	**8.33**	**29**	P	**Pn**	**00 58 40.7**	**-0.7**
KUR				*e*S	**Sn**	**01 00 12.1**	**-1.9**
KUR				smax	smax		
	comp=E,197nm,0.7s						
KUR				smax	smax		
	comp=N,110nm,0.4s						
YSS	**Yuzh-Sakhalins**	**8.86**	**3**	*c*eP	**Pn**	**00 58 49.9**	**+1.4**
YSS				pmax	pmax		
	comp=Z,83nm,2.5s						
USA0B	**Ussuriysk Arra**	**9.74**	**312**	P	**Pn**	**00 59 01.1**	**+0.5**
USA0B	**Ussuriysk Arra**	**9.74**	**312**	Pn	**Pn**	**00 59 01.1**	**+0.5**
USRK	**Ussuriysk Ar.**	**9.74**	**312**	P	**Pn**	**00 59 00.3**	**-0.3**
	baz=122,slow=14,SNR=9.1						
JNU	**Nakatsue**	**10.38**	**245**	P	**Pn**	**00 59 09.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=48,slow=12,SNR=2.8						
JNU				LR	LR	01 03 34.2	
	comp=Z,222nm,20.6s,baz=60,slow=40						
JCJ	**Chichijima**	**10.98**	**179**	Pn	**Pn**	**00 59 15.5**	**-2.2**
KSRS	**Korea Array**	**11.22**	**271**	P	**Pn**	**00 59 20.4**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=82,slow=14,SNR=2.9						
KSRS				LR	LR	01 03 23.4	
	comp=Z,70nm,20.5s,baz=54,slow=36						
TJN	**Taejon**	**11.85**	**266**	*c*eP	**Pn**	**00 59 30.9**	**+1.3**
KLR	**Kul'dur**	**13.38**	**329**	P	**Pn**	**00 59 49.2**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=316,slow=22,SNR=2.0						
KLR				LR	LR	01 04 39.6	
	comp=Z,66nm,18.6s,baz=142,slow=36						
PETK	**Petropavlovsk-**	**16.50**	**31**	P	**Pn**	**01 00 57.6**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=233,slow=12,SNR=2.3						
ZEA	**Zeya**	**18.66**	**332**	*e*P	**P**	**01 00 56.1**	**-0.5**
ZEA				pmax	pmax		
	comp=Z,20nm,0.7s						
HIA	**Hailar**	**19.55**	**312**	*i* P	**Pn**	**

comp=N,12nm,0.9s,baz=186,slow=6.6,SNR=9.0
SEY Seymchan 25.64 11 *i* P **P** **01 02 07.7 +0.3**
BOD Bodaibo 26.92 326 *eP* **P** **01 02 18.2 -0.8**
BOD pmax pmax
comp=Z,10.0nm,0.8s
XAN Xi'an 27.02 272 P **P** **01 02 21.5 +1.2**
XAN pP pP 01 02 34.0 0.0
XAN pmax pmax
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 27.21 302 *i* P **P** **01 02 21.6 -0.4**
ULN pmax pmax
comp=Z,3.0nm,1.3s
SONM Songino Array 27.64 302 P **P** **01 02 25.6 -0.2**
comp=Z,0.9nm,0.7s,baz=86,slow=7.8,SNR=6.2
SONM pP **pP** **01 02 39.7 +0.2**
comp=Z,0.4nm,0.3s,baz=295,slow=5.0,SNR=3.1
SONM Songino Array 27.64 302 P **P** **01 02 26.1 +0.3**
SONM *PP **pP** **01 02 39.7 +0.2**
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 27.64 302 P **P** **01 02 26.1 +0.3**
H11N2 WAKE ISLAND Hy 28.27 123 T T 01 32 48.3
baz=316,slow=76,SNR=490
H11N1 WAKE ISLAND Hy 28.28 123 T T 01 32 59.9
baz=316,slow=76,SNR=642
H11N3 WAKE ISLAND Hy 28.29 123 T T 01 33 02.5
baz=316,slow=76,SNR=527
H11S1 WAKE ISLAND Hy 29.03 125 T T 01 33 49.6
baz=318,slow=76,SNR=248
H11S3 WAKE ISLAND Hy 29.03 125 T T 01 33 50.4
baz=318,slow=76,SNR=244
H11S2 WAKE ISLAND Hy 29.04 125 T T 01 33 51.5
baz=318,slow=76,SNR=196
GYA Guiyang 31.93 259 *eP* **P** **01 03 01.3 -2.7**
GYA pP pP 01 03 13.3 -4.5
GYA pmax pmax
comp=Z,6.0nm,0.9s
TIXI Tiksi 34.29 353*ceP* **P** **01 03 21.9 -2.0**
SIJI Sorong 40.05 197 LR LR 01 18 00.5
comp=Z,95nm,20.8s,baz=93,slow=32
WMQ Urumqi 40.84 296 *eP* **P** **01 04 20.8 +1.2**
WMQ sP sP 01 04 38.5 -1.6
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ pmax pmax
comp=Z,65nm,4.5s
WMQ LR LR
comp=N,310nm,29.2s
WMQ LR LR
comp=E,1μm,29.2s
WMQ LR LR
comp=Z,390nm,28.5s
ZAA0 Zalesovo Array 41.59 311 P **P** **01 04 24.7 -0.8**
ZAA0 lAmb lAmb 01 04 25.7
comp=Z,4.1nm,0.7s
ZALV Zalesovo Beam 41.59 311 P **P** **01 04 25.2 -0.3**
comp=Z,4.6nm,0.6s,baz=87,slow=8.2,SNR=20
ZALV sP **sP** **01 04 43.7 -2.4**
comp=Z,2.3nm,0.6s,baz=79,slow=7.6,SNR=4.4
ZALV Zalesovo Beam 41.59 311 P **P** **01 04 25.1 -0.4**
FAKI Fak Fak 41.82 195 P **P** **01 04 27.4 -0.5**
NRIK Noril'sk 42.52 335 P **P** **01 04 31.9 -1.1**
comp=Z,1.2nm,0.4s,baz=79,slow=10,SNR=3.5
NRIK Noril'sk 42.52 335 *i* P **P** **01 04 31.6 -1.3**
NRIK pmax pmax
comp=Z,7.0nm,1.9s
MK31 Makanchi Array 44.00 301 *i* P **P** **01 04 45.7 +0.4**
MK31 Makanchi Array 44.00 301 P **P** **01 04 45.0 -0.3**
MKAR Makanchi Array 44.00 301 P **P** **01 04 44.6 -0.7**
comp=Z,1.5nm,0.6s,baz=84,slow=10,SNR=11
MKAR sP **sP** **01 05 04.2 -1.6**
comp=Z,1.7nm,0.7s,baz=85,slow=9.3,SNR=5.6
MKAR Makanchi Array 44.00 301 P **P** **01 04 45.7 +0.4**
MKAR *SP **sP** **01 05 04.3 -1.6**
MKAR Makanchi Array 44.00 301 P **P** **01 04 45.7 +0.4**
MAKZ Makanchi 44.21 301 P **P** **01 04 46.9 0.0**
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
MAKZ Makanchi 44.21 301 P **P** **01 04 46.9 0.0**
KURK Kurchatov 45.69 307*ceP* **P** **01 04 57.7 -0.9**
KURK pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 45.69 307 P **P** **01 04 58.2 -0.3**
KURK lAmb lAmb 01 05 01.6
comp=Z,5.7nm,0.7s
SPU Mount Spurr 46.06 38 P **P** **01 04 59.9 -1.5**
COLA College 47.89 33 *i* P **P** **01 05 12.9 -2.6**
COLA pmax pmax
comp=Z,3.0nm,1.1s
KKN Kakani 48.10 275 *eP* **P** **01 05 22.2 +4.2**
PKIN Phulchoki 48.11 275 *eP* **P** **01 05 21.8 +3.7**
IL31 48.31 33 P **P** **01 05 18.8 +0.1**
IL31 lAmb lAmb 01 05 21.7
comp=Z,2.9nm,0.8s
ILAR Eielson Array 48.31 33 P **P** **01 05 21.0 +2.2**
comp=Z,2.0nm,0.7s,baz=267,slow=6.7,SNR=26
ILAR sP **sP** **01 05 39.3 +0.1**
comp=Z,1.0nm,0.7s,baz=271,slow=6.7,SNR=4.3
ILAR Eielson Array 48.31 33 P **P** **01 05 19.6 +0.8**
DANN Dangsing 49.04 277 *eP* **P** **01 05 25.4 +0.1**
comp=Z,26nm,0.6s
KOLN Koldanda 49.43 276 *eP* **P** **01 05 29.5 +1.3**
PYUN Piuthan 49.76 277 *eP* **P** **01 05 30.5 -0.2**
BRVK Borovoye 50.30 312 *i* P **P** **01 05 34.0 -0.1**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
KKAR Karatay Array 53.05 300 P **P** **01 05 54.4 -0.4**
KKAR Karatay Array 53.05 300 P **P** **01 05 54.4 -0.4**
HYT Haines Junctio 53.12 37 P **P** **01 05 52.9 -2.4**
HYT lAmb lAmb 01 06 00.1
comp=Z,10nm,1.1s
INK Inuvik 53.19 28 P **P** **01 05 57.5 +2.1**
comp=Z,4.4nm,1.1s,baz=299,slow=7.0,SNR=10
CHGR Chuyangaron 55.68 295 P **P** **01 06 14.0 -0.1**
ARU Arti 55.91 318*di* P **P** **01 06 14.6 -0.7**
ARU S **S** **01 13 58.4 -0.3**
ARU SS **SS** **01 17 37.6 -7.0**
ARU pmax pmax
comp=Z,5.0nm,0.7s
ARU Arti 55.91 318 P **P** **01 06 15.0 -0.3**
ARU lAmb lAmb 01 06 15.5
comp=Z,5.0nm,0.7s
C36M Paulatuk 56.23 25 P **P** **01 06 19.0 +1.6**
C36M lAmb lAmb 01 06 20.4
comp=Z,6.6nm,0.9s
WRA Warramunga Arr 58.20 189 P **P** **01 06 32.8 +1.0**
comp=Z,0.9nm,0.8s,baz=5.5,slow=7.4,SNR=10
WRA pP **pP** **01 06 47.2 +0.7**
comp=Z,3.0nm,0.8s,baz=5.9,slow=7.5,SNR=12
EUNU Eureka 59.05 9 P **P** **01 06 37.5 +0.3**
SPA0 Spitsbergen Ar 59.57 349 *eP* **P** **01 06 41.4 +0.6**
KIRV Kirov 59.71 323*ceP* **P** **01 06 41.3 -0.6**
ASAR Alice Springs 61.92 188 P **P** **01 06 58.4 +1.0**
comp=Z,0.6nm,0.9s,baz=8.8,slow=6.7,SNR=5.5
ASAR pP **pP** **01 07 13.9 +1.8**
comp=Z,1.2nm,0.7s,baz=10.0,slow=5.6,SNR=7.1
YKA Yellowknife Ar 62.62 31 P **P** **01 07 02.4 +0.9**
comp=Z,1.5nm,0.8s,baz=302,slow=7.3,SNR=4.2
HAMF Hammerfest 62.98 341 *eP* **P** **01 07 03.3 -0.5**
ARA0 ARCESS Array S 63.18 339 *eP* **P** **01 07 05.9 +0.8**
ARCES ARCESS Array B 63.18 339 P **P** **01 07 05.8 +0.6**
comp=Z,2.7nm,0.6s,baz=53,slow=7.2,SNR=20
GEYT Alibeck 63.78 299 P **P** **01 07 09.9 +0.2**
comp=Z,0.8nm,0.5s,baz=74,slow=5.1,SNR=1.2
GEYT Alibeck 63.78 299 lAmb lAmb 01 07 15.0
comp=Z,1.0nm,0.8s
TULEG Thule 63.97 8 P **P** **01 07 09.4 -0.8**
KTK1 Kautokeino 64.14 339 *eP* **P** **01 07 12.2 +0.7**
TRO Tromso 64.87 341 *eP* **P** **01 07 16.5 +0.3**
STEI Steigen 67.03 341 *eP* **P** **01 07 30.6 +0.5**
FAUS Fauske 67.42 340 *eP* **P** **01 07 33.4 +0.9**
OBN Obninsk 67.55 323‖ *eP* **P** **01 07 32.7 -0.9**
OBN *i* 01 07 58.3
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN MLR MLR
comp=Z,110nm,17.0s
FINES FINESS Array B 68.11 332 P **P** **01 07 37.2 +0.2**
comp=Z,5.7nm,0.7s,baz=44,slow=8.4,SNR=18
FINES pP **pP** **01 07 51.9 -0.2**
comp=Z,1.8nm,0.9s,baz=114,slow=2.3,SNR=1.7
FINES FINESS Array B 68.11 332 P **P** **01 07 36.9 -0.1**
MOR8 Moi Rana 68.54 340 *eP* **P** **01 07 38.5 -1.2**
NSS Namsos 70.46 339 *eP* **P** **01 07 51.1 -0.4**
KIV Kislovodsk 70.60 311 *eP* **P** **01 07 53.4 +0.5**
KIV pmax pmax
comp=Z,21nm,1.1s
KIV Kislovodsk 70.60 311 P **P** **01 07 53.8 +0.9**
KIV lAmb lAmb 01 07 54.9
comp=Z,5.6nm,0.9s
KBZ Khabaz 70.60 311 P **P** **01 07 53.0 +0.3**
comp=Z,2.9nm,0.9s,baz=146,slow=3.2
KBZ Khabaz 70.60 311*ceP* **P** **01 07 52.3 -0.4**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
GNI Garni 71.49 307 *i* P **P** **01 07 57.5 -0.9**
GNI pmax pmax
comp=Z,6.0nm,1.0s
NC204 NORSAR Array S 73.35 338 P **P** **01 08 08.8 -0.2**
NB2 NORSAR Subarra 73.40 337 P **P** **01 08 09.8 +0.6**
comp=Z,1.6nm,0.7s,baz=39,slow=6.2
NB2 NORSAR Subarra 73.40 337 P **P** **01 08 09.8 +0.6**
baz=39,slow=6.2
NOA NORSAR Array B 73.40 337 P **P** **01 08 09.8 +0.6**
comp=Z,3.5nm,0.8s,baz=39,slow=5.9,SNR=10
NC602 NORSAR Array S 73.54 337 *eP* **P** **01 08 09.7 -0.3**
AKASG Malin Array Be 73.77 322 P **P** **01 08 11.3 -0.2**
comp=Z,2.6nm,0.5s,baz=45,slow=6.3,SNR=12
AKASG Malin Array Be 73.77 322 lAmb lAmb 01 08 12.3
comp=Z,0.7nm,0.5s
AKBB Malin Array Si 73.77 322*ceP* **P** **01 08 10.1 -1.4**
AKBB Malin Array Si 73.77 322 P **P** **01 08 11.3 -0.2**
AKBB lAmb lAmb 01 08 12.1
comp=Z,5.1nm,0.8s
LHV Little Huntoon 73.90 54 P **P** **01 08 14.1 +1.6**
LHV lAmb lAmb 01 08 17.5
comp=Z,4.6nm,1.1s
NVAR Mina Array Bea 73.93 54 P **P** **01 08 16.2 +3.2**
comp=Z,1.1nm,0.7s,baz=286,slow=5.5,SNR=3.9
NVAR Mina Array Bea 73.93 54 P **P** **01 08 14.7 +1.7**
PD31 Pinedale Array 76.54 46 P **P** **01 08 28.3 +0.4**
PDAR Pinedale Array 76.54 46 P **P** **01 08 30.6 +2.6**
comp=Z,1.5nm,0.7s,baz=268,slow=2.4,SNR=16
PDAR Pinedale Array 76.54 46 P **P** **01 08 28.9 +0.9**
BUR08 Bucovina Ar. S 77.78 322 P **P** **01 08 35.1 +0.5**
BUR08 lAmb lAmb 01 08 36.1
comp=Z,3.5nm,0.8s
BURAR Bucovina Array 77.79 322 P **P** **01 08 35.1 +0.4**
BURAR Bucovina Array 77.79 322 P **P** **01 08 35.1 +0.4**
RDMU Red Mountain 77.94 48 P **P** **01 08 37.1 +1.3**
KOLS Kolonicke sedl 78.26 324 *eP* **P** **01 08 36.9 -0.2**
KOLS Kolonicke sedl 78.26 324 *eP* **P** **01 08 36.9 -0.2**
BRTR Keskin Array B 78.53 312 P **P** **01 08 39.0 +0.1**
comp=Z,0.6nm,0.5s,baz=103,slow=7.2,SNR=3.0
DPC Dobruska-Polom 79.83 328 *eP* **P** **01 08 46.8 +1.1**
DPC Dobruska-Polom 79.83 328 *eP* **P** **01 08 46.8 +1.1**
113A Mohawk Valley, 80.30 56 P **P** **01 08 48.1 -0.4**
SMCO Snowmass 80.36 47 P **P** **01 08 46.0 -3.3**
CLL Collm 80.43 330 *i* P **P** **01 08 49.4 +0.5**
comp=Z,4.0nm,0.9s
CLL Collm 80.43 330 *i* P **P** **01 08 49.4 +0.5**
CLL pmax pmax
comp=Z,4.0nm,0.9s
PRU Pruhonice 80.84 329 *eP* **P** **01 08 52.1 +1.0**
PRU Pruhonice 80.84 329 *eP* **P** **01 08 52.1 +1.0**
MODS Modra-Piesok 80.92 326 *eP* **P** **01 08 52.1 +0.5**
MODS Modra-Piesok 80.92 326 *eP* **P** **01 08 52.1 +0.5**
KHC Kasperske Hory 81.90 329 *eP* **P** **01 08 57.6 +0.8**
KHC Kasperske Hory 81.90 329 *eP* **P** **01 08 57.6 +0.8**
GERES GERESS Array B 82.08 328 P **P** **01 08 57.7 -0.1**
comp=Z,0.5nm,0.6s,baz=46,slow=5.8,SNR=5.9
GERES GERESS Array B 82.08 328 P **P** **01 08 57.4 -0.4**
TXAR Lajitas Array 89.05 53 P **P** **01 09 35.1 +2.4**
comp=Z,1.0nm,0.6s,baz=302,slow=3.0,SNR=17
TXAR pP **pP** **01 09 49.6 +1.3**
comp=Z,0.3nm,0.6s,baz=222,slow=1.5,SNR=3.1
TORD Torodi Ar. Bea 116.94 316 PKP **PKiKP** **01 15 22.6 +0.1**
comp=Z,0.2nm,0.6s,baz=338,slow=3.3,SNR=1.4
LPAZ La Paz 145.69 59 PKPbc **PKPab** **01 16 19.2 +1.6**
comp=Z,2.6nm,0.6s,baz=2.1,slow=2.7,SNR=11
LPAZ La Paz 145.69 59 **PKPdf** **01 16 17.0 +0.2**

*REY **15** 01:04:44.9, 64.°62N×17.°40W, h9km*
*NEIC **15** 01:04:45.6±1.7, 64.°5N±0.°1×18.°2W±0.°1, h10km±1km, mb4.1/10, Error ellipse: s-maj=18.5km s-min=6.8km az=155.0*
*IDC **15** 01:04:46.0±1.0, 64.°33N×17.°73W, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.5/48, mbtmp3.6/6, Error ellipse: s-maj=36.6km s-min=12.8km az=17.0*
ISC 15 01:04:45.0±1.0, **64.°62N**±0.°02×**17.°42W**±0.°02, **h7**km±6km, **n51**, σ1§**60**/69, **mb3.9**/9, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
IVON	**Vonarskard** baz=291	**0.15**	**291**	P		**Pg**	**01 04 48.4**	**+0.1**
IVON	baz=291			S		**Sg**	**01 04 51.3**	**+0.8**
IDYN	**Dyngjuhals** baz=4.1	**0.18**	**8**	P		**Pg**	**01 04 48.8**	**+0.1**
IGRF	**Grimsfjall** baz=165	**0.22**	**162**	P		**Pg**	**01 04 49.4**	**-0.1**
IGRF	baz=165			S		**Sg**	**01 04 52.8**	**+0.3**
IHAM	**Hamarinn** baz=234	**0.22**	**232**	P		**Pg**	**01 04 49.5**	**0.0**
IHAM	baz=234			S		**Sg**	**01 04 53.0**	**+0.5**
IKVE	**Kverkfjoll** baz=78	**0.33**	**79**	P		**Pg**	**01 04 51.0**	**-0.5**
IHUS	**Husbondi** baz=200	**0.34**	**198**	P		**Pg**	**01 04 51.6**	**-0.1**
IHUS	baz=200			S		**Sg**	**01 04 57.0**	**+0.8**
IVOT	**Vottur** baz=165	**0.36**	**163**	P		**Pg**	**01 04 51.8**	**-0.3**
ISKR	**Skrokkalda** baz=263	**0.42**	**263**	P		**Pg**	**01 04 52.9**	**-0.3**
THOR	**Thorvaldshraun** baz=44	**0.45**	**45**	P		**Pg**	**01 04 53.3**	**-0.5**
THOR	baz=44			S		**Sg**	**01 04 59.7**	**0.0**
IJOK	**Jokulheimar** baz=230	**0.46**	**229**	P		**Pg**	**01 04 53.6**	**-0.3**
IJOK	baz=230			S		**Sg**	**01 05 00.4**	**+0.4**
IASK	**Askja** baz=36	**0.55**	**37**	P		**Pg**	**01 04 54.8**	**-0.8**
IASK	baz=36			S		**Sg**	**01 05 02.6**	**-0.2**
IMKO	**Mokollar** baz=51	**0.59**	**51**	P		**Pg**	**01 04 55.7**	**-0.7**
IMKO	baz=51			S		**Sg**	**01 05 04.1**	**+0.1**
IIEY	**Innrieyrar** baz=212	**0.61**	**211**	P		**Pg**	**01 04 55.9**	**-0.8**
IIEY	baz=212			S		**Sg**	**01 05 04.8**	**+0.2**
IKSK	**Karasker** baz=138	**0.61**	**138**	P		**Pg**	**01 04 55.4**	**-1.4**
IKAL	**Kalfafell** baz=191	**0.68**	**190**	P		**Pg**	**01 04 57.2**	**-1.0**
IKAL	baz=191			S		**Sg**	**01 05 07.2**	**+0.3**
ISVA	**Svartarkot** baz=4.7	**0.73**	**5**	P		**Pg**	**01 04 57.8**	**-1.2**
ISVA	baz=4.7			S		**Sg**	**01 05 07.9**	**-0.6**
IVSH	**V-Sauoahnukur** baz=74	**0.75**	**74**	P		**Pg**	**01 04 58.0**	**-1.5**
IVSH	baz=74			S		**Sg**	**01 05 09.1**	**-0.2**
IVAT	**Vatnsfell** baz=238	**0.78**	**237**	P		**Pg**	**01 04 59.0**	**-1.0**
IVAT	baz=238			S		**Sg**	**01 05 10.3**	**+0.1**
IFAG	**Fagurholsmyri** baz=156	**0.82**	**155**	P		**Pg**	**01 04 59.4**	**-1.3**
IFAG	baz=156			S		**Sg**	**01 05 11.2**	**-0.1**
IADA	**Aoalbol** baz=62	**0.89**	**62**	P		**Pg**	**01 05 00.4**	**-1.6**
IADA	baz=62			S		**Sg**	**01 05 12.8**	**-0.7**
IHVE	**Hveravellir** baz=286	**0.95**	**286**	S		**Sg**	**01 05 14.9**	**-0.8**
IHVE	baz=286			P		**Pg**	**01 05 01.5**	**-1.8**
IMEL	**Melhnausar** baz=18	**1.01**	**18**	P		**Pg**	**01 05 02.4**	**-2.0**
ISNB	**Snabyli** baz=212	**1.03**	**211**	P		**Pg**	**01 05 03.4**	**-1.4**
ISNB	baz=212			S		**Sg**	**01 05 17.4**	**-0.8**
IREN	**Reynihlio** baz=11	**1.06**	**12**	P		**Pg**	**01 05 03.2**	**-2.1**
IKVO	**Krokottuvotn** baz=11	**1.12**	**11**	P		**Pg**	**01 05 04.3**	**-2.3**
BORG	**Borgarnes** 17nm,0.3s,baz=92,slow=8.2,SNR=38	**1.69**	**276**	Pg		**Pn**	**01 05 13.3**	**-1.5**
BORG	7.3nm,0.3s,baz=219,slow=23,SNR=10			Lg		Lg	01 05 38.9	
BORG	**Borgarnes**	**1.69**	**276**			**Pn**	**01 05 10.5**	**-4.3**
SCO	**Scoresbysund**	**6.14**	**346**			**Pn**	**01 06 16.4**	**+0.4**
SCO	**Scoresbysund** baz=171,slow=6.5	**6.14**	**346**	*e*		**Pn**	**01 06 13.6**	**-2.4**
SCO				*i* P		**Pn**	**01 06 18.1**	**+2.1**
SCO				*i* S		**Sn**	**01 07 31.6**	**+5.2**
KHC	**Kasperske Hory**	**22.62**	**118**	*ex*		**P**	**01 09 48.5**	**+2.4**
GERES	**GERESS Array B** 0.5nm,0.6s,baz=335,slow=8.8,SNR=2.7	**22.90**	**119**	P		**P**	**01 09 50.6**	**+1.5**
MORC	**Moravsky Berou**	**23.65**	**112**	P		**P**	**01 09 58.0**	**+1.4**
SALO	**Salr**	**24.49**	**128**	P		**P**	**01 10 06.0**	**+1.4**
CTI	**Castel Tesino**	**24.51**	**125**	P		**P**	**01 10 07.8**	**+3.0**
CTI	comp=Z,4.2nm,1.1s			lAmb		lAmb	01 10 08.9	
ROSA	**Rosais**	**26.71**	**199**	P		**P**	**01 10 21.7**	**-2.9**
PMOZ	**Porto Moniz, M**	**31.82**	**180**	P		**P**	**01 11 08.7**	**-1.4**
IL31		**45.74**	**332**	P		**P**	**01 13 06.5**	**+0.3**
IL31	comp=Z,6.7nm,1.3s			lAmb		lAmb	01 13 13.7	
ILAR	**Eielson Array** comp=Z,1.5nm,1.2s,baz=22,slow=5.7,SNR=6.6	**45.74**	**332**	P		**P**	**01 13 09.0**	**+2.7**
ILAR	**Eielson Array**	**45.74**	**332**	P		**P**	**01 13 07.6**	**+1.3**
COLA	**College**	**45.84**	**333**	P		**P**	**01 13 07.2**	**+0.2**
IMAR	**Indian Mountai**	**45.92**	**337**	P		**P**	**01 13 08.4**	**+0.8**
CNNC	**Cliffs of the**	**46.20**	**261**	P		**P**	**01 13 07.7**	**-2.4**
KURK	**Kurchatov**	**48.11**	**58**	P		**P**	**01 13 27.2**	**+2.3**
KURK	comp=Z,1.5nm,0.8s			lAmb		lAmb	01 13 31.5	
KURBB	**Kurchatov Arra** comp=Z,0.3nm,0.3s,baz=322,slow=7.3,SNR=6.2	**48.15**	**58**	P		P	01 13 30.1	+4.9
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.7s,baz=344,slow=7.1,SNR=3.5	**53.08**	**156**	P		**P**	**01 14 03.2**	**+0.4**
PD31	**Pinedale Array**	**53.23**	**293**	P		**P**	**01 14 02.4**	**-1.5**
PD31	comp=Z,1.1nm,0.9s			lAmb		lAmb	01 14 12.2	
PDAR	**Pinedale Array** comp=Z,1.2nm,0.7s,baz=58,slow=5.6,SNR=12	**53.23**	**293**	P		**P**	**01 14 05.4**	**+1.5**
PDAR	**Pinedale Array**	**53.23**	**293**	P		**P**	**01 14 03.4**	**-0.5**
PV13	**Radium Mtn., P**	**56.85**	**290**	P		**P**	**01 14 28.3**	**-1.9**
TXAR	**Lajitas Array** comp=Z,0.6nm,0.9s,baz=56,slow=4.7,SNR=4.8	**62.33**	**280**	P		**P**	**01 15 10.4**	**+2.6**
TXAR	**Lajitas Array**	**62.33**	**280**	P		**P**	**01 15 07.5**	**-0.4**

*IDC **15** 01:07:26.8±2.3, 6.°63N×93.°78E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/59, mbtmp3.6/6, ML4.1/1, Error ellipse: s-maj=92.4km s-min=23.4km az=60.0*
*NEIC **15** 01:07:29.8±1.8, 6.°8N±0.°2×93.°9E±0.°2, h22km±6km, mb4.0/5, Error ellipse: s-maj=29.3km s-min=14.2km az=48.0*
ISC 15 01:07:31.3±1.3, **6.°7N**±0.°1×**93.°8E**±0.°2, **h35**km, **n17**, σ1§**15**/13, **mb3.9**/7, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CMBY	**CAMPBELL BAY**	**0.35**	**15**	*i* Pg		Pn	01 07 46.4	+6.5
CMBY				*i* Sg		Sn	01 07 54.4	+8.6
LHMI	**Lhok Sumawe**	**3.41**	**115**	Pn		**Pn**	**01 08 20.6**	**-1.4**
SRIT	**Nakonsritamara**	**6.03**	**71**	Pn		**Pn**	**01 08 57.1**	**-1.0**
IPM	**Ipoh**	**7.48**	**107**	Pn		**Pn**	**01 09 18.1**	**+0.1**
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=206,slow=14,SNR=1.2	**12.73**	**23**	Pn		**Pn**	**01 10 31.1**	**+1.1**
SHL	**Shillong**	**18.88**	**355**	P		**P**	**01 11 48.1**	**-0.9**
SHL	comp=Z,4.0nm,0.4s			lAmb		lAmb	01 12 25.2	
H08S3	**Diego Garcia H** baz=55,slow=75,SNR=55	**25.60**	**237**	T		T	01 39 43.6	
H08S2	**Diego Garcia H** baz=55,slow=75,SNR=4.7	**25.60**	**237**	T		T	01 39 52.4	
H08S1	**Diego Carcia H** baz=55,slow=75,SNR=6.3	**25.61**	**237**	T		T	01 39 52.4	
MKAR	**Makanchi Array** comp=Z,0.7nm,0.6s,baz=165,slow=8.0,SNR=6.7	**41.19**	**348**	P		**P**	**01 15 12.5**	**0.0**
KK31	**Karatay Array**	**41.70**	**334**	P		**P**	**01 15 16.2**	**-0.5**
KK31	comp=Z,3.5nm,1.4s			lAmb		lAmb	01 15 31.2	
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.5s,baz=173,slow=7.0,SNR=14	**45.63**	**346**	P		**P**	**01 15 49.3**	**+1.0**
KURK	**Kurchatov**	**45.70**	**347**	P		**P**	**01 15 47.6**	**-1.1**
KURK	comp=Z,14nm,2.0s			lAmb		lAmb	01 15 52.4	
ZAA0	**Zalesovo Array**	**47.70**	**353**	P		**P**	**01 16 03.7**	**-0.6**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.3s,baz=163,slow=10,SNR=1.8	**47.70**	**353**	P		**P**	**01 16 05.5**	**+1.1**
WRA	**Warramunga Arr** comp=Z,0.2nm,0.9s,baz=306,slow=8.3,SNR=1.3	**47.82**	**124**	P		**P**	**01 16 05.5**	**-0.4**
ASAR	**Alice Springs** comp=Z,0.1nm,0.4s,baz=302,slow=7.7,SNR=1.5	**49.39**	**129**	P		**P**	**01 16 19.8**	**+1.9**

*CRAAG **15** 01:12:59.1, 36.°38N×3.°45E, Ml4.4*
*IDC **15** 01:13:00.2±0.6, 36.°49N×3.°51E, h0km, mb3.9/22, mb1 4.1/28, mb1mx3.9/50, mbtmp3.9/28, ML3.8/6, Error ellipse: s-maj=15.8km s-min=12.3km az=150.0*
*MED_RC **15** 01:13:00.0±0.8, 36.°38N×3.°44E, h19km±3km, MW4.3/6, Moment Tensor Solution.Mantle waves: s6,c8; Duration: 1§0 Moment tensor: Scale 10¹⁵Nm; Mrr4.04±1.81; Mθθ-1.22±.86; Mϕϕ-2.82±1.09; Mrθ-0.21±.81; Mrϕ-1.91±.21; Mθϕ0.25±.58; Best double couple: M₀4.08000×10¹⁵ NP1:ϕ₁218.00000°, δ44.00000°, λ96.00000°. NP2: ϕ₂29.00000°, δ46.00000°, λ84.00000°. Principal axes: T 4.0700, Plg85.0000°, Azm222.0000°; N 0.0300, Plg4.0000°, Azm34.0000°; P -4.0900, Plg1.0000°, Azm124.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*NEIC **15** 01:13:01.3±1.9, 36.°40N±0.°07×3.°44E±0.°07, h10km±1km, mb4.2/18 Error ellipse: s-maj=11.6km s-min=9.1km az=353.0*
*MDD **15** 01:13:01.3±0.3, 36.°35N×3.°42E, h0km, mb4.9/44, Error ellipse: s-maj=4.9km s-min=3.5km az=70.0, PRXIMO*
*LDG **15** 01:13:02.4±0.1, 36.°28N×3.°54E, h10km, Ml3.7/38, Error ellipse: s-maj=3.4km s-min=2.7km az=6.0*
ISC 15 01:13:01.5±0.4, **36.°45N**±0.°03×**3.°52E**±0.°03, **h10**km, **n251**, σ2§**50**/355, **mb4.0**/27, **4C-8D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ABMS	**Boumerdes**	**0.30**	**355**	P		**Pb**	**01 13 08.9**	**0.0**
ABMS	**Boumerdes**	**0.30**	**355**	P		**Pb**	**01 13 08.9**	**0.0**
ADJB	**Djebel Djouab**	**0.30**	**192**	P		**Pg**	**01 13 04.8**	**-2.8**
ADJB	**Djebel Djouab**	**0.30**	**192**	P		**Pg**	**01 13 04.8**	**-2.8**
AKET	**Djebel Ketaf**	**0.50**	**144**	P		**Pg**	**01 13 10.2**	**-1.1**
AKET	**Djebel Ketaf**	**0.50**	**144**	P		**Pg**	**01 13 10.2**	**-1.1**
EMHD	**Djebel Mahouad**	**0.52**	**241**	P		**Pg**	**01 13 09.0**	**-2.6**
ABA	**Alger-Bouzarea**	**0.52**	**312**	P		**Pg**	**01 13 11.5**	**-0.1**
ABA	**Alger-Bouzarea**	**0.52**	**312**	P		**Pg**	**01 13 11.5**	**-0.1**
SET	**Setif**	**1.54**	**99**	P		**Pn**	**01 13 30.0**	**+0.9**
SET	**Setif**	**1.54**	**99**	P		**Pn**	**01 13 30.0**	**+0.9**
EBNR	**Beni Rached**	**1.61**	**265**	P		**Pn**	**01 13 29.7**	**-0.3**
CKHR	**Kef el Ahmar**	**1.67**	**104**	P		**Pn**	**01 13 31.2**	**+0.2**
ECHA	**Ech Chlef**	**1.76**	**261**	P		**Pn**	**01 13 28.5**	**-3.5**
DFRA	**Djebel Bou Aff**	**1.91**	**87**	P		**Pn**	**01 13 34.2**	**0.0**
EANR	**'Ain N'Sour**	**2.02**	**256**	P		**Pn**	**01 13 34.0**	**-1.6**
ETRT	**Tiaret**	**2.09**	**240**	P		**Pn**	**01 13 35.0**	**-1.6**
OKGL	**Djebel Kef Gue**	**2.36**	**261**	P		**Pn**	**01 13 40.0**	**-0.3**
OKGL	**Djebel Kef Gue** 289nm,0.3s,SNR=7.9	**2.36**	**261**	P		**Pn**	**01 13 37.5**	**-2.8**
OKGL	**Djebel Kef Gue**	**2.36**	**261**			**Pn**	**01 13 38.3**	**-2.0**
CASM	**Ain Smara**	**2.41**	**94**	P		**Pn**	**01 13 41.0**	**0.0**
OJGS	**Djebel Guires**	**2.43**	**248**	P		**Pn**	**01 13 47.0**	**-1.1**
CKFL	**Kef-Lekhel**	**2.58**	**90**	P		**Pn**	**01 13 43.7**	**+0.2**
CAEH	**'Ain El Ouahch**	**2.70**	**82**	P		**Pn**	**01 13 44.6**	**-0.4**
OJBR	**Djebel Berber**	**2.71**	**252**	P		**Pn**	**01 13 46.0**	**+0.8**
EIBI	**Ibiza** 188nm,0.4s,SNR=18	**3.09**	**327**	‖P		**Pn**	**01 13 50.7**	**+0.4**
EIBI	502nm,0.5s,SNR=13			S		**Sn**	**01 14 25.6**	**-1.8**
EIBI	**Ibiza**	**3.09**	**327**			**Pn**	**01 13 50.8**	**+0.4**
EIBI						**Sn**	**01 14 25.6**	**-1.8**

CMAH Djebel Manchou 3.15 86 P Pn 01 13 50.7 -0.5
ODJA Bouhanifia 3.18 250 P Pn 01 13 51.0 -0.6
ETOS Mallorca 3.36 351 P Pn 01 13 54.3 +0.3
185nm,0.7s,SNR=94
ETOS S Sn 01 14 33.4 -0.6
166nm,0.6s,SNR=5.0
ETOS Mallorca 3.36 351 Pn 01 13 54.3 +0.3
ETOS Sn 01 14 33.4 -0.6
EBEN2 Beniarda presa 3.69 308 P Pn 01 13 57.5 -1.1
72nm,0.4s,SNR=7.9
EBEN2 S Sn 01 14 40.6 -1.5
66nm,0.3s,SNR=7.9
EBEN2 Beniarda presa 3.69 308 Pn 01 13 57.5 -1.1
EBEN2 Sn 01 14 41.4 -0.6
OTSS Djebel Tessala 3.69 253 P Pn 01 13 45.0 -14
ETRV Los Montesinos 3.75 296 P Pn 01 13 59.2 -0.2
42nm,0.3s,SNR=7.9
ETRV S Sn 01 14 41.2 -2.5
158nm,0.5s,SNR=7.9
CART Cartagena 3.79 289 eP Pn 01 13 58.9 -1.0
CART eS Sn 01 14 42.0 -2.5
CART Cartagena 3.79 289 Pn Pn 01 13 60.0 +0.1
AFON Font Roja 3.91 306 P Pn 01 14 00.8 -0.9
25nm,0.2s,SNR=16
AFON S Sn 01 14 46.2 -1.5
80nm,0.5s
AFON Font Roja 3.91 306 Pn 01 14 01.6 -0.1
AFON Sn 01 14 46.9 -0.7
EMUR La Murta 4.04 291 ⇑P Pn 01 14 02.7 -0.8
33nm,0.3s,SNR=18
EMUR S Sn 01 14 47.5 -3.5
24nm,0.6s
EMUR La Murta 4.04 291 Pn 01 14 02.7 -0.8
EMUR Sn 01 14 50.3 -0.6
TLOR Lorca, Murcia 4.33 288 P Pn 01 14 07.0 -0.4
59nm,0.2s,SNR=7.9
TLOR S Sn 01 14 55.2 -2.8
76nm,0.3s,SNR=7.9
ETOB Tobarra 4.58 300 P Pn 01 14 10.8 0.0
77nm,0.6s,SNR=81
ETOB S Sn 01 15 01.9 -2.3
14nm,0.3s
ETOB Tobarra 4.58 300 Pn 01 14 10.8 0.0
ETOB Sn 01 15 03.2 -0.9
ENIJ Nijar 4.63 278 P Pn 01 14 09.0 -2.4
24nm,0.4s,SNR=7.9
ENIJ S Sn 01 15 00.6 -4.7
46nm,0.4s,SNR=7.9
ENIJ Nijar 4.63 278 Pn 01 14 09.9 -1.6
ECHE Chera 4.73 313 P Pn 01 14 13.7 +0.8
65nm,0.3s,SNR=7.9
ECHE S Sn 01 15 04.7 -3.1
6.0nm,0.0s,SNR=7.9
ECHE Chera 4.73 313 Pn 01 14 13.9 +1.1
I48TN KESRA INFRASON 4.75 96 i 01 41 00.0
baz=279,slow=299,SNR=0.4
KEST Kesra 4.78 97 Pn Pn 01 14 14.4 +0.8
6.1nm,0.3s,baz=53,slow=15,SNR=67
KEST Sn Sn 01 15 10.1 +1.0
2.5nm,0.3s,baz=199,slow=18,SNR=1.8
KEST Kesra 4.78 97 Pn Pn 01 14 14.1 +0.5
EMOS Mosqueruela 5.00 322 ⇓P Pn 01 14 17.1 +0.2
73nm,0.6s,SNR=18
EMOS S Sn 01 15 11.3 -3.5
203nm,1.0s
EMOS Mosqueruela 5.00 322 Pn 01 14 17.1 +0.2
SESP Santiago Espad 5.11 291 P Pn 01 14 18.7 +0.5
26nm,0.3s,SNR=7.9
SESP S Sn 01 15 16.1 -1.3
16nm,0.2s,SNR=7.9
SESP Santiago Espad 5.11 291 Pn 01 14 18.8 +0.5
ERTA Horta de San J 5.14 332 P Pn 01 14 18.6 +0.1
24nm,0.5s,SNR=12
ERTA S Sn 01 15 14.1 -3.8
74nm,0.6s
EBER Berja 5.17 277 P Pn 01 14 17.2 -1.9
15nm,0.4s,SNR=9.5
EBER S Sn 01 15 15.6 -3.2
66nm,0.7s
EBER Berja 5.17 277 Pn 01 14 17.2 -1.9
EPOB Poblet 5.25 340 P Pn 01 14 20.1 0.0
16nm,0.4s,SNR=21
EPOB S Sn 01 15 15.9 -4.7
9.2nm,0.2s
GORA Gorafe 5.35 283 P Pn 01 14 22.8 +1.3
19nm,0.4s,SNR=7.9
GORA S Sn 01 15 23.3 +0.1
28nm,0.4s,SNR=7.9
CFON Fontmartina 5.37 351 P Pn 01 14 21.9 +0.2
18nm,0.2s,SNR=52
CFON S Sn 01 15 19.0 -4.6
21nm,0.3s
JBK JBK 5.40 249 P Pn 01 14 21.1 -1.1
GOG Mont Gurugu 5.43 259 P Pn 01 14 21.1 -1.5
EQES Quesada 5.43 286 P Pn 01 14 23.3 +0.7
52nm,0.4s,SNR=73
EQES S Sn 01 15 25.1 -0.2
19nm,0.4s
VSL Villasalto 5.54 55 Pn Pn 01 14 24.5 +0.5
EQUE Quentar 5.63 280 P Pn 01 14 24.9 -0.4
9.0nm,0.4s,SNR=14
EQUE S Sn 01 15 27.9 -2.2
17nm,0.5s
EMIR Miracle 5.67 345 P Pn 01 14 27.6 +1.8
162nm,0.3s,SNR=35
EMIR S Sn 01 15 27.5 -3.5
53nm,0.3s
ELGU Los Guajares, 5.76 276 P Pn 01 14 25.6 -1.5
25nm,0.7s,SNR=7.9
ELGU S Sn 01 15 28.9 -4.3
65nm,0.7s,SNR=7.9
FIGM Figuig 5.85 224 P Pn 01 14 27.2 -1.2
EJON La Jonquera 6.01 356 P Pn 01 14 31.9 +1.4
77nm,0.5s,SNR=59
EJON S Sn 01 15 36.0 -3.3
37nm,0.6s
SJAF Saint Jean de 6.04 356 P Pn 01 14 32.1 +1.2
49nm,0.4s,SNR=7.9
SJAF S Sn 01 15 36.6 -3.6
60nm,1.4s,SNR=7.9
ESAC San Caprasio 6.11 331 P Pn 01 14 32.7 +0.9
43nm,0.2s,SNR=10
ESAC S Sn 01 15 39.0 -2.8
141nm,0.5s
CLLI Llivia 6.14 349 P Pn 01 14 34.1 +1.8
16nm,0.5s,SNR=40
CLLI S Sn 01 15 40.9 -1.7
16nm,0.6s
EGOR Sierra Gorda, 6.16 278 P Pn 01 14 32.7 +0.2
8.0nm,0.4s,SNR=7.9
EGOR S Sn 01 15 44.2 +1.1
38nm,0.7s,SNR=7.9
ETOR Torete 6.17 317 P Pn 01 14 34.5 +1.8
78nm,0.5s,SNR=29
ETOR S Sn 01 15 42.8 -0.5
40nm,1.1s
CSOR Sort 6.20 343 P Pn 01 14 34.7 +1.6
26nm,0.3s,SNR=45
CSOR S Sn 01 15 41.8 -2.3
132nm,0.9s
CSOR Sort 6.20 343 Pn 01 14 34.7 +1.6
EADA Adamuz 6.67 287 P Pn 01 14 38.6 -1.0
1.8nm,0.3s,SNR=7.9
EADA S Sn 01 15 54.9 -0.8
21nm,0.5s,SNR=7.9
ECHI Chisagues Biel 6.71 339 P Pn 01 14 41.2 +1.0
3.3nm,0.2s,SNR=4.0
ESBB Sonseca Array 6.72 301 Pn 01 14 39.9 -0.3
ESDC Sonseca Array 6.72 301 Pn Pn 01 14 39.2 -1.0
1.5nm,0.3s,baz=111,slow=13,SNR=50
ESDC Sn Sn 01 15 55.6 -1.2
0.1nm,0.3s,baz=118,slow=24,SNR=2.4
ESDC Sonseca Array 6.72 301 P Pn 01 14 39.8 -0.4
8.4nm,0.5s,baz=112,slow=13,SNR=44
ESDC S Sn 01 15 52.3 -4.5
5.4nm,0.5s,baz=115,slow=24,SNR=4.0
ESDC Sonseca Array 6.72 301 Pn 01 14 39.6 -0.6
PAB San Pablo 6.93 299 P Pn 01 14 42.7 -0.6
12nm,0.4s,SNR=7.9
PAB San Pablo 6.93 299 Pn Pn 01 14 43.4 +0.2
MTLF Montolieu 6.95 352 P Pn 01 14 45.2 +1.8
MTLF S Sn 01 15 59.4 -3.1
1.7nm,0.3s
MTLF Montolieu 6.95 352 eP Pn 01 14 45.2 +1.8
MTLF eS Sn 01 15 59.4 -3.1
3.3nm,0.3s
EPF Esparros 7.01 341 P Pn 01 14 45.6 +1.4
EPF S Sn 01 16 00.8 -3.2
6.8nm,0.3s
EPF Esparros 7.01 341 eP Pn 01 14 45.6 +1.4
EPF eS Sn 01 16 00.8 -3.2
14nm,0.3s
HORN Hornachuelos 7.14 284 P Pn 01 14 44.2 -1.8
ETSF Etsaut 7.16 335 P Pn 01 14 47.6 +1.3
ETSF S Sn 01 16 04.1 -3.7
8.1nm,0.5s
ETSF Etsaut 7.16 335 eP Pn 01 14 47.6 +1.3
ETSF eS Sn 01 16 04.1 -3.7
16nm,0.5s
SMIR Smir Dam 7.25 267 P Pn 01 14 45.7 -1.7
LMR La Mourre 7.25 18 P Pn 01 14 47.7 +0.3
LMR S Sn 01 16 06.6 -3.2
5.2nm,0.2s
LMR La Mourre 7.25 18 eP Pn 01 14 47.7 +0.3
LMR eS Sn 01 16 06.6 -3.2
10nm,0.2s
ECAB El Cabril 7.31 285 P Pn 01 14 46.7 -1.6
3.8nm,0.4s,SNR=9.6
ECAB S Sn 01 16 07.8 -3.5
41nm,1.4s,SNR=7.9
GUD Guadarrama 7.32 307 P Pn 01 14 49.2 +0.6
14nm,0.4s,SNR=23
GUD S Sn 01 16 08.5 -3.3
84nm,2.1s
ATE Arette 7.38 335 P Pn 01 14 51.1 +1.9
2.8nm,0.3s,SNR=7.9
ATE S Sn 01 16 09.6 -3.4
2.9nm,1.0s,SNR=7.9
PGF Pioggiola 7.42 33 P Pn 01 14 50.6 +0.7
PGF S Sn 01 16 09.4 -4.7
10nm,0.3s
PGF Pioggiola 7.42 33 eP Pn 01 14 50.6 +0.7
PGF eSn Sn 01 16 09.4 -4.7
21nm,0.3s
EORO Oroz-Betelu 7.43 331 P Pn 01 14 51.4 +1.4
16nm,0.6s,SNR=11
EORO S Sn 01 16 11.9 -2.4
16nm,0.6s,SNR=5.5
FRF La Foret Royal 7.50 18 P Pn 01 14 50.9 +0.1
FRF S Sn 01 16 13.0 -2.9
6.8nm,0.3s
FRF La Foret Royal 7.50 18 eP Pn 01 14 50.9 +0.1
FRF eSn Sn 01 16 13.0 -2.9
14nm,0.3s
SJPF Ste Jean 7.59 333 P Pn 01 14 53.2 +1.1
SJPF S Sn 01 16 14.4 -3.7
20nm,0.7s
SJPF Ste Jean 7.59 333 eP Pn 01 14 53.2 +1.1
SJPF eSn Sn 01 16 14.4 -3.7
40nm,0.7s
MDT Midelt 7.61 244 Pn Pn 01 14 52.5 -0.1
0.8nm,0.3s,baz=284,slow=19,SNR=21
MDT Lg Lg 01 17 02.1
1.1nm,0.3s,baz=288,slow=20,SNR=1.9
MDT Midelt 7.61 244 P Pn 01 14 52.2 -0.4
LASF Ste Croix 7.62 2 P Pn 01 14 53.4 +0.8
LASF S Sn 01 16 15.5 -3.5
41nm,0.7s
LASF Ste Croix 7.62 2 eP Pn 01 14 53.4 +0.8
LASF eSn Sn 01 16 15.5 -3.5
83nm,0.7s
IFR Ifrane 7.67 250 eP Pn 01 14 52.6 -0.9
IFR eS Sg 01 17 13.9 +6.1
SMRF Simiane la Rot 7.68 11 P Pn 01 14 54.9 +1.5
SMRF S Sn 01 16 19.3 -1.1
6.7nm,0.5s
SMRF Simiane la Rot 7.68 11 eP Pn 01 14 54.9 +1.5
SMRF eSn Sn 01 16 19.3 -1.1
6.7nm,0.5s
EALK Alkurruntz 7.78 332 P Pn 01 14 57.2 +2.4
22nm,0.5s,SNR=11
EALK S Sn 01 16 20.0 -3.1
137nm,1.5s,SNR=7.0
CLTB Caltabellotta 7.84 79 Pn Pn 01 14 56.5 +0.8
SBF Sospel 7.99 21 P Pn 01 14 57.3 -0.3
SBF S Sn 01 16 24.5 -3.5
8.4nm,0.4s
SBF Sospel 7.99 21 eP Pn 01 14 57.3 -0.3
SBF eSn Sn 01 16 24.5 -3.5
17nm,0.4s
EMIN Mina Concepcio 8.24 282 P Pn 01 14 60.0 -1.1
5.1nm,0.4s,SNR=11
EPLA Plasencia 8.36 298 P Pn 01 15 02.8 0.0
6.3nm,0.6s,SNR=7.9
VIVF Saint-Julien-l 8.44 6 P Pn 01 15 05.0 +1.2
VIVF S Sn 01 16 36.2 -3.0
2.9nm,0.3s
VIVF Saint-Julien-l 8.44 6 eP Pn 01 15 05.0 +1.2
VIVF eSn Sn 01 16 36.2 -3.0
5.8nm,0.3s
CASP Castiglione de 8.50 40 Pn Pn 01 15 05.4 +0.8
CAF Calviac 8.54 353 P Pn 01 15 07.0 +1.9
CAF S Sn 01 16 37.2 -4.3
2.5nm,0.5s
CAF Calviac 8.54 353 eP Pn 01 15 07.0 +1.9
CAF eSn Sn 01 16 37.2 -4.3
4.9nm,0.5s
ELAN Lanestosa 8.62 324 P Pn 01 15 07.8 +1.4
19nm,0.6s,SNR=8.4
MBDF Montbardon 8.63 16 P Pn 01 15 07.4 +0.9
MBDF S Sn 01 16 40.6 -3.3
3.0nm,0.5s
MBDF Montbardon 8.63 16 eP Pn 01 15 07.4 +0.9
MBDF eSn Sn 01 16 40.6 -3.3
6.0nm,0.5s
ORIF Oris-en-Rattie 8.65 11 P Pn 01 15 08.6 +1.9
ORIF S Sn 01 16 40.7 -3.6
1.2nm,0.5s
ORIF Oris-en-Rattie 8.65 11 eP Pn 01 15 08.6 +1.9
ORIF eSn Sn 01 16 40.7 -3.6
2.4nm,0.5s
LFF La Frestale 8.74 347 P Pn 01 15 09.5 +1.7
LFF S Sn 01 16 41.9 -4.4
4.8nm,0.5s
LFF La Frestale 8.74 347 eP Pn 01 15 09.5 +1.7
LFF eSn Sn 01 16 41.9 -4.4
9.6nm,0.5s
SSB Saint Sauveur 8.85 5 Pn Pn 01 15 10.9 +1.4
EGRO El Granado 8.87 280 P Pn 01 15 08.5 -1.1
4.9nm,0.4s,SNR=5.8
RJF Les Rejaudoux 8.97 351 P Pn 01 15 11.7 +0.6
RJF S Sn 01 16 47.3 -4.9
2.6nm,0.6s
RJF Les Rejaudoux 8.97 351 eP Pn 01 15 11.7 +0.6
RJF eSn Sn 01 16 47.3 -4.9
5.1nm,0.6s
OSSC Osservatorio P 9.22 38 Pn Pn 01 15 15.8 +1.3
LPG La Plagne 9.36 14 P Pn 01 15 19.0 +2.3
LPG S Sn 01 16 58.3 -3.8
2.4nm,0.3s
LPG La Plagne 9.36 14 eP Pn 01 15 19.0 +2.3
LPG eSn Sn 01 16 58.3 -3.8
4.8nm,0.3s
LPL La Plagne 9.38 14 P Pn 01 15 18.7 +1.9
LPL S Sn 01 16 58.5 -3.9
11nm,0.7s
LPL La Plagne 9.38 14 eP Pn 01 15 18.7 +1.9
LPL eSn Sn 01 16 58.5 -3.9
21nm,0.7s
MVO Moncorvo 9.48 303 P Pn 01 15 18.4 +0.3
16nm,0.8s,SNR=7.8
EARI Arriondas 9.57 318 P Pn 01 15 20.8 +1.5
53nm,0.6s,SNR=64
EARI S Sn 01 17 05.2 -1.8
455nm,3.1s,SNR=6.6
ECAL Calabor 9.66 308 P Pn 01 15 20.6 +0.1
16nm,0.3s,SNR=12
NRCA Norcia 9.76 46 Pn 01 15 23.1 +1.1
INTR Introdacqua 9.78 52 Pn Pn 01 15 23.3 +1.0
TCF Toulx Ste Croi 9.88 355 P Pn 01 15 24.9 +1.4
TCF S Sn 01 17 07.9 -6.5
0.3nm,0.4s
TCF Toulx Ste Croi 9.88 355 eP Pn 01 15 24.9 +1.4
TCF eSn Sn 01 17 07.9 -6.5
0.7nm,0.4s
BGF Bois d'Agland 10.11 357 P Pn 01 15 28.5 +1.8
BGF S Sn 01 17 14.9 -5.2
6.8nm,0.6s
BGF Bois d'Agland 10.11 357 eP Pn 01 15 28.5 +1.8
BGF eSn Sn 01 17 14.9 -5.2
14nm,0.6s
SMF Signal de Mont 10.19 1 P Pn 01 15 29.5 +1.8
SMF S Sn 01 17 16.4 -5.6
2.3nm,0.5s
SMF Signal de Mont 10.19 1 eP Pn 01 15 29.5 +1.8
SMF eSn Sn 01 17 16.4 -5.6
4.7nm,0.5s
SENIN Lac Senin/Sane 10.30 15 Pn Pn 01 15 30.2 +0.7
AVF Avril sur Loir 10.33 359 P Pn 01 15 31.4 +1.7
AVF S Sn 01 17 19.3 -6.2
0.6nm,0.4s
AVF Avril sur Loir 10.33 359 eP Pn 01 15 31.4 +1.7
AVF eSn Sn 01 17 19.3 -6.2
1.2nm,0.4s
CABF La Chapelle 10.33 10 P Pn 01 15 31.8 +2.0
CABF S Sn 01 17 20.9 -4.7
5.7nm,0.7s
CABF La Chapelle 10.33 10 eP Pn 01 15 31.8 +2.0
CABF eSn Sn 01 17 20.9 -4.7
11nm,0.7s
ELOB Lobios 10.49 305 P Pn 01 15 32.6 +0.7
4.7nm,0.4s,SNR=5.1
ELOB Lobios 10.49 305 Pn 01 15 32.6 +0.7
MFF Saint Martin d 10.50 346 P Pn 01 15 32.6 +0.5
MFF S Sn 01 17 24.2 -5.5
0.2nm,0.2s
MFF Saint Martin d 10.50 346 eP Pn 01 15 32.6 +0.5
MFF eSn Sn 01 17 24.2 -5.5
0.5nm,0.2s
SSF Saint Saulge 10.60 360 P Pn 01 15 35.4 +2.0
SSF S Sn 01 17 26.9 -5.2
0.9nm,0.4s
SSF Saint Saulge 10.60 360 eP Pn 01 15 35.4 +2.0
SSF eSn Sn 01 17 26.9 -5.2
1.8nm,0.4s
EPON Pontenova 10.68 313 P Pn 01 15 34.9 +0.3
8.3nm,0.5s,SNR=6.9
EPON Pontenova 10.68 313 Pn 01 15 34.9 +0.3
LOR Lormes 10.81 1 P Pn 01 15 38.5 +2.2
LOR S Sn 01 17 31.6 -5.7
1.7nm,0.5s
LOR Lormes 10.81 1 eP Pn 01 15 38.5 +2.2
baz=183
LOR eSn Sn 01 17 31.6 -5.7
3.4nm,0.5s
DAVOX Davos/Dischmat 11.36 23 Pn Pn 01 15 44.2 +0.2
0.2nm,0.3s,baz=233,slow=10,SNR=2.2
HINF Hinteralfeld 11.62 11 P Pn 01 15 48.3 +0.9
HINF S Sn 01 17 51.3 -5.9
HINF Hinteralfeld 11.62 11 eP Pn 01 15 48.3 +0.9
HINF eSn Sn 01 17 51.3 -5.9
HAU Haudompre 11.73 9 P Pn 01 15 49.5 +0.6
HAU S Sn 01 17 53.7 -6.2
2.7nm,0.5s
HAU Haudompre 11.73 9 eP Pn 01 15 49.5 +0.6
HAU eSn Sn 01 17 53.7 -6.2
5.4nm,0.5s
SFTF Sexfontaines 11.80 5 P Pn 01 15 51.2 +1.4
SFTF S Sn 01 17 53.7 -7.8
1.5nm,0.4s
SFTF Sexfontaines 11.80 5 eP Pn 01 15 51.2 +1.4
SFTF eSn Sn 01 17 53.7 -7.8
1.5nm,0.4s
DAVA Damuels 11.81 22 eP Pn 01 15 54.0 +3.9
0.5nm,0.2s
FETA Feichten 11.85 25 eP Pn 01 15 53.7 +3.1
1.8nm,0.8s
MEZF Maizieres J'vi 12.10 5 eP Pn 01 15 54.7 +0.9
baz=186
PAGF Fort de Pagny 12.20 7 eP Pn 01 15 57.3 +2.0
MOTA Moosalm 12.26 25 eP Pn 01 15 58.4 +2.2
2.4nm,0.7s
RETA Reutte 12.27 24 eP Pn 01 16 01.3 +5.1
0.8nm,0.3s
CDF Champ du Feu 12.27 12 eP Pn 01 15 56.9 +0.6
CDF eSn Sn 01 18 07.3 -5.8
1.2nm,0.5s
ABTA Abfaltersbach 12.28 30 eP Pn 01 15 59.7 +3.2
2.2nm,0.5s
GRR Gorron 12.36 346 eP Pn 01 15 57.7 +0.3
GRR eSn Sn 01 18 08.2 -6.8
0.4nm,0.3s
WATA Walderalm 12.41 26 eP Pn 01 16 00.6 +2.3
0.4nm,0.2s
LDF La Druitiere 12.43 349 eP Pn 01 15 58.8 +0.5
LDF eSn Sn 01 18 10.5 -6.2
1.9nm,0.3s
QUIF Quistinic 12.47 339 eP Pn 01 15 59.2 +0.2
QUIF eSn Sn 01 18 12.5 -5.4
0.3nm,0.2s
SGMF Saint Gilles 12.61 341 eP Pn 01 16 01.2 +0.3
SGMF eSn Sn 01 18 11.1 -10
0.2nm,0.2s
FLN La Foliniere 12.65 348 eP Pn 01 16 01.0 -0.3
baz=169
ROSF Rostrenen 12.88 339 eP Pn 01 16 04.7 +0.1
ROSF eSn Sn 01 18 19.0 -9.0
0.6nm,0.3s
BAIF Baives 13.61 2 eP Pn 01 16 16.7 +2.2
GIVF Givet 13.68 4 eP Pn 01 16 15.8 +0.4
MOA Molln 13.89 32 eP Pn 01 16 20.2 +1.9
0.5nm,0.3s
GEC2 GERESS Array S 14.46 28 Pn 01 16 29.1 +2.9
GERES GERESS Array B 14.46 28 Pn Pn 01 16 26.5 +0.3
0.1nm,0.3s,baz=207,slow=12,SNR=19
GERES GERESS Array B 14.46 28 Pn Pn 01 16 28.2 +2.0
CONA Conrad Observa 14.65 35 eP Pn 01 16 30.8 +2.0
1.4nm,0.5s
KHC Kasperske Hory 14.65 27 eP Pn 01 16 30.6 +1.9
MODS Modra-Piesok 15.63 36 eP P 01 16 45.8 -0.2
CLL Collm 16.33 22 e(P) P 01 16 54.0 +0.4
PSZ Piszkesteto 16.65 41 ⇑P P 01 16 59.7 +2.3
PSZ Piszkesteto 16.65 41 P P 01 16 59.9 +2.5
SIRR Siria 16.75 49 ⇑P P 01 17 00.1 +1.7
GZR Gura Zlata 17.05 52 ⇓P P 01 17 03.0 +1.2
IDI Anoyia 17.36 88 P P 01 17 05.7 +0.4
0.3nm,0.3s,baz=267,slow=17,SNR=2.6
IDI Anoyia 17.36 88 ⇓P P 01 17 07.2 +1.9
CRVS Cervenica-Dubn 18.08 41 eP P 01 17 16.7 +3.6
ARR Arges 18.24 54 ⇓P P 01 17 16.8 +1.9
MLR Muntele Rosu 19.14 55 P Pn 01 17 27.6 +1.8
0.2nm,0.3s,baz=265,slow=5.4,SNR=5.5
MLR Muntele Rosu 19.14 55 ⇓P Pn 01 17 27.8 +2.1
OZUR 19.26 53 ⇓P Pn 01 17 28.4 +1.3
ISR Istrita 19.42 56 ⇑P Pn 01 17 30.8 +1.8
EKA Eskdalemuir Ar 19.43 348 P Pn 01 17 32.7 +3.7
baz=161,slow=13,SNR=4.5
BURAR Bucovina Array 19.53 48 ⇓P Pn 01 17 31.7 +1.3
BURAR Bucovina Array 19.53 48 Pn 01 17 31.1 +0.7
BUR08 Bucovina Ar. S 19.54 48 P 01 17 29.9 +0.8
SUW Suwalki 22.23 32 P P 01 17 58.7 +0.6
KOWA Kowa 22.88 199 P P 01 18 06.5 +1.2
1.3nm,0.7s,baz=36,slow=12,SNR=2.8
TOA0 Torodi Ar. Sit 23.26 184 P P 01 18 08.1 -1.1
TOA0 IAmb IAmb 01 18 16.8
comp=Z,4.0nm,0.8s
TORD Torodi Ar. Bea 23.26 184 P P 01 18 07.9 -1.3
comp=Z,2.8nm,0.6s,baz=358,slow=11,SNR=32
TORD Torodi Ar. Bea 23.26 184 P P 01 18 08.4 -0.8
AKASG Malin Array Be 23.29 44 P P 01 18 07.9 -1.3
comp=Z,2.0nm,0.5s,baz=242,slow=10,SNR=4.0
AKASG Malin Array Be 23.29 44 IAmb IAmb 01 18 12.7
comp=Z,0.7nm,0.7s
AKBB Malin Array Si 23.29 44 P P 01 18 09.7 +0.5
AKBB IAmb IAmb 01 18 12.6
comp=Z,6.8nm,1.1s
BR131 Keskin Array S 23.88 73 P P 01 18 15.8 +0.5
BR131 IAmb IAmb 01 18 18.7
comp=Z,6.6nm,1.6s
BRTR Keskin Array B 23.88 73 P P 01 18 15.7 +0.3
comp=Z,0.7nm,0.6s,baz=260,slow=7.2,SNR=3.5
HFS Hagfors 24.59 12 P P 01 18 21.1 -0.4
comp=Z,2.3nm,0.6s,baz=194,slow=12,SNR=7.0
NOA NORSAR Array B 25.09 9 P P 01 18 26.3 +0.2
comp=Z,1.1nm,1.0s,baz=189,slow=8.7,SNR=2.2
MMAI Mount Meron Ar 26.37 88 P P 01 18 39.6 +1.6
comp=Z,1.2nm,0.6s,baz=292,slow=9.5,SNR=7.8
FINES FINESS Array B 28.77 23 P P 01 18 59.3 +0.2
comp=Z,1.5nm,0.9s,baz=274,slow=4.0,SNR=1.5
ARCES ARCESS Array B 35.24 13 P P 01 19 54.9 -0.9
comp=Z,1.5nm,0.6s,baz=208,slow=5.1,SNR=5.9
ARU Arti 41.54 43 P P 01 20 48.1 -0.7
comp=Z,1.2nm,0.7s,baz=243,slow=7.2,SNR=6.5
ARU Arti 41.54 43 IAmb IAmb 01 20 48.6
comp=Z,4.3nm,0.9s
SUMG Summit 41.87 342 P P 01 20 50.7 -1.1
UOSS Minazif 46.23 89 P P 01 21 26.3 -0.7
SCHQ Schefferville 50.25 315 P P 01 21 57.4 -0.3

comp=Z,6.1nm,0.9s,baz=214,slow=14,SNR=2.3
KK31 Karatay Array 50.69 61 P **P** **01 22 01.0 -0.2**
KK31 IAmb IAmb 01 22 28.4
comp=Z,10nm,1.9s
KKAR Karatay Array 50.69 61 P **P** **01 22 00.2 -0.9**
KKAR IAmb IAmb 01 22 28.4
comp=Z,10nm,1.9s
KURBB Kurchatov Arra 53.93 50 P **P** **01 22 24.6 -0.4**
comp=Z,0.5nm,0.6s,baz=288,slow=8.0,SNR=7.3
KURK Kurchatov 53.96 49 P **P** **01 22 24.6 -0.6**
ZALV Zalesovo Beam 56.69 44 P **P** **01 22 44.8 -0.1**
comp=Z,0.7nm,0.5s,baz=282,slow=7.2,SNR=2.9
MK31 Makanchi Array 57.48 53 P **P** **01 22 50.0 -0.6**
MK31 IAmb IAmb 01 22 50.8
comp=Z,3.8nm,1.3s
MKAR Makanchi Array 57.48 53 P **P** **01 22 50.2 -0.4**
comp=Z,0.8nm,0.6s,baz=281,slow=6.2,SNR=9.3
MKAR PcP **PcP** **01 23 44.4 +0.1**
comp=Z,0.6nm,0.6s,baz=274,slow=4.8,SNR=2.5
ULM Lac du Bonnet 68.34 317 P **P** **01 24 03.9 +1.1**
comp=Z,2.6nm,0.7s,baz=17,slow=6.5,SNR=3.2
YKA Yellowknife Ar 69.67 334 P **P** **01 24 10.8 0.0**
comp=Z,1.0nm,0.6s,baz=59,slow=6.8,SNR=7.0
SONM Songino Array 71.58 44 P **P** **01 24 22.3 -0.6**
comp=Z,0.3nm,0.5s,baz=299,slow=7.2,SNR=1.8
ILAR Eielson Array 76.47 347 P **P** **01 24 52.4 +1.4**
comp=Z,0.3nm,0.8s,baz=89,slow=4.7,SNR=2.9
PDAR Pinedale Array 80.36 317 P **P** **01 25 12.9 -0.4**
comp=Z,0.4nm,0.8s,baz=72,slow=42,SNR=2.7
CMAR Chiang Mai Arr 83.47 72 P **P** **01 25 30.4 +0.7**
comp=Z,0.9nm,0.3s,baz=296,slow=4.9,SNR=5.1
CPUP Villa Florida 84.75 232 P **P** **01 25 37.6 +1.8**
comp=Z,0.9nm,0.7s,baz=58,slow=5.2,SNR=6.3
TXAR Lajitas Array 85.39 303 P **P** **01 25 40.1 +0.6**
comp=Z,0.5nm,0.8s,baz=76,slow=5.3,SNR=5.0
WRA Warramunga Ar 134.14 83 PKP **PKPdf** **01 32 19.6 -0.1**
comp=Z,0.5nm,0.6s,baz=316,slow=1.7,SNR=5.3
ASAR Alice Springs 135.65 88 PKP **PKPdf** **01 32 22.6 +0.1**
comp=Z,0.7nm,0.8s,baz=322,slow=2.1,SNR=4.9
STKA Stephens Creek 145.21 95 PKPbc **PKPab** **01 32 39.2 +0.1**
comp=Z,2.0nm,0.5s,baz=307,slow=5.1,SNR=3.1

ATH 15 01:14:38.2, 38.26N×22.13E, h8km±3km, ML1.3/5, Error ellipse: s-maj=3.7km s-min=0.7km az=352.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRIZ	**Trizonia**	**0.12**	**337**	P	Pg	01 14 40.7	-0.1
TRIZ				S	Sg	01 14 43.0	+0.2
KALE	**Kalithea**	**0.13**	**3**	P	Pg	01 14 41.1	-0.1
KALE				S	Sg	01 14 43.5	+0.2
KALE				AML	AML	01 14 43.9	
	comp=N,719μm,0.2s						
KALE				AML	AML	01 14 44.4	
	comp=E,626μm,0.3s						
SERG	**Sergoula**	**0.17**	**340**	P	Pg	01 14 41.7	-0.1
SERG				S	Sg	01 14 44.3	+0.2
SERG				AML	AML	01 14 44.9	
	comp=N,277μm,0.2s						
SERG				AML	AML	01 14 45.0	
	comp=E,375μm,0.3s						
KLV	**Kalavryta, Ach**	**0.21**	**176**	P	Pg	01 14 42.4	-0.1
EFP	**Efpalio**	**0.24**	**314**	P	Pg	01 14 43.1	0.0
EFP				S	Sg	01 14 47.0	+0.6
DSF	**Desfina**	**0.35**	**64**	P	Pg	01 14 45.2	+0.1
DSF				S	Sg	01 14 49.9	+0.2
DSF				AML	AML	01 14 51.4	
	comp=E,101μm,0.2s						
DSF				AML	AML	01 14 52.1	
	comp=N,107μm,0.2s						
GUR	**Goura**	**0.36**	**152**	P	Pg	01 14 45.0	-0.3
GUR				S	Sg	01 14 51.1	+0.9
GUR				AML	AML	01 14 52.1	
	comp=N,113μm,0.3s						
GUR				AML	AML	01 14 54.5	
	comp=E,97μm,0.4s						
ANX	**Ano Chora**	**0.37**	**334**	P	Pg	01 14 45.5	-0.1
ANX				S	Sg	01 14 51.3	+0.7
ANX				AML	AML	01 14 52.2	
	comp=N,139μm,0.3s						
ANX				AML	AML	01 14 53.6	
	comp=E,127μm,0.4s						
DRO	**Drossia**	**0.45**	**228**	P	Pg	01 14 46.9	0.0
RLS	**Riolos of Patr**	**0.56**	**249**	P	Pg	01 14 48.7	-0.3
AXAR	**Agios Charalam**	**0.66**	**39**	P	Pg	01 14 50.9	0.0
AXAR				S	Sg	01 14 59.8	+0.3
EVR	**Evrytania**	**0.70**	**339**	P	Pg	01 14 51.4	-0.4
EVR				S	Sg	01 15 01.9	+0.8
AGG	**Agios Georgios**	**0.78**	**12**	P	Pg	01 14 53.0	-0.3
AMT	**Artemida-Makis**	**0.80**	**205**	P	Pg	01 14 53.4	-0.1

*IDC **15** 01:42:02.6±0.8, 27°.21N×129°.95E, h0km, mb3.8/14, mb1 4.1/16, mb1mx3.9/45, mbtmp3.9/16, ML4.0/2, Error ellipse: s-maj=25.5km s-min=18.3km az=80.0*
*NIED **15** 01:42:05.8, 27°.21N×129°.96E, h50km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^15^Nm; Mrr-1.34; Mθθ0.52; Mφφ0.82; Mrθ0.11; Mθφ0.69; Mφr-0.31; Fault plane solution: M0 1.40000×10^15^ NP1:ϕ=28.00000°, δ=50.00000°, λ=-105.00000°. NP2:ϕ=230.00000°, δ=42.00000°, λ=-73.00000°.*
*JMA **15** 01:42:05.7±0.1, 27°.20N×129°.96E, h50km, M4.0*
*NEIC **15** 01:42:06.3±1.2, 27°.11N±0°.08×130°.0E±0°.1, h29km±6km, mb4.2/10, Error ellipse: s-maj=17.9km s-min=9.4km az=66.0*

ISC 15 01:42:04.7±2.1, 27°.22N±0°.03×129°.98E±0°.03, h15km±13km, n50, σ1°37/68, mb3.8/15, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.07**	**302**	P	**Pb**	**01 42 24.6**	**-0.4**
JTK				S	**Sg**	**01 42 38.2**	**-1.3**
JZK	**Kikaishima**	**1.09**	**360**	P	**Pb**	**01 42 25.7**	**+0.4**
JZK				*e*S	**Sb**	**01 42 40.5**	**+1.1**
JAM	**Amami Oshima**	**1.23**	**345**	P	**Pn**	**01 42 27.1**	**-0.3**
JAM				S	**Sb**	**01 42 42.4**	**-1.1**
JAMN	**Amaminishikomi**	**1.24**	**325**	P	**Pn**	**01 42 26.8**	**-0.8**
JAMN				S	**Sb**	**01 42 42.4**	**-1.4**
JOKE	**Okinoerabujima**	**1.26**	**277**	P	**Pn**	**01 42 27.2**	**-0.6**
JOKE				S	**Sb**	**01 42 42.7**	**-1.5**
JYRO	**Yoronjima**	**1.37**	**262**	P	**Pn**	**01 42 29.0**	**-0.3**
JYRO				*e*S	**Sn**	**01 42 45.3**	**-2.0**
JOW	**Kunigami**	**1.57**	**256**	P	**Pn**	**01 42 31.7**	**-0.3**
JOW				*e*S	**Sn**	**01 42 50.3**	**-1.8**
JKDJ	**Kitadaitoujima**	**1.73**	**137**	P	**Pn**	**01 42 33.9**	**-0.4**
JKDJ				*e*S	**Sn**	**01 42 54.0**	**-2.1**
JMZ	**Minamidaito 2**	**1.78**	**141**	P	**Pn**	**01 42 34.3**	**-0.7**
JMZ				S	**Sn**	**01 42 54.6**	**-2.8**
JMZ	**Minamidaito 2**	**1.78**	**141**		**Pn**	**01 42 33.8**	**-1.2**
JIH	**Iheya**	**1.80**	**265**	P	**Pn**	**01 42 35.2**	**0.0**
JIH				S	**Sn**	**01 42 56.2**	**-1.6**
JNTH	**Nagotoyohara**	**1.88**	**249**	P	**Pn**	**01 42 36.0**	**-0.3**
JNTH				S	**Sn**	**01 42 57.0**	**-2.8**
JTAJ	**Takarajima**	**2.05**	**341**	P	**Pn**	**01 42 38.0**	**-0.6**
JTAJ				S	**Sn**	**01 43 02.1**	**-1.8**
JJT3	**Tamagusuku3**	**2.23**	**242**	P	**Pn**	**01 42 41.3**	**+0.1**
JJT3				S	**Sn**	**01 43 07.4**	**-1.2**
JAGN	**Aguni-jima**	**2.52**	**256**	P	**Pn**	**01 42 45.6**	**+0.5**
JAGN				*e*S	**Sn**	**01 43 13.3**	**-2.3**
JNN	**Nakanoshima**	**2.62**	**358**	P	**Pn**	**01 42 46.2**	**-0.3**
JNN				S	**Sn**	**01 43 16.0**	**-2.0**
JKE	**Kume jima 2**	**2.99**	**253**	P	**Pn**	**01 42 51.5**	**-0.1**
JKE				*e*S	**Sn**	**01 43 25.7**	**-1.4**
JYAK	**Yakushimahirau**	**3.05**	**9**	P	**Pn**	**01 42 52.2**	**-0.2**
JYAK				S	**Sn**	**01 43 26.1**	**-2.5**
JTN	**Tanegashima 3**	**3.54**	**14**	P	**Pn**	**01 42 58.7**	**-0.4**
JTN				S	**Sn**	**01 43 38.8**	**-1.9**
JNU	**Nakatsue**	**5.94**	**7**	Pn	**Pn**	**01 43 34.0**	**+1.8**
	2.6nm,0.3s,baz=293,slow=4.6,SNR=8.9						
JNU				Sn	**Sn**	**01 44 35.6**	**-4.3**
	1.2nm,0.3s,baz=165,slow=19,SNR=1.2						
JHJ	**Hachijo jima 2**	**10.32**	**53**	Pn	**Pn**	**01 44 34.4**	**+2.1**
	8.6nm,0.3s,baz=184,slow=16,SNR=2.2						
BJT	**Baijiatuau**	**17.16**	**322**	Pn	**Pn**	**01 46 04.8**	**+0.9**
XAN	**Xi'an**	**19.34**	**296**	P	**P**	**01 46 30.0**	**+0.4**
XAN				IAmb	IAmb	01 46 45.1	
	comp=Z,6.5nm,0.6s						
SONM	**Songino Array**	**27.62**	**324**	P	**P**	**01 47 52.0**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=128,slow=9.6,SNR=3.8						
SONM	**Songino Array**	**27.62**	**324**	IAmb	IAmb	01 47 55.0	
	comp=Z,2.1nm,1.3s						
GUN	**Gumba**	**38.94**	**282**	*e*P	**P**	**01 49 33.1**	**+2.4**
	comp=Z,6.0nm,0.4s						
PKI	**Pulchoki**	**39.41**	**281**	*e*P	**P**	**01 49 35.1**	**+0.5**
	comp=Z,12nm,0.6s						
GKN	**Gorkha**	**40.01**	**282**	*e*P	**P**	**01 49 41.1**	**+1.8**
	comp=Z,25nm,0.6s						
DANN	**Dangsing**	**40.71**	**283**	*e*P	**P**	**01 49 47.5**	**+2.2**
	comp=Z,27nm,0.7s						
KOLN	**Koldanda**	**40.95**	**282**	*e*P	**P**	**01 49 48.3**	**+1.1**
	comp=Z,23nm,1.1s						
PYUN	**Piuthan**	**41.42**	**282**	*e*P	**P**	**01 49 52.5**	**+1.4**
	comp=Z,25nm,0.9s						
MKAR	**Makanchi Array**	**42.06**	**311**	P	**P**	**01 49 56.0**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=102,slow=9.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**42.43**	**322**	P	**P**	**01 49 59.3**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=107,slow=12,SNR=1.7						
WRAB	**Tennant Creek**	**47.06**	**174**	P	**P**	**01 50 34.4**	**-1.6**
WRA	**Warramunga Arr**	**47.07**	**174**	P	**P**	**01 50 35.8**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=355,slow=8.6,SNR=7.8						
KKAR	**Karatay Array**	**50.12**	**305**	P	**P**	**01 51 00.1**	**+0.7**
KKAR				IAmb	IAmb	01 51 04.6	
	comp=Z,7.9nm,1.9s						
BRVK	**Borovoye**	**50.66**	**318**	P	**P**	**01 51 04.4**	**+1.1**
ASAR	**Alice Springs**	**50.73**	**175**	P	**P**	**01 51 05.0**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=7.8,slow=13,SNR=9.7						
ABKAR	**Akbulak array**	**57.12**	**313**	P	**P**	**01 51 50.1**	**-0.5**
IL31		**62.83**	**29**	P	**P**	**01 52 29.2**	**-0.3**
ILAR	**Eielson Array**	**62.83**	**29**	P	**P**	**01 52 29.0**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=266,slow=6.6,SNR=6.4						
BMAR	**Burnt Mountain**	**63.45**	**25**	P	**P**	**01 52 33.2**	**-0.5**
INK	**Inuvik**	**67.36**	**24**	P	**P**	**01 52 59.6**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=299,slow=3.6,SNR=14						
KBZ	**Khabaz**	**69.74**	**309**	P	**P**	**01 53 14.7**	**+0.5**
	comp=Z,2.7nm,0.8s,baz=185,slow=3.5						
FINES	**FINESS Array B**	**72.77**	**331**	P	**P**	**01 53 32.3**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=76,slow=5.9,SNR=6.7						
AKASG	**Malin Array Be**	**75.79**	**320**	P	**P**	**01 53 50.0**	**0.0**
	comp=Z,1.0nm,0.6s,baz=50,slow=5.3,SNR=4.1						
YKA	**Yellowknife Ar**	**76.97**		P	**P**	**01 53 56.0**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=308,slow=5.2,SNR=2.8						
BRTR	**Keskin Array B**	**77.66**	**308**	P	**P**	**01 54 01.6**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=306,slow=37,SNR=4.6						
NOA	**NORSAR Array B**	**79.11**	**334**	P	**P**	**01 54 08.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=56,slow=4.7,SNR=1.6						
GERES	**GERESS Array B**	**85.35**	**324**	P	**P**	**01 54 41.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=56,slow=7.3,SNR=2.5						

*IDC **15** 01:46:30.4±1.6, 7°.84N×78°.03W, h0km, mb3.6/1, mb1 3.9/4, mb1mx3.5/38, mbtmp3.9/4, ML3.0/3, Error ellipse: s-maj=69.7km s-min=31.3km az=175.0*
*UPA **15** 01:46:32.2±2.2, 7°.10N×77°.69W, h15km±28km, MW3.9*
*RSNC **15** 01:46:35.0±1.9, 7°.21N×77°.85W, h4km±4km, ML3.0, Mw3.6*

ISC 15 01:46:33.4±0.9, 7°.21N±0°.03×77°.80W±0°.03, h18km±5km, n44, σ1°50/73, 5C-3D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTAC	**Punta Ardita,**	**0.06**	**184**	↑*i*P	**Pg**	**01 46 36.9**	**+0.1**
PTAC				*e*S	**Sg**	**01 46 39.1**	**+0.1**
SOLC	**Bahia Solano**	**1.05**	**158**	*e*P	**Pg**	**01 46 52.2**	**-1.7**
SOLC				*e*S	**Sg**	**01 47 07.3**	**-0.5**
SOLC				*i*		01 47 10.4	
	comp=Z,737nm,0.3s						
UPD2	**Meteti**	**1.34**	**351**	↑*i*P	**Pn**	**01 46 57.5**	**+0.1**
UPD2				*e*S	**Sg**	**01 47 15.8**	**-1.2**
UPD2	**Meteti**	**1.34**	**351**	*e*P	**Pn**	**01 46 57.4**	**+0.1**
UPD2				↓*e*S	**Sg**	**01 47 16.4**	**-0.6**
CAPC	**Capurgana**	**1.48**	**18**	↑*e*P	Pn	01 46 57.7	-1.6
CAPC				*e*S	**Sn**	**01 47 16.5**	**-1.8**
CAPC				*i*		01 47 21.2	
	comp=Z,286nm,0.3s						
CAP2	**Capurgana**	**1.50**	**17**	*e*P	Pn	01 46 57.6	-1.9
CAP2				*e*S	**Sn**	**01 47 17.6**	**-0.9**
DBBC	**Dabeiba**	**1.59**	**97**	*e*P	**Pn**	**01 46 59.9**	**-1.0**
LCBC	**Los crdobas,**	**2.17**	**41**	↑*i*P	**Pn**	**01 47 09.4**	**+0.7**
LCBC				*i*		01 47 10.8	
	comp=Z,121nm,0.5s						
LCBC				*e*S	**Sn**	**01 47 35.7**	**+0.6**
CBOC	**Ciudad Bolivar**	**2.23**	**127**	*e*P	**Pn**	**01 47 09.7**	**0.0**
CBOC				*e*S	**Sn**	**01 47 37.0**	**+0.1**
CBOC				*i*		01 47 47.7	
	comp=Z,58nm,0.6s						
CNTA3	**Canitas, Panam**	**2.27**	**332**	*e*P	**Pn**	**01 47 12.9**	**+2.8**
CNTA3				*e*S	**Sn**	**01 47 40.7**	**+3.1**
PIZC	**Pizarro, Choco**	**2.27**	**169**	*e*P	**Pn**	**01 47 10.4**	**+0.2**
PIZC				*e*S	**Sn**	**01 47 37.1**	**-0.7**
UREC	**San Jos de Ur**	**2.31**	**76**	*e*P	**Pn**	**01 47 11.0**	**+0.2**
UREC				*e*S	**Sn**	**01 47 39.4**	**+0.5**
UREC				*i*		01 47 44.0	
	comp=Z,84nm,0.3s						
CHPO	**Chepo, Panama**	**2.34**	**326**	*e*P	**Pn**	**01 47 12.0**	**+0.9**
CHPO				*e*S	**Sn**	**01 47 43.1**	**+3.7**
TABO3	**Taboga, Panama**	**2.34**	**312**	↓*e*P	**Pn**	**01 47 10.4**	**-0.6**
TABO3				*e*S	**Sn**	**01 47 38.6**	**-0.8**
UPA	**Univ. de Panam**	**2.46**	**316**	*e*P	Pn	01 47 10.4	-2.3
UPA				*e*S	**Sn**	**01 47 40.0**	**-2.3**
UPA				*i*		01 48 04.9	
	comp=Z,39nm,0.6s						
UPA	**Univ. de Panam**	**2.46**	**316**	*e*P	**Pn**	**01 47 11.2**	**-1.5**
UPA				*e*S	**Sn**	**01 47 45.4**	**+3.1**
HELC	**Santa Helena**	**2.48**	**114**	*e*P	**Pn**	**01 47 14.6**	**+1.3**
HELC				*e*S	**Sn**	**01 47 44.7**	**+1.4**
HELC				*i*		01 47 48.0	
	comp=Z,60nm,0.8s						
AZU	**Azuero**	**2.52**	**283**	*e*P	**Pn**	**01 47 13.5**	**0.0**
AZU				*e*S	**Sn**	**01 47 41.6**	**-2.2**
AZU				*i*		01 47 54.8	
	comp=Z,129nm,0.4s						
AZU	**Azuero**	**2.52**	**283**	↑*e*P	**Pn**	**01 47 13.9**	**+0.4**
CHOR3	**La Chorrera**	**2.57**	**311**	*e*P	**Pn**	**01 47 13.0**	**-1.2**
CHOR3				*e*S	**Sn**	**01 47 46.3**	**+1.3**
MONA	**Monteria**	**2.63**	**54**	*e*P	**Pn**	**01 47 14.6**	**-0.5**
MONA				*e*S	**Sn**	**01 47 45.1**	**-1.5**
MOTC	**Monteria, Cord**	**2.63**	**54**	*e*P	**Pn**	**01 47 14.6**	**-0.5**
MOTC				*e*S	**Sn**	**01 47 46.3**	**-0.3**
MOTC				*i*		01 47 52.3	
	comp=Z,36nm,0.6s						
VTON	**El Valle, Cocl**	**2.68**	**301**	*e*P	**Pn**	**01 47 15.8**	**0.0**
VTON				*e*S	**Sn**	**01 47 49.1**	**+1.2**
PLMC	**San Jos del P**	**2.75**	**146**	*e*P	**Pn**	**01 47 16.5**	**-0.2**
PLMC				*i*		01 47 35.1	
	comp=Z,31nm,0.4s						
PLMC				*e*S	**Sn**	**01 47 47.5**	**-2.1**
BCIP	**Isla Barro Col**	**2.80**	**314**	*e*P	**Pn**	**01 47 17.0**	**-0.4**
BCIP				*i*		01 47 28.1	
	comp=Z,81nm,0.3s						
BCIP				*e*S	**Sn**	**01 47 49.9**	**-0.8**
BCIP	**Isla Barro Col**	**2.80**	**314**	*e*P	**Pn**	**01 47 18.0**	**+0.6**
BCIP				*e*S	**Sn**	**01 47 51.3**	**+0.5**
CACAO	**El Cacao, Vera**	**3.04**	**273**	↓*e*P	**Pn**	**01 47 20.2**	**-0.4**
MARI3	**Mariato, Verag**	**3.19**	**278**	*e*P	**Pn**	**01 47 24.0**	**+1.2**
MARI3				*e*S	**Sn**	**01 47 57.9**	**-2.6**
MALC	**Bahia Malaga**	**3.21**	**172**	*e*P	**Pn**	**01 47 23.6**	**+0.6**
MALC				*i*		01 48 01.1	
	comp=Z,21nm,0.6s						
NORC	**Norcasia**	**3.34**	**119**	*e*P	**Pn**	**01 47 27.5**	**+2.5**
NORC				*e*S	**Sn**	**01 48 07.1**	**+2.8**
NORC				*i*		01 48 15.8	
	comp=Z,22nm,0.5s						
PTBC	**PUERTO BERRIO,**	**3.39**	**101**	*e*P	**Pn**	**01 47 27.1**	**+1.5**
PTBC				*e*S	**Sn**	**01 48 05.9**	**+0.5**
PTBC				*i*		01 48 22.4	
	comp=Z,29nm,0.6s						
YOTC	**Yotoco, Valle**	**3.52**	**156**	*e*P	**Pn**	**01 47 28.2**	**+0.7**
TOLC	**Tolima**	**3.59**	**136**	*e*P	**Pn**	**01 47 33.0**	**+4.4**
TOLC				*e*S	**Sn**	**01 48 09.4**	**-1.4**
ANIL	**Santa Ana**	**3.61**	**138**	*e*P	**Pn**	**01 47 29.3**	**+0.5**
ANIL				*e*S	**Sn**	**01 48 11.5**	**+0.3**
SJCC	**San Jacinto, C**	**3.72**	**44**	*e*P	**Pn**	**01 47 30.2**	**0.0**
SJCC				*e*S	Sn	01 48 08.8	-4.8
ORTC	**Ortega, Tolima**	**4.15**	**142**	*e*P	**Pn**	**01 47 40.3**	**+4.2**
ORTC				*i*		01 48 01.3	
	comp=Z,13nm,0.5s						
ORTC				*e*S	**Sn**	**01 48 23.5**	**-0.8**
ROSC	**El Rosal**	**4.19**	**124**	Pn	**Pn**	**01 47 43.4**	**+6.5**
	comp=Z,2.6nm,0.3s,baz=31,slow=23,SNR=4.0						
ROSC				Sn	Sn	01 48 35.5	+10
	comp=Z,1.9nm,0.3s,baz=184,slow=23,SNR=1.6						
OCAC	**Ocana**	**4.56**	**77**	*e*P	**Pn**	**01 47 42.9**	**+1.1**
OCAC				*e*S	**Sn**	**01 48 34.0**	**-0.5**
OCAC				*i*		01 48 45.2	
	comp=Z,38nm,0.4s						
PAMC	**Pamplona, Colo**	**5.07**	**88**	*e*P	**Pn**	**01 47 49.1**	**+0.1**
PAMC				*e*S	**Sn**	**01 48 47.5**	**+0.1**
SDV	**Santo Domingo**	**7.29**	**76**	Pn	**Pn**	**01 48 20.9**	**+1.5**
	comp=Z,4.2nm,0.3s,baz=260,slow=9.6,SNR=5.5						
SDV				Sn	**Sn**	**01 49 41.0**	**-0.9**
	comp=Z,3.2nm,0.3s,baz=135,slow=22,SNR=5.7						
PCRV	**Puerto La Cruz**	**13.35**	**76**	Pn	**Pn**	**01 49 41.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=24,slow=16,SNR=1.9						
TORD	**Torodi Ar. Bea**	**78.21**	**78**	P	**P**	**01 58 33.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=292,slow=5.5,SNR=1.9						
ASAR	**Alice Springs**	**145.46**	**238**	PKPbc	**PKPbc**	**02 06 11.3**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=123,slow=3.4,SNR=5.1						
WRA	**Warramunga Arr**	**146.37**	**245**	PKPbc	**PKPdf**	**02 06 13.3**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=99,slow=3.7,SNR=2.1						

IDC 15 01:52:58.1±4.2, 5°.95S×155°.14E, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.6/28, mbtmp3.9/2, Error ellipse: s-maj=188.9km s-min=58.4km az=126.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.54**	**234**	P	P	01 58 21.0	+1.3
	2.9nm,0.7s,baz=58,slow=9.4,SNR=34						
H11S3	**WAKE ISLAND Hy**	**26.83**	**25**	T	T	02 27 11.9	
	baz=205,slow=74						
H11S2	**WAKE ISLAND Hy**	**26.83**	**25**	T	T	02 27 17.5	
	baz=205,slow=74						
H11S1	**WAKE ISLAND Hy**	**26.84**	**25**	T	T	02 27 19.4	
	baz=205						
ASAR	**Alice Springs**	**26.98**	**227**	P	P	01 58 40.3	-1.5
	0.5nm,0.5s,baz=66,slow=9.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**152.88**	**287**	PKPbc	PKPbc	02 12 58.2	-0.2
	0.3nm,0.6s,baz=86,slow=4.0,SNR=2.1						

*MAN **15** 02:21:09.4, 5°.28N×125°.95E, h91km, mb4.6, ML3.4, MS3.3*
*NEIC **15** 02:21:10.7±1.4, 5°.36N±0°.06×126°.00E±0°.10, h116km±7km, mb4.4/27, Error ellipse: s-maj=14.3km s-min=8.5km az=72.0*
*IDC **15** 02:21:11.3±0.9, 5°.36N×125°.86E, h118km±8km, mb4.1/22, mb1 4.2/25, mb1mx4.0/40, mbtmp4.5/25, Error ellipse: s-maj=17.6km s-min=7.5km az=74.0*
*DJA **15** 02:21:15.3±0.6, 5°.N±4°×12°.6E±°, h59km±8km, M4.6/13, mb4.7/13, mB5.1/9, MLv4.8/12, Mw(mB)4.4/9*

ISC 15 02:21:11.2±0.4, 5°.36N±0°.04×126°.11E±0°.06, h116km, n108, σ1°69/114, mb4.4/34, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.76**	**199**	P	**Pn**	**02 21 40.8**	**-0.8**
SGSI				S	**Sn**	**02 21 59.9**	**-4.9**
DAV	**Davao City (W)**	**1.78**	**343**	P	**Pn**	**02 21 41.7**	**-0.1**
	130nm,0.3s,baz=171,slow=3.3,SNR=2.6						
DAV				S	**Sn**	**02 22 04.2**	**-0.8**
	336nm,0.3s,baz=270,slow=20,SNR=5.0						
KCP	**Kidapawan**	**1.93**	**328**	↑*i*P	**Pn**	**02 21 42.8**	**-0.8**
KCP				*i* S	**Sn**	**02 22 08.3**	**-0.1**
CGP	**Cagayan de Oro**	**3.38**	**335**	↓*e*P	**Pn**	**02 22 03.2**	**+0.8**
CGP				*e*S	**Sn**	**02 22 45.4**	**+3.4**
TNTI	**Ternate**	**4.73**	**165**	P	**Pn**	**02 22 21.3**	**+0.8**
TNTI				S	**Sn**	**02 23 13.5**	**-0.9**
TNTI	**Ternate**	**4.73**	**165**		**Pn**	**02 22 19.9**	**-0.6**
KMSI	**Cibinong**	**5.21**	**204**	P	**Pn**	**02 22 27.3**	**+0.3**
	1.0nm171nm,0.5s						
KMSI				S	**Sn**	**02 23 24.6**	**-1.4**
	1.0nm171nm,0.5s						
GTOI	**Gorontalo**	**5.62**	**214**	P	**Pn**	**02 22 31.6**	**-1.0**
	0.5nm2μm153nm,0.6s						
LBMI	**Labuha**	**6.12**	**167**	P	**Pn**	**02 22 39.8**	**+0.5**
	1.4nm3μm53nm,0.4s						
MRSI	**Marisa**	**6.39**	**221**	P	**Pn**	**02 22 42.4**	**-0.6**
	0.5nm2μm156nm,0.7s						
LUWI	**Luwuk**	**7.18**	**208**	P	**Pn**	**02 22 55.5**	**+1.8**
LUWI	**Luwuk**	**7.18**	**208**	Pn	**Pn**	**02 22 54.3**	**+0.6**
MYLDM	**Lahad Datu**	**7.58**	**269**	Pn	**Pn**	**02 22 59.8**	**+0.7**
APSI	**Ampana**	**7.66**	**216**	P	**Pn**	**02 23 03.7**	**+3.5**
	0.2nm781nm64nm,0.8s						
MPSI	**Mapaga**	**7.96**	**231**	P	**Pn**	**02 23 04.6**	**+0.3**
	0.1nm455nm17nm,0.8s						
SIJI	**Sorong**	**8.05**	**140**	P	**Pn**	**02 23 05.9**	**+0.4**
	6.0nm,0.3s,baz=331,slow=19,SNR=9.6						
SIJI				S	**Sn**	**02 24 32.9**	**-2.0**
	1.7nm,0.3s,baz=153,slow=20,SNR=6.9

AS31	**Alice Springs**	**29.84**	**166**	P		**P**	**02 27 07.8**	**+0.1**
ASAR	**Alice Springs**	**29.84**	**166**	P		**P**	**02 27 07.6**	**-0.1**
	comp=Z,6.5nm,0.5s,baz=344,slow=7.3,SNR=116							
ASAR				ScP		**ScP**	**02 33 40.0**	**0.0**
	comp=Z,1.6nm,0.6s,baz=344,slow=3.0,SNR=18							
ASAR	**Alice Springs**	**29.84**	**166**	P		**P**	**02 27 07.2**	**-0.5**
MHMT	**Maesarieng**	**30.32**	**297**	P		**P**	**02 27 12.8**	**+0.7**
KSRS	**Korea Array**	**31.98**	**3**	P		**P**	**02 27 27.4**	**+1.0**
	comp=Z,5.6nm,0.8s,baz=191,slow=10,SNR=13							
CTA	**Charters Tower**	**32.12**	**143**	P		**P**	**02 27 29.6**	**+1.8**
	comp=Z,3.7nm,0.7s,baz=3.0,slow=7.4,SNR=6.0							
XAN	**Xi'an**	**32.69**	**333**	P		**P**	**02 27 30.8**	**-1.9**
XAN				pmax	pmax			
	comp=Z,7.0nm,0.7s							
MJAR	**Matsushiro Arr**	**32.96**	**18**	P		**P**	**02 27 35.4**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=194,slow=9.5,SNR=4.5							
HHC	**Hu-ho-hao-te**	**37.66**	**342**	*eP*		**P**	**02 28 15.5**	**+0.2**
HHC				pmax	pmax			
	comp=Z,20nm,0.9s							
HHC				pmax	pmax			
	comp=Z,110nm,5.4s							
SHL	**Shillong**	**38.43**	**305**	P		**P**	**02 28 20.5**	**-1.6**
NWAO	**Narrogin (SRO)**	**39.00**	**192**	P		**P**	**02 28 25.9**	**-0.6**
	comp=Z,2.9nm,0.3s,baz=34,slow=6.6,SNR=8.2							
USRK	**Ussuriysk Ar.**	**39.02**	**7**	P		**P**	**02 28 27.2**	**+0.7**
	comp=Z,3.3nm,0.7s,baz=187,slow=7.8,SNR=9.6							
USRK	**Ussuriysk Ar.**	**39.02**	**7**	P		**P**	**02 28 25.5**	**-1.0**
BBOO	**Buckleboo**	**39.12**	**167**	P		**P**	**02 28 27.3**	**-0.2**
STKA	**Stephens Creek**	**39.87**	**159**	P		**P**	**02 28 34.3**	**+0.6**
	comp=Z,7.5nm,0.7s,baz=326,slow=10,SNR=12							
STKA	**Stephens Creek**	**39.87**	**159**	P		**P**	**02 28 33.6**	**-0.1**
LSA	**Lhasa**	**40.91**	**310**	P		**P**	**02 28 42.5**	**-0.4**
TAPN	**Taplejung**	**42.57**	**305**	*eP*		**P**	**02 28 55.3**	**-1.0**
	comp=Z,34nm,0.5s							
ODAN	**Odare**	**42.63**	**304**	*eP*		**P**	**02 28 56.5**	**-0.2**
	comp=Z,40nm,0.6s							
RAMN	**Ramite**	**43.32**	**304**	*eP*		**P**	**02 29 02.3**	**0.0**
	comp=Z,41nm,0.6s							
GUN	**Gumba**	**44.28**	**305**	*eP*		**P**	**02 29 09.8**	**-0.3**
	comp=Z,68nm,0.5s							
PKI	**Pulchoki**	**44.54**	**304**	*eP*		**P**	**02 29 11.2**	**-0.9**
	comp=Z,15nm,0.5s							
PKIN	**Phulchoki**	**44.55**	**304**	*eP*		**P**	**02 29 11.6**	**-0.5**
	comp=Z,16nm,0.6s							
KKN	**Kakani**	**44.72**	**305**	*eP*		**P**	**02 29 12.8**	**-0.6**
	comp=Z,22nm,0.5s							
DMN	**Daman**	**44.80**	**304**	*eP*		**P**	**02 29 13.2**	**-0.9**
	comp=Z,16nm,0.7s							
GKN	**Gorkha**	**45.33**	**305**	*eP*		**P**	**02 29 17.6**	**-0.6**
	comp=Z,14nm,0.5s							
SONM	**Songino Array**	**45.56**	**341**	P		**P**	**02 29 17.4**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=133,slow=6.3,SNR=5.0							
SONM	**Songino Array**	**45.56**	**341**	P		**P**	**02 29 19.0**	**-0.6**
KOLN	**Koldanda**	**46.10**	**304**	*eP*		**P**	**02 29 24.1**	**-0.2**
	comp=Z,54nm,0.6s							
DANN	**Dangsing**	**46.18**	**305**	*eP*		**P**	**02 29 24.5**	**-0.5**
	comp=Z,59nm,0.5s							
PYUN	**Piuthan**	**46.72**	**304**	*eP*		**P**	**02 29 28.9**	**-0.2**
	comp=Z,33nm,0.4s							
DZM	**Mont Dzumac**	**47.98**	**126**	P		**P**	**02 29 41.4**	**+2.6**
	comp=Z,14nm,0.7s,baz=249,slow=11,SNR=12							
DZM	**Mont Dzumac**	**47.98**	**126**	IAmb		IAmb	02 29 42.1	
	comp=Z,15nm,0.8s							
WMQ	**Urumqi**	**51.04**	**325**	*eP*		**P**	**02 30 02.0**	**+0.3**
PETK	**Petropavlovsk-**	**54.17**	**23**	P		**P**	**02 30 24.5**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=246,slow=5.7,SNR=1.9							
MK31	**Makanchi Array**	**55.87**	**325**	P		**P**	**02 30 35.5**	**-1.4**
MKAR	**Makanchi Array**	**55.87**	**325**	P		**P**	**02 30 35.4**	**-1.5**
	comp=Z,3.9nm,0.4s,baz=124,slow=6.7,SNR=51							
MKAR	**Makanchi Array**	**55.87**	**325**	P		**P**	**02 30 35.3**	**-1.6**
MAKZ	**Makanchi**	**56.06**	**325**	P		**P**	**02 30 37.0**	**-1.3**
MAKZ				IAmb		IAmb	02 30 40.5	
	comp=Z,3.0nm,0.7s							
YAK	**Yakutsk**	**56.61**	**2**	P		**P**	**02 30 41.5**	**-0.2**
ZALV	**Zalesovo Beam**	**58.86**	**333**	P		**P**	**02 30 55.0**	**-2.6**
	comp=Z,1.2nm,0.4s,baz=142,slow=7.1,SNR=4.3							
ZALV	**Zalesovo Beam**	**58.86**	**333**	P		**P**	**02 30 54.8**	**-2.9**
KURK	**Kurchatov**	**60.04**	**327**	P		**P**	**02 31 04.4**	**-1.4**
GAR	**Garm**	**60.37**	**312**	P		**P**	**02 31 07.3**	**-1.2**
KKAR	**Karatay Array**	**61.63**	**317**	P		**P**	**02 31 15.5**	**-1.3**
TIXI	**Tiksi**	**66.23**	**1**	P		**P**	**02 31 45.5**	**-0.8**
NRIK	**Noril'sk**	**68.71**	**346**	P		**P**	**02 32 01.6**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=122,slow=4.6,SNR=8.3							
ABKAR	**Akbulak array**	**70.50**	**321**	P		**P**	**02 32 12.1**	**-1.3**
ARU	**Arti**	**73.24**	**328**	P		**P**	**02 32 27.6**	**-2.0**
ILAR	**Eielson Array**	**83.90**	**25**	P		**P**	**02 33 28.0**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=254,slow=5.5,SNR=12							
VNDA	**Vanda**	**85.11**	**173**	P		**P**	**02 33 34.0**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=313,slow=6.2,SNR=7.4							
ARCES	**ARCESS Array B**	**88.71**	**340**	P		**P**	**02 33 49.4**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=73,slow=4.1,SNR=5.8							
FINES	**FINESS Array B**	**90.11**	**332**	P		**P**	**02 33 57.8**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=51,slow=6.3,SNR=10							
TXAR	**Lajitas Array**	**121.08**	**51**	PKP		**PKPdf**	**02 39 50.2**	**-1.0**
	comp=Z,0.1nm,0.6s,baz=256,slow=3.6,SNR=1.8							
TORD	**Torodi Ar. Bea**	**121.82**	**289**	PKP		**PKPdf**	**02 39 51.3**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=29,slow=2.2,SNR=9.0							

*IDC **15** 02:31:35.6±0.2, 1.°89N×126.°42E, h0km, mb6.2/53, mb1 6.2/54, mb1mx6.2/54, mbtmp6.2/54, ML5.2/1, MS6.4/32, Ms1 6.4/32, ms1mx6.3/44, Error ellipse: s-maj=8.9km s-min=6.4km az=64.0*

*KLM **15** 02:31:38.0, 1.°91N×126.°70E, h11km, mb7.0*

*BJI **15** 02:31:39.4±0.0, 1.°95N×126.°55E, h40km, mB6.7/65, mb6.5/82, Ms7.0/93, Ms7 6.9/88*

*MOS **15** 02:31:39.8±0.9, 1.°89N×126.°44E, h43km, mb6.8/92, MS6.8/63, Error ellipse: s-maj=6.3km s-min=3.6km az=114.5*

*NEIC **15** 02:31:40.6, 1.°93N×126.°55E, h45km, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}2.94; $M_{\theta\theta}$0.18; $M_{\phi\phi}$-3.13; $M_{r\theta}$1.13; $M_{r\phi}$-2.19; $M_{\theta\phi}$-0.30; Fault plane solution: M_o3.92000×10^{19} NP1:ϕ_s50.55000°, δ52.68000°, λ124.59000°. NP2:ϕ_s181.87000°, δ49.11000°, λ53.33000°. Principal axes: T 3.5288, Plg63.0000°, Azm23.0000°; N 0.6951, Plg27.0000°, Azm208.0000°; P -4.2238, Plg2.0000°, Azm117.0000°;*

*NEIC **15** 02:31:41.7±1.4, 1.°89N±0.°05×126.°52E±0.°05, h45km±1km, mb6.7/305, Ms_20 6.7/891, Mwb7.0/65, Mwc7.1/64, Mww7.1, Mwc7.0(GCMT) Error ellipse: s-maj=9.1km s-min=8.7km az=88.0*

*GCMT **15** 02:31:49.7±0.1, 1.°98N×126.°37E, h38km, MW7.0/168, Moment Tensor Solution. s168,c462; s166,c848; Duration: 8s2 Moment tensor: Scale 10^{19}Nm; M_{rr}4.12±.01; $M_{\theta\theta}$-0.83±.01; $M_{\phi\phi}$-3.29±.01; $M_{r\theta}$-0.06±.03; $M_{r\phi}$-2.03±.01; $M_{\theta\phi}$-2.05±.03; Best double couple: M_o4.75000×10^{19} NP1:ϕ_s42.00000°, δ35.00000°, λ110.00000°. NP2:ϕ_s197.00000°, δ58.00000°, λ77.00000°. Principal axes: T 4.6890, Plg74.0000°, Azm72.0000°; N 0.1190, Plg11.0000°, Azm205.0000°; P -4.8110, Plg12.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=150s. Triangular moment-rate function*

*NEIC **15** 02:31:50, 1.°97N×126.°42E, h37km, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}3.97; $M_{\theta\theta}$-0.76; $M_{\phi\phi}$-3.21; $M_{r\theta}$0.17; $M_{\phi\phi}$-1.97; $M_{r\phi}$-2.22; Fault plane solution: M_o4.71000×10^{19} NP1:ϕ_s44.00000°, δ35.00000°, λ116.00000°. NP2:ϕ_s194.00000°, δ59.00000°, λ73.00000°. Principal axes: T 4.6992, Plg71.0000°, Azm65.0000°; N 0.0166, Plg14.0000°, Azm203.0000°; P -4.7158, Plg12.0000°, Azm296.0000°;*

*NEIC **15** 02:31:51, 1.°89N×126.°51E, h40km, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}3.92; $M_{\theta\theta}$-0.85; $M_{\phi\phi}$-3.07; $M_{r\theta}$-0.47; $M_{\phi\phi}$-1.91; $M_{r\phi}$-2.65; Fault plane solution: M_o4.86000×10^{19} NP1:ϕ_s41.00000°, δ30.00000°, λ110.00000°. NP2:ϕ_s199.00000°, δ62.00000°, λ79.00000°. Principal axes: T 4.8134, Plg71.0000°, Azm85.0000°; N 0.0934, Plg10.0000°, Azm204.0000°; P -4.9068, Plg16.0000°, Azm297.0000°;*

*NEIC **15** 02:31:55.6, 1.°45N×126.°51E, h37km, Moment Tensor Solution. Moment tensor: Scale 10^{19}Nm; M_{rr}4.49; $M_{\theta\theta}$-0.97; $M_{\phi\phi}$-3.51; $M_{r\theta}$0.18; $M_{\phi\phi}$-2.06; $M_{r\phi}$-2.18; Fault plane solution: M_o5.07000×10^{19} NP1:ϕ_s195.51000°, δ57.37000°, λ74.58000°. NP2:ϕ_s42.60000°, δ35.73000°, λ112.55000°. Principal axes: T 5.1239, Plg73.0000°, Azm66.0000°; N -0.1029, Plg13.0000°, Azm204.0000°; P -5.0210, Plg11.0000°, Azm297.0000°;*

ISC 15 02:31:42.2±0.3, 1.°83N±0.°02×126.°46E±0.°03, h48km±1km, h48km:pP-P, n2712, σ1996/2796, mb6.7/318, MS6.8/551, 285C-43D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**139**	Pn	**Pn**	**02 32 05.3**	**+0.1**
MNI	**Manado**	**1.67**	**257**	P	**Pn**	**02 32 10.2**	**+1.1**
LUWI	**Luwuk**	**4.67**	**232**	Pn	**Pn**	**02 32 53.0**	**+2.8**
DAV	**Davao City (W)**	**5.28**	**350**	Pn	**Pn**	**02 32 58.2**	**-0.4**
	130nm,0.3s,baz=101,slow=1.4,SNR=37						
DAV				Sn	Sn	02 34 06.7	+8.6
	1μm,0.3s,baz=220,slow=22,SNR=5.6						
DAV	**Davao City (W)**	**5.28**	**350**		**Pn**	**02 32 59.9**	**+1.3**
DAV	**Davao City (W)**	**5.28**	**350**	*eP*	**Pn**	**02 32 59.4**	**+0.8**
KCP	**Kidapawan**	**5.32**	**345**	*eP*	**Pn**	**02 33 00.1**	**+0.8**
KCP				*i* S	**Sn**	**02 34 04.4**	**+5.1**
SIJI	**Sorong**	**5.50**	**119**	Pn	**Pn**	**02 33 02.7**	**+1.0**
	30nm,0.3s,baz=321,slow=11,SNR=69						
SIJI				Sn	Sn	02 34 13.5	+10
	30nm,0.3s,baz=343,slow=19,SNR=1.1						
AAI	**Ambon**	**5.75**	**162**	P	**Pn**	**02 33 08.2**	**+3.1**
AAI				pmax	pmax		
	comp=Z,7μm,1.2s						
BIP	**Bislig**	**6.35**	**358**	*eP*	**Pn**	**02 33 14.9**	**+1.6**
BIP				*eS*	**Sn**	**02 34 28.1**	**+3.4**
ZCP	**Zamboanga City**	**6.69**	**319**	*iP*	**Pn**	**02 33 18.0**	**0.0**
CGP	**Cagayan de Oro**	**6.81**	**345**	*eS*	Sn	02 34 49.0	+13
CGP	**Cagayan de Oro**	**6.81**	**345**	*eP*	**Pn**	**02 33 23.1**	**+3.5**
FAKI	**Fak Fak**	**7.47**	**129**	Pn	**Pn**	**02 33 30.7**	**+2.0**
TBP	**Tagbilaran**	**8.22**	**342**	*eP*	**Pn**	**02 33 40.8**	**+1.8**
MYLDM	**Lahad Datu**	**8.61**	**293**	Pn	**Pn**	**02 33 46.9**	**+2.5**
KAPI	**Kappang**	**9.55**	**225**	Pn	**Pn**	**02 33 59.0**	**+1.8**
	comp=Z,133nm,0.3s,baz=38,slow=7.8,SNR=182						
KAPI				Sn	**Sn**	**02 35 50.4**	**+7.2**
	comp=Z,85nm,0.3s,baz=180,slow=20,SNR=1.4						
KAPI	**Kappang**	**9.55**	**225**	P	**Pn**	**02 34 00.7**	**+3.5**
KAPI				P	**Pn**	**02 34 00.7**	**+3.5**
KAPI	**Kappang**	**9.55**	**225**	P	**Pn**	**02 33 58.7**	**+1.5**
KAPI	**Kappang**	**9.55**	**225**	Pn	**Pn**	**02 33 58.7**	**+1.5**
I39PW	**PALAU INFRASON**	**9.85**	**55**	Pn	**Pn**	**02 34 04.0**	**+2.7**
	baz=229,slow=13,SNR=1.9						
I39PW				*i*		03 20 50.0	
	baz=228,slow=315,SNR=4.7						
BKB	**Balikpapan**	**10.05**	**252**	Pn	**Pn**	**02 34 05.2**	**+1.1**
SAUI	**Saumlaki**	**10.88**	**154**	Pn	**Pn**	**02 34 17.3**	**+1.9**
KKM	**Kota Kinabalu**	**11.04**	**293**		**Pn**	**02 34 20.5**	**+2.7**
MMRI	**Maumere**	**11.22**	**202**		Pn	02 34 24.6	+4.5
SOEI	**Soe**	**11.72**	**191**	Pn	Pn	02 34 33.4	+6.3
BATI	**Baumata**	**12.28**	**193**	Pn	**Pn**	**02 34 37.7**	**+3.1**
	comp=Z,18nm,0.3s,baz=98,slow=0.5,SNR=44						
BATI				Sn	**Sn**	**02 36 58.8**	**+8.6**
	baz=162,slow=20,SNR=1.1						
BATI				LR	LR	02 40 06.0	
	comp=Z,325μm,20.5s,baz=354,slow=41						
GQP	**Guinayangan**	**12.63**	**342**	*eP*	**Pn**	**02 34 42.2**	**+2.9**
PGP	**Puerto Galera**	**12.81**	**335**	*eP*	**Pn**	**02 34 43.1**	**+1.2**
LQP	**Lukban**	**13.13**	**339**	*eP*	**Pn**	**02 34 47.5**	**+1.1**
TGY	**Tagaytay City**	**13.36**	**336**	Pn	**Pn**	**02 34 48.6**	**-0.7**
	comp=Z,42nm,0.3s,baz=155,slow=3.4,SNR=21						
TGY	**Tagaytay City**	**13.36**	**336**	*iP*	**P**	**02 34 59.4**	**+1.8**
SBUM	**Sibu**	**14.25**	**273**		**Pn**	**02 35 04.0**	**+2.6**
SBUM	**Sibu**	**14.25**	**273**	P	**P**	**02 35 05.0**	**-2.5**
MTN	**Manton Dam**	**15.30**	**162**	P	**Pn**	**02 35 14.4**	**-0.8**
	baz=15,SNR=187						
MTN	**Manton Dam**	**15.30**	**162**		**Pn**	**02 35 14.7**	**-0.5**
DNP	**Denpasar**	**15.32**	**227**	P	**P**	**02 35 20.2**	**+0.7**
KDU	**Kakadu**	**15.61**	**158**	P	**Pn**	**02 35 17.0**	**-2.2**
	baz=16,SNR=139						
JAGI	**Jajag, Banyuwa**	**15.98**	**230**	P	**P**	**02 35 28.7**	**+1.8**
KSM	**Kuching**	**16.15**	**269**	P	**P**	**02 35 31.9**	**+3.2**
KSM	**Kuching**	**16.15**	**269**	P	**P**	**02 35 30.0**	**+1.3**
CVP	**Callao Caves**	**16.42**	**344**	*eP*	**Pn**	**02 35 22.8**	**-6.6**
KNRA	**Kununurra**	**17.55**	**173**	P	**Pn**	**02 35 43.1**	**-0.4**
	baz=18,SNR=1000						
KNRA	**Kununurra**	**17.55**	**173**	P	**Pn**	**02 35 42.8**	**-0.7**
KNRA				IAmb	IAmb	02 35 52.8	
	comp=Z,8μm,1.1s						
SMRI	**Semarang**	**18.26**	**241**	P	**P**	**02 35 52.7**	**+0.6**
UGM	**Wanagama**	**18.61**	**238**	P	**Pn**	**02 35 57.0**	**+0.4**
UGM				IAmb	IAmb	02 36 36.9	
	comp=Z,6μm,1.1s						
FITZ	**Fitzroy Crossi**	**19.82**	**182**	P	**P**	**02 36 08.1**	**-1.0**
	comp=Z,5.4nm,0.3s,baz=19,slow=8.8,SNR=127						
FITZ				S	**S**	**02 39 43.9**	**-6.1**
	comp=Z,1.6nm,0.3s,baz=100,slow=19,SNR=1.9						
FITZ				LR	LR	02 44 36.8	
	comp=Z,34μm,20.6s,baz=8.0,slow=39						
FITZ	**Fitzroy Crossi**	**19.82**	**182**	P	**P**	**02 36 08.2**	**-0.9**
	baz=20,SNR=480						
FITZ	**Fitzroy Crossi**	**19.82**	**182**	P	**P**	**02 36 09.4**	**+0.3**
DLV	**T Lat**	**20.46**	**300**	P	**P**	**02 36 15.9**	**-0.4**
DLV				IAmb	IAmb	02 36 48.1	
	comp=Z,6μm,1.3s						
LEM	**Lembang**	**20.68**	**245**	P	**P**	**02 36 17.8**	**-0.9**
	comp=Z,562nm,0.8s,baz=28,slow=8.0,SNR=48						
LEM				S	Sn	02 40 14.6	+0.4
	comp=Z,317nm,1.1s,baz=144,slow=19,SNR=1.7						
CISI	**Cisompet, Garu**	**20.81**	**243**	P	**P**	**02 36 19.4**	**-0.6**
CISI				IAmb	IAmb	02 37 10.6	
	comp=Z,4μm,1.1s						
MANU	**Manus Island**	**21.25**	**100**	P	**P**	**02 36 23.7**	**-0.9**
TWG	**Pinlang**	**21.51**	**346**	P	**P**	**02 36 23.6**	**-3.7**
TWG				IAmb	IAmb	02 36 31.1	
	comp=Z,2μm,0.6s						
TWG				IAMs_20	IAMs_20	02 45 31.5	
	comp=Z,352μm,21.0s						
GUMO	**Guam**	**21.63**	**56**	P	**P**	**02 36 26.4**	**-2.2**
	comp=Z,157nm,0.7s,baz=198,slow=6.2,SNR=11						
GUMO				S	Sn	02 40 30.6	-6.0
	comp=Z,476nm,1.2s,baz=139,slow=19,SNR=3.0						
GUMO	**Guam**	**21.63**	**56**	P	**P**	**02 36 28.0**	**-0.6**
GUMO				pmax	pmax		
	comp=Z,8μm,1.5s						
GUMO	**Guam**	**21.63**	**56**	P	**P**	**02 36 28.0**	**-0.6**
GUMO				IAmb	IAmb	02 36 35.5	
	comp=Z,8μm,1.4s						
YULB	**Yu-li**	**22.01**	**347**	IAMs_20	IAMs_20	02 46 00.7	
	comp=Z,333μm,22.0s						
TPUB	**Ta-pu**	**22.08**	**346**	P	**P**	**02 36 29.7**	**-3.7**
TPUB				IAmb	IAmb	02 36 39.1	
	comp=Z,3μm,0.8s						
PMBI	**Palembang**	**22.19**	**258**	P	**P**	**02 36 35.7**	**+1.0**
SSLB	**Suanglung**	**22.47**	**347**	P	**P**	**02 36 34.7**	**-2.9**
SSLB				IAmb	IAmb	02 36 46.0	
	comp=Z,3μm,0.9s						
MYKOM	**Kota Tinggi**	**22.60**	**270**	P	**P**	**02 36 39.6**	**+0.4**
MYKOM	**Kota Tinggi**	**22.60**	**270**	P	**P**	**02 36 40.0**	**+0.9**
NACB	**Ninganchiao**	**22.70**	**348**	P	**P**	**02 36 37.2**	**-2.8**
YOJ	**Yonaguni jima**	**22.74**	**352**	P	**P**	**02 36 38.5**	**-1.9**
YOJ				pmax	pmax		
	comp=Z,7μm,1.5s						
YOJ				MLR	MLR		
	comp=Z,91μm,21.0s						
YOJ	**Yonaguni jima**	**22.74**	**352**	P	**P**	**02 36 38.5**	**-1.9**
YOJ				IAmb	IAmb	02 37 07.9	
	comp=Z,7μm,1.5s						
COEN	**Coen**	**22.82**	**134**	P	**P**	**02 36 38.9**	**-2.4**
	baz=23,SNR=172						
COEN	**Coen**	**22.82**	**134**	P	**P**	**02 36 40.6**	**-0.7**
WB0	**Warramunga Arr**	**22.84**	**160**	P	**P**	**02 36 40.5**	**-1.0**
I07AU	**WARRAMUNGA IN2**	**22.97**	**161**	P	**P**	**02 36 43.0**	**+0.2**
	baz=332,slow=13,SNR=1.8						
WRAB	**Tennant Creek**	**22.98**	**161**	*ce*	**P**	**02 36 41.7**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,7μm,1.0s						
WRAB				MLR	MLR		
	comp=Z,228μm,22.0s						
WRAB	**Tennant Creek**	**22.98**	**161**	P	**P**	**02 36 42.4**	**-0.6**
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**02 36 41.7**	**-1.3**
	comp=Z,1μm,0.6s,baz=340,slow=11,SNR=536						
WRA				S	**S**	**02 40 46.0**	**-4.0**
	comp=Z,57nm,0.9s,baz=343,slow=18,SNR=1.2						
WRA				P3KPbc		03 10 07.8	
	comp=Z,1.7nm,0.9s,baz=156,slow=3.5,SNR=6.0						
WB2	**Warramunga Arr**	**22.98**	**161**	P	**P**	**02 36 41.8**	**-1.2**
	baz=23						
WB2	**Warramunga Arr**	**22.98**	**161**	P	**P**	**02 36 42.7**	**-0.3**
WR0	**Warramunga Arr**	**23.06**	**160**	P	**P**	**02 36 42.5**	**-1.3**
WR0				IAmb	IAmb	02 36 54.0	
	comp=Z,4μm,1.0s						
PMG	**Port Moresby**	**23.45**	**119**	P	**P**	**02 36 46.4**	**-1.2**
	comp=Z,327nm,0.7s,baz=314,slow=6.8,SNR=45						
PMG				S	**S**	**02 40 51.4**	**-6.4**
	comp=Z,99nm,0.9s,baz=349,slow=5.2,SNR=1.9						
PMG				LR	LR	02 48 26.6	
	comp=Z,259μm,20.7s,baz=314,slow=43						
PMG	**Port Moresby**	**23.45**	**119**	*ce*P	**P**	**02 36 45.8**	**-1.8**
PMG				pmax	pmax		
	comp=Z,2μm,1.1s						
PMG				MLR	MLR		
	comp=Z,287μm,23.0s						
PMG	**Port Moresby**	**23.45**	**119**	P	**P**	**02 36 46.2**	**-1.4**
PMG				IAmb	IAmb	02 37 28.5	
	comp=Z,2μm,1.2s						
PMG	**Port Moresby**	**23.45**	**119**	IAMs_20	IAMs_20	02 46 41.8	
	comp=Z,242μm,22.0s						
TATO	**Taipei**	**23.50**	**349**	P	**P**	**02 36 45.5**	**-2.4**
TATO				P	**P**	**02 36 45.5**	**-2.4**
TATO	**Taipei**	**23.50**	**349**	P	**P**	**02 36 45.6**	**-2.4**
TATO	**Taipei**	**23.50**	**349**	IAMs_20	IAMs_20	02 46 50.1	
	comp=Z,350μm,22.0s						
HKPS	**Hong Kong Po S**	**23.59**	**330**	IAmb	IAmb	02 36 51.9	
	comp=Z,8μm,2.0s						
HKPS				IAMs_20	IAMs_20	02 44 34.7	
	comp=Z,282μm,21.0s						
HKC	**Hong Kong Obse**	**23.59**	**330**	*i*P	**P**	**02 36 48.0**	**-0.9**
QIZ	**Qiongzhong**	**23.60**	**317**	P	**P**	**02 36 48.1**	**-0.9**
QIZ				S	**S**	**02 41 02.3**	**+2.1**
QIZ				pmax	pmax		
	comp=Z,400nm,1.3s						
QIZ				LR	LR		
	comp=Z,224μm,22.0s						
QIZ				LR	LR		
	comp=Z,338μm,23.3s						
QIZ				LR	LR		
	comp=Z,550μm,26.5s						
QIZ	**Qiongzhong**	**23.60**	**317**	IAmb	IAmb	02 36 52.0	
	comp=Z,3μm,1.3s						
QIZ	**Qiongzhong**	**23.60**	**317**	IAMs_20	IAMs_20	02 45 32.7	
	comp=Z,332μm,22.0s						
MCO	**Taipa Grande**	**23.75**	**329**	P	**P**	**02 36 51.0**	**+0.6**
MBWA	**Marble Bar**	**23.78**	**196**	P	**P**	**02 36 51.1**	**+0.4**
MBWA				P	**P**	**02 36 51.1**	**+0.4**
KNMB	**Chin-men Tao**	**23.81**	**342**	IAmb	IAmb	02 37 39.0	
	comp=Z,6μm,2.0s						
XMIS	**Christmas Isla**	**24.05**	**239**	P	**P**	**02 36 52.3**	**-0.9**
XMIS				IAmb	IAmb	02 37 06.5	
	comp=Z,2μm,0.9s						
XMIS				IAMs_20	IAMs_20	02 48 06.4	
	comp=Z,272μm,22.0s						
PSA00	**Pilbara Seismi**	**24.15**	**195**	P	**P**	**02 36 53.7**	**-0.3**
PSA00	**Pilbara Seismi**	**24.15**	**195**	IAmb	IAmb	02 37 05.1	
	comp=Z,2μm,0.9s						
QZH	**Quanzhou**	**24.20**	**342**	*i*P	**P**	**02 36 52.8**	**-1.6**
QZH				S	**S**	**02 41 05.9**	**-3.7**
QZH				pmax	pmax		
	comp=Z,850nm,1.1s						
QZH				pmax	pmax		
	comp=Z,17μm,4.3s						
QZH				LR	LR		
	comp=Z,268μm,29.8s						
QZH				LR	LR		
	comp=Z,107μm,23.7s						
QZH				LR	LR		
	comp=Z,468μm,29.8s						
JMZ	**Minamidaito 2**	**24.28**	**10**	P	**P**	**02 36 54.4**	**-0.8**
MNAI	**Manna**	**24.28**	**255**	P	**P**	**02 36 55.0**	**-0.4**
GZH	**Guangzhou**	**24.66**	**330**	P	**P**	**02 37 01.5**	**+2.8**
GZH				S	**S**	**02 41 23.0**	**+5.8**
GZH				pmax	pmax		
	comp=Z,7μm,3.1s						
GZH				LR	LR		
	comp=Z,194μm,23.1s						
GZH				LR	LR		
	comp=Z,186μm,21.6s						
BKNI	**Bangkinang**	**25.46**	**267**	P	**P**	**02 37 06.4**	**+0.3**
BKNI				IAmb	IAmb	02 37 45.8	
	comp=Z,4μm,1.2s						
IPM	**Ipoh**	**25.53**	**277**	IAMs_20	IAMs_20	02 49 00.0	
	comp=Z,324μm,21.0s						
IPM	**Ipoh**	**25.53**	**

UTTA	**Uttaradit**	**29.95**	**303**		P	**P**	**02 37 45.0**	**-1.2**	
	comp=Z,6µmcomp=Z,712nm,0.8s								
SUKH	**Sukhothai**	**30.61**	**302**		P	**P**	**02 37 51.0**	**-1.0**	
	comp=Z,6µmcomp=Z,746nm,0.7s								
WHN	**Wuhan**	**30.78**	**339**	⇓	*i*P	**P**	**02 37 53.8**	**+0.5**	
WHN					pP	**pwP**	**02 38 05.9**	**-1.6**	
WHN					S	**S**	**02 42 57.8**	**+4.4**	
WHN					pmax	pmax			
	comp=Z,210nm,1.1s								
WHN					LR	LR			
	comp=Z,433µm,28.4s								
WHN					LR	LR			
	comp=Z,480µm,20.1s								
WHN					LR	LR			
	comp=Z,632µm,27.9s								
NJ2	**Nanjing**	**30.90**	**347**	⇓	P	**P**	**02 37 55.0**	**+0.6**	
NJ2					pP	**pP**	**02 38 03.8**	**-2.6**	
NJ2					sP	**pwP**	**02 38 07.3**	**-1.3**	
NJ2					S	**S**	**02 42 55.1**	**-0.2**	
NJ2					sS	**sS**	**02 43 07.9**	**-7.5**	
NJ2					pmax	pmax			
	comp=Z,390nm,0.8s								
NJ2					pmax	pmax			
	comp=Z,16µm,8.5s								
NJ2					LR	LR			
	comp=Z,142µm,23.7s								
NJ2					LR	LR			
	comp=Z,109µm,21.6s								
NJ2					LR	LR			
	comp=Z,183µm,22.7s								
GYA	**Guiyang**	**31.01**	**324**	⇑	P	**P**	**02 37 55.3**	**-0.3**	
GYA					PP	**PnPn**	**02 39 00.4**	**+2.3**	
GYA					PcP	**PcP**	**02 40 54.6**	**+3.7**	
GYA					S	**S**	**02 42 59.5**	**+2.1**	
GYA					SS	**SnSn**	**02 44 41.3**	**-0.2**	
GYA					pmax	pmax			
	comp=Z,250nm,1.9s								
GYA					pmax	pmax			
	comp=Z,4µm,3.5s								
GYA					LR	LR			
	comp=Z,74µm,20.9s								
GYA					LR	LR			
	comp=Z,90µm,19.6s								
GYA					LR	LR			
	comp=Z,163µm,19.0s								
LAMP	**Lampang**	**31.10**	**304**		P	**P**	**02 37 57.9**	**+1.5**	
	comp=Z,6µmcomp=Z,580nm,0.9s								
PAYA	**Payao**	**31.32**	**306**		P	**P**	**02 37 58.1**	**-0.2**	
	comp=Z,9µmcomp=Z,71µmcomp=Z,5µm,0.9s								
JNU	**Nakatsue**	**31.40**	**7**		P3KPbc		03 09 40.4		
	comp=Z,14nm,1.0s,baz=7,2,slow=11,SNR=4.2								
JNU	**Nakatsue**	**31.40**	**7**		IAmb	IAmb	02 38 03.6		
	comp=Z,1µm,0.9s								
CM36	**Chiang Mai Arr**	**31.54**	**304**		P	**P**	**02 37 59.0**	**-1.3**	
CM35	**Chiang Mai Arr**	**31.57**	**304**		P	**P**	**02 38 00.0**	**-0.5**	
CM04	**Chiang Mai Arr**	**31.58**	**303**		P	**P**	**02 38 00.0**	**-0.6**	
	comp=Z,1µmcomp=Z,4µmcomp=Z,362nm,1.1s								
CM09	**Chiang Mai Arr**	**31.59**	**303**		P	**P**	**02 38 00.0**	**-0.7**	
	comp=Z,1µmcomp=Z,3µmcomp=Z,305nm,0.8s								
CM01	**Chiang Mai Arr**	**31.61**	**303**		P	**P**	**02 38 01.1**	**+0.3**	
	comp=Z,1µmcomp=Z,4µmcomp=Z,353nm,1.2s								
CM05	**Chiang Mai Arr**	**31.61**	**303**		P	**P**	**02 38 00.9**	**+0.1**	
	comp=Z,899nmcomp=Z,3µmcomp=Z,222nm,1.1s								
CM02	**Chiang Mai Arr**	**31.62**	**303**		P	**P**	**02 38 01.1**	**+0.1**	
	comp=Z,1µmcomp=Z,3µmcomp=Z,300nm,0.9s								
CM31	**Chiang Mai Arr**	**31.64**	**303**		P	**P**	**02 38 01.0**	**-0.1**	
	comp=Z,165µmcomp=Z,114µmcomp=Z,9µm,1.3s								
CM31	**Chiang Mai Arr**	**31.64**	**303**		P	**P**	**02 38 01.0**	**-0.1**	
CMAR	**Chiang Mai Arr**	**31.64**	**303**		P	**P**	**02 38 00.5**	**-0.6**	
	comp=Z,234nm,1.0s,baz=123,slow=7.1,SNR=11.1								
CMAR					PcP	**PcP**	**02 40 54.8**	**+2.2**	
	comp=Z,96nm,0.9s,baz=146,slow=2.5,SNR=6.1								
CMAR					PKiKP	**PKiKP**	**02 48 21.9**	**+0.1**	
	comp=Z,7.0nm,0.8s,baz=263,slow=0.9,SNR=4.8								
CMAR					LR	LR	02 52 16.3		
	comp=Z,126µm,19.9s,baz=184,slow=39								
CMAR					P3KPbc		03 09 37.9		
	comp=Z,0.6nm,0.3s,baz=267,slow=1.5,SNR=1.2								
CMAR	**Chiang Mai Arr**	**31.64**	**303**	*ce*	P	**P**	**02 38 00.9**	**-0.2**	
CMAR					pmax	pmax			
	comp=Z,234nm,1.0s								
CMAR	**Chiang Mai Arr**	**31.64**	**303**		P	**P**	**02 38 00.7**	**-0.4**	
CM13	**Chiang Mai Arr**	**31.65**	**303**		P	**P**	**02 38 01.3**	**0.0**	
	comp=Z,3µmcomp=Z,303nm,1.0s								
CM15	**Chiang Mai Arr**	**31.65**	**303**		P	**P**	**02 38 01.9**	**+0.6**	
	comp=Z,969nmcomp=Z,3µmcomp=Z,303nm,0.8s								
CM34	**Chiang Mai Arr**	**31.66**	**304**		P	**P**	**02 38 00.0**	**-1.3**	
CMMT	**Chiang Mai**	**31.80**	**304**		P	**P**	**02 38 02.0**	**-0.6**	
	comp=Z,153µmcomp=Z,16µmcomp=Z,416nm,1.1s								
CM33	**Chiang Mai Arr**	**31.81**	**304**		P	**P**	**02 38 01.0**	**-1.6**	
CHTO	**Chiang Mai**	**31.81**	**304**		P	**P**	**02 38 02.2**	**-0.4**	
CHTO					P	**P**	**02 38 02.2**	**-0.4**	
CHTO					P	**P**	**02 38 02.2**	**-0.4**	
CHTO	**Chiang Mai**	**31.81**	**304**		P	**P**	**02 38 02.2**	**-0.4**	
CHTO					pmax	pmax			
	comp=Z,1µm,1.5s								
CHTO					MLR	MLR			
	comp=Z,212µm,21.0s								
CHTO	**Chiang Mai**	**31.81**	**304**		P	**P**	**02 38 02.2**	**-0.4**	
CHTO					IAmb	IAmb	02 38 11.5		
	comp=Z,1µm,1.4s								
CHTO	**Chiang Mai**	**31.81**	**304**		IAMs_20	IAMs_20	02 51 01.7		
	comp=Z,212µm,21.0s								
CM32	**Chiang Mai Arr**	**31.81**	**304**		P	**P**	**02 38 02.0**	**-0.7**	
PATS	**Pohnpei**	**32.13**	**80**		P	**P**	**02 38 04.9**	**-0.7**	
	baz=32,SNR=12								
PATS	**Pohnpei**	**32.13**	**80**		IAmb	IAmb	02 39 03.1		
	comp=Z,1µm,1.3s								
MORW	**Morawa**	**32.31**	**197**		P	**P**	**02 38 07.2**	**+0.3**	
	baz=32,SNR=74								
MORW	**Morawa**	**32.31**	**197**		P	**P**	**02 38 06.9**	**+0.1**	
MORW					IAmb	IAmb	02 38 16.7		
	comp=Z,1µm,0.9s								
MHMT	**Maesarieng**	**32.36**	**302**		P	**P**	**02 38 07.3**	**-0.2**	
	comp=Z,175µmcomp=Z,32µmcomp=Z,1µm,1.0s								
FORT	**Forrest**	**32.47**	**177**		P	**P**	**02 38 08.4**	**+0.2**	
	baz=33,SNR=262								
FORT	**Forrest**	**32.47**	**177**		P	**P**	**02 38 08.1**	**-0.1**	
JMN	**Monobe**	**32.48**	**12**		IAmb	IAmb	02 38 25.8		
	comp=Z,1µm,1.0s								
ENH	**Enshi**	**32.55**	**332**		P	**P**	**02 38 08.2**	**-0.8**	
KMI	**Kunming**	**32.55**	**317**	⇓	*e*P	**P**	**02 38 10.4**	**+1.1**	
KMI					pP	pP	02 38 20.4	-1.0	
KMI					S	**S**	**02 43 19.6**	**-2.2**	
KMI					sS	sS	02 43 35.1	-6.8	
KMI					pmax	pmax			
	comp=Z,880nm,1.6s								
KMI					pmax	pmax			
	comp=Z,8µm,3.5s								
KMI					LR	LR			
	comp=Z,198µm,22.4s								
KMI					LR	LR			
	comp=Z,312µm,25.1s								
KMI					LR	LR			
	comp=Z,575µm,24.6s								
KMI	**Kunming**	**32.55**	**317**		IAmb	IAmb	02 38 21.3		
	comp=Z,1µm,1.2s								
KMI	**Kunming**	**32.55**	**317**		IAMs_20	IAMs_20	02 52 41.3		
	comp=Z,197µm,22.0s								
COCO	**West Island**	**32.56**	**244**		P	**P**	**02 38 08.8**	**-0.4**	
COCO					pmax	pmax			
	comp=Z,1µm,0.9s								
COCO	**West Island**	**32.56**	**244**		P	**P**	**02 38 08.8**	**-0.4**	
COCO					IAmb	IAmb	02 38 20.2		
	comp=Z,1µm,0.9s								
JTU	**Tsushima**	**32.64**	**4**		IAmb	IAmb	02 38 22.7		
	comp=Z,1µm,1.2s								
CMBY	**CAMPBELL BAY**	**32.83**	**280**	*e*	P	**P**	**02 38 11.2**	**-0.4**	
QLP	**Quilpie**	**33.05**	**150**		P	**P**	**02 38 13.6**	**+0.2**	
	baz=33,SNR=86								
KMBL	**Kambalda**	**33.30**	**187**		P	**P**	**02 38 15.5**	**-0.1**	
	baz=34,SNR=203								
JHJ2	**Mitsune**	**33.54**	**21**		IAmb	IAmb	02 38 26.7		
	comp=Z,1µm,0.8s								
JHS	**Saijyo**	**33.57**	**10**		IAmb	IAmb	02 38 54.1		
	comp=Z,2µm,1.5s								
BLDU	**Ballidu**	**33.58**	**195**		P	**P**	**02 38 17.9**	**0.0**	
	baz=34,SNR=298								
KLBR	**Kellerberrin**	**34.26**	**193**		P	**P**	**02 38 24.1**	**+0.3**	
	baz=34,SNR=110								
JWT	**Wachi**	**34.30**	**13**		IAMs_20	IAMs_20	02 51 38.6		
	comp=Z,127µm,22.0s								
TJN	**Taejon**	**34.38**	**1**	*ce*	P	**P**	**02 38 24.3**	**-0.5**	
MUN	**Mundaring**	**35.01**	**195**		P	**P**	**02 38 30.4**	**+0.1**	
	baz=35,SNR=62								
DGPR	**DIGLIPUR**	**35.05**	**290**	*e*	P	**P**	**02 38 28.8**	**-2.0**	
DGPR					IAmb	IAmb	02 38 45.7		
	comp=Z,214nm,0.9s								
JGF	**Kuroka**	**35.09**	**16**		IAmb	IAmb	02 38 34.1		
	comp=Z,636nm,0.7s								
HNR	**Honiara**	**35.18**	**109**		P	**P**	**02 38 31.9**	**-0.1**	
	comp=Z,1µm,0.9s,baz=231,slow=3.4,SNR=13								
HNR					S	**S**	**02 44 07.4**	**+5.1**	
	comp=Z,97nm,0.6s,baz=273,slow=1.7,SNR=1.1								
HNR					LR	LR	02 52 06.3		
	comp=Z,82µm,21.9s,baz=274,slow=35								
HNR	**Honiara**	**35.18**	**109**		P	**P**	**02 38 31.0**	**-1.1**	
HNR					IAmb	IAmb	02 38 37.5		
	comp=Z,1µm,0.9s								
TIA	**Tai'an**	**35.28**	**347**		P	**P**	**02 38 32.3**	**-0.3**	
TIA					S	S	02 43 51.8	-12	
TIA					pmax	pmax			
	comp=Z,2µm,2.7s								
TIA					LR	LR			
	comp=Z,98µm,24.2s								
TIA					LR	LR			
	comp=Z,78µm,17.8s								
TIA					LR	LR			
	comp=Z,221µm,25.6s								
RMQ	**Roma**	**35.44**	**144**		P	**P**	**02 38 34.0**	**-0.1**	
	baz=36,SNR=96								
KSAR	**Wonju Array Be**	**35.46**	**2**		P	**P**	**02 38 33.0**	**-1.1**	
KSAR	**Wonju Array Be**	**35.46**	**2**		P	**P**	**02 38 33.0**	**-1.1**	
KSRS	**Korea Array**	**35.47**	**2**		P	**P**	**02 38 34.1**	**0.0**	
	comp=Z,322nm,1.0s,baz=177,slow=10.0,SNR=152								
KSRS					PcP	**PcP**	**02 41 04.2**	**+1.2**	
	comp=Z,59nm,0.8s,baz=178,slow=2.5,SNR=4.8								
KSRS					S	**S**	**02 44 12.6**	**+6.5**	
	comp=Z,8.7nm,1.0s,baz=189,slow=9.9,SNR=1.6								
KSRS					P3KPbc		03 09 16.6		
	comp=Z,1.4nm,0.6s,baz=1.4,slow=3.1,SNR=3.3								
KSRS					PKPPKP	P'P'df	03 11 31.6	-8.9	
	comp=Z,2.6nm,0.9s,baz=345,slow=1.8,SNR=2.4								
INCN	**Inchon**	**35.48**	**0**		P	**P**	**02 38 33.3**	**-1.0**	
INCN					P	**P**	**02 38 33.3**	**-1.0**	
INCN					P	**P**	**02 38 33.3**	**-1.0**	
INCN	**Inchon**	**35.48**	**0**		P	**P**	**02 38 33.9**	**-0.4**	
INCN					pmax	pmax			
	comp=Z,696nm,1.1s								
INCN					MLR	MLR			
	comp=Z,97µm,22.0s								
INCN	**Inchon**	**35.48**	**0**		P	**P**	**02 38 33.9**	**-0.4**	
KS19	**Wonju Array Si**	**35.52**	**2**		P	**P**	**02 38 34.3**	**-0.3**	
KS19					IAmb	IAmb	02 38 57.4		
	comp=Z,958nm,1.1s								
BBOO	**Buckleboo**	**35.63**	**166**		P	**P**	**02 38 35.6**	**0.0**	
	baz=36,SNR=418								
BBOO	**Buckleboo**	**35.63**	**166**		P	**P**	**02 38 35.6**	**0.0**	
NWAO	**Narrogin (SRO)**	**35.66**	**193**		P	**P**	**02 38 36.2**	**+0.4**	
	comp=Z,926nm,1.1s,baz=28,slow=7.4,SNR=52								
NWAO					LR	LR	02 54 43.1		
	comp=Z,90µm,21.6s,baz=24,slow=39								
NWAO	**Narrogin (SRO)**	**35.66**	**193**		P	**P**	**02 38 36.5**	**+0.6**	
	baz=36,SNR=72								
NWAO	**Narrogin (SRO)**	**35.66**	**193**		P	**P**	**02 38 36.8**	**+1.0**	
NWAO					P	**P**	**02 38 36.8**	**+1.0**	
NWAO	**Narrogin (SRO)**	**35.66**	**193**		P	**P**	**02 38 36.6**	**+0.7**	
NWAO					pmax	pmax			
	comp=Z,1µm,0.9s								
NWAO	**Narrogin (SRO)**	**35.66**	**193**		P	**P**	**02 38 36.6**	**+0.7**	
NWAO					IAmb	IAmb	02 38 46.0		
	comp=Z,1µm,0.9s								
XAN	**Xi'an**	**35.99**	**335**		P	**P**	**02 38 37.9**	**-0.9**	
XAN					pP	pP	02 38 50.1	-0.8	
XAN					sP	sP	02 38 55.3	-1.0	
XAN					PP	**PnPn**	**02 39 59.1**	**-1.7**	
XAN					S	**S**	**02 44 14.8**	**+0.5**	
XAN					sS	sS	02 44 34.0	-0.6	
XAN					PcS	**PcS**	**02 44 49.5**	**-2.8**	
XAN					SS	**SnSn**	**02 46 40.6**	**-1.6**	
XAN					ScS	**ScS**	**02 48 51.3**	**-1.5**	
XAN					pmax	pmax			
	comp=Z,360nm,1.0s								
XAN					pmax	pmax			
	comp=Z,5µm,4.1s								
XAN					LR	LR			
	comp=Z,141µm,23.9s								
XAN					LR	LR			
	comp=Z,80µm,20.6s								
XAN					LR	LR			
	comp=Z,265µm,24.1s								
XAN	**Xi'an**	**35.99**	**335**		P	**P**	**02 38 37.5**	**-1.3**	
XAN					pmax	pmax			
	comp=Z,2µm,1.1s								
XAN					MLR	MLR			
	comp=Z,124µm,22.0s								
XAN	**Xi'an**	**35.99**	**335**		P	**P**	**02 38 37.5**	**-1.3**	
XAN					IAmb	IAmb	02 38 46.8		
	comp=Z,2µm,1.1s								
XAN	**Xi'an**	**35.99**	**335**		IAMs_20	IAMs_20	02 55 36.3		
	comp=Z,124µm,22.0s								
CD2	**Chengdu**	**36.03**	**326**	⇑	*i*P	**P**	**02 38 38.1**	**-1.1**	
CD2					pP	pP	02 38 50.0	-1.4	
CD2					sP	sP	02 38 54.3	-2.6	
CD2					PP	**PP**	**02 40 02.4**	**+0.6**	
CD2					S	**S**	**02 44 17.0**	**+2.0**	
CD2					sS	sS	02 44 32.1	-3.2	
CD2					pmax	pmax			
	comp=Z,1µm,1.3s								
CD2					LR	LR			
	comp=Z,308µm,27.0s								
CD2					LR	LR			
	comp=Z,370µm,24.0s								
CD2					LR	LR			
	comp=Z,388µm,25.0s								
EIDS	**Eidsvold**	**36.05**	**140**		P	**P**	**02 38 38.6**	**-0.7**	
	baz=36,SNR=186								
EIDS	**Eidsvold**	**36.05**	**140**		P	**P**	**02 38 38.6**	**-0.7**	
EIDS					IAmb	IAmb	02 38 43.7		
	comp=Z,1µm,1.1s								
EIDS					IAMs_20	IAMs_20	02 56 04.3		
	comp=Z,111µm,20.0s								
MJAR	**Matsushiro Arr**	**36.20**	**16**		P	**P**	**02 38 39.1**	**-1.4**	
	comp=Z,746nm,0.9s,baz=185,slow=9.1,SNR=360								
MJAR					S	**S**	**02 44 16.0**	**-1.4**	
	comp=Z,8.5nm,0.9s,baz=190,slow=5.8,SNR=1.1								
MJAR					LR	LR	02 52 13.9		
	comp=Z,34µm,20.5s,baz=190,slow=34								
MJAR					P3KPbc		03 09 17.7		
	comp=Z,9.1nm,1.0s,baz=16,slow=4.2,SNR=9.7								
MJAR	**Matsushiro Arr**	**36.20**	**16**		P	**P**	**02 38 38.8**	**-1.7**	
MAJO	**Matsushiro**	**36.20**	**16**	*c*	*i*P	**P**	**02 38 38.7**	**-1.8**	
MAJO					pmax	pmax			
	comp=Z,1µm,1.0s								
MAJO					MLR	MLR			
	comp=Z,123µm,23.0s								
MAJO	**Matsushiro**	**36.20**	**16**		P	**P**	**02 38 39.5**	**-1.1**	
MAJO					IAmb	IAmb	02 38 45.5		
	comp=Z,1µm,1.0s								
MAT	**Matsushiro**	**36.20**	**16**		P	**P**	**02 38 39.1**	**-1.4**	
MAT					S	**S**	**02 44 15.9**	**-1.6**	
MJB9	**Matsu-Tunnel**	**36.21**	**16**		IAmb	IAmb	02 38 45.5		
	comp=Z,2µm,1.0s								
STKA	**Stephens Creek**	**36.47**	**158**		P	**P**	**02 38 42.6**	**-0.3**	
	comp=Z,277nm,0.6s,baz=333,slow=9.1,SNR=156								
STKA					S	**S**	**02 44 16.6**	**-5.0**	
	comp=Z,52nm,0.8s,baz=324,slow=14,SNR=1.8								
STKA					LR	LR	02 56 01.4		
	comp=Z,39µm,18.6s,baz=343,slow=40								
STKA					PKPPKP	**P'P'df**	**03 11 37.2**	**-2.2**	
	comp=Z,3.4nm,0.9s,baz=117,slow=7.1,SNR=3.1								
STKA	**Stephens Creek**	**36.47**	**158**		P	**P**	**02 38 42.6**	**-0.3**	
	baz=37,SNR=448								
STKA	**Stephens Creek**	**36.47**	**158**	*c*	*i*P	**P**	**02 38 42.0**	**-0.9**	
STKA	**Stephens Creek**	**36.47**	**158**		P	**P**	**02 38 42.6**	**-0.3**	
JYT	**Yasato**	**36.51**	**19**		IAmb	IAmb	02 38 44.0		
	comp=Z,778nm,0.8s								
HTT	**Hallett**	**36.99**	**163**		P	**P**	**02 38 47.4**	**0.0**	
	baz=37,SNR=82								
PYAG	**Pyongyang**	**37.05**	**359**		P	**P**	**02 38 48.7**	**+1.1**	
PYAG					pP	**pP**	**02 38 57.9**	**-1.9**	
PYAG					S	**S**	**02 44 29.3**	**-0.8**	
DL2	**Dalian**	**37.16**	**354**	⇑	*i*P	**P**	**02 38 48.8**	**+0.2**	
DL2					pP	**pP**	**02 38 57.9**	**-2.8**	
DL2					PP	**PnPn**	**02 40 18.3**	**+3.4**	
DL2					S	**S**	**02 44 30.8**	**-1.1**	
DL2					ScS	**ScS**	**02 49 01.0**	**+2.1**	
DL2					pmax	pmax			
	comp=Z,1µm,0.8s								
DL2					pmax	pmax			
	comp=Z,5µm,6.1s								
DL2					LR	LR			
	comp=Z,108µm,24.9s								
DL2					LR	LR			
	comp=Z,67µm,22.9s								
DL2					LR	LR			
	comp=Z,191µm,25.7s								
PYS	**Pyongsong**	**37.24**	**359**		P	**P**	**02 38 51.4**	**+2.1**	
PYS					pP	**pP**	**02 38 55.1**	**-6.4**	
PYS					S	**S**	**02 44 39.5**	**+6.4**	
JSD	**Sado**	**37.62**	**15**		IAmb	IAmb	02 38 54.5		
	comp=Z,1µm,0.8s								
JSD					IAMs_20	IAMs_20	02 53 35.5		
	comp=Z,109µm,22.0s								
CMSA	**Cobar Meteorol**	**37.88**	**153**		P	**P**	**02 38 54.5**	**-0.3**	
	baz=38,SNR=398								
HHU	**Hamhung**	**37.93**	**1**		P	**P**	**02 38 56.3**	**+1.2**	
HHU					pP	**pP**	**02 39 02.8**	**-4.4**	
HHU					S	**S**	**02 44 46.7**	**+3.2**	
TIY	**Taiyuan**	**37.97**	**342**	*e*	P	**P**	**02 38 55.1**	**-0.4**	
TIY					S	**S**	**02 44 48.9**	**+4.6**	
TIY					pmax	pmax			
	comp=Z,62nm,0.6s								
TIY					pmax	pmax			
	comp=Z,2µm,4.5s								
TIY					LR	LR			
	comp=Z,36µm,13.1s								
TIY					LR	LR			
	comp=Z,81µm,20.1s								
TIY					LR	LR			
	comp=Z,281µm,26.8s								
SUJ	**Sinuiju**	**38.13**	**358**		P	**P**	**02 38 57.3**	**+0.5**	
SUJ					pP	**pP**	**02 39 04.9**	**-4.1**	
SUJ					S	**S**	**02 44 48.5**	**+1.9**	
H01W3	**Cape Leeuwin H**	**38.31**	**196**		P	**P**	**02 39 02.7**	**+4.6**	
	baz=28,slow=7.0,SNR=96								
H01W1	**Cape Leeuwin H**	**38.31**	**196**		P	**P**	**02 39 02.2**	**+4.1**	
	baz=28,slow=7.0,SNR=131								
H01W2	**Cape Leeuwin H**	**38.33**	**196**		P	**P**	**02 39 02.7**	**+4.4**	
	baz=28,slow=7.0,SNR=128								
SAIH	**SAIHA**	**38.45**	**305**	*e*	P	**P**	**02 38 59.4**	**-0.5**	
LKP	**Lekhapani**	**38.77**	**314**	*e*	P	**P**	**02 39 01.1**	**-1.2**	
IMP	**Imphal**	**38.82**	**309**	*e*	P	**P**	**02 39 01.6**	**-1.4**	
BJT	**Baijiatuau**	**39.14**	**347**		P	**P**	**02 39 04.6**	**-0.7**	
BJT					pmax	pmax			
	comp=Z,551nm,0.7s								
BJT					MLR	MLR			
	comp=Z,58µm,22.0s								
BJT	**Baijiatuau**	**39.14**	**347**		P	**P**	**02 39 04.6**	**-0.7**	
BJI	**Beijing**	**39.16**	**347**		P	**P**	**02 39 05.0**	**-0.4**	
BJI					PcP	**PcP**	**02 41 17.6**	**+3.4**	
BJI					ScP	**ScP**	**02 44 59.3**	**+0.4**	
BJI					S	**S**	**02 45 08.9**	**+6.8**	
BJI					pmax	pmax			
	comp=Z,720nm,0.9s								
BJI					LR	LR			
	comp=Z,73µm,28.6s								
BJI					LR	LR			
	comp=Z,58µm,28.0s								
BJI					LR	LR			
	comp=Z,153µm,30.9s								
MOKO	**MOKOCHONG**	**39.18**	**311**	*e*	P	**P**	**02 39 05.0**	**-1.0**	
JORH	**JORHAT**	**39.60**	**312**	*e*	P	**P**	**02 39 09.1**	**-0.2**	
SILR	**SILCHAR**	**39.70**	**308**	*e*	P	**P**	**02 39 11.6**	**+1.4**	
SNY	**Shenyang**	**39.90**	**357**	⇑	P	**P**	**02 39 11.5**	**0.0**	
SNY					S	**S**	**02 45 14.3**	**+1.2**	
SNY					pmax	pmax			
	comp=Z,130nm,0.7s								
SNY					pmax	pmax			
	comp=Z,7µm,5.5s								
SNY					LR	LR			
	comp=Z,123µm,23.5s								
SNY					LR	LR			
	comp=Z,62µm,22.1s								
SNY					LR	LR			
	comp=Z,216µm,22.1s								
LZH	**Lanzhou**	**40.01**	**331**	⇑	P	**P**	**02 39 12.8**	**0.0**	
LZH					pP	pP	02 39 24.6	-0.4	
LZH					S	**S**	**02 45 13.4**	**-1.9**	
LZH					SS	**SS**	**02 48 06.8**	**-7.1**	
LZH					pmax	pmax			
	comp=Z,1µm,1.5s								
LZH					pmax	pmax			
	comp=Z,8µm,7.7s								
LZH					LR	LR			
	comp=Z,96µm,15.7s								
LZH					LR	LR			
	comp=Z,170µm,18.4s								
LZH					LR	LR			
	comp=Z,183µm,17.8s								
ARMA	**Armidale**	**40.05**	**145**		P	**P**	**02 39 13.6**	**+0.5**	
	baz=40,SNR=187								
ARMA	**Armidale**	**40.05**	**145**		P	**P**	**02 39 13.3**	**+0.2**	
ARMA					IAmb	IAmb	02 39 25.4		
	comp=Z,2µm,1.1s								
BELO	**BELONIA**	**40.06**	**305**	*e*	P	**P**	**02 39 15.4**	**+2.2**	
ZIRO	**ZIRO**	**40.33**	**312**	*e*	P	**P**	**02 39 16.0**	**+0.3**	
AGT	**Agartala**	**40.51**	**306**	*e*	P	**P**	**02 39 18.6**	**+1.7**	
AGT					IAmb	IAmb	02 39 30.9		
	comp=Z,1µm,1.0s								
TEZP	**TEZPUR**	**40.63**	**310**	*e*	P	**P**	**02 39 17.8**	**-0.1**	
SHL	**Shillong**	**40.81**	**308**	*e*	P	**P**	**02 39 19.0**	**-0.6**	
SHL	**Shillong**	**40.81**	**308**		P	**P**	**02 39 18.9**	**-0.6**	
	SNR=978								
SHL	**Shillong**	**40.81**	**308**		P	**P**	**02 39 18.5**	**-1.1**	
SHL					pmax	pmax			
	comp=Z,2µm,0.9s								
SHL					MLR	MLR			
	comp=Z,98µm,22.0s								
SHL	**Shillong**	**40.81**	**308**		P	**P**	**02 39 18.5**	**-1.1**	
SHL					IAmb	IAmb	02 39 27.3		
	comp=Z,2µm,0.9s								
SHL					IAMs_20	IAMs_20	02 58 28.8		
	comp=Z,98µm,22.0s								
JTM	**Tenmabayashi**	**40.97**	**17**		IAmb	IAmb	02 39 32.5		
	comp=Z,3µm,1.1s								
JTM					IAMs_20	IAM

USA0B Ussuriysk Arra 42.47 6*c* *i*P **P** **02 39 32.8 +0.2**
USA0B Ussuriysk Arra 42.47 6 P **P** **02 39 32.6 -0.1**
USRK Ussuriysk Ar. 42.47 6 P **P** **02 39 32.9 +0.2**
comp=Z,590nm,0.7s,baz=190,slow=6.9,SNR=511
USRK S **S** **02 45 52.8 +1.5**
comp=Z,8.0nm,0.8s,baz=181,slow=5.8,SNR=1.2
USRK LR LR 02 59 52.2
comp=Z,12μm,18.5s,baz=182,slow=40
USRK PKP2ab 03 12 50.7
comp=Z,6.3nm,0.9s,baz=297,slow=5.2,SNR=4.9
USRK Ussuriysk Ar. 42.47 6 P **P** **02 39 32.2 -0.4**
MDJ Mudanjiang 42.69 3 P **P** **02 39 35.1 +0.7**
MDJ sP pP 02 39 44.1 -2.6
MDJ PP **PP** **02 41 12.9 -1.3**
MDJ PcS **PcS** **02 45 21.3 +3.7**
MDJ S **S** **02 45 53.3 -1.2**
MDJ SS **SS** **02 49 02.8 -3.7**
MDJ pmax pmax
comp=Z,380nm,1.0s
MDJ pmax pmax
comp=Z,12μm,5.4s
MDJ LR LR
comp=Z,112μm,20.1s
MDJ LR LR
comp=Z,48μm,20.1s
MDJ LR LR
comp=Z,166μm,23.5s
MDJ Mudanjiang 42.69 3 P **P** **02 39 34.5 0.0**
CNB Canberra Magne 42.72 152 P **P** **02 39 35.9 +1.0**
baz=43,SNR=105
ERM Erimo 42.72 18*ce*P **P** **02 39 35.3 +0.6**
ERM pmax pmax
comp=Z,762nm,0.9s
ERM Erimo 42.72 18 P **P** **02 39 33.6 -1.1**
H11S3 WAKE ISLAND Hy 42.76 65 P **P** **02 39 37.3 +2.1**
baz=228
H11S3 T T 03 26 17.6
baz=252,slow=75,SNR=391
H11S2 WAKE ISLAND Hy 42.77 65 P **P** **02 39 38.2 +2.9**
baz=228
H11S2 T T 03 26 21.0
baz=252,slow=75,SNR=384
H11S1 WAKE ISLAND Hy 42.77 65 P **P** **02 39 38.2 +2.9**
baz=228
H11S1 T T 03 26 20.4
baz=252,slow=75,SNR=9.1
JEW Eniwo 42.97 16 P **P** **02 39 36.7 0.0**
JEW IAMs_20 IAMs_20 02 57 03.0
comp=E,85μm,21.0s
WAKE Wake Island 42.98 63 P **P** **02 39 37.0 -0.1**
WAKE IAmb IAmb 02 39 51.4
comp=Z,3μm,1.3s
TOO Toolangi 42.99 158 P **P** **02 39 38.1 +1.1**
baz=43,SNR=108
TOO Toolangi 42.99 158 P **P** **02 39 37.5 +0.5**
TOO pmax pmax
comp=Z,3μm,1.9s
TOO Toolangi 42.99 158 P **P** **02 39 37.5 +0.5**
TOO IAmb IAmb 02 39 48.2
comp=Z,3μm,1.9s
H11N1 WAKE ISLAND Hy 43.33 63 P **P** **02 39 42.1 +2.4**
baz=237,slow=10,SNR=20
H11N1 T T 03 27 00.7
baz=251,slow=75,SNR=89
H11N2 WAKE ISLAND Hy 43.34 63 P **P** **02 39 42.2 +2.4**
baz=237,slow=10,SNR=14
H11N2 T T 03 27 05.7
baz=251,slow=75,SNR=30
H11N3 WAKE ISLAND Hy 43.34 63 P **P** **02 39 41.7 +1.8**
baz=237,slow=10,SNR=27
H11N3 T T 03 27 05.4
baz=251,slow=75,SNR=80
LSA Lhasa 43.51 313 P **P** **02 39 42.5 +0.7**
LSA pP **pP** **02 39 53.0 -1.3**
LSA S **S** **02 46 10.8 +2.9**
LSA ScS **ScS** **02 49 31.5 -6.7**
LSA pmax pmax
comp=Z,4μm,1.7s
LSA LR LR
comp=Z,272μm,25.6s
LSA LR LR
comp=Z,215μm,29.9s
LSA LR LR
comp=Z,739μm,29.9s
LSA Lhasa 43.51 313 P **P** **02 39 42.2 +0.4**
LSA Lhasa 43.51 313 P **P** **02 39 41.9 +0.1**
LSA pmax pmax
comp=Z,3μm,1.5s
LSA MLR MLR
comp=Z,86μm,22.0s
LSA Lhasa 43.51 313 P **P** **02 39 41.9 +0.1**
LSA IAmb IAmb 02 39 55.0
comp=Z,3μm,1.5s
LSA IAMs_20 IAMs_20 02 57 30.0
comp=Z,86μm,22.0s
BWNR Bhubaneshwar 43.72 298 *e*P **P** **02 39 42.2 -0.9**
BWNR IAmb IAmb 02 39 46.8
comp=Z,432nm,1.2s
BWNR *e*P pP 02 39 47.0 -8.5
SANVU Saraoutou 43.79 115 IAmb IAmb 02 39 47.9
comp=Z,2μm,1.1s
TEY Ternei 43.94 10⇑ *i*P **P** **02 39 45.1 +0.6**
TEY *e*S **S** **02 46 13.0 +0.2**
TEY pmax pmax
comp=N,590nm,0.9s
TEY pmax pmax
comp=Z,970nm,0.8s
TEY pmax pmax
comp=Z,13μm,7.1s
TEY pmax pmax
comp=N,7μm,7.1s
TEY smax smax
comp=E,48μm,8.0s
GTK Tadong 44.23 308 *e*P **P** **02 39 48.4 +1.1**
ASAJ Asahikawa 44.47 17 P **P** **02 39 49.5 +0.7**
baz=237,slow=13
ASAJ S **S** **02 46 20.2 -0.3**
comp=E,12nm,0.9s,baz=76,slow=19,SNR=1.1
ASAJ LR LR 02 56 28.9
comp=E,44μm,20.4s,baz=221,slow=34
JKA Kamikawa-asahi 44.47 17 IAmb IAmb 02 40 21.3
comp=Z,1μm,0.9s
JKA IAMs_20 IAMs_20 02 58 12.0
comp=Z,101μm,22.0s
GTA Gaotai 44.59 330⇑ P **P** **02 39 49.3 -0.7**
GTA pP pP 02 40 02.0 -0.3
GTA sP sP 02 40 06.9 -0.8
GTA PcP **PP** **02 41 37.0 +2.2**
GTA PcS **PcS** **02 45 29.0 +3.1**
GTA S **S** **02 46 24.9 +2.2**
GTA ScS **ScS** **02 49 44.0 0.0**
GTA pmax pmax
comp=Z,410nm,2.0s
GTA pmax pmax
comp=Z,3μm,6.7s
GTA LR LR
comp=Z,140μm,24.3s
GTA LR LR
comp=Z,128μm,22.9s
GTA LR LR
comp=Z,216μm,20.7s
CHLP Challavanipeta 44.74 295 *e*P **P** **02 39 51.6 +0.3**
CHLP IVmBBB 02 39 60.0
comp=Z,9μm,3.4s
CHLP IAMs_BB IVMs_BB 02 57 02.8
comp=Z,40μm,25.1s
BOK Bokaro 44.92 302 *e*P **P** **02 39 53.3 +0.6**
BOK IAmb IAmb 02 40 01.5
comp=Z,612nm,1.1s
TAPN Taplejung 44.94 308 *e*P **P** **02 39 52.9 -0.3**
comp=Z,3μm,1.2s
ODAN Odare 44.97 307 *e*P **P** **02 39 52.9 -0.4**
comp=Z,2μm,1.0s
LHI Lord Howe Isla 45.37 140 P **P** **02 39 55.2 -0.9**
YUK Yuzh-Kuril'sk 45.41 20*c* *i*P **P** **02 39 56.4 +0.2**
YUK *i* 02 41 32.8
YUK *i* 02 41 41.2
YUK *i* PPP PPP 02 42 21.9
YUK *i* S **S** **02 46 33.0 -1.1**
YUK *i* 02 49 48.3
YUK *i* SSS SSS 02 50 46.0
YUK pmax pmax
comp=Z,4μm,3.0s
YUK pmax pmax
comp=Z,3μm,1.1s
YUK pmax pmax
comp=E,1μm,0.9s
YUK pmax pmax
comp=N,802nm,0.7s
RAMN Ramite 45.64 307 *e*P **P** **02 39 58.5 -0.2**
comp=N,3μm,1.2s
DZM Mont Dzumac 45.69 124 P **P** **02 39 59.0 +0.1**
comp=N,573nm,1.1s,baz=322,slow=5.8,SNR=64
DZM S **S** **02 46 37.3 -1.7**
comp=N,12nm,1.0s,baz=298,slow=17,SNR=1.2
DZM LR LR 03 00 16.0
comp=N,65μm,21.8s,baz=320,slow=38
DZM Mont Dzumac 45.69 124 *e*LR LR 02 52 48.7
comp=N,348μm,24.9s
DZM Mont Dzumac 45.69 124 IAmb IAmb 02 40 02.9
comp=Z,2μm,1.4s
DZM IAMs_20 IAMs_20 03 00 06.3
comp=Z,74μm,20.0s
DZM Mont Dzumac 45.69 124 *e*P **P** **02 39 59.0 +0.1**
comp=Z,3μm,1.4s
DZM Mont Dzumac 45.69 124 *e*S **S** **02 46 39.9 +0.9**
comp=Z,149μm,37.6s
DZM Mont Dzumac 45.69 124 *e*LQ LQ 02 50 48.8
comp=Z,197μm,31.1s
PALK Pallekele 45.91 278 S **S** **02 46 40.3 -2.0**
comp=Z,12nm,0.9s,baz=176,slow=14,SNR=1.8
PALK LR LR 03 00 42.3
comp=Z,144μm,21.9s,baz=214,slow=38
PALK Pallekele 45.91 278*c* *i*P **P** **02 39 59.8 -0.9**
PALK pmax pmax
comp=Z,1μm,1.3s
PALK Pallekele 45.91 278 P **P** **02 40 00.1 -0.7**
PALK IAmb IAmb 02 40 09.2
comp=Z,1μm,1.2s
TARA Tarawa 46.44 90 P **P** **02 40 04.4 -0.4**
PVM Polavaram 46.64 292 *e*P **P** **02 40 05.6 -0.7**
PVM IVmB_BB 02 40 14.7
comp=Z,8μm,3.0s
PVM IVMs_BB IVMs_BB 02 59 01.4
comp=Z,39μm,23.4s
GUN Gumba 46.64 308 *e*P **P** **02 40 06.3 -0.3**
comp=Z,2μm,0.8s
PKI Pulchoki 46.87 307 *e*P **P** **02 40 07.5 -0.9**
comp=Z,4μm,1.5s
PKIN Phulchoki 46.88 307 *e*P **P** **02 40 07.4 -1.0**
comp=Z,7μm,1.7s
KKN Kakani 47.06 307 *e*P **P** **02 40 09.0 -0.8**
comp=Z,2μm,1.0s
MDRS Chennai 47.07 286 *e*P **P** **02 40 09.4 -0.4**
MDRS IAmb IAmb 02 40 23.9
comp=Z,696nm,1.1s
DMN Daman 47.12 307 *e*P **P** **02 40 09.5 -0.8**
comp=Z,4μm,1.1s
YSS Yuzh-Sakhalins 47.13 15α *i*P **P** **02 40 09.6 -0.1**
YSS *e**PP **pwP** **02 40 23.4 -1.4**
YSS *e**SP **sP** **02 40 30.2 +2.9**
YSS *e* 02 41 36.7
YSS *e* 02 42 00.2
YSS *e*S **S** **02 46 57.1 -1.5**
YSS *e* 02 49 57.0
YSS *e*SS **SS** **02 50 25.0 -1.4**
YSS pmax pmax
comp=N,280nm,1.3s
YSS pmax pmax
comp=Z,640nm,1.3s
YSS pmax pmax
comp=E,190nm,0.8s
YSS pmax pmax
comp=Z,12μm,8.0s
YSS pmax pmax
comp=N,5μm,4.9s
YSS pmax pmax
comp=E,3μm,5.4s
YSS Yuzh-Sakhalins 47.13 15 P **P** **02 40 08.3 -1.3**
YSS IAmb IAmb 02 40 39.4
comp=Z,2μm,1.5s
KUR Kuril'sk 47.15 21*c* *i*P **P** **02 40 10.1 +0.2**
KUR *i* 02 41 39.5
KUR *i* 02 42 01.6
KUR *e*PPP PPP 02 42 47.2
KUR *i*S **S** **02 47 01.4 +2.4**
KUR pmax pmax
comp=Z,18μm,7.3s
KUR pmax pmax
comp=N,12μm,8.0s
KUR pmax pmax
comp=E,10μm,7.6s
KUR pmax pmax
comp=Z,2μm,1.3s
KUR pmax pmax
comp=E,557nm,1.7s
KUR pmax pmax
comp=N,1μm,1.4s
KLR Kul'dur 47.44 5 S **S** **02 47 03.4 +0.5**
comp=N,25nm,1.2s,baz=299,slow=10,SNR=2.0
KLR Kul'dur 47.44 5*ce*P **P** **02 40 11.9 -0.1**
KLR pmax pmax
comp=Z,799nm,1.4s
KLR MLR MLR
comp=Z,138μm,23.0s
MYLAV Mylavaram 47.44 291 *e*P **P** **02 40 12.4 -0.2**
MYLAV IVmB_BB 02 40 21.0
comp=Z,8μm,3.0s
MYLAV IVMs_BB IVMs_BB 02 58 36.9
comp=Z,32μm,26.6s
HIA Hailar 47.60 354*c* *i*P **P** **02 40 12.8 -0.6**
HIA pmax pmax
comp=Z,1μm,1.1s
HIA MLR MLR
comp=Z,102μm,23.0s
HIA Hailar 47.60 354 P **P** **02 40 13.1 -0.3**
GKN Gorkha 47.67 307 *e*P **P** **02 40 13.7 -0.7**
comp=Z,5μm,1.3s
SKHT Srikalahasti 47.70 287 *e*P **P** **02 40 13.9 -0.7**
SKHT IVmBBB 02 40 22.8
comp=Z,7μm,1.9s
SKHT IVMs_BB IVMs_BB 02 56 23.4
comp=Z,29μm,29.9s
ADKI Addanki 47.86 290 *e*P **P** **02 40 16.4 +0.5**
ADKI IVmBBB 02 40 24.3
comp=Z,6μm,2.9s
ADKI IVMs_BB IVMs_BB 02 57 12.4
comp=Z,19μm,31.5s
MOO Moorlands 47.89 159 P **P** **02 40 16.6 +0.9**
baz=48,SNR=26
GGR Gangavaram 48.09 292 *e*P **P** **02 40 16.5 -1.2**
GGR IVmB_BB 02 40 25.7
comp=Z,9μm,3.1s
GGR IVMs_BB IVMs_BB 02 58 41.9
comp=Z,38μm,26.1s
TAU Tasmania Unive 48.34 160 P **P** **02 40 19.3 +0.1**
TAU pmax pmax
comp=Z,497nm,1.2s
TAU Tasmania Unive 48.34 160 P **P** **02 40 19.3 +0.1**
KOLN Koldanda 48.40 306 *e*P **P** **02 40 19.4 -0.8**
comp=Z,4μm,1.2s
DANN Dangsing 48.52 307 *e*P **P** **02 40 20.2 -0.9**
comp=Z,2μm,0.7s
NJS Nagarjunasagar 48.64 290 *e*P **P** **02 40 21.6 -0.3**
NJS IVmB_BB 02 40 29.7
comp=Z,7μm,2.8s
NJS IVMs_BB IVMs_BB 02 57 20.9
comp=Z,19μm,27.7s
ULN Ulaanbaatar 48.83 343 P **P** **02 40 23.0 0.0**
ULN P **P** **02 40 23.0 0.0**
ULN Ulaanbaatar 48.83 343*ce*P **P** **02 40 22.8 -0.2**
ULN pmax pmax
comp=Z,401nm,1.7s
ULN Ulaanbaatar 48.83 343 P **P** **02 40 22.9 -0.2**
ULN IAmb IAmb 02 40 33.0
comp=Z,823nm,1.0s
ULN Ulaanbaatar 48.83 343 IAMs_20 IAMs_20 03 01 39.9
comp=Z,104μm,21.0s
SONM Songino Array 49.00 342 P **P** **02 40 23.8 -0.5**
comp=Z,100nm,0.6s,baz=158,slow=8.5,SNR=255
SONM PcP **PcP** **02 41 49.0 +1.3**
comp=Z,129nm,1.0s,baz=177,slow=3.0,SNR=1.7
SONM LR LR 03 04 14.4
comp=Z,67μm,21.3s,baz=156,slow=40
SONM PKPPKP **P'P'df** **03 11 18.1 -7.1**
comp=Z,2.0nm,0.9s,baz=70,slow=0.5,SNR=4.5
PYUN Piuthan 49.03 306 *e*P **P** **02 40 24.4 -0.6**
CUPL Choutuppal 49.16 291 *e*P **P** **02 40 25.5 -0.4**
CUPL IVmB_BB 02 40 33.7
comp=Z,8μm,3.0s
CUPL IVMs_BB IVMs_BB 03 00 28.0
comp=Z,34μm,23.7s
RPR Rampur 49.18 293 *e*P **P** **02 40 25.3 -0.7**
RPR IVmB_BB 02 40 33.9
comp=Z,8μm,3.5s
RPR IVMs_BB IVMs_BB 02 59 25.6
comp=Z,32μm,25.4s
GRNR Gornyy 49.48 8⇑ *i*P **P** **02 40 28.5 +0.7**
GRNR *e*S **S** **02 47 37.2 +5.4**
GRNR pmax pmax
comp=E,70nm,0.5s
GRNR pmax pmax
comp=N,130nm,0.9s
GRNR pmax pmax
comp=Z,270nm,0.9s
GRNR smax smax
comp=N,10.0nm,1.2s
HYB Hyderabad 49.53 291 *i*P **P** **02 40 27.0 -1.7**
comp=N,900nm,1.0s
HYB *e*sP **sP** **02 40 46.5 -0.1**
HYB *e*PP **PP** **02 42 20.0 -3.4**
HYB *e*S **S** **02 47 35.0 +1.5**
HYB *e*ScS **ScS** **02 50 16.0 -1.0**
HYBB Hyderabad (bro 49.53 291 *e*P **P** **02 40 27.3 -1.4**
HYBB IVmBBB 02 40 36.4
comp=Z,11μm,2.0s
HYBB IVMs_BB IVMs_BB 02 59 49.5
comp=Z,37μm,25.6s
TRD Trivandrum 49.71 280 *e*P **P** **02 40 28.9 -1.2**
NGP Nagpur 50.00 296 *e*P **P** **02 40 32.1 -0.1**
NGP IAmb IAmb 02 40 35.3
comp=Z,210nm,0.9s
NFK Norfolk Island 50.18 131 P **P** **02 40 34.7 +1.2**
baz=50,SNR=17
URV Uravakonda 50.25 288 *e*P **P** **02 40 32.8 -1.5**
URV IVmBBB 02 40 41.5
comp=Z,5μm,1.9s
URV IVMs_BB IVMs_BB 02 57 33.1
comp=Z,18μm,36.2s
TYV Tymovskoe 50.74 13 *e*P **P** **02 40 38.3 +1.1**
TYV *e*S **S** **02 47 54.4 +5.2**
TYV pmax pmax
comp=Z,223nm,1.0s
TYV pmax pmax
comp=Z,9μm,2.8s
TYV smax smax
comp=E,15μm,6.7s
CIT Chita 51.17 350 *e*P **P** **02 40 42.1 +1.5**
CIT *e* 02 41 48.8
CIT *e* 02 42 35.1
CIT *e*S **S** **02 47 57.7 +2.4**
CIT *e* 02 50 30.9
CIT pmax pmax
comp=Z,4μm,1.9s
KLRI Killari 51.49 292 *e*P **P** **02 40 42.9 -0.6**
KLRI IVmB_BB 02 40 50.9
comp=Z,11μm,3.2s
KLRI IVMs_BB IVMs_BB 03 00 43.0
comp=Z,50μm,25.4s
ZEA Zeya 51.74 1 *e*P **P** **02 40 44.3 -0.4**
ZEA *e*S **S** **02 48 10.2 +7.2**
ZEA pmax pmax
comp=E,40nm,0.8s
ZEA pmax pmax
comp=N,140nm,0.7s
ZEA pmax pmax
comp=Z,230nm,0.7s
ZEA pmax pmax
comp=E,300nm,5.2s
ZEA pmax pmax
comp=N,4μm,10.9s
ZEA pmax pmax
comp=Z,7μm,9.7s
ZEA smax smax
comp=N,8μm,5.9s
ZEA smax smax
comp=E,14μm,8.2s
LGTI Lohaghat 51.77 307 *ex* P **P** **02 40 40.8 -4.6**
LGTI *ex* x 02 43 20.4
PTH Pithoragarh 51.84 307 *e*P **P** **02 40 45.5 -0.7**
PTH *ex* x 02 46 06.5
BHPL Bhopal 52.04 298 *e*P **P** **02 40 47.2 -0.4**
BHPL IAmb IAmb 02 40 51.3
comp=Z,833nm,1.1s
ZAK Zakamensk 52.22 341 *e*P **P** **02 40 48.3 -0.2**
ZAK pmax pmax
comp=Z,233nm,1.4s
TLY Talaya 53.24 342 LR LR 03 04 57.2
comp=Z,48μm,21.8s,baz=140,slow=38
TLY PKPPKP PKPPKPdf 03 11 12.7
comp=Z,2.3nm,0.7s,baz=158,slow=5.4,SNR=3.7
TLY Talaya 53.24 342 P **P** **02 40 56.5 +0.5**
TLY P **P** **02 40 56.5 +0.5**
TLY Talaya 53.24 342*c* *i*P **P** **02 40 56.0 +0.1**
TLY *e*S **S** **02 48 21.1 -2.6**
TLY pmax pmax
comp=Z,2μm,1.5s
TLY MLR MLR
comp=Z,139μm,20.0s
TLY Talaya 53.24 342 P **P** **02 40 55.7 -0.2**
TLY IAmb IAmb 02 41 09.8
comp=Z,1μm,1.4s
IRK Irkutsk 53.55 343 *e*P **P** **02 40 59.3 +1.1**
IRK *e*S **S** **02 48 27.1 -0.7**
IRK pmax pmax
comp=Z,2μm,2.0s
FUNA Funafuti 53.56 102 P **P** **02 40 58.7 -0.2**
GOA Goa 53.61 288 *e*P **P** **02 40 58.7 -0.5**
GOA IAmb IAmb 02 41 01.8
comp=Z,495nm,0.9s
DDI Dehra Dun 53.87 307 *e*P **P** **02 41 00.1 -0.8**
NDI New Delhi 53.95 305 *e*P **P** **02 40 59.0 -2.5**
NDI *e*S **S** **02 48 32.0 -2.0**
MOY Mondy 54.07 341 *e*P **P** **02 41 02.6 +0.5**
MOY pmax pmax
comp=Z,3μm,2.7s
WMQ Urumqi 54.13 326 P **P** **02 41 02.6 0.0**
WMQ pP pP 02 41 11.3 -4.0
WMQ sP sP 02 41 22.8 +2.2
WMQ PcS **PcS** **02 46 00.0 -6.2**
WMQ S **S** **02 48 34.1 -1.9**
WMQ sS sS 02 48 55.1 -1.8
WMQ ScS **ScS** **02 50 47.4 -0.7**
WMQ SS **SS** **02 52 19.3 +1.0**
WMQ pmax pmax
comp=Z,1μm,1.1s
WMQ pmax pmax
comp=Z,5μm,3.7s
WMQ LR LR
comp=Z,111μm,18.5s
WMQ LR LR
comp=Z,98μm,22.1s
WMQ LR LR
comp=Z,311μm,27.5s
WMQ Urumqi 54.13 326 IAmb IAmb 02 41 12.7
comp=Z,855nm,0.9s
POO Poona 54.14 292 *e*P **P** **02 41 01.7 -1.4**
POO IAmb IAmb 02 41 09.7
comp=Z,623nm,0.9s
MSVF Nonsavu 54.39 113*c* *i*P **P** **02 41 04.5 -0.5**
MSVF pmax pmax
comp=Z,1μm,1.1s
MSVF MLR MLR
comp=Z,70μm,20.0s
MSVF Nonsavu 54.39 113 P **P** **02 41 04.8 -0.1**
MSVF IAmb IAmb 02 41 16.6
comp=Z,1μm,1.1s
MSVF Nonsavu 54.39 113 IAMs_20 IAMs_20 03 04 36.6
comp=Z,76μm,21.0s
H08S2 Diego Garcia H 54.65 259 P **P** **02 41 07.7 +1.2**
baz=44,slow=8.7,SNR=15
H08S3 Diego Garcia H 54.66 259 P **P** **02 41 06.2 -0.4**
baz=44,slow=8.7,SNR=48
DGAR Diego Garcia 54.66 260 P **P** **02 41 10.8 +3.9**
DGAR P **P** **02 41 10.8 +3.9**
DGAR Diego Garcia 54.66 260⇑ *e*P **P** **02 41 05.9 -1.0**
DGAR pmax pmax
comp=Z,2μm,1.2s
DGAR Diego Garcia 54.66 260 P **P** **02 41 06.8 -0.1**
H08S1 Diego Garcia H 54.67 259 P **P** **02 41 06.3 -0.4**
baz=44,slow=8.7,SNR=21
SKR Severo-Kuril's 54.75 23 *e*P **P** **02 41 07.5 +0.6**
SKR *e**PP **pwP** **02 41 21.5 -0.7**
SKR *e* 02 42 08.1
SKR *e*S **S** **02 48 45.4 +1.4**
SKR *e* 02 50 54.3
SKR pmax pmax

comp=Z,6µm,3.5s
SKR pmax pmax
comp=Z,2µm,3.6s
SKR pmax pmax
comp=Z,469nm,0.9s
SKR MLR MLR
comp=Z,25µm,18.0s
SMLA Simla 54.88 307 *e*P **P 02 41 08.1 -0.1**
AJM Ajmer 55.40 301 ⇑*i*P **P 02 41 11.0 -1.1**
BHK Bhakra 55.58 307 *e*P **P 02 41 12.8 -0.5**
BHK *ex* x 02 43 06.2
DHRM DHARAMSHALA 55.98 308 *e*P **P 02 41 15.3 -1.1**
BOD Bodaibo 56.69 352 *e*P **P 02 41 20.3 -0.4**
BOD pmax pmax
comp=Z,1µm,1.8s
PEA0B Petropavlovsk- 57.28 22 *ce*P **P 02 41 25.7 +0.8**
PEA0B Petropavlovsk- 57.28 22 IAmb IAmb 02 42 03.7
comp=Z,844nm,1.1s
PETK Petropavlovsk- 57.28 22 P **P 02 41 25.4 +0.5**
comp=Z,368nm,0.7s,baz=185,slow=3.7,SNR=175
PETK S **S 02 49 13.9 -3.6**
comp=Z,2.1nm,0.8s,baz=202,slow=11,SNR=1.0
PETK LR LR 03 06 03.6
comp=Z,15µm,20.4s,baz=220,slow=36
PETK PKPPKP **P'P'df 03 11 07.2 -6.2**
comp=Z,13nm,1.1s,baz=119,slow=7.4,SNR=4.8
PETK PKP2bc 03 11 32.7
comp=Z,31nm,1.2s,baz=69,slow=8.4,SNR=5.0
PETK Petropavlovsk- 57.28 22 P **P 02 41 24.4 -0.5**
PET Petropavlovsk 57.57 22 *ce*P **P 02 41 27.5 +0.5**
PET *i* S **S 02 49 20.3 -1.0**
PET pmax pmax
comp=Z,21µm,17.5s
PET pmax pmax
comp=Z,903nm,1.3s
PET smax smax
comp=N,10µm,7.4s
PET smax smax
comp=E,36µm,22.7s
PET smax smax
comp=E,21µm,10.3s
PET MLR MLR
comp=Z,46µm,21.0s
PET Petropavlovsk 57.57 22 P **P 02 41 26.9 0.0**
PET IAmb IAmb 02 42 06.3
comp=Z,2µm,1.6s
ZSN Zaisan 57.95 328 *i* P **P 02 41 29.0 -0.9**
comp=Z,572nm,2.6s,baz=328
ZSN *i* S **S 02 49 27.3 +0.7**
comp=Z,1µm,5.1s,baz=328
ZSN Zaisan 57.95 328 *i* P **P 02 41 28.9 -0.9**
ZSN *i* S **S 02 49 27.3 +0.7**
ZSN pmax pmax
comp=Z,572nm,2.6s
SHLS Shalkode 58.64 321 *i* P **P 02 41 32.5 -2.3**
comp=Z,1µm,1.5s,baz=321
SHLS *i* S **S 02 49 33.2 -2.7**
comp=Z,687nm,5.0s,baz=321
SHLS Shalkode 58.64 321 *i* P **P 02 41 32.5 -2.3**
SHLS *i* S **S 02 49 33.2 -2.7**
SHLS pmax pmax
comp=Z,1µm,1.5s
PDGK Podgornoye 58.71 321 *i* P **P 02 41 35.2 -0.1**
PDGK pmax pmax
comp=Z,1µm,0.9s
NIL Nilore 58.88 309 P **P 02 41 35.5 -1.1**
NIL pmax pmax
comp=Z,862nm,0.9s
NIL MLR MLR
comp=Z,74µm,22.0s
NIL Nilore 58.88 309 P **P 02 41 35.5 -1.1**
NIL IAmb IAmb 02 42 00.7
comp=Z,862nm,0.8s
NIL Nilore 58.88 309 IAMs_20 IAMs_20 03 09 59.5
comp=Z,74µm,22.0s
BHUJ Bhuj 58.95 296 *e*P **P 02 41 36.8 -0.5**
MK31 Makanchi Array 58.96 326 *i* P **P 02 41 35.9 -1.0**
MK31 pmax pmax
comp=Z,288nm,0.5s
MK31 Makanchi Array 58.96 326 P **P 02 41 36.2 -0.7**
MK31 IAmb IAmb 02 41 46.3
comp=Z,692nm,1.0s
MKAR Makanchi Array 58.96 326 P **P 02 41 36.1 -0.8**
comp=Z,380nm,0.5s,baz=120,slow=7.8,SNR=604
MKAR S **S 02 49 39.5 -0.3**
comp=Z,15nm,1.0s,baz=159,slow=12,SNR=3.0
MKAR LR LR 03 09 53.8
comp=Z,104µm,18.0s,baz=112,slow=39
MKAR PKPPKP P'P'df 03 10 58.7 -13
comp=Z,5.2nm,0.8s,baz=302,slow=2.3,SNR=8.7
MKAR PKP2bc 03 11 22.0
comp=Z,30nm,1.0s,baz=268,slow=3.3,SNR=7.4
MKAR Makanchi Array 58.96 326 P **P 02 41 35.9 -1.0**
MAKZ Makanchi 59.14 326 *i* P **P 02 41 37.8 -0.3**
MAKZ pmax pmax
comp=Z,1µm,1.0s
MAKZ Makanchi 59.14 326 P **P 02 41 37.3 -0.8**
KSH Kashi 59.20 316 ⇑*i*P **P 02 41 38.8 0.0**
KSH sP sP 02 41 55.0 -2.0
KSH S **S 02 49 35.5 -7.9**
KSH pmax pmax
comp=Z,2µm,1.2s
KSH pmax pmax
comp=Z,16µm,4.6s
KSH LR LR
comp=Z,129µm,21.3s
KSH LR LR
comp=Z,48µm,17.1s
KSH LR LR
comp=Z,123µm,23.3s
SATY Saty 59.25 321 *i* P **P 02 41 38.5 -0.7**
comp=Z,779nm,1.5s,baz=321
SATY *e*S **S 02 49 44.7 +0.7**
baz=321
SATY LR LR 03 05 39.9
comp=Z,15µm,20.1s,baz=321
SATY Saty 59.25 321 *i* P **P 02 41 38.4 -0.7**
SATY *e*S **S 02 49 44.6 +0.7**
SATY pmax pmax
comp=Z,779nm,1.5s
SATY MLR MLR
comp=Z,15µm,20.0s
KPKS Kokpek 59.28 321 *i* P **P 02 41 38.4 -0.9**
comp=Z,1µm,1.6s,baz=321
KPKS LR LR 03 05 53.7
comp=Z,15µm,16.4s,baz=321
KPKS Kokpek 59.28 321 *i* P **P 02 41 38.4 -0.9**
KPKS pmax pmax
comp=Z,1µm,1.6s
KPKS MLR MLR
comp=Z,15µm,16.0s
PYZ Puysegur Point 59.50 149 IAMs_20 IAMs_20 03 11 36.4
comp=Z,52µm,20.0s
FOZ Fox Glacier 59.55 145 P **P 02 41 41.2 +0.2**
MLZ Mavora Lakes 59.74 147 IAMs_20 IAMs_20 03 09 29.8
comp=Z,69µm,22.0s
WKZ Wanaka 59.90 146 IAMs_20 IAMs_20 03 09 23.8
comp=Z,66µm,20.0s
AIS Amsterdam Isla 59.92 224 P **P 02 41 44.7 +1.1**
YAK Yakutsk 60.10 2 P **P 02 41 44.1 -0.2**
comp=Z,603nm,0.7s,baz=346,slow=1.6,SNR=8.2
YAK S **S 02 49 50.4 -3.4**
comp=Z,7.3nm,0.3s,baz=276,slow=10,SNR=1.8
YAK PKPPKP **P'P'df 03 11 06.3 -2.1**
comp=Z,11nm,0.4s,baz=25,slow=2.0,SNR=2.5
YAK Yakutsk 60.10 2*c* *i*P **P 02 41 44.2 -0.2**
YAK *e**PP **pwP 02 41 59.0 -0.7**
YAK *e* 02 42 30.5
YAK *e* 02 44 02.0
YAK *e*S **S 02 49 54.2 +0.4**
YAK *e**SS **sS 02 50 19.3 +3.9**
YAK *e* 02 51 33.2
YAK *e*SS **SS 02 53 54.1 +2.7**
YAK pmax pmax
comp=Z,2µm,1.0s
YAK pmax pmax
comp=N,573nm,1.3s
YAK pmax pmax
comp=E,117nm,1.2s
YAK pmax pmax
comp=Z,3µm,2.8s
YAK pmax pmax
comp=N,3µm,2.7s
YAK pmax pmax
comp=E,1µm,2.8s
YAK smax smax
comp=N,6µm,2.6s
YAK smax smax
comp=E,6µm,2.4s
YAK MLR MLR
comp=Z,145µm,27.0s
YAK MLR MLR
comp=N,77µm,24.0s
YAK MLR MLR
comp=E,59µm,25.0s
YAK Yakutsk 60.10 2 IAMs_20 IAMs_20 03 09 16.2
comp=Z,75µm,21.0s
MDOK Medeo 60.17 320 *i* P **P 02 41 44.6 -0.9**
baz=320
MDOK *e*S **S 02 49 55.7 -0.1**
baz=320
MDOK Medeo 60.17 320 *i* P **P 02 41 44.5 -0.9**
MDOK *e*S **S 02 49 55.6 -0.1**
TNSS Tian-Shan 60.17 320 *i* P **P 02 41 45.4 -0.4**
baz=320
TNSS Tian-Shan 60.17 320 *i* P **P 02 41 45.4 -0.4**
TDK Taldyqorghan 60.24 323 *i* P **P 02 41 45.4 -0.4**
comp=Z,2µm,1.3s,baz=322
TDK *e*S **S 02 49 57.3 +0.9**
baz=322
TDK LR LR 03 05 03.8
comp=Z,37µm,19.5s,baz=322
TDK Taldyqorghan 60.24 323 *i* P **P 02 41 45.3 -0.4**
TDK *e*S **S 02 49 57.2 +0.9**
TDK pmax pmax
comp=Z,2µm,1.3s
TDK MLR MLR
comp=Z,37µm,20.0s
KNDC Almaty 60.25 320 P **P 02 41 46.5 +0.6**
ULHL Ulahol 60.26 319 P **P 02 41 46.1 0.0**
SNR=51
AAA Alma-Ata 60.28 320 *i* P **P 02 41 45.5 -0.6**
comp=Z,1µm,2.0s,baz=320
AAA *e*S **S 02 49 57.3 +0.2**
baz=320
AAA Alma-Ata 60.28 320 *i* P **P 02 41 45.5 -0.6**
AAA *e*S **S 02 49 57.2 +0.2**
AAA pmax pmax
comp=Z,1µm,2.0s
RPZ Rata Peaks 60.38 144 IAMs_20 IAMs_20 03 09 56.7
comp=Z,81µm,22.0s
TGRZ Tauranga 60.52 136 P **P 02 41 49.8 +2.1**
CHKK Chushkaly 60.54 321 *e*P **P 02 41 46.7 -1.1**
baz=321
CHKK Chushkaly 60.54 321 *e*P **P 02 41 46.7 -1.1**
MA2 Magadan 60.60 14 P **P 02 41 48.5 +0.6**
comp=Z,778nm,0.8s,baz=197,slow=6.6,SNR=141
MA2 LR LR 03 08 19.4
comp=Z,20µm,21.0s,baz=205,slow=36
MA2 Magadan 60.60 14*ce*P **P 02 41 48.6 +0.8**
MA2 pmax pmax
comp=Z,1µm,1.0s
MA2 MLR MLR
comp=Z,56µm,22.0s
MA2 Magadan 60.60 14 P **P 02 41 48.2 +0.3**
MA2 IAmb IAmb 02 41 50.6
comp=Z,957nm,0.9s
MA2 IAMs_20 IAMs_20 03 10 42.5
comp=Z,58µm,22.0s
RATZ Rangitukua 60.73 137 P **P 02 41 51.4 +2.2**
KRVZ Karewarewa 60.76 138 P **P 02 41 51.8 +2.3**
OPRZ Ohinepanea 60.78 136 P **P 02 41 51.3 +1.9**
ETVZ East Tongariro 60.83 138 P **P 02 41 52.7 +2.7**
HLRZ Highlands Stat 60.83 136 P **P 02 41 53.5 +3.6**
WNVZ Wahianoa 60.85 138 P **P 02 41 51.9 +1.8**
RITZ Rihia Road 60.85 137 P **P 02 41 52.6 +2.6**
KUU Kurty 60.97 321 *i* P **P 02 41 50.0 -0.8**
comp=Z,2µm,1.0s,baz=321
KUU *i* S **S 02 50 05.9 +0.2**
comp=Z,2µm,5.0s,baz=321
KUU Kurty 60.97 321 *i* P **P 02 41 49.9 -0.8**
KUU *i* S **S 02 50 05.9 +0.2**
KUU pmax pmax
comp=Z,2µm,1.0s
RRRZ Republican Roa 60.98 136 P **P 02 41 54.3 +3.3**
MOVZ Moawhango 60.99 138 P **P 02 41 51.9 +0.9**
TKM2 Tokmak 2 60.99 319 P **P 02 41 50.5 -0.6**
SNR=218
TKM2 Tokmak 2 60.99 319 *i* P **P 02 41 50.4 -0.7**
TKM2 pmax pmax
comp=Z,564nm,0.8s
EDRZ Edgecumbe 61.03 136 P **P 02 41 52.0 +0.7**
KHZ Kahutara 61.14 142 IAMs_20 IAMs_20 03 11 57.7
comp=Z,71µm,21.0s
MRHZ Matea Rd 61.16 137 P **P 02 41 50.1 -2.0**
MUGZ Murupara 61.23 136 P **P 02 41 51.0 -1.5**
SNZO South Karori 61.28 140 P **P 02 41 52.7 -0.1**
SNZO IAmb IAmb 02 41 55.3
comp=Z,1µm,1.3s
KBK Karagaybulak 61.30 319 P **P 02 41 53.5 +0.3**
SNR=96
URZ Urewera 61.36 136 PKP2bc PKPPKPbc 03 11 13.2
comp=Z,24nm,1.0s,baz=109,slow=4.2,SNR=1.9
URZ LR LR 03 11 25.3
comp=Z,66µm,18.2s,baz=314,slow=39
URZ Urewera 61.36 136 P **P 02 41 53.9 +0.5**
URZ Urewera 61.36 136 P **P 02 41 53.2 -0.2**
URZ IAmb IAmb 02 41 55.8
comp=Z,580nm,1.1s
URZ IAMs_20 IAMs_20 03 10 55.5
comp=Z,66µm,20.0s
BKZ Black Stump Fm 61.37 137 P **P 02 41 54.5 +1.0**
BKZ Black Stump Fm 61.37 137 IAmb IAmb 02 42 00.7
comp=Z,530nm,0.8s
BKZ IAMs_20 IAMs_20 03 11 44.9
comp=Z,70µm,20.0s
UCH Uchtor 61.39 318 P **P 02 41 54.1 -0.1**
SNR=86
BHW Baring Head 61.44 140 P **P 02 41 53.3 -0.5**
RTZ Ruatahuna 61.44 136 P **P 02 41 51.3 -2.7**
KWHZ Kaweka Forest 61.45 138 P **P 02 41 54.2 +0.1**
MTHZ Maungataniwha 61.46 137 P **P 02 41 54.9 +0.8**
RAO Raoul Island 61.46 125 LR LR 03 07 42.7
comp=Z,14µm,21.6s,baz=300,slow=35
KRHZ Kereru 61.52 138 P **P 02 41 54.3 -0.2**
PNHZ Pukenui 61.54 138 P **P 02 41 58.8 +4.1**
NMHZ Naumai 61.55 137 P **P 02 41 57.0 +2.2**
FRU1 Bishkek 61.57 319 IAmb IAmb 02 42 49.6
comp=Z,589nm,1.1s
FRU1 IAMs_20 IAMs_20 03 08 56.4
comp=Z,77µm,21.0s
CHMS Chumysh 61.58 319 P **P 02 41 54.6 -0.3**
SNR=45
AAK Ala-Archa 61.59 319 P **P 02 41 54.8 -0.3**
SNR=76
AAK Ala-Archa 61.59 319 *i* P **P 02 41 54.9 -0.3**
SNR=315
AAK Ala-Archa 61.59 319 P **P 02 41 55.0 -0.1**
AAK P **P 02 41 55.0 -0.1**
AAK P **P 02 41 55.0 -0.1**
AAK Ala-Archa 61.59 319 P **P 02 41 54.8 -0.3**
HAZ Te Kaha 61.59 135 P **P 02 41 56.5 +1.6**
RUGZ Raukumara Rang 61.62 136 P **P 02 41 56.1 +0.8**
RAHZ Arahi 61.66 137 P **P 02 41 57.1 +1.6**
RAGZ Rawiri 61.68 136 P **P 02 41 57.0 +1.3**
MWZ Matawai 61.68 136 P **P 02 41 56.5 +0.9**
PRWZ Pori Road 61.71 139 P **P 02 41 56.7 +0.9**
ARHZ Aropaoanui 61.76 137 P **P 02 41 57.3 +1.2**
SNGZ Shannon Statio 61.77 137 P **P 02 41 57.3 +1.1**
WPHZ Waipukurau 61.78 138 P **P 02 41 58.7 +2.4**
WHHZ Waihua 61.83 137 P **P 02 41 57.9 +1.3**
PKGZ Pakihiroa 61.86 135 P **P 02 41 58.3 +1.5**
SGDS Sogindy 61.86 320 *i* P **P 02 41 55.7 -1.1**
comp=Z,494nm,2.2s,baz=320
SGDS *i* S **S 02 50 17.4 +0.1**
baz=320
SGDS LR LR 03 07 36.3
comp=Z,5µm,14.6s,baz=320
SGDS Sogindy 61.86 320 *i* P **P 02 41 55.7 -1.1**
SGDS *i* S **S 02 50 17.3 +0.1**
SGDS pmax pmax
comp=Z,494nm,2.2s
SGDS MLR MLR
comp=Z,5µm,15.0s
USP Ospenovka 61.86 319 P **P 02 41 56.1 -0.7**
SNR=156
MXZ Matakaoa Point 61.88 135 IAMs_20 IAMs_20 03 10 01.1
comp=Z,67µm,22.0s
AML Almayashu 61.90 318 P **P 02 41 57.3 -0.2**
SNR=206
TWGZ Tauwhareparae 61.93 136 P **P 02 41 59.4 +2.1**
KAHZ Kahuranaki 61.94 138 P **P 02 41 59.2 +1.8**
BFZ Birch Farm 61.96 139 P **P 02 41 58.4 +1.0**
BFZ Birch Farm 61.96 139 IAMs_20 IAMs_20 03 10 21.2
comp=Z,58µm,21.0s
TKGZ Te Karaka 61.96 136 P **P 02 41 59.7 +2.3**
CKHZ Cape Kidnapper 62.01 137 P **P 02 41 59.5 +1.7**
RIGZ Rimuhau 62.02 136 P **P 02 41 59.2 +1.2**
PXZ Pawanui 62.04 138 P **P 02 41 59.9 +1.9**
WMGZ Waiomatatini S 62.07 135 P **P 02 41 59.5 +1.4**
EKS2 Erkin-Say 62.07 318 P **P 02 41 58.0 -0.3**
SNR=132
PUZ Puketiti 62.07 135 P **P 02 41 58.8 +0.6**
KNZ Kokohu 62.11 137 P **P 02 41 59.0 +0.6**
ZAA0 Zalesovo Array 62.15 334 P **P 02 41 57.2 -1.2**
ZAA0 IAmb IAmb 02 42 34.4
comp=Z,559nm,1.1s
ZAA0 IAMs_20 IAMs_20 03 10 40.7
comp=Z,52µm,22.0s
ZALV Zalesovo Beam 62.15 334 P **P 02 41 56.8 -1.6**
comp=Z,238nm,0.8s,baz=130,slow=6.8,SNR=110
ZALV S **S 02 50 15.4 -4.8**
comp=Z,9.9nm,0.9s,baz=72,slow=4.7,SNR=1.2
ZALV LR LR 03 11 01.8
comp=Z,50µm,21.8s,baz=136,slow=38
ZALV PKPPKP **P'P'df 03 11 02.1 -3.9**
comp=Z,19nm,1.0s,baz=309,slow=2.5,SNR=8.3
ZALV PKP2ab 03 11 19.1
comp=Z,139nm,1.2s,baz=302,slow=3.5,SNR=10
ZALV Zalesovo Beam 62.15 334 P **P 02 41 57.2 -1.2**
ZALV Zalesovo Beam 62.15 334 P **P 02 41 57.2 -1.2**
SEM Semipalatinsk 62.16 329 *e*P **P 02 41 57.0 -1.9**
baz=328
SEM LR LR 03 06 14.5
comp=Z,8µm,18.1s,baz=328
SEM Semipalatinsk 62.16 329 *e*P **P 02 41 57.0 -1.9**
SEM MLR MLR
comp=Z,8µm,18.0s
PRGZ Paritu Road 62.20 136 P **P 02 42 01.5 +2.4**
CNGZ Carnagh Statio 62.23 136 P **P 02 42 00.9 +1.7**
MCQ Macquarie Isla 62.23 159 P **P 02 42 00.5 +1.6**
baz=62,SNR=25
MCQ Macquarie Isla 62.23 159 P **P 02 41 59.6 +0.7**
MCQ pmax pmax
comp=Z,2µm,1.0s
MCQ MLR MLR
comp=Z,32µm,21.0s
MCQ Macquarie Isla 62.23 159 P **P 02 41 59.6 +0.7**
MHGZ Mahia Peninsul 62.33 137 P **P 02 42 01.4 +1.5**
KBL Kabul 62.47 308 P **P 02 42 01.2 -0.1**
SNR=413
KBL P **P 02 42 01.2 -0.1**
SNR=413
KBL Kabul 62.47 308 P **P 02 42 00.0 -1.2**
KBL pmax pmax
comp=Z,867nm,1.1s
KBL MLR MLR
comp=Z,48µm,22.0s
KBL Kabul 62.47 308 P **P 02 42 00.0 -1.2**
KBL IAmb IAmb 02 42 09.6
comp=Z,867nm,1.1s
KBL IAMs_20 IAMs_20 03 11 26.8
comp=Z,48µm,22.0s
BTLS Baital 62.96 321 *i* P **P 02 42 03.0 -1.0**
comp=Z,178nm,1.0s,baz=321
BTLS *e*S **S 02 50 30.8 0.0**
baz=321
BTLS Baital 62.96 321 *i* P **P 02 42 03.0 -1.0**
BTLS *e*S **S 02 50 30.7 0.0**
BTLS pmax pmax
comp=Z,178nm,1.0s
BTK Batken 63.05 315 P **P 02 42 04.2 -0.6**
BTK pmax pmax
comp=Z,950nm,1.2s
BTK Batken 63.05 315 P **P 02 42 04.2 -0.6**
BTK IAmb IAmb 02 42 16.4
comp=Z,950nm,1.2s
AFI Afiamalu 63.15 106 P **P 02 42 05.6 -0.3**
AFI pmax pmax
comp=Z,851nm,1.3s
AFI MLR MLR
comp=Z,22µm,22.0s
AFI Afiamalu 63.15 106 P **P 02 42 05.6 -0.3**
AFI IAmb IAmb 02 42 19.4
comp=Z,851nm,1.3s
KURBB Kurchatov Arra 63.19 328 P **P 02 42 05.0 -0.4**
comp=Z,489nm,0.7s,baz=128,slow=6.2,SNR=50
KURBB S **S 02 50 28.7 -4.7**
comp=Z,4.0nm,1.0s,baz=120,slow=6.8,SNR=1.4
KURBB Kurchatov Arra 63.19 328 P **P 02 42 05.2 -0.2**
KURK Kurchatov 63.19 328 P **P 02 42 05.3 -0.2**
KURK P **P 02 42 05.3 -0.2**
KURK P **P 02 42 05.3 -0.2**
KURK Kurchatov 63.19 328*ce*P **P 02 42 04.6 -0.8**
KURK pmax pmax
comp=Z,837nm,0.8s
KURK MLR MLR
comp=Z,65µm,23.0s
KURK Kurchatov 63.19 328 P **P 02 42 04.8 -0.6**
DZA Taraz 63.80 318 *i* P **P 02 42 08.7 -1.0**
comp=Z,201nm,0.8s,baz=318
DZA *e*S **S 02 50 41.4 0.0**
baz=318
DZA Taraz 63.80 318 *i* P **P 02 42 08.7 -1.0**
DZA *e*S **S 02 50 41.4 0.0**
DZA pmax pmax
comp=Z,201nm,0.8s
SEY Seymchan 63.93 13 P **P 02 42 11.2 +1.2**
comp=Z,386nm,1.0s,baz=217,slow=5.8,SNR=193
SEY S **S 02 50 44.3 +2.2**
comp=Z,5.3nm,0.6s,baz=321,slow=16,SNR=1.8
SEY LR LR 03 10 39.8
comp=Z,20µm,20.9s,baz=198,slow=37
SEY PKPPKP **P'P'df 03 11 01.1 -1.4**
comp=Z,14nm,1.0s,baz=173,slow=1.9,SNR=5.1
SEY PKP2ab 03 11 14.6
comp=Z,34nm,1.0s,baz=36,slow=2.8,SNR=8.7
SEY Seymchan 63.93 13*c* *i*P **P 02 42 11.5 +1.5**
SMY Shemya 64.23 30 IAmb IAmb 02 42 16.8
comp=Z,1µm,1.1s
IUG Iuzhnay 64.39 317 *i* P **P 02 42 13.0 -0.7**
comp=Z,101nm,0.7s,baz=317
IUG *e*S **S 02 50 49.7 +0.7**
baz=317
IUG LR LR 03 09 21.7
comp=Z,8µm,17.2s,baz=317
IUG Iuzhnay 64.39 317 *i* P **P 02 42 13.0 -0.7**
IUG *e*S **S 02 50 49.6 +0.7**
IUG pmax pmax
comp=Z,101nm,0.7s
IUG MLR MLR
comp=Z,8µm,17.0s
KK31 Karatay Array 64.44 318 *i* P **P 02 42 13.3 -0.6**
KK31 Karatay Array 64.44 318 P **P 02 42 13.2 -0.6**
KKAR Karatay Array 64.44 318 P **P 02 42 12.8 -1.0**
KKAR Karatay Array 64.44 318 P **P 02 42 12.8 -1.0**
TAS Tashkent 64.59 316 P **P 02 42 14.3 -0.6**
TAS Tashkent 64.59 316 P **P 02 42 14.3 -0.6**
JOHN Johnston Islan 64.61 72 P **P 02 42 15.3 -0.1**
JOHN Johnston Islan 64.61 72 IAMs_20 IAMs_20 03 07 57.0
comp=Z,58µm,22.0s
BRLS Borolday 64.86 317 *e*P **P 02 42 15.9 -0.8**
comp=Z,256nm,0.8s,baz=317
BRLS Borolday 64.86 317 *e*P **P 02 42 15.8 -0.8**
BRLS pmax pmax
comp=Z,256nm,0.8s
NIUE Niue 65.81 112 P **P 02 42 23.0 -0.1**
BRZS Berezniki 66.08 325 *i* P **P 02 42 23.5 -0.8**
comp=Z,767nm,2.5s,baz=325
BRZS *e*S **S 02 51 09.8 +0.6**
baz=325
BRZS LR LR 03 09 50.8
comp=Z,15µm,19.2s,baz=325
BRZS Berezniki 66.08 325 *i* P **P 02 42 23.5 -0.8**
BRZS *e*S **S 02 51 09.7 +0.6**
BRZS pmax pmax
comp=Z,767nm,2.5s
BRZS MLR MLR
comp=Z,15µm,19.0s
HRA Herat 67.83 306 IAmb IAmb 02 43 32.6
comp=Z,1µm,1.7s
HRA IAMs_20 IAMs_20 03 16 01.8
comp=Z,46µm,21.0s
JLN Jalan Bani Buh 68.09 293 P **P 02 42 36.7 -0.9**
SNR=14
JLN P **P 02 42 36.7 -0.9**
SNR=14

JLN P P 02 42 36.7 -0.9
SNR=14
WBK Wadi Bani Khal 68.55 293 P P 02 42 40.1 -0.4
SNR=24
WBK P P 02 42 40.1 -0.4
SNR=24
WBK P P 02 42 40.1 -0.4
SNR=24
ADK Adak 68.67 34 P P 02 42 40.0 -0.6
ADK pmax pmax
comp=Z,1μm,1.3s
ADK Adak 68.67 34 P P 02 42 40.0 -0.6
ADK IAmb IAmb 02 42 51.4
comp=Z,1μm,1.2s
BVAR Borovoye Array 68.76 327 P P 02 42 40.4 -0.8
comp=Z,60nm,0.5s,baz=202,slow=32,SNR=170
BVAR S S 02 51 39.6 -1.5
comp=Z,6.5nm,0.9s,baz=221,slow=26,SNR=2.4
BRVK Borovoye 68.83 327 P P 02 42 41.8 +0.2
BRVK P P 02 42 41.8 +0.2
BRVK P P 02 42 41.8 +0.2
BRVK S S 02 51 37.9 -4.0
BRVK S S 02 51 37.9 -4.0
BRVK S S 02 51 37.9 -4.0
BRVK Borovoye 68.83 327 *i* P P 02 42 41.5 -0.1
BRVK pmax pmax
comp=Z,1μm,1.0s
BRVK MLR MLR
comp=Z,124μm,23.4s
BRVK Borovoye 68.83 327 P P 02 42 41.0 -0.6
BRVK IAmb IAmb 02 42 52.1
comp=Z,2μm,1.2s
BRVK Borovoye 68.83 327 IAMs_20 IAMs_20 03 15 11.8
comp=Z,46μm,20.0s
CASY Casey 68.92 187 P P 02 42 42.1 +0.3
CASY Casey 68.92 187 IAMs_20 IAMs_20 03 11 31.1
comp=Z,45μm,22.0s
MHTO MHTO 69.29 292 P P 02 42 44.0 -1.1
SNR=53
MHTO P P 02 42 44.0 -1.1
SNR=53
JMDO Jabal Madar 69.32 293 P P 02 42 44.2 -1.1
SNR=34
JMDO P P 02 42 44.2 -1.1
SNR=34
JMDO P P 02 42 44.2 -1.1
SNR=34
BIDO Bidbid 69.43 294 P P 02 42 44.0 -2.0
SNR=54
SMDO Samad 69.45 294 P P 02 42 44.8 -1.3
SNR=19
SMDO P P 02 42 44.8 -1.3
SNR=19
SMDO P P 02 42 44.8 -1.3
SNR=19
DQM DQM 69.58 290 P P 02 42 46.2 -0.7
SNR=30
DQM P P 02 42 46.2 -0.7
SNR=30
TIXI Tiksi 69.73 1*c i* P P 02 42 45.1 -1.7
TIXI Tiksi 69.73 1 P P 02 42 45.6 -1.1
TIXI IAMs_20 IAMs_20 03 16 31.4
comp=Z,65μm,22.0s
HOQ Hoqain 70.18 294 P P 02 42 52.0 +1.4
SNR=48
BSY Bisya 70.19 293 P P 02 42 49.4 -1.2
SNR=34
BSY P P 02 42 49.4 -1.2
SNR=34
ATKA Atka Island 70.20 34 P P 02 42 49.5 -0.5
ATKA IAmb IAmb 02 43 23.2
comp=Z,1μm,1.0s
ARQ Araqi 70.88 294 P P 02 42 53.9 -1.0
SNR=46
ARQ P P 02 42 53.9 -1.0
SNR=46
SOHO SOHO 70.96 295 *i* P P 02 42 53.4 -1.8
SNR=74
SOHO SOHO 70.96 295 P P 02 42 54.5 -0.7
SHAO Shalim 71.22 288 *i* P P 02 42 56.5 -0.5
SNR=30
SHAO Shalim 71.22 288 P P 02 42 55.3 -1.6
SNR=13
MDH Madha 71.31 296 *i* P P 02 42 55.3 -2.1
SNR=36
MDH Madha 71.31 296 P P 02 42 56.6 -0.8
SNR=21
UOSS Minazif 71.35 296 *i* P P 02 42 55.7 -1.9
SNR=40
UOSS Minazif 71.35 296 P P 02 42 57.7 0.0
UOSS P P 02 42 57.7 0.0
UOSS Minazif 71.35 296 P P 02 42 56.6 -1.1
BANOM Banah 71.38 297 *i* P P 02 42 55.9 -2.0
SNR=73
BANOM Banah 71.38 297 P P 02 42 57.1 -0.7
SNR=41
BANOM P P 02 42 57.1 -0.7
SNR=41
HATD Hatta, Dubai 71.40 295 *i* P P 02 42 57.0 -1.0
SNR=48
HATD Hatta, Dubai 71.40 295 P P 02 42 57.4 -0.6
SNR=71
MSFE Esma-Masafi 71.44 296 *i* P P 02 42 56.4 -1.8
SNR=94
SHME Shamm 71.54 297 *i* P P 02 42 57.5 -1.2
SNR=26
ALNE Al Ain 71.66 295 *i* P P 02 42 58.4 -1.2
SNR=140
ASHT Ashkhabad 71.67 309 P P 02 42 59.1 -0.2
ASHT pmax pmax
comp=Z,989nm,1.3s
ASHT Ashkhabad 71.67 309 P P 02 42 59.1 -0.2
ASHT IAmb IAmb 02 43 09.6
comp=Z,989nm,1.3s
DMTO DMTO 71.84 288 P P 02 43 00.3 -0.4
SNR=7.0
DMTO P P 02 43 00.3 -0.4
SNR=7.0
NAZ Nazwa, Dubai 71.84 296 *i* P P 02 42 60.0 -0.6
SNR=17
NAZ Nazwa, Dubai 71.84 296 P P 02 43 00.0 -0.6
SNR=39
GEYT Alibeck 71.87 309 P P 02 43 00.1 -0.5
comp=Z,126nm,0.8s,baz=134,slow=4.3,SNR=92
GEYT S S 02 52 15.3 -2.9
comp=Z,8.9nm,1.1s,baz=342,slow=9.1,SNR=1.7
GEYT PKPPKP **P'P'df** 03 10 45.2 -5.9
comp=Z,5.8nm,1.1s,baz=202,slow=6.6,SNR=3.0
GEYT Alibeck 71.87 309 P P 02 43 00.2 -0.4
FAQ Al Faqa, Dubai 71.88 295 *i* P P 02 42 59.5 -1.4
SNR=84
FAQ Al Faqa, Dubai 71.88 295 P P 02 43 00.6 -0.2
SNR=52
UMQ Umm Al-Quwin 71.90 296 *i* P P 02 43 00.1 -0.8
SNR=21
UMQ Umm Al-Quwin 71.90 296 P P 02 43 01.5 +0.5
SNR=14
ASUD Al Ashush, Dub 72.10 295 *i* P P 02 43 01.0 -1.2
SNR=20
ASUD Al Ashush, Dub 72.10 295 P P 02 43 01.9 -0.3
SNR=55
ASUD P P 02 43 01.9 -0.3
SNR=55
NRIK Noril'sk 72.20 346 P P 02 43 01.9 +0.1
comp=Z,623nm,0.9s,baz=126,slow=6.0,SNR=428
NRIK S S 02 52 18.0 -2.6
comp=Z,42nm,1.0s,baz=10,slow=22,SNR=19
NRIK PKPPKP **P'P'df** 03 10 42.9 -5.7
comp=Z,2.8nm,0.5s,baz=54,slow=2.3,SNR=6.8
NRIK LR LR 03 19 02.4
comp=Z,27μm,20.2s,baz=146,slow=40
NRIK Noril'sk 72.20 346*ce* P P 02 43 01.6 -0.2
NRIK pmax pmax
comp=Z,2μm,1.5s
NRIK MLR MLR
comp=Z,84μm,21.0s
AJN Ajban 72.41 295 *i* P P 02 43 02.2 -1.7
SNR=15
AJN Ajban 72.41 295 P P 02 43 03.8 -0.2
SNR=71
SOCY Socotra 72.49 282 P P 02 43 04.0 -0.7
SNR=28
SOCY Socotra 72.49 282 IAmb IAmb 02 43 15.1
comp=Z,718nm,0.7s
RBK Rabkut 72.53 288 P P 02 43 04.5 -0.4
SNR=29
RBK P P 02 43 04.5 -0.4
SNR=29
RER Riviere de l'E 72.74 247 P P 02 43 08.2 +2.1
SNR=25
RER Riviere de l'E 72.74 247 P P 02 43 06.7 +0.5
WHFO Wadi Hawf 72.97 288 P P 02 43 05.5 -2.0
SNR=64
WHFO P P 02 43 05.5 -2.0
SNR=64
ABTO Aybut 73.39 287 P P 02 43 09.0 -1.0
SNR=36
AB31 Akbulak array 73.44 321 *i* P P 02 43 09.3 -0.3
ABKAR Akbulak array 73.44 321 P P 02 43 09.3 -0.3
NIKH Nikolski High 73.51 35 IAmb IAmb 02 43 13.7
comp=Z,764nm,1.0s
AKTO Aktyubinsk 74.97 322 P P 02 43 18.1 -0.5
comp=Z,180nm,0.6s,baz=101,slow=7.0,SNR=240
AKTO S S 02 52 46.2 -6.5
comp=Z,6.5nm,1.0s,baz=114,slow=20,SNR=1.2
AKTO LR LR 03 16 59.3
comp=Z,69μm,21.9s,baz=100,slow=36
UNV Unalaska Valle 75.12 34 IAMs_20 IAMs_20 03 11 24.4
comp=Z,48μm,22.0s
SVE Sverdlovsk 75.43 329*d i* P P 02 43 21.0 0.0
SVE *e* S S 02 52 52.8 -4.7
SVE *e* 02 57 48.4
SVE pmax pmax
comp=Z,2μm,1.0s
SVE MLR MLR
comp=Z,67μm,25.0s
RAR Rarotonga 75.56 112 P P 02 43 22.2 -0.2
comp=Z,116nm,1.0s,baz=256,slow=5.2,SNR=22
RAR Rarotonga 75.56 112 P P 02 43 22.3 -0.2
RAR pmax pmax
comp=Z,456nm,1.4s
RAR Rarotonga 75.56 112 P P 02 43 22.3 -0.2
AKUT Akutan 75.62 34 IAMs_20 IAMs_20 03 11 39.6
comp=Z,49μm,22.0s
KIP Kipapa 75.86 68*ce* P P 02 43 25.2 +1.0
KIP pmax pmax
comp=Z,2μm,2.1s
KIP Kipapa 75.86 68 P P 02 43 23.2 -0.9
KIP IAmb IAmb 02 43 30.2
comp=Z,1μm,1.4s
KIP Kipapa 75.86 68 IAMs_20 IAMs_20 03 14 22.9
comp=Z,48μm,22.0s
HON Honolulu 75.86 69 P P 02 43 24.3 +0.1
HON pmax pmax
comp=Z,2μm,1.1s
HON Honolulu 75.86 69 P P 02 43 24.3 +0.1
HON IAMs_20 IAMs_20 03 14 24.1
comp=Z,44μm,21.0s
OPA Opana 75.88 68 IAMs_20 IAMs_20 03 14 14.4
comp=Z,50μm,22.0s
XMAS Kiritimati 76.04 88 P P 02 43 25.4 +0.1
XMAS IAmb IAmb 02 43 30.9
comp=Z,2μm,1.6s
XMAS Kiritimati 76.04 88 IAMs_20 IAMs_20 03 16 26.8
comp=Z,45μm,22.0s
GAMB Gambell 76.23 24 IAmb IAmb 02 43 36.6
comp=Z,2μm,1.6s
ARU Arti 76.39 328 P P 02 43 25.6 -0.9
comp=Z,110nm,0.6s,baz=117,slow=2.4,SNR=298
ARU S S 02 53 00.7 -7.3
comp=Z,2.3nm,0.6s,baz=180,slow=20,SNR=1.8
ARU PKKPbc **PKKPbc** 03 02 41.5 -0.2
comp=Z,1.1nm,0.4s,baz=166,slow=4.2,SNR=3.9
ARU Arti 76.39 328*c i* P P 02 43 25.6 -0.9
ARU 02 46 14.2
ARU PPP PPP 02 48 02.3
ARU S S 02 53 08.7 +0.7
ARU SSS SSS 03 01 20.6
ARU pmax pmax
comp=Z,750nm,1.0s
ARU pmax pmax
comp=Z,5μm,8.9s
ARU MLR MLR
comp=Z,68μm,22.0s
ARU Arti 76.39 328 P P 02 43 25.5 -0.9
FALS False Pass 77.15 34 IAMs_20 IAMs_20 03 12 27.8
comp=Z,54μm,21.0s
SBV Sambava 77.35 256 P P 02 43 33.2 +0.5
SNR=69
HLK Haleakala 77.47 69 IAmb IAmb 02 44 07.5
comp=Z,729nm,1.0s
HLK IAMs_20 IAMs_20 03 15 08.6
comp=Z,49μm,22.0s
KHLU Kahalu`u 77.75 70 IAMs_20 IAMs_20 03 10 33.0
comp=Z,46μm,22.0s
HUH Hualalai 77.80 70 IAmb IAmb 02 43 46.9
comp=Z,812nm,1.1s
HPAH Hawaii Prepara 77.95 70 IAmb IAmb 02 43 46.3
comp=Z,595nm,0.9s
HPAH IAMs_20 IAMs_20 03 10 39.4
comp=Z,40μm,22.0s
MWH Moku'aweowe 78.02 71 IAmb IAmb 02 43 53.6
comp=Z,872nm,0.9s
MLOA Mauna Loa Obse 78.04 71 IAmb IAmb 02 43 47.5
comp=Z,738nm,0.8s
MLOA IAMs_20 IAMs_20 03 15 07.9
comp=Z,42μm,21.0s
POHA Pohakuloa 78.09 70 P P 02 43 37.4 +0.3
POHA IAmb IAmb 02 43 51.6
comp=Z,1μm,0.9s
POHA Pohakuloa 78.09 70 IAMs_20 IAMs_20 03 10 43.2
comp=Z,50μm,22.0s
UWB Uwekahuna B 78.32 71 IAmb IAmb 02 43 49.7
comp=Z,864nm,1.0s
HATHI Halema'uma'u T 78.33 71 P P 02 43 36.9 -1.4
HATHI IAmb IAmb 02 43 59.5
comp=Z,819nm,0.9s
PUH Pauahi 78.38 71 IAmb IAmb 02 43 48.7
comp=Z,955nm,0.9s
TNA Tin City 78.43 23 P P 02 43 38.8 +1.1
baz=248,SNR=9.9
TNA S S 02 53 32.7 +3.0
baz=248
SDPT Sand Point 78.91 34 IAMs_20 IAMs_20 03 14 01.4
comp=Z,50μm,22.0s
CHGN Chignik 80.25 33 IAmb IAmb 02 43 56.7
comp=Z,1μm,1.3s
ABPO Ambohimpanom 80.43 250 *i* P P 02 43 52.5 +2.8
ABPO Ambohimpanom 80.43 250 P P 02 43 50.2 +0.4
ABPO pmax pmax
comp=Z,723nm,1.1s
ABPO Ambohimpanom 80.43 250 P P 02 43 50.2 +0.4
ABPO IAmb IAmb 02 44 01.2
comp=Z,723nm,1.1s
ABPO Ambohimpanom 80.43 250 IAMs_20 IAMs_20 03 15 06.1
comp=Z,40μm,22.0s
ABPO Ambohimpanom 80.43 250 *i* P P 02 43 52.5 +2.8
MAK Makhachkala 80.67 313*c i* P P 02 43 46.8 -3.5
MAK *e* 02 46 56.0
MAK *e* PPP PPP 02 48 40.6
MAK *e* S S 02 53 49.1 -5.3
MAK *e* SS SS 02 59 09.8 +1.7
MAK *e* SSS SSS 03 02 34.9
MAK pmax pmax
comp=Z,10μm,3.4s
MAK pmax pmax
comp=Z,812nm,1.1s
CRZF Crozet Islands 80.76 223 IAMs_20 IAMs_20 03 14 59.9
comp=Z,40μm,22.0s
RAYN Ar Rayn 80.98 293 *i* P P 02 43 51.8 -0.7
SNR=399
RAYN Ar Rayn 80.98 293 P P 02 43 51.8 -0.7
RAYN pmax pmax
comp=Z,384nm,0.9s
RAYN MLR MLR
comp=Z,72μm,22.0s
RAYN Ar Rayn 80.98 293 P P 02 43 51.8 -0.7
VOI Vohitsoka 81.10 248 P P 02 43 53.6 +0.4
SNR=88
FOMA Nahampoana Res 81.25 245 P P 02 43 54.6 +0.8
SNR=21
FOMA Nahampoana Res 81.25 245 IAMs_20 IAMs_20 03 18 02.3
comp=Z,36μm,21.0s
LGD Lagodekhi 81.49 312 P P 02 43 55.0 +0.2
VNDA Vanda 81.59 173 P P 02 43 54.9 +0.4
comp=Z,274nm,0.8s,baz=318,slow=5.9,SNR=197
VNDA S S 02 54 01.0 -1.7
comp=Z,1.6nm,0.8s,baz=126,slow=17,SNR=1.1
VNDA PKKPbc **PKKPbc** 03 02 31.0 +0.1
comp=Z,4.0nm,0.8s,baz=66,slow=1.5,SNR=4.4
VNDA PKP2bc 03 10 06.4
comp=Z,0.8nm,0.7s,baz=172,slow=2.0,SNR=3.6
VNDA PKPPKP **P'P'df** 03 10 31.1 +0.2
comp=Z,5.3nm,1.0s,baz=253,slow=2.6,SNR=6.8
VNDA LR LR 03 18 15.9
comp=Z,30μm,21.2s,baz=331,slow=34
VNDA Vanda 81.59 173 P P 02 43 54.4 -0.2
KIRV Kirov 81.70 329 P P 02 43 55.0 -0.4
comp=Z,228nm,0.4s,baz=107,slow=2.7,SNR=116
KIRV S S 02 53 57.5 -6.9
comp=Z,20nm,0.8s,baz=8.1,slow=14,SNR=3.2
KIRV PKKPbc **PKKPbc** 03 02 29.2 -0.7
comp=Z,21nm,1.0s,baz=285,slow=2.4,SNR=3.8
CHIR Chirikof Islan 81.70 34 IAmb IAmb 02 44 00.4
comp=Z,798nm,0.8s
MAW Mawson 81.89 200 P P 02 43 57.1 +0.8
comp=Z,477nm,1.1s,baz=64,slow=6.2,SNR=143
MAW S S 02 54 05.3 -0.8
comp=Z,3.3nm,1.0s,baz=217,slow=20,SNR=1.4
MAW PKKPbc **PKKPbc** 03 02 27.4 -2.5
comp=Z,8.9nm,0.9s,baz=256,slow=3.7,SNR=5.6
MAW PKPPKP **P'P'df** 03 10 29.5 -1.3
comp=Z,15nm,1.0s,baz=248,slow=3.6,SNR=11
MAW LR LR 03 17 01.7
comp=Z,26μm,21.8s,baz=54,slow=33
MAW Mawson 81.89 200 P P 02 43 56.8 +0.5
baz=82,SNR=434
MAW Mawson 81.89 200 P P 02 43 56.3 0.0
GROC Groznyy 81.94 313 *eP* P 02 43 57.1 0.0
GROC *e**PP **pwP** 02 44 11.8 -1.1
GROC *e**SP **sP** 02 44 17.6 +2.0
GROC *eS* S 02 54 07.3 -0.3
GROC pmax pmax
comp=Z,495nm,1.1s
GNI Garni 82.49 310 P P 02 44 00.6 +0.3
comp=Z,75nm,0.9s,baz=198,slow=0.9,SNR=31
GNI S S 02 54 10.5 -3.2
comp=Z,11nm,1.0s,baz=274,slow=19,SNR=1.7
GNI Garni 82.49 310 P P 02 43 59.9 -0.4
GNI Garni 82.49 310 *eP* P 02 44 00.8 +0.5
GNI Garni 82.49 310 S S 02 54 14.7 +1.0
GNI Garni 82.49 310*c i* P P 02 43 59.1 -1.2
GNI pmax pmax
comp=Z,238nm,1.1s
GNI MLR MLR
comp=Z,31μm,26.0s
GNI Garni 82.49 310 P P 02 44 00.1 -0.2
GNI IAmb IAmb 02 44 40.1
comp=Z,835nm,1.1s
SEAG Tbilisi Sea 82.56 312 P P 02 44 03.3 +2.9
SVW2 Sparrevohn 82.58 29 IAmb IAmb 02 44 15.1
comp=Z,1μm,1.3s
SII Sitkinak Islan 82.61 33 IAmb IAmb 02 44 12.6
comp=Z,996nm,0.9s
TTA Tatalina 82.70 27 IAmb IAmb 02 44 13.0
comp=Z,924nm,1.0s
GUDG Gudauri 82.85 312 P P 02 44 02.7 +0.5
TASB TASBURUN-IGDIR 82.86 310 *eP* P 02 44 02.4 +0.3
CLDR Calditan 83.06 309 *eP* P 02 44 04.1 +0.8
OHAK Old Harbor 83.18 33 IAmb IAmb 02 44 17.4
comp=Z,676nm,0.8s
CUKT Cukurca 83.20 307 *eP* P 02 44 03.4 -0.6
ZEI Tsey 83.29 313 *eP* P 02 44 02.3 -2.1
ZEI *eS* S 02 54 14.8 -7.1
ZEI pmax pmax
comp=Z,1μm,1.3s
ZEI pmax pmax
comp=E,1μm,0.9s
ZEI pmax pmax
comp=N,1μm,1.4s
ZEI pmax pmax
comp=Z,6μm,11.3s
ATD Arta Tunnel 83.38 281 S S 02 54 21.2 -2.2
comp=Z,10nm,1.0s,baz=217,slow=17,SNR=1.5
BGD Bogdanovka 83.43 311 P P 02 44 06.2 +1.0
VANB Van 83.44 308 *eP* P 02 44 05.3 +0.1
AKH Akhalkalaki 83.51 311 ⇑P P 02 44 06.8 +1.2
AKH Akhalkalaki 83.51 311 *eP* P 02 44 06.7 +1.2
AKH Akhalkalaki 83.51 311 P P 02 44 06.7 +1.2
AKH Akhalkalaki 83.51 311 IAmb IAmb 02 44 14.9
comp=Z,837nm,0.9s
KDAK Kodiak Island 83.62 32 P P 02 44 05.2 -0.3
KDAK pmax pmax
comp=Z,1μm,1.2s
KDAK Kodiak Island 83.62 32 P P 02 44 05.2 -0.3
KDAK IAmb IAmb 02 44 19.9
comp=Z,1μm,1.2s
GEVA Gevas 83.69 308 IAMs_20 IAMs_20 03 25 23.6
comp=Z,30μm,22.0s
AKDM Akdamar-Van 83.75 308 *eP* P 02 44 07.4 +0.6
KARS Kars 83.78 310 *eP* P 02 44 07.9 +1.0
KARS Kars 83.78 310 P P 02 44 07.9 +1.0
AGRB Hanur-Agry 83.80 309 *eP* P 02 44 07.9 +0.8
GOF Gofitskoye 84.05 315 ⇑*i* P P 02 44 07.9 -0.1
GOF *i* S S 02 54 28.9 -0.1
GOF pmax pmax
comp=Z,646nm,0.9s
GOF smax smax
comp=N,379nm,1.6s
KBZ Khabaz 84.08 314 P P 02 44 08.2 0.0
comp=N,149nm,0.8s,baz=158,slow=2.9
KBZ S S 02 54 25.9 -3.3
baz=145,slow=16
KBZ Khabaz 84.08 314*ce* P P 02 44 08.1 0.0
KBZ pmax pmax
comp=Z,384nm,1.0s
KBZ MLR MLR
comp=Z,28μm,25.0s
A21K Barrow 84.09 18 P P 02 44 09.1 +1.5
baz=258,SNR=265
A21K S S 02 54 30.4 +2.1
baz=258
MLAZ Malazgirt-MUS 84.12 309 *eP* P 02 44 09.6 +0.9
SIRT Sirnak 84.14 307 *eP* P 02 44 09.1 +0.3
IMAR Indian Mountai 84.17 24 P P 02 44 08.3 +0.2
KVAR Kislovodsk Arr 84.24 314 P P 02 44 09.9 +0.7
comp=Z,46nm,0.7s,baz=270,slow=20,SNR=45
KVAR S **SKSac** 02 54 23.2 -5.8
comp=Z,25nm,1.1s,baz=330,slow=20,SNR=2.3
KIV Kislovodsk 84.25 314 ⇑P P 02 44 09.3 +0.1
KIV Kislovodsk 84.25 314 ⇑P **PKKPbc** 03 02 24.0 +0.5
KIV Kislovodsk 84.25 314 *i* P P 02 44 09.1 -0.1
SNR=154
KIV Kislovodsk 84.25 314 *eP* P 02 44 09.1 -0.1
KIV Kislovodsk 84.25 314 P P 02 44 08.9 -0.2
KIV P P 02 44 08.9 -0.2
KIV S **SKSac** 02 54 25.5 -3.5
KIV S **SKSac** 02 54 25.5 -3.5
KIV Kislovodsk 84.25 314 *eP* P 02 44 09.0 -0.1
KIV *e* 02 47 24.3
KIV *e* 02 54 28.1
KIV *e*SS SS 03 00 00.4 -1.0
KIV pmax pmax
comp=Z,6μm,4.2s
KIV pmax pmax
comp=Z,2μm,1.0s
KIV Kislovodsk 84.25 314 P P 02 44 08.6 -0.5
KIV IAmb IAmb 02 44 40.5
comp=Z,534nm,1.0s
HOM Homer 84.32 30 P P 02 44 09.5 +0.5
baz=264
HOM S S 02 54 31.5 +0.4
baz=264
SENK Senkaya-Erzuru 84.34 310 *eP* P 02 44 10.7 +0.9
PPLA Purkeypile 84.43 27 IAmb IAmb 02 45 00.6
comp=Z,1μm,1.5s
GURO Guroymak-BITLI 84.50 308 *eP* P 02 44 11.5 +0.9
SKT Skwentna 84.62 28 IAmb IAmb 02 44 14.6
comp=Z,476nm,0.8s
CHVG Ch'k'valeri 84.63 313 ⇑P P 02 44 11.1 +0.1
CAPN Captain Cook N 84.68 29 P P 02 44 12.0 +1.2
baz=264
CAPN S **SKKSac** 02 54 40.4 +3.7
baz=264
KOPR Koprukoy-ERZUR 84.69 310 *eP* P 02 44 12.4 +0.8
PPT Papeete 84.79 108 P P 02 44 13.3 +1.0
comp=Z,70nm,0.9s,baz=73,slow=1.2,SNR=19
PPT LR LR 03 18 30.2
comp=Z,22μm,21.7s,baz=263,slow=33
PPT2 Papeete2 84.79 108 *eP* P 02 44 15.8 +3.4
comp=Z,388nm,1.4s
PPT2 Papeete2 84.79 108 *eS* S 02 54 36.0 -1.5
comp=Z,160μm,36.5s
PPT2 Papeete2 84.79 108 *e*LR LR 03 10 43.8
comp=Z,145μm,29.2s
PPT2 Papeete2 84.79 108 *e*LQ LQ 03 07 11.7
comp=Z,61μm,29.0s
PAE Paea 84.79 108 *eP* P 02 44 15.3 +3.0
comp=Z,79nm,1.4s

PPTF	**Pamatai, Papee**	**84.80**	**108**		P		**P**	02 44 12.4	**0.0**
PPTF					IAmb		IAmb	02 44 47.5		
	comp=Z,771nm,1.5s									
SUA	**Susitna One**	**84.94**	**29**		P		**P**	**02 44 11.6**	**-0.7**
VRTB	**Varto-Mus**	**84.97**	**309**	*eP*			**P**	**02 44 14.4**	**+1.4**
TIAR	**Tiarei**	**85.01**	**108**	*eP*			**P**	**02 44 16.7**	**+3.3**
	comp=Z,40nm,0.9s									
KTH	**Kantishna Hill**	**85.07**	**26**		IAmb		IAmb	02 44 23.3		
	comp=Z,978nm,1.6s									
BPAW	**Bear Paw Mtn.**	**85.10**	**26**		IAmb		IAmb	02 44 19.5		
	comp=Z,2µm,1.9s									
TVO	**Taravao**	**85.11**	**108**	*eP*			**P**	**02 44 17.3**	**+3.3**
	comp=Z,138nm,1.5s									
SVAN	**Silvan-Diyarba**	**85.15**	**308**	*eP*			**P**	**02 44 14.1**	**+0.4**
TEND	**Ethiopian Broa**	**85.19**	**282**	*eP*			**P**	**02 44 16.5**	**+2.1**
TEND				*eS*			**S**	**02 54 41.4**	**0.0**
CUT	**Chulitna**	**85.26**	**28**		P		**P**	**02 44 13.3**	**-0.3**
	baz=265,SNR=85									
CUT					S		**S**	**02 54 37.4**	**-2.8**
	baz=265									
VRH	**Novokhopyorsk**	**85.28**	**321**	*eP*			**P**	**02 44 13.1**	**-0.9**
VRH				*eS*			**SKSac**	**02 54 28.6**	**-6.4**
VRH					pmax		pmax			
	comp=Z,3µm,0.9s									
VRH					pmax		pmax			
	comp=Z,5µm,1.3s									
VRH					smax		smax			
	comp=E,29µm,13.2s									
VRH					MLR		MLR			
	comp=Z,75µm,25.0s									
TBI	**Tubuai**	**85.28**	**113**	*eP*			**P**	**02 44 18.3**	**+3.7**
	comp=Z,1µm,1.4s									
TBI	**Tubuai**	**85.28**	**113**	*eS*			**S**	**02 54 41.6**	**-0.4**
	comp=Z,54µm,37.5s									
TBI	**Tubuai**	**85.28**	**113**	*e*LR			LR	03 10 58.4		
	comp=Z,174µm,34.2s									
TBI	**Tubuai**	**85.28**	**113**	*e*LQ			LQ	03 07 26.0		
	comp=Z,48µm,34.2s									
KARO	**Karliova-Bingo**	**85.29**	**309**	*eP*			**P**	**02 44 15.8**	**+1.2**
MLY	**Manley**	**85.30**	**25**		P		**P**	**02 44 14.7**	**+0.8**
	baz=264,SNR=98									
MLY					S		**S**	**02 54 43.1**	**+2.4**
	baz=264									
TRF	**Thorofare Moun**	**85.34**	**27**		IAmb		IAmb	02 44 37.6		
	comp=Z,583nm,1.3s									
O22K	**Cooper Landing**	**85.36**	**30**		P		**P**	**02 44 14.3**	**+0.1**
	baz=266,SNR=65									
O22K					S		**S**	**02 54 41.8**	**+0.6**
	baz=266									
RC01	**Rabbit Creek A**	**85.40**	**29**		P		**P**	**02 44 14.4**	**0.0**
	baz=265,SNR=114									
RC01					S		**S**	**02 54 41.2**	**-0.5**
	baz=265									
MARD	**Mardin**	**85.46**	**307**		IAmb		IAmb	02 44 26.4		
	comp=Z,504nm,0.8s									
SEW	**Seward**	**85.46**	**30**		IAMs_20		IAMs_20	03 26 53.5		
	comp=Z,28µm,22.0s									
CHOM	**Cayeli-Rize**	**85.56**	**311**	*eP*			**P**	**02 44 16.2**	**+0.5**
BNGB	**Bingl**	**85.57**	**309**	*eP*			**P**	**02 44 16.8**	**+0.9**
MAZI	**Mazidag**	**85.73**	**307**	*eP*			**P**	**02 44 16.9**	**+0.2**
COLD	**Coldfoot**	**85.73**	**23**		P		**P**	**02 44 17.2**	**+1.3**
	baz=264,SNR=426									
COLD					S		**S**	**02 54 49.1**	**+4.4**
	baz=264									
KOPT	**Kop Dagi**	**85.73**	**310**		P		**P**	**02 44 17.6**	**+0.7**
BWN	**Browne**	**85.77**	**26**		IAmb		IAmb	02 44 51.7		
	comp=Z,429nm,1.0s									
GHO	**Glory Hole Cre**	**85.84**	**28**		IAmb		IAmb	02 44 24.3		
	comp=Z,378nm,0.7s									
I23K	**Minto, Yukon-K**	**85.89**	**25**		P		**P**	**02 44 17.1**	**+0.4**
	baz=266,SNR=223									
I23K					S		**S**	**02 54 49.6**	**+3.3**
	baz=266									
I23K	**Minto, Yukon-K**	**85.89**	**25**		IAmb		IAmb	02 44 21.1		
	comp=Z,351nm,0.8s									
MCK	**McKinley**	**85.97**	**26**		P		**P**	**02 44 17.0**	**-0.3**
	baz=266,SNR=134									
MCK					S		**S**	**02 54 48.0**	**+0.7**
	baz=266									
NEA2	**Nenana**	**85.97**	**25**		P		**P**	**02 44 17.1**	**-0.1**
	baz=266,SNR=70									
NEA2					S		**S**	**02 54 48.7**	**+1.4**
	baz=266									
DYBB	**Diyarbakir**	**85.98**	**308**	*eP*			**P**	**02 44 18.6**	**+0.7**
RND	**Reindeer**	**85.98**	**27**		IAmb		IAmb	02 45 07.3		
	comp=Z,780nm,1.5s									
BAYT	**Aydıntepe-Bayb**	**86.02**	**310**	*eP*			**P**	**02 44 19.3**	**+1.1**
TOLK	**Toolik Lake Re**	**86.10**	**21**		P		**P**	**02 44 18.8**	**+1.0**
	baz=265,SNR=241									
TOLK					S		**S**	**02 54 51.6**	**+3.2**
	baz=265									
MEH	**Mehetia**	**86.25**	**108**	*eP*			**P**	**02 44 22.2**	**+2.7**
	comp=Z,143nm,1.4s									
PMOR	**Pomariorio Ree**	**86.26**	**105**	*eP*			**P**	**02 44 22.9**	**+3.3**
	comp=Z,1µm,1.5s									
KTUT	**Trabzon**	**86.31**	**311**	⇑*P*			**P**	**02 44 19.7**	**+0.4**
KTUT	**Trabzon**	**86.31**	**311**	*eP*			**P**	**02 44 19.5**	**+0.1**
ERZN	**Erzincan**	**86.33**	**309**	*eP*			**P**	**02 44 20.5**	**+0.8**
SOC	**Sochi**	**86.38**	**313**	*c iP*			**P**	**02 44 18.6**	**-1.1**
SOC				*e**SP			**pP**	**02 44 31.1**	**-2.0**
SOC				*eS*			**SKSac**	**02 54 41.7**	**-0.7**
SOC					pmax		pmax			
	comp=Z,749nm,0.7s									
SOC					pmax		pmax			
	comp=Z,2µm,1.6s									
SOC					MLR		MLR			
	comp=Z,25µm,17.0s									
ANKE	**Ethiopia-Afar**	**86.47**	**279**	*eP*			**P**	**02 44 21.1**	**-0.1**
ANKE				*eS*			**S**	**02 54 53.1**	**-1.7**
TCOL	**CIGO, UAF Yank**	**86.51**	**25**		P		**P**	**02 44 19.2**	**-0.6**
	baz=267,SNR=17									
TCOL					S		**S**	**02 54 53.6**	**+1.2**
	baz=267									
COLA	**College**	**86.51**	**25**		P		**P**	**02 44 18.9**	**-0.9**
COLA					pmax		pmax			
	comp=Z,546nm,1.8s									
COLA	**College**	**86.51**	**25**		P		**P**	**02 44 18.9**	**-0.9**
VAH	**Vaihoa**	**86.53**	**105**	*eP*			**P**	**02 44 24.1**	**+3.2**
	comp=Z,694nm,1.5s									
PTK	**Pertek**	**86.58**	**309**	*eP*			**P**	**02 44 21.8**	**+0.8**
SCM	**Sheep Creek Mo**	**86.60**	**28**		IAmb		IAmb	02 44 33.8		
	comp=Z,667nm,1.0s									
SVRC	**Sivrice-ELAZID**	**86.64**	**308**	*eP*			**P**	**02 44 21.9**	**+0.6**
GLI	**Glacier Island**	**86.67**	**29**		IAmb		IAmb	02 44 26.4		
	comp=Z,364nm,0.7s									
POKR	**Poker Plat Res**	**86.70**	**25**		P		**P**	**02 44 20.6**	**-0.2**
	baz=267,SNR=18									
POKR					S		**S**	**02 54 55.9**	**+1.6**
	baz=267									
VORD	**Divnogorie**	**86.80**	**321**	*eP*			**P**	**02 44 21.2**	**-0.3**
VORD				*eS*			**SKSac**	**02 54 41.0**	**-3.6**
VORD					pmax		pmax			
	comp=Z,2µm,1.0s									
VORD					pmax		pmax			
	comp=Z,2µm,1.0s									
VORD					smax		smax			
	comp=N,15µm,7.5s									
VORD					MLR		MLR			
	comp=E,61µm,21.0s									
VORR	**Voronezh**	**86.86**	**321**	⇑*iP*			**P**	**02 44 20.0**	**-1.8**
VORR				*eS*			**SKKSac**	**02 54 53.0**	**-0.5**
VORR					pmax		pmax			
	comp=Z,5µm,1.2s									
HDA	**Harding Lake**	**86.88**	**26**		P		**P**	**02 44 20.6**	**-1.0**
	baz=268,SNR=134									
HDA					S		**S**	**02 54 56.1**	**0.0**
	baz=268									
HDA					S		**S**	**02 54 56.1**	**0.0**
	baz=268									
VSR	**Storozhevoye**	**86.88**	**321**	*eP*			**P**	**02 44 21.4**	**-0.5**
VSR				*eS*			**SKSac**	**02 54 36.2**	**-8.9**
VSR					pmax		pmax			
	comp=Z,1µm,0.8s									
VSR					pmax		pmax			
	comp=Z,2µm,1.3s									
VSR					smax		smax			
	comp=E,17µm,7.8s									
VSR					MLR		MLR			
	comp=Z,57µm,23.0s									
KLMR	**Klimovskoe**	**86.92**	**331**	*c iP*			**P**	**02 44 20.7**	**-1.2**
KLMR				*e*				02 47 45.2		
KLMR				*eS*			**SKSac**	**02 54 44.5**	**-0.3**
KLMR					pmax		pmax			
	comp=Z,3µm,1.5s									
KLMR					MLR		MLR			
	comp=Z,21µm,24.0s									
KLMR	**Klimovskoe**	**86.92**	**331**	⇑*iP*			**P**	**02 44 20.7**	**-1.2**
KLMR				⇓*iP*			**P**	**02 44 20.7**	**-1.2**
KLMR				⇓*iP*			**P**	**02 44 20.7**	**-1.2**
KLMR					AMP			02 44 37.3		
	comp=Z,3µm,1.5s									
KLMR				*e*PP			**PP**	**02 47 45.3**	**+0.2**
KLMR				*eS*			**SKSac**	**02 54 44.6**	**-0.3**
KLMR				*eS*			**SKSac**	**02 54 44.6**	**-0.3**
KLMR					LQ		LQ	03 16 44.3		
KLMR					LQ		LQ	03 16 44.3		
KLMR					LR		LR	03 21 37.8		
KLMR					AMP			03 23 40.0		
	comp=Z,21µm,24.0s									
ILAR	**Eielson Array**	**86.92**	**25**		P		**P**	**02 44 21.0**	**-0.8**
	comp=Z,69nm,0.8s,baz=208,slow=4.1,SNR=187									
ILAR					PP		**PP**	**02 47 49.0**	**+3.9**
	comp=Z,51nm,1.1s,baz=262,slow=6.3,SNR=6.5									
ILAR					S		**SKSac**	**02 54 44.1**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=258,slow=3.8,SNR=1.2									
ILAR					PKKPbc		**PKKPbc**	**03 02 18.8**	**+0.9**
	comp=Z,5.7nm,0.8s,baz=46,slow=1.2,SNR=8.0									
ILAR					PKPPKP		P'P'df	03 10 14.7	-7.8
	comp=Z,2.5nm,1.0s,baz=314,slow=0.5,SNR=4.7									
ILAR	**Eielson Array**	**86.92**	**25**		P		**P**	**02 44 20.2**	**-1.7**
ILAR	**Eielson Array**	**86.92**	**25**				**PKKPbc**	**03 02 18.8**	**+0.9**
HIN	**Hinchinbrook I**	**86.95**	**30**		IAmb		IAmb	02 45 05.4		
	comp=Z,452nm,1.0s									
HIN					IAMs_20		IAMs_20	03 17 37.2		
	comp=Z,25µm,21.0s									
Q23K	**Middleton Isla**	**87.00**	**31**		P		**P**	**02 44 23.7**	**+1.4**
	baz=268									
Q23K					S		**S**	**02 55 02.3**	**+5.1**
	baz=268									
URFA	**Urfa**	**87.02**	**307**	*eP*			**P**	**02 44 23.6**	**+0.5**
LPSR	**Galich'ya Gora**	**87.05**	**322**	*eP*			**P**	**02 44 22.4**	**-0.3**
LPSR				*eS*			**SKSac**	**02 54 41.9**	**-4.2**
LPSR					pmax		pmax			
	comp=Z,3µm,1.3s									
LPSR					pmax		pmax			
	comp=Z,3µm,1.2s									
LPSR					smax		smax			
	comp=E,34µm,11.7s									
LPSR					MLR		MLR			
	comp=Z,66µm,25.0s									
ESPY	**Espiye-Giresun**	**87.10**	**311**	*eP*			**P**	**02 44 22.7**	**-0.6**
M24K	**Tolsona, Glenn**	**87.15**	**28**		P		**P**	**02 44 23.9**	**+0.8**
	baz=268,SNR=52									
M24K					S		**S**	**02 55 02.1**	**+3.2**
	baz=268									
M24K	**Tolsona, Glenn**	**87.15**	**28**		IAmb		IAmb	02 45 09.4		
	comp=Z,643nm,1.1s									
ILIC	**ilic-Erzincan**	**87.22**	**309**	*eP*			**P**	**02 44 24.8**	**+0.8**
EYAK	**Cordova Ski Ar**	**87.32**	**30**		IAMs_20		IAMs_20	03 25 59.2		
	comp=Z,28µm,22.0s									
MALT	**Malatya**	**87.33**	**308**	*eP*			**P**	**02 44 25.2**	**+0.6**
PAX	**Paxson**	**87.50**	**27**		IAMs_20		IAMs_20	03 19 40.1		
	comp=Z,29µm,22.0s									
FURI	**Furi**	**87.53**	**279**		P		**P**	**02 44 26.7**	**+0.4**
FYU	**Fort Yukon**	**87.65**	**24**		IAmb		IAmb	02 45 00.5		
	comp=Z,777nm,1.2s									
TMCR	**Tamitsa**	**87.67**	**334**	*eP*			**P**	**02 44 23.8**	**-1.6**
TMCR				*eS*			**SKSac**	**02 54 49.5**	**+0.2**
TMCR					pmax		pmax			
	comp=Z,1µm,1.5s									
RIDG	**Independent Ri**	**87.79**	**26**		IAmb		IAmb	02 44 39.1		
	comp=Z,388nm,0.9s									
MOS	**Moscow**	**87.84**	**326**	*eP*			**P**	**02 44 24.3**	**-2.1**
MOS				*e*				02 47 47.9		
MOS				*i*				02 54 46.8		
MOS				*i* S			**SKKSac**	**02 55 00.1**	**-0.6**
MOS				*e*PS			SP	02 56 04.8		
MOS				*e*SS			**SS**	**03 00 57.6**	**+4.4**
MOS				*e*SSS			SSS	03 04 23.2		
MOS					pmax		pmax			
	comp=Z,1µm,1.2s									
MOS					pmax		pmax			
	comp=Z,6µm,2.5s									
MOS					smax		smax			
	comp=N,58µm,7.0s									
MOS					smax		smax			
	comp=E,61µm,6.2s									
MOS					MLR		MLR			
	comp=E,78µm,24.0s									
MOS					MLR		MLR			
	comp=Z,101µm,24.0s									
RAGM	**Ragged Mountai**	**87.85**	**30**		IAMs_20		IAMs_20	03 19 38.2		
	comp=Z,30µm,22.0s									
N25K	**Chitina, Valde**	**87.89**	**29**		P		**P**	**02 44 27.4**	**+0.7**
	baz=270,SNR=57									
N25K					S		**S**	**02 55 07.0**	**+0.9**
	baz=270									
N25K	**Chitina, Valde**	**87.89**	**29**		IAMs_20		IAMs_20	03 18 33.7		
	comp=Z,26µm,22.0s									
BMAR	**Burnt Mountain**	**87.92**	**23**		P		**P**	**02 44 27.0**	**+0.3**
KAIM	**Kayak Island**	**87.98**	**30**		IAmb		IAmb	02 44 40.2		
	comp=Z,435nm,1.0s									
DILA	**Dilla**	**87.99**	**276**	*eP*			**P**	**02 44 29.9**	**+1.6**
DILA				*eS*			**SKSac**	**02 54 50.5**	**-3.1**
ANN	**Anapa**	**88.03**	**315**	*eP*			**P**	**02 44 26.5**	**-1.1**
ANN				*e**PP			**pP**	**02 44 35.7**	**-5.4**
ANN				*eS*			**SKSac**	**02 54 51.9**	**-0.4**
ANN					pmax		pmax			
	comp=E,334nm,0.9s									
ANN					pmax		pmax			
	comp=N,459nm,1.1s									
ANN					pmax		pmax			
	comp=Z,2µm,1.1s									
ANN					pmax		pmax			
	comp=E,228nm,0.7s									
ANN					pmax		pmax			
	comp=Z,3µm,1.2s									
ANN					pmax		pmax			
	comp=N,263nm,0.5s									
ANN					smax		smax			
	comp=N,17µm,5.7s									
ANN					smax		smax			
	comp=E,37µm,10.6s									
ANN					MLR		MLR			
	comp=E,115µm,25.0s									
ANN					MLR		MLR			
	comp=N,142µm,25.0s									
ANN					MLR		MLR			
	comp=Z,106µm,26.0s									
HMT	**Hamilton**	**88.06**	**30**		IAMs_20		IAMs_20	03 20 51.7		
	comp=Z,24µm,20.0s									
RSDY	**Resadiye-TOKAT**	**88.16**	**310**	*eP*			**P**	**02 44 28.8**	**+0.4**
SCRK	**Sand Creek**	**88.17**	**26**		P		**P**	**02 44 27.9**	**-0.1**
	baz=270,SNR=70									
SCRK					S		**S**	**02 55 08.2**	**-0.4**
	baz=270									
GAZ	**Gaziantep**	**88.31**	**307**	*eP*			**P**	**02 44 29.6**	**+0.4**
SVSK	**Karacayir**	**88.42**	**310**	*eP*			**P**	**02 44 30.4**	**+0.8**
VRDI	**Verde Repeater**	**88.45**	**29**		IAMs_20		IAMs_20	03 27 37.9		
	comp=Z,26µm,22.0s									
OBN	**Obninsk**	**88.45**	**325**	⇑*P*			**P**	**02 44 28.5**	**-0.9**
OBN	**Obninsk**	**88.45**	**325**	*c iP*			**P**	**02 44 28.4**	**-0.9**
OBN				*i* *SP			**pP**	**02 44 42.9**	**0.0**
OBN				*e*				02 48 05.0		
OBN				*i* S			**SKSac**	**02 54 53.1**	**-1.2**
OBN				*i*				02 55 11.0		
OBN				*e*SS			**SS**	**03 01 02.1**	**+0.1**
OBN				*i* SSS			SSS	03 04 37.5		
OBN					pmax		pmax			
	comp=Z,16µm,5.2s									
OBN					pmax		pmax			
	comp=Z,3µm,1.9s									
OBN					MLR		MLR			
	comp=Z,127µm,25.0s									
OBN	**Obninsk**	**88.45**	**325**		P		**P**	**02 44 28.3**	**-1.0**
OBN					IAMs_20		IAMs_20	03 27 30.8		
	comp=Z,41µm,20.0s									
L26K	**Log Cabin Wild**	**88.47**	**27**		P		**P**	**02 44 29.7**	**+0.4**
	baz=271,SNR=106									
L26K					S		**S**	**02 55 12.7**	**+1.3**
	baz=271									
KIBK	**Kibwezi**	**88.49**	**268**		P		**P**	**02 44 31.9**	**+1.3**
	SNR=343									
CRQM	**Cirque**	**88.61**	**29**		IAmb		IAmb	02 44 43.8		
	comp=Z,495nm,1.1s									
MCARA	**McCarthy VSAT**	**88.65**	**29**		IAmb		IAmb	02 44 45.7		
	comp=Z,402nm,1.1s									
ASF	**Jabal al Asfar**	**88.67**	**302**		P		**P**	**02 44 32.1**	**+1.0**
	comp=Z,36nm,0.8s,baz=49,slow=12,SNR=69									
ASF					S		**SKSac**	**02 54 57.5**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=10,slow=23,SNR=3.3									
ASF					LR		LR	03 27 26.3		
	comp=Z,5µm,22.0s,baz=63,slow=38									
TOKT	**Tokat**	**88.76**	**310**	*eP*			**P**	**02 44 31.3**	**0.0**
TOKA	**Tokat**	**88.81**	**310**		P		**P**	**02 44 31.1**	**-0.4**
SARI	**SarD1z-Kayseri**	**88.91**	**308**	*eP*			**P**	**02 44 32.4**	**+0.3**
LVZ	**Lovozero**	**89.00**	**338**	*ceP*			**P**	**02 44 29.9**	**-1.8**
LVZ					pmax		pmax			
	comp=Z,335nm,1.0s									
LVZ					MLR		MLR			
	comp=Z,61µm,23.0s									
ISLE	**Juniper Island**	**89.01**	**30**		IAmb		IAmb	02 44 46.0		
	comp=Z,703nm,1.5s									
K27K	**Chicken**	**89.01**	**26**		P		**P**	**02 44 32.9**	**+1.1**
	baz=272									
K27K					S		**S**	**02 55 19.2**	**+2.9**
	baz=272									
K27K	**Chicken**	**89.01**	**26**		IAmb		IAmb	02 44 44.9		
	comp=Z,503nm,1.1s									
KVT	**Kavak**	**89.12**	**311**	*eP*			**P**	**02 44 33.3**	**+0.4**
TAHT	**Tahtakopru-Hat**	**89.15**	**306**	*eP*			**P**	**02 44 33.3**	**+0.2**
BCAR	**Beaver Creek A**	**89.18**	**27**		P		**P**	**02 44 32.8**	**+0.1**
MESA	**MESA**	**89.22**	**30**		IAMs_20		IAMs_20	03 19 29.2		
	comp=Z,26µm,22.0s									
KMBO	**Kilima Mbogo**	**89.25**	**269**		P		**P**	**02 44 36.0**	**+1.7**
	comp=Z,43nm,0.9s,baz=54,slow=5.6,SNR=66									
KMBO					S		**SKSac**	**02 55 03.5**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=54,slow=19,SNR=1.3									
KMBO					PKPPKP		**P'P'df**	**03 10 24.9**	**+3.7**
	comp=Z,2.1nm,1.0s,baz=233,slow=2.6,SNR=5.3									
KMBO					LR		LR	03 22 37.4		
	comp=Z,25µm,20.2s,baz=80,slow=34									
KMBO	**Kilima Mbogo**	**89.25**	**269**	*i*	P		**P**	**02 44 35.2**	**+0.9**
	SNR=87									
KMBO	**Kilima Mbogo**	**89.25**	**269**		P		**P**	**02 44 35.8**	**+1.5**
KMBO					P		**P**	**02 44 35.8**	**+1.5**
KMBO					S		**SKSac**	**02 55 03.9**	**+2.5**
KMBO					S		**SKSac**	**02 55 03.9**	**+2.5**
KMBO	**Kilima Mbogo**	**89.25**	**269**	*c iP*			**P**	**02 44 35.2**	**+0.9**
KMBO	**Kilima Mbogo**	**89.25**	**269**		P		**P**	**02 44 34.4**	**+0.1**
KMBO	**Kilima Mbogo**	**89.25**	**269**		IAMs_20		IAMs_20	03 22 23.7		
	comp=Z,35µm,21.0s									
YAH	**Yahtse**	**89.31**	**30**		IAMs_20		IAMs_20	03 20 34.7		
	comp=Z,29µm,21.0s									
BARN	**Barnard Glacie**	**89.32**	**29**		IAmb		IAmb	02 44 47.7		
	comp=Z,511nm,1.0s									
BNN	**Bunyan**	**89.34**	**309**	*eP*			**P**	**02 44 33.9**	**-0.2**
KOZT	**Kozan**	**89.40**	**307**	*eP*			**P**	**02 44 34.1**	**-0.2**
HWQ	**Hawqa**	**89.41**	**304**	*eP*			**P**	**02 44 34.8**	**+0.3**
CEYT	**Ceyhan**	**89.48**	**307**	*eP*			**P**	**02 44 34.8**	**+0.2**
CTGM	**Chitina Glacie**	**89.48**	**29**		IAmb		IAmb	02 44 48.5		
	comp=Z,383nm,0.9s									
APA	**Apatity**	**89.49**	**337**	⇓*iP*			**P**	**02 44 32.3**	**-1.7**
APA				*i*				02 54 58.0		
APA				*i* S			**S**	**02 55 18.0**	**-2.7**
APA				*i* PS			**PS**	**02 56 37.0**	**+5.2**
APA				*i* SS			**SS**	**03 01 20.0**	**+3.4**
APA					pmax		pmax			
	comp=Z,203nm,1.0s									
RCY	**Rachaya**	**89.52**	**303**	*eP*			**P**	**02 44 35.6**	**+0.5**
TABL	**Table Mountain**	**89.61**	**30**		IAmb		IAmb	02 44 47.1		
	comp=Z,284nm,0.9s									
TABL					IAMs_20		IAMs_20	03 20 43.5		
	comp=Z,31µm,22.0s									
QRWL	**Qaraoun**	**89.65**	**303**	*eP*			**P**	**02 44 36.0**	**+0.4**
BHL	**Bhannes**	**89.66**	**304**	*eP*			**P**	**02 44 35.9**	**+0.2**
DIKM	**Dikmen**	**89.70**	**311**	⇑*P*			**P**	**02 44 34.1**	**-1.4**
DIKM	**Dikmen**	**89.70**	**311**	⇑*P*			**PKKPbc**	**03 02 10.2**	**+0.1**
DIKM	**Dikmen**	**89.70**	**311**	*eP*			**P**	**02 44 34.6**	**-0.9**
SNOP	**Sinop**	**89.72**	**312**	*eP*			**P**	**02 44 35.1**	**-0.5**
KRTS	**Karatas**	**89.80**	**306**	*eP*			**P**	**02 44 36.6**	**+0.5**
MMAI	**Mount Meron Ar**	**89.90**	**303**		P		**P**	**02 44 37.3**	**+0.5**
	comp=Z,139nm,0.9s,baz=78,slow=5.5,SNR=141									
MMAI					S		**SKSac**	**02 55 06.8**	**+2.6**
	comp=Z,1.1nm,0.7s,baz=73,slow=16,SNR=1.2									
MMAI					PKKPbc		**PKKPbc**	**03 02 10.8**	**+1.5**
	comp=Z,9.3nm,1.0s,baz=101,slow=2.9,SNR=5.6									
MMAI					LR		LR	03 31 15.3		
	comp=Z,6µm,20.8s,baz=100,slow=40									
MMAI	**Mount Meron Ar**	**89.90**	**303**		P		**PKKPbc**	**03 02 10.8**	**+1.5**
KARA	**Karaisali**	**90.03**	**307**	*eP*			**P**	**02 44 36.9**	**-0.3**
CMRD	**Camardi-Nigde**	**90.06**	**308**	*eP*			**P**	**02 44 36.8**	**-0.7**
PCA	**Pinnacle**	**90.07**	**30**		IAmb		IAmb	02 44 48.5		
	comp=Z,290nm,1.0s									
PCA					IAMs_20		IAMs_20	03 21 06.3		
	comp=Z,25µm,22.0s									
DAWY	**Dawson**	**90.19**	**26**		IAmb		IAmb	02 44 47.9		
	comp=Z,1µm,2.0s									
DAWY					IAMs_20		IAMs_20	03 25 58.7		
	comp=Z,27µm,22.0s									
CORM	**Corum**	**90.23**	**310**	*eP*			**P**	**02 44 38.3**	**+0.1**
SIM	**Simferopol'**	**90.38**	**315**	*ceP*			**P**	**02 44 36.9**	**-1.8**
SIM				*e*				02 48 17.0		
SIM				*e*				02

BERE Bereket-Mersin 91.54 306 *e*P **P** 02 44 44.1 -0.3
KURC Kurucasile-Bar 91.57 312 *e*P **P** 02 44 42.8 -1.4
KEV Kevo 91.57 340 P **P** 02 44 42.9 -0.7
KEV pmax pmax
comp=Z,335nm,1.2s
KEV Kevo 91.57 340 P **P** 02 44 42.9 -0.7
KEV IAmb IAmb 02 45 23.7
comp=Z,335nm,1.2s
TEKE Tekeli-Mersin 91.64 306 *e*P **P** 02 44 43.8 -0.9
CHBY Cihanbeyli 91.67 309 *e*P **P** 02 44 43.5 -1.4
LOD Lodumlu 91.68 310 *e*P **P** 02 44 44.1 -0.8
QSPA South Pole Qui 91.75 180 P **P** 02 44 45.1 +0.5
comp=Z,79nm,0.8s,baz=121,slow=0.2,SNR=71
QSPA S **SKSac** 02 55 12.9 -0.5
comp=Z,16nm,1.1s,baz=37,slow=21,SNR=8.4
QSPA PKKP **PKKPdf** 03 02 04.4 +1.0
comp=Z,22nm,1.1s,baz=179,slow=2.5,SNR=3.9
QSPA PKPPKP P'P'df 03 09 58.5 -14
comp=Z,5.7nm,1.1s,baz=240,slow=1.6,SNR=4.6
QSPA South Pole Qui 91.75 180 P **P** 02 44 44.4 -0.3
LEF Lefka 91.88 305 ⇑P **P** 02 44 44.6 -1.2
LEF Lefka 91.88 305 *e*P **P** 02 44 44.5 -1.3
INK Inuvik 92.01 21 P **P** 02 44 45.2 -0.4
comp=Z,135nm,1.1s,baz=275,slow=4.1,SNR=154
INK S **SKSac** 02 55 14.1 -0.4
comp=Z,12nm,1.1s,baz=91,slow=32,SNR=6.9
INK PKKP **PKKPdf** 03 02 02.8 +0.8
comp=Z,5.6nm,0.5s,baz=55,slow=3.0,SNR=12
INK PKPPKP **P'P'df** 03 10 13.3 +0.5
comp=Z,3.9nm,1.0s,baz=62,slow=6.5,SNR=4.7
INK Inuvik 92.01 21 IAMs_20 IAMs_20 03 33 14.8
comp=Z,27µm,22.0s
LADK Ladik-KONYA 92.10 308 *e*P **P** 02 44 45.2 -1.8
ARA0 ARCESS Array S 92.12 340⇑*i*P **P** 02 44 44.9 -1.3
ARCES ARCESS Array B 92.12 340 P **P** 02 44 45.0 -1.2
comp=Z,460nm,1.0s,baz=78,slow=6.3,SNR=162
ARCES PKKPbc **PKKPbc** 03 02 05.9 +0.9
comp=Z,4.4nm,0.6s,baz=241,slow=3.9,SNR=8.9
ARCES LR LR 03 32 27.0
comp=Z,23µm,20.1s,baz=85,slow=40
SPA0 Spitsbergen Ar 92.28 349 P **P** 02 44 46.4 -0.4
SPA0 Spitsbergen Ar 92.28 349⇑*i*P **P** 02 44 46.0 -0.8
SPA0 *e*PP **PP** 02 48 27.3 -0.1
SPITS Spitsbergen Ar 92.28 349 P **P** 02 44 45.6 -1.1
comp=Z,101nm,0.8s,baz=124,slow=7.4,SNR=50
SPITS PKKPbc **PKKPbc** 03 02 09.0 +4.2
comp=Z,12nm,0.9s,baz=352,slow=2.9,SNR=5.2
GAZI Gazipasa 92.28 306 *e*P **P** 02 44 47.0 -0.7
YUVA Yuva-Kibriscik 92.47 310 *e*P **P** 02 44 45.6 -3.0
HAMF Hammerfest 92.51 341⇑*i*P **P** 02 44 46.8 -1.2
HAMF IVmBBB 02 44 50.0
comp=Z,4µm,1.6s
HAMF *e*PP **PP** 02 48 29.5 +0.1
HAMF *e*SKSac **SKSac** 02 55 18.0 +0.7
HAMF *e*SP SPn 02 56 59.7 +1.1
HAMF *e*SS **SS** 03 02 01.8 +1.9
HAMF IVMs_BB IVMs_BB 03 29 43.1
comp=Z,23µm,24.0s
SEYD Seydisehir-KON 92.58 307 *e*P **P** 02 44 47.3 -1.9
KDZE Karadeniz Ereo 92.58 311⇓P **P** 02 44 48.5 -0.5
SKAG Skagway 92.61 30 IAmb IAmb 02 45 00.5
comp=Z,291nm,0.9s
SVRH Sivrihisar-ESK 92.67 309 *e*P **P** 02 44 48.5 -1.0
KBS Kingsbay 92.81 350 P **P** 02 44 48.6 -0.6
KBS pmax pmax
comp=Z,112nm,0.9s
KBS MLR MLR
comp=Z,27µm,22.0s
KBS Kingsbay 92.81 350 P **P** 02 44 48.6 -0.6
KBS Kingsbay 92.81 350 IAMs_20 IAMs_20 03 26 39.1
comp=Z,27µm,22.0s
KBS Kingsbay 92.81 350*i*P **P** 02 44 48.2 -1.0
KBS *e*PP **PP** 02 48 32.3 +0.8
KBS *e*SKSac **SKSac** 02 55 17.8 -1.0
KBS *e*SS **SS** 03 02 07.5 +3.5
KBS IVMs_BB IVMs_BB 03 25 56.4
comp=Z,31µm,26.4s
MDUB Mudurnu 92.83 310 *e*P **P** 02 44 49.2 -1.1
HSPB Hornsund (broa 92.86 348 *e*P **P** 02 44 48.2 -1.3
HSPB *e*S **SKSac** 02 55 18.6 -0.5
HSPB *e* 03 28 18.8
HSPB Hornsund (broa 92.86 348⇑*i*P **P** 02 44 47.9 -1.5
HSPB IVmB_BB 02 44 56.6
comp=Z,4µm,1.5s
HSPB *e*PP **PP** 02 48 32.0 +0.1
HSPB *e*SKSac **SKSac** 02 55 18.5 -0.5
HSPB *e*SS **SS** 03 02 05.1 +0.4
HSPB IVMs_BB IVMs_BB 03 28 10.3
comp=Z,28µm,25.6s
BJO1 Bjornoya 92.87 345⇑*i*P **P** 02 44 49.0 -0.5
BJO1 IVmB_BB 02 44 55.7
comp=Z,3µm,1.8s
BJO1 *e*SKSac **SKSac** 02 55 18.9 -0.2
BJO1 *e*SS **SS** 03 02 06.7 +1.8
BJO1 IVMs_BB IVMs_BB 03 23 43.4
comp=Z,11µm,26.2s
SIT Sitka 92.94 33 IAmb IAmb 02 45 03.1
comp=Z,311nm,1.1s
BESE Bessie Mountai 92.98 31 IAmb IAmb 02 45 02.4
comp=Z,474nm,1.1s
BESE IAMs_20 IAMs_20 03 20 26.8
comp=Z,32µm,21.0s
KTK1 Kautokeino 93.02 339⇑*i*P **P** 02 44 48.8 -1.6
KTK1 *e*SKSac **SKSac** 02 55 19.3 -0.9
CIFT Cifteler, Eski 93.03 309 *e*P **P** 02 44 49.9 -1.3
AKASG Malin Array Be 93.18 321 P **P** 02 44 50.0 -1.4
comp=Z,128nm,1.1s,baz=73,slow=4.1,SNR=80
AKASG S **SKSac** 02 55 21.0 -0.8
comp=Z,0.8nm,0.4s,baz=86,slow=5.1,SNR=2.1
AKASG PKKP **PKKPdf** 03 01 60.0 +0.3
comp=Z,7.0nm,0.7s,baz=271,slow=3.1,SNR=13
AKASG PKPPKP **P'P'df** 03 10 08.1 -3.5
comp=Z,0.2nm,0.3s,baz=262,slow=2.4,SNR=4.7
AKASG Malin Array Be 93.18 321 P **P** 02 44 50.1 -1.4
AKBB Malin Array Si 93.19 321*ce*P **P** 02 44 49.8 -1.7
AKBB Malin Array Si 93.19 321 IAmb IAmb 02 45 23.3
comp=Z,315nm,1.1s
PURM Purcari 93.22 317⇓P **P** 02 44 52.7 +1.0
JIS Juneau Island 93.27 32 IAmb IAmb 02 45 02.0
comp=Z,269nm,1.0s
SRCK Saricakaya, Es 93.31 310 *e*P **P** 02 44 50.9 -1.4
GULT Gulveren 93.36 310 *e*P **P** 02 44 50.3 -2.3
FIA1 FINESS Array S 93.36 332 IAmb IAmb 02 45 05.0
comp=Z,272nm,1.0s
FINES FINESS Array B 93.36 332 P **P** 02 44 50.4 -1.7
comp=Z,87nm,0.8s,baz=78,slow=3.8,SNR=69
FINES PKKPbc **PKKPbc** 03 02 03.3 +1.8
comp=Z,8.6nm,0.9s,baz=194,slow=3.9,SNR=5.5
FINES PKPPKP **P'P'df** 03 10 15.0 +4.4
comp=Z,3.9nm,1.0s,baz=123,slow=7.0,SNR=4.2
FINES FINESS Array B 93.36 332 *i* P **P** 02 44 51.0 -1.1
FINES pmax pmax
comp=Z,87nm,0.8s
FINES FINESS Array B 93.36 332 P **P** 02 44 50.7 -1.4
OUF Merijarvi 93.43 335 *e*S **P** 02 44 51.2 -1.1
SAUV Serdivan-Sakar 93.47 311 *e*P **P** 02 44 50.7 -2.3
SPNC Sapanca-Adapaz 93.49 311 *e*P **P** 02 44 52.1 -1.0
SHUT Suhut-Afyon 93.50 309 *e*P **P** 02 44 52.5 -0.9
MICGM Minsk 93.51 325 LRM MLR 03 27 52.0
comp=N,29nm,28.0s
MICGM Minsk 93.51 325⇑*e*P **P** 02 44 50.0 -2.9
MICGM Minsk 93.51 325⇑*e*P **P** 02 44 50.0 -2.9
MICGM Minsk 93.51 325 PM 02 44 51.0
comp=Z,0.5nm,1.0s
MICGM Minsk 93.51 325 PM 02 44 52.0
comp=Z,5.1nm,6.0s
MICGM Minsk 93.51 325 *e*PP PP 02 48 48.0 +10
MICGM Minsk 93.51 325 *e*SKS **SKSac** 02 55 16.0 -7.4
MICGM Minsk 93.51 325 *e*S S 02 55 48.0 -9.5
MICGM Minsk 93.51 325 SM 02 55 50.0
comp=E,29nm,12.0s
MICGM Minsk 93.51 325 SM 02 55 50.0
comp=E,48nm,12.0s
MICGM Minsk 93.51 325 *e*PS PS 02 57 08.0 -8.8
MICGM Minsk 93.51 325 *e*SS SS 03 02 00.0 -15
MICGM Minsk 93.51 325 *e*SSS SSS 03 06 04.0
MICGM Minsk 93.51 325 *e*LQ LQ 03 12 34.0
MICGM Minsk 93.51 325 LQM 03 15 24.0
comp=E,19nm,26.0s
MICGM Minsk 93.51 325 LQM 03 15 56.0
comp=E,29nm,28.0s
MICGM Minsk 93.51 325 *e*LR LR 03 19 20.0
MICGM Minsk 93.51 325 LRM MLR 03 27 36.0
comp=E,119nm,24.0s
MICGM Minsk 93.51 325 LRM MLR 03 27 40.0
comp=Z,143nm,24.0s
MICGM Minsk 93.51 325 LRM MLR 03 27 42.0
comp=Z,95nm,24.0s
MICGM Minsk 93.51 325 LRM MLR 03 27 44.0
comp=E,71nm,25.0s
MICGM Minsk 93.51 325 LRM MLR 03 27 48.0
comp=N,18nm,22.0s
MNK Minsk 93.51 325 *e*P **P** 02 44 50.0 -2.9
MNK *e* 02 55 16.0
MNK *e*S **SKKSac** 02 55 48.0 +5.0
MNK pmax pmax
comp=Z,5µm,6.0s
MNK smax smax
comp=E,29µm,12.0s
VSU Vasula 93.54 329 *e*P **P** 02 44 52.0 -0.9
VSU Vasula 93.54 329*c i*P **P** 02 44 51.0 -1.9
VSU pmax pmax
comp=Z,732nm,1.2s
VSU MLR MLR
comp=Z,218µm,27.0s
VSU Vasula 93.54 329 *e*SB **P** 02 44 52.2 -0.7
BCK Bucak 93.56 308 *e*P **P** 02 44 51.6 -2.1
ISP Isparta 93.58 308 *e*P **P** 02 44 51.9 -1.9
ISP Isparta 93.58 308 P **P** 02 44 52.9 -0.9
ISP pmax pmax
comp=Z,629nm,1.6s
ISP Isparta 93.58 308 P **P** 02 44 52.9 -0.9
ISP IAmb IAmb 02 45 00.7
comp=Z,629nm,1.6s
TAOE Nuku Hiva Isla 93.63 99 *e*S **S** 02 55 55.9 -4.5
comp=Z,17µm,31.8s
TAOE Nuku Hiva Isla 93.63 99 *e*LR LR 03 14 43.0
comp=Z,93µm,25.7s
TAOE Nuku Hiva Isla 93.63 99 *e*T T 04 27 31.7
comp=Z,32nm,0.2s
TAOE Nuku Hiva Isla 93.63 99 IAMs_20 IAMs_20 03 22 25.4
comp=Z,24µm,22.0s
TAOE Nuku Hiva Isla 93.63 99 *e*LQ LQ 03 10 50.5
comp=Z,36µm,28.9s
KORT Korkueli 93.79 307 *e*P **P** 02 44 53.4 -1.4
CAVI Cavuskoy 93.89 310 *e*P **P** 02 44 54.2 -0.8
KIS Kishinev 93.89 317⇑*i*P **P** 02 44 53.2 -1.6
comp=Z,2µm,6.2s
KIS Kishinev 93.89 317 *i* S **S** 02 56 00.0 -1.2
KIS Kishinev 93.89 317⇑P **P** 02 44 53.6 -1.3
KIS Kishinev 93.89 317*c i*P **P** 02 44 53.2 -1.6
KIS *i* 02 55 20.0
KIS *i* S **S** 02 56 00.0 -1.2
KIS *i* PS PS 02 57 45.0 +24
KIS pmax pmax
comp=Z,2µm,6.2s
KIS Kishinev 93.89 317 *i* PP PP 02 49 02.0 +21
KIS Kishinev 93.89 317 *i* SKS **SKSac** 02 55 20.0 -5.8
KIS Kishinev 93.89 317 *i* SKKS SKKSac 02 55 30.0 -16
MILM Milestii Mici 93.90 317⇑P **P** 02 44 53.6 -1.3
SILT Sile 93.94 311 *e*P **P** 02 44 54.9 -0.3
ADVT Abdulvahap 93.94 311 *e*P **P** 02 44 54.2 -1.0
BASM Basmaki-Afyon 93.95 308 *e*P **P** 02 44 54.0 -1.4
IDID Didziasalis 94.04 326 *e*P **P** 02 44 55.0 -0.3
SORM Soroca 94.06 318⇑P **P** 02 44 54.3 -1.3
SORM Soroca 94.06 318⇓P **PKKPbc** 03 02 00.1 +0.9
SORM Soroca 94.06 318 P **P** 02 44 54.2 -1.3
NACGM Naroch 94.08 325 *e*P **P** 02 44 54.0 -1.5
NACGM *e*P **P** 02 44 54.0 -1.5
NACGM PM 02 45 06.0
comp=Z,0.8nm,1.0s
NACGM *e*PP **PP** 02 48 46.0 +4.0
NACGM *e*PKS PKiKP 02 49 10.0 -30
NACGM *e*PPP PPP 02 50 24.0
NACGM *e*SKS **SKSac** 02 55 28.0 +1.5
NACGM *e*S **S** 02 56 02.0 -0.5
NACGM *e*PS **PS** 02 57 20.0 -3.1
NACGM *e*SS **SS** 03 02 24.0 +0.9
NACGM *e*SSS SSS 03 06 04.0
NACGM *e*LR LR 03 23 20.0
TLCR 94.11 315⇓P **P** 02 44 55.3 -0.6
TLCR 94.11 315⇑P **PKKPbc** 03 01 58.4 -0.6
TLCR 94.11 315 P **P** 02 44 55.2 -0.6
JURR Jurilovca 94.11 315⇑P **P** 02 44 55.6 -0.3
IZAR Zarasai 94.25 326 *e*P **P** 02 44 54.2 -2.0
TVSB Tavsanli 94.26 310 *e*P **P** 02 44 55.8 -1.0
IIGN Ignalina 94.32 326 *e*P **P** 02 44 55.0 -1.6
GEDZ Gediz 94.34 309 *e*P **P** 02 44 56.2 -1.0
TRO Tromso 94.34 340⇑*i*P **P** 02 44 54.6 -1.7
TRO *e*PP **PP** 02 48 43.6 -0.1
TRO *e*SKSac **SKSac** 02 55 26.6 -0.7
TRO *e*SP **SP** 02 57 19.4 +0.6
TRO *e*SS **SS** 03 02 26.0 0.0
TRO IVMs_BB IVMs_BB 03 27 01.0
comp=Z,24µm,26.7s
ISAL Salakas 94.34 326 *e*P **P** 02 44 54.7 -2.0
GEMT Gemlik 94.36 311 *e*P **P** 02 44 55.9 -1.3
ISK Istanbul-Kandi 94.39 311 *e*P **P** 02 44 55.9 -1.4
ISK Istanbul-Kandi 94.39 311 P **P** 02 44 56.7 -0.6
KAVV Kandilli-Istan 94.39 311 *e*P **P** 02 44 55.7 -1.6
CRAG Craig 94.40 34 IAmb IAmb 02 45 08.7
comp=Z,260nm,1.2s
TPGR Topolog 94.42 315⇓P **P** 02 44 56.9 -0.5
TPGR Topolog 94.42 315⇑P **PKKPbc** 03 01 58.0 -0.2
MANR Mangalia 94.43 314⇑P **P** 02 44 57.1 -0.2
AKAS Kas 94.46 306 *e*P **P** 02 44 55.9 -2.0
TIRR Tirgusor 94.48 315⇓P **P** 02 44 56.4 -1.2
TIRR Tirgusor 94.48 315⇓P **P** 02 44 56.4 -1.2
TIRR Tirgusor 94.48 315⇑P **PKKPbc** 03 01 57.9 -0.1
TIRR Tirgusor 94.48 315 P **P** 02 44 56.9 -0.6
TIRR pmax pmax
comp=Z,346nm,1.2s
TIRR Tirgusor 94.48 315 P **P** 02 44 56.9 -0.6
TIRR IAmb IAmb 02 45 22.5
comp=Z,346nm,1.2s
KSL Kastellorizon 94.49 306 P **P** 02 44 57.0 -0.8
MFTR Murfatlar 94.50 314⇑P **P** 02 44 56.7 -1.0
CFR Carcaliu 94.58 315⇑P **P** 02 44 57.0 -1.0
CFR Carcaliu 94.58 315⇑P **PKKPbc** 03 01 57.5 -0.2
CFR Carcaliu 94.58 315 P **P** 02 44 57.0 -1.0
BGKT Bogazkoy 94.59 311 *e*P P 02 44 52.1 -6.1
ARMT Armutlu 94.60 311 *e*P **P** 02 44 56.8 -1.5
MDNY Mudanya-Bursa 94.60 311 *e*P **P** 02 44 56.8 -1.4
CAME Cameli-Denizli 94.63 307 *e*P **P** 02 44 58.2 -0.5
VASR Vaslui 94.63 317⇓P **P** 02 44 57.5 -0.7
SIMA Simav-Kutahya 94.66 309 *e*P **P** 02 44 57.0 -1.7
WRAK Wrangell Islan 94.67 33 IAmb IAmb 02 45 10.1
comp=Z,367nm,0.9s
VARL Varlezi 94.69 316⇑P **P** 02 44 58.4 -0.2
IAS Iasi 94.72 317⇓P **P** 02 44 57.7 -0.9
IAS Iasi 94.72 317 P **P** 02 44 57.7 -0.9
TLBR Topalu 94.72 315⇑P **P** 02 44 58.8 +0.1
TLBR Topalu 94.72 315⇑P **PKKPbc** 03 01 57.0 -0.3
SCHL Schela 94.76 316⇑P **P** 02 44 58.4 -0.5
CTKS Kestanelik-??a 94.79 311 *e*P **P** 02 44 58.8 -0.3
HARR Harsova 94.79 315⇓P **P** 02 44 57.5 -1.6
HARR Harsova 94.79 315⇑P **PKKPbc** 03 01 57.0 -0.1
HARR Harsova 94.79 315 P **P** 02 44 57.4 -1.6
BURU Burvik 94.80 335 *e*SB **P** 02 44 57.1 -1.5
BIR Birlad 94.80 317⇑P **P** 02 44 58.5 -0.6
BIR Birlad 94.80 317 P **P** 02 44 58.4 -0.6
FETY Fethiye 94.84 307 *e*P **P** 02 44 57.4 -2.1
FETY Fethiye 94.84 307 P **P** 02 44 58.0 -1.5
TUDR 94.86 316⇑P **P** 02 44 59.0 -0.2
CTYL Yalikoy Yolu 94.92 312 *e*P **P** 02 44 58.4 -1.3
ICOR Ion Corvin 94.95 314⇑P **P** 02 44 59.5 -0.3
ICOR Ion Corvin 94.95 314⇓P **PKKPbc** 03 01 55.6 -1.1
KULA Kula-Manisa 94.97 309 *e*P **P** 02 44 59.1 -1.0
KULA Kula-Manisa 94.97 309 P **P** 02 44 59.2 -0.9
SLVT Silivri 95.01 311 *e*P **P** 02 44 58.3 -1.8
POGA Pongola 95.06 243 *i* P **P** 02 45 03.4 +2.7
POGA Pongola 95.06 243 *i* P **P** 02 45 03.4 +2.7
C36M Paulatuk 95.08 20 P **P** 02 44 59.5 -0.2
baz=289,SNR=182
C36M S **S** 02 56 14.8 +4.3
baz=289
C36M Paulatuk 95.08 20 IAmb IAmb 02 45 03.2
comp=Z,347nm,0.8s
PETR Petresti 95.14 316⇑P **P** 02 45 01.2 +0.6
PETR Petresti 95.14 316⇑P **PKKPbc** 03 01 56.2 0.0
H02S1 DAWSON INLET T 95.16 36 P **P** 02 45 00.8 +0.4
DALY Dalyan (Mula) 95.16 307 *e*P **P** 02 45 00.7 -0.2
AMRR Amara 95.22 315⇓P **P** 02 45 01.0 0.0
ODBI Odobesti 95.26 316⇓P **P** 02 45 01.9 +0.8
ODBI Odobesti 95.26 316⇑P **PKKPbc** 03 01 54.3 -1.7
GRER 95.37 316⇑P **P** 02 45 02.4 +0.8
CRLT Corlu 95.38 311 *e*P **P** 02 45 00.4 -1.4
EDC Edincik 95.38 311 *e*P **P** 02 45 00.9 -0.9
YER Yerkesik 95.42 307 *e*P **P** 02 45 00.6 -1.6
PGOR Pogoanele 95.43 315⇓P **P** 02 45 02.2 +0.3
PGOR Pogoanele 95.43 315⇑P **PKKPbc** 03 01 51.7 -3.8
TESR Tescani 95.43 317⇓P **P** 02 45 01.3 -0.6
BALB Balikesir 95.45 310 *e*P **P** 02 45 00.9 -1.2
VRI Vrincioaia 95.47 316⇑P **P** 02 45 01.9 -0.2
VRI Vrincioaia 95.47 316⇑P **PKKPbc** 03 01 54.0 -1.4
VRI ⇑P **PKKPdf** 03 01 55.6 +0.1
VRI Vrincioaia 95.47 316 *e*P **P** 02 45 01.7 -0.4
VRI Vrincioaia 95.47 316 P **P** 02 45 01.9 -0.2
KSMZ Kasama 95.47 260⇑*i*P **P** 02 45 01.9 -1.1
KSMZ *i* 02 45 02.7
baz=148,slow=8.6
KSMZ *i* 02 45 26.0
KSMZ *i* 02 45 28.4
TURN Turunc 95.50 307 *e*P **P** 02 45 01.4 -1.0
DLBC Dease Lake 95.50 31 P **P** 02 45 02.4 +0.3
comp=Z,60nm,0.9s,baz=281,slow=5.2,SNR=73
DLBC PKKPbc **PKKPdf** 03 01 55.6 -0.2
comp=Z,4.9nm,0.8s,baz=29,slow=1.8,SNR=7.7
DLBC Dease Lake 95.50 31 IAmb IAmb 02 45 06.7
comp=Z,372nm,1.4s
PLOR Plostina 95.53 316⇑P **P** 02 45 02.1 -0.4
PLOR Plostina 95.53 316⇑P **PKKPbc** 03 01 55.0 -0.3
PLOR Plostina 95.53 316 P **P** 02 45 02.0 -0.4
BISRR Bisoca 95.53 316⇓P **P** 02 45 02.8 +0.3
MRMT Marmara Adasi 95.55 311 *e*P **P** 02 45 00.6 -2.1
PABE Paberze 95.56 326 *e*P **P** 02 45 01.5 -0.8
PRAR RASCA 95.59 318⇑P **P** 02 45 01.7 -1.0
LEHL Lehliu 95.61 315⇑P **P** 02 45 02.7 0.0
ALE Alert 95.64 1 IAMs_20 IAMs_20 03 29 43.3
comp=Z,27µm,22.0s
AYDB Zeytinkoy-Aydi 95.64 308 *e*P **P** 02 45 02.5 -0.7
ARG Arkhangelos 95.65 306 P P 02 44 56.9 -6.2
ISR Istrita 95.71 316⇑P **P** 02 45 03.5 +0.2
ISR Istrita 95.71 316 P **P** 02 45 03.5 +0.2
BIZ Bicaz 95.74 317⇑P **P** 02 45 03.0 -0.3
BIZ Bicaz 95.74 317⇑P **PKKPbc** 03 01 50.1 -4.6
MBAR Mbarara 95.74 270 PKKP **PKKPdf** 03 01 58.4 +3.7
comp=Z,10nm,0.2s,baz=332,slow=4.1,SNR=4.4
MBAR Mbarara 95.74 270*i* P **P** 02 45 04.7 +0.4
MBAR Mbarara 95.74 270 P **P** 02 45 04.3 +0.1
MBAR P **P** 02 45 04.3 +0.1
MBAR S **SKSac** 02 55 39.8 +2.4
MBAR S **SKSac** 02 55 39.8 +2.4
MBAR Mbarara 95.74 270*i* P **P** 02 45 02.5 -1.7
MBAR pmax pmax
comp=Z,98nm,1.4s
MBAR Mbarara 95.74 270 P **P** 02 45 03.8 -0.5
MBAR Mbarara 95.74 270 IAMs_20 IAMs_20 03 26 30.8
comp=Z,27µm,22.0s
MBAR Mbarara 95.74 270*i* P **P** 02 45 04.7 +0.4
NEHR Nehoiu 95.84 316⇑P **P** 02 45 03.6 -0.3
NEHR Nehoiu 95.84 316⇑P **PKKPbc** 03 01 58.4 +3.9
RKY Sarkoy-Tekirda 95.85 311 *e*P **P** 02 45 04.1 +0.1
N2IH Innhavet 95.90 339⇑*i*P **P** 02 45 02.0 -1.5
RAZG Razgrad 95.96 314⇑P **P** 02 45 03.8 -0.6
SULR 95.97 315⇑P **P** 02 45 04.3 -0.1
SLIT Slitere, Latvi 96.02 328 *e*P **P** 02 45 03.6 -0.6
EDRB Edirne 96.02 312 *e*P **P** 02 45 04.9 +0.2
EDRB Edirne 96.02 312 P **P** 02 45 04.3 -0.4
SECR 96.05 315⇑P **P** 02 45 04.7 -0.1
JMB Yambol 96.06 313*i* P **P** 02 45 07.4 +2.6
MLR Muntele Rosu 96.07 316 P **P** 02 45 04.3 -0.8
comp=Z,139nm,0.9s,baz=308,slow=0.5,SNR=35
MLR PP **PP** 02 49 02.3 +4.3
comp=Z,96nm,1.0s,baz=76,slow=4.6,SNR=4.5
MLR S **SKSac** 02 55 34.5 -3.3
comp=Z,12nm,1.1s,baz=199,slow=13,SNR=1.8
MLR Muntele Rosu 96.07 316⇓P **P** 02 45 04.4 -0.6
MLR Muntele Rosu 96.07 316⇑P **PKKPbc** 03 01 56.2 +2.2
OZUR 96.09 317⇓P **P** 02 45 04.8 -0.2
OZUR 96.09 317⇑P **PKKPbc** 03 01 51.6 -2.3
STEI Steigen 96.16 339⇑*i*P **P** 02 45 03.2 -1.5
STEI IVmB_BB 02 45 06.9
comp=Z,3µm,0.2s
STEI *e*SKSac **SKSac** 02 55 36.7 -0.3
STEI *e*SS **SS** 03 02 52.2 +0.3
STEI IVMs_BB IVMs_BB 03 23 30.8
comp=Z,17µm,29.9s
GCAM G?zelcaml? 96.19 308 *e*P **P** 02 45 04.9 -0.6
BODT Bodrum 96.21 307 *e*P **P** 02 45 03.9 -1.8
BODT Bodrum 96.21 307 P **P** 02 45 05.2 -0.5
BURAR Bucovina Array 96.23 318⇑P **P** 02 45 05.6 -0.1
BURAR Bucovina Array 96.23 318⇑P **PKKPbc** 03 01 53.4 -0.2
BURAR Bucovina Array 96.23 318 P **P** 02 45 05.5 -0.1
BURAR Bucovina Array 96.23 318 P **P** 02 45 05.4 -0.2
N2ST Straumen 96.23 339⇑*i*P **P** 02 45 03.2 -1.9
SGRR Singureni 96.24 315⇓P **P** 02 45 05.5 -0.1
SGRR Singureni 96.24 315⇑P **PKKPbc** 03 01 49.9 -3.4
BLCB Balcova 96.25 309 *e*P **P** 02 45 04.9 -0.9
BLCB Balcova 96.25 309 P **P** 02 45 04.9 -0.9
DKL Dikili 96.27 309 *e*P **P** 02 45 04.2 -1.7
SUW Suwalki 96.31 325 *e*P **P** 02 45 04.3 -1.4
SUW *e*S **SKSac** 02 55 38.1 -0.3
SUW *e*L L 03 29 24.2
comp=Z,123µm,25.3s
N2TV T?rnvik 96.33 339⇑*i*P **P** 02 45 04.1 -1.3
FAUS Fauske 96.33 339⇑*i*P **P** 02 45 03.8 -1.7
FAUS IVmB_BB 02 45 07.4
comp=Z,3µm,1.2s
FAUS *e*SKSac **SKSac** 02 55 37.5 -0.5
FAUS *e*SS **SS** 03 02 55.7 +1.3
FAUS IVMs_BB IVMs_BB 03 23 54.5
comp=Z,19µm,32.9s
ERIK Erikli-Kesan 96.36 311 *e*P **P** 02 45 04.9 -1.3
NIS1 Nisyros Isl. 96.37 307 *e*P **P** 02 45 04.8 -1.6
NIS1 Nisyros Isl. 96.37 307 P **P** 02 45 05.9 -0.5
DOPR Dopca 96.38 316⇓P **P** 02 45 05.9 -0.4
DOPR Dopca 96.38 316⇑P **PKKPbc** 03 01 51.8 -1.2
NISR Nisiros 96.41 307 Pn **P** 02 45 10.1 +3.6
NISR Nisiros 96.41 307 P **P** 02 45 10.1 +3.6
SZH Strazhica 96.41 314*i* P **P** 02 45 06.1 -0.4
GELI Tayfur-Gelibol 96.42 311 *e*P **P** 02 45 05.3 -1.2
SMG Samos 96.50 308 P **P** 02 45 06.0 -1.0
KARP Karpathos 96.51 306 *e*P **P** 02 45 05.8 -1.3
KARP Karpathos 96.51 306 P **P** 02 45 06.9 -0.2
KOSK Kos Island 96.51 307 P **P** 02 45 05.9 -1.1
NBB08 Skaug oppvekst 96.57 339 *e*P **P** 02 45 05.5 -1.0
PBUR Paburge 96.58 327 *e*P **P** 02 45 06.7 -0.2
EUNU Eureka 96.58 5 IAmb IAmb 02 45 36.2
comp=Z,443nm,1.6s
URLA Izmir 96.60 309 *e*P **P** 02 45 06.3 -1.2
LVV L'vov 96.61 320 *e*P **P** 02 45 07.0 -0.2
LVV *e*PPP PPP 02 51 09.6
LVV *e* 02 55 41.2
LVV *e*S **S** 02 56 17.3 -7.4
LVV *e*PS **PS** 02 57 55.3 +4.2
LVV *e*SS **SS** 03 03 09.5 +10
LVV pmax pmax
comp=Z,3µm,5.0s
EZN Ezine 96.61 310 *e*P **P** 02 45 06.3 -1.1
EZN Ezine 96.61 310 P **P** 02 45 06.5 -0.9
ENEZ Enez 96.62 311 P **P** 02 45 06.3 -1.1
ALN Alexandroupoli 96.68 311 *e*P **P** 02 45 06.3 -1.4
ALN Alexandroupoli 96.68 311 P **P** 02 45 06.8 -0.9
ALN Alexandroupoli 96.68 311 P **P** 02 45 06.8 -0.9
ALN IAmb IAmb 02 45 20.7
comp=Z,799nm,1.9s
ALN Alexandroupoli 96.68 311 P **P** 02 45 06.7 -0.9
LOF Lofoten 96.68 340⇑*i*P **P** 02 45 04.8 -2.3
LOF IVmB_BB 02 45 11.6
comp=Z,2µm,3.6s
LOF *e*PP **PP** 02 49 01.9 +0.1
LOF *e*SKSac **SKSac** 02 55 38.9 -0.9
LOF *e*SP **SP** 02 57 44.5 +0.1
LOF *e*SS **SS** 03 02 58.8 -0.5
LOF IVMs_BB IVMs_BB 03 24 35.9
comp=Z,14µm,33.8s
VOIR 96.70 316⇑P **P** 02 45 06.8 -1.0
VOIR 96.70 316⇑P **PKKPbc** 03 01 55.2 +3.0
VOIR 96.70 316 P **P** 02 45 06.8 -1.0
NBB28 Valnes 96.70 339⇑*i*P **P** 02 45 05.3 -1.8
MTUR Matau 96.73 316⇑P **P** 02 45 08.3 +0.3
MTUR Matau 96.73 316 P **P** 02 45 08.2 +0.3
PRK Paraskevi 96.74 310 P **P** 02 45 08.0 0.0
ZIMR 96.76 314⇑P **P** 02 45 08.1 +0.1
COPA Copaceanca 96.79 315⇑P **P** 02 45 07.3 -0.8
COPA Copaceanca 96.79 315⇑P **PKKPbc** 03 01 48.2 -3.5
BOZC Bozcaada 96.82 310 *e*P **P** 02 45 07.3 -1.1

STFAR	**Stefanesti-Arg**	**96.86 315**	⇓P		**P**		**02 45 07.9**	**-0.6**
DIM	**Dimitrovgrad**	**96.89 313**	*i* P		**P**		**02 45 07.9**	**-0.7**
GADA	**Gvkgeada**	**96.89 311**	Pg		P		02 45 00.1	-8.6
GADA	**Gvkgeada**	**96.89 311**	P		P		02 45 00.1	-8.6
ARCR	**ARCALIA**	**96.90 318**	⇓P		**P**		**02 45 08.8**	**+0.2**
ARCR	**ARCALIA**	**96.90 318**	⇑P		**PKKPbc**		**03 01 53.7**	**+2.0**
HUMR	**Humele**	**96.90 315**	⇑P		**P**		**02 45 07.4**	**-1.2**
HUMR	**Humele**	**96.90 315**	⇑P		**PKKPbc**		**03 01 52.4**	**+0.9**
NBB05	**Inndyr**	**96.92 339**	*eP*		**P**		**02 45 06.6**	**-1.5**
N2SV	**S_rvÿgen**	**96.96 340**	⇑*i*P		**P**		**02 45 06.3**	**-2.0**
ARR	**Arges**	**97.00 316**	⇓P		**P**		**02 45 08.6**	**-0.5**
ARR	**Arges**	**97.00 316**	⇑P		**PKKPbc**		**03 01 51.2**	**-0.2**
RDO	**Rodhopi**	**97.02 312**	*eP*		**P**		**02 45 07.9**	**-1.3**
RDO	**Rodhopi**	**97.02 312**	P		**P**		**02 45 07.6**	**-1.6**
NBB17	**Glomfjord BÝr**	**97.02 338**	*eP*		**P**		**02 45 06.8**	**-1.9**
KDZ	**Kurdzhali**	**97.03 312**	*eP*		**P**		**02 45 08.2**	**-1.1**
MDB	**Medias**	**97.04 317**	⇑P		**PKKPbc**		**03 01 49.4**	**-1.7**
NBB30	**Finnes**	**97.05 339**	⇑*i*P		**P**		**02 45 06.4**	**-2.3**
SIGR	**SIGRI**	**97.06 310**	*eP*		**P**		**02 45 08.2**	**-1.3**
SIGR	**SIGRI**	**97.06 310**	P		**P**		**02 45 08.1**	**-1.4**
MOR8	**Moi Rana**	**97.08 338**	⇑*i*P		**P**		**02 45 06.2**	**-2.7**
MOR8				*e*SKSac	**SKSac**		**02 55 38.9**	**-3.1**
MOR8				*e*SP	**SP**		**02 57 46.8**	**-2.1**
MOR8				*e*SS	**SS**		**03 03 03.2**	**-1.8**
MOR8				IVMs_BB	IVMs_BB		03 28 41.2	
	comp=Z,26µm,28.5s							
SMTH	**Samothraki Isl**	**97.13 311**		P	**P**		**02 45 09.2**	**-0.6**
N2VA	**Vr_y**	**97.16 339**	⇑*i*P		**P**		**02 45 07.3**	**-1.9**
ZKR	**Zakros**	**97.33 306**	*eP*		Pdif		02 45 10.8	-0.1
ZKR	**Zakros**	**97.33 306**	P		**P**		**02 45 09.8**	**-1.0**
AMGA	**Amorgos Island**	**97.36 307**	P		**P**		**02 45 09.1**	**-1.8**
BMR	**Baia Mare**	**97.36 318**	⇑P		Pdif		02 45 10.7	0.0
BMR	**Baia Mare**	**97.36 318**	P		Pdif		02 45 10.7	0.0
VLAD	**Vladila**	**97.39 315**	⇑P		**P**		**02 45 10.3**	**-0.5**
VLAD	**Vladila**	**97.39 315**	⇑P		**PKKPbc**		**03 01 51.5**	**+1.4**
N2RO	**R_st**	**97.42 339**	⇑*i*P		**P**		**02 45 08.4**	**-2.0**
STIA	**Sitia Lasithi**	**97.42 306**	P		Pdif		02 45 11.4	+0.2
KONS	**Konsvik**	**97.45 338**	*eP*		**P**		**02 45 09.1**	**-1.5**
KONS				*e*SKSac	**SKSac**		**02 55 43.4**	**-0.4**
CJR	**Cluj-Napoca**	**97.47 317**	⇑P		Pdif		02 45 11.5	+0.2
CJR	**Cluj-Napoca**	**97.47 317**	P		Pdif		02 45 11.4	+0.1
LIA	**Limnos Island**	**97.47 310**	P		**P**		**02 45 10.3**	**-1.0**
NBB40	**Tonnes**	**97.49 338**	⇑*i*P		**P**		**02 45 08.8**	**-1.9**
PLD	**Plovdiv**	**97.49 313**	*eP*		**P**		**02 45 09.8**	**-1.5**
PLD	**Plovdiv**	**97.49 313**	P		**P**		**02 45 10.5**	**-0.8**
PLD				pmax	pmax			
	comp=Z,822nm,1.4s							
KWP	**Kalwaria Pacla**	**97.49 320**	*eP*		**P**		**02 45 10.4**	**-0.8**
KWP				*e*S	**SKSac**		**02 55 43.5**	**-1.3**
KWP				*e*L	L		03 26 17.6	
	comp=Z,91µm,31.1s							
RZN	**Rozhen**	**97.55 312**	*i* P		**P**		**02 45 10.8**	**-1.1**
STOK	**Stokkvaagen**	**97.55 338**	*eP*		**P**		**02 45 09.6**	**-1.4**
STOK				*e*SKSac	**SKSac**		**02 55 42.8**	**-1.5**
LOT	**Lotru**	**97.59 316**	⇑P		**P**		**02 45 11.6**	**-0.3**
LOT	**Lotru**	**97.59 316**	*eP*		**P**		**02 45 11.3**	**-0.6**
APE	**Apeiranthos**	**97.62 308**	⇑P		**P**		**02 45 10.2**	**-1.9**
APE	**Apeiranthos**	**97.62 308**	⇑P		**PKKPbc**		**03 01 51.3**	**+1.9**
APE	**Apeiranthos**	**97.62 308**	*eP*		**P**		**02 45 09.8**	**-2.3**
APE	**Apeiranthos**	**97.62 308**	*c iP*		**P**		**02 45 09.4**	**-2.7**
APE				pmax	pmax			
	comp=Z,57nm,1.0s							
APE				MLR	MLR			
	comp=Z,24µm,25.0s							
APE	**Apeiranthos**	**97.62 308**		P	**P**		**02 45 09.9**	**-2.2**
THAS	**Thassos island**	**97.72 311**		P	**P**		**02 45 11.1**	**-1.3**
FRMA	**Ierapetra Chan**	**97.73 306**		P	**P**		**02 45 11.2**	**-1.4**
THR8	**Santorini-Mono**	**97.75 307**		P	**P**		**02 45 10.9**	**-1.7**
THR7	**Fira-Santorini**	**97.79 307**		P	**P**		**02 45 12.1**	**-0.7**
SNT1	**Gialos, Santor**	**97.79 307**		P	**P**		**02 45 11.7**	**-1.1**
CMBO	**Columbo, Santo**	**97.80 307**		P	**P**		**02 45 12.0**	**-0.9**
NPS	**Neapolis**	**97.80 306**		P	**P**		**02 45 12.8**	**-0.1**
KAVA	**Kavala**	**97.81 312**		P	**P**		**02 45 11.3**	**-1.5**
PGB	**Panagyurishte**	**97.81 313**	*i* P		**P**		**02 45 11.8**	**-1.1**
SNT5	**Nea Kammeni, S**	**97.82 307**		P	**P**		**02 45 09.8**	**-3.1**
KOLS	**Kolonicke sedl**	**97.91 320**		P	**P**		**02 45 12.9**	**-0.2**
KOLS				*e*			02 55 45.8	
KOLS				*e*S	**S**		**02 56 35.6**	**-0.4**
KOLS	**Kolonicke sedl**	**97.91 320**		*e*PDIFF	**P**		**02 45 12.9**	**-0.2**
LAST	**Lasithi**	**97.92 306**		P	**P**		**02 45 12.9**	**-0.7**
UZH	**Uzhgorod**	**97.96 319**		*eP*	**P**		**02 45 13.0**	**-0.3**
UZH				*e*S	**S**		**02 56 33.0**	**-3.3**
BBB	**Bella Bella**	**97.97 37**		P	Pdif		02 45 13.2	0.0
	comp=Z,32nm,0.8s,baz=305,slow=3.6,SNR=8.1							
BBB	**Bella Bella**	**97.97 37**		P	Pdif		02 45 12.7	-0.5
MPEP	**Malo Peshtene**	**97.98 314**		*i* P	**P**		**02 45 12.8**	**-0.7**
BLWY	**Bulawayo**	**98.00 250**		*i* P	Pdif		02 45 16.0	+1.6
BLWY	**Bulawayo**	**98.00 250**		*i* P	Pdif		02 45 16.0	+1.6
MATP	**Matopo**	**98.10 250**		S	**SKSac**		**02 55 50.5**	**+1.2**
	comp=Z,8.8nm,1.1s,baz=270,slow=15,SNR=2.0							
MATP				PKKP	**PKKPdf**		**03 01 49.4**	**-1.2**
	comp=Z,12nm,0.7s,baz=270,slow=2.6,SNR=20							
DEV	**Deva**	**98.10 317**	⇑P		Pdif		02 45 14.0	-0.1
DEV	**Deva**	**98.10 317**	P		Pdif		02 45 13.9	-0.1
SRE	**Strehaia**	**98.12 315**	⇑P		Pdif		02 45 14.8	+0.6
SRE	**Strehaia**	**98.12 315**	P		Pdif		02 45 14.8	+0.6
BAIL	**Bailesti**	**98.14 315**	⇑P		Pdif		02 45 14.0	-0.2
BEL	**Belsk**	**98.20 323**	*eP*		**P**		**02 45 13.4**	**-0.9**
BEL				*e*S	**SKSac**		**02 55 49.8**	**+1.5**
BEL				*e*L	L		03 31 04.2	
	comp=Z,94µm,25.0s							
HRKL	**Herakleio**	**98.21 306**		P	**P**		**02 45 13.1**	**-1.6**
KSTL	**Kastelli Herak**	**98.23 306**		P	Pdif		02 45 15.0	+0.1
NVR	**Nevrokopi**	**98.24 316**		P	**P**		**02 45 13.3**	**-1.5**
GZR	**Gura Zlata**	**98.28 316**	⇑P		**P**		**02 45 14.5**	**-0.5**
GZR	**Gura Zlata**	**98.28 316**	⇑P		**PKKPbc**		**03 01 48.3**	**+0.5**
MMB	**Musomiste**	**98.29 312**	*i* P		**P**		**02 45 13.6**	**-1.4**
OUR	**Ouranopolis**	**98.31 311**	*eP*		**P**		**02 45 14.8**	**-0.3**
OUR	**Ouranopolis**	**98.31 311**	P		**P**		**02 45 14.2**	**-0.9**
KARY	**Karystos**	**98.33 309**	P		**P**		**02 45 12.5**	**-2.7**
IDI	**Anoyia**	**98.38 306**	P		**P**		**02 45 14.8**	**-0.8**
	comp=Z,36nm,0.9s,baz=20,slow=12,SNR=21							
IDI				S	**SKSac**		**02 55 48.3**	**-1.8**
	comp=Z,16nm,1.0s,baz=66,slow=20,SNR=2.3							
IDI				PKKPbc	**PKKPbc**		**03 01 48.0**	**+0.8**
	comp=Z,23nm,0.7s,baz=201,slow=1.4,SNR=7.7							
IDI	**Anoyia**	**98.38 306**	⇑P		**P**		**02 45 14.2**	**-1.4**
IDI	**Anoyia**	**98.38 306**	⇑P		**PKKPdf**		**03 01 48.2**	**-2.0**
IDI	**Anoyia**	**98.38 306**		IAMs_20	IAMs_20		03 34 45.8	
	comp=Z,21µm,21.0s							
IDI	**Anoyia**	**98.38 306**		P	**P**		**02 45 13.9**	**-1.7**
PUNG	**Punghina**	**98.39 315**	⇑P		**P**		**02 45 14.8**	**-0.5**
CRVS	**Cervenica-Dubn**	**98.44 320**	*eP*		Pdif		02 45 15.6	+0.1
CRVS				*e*			02 55 50.1	
CRVS				*e*S	**S**		**02 56 38.4**	**-2.0**
CRVS	**Cervenica-Dubn**	**98.44 320**		*e*PDIFF	Pdif		02 45 15.6	+0.1
LSZ	**Lusaka**	**98.46 255**		S	**SKSac**		**02 55 51.6**	**+0.4**
	comp=Z,4.0nm,0.9s,baz=135,slow=16,SNR=1.7							
LSZ	**Lusaka**	**98.46 255**	*i* P		Pdif		02 45 17.6	+1.2
LSZ	**Lusaka**	**98.46 255**		P	**P**		**02 45 13.6**	**-2.8**
LSZ				P	**P**		**02 45 13.6**	**-2.8**
LSZ				S	**SKSac**		**02 55 51.4**	**+0.1**
LSZ				S	**SKSac**		**02 55 51.4**	**+0.1**
LSZ	**Lusaka**	**98.46 255**		P	**P**		**02 45 16.0**	**-0.4**
LSZ				pmax	pmax			
	comp=Z,668nm,1.9s							
LSZ	**Lusaka**	**98.46 255**		P	**P**		**02 45 16.0**	**-0.4**
LSZ				IAmb	IAmb		02 45 28.2	
	comp=Z,668nm,1.9s							
LSZ	**Lusaka**	**98.46 255**	*i* P		Pdif		02 45 17.6	+1.2
VTS	**Vitosha**	**98.47 313**	*i* P		**P**		**02 45 15.0**	**-1.0**
SRS	**Serrai**	**98.48 312**		P	**P**		**02 45 14.6**	**-1.2**
SRS				pmax	pmax			
	comp=Z,98nm,1.8s							
SRS	**Serrai**	**98.48 312**		P	**P**		**02 45 14.0**	**-1.8**
RMGR	**Halanga-Turnu**	**98.48 316**	⇑P		**P**		**02 45 14.3**	**-1.4**
SIVA	**Sivas**	**98.48 306**		P	**P**		**02 45 15.4**	**-0.6**
KYMI	**Kymi, Euboea I**	**98.50 309**		P	P		02 45 05.3	-11
MHLO	**Agia Marina, M**	**98.57 307**		P	**P**		**02 45 15.6**	**-0.7**
AOS	**Alonnisos**	**98.58 310**	*eP*		**P**		**02 45 15.6**	**-0.7**
AOS	**Alonnisos**	**98.58 310**		P	**P**		**02 45 13.7**	**-2.6**
RKT	**Rikitea**	**98.59 113**	*e*S		**S**		**02 56 41.3**	**-1.4**
	comp=Z,12µm,31.2s							
RKT	**Rikitea**	**98.59 113**	*e*LR		LR		03 17 05.8	
	comp=Z,165µm,34.2s							
RKT	**Rikitea**	**98.59 113**	*e*LQ		LQ		03 13 01.1	
	comp=Z,33µm,39.0s							
PAIG	**Paliouri**	**98.61 311**		P	**P**		**02 45 15.4**	**-1.0**
HERR	**Herculane**	**98.63 316**	⇑P		**P**		**02 45 16.0**	**-0.4**
HERR	**Herculane**	**98.63 316**	⇑P		**PKKPbc**		**03 01 46.3**	**-0.4**
NSS	**Namsos**	**98.66 337**	⇑*eP*		**P**		**02 45 15.0**	**-1.0**
NSS				IVmB_BB			02 45 20.8	
	comp=Z,2µm,2.4s							
NSS				*e*PP	**PP**		**02 49 20.1**	**+3.1**
NSS				*e*SKSac	**SKSac**		**02 55 48.2**	**-1.8**
NSS				*e*SS	**SS**		**03 03 27.4**	**+0.3**
NSS				IVMs_BB	IVMs_BB		03 29 34.9	
	comp=Z,20µm,25.4s							
PRNS	**Prines Rethymn**	**98.68 306**		P	Pdif		02 45 17.1	+0.2
SOH	**Sokhos**	**98.70 312**		P	**P**		**02 45 15.3**	**-1.6**
PLG	**Polygyros**	**98.71 311**		P	**P**		**02 45 15.3**	**-1.6**
DION	**Dionisos Attik**	**98.72 309**		P	**P**		**02 45 15.5**	**-1.3**
KKB	**Krupnik**	**98.72 313**	*i* P		**P**		**02 45 15.6**	**-1.3**
PTL	**Penteli**	**98.78 309**		P	**P**		**02 45 15.6**	**-1.7**
ATHU	**Athens Univers**	**98.85 309**		P	**P**		**02 45 15.4**	**-2.2**
VLY	**Voula,Athens**	**98.86 309**		P	**P**		**02 45 15.5**	**-2.1**
SIRR	**Siria**	**98.87 317**	⇓P		**P**		**02 45 17.1**	**-0.3**
SIRR	**Siria**	**98.87 317**	⇑P		**PKKPbc**		**03 01 45.8**	**-0.3**
ATH	**Athens Observa**	**98.91 309**		P	**P**		**02 45 15.8**	**-2.0**
VAM	**Vamos**	**98.92 306**		P	**P**		**02 45 17.2**	**-0.7**
HORT	**Hortiatis**	**98.93 311**	*eP*		**P**		**02 45 15.8**	**-2.2**
HORT	**Hortiatis**	**98.93 311**		P	**P**		**02 45 15.7**	**-2.2**
THE	**Thessaloniki**	**99.03 311**		P	**Pdif**		**02 45 16.0**	**-2.3**
CHAN	**Chania**	**99.03 306**		P	**Pdif**		**02 45 19.2**	**+0.8**
BZS	**Buzias**	**99.04 317**	⇑P		**Pdif**		**02 45 17.4**	**-0.8**
BZS	**Buzias**	**99.04 317**	⇑P		**PKKPbc**		**03 01 44.8**	**-0.8**
BZS	**Buzias**	**99.04 317**	P		**Pdif**		**02 45 20.4**	**+2.2**
BZS				pmax	pmax			
	comp=Z,106nm,1.6s							
NIE	**Niedzica**	**99.07 321**	*eP*		**Pdif**		**02 45 17.4**	**-0.9**
NIE				*e*S	**SKSac**		**02 55 54.5**	**+1.7**
NIE				*e*L	L		03 30 48.9	
XOR	**Xorichti**	**99.08 310**		P	**Pdif**		**02 45 16.7**	**-1.9**
DAG	**Danmarks Havn**	**99.08 352**	⇑*i*P		**Pdif**		**02 45 16.6**	**-1.1**
DAG				pmax	pmax			
	comp=Z,97nm,0.8s							
DAG				MLR	MLR			
	comp=Z,75µm,27.0s							
DAG	**Danmarks Havn**	**99.08 352**	⇑*i*P		**Pdif**		**02 45 16.6**	**-1.1**
	comp=Z,97nm,0.8s							
	comp=Z,75µm,27.0s							
DAG	**Danmarks Havn**	**99.08 352**	⇑*i*P		**Pdif**		**02 45 16.7**	**-1.1**
DAG				IAmb	IAmb		02 45 20.1	
	comp=Z,97nm,0.8s							
DAG				IAMs_20	IAMs_20		03 29 30.2	
	comp=Z,75µm,26.9s							
IMMV	**Iera Moni Meta**	**99.09 306**		*eP*	**Pdif**		**02 45 18.1**	**-0.6**
IMMV	**Iera Moni Meta**	**99.09 306**		P	**Pdif**		**02 45 18.6**	**-0.1**
GVDS	**Gavdos**	**99.09 306**		*eP*	**Pdif**		**02 45 17.8**	**-0.9**
GVDS	**Gavdos**	**99.09 306**		P	**Pdif**		**02 45 18.5**	**-0.2**
GVD	**Gavdhos**	**99.10 306**		*eP*	**Pdif**		**02 45 17.8**	**-0.9**
GVD	**Gavdhos**	**99.10 306**		P	**Pdif**		**02 45 18.4**	**-0.3**
MDVR	**Moldovita**	**99.14 316**	⇑P		**Pdif**		**02 45 18.5**	**-0.3**
MDVR	**Moldovita**	**99.14 316**	⇑P		**PKKPbc**		**03 01 44.6**	**-0.7**
KECS	**Kecovo**	**99.17 320**		*eP*	**Pdif**		**02 45 18.5**	**-0.2**
KECS				*e*S	**S**		**02 56 44.6**	**-1.9**
KECS	**Kecovo**	**99.17 320**		*e*PDIFF	**Pdif**		**02 45 18.5**	**-0.2**
KECS				*e*SDIFF	**S**		**02 56 44.6**	**-1.9**
VILL	**Villia**	**99.19 309**		P	**Pdif**		**02 45 17.2**	**-1.9**
VAY	**Valandovo**	**99.20 312**		*i* P	**Pdif**		**02 45 17.4**	**-1.6**
VAY	**Valandovo**	**99.20 312**		P	**Pdif**		**02 45 17.5**	**-1.5**
VAY				pmax	pmax			
	comp=Z,323nm,1.4s							
RODP	**Rodopos**	**99.25 306**		P	**Pdif**		**02 45 20.2**	**+0.8**
ATAL	**Atalanti**	**99.32 310**		P	**Pdif**		**02 45 12.2**	**-7.5**
LKR	**Lokris**	**99.35 309**		P	**Pdif**		**02 45 16.6**	**-3.2**
KNDR	**Palaiochora Ch**	**99.36 306**		*eP*	**Pdif**		**02 45 21.4**	**+1.5**
KNDR	**Palaiochora Ch**	**99.36 306**		P	**Pdif**		**02 45 22.8**	**+2.9**
GRG	**Griva**	**99.39 312**		*eP*	**Pdif**		**02 45 17.5**	**-2.5**
GRG	**Griva**	**99.39 312**		P	**Pdif**		**02 45 16.4**	**-3.6**
STIP	**Stip**	**99.41 313**		*i* P	**Pdif**		**02 45 17.4**	**-2.6**
BANR	**Banloc**	**99.42 316**	⇑P		**Pdif**		**02 45 20.0**	**+0.2**
EPID	**Epidavros**	**99.43 308**		P	**Pdif**		**02 45 15.7**	**-4.5**
KRND	**KRANIDI**	**99.44 308**		P	**Pdif**		**02 45 17.9**	**-2.3**
LIT	**Litokhoron**	**99.48 311**		P	**Pdif**		**02 45 18.8**	**-1.6**
LIT				pmax	pmax			
	comp=Z,402nm,1.3s							
LIT	**Litokhoron**	**99.48 311**		P	**Pdif**		**02 45 18.8**	**-1.6**
LIT				IAmb	IAmb		02 45 38.0	
	comp=Z,402nm,1.3s							
LIT	**Litokhoron**	**99.48 311**		P	**Pdif**		**02 45 17.9**	**-2.5**
LOUT	**Loutraki**	**99.48 309**		P	**Pdif**		**02 45 17.8**	**-2.6**
LTK	**Loutraki**	**99.48 309**		P	**Pdif**		**02 45 17.4**	**-3.0**
HFS	**Hagfors**	**99.56 332**		P	**Pdif**		**02 45 18.9**	**-1.3**
	comp=Z,51nm,0.9s,baz=79,slow=7.7,SNR=28							
ANKY	**Antikythira Is**	**99.57 307**		Pn	**Pdif**		**02 45 20.4**	**-0.4**
ANKY	**Antikythira Is**	**99.57 307**		P	**Pdif**		**02 45 20.4**	**-0.4**
AXAR	**Agios Charalam**	**99.59 310**		P	**Pdif**		**02 45 18.7**	**-2.2**
LRSO	**Larissa Observ**	**99.63 311**		P	**Pdif**		**02 45 18.9**	**-2.1**
LANS	**Liptovska Anna**	**99.66 320**		*eP*	**Pdif**		**02 45 21.3**	**+0.3**
LANS	**Liptovska Anna**	**99.66 320**		*e*PDIFF	**Pdif**		**02 45 21.3**	**+0.3**
NVL	**N'lazarevskaya**	**99.67 198**	⇑*i*P		**Pdif**		**02 45 23.2**	**+2.8**
NVL				*e*S	**SKSac**		**02 55 50.2**	**-4.6**
NVL				pmax	pmax			
	comp=Z,63nm,1.1s							
PSZ	**Piszkesteto**	**99.68 319**	⇑P		**Pdif**		**02 45 20.3**	**-0.9**
PSZ	**Piszkesteto**	**99.68 319**	P		**Pdif**		**02 45 24.4**	**+3.3**
PSZ				pmax	pmax			
	comp=Z,180nm,1.8s							
PSZ	**Piszkesteto**	**99.68 319**		IAMs_20	IAMs_20		03 37 50.6	
	comp=Z,29µm,21.0s							
KTHA	**Kythira Island**	**99.70 307**		*eP*	**Pdif**		**02 45 20.6**	**-0.8**
KTHA	**Kythira Island**	**99.70 307**		P	**Pdif**		**02 45 20.1**	**-1.3**
RES	**Resolute Bay**	**99.71 10**		PKKPbc	PKKPbc		03 01 45.1	+0.5
	comp=Z,7.7nm,0.9s,baz=116,slow=4.5,SNR=4.4							
THAL	**Thalero**	**99.72 309**		P	**Pdif**		**02 45 20.3**	**-1.1**
VLI	**Veliai**	**99.72 308**		P	**Pdif**		**02 45 19.8**	**-1.7**
AGG	**Agios Georgios**	**99.80 310**		*eP*	**Pdif**		**02 45 19.4**	**-2.4**
AGG	**Agios Georgios**	**99.80 310**		P	**Pdif**		**02 45 25.8**	**+4.0**
TBLU	**Trondheim**	**99.87 336**	⇑*i*P		**Pdif**		**02 45 19.8**	**-1.7**
TBLU				IVmB_BB			02 45 26.1	
	comp=Z,2µm,1.9s							
TBLU				*e*PP	**PP**		**02 49 25.4**	**-0.9**
TBLU				*e*SKSac	**SKSac**		**02 55 55.5**	**-0.6**
TBLU				*e*SS	**SS**		**03 03 46.2**	**+2.1**
TBLU				IVMs_BB	IVMs_BB		03 35 35.0	
	comp=Z,23µm,21.4s							
SKO	**Skopje**	**99.91 313**		*i* P	**Pdif**		**02 45 21.3**	**-0.9**
SKO	**Skopje**	**99.91 313**		P	**Pdif**		**02 45 25.6**	**+3.4**
SKO				pmax	pmax			
	comp=Z,60nm,1.7s							
THL	**Klokotos Trika**	**99.94 311**		P	**Pdif**		**02 45 20.1**	**-2.2**
MAKR	**Makrakomi, Fth**	**99.95 310**		P	**Pdif**		**02 45 20.3**	**-2.2**
GUR	**Goura**	**99.98 309**		P	**Pdif**		**02 45 20.4**	**-2.3**
KZN	**Kozani**	**99.98 311**		P	**Pdif**		**02 45 20.7**	**-2.0**
VLX	**Vlachokerasia**	**100.05 308**		P	**Pdif**		**02 45 21.4**	**-1.7**
KALE	**Kalithea**	**100.06 309**		P	**Pdif**		**02 45 20.6**	**-2.4**
ALIK	**Aliki, Aigiali**	**100.10 309**		P	**Pdif**		**02 45 21.5**	**-1.6**
TRIP	**Tripoli**	**100.11 308**		P	**Pdif**		**02 45 21.2**	**-2.1**
KLV	**Kalavryta, Ach**	**100.11 309**		P	**Pdif**		**02 45 21.7**	**-1.6**
TRIZ	**Trizonia**	**100.11 309**		P	**Pdif**		**02 45 21.1**	**-2.0**
SERG	**Sergoula**	**100.12 309**		P	**Pdif**		**02 45 21.5**	**-1.7**
ANX	**Ano Chora**	**100.19 310**		P	**Pdif**		**02 45 22.4**	**-1.2**
EVR	**Evrytania**	**100.22 310**		P	**Pdif**		**02 45 21.9**	**-1.9**
J28D	**J28D**	**100.22 44**		Pdiff	**Pdif**		**02 45 26.2**	**+3.2**
J28D				PP	PP		02 49 37.9	+8.8
J28D				PS	**PS**		**02 58 29.3**	**-0.1**
EFP	**Efpalio**	**100.23 309**		P	**Pdif**		**02 45 21.5**	**-2.2**
OKC	**Ostrava-Krasne**	**100.32 321**		*eP*	**Pdif**		**02 45 23.8**	**0.0**
OKC				MLR	MLR			
	comp=Z,29µm,19.9s							
OKC	**Ostrava-Krasne**	**100.32 321**		*e*PDIFF	**Pdif**		**02 45 23.8**	**0.0**
OKC				*e*pP	**pPdif**		**02 45 33.5**	**-3.9**
OKC				AMS	AMS		03 34 30.0	
	comp=Z,29µm,19.9s							
NC602	**NORSAR Array S**	**100.33 333**		*e*Pdif	**Pdif**		**02 45 23.2**	**-0.4**
NC602				*e*PP	**PP**		**02 49 29.7**	**-0.1**
NC602				*e*SKSac	**SKSac**		**02 55 59.1**	**+0.6**
NC602				*e*SP	**SP**		**02 58 22.4**	**-1.7**
NC602				*e*SS	**SS**		**03 03 53.0**	**+2.3**
NC602				IVMs_BB	IVMs_BB		03 33 22.2	
	comp=Z,31µm,24.0s							
NORES	**NORESS Array B**	**100.33 333**		P	**Pdif**		**02 45 25.5**	**+1.9**
NORES				pmax	pmax			
	comp=Z,44nm,0.7s							
NB2	**NORSAR Subarra**	**100.35 333**		P	**Pdif**		**02 45 22.2**	**-1.6**
	comp=Z,196nm,1.2s,baz=67,slow=4.6							
NB2	**NORSAR Subarra**	**100.35 333**		P	**Pdif**		**02 45 22.2**	**-1.6**
	baz=67,slow=4.6							
NOA	**NORSAR Array B**	**100.35 333**		P	**Pdif**		**02 45 21.9**	**-1.9**
	comp=Z,66nm,0.9s,baz=68,slow=4.5,SNR=76							
NOA				PP	**PP**		**02 49 27.2**	**-2.9**
	comp=Z,11nm,0.7s,baz=66,slow=7.6,SNR=2.7							
NOA				PKKPbc	**PKKPbc**		**03 01 40.3**	**-2.2**
	comp=Z,11nm,1.0s,baz=67,slow=3.1,SNR=15							
BUD	**Budapest**	**100.36 319**		P	**Pdif**		**02 45 24.8**	**+0.8**
BUD				pmax	pmax			
	comp=Z,120nm,1.2s							
KPRO	**Kipourio**	**100.36 311**		P	**Pdif**		**02 45 21.9**	**-2.4**
G22D	**G22D**	**100.38 47**		Pdiff	**Pdif**		**02 45 25.6**	**+1.9**
G22D				PP	**PP**		**02 49 34.0**	**+3.7**
G22D				SKKS	SKKSac		02 56 45.3	+12
G22D				PS	**PS**		**02 58 33.4**	**+2.2**
G22D				SSS	SSS		03 08 02.2	
FRGS	**Fruska Gora**	**100.38 316**	⇑*i*P		**Pdif**		**02 45 23.5**	**-0.7**
J20D	**J20D**	**100.41 44**		Pdiff	**Pdif**		**02 45 25.6**	**+1.8**
J20D				PP	PP		02 49 38.7	+8.2
J20D				PS	**PS**		**02 58 25.2**	**-6.2**
J20D				SSS	SSS		03 08 01.5	
ITM	**Ithomi**	**100.44 308**	*eP*		**Pdif**		**02 45 22.6**	**-2.1**
ITM	**Ithomi**	**100.44 308**		P	**Pdif**		**02 45 23.1**	**-1.6**
DRO	**Drossia**	**100.47 309**		P	**Pdif**		**02 45 23.7**	**-1.1**
PENT	**Pentalofos**	**100.48 311**		P	**Pdif**		**02 45 22.6**	**-2.3**
DIVS	**Divibare**	**100.49 315**	⇑*i*P		**Pdif**		**02 45 24.1**	**-0.8**
NEST	**Nestorio**	**100.50 312**		P	**Pdif**		**02 45 23.2**	**-1.8**
G29D	**G29D**	**100.52 47**		Pdiff	**Pdif**		**02 45 27.3**	**+2.9**
G29D				PP	**PP**		**02 49 34.8**	**+3.4**
G29D				SKKS	**SKKSac**		**02 56 41.2**	**+7.3**

KSP Ksiaz 101.18 323 *e*P **Pdif 02 45 27.7 +0.1**
KSP *e*S **SKSac 02 56 01.8 -1.2**
KSP *e*L L 03 32 00.7
comp=Z,80µm,25.5s
TIR Tirane 101.19 313 P **Pdif 02 45 26.6 -1.4**
TIR Tirane 101.19 313 P **Pdif 02 45 30.1 +2.2**
TIR pmax pmax
comp=Z,205nm,1.2s
TIR Tirane 101.19 313 IAMs_20 IAMs_20 03 34 07.3
comp=Z,28µm,21.0s
TIR Tirane 101.19 313 P **Pdif 02 45 26.5 -1.4**
IGT Igoumenitsa 101.22 311 P **Pdif 02 45 26.4 -1.7**
IGT pmax pmax
comp=Z,145nm,1.6s
IGT Igoumenitsa 101.22 311 P **Pdif 02 45 26.2 -1.9**
G20D G20D 101.22 47 Pdiff **Pdif 02 45 30.5 +3.0**
G20D PP **PP 02 49 40.3 +3.5**
G20D SKKS **SKKSac 02 56 45.3 +6.3**
G20D PS **PS 02 58 38.9 -1.4**
HAPS Han Pijesak,BI 101.23 316 *e*P **Pdif 02 45 27.8 -0.3**
TULEG Thule 101.24 4 IAMs_20 IAMs_20 03 34 06.3
comp=Z,22µm,21.0s
TULEG Thule 101.24 4 *i* P **Pdif 02 45 28.0 +0.6**
TULEG IAMs_20 IAMs_20 03 25 53.3
comp=Z,81µm,31.1s
TULEG Thule 101.24 4 IAmb IAmb 03 01 41.6
comp=Z,41nm,1.0s
TULEG Thule 101.24 4 *i* P **PKKPbc 03 01 37.6 -2.6**
FSK Fiskardo 101.26 310 P **Pdif 02 45 26.9 -1.4**
MODS Modra-Piesok 101.26 320 *e*P **Pdif 02 45 26.8 -1.3**
MODS *e* 02 56 04.5
MODS *e*S **Sdif 02 57 03.8 -0.3**
MODS Modra-Piesok 101.26 320 *e*PDIFF **Pdif 02 45 26.8 -1.3**
MOL Molde 101.28 336 *e*P **Pdif 02 45 27.7 -0.1**
MOL IVmB_BB 02 45 33.4
comp=Z,3µm,3.9s
MOL *e*SKSac **SKSac 02 56 02.8 -0.2**
MOL *e*SS **SS 03 04 04.5 +0.8**
MOL IVMs_BB IVMs_BB 03 33 21.6
comp=Z,24µm,25.8s
VLMS Volimes, Zakyn 101.30 309 P **Pdif 02 45 25.7 -2.8**
DPC Dobruska-Polom 101.31 322 *e*P **Pdif 02 45 28.6 +0.3**
DPC *e* 02 56 04.0
DPC MLR MLR
comp=Z,74µm,21.7s
DPC Dobruska-Polom 101.31 322 *e*PDIFF **Pdif 02 45 28.6 +0.3**
DPC *e*pP **pPdif 02 45 38.4 -3.5**
DPC *e*SKS **SKSac 02 56 04.0 +0.2**
DPC AMS AMS 03 35 10.0
comp=Z,74µm,21.7s
OSTC Ostas 101.31 322 *e*PDIFF **Pdif 02 45 28.5 +0.2**
OSTC *ex* x 02 45 39.2
OSTC *e*SKS **SKSac 02 56 04.5 +0.8**
OSTC AMS AMS 03 33 10.0
comp=Z,76µm,23.0s
PSDA Pessada-Kefalo 101.31 309 P **Pdif 02 45 23.7 -4.8**
G35D G35D 101.31 46 Pdiff **Pdif 02 45 30.0 +2.1**
G35D PP **PP 02 49 44.1 +6.7**
G35D SKKS **SKKSac 02 56 43.9 +4.3**
G35D PS **PS 02 58 41.7 +0.4**
G35D SSS SSS 03 08 07.9
YKA Yellowknife Ar 101.32 24 P **Pdif 02 45 27.6 -0.3**
comp=Z,26nm,0.7s,baz=302,slow=4.8,SNR=50
YKA PP **PP 02 49 41.4 +4.1**
comp=Z,14nm,0.9s,baz=302,slow=6.2,SNR=3.8
YKA PKiKP **PKiKP 02 49 53.7 +1.5**
comp=Z,8.1nm,0.6s,baz=311,slow=0.9,SNR=22
YKA PKKPbc **PKKPbc 03 01 35.2 -4.4**
comp=Z,3.9nm,0.8s,baz=132,slow=4.1,SNR=4.0
DBG Daneborg 101.35 351⇑ *i*P **Pdif 02 45 27.3 -0.6**
DBG IAmb IAmb 02 45 31.2
comp=Z,70nm,0.9s
DBG IAMs_20 IAMs_20 03 26 42.1
comp=Z,72µm,30.9s
KEF5 Kardakata, Kep 101.37 309 P **Pdif 02 45 27.6 -1.2**
PDG Podgorica 101.39 314⇑P **Pdif 02 45 27.7 -1.0**
PDG Podgorica 101.39 314⇑P **PKKPbc 03 01 36.5 -2.3**
PDG Podgorica 101.39 314 *e*P **Pdif 02 45 27.5 -1.2**
TTG Podgorica 101.39 314⇑ *i*P **Pdif 02 45 27.7 -1.0**
SRN Sarande 101.40 311 P **Pdif 02 45 27.9 -0.9**
CHVC Chvalec 101.40 322 *e*PDIFF **Pdif 02 45 28.9 +0.2**
CHVC AMS AMS 03 33 10.0
comp=Z,78µm,24.0s
KEF4 Livadi, Kephal 101.41 309 P **Pdif 02 45 27.0 -1.9**
ZST Bratislava 101.42 320 *e*P **Pdif 02 45 28.9 +0.1**
ZST *e* 02 56 02.4
ZST *e*S **Sdif 02 57 09.9 +4.5**
ZST Bratislava 101.42 320 *e*PDIFF **Pdif 02 45 28.8 0.0**
VRAC Vranov 101.44 321 P **Pdif 02 45 29.2 +0.4**
comp=Z,39nm,1.0s,baz=78,slow=5.3,SNR=23
VRAC Vranov 101.44 321⇑P **Pdif 02 45 29.0 +0.2**
VRAC Vranov 101.44 321 *e*PDIFF **Pdif 02 45 28.0 -0.8**
VRAC *e*PP **PP 02 49 45.8 +7.1**
VRAC *e*SKS **SKSac 02 56 05.8 +1.4**
VRAC *e*SDIFF **Sdif 02 57 03.5 -2.0**
VRAC *e*SP **SP 02 58 37.1 +0.5**
VRAC *e*SS **SS 03 04 01.7 -5.2**
VRAC *e* 03 09 53.9
DMLN Damoulianata-K 101.45 309 P **Pdif 02 45 26.3 -2.9**
UPC Upice 101.45 322 *e*P **Pdif 02 45 29.1 +0.2**
UPC MLR MLR
comp=Z,81µm,22.9s
UPC Upice 101.45 322 *e*PDIFF **Pdif 02 45 29.1 +0.2**
UPC *e*pP **pPdif 02 45 38.7 -3.8**
UPC AMS AMS 03 33 20.0
comp=Z,81µm,22.9s
UPM Unac-Piva 101.47 315 *e*P **Pdif 02 45 28.0 -1.3**
UPM Unac-Piva 101.47 315 *e*P **Pdif 02 45 28.7 -0.6**
NKY Niksic 101.49 314⇑ *i*P **Pdif 02 45 28.1 -1.3**
DRME Dracevica, Mon 101.50 314⇑ *i*P **Pdif 02 45 28.1 -1.2**
DRME Dracevica, Mon 101.50 314 *e*P **Pdif 02 45 26.6 -2.7**
ULC Ulcinj 101.51 313⇑ *i*P **Pdif 02 45 27.9 -1.4**
NKME Niksic 101.53 314 *e*P **Pdif 02 45 28.0 -1.5**
G04D G04D 101.56 49 Pdiff **Pdif 02 45 32.1 +3.3**
G04D PP PP 02 49 46.5 +7.3
G04D SKKS SKKSac 02 56 30.2 -11
G04D PS **PS 02 58 40.3 -3.2**
KEK Kerkira 101.59 311 P **Pdif 02 45 28.7 -1.0**
CEME Cevo 101.61 314⇑ *i*P **Pdif 02 45 28.4 -1.4**
JMIC Jan Mayen 101.62 346 P **Pdif 02 45 30.2 +1.1**
comp=Z,104nm,0.8s,baz=142,slow=13,SNR=3.1
JMIC Jan Mayen 101.62 346⇑ *i*P **Pdif 02 45 29.3 +0.1**
JMIC *e*PP **PP 02 49 40.1 +0.8**
JMIC *e*SKSac **SKSac 02 56 03.0 -1.3**
JMIC *e*SP **SP 02 58 39.2 +1.8**
JMIC *e*SS **SS 03 04 06.6 -1.5**
JMIC IVMs_BB IVMs_BB 03 25 44.1
comp=Z,11µm,26.5s
KRUC Moravsky 101.63 321 *e*PDIFF **Pdif 02 45 29.2 -0.5**
KRUC *e*PP **PP 02 49 47.3 +7.2**
KRUC *e*SKS **SKSac 02 56 07.3 +2.0**
KRUC *e*SDIFF **Sdif 02 57 05.6 -1.5**
KRUC *e*SP **SP 02 58 39.7 +1.0**
KRUC *e*SS **SS 03 04 09.0 -0.6**
KRUC *e* 03 05 54.2
KRUC *e* 03 09 52.8
KRUC Moravsky 101.63 321 P **Pdif 02 45 30.2 +0.5**
VLO Vlora 101.65 312 P **Pdif 02 45 28.2 -1.7**
KONO Kongsberg 101.65 332*c* *i*P **Pdif 02 45 29.0 -0.5**
KONO pmax pmax
comp=Z,70nm,0.9s
KONO MLR MLR
comp=Z,104µm,23.0s
KONO Kongsberg 101.65 332⇑ *i*P **Pdif 02 45 29.5 0.0**
KONO IVmB_BB 02 45 41.3
comp=Z,2µm,2.4s
KONO *e*PP **PP 02 49 40.6 +0.8**
KONO *e*SKSac **SKSac 02 56 03.8 -1.1**
KONO *e*SP **SP 02 58 38.2 0.0**
KONO *e*SS **SS 03 04 11.2 +2.1**
KONO IVMs_BB IVMs_BB 03 33 13.7
comp=Z,30µm,28.1s
BUM Brajici-Budva 101.68 314⇑ *i*P **Pdif 02 45 28.9 -1.3**
AKN Aaknes 101.69 335⇑ *i*P **Pdif 02 45 28.8 -0.9**
AKN *e*PP **PP 02 49 42.1 +2.0**
AKN *e*SKSac **SKSac 02 56 03.4 -1.6**
AKN *e*SP **SP 02 58 39.6 +1.0**
AKN *e*SS **SS 03 04 15.3 +5.8**
AKN IVMs_BB IVMs_BB 03 33 45.4
comp=Z,24µm,25.6s
RGN Rugen 101.71 327 *e*P **Pdif 02 45 29.2 -0.7**
COP Copenhagen 101.79 328 *e*P **Pdif 02 45 32.4 +2.3**
COP pmax pmax
comp=Z,100nm,1.0s
COP MLR MLR
comp=Z,37µm,23.0s
COP Copenhagen 101.79 328 *i* P **Pdif 02 45 32.4 +2.3**
comp=Z,100nm,1.0s
comp=Z,37µm,23.0s
COP Copenhagen 101.79 328 *e*P **Pdif 02 45 32.5 +2.3**
COP IAmb IAmb 02 45 37.7
comp=Z,100nm,1.0s
COP IAMs_20 IAMs_20 03 35 55.4
comp=Z,37µm,22.8s
BRY Bratogost 101.80 314 P **Pdif 02 45 31.2 +0.4**
BRY Bratogost 101.80 314⇑ *i*P **Pdif 02 45 29.4 -1.4**
BRY Bratogost 101.80 314 *e*P **Pdif 02 45 29.3 -1.5**
SKAR Skarslia 101.80 334⇑ *i*P **Pdif 02 45 29.2 -1.0**
SKAR *e*PP **PP 02 49 41.4 +0.4**
SKAR *e*SKSac **SKSac 02 56 04.8 -0.9**
SKAR *e*SP **SP 02 58 37.8 -2.0**
SKAR IVMs_BB IVMs_BB 03 36 01.6
comp=Z,24µm,22.5s
NLWA Neilton Lookou 101.84 41 IAMs_20 IAMs_20 03 23 46.6
comp=Z,24µm,22.0s
HCY Herceg Novi 101.94 314 P **Pdif 02 45 34.5 +3.3**
HCY Herceg Novi 101.94 314⇑ *i*P **Pdif 02 45 29.8 -1.4**
HCY Herceg Novi 101.94 314 *e*P **Pdif 02 45 29.3 -1.9**
TREB Trebinje 101.98 314 *e*P **Pdif 02 45 28.5 -2.9**
G03D7 G03D7 102.05 49 Pdiff **Pdif 02 45 34.8 +3.8**
G03D7 PP PP 02 49 50.4 +7.5
G03D7 PS **PS 02 58 45.8 -3.0**
G03D7 SSS SSS 03 07 56.0
BEHE Becsehely 102.11 318⇑ *i*P **Pdif 02 45 34.1 +2.2**
TREC Trest 102.14 321 *e*P **Pdif 02 45 32.3 +0.3**
TREC MLR MLR
comp=Z,64µm,24.7s
TREC Trest 102.14 321 *e*PDIFF **Pdif 02 45 32.3 +0.3**
TREC AMS AMS 03 35 30.0
comp=Z,64µm,24.7s
RUE Ruedersdorf 102.16 325 *e*P **Pdif 02 45 32.5 +0.6**
A04D Lummi Island 102.21 39 P **Pdif 02 45 33.2 +1.0**
baz=287
BLY Banja Luka 102.29 316⇑ *i*P **Pdif 02 45 32.3 -0.4**
CONA Conrad Observa 102.30 320 *e*P **Pdif 02 45 33.5 +0.7**
comp=Z,74nm,1.3s,SNR=15
CONA *e*P **PP 02 49 43.5 -1.8**
comp=Z,229nm,1.5s
CONA *e*P **PKKPbc 03 01 37.5 +1.0**
comp=Z,30nm,1.1s
D03D Eldon 102.31 41 P **Pdif 02 45 34.1 +1.3**
baz=287,SNR=23
PVCC Panska Ves 102.32 323 *e*P **Pdif 02 45 33.3 +0.6**
PVCC MLR MLR
comp=Z,83µm,24.2s
PVCC Panska Ves 102.32 323 *e*PDIFF **Pdif 02 45 33.3 +0.6**
PVCC *ex* x 02 49 57.3
PVCC *e*SKS **SKSac 02 56 15.1 +6.6**
PVCC AMS AMS 03 34 00.0
comp=Z,83µm,24.2s
G10D G10D 102.33 48 Pdiff **Pdif 02 45 45.1 +13**
G10D PP **PKiKP 02 49 49.6 -4.5**
G10D PS **PS 02 58 48.5 -3.6**
STON Ston 102.40 315 *e*P **Pdif 02 45 31.6 -1.6**
STON Ston 102.40 315 *e*Pn **Pdif 02 45 36.1 +2.9**
MGRS Mrkonjic Grad 102.44 316 *e*P **Pdif 02 45 47.8 +14**
KOGS Kog 102.46 318 *i* Pdiff **Pdif 02 45 32.7 -0.7**
KOGS *i* pPdiff **pPdif 02 45 47.1 +0.1**
KOGS *i* SKSac **SKSac 02 56 08.9 -0.5**
KOGS *e*Sdiff **Sdif 02 57 14.2 0.0**
KOGS *e*SS **SKKPbc 03 05 09.4 -4.1**
HYA Hoyanger 102.50 335⇑ *i*P **Pdif 02 45 33.1 -0.1**
HYA *e*SKSac **SKSac 02 56 08.1 -0.7**
PRU Pruhonice 102.51 322 *e*P **Pdif 02 45 33.5 0.0**
PRU MLR MLR
comp=Z,88µm,21.4s
PRU Pruhonice 102.51 322 *e*PDIFF **Pdif 02 45 33.5 0.0**
PRU *e*pP **pPdif 02 45 43.5 -3.6**
PRU *e*SKS **SKSac 02 56 16.7 +7.3**
PRU AMS AMS 03 36 00.0
comp=Z,88µm,21.4s
PRA Prague 102.55 322 *e*P **Pdif 02 45 34.9 +1.2**
PRA MLR MLR
comp=Z,43µm,21.3s
PRA Prague 102.55 322 *e*PDIFF **Pdif 02 45 34.9 +1.2**
PRA *e*pP **pPdif 02 45 43.9 -3.4**
PRA AMS AMS 03 36 10.0
comp=Z,43µm,21.3s
BRG Berggiesshubel 102.59 323 *i* PDIFF **Pdif 02 45 33.7 -0.2**
comp=Z,97nm,1.2s
BRG *i* pPDIFF 02 45 48.3
comp=Z,325nm,1.6s
BRG PP **PP 02 49 46.0 -1.2**
BRG SKS **SKSac 02 56 14.0 +4.3**
BRG SDIFF **Sdif 02 57 16.0 +1.0**
BRG SS **SS 03 04 17.0 -5.6**
BRG *e*PKPPKP **P'P'df 03 09 51.8 -1.8**
comp=Z,88nm,2.3s
comp=N,41µm,22.7s
comp=E,57µm,24.7s
comp=Z,80µm,23.9s
BRG Berggiesshubel 102.59 323 *i* P **Pdif 02 45 33.7 -0.2**
BRG 02 49 46.0
BRG 02 56 14.0
BRG S **Sdif 02 57 16.0 +1.0**
BRG SS **SS 03 04 17.0 -5.6**
BRG pmax pmax
comp=Z,97nm,1.2s
BRG MLR MLR
comp=N,41µm,22.7s
BRG MLR MLR
comp=E,57µm,24.7s
BRG MLR MLR
comp=Z,80µm,23.9s
BRG Berggiesshubel 102.59 323 *e*Pdiff **Pdif 02 45 33.9 +0.1**
baz=68,slow=4.5
RICI Ricice 102.65 315 *e*Pn **Pdif 02 45 35.0 +0.7**
ARSA Arzberg 102.71 319 *e*P **Pdif 02 45 34.5 0.0**
comp=Z,68nm,1.1s,SNR=11
ARSA P **PP 02 49 51.1 +2.8**
comp=Z,85nm,1.7s
ARSA *e*P **PKKPbc 03 01 35.6 +0.5**
comp=Z,16nm,0.9s
B05A Bryant 102.74 40 P **Pdif 02 45 35.7 +1.1**
baz=288,SNR=13
HOMB Homborsund 102.75 331 *e*Pdif **Pdif 02 45 33.7 -0.7**
HOMB IVmBBB 02 45 45.1
comp=Z,2µm,4.3s
HOMB *e*PP **PP 02 49 50.7 +2.6**
HOMB *e*SKSac **SKSac 02 56 07.8 -2.3**
HOMB IVMs_BB IVMs_BB 03 33 21.7
comp=Z,38µm,25.6s
F04D Rainier, OR 102.77 42 P **Pdif 02 45 35.7 +0.9**
baz=286
FOO Floro 102.78 335⇑ *i*P **Pdif 02 45 34.4 -0.1**
FOO IVmB_BB 02 45 47.2
comp=Z,2µm,3.4s
FOO *e*PP **PP 02 49 50.5 +2.3**
FOO *e*SKSac **SKSac 02 56 06.0 -4.1**
FOO *e*SKSac **SKSac 02 56 09.8 -0.3**
FOO *e*SS **SS 03 04 26.2 +1.7**
FOO IVMs_BB IVMs_BB 03 34 18.3
comp=Z,20µm,27.4s
MAKA Makarska 102.78 315 *e*Pn **Pdif 02 45 35.9 +1.0**
ZAG Zagreb 102.81 318⇑ *i*P **Pdif 02 45 35.2 +0.2**
G03D McMinnville, O 102.84 43 P **Pdif 02 45 33.4 -1.8**
baz=286
ODD1 Odda 102.89 333 *e*Pdif **Pdif 02 45 35.0 -0.1**
ODD1 *e*SKSac **SKSac 02 56 09.0 -1.9**
ODD1 *e*SP **SP 02 58 51.9 +0.5**
GOET G??ttrup 102.91 330 *i* P **Pdif 02 45 38.4 +3.3**
GOET G??ttrup 102.91 330 *i* P **Pdif 02 45 38.5 +3.3**
FBE Freiberg 102.92 323 *e*Pdiff **Pdif 02 45 35.7 +0.3**
baz=68,slow=4.5
E04D Cinebar 102.93 41 P **Pdif 02 45 37.3 +1.8**
baz=287,SNR=6.8
PBCC Pribram 102.94 322 *e*PDIFF **Pdif 02 45 35.7 +0.2**
FS13D FS13D 102.96 48 Pdiff **Pdif 02 45 47.3 +12**
FS13D PP **PP 02 49 51.9 +1.9**
FS13D PS **PS 02 58 49.9 -9.0**
KBO Bosley Butte 102.96 46 IAMs_20 IAMs_20 03 22 42.6
comp=Z,23µm,22.0s
FS09D FS09D 102.97 48 PP **PKiKP 02 49 56.6 +1.1**
FS09D PS **PS 02 58 59.5 +0.4**
FS06D FS06D 102.98 48 PP **PKiKP 02 49 54.2 -1.3**
FS06D PS **PS 02 58 52.6 -6.7**

COR Corvallis 102.99 43 IAMs_20 IAMs_20 03 33 41.1
comp=Z,23µm,21.0s
CLL Collm 103.00 324 *e*Pdif **Pdif 02 45 35.0 -0.7**
CLL *i* pPdif **pPdif 02 45 48.6 -0.7**
CLL *e* 02 46 00.0
CLL *i* 02 46 06.8
CLL *e* 02 48 31.0
CLL *e* 02 49 28.0
CLL *i* PP **PKiKP 02 49 53.9 -1.7**
CLL *i* pPP 02 50 02.0
CLL *e*PPP PPP 02 52 00.0
CLL *e*SKSac **SKSac 02 56 11.0 -0.6**
CLL *e*SKKSac **SKKSac 02 56 52.0 -0.1**
CLL *e*Sdif **Sdif 02 57 18.0 -0.4**
CLL *e*SP **SP 02 58 49.0 -4.0**
CLL *e*PS **PS 02 59 01.0 +1.5**
CLL *e* 03 00 18.0
CLL *e* 03 01 12.0
CLL *e*PKKPbc 03 01 53.0
CLL *e* 03 03 42.0
CLL *e*SS **SS 03 04 30.0 +1.7**
CLL *e* 03 05 54.0
CLL *e* 03 09 24.0
CLL *e* 03 12 48.0
CLL Lmax 03 33 00.0
CLL Collm 103.00 324 *e*P **Pdif 02 45 35.0 -0.7**
CLL *i* 02 49 53.9
CLL *e* 02 56 11.0
CLL *e*S **Sdif 02 57 18.0 -0.4**
CLL Collm 103.00 324 *e*Pdiff **Pdif 02 45 35.4 -0.3**
baz=68,slow=4.5
LSTV Lastovo 103.00 315 *e*Pn **Pdif 02 45 39.2 +3.3**
KIJV Kijevo 103.02 316 *i* Pn **Pdif 02 45 36.1 +0.1**
B06A Marblemount 103.05 39 IAMs_20 IAMs_20 03 25 23.3
comp=Z,20µm,21.0s
FS10D FS10D 103.05 48 Pdiff **Pdif 02 45 48.8 +13**
FS10D PS PS 02 59 20.0 +20
D05A Enumclaw 103.13 41 IAMs_20 IAMs_20 03 24 39.5
comp=Z,19µm,21.0s
SUE Sulen 103.16 335 *e*P **Pdif 02 45 35.4 -0.8**
SUE IVmB_BB 02 45 41.9
comp=Z,2µm,3.7s
SUE *e*PP **PP 02 49 52.1 +1.1**
SUE *e*SKSac **SKSac 02 56 12.5 +0.6**
SUE *e*SS **SS 03 04 30.0 +0.2**
SUE IVMs_BB IVMs_BB 03 34 31.0
comp=Z,23µm,23.3s
CRES Cresnjev 103.17 318 *i* Pdiff **Pdif 02 45 36.2 -0.3**
CRES *e*pPdiff **pPdif 02 45 50.4 +0.2**
CRES *e* 02 49 09.7
CRES *e*PP **PKiKP 02 49 53.9 -2.2**
CRES *e* 02 52 29.2
CRES *e* 02 54 23.1
CRES *i* SKSac **SKSac 02 56 11.9 -0.8**
CRES *e*Sdiff **Sdif 02 57 22.3 +2.2**
CRES *e* 02 58 53.6
CRES *e*PKKP **PKKPbc 03 01 33.2 -0.5**
CRES Cresnjev 103.17 318⇑ *i*P **Pdif 02 45 36.3 -0.3**
MUD Monsted U'grnd 103.18 330 *i* P **Pdif 02 45 36.3 0.0**
MUD MLR MLR
comp=Z,79µm,24.0s
MUD Monsted U'grnd 103.18 330 *i* P **Pdif 02 45 36.3 0.0**
comp=Z,78µm,24.0s
MUD Monsted U'grnd 103.18 330 *i* P **Pdif 02 45 36.3 0.0**
MUD IAMs_20 IAMs_20 03 33 32.5
comp=Z,79µm,24.0s
BLS5 Blasjo 103.19 333⇑ *i*P **Pdif 02 45 35.2 -1.2**
BLS5 IVmB_BB 02 45 42.5
comp=Z,3µm,3.1s
BLS5 *e*PP **PKiKP 02 49 53.6 -2.1**
BLS5 *e*SKSac **SKSac 02 56 09.3 -3.0**
BLS5 *e*SS **SS 03 04 32.1 +1.7**
BLS5 IVMs_BB IVMs_BB 03 33 14.9
comp=Z,27µm,29.0s
I03D Drain, OR 103.20 44 P **Pdif 02 45 38.5 +1.8**
baz=286
SOKA Soboth 103.20 319 *e*P **Pdif 02 45 36.8 -0.1**
comp=Z,61nm,1.4s,SNR=16
SOKA *e*P **PKiKP 02 49 55.9 -0.3**
comp=Z,213nm,1.3s
SOKA *e*P **PKKPbc 03 01 34.3 +0.6**
comp=Z,27nm,1.5s
BER Bergen 103.24 334⇑ *e*P **Pdif 02 45 36.5 0.0**
BER IVmB_BB 02 45 49.4
comp=Z,3µm,4.5s
BER *e*PP **PP 02 49 52.8 +1.1**
BER *e*SKSac **SKSac 02 56 08.0 -4.3**
BER *e*SKSac **SKSac 02 56 12.1 -0.2**
BER *e*SS **SS 03 04 33.4 +2.4**
BER IVMs_BB IVMs_BB 03 33 59.5
comp=Z,21µm,23.8s
ASK Askoy 103.25 334 *e*P **Pdif 02 45 36.9 +0.3**
ASK *e*PP **PP 02 49 51.4 -0.4**
ASK *e*SKSac **SKSac 02 56 11.2 -1.2**
SNAA Sanae 103.32 195 Pdiff **Pdif 02 45 37.4 +0.6**
SNAA Sanae 103.32 195 PKPbc **PKKPbc 03 01 31.1 -3.1**
SNAA Sanae 103.32 195 Pdiff **Pdif 02 45 38.0 +1.2**
comp=Z,14nm,0.8s,baz=112,slow=6.5,SNR=22
SNAA PP **PKiKP 02 49 56.5 +0.8**
comp=Z,41nm,1.0s,baz=151,slow=9.3,SNR=4.9
SNAA PKKPbc **PKKPbc 03 01 31.2 -2.9**
comp=Z,20nm,0.9s,baz=242,slow=1.3,SNR=12
SNAA PKPPKP **P'P'df 03 09 49.3 -1.5**
comp=Z,1.9nm,0.9s,baz=310,slow=3.0,SNR=4.9
SNART Snartemo 103.33 332 *e*P **Pdif 02 45 36.8 -0.2**
SNART *e*SKSac **SKSac 02 56 11.9 -0.9**
SNART Snartemo 103.33 332 *e*P **Pdif 02 45 37.4 +0.4**
MOA Molln 103.35 320 *e*P **Pdif 02 45 37.8 +0.4**
comp=Z,145nm,1.1s,SNR=24
MOA P **PKiKP 02 49 56.9 +0.6**
comp=Z,174nm,1.5s
MOA *e*P **PKKPbc 03 01 34.8 +1.5**
comp=Z,32nm,1.1s
KHC Kasperske Hory 103.38 322 *e*P **Pdif 02 45 36.4 -1.1**
KHC *e* 02 49 54.0
KHC *e* 02 56 14.3
KHC MLR MLR
comp=Z,72µm,23.3s
KHC Kasperske Hory 103.38 322 *e*PDIFF **Pdif 02 45 36.4 -1.1**
KHC *e*pP **pPdif 02 45 46.5 -4.6**
KHC *e*PP **PP 02 49 54.0 +0.8**
KHC *e*SKS 02 56 14.3
KHC *e*PKKP **PKKPbc 03 01 37.0 +3.7**
KHC AMS AMS 03 36 10.0
comp=Z,72µm,23.3s
GEC2 GERESS Array S 103.39 321 *e*Pdiff **Pdif 02 45 37.4 -0.3**
baz=68,slow=4.5
GEC2 GERESS Array S 103.39 321 IAMs_20 IAMs_20 03 33 52.5
comp=Z,26µm,22.0s
GERES GERESS Array B 103.39 321 Pdiff **Pdif 02 45 37.1 -0.5**
comp=Z,13nm,0.9s,baz=60,slow=5.3,SNR=30
GERES PP **PKiKP 02 49 55.5 -1.0**
comp=Z,18nm,1.0s,baz=69,slow=7.3,SNR=5.9
GERES PKKPbc **PKKPbc 03 01 32.1 -1.2**
comp=Z,2.5nm,0.8s,baz=235,slow=1.5,SNR=5.9
GERES PKPPKP **P'P'df 03 09 50.0 -2.4**
comp=Z,1.0nm,0.9s,baz=342,slow=1.7,SNR=5.4
H04D Lebanon 103.39 43 P **Pdif 02 45 39.1 +1.5**
baz=286
L02E Cave Junction 103.42 46 P **Pdif 02 45 38.4 +0.6**
baz=285
BAI Bari 103.44 313 *e*P **PKiKP 02 49 56.2 -0.4**
JCC Jacoby Creek, 103.45 47 IAMs_20 IAMs_20 03 28 56.8
comp=Z,20µm,22.0s
OBKA Obir 103.57 319 *e*P **Pdif 02 45 39.0 +0.5**
comp=Z,68nm,1.2s,SNR=7.3
OBKA P **PKiKP 02 49 56.8 -0.1**
comp=Z,80nm,1.1s
OBKA *e*P **PKKPbc 03 01 33.5 +0.8**
comp=Z,26nm,0.9s
BSEG Bad Segeberg 103.58 327 *e*Pdiff **Pdif 02 45 38.3 +0.1**
baz=68,slow=4.5
C06D Leavenworth 103.61 40 P **Pdif 02 45 39.4 +0.8**
baz=288
TANN Tannenbergstha 103.63 323 *e*Pdiff **Pdif 02 45 38.6 0.0**
baz=68,slow=4.5
KHMM Horse Mountain 103.66 47 IAMs_20 IAMs_20 03 42 23.2
comp=Z,22µm,21.0s
MATE Matera 103.68 313⇑P **Pdif 02 45 39.0 +0.1**
MATE Matera 103.68 313⇑P **PKKPbc 03 01 31.5 -0.4**
NKC Novy Kostel 103.70 323 *e*P **Pdif 02 45 39.1 +0.2**
NKC MLR MLR
comp=Z,91µm,23.9s
NKC Novy Kostel 103.70 323 *e*PDIFF **Pdif 02 45 39.1 +0.2**

NKC *e*pP **pPdif** **02 45 48.9 -3.6**
NKC *e*SKS **SKSac** **02 56 24.6 +10**
NKC AMS AMS 03 35 20.0
comp=Z,91µm,23.9s
LJU Ljubljana 103.72 318 *e*Pdiff **Pdif** **02 45 39.0 -0.1**
comp=Z,1µm,4.4s
LJU *i* pDdiff **pDdif** **02 45 52.8 +0.2**
LJU *e* 02 49 12.6
LJU *e* 02 49 36.2
LJU *e*PP **PKiKP** **02 49 58.6 +1.6**
LJU *e* 02 51 32.6
LJU *e* 02 52 35.2
LJU *e* 02 54 29.3
LJU *i* SKSac **SKSac** **02 56 14.6 -0.7**
LJU *e*Sdiff **Sdif** **02 57 25.9 +1.2**
LJU *e*SP **SP** **02 59 03.2 +2.3**
LJU *e* 02 59 26.6
LJU *e*PKKP **PKKPbc** **03 01 32.9 +0.8**
LJU *e*SS SKKPbc 03 05 25.3 +15
LJU *e* 03 09 41.0
LJU Ljubljana 103.72 318⇑ *i*P **Pdif** **02 45 38.7 -0.4**
WERN Wernitzgruen 103.73 323 *e*Pdiff **Pdif** **02 45 38.9 -0.1**
baz=68,slow=4.5
GUNZ Gunzen 103.73 323 *e*Pdiff **Pdif** **02 45 39.2 +0.2**
baz=68,slow=4.5
NEUB Neuenburg 103.76 324 *e*Pdiff **Pdif** **02 45 39.0 -0.1**
baz=68,slow=4.5
HUMO Hull Mountain 103.77 45 IAMs_20 IAMs_20 03 34 13.9
comp=Z,25µm,21.0s
PLN Plauen 103.79 323 *e*Pdiff **Pdif** **02 45 39.2 -0.1**
baz=68,slow=4.5
WET Wettzell 103.81 322 *e*Pdiff **Pdif** **02 45 39.5 +0.1**
baz=68,slow=4.5
I04A Tendick Farm, 103.82 44 P **Pdif** **02 45 40.6 +1.0**
baz=286,SNR=12
KMRM Mail Ridge 103.84 48 IAMs_20 IAMs_20 03 34 51.1
comp=Z,27µm,22.0s
F05D White Salmon 103.87 42 P **Pdif** **02 45 40.6 +0.8**
baz=288
CEY Cerknica 103.88 318⇑ *i*P **Pdif** **02 45 39.4 -0.4**
LTY Liberty 103.96 40 IAMs_20 IAMs_20 03 25 17.7
comp=Z,30µm,22.0s
RIY Rijeka 103.97 318⇑ *i*P **Pdif** **02 45 39.1 -1.0**
MANZ Manzenberg 103.99 323 *e*Pdiff **Pdif** **02 45 40.5 +0.3**
baz=68,slow=4.5
TIP Timpagrande 104.00 311⇑P **Pdif** **02 45 40.2 -0.3**
TIP Timpagrande 104.00 311⇑P **PKKPbc** **03 01 34.0 +2.9**
ROTZ Rotzenmuhle 104.01 322 *e*Pdiff **Pdif** **02 45 40.5 +0.2**
baz=68,slow=4.5
MOX Moxa 104.06 323 P **Pdif** **02 45 40.8 +0.4**
MOX Moxa 104.06 323 *e*Pdiff **Pdif** **02 45 40.4 -0.1**
baz=68,slow=4.5
MOX *e*L L 03 37 49.9
comp=Z,42µm,22.0s
KCPM Cahto Peak 104.06 48 IAMs_20 IAMs_20 03 32 15.1
comp=Z,20µm,22.0s
ASSE Asse, Remlinge 104.06 325 *e*Pdiff **Pdif** **02 45 40.1 -0.2**
baz=68,slow=4.5
MYKA Terra Mystica 104.13 319 *e*P **Pdif** **02 45 40.8 -0.1**
comp=Z,32nm,1.2s
MYKA *e*P **PKKPbc** **03 01 31.7 +0.7**
comp=Z,18nm,0.8s
G05D Wamic, OR 104.16 42 P **Pdif** **02 45 41.9 +0.9**
baz=288
M02C Callahan 104.16 47 P **Pdif** **02 45 42.6 +1.3**
baz=285,SNR=10
YBH Yreka Blue Hor 104.18 46 Pdiff **Pdif** **02 45 42.2 +0.9**
comp=Z,4.7nm,0.7s,baz=295,slow=3.1,SNR=9.2
YBH PP **PP** **02 50 02.3 +2.8**
comp=Z,12nm,1.0s,baz=289,slow=4.1,SNR=4.7
YBH PKKPbc **PKKPbc** **03 01 32.1 +1.4**
comp=Z,2.8nm,0.8s,baz=107,slow=4.5,SNR=3.5
KBA Koelnbreinsper 104.18 320 *e*P **Pdif** **02 45 41.1 -0.2**
comp=Z,47nm,0.9s,SNR=7.9
KBA P **PKiKP** **02 49 57.7 -0.4**
comp=Z,164nm,1.4s
KBA *e*P **PKKPbc** **03 01 32.0 +1.0**
comp=Z,18nm,1.1s
KBA Koelnbreinsper 104.18 320 P **Pdif** **02 45 43.8 +2.5**
SUR Sutherland 104.19 237 Pdiff **Pdif** **02 45 43.0 +1.4**
SUR PP **PP** **02 50 01.8 +1.7**
comp=Z,39nm,1.1s,baz=121,slow=7.8,SNR=3.4
SUR Sutherland 104.19 237 IAMs_20 IAMs_20 03 29 19.9
comp=Z,27µm,22.0s
J04D Umpqua Nationa 104.19 45 P **Pdif** **02 45 42.2 +0.8**
baz=286
L04D Klamath Falls 104.34 46 P **Pdif** **02 45 43.6 +1.5**
baz=286,SNR=8.7
CLZ Clausthal 104.35 325 *e*Pdiff **Pdif** **02 45 42.1 +0.3**
baz=68,slow=4.5
N02D Trinity Center 104.38 47 P **Pdif** **02 45 44.3 +2.1**
baz=285
I05D Terrebonne, OR 104.41 43 P **Pdif** **02 45 43.3 +1.1**
baz=287
O02D Mt. Diablo Mer 104.53 48 P **Pdif** **02 45 45.2 +2.3**
baz=285,SNR=9.1
WDC Whiskeytown Da 104.61 47 IAMs_20 IAMs_20 03 33 52.3
comp=Z,26µm,22.0s
K04D Chiloquin, OR 104.61 45 P **Pdif** **02 45 45.2 +1.9**
baz=286
HOPS Hopland Field 104.62 49 IAMs_20 IAMs_20 03 34 40.9
comp=Z,20µm,21.0s
GRF Grafenberg Arr 104.63 323 *e*Pdiff **Pdif** **02 45 43.5 +0.5**
baz=68,slow=4.5
GRF *e*PP **PKiKP** **02 49 59.4 +0.8**
baz=72,slow=6.5
GRF *e*PKKPab **PKKPab** **03 01 50.2 +3.1**
GRF *e*PxPxdf PKPPKPdf 03 09 36.7
baz=227,slow=2.1
GRF *e*L L 03 37 54.2
comp=Z,38µm,21.0s
E07A Sunnyside 104.72 41 IAMs_20 IAMs_20 03 24 27.6
comp=Z,20µm,21.0s
J05D Fort Rock, OR 104.79 44 P **Pdif** **02 45 44.7 +0.6**
baz=287,SNR=13
M04C Macdoel 104.79 46 P **Pdif** **02 45 45.1 +1.0**
baz=286,SNR=8.1
ABTA Abfaltersbach 104.83 319 P **Pdif** **02 45 42.2 -1.9**
comp=Z,70nm,1.5s,SNR=7.2
ABTA P **PKiKP** **02 49 58.3 -0.9**
comp=Z,64nm,1.4s
PINE Pine Mountain 104.84 44 IAMs_20 IAMs_20 03 34 29.3
comp=Z,22µm,22.0s
SCO Scoresbysund 104.84 350 *i* P **Pdif** **02 45 43.4 0.0**
SCO MLR MLR
comp=Z,96µm,27.0s
SCO Scoresbysund 104.84 350 *i* P **Pdif** **02 45 43.4 0.0**
comp=Z,96µm,27.0s
SCO Scoresbysund 104.84 350 *i* P **Pdif** **02 45 43.5 0.0**
SCO IAMs_20 IAMs_20 03 31 32.1
comp=Z,96µm,27.4s
GDXM Geysers 104.88 49 IAMs_20 IAMs_20 03 33 43.8
comp=Z,23µm,20.0s
F07A Phinny Hill Vi 104.88 41 IAMs_20 IAMs_20 03 25 17.0
comp=Z,20µm,22.0s
VNA2 Neumayer--Watz 104.93 194 Pdiff **Pdif** **02 45 45.0 +1.1**
baz=137,slow=6.9
VNA2 Neumayer--Watz 104.93 194 PKPbc **PKKPbc** **03 01 26.9 -2.3**
HAWA Hanford 104.98 41 IAMs_20 IAMs_20 03 24 45.6
comp=Z,23µm,22.0s
SUMG Summit 105.10 355 *i* P **Pdif** **02 45 47.4 +2.3**
SUMG MLR MLR
comp=Z,130µm,24.0s
SUMG Summit 105.10 355 IAMs_20 IAMs_20 03 36 05.4
comp=Z,24µm,22.0s
SUMG Summit 105.10 355 *i* P **Pdif** **02 45 47.4 +2.3**
comp=Z,125µm,24.0s
SUMG Summit 105.10 355 *i* P **PKKPbc** **03 01 28.5 -0.7**
comp=Z,88nm,1.0s
SUMG Summit 105.10 355 *i* P **Pdif** **02 45 47.5 +2.3**
SUMG IAMs_20 IAMs_20 03 34 23.1
comp=Z,125µm,24.4s
SUMG Summit 105.10 355 IAmb IAmb 03 01 29.8
comp=Z,88nm,1.0s
SUMG Summit 105.10 355 *i* P **PKKPbc** **03 01 28.5 -0.7**
D08A Wollman Farm, 105.16 40 IAMs_20 IAMs_20 03 25 42.1
comp=Z,25µm,22.0s
K05A Summer Lake 105.19 45 IAMs_20 IAMs_20 03 35 12.6
comp=Z,18µm,20.0s
WTTA Wattenberg 105.22 320 *e*P **Pdif** **02 45 45.6 -0.3**
comp=Z,82nm,1.5s,SNR=13
WTTA P **PKiKP** **02 50 00.0 0.0**
comp=Z,340nm,1.3s
WTTA *e*P **PKKPbc** **03 01 27.4 -0.5**
comp=Z,44nm,1.2s
WTTA Wattenberg 105.22 320 P **Pdif** **02 45 45.6 -0.3**
O03E Paynes Creek 105.23 47 P **Pdif** **02 45 47.4 +1.4**
baz=286,SNR=9.3
WATA Walderalm 105.23 320 *e*P **Pdif** **02 45 45.4 -0.6**
comp=Z,56nm,1.4s,SNR=12
WATA P **PKiKP** **02 49 58.7 -1.3**
comp=Z,250nm,1.5s
WATA *e*P **PKKPbc** **03 01 27.1 -0.7**
comp=Z,28nm,1.6s
E08A Dider Farm, El 105.26 41 IAMs_20 IAMs_20 03 24 44.9
comp=Z,19µm,21.0s
VNA3 Neumayer Olymp 105.26 193 Pdiff **Pdif** **02 45 47.8 +2.5**
VNA3 Neumayer Olymp 105.26 193 PKPdf **PKKPbc** **03 01 26.0 -2.3**
VNA1 Neumayer--Stat 105.33 194 Pdiff **Pdif** **02 45 47.4 +1.8**
VNA1 Neumayer--Stat 105.33 194 PKPab **PKKPbc** **03 01 26.0 -1.9**
SQTA Sankt Quirin 105.51 320 *e*P **Pdif** **02 45 46.9 -0.2**
comp=Z,148nm,1.7s,SNR=9.8
SQTA P **PP** **02 50 09.5 +0.3**
comp=Z,149nm,1.3s
SQTA *e*P **PKKPbc** **03 01 26.8 -0.1**
comp=Z,24nm,0.9s
MOTA Moosalm 105.53 320 *e*P **Pdif** **02 45 46.0 -1.2**
comp=Z,90nm,1.6s,SNR=10
MOTA *e*P **PP** **02 50 09.6 +0.2**
comp=Z,219nm,1.2s
MOTA *e*P **PKKPbc** **03 01 26.8 -0.1**
comp=Z,33nm,1.0s
AQU L'Aquila 105.60 315 P **Pdif** **02 45 48.3 +0.8**
AQU pmax pmax
comp=Z,123nm,1.0s
AQU L'Aquila 105.60 315⇑ *i*P **Pdif** **02 45 46.6 -0.9**
AQU L'Aquila 105.60 315 IAMs_20 IAMs_20 03 41 13.6
comp=Z,30µm,22.0s
IBBN Ibbenburen 105.64 326 *e*Pdiff **Pdif** **02 45 47.1 -0.3**
baz=68,slow=4.5
RETA Reutte 105.70 321 *e*P **Pdif** **02 45 48.0 0.0**
comp=Z,27nm,1.3s
RETA *e*P **PKiKP** **02 49 60.0 -0.8**
comp=Z,193nm,1.1s
RETA *e*P **PKKPbc** **03 01 26.5 +0.2**
comp=Z,31nm,1.6s
TEOL Teolo 105.84 318 IAMs_20 IAMs_20 03 42 38.5
comp=Z,22µm,21.0s
E09A Wood Farm, Sta 105.84 40 IAMs_20 IAMs_20 03 25 11.3
comp=Z,20µm,21.0s
MOD Modoc Plateau 105.85 45 IAMs_20 IAMs_20 03 32 24.2
comp=Z,19µm,22.0s
NEW Newport 105.87 38 Pdiff **Pdif** **02 45 50.1 +1.6**
comp=Z,9.9nm,0.9s,baz=278,slow=3.1,SNR=16
NEW Newport 105.87 38 P **Pdif** **02 45 50.2 +1.6**
baz=292,SNR=22
NEW Newport 105.87 38 IAMs_20 IAMs_20 03 37 04.9
comp=Z,19µm,22.0s
FETA Feichten 105.89 320 *e*P **Pdif** **02 45 48.0 -0.8**
comp=Z,40nm,1.4s,SNR=8.8
FETA P **PKiKP** **02 50 02.6 +1.3**
comp=Z,130nm,1.3s
FETA *e*P **PKKPbc** **03 01 25.1 -0.7**
comp=Z,33nm,1.1s
TNS Taunus Mts 106.09 324 *e*Pdiff **Pdif** **02 45 49.5 0.0**
baz=68,slow=4.5
VAE Valguarnera 106.22 310 Pdiff **Pdif** **02 45 53.0 +2.5**
comp=Z,19nm,0.9s,baz=97,slow=7.3,SNR=3.4
VAE PP **PP** **02 50 21.4 +6.6**
comp=Z,83nm,1.0s,baz=189,slow=21,SNR=5.3
DAVA Damuels 106.33 321 *e*P **Pdif** **02 45 51.3 +0.5**
comp=Z,52nm,1.3s,SNR=6.0
DAVA *e*P **PKiKP** **02 50 01.5 -0.5**
comp=Z,188nm,1.3s
DAVA *e*P **PKKPbc** **03 01 23.6 -0.8**
comp=Z,30nm,1.2s
BEKR Beckworth 106.41 48 IAMs_20 IAMs_20 03 33 56.0
comp=Z,21µm,21.0s
SAO San Andreas Ge 106.43 51 IAMs_20 IAMs_20 03 31 04.1
comp=Z,17µm,20.0s
DAVOX Davos/Dischmat 106.52 320 Pdiff **Pdif** **02 45 52.3 +0.6**
comp=Z,14nm,0.6s,baz=125,slow=3.5,SNR=20
DAVOX PP **PP** **02 50 18.5 +1.8**
comp=Z,55nm,1.1s,baz=65,slow=7.0,SNR=7.6
DAVOX PKKPbc **PKKPbc** **03 01 23.8 -0.1**
comp=Z,6.2nm,0.9s,baz=192,slow=4.0,SNR=3.9
DAVOX PKKP **PKKPdf** **03 01 33.5 -2.1**
comp=Z,8.6nm,0.8s,baz=179,slow=4.9,SNR=4.7
J08A Circle Bar Ran 106.68 44 IAMs_20 IAMs_20 03 35 35.9
comp=Z,25µm,21.0s
CMB Columbia Colle 106.91 49 IAMs_20 IAMs_20 03 34 38.4
comp=Z,18µm,21.0s
BMO Blue Mountains 106.97 42 IAMs_20 IAMs_20 03 25 27.3
comp=Z,21µm,22.0s
PMPB Monarch Peak 107.08 51 IAMs_20 IAMs_20 03 29 56.2
comp=Z,27µm,22.0s
VCNR Virginia City 107.10 48 IAMs_20 IAMs_20 03 35 03.4
comp=Z,20µm,21.0s
CLTB Caltabellotta 107.11 310 IAMs_20 IAMs_20 03 41 56.2
comp=Z,22µm,21.0s
VLC Villacollemand 107.11 317 IAMs_20 IAMs_20 03 39 30.2
comp=Z,23µm,22.0s
BTNL Ternell 107.29 325 P **Pdif** **02 45 55.7 +0.8**
BTNL PKiKP **PKiKP** **02 50 01.5 -2.0**
MEM Membach 107.36 325 P **Pdif** **02 45 55.8 +0.7**
BEBN Eben Emael 107.46 325 P **Pdif** **02 45 56.9 +1.4**
BHOU Houvegnez 107.47 325 P **Pdif** **02 46 00.4 +4.7**
BSTI Sart Tilman 107.62 325 P **Pdif** **02 45 57.2 +0.9**
BSTI PP **PP** **02 50 21.4 -2.9**
MSSA Maissana 107.64 318 IAMs_20 IAMs_20 03 44 01.2
comp=Z,31µm,22.0s
PAGB Antelope Grade 107.64 52 IAMs_20 IAMs_20 03 37 59.1
comp=Z,21µm,21.0s
ECH Echery 107.67 322 IAMs_20 IAMs_20 03 42 10.5
comp=Z,24µm,21.0s
WLF Walferdange 107.67 324 P **Pdif** **02 45 59.0 +2.5**
WLF PP **PP** **02 50 22.2 -2.6**
BCLA Clavier 107.84 325 P **Pdif** **02 45 58.6 +1.4**
BCLA PP **PP** **02 50 25.9 0.0**
SMMC Simmler 107.95 52 P **Pdif** **02 46 01.0 +2.8**
baz=286
BGES Gesves 107.98 325 P **Pdif** **02 46 00.5 +2.6**
OMMB Old Mammoth Mi 108.08 49 IAMs_20 IAMs_20 03 43 09.4
comp=Z,17µm,20.0s
VOG Valley Oaks Go 108.15 51 P **Pdif** **02 46 03.0 +4.1**
baz=286
MLAC Mammoth, Mammo 108.20 49 P **Pdif** **02 46 02.2 +2.7**
baz=287
BMRD Maredsous 108.20 325 P **Pdif** **02 46 00.4 +1.6**
PKM Mcpherson Peak 108.21 52 P **Pdif** **02 46 02.1 +2.6**
baz=286
UCC Uccle 108.21 326 P **Pdif** **02 46 01.8 +2.9**
BIGH Upper Bighouse 108.24 335 *e*P **Pdif** **02 45 55.9 -2.9**
BIGH IAMs_20 IAMs_20 03 36 41.7
comp=Z,63µm,24.5s
LHV Little Huntoon 108.26 49 IAMs_20 IAMs_20 03 35 46.3
comp=Z,20µm,21.0s
KVN Kaiserville 108.32 48 IAMs_20 IAMs_20 03 35 53.7
comp=Z,17µm,20.0s
NVAR Mina Array Bea 108.36 48 Pdiff **Pdif** **02 46 01.2 +1.1**
comp=Z,4.2nm,0.8s,baz=266,slow=5.5,SNR=18
NVAR PKiKP **PKiKP** **02 50 07.8 +1.6**
comp=Z,6.6nm,0.7s,baz=263,slow=2.4,SNR=8.2
NVAR PKKPbc **PKKPbc** **03 01 16.9 -1.0**
comp=Z,2.9nm,0.7s,baz=136,slow=3.4,SNR=4.2
NVAR PKKP **PKKPdf** **03 01 32.8 +0.7**
comp=Z,20nm,0.9s,baz=134,slow=4.2,SNR=11
SNF Seneffe 108.39 325 P **Pdif** **02 46 01.9 +2.3**
DOU Dourbes 108.39 325 P **Pdif** **02 46 01.3 +1.6**
DOU PP **PP** **02 50 29.9 -0.1**
MSO Missoula 108.41 39 P **Pdif** **02 46 01.7 +1.7**
baz=294
MSO P **PKiKP** **02 50 06.3 +0.4**
baz=294
TSUM Tsumeb 108.42 250 PKiKP **PKiKP** **02 50 08.7 +2.0**
comp=Z,11nm,1.0s,baz=11,slow=5.2,SNR=4.1
TSUM PKKP **PKKPdf** **03 01 31.5 -0.1**
comp=Z,11nm,0.9s,baz=280,slow=5.1,SNR=5.4
MFID Camas Ranch 108.47 43 IAMs_20 IAMs_20 03 36 34.2
comp=Z,18µm,21.0s
VES Vestal, Richgr 108.52 51 P **Pdif** **02 46 01.5 +0.9**
baz=286
DRUM Mains of Drumt 108.55 333 *e*P **Pdif** **02 45 55.9 -4.3**
DRUM IAMs_20 IAMs_20 03 39 37.4
comp=Z,67µm,23.5s
SCZ2 Santa Cruz Isl 108.59 53 P **Pdif** **02 46 03.8 +2.8**
baz=286
TIN Tinemaha, Big 108.83 50 P **Pdif** **02 46 03.9 +1.8**
baz=287
SNCC San Nicolas Is 108.87 54 IAMs_20 IAMs_20 03 37 59.1
comp=Z,21µm,20.0s
ARVC Arvin 108.92 52 P **Pdif** **02 46 04.0 +1.6**
baz=286
ISA Isabella, Lake 109.05 51 P **Pdif** **02 46 04.7 +1.6**
baz=287
ISA Isabella, Lake 109.05 51 IAMs_20 IAMs_20 03 39 04.3
comp=Z,17µm,20.0s
ILULI Ilulissat 109.08 359 IAMs_20 IAMs_20 03 42 42.3
comp=Z,18µm,21.0s
CWC Cottonwood Cre 109.12 50 P **Pdif** **02 46 04.9 +1.4**
baz=287
OSI Osito Audit: C 109.15 52 IAMs_20 IAMs_20 03 34 53.1
comp=Z,30µm,21.0s
WACR West Acre 109.31 329 *e*P **Pdif** **02 46 00.6 -3.1**
WACR IAMs_20 IAMs_20 03 37 03.0
comp=Z,98µm,26.8s
HLID Hailey 109.38 42 P **Pdif** **02 46 05.5 +1.0**
baz=292,SNR=6.6
HLID P **PKiKP** **02 50 07.8 -0.1**
baz=292
EDI Edinburgh 109.43 333 *e*P **Pdif** **02 45 58.9 -5.3**
EDI IAMs_20 IAMs_20 03 38 44.4
comp=Z,85µm,24.3s
EDMD Edmundbyers 109.48 331 *e*P **Pdif** **02 45 59.0 -5.5**
EDMD IAMs_20 IAMs_20 03 38 51.2
comp=Z,107µm,23.7s
GRAC Grapevine Rang 109.50 50 P **Pdif** **02 46 07.9 +2.9**
baz=288
GRAC P **PKiKP** **02 50 09.9 +1.8**
baz=288
BORG Borgarnes 109.51 346 PKKP **PKKPdf** **03 01 28.3 -1.6**
comp=Z,31nm,1.0s,baz=237,slow=5.7,SNR=3.9
DECC Green Verdugo 109.56 53 P **Pdif** **02 46 08.0 +2.7**
baz=286
EDW2 Edwards Air Fo 109.65 52 P **Pdif** **02 46 08.7 +2.9**
baz=287,SNR=6.8
EDW2 P **PKiKP** **02 50 10.5 +2.0**
baz=287
MPMC Manual Prospec 109.69 51 P **Pdif** **02 46 08.5 +2.4**
baz=288,SNR=15
MPMC P **PKiKP** **02 50 10.3 +1.6**
baz=288
PASC Pasadena Art C 109.70 53 IAMs_20 IAMs_20 03 37 19.7
comp=Z,25µm,21.0s
LRMC Laurel Mtn Rad 109.72 51 P **Pdif** **02 46 03.8 -2.3**
baz=287
LRMC P **PKiKP** **02 50 10.4 +1.7**
baz=287
CIS Catalina Islan 109.73 54 P **PKiKP** **02 50 11.1 +2.5**
baz=286
EKA Eskdalemuir Ar 109.76 332 Pdiff **Pdif** **02 46 05.7 0.0**
comp=Z,4.5nm,0.9s,baz=80,slow=5.3,SNR=3.8
EKA PP **PP** **02 50 41.7 +2.0**
comp=Z,20nm,0.9s,baz=50,slow=7.8,SNR=4.3
MWC Mount Wilson 109.78 53 IAMs_20 IAMs_20 03 37 35.0
comp=Z,26µm,21.0s
ESK Eskdalemuir 109.79 332 *e*P **Pdif** **02 46 02.9 -2.9**
ESK IAMs_20 IAMs_20 03 38 58.2
comp=Z,107µm,26.3s
ELK Elko 109.84 45 PKiKP **PKiKP** **02 50 10.4 +1.5**
comp=Z,30nm,1.0s,baz=304,slow=3.3,SNR=19
ELK PKKPbc **PKKPbc** **03 01 13.6 +0.4**
comp=Z,9.9nm,0.9s,baz=126,slow=3.4,SNR=8.7
ELSH Elham, Standar 109.84 327 *e*P **Pdif** **02 46 00.9 -5.2**
ELSH IAMs_20 IAMs_20 03 37 45.6
comp=Z,69µm,24.0s
DLMT Dillon 109.86 40 IAMs_20 IAMs_20 03 28 27.6
comp=Z,23µm,22.0s
FURC Furnace Creek, 110.05 50 P **Pdif** **02 46 09.4 +2.0**
baz=286
BFSC Mount Baldy Ra 110.10 53 P **Pdif** **02 46 09.6 +1.8**
baz=287
BFSC P **PKiKP** **02 50 13.1 +3.6**
baz=287
TPNV Topopah Spring 110.37 49 P **Pdif** **02 46 10.8 +1.7**
baz=289,SNR=6.6
BOZ Bozeman (W) 110.38 39 P **Pdif** **02 46 10.1 +1.2**
baz=295
BOZ P **PKiKP** **02 50 10.6 +1.0**
baz=295
R11A Troy Canyon, C 110.41 48 P **Pdif** **02 46 10.6 +1.4**
baz=290,SNR=13
R11A P **PKiKP** **02 50 09.7 -0.3**
baz=290
GSC Goldstone, Bar 110.45 51 P **Pdif** **02 46 11.6 +2.2**
baz=288,SNR=9.5
GSC Goldstone, Bar 110.45 51 IAMs_20 IAMs_20 03 35 44.6
comp=Z,25µm,22.0s
EGMT Eagleton 110.46 37 P **Pdif** **02 46 12.3 +3.2**
baz=298,SNR=6.5
EGMT P **PKiKP** **02 50 08.9 -0.8**
baz=298
EGMT Eagleton 110.46 37 IAMs_20 IAMs_20 03 41 55.4
comp=Z,22µm,22.0s
KEST Kesra 110.62 309 Pdiff **Pdif** **02 46 10.7 +0.6**
comp=Z,7.4nm,0.9s,baz=340,slow=4.6,SNR=6.5
KEST PKiKP **PKiKP** **02 50 13.1 +2.8**
comp=Z,7.9nm,0.7s,baz=28,slow=0.7,SNR=5.1
KEST PP **PP** **02 50 48.3 +1.4**
comp=Z,52nm,0.9s,baz=333,slow=10,SNR=6.9
KEST PKKPbc **PKKPbc** **03 01 11.7 +1.3**
comp=Z,17nm,0.9s,baz=323,slow=0.4,SNR=9.8
KEST Kesra 110.62 309 IAMs_20 IAMs_20 03 41 27.4
comp=Z,24µm,21.0s
MURC Murrieta 110.65 53 P **Pdif** **02 46 11.6 +1.4**
baz=287
MURC P **PKiKP** **02 50 10.5 +0.2**
baz=287
SHOC Shoshone, Teco 110.68 50 P **Pdif** **02 46 12.4 +2.1**
baz=288
SHOC P **PKiKP** **02 50 12.1 +1.8**
baz=288
109C Camp Elliot, M 110.93 54 P **Pdif** **02 46 14.2 +2.8**
baz=287
109C Camp Elliot, M 110.93 54 IAMs_20 IAMs_20 03 38 58.4
comp=Z,20µm,21.0s
HEC Hector,Ludlow 110.97 52 P **Pdif** **02 46 13.6 +1.9**
baz=288
HEC P **PKiKP** **02 50 11.4 +0.4**
baz=288
FFC Flin Flon 111.02 28 IAMs_20 IAMs_20 03 42 26.5
comp=Z,20µm,21.0s
TJX Tijuana 111.08 54 IAMs_20 IAMs_20 03 31 42.3
comp=Z,25µm,21.0s
TUQ Turquoise Moun 111.10 51 P **Pdif** **02 46 14.1 +1.8**
baz=288
TUQ P **PKiKP** **02 50 12.4 +1.1**
baz=288
SPR3 Spring Creek 3 111.11 47 IAMs_20 IAMs_20 03 37 54.3
comp=Z,21µm,22.0s
PRN Pahroc Range 111.12 49 IAMs_20 IAMs_20 03 36 59.0
comp=Z,17µm,21.0s
PFO Pinyon Flats O 111.23 53 Pdiff **Pdif** **02 46 15.0 +2.1**
comp=Z,4.9nm,1.1s,baz=277,slow=6.3,SNR=10.0
PFO PKiKP **PKiKP** **02 50 13.4 +1.8**
comp=Z,21nm,1.0s,baz=233,slow=4.0,SNR=6.0
PFO PKKPbc **PKKPbc** **03 01 10.3 +2.0**
comp=Z,6.0nm,0.8s,baz=126,slow=3.0,SNR=4.2
PFO Pinyon Flats O 111.23 53 P **Pdif** **02 46 14.4 +1.5**
baz=287
PFO P **PKiKP** **02 50 13.2 +1.6**
baz=287
PFO Pinyon Flats O 111.23 53 IAMs_20 IAMs_20 03 39 32.5
comp=Z,27µm,22.0s
XPFO Pion Flat 111.24 53 IAMs_20 IAMs_20 03 39 33.5
comp=Z,26µm,22.0s
TPFO Pinon Flats 111.24 53 P **Pdif** **02 46 15.3 +2.4**
baz=287
SFJD Kangerlussuaq 111.29 359 Pdiff **Pdif** **02 46 12.9 +0.7**
comp=Z,13nm,1.1s,baz=355,slow=12,SNR=2.4
SFJD PKiKP **PKiKP** **02 50 13.0 +2.5**
comp=Z,21nm,0.9s,baz=312,slow=2.5,SNR=4.9
SFJD PP **PP** **02 50 51.3 +1.1**
comp=Z,66nm,1.0s,baz=354,slow=8.2,SNR=5.6
SFJD PKKPab **PKKPab** **03 01 16.3 -1.0**
comp=Z,15nm,0.7s,baz=229,slow=4.7,SNR=4.9
SFJD Kangerlussuaq 111.29 359 *i* PKiKP **PKiKP** **02 50 13.0 +2.5**
BAR Barrett 111.33 54 IAMs_20 IAMs_20 03 31 51.2
comp=Z,23µm,20.0s
SHPR Sheep Range 111.34 50 IAMs_20 IAMs_20 03 41 45.9
comp=Z,20µm,20.0s
TKX Tecate 111.42 54 IAMs_20 IAMs_20 03 35 38.4
comp=Z,25µm,21.0s
MONP2 Monument Peak 111.47 54 P **Pdif** **02 46 17.1 +3.0**
baz=287,SNR=5.2
MONP2 P **PKiKP** **02 50 13.1 +0.9**
baz=287
BELC Belle Mtn. Jos 111.48 52 P **Pdif** **02 46 17.0 +3.0**
baz=288,SNR=15
BELC P **PKiKP** **02 50 13.5 +1.4**
baz=288
GMRC Granite Mounta 111.51 51 P **Pdif** **02 46 17.3 +3.2**

baz=288,SNR=10
GMRC P PKiKP 02 50 13.7 +1.7
baz=288
IMW Indian Meadow 111.55 41 IAMs_20 IAMs_20 03 47 21.7
comp=Z,16µm,20.0s
H17A Grant Village 111.57 40 P Pdif 02 46 18.5 +4.2
baz=296
H17A Grant Village 111.57 40 IAMs_20 IAMs_20 03 33 50.3
comp=Z,26µm,21.0s
CCX Cicese 111.57 55 IAMs_20 IAMs_20 03 35 37.6
comp=Z,24µm,21.0s
TPAW Teton Pass 111.71 41 IAMs_20 IAMs_20 03 30 15.8
comp=Z,26µm,22.0s
ANGG Ammassalik, Gr 111.72 353 IAMs_20 IAMs_20 03 43 29.6
comp=Z,28µm,22.0s
DUG Dugway, Tooele 111.76 45 P Pdif 02 46 16.7 +1.6
baz=292,SNR=9.3
DUG P PKiKP 02 50 13.2 +0.8
baz=292
IKP In-Ko-Pah, Jac 111.80 54 P Pdif 02 46 18.4 +3.0
baz=287
IKP P PKiKP 02 50 14.4 +1.8
baz=287
SNOW Snow King Moun 111.86 41 IAMs_20 IAMs_20 03 28 29.5
comp=Z,19µm,22.0s
SWSC Sam W. Stewart 111.96 53 P Pdif 02 46 19.8 +3.9
baz=288
SWSC P PKiKP 02 50 14.6 +1.8
baz=288
BC3 Big Chuckawall 112.02 53 P Pdif 02 46 17.8 +1.4
baz=288,SNR=12
BC3 P PKiKP 02 50 14.5 +1.4
baz=288
HWUT Hardware Ranch 112.08 43 IAMs_20 IAMs_20 03 39 10.9
comp=Z,27µm,21.0s
RLMT Red Lodge 112.09 39 P Pdif 02 46 19.1 +2.5
baz=297,SNR=6.7
RLMT P PKiKP 02 50 13.3 +0.3
baz=297
IRM Iron Mountain 112.11 52 P Pdif 02 46 19.5 +2.8
baz=288,SNR=11
IRM P PKiKP 02 50 14.4 +1.3
baz=288
UABX UABC, Campus M 112.34 54 IAMs_20 IAMs_20 03 31 29.7
comp=Z,19µm,21.0s
GLA Glamis 112.70 53 P Pdif 02 46 21.8 +2.4
baz=288
GLA P PKiKP 02 50 15.0 +0.7
baz=288
GLA Glamis 112.70 53 IAMs_20 IAMs_20 03 40 17.4
comp=Z,25µm,22.0s
W13A Hualapai Mount 112.78 51 IAMs_20 IAMs_20 03 37 08.2
comp=Z,19µm,21.0s
PDMCI Parker Dam,Lak 112.85 52 P Pdif 02 46 23.0 +3.2
baz=289
PDMCI P PKiKP 02 50 16.8 +2.3
baz=289
BW06 Boulder Array 112.94 42 P Pdif 02 46 22.6 +2.1
baz=296
BW06 P PKiKP 02 50 15.4 +0.6
baz=296
PDAR Pinedale Array 112.94 42 Pdiff Pdif 02 46 22.9 +2.5
comp=Z,0.6nm,0.8s,baz=215,slow=4.7,SNR=5.2
PDAR PKiKP PKiKP 02 50 16.1 +1.3
comp=Z,8.1nm,0.6s,baz=172,slow=3.3,SNR=14
PDAR PKKPbc PKKPbc 03 01 03.3 +0.2
comp=Z,6.2nm,0.7s,baz=112,slow=5.4,SNR=16
LAO LASA Array 113.20 37 P Pdif 02 46 23.7 +2.3
baz=300
LAO P PKiKP 02 50 16.4 +1.5
baz=300
LAO LASA Array 113.20 37 IAMs_20 IAMs_20 03 32 38.1
comp=Z,17µm,22.0s
SFX San Felipe 113.30 55 IAMs_20 IAMs_20 03 32 58.3
comp=Z,28µm,21.0s
DGMT Dagmar 113.45 34 P PKiKP 02 50 15.6 +0.3
baz=303
U15A North Rim 113.54 49 IAMs_20 IAMs_20 03 37 21.9
comp=Z,25µm,22.0s
113A Mohawk Valley, 113.64 53 IAMs_20 IAMs_20 03 40 31.1
comp=Z,24µm,22.0s
Y14A Wickenburg 113.86 52 IAMs_20 IAMs_20 03 40 22.7
comp=Z,21µm,20.0s
WUAZ Wupatki 114.56 49 P Pdif 02 46 30.8 +3.1
baz=292
WUAZ P PKiKP 02 50 19.4 +1.5
baz=292
WUAZ Wupatki 114.56 49 IAMs_20 IAMs_20 03 38 37.1
comp=Z,27µm,22.0s
214A Organ Pipe Nat 114.67 54 P Pdif 02 46 30.7 +2.6
baz=289
214A P PKiKP 02 50 18.9 +0.8
baz=289
214A Organ Pipe Nat 114.67 54 IAMs_20 IAMs_20 03 37 37.4
comp=Z,29µm,22.0s
X16A Lo Mia Camp, P 114.91 51 IAMs_20 IAMs_20 03 41 15.4
comp=Z,24µm,21.0s
O20A White River Ci 114.98 44 P Pdif 02 46 32.8 +3.3
baz=296
O20A P PKPdf 02 50 19.3 +0.6
baz=296,SNR=14
O20A White River Ci 114.98 44 IAMs_20 IAMs_20 03 44 41.9
comp=Z,22µm,22.0s
K22A Casper 114.99 41 P Pdif 02 46 29.5 0.0
baz=298
K22A P PKPdf 02 50 19.0 +0.5
baz=298
K22A Casper 114.99 41 IAMs_20 IAMs_20 03 30 20.8
comp=Z,20µm,22.0s
PV14 Lion Creek, Pa 115.18 46 IAMs_20 IAMs_20 03 41 50.1
comp=Z,22µm,22.0s
PV20 West Nyswonger 115.23 46 IAMs_20 IAMs_20 03 37 49.5
comp=Z,16µm,22.0s
PV17 East Wray Mesa 115.27 46 IAMs_20 IAMs_20 03 37 39.3
comp=Z,25µm,22.0s
PV22 Blue Mesa, Par 115.28 45 IAMs_20 IAMs_20 03 44 28.7
comp=Z,23µm,22.0s
PV16 Nyswonger Mesa 115.28 46 IAMs_20 IAMs_20 03 37 50.8
comp=Z,17µm,22.0s
PV18 Skein Mesa, Pa 115.31 46 IAMs_20 IAMs_20 03 37 39.6
comp=Z,21µm,22.0s
PV11 David Mesa, Pa 115.32 46 IAMs_20 IAMs_20 03 37 51.7
comp=Z,20µm,22.0s
PV03 Paradox Valley 115.36 46 IAMs_20 IAMs_20 03 37 52.7
comp=Z,18µm,22.0s
PV12 Saucer Basin, 115.36 46 IAMs_20 IAMs_20 03 41 54.8
comp=Z,21µm,22.0s
PV07 Paradox Valley 115.42 45 PKPdf 02 50 19.8 +0.2
PV07 IAMs_20 IAMs_20 03 40 09.4
comp=Z,20µm,22.0s
PV15 Paradox Valley 115.58 46 IAMs_20 IAMs_20 03 44 24.7
comp=Z,18µm,22.0s
RSSD Black Hills 115.84 38 PKIKP PKiKP 02 50 19.5 -0.7
RSSD MLR MLR
comp=Z,20µm,22.0s
RSSD Black Hills 115.84 38 P Pdif 02 46 35.7 +2.4
baz=301
RSSD P PKPdf 02 50 20.2 0.0
baz=301
RSSD Black Hills 115.84 38 PKiKP 02 50 19.5 -0.7
RSSD Black Hills 115.84 38 IAMs_20 IAMs_20 03 40 44.0
comp=Z,21µm,22.0s
W18A Petrified Fore 115.95 49 P Pdif 02 46 37.5 +3.6
baz=293
W18A P PKPdf 02 50 21.8 +1.1
baz=293
W18A Petrified Fore 115.95 49 IAMs_20 IAMs_20 03 39 37.9
comp=Z,19µm,20.0s
X18A Snowflake 116.01 50 IAMs_20 IAMs_20 03 42 03.6
comp=Z,20µm,22.0s
MVCO Mesa Verde 116.04 47 P Pdif 02 46 36.6 +2.3
baz=294
MVCO P PKiKP 02 50 22.0 +1.2
baz=294,SNR=16
MVCO Mesa Verde 116.04 47 IAMs_20 IAMs_20 03 30 53.1
comp=Z,22µm,21.0s
TUC Tucson 116.17 53 P Pdif 02 46 38.1 +3.3
baz=291
TUC P PKiKP 02 50 21.6 +0.6
baz=291
TUC Tucson 116.17 53 IAMs_20 IAMs_20 03 38 41.0
comp=Z,23µm,21.0s
N23A Red Feather La 116.20 42 P Pdif 02 46 38.7 +3.7
baz=298
N23A P PKiKP 02 50 21.2 +0.1
baz=298
SMCO Snowmass 116.28 44 IAMs_20 IAMs_20 03 42 46.3
comp=Z,19µm,21.0s
MDND Maddock 116.33 33 P PKiKP 02 50 20.7 -0.1
baz=307
EBNR Beni Rached 116.34 312 P PKPdf 02 50 21.0 -0.2
E28A Huff 116.48 34 IAMs_20 IAMs_20 03 43 45.3
comp=Z,17µm,22.0s
ECHA Ech Chlef 116.52 312 P PKiKP 02 50 24.0 +2.6
SRIG Santa Rosalia 116.58 58 IAMs_20 IAMs_20 03 33 12.6
comp=Z,21µm,22.0s
ULM Lac du Bonnet 116.74 29 PKP PKiKP 02 50 21.1 -0.3
comp=Z,60nm,0.6s,baz=311,slow=1.0,SNR=24
ULM PKKPab PKKPab 03 00 51.9 -1.4
comp=Z,15nm,0.7s,baz=118,slow=3.2,SNR=9.4
EANR 'Ain N'Sour 116.79 312 P PKiKP 02 50 25.0 +2.9
NRS Narsarsuaq 116.87 356 PKIKP PKiKP 02 50 21.4 0.0
NRS Narsarsuaq 116.87 356 PKiKP 02 50 21.4 0.0
NRS IAMs_20 IAMs_20 03 47 30.1
comp=Z,15µm,21.0s
ETRT Tiaret 116.87 312 P PKiKP 02 50 30.0 +7.7
ISCO Idaho Springs 116.94 43 P Pdif 02 46 41.6 +3.3
baz=298
ISCO P PKiKP 02 50 23.1 +0.5
baz=298,SNR=14
S22A 4UR Ranch, Cre 117.01 46 P Pdif 02 46 41.1 +2.3
baz=296
S22A P PKiKP 02 50 24.1 +1.4
baz=296,SNR=6.1
S22A 4UR Ranch, Cre 117.01 46 IAMs_20 IAMs_20 03 42 28.9
comp=Z,19µm,22.0s
HSIG 117.14 56 PKPdf 02 50 22.5 -0.4
HSIG IAMs_20 IAMs_20 03 31 59.1
comp=Z,27µm,22.0s
TAM Tamanrasset 117.52 297 IAMs_20 IAMs_20 03 41 43.6
comp=Z,24µm,22.0s
CART Cartagena 117.62 315 IAMs_20 IAMs_20 03 44 01.0
comp=Z,24µm,22.0s
Q24A Divide 117.64 44 P PKiKP 02 50 25.0 +1.0
baz=298
Q24A Divide 117.64 44 IAMs_20 IAMs_20 03 43 34.4
comp=Z,18µm,22.0s
319A Douglas 117.69 53 IAMs_20 IAMs_20 03 37 56.5
comp=Z,25µm,22.0s
SDCO Great Sand Dun 117.96 45 P Pdif 02 46 43.7 +0.7
baz=297
SDCO P PKiKP 02 50 25.1 +0.5
baz=297,SNR=22
SDCO Great Sand Dun 117.96 45 IAMs_20 IAMs_20 03 37 20.7
comp=Z,16µm,21.0s
AGMN Agassiz Nation 118.02 31 P PKPdf 02 50 23.5 -0.5
baz=310
AGMN Agassiz Nation 118.02 31 IAMs_20 IAMs_20 03 50 21.9
comp=Z,19µm,21.0s
121A Cookes Peak, D 118.44 51 P Pdif 02 46 48.9 +3.9
baz=293
121A P PKiKP 02 50 26.9 +1.3
baz=293,SNR=19
121A Cookes Peak, D 118.44 51 IAMs_20 IAMs_20 03 42 35.1
comp=Z,24µm,22.0s
ANMO Albuquerque 118.48 48 Pdiff Pdif 02 46 47.7 +2.5
comp=Z,1.3nm,0.8s,baz=275,slow=3.0,SNR=4.0
ANMO PKP PKiKP 02 50 27.0 +1.4
comp=Z,31nm,0.8s,baz=191,slow=2.2,SNR=25
ANMO PKKPab PKKPab 03 00 45.4 -0.6
comp=Z,8.2nm,1.0s,baz=151,slow=6.1,SNR=5.8
ANMO Albuquerque 118.48 48 PKiKP PKiKP 02 50 27.0 +1.4
ANMO Albuquerque 118.48 48 P Pdif 02 46 48.2 +2.9
baz=295
ANMO P PKiKP 02 50 26.3 +0.7
baz=295
ANMO Albuquerque 118.48 48 PKiKP 02 50 25.3 -0.3
ANMO Albuquerque 118.48 48 IAMs_20 IAMs_20 03 42 44.8
comp=Z,19µm,21.0s
Y22D IRIS PASSCAL I 118.50 49 P PKiKP 02 50 27.3 +1.7
baz=294
Y22D IRIS PASSCAL I 118.50 49 IAMs_20 IAMs_20 03 44 16.3
comp=Z,20µm,21.0s
ES02 SONSECA Array 118.67 318 IAMs_20 IAMs_20 03 43 32.5
comp=Z,20µm,21.0s
ESDC Sonseca Array 118.69 318 Pdiff Pdif 02 46 53.5 +7.7
comp=Z,0.8nm,0.9s,baz=35,slow=4.9,SNR=2.9
ESDC PKP PKiKP 02 50 25.7 +0.1
comp=Z,3.1nm,0.6s,baz=34,slow=2.4,SNR=12
ESDC PP PP 02 51 40.6 -2.9
comp=Z,15nm,1.0s,baz=45,slow=9.6,SNR=4.6
ESDC PKKPbc PKKPab 03 00 44.2 -0.7
comp=Z,7.0nm,0.8s,baz=248,slow=2.9,SNR=10.0
ES05 SONSECA Array 118.69 318 IAMs_20 IAMs_20 03 47 32.2
comp=Z,22µm,19.0s
ES12 SONSECA Array 118.69 318 IAMs_20 IAMs_20 03 44 48.9
comp=Z,22µm,21.0s
SUSD Miller 118.71 36 P PKiKP 02 50 25.5 0.0
baz=306
SUSD Miller 118.71 36 IAMs_20 IAMs_20 03 46 35.5
comp=Z,18µm,22.0s
T25A Trinidad 119.01 45 P PKiKP 02 50 27.5 +0.9
baz=298,SNR=31
PAB San Pablo 119.01 318 IAMs_20 IAMs_20 03 52 04.2
comp=Z,23µm,22.0s
LPIG La Paz 119.18 61 PKP PKiKP 02 50 27.3 +0.4
comp=Z,22nm,0.4s,baz=30,slow=1.2,SNR=7.2
KSCO Kaye Shedlock' 119.34 42 P PKiKP 02 50 27.3 +0.3
baz=300,SNR=5.9
F33A 5 Mile Ranch, 119.36 33 IAMs_20 IAMs_20 03 46 37.5
comp=Z,19µm,22.0s
PBRG Braganca 119.37 321 ePKPdf PKiKP 02 50 30.2 +3.3
PBRG Braganca 119.37 321 ePP PP 02 51 59.1 +11
PBRG Braganca 119.37 321 eSS SS 03 08 19.1 +12
SLBS Sierra La Lagu 119.62 61 PKiKP 02 50 28.2 +0.3
EPT El Paso 119.74 52 IAMs_20 IAMs_20 03 40 48.4
comp=Z,26µm,22.0s
K31A O'Neill 119.88 37 IAMs_20 IAMs_20 03 42 46.7
comp=Z,20µm,22.0s
MVO Moncorvo 119.90 321 ePKPdf PKiKP 02 50 31.1 +3.1
MVO Moncorvo 119.90 321 ePP PP 02 51 52.5 +0.8
MVO Moncorvo 119.90 321 eSS SS 03 08 25.8 +12
MVO Moncorvo 119.90 321 eLR LR 03 37 10.9
comp=Z,34µm,24.0s
MELI Melilla 120.04 313 PKP PKiKP 02 50 30.7 +2.3
MELI Melilla 120.04 313 PP PP 02 51 57.4 +4.5
FIGM Figuig 120.14 309 P PKiKP 02 50 31.4 +2.6
SNR=12
PCAB Cabril 120.22 322 ePKPdf PKiKP 02 50 30.7 +2.1
PGAV Gavieira, Arco 120.23 322 ePKPdf PKiKP 02 50 30.1 +1.4
PGAV Gavieira, Arco 120.23 322 ePP PP 02 52 03.3 +9.4
PGAV Gavieira, Arco 120.23 322 eSS SS 03 08 29.6 +12
PGAV Gavieira, Arco 120.23 322 eLR LR 03 37 40.4
comp=Z,35µm,24.0s
POLO Lamas de Olo 120.27 321 ePKPdf PKiKP 02 50 32.1 +3.4
POLO Lamas de Olo 120.27 321 ePP PP 02 52 05.6 +11
POLO Lamas de Olo 120.27 321 eSS SS 03 08 32.5 +14
EYMN Ely 120.42 29 P PKPdf 02 50 28.3 -0.3
baz=315
ECSD EROS Data Cent 120.48 35 P PKiKP 02 50 28.8 -0.2
baz=308
ECSD EROS Data Cent 120.48 35 IAMs_20 IAMs_20 03 46 11.5
comp=Z,23µm,22.0s
MNTX Cornudas Mount 120.64 51 P Pdif 02 46 58.7 +4.1
baz=294
MNTX P PKiKP 02 50 30.3 +0.6
baz=294,SNR=42
MNTX Cornudas Mount 120.64 51 IAMs_20 IAMs_20 03 37 23.4
comp=Z,24µm,22.0s
MTE Manteigas 120.65 320 ePKPdf PKiKP 02 50 31.8 +2.3
MTE Manteigas 120.65 320 ePP PP 02 52 07.8 +11
MTE Manteigas 120.65 320 eSS SS 03 08 44.9 +21
MTE Manteigas 120.65 320 eLR LR 03 37 10.9
comp=Z,30µm,24.0s
PVIS Viseu 120.70 321 ePKPdf PKiKP 02 50 33.7 +4.1
PCBR Castelo Branco 120.91 320 ePKPdf PKiKP 02 50 32.0 +2.1
BGNE Belgrade 120.95 38 P PKiKP 02 50 29.6 -0.4
baz=305
BGNE Belgrade 120.95 38 IAMs_20 IAMs_20 03 52 25.0
comp=Z,16µm,22.0s
RPN Rapa Nui 121.01 121 IAMs_20 IAMs_20 03 33 09.9
comp=Z,18µm,22.0s
PMRV Marv??o 121.08 319 ePKPdf PKiKP 02 50 32.4 +2.1
PMRV Marv??o 121.08 319 ePP PP 02 52 06.8 +7.0
PMRV Marv??o 121.08 319 eSS SS 03 08 41.9 +13
PMRV Marv??o 121.08 319 eLR LR 03 39 50.5
comp=Z,31µm,22.0s
PVLZ Peæn de 121.09 314 PKP PKPdf 02 50 27.5 -2.7
PVLZ Peæn de 121.09 314 PP PP 02 52 01.4 +1.4
COI Coimbra 121.31 321 ePP PP 02 52 09.9 +8.7
COI Coimbra 121.31 321 eSS SS 03 08 49.5 +18
E38A The Farm, Brul 121.32 30 IAMs_20 IAMs_20 03 49 30.1
comp=Z,20µm,21.0s
CBKS Cedar Bluff 121.37 41 PKiKP PKiKP 02 50 30.7 -0.2
CBKS Cedar Bluff 121.37 41 P PKiKP 02 50 31.0 +0.1
baz=302,SNR=13
CBKS Cedar Bluff 121.37 41 PKiKP 02 50 30.7 -0.2
PCAS Casmilo, Conde 121.45 320 ePKPdf PKiKP 02 50 32.6 +1.6
PCAS Casmilo, Conde 121.45 320 ePP PP 02 52 04.9 +2.7
PCAS Casmilo, Conde 121.45 320 eSS SS 03 08 52.1 +19
CEU Ceuta 121.52 315 PKP PKiKP 02 50 32.0 +0.8
CEU Ceuta 121.52 315 PP PP 02 52 02.9 +0.1
SPMN Marine on St. 121.63 32 P PKiKP 02 50 30.8 -0.4
baz=312
SPMN Marine on St. 121.63 32 IAMs_20 IAMs_20 03 46 47.3
comp=Z,21µm,22.0s
MSTX Muleshoe 121.65 48 P PKiKP 02 50 31.4 -0.3
baz=297
MSTX Muleshoe 121.65 48 IAMs_20 IAMs_20 03 46 27.5
comp=Z,15µm,20.0s
L34A Svendsen Farm, 121.69 37 IAMs_20 IAMs_20 03 50 29.6
comp=Z,15µm,22.0s
PMTG Montargil 121.82 319 ePKPdf PKiKP 02 50 31.6 -0.1
PMTG Montargil 121.82 319 ePP PP 02 52 10.1 +5.4
PMTG Montargil 121.82 319 eSS SS 03 08 52.6 +14
SFS San Fernando 121.82 316 PKP PKPdf 02 50 25.4 -6.2
SFS San Fernando 121.82 316 PKP PKiKP 02 50 39.1 +7.4
SFS San Fernando 121.82 316 PP PP 02 52 12.3 +7.4
PSBE So Bento 121.94 320 ePKPdf PKiKP 02 50 35.5 +3.5
PSBE So Bento 121.94 320 ePP PP 02 52 11.6 +6.0
PSBE So Bento 121.94 320 eSS SS 03 08 55.5 +16
EVO Evora 121.97 319 PKP PKiKP 02 50 36.3 +4.3
EVO Evora 121.97 319 PP PP 02 52 20.0 +14
EVO Evora 121.97 319 ePKPdf PKiKP 02 50 43.8 +12
EVO Evora 121.97 319 ePP PP 02 52 15.3 +9.5
AMTX Amarillo 122.02 46 P PKiKP 02 50 32.6 +0.2
baz=299
AMTX Amarillo 122.02 46 IAMs_20 IAMs_20 03 50 32.3
comp=Z,19µm,22.0s
I37A Lemont, Waseca 122.11 33 IAMs_20 IAMs_20 03 47 20.2
comp=Z,21µm,21.0s
PBEJ Beja 122.14 318 ePKPdf PKiKP 02 50 34.5 +2.1
PBEJ Beja 122.14 318 ePP PP 02 52 08.7 +1.7
HPIG 122.24 56 PKiKP 02 50 33.1 0.0
R32A Long Quarter, 122.26 41 IAMs_20 IAMs_20 03 53 40.1
comp=Z,25µm,22.0s
PVAQ Vaqueiros 122.38 317 ePKPdf PKiKP 02 50 34.4 +1.5
PVAQ Vaqueiros 122.38 317 ePP PP 02 52 17.8 +9.2
PVAQ Vaqueiros 122.38 317 eSS SS 03 08 54.7 +9.2
PVAQ Vaqueiros 122.38 317 eLR LR 03 40 36.7
comp=Z,34µm,22.0s
PVAQ Vaqueiros 122.38 317 PKPdf PKPdf 02 50 32.3 -0.4
MDT Midelt 122.40 311 PKP PKiKP 02 50 33.9 +0.7
comp=Z,9.7nm,0.6s,baz=273,slow=2.6,SNR=16
MDT PKKPab PKKPbc 03 00 27.8 -1.0
comp=Z,4.6nm,1.0s,baz=241,slow=4.8,SNR=2.3
MDT Midelt 122.40 311 P PKiKP 02 50 34.4 +1.2
SNR=12
IFR Ifrane 122.47 312 PKP PKiKP 02 50 35.2 +1.8
IFR Ifrane 122.47 312 PP PP 02 52 17.3 +7.6
SCHQ Schefferville 122.47 9 PKP PKiKP 02 50 32.7 +0.1
comp=Z,92nm,0.6s,baz=340,slow=2.3,SNR=36
SCHQ PKKPab PKKPab 03 00 27.4 -0.9
comp=Z,22nm,0.7s,baz=178,slow=4.3,SNR=12
SCHQ SKKPbc SKKPbc 03 04 15.6 +0.9
comp=Z,10nm,0.8s,baz=352,slow=1.6,SNR=4.2
SCHQ Schefferville 122.47 9 PKiKP 02 50 33.0 +0.5
PCVE Castro Verde 122.47 318 ePKPdf PKiKP 02 50 34.2 +1.1
PCVE Castro Verde 122.47 318 ePP PP 02 52 18.9 +10
PCVE Castro Verde 122.47 318 eSS SS 03 08 53.6 +6.9
PNCL Nicolau / Gran 122.54 319 ePKPdf PKiKP 02 50 34.9 +1.7
PNCL Nicolau / Gran 122.54 319 ePP PP 02 52 16.6 +6.9
PNCL Nicolau / Gran 122.54 319 eSS SS 03 08 53.5 +6.0
PBDV Barranco-do-Ve 122.61 317 ePKPdf PKiKP 02 50 35.6 +2.2
PBDV Barranco-do-Ve 122.61 317 ePP PP 02 52 20.2 +10
PBDV Barranco-do-Ve 122.61 317 eSS SS 03 08 58.8 +10
N35A Tabor 122.80 37 IAMs_20 IAMs_20 03 50 52.0
comp=Z,22µm,22.0s
TXAR Lajitas Array 122.95 53 Pdiff Pdif 02 47 13.6 +8.5
comp=Z,0.3nm,0.7s,baz=267,slow=2.4,SNR=5.4
TXAR PKP PKiKP 02 50 34.9 +0.5
comp=Z,28nm,0.7s,baz=347,slow=1.5,SNR=36
TXAR PKKPbc PKKPab 03 00 27.2 +0.7
comp=Z,16nm,1.0s,baz=131,slow=3.2,SNR=21
TXAR SKKPbc SKKPbc 03 04 14.1 +1.9
comp=Z,11nm,1.1s,baz=133,slow=5.0,SNR=4.6
TXAR Lajitas Array 122.95 53 PKiKP 02 50 34.5 +0.1
PTEO Sao Teotonio 122.98 318 ePKPdf PKiKP 02 50 36.2 +2.2
PTEO Sao Teotonio 122.98 318 ePP PP 02 52 28.1 +15
MORF Marmelete 123.06 318 ePKPdf PKPdf 02 50 33.7 -0.4
MORF eSS SS 03 08 56.4 +2.2
MORF AMS AMS 03 52 02.5
comp=Z,25µm,27.9s
MORF Marmelete 123.06 318 ePKIKP PKPdf 02 50 33.7 -0.4
MORF eSS SS 03 08 56.4 +2.1
MORF Marmelete 123.06 318 ePKPdf PKiKP 02 50 35.9 +1.6
MORF Marmelete 123.06 318 ePP PP 02 52 32.4 +19
U32A Winter Ranch, 123.16 43 IAMs_20 IAMs_20 03 46 12.1
comp=Z,24µm,21.0s
TOC2 Torodi Ar. Sit 123.21 287 IAMs_20 IAMs_20 03 41 43.6
comp=Z,22µm,22.0s
TOC3 Torodi Ar. Sit 123.21 287 IAMs_20 IAMs_20 03 41 43.7
comp=Z,22µm,22.0s
TOC1 Torodi Ar. Sit 123.22 287 IAMs_20 IAMs_20 03 41 44.0
comp=Z,25µm,22.0s
TOA0 Torodi Ar. Sit 123.23 287 IAMs_20 IAMs_20 03 50 39.3
comp=Z,20µm,21.0s
TORD Torodi Ar. Bea 123.23 287 Pdiff Pdif 02 47 15.8 +9.4
comp=Z,0.5nm,0.9s,baz=94,slow=4.1,SNR=3.3
TORD PKP PKPdf 02 50 34.7 -0.2
comp=Z,47nm,0.8s,baz=114,slow=1.1,SNR=43
TORD PP PP 02 52 20.9 +5.3
comp=Z,37nm,0.9s,baz=60,slow=4.6,SNR=4.6
TORD PKKPab PKKPab 03 00 26.6 +1.3
comp=Z,33nm,0.8s,baz=277,slow=3.4,SNR=20
TOC4 Torodi Ar. Sit 123.23 287 IAMs_20 IAMs_20 03 41 44.3
comp=Z,22µm,22.0s
KSU1 Kansas State U 123.24 39 P PKiKP 02 50 34.5 0.0
baz=305,SNR=54
KSU1 Kansas State U 123.24 39 IAMs_20 IAMs_20 03 47 50.9
comp=Z,23µm,22.0s
TOB4 Torodi Ar. Sit 123.24 287 IAMs_20 IAMs_20 03 50 39.6
comp=Z,21µm,21.0s
TOC7 Torodi Ar. Sit 123.25 287 IAMs_20 IAMs_20 03 41 44.6
comp=Z,21µm,22.0s
TOC5 Torodi Ar. Sit 123.25 287 IAMs_20 IAMs_20 03 50 39.9
comp=Z,24µm,21.0s
PFVI Vila Bisbo 123.27 318 ePKPdf PKiKP 02 50 38.4 +3.8
PFVI Vila Bisbo 123.27 318 ePP PP 02 52 23.2 +8.6
PFVI Vila Bisbo 123.27 318 eSS SS 03 09 19.6 +23
K38A Parkersburg 123.35 34 IAMs_20 IAMs_20 03 49 02.1
comp=Z,16µm,22.0s
KS21 Milan North St 123.58 42 IAMs_20 IAMs_20 03 45 16.1
comp=Z,24µm,22.0s
SCIA State Center 123.58 35 P PKiKP 02 50 34.8 -0.3
baz=310
SCIA State Center 123.58 35 IAMs_20 IAMs_20 03 53 33.4
comp=Z,15µm,21.0s
TZRR Tazzarine 124.04 310 P PKiKP 02 50 38.0 +1.6
SNR=22
WMOK Wichita Mounta 124.16 45 PKIKP PKPdf 02 50 35.8 -0.4
WMOK Wichita Mounta 124.16 45 P PKiKP 02 50 36.5 0.0
baz=301
WMOK Wichita Mounta 124.16 45 PKPdf 02 50 35.8 -0.4
WMOK Wichita Mounta 124.16 45 IAMs_20 IAMs_20 03 39 07.0
comp=Z,25µm,22.0s
ZGR Zagora 124.37 309 P PKiKP 02 50 38.2 +1.0
SNR=27
OK029 Liberty Lake 124.53 43 IAMs_20 IAMs_20 03 47 15.3
comp=Z,22µm,22.0s
JFWS Jewell Farm 124.55 32 PKIKP PKPdf 02 50 35.9 -0.8
JFWS Jewell Farm 124.55 32 P PKPdf 02 50 36.1 -0.6
baz=314
JFWS Jewell Farm 124.55 32 PKPdf 02 50 35.9 -0.8
JFWS Jewell Farm 124.55 32 IAMs_20 IAMs_20 03 48 46.7
comp=Z,24µm,22.0s
T35A Sooner Cattle 124.55 42 IAMs_20 IAMs_20 03 47 05.7
comp=Z,17µm,20.0s
ABTX Abilene, Hawle 124.59 48 P PKiKP 02 50 37.5 0.0
baz=299,SNR=16
ABTX Abilene, Hawle 124.59 48 IAMs_20 IAMs_20 03 45 10.8
comp=Z,17µm,22.0s
L40A Anamosa 124.60 34 IAMs_20 IAMs_20 03 50 23.1
comp=Z,23µm,21.0s
OK025 Westminster Rd 124.72 43 IAMs_20 IAMs_20 03 46 04.6
comp=Z,19µm,22.0s
OKCFA Oklahoma City 124.73 44 IAMs_20 IAMs_20 03 42 27.9
comp=Z,24µm,22.0s
OKCSW OKLAHOMA CITY 124.75 44 PKPdf PKiKP 02 50 37.3 -0.4

QUOK Quay 124.83 42 IAMs_20 IAMs_20 03 50 07.3
comp=Z,18µm,21.0s
P38A Dawn 124.83 37 IAMs_20 IAMs_20 03 56 38.8
comp=Z,16µm,22.0s
FNO Franklin 124.85 44 PKiKP 02 50 37.5 -0.4
OK031 S. Brethren Rd 124.86 43 IAMs_20 IAMs_20 03 54 47.1
comp=Z,24µm,22.0s
E46A Sault Ste Mari 124.87 26 IAMs_20 IAMs_20 03 38 02.7
comp=Z,23µm,22.0s
OUZM OUZ 124.89 310 P PKiKP 02 50 40.0 +1.7
SNR=18
OK030 Cody Creek RV 124.91 43 IAMs_20 IAMs_20 03 47 17.5
comp=Z,21µm,21.0s
G45A Suttons Bay 125.29 28 PKiKP 02 50 38.0 -0.4
G45A IAMs_20 IAMs_20 03 54 01.9
comp=Z,24µm,22.0s
LSQQ Lebel-sur-Quev 125.40 19 P PKPdf 02 50 37.9 -0.3
baz=331
CHGQ Chibougamau 125.43 16 P PKiKP 02 50 38.2 -0.3
baz=334,SNR=32
JCT Junction City 125.48 50 P PKiKP 02 50 39.2 -0.1
baz=298,SNR=73
JCT Junction City 125.48 50 IAMs_20 IAMs_20 03 44 32.5
comp=Z,24µm,22.0s
TUL1 Leonard 125.59 42 P PKiKP 02 50 39.1 -0.2
baz=304,SNR=17
TUL1 Leonard 125.59 42 IAMs_20 IAMs_20 03 50 51.4
comp=Z,21µm,22.0s
K43A Burlington 125.70 31 IAMs_20 IAMs_20 03 53 56.1
comp=Z,25µm,22.0s
I45A Fountain 125.78 29 IAMs_20 IAMs_20 03 52 00.8
comp=Z,23µm,22.0s
USHA Ushuaia 125.79 169 PKP PKiKP 02 50 39.3 +0.2
comp=Z,147nm,0.8s,baz=221,slow=1.4,SNR=12
MG01 Puerto William 125.83 170 IAMs_20 IAMs_20 03 46 19.9
comp=Z,25µm,22.0s
HOPE Hope Point 125.88 192 IAMs_20 IAMs_20 03 51 42.7
comp=Z,18µm,22.0s
GLMI Grayling 125.93 27 P PKiKP 02 50 39.5 -0.2
baz=320
GLMI Grayling 125.93 27 IAMs_20 IAMs_20 03 51 01.9
comp=Z,23µm,22.0s
Z35A Perchaven, San 125.97 46 IAMs_20 IAMs_20 03 42 04.2
comp=Z,21µm,22.0s
VLDQ Val d'Or 126.06 20 IAMs_20 IAMs_20 03 56 16.3
comp=Z,17µm,22.0s
S39A Bolivar 126.15 39 IAMs_20 IAMs_20 03 49 02.9
comp=Z,16µm,21.0s
U38A Gravette 126.22 41 PKPdf PKPdf 02 50 39.5 -0.6
U38A IAMs_20 IAMs_20 03 46 39.9
comp=Z,22µm,21.0s
L44A Lake County Fo 126.29 31 P PKPdf 02 50 39.2 -0.8
baz=316,SNR=9.4
ZAIG Zacatecas 126.34 60 IAMs_20 IAMs_20 03 42 28.5
comp=Z,17µm,21.0s
R40A Maddies Statio 126.44 38 IAMs_20 IAMs_20 03 48 28.2
comp=Z,22µm,22.0s
WHTX Lake Whitney, 126.51 47 P PKiKP 02 50 41.2 0.0
baz=300,SNR=31
WHTX Lake Whitney, 126.51 47 IAMs_20 IAMs_20 03 47 54.6
comp=Z,18µm,21.0s
HQIL Hanson Quary C 126.59 32 IAMs_20 IAMs_20 03 51 09.8
comp=Z,23µm,22.0s
HHAR Hobbs 126.60 41 IAMs_20 IAMs_20 03 54 48.0
comp=Z,23µm,22.0s
X37A Clayton 126.61 43 IAMs_20 IAMs_20 03 54 24.6
comp=Z,22µm,21.0s
HDIL Hopedale 126.68 34 P PKPdf 02 50 40.5 -0.4
baz=313,SNR=24
HDIL Hopedale 126.68 34 PKiKP 02 50 40.8 -0.5
HDIL IAMs_20 IAMs_20 03 55 07.5
comp=Z,18µm,22.0s
833A Chaparral WMA, 126.78 52 P PKiKP 02 50 42.4 +0.6
baz=297,SNR=33
435B Jarrell 127.02 49 P PKiKP 02 50 42.2 -0.1
baz=300,SNR=18
MGMO Mountain Grove 127.14 39 IAMs_20 IAMs_20 03 49 34.1
comp=Z,24µm,22.0s
P43A Skaggs, Pawnee 127.18 35 IAMs_20 IAMs_20 03 50 50.6
comp=Z,22µm,22.0s
CCM Cathedral Cave 127.21 37 P PKPdf 02 50 41.7 -0.2
baz=310
CCM Cathedral Cave 127.21 37 IAMs_20 IAMs_20 03 52 57.6
comp=Z,15µm,22.0s
L46A Eue Claire 127.24 30 IAMs_20 IAMs_20 03 54 51.8
comp=Z,22µm,22.0s
U40A Yellville 127.26 40 P PKPdf 02 50 41.9 -0.3
baz=307,SNR=47
W39A Magazine 127.34 42 P PKPdf 02 50 41.9 -0.4
baz=306
W39A Magazine 127.34 42 PKPdf 02 50 42.1 -0.1
W39A IAMs_20 IAMs_20 03 46 32.7
comp=Z,19µm,22.0s
O44A Mansfield 127.42 34 IAMs_20 IAMs_20 03 53 41.8
comp=Z,25µm,22.0s
I49A Point Hope 127.43 26 IAMs_20 IAMs_20 03 52 40.3
comp=Z,24µm,22.0s
SLM Saint Louis 127.43 36 IAMs_20 IAMs_20 03 48 56.5
comp=Z,25µm,22.0s
D55A Sainte-Anne-du 127.67 19 P PKiKP 02 50 42.5 -0.6
baz=332,SNR=19
237A Washetta, Mont 127.71 46 IAMs_20 IAMs_20 03 46 33.1
comp=Z,17µm,22.0s
ALGO Algonquin Park 127.71 21 P PKPdf 02 50 42.5 -0.2
baz=328,SNR=16
735A Kenedy 127.77 51 IAMs_20 IAMs_20 03 42 38.2
comp=Z,24µm,22.0s
MIAR Mount Ida 127.86 42 P PKiKP 02 50 43.4 -0.4
baz=306,SNR=33
MIAR Mount Ida 127.86 42 IAMs_20 IAMs_20 03 44 52.5
comp=Z,25µm,22.0s
D56A ZEC Mazanza, M 127.88 18 P PKiKP 02 50 42.9 -0.6
baz=333,SNR=19
T42A Van Buren 127.95 38 IAMs_20 IAMs_20 03 49 40.5
comp=Z,24µm,22.0s
Q44A Meyer Farm, Va 127.97 35 IAMs_20 IAMs_20 03 54 40.4
comp=Z,19µm,21.0s
E55A Montcerf-Lytto 127.98 20 P PKPdf 02 50 42.7 -0.5
baz=331,SNR=18
SFIN Lafayette 128.01 32 P PKPdf 02 50 43.2 -0.2
baz=316,SNR=15
SFIN Lafayette 128.01 32 IAMs_20 IAMs_20 03 54 26.2
comp=Z,22µm,20.0s
LATQ La Tuque 128.16 17 P PKiKP 02 50 44.1 0.0
baz=335,SNR=31
G54A Lake Saint Pet 128.17 22 P PKiKP 02 50 43.9 -0.3
baz=328,SNR=26
L48A N Adams 128.22 29 PKPdf PKiKP 02 50 45.0 +0.6
E56A St. Veronique 128.24 19 P PKiKP 02 50 43.8 -0.4
baz=332,SNR=20
GO09 Cerro Castillo 128.25 165 IAMs_20 IAMs_20 03 47 37.9
comp=Z,19µm,20.0s
SADO Sadowa 128.30 23 PKP PKiKP 02 50 44.5 0.0
comp=Z,176nm,1.1s,baz=335,slow=3.3,SNR=17
SADO Sadowa 128.30 23 IAMs_20 IAMs_20 03 52 26.1
comp=Z,16µm,21.0s
KVTX Kingsville 128.31 52 IAMs_20 IAMs_20 03 44 32.5
comp=Z,18µm,22.0s
AAM Ann Arbor 128.32 28 P PKiKP 02 50 44.4 -0.1
baz=320,SNR=13
AAM Ann Arbor 128.32 28 IAMs_20 IAMs_20 03 51 06.2
comp=Z,17µm,21.0s
I51A Listowel 128.32 25 P PKiKP 02 50 44.9 +0.3
baz=324,SNR=12
H09W1 TRISTAN DA CUN 128.34 222 PKP PKiKP 02 50 46.8 +2.1
SNR=5.7
KOWA Kowa 128.36 290 Pdiff Pdif 02 47 38.1 +8.9
comp=Z,1.3nm,0.8s,baz=42,slow=5.5,SNR=2.3
KOWA PKP PKPdf 02 50 44.4 -0.3
comp=Z,25nm,0.8s,baz=60,slow=2.0,SNR=23
KOWA Kowa 128.36 290 PKPdf 02 50 43.7 -1.0
W41B Gary Mavity, V 128.37 41 P PKPdf 02 50 43.8 -0.4
baz=307,SNR=9.2
W41B Gary Mavity, V 128.37 41 IAMs_20 IAMs_20 03 53 47.7
comp=Z,19µm,22.0s
N47A Urbana 128.38 31 IAMs_20 IAMs_20 03 54 10.0
comp=Z,23µm,22.0s
X40A Basin Creek Fa 128.39 42 P PKiKP 02 50 44.4 -0.5
baz=306,SNR=14
X40A Basin Creek Fa 128.39 42 IAMs_20 IAMs_20 03 44 15.4
comp=Z,21µm,21.0s
D58A Chemin du LacG 128.40 17 P PKiKP 02 50 44.5 -0.1
baz=335,SNR=20
P46A Rosedale 128.49 33 IAMs_20 IAMs_20 03 54 03.0
comp=Z,22µm,22.0s
LCAR Lake Charles 128.52 39 IAMs_20 IAMs_20 03 56 50.6
comp=Z,17µm,20.0s
PBMO Poplar Bluff 128.52 38 IAMs_20 IAMs_20 03 56 23.5
comp=Z,16µm,21.0s
UALR University of 128.54 41 IAMs_20 IAMs_20 03 47 12.5
comp=Z,23µm,22.0s
OLIL Olney 128.60 35 IAMs_20 IAMs_20 03 55 55.3
comp=Z,23µm,22.0s
E57A Chemin Saint G 128.63 18 P PKPdf 02 50 44.4 -0.1
baz=333,SNR=20
S44A Carbondale 128.64 36 IAMs_20 IAMs_20 03 55 15.3
comp=Z,22µm,21.0s
NATX Nacogdoches 128.66 46 P PKiKP 02 50 46.7 +1.2
baz=303,SNR=12
NATX Nacogdoches 128.66 46 IAMs_20 IAMs_20 03 45 18.2
comp=Z,22µm,22.0s
WLAR White Oak Lake 128.67 43 IAMs_20 IAMs_20 03 59 32.9
comp=Z,20µm,21.0s
H53A Bobcaygeon 128.68 23 P PKiKP 02 50 45.1 -0.1
baz=327,SNR=29
HKT Hockley 128.75 48 PKIKP PKiKP 02 50 45.2 -0.4
HKT MLR MLR
comp=Z,26µm,22.0s
HKT Hockley 128.75 48 PKiKP 02 50 45.2 -0.4
D59A Saint-Raymond 128.77 16 P PKiKP 02 50 44.8 -0.5
baz=336,SNR=7.6
PLVO Plevna 128.85 21 IAMs_20 IAMs_20 03 50 52.5
comp=Z,19µm,22.0s
E58A La Victoria 128.94 17 P PKPdf 02 50 44.7 -0.3
baz=334,SNR=15
F57A Harrington 128.99 19 P PKPdf 02 50 44.7 -0.4
baz=332
PARMO Parma 129.01 38 IAMs_20 IAMs_20 03 53 29.5
comp=Z,17µm,22.0s
D61A St Aubert, Com 129.03 15 P PKPdf 02 50 44.6 -0.5
baz=338
D60A Saint Jean D'O 129.10 15 P PKiKP 02 50 45.7 -0.3
baz=337
Z41A Richland Creek 129.13 43 P PKiKP 02 50 46.2 -0.2
baz=336,SNR=8.9
Z41A Richland Creek 129.13 43 IAMs_20 IAMs_20 03 50 01.1
comp=Z,22µm,22.0s
HBAR Harrisburg 129.16 39 IAMs_20 IAMs_20 03 57 07.5
comp=Z,21µm,22.0s
BLO Bloomington 129.18 33 IAMs_20 IAMs_20 03 54 57.3
comp=Z,21µm,22.0s
PVMO Portageville 129.21 38 IAMs_20 IAMs_20 03 53 49.6
comp=Z,21µm,22.0s
F58A St-In Laurent 129.22 18 P PKPdf 02 50 45.2 -0.3
baz=334
PENMO Penman 129.23 38 IAMs_20 IAMs_20 03 53 50.2
comp=Z,19µm,22.0s
GNAR Gosnell 129.30 39 PKPdf 02 50 45.3 -0.6
GNAR IAMs_20 IAMs_20 03 54 47.1
comp=Z,14µm,21.0s
PEBM Pemiscott Bayo 129.30 38 IAMs_20 IAMs_20 03 54 59.2
comp=Z,17µm,22.0s
M50A Fremont 129.30 29 IAMs_20 IAMs_20 03 44 39.2
comp=Z,15µm,21.0s
LPAR Lepanto 129.35 39 IAMs_20 IAMs_20 03 50 47.6
comp=Z,22µm,22.0s
USIN University of 129.38 35 IAMs_20 IAMs_20 03 53 38.9
comp=Z,24µm,22.0s
D62A Allapoint, All 129.42 14 P PKiKP 02 50 46.8 +0.2
baz=340
CCAR Cane Creek 129.44 42 IAMs_20 IAMs_20 03 51 14.1
comp=Z,20µm,22.0s
E60A Ste Agathe de 129.47 16 P PKiKP 02 50 47.1 +0.4
baz=337,SNR=8.1
G57A Newington 129.52 20 P PKiKP 02 50 46.7 -0.1
baz=332,SNR=12
F59A Saint Guilaume 129.55 17 P PKiKP 02 50 47.1 +0.2
baz=335
GLAT Glass 129.55 38 IAMs_20 IAMs_20 03 50 01.8
comp=Z,19µm,22.0s
X43A Marvell 129.66 41 P PKiKP 02 50 47.0 -0.4
baz=308,SNR=8.7
X43A Marvell 129.66 41 IAMs_20 IAMs_20 03 53 28.9
comp=Z,18µm,22.0s
E61A Lac Etchemin 129.67 15 P PKiKP 02 50 47.6 +0.5
baz=338,SNR=17
D63A Stockholm 129.68 13 P PKiKP 02 50 46.8 -0.4
baz=341
F60A Warwick 129.69 17 P PKiKP 02 50 46.9 -0.3
baz=336,SNR=17
E62A Clayton Lake 129.74 14 P PKiKP 02 50 46.9 -0.3
baz=339,SNR=8.1
HALT Halls 129.75 38 IAMs_20 IAMs_20 03 49 13.1
comp=Z,19µm,21.0s
M51A Elyria 129.77 28 P PKiKP 02 50 46.8 -0.7
baz=322,SNR=8.6
G58A Ormstown 129.79 19 P PKiKP 02 50 47.8 +0.4
baz=333
HDBT Hernando Brdge 129.79 39 IAMs_20 IAMs_20 03 53 02.2
comp=Z,19µm,20.0s
PECO Prince Edward 129.82 22 PKiKP 02 50 46.9 -0.6
PECO IAMs_20 IAMs_20 03 52 13.4
comp=Z,19µm,22.0s
BATG Bathurst New B 129.87 11 IAMs_20 IAMs_20 03 57 52.0
comp=Z,13µm,20.0s
P49A Miami Univ. Ec 129.88 31 P PKiKP 02 50 47.2 -0.6
baz=318,SNR=22
H57A Richville 129.95 20 P PKiKP 02 50 47.5 -0.2
baz=331,SNR=9.1
F61A St Evariste 129.95 16 P PKiKP 02 50 47.9 +0.1
baz=337
WCI Wyandotte Cave 129.97 34 PKHKP PKPpre 02 50 32.4
WCI Wyandotte Cave 129.97 34 P PKiKP 02 50 48.3 +0.3
baz=315
WCI Wyandotte Cave 129.97 34 PKPpre 02 50 32.4
M52A Chesterland 129.99 27 IAMs_20 IAMs_20 03 53 12.1
comp=Z,21µm,22.0s
N51A Ashland 130.00 28 IAMs_20 IAMs_20 03 55 09.6
comp=Z,21µm,22.0s
PQI Presque Isle 130.04 13 IAMs_20 IAMs_20 03 55 02.7
comp=Z,16µm,22.0s
LONY Lake Ozonia 130.08 20 P PKiKP 02 50 47.7 -0.4
baz=332,SNR=11
LONY Lake Ozonia 130.08 20 PKiKP 02 50 47.7 -0.4
LONY IAMs_20 IAMs_20 03 44 13.2
comp=Z,20µm,22.0s
ERPA Erie 130.13 26 P PKiKP 02 50 47.5 -0.7
baz=324
ERPA Erie 130.13 26 IAMs_20 IAMs_20 03 52 03.9
comp=Z,23µm,22.0s
L53A Girard 130.15 26 P PKiKP 02 50 47.7 -0.6
baz=324
E63A Oxbow 130.19 13 P PKiKP 02 50 47.6 -0.6
baz=340,SNR=9.3
E63A Oxbow 130.19 13 IAMs_20 IAMs_20 03 52 09.5
comp=Z,19µm,21.0s
FRNY Flat Rock 130.22 19 IAMs_20 IAMs_20 03 54 26.6
comp=Z,14µm,21.0s
ACSO Alum Creek Sta 130.23 30 P PKiKP 02 50 48.0 -0.5
baz=320,SNR=19
441A DeRidder 130.27 46 IAMs_20 IAMs_20 03 48 00.6
comp=Z,22µm,22.0s
I57A Carthage 130.31 21 P PKiKP 02 50 47.9 -0.6
baz=330,SNR=9.8
E64A Bridgewater 130.32 13 P PKiKP 02 50 48.4 0.0
baz=341
W45A Hickory Valley 130.34 39 IAMs_20 IAMs_20 03 55 04.6
comp=Z,21µm,22.0s
H59A Cadyville 130.35 19 P PKiKP 02 50 48.6 0.0
baz=333
G60A Masonville 130.37 17 P PKiKP 02 50 48.9 +0.3
baz=335
M53A WI Miller and 130.38 27 P PKiKP 02 50 49.1 +0.4
baz=323,SNR=17
M53A WI Miller and 130.38 27 IAMs_20 IAMs_20 03 55 12.4
comp=Z,20µm,21.0s
H58A Gabriels 130.40 19 P PKiKP 02 50 48.7 0.0
baz=332,SNR=10
143A Socs Landing, 130.40 43 IAMs_20 IAMs_20 03 52 01.9
comp=Z,21µm,22.0s
G61A St-Isidore-de- 130.44 17 P PKiKP 02 50 49.0 +0.2
baz=336
J56A Wolcott 130.44 22 P PKiKP 02 50 48.8 0.0
baz=329
O51A Pataskala 130.48 29 P PKiKP 02 50 49.0 0.0
baz=320,SNR=21
MMNY Mt. Morris Dam 130.49 24 PKPdf 02 50 47.9 -0.1
WVT Waverly 130.53 37 P PKiKP 02 50 48.5 -0.6
baz=312
342A Flagon Creek P 130.53 45 IAMs_20 IAMs_20 03 52 54.8
comp=Z,15µm,20.0s
R49A Shelbyville 130.54 33 IAMs_20 IAMs_20 03 51 50.4
comp=Z,21µm,22.0s
OXF Oxford 130.61 40 P PKiKP 02 50 48.7 -0.6
baz=310,SNR=6.8
OXF Oxford 130.61 40 IAMs_20 IAMs_20 03 46 39.0
comp=Z,22µm,22.0s
KIC Kosan Boka 130.61 280 eP PKPdf 02 50 47.7 -1.4
comp=Z,360nm,1.2s
PMPS Porto Santo 130.64 318 ePKPdf PKiKP 02 50 52.8 +3.3
J57A Williamstown 130.65 22 P PKiKP 02 50 48.7 -0.5
baz=330
J57A Williamstown 130.65 22 IAMs_20 IAMs_20 03 59 27.1
comp=Z,14µm,22.0s
DBIC Dimbokro 130.68 280 PKhKP PKPpre 02 50 38.1
comp=Z,4.0nm,0.7s,baz=36,slow=4.4,SNR=5.0
DBIC PKP PKiKP 02 50 50.9 +0.9
comp=Z,76nm,1.0s,baz=90,slow=2.6,SNR=25
DBIC SKPbc SKPbc 02 54 09.6 +0.3
comp=Z,99nm,1.0s,baz=67,slow=4.9,SNR=4.6
F63A Nahmakanta, Br 130.70 14 P PKiKP 02 50 49.8 +0.6
baz=339
F63A Nahmakanta, Br 130.70 14 IAMs_20 IAMs_20 03 52 12.1
comp=Z,18µm,20.0s
F64A Sherman 130.73 14 P PKiKP 02 50 49.3 0.0
baz=340,SNR=8.9
F64A Sherman 130.73 14 IAMs_20 IAMs_20 03 50 08.9
comp=Z,19µm,22.0s
H60A Morristown 130.74 18 P PKiKP 02 50 49.5 +0.2
baz=334
K56A Middlesex 130.75 23 P PKPdf 02 50 48.6 0.0
baz=328
P51A Williamsport 130.76 30 P PKPdf 02 50 48.7 0.0
baz=320,SNR=14
P51A Williamsport 130.76 30 IAMs_20 IAMs_20 03 56 24.0
comp=Z,23µm,21.0s
I58A Old Forge 130.77 20 P PKiKP 02 50 49.0 -0.5
baz=331
M54A Oil Creek Stat 130.77 26 P PKiKP 02 50 49.4 -0.2
baz=325,SNR=14
M54A Oil Creek Stat 130.77 26 IAMs_20 IAMs_20 03 54 07.7
comp=Z,24µm,22.0s
G62A West of Eustis 130.78 16 P PKiKP 02 50 48.8 -0.6
baz=337
G62A West of Eustis 130.78 16 IAMs_20 IAMs_20 03 53 28.2
comp=Z,21µm,22.0s
NCB Newcomb 130.78 20 IAMs_20 IAMs_20 03 53 03.5
comp=Z,13µm,21.0s
N53A Lisbon 130.81 27 IAMs_20 IAMs_20 03 57 50.8
comp=Z,19µm,22.0s
TIC Toumodi 130.84 280 eP PKPdf 02 50 46.7 -2.8
O52A Adamsville 130.88 29 P PKiKP 02 50 49.6 -0.2
baz=321,SNR=12
O52A Adamsville 130.88 29 IAMs_20 IAMs_20 03 53 39.9
comp=Z,21µm,22.0s
LIC Lamto 130.91 280 eP PKPdf 02 50 45.3 -4.3
comp=Z,273nm,0.8s
Y45A Yeager Farm, C 130.93 40 IAMs_20 IAMs_20 03 39 06.2
comp=Z,18µm,22.0s
J58A Remsen 130.95 21 P PKiKP 02 50 49.5 -0.3
baz=331,SNR=14
J58A Remsen 130.95 21 IAMs_20 IAMs_20 03 55 45.0
comp=Z,17µm,22.0s
H61A Lyndonville 131.00 17 P PKiKP 02 50 50.3 +0.4
baz=335,SNR=5.9
K57A Scipio Center 131.03 22 P PKPdf 02 50 49.2 +0.1
baz=329,SNR=14
I59A Olmsteadville 131.05 19 P PKiKP 02 50 49.5 -0.5
baz=333,SNR=13
PKME Peaks-Kenny Pk 131.06 15 P PKiKP 02 50 49.6 -0.4
baz=339
PKME Peaks-Kenny Pk 131.06 15 IAMs_20 IAMs_20 03 52 44.8
comp=Z,22µm,22.0s
N54A Moraine State 131.07 27 P PKPdf 02 50 49.2 0.0
baz=324,SNR=12
O53A New Philadelph 131.07 28 P PKiKP 02 50 50.4 +0.2
baz=322,SNR=8.7
P52A Corning 131.11 29 P PKiKP 02 50 49.8 -0.4
baz=321,SNR=17
G63A Kingsbury 131.11 15 P PKiKP 02 50 50.7 +0.6
baz=338
J59A Piesco 131.13 20 P PKiKP 02 50 50.5 +0.3
baz=332,SNR=13
L56A Greenwood 131.13 24 P PKiKP 02 50 49.7 -0.5
baz=327
L56A Greenwood 131.13 24 PKPpre 02 50 38.5
L56A PKPdf PKiKP 02 50 49.8 -0.5
H62A Milan 131.19 17 P PKiKP 02 50 50.1 -0.2
baz=336
H62A Milan 131.19 17 IAMs_20 IAMs_20 03 51 26.3
comp=Z,16µm,22.0s
I60A Shoreham 131.20 19 P PKiKP 02 50 50.3 0.0
baz=333,SNR=11
G64A Maxfield 131.20 14 P PKiKP 02 50 50.3 0.0
baz=340
PMAR Madeira 131.23 318 ePKPdf PKiKP 02 50 55.3 +4.4
FUL Funchal 131.26 318 ePKPdf PKiKP 02 50 51.6 +0.9
LBNH Lisbon 131.27 18 P PKiKP 02 50 50.8 +0.4
baz=335
LBNH Lisbon 131.27 18 IAMs_20 IAMs_20 03 49 06.5
comp=Z,17µm,22.0s
VBMS Vicksburg 131.29 43 P PKiKP 02 50 51.8 +1.0
baz=307
K58A Earlville 131.33 22 P PKiKP 02 50 51.1 +0.4
baz=330,SNR=9.8
K58A Earlville 131.33 22 IAMs_20 IAMs_20 03 55 12.3
comp=Z,15µm,20.0s
PMOZ Porto Moniz, M 131.36 318 ePKPdf PKiKP 02 50 54.8 +3.7
PMOZ Porto Moniz, M 131.36 318 ePP PP 02 53 11.8 +3.7
PMOZ Porto Moniz, M 131.36 318 eSS SS 03 11 11.2 +34
PMOZ Porto Moniz, M 131.36 318 eLR LR 03 44 11.5
comp=Z,32µm,24.0s
V48A Smith Brothers 131.40 37 IAMs_20 IAMs_20 03 55 23.4
comp=Z,22µm,21.0s
M56A Emporium 131.42 25 P PKiKP 02 50 50.9 +0.1
baz=326,SNR=14
H63A New Sharon 131.42 16 P PKiKP 02 50 51.2 +0.5
baz=338
I61A Oroboro, Fairl 131.46 18 P PKiKP 02 50 51.5 +0.7
baz=335
U49A Red Boiling Sp 131.47 35 IAMs_20 IAMs_20 03 57 48.2
comp=Z,22µm,22.0s
LMN Caledonia Moun 131.48 11 IAMs_20 IAMs_20 03 49 15.7
comp=Z,20µm,21.0s
O54A Avella 131.51 28 P PKPdf 02 50 50.1 +0.1
baz=323,SNR=11
L57A Andrews Acres 131.53 23 P PKiKP 02 50 51.0 0.0
baz=328
G65A Princeton 131.54 13 P PKiKP 02 50 51.0 +0.1
baz=341
Q52A Bidwell 131.56 30 P PKiKP 02 50 50.8 -0.4
baz=320,SNR=13
P53A Whipple 131.59 29 P PKiKP 02 50 50.8 -0.4
baz=322,SNR=19
344A Westbrook Farm 131.60 44 IAMs_20 IAMs_20 03 48 01.7
comp=Z,20µm,22.0s
K59A Cooperstown 131.61 21 P PKiKP 02 50 51.2 0.0
baz=331
TLIG Tlapa 131.63 65 IAMs_20 IAMs_20 03 44 24.1
comp=Z,21µm,22.0s
HNH Hanover 131.64 18 IAMs_20 IAMs_20 03 48 19.3
comp=Z,22µm,22.0s
H64A Troy 131.66 15 P PKPdf 02 50 50.3 +0.1
baz=339
BINY Binghamton 131.69 22 P PKiKP 02 50 51.3 -0.1
baz=329
BINY Binghamton 131.69 22 IAMs_20 IAMs_20 03 59 20.0
comp=Z,15µm,21.0s
J60A Lant Hill Farm 131.69 19 P PKiKP 02 50 50.7 -0.6
baz=333
GGN Saint George 131.78 13 IAMs_20 IAMs_20 04 00 59.7
comp=Z,16µm,22.0s
I62A Tamworth 131.78 17 P PKiKP 02 50 51.1 -0.4
baz=336,SNR=5.9
I62A Tamworth 131.78 17 IAMs_20 IAMs_20 03 56 34.9
comp=Z,23µm,22.0s
I63A Otisfield 131.84 16 P PKiKP 02 50 50.3 -0.2
baz=337
I63A Otisfield 131.84 16 PKPdf 02 50 50.3 -0.2
I63A IAMs_20 IAMs_20 03 57 33.4
comp=Z,20µm,22.0s
N56A West Decatur 131.84 25 P PKiKP 02 50 51.7 -0.1
baz=326,SNR=9.7
H65A Eastbrook 131.85 14 P PKiKP 02 50 51.3 -0.3
baz=340,SNR=5.3
L58A Harry Jones Me 131.88 22 P PKiKP 02 50 51.4 -0.3
baz=329
J61A Chester 131.88 19 P PKiKP 02 50 52.0 +0.3
baz=334
P54A Burton 131.93 28 P PKiKP 02 50 52.1 +0.2
baz=323
M57A Sunshine Farm, 131.98 24 P PKiKP 02 50 51.3 -0.7
baz=328
O55A Ligonier 131.98 27 P PKiKP 02 50 51.4 -0.6

baz=324
H66A Whiting 131.99 13 P PKPdf 02 50 50.0 -0.8
baz=341
Q53A Leroy 132.01 30 P PKiKP 02 50 52.0 -0.1
baz=321
146A Union 132.01 41 IAMs_20 IAMs_20 03 54 56.4
comp=Z,21µm,22.0s
EMMW East Machias 132.03 13 IAMs_20 IAMs_20 03 52 44.3
comp=Z,20µm,21.0s
L59A Walton 132.05 22 P PKiKP 02 50 52.0 -0.1
baz=330
TRY Troy 132.06 20 IAMs_20 IAMs_20 03 54 03.6
comp=Z,23µm,22.0s
K60A Five Rivers En 132.09 20 P PKiKP 02 50 52.6 +0.5
baz=332,SNR=8.9
MCWV Mont Chateau 132.18 27 P PKiKP 02 50 52.5 +0.1
baz=323
R53A Hurricane 132.20 30 P PKiKP 02 50 52.1 -0.4
baz=320,SNR=12
M58A Price's Panora 132.22 23 P PKiKP 02 50 52.4 -0.1
baz=328
I64A Boothbay 132.22 16 P PKiKP 02 50 52.2 -0.1
baz=338
J62A Henniker 132.22 18 P PKiKP 02 50 52.5 +0.1
baz=335
Q54A Coxs Mills 132.25 29 P PKiKP 02 50 52.1 -0.5
baz=322,SNR=5.6
Q54A Coxs Mills 132.25 29 IAMs_20 IAMs_20 03 58 16.1
comp=Z,18µm,21.0s
K61A Williamstown 132.25 20 P PKiKP 02 50 52.8 +0.3
baz=333
O56A Blue Knob Stat 132.26 26 P PKiKP 02 50 51.9 -0.7
baz=325,SNR=10
O56A Blue Knob Stat 132.26 26 IAMs_20 IAMs_20 03 44 24.2
comp=Z,16µm,22.0s
N57A Milroy 132.29 25 P PKiKP 02 50 52.3 -0.3
baz=327
Z47A Carrollton 132.30 40 IAMs_20 IAMs_20 03 58 16.8
comp=Z,22µm,21.0s
P55A Reedsville 132.31 28 P PKiKP 02 50 52.7 0.0
baz=323,SNR=8.4
J63A Strafford 132.40 17 P PKiKP 02 50 51.9 -0.8
baz=336
M59A Waymart 132.47 22 P PKiKP 02 50 52.9 -0.1
baz=330
346A Big Creek Wild 132.51 43 PKPdf 02 50 51.6 -0.6
346A IAMs_20 IAMs_20 03 52 41.6
comp=Z,22µm,22.0s
L60A Shokan 132.52 21 P PKiKP 02 50 53.7 +0.7
baz=331
N58A Sunbury 132.56 24 P PKPdf 02 50 52.2 +0.2
baz=328
L61A Hillsdale 1, H 132.58 20 P PKiKP 02 50 52.6 -0.6
baz=332
K62A Royalston 132.60 19 P PKiKP 02 50 53.8 +0.6
baz=334
K62A Royalston 132.60 19 IAMs_20 IAMs_20 03 53 10.6
comp=Z,16µm,21.0s
Q55A Buckhannon 132.60 28 P PKiKP 02 50 53.1 -0.2
baz=323,SNR=13
S53A Williamson 132.61 31 P PKiKP 02 50 53.3 -0.1
baz=320,SNR=8.0
L61B Northampton 132.65 19 P PKiKP 02 50 53.1 -0.2
baz=334
BART Pico Bartolome 132.65 329 *e*PKP PKiKP 02 50 55.4 +1.9
BART *e*P SKPbc 02 54 18.7 +2.9
TZTN Tazewell 132.70 33 P PKiKP 02 50 53.8 +0.2
baz=317,SNR=11
O57A Amberson 132.71 25 P PKiKP 02 50 53.0 -0.5
baz=326
P56A Dayton Farm, R 132.76 27 P PKiKP 02 50 53.0 -0.6
baz=324
V51A Loudon 132.79 35 IAMs_20 IAMs_20 03 43 33.7
comp=Z,19µm,22.0s
PCALD Caldeiras da R 132.79 329 *e*PKP PKiKP 02 50 55.8 +2.1
PCALD *e*P SKPbc 02 54 19.1 +2.9
R54A Victor 132.80 30 P PKiKP 02 50 53.2 -0.6
baz=321,SNR=12
K63A Dunstable 132.80 18 P PKiKP 02 50 54.0 +0.4
baz=335
CMLA Cha da Macela 132.84 329 *e*PKP PKPdf 02 50 52.5 -0.2
CMLA *e*P SKPbc 02 54 19.1 +2.7
CMLA Cha da Macela 132.84 329 IAMs_20 IAMs_20 03 50 59.5
comp=Z,20µm,22.0s
GRON Grota Negra 132.84 330 *e*P SKPbc 02 54 17.5 +1.1
HAL Halifax 132.87 10 IAMs_20 IAMs_20 03 55 35.5
comp=Z,20µm,22.0s
N59A State Game Lan 132.87 23 P PKPdf 02 50 52.7 0.0
baz=329
PSCM Serra do Cume 132.89 332 *e*PKP PKiKP 02 50 57.7 +3.8
PSCM *e*P SKPbc 02 54 17.2 +0.7
PSET Sete Cidades 132.89 330 *e*PKP PKiKP 02 50 57.7 +3.8
PSET *e*P SKPbc 02 54 17.2 +0.6
Y49A Blount Mountai 132.91 38 IAMs_20 IAMs_20 03 59 26.8
comp=Z,18µm,21.0s
T53A Wise 132.92 32 P PKPdf 02 50 53.0 +0.1
baz=319
S54A Dingess, Beckl 132.93 30 P PKPdf 02 50 52.8 -0.1
baz=321,SNR=7.9
FPAL Fort Paine 132.94 37 PKPpre 02 50 40.4
FPAL PKPdf PKPdf 02 50 52.2 -0.8
HRV Adam Dziewonsk 132.96 18 P PKiKP 02 50 53.7 -0.1
baz=335
HRV Adam Dziewonsk 132.96 18 IAMs_20 IAMs_20 03 57 34.0
comp=Z,22µm,22.0s
M60A Port Jervis 132.96 22 P PKiKP 02 50 53.3 -0.6
baz=331
Q56A Snyder Ridge, 132.98 27 P PKiKP 02 50 53.4 -0.6
baz=324
ADH Angra Heroismo 132.98 332 *e*PKP PKiKP 02 50 56.7 +2.7
KSCT Kent School, K 133.02 20 IAMs_20 IAMs_20 04 01 12.8
comp=Z,20µm,22.0s
L62A Suffield 133.03 20 P PKiKP 02 50 53.5 -0.5
baz=333
PGRA Graciosa 133.03 333 *e*PKP PKPdf 02 50 53.1 +0.1
SRBC Serra Branca 133.05 333 *e*PKP PKiKP 02 50 55.9 +1.7
O58A Lewisberry 133.08 25 P PKPdf 02 50 53.1 0.0
baz=327,SNR=9.5
LRAL Lakeview Retre 133.09 39 P PKPdf 02 50 53.4 +0.1
baz=311
LRAL Lakeview Retre 133.09 39 IAMs_20 IAMs_20 03 58 25.7
comp=Z,22µm,21.0s
WES Weston 133.14 18 IAMs_20 IAMs_20 03 52 34.9
comp=Z,13µm,21.0s
R55A Marlinton 133.14 29 P PKPdf 02 50 53.1 -0.2
baz=322
P57A Homestead Farm 133.15 26 P PKiKP 02 50 53.5 -0.8
baz=326
N60A Cedar Hill Far 133.17 22 P PKPdf 02 50 53.2 +0.1
baz=330
PSMN Pico do Norte, 133.18 328 *e*PKP PKiKP 02 50 53.8 -0.7
PSMN *e*P SKPbc 02 54 19.1 +1.5
TKL Tuckaleechee C 133.22 34 PKhKP PKPpre 02 50 40.7
comp=Z,16nm,0.7s,baz=216,slow=3.2,SNR=16
TKL PKP PKiKP 02 50 54.7 +0.1
comp=Z,171nm,0.8s,baz=144,slow=2.2,SNR=26
TKL SKPbc SKPab 02 54 20.4 +0.8
comp=Z,29nm,0.9s,baz=296,slow=2.8,SNR=2.0
PSMA Santa Maria 133.22 328 *e*PKP PKiKP 02 50 55.1 +0.5
PSMA *e*P SKPbc 02 54 17.2 -0.5
BCX Boston College 133.23 18 PKPdf 02 50 53.3 +0.1
BCX IAMs_20 IAMs_20 03 54 04.3
comp=Z,20µm,22.0s
M61A Granite Spring 133.28 21 P PKPdf 02 50 53.2 -0.1
baz=332
Q57A Strasburg 133.34 27 P PKiKP 02 50 54.3 -0.5
baz=325
S55A Lewisburg 133.36 30 P PKiKP 02 50 54.1 -0.8
baz=322
T54A Tazewell 133.36 31 P PKiKP 02 50 54.6 -0.4
baz=320
R56A Bull Pasture M 133.39 28 P PKiKP 02 50 54.7 -0.3
baz=323,SNR=14
PMAN Manadas 133.40 332 *e*PKP PKiKP 02 50 56.4 +1.5
PMAN *e*P SKPbc 02 54 17.5 -0.7
ROSA Rosais 133.40 333 *e*P SKPbc 02 54 18.7 +0.4
P58A Pank, Wackersv 133.45 25 P PKiKP 02 50 54.6 -0.4
baz=326
M62A Hamden 133.47 20 P PKiKP 02 50 54.7 -0.2
baz=333
BRYW Bryant College 133.49 19 IAMs_20 IAMs_20 03 54 48.3
comp=Z,18µm,22.0s
PAL Palisades 133.50 21 P PKiKP 02 50 54.3 -0.7
baz=331
L63A North Scituate 133.52 19 P PKiKP 02 50 54.3 -0.7
baz=335
O60A Telford 133.53 23 P PKPdf 02 50 53.2 -0.7
baz=329
W52A Murphy 133.53 35 IAMs_20 IAMs_20 03 57 56.9
comp=Z,21µm,22.0s
BRNJ Basking Ridge 133.54 22 PKPpre 02 50 41.4
BRNJ PKPdf PKPdf 02 50 52.4 -1.4
BRNJ IAMs_20 IAMs_20 03 55 02.7
comp=Z,21µm,22.0s
WSPT Westport, CT 133.56 21 IAMs_20 IAMs_20 03 53 13.2
comp=Z,21µm,21.0s
YLE Yale 133.57 20 IAMs_20 IAMs_20 04 02 05.5
comp=Z,20µm,22.0s
N61A South Mountain 133.58 22 P PKiKP 02 50 54.3 -0.8
baz=331
U54A Nelsons Funny 133.64 32 P PKPdf 02 50 54.2 -0.1
baz=319
PICO Pico 133.66 333 *e*PKP PKiKP 02 50 55.1 -0.4
PICO *e*P SKPbc 02 54 19.8 +0.6
L64A Middleborough 133.70 18 P PKPdf 02 50 54.3 +0.2
baz=336
SDMD Soldier's Deli 133.71 25 IAMs_20 IAMs_20 03 54 40.2
comp=Z,16µm,22.0s
P59A Jarrettsville 133.72 25 P PKiKP 02 50 54.6 -0.9
baz=328
PCAN Candelaria 133.72 333 *e*PKP PKiKP 02 50 56.3 +0.7
PCAN *e*P SKPbc 02 54 20.2 +0.8
CALA Caldeira 133.72 333 *e*P SKPbc 02 54 19.8 +0.4
T55A Pulaski 133.72 30 P PKiKP 02 50 55.1 -0.6
baz=321
Q58A Fox Den Farm, 133.74 26 P PKPdf 02 50 54.6 +0.3
baz=326,SNR=8.9
M63A Gales Ferry 133.79 19 P PKiKP 02 50 56.2 +0.6
baz=334
BLA Blacksburg 133.84 30 P PKiKP 02 50 55.0 -0.9
baz=321
PSUB Penn St. - Bra 133.85 23 IAMs_20 IAMs_20 03 57 04.0
comp=Z,21µm,22.0s
P60A Greenville 133.87 24 P PKPdf 02 50 54.5 0.0
baz=329
P60A Greenville 133.87 24 IAMs_20 IAMs_20 03 55 04.7
comp=Z,22µm,22.0s
R57A Stanardsville 133.88 27 P PKiKP 02 50 54.9 -0.9
baz=324,SNR=7.7
S56A Natural Bridge 133.89 29 P PKiKP 02 50 55.7 -0.2
baz=323
M64A Tiverton 133.93 18 P PKiKP 02 50 55.2 -0.6
baz=335
O61A Allentown 134.05 23 P PKiKP 02 50 55.3 -0.9
baz=330
M65A Busby, Falmout 134.10 18 IAMs_20 IAMs_20 03 56 22.2
comp=Z,22µm,22.0s
S57A Dark Hollow, R 134.12 28 P PKPdf 02 50 55.1 0.0
baz=323
S57A Dark Hollow, R 134.12 28 IAMs_20 IAMs_20 03 55 16.5
comp=Z,19µm,22.0s
R58A Rapidan 134.12 27 P PKiKP 02 50 55.9 -0.5
baz=325,SNR=9.8
V54A Nebo 134.13 33 P PKiKP 02 50 55.6 -0.9
baz=319
H07S1 FLORES T-PHASE 134.15 336 *e*PKP PKiKP 02 50 56.7 +0.3
T56A Rocky Mt 134.17 30 P PKiKP 02 50 55.8 -0.8
baz=322
Q59A Harwood 134.25 25 P PKiKP 02 50 56.9 +0.3
baz=327
BRAL Brewton 134.26 41 P PKiKP 02 50 56.7 -0.1
baz=310
BRAL Brewton 134.26 41 PKPdf PKPdf 02 50 53.2 -2.2
BRAL IAMs_20 IAMs_20 03 55 26.0
comp=Z,20µm,22.0s
P61A Hammonton 134.32 23 IAMs_20 IAMs_20 03 55 44.6
comp=Z,16µm,22.0s
R58B Mineral 134.45 27 P PKiKP 02 50 56.0 -1.0
baz=325,SNR=10
V55A Taylorsville 134.47 32 P PKPdf 02 50 55.5 -0.3
baz=320
CBN Corbin Frederi 134.48 27 P PKPdf 02 50 55.5 -0.2
baz=326
W54A Cherokee Point 134.52 33 P PKiKP 02 50 56.5 -0.8
baz=318,SNR=5.6
U56A King 134.52 31 P PKiKP 02 50 56.5 -0.7
baz=321
T57A Hurt 134.58 29 P PKiKP 02 50 56.5 -0.8
baz=323
R59A King George, V 134.60 26 P PKiKP 02 50 56.6 -0.7
baz=326
S58A Poland Farm, P 134.66 28 P PKPdf 02 50 56.0 -0.1
baz=314
R60A Leonardtown, M 134.78 26 P PKPdf 02 50 56.4 +0.2
baz=327
X54A Belton 134.81 34 P PKiKP 02 50 57.6 -0.2
baz=317,SNR=14
V56A Mocksville 134.88 31 P PKiKP 02 50 57.3 -0.7
baz=320,SNR=6.5
S59A Mechanicsville 134.88 27 P PKiKP 02 50 57.6 -0.3
baz=326
PAULI Pauline 134.92 33 PKPpre 02 50 44.3
PAULI PKPdf PKPdf 02 50 53.8 -2.8
PAULI IAMs_20 IAMs_20 03 54 42.3
comp=Z,20µm,21.0s
KMSC Kings Mountain 134.94 33 P PKPdf 02 50 57.0 +0.3
baz=319,SNR=9.2
T58A Grand View Acr 134.97 29 P PKPdf 02 50 56.6 -0.1
baz=323
U57A Blanch 134.98 30 P PKPdf 02 50 56.5 -0.2
baz=322
GOGA Godfrey 135.00 36 P PKiKP 02 50 57.6 -0.7
baz=315,SNR=9.2
GOGA Godfrey 135.00 36 IAMs_20 IAMs_20 03 58 01.8
comp=Z,21µm,22.0s
CMIG Matias Romero 135.10 64 PKhKP PKPpre 02 50 51.9
comp=Z,7.4nm,0.9s,baz=32,slow=1.7,SNR=5.0
CMIG PKP PKiKP 02 50 58.9 0.0
comp=Z,36nm,0.8s,baz=297,slow=2.4,SNR=16
V57A Coltrane Farms 135.19 31 P PKiKP 02 50 57.9 -0.7
baz=321,SNR=5.9
S60A Water View 135.21 26 P PKiKP 02 50 58.3 -0.2
baz=326
X55A Gracelyn & Ava 135.28 34 P PKiKP 02 50 58.0 -0.8
baz=318
W56A Indian Trail 135.35 32 P PKiKP 02 50 59.5 +0.5
baz=320
U58A Oxford 135.40 29 P PKPdf 02 50 57.8 +0.3
baz=323
T59A Double "B" Far 135.41 28 P PKPdf 02 50 57.8 +0.4
baz=325
352A Blakely 135.43 39 IAMs_20 IAMs_20 03 59 24.7
comp=Z,20µm,22.0s
451A Vernon 135.47 41 IAMs_20 IAMs_20 03 57 50.9
comp=Z,20µm,22.0s
X56A White Oak 135.59 33 P PKPdf 02 50 57.9 0.0
baz=319
V58A Windy Hill, Pi 135.60 30 P PKPdf 02 50 58.1 +0.2
baz=322
T60A Surry 135.65 27 P PKPdf 02 50 57.4 -0.4
baz=326
W57A Gilead 135.65 31 P PKPdf 02 50 58.2 +0.2
baz=321,SNR=12
154A Montrose 135.78 37 IAMs_20 IAMs_20 03 58 52.2
comp=Z,22µm,22.0s
U59A Littleton 135.80 28 P PKPdf 02 50 57.8 -0.4
baz=324
Y56A Pelion 135.97 34 P PKPdf 02 50 58.9 +0.3
baz=318
U60A Pendleton 136.00 28 P PKPdf 02 50 59.0 +0.5
baz=325
V59A Middlesex 136.05 29 P PKiKP 02 50 59.4 -1.0
baz=323
X57A Johnson Farm, 136.12 32 P PKPdf 02 50 58.8 -0.1
baz=320
W58A Raeford 136.14 31 P PKPdf 02 50 58.7 -0.2
baz=321,SNR=6.6
LL01 San Ignacio de 136.23 160 PKPpre 02 50 49.5
LL01 PKPdf PKPdf 02 50 57.2 -1.6
LL01 IAMs_20 IAMs_20 03 46 23.1
comp=Z,15µm,22.0s
Z56A Williston 136.27 34 P PKiKP 02 50 59.7 -1.2
baz=318
Y57A Sumter 136.30 33 P PKPdf 02 50 59.4 +0.2
baz=319
TIGA Tifton 136.30 38 P PKPdf 02 50 59.3 +0.1
baz=314
W59A Clinton 136.43 30 P PKiKP 02 51 00.2 -0.9
baz=322
U61A Possum Corner 136.44 27 P PKPdf 02 50 59.9 +0.5
baz=326
X58A Rowland 136.45 31 P PKPdf 02 50 59.5 +0.1
baz=321,SNR=6.4
V60A Jim Taylor Roa 136.52 28 P PKPdf 02 50 59.1 -0.4
baz=324
553A Crawfordville 136.61 40 IAMs_20 IAMs_20 04 02 09.7
comp=Z,16µm,22.0s
255A Hazlehurst 136.64 37 IAMs_20 IAMs_20 03 47 34.3
comp=Z,18µm,22.0s
CNNC Cliffs of the 136.64 29 P PKPdf 02 50 58.2 -1.6
baz=323
Z57A Bowman 136.67 34 P PKPdf 02 51 00.4 +0.5
baz=318
X59A McDuffie Farm, 136.81 31 P PKPdf 02 50 59.6 -0.6
baz=322
V61A Roper 136.82 28 P PKPdf 02 50 58.7 -1.4
baz=325
W60A Pink Hill 136.88 29 P PKPdf 02 50 58.3 -2.0
baz=323
157A Early Branch 136.96 35 P PKPdf 02 50 59.4 -1.1
baz=318
NHSC New Hope 137.10 34 P PKPdf 02 50 59.8 -0.9
baz=319
X60A Albert Glenn T 137.13 30 P PKPdf 02 50 59.0 -1.7
baz=323
Y59A Loris 137.13 32 P PKPdf 02 50 59.8 -0.9
baz=321
W61A Ground Anchor 137.13 29 P PKPdf 02 50 59.5 -1.2
baz=324
Z58A St. Stephen 137.13 33 P PKPdf 02 51 00.4 -0.4
baz=320
V62A Hyde County Ai 137.30 27 P PKPdf 02 50 59.0 -2.0
baz=326
158A Hollywood 137.37 34 P PKPdf 02 50 59.1 -2.1
baz=319
456A Hilliard 137.76 38 IAMs_20 IAMs_20 03 54 13.1
comp=Z,17µm,22.0s
CCIG Comitan 137.84 63 IAMs_20 IAMs_20 03 46 12.6
comp=Z,13µm,21.0s
PLCA Paso Flores 138.33 160 PKhKP PKPpre 02 50 53.7
comp=Z,11nm,0.8s,baz=229,slow=3.4,SNR=8.9
PLCA PKP PKiKP 02 51 05.0 0.0
comp=Z,59nm,0.8s,baz=233,slow=3.8,SNR=15
PLCA SKPbc SKiKP 02 54 37.1 -0.3
comp=Z,20nm,0.8s,baz=206,slow=5.7,SNR=4.2
PLCA Paso Flores 138.33 160 PKIKP PKiKP 02 51 05.0 0.0
PLCA Paso Flores 138.33 160 PKPpre 02 50 52.1
PLCA PKPdf PKPdf 02 51 01.0 -1.9
HUEH Huehuetenango 138.76 64 PKPdf PKPdf 02 51 00.7 -3.8
HUEH IAMs_20 IAMs_20 03 46 13.3
comp=Z,15µm,22.0s
RTAL Retalhuleu 138.87 65 IAMs_20 IAMs_20 03 47 59.3
comp=Z,19µm,22.0s
TEIG Tepich 139.50 55 *e*P PKPdf 02 50 55.9 -10
TEIG Tepich 139.50 55 IAMs_20 IAMs_20 03 51 48.4
comp=Z,13µm,21.0s
PETF Flores 139.61 61 IAMs_20 IAMs_20 03 44 32.3
comp=Z,16µm,22.0s
DWPF Disney Wildern 139.94 40 IAMs_20 IAMs_20 04 06 48.2
comp=Z,16µm,22.0s
H03S2 Juan Fernandez 140.28 146 PKP PKiKP 02 51 08.8 +0.1
baz=327,slow=9.6,SNR=3.2
H03S1 Juan Fernandez 140.29 146 PKP PKiKP 02 51 08.7 0.0
baz=327,slow=9.6,SNR=2.5
H03S3 Juan Fernandez 140.30 146 PKP PKiKP 02 51 08.3 -0.5
baz=327,slow=9.6,SNR=3.1
ASCN Ascension 140.52 260 IAMs_20 IAMs_20 03 47 21.1
comp=Z,17µm,20.0s
MTO3 Montecristo 141.03 64 IAMs_20 IAMs_20 03 49 14.0
comp=Z,16µm,22.0s
060A Indiantown 141.37 40 IAMs_20 IAMs_20 03 52 54.0
comp=Z,20µm,22.0s
BI02 San Fabin de 141.66 157 IAMs_20 IAMs_20 03 55 59.1
comp=Z,15µm,20.0s
061Z Ochoppi 141.81 42 IAMs_20 IAMs_20 04 04 37.7
comp=Z,20µm,22.0s
TGUH Tegucigalpa,Un 143.03 64 *e*P PKPdf 02 51 07.2 -4.9
TGUH Tegucigalpa,Un 143.03 64 IAMs_20 IAMs_20 03 50 14.0
comp=Z,14µm,22.0s
PAYG Puerto Ayora 143.24 89↑ *e*P PKPbc 02 51 10.4 +0.9
PAYG Puerto Ayora 143.24 89 PKPdf 02 51 13.5 +1.1
BO02 Sierra Bellavi 143.48 156 IAMs_20 IAMs_20 03 58 19.4
comp=Z,14µm,22.0s
BBSR BB Station 144.38 16 PKPdf 02 51 13.3 -0.6
BBSR BB Station 144.38 16 IAMs_20 IAMs_20 04 02 32.3
comp=Z,15µm,22.0s
VA01 Torpederas 144.62 153 IAMs_20 IAMs_20 04 03 06.8
comp=Z,10µm,20.0s
MT02 Curacav 144.65 154 IAMs_20 IAMs_20 03 58 43.1
comp=Z,15µm,21.0s
MT05 Renca 144.71 155 IAMs_20 IAMs_20 04 05 56.9
comp=Z,12µm,20.0s
PEL Peldehue 144.94 154 IAMs_20 IAMs_20 04 05 38.2
comp=Z,13µm,22.0s
VA03 San Esteban 145.33 154 IAMs_20 IAMs_20 03 51 54.0
comp=Z,13µm,22.0s
SACV Santiago Islan 146.00 300 IAMs_20 IAMs_20 04 02 55.8
comp=Z,16µm,22.0s
CO02 Combarbal 146.44 152 IAMs_20 IAMs_20 04 06 55.0
comp=Z,16µm,22.0s
JTS Las Juntas de 146.49 68 PKPbc PKPbc 02 51 18.9 -0.5
comp=Z,66nm,0.5s,baz=340,slow=4.0,SNR=31
JTS Las Juntas de 146.49 68↑ *e*P PKPdf 02 51 16.7 -1.3
LPA La Plata 146.84 173 *c i*P KiKP PKPdf 02 51 14.3 -3.7
CO03 El Pedregal 146.90 152 IAMs_20 IAMs_20 04 06 57.9
comp=Z,12µm,22.0s
ZON Zonda 147.17 156 IAMs_20 IAMs_20 04 04 01.9
comp=Z,16µm,22.0s
HDC Heredia 147.37 68 IAMs_20 IAMs_20 03 42 48.8
comp=Z,17µm,21.0s
GO04 Tololo Observa 147.40 152 IAMs_20 IAMs_20 03 48 17.4
comp=Z,19µm,22.0s
PRVC Isla de Provid 148.53 60 *e*P PKPdf 02 51 20.5 -0.8
AC05 El Transito 148.76 151 PKPbc PKPbc 02 51 24.6 -0.8
AC05 IAMs_20 IAMs_20 03 56 43.5
comp=Z,16µm,22.0s
MTDJ Mount Denham 149.09 49↑ *e*P PKPdf 02 51 21.3 -1.0
MCJ Malvern 149.16 49↓ *i*P PKPbc 02 51 26.0 -0.6
BBJ Bamboo Saint A 149.19 48 *i*P PKPbc 02 51 24.5 -2.1
STH Stony Hill 149.72 48 *i*P PKiKP 02 51 28.6 -0.3
GTBY Guantanamo Bay 149.74 43 *i*P PKPdf 02 51 23.2 +0.1
GTBY Guantanamo Bay 149.74 43 IAMs_20 IAMs_20 04 03 19.1
comp=Z,14µm,22.0s
GO03 Copiap 149.81 150 IAMs_20 IAMs_20 03 59 50.2
comp=Z,13µm,22.0s
HOJ Hope 149.81 48↓ *i*P PKiKP 02 51 29.0 0.0
PLTB Pedras Altas 150.23 180 *e*P PKPdf 02 51 25.4 +1.8
GRTK Grand Turk 151.11 36 IAMs_20 IAMs_20 04 06 52.6
comp=Z,17µm,22.0s
MAPC Malpelo 151.35 78↑ *e*P PKPdf 02 51 25.7 -0.2
PNME Penonome 151.39 69↑ *e*P PKPdf 02 51 24.4 -1.5
CPSB Cacapava Do Su 151.58 180 *e*P PKPdf 02 51 27.1 +1.3
BCIP Isla Barro Col 151.61 67↑ *e*P PKPdf 02 51 25.7 -0.5
AZU Azuero 151.67 70↑ *e*P PKPdf 02 51 25.7 -0.6
UPA Univ. de Panam 151.95 67↑ *e*P PKPdf 02 51 24.8 -1.9
PB14 IPOC Station P 152.09 146 PKPbc PKPdf 02 51 30.1 +3.1
ITQB Itaqui 152.16 174 *e*P PKPdf 02 51 27.8 +1.2
CNLB Canela 152.55 185 *e*P PKPdf 02 51 29.9 +2.6
UPD2 Meteti 153.51 67↑ *e*P PKPdf 02 51 29.4 +0.4
PB04 IPOC Station P 154.00 143 IAMs_20 IAMs_20 03 51 29.9
comp=Z,16µm,22.0s
PB06 IPOC Station P 154.06 144 IAMs_20 IAMs_20 03 50 30.4
comp=Z,13µm,20.0s
CAPC Capurgana 154.08 66↑ *e*P PKPdf 02 51 30.4 +0.6
PTAC Punta Ardita, 154.19 70↑ *e*P PKPdf 02 51 29.8 -0.1
LVC Limon Verde 154.51 145 PKP PKPdf 02 51 32.2 +1.6
comp=Z,32nm,0.8s,baz=255,slow=2.9,SNR=20
LVC Limon Verde 154.51 145 PKPbc PKPdf 02 51 33.9 +3.2
LVC Limon Verde 154.51 145 *e*P PKPdf 02 51 32.5 +1.9
PAC1 Pacto, Paraso 154.66 86↑ *e*P PKPdf 02 51 28.6 -2.2
ATAH Atahualpa 154.67 103 PKP PKPdf 02 51 33.1 +2.0
comp=Z,52nm,0.9s,baz=192,slow=1.4,SNR=35
ITAB Concordia 154.71 183 *e*P PKPdf 02 51 31.3 +1.0
NNA Nana 154.79 115 PKP PKPdf 02 51 31.5 +0.7
comp=Z,43nm,0.9s,baz=285,slow=2.5,SNR=18
NNA Nana 154.79 115 PKPdf 02 51 33.0 +2.2
SOLC Bahia Solano 154.86 71 *e*P PKPdf 02 51 31.0 +0.1
LCBC Los crdobas, 154.89 65↑ *e*P PKPdf 02 51 31.1 +0.2
GR1C Gorgona, Isla 154.91 79 *e*P PKPdf 02 51 29.4 -1.6
PB09 IPOC Station P 154.95 144 IAMs_20 IAMs_20 03 52 30.1
comp=Z,17µm,22.0s
CUSE Cuicocha Este 155.05 85↑ *e*P PKPdf 02 51 32.9 +1.1
PATCX Punta Patache 155.12 141 IAMs_20 IAMs_20 04 04 38.9
comp=Z,13µm,21.0s
PIZC Pizarro, Choco 155.26 74↑ *e*P PKPdf 02 51 32.9 +1.5
TA01 Diego Aracena 155.29 140 IAMs_20 IAMs_20 03 50 45.4
comp=Z,11µm,22.0s
CPUP Villa Florida 155.37 172 PKP PKPdf 02 51 31.9 +0.7
comp=Z,29nm,1.1s,baz=153,slow=1.1,SNR=19
CPUP Villa Florida 155.37 172 PKPdf 02 51 31.2 -0.1
CPUP Villa Florida 155.37 172 *e*P PKPdf 02 51 32.3 +1.0

PB01	**IPOC Station P**	**155.37**	**142**	IAMs_20	IAMs_20	04 03 40.4		
	comp=Z,12µm,22.0s							
SJCC	**San Jacinto, C**	**155.50**	**61**⇑	*e*P	**PKPdf**	**02 51 31.8**	**-0.1**	
MALC	**Bahia Malaga**	**155.52**	**76**	*e*P	**PKPdf**	**02 51 32.6**	**+0.8**	
MOTC	**Monteria, Cord**	**155.55**	**64**⇑	*e*P	**PKPdf**	**02 51 30.9**	**-1.0**	
SMRC	**Santa Marta, M**	**155.71**	**57**⇑	*e*P	**PKPdf**	**02 51 31.8**	**-0.2**	
DBBC	**Dabeiba**	**155.72**	**69**⇑	*e*P	**PKPdf**	**02 51 32.7**	**+0.5**	
GCUF	**Volcan Galeras**	**156.00**	**83**⇑	*e*P	**PKPdf**	**02 51 33.8**	**+0.6**	
UREC	**San Jos de Ur**	**156.08**	**66**⇑	*e*P	**PKPdf**	**02 51 32.6**	**0.0**	
CRPR	**Cabo Rojo, PR**	**156.18**	**34**		**PKPdf**	**02 51 31.9**	**-0.6**	
PB08	**IPOC Station P**	**156.25**	**141**	IAMs_20	IAMs_20	03 51 17.8		
	comp=Z,17µm,22.0s							
CBOC	**Ciudad Bolivar**	**156.29**	**71**⇑	*i*P	**PKPdf**	**02 51 33.6**	**+0.5**	
PLMC	**San Jos del P**	**156.31**	**74**⇑	*e*P	**PKPdf**	**02 51 32.9**	**0.0**	
ARGC	**Ariguani, Magd**	**156.33**	**60**⇑	*i*P	**PKPdf**	**02 51 33.8**	**+0.9**	
POPC	**Popayan, Colom**	**156.46**	**79**⇑	*e*P	**PKPdf**	**02 51 32.9**	**-0.4**	
YOTC	**Yotoco, Valle**	**156.49**	**76**⇑	*e*P	**PKPdf**	**02 51 32.6**	**-0.7**	
SOTA	**Rioblanco**	**156.60**	**80**	*e*P	**PKPdf**	**02 51 34.7**	**+0.8**	
SJG	**San Juan**	**156.61**	**32**	PKP	**PKPdf**	**02 51 32.8**	**-0.3**	
	comp=Z,48nm,0.6s,baz=4.4,slow=2.4,SNR=20							
SJG				PKPab	**PKPab**	**02 52 02.9**	**+0.9**	
	comp=Z,79nm,0.7s,baz=248,slow=5.5,SNR=7.3							
SJG	**San Juan**	**156.61**	**32**	*e*P	**PKPdf**	**02 51 32.5**	**-0.5**	
SJG	**San Juan**	**156.61**	**32**	PKIKP	**PKPdf**	**02 51 33.1**	**0.0**	
SJG	**San Juan**	**156.61**	**32**		**PKPdf**	**02 51 33.1**	**0.0**	
SJG	**San Juan**	**156.61**	**32**	IAMs_20	IAMs_20	04 13 41.7		
	comp=Z,11µm,22.0s							
HELC	**Santa Helena**	**156.64**	**70**⇑	*e*P	**PKPdf**	**02 51 33.2**	**-0.6**	
MNMC	**Minye Minye**	**156.70**	**139**		**PKPdf**	**02 51 34.2**	**+0.6**	
MNMC				IAMs_20	IAMs_20	03 53 15.9		
	comp=Z,13µm,22.0s							
AP01	**Chacalluta**	**156.72**	**136**	IAMs_20	IAMs_20	03 50 45.7		
	comp=Z,12µm,21.0s							
PCON	**Cinco Dias**	**156.77**	**80**⇑	*e*P	**PKPdf**	**02 51 34.1**	**-0.1**	
PUAC	**Puerto Asis, P**	**156.85**	**84**⇑	*e*P	**PKPdf**	**02 51 33.3**	**-0.3**	
MARP	**Paez Belalcaza**	**157.11**	**78**⇑	*e*P	**PKPdf**	**02 51 34.2**	**0.0**	
PTGB	**Pitanga**	**157.21**	**183**	*e*P	**PKPdf**	**02 51 34.6**	**+0.8**	
RREF	**El Recreo**	**157.21**	**73**⇑	*e*P	**PKPdf**	**02 51 31.4**	**-3.4**	
URIC	**Uribia, Colomb**	**157.25**	**53**	*e*P	**PKPdf**	**02 51 34.0**	**0.0**	
ANIL	**Santa Ana**	**157.27**	**74**⇑	*i*P	**PKPdf**	**02 51 34.9**	**+0.4**	
TOLC	**Tolima**	**157.32**	**74**⇑	*e*P	**PKPdf**	**02 51 34.3**	**-0.3**	
NORC	**Norcasia**	**157.46**	**71**⇑	*e*P	**PKPdf**	**02 51 33.0**	**-1.4**	
PTBC	**PUERTO BERRIO**	**157.52**	**68**⇑	*e*P	**PKPdf**	**02 51 32.9**	**-1.5**	
ORTC	**Ortega, Tolima**	**157.57**	**75**⇑	*e*P	**PKPdf**	**02 51 34.8**	**+0.3**	
SPB	**Sao Paulo**	**157.58**	**195**	IAMs_20	IAMs_20	03 59 38.9		
	comp=Z,17µm,22.0s							
FLOC	**Florencia**	**157.63**	**81**⇑	*e*P	**PKPdf**	**02 51 34.9**	**+0.3**	
BETC	**Betania**	**157.65**	**78**⇑	*e*P	**PKPdf**	**02 51 35.3**	**+0.6**	
GARC	**Garzon, Huila**	**157.69**	**80**⇑	*e*P	**PKPdf**	**02 51 35.1**	**+0.2**	
OCAC	**Ocana**	**157.88**	**63**⇑	*e*P	**PKPdf**	**02 51 34.5**	**-0.5**	
PRAC	**Prado**	**157.96**	**76**⇑	*e*P	**PKPdf**	**02 51 35.3**	**+0.2**	
BRRC	**Barranca, Sant**	**158.00**	**66**⇑	*e*P	**PKPdf**	**02 51 35.0**	**+0.1**	
VAO	**Valinhos**	**158.01**	**196**	*e*P	**PKPdf**	**02 51 37.5**	**+2.6**	
SPBC	**San Pablo de B**	**158.19**	**70**⇑	*e*P	**PKPdf**	**02 51 35.4**	**0.0**	
ROSC	**El Rosal**	**158.20**	**72**	PKP	**PKPdf**	**02 51 36.4**	**+0.6**	
	comp=Z,72nm,0.6s,baz=127,slow=2.0,SNR=34							
CTAB	**Cerro Tablazo,**	**158.26**	**72**⇑	*e*P	**PKPdf**	**02 51 38.1**	**+2.2**	
FRTB	**Fartura**	**158.27**	**190**	*e*P	**PKPdf**	**02 51 37.0**	**+1.9**	
CVER	**Cruz Verde, Cu**	**158.53**	**73**	*e*P	**PKPdf**	**02 51 38.0**	**+1.7**	
PTLC	**Puerto Leguiza**	**158.65**	**85**⇑	*e*P	**PKPdf**	**02 51 35.3**	**-0.6**	
SEUS	**St. Eustatius**	**158.66**	**25**	*e*P	**PKPdf**	**02 51 34.8**	**-0.8**	
BARC	**Barichara**	**158.68**	**67**	*e*P	**PKPdf**	**02 51 35.6**	**-0.5**	
PAMC	**Pamplona, Colo**	**158.82**	**64**⇑	*e*P	**PKPdf**	**02 51 36.3**	**-0.3**	
CHIC	**Chingaza**	**158.82**	**72**⇑	*e*P	**PKPdf**	**02 51 37.1**	**+0.6**	
SKI	**Saint Kitts**	**158.90**	**25**	*e*P	**PKPdf**	**02 51 34.2**	**-1.7**	
SKI	**Saint Kitts**	**158.90**	**25**	*e*P	**PKPdf**	**02 51 37.2**	**+1.2**	
SKOC	**St. Kitts, UWI**	**158.94**	**25**	*e*P	**PKPdf**	**02 51 40.1**	**+4.2**	
RUSC	**La Rusia**	**159.03**	**28**	*e*P	**PKPdf**	**02 51 36.7**	**-0.4**	
BSCB	**Bom Sucesso**	**159.12**	**204**	*e*P	**PKPdf**	**02 51 39.2**	**+2.9**	
TRCB	**Terra Rica**	**159.15**	**182**	*e*P	**PKPdf**	**02 51 37.3**	**+1.1**	
MACC	**Macarena, Meta**	**159.31**	**79**⇑	*e*P	**PKPdf**	**02 51 36.4**	**-0.2**	
SJMB	**Sao Joao De Ma**	**159.32**	**215**	*e*P	**PKPdf**	**02 51 36.5**	**+0.1**	
ANBD	**Bethesda, Anti**	**159.56**	**23**	*e*P	**PKPdf**	**02 51 34.5**	**-2.2**	
MLYT	**Lee's Yard**	**159.68**	**25**	*e*P	**PKPdf**	**02 51 36.5**	**-0.4**	
LPAZ	**La Paz**	**159.68**	**136**	PKP	**PKPdf**	**02 51 38.7**	**+1.0**	
	comp=Z,66nm,0.9s,baz=8.4,slow=1.0,SNR=71							
LPAZ				PKPab	**PKPab**	**02 52 17.7**	**+1.5**	
	comp=Z,245nm,1.2s,baz=316,slow=2.6,SNR=5.8							
LPAZ	**La Paz**	**159.68**	**136**⇑	*e*P	**PKPdf**	**02 51 39.2**	**+1.6**	
LPAZ	**La Paz**	**159.68**	**136**	PKIKP	**PKPdf**	**02 51 38.1**	**+0.4**	
LPAZ	**La Paz**	**159.68**	**136**		**PKPdf**	**02 51 38.1**	**+0.4**	
LPAZ	**La Paz**	**159.68**	**136**	*e*P	**PKPdf**	**02 51 38.7**	**+1.0**	
SDV	**Santo Domingo**	**159.91**	**58**	PKP	**PKPdf**	**02 51 37.4**	**-0.1**	
	comp=Z,79nm,0.7s,baz=180,slow=1.2,SNR=75							
SDV				PP	**PP**	**02 56 00.8**	**+2.4**	
	comp=Z,32nm,1.0s,baz=318,slow=5.0,SNR=3.2							
SDV	**Santo Domingo**	**159.91**	**58**⇑	*e*P	**PKPdf**	**02 51 36.8**	**-0.7**	
SDV	**Santo Domingo**	**159.91**	**58**	*e*P	**PKPdf**	**02 51 37.5**	**0.0**	
TAMC	**Tame, Arauca**	**160.01**	**66**	*e*P	**PKPdf**	**02 51 36.8**	**-0.6**	
CZSB	**Cruzeiro do Su**	**160.03**	**108**	*e*P	**PKPdf**	**02 51 38.2**	**+0.8**	
ABD	**La Joyeuse, An**	**160.19**	**23**	*e*P	**PKPdf**	**02 51 34.5**	**-3.0**	
PCMB	**Pacaembu**	**160.22**	**186**	*e*P	**PKPdf**	**02 51 37.7**	**+0.3**	
BB19B	**Bebedouro**	**160.27**	**194**	*e*P	**PKPdf**	**02 51 38.0**	**+0.5**	
GUVC	**San Jose del G**	**160.43**	**77**	*e*P	**PKPdf**	**02 51 37.3**	**-0.5**	
PTGC	**Puerto Gaitan,**	**160.47**	**72**⇑	*e*P	**PKPdf**	**02 51 36.0**	**-1.9**	
CBF	**Ff. Capester**	**160.50**	**24**	*e*P	**PKPdf**	**02 51 32.3**	**-5.6**	
TBG	**Guadeloupe-3**	**160.69**	**24**	*e*P	**PKPdf**	**02 51 36.3**	**-1.7**	
TDBA	**Terre de Bas,**	**160.69**	**24**	*e*P	**PKPdf**	**02 51 36.3**	**-1.7**	
MAGL	**Barre de l'ile**	**160.74**	**23**	*e*P	**PKPdf**	**02 51 36.5**	**-1.6**	
DSLB	**Salisbury**	**161.15**	**24**	*e*P	**PKPdf**	**02 51 37.1**	**-1.4**	
MDN	**Morne-Daniel**	**161.27**	**24**	*e*P	**PKPdf**	**02 51 37.0**	**-1.6**	
DRTD	**Roseau, Domini**	**161.29**	**24**	*e*P	**PKPdf**	**02 51 34.9**	**-3.8**	
AQDB	**Aquidauana**	**161.35**	**174**	*e*P	**PKPdf**	**02 51 39.6**	**+1.0**	
FDF	**Fort de France**	**161.90**	**24**	*e*P	**PKPdf**	**02 51 36.1**	**-3.2**	
RCBR	**Riachuelo**	**161.97**	**257**	PKP	**PKPdf**	**02 51 39.3**	**-0.2**	
	comp=Z,27nm,1.0s,baz=83,slow=3.4,SNR=13							
RCBR				PKPab	**PKPab**	**02 52 26.8**	**+1.1**	
	comp=Z,202nm,1.0s,baz=92,slow=4.1,SNR=11							
RCBR	**Riachuelo**	**161.97**	**257**	PKIKP	**PKPdf**	**02 51 40.2**	**+0.7**	
RCBR						02 52 26.8		
RCBR	**Riachuelo**	**161.97**	**257**		**PKPdf**	**02 51 40.2**	**+0.7**	
RCBR	**Riachuelo**	**161.97**	**257**	*e*P	**PKPdf**	**02 51 42.2**	**+2.7**	
ITRB	**Iturama**	**161.97**	**190**	*e*P	**PKPdf**	**02 51 40.8**	**+1.5**	
ILAM	**Ilet Lapin Mar**	**161.97**	**24**	*e*P	**PKPdf**	**02 51 36.5**	**-2.9**	
MPOM	**Morne Pois Mar**	**162.28**	**24**	*e*P	**PKPdf**	**02 51 37.2**	**-2.5**	
SLBI	**Saint Lucia, B**	**162.61**	**25**	*e*P	**PKPdf**	**02 51 38.1**	**-1.9**	
SLB	**Belfond**	**162.75**	**25**	*e*P	**PKPdf**	**02 51 38.1**	**-2.2**	
MCLT	**Moule a Chique**	**162.90**	**25**	*e*P	**PKPdf**	**02 51 38.8**	**-1.5**	
SFAN	**Fancy Village**	**163.09**	**26**	*e*P	PKPdf	02 51 51.2	+11	
IPMB	**Ipameri, GO**	**163.12**	**198**	*e*P	**PKPdf**	**02 51 40.8**	**+0.3**	
SVB	**Belmont**	**163.15**	**27**	*e*P	**PKPdf**	**02 51 38.7**	**-1.9**	
SVB	**Belmont**	**163.15**	**27**		**PKPdf**	**02 51 40.1**	**-0.5**	
SVB					**PKPab**	**02 52 30.8**	**+0.2**	
SVOC	**Richmond Hill,**	**163.27**	**27**	*e*P	**PKPdf**	**02 51 39.8**	**-0.9**	
PCRV	**Puerto La Cruz**	**163.74**	**43**	PKP	**PKPdf**	**02 51 40.6**	**-0.6**	
	comp=Z,8.3nm,0.7s,baz=7.7,slow=3.9,SNR=3.8							
PCRV				PKPab	**PKPab**	**02 52 33.3**	**0.0**	
	comp=Z,34nm,0.7s,baz=315,slow=2.9,SNR=5.6							
GCMP	**Grenada, Carri**	**163.76**	**29**	*e*P	**PKPdf**	**02 51 37.4**	**-3.7**	
GRSS	**Sisters**	**163.83**	**30**	*e*P	**PKPdf**	**02 51 39.8**	**-1.4**	
GRHS	**Sauteurs**	**163.88**	**30**	*e*P	**PKPdf**	**02 51 40.4**	**-0.8**	
GRGR	**Grenville**	**163.95**	**30**	*e*P	**PKPdf**	**02 51 38.1**	**-3.3**	
JANB	**Januaria**	**164.01**	**214**	*e*P	**PKPdf**	**02 51 43.7**	**+2.2**	
BBSP	**Saint Philip**	**164.04**	**21**	*e*P	**PKPdf**	**02 51 34.3**	**-7.1**	
SIV	**San Ignacio**	**164.09**	**153**	PKP	**PKPdf**	**02 51 41.9**	**+0.4**	
	comp=Z,40nm,0.7s,baz=198,slow=1.4,SNR=107							
SIV				PKPab	**PKPab**	**02 52 36.9**	**+2.3**	
	comp=Z,136nm,0.8s,baz=216,slow=5.1,SNR=13							
ETMB	**Extrema**	**165.11**	**123**	*e*P	**PKPdf**	**02 51 42.7**	**+0.3**	
TPR	**Prospect**	**165.20**	**29**	*e*P	**PKPdf**	**02 51 45.1**	**+2.6**	
BDFB	**Brasilia**	**165.24**	**201**	PKP	**PKPdf**	**02 51 42.6**	**0.0**	
	comp=Z,39nm,0.9s,baz=88,slow=1.4,SNR=32							
BDFB				PKPab	**PKPab**	**02 52 42.2**	**+2.4**	
	comp=Z,109nm,1.0s,baz=50,slow=3.8,SNR=6.8							
TRN	**Trinidad (W)**	**165.34**	**32**	*e*P	**PKPdf**	**02 51 43.9**	**+1.4**	
PTLB	**Pontes e Lacer**	**165.39**	**158**	*e*P	**PKPdf**	**02 51 43.2**	**+0.7**	
TPP	**Pointe-a-Pierr**	**165.59**	**33**	*e*P	**PKPdf**	**02 51 45.4**	**+2.6**	
ARAG	**Araguaiana, MT**	**166.11**	**187**	*e*P	**PKPdf**	**02 51 43.7**	**+0.5**	
NBMO	**Morrinhos-CE**	**166.44**	**264**	*e*P	**PKPdf**	**02 51 43.4**	**-0.1**	
SDBA	**SAO DESIDERIO**	**166.45**	**219**	*e*P	**PKPdf**	**02 51 43.9**	**+0.4**	
VILB	**Vilhena**	**167.13**	**149**	*e*P	**PKPdf**	**02 51 45.3**	**+1.3**	
SAML	**Samuel**	**168.08**	**127**	*e*P	**PKPdf**	**02 51 45.4**	**+0.7**	
SAML	**Samuel**	**168.08**	**127**	PKIKP	**PKPdf**	**02 51 44.1**	**-0.5**	
SAML	**Samuel**	**168.08**	**127**		**PKPdf**	**02 51 44.1**	**-0.5**	
SAML	**Samuel**	**168.08**	**127**	*e*P	**PKPdf**	**02 51 45.8**	**+1.1**	
SNDB	**Serra Nova Dou**	**169.68**	**192**	*e*P	**PKPdf**	**02 51 46.0**	**+0.4**	
SMTB	**Santa Maria do**	**170.85**	**220**	*e*P	**PKPdf**	**02 51 46.5**	**+0.1**	
MDP	**Montagnes des**	**173.05**	**353**	PKP	**PKPdf**	**02 51 46.8**	**-0.6**	
	comp=Z,22nm,0.8s,baz=357,slow=2.4,SNR=17							
MDP				PKPab	**PKPab**	**02 53 15.4**	**+1.2**	
	comp=Z,64nm,1.0s,baz=358,slow=4.6,SNR=7.2							
MDP				PP	**PP**	**02 57 07.9**	**+3.8**	
	comp=Z,78nm,1.2s,baz=24,slow=5.5,SNR=4.8							
NPGB	**Novo Progresso**	**174.51**	**161**	*e*P	**PKPdf**	**02 51 47.7**	**-0.2**	
TMAB	**Tom-Au,PA,Br**	**174.54**	**264**	*e*P	**PKPdf**	**02 51 48.2**	**+0.3**	

IDC ***15*** *02:34:55.1±1.5, 1.75N×126.14E, h0km, mb5.5/6, mb1 5.6/6, mb1mx5.0/57, mbtmp5.5/6, Error ellipse: s-maj=161.1km s-min=19.8km az=66.0*

NEIC ***15*** *02:34:59.8±2.4, 1.67N±0.10×126.30E±0.08, h45km±7km, mb5.9/33, Error ellipse: s-maj=15.5km s-min=10.4km az=209.0*

ISC 15 02:34:59.9±0.5, 1.65N±0.08×126.25E±0.09, h47km, n49, σ1s16/50, mb5.9/18, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.42**	**128**	Pn	**Pn**	**02 35 22.6**	**-0.6**
TNTI				Sn	**Sn**	**02 35 39.2**	**-1.5**
KAPI	**Kappang**	**9.27**	**224**	Pn	**Pn**	**02 37 12.2**	**+1.1**
SAUI	**Saumlaki**	**10.81**	**152**	Pn	**Pn**	**02 37 31.2**	**-0.9**
SOEI	**Soe**	**11.50**	**190**	Pn	**Pn**	**02 37 41.3**	**-0.4**
KNRA	**Kununurra**	**17.39**	**172**		**P**	**02 39 01.1**	**+1.0**
KNRA				IAmb	IAmb	02 39 07.6	
	comp=Z,955nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**02 39 25.1**	**+0.4**
WB0	**Warramunga Arr**	**22.73**	**160**	P	**P**	**02 39 59.4**	**+1.3**
WB0				IAmb	IAmb	02 40 00.6	
	comp=Z,380nm,0.8s						
COEN	**Coen**	**22.84**	**133**	P	**P**	**02 40 00.4**	**+1.1**
WRAB	**Tennant Creek**	**22.87**	**160**	P	**P**	**02 40 00.8**	**+1.2**
WRAB				IAmb	IAmb	02 40 06.7	
	comp=Z,843nm,1.2s						
WRA	**Warramunga Arr**	**22.88**	**160**	P	**P**	**02 40 00.6**	**+0.9**
	comp=Z,236nm,0.7s,baz=339,slow=11,SNR=4.7						
WB2	**Warramunga Arr**	**22.88**	**160**	P	**P**	**02 40 00.1**	**+0.4**
WB2				IAmb	IAmb	02 40 01.5	
	comp=Z,382nm,0.9s						
WR0	**Warramunga Arr**	**22.96**	**160**	P	**P**	**02 40 01.1**	**+0.6**
AS31	**Alice Springs**	**26.24**	**164**	P	**P**	**02 40 31.6**	**+0.9**
ASAR	**Alice Springs**	**26.24**	**164**	P	**P**	**02 40 34.3**	**+3.5**
	comp=Z,90nm,0.8s,baz=348,slow=12,SNR=3.0						
ASAR	**Alice Springs**	**26.24**	**164**	P	**P**	**02 40 32.0**	**+1.2**
GIRL	**Giralia**	**26.84**	**205**	P	**P**	**02 40 37.5**	**+1.4**
RPSI	**Rantau Prapat**	**27.33**	**273**	P	**P**	**02 40 38.4**	**-2.3**
GSI	**Gunungsitoli**	**28.67**	**270**	P	**P**	**02 40 50.6**	**-2.0**
GSI				IAmb	IAmb	02 40 56.9	
	comp=Z,353nm,0.8s						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**02 44 55.3**	**+0.5**
	comp=Z,23nm,0.6s,baz=120,slow=7.5,SNR=7.1						
MAKZ	**Makanchi**	**59.18**	**326**	P	**P**	**02 44 55.2**	**-0.9**
MAKZ				IAmb	IAmb	02 45 00.4	
	comp=Z,110nm,0.9s						
KDJ	**Kajisay**	**59.59**	**319**	P	**P**	**02 44 58.0**	**-1.2**
KDJ				IAmb	IAmb	02 45 02.6	
	comp=Z,117nm,1.2s						
BHW	**Baring Head**	**61.43**	**140**	P	**P**	**02 45 10.2**	**-1.4**
ZALV	**Zalesovo Beam**	**62.22**	**334**	P	**P**	**02 45 17.8**	**+1.2**
	comp=Z,10.0nm,0.6s,baz=140,slow=7.7,SNR=0.8						
KBL	**Kabul**	**62.42**	**308**	P	**P**	**02 45 18.4**	**-0.3**
KURBB	**Kurchatov Arra**	**63.23**	**328**	P	**P**	**02 45 25.8**	**+2.4**
	comp=Z,39nm,0.8s,baz=126,slow=6.8,SNR=5.5						
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**02 45 23.6**	**+0.1**
AKTO	**Aktyubinsk**	**74.99**	**322**	P	**P**	**02 46 36.4**	**+0.1**
	comp=Z,60nm,1.1s,baz=119,slow=13,SNR=3.5						
MLOA	**Mauna Loa Obse**	**78.30**	**71**	P	**P**	**02 46 56.7**	**+0.5**
MLOA				IAmb	IAmb	02 47 14.6	
	comp=Z,212nm,1.3s						
HMH	**Humu'ula Sheep**	**78.39**	**70**	P	**P**	**02 46 57.5**	**+1.0**
MLH	**Mauna Loa**	**78.48**	**71**	P	**P**	**02 46 58.3**	**+1.3**
MLH				IAmb	IAmb	02 47 08.9	
	comp=Z,118nm,1.0s						
MAW	**Mawson**	**81.65**	**200**	P	**P**	**02 47 12.3**	**-0.4**
TTA	**Tatalina**	**82.96**	**27**	P	**P**	**02 47 20.6**	**+0.8**
TTA				IAmb	IAmb	02 47 28.8	
	comp=Z,189nm,1.5s						
OHAK	**Old Harbor**	**83.45**	**33**	P	**P**	**02 47 22.1**	**-0.3**
GEVA	**Gevas**	**83.64**	**308**	P	**P**	**02 47 24.6**	**+0.7**
KDAK	**Kodiak Island**	**83.89**	**32**	P	**P**	**02 47 24.4**	**-0.1**
IMAR	**Indian Mountai**	**84.42**	**24**	P	**P**	**02 47 27.4**	**+0.3**
GLI	**Glacier Island**	**86.93**	**29**	P	**P**	**02 47 41.1**	**+1.4**
GLI				IAmb	IAmb	02 47 56.7	
	comp=Z,89nm,1.1s						
IL31		**87.17**	**25**	P	**P**	**02 47 42.0**	**+1.3**
ILAR	**Eielson Array**	**87.17**	**25**	P	**P**	**02 47 41.0**	**+0.1**
RAGM	**Ragged Mountai**	**88.12**	**30**	P	**P**	**02 47 46.1**	**+0.6**
SUCK	**Suckling Hills**	**88.57**	**30**	P	**P**	**02 47 46.7**	**-0.9**
VRDI	**Verde Repeater**	**88.71**	**29**	P	**P**	**02 47 47.8**	**-0.6**
BR131	**Keskin Array S**	**90.97**	**310**	P	**P**	**02 47 58.9**	**-0.5**
BR131				IAmb	IAmb	02 48 03.0	
	comp=Z,97nm,1.4s						
BRTR	**Keskin Array B**	**90.97**	**310**	P	**P**	**02 47 58.3**	**-1.1**
MDUB	**Mudurnu**	**92.79**	**310**	P	**P**	**02 48 06.3**	**-1.5**
C36M	**Paulatuk**	**95.32**	**20**	P	**P**	**02 48 19.2**	**+0.6**
MBAR	**Mbarara**	**95.53**	**270**	P	**P**	**02 48 20.1**	**-0.9**
MBAR				IAmb	IAmb	02 48 34.8	
	comp=Z,81nm,1.4s						
MLR	**Muntele Rosu**	**96.06**	**316**	P	**P**	**02 48 22.7**	**+0.1**
KHC	**Kasperske Hory**	**103.39**	**321**	*ex*	**Pdif**	**02 48 55.0**	**-0.3**

NEIC ***15*** *02:40:06.8±1.6, 0.57N±0.06×126.03E±0.07, h35km±2km, mb5.1/16, Error ellipse: s-maj=14.3km s-min=4.4km az=50.0*

IDC ***15*** *02:40:09.2±1.3, 1.79N×126.08E, h0km, mb4.7/6, mb1 4.8/6, mb1mx4.2/62, mbtmp4.7/6, Error ellipse: s-maj=132.1km s-min=19.7km az=67.0*

ISC 15 02:40:07.0±0.7, 0.6N±0.1×126.0E±0.1, h35km, n27, σ0s81/22, mb4.8/8, 1C-1D, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36**	**80**	Pn	**Pn**	**02 40 28.8**	**-0.6**
MMRI	**Maumere**	**9.87**	**202**	Pn	**Pn**	**02 42 26.4**	**-0.2**
KSM	**Kuching**	**15.74**	**273**	Pn	**Pn**	**02 43 45.2**	**-1.1**
KSM				IAmb	IAmb	02 43 59.1	
	comp=Z,203nm,1.2s						
WRA	**Warramunga Arr**	**21.93**	**159**	P	P	02 45 15.6	+18
	comp=Z,17nm,0.8s,baz=339,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**21.93**	**159**	P	**P**	**02 44 58.0**	**+0.4**
ASAR	**Alice Springs**	**25.25**	**163**	P	P	02 45 48.7	+19
	comp=Z,5.9nm,0.8s,baz=347,slow=13,SNR=2.2						
SONM	**Songino Array**	**50.09**	**343**	P	**P**	**02 48 57.8**	**-0.8**
	comp=Z,9.3nm,1.0s,baz=152,slow=7.5,SNR=4.5						
MK31	**Makanchi Array**	**59.78**	**327**	P	**P**	**02 50 08.9**	**+0.2**
MKAR	**Makanchi Array**	**59.78**	**327**	P	**P**	**02 50 09.1**	**+0.4**
	comp=Z,4.2nm,0.4s,baz=119,slow=7.3,SNR=12						
BKZ	**Black Stump Fm**	**60.73**	**137**	P	**P**	**02 50 15.8**	**+0.5**
BFZ	**Birch Farm**	**61.28**	**138**	P	**P**	**02 50 18.8**	**-0.2**
FRU1	**Bishkek**	**62.26**	**319**	P	**P**	**02 50 24.4**	**-1.3**
KBL	**Kabul**	**62.93**	**309**	P	**P**	**02 50 29.6**	**-0.8**
ZAA0	**Zalesovo Array**	**63.11**	**334**	P	**P**	**02 50 31.8**	**+0.8**
GAR	**Garm**	**63.58**	**314**	P	**P**	**02 50 34.3**	**-0.2**
BTK	**Batken**	**63.64**	**315**	P	**P**	**02 50 35.6**	**+0.7**
KURBB	**Kurchatov Arra**	**64.05**	**329**	P	**P**	**02 50 37.8**	**+0.5**
	comp=Z,6.5nm,0.6s,baz=128,slow=6.9,SNR=9.7						
KURK	**Kurchatov**	**64.05**	**329**	P	**P**	**02 50 37.8**	**+0.5**
KURK	**Kurchatov**	**64.05**	**329**	IAmb	IAmb	02 50 44.1	
	comp=Z,97nm,1.2s						
CHGR	**Chuyangaron**	**64.29**	**313**	P	**P**	**02 50 39.5**	**+0.3**
KK31	**Karatay Array**	**65.10**	**318**	P	**P**	**02 50 43.4**	**-0.9**
KKAR	**Karatay Array**	**65.10**	**318**	P	**P**	**02 50 44.0**	**-0.3**
KKAR				IAmb	IAmb	02 50 46.8	
	comp=Z,13nm,1.1s						
BRVK	**Borovoye**	**69.68**	**328**	P	**P**	**02 51 13.3**	**+0.3**
BRVK				IAmb	IAmb	02 51 21.2	
	comp=Z,23nm,1.1s						
KIWB	**Kanaga Island**	**69.70**	**34**	P	**P**	**02 51 13.2**	**0.0**
AKTO	**Aktyubinsk**	**75.72**	**322**	P	**P**	**02 51 51.1**	**+2.1**
	comp=Z,7.3nm,0.8s,baz=100,slow=7.0,SNR=3.4						
SYO	**Syowa Base**	**89.22**	**201**⇑	*i*X	P	02 53 05.2	+6.3
SYO	**Syowa Base**	**89.22**	**201**	*i*sP	sP	02 53 16.0	+2.8

PRU ***15*** *02:42:22.9±0.0, 47.88N×23.04E, h0km*

SIGU ***15*** *02:42:24.8±0.2, 48.1N±1.1×23.0E±0.6, h14km, mb2.3/9*

BUC ***15*** *02:42:26.4±0.6, 48.04N×23.10E, h5km, ml2.7/9, Error ellipse: s-maj=5.5km s-min=2.5km az=178.0*

KRSZO 15 02:42:25.2±0.8, 48.05N×23.00E, h12km±5km, 17C-19D, Error ellipse: s-maj=2.7km s-min=2.4km az=1.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRSU	**Trosnyk**	**0.05**	**330**⇑	*i*Pg	Pg	02 42 27.8	+0.3
TRSU				Pm		02 42 28.1	
TRSU				⇓*i*Sg	Sg	02 42 30.3	+1.1
TRSU				Sm		02 42 30.7	
TRSU				m		02 42 30.9	
TRSU	**Trosnyk**	**0.05**	**330**	Pg	Pg	02 42 27.8	+0.3
TRSU				x	x	02 42 28.1	
TRSU				Lg	Lg	02 42 30.3	
TRSU				x	x	02 42 30.7	
TRSU				x	x	02 42 30.9	
KORU	**Korolevo**	**0.14**	**40**⇓	*i*Pg	Pg	02 42 28.8	+0.2
KORU		

KWP				*e*Sn	Sb	02 43 14.8	0.0		
KECS	**Kecovo**	**1.73**	**285**	*e*Pn	Pn	02 42 55.3	+0.1		
KECS				*e*Sn	Sb	02 43 18.5	-0.2		
KECS	**Kecovo**	**1.73**	**285**	*e*PN	Pn	02 42 55.3	+0.1		
KECS				*e*SN	Sb	02 43 18.5	-0.2		
KECS				*e*LG	Lg	02 43 22.4			
CHRU	**Chernivtsi**	**1.97**	**82**	*e*Sn	Sb	02 43 24.6	-1.0		
CHRU	**Chernivtsi**	**1.97**	**82**	Sn	Sb	02 43 24.6	-1.0		
BSZH	**Besenyszg**	**1.99**	**249**	*e*Sn	Sn	02 43 24.5	+1.0		
SIRR	**Siria**	**2.00**	**208**	Pn	Pn	02 42 58.4	-0.5		
PSZ	**Piszkesteto**	**2.09**	**268**	*e*Pn	Pn	02 42 59.8	-0.3		
PSZ				*e*Lg	Lg	02 43 34.4			
NIE	**Niedzica**	**2.25**	**309**	*e*Pn	Pn	02 43 03.1	+0.8		
AMBH	**Ambrzfalva**	**2.30**	**223**	*e*Lg	Lg	02 43 41.3			
KMPD	**K-Podol'skiy**	**2.37**	**76**	*e*Pn	Pn	02 43 04.6	+0.7		
KMPD				*e*Sn	Sn	02 43 33.1	+0.3		
KMPD	**K-Podol'skiy**	**2.37**	**76**	Pn	Pn	02 43 04.6	+0.7		
KMPD				Sn	Sn	02 43 33.1	+0.3		
BIZ	**Bicaz**	**2.38**	**117**	ǁP	Pn	02 43 05.2	+1.1		
BIZ	**Bicaz**	**2.38**	**117**	ǁP	Pn	02 43 05.2	+1.1		
BIZ	**Bicaz**	**2.38**	**117**	Pn	Pn	02 43 05.2	+1.1		
BIZ				Pn	Pn	02 43 05.2	+1.1		
BIZ				Pn	Pn	02 43 05.2	+1.1		
HORU	**Horodok**	**2.56**	**62**	*e*Sn	Sn	02 43 39.8	+2.3		
HORU	**Horodok**	**2.56**	**62**	Sn	Sn	02 43 39.8	+2.3		
LANS	**Liptovska Anna**	**2.59**	**297**	*e*Pn	Pn	02 43 08.8	+1.8		
LANS	**Liptovska Anna**	**2.59**	**297**	*e*PN	Pn	02 43 08.8	+1.8		
BZS	**Buzias**	**2.61**	**202**	ǁP	Pn	02 43 09.6	+2.3		
BZS	**Buzias**	**2.61**	**202**	ǁP	Pn	02 43 09.6	+2.3		
BZS	**Buzias**	**2.61**	**202**	Pn	Pn	02 43 09.6	+2.3		
BZS				Pn	Pn	02 43 09.6	+2.3		
BZS				Pn	Pn	02 43 09.6	+2.3		
GZR	**Gura Zlata**	**2.66**	**183**	ǁP	Pb	02 43 11.1	-1.7		
GZR	**Gura Zlata**	**2.66**	**183**	ǁP	Pb	02 43 11.1	-1.7		
GZR	**Gura Zlata**	**2.66**	**183**	Pn	Pb	02 43 11.1	-1.7		
GZR				Pn	Pb	02 43 11.1	-1.7		
GZR				Pn	Pb	02 43 11.1	-1.7		
VYHS	**Vyhne**	**2.81**	**281**	*e*Pn	Pn	02 43 10.4	+0.3		
ARR	**Arges**	**2.91**	**157**	ǁP	Pn	02 43 13.2	+1.9		
ARR	**Arges**	**2.91**	**157**	ǁP	Pn	02 43 13.2	+1.9		
ARR	**Arges**	**2.91**	**157**	Pn	Pn	02 43 13.2	+1.9		
ARR				Pn	Pn	02 43 13.2	+1.9		
ARR				Pn	Pn	02 43 13.2	+1.9		
NDNU	**Novodnistrovsk**	**2.97**	**78**	*e*Pn	Pn	02 43 13.3	+1.2		
NDNU				*e*Sn	Sb	02 43 52.0	-2.2		
NDNU	**Novodnistrovsk**	**2.97**	**78**	Pn	Pn	02 43 13.3	+1.2		
NDNU				Sn	Sb	02 43 52.0	-2.2		
VOIR		**2.97**	**151**	ǁP	Pn	02 43 13.6	+1.3		
VOIR		**2.97**	**151**	ǁP	Pn	02 43 13.6	+1.3		
VOIR		**2.97**	**151**	Pn	Pn	02 43 13.6	+1.3		
VOIR				Pn	Pn	02 43 13.6	+1.3		
VOIR				Pn	Pn	02 43 13.6	+1.3		
HERR	**Herculane**	**3.19**	**187**	ǁP	Pn	02 43 17.8	+2.6		
HERR	**Herculane**	**3.19**	**187**	ǁP	Pn	02 43 17.8	+2.6		
HERR	**Herculane**	**3.19**	**187**	Pn	Pn	02 43 17.8	+2.6		
HERR				Pn	Pn	02 43 17.8	+2.6		
HERR				Pn	Pn	02 43 17.8	+2.6		
MORH	**Mrgy, Hungar**	**3.49**	**240**	*e*Pn	Pn	02 43 17.9	-1.4		
MORH				*e*Sn	Sn	02 43 58.0	-2.6		
MORC	**Moravsky Berou**	**3.99**	**298**	*e*PN	Pn	02 43 26.4	+0.2		
MORC				*e*SN	Sn	02 44 13.5	+0.5		
MORC	**Moravsky Berou**	**3.99**	**298**	Pn	Pn	02 43 26.4	+0.2		
MORC				Sn	Sn	02 44 13.5	+0.5		
VRAC	**Vranov**	**4.43**	**289**	*e*PN	Pn	02 43 32.8	+0.6		
VRAC				*e*SN	Sn	02 44 24.2	+0.6		
VRAC	**Vranov**	**4.43**	**289**	Pn	Pn	02 43 32.8	+0.6		
VRAC				Sn	Sn	02 44 24.2	+0.6		
KRUC	**Moravsky**	**4.50**	**285**	*e*PN	Pn	02 43 33.2	0.0		
KRUC				*e*SN	Sn	02 44 24.8	-0.7		
KRUC	**Moravsky**	**4.50**	**285**	Pn	Pn	02 43 33.2	0.0		
KRUC				Sn	Sn	02 44 24.8	-0.7		
KHC	**Kasperske Hory**	**6.34**	**283**	Pn	Pn	02 43 57.9	-0.6		
KHC				*e*Pn	Pn	02 43 57.9	-0.6		
KHC	**Kasperske Hory**	**6.34**	**283**	*e*PN	Pn	02 43 57.9	-0.6		

HEL 15 02:43:04.7, 60.82N×21.10E, h0km, ML1.6, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAF	**Rauma**	**0.38**	**57**	*e*P	Pg	02 43 11.3	-0.7
RAF				*e*S	Sg	02 43 16.9	0.0
AAL	**Aland**	**0.84**	**221**	*i* P	Pg	02 43 21.3	+0.4
AAL				*i* S	Sb	02 43 33.1	-1.0
GRAU	**Graesoe**	**1.36**	**250**	*e*P	Pg	02 43 30.5	-0.1
GRAU				*e*S	Sn	02 43 50.2	+0.7
FORU	**Forsmark**	**1.50**	**255**	*e*P	Pb	02 43 33.4	0.0
FORU				*e*S	Sn	02 43 55.0	+1.8
NRTU	**Norrtaelje**	**1.68**	**228**	*e*P	Pn	02 43 35.8	+0.5
MEF	**Metsahovi** baz=288	**1.74**	**109**	*e*PG	Pn	02 43 35.7	-0.3
MEF	comp=Z,5.2nm,0.2s			MSG		02 43 56.5	
MEF				*e*SN	Sn	02 43 58.6	-0.3
NUR	**Nurmijrvi**	**1.77**	**99**	*e*PN	Pn	02 43 36.5	-0.1
NUR				*e*SN	Sn	02 43 59.7	0.0
IGGU	**Iggoen**	**1.85**	**273**	*e*P	Pg	02 43 40.0	-0.2
KEF	**Keuruu**	**2.26**	**52**	*e*PB	Pn	02 43 44.5	+1.3
KEF	comp=Z,3.9nm,0.2s			MSG		02 44 11.6	
KEF				*e*SG	Sb	02 44 14.3	-0.4
VAF	**Ylistaro** baz=197	**2.35**	**18**	*e*PG	Pb	02 43 47.4	-0.5
VAF	comp=Z,1.1nm,0.2s			MSG		02 44 14.4	
VAF				*e*SG	Sb	02 44 18.5	+1.1
PVF	**Pernaja** baz=277	**2.36**	**95**	*e*PB	Pn	02 43 45.7	+1.1
PVF	comp=Z,5.2nm,0.2s			MSG		02 44 14.4	
PVF				*e*SG	Sb	02 44 16.0	-1.6
HEMU	**Hemsoen** baz=141	**2.37**	**323**	*e*PG	Pb	02 43 48.0	-0.2
FIA0	**FINESS Array S** baz=254	**2.49**	**73**	*e*PB	Pn	02 43 47.8	+1.3
FIA0				*e*SG	Sb	02 44 20.3	-1.2
MTSE	**Matsula**	**2.52**	**146**	*e*PG	Pb	02 43 50.1	-0.6
MTSE				*e*SB	Sb	02 44 20.4	-1.7
HUSU	**Husum** baz=162	**2.68**	**342**	*e*PB	Pb	02 43 52.2	-1.3
ARBE	**Arbavere**	**2.81**	**117**	*e*PG	Pg	02 43 57.3	-1.2
KAF	**Kangasniemi** baz=249	**2.81**	**60**	*e*PB	Pn	02 43 53.2	+2.3
KAF				*e*SB	Sb	02 44 28.5	-2.2

IDC 15 02:43:12.2±0.5, 1.70N×126.20E, h0km, mb4.6/17, mb1 4.7/18, mb1mx4.4/65, mbtmp4.6/18, ML4.5/1, Error ellipse: s-maj=31.5km s-min=11.5km az=73.0
DJA 15 02:43:15.9±1.4, 2.7N±3.3×12.6E±.1, h21km±12km, M5.0/15, mb4.8/5, MLv5.2/15
NEIC 15 02:43:16.8±1.6, 1.72N±0.07×126.28E±0.07, h35km±2km, mb5.1/11, Error ellipse: s-maj=13.8km s-min=9.7km az=52.0

ISC 15 02:43:18.2±0.5, 1.74N±0.05×126.33E±0.06, h47km, n53, σ1s25/53, mb4.6/18, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**133**	P	**Pn**	**02 43 40.9**	**-0.7**
TNTI				S	**Sn**	**02 43 59.5**	**+0.5**
TNTI	**Ternate**	**1.41**	**133**		**Pn**	**02 43 40.6**	**-1.0**
SGSI	**Sangihe**	**2.09**	**337**	P	**Pn**	**02 43 50.1**	**-0.8**
SGSI				S	**Sn**	**02 44 14.8**	**-0.9**
KMSI	**Cibinong**	**2.62**	**244**	P	**Pn**	**02 43 58.2**	**+0.1**
LBMI	**Labuha**	**2.64**	**154**	P	**Pn**	**02 43 56.5**	**-1.9**
GTOI	**Gorontalo**	**3.50**	**252**	P	**Pn**	**02 44 11.4**	**+1.2**
LUWI	**Luwuk**	**4.51**	**232**	P	**Pn**	**02 44 24.5**	**+0.4**
LUWI	**Luwuk**	**4.51**	**232**	Pn	**Pn**	**02 44 21.7**	**-2.3**
MRSI	**Marisa**	**4.57**	**254**	P	**Pn**	**02 44 24.5**	**-0.4**
NLAI	**Namlea**	**5.01**	**171**	P	**Pn**	**02 44 30.2**	**-0.7**
DAV	**Davao City (W)**	**5.34**	**352**	Pn	**Pn**	**02 44 32.7**	**-2.8**
APSI	**Ampana** 2.9nm217nm,0.6s	**5.38**	**241**	P	**Pn**	**02 44 36.0**	**0.0**
SIJI	**Sorong** 2.7nm,0.3s,baz=151,slow=19,SNR=3.4	**5.57**	**118**	Pn	**Pn**	**02 44 41.1**	**+2.4**
MSAI	**Masohi** 0.5nm30nm,1.5s	**5.68**	**153**	P	**Pn**	**02 44 38.4**	**-1.8**
AAI	**Ambon** 3.1nm188nm,1.1s	**5.71**	**161**	P	**Pn**	**02 44 39.4**	**-1.1**
SPSI	**Sidrap Palu**	**8.67**	**229**	P	**Pn**	**02 45 21.5**	**+0.3**
KAPI	**Kappang** 4.8nm,0.3s,baz=355,slow=7.9,SNR=6.1	**9.40**	**224**	Pn	**Pn**	**02 45 33.5**	**+2.4**
KAPI	**Kappang**	**9.40**	**224**		**Pn**	**02 45 30.8**	**-0.4**
SAUI	**Saumlaki**	**10.86**	**153**	Pn	**Pn**	**02 45 48.6**	**-2.5**
MMRI	**Maumere**	**11.09**	**202**	Pn	**Pn**	**02 45 53.0**	**-1.4**
SBUM	**Sibu**	**14.12**	**273**	Pn	**Pn**	**02 46 36.8**	**+1.1**
JAGI	**Jajag, Banyuwa**	**15.82**	**230**	Pn	**Pn**	**02 46 54.9**	**-3.2**
JAGI	comp=Z,120nm,0.9s			IAmb	IAmb	02 47 43.6	
FITZ	**Fitzroy Crossi** comp=Z,1.2nm,0.3s,baz=342,slow=5.3,SNR=7.7	**19.73**	**182**	P	**P**	**02 47 43.6**	**-0.5**
FITZ	**Fitzroy Crossi** comp=Z,162nm,1.4s	**19.73**	**182**	IAmb	IAmb	02 47 51.6	
CISI	**Cisompet, Garu**	**20.66**	**243**	P	**P**	**02 47 52.2**	**-2.1**
WRA	**Warramunga Arr** comp=Z,28nm,0.5s,baz=341,slow=11,SNR=28	**22.94**	**160**	P	**P**	**02 48 17.9**	**-0.8**
WB2	**Warramunga Arr**	**22.94**	**160**	P	**P**	**02 48 18.2**	**-0.5**
WR0	**Warramunga Arr**	**23.02**	**160**	P	**P**	**02 48 18.9**	**-0.6**
WR0	comp=Z,77nm,1.0s			IAmb	IAmb	02 48 29.0	
AS31	**Alice Springs**	**26.31**	**164**	P	**P**	**02 48 49.2**	**-0.5**
ASAR	**Alice Springs** comp=Z,13nm,0.6s,baz=344,slow=8.2,SNR=16	**26.31**	**164**	P	**P**	**02 48 48.7**	**-1.1**
NWAO	**Narrogin (SRO)** comp=Z,23nm,0.9s,baz=356,slow=13,SNR=4.9	**35.54**	**193**	P	**P**	**02 50 11.4**	**+0.4**
KSRS	**Korea Array** comp=Z,2.3nm,0.7s,baz=201,slow=6.4,SNR=1.7	**35.57**	**2**	P	**P**	**02 50 11.6**	**+0.5**
STKA	**Stephens Creek** comp=Z,23nm,0.8s,baz=337,slow=9.6,SNR=8.4	**36.44**	**158**	P	**P**	**02 50 19.1**	**+0.4**
USRK	**Ussuriysk Ar.** comp=Z,2.4nm,0.6s,baz=180,slow=6.7,SNR=3.0	**42.57**	**6**	P	**P**	**02 51 10.5**	**+0.9**
DZM	**Mont Dzumac** comp=Z,11nm,0.9s,baz=280,slow=16,SNR=4.6	**45.75**	**123**	P	**P**	**02 51 36.8**	**+1.4**
SONM	**Songino Array** comp=Z,1.8nm,0.7s,baz=175,slow=5.7,SNR=6.1	**49.05**	**342**	P	**P**	**02 52 01.1**	**+0.3**
MK31	**Makanchi Array**	**58.96**	**326**	P	**P**	**02 53 13.1**	**+0.1**
MKAR	**Makanchi Array** comp=Z,5.0nm,0.4s,baz=122,slow=7.4,SNR=24	**58.96**	**326**	P	**P**	**02 53 12.4**	**-0.5**
ZALV	**Zalesovo Beam** comp=Z,14nm,0.3s,baz=150,slow=6.6,SNR=3.9	**62.17**	**334**	P	**P**	**02 53 36.4**	**+1.7**
KURBB	**Kurchatov Arra** comp=Z,6.0nm,0.4s,baz=131,slow=7.0,SNR=12	**63.20**	**328**	P	**P**	**02 53 41.5**	**-0.1**
KURK	**Kurchatov**	**63.20**	**328**	P	**P**	**02 53 41.5**	**-0.1**
BVAR	**Borovoye Array** comp=Z,1.9nm,0.4s,baz=86,slow=8.5,SNR=10	**68.77**	**328**	P	**P**	**02 54 18.0**	**+0.7**
AKTO	**Aktyubinsk** comp=Z,5.7nm,0.7s,baz=104,slow=8.0,SNR=5.4	**74.97**	**322**	P	**P**	**02 54 53.9**	**-0.7**
VNDA	**Vanda** comp=Z,2.1nm,0.4s,baz=319,slow=7.1,SNR=10	**81.52**	**173**	P	**P**	**02 55 30.9**	**+0.7**
MAW	**Mawson** comp=Z,4.4nm,1.0s,baz=82,slow=7.1,SNR=3.8	**81.77**	**200**	P	**P**	**02 55 32.3**	**+0.6**
ILAR	**Eielson Array** comp=Z,3.3nm,1.1s,baz=269,slow=5.9,SNR=2.4	**87.06**	**25**	P	**P**	**02 56 00.0**	**+1.4**
MMAI	**Mount Meron Ar** comp=Z,0.9nm,0.5s,baz=75,slow=7.8,SNR=5.8	**89.84**	**303**	P	**P**	**02 56 13.9**	**+1.3**
SYO	**Syowa Base**	**90.44**	**201**	*i* pP	pP	02 56 23.8	-4.1
TOA0	**Torodi Ar. Sit**	**123.14**	**287**	PKPdf	**PKPdf**	**03 02 10.2**	**-0.6**
TORD	**Torodi Ar. Bea**	**123.14**	**287**	PKP	**PKiKP**	**03 02 11.1**	**0.0**
DBIC	**Dimo.Ko** comp=Z,7.2nm,1.0s,baz=352,slow=3.3,SNR=4.4	**130.57**	**280**	PKP	**PKiKP**	**03 02 26.0**	**+0.1**
ACON	**Acoyapa**	**145.86**	**66**		**PKPab**	**03 02 53.4**	**-0.7**
PB04	**IPOC Station P**	**154.01**	**143**		**PKiKP**	**03 03 14.6**	**+0.7**

IDC 15 02:44:26.8±1.3, 1.86N×126.29E, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.0/63, mbtmp4.3/6, Error ellipse: s-maj=147.9km s-min=19.8km az=67.0
NEIC 15 02:44:31.1±2.8, 1.8N±0.1×126.21E±0.05, h35km±2km, mb4.7/3, Error ellipse: s-maj=18.9km s-min=8.0km az=194.0

ISC 15 02:44:31.5±0.8, 1.80N±0.10×126.2E±0.1, h35km, n14, σ0s90/12, mb4.4/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.53**	**132**	Pn	**Pn**	**02 44 56.2**	**-0.2**
LUWI	**Luwuk**	**4.46**	**231**	Pn	**Pn**	**02 45 35.0**	**-1.6**
SAUI	**Saumlaki**	**10.96**	**153**	Pn	**Pn**	**02 47 05.1**	**-0.8**
MMRI	**Maumere**	**11.10**	**201**	Pn	**Pn**	**02 47 07.3**	**-0.5**
SOEI	**Soe**	**11.64**	**190**	Pn	**Pn**	**02 47 16.2**	**+0.8**
WRA	**Warramunga Arr** 6.2nm,0.8s,baz=339,slow=11,SNR=1.9	**23.02**	**160**	P	**P**	**02 49 33.6**	**-0.2**
ASAR	**Alice Springs** 1.7nm,0.5s,baz=345,slow=11,SNR=0.6	**26.39**	**164**	P	**P**	**02 50 06.2**	**+1.3**
MJB9	**Matsu-Tunnel**	**36.31**	**16**	P	**P**	**02 51 31.1**	**-0.8**
STKA	**Stephens Creek** 13nm,1.0s,baz=333,slow=14,SNR=1.6	**36.53**	**158**	P	**P**	**02 51 34.5**	**+0.7**
STKA	**Stephens Creek** comp=Z,13nm,1.4s	**36.53**	**158**	IAmb	IAmb	02 51 36.1	
SONM	**Songino Array** comp=Z,4.0nm,1.1s,baz=165,slow=7.4,SNR=2.3	**48.97**	**342**	P	**P**	**02 53 15.1**	**+0.4**
SONM	**Songino Array** comp=Z,7.5nm,1.2s	**48.97**	**342**	IAmb	IAmb	02 53 17.3	
MKAR	**Makanchi Array** comp=Z,1.3nm,0.4s,baz=122,slow=7.1,SNR=1.3	**58.86**	**326**	P	**P**	**02 54 27.1**	**+0.3**
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.3s,baz=124,slow=6.7,SNR=1.2	**63.09**	**328**	P	**P**	**02 54 55.7**	**+0.3**

IDC 15 02:46:39.8±0.7, 1.78N×126.29E, h0km, mb4.4/13, mb1 4.4/14, mb1mx4.1/61, mbtmp4.4/14, ML4.0/1, Error ellipse: s-maj=42.1km s-min=14.2km az=75.0
NEIC 15 02:46:45.0±1.2, 1.8N±0.1×126.4E±0.2, h35km±7km, mb4.7/5, Error ellipse: s-maj=35.7km s-min=14.0km az=61.0

ISC 15 02:46:45.9±0.7, 1.7N±0.1×126.4E±0.2, h47km, n20, σ0s78/18, mb4.4/15, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**136**		**Pn**	**02 47 07.3**	**-0.8**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=357,slow=10,SNR=2.5	**19.73**	**182**	P	**Pn**	**02 51 12.8**	**-0.8**
WRA	**Warramunga Arr** 3.4nm,0.3s,baz=338,slow=11,SNR=11	**22.89**	**161**	P	**P**	**02 51 46.0**	**+0.2**
WB2	**Warramunga Arr**	**22.90**	**161**	P	**P**	**02 51 47.1**	**+1.2**
WR0	**Warramunga Arr**	**22.98**	**160**	P	**P**	**02 51 48.0**	**+1.3**
WR0	comp=Z,52nm,1.5s			IAmb	IAmb	02 52 02.9	
ASAR	**Alice Springs** comp=Z,1.1nm,0.3s,baz=345,slow=12,SNR=5.3	**26.27**	**164**	P	**P**	**02 52 18.0**	**+0.9**
KSRS	**Korea Array** comp=Z,2.4nm,0.8s,baz=171,slow=12,SNR=6.7	**35.57**	**2**	P	**P**	**02 53 39.5**	**+0.7**
STKA	**Stephens Creek** comp=Z,8.0nm,1.0s,baz=341,slow=12,SNR=2.4	**36.39**	**158**	P	**P**	**02 53 46.3**	**+0.4**
STKA	**Stephens Creek** comp=Z,3.8nm,1.4s	**36.39**	**158**	IAmb	IAmb	02 53 49.5	
USRK	**Ussuriysk Ar.** comp=Z,2.8nm,0.8s,baz=205,slow=6.4,SNR=3.2	**42.57**	**6**	P	**P**	**02 54 36.4**	**-0.8**
SONM	**Songino Array** comp=Z,1.5nm,0.4s,baz=161,slow=8.3,SNR=7.6	**49.09**	**342**	P	**P**	**02 55 28.7**	**-0.1**
SONM	**Songino Array** comp=Z,3.5nm,1.0s	**49.09**	**342**	IAmb	IAmb	02 55 31.1	
PETK	**Petropavlovsk-** comp=Z,3.4nm,0.8s,baz=178,slow=5.1,SNR=6.3	**57.37**	**22**	P	**P**	**02 56 30.1**	**+0.7**
MK31	**Makanchi Array**	**59.03**	**326**	P	**P**	**02 56 41.4**	**+0.3**
MK31	comp=Z,9.5nm,1.4s			IAmb	IAmb	02 56 48.3	
MKAR	**Makanchi Array** comp=Z,3.6nm,0.4s,baz=120,slow=7.9,SNR=28	**59.03**	**326**	P	**P**	**02 56 40.9**	**-0.3**
ZALV	**Zalesovo Beam** comp=Z,0.9nm,0.3s,baz=125,slow=4.7,SNR=2.0	**62.23**	**334**	P	**P**	**02 57 01.7**	**-1.0**
KURBB	**Kurchatov Arra** comp=Z,3.3nm,0.4s,baz=130,slow=6.7,SNR=22	**63.26**	**328**	P	**P**	**02 57 09.2**	**-0.4**
BVAR	**Borovoye Array** comp=Z,1.0nm,0.4s,baz=93,slow=8.1,SNR=8.9	**68.83**	**327**	P	**P**	**02 57 45.0**	**-0.4**
AKTO	**Aktyubinsk** comp=Z,2.3nm,0.6s,baz=98,slow=11,SNR=6.2	**75.04**	**322**	P	**P**	**02 58 23.1**	**+0.5**
FINES	**FINESS Array B** comp=Z,5.4nm,1.0s,baz=54,slow=4.1,SNR=3.5	**93.44**	**332**	P	**P**	**02 59 55.5**	**-0.6**

IDC 15 02:48:07.0±2.1, 1.84N×126.25E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/61, mbtmp3.8/3, Error ellipse: s-maj=193.8km s-min=24.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 1.3nm,0.5s,baz=338,slow=11,SNR=2.6	**23.06**	**160**	P	P	02 53 13.3	-1.0
ASAR	**Alice Springs** 1.8nm,0.9s,baz=345,slow=6.7,SNR=2.3	**26.43**	**164**	P	P	02 53 46.5	+0.8
MKAR	**Makanchi Array** 0.4nm,0.3s,baz=121,slow=8.4,SNR=3.9	**58.83**	**326**	P	P	02 58 07.4	-0.1

IDC 15 02:49:07.3±0.6, 1.79N×126.32E, h0km, mb4.3/17, mb1 4.3/19, mb1mx4.2/62, mbtmp4.3/19, ML3.7/2, Error ellipse: s-maj=29.9km s-min=11.7km az=76.0
NEIC 15 02:49:12.8±1.4, 1.70N±0.03×126.33E±0.08, h40km±9km, mb4.7/16, Error ellipse: s-maj=11.3km s-min=4.4km az=85.0

ISC 15 02:49:13.3±0.5, 1.71N±0.07×126.36E±0.09, h47km, n42, σ1s21/41, mb4.3/20, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**133**		**Pn**	**02 49 34.8**	**-1.3**
LUWI	**Luwuk**	**4.51**	**233**	Pn	**Pn**	**02 50 19.8**	**+0.7**
DAV	**Davao City (W)**	**5.38**	**352**	Pn	**Pn**	**02 50 31.6**	**+0.5**
SIJI	**Sorong** 1.3nm,0.3s,baz=221,slow=19,SNR=2.5	**5.54**	**118**	Pn	**Pn**	**02 50 33.1**	**-0.2**
MYLDM	**Lahad Datu**	**8.56**	**294**	Pn	**Pn**	**02 51 13.9**	**-0.9**
KAPI	**Kappang** 1.2nm,0.3s,baz=51,slow=18,SNR=2.6	**9.39**	**225**	Pn	**Pn**	**02 51 28.4**	**+2.2**
BKB	**Balikpapan**	**9.91**	**253**	Pn	**Pn**	**02 51 31.1**	**-2.1**
SBUM	**Sibu**	**14.15**	**273**	Pn	**Pn**	**02 52 29.3**	**-1.8**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=34,slow=7.3,SNR=3.8	**19.70**	**182**	P	**Pn**	**02 53 40.8**	**+0.2**
WB0	**Warramunga Arr**	**22.76**	**160**	P	**P**	**02 54 12.0**	**+0.2**
WB0	comp=Z,20nm,0.8s			IAmb	IAmb	02 54 13.8	
WRA	**Warramunga Arr** comp=Z,7.0nm,0.4s,baz=338,slow=11,SNR=16	**22.90**	**160**	P	**P**	**02 54 12.4**	**-0.9**
WB2	**Warramunga Arr**	**22.91**	**160**	P	**P**	**02 54 13.9**	**+0.5**
WB2	comp=Z,23nm,1.0s			IAmb	IAmb	02 54 25.4	
AS31	**Alice Springs**	**26.27**	**164**	P	**P**	**02 54 44.5**	**0.0**
ASAR	**Alice Springs** comp=Z,3.7nm,0.4s,baz=348,slow=13,SNR=8.1	**26.27**	**164**	P	**P**	**02 54 45.6**	**+1.1**
NWAO	**Narrogin (SRO)** comp=Z,7.3nm,1.0s,baz=12,slow=14,SNR=3.4	**35.52**	**193**	P	**P**	**02 56 06.9**	**+1.1**
KS19	**Wonju Array Si**	**35.64**	**2**	P	**P**	**02 56 08.2**	**+1.3**
MJAR	**Matsushiro Arr** comp=Z,1.3nm,0.3s,baz=174,slow=9.4,SNR=4.6	**36.35**	**16**	P	**P**	**02 56 11.5**	**-1.4**
MJB9	**Matsu-Tunnel**	**36.35**	**16**	P	**P**	**02 56 13.0**	**+0.1**
STKA	**Stephens Creek** comp=Z,6.3nm,0.9s,baz=356,slow=7.4,SNR=5.2	**36.40**	**158**	P	**P**	**02 56 13.6**	**+0.1**
STKA	**Stephens Creek** comp=Z,22nm,1.9s	**36.40**	**158**	IAmb	IAmb	02 56 19.9	
USA0B	**Ussuriysk Arra**	**42.60**	**6**	P	**P**	**02 57 05.1**	**+0.3**
USA0B	comp=Z,65nm,1.9s			IAmb	IAmb	02 57 24.7	
USRK	**Ussuriysk Ar.** comp=Z,3.2nm,0.7s,baz=213,slow=7.3,SNR=6.1	**42.60**	**6**	P	**P**	**02 57 05.4**	**+0.6**
KLR	**Kul'dur** comp=Z,1.9nm,0.5s,baz=216,slow=5.3,SNR=4.7	**47.56**	**5**	P	**P**	**02 57 43.8**	**-0.4**
SONM	**Songino Array** comp=Z,1.2nm,0.6s,baz=148,slow=7.8,SNR=7.0	**49.09**	**342**	P	**P**	**02 57 56.7**	**+0.6**
PETK	**Petropavlovsk-** comp=Z,1.5nm,0.5s,baz=187,slow=3.4,SNR=7.4	**57.43**	**22**	P	**P**	**02 58 57.8**	**+0.7**
MK31	**Makanchi Array**	**59.00**	**326**	P	**P**	**02 59 08.1**	**-0.2**
MKAR	**Makanchi Array** comp=Z,2.4nm,0.4s,baz=121,slow=8.0,SNR=21	**59.00**	**326**	P	**P**	**02 59 08.3**	**0.0**
MAKZ	**Makanchi**	**59.18**	**326**	P	**P**	**02 59 10.2**	**+0.6**
ZALV	**Zalesovo Beam** comp=Z,0.7nm,0.3s,baz=142,slow=5.4,SNR=2.6	**62.21**	**334**	P	**P**	**02 59 29.7**	**-0.3**
KURBB	**Kurchatov Arra** comp=Z,2.2nm,0.5s,baz=130,slow=6.6,SNR=12	**63.23**	**328**	P	**P**	**02 59 36.8**	**-0.1**
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**02 59 37.2**	**+0.3**
KKAR	**Karatay Array**	**64.45**	**318**	P	**P**	**02 59 45.8**	**+0.7**
BVAR	**Borovoye Array** comp=Z,1.0nm,0.5s,baz=90,slow=9.6,SNR=6.0	**68.80**	**328**	P	**P**	**03 00 12.8**	**+0.2**
NRIK	**Noril'sk** comp=Z,3.3nm,0.7s,baz=113,slow=7.2,SNR=3.5	**72.29**	**346**	P	**P**	**03 00 33.4**	**-0.2**
ABKAR	**Akbulak array**	**73.47**	**321**	P	**P**	**03 00 41.2**	**+0.2**
**AK

BAKI	**Biak**	**10.07 107**	P	Pn	02 56 16.1	+8.5
KKM	**Kota Kinabalu**	**11.07 292**	Pn	**Pn**	**02 56 22.8**	**+1.4**
MMRI	**Maumere**	**11.25 202**	Pn	**Pn**	**02 56 24.2**	**+0.4**
SBUM	**Sibu**	**14.28 273**	Pn	**Pn**	**02 57 06.7**	**+1.6**
WB0	**Warramunga Arr**	**22.84 161**	P	**P**	**02 58 44.2**	**-0.6**
WB0	comp=Z,31nm,1.1s		IAmb	IAmb	02 58 54.6	
WRAB	**Tennant Creek**	**22.98 161**	P	**P**	**02 58 46.1**	**-0.2**
WRA	**Warramunga Arr**	**22.99 161**	P	**P**	**02 58 45.2**	**-1.1**
WRA	comp=Z,14nm,0.7s,baz=340,slow=11,SNR=15	PcP		**PcP**	**03 02 35.6**	**+0.5**
	comp=Z,1.9nm,0.8s,baz=320,slow=2.3,SNR=2.3					
WB2	**Warramunga Arr**	**22.99 161**	P	**P**	**02 58 46.4**	**+0.1**
WB2	comp=Z,27nm,0.9s		IAmb	IAmb	02 58 48.9	
WR0	**Warramunga Arr**	**23.07 160**	P	**P**	**02 58 47.4**	**+0.3**
AS31	**Alice Springs**	**26.37 165**	P	**P**	**02 59 18.0**	**+0.5**
ASAR	**Alice Springs**	**26.37 165**	P	**P**	**02 59 18.6**	**+1.1**
ASAR	comp=Z,2.7nm,0.7s,baz=345,slow=9.6,SNR=6.6	PcP		**PcP**	**03 02 42.5**	**0.0**
	comp=Z,2.2nm,0.7s,baz=0.3,slow=2.5,SNR=2.1					
KSRS	**Korea Array**	**35.45 2**	P	**P**	**03 00 37.4**	**+0.1**
	comp=Z,1.5nm,0.7s,baz=179,slow=10.0,SNR=2.6					
STKA	**Stephens Creek**	**36.48 158**	P	**P**	**03 00 44.6**	**-1.6**
	comp=Z,4.5nm,0.9s,baz=339,slow=10,SNR=4.2					
STKA	**Stephens Creek**	**36.48 158**	IAmb	IAmb	03 01 58.7	
	comp=Z,13nm,1.9s					
SHL	**Shillong**	**40.82 308**	P	**P**	**03 01 21.5**	**-1.5**
SHL	comp=Z,12nm,1.0s		IAmb	IAmb	03 01 22.6	
LSA	**Lhasa**	**43.52 313**	P	**P**	**03 01 45.1**	**-0.1**
SONM	**Songino Array**	**49.00 342**	P	**P**	**03 02 28.3**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=141,slow=5.0,SNR=3.6					
SONM	**Songino Array**	**49.00 342**	IAmb	IAmb	03 02 36.9	
	comp=Z,2.5nm,0.8s					
MK31	**Makanchi Array**	**58.96 326**	P	**P**	**03 03 41.1**	**+0.9**
MKAR	**Makanchi Array**	**58.96 326**	P	**P**	**03 03 39.6**	**-0.6**
	comp=Z,3.2nm,0.4s,baz=121,slow=7.0,SNR=17					
ZALV	**Zalesovo Beam**	**62.15 334**	P	**P**	**03 04 01.4**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=126,slow=4.5,SNR=3.2					
KURBB	**Kurchatov Arra**	**63.19 328**	P	**P**	**03 04 08.3**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=131,slow=5.9,SNR=9.0					
KURK	**Kurchatov**	**63.19 328**	P	**P**	**03 04 08.5**	**-0.3**
BVAR	**Borovoye Array**	**68.76 327**	P	**P**	**03 04 44.2**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=94,slow=9.4,SNR=5.5					
AKTO	**Aktyubinsk**	**74.98 322**	P	**P**	**03 05 21.9**	**0.0**
	comp=Z,1.6nm,0.5s,baz=115,slow=13,SNR=3.3					
VNDA	**Vanda**	**81.61 173**	P	**P**	**03 05 58.5**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=317,slow=7.7,SNR=11					
MAW	**Mawson**	**81.92 200**	P	**P**	**03 06 00.4**	**+0.7**
	comp=Z,2.0nm,0.7s,baz=99,slow=4.7,SNR=6.4					
FINES	**FINESS Array B**	**93.36 332**	P	**P**	**03 06 53.9**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=46,slow=4.2,SNR=3.8					

IDC 15 02:55:00.2±2.3, 1.73N×126.30E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.6/53, mbtmp3.9/4, Error ellipse: s-maj=254.1km s-min=24.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.93 160**		P	P	03 00 04.2	-1.9
	2.0nm,0.4s,baz=337,slow=11,SNR=1.8						
MKAR	**Makanchi Array**	**58.96 326**		P		03 05 00.9	-0.6
	0.6nm,0.5s,baz=134,slow=8.3,SNR=1.6						
KURBB	**Kurchatov Arra**	**63.19 328**		P		03 05 30.0	-0.1
	0.6nm,0.4s,baz=129,slow=6.2,SNR=3.2						
VNDA	**Vanda**	**81.51 173**		P		03 07 20.6	+1.5
	0.6nm,0.7s,baz=310,slow=3.4,SNR=1.9						

*IDC **15** 02:55:29.2±2.1, 1.93N×126.56E, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.7/54, mbtmp4.1/5, Error ellipse: s-maj=223.5km s-min=20.2km az=66.0*
*NEIC **15** 02:55:34.3±0.5, 2.0N±0.1×126.8E±0.3, h35km±2km, mb4.4/4, Error ellipse: s-maj=57.8km s-min=8.7km az=66.0*

ISC 15 02:55:34.3±0.9, 2.0N±0.2×126.8E±0.4, h35km, n10, σ0s46/10, mb4.1/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36 155**		Pn	**Pn**	**02 55 57.2**	**+0.4**
WRA	**Warramunga Arr**	**23.05 162**		P	**P**	**03 00 35.6**	**-1.0**
	4.2nm,0.5s,baz=340,slow=11,SNR=3.4						
AS31	**Alice Springs**	**26.45 165**		P	**P**	**03 01 08.2**	**+0.1**
AS31				IAmb	IAmb	03 01 29.1	
	comp=Z,2.5nm,0.6s						
ASAR	**Alice Springs**	**26.45 165**		P	**P**	**03 01 08.3**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=344,slow=11,SNR=2.4						
KSAR	**Wonju Array Be**	**35.27 2**		P	**P**	**03 02 25.7**	**0.0**
MJB9	**Matsu-Tunnel**	**35.94 16**		P	**P**	**03 02 31.5**	**0.0**
MK31	**Makanchi Array**	**58.99 326**		P	**P**	**03 05 30.9**	**+0.3**
MK31				IAmb	IAmb	03 06 18.1	
	comp=Z,16nm,2.0s						
MKAR	**Makanchi Array**	**58.99 326**		P	**P**	**03 05 30.2**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=120,slow=7.8,SNR=5.7						
KURBB	**Kurchatov Arra**	**63.21 328**		P	**P**	**03 05 58.9**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=125,slow=6.3,SNR=3.7						
AKTO	**Aktyubinsk**	**75.03 322**		P	**P**	**03 07 12.4**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=121,slow=5.9,SNR=3.3						

*IDC **15** 02:58:29.1±1.6, 1.83N×126.50E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/53, mbtmp3.8/5, ML3.1/1, Error ellipse: s-maj=122.3km s-min=19.6km az=69.0*
*NEIC **15** 02:58:33.0±1.0, 1.9N±0.1×126.43E±0.07, h35km±2km, mb4.3/7, Error ellipse: s-maj=24.1km s-min=10.3km az=199.0*

ISC 15 02:58:34.4±1.2, 1.8N±0.1×126.4E±0.1, h47km, n15, σ0s93/14, mb4.0/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.39 137**			**Pn**	**02 58 56.5**	**-0.8**
LUWI	**Luwuk**	**4.62 232**		Pn	**Pn**	**02 59 40.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**19.79 182**		P	**P**	**03 03 01.3**	**+0.4**
	0.0nm,0.3s,baz=0.0,slow=12,SNR=3.0						
FITZ	**Fitzroy Crossi**	**19.79 182**		IAmb	IAmb	03 03 10.3	
	comp=Z,21nm,1.6s						
WRAB	**Tennant Creek**	**22.96 161**		P	**P**	**03 03 35.8**	**+0.9**
WRA	**Warramunga Arr**	**22.96 161**		P	**P**	**03 03 35.7**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=340,slow=11,SNR=5.4						
WB2	**Warramunga Arr**	**22.97 161**		P	**P**	**03 03 35.2**	**+0.2**
ASAR	**Alice Springs**	**26.34 164**		P	**P**	**03 04 07.0**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=344,slow=7.8,SNR=3.3						
MK31	**Makanchi Array**	**58.97 326**		P	**P**	**03 08 29.3**	**+0.2**
MK31				IAmb	IAmb	03 10 32.9	
	comp=Z,4.1nm,1.2s						
MKAR	**Makanchi Array**	**58.97 326**		P	**P**	**03 08 30.6**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=123,slow=7.8,SNR=9.6						
MKAR	**Makanchi Array**	**58.97 326**		P	**P**	**03 08 28.7**	**-0.4**
ZAA0	**Zalesovo Array**	**62.16 334**		P	**P**	**03 08 49.8**	**-0.9**
ZALV	**Zalesovo Beam**	**62.16 334**		P	**P**	**03 08 49.7**	**-1.0**
KURBB	**Kurchatov Arra**	**63.20 328**		P	**P**	**03 08 59.0**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=130,slow=6.5,SNR=5.8						
KURK	**Kurchatov**	**63.20 328**		P	**P**	**03 08 57.6**	**-0.1**

*NEIC **15** 03:00:59.1±1.1, 60.73N±0.02×151.07W±0.02, h14km±4km, Error ellipse: s-maj=3.1km s-min=0.9km az=205.0*

AEIC 15 03:01:00±2.3, 60.76N±0.01×151.07W±0.05, h20km±6km, ML2.5, Error ellipse: s-maj=3.4km s-min=1.6km az=88.0, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPN	**Captain Cook N**	**0.04 286**			Pb	03 01 05.2	+1.6
SLKM	**Skilak Lake**	**0.49 120**			Pb	03 01 08.8	-1.2
SPCG	**Spurr Capps Gl**	**0.71 320**			Pb	03 01 13.2	-0.5
SPCG					Sb	03 01 23.2	+0.1
SPCR	**Spurr Chakacha**	**0.71 309**			Pb	03 01 13.0	-0.7
SPCR					Sb	03 01 22.9	-0.2
SPCN	**Chakachatna No**	**0.72 311**			Pb	03 01 13.6	-0.2
O22K	**Cooper Landing**	**0.72 112**			Pb	03 01 12.7	-1.2
O22K					Sb	03 01 23.2	-0.1
SUA	**Susitna One**	**0.73 12**			Pb	03 01 13.2	-0.9
SUA					Sb	03 01 23.3	-0.3
RC01	**Rabbit Creek A**	**0.73 62**			Pb	03 01 12.5	-1.5
RC01					Sb	03 01 23.3	-0.4
SPCP	**Crater Peak Br**	**0.73 315**			Pb	03 01 13.9	-0.3
SPCP					Sb	03 01 24.1	+0.2
SPBG	**Spurr Blockage**	**0.81 309**			Pb	03 01 14.9	-0.5
DFR	**Drift River**	**0.81 259**			Pb	03 01 14.8	-0.7
DFR					Sb	03 01 26.1	+0.1
BGL	**Barrier Glacie**	**0.82 309**			Pb	03 01 15.1	-0.5
STLK	**Strandline Lak**	**0.83 334**			Pb	03 01 15.0	-0.8
RSO	**Redoubt South**	**0.88 251**			Pb	03 01 16.2	-0.5
RDWB	**Redoubt West**	**0.91 254**			Pb	03 01 16.4	-0.8
RDWB					Sb	03 01 28.8	-0.2
NCT	**North Crescent**	**0.94 259**			Pb	03 01 16.7	-0.9
NCT					Sb	03 01 29.4	-0.2
SPNN	**North Nagishla**	**1.00 308**			Pb	03 01 18.1	-0.7
SPNN					Sb	03 01 31.6	+0.1
BRLK	**Bradley Lake**	**1.00 175**			Pb	03 01 17.6	-1.1
BRLK					Sb	03 01 30.8	-0.5
BRSE	**Bradley Lake S**	**1.03 171**			Pb	03 01 17.8	-1.3
SEW	**Seward**	**1.04 128**			Pb	03 01 17.8	-1.4
HOM	**Homer**	**1.14 195**			Pn	03 01 20.4	-0.4
HOM					Sn	03 01 35.7	0.0
IVE	**Iliamna Volcan**	**1.22 233**			Pn	03 01 21.5	-0.4
CNPM	**China Poot**	**1.24 184**			Pn	03 01 21.2	-1.0
CNPM					Sb	03 01 37.6	-0.6
SKT	**Skwentna**	**1.25 350**			Pn	03 01 21.8	-0.5
PMR	**Palmer**	**1.26 47**			Pn	03 01 20.1	-2.3
ILS	**Iliamna Low So**	**1.28 232**			Pn	03 01 22.8	+0.1
PWL	**Port Wells**	**1.35 84**			Pn	03 01 23.5	-0.2
KNK	**Knik Glacier**	**1.43 61**			Pn	03 01 24.2	-0.6
GHO	**Glory Hole Cre**	**1.46 45**			Pn	03 01 24.5	-0.7
SML	**Sawmill**	**1.69 50**			Pn	03 01 28.8	+0.3
CUT	**Chulitna**	**1.70 13**			Pn	03 01 27.6	-0.8
GLI	**Glacier Island**	**1.95 85**			Pn	03 01 31.6	-0.3
SCM	**Sheep Creek Mo**	**2.11 58**			Pn	03 01 34.7	+0.5
JPK	**Jack Peak**	**2.21 80**			Pn	03 01 35.0	-0.5
PPLA	**Purkeypile**	**2.21 347**			Pn	03 01 36.5	+0.8
SVW2	**Sparrevohn**	**2.23 281**			Pn	03 01 36.0	+0.2
FID	**Port Fidalgo**	**2.25 88**			Pn	03 01 34.8	-1.3
HIN	**Hinchinbrook I**	**2.29 97**			Pn	03 01 36.0	-0.6
HUR	**Hurricane**	**2.33 16**			Pn	03 01 38.5	+1.3
WAT7	**Susitna Watana**	**2.34 26**			Pn	03 01 38.8	+1.4
WAT1	**Susitna Watana**	**2.40 29**			Pn	03 01 39.1	+0.9
WAT6	**Susitna Watana**	**2.42 40**			Pn	03 01 39.9	+1.3
WAT2	**Susitna Watana**	**2.51 27**			Pn	03 01 40.8	+1.1
KLU	**Klutina**	**2.61 71**			Pn	03 01 41.3	+0.3
DIV	**Divide**	**2.61 79**			Pn	03 01 41.2	+0.1
EYAK	**Cordova Ski Ar**	**2.63 92**			Pn	03 01 41.1	-0.2
CAST	**Castle Rocks**	**2.71 350**			Pn	03 01 43.5	+1.0
M24K	**Tolsona, Glenn**	**2.71 58**			Pn	03 01 43.2	+0.8
TRF	**Thorofare Moun**	**2.73 7**			Pn	03 01 43.8	+1.1
KTH	**Kantishna Hill**	**2.81 1**			Pn	03 01 45.0	+1.3
RND	**Reindeer**	**2.86 20**			Pn	03 01 43.9	-0.5
DHY	**Denali Highway**	**2.91 35**		Pn	Pn	03 01 45.9	+0.6
RAGM	**Ragged Mountai**	**3.18 94**		Pn	Pn	03 01 48.2	-0.6
TTA	**Tatalina**	**3.20 315**		Pn	Pn	03 01 49.9	+0.7
N25K	**Chitina, Valde**	**3.25 72**		Pn	Pn	03 01 50.0	+0.1
BPAW	**Bear Paw Mtn.**	**3.36 1**		Pn	Pn	03 01 51.4	+0.2
PAX	**Paxson**	**3.46 48**		Pn	Pn	03 01 53.5	+0.7
GLB	**Gilahina Butte**	**3.59 76**		Pn	Pn	03 01 54.2	-0.3
VRDI	**Verde Repeater**	**3.74 79**		Pn	Pn	03 01 56.6	-0.1
IL31		**4.46 24**		Pn	Pn	03 02 07.4	+1.0
BCAR	**Beaver Creek A**	**4.96 58**			Pn	03 02 13.2	-0.1
PRP	**Porcupine Dome**	**5.40 25**		Pn	Pn	03 02 19.2	-0.2

SIGU 15 03:02:00.7±0.2, 48.7N±2.2×23.0E±0.4, h13km±1km, mb1.6/3, 2C-1D, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRSU	**Trosnyk**	**0.10**	**330**	↑*i*Pg	Pg	03 02 03.8	+0.2
TRSU				Pm		03 02 04.1	
TRSU				↓*i*Sg	Sg	03 02 06.3	+0.5
TRSU				Sm		03 02 06.8	
TRSU				m		03 02 07.0	
KORU	**Korolevo**	**0.16**	**25**	*e*Pg	Pg	03 02 04.9	+0.3
KORU				Pm		03 02 05.4	
KORU				*e*Sg	Sg	03 02 07.8	+0.6
KORU				Sm		03 02 08.4	
KORU				m		03 02 08.5	
BRIU	**Brid**	**0.33**	**359**	*e*Pg	Pb	03 02 08.1	-0.3
BERU	**Beregovo**	**0.34**	**311**	*e*Pg	Pg	03 02 08.0	+0.4
BERU				*e*Sg	Sb	03 02 13.3	-0.7
BMR	**Baia Mare**	**0.46**	**137**	↑↑P	Pn	03 02 15.9	+2.9
NSLU	**Nyzhne Selyshc**	**0.97**	**78**	*e*Pg	Pb	03 02 08.0	-11
NSLU				Pm		03 02 10.3	
NSLU				*e*Sg	Sb	03 02 13.7	-19
NSLU				Sm		03 02 14.6	
NSLU				m		03 02 15.1	
KOLS	**Kolonicke sedl**	**1.05**	**332**	*e*PG	Pn	03 02 22.1	+0.9
KOLS				*e*SG	Sn	03 02 36.7	+1.0
KECS	**Kecovo**	**1.77**	**287**	*e*SG	Sg	03 02 57.2	-0.3

IDC 15 03:05:35.4±1.9, 1.86N×126.47E, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.6/57, mbtmp4.0/4, Error ellipse: s-maj=175.6km s-min=22.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.00**	**161**	P	P	03 10 40.9	-1.3
	1.1nm,0.5s,baz=339,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**26.39**	**165**	P	P	03 11 15.0	+1.2
	3.8nm,1.2s,baz=344,slow=12,SNR=4.8						
MKAR	**Makanchi Array**	**58.94**	**326**	P	P	03 15 36.7	+0.1
	0.4nm,0.4s,baz=123,slow=7.8,SNR=6.1						
KURBB	**Kurchatov Arra**	**63.17**	**328**	P	P	03 16 04.8	-0.4
	1.4nm,0.2s,baz=132,slow=6.8,SNR=2.1						

*BJI **15** 03:07:59.2±0.0, 0.58S×124.26E, h88km, mB6.5/28, mb6.0/75, Ms5.7/17, Ms7 5.6/17*
*NEIC **15** 03:08:04.6±2.0, 0.15S±0.07×123.89E±0.06, h90km±3km, mb5.8/230, Mww5.9, Mwc5.9(GCMT), Error ellipse: s-maj=10.4km s-min=7.8km az=154.0*
*IDC **15** 03:08:04.4±0.8, 0.13S×123.85E, h88km±6km, mb5.5/50, mb1 5.4/52, mb1mx5.4/54, mbtmp5.8/52, Error ellipse: s-maj=8.7km s-min=6.2km az=76.0*
*GCMT **15** 03:08:05.8±0.3, 0.23S±0.02×123.99E±0.02, h86km±4km, MW5.9/72, Moment Tensor Solution. s9,c9; s72,c125; Duration: 2s2 Moment tensor: Scale 10^18Nm; Mrr=0.04±.05; Mθθ=0.40±.04; Mφφ=-0.35±.04; Mrθ=0.09±.03; Mθφ=0.80±.03; Mrφ=0.39±.03; Best double couple: M=0.96800×10^18 NP1:φs=102.00000°, δ66.00000°, λ=-2.00000° NP2:φs=193.00000°, δ89.00000°, λ=-156.00000°. Principal axes: T 0.9830, Plg16.0000°, Azm325.0000°; N -0.0300, Plg66.0000°, Azm196.0000°; P -0.9530, Plg18.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*DJA **15** 03:08:05.8±0.1, 0.5S±1.2×124.4E±.1°, h97km±1km, M6.3/102, mB6.5/47, mb5.9/102, MLv6.5/30, Mw(mB)6.3/47, Mwp5.1/1*
*MOS **15** 03:08:05.4±1.0, 0.18S×123.87E, h87km, mb6.2/76, Error ellipse: s-maj=7.0km s-min=4.3km az=114.2*
*KLM **15** 03:08:06.0, 0.22S×123.99E, h102km, mb6.1*
*NEIC **15** 03:08:06, 0.25S×124.01E, h91km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.10; Mθθ3.15; Mφφ-3.25; Mrθ0.98; Mθφ7.10; Mφr3.58; Fault plane solution: Mo8.63000×10^17 NP1:φs102.00000°, δ65.00000°, λ1.00000°. NP2:φs12.00000°, δ89.00000°, λ155.00000°. Principal axes: T 8.6731, Plg19.0000°, Azm324.0000°; N -0.0909, Plg65.0000°, Azm189.0000°; P -8.5822, Plg17.0000°, Azm60.0000°;*
*NEIC **15** 03:08:10, 0.16S×123.99E, h90km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr2.32; Mθθ0.43; Mφφ-2.76; Mrθ2.29; Mθφ7.89; Mφr1.86; Fault plane solution: Mo8.81000×10^17 NP1:φs3.00000°, δ72.00000°, λ161.00000°. NP2:φs99.00000°, δ72.00000°, λ19.00000°. Principal axes: T 8.3400, Plg26.0000°, Azm321.0000°; N 0.8722, Plg64.0000°, Azm141.0000°; P -9.2122, Plg0.0000°, Azm231.0000°;*

ISC 15 03:08:05.5±0.4, 0.19S±0.03×123.98E±0.03, h100km±2km, h100km; pP-P, n1170, σ1s59/1248, mb5.8/274, 102C-22D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.76**	**0**	P	**Pn**	**03 08 24.5**	**+1.0**
KMSI				S	**Sn**	**03 08 38.0**	**+1.0**

LUWI	**Luwuk**	**1.47 235**	P	**Pn**	**03 08 30.6**	**-0.8**
LUWI			S	**Sn**	**03 08 52.8**	**+1.8**
LUWI	**Luwuk**	**1.47 235**	Pn	**Pn**	**03 08 30.0**	**-1.4**
MNI	**Manado**	**1.84 28**	P	**Pn**	**03 08 38.3**	**+2.2**
MRSI	**Marisa**	**2.14 288**	P	**Pn**	**03 08 42.6**	**+2.7**
MRSI			S	**Sn**	**03 09 09.3**	**+3.0**
APSI	**Ampana**	**2.44 253**	P	**Pn**	**03 08 43.7**	**0.0**
APSI			S	**Sn**	**03 09 16.2**	**+3.1**
TNTI	**Ternate**	**3.52 74**	P	**Pn**	**03 08 57.4**	**-0.8**
TNTI			S	**Sn**	**03 09 37.9**	**-1.1**
TNTI	**Ternate**	**3.52 74**	Pn	**Pn**	**03 08 56.8**	**-1.4**
LBMI	**Labuha**	**3.55 97**	P	**Pn**	**03 08 57.4**	**-1.2**
LBMI			S	**Sn**	**03 09 33.9**	**-5.8**
MPSI	**Mapaga**	**4.11 277**	P	**Pn**	**03 09 08.2**	**+2.0**
MPSI			S	**Sn**	**03 09 57.3**	**+3.9**
SGSI	**Sangihe**	**4.15 22**	P	**Pn**	**03 09 08.8**	**+2.0**
NLAI	**Namlea**	**4.34 134**	P	**Pn**	**03 09 07.1**	**-2.3**
TTSI	**Tana Toraja**	**5.03 236**	P	**Pn**	**03 09 19.7**	**+1.1**
	80nm273µm21µm,0.8s					
AAI	**Ambon**	**5.46 130**	P	**Pn**	**03 09 23.1**	**-1.4**
	54nm77µm8µm,1.0s					
AAI	**Ambon**	**5.46 130**	P	**Pn**	**03 09 22.9**	**-1.6**
AAI			pmax	pmax		
	comp=Z,8µm,1.0s					
SPSI	**Sidrap Palu**	**5.63 228**	P	**Pn**	**03 09 26.5**	**-0.3**
	comp=Z,62nmcomp=Z,262µmcomp=Z,18µm,0.8s					
BNSI	**Bone**	**5.69 223**	P	**Pn**	**03 09 28.8**	**+1.2**
	comp=Z,26nmcomp=Z,85µmcomp=Z,9µm,1.3s					
MSAI	**Masohi**	**5.86 122**	P	**Pn**	**03 09 28.8**	**-1.0**
	comp=Z,18nmcomp=Z,30µmcomp=Z,4µm,1.1s					
KAPI	**Kappang**	**6.38 221**	P	**Pn**	**03 09 36.0**	**-1.1**
	comp=Z,828nm,0.3s,baz=52,slow=5.7,SNR=570					
KAPI			S	**Sn**	**03 10 46.5**	**-2.0**
	comp=Z,618nm,0.3s,baz=51,slow=21,SNR=10					
KAPI	**Kappang**	**6.38 221**	Pn	**Pn**	**03 09 35.4**	**-1.6**
SGKI	**Sangatta, Kali**	**6.38 267**	P	**Pn**	**03 09 40.2**	**+3.2**
	comp=Z,14nmcomp=Z,1µm,0.8s					
BKSI	**Bulukumba**	**6.38 217**	P	**Pn**	**03 09 36.2**	**-0.8**
	comp=Z,24nmcomp=Z,68µmcomp=Z,5µm,1.4s					
BSSI	**Bau Bau, Buton**	**6.86 210**	P	**Pn**	**03 09 43.6**	**+0.1**
	comp=Z,31nmcomp=Z,85µmcomp=Z,6µm,1.0s					
BKB	**Balikpapan**	**7.16 261**	P	**Pn**	**03 09 48.2**	**+0.6**
	comp=Z,9.2nmcomp=Z,32µmcomp=Z,2µm,1.1s					
BKB	**Balikpapan**	**7.16 261**	Pn	**Pn**	**03 09 47.0**	**-0.6**
BNDI	**Bandanaira**	**7.32 126**	P	**Pn**	**03 09 48.7**	**-1.0**
	comp=Z,39nmcomp=Z,88µmcomp=Z,10µm,1.1s					
SIJI	**Sorong**	**7.32 95**	P	**Pn**	**03 09 47.9**	**-1.8**
	comp=Z,93nm,0.3s,baz=292,slow=9.6,SNR=630					
SIJI			S	**Sn**	**03 11 06.2**	**-5.1**
	comp=Z,50nm,0.3s,baz=118,slow=19,SNR=14					
DAV	**Davao City (W)**	**7.39 12**	P	**Pn**	**03 09 54.8**	**+4.1**
	comp=Z,78nm,0.3s,baz=137,slow=2.2,SNR=19					
DAV			S	**Sn**	**03 11 17.7**	**+4.7**
	comp=Z,110nm,0.3s,baz=264,slow=18,SNR=1.0					
MYLDM	**Lahad Datu**	**7.64 314**	Pn	**Pn**	**03 09 57.2**	**+3.0**
KBKI	**Kotabaru**	**8.39 248**	P	**Pn**	**03 10 04.7**	**+0.3**
	comp=Z,13µmcomp=Z,1µm,1.5s					
MMRI	**Maumere**	**8.56 192**	P	**Pn**	**03 10 05.9**	**-0.8**
	comp=Z,967nm,0.7s					
MMRI	**Maumere**	**8.56 192**	Pn	**Pn**	**03 10 04.3**	**-2.4**
FAKI	**Fak Fak**	**8.70 108**	P	**Pn**	**03 10 04.5**	**-4.1**
FAKI	**Fak Fak**	**8.70 108**	Pn	Pn	03 10 03.7	-4.8
EDFI	**Ende, Flores**	**8.80 195**	P	**Pn**	**03 10 07.7**	**-2.3**
	comp=Z,1.1nmcomp=Z,187nm,0.9s					
SPMM	**Sapulut**	**8.95 303**	P	**Pn**	**03 10 16.0**	**+4.0**
MTKI	**Muara Teweh, K**	**9.11 265**	P	**Pn**	**03 10 15.6**	**+1.4**
	comp=Z,12µmcomp=Z,276nm,0.6s					
SOEI	**Soe**	**9.50 178**	P	**Pn**	**03 10 21.2**	**+1.6**
	comp=Z,35µmcomp=Z,1µm,1.3s					
SOEI	**Soe**	**9.50 178**	Pn	**Pn**	**03 10 19.6**	**0.0**
BBKI	**Banjar Baru**	**9.69 250**	P	**Pn**	**03 10 22.8**	**+0.7**
	comp=Z,493nm,0.9s					
KKM	**Kota Kinabalu**	**9.92 309**	Pn	**Pn**	**03 10 29.0**	**+3.7**
BATI	**Baumata**	**9.95 182**	P	**Pn**	**03 10 24.6**	**-1.1**
	comp=Z,4.6nm,0.3s,baz=135,slow=0.7,SNR=17					
BATI			S	**Sn**	**03 12 16.1**	**+0.6**
	comp=Z,9.7nm,0.3s,baz=198,slow=6.4,SNR=1.5					
BATI	**Baumata**	**9.95 182**	P	**Pn**	**03 10 27.0**	**+1.4**
	comp=Z,7µmcomp=Z,279nm,1.1s					
WBSI	**Waikabubak, Su**	**10.44 206**	P	**Pn**	**03 10 31.4**	**-0.8**
	comp=Z,11µmcomp=Z,1µm,1.0s					
BASI	**Baing, Sumba**	**10.52 199**	P	**Pn**	**03 10 34.3**	**+1.0**
	com

FITZ S Sn 03 15 15.3 -12
comp=Z,0.5nm,0.3s,baz=295,slow=17,SNR=1.3
FITZ ScP **ScP** **03 20 06.0 +0.6**
comp=Z,0.4nm,0.3s,baz=296,slow=2.7,SNR=5.1
FITZ Fitzroy Crossi 17.87 175 P **P** **03 12 05.1 -2.0**
baz=18,SNR=35
FITZ Fitzroy Crossi 17.87 175 P **P** **03 12 05.2 -1.8**
CBJI Citeko 18.18 250 P **Pn** **03 12 12.0 +0.5**
comp=Z,30µcomp=Z,2µm,0.9s
MMPI Merauke 18.29 117 P **Pn** **03 12 14.1 +1.2**
comp=Z,751nm,0.7s
DBJI Dramaga 18.31 249 P **Pn** **03 12 13.5 +0.3**
comp=Z,24µcomp=Z,704nm,1.6s
SKJI Sukabumi 18.65 248 P **Pn** **03 12 19.2 +2.1**
comp=Z,30µcomp=Z,1µm,1.8s
PMBI Palembang 19.39 262 P **Pn** **03 12 27.5 +1.7**
comp=Z,51µcomp=Z,1µm,0.9s
PMBI Palembang 19.39 262 P **P** **03 12 23.9 +0.1**
DSRI Dabo 19.40 269 P **P** **03 12 24.6 +0.7**
comp=Z,297nm,0.9s
TPRI Tanjung Pinang 19.48 273 P **Pn** **03 12 26.4 -0.6**
comp=Z,1µm,0.9s
DLV T Lat 19.55 309 **Pn** **03 12 29.3 +1.4**
DLV IAmb IAmb 03 12 30.0
comp=Z,994nm,1.0s
KLI Kotabumi 19.65 256 P **Pn** **03 12 28.3 -0.6**
comp=Z,412nm,0.9s
KLSI 19.74 257 P **Pn** **03 12 28.9 -1.0**
comp=Z,130nm,0.9s
KASI Kota Agung 20.16 254 P Pn 03 12 34.1 -0.7
comp=Z,379nm,0.9s
MYKOM Kota Tinggi 20.22 276 P Pn 03 12 35.0 -0.6
MDSI Maura Dua 20.23 258 P **P** **03 12 33.6 +0.7**
comp=Z,206nm,0.8s
LWLI Liwa 20.46 256 P Pn 03 12 40.6 +2.1
LHSI Lahat 20.75 260 P Pn 03 12 43.0 +1.2
XMIS Christmas Isla 20.89 240 P **P** **03 12 38.7 -1.3**
XMIS IAmb IAmb 03 12 40.4
comp=Z,808nm,1.1s
PSA00 Pilbara Seismi 21.63 190 P **P** **03 12 47.2 -0.6**
KSI Kapahiang 21.64 261 P **P** **03 12 51.6 +3.5**
comp=Z,16µcomp=Z,338nm,1.1s
MASI Maura Aman, Be 21.92 262 P **P** **03 12 54.6 +3.6**
comp=Z,16µcomp=Z,1µm,1.3s
WB0 Warramunga Arr 21.97 153 IAmb IAmb 03 12 55.7
comp=Z,558nm,1.1s
WRAB Tennant Creek 22.09 153*c i*P **P** **03 12 49.3 -3.4**
WRAB pmax pmax
comp=Z,486nm,1.1s
WRAB Tennant Creek 22.09 153 P **P** **03 12 50.1 -2.6**
WRAB IAmb IAmb 03 12 57.2
comp=Z,381nm,0.8s
WRA Warramunga Arr 22.09 153 P **P** **03 12 49.9 -2.8**
comp=Z,206nm,0.7s,baz=334,slow=10,SNR=141
WRA S **S** **03 16 40.7 -10**
comp=Z,13nm,1.0s,baz=339,slow=17,SNR=1.7
WRA ScP **ScP** **03 20 15.6 +0.2**
comp=Z,16nm,0.8s,baz=328,slow=2.3,SNR=5.7
WRA Warramunga Arr 22.09 153 IAmb IAmb 03 12 53.4
comp=Z,17nm,1.2s
WRA **ScP** **03 20 16.1 +0.7**
WB2 Warramunga Arr 22.10 153 P **P** **03 12 50.4 -2.4**
baz=22
WB2 Warramunga Arr 22.10 153 IAmb IAmb 03 12 57.2
comp=Z,386nm,0.8s
WR0 Warramunga Arr 22.20 153 IAmb IAmb 03 12 59.1
comp=Z,835nm,1.2s
SDSI Sungai Dareh 22.56 268 P **P** **03 12 57.3 -0.3**
comp=Z,228nm,1.7s
KRJI Kerinci 22.59 265 P **P** **03 12 59.5 +1.4**
comp=Z,31µcomp=Z,1µm,0.9s
BKNI Bangkinang 22.94 271 P **P** **03 13 02.3 +0.8**
comp=Z,507nm,0.9s
IPM Ipoh 23.40 282 P **P** **03 13 07.0 +1.2**
COEN Coen 23.41 127 P **P** **03 13 04.7 -1.1**
baz=23,SNR=58
COEN Coen 23.41 127 P **P** **03 13 04.8 -1.1**
MANU Manus Island 23.45 95 P **P** **03 13 05.8 -0.5**
MANU IAmb IAmb 03 13 09.1
comp=Z,348nm,0.9s
QIZ Qiongzhong 23.61 325 P **P** **03 13 07.4 -0.2**
QIZ S **S** **03 17 17.4 +2.7**
QIZ pmax pmax
comp=Z,130nm,1.3s
QIZ Qiongzhong 23.61 325 IAmb IAmb 03 13 10.2
comp=Z,513nm,1.0s
KULM Kulim 23.93 283 P **P** **03 13 10.0 -0.5**
KULM IAmb IAmb 03 13 36.0
comp=Z,277nm,1.2s
KULM Kulim 23.93 283 P **P** **03 13 11.0 +0.5**
SSLB Suanglung 24.02 353 IAmb IAmb 03 13 18.4
comp=Z,372nm,0.9s
GIRL Giralia 24.25 202 P **P** **03 13 13.3 0.0**
baz=24,SNR=9.3
HKPS Hong Kong Po S 24.31 337 IAmb IAmb 03 13 57.7
comp=Z,1µm,2.0s
MNSI Mandailing Nat 24.42 272 P **P** **03 13 16.5 +1.5**
comp=Z,198nm,1.4s
GUMO Guam 24.82 56 P **P** **03 13 17.6 -0.9**
comp=Z,993nm,0.8s,baz=196,slow=8.7,SNR=36
GUMO Guam 24.82 56 P **P** **03 13 19.0 +0.4**
GUMO pmax pmax
comp=Z,2µm,1.0s
GUMO Guam 24.82 56 P **P** **03 13 19.0 +0.4**
PMG Port Moresby 24.82 112 P **P** **03 13 18.4 -0.3**
comp=Z,525nm,0.8s,baz=313,slow=6.4,SNR=97
PMG Port Moresby 24.82 112*d i*P **P** **03 13 18.3 -0.3**
PMG pmax pmax
comp=Z,582nm,0.9s
PMG Port Moresby 24.82 112 P **P** **03 13 18.5 -0.1**
PMG IAmb IAmb 03 13 20.3
comp=Z,565nm,0.9s
SISI Saibi 24.91 267 P **P** **03 13 20.9 +1.4**
comp=Z,238nm,1.3s
WRKA Warakurna 25.05 171 P **P** **03 13 19.6 -1.0**
baz=25,SNR=160
TATO Taipei 25.14 355 P **P** **03 13 21.6 +0.3**
TATO IAmb IAmb 03 13 23.8
comp=Z,250nm,0.8s
RPSI Rantau Prapat 25.21 277 P **P** **03 13 21.8 -0.4**
PSI Prapat 25.22 277 P **P** **03 13 21.8 -0.6**
PSI pmax pmax
comp=Z,187nm,1.1s
ASAR Alice Springs 25.24 158 P **P** **03 13 21.4 -1.0**
comp=Z,197nm,0.6s,baz=343,slow=15,SNR=422
ASAR PP **PnPn** **03 14 00.6 -2.6**
comp=Z,171nm,0.9s,baz=324,slow=9.2,SNR=5.8
ASAR S **S** **03 17 42.8 +1.9**
comp=Z,18nm,1.1s,baz=349,slow=24,SNR=2.5
ASAR ScP **ScP** **03 20 24.6 +0.8**
comp=Z,20nm,1.0s,baz=342,slow=3.0,SNR=8.2
ASAR Alice Springs 25.24 158 ScP **ScP** **03 20 24.0 +0.2**
GZH Guangzhou 25.35 337 P **P** **03 13 28.6 +5.3**
QIS Mount Isa 25.36 144 P **P** **03 13 23.1 -0.3**
baz=25,SNR=290
TRTT Trang 25.49 289 P **P** **03 13 25.6 +0.9**
comp=Z,350nm,1.1s
QZH Quanzhou 25.53 349 P **P** **03 13 25.8 +0.9**
QZH pmax pmax
comp=Z,280nm,1.1s
TSI Tuntungan 25.66 278 P P 03 13 33.6 +7.3
SRAK Srakaew 25.90 304 P **P** **03 13 25.2 -3.2**
comp=Z,19µcomp=Z,3µm,0.8s
KRAB Krabi 26.07 289 P **P** **03 13 34.2 +4.2**
comp=Z,3µcomp=Z,165nm,0.9s
PATY Pattaya 26.36 300 P **P** **03 13 34.6 +2.0**
comp=Z,112nm,0.9s
GSI Gunungsitoli 26.44 273 P **P** **03 13 33.2 -0.1**
comp=Z,135nm,1.1s
GSI Gunungsitoli 26.44 273 IAmb IAmb 03 14 07.6
comp=Z,725nm,1.6s
KHON Khomkaen 26.56 309 P **P** **03 13 35.0 +0.7**
comp=Z,11µcomp=Z,1µm,0.9s
SURT Suratani 26.68 291 P **P** **03 13 39.9 +4.5**
comp=Z,56nmcomp=Z,7.2nm,1.1s
MTSU Mount Surprise 26.79 133 P **P** **03 13 36.2 -0.2**
baz=27,SNR=12
MEEK Meekatharra 26.79 191 P **P** **03 13 35.1 -1.3**
baz=27,SNR=35
CHAI Chaiyaphum 26.97 307 P **P** **03 13 38.8 +0.8**
comp=Z,7µcomp=Z,913nm,0.9s
TPTI 27.00 278 P **P** **03 13 38.6 +0.2**
comp=Z,44nm,1.6s
NONG Nongkai 27.37 313 P **P** **03 13 42.0 +0.5**
comp=Z,277nm,0.9s
PHET Kaeng Krachan 27.43 299 P **P** **03 13 43.0 +0.9**
comp=Z,3µcomp=Z,419nm,0.8s

LHMI Lhok Sumawe 27.53 282 P **P** **03 13 44.4 +1.4**
comp=Z,220nm,0.9s
LHMI Lhok Sumawe 27.53 282 IAmb IAmb 03 14 22.1
comp=Z,717nm,1.5s
KRVT Keravat (AS076 28.32 99 P **P** **03 13 50.9 +0.8**
comp=Z,2µm,0.9s,baz=121,slow=1.8,SNR=117
RABL Rabaul 28.44 98 P **P** **03 13 52.0 +0.8**
SRDT SRDT 28.53 301 P **P** **03 13 53.8 +1.8**
comp=Z,26µcomp=Z,173nm,1.0s
UTHA Uthaitani 28.85 304 P **P** **03 13 55.0 +0.3**
comp=Z,4µcomp=Z,533nm,1.0s
PHIT Phitsanulok 28.93 308 P **P** **03 13 56.8 +1.4**
comp=Z,12µcomp=Z,2µm,0.9s
SLVN Son La 29.02 319 IAmb IAmb 03 13 59.7
comp=Z,220nm,1.0s
UTTA Uttaradit 29.14 309 P **P** **03 13 58.4 +1.1**
comp=Z,3µcomp=Z,417nm,1.0s
CTA Charters Tower 29.44 134 P **P** **03 14 00.1 +0.1**
comp=Z,37nm,1.1s,baz=310,slow=12,SNR=15
CTAO Charters Tower 29.44 134 P **P** **03 13 59.1 -0.8**
CTAO pmax pmax
comp=Z,329nm,2.0s
CTAO Charters Tower 29.44 134 P **P** **03 13 59.1 -0.8**
CTAO IAmb IAmb 03 14 41.7
comp=Z,329nm,1.9s
MORW Morawa 29.70 194 P **P** **03 14 01.5 -0.6**
baz=30,SNR=5.2
SUKH Sukhothai 29.72 307 P **P** **03 14 03.8 +1.4**
comp=Z,6µcomp=Z,842nm,1.0s
LAMP Lampang 30.30 309 P **P** **03 14 09.1 +1.5**
comp=Z,3µcomp=Z,469nm,0.8s
PAYA Payao 30.61 311 P **P** **03 14 11.0 +0.7**
comp=Z,11µcomp=Z,1µm,1.0s
FORT Forrest 30.66 173 P **P** **03 14 09.6 -1.0**
baz=31,SNR=73
FORT Forrest 30.66 173 P **P** **03 14 08.9 -1.7**
FORT IAmb IAmb 03 14 10.6
comp=Z,199nm,0.7s
CM09 Chiang Mai Arr 30.76 308 P **ScP** **03 20 44.0 +3.1**
CM35 Chiang Mai Arr 30.76 309 P **P** **03 14 12.0 +0.3**
CM01 Chiang Mai Arr 30.77 308 P **P** **03 14 13.2 +1.5**
comp=Z,2µcomp=Z,330nm,1.0s
CM01 Chiang Mai Arr 30.77 308 P **ScP** **03 20 44.7 +3.8**
CM05 Chiang Mai Arr 30.77 308 P **ScP** **03 20 44.0 +3.1**
CM02 Chiang Mai Arr 30.79 308 P **ScP** **03 20 44.7 +3.7**
CM31 Chiang Mai Arr 30.80 308 P **ScP** **03 20 44.8 +3.8**
CM31 Chiang Mai Arr 30.80 308 IAmb IAmb 03 14 15.9
comp=Z,329nm,0.9s
CMAR Chiang Mai Arr 30.80 308 P **P** **03 14 12.3 +0.2**
comp=Z,201nm,0.9s,baz=139,slow=7.8,SNR=170
CMAR PcP **PcP** **03 17 08.4 +1.3**
comp=Z,94nm,0.9s,baz=169,slow=2.0,SNR=28
CMAR ScP **ScP** **03 20 42.6 +1.6**
comp=Z,37nm,1.1s,baz=154,slow=2.2,SNR=14
CMAR Chiang Mai Arr 30.80 308 P **P** **03 14 12.0 0.0**
CMAR **PcP** **03 17 07.6 +0.4**
CMAR **ScP** **03 20 41.0 0.0**
CM13 Chiang Mai Arr 30.81 308 P **ScP** **03 20 44.7 +3.6**
CMBY CAMPBELL BAY 30.82 284*e*P **P** **03 14 09.1 -3.2**
CM34 Chiang Mai Arr 30.86 309 P **P** **03 14 13.0 +0.4**
CMMT Chiang Mai 31.00 309 P **P** **03 14 14.7 +1.0**
comp=Z,259nm,1.0s
CHTO Chiang Mai 31.00 309 P **P** **03 14 14.0 +0.2**
CHTO pmax pmax
comp=Z,493nm,1.0s
CHTO Chiang Mai 31.00 309 P **P** **03 14 14.0 +0.2**
BLDU Ballidu 31.03 192 P **P** **03 14 12.9 -0.9**
baz=31,SNR=6.1
KMBL Kambalda 31.07 183 P **P** **03 14 13.1 -1.1**
baz=31,SNR=8.4
GYA Guiyang 31.32 329 ⇑P **P** **03 14 18.4 +1.8**
GYA sP sP 03 14 52.3 +1.5
GYA PcP **PcP** **03 17 09.6 +1.0**
GYA ScP **ScP** **03 20 43.5 +0.8**
GYA ScS **ScS** **03 24 40.1 -0.5**
GYA pmax pmax
comp=Z,190nm,1.0s
MHMT Maesarieng 31.45 307 P **P** **03 14 18.8 +1.1**
comp=Z,833nm,0.9s
KLBR Kellerberrin 31.78 190 P **P** **03 14 19.3 -1.1**
baz=32,SNR=10
WHN Wuhan 31.91 344 ⇑P **P** **03 14 22.8 +1.2**
WHN ScP **ScP** **03 20 44.8 +0.3**
WHN pmax pmax
comp=Z,140nm,1.1s
JSU Suzuyama 32.12 10 IAmb IAmb 03 14 24.9
comp=Z,196nm,0.9s
NJ2 Nanjing 32.44 352*e*P **P** **03 14 26.8 +0.7**
NJ2 pP **pP** **03 14 49.6 +0.8**
NJ2 sP **sP** **03 14 57.4 -3.1**
NJ2 PcP **PcP** **03 17 11.5 +0.2**
NJ2 ScP **ScP** **03 20 46.9 +0.7**
NJ2 pmax pmax
comp=Z,260nm,0.8s
KMI Kunming 32.49 322⇓ *i*P **P** **03 14 29.0 +2.0**
KMI pP pP 03 14 50.1 +0.4
KMI sP sP 03 14 58.5 -2.8
KMI pmax pmax
comp=Z,130nm,1.3s
KMI pmax pmax
comp=Z,15µm,10.8s
KMI LR LR
comp=Z,6µm,16.5s
KMI LR LR
comp=Z,7µm,12.5s
KMI LR LR
comp=Z,8µm,24.2s
QLP Quilpie 32.69 145 P **P** **03 14 28.7 +0.2**
baz=33,SNR=9.4
NWAO Narrogin (SRO) 33.17 190 P **P** **03 14 31.8 -0.8**
comp=Z,9.0nm,0.5s,baz=21,slow=7.1,SNR=12
NWAO Narrogin (SRO) 33.17 190 P **P** **03 14 32.0 -0.6**
baz=33,SNR=11
NWAO Narrogin (SRO) 33.17 190 P **P** **03 14 33.1 +0.5**
NWAO pmax pmax
comp=Z,75nm,1.2s
NWAO Narrogin (SRO) 33.17 190 P **P** **03 14 33.1 +0.5**
ENH Enshi 33.29 337 P **P** **03 14 34.9 +1.2**
DGPR DIGLIPUR 33.52 295*e*P **P** **03 14 35.2 -0.6**
DGPR *i* PCP **PcP** **03 17 11.6 -3.0**
JNU Nakatsue 33.77 10 P **P** **03 14 37.2 -0.6**
comp=Z,220nm,0.8s,baz=196,slow=5.0,SNR=70
JNU ScP **ScP** **03 20 51.1 +0.2**
comp=Z,24nm,0.8s,baz=162,slow=0.9,SNR=4.6
JNU Nakatsue 33.77 10 **P** **03 14 37.5 -0.3**
JNU IAmb IAmb 03 14 39.4
comp=Z,266nm,0.9s
BBOO Buckleboo 34.38 162 P **P** **03 14 42.2 -0.9**
baz=34,SNR=21
BBOO Buckleboo 34.38 162 P **P** **03 14 42.9 -0.2**
BBOO IAmb IAmb 03 16 00.6
comp=Z,137nm,1.1s
RKGY Rocky Gully 34.86 190 P **P** **03 14 47.9 +0.8**
baz=35,SNR=17
JTU Tsushima 34.91 8 IAmb IAmb 03 14 49.9
comp=Z,140nm,1.1s
PATS Pohnpei 34.96 78 P **P** **03 14 49.2 +0.9**
baz=35,SNR=12
RMQ Roma 35.39 140 P **P** **03 14 52.0 +0.1**
baz=35,SNR=11
STKA Stephens Creek 35.65 154 P **P** **03 14 53.6 -0.3**
comp=Z,68nm,0.9s,baz=327,slow=9.0,SNR=66
STKA ScP **ScP** **03 20 58.6 +1.0**
comp=Z,23nm,0.9s,baz=314,slow=8.1,SNR=4.6
STKA Stephens Creek 35.65 154 P **P** **03 14 53.5 -0.5**
baz=36,SNR=38
STKA Stephens Creek 35.65 154 P **P** **03 14 53.5 -0.5**
HTT Hallett 35.92 158 P **P** **03 14 56.1 -0.3**
baz=36,SNR=16
JHS Saijyo 36.04 13 P **P** **03 14 57.6 +0.3**
EIDS Eidsvold 36.22 136 P **P** **03 14 58.1 -0.9**
baz=36,SNR=4.3
EIDS Eidsvold 36.22 136 P **P** **03 14 57.9 -1.0**
JHJ Hachijo jima 2 36.33 23 P **P** **03 14 58.5 -1.3**
comp=Z,148nm,0.6s,baz=66,slow=20,SNR=3.6
CD2 Chengdu 36.41 330 P **P** **03 15 00.6 0.0**
CD2 pmax pmax
comp=Z,360nm,1.0s
TJN Taejon 36.52 5*ce*P **P** **03 15 01.6 +0.3**
TIA Tai'an 36.78 351 P **P** **03 15 02.6 -0.9**
TIA pmax pmax
comp=Z,25nm,1.0s
XAN Xi'an 36.87 339 P **P** **03 15 03.9 -0.5**
XAN pP pP 03 15 22.3 -5.1
XAN PP **PP** **03 16 29.3 -1.1**
XAN S **S** **03 20 42.3 +0.5**

XAN pmax pmax
comp=Z,510nm,1.0s
XAN LR LR
comp=Z,8µm,22.8s
XAN LR LR
comp=Z,7µm,21.1s
XAN LR LR
comp=Z,10µm,20.9s
XAN Xi'an 36.87 339 P **P** **03 15 04.3 -0.1**
XAN pmax pmax
comp=Z,438nm,1.0s
XAN Xi'an 36.87 339 P **P** **03 15 04.3 -0.1**
HNR Honiara 36.96 105 P **P** **03 15 05.1 -0.2**
comp=Z,671nm,0.9s,baz=219,slow=3.5,SNR=14
HNR Honiara 36.96 105 P **P** **03 15 05.3 -0.1**
HNR pmax pmax
comp=Z,805nm,1.0s
HNR Honiara 36.96 105 P **P** **03 15 05.3 -0.1**
CMSA Cobar Meteorol 37.34 149 P **P** **03 15 08.8 +0.4**
baz=37,SNR=45
INU Inuyama 37.40 18 IAmb IAmb 03 15 11.8
comp=Z,191nm,0.8s
INCN Inchon 37.57 3 P **P** **03 15 10.3 +0.1**
INCN pmax pmax
comp=Z,59nm,0.9s
INCN Inchon 37.57 3 P **P** **03 15 10.3 +0.1**
KSAR Wonju Array Be 37.62 5 P **P** **03 15 11.1 +0.5**
KSAR 03 17 27.0
KSAR Wonju Array Be 37.62 5 P **P** **03 15 11.1 +0.5**
KSAR **PcP** **03 17 27.0 +0.7**
KSRS Korea Array 37.64 5 P **P** **03 15 10.8 0.0**
comp=Z,89nm,0.9s,baz=183,slow=9.4,SNR=151
KSRS PcP **PcP** **03 17 28.0 +1.6**
comp=Z,30nm,0.9s,baz=187,slow=4.2,SNR=8.2
KSRS ScP **ScP** **03 21 05.5 +0.7**
comp=Z,40nm,0.9s,baz=188,slow=3.4,SNR=22
SAIH SAIHA 37.67 309*e*P **P** **03 15 11.2 -0.3**
SAIH IAmb IAmb 03 15 14.5
comp=Z,366nm,0.7s
KS19 Wonju Array Si 37.68 5 IAmb IAmb 03 15 18.8
comp=Z,98nm,0.8s
JGF Kuroka 37.73 18 IAmb IAmb 03 15 15.4
comp=Z,111nm,0.7s
IMP Imphal 38.26 313*e*P **P** **03 15 15.9 -0.4**
IMP IAmb IAmb 03 15 17.5
comp=Z,153nm,1.0s
KOHI KOHIMA 38.67 314*e*P **P** **03 15 19.4 -0.4**
KOHI IAmb IAmb 03 15 22.5
comp=Z,436nm,1.2s
MOKO MOKOCHONG 38.74 315*e*P **P** **03 15 20.7 +0.2**
MOKO IAmb IAmb 03 15 23.6
comp=Z,234nm,0.7s
MAJO Matsushiro 38.87 18*c i*P **P** **03 15 20.2 -0.9**
MAJO pmax pmax
comp=Z,146nm,1.0s
MAJO Matsushiro 38.87 18 P **P** **03 15 21.3 +0.2**
MAJO IAmb IAmb 03 15 27.4
comp=Z,156nm,0.9s
MAT Matsushiro 38.87 18 P **P** **03 15 20.7 -0.4**
MAT S **S** **03 21 07.6 -4.3**
MJAR Matsushiro Arr 38.87 18 P **P** **03 15 21.0 -0.2**
comp=Z,99nm,0.8s,baz=188,slow=8.8,SNR=106
MJAR PcP **PcP** **03 17 31.1 +0.8**
comp=Z,13nm,1.0s,baz=186,slow=3.6,SNR=4.0
MJAR ScP **ScP** **03 21 10.2 +0.5**
comp=Z,51nm,1.1s,baz=218,slow=3.7,SNR=16
MJAR Matsushiro Arr 38.87 18 **ScP** **03 21 10.3 +0.7**
MJAR Matsushiro Arr 38.87 18 P **P** **03 15 20.8 -0.4**
MJB9 Matsu-Tunnel 38.87 18 P **P** **03 15 22.1 +1.0**
MJB9 IAmb IAmb 03 15 27.4
comp=Z,193nm,1.0s
MJB9 **S** **03 21 11.0 -1.0**
DL2 Dalian 38.97 357 P **P** **03 15 21.4 -0.5**
DL2 PcP **PcP** **03 17 31.6 +1.1**
DL2 S **S** **03 21 11.8 -1.5**
DL2 pmax pmax
comp=Z,340nm,0.8s
DL2 LR LR
comp=Z,5µm,20.2s
DL2 LR LR
comp=Z,9µm,18.7s
DL2 LR LR
comp=Z,9µm,22.9s
TIY Taiyuan 39.20 345*e*P **P** **03 15 23.8 -0.2**
TIY pmax pmax
comp=Z,810nm,0.8s
ARMA Armidale 39.93 141 P **P** **03 15 31.0 +0.8**
baz=40,SNR=8.8
ARMA Armidale 39.93 141 P **P** **03 15 30.8 +0.6**
ARPS Mount Arapiles 39.98 157 P **P** **03 15 30.2 -0.1**
baz=40,SNR=37
TEZP TEZPUR 40.15 314*e*P **P** **03 15 31.9 0.0**
TEZP IAmb IAmb 03 15 34.9
comp=Z,91nm,0.6s
SHL Shillong 40.21 312*e*P **P** **03 15 32.8 +0.2**
SHL *i* x x 03 21 15.4
SHL Shillong 40.21 312 P **P** **03 15 32.0 -0.6**
SHL pmax pmax
comp=Z,252nm,0.9s
SHL Shillong 40.21 312 P **P** **03 15 32.0 -0.6**
SHL IAmb IAmb 03 15 34.0
comp=Z,252nm,0.9s
JSD Sado 40.26 18 IAmb IAmb 03 15 37.9
comp=Z,123nm,0.7s
BJT Baijiatuau 40.65 351 P **P** **03 15 35.6 -0.2**
BJT pmax pmax
comp=Z,236nm,0.8s
BJT Baijiatuau 40.65 351 P **P** **03 15 35.6 -0.2**
BJT IAmb IAmb 03 15 39.0
comp=Z,236nm,0.8s
LZH Lanzhou 40.67 335*e*P **P** **03 15 36.9 +0.7**
LZH pP pP 03 15 58.0 -1.6
LZH sP sP 03 16 10.8 -0.3
LZH ScP **ScP** **03 21 16.9 0.0**
LZH pmax pmax
comp=Z,130nm,1.2s
LZH LR LR
comp=Z,3µm,13.0s
LZH LR LR
comp=Z,3µm,13.6s
LZH LR LR
comp=Z,2µm,13.6s
BJI Beijing 40.67 351 P **P** **03 15 35.0 -1.0**
BJI PcP **PcP** **03 17 35.6 -0.3**
BJI ScS ScS 03 25 32.0 +0.7
BJI pmax pmax
comp=Z,290nm,1.0s
GUWA GUWAHATI 40.70 313*e*P **P** **03 15 36.8 +0.3**
GUWA IAmb IAmb 03 15 40.0
comp=Z,196nm,1.4s
YNG Young 40.91 148 P **P** **03 15 39.1 +1.0**
baz=41,SNR=7.6
JMM Marumori 40.93 20 IAmb IAmb 03 15 55.4
comp=Z,186nm,0.9s
MGCD Mangrove Creek 41.59 145 P **P** **03 15 45.3 +1.7**
baz=42,SNR=7.1
SNY Shenyang 41.83 360 ⇑P **P** **03 15 44.3 -1.1**
SNY pmax pmax
comp=Z,44nm,0.8s
TOO Toolangi 42.16 154 P **P** **03 15 49.4 +1.1**
baz=42,SNR=16
TOO Toolangi 42.16 154 P **P** **03 15 49.4 +1.1**
TOO pmax pmax
comp=Z,166nm,1.2s
TOO Toolangi 42.16 154 P **P** **03 15 49.4 +1.1**
TOO IAmb IAmb 03 16 05.6
comp=Z,166nm,1.1s
CNB Canberra Magne 42.20 149 P **P** **03 15 49.8 +1.1**
baz=42,SNR=17
HHC Hu-ho-hao-te 42.38 346*e*P **P** **03 15 51.1 +1.0**
HHC pmax pmax
comp=Z,200nm,1.1s
HHC pmax pmax
comp=Z,6µm,5.6s
BWNR Bhubaneshwar 42.54 301*e*P **P** **03 15 51.6 +0.1**
BWNR IAmb IAmb 03 15 54.4
comp=Z,149nm,0.7s
BTO Baotou 42.55 344*e*P **P** **03 15 51.6 +0.1**
LSA Lhasa 43.16 316 P **P** **03 15 58.7 +1.7**
LSA Lhasa 43.16 316 P **P** **03 15 57.5 +0.5**
LSA pmax pmax
comp=Z,117nm,0.6s
LSA Lhasa 43.16 316 P **P** **03 15 57.5 +0.5**
LSA IAmb IAmb 03 16 01.2
comp=Z,117nm,0.6s

CHLP Challavanipeta 43.39 298 *e*P **P** **03 15 58.0 -0.5**
GTK Tadong 43.62 312 *e*P **P** **03 16 01.4 +1.0**
JTM Tenmabayashi 43.65 19 IAmb IAmb 03 16 14.4
comp=Z,270nm,1.1s
VLA Vladivostok 43.70 8*c i*P **P** **03 16 01.1 +0.6**
VLA pmax pmax
comp=Z,303nm,0.9s
PALK Pallekele 43.79 281 P **P** **03 16 00.2 -1.6**
comp=Z,18nm,0.7s,baz=184,slow=8.7,SNR=8.5
PALK PcP **PcP** **03 17 47.9 +0.9**
comp=Z,102nm,1.0s,baz=187,slow=3.0,SNR=13
PALK ScP **ScP** **03 21 31.1 +1.3**
comp=Z,27nm,1.0s,baz=189,slow=4.5,SNR=5.8
PALK Pallekele 43.79 281 P **P** **03 16 00.7 -1.2**
BOK Bokaro 43.98 306 *e*P **P** **03 16 03.2 0.0**
BOK IAmb IAmb 03 16 06.7
comp=Z,33nm,0.7s
ODAN Odare 44.29 310 *e*P **P** **03 16 05.8 -0.1**
comp=Z,536nm,0.9s
TAPN Taplejung 44.31 311 *e*P **P** **03 16 06.0 -0.1**
comp=Z,435nm,1.0s
KWAJ Kwajalein Atol 44.37 77 P **P** **03 16 07.9 +1.5**
KWAJ pmax pmax
comp=Z,554nm,1.0s
KWAJ Kwajalein Atol 44.37 77 P **P** **03 16 07.9 +1.5**
USA0B Ussuriysk Arra 44.77 8 *i* P **P** **03 16 09.1 0.0**
USA0B Ussuriysk Arra 44.77 8 P **P** **03 16 09.5 +0.4**
USRK Ussuriysk Ar. 44.77 8 P **P** **03 16 09.5 +0.4**
comp=Z,301nm,0.8s,baz=193,slow=7.3,SNR=348
USRK ScP **ScP** **03 21 33.4 +0.4**
comp=Z,44nm,1.0s,baz=219,slow=2.4,SNR=18
USRK Ussuriysk Ar. 44.77 8 P **P** **03 16 08.8 -0.3**
USRK ScP **ScP** **03 21 32.8 -0.2**
MDJ Mudanjiang 44.90 6 P **P** **03 16 10.6 +0.5**
MDJ pmax pmax
comp=Z,260nm,1.0s
MDJ pmax pmax
comp=Z,11μm,11.6s
MDJ Mudanjiang 44.90 6 P **P** **03 16 09.5 -0.6**
MDJ IAmb IAmb 03 16 14.7
comp=Z,296nm,1.0s
RAMN Ramite 44.94 310 *e*P **P** **03 16 11.1 0.0**
comp=Z,1μm,1.0s
PVM Polavaram 45.16 295 *e*P **P** **03 16 12.2 -0.3**
GTA Gaotai 45.20 333 ⇑P **P** **03 16 12.8 +0.1**
GTA ScP **ScP** **03 21 35.6 +0.5**
GTA ScS **ScS** **03 25 57.0 -2.8**
GTA pmax pmax
comp=Z,390nm,1.2s
SANVU Saraoutou 45.29 112 P **P** **03 16 14.5 +0.9**
MDRS Chennai 45.30 289 *e*P **P** **03 16 13.4 -0.3**
MDRS IAmb IAmb 03 16 17.5
comp=Z,80nm,0.8s
ERM Érimo 45.45 20 *i* P **P** **03 16 15.4 +1.0**
ERM pmax pmax
comp=Z,129nm,1.0s
H11S3 WAKE ISLAND Hy 45.87 64 P **P** **03 16 18.8 +0.8**
baz=228,slow=6.0,SNR=5.3
H11S2 WAKE ISLAND Hy 45.89 64 P **P** **03 16 19.3 +1.2**
baz=228,slow=6.0,SNR=4.3
H11S1 WAKE ISLAND Hy 45.89 64 P **P** **03 16 18.9 +0.8**
baz=228,slow=6.0,SNR=4.9
MYLAV Mylavaram 45.91 294 *e*P **P** **03 16 18.1 -0.4**
SKHT Srikalahasti 45.97 289 *e*P **P** **03 16 18.2 -0.9**
GUN Gumba 45.98 311 *e*P **P** **03 16 18.8 -0.6**
comp=Z,652nm,0.8s
WAKE Wake Island 46.10 63 P **P** **03 16 21.5 +1.5**
PKI Pulchoki 46.17 310 *e*P **P** **03 16 20.1 -0.7**
comp=Z,344nm,0.9s
PKIN Phulchoki 46.18 310 *e*P **P** **03 16 20.2 -0.7**
comp=Z,549nm,1.2s
ADKI Addanki 46.27 292 *e*P **P** **03 16 20.6 -0.7**
KKN Kakani 46.38 310 *e*P **P** **03 16 21.8 -0.5**
comp=Z,386nm,0.9s
TEY Ternei 46.41 12⇑*i*P **P** **03 16 22.5 +0.6**
TEY *e* 03 22 59.1
TEY pmax pmax
comp=N,100nm,1.6s
TEY pmax pmax
comp=E,30nm,1.6s
TEY pmax pmax
comp=Z,180nm,1.6s
DMN Daman 46.42 310 *e*P **P** **03 16 22.3 -0.4**
comp=Z,611nm,1.1s
DZM Mont Dzumac 46.72 121 P **P** **03 16 25.8 +0.8**
comp=Z,50nm,1.0s,baz=160,slow=18,SNR=7.3
DZM Mont Dzumac 46.72 121 *e*P **P** **03 16 25.5 +0.5**
comp=Z,182nm,1.2s
GKN Gorkha 46.98 310 *e*P **P** **03 16 26.2 -0.7**
comp=Z,1μm,1.3s
NJS Nagarjunasagar 47.07 293 *e*P **P** **03 16 26.4 -1.2**
ASAJ Asahikawa 47.14 18 P **P** **03 16 28.6 +0.9**
comp=Z,137nm,0.7s,baz=234,slow=12,SNR=53
JKA Kamikawa-asahi 47.14 18 IAmb IAmb 03 16 31.2
comp=Z,156nm,0.7s
CUPL Choutuppal 47.63 294 *e*P **P** **03 16 30.7 -1.3**
KOLN Koldanda 47.66 309 *e*P **P** **03 16 32.0 -0.3**
comp=Z,1μm,0.9s
RPR Rampur 47.76 296 *e*P **P** **03 16 32.4 -0.5**
DANN Dangsing 47.82 310 *e*P **P** **03 16 33.3 -0.3**
comp=Z,616nm,0.7s
HYB Hyderabad 48.01 294 *i* P **P** **03 16 33.0 -1.9**
HYBB Hyderabad (bro 48.01 294 *e*P **P** **03 16 33.7 -1.3**
PYUN Píuthan 48.30 309 *e*P **P** **03 16 37.0 -0.2**
comp=Z,2μm,1.0s
URV Uravakonda 48.56 290 *e*P **P** **03 16 37.5 -1.7**
NGP Nagpur 48.73 299 *e*P **P** **03 16 40.1 -0.3**
NGP IAmb IAmb 03 16 42.5
comp=Z,125nm,0.9s
TARA Tarawa 48.97 88 P **P** **03 16 43.7 +1.5**
HIA Hailar 49.41 356 P **P** **03 16 45.0 -0.1**
HIA pmax pmax
comp=Z,199nm,0.8s
HIA Hailar 49.41 356 P **P** **03 16 45.0 -0.1**
KLR Kul'dur 49.69 7 P **P** **03 16 47.0 -0.2**
comp=Z,152nm,0.8s,baz=205,slow=5.7,SNR=199
KLR ScP **ScP** **03 21 53.3 -0.3**
comp=Z,21nm,1.0s,baz=226,slow=3.2,SNR=5.3
KLR Kul'dur 49.69 7*ce*P **P** **03 16 46.9 -0.2**
KLR pmax pmax
comp=Z,171nm,0.9s
YSS Yuzh-Sakhalins 49.75 17⇑*e*P **P** **03 16 48.2 +0.5**
YSS *e*S **S** **03 23 47.4 -1.9**
YSS pmax pmax
comp=Z,110nm,1.3s
YSS Yuzh-Sakhalins 49.75 17 P **P** **03 16 48.5 +0.8**
YSS IAmb IAmb 03 16 50.9
comp=Z,158nm,1.2s
KLRI Killari 49.98 294 *e*P **P** **03 16 48.3 -1.6**
ULN Ulaanbaatar 50.08 345 P **P** **03 16 49.5 -0.9**
ULN pmax pmax
comp=Z,123nm,0.8s
ULN Ulaanbaatar 50.08 345 P **P** **03 16 49.5 -0.9**
ULN IAmb IAmb 03 16 53.0
comp=Z,123nm,0.8s
SONM Songino Array 50.23 345 P **P** **03 16 50.8 -0.6**
comp=Z,115nm,0.7s,baz=159,slow=8.9,SNR=238
SONM PcP **PcP** **03 18 09.5 +0.3**
comp=Z,36nm,1.0s,baz=169,slow=8.6,SNR=4.0
SONM ScP **ScP** **03 21 56.0 -0.1**
comp=Z,30nm,1.0s,baz=163,slow=4.4,SNR=14
SONM Songino Array 50.23 345 P **P** **03 16 50.6 -0.9**
SONM Songino Array 50.23 345 ScP **ScP** **03 21 55.7 -0.4**
BHPL Bhopal 50.86 301 *e*P **P** **03 16 55.9 -0.6**
BHPL IAmb IAmb 03 16 58.5
comp=Z,291nm,0.8s
BHPL *e*S **S** **03 24 03.8 -1.8**
LGTI Lohaghat 51.05 309 *e*P **P** **03 16 56.4 -1.4**
GRNR Gornyy 51.87 10⇑*i*P **P** **03 17 04.4 +0.9**
GRNR *e*S **S** **03 24 26.7 +8.2**
GRNR pmax pmax
comp=N,70nm,0.9s
GRNR pmax pmax
comp=Z,180nm,0.9s
GRNR smax smax
comp=N,9.0nm,0.8s
POO Poona 52.62 294 *e*P **P** **03 17 07.7 -2.0**
POO IAmb IAmb 03 17 10.8
comp=Z,148nm,0.8s
CIT Chita 52.77 352 *e*P **P** **03 17 09.5 -0.7**
CIT *e* 03 17 39.9
CIT *e* 03 18 18.9
CIT pmax pmax
comp=Z,252nm,1.1s
DDI Dehra Dun 53.15 309 *e*P **P** **03 17 11.4 -2.0**
DDI IAmb IAmb 03 17 14.4
comp=Z,230nm,0.9s
TYV Tymovskoe 53.29 15 *e*P **P** **03 17 15.4 +1.4**
TYV pmax pmax
comp=Z,51nm,0.9s
TYV pmax pmax
comp=Z,2μm,5.1s
ZAK Zakamensk 53.40 344 *e*P **P** **03 17 14.1 -0.8**
ZAK pmax pmax
comp=Z,52nm,1.0s
ZEA Zeya 53.82 2 *e*P **P** **03 17 17.6 -0.2**
ZEA pmax pmax
comp=N,60nm,1.1s
ZEA pmax pmax
comp=Z,120nm,1.0s
SMLA Simla 54.19 310 *e*P **P** **03 17 20.9 0.0**
SMLA IAmb IAmb 03 17 23.9
AJM Ajmer 54.37 303⇑*i*P **P** **03 17 20.0 -2.4**
TLY Talaya 54.47 345 P **P** **03 17 22.4 -0.2**
comp=Z,75nm,0.8s,baz=186,slow=5.5,SNR=60
TLY ScP **ScP** **03 22 14.1 -0.2**
comp=Z,7.8nm,0.8s,baz=152,slow=5.7,SNR=5.7
TLY Talaya 54.47 345 P **P** **03 17 22.9 +0.3**
TLY Talaya 54.47 345*c i*P **P** **03 17 22.3 -0.3**
TLY pmax pmax
comp=Z,93nm,0.9s
TLY Talaya 54.47 345 P **P** **03 17 22.7 +0.1**
TLY IAmb IAmb 03 17 23.8
comp=Z,88nm,0.8s
TLY ScP **ScP** **03 22 13.8 -0.5**
WMQ Urumqi 54.47 328 *e*P **P** **03 17 23.4 +0.6**
WMQ sP pwP 03 17 51.3 +1.6
WMQ ScP **ScP** **03 22 15.0 +0.5**
WMQ pmax pmax
comp=Z,430nm,1.3s
WMQ pmax pmax
comp=Z,15μm,11.7s
WMQ LR LR
comp=Z,8μm,26.1s
WMQ LR LR
comp=Z,4μm,12.1s
WMQ LR LR
comp=Z,10μm,29.1s
BHK Bhakra 54.89 310 *e*P **P** **03 17 25.3 -0.7**
BHK *es*P PcP 03 18 15.2 -12
MOY Mondy 55.20 343 *e*P **P** **03 17 28.0 0.0**
MOY pmax pmax
comp=Z,152nm,3.0s
DHRM DHARAMSHALA 55.34 310 *e*P **P** **03 17 28.6 -1.0**
DHRM *e*S **S** **03 25 03.2 -3.3**
FUNA Funafuti 55.62 100 P **P** **03 17 32.9 +1.4**
MSVF Nonsavu 55.93 111 *i* P **P** **03 17 34.1 +0.3**
MSVF pmax pmax
comp=Z,71nm,1.0s
MSVF Nonsavu 55.93 111 P **P** **03 17 35.0 +1.2**
MSVF IAmb IAmb 03 17 36.1
comp=Z,92nm,1.1s
BHUJ Bhuj 57.65 298 *e*P **P** **03 17 44.6 -1.2**
BHUJ IAmb IAmb 03 17 47.3
comp=Z,88nm,0.8s
NIL Nilore 58.25 311 P **P** **03 17 48.7 -1.2**
NIL pmax pmax
comp=Z,255nm,0.7s
NIL Nilore 58.25 311 P **P** **03 17 48.7 -1.2**
BOD Bodaibo 58.38 354 *e*P **P** **03 17 49.8 -0.4**
BOD pmax pmax
comp=Z,184nm,1.2s
ZSN Zaisan 58.39 330 *i* P **P** **03 17 49.9 -0.7**
comp=Z,103nm,1.4s,baz=330
ZSN Zaisan 58.39 330 *i* P **P** **03 17 49.8 -0.7**
ZSN pmax pmax
comp=Z,103nm,1.4s
SHLS Shalkode 58.70 323⇑*i*P **P** **03 17 51.4 -1.6**
comp=Z,278nm,0.9s,baz=323
SHLS Shalkode 58.70 323*c i*P **P** **03 17 51.3 -1.6**
SHLS pmax pmax
comp=Z,278nm,0.9s
PDGK Podgornoye 58.78 323 P **P** **03 17 52.7 -0.8**
KSH Kashi 58.98 318 P **P** **03 17 55.4 +0.5**
KSH pP pP 03 18 16.1 -2.3
KSH pmax pmax
comp=Z,92nm,0.8s
KSH pmax pmax
comp=Z,30μm,14.2s
SATY Saty 59.28 322⇑*i*P **P** **03 17 56.7 -0.3**
comp=Z,177nm,0.8s,baz=323
SATY Saty 59.28 322*c i*P **P** **03 17 56.7 -0.3**
SATY pmax pmax
comp=Z,177nm,0.8s
MK31 Makanchi Array 59.29 328 *i* P **P** **03 17 55.7 -1.1**
MK31 pmax pmax
comp=Z,297nm,0.9s
MK31 Makanchi Array 59.29 328 P **P** **03 17 55.2 -1.6**
MKAR Makanchi Array 59.29 328 P **P** **03 17 56.0 -0.8**
comp=Z,152nm,0.8s,baz=126,slow=8.5,SNR=318
MKAR PcP **PcP** **03 18 44.1 +0.2**
comp=Z,30nm,0.6s,baz=132,slow=3.8,SNR=7.6
MKAR ScP **ScP** **03 22 34.5 -1.2**
comp=Z,30nm,1.0s,baz=126,slow=5.4,SNR=8.2
MKAR S **S** **03 25 54.9 -2.6**
comp=Z,3.7nm,1.0s,baz=122,slow=14,SNR=4.3
MKAR Makanchi Array 59.29 328 P **P** **03 17 54.9 -1.9**
KPKS Kokpek 59.34 323⇑*i*P **P** **03 17 56.9 -0.5**
comp=Z,281nm,0.9s,baz=323
KPKS Kokpek 59.34 323*c i*P **P** **03 17 56.8 -0.5**
KPKS pmax pmax
comp=Z,281nm,0.9s
MAKZ Makanchi 59.47 328 P **P** **03 17 57.1 -0.9**
MAKZ pmax pmax
comp=Z,248nm,1.0s
MAKZ Makanchi 59.47 328 P **P** **03 17 57.1 -0.9**
WHZ Wether Hill Ro 59.66 146 IAmb IAmb 03 18 45.7
comp=Z,100nm,1.1s
PEA0B Petropavlovsk- 60.08 23*ce*P **P** **03 18 03.5 +1.5**
PEA0B Petropavlovsk- 60.08 23 IAmb IAmb 03 18 05.9
comp=Z,88nm,0.8s
PETK Petropavlovsk- 60.08 23 P **P** **03 18 03.2 +1.1**
comp=Z,89nm,0.8s,baz=201,slow=3.4,SNR=66
PETK PcP **PcP** **03 18 48.2 +1.3**
comp=Z,38nm,0.8s,baz=192,slow=1.5,SNR=4.0
PETK ScP **ScP** **03 22 38.3 -0.7**
comp=Z,12nm,1.0s,baz=221,slow=5.9,SNR=3.9
PETK Petropavlovsk- 60.08 23 P **P** **03 18 02.8 +0.7**
TNSS Tian-Shan 60.17 322 *i* P **P** **03 18 03.4 0.0**
baz=322
TNSS Tian-Shan 60.17 322 *i* P **P** **03 18 03.3 0.0**
MDOK Medeo 60.17 322 *i* P **P** **03 18 02.9 -0.2**
baz=322
MDOK Medeo 60.17 322 *i* P **P** **03 18 02.8 -0.2**
ULHL Ulahol 60.19 321 P **P** **03 18 03.5 +0.2**
SNR=24
RPZ Rata Peaks 60.26 142 P **P** **03 18 04.6 +1.1**
RPZ IAmb IAmb 03 18 31.9
comp=Z,193nm,1.1s
AAA Alma-Ata 60.28 322 *e*P **P** **03 18 03.7 -0.1**
comp=Z,170nm,1.1s,baz=322
AAA Alma-Ata 60.28 322 *e*P **P** **03 18 03.6 -0.1**
AAA pmax pmax
comp=Z,171nm,1.1s
TDK Taldyqorghan 60.38 324 *e*P **P** **03 18 04.0 -0.4**
comp=Z,304nm,0.8s,baz=324
TDK Taldyqorghan 60.38 324 *e*P **P** **03 18 03.9 -0.4**
TDK pmax pmax
comp=Z,304nm,0.8s
PET Petropavlovsk 60.39 23*ce*P **P** **03 18 06.0 +1.9**
PET pmax pmax
comp=Z,259nm,1.0s
PET Petropavlovsk 60.39 23 P **P** **03 18 05.5 +1.4**
PET IAmb IAmb 03 18 18.7
comp=Z,96nm,1.1s
CHKK Chushkaly 60.59 323 *e*P **P** **03 18 05.0 -0.8**
baz=323
CHKK Chushkaly 60.59 323 *e*P **P** **03 18 04.9 -0.8**
TKM2 Tokmak 2 60.95 321 P **P** **03 18 08.0 -0.5**
SNR=102
TKM2 Tokmak 2 60.95 321 *i* P **P** **03 18 07.2 -1.2**
TKM2 pmax pmax
comp=Z,238nm,1.3s
KUU Kurty 61.00 322⇑*i*P **P** **03 18 08.0 -0.6**
comp=Z,343nm,0.8s,baz=322
KUU Kurty 61.00 322*c i*P **P** **03 18 07.9 -0.6**
KUU pmax pmax
comp=Z,343nm,0.8s
KBK Karagaybulak 61.22 321 P **P** **03 18 10.4 +0.2**
SNR=41
UCH Uchtor 61.28 320 P **P** **03 18 10.9 -0.1**
SNR=24
AAK Ala-Archa 61.50 320 P **P** **03 18 11.9 -0.1**
SNR=43
AAK Ala-Archa 61.50 320 *i* P **P** **03 18 12.0 -0.1**
SNR=47
AAK Ala-Archa 61.50 320 P **P** **03 18 12.0 -0.1**
AAK Ala-Archa 61.50 320 P **P** **03 18 11.6 -0.5**
CHMS Chumysh 61.52 321 P **P** **03 18 11.2 -0.9**
SNR=19
AML Almayashu 61.77 320 P **P** **03 18 14.3 +0.1**
SNR=7.1
KBL Kabul 61.81 310 P **P** **03 18 13.4 -1.0**
SNR=89
KBL Kabul 61.81 310 P **P** **03 18 13.1 -1.3**
KBL pmax pmax
comp=Z,336nm,0.8s
KBL Kabul 61.81 310 P **P** **03 18 13.1 -1.3**
USP Ospenovka 61.82 321 P **P** **03 18 13.4 -0.7**
SNR=91
SGDS Sogindy 61.83 321⇑*i*P **P** **03 18 13.2 -0.9**
comp=Z,77nm,1.3s,baz=321
SGDS Sogindy 61.83 321*c i*P **P** **03 18 13.2 -0.9**
SGDS pmax pmax
comp=Z,77nm,1.3s
EKS2 Erkin-Say 61.97 320 P **P** **03 18 15.2 -0.1**
SNR=29
YAK Yakutsk 62.22 3 P **P** **03 18 16.0 -0.2**
comp=Z,622nm,0.8s,baz=33,slow=0.2,SNR=42
YAK S **S** **03 26 33.7 -0.2**
comp=Z,6.2nm,0.4s,baz=280,slow=23,SNR=6.1
YAK Yakutsk 62.22 3*c i*P **P** **03 18 16.3 +0.1**
YAK *e**PP **pP** **03 18 41.1 +0.4**
YAK *e* 03 18 55.2
YAK *e*S **S** **03 26 34.8 +0.8**
YAK *e* 03 27 54.7
YAK pmax pmax
comp=Z,1μm,1.0s
YAK pmax pmax
comp=N,295nm,1.1s
YAK pmax pmax
comp=E,80nm,1.1s
YAK smax smax
comp=E,7μm,13.2s
YAK Yakutsk 62.22 3 P **P** **03 18 15.5 -0.7**
BTK Batken 62.74 316 IAmb IAmb 03 18 22.6
comp=Z,121nm,1.1s
ZAA0 Zalesovo Array 62.90 335 IAmb IAmb 03 18 22.2
comp=Z,114nm,0.9s
ZALV Zalesovo Beam 62.90 335 P **P** **03 18 19.1 -1.8**
comp=Z,96nm,0.8s,baz=121,slow=5.8,SNR=107
ZALV S S 03 26 32.0 -11
comp=Z,4.2nm,0.9s,baz=134,slow=8.3,SNR=2.9
ZALV Zalesovo Beam 62.90 335 P **P** **03 18 19.2 -1.7**
ZALV Zalesovo Beam 62.90 335 P **P** **03 18 19.2 -1.7**
BTLS Baital 63.00 322 *i* P **P** **03 18 20.7 -1.1**
comp=Z,16nm,0.9s,baz=323
BTLS *e*S **S** **03 26 46.8 +2.3**
baz=323
BTLS Baital 63.00 322 *i* P **P** **03 18 20.7 -1.1**
BTLS *e*S **S** **03 26 46.8 +2.3**
BTLS pmax pmax
comp=Z,16nm,0.9s
MA2 Magadan 63.17 15 P **P** **03 18 24.0 +1.4**
comp=Z,204nm,0.8s,baz=201,slow=6.5,SNR=52
MA2 Magadan 63.17 15*ce*P **P** **03 18 23.4 +0.8**
MA2 pmax pmax
comp=Z,190nm,0.7s
MA2 Magadan 63.17 15 P **P** **03 18 24.4 +1.7**
KURBB Kurchatov Arra 63.62 330 P **P** **03 18 24.9 -1.0**
comp=Z,276nm,0.9s,baz=130,slow=5.9,SNR=305
KURBB PKP2bc 03 47 27.2
comp=Z,1.4nm,0.9s,baz=302,slow=3.9,SNR=4.9
KURBB Kurchatov Arra 63.62 330 P **P** **03 18 24.6 -1.2**
KURK Kurchatov 63.63 330 P **P** **03 18 25.3 -0.6**
KURK Kurchatov 63.63 330*ce*P **P** **03 18 24.3 -1.6**
KURK pmax pmax
comp=Z,876nm,1.3s
KURK Kurchatov 63.63 330 P **P** **03 18 24.2 -1.7**
DZA Taraz 63.67 319 *e*P **P** **03 18 25.2 -1.2**
comp=Z,16nm,0.8s,baz=319
DZA Taraz 63.67 319 *e*P **P** **03 18 25.1 -1.2**
DZA pmax pmax
comp=Z,16nm,0.8s
IUG Iuzhnay 64.19 318⇑*i*P **P** **03 18 29.0 -0.9**
comp=Z,61nm,1.1s,baz=318
IUG Iuzhnay 64.19 318*c i*P **P** **03 18 28.9 -0.9**
IUG pmax pmax
comp=Z,61nm,1.1s
KK31 Karatay Array 64.30 319 *i* P **P** **03 18 28.8 -1.6**
KKAR Karatay Array 64.30 319 P **P** **03 18 28.3 -2.2**
KKAR Karatay Array 64.30 319 P **P** **03 18 28.3 -2.2**
KNTN Kanton 64.32 93 P **P** **03 18 32.4 +1.3**
KNTN IAmb IAmb 03 18 33.2
comp=Z,150nm,1.0s
BRLS Boroldday 64.71 319 *e*P **P** **03 18 31.8 -1.3**
comp=Z,31nm,0.8s,baz=319
BRLS Boroldday 64.71 319 *e*P **P** **03 18 31.8 -1.3**
BRLS pmax pmax
comp=Z,31nm,0.8s
BRZS Berezniki 66.36 327 *e*P **P** **03 18 42.8 -0.8**
comp=Z,63nm,0.8s,baz=327
BRZS Berezniki 66.36 327 *e*P **P** **03 18 42.8 -0.8**
BRZS pmax pmax
comp=Z,63nm,0.8s
SEY Seymchan 66.46 14 *i* P **P** **03 18 45.4 +1.5**
comp=Z,98nm,1.0s,baz=219,slow=5.2,SNR=57
SEY Seymchan 66.46 14 *i* P **P** **03 18 45.2 +1.3**
HRA Herat 67.06 308 IAmb IAmb 03 18 50.1
comp=Z,134nm,1.4s
WBK Wadi Bani Khal 67.10 295 P **P** **03 18 48.5 -0.4**
SNR=7.8
NIUE Niue 67.40 111 P **P** **03 18 52.0 +1.2**
JOHN Johnston Islan 67.59 72 P **P** **03 18 53.0 +1.0**
MHTO MHTO 67.75 293 P **P** **03 18 50.7 -2.2**
SNR=12
JMDO Jabal Madar 67.85 294 P **P** **03 18 51.7 -1.9**
SNR=9.5
DQM DQM 67.98 292 P **P** **03 18 52.5 -1.9**
SNR=5.6
DQM P **P** **03 18 52.5 -1.9**
SNR=5.6
SMDO Samad 68.02 295 P **P** **03 18 53.7 -1.0**
SNR=8.7
BIDO Bidbid 68.03 295 P **P** **03 18 53.0 -1.7**
SNR=34
BSY Bisya 68.73 294 P **P** **03 18 57.3 -1.8**
SNR=12
HOQ Hoqain 68.78 295 P **P** **03 18 57.7 -1.6**
SNR=21
BVAR Borovoye Array 69.15 329 P **P** **03 18 59.3 -1.7**
comp=Z,43nm,0.9s,baz=225,slow=27,SNR=135
BRVK Borovoye 69.23 329 P **P** **03 18 59.9 -1.6**
BRVK Borovoye 69.23 329 P **P** **03 18 59.6 -1.9**
BRVK IAmb IAmb 03 19 03.4
comp=Z,203nm,0.9s
ARQ Araqi 69.45 295 P **P** **03 19 01.8 -1.7**
SNR=18
SHAO Shalim 69.52 289 *i* P **P** **03 19 02.1 -1.9**
SNR=17
SOHO SOHO 69.57 296 *i* P **P** **03 19 02.5 -1.7**
SNR=30
SOHO SOHO 69.57 296 P **P** **03 19 02.4 -1.7**
MDH Madha 69.98 297 *i* P **P** **03 19 05.0 -1.7**
SNR=16
MDH Madha 69.98 297 P **P** **03 19 04.4 -2.3**
SNR=8.2
MDH P **P** **03 19 04.4 -2.3**
SNR=8.2
UOSS Minazif 70.00 297 *i* P **P** **03 19 04.7 -2.1**
SNR=38
UOSS Minazif 70.00 297 P **P** **03 19 05.3 -1.6**
UOSS IAmb IAmb 03 19 11.1
comp=Z,81nm,0.9s
HATD Hatta, Dubai 70.05 296 *i* P **P** **03 19 05.7 -1.5**
SNR=45
HATD Hatta, Dubai 70.05 296 P **P** **03 19 05.3 -1.9**
SNR=23
HATD P **P** **03 19 05.3 -1.9**
SNR=23
BANOM Banah 70.09 298 *i* P **P** **03 19 06.1 -1.3**
SNR=29
BANOM Banah 70.09 298 P **P** **03 19 05.9 -1.5**
SNR=12
MSFE Esma-Masafi 70.11 297 *i* P **P** **03 19 06.6 -1.0**
SNR=31
SHME Shamm 70.25 298 *i* P **P** **03 19 07.4 -1.0**

SNR=9.9
ALNE Al Ain 70.26 296 *i* P P 03 19 07.2 -1.2
SNR=31
NAZ Nazwa, Dubai 70.50 297 *i* P P 03 19 09.0 -0.9
SNR=17
NAZ Nazwa, Dubai 70.50 297 P P 03 19 10.0 +0.1
SNR=14
SOCY Socotra 70.50 283 P P 03 19 07.1 -3.0
SNR=6.6
SOCY Socotra 70.50 283 P P 03 19 07.4 -2.7
SOCY IAmb IAmb 03 19 10.7
comp=Z,153nm,0.9s
FAQ Al Faqa, Dubai 70.52 296 *i* P P 03 19 09.0 -1.0
SNR=37
FAQ Al Faqa, Dubai 70.52 296 P P 03 19 08.1 -1.9
SNR=18
UMQ Umm Al-Quwin 70.59 297 *i* P P 03 19 09.6 -0.7
SNR=6.4
ASUD Al Ashush, Dub 70.73 296 *i* P P 03 19 10.3 -1.1
SNR=114
ASUD Al Ashush, Dub 70.73 296 P P 03 19 10.2 -1.1
SNR=47
RBK Rabkut 70.80 289 P P 03 19 09.6 -2.3
SNR=6.3
AJN Ajban 71.03 296 *i* P P 03 19 11.7 -1.4
SNR=32
AJN Ajban 71.03 296 P P 03 19 11.8 -1.4
SNR=55
AJN P P 03 19 11.8 -1.4
SNR=55
WHFO Wadi Hawf 71.25 289 P P 03 19 11.8 -2.8
SNR=6.6
WHFO P P 03 19 11.8 -2.8
SNR=6.6
GEYT Alibeck 71.26 310 P P 03 19 13.2 -1.1
comp=Z,48nm,0.9s,baz=132,slow=4.2,SNR=50
GYA0 ALIBECK ARRAY 71.26 310 P P 03 19 12.9 -1.4
GYA0B ALIBECK ARRAY 71.26 310 P P 03 19 13.2 -1.0
ABTO Aybut 71.64 288 P P 03 19 14.6 -2.4
SNR=7.0
ADK Adak 71.73 34 P P 03 19 17.7 +0.9
ADK pmax pmax
comp=Z,101nm,0.9s
ADK Adak 71.73 34 P P 03 19 17.7 +0.9
ADK IAmb IAmb 03 19 23.5
comp=Z,101nm,0.8s
TIXI Tiksi 71.80 2 *ce*P P 03 19 15.3 -1.4
TIXI Tiksi 71.80 2 P P 03 19 14.9 -1.8
AB31 Akbulak array 73.48 322 *i* P P 03 19 25.6 -1.6
ABKAR Akbulak array 73.48 322 P P 03 19 25.3 -1.9
NRIK Noril'sk 73.59 347 P P 03 19 27.0 -0.4
comp=Z,210nm,0.8s,baz=135,slow=5.9,SNR=287
NRIK S **SKiKP** 03 28 44.7 -3.2
comp=Z,4.4nm,0.8s,baz=351,slow=23,SNR=10
NRIK Noril'sk 73.59 347 *ce*P P 03 19 26.9 -0.6
NRIK pmax pmax
comp=Z,226nm,0.9s
AKTO Aktyubinsk 75.05 323 P P 03 19 35.1 -1.2
comp=Z,95nm,0.7s,baz=106,slow=7.1,SNR=151
AKTO S S 03 29 01.4 -5.0
comp=Z,4.8nm,1.1s,baz=139,slow=19,SNR=2.8
SVE Sverdlovsk 75.89 330 *de*P P 03 19 39.9 -1.0
SVE *e*S S 03 29 09.0 -6.3
SVE pmax pmax
comp=Z,280nm,0.9s
ARU Arti 76.80 329 P P 03 19 44.6 -1.5
comp=Z,53nm,0.8s,baz=118,slow=2.5,SNR=161
ARU S S 03 29 17.7 -7.7
comp=Z,2.6nm,0.9s,baz=209,slow=22,SNR=9.6
ARU Arti 76.80 329 *c i*P P 03 19 44.4 -1.7
ARU 03 22 34.6
ARU S S 03 29 27.8 +2.5
ARU pmax pmax
comp=Z,175nm,0.8s
ARU Arti 76.80 329 P P 03 19 43.6 -2.5
ARU IAmb IAmb 03 19 45.5
comp=Z,154nm,0.8s
RAR Rarotonga 77.11 112 P P 03 19 51.4 +2.8
ABPO Ambohimpanom 77.41 251 P P 03 19 50.4 -0.1
ABPO Ambohimpanom 77.41 251 P P 03 19 50.4 -0.1
OPO Ambohidratompo 77.42 251 P P 03 19 50.6 +0.1
comp=Z,138nm,0.9s,baz=79,slow=5.6,SNR=92
VOI Vohitsoka 78.04 248 P P 03 19 54.1 +0.2
SNR=15
FOMA Nahampoana Res 78.14 245 P P 03 19 54.2 0.0
FOMA IAmb IAmb 03 19 55.9
comp=Z,112nm,1.1s
AKUT Akutan 78.69 34 IAmb IAmb 03 20 05.0
comp=Z,157nm,0.8s
KIP Kipapa 78.91 68 *i* P P 03 20 00.2 +1.7
KIP pmax pmax
comp=Z,46nm,1.0s
HON Honolulu 78.91 68 P P 03 19 59.9 +1.4
HON pmax pmax
comp=Z,290nm,1.0s
HON Honolulu 78.91 68 P P 03 19 59.9 +1.4
HON IAmb IAmb 03 20 02.5
comp=Z,290nm,1.0s
MAW Mawson 79.15 200 P P 03 20 00.1 +1.3
comp=Z,18nm,1.0s,baz=53,slow=5.8,SNR=25
MAW PKKPbc **PKKPbc** 03 38 49.2 -3.9
comp=Z,1.1nm,0.9s,baz=190,slow=6.1,SNR=3.7
MAW Mawson 79.15 200 P P 03 20 00.1 +1.3
baz=79,SNR=18
MAW Mawson 79.15 200 P P 03 19 59.4 +0.6
RAYN Ar Rayn 79.51 294 *i* P P 03 20 00.6 -1.3
SNR=216
RAYN Ar Rayn 79.51 294 P P 03 20 00.2 -1.7
RAYN pmax pmax
comp=Z,253nm,1.0s
RAYN Ar Rayn 79.51 294 P P 03 20 00.2 -1.7
RAYN IAmb IAmb 03 20 03.5
comp=Z,253nm,1.0s
VNDA Vanda 79.92 172 P P 03 20 03.5 +0.6
comp=Z,3.7nm,0.9s,baz=324,slow=5.5,SNR=16
VNDA PKKPbc **PKKPbc** 03 38 48.5 -3.1
comp=Z,1.3nm,1.0s,baz=96,slow=2.0,SNR=3.8
VNDA Vanda 79.92 172 P P 03 20 03.2 +0.3
MAK Makhachkala 80.25 314 *eP* P 03 20 01.9 -3.4
MAK *e* 03 23 06.1
MAK *e*S S 03 29 59.0 -3.6
MAK *e*SSS SSS 03 38 37.4
MAK pmax pmax
comp=Z,343nm,1.1s
MAK MLR MLR
comp=Z,3µm,16.0s
LGD Lagodekhi 81.00 312 P P 03 20 08.7 -0.7
MLOA Mauna Loa Obse 81.06 70 IAmb IAmb 03 20 13.9
comp=Z,334nm,1.2s
POHA Pohakuloa 81.11 70 P P 03 20 13.1 +2.4
POHA IAmb IAmb 03 20 13.9
comp=Z,168nm,1.0s
MLH Mauna Loa 81.23 70 P P 03 20 12.9 +1.5
TNA Tin City 81.25 23 P P 03 20 11.5 +1.3
baz=250
PUH Pauahi 81.39 70 IAmb IAmb 03 20 15.0
comp=Z,260nm,1.1s
GROC Groznyy 81.52 314 *eP* P 03 20 10.5 -1.6
GROC *e**PP **pP** 03 20 35.9 -1.0
GROC *e* 03 23 18.3
GROC *e*S S 03 30 11.6 -4.3
GROC *e**SS **sS** 03 30 57.4 -3.2
GROC pmax pmax
comp=Z,193nm,1.2s
GNI Garni 81.90 310 P P 03 20 14.8 +0.5
comp=Z,42nm,1.0s,baz=85,slow=0.3,SNR=10
GNI Garni 81.90 310 P P 03 20 13.5 -0.9
GNI Garni 81.90 310 *ce*P P 03 20 14.0 -0.4
GNI pmax pmax
comp=Z,128nm,1.7s
GNI Garni 81.90 310 P P 03 20 13.5 -0.9
KIRV Kirov 82.15 329 P P 03 20 14.2 -0.8
comp=Z,197nm,0.8s,baz=94,slow=0.5,SNR=75
KIRV S S 03 30 13.4 -8.3
comp=Z,3.4nm,0.4s,baz=53,slow=20,SNR=1.4
KIRV Kirov 82.15 329 *ce*P P 03 20 13.2 -1.8
KZRT Kazreti 82.31 312 P P 03 20 15.9 -0.5
GUDG Gudauri 82.38 313 P P 03 20 16.8 -0.1
ZEI Tsey 82.84 313 *eP* P 03 20 16.2 -3.1
ZEI pmax pmax
comp=Z,148nm,1.4s
BGD Bogdanovka 82.89 311 P P 03 20 19.7 +0.1
AKH Akhalkalaki 82.99 312 ⇑P P 03 20 20.2 +0.2
AKH Akhalkalaki 82.99 312 P P 03 20 19.5 -0.5
AKH pmax pmax
comp=Z,583nm,1.0s

AKH Akhalkalaki 82.99 312 P P 03 20 19.5 -0.5
GEVA Gevas 82.99 308 P P 03 20 18.9 -1.2
GEVA IAmb IAmb 03 20 21.4
comp=Z,238nm,1.0s
ONI Oni 83.15 313 P P 03 20 20.5 -0.2
KARS Kars 83.21 311 P P 03 20 21.2 0.0
KBZ Khabaz 83.68 314 P P 03 20 22.6 -0.6
comp=Z,64nm,1.0s,baz=52,slow=19
KBZ Khabaz 83.68 314 *ce*P P 03 20 21.8 -1.5
KBZ pmax pmax
comp=Z,86nm,1.0s
GOF Gofitskoye 83.73 315 ⇑*i*P P 03 20 23.0 -0.5
GOF *i* S S 03 30 34.5 -3.8
GOF pmax pmax
comp=Z,103nm,0.9s
GOF smax smax
comp=N,58nm,1.5s
KVAR Kislovodsk Arr 83.85 314 P P 03 20 23.8 -0.6
comp=N,6.1nm,0.7s,baz=75,slow=20,SNR=5.5
KIV Kislovodsk 83.86 314 ⇑P P 03 20 23.5 -0.8
KIV Kislovodsk 83.86 314 *i* P P 03 20 23.4 -0.9
SNR=6.3
KIV Kislovodsk 83.86 314 *eP* P 03 20 23.6 -0.8
KIV pmax pmax
comp=Z,167nm,1.0s
KIV Kislovodsk 83.86 314 P P 03 20 22.7 -1.7
RDOG Red Dog Mine 83.91 21 IAmb IAmb 03 20 27.0
comp=Z,162nm,1.0s
CHVG Ch'k'valeri 84.17 313 ⇑P P 03 20 25.7 -0.1
CHVG Ch'k'valeri 84.17 313 ⇑P P 03 20 25.7 -0.1
KOPT Kop Dagi 85.12 310 IAmb IAmb 03 20 41.4
comp=Z,90nm,1.0s
VRH Novokhopyorsk 85.29 321 *eP* P 03 20 29.4 -1.8
VRH pmax pmax
comp=Z,290nm,1.0s
TTA Tatalina 85.62 27 P P 03 20 33.8 +1.1
TTA pmax pmax
comp=Z,141nm,1.9s
TTA Tatalina 85.62 27 P P 03 20 33.8 +1.1
TTA IAmb IAmb 03 21 05.3
comp=Z,141nm,1.9s
KTUT Trabzon 85.75 311 ⇑P P 03 20 32.9 -0.8
KIBK Kibwezi 85.93 268 P P 03 20 35.8 +0.5
SNR=12
SOC Sochi 85.97 314 *eP* P 03 20 31.7 -3.1
SOC *e*PPP PPP 03 25 50.0
SOC *e*S **SKSac** 03 30 51.9 +0.2
SOC pmax pmax
comp=Z,118nm,1.0s
OHAK Old Harbor 86.22 33 IAmb IAmb 03 21 05.5
comp=Z,94nm,1.0s
PPT2 Papeete2 86.55 108 *eP* P 03 20 40.9 +2.6
comp=Z,60nm,1.3s
MALT Malatya 86.62 308 P P 03 20 37.9 -0.4
KMBO Kilima Mbogo 86.72 269 P P 03 20 41.1 +1.7
comp=Z,28nm,0.8s,baz=66,slow=6.6,SNR=81
KMBO Kilima Mbogo 86.72 269 *i* P P 03 20 39.8 +0.3
SNR=45
KMBO Kilima Mbogo 86.72 269 P P 03 20 39.7 +0.3
KMBO pmax pmax
comp=Z,42nm,0.9s
KMBO Kilima Mbogo 86.72 269 P P 03 20 39.7 +0.3
A21K Barrow 86.79 18 P P 03 20 39.9 +1.7
baz=260,SNR=44
VORD Divnogorie 86.79 321 *eP* P 03 20 36.2 -2.4
VORD pmax pmax
comp=Z,220nm,0.6s
VSR Storozhevoye 86.89 321 *eP* P 03 20 37.4 -1.7
VSR pmax pmax
comp=Z,320nm,1.0s
VORR Voronezh 86.90 322 *eP* P 03 20 37.0 -2.1
VORR pmax pmax
comp=Z,700nm,1.2s
IMAR Indian Mountai 87.02 24 P P 03 20 40.1 +0.6
LPSR Galich'ya Gora 87.14 323 *eP* P 03 20 38.8 -1.5
LPSR pmax pmax
comp=Z,300nm,0.9s
KLMR Klimovskoe 87.46 331 *eP* P 03 20 37.7 -3.9
KLMR pmax pmax
comp=Z,143nm,0.8s
KLMR Klimovskoe 87.46 331 *eP* P 03 20 37.7 -3.9
KLMR AMP 03 20 44.0
comp=Z,143nm,0.8s
KLMR *e*PP **PP** 03 24 00.7 -6.8
GAZ Gaziantep 87.53 307 P P 03 20 42.1 -0.6
ASF Jabal al Asfar 87.63 302 P P 03 20 43.0 -0.2
comp=Z,17nm,0.9s,baz=52,slow=11,SNR=22
ANN Anapa 87.68 315 *eP* P 03 20 41.1 -1.9
ANN pmax pmax
comp=Z,332nm,0.9s
BRLK Bradley Lake 87.71 30 IAmb IAmb 03 20 46.7
comp=Z,52nm,0.8s
SYO Syowa Base 87.80 201 ⇑*i*P P 03 20 42.0 -1.1
SYO Syowa Base 87.80 201 ⇑*i*PcP PcP 03 20 48.7 +3.8
BPAW Bear Paw Mtn. 88.00 26 P P 03 20 44.3 +0.1
MOS Moscow 88.10 326 *eP* P 03 20 42.1 -2.7
MOS *e* 03 21 11.5
MOS *e*S **SKSac** 03 31 00.2 -4.0
MOS *e* 03 31 15.3
MOS pmax pmax
comp=Z,193nm,1.4s
MLY Manley 88.17 25 P P 03 20 45.7 +0.6
baz=266,SNR=22
CUT Chulitna 88.19 28 P P 03 20 45.4 +0.3
baz=266
TOKA Tokat 88.21 310 P P 03 20 45.1 -0.6
TOKA IAmb IAmb 03 20 47.0
comp=Z,76nm,1.0s
O22K Cooper Landing 88.33 30 P P 03 20 46.5 +0.7
baz=267
RC01 Rabbit Creek A 88.36 29 P P 03 20 46.4 +0.5
baz=267
TMCR Tamitsa 88.40 334 *eP* P 03 20 44.3 -1.7
TMCR pmax pmax
comp=Z,181nm,0.9s
SEW Seward 88.45 30 IAmb IAmb 03 20 56.3
comp=Z,95nm,1.2s
COLD Coldfoot 88.55 23 P P 03 20 48.0 +1.3
baz=266,SNR=59
COLD Coldfoot 88.55 23 IAmb IAmb 03 20 49.1
comp=Z,45nm,0.7s
RCY Rachaya 88.55 303 *eP* P 03 20 47.2 -0.5
LODK Lodwar 88.63 273 P P 03 20 48.8 +0.5
SNR=20
BWN Browne 88.67 26 IAmb IAmb 03 20 52.8
comp=Z,46nm,0.9s
OBN Obninsk 88.67 325 ⇑P P 03 20 46.5 -1.0
OBN Obninsk 88.67 325 *c i*P P 03 20 45.9 -1.6
OBN 03 24 14.0
OBN *i* S **SKSac** 03 31 03.0 -4.6
OBN *e* 03 31 21.0
OBN pmax pmax
comp=Z,288nm,1.7s
OBN MLR MLR
comp=Z,5µm,21.0s
OBN Obninsk 88.67 325 P P 03 20 46.5 -1.0
OBN IAmb IAmb 03 20 47.3
comp=Z,136nm,0.9s
QRWL Qaraoun 88.68 303 *eP* P 03 20 47.6 -0.6
I23K Minto, Yukon-K 88.77 25 P P 03 20 48.4 +0.7
baz=267,SNR=30
I23K Minto, Yukon-K 88.77 25 IAmb IAmb 03 20 49.7
comp=Z,45nm,0.9s
DQRL Deir Qamar 88.78 304 *eP* P 03 20 48.2 -0.5
NEA2 Nenana 88.86 26 P P 03 20 48.4 +0.2
baz=267
MCK McKinley 88.88 26 P P 03 20 48.4 0.0
baz=267,SNR=20
TOLK Toolik Lake Re 88.88 21 P P 03 20 49.7 +1.4
baz=267,SNR=22
TOLK Toolik Lake Re 88.88 21 IAmb IAmb 03 20 50.6
comp=Z,58nm,1.2s
RND Reindeer 88.90 27 IAmb IAmb 03 20 51.5
comp=Z,47nm,0.9s
MMAI Mount Meron Ar 88.91 303 P P 03 20 48.8 -0.4
comp=Z,46nm,0.7s,baz=80,slow=6.9,SNR=64
KNK Knik Glacier 89.00 29 IAmb IAmb 03 20 55.2
comp=Z,45nm,0.9s
SML Sawmill 89.07 28 IAmb IAmb 03 20 53.1
comp=Z,70nm,1.1s
EIL Eiat 89.25 300 P P 03 20 50.5 -0.3
comp=Z,36nm,0.8s,baz=354,slow=2.1,SNR=25
TCOL CIGO, UAF Yank 89.39 25 P P 03 20 50.4 -0.2
baz=268
COLA College 89.39 25 *i* P P 03 20 49.9 -0.8

COLA pmax pmax
comp=Z,11nm,0.9s
COLA College 89.39 25 P P 03 20 50.1 -0.6
SCM Sheep Creek Mo 89.55 28 IAmb IAmb 03 20 55.6
comp=Z,40nm,0.8s
POKR Poker Plat Res 89.58 25 P P 03 20 53.3 +1.7
baz=269
QSPA South Pole Qui 89.74 180 P P 03 20 53.2 +0.8
comp=Z,5.0nm,0.9s,baz=316,slow=1.9,SNR=14
QSPA PKPPKP **P'P'df** 03 46 33.2 -0.1
comp=Z,2.9nm,1.1s,baz=194,slow=1.9,SNR=4.5
QSPA South Pole Qui 89.74 180 P P 03 20 52.9 +0.5
QSPA IAmb IAmb 03 21 22.4
comp=Z,114nm,1.8s
HDA Harding Lake 89.77 26 P P 03 20 51.8 -0.7
baz=269,SNR=28
ILAR Eielson Array 89.80 25 P P 03 20 51.1 -1.5
comp=Z,4.1nm,0.5s,baz=251,slow=4.6,SNR=76
ILAR S **SKSac** 03 31 09.6 -4.4
comp=Z,1.5nm,1.1s,baz=225,slow=4.8,SNR=1.7
ILAR PKKP **PKKPdf** 03 38 22.1 -0.7
comp=Z,1.1nm,0.8s,baz=82,slow=1.7,SNR=6.4
ILAR Eielson Array 89.80 25 P P 03 20 51.3 -1.3
ILAR Eielson Array 89.80 25 P P 03 20 51.3 -1.3
LVZ Lovozero 89.92 338 *ce*P P 03 20 51.6 -1.6
LVZ pmax pmax
comp=Z,119nm,1.7s
FID Port Fidalgo 89.94 29 IAmb IAmb 03 20 59.0
comp=Z,43nm,1.0s
SIM Simferopol' 90.04 315 *eP* P 03 20 51.3 -2.9
SIM pmax pmax
comp=Z,29nm,0.5s
M24K Tolsona, Glenn 90.10 28 P P 03 20 55.4 +1.3
baz=270,SNR=11
M24K Tolsona, Glenn 90.10 28 IAmb IAmb 03 20 59.0
comp=Z,70nm,0.8s
BZK Bozkurt 90.11 312 ⇑P P 03 20 53.8 -0.7
BR131 Keskin Array S 90.39 310 *c i*P P 03 20 54.5 -1.6
BRTR Keskin Array B 90.39 310 P P 03 20 54.5 -1.6
comp=Z,36nm,0.9s,baz=122,slow=4.7,SNR=64
BRTR PP **PP** 03 24 28.9 -2.8
comp=Z,14nm,1.0s,baz=119,slow=7.2,SNR=7.1
BRTR Keskin Array B 90.39 310 P P 03 20 54.2 -1.9
APA Apatity 90.40 337 ⇑*i*P P 03 20 52.6 -2.7
APA pmax pmax
comp=Z,46nm,0.9s
CSS Mathiatis 90.64 305 IAmb IAmb 03 20 59.7
comp=Z,106nm,1.1s
RIDG Independent Ri 90.70 26 IAmb IAmb 03 20 58.1
comp=Z,33nm,0.8s
BMAR Burnt Mountain 90.73 23 P P 03 20 58.3 +1.3
N25K Chitina, Valde 90.85 29 P P 03 20 58.8 +1.1
baz=271,SNR=7.1
LEF Lefka 91.00 305 ⇑P P 03 21 00.3 +1.5
SCRK Sand Creek 91.07 26 P P 03 20 59.4 +0.7
baz=272,SNR=13
GLB Gilahina Butte 91.23 29 P P 03 20 59.8 +0.4
L26K Log Cabin Wild 91.39 27 P P 03 21 01.1 +1.0
baz=272,SNR=7.8
CRQM Cirque 91.58 29 P P 03 21 01.9 +0.7
CRQM IAmb IAmb 03 21 06.8
comp=Z,25nm,0.7s
MCARA McCarthy VSAT 91.61 29 IAmb IAmb 03 21 08.1
comp=Z,43nm,0.8s
TGL Tana Glacier 91.73 29 P P 03 21 02.8 +1.0
TGL IAmb IAmb 03 21 05.8
comp=Z,28nm,0.8s
K27K Chicken 91.91 26 P P 03 21 04.2 +1.8
baz=274
K27K Chicken 91.91 26 IAmb IAmb 03 21 06.7
comp=Z,35nm,0.9s
BALM Baldy 91.96 29 P P 03 21 04.2 +1.3
BALM pmax pmax
comp=Z,18nm,0.8s
BALM Baldy 91.96 29 P P 03 21 03.7 +0.8
ISLE Juniper Island 91.98 30 P P 03 21 03.9 +0.9
ISLE IAmb IAmb 03 21 26.4
comp=Z,32nm,0.9s
PUL Pulkovo 92.02 330 *ce*P P 03 21 01.6 -1.4
PUL pmax pmax
comp=Z,109nm,0.9s
BCAR Beaver Creek A 92.10 27 P P 03 21 04.4 +1.0
MDUB Mudurnu 92.25 310 P P 03 21 03.4 -1.2
EGAK Eagle 92.26 25 IAmb IAmb 03 21 05.8
comp=Z,40nm,1.3s
BARN Barnard Glacie 92.29 29 P P 03 21 05.7 +1.1
BARN IAmb IAmb 03 21 09.8
comp=Z,44nm,0.7s
YAH Yahtse 92.29 30 IAmb IAmb 03 21 17.8
comp=Z,80nm,1.4s
CTGM Chitina Glacie 92.45 29 P P 03 21 06.1 +0.9
CTGM IAmb IAmb 03 21 08.5
comp=Z,46nm,0.8s
TABL Table Mountain 92.58 30 IAmb IAmb 03 21 18.8
comp=Z,45nm,0.9s
ISP Isparta 92.85 308 IAmb IAmb 03 21 06.8
comp=Z,69nm,1.0s
PURM Purcari 92.97 316 ⇑P P 03 21 07.9 +0.2
PCA Pinnacle 93.05 30 IAmb IAmb 03 21 10.8
comp=Z,33nm,0.8s
DAWY Dawson 93.08 26 IAmb IAmb 03 21 10.1
comp=Z,37nm,1.1s
ARCES ARCESS Array B 93.15 340 P P 03 21 06.8 -1.3
comp=Z,40nm,0.8s,baz=93,slow=3.1,SNR=41
AKASG Malin Array Be 93.17 321 P P 03 21 06.3 -2.2
comp=Z,42nm,0.9s,baz=69,slow=4.7,SNR=90
AKASG PP **PP** 03 24 50.3 -2.8
comp=Z,11nm,0.9s,baz=69,slow=8.0,SNR=5.3
AKASG Malin Array Be 93.17 321 P P 03 21 06.6 -1.9
AKBB Malin Array Si 93.17 321 *ce*P P 03 21 06.2 -2.3
MBAR Mbarara 93.24 269 *i* P P 03 21 08.6 -1.3
MBAR Mbarara 93.24 269 P P 03 21 09.6 -0.2
MBAR IAmb IAmb 03 21 11.2
comp=Z,53nm,1.2s
MILM Milestii Mici 93.68 317 ⇑P P 03 21 08.3 -2.6
MICGM Minsk 93.71 324 ⇓*eP* P 03 21 09.0 -1.9
MICGM PM 03 21 10.0
comp=Z,0.7nm,0.8s
MICGM *e* 03 31 35.0
MNK Minsk 93.71 324 *eP* P 03 21 09.0 -1.9
MNK *e* 03 31 35.0
MNK pmax pmax
comp=Z,670nm,0.8s
SPITS Spitsbergen Ar 93.77 349 P P 03 21 10.1 -0.7
SPITS pmax pmax
comp=Z,21nm,0.4s
TLCR 93.79 315 ⇑P P 03 21 08.5 -3.0
TLCR 93.79 315 ⇑P P 03 21 08.5 -3.0
SORM Soroca 93.91 318 ⇓P P 03 21 10.4 -1.6
SORM Soroca 93.91 318 ⇓P P 03 21 10.4 -1.6
EPYK Eagle Plains 93.91 23 P P 03 21 12.5 +0.8
baz=278
FIA1 FINESS Array S 93.96 332 IAmb IAmb 03 21 14.2
comp=Z,30nm,0.8s
FINES FINESS Array B 93.96 332 P P 03 21 10.2 -1.7
comp=Z,19nm,0.7s,baz=75,slow=4.5,SNR=41
FINES FINESS Array B 93.96 332 P P 03 21 10.4 -1.4
VSU Vasula 93.97 328 *eP* P 03 21 10.7 -1.3
VSU Vasula 93.97 328 *i* P P 03 21 10.1 -1.9
VSU pmax pmax
comp=Z,222nm,1.0s
TPGR Topolog 94.09 315 ⇑P P 03 21 09.4 -3.5
TIRR Tirgusor 94.12 314 ⇑P P 03 21 11.8 -1.2
TIRR Tirgusor 94.12 314 ⇑P P 03 21 11.8 -1.2
TIRR Tirgusor 94.12 314 IAmb IAmb 03 21 13.7
comp=Z,68nm,1.1s
CFR Carcaliu 94.27 315 ⇓P P 03 21 11.9 -1.8
CFR Carcaliu 94.27 315 ⇓P P 03 21 11.9 -1.8
IDID Didziasalis 94.29 325 *eP* P 03 21 13.0 -0.3
HSPB Hornsund (broa 94.30 348 *eP* P 03 21 12.6 -0.5
NACGM Naroch 94.31 325 *eP* P 03 21 12.0 -1.6
NACGM PM 03 21 14.0
comp=Z,0.6nm,1.0s
HYT Haines Junctio 94.33 29 IAmb IAmb 03 21 16.9
comp=Z,27nm,0.7s
KBS Kingsbay 94.35 350 *i* P P 03 21 12.6 -0.8
KBS IAmb IAmb 03 21 13.2
comp=Z,180nm,0.9s
TLBR Topalu 94.37 314 ⇑P P 03 21 12.8 -1.4
VASR Vaslui 94.40 317 ⇑P P 03 21 13.1 -1.2
VARL Varlezi 94.42 316 ⇑P P 03 21 13.7 -0.7
HARR Harsova 94.44 315 ⇑P P 03 21 13.1 -1.4
HARR Harsova 94.44 315 ⇑P P 03 21 13.1 -1.4
IZAR Zarasai 94.52 326 *eP* P 03 21 14.1 -0.6
ICOR Ion Corvin 94.58 314 ⇑P P 03 21 13.6 -1.6

IIGN Ignalina 94.58 325 *e*P **P** **03 21 14.5 -0.4**
ISAL Salakas 94.61 326 *e*P **P** **03 21 14.4 -0.6**
INK Inuvik 94.79 21 P **P** **03 21 15.2 -0.3**
comp=Z,84nm,1.2s,baz=124,slow=12,SNR=7.9
INK S **SKSac** **03 31 40.3 -1.4**
comp=Z,5.0nm,1.2s,baz=272,slow=29,SNR=11
INK Inuvik 94.79 21 IAmb IAmb 03 21 16.8
comp=Z,64nm,1.3s
PETR Petresti 94.86 316 ⇑P **P** **03 21 16.9 +0.5**
TESR Tescani 95.19 317 ⇓P **P** **03 21 17.0 -1.0**
VRI Vrincioaia 95.20 316 ⇑P **P** **03 21 16.7 -1.3**
VRI Vrincioaia 95.20 316 ⇑P **P** **03 21 16.7 -1.3**
BISRR Bisoca 95.24 316 ⇑P **P** **03 21 18.4 +0.1**
PLOR Plostina 95.25 316 ⇑P **P** **03 21 16.8 -1.5**
PLOR Plostina 95.25 316 ⇑P **P** **03 21 16.8 -1.5**
PRAR RASCA 95.40 317 ⇑P **P** **03 21 17.2 -1.7**
BIZ Bicaz 95.53 317 ⇓P **P** **03 21 18.5 -0.9**
LSZ Lusaka 95.54 255 P **P** **03 21 19.5 -0.8**
LSZ pmax pmax
comp=Z,128nm,0.8s
LSZ Lusaka 95.54 255 P **P** **03 21 19.5 -0.8**
NEHR Nehoiu 95.54 315 ⇑P **P** **03 21 18.7 -0.9**
RAZG Razgrad 95.56 314 ⇑P **P** **03 21 17.2 -2.4**
SKAG Skagway 95.60 30 IAmb IAmb 03 21 22.7
comp=Z,33nm,0.8s
WHY Whitehorse 95.63 29 IAmb IAmb 03 21 22.9
comp=Z,41nm,0.8s
SULR 95.64 315 ⇑P **P** **03 21 18.9 -1.1**
MLR Muntele Rosu 95.78 316 P **P** **03 21 19.6 -1.2**
comp=Z,31nm,0.9s,baz=54,slow=2.0,SNR=34
MLR Muntele Rosu 95.78 316 ⇑P **P** **03 21 19.3 -1.4**
OZUR 95.83 316 ⇑P **P** **03 21 20.2 -0.7**
PABE Paberze 95.83 326 *e*P **P** **03 21 20.0 -0.6**
SGRR Singureni 95.88 314 ⇑P **P** **03 21 19.8 -1.3**
BESE Bessie Mountai 95.99 31 IAmb IAmb 03 22 12.0
comp=Z,51nm,1.4s
BURAR Bucovina Array 96.06 318 ⇑P **P** **03 21 21.1 -0.9**
BURAR Bucovina Array 96.06 318 ⇑P **P** **03 21 21.1 -0.9**
BURAR Bucovina Array 96.06 318 P **P** **03 21 21.1 -0.9**
BUR08 Bucovina Ar. S 96.07 318 IAmb IAmb 03 21 22.8
comp=Z,54nm,0.8s
DOPR Dopca 96.12 316 ⇑P **P** **03 21 21.5 -0.7**
VOIR 96.41 316 ⇑P **P** **03 21 20.9 -2.7**
VOIR 96.41 316 ⇑P **P** **03 21 20.9 -2.7**
COPA Copaceanca 96.43 314 ⇑P **P** **03 21 20.6 -2.9**
SUW Suwalki 96.50 324 *e*P **P** **03 21 22.7 -1.0**
STFAR Stefanesti-Arg 96.54 315 ⇑P **P** **03 21 22.8 -1.3**
HUMR Humele 96.56 315 ⇓P **P** **03 21 22.5 -1.7**
LVV L'vov 96.57 320 *e*P **P** **03 21 21.5 -2.6**
ARCR ARCALIA 96.70 317 ⇓P **P** **03 21 24.4 -0.4**
ARR Arges 96.71 316 ⇓P **P** **03 21 23.5 -1.5**
MDB Medias 96.80 316 ⇑P **P** **03 21 25.3 +0.1**
MDB Medias 96.80 316 ⇑P **P** **03 21 25.3 +0.1**
PBUR Paburge 96.89 326 *e*P **P** **03 21 24.4 -1.0**
PLD Plovdiv 97.02 312 P Pdif 03 21 29.7 +3.3
PLD pmax pmax
comp=Z,541nm,1.7s
VLAD Vladila 97.03 314 ⇑P **P** **03 21 25.1 -1.2**
BMR Baia Mare 97.21 318 ⇑P **P** **03 21 26.8 -0.2**
BMR Baia Mare 97.21 318 ⇑P **P** **03 21 26.8 -0.2**
CJR Cluj-Napoca 97.26 317 ⇓P **P** **03 21 27.2 -0.2**
CJR Cluj-Napoca 97.26 317 ⇓P **P** **03 21 27.2 -0.2**
LOT Lotru 97.31 316 ⇑P **P** **03 21 26.9 -0.8**
KWP Kalwaria Pacla 97.45 320 *e*P **P** **03 21 27.6 -0.5**
IDI Anoyia 97.54 305 P **P** **03 21 27.5 -1.4**
comp=Z,24nm,0.8s,baz=71,slow=3.2,SNR=11
IDI Anoyia 97.54 305 ⇑P **P** **03 21 27.7 -1.2**
IDI Anoyia 97.54 305 IAmb IAmb 03 21 30.6
comp=Z,26nm,0.9s
BOSA Boshof 97.57 241 P **P** **03 21 28.0 -1.3**
comp=Z,9.7nm,0.9s,baz=101,slow=4.8,SNR=9.1
BOSA Boshof 97.57 241 IAmb IAmb 03 21 55.4
comp=Z,73nm,1.9s
C36M Paulatuk 97.80 19 P Pdif 03 21 29.6 +0.4
baz=291
KOLS Kolonicke sedl 97.83 319 *e*P **P** **03 21 29.2 -0.7**
KOLS Kolonicke sedl 97.83 319 *e*PDIFF **P** **03 21 29.2 -0.7**
DEV Deva 97.85 316 ⇓P **P** **03 21 29.4 -0.6**
DEV Deva 97.85 316 ⇓P **P** **03 21 29.4 -0.6**
UZH Uzhgorod 97.87 319 *e*P **P** **03 21 27.6 -2.4**
UZH *e* 03 21 41.8
GZR Gura Zlata 98.01 316 ⇓P **P** **03 21 29.7 -1.1**
GZR Gura Zlata 98.01 316 ⇓P **P** **03 21 29.7 -1.1**
BEL Belsk 98.29 322 *e*P **P** **03 21 31.2 -0.6**
HERR Herculane 98.33 315 ⇑P **P** **03 21 30.8 -1.3**
CRVS Cervenica-Dubn 98.37 319 *e*P **P** **03 21 31.9 -0.4**
CRVS Cervenica-Dubn 98.37 319 *e*PDIFF **P** **03 21 31.9 -0.4**
SIRR Siria 98.65 317 ⇑P **P** **03 21 32.1 -1.5**
VAY Valandovo 98.70 312 *i* P **P** **03 21 31.5 -2.4**
VAY Valandovo 98.70 312 P **P** **03 21 32.1 -1.8**
VAY pmax pmax
comp=Z,86nm,1.6s
BZS Buzias 98.78 316 ⇑P **P** **03 21 32.7 -1.4**
BZS Buzias 98.78 316 ⇑P **P** **03 21 32.7 -1.4**
GRG Griva 98.87 311 P **P** **03 21 32.7 -2.0**
LIT Litokhoron 98.91 310 P **P** **03 21 32.3 -2.6**
LIT Litokhoron 98.91 310 IAmb IAmb 03 21 33.0
comp=Z,28nm,1.0s
NIE Niedzica 99.03 320 *e*P **Pdif** **03 21 35.2 0.0**
KECS Kecovo 99.08 319 *e*P **Pdif** **03 21 34.7 -0.7**
KECS Kecovo 99.08 319 *e*PDIFF **Pdif** **03 21 34.7 -0.7**
BANR Banloc 99.15 316 ⇑P **Pdif** **03 21 34.3 -1.5**
AGG Agios Georgios 99.17 309 P **Pdif** **03 21 34.6 -1.5**
PSZ Piszkesteto 99.57 319 ⇑P **Pdif** **03 21 35.7 -2.0**
PSZ Piszkesteto 99.57 319 P **Pdif** **03 21 36.7 -1.0**
PSZ pmax pmax
comp=Z,24nm,1.1s
PSZ Piszkesteto 99.57 319 Pdif **Pdif** **03 21 36.7 -1.0**
PSZ IAmb IAmb 03 21 37.8
comp=Z,24nm,1.1s
LANS Liptovska Anna 99.62 320 *e*P **Pdif** **03 21 37.6 -0.3**
LANS Liptovska Anna 99.62 320 *e*PDIFF **Pdif** **03 21 37.6 -0.3**
HFS Hagfors 100.16 332 P **Pdif** **03 21 38.0 -2.0**
comp=Z,10nm,0.7s,baz=126,slow=3.8,SNR=33
HFS Hagfors 100.16 332 P **Pdif** **03 21 38.0 -2.0**
BUD Budapest 100.22 318 P **Pdif** **03 21 40.9 +0.4**
BUD pmax pmax
comp=Z,19nm,1.0s
OKC Ostrava-Krasne 100.32 321 *e*P **Pdif** **03 21 40.5 -0.4**
OKC Ostrava-Krasne 100.32 321 *e*PDIFF **Pdif** **03 21 40.5 -0.4**
OKC *e*PDIFF **Pdif** **03 21 40.6 -0.4**
SRO Srobarova 100.63 319 *e*P **Pdif** **03 21 42.1 -0.2**
IGT Igoumenitsa 100.64 310 P **Pdif** **03 21 40.4 -2.2**
IGT pmax pmax
comp=Z,114nm,1.2s
MORC Moravsky Berou 100.72 321 ⇓P **Pdif** **03 21 42.4 -0.4**
MORC Moravsky Berou 100.72 321 *e*PDIFF **Pdif** **03 21 41.7 -1.1**
MORC *e*PP **PP** **03 25 51.5 +0.4**
MORC Moravsky Berou 100.72 321 ⇓P **Pdif** **03 21 42.4 -0.4**
DAG Danmarks Havn 100.74 352 *i* P **Pdif** **03 21 41.4 -0.8**
DAG pmax pmax
comp=Z,20nm,0.8s
DAG Danmarks Havn 100.74 352 *i* P **Pdif** **03 21 41.4 -0.8**
comp=Z,20nm,0.8s
DAG Danmarks Havn 100.74 352 *i* P **Pdif** **03 21 41.4 -0.8**
DAG IAmb IAmb 03 21 41.9
comp=Z,20nm,0.8s
SNAA Sanae 100.74 195 Pdiff **Pdif** **03 21 43.1 +0.6**
JAVC Velka Javorina 100.83 320 *e*PDIFF **Pdif** **03 21 43.1 -0.2**
JAVC *e*PP **PP** **03 25 52.1 0.0**
BSD Bornholm Skovb 100.98 326 *i* P **Pdif** **03 21 43.0 -0.6**
BSD pmax pmax
comp=Z,86nm,1.0s
BSD Bornholm Skovb 100.98 326 *i* P **Pdif** **03 21 43.0 -0.6**
comp=Z,86nm,1.0s
BSD Bornholm Skovb 100.98 326 *i* P **Pdif** **03 21 43.0 -0.6**
BSD IAmb IAmb 03 21 43.5
comp=Z,86nm,1.0s
PDG Podgorica 100.98 313 ⇑P **Pdif** **03 21 38.1 -5.9**
NORES NORESS Array B 100.98 332 P **Pdif** **03 21 47.4 +3.8**
NB2 NORSAR Subarra101.03 333 P **Pdif** **03 21 41.4 -2.5**
comp=Z,24nm,1.1s,baz=74,slow=4.4
NB2 NORSAR Subarra101.03 333 P **Pdif** **03 21 41.4 -2.5**
baz=74,slow=4.4
NOA NORSAR Array B 101.03 333 P **Pdif** **03 21 42.3 -1.5**
comp=Z,10nm,0.9s,baz=74,slow=4.5,SNR=25
MODS Modra-Piesok 101.19 319 *e*P **Pdif** **03 21 43.4 -1.5**
KSP Ksiaz 101.26 322 *e*P **Pdif** **03 21 45.0 0.0**
DPC Dobruska-Polom 101.36 321 *e*P **Pdif** **03 21 45.4 -0.2**
DPC *e* 03 25 56.1
DPC Dobruska-Polom 101.36 321 *e*PDIFF **Pdif** **03 21 45.4 -0.2**
DPC *e*PP **PP** **03 25 56.1 +0.2**
OSTC Ostas 101.37 322 *e*PDIFF **Pdif** **03 21 45.1 -0.5**
OSTC *e*PP **PP** **03 25 58.8 +2.8**
VRAC Vranov 101.43 320 P **Pdif** **03 21 45.7 -0.2**
comp=Z,10nm,1.0s,baz=78,slow=5.0,SNR=10
VRAC Vranov 101.43 320 ⇓P **Pdif** **03 21 45.4 -0.5**
VRAC Vranov 101.43 320 *e*PDIFF **Pdif** **03 21 45.0 -0.9**
VRAC *e*PP **PP** **03 25 55.6 -0.8**
CHVC Chvalec 101.47 322 *e*PDIFF **Pdif** **03 21 45.6 -0.4**
UPC Upice 101.51 322 *e*P **Pdif** **03 21 45.9 -0.3**
UPC *e* 03 25 59.6
UPC Upice 101.51 322 *e*PDIFF **Pdif** **03 21 45.9 -0.3**
UPC *e*PP **PP** **03 25 59.6 +2.6**
KRUC Moravsky 101.61 320 *e*PDIFF **Pdif** **03 21 45.7 -1.0**
KRUC *e*PP **PP** **03 25 56.1 -1.7**
CONA Conrad Observa 102.22 319 *e*P **Pdif** **03 21 49.3 -0.2**
comp=Z,7.6nm,1.2s
CONA P **PP** **03 26 03.2 +0.7**
comp=Z,22nm,1.0s
RUE Ruedersdorf 102.35 324 *e*P **Pdif** **03 21 49.7 -0.1**
PRU Pruhonice 102.55 321 *e*P **Pdif** **03 21 50.3 -0.5**
PRU *e* 03 26 07.0
PRU Pruhonice 102.55 321 *e*PDIFF **Pdif** **03 21 50.3 -0.5**
PRU *e*PP **PP** **03 26 07.0 +2.2**
ARSA Arzberg 102.60 319 *e*P **Pdif** **03 21 50.9 -0.2**
comp=Z,6.4nm,1.3s
ARSA *e*P **PP** **03 26 05.1 -0.3**
comp=Z,13nm,1.2s
BRG Berggiesshubel 102.69 322 *e*PDIFF **Pdif** **03 21 51.8 +0.4**
comp=Z,26nm,1.1s
BRG Berggiesshubel 102.69 322 *e*PKP **PKiKP** **03 26 09.3 -2.5**
comp=Z,19nm,1.2s
BRG Berggiesshubel 102.69 322 *e*P **Pdif** **03 21 51.8 +0.4**
BRG *e* 03 26 09.3
BRG pmax pmax
comp=Z,26nm,1.1s
BRG pmax pmax
comp=Z,19nm,1.2s
BRG Berggiesshubel 102.69 322 *e*Pdiff **Pdif** **03 21 51.4 0.0**
baz=73,slow=4.6
DBG Daneborg 102.94 351 *i* P **Pdif** **03 21 51.8 -0.2**
DBG IAmb IAmb 03 21 52.9
comp=Z,22nm,1.0s
PBCC Pribram 102.97 321 *e*PDIFF **Pdif** **03 21 52.2 -0.5**
PBCC *e*PP **PP** **03 26 09.4 +1.4**
FBE Freiberg 103.03 323 *e*Pdiff **Pdif** **03 21 53.1 +0.2**
baz=73,slow=4.6
SOKA Soboth 103.06 318 *e*P **Pdif** **03 21 52.4 -0.9**
comp=Z,5.5nm,1.1s
SOKA *e*P **PKiKP** **03 26 12.1 -0.7**
comp=Z,25nm,1.3s
SOKA *e*S **SKSac** **03 32 25.9 +1.8**
comp=Z,4.6nm,1.2s
CLL Collm 103.14 323 *i* Pdif **Pdif** **03 21 52.2 -1.2**
comp=Z,48nm,1.9s
CLL *i* 03 22 03.9
CLL *e* 03 26 02.0
CLL *e*P **PKiKP** **03 26 11.0 -1.6**
CLL Collm 103.14 323 *i* P **Pdif** **03 21 52.2 -1.2**
CLL *e* 03 26 11.0
CLL pmax pmax
comp=Z,48nm,1.9s
CLL Collm 103.14 323 *e*Pdiff **Pdif** **03 21 52.8 -0.6**
baz=73,slow=4.6
MOA Molln 103.28 319 *e*P **Pdif** **03 21 54.1 0.0**
comp=Z,14nm,1.1s,SNR=6.3
MOA P **PP** **03 26 08.4 -2.0**
comp=Z,8.9nm,1.0s
GEC2 GERESS Array S 103.38 320 *e*Pdiff **Pdif** **03 21 54.4 -0.3**
baz=73,slow=4.6
GERES GERESS Array B 103.38 320 Pdiff **Pdif** **03 21 53.5 -1.1**
comp=Z,5.3nm,1.0s,baz=74,slow=4.7,SNR=22
GERES PP **PP** **03 26 08.1 -3.1**
comp=Z,3.4nm,0.9s,baz=79,slow=6.9,SNR=5.8
GERES PKiKP **PKiKP** **03 26 13.9 +0.7**
comp=Z,4.6nm,0.9s,baz=85,slow=1.5,SNR=5.7
KHC Kasperske Hory 103.39 321 *e*P **Pdif** **03 21 53.6 -1.0**
KHC *e* 03 26 12.0
KHC Kasperske Hory 103.39 321 *e*PDIFF **Pdif** **03 21 53.6 -1.0**
KHC *ex* x 03 22 51.5
KHC *ex* x 03 26 12.0
KHC *e*PP **PKiKP** **03 26 13.2 0.0**
TULEG Thule 103.40 3 *i* P **Pdif** **03 21 53.5 -0.6**
TULEG IAmb IAmb 03 21 55.0
comp=Z,18nm,1.1s
OBKA Obir 103.43 318 *e*P **Pdif** **03 21 53.4 -1.5**
comp=Z,6.8nm,1.1s
OBKA *e*P **PKiKP** **03 26 12.6 -0.8**
comp=Z,20nm,1.3s
OBKA *e*S **SKSac** **03 32 27.1 +1.2**
comp=Z,8.0nm,1.4s
TIP Timpagrande 103.43 310 ⇑P **Pdif** **03 21 54.5 -0.6**
TANN Tannenbergstha 103.72 322 *e*Pdiff **Pdif** **03 21 55.9 -0.2**
baz=73,slow=4.6
NKC Novy Kostel 103.78 322 *e*P **Pdif** **03 21 55.9 -0.4**
NKC Novy Kostel 103.78 322 *e*PDIFF **Pdif** **03 21 55.9 -0.4**
WERN Wernitzgruen 103.81 322 *e*Pdiff **Pdif** **03 21 56.4 0.0**
baz=73,slow=4.6
GUNZ Gunzen 103.82 322 *e*Pdiff **Pdif** **03 21 56.5 0.0**
baz=73,slow=4.6
WET Wettzell 103.82 321 *e*Pdiff **Pdif** **03 21 56.5 -0.1**
baz=73,slow=4.6
BSEG Bad Segeberg 103.89 326 *e*Pdiff **Pdif** **03 21 57.3 +0.7**
baz=73,slow=4.6
PLN Plauen 103.89 322 *e*Pdiff **Pdif** **03 21 56.6 -0.2**
baz=73,slow=4.6
NEUB Neuenburg 103.91 323 *e*Pdiff **Pdif** **03 21 56.7 -0.1**
baz=73,slow=4.6
MYKA Terra Mystica 104.00 318 *e*S **SKSac** **03 32 26.7 -1.8**
comp=Z,35nm,1.6s
ROTZ Rotzenmuhle 104.07 322 *e*Pdiff **Pdif** **03 21 57.8 +0.2**
baz=73,slow=4.6
KBA Koelnbreinsper 104.08 319 *e*P **PKiKP** **03 26 16.9 +2.2**
comp=Z,14nm,1.1s
KBA *e*S **SKSac** **03 32 26.2 -2.8**
comp=Z,19nm,1.6s
MOX Moxa 104.17 323 *e*Pdiff **Pdif** **03 21 58.0 -0.1**
baz=73,slow=4.6
YKA Yellowknife Ar 104.18 24 Pdiff **Pdif** **03 21 58.9 +1.1**
comp=Z,3.1nm,1.1s,baz=313,slow=3.8,SNR=6.4
YKA PKiKP **PKiKP** **03 26 15.0 +0.8**
comp=Z,0.7nm,0.4s,baz=313,slow=0.9,SNR=10.0
YKA PKKPbc **PKKPbc** **03 37 45.8 -2.5**
comp=Z,2.4nm,0.8s,baz=121,slow=2.5,SNR=7.7
NRDL Niedersach Rie 104.48 325 *e*Pdiff **Pdif** **03 22 00.1 +0.8**
baz=73,slow=4.6
CLZ Clausthal 104.54 324 *e*Pdiff **Pdif** **03 21 59.9 +0.2**
baz=73,slow=4.6
GRF Grafenberg Arr 104.70 322 *e*Pdiff **Pdif** **03 22 00.4 0.0**
baz=73,slow=4.6
GRF *e*PP **PP** **03 26 23.1 +2.3**
baz=76,slow=6.5
ABTA Abfaltersbach 104.72 319 *e*P **Pdif** **03 21 59.5 -1.2**
comp=Z,6.5nm,1.0s
ABTA *e*P **PKiKP** **03 26 16.1 +0.3**
comp=Z,14nm,1.1s
ABTA *e*S **SKSac** **03 32 28.6 -3.1**
comp=Z,40nm,1.4s
WTTA Wattenberg 105.15 319 *e*P **Pdif** **03 22 02.1 -0.6**
comp=Z,19nm,1.0s,SNR=5.3
WTTA *e*P **PKiKP** **03 26 17.7 +1.0**
comp=Z,21nm,1.0s
WTTA *e*S **SKSac** **03 32 31.7 -2.2**
comp=Z,12nm,1.1s
WTTA Wattenberg 105.15 319 P **Pdif** **03 22 01.6 -1.1**
WATA Walderalm 105.17 319 *e*P **Pdif** **03 22 02.0 -0.8**
comp=Z,13nm,1.1s
WATA *e*P **PKiKP** **03 26 17.4 +0.7**
comp=Z,20nm,1.5s
WATA *e*S **SKSac** **03 32 32.0 -1.9**
comp=Z,11nm,1.4s
SQTA Sankt Quirin 105.44 319 *e*P **Pdif** **03 22 03.3 -0.6**
comp=Z,14nm,1.0s
SQTA *e*P **PKiKP** **03 26 18.1 +1.0**
comp=Z,17nm,1.1s
SQTA *e*S **SKSac** **03 32 33.6 -1.5**
comp=Z,30nm,1.3s
MOTA Moosalm 105.47 319 *e*P **Pdif** **03 22 03.4 -0.7**
comp=Z,14nm,0.9s,SNR=5.5
MOTA *e*P **PKiKP** **03 26 17.8 +0.6**
comp=Z,23nm,1.2s
MOTA *e*S **SKSac** **03 32 36.1 +0.8**
comp=Z,16nm,1.3s
RETA Reutte 105.65 320 *e*P **Pdif** **03 22 04.3 -0.5**
comp=Z,8.4nm,1.3s
RETA *e*P **PKiKP** **03 26 18.2 +0.7**
comp=Z,16nm,1.6s
RETA *e*S **SKSac** **03 32 36.5 +0.6**
comp=Z,21nm,1.9s
FETA Feichten 105.81 319 *e*P **Pdif** **03 22 05.3 -0.3**
comp=Z,12nm,1.1s
FETA *e*P **PKiKP** **03 26 18.8 +0.9**
comp=Z,19nm,1.0s
TNS Taunus Mts 106.23 323 *e*Pdiff **Pdif** **03 22 07.4 +0.2**
baz=73,slow=4.6
DAVA Damuels 106.29 320 *e*P **PKiKP** **03 26 17.1 -1.6**
comp=Z,17nm,1.1s
DAVA *e*S **SKSac** **03 32 38.0 -0.9**
comp=Z,14nm,1.6s
DAVOX Davos/Dischmat 106.44 319 Pdiff **Pdif** **03 22 07.8 -0.7**
comp=Z,8.2nm,0.9s,baz=91,slow=6.8,SNR=12
KEST Kesra 109.94 308 PKiKP **PKiKP** **03 26 27.4 +1.5**
comp=Z,6.0nm,1.0s,baz=225,slow=3.7,SNR=5.3
KEST PP **PP** **03 26 59.5 -0.2**
comp=Z,51nm,0.9s,baz=302,slow=2.2,SNR=9.4
EKA Eskdalemuir Ar 110.35 331 Pdiff **Pdif** **03 22 27.9 +2.5**
comp=Z,6.4nm,1.2s,baz=46,slow=5.3,SNR=3.9
EKA PKiKP **PKiKP** **03 26 26.3 +0.4**
comp=Z,1.4nm,0.5s,baz=32,slow=2.8,SNR=12
EKA PP **PP** **03 26 58.5 -3.3**
comp=Z,8.6nm,0.9s,baz=53,slow=7.4,SNR=4.1
NVAR Mina Array Bea 111.56 48 Pdiff **Pdif** **03 22 37.0 +5.5**
comp=Z,0.8nm,0.8s,baz=267,slow=5.7,SNR=5.1
NVAR PKiKP **PKiKP** **03 26 30.4 +1.4**
comp=Z,2.1nm,0.9s,baz=279,slow=1.3,SNR=5.3
NVAR PP **PP** **03 27 11.8 +0.4**
comp=Z,7.8nm,1.0s,baz=286,slow=6.8,SNR=5.4
NVAR PKKPbc **PKKPbc** **03 37 25.1 +0.5**
comp=Z,1.5nm,0.9s,baz=137,slow=3.9,SNR=5.4
HLID Hailey 112.54 42 P **PKiKP** **03 26 32.4 +1.8**
baz=293
MPMC Manual Prospec 112.89 51 P **PKiKP** **03 26 33.7 +2.1**
baz=288
BOZ Bozeman (W) 113.51 39 P **PKiKP** **03 26 34.2 +1.8**
baz=296
EGMT Eagleton 113.55 36 P **PKiKP** **03 26 33.1 +0.8**
baz=299
R11A Troy Canyon, C 113.60 48 P **PKiKP** **03 26 35.6 +2.8**
baz=290
GSC Goldstone, Bar 113.65 51 P **PKiKP** **03 26 35.5 +2.6**
baz=288
BELC Belle Mtn. Jos 114.68 52 P **PKiKP** **03 26 38.1 +3.2**
baz=288
GMRC Granite Mounta 114.70 51 P **PKiKP** **03 26 38.3 +3.3**
baz=288
DUG Dugway, Tooele 114.94 45 P PKPdf 03 26 38.5 +3.2
baz=293
BC3 Big Chuckawall 115.22 53 P **PKPdf** **03 26 38.2 +2.2**
baz=288
MVU Marysvale 116.02 47 **PKiKP** **03 26 39.3 +1.7**
BW06 Boulder Array 116.10 41 P **PKiKP** **03 26 38.7 +1.1**
baz=297
PDAR Pinedale Array 116.10 41 PKP **PKiKP** **03 26 38.2 +0.6**
comp=Z,3.1nm,0.9s,baz=142,slow=2.1,SNR=9.7
PDAR PKKPab **PKKPab** **03 37 12.9 -0.5**
comp=Z,3.8nm,0.8s,baz=117,slow=6.1,SNR=19
PDAR Pinedale Array 116.10 41 **PKPdf** **03 26 37.4 -0.2**
TAM Tamanrasset 116.17 295 PKiKP **PKiKP** **03 26 39.1 +1.0**
TAM Tamanrasset 116.17 295 **PKiKP** **03 26 39.1 +1.0**
LAO LASA Array 116.30 36 P **PKiKP** **03 26 39.1 +1.5**
baz=301
DGMT Dagmar 116.51 34 P **PKiKP** **03 26 39.8 +1.9**
baz=304
WUAZ Wupatki 117.76 49 P **PKiKP** **03 26 43.9 +3.0**
baz=292
214A Organ Pipe Nat 117.86 54 P **PKiKP** **03 26 44.3 +3.2**
baz=289
K22A Casper 118.13 40 P **PKiKP** **03 26 42.3 +0.8**
baz=299
O20A White River Ci 118.15 43 P **PKiKP** **03 26 43.1 +1.5**
baz=296
ESDC Sonseca Array 118.47 316 PKP **PKiKP** **03 26 42.7 +0.7**
comp=Z,10nm,1.1s,baz=10,slow=3.8,SNR=21
ESDC PP **PP** **03 27 58.0 -1.7**
comp=Z,15nm,1.1s,baz=57,slow=6.5,SNR=14
ESDC Sonseca Array 118.47 316 **PKiKP** **03 26 42.0 0.0**
PAB San Pablo 118.79 316 PKiKP **PKiKP** **03 26 43.3 +0.6**
PAB San Pablo 118.79 316 PKPdf **PKiKP** **03 26 43.3 +0.6**
RSSD Black Hills 118.95 38 PKiKP **PKPdf** **03 26 43.0 0.0**
RSSD Black Hills 118.95 38 P **PKiKP** **03 26 43.5 +0.5**
baz=302
RSSD Black Hills 118.95 38 PKPdf **PKPdf** **03 26 43.0 0.0**
MVCO Mesa Verde 119.23 47 P **PKiKP** **03 26 45.7 +1.8**
baz=295,SNR=5.3
N23A Red Feather La 119.36 42 P **PKiKP** **03 26 46.4 +2.4**
baz=299
TUC Tucson 119.36 53 P **PKiKP** **03 26 45.7 +1.7**
baz=291
MDND Maddock 119.37 32 P **PKiKP** **03 26 44.1 +0.6**
baz=308
FIGM Figuig 119.43 307 P **PKiKP** **03 26 45.2 +1.0**
SNR=11
ULM Lac du Bonnet 119.70 28 PKP **PKPdf** **03 26 43.5 -0.5**
comp=Z,9.1nm,0.8s,baz=300,slow=2.0,SNR=11
MVO Moncorvo 119.84 319 *e*PKPdf **PKiKP** **03 26 45.7 +1.0**
ISCO Idaho Springs 120.10 43 P **PKiKP** **03 26 46.6 +1.1**
baz=298
S22A 4UR Ranch, Cre 120.20 45 P **PKiKP** **03 26 47.5 +1.7**
baz=296,SNR=6.8
PCAB Cabril 120.22 320 *e*PKPdf **PKiKP** **03 26 46.5 +1.1**
POLO Lamas de Olo 120.24 319 *e*PKPdf **PKiKP** **03 26 46.5 +1.0**
PGAV Gavieira, Arco 120.24 320 *e*PKPdf **PKiKP** **03 26 46.2 +0.7**
MTE Manteigas 120.56 318 *e*PKPdf **PKiKP** **03 26 47.0 +0.9**
PVIS Viseu 120.63 319 *e*PKPdf **PKiKP** **03 26 47.5 +1.3**
PCBR Castelo Branco 120.79 318 *e*PKPdf **PKiKP** **03 26 47.5 +1.0**
Q24A Divide 120.81 43 P **PKiKP** **03 26 48.2 +1.2**
baz=298
PMRV Marv??o 120.93 317 *e*PKPdf **PKiKP** **03 26 47.8 +1.0**
SDCO Great Sand Dun 121.14 45 P **PKiKP** **03 26 49.2 +1.6**
baz=298,SNR=7.7
COI Coimbra 121.23 319 *e*PKPdf **PKiKP** **03 26 48.1 +0.8**
PCAS Casmilo, Conde 121.36 318 *e*PKPdf **PKiKP** **03 26 48.5 +0.9**
TOA0 Torodi Ar. Sit 121.40 285 PKPdf **PKPdf** **03 26 47.9 -0.3**
TORD Torodi Ar. Bea 121.40 285 PKhKP PKPpre 03 26 40.3
comp=Z,0.3nm,0.3s,baz=71,slow=0.4,SNR=9.7
TORD PKP **PKiKP** **03 26 48.2 -0.1**
comp=Z,30nm,0.9s,baz=54,slow=2.1,SNR=98
TORD SKP **SKPdf** **03 30 16.0 +1.2**
comp=Z,3.9nm,0.8s,baz=54,slow=2.1,SNR=3.5
TORD PKKPab **PKKPab** **03 36 51.2 +1.0**
comp=Z,12nm,0.9s,baz=282,slow=3.8,SNR=24
TORD Torodi Ar. Bea 121.40 285 **PKPdf** **03 26 47.7 -0.5**
121A Cookes Peak, D 121.64 51 P **PKiKP** **03 26 49.7 +1.1**
baz=293
ANMO Albuquerque 121.68 48 *i* PKiKP **PKiKP** **03 26 48.8 +0.2**
ANMO Albuquerque 121.68 48 P **PKiKP** **03 26 50.5 +1.8**
baz=295
ANMO Albuquerque 121.68 48 PKPdf **PKiKP** **03 26 49.6 +0.9**
EVO Evora 121.79 317 *e*PKPdf **PKiKP** **03 26 49.6 +1.1**
MDT Midelt 121.80 309 PKP **PKiKP** **03 26 49.6 +0.8**
comp=Z,28nm,1.0s,baz=77,slow=1.9,SNR=21
MDT Midelt 121.80 309 P **PKiKP** **03 26 50.0 +1.2**
SNR=14
PBEJ Beja 121.93 316 *e*PKPdf **PKiKP** **03 26 50.0 +1.2**
PVAQ Vaqueiros 122.12 315 *e*PKPdf **PKiKP** **03 26 50.3 +1.1**
T25A Trinidad 122.19 45 P **PKiKP** **03 26 50.9 +1.3**
baz=298
PCVE Castro Verde 122.24 316 *e*PKPdf **PKiKP** **03 26 50.4 +1.0**
PNCL Nicolau / Gran 122.35 317 *e*PKPdf **PKiKP** **03 26 50.9 +1.3**
PBDV Barranco-do-Ve 122.35 315 *e*PKPdf **PKiKP** **03 26 50.9 +1.2**
GOLM Goulmima 122.50 308 P **PKiKP** **03 26 52.0 +1.7**
SNR=13
MORF Marmelete 122.82 316 *e*PKPdf **PKPdf** **03 26 50.1 -0.3**
MORF Marmelete 122.82 316 *e*PKPdf **PKiKP** **03 26 51.9 +1.3**
PFVI Vila Bisbo 123.03 316 *e*PKPdf **PKiKP** **03 26 52.2 +1.2**
TZRR Tazzarine 123.34 307 P **PKiKP** **03 26 53.0 +1.1**
SNR=23
ECSD EROS Data Cent 123.56 34 P **PKiKP** **03 26 52.1 +0.3**
baz=309,SNR=12
ZGR Zagora 123.64 307 P **PKiKP** **03 26 53.4 +0.9**
SNR=35
MNTX Cornudas Mount 123.84 51 P **PKiKP** **03 26 54.5 +1.7**
baz=294
OUZM OUZ 124.24 308 P **PKiKP** **03 26 55.0 +1.2**
SNR=25
SPMN Marine on St. 124.64 31 P **PKPdf** **03 26 53.6 0.0**
baz=314
SCHQ Schefferville 124.82 8 PKP **PKiKP** **03 26 54.4 +0.4**
comp=Z,17nm,0.8s,baz=6.9,slow=2.2,SNR=26
SCHQ PP **PP** **03 28 42.0 +0.4**
comp=Z,21nm,0.8s,baz=14,slow=8.5,SNR=6.7
SCHQ SKP **SKPdf** **03 30 21.6 +1.4**
comp=Z,5.7nm,0.8s,baz=118,slow=1.1,SNR=3.8
SCHQ Schefferville 124.82 8 PKPdf **PKPdf** **03 26 53.6 -0.1**
MSTX Muleshoe 124.84 48 P **PKiKP** **03 26 55.8 +0.9**

baz=298
OUK Oukaimeden 124.98 309 P PKiKP 03 26 57.0 +1.5
SNR=20
TXAR Lajitas Array 126.15 53 PKP PKiKP 03 27 00.6 +3.0
comp=Z,3.5nm,0.8s,baz=236,slow=1.1,SNR=23
TXAR SKPbc SKPbc 03 30 04.6
comp=Z,2.5nm,0.7s,baz=318,slow=1.7,SNR=4.9
KSU1 Kansas State U 126.37 39 P PKiKP 03 26 57.9 +0.4
baz=306
SCIA State Center 126.65 34 P PKiKP 03 26 58.4 +0.4
baz=311
KOWA Kowa 126.66 288 PKPdf PKPdf 03 26 58.4 +0.1
WMOK Wichita Mounta 127.34 45 P PKiKP 03 27 00.1 +0.5
baz=302
JFWS Jewell Farm 127.57 31 P PKiKP 03 26 59.6 -0.2
baz=315
ABTX Abilene, Hawle 127.78 47 P PKPdf 03 27 00.2 +0.1
baz=299
CHGQ Chibougamau 128.04 15 P PKPdf 03 27 00.2 +0.3
baz=337
LSQQ Lebel-sur-Quev 128.08 17 P PKPdf 03 27 00.1 +0.1
baz=333
KIC Kosan Boka 128.47 278 *e*PKiKP PKiKP 03 27 02.7 +0.3
comp=Z,93nm,1.2s
DBIC Dimbokro 128.56 278 PKP PKPdf 03 27 02.0 +0.1
comp=Z,23nm,0.9s,baz=47,slow=1.6,SNR=14
DBIC SKPab SKPab 03 30 14.0
comp=Z,32nm,1.1s,baz=94,slow=3.3,SNR=8.4
DBIC Dimbokro 128.56 278 PKiKP PKiKP 03 27 02.6 0.0
DBIC Dimbokro 128.56 278 PKPdf PKiKP 03 27 02.6 0.0
JCT Junction City 128.68 50 P PKiKP 03 27 03.8 +1.3
baz=298
TIC Toumodi 128.72 278 *e*PKiKP PKiKP 03 27 03.1 +0.1
TUL1 Leonard 128.75 42 P PKiKP 03 27 03.1 +0.7
baz=305
LIC Lamto 128.76 278 *e*PKiKP PKiKP 03 27 03.3 +0.3
comp=Z,96nm,1.1s
HDIL Hopedale 129.73 33 P PKiKP 03 27 04.2 0.0
baz=315
833A Chaparral WMA, 129.97 52 P PKiKP 03 27 06.3 +1.3
baz=297
CCM Cathedral Cave 130.31 37 PKIKP PKiKP 03 27 05.9 +0.4
CCM Cathedral Cave 130.31 37 P PKiKP 03 27 05.4 0.0
baz=311
CCM Cathedral Cave 130.31 37 PKPdf PKiKP 03 27 05.9 +0.4
D55A Sainte-Anne-du 130.36 17 P PKiKP 03 27 05.3 0.0
baz=334
U40A Yellville 130.40 39 P PKiKP 03 27 05.5 -0.2
baz=308
ALGO Algonquin Park 130.47 20 P PKiKP 03 27 05.3 -0.3
baz=331
W39A Magazine 130.50 41 P PKiKP 03 27 06.3 +0.4
baz=307
D56A ZEC Mazanza, M 130.54 17 P PKiKP 03 27 05.6 -0.1
baz=335
E55A Montcerf-Lytto 130.69 18 P PKiKP 03 27 06.0 +0.1
baz=333
LATQ La Tuque 130.78 15 P PKiKP 03 27 06.0 -0.1
baz=338
E56A St. Veronique 130.92 17 P PKiKP 03 27 06.2 -0.2
baz=335
MIAR Mount Ida 131.02 42 P PKiKP 03 27 07.4 +0.4
baz=306
D58A Chemin du LacG 131.02 15 P PKiKP 03 27 06.5 -0.1
baz=338
E57A Chemin Saint G 131.30 17 P PKPdf 03 27 06.4 +0.1
baz=336
E61A Lac Etchemin 132.23 13 P PKiKP 03 27 09.0 -0.1
baz=340
F60A Warwick 132.31 15 P PKiKP 03 27 09.6 +0.3
baz=338
P49A Miami Univ. Ec 132.88 30 P PKPdf 03 27 09.9 +0.4
baz=319
WCI Wyandotte Cave 133.02 33 P PKiKP 03 27 10.9 0.0
baz=317
H58A Gabriels 133.10 18 P PKPdf 03 27 09.8 0.0
baz=335
ACSO Alum Creek Sta 133.20 28 P PKiKP 03 27 11.1 -0.1
baz=322
O51A Pataskala 133.44 28 P PKiKP 03 27 11.8 0.0
baz=322
I58A Old Forge 133.50 19 P PKPdf 03 27 11.1 +0.6
baz=334
WVT Waverly 133.63 36 PKiKP PKiKP 03 27 11.9 -0.3
WVT Waverly 133.63 36 P PKiKP 03 27 11.7 -0.5
baz=314
WVT Waverly 133.63 36 PKPdf PKiKP 03 27 11.9 -0.3
H61A Lyndonville 133.64 16 P PKPdf 03 27 10.9 +0.1
baz=338
M54A Oil Creek Stat 133.65 25 P PKiKP 03 27 12.0 -0.1
baz=327
J58A Remsen 133.69 19 P PKPdf 03 27 10.9 0.0
baz=333
OXF Oxford 133.74 39 P PKiKP 03 27 13.8 +1.4
baz=311
K57A Scipio Center 133.82 21 P PKPdf 03 27 11.1 -0.1
baz=331
J59A Piesco 133.86 19 P PKiKP 03 27 12.0 -0.6
baz=334
I60A Shoreham 133.89 17 P PKPdf 03 27 11.8 +0.6
baz=336
L56A Greenwood 133.96 22 P PKiKP 03 27 12.2 -0.6
baz=330
P52A Corning 134.07 28 P PKPdf 03 27 12.0 +0.3
baz=322
K58A Earlville 134.10 20 P PKPdf 03 27 12.1 +0.4
baz=332
L57A Andrews Acres 134.34 22 P PKPdf 03 27 12.6 +0.4
baz=330
O54A Avella 134.44 26 P PKPdf 03 27 13.0 +0.6
baz=325
BINY Binghamton 134.48 21 P PKiKP 03 27 13.4 -0.4
baz=332
H66A Whiting 134.48 11 P PKiKP 03 27 13.7 0.0
baz=344
Q52A Bidwell 134.54 29 P PKPdf 03 27 13.2 +0.6
baz=322
P53A Whipple 134.54 28 P PKiKP 03 27 13.4 -0.5
baz=323
L58A Harry Jones Me 134.66 21 P PKPdf 03 27 13.3 +0.5
baz=332
T50A Nancy 134.69 33 PKiKP 03 27 13.7 -0.7
N56A West Decatur 134.71 24 P PKPdf 03 27 13.5 +0.6
baz=328
L59A Walton 134.82 20 P PKPdf 03 27 13.6 +0.5
baz=333
P54A Burton 134.86 27 P PKPdf 03 27 13.5 +0.3
baz=324
Q53A Leroy 134.97 28 P PKiKP 03 27 14.3 -0.6
baz=323
M58A Price's Panora 135.03 22 P PKiKP 03 27 14.4 -0.6
baz=331
Q54A Coxs Mills 135.20 28 P PKiKP 03 27 14.8 -0.5
baz=324
M59A Waymart 135.25 21 P PKiKP 03 27 15.4 0.0
baz=332
L61A Hillsdale 1, H 135.30 19 P PKiKP 03 27 14.7 -0.7
baz=335
N58A Sunbury 135.39 22 P PKPdf 03 27 14.4 +0.2
baz=330
Q55A Buckhannon 135.53 27 P PKPdf 03 27 15.3 +0.7
baz=325
P56A Dayton Farm, R 135.66 25 P PKPdf 03 27 15.4 +0.7
baz=326
R54A Victor 135.76 28 P PKiKP 03 27 16.0 -0.5
baz=323
O58A Lewisberry 135.93 23 P PKPdf 03 27 15.2 0.0
baz=329
N60A Cedar Hill Far 135.96 21 P PKPdf 03 27 15.8 +0.6
baz=332
M61A Granite Spring 136.03 19 P PKiKP 03 27 16.3 -0.7
baz=334
LRAL Lakeview Retre 136.22 39 P PKiKP 03 27 18.2 +0.6
baz=312
PAL Palisades 136.26 20 P PKPdf 03 27 16.1 +0.4
baz=334
TKL Tuckaleechee C 136.27 33 SKPbc SKPbc 03 30 39.5 +0.3
comp=Z,38nm,0.9s,baz=228,slow=0.9,SNR=18
P58A Pank, Wackersv 136.32 24 P PKiKP 03 27 17.2 -0.4
baz=328
R56A Bull Pasture M 136.32 27 P PKiKP 03 27 18.4 +0.6
baz=325
Q58A Fox Den Farm, 136.63 25 P PKiKP 03 27 17.7 -0.5
baz=328
BLA Blacksburg 136.81 29 P PKiKP 03 27 19.1 +0.3
baz=323
V54A Nebo 137.16 32 P PKiKP 03 27 20.3 +0.8
baz=320

PLCA Paso Flores 137.17 164 PKhKP PKPpre 03 27 11.2
comp=Z,1.8nm,0.9s,baz=78,slow=8.6,SNR=3.2
PLCA PKP PKiKP 03 27 19.7 +0.2
comp=Z,4.8nm,0.8s,baz=204,slow=4.3,SNR=7.2
PLCA SKPbc SKPbc 03 30 44.0 +2.1
comp=Z,12nm,1.1s,baz=201,slow=3.1,SNR=4.2
PLCA Paso Flores 137.17 164 PKIKP PKiKP 03 27 24.6 +5.2
PLCA Paso Flores 137.17 164 PKPdf PKiKP 03 27 24.6 +5.2
PLCA Paso Flores 137.17 164 *e*P PKPdf 03 27 18.2 +0.6
R58B Mineral 137.36 26 P PKPdf 03 27 16.3 -1.5
baz=327
BRAL Brewton 137.41 41 P PKiKP 03 27 20.2 +0.1
baz=311
V55A Taylorsville 137.48 31 P PKPdf 03 27 18.0 -0.1
baz=321
X54A Belton 137.86 33 P PKPdf 03 27 10.5 -8.4
baz=319
U57A Blanch 137.95 28 P PKPdf 03 27 10.2 -8.8
baz=324
GOGA Godfrey 138.09 35 P PKPdf 03 27 11.2 -8.2
baz=317
CMIG Matias Romero 138.22 64 PKP PKiKP 03 27 22.4 +0.3
comp=Z,9.0nm,0.9s,baz=5.6,slow=4.5,SNR=5.6
CMIG SKPbc SKPbc 03 30 46.7 +1.3
comp=Z,21nm,1.1s,baz=277,slow=3.3,SNR=4.8
T59A Double "B" Far 138.33 26 P PKPdf 03 27 11.0 -8.6
baz=327
U58A Oxford 138.35 28 P PKPdf 03 27 10.8 -8.9
baz=325
W56A Indian Trail 138.36 31 P PKPdf 03 27 11.7 -8.1
baz=322
V58A Windy Hill, Pi 138.57 29 P PKPdf 03 27 10.4 -10
baz=324
W58A Raeford 139.13 30 P PKPdf 03 27 13.4 -7.8
baz=323
X58A Rowland 139.45 30 P PKPdf 03 27 15.1 -6.7
baz=323
W60A Pink Hill 139.84 28 P PKPdf 03 27 15.8 -6.7
baz=325
TEIG Tepich 142.69 56 *e*P PKPdf 03 27 24.8 -3.2
RFA San Rafael 143.32 163 *i* P PKiKP 03 27 31.0 -1.2
MT02 Curacav 143.81 158 PKPbc 03 27 28.4 +0.9
PEL Peldehue 144.08 159 *i* P PKPdf 03 27 29.6 -0.6
ROC1 El Roble 144.11 158 *i* P PKPbc 03 27 28.6 -0.1
SACV Santiago Islan 144.76 296 PKPdf PKPdf 03 27 31.4 -0.4
AAGR Agrelo 144.77 161 *i* P PKPdf 03 27 32.1 +0.7
ASAL Salagasta 145.22 161 *i* P PKPdf 03 27 33.7 +1.5
AUSP Uspallata 145.37 160 *i* P PKPab 03 27 34.4 +1.5
RTLS Leoncito 145.79 160 *i* P PKPab 03 27 34.8 +0.3
RTCV Cerro Valdivia 145.99 161 *i* P PKPab 03 27 35.5 +0.5
TGUH Tegucigalpa,Un 146.14 65 *e*P PKPdf 03 27 34.3 0.0
ZON Zonda 146.23 160 *i* P PKPab 03 27 35.6 -0.4
MRA San Martin 146.29 165 *i* P PKPab 03 27 35.8 -0.4
RTLL Cerro Villicun 146.50 160 *i* P PKPbc 03 27 36.2 +0.2
GO04 Tololo Observa 146.68 156 *i* P PKPdf 03 27 33.8 -1.2
BBSR BB Station 146.96 14 PKPab 03 27 38.2 -0.4
ACCO Cerro Coronel 146.97 159 *i* P PKPab 03 27 38.9 -0.3
AROD Rodeo 147.20 158 *i* P PKPbc 03 27 37.6 -0.7
ACHE Chepes 147.22 163 *i* P PKPbc 03 27 37.4 -0.7
ACDV Cuesta del Vie 147.33 159 *i* P PKPdf 03 27 37.1 +1.1
AVFE Valle Fertil 147.45 161 *i* P PKPbc 03 27 37.6 -1.0
TCA Tanti 147.60 166 *i* P PKiKP 03 27 40.3 -0.8
MATN Matagalpa 147.77 66 PKPbc 03 27 40.1 +0.2
AGUA GUANDACOL 148.17 159 *i* P PKPdf 03 27 38.7 +1.4
ACLC CERRO LA CRUZ 148.75 161 *i* P PKPdf 03 27 39.4 +1.0
VCA Vinchina 148.96 159 *i* P PKPab 03 27 44.2 +0.2
JTS Las Juntas de 149.53 70 PKPbc PKiKP 03 27 45.5 +0.1
comp=Z,34nm,0.9s,baz=8.9,slow=3.4,SNR=17
JTS Las Juntas de 149.53 70 *e*P PKiKP 03 27 45.0 -0.4
CYA Choya 150.02 163 *i* P PKPbc 03 27 45.5 +0.3
AC01 Pan de Azucar 150.27 153 PKiKP 03 27 46.6 -0.1
ITQB Itaqui 150.29 179 *e*P PKPdf 03 27 42.0 +1.5
PB14 IPOC Station P 151.66 152 PKiKP 03 27 50.2 +0.2
PRVC Isla de Provid 151.68 61 *e*P PKiKP 03 27 50.8 +1.1
MTDJ Mount Denham 152.29 49 *e*P PKPab 03 28 00.7 -0.3
ITAB Concordia 152.47 188 *e*P PKPdf 03 27 45.0 +1.1
GTBY Guantanamo Bay 152.91 42 *e*P PKPbc 03 27 51.3 -0.7
CPUP Villa Florida 153.60 177 PKP PKPdf 03 27 47.4 +1.9
comp=Z,7.5nm,1.1s,baz=162,slow=3.6,SNR=7.9
CPUP PKPbc PKiKP 03 27 55.1 +1.6
comp=Z,12nm,1.0s,baz=93,slow=0.8,SNR=14
CPUP Villa Florida 153.60 177 PKPdf PKPdf 03 27 45.9 +0.3
CPUP PKPbc PKiKP 03 27 53.8 +0.4
LVC Limon Verde 154.09 152 PKPbc PKiKP 03 27 56.7 +1.7
comp=Z,6.9nm,0.7s,baz=309,slow=0.1,SNR=4.2
LVC Limon Verde 154.09 152 *e*P PKPdf 03 27 48.0 +1.1
AZU Azuero 154.67 72 *e*P PKiKP 03 27 59.9 +3.9
PTGB Pitanga 154.94 189 *e*P PKPdf 03 27 49.3 +1.6
ATAH Atahualpa 156.53 109 PKP PKPdf 03 27 53.5 +3.1
comp=Z,3.7nm,0.8s,baz=187,slow=8.1,SNR=3.9
ATAH PKPab PKPab 03 28 21.6 +2.0
comp=Z,22nm,0.9s,baz=264,slow=3.9,SNR=8.6
SJCC San Jacinto, C 158.64 63 *e*P PKPdf 03 27 53.2 +0.7
MOTC Monteria, Cord 158.66 66 *e*P PKPdf 03 27 51.3 -1.2
DBBC Dabeiba 158.75 71 *e*P PKPdf 03 27 52.9 +0.1
UREC San Jos de Ur 159.15 68 *e*P PKPdf 03 27 55.0 +1.8
POPC Popayan, Colom 159.22 83 *e*P PKPdf 03 27 53.2 -0.3
PLMC San Jos del P 159.23 77 *e*P PKPdf 03 27 55.2 +1.9
CBOC Ciudad Bolivar 159.27 74 *e*P PKPdf 03 27 49.6 -3.9
YOTC Yotoco, Valle 159.35 79 *e*P PKPdf 03 27 55.0 +1.4
AQDB Aquidauana 159.46 181 *e*P PKPdf 03 27 55.0 +1.7
SJG San Juan 159.60 29 PKPab PKPab 03 28 32.7 +0.7
comp=Z,23nm,0.8s,baz=39,slow=2.6,SNR=8.7
SJG San Juan 159.60 29 *e*P PKPab 03 28 31.4 -0.6
LPAZ La Paz 159.73 144 PKP PKPdf 03 27 56.6 +2.1
comp=Z,4.5nm,1.1s,baz=224,slow=1.0,SNR=8.8
LPAZ PKPab PKPab 03 28 35.7 +2.3
comp=Z,18nm,1.1s,baz=97,slow=1.2,SNR=4.4
LPAZ La Paz 159.73 144 *e*P PKPdf 03 27 55.2 +0.7
LPAZ La Paz 159.73 144 PKPdf 03 27 55.0 +0.5
LPAZ La Paz 159.73 144 *e*P PKPdf 03 27 55.4 +1.0
CUPR Culebra, Puert 159.83 26 PKPab 03 28 33.8 +0.8
TOLC Tolima 160.24 77 *e*P PKPdf 03 27 55.8 +1.0
BETC Betania 160.43 83 *e*P PKPdf 03 27 56.0 +1.3
NORC Norcasia 160.44 74 *e*P PKPdf 03 27 58.3 +3.7
PTBC PUERTO BERRIO 160.56 71 *e*P PKPdf 03 27 54.6 -0.1
PRAC Prado 160.83 79 *e*P PKPdf 03 27 56.0 +1.0
OCAC Ocana 161.00 65 *e*P PKPdf 03 27 56.0 +0.6
BRRC Barranca, Sant 161.07 68 *e*P PKPdf 03 27 53.6 -1.7
ROSC El Rosal 161.15 76 PKP PKPdf 03 27 56.8 +0.9
comp=Z,9.6nm,0.7s,baz=60,slow=14,SNR=4.5
ROSC PKPab PKPab 03 28 42.3 +2.6
comp=Z,49nm,1.0s,baz=170,slow=12,SNR=7.1
BARC Barichara 161.74 69 *e*P PKPdf 03 27 49.6 -6.7
CHIC Chingaza 161.77 76 *e*P PKPdf 03 27 56.0 -0.5
PAMC Pamplona, Colo 161.92 67 *e*P PKPdf 03 27 56.7 0.0
RUSC La Rusia 162.05 71 *e*P PKPdf 03 27 57.4 +0.5
MACC Macarena, Meta 162.07 84 *e*P PKPdf 03 27 57.6 +1.2
BDFB Brasilia 162.39 206 PKP PKPdf 03 27 57.6 +0.9
comp=Z,4.7nm,0.9s,baz=111,slow=8.3,SNR=4.8
BDFB PKPab PKPab 03 28 45.7 +1.3
comp=Z,12nm,1.0s,baz=212,slow=2.6,SNR=5.8
BDFB Brasilia 162.39 206 PKPdf PKPdf 03 27 57.1 +0.4
BDFB PKPab PKPab 03 28 45.2 +0.8
SDV Santo Domingo 163.08 59 PKP PKPdf 03 27 57.5 0.0
comp=Z,15nm,0.9s,baz=302,slow=1.1,SNR=10
SDV PKPab PKPab 03 28 49.4 +1.6
comp=Z,16nm,0.8s,baz=68,slow=4.7,SNR=3.6
SDV Santo Domingo 163.08 59 *e*P PKPdf 03 27 54.6 -2.9
SDV Santo Domingo 163.08 59 PKPdf 03 27 57.9 +0.4
SIV San Ignacio 163.16 163 PKP PKPdf 03 27 58.1 +0.8
comp=Z,6.6nm,1.0s,baz=214,slow=1.2,SNR=20
PTLB Pontes e Lacer 164.16 169 *e*P PKPdf 03 28 00.7 +2.5
PCRV Puerto La Cruz 166.89 41 PKPab PKPab 03 29 04.4 +0.1
comp=Z,5.9nm,0.7s,baz=179,slow=6.4,SNR=3.9
SNDB Serra Nova Dou 167.03 201 *e*P PKPdf 03 28 02.2 +1.6
SMTB Santa Maria do 167.69 223 *e*P PKPdf 03 28 03.6 +2.5
ROSB Rosrio 167.72 255 *e*P PKPdf 03 28 03.8 +2.6
SAML Samuel 168.45 142 *e*P PKPdf 03 28 01.6 0.0
SAML Samuel 168.45 142 PKIKP PKPdf 03 28 02.7 +1.0
SAML Samuel 168.45 142 PKPdf 03 28 02.7 +1.0
CLDB Colider 169.00 181 *e*P PKPdf 03 28 05.7 +3.6
PRPB Parauapebas 171.15 224 *e*P PKPdf 03 28 05.9 +2.6
NPGB Novo Progresso 172.78 185 *e*P PKPdf 03 28 07.0 +2.9
MDP Montagnes des 174.07 325 PKPab PKPab 03 29 34.6 -1.4
comp=Z,35nm,0.9s,baz=70,slow=4.7,SNR=13

IDC 15 03:14:34.2±2.1,1°92N×126°49E,h0km,mb4.0/3, mb1 4.3/3,mb1mx3.7/50,mbtmp4.1/3,Error ellipse: s-maj=180.5km s-min=25.1km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.05**	**161**	P		P 03 19 41.0	-0.3
	4.9nm,0.6s,baz=340,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**26.43**	**165**	P		P 03 20 13.3	+0.3
	1.6nm,0.5s,baz=346,slow=10,SNR=2.8						
MKAR	**Makanchi Array**	**58.91**	**326**	P		P 03 24 35.1	-0.2
	1.2nm,0.7s,baz=120,slow=8.8,SNR=5.9						

*PRU **15** 03:15:05.4±0.0,47°.82N×22°.99E,h0km*
*SIGU **15** 03:15:07.4±0.1,48°.0N±0°.4×23°.0E±0°.5,h10km,mb2.3/6*
*BUC **15** 03:15:07.8±0.4,48°.05N×23°.05E,h7km±2km,ml2.8/8, Error ellipse: s-maj=2.7km s-min=1.8km az=13.0*
*IDC **15** 03:15:09.4±1.1,48°.26N×22°.77E,h0km,mb3.5/1, mb1 3.4/5,mb1mx3.2/61,mbtmp3.2/5,ML2.4/4,Error ellipse: s-maj=18.2km s-min=10.2km az=2.0*
*KRSZO **15** 03:15:09.9±0.7,48°.04N×23°.01E,h35km,mb3.2/3,Error ellipse: s-maj=3.3km s-min=2.8km az=41.0*

ISC 15 03:15:07.4±0.7,48°.02N±0°.01×22°.98E±0°.01,h14km±4km, n117,σ1$44/241,32C-34D, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRSU	**Trosnyk**	**0.08**	**346**	⇑*i*Pg		**Pg**	**03 15 10.3**	**+0.1**
TRSU				Pm			03 15 10.6	
TRSU				⇓*i*Sg		**Sg**	**03 15 12.8**	**+0.6**
TRSU				Sm			03 15 13.1	
TRSU				m			03 15 13.8	
TRSU	**Trosnyk**	**0.08**	**346**	x		**Pg**	**03 15 10.3**	**+0.1**
TRSU				x		x	03 15 10.6	
TRSU				x		**Sg**	**03 15 12.8**	**+0.6**
TRSU				x		x	03 15 13.1	
TRSU				x		x	03 15 13.8	
KORU	**Korolevo**	**0.17**	**36**	⇓*i*Pg		**Pg**	**03 15 11.4**	**0.0**
KORU				Pm			03 15 11.8	
KORU				⇓*e*Sg		**Sg**	**03 15 14.3**	**+0.1**
KORU				Sm			03 15 14.9	
KORU				m			03 15 15.1	
KORU	**Korolevo**	**0.17**	**36**	x		**Pg**	**03 15 11.4**	**0.0**
KORU				x		x	03 15 11.8	
KORU				x		**Sg**	**03 15 14.3**	**+0.1**
KORU				x		x	03 15 14.9	
KORU				x		x	03 15 15.1	
BERU	**Beregovo**	**0.31**	**313**	⇓*i*Pg		**Pb**	**03 15 14.4**	**-0.3**
BERU				Pm			03 15 14.8	
BERU				*e*Sg		**Sb**	**03 15 19.3**	**-0.4**
BERU				Sm			03 15 20.0	
BERU				m			03 15 23.9	
BERU	**Beregovo**	**0.31**	**313**	x		**Pb**	**03 15 14.4**	**-0.3**
BERU				x		x	03 15 14.8	
BERU				x		**Sb**	**03 15 19.3**	**-0.4**
BERU				x		x	03 15 20.0	
BERU				x		x	03 15 23.9	
BRIU	**Brid**	**0.32**	**4**	⇑*e*Pg		**Pg**	**03 15 14.3**	**+0.4**
BRIU				Pm			03 15 16.0	
BRIU				*e*Sg		**Sb**	**03 15 19.8**	**-0.1**
BRIU				Sm			03 15 22.4	
BRIU				m			03 15 23.9	
BRIU	**Brid**	**0.32**	**4**	x		**Pg**	**03 15 14.3**	**+0.4**
BRIU				x		x	03 15 16.0	
BRIU				x		**Sb**	**03 15 19.8**	**-0.1**
BRIU				x		x	03 15 22.4	
BRIU				x		x	03 15 23.9	
MUKU	**Mukachevo**	**0.48**	**336**	⇑*e*Pg		**Pb**	**03 15 17.6**	**0.0**
MUKU				Pm			03 15 20.0	
MUKU				*e*Sg		**Sb**	**03 15 25.3**	**+0.9**
MUKU				Sm			03 15 25.9	
MUKU				m			03 15 31.3	
MUKU	**Mukachevo**	**0.48**	**336**	Pn		**Pb**	**03 15 17.6**	**0.0**
MUKU				x		x	03 15 20.0	
MUKU				Sn		**Sb**	**03 15 25.3**	**+0.9**
MUKU				x		x	03 15 25.9	
MUKU				x		x	03 15 31.3	
CEI	**Carei**	**0.49**	**227**	⇓P		**Pb**	**03 15 18.5**	**+0.8**
CEI				⇑S		**Sb**	**03 15 26.0**	**+1.2**
CEI	**Carei**	**0.49**	**227**	⇓P		**Pb**	**03 15 18.5**	**+0.8**
CEI				⇑S		**Sb**	**03 15 26.0**	**+1.2**
CEI	**Carei**	**0.49**	**227**	Pn		**Pb**	**03 15 18.5**	**+0.8**
CEI				Pn		**Pb**	**03 15 18.5**	**+0.8**
CEI				Pn		**Pb**	**03 15 18.5**	**+0.8**
CEI				Sn		**Sb**	**03 15 25.0**	**+0.3**
CEI				S		**Sb**	**03 15 26.0**	**+1.2**
CEI				S		**Sg**	**03 15 26.0**	**+1.2**
BMR	**Baia Mare**	**0.49**	**135**	⇓P		**Pg**	**03 15 17.1**	**+0.1**
BMR				⇑S		**Sg**	**03 15 23.7**	**+0.1**
BMR	**Baia Mare**	**0.49**	**135**	⇓P		**Pg**	**03 15 17.1**	**+0.1**
BMR				⇑S		**Sg**	**03 15 23.7**	**+0.1**
BMR	**Baia Mare**	**0.49**	**135**	Pn		**Pg**	**03 15 17.1**	**+0.1**
BMR				Pg		**Pb**	**03 15 17.8**	**0.0**
BMR				Pg		**Pb**	**03 15 17.8**	**0.0**
BMR				Sn		**Sg**	**03 15 23.7**	**+0.1**
BMR				Sn		**Sg**	**03 15 23.7**	**+0.1**
BMR				Sn		**Sg**	**03 15 23.7**	**+0.1**
MEZ	**Mezhgor'ye**	**0.61**	**35**	*e*Pg		**Pb**	**03 15 20.3**	**+0.5**
MEZ				*e*Sg		**Sg**	**03 15 27.5**	**+0.2**
MEZ	**Mezhgor'ye**	**0.61**	**35**	Pn		**Pb**	**03 15 20.3**	**+0.5**
MEZ				Sn		**Sg**	**03 15 27.5**	**+0.2**
UZH	**Uzhgorod**	**0.77**	**323**	*e*Pg		**Pb**	**03 15 23.2**	**+0.7**
UZH				*e*Sg		**Sn**	**03 15 34.8**	**-0.3**
UZH	**Uzhgorod**	**0.77**	**323**	Pn		**Pb**	**03 15 23.2**	**+0.7**
UZH				Sn		**Sn**	**03 15 34.8**	**-0.3**
RAKU	**Rahkiv**	**0.79**	**89**	*e*Pg		**Pg**	**03 15 22.4**	**-0.4**
RAKU				m			03 15 36.2	
RAKU	**Rahkiv**	**0.79**	**89**	Pn		**Pg**	**03 15 22.4**	**-0.4**
RAKU				x		x	03 15 36.2	
LTVH	**Ltavrtes, Hu**	**0.97**	**229**	*e*Pn		**Pn**	**03 15 27.6**	**+1.0**
LTVH				*e*Sn		**Sn**	**03 15 42.8**	**+2.6**
NSLU	**Nyzhne Selyshc**	**1.00**	**79**	⇑*i*Pg		Pb	03 15 14.5	-12
NSLU				Pm			03 15 14.9	
NSLU				*e*Sg		Sb	03 15 19.9	-20
NSLU				Sm			03 15 20.6	
NSLU				m			03 15 21.7	
NSLU	**Nyzhne Selyshc**	**1.00**	**79**	Pn		Pb	03 15 14.5	-12
NSLU				x		x	03 15 14.9	
NSLU				Sn		Sb	03 15 19.9	-20
NSLU				x		x	03 15 20.6	
NSLU				x		x	03 15 21.7	
KOLS	**Kolonicke sedl**	**1.03**	**333**	*e*Pn		**Pn**	**03 15 28.3**	**+0.9**
KOLS				*e*Sn		**Sn**	**03 15 43.8**	**+2.1**
KOLS	**Kolonicke sedl**	**1.03**	**333**	*e*PG		**Pn**	**03 15 28.3**	**+0.9**
KOLS				*e*SG		**Sn**	**03 15 43.8**	**+2.1**
KOLS				eLG		Lg	03 15 45.2	
STNU	**Starunia**	**1.23**	**55**	*e*Pg		**Pg**	**03 15 32.5**	**+1.6**
STNU				*e*Sg		**Sg**	**03 15 50.8**	**+3.9**
STNU	**Starunia**	**1.23**	**55**	Pn		**Pg**	**03 15 32.5**	**+1.6**
STNU				Sn		**Sg**	**03 15 50.8**	**+3.9**
SHIU	**Shidnytsya**	**1.23**	**12**	*e*Pg		**Pg**	**03 15 31.3**	**+0.3**
SHIU	**Shidnytsya**	**1.23**	**12**	Pn		**Pg**	**03 15 31.3**	**+0.3**
MORS	**Morshin**	**1.27**	**28**	*e*Pg		**Pg**	**03 15 32.1**	**+0.4**
MORS	**Morshin**	**1.27**	**28**	Pn		**Pg**	**03 15 32.1**	**+0.4**
ARCR	**ARCALIA**	**1.32**	**135**	⇑P		**Pg**	**03 15 32.6**	**-0.1**
ARCR				⇑S		**Sg**	**03 15 51.1**	**+1.3**
ARCR	**ARCALIA**	**1.32**	**135**	⇑P		**Pg**	**03 15 32.6**	**-0.1**
ARCR				⇑S		**Sg**	**03 15 51.1**	**+1.3**
ARCR	**ARCALIA**	**1.32**	**135**	Pn		**Pg**	**03 15 32.6**	**-0.1**
ARCR				Pn		**Pg**	**03 15 32.6**	**-0.1**
ARCR				Pn		**Pg**	**03 15 32.6**	**-0.1**
ARCR				*e*Sn		**Sg**	**03 15 51.1**	**+1.3**
ARCR				Sn		**Sg**	**03 15 51.1**	**+1.3**
ARCR				Sn		**Sg**	**03 15 51.1**	**+1.3**
CRVS	**Cervenica-Dubn**	**1.34**	**312**	*e*Pn		**Pb**	**03 15 32.4**	**0.0**
CRVS				*e*Sn		**Sg**	**03 15 52.7**	**+2.0**
CRVS	**Cervenica-Dubn**	**1.34**	**312**	*e*SN		**Sg**	**03 15 52.7**	**+2.0**
CJR	**Cluj-Napoca**	**1.37**	**162**	⇓P		**Pb**	**03 15 33.5**	**+0.6**
CJR				⇓S		**Sg**	**03 15 52.6**	**+1.0**
CJR	**Cluj-Napoca**	**1.37**	**162**	⇓P		**Pb**	**03 15 33.5**	**+0.6**
CJR				⇓S		**Sg**	**03 15 52.6**	**+1.0**
CJR	**Cluj-Napoca**	**1.37**	**162**	Pn		**Pb**	**03 15 33.5**	**+0.6**
CJR				Pn		**Pb**	**03 15 33.5**	**+0.6**
CJR				Pn		**Pb**	**03 15 33.5**	**+0.6**
CJR				Sn		**Sg**	**03 15 52.6**	**+1.0**
CJR				Sn		**Sg**	**03 15 52.6**	**+1.0**
CJR				Sn		**Sg**	**03 15 52.6**	**+1.0**
KSV	**Kosov**	**1.43**	**77**	Pn		**Pg**	**03 15 34.4**	**-0.3**
KSV				m			03 16 00.0	
KSV	**Kosov**	**1.43**	**77**	Pn		**Pg**	**03 15 34.4**	**-0.3**
KSV				x		x	03 16 00.0	

BURAR	**Bucovina Array**	**1.56**	**104**	⇓P		**Pb**	**03 15 35.9**	**-0.1**
BURAR				⇓S		**Sb**	**03 15 56.2**	**+0.5**
BURAR	**Bucovina Array**	**1.56**	**104**	⇓P		**Pb**	**03 15 35.9**	**-0.1**
BURAR				⇓S		**Sb**	**03 15 56.2**	**+0.5**
BURAR	**Bucovina Array**	**1.56**	**104**	Pn		**Pb**	**03 15 35.9**	**-0.1**
BURAR				Pn		**Pb**	**03 15 35.9**	**-0.1**
BURAR				Pn		**Pb**	**03 15 35.9**	**-0.1**
BURAR				Sn		**Sb**	**03 15 56.2**	**+0.5**
BURAR				Sn		**Sb**	**03 15 56.2**	**+0.5**
BURAR				Sn		**Sb**	**03 15 56.2**	**+0.5**
KWP	**Kalwaria Pacla**	**1.62**	**354**	*e*Pn		**Pb**	**03 15 36.9**	**-0.2**
KECS	**Kecovo**	**1.73**	**286**	*e*Pn		**Pn**	**03 15 38.2**	**+1.1**
KECS				*e*Sn		**Sg**	**03 16 04.0**	**+0.9**
KECS	**Kecovo**	**1.73**	**286**	*e*PN		**Pn**	**03 15 37.9**	**+0.8**
KECS				eLg		Lg	03 16 04.9	
BSZH	**Besenyszg**	**1.97**	**250**	*e*Pn		**Pn**	**03 15 41.2**	**+0.9**
SIRR	**Siria**	**1.97**	**208**	⇑P		**Pn**	**03 15 41.7**	**+1.2**
SIRR	**Siria**	**1.97**	**208**	⇑P		**Pn**	**03 15 41.7**	**+1.2**
SIRR	**Siria**	**1.97**	**208**	Pn		**Pn**	**03 15 41.7**	**+1.2**
SIRR				Pn		**Pn**	**03 15 41.7**	**+1.2**
SIRR				Pn		**Pn**	**03 15 41.7**	**+1.2**
PSZ	**Piszkesteto**	**2.08**	**268**	⇑P		**Pn**	**03 15 42.5**	**+0.6**
PSZ				⇑S		**Sb**	**03 16 12.1**	**+1.4**
PSZ	**Piszkesteto**	**2.08**	**268**	⇑P		**Pn**	**03 15 42.5**	**+0.6**
PSZ				⇑S		**Sb**	**03 16 12.1**	**+1.4**
PSZ	**Piszkesteto**	**2.08**	**268**	*e*Pn		**Pn**	**03 15 42.2**	**+0.3**
PSZ				Pn		**Pn**	**03 15 42.5**	**+0.6**
PSZ				Pn		**Pn**	**03 15 42.5**	**+0.6**
PSZ				*e*Sn		**Sb**	**03 16 12.1**	**+1.4**
PSZ				Sn		**Sg**	**03 16 12.6**	**-1.6**
PSZ				Sn		**Sg**	**03 16 12.6**	**-1.6**
MDB	**Medias**	**2.11**	**153**	⇑P		**Pn**	**03 15 44.0**	**+1.7**
MDB				⇑S		**Sn**	**03 16 10.1**	**+1.8**
MDB	**Medias**	**2.11**	**153**	⇑P		**Pn**	**03 15 44.0**	**+1.7**
MDB				⇑S		**Sn**	**03 16 10.1**	**+1.8**
MDB	**Medias**	**2.11**	**153**	Pn		**Pn**	**03 15 43.0**	**+0.7**
MDB				Pn		**Pn**	**03 15 44.0**	**+1.7**
MDB				Pn		**Pn**	**03 15 44.0**	**+1.7**
MDB				Sn		**Sn**	**03 16 10.1**	**+1.8**
MDB				S		**Sb**	**03 16 10.9**	**-0.5**
MDB				S		**Sb**	**03 16 10.9**	**-0.5**
DEV	**Deva**	**2.14**	**182**	⇓P		**Pb**	**03 15 44.5**	**-1.4**
DEV				⇓S		**Sb**	**03 16 12.3**	**0.0**
DEV	**Deva**	**2.14**	**182**	⇓P		**Pb**	**03 15 44.5**	**-1.4**
DEV				⇓S		**Sb**	**03 16 12.3**	**0.0**
DEV	**Deva**	**2.14**	**182**	Pn		**Pb**	**03 15 44.5**	**-1.4**
DEV				Pn		**Pb**	**03 15 44.5**	**-1.4**
DEV				Pn		**Pb**	**03 15 44.5**	**-1.4**
DEV				Sn		**Sb**	**03 16 12.3**	**0.0**
DEV				Sn		**Sb**	**03 16 12.3**	**0.0**
DEV				Sn		**Sb**	**03 16 12.3**	**0.0**
AMBH	**Ambrzfalva**	**2.27**	**223**	*e*Pn		**Pb**	**03 15 48.2**	**+0.1**
BIZ	**Bicaz**	**2.38**	**116**	⇑P		**Pn**	**03 15 47.1**	**+1.2**
BIZ	**Bicaz**	**2.38**	**116**	⇑P		**Pn**	**03 15 47.1**	**+1.2**
BIZ	**Bicaz**	**2.38**	**116**	Pn		**Pn**	**03 15 47.1**	**+1.2**
BIZ				Pn		**Pb**	**03 15 48.0**	**-2.0**
BIZ				Pn		**Pb**	**03 15 48.0**	**-2.0**
KMPD	**K-Podol'skiy**	**2.38**	**76**	*e*Pn		**Pb**	**03 15 48.4**	**-1.6**
KMPD	**K-Podol'skiy**	**2.38**	**76**	Pn		**Pb**	**03 15 48.4**	**-1.6**
HORU	**Horodok**	**2.58**	**61**	*e*Sn		**Sb**	**03 16 23.3**	**-1.6**
HORU	**Horodok**	**2.58**	**61**	Sn		**Sb**	**03 16 23.3**	**-1.6**
BZS	**Buzias**	**2.58**	**202**	⇑P		**Pn**	**03 15 50.5**	**+1.7**
BZS	**Buzias**	**2.58**	**202**	⇑P		**Pn**	**03 15 50.5**	**+1.7**
BZS	**Buzias**	**2.58**	**202**	Pn		**Pn**	**03 15 50.5**	**+1.7**
BZS				Pn		**Pn**	**03 15 50.5**	**+1.7**
BZS				Pn		**Pn**	**03 15 50.5**	**+1.7**
BZS				*e*Sn		**Sn**	**03 16 16.2**	**-3.7**
LOT	**Lotru**	**2.63**	**168**	⇓P		**Pn**	**03 15 50.1**	**+0.5**
LOT				⇓S		**Sb**	**03 16 25.3**	**-1.2**
LOT	**Lotru**	**2.63**	**168**	⇓P		**Pn**	**03 15 50.1**	**+0.5**
LOT				⇓S		**Sb**	**03 16 25.3**	**-1.2**
LOT	**Lotru**	**2.63**	**168**	Pn		**Pn**	**03 15 50.0**	**+0.5**
LOT				Pn		**Pb**	**03 15 50.5**	**-3.8**
LOT				Pn		**Pb**	**03 15 50.5**	**-3.8**
LOT				Sn		**Sb**	**03 16 25.3**	**-1.2**
LOT				Sn		**Sb**	**03 16 25.3**	**-1.2**
LOT				Sn		**Sb**	**03 16 25.3**	**-1.2**
DOPR	**Dopca**	**2.63**	**140**	⇑P		**Pn**	**03 15 50.9**	**+1.5**
DOPR	**Dopca**	**2.63**	**140**	⇑P		**Pn**	**03 15 50.9**	**+1.5**
DOPR	**Dopca**	**2.63**	**140**	Pn		**Pn**	**03 15 50.9**	**+1.5**
DOPR				Pn		**Pn**	**03 15 50.9**	**+1.5**
DOPR				Pn		**Pn**	**03 15 50.9**	**+1.5**
GZR	**Gura Zlata**	**2.63**	**183**	⇓P		**Pn**	**03 15 51.2**	**+1.7**
GZR				⇑S		**Sb**	**03 16 24.9**	**-1.6**
GZR	**Gura Zlata**	**2.63**	**183**	⇑P		**Pn**	**03 15 51.2**	**+1.7**
GZR				⇑S		**Sb**	**03 16 24.9**	**-1.6**
GZR	**Gura Zlata**	**2.63**	**183**	Pn		**Pn**	**03 15 51.2**	**+1.7**
GZR				Pn		**Pn**	**03 15 51.2**	**+1.7**
GZR				Pn		**Pn**	**03 15 51.2**	**+1.7**
GZR				Sn		**Sb**	**03 16 24.9**	**-1.6**
GZR				Sn		**Sb**	**03 16 24.9**	**-1.6**
GZR				Sn		**Sb**	**03 16 24.9**	**-1.6**
VYHS	**Vyhne**	**2.81**	**281**	*e*Pn		**Pn**	**03 15 53.0**	**+1.1**
ARR	**Arges**	**2.89**	**156**	⇓P		**Pn**	**03 15 54.5**	**+1.5**
ARR				⇓S		**Sn**	**03 16 30.9**	**+3.4**
ARR	**Arges**	**2.89**	**156**	⇓P		**Pn**	**03 15 54.5**	**+1.5**
ARR				⇓S		**Sn**	**03 16 30.9**	**+3.4**
ARR	**Arges**	**2.89**	**156**	Pn		**Pn**	**03 15 54.5**	**+1.5**
ARR				Pn		**Pn**	**03 15 54.5**	**+1.5**
ARR				Pn		**Pn**	**03 15 54.5**	**+1.5**
ARR				Sn		**Sn**	**03 16 30.9**	**+3.4**
ARR				Sn		**Sn**	**03 16 30.9**	**+3.4**
ARR				Sn		**Sn**	**03 16 30.9**	**+3.4**
VOIR		**2.95**	**150**	⇓P		**Pn**	**03 15 55.4**	**+1.6**
VOIR		**2.95**	**150**	⇓P		**Pn**	**03 15 55.4**	**+1.6**
VOIR		**2.95**	**150**	Pn		**Pn**	**03 15 55.4**	**+1.6**
VOIR				Pn		**Pn**	**03 15 55.4**	**+1.6**
VOIR				Pn		**Pn**	**03 15 55.4**	**+1.6**
NDNU	**Novodnistrovsk**	**2.98**	**77**	*e*Pn		**Pn**	**03 15 56.1**	**+1.9**
NDNU	**Novodnistrovsk**	**2.98**	**77**	Pn		**Pn**	**03 15 56.1**	**+1.9**
HERR	**Herculane**	**3.17**	**187**	⇑P		**Pn**	**03 15 58.6**	**+1.8**
HERR	**Herculane**	**3.17**	**187**	⇑P		**Pn**	**03 15 58.6**	**+1.8**
HERR	**Herculane**	**3.17**	**187**	Pn		**Pn**	**03 15 58.6**	**+1.8**
HERR				Pn		**Pn**	**03 15 58.6**	**+1.8**
HERR				Pn		**Pn**	**03 15 58.6**	**+1.8**
MLR	**Muntele Rosu**	**3.25**	**140**	Pn		**Pb**	**03 16 06.2**	**+1.3**
	0.1nm,0.3s,baz=228,slow=18,SNR=1.3							
MLR	**Muntele Rosu**	**3.25**	**140**	Pn		**Pb**	**03 16 06.2**	**+1.3**
	0.1nm,0.3s							
SORM	**Soroca**	**3.60**	**86**	*e*Pn		**Pn**	**03 16 03.6**	**+0.9**
SORM	**Soroca**	**3.60**	**86**	⇓P		**Pn**	**03 16 03.6**	**+0.9**
SORM	**Soroca**	**3.60**	**86**	⇓P		**Pn**	**03 16 03.6**	**+0.9**
SORM	**Soroca**	**3.60**	**86**	Pn		**Pn**	**03 16 03.6**	**+0.9**
SORM				Pn		**Pn**	**03 16 03.6**	**+0.9**
SORM				Pn		**Pn**	**03 16 03.6**	**+0.9**
VRAC	**Vranov**	**4.43**	**289**	Pn		**Pn**	**03 16 13.1**	**-1.0**
	0.2nm,0.3s,baz=113,slow=13,SNR=1.8							
VRAC				Sn		**Sn**	**03 17 06.0**	**+0.5**
	1.3nm,0.3s,baz=317,slow=23,SNR=9.9							
VRAC	**Vranov**	**4.43**	**289**	*e*PN		**Pn**	**03 16 13.8**	**-0.3**
VRAC				*e*SN		**Sn**	**03 17 06.3**	**+0.9**
VRAC	**Vranov**	**4.43**	**289**	Pn		**Pn**	**03 16 13.1**	**-1.0**
	0.2nm,0.3s							
VRAC				Pn		**Pn**	**03 16 13.8**	**-0.3**
VRAC				P		**Pn**	**03 16 15.3**	**+1.2**
VRAC				P		**Pn**	**03 16 15.3**	**+1.2**
VRAC				P		**Pn**	**03 16 15.3**	**+1.2**
VRAC				Sn		**Sn**	**03 17 06.0**	**+0.5**
	1.3nm,0.3s							
VRAC				x		x	03 17 06.3	
KRUC	**Moravsky**	**4.50**	**286**	*e*PN		**Pn**	**03 16 15.0**	**-0.1**
KRUC				*e*SN		**Sn**	**03 17 07.4**	**+0.2**
KRUC	**Moravsky**	**4.50**	**286**	Pn		**Pn**	**03 16 15.0**	**-0.1**
KRUC				Sn		**Sn**	**03 17 07.4**	**+0.2**
AKASG	**Malin Array Be**	**4.88**	**54**	Pg		**Pb**	**03 16 35.3**	**+2.8**
	0.8nm,0.3s,baz=237,slow=17,SNR=4.0							
AKASG				Lg		Lg	03 17 38.1	
	1.6nm,0.3s,baz=195,slow=23,SNR=5.6							
AKASG	**Malin Array Be**	**4.88**	**54**	Pn		**Pb**	**03 16 35.3**	**+2.8**
	0.8nm,0.3s							
AKASG				Sn		**Sg**	**03 17 38.1**	**-5.8**
	1.6nm,0.3s							
DPC	**Dobruska-Polom**	**4.95**	**301**	*e*Pn		**Pn**	**03 16 21.8**	**+0.4**
DPC				Pn		**Pn**	**03 16 21.8**	**+0.4**
DPC	**Dobruska-Polom**	**4.95**	**301**	*e*PN		**Pn**	**03 16 21.8**	**+0.4**
OSTC	**Ostas**	**5.10**	**302**	Pn		**Pn**	**03 16 24.6**	**+1.2**
OSTC	**Ostas**	**5.10**	**302**	*e*PN		**Pn**	**03 16 24.6**	**+1.2**
GERES	**GERESS Array B**	**6.23**	**281**	Pn		**Pn**	**03 16 40.5**	**+1.5**
	0.2nm,0.3s,baz=89,slow=14,SNR=6.2							
GERES				Sn		**Sn**	**03 17 51.3**	**+1.3**
	0.2nm,0.3s,baz=84,slow=27,SNR=4.7							
GERES	**GERESS Array B**	**6.23**	**281**	Pn		**Pn**	**03 16 40.5**	**+1.5**
	0.2nm,0.3s							
GERES				Sn		**Sn**	**03 17 51.3**	**+1.3**
	0.2nm,0.3s							
FINES	**FINESS Array B**	**13.57**	**6**	Pn		**Pn**	**03 18 15.2**	**-4.0**
	0.1nm,0.3s,baz=186,slow=11,SNR=2.9							
FINES	**FINESS Array B**	**13.57**	**6**	Pn		**Pn**	**03 18 15.2**	**-4.0**
	0.1nm,0.3s							
ARCES	**ARCESS Array B**	**21.61**	**2**	P		**P**	**03 19 56.5**	**-0.1**
	2.2nm,0.9s,baz=179,slow=12,SNR=3.2							
ARCES	**ARCESS Array B**	**21.61**	**2**	P		**P**	**03 19 56.5**	**-0.1**
	2.2nm,0.9s							

IDC ***15*** *03:16:12.9±0.9, 1.°80N×126.°46E, h0km, mb4.3/9, mb1 4.4/10, mb1mx4.0/52, mbtmp4.3/10, ML4.2/1, Error ellipse: s-maj=80.7km s-min=15.1km az=72.0*
NEIC ***15*** *03:16:18.1±1.4, 1.°8N±0.°1×126.°33E±0.°05, h35km±2km, mb4.6/13, Error ellipse: s-maj=20.4km s-min=6.6km az=199.0*

ISC 15 03:16:19.2±0.6, 1.°68N±0.°09×126.°29E±0.°09, h47km, n26, σ1s04/24, mb4.3/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**130**		**Pn**	**03 16 41.5**	**-1.0**
LUWI	**Luwuk**	**4.43**	**232**	Pn	**Pn**	**03 17 24.2**	**+0.2**
SBUM	**Sibu**	**14.08**	**273**	Pn	**Pn**	**03 19 33.9**	**-2.2**
MTN	**Manton Dam**	**15.21**	**162**	Pn	**Pn**	**03 19 49.5**	**-1.6**
MTN				IAmb	IAmb	03 20 02.3	
	comp=Z,92nm,1.6s						
KSM	**Kuching**	**15.97**	**269**		**Pn**	**03 19 58.9**	**-2.0**
KSM				IAmb	IAmb	03 20 00.8	
	comp=Z,51nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P	**P**	**03 20 45.2**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=3.5,slow=12,SNR=4.6						
WRAB	**Tennant Creek**	**22.89**	**160**	P	**P**	**03 21 19.1**	**-0.1**
WRA	**Warramunga Arr**	**22.90**	**160**	P	**P**	**03 21 18.6**	**-0.6**
	comp=Z,16nm,0.5s,baz=339,slow=9.9,SNR=26						
WRA	**Warramunga Arr**	**22.90**	**160**	IAmb	IAmb	03 21 19.5	
	comp=Z,0.7nm,0.8s						
AS31	**Alice Springs**	**26.26**	**164**	P	**P**	**03 21 50.8**	**+0.5**
ASAR	**Alice Springs**	**26.27**	**164**	P	**P**	**03 21 51.4**	**+1.0**
	comp=Z,3.9nm,0.6s,baz=348,slow=13,SNR=10.0						
ASAR				PcP	**PcP**	**03 25 16.4**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=355,slow=2.0,SNR=4.0						
STKA	**Stephens Creek**	**36.40**	**158**	P	**P**	**03 23 19.4**	**+0.1**
	comp=Z,1.9nm,0.2s,baz=349,slow=11,SNR=4.0						
STKA	**Stephens Creek**	**36.40**	**158**	IAmb	IAmb	03 24 19.2	
	comp=Z,10nm,1.6s						
SONM	**Songino Array**	**49.09**	**342**	P	**P**	**03 25 02.5**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=142,slow=7.3,SNR=3.4						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**03 26 14.2**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=121,slow=7.2,SNR=12						
MAKZ	**Makanchi**	**59.17**	**326**	P	**P**	**03 26 13.4**	**-2.0**
MAKZ				IAmb	IAmb	03 26 13.8	
	comp=Z,6.9nm,1.1s						
ZAA0	**Zalesovo Array**	**62.21**	**334**	P	**P**	**03 26 36.1**	**+0.3**
ZALV	**Zalesovo Beam**	**62.21**	**334**		**P**	**03 26 35.7**	**-0.2**
BTK	**Batken**	**63.02**	**315**	P	**P**	**03 26 42.1**	**+0.4**
KURK	**Kurchatov**	**63.23**	**328**	P	**P**	**03 26 43.0**	**+0.3**
NRIK	**Noril'sk**	**72.30**	**347**	P	**P**	**03 27 39.1**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=177,slow=7.4,SNR=2.4						
AKTO	**Aktyubinsk**	**74.98**	**322**	P	**P**	**03 27 56.4**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=97,slow=12,SNR=4.0						
VNDA	**Vanda**	**81.47**	**173**	P	**P**	**03 28 31.8**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=319,slow=5.8,SNR=10						
VNDA	**Vanda**	**81.47**	**173**	P	**P**	**03 28 32.0**	**+1.0**
MAW	**Mawson**	**81.69**	**200**	P	**P**	**03 28 33.4**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=66,slow=10,SNR=3.0						
MAW	**Mawson**	**81.69**	**200**	IAmb	IAmb	03 31 12.5	
	comp=Z,4.9nm,1.9s						

MOS ***15*** *03:16:56.5±1.3, 44.°83N×147.°19E, h117km, mb4.4/1, Error ellipse: s-maj=64.8km s-min=16.5km az=55.0*
SKHL ***15*** *03:16:59.5±0.8, 44.°84N×146.°92E, h125km±5km, mb4.3/4, msh5.3/4*
JMA ***15*** *03:17:00.4±0.2, 44.°03N×147.°66E, h98km, M3.9*

ISC 15 03:16:56.3±1.4, 44.°59N±0.°09×147.°4E±0.°1, h146km±8km, n27, σ2s17/45, 4C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.73**	**28**	*i* P	**Pn**	**03 17 20.0**	**+1.5**
KUR				AMB	AMB	03 17 20.0	
	110nm,0.4s						
KUR				*i* S	**Sn**	**03 17 35.0**	**-0.5**
KUR				A	A	03 17 35.0	
	740nm,0.4s						
KUR				A	A	03 17 35.0	
	140nm,0.4s						
KUR	**Kuril'sk**	**0.73**	**28***c*	*i*PN	**Pn**	**03 17 20.1**	**+1.5**
KUR				*i* S	**Sn**	**03 17 35.3**	**-0.2**
KUR				pmax	pmax		
	comp=N,15nm,0.1s						
KUR				pmax	pmax		
	comp=Z,134nm,0.1s						
KUR				pmax	pmax		
	comp=E,80nm,0.3s						
KUR				smax	smax		
	comp=N,864nm,0.3s						
KUR				smax	smax		
	comp=E,1μm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.23**	**244**	*i* P	**Pn**	**03 17 23.0**	**+0.3**
YUK				AMB	AMB	03 17 24.0	
	comp=E,132nm,0.3s						
YUK				*i* S	**Sn**	**03 17 41.3**	**-1.6**
YUK				A	A	03 17 41.9	
	comp=E,2μm,0.4s						
YUK				A	A	03 17 41.9	
	comp=E,3μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.23**	**244***c*	*i*PN	**Pn**	**03 17 23.9**	**+1.2**
YUK				*i* S	**Sn**	**03 17 41.6**	**-1.3**
YUK				pmax	pmax		
	comp=E,243nm,0.2s						
YUK				pmax	pmax		
	comp=Z,2μm,0.2s						
YUK				pmax	pmax		
	comp=N,284nm,0.1s						
YUK				smax	smax		
	comp=N,926nm,0.2s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
GRPR	**Tuman**	**1.30**	**243**	*i* P	**Pn**	**03 17 24.0**	**+0.5**
GRPR				AMB	AMB	03 17 25.0	
	comp=E,46nm,0.2s						
GRPR				*i* S	**Sn**	**03 17 42.0**	**-2.2**
GRPR				A	A	03 17 43.0	
	comp=E,215nm,0.2s						
GRPR				A	A	03 17 43.0	
	comp=E,115nm,0.2s						
GRPR	**Tuman**	**1.30**	**243**	*i*PN	**Pn**	**03 17 24.6**	**+1.1**
GRPR				*i* S	**Sn**	**03 17 42.6**	**-1.6**
GRPR				pmax	pmax		
	comp=N,135nm,0.1s						
GRPR				pmax	pmax		
	comp=Z,462nm,0.1s						
GRPR				pmax	pmax		
	comp=E,52nm,0.2s						
GRPR				smax	smax		
	comp=N,2μm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.2s						
GLVR	**Golovnino**	**1.59**	**238**	*i* P	**Pn**	**03 17 27.0**	**+0.5**
GLVR				AMB	AMB	03 17 28.0	
	comp=E,31nm,0.3s						
GLVR				*i* S	**Sn**	**03 17 48.0**	**-1.5**
GLVR				A	A	03 17 50.0	
	comp=E,124nm,0.3s						
GLVR				A	A	03 17 50.0	
	comp=E,203nm,0.3s						
GLVR	**Golovnino**	**1.59**	**238**	*i*PN	**Pn**	**03 17 27.8**	**+1.3**
GLVR				*i* S	**Sn**	**03 17 48.6**	**-0.9**
GLVR				pmax	pmax		
	comp=Z,307nm,0.1s						
GLVR				smax	smax		
	comp=N,1μm,0.3s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
NEM2	**Nemuro 2**	**1.70**	**225**	P	**Pn**	**03 17 27.3**	**-0.4**
NEM2				*e*S	**Sn**	**03 17 47.5**	**-4.3**
NMR	**Nemuro--Hokkai**	**1.71**	**225**	*i* P	**Pn**	**03 17 27.0**	**-0.8**
NMR				*i* S	**Sn**	**03 17 47.0**	**-4.9**
NMR	**Nemuro--Hokkai**	**1.71**	**225**	⇑*i*PN	**Pn**	**03 17 27.3**	**-0.5**
JRA	**Rausu**	**1.75**	**249**	P	**Pn**	**03 17 30.9**	**+2.6**
JRA				*e*S	**Sn**	**03 17 55.0**	**+2.2**
JNSB	**Nemuroshibetsu**	**1.90**	**246**	P	**Pn**	**03 17 32.7**	**+2.8**
JNSB				*e*S	**Sn**	**03 17 57.5**	**+1.8**
JNK	**Nakash**	**2.17**	**243**	P	**Pn**	**03 17 35.4**	**+2.3**
JNK				*e*S	**Sn**	**03 18 01.5**	**+0.1**
JKHN	**Kushirohamanak**	**2.20**	**228**	P	**Pn**	**03 17 34.0**	**+0.4**
JKHN				*e*S	**Sn**	**03 17 59.3**	**-2.9**
JAK	**Akkeshi**	**2.52**	**232**	P	**Pn**	**03 17 38.2**	**+0.8**
JAK				*e*S	**Sn**	**03 18 06.9**	**-2.1**
JTKR	**Abashiri--Toko**	**2.57**	**257**	P	Pn	03 17 42.1	+4.0
JAR	**Ashorobuto**	**2.91**	**245**	P	**Pn**	**03 17 46.1**	**+3.7**
JAR				*e*S	**Sn**	**03 18 20.9**	**+3.0**
JCH	**Churui**	**3.53**	**237**	P	**Pn**	**03 17 52.2**	**+2.0**
JCH				*e*S	**Sn**	**03 18 31.1**	**-0.9**
YSS	**Yuzh-Sakhalins**	**4.01**	**308**	*e*P	**Pn**	**03 17 52.8**	**-3.7**
ERM	**Erimo**	**4.02**	**232**	*i* PN	**Pn**	**03 17 59.6**	**+3.0**
JNBK	**Urakawa-nobuka**	**4.09**	**237**	P	**Pn**	**03 17 59.3**	**+1.8**
JKB	**Kayabe**	**5.37**	**242**	P	**Pn**	**03 18 17.3**	**+2.8**
JKB				*e*S	**Sn**	**03 19 14.5**	**-1.0**
JOT	**Ohata**	**5.64**	**238**	P	**Pn**	**03 18 19.7**	**+1.5**
JOT				*e*S	**Sn**	**03 19 18.7**	**-3.4**
MAJO	**Matsushiro**	**10.64**	**224**	*i* PN	**Pn**	**03 19 27.6**	**+2.8**
ARU	**Arti**	**53.86**	**317**	*e*P	**P**	**03 26 03.3**	**-0.5**
ARU	**Arti**	**53.86**	**317**	*i* P	**P**	**03 26 03.4**	**-0.4**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						

IDC 15 03:19:52.5±2.1, 1.°71N×126.°88E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/46, mbtmp3.6/4, Error ellipse: s-maj=224.4km s-min=21.5km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.73**	**162**	P	P	03 24 55.8	-0.5
	0.8nm,0.6s,baz=340,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**26.13**	**165**	P	P	03 25 29.0	+0.4
	0.7nm,0.9s,baz=346,slow=12,SNR=2.3						
MKAR	**Makanchi Array**	**59.29**	**326**	P	P	03 29 56.0	-0.2
	0.3nm,0.4s,baz=120,slow=7.6,SNR=5.4						
KURBB	**Kurchatov Arra**	**63.51**	**328**	P	P	03 30 24.6	0.0
	0.6nm,0.5s,baz=132,slow=5.6,SNR=4.0						

IDC 15 03:22:22.5±1.5, 1.°71N×126.°21E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.6/46, mbtmp3.8/6, ML3.3/1, Error ellipse: s-maj=114.8km s-min=18.6km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.69**	**182**	P	Pn	03 26 54.1	-0.6
	0.1nm,0.3s,baz=23,slow=7.7,SNR=2.6						
WRA	**Warramunga Arr**	**22.95**	**160**	P	P	03 27 27.9	-0.7
	1.8nm,0.4s,baz=338,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.31**	**164**	P	P	03 28 00.8	+0.7
	0.4nm,0.4s,baz=348,slow=13,SNR=7.5						
MKAR	**Makanchi Array**	**58.92**	**326**	P	P	03 32 23.6	0.0
	0.9nm,0.4s,baz=118,slow=7.7,SNR=14						
KURBB	**Kurchatov Arra**	**63.16**	**328**	P	P	03 32 52.2	0.0
	0.7nm,0.5s,baz=130,slow=6.6,SNR=5.7						
VNDA	**Vanda**	**81.50**	**173**	P	P	03 34 40.9	-0.4
	0.4nm,0.7s,baz=319,slow=7.3,SNR=3.0						

IDC 15 03:22:47.7±1.8, 1.°92N×126.°22E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/44, mbtmp3.8/4, Error ellipse: s-maj=187.6km s-min=21.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.14**	**160**	P	P	03 27 55.3	-0.5
	1.0nm,0.4s,baz=339,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**26.50**	**164**	P	P	03 28 27.4	+0.3
	1.2nm,0.9s,baz=344,slow=8.9,SNR=3.2						
MKAR	**Makanchi Array**	**58.76**	**326**	P	P	03 32 47.6	0.0
	0.4nm,0.4s,baz=119,slow=8.2,SNR=3.2						
KURBB	**Kurchatov Arra**	**62.99**	**328**	P	P	03 33 16.2	-0.1
	0.6nm,0.4s,baz=138,slow=6.5,SNR

comp=Z,0.7nm,0.3s,baz=30,slow=9.5,SNR=15
TWG Pinlang 21.53 346 P P 03 27 46.6 -2.9
TWG IAmb IAmb 03 27 54.4
comp=Z,45nm,0.9s
TPUB Ta-pu 22.10 345 P P 03 27 53.6 -2.0
PMBI Palembang 22.30 258 P P 03 28 12.0 +14
SSLB Suanglung 22.49 346 P P 03 27 58.8 -1.1
SSLB IAmb IAmb 03 27 59.7
comp=Z,37nm,0.7s
MYKOM Kota Tinggi 22.71 270 P P 03 27 60.0 -2.2
COEN Coen 22.74 134 P P 03 28 03.0 +0.5
KLSI 22.76 253 P P 03 28 05.1 +2.3
comp=Z,10nm,0.8s
WB0 Warramunga Arr 22.80 161 P P 03 28 01.8 -1.3
WB0 IAmb IAmb 03 28 06.9
comp=Z,71nm,1.1s
WRAB Tennant Creek 22.94 161 P P 03 28 03.2 -1.3
WRA Warramunga Arr 22.95 161 P P 03 28 03.0 -1.6
comp=Z,30nm,0.6s,baz=338,slow=11,SNR=55
WB2 Warramunga Arr 22.95 161 P P 03 28 03.3 -1.3
WR0 Warramunga Arr 23.03 161 IAmb IAmb 03 28 09.2
comp=Z,82nm,1.4s
KASI Kota Agung 23.23 252 P P 03 28 09.1 +1.6
comp=Z,63nm,0.8s
MDSI Maura Dua 23.24 254 P P 03 28 06.5 -1.1
comp=Z,24nm,0.9s
PMG Port Moresby 23.35 119 P P 03 28 08.6 -0.1
comp=Z,12nm,0.7s,baz=239,slow=6.7,SNR=3.8
PMG Port Moresby 23.35 119 P P 03 28 08.4 -0.3
PSA00 Pilbara Seismi 24.18 195 P P 03 28 15.8 -0.4
PSA00 IAmb IAmb 03 28 21.1
comp=Z,108nm,2.0s
SDSI Sungai Dareh 25.29 264 P P 03 28 27.8 +1.3
comp=Z,25nm,0.9s
ASAR Alice Springs 26.33 165 P P 03 28 35.6 -0.2
comp=Z,18nm,0.7s,baz=349,slow=14,SNR=35
ASAR PcP **PcP 03 32 01.5 +0.3**
comp=Z,1.8nm,0.4s,baz=348,slow=2.3,SNR=5.7
ASAR Alice Springs 26.33 165 P P 03 28 34.9 -1.0
RPSI Rantau Prapat 27.64 272 P P 03 28 46.2 -1.5
GSI Gunungsitoli 28.99 269 P P 03 28 57.7 -2.1
GSI IAmb IAmb 03 28 59.1
comp=Z,36nm,1.0s
CTA Charters Tower 29.11 139 P P 03 29 02.0 +1.2
comp=Z,6.5nm,0.6s,baz=329,slow=15,SNR=6.0
CTAO Charters Tower 29.11 139 P P 03 29 00.7 0.0
SLVN Son La 29.38 313 P P 03 29 03.1 -0.1
WHN Wuhan 30.81 339 ⇓P P 03 29 18.3 +2.6
NJ2 Nanjing 30.93 347 *eP* **P 03 29 17.8 +1.2**
NJ2 pmax pmax
comp=Z,17nm,0.6s
GYA Guiyang 31.07 324 ⇑P P 03 29 18.3 +0.2
GYA pmax pmax
comp=Z,11nm,0.8s
JNU Nakatsue 31.39 7 P P 03 29 21.4 +0.6
comp=Z,22nm,0.8s,baz=188,slow=4.5,SNR=8.7
JNU Nakatsue 31.39 7 P P 03 29 19.8 -0.9
CMAR Chiang Mai Arr 31.73 303 P P 03 29 23.8 -0.2
comp=Z,1.6nm,0.3s,baz=120,slow=7.7,SNR=10
CMAR PcP **PcP 03 32 15.7 +0.9**
comp=Z,0.6nm,0.3s,baz=153,slow=1.0,SNR=4.2
CHTO Chiang Mai 31.90 304 P P 03 29 24.0 -1.4
FORT Forrest 32.46 178 P P 03 29 29.3 -0.8
KMI Kunming 32.63 317⇓ *eP* **P 03 29 32.8 +0.8**
KMI pP pP 03 29 38.5 -5.4
KMI PP **PP 03 30 45.8 -0.6**
KMI sS sS 03 35 02.6 -2.3
KMI pmax pmax
comp=Z,20nm,0.6s
KMI LR LR
comp=Z,3μm,21.8s
KMI LR LR
comp=Z,4μm,23.3s
KMI LR LR
comp=Z,4μm,20.6s
KSRS Korea Array 35.47 2 P P 03 29 57.5 +1.4
comp=Z,4.4nm,0.6s,baz=179,slow=10.0,SNR=16
KS19 Wonju Array Si 35.51 2 P P 03 29 56.5 -0.1
NWAO Narrogin (SRO) 35.68 194 P P 03 29 57.2 -0.9
comp=Z,5.2nm,0.5s,baz=23,slow=8.4,SNR=11
EIDS Eidsvold 35.98 140 P P 03 30 00.4 -0.4
EIDS IAmb IAmb 03 30 02.9
comp=Z,14nm,0.9s
XAN Xi'an 36.04 335 P P 03 30 00.8 -0.4
XAN pP pwP 03 30 15.3 -0.4
XAN pmax pmax
comp=Z,18nm,1.1s
XAN Xi'an 36.04 335 P P 03 30 01.4 +0.2
XAN IAmb IAmb 03 30 01.4
comp=Z,11nm,0.7s
CD2 Chengdu 36.09 326 P P 03 30 01.3 -0.4
CD2 pmax pmax
comp=Z,30nm,0.5s
MAJO Matsushiro 36.17 16 P P 03 30 02.1 -0.2
MAT Matsushiro 36.17 16 P P 03 30 02.0 -0.3
MJAR Matsushiro Arr 36.17 16 P P 03 30 01.8 -0.5
comp=Z,4.1nm,0.5s,baz=184,slow=9.2,SNR=14
MJAR Matsushiro Arr 36.17 16 P P 03 30 02.8 +0.6
STKA Stephens Creek 36.43 158 P P 03 30 04.5 0.0
comp=Z,14nm,0.7s,baz=350,slow=6.6,SNR=7.5
STKA Stephens Creek 36.43 158 P P 03 30 03.6 -0.9
DL2 Dalian 37.17 354 P P 03 30 12.1 +1.4
DL2 pmax pmax
comp=Z,53nm,0.7s
JMM Marumori 38.17 18 P P 03 30 18.5 -0.6
BJT Baijiatuan 39.17 347 P P 03 30 27.1 -0.4
BJT IAmb IAmb 03 30 31.0
comp=Z,20nm,1.1s
BJI Beijing 39.19 347 P P 03 30 27.8 +0.2
BJI pmax pmax
comp=Z,17nm,0.9s
ARMA Armidale 39.99 145 P P 03 30 35.0 +0.3
LZH Lanzhou 40.06 331 *eP* **P 03 30 35.3 +0.1**
LZH pP pP 03 30 45.9 -1.3
LZH sP sP 03 30 51.8 -0.7
LZH pmax pmax
comp=Z,20nm,1.1s
SHL Shillong 40.89 308 P P 03 30 41.5 -0.8
SHL IAmb IAmb 03 30 42.7
comp=Z,24nm,0.9s
HHC Hu-ho-hao-te 41.14 343 *eP* **P 03 30 44.5 +0.5**
HHC pmax pmax
comp=Z,10.0nm,1.1s
CN2 Changchun 41.80 359 *eP* **P 03 30 49.4 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USA0B Ussuriysk Arra 42.46 6 P P 03 30 54.1 -0.4
USA0B IAmb IAmb 03 30 56.6
comp=Z,15nm,0.8s
USRK Ussuriysk Ar. 42.46 6 P P 03 30 55.9 +1.3
comp=Z,10nm,0.7s,baz=190,slow=7.1,SNR=22
USRK Ussuriysk Ar. 42.46 6 P P 03 30 54.4 -0.1
MDJ Mudanjiang 42.69 3 P P 03 30 56.5 +0.2
MDJ IAmb IAmb 03 31 06.1
comp=Z,75nm,1.9s
LSA Lhasa 43.59 313 P P 03 31 04.2 -0.3
LSA IAmb IAmb 03 31 08.4
comp=Z,12nm,0.7s
SANVU Saraoutou 43.69 115 P P 03 31 05.3 +0.3
ASAJ Asahikawa 44.44 16 P P 03 31 12.6 +2.1
comp=Z,14nm,0.7s,baz=276,slow=15,SNR=5.9
GTA Gaotai 44.64 330 *eP* **P 03 31 11.8 -0.6**
GTA pP pP 03 31 21.4 -3.2
GTA sP pwP 03 31 25.3 -1.8
GTA PcP **PP 03 32 56.3 -1.0**
GTA pmax pmax
comp=Z,5.0nm,1.2s
TAPN Taplejung 45.02 308 *eP* **P 03 31 15.0 -0.8**
comp=Z,24nm,0.8s
ODAN Odare 45.06 307 *eP* **P 03 31 14.6 -1.4**
comp=Z,21nm,0.7s
DZM Mont Dzumac 45.60 124 P P 03 31 21.3 +1.1
comp=Z,11nm,0.9s,baz=308,slow=21,SNR=3.6
DZM Mont Dzumac 45.60 124 IAmb IAmb 03 32 30.5
comp=Z,22nm,1.2s
RAMN Ramite 45.73 307 *eP* **P 03 31 20.3 -1.0**
comp=Z,14nm,0.5s
PALK Pallekele 46.02 278 P P 03 31 23.3 -0.2
comp=Z,2.6nm,0.4s,baz=225,slow=5.7,SNR=2.1
GUN Gumba 46.73 308 *eP* **P 03 31 28.1 -1.2**
comp=Z,30nm,0.5s
PKI Pulchoki 46.95 307 *eP* **P 03 31 29.4 -1.6**
comp=Z,7.7nm,0.3s
PKIN Phulchoki 46.96 307 *eP* **P 03 31 29.2 -1.9**
comp=Z,11nm,0.5s
DMN Daman 47.21 307 *eP* **P 03 31 31.7 -1.3**
KLR Kul'dur 47.43 5 P P 03 31 34.5 +0.5
comp=Z,7.6nm,0.8s,baz=215,slow=4.1,SNR=12
GKN Gorkha 47.75 307 *eP* **P 03 31 35.8 -1.3**
comp=Z,7.1nm,0.2s
KOLN Koldanda 48.49 306 *eP* **P 03 31 41.5 -1.3**
comp=Z,19nm,0.4s
DANN Dangsing 48.60 307 *eP* **P 03 31 42.1 -1.7**
comp=Z,30nm,0.5s
ULN Ulaanbaatar 48.86 343 P P 03 31 44.5 -0.7
ULN IAmb IAmb 03 31 49.3
comp=Z,7.7nm,0.8s
SONM Songino Array 49.04 342 P P 03 31 46.8 +0.3
comp=Z,7.5nm,0.7s,baz=152,slow=9.4,SNR=20
SONM PcP **PcP 03 33 11.1 +1.2**
comp=Z,1.8nm,0.8s,baz=174,slow=4.5,SNR=3.0
SONM Songino Array 49.04 342 P P 03 31 46.5 -0.1
PYUN Piuthan 49.12 306 *eP* **P 03 31 46.8 -0.8**
comp=Z,33nm,0.5s
TLY Talaya 53.27 342 P P 03 32 17.2 -1.0
comp=Z,4.9nm,0.6s,baz=180,slow=9.3,SNR=3.5
TLY Talaya 53.27 342 IAmb IAmb 03 32 36.7
comp=Z,7.8nm,0.8s
WMQ Urumqi 54.19 326 *eP* **P 03 32 27.3 +2.3**
PETK Petropavlovsk- 57.24 22 P P 03 32 48.0 +1.3
comp=Z,3.9nm,0.5s,baz=172,slow=3.8,SNR=13
ZSN Zaisan 58.01 328 *eP* **P 03 32 51.0 -1.2**
comp=Z,4.0nm,1.0s,baz=328
SHLS Shalkode 58.70 321 *eP* **P 03 32 54.3 -3.0**
comp=Z,6.8nm,0.9s,baz=321
NIL Nilore 58.96 309 P P 03 32 57.7 -1.5
NIL IAmb IAmb 03 33 07.3
comp=Z,8.4nm,0.8s
MK31 Makanchi Array 59.02 326 P P 03 32 58.8 -0.5
MK31 IAmb IAmb 03 33 01.6
comp=Z,11nm,1.0s
MKAR Makanchi Array 59.02 326 P P 03 32 58.8 -0.5
comp=Z,6.8nm,0.4s,baz=120,slow=8.0,SNR=54
MKAR PcP **PcP 03 33 48.2 +0.3**
comp=Z,5.3nm,0.9s,baz=121,slow=5.6,SNR=4.1
MKAR Makanchi Array 59.02 326 P P 03 32 58.4 -0.9
MAKZ Makanchi 59.20 326 P P 03 32 59.9 -0.7
MAKZ IAmb IAmb 03 33 02.8
comp=Z,17nm,1.0s
KSH Kashi 59.27 316 *eP* **P 03 33 03.1 +1.8**
KSH pmax pmax
comp=Z,5μm,13.5s
SATY Saty 59.32 321 *eP* **P 03 33 00.5 -1.1**
comp=Z,10.0nm,0.9s,baz=320
SATY *eS* **S 03 41 06.5 -0.4**
baz=320
KPKS Kokpek 59.35 321 *eP* **P 03 33 00.6 -1.1**
comp=Z,6.4nm,0.8s,baz=321
YAK Yakutsk 60.09 2 P P 03 33 07.0 +0.7
comp=Z,22nm,0.7s,baz=223,slow=1.0,SNR=7.6
YAK Yakutsk 60.09 2 P P 03 33 05.9 -0.4
MDOK Medeo 60.24 320 *eP* **P 03 33 06.6 -1.3**
baz=320
TNSS Tian-Shan 60.24 320 *eP* **P 03 33 07.2 -1.1**
baz=320
TDK Taldyqorghan 60.31 323 *eP* **P 03 33 07.1 -1.1**
comp=Z,8.1nm,0.4s,baz=322
AAA Alma-Ata 60.34 320 *eP* **P 03 33 07.8 -0.8**
comp=Z,7.7nm,0.4s,baz=320
CHKK Chushkaly 60.61 321 *eP* **P 03 33 08.8 -1.5**
baz=321
KUU Kurty 61.04 321 *eP* **P 03 33 12.2 -1.0**
comp=Z,14nm,0.9s,baz=320
ZAA0 Zalesovo Array 62.20 334 P P 03 33 20.1 -0.6
ZALV Zalesovo Beam 62.20 334 P P 03 33 19.7 -1.1
comp=Z,1.5nm,0.3s,baz=109,slow=7.3,SNR=6.8
ZALV Zalesovo Beam 62.20 334 P P 03 33 19.4 -1.3
KBL Kabul 62.55 308 P P 03 33 22.9 -0.9
KBL IAmb IAmb 03 33 26.4
comp=Z,8.7nm,0.8s
BTLS Baital 63.03 321 *eP* **P 03 33 25.1 -1.4**
comp=Z,1.7nm,0.7s,baz=321
BTK Batken 63.12 315 IAmb IAmb 03 33 28.9
comp=Z,7.5nm,0.8s
KURBB Kurchatov Arra 63.24 328 P P 03 33 27.4 -0.3
comp=Z,8.5nm,0.4s,baz=131,slow=6.2,SNR=33
KURK Kurchatov 63.25 328 P P 03 33 27.3 -0.5
DZA Taraz 63.87 318 *eP* **P 03 33 31.1 -1.0**
baz=318
SEY Seymchan 63.90 13 P P 03 33 32.0 +0.2
comp=Z,3.2nm,0.7s,baz=147,slow=5.3,SNR=4.8
IUG Iuzhnay 64.46 317 *eP* **P 03 33 35.2 -0.9**
comp=Z,4.4nm,0.7s,baz=316
KKAR Karatay Array 64.51 318 P P 03 33 35.1 -1.2
BRZS Berezniki 66.14 325 *eP* **P 03 33 45.7 -1.0**
comp=Z,2.3nm,0.7s,baz=325
BRVK Borovoye 68.89 327 P P 03 34 03.6 -0.4
BRVK IAmb IAmb 03 34 13.3
comp=Z,7.6nm,0.7s
TIXI Tiksi 69.73 1 P P 03 34 08.0 -0.8
GEYT Alibeck 71.96 309 P P 03 34 22.9 -0.2
comp=Z,4.7nm,0.6s,baz=133,slow=6.3,SNR=6.2
GEYT Alibeck 71.96 309 P P 03 34 22.4 -0.7
NRIK Noril'sk 72.22 346 P P 03 34 24.5 +0.5
comp=Z,16nm,0.8s,baz=124,slow=6.7,SNR=20
ABKAR Akbulak array 73.51 321 P P 03 34 31.3 -0.8
ARU Arti 76.45 328 P P 03 34 47.6 -1.2
RAYN Ar Rayn 81.08 293 P P 03 35 14.2 -0.9
VNDA Vanda 81.58 173 P P 03 35 16.8 +0.3
comp=Z,4.3nm,0.8s,baz=321,slow=6.1,SNR=20
VNDA Vanda 81.58 173 P P 03 35 16.5 0.0
VNDA IAmb IAmb 03 35 19.2
comp=Z,28nm,1.9s
MAW Mawson 81.93 200 P P 03 35 18.8 +0.4
comp=Z,4.6nm,0.7s,baz=86,slow=5.3,SNR=19
MAW Mawson 81.93 200 P P 03 35 18.5 0.0
TTA Tatalina 82.65 27 P P 03 35 23.9 +1.4
TTA IAmb IAmb 03 35 25.4
comp=Z,12nm,1.1s
AKH Akhalkalaki 83.59 311 P P 03 35 28.1 +0.2
GEVA Gevas 83.77 308 P P 03 35 29.4 +0.4
A21K Barrow 84.06 18 P P 03 35 31.1 +1.7
IMAR Indian Mountai 84.13 24 P P 03 35 31.4 +1.5
KBZ Khabaz 84.16 314 P P 03 35 30.4 -0.2
comp=Z,3.9nm,0.7s,baz=54,slow=19
KIV Kislovodsk 84.32 314 P P 03 35 31.7 +0.2
KIV IAmb IAmb 03 35 34.9
comp=Z,7.7nm,0.7s
MARD Mardin 85.55 307 P P 03 35 36.9 -0.9
COLD Coldfoot 85.69 23 IAmb IAmb 03 35 41.5
comp=Z,11nm,1.1s
KOPT Kop Dagi 85.82 310 IAmb IAmb 03 35 58.6
comp=Z,15nm,1.1s
TOLK Toolik Lake Re 86.06 21 IAmb IAmb 03 35 42.9
comp=Z,8.8nm,0.9s
ILAR Eielson Array 86.87 25 P P 03 35 42.9 -0.7
comp=Z,0.6nm,0.6s,baz=254,slow=4.5,SNR=6.5
KLMR Klimovskoe 86.97 331 *eP* **P 03 35 42.9 -1.2**
KLMR AMP 03 35 45.8
comp=Z,12nm,0.6s
BCAR Beaver Creek A 89.13 27 P P 03 35 55.5 +1.0
KMBO Kilima Mbogo 89.35 269 P P 03 35 57.5 +0.7
comp=Z,1.8nm,0.8s,baz=58,slow=7.8,SNR=3.9
KMBO Kilima Mbogo 89.35 269 P 03 36 02.3 +5.5
SYO Syowa Base 90.61 201⇑ *eP* **P 03 36 00.0 -1.1**
BRTR Keskin Array B 91.10 310 P P 03 36 03.0 -1.3
comp=Z,2.3nm,0.7s,baz=116,slow=5.6,SNR=5.7
BRTR Keskin Array B 91.10 310 P P 03 36 03.4 -0.9
ARCES ARCESS Array B 92.16 340 P P 03 36 07.0 -1.4
comp=Z,4.7nm,0.8s,baz=64,slow=5.5,SNR=6.5
AKASG Malin Array Be 93.25 321 P P 03 36 12.0 -1.8
comp=Z,0.3nm,0.3s,baz=73,slow=4.6,SNR=5.1
FINES FINESS Array B 93.42 332 P P 03 36 12.8 -1.5
comp=Z,3.1nm,0.8s,baz=35,slow=7.0,SNR=14
BURAR Bucovina Array 96.30 318 P P 03 36 27.7 -0.3
BUR08 Bucovina Ar. S 96.31 318 P P 03 36 27.5 -0.5
BUR08 IAmb IAmb 03 36 28.7
comp=Z,3.8nm,0.8s
NB2 NORSAR Subarra100.40 333 P Pdif 03 36 44.2 -1.7
comp=Z,1.1nm,0.8s,baz=64,slow=4.8
NOA NORSAR Array B 100.40 333 P Pdif 03 36 44.3 -1.7
comp=Z,1.2nm,0.8s,baz=68,slow=4.6,SNR=4.7
PDAR Pinedale Array 112.87 42 PKKPab PKKPab 03 52 31.8 -1.0
comp=Z,0.4nm,0.7s,baz=116,slow=8.6,SNR=3.9
SCHQ Schefferville 122.45 9 PKP **PKiKP 03 41 54.7 +0.1**
comp=Z,1.9nm,0.4s,baz=23,slow=5.8,SNR=8.1
TXAR Lajitas Array 122.87 53 PKP **PKPdf 03 41 56.1 +0.1**
comp=Z,0.8nm,0.9s,baz=278,slow=0.6,SNR=3.8
TORD Torodi Ar. Bea 123.33 287 PKP **PKiKP 03 41 57.4 0.0**
comp=Z,1.0nm,0.8s,baz=84,slow=1.9,SNR=10
TORD PKKPab **PKKPab 03 51 48.0 +1.1**
comp=Z,0.9nm,0.6s,baz=245,slow=3.5,SNR=5.7
RFA San Rafael 144.36 158 *i* P PKPbc 03 42 34.5 +0.2
ROC1 El Roble 144.90 154 *i* P PKPbc 03 42 36.7 +0.4
PEL Peldehue 144.90 154 *i* P **PKPab 03 42 35.5 -0.5**
AAGR Agrelo 145.72 157 *i* P **PKPab 03 42 40.2 +1.2**
ASAL Salagasta 146.15 156 *i* P **PKPab 03 42 41.0 +0.3**
AUSP Uspallata 146.24 155 *i* P **PKPab 03 42 41.9 +0.6**
CO02 Combarbal 146.40 152 PKPbc **PKPab 03 42 42.2 +0.5**
RTLS Leoncito 146.65 155 *i* P **PKPab 03 42 43.2 +0.3**
RTCV Cerro Valdivia 146.91 156 *i* P **PKPbc 03 42 42.0 -0.1**
ZON Zonda 147.12 156 *i* P **PKPbc 03 42 43.5 +0.6**
RTLL Cerro Villicun 147.40 156 *i* P **PKPbc 03 42 43.9 +0.3**
ACCO Cerro Coronel 147.79 154 *i* P **PKPbc 03 42 44.2 -0.8**
CO01 Juntas del Tor 147.85 152 PKPbc **PKiKP 03 42 46.2 -0.9**
AROD Rodeo 147.97 153 *i* P **PKPbc 03 42 45.8 +0.3**
AVFE Valle Fertil 148.40 157 *i* P **PKPbc 03 42 47.0 +0.7**
AC05 El Transito 148.71 151 PKPbc **PKPbc 03 42 48.0 +0.8**
TCA Tanti 148.81 161 *i* P **PKPbc 03 42 46.0 -1.5**
AGUA GUANDACOL 148.99 154 *i* P **PKiKP 03 42 49.0 -0.3**
VCA Vinchina 149.76 154 *i* P **PKiKP 03 42 51.1 +0.2**
CYA Choya 151.02 157 *i* P **PKPbc 03 42 53.1 +0.3**
CPUP Villa Florida 155.36 172 PKPab **PKPab 03 43 18.6 +0.1**
comp=Z,3.1nm,1.0s,baz=145,slow=4.3,SNR=4.7
LPAZ La Paz 159.61 136 PKPab **PKPab 03 43 39.0 +1.1**
comp=Z,2.0nm,0.8s,baz=219,slow=4.9,SNR=5.8

IDC 15 03:24:59.8±1.8, 1°.84N×126°.21E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.7/42, mbtmp4.1/4, Error ellipse: s-maj=187.4km s-min=21.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.07**	**160**	P	P	03 30 06.5	-0.7
	5.6nm,0.6s,baz=339,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**26.44**	**164**	P	P	03 30 39.3	+0.8
	1.5nm,0.4s,baz=346,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**58.81**	**326**	P	P	03 34 59.9	-0.1
	0.8nm,0.4s,baz=128,slow=7.7,SNR=5.3						
KURBB	**Kurchatov Arra**	**63.05**	**328**	P	P	03 35 28.6	-0.1
	1.2nm,0.4s,baz=139,slow=7.2,SNR=6.1						

*IDC **15** 03:29:09.5±1.3, 1°.86N×126°.59E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/45, mbtmp3.9/7, ML3.5/1, Error ellipse: s-maj=105.7km s-min=17.9km az=71.0*
*DJA **15** 03:29:10.1±1.0, 2°.1N±3°×12°.7E±°, h11km±9km, M4.1/10, MLv4.1/10*
*NEIC **15** 03:29:15.3±1.2, 1°.86N±0°.03×126°.61E±0°.08, h35km±2km, mb4.3/13, Error ellipse: s-maj=13.3km s-min=5.6km az=91.0*

ISC 15 03:29:11.0±0.7, 1°.85N±0°.06×126°.66E±0°.09, h10km, n33, σ1s29/32, mb4.2/9, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.28**	**147**	P	Pn	**03 29 33.5**	**-1.4**
TNTI				S	Sb	**03 29 50.6**	**-1.0**
TNTI	**Ternate**	**1.28**	**147**		Pg	**03 29 36.9**	**+1.4**
SGSI	**Sangihe**	**2.15**	**328**	P	Pn	**03 29 46.2**	**-0.7**
SGSI				S	Sn	**03 30 13.6**	**-0.1**
LBMI	**Labuha**	**2.60**	**161**	P	Pn	**03 29 50.9**	**-2.3**
KMSI	**Cibinong**	**2.96**	**245**	P	Pn	**03 29 56.9**	**-1.2**
GTOI	**Gorontalo**	**3.84**	**252**	P	Pn	**03 30 10.3**	**+0.1**
LUWI	**Luwuk**	**4.83**	**234**	P	Pn	**03 30 22.2**	**-1.6**
LUWI	**Luwuk**	**4.83**	**234**	Pn	Pn	**03 30 25.1**	**+1.3**
MRSI	**Marisa**	**4.91**	**254**	P	Pn	**03 30 23.1**	**-1.8**
KCP	**Kidapawan**	**5.36**	**343⇑** *eP*	Pb	Pn	03 30 38.2	-6.7
MYLDM	**Lahad Datu**	**8.79**	**292**	Pn	Pn	**03 31 19.1**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.84**	**183**	P	Pn	**03 33 43.3**	**-0.5**
	0.1nm,0.3s,baz=24,slow=10.0,SNR=1.3						
FITZ	**Fitzroy Crossi**	**19.84**	**183**	IAmb	IAmb	03 34 39.3	
	comp=Z,32nm,1.9s						
WB0	**Warramunga Arr**	**22.78**	**161**	P	P	**03 34 15.7**	**+1.8**
WB0				IAmb	IAmb	03 34 16.7	
	comp=Z,6.4nm,0.6s						
WRAB	**Tennant Creek**	**22.92**	**161**	P	P	**03 34 17.0**	**+1.7**
WRA	**Warramunga Arr**	**22.93**	**161**	P	P	**03 34 15.0**	**-0.4**
	comp=Z,4.8nm,0.5s,baz=340,slow=11,SNR=16						
WRA	**Warramunga Arr**	**22.93**	**161**	P	P	**03 34 17.8**	**+2.4**
WB2	**Warramunga Arr**	**22.93**	**161**	P	P	**03 34 16.7**	**+1.2**
WB2				IAmb	IAmb	03 34 21.5	
	comp=Z,11nm,0.8s						
WR0	**Warramunga Arr**	**23.01**	**161**	P	P	**03 34 18.4**	**+2.2**
WR0				IAmb	IAmb	03 34 22.5	
	comp=Z,10.0nm,1.0s						
AS31	**Alice Springs**	**26.32**	**165**	P	P	**03 34 48.9**	**+1.7**
ASAR	**Alice Springs**	**26.32**	**165**	P	P	**03 34 48.4**	**+1.2**
	comp=Z,1.5nm,0.5s,baz=347,slow=13,SNR=5.0						
ULN	**Ulaanbaatar**	**48.88**	**343**	P	P	**03 37 57.2**	**+0.1**
SONM	**Songino Array**	**49.05**	**342**	P	P	**03 37 59.6**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=167,slow=8.3,SNR=3.6						
WMQ	**Urumqi**	**54.23**	**326**	P	P	**03 38 36.5**	**-0.6**
MK31	**Makanchi Array**	**59.06**	**326**	P	P	**03 39 11.9**	**+0.5**
MKAR	**Makanchi Array**	**59.06**	**326**	P	P	**03 39 10.7**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=121,slow=7.9,SNR=11						
MAKZ	**Makanchi**	**59.24**	**326**	P	P	**03 39 13.1**	**+0.5**
KURBB	**Kurchatov Arra**	**63.28**	**328**	P	P	**03 39 39.4**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=129,slow=6.7,SNR=5.2						
KURK	**Kurchatov**	**63.29**	**328**	P	P	**03 39 39.4**	**-0.5**
KURK	**Kurchatov**	**63.29**	**328**	IAmb	IAmb	03 39 43.9	
	comp=Z,15nm,1.9s						
KKAR	**Karatay Array**	**64.56**	**318**	P	P	**03 39 48.0**	**-0.6**
ABKAR	**Akbulak array**	**73.56**	**321**	P	P	**03 40 42.9**	**-1.4**
VNDA	**Vanda**	**81.58**	**173**	P	P	**03 41 28.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=320,slow=5.3,SNR=1.5						

*IDC **15** 03:32:36.5±1.2, 10°.22S×123°.76E, h54km±12km, mb3.5/2, mb1 3.9/5, mb1mx3.3/45, mbtmp3.9/5, Error ellipse: s-maj=37.2km s-min=17.3km az=65.0*
*DJA **15** 03:32:37.6±0.7, 11°.5S±5°×12°.4E±°, h10km, M4.2/6, mb4.5/3, MLv4.1/6*

ISC 15 03:32:29.1±0.8, 9°.96S±0°.07×124°.41E±0°.06, h10km, n15, σ2s24/19, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.78**	**252**	P	Pn	**03 32 45.7**	**-0.5**
	2μm,0.3s,baz=98,slow=2.9,SNR=304						
BATI				S	Sg	**03 32 52.2**	**-2.1**
	3μm,0.3s,baz=150,slow=20,SNR=72						
BATI	**Baumata**	**0.78**	**252**	P	Pn	**03 32 45.6**	**-0.5**
BATI				S	Sg	**03 32 54.2**	**-0.1**
MMRI	**Maumere**	**2.52**	**301**	P	Pg	**03 33 17.0**	**-0.5**
EDFI	**Ende, Flores**	**2.95**	**294**	P	Pb	**03 33 22.0**	**+0.2**
BASI	**Baing, Sumba**	**3.79**	**266**	P	Pb	**03 33 36.4**	**+0.3**
WBSI	**Waikabubak, Su**	**4.96**	**273**	P	Pb	03 33 50.7	-5.4
BSSI	**Bau Bau, Buton**	**5.43**	**314**	P	Pn	**03 33 47.9**	**-2.3**
PLAI	**Plampang**	**6.64**	**279**	P	Pn	**03 34 09.7**	**+2.8**
	0.2nm45nm,0.7s						
TWSI	**Taliwang, Sumb**	**7.53**	**279**	P	Pn	**03 34 21.9**	**+2.8**
FITZ	**Fitzroy Crossi**	**8.17**	**172**	P	Pn	**03 34 31.7**	**+3.8**
	1.1nm,0.3s,baz=356,slow=9.8,SNR=23						
FITZ				S	Sn	**03 35 55.6**	**-4.8**
	4.9nm,0.3s,baz=130,slow=3.2,SNR=16						
WRA	**Warramunga Arr**	**13.79**	**137**	P	P	**03 35 51.0**	**-2.5**
	0.4nm,0.3s,baz=314,slow=13,SNR=5.6						
WRA				S	Sn	**03 38 18.7**	**+0.5**
	0.5nm,0.3s,baz=309,slow=25,SNR=6.4						
MMPI	**Merauke**	**15.84**	**86**	P	Pn	**03 36 14.5**	**+2.2**
ASAR	**Alice Springs**	**16.36**	**148**	P	P	**03 36 24.1**	**+2.0**
	0.8nm,0.3s,baz=318,slow=12,SNR=20						
ASAR				S	Sn	**03 39 20.8**	**-0.1**
	0.3nm,0.3s,baz=317,slow=22,SNR=9.6						
MKAR	**Makanchi Array**	**67.84**	**330**	P	P	**03 43 28.8**	**+1.2**
	0.5nm,0.4s,baz=121,slow=8.2,SNR=9.7						
KURBB	**Kurchatov Arra**	**72.28**	**331**	P	P	**03 43 54.9**	**+0.2**
	0.5nm,0.4s,baz=130,slow=6.5,SNR=2.9						

DJA 15 03:33:31.2±1.2, 2°.7N±3°×12°.7E±°, h13km±10km, M3.8/9, MLv3.8/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**143**	P	Pn	03 33 55.5	-0.6
TNTI				S	Sn	03 34 13.9	-0.3
SGSI	**Sangihe**	**2.06**	**331**	P	Pn	03 34 05.4	-0.1
SGSI				S	Sn	03 34 32.0	+0.9
LBMI	**Labuha**	**2.68**	**159**	P	Pn	03 34 13.7	-0.4
KMSI	**Cibinong**	**2.87**	**243**	P	Pn	03 34 17.1	+0.4

GTOI	**Gorontalo**	**3.74 251**	P		Pn	03 34 30.0	+1.4
LUWI	**Luwuk**	**4.76 232**	P		Pn	03 34 42.5	-0.1

*NEIC **15** 03:34:09.9±2.4, 10.86S±0.10×124.7E±0.1, h72km±10km, mb4.2/4, Error ellipse: s-maj=19.1km s-min=5.0km az=225.0*

*IDC **15** 03:34:14.3±1.4, 10.30S×124.19E, h0km, mb4.1/4, mb1 4.1/7, mb1mx3.7/45, mbtmp4.0/7, ML3.7/3, Error ellipse: s-maj=35.2km s-min=11.0km az=5.0*

ISC 15 03:34:04.1±0.7, **10.63S**±0.10×**124.83E**±0.10, **h10**km, **n23,** σ2**$64**/17, **mb4.2/7, Timor region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.03 327**		Pn	Pn	03 34 33.0	+8.3
BATI	**Baumata**	**1.22 290**		Pg	**Pn**	**03 34 25.0**	**-2.3**
	699nm,0.3s,baz=176,slow=5.4,SNR=23						
BATI				Lg	Lg	03 34 30.9	
	1µm,0.3s,baz=92,slow=14,SNR=5.7						
MMRI	**Maumere**	**3.23 307**		Pn	**Pn**	**03 34 58.1**	**+3.2**
KNRA	**Kununurra**	**6.31 143**		Pn	**Pn**	**03 35 37.5**	**+0.2**
MTN	**Manton Dam**	**6.55 110**		Pn	**Pn**	**03 35 43.9**	**+3.3**
FITZ	**Fitzroy Crossi**	**7.47 174**		Sn	Sb	03 37 35.5	-7.6
	4.5nm,0.3s,baz=132,slow=18,SNR=4.0						
FITZ	**Fitzroy Crossi**	**7.47 174**		Pn	**Pn**	**03 35 54.2**	**+1.0**
KAPI	**Kappang**	**7.51 318**		Pn	**Pn**	**03 35 56.1**	**+2.3**
	0.8nm,0.3s,baz=148,slow=13,SNR=2.2						
WRA	**Warramunga Arr**	**13.03 136**		Pn	P	03 37 29.6	+10
	0.3nm,0.3s,baz=311,slow=12,SNR=3.9						
WRA				Sn	**S**	**03 39 56.5**	**-3.6**
	0.4nm,0.3s,baz=300,slow=23,SNR=3.5						
UGM	**Wanagama**	**14.38 280**			**Pn**	**03 37 29.1**	**+1.2**
ASAR	**Alice Springs**	**15.59 147**		Pn	P	03 38 03.8	+15
	0.6nm,0.3s,baz=318,slow=12,SNR=6.1						
ASAR				Sn	**S**	**03 40 59.2**	**+6.6**
	0.3nm,0.3s,baz=317,slow=22,SNR=4.7						
ASAR	**Alice Springs**	**15.59 147**			**P**	**03 37 48.3**	**-0.1**
JOW	**Kunigami**	**37.38 5**		P	**P**	**03 41 17.1**	**-0.1**
CM31	**Chiang Mai Arr**	**38.57 318**		P	**P**	**03 41 26.1**	**-1.3**
CM31				IAmb	IAmb	03 41 36.8	
	comp=Z,3.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**38.57 318**		P	P	03 41 33.9	+6.5
	comp=Z,0.7nm,0.4s,baz=130,slow=8.4,SNR=4.0						
CMAR	**Chiang Mai Arr**	**38.57 318**		P	**P**	**03 41 26.4**	**-1.0**
MKAR	**Makanchi Array**	**68.62 330**		P	P	03 45 16.4	+8.9
	comp=Z,2.0nm,0.5s,baz=135,slow=7.6,SNR=12						
MKAR	**Makanchi Array**	**68.62 330**		P	**P**	**03 45 06.6**	**-0.9**
ZALV	**Zalesovo Beam**	**72.71 337**		P	P	03 45 40.2	+8.1
	comp=Z,0.8nm,0.3s,baz=132,slow=4.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**72.70 337**		P	**P**	**03 45 32.3**	**+0.2**
KK31	**Karatay Array**	**72.83 321**		P	**P**	**03 45 31.6**	**-1.5**
KK31				IAmb	IAmb	03 45 36.7	
	comp=Z,1.0nm,0.9s						
KURBB	**Kurchatov Arra**	**73.06 331**		P	P	03 45 41.2	+7.0
	comp=Z,1.1nm,0.8s,baz=138,slow=5.8,SNR=5.8						
KURK	**Kurchatov**	**73.08 331**		P	**P**	**03 45 33.3**	**-1.1**
KURK				IAmb	IAmb	03 45 44.1	
	comp=Z,3.0nm,0.8s						

*DJA **15** 03:37:51.6±0.5, 2.7N±3.7×12.7E±.7, h154km±6km, M4.0/11, MLv4.0/11*

*IDC **15** 03:37:52.2±1.6, 1.84N×126.34E, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.5/50, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=115.1km s-min=19.4km az=69.0*

*NEIC **15** 03:37:54.1±1.4, 1.9N±0.1×126.30E±0.04, h23km±9km, mb4.3/8, Error ellipse: s-maj=20.0km s-min=4.8km az=188.0*

ISC 15 03:37:57.5±0.9, **1.74N**±0.06×**126.32E**±0.06, **h47**km, **n24,** σ1$**77**/26, **mb4.0/7, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.42 133**		P	**Pn**	**03 38 19.8**	**-1.1**
TNTI				S	**Sn**	**03 38 41.9**	**+3.4**
TNTI	**Ternate**	**1.42 133**			**Pn**	**03 38 21.0**	**0.0**
SGSI	**Sangihe**	**2.09 338**		P	**Pn**	**03 38 28.4**	**-1.7**
SGSI				S	**Sn**	**03 38 56.7**	**+1.8**
KMSI	**Cibinong**	**2.62 244**		P	**Pn**	**03 38 37.4**	**+0.1**
LBMI	**Labuha**	**2.64 154**		P	**Pn**	**03 38 34.2**	**-3.5**
LBMI				S	**Sn**	**03 39 07.7**	**-0.9**
GTOI	**Gorontalo**	**3.49 252**		P	**Pn**	**03 38 50.2**	**+0.8**
LUWI	**Luwuk**	**4.50 232**		P	**Pn**	**03 39 01.0**	**-2.3**
LUWI	**Luwuk**	**4.50 232**		Pn	**Pn**	**03 39 02.7**	**-0.6**
MRSI	**Marisa**	**4.56 254**		P	**Pn**	**03 39 02.5**	**-1.5**
FAKI	**Fak Fak**	**7.52 128**		Pn	**Pn**	**03 39 44.7**	**0.0**
SMRI	**Semarang**	**18.10 241**			**P**	**03 42 04.1**	**-1.5**
FITZ	**Fitzroy Crossi**	**19.73 182**		P	**P**	**03 42 24.4**	**+1.1**
	0.1nm,0.3s,baz=13,slow=11,SNR=2.0						
WRAB	**Tennant Creek**	**22.94 160**		P	**P**	**03 42 58.5**	**+0.6**
WRAB				IAmb	IAmb	03 43 25.9	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**22.94 160**		P	**P**	**03 42 58.6**	**+0.7**
	comp=Z,1.9nm,0.4s,baz=339,slow=11,SNR=9.5						
WRA	**Warramunga Arr**	**22.94 160**		IAmb	IAmb	03 43 23.0	
	comp=Z,0.2nm,0.9s						
WB2	**Warramunga Arr**	**22.95 160**		P	**P**	**03 42 58.4**	**+0.4**
WB2				IAmb	IAmb	03 43 25.9	
	comp=Z,11nm,1.2s						
AS31	**Alice Springs**	**26.31 164**		P	**P**	**03 43 31.2**	**+2.2**
ASAR	**Alice Springs**	**26.31 164**		P	**P**	**03 43 31.3**	**+2.2**
	comp=Z,1.0nm,0.6s,baz=353,slow=14,SNR=6.8						
MK31	**Makanchi Array**	**58.96 326**		P	**P**	**03 47 50.2**	**-2.0**
MK31				IAmb	IAmb	03 47 51.2	
	comp=Z,2.9nm,1.1s						
MKAR	**Makanchi Array**	**58.96 326**		P	**P**	**03 47 52.9**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=128,slow=6.8,SNR=6.7						
MKAR	**Makanchi Array**	**58.96 326**		P	**P**	**03 47 50.5**	**-1.7**
MAKZ	**Makanchi**	**59.14 326**		P	**P**	**03 47 50.6**	**-2.9**
KURBB	**Kurchatov Arra**	**63.19 328**		P	**P**	**03 48 21.6**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=130,slow=6.2,SNR=9.8						
KURK	**Kurchatov**	**63.20 328**		P	**P**	**03 48 21.6**	**+0.8**

*IDC **15** 03:38:12.5±1.8, 1.89N×126.52E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.5/49, mbtmp3.9/4, MS4.9/1, Ms1 4.9/1, ms1mx4.1/38, Error ellipse: s-maj=182.2km s-min=21.1km az=66.0*

*NEIC **15** 03:38:16.8±2.8, 2.0N±0.5×126.7E±0.9, h35km±2km, mb4.2/5, Error ellipse: s-maj=178.9km s-min=11.9km az=60.0*

ISC 15 03:38:16.2±2.4, **2.0N**±0.5×**12.7E**±., **h35**km, **n10,** σ1$**16**/9, **mb4.0/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.27 171**		Pn	**Pn**	**03 38 37.3**	**-0.3**
WRAB	**Tennant Creek**	**22.95 162**		P	**P**	**03 43 16.9**	**-0.7**
WRA	**Warramunga Arr**	**22.95 162**		P	**P**	**03 43 18.7**	**+1.1**
	3.7nm,0.8s,baz=340,slow=11,SNR=5.4						
WB2	**Warramunga Arr**	**22.95 162**		P	**P**	**03 43 16.2**	**-1.5**
ASAR	**Alice Springs**	**26.38 166**		P	**P**	**03 43 51.5**	**+2.0**
	0.9nm,0.5s,baz=343,slow=9.1,SNR=3.6						
PALK	**Pallekele**	**46.58 278**		LR	LR	04 08 23.1	
	comp=Z,1µm,19.4s,baz=151,slow=39						
MK31	**Makanchi Array**	**59.19 326**		P	**P**	**03 48 13.2**	**-0.5**
MKAR	**Makanchi Array**	**59.19 326**		P	**P**	**03 48 13.8**	**0.0**
	0.7nm,0.5s,baz=122,slow=8.0,SNR=8.5						
KURBB	**Kurchatov Arra**	**63.39 328**		P	**P**	**03 48 42.1**	**0.0**
	0.8nm,0.5s,baz=130,slow=6.2,SNR=10						
KURK	**Kurchatov**	**63.39 328**		P	**P**	**03 48 42.1**	**0.0**

*DJA **15** 03:40:03.1±1.5, 2.7N±6.7×12.7E±., h264km±19km, M3.9/9, MLv3.9/9*

*IDC **15** 03:40:11.6±1.2, 1.90N×126.19E, h0km, mb4.0/5, mb1 4.0/6, mb1mx3.6/50, mbtmp3.9/6, ML3.6/1, Error ellipse: s-maj=95.5km s-min=17.9km az=71.0*

*NEIC **15** 03:40:16.8±0.6, 1.89N±0.08×126.3E±0.1, h35km±2km, mb4.1/4, Error ellipse: s-maj=18.7km s-min=11.0km az=58.0*

ISC 15 03:40:17.7±0.9, **1.80N**±0.08×**126.3E**±0.1, **h47**km, **n18,** σ0$**79**/12, **mb4.2/6, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.48 133**		P	**Pn**	**03 40 41.3**	**-0.6**
TNTI	**Ternate**	**1.48 133**		Pn	**Pn**	**03 40 42.1**	**+0.2**
SGSI	**Sangihe**	**2.03 338**		P	**Pn**	**03 40 50.0**	**+0.5**
KMSI	**Cibinong**	**2.61 242**		P	Pn	03 40 52.6	-4.9
LBMI	**Labuha**	**2.70 153**		P	Pn	03 40 50.8	-7.9
GTOI	**Gorontalo**	**3.48 251**		P	Pn	03 41 02.8	-6.6
LUWI	**Luwuk**	**4.51 231**		Pn	**Pn**	**03 41 23.2**	**-0.3**
MRSI	**Marisa**	**4.55 253**		P	Pn	03 41 14.5	-10
FITZ	**Fitzroy Crossi**	**19.78 182**		P	**P**	**03 44 45.1**	**+1.0**
	0.1nm,0.3s,baz=346,slow=9.1,SNR=3.1						
FITZ	**Fitzroy Crossi**	**19.78 182**		IAmb	IAmb	03 44 49.4	
	comp=Z,18nm,1.9s						
WRA	**Warramunga Arr**	**23.00 160**		P	**P**	**03 45 19.1**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=336,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.37 164**		P	**P**	**03 45 51.1**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=344,slow=7.4,SNR=8.0						
MK31	**Makanchi Array**	**58.90 326**		P	**P**	**03 50 11.6**	**-0.4**
MK31				IAmb	IAmb	03 50 13.8	
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**58.90 326**		P	**P**	**03 50 11.9**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=119,slow=8.3,SNR=9.3						
KURBB	**Kurchatov Arra**	**63.13 328**		P	**P**	**03 50 40.6**	**0.0**
	comp=Z,1.3nm,0.6s,baz=130,slow=6.2,SNR=10.0						
KURK	**Kurchatov**	**63.14 328**		P	**P**	**03 50 40.6**	**0.0**
KURK	**Kurchatov**	**63.14 328**		IAmb	IAmb	03 50 43.0	
	comp=Z,3.3nm,0.6s						
NRIK	**Noril'sk**	**72.20 347**		P	**P**	**03 51 36.1**	**-1.3**
	comp=Z,2.4nm,0.5s,baz=110,slow=4.0,SNR=5.2						

IDC 15 03:40:35.4±1.7, **1.56N**×**126.08E**, **h0**km, **mb3.7/4, mb1 3.9/4, mb1mx3.4/49, mbtmp3.7/4, Error ellipse: s-maj=177.1km s-min=21.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.85 160**		P	P	03 45 40.5	0.0
	1.9nm,0.4s,baz=338,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**26.20 164**		P	P	03 46 12.1	0.0
	0.5nm,0.5s,baz=340,slow=9.0,SNR=4.0						
MKAR	**Makanchi Array**	**58.97 326**		P	P	03 50 36.2	-0.6
	0.4nm,0.6s,baz=130,slow=8.2,SNR=2.8						
KURBB	**Kurchatov Arra**	**63.22 328**		P	P	03 51 06.1	+0.5
	0.6nm,0.5s,baz=131,slow=5.9,SNR=3.3						

IDC 15 03:41:19.9±1.8, **1.87N**×**126.38E**, **h0**km, **mb3.7/4, mb1 3.9/4, mb1mx3.5/49, mbtmp3.7/4, Error ellipse: s-maj=177.1km s-min=21.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.04 161**		P	P	03 46 27.1	+0.2
	1.6nm,0.4s,baz=339,slow=11,SNR=7.9						
ASAR	**Alice Springs**	**26.41 164**		P	P	03 46 58.4	-0.1
	0.7nm,0.4s,baz=344,slow=7.5,SNR=4.3						
MKAR	**Makanchi Array**	**58.89 326**		P	P	03 51 20.8	0.0
	0.2nm,0.4s,baz=128,slow=7.1,SNR=3.6						
KURBB	**Kurchatov Arra**	**63.12 328**		P	P	03 51 49.3	-0.1
	0.7nm,0.6s,baz=131,slow=5.5,SNR=2.2						

IDC 15 03:41:57.6±1.6, **1.87N**×**126.23E**, **h0**km, **mb3.8/4, mb1 3.9/5, mb1mx3.5/50, mbtmp3.8/5, ML3.2/1, Error ellipse: s-maj=117.4km s-min=20.1km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.85 182**		P	Pn	03 46 31.4	-0.4
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=2.3						
WRA	**Warramunga Arr**	**23.00 160**		P	P	03 47 04.3	-0.9
	1.8nm,0.5s,baz=338,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**26.46 164**		P	P	03 47 36.8	+0.2
	0.7nm,0.4s,baz=340,slow=8.6,SNR=3.0						
MKAR	**Makanchi Array**	**58.80 326**		P	P	03 51 57.5	-0.3
	0.6nm,0.5s,baz=118,slow=7.5,SNR=6.7						
KURBB	**Kurchatov Arra**	**63.03 328**		P	P	03 52 26.6	+0.2
	0.6nm,0.5s,baz=138,slow=5.8,SNR=3.4						

IDC 15 03:42:40.9±1.8, **1.80N**×**126.06E**, **h0**km, **mb3.6/4, mb1 3.8/4, mb1mx3.4/48, mbtmp3.7/4, Error ellipse: s-maj=179.7km s-min=22.2km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.08 160**		P	P	03 47 47.6	-0.9
	1.1nm,0.5s,baz=338,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**26.43 164**		P	P	03 48 20.5	+0.8
	0.3nm,0.4s,baz=352,slow=13,SNR=2.8						
MKAR	**Makanchi Array**	**58.77 326**		P	P	03 52 41.0	0.0
	0.5nm,0.5s,baz=121,slow=8.6,SNR=4.1						
KURBB	**Kurchatov Arra**	**63.01 328**		P	P	03 53 09.4	-0.2
	0.3nm,0.4s,baz=128,slow=6.7,SNR=4.3						

*IDC **15** 03:46:57.1±1.9, 1.92N×126.72E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.4/46, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=114.3km s-min=23.3km az=69.0*

*DJA **15** 03:47:06.5±0.5, 1.7N±4.7×12.8E±., h86km±8km, M4.3/9, mb4.6/1, MLv4.1/9*

ISC 15 03:46:57.8±1.3, **2.0N**±0.1×**126.8E**±0.1, **h10**km, **n9,** σ1$**60**/8, **mb3.8/3, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33 157**		P	**Pn**	**03 47 22.1**	**-0.3**
SGSI	**Sangihe**	**2.13 322**		P	**Sn**	**03 47 58.5**	**-1.4**
LBMI	**Labuha**	**2.70 166**		P	Pn	03 47 34.4	-6.9
GTOI	**Gorontalo**	**4.06 251**		P	**Pg**	**03 48 17.7**	**+2.1**
LUWI	**Luwuk**	**5.07 233**		P	**Pb**	**03 48 24.4**	**-2.2**
FITZ	**Fitzroy Crossi**	**20.00 183**		P	**P**	**03 51 30.5**	**-0.2**
	0.1nm,0.3s,baz=11,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**23.01 162**		P	**P**	**03 52 02.9**	**-0.2**
	1.5nm,0.5s,baz=340,slow=11,SNR=15						
ASAR	**Alice Springs**	**26.42 165**		P	**P**	**03 52 35.8**	**+0.9**
	0.3nm,0.3s,baz=348,slow=13,SNR=6.5						
MKAR	**Makanchi Array**	**59.04 326**		P	**P**	**03 56 58.9**	**+0.8**
	0.6nm,0.5s,baz=123,slow=8.0,SNR=8.0						

*IDC **15** 03:48:24.3±0.9, 1.77N×126.50E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.8/43, mbtmp4.0/8, ML3.2/1, Error ellipse: s-maj=67.5km s-min=16.5km az=78.0*

*NEIC **15** 03:48:27.2±2.2, 2.15N±0.08×127.09E±0.08, h36km±7km, mb4.4/30, Error ellipse: s-maj=13.7km s-min=9.5km az=46.0*

*DJA **15** 03:48:30.3±0.9, 2.7N±2.7×12.7E±., h28km±8km, M4.3/12, mb4.5/6, MLv4.2/12*

ISC 15 03:48:27.4±0.5, **1.96N**±0.05×**126.94E**±0.06, **h35**km, **n69,** σ1$**85**/68, **mb4.3/20, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25 160**		P	**Pn**	**03 48 51.6**	**+3.1**
TNTI	**Ternate**	**1.25 160**			**Pn**	**03 48 50.5**	**+2.0**
SGSI	**Sangihe**	**2.22 321**		P	**Pn**	**03 49 04.0**	**+2.2**
SGSI				S	**Sn**	**03 49 30.9**	**+2.8**
LBMI	**Labuha**	**2.64 168**		P	**Pn**	**03 49 10.1**	**+2.5**
LBMI				S	**Sn**	**03 49 40.8**	**+2.4**
KMSI	**Cibinong**	**3.27 245**		P	**Pn**	**03 49 15.7**	**-0.5**
KMSI				S	**Sn**	**03 49 50.2**	**-3.6**
GTOI	**Gorontalo**	**4.14 252**		P	**Pn**	**03 49 28.7**	**+0.4**
GTOI				S	**Sn**	**03 50 14.2**	**-1.4**
LUWI	**Luwuk**	**5.13 234**		P	**Pn**	**03 49 41.4**	**-0.4**
LUWI	**Luwuk**	**5.13 234**		Pn	**Pn**	**03 49 44.2**	**+2.4**
SIJI	**Sorong**	**5.16 123**		Pn	Pn	03 49 52.8	+11
	1.2nm,0.3s,baz=253,slow=19,SNR=2.4						
NLAI	**Namlea**	**5.17 178**		P	**Pn**	**03 49 43.8**	**+1.5**
	0.1nm22nm,0.6s						
MRSI	**Marisa**	**5.21 254**		P	**Pn**	**03 49 42.9**	**-0.1**
KCP	**Kidapawan**	**5.34 340**↓		*eP*	Pn	03 49 53.1	+8.2
KCP				*i*	S	**Sn**	**03 50 49.0**	**+3.8**
APSI	**Ampana**	**6.01 242**		P	Pn	03 50 09.7	+16
FAKI	**Fak Fak**	**7.18 132**		Pn	**Pn**	**03 50 09.7**	**-0.4**
MPSI	**Mapaga**	**7.22 257**		P	**Pn**	**03 50 14.2**	**+3.6**
TTSI	**Tana Toraja**	**8.69 235**		P	Pn	03 50 38.2	+7.5
MYLDM	**Lahad Datu**	**9.01 291**		Pn	**Pn**	**03 50 35.7**	**+0.6**
BNSI	**Bone**	**9.30 227**		P	**Pn**	**03 50 43.7**	**+4.5**
KAPI	**Kappang**	**9.98 226**		Pn	**Pn**	**03 50 46.2**	**-2.2**
	1.3nm,0.3s,baz=85,slow=6.6,SNR=3.6						
KAPI	**Kappang**	**9.98 226**		Pn	**Pn**	**03 50 50.7**	**+2.3**
SOEI	**Soe**	**11.94 193**		Pn	**Pn**	**03 51 17.2**	**+1.8**
MTKI	**Muara Teweh, K**	**12.38 257**		P	**Pn**	**03 51 20.5**	**-0.9**
SBUM	**Sibu**	**14.72 272**		Pn	**Pn**	**03 51 53.6**	**+0.4**
STKI	**Sintang**	**15.58 263**		P	Pn	03 51 47.7	-17
KSM	**Kuching**	**16.63 269**		Pn	**Pn**	**03 52 17.3**	**-0.8**
KNRA	**Kununurra**	**17.62 174**			**Pn**	**03 52 31.5**	**+1.2**
KNRA				IAmb	IAmb	03 52 34.6	
	comp=Z,19nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.97 184**		P	**P**	**03 52 56.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=6.5,slow=8.4,SNR=3.8						
FITZ	**Fitzroy Crossi**	**19.97 184**		P	**P**	**03 52 58.5**	**+1.6**
GUMO	**Guam**	**21.16 56**		P	**P**	**03 53 05.5**	**-4.3**
WB0	**Warramunga Arr**	**22.80 162**		P	**P**	**03 53 28.1**	**+0.8**
WB0				IAmb	IAmb	03 53 34.0	
	comp=Z,14nm,0.9s						
WRAB	**Tennant Creek**	**22.94 162**		P	**P**	**03 53 30.2**	**+1.4**
WRAB				IAmb	IAmb	03 53 35.5	
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**22.95 162**		P	**P**	**03 53 29.7**	**+0.9**
	comp=Z,5.6nm,0.6s,baz=339,slow=11,SNR=17						
WRA	**Warramunga Arr**	**22.95 162**		P	**P**	**03 53 29.7**	**+0.9**
WB2	**Warramunga Arr**	**22.95 162**		P	**P**	**03 53 29.8**	**+1.0**
WB2				IAmb	IAmb	03 53 35.6	
	comp=Z,23nm,1.1s						
WR0	**Warramunga Arr**	**23.02 161**		P	**P**	**03 53 31.2**	**+1.6**
WR0				IAmb	IAmb	03 53 35.7	
	comp=Z,14nm,1.1s						
PMG	**Port Moresby**	**23.09 120**		P	**P**	**03 53 30.1**	**-0.2**
PMG				IAmb	IAmb	03 53 36.6	
	comp=Z,17nm,1.0s						
RGRI	**Rengat**	**24.71 265**		P	P	03 53 36.7	-9.0
AS31	**Alice Springs**	**26.36 166**		P	**P**	**03 54 02.2**	**+1.7**
ASAR	**Alice Springs**	**26.36 166**		P	**P**	**03 54 02.5**	**+2.0**
	comp=Z,2.2nm,0.9s,baz=352,slow=14,SNR=8.6						
ASAR	**Alice Springs**	**26.36 166**		P	**P**	**03 54 02.3**	**+1.8**
KS19	**Wonju Array Si**	**35.38 1**		P	**P**	**03 55 17.6**	**-2.2**
EIDS	**Eidsvold**	**35.84 141**		P	**P**	**03 55 22.8**	**-1.2**
EIDS				IAmb	IAmb	03 55 32.1	
	comp=Z,6.1nm,1.1s						
XAN	**Xi'an**	**36.09 334**		P	**P**	**03 55 24.2**	**-1.8**
SHL	**Shillong**	**41.11 308**		P	**P**	**03 56 08.9**	**+0.4**
SHL				IAmb	IAmb	03 56 13.5	
	comp=Z,4.8nm,0.7s						
HHC	**Hu-ho-hao-te**	**41.14 342**		*eP*	**P**	**03 56 08.5**	**+0.1**
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,2µm,5.3s						
KLR	**Kul'dur**	**47.27 4**		P	**P**	**03 57 00.8**	**+3.6**
	comp=Z,0.7nm,0.3s,baz=319,slow=20,SNR=3.2						
SONM	**Songino Array**	**49.03 342**		P	**P**	**03 57 13.8**	**+2.8**
	comp=Z,1.1nm,0.8s,baz=162,slow=10,SNR=7.0						
SONM	**Songino Array**	**49.03 342**		P	**P**	**03 57 10.9**	**-0.2**
WMQ	**Urumqi**	**54.29 326**		*eP*	**P**	**03 57 52.3**	**+1.9**
MK31	**Makanchi Array**	**59.12 326**		P	**P**	**03 58 25.3**	**+0.7**
MK31				IAmb	IAmb	03 58 27.6	
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**59.12 326**		P	**P**	**03 58 25.9**	**+1.3**
	comp=Z,1.1nm,0.4s,baz=121,slow=7.9,SNR=10						
MKAR	**Makanchi Array**	**59.12 326**		P	**P**	**03 58 25.6**	**+1.0**
MAKZ	**Makanchi**	**59.31 326**		P	**P**	**03 58 26.6**	**+0.7**
MAKZ				IAmb	IAmb	03 58 33.5	
	comp=Z,2.1nm,0.8s						
GAR	**Garm**	**63.28 313**		P	**P**	**03 58 53.8**	**+0.8**
KURK	**Kurchatov**	**63.34 328**		P	**P**	**03 58 52.9**	**-0.1**
KURK				IAmb	IAmb	03 58 57.1	
	comp=Z,3.7nm,0.7s						
CHGR	**Chuyangaron**	**64.01 313**		P	**P**	**03 58 58.4**	**+0.6**
KK31	**Karatay Array**	**64.67 318**		P	**P**	**03 59 02.1**	**+0.1**
KKAR	**Karatay Array**	**64.67 318**		P	**P**	**03 59 02.5**	**+0.6**
KKAR	**Karatay Array**	**64.67 318**		P	**P**	**03 59 02.2**	**+0.3**
KKAR				IAmb	IAmb	03 59 04.9	
	comp=Z,1.7nm,0.8s						
ADK	**Adak**	**68.30 34**		P	**P**	**03 59 23.1**	**-1.8**
UOSS	**Minazif**	**71.73 296**		P	**P**	**03 59 46.2**	**-0.4**
UOSS				IAmb	IAmb	04 00 01.8	
	comp=Z,2.6nm,0.9s						
ABKAR	**Akbulak array**	**73.65 321**		P	**P**	**03 59 57.4**	**-0.1**
KKH	**Kailua Kona**	**77.14 70**		P	**P**	**04 00 15.7**	**-2.4**
RAYN	**Ar Rayn**	**81.37 293**		P	**P**	**04 00 39.8**	**-1.5**
RAYN				IAmb	IAmb	04 00 45.9	
	comp=Z,2.6nm,0.8s						
VNDA	**Vanda**	**81.66 173**		P	**P**	**04 00 42.7**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=319,slow=4.3,SNR=7.0						
VNDA	**Vanda**	**81.66 173**		P	**P**	**04 00 42.0**	**+0.5**
MAW	**Mawson**	**82.18 200**		P	**P**	**04 00 45.1**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=51,slow=6.5,SNR=3.8						
MAW	**Mawson**	**82.18 200**		P	**P**	**04

KCP			*i* S		**Sn**	**03 59 24.8**	**+2.3**
SIJI	**Sorong**	**5.54 118**	Pn		**Pn**	**03 58 25.9**	**+2.7**
	1.8nm,0.3s,baz=326,slow=15,SNR=6.3						
MSAI	**Masohi**	**5.65 153**	P		Pn	03 58 39.7	+15
AAI	**Ambon**	**5.67 161**	P		Pn	03 58 32.8	+7.8
MPSI	**Mapaga**	**6.60 258**	P		**Pn**	**03 58 41.1**	**+3.4**
	0.6nm10µm72nm,0.8s						
FAKI	**Fak Fak**	**7.47 128**	P		Pn	03 58 55.9	+6.2
FAKI	**Fak Fak**	**7.47 128**	Pn		**Pn**	**03 58 51.1**	**+1.4**
TTSI	**Tana Toraja**	**8.07 234**	P		**Pn**	**03 58 59.3**	**+1.4**
	0.4nm134nm,1.0s						
MYLDM	**Lahad Datu**	**8.56 294**	Pn		**Pn**	**03 59 05.7**	**+1.0**
SPSI	**Sidrap Palu**	**8.67 229**	P		**Pn**	**03 59 08.3**	**+2.2**
	0.2nm78nm,1.1s						
BNSI	**Bone**	**8.71 226**	P		**Pn**	**03 59 08.0**	**+1.3**
	0.3nm80nm,0.8s						
BKSI	**Bulukumba**	**9.36 222**	P		**Pn**	**03 59 17.0**	**+1.4**
	43nm,0.6s						
KAPI	**Kappang**	**9.39 225**	Pn		**Pn**	**03 59 17.9**	**+1.9**
	4.1nm,0.3s,baz=17,slow=8.6,SNR=9.5						
KAPI	**Kappang**	**9.39 225**	Pn		**Pn**	**03 59 15.6**	**-0.5**
BSSI	**Bau Bau, Buton**	**9.76 217**	P		**Pn**	**03 59 22.9**	**+1.8**
	64nm,0.5s						
BAKI	**Biak**	**10.17 106**	P		Pn	03 59 37.7	+11
SPMM	**Sapulut**	**10.31 287**	P		**Pn**	**03 59 31.0**	**+2.3**
KKM	**Kota Kinabalu**	**10.99 293**	Pn		**Pn**	**03 59 38.3**	**+0.3**
MMRI	**Maumere**	**11.07 202**	Pn		**Pn**	**03 59 37.8**	**-1.2**
KBKI	**Kotabaru**	**11.34 244**	P		Pn	03 59 48.0	+5.3
EDFI	**Ende, Flores**	**11.39 204**	P		**Pn**	**03 59 45.5**	**+2.0**
	16nm,0.7s						
SOEI	**Soe**	**11.58 190**	P		Pn	03 59 53.9	+7.8
SOEI	**Soe**	**11.58 190**	Pn		**Pn**	**03 59 46.6**	**+0.4**
PLAI	**Plampang**	**13.52 219**	P		**P**	**04 00 23.8**	**+3.3**
TWSI	**Taliwang, Sumb**	**14.04 222**	P		**P**	**04 00 29.5**	**+3.3**
SBUM	**Sibu**	**14.15 273**	Pn		**Pn**	**04 00 18.9**	**-2.1**
SBUM	**Sibu**	**14.15 273**	P		**Pn**	**04 00 24.0**	**+3.0**
MTN	**Manton Dam**	**15.22 162**	Pn		**Pn**	**04 00 33.8**	**-1.4**
MTN			IAmb		IAmb	04 00 51.0	
	comp=Z,27nm,1.1s						
JAGI	**Jajag, Banyuwa**	**15.83 230**	Pn		**Pn**	**04 00 41.7**	**-1.3**
JAGI			IAmb		IAmb	04 00 56.7	
	comp=Z,49nm,0.9s						
KSM	**Kuching**	**16.05 269**	Pn		**Pn**	**04 00 43.6**	**-2.2**
KNRA	**Kununurra**	**17.44 172**	Pn		**Pn**	**04 00 59.3**	**-3.9**
SMRI	**Semarang**	**18.11 241**	P		**P**	**04 01 08.4**	**-3.0**
SMRI			IAmb		IAmb	04 01 19.4	
	comp=Z,36nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.70 182**	P		**P**	**04 01 28.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=21,slow=8.0,SNR=16						
FITZ	**Fitzroy Crossi**	**19.70 182**	P		**P**	**04 01 27.1**	**-1.7**
TPUB	**Ta-pu**	**22.16 346**	P		**P**	**04 01 54.3**	**-1.0**
WB0	**Warramunga Arr**	**22.76 160**	P		**P**	**04 02 00.2**	**-1.5**
WB0			IAmb		IAmb	04 02 07.1	
	comp=Z,21nm,0.7s						
WRAB	**Tennant Creek**	**22.90 160**	P		**P**	**04 02 01.7**	**-1.5**
WRAB			IAmb		IAmb	04 02 04.8	
	comp=Z,41nm,1.1s						
WRA	**Warramunga Arr**	**22.90 160**	P		**P**	**04 02 01.9**	**-1.3**
	comp=Z,17nm,0.8s,baz=340,slow=10,SNR=44						
WRA			S		**S**	**04 06 06.9**	**-2.9**
	comp=Z,5.5nm,1.1s,baz=340,slow=18,SNR=9.0						
WRA	**Warramunga Arr**	**22.90 160**	P		**P**	**04 02 01.6**	**-1.7**
WB2	**Warramunga Arr**	**22.91 160**	P		**P**	**04 02 01.6**	**-1.6**
WR0	**Warramunga Arr**	**22.99 160**	P		**P**	**04 02 02.8**	**-1.2**
WR0			IAmb		IAmb	04 02 08.9	
	comp=Z,21nm,1.0s						
PSA00	**Pilbara Seismi**	**24.00 195**	P		**P**	**04 02 12.7**	**-1.1**
PSA00			IAmb		IAmb	04 02 14.5	
	comp=Z,24nm,1.0s						
PSA00	**Pilbara Seismi**	**24.00 195**	P		**P**	**04 02 12.5**	**-1.2**
PSA00			IAmb		IAmb	04 02 17.9	
	comp=Z,12nm,0.8s						
SDSI	**Sungai Dareh**	**25.07 264**	P		**P**	**04 02 25.8**	**+2.3**
	comp=Z,20nm,1.2s						
AS31	**Alice Springs**	**26.27 164**	P		**P**	**04 02 33.0**	**-1.4**
ASAR	**Alice Springs**	**26.28 164**	P		**P**	**04 02 34.5**	**+0.1**
	comp=Z,8.0nm,0.9s,baz=345,slow=7.2,SNR=56						
ASAR			S		**S**	**04 07 04.1**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=355,slow=23,SNR=4.8						
ASAR	**Alice Springs**	**26.28 164**	P		**P**	**04 02 33.5**	**-0.9**
RPSI	**Rantau Prapat**	**27.43 273**	P		**P**	**04 02 43.4**	**-1.5**
WHN	**Wuhan**	**30.85 340**	P		P	04 03 20.1	+5.1
NJ2	**Nanjing**	**30.99 348**	*e*P		**P**	**04 03 18.3**	**+2.1**
NJ2			pmax		pmax		
	comp=Z,8.0nm,0.7s						
GYA	**Guiyang**	**31.04 324**	*e*P		**P**	**04 03 16.3**	**-0.6**
GYA			pmax		pmax		
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**31.62 304**	P		**P**	**04 03 22.3**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=133,slow=8.7,SNR=4.5						
MORW	**Morawa**	**32.16 197**	P		**P**	**04 03 26.6**	**0.0**
MORW			IAmb		IAmb	04 03 45.4	
	comp=Z,8.1nm,1.1s						
FORT	**Forrest**	**32.35 177**	P		**P**	**04 03 27.8**	**-0.5**
KMI	**Kunming**	**32.57 318**	ǁ *e*P		**P**	**04 03 33.8**	**+3.3**
KMI			pP		pP	04 03 40.8	-1.6
KMI			sP		sP	04 03 46.4	-1.5
KMI			pmax		pmax		
	comp=Z,10.0nm,0.5s						
KMI			LR		LR		
	comp=Z,2µm,24.2s						
KMI			LR		LR		
	comp=Z,2µm,19.8s						
KMI			LR		LR		
	comp=Z,4µm,31.3s						
KMI	**Kunming**	**32.57 318**	P		**P**	**04 03 27.9**	**-2.6**
ENH	**Enshi**	**32.60 332**	P		**P**	**04 03 29.4**	**-1.1**
NWAO	**Narrogin (SRO)**	**35.52 193**	P		**P**	**04 03 55.9**	**+0.2**
	baz=1.3,slow=10						
NWAO	**Narrogin (SRO)**	**35.52 193**	P		**P**	**04 03 55.7**	**0.0**
BBOO	**Buckleboo**	**35.54 166**	P		**P**	**04 03 54.7**	**-1.2**
KSRS	**Korea Array**	**35.59 2**	P		**P**	**04 03 58.3**	**+2.1**
	comp=Z,1.8nm,0.6s,baz=187,slow=11,SNR=8.0						
XAN	**Xi'an**	**36.05 335**	P		**P**	**04 03 58.3**	**-2.1**
XAN			pP		pP	04 04 08.3	-4.1
XAN			pmax		pmax		
	comp=Z,15nm,1.0s						
XAN	**Xi'an**	**36.05 335**	P		**P**	**04 03 58.7**	**-1.6**
CD2	**Chengdu**	**36.07 326**	P		**P**	**04 03 59.6**	**-0.9**
CD2			pmax		pmax		
	comp=Z,30nm,1.0s						
STKA	**Stephens Creek**	**36.40 158**	P		**P**	**04 04 03.1**	**-0.2**
	comp=Z,7.1nm,0.7s,baz=330,slow=8.1,SNR=8.7						
STKA	**Stephens Creek**	**36.40 158**	P		**P**	**04 04 02.2**	**-1.0**
BJT	**Baijiatuan**	**39.23 348**	P		**P**	**04 04 26.1**	**-1.0**
BJT			IAmb		IAmb	04 04 37.6	
	comp=Z,10nm,1.2s						
LZH	**Lanzhou**	**40.06 331**	*e*P		**P**	**04 04 34.1**	**-0.1**
LZH			pP		pP	04 04 47.3	+0.9
LZH			sP		sP	04 04 53.8	+2.0
LZH			pmax		pmax		
	comp=Z,24nm,1.1s						
SHL	**Shillong**	**40.80 309**	P		**P**	**04 04 39.4**	**-1.1**
SHL			IAmb		IAmb	04 04 43.0	
	comp=Z,13nm,1.1s						
HHC	**Hu-ho-hao-te**	**41.19 343**	*e*P		**P**	**04 04 44.1**	**+0.7**
HHC			pmax		pmax		
	comp=Z,24nm,1.1s						
USRK	**Ussuriysk Ar.**	**42.60 6**	P		**P**	**04 04 53.4**	**-1.3**
H11S3	**WAKE ISLAND Hy**	**42.90 64**	T		T	04 52 26.2	
	baz=252,slow=74,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**42.92 64**	T		T	04 52 27.1	
	baz=252,slow=74,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**42.92 64**	T		T	04 52 27.8	
	baz=252,SNR=6.1						
LSA	**Lhasa**	**43.51 313**	P		**P**	**04 05 03.1**	**+0.2**
LSA			IAmb		IAmb	04 05 09.2	
	comp=Z,8.2nm,1.0s						
GTA	**Gaotai**	**44.64 330**	P		**P**	**04 05 11.3**	**-0.1**
GTA			pP		pP	04 05 22.4	-1.4
GTA			sP		sP	04 05 27.9	-1.2
GTA			pmax		pmax		
	comp=Z,7.0nm,1.1s						
RAMN	**Ramite**	**45.63 307**	*e*P		**P**	**04 05 18.9**	**-0.7**
GUN	**Gumba**	**46.63 308**	*e*P		**P**	**04 05 26.7**	**-0.9**
PKI	**Pulchoki**	**46.85 307**	*e*P		**P**	**04 05 28.2**	**-1.1**
PKIN	**Phulchoki**	**46.87 307**	*e*P		**P**	**04 05 28.7**	**-0.6**
DMN	**Daman**	**47.11 307**	*e*P		**P**	**04 05 30.2**	**-1.0**
KLR	**Kul'dur**	**47.56 5**	P		**P**	**04 05 34.3**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=171,slow=9.1,SNR=6.6						
GKN	**Gorkha**	**47.66 307**	*e*P		**P**	**04 05 34.3**	**-1.1**
HIA	**Hailar**	**47.71 354**	P		**P**	**04 05 35.3**	**0.0**
HIA			IAmb		IAmb	04 05 39.4	
	comp=Z,6.0nm,0.6s						
KOLN	**Koldanda**	**48.39 306**	*e*P		**P**	**04 05 40.3**	**-0.8**
	comp=Z,43nm,0.9s						
DANN	**Dangsing**	**48.50 307**	*e*P		**P**	**04 05 40.9**	**-1.2**
	comp=Z,39nm,1.0s						
ULN	**Ulaanbaatar**	**48.91 343**	P		**P**	**04 05 44.2**	**-0.5**
ULN			IAmb		IAmb	04 05 46.4	
	comp=Z,7.7nm,1.1s						
PYUN	**Piuthan**	**49.01 307**	*e*P		**P**	**04 05 45.3**	**-0.6**
	comp=Z,56nm,1.1s						
SONM	**Songino Array**	**49.08 342**	P		**P**	**04 05 45.9**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=158,slow=8.4,SNR=15						
SONM	**Songino Array**	**49.08 342**	P		**P**	**04 05 45.5**	**-0.5**
WMQ	**Urumqi**	**54.16 326**	*e*P		**P**	**04 06 25.3**	**+1.4**
WMQ	**Urumqi**	**54.16 326**	P		**P**	**04 06 24.5**	**+0.5**
WMQ			IAmb		IAmb	04 06 25.7	
	comp=Z,9.7nm,0.9s						
PETK	**Petropavlovsk-**	**57.42 22**	P		**P**	**04 06 49.2**	**+2.2**
	comp=Z,2.4nm,0.8s,baz=168,slow=3.9,SNR=4.6						
SHLS	**Shalkode**	**58.66 321**	*e*P		**P**	**04 06 53.5**	**-2.6**
	comp=Z,4.4nm,1.1s,baz=322						
SHLS			*e*S		**S**	**04 14 54.6**	**-2.8**
	baz=322						
NIL	**Nilore**	**58.87 309**	P		**P**	**04 06 57.0**	**-0.6**
MK31	**Makanchi Array**	**59.00 326**	P		**P**	**04 06 57.8**	**-0.4**
MK31			IAmb		IAmb	04 06 59.9	
	comp=Z,6.2nm,0.9s						
MKAR	**Makanchi Array**	**59.00 326**	P		**P**	**04 06 57.6**	**-0.6**
	comp=Z,3.5nm,0.6s,baz=123,slow=6.1,SNR=33						
MKAR	**Makanchi Array**	**59.00 326**	P		**P**	**04 06 57.4**	**-0.8**
MAKZ	**Makanchi**	**59.18 326**	P		**P**	**04 06 59.1**	**-0.4**
SATY	**Saty**	**59.28 321**	*e*P		**P**	**04 06 59.1**	**-1.2**
	comp=Z,4.8nm,0.9s,baz=321						
SATY			*e*S		**S**	**04 15 06.2**	**+0.9**
	baz=321						
KPKS	**Kokpek**	**59.31 321**	*e*P		**P**	**04 06 59.9**	**-0.6**
	comp=Z,4.3nm,1.1s,baz=321						
GSP	**Gladstone Stre**	**60.00 145**	*e*P		**P**	**04 07 04.0**	**-1.1**
MDOK	**Medeo**	**60.19 320**	*e*P		**P**	**04 07 06.1**	**-0.6**
	baz=320						
TNSS	**Tian-Shan**	**60.20 320**	*e*P		**P**	**04 07 06.3**	**-0.7**
	baz=320						
TDK	**Taldyqorghan**	**60.27 323**	*e*P		**P**	**04 07 07.0**	**0.0**
	baz=323						
CHKK	**Chushkaly**	**60.57 321**	*e*P		**P**	**04 07 07.8**	**-1.3**
	baz=321						
KUU	**Kurty**	**61.00 321**	*e*P		**P**	**04 07 10.7**	**-1.2**
	comp=Z,8.8nm,1.0s,baz=321						
SGDS	**Sogindy**	**61.88 320**	*e*P		**P**	**04 07 16.6**	**-1.4**
	comp=Z,1.7nm,1.3s,baz=320						
ZAA0	**Zalesovo Array**	**62.21 334**	P		**P**	**04 07 19.0**	**-0.9**
ZALV	**Zalesovo Beam**	**62.21 334**	P		**P**	**04 07 18.7**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=132,slow=6.6,SNR=5.2						
ZALV	**Zalesovo Beam**	**62.21 334**	P		**P**	**04 07 18.9**	**-1.0**
KBL	**Kabul**	**62.46 308**	P		**P**	**04 07 21.5**	**-0.7**
KBL			IAmb		IAmb	04 07 22.6	
	comp=Z,4.5nm,0.8s						
BTLS	**Baital**	**62.98 321**	*e*P		**P**	**04 07 23.6**	**-1.6**
	comp=Z,1.3nm,0.9s,baz=321						
GAR	**Garm**	**63.02 314**	P		**P**	**04 07 25.2**	**-0.6**
BTK	**Batken**	**63.05 315**	P		**P**	**04 07 26.2**	**+0.3**
BTK			IAmb		IAmb	04 07 31.8	
	comp=Z,6.6nm,1.1s						
KURK	**Kurchatov**	**63.24 328**	P		**P**	**04 07 26.4**	**-0.4**
CHGR	**Chuyangaron**	**63.74 313**	P		**P**	**04 07 30.0**	**-0.5**
DZA	**Taraz**	**63.82 318**	*e*P		**P**	**04 07 30.0**	**-0.9**
	baz=318						
IUG	**Iuzhnay**	**64.40 317**	*e*P		**P**	**04 07 33.8**	**-1.0**
	baz=317						
KK31	**Karatay Array**	**64.45 318**	P		**P**	**04 07 34.5**	**-0.5**
KKAR	**Karatay Array**	**64.45 318**	P		**P**	**04 07 34.5**	**-0.5**
BRZS	**Berezniki**	**66.11 325**	*e*P		**P**	**04 07 44.7**	**-0.9**
	comp=Z,1.7nm,1.3s,baz=325						
BRVK	**Borovoye**	**68.87 328**	P		**P**	**04 08 02.1**	**-0.8**
BRVK			IAmb		IAmb	04 08 05.5	
	comp=Z,5.1nm,0.9s						
TIXI	**Tiksi**	**69.85 1**	P		**P**	**04 08 09.1**	**+0.5**
NRIK	**Noril'sk**	**72.29 346**	P		**P**	**04 08 24.1**	**+0.7**
	comp=Z,4.5nm,0.7s,baz=124,slow=5.3,SNR=9.8						
ABKAR	**Akbulak array**	**73.47 321**	P		**P**	**04 08 29.9**	**-0.9**
ARU	**Arti**	**76.43 328**	P		**P**	**04 08 46.8**	**-0.9**
ARU			IAmb		IAmb	04 08 48.1	
	comp=Z,8.2nm,1.0s						
RAYN	**Ar Rayn**	**80.93 293**	P		**P**	**04 09 12.5**	**-0.7**
RAYN			IAmb		IAmb	04 09 15.6	
	comp=Z,6.1nm,1.1s						
VNDA	**Vanda**	**81.49 173**	P		**P**	**04 09 15.7**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=316,slow=5.7,SNR=15						
VNDA	**Vanda**	**81.49 173**	P		**P**	**04 09 15.2**	**+0.2**
MAW	**Mawson**	**81.75 200**	P		**P**	**04 09 17.6**	**+1.1**
	comp=Z,3.5nm,1.0s,baz=54,slow=5.9,SNR=5.5						
MAW	**Mawson**	**81.75 200**	P		**P**	**04 09 17.3**	**+0.7**
TTA	**Tatalina**	**82.85 27**	P		**P**	**04 09 24.9**	**+2.3**
TTA			IAmb		IAmb	04 09 33.0	
	comp=Z,9.9nm,1.2s						
OHAK	**Old Harbor**	**83.34 33**	P		**P**	**04 09 24.4**	**-0.7**
AKH	**Akhalkalaki**	**83.51 311**	P		**P**	**04 09 27.0**	**+0.4**
AKH			IAmb		IAmb	04 09 28.5	
	comp=Z,8.5nm,1.2s						
A21K	**Barrow**	**84.23 18**	P		**P**	**04 09 29.0**	**-0.4**
SKT	**Skwentna**	**84.78 28**	P		**P**	**04 09 33.6**	**+1.2**
SKT			IAmb		IAmb	04 09 37.9	
	comp=Z,3.6nm,1.0s						
KLMR	**Klimovskoe**	**86.97 331**	*e*P		**P**	**04 09 42.6**	**-0.6**
KLMR			AMP			04 09 45.2	
	comp=Z,14nm,1.2s						
ILAR	**Eielson Array**	**87.07 25**	P		**P**	**04 09 44.2**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=250,slow=5.6,SNR=4.8						
GAZ	**Gaziantep**	**88.29 307**	P		**P**	**04 09 50.0**	**-0.2**
KMBO	**Kilima Mbogo**	**89.14 269**	P		**P**	**04 09 56.7**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=233,slow=20,SNR=3.0						
KMBO	**Kilima Mbogo**	**89.14 269**	P		**P**	**04 09 54.4**	**-0.4**
KMBO			IAmb		IAmb	04 10 06.2	
	comp=Z,3.1nm,0.9s						
BRTR	**Keskin Array B**	**91.01 310**	P		**P**	**04 10 02.7**	**-0.2**
ARA1	**ARCESS Array S**	**92.20 340**	P		**P**	**04 10 06.4**	**-1.2**
ARCES	**ARCESS Array B**	**92.20 340**	P		**P**	**04 10 07.7**	**+0.1**
	comp=Z,3.9nm,1.0s,baz=89,slow=6.6,SNR=3.4						
FINES	**FINESS Array B**	**93.42 332**	P		**P**	**04 10 12.4**	**-1.0**
	comp=Z,2.2nm,1.0s,baz=49,slow=6.3,SNR=4.5						
BURAR	**Bucovina Array**	**96.25 318**	P		**P**	**04 10 26.6**	**-0.2**
BUR08	**Bucovina Ar. S**	**96.25 318**	P		**P**	**04 10 26.8**	**-0.1**
BUR08			IAmb		IAmb	04 10 35.1	
	comp=Z,2.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**123.17 287**	PKP		**PKiKP**	**04 15 56.5**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=46,slow=3.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**123.17 287**			**PKPdf**	**04 15 55.6**	**-0.2**

IDC ***15*** *04:01:53.7±1.4,2°.10N×127°.03E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.7/31,mbtmp3.8/5,Error ellipse: s-maj=100.6km s-min=19.7km az=72.0*
DJA ***15*** *04:01:58.9±0.3,2°.N±4×12°.7E±°,h10km,M4.0/10, MLv4.0/10*
NEIC ***15*** *04:02:00.3±0.6,2°.0N±0°.1×126°.96E±0°.08,h50km±13km, mb4.1/6,Error ellipse: s-maj=19.0km s-min=5.1km az=212.0*

ISC 15 04:02:00.5±0.9,1°.94N±0°.07×126°.70E±0°.10,h35km,n21, σ2ᵉ01/21,mb4.0/6,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TNTI	**Ternate**	**1.34**	**150**	P		**Pn**	**04 02 22.6**	**-0.1**
TNTI				S		**Sn**	**04 02 42.7**	**+3.4**
TNTI	**Ternate**	**1.34**	**150**			**Pn**	**04 02 22.1**	**-0.6**
SGSI	**Sangihe**	**2.09**	**326**	P		**Pn**	**04 02 33.8**	**+0.7**
LBMI	**Labuha**	**2.68**	**163**	P		**Pn**	**04 02 41.3**	**+0.1**
KMSI	**Cibinong**	**3.04**	**244**	P		**Pn**	**04 02 44.1**	**-2.0**
GTOI	**Gorontalo**	**3.91**	**251**	P		**Pn**	**04 02 57.7**	**-0.4**
LUWI	**Luwuk**	**4.92**	**233**	P		**Pn**	**04 03 09.2**	**-2.8**
LUWI	**Luwuk**	**4.92**	**233**	Pn		**Pn**	**04 03 15.6**	**+3.6**
MRSI	**Marisa**	**4.98**	**253**	P		**Pn**	**04 03 11.2**	**-1.6**
MYLDM	**Lahad Datu**	**8.79**	**292**			**Pn**	**04 04 08.0**	**+2.7**
SBUM	**Sibu**	**14.48**	**272**	Pn		**Pn**	**04 05 26.0**	**+2.9**
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P		**P**	**04 06 28.6**	**-1.0**
	2.3nm,0.9s,baz=3.9,slow=12,SNR=2.5							
FITZ	**Fitzroy Crossi**	**19.94**	**183**	IAmb		IAmb	04 06 54.8	
	comp=Z,7.5nm,1.4s							
WRAB	**Tennant Creek**	**23.00**	**161**	P		**P**	**04 07 00.9**	**-1.5**
WRAB				IAmb		IAmb	04 07 07.0	
	comp=Z,6.6nm,0.8s							
WRA	**Warramunga Arr**	**23.00**	**161**	P		**P**	**04 07 00.2**	**-2.2**
	comp=Z,2.4nm,0.6s,baz=343,slow=11,SNR=13							
WB2	**Warramunga Arr**	**23.00**	**161**	P		**P**	**04 07 00.8**	**-1.7**
ASAR	**Alice Springs**	**26.40**	**165**	P		**P**	**04 07 33.5**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=346,slow=12,SNR=8.0							
SONM	**Songino Array**	**48.98**	**342**	P		**P**	**04 10 42.2**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=169,slow=8.2,SNR=3.6							
MK31	**Makanchi Array**	**59.01**	**326**	P		**P**	**04 11 55.9**	**-1.0**
MK31				IAmb		IAmb	04 11 57.1	
	comp=Z,1.3nm,0.7s							
MKAR	**Makanchi Array**	**59.01**	**326**	P		**P**	**04 11 55.4**	**-1.5**
	comp=Z,1.0nm,0.4s,baz=120,slow=7.7,SNR=12							
MAKZ	**Makanchi**	**59.19**	**326**	P		**P**	**04 11 57.5**	**-0.6**

IDC ***15*** *04:03:33.6±2.5,11°.99N×85°.89W,h0km,mb3.2/4, mb1 3.7/4,mb1mx3.6/23,mbtmp3.2/4,Error ellipse: s-maj=156.8km s-min=51.8km az=53.0*
INET ***15*** *04:03:34.1,11°.00N×86°.78W,h15km,MW3.7*
UCR ***15*** *04:03:36.9±1.9,10°.78N×86°.67W,h10km,MW3.8*

ISC 15 04:03:33.2±1.1,11°.0N±0°.2×86°.8W±0°.1,h10km,n22, σ1ᵉ19/22,mb3.2/4,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HZTE	**Horizontes, Gu**	**1.20**	**105**	*e*P		**Pg**	**04 03 56.4**	**+0.1**
GBS3	**Finca Las Img**	**1.32**	**101**	*i* P		**Pb**	**04 03 58.0**	**-0.2**
GBS3				*i* S		**Sg**	**04 04 15.3**	**-0.4**
BUEV	**Buena Vista**	**1.36**	**100**	*e*P		**Pb**	**04 03 58.8**	**-0.1**
GB1A	**Boringuen Arri**	**1.37**	**99**	*e*P		**Pg**	**04 03 59.2**	**-0.3**
GPS2	**Hotel Rincn d**	**1.42**	**101**	*i* P		**Pb**	**04 03 59.5**	**-0.4**
ORTG	**Ortega, Santa**	**1.45**	**117**	*e*P		**Pn**	**04 03 59.5**	**-0.2**
ORTG				*e*S		**Sn**	**04 04 17.4**	**-1.4**
DUNO	**Dulce Nombre,**	**1.58**	**127**	*e*P		**Pn**	**04 04 00.6**	**-0.7**
COLC	**Colonia**	**1.58**	**103**	*i* P		**Pg**	**04 04 05.1**	**+1.4**
CUI	**Cuipilapa**	**1.62**	**103**	*e*P		**Pn**	**04 04 02.5**	**+0.5**
JTS	**Las Juntas de**	**1.94**	**112**	*e*P		**Pn**	**04 04 06.7**	**+0.5**
ARE1	**Arenal 1**	**2.10**	**106**	*e*P		**Pb**	**04 04 10.9**	**-0.5**
CEDE	**Laguna Cedeo**	**2.11**	**105**	*e*P		**Pn**	**04 04 09.9**	**+1.3**
COVE	**Coope Vega, Sa**	**2.35**	**97**	*e*P		**Pn**	**04 04 12.5**	**+0.6**
RIMA	**Rio Macho**	**3.13**	**113**	*e*P		**Pn**	**04 04 25.4**	**+2.6**
TXAR	**Lajitas Array**	**24.09**	**322**	P		**P**	**04 08 48.9**	**-0.3**
	0.9nm,0.8s,baz=138,slow=10,SNR=10							
TXAR				PcP		**PcP**	**04 12 32.9**	**+2.3**
	0.2nm,0.8s,baz=142,slow=4.5,SNR=3.3							
H06E1	**SOCORRO T-PHAS**	**24.55**	**291**	T		T	04 34 16.2	
	SNR=8.7							
PDAR	**Pinedale Array**	**37.33**	**332**	P		**P**	**04 10 44.9**	**-1.1**
	0.2nm,0.5s,baz=144,slow=11,SNR=2.8							
NVAR	**Mina Array Bea**	**39.20**	**319**	P		**P**	**04 11 03.2**	**+1.3**
	0.1nm,0.5s,baz=130,slow=8.4,SNR=1.1							
NVAR				PcP		**PcP**	**04 13 11.6**	**+0.4**
	0.6nm,0.7s,baz=133,slow=6.3,SNR=6.2							
H03N2	**Juan Fernandez**	**44.85**	**171**	T		T	04 59 46.8	
	baz=349,SNR=4.4							
H03N1	**Juan Fernandez**	**44.86**	**171**	T		T	04 59 45.2	
	baz=349							
H03N3	**Juan Fernandez**	**44.87**	**171**	T		T	04 59 44.7	
	baz=349							
ILAR	**Eielson Array**	**67.58**	**336**	P		**P**	**04 14 27.8**	**-1.9**
	0.1nm,0.4s,baz=130,slow=4.6,SNR=5.5							

IDC 15 04:04:22.5±2.0,1°.82N×126°.49E,h0km,mb3.6/3, mb1 3.8/4,mb1mx3.5/31,mbtmp3.6/4,ML3.5/1,Error ellipse: s-maj=119.4km s-min=25.6km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P		P	04 08 54.5	-0.3
	0.1nm,0.3s,baz=0

baz=15,SNR=12
MTN Manton Dam 15.27 163 Pn **Pn** 04 09 37.7 -1.6
MTN IAmb IAmb 04 09 54.6
comp=Z,65nm,1.1s
KMMI Kalianget 15.45 235 P P 04 09 56.8 +11
KDU Kakadu 15.56 158 P **Pn** **04 09 43.1 +0.1**
baz=16,SNR=20
JAGI Jajag, Banyuwa 16.14 230 P **P** **04 09 56.9 +3.8**
JAGI Jajag, Banyuwa 16.14 230 Pn **Pn** **04 09 50.0 -0.6**
JAGI IAmb IAmb 04 10 07.9
comp=Z,70nm,0.8s
BLJI Banyuglugur 16.15 234 P P 04 10 01.3 +8.2
KSM Kuching 16.34 269 Pn **Pn** **04 09 51.4 -1.7**
KSM Kuching 16.34 269 P **P** **04 09 56.0 +0.7**
GMJI Gumukmas 16.58 232 P **P** **04 10 01.6 +3.7**
KNRA Kununurra 17.55 173 P **Pn** **04 10 06.5 -1.5**
baz=18,SNR=51
KNRA Kununurra 17.55 173 **Pn** **04 10 06.7 -1.4**
PWJI Pagerwojo 17.77 236 P **P** **04 10 13.6 +2.5**
comp=Z,50nm,1.4s
SMRI Semarang 18.44 241 P **P** **04 10 16.8 -1.7**
FITZ Fitzroy Crossi 19.86 183 P **P** **04 10 32.0 -1.9**
comp=Z,0.5nm,0.3s,baz=16,slow=7.8,SNR=14
FITZ Fitzroy Crossi 19.86 183 P **P** **04 10 32.5 -1.4**
baz=20,SNR=26
FITZ Fitzroy Crossi 19.86 183 P **P** **04 10 33.4 -0.6**
KPJI Karang Pucung 19.90 243 P **P** **04 10 32.5 -2.0**
comp=Z,85nm,0.7s
GUMO Guam 21.46 56 P **P** **04 10 50.3 -1.0**
comp=Z,47nm,0.8s,baz=202,slow=19,SNR=2.6
TWG Pinlang 21.53 346 P **P** **04 10 49.0 -3.0**
TWG IAmb IAmb 04 11 01.8
comp=Z,43nm,0.6s
YULB Yu-li 22.03 347 P **P** **04 10 54.0 -3.3**
TPUB Ta-pu 22.10 345 P **P** **04 10 56.8 -1.4**
SSLB Suanglung 22.49 346 P **P** **04 10 59.7 -2.7**
SSLB IAmb IAmb 04 11 13.4
comp=Z,56nm,1.1s
COEN Coen 22.70 134 P **P** **04 11 03.2 -1.4**
baz=23,SNR=8.8
COEN Coen 22.70 134 P **P** **04 11 03.4 -1.2**
NACB Ninganchiao 22.72 348 P **P** **04 11 03.8 -0.9**
WB0 Warramunga Arr 22.80 161 P **P** **04 11 04.0 -1.6**
KLSI 22.85 253 P **P** **04 11 06.9 +0.7**
comp=Z,9.6nm,0.9s
WRAB Tennant Creek 22.94 161 P **P** **04 11 05.8 -1.3**
WRA Warramunga Arr 22.94 161 P **P** **04 11 05.0 -2.0**
comp=Z,53nm,0.7s,baz=340,slow=11,SNR=94
WRA PcP **PcP** **04 14 56.1 -0.1**
comp=Z,0.8nm,0.4s,baz=348,slow=1.8,SNR=1.7
WRA S **S** **04 15 11.9 -2.1**
comp=Z,8.6nm,0.9s,baz=331,slow=21,SNR=7.8
WB2 Warramunga Arr 22.95 161 P **P** **04 11 06.0 -1.1**
WC3 Warramunga Arr 22.97 161 P **P** **04 11 05.7 -1.7**
baz=23
PMG Port Moresby 23.29 119 P **P** **04 11 08.8 -1.8**
comp=Z,7.3nm,0.3s,baz=302,slow=13,SNR=5.4
PMG Port Moresby 23.29 119 P **P** **04 11 09.9 -0.8**
PMG IAmb IAmb 04 11 13.1
comp=Z,34nm,1.1s
KASI Kota Agung 23.31 252 P P 04 11 18.8 +7.9
MDSI Maura Dua 23.33 254 P **P** **04 11 09.4 -1.6**
comp=Z,35nm,0.8s
LWLI Liwa 23.58 253 P P 04 11 21.6 +8.0
PSA00 Pilbara Seismi 24.22 196 P **P** **04 11 18.3 -0.9**
PSA00 IAmb IAmb 04 11 25.6
comp=Z,33nm,1.1s
MASI Maura Aman, Be 24.91 259 P **P** **04 11 30.7 +5.1**
SDSI Sungai Dareh 25.37 264 P **P** **04 11 30.8 +1.0**
comp=Z,30nm,0.8s
KRJI Kerinci 25.49 261 P P 04 11 46.2 +15
QIS Mount Isa 25.64 151 P **P** **04 11 32.4 +0.2**
baz=26,SNR=13
BKNI Bangkinang 25.65 267 P **P** **04 11 32.2 -0.1**
IPM Ipoh 25.72 276 P **P** **04 11 33.1 +0.1**
KRVT Keravat (AS076 26.08 104 P **P** **04 11 35.2 -1.0**
comp=Z,18nm,0.5s,baz=259,slow=10,SNR=1.4
AS31 Alice Springs 26.33 165 P **P** **04 11 37.8 -0.6**
ASAR Alice Springs 26.33 165 P **P** **04 11 37.0 -1.4**
comp=Z,4.7nm,0.4s,baz=344,slow=7.9,SNR=47
ASAR PcP **PcP** **04 15 03.7 0.0**
comp=Z,1.8nm,0.5s,baz=352,slow=2.4,SNR=2.2
ASAR S **S** **04 16 08.4 +0.1**
comp=Z,4.0nm,0.9s,baz=352,slow=22,SNR=5.7
ASAR Alice Springs 26.33 165 P **P** **04 11 38.2 -0.2**
MTSU Mount Surprise 26.40 140 P **P** **04 11 39.0 -0.1**
baz=26,SNR=12
WRKA Warakurna 26.78 177 P **P** **04 11 41.8 -0.7**
baz=27,SNR=46
MNSI Mandailing Nat 27.09 268 P **P** **04 11 47.9 +2.6**
comp=Z,16nm,0.7s
SRAK Srakaew 27.16 298 P **P** **04 11 50.3 +4.4**
comp=Z,148nm,0.9s
GIRL Giralia 27.20 206 P **P** **04 11 46.2 0.0**
baz=27,SNR=4.4
GIRL Giralia 27.20 206 P **P** **04 11 46.0 -0.2**
RPSI Rantau Prapat 27.72 272 P **P** **04 11 50.1 -0.9**
CHAI Chaiyaphum 28.03 301 P **P** **04 11 54.5 +0.8**
comp=Z,22nm,0.8s
NONG Nongkai 28.13 306 P **P** **04 11 56.0 +1.4**
comp=Z,29nm,0.8s
GSI Gunungsitoli 29.07 269 P **P** **04 12 02.7 -0.3**
GSI IAmb IAmb 04 12 05.3
comp=Z,26nm,0.7s
CTA Charters Tower 29.07 140 P **P** **04 12 02.8 -0.1**
comp=Z,9.5nm,0.9s,baz=332,slow=12,SNR=9.1
CTAO Charters Tower 29.07 140 P **P** **04 12 02.6 -0.3**
CTAO IAmb IAmb 04 12 13.7
comp=Z,25nm,1.1s
MEEK Meekatharra 29.37 195 P **P** **04 12 04.4 -1.2**
baz=30,SNR=13
PHIT Phitsanulok 29.95 302 P **P** **04 12 15.0 +4.2**
comp=Z,51nm,0.8s
UTTA Uttaradit 30.10 303 P **P** **04 12 16.2 +4.1**
comp=Z,12nm,0.8s
SUKH Sukhothai 30.75 302 P P 04 12 26.7 +8.8
comp=Z,14nm,0.7s
WHN Wuhan 30.82 339 ⇑P **P** **04 12 21.3 +3.0**
NJ2 Nanjing 30.92 347 *eP* **P** **04 12 20.6 +1.5**
NJ2 pmax pmax
comp=Z,17nm,0.7s
JNU Nakatsue 31.35 7 P **P** **04 12 22.9 0.0**
PAYA Payao 31.46 305 P P 04 12 34.0 +10
CM31 Chiang Mai Arr 31.79 303 P **P** **04 12 26.0 -0.9**
CMAR Chiang Mai Arr 31.79 303 P **P** **04 12 25.6 -1.4**
comp=Z,1.1nm,0.3s,baz=101,slow=4.7,SNR=2.1
CMAR Chiang Mai Arr 31.79 303 P **P** **04 12 26.3 -0.6**
CM34 Chiang Mai Arr 31.80 304 P **P** **04 12 30.0 +2.9**
CMMT Chiang Mai 31.95 304 P **P** **04 12 31.1 +2.7**
CM33 Chiang Mai Arr 31.95 304 P **P** **04 12 31.0 +2.6**
CHTO Chiang Mai 31.95 304 P **P** **04 12 28.2 -0.3**
MORW Morawa 32.39 198 P **P** **04 12 31.2 -0.9**
baz=32,SNR=4.6
MORW Morawa 32.39 198 P **P** **04 12 30.9 -1.2**
MORW IAmb IAmb 04 12 34.8
comp=Z,24nm,1.1s
FORT Forrest 32.48 178 P **P** **04 12 32.3 -0.6**
baz=33,SNR=8.9
FORT Forrest 32.48 178 P **P** **04 12 32.6 -0.3**
KMI Kunming 32.66 317⇑ *eP* **P** **04 12 35.8 +1.0**
KMI pP pP 04 12 42.6 -4.1
KMI sP pwP 04 12 49.9 +0.7
KMI pmax pmax
comp=Z,11nm,0.6s
KMI LR LR
comp=Z,2µm,26.4s
KMI LR LR
comp=Z,1µm,20.0s
KMI LR LR
comp=Z,3µm,25.3s
KMI Kunming 32.66 317 P **P** **04 12 33.7 -1.2**
KMI IAmb IAmb 04 12 44.6
comp=Z,15nm,0.6s
KMBL Kambalda 33.35 187 P **P** **04 12 39.4 -1.1**
baz=34,SNR=9.3
JHS Saijyo 33.52 10 P **P** **04 12 43.9 +1.9**
JHS IAmb IAmb 04 12 50.1
comp=Z,17nm,0.8s
BLDU Ballidu 33.66 196 P **P** **04 12 41.9 -1.2**
baz=34,SNR=7.2
JWT Wachi 34.24 13 P **P** **04 12 48.3 +0.2**
KLBR Kellerberrin 34.32 194 P **P** **04 12 47.7 -1.2**
baz=34,SNR=18
INU Inuyama 34.69 15 P **P** **04 12 52.6 +0.6**
MUN Mundaring 35.08 196 P **P** **04 12 54.7 -0.8**
baz=35,SNR=4.3
TIA Tai'an 35.30 347 P **P** **04 12 57.4 +0.1**
TIA pmax pmax
comp=Z,4.0nm,0.5s
KSRS Korea Array 35.44 2 P **P** **04 12 59.0 +0.6**
comp=Z,4.9nm,0.7s,baz=179,slow=9.8,SNR=13
KS19 Wonju Array Si 35.49 2 P **P** **04 12 59.1 +0.2**
KS19 IAmb IAmb 04 13 07.4
comp=Z,15nm,0.9s
BBOO Buckleboo 35.61 166 P **P** **04 12 59.3 -0.7**
baz=36,SNR=12
BBOO Buckleboo 35.61 166 P **P** **04 12 59.5 -0.5**
NWAO Narrogin (SRO) 35.73 194 P **P** **04 13 00.2 -0.8**
baz=36,SNR=4.4
NWAO Narrogin (SRO) 35.73 194 P **P** **04 13 00.2 -0.8**
NWAO IAmb IAmb 04 13 11.2
comp=Z,14nm,0.8s
EIDS Eidsvold 35.95 140 P **P** **04 13 03.0 0.0**
baz=36,SNR=4.0
EIDS Eidsvold 35.95 140 P **P** **04 13 03.2 +0.2**
XAN Xi'an 36.05 335 P **P** **04 13 01.9 -1.9**
XAN pP pP 04 13 12.3 -3.5
XAN pmax pmax
comp=Z,13nm,1.0s
XAN Xi'an 36.05 335 P **P** **04 13 02.6 -1.3**
XAN IAmb IAmb 04 13 15.8
comp=Z,23nm,1.2s
CD2 Chengdu 36.12 325 P **P** **04 13 04.8 +0.4**
CD2 pmax pmax
comp=Z,20nm,0.6s
MJAR Matsushiro Arr 36.13 16 P **P** **04 13 03.8 -0.6**
comp=Z,11nm,0.7s,baz=181,slow=9.8,SNR=21
MJAR Matsushiro Arr 36.13 16 P **P** **04 13 04.1 -0.4**
MAJO Matsushiro 36.13 16 P **P** **04 13 04.1 -0.3**
MAJO IAmb IAmb 04 13 21.3
comp=Z,16nm,0.8s
MAT Matsushiro 36.13 16 P **P** **04 13 04.2 -0.2**
STKA Stephens Creek 36.42 158 P **P** **04 13 06.2 -0.7**
comp=Z,7.6nm,0.6s,baz=347,slow=6.9,SNR=13
STKA Stephens Creek 36.42 158 P **P** **04 13 06.7 -0.2**
baz=36,SNR=11
STKA Stephens Creek 36.42 158 P **P** **04 13 06.6 -0.4**
HTT Hallett 36.96 163 P **P** **04 13 11.5 -0.1**
baz=37,SNR=7.6
DL2 Dalian 37.16 354 P **P** **04 13 17.0 +3.9**
DL2 pmax pmax
comp=Z,54nm,0.7s
RKGY Rocky Gully 37.40 193 P **P** **04 13 15.8 +0.6**
baz=38,SNR=7.9
BJT Baijiatuan 39.16 347 P **P** **04 13 30.0 +0.1**
BJT IAmb IAmb 04 13 40.0
comp=Z,14nm,0.7s
BJI Beijing 39.18 347 P **P** **04 13 29.4 -0.7**
BJI pmax pmax
comp=Z,14nm,0.7s
ARMA Armidale 39.97 145 P **P** **04 13 38.2 +1.3**
baz=40,SNR=8.4
ARMA Armidale 39.97 145 P **P** **04 13 37.0 +0.1**
ARMA IAmb IAmb 04 13 49.0
comp=Z,19nm,0.8s
LZH Lanzhou 40.08 331 *eP* **P** **04 13 37.6 -0.3**
LZH pP pP 04 13 46.1 -3.8
LZH sP pwP 04 13 51.6 -1.0
LZH pmax pmax
comp=Z,31nm,1.0s
LZH LR LR
comp=Z,1µm,14.0s
LZH LR LR
comp=Z,1µm,15.2s
LZH LR LR
comp=Z,2µm,14.6s
SHL Shillong 40.94 308 P **P** **04 13 43.6 -1.6**
SHL IAmb IAmb 04 13 51.0
comp=Z,26nm,1.0s
ARPS Mount Arapiles 40.95 161 P **P** **04 13 45.2 +0.4**
baz=41,SNR=15
HHC Hu-ho-hao-te 41.14 343 *eP* **P** **04 13 48.1 +1.6**
HHC pmax pmax
comp=Z,21nm,1.1s
HHC pmax pmax
comp=Z,470nm,5.1s
USA0B Ussuriysk Arra 42.43 6 P **P** **04 13 57.5 +0.7**
USA0B IAmb IAmb 04 13 59.0
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 42.43 6 P **P** **04 13 57.3 +0.5**
comp=Z,14nm,0.7s,baz=192,slow=7.0,SNR=24
USRK Ussuriysk Ar. 42.43 6 P **P** **04 13 57.1 +0.3**
H11S3 WAKE ISLAND Hy 42.58 64 T T 04 59 47.9
baz=252,slow=74
H11S2 WAKE ISLAND Hy 42.59 64 T T 04 59 50.3
baz=252,slow=74
H11S1 WAKE ISLAND Hy 42.59 64 T T 04 59 51.2
baz=252,slow=74
MDJ Mudanjiang 42.66 3 P **P** **04 13 59.4 +0.7**
MDJ pmax pmax
comp=Z,10.0nm,0.7s
TOO Toolangi 42.94 158 P **P** **04 14 01.1 0.0**
baz=43,SNR=6.1
TOO Toolangi 42.94 158 P **P** **04 14 00.9 -0.2**
H11N1 WAKE ISLAND Hy 43.15 63 T T 05 00 28.8
baz=250
H11N2 WAKE ISLAND Hy 43.16 63 T T 05 00 34.2
baz=250
H11N3 WAKE ISLAND Hy 43.16 63 T T 05 00 36.2
baz=250
LSA Lhasa 43.63 313 P **P** **04 14 06.5 -0.8**
LSA IAmb IAmb 04 14 12.1
comp=Z,19nm,0.8s
ASAJ Asahikawa 44.39 16 P **P** **04 14 13.2 +0.6**
comp=Z,21nm,0.8s,baz=219,slow=11,SNR=8.9
GTA Gaotai 44.66 330 P **P** **04 14 14.0 -1.1**
GTA pP pP 04 14 27.3 +0.1
GTA sP sP 04 14 32.6 +0.1
GTA PcP **PcP** **04 15 56.9 -0.2**
GTA pmax pmax
comp=Z,5.0nm,1.0s
TAPN Taplejung 45.08 308 *eP* **P** **04 14 16.8 -2.0**
comp=Z,7.9nm,0.3s
ODAN Odare 45.11 307 *eP* **P** **04 14 17.7 -1.3**
comp=Z,55nm,0.9s
GUN Gumba 46.78 308 *eP* **P** **04 14 30.1 -2.1**
comp=Z,56nm,0.9s
PKI Pulchoki 47.00 307 *eP* **P** **04 14 32.4 -1.6**
PKIN Phulchoki 47.02 307 *eP* **P** **04 14 32.2 -1.8**
DMN Daman 47.26 307 *eP* **P** **04 14 34.5 -1.4**
HIA Hailar 47.60 354 P **P** **04 14 38.2 +0.3**
HIA IAmb IAmb 04 14 50.0
comp=Z,12nm,0.9s
GKN Gorkha 47.81 307 *eP* **P** **04 14 38.4 -1.6**
KOLN Koldanda 48.54 306 *eP* **P** **04 14 43.8 -2.0**
comp=Z,41nm,0.6s
DANN Dangsing 48.65 307 *eP* **P** **04 14 44.9 -1.8**
comp=Z,50nm,0.7s
ULN Ulaanbaatar 48.87 343 P **P** **04 14 47.7 -0.2**
ULN IAmb IAmb 04 14 52.3
comp=Z,11nm,0.8s
SONM Songino Array 49.04 342 P **P** **04 14 49.0 -0.1**
comp=Z,12nm,0.8s,baz=157,slow=9.1,SNR=28
SONM Songino Array 49.04 342 P **P** **04 14 49.0 -0.1**
PYUN Piuthan 49.17 306 *eP* **P** **04 14 48.8 -1.8**
comp=Z,89nm,0.9s
HYB Hyderabad 49.70 291 *i* P **P** **04 14 55.0 +0.5**
WMQ Urumqi 54.21 326 *eP* **P** **04 15 29.9 +2.1**
WMQ pP pwP 04 15 42.3 -0.6
WMQ LR LR
comp=Z,5µm,29.3s
WMQ LR LR
comp=Z,6µm,29.1s
WMQ LR LR
comp=Z,7µm,25.3s
WMQ Urumqi 54.21 326 P **P** **04 15 27.5 -0.3**
WMQ IAmb IAmb 04 15 43.1
comp=Z,13nm,0.7s
PETK Petropavlovsk- 57.18 22 P **P** **04 15 48.4 -0.4**
comp=Z,8.6nm,0.8s,baz=182,slow=3.4,SNR=13
PETK Petropavlovsk- 57.18 22 P **P** **04 15 48.2 -0.7**
SHLS Shalkode 58.74 321 *eP* **P** **04 15 57.1 -3.0**
comp=Z,6.5nm,0.9s,baz=321
NIL Nilore 59.01 309 P **P** **04 16 01.5 -0.5**
MK31 Makanchi Array 59.05 326 P **P** **04 16 01.2 -0.9**
MK31 IAmb IAmb 04 16 12.0
comp=Z,14nm,1.1s
MKAR Makanchi Array 59.05 326 P **P** **04 16 00.5 -1.5**
comp=Z,8.4nm,0.5s,baz=119,slow=7.7,SNR=31
MKAR Makanchi Array 59.05 326 P **P** **04 16 01.0 -1.0**
MAKZ Makanchi 59.23 326 P **P** **04 16 02.6 -0.7**
KSH Kashi 59.32 316 *eP* **P** **04 16 04.9 +0.7**
KSH pmax pmax
comp=Z,11nm,0.8s
KSH pmax pmax
comp=Z,1µm,11.5s
SATY Saty 59.35 321 *eP* **P** **04 16 02.8 -1.5**
comp=Z,11nm,0.9s,baz=321
KPKS Kokpek 59.38 321 *eP* **P** **04 16 02.9 -1.6**
comp=Z,11nm,0.9s,baz=321
YAK Yakutsk 60.07 2 P **P** **04 16 08.2 -0.5**
MDOK Medeo 60.27 320 *eP* **P** **04 16 09.2 -1.5**
baz=320
TNSS Tian-Shan 60.28 320 *eP* **P** **04 16 09.8 -1.2**
baz=320
TDK Taldyqorghan 60.34 322 *eP* **P** **04 16 09.7 -1.2**
baz=323
KUU Kurty 61.07 321 *eP* **P** **04 16 14.7 -1.3**
comp=Z,20nm,0.9s,baz=321
SGDS Sogindy 61.97 319 *eP* **P** **04 16 20.8 -1.3**
comp=Z,2.1nm,0.9s,baz=320
ZAA0 Zalesovo Array 62.21 334 P **P** **04 16 23.8 +0.4**
ZALV Zalesovo Beam 62.21 334 P **P** **04 16 21.4 -2.0**
comp=Z,1.5nm,0.3s,baz=128,slow=6.2,SNR=3.0
ZALV Zalesovo Beam 62.21 334 P **P** **04 16 22.6 -0.8**
KBL Kabul 62.60 308 P **P** **04 16 25.4 -1.2**
BTLS Baital 63.06 321 *eP* **P** **04 16 27.6 -1.6**
comp=Z,1.8nm,0.7s,baz=321
GAR Garm 63.13 313 P **P** **04 16 28.9 -1.2**
BTK Batken 63.16 315 IAmb IAmb 04 16 39.8
comp=Z,9.6nm,0.9s
KURK Kurchatov 63.27 328 P **P** **04 16 29.5 -1.0**
CHGR Chuyangaron 63.86 313 P **P** **04 16 33.9 -0.9**
DZA Taraz 63.91 318 *eP* **P** **04 16 33.8 -1.1**
baz=318
IUG Iuzhnay 64.50 317 *eP* **P** **04 16 37.4 -1.6**
comp=Z,8.0nm,0.8s,baz=317
KK31 Karatay Array 64.55 318 P **P** **04 16 38.6 -0.5**
KK31 IAmb IAmb 04 16 41.1
comp=Z,7.8nm,0.8s
KKAR Karatay Array 64.55 318 P **P** **04 16 37.9 -1.2**
BRZS Berezniki 66.17 325 *eP* **P** **04 16 47.9 -1.6**
comp=Z,2.7nm,0.8s,baz=325
BRVK Borovoye 68.91 327 P **P** **04 17 06.6 -0.1**
BRVK IAmb IAmb 04 17 12.6
comp=Z,12nm,0.7s
CASY Casey 68.96 187 P **P** **04 17 06.7 0.0**
CASY IAmb IAmb 04 17 07.0
comp=Z,12nm,0.9s
TIXI Tiksi 69.70 1 P **P** **04 17 10.5 -0.7**
NRIK Noril'sk 72.22 346 P **P** **04 17 26.2 -0.3**
comp=Z,16nm,0.7s,baz=129,slow=6.4,SNR=18
ABKAR Akbulak array 73.55 321 P **P** **04 17 34.4 -0.3**
ARU Arti 76.47 328 P **P** **04 17 50.9 -0.6**
RAYN Ar Rayn 81.15 293 P **P** **04 18 17.6 -0.4**
RAYN IAmb IAmb 04 18 32.9
comp=Z,8.3nm,0.8s
VNDA Vanda 81.59 173 P **P** **04 18 18.7 -0.4**
comp=Z,5.4nm,0.8s,baz=318,slow=6.2,SNR=20
VNDA Vanda 81.59 173 P **P** **04 18 19.0 -0.1**
MAW Mawson 81.98 200 P **P** **04 18 20.8 -0.5**
comp=Z,3.6nm,0.6s,baz=73,slow=4.7,SNR=21
MAW Mawson 81.98 200 P **P** **04 18 21.1 -0.2**
baz=82,SNR=15
MAW Mawson 81.98 200 P **P** **04 18 21.4 +0.1**
TTA Tatalina 82.59 27 P **P** **04 18 25.8 +1.0**
TTA IAmb IAmb 04 18 35.3
comp=Z,12nm,1.2s
AKH Akhalkalaki 83.64 311 P **P** **04 18 31.0 +0.2**
GEVA Gevas 83.82 308 P **P** **04 18 31.8 0.0**
A21K Barrow 84.01 18 P **P** **04 18 33.8 +2.1**
baz=258
IMAR Indian Mountai 84.07 24 P **P** **04 18 32.8 +0.6**
KIV Kislovodsk 84.37 314 P **P** **04 18 33.9 -0.4**
KIV IAmb IAmb 04 18 42.2
comp=Z,8.7nm,0.7s
CAST Castle Rocks 84.43 27 P **P** **04 18 35.2 +1.1**
SKT Skwentna 84.51 28 IAmb IAmb 04 18 38.7
comp=Z,14nm,1.1s
BRLK Bradley Lake 84.60 30 P **P** **04 18 36.0 +1.0**
KTH Kantishna Hill 84.96 26 P **P** **04 18 38.0 +1.2**
BPAW Bear Paw Mtn. 84.99 26 P **P** **04 18 37.9 +1.0**
MLY Manley 85.19 25 P **P** **04 18 39.3 +1.4**
baz=264
TRF Thorofare Moun 85.23 27 P **P** **04 18 39.2 +0.9**
TRF IAmb IAmb 04 18 47.8
comp=Z,8.1nm,1.1s
SEW Seward 85.35 30 P **P** **04 18 40.2 +1.5**
MARD Mardin 85.60 307 P **P** **04 18 40.2 -0.4**
PMR Palmer 85.61 29 P **P** **04 18 41.0 +1.0**
PMR IAmb IAmb 04 18 55.9
comp=Z,8.4nm,1.0s
COLD Coldfoot 85.63 23 P **P** **04 18 42.0 +1.9**
baz=264
COLD Coldfoot 85.63 23 P **P** **04 18 40.9 +0.9**
COLD IAmb IAmb 04 18 43.2
comp=Z,6.5nm,0.8s
I23K Minto, Yukon-K 85.79 25 P **P** **04 18 42.2 +1.4**
baz=265
KOPT Kop Dagi 85.87 310 P **P** **04 18 42.2 0.0**
RND Reindeer 85.88 27 IAmb IAmb 04 18 43.2
comp=Z,6.1nm,0.9s
KNK Knik Glacier 85.92 29 P **P** **04 18 42.2 +0.6**
TOLK Toolik Lake Re 86.00 21 P **P** **04 18 43.5 +1.6**
baz=265
TOLK Toolik Lake Re 86.00 21 P **P** **04 18 42.5 +0.6**
TOLK IAmb IAmb 04 19 00.3
comp=Z,5.2nm,0.8s
WRH Wood River Hil 86.28 26 P **P** **04 18 43.5 +0.2**
CCB Clear Creek Bu 86.42 25 P **P** **04 18 44.4 +0.5**
HDA Harding Lake 86.77 26 P **P** **04 18 45.5 -0.2**
baz=268
ILAR Eielson Array 86.81 25 P **P** **04 18 44.6 -1.2**
comp=Z,1.0nm,0.7s,baz=229,slow=5.8,SNR=12
ILAR Eielson Array 86.81 25 P **P** **04 18 45.7 -0.2**
KLMR Klimovskoe 86.99 331 *eP* **P** **04 18 44.4 -2.4**
KLMR AMP 04 18 51.2
comp=Z,21nm,0.8s
BMAR Burnt Mountain 87.82 23 P **P** **04 18 52.2 +1.5**
GAZ Gaziantep 88.44 307 P **P** **04 18 56.3 +1.9**
K27K Chicken 88.90 26 P **P** **04 18 57.4 +1.6**
baz=272
K27K Chicken 88.90 26 P **P** **04 18 56.7 +0.9**
K27K IAmb IAmb 04 19 13.9
comp=Z,5.0nm,0.9s
TOKA Tokat 88.94 310 P **P** **04 18 56.7 0.0**
TOKA IAmb IAmb 04 19 05.0
comp=Z,10nm,1.1s
BCAR Beaver Creek A 89.07 27 P **P** **04 18 57.5 +0.8**
YAH Yahtse 89.19 30 P **P** **04 18 57.4 -0.1**
CTGM Chitina Glacie 89.37 29 P **P** **04 18 58.3 0.0**
CTGM IAmb IAmb 04 19 15.6
comp=Z,5.4nm,0.9s
KMBO Kilima Mbogo 89.44 269 P **P** **04 18 59.7 -0.1**
comp=Z,3.2nm,0.9s,baz=91,slow=6.4,SNR=6.7
KMBO Kilima Mbogo 89.44 269 P **P** **04 18 60.0 +0.2**
KMBO IAmb IAmb 04 19 07.6
comp=Z,8.1nm,1.1s
BCPM Bancas Point 90.27 30 P **P** **04 19 02.9 +0.6**
SYO Syowa Base 90.66 201⇑ *eP* **P** **04 19 02.4 -1.5**
EPYK Eagle Plains 90.97 24 P **P** **04 19 06.7 +1.2**
baz=277
BR131 Keskin Array S 91.15 310 P **P** **04 19 07.4 +0.3**
BRTR Keskin Array B 91.15 310 P **P** **04 19 05.8 -1.2**
comp=Z,2.6nm,0.7s,baz=135,slow=4.4,SNR=9.1
BRTR Keskin Array B 91.15 310 P **P** **04 19 05.6 -1.5**
QSPA South Pole Qui 91.78 180 P **P** **04 19 09.5 +0.2**
ARCES ARCESS Array B 92.17 340 P **P** **04 19 09.2 -1.8**
comp=Z,5.4nm,0.9s,baz=60,slow=5.8,SNR=5.6
AKASG Malin Array Be 93.29 321 P **P** **04 19 14.7 -1.8**
comp=Z,0.8nm,0.4s,baz=69,slow=5.0,SNR=4.1
AKASG Malin Array Be 93.29 321 P **P** **04 19 16.8 +0.3**
FINES FINESS Array B 93.43 332 P **P** **04 19 15.0 -1.9**
comp=Z,2.5nm,0.8s,baz=190,slow=9.5,SNR=8.3
C36M Paulatuk 94.99 20 P **P** **04 19 23.9 +0.1**
baz=289
BURAR Bucovina Array 96.34 318 P **P** **04 19 30.3 -0.4**
BUR08 Bucovina Ar. S 96.34 318 P **P** **04 19 30.1 -0.7**
NOA NORSAR Array B 100.42 333 P **Pdif** **04 19 46.0 -2.6**
comp=Z,0.9nm,0.8s,baz=68,slow=4.7,SNR=3.6
YKA Yellowknife Ar 101.22 25 P **Pdif** **04 19 52.1 0.0**
comp=Z,0.6nm,0.7s,baz=296,slow=5.6,SNR=2.4
NVAR Mina Array Bea 108.20 49 PP **PP** **04 24 55.9 +2.0**
comp=Z,0.5nm,0.8s,baz=269,slow=8.1,SNR=4.6
ECSD EROS Data Cent 120.36 35 P **PKPdf** **04 24 52.8 -0.4**
baz=308

MNTX	**Cornudas Mount**	**120.48**	**51**	P	**PKiKP**	**04 24 54.6**	**+0.7**
	baz=294						
TXAR	**Lajitas Array**	**122.79**	**53**	PKP	**PKiKP**	**04 24 58.8**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=270,slow=1.3,SNR=6.5						
TORD	**Torodi Ar. Bea**	**123.41**	**287**	PKP	**PKPdf**	**04 24 59.0**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=42,slow=2.1,SNR=5.2						
U40A	**Yellville**	**127.12**	**40**	P	**PKiKP**	**04 25 06.7**	**-0.2**
	baz=307						
PLCA	**Paso Flores**	**138.29**	**160**	PKP	**PKPdf**	**04 25 27.0**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=45,slow=2.4,SNR=3.2						
VA03	**San Esteban**	**145.26**	**154**		**PKPdf**	**04 25 40.2**	**+0.1**
AAGR	**Agrelo**	**145.71**	**157**	*i* P	**PKPab**	**04 25 42.5**	**+0.9**
ARCO	**CERRO ARCO**	**145.88**	**156**	*i* P	**PKPab**	**04 25 43.0**	**+0.7**
ASAL	**Salagasta**	**146.14**	**156**	*i* P	**PKPab**	**04 25 43.1**	**-0.1**
AUSP	**Uspallata**	**146.23**	**155**	*i* P	**PKPab**	**04 25 44.2**	**+0.5**
CO02	**Combarbal**	**146.38**	**152**		**PKPbc**	**04 25 43.6**	**+0.3**
RTLS	**Leoncito**	**146.63**	**155**	*i* P	**PKPdf**	**04 25 43.2**	**+0.5**
CO03	**El Pedregal**	**146.83**	**152**		**PKPbc**	**04 25 45.1**	**+0.5**
RTCV	**Cerro Valdivia**	**146.89**	**156**	*i* P	**PKPdf**	**04 25 43.6**	**+0.8**
ZON	**Zonda**	**147.11**	**155**	*i* P	**PKPbc**	**04 25 45.7**	**+0.4**
GO04	**Tololo Observa**	**147.33**	**151**		**PKPbc**	**04 25 46.5**	**+0.3**
ACCO	**Cerro Coronel**	**147.78**	**154**	*i* P	**PKPdf**	**04 25 45.6**	**+0.9**
CO01	**Juntas del Tor**	**147.83**	**152**	PKPbc	**PKPbc**	**04 25 47.8**	**+0.3**
AROD	**Rodeo**	**147.95**	**153**	*i* P	**PKPbc**	**04 25 47.5**	**-0.6**
ACDV	**Cuesta del Vie**	**148.11**	**154**	*i* P	**PKPdf**	**04 25 46.2**	**+1.2**
ACHE	**Chepes**	**148.25**	**158**	*i* P	**PKPdf**	**04 25 45.7**	**+0.5**
AVFE	**Valle Fertil**	**148.39**	**156**	*i* P	**PKPbc**	**04 25 49.6**	**+0.8**
AC05	**El Transito**	**148.69**	**151**	PKPbc	**PKPbc**	**04 25 50.5**	**+0.7**
TCA	**Tanti**	**148.81**	**161**	*i* P	**PKPbc**	**04 25 50.5**	**+0.5**
AGUA	**GUANDACOL**	**148.97**	**154**	*i* P	**PKPbc**	**04 25 50.5**	**+0.1**
APLL	**PUNTA DE LOS L**	**148.99**	**158**	*i* P	**PKPbc**	**04 25 49.5**	**-0.9**
ACLC	**CERRO LA CRUZ**	**149.68**	**156**	*i* P	**PKPbc**	**04 25 52.8**	**+0.5**
GO03	**Copiap**	**149.73**	**149**	PKPbc	**PKPbc**	**04 25 52.0**	**-0.3**
VCA	**Vinchina**	**149.75**	**153**	*i* P	**PKPdf**	**04 25 50.0**	**+2.3**
LPAZ	**La Paz**	**159.56**	**135**	PKP	**PKPdf**	**04 26 01.4**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=265,slow=5.2,SNR=4.2						

*IDC **15** 04:07:40.6±0.7, 1°.88N×126°.57E, h0km, mb4.5/12, mb1 4.6/13, mb1mx4.4/29, mbtmp4.5/13, ML4.2/1, Error ellipse: s-maj=48.3km s-min=15.6km az=81.0*
*NEIC **15** 04:07:43.7±1.5, 1°.83N±0°.07×126°.54E±0°.09, h18km±5km, mb4.7/17, Error ellipse: s-maj=13.7km s-min=8.7km az=61.0*

ISC 15 04:07:46.9±0.5, 1°.81N±0°.06×126°.52E±0°.10, h47km, n36, σ0s92/37, mb4.5/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**141**	Pn	**Pn**	**04 08 08.1**	**-1.0**
DAV	**Davao City (W)**	**5.31**	**350**	Pn	**Pn**	**04 09 02.2**	**-1.5**
KAPI	**Kappang**	**9.57**	**225**	Pn	**Pn**	**04 10 01.4**	**-0.8**
KKM	**Kota Kinabalu**	**11.11**	**293**	Pn	**Pn**	**04 10 24.6**	**+1.3**
SBUM	**Sibu**	**14.30**	**273**	Pn	**Pn**	**04 11 05.6**	**-1.2**
MTN	**Manton Dam**	**15.26**	**163**	Pn	**Pn**	**04 11 18.3**	**-1.1**
MTN				IAmb	IAmb	04 11 29.6	
	comp=Z,26nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.80**	**182**	P	**P**	**04 12 14.1**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=342,slow=3.8,SNR=1.9						
CISI	**Cisompet, Garu**	**20.85**	**243**	P	**P**	**04 12 24.2**	**-0.9**
CISI				IAmb	IAmb	04 12 28.0	
	comp=Z,35nm,0.9s						
WB0	**Warramunga Arr**	**22.79**	**161**	P	**P**	**04 12 45.6**	**-0.1**
WRAB	**Tennant Creek**	**22.93**	**161**	P	**P**	**04 12 46.7**	**-0.5**
WRA	**Warramunga Arr**	**22.94**	**161**	P	**P**	**04 12 46.4**	**-0.9**
	comp=Z,24nm,0.6s,baz=337,slow=11,SNR=4.4						
WRA				S	**S**	**04 16 53.3**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=323,slow=16,SNR=3.4						
WB2	**Warramunga Arr**	**22.94**	**161**	P	**P**	**04 12 47.2**	**-0.1**
AS31	**Alice Springs**	**26.32**	**165**	P	**P**	**04 13 18.9**	**+0.4**
ASAR	**Alice Springs**	**26.32**	**165**	P	**P**	**04 13 20.2**	**+1.7**
	comp=Z,14nm,0.6s,baz=344,slow=9.6,SNR=4.1						
ASAR				PcP	**PcP**	**04 16 44.4**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=343,slow=2.9,SNR=2.3						
ASAR				S	**S**	**04 17 50.4**	**+2.1**
	comp=Z,1.2nm,0.8s,baz=359,slow=22,SNR=2.3						
ENH	**Enshi**	**32.60**	**332**	P	**P**	**04 14 13.3**	**-0.8**
MJAR	**Matsushiro Arr**	**35.21**	**16**	P	**P**	**04 14 45.2**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=187,slow=8.6,SNR=4.5						
USA0B	**Ussuriysk Arra**	**42.49**	**6**	P	**P**	**04 15 37.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**42.49**	**6**	P	**P**	**04 15 37.1**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=210,slow=5.0,SNR=3.2						
USRK	**Ussuriysk Ar.**	**42.49**	**6**	P	**P**	**04 15 37.2**	**-0.3**
HIA	**Hailar**	**47.64**	**354**	P	**P**	**04 16 19.6**	**+1.2**
SONM	**Songino Array**	**49.05**	**342**	P	**P**	**04 16 29.8**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=144,slow=6.6,SNR=3.2						
SONM	**Songino Array**	**49.05**	**342**	IAmb	IAmb	04 16 33.6	
	comp=Z,3.1nm,0.9s						
MK31	**Makanchi Array**	**59.01**	**326**	P	**P**	**04 17 42.6**	**+0.6**
MK31				IAmb	IAmb	04 17 46.6	
	comp=Z,5.9nm,1.0s						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**04 17 41.9**	**-0.1**
	comp=Z,5.5nm,0.4s,baz=121,slow=8.0,SNR=12						
MAKZ	**Makanchi**	**59.20**	**326**	P	**P**	**04 17 43.2**	**0.0**
ZALV	**Zalesovo Beam**	**62.20**	**334**	P	**P**	**04 18 03.8**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=139,slow=6.2,SNR=1.4						
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**04 18 10.5**	**-0.1**
KKAR	**Karatay Array**	**64.49**	**318**	P	**P**	**04 18 20.5**	**+1.5**
KKAR				IAmb	IAmb	04 18 28.7	
	comp=Z,5.1nm,1.1s						
BRVK	**Borovoye**	**68.88**	**327**	P	**P**	**04 18 47.8**	**+1.0**
NRIK	**Noril'sk**	**72.23**	**346**	P	**P**	**04 19 06.8**	**0.0**
	comp=Z,7.1nm,0.8s,baz=148,slow=8.4,SNR=2.7						
VNDA	**Vanda**	**81.56**	**173**	P	**P**	**04 19 59.7**	**+0.6**
	comp=Z,2.8nm,0.7s,baz=314,slow=5.9,SNR=2.7						
MAW	**Mawson**	**81.89**	**200**	P	**P**	**04 20 01.9**	**+0.8**
	comp=Z,3.8nm,0.7s,baz=39,slow=6.0,SNR=4.8						
MAW	**Mawson**	**81.89**	**200**	IAmb	IAmb	04 20 03.0	
	comp=Z,0.9nm,0.8s						
ILAR	**Eielson Array**	**86.92**	**25**	P	**P**	**04 20 25.4**	**-1.2**
	comp=Z,0.6nm,0.9s,baz=245,slow=5.8,SNR=2.4						
FINES	**FINESS Array B**	**93.42**	**332**	P	**P**	**04 20 58.0**	**+1.0**
	comp=Z,3.1nm,0.9s,baz=67,slow=4.7,SNR=2.4						
TORD	**Torodi Ar. Bea**	**123.30**	**287**	PKP	**PKPdf**	**04 26 39.7**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=118,slow=2.0,SNR=4.5						

*TAP **15** 04:07:60.0, 24°.09N×122°.47E, h35km±1km, ML2.7, C*
*JMA **15** 04:07:59.6±0.2, 24°.00N×122°.44E, h16km±4km, M2.2*

ISC 15 04:07:59.7±1.0, 24°.03N±0°.03×122°.44E±0°.02, h22km±13km, n49, σ0s59/84, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.62**	**48**	P	**Pb**	**04 08 12.1**	**+0.2**
JYNG				S	**Sb**	**04 08 20.1**	**-0.2**
YOJ	**Yonaguni jima**	**0.68**	**51**	*e*P	**Pb**	**04 08 12.4**	**-0.5**
	baz=61						
YOJ				S	**Sb**	**04 08 21.6**	**-0.2**
	baz=61						
YOJ	**Yonaguni jima**	**0.68**	**51**	P	**Pb**	**04 08 12.8**	**0.0**
YOJ				*e*S	**Sb**	**04 08 21.6**	**-0.2**
NACB	**Ninganchiao**	**0.78**	**281**	P	**Pb**	**04 08 14.3**	**-0.3**
	baz=263						
NACB				*e*S	**Sb**	**04 08 25.8**	**+1.0**
	baz=263						
TWC	**Suao**	**0.79**	**317**	P	**Pb**	**04 08 14.4**	**-0.2**
	baz=303						
TWC				*e*S	**Sb**	**04 08 23.7**	**-1.2**
	baz=303						
ETLH	**Xiulin Townshi**	**0.89**	**281**	*e*P	**Pb**	**04 08 16.5**	**0.0**
	baz=265						
ETLH				*e*S	**Sb**	**04 08 28.9**	**+0.9**
	baz=265						
EGS		**0.93**	**330**	*e*P	**Pn**	**04 08 17.1**	**-0.3**
	baz=316						
EGS				*e*S	**Sb**	**04 08 29.4**	**+0.4**
	baz=316						
ESL	**Shilin**	**0.94**	**257**	*e*S	**Sb**	**04 08 29.4**	**-0.1**
	baz=244						
TWE	**Neicheng**	**0.98**	**315**	P	**Pn**	**04 08 18.0**	**0.0**
	baz=311						
TWE				*e*S	**Sb**	**04 08 30.9**	**+0.4**
	baz=311						
NTC	**Toucheng**	**0.99**	**326**	*e*P	**Pn**	**04 08 17.9**	**-0.3**
	baz=323						
NTC				*e*S	**Sn**	**04 08 31.5**	**0.0**
	baz=323						
EGFH	**Guangfu**	**0.99**	**249**	*e*S	**Sb**	**04 08 31.3**	**+0.4**
	baz=245						
NDT	**Datong Townshi**	**1.02**	**304**	*e*P	**Pb**	**04 08 18.7**	**+0.1**
	baz=288						
NDT				*e*S	**Sn**	**04 08 32.5**	**+0.3**
	baz=288						
NNSB	**Datong**	**1.04**	**293**	P	**Pn**	**04 08 18.6**	**-0.4**
NNSB				*e*S	**Sb**	**04 08 32.8**	**+0.4**
	baz=288						
NNS	**Nan Shan**	**1.05**	**293**	*e*P	**Pn**	**04 08 19.2**	**0.0**
	baz=289						
NNS				*e*S	**Sn**	**04 08 33.4**	**+0.2**
	baz=289						
TWB1	**Santiao Chiao**	**1.05**	**337**	*e*S	**Sb**	**04 08 32.4**	**-0.3**
	baz=350						
HGSD	**Ruisui**	**1.07**	**240**	*e*S	**Sn**	**04 08 33.6**	**0.0**
	baz=237						
WHF	**Hehuan Shan**	**1.08**	**276**	P	**Pn**	**04 08 19.4**	**-0.4**
	baz=260						
WHF				*e*S	**Sn**	**04 08 34.5**	**+0.2**
	baz=260						
TIPB	**Shuangxi**	**1.09**	**329**	*e*P	**Pn**	**04 08 19.3**	**-0.3**
	baz=326						
TIPB				*e*S	**Sn**	**04 08 32.9**	**-1.1**
	baz=326						
NWLT	**Wulai**	**1.13**	**311**	P	**Pb**	**04 08 20.5**	**0.0**
	baz=307						
NWLT				*e*S	**Sb**	**04 08 35.5**	**+0.7**
	baz=307						
CHGB	**Renai**	**1.15**	**272**	P	**Pn**	**04 08 20.7**	**0.0**
	baz=267						
CHGB				S	**Sn**	**04 08 35.7**	**-0.2**
	baz=267						
NSK	**Sanguang**	**1.17**	**303**	P	**Pn**	**04 08 20.8**	**0.0**
	baz=286						
NSK				S	**Sn**	**04 08 35.8**	**-0.4**
	baz=286						
TDCB	**Techi**	**1.19**	**281**	*e*P	**Pn**	**04 08 21.0**	**-0.1**
	baz=265						
TDCB				*e*S	**Sn**	**04 08 36.4**	**-0.3**
	baz=265						
NWF	**Wu-fen Shan**	**1.19**	**330**	*e*P	**Pb**	**04 08 21.5**	**-0.2**
	baz=328						
NWF				*e*S	**Sb**	**04 08 37.0**	**+0.3**
	baz=328						
WFSB	**Wu-fen Shan**	**1.19**	**330**	*e*P	**Pn**	**04 08 20.9**	**-0.2**
	baz=327						
WFSB				*e*S	**Sb**	**04 08 36.7**	**+0.1**
	baz=327						
IRIF	**Iriomote-Funau**	**1.22**	**75**	P	**Pb**	**04 08 22.3**	**+0.3**
IRIF				*e*S	**Sb**	**04 08 38.5**	**+1.1**
TWA	**Mucha**	**1.22**	**321**	*e*S	**Sb**	**04 08 38.4**	**+0.9**
	baz=335						
YULB	**Yu-li**	**1.22**	**239**	P	**Pn**	**04 08 21.1**	**-0.3**
	baz=250						
YULB				*e*S	**Sn**	**04 08 37.7**	**+0.4**
	baz=250						
NHDH	**Xindian Distri**	**1.24**	**318**	*e*S	**Sb**	**04 08 39.2**	**+1.1**
	baz=331						
TWF1	**Yuli**	**1.25**	**237**	*e*P	**Pn**	**04 08 21.8**	**0.0**
	baz=224						
TWF1				*e*S	**Sn**	**04 08 38.0**	**+0.2**
	baz=224						
HATJ	**Hateruma jima**	**1.25**	**89**	*e*S	**Sb**	**04 08 38.7**	**+0.4**
TATO	**Taipei**	**1.28**	**318**	*e*P	**Pb**	**04 08 22.7**	**-0.3**
	baz=331						
TATO				*e*S	**Sb**	**04 08 39.9**	**+0.9**
	baz=331						
FULB	**Fuli**	**1.34**	**232**	*e*S	**Sn**	**04 08 40.7**	**+0.6**
	baz=229						
YM01	**YM01**	**1.36**	**325**	*e*P	**Pb**	**04 08 24.2**	**-0.3**
	baz=322						
YM01				*e*S	**Sb**	**04 08 41.9**	**+0.4**
	baz=322						
SSLB	**Suanglung**	**1.38**	**260**	*e*P	**Pn**	**04 08 23.6**	**+0.1**
	baz=256						
SSLB				*e*S	**Sn**	**04 08 41.2**	**+0.1**
	baz=256						
WHP	**Taichung City**	**1.38**	**280**	P	**Pb**	**04 08 25.0**	**+0.1**
	baz=266						
WHP				*e*S	**Sb**	**04 08 42.8**	**+0.6**
	baz=266						
SMLT	**Sun Moon Lake**	**1.41**	**264**	*e*P	**Pn**	**04 08 25.0**	**+0.9**
	baz=252						
SMLT				*e*S	**Sn**	**04 08 41.5**	**-0.6**
	baz=252						
LIOB	**Emei**	**1.43**	**296**	*e*P	**Pb**	**04 08 25.3**	**-0.4**
	baz=292						
LIOB				*e*S	**Sb**	**04 08 43.8**	**+0.3**
	baz=292						
NSTT	**Nanjuang**	**1.44**	**295**	*e*S	**Sb**	**04 08 43.8**	**+0.1**
	baz=291						
TYC	**Yuchr**	**1.45**	**265**	*e*P	**Pb**	**04 08 25.9**	**-0.1**
	baz=262						
TYC				*e*S	**Sn**	**04 08 42.9**	**+0.1**
	baz=262						
JKRS	**Kuro-shima**	**1.45**	**82**	P	**Pb**	**04 08 26.0**	**0.0**
JKRS				*e*S	**Sb**	**04 08 43.6**	**-0.4**
EDH	**Donghe**	**1.48**	**225**	*e*S	**Sn**	**04 08 42.4**	**-1.2**
	baz=215						
ELDTW	**Lidau**	**1.55**	**237**	*e*S	**Sn**	**04 08 44.3**	**-1.2**
	baz=234						
JIJ	**Ishigaki jima**	**1.59**	**78**	P	**Pn**	**04 08 27.0**	**+0.5**
JIJ				*e*S	**Sb**	**04 08 46.8**	**-1.3**
CHN5	**Tsauling**	**1.67**	**255**	*e*S	**Sb**	**04 08 50.2**	**-0.2**
	baz=241						
JISG	**Ishigakijimahi**	**1.80**	**72**	*e*S	**Sn**	**04 08 51.7**	**+0.3**
TPUB	**Ta-pu**	**1.81**	**247**	*e*P	**Pn**	**04 08 30.9**	**+1.4**
	baz=244						
TPUB				*e*S	**Sb**	**04 08 53.6**	**-0.8**
	baz=244						
CHN4	**Tsaushan**	**1.82**	**249**	*e*P	**Pb**	**04 08 31.3**	**-1.0**
	baz=245						
CHN4				*e*S	**Sb**	**04 08 54.7**	**0.0**
	baz=245						
WTP	**Ta-pu**	**1.84**	**245**	*e*P	**Pb**	**04 08 32.0**	**-0.8**
	baz=242						
WTP				*e*S	**Sb**	**04 08 54.8**	**-0.6**
	baz=242						
SLGT	**Liugui**	**1.94**	**238**	*e*S	**Sn**	**04 08 57.0**	**+1.9**
	baz=227						

OTT 15 04:13:23.5±0.4, 44°.57N×57°.04W, h18km, ML3.6/9, Laurentian Slope Seismic Zone. 275km southeast from Louisbourg, Ns, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBN	**Guysborough**	**3.28**	**286**	PN	Pn	04 14 14.4	+0.5
GBN				SN	Sn	04 14 51.0	-1.5
GBN				Trac		04 14 52.4	
	comp=Z,24nm,0.3s						
CHEG	**Cheticamp, Nov**	**3.39**	**313**	PN	Pn	04 14 15.0	-0.5
CHEG				SN	Sn	04 14 53.6	-1.7
CHEG				Trac		04 14 59.5	
	comp=Z,8.9nm,0.2s						
HAL	**Halifax**	**4.68**	**273**	PN	Pn	04 14 33.3	+0.1
HAL				SN	Sn	04 15 23.3	-3.7
HAL				Trac		04 15 25.0	
	comp=Z,4.1nm,0.1s						
DRLN	**Deer Lake**	**4.70**	**356**	PN	Pn	04 14 32.5	-1.0
DRLN				SN	Sn	04 15 24.2	-3.2
LMN	**Caledonia Moun**	**5.64**	**286**	PN	Pn	04 14 45.6	-0.7
LMN				SN	Sn	04 15 46.5	-4.0
LMN				Trac		04 15 50.8	
	comp=Z,0.0nm,0.1s						
ELNB	**Elgin, New Bru**	**5.87**	**286**	PN	Pn	04 14 49.7	+0.2
ELNB				SN	Sn	04 15 52.2	-4.2
ELNB				Trac		04 15 60.0	
	comp=Z,2.1nm,0.3s						
HKNB	**Havelock Quarr**	**6.05**	**286**	PN	Pn	04 14 47.1	-4.9
HKNB				SN	Sn	04 15 56.3	-4.5
WCNB	**Wards Creek**	**6.09**	**283**	PN	Pn	04 14 52.2	-0.3
WCNB				SN	Sn	04 15 57.7	-4.0
WCNB				Trac		04 16 04.7	
	comp=Z,63nm,0.4s						
SRNB	**Snider Mountai**	**6.20**	**285**	PN	Pn	04 14 53.6	-0.5
SRNB				SN	Sn	04 15 59.9	-4.7
SRNB				Trac		04 16 05.5	
	comp=Z,44nm,0.4s						
BATG	**Bathurst New B**	**6.85**	**296**	PN	Pn	04 15 02.7	-0.3
BATG				SN	Sn	04 16 15.7	-4.7
BATG				Trac		04 16 17.8	
	comp=Z,1.0nm,0.0s						
NATG	**Natashquan Que**	**6.93**	**328**	PN	Pn	04 15 03.1	-0.9
NATG				SN	Sn	04 16 17.6	-4.8
NATG				Trac		04 16 19.6	
	comp=Z,2.5nm,0.2s						
GGN	**Saint George**	**6.99**	**278**	PN	Pn	04 15 02.4	-2.4
GGN				SN	Sn	04 16 18.1	-5.7
GGN				Trac		04 16 19.4	
	comp=Z,338nm,1.9s						
PKME	**Peaks-Kenny Pk**	**8.72**	**279**	PN	Pn	04 15 28.8	+0.1
PKME				SN	Sn	04 16 59.6	-6.9
PKME				Trac		04 17 02.7	
	comp=Z,85nm,1.4s						

IDC 15 04:17:45.2±1.9, 2°.03N×126°.70E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.3/40, mbtmp3.6/3, Error ellipse: s-maj=171.9km s-min=26.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.09**	**161**	P	P	04 22 52.1	-0.7
	1.5nm,0.6s,baz=340,slow=11,SNR=28						
ASAR	**Alice Springs**	**26.49**	**165**	P	P	04 23 24.8	+0.3
	0.8nm,0.6s,baz=347,slow=12,SNR=8.1						
ASAR				PcP	PcP	04 26 50.4	+0.7
	0.4nm,0.9s,baz=354,slow=2.8,SNR=2.6						
MKAR	**Makanchi Array**	**58.93**	**326**	P	P	04 27 45.8	-0.5
	0.2nm,0.4s,baz=115,slow=7.5,SNR=4.3						

*IDC **15** 04:21:57.9±1.1, 1°.88N×126°.53E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.6/44, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=71.3km s-min=21.0km az=73.0*
*NEIC **15** 04:22:00.9±0.6, 1°.72N±0°.09×126°.16E±0°.08, h16km±5km, mb4.1/11, Error ellipse: s-maj=14.4km s-min=10.6km az=220.0*
*DJA **15** 04:22:04.7±4.5, 2°.N±4°×12°.6E±°, h25km±49km, M4.1/9, mb4.4/1, MLv3.9/9*

ISC 15 04:21:59.9±0.7, 1°.90N±0°.07×126°.49E±0°.09, h10km, n28, σ1s83/30, mb4.1/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**142**	P	**Pg**	**04 22 28.3**	**+1.1**
TNTI	**Ternate**	**1.43**	**142**		**Pg**	**04 22 27.7**	**+0.4**
SGSI	**Sangihe**	**2.02**	**332**	P	**Pg**	**04 22 38.1**	**-0.5**
LBMI	**Labuha**	**2.72**	**158**	P	**Pn**	**04 22 45.7**	**+2.1**
KMSI	**Cibinong**	**2.83**	**242**	P	**Pn**	**04 22 47.7**	**+2.5**
GTOI	**Gorontalo**	**3.70**	**250**	P	**Pn**	**04 23 00.9**	**+3.8**
LUWI	**Luwuk**	**4.73**	**232**	P	**Pn**	**04 23 13.5**	**+2.2**
LUWI	**Luwuk**	**4.73**	**232**	Pn	**Pn**	**04 23 07.0**	**-4.2**
APSI	**Ampana**	**5.59**	**240**	P	**Pn**	**04 23 25.5**	**+2.4**
SOEI	**Soe**	**11.79**	**191**	Pn	**Pn**	**04 24 43.8**	**-4.5**
MTN	**Manton Dam**	**15.36**	**163**		**Pn**	**04 25 36.6**	**-0.2**
MTN				IAmb	IAmb	04 25 51.7	
	comp=Z,7.6nm,1.1s						
KNRA	**Kununurra**	**17.61**	**173**		**Pn**	**04 26 05.2**	**-0.3**
KNRA				IAmb	IAmb	04 26 07.6	
	comp=Z,20nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.89**	**182**	P	**P**	**04 26 30.1**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=19,slow=13,SNR=2.5						
WB0	**Warramunga Arr**	**22.89**	**161**	P	**P**	**04 27 02.9**	**-1.1**
WRAB	**Tennant Creek**	**23.03**	**161**	P	**P**	**04 27 04.5**	**-0.8**
WRA	**Warramunga Arr**	**23.03**	**161**	P	**P**	**04 27 04.7**	**-0.8**
	comp=Z,9.2nm,0.5s,baz=339,slow=11,SNR=83						
WRA				PcP	**PcP**	**04 30 55.0**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=335,slow=1.9,SNR=1.6						
WB2	**Warramunga Arr**	**23.04**	**161**	P	**P**	**04 27 04.9**	**-0.6**
WR0	**Warramunga Arr**	**23.12**	**160**	P	**P**	**04 27 05.7**	**-0.6**
AS31	**Alice Springs**	**26.42**	**165**	P	**P**	**04 27 36.6**	**-0.4**
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**04 27 36.2**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=345,slow=9.2,SNR=16						
ASAR				PcP	**PcP**	**04 31 02.3**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=342,slow=2.4,SNR=1.9						
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**04 27 36.0**	**-0.9**
BBOO	**Buckleboo**	**35.69**	**166**	P	**P**	**04 28 58.1**	**-0.5**
WMQ	**Urumqi**	**54.09**	**326**	*e*P	**P**	**04 31 27.1**	**+2.1**
MK31	**Makanchi Array**	**58.92**	**326**	P	**P**	**04 31 59.2**	**-0.1**
MK31				IAmb	IAmb	04 31 59.5	
	comp=Z,1.6nm,1.4s						
MKAR	**Makanchi Array**	**58.92**	**326**	P	**P**	**04 31 59.1**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=118,slow=8.0,SNR=14						
KURK	**Kurchatov**	**63.15**	**328**	P	**P**	**04 32 27.7**	**-0.2**
KURK				IAmb	IAmb	04 32 30.6	
	comp=Z,2.1nm,0.8s						
A21K	**Barrow**	**84.02**	**18**	P	**P**	**04 34 31.4**	**+1.2**
ILAR	**Eielson Array**	**86.85**	**25**	P	**P**	**04 34 43.6**	**-0.9**
	comp=Z,0.1nm,0.5s,baz=257,slow=5.9,SNR=1.5						

*IDC **15** 04:28:40.6±0.4, 25°.82S×68°.98E, h0km, mb4.4/27, mb1 4.5/27, mb1mx4.4/50, mbtmp4.4/27, Error ellipse: s-maj=14.1km s-min=12.7km az=3.0*
*NEIC **15** 04:28:42.3±1.1, 25°.8S±0°.1×68°.9E±0°.1, h10km±1km, mb4.7/46, Error ellipse: s-maj=18.0km s-min=17.3km az=251.0*

ISC 15 04:28:42.3±0.4, 25°.83S±0°.08×68°.98E±0°.08, h10km, n113, σ0s60/108, mb4.7/53, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**18.39**	**11**	T	T	04 51 48.2	
	baz=190,slow=76						
H08S2	**Diego Garcia H**	**18.39**	**11**	T	T	04 51 48.4	
	baz=190,slow=76						
H08S3	**Diego Garcia H**	**18.40**	**11**	T	T	04 51 49.9	
	baz=190,slow

comp=Z,31nm,1.0s
KNRA Kununurra 56.41 92 P **P** **04 38 24.0 -0.4**
KNRA IAmb IAmb 04 38 26.6
comp=Z,9.5nm,1.0s
ASAR Alice Springs 58.46 103 P **P** **04 38 38.4 -0.5**
comp=Z,6.9nm,0.8s,baz=252,slow=6.3,SNR=59
AS31 Alice Springs 58.46 103 P **P** **04 38 38.6 -0.3**
LSA Lhasa 59.16 22 P **P** **04 38 44.4 +0.4**
LSA IAmb IAmb 04 38 46.2
comp=Z,11nm,1.2s
NIL Nilore 59.29 4 P **P** **04 38 44.5 +0.3**
MTN Manton Dam 59.59 90 P **P** **04 38 46.6 -0.1**
WRA Warramunga Arr 59.98 99 P **P** **04 38 49.0 -0.3**
comp=Z,8.6nm,0.8s,baz=254,slow=6.8,SNR=46
WB2 Warramunga Arr 59.99 99 P **P** **04 38 49.5 0.0**
WB2 IAmb IAmb 04 38 50.1
comp=Z,7.9nm,0.8s
WRAB Tennant Creek 59.99 99 P **P** **04 38 49.4 0.0**
WRAB IAmb IAmb 04 38 50.2
comp=Z,7.1nm,0.8s
SNAA Sanae 60.00 200 P **P** **04 38 48.9 +0.1**
SNAA Sanae 60.00 200 P **P** **04 38 48.8 +0.1**
comp=Z,4.7nm,0.8s,baz=110,slow=6.6,SNR=19
SNAA Sanae 60.00 200 P **P** **04 38 48.8 0.0**
SNAA IAmb IAmb 04 38 50.9
comp=Z,4.4nm,0.7s
KBL Kabul 60.04 0 P **P** **04 38 49.4 -0.2**
WB0 Warramunga Arr 60.08 99 P **P** **04 38 49.5 -0.6**
WB0 IAmb IAmb 04 38 50.7
comp=Z,8.0nm,0.9s
WR0 Warramunga Arr 60.15 99 P **P** **04 38 50.5 -0.1**
KMI Kunming 60.25 35 P **P** **04 38 51.5 +0.3**
VNA1 Neumayer--Stat 61.65 202 P **P** **04 39 01.3 +1.4**
STKA Stephens Creek 62.82 114 P **P** **04 39 08.1 -0.4**
comp=Z,4.1nm,0.8s,baz=296,slow=4.4,SNR=5.5
STKA Stephens Creek 62.82 114 IAmb IAmb 04 39 09.1
comp=Z,2.3nm,1.1s
QSPA South Pole Qui 64.31 180 P **P** **04 39 17.8 0.0**
comp=Z,7.9nm,1.0s,baz=294,slow=2.0,SNR=15
QSPA South Pole Qui 64.31 180 P **P** **04 39 18.5 +0.7**
VNDA Vanda 65.60 166 P **P** **04 39 26.4 +0.4**
comp=Z,1.0nm,0.7s,baz=262,slow=5.9,SNR=7.1
VNDA Vanda 65.60 166 P **P** **04 39 26.1 +0.2**
VNDA IAmb IAmb 04 39 35.1
comp=Z,6.1nm,1.2s
BELA Belgrano 2 67.75 193 P **P** **04 39 39.8 +0.2**
ENH Enshi 67.95 37 P **P** **04 39 41.7 +0.2**
KK31 Karatay Array 68.60 1 P **P** **04 39 45.8 +0.5**
KKAR Karatay Array 68.60 1 P **P** **04 39 45.8 +0.5**
CTA Charters Tower 70.46 103 P **P** **04 39 57.4 -0.1**
comp=Z,3.6nm,0.9s,baz=275,slow=11,SNR=4.0
XAN Xi'an 70.59 34 P **P** **04 39 57.2 -0.6**
WMQ Urumqi 71.40 14 P **P** **04 40 03.3 +0.7**
EIDS Eidsvold 72.75 110 P **P** **04 40 11.2 +0.1**
BRTR Keskin Array B 73.07 332 P **P** **04 40 13.0 +0.3**
comp=Z,1.4nm,0.7s,baz=164,slow=7.3,SNR=3.5
MAKZ Makanchi 73.24 9 P **P** **04 40 14.0 +0.6**
MAKZ IAmb IAmb 04 40 21.5
comp=Z,7.1nm,1.3s
MKAR Makanchi Array 73.28 10 P **P** **04 40 13.1 -0.6**
comp=Z,3.0nm,0.8s,baz=189,slow=5.7,SNR=20
ABKAR Akbulak array 75.17 354 P **P** **04 40 24.4 -0.2**
TOA0 Torodi Ar. Sit 76.05 292 P **P** **04 40 30.2 -0.2**
TOA0 IAmb IAmb 04 40 31.5
comp=Z,9.1nm,1.4s
TORD Torodi Ar. Bea 76.05 292 P **P** **04 40 30.1 -0.2**
comp=Z,3.2nm,1.1s,baz=111,slow=4.5,SNR=9.2
TORD Torodi Ar. Bea 76.05 292 P **P** **04 40 30.2 -0.2**
KURK Kurchatov 76.68 6 P **P** **04 40 33.7 +0.6**
KURK IAmb IAmb 04 40 41.6
comp=Z,11nm,1.6s
DBIC Dimbokro 78.51 283 P **P** **04 40 44.4 +0.2**
comp=Z,3.9nm,0.9s,baz=83,slow=9.6,SNR=3.1
ZAA0 Zalesovo Array 80.62 9 P **P** **04 40 55.3 +0.6**
ZAA0 IAmb IAmb 04 40 56.0
comp=Z,7.5nm,0.8s
ZALV Zalesovo Beam 80.62 9 P **P** **04 40 55.0 +0.2**
comp=Z,6.1nm,0.7s,baz=192,slow=4.8,SNR=24
ZALV Zalesovo Beam 80.62 9 P **P** **04 40 54.7 -0.1**
SONM Songino Array 80.67 25 P **P** **04 40 55.8 +0.4**
comp=Z,10nm,0.9s,baz=212,slow=5.3,SNR=53
ULN Ulaanbaatar 80.94 25 P **P** **04 40 57.2 +0.3**
BURAR Bucovina Array 83.03 332 P **P** **04 41 08.1 +0.3**
BUR08 Bucovina Ar. S 83.06 332 P **P** **04 41 09.5 +1.5**
KSAR Wonju Array Be 83.79 43 P **P** **04 41 11.7 -0.1**
KSRS Korea Array 83.82 43 P **P** **04 41 11.6 -0.4**
comp=Z,2.7nm,0.7s,baz=233,slow=6.0,SNR=6.0
AKASG Malin Array Be 83.90 336 P **P** **04 41 11.6 -0.5**
comp=Z,2.1nm,0.8s,baz=142,slow=4.5,SNR=6.0
ARSA Arzberg 87.22 327 *eP* **P** **04 41 30.4 +1.6**
comp=Z,3.6nm,1.0s
CONA Conrad Observa 87.53 327 *eP* **P** **04 41 30.6 +0.3**
comp=Z,6.3nm,1.0s
MORC Moravsky Berou 88.03 330 P **P** **04 41 33.1 +0.6**
MORC IAmb IAmb 04 41 34.7
comp=Z,4.9nm,1.1s
KBA Koelnbreinsper 88.20 326 *eP* **P** **04 41 34.1 +0.4**
comp=Z,1.7nm,0.5s
MOA Molln 88.26 327 *eP* **P** **04 41 34.0 +0.3**
comp=Z,8.3nm,1.4s
ABTA Abfaltersbach 88.41 325 *eP* **P** **04 41 35.2 +0.7**
comp=Z,5.6nm,0.9s
WTTA Wattenberg 89.20 325 *eP* **P** **04 41 38.6 +0.3**
comp=Z,7.1nm,1.2s
GERES GERESS Array B 89.20 327 P **P** **04 41 37.4 -0.9**
comp=Z,0.4nm,0.8s,baz=95,slow=3.3,SNR=4.2
WATA Walderalm 89.28 325 *eP* **P** **04 41 39.6 +1.0**
comp=Z,4.3nm,1.0s
SQTA Sankt Quirin 89.39 325 *eP* **P** **04 41 39.5 +0.3**
comp=Z,6.4nm,1.2s
FETA Feichten 89.51 324 *eP* **P** **04 41 40.5 +0.7**
comp=Z,8.8nm,1.1s
MOTA Moosalm 89.53 325 *eP* **P** **04 41 40.9 +1.0**
comp=Z,8.6nm,1.1s
MJAR Matsushiro Arr 89.97 49 P **P** **04 41 41.4 -0.6**
comp=Z,0.7nm,0.3s,baz=243,slow=5.3,SNR=1.8
DAVA Damuels 90.13 324 *i P* **P** **04 41 43.2 +0.5**
comp=Z,4.7nm,0.9s
USRK Ussuriysk Ar. 90.39 40 P **P** **04 41 42.6 -1.1**
comp=Z,1.1nm,0.6s,baz=164,slow=42,SNR=2.5
ESDC Sonseca Array 94.10 312 P **P** **04 42 00.8 -0.3**
comp=Z,0.7nm,0.9s,baz=234,slow=1.1,SNR=2.5
ILAR Eielson Array 134.79 21 PKhKP PKPpre 04 47 49.5
comp=Z,0.1nm,0.5s,baz=322,slow=34,SNR=1.7
ILAR PKP **PKPdf** **04 47 59.6 -1.0**
comp=Z,1.1nm,1.1s,baz=312,slow=3.0,SNR=5.9
EPYK Eagle Plains 136.38 15 PKPdf **PKiKP** **04 48 04.7 -0.6**
YKA Yellowknife Ar 143.26 3 PKhKP PKPpre 04 48 07.9
comp=Z,0.5nm,0.7s,baz=222,slow=8.4,SNR=2.2
YKA PKP pPKPdf 04 48 17.5 -1.1
comp=Z,2.7nm,0.8s,baz=360,slow=2.4,SNR=5.6
NCB Newcomb 145.17 311 PKPbc **PKPdf** **04 48 20.1 0.0**
WSPT Westport, CT 145.34 306 PKPbc **PKPbc** **04 48 20.1 -0.2**
VLDQ Val d'Or 145.57 319 **PKPab** **04 48 21.6 +0.6**
ULM Lac du Bonnet 152.96 338 PKPbc **PKPbc** **04 48 39.0 -0.7**
comp=Z,7.7nm,0.6s,baz=36,slow=3.0,SNR=13
PDAR Pinedale Array 163.06 356 PKP **PKPdf** **04 48 44.1 -1.2**
comp=Z,0.8nm,0.9s,baz=222,slow=1.2,SNR=5.2
NVAR Mina Array Bea 166.01 24 PKP **PKPdf** **04 48 49.3 +1.3**
comp=Z,1.4nm,1.0s,baz=307,slow=0.5,SNR=5.4
NVAR PKPab **PKPab** **04 49 48.5 +0.4**
comp=Z,2.3nm,0.8s,baz=308,slow=3.6,SNR=14
NVAR Mina Array Bea 166.01 24 **PKPdf** **04 48 50.3 +2.3**
NVAR **PKPab** **04 49 48.7 +0.7**
TXAR Lajitas Array 172.60 300 PKP **PKPdf** **04 48 51.7 -0.5**
comp=Z,0.5nm,0.9s,baz=186,slow=1.6,SNR=4.1

*IDC **15** 04:36:41.3±2.0, 1°.74N×126°.43E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/33, mbtmp3.6/3, Error ellipse: s-maj=170.8km s-min=24.1km az=66.0*
*DJA **15** 04:37:01.2±0.3, 2°.N±3°×12°.7E±°, h10km, M4.3, M7, MLv4.3/7*
ISC 15 04:36:44.1±2.3, 2°.10N±0°.10×128°.3E±0°.2, h10km, n7, σ0§60/6, mb3.5/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.64**	**216**	P		**Pg**	**04 37 15.6**	**0.0**
LBMI	**Labuha**	**2.85**	**197**	P		**Pg**	**04 37 38.1**	**-0.7**
SGSI	**Sangihe**	**3.21**	**299**	P		**Pg**	**04 37 45.4**	**-0.4**
KMSI	**Cibinong**	**4.61**	**251**	P		**Pn**	**04 37 54.2**	**+0.3**
WRA	**Warramunga Arr**	**22.69**	**165**	P		**P**	**04 41 46.7**	**+0.6**
0.8nm,0.5s,baz=339,slow=11,SNR=10								
ASAR	**Alice Springs**	**26.18**	**168**	P		**P**	**04 42 18.9**	**-0.1**
0.4nm,0.5s,baz=348,slow=8.8,SNR=6.4								
MKAR	**Makanchi Array**	**59.80**	**325**	P		P	04 46 42.9	-6.7
0.5nm,0.4s,baz=121,slow=7.5,SNR=11								

*IDC **15** 04:37:58.6±0.5, 1°.77N×126°.31E, h0km, mb4.3/18, mb1 4.3/21, mb1mx4.2/35, mbtmp4.2/21, ML3.4/3, Error ellipse: s-maj=25.8km s-min=11.9km az=74.0*
*NEIC **15** 04:38:04.6±1.7, 1°.89N±0°.07×126°.71E±0°.07, h45km±2km, mb4.4/28, Error ellipse: s-maj=12.2km s-min=8.9km az=222.0*
*DJA **15** 04:38:06.5±0.3, 2°.N±3°×12°.7E±°, h44km±5km, M4.4/13, mB5.7/3, mb4.5/11, MLv4.3/13, Mw(mB)5.2/3*
ISC 15 04:38:05.4±0.4, 1°.94N±0°.05×126°.70E±0°.07, h47km, n86, σ1§55/85, mb4.2/31, 2C, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.34**	**150**	P		**Pn**	**04 38 27.9**	**+0.2**
TNTI				S		**Sn**	**04 38 47.1**	**+2.8**
TNTI	**Ternate**	**1.34**	**150**			**Pn**	**04 38 26.7**	**-1.0**
SGSI	**Sangihe**	**2.09**	**326**	P		**Pn**	**04 38 38.0**	**0.0**
SGSI				S		**Sn**	**04 39 03.7**	**+0.9**
KMSI	**Cibinong**	**3.03**	**244**	P		**Pn**	**04 38 52.0**	**+1.1**
GTOI	**Gorontalo**	**3.91**	**251**	P		**Pn**	**04 39 06.9**	**+4.0**
DDMP	**Don Marcelino,**	**4.25**	**347**	*eP*		**Pn**	**04 39 06.8**	**-0.8**
LUWI	**Luwuk**	**4.92**	**233**	P		Pn	04 39 33.1	+16
LUWI	**Luwuk**	**4.92**	**233**	Pn		**Pn**	**04 39 17.4**	**+0.7**
MRSI	**Marisa**	**4.97**	**253**	P		**Pn**	**04 39 19.8**	**+2.3**
MATI	**Mati**	**4.99**	**355**	*eP*		**Pn**	**04 39 16.4**	**-1.5**
SKMP	**Bagumbayan, Su**	**5.03**	**335**	*eP*		**Pn**	**04 39 17.3**	**-1.1**
NLAI	**Namlea**	**5.16**	**176**	P		**Pn**	**04 39 23.2**	**+3.1**
0.2nm1µm26nm,0.6s								
KCP	**Kidapawan**	**5.29**	**342**	*eP*		Pn	04 39 27.9	+6.0
SIJI	**Sorong**	**5.35**	**121**	Pn		**Pn**	**04 39 22.2**	**-0.6**
1.3nm,0.3s,baz=229,slow=19,SNR=5.6								
APSI	**Ampana**	**5.79**	**241**	P		**Pn**	**04 39 32.6**	**+3.9**
BUKP	**Musuan**	**6.12**	**345**	*eP*		**Pn**	**04 39 34.2**	**+0.8**
MPSI	**Mapaga**	**6.98**	**257**	P		**Pn**	**04 39 46.5**	**+1.4**
0.1nm21nm,1.0s								
FAKI	**Fak Fak**	**7.36**	**131**	P		**Pn**	**04 39 54.0**	**+3.7**
0.1nm15nm,1.6s								
FAKI	**Fak Fak**	**7.36**	**131**	Pn		**Pn**	**04 39 47.2**	**-3.1**
GLSP	**General Luna,**	**7.81**	**356**	*eP*		**Pn**	**04 39 57.4**	**+0.9**
TTSI	**Tana Toraja**	**8.47**	**234**	P		Pn	04 40 11.9	+6.3
MYLDM	**Lahad Datu**	**8.79**	**292**			**Pn**	**04 40 09.6**	**-0.3**
SPSI	**Sidrap Palu**	**9.07**	**230**	P		**Pn**	**04 40 14.1**	**+0.3**
14nm,0.5s								
BNSI	**Bone**	**9.11**	**226**	P		Pn	04 40 24.4	+10
KAPI	**Kappang**	**9.79**	**225**	Pn		Pn	04 40 13.7	-10
0.8nm,0.3s,baz=104,slow=17,SNR=1.5								
KAPI	**Kappang**	**9.79**	**225**	Pn		**Pn**	**04 40 24.0**	**+0.4**
BAKI	**Biak**	**9.91**	**108**	P		Pn	04 40 34.9	+10
KKM	**Kota Kinabalu**	**11.22**	**292**	Pn		**Pn**	**04 40 43.6**	**+0.2**
SOEI	**Soe**	**11.87**	**192**	Pn		**Pn**	**04 40 49.5**	**-2.6**
LQP	**Lukban**	**13.13**	**337**	*eP*		**Pn**	**04 41 18.0**	**-0.5**
TWSI	**Taliwang, Sumb**	**14.43**	**223**	P		**P**	**04 41 34.7**	**+2.0**
SBUM	**Sibu**	**14.47**	**272**	Pn		**Pn**	**04 41 27.5**	**0.0**
MTN	**Manton Dam**	**15.33**	**163**	Pn		**Pn**	**04 41 38.1**	**-0.7**
KNRA	**Kununurra**	**17.62**	**173**			**Pn**	**04 42 06.0**	**-1.6**
KNRA				IAmb		IAmb	04 42 19.2	
comp=Z,31nm,1.4s								
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P		**P**	**04 42 29.0**	**-4.5**
comp=Z,0.0nm,0.3s,baz=18,slow=20,SNR=2.5								
FITZ	**Fitzroy Crossi**	**19.94**	**183**			**P**	**04 42 33.2**	**-0.3**
TPUB	**Ta-pu**	**22.04**	**345**	P		**P**	**04 42 55.0**	**-1.2**
COEN	**Coen**	**22.72**	**135**	P		**P**	**04 43 00.9**	**-2.6**
WB0	**Warramunga Arr**	**22.86**	**161**			**P**	**04 43 03.0**	**-1.9**
WB0				IAmb		IAmb	04 43 11.9	
comp=Z,11nm,0.7s								
WRA	**Warramunga Arr**	**23.00**	**161**	P		**P**	**04 43 05.0**	**-1.4**
comp=Z,8.3nm,0.7s,baz=340,slow=11,SNR=29								
WRA				PcP		**PcP**	**04 46 55.1**	**0.0**
comp=Z,0.3nm,0.6s,baz=318,slow=2.4,SNR=1.8								
WB2	**Warramunga Arr**	**23.01**	**161**	P		**P**	**04 43 04.9**	**-1.6**
WB2				IAmb		IAmb	04 43 13.5	
comp=Z,12nm,0.7s								
WR0	**Warramunga Arr**	**23.08**	**161**	P		**P**	**04 43 06.3**	**-0.9**
WR0				IAmb		IAmb	04 43 12.7	
comp=Z,10nm,0.8s								
AS31	**Alice Springs**	**26.40**	**165**	P		**P**	**04 43 36.8**	**-0.9**
ASAR	**Alice Springs**	**26.40**	**165**	P		**P**	**04 43 37.4**	**-0.3**
comp=Z,2.0nm,0.4s,baz=350,slow=14,SNR=19								
ASAR				PcP		**PcP**	**04 47 02.3**	**-0.2**
comp=Z,0.4nm,0.5s,baz=349,slow=2.4,SNR=3.0								
ASAR	**Alice Springs**	**26.40**	**165**	P		**P**	**04 43 37.2**	**-0.5**
CTA	**Charters Tower**	**29.11**	**140**	P		**P**	**04 44 03.8**	**+1.9**
comp=Z,2.8nm,0.6s,baz=291,slow=6.9,SNR=3.1								
CMAR	**Chiang Mai Arr**	**31.78**	**303**	P		**P**	**04 44 24.4**	**-1.2**
comp=Z,1.2nm,0.3s,baz=129,slow=7.3,SNR=4.1								
CHTO	**Chiang Mai**	**31.94**	**304**	P		**P**	**04 44 26.5**	**-0.5**
CHTO				IAmb		IAmb	04 44 37.5	
comp=Z,3.5nm,1.0s								
ENH	**Enshi**	**32.57**	**332**	P		**P**	**04 44 31.9**	**-0.5**
KSRS	**Korea Array**	**35.36**	**2**	P		**P**	**04 44 58.0**	**+1.6**
comp=Z,1.7nm,0.6s,baz=180,slow=9.5,SNR=5.3								
XAN	**Xi'an**	**36.00**	**334**	P		**P**	**04 45 02.0**	**0.0**
XAN				IAmb		IAmb	04 45 02.9	
comp=Z,4.7nm,0.9s								
MJAR	**Matsushiro Arr**	**36.04**	**16**	P		**P**	**04 45 03.0**	**+0.7**
comp=Z,2.3nm,0.7s,baz=166,slow=7.7,SNR=5.6								
STKA	**Stephens Creek**	**36.48**	**158**	P		**P**	**04 45 04.4**	**-1.7**
comp=Z,2.4nm,0.3s,baz=345,slow=15,SNR=3.0								
BJT	**Baijiatuau**	**39.09**	**347**	P		**P**	**04 45 27.6**	**-0.4**
BJT				IAmb		IAmb	04 45 41.4	
comp=Z,11nm,1.1s								
SHL	**Shillong**	**40.92**	**308**	P		**P**	**04 45 42.3**	**-1.4**
SHL				IAmb		IAmb	04 45 46.4	
comp=Z,7.9nm,1.0s								
USRK	**Ussuriysk Ar.**	**42.34**	**6**	P		**P**	**04 45 56.9**	**+2.1**
comp=Z,4.2nm,0.9s,baz=207,slow=9.7,SNR=4.4								
LSA	**Lhasa**	**43.61**	**313**	P		**P**	**04 46 05.5**	**-0.3**
LSA				IAmb		IAmb	04 46 14.5	
comp=Z,5.7nm,0.8s								
GTA	**Gaotai**	**44.61**	**330**	*eP*		**P**	**04 46 16.9**	**+3.5**
GTA				pP		pP	04 46 26.3	+0.7
GTA				sP		sP	04 46 30.3	-0.6
GTA				PcP		**PP**	**04 47 57.4**	**-0.8**
GTA				pmax		pmax		
comp=Z,4.0nm,1.1s								
SONM	**Songino Array**	**48.98**	**342**	P		**P**	**04 46 47.5**	**+0.2**
comp=Z,1.8nm,0.7s,baz=154,slow=8.9,SNR=10								
SONM	**Songino Array**	**48.98**	**342**	P		**P**	**04 46 47.2**	**-0.2**
WMQ	**Urumqi**	**54.17**	**326**	*eP*		**P**	**04 47 28.1**	**+1.9**
PETK	**Petropavlovsk-**	**57.09**	**22**	P		**P**	**04 47 49.7**	**+2.9**
comp=Z,1.4nm,0.6s,baz=163,slow=8.1,SNR=1.8								
NIL	**Nilore**	**59.00**	**309**	P		**P**	**04 48 00.2**	**-0.5**
MK31	**Makanchi Array**	**59.00**	**326**	P		**P**	**04 47 59.3**	**-1.1**
MK31				IAmb		IAmb	04 48 02.4	
comp=Z,3.0nm,0.8s								
MKAR	**Makanchi Array**	**59.00**	**326**	P		**P**	**04 48 00.1**	**-0.4**
comp=Z,3.3nm,0.4s,baz=121,slow=8.1,SNR=54								
MKAR	**Makanchi Array**	**59.00**	**326**	P		**P**	**04 47 59.3**	**-1.1**
MAKZ	**Makanchi**	**59.19**	**326**	P		**P**	**04 48 01.1**	**-0.6**
ZALV	**Zalesovo Beam**	**62.16**	**333**	P		**P**	**04 48 20.8**	**-0.9**
comp=Z,1.2nm,0.6s,baz=132,slow=6.2,SNR=4.4								
ZALV	**Zalesovo Beam**	**62.16**	**333**	P		**P**	**04 48 21.3**	**-0.4**
BTK	**Batken**	**63.14**	**315**	P		**P**	**04 48 28.3**	**-0.3**
BTK				IAmb		IAmb	04 48 32.3	
comp=Z,7.9nm,1.4s								
KURK	**Kurchatov**	**63.23**	**328**	P		**P**	**04 48 28.4**	**-0.5**
KK31	**Karatay Array**	**64.52**	**318**	P		**P**	**04 48 37.2**	**-0.4**
KK31				IAmb		IAmb	04 48 39.9	
comp=Z,1.9nm,0.8s								
KKAR	**Karatay Array**	**64.52**	**318**	P		**P**	**04 48 36.9**	**-0.7**
NRIK	**Noril'sk**	**72.15**	**346**	P		**P**	**04 49 25.7**	**+0.9**
comp=Z,4.0nm,0.6s,baz=125,slow=7.1,SNR=5.2								
ABKAR	**Akbulak array**	**73.51**	**321**	P		**P**	**04 49 32.5**	**-0.8**
RAYN	**Ar Rayn**	**81.15**	**293**	P		**P**	**04 50 15.9**	**-0.7**
RAYN				IAmb		IAmb	04 50 27.8	
comp=Z,3.1nm,0.9s								
VNDA	**Vanda**	**81.67**	**173**	P		**P**	**04 50 18.4**	**+0.2**
comp=Z,1.2nm,0.5s,baz=321,slow=8.0,SNR=9.5								
VNDA	**Vanda**	**81.67**	**173**	P		**P**	**04 50 18.5**	**+0.3**
A21K	**Barrow**	**83.92**	**18**	P		**P**	**04 50 30.6**	**+0.6**
IMAR	**Indian Mountai**	**83.98**	**24**	P		**P**	**04 50 30.1**	**-0.3**
KBZ	**Khabaz**	**84.18**	**314**	P		**P**	**04 50 30.6**	**-1.3**
comp=Z,1.0nm,0.5s,baz=233,slow=20								
ILAR	**Eielson Array**	**86.72**	**25**	P		**P**	**04 50 44.1**	**0.0**
comp=Z,0.5nm,0.8s,baz=245,slow=4.9,SNR=5.8								
ARCES	**ARCESS Array B**	**92.11**	**340**	P		**P**	**04 51 09.6**	**+0.2**
comp=Z,2.4nm,0.9s,baz=82,slow=7.4,SNR=1.5								
FINES	**FINESS Array B**	**93.38**	**332**	P		**P**	**04 51 13.8**	**-1.6**
comp=Z,1.0nm,0.7s,baz=49,slow=5.8,SNR=6.6								
BURAR	**Bucovina Array**	**96.31**	**318**	P		**P**	**04 51 29.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**123.42**	**287**	PKP		**PKPdf**	**04 56 58.1**	**-0.4**
comp=Z,0.4nm,0.7s,baz=22,slow=2.9,SNR=2.6								

*IDC **15** 04:49:21.1±1.4, 1°.73N×126°.28E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/34, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=108.4km s-min=19.8km az=71.0*
*DJA **15** 04:49:25.3±1.9, 2°.N±5°×12°.7E±°, h26km±19km, M4.1/6, MLv4.1/6*
ISC 15 04:49:27.1±1.2, 1°.75N±0°.08×126°.3E±0°.1, h47km, n7, σ1§05/8, mb3.7/4, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SGSI	**Sangihe**	**2.06**	**339**	P		**Pn**	**04 49 58.7**	**-0.6**
SGSI				S		**Sn**	**04 50 23.3**	**-0.5**
KMSI	**Cibinong**	**2.56**	**243**	P		**Pn**	**04 50 35.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.73**	**182**	P		**P**	**04 53 52.9**	**-0.1**
0.1nm,0.3s,baz=22,slow=11,SNR=1.2								
WRA	**Warramunga Arr**	**22.97**	**160**	P		**P**	**04 54 25.9**	**-1.9**
1.7nm,0.4s,baz=338,slow=11,SNR=40								
ASAR	**Alice Springs**	**26.33**	**164**	P		**P**	**04 54 59.5**	**+0.7**
0.5nm,0.8s,baz=346,slow=12,SNR=10								
SONM	**Songino Array**	**49.02**	**342**	P		**P**	**04 58 10.3**	**+0.9**
0.2nm,0.3s,baz=142,slow=7.2,SNR=2.0								
MKAR	**Makanchi Array**	**58.92**	**326**	P		**P**	**04 59 21.9**	**+0.3**
0.3nm,0.3s,baz=118,slow=8.1,SNR=9.3								

*ISK **15** 04:49:35.2, 39°.99N×39°.97E, h9km, ML2.5/8*
*DDA **15** 04:49:35.1, 39°.98N×39°.89E, h7km±5km, ML1.9*
ISC 15 04:49:35.1±1.0, 39°.99N±0°.02×39°.91E±0°.03, h12km±9km, n17, σ0§72/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EUZM	**Uzumlu**	**0.33**	**210**	*i* P		**Pg**	**04 49 42.5**	**+0.7**
EUZM				*i* S		**Sg**	**04 49 45.9**	**-0.4**
BAYB	**BAYBURT**	**0.37**	**45**	*i* P		**Pg**	**04 49 43.2**	**+0.5**
BAYB				*i* S		**Sg**	**04 49 47.9**	**+0.2**
BAYB				IAML			04 49 49.0	
comp=N,162nm,0.6s								
BAYB				IAML			04 49 49.0	
comp=E,179nm,0.2s								
ERZN	**Erzincan**	**0.43**	**200**	PG		**Pb**	**04 49 44.5**	**-0.3**
ERZN				SG		**Sb**	**04 49 51.1**	**-0.2**
BAYT	**Aydıntepe-Bayb**	**0.44**	**24**	PG		**Pg**	**04 49 44.1**	**+0.3**
BAYT				SG		**Sg**	**04 49 50.4**	**+0.7**
KOPT	**Kop Dagi**	**0.45**	**87**	*i* P		**Pb**	**04 49 44.9**	**-0.3**
KOPT				*i* S		**Sb**	**04 49 51.1**	**-0.9**
KOPT				IAML			04 49 54.0	
comp=N,87nm,0.7s								
KOPT				IAML			04 49 57.0	
comp=E,79nm,0.7s								
KELT	**Kelkit**	**0.53**	**287**	*i* P		**Pb**	**04 49 46.4**	**-0.1**
KELT				*i* S		**Sg**	**04 49 52.2**	**-0.3**
KELT				IAML			04 49 55.0	
comp=N,79nm,0.3s								
KELT				IAML			04 49 55.0	
comp=E,72nm,0.4s								
YEDI	**Yedisu-Bingol**	**0.74**	**139**	PG		**Pg**	**04 49 49.4**	**-0.1**
YEDI				SG		**Sb**	**04 49 59.5**	**-0.7**
KRIK	**Erzurum-spir**	**0.85**	**66**	*i* P		**Pb**	**04 49 52.0**	**+0.1**
KRIK				*i* S		**Sg**	**04 50 01.9**	**-0.8**
TNCL	**Tunceli-Merkez**	**0.92**	**198**	*i* P		**Pg**	**04 49 52.7**	**-0.3**
TNCL				*i* S		**Sg**	**04 50 03.4**	**-1.6**
MACK	**Trabzon**	**0.95**	**353**	*i* P		**Pb**	**04 49 54.2**	**+0.5**
MACK				*i* S		**Sg**	**04 50 04.5**	**-1.6**
MACK				IAML			04 50 09.0	
comp=N,99nm,0.2s								
MACK				IAML			04 50 09.0	
comp=E,80nm,0.4s								
KTUT	**Trabzon**	**1.00**	**354**	PG		**Pg**	**04 49 53.7**	**-0.7**
PTK	**Pertek**	**1.17**	**200**	PN		**Pn**	**04 49 58.7**	**+1.1**
CHOM	**Cayeli-Rize**	**1.28**	**30**	PN		**Pg**	**04 49 59.6**	**-0.1**
ESPY	**Espiye-Giresun**	**1.29**	**316**	PN		**Pn**	**04 49 59.8**	**+0.8**
KEMA	**Kemaliye**	**1.31**	**237**	*i* P		**Pb**	**04 50 00.3**	**+0.5**
KEMA				*i* S		**Sb**	**04 50 16.5**	**-0.2**
ELZG	**Elazig**	**1.66**	**206**	*i* P		**Pb**	**04 50 06.4**	**+0.7**
ELZG				*i* S		**Sn**	**04 50 25.6**	**0.0**
SVSK	**Karacayir**	**2.24**	**269**	PN		**Pb**	**04 50 14.6**	**-0.9**

*NEIC **15** 04:50:21.9±1.6, 1°.9N±0°.1×126°.44E±0°.07, h35km±2km, mb4.1/8, Error ellipse: s-maj=22.7km s-min=5.8km az=210.0*
*IDC **15** 04:50:24.2±4.3, 1°.70N×126°.38E, h63km±36km, mb3.8/3, mb1 4.0/6, mb1mx3.5/38, mbtmp

DDMP	Don Marcelino,	4.26	346	*e*P	Pn	05 00 04.0	0.0
LUWI	Luwuk	4.95	233	Pn	Pn	05 00 14.8	+1.3
SKMP	Bagumbayan, Su	5.05	334	*e*P	Pn	05 00 14.8	0.0
KCP	Kidapawan	5.30	342⍐	*e*P	Pn	05 00 24.7	+6.4
BUKP	Musuan	6.13	344	*e*P	Pn	05 00 27.5	-2.3
PAGZ	Pagadian	6.76	330	*e*P	Pn	05 00 36.6	-1.6
FAKI	Fak Fak	7.32	131	Pn	Pn	05 00 44.4	-1.6
MYLDM	Lahad Datu	8.84	292		Pn	05 01 08.2	+1.4
KAPI	Kappang	9.82	225	Pn	Pn	05 01 21.5	+1.2
SBUM	Sibu	14.52	272	Pn	Pn	05 02 23.2	-1.4
MTN	Manton Dam	15.32	164	Pn	Pn	05 02 33.3	-1.9
MTN				IAmb	IAmb	05 02 58.2	
	comp=Z,28nm,1.7s						
JAGI	Jajag, Banyuwa	16.27	230	Pn	Pn	05 02 46.0	-1.4
KNRA	Kununurra	17.62	174	Pn	Pn	05 03 03.3	-1.0
FITZ	Fitzroy Crossi	19.94	183	P	P	05 03 31.2	+0.6
	comp=Z,0.2nm,0.3s,baz=6.3,slow=9.2,SNR=2.8						
WB0	Warramunga Arr	22.84	161		P	05 04 02.1	+0.3
WB0				IAmb	IAmb	05 04 05.8	
	comp=Z,12nm,1.1s						
WRAB	Tennant Creek	22.98	161	P	P	05 04 03.0	-0.2
WRAB				IAmb	IAmb	05 04 09.6	
	comp=Z,30nm,1.6s						
WRA	Warramunga Arr	22.99	161	P	P	05 04 03.3	0.0
	comp=Z,5.5nm,0.6s,baz=340,slow=11,SNR=49						
WRA	Warramunga Arr	22.99	161	P	P	05 04 03.9	+0.6
WB2	Warramunga Arr	22.99	161		P	05 04 03.5	+0.2
WB2				IAmb	IAmb	05 04 09.7	
	comp=Z,37nm,1.6s						
WR0	Warramunga Arr	23.07	161		P	05 04 04.5	+0.4
WR0				IAmb	IAmb	05 04 09.9	
	comp=Z,9.6nm,0.9s						
AS31	Alice Springs	26.39	165	P	P	05 04 34.6	-0.2
ASAR	Alice Springs	26.39	165	P	P	05 04 35.1	+0.3
	comp=Z,1.1nm,0.5s,baz=342,slow=8.4,SNR=22						
CTA	Charters Tower	29.08	140	P	P	05 05 00.9	+2.0
	comp=Z,1.3nm,0.5s,baz=328,slow=14,SNR=2.2						
SANVU	Saraoutou	43.58	115	P	P	05 07 01.6	-0.9
LSA	Lhasa	43.64	313	P	P	05 07 03.7	+0.2
LSA				IAmb	IAmb	05 08 32.7	
	comp=Z,5.7nm,0.6s						
KLR	Kul'dur	47.31	4	P	P	05 07 32.9	+1.3
	comp=Z,1.5nm,0.6s,baz=343,slow=17,SNR=3.6						
SONM	Songino Array	48.99	342	P	P	05 07 45.0	+0.2
	comp=Z,0.6nm,0.5s,baz=144,slow=10,SNR=4.4						
WMQ	Urumqi	54.20	326	P	P	05 08 24.5	+0.8
PETK	Petropavlovsk-	57.08	22	P	P	05 08 45.1	+0.9
	comp=Z,0.8nm,0.5s,baz=243,slow=1.6,SNR=1.1						
MK31	Makanchi Array	59.03	326	P	P	05 08 57.7	-0.3
MK31				IAmb	IAmb	05 10 27.2	
	comp=Z,3.5nm,1.1s						
MKAR	Makanchi Array	59.03	326	P	P	05 08 57.4	-0.6
	comp=Z,1.6nm,0.5s,baz=122,slow=8.6,SNR=12						
MKAR	Makanchi Array	59.03	326	P	P	05 08 57.1	-0.9
MAKZ	Makanchi	59.22	326	P	P	05 08 59.3	0.0
MAKZ				IAmb	IAmb	05 10 30.3	
	comp=Z,3.3nm,0.7s						
ZAA0	Zalesovo Array	62.18	333	P	P	05 09 21.4	+2.1
ZAA0				IAmb	IAmb	05 10 55.7	
	comp=Z,2.5nm,0.9s						
KURK	Kurchatov	63.25	328	P	P	05 09 26.1	-0.4
KK31	Karatay Array	64.55	318	P	P	05 09 34.7	-0.5
KKAR	Karatay Array	64.55	318	P	P	05 09 34.7	-0.5
ABKAR	Akbulak array	73.54	321	P	P	05 10 31.1	+0.2
VNDA	Vanda	81.66	173	P	P	05 11 16.3	+0.7
	comp=Z,1.1nm,0.8s,baz=321,slow=7.5,SNR=7.5						
FINES	FINESS Array B	93.41	332	P	P	05 12 11.6	-1.4
	comp=Z,1.2nm,0.9s,baz=53,slow=5.4,SNR=1.3						

*IDC **15** 05:00:19.6±0.5, 1°.83N×126°.66E, h0km, mb4.2/17, mb1 4.2/19, mb1mx4.0/50, mbtmp4.2/19, ML3.8/2, Error ellipse: s-maj=32.8km s-min=10.8km az=72.0*
*NEIC **15** 05:00:22.6±1.2, 1°.87N±0°.06×126°.71E±0°.08, h27km±6km, mb4.5/28, Error ellipse: s-maj=12.3km s-min=6.9km az=55.0*
*DJA **15** 05:00:27.7±1.3, 2°.7N±14°.1×12°.7E±°, h10km, M4.5/7, mB5.3/3, mb4.7/6, MLv4.5/7, Mw(mB)4.7/3*

ISC 15 05:00:20.5±0.4, 1°.84N±0°.05×126°.67E±0°.06, h10km, n68, σ1§38/73, mb4.4/26, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.27	147	Pn	Pg	05 00 46.6	+1.6
TNTI				Sn	Sn	05 01 01.0	-0.6
LUWI	Luwuk	4.84	234	P	Pb	05 01 44.8	-0.6
	1.7nm3µm278nm,1.0s						
LUWI	Luwuk	4.84	234	Pn	Pn	05 01 33.9	+0.4
MRSI	Marisa	4.92	254	Pn	Pn	05 01 40.2	+5.6
DAV	Davao City (W)	5.30	348	Pn	Pn	05 01 38.3	-1.6
MSAI	Masohi	5.63	156	P	Pb	05 01 58.4	-0.5
APSI	Ampana	5.71	241	P	Pb	05 01 57.1	-3.3
	0.8nm2µm226nm,1.2s						
MPSI	Mapaga	6.93	258	P	Pn	05 02 09.6	+7.3
FAKI	Fak Fak	7.32	130	Pn	Pn	05 02 07.2	-0.3
MYLDM	Lahad Datu	8.80	292	Pn	Pn	05 02 31.5	+3.6
KAPI	Kappang	9.70	225	Pn	Pn	05 02 42.1	+1.7
	2.4nm,0.3s,baz=247,slow=14,SNR=3.9						
KAPI	Kappang	9.70	225		Pn	05 02 41.6	+1.3
KKM	Kota Kinabalu	11.23	292	Pn	Pn	05 03 04.6	+3.2
SBUM	Sibu	14.45	273		Pn	05 03 45.2	-0.1
MTN	Manton Dam	15.25	163	Pn	Pn	05 03 57.2	+1.1
KSM	Kuching	16.36	269	P	Pn	05 04 10.7	+0.2
KSM				IAmb	IAmb	05 04 19.2	
	comp=Z,25nm,1.3s						
KNRA	Kununurra	17.53	173	P	Pn	05 04 24.1	-1.1
FITZ	Fitzroy Crossi	19.84	183	P	P	05 04 51.1	-0.7
	comp=Z,0.1nm,0.3s,baz=26,slow=12,SNR=2.4						
FITZ				S	S	05 08 31.4	-3.9
	comp=Z,0.0nm,0.3s,baz=21,slow=22,SNR=1.7						
FITZ	Fitzroy Crossi	19.84	183	P	P	05 04 51.9	+0.1
WB0	Warramunga Arr	22.78	161	P	P	05 05 22.3	-1.1
WB0				IAmb	IAmb	05 05 25.6	
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	22.92	161	P	P	05 05 23.6	-1.3
WRAB				IAmb	IAmb	05 05 27.1	
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	22.92	161	P	P	05 05 24.7	-0.3
	comp=Z,18nm,0.9s,baz=339,slow=11,SNR=18						
WRA				PcP	PcP	05 09 16.2	+0.6
	comp=Z,0.7nm,0.8s,baz=326,slow=2.3,SNR=2.8						
WRA				S	S	05 09 31.7	-3.4
	comp=Z,1.1nm,0.8s,baz=332,slow=21,SNR=4.5						
WRA	Warramunga Arr	22.92	161	P	P	05 05 24.1	-0.9
WB2	Warramunga Arr	22.93	161	P	P	05 05 23.9	-1.1
WB2				IAmb	IAmb	05 05 27.6	
	comp=Z,18nm,0.8s						
HKPS	Hong Kong Po S	23.68	330	P	P	05 05 30.3	-2.3
BKNI	Bangkinang	25.67	267	P	P	05 05 51.7	+0.8
AS31	Alice Springs	26.32	165	P	P	05 05 57.1	+0.4
ASAR	Alice Springs	26.32	165	P	P	05 05 57.5	+0.8
	comp=Z,5.0nm,0.8s,baz=346,slow=12,SNR=11						
ASAR				PcP	PcP	05 09 23.9	+0.9
	comp=Z,0.6nm,0.7s,baz=8.3,slow=1.3,SNR=2.5						
ASAR				S	S	05 10 33.9	+4.2
	comp=Z,0.3nm,0.3s,baz=346,slow=19,SNR=3.2						
ASAR				PKPPKP	P'P'df	05 40 30.7	-0.8
	comp=Z,0.7nm,1.0s,baz=188,slow=0.7,SNR=1.0						
ASAR	Alice Springs	26.32	165	P	P	05 05 57.4	+0.6
CTA	Charters Tower	29.05	140	P	P	05 06 20.8	-0.5
	comp=Z,2.2nm,1.0s,baz=333,slow=9.0,SNR=1.4						
CMAR	Chiang Mai Arr	31.80	303	P	P	05 06 47.0	+1.4
	comp=Z,0.6nm,0.3s,baz=91,slow=7.3,SNR=1.5						
MORW	Morawa	32.38	198	P	P	05 06 50.1	-0.4
MORW				IAmb	IAmb	05 06 55.1	
	comp=Z,10nm,1.1s						
FORT	Forrest	32.47	178	P	P	05 06 50.7	-0.6
JWT	Wachi	34.25	13	P	P	05 07 06.4	-0.3
KSAR	Wonju Array Be	35.44	2	P	P	05 07 17.2	+0.2
KSRS	Korea Array	35.46	2	P	P	05 07 18.2	+1.1
	comp=Z,0.8nm,0.5s,baz=182,slow=10,SNR=2.7						
STKA	Stephens Creek	36.41	158	P	P	05 07 24.7	-0.7
	comp=Z,1.8nm,0.5s,baz=319,slow=11,SNR=2.0						
STKA	Stephens Creek	36.41	158	P	P	05 07 24.7	-0.7
JSD	Sado	37.56	15	P	P	05 07 33.6	-1.5
ARMA	Armidale	39.95	145	P	P	05 07 55.0	-0.4
ARMA				IAmb	IAmb	05 08 01.3	
	comp=Z,8.5nm,1.2s						
SHL	Shillong	40.96	308	P	P	05 08 03.6	-0.4
SHL				IAmb	IAmb	05 08 07.0	
	comp=Z,9.2nm,1.0s						
USRK	Ussuriysk Ar.	42.44	6	P	P	05 08 17.9	+2.4
	comp=Z,1.9nm,0.7s,baz=201,slow=7.3,SNR=3.2						
USRK	Ussuriysk Ar.	42.44	6	P	P	05 08 14.4	-1.1
TOO	Toolangi	42.92	158	P	P	05 08 18.6	-1.0
TOO				IAmb	IAmb	05 08 24.4	
	comp=Z,14nm,1.3s						
LSA	Lhasa	43.65	313	P	P	05 08 25.9	-0.3
KLR	Kul'dur	47.41	5	P	P	05 08 55.3	+0.2
	comp=Z,1.5nm,0.7s,baz=297,slow=9.0,SNR=2.0						
SONM	Songino Array	49.06	342	P	P	05 09 08.5	+0.5
	comp=Z,1.0nm,0.6s,baz=151,slow=6.3,SNR=5.7						
SONM	Songino Array	49.06	342	P	P	05 09 07.8	-0.2
WMQ	Urumqi	54.23	326	P	P	05 09 46.5	-0.3
MK31	Makanchi Array	59.07	326	P	P	05 10 20.3	-0.7
MKAR	Makanchi Array	59.07	326	P	P	05 10 21.4	+0.4
	comp=Z,2.1nm,0.5s,baz=120,slow=7.6,SNR=11						
MKAR	Makanchi Array	59.07	326	P	P	05 10 20.6	-0.4
MAKZ	Makanchi	59.25	326	P	P	05 10 23.1	+0.8
ZALV	Zalesovo Beam	62.23	334	P	P	05 10 42.4	0.0
	comp=Z,0.6nm,0.3s,baz=128,slow=9.3,SNR=2.2						
ZALV	Zalesovo Beam	62.23	334	P	P	05 10 42.0	-0.4
KURBB	Kurchatov Arra	63.29	328	P	P	05 10 49.7	+0.2
	comp=Z,2.8nm,0.5s,baz=130,slow=6.2,SNR=22						
KURK	Kurchatov	63.29	328	P	P	05 10 49.1	-0.5
KURK				IAmb	IAmb	05 10 53.8	
	comp=Z,6.4nm,0.8s						
KKAR	Karatay Array	64.57	318	P	P	05 10 57.2	-0.9
BRVK	Borovoye	68.93	327	P	P	05 11 25.5	-0.2
BRVK				IAmb	IAmb	05 11 29.5	
	comp=Z,4.0nm,1.0s						
NRIK	Noril'sk	72.23	346	P	P	05 11 46.2	+0.6
	comp=Z,3.2nm,0.6s,baz=137,slow=3.4,SNR=3.6						
ABKAR	Akbulak array	73.57	321	P	P	05 11 53.0	-0.9
AKTO	Aktyubinsk	75.09	322	P	P	05 12 03.6	+0.8
	comp=Z,2.4nm,0.8s,baz=95,slow=8.6,SNR=4.9						
ARU	Arti	76.49	328	P	P	05 12 11.2	+0.5
	comp=Z,1.1nm,0.4s,baz=56,slow=2.3,SNR=4.5						
VNDA	Vanda	81.58	173	P	P	05 12 37.3	-0.8
	comp=Z,0.7nm,0.6s,baz=307,slow=7.8,SNR=3.5						
FINES	FINESS Array B	93.45	332	P	P	05 13 36.8	+0.6
	comp=Z,1.8nm,1.0s,baz=29,slow=3.2,SNR=1.4						
TXAR	Lajitas Array	122.79	53	PKP	PKiKP	05 19 19.3	+1.4
	comp=Z,0.3nm,0.9s,baz=191,slow=2.4,SNR=2.3						
TORD	Torodi Ar. Bea	123.43	287	PKP	PKiKP	05 19 19.6	+0.2
	comp=Z,0.5nm,0.6s,baz=58,slow=1.5,SNR=3.1						
SIV	San Ignacio	164.01	152	PKPab	PKPab	05 21 19.4	+1.4
	comp=Z,0.4nm,0.5s,baz=204,slow=5.9,SNR=4.1						

*IDC **15** 05:01:46.8±0.7, 1°.61N×125°.98E, h0km, mb4.2/15, mb1 4.2/16, mb1mx4.0/50, mbtmp4.1/16, ML3.6/1, Error ellipse: s-maj=47.9km s-min=13.6km az=71.0*
*NEIC **15** 05:01:50.7±1.7, 1°.66N±0°.06×126°.29E±0°.08, h35km±2km, mb4.6/27, Error ellipse: s-maj=15.1km s-min=7.1km az=234.0*
*DJA **15** 05:01:58.0±0.5, 1°.N±4°.×12°.7E±°, h10km, M3.3/3, MLv3.3/3*

ISC 15 05:01:52.0±0.4, 1°.63N±0°.05×126°.27E±0°.08, h47km, n57, σ1§13/61, mb4.3/27, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.39	128	P	Pn	05 02 01.4	-14
TNTI	Ternate	1.39	128	Pn	Pn	05 02 13.2	-1.7
TNTI				Sn	Sn	05 02 32.1	-0.1
SGSI	Sangihe	2.17	340	P	Sn	05 02 51.3	-0.2
KMSI	Cibinong	2.52	245	P	Sn	05 02 50.7	-9.3
LBMI	Labuha	2.56	151	P	Pn	05 02 29.6	-1.5
MYLDM	Lahad Datu	8.52	295	Pn	Pn	05 03 51.3	-1.6
KAPI	Kappang	9.27	225	Pn	Pn	05 04 05.0	+1.7
SBUM	Sibu	14.07	274	Pn	Pn	05 05 09.2	+0.5
KNRA	Kununurra	17.37	172	P	Pn	05 05 50.1	-1.1
FITZ	Fitzroy Crossi	19.61	182	P	Pn	05 06 17.8	-0.5
	0.1nm,0.3s,baz=29,slow=13,SNR=1.4						
FITZ	Fitzroy Crossi	19.61	182	P	Pn	05 06 17.6	-0.7
CISI	Cisompet, Garu	20.55	243	P	P	05 06 26.2	-0.8
CISI				IAmb	IAmb	05 06 45.1	
	comp=Z,52nm,1.2s						
TPUB	Ta-pu	22.23	346	P	P	05 06 44.5	-0.3
SSLB	Suanglung	22.62	347	P	P	05 06 47.3	-1.8
SSLB				IAmb	IAmb	05 06 50.1	
	comp=Z,26nm,1.1s						
WB0	Warramunga Arr	22.71	160	P	P	05 06 49.1	-0.8
WB0				IAmb	IAmb	05 06 54.3	
	comp=Z,7.6nm,0.6s						
WRAB	Tennant Creek	22.85	160	P	P	05 06 51.8	+0.4
WRAB				IAmb	IAmb	05 06 55.5	
	comp=Z,8.7nm,0.6s						
WRA	Warramunga Arr	22.85	160	P	P	05 06 51.2	-0.3
	comp=Z,7.1nm,0.6s,baz=339,slow=11,SNR=4.7						
WRA				PcP	PcP	05 10 43.0	+1.5
	comp=Z,0.4nm,0.5s,baz=330,slow=2.1,SNR=2.1						
WRA				S	S	05 10 57.6	-0.2
	comp=Z,0.5nm,0.7s,baz=332,slow=19,SNR=2.2						
WRA	Warramunga Arr	22.85	160	P	P	05 06 50.1	-1.4
WB2	Warramunga Arr	22.86	160	P	P	05 06 51.4	-0.2
XMIS	Christmas Isla	23.79	239	P	P	05 06 58.2	-2.5
PSAC2	Pilbara Seismi	23.88	195	P	P	05 07 01.1	-0.3
PSA00	Pilbara Seismi	23.90	195	P	P	05 07 01.5	-0.1
PSA00				IAmb	IAmb	05 07 18.2	
	comp=Z,18nm,1.2s						
AS31	Alice Springs	26.22	164	P	P	05 07 23.0	+0.3
ASAR	Alice Springs	26.22	164	P	P	05 07 24.2	+1.5
	comp=Z,3.5nm,0.7s,baz=346,slow=12,SNR=5.4						
ASAR				PcP	PcP	05 10 50.3	+1.5
	comp=Z,0.5nm,0.5s,baz=352,slow=2.0,SNR=2.7						
ASAR	Alice Springs	26.22	164	P	P	05 07 22.5	-0.2
CMAR	Chiang Mai Arr	31.59	304	P	P	05 08 08.1	-2.4
	comp=Z,0.4nm,0.3s,baz=112,slow=9.8,SNR=1.3						
CMAR	Chiang Mai Arr	31.59	304	P	P	05 08 10.4	-0.2
FORT	Forrest	32.27	177	P	P	05 08 16.8	+0.4
JWT	Wachi	34.54	13	P	P	05 08 35.6	-0.4
NWAO	Narrogin (SRO)	35.42	193	P	P	05 08 43.1	-0.5
NWAO				IAmb	IAmb	05 08 58.4	
	comp=Z,18nm,1.2s						
BBOO	Buckleboo	35.48	166	P	P	05 08 44.0	-0.2
BBOO				IAmb	IAmb	05 08 54.3	
	comp=Z,16nm,1.1s						
KSRS	Korea Array	35.68	2	P	P	05 08 46.2	+0.4
	comp=Z,1.5nm,0.8s,baz=180,slow=11,SNR=2.2						
EIDS	Eidsvold	36.02	140	P	P	05 08 48.6	-0.3
EIDS				IAmb	IAmb	05 09 03.5	
	comp=Z,6.3nm,1.0s						
STKA	Stephens Creek	36.36	158	P	P	05 08 52.9	+1.2
	comp=Z,1.8nm,0.5s,baz=314,slow=5.4,SNR=3.1						
STKA	Stephens Creek	36.36	158	P	P	05 08 52.4	+0.7
BJT	Baijiatuan	39.30	348	P	P	05 09 15.0	-1.4
BJT				IAmb	IAmb	05 09 21.7	
	comp=Z,8.1nm,0.5s						
SHL	Shillong	40.78	309	P	P	05 09 28.2	-1.1
SHL				IAmb	IAmb	05 09 30.7	
	comp=Z,8.0nm,1.0s						
USRK	Ussuriysk Ar.	42.69	6	P	P	05 09 43.7	-0.5
KLR	Kul'dur	47.65	5	P	P	05 10 25.5	+2.0
	comp=Z,2.2nm,0.8s,baz=156,slow=2.6,SNR=3.8						
TAU	Tasmania Unive	48.22	159	P	P	05 10 27.3	-0.7
SONM	Songino Array	49.14	342	P	P	05 10 37.1	+1.9
	comp=Z,1.1nm,0.5s,baz=151,slow=10.0,SNR=5.1						
SONM				PcP	PcP	05 11 59.7	+1.6
	comp=Z,0.2nm,0.4s,baz=150,slow=6.1,SNR=2.9						
SONM	Songino Array	49.14	342	P	P	05 10 35.1	-0.2
MK31	Makanchi Array	59.02	326	P	P	05 11 47.6	+0.5
MK31				IAmb	IAmb	05 12 01.2	
	comp=Z,2.2nm,0.8s						
MKAR	Makanchi Array	59.02	326	P	P	05 11 47.6	+0.4
	comp=Z,2.8nm,0.4s,baz=120,slow=8.3,SNR=20						
MKAR				PcP	PcP	05 12 36.2	+0.5
	comp=Z,0.8nm,0.5s,baz=114,slow=6.0,SNR=1.8						
MKAR	Makanchi Array	59.02	326	P	P	05 11 47.3	+0.2
MAKZ	Makanchi	59.20	326	P	P	05 11 48.6	+0.2
MAKZ				IAmb	IAmb	05 12 04.6	
	comp=Z,6.2nm,1.4s						
ZALV	Zalesovo Beam	62.25	334	P	P	05 12 08.8	-0.1
	comp=Z,0.6nm,0.3s,baz=112,slow=6.9,SNR=1.9						
KURBB	Kurchatov Arra	63.26	328	P	P	05 12 16.0	+0.3
	comp=Z,2.8nm,0.7s,baz=129,slow=7.1,SNR=13						
KURK	Kurchatov	63.27	328	P	P	05 12 15.2	-0.5
KURK				IAmb	IAmb	05 12 18.8	
	comp=Z,6.8nm,0.8s						
BVAR	Borovoye Array	68.83	328	P	P	05 12 52.7	+1.2
	comp=Z,0.7nm,0.4s,baz=94,slow=9.4,SNR=4.5						
SOCY	Socotra	72.34	282	P	P	05 13 13.4	-0.4
NRIK	Noril'sk	72.35	347	P	P	05 13 13.3	+0.7
	comp=Z,2.1nm,0.5s,baz=156,slow=3.0,SNR=4.1						
ABKAR	Akbulak array	73.48	321	P	P	05 13 19.8	+0.1
AKTO	Aktyubinsk	75.02	322	P	P	05 13 29.9	+1.3
	comp=Z,1.5nm,0.5s,baz=90,slow=7.0,SNR=4.9						
ARU	Arti	76.46	328	P	P	05 13 37.1	+0.3
	comp=Z,0.7nm,0.3s,baz=121,slow=5.9,SNR=3.6						
VNDA	Vanda	81.42	173	P	P	05 14 06.9	+3.4
	comp=Z,1.2nm,0.8s,baz=300,slow=7.4,SNR=1.3						
TORD	Torodi Ar. Bea	123.11	287	PKP	PKiKP	05 20 45.8	+1.0
	comp=Z,0.6nm,0.8s,baz=45,slow=1.0,SNR=2.3						

*IDC **15** 05:08:58.3±1.7, 2°.03N×126°.93E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/44, mbtmp3.6/5, Error ellipse: s-maj=116.5km s-min=20.4km az=70.0*
*DJA **15** 05:09:01.8±0.5, 2°.N±6°.×12°.7E±°, h10km, M3.9/6, MLv3.9/6*
*NEIC **15** 05:09:03.4±1.3, 2°.07N±0°.10×126°.94E±0°.08, h35km±2km, mb4.1/12, Error ellipse: s-maj=18.1km s-min=11.2km az=207.0*

ISC 15 05:09:03.6±0.7, 2°.03N±0°.08×126°.94E±0°.09, h35km, n26, σ0§67/26, mb3.8/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.31	161	P	Pn	05 09 25.9	+0.4
TNTI	Ternate	1.31	161		Pn	05 09 26.4	+1.0
SGSI	Sangihe	2.17	319	P	Pn	05 09 38.1	+0.8
LUWI	Luwuk	5.17	234	Pn	Pn	05 10 18.8	+0.4
FAKI	Fak Fak	7.23	133	Pn	Pn	05 10 47.2	+0.3
MYLDM	Lahad Datu	8.99	291	Pn	Pn	05 11 11.0	0.0
JAGI	Jajag, Banyuwa	16.47	231	Pn	Pn	05 12 52.4	+0.2
JAGI				IAmb	IAmb	05 13 10.8	
	comp=Z,34nm,0.8s						
KNRA	Kununurra	17.68	174	P	Pn	05 13 08.0	+0.8
KNRA				IAmb	IAmb	05 13 09.2	
	comp=Z,14nm,1.4s						
FITZ	Fitzroy Crossi	20.04	184	P	P	05 13 34.2	+0.5
	comp=Z,0.4nm,0.4s,baz=8.7,slow=11,SNR=1.6						
FITZ	Fitzroy Crossi	20.04	184	P	P	05 13 34.2	+0.5
MANU	Manus Island	20.81	101	P	P	05 13 41.0	-1.3
CISI	Cisompet, Garu	21.33	243	P	P	05 13 46.2	-1.6
CISI				IAmb	IAmb	05 13 54.0	
	comp=Z,126nm,1.4s						
WB0	Warramunga Arr	22.86	162	P	P	05 14 04.2	+0.2
WB0				IAmb	IAmb	05 14 10.3	
	comp=Z,3.5nm,0.9s						
WRA	Warramunga Arr	23.01	162	P	P	05 14 04.9	-0.7
	comp=Z,1.8nm,0.5s,baz=339,slow=11,SNR=16						
WRA	Warramunga Arr	23.01	162	P	P	05 14 05.4	-0.2
WB2	Warramunga Arr	23.01	162	P	P	05 14 05.1	-0.6
WB2				IAmb	IAmb	05 14 10.6	
	comp=Z,3.8nm,1.0s						
AS31	Alice Springs	26.42	166	P	P	05 14 37.0	-0.2
ASAR	Alice Springs	26.42	166	P	P	05 14 36.4	-0.8
	comp=Z,2.0nm,0.4s,baz=348,slow=7.9,SNR=2.9						
ASAR	Alice Springs	26.42	166	P	P	05 14 36.7	-0.5
MK31	Makanchi Array	59.07	326	P	P	05 18 59.5	-0.8
MK31				IAmb	IAmb	05 19 13.9	
	comp=Z,1.2nm,1.1s						
MKAR	Makanchi Array	59.07	326	P	P	05 19 00.1	-0.2
	comp=Z,0.3nm,0.4s,baz=119,slow=7.8,SNR=5.2						
MKAR	Makanchi Array	59.07	326	P	P	05 19 00.2	-0.1
KURBB	Kurchatov Arra	63.28	328	P	P	05 19 28.9	+0.2
	comp=Z,0.4nm,0.3s,baz=129,slow=6.6,SNR=8.3						
KURK	Kurchatov	63.28	328	P	P	05 19 28.8	0.0
KURK				IAmb	IAmb	05 19 42.5	
	comp=Z,3.3nm,1.2s						
ABKAR	Akbulak array	73.60	321	P	P	05 20 33.7	+0.4
AKUT	Akutan	75.20	34	P	P	05 20 42.8	+0.3

*IDC **15** 05:09:56.4±0.8, 1°.87N×126°.47E, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.8/42, mbtmp3.9/9, ML3.1/1, Error ellipse: s-maj=50.8km s-min=17.0km az=73.0*
*NEIC **15** 05:10:01.2±1.8, 1°.84N±0°.08×126°.40E±0°.09, h35km±2km, mb4.8/30, Error ellipse: s-maj=18.3km s-min=8.2km az=227.0*
*DJA **15** 05:10:15.1±0.5, 2°.N±5°.×12°.8E±°, h10km, M3.8/4, MLv3.8/4*

ISC 15 05:10:01.1±0.4, 1°.81N±0°.05×126°.47E±0°.07, h35km, n53, σ1§14/53, mb4.4/21, 1C, Northern Molucca Sea

| Code | Station Name | Δ° | AZ° | Phase | ID |

comp=Z,0.2nm,0.6s,baz=268,slow=4.5,SNR=1.6
ILAR Eielson Array 86.94 25 P **P** **05 22 42.3 -0.1**
QSPA South Pole Qui 91.72 180 P **P** **05 23 03.1 -1.8**
QSPA IAmb IAmb 05 25 57.3
comp=Z,10nm,1.6s
MLR Muntele Rosu 96.09 316 P **P** **05 23 24.6 -0.9**
MLR IAmb IAmb 05 26 33.9
comp=Z,16nm,1.4s
BURAR Bucovina Array 96.25 318 P **P** **05 23 24.7 -1.5**

SJA ***15*** *05:20:35.3±0.8, 17°.21S×69°.99W, h174km±5km, ML5.0, MW4.7*
NEIC ***15*** *05:20:37.8±1.7, 17°.24S±0°.04×69°.92W±0°.07, h153km±4km, mb5.0/181, ML5.3(ARE), Error ellipse: s-maj=10.3km s-min=5.8km az=107.0*
VAO ***15*** *05:20:37.7±0.8, 17°.19S×69°.61W, h135km±6km, mb5.2*
BJI ***15*** *05:20:37.0±0.0, 17°.20S×69°.80W, h141km, mB5.9/2*
ARE ***15*** *05:20:37±1.8, 17°.34S±0°.05×69°.99W±0°.07, h156km±4km, Error ellipse: s-maj=9.9km s-min=6.8km az=108.0*
GUC ***15*** *05:20:38.7±0.7, 17°.31S×69°.97W, h154km±3km, ML5.2*
IDC ***15*** *05:20:40.1±0.5, 17°.10S×69°.58W, h155km±3km, mb4.6/22, mb1 4.8/23, mb1mx4.7/29, mbtmp5.1/23, Error ellipse: s-maj=10.8km s-min=10.1km az=74.0*

ISC 15 05:20:37.6±0.2, 17°.27S±0°.03×69°.83W±0°.04, h150km, h150km:pP-P,n549,σ1s81/641, mb5.0/102, 9C-9D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**1.10**	**164**	*eP*		**Pn**	**05 21 05.5**	**+1.6**
PB16				*i* S		**Sn**	**05 21 25.9**	**+1.9**
PB16	**IPOC Station P**	**1.10**	**164**			**Pn**	**05 21 05.5**	**+1.6**
PB16					Sn	**Sn**	**05 21 25.8**	**+1.7**
PB16	**IPOC Station P**	**1.10**	**164**	*i* P		**Pn**	**05 21 05.6**	**+1.6**
PB16				*eS*		**Sn**	**05 21 27.7**	**+3.6**
PB16					IAML		05 21 34.9	
	comp=Z,3μm,0.8s							
AP01	**Chacalluta**	**1.20**	**204**	⇑*iP*		**Pn**	**05 21 04.4**	**+0.2**
AP01				*eS*		**Sn**	**05 21 24.2**	**-0.3**
AP01					IAML		05 21 26.5	
	comp=E,70μm,0.6s							
AP01	**Chacalluta**	**1.20**	**204**			**Pn**	**05 21 04.4**	**+0.2**
AP01					Sn	**Sn**	**05 21 24.1**	**-0.5**
I08BO	**LAS PENAS INFR**	**1.68**	**52**	P		**Pn**	**05 21 10.0**	**+0.3**
	baz=240,slow=16,SNR=3.9							
MNMC	**Minye Minye**	**1.86**	**173**	⇓*iP*		**Pn**	**05 21 12.6**	**+1.2**
MNMC				*i* S		**Sn**	**05 21 38.2**	**+0.7**
MNMC					IAML		05 21 41.4	
	comp=E,17μm,0.6s							
MNMC	**Minye Minye**	**1.86**	**173**			**Pn**	**05 21 12.7**	**+1.2**
MNMC					Sn	**Sn**	**05 21 38.0**	**+0.5**
MNMCX	**Minye Minye**	**1.86**	**173**	*i* P		**Pn**	**05 21 12.8**	**+1.3**
MNMCX				*eS*		**Sn**	**05 21 39.5**	**+2.0**
MNMCX					IAML		05 21 43.3	
	comp=Z,6μm,0.7s							
LPAZ	**La Paz**	**1.89**	**59**	P		**Pn**	**05 21 13.3**	**+1.2**
	comp=Z,446nm,0.3s,baz=263,slow=6.8,SNR=9742							
LPAZ					S	**Sn**	**05 21 38.6**	**+0.1**
	comp=Z,52nm,0.3s,baz=126,slow=3.5,SNR=4.8							
LPAZ					LR	LR	05 21 57.6	
	comp=Z,4μm,20.7s,baz=170,slow=48							
LPAZ	**La Paz**	**1.89**	**59**	⇑*iP*		**Pn**	**05 21 13.6**	**+1.4**
LPAZ				*eS*		**Sn**	**05 21 37.5**	**-1.0**
LPAZ	**La Paz**	**1.89**	**59**	⇑*iP*		**Pn**	**05 21 13.5**	**+1.4**
LPAZ				*eS*		**Sn**	**05 21 38.5**	**0.0**
LPAZ	**La Paz**	**1.89**	**59**			**Pn**	**05 21 13.4**	**+1.4**
LPAZ						**Sn**	**05 21 40.9**	**+2.4**
LPAZ	**La Paz**	**1.89**	**59**	*i* P		**Pn**	**05 21 13.6**	**+1.4**
LPAZ				*eS*		**Sn**	**05 21 41.1**	**+2.5**
PSGC	**Pisagua**	**2.33**	**187**	⇓*eP*		**Pn**	**05 21 16.5**	**-0.3**
PSGC				*eS*		**Sn**	**05 21 45.1**	**-1.9**
PSGCX	**Pisagua**	**2.33**	**187**			**Pn**	**05 21 16.6**	**-0.1**
PSGCX	**Pisagua**	**2.33**	**187**	*i* P		**Pn**	**05 21 16.7**	**-0.1**
PSGCX					IAML		05 21 51.8	
	comp=Z,3μm,0.3s							
PB11	**IPOC Station P**	**2.48**	**176**	⇓*iP*		**Pn**	**05 21 19.2**	**+0.6**
PB11				*eS*		**Sn**	**05 21 50.0**	**-0.4**
PB11					IAML		05 21 52.0	
	comp=N,9μm,0.5s							
PB11	**IPOC Station P**	**2.48**	**176**			**Pn**	**05 21 19.4**	**+0.7**
PB11	**IPOC Station P**	**2.48**	**176**	*i* P		**Pn**	**05 21 19.4**	**+0.7**
PB11				*eS*		**Sn**	**05 21 51.4**	**+1.0**
PB11					IAML		05 21 54.1	
	comp=Z,3μm,0.5s							
PB08	**IPOC Station P**	**2.93**	**168**	⇓*iP*		**Pn**	**05 21 25.8**	**+1.4**
PB08				*i* S		**Sn**	**05 22 00.9**	**+0.3**
PB08					IAML		05 22 04.2	
	comp=N,4μm,0.3s							
PB08	**IPOC Station P**	**2.93**	**168**			**Pn**	**05 21 25.9**	**+1.5**
PB08	**IPOC Station P**	**2.93**	**168**	*i* P		**Pn**	**05 21 25.8**	**+1.4**
PB08					IAML		05 22 06.7	
	comp=Z,2μm,0.7s							
TA02	**Huaiquique**	**3.00**	**186**	*eP*		**Pn**	**05 21 24.6**	**-0.3**
TA02				*i* S		**Sn**	**05 21 58.9**	**-2.7**
TA01	**Diego Aracena**	**3.30**	**186**	⇓*iP*		**Pn**	**05 21 28.1**	**-0.6**
TA01				*eS*		**Sn**	**05 22 04.7**	**-3.7**
TA01					IAML		05 22 07.0	
	comp=E,4μm,0.6s							
TA01	**Diego Aracena**	**3.30**	**186**	Pn		**Pn**	**05 21 28.1**	**-0.6**
PATCX	**Punta Patache**	**3.55**	**185**	*eP*		**Pn**	**05 21 31.3**	**-0.7**
PATCX				*eS*		**Sn**	**05 22 10.5**	**-3.8**
PATCX	**Punta Patache**	**3.55**	**185**			**Pn**	**05 21 31.5**	**-0.5**
PB01	**IPOC Station P**	**3.77**	**175**	⇓*iP*		**Pn**	**05 21 34.9**	**0.0**
PB01				*eS*		**Sn**	**05 22 16.9**	**-2.5**
PB01	**IPOC Station P**	**3.77**	**175**			**Pn**	**05 21 34.9**	**0.0**
PB01	**IPOC Station P**	**3.77**	**175**	*i* P		**Pn**	**05 21 34.9**	**0.0**
PB01					IAML		05 22 25.5	
	comp=Z,2μm,0.9s							
PB07	**IPOC Station P**	**4.43**	**181**	*eP*		**Pn**	**05 21 43.6**	**-0.1**
PB07				*eS*		**Sn**	**05 22 30.8**	**-4.5**
PB07	**IPOC Station P**	**4.43**	**181**			**Pn**	**05 21 43.7**	**0.0**
PB07	**IPOC Station P**	**4.43**	**181**	*i* P		**Pn**	**05 21 43.9**	**+0.2**
PB07					IAML		05 22 46.5	
	comp=Z,2μm,0.5s							
PB09	**IPOC Station P**	**4.54**	**173**	⇓*eP*		**Pn**	**05 21 45.5**	**+0.5**
PB09	**IPOC Station P**	**4.54**	**173**			**Pn**	**05 21 45.3**	**+0.3**
PB09	**IPOC Station P**	**4.54**	**173**	*i* P		**Pn**	**05 21 45.5**	**+0.5**
PB09					IAML		05 22 43.3	
	comp=Z,2μm,0.4s							
PB03	**IPOC Station P**	**4.75**	**179**	*eP*		**Pn**	**05 21 47.9**	**0.0**
PB03				*eS*		**Sn**	**05 22 37.9**	**-4.9**
PB03	**IPOC Station P**	**4.75**	**179**	*i* P		**Pn**	**05 21 47.9**	**0.0**
PB03					IAML		05 22 47.7	
	comp=Z,2μm,0.5s							
PB04	**IPOC Station P**	**5.05**	**183**	*eP*		**Pn**	**05 21 51.2**	**-0.6**
PB04				*eS*		**Sn**	**05 22 43.9**	**-5.8**
PB04	**IPOC Station P**	**5.05**	**183**			**Pn**	**05 21 51.3**	**-0.5**
PB04	**IPOC Station P**	**5.05**	**183**	*i* P		**Pn**	**05 21 51.3**	**-0.5**
PB04					IAML		05 22 53.0	
	comp=Z,2μm,0.4s							
LVC	**Limon Verde**	**5.38**	**171**	P		**Pn**	**05 21 57.4**	**+0.9**
	comp=Z,153nm,0.3s,baz=359,slow=7.8,SNR=806							
LVC					S	**Sn**	**05 22 55.0**	**-2.9**
	comp=Z,104nm,0.3s,baz=119,slow=18,SNR=17							
LVC	**Limon Verde**	**5.38**	**171**			**Pn**	**05 21 56.9**	**+0.5**
PB06	**IPOC Station P**	**5.41**	**178**			**Pn**	**05 21 56.3**	**-0.4**
PB06	**IPOC Station P**	**5.41**	**178**	*i* P		**Pn**	**05 21 56.1**	**-0.5**
PB06					IAML		05 23 02.0	
	comp=Z,1μm,0.9s							
PB05	**IPOC Station P**	**5.57**	**184**	*i* P		**Pn**	**05 21 57.7**	**-1.0**
PB05					IAML		05 23 03.4	
	comp=Z,803nm,0.7s							
PB15	**IPOC Station P**	**5.92**	**177**			**Pn**	**05 22 03.0**	**-0.5**
PB15	**IPOC Station P**	**5.92**	**177**	*i* P		**Pn**	**05 22 02.9**	**-0.5**
PB10	**IPOC Station P**	**6.25**	**186**	Pn		**Pn**	**05 22 06.1**	**-1.6**
PB10	**IPOC Station P**	**6.25**	**186**	*i* P		**Pn**	**05 22 06.0**	**-1.6**
PB10					IAML		05 23 19.5	
	comp=Z,502nm,0.8s							
YJA	**Yavi**	**6.35**	**141**	*i* P		**Pn**	**05 22 10.8**	**+1.4**
YJA					IAML		05 23 28.1	
	comp=Z,105nm,1.3s							
HJA	**Humahuaca**	**7.22**	**146**	*i* P		**Pn**	**05 22 22.1**	**+1.2**
HJA					IAML		05 23 47.3	
	comp=Z,314nm,1.1s							
PB14	**IPOC Station P**	**7.34**	**184**	Pn		**Pn**	**05 22 20.2**	**-2.2**
PB14	**IPOC Station P**	**7.34**	**184**	*i* P		**Pn**	**05 22 20.2**	**-2.2**
PB14					IAML		05 23 55.5	
	comp=Z,278nm,0.6s							
GO02	**Mina Guanaco**	**7.86**	**178**			**Pn**	**05 22 27.8**	**-1.6**
ETMB	**Extrema**	**8.20**	**26**	*eP*		**Pn**	**05 22 32.2**	**-1.4**
SLA	**San Lorenzo**	**8.44**	**152**	*i* P		**Pn**	**05 22 37.3**	**+0.2**
SLA					IAML		05 24 20.2	
	comp=Z,77nm,1.0s							
SIV	**San Ignacio**	**8.49**	**83**	P		**Pn**	**05 22 35.0**	**-2.5**
	comp=Z,66nm,0.3s,baz=274,slow=12,SNR=292							
NNA	**Nana**	**8.58**	**307**	P		**Pn**	**05 22 37.5**	**-1.4**
	comp=Z,56nm,0.3s,baz=131,slow=11,SNR=112							
NNA				S		**Sn**	**05 24 07.2**	**-7.2**
	comp=Z,58nm,0.3s,baz=209,slow=21,SNR=10							
NNA	**Nana**	**8.58**	**307**			**Pn**	**05 22 37.1**	**-1.7**
AC01	**Pan de Azucar**	**8.86**	**185**	Pn		**Pn**	**05 22 39.9**	**-2.6**
AC02	**Maricunga**	**9.54**	**176**			**Pn**	**05 22 50.8**	**-1.1**
VILB	**Vilhena**	**10.24**	**67**	*eP*		**Pn**	**05 22 58.0**	**-2.8**
GO03	**Copiap**	**10.28**	**182**	Pn		**Pn**	**05 22 58.3**	**-3.0**
GO03	**Copiap**	**10.28**	**182**	*i* P		**Pn**	**05 22 58.4**	**-3.0**
GO03				*eS*		**Sn**	**05 24 48.4**	**-6.8**
AHML	**Horco Molle**	**10.34**	**157**	*i* P		**Pn**	**05 23 00.8**	**-1.3**
AHML				*eS*		**Sn**	**05 24 51.5**	**-5.2**
AHML					IAML		05 24 55.3	
	comp=Z,75nm,1.1s							
PTLB	**Pontes e Lacer**	**10.42**	**82**	*eP*		**Pn**	**05 23 00.2**	**-3.0**
SAML	**Samuel**	**10.50**	**39**	⇑*iP*		**Pn**	**05 23 01.0**	**-3.2**
SAML				*eS*		Sn	05 24 46.8	-14
SAML	**Samuel**	**10.50**	**39**			**Pn**	**05 23 01.0**	**-3.2**
AC04	**Llanos de Chal**	**10.95**	**186**	Pn		**Pn**	**05 23 06.4**	**-3.6**
VCA	**Vinchina**	**11.51**	**173**	*i* P		**Pn**	**05 23 16.5**	**-1.1**
AC05	**El Transito**	**11.52**	**182**	Pn		**Pn**	**05 23 15.2**	**-2.5**
AANI	**Anillaco**	**11.79**	**168**	*i* P		**Pn**	**05 23 18.4**	**-2.8**
ACLC	**CERRO LA CRUZ**	**12.38**	**168**	*i* P		**Pn**	**05 23 27.0**	**-2.0**
CO01	**Juntas del Tor**	**12.65**	**181**			**Pn**	**05 23 31.4**	**-1.2**
AROD	**Rodeo**	**12.84**	**179**	*i* P		**Pn**	**05 23 34.5**	**-0.6**
ACDV	**Cuesta del Vie**	**12.86**	**177**	*i* P		**Pn**	**05 23 34.3**	**-0.8**
GO04	**Tololo Observa**	**12.88**	**184**			**Pn**	**05 23 33.9**	**-1.5**
GO04	**Tololo Observa**	**12.88**	**184**	*i* P		**Pn**	**05 23 33.6**	**-1.8**
ATAH	**Atahualpa**	**13.09**	**319**	P		**Pn**	**05 23 37.6**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=126,slow=7.8,SNR=5.4							
ACCO	**Cerro Coronel**	**13.28**	**177**	*i* P		**Pn**	**05 23 39.5**	**-1.1**
AVFE	**Valle Fertil**	**13.50**	**171**	*i* P		**Pn**	**05 23 44.0**	**+0.8**
CO03	**El Pedregal**	**13.53**	**183**			**Pn**	**05 23 41.1**	**-2.5**
AQDB	**Aguidauana**	**13.74**	**106**	*eP*		**Pn**	**05 23 44.7**	**-1.6**
CO02	**Combarbal**	**13.91**	**184**	Pn		**Pn**	**05 23 48.5**	**+0.1**
RTLL	**Cerro Villicun**	**14.05**	**175**	*i* P		**Pn**	**05 23 48.9**	**-1.3**
ZON	**Zonda**	**14.25**	**176**			**Pn**	**05 23 53.2**	**+0.6**
ZON	**Zonda**	**14.25**	**176**	*i* P		**Pn**	**05 23 53.6**	**+0.9**
RTLS	**Leoncito**	**14.47**	**178**	*i* P		**Pn**	**05 23 55.1**	**-0.6**
RTCV	**Cerro Valdivia**	**14.58**	**176**	*i* P		**Pn**	**05 23 55.7**	**-1.0**
CPUP	**Villa Florida**	**14.69**	**130**	P		**Pn**	**05 23 56.5**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=309,slow=12,SNR=18							
CPUP	**Villa Florida**	**14.69**	**130**	Pn		**Pn**	**05 23 58.3**	**+0.2**
TCA	**Tanti**	**14.79**	**162**	*i* P		**Pn**	**05 23 59.0**	**-0.4**
AUSP	**Uspallata**	**14.89**	**179**	*i* P		**Pn**	**05 24 00.9**	**0.0**
CLDB	**Colider**	**15.02**	**67**	*eP*		**Pn**	**05 23 58.2**	**-4.1**
VA03	**San Esteban**	**15.44**	**182**	Pn		**Pn**	**05 24 06.5**	**-1.0**
MRA	**San Martin**	**15.54**	**167**	*i* P		**Pn**	**05 24 08.5**	**-0.5**
ROC1	**El Roble**	**15.68**	**184**			**Pn**	**05 24 10.4**	**-0.2**
ROC1	**El Roble**	**15.68**	**184**	*i* P		**P**	**05 24 11.0**	**-0.5**
VA01	**Torpederas**	**15.77**	**186**			**P**	**05 24 11.9**	**-0.4**
VA01					IAmb	IAmb	05 24 13.1	
	comp=Z,106nm,1.0s							
AAGR	**Agrelo**	**15.77**	**177**	*i* P		**P**	**05 24 12.6**	**+0.2**
PEL	**Peldehue**	**15.83**	**183**			**P**	**05 24 12.5**	**-0.4**
PEL	**Peldehue**	**15.83**	**183**	*i* P		**Pn**	**05 24 12.0**	**-0.2**
MT02	**Curacav**	**15.97**	**184**			**Pn**	**05 24 13.1**	**-0.8**
MT05	**Renca**	**16.08**	**183**	P		**P**	**05 24 16.0**	**+0.3**
MACA	**Manacapuru-AM**	**16.65**	**34**	*eP*		**P**	**05 24 20.6**	**-1.5**
TRCB	**Terra Rica**	**17.06**	**112**	*eP*		**Pn**	**05 24 27.0**	**-0.3**
ITQB	**Itaqui**	**17.27**	**138**	*eP*		**Pn**	**05 24 29.7**	**0.0**
ARAG	**Araguaiana, MT**	**17.34**	**87**	*eP*		**P**	**05 24 29.3**	**-0.5**
NPGB	**Novo Progresso**	**17.40**	**56**	*eP*		**P**	**05 24 29.4**	**-1.0**
RFA	**San Rafael**	**17.47**	**176**	*i* P		**Pn**	**05 24 34.0**	**+1.8**
BO02	**Sierra Bellavi**	**17.47**	**183**			**Pn**	**05 24 33.1**	**+1.0**
PTLC	**Puerto Leguiza**	**18.01**	**344**	*eP*		**P**	**05 24 35.0**	**-2.1**
PCMB	**Pacaembu**	**18.03**	**107**	*eP*		**P**	**05 24 37.0**	**-0.2**
PTGB	**Pitanga**	**18.15**	**117**	*eP*		**P**	**05 24 38.9**	**+0.3**
ITRB	**Iturama**	**18.62**	**100**	*eP*		**P**	**05 24 44.2**	**+0.5**
SNDB	**Serra Nova Dou**	**18.68**	**76**	*eP*		**P**	**05 24 43.8**	**-0.6**
ITTB	**Itaituba**	**18.84**	**49**	*eP*		**P**	**05 24 45.5**	**-0.7**
ITAB	**Concordia**	**19.12**	**124**	*eP*		**P**	**05 24 49.0**	**-0.1**
BI02	**San Fabin de**	**19.36**	**184**	P		**P**	**05 24 51.7**	**0.0**
CUSE	**Cuicocha Este**	**19.40**	**333**	*eP*		**Pn**	**05 24 54.3**	**-1.1**
MACC	**Macarena, Meta**	**19.70**	**348**	*eP*		**Pn**	**05 25 00.1**	**+1.7**
BI03	**Tigo**	**19.70**	**188**	P		**P**	**05 24 55.3**	**+0.1**
GCUF	**Volcan Galeras**	**19.82**	**337**	*eP*		**P**	**05 24 58.4**	**+1.2**
CPSB	**Cacapava Do Su**	**19.86**	**134**	*eP*		**P**	**05 24 56.9**	**-0.1**
FRTB	**Fartura**	**19.93**	**111**	*eP*		**P**	**05 24 57.7**	**-0.2**
BB19B	**Bebedouro**	**20.46**	**104**	*eP*		**P**	**05 25 03.3**	**-0.4**
PCON	**Cinco Dias**	**20.52**	**341**	*eP*		**P**	**05 25 06.7**	**+1.8**
PLTB	**Pedras Altas**	**20.60**	**137**	*eP*		**P**	**05 25 04.5**	**-0.5**
IPMB	**Pameri, GO**	**20.61**	**95**	*eP*		**P**	**05 25 04.4**	**-0.9**
POPC	**Popayan, Colom**	**20.81**	**340**	*eP*		Pn	05 25 10.1	-1.8
BDFB	**Brasilia**	**20.98**	**89**	P		**P**	**05 25 07.6**	**-1.7**
	comp=Z,118nm,0.8s,baz=262,slow=12,SNR=71							
BDFB	**Brasilia**	**20.98**	**89**	P		**P**	**05 25 08.5**	**-0.8**
CNLB	**Canela**	**21.12**	**128**	*eP*		**P**	**05 25 08.9**	**-1.7**
PRAC	**Prado**	**21.44**	**346**	*eP*		**P**	**05 25 16.6**	**+2.5**
PTGC	**Puerto Gaitan,**	**21.45**	**354**	*eP*		**P**	**05 25 10.9**	**-3.4**
LC01	**Cunco**	**21.62**	**184**	P		**P**	**05 25 16.1**	**+0.3**
MALB	**Monte Alegre**	**21.65**	**47**	*eP*		**P**	**05 25 14.8**	**-1.6**
ORTC	**Ortega, Tolima**	**21.71**	**345**	*eP*		**P**	**05 25 12.3**	**-4.8**
GR1C	**Gorgona, Isla**	**21.76**	**337**	*eP*		**P**	**05 25 16.7**	**-0.8**
SPB	**Sao Paulo**	**21.89**	**110**	P		**P**	**05 25 18.1**	**-0.7**
SPB					IAmb	IAmb	05 25 20.3	
	comp=Z,47nm,0.7s							
SPB	**Sao Paulo**	**21.89**	**110**	*eP*		**P**	**05 25 17.7**	**-1.1**
CHIC	**Chingaza**	**22.10**	**350**	*eP*		**P**	**05 25 27.6**	**+6.2**
VAO	**Valinhos**	**22.20**	**109**	*eP*		**P**	**05 25 21.0**	**-0.9**
PRPB	**Paraupebas**	**22.45**	**63**	*eP*		**P**	**05 25 23.1**	**-1.4**
PLMC	**San Jos del P**	**22.94**	**343**	*eP*		**P**	**05 25 28.9**	**-0.1**
SPBC	**San Pablo de B**	**23.16**	**349**	*eP*		**P**	**05 25 29.4**	**-1.6**
SMTB	**Santa Maria do**	**23.20**	**72**	*eP*		**P**	**05 25 30.6**	**-0.7**
NORC	**Norcasia**	**23.23**	**347**	*eP*		**P**	**05 25 27.8**	**-3.9**
RUSC	**La Rusia**	**23.24**	**352**	*eP*		**P**	**05 25 30.9**	**-1.3**
PLCA	**Paso Flores**	**23.39**	**181**	P		**P**	**05 25 35.0**	**+2.1**
	comp=Z,242nm,0.9s,baz=0.3,slow=10,SNR=187							
PLCA	**Paso Flores**	**23.39**	**181**	P		**P**	**05 25 34.3**	**+1.4**
PLCA	**Paso Flores**	**23.39**	**181**	*eP*		**P**	**05 25 35.0**	**+2.1**
PARB	**Paraibuna**	**23.47**	**109**	*eP*		**P**	**05 25 30.0**	**-0.9**
CBOC	**Ciudad Bolivar**	**23.79**	**345**	*eP*		**P**	**05 25 40.2**	**+3.4**
BSCB	**Bom Sucesso**	**23.95**	**103**	*eP*		**P**	**05 25 38.2**	**0.0**
HELC	**Santa Helena**	**23.98**	**346**	*eP*		**P**	**05 25 36.6**	**-2.2**
PTBC	**PUERTO BERRIO,**	**24.10**	**349**	*eP*		**P**	**05 25 35.2**	**-4.3**
MCPB	**Macapa, AP**	**24.25**	**48**	*eP*		**P**	**05 25 40.6**	**-0.4**
ESAR	**Angra dos Reis**	**24.49**	**108**	*eP*		**P**	**05 25 43.6**	**+0.6**
SDBA	**SAO DESIDERIO**	**24.56**	**82**	*eP*		**P**	**05 25 43.3**	**-0.5**
JANB	**Januaria**	**24.60**	**89**	*eP*		**P**	**05 25 44.4**	**+0.2**
PAMC	**Pamplona, Colo**	**24.62**	**353**	*eP*		**P**	**05 25 44.3**	**-0.4**
LL01	**San Ignacio de**	**25.12**	**185**	P		**P**	**05 25 49.4**	**+0.9**
TMAB	**Tom-Au,PA,Br**	**25.98**	**58**	*eP*		**P**	**05 25 56.1**	**-0.4**
SDV	**Santo Domingo**	**26.00**	**358**	P		**P**	**05 25 56.0**	**-0.9**
	comp=Z,2.9nm,0.3s,baz=15,slow=15,SNR=2.0							
SDV	**Santo Domingo**	**26.00**	**358**	P		**P**	**05 25 56.9**	**-0.1**
SDV					IAmb	IAmb	05 26 37.9	
	comp=Z,64nm,1.2s							
SDV	**Santo Domingo**	**26.00**	**358**	*eP*		**P**	**05 25 57.7**	**+0.8**
SJMB	**Sao Joao De Ma**	**27.27**	**97**	*eP*		**P**	**05 26 08.1**	**0.0**
SJCC	**San Jacinto, C**	**27.51**	**349**	*eP*		**P**	**05 26 10.1**	**-0.1**
PCRV	**Puerto La Cruz**	**27.75**	**11**	P		**P**	**05 26 12.5**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=4.7,slow=5.8,SNR=2.2							
MDP	**Montagnes des**	**27.97**	**39**	P		**P**	**05 26 14.0**	**-0.4**
	comp=Z,48nm,0.8s,baz=64,slow=3.2,SNR=31							
ROSB	**Rosrio**	**28.99**	**63**	*eP*		**P**	**05 26 21.6**	**-1.8**
GRGR	**Grenville**	**30.31**	**16**	P		**P**	**05 26 35.2**	**+0.2**
SVB	**Belmont**	**31.51**	**16**	P		**P**	**05 26 44.8**	**-0.7**
ACON	**Acoyapa**	**32.77**	**331**	P		**P**	**05 26 56.7**	**+0.1**
FDF	**Fort de France**	**32.93**	**16**	P		**P**	**05 26 56.2**	**-1.8**
RCBR	**Riachuelo**	**35.06**	**75**	P		**P**	**05 27 16.0**	**-0.4**
	comp=Z,33nm,0.8s,baz=246,slow=8.9,SNR=14							
RCBR	**Riachuelo**	**35.06**	**75**	P		**P**	**05 27 16.3**	**-0.2**
RCBR					IAmb	IAmb	05 27 17.8	
	comp=Z,31nm,0.8s							
RCBR	**Riachuelo**	**35.06**	**75**	*eP*		**P**	**05 27 15.7**	**-0.8**
ICMP	**Isla Caja de M**	**35.09**	**5**	P		**P**	**05 27 16.1**	**-0.3**
ICMP					IAmb	IAmb	05 27 58.0	
	comp=Z,46nm,1.0s							
MLPR	**Magueyes Islan**	**35.12**	**5**	P		**P**	**05 27 15.8**	**-1.0**
MLPR					pP	**pP**	**05 27 51.4**	**+1.1**
MLPR					IAmb	IAmb	05 27 54.6	
	comp=Z,46nm,1.2s							
CRPR	**Cabo Rojo, PR**	**35.16**	**4**	P		**P**	**05 27 16.0**	**-1.1**
CRPR					IAmb	IAmb	05 27 17.4	
	comp=Z,35nm,1.0s							
CRPR						**pP**	**05 27 51.2**	**+0.7**
OBIP	**Obispado Ponce**	**35.23**	**5**	P		**P**	**05 27 16.6**	**-1.1**
OBIP						**pP**	**05 27 51.0**	**-0.3**
OBIP					IAmb	IAmb	05 27 56.1	
	comp=Z,47nm,1.1s							
PDPR	**Patillas Dam,**	**35.27**	**6**	P		**P**	**05 27 16.5**	**-1.5**
PDPR						**pP**	**05 27 53.1**	**+1.6**
PDPR					IAmb	IAmb	05 27 55.9	
	comp=Z,41nm,1.2s							
SJG	**San Juan**	**35.34**	**6**	*eP*		**P**	**05 27 16.5**	**-2.2**
SJG	**San Juan**	**35.34**	**6**	P		**P**	**05 27 17.2**	**-1.5**
SJG						**pP**	**05 27 53.9**	**+1.7**
SJG					IAmb	IAmb	05 27 55.9	
	comp=Z,43nm,1.4s							
MPR	**Mayaguez**	**35.36**	**4**	P		**P**	**05 27 17.3**	**-1.5**
MPR					IAmb	IAmb	05 27 57.1	
	comp=Z,46nm,1.2s							
AOPR	**Arecibo Observ**	**35.52**	**5**	P		**P**	**05 27 18.9**	**-1.4**
AOPR					IAmb	IAmb	05 27 21.1	
	comp=Z,18nm,0.6s							
CBYP	**Canovanas**	**35.53**	**6**	P		**P**	**05 27 18.5**	**-1.9**
CBYP					IAmb	IAmb	05 27 59.2	
	comp=Z,34nm,0.9s							
EFI	**East Falkland**	**35.58**	**167**	P		**P**	**05 27 21.9**	**+1.6**
USHA	**Ushuaia**	**37.51**	**179**	P		**P**	**05 27 39.6**	**+3.0**
	comp=Z,52nm,0.6s,baz=10,slow=6.4,SNR=13							
PETF	**Flores**	**39.29**	**329**	P		**P**	**05 27 51.7**	**-0.3**
PETF					IAmb	IAmb	05 28 01.9	
	comp=Z,26nm,0.7s							
HOPE	**Hope Point**	**45.00**	**153**	P		**P**	**05 28 39.7**	**+1.9**
PMSA	**Palmer Station**	**47.63**	**177**	P		**P**	**05 28 58.2**	**+0.1**
PMSA					IAmb	IAmb	05 29 02.3	
	comp=Z,48nm,1.0s							
BRAL	**Brewton**	**50.93**	**341**	P		**P**	**05 29 25.3**	**+1.7**
	baz=159							
ZAIG	**Zacatecas**	**51.08**	**320**	P		**P**	**05 29 25.5**	**+0.2**
152A	**Waverly Hall**	**51.66**	**344**	P		**P**	**05 29 27.1**

MGMO IAmb IAmb 05 30 16.4
comp=Z,26nm,1.1s
MGMO PcP PcP 05 31 06.7 +1.2
FVM French Village 58.27 341 P P 05 30 16.3 -0.2
TUL1 Leonard 58.33 335 P P 05 30 17.8 +0.9
baz=151,SNR=6.0
TUL1 Leonard 58.33 335 P P 05 30 16.3 -0.6
TUL1 IAmb IAmb 05 30 18.6
comp=Z,36nm,1.3s
FNO Franklin 58.43 334 P P 05 30 17.4 -0.2
WMOK Wichita Mounta 58.59 332 P P 05 30 19.0 +0.3
baz=147
WMOK Wichita Mounta 58.59 332 P P 05 30 18.5 -0.3
WMOK PcP PcP 05 31 08.4 +1.1
WMOK IAmb IAmb 05 31 09.8
comp=Z,16nm,0.9s
CCM Cathedral Cave 58.60 340 P P 05 30 18.7 0.0
baz=156
CCM Cathedral Cave 58.60 340 P P 05 30 17.7 -1.0
CCM IAmb IAmb 05 31 09.4
comp=Z,14nm,0.9s
OK025 Westminster Rd 58.68 334 P P 05 30 19.1 -0.2
OK025 IAmb IAmb 05 30 20.6
comp=Z,32nm,1.0s
OK025 pP pP 05 30 55.9 -0.1
Q44A Meyer Farm, Va 58.70 343 P P 05 30 18.8 -0.5
Q44A IAmb IAmb 05 30 25.2
comp=Z,19nm,0.7s
OK030 Cody Creek RV 58.74 335 P P 05 30 19.1 -0.7
OK030 pP 05 30 55.7 -0.8
OK031 S. Brethren Rd 58.79 334 P P 05 30 20.4 +0.4
OK031 pP 05 30 57.6 +0.8
MNTX Cornudas Mount 59.45 325 P P 05 30 25.1 +0.3
baz=140,SNR=19
MNTX Cornudas Mount 59.45 325 P P 05 30 24.4 -0.3
MNTX pP pP 05 31 00.6 -0.9
T35A Sooner Cattle 59.49 335 P P 05 30 25.0 +0.1
T35A IAmb IAmb 05 30 26.6
comp=Z,27nm,1.1s
MSTX Muleshoe 59.85 328 P P 05 30 28.3 +0.7
baz=143
MSTX Muleshoe 59.85 328 P P 05 30 27.7 +0.2
KAN13 South Haven SW 59.96 335 P P 05 30 28.4 +0.3
KAN13 pP pP 05 31 04.6 -0.4
AMTX Amarillo 60.05 330 P P 05 30 29.5 +0.6
baz=145
KAN08 Anthony NE Sta 60.35 334 P P 05 30 30.1 -0.6
KAN08 pP 05 31 07.6 -0.1
121A Cookes Peak, D 61.42 324 P P 05 30 40.1 +1.9
baz=138,SNR=6.2
121A Cookes Peak, D 61.42 324 P P 05 30 37.6 -0.7
121A IAmb IAmb 05 30 41.3
comp=Z,16nm,1.1s
121A PcP 05 31 17.7 -1.2
KSU1 Kansas State U 61.42 336 P P 05 30 38.1 +0.2
baz=151,SNR=9.5
KSU1 Kansas State U 61.42 336 P P 05 30 37.8 -0.1
KSU1 PcP PcP 05 31 18.4 -0.2
319A Douglas 61.44 322 P P 05 30 38.5 +0.2
319A IAmb IAmb 05 30 41.2
comp=Z,27nm,0.9s
319A PcP 05 31 18.3 -0.7
R32A Long Quarter, 61.67 334 P P 05 30 39.5 -0.2
BNM Barren Site 61.99 326 P P 05 30 40.2 -2.0
BNM PcP 05 31 21.6 +0.2
G62A West of Eustis 62.19 359 P P 05 30 42.3 -0.7
G65A Princeton 62.20 2 P P 05 30 43.1 +0.1
PKME Peaks-Kenny Pk 62.23 0 P P 05 30 42.9 -0.3
CBKS Cedar Bluff 62.43 334 P P 05 30 46.2 +1.4
baz=148
CBKS Cedar Bluff 62.43 334 P P 05 30 44.7 0.0
CBKS IAmb IAmb 05 30 46.9
comp=Z,32nm,0.8s
CBKS PcP PcP 05 31 23.0 +0.2
ANMO Albuquerque 62.51 326 P P 05 30 46.7 +1.2
baz=140
ANMO Albuquerque 62.51 326 P P 05 30 45.7 +0.2
N35A Tabor 62.61 338 P P 05 30 45.4 -0.4
N35A IAmb IAmb 05 31 25.5
comp=Z,28nm,0.9s
SCIA State Center 62.72 341 P P 05 30 46.6 0.0
baz=155
SCIA State Center 62.72 341 P P 05 30 46.0 -0.6
SCIA IAmb IAmb 05 30 52.6
comp=Z,26nm,1.1s
JFWS Jewell Farm 62.77 343 P P 05 30 46.8 -0.1
baz=158
JFWS Jewell Farm 62.77 343 P P 05 30 46.7 -0.1
JFWS IAmb IAmb 05 30 53.3
comp=Z,17nm,0.8s
TUC Tucson 63.00 321 P P 05 30 50.0 +1.3
baz=136
TUC Tucson 63.00 321 P P 05 30 48.3 -0.4
BELA Belgrano 2 63.03 172 P P 05 30 49.4 +1.2
N33A J Bar K, Exete 63.16 337 P P 05 30 48.5 -1.0
T25A Trinidad 63.18 329 P P 05 30 51.7 +1.7
baz=143,SNR=6.0
T25A Trinidad 63.18 329 P P 05 30 48.6 -1.4
L34A Svendsen Farm, 63.84 338 P P 05 30 53.9 -0.1
KSCO Kaye Shedlock' 63.85 332 P P 05 30 55.4 +1.2
baz=145
214A Organ Pipe Nat 63.98 320 P P 05 30 57.4 +2.3
baz=134,SNR=16
BGNE Belgrade 64.01 337 P P 05 30 56.1 +1.1
baz=150,SNR=8.7
BGNE Belgrade 64.01 337 P P 05 30 55.5 +0.4
X18A Snowflake 64.11 324 P P 05 30 56.0 -0.1
SDCO Great Sand Dun 64.19 329 P P 05 30 58.4 +1.7
baz=142,SNR=25
VNA3 Neumayer Olymp 64.34 162 P P 05 30 59.0 +2.2
VNA1 Neumayer--Stat 64.54 161 P P 05 31 00.7 +2.6
S22A 4UR Ranch, Cre 64.85 328 P P 05 31 02.2 +1.3
baz=141,SNR=11
X16A Lo Mia Camp, P 64.88 323 P P 05 31 00.3 -0.8
X16A IAmb IAmb 05 31 04.4
comp=Z,16nm,1.1s
VNA2 Neumayer--Watz 64.91 161 P P 05 31 02.8 +2.2
baz=284,slow=5.8
Q24A Divide 64.98 330 P P 05 31 03.4 +1.6
baz=143,SNR=5.3
K31A O'Neill 65.28 337 P P 05 31 03.2 -0.1
K31A pP 05 31 41.9 +1.1
MVCO Mesa Verde 65.30 327 P P 05 31 05.2 +1.4
baz=139,SNR=11
MVCO Mesa Verde 65.30 327 P P 05 31 04.7 +0.9
MVCO IAmb IAmb 05 31 06.5
comp=Z,21nm,1.1s
ECSD EROS Data Cent 65.48 339 P P 05 31 04.8 +0.3
baz=152,SNR=17
ECSD EROS Data Cent 65.48 339 P P 05 31 04.5 0.0
SPMN Marine on St. 65.61 342 P P 05 31 05.2 -0.1
baz=156,SNR=12
SPMN Marine on St. 65.61 342 P P 05 31 04.5 -0.9
WUAZ Wupatki 65.63 324 P P 05 31 08.1 +2.2
baz=136,SNR=15
WUAZ Wupatki 65.63 324 P P 05 31 04.7 -1.1
WUAZ IAmb IAmb 05 31 09.1
comp=Z,20nm,1.0s
ISCO Idaho Springs 65.86 330 P P 05 31 08.9 +1.5
baz=142,SNR=18
GLA Glamis 65.97 319 P P 05 31 09.4 +1.4
baz=132
SMCO Snowmass 66.03 329 P P 05 31 08.0 -0.7
SMCO IAmb IAmb 05 31 11.5
comp=Z,15nm,0.9s
PV01 Paradox Valley 66.03 327 P P 05 31 09.1 +0.7
PV01 IAmb IAmb 05 31 11.4
comp=Z,23nm,0.9s
PV02 Paradox Valley 66.17 327 P P 05 31 09.0 -0.4
PV02 IAmb IAmb 05 31 12.3
comp=Z,17nm,1.1s
PV13 Radium Mtn., P 66.18 327 P P 05 31 09.4 -0.1
PV13 IAmb IAmb 05 31 12.1
comp=Z,17nm,1.0s
PDMCI Parker Dam,Lak 66.40 321 P P 05 31 12.8 +2.2
baz=133
PV04 Paradox Valley 66.40 327 P P 05 31 09.3 -1.4
F36A Milaca 66.40 342 P P 05 31 10.1 -0.3
F36A IAmb IAmb 05 31 11.3
comp=Z,28nm,1.1s
PV14 Lion Creek, Pa 66.45 327 P P 05 31 10.5 -0.6
IKP In-Ko-Pah, Jac 66.51 318 P P 05 31 13.7 +2.3
baz=131
SNAA Sanae 66.54 161 P P 05 31 13.1 +2.0
SNAA Sanae 66.54 161 P P 05 31 12.5 +1.4

BC3 Big Chuckawall 66.76 320 P P 05 31 15.1 +2.1
baz=132,SNR=12
U15A North Rim 66.80 324 P P 05 31 13.4 -0.1
MONP2 Monument Peak 66.86 318 P P 05 31 16.3 +2.5
baz=131,SNR=6.1
N23A Red Feather La 66.88 331 P P 05 31 15.5 +1.7
baz=142,SNR=6.0
N23A Red Feather La 66.88 331 P P 05 31 12.4 -1.4
IRM Iron Mountain 66.91 320 P P 05 31 16.1 +2.2
baz=133,SNR=19
SUSD Miller 66.92 338 P P 05 31 14.0 +0.3
SUSD IAmb IAmb 05 31 15.3
comp=Z,34nm,1.1s
PHWY Pilot Hill 66.98 332 P P 05 31 12.6 -1.9
F33A 5 Mile Ranch, 67.23 340 P P 05 31 15.0 -0.6
F33A IAmb IAmb 05 31 16.8
comp=Z,26nm,0.9s
109C Camp Elliot, M 67.30 318 P P 05 31 18.9 +2.6
baz=131
BELC Belle Mtn. Jos 67.33 319 P P 05 31 18.9 +2.2
baz=132,SNR=9.6
TPFO Pinon Flats 67.35 319 P P 05 31 19.2 +2.4
baz=131,SNR=11
PFO Pinyon Flats O 67.36 319 P P 05 31 19.1 +2.3
baz=131,SNR=10
PFO Pinyon Flats O 67.36 319 P P 05 31 15.6 -1.2
PFO IAmb IAmb 05 31 20.3
comp=Z,16nm,0.9s
O20A White River Ci 67.39 329 P P 05 31 18.8 +1.8
baz=140,SNR=12
GMRC Granite Mounta 67.64 320 P P 05 31 21.1 +2.4
baz=132,SNR=17
EYMN Ely 67.76 344 P P 05 31 19.2 +0.4
baz=158
EYMN Ely 67.76 344 P P 05 31 19.1 +0.2
EYMN IAmb IAmb 05 31 19.6
comp=Z,18nm,1.0s
MURC Murrieta 67.82 318 P P 05 31 22.1 +2.5
baz=131
HEC Hector,Ludlow 68.09 320 P P 05 31 24.1 +2.7
baz=132,SNR=5.5
LIC Lamto 68.12 76 *e*P P 05 31 21.6 -0.3
comp=Z,64nm,0.6s
TUQ Turquoise Moun 68.24 321 P P 05 31 24.7 +2.4
baz=132
TIC Toumodi 68.28 75 *e*P P 05 31 22.8 -0.1
KIC Kosan Boka 68.43 76 *e*P P 05 31 24.0 +0.2
comp=Z,104nm,0.6s
DBIC Dimbokro 68.44 75 P P 05 31 24.1 +0.3
comp=Z,53nm,0.7s,baz=230,slow=6.4,SNR=74
DBIC Dimbokro 68.44 75 P P 05 31 24.1 +0.3
BFSC Mount Baldy Ra 68.52 319 P P 05 31 26.2 +2.1
baz=131,SNR=8.1
K22A Casper 68.53 332 P P 05 31 25.6 +1.6
baz=142,SNR=5.6
D32A Dogwood Acres, 68.61 340 P P 05 31 23.6 -0.6
RSSD Black Hills 68.63 334 P P 05 31 26.2 +1.5
baz=145
GSC Goldstone, Bar 68.69 320 P P 05 31 27.6 +2.5
baz=132,SNR=11
B35A Bob, Littlefor 68.73 343 P P 05 31 24.5 -0.4
B35A IAmb IAmb 05 31 26.3
comp=Z,24nm,1.1s
SHOC Shoshone, Teco 68.76 321 P P 05 31 28.3 +2.9
baz=132,SNR=6.0
MWC Mount Wilson 68.77 318 P P 05 31 25.2 -0.5
MWC IAmb IAmb 05 31 29.2
comp=Z,35nm,1.1s
DECC Green Verdugo 68.96 318 P P 05 31 29.4 +2.7
baz=130
MPU Maple Canyon 69.02 327 P P 05 31 25.4 -1.8
PRN Pahroc Range 69.06 323 P P 05 31 27.4 0.0
EDW2 Edwards Air Fo 69.15 319 P P 05 31 30.0 +2.1
baz=130,SNR=11
AGMN Agassiz Nation 69.29 342 P P 05 31 28.7 +0.4
baz=154,SNR=9.8
AGMN Agassiz Nation 69.29 342 P P 05 31 28.1 -0.3
AGMN IAmb IAmb 05 31 29.6
comp=Z,22nm,0.9s
LRMC Laurel Mtn Rad 69.34 320 P P 05 31 31.6 +2.4
baz=131,SNR=6.1
JLU Jordanelle 69.36 327 P P 05 31 28.2 -1.1
E28A Huff 69.38 338 P P 05 31 29.8 +0.8
TPNV Topopah Spring 69.45 322 P P 05 31 32.7 +2.9
baz=132,SNR=43
TPNV Topopah Spring 69.45 322 P P 05 31 29.3 -0.5
TPNV IAmb IAmb 05 31 33.7
comp=Z,31nm,0.9s
FURC Furnace Creek, 69.49 321 P P 05 31 32.6 +2.8
baz=132,SNR=22
MPMC Manual Prospec 69.60 320 P P 05 31 32.8 +2.0
baz=131,SNR=15
TCUT Toone Canyon 69.72 328 P P 05 31 29.9 -1.6
DUG Dugway, Tooele 69.78 326 P P 05 31 33.6 +1.9
baz=136,SNR=9.8
DUG Dugway, Tooele 69.78 326 P P 05 31 32.5 +0.8
DUG IAmb IAmb 05 31 35.0
comp=Z,19nm,1.0s
ISA Isabella, Lake 69.95 319 P P 05 31 35.5 +2.7
baz=130,SNR=19
ISA Isabella, Lake 69.95 319 P P 05 31 33.8 +0.9
ISA IAmb IAmb 05 31 36.5
comp=Z,27nm,0.9s
R11A Troy Canyon, C 70.01 323 P P 05 31 35.8 +2.5
baz=133,SNR=20
BW06 Boulder Array 70.03 330 P P 05 31 34.2 +0.8
baz=140,SNR=8.8
PD31 Pinedale Array 70.03 330 P P 05 31 33.3 -0.1
PDAR Pinedale Array 70.03 330 P P 05 31 34.2 +0.9
comp=Z,2.0nm,0.6s,baz=125,slow=8.6,SNR=21
PDAR pP pP 05 32 12.7 +1.4
comp=Z,1.3nm,0.7s,baz=128,slow=7.4,SNR=2.0
PDAR Pinedale Array 70.03 330 P P 05 31 32.4 -1.0
MDND Maddock 70.09 339 P P 05 31 34.6 +1.3
baz=150,SNR=13
GRAC Grapevine Rang 70.15 321 P P 05 31 36.4 +2.5
baz=132,SNR=7.6
HWUT Hardware Ranch 70.16 328 P P 05 31 33.4 -0.7
CWC Cottonwood Cre 70.21 320 P P 05 31 37.0 +2.4
baz=131
PKM Mcpherson Peak 70.31 318 P P 05 31 37.7 +2.5
baz=129,SNR=9.9
BGU Big Grassy Mou 70.42 327 P P 05 31 35.5 -0.2
VES Vestal, Richgr 70.45 319 P P 05 31 38.0 +2.3
baz=130,SNR=7.0
SMMC Simmler 70.69 318 P P 05 31 39.9 +2.6
baz=129,SNR=8.1
AHID Auburn Hatcher 70.78 329 P P 05 31 38.2 +0.3
AHID IAmb IAmb 05 31 40.2
comp=Z,20nm,1.1s
ULM Lac du Bonnet 71.04 343 P P 05 31 39.3 +0.3
comp=Z,28nm,0.5s,baz=153,slow=6.2,SNR=65
ULM pP pP 05 32 18.5 +1.5
comp=Z,7.1nm,0.6s,baz=182,slow=3.8,SNR=2.8
ULM Lac du Bonnet 71.04 343 P P 05 31 38.0 -0.9
ULM pP 05 32 17.1 +0.1
REDW Red Top Meadow 71.11 330 P P 05 31 39.5 -0.4
SNOW Snow King Moun 71.13 330 P P 05 31 39.2 -0.9
TPAW Teton Pass 71.25 330 P P 05 31 40.3 -0.4
MLAC Mammoth, Mammo 71.45 321 P P 05 31 44.5 +2.4
baz=131
ELK Elko 71.47 325 P P 05 31 42.5 +0.4
LAO LASA Array 71.61 335 P P 05 31 43.5 +0.9
baz=143,SNR=6.1
NVAR Mina Array Bea 71.65 322 P P 05 31 45.5 +2.3
comp=Z,9.8nm,0.9s,baz=148,slow=6.6,SNR=58
NVAR pP pP 05 32 23.2 +2.0
comp=Z,4.8nm,1.1s,baz=137,slow=7.3,SNR=2.1
RLMT Red Lodge 71.70 332 P P 05 31 45.0 +1.7
baz=140,SNR=8.5
SCHQ Schefferville 71.86 2 P P 05 31 46.2 +2.4
comp=Z,2.2nm,0.6s,baz=279,slow=14,SNR=1.6
RYN Ryan 71.91 322 P P 05 31 45.6 +0.9
KOWA Kowa 72.19 68 P P 05 31 46.5 -0.1
KOWA IAmb IAmb 05 31 47.5
comp=Z,27nm,0.8s
DGMT Dagmar 72.26 337 P P 05 31 48.1 +1.7
baz=146
DGMT Dagmar 72.26 337 P P 05 31 45.9 -0.5
DGMT pP pP 05 32 22.0 -2.5
DGMT IAmb IAmb 05 32 29.8
comp=Z,35nm,1.1s
YHB Horse Butte 72.31 330 P P 05 31 46.1 -0.8
GCMT Greycliff 72.39 332 P P 05 31 47.9 +0.5
QLMT Earthquake Lak 72.48 330 P P 05 31 48.0 0.0
PNTR Pine Nut 72.85 322 P P 05 31 50.1 -0.2

PNTR IAmb IAmb 05 31 54.1
comp=Z,26nm,0.9s
QSPA South Pole Qui 72.90 180 P P 05 31 51.3 +1.2
VCNR Virginia City 73.01 322 P P 05 31 50.3 -1.0
HLID Hailey 73.02 328 P P 05 31 53.5 +2.3
baz=136,SNR=22
BOZ Bozeman (W) 73.14 331 P P 05 31 53.3 +1.5
baz=138,SNR=12
MCMT McKenzie Canyo 73.16 330 P P 05 31 53.0 +0.9
DLMT Dillon 73.43 330 P P 05 31 53.5 0.0
MFID Camas Ranch 73.65 327 P P 05 31 53.1 -1.6
MFID IAmb IAmb 05 31 58.3
comp=Z,33nm,1.1s
BEKR Beckworth 73.80 322 P P 05 31 56.3 +0.5
HRY Holter Researc 74.07 331 P P 05 31 58.2 +1.1
EGMT Eagleton 74.15 333 P P 05 31 58.8 +1.2
baz=140,SNR=8.7
EGMT Eagleton 74.15 333 P P 05 31 55.9 -1.7
EGMT IAmb IAmb 05 31 59.8
comp=Z,25nm,1.1s
VAH Vaihoa 74.22 259 *e*P P 05 32 02.0 +3.4
comp=Z,62nm,1.0s
ORV Oroville 74.28 321 P P 05 31 58.8 +0.4
ORV IAmb IAmb 05 32 02.2
comp=Z,39nm,1.0s
PMOR Pomariorio Ree 74.53 259 *e*P P 05 32 04.0 +3.7
comp=Z,156nm,1.5s
PLID Pearl Lake 74.90 328 P P 05 32 02.0 -0.1
O03E Paynes Creek 74.92 321 P P 05 32 03.6 +1.5
baz=129,SNR=10
MSO Missoula 75.14 330 P P 05 32 04.9 +1.6
baz=137,SNR=7.9
O02D Mt. Diablo Mer 75.44 321 P P 05 32 06.4 +1.3
baz=128,SNR=6.0
WDC Whiskeytown Da 75.54 321 P P 05 32 05.9 +0.3
M04C Macdoel 75.88 323 P P 05 32 09.6 +1.9
baz=129,SNR=12
N02D Trinity Center 75.89 321 P P 05 32 08.8 +1.1
baz=128,SNR=8.4
K05A Summer Lake 75.94 324 P P 05 32 08.8 +0.8
K05A IAmb IAmb 05 32 11.9
comp=Z,34nm,1.0s
M02C Callahan 76.23 322 P P 05 32 11.1 +1.4
baz=128,SNR=7.2
K04D Chiloquin, OR 76.36 323 P P 05 32 12.6 +2.2
baz=129
L04D Klamath Falls 76.42 323 P P 05 32 12.2 +1.5
baz=129
KHMM Horse Mountain 76.44 321 P P 05 32 09.8 -1.1
J05D Fort Rock, OR 76.49 324 P P 05 32 13.4 +2.3
baz=130,SNR=11
WALA Waterton Lakes 76.75 332 P P 05 32 11.8 -0.6
TOA0 Torodi Ar. Sit 76.80 72 P P 05 32 12.8 -0.5
TOA0 IAmb IAmb 05 32 17.0
comp=Z,40nm,0.8s
TORD Torodi Ar. Bea 76.80 72 P P 05 32 13.2 -0.1
comp=Z,23nm,0.4s,baz=263,slow=4.9,SNR=277
TORD pP pP 05 32 52.1 +0.6
comp=Z,8.4nm,0.8s,baz=261,slow=4.6,SNR=2.3
TORD Torodi Ar. Bea 76.80 72 P P 05 32 12.4 -0.9
TORD pP 05 32 52.5 +1.0
J04D Umpqua Nationa 76.95 324 P P 05 32 15.7 +1.9
baz=129
HUMO Hull Mountain 77.04 323 P P 05 32 14.1 0.0
L02E Cave Junction 77.14 322 P P 05 32 16.7 +2.1
baz=128
I05D Terrebonne, OR 77.22 325 P P 05 32 17.9 +2.8
baz=130,SNR=12
I04A Tendick Farm, 77.47 324 P P 05 32 18.3 +1.9
baz=129
K02D Willamette Mer 77.51 322 P P 05 32 18.9 +2.2
baz=128
HAWA Hanford 77.60 327 P P 05 32 17.0 0.0
D08A Wollman Farm, 77.73 328 P P 05 32 17.8 0.0
G05D Wamic, OR 77.79 326 P P 05 32 21.2 +3.0
baz=130,SNR=6.2
I03D Drain, OR 77.94 323 P P 05 32 21.2 +2.2
baz=128
LTY Liberty 78.76 327 P P 05 32 23.4 -0.1
B08A Colville Reser 78.82 329 P P 05 32 22.3 -1.4
F04A Amboy 78.83 326 P P 05 32 23.8 0.0
F04A IAmb IAmb 05 32 26.9
comp=Z,44nm,0.9s
F04A pP 05 33 02.2 -0.2
LON Longmire 79.02 327 P P 05 32 23.4 -1.5
E04D Cinebar 79.30 326 P P 05 32 29.0 +2.6
baz=129
B06A Marblemount 80.00 328 P P 05 32 29.7 -0.3
B06A IAmb IAmb 05 32 32.5
comp=Z,31nm,0.9s
B05A Bryant 80.14 328 P P 05 32 32.2 +1.4
baz=130,SNR=8.7
D03D Eldon 80.20 327 P P 05 32 33.5 +2.4
baz=129
NLWA Neilton Lookou 80.52 326 P P 05 32 32.9 -0.1
NLWA IAmb IAmb 05 32 36.6
comp=Z,42nm,1.1s
SYO Syowa Base 80.75 160 ⇑*i*P P 05 32 34.6 +0.8
SYO Syowa Base 80.75 160 ⇓*i*PcP PcP 05 32 37.7 -2.4
SYO Syowa Base 80.75 160 ⇓*i*pP pP 05 33 09.8 -2.8
VNDA Vanda 80.84 190 P P 05 32 37.8 +3.5
comp=Z,20nm,0.8s,baz=134,slow=4.7,SNR=127
VNDA Vanda 80.84 190 P P 05 32 33.2 -1.0
VNDA IAmb IAmb 05 32 38.9
comp=Z,30nm,0.9s
PGC Sidney 81.09 327 P P 05 32 35.5 -0.4
PGC IAmb IAmb 05 32 39.4
comp=Z,65nm,1.1s
TSUM Tsumeb 82.11 108 P P 05 32 41.3 -0.9
TSUM IAmb IAmb 05 32 44.7
comp=Z,56nm,1.8s
PAB San Pablo 83.13 45 P P 05 32 47.8 +0.9
PAB IAmb IAmb 05 35 00.8
comp=Z,75nm,1.9s
ESDC Sonseca Array 83.46 45 P P 05 32 49.8 +1.3
comp=Z,7.0nm,1.1s,baz=251,slow=5.4,SNR=17
ESDC Sonseca Array 83.46 45 P P 05 32 46.7 -1.8
ESDC pP pP 05 33 27.2 -0.3
ESBB Sonseca Array 83.46 45 P P 05 32 49.7 +1.2
ESBB IAmb IAmb 05 35 25.0
comp=Z,51nm,1.8s
TAM Tamanrasset 83.72 64 P P 05 32 49.3 -1.1
RAR Rarotonga 83.86 250 P P 05 32 55.7 +4.8
comp=Z,3.2nm,0.4s,baz=108,slow=6.4,SNR=1.9
BOSA Boshof 86.21 119 P P 05 33 04.2 +1.5
comp=Z,5.9nm,1.0s,baz=262,slow=2.6,SNR=4.8
BOSA Boshof 86.21 119 P P 05 33 02.7 0.0
BOSA IAmb IAmb 05 36 09.7
comp=Z,69nm,1.8s
YKA Yellowknife Ar 86.93 341 P P 05 33 06.2 +1.1
comp=Z,29nm,0.8s,baz=131,slow=4.6,SNR=68
YKA pP pP 05 33 44.9 +0.4
comp=Z,6.6nm,0.8s,baz=133,slow=4.9,SNR=2.8
LBTB Lobatse 87.58 115 P P 05 33 08.4 -1.0
MAW Mawson 88.61 164 P P 05 33 15.6 +2.4
comp=Z,43nm,0.6s,baz=214,slow=6.0,SNR=157
MAW Mawson 88.61 164 P P 05 33 12.8 -0.4
MAW PcP PcP 05 33 15.7 +1.0
DLBC Dease Lake 90.07 333 P P 05 33 19.6 -0.6
DLBC IAmb IAmb 05 36 35.3
comp=Z,24nm,0.8s
KEST Kesra 91.46 53 P P 05 33 27.7 +0.5
comp=Z,8.2nm,1.1s,baz=252,slow=9.7,SNR=4.5
K27K Chicken 97.86 335 P Pdif 05 33 57.1 +1.5
baz=113
GERES GERESS Array B 98.65 42 P Pdif 05 34 00.6 +0.9
comp=Z,1.0nm,1.0s,baz=264,slow=3.9,SNR=3.8
ILAR Eielson Array 100.07 335 P **Pdif** 05 **34 06.5 +1.0**
comp=Z,0.8nm,1.0s,baz=133,slow=4.2,SNR=6.4
ILAR PP **PP** 05 **38 08.5 -4.5**
comp=Z,0.5nm,0.8s,baz=110,slow=5.8,SNR=4.8
MLR Muntele Rosu 106.10 47 ⇑P PP 05 38 49.3 -9.3
PLOR Plostina 106.64 46 ⇑P **PP** 05 **38 55.0 -7.5**
VRI Vrincioaia 106.69 46 ⇑P **PP** 05 **38 57.5 -5.3**
KBZ Khabaz 118.08 49 PKP **PKiKP** 05 **39 08.5 +1.7**
comp=Z,4.6nm,1.0s
STKA Stephens Creek 122.59 212 PKP **PKiKP** 05 **39 17.4 +1.3**
comp=Z,3.9nm,0.6s,baz=101,slow=5.7,SNR=6.5
PETK Petropavlovsk- 128.64 325 PKP **PKiKP** 05 **39 29.0 +1.6**
comp=Z,6.7nm,1.0s,baz=64,slow=3.4,SNR=4.5
CTA Charters Tower 128.69 225 PKP **PKiKP** 05 **39 29.9 +1.4**
comp=Z,5.6nm,0.9s,baz=109,slow=2.7,SNR=6.3
NWAO Narrogin (SRO) 129.63 188 PKP **PKiKP** 05 **39 31.2 +1.1**
comp=Z,12nm,0.8s,baz=171,slow=3.4,SNR=4.3
ASAR Alice Springs 133.18 210 PKhKP PKPpre 05 39 21.6
comp=Z,0.9nm,0.8s,baz=156,slow=2.7,SNR=7.4

ASAR PKP **PKiKP** **05 39 37.6 0.0**
comp=Z,4.4nm,0.7s,baz=136,slow=2.3,SNR=24
ASAR PP **PP** **05 42 01.2 -2.1**
comp=Z,6.0nm,1.2s,baz=148,slow=6.1,SNR=10
ASAR SKPbc **SKPab** **05 42 53.6 +1.0**
comp=Z,1.5nm,0.8s,baz=138,slow=4.5,SNR=5.5
BRZS **Berezniki** **135.62 34** *e*PKiKP **PKPdf** **05 39 40.5 +0.5**
baz=34
WRA **Warramunga Arr** **136.06 214** PKhKP PKPpre 05 39 28.0
comp=Z,1.8nm,0.9s,baz=138,slow=2.8,SNR=8.6
WRA PKP **PKiKP** **05 39 43.3 -0.2**
comp=Z,11nm,0.9s,baz=149,slow=1.7,SNR=24
WRA SKPbc **SKPbc** **05 43 02.4 +2.5**
comp=Z,2.8nm,1.1s,baz=141,slow=2.2,SNR=6.4
IUG **luzhnay** **137.77 46** *e*PKiKP **PKPdf** **05 39 44.9 +0.6**
baz=45
ZALV **Zalesovo Beam** **138.45 22** PKP **PKPdf** **05 39 45.8 +0.7**
comp=Z,16nm,0.8s,baz=300,slow=2.1,SNR=42
ZALV pPKP **pPKPdf** **05 40 27.8 +1.3**
comp=Z,7.9nm,0.9s,baz=298,slow=3.2,SNR=3.5
ZALV SKPbc **SKiKP** **05 43 08.1 -1.3**
comp=Z,5.0nm,0.8s,baz=304,slow=3.4,SNR=11
BTLS **Baital** **139.04 40** *e*PKiKP **PKPdf** **05 39 47.5 +1.0**
baz=39
SEM **Semipalatinsk** **139.17 29** *e*PKiKP **PKPdf** **05 39 47.5 +0.7**
baz=29
KUU **Kurty** **141.04 40** *e*PKP **PKPdf** **05 39 48.7 -1.5**
baz=40
KUU *e*PKiKP **PKiKP** **05 39 51.7 -1.2**
comp=Z,4.1nm,0.9s,baz=40
CHKK **Chushkaly** **141.46 39** *e*PKiKP **PKiKP** **05 39 52.5 -1.3**
baz=39
FITZ **Fitzroy Crossi** **141.70 204** PKhKP **PKPdf** **05 39 47.3 -4.8**
comp=Z,8.6nm,0.5s,baz=142,slow=3.6,SNR=26
FITZ PKP **PKiKP** **05 39 54.2 -0.7**
comp=Z,8.4nm,0.7s,baz=198,slow=5.9,SNR=9.5
MDOK **Medeo** **141.87 40** *e*PKiKP **PKPdf** **05 39 52.7 +0.8**
baz=40
MKAR **Makanchi Array** **142.62 32** PKhKP **PKPdf** **05 39 50.3 -2.6**
comp=Z,1.1nm,0.8s,baz=305,slow=3.0,SNR=5.7
MKAR PKP **PKiKP** **05 39 54.6 -1.5**
comp=Z,4.6nm,0.8s,baz=337,slow=2.0,SNR=14
MKAR SKPbc **SKiKP** **05 43 19.7 +1.4**
comp=Z,1.6nm,0.7s,baz=337,slow=3.1,SNR=6.3
KPKS **Kokpek** **142.70 39** *e*PKP **PKPdf** **05 39 50.6 -2.7**
baz=39
KPKS *e*PKiKP **PKiKP** **05 39 55.0 -1.4**
comp=Z,3.4nm,1.1s,baz=39
KSH **Kashi** **142.97 46** *e*PKP **PKiKP** **05 39 55.8 -1.3**
GENI **Genyem** **144.43 239** PKP **PKPdf** **05 39 56.7 -0.3**
GENI PKP PKPbc 05 39 57.7 +1.8
GENI PKP **PKiKP** **05 39 58.8 -1.9**
WMQ **Urumqi** **147.42 31** *e*PKPbc **PKPdf** **05 40 01.4 +0.1**
WMQ LR LR
comp=Z,1μm,29.3s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,490nm,29.1s
USRK **Ussuriysk Ar.** **147.46 330** PKPbc **PKiKP** **05 40 05.8 -0.2**
comp=Z,23nm,0.8s,baz=33,slow=1.6,SNR=36
USRK pPKPbc **pPKPab** **05 40 46.1 -0.5**
comp=Z,23nm,1.0s,baz=12,slow=2.7,SNR=3.0
BAKI **Biak** **148.54 237** PKP **PKPbc** **05 40 07.0 -0.7**
BAKI PKP **PKPab** **05 40 15.7 +4.2**
MJAR **Matsushiro Arr** **148.66 313** PKPbc **PKiKP** **05 40 08.9 +0.1**
comp=Z,32nm,0.9s,baz=89,slow=1.7,SNR=45
MJAR pPKPbc **pPKPbc** **05 40 48.1 -0.4**
comp=Z,10nm,1.0s,baz=349,slow=0.2,SNR=3.4
MAT **Matsushiro** **148.66 313** *e*PKP **PKPdf** **05 40 05.4 +1.9**
SONM **Songino Array** **149.36 5** PKPbc **PKiKP** **05 40 10.3 +0.3**
comp=Z,26nm,0.8s,baz=324,slow=1.7,SNR=73
SONM pPKPbc **pPKPbc** **05 40 51.3 +1.2**
comp=Z,21nm,1.0s,baz=335,slow=0.8,SNR=6.9
BATI **Baumata** **149.62 207** PKPbc **PKiKP** **05 40 13.4 +2.0**
comp=Z,58nm,0.8s,baz=98,slow=12,SNR=3.9
BATI PKPab **PKPab** **05 40 18.3 +2.5**
comp=Z,41nm,0.9s,baz=169,slow=5.2,SNR=3.8
SOEI **Soe** **149.75 208** PKP **PKPbc** **05 40 08.7 -2.2**
SOEI PKP **PKiKP** **05 40 10.5 -1.3**
SOEI PKP **PKPab** **05 40 13.7 -2.8**
HYB **Hyderabad** **149.83 85** *i* PKP **PKPdf** **05 40 04.0 -1.9**
FAKI **Fak Fak** **150.39 229** PKP **PKPdf** **05 40 09.3 +2.4**
FAKI PKP **PKiKP** **05 40 14.3 +1.3**
CN2 **Changchun** **150.56 337** *e*PKPbc **PKPdf** **05 40 03.5 -2.8**
EDFI **Ende, Flores** **151.75 205** PKP **PKPdf** **05 40 09.0 -0.1**
EDFI PKP **PKPbc** **05 40 10.0 -5.6**
EDFI PKP **PKiKP** **05 40 10.8 -5.1**
WBSI **Waikabubak, Su** **151.75 199** PKP **PKPdf** **05 40 10.3 +1.3**
WBSI PKP **PKiKP** **05 40 19.0 +3.2**
PYUN **Piuthan** **152.76 62** *e*P **PKPab** **05 40 27.3 -1.7**
comp=Z,17nm,0.3s
TWSI **Taliwang, Sumb** **153.32 195** PKP **PKPdf** **05 40 09.5 -1.8**
TWSI PKP **PKPbc** **05 40 11.4 -7.5**
TWSI PKP **PKiKP** **05 40 21.0 +2.0**
DANN **Dangsing** **153.33 61** *e*P **PKPab** **05 40 28.9 -2.6**
comp=Z,18nm,0.3s
KOLN **Koldanda** **153.38 62** *e*P **PKPab** **05 40 28.5 -3.1**
comp=Z,3.2nm,0.3s
GKN **Gorkha** **154.17 61** *e*P **PKPab** **05 40 30.6 -4.3**
KSRS **Korea Array** **154.54 326** PKP **PKPdf** **05 40 14.3 +2.0**
comp=Z,0.9nm,0.3s,baz=74,slow=1.0,SNR=7.3
KSRS PKPbc **PKiKP** **05 40 22.7 +1.9**
comp=Z,4.7nm,0.9s,baz=51,slow=0.5,SNR=10.0
KSRS PKPab **PKPab** **05 40 37.8 +1.9**
comp=Z,1.7nm,0.8s,baz=53,slow=4.7,SNR=5.0
DMN **Daman** **154.69 62** *e*P **PKPab** **05 40 31.2 -6.1**
PKIN **Phulchoki** **154.95 61** *e*P **PKPab** **05 40 32.0 -6.4**
PKI **Pulchoki** **154.96 61** *e*P **PKPab** **05 40 31.2 -7.3**
GUN **Gumba** **155.24 60** *e*P **PKPab** **05 40 32.3 -7.4**
BKSI **Bulukumba** **155.50 205** PKP **PKPdf** **05 40 08.6 -5.7**
BKSI PKP PKPab 05 40 27.5 -13
KAPI **Kappang** **155.92 204** PKPab **PKPab** **05 40 45.2 +2.9**
comp=Z,26nm,0.7s,baz=168,slow=2.4,SNR=15
GTA **Gaotai** **156.16 20** PKP **PKPdf** **05 40 16.9 +2.3**
HHC **Hu-ho-hao-te** **156.47 357** *e*PKP **PKPdf** **05 40 12.1 -2.8**
LZH **Lanzhou** **160.43 15** *e*PKP **PKPdf** **05 40 16.5 -3.4**
LZH pPKP pPKPdf 05 40 55.3 -6.1
LZH sPKP 05 41 14.8
XAN **Xi'an** **163.26 4** PKP **PKPdf** **05 40 25.0 +2.3**
NJ2 **Nanjing** **163.31 333** *e*PKP **PKPdf** **05 40 22.8 +0.1**
CMAR **Chiang Mai Arr** **169.24 82** PKP **PKPdf** **05 40 29.4 +1.7**
comp=Z,0.8nm,0.3s,baz=255,slow=1.7,SNR=8.9
CMAR PKPab **PKPab** **05 41 41.2 +0.4**
comp=Z,0.6nm,0.3s,baz=183,slow=33,SNR=1.3
GYA **Guiyang** **170.29 19** PKP **PKPdf** **05 40 30.4 +2.1**

IDC 15 05:20:44.8±1.3,2°.02S×128°.33E,h0km,mb3.3/3,
mb1 3.5/5,mb1mx3.3/48,mbtmp3.4/5,ML3.3/2,Error
ellipse: s-maj=40.2km s-min=24.8km az=65.0,Ceram
Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.15**	**69**	Pn	Pn	05 21 35.6	-0.2
	4.0nm,0.3s,baz=123,slow=18,SNR=17						
WRA	**Warramunga Arr**	**18.75**	**162**	P		05 25 03.8	-1.7
	0.1nm,0.3s,baz=339,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**22.18**	**166**	P		05 25 43.8	+1.1
	0.2nm,0.5s,baz=346,slow=13,SNR=2.4						
MKAR	**Makanchi Array**	**63.18**	**326**	P		05 31 14.6	-0.2
	0.2nm,0.4s,baz=123,slow=8.3,SNR=4.7						
KURBB	**Kurchatov Arra**	**67.43**	**328**	P		05 31 42.5	+0.3
	0.4nm,0.6s,baz=128,slow=6.8,SNR=4.5						

*NEIC **15** 05:24:09.7±1.1,1°.85N±0°.08×126°.44E±0°.04,h35km±2km,*
mb4.5/26,Error ellipse: s-maj=15.4km s-min=3.6km
az=203.0
*DJA **15** 05:24:09.7±0.3,2°N±3°×12°6E±°,h10km,M4.4/7,MLv4.4/7*
*IDC **15** 05:24:14.4±4.0,1°.49N×125°.67E,h74km±36km,mb3.8/8,*
mb1 3.8/9,mb1mx3.5/45,mbtmp4.0/9,ML3.9/1,MS4.6/1,
Ms1 4.6/1,ms1mx3.6/38,Error ellipse: s-maj=59.4km
s-min=11.9km az=68.0
ISC 15 05:24:11.4±0.5,1°.79N±0°.04×126°.40E±0°.06,h47km,n56,
σ1s36/63,mb4.4/20,2C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**136**	P	**Pn**	**05 24 34.1**	**-0.5**
TNTI				S	**Sn**	**05 24 52.9**	**+1.0**
TNTI	**Ternate**	**1.40**	**136**		**Pn**	**05 24 34.2**	**-0.3**
SGSI	**Sangihe**	**2.07**	**335**	P	**Pn**	**05 24 43.6**	**-0.1**
SGSI				S	**Sn**	**05 25 07.9**	**-0.4**
KMSI	**Cibinong**	**2.70**	**243**	P	**Pn**	**05 24 52.5**	**+0.2**
KMSI				S	**Sn**	**05 25 23.8**	**0.0**
GTOI	**Gorontalo**	**3.57**	**251**	P	**Pn**	**05 25 07.9**	**+3.6**
GTOI				S	**Sn**	**05 25 44.8**	**-0.6**
DDMP	**Don Marcelino,**	**4.34**	**351**	*e*P	**Pn**	**05 25 14.6**	**-0.3**
DDMP				*e*S	**Sn**	**05 26 06.6**	**+2.4**
LUWI	**Luwuk**	**4.59**	**232**		**Pn**	**05 25 20.0**	**+1.7**
SKMP	**Bagumbayan, Su**	**5.05**	**339**	*e*P	**Pn**	**05 25 23.4**	**-1.2**
SKMP				*e*S	**Sn**	**05 26 19.9**	**-1.7**
KCP	**Kidapawan**	**5.34**	**346**	*e*P	**Pn**	**05 25 31.2**	**+2.4**
KCP				*i* S	**Sn**	**05 26 33.0**	**+4.0**
BUKP	**Musuan**	**6.19**	**348**	*e*P	**Pn**	**05 25 40.9**	**+0.5**
BUKP				*e*S	**Sn**	**05 26 51.6**	**+1.7**
MYLDM	**Lahad Datu**	**8.57**	**293**		**Pn**	**05 26 13.2**	**+0.2**
PGP	**Puerto Galera**	**12.82**	**335**	*e*P	P	05 27 29.4	+8.5
LUBP	**Lubang**	**13.33**	**333**	*e*P	P	05 27 40.1	+14
MTN	**Manton Dam**	**15.28**	**162**	Pn	**Pn**	**05 27 40.8**	**-3.4**
KNRA	**Kununurra**	**17.51**	**172**	P	**Pn**	**05 28 12.0**	**-0.3**
UGM	**Wanagama**	**18.54**	**238**	P	**Pn**	**05 28 24.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.78**	**182**	P	**P**	**05 28 36.6**	**-1.2**
	0.3nm,0.3s,baz=17,slow=12,SNR=8.2						
FITZ	**Fitzroy Crossi**	**19.78**	**182**	P	**P**	**05 28 37.6**	**-0.1**
YULB	**Yu-li**	**22.03**	**347**	P	**P**	**05 29 01.2**	**-0.9**
YULB				IAmb	IAmb	05 29 14.9	
	comp=Z,49nm,1.2s						
SSLB	**Suanglung**	**22.49**	**347**	P	**P**	**05 29 05.5**	**-1.6**
SSLB				IAmb	IAmb	05 29 08.0	
	comp=Z,18nm,0.9s						
WB0	**Warramunga Arr**	**22.82**	**160**	P	**P**	**05 29 09.4**	**-1.1**
WB0				IAmb	IAmb	05 29 17.1	
	comp=Z,5.9nm,0.6s						
WRAB	**Tennant Creek**	**22.96**	**161**	P	**P**	**05 29 12.0**	**+0.1**
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**05 29 11.1**	**-0.9**
	comp=Z,4.6nm,0.5s,baz=338,slow=11,SNR=56						
WRA				S	**S**	**05 33 17.3**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=343,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**05 29 11.6**	**-0.4**
WB2	**Warramunga Arr**	**22.97**	**161**	P	**P**	**05 29 12.1**	**+0.1**
WB2				IAmb	IAmb	05 29 19.1	
	comp=Z,6.4nm,0.7s						
MBWA	**Marble Bar**	**23.72**	**196**	P	**P**	**05 29 19.7**	**+0.4**
PSA00	**Pilbara Seismi**	**24.09**	**195**	P	**P**	**05 29 21.8**	**-0.8**
PSA00				IAmb	IAmb	05 29 23.6	
	comp=Z,12nm,1.2s						
AS31	**Alice Springs**	**26.34**	**164**	P	**P**	**05 29 43.3**	**+0.1**
ASAR	**Alice Springs**	**26.34**	**164**	P	**P**	**05 29 43.2**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=344,slow=7.3,SNR=26						
ASAR				PcP	**PcP**	**05 33 09.5**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=340,slow=1.8,SNR=2.1						
ASAR	**Alice Springs**	**26.34**	**164**	P	**P**	**05 29 42.8**	**-0.4**
CTA	**Charters Tower**	**29.19**	**139**	P	**P**	**05 30 12.0**	**+3.3**
	comp=Z,2.5nm,1.0s,baz=330,slow=8.1,SNR=2.4						
MORW	**Morawa**	**32.25**	**197**	P	**P**	**05 30 35.4**	**-0.2**
MORW				IAmb	IAmb	05 30 40.1	
	comp=Z,9.8nm,1.4s						
FORT	**Forrest**	**32.43**	**177**	P	**P**	**05 30 38.4**	**+1.3**
JWT	**Wachi**	**34.36**	**13**	P	**P**	**05 30 53.2**	**-0.6**
HNR	**Honiara**	**35.23**	**109**	LR	LR	05 47 37.1	
	comp=Z,874nm,20.1s,baz=266,slow=39						
NWAO	**Narrogin (SRO)**	**35.60**	**193**	P	**P**	**05 31 04.6**	**0.0**
BBOO	**Buckleboo**	**35.61**	**166**	P	**P**	**05 31 04.4**	**-0.3**
BBOO				IAmb	IAmb	05 31 11.2	
	comp=Z,22nm,1.3s						
STKA	**Stephens Creek**	**36.46**	**158**	P	**P**	**05 31 12.1**	**+0.1**
JSD	**Sado**	**37.68**	**15**	P	**P**	**05 31 22.1**	**-0.1**
SONM	**Songino Array**	**49.02**	**342**	P	**P**	**05 32 53.7**	**0.0**
	comp=Z,0.3nm,0.5s,baz=156,slow=8.3,SNR=6.4						
SONM	**Songino Array**	**49.02**	**342**	P	**P**	**05 32 52.9**	**-0.8**
MK31	**Makanchi Array**	**58.96**	**326**	P	**P**	**05 34 05.6**	**-0.5**
MK31				IAmb	IAmb	05 34 07.2	
	comp=Z,2.3nm,0.6s						
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**05 34 05.4**	**-0.7**
	comp=Z,2.7nm,0.5s,baz=120,slow=8.3,SNR=32						
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**05 34 05.3**	**-0.8**
MAKZ	**Makanchi**	**59.14**	**326**	P	**P**	**05 34 06.9**	**-0.5**
MAKZ				IAmb	IAmb	05 34 08.1	
	comp=Z,2.8nm,0.7s						
ZALV	**Zalesovo Beam**	**62.16**	**334**	P	**P**	**05 34 26.8**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=127,slow=9.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**62.16**	**334**	P	**P**	**05 34 26.6**	**-1.1**
KURBB	**Kurchatov Arra**	**63.19**	**328**	P	**P**	**05 34 33.8**	**-0.9**
	comp=Z,2.5nm,0.5s,baz=129,slow=6.0,SNR=35						
KURK	**Kurchatov**	**63.19**	**328**	P	**P**	**05 34 34.4**	**-0.3**
KURK				IAmb	IAmb	05 34 36.1	
	comp=Z,5.0nm,0.6s						
KKAR	**Karatay Array**	**64.42**	**318**	P	**P**	**05 34 43.1**	**+0.1**
CASY	**Casey**	**68.87**	**187**	P	**P**	**05 35 10.7**	**-0.1**
ABKAR	**Akbulak array**	**73.44**	**321**	P	**P**	**05 35 38.0**	**-0.8**
ARU	**Arti**	**76.39**	**328**	P	**P**	**05 35 55.8**	**+0.1**
ARU				IAmb	IAmb	05 36 14.5	
	comp=Z,3.0nm,1.0s						
VNDA	**Vanda**	**81.56**	**173**	P	**P**	**05 36 22.6**	**-1.0**
SKT	**Skwentna**	**84.69**	**28**	P	**P**	**05 36 39.0**	**-1.2**
SKT				IAmb	IAmb	05 36 45.2	
	comp=Z,3.3nm,1.0s						
ILAR	**Eielson Array**	**86.98**	**25**	P	**P**	**05 36 55.0**	**+3.6**
	comp=Z,0.6nm,1.0s,baz=248,slow=4.8,SNR=2.8						

IDC 15 05:27:35.9±2.0,1°.72N×126°.17E,h0km,mb3.5/3,
mb1 3.7/3,mb1mx3.3/35,mbtmp3.5/3,Error ellipse:
s-maj=176.0km s-min=26.1km az=65.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.97**	**160**	P	P	05 32 40.8	-1.4
	0.6nm,0.3s,baz=338,slow=11,SNR=7.8						
ASAR	**Alice Springs**	**26.33**	**164**	P	P	05 33 15.2	+1.5
	0.2nm,0.4s,baz=339,slow=7.3,SNR=2.1						
MKAR	**Makanchi Array**	**58.89**	**326**	P	P	05 37 36.7	-0.1
	0.4nm,0.5s,baz=119,slow=8.1,SNR=6.2						

*IDC **15** 05:27:40.6±2.4,22°.05S×179°.53W,h574km±29km,*
mb3.4/12,mb1 3.5/13,mb1mx3.4/35,mbtmp4.3/13,Error
ellipse: s-maj=22.7km s-min=17.8km az=6.0
*NEIC **15** 05:27:41.3±1.7,22°.0S±0°.1×179°.4W±0°.2,h589km±9km,*
mb4.3/24,Error ellipse: s-maj=20.4km s-min=16.6km
az=74.0
ISC 15 05:27:41.8±0.6,22°.14S±0°.07×179°.4W±0°.1,h592km,n50,
σ1s44/50,mb4.2/21,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.98**	**331**	P	**P**	**05 29 14.3**	**0.0**
RAO	**Raoul Island**	**7.21**	**169**	P	**P**	**05 29 32.6**	**-0.6**
	95nm,0.3s,baz=344,slow=19,SNR=8.3						
RAO	**Raoul Island**	**7.21**	**169**	P	**P**	**05 29 32.8**	**-0.4**
DZM	**Mont Dzumac**	**13.09**	**268**	P	**P**	**05 30 34.4**	**+2.6**
SANVU	**Saraoutou**	**14.29**	**295**	P	**P**	**05 30 44.9**	**+1.2**
OUZ	**Omahuta**	**14.38**	**204**	P	**P**	**05 30 45.8**	**+1.5**
URZ	**Urewera**	**16.33**	**190**	P	**P**	**05 31 00.7**	**-1.6**
	1.3nm,0.3s,baz=289,slow=2.6,SNR=8.2						
URZ				S	**S**	**05 33 39.2**	**-6.5**
	0.6nm,0.3s,baz=148,slow=23,SNR=6.1						
URZ	**Urewera**	**16.33**	**190**	P	**P**	**05 31 01.4**	**-0.9**
BKZ	**Black Stump Fm**	**17.32**	**191**	P	**P**	**05 31 09.3**	**-2.2**
EIDS	**Eidsvold**	**27.15**	**257**	P	**P**	**05 32 39.4**	**+0.1**
EIDS				IAmb	IAmb	05 32 43.3	
	comp=Z,12nm,1.4s						
ARMA	**Armidale**	**27.16**	**246**	P	**P**	**05 32 41.1**	**+1.6**
ARMA				IAmb	IAmb	05 32 42.5	
	comp=Z,9.2nm,1.1s						
CTA	**Charters Tower**	**32.03**	**267**	P	**P**	**05 33 20.9**	**-0.6**
	comp=Z,6.3nm,0.4s,baz=91,slow=11,SNR=20						
CTAO	**Charters Tower**	**32.03**	**267**	P	**P**	**05 33 21.5**	**0.0**
CTAO				IAmb	IAmb	05 33 23.5	
	comp=Z,8.1nm,1.4s						
STKA	**Stephens Creek**	**35.88**	**246**	P	**P**	**05 33 52.3**	**-1.1**
	comp=Z,2.3nm,0.7s,baz=83,slow=11,SNR=4.2						
STKA	**Stephens Creek**	**35.88**	**246**	P	**P**	**05 33 54.2**	**+0.8**
COEN	**Coen**	**36.39**	**276**	P	**P**	**05 33 57.2**	**-0.7**
COEN				IAmb	IAmb	05 34 22.9	
	comp=Z,8.6nm,1.2s						
AS31	**Alice Springs**	**42.86**	**259**	P	**P**	**05 34 49.7**	**+0.3**
ASAR	**Alice Springs**	**42.86**	**259**	P	**P**	**05 34 49.0**	**-0.4**
	comp=Z,6.9nm,0.8s,baz=98,slow=8.1,SNR=53						
ASAR	**Alice Springs**	**42.86**	**259**	P	**P**	**05 34 48.9**	**-0.6**
WB0	**Warramunga Arr**	**43.06**	**264**	P	**P**	**05 34 50.4**	**-0.6**
WB0				IAmb	IAmb	05 34 50.7	
	comp=Z,7.2nm,0.7s						
WRA	**Warramunga Arr**	**43.07**	**264**	P	**P**	**05 34 50.0**	**-1.1**
	comp=Z,1.8nm,0.4s,baz=97,slow=8.0,SNR=27						
WRA	**Warramunga Arr**	**43.07**	**264**	P	**P**	**05 34 50.0**	**-1.1**
FORT	**Forrest**	**47.43**	**248**	P	**P**	**05 35 23.9**	**-0.2**
MTN	**Manton Dam**	**47.87**	**273**	P	**P**	**05 35 26.8**	**-0.8**
MTN				IAmb	IAmb	05 35 27.2	
	comp=Z,6.3nm,0.7s						
KNRA	**Kununurra**	**49.24**	**268**	P	**P**	**05 35 37.1**	**-0.6**
KNRA				IAmb	IAmb	05 35 37.5	
	comp=Z,6.4nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.50**	**264**	P	**P**	**05 35 53.3**	**-0.8**
	comp=Z,12nm,0.4s,baz=75,slow=5.3,SNR=14						
FITZ	**Fitzroy Crossi**	**51.50**	**264**	P	**P**	**05 35 54.1**	**0.0**
SIJI	**Sorong**	**52.40**	**287**	P	**P**	**05 36 00.0**	**-0.6**
	comp=Z,22nm,0.7s,baz=97,slow=5.7,SNR=8.4						
VNDA	**Vanda**	**56.16**	**185**	P	**P**	**05 36 27.5**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=22,slow=6.6,SNR=3.0						
VNDA	**Vanda**	**56.16**	**185**	P	**P**	**05 36 29.0**	**+3.0**
VNDA				IAmb	IAmb	05 36 41.2	
	comp=Z,2.5nm,1.2s						
MORW	**Morawa**	**57.98**	**249**	P	**P**	**05 36 38.8**	**-0.3**
MORW				IAmb	IAmb	05 36 57.7	
	comp=Z,27nm,1.5s						
QSPA	**South Pole Qui**	**67.93**	**180**	P	**P**	**05 37 43.9**	**+1.5**
QSPA				IAmb	IAmb	05 37 44.6	
	comp=Z,7.7nm,0.9s						
MJAR	**Matsushiro Arr**	**70.76**	**325**	P	**P**	**05 37 58.8**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=171,slow=5.5,SNR=4.1						
MJAR	**Matsushiro Arr**	**70.76**	**325**	P	**P**	**05 37 58.7**	**-0.7**
SMY	**Shemya**	**74.77**	**356**	P	**P**	**05 38 20.3**	**-1.7**
PETK	**Petropavlovsk-**	**77.52**	**346**	P	**P**	**05 38 36.4**	**-0.8**
	comp=Z,3.2nm,0.7s,baz=247,slow=6.1,SNR=5.1						
PETK	**Petropavlovsk-**	**77.52**	**346**	P	**P**	**05 38 36.9**	**-0.2**
BELA	**Belgrano 2**	**78.10**	**173**	P	**P**	**05 38 40.2**	**+0.2**
MAW	**Mawson**	**79.57**	**200**	P	**P**	**05 38 48.8**	**+0.9**
USA0B	**Ussuriysk Arra**	**79.58**	**327**	P	**P**	**05 38 47.9**	**-0.4**
USA0B				IAmb	IAmb	05 39 15.0	
	comp=Z,18nm,1.4s						
TXAR	**Lajitas Array**	**89.06**	**58**	P	**P**	**05 39 36.4**	**+1.2**
	comp=Z,0.5nm,1.0s,baz=228,slow=4.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**89.41**	**290**	P	**P**	**05 39 37.6**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=141,slow=3.0,SNR=7.6						
CMAR	**Chiang Mai Arr**	**89.41**	**290**	P	**P**	**05 39 38.1**	**+1.2**
ILAR	**Eielson Array**	**90.21**	**13**	P	**P**	**05 39 38.8**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=214,slow=6.3,SNR=1.4						
N23A	**Red Feather La**	**92.56**	**47**	P	**P**	**05 39 52.4**	**+1.1**
SONM	**Songino Array**	**96.11**	**319**	P	**P**	**05 40 06.5**	**-0.6**
AKASG	**Malin Array Be**	**143.76**	**329**	PKP	PKPbc	05 46 08.0	-1.3
	comp=Z,1.6nm,0.5s,baz=42,slow=4.5,SNR=12						
BRTR	**Keskin Array B**	**146.90**	**310**	PKPbc	**PKPbc**	**05 46 18.8**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=306,slow=37,SNR=2.1						
GERES	**GERESS Array B**	**151.38**	**342**	PKPab	**PKPab**	**05 46 40.4**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=25,slow=7.6,SNR=1.8						
TORD	**Torodi Ar. Bea**	**170.99**	**187**	PKPab	**PKPab**	**05 48 07.0**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=180,slow=4.4,SNR=2.3						

WEL 15 05:34:54.0,44°S±2°×17°1E±°,h9km±3km,M2.5/9,ML2.5/9,
MLv2.5/9,Error ellipse: s-maj=0.0km s-min=0.0km
az=173.2,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**0.21**	**194**	P	Pg	05 34 60.0	+1.6
MHCZ	**Mount Hutt**	**0.32**	**94**	P	Pb	05 35 01.9	-0.1
ARCZ	**Arundel**	**0.44**	**175**	P	Pb	05 35 03.9	0.0
WVZ	**Waitaha Valley**	**0.52**	**327**	P	Pb	05 35 05.5	+0.2
GCSZ	**Gaunt Creek Bo**	**0.61**	**288**	P	Pb	05 35 07.3	+0.4
WACZ	**Wakanui South**	**0.67**	**130**	P	Pb	05 35 08.7	+0.7
OXZ	**Oxford**	**0.69**	**75**	P	Pb	05 35 08.7	+0.4
INZ	**Inchbonnie**	**0.82**	**17**	P	Pb	05 35 10.7	+0.3
FOZ	**Fox Glacier**	**0.95**	**268**	P	Pn	05 35 13.8	+0.2
LBZ	**Lake Benmore**	**1.11**	**218**	P	Pn	05 35 16.9	+1.1
LTZ	**Lake Taylor**	**1.11**	**49**	P	Pn	05 35 16.3	+0.4
MQZ	**McQueen's Vall**	**1.13**	**100**	P	Pg	05 35 15.4	-0.3
AKCZ	**Akaroa Harbour**	**1.34**	**106**	P	Pb	05 35 19.4	0.0
OKCZ	**Okains Bay**	**1.42**	**99**	P	Pn	05 35 20.0	-0.1
ODZ	**Otahua Downs**	**1.57**	**193**	P	Pn	05 35 22.2	+0.1

IDC 15 05:41:03.8±1.6,0°.66S×127°.56E,h0km,mb3.5/4,
mb1 3.7/4,mb1mx3.4/43,mbtmp3.6/4,Error ellipse:
s-maj=148.7km s-min=23.1km az=68.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.28**	**161**	P	P	05 45 41.0	-0.3
	1.1nm,0.5s,baz=340,

DALK				*eS*		**Sn**	05 48 39.1	-1.4
PET	**Petropavlovsk**	**2.86**	**211**	*eP*		**Pn**	05 48 05.4	-0.3
PET				*eS*		**Sn**	05 48 39.7	-1.6
PET	**Petropavlovsk**	**2.86**	**211**	Pn		**Pn**	05 48 05.5	-0.1
PEA0B	**Petropavlovsk-**	**3.11**	**221**	Pn		**Pn**	05 48 08.8	0.0
PETK	**Petropavlovsk-**	**3.11**	**221**	Pn		**Pn**	05 48 08.9	0.0
	0.9nm,0.3s,baz=54,slow=15,SNR=13							
PETK					Sn	**Sn**	05 48 50.1	+3.1
	1.0nm,0.3s,baz=59,slow=20,SNR=5.6							
PETK	**Petropavlovsk-**	**3.11**	**221**			**Pn**	05 48 08.5	-0.3
KRMR	**Karymshinskiy**	**3.19**	**214**	*eP*		**Pn**	05 48 10.1	+0.3
KRMR				*eS*		**Sn**	05 48 47.7	-1.0
RUS	**Russkaya**	**3.42**	**208**	*eP*		**Pn**	05 48 11.9	-0.9
RUS				*eS*		**Sn**	05 48 51.9	-2.1
GRL	**Gorelyy**	**3.44**	**212**	*eP*		**Pn**	05 48 13.2	0.0
GRL				*eS*		**Sn**	05 48 54.0	-0.7
APC	**Apacha**	**3.46**	**224**	P		**Pn**	05 48 13.1	-0.1
ASAK	**Asacha**	**3.64**	**213**	*eP*		**Pn**	05 48 15.7	0.0
KDTR	**Khodutka, Kamc**	**4.10**	**207**	*eP*		**Pn**	05 48 20.1	-1.4
KDTR				*eS*		**Sn**	05 49 05.4	-4.3
AMKA	**Amchitka**	**11.61**	**103**	Pn		Pn	05 49 44.6	-16
YSS	**Yuzh-Sakhalins**	**14.29**	**241**	Pn		P	05 50 42.2	+5.3
YSS				IAmb		IAmb	05 51 00.0	
	comp=Z,78nm,1.5s							
NIKH	**Nikolski High**	**17.68**	**86**	P		P	05 51 06.1	-8.2
TTA	**Tatalina**	**22.79**	**53**	P		**P**	05 52 06.6	-1.5
SVW2	**Sparrevohn**	**23.10**	**58**	P		**P**	05 52 08.9	-1.9
SVW2				IAmb		IAmb	05 52 12.8	
	comp=Z,7.8nm,1.2s							
IMAR	**Indian Mountai**	**23.87**	**46**	P		**P**	05 52 16.8	-1.0
MJB9	**Matsu-Tunnel**	**24.54**	**229**	P		P	05 52 33.5	+9.4
TRF	**Thorofare Moun**	**25.36**	**52**	P		**P**	05 52 30.5	-1.0
TRF				IAmb		IAmb	05 52 47.1	
	comp=Z,7.9nm,1.4s							
SUA	**Susitna One**	**25.37**	**57**			**P**	05 52 30.2	-1.3
SUA				IAmb		IAmb	05 52 57.4	
	comp=Z,10nm,1.4s							
ILAR	**Eielson Array**	**26.74**	**49**	P		**P**	05 52 43.1	-0.6
	comp=Z,0.4nm,0.4s,baz=263,slow=7.6,SNR=11							
ILAR	**Eielson Array**	**26.74**	**49**	P		**P**	05 52 42.9	-0.9
JWT	**Wachi**	**26.82**	**232**	P		P	05 52 54.8	+10
JWT				IAmb		IAmb	05 53 08.6	
	comp=Z,59nm,1.5s							
BMAR	**Burnt Mountain**	**27.54**	**43**	P		**P**	05 52 51.0	+0.1
N25K	**Chitina, Valde**	**28.24**	**55**	P		**P**	05 52 57.5	+0.3
N25K				IAmb		IAmb	05 53 04.7	
	comp=Z,12nm,1.5s							
JCJ	**Chichijima**	**31.52**	**214**	P		P	05 53 34.6	+8.4
HYT	**Haines Junctio**	**31.76**	**55**	P		**P**	05 53 28.8	+0.6
ULN	**Ulaanbaatar**	**33.60**	**280**	P		P	05 53 56.6	+12
ULN				IAmb		IAmb	05 54 06.3	
	comp=Z,4.5nm,1.4s							
H11N2	**WAKE ISLAND Hy**	**35.97**	**171**	T		T	06 31 52.5	
	baz=355,slow=76,SNR=15							
H11N3	**WAKE ISLAND Hy**	**35.99**	**171**	T		T	06 31 54.7	
	baz=355,slow=76,SNR=12							
H11N1	**WAKE ISLAND Hy**	**35.99**	**171**	T		T	06 31 55.0	
	baz=355,slow=76,SNR=18							
NVAR	**Mina Array Bea**	**54.41**	**72**	P		**P**	05 56 30.8	+0.8
	comp=Z,0.7nm,0.7s,baz=298,slow=6.7,SNR=6.4							
PDAR	**Pinedale Array**	**55.87**	**63**	P		**P**	05 56 41.2	+0.9
	comp=Z,0.5nm,0.5s,baz=346,slow=2.9,SNR=6.0							
ULM	**Lac du Bonnet**	**56.77**	**48**	P		**P**	05 56 46.4	+0.1
	comp=Z,2.3nm,0.6s,baz=298,slow=5.7,SNR=4.6							
TX31	**Lajitas Ar. Si**	**69.18**	**68**	P		**P**	05 58 09.6	+1.0
TX31				IAmb		IAmb	05 58 33.9	
	comp=Z,7.9nm,1.4s							
TX32	**Lajitas Array**	**69.18**	**68**	P		**P**	05 58 09.6	+1.0
TXAR	**Lajitas Array**	**69.18**	**68**	P		**P**	05 58 09.4	+0.8
	comp=Z,1.0nm,0.5s,baz=298,slow=4.8,SNR=18							
TXAR	**Lajitas Array**	**69.18**	**68**	P		**P**	05 58 09.0	+0.4

IDC ***15*** *05:47:53.7±1.0,1°.87N×126°.38E,h0km,mb4.1/7, mb1 4.1/8,mb1mx3.8/44,mbtmp4.0/8,ML3.9/1,MS4.5/1, Ms1 4.5/1,ms1mx3.5/37, Error ellipse: s-maj=103.8km s-min=16.5km az=71.0*

NEIC ***15*** *05:47:58.7±1.2,1°.90N±0°.08×126°.57E±0°.06,h35km±1km, mb4.7/21,Error ellipse: s-maj=15.1km s-min=7.2km az=212.0*

DJA ***15*** *05:47:58.1±0.4,2°N±3°×12°6E±°,h10km,M4.3/6,MLv4.3/6*

ISC 15 05:48:00.1±0.5,1°**.83N**±0°.05×**126°.51E**±0°.07,**h47**km,**n47,** σ1§**12**/50,**mb4.5**/15,**2C-1D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**141**	P	**Pn**	05 48 22.8	+0.2
TNTI	**Ternate**	**1.36**	**141**		**Pn**	05 48 23.5	+0.8
SGSI	**Sangihe**	**2.09**	**332**	P	**Pn**	05 48 32.7	+0.1
SGSI				S	**Sn**	05 48 57.1	-0.3
KMSI	**Cibinong**	**2.82**	**244**	P	**Pn**	05 48 42.2	-0.4
KMSI				S	**Sn**	05 49 13.4	-2.0
GTOI	**Gorontalo**	**3.69**	**251**	P	**Pn**	05 48 55.8	+1.1
DDMP	**Don Marcelino,**	**4.32**	**349**	*eP*	**Pn**	05 49 03.5	+0.2
LUWI	**Luwuk**	**4.70**	**233**	Pn	**Pn**	05 49 08.9	+0.4
LUWI				Sn	**Sn**	05 50 03.4	+1.6
SKMP	**Bagumbayan, Su**	**5.05**	**337**	*eP*	**Pn**	05 49 13.2	-0.2
KCP	**Kidapawan**	**5.33**	**345**‖	*eP*	**Pn**	05 49 21.6	+4.3
MYLDM	**Lahad Datu**	**8.66**	**293**	Pn	**Pn**	05 50 03.4	+0.6
KAPI	**Kappang**	**9.58**	**225**	Pn	**Pn**	05 50 17.2	+1.7
MTN	**Manton Dam**	**15.29**	**163**	Pn	**Pn**	05 51 32.8	-0.1
MTN				IAmb	IAmb	05 52 17.8	
	comp=Z,39nm,1.9s						
KNRA	**Kununurra**	**17.54**	**173**		**P**	05 52 01.8	-0.1
FITZ	**Fitzroy Crossi**	**19.82**	**182**	P	**P**	05 52 26.7	-0.3
	comp=Z,0.3nm,0.3s,baz=340,slow=8.2,SNR=5.9						
FITZ	**Fitzroy Crossi**	**19.82**	**182**	P	**P**	05 52 26.8	-0.2
TPUB	**Ta-pu**	**22.09**	**346**	P	**P**	05 52 50.4	-1.0
TPUB				IAmb	IAmb	05 52 53.4	
	comp=Z,100nm,1.3s						
WB0	**Warramunga Arr**	**22.82**	**161**	P	**P**	05 52 59.3	+0.1
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	05 53 00.2	-0.4
	comp=Z,3.7nm,0.5s,baz=340,slow=11,SNR=68						
WRA				S	**S**	05 57 04.3	-3.4
	comp=Z,0.3nm,0.8s,baz=346,slow=21,SNR=1.6						
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	05 53 00.3	-0.4
WB2	**Warramunga Arr**	**22.97**	**161**	P	**P**	05 53 00.5	-0.2
PSA00	**Pilbara Seismi**	**24.16**	**195**	P	**P**	05 53 13.5	+1.5
PSA00				IAmb	IAmb	05 54 04.7	
	comp=Z,63nm,1.9s						
AS31	**Alice Springs**	**26.34**	**165**	P	**P**	05 53 32.1	+0.2
ASAR	**Alice Springs**	**26.35**	**165**	P	**P**	05 53 32.5	+0.5
	comp=Z,1.1nm,0.4s,baz=343,slow=7.3,SNR=22						
ASAR				PcP	**PcP**	05 56 58.4	+1.3
	comp=Z,0.2nm,0.4s,baz=336,slow=2.6,SNR=1.9						
ASAR	**Alice Springs**	**26.35**	**165**	P	**P**	05 53 32.1	+0.2
GSI	**Gunungsitoli**	**28.93**	**269**	P	**P**	05 53 53.3	-1.8
GSI				IAmb	IAmb	05 54 53.2	
	comp=Z,24nm,0.9s						
LHMI	**Lhok Sumawe**	**29.69**	**277**	P	**P**	05 54 02.4	+0.5
LHMI				IAmb	IAmb	05 54 47.8	
	comp=Z,42nm,1.0s						
BBOO	**Buckleboo**	**35.62**	**166**	P	**P**	05 54 53.6	+0.1
NWAO	**Narrogin (SRO)**	**35.66**	**193**	P	**P**	05 54 53.7	-0.1
STKA	**Stephens Creek**	**36.45**	**158**	P	**P**	05 55 01.6	+1.0
	comp=Z,2.0nm,0.6s,baz=331,slow=10,SNR=3.3						
STKA	**Stephens Creek**	**36.45**	**158**	P	**P**	05 55 00.7	+0.1
STKA				IAmb	IAmb	05 55 49.6	
	comp=Z,8.5nm,1.9s						
ARMA	**Armidale**	**40.03**	**145**	P	**P**	05 55 30.9	+0.1
ARMA				IAmb	IAmb	05 55 51.5	
	comp=Z,73nm,1.9s						
JEM	**Erimo**	**42.71**	**18**	P	P	05 56 05.4	+13
SONM	**Songino Array**	**49.02**	**342**	P	**P**	05 56 41.5	-0.9
	comp=Z,0.7nm,0.7s,baz=153,slow=6.6,SNR=4.7						
SONM				LR	LR	06 20 02.1	
	comp=Z,519nm,21.8s,baz=164,slow=39						
SONM	**Songino Array**	**49.02**	**342**	P	**P**	05 56 43.0	+0.6
MK31	**Makanchi Array**	**58.99**	**326**	P	**P**	05 57 54.4	-0.5
MK31				IAmb	IAmb	05 57 56.4	
	comp=Z,2.1nm,0.7s						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	05 57 54.6	-0.4
	comp=Z,2.4nm,0.5s,baz=124,slow=7.9,SNR=27						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	05 57 54.8	-0.2
MAKZ	**Makanchi**	**59.17**	**326**	P	**P**	05 57 57.0	+0.7
MAKZ				IAmb	IAmb	05 57 57.6	
	comp=Z,2.1nm,0.6s						
KURK	**Kurchatov**	**63.22**	**328**	P	**P**	05 58 23.7	+0.2
KURK				IAmb	IAmb	05 58 27.9	
	comp=Z,4.5nm,0.8s						
NRIK	**Noril'sk**	**72.21**	**346**	P	**P**	05 59 20.0	+0.2
	comp=Z,1.4nm,0.5s,baz=121,slow=5.9,SNR=2.0						
ABKAR	**Akbulak array**	**73.47**	**321**	P	**P**	05 59 26.5	-1.2
XMAS	**Kiritimati**	**76.00**	**88**	P	**P**	05 59 42.1	-1.0
VNDA	**Vanda**	**81.58**	**173**	P	**P**	06 00 12.7	+0.2
	comp=Z,0.3nm,0.3s,baz=331,slow=4.8,SNR=2.1						
VNDA	**Vanda**	**81.58**	**173**	P	**P**	06 00 13.5	+1.1
VNDA				IAmb	IAmb	06 00 30.0	
	comp=Z,9.6nm,1.9s						
SYO	**Syowa Base**	**90.59**	**201**‖	*eX*	P	06 00 49.0	-7.9
SYO	**Syowa Base**	**90.59**	**201**‖	*eX*	**P**	06 00 57.4	+0.5
TORD	**Torodi Ar. Bea**	**123.28**	**287**	PKP	**PKiKP**	06 06 53.1	-0.1
	comp=Z,0.6nm,0.7s,baz=76,slow=1.9,SNR=3.4						

DJA ***15*** *06:12:06.7±0.4,2°N±5°×12°7E±°,h10km,M3.9/6,MLv3.9/6*

IDC ***15*** *06:12:09.6±2.0,1°.67N×126°.19E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.4/37,mbtmp3.6/3,MS3.6/1,Ms1 3.6/1, ms1mx3.1/38,Error ellipse: s-maj=176.9km s-min=25.2km az=65.0*

NEIC ***15*** *06:12:13.6±1.1,1°.72N±0°.08×126°.31E±0°.07,h30km±7km, mb4.2/13,Error ellipse: s-maj=13.0km s-min=8.2km az=225.0*

ISC 15 06:12:10.5±0.7,1°**.68N**±0°.08×**126°.3E**±0°.1,**h10**km,**n24,** σ0§**68**/22,**mb4.1**/9,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**130**	P	Pn	06 12 31.7	-4.5
TNTI	**Ternate**	**1.41**	**130**		**Pb**	06 12 37.3	+0.4
TNTI				Sn	**Sn**	06 12 54.1	-0.8
KMSI	**Cibinong**	**2.55**	**245**	P	Pg	06 13 11.4	+12
LBMI	**Labuha**	**2.60**	**152**	P	**Pn**	06 12 53.0	+0.3
DAV	**Davao City (W)**	**5.40**	**353**	Pn	**Pn**	06 13 31.1	-0.1
SMRI	**Semarang**	**18.04**	**241**	P	**Pn**	06 16 20.1	-1.3
FITZ	**Fitzroy Crossi**	**19.67**	**182**	LR	LR	06 26 02.7	
	comp=Z,154nm,18.4s,baz=297,slow=42						
TPUB	**Ta-pu**	**22.18**	**346**	P	**P**	06 17 07.4	+0.4
WB0	**Warramunga Arr**	**22.75**	**160**	P	**P**	06 17 13.2	+0.1
WB0				IAmb	IAmb	06 17 16.2	
	comp=Z,8.0nm,1.4s						
WRA	**Warramunga Arr**	**22.90**	**160**	P	**P**	06 17 15.1	+0.5
	comp=Z,1.0nm,0.4s,baz=338,slow=11,SNR=27						
WRA	**Warramunga Arr**	**22.90**	**160**	P	**P**	06 17 14.7	+0.1
WB2	**Warramunga Arr**	**22.90**	**160**	P	**P**	06 17 15.4	+0.8
WB2				IAmb	IAmb	06 17 18.1	
	comp=Z,7.2nm,1.2s						
WR0	**Warramunga Arr**	**22.98**	**160**	P	**P**	06 17 15.9	+0.4
PMG	**Port Moresby**	**23.53**	**118**	P	**P**	06 17 19.4	-1.7
PMG				IAmb	IAmb	06 17 25.9	
	comp=Z,12nm,0.8s						
ASAR	**Alice Springs**	**26.26**	**164**	P	**P**	06 17 47.2	+1.0
	comp=Z,0.3nm,0.3s,baz=345,slow=11,SNR=9.2						
STKA	**Stephens Creek**	**36.40**	**158**	P	**P**	06 19 15.6	+0.3
TLY	**Talaya**	**53.33**	**343**	P	**P**	06 21 29.8	0.0
TLY				IAmb	IAmb	06 21 37.6	
	comp=Z,8.5nm,1.4s						
MK31	**Makanchi Array**	**58.99**	**326**	P	**P**	06 22 10.4	0.0
MK31				IAmb	IAmb	06 22 11.2	
	comp=Z,2.9nm,1.5s						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	06 22 10.7	+0.3
	comp=Z,0.3nm,0.4s,baz=119,slow=7.9,SNR=5.9						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	06 22 09.9	-0.5
KURK	**Kurchatov**	**63.23**	**328**	P	**P**	06 22 39.3	+0.2
KURK				IAmb	IAmb	06 22 41.9	
	comp=Z,1.2nm,0.7s						
AFI	**Afiamalu**	**63.28**	**106**	P	**P**	06 22 40.0	-0.1
ABKAR	**Akbulak array**	**73.45**	**321**	P	**P**	06 23 43.6	+0.5
VNDA	**Vanda**	**81.47**	**173**	P	**P**	06 24 27.7	+0.3

IDC ***15*** *06:13:55.6±0.5,1°.88N×126°.26E,h0km,mb4.4/19, mb1 4.5/22,mb1mx4.3/39,mbtmp4.4/22,ML4.0/3,Error ellipse: s-maj=23.7km s-min=10.8km az=79.0*

BJI ***15*** *06:13:56.3±0.0,1°.53N×126°.68E,h42km,mB5.2/15, mb4.7/30,Ms4.3/1,Ms7 4.1/1*

DJA ***15*** *06:13:59.2±0.3,2°N±3°×12°6E±°,h10km,M4.6/6,MLv4.6/6*

NEIC ***15*** *06:14:00.3±1.7,1°.92N±0°.07×126°.46E±0°.03,h35km±1km, mb4.8/53,Error ellipse: s-maj=12.0km s-min=4.6km az=9.0*

ISC 15 06:14:01.6±0.3,1°**.92N**±0°.04×**126°.46E**±0°.06,**h47**km,**n118,** σ1§**23**/121,**mb4.7**/51,**1C-1D,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.46**	**141**	P	**Pn**	06 14 24.6	-0.9
TNTI	**Ternate**	**1.46**	**141**	Pn	**Pn**	06 14 24.3	-1.3
SGSI	**Sangihe**	**1.99**	**332**	P	**Pn**	06 14 33.0	+0.2
SGSI				S	**Sn**	06 14 56.8	+0.3
LBMI	**Labuha**	**2.75**	**158**	P	**Pn**	06 14 42.8	-0.4
KMSI	**Cibinong**	**2.81**	**242**	P	**Pn**	06 14 46.9	+2.7
DDMP	**Don Marcelino,**	**4.22**	**350**	*eP*	**Pn**	06 15 02.3	-1.3
DDMP				*eS*	**Sn**	06 15 51.8	+0.2
LUWI	**Luwuk**	**4.72**	**231**		**Pn**	06 15 13.1	+2.8
SKMP	**Bagumbayan, Su**	**4.95**	**337**	*eP*	**Pn**	06 15 13.4	-0.2
SKMP				*eS*	**Sn**	06 16 08.7	-0.9
KCP	**Kidapawan**	**5.24**	**345**‖	*eP*	**Pn**	06 15 21.8	+4.3
SIJI	**Sorong**	**5.55**	**120**	Pn	**Pn**	06 15 23.3	+1.5
	2.0nm,0.3s,baz=320,slow=11,SNR=6.8						
BUKP	**Musuan**	**6.08**	**347**	*eP*	**Pn**	06 15 29.6	+0.5
BUKP				*eS*	**Sn**	06 16 38.5	+1.1
PAGZ	**Pagadian**	**6.64**	**333**	*eP*	**Pn**	06 15 36.4	-0.3
FAKI	**Fak Fak**	**7.52**	**130**	Pn	**Pn**	06 15 51.7	+2.8
MYLDM	**Lahad Datu**	**8.58**	**292**	Pn	**Pn**	06 16 05.1	+1.8
KAPI	**Kappang**	**9.61**	**224**	Pn	**Pn**	06 16 15.1	-2.3
	1.3nm,0.3s,baz=50,slow=16,SNR=1.4						
KAPI	**Kappang**	**9.61**	**224**	Pn	**Pn**	06 16 17.3	-0.2
SAUI	**Saumlaki**	**10.96**	**154**	Pn	**Pn**	06 16 34.1	-1.8
KKM	**Kota Kinabalu**	**11.01**	**292**	Pn	**Pn**	06 16 37.2	+0.5
SBUM	**Sibu**	**14.24**	**272**	Pn	**Pn**	06 17 20.6	-0.1
KSM	**Kuching**	**16.15**	**269**	Pn	**Pn**	06 17 44.8	-0.8
KNRA	**Kununurra**	**17.63**	**173**	P	**Pn**	06 18 03.3	-0.7
FITZ	**Fitzroy Crossi**	**19.91**	**182**	P	**P**	06 18 28.4	-1.1
	0.6nm,0.3s,baz=25,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**19.91**	**182**		**P**	06 18 28.3	-1.2
TWG	**Pinlang**	**21.43**	**346**	P	**P**	06 18 43.3	-2.5
TWG				IAmb	IAmb	06 19 09.3	
	comp=Z,37nm,1.1s						
GUMO	**Guam**	**21.59**	**57**	P	**P**	06 18 46.1	-1.5
YULB	**Yu-li**	**21.93**	**347**	P	**P**	06 18 48.0	-3.2
YULB				IAmb	IAmb	06 18 56.9	
	comp=Z,48nm,1.3s						
TPUB	**Ta-pu**	**21.99**	**346**	P	**P**	06 18 50.4	-1.5
TPUB				IAmb	IAmb	06 18 59.9	
	comp=Z,91nm,1.3s						
SSLB	**Suanglung**	**22.38**	**347**	P	**P**	06 18 53.5	-2.6
COEN	**Coen**	**22.88**	**134**		**P**	06 18 60.0	-1.4
COEN				IAmb	IAmb	06 19 08.6	
	comp=Z,45nm,1.4s						
WB0	**Warramunga Arr**	**22.92**	**160**	P	**P**	06 19 00.9	-0.9
WB0				IAmb	IAmb	06 19 06.1	
	comp=Z,28nm,0.9s						
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	06 19 01.9	-1.3
	comp=Z,12nm,0.5s,baz=340,slow=11,SNR=59						
WRA				S	**S**	06 23 12.5	+1.6
	comp=Z,3.5nm,0.8s,baz=339,slow=19,SNR=4.6						
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	06 19 00.8	-2.4
WB2	**Warramunga Arr**	**23.07**	**161**	P	**P**	06 19 01.9	-1.4
WB2				IAmb	IAmb	06 19 08.2	
	comp=Z,29nm,0.8s						
QIZ	**Qiongzhong**	**23.54**	**317**	P	**P**	06 19 07.3	-0.6
QIZ				IAmb	IAmb	06 19 29.1	
	comp=Z,47nm,1.2s						
PSA00	**Pilbara Seismi**	**24.23**	**195**	P	**P**	06 19 14.0	-0.2
AS31	**Alice Springs**	**26.44**	**165**	P	**P**	06 19 33.9	-0.4
AS31				IAmb	IAmb	06 19 37.9	
	comp=Z,6.1nm,0.3s						
ASAR	**Alice Springs**	**26.44**	**165**	P	**P**	06 19 34.0	-0.4
	comp=Z,3.0nm,0.3s,baz=346,slow=13,SNR=44						
ASAR				PcP	**PcP**	06 22 59.6	+0.7
	comp=Z,1.7nm,0.5s,baz=339,slow=2.5,SNR=7.4						
ASAR	**Alice Springs**	**26.44**	**165**	P	**P**	06 19 34.1	-0.2
GIRL	**Giralia**	**27.17**	**205**	P	**P**	06 19 41.3	+0.4
CTA	**Charters Tower**	**29.25**	**139**	P	**P**	06 20 02.4	+3.0
	comp=Z,2.4nm,0.6s,baz=315,slow=9.6,SNR=6.9						
NJ2	**Nanjing**	**30.82**	**347**	*eP*	**P**	06 20 14.0	+0.9
NJ2				pmax	pmax		
	comp=Z,19nm,0.8s						
JNU	**Nakatsue**	**31.32**	**7**	P	**P**	06 20 18.5	+0.9
	comp=Z,11nm,0.9s,baz=90,slow=6.6,SNR=4.1						
JNU	**Nakatsue**	**31.32**	**7**	P	**P**	06 20 17.4	-0.2
JNU				IAmb	IAmb	06 20 29.3	
	comp=Z,23nm,1.2s						
CMAR	**Chiang Mai Arr**	**31.59**	**303**	P	**P**	06 20 18.9	-1.3
	comp=Z,1.0nm,0.2s,baz=102,slow=7.5,SNR=6.3						
CMAR	**Chiang Mai Arr**	**31.59**	**303**	P	**P**	06 20 20.1	0.0
MORW	**Morawa**	**32.39**	**197**	P	**P**	06 20 27.0	-0.1
MORW				IAmb	IAmb	06 20 41.7	
	comp=Z,24nm,1.4s						
FORT	**Forrest**	**32.55**	**177**	P	**P**	06 20 28.6	+0.2
FORT				IAmb	IAmb	06 20 37.4	
	comp=Z,22nm,0.8s						
JWT	**Wachi**	**34.22**	**13**	P	**P**	06 20 41.7	-1.2
KSRS	**Korea Array**	**35.39**	**2**	P	**P**	06 20 54.5	+1.6
	comp=Z,2.7nm,0.8s,baz=176,slow=8.2,SNR=7.3						
BBOO	**Buckleboo**	**35.72**	**166**	P	**P**	06 20 55.7	-0.2
NWAO	**Narrogin (SRO)**	**35.74**	**193**	P	**P**	06 20 56.4	+0.4
NWAO				IAmb	IAmb	06 21 18.5	
	comp=Z,20nm,1.4s						
XAN	**Xi'an**	**35.91**	**335**	P	**P**	06 20 57.6	0.0
XAN				pP	pP	06 21 09.9	+0.3
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2	**Chengdu**	**35.96**	**326**	P	**P**	06 20 57.5	-0.5
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
EIDS	**Eidsvold**	**36.12**	**140**	P	**P**	06 20 59.7	+0.3
EIDS				IAmb	IAmb	06 21 03.5	
	comp=Z,12nm,1.1s						
MAT	**Matsushiro**	**36.12**	**16**	P	**P**	06 20 59.6	+0.3
MJAR	**Matsushiro Arr**	**36.12**	**16**	P	**P**	06 21 00.7	+1.4
	comp=Z,2.8nm,0.6s,baz=184,slow=9.6,SNR=7.1						
STKA	**Stephens Creek**	**36.55**	**158**	P	**P**	06 21 03.0	+0.1
	comp=Z,3.4nm,0.4s,baz=325,slow=9.3,SNR=11						
STKA	**Stephens Creek**	**36.55**	**158**	P	**P**	06 21 03.1	+0.1
JMM	**Marumori**	**38.12**	**19**	P	**P**	06 21 16.6	+0.5
JMM				IAmb	IAmb	06 21 19.9	
	comp=Z,26nm,1.0s						
LZH	**Lanzhou**	**39.93**	**331**	*eP*	**P**	06 21 32.4	+0.8
LZH				pP	pP	06 21 41.6	-2.1
LZH				sP	pwP	06 21 46.0	0.0
LZH				pmax	pmax		
	comp=Z,21nm,0.9s						
SHL	**Shillong**	**40.75**	**308**	P	**P**	06 21 38.1	-0.5
SHL				IAmb	IAmb	06 21 43.1	
	comp=Z,14nm,1.0s						
HHC	**Hu-ho-hao-te**	**41.03**	**343**	*eP*	**P**	06 21 40.5	0.0
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.5s						
USA0B	**Ussuriysk Arra**	**42.39**	**6**	P	**P**	06 21 51.4	0.0
USRK	**Ussuriysk Ar.**	**42.39**	**6**	P	**P**	06 21 51.0	-0.4
	comp=Z,2.9nm,0.7s,baz=210,slow=9.9,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	**42.72**	**65**	T	T	07 08 59.1	
	baz=252,slow=75,SNR=8.1						
H11S2	**WAKE ISLAND Hy**	**42.74**	**65**	T	T	07 08 38.5	
	baz=252,slow=75,SNR=6.5						
H11S1	**WAKE ISLAND Hy**	**42.74**	**65**	T	T	07 08 59.7	
	baz=252,slow=75,SNR=5.6						
TOO	**Toolangi**	**43.07**	**158**	P	**P**	06 21 56.8	-0.3
ASAJ	**Asahikawa**	**44.39**	**17**	P	**P**	06 22 08.5	+0.9
	comp=Z,16nm,1.0s,baz=235,slow=12,SNR=2.6						
GTA	**Gaotai**	**44.51**	**330**	*eP*	**P**	06 22 09.0	+0.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	**Songino Array**	**48.92**	**342**	P	**P**	06 22 43.7	+0.5
	comp=Z,2.7nm,0.7s,baz=161,slow=9.3,SNR=14						
SONM				PcP	**PcP**	06 24 08.3	+1.3
	comp

TNTI				Sn	Sn	06 24 26.7	+3.1
SGSI	**Sangihe**	**2.08**	**334**	P	Pn	06 24 16.7	+0.3
SGSI				S	Sn	06 24 41.5	+0.3
KMSI	**Cibinong**	**2.76**	**244**	P	Pn	06 24 25.9	+0.2
GTOI	**Gorontalo**	**3.64**	**251**	P	Pn	06 24 41.2	+3.4
DDMP	**Don Marcelino,**	**4.33**	**350**	*e*P	Pn	06 24 48.2	+0.8
DDMP				*e*S	Sn	06 25 39.1	+2.4
LUWI	**Luwuk**	**4.65**	**233**	Pn	Pn	06 24 47.7	-4.0
SKMP	**Bagumbayan, Su**	**5.06**	**338**	*e*P	Pn	06 24 57.6	+0.3
SKMP				*e*S	Sn	06 25 53.2	-1.3
KCP	**Kidapawan**	**5.34**	**345⇓**	*e*P	Pn	06 25 06.7	+5.3
KCP				*i* S	Sn	06 26 07.9	+6.2
MTN	**Manton Dam**	**15.28**	**162**	Pn	Pn	06 27 16.1	-1.0
MTN				IAmb	IAmb	06 27 30.6	

comp=Z,9.2nm,1.1s

FITZ	**Fitzroy Crossi**	**19.80**	**182**	P	**P**	**06 28 10.2**	**-1.3**

comp=Z,0.1nm,0.3s,baz=9.6,slow=12,SNR=2.0

FITZ	**Fitzroy Crossi**	**19.80**	**182**	P	**P**	**06 28 10.1**	**-1.3**
WB0	**Warramunga Arr**	**22.81**	**160**	P	**P**	**06 28 43.1**	**-0.8**
WB0				IAmb	IAmb	06 28 50.6	

comp=Z,3.3nm,0.5s

WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**06 28 44.4**	**-1.0**

comp=Z,1.6nm,0.3s,baz=337,slow=11,SNR=27

WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**06 28 44.8**	**-0.6**
WB2	**Warramunga Arr**	**22.96**	**161**	P	**P**	**06 28 44.9**	**-0.6**
WB2				IAmb	IAmb	06 29 07.7	

comp=Z,8.4nm,1.2s

WR0	**Warramunga Arr**	**23.04**	**160**	P	**P**	**06 28 45.5**	**-0.7**
WR0				IAmb	IAmb	06 29 13.2	

comp=Z,7.6nm,1.4s

KULM	**Kulim**	**25.99**	**278**	P	**P**	**06 29 10.7**	**-3.0**
AS31	**Alice Springs**	**26.34**	**164**	P	**P**	**06 29 16.6**	**-0.2**
ASAR	**Alice Springs**	**26.34**	**164**	P	**P**	**06 29 16.9**	**+0.1**

comp=Z,1.1nm,0.6s,baz=346,slow=8.0,SNR=13

STKA	**Stephens Creek**	**36.45**	**158**	P	**P**	**06 30 46.5**	**+0.9**
STKA				IAmb	IAmb	06 31 02.9	

comp=Z,2.6nm,1.3s

SONM	**Songino Array**	**49.03**	**342**	P	**P**	**06 32 27.6**	**+0.1**

comp=Z,1.1nm,0.9s,baz=146,slow=6.4,SNR=3.7

MK31	**Makanchi Array**	**58.98**	**326**	P	**P**	**06 33 39.6**	**-0.4**
MK31				IAmb	IAmb	06 33 41.7	

comp=Z,1.1nm,1.0s

MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**06 33 40.3**	**+0.2**

comp=Z,1.2nm,0.5s,baz=118,slow=8.8,SNR=8.9

MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**06 33 40.0**	**0.0**
KURK	**Kurchatov**	**63.21**	**328**	P	**P**	**06 34 08.0**	**-0.6**
AB07	**Akbulak array**	**73.45**	**321**	P	**P**	**06 35 12.6**	**-0.2**
ABKAR	**Akbulak array**	**73.46**	**321**	P	**P**	**06 35 11.8**	**-1.0**

IDC ***15*** *06:27:37.0±1.9, 1°.72N×126°.06E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.5/34, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=119.9km s-min=24.4km az=68.0*
DJA ***15*** *06:27:38.9±0.4, 2°.N±4°×12°.7E±°, h10km, M3.8/6, MLv3.8/6*
ISC 15 06:27:37.4±1.0, 1°.9N±0°.2×126°.5E±0°.4, h10km, n7, σ0s 83/7, mb3.9/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**142**	P		**Pb**	**06 28 03.8**	**-0.3**
SGSI	**Sangihe**	**2.01**	**331**	P		**Pn**	**06 28 11.2**	**-0.3**
SGSI				S		**Sb**	**06 28 39.1**	**-0.2**
LBMI	**Labuha**	**2.72**	**158**	P		Pn	06 28 15.0	-6.2
FITZ	**Fitzroy Crossi**	**19.90**	**182**	P		**P**	**06 32 08.4**	**-0.8**

0.1nm,0.3s,baz=5.2,slow=11,SNR=1.5

WRA	**Warramunga Arr**	**23.04**	**161**	P		**P**	**06 32 42.9**	**-0.1**

2.1nm,0.5s,baz=338,slow=11,SNR=16

ASAR	**Alice Springs**	**26.42**	**165**	P		**P**	**06 33 15.8**	**+1.3**

0.9nm,0.6s,baz=344,slow=8.7,SNR=8.7

MKAR	**Makanchi Array**	**58.92**	**326**	P		**P**	**06 37 37.2**	**+0.4**

0.6nm,0.4s,baz=131,slow=8.8,SNR=5.4

IDC 15 06:31:37.1±2.2, 2°.32N×127°.52E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/38, mbtmp3.5/3, Error ellipse: s-maj=153.6km s-min=28.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.12**	**163**	P		P	06 36 44.8	-0.1

0.6nm,0.5s,baz=343,slow=12,SNR=12

ASAR	**Alice Springs**	**26.57**	**167**	P		P	06 37 17.3	+0.2

0.4nm,0.5s,baz=344,slow=9.6,SNR=6.3

MKAR	**Makanchi Array**	**59.16**	**325**	P		P	06 41 39.7	-0.1

0.4nm,0.4s,baz=111,slow=7.9,SNR=2.6

JMA ***15*** *06:31:46.8±0.2, 24°.12N×120°.98E, h12km±3km, M3.8*
TAP ***15*** *06:31:47.1, 24°.10N×121°.00E, h27km, ML4.0, B*
ISC 15 06:31:48.0±0.8, 24°.11N±0°.01×120°.99E±0°.01, h25km±4km, n129, σ0s 74/239, 16C-7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DPDB	**Guoxing**	**0.09**	**218⇑**	*i*P		**Pb**	**06 31 52.5**	**-0.2**

baz=228

DPDB				*i* S		**Sb**	**06 31 56.5**	**+0.6**

baz=228

CHGB	**Renai**	**0.17**	**106⇓**	*i*P		**Pb**	**06 31 53.4**	**-0.3**

baz=103

CHGB				*i* S		**Sb**	**06 31 57.6**	**+0.2**

baz=103

WHP	**Taichung City**	**0.17**	**347⇓**	*i*P		**Pb**	**06 31 53.4**	**-0.1**

baz=344

WHP				*i* S		**Sb**	**06 31 57.7**	**+0.5**

baz=344

TDCB	**Techi**	**0.21**	**47⇓**	*i*P		**Pb**	**06 31 53.5**	**-0.5**

baz=43

TDCB				*i* S		**Sb**	**06 31 57.5**	**-0.5**

baz=43

TWT	**Tachien**	**0.22**	**49⇓**	*i*P		**Pb**	**06 31 53.6**	**-0.5**

baz=44

TWT				*i* S		**Sb**	**06 31 57.8**	**-0.6**

baz=44

OWD	**Renai**	**0.23**	**132**	P		**Pb**	**06 31 54.1**	**-0.1**

baz=125

OWD				S		**Sb**	**06 31 58.1**	**-0.2**

baz=125

TYC	**Yuchr**	**0.24**	**211⇑**	*i*P		**Pb**	**06 31 53.8**	**-0.3**

baz=207

TYC				*e*S		**Sb**	**06 31 58.4**	**+0.1**

baz=207

SMLT	**Sun Moon Lake**	**0.24**	**200⇑**	*i*P		**Pb**	**06 31 53.9**	**-0.4**

baz=196

SMLT				*e*S		**Sb**	**06 31 58.9**	**+0.4**

baz=196

WHF	**Hehuan Shan**	**0.25**	**81⇓**	*i*P		**Pb**	**06 31 54.6**	**-0.2**

baz=88

WHF				*e*S		**Sb**	**06 31 59.0**	**-0.4**

baz=88

FUSS	**Fushou**	**0.27**	**59⇓**	*i*P		**Pb**	**06 31 54.3**	**-0.5**

baz=61

FUSS				*e*S		**Sb**	**06 31 59.0**	**-0.5**

baz=61

TCU	**Taichung**	**0.29**	**278⇑**	*i*P		**Pb**	**06 31 55.2**	**+0.3**

baz=279

TCU				S		**Sb**	**06 32 00.9**	**+1.3**

baz=279

TWQ1	**Liyutan**	**0.31**	**320⇑**	*i*P		**Pb**	**06 31 55.4**	**+0.2**

baz=321

TWQ1				S		**Sb**	**06 32 01.2**	**+1.0**

baz=321

SSLB	**Suanglung**	**0.32**	**186⇑**	*i*P		**Pb**	**06 31 54.6**	**-0.8**

baz=188

SSLB				*i* S		**Sb**	**06 31 59.7**	**-0.7**

baz=188

WNT	**Mingjian**	**0.36**	**231⇑**	*i*P		**Pb**	**06 31 55.9**	**0.0**

baz=232

WNT				*e*S		**Sb**	**06 32 02.4**	**+1.0**

baz=232

NSY	**Sanyi**	**0.37**	**326⇑**	*i*P		**Pb**	**06 31 56.6**	**+0.4**

baz=326

NSY				*e*S		**Sn**	**06 32 03.5**	**-0.8**

baz=326

WJS	**Zhushan**	**0.37**	**220**	*i* P		**Pb**	**06 31 56.0**	**-0.2**

baz=222

WJS				*e*S		**Sb**	**06 32 02.1**	**+0.5**

baz=222

WCHH	**Zhanghua**	**0.40**	**266⇑**	*i*P		**Pb**	**06 31 56.5**	**0.0**

baz=267

WCHH				*e*S		**Sb**	**06 32 03.2**	**+1.0**

baz=267

WDJ	**Dajia District**	**0.40**	**307**	*i* P		**Pb**	**06 31 56.9**	**+0.3**

baz=307

WDJ				*e*S		**Sn**	**06 32 04.2**	**-0.7**

WHYT	**Xinyi Township**	**0.43**	**197**	*i* P		**Pb**	**06 31 56.6**	**-0.4**

baz=199

WHYT				*i* S		**Sb**	**06 32 03.8**	**+0.5**

baz=199

ETLH	**Xiulin Townshi**	**0.46**	**77**	P		**Pb**	**06 31 57.0**	**-0.6**

baz=73

ETLH				*e*S		**Sb**	**06 32 03.5**	**-0.6**

baz=73

NMLH	**Miaoli**	**0.47**	**337**	P		**Pb**	**06 31 57.6**	**0.0**

baz=336

NMLH				*e*S		**Sn**	**06 32 05.9**	**-0.7**

baz=336

NNSB	**Datong**	**0.48**	**48**	*i* P		**Pb**	**06 31 57.0**	**-1.0**

baz=48

NNSB				*e*S		**Sb**	**06 32 05.3**	**+0.5**

baz=48

NNSH	**Datong**	**0.48**	**48**	*i* P		**Pb**	**06 31 57.6**	**-0.3**

baz=44

NNSH				*e*S		**Sb**	**06 32 03.7**	**-1.0**

baz=44

NNS	**Nan Shan**	**0.48**	**46**	*i* P		**Pb**	**06 31 57.3**	**-0.7**

baz=47

NNS				*e*S		**Sb**	**06 32 05.0**	**+0.2**

baz=47

ESL	**Shilin**	**0.50**	**126**	*i* P		**Pb**	**06 31 57.8**	**-0.4**

baz=125

ESL				*e*S		**Sb**	**06 32 04.8**	**-0.3**

baz=125

NSTT	**Nanjuang**	**0.52**	**1⇓**	*i*P		**Pb**	**06 31 58.6**	**0.0**

baz=353

NSTT				*e*S		**Sb**	**06 32 06.0**	**+0.2**

baz=353

LIOB	**Emei**	**0.54**	**2⇑**	*i*P		**Pb**	**06 31 59.0**	**+0.1**

baz=354

LIOB				*e*S		**Sb**	**06 32 07.1**	**+0.8**

baz=354

TWD	**Chiawan**	**0.55**	**93⇑**	*i*P		**Pb**	**06 31 58.4**	**-0.7**

baz=92

TWD				*i* S		**Sb**	**06 32 05.8**	**-0.9**

baz=92

NACB	**Ninganchiao**	**0.56**	**83⇑**	*i*P		**Pb**	**06 31 58.2**	**-0.9**

baz=82

NACB				S		**Sb**	**06 32 05.7**	**-1.0**

baz=82

WGK	**Gukeng**	**0.57**	**223⇑**	*i*P		**Pb**	**06 31 59.2**	**-0.2**

baz=224

WGK				*e*S		**Sb**	**06 32 08.4**	**+1.1**

baz=224

HWA	**Hwalien**	**0.58**	**103**	P		**Pb**	**06 31 59.3**	**-0.2**

baz=102

HWA				*e*S		**Sb**	**06 32 08.0**	**+0.7**

baz=102

CHN5	**Tsauling**	**0.58**	**209⇑**	*i*P		**Pb**	**06 31 59.2**	**-0.5**

baz=220

CHN5				*i* S		**Sb**	**06 32 08.2**	**+0.6**

baz=220

WDLH	**Douliu**	**0.59**	**225**	P		**Pb**	**06 31 59.3**	**-0.4**

baz=226

WDLH				S		**Sn**	**06 32 09.1**	**-0.4**

baz=226

EGFH	**Guangfu**	**0.59**	**137**	P		**Pb**	**06 31 59.3**	**-0.5**

baz=132

EGFH				S		**Sb**	**06 32 07.1**	**-0.7**

baz=132

RLNB	**Erlin**	**0.62**	**250**	P		**Pb**	**06 31 59.8**	**-0.4**

baz=250

RLNB				*e*S		**Sn**	**06 32 10.0**	**-0.2**

baz=250

ALS	**Alishan**	**0.62**	**196⇑**	*i*P		**Pb**	**06 31 59.9**	**-0.5**

baz=196

ALS				*e*S		**Sb**	**06 32 08.9**	**+0.1**

baz=196

NSK	**Sanguang**	**0.66**	**31**	*i* P		**Pb**	**06 32 00.3**	**-0.6**

baz=24

NSK				*e*S		**Sb**	**06 32 09.2**	**-0.6**

baz=24

EHY	**Hungye**	**0.67**	**153**	*e*P		**Pb**	**06 32 00.6**	**-0.5**

baz=147

EHY				*e*S		**Sb**	**06 32 10.1**	**0.0**

baz=147

SBCB	**Hsinchu**	**0.68**	**360**	*e*P		**Pb**	**06 32 01.0**	**-0.3**

baz=359

SBCB				*e*S		**Sb**	**06 32 11.4**	**+1.0**

baz=359

NDT	**Datong Townshi**	**0.69**	**44**	P		**Pb**	**06 32 00.5**	**-0.8**

baz=43

NDT				*e*S		**Sb**	**06 32 09.7**	**-0.8**

baz=43

WTK	**Tuku**	**0.69**	**233**	*e*P		**Pb**	**06 32 00.6**	**-0.8**

baz=234

WTK				*e*S		**Sn**	**06 32 11.8**	**-0.3**

baz=234

WTCT	**Ta-ch'eng**	**0.69**	**250**	*e*P		**Pb**	**06 32 00.8**	**-0.6**

baz=250

WTCT				*e*S		**Sb**	**06 32 11.6**	**+1.0**

baz=250

HGSD	**Ruisui**	**0.73**	**147**	*e*P		**Pb**	**06 32 02.0**	**-0.1**

baz=145

HGSD				*e*S		**Sb**	**06 32 11.8**	**+0.1**

baz=145

CHN2	**Minshiung**	**0.74**	**220**	*i* P		**Pb**	**06 32 01.9**	**-0.4**

baz=220

CHN2				*e*S		**Sb**	**06 32 13.0**	**+1.0**

baz=220

WMLT	**Mailiao**	**0.76**	**247**	*e*P		**Pb**	**06 32 01.8**	**-0.8**

baz=247

WMLT				*e*S		**Sb**	**06 32 13.4**	**+0.7**

baz=247

YULB	**Yu-li**	**0.77**	**158**	*i* P		**Pb**	**06 32 02.2**	**-0.5**

baz=159

YULB				*e*S		**Sb**	**06 32 12.1**	**-0.6**

baz=159

CHY	**Chiayi**	**0.80**	**221**	*e*P		**Pb**	**06 32 02.8**	**-0.5**

baz=221

CHY				*e*S		**Sn**	**06 32 14.6**	**-0.2**

baz=221

TWF1	**Yuli**	**0.80**	**159⇑**	*i*P		**Pb**	**06 32 03.0**	**-0.4**

baz=159

TWF1				*e*S		**Sb**	**06 32 14.1**	**+0.3**

baz=159

EYUL	**Yuli**	**0.81**	**158**	*e*P		**Pb**	**06 32 03.1**	**-0.4**

baz=159

EYUL				*e*S		**Sn**	**06 32 14.8**	**-0.4**

baz=159

NWLT	**Wulai**	**0.81**	**35**	P		**Pb**	**06 32 03.1**	**-0.5**

baz=42

NWLT				*e*S		**Sb**	**06 32 14.5**	**+0.3**

baz=42

ENAH	**Nanao**	**0.82**	**65**	*e*P		**Pb**	**06 32 02.7**	**-1.0**

baz=74

ENAH				*e*S		**Sb**	**06 32 13.8**	**-0.6**

baz=74

CHN4	**Tsaushan**	**0.84**	**206**	P		**Pb**	**06 32 03.4**	**-0.5**

baz=207

CHN4				*e*S		**Sn**	**06 32 15.9**	**+0.2**

baz=207

WSF	**Szhu**	**0.84**	**237**	P		**Pb**	**06 32 03.2**	**-0.8**

baz=237

WSF				*e*S		**Sb**	**06 32 15.5**	**+0.5**

baz=237

TPUB	**Ta-pu**	**0.87**	**202**	P		**Pb**	**06 32 03.7**	**-0.8**

baz=203

TPUB				*e*S		**Sb**	**06 32 15.7**	**0.0**

baz=203

TWE	**Neicheng**	**0.87**	**45**	P		**Pb**	**06 32 04.2**	**-0.2**

baz=46

TWE				*e*S		**Sb**	**06 32 15.9**	**+0.3**

baz=46

NCUH	**Zhongli**	**0.88**	**12**	*e*P		**Pb**	**06 32 04.0**	**-0.6**

baz=359

NCUH				*e*S		**Sn**	**06 32 17.4**	**+0.7**

baz=359

NCU	**National Centr**	**0.88**	**12**	*e*P		**Pb**	**06 32 03.9**	**-0.7**

baz=360

NCU				*e*S		**Sb**	**06 32 16.4**	**+0.5**

baz=360

WLGB	**Puzi**	**0.89**	**225**	*e*P		**Pb**	**06 32 03.5**	**-1.2**

baz=226

WLGB				*e*S		**Sb**	**06 32 16.0**	**-0.3**

baz=226

ELDTW	**Lidau**	**0.91**	**178**	*i* P		**Pb**	**06 32 04.7**	**-0.6**

baz=184

ELDTW				*e*S		**Sb**	**06 32 17.0**	**-0.1**

baz=184

WTP	**Ta-pu**	**0.92**	**202**	P		**Pb**	**06 32 04.6**	**-0.9**

baz=209

WTP				*e*S		**Sb**	**06 32 17.5**	**+0.2**

baz=209

TWC	**Suao**	**0.93**	**57**	P		**Pb**	**06 32 04.7**	**-0.8**

baz=65

TWC				*e*S		**Sn**	**06 32 17.8**	**-0.2**

baz=65

FULB	**Fuli**	**0.95**	**163**	*i* P		**Pn**	**06 32 06.1**	**+0.4**

baz=163

FULB				*e*S		**Sb**	**06 32 18.2**	**+0.3**

baz=163

STYT	**Tauyuan**	**0.96**	**193**	P		**Pb**	**06 32 05.3**	**-0.8**

baz=193

STYT				*e*S		**Sb**	**06 32 18.5**	**+0.1**

baz=193

TATO	**Taipei**	**0.98**	**28**	*e*P		**Pb**	**06 32 06.4**	**+0.2**

baz=27

TATO				*e*S		**Sn**	**06 32 20.4**	**+1.3**

baz=27

NHDH	**Xindian Distri**	**0.98**	**30**	*e*P		**Pn**	**06 32 06.0**	**-0.2**

baz=18

NHDH				*e*S		**Sn**	**06 32 20.1**	**+0.9**

baz=18

ICHU	**Yijhu**	**0.99**	**221**	*e*P		**Pn**	**06 32 06.2**	**-0.1**

baz=230

ICHU				*e*S		**Sn**	**06 32 19.9**	**+0.4**

baz=230

SNST	**Tainan City**	**0.99**	**207**	P		**Pn**	**06 32 05.7**	**-0.6**

baz=208

SNST				*e*S		**Sn**	**06 32 19.8**	**+0.3**

baz=208

CHN1	**Nanshi**	**1.01**	**205**	*i* P		**Pn**	**06 32 06.0**	**-0.6**

baz=205

CHN1				*e*S		**Sb**	**06 32 20.1**	**+0.3**

baz=205

TWA	**Mucha**	**1.02**	**32**	*e*P		**Pn**	**06 32 06.2**	**-0.6**

baz=21

TWA				*e*S		**Sn**	**06 32 22.1**	**+1.7**

baz=21

TAP	**Taipei**	**1.04**	**27**	*e*P		**Pb**	**06 32 07.8**	**+0.4**

baz=27

TAP				*e*S		**Sn**	**06 32 22.0**	**+1.3**

baz=27

CHN8	**Yiju**	**1.04**	**223**	*e*P		**Pn**	**06 32 06.4**	**-0.6**

baz=237

CHN8				*e*S		**Sn**	**06 32 21.2**	**+0.5**

baz=237

TAP1	**Taipei**	**1.05**	**27**	*e*P		**Pn**	**06 32 06.1**	**-0.9**

baz=27

TAP1				*e*S		**Sn**	**06 32 21.3**	**+0.4**

baz=27

CHKT	**Chengkung**	**1.06**	**161**	*e*P		**Pn**	**06 32 07.5**	**+0.2**

baz=147

CHKT				*e*S		**Sn**	**06 32 22.6**	**+1.4**

baz=147

TWS1	**Kuangyinshan**	**1.06**	**21**	*e*P		**Pn**	**06 32 06.9**	**-0.5**

baz=21

TWS1				*e*S		**Sn**	**06 32 23.0**	**+1.7**

baz=21

NTC	**Toucheng**	**1.07**	**46**	*e*P		**Pn**	**06 32 07.8**	**0.0**

baz=31

NTC				*e*S		**Sn**	**06 32 23.0**	**+1.6**

baz=31

| | | | | | | | |
|---|---|---|---

LDUT				*eS*		**Sb**	**06 32 33.9**	**+0.3**
	baz=150								
ECL	**Taimali**	**1.50**	**181**	*eP*		**Pn**	**06 32 14.1**	**+0.8**
	baz=168								
ECL				*eS*		**Sb**	**06 32 34.0**	**+0.1**
	baz=168								
MASBT	**Mashibuluo**	**1.52**	**193**	*eP*		**Pn**	**06 32 13.7**	**0.0**
	baz=193								
MASBT				*eS*		**Sn**	**06 32 33.2**	**+0.6**
	baz=193								
VWUC	**VWUC**	**1.66**	**302**	*eP*		**Pn**	**06 32 13.3**	**-2.2**
	baz=301								
SSPT	**Xinbi**	**1.66**	**194**	*eP*		**Pn**	**06 32 15.8**	**+0.2**
	baz=194								
SSPT				*eS*		**Sb**	**06 32 39.2**	**+0.7**
	baz=194								
VCHM	**Qimei**	**1.69**	**238**	*eP*		**Pn**	**06 32 15.3**	**-0.6**
	baz=238								
EAST	**Anshuo**	**1.72**	**184**	*eP*		**Pn**	**06 32 16.8**	**+0.3**
	baz=201								
EAST				*eS*		**Sb**	**06 32 39.5**	**-0.7**
	baz=201								
TAW	**Tawu**	**1.74**	**183**	*eP*		**Pn**	**06 32 16.3**	**-0.4**
	baz=199								
SCZT	**Fangliau**	**1.76**	**191**	P		**Pn**	**06 32 17.0**	**+0.1**
	baz=192								
SCZT				*eS*		**Sb**	**06 32 40.3**	**-0.9**
	baz=192								
PTTC	**Pingtan**	**1.78**	**322**	*eP*		**Pn**	**06 32 15.3**	**-1.8**
	baz=320								
WLCH	**Liuqiu**	**1.84**	**198**	*eP*		**Pn**	**06 32 18.0**	**0.0**
	baz=199								
YOJ	**Yonaguni jima**	**1.88**	**79**	*eP*		**Pn**	**06 32 19.1**	**+0.5**
	baz=80								
YOJ	**Yonaguni jima**	**1.88**	**79**	P		**Pn**	**06 32 19.0**	**+0.5**
YOJ				*eS*		**Sn**	**06 32 43.0**	**+1.6**
SLIU	**Shizi**	**1.89**	**185**	*eP*		**Pn**	**06 32 18.8**	**+0.1**
	baz=200								
LAY	**Lan-yu**	**2.12**	**166**	*eP*		**Pn**	**06 32 21.5**	**-0.5**
	baz=156								
TWK1	**Hengchun**	**2.16**	**185**	*eP*		**Pn**	**06 32 22.0**	**-0.5**
	baz=198								
TWKBT	**Hengchun**	**2.16**	**184**	*eP*		**Pn**	**06 32 22.2**	**-0.2**
	baz=198								
IRIF	**Iriomote-Funau**	**2.51**	**84**	P		**Pn**	**06 32 27.3**	**+0.1**
IRIF				*eS*		**Sn**	**06 32 58.1**	**+1.1**
HATJ	**Hateruma jima**	**2.57**	**91**	P		**Pn**	**06 32 28.9**	**+0.8**
MHZQ	**Yeshan**	**2.66**	**319**	*eP*		**Pn**	**06 32 28.0**	**-1.3**
	baz=315								
LYJJ	**Jianjiangzhen**	**2.67**	**336**	*eP*		**Pn**	**06 32 28.8**	**-0.7**
	baz=334								
JKRS	**Kuro-shima**	**2.76**	**87**	P		**Pn**	**06 32 31.3**	**+0.7**
JKRS				*eS*		**Sn**	**06 33 05.0**	**+1.8**
JIJ	**Ishigaki jima**	**2.89**	**84**	P		**Pn**	**06 32 32.4**	**0.0**
JIJ				S		**Sn**	**06 33 06.2**	**-0.2**
JISG	**Ishigakijimahi**	**3.07**	**80**	P		**Pn**	**06 32 35.1**	**+0.2**
JISG				S		**Sn**	**06 33 11.0**	**+0.3**
JTJ	**Tarama**	**3.43**	**80**	P		**Pn**	**06 32 40.2**	**+0.4**

IDC 15 06:47:41.5±9.5, 7°.12N×93°.99E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/51, mbtmp3.3/3, Error ellipse: s-maj=491.3km s-min=30.8km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.79**	**348**	P	P	06 55 24.5	-0.1
	0.6nm,0.7s,baz=161,slow=7.7,SNR=5.0						
WRA	**Warramunga Arr**	**47.95**	**125**	P	P	06 56 23.3	+1.0
	0.3nm,0.8s,baz=306,slow=8.6,SNR=2.2						
ASAR	**Alice Springs**	**49.55**	**129**	P	P	06 56 33.4	-1.2
	0.2nm,0.8s,baz=306,slow=7.8,SNR=1.9						

REN ***15*** *06:58:38.3±0.8, 41°.88N±0°.03×119°.56W±0°.04, h0km±8km, ML2.6/3, Error ellipse: s-maj=5.4km s-min=3.5km az=221.0*

ANF ***15*** *06:58:38.2±0.8, 41°.88N×119°.59W, h1km, ML2.6/4, Error ellipse: s-maj=6.2km s-min=4.1km az=88.0*

NEIC ***15*** *06:58:40.0±0.2, 41°.90N±0°.05×119°.67W±0°.04, h12km±4km, Error ellipse: s-maj=7.1km s-min=4.0km az=190.0*

ISC 15 06:58:38.9±1.3, 41°.88N±0°.04×119°.60W±0°.06, h10km, n14, σ0s68/18, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.53**	**273**		**Pg**	**06 58 49.0**	**-0.2**
MOD	**Modoc Plateau**	**0.53**	**273**		**Sg**	**06 58 56.6**	**+0.5**
K05A	**Summer Lake**	**1.28**	**312**		**Pn**	**06 59 03.2**	**+0.2**
M04C	**Macdoel**	**1.68**	**267**	P	**Pn**	**06 59 08.8**	**+0.4**
	baz=86,SNR=19						
M04C				S	**Sg**	**06 59 32.6**	**-0.2**
	baz=86						
J08A	**Circle Bar Ran**	**1.70**	**29**		**Pb**	**06 59 09.7**	**-0.6**
K04D	**Chiloquin, OR**	**1.76**	**296**	Sb	**Sg**	**06 59 36.1**	**+0.4**
	baz=114						
J05D	**Fort Rock, OR**	**1.85**	**320**	Pb	**Pb**	**06 59 13.3**	**+0.3**
	baz=138,SNR=12						
J05D				Sb	**Sg**	**06 59 38.1**	**-0.4**
	baz=138						
L04D	**Klamath Falls**	**2.04**	**280**	P	**Pn**	**06 59 13.8**	**+0.3**
	baz=98,SNR=5.5						
L04D				Sb	**Sg**	**06 59 44.0**	**-0.6**
	baz=98						
BEKR	**Beckworth**	**2.09**	**196**		**Pn**	**06 59 15.2**	**+1.0**
PINE	**Pine Mountain**	**2.15**	**333**		**Pn**	**06 59 15.5**	**+0.4**
I07A	**Izee**	**2.20**	**2**	Pn	**Pn**	**06 59 16.4**	**+0.7**
O03E	**Paynes Creek**	**2.30**	**227**	Pb	**Pb**	**06 59 20.8**	**+0.3**
	baz=46						
O03E				Sb	**Sg**	**06 59 51.3**	**-1.4**
	baz=46						
N02D	**Trinity Center**	**2.50**	**250**	Sb	**Sg**	**06 59 58.1**	**-1.3**
	baz=68						
HUMO	**Hull Mountain**	**2.60**	**287**	Pn	**Pn**	**06 59 21.1**	**+0.1**

NEIC ***15*** *06:58:48.5±1.4, 48°.40N±0°.05×114°.33W±0°.08, h12km±7km, Error ellipse: s-maj=8.5km s-min=6.5km az=217.0*

NEIC ***15*** *06:58:48, 48°.45N×114°.30W, h17km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}1.90; $M_{\theta\theta}$-6.37; $M_{\phi\phi}$4.47; $M_{r\theta}$3.39; $M_{r\phi}$-0.41; $M_{\theta\phi}$4.87; Fault plane solution: M_o8.21000×10^{14} NP1:ϕ_s47.07000°, δ80.50000°, λ47.80000°. NP2:ϕ_s306.75000°, δ43.06000°, λ166.00000°. Principal axes: T 8.4346, Plg39.0000°, Azm279.0000°; N -0.4711, Plg41.0000°, Azm56.0000°; P -7.9635, Plg24.0000°, Azm168.0000°;*

BUT ***15*** *06:58:48.4±1.4, 48°.40N±0°.07×114°.24W±0°.08, h14km±6km, mb4.2/7(NEIC), Mwr3.9/14(NEIC) Error ellipse: s-maj=10.0km s-min=7.2km az=191.0*

PGC ***15*** *06:58:49.3±0.1, 48°.37N×114°.26W, h10km, ML4.9/5*

PGC 167km southeast of Cranbrook, Bc Montana Felt Mmi Iv in Montana.

ANF ***15*** *06:58:50.0±0.6, 48°.40N×114°.25W, h23km±5km, ML4.7/6, Error ellipse: s-maj=4.8km s-min=2.6km az=14.0*

IDC ***15*** *06:58:49.0±0.7, 48°.46N×114°.23W, h0km, mb3.1/3, mb1 3.8/8, mb1mx3.6/61, mbtmp3.5/8, ML3.9/4, Error ellipse: s-maj=8.7km s-min=6.7km az=9.0*

ISC 15 06:58:47.9±1.0, 48°.41N±0°.02×114°.26W±0°.03, h10km±9km, n130, σ1s68/146, mb3.4/3, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YBMT	**Yellow Bay**	**0.57**	**163**	P	**Pg**	**06 58 59.0**	**0.0**
BSMT	**Bassoo Peak**	**0.66**	**212**	P	**Pg**	**06 59 01.1**	**+0.4**
JTMT	**Jette**	**0.66**	**181**	P	**Pg**	**06 59 00.7**	**-0.1**
JTMT	**Jette**	**0.66**	**181**	Pg	**Pg**	**06 59 00.7**	**-0.1**
JTMT				Sg	**Sg**	**06 59 09.8**	**+0.3**
WALA	**Waterton Lakes**	**0.69**	**19**	P	**Pg**	**06 59 01.7**	**+0.4**
WALA				S	**Sg**	**06 59 11.1**	**+0.8**
WALA	**Waterton Lakes**	**0.69**	**19**		**Pg**	**06 59 01.6**	**+0.3**
WALA				Sg	**Sg**	**06 59 11.3**	**+1.0**
SWMT	**Swartz Lake**	**0.92**	**169**	P	**Pg**	**06 59 05.0**	**-0.6**
BHMT	**Big Hole Peak**	**0.98**	**212**	P	**Pg**	**06 59 07.0**	**+0.3**
SLMT	**Seeley Lake**	**1.28**	**156**	P	**Pn**	**06 59 12.0**	**0.0**
SLMT				S	**Sb**	**06 59 28.4**	**-0.3**
OVMT	**Ovando**	**1.59**	**147**	P	**Pn**	**06 59 16.7**	**+0.4**
MSO	**Missoula**	**1.60**	**172**	P	**Pn**	**06 59 16.4**	**+0.1**
	baz=353						
MSO				S	**Sn**	**06 59 37.9**	**+0.8**
	baz=353						
MSO	**Missoula**	**1.60**	**172**	Pn	**Pn**	**06 59 16.4**	**+0.1**
NEW	**Newport**	**1.91**	**267**	Pn	**Pb**	**06 59 23.6**	**+0.7**
	155nm,0.3s,baz=87,slow=12,SNR=285						
NEW				Lg	Lg	06 59 49.9	
	361nm,0.3s,baz=178,slow=19,SNR=18						
NEW	**Newport**	**1.91**	**267**	P	**Pn**	**06 59 20.9**	**+0.3**
	baz=85						
NEW				Sb	**Sg**	**06 59 49.8**	**+0.4**
	baz=85						
NEW	**Newport**	**1.91**	**267**		**Pn**	**06 59 20.8**	**+0.2**
LYMT	**Lyon Mountain**	**1.96**	**137**	P	**Pn**	**06 59 22.7**	**+1.2**
BPMT	**Black Pine Rid**	**2.05**	**164**	P	**Pn**	**06 59 23.0**	**+0.3**
HRY	**Holter Researc**	**2.37**	**135**	Pn	**Pn**	**06 59 27.8**	**+0.9**
PRDA	**Priddis**	**2.46**	**360**	P	**Pn**	**06 59 30.6**	**+2.4**
PRDA				Sg	**Sb**	**07 00 04.8**	**+2.1**
C09A	**Chrisman Ranch**	**2.76**	**259**	P	**Pn**	**06 59 32.1**	**0.0**
C09A				Sg	**Sg**	**07 00 17.4**	**+1.0**
C09A	**Chrisman Ranch**	**2.76**	**259**	Pn	**Pn**	**06 59 32.2**	**0.0**
LRM	**Limekiln Ridge**	**2.87**	**154**	P	**Pn**	**06 59 34.4**	**+0.5**
LRM				Sg	**Sb**	**07 00 16.4**	**+1.8**
LRM	**Limekiln Ridge**	**2.87**	**154**	Pn	**Pn**	**06 59 34.1**	**+0.2**
EGMT	**Eagleton**	**3.04**	**96**	P	**Pn**	**06 59 36.8**	**+0.7**
	baz=279						
EGMT				Sb	**Sb**	**07 00 20.6**	**+1.3**
	baz=279						
EGMT	**Eagleton**	**3.04**	**96**	Pn	**Pn**	**06 59 36.8**	**+0.7**
F10A	**Beach Ranch, E**	**3.17**	**221**		**Pn**	**06 59 38.7**	**+0.8**
E09A	**Wood Farm, Sta**	**3.25**	**236**		**Pn**	**06 59 38.9**	**+0.1**
DLMT	**Dillon**	**3.25**	**159**		**Pn**	**06 59 39.5**	**+0.4**
BOZ	**Bozeman (W)**	**3.34**	**146**	Pb	**Pb**	**06 59 48.5**	**+1.2**
	baz=328						
BOZ				Sb	**Sb**	**07 00 31.1**	**+3.0**
	baz=328						
BOZ	**Bozeman (W)**	**3.34**	**146**		**Pn**	**06 59 40.8**	**+0.5**
B08A	**Colville Reser**	**3.38**	**271**	P	**Pn**	**06 59 40.4**	**-0.4**
B08A				Sg	**Sb**	**07 00 32.2**	**+3.1**
B08A	**Colville Reser**	**3.38**	**271**	Pn	**Pn**	**06 59 40.4**	**-0.4**
D08A	**Wollman Farm,**	**3.42**	**248**	Pn	**Pn**	**06 59 41.0**	**-0.3**
PLID	**Pearl Lake**	**3.53**	**200**	Pn	**Pn**	**06 59 43.5**	**+0.5**
PNT	**Penticton**	**3.65**	**286**	P	**Pn**	**06 59 45.3**	**+0.9**
PNT				Sg	**Sg**	**07 00 45.6**	**+0.6**
MCMT	**McKenzie Canyo**	**3.71**	**164**		**Pn**	**06 59 45.9**	**+0.4**
E08A	**Dider Farm, El**	**3.78**	**241**	Pn	**Pn**	**06 59 46.9**	**+0.7**
MOMT	**Monida**	**4.03**	**161**	P	**Pn**	**06 59 50.1**	**+0.2**
MOMT				Sg	**Sg**	**07 00 53.8**	**-3.4**
QLMT	**Earthquake Lak**	**4.08**	**150**	P	**Pn**	**06 59 50.9**	**+0.4**
QLMT				Sg	**Sb**	**07 00 53.2**	**+3.9**
QLMT	**Earthquake Lak**	**4.08**	**150**		**Pn**	**06 59 51.0**	**+0.4**
GCMT	**Greycliff**	**4.09**	**128**		**Pn**	**06 59 52.3**	**+1.7**
TPMT	**Tepee Creek**	**4.09**	**153**	P	**Pn**	**06 59 51.3**	**+0.5**
TPMT				Sg	**Sb**	**07 00 54.1**	**+4.3**
HAWA	**Hanford**	**4.11**	**243**	Pn	**Pn**	**06 59 51.3**	**+0.6**
BMO	**Blue Mountains**	**4.13**	**212**		**Pn**	**06 59 51.9**	**+0.7**
YHL	**Hebgen Lake**	**4.14**	**148**		**Pn**	**06 59 51.7**	**+0.2**
E07A	**Sunnyside**	**4.22**	**246**		**Pn**	**06 59 52.5**	**+0.2**
YHB	**Horse Butte**	**4.23**	**149**		**Pn**	**06 59 53.5**	**+0.9**
YHH	**Holmes Hill**	**4.32**	**146**		**Pn**	**06 59 54.7**	**+0.8**
YMR	**Madison River**	**4.38**	**147**		**Pn**	**06 59 55.8**	**+1.1**
YNR	**Norris Junctio**	**4.45**	**145**		**Pn**	**06 59 57.7**	**+2.1**
LTY	**Liberty**	**4.47**	**257**	P	**Pn**	**06 59 55.5**	**-0.3**
LTY	**Liberty**	**4.47**	**257**		**Pn**	**06 59 55.9**	**+0.2**
G08A	**Pilot Rock**	**4.49**	**228**		**Pn**	**06 59 57.0**	**+0.9**
YNE	**Yellowstone No**	**4.49**	**138**		**Pn**	**06 59 57.5**	**+1.3**
GPW	**Glacier Peak**	**4.60**	**269**	P	**Pn**	**06 59 57.8**	**+0.1**
F07A	**Phinny Hill Vi**	**4.61**	**239**		**Pn**	**06 59 57.7**	**+0.1**
MNB	**Mounoet Dainar**	**4.62**	**327**	P	**Pn**	**07 00 00.8**	**+2.9**
MNB				Sg	**Sg**	**07 01 12.7**	**-3.5**
YMP	**Mirror Lake Pl**	**4.63**	**141**		**Pn**	**06 59 59.3**	**+1.0**
RLMT	**Red Lodge**	**4.75**	**132**	Sb	**Sb**	**07 01 13.8**	**+5.1**
	baz=316						
RLMT	**Red Lodge**	**4.75**	**132**		**Pn**	**07 00 01.6**	**+1.8**
H17A	**Grant Village**	**4.76**	**146**		**Pn**	**07 00 00.3**	**+0.4**
YPP	**Pitchstone Pla**	**4.78**	**149**		**Pn**	**07 00 00.5**	**+0.3**
B06A	**Marblemount**	**4.81**	**274**		**Pn**	**07 00 01.4**	**+1.1**
HOPB	**Hope**	**4.82**	**284**	P	**Pn**	**07 00 01.6**	**+1.1**
RPW	**Rockport**	**4.83**	**273**	P	**Pn**	**07 00 01.0**	**+0.3**
RPW				Sg	**Sg**	**07 01 18.1**	**-4.7**
BLBC	**Blue River**	**4.84**	**321**	P	**Pn**	**07 00 03.2**	**+2.2**
HLID	**Hailey**	**4.85**	**181**	P	**Pn**	**07 00 01.6**	**+0.5**
	baz=1.4						
HLID				S	**Sn**	**07 00 56.5**	**-0.9**
	baz=1.4						
HLID	**Hailey**	**4.85**	**181**	Pn	**Pn**	**07 00 00.9**	**-0.2**
EDM	**Edmonton**	**4.85**	**6**	P	**Pn**	**07 00 01.7**	**+0.7**
FLWY	**Flagg Ranch**	**4.98**	**149**		**Pn**	**07 00 03.9**	**+0.9**
IMW	**Indian Meadow**	**5.07**	**152**		**Pn**	**07 00 04.3**	**+0.1**
MBW	**Mount Baker**	**5.08**	**277**	P	**Pn**	**07 00 05.0**	**+0.7**
MFID	**Camas Ranch**	**5.11**	**193**		**Pn**	**07 00 05.0**	**+0.4**
JCW	**Jim Creek**	**5.12**	**270**	P	**Pn**	**07 00 05.2**	**+0.5**
D05A	**Enumclaw**	**5.35**	**260**	P	**Pn**	**07 00 07.6**	**-0.1**
D05A	**Enumclaw**	**5.35**	**260**		**Pn**	**07 00 08.0**	**+0.2**
LON	**Longmire**	**5.37**	**255**	P	**Pn**	**07 00 08.2**	**+0.1**
LON	**Longmire**	**5.37**	**255**		**Pn**	**07 00 08.2**	**+0.1**
LLLB	**Lillooet**	**5.43**	**297**	Pn	**Pn**	**07 00 09.9**	**+1.0**
TPAW	**Teton Pass**	**5.43**	**154**	Pn	**Pn**	**07 00 11.0**	**+1.8**
SNOW	**Snow King Moun**	**5.52**	**152**	Pn	**Pn**	**07 00 11.9**	**+1.6**
HNBB	**Haney**	**5.56**	**282**	P	**Pn**	**07 00 10.9**	**+0.3**
LAO	**LASA Array**	**5.71**	**105**	P	**Pn**	**07 00 14.0**	**+1.2**
	baz=290						
LAO	**LASA Array**	**5.71**	**105**		**Pn**	**07 00 12.8**	**+0.1**
G05D	**Wamic, OR**	**5.79**	**239**	P	**Pn**	**07 00 14.7**	**+0.9**
	baz=54						
GNW	**Green Mountain**	**5.81**	**265**	P	**Pn**	**07 00 13.8**	**-0.2**
BLN	**Blyn Mountain**	**5.84**	**269**	P	**Pn**	**07 00 14.9**	**+0.5**
J08A	**Circle Bar Ran**	**5.84**	**212**	Pn	**Pn**	**07 00 14.6**	**-0.1**
WSLR	**Whistler**	**5.92**	**290**	P	**Pn**	**07 00 17.5**	**+1.8**
HDW	**Hoodsport**	**5.95**	**266**	P	**Pn**	**07 00 15.9**	**-0.2**
D03D	**Eldon**	**5.99**	**265**	P	**Pn**	**07 00 16.5**	**-0.1**
	baz=78						
WPB	**Watts Point**	**6.02**	**285**	P	**Pn**	**07 00 18.5**	**+1.6**
BIB	**Bowen Island**	**6.05**	**283**	P	**Pn**	**07 00 18.4**	**+1.1**
PGC	**Sidney**	**6.11**	**276**	Pn	**Pn**	**07 00 18.2**	**0.0**
I05D	**Terrebonne, OR**	**6.37**	**233**	P	**Pn**	**07 00 23.3**	**+1.5**
	baz=48						
SHB	**Sechelt**	**6.44**	**284**	P	**Pn**	**07 00 23.8**	**+1.1**
NLLB	**Nanaimo Lost L**	**6.48**	**281**	P	**Pn**	**07 00 25.7**	**+2.5**
PDAR	**Pinedale Array**	**6.54**	**148**	Pn	Pn	07 00 31.1	+6.9
	0.5nm,0.3s,baz=338,slow=12,SNR=12						
PDAR				Lg	Lg	07 02 10.8	
	2.6nm,0.3s,baz=357,slow=33,SNR=9.8						
PDAR	**Pinedale Array**	**6.54**	**148**		**Pn**	**07 00 24.1**	**-0.2**
B926	**Mesachie Lake**	**6.56**	**277**	P	**Pn**	**07 00 26.3**	**+1.9**
DGMT	**Dagmar**	**6.70**	**86**	P	**Pn**	**07 00 26.9**	**+0.6**
	baz=273						
DGMT	**Dagmar**	**6.70**	**86**		**Pn**	**07 00 26.9**	**+0.6**
TXB	**Texada**	**6.81**	**285**	P	**Pn**	**07 00 29.5**	**+1.7**
CBB	**Campbell River**	**7.45**	**287**	P	**Pn**	**07 00 38.6**	**+2.0**
ELK	**Elko**	**7.70**	**186**	Pn	**Pn**	**07 00 42.9**	**+2.7**
	0.9nm,0.3s,baz=353,slow=15,SNR=12						
ELK				Lg	Lg	07 02 47.4	
	2.2nm,0.3s,baz=145,slow=12,SNR=6.7						
GDR	**Gold River**	**7.85**	**284**	P	**Pn**	**07 00 45.5**	**+3.5**
NCRB	**Newcastle Ridg**	**7.95**	**289**	P	**Pn**	**07 00 46.3**	**+2.8**
RSSD	**Black Hills**	**8.28**	**117**		**Pn**	**07 00 48.0**	**-0.2**
E28A	**Huff**	**9.37**	**96**		**Pn**	**07 01 02.6**	**-0.3**
N23A	**Red Feather La**	**9.56**	**139**	Pn	**Pn**	**07 01 06.4**	**+0.6**
BBB	**Bella Bella**	**9.63**	**298**	Pn	**Pn**	**07 01 06.3**	**-0.2**
FFC	**Flin Flon**	**9.91**	**46**	Pn	**Pn**	**07 01 11.9**	**+1.6**
NVAR	**Mina Array Bea**	**10.40**	**198**	Pn	Pn	07 01 22.2	+5.0
	0.2nm,0.3s,baz=13,slow=12,SNR=7.5						
NVAR				Lg	Lg	07 04 16.1	
	0.1nm,0.3s,baz=14,slow=34,SNR=2.8						
ULM	**Lac du Bonnet**	**12.14**	**74**	Pn	**Pn**	**07 01 37.9**	**-2.8**
	0.5nm,0.3s,baz=268,slow=10,SNR=6.8						
ULM				Lg	Lg	07 05 02.6	
	2.0nm,0.3s,baz=16,slow=9.4,SNR=3.6						
ULM	**Lac du Bonnet**	**12.14**	**74**	Pn	**Pn**	**07 01 37.6**	**-3.1**
ECSD	**EROS Data Cent**	**13.11**	**104**	Pn	**Pn**	**07 01 51.4**	**-2.7**
B35A	**Bob, Littlefor**	**13.65**	**83**	Pn	**Pn**	**07 01 57.9**	**-3.5**
YKA	**Yellowknife Ar**	**14.12**	**359**	Pn	**Pn**	**07 02 04.7**	**-3.0**
	0.9nm,0.3s,baz=180,slow=13,SNR=55						
YKA				Pg	P	07 03 07.2	+52
	1.0nm,0.3s,baz=171,slow=16,SNR=7.5						
YKA				Sn	Sn	07 04 33.4	-11
	0.6nm,0.3s,baz=170,slow=22,SNR=4.7						
YKA				Lg	Lg	07 06 06.8	
	0.5nm,0.3s,baz=170,slow=28,SNR=7.7						
F36A	**Milaca**	**14.34**	**92**	Pn	**Pn**	**07 02 07.7**	**-3.2**
EYMN	**Ely**	**15.19**	**83**	Pn	**Pn**	**07 02 18.6**	**-3.8**
EYMN					IAmb	IAmb	07 02 43.5
	comp=Z,23nm,1.4s						
E38A	**The Farm, Brul**	**15.44**	**88**	Pn	**Pn**	**07 02 22.0**	**-3.7**
E38A					IAmb	IAmb	07 02 47.4
	comp=Z,33nm,1.2s						
COWI	**Conover**	**17.19**	**88**	Pn	**Pn**	**07 02 44.2**	**-3.8**
COWI					IAmb	IAmb	07 03 10.9
	comp=Z,12nm,1.2s						
D41A	**Chassel**	**17.32**	**85**	Pn	**Pn**	**07 02 46.1**	**-3.5**
E43A	**Lone Tree Farm**	**18.54**	**86**	P	**P**	**07 03 02.1**	**-2.3**
E43A					IAmb	IAmb	07 03 11.0
	comp=Z,24nm,1.2s						
TXAR	**Lajitas Array**	**20.72**	**153**	P	Pn	07 03 31.1	+0.2
	comp=Z,0.4nm,0.7s,baz=340,slow=6.6,SNR=3.5						
INK	**Inuvik**	**22.17**	**341**	P	**P**	**07 03 46.2**	**+2.7**
	comp=Z,1.3nm,0.9s,baz=135,slow=16,SNR=2.4						
INK	**Inuvik**	**22.17**	**341**	P	**P**	**07 03 43.8**	**+0.2**
ILAR	**Eielson Array**	**23.90**	**325**	P	**P**	**07 04 05.2**	**+3.8**
	comp=Z,0.3nm,0.5s,baz=146,slow=9.3,SNR=6.3						
ILAR	**Eielson Array**	**23.90**	**325**	P	**P**	**07 04 02.7**	**+1.2**
TTA	**Tatalina**	**27.06**	**318**	P	**P**	**07 04 31.0**	**+0.8**
TTA					IAmb	IAmb	07 04 47.1
	comp=Z,7.0nm,1.4s						

IDC 15 07:01:50.4±1.4, 1°.52N×126°.09E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.5/37, mbtmp3.5/4, Error ellipse: s-maj=139.0km s-min=21.5km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.81**	**160**	P	P	07 06 54.8	-0.3
	1.1nm,0.5s,baz=339,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.16**	**164**	P	P	07 07 27.1	+0.4
	0.2nm,0.6s,baz=343,slow=7.0,SNR=4.0						
SONM	**Songino Array**	**49.19**	**343**	P	P	07 10 41.4	+1.0
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.3						
MKAR	**Makanchi Array**	**59.01**	**326**	P	P	07 11 51.4	-0.7
	0.5nm,0.4s,baz=120,slow=7.9,SNR=13						

IDC 15 07:05:19.0±4.8, 20°.74S×176°.02W, h0km, mb4.0/5, mb1 4.2/5, mb1mx3.8/36, mbtmp4.0/5, Error ellipse: s-maj=140.7km s-min=93.0km az=165.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.31**	**264**	P	P	07 12 17.8	+1.7
	0.8nm,0.3s,baz=79,slow=10,SNR=1.5						
STKA	**Stephens Creek**	**39.36**	**245**	P	P	07 12 50.1	-0.2
	1.5nm,0.4s,baz=102,slow=9.4,SNR=7.8						
ASAR	**Alice Springs**	**46.27**	**257**	P	P	07 13 46.0	-0.6
	1.8nm,0.7s,baz=102,slow=7.9,SNR=20						
ASAR				PcP	PcP	07 15 22.2	0.0
	0.4nm,0.6s,baz=104,slow=3.9,SNR=4.4						
WRA	**Warramunga Arr**	**46.40**	**262**	P	P	07 13 47.0	-0.7
	0.4nm,0.3s,baz=93,slow=8.0,SNR=11						
FITZ	**Fitzroy Crossi**	**54.83**	**262**	P	P	07 14 51.0	-0.3
	0.5nm,0.2s,baz=90,slow=7.1,SNR=6.8						

KRNET 15 07:14:38.9±0.1, 41°.68N×80°.29E, mb2.5, 6C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.62**	**300**	⇑*iP*	Pn	07 15 07.7	-1.2
	baz=1.0						
PRZ				⇑*iS*	Sn	07 15 28.5	-2.1
	baz=1.0						
ANVS	**Anan'yevo**	**2.24**	**300**	⇓*iP*	Pn	07 15 16.3	-1.1
	baz=1.0						
ANVS				⇓*iS*	Sn	07 15 43.7	-2.2
	baz=1.0						
KDJ	**Kajisay**	**2.37**	**282**	⇑*iP*	Pn	07 15 17.8	-1.3
	baz=82						
KDJ				⇑*iS*	Sn	07 15 46.5	-2.4
	baz=82						
BOOM	**Boomskoye usch**	**3.34**	**286**	⇑*iP*	Pn	07 15 31.6	-0.9
	baz=86						
BOOM				⇑*iS*	Sn	07 16 10.0	-2.9
	baz=86						

**NNC 15 07:15:23.0±2.1, 41°.83N×78°.25E, h0km, mb3.1, mpv2.8, 3C-1D, Error ellipse: s-maj=15.6km s-min=6.9km az=169.0, Suspected Mining explosion., Kyrg

PFVI	**Vila Bisbo**	**0.37**	**233**	P		**Pg**	**07 23 36.0**	**-0.1**
PFVI				S		**Sg**	**07 23 40.5**	**-0.8**
PFVI	**Vila Bisbo**	**0.37**	**233**	⇑*i*Pg		**Pg**	**07 23 36.0**	**-0.1**
PFVI				*e*Sg		**Sg**	**07 23 40.6**	**-0.7**
PFVI				A		A	07 23 42.1	
	comp=N,251nm,0.1s							
PCVE	**Castro Verde**	**0.43**	**50**	Pg		**Pb**	**07 23 38.1**	**+0.5**
PCVE				Lg		Lg	07 23 44.6	
	comp=N,83nm,0.3s							
PCVE	**Castro Verde**	**0.43**	**50**	⇑*i*Pg		**Pb**	**07 23 38.1**	**+0.5**
PCVE				*e*Sg		**Sb**	**07 23 44.6**	**+0.8**
PCVE				A		A	07 23 45.0	
	comp=N,83nm,0.3s							
PBDV	**Barranco-do-Ve**	**0.44**	**105**	Pg		**Pb**	**07 23 37.7**	**+0.1**
PBDV				Lg		Lg	07 23 44.0	
	comp=N,78nm,0.4s							
PBDV	**Barranco-do-Ve**	**0.44**	**105**	⇓*i*Pg		**Pb**	**07 23 37.7**	**+0.1**
PBDV				*e*Sg		**Sb**	**07 23 44.0**	**+0.1**
PBDV				A		A	07 23 48.6	
	comp=N,78nm,0.4s							
PVAQ	**Vaqueiros**	**0.59**	**85**	Pg		**Pb**	**07 23 40.6**	**+0.3**
PVAQ				Lg		Lg	07 23 48.6	
	comp=N,129nm,0.3s							
PVAQ	**Vaqueiros**	**0.59**	**85**	P		**Pb**	**07 23 40.5**	**+0.3**
PVAQ				S		**Sg**	**07 23 48.5**	**+0.3**
PVAQ	**Vaqueiros**	**0.59**	**85**	⇓*e*Pg		**Pb**	**07 23 40.6**	**+0.3**
PVAQ				*e*Sg		**Sb**	**07 23 48.6**	**+0.3**
PVAQ				A		A	07 23 53.8	
	comp=N,129nm,0.3s							
PNCL	**Nicolau / Gran**	**0.76**	**356**	Pg		**Pb**	**07 23 43.6**	**+0.5**
PNCL				Lg		Lg	07 23 54.2	
	comp=N,130nm,0.4s							
PNCL	**Nicolau / Gran**	**0.76**	**356**	*e*P		**Pb**	**07 23 43.6**	**+0.5**
PNCL				*e*S		**Sb**	**07 23 54.2**	**+1.1**
PNCL				A		A	07 23 55.9	
	comp=N,130nm,0.4s							
EGRO	**El Granado**	**0.80**	**77**	Pg		**Pg**	**07 23 44.3**	**+0.3**
	comp=N,3.1nm,0.1s,SNR=68							
EGRO				Lg		Lg	07 23 54.6	
	comp=N,161nm,0.1s,SNR=56							
PBEJ	**Beja**	**0.82**	**35**	Pg		**Pn**	**07 23 45.3**	**+0.2**
PBEJ				Lg		Lg	07 23 57.2	
	comp=N,32nm,0.5s							
PBEJ	**Beja**	**0.82**	**35**	*e*P		**Pn**	**07 23 45.3**	**+0.2**
PBEJ				*e*S		**Sn**	**07 23 57.2**	**+0.4**
PBEJ				A		A	07 24 00.1	
	comp=N,65nm,0.5s							
EVO	**Evora**	**1.23**	**17**	Pg		**Pb**	**07 23 51.5**	**+0.4**
EVO				Lg		Lg	07 24 08.6	
	comp=N,52nm,0.1s							
EVO	**Evora**	**1.23**	**17**	*e*P		**Pb**	**07 23 51.5**	**+0.4**
EVO				*e*S		**Sg**	**07 24 08.6**	**+0.4**
EVO				A		A	07 24 10.0	
	comp=N,52nm,0.1s							
PBAR	**Barrancos**	**1.39**	**54**	Pg		**Pg**	**07 23 55.8**	**+0.5**
PBAR				Lg		Lg	07 24 13.0	
	comp=N,53nm,0.3s							
PBAR	**Barrancos**	**1.39**	**54**	*e*P		**Pg**	**07 23 55.8**	**+0.5**
PBAR				*e*S		**Sg**	**07 24 13.0**	**-0.5**
PBAR				A		A	07 24 14.7	
	comp=N,53nm,0.3s							
LIS	**Lisbon**	**1.47**	**338**	Lg		Lg	07 24 16.0	
	comp=N,99nm,0.3s							
LIS	**Lisbon**	**1.47**	**338**	*e*Sg		**Sg**	**07 24 16.0**	**+0.2**
LIS				A		A	07 24 17.2	
	comp=N,99nm,0.3s							
EMIN	**Mina Concepcio**	**1.48**	**73**	Pg		**Pn**	**07 23 54.8**	**+0.6**
	comp=N,1.2nm,0.1s,SNR=37							
EMIN				Lg		Lg	07 24 15.7	
	comp=N,18nm,0.1s,SNR=19							
PMTG	**Montargil**	**1.72**	**6**	Pn		**Pn**	**07 23 58.3**	**+0.8**
PMTG				Pg		**Pb**	**07 24 00.8**	**+1.3**
PMTG				Lg		Lg	07 24 23.2	
	comp=N,48nm,0.2s							
PMTG	**Montargil**	**1.72**	**6**	*e*Pn		**Pn**	**07 23 58.3**	**+0.8**
PMTG	**Montargil**	**1.72**	**6**	*e*Pg		**Pb**	**07 24 00.8**	**+1.3**
PMTG				*e*Sg		**Sg**	**07 24 23.2**	**-0.8**
PMTG				A		A	07 24 24.2	
	comp=N,48nm,0.2s							
ESPR	**Espera**	**2.14**	**102**	Pn		**Pn**	**07 24 04.9**	**+1.7**
	comp=N,1.0nm,0.1s,SNR=7.9							
ESPR				Pg		**Pg**	**07 24 09.2**	**-0.2**
	comp=N,11nm,0.2s,SNR=7.9							
ESPR				Sn		**Sb**	**07 24 31.8**	**-1.0**
	comp=N,3.3nm,0.1s,SNR=7.9							
ESPR				Lg		Lg	07 24 38.9	
	comp=N,16nm,0.3s,SNR=7.9							
PSBE	**So Bento**	**2.17**	**353**	*e*Pn		**Pn**	**07 24 05.0**	**+1.2**
PSBE	**So Bento**	**2.17**	**353**	*e*Pg		**Pg**	**07 24 10.0**	**-0.1**
PSBE				*e*Sg		**Sg**	**07 24 36.8**	**-1.6**
PSBE				A		A	07 24 39.7	
	comp=N,20nm,1.1s							
PMRV	**Marv??o**	**2.23**	**22**	Pn		**Pn**	**07 24 05.4**	**+0.8**
PMRV				Pg		**Pg**	**07 24 10.7**	**-0.6**
PMRV				Lg		Lg	07 24 37.8	
	comp=N,16nm,0.6s							
PMRV	**Marv??o**	**2.23**	**22**	⇓*e*Pn		**Pn**	**07 24 05.4**	**+0.8**
PMRV	**Marv??o**	**2.23**	**22**	*e*Pg		**Pg**	**07 24 10.7**	**-0.6**
PMRV				*e*Sg		**Sb**	**07 24 37.8**	**+2.2**
PMRV				A		A	07 24 42.0	
	comp=N,16nm,0.6s							
ECAB	**El Cabril**	**2.52**	**72**	Pn		**Pn**	**07 24 09.7**	**+1.2**
	comp=N,2.7nm,0.1s,SNR=40							
ECAB				Pg		**Pg**	**07 24 15.8**	**-0.9**
	comp=N,1.8nm,0.2s,SNR=7.9							
ECAB				Sn		**Sn**	**07 24 38.8**	**+0.1**
	comp=N,14nm,0.2s,SNR=20							
ECAB				Lg		Lg	07 24 47.1	
	comp=N,17nm,0.2s,SNR=8.2							
HORN	**Hornachuelos**	**2.59**	**78**	P		**Pn**	**07 24 10.1**	**+0.6**
HORN				S		**Sn**	**07 24 41.5**	**+1.0**
PCBR	**Castelo Branco**	**2.60**	**17**	Pn		**Pn**	**07 24 10.5**	**+0.9**
PCBR				Pg		**Pg**	**07 24 18.9**	**+0.6**
PCBR				Sn		**Sn**	**07 24 41.4**	**+0.7**
PCBR				Lg		Lg	07 24 50.0	
	comp=N,5.2nm,0.5s							
PCBR	**Castelo Branco**	**2.60**	**17**	*e*Pn		**Pn**	**07 24 10.5**	**+0.9**
PCBR	**Castelo Branco**	**2.60**	**17**	*e*Pg		**Pg**	**07 24 18.9**	**+0.6**
PCBR				*e*Sn		**Sn**	**07 24 41.4**	**+0.7**
PCBR				*e*Sg		**Sg**	**07 24 50.0**	**-2.0**
PCBR				A		A	07 24 51.9	
	comp=N,10nm,0.5s							
PCAS	**Casmilo, Conde**	**2.69**	**359**	Pn		**Pn**	**07 24 12.1**	**+1.2**
PCAS				Pg		**Pg**	**07 24 19.6**	**-0.5**
PCAS				Sn		**Sn**	**07 24 44.3**	**+1.2**
PCAS				Lg		Lg	07 24 53.1	
	comp=N,12nm,0.5s							
PCAS	**Casmilo, Conde**	**2.69**	**359**	*e*Pn		**Pn**	**07 24 12.1**	**+1.2**
PCAS	**Casmilo, Conde**	**2.69**	**359**	*e*Pg		**Pg**	**07 24 19.6**	**-0.5**
PCAS				*e*Sn		**Sn**	**07 24 44.3**	**+1.2**
PCAS				*e*Sg		**Sg**	**07 24 53.1**	**-1.9**
PCAS				A		A	07 25 00.4	
	comp=N,12nm,0.5s							
MTE	**Manteigas**	**3.12**	**13**	Pn		**Pn**	**07 24 17.6**	**+0.7**
MTE				Sn		**Sn**	**07 24 54.1**	**+0.3**
MTE				Lg		Lg	07 25 06.8	
	comp=N,11nm,0.8s							
MTE	**Manteigas**	**3.12**	**13**	⇓*e*Pn		**Pn**	**07 24 17.6**	**+0.7**
MTE				*e*Sn		**Sn**	**07 24 54.1**	**+0.3**
MTE				*e*Sg		**Sg**	**07 25 06.8**	**-2.0**
MTE				A		A	07 25 13.0	
	comp=N,22nm,0.8s							
EADA	**Adamuz**	**3.18**	**74**	Pn		**Pn**	**07 24 18.2**	**+0.5**
	comp=N,0.3nm,0.1s,SNR=7.9							
EADA				Sn		**Sn**	**07 24 55.1**	**0.0**
	comp=N,4.5nm,0.1s,SNR=7.9							
EADA				Lg		Lg	07 25 07.9	
	comp=N,4.5nm,0.1s,SNR=7.9							
EPLA	**Plasencia**	**3.28**	**34**	Pn		**Pn**	**07 24 19.3**	**+0.2**
	comp=N,0.9nm,0.2s,SNR=7.9							
EPLA				Sn		**Sn**	**07 24 56.8**	**-0.8**
	comp=N,0.4nm,0.2s,SNR=7.9							
EPLA				Lg		Lg	07 25 11.9	
	comp=N,1.4nm,0.2s,SNR=7.9							
PVIS	**Viseu**	**3.38**	**7**	Pn		**Pn**	**07 24 21.3**	**+0.9**
PVIS				Pg		**Pg**	**07 24 32.6**	**-0.7**
PVIS				Sn		**Sn**	**07 25 00.4**	**+0.2**
PVIS				Lg		Lg	07 25 15.6	
	comp=N,4.7nm,0.4s							
PVIS	**Viseu**	**3.38**	**7**	*e*Pn		**Pn**	**07 24 21.3**	**+0.9**
PVIS	**Viseu**	**3.38**	**7**	*e*Pg		**Pg**	**07 24 32.6**	**-0.7**
PVIS				*e*Sn		**Sn**	**07 25 00.4**	**+0.2**
PVIS				*e*Sg		**Sg**	**07 25 15.6**	**-1.6**
PVIS				A		A	07 25 19.2	
	comp=N,9.4nm,0.4s							
EGOR	**Sierra Gorda,**	**3.48**	**93**	Pn		**Pn**	**07 24 23.1**	**+1.3**
	comp=N,0.2nm,0.1s,SNR=7.9							
EGOR				Sn		**Sn**	**07 25 04.4**	**+1.7**
	comp=N,0.1nm,0.1s,SNR=7.9							
PAB	**San Pablo**	**3.90**	**55**	Pn		**Pn**	**07 24 28.4**	**+0.9**
	comp=N,0.4nm,0.2s,SNR=7.9							
PAB				Sn		**Sn**	**07 25 11.0**	**-1.9**
	comp=N,1.3nm,0.1s,SNR=7.9							
PAB				Lg		Lg	07 25 30.5	
	comp=N,4.0nm,0.4s,SNR=7.9							
MVO	**Moncorvo**	**3.96**	**16**	Pn		**Pn**	**07 24 28.7**	**+0.3**
	comp=N,2.1nm,0.2s,SNR=8.2							
MVO				Sn		**Sn**	**07 25 12.5**	**-2.0**
	comp=N,0.5nm,0.1s,SNR=7.9							
MVO				Lg		Lg	07 25 32.1	
	comp=N,2.5nm,0.3s,SNR=5.0							
MVO	**Moncorvo**	**3.96**	**16**	*e*Pn		**Pn**	**07 24 29.0**	**+0.6**
MVO				*e*Sg		**Sg**	**07 25 33.9**	**-1.8**
MVO				A		A	07 25 39.1	
	comp=N,5.1nm,0.4s							
EQUE	**Quentar**	**4.01**	**91**	Pn		**Pn**	**07 24 30.7**	**+1.7**
	comp=N,0.2nm,0.1s,SNR=4.7							
EQUE				Sn		**Sn**	**07 25 16.3**	**+0.7**
	comp=N,0.5nm,0.1s,SNR=5.0							
EQUE				Lg		Lg	07 25 37.4	
	comp=N,1.9nm,0.3s,SNR=7.9							
POLO	**Lamas de Olo**	**4.05**	**7**	Pn		**Pn**	**07 24 30.6**	**+1.0**
POLO				Sn		**Sn**	**07 25 16.6**	**0.0**
	comp=N,3.3nm,0.6s							
POLO	**Lamas de Olo**	**4.05**	**7**	*e*Pn		**Pn**	**07 24 30.6**	**+1.0**
POLO				*e*Sn		**Sn**	**07 25 16.6**	**0.0**
POLO				A		A	07 25 45.4	
	comp=N,3.3nm,0.6s							
ESDC	**Sonseca Array**	**4.22**	**55**	Pn		**Pn**	**07 24 32.6**	**+0.7**
	comp=N,0.8nm,0.1s,baz=242,slow=13,SNR=5.8							
ESDC				Sn		**Sn**	**07 25 20.1**	**-0.6**
	comp=N,1.6nm,0.5s,baz=242,slow=23,SNR=8.3							
ESDC				Lg		Lg	07 25 40.8	
	SNR=7.9							
EQES	**Quesada**	**4.30**	**82**	Pn		**Pn**	**07 24 34.2**	**+1.0**
	comp=N,0.7nm,0.1s,SNR=7.9							
EQES				Sn		**Sn**	**07 25 21.7**	**-1.2**
	comp=N,1.6nm,0.2s,SNR=7.9							
PCAB	**Cabril**	**4.36**	**4**	Pn		**Pn**	**07 24 34.8**	**+0.9**
PCAB	**Cabril**	**4.36**	**4**	*e*Pn		**Pn**	**07 24 34.8**	**+0.9**
ELOB	**Lobios**	**4.52**	**4**	Pn		**Pn**	**07 24 36.9**	**+0.8**
	comp=N,1.9nm,0.1s,SNR=6.1							
ELOB				Sn		**Sn**	**07 25 23.9**	**-4.2**
	comp=N,0.3nm,0.1s,SNR=7.9							
ELOB				Lg		Lg	07 25 48.1	
	comp=N,1.4nm,0.3s,SNR=7.9							
PGAV	**Gavieira, Arco**	**4.61**	**2**	Pn		**Pn**	**07 24 38.2**	**+0.9**
PGAV				Sn		**Sn**	**07 25 28.6**	**-1.8**
PGAV	**Gavieira, Arco**	**4.61**	**2**	*e*Pn		**Pn**	**07 24 38.2**	**+0.9**
PGAV				*e*Sn		**Sn**	**07 25 28.6**	**-1.8**
PBRG	**Braganca**	**4.64**	**16**	Pn		**Pn**	**07 24 38.3**	**+0.6**
PBRG				Sn		**Sn**	**07 25 29.8**	**-1.3**
PBRG	**Braganca**	**4.64**	**16**	*e*Pn		**Pn**	**07 24 38.3**	**+0.6**
PBRG				*e*Sn		**Sn**	**07 25 29.8**	**-1.3**
GUD	**Guadarrama**	**4.69**	**44**	Pn		**Pn**	**07 24 38.9**	**+0.4**
	comp=N,0.3nm,0.3s,SNR=7.9							
GUD				Sn		**Sn**	**07 25 30.4**	**-2.2**
	comp=N,0.2nm,0.1s,SNR=7.9							
MD31	**MD31**	**5.41**	**145**	P		**Pn**	**07 24 48.0**	**-0.3**
MD31				S		**Sn**	**07 25 46.5**	**-3.6**
MDT	**Midelt**	**5.52**	**144**	P		**Pn**	**07 24 49.8**	**0.0**
MDT				S		**Sn**	**07 25 49.4**	**-3.5**

IDC 15 **07:26:08.0±2.2,1°.89N×126°.38E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.2/51,mbtmp3.3/3,Error ellipse: s-maj=174.7km s-min=28.1km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.06**	**161**	P	P	07 31 14.5	-0.7
	0.6nm,0.5s,baz=339,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**26.43**	**164**	P	P	07 31 47.5	+0.7
	0.2nm,0.4s,baz=345,slow=12,SNR=5.8						
MKAR	**Makanchi Array**	**58.87**	**326**	P	P	07 36 08.5	-0.2
	0.2nm,0.5s,baz=118,slow=6.6,SNR=1.5						

*JMA **15** 07:26:35.8±0.1,41°.09N×143°.26E,h56km,M3.3*
*IDC **15** 07:26:37.6±3.6,41°.04N×143°.52E,h46km±28km, mb3.5/5, mb1 3.5/7,mb1mx3.2/64,mbtmp3.6/7,ML2.7/2,Error ellipse: s-maj=55.9km s-min=24.9km az=87.0*

ISC 15 07:26:36.3±2.5,41°.09N±0°.05×143°.32E±0°.07,h30km±18km, n28,σ0°.97/28,mb3.4/5,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.93**	**353**	P	**Pn**	**07 26 52.7**	**-0.6**
JEM				*e*S	**Sb**	**07 27 05.7**	**-0.2**
JTHR	**Tokachihiroo**	**1.20**	**359**	P	**Pn**	**07 26 57.0**	**0.0**
JNBK	**Urakawa-nobuka**	**1.26**	**341**	P	**Pn**	**07 26 57.4**	**-0.5**
JARK	**Aomorirokkasho**	**1.48**	**267**	P	**Pn**	**07 26 59.7**	**-1.1**
JCH	**Churui**	**1.52**	**1**	P	**Pn**	**07 27 01.0**	**-0.5**
JCH				*e*S	**Sn**	**07 27 19.8**	**-0.5**
JANG	**Nango**	**1.55**	**243**	P	**Pn**	**07 27 00.7**	**-1.1**
JANG				*e*S	**Sn**	**07 27 19.7**	**-1.2**
JTM	**Tenmabayashi**	**1.73**	**261**	P	**Pn**	**07 27 04.1**	**-0.2**
JTM				*e*S	**Sn**	**07 27 25.2**	**-0.2**
JOT	**Ohata**	**1.74**	**280**	P	**Pn**	**07 27 03.9**	**-0.5**
JBT2	**Biratori 2**	**1.83**	**337**	P	**Pn**	**07 27 06.1**	**+0.4**
JKB	**Kayabe**	**1.89**	**296**	P	**Pn**	**07 27 06.3**	**-0.2**
JAK	**Akkeshi**	**2.16**	**28**	P	**Pn**	**07 27 09.8**	**-0.4**
JAK				*e*S	**Sn**	**07 27 35.5**	**-0.5**
JAR	**Ashorobuto**	**2.23**	**8**	P	**Pn**	**07 27 10.6**	**-0.6**
JAR				*e*S	**Sn**	**07 27 36.7**	**-1.0**
JEW	**Eniwo**	**2.24**	**322**	P	**Pn**	**07 27 12.1**	**+0.8**
JOM	**Ohasama**	**2.24**	**224**	P	**Pn**	**07 27 11.5**	**+0.2**
JMK	**Ichinoseki**	**2.68**	**218**	P	**Pn**	**07 27 17.6**	**+0.3**
ASAJ	**Asahikawa**	**3.07**	**350**	P	**Pn**	**07 27 24.8**	**+2.1**
	1.2nm,0.3s,baz=200,slow=9.8,SNR=6.9						
MJAR	**Matsushiro Arr**	**6.04**	**223**	P	**Pn**	**07 28 04.9**	**+1.2**
	0.1nm,0.3s,baz=27,slow=14,SNR=2.3						
SONM	**Songino Array**	**27.01**	**297**	P	**P**	**07 32 16.5**	**+0.8**
	0.7nm,0.8s,baz=100,slow=7.5,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**29.27**	**130**	T	T	08 03 25.6	
	baz=322,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**29.28**	**130**	T	T	08 03 43.8	
	baz=322,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**29.29**	**130**	T	T	08 03 34.2	
	baz=322,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**30.12**	**131**	T	T	08 04 34.6	
	baz=324						
H11S3	**WAKE ISLAND Hy**	**30.13**	**131**	T	T	08 04 49.3	
	baz=324						
H11S2	**WAKE ISLAND Hy**	**30.14**	**131**	T	T	08 04 40.1	
	baz=324						
ZALV	**Zalesovo Beam**	**40.40**	**309**	P	**P**	**07 34 13.9**	**+2.6**
	1.4nm,0.5s,baz=94,slow=9.3,SNR=5.8						
MKAR	**Makanchi Array**	**43.34**	**299**	P	**P**	**07 34 34.8**	**-0.8**
	0.3nm,0.5s,baz=81,slow=10,SNR=4.9						
WRA	**Warramunga Arr**	**61.29**	**190**	P	**P**	**07 36 48.3**	**-0.5**
	0.1nm,0.4s,baz=7.3,slow=7.1,SNR=1.6						
FINES	**FINESS Array B**	**65.92**	**332**	P	**P**	**07 37 18.3**	**-0.6**
	3.2nm,1.0s,baz=45,slow=8.6,SNR=5.6						

*IDC **15** 07:30:14.3±1.4,39°.32N×28°.94E,h0km,mb3.5/4, mb1 3.6/7,mb1mx3.4/53,mbtmp3.5/7,ML3.3/3,Error ellipse: s-maj=21.4km s-min=15.3km az=21.0*
*DDA **15** 07:30:15.4,39°.33N×29°.00E,h12km±1km,MW4.0*
*ISK **15** 07:30:15.4,39°.35N×29°.02E,h8km,ML3.8/47*

ISC 15 07:30:16.1±0.9,39°.36N±0°.02×29°.00E±0°.02,h12km±7km, n109,σ1°.41/138,mb3.5/4,24C-7D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIMA	**Simav-Kutahya**	**0.27**	**183**	PG	**Pg**	**07 30 21.5**	**-0.2**
SIMA				SG	**Sg**	**07 30 25.5**	**0.0**
TVSB	**Tavsanli**	**0.37**	**75**	PG	**Pg**	**07 30 22.9**	**-0.6**
TVSB				SG	**Sg**	**07 30 28.1**	**-0.3**
SHAP	**Saphane-Kutahy**	**0.38**	**153**	PG	**Pg**	**07 30 23.3**	**-0.3**
DST	**Dursunbey**	**0.39**	**310**	PG	**Pg**	**07 30 23.5**	**-0.3**
GEDZ	**Gediz**	**0.45**	**134**	PG	**Pg**	**07 30 24.5**	**-0.4**
GDZ	**Gediz**	**0.46**	**126**	⇑*i*P	**Pg**	**07 30 24.6**	**-0.5**
GDZ				*i* S	**Sg**	**07 30 31.1**	**-0.2**
GDZ				IAML		07 30 34.0	
	comp=N,400nm,0.5s						
GDZ				IAML		07 30 37.0	
	comp=E,521nm,0.5s						
USAK	**Uak-Merkez**	**0.64**	**179**	⇑*i*P	**Pg**	**07 30 28.0**	**-0.6**
USAK				*i* S	**Sg**	**07 30 36.4**	**-0.6**
USAK				IAML		07 30 39.0	
	comp=N,2μm,0.4s						
USAK				IAML		07 30 41.0	
	comp=E,4μm,0.3s						
ORLT	**Orhaneli**	**0.69**	**353**	PG	**Pg**	**07 30 29.1**	**-0.4**
KULA	**Kula-Manisa**	**0.88**	**198**	PG	**Pb**	**07 30 32.6**	**-0.8**
BALB	**Balikesir**	**0.91**	**288**	PG	**Pn**	**07 30 34.7**	**-0.1**
IGD	**Bursa**	**0.92**	**10**	⇑*i*P	**Pg**	**07 30 33.0**	**-0.8**
IGD				*i* S	**Sn**	**07 30 48.4**	**+0.4**
IGD				IAML		07 30 49.0	
	comp=N,2μm,0.6s						
IGD				IAML		07 30 49.0	
	comp=E,2μm,0.2s						
MANT	**Manisa**	**0.93**	**202**	⇑*i*P	**Pg**	**07 30 33.3**	**-0.7**
MANT				*i* S	**Sg**	**07 30 45.3**	**-0.9**
MANT				IAML		07 30 47.0	
	comp=E,2μm,0.3s						
MANT				IAML		07 30 49.0	
	comp=N,1μm,0.7s						
AUBOZ	**BOZOYUK**	**0.97**	**55**	⇑*i*P	**Pg**	**07 30 33.6**	**-1.2**
AUBOZ				*i* S	**Sb**	**07 30 48.9**	**+1.2**
AUBOZ				IAML		07 30 51.0	
	comp=N,4μm,0.5s						
AUBOZ				IAML		07 30 52.0	
	comp=E,5μm,0.5s						
STEP	**BALIKESIR_Sava**	**0.99**	**272**	⇑*i*P	**Pb**	**07 30 35.1**	**-0.2**
STEP				*i* S	**Sb**	**07 30 49.3**	**+0.9**
STEP				IAML		07 30 52.0	
	comp=N,4μm,0.8s						
STEP				IAML		07 30 52.0	
	comp=E,3μm,0.2s						
MDNY	**Mudanya-Bursa**	**1.01**	**355**	PG	**Pg**	**07 30 35.1**	**-0.5**
AKHS	**Akhisar**	**1.04**	**243**	⇑*i*P	**Pb**	**07 30 35.9**	**-0.1**
AKHS				*i* S	**Sb**	**07 30 50.3**	**+0.6**
AKHS				IAML		07 30 52.0	
	comp=E,996nm,0.4s						
AKS	**Akhisar**	**1.04**	**243**	PG	**Pg**	**07 30 35.6**	**-0.5**
CAVI	**Cavuskoy**	**1.06**	**37**	PG	**Pg**	**07 30 35.6**	**-1.0**
GOMA	**Golmarmara-Man**	**1.06**	**233**	PG	**Pb**	**07 30 36.3**	**-0.1**
GEMT	**Gemlik**	**1.09**	**8**	PN	**Pb**	**07 30 37.2**	**+0.4**
GEMT				SN	**Sn**	**07 30 52.6**	**+0.4**
KHL	**Karahalli**	**1.11**	**158**	PN	**Pb**	**07 30 37.0**	**-0.3**
BALY	**Balya**	**1.14**	**290**	⇑*i*P	**Pb**	**07 30 37.7**	**+0.1**
BALY				*i* S	**Sb**	**07 30 53.3**	**+0.9**
BALY				IAML		07 31 00.0	
	comp=E,775nm,1.0s						
BALY				IAML		07 31 03.0	
	comp=N,764nm,0.6s						
AFYO	**Afyonkarahisar**	**1.16**	**119**	*i* P	**Pn**	**07 30 38.8**	**+0.6**
AFYO				*i* S	**Sn**	**07 30 56.5**	**+2.4**
AFYO				IAML		07 30 57.0	
	comp=N,2μm,0.6s						
AFYO				IAML		07 30 57.0	
	comp=E,4μm,0.5s						
AUKIR	**Kirka- Seyitga**	**1.19**	**93**	*i* P	**Pn**	**07 30 38.9**	**+0.2**
AUKIR				*i* S	**Sb**	**07 30 54.2**	**+0.2**
AUKIR				IAML		07 31 00.0	
	comp=E,2μm,0.5s						
AUKIR				IAML		07 31 02.0	
	comp=N,2μm,0.4s						
ARMT	**Armutlu**	**1.21**	**355**	PN	**Pg**	**07 30 38.8**	**-0.6**
ADVT	**Abdulvahap**	**1.22**	**28**	PN	**Pg**	**07 30 38.5**	**-0.9**
ADVT				SN	**Sn**	**07 30 56.4**	**+1.1**
GONE	**Gonen-Balikesi**	**1.23**	**305**	PN	**Pn**	**07 30 39.5**	**+0.4**
BORA	**Eskisehir**	**1.24**	**65**	⇑*i*P	**Pg**	**07 30 38.3**	**-1.5**
BORA				*i* S	**Sb**	**07 30 56.0**	**+0.6**
BORA				IAML		07 30 59.0	
	comp=N,887nm,0.4s						
BORA				IAML		07 30 59.0	
	comp=E,984nm,0.3s						
EDC	**Edincik**	**1.32**	**319**	PN	**Pn**	**07 30 40.9**	**+0.5**
GPA	**Golpazari**	**1.37**	**47**	PN	**Pn**	**07 30 41.4**	**+0.3**
GPA				SN	**Sn**	**07 31 00.3**	**+1.1**
KZIL	**AFYON_Kizioren**	**1.41**	**141**	*i* P	**Pg**	**07 30 42.8**	**-0.4**
KZIL				*i* S	**Sn**	**07 31 00.8**	**+0.4**
KZIL				IAML		07 31 04.0	
	comp=N,437nm,0.4s						
KZIL				IAML		07 31 08.0	
	comp=E,463nm,0.5s						
SRCK	**Saricakaya, Es**	**1.43**	**61**	PN	**Pn**	**07 30 42.1**	**+0.2**
SHUT	**Suhut-Afyon**	**1.45**	**123**	PN	**Pn**	**07 30 42.2**	**-0.1**
GEYV	**SAKARYA_Geyve**	**1.50**	**41**	*i* P	**Pn**	**07 30 43.5**	**+0.6**
GEYV				*i* S	**Sg**	**

DGB	**zmir**	**2.11**	**232**	*i* P	**Pg**	**07 30 56.1**	**-0.4**
DGB				IAML		07 31 29.0	
	comp=N,171nm,0.4s						
DGB				IAML		07 31 30.0	
	comp=E,198nm,0.6s						
EZN	**Ezine**	**2.12**	**284**	PN	**Pn**	**07 30 52.0**	**+0.6**
URLA	**Izmir**	**2.13**	**243**	PN	**Pn**	**07 30 52.2**	**+0.7**
GCAM	**G?zelcaml?**	**2.16**	**221**	PN	**Pn**	**07 30 52.5**	**+0.6**
GCAM	**G?zelcaml?**	**2.16**	**221**	*i* P	**Pg**	**07 30 56.6**	**-0.9**
GCAM				IAML		07 31 33.0	
	comp=N,279nm,1.2s						
GCAM				IAML		07 31 35.0	
	comp=E,162nm,0.8s						
MLSB	**Milas**	**2.27**	**205**	PN	**Pn**	**07 30 54.0**	**+0.5**
YER	**Yerkesik**	**2.29**	**195**	PN	**Pn**	**07 30 53.6**	**-0.2**
CAME	**Cameli-Denizli**	**2.42**	**174**	PN	**Pn**	**07 30 56.1**	**+0.4**
KIBS	**BOLU**	**2.44**	**63**	*i* P	**Pg**	**07 31 01.5**	**-1.3**
FETY	**Fethiye**	**2.72**	**179**	*i* P	**Pn**	**07 30 58.9**	**-0.7**
APE	**Apeiranthos**	**3.56**	**231**	⇑P	**Pg**	**07 31 23.1**	**-1.3**
APE	**Apeiranthos**	**3.56**	**231**	⇑S	**Sb**	**07 32 03.4**	**+1.1**
BRTR	**Keskin Array B**	**3.60**	**83**	Pn	**Pn**	**07 31 12.3**	**+0.4**
	comp=E,1.7nm,0.3s,baz=258,slow=12,SNR=21						
BRTR				Pg	**Pg**	**07 31 23.4**	**-1.8**
	comp=E,3.9nm,0.3s,baz=255,slow=16,SNR=24						
BRTR				Sn	**Sn**	**07 31 53.2**	**-1.3**
	comp=E,2.6nm,0.3s,baz=115,slow=8.8,SNR=5.5						
BRTR				Lg	Lg	07 32 12.9	
	comp=E,3.0nm,0.3s,baz=261,slow=21,SNR=3.3						
RZN	**Rozhen**	**4.01**	**307**	*i* P	**Pn**	**07 31 18.6**	**+1.1**
PLD	**Plovdiv**	**4.27**	**311**	*e*P	**Pn**	**07 31 21.0**	**+0.1**
MMB	**Musomiste**	**4.60**	**301**	*e*P	Pg	07 31 51.0	+6.9
RAZG	**Razgrad**	**4.60**	**337**	⇓P	**Pn**	**07 31 26.7**	**+1.1**
RAZG	**Razgrad**	**4.60**	**337**	⇓S	**Sn**	**07 32 13.6**	**-5.3**
BZK	**Bozkurt**	**4.61**	**54**	⇑P	**Pg**	**07 31 43.1**	**-1.2**
TIRR	**Tirgusor**	**5.12**	**355**	⇑S	**Sn**	**07 32 30.0**	**-1.5**
TIRR	**Tirgusor**	**5.12**	**355**	*i* P	**Pn**	**07 31 32.4**	**-0.1**
DIKM	**Dikmen**	**5.29**	**62**	⇑P	**Pg**	**07 31 53.4**	**-4.0**
DIKM				⇑S	**Sg**	**07 33 01.1**	**-4.8**
TPGR	**Topolog**	**5.51**	**356**	⇓P	**Pn**	**07 31 42.8**	**+4.8**
STIP	**Stip**	**5.69**	**296**	*i* Pn	**Pn**	**07 31 40.1**	**-0.4**
PGOR	**Pogoanele**	**5.75**	**346**	⇓P	**Pn**	**07 31 43.7**	**+2.5**
TLCR		**5.83**	**359**	⇓P	Pn	07 31 47.6	+5.3
CFR	**Carcaliu**	**5.85**	**354**	⇓P	**Pn**	**07 31 46.6**	**+3.9**
BISRR	**Bisoca**	**6.41**	**345**	⇑P	**Pn**	**07 31 53.3**	**+2.8**
MLR	**Muntele Rosu**	**6.53**	**341**	Pn	**Pn**	**07 31 53.5**	**+1.4**
	comp=E,0.2nm,0.3s,baz=191,slow=10,SNR=2.7						
MLR				Lg	Lg	07 33 44.8	
	comp=E,0.2nm,0.3s,baz=68,slow=16,SNR=4.1						
MLR	**Muntele Rosu**	**6.53**	**341**	⇑P	**Pn**	**07 31 54.8**	**+2.7**
PLOR	**Plostina**	**6.72**	**346**	⇑P	**Pn**	**07 31 58.0**	**+3.4**
VRI	**Vrincioaia**	**6.72**	**346**	⇑P	**Pn**	**07 31 57.7**	**+3.1**
VOIR		**6.74**	**336**	⇑P	**Pn**	**07 31 56.0**	**+1.1**
ARR	**Arges**	**6.82**	**333**	⇑P	**Pn**	**07 31 57.7**	**+1.7**
HERR	**Herculane**	**7.38**	**321**	⇑P	**Pn**	**07 32 03.8**	**+0.2**
GZR	**Gura Zlata**	**7.59**	**325**	⇑P	**Pn**	**07 32 07.6**	**+1.0**
BIZ	**Bicaz**	**7.87**	**345**	⇑P	**Pn**	**07 32 13.1**	**+2.8**
MMAI	**Mount Meron Ar**	**8.17**	**139**	Pn	**Pn**	**07 32 15.3**	**+0.7**
	comp=E,1.2nm,0.3s,baz=324,slow=11,SNR=5.0						
SORM	**Soroca**	**8.79**	**357**	⇓P	**Pn**	**07 32 27.0**	**+4.1**
FINES	**FINESS Array B**	**22.19**	**356**	P	**P**	**07 35 10.3**	**-1.6**
	comp=E,3.4nm,1.0s,baz=166,slow=13,SNR=2.6						
AKTO	**Aktyubinsk**	**23.20**	**52**	P	**P**	**07 35 23.3**	**+0.6**
	comp=E,1.4nm,0.6s,baz=257,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**35.53**	**230**	P	**P**	**07 37 13.1**	**0.0**
	comp=E,0.3nm,0.6s,baz=42,slow=8.8,SNR=2.2						
MKAR	**Makanchi Array**	**38.98**	**61**	P	**P**	**07 37 41.9**	**-0.2**
	comp=E,0.2nm,0.5s,baz=273,slow=7.4,SNR=2.3						

IDC ***15*** *07:31:23.6±5.2, 40.°78N×143.°98E, h0km, mb3.8/4, mb1 3.7/6, mb1mx3.4/57, mbtmp3.7/6, ML2.9/2, Error ellipse: s-maj=101.6km s-min=38.0km az=113.0*
JMA ***15*** *07:31:31.6±0.1, 41.°09N×143.°26E, h42km, M3.2*

ISC 15 07:31:29.6±2.1, 41.°05N±0.°06×143.°37E±0.°07, h16km±12km, n29, σ1§00/33, mb3.7/4, 1D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	**Erimo**	**0.98**	**351**	P	**Pg**	**07 31 48.4**	**-0.2**
JEM				*e*S	**Sb**	**07 31 59.8**	**-1.0**
JTHR	**Tokachihiroo**	**1.24**	**357**	P	**Pn**	**07 31 52.5**	**+0.2**
JNBK	**Urakawa-nobuka**	**1.31**	**340**	P	**Pn**	**07 31 53.2**	**-0.1**
JARK	**Aomorirokkasho**	**1.52**	**269**	P	**Pn**	**07 31 55.6**	**-0.5**
JARK				*e*S	**Sn**	**07 32 14.1**	**-1.4**
JCH	**Churui**	**1.56**	**360**	P	**Pn**	**07 31 56.8**	**+0.1**
JCH				*e*S	**Sn**	**07 32 16.1**	**-0.5**
JANG	**Nango**	**1.56**	**245**	P	**Pn**	**07 31 56.5**	**-0.2**
JTM	**Tenmabayashi**	**1.77**	**262**	P	**Pn**	**07 31 59.8**	**+0.3**
JTM				*e*S	**Sn**	**07 32 20.9**	**-0.7**
JOT	**Ohata**	**1.78**	**281**	P	**Pn**	**07 31 59.5**	**-0.2**
JBT2	**Biratori 2**	**1.88**	**337**	P	**Pn**	**07 32 01.6**	**+0.5**
JBT2				*e*S	**Sn**	**07 32 23.6**	**-0.9**
JOB	**Onbets**	**1.88**	**10**	P	**Pn**	**07 32 01.6**	**+0.5**
JOB				*e*S	**Sn**	**07 32 24.3**	**-0.2**
JIAM	**Iburiatsuma**	**1.91**	**326**	P	**Pn**	**07 32 02.1**	**+0.6**
JKB	**Kayabe**	**1.95**	**296**	P	**Pn**	**07 32 01.5**	**-0.5**
JAK	**Akkeshi**	**2.18**	**26**	P	**Pn**	**07 32 05.5**	**+0.3**
JAK				*e*S	**Sn**	**07 32 30.9**	**-0.9**
JOM	**Ohasama**	**2.24**	**226**	P	**Pn**	**07 32 07.2**	**+1.2**
JAH	**Hinai**	**2.25**	**248**	P	**Pn**	**07 32 07.2**	**+1.0**
JAH				*e*S	**Sn**	**07 32 34.5**	**+0.9**
JAR	**Ashorobuto**	**2.27**	**7**	⇓P	**Pn**	**07 32 06.2**	**-0.2**
JAR				*e*S	**Sn**	**07 32 32.2**	**-1.7**
JEW	**Eniwo**	**2.29**	**322**	P	**Pn**	**07 32 08.7**	**+2.0**
ASAJ	**Asahikawa**	**3.12**	**350**	Pn	**Pn**	**07 32 19.8**	**+1.7**
	1.5nm,0.3s,baz=158,slow=11,SNR=1.9						
ASAJ				Sn	**Sn**	**07 32 55.3**	**+0.3**
	1.3nm,0.3s,baz=148,slow=28,SNR=2.0						
MJAR	**Matsushiro Arr**	**6.04**	**224**	Pn	**Pn**	**07 32 57.1**	**-1.2**
	0.1nm,0.3s,baz=34,slow=13,SNR=2.6						
SONM	**Songino Array**	**27.06**	**297**	P	**P**	**07 37 12.3**	**+1.0**
	0.8nm,0.9s,baz=75,slow=7.6,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**29.21**	**130**	T	T	08 08 17.9	
	baz=322						
H11N1	**WAKE ISLAND Hy**	**29.23**	**130**	T	T	08 08 20.3	
	baz=322						
H11N3	**WAKE ISLAND Hy**	**29.23**	**130**	T	T	08 08 20.1	
	baz=322						
H11S1	**WAKE ISLAND Hy**	**30.07**	**131**	T	T	08 09 25.6	
	baz=324						
H11S3	**WAKE ISLAND Hy**	**30.07**	**131**	T	T	08 09 31.3	
	baz=324						
H11S2	**WAKE ISLAND Hy**	**30.09**	**131**	T	T	08 09 33.4	
	baz=324						
ZALV	**Zalesovo Beam**	**40.45**	**309**	P	**P**	**07 39 09.3**	**+2.3**
	1.5nm,0.5s,baz=80,slow=7.8,SNR=5.8						
MKAR	**Makanchi Array**	**43.40**	**299**	P	**P**	**07 39 30.5**	**-0.7**
	0.4nm,0.5s,baz=83,slow=9.5,SNR=7.1						
FINES	**FINESS Array B**	**65.98**	**332**	P	**P**	**07 42 14.0**	**-0.6**
	0.8nm,0.6s,baz=57,slow=7.0,SNR=7.4						

IDC 15 07:35:10.0±2.8, 1.°94N×126.°44E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/36, mbtmp3.4/3, Error ellipse: s-maj=269.7km s-min=27.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.09**	**161**	P	P	07 40 16.9	-0.7
	0.4nm,0.4s,baz=336,slow=9.5,SNR=15						
ASAR	**Alice Springs**	**26.47**	**165**	P	P	07 40 48.8	-0.3
	0.3nm,0.5s,baz=345,slow=7.5,SNR=8.7						
MKAR	**Makanchi Array**	**58.86**	**326**	P	P	07 45 11.6	+1.0
	0.2nm,0.4s,baz=112,slow=6.3,SNR=3.1						

IDC ***15*** *07:36:32.1±2.0, 1.°92N×126.°54E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/35, mbtmp3.7/3, Error ellipse: s-maj=173.6km s-min=24.1km az=66.0*
NEIC ***15*** *07:36:36.6±1.0, 1.°86N±0.°03×126.°44E±0.°09, h35km±2km, mb4.0/6, Error ellipse: s-maj=14.8km s-min=5.7km az=92.0*

ISC 15 07:36:37.6±1.0, 1.°8N±0.°1×126.°4E±0.°1, h47km, n16, σ1§23/16, mb3.9/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.39**	**137**		**Pn**	**07 37 00.2**	**-0.4**
LUWI	**Luwuk**	**4.62**	**232**	Pn	**Pn**	**07 37 44.5**	**-0.4**
FAKI	**Fak Fak**	**7.47**	**129**	Pn	**Pn**	**07 38 23.5**	**-0.6**
SAUI	**Saumlaki**	**10.86**	**153**	Pn	**Pn**	**07 39 07.9**	**-2.7**
MMRI	**Maumere**	**11.18**	**202**	Pn	**Pn**	**07 39 16.7**	**+1.8**
WB0	**Warramunga Arr**	**22.81**	**160**	P	**P**	**07 41 37.2**	**+0.5**
WB0				IAmb	IAmb	07 41 43.5	
	comp=Z,3.0nm,0.6s						
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**07 41 38.2**	**0.0**
	comp=Z,1.3nm,0.6s,baz=340,slow=11,SNR=17						
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**07 41 37.9**	**-0.3**
WB2	**Warramunga Arr**	**22.96**	**161**		**P**	**07 41 38.3**	**+0.1**
WB2				IAmb	IAmb	07 41 52.3	
	comp=Z,11nm,1.5s						
ASAR	**Alice Springs**	**26.34**	**164**	P	**P**	**07 42 11.9**	**+2.5**
	comp=Z,0.5nm,0.3s,baz=347,slow=7.6,SNR=6.0						
ASAR	**Alice Springs**	**26.34**	**164**	P	**P**	**07 42 09.7**	**+0.3**
MK31	**Makanchi Array**	**58.97**	**326**	P	**P**	**07 46 32.9**	**+0.4**
MK31				IAmb	IAmb	07 46 56.0	
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**07 46 33.1**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=117,slow=7.3,SNR=10.0						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**07 46 32.0**	**-0.4**
KURK	**Kurchatov**	**63.20**	**328**	P	**P**	**07 47 01.8**	**+0.8**
ABKAR	**Akbulak array**	**73.45**	**321**	P	**P**	**07 48 04.8**	**-0.3**

IDC ***15*** *07:41:57.0±2.5, 9.°47S×112.°85E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.7/33, mbtmp3.8/6, ML3.8/1, MS3.0/1, Ms1 3.2/1, ms1mx2.7/36, Error ellipse: s-maj=118.3km s-min=20.1km az=50.0*
DJA ***15*** *07:42:07.1±1.0, 9.°S±6.°×11.°3E±.°, h10km±5km, M3.8/7, MLv3.8/7*

ISC 15 07:41:59.4±1.5, 9.°52S±0.°08×112.°80E±0.°04, h18km±5km, n15, σ0§94/19, mb4.0/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.39**	**27**	P	**Pg**	**07 42 26.7**	**+0.4**
GMJI				S	**Sn**	**07 42 40.7**	**-1.1**
JAGI	**Jajag, Banyuwa**	**1.69**	**52**	P	**Pg**	**07 42 31.7**	**-0.3**
JAGI				S	**Sb**	**07 42 53.1**	**+2.1**
PWJI	**Pagerwojo**	**1.79**	**326**	P	**Pg**	**07 42 33.7**	**-0.1**
PWJI				S	**Sb**	**07 42 52.5**	**-1.2**
BLJI	**Banyuglugur**	**1.93**	**24**	P	**Pg**	**07 42 36.9**	**+0.3**
ABJI	**Asem Bagus**	**2.22**	**40**	P	**Pg**	**07 42 41.7**	**-0.4**
WOJI	**Wonogiri, Jawa**	**2.50**	**312**	P	**Pb**	**07 42 43.9**	**+0.1**
WOJI				S	**Sb**	**07 43 13.6**	**-0.6**
SRBI	**Singaraja**	**2.78**	**59**	P	**Pb**	**07 42 48.0**	**-0.5**
SRBI				S	**Sb**	**07 43 22.2**	**0.0**
KPJI	**Karang Pucung**	**4.41**	**299**	P	**Pb**	**07 43 17.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**15.09**	**126**	Pn	**Pn**	**07 45 30.8**	**-1.1**
	0.3nm,0.3s,baz=304,slow=11,SNR=8.2						
FITZ				Sn	Sn	07 48 06.7	-12
	0.2nm,0.3s,baz=47,slow=23,SNR=2.0						
WRA	**Warramunga Arr**	**23.23**	**119**	P	**P**	**07 47 05.0**	**-0.8**
	0.4nm,0.5s,baz=292,slow=11,SNR=7.9						
ASAR	**Alice Springs**	**24.58**	**127**	P	**P**	**07 47 19.8**	**+1.2**
	1.8nm,0.7s,baz=306,slow=9.2,SNR=22						
CMAR	**Chiang Mai Arr**	**30.98**	**334**	LR	LR	08 01 45.3	
	comp=Z,29nm,21.4s,baz=95,slow=38						
SONM	**Songino Array**	**57.38**	**355**	P	**P**	**07 51 47.5**	**+0.8**
	0.6nm,0.4s,baz=165,slow=8.0,SNR=5.6						
MKAR	**Makanchi Array**	**62.32**	**337**	P	**P**	**07 52 21.2**	**+0.5**
	0.5nm,0.4s,baz=157,slow=7.2,SNR=6.5						
ZALV	**Zalesovo Beam**	**67.52**	**343**	P	**P**	**07 52 53.9**	**-0.3**
	0.7nm,0.3s,baz=141,slow=5.7,SNR=3.8						

IDC ***15*** *07:44:35.6±1.6, 27.°79N×53.°87E, h0km, mb3.9/3, mb1 3.8/4, mb1mx3.5/42, mbtmp3.8/4, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/39, Error ellipse: s-maj=36.0km s-min=34.3km az=1.0*
THR ***15*** *07:44:36.2±0.7, 27.°75N×54.°11E, h6km±11km, ML3.3*
TEH ***15*** *07:44:37.1, 27.°76N×54.°17E, h7km, ML3.2*

ISC 15 07:44:37.6±0.8, 27.°73N±0.°06×54.°12E±0.°04, h10km, n32, σ1§16/34, mb3.7/3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.23**	**106**	*e*Pg	**Pg**	**07 44 42.1**	**-0.3**
LAR1				*e*		07 44 56.4	
JHRM	**Jahrom**	**0.91**	**328**	*e*Pg	**Pg**	**07 44 54.1**	**-1.0**
JHRM				*e*		07 45 14.8	
LMD1	**Lamerd**	**0.94**	**246**	*e*Pg	**Pg**	**07 44 59.9**	**+0.3**
LMD1				*e*		07 45 19.5	
GHIR	**Ghir-Karzin**	**1.15**	**299**	*e*Pg	**Pb**	**07 44 59.8**	**+0.2**
GHIR				*e*Sg	**Sn**	**07 45 16.3**	**+0.7**
GHIR	**Ghir-Karzin**	**1.15**	**299**	*e*Pn	**Pb**	**07 44 59.8**	**+0.2**
QIR1	**Qir**	**1.21**	**308**	*e*Pg	**Pg**	**07 45 02.1**	**+1.3**
QIR1				*e*		07 45 24.9	
BNDS	**Bandar-Abbas**	**1.85**	**100**	*e*Pn	**Pn**	**07 45 10.3**	**+0.8**
BNDS				Sn	**Sb**	**07 45 36.2**	**+1.4**
BNDS	**Bandar-Abbas**	**1.85**	**100**	*e*Pn	**Pn**	**07 45 10.3**	**+0.8**
GENO	**Geno**	**1.85**	**100**	*e*Pg	**Pn**	**07 45 11.0**	**+1.5**
GENO				*e*		07 45 50.4	
SHI	**Shiraz**	**2.37**	**324**	*e*Pn	**Pn**	**07 45 17.9**	**+1.2**
SHI				*e*		07 46 14.2	
NGRK	**Negar Kerman**	**2.98**	**50**	*e*Pn	**Pn**	**07 45 25.9**	**+0.7**
NGRK				*e*		07 46 28.5	
KHNJ	**Kahnooj**	**3.18**	**85**	*e*Pn	**Pn**	**07 45 29.1**	**+1.4**
KRBR	**Kerman**	**3.22**	**45**	*e*Pn	**Pn**	**07 45 29.8**	**+1.3**
KRBR				IAML		07 46 30.9	
	comp=N,69nm,0.6s						
KRBR	**Kerman**	**3.22**	**45**	*e*Pn	**Pn**	**07 45 29.8**	**+1.3**
TVBK	**TV Kerman**	**3.22**	**45**	*e*Pn	**Pn**	**07 45 29.8**	**+1.2**
TVBK				*e*		07 45 46.6	
KHGB	**Koh Gabri**	**3.34**	**37**	*e*Pn	**Pn**	**07 45 31.5**	**+1.4**
KHGB				*e*		07 46 17.7	
IMEH	**Mehriz**	**3.67**	**7**	*e*Pn	**Pn**	**07 45 36.3**	**+1.7**
ISAD	**Sadrabad**	**4.18**	**355**	*e*Pn	**Pn**	**07 45 43.5**	**+1.8**
IRAM	**Ramesheh**	**4.33**	**340**	*e*Pn	**Pn**	**07 45 43.8**	**0.0**
ICHK	**Chekchek**	**4.50**	**3**	*e*Pn	**Pn**	**07 45 47.1**	**+1.0**
YZKH	**Yazd**	**4.66**	**5**	*e*Pn	**Pn**	**07 45 49.2**	**+1.2**
YZKH	**Yazd**	**4.66**	**5**	*e*Pn	**Pn**	**07 45 49.3**	**+1.2**
NASN	**Na'in**	**5.18**	**348**	*e*Pn	**Pn**	**07 45 56.2**	**+0.8**
NASN	**Na'in**	**5.18**	**348**	*e*Pn	**Pn**	**07 45 56.2**	**+0.8**
TPRV	**Parvadeh(Tabas**	**5.72**	**22**	*e*Pn	**Pn**	**07 46 03.0**	**+0.3**
WSAR	**Wadi Sarin**	**6.05**	**137**	Pn	**Pn**	**07 46 08.8**	**+1.6**
	comp=N,0.7nm,0.3s,baz=312,slow=8.5,SNR=5.2						
WSAR				Sn	**Sn**	**07 47 16.4**	**-0.1**
	comp=N,0.6nm,0.3s,baz=80,slow=2.1,SNR=1.6						
TKDS	**Koohdasht(Taba**	**6.41**	**23**	*e*Pn	**Pn**	**07 46 12.8**	**+0.7**
TNSJ	**Nastanj**	**6.57**	**18**	*e*Pn	**Pn**	**07 46 14.7**	**+0.4**
ZALV	**Zalesovo Beam**	**34.52**	**32**	P	**P**	**07 51 26.2**	**+0.3**
	comp=N,1.6nm,0.5s,baz=240,slow=9.0,SNR=7.1						
ZALV				LR	LR	08 06 25.8	
	comp=N,52nm,18.8s,baz=18,slow=38						
FINES	**FINESS Array B**	**38.57**	**339**	P	**P**	**07 51 58.2**	**-2.1**
	comp=N,0.9nm,0.6s,baz=150,slow=9.2,SNR=1.0						
TORD	**Torodi Ar. Bea**	**50.87**	**264**	P	**P**	**07 53 37.1**	**-1.9**
	comp=N,0.7nm,0.7s,baz=60,slow=7.9,SNR=4.5						
MJAR	**Matsushiro Arr**	**69.64**	**59**	LR	LR	08 32 29.3	
	comp=N,12nm,21.8s,baz=290,slow=41						

IDC 15 07:55:18.8±2.0, 1.°79N×126.°49E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/32, mbtmp3.6/3, Error ellipse: s-maj=179.2km s-min=24.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.93**	**161**	P	P	08 00 24.3	-0.4
	1.3nm,0.6s,baz=339,slow=11,SNR=21						
ASAR	**Alice Springs**	**26.31**	**165**	P	P	08 00 56.9	+0.4
	0.3nm,0.4s,baz=345,slow=12,SNR=7.0						
MKAR	**Makanchi Array**	**59.01**	**326**	P	P	08 05 20.4	-0.1
	0.5nm,0.4s,baz=118,slow=7.8,SNR=10						

IDC 15 08:00:44.0±2.3, 1.°75N×126.°58E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/42, mbtmp3.3/3, Error ellipse: s-maj=184.4km s-min=28.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.87**	**161**	P	P	08 05 49.1	-0.2
	0.8nm,0.7s,baz=340,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**26.25**	**165**	P	P	08 06 21.3	+0.2
	0.2nm,0.4s,baz=347,slow=8.9,SNR=5.7						
MKAR	**Makanchi Array**	**59.09**	**326**	P	P	08 10 46.1	-0.1
	0.1nm,0.3s,baz=128,slow=7.8,SNR=1.9						

IDC ***15*** *08:02:02.3±1.3, 1.°91N×126.°65E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/45, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=101.7km s-min=19.5km az=71.0*
NEIC ***15*** *08:02:07.0±1.8, 1.°90N±0.°09×126.°41E±0.°09, h29km±6km, mb4.2/14, Error ellipse: s-maj=16.6km s-min=8.2km az=224.0*
DJA ***15*** *08:02:12.3±0.4, 1.°N±4.°×12.°7E±.°, h10km, M4.5/6, mb5.4/2, MLv4.0/6*

ISC 15 08:02:04.4±0.6, 1.°96N±0.°06×126.°50E±0.°07, h10km, n38, σ1§11/35, mb4.2/10, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.46**	**144**	P	**Pn**	**08 02 30.5**	**-0.4**
TNTI	**Ternate**	**1.46**	**144**		**Pb**	**08 02 31.2**	**-0.5**
TNTI				Sn	**Sg**	**08 02 51.0**	**-0.5**
SGSI	**Sangihe**	**1.97**	**331**	P	Pg	08 02 54.7	+12
LBMI	**Labuha**	**2.77**	**159**	P	**Pg**	**08 03 00.3**	**+2.9**
KMSI	**Cibinong**	**2.87**	**241**	P	**Pg**	**08 03 01.0**	**+1.6**
GTOI	**Gorontalo**	**3.73**	**249**	P	Pg	08 03 27.2	+11
DDMP	**Don Marcelino,**	**4.20**	**349**	*e*P	**Pn**	**08 03 06.7**	**-1.8**
DDMP				*e*S	**Sn**	**08 03 59.1**	**+1.5**
MRSI	**Marisa**	**4.79**	**252**	P	Pb	08 03 23.2	-5.3
SKMP	**Bagumbayan, Su**	**4.94**	**337**	*e*P	**Pn**	**08 03 19.9**	**+1.3**
KCP	**Kidapawan**	**5.21**	**344**	⇑*e*P	Pb	08 03 31.2	-4.6
MPSI	**Mapaga**	**6.79**	**256**	P	Pn	08 03 52.9	+8.7
	0.0nm9.8nm,0.8s						
FAKI	**Fak Fak**	**7.52**	**130**	Pn	**Pn**	**08 03 55.1**	**+1.0**
MYLDM	**Lahad Datu**	**8.60**	**292**	Pn	**Pn**	**08 04 08.9**	**-0.2**
KAPI	**Kappang**	**9.66**	**224**	Pn	**Pn**	**08 04 23.3**	**-0.3**
WSI	**Waingapu**	**10.10**	**208**	P	P	08 05 15.4	-5.6
JAGI	**Jajag, Banyuwa**	**16.09**	**230**	Pn	**Pn**	**08 05 49.2**	**-1.7**
KNRA	**Kununurra**	**17.66**	**173**	P	**Pn**	**08 06 09.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**19.95**	**182**	P	**P**	**08 06 36.0**	**-0.8**
	0.1nm,0.3s,baz=11,slow=11,SNR=1.6						
FITZ	**Fitzroy Crossi**	**19.95**	**182**	P	**P**	**08 06 36.2**	**-0.5**
YULB	**Yu-li**	**21.90**	**347**	P	**P**	**08 06 58.0**	**+0.1**
WB0	**Warramunga Arr**	**22.94**	**161**	P	**P**	**08 07 07.6**	**-1.4**
WB0				IAmb	IAmb	08 07 11.0	
	comp=Z,4.4nm,0.6s						
WRAB	**Tennant Creek**	**23.08**	**161**	P	**P**	**08 07 08.9**	**-1.5**
WRAB				IAmb	IAmb	08 07 14.6	
	comp=Z,4.9nm,0.5s						
WRA	**Warramunga Arr**	**23.08**	**161**	P	**P**	**08 07 08.6**	**-1.9**
	comp=Z,2.9nm,0.5s,baz=340,slow=11,SNR=26						
WRA	**Warramunga Arr**	**23.08**	**161**	P	**P**	**08 07 10.2**	**-0.2**
WB2	**Warramunga Arr**	**23.09**	**161**	P	**P**	**08 07 09.3**	**-1.2**
WB2				IAmb	IAmb	08 07 17.3	
	comp=Z,7.8nm,1.0s						
AS31	**Alice Springs**	**26.47**	**165**	P	**P**	**08 07 40.9**	**-1.1**
ASAR	**Alice Springs**	**26.47**	**165**	P	**P**	**08 07 40.5**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=344,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**08 11 06.7**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=338,slow=2.0,SNR=1.4						
ASAR	**Alice Springs**	**26.47**	**165**	P	**P**	**08 07 41.8**	**-0.2**
STKA	**Stephens Creek**	**36.57**	**158**	P	**P**	**08 09 11.0**	**+0.3**
SONM	**Songino Array**	**48.90**	**342**	P	**P**	**08 10 50.5**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=150,slow=6.1,SNR=3.7						
SONM	**Songino Array**	**48.90**	**342**	P	**P**	**08 10 51.3**	**+0.7**
FUNA	**Funafuti**	**53.55**	**102**	P	**P**	**08 11 25.7**	**-0.3**
MK31	**Makanchi Array**	**58.88**	**326**	P	**P**	**08 12

VNDA					IAmb	IAmb	08 22 23.0	
	comp=Z,3.4nm,1.4s							
IMAR	**Indian Mountai**	**84.23**	**24**	P	**P**		**08 22 13.6**	**-1.1**

*ISK **15** 08:11:31.2,38.99N×23.65E,h15km,ML3.6/20*
*ATH **15** 08:11:31.3,38.99N×23.70E,h24km,ML3.7/31,Error ellipse: s-maj=0.8km s-min=0.6km az=219.0*
*IDC **15** 08:11:31.2±1.2,38.92N×23.62E,h0km,mb3.5/4, mb1 3.7/6,mb1mx3.4/43,mbtmp3.6/6,ML3.9/2,Error ellipse: s-maj=31.2km s-min=16.3km az=112.0*
*THE **15** 08:11:32.1,38.98N×23.67E,h13km±1km,ML3.6/12,Error ellipse: s-maj=1.0km s-min=0.5km az=291.0*

ISC 15 08:11:32.2±0.8,38.98N±0.02×23.67E±0.02,h12km±6km, n136,σ0.91/181,mb3.4/4,11C-9D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALNA	**Alonissos**	**0.23**	**42**	P	**Pg**	**08 11 37.1**	**+0.1**
ALNA				S	**Sg**	**08 11 40.9**	**+0.6**
ALNA				AML	AML	08 11 41.3	
ALNA				AML	AML	08 11 41.4	
AOS	**Alonnisos**	**0.25**	**40**	P	**Pg**	**08 11 37.1**	**-0.3**
AOS				S	**Sg**	**08 11 41.2**	**+0.1**
AOS				AML	AML	08 11 41.3	
	comp=N,68860μm,0.7s						
AOS				AML	AML	08 11 41.8	
	comp=E,75446μm,0.4s						
AOS	**Alonnisos**	**0.25**	**40**	PG	**Pg**	**08 11 37.2**	**-0.3**
AOS				SG	**Sg**	**08 11 41.1**	**+0.1**
AOS	**Alonnisos**	**0.25**	**40**	P	**Pg**	**08 11 37.2**	**-0.3**
AOS				S	**Sg**	**08 11 40.7**	**-0.3**
	comp=E,36μm,0.6s						
NEO	**Neokhori**	**0.48**	**314**	P	**Pg**	**08 11 41.2**	**-0.4**
NEO				S	**Sg**	**08 11 48.4**	**+0.5**
NEO				AML	AML	08 11 49.5	
	comp=N,28348μm,0.4s						
NEO				AML	AML	08 11 50.0	
	comp=E,18987μm,0.2s						
NEO	**Neokhori**	**0.48**	**314**	P	**Pg**	**08 11 41.6**	**0.0**
NEO				S	**Sg**	**08 11 48.6**	**+0.6**
	comp=E,12μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.48**	**136**	P	**Pg**	**08 11 41.6**	**0.0**
KYMI				S	**Sg**	**08 11 48.1**	**+0.1**
KYMI				AML	AML	08 11 48.6	
	comp=N,13812μm,0.5s						
KYMI				AML	AML	08 11 49.0	
	comp=E,17683μm,0.3s						
KYMI	**Kymi, Euboea I**	**0.48**	**136**	P	**Pg**	**08 11 41.6**	**0.0**
KYMI				S	**Sg**	**08 11 48.4**	**+0.4**
	comp=E,8μm,0.4s						
XOR	**Xorichti**	**0.54**	**316**	P	**Pg**	**08 11 42.4**	**-0.3**
XOR				S	**Sg**	**08 11 49.9**	**0.0**
XOR				AML	AML	08 11 53.7	
	comp=N,12540μm,0.3s						
XOR				AML	AML	08 11 53.8	
	comp=E,10184μm,0.3s						
XOR	**Xorichti**	**0.54**	**316**	P	**Pg**	**08 11 42.9**	**+0.2**
XOR				S	**Sg**	**08 11 49.7**	**-0.1**
	comp=E,6μm,0.3s						
ATAL	**Atalanti**	**0.58**	**241**	P	**Pg**	**08 11 43.3**	**-0.2**
ATAL				AML	AML	08 11 52.2	
	comp=E,15206μm,0.5s						
ATAL				S	**Sb**	**08 11 52.3**	**-0.2**
ATAL				AML	AML	08 11 56.0	
	comp=N,18405μm,0.4s						
LKR	**Lokris**	**0.62**	**238**	P	**Pg**	**08 11 44.0**	**-0.2**
LKR				S	**Sg**	**08 11 52.8**	**+0.4**
LKR				AML	AML	08 11 53.8	
	comp=E,15868μm,0.3s						
LKR				AML	AML	08 11 56.3	
	comp=N,10622μm,0.3s						
LKR	**Lokris**	**0.62**	**238**	P	**Pg**	**08 11 44.0**	**-0.2**
LKR				S	**Sg**	**08 11 52.5**	**+0.2**
	comp=N,7μm,0.3s						
VOL2	**Volos**	**0.68**	**305**	P	**Pn**	**08 11 47.8**	**+0.2**
SKY	**Skiros Island**	**0.69**	**98**	P	**Pg**	**08 11 45.6**	**0.0**
SKY				AML	AML	08 11 57.9	
	comp=N,19251μm,0.3s						
SKY				AML	AML	08 11 59.0	
	comp=E,20397μm,0.4s						
SKY	**Skiros Island**	**0.69**	**98**	P	**Pg**	**08 11 45.5**	**-0.1**
SKY				S	**Sg**	**08 11 55.1**	**+0.4**
	comp=E,10μm,0.4s						
AXAR	**Agios Charalam**	**0.82**	**255**	P	**Pg**	**08 11 47.5**	**-0.5**
AXAR				S	**Sb**	**08 12 00.1**	**+0.8**
AXAR				AML	AML	08 12 02.1	
	comp=N,21922μm,0.4s						
AXAR				AML	AML	08 12 04.1	
	comp=E,12814μm,0.3s						
VIL2	**Platees**	**0.83**	**203**	P	**Pg**	**08 11 47.7**	**-0.5**
VIL2				S	**Sn**	**08 12 01.3**	**-0.6**
VIL2				AML	AML	08 12 04.2	
	comp=N,11572μm,0.6s						
VIL2				AML	AML	08 12 04.3	
	comp=E,10066μm,0.4s						
DION	**Dionisos Attik**	**0.92**	**167**	P	**Pg**	**08 11 49.6**	**-0.4**
DION				S	**Sb**	**08 12 02.6**	**+0.3**
DION				AML	AML	08 12 04.7	
DION				AML	AML	08 12 05.7	
	comp=E,68779μm,0.4s						
DION	**Dionisos Attik**	**0.92**	**167**	P	**Pg**	**08 11 49.6**	**-0.4**
DION				S	**Sb**	**08 12 02.6**	**+0.3**
	comp=E,44μm,0.3s						
PTL	**Penteli**	**0.94**	**171**	P	**Pg**	**08 11 49.8**	**-0.5**
PTL				S	**Sb**	**08 12 02.8**	**-0.1**
PTL				AML	AML	08 12 04.8	
	comp=E,28845μm,0.5s						
PTL				AML	AML	08 12 04.8	
	comp=N,8140μm,0.8s						
PAIG	**Paliouri**	**0.95**	**0**	P	**Pg**	**08 11 50.2**	**-0.2**
PAIG	**Paliouri**	**0.95**	**0**	P	**Pg**	**08 11 50.3**	**-0.2**
PAIG				S	**Sb**	**08 12 03.8**	**+0.7**
	comp=N,2μm,0.6s						
ATH	**Athens Observa**	**1.00**	**178**	P	**Pb**	**08 11 50.8**	**-0.6**
ATH				S	**Sb**	**08 12 05.1**	**+0.4**
ATH				AML	AML	08 12 06.6	
	comp=E,18234μm,0.4s						
ATH				AML	AML	08 12 07.3	
	comp=N,14158μm,0.6s						
ATH	**Athens Observa**	**1.00**	**178**	P	**Pb**	**08 11 50.9**	**-0.6**
ATH				S	**Sb**	**08 12 04.9**	**+0.2**
	comp=N,8μm,0.5s						
ATHU	**Athens Univers**	**1.01**	**175**	P	**Pb**	**08 11 50.9**	**-0.7**
ATHU				S	**Sb**	**08 12 05.2**	**+0.2**
ATHU				AML	AML	08 12 06.5	
	comp=E,3477μm,0.4s						
ATHU				AML	AML	08 12 08.1	
	comp=N,4423μm,0.4s						
AGG	**Agios Georgios**	**1.04**	**273**	P	**Pb**	**08 11 51.2**	**-1.0**
AGG				S	**Sn**	**08 12 06.7**	**-0.5**
AGG				AML	AML	08 12 10.2	
	comp=E,4192μm,0.7s						
AGG				AML	AML	08 12 10.8	
	comp=N,3521μm,0.9s						
AGG	**Agios Georgios**	**1.04**	**273**	PG	**Pb**	**08 11 51.1**	**-1.1**
DLFA	**Delphi**	**1.04**	**242**	P	**Pb**	**08 11 51.4**	**-0.9**
DLFA				S	**Sg**	**08 12 06.2**	**+0.3**
DLFA				AML	AML	08 12 07.6	
	comp=E,10032μm,0.5s						
DLFA				AML	AML	08 12 07.6	
	comp=N,10368μm,0.6s						
DSF	**Desfina**	**1.06**	**238**	P	**Pb**	**08 11 51.2**	**-1.3**
DSF				S	**Sn**	**08 12 07.3**	**-0.3**
DSF				AML	AML	08 12 09.7	
	comp=N,9490μm,0.4s						
DSF				AML	AML	08 12 10.3	
	comp=E,7506μm,0.3s						
LTK	**Loutraki**	**1.10**	**210**	P	**Pb**	**08 11 52.3**	**-0.9**
LTK				S	**Sg**	**08 12 07.9**	**+0.1**
KARY	**Karystos**	**1.12**	**147**	P	**Pb**	**08 11 52.7**	**-0.7**
KARY				S	**Sb**	**08 12 07.7**	**-0.3**
KARY				AML	AML	08 12 09.1	
	comp=E,5222μm,0.5s						
KARY				AML	AML	08 12 10.3	
	comp=N,6966μm,0.5s						
VLY	**Voula,Athens**	**1.13**	**175**	P	**Pb**	**08 11 53.3**	**-0.3**
VLY				S	**Sb**	**08 12 08.3**	**+0.1**
VLY				AML	AML	08 12 10.2	
	comp=N,12276μm,0.4s						
VLY				AML	AML	08 12 11.6	
	comp=E,13543μm,0.5s						
LOUT	**Loutraki**	**1.13**	**209**	P	**Pb**	**08 11 52.8**	**-0.8**
LOUT				AML	AML	08 12 12.9	
	comp=N,726μm,0.3s						
LOUT				AML	AML	08 12 14.5	
	comp=E,852μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.20**	**272**	P	**Pn**	**08 11 54.3**	**-0.6**
MAKR				AML	AML	08 12 15.3	
	comp=N,4756μm,0.4s						
MAKR				AML	AML	08 12 17.7	
	comp=E,3653μm,0.3s						
THAL	**Thalero**	**1.23**	**220**	P	**Pb**	**08 11 55.3**	**0.0**
THAL				AML	AML	08 12 17.3	
	comp=N,8036μm,0.4s						
THAL				AML	AML	08 12 21.9	
	comp=E,6376μm,0.3s						
KALE	**Kalithea**	**1.33**	**244**	P	**Pn**	**08 11 56.2**	**-0.5**
KALE				S	**Sg**	**08 12 15.1**	**0.0**
KALE				AML	AML	08 12 18.2	
	comp=E,3345μm,0.4s						
KALE				AML	AML	08 12 22.7	
	comp=N,3840μm,0.5s						
OUR	**Ouranopolis**	**1.38**	**10**	P	**Pn**	**08 11 56.7**	**-0.5**
OUR	**Ouranopolis**	**1.38**	**10**	PN	**Pn**	**08 11 56.5**	**-0.7**
OUR	**Ouranopolis**	**1.38**	**10**	P	**Pn**	**08 11 56.7**	**-0.5**
SERG	**Sergoula**	**1.38**	**246**	P	**Pn**	**08 11 57.5**	**+0.2**
SERG				S	**Sg**	**08 12 16.5**	**-0.2**
SERG				AML	AML	08 12 23.5	
	comp=E,3782μm,0.4s						
SERG				AML	AML	08 12 24.6	
	comp=N,6162μm,0.5s						
TRIZ	**Trizonia**	**1.39**	**244**	P	**Pn**	**08 11 57.3**	**-0.1**
PLG	**Polygyros**	**1.41**	**353**	P	**Pn**	**08 11 56.9**	**-0.7**
PLG				AML	AML	08 12 15.2	
	comp=E,2156μm,0.6s						
PLG				S	**Sn**	**08 12 15.4**	**-0.7**
PLG				AML	AML	08 12 15.9	
	comp=N,2034μm,0.5s						
THL	**Klokotos Trika**	**1.41**	**295**	P	**Pn**	**08 11 57.6**	**-0.1**
ANX	**Ano Chora**	**1.42**	**255**	P	**Pn**	**08 11 58.3**	**+0.4**
ANX				AML	AML	08 12 23.9	
	comp=E,3439μm,0.6s						
ANX				AML	AML	08 12 24.8	
	comp=N,5176μm,0.4s						
EPID	**Epidavros**	**1.43**	**198**	P	**Pn**	**08 11 57.8**	**-0.2**
LIT	**Litokhoron**	**1.45**	**321**	P	**Pn**	**08 11 57.7**	**-0.5**
LIT				AML	AML	08 12 20.6	
	comp=N,1817μm,0.4s						
LIT				AML	AML	08 12 21.5	
	comp=E,1814μm,0.4s						
LIT	**Litokhoron**	**1.45**	**321**	P	**Pn**	**08 11 57.7**	**-0.5**
EVR	**Evrytania**	**1.45**	**268**	P	**Pn**	**08 11 58.8**	**+0.5**
GUR	**Goura**	**1.47**	**225**	P	**Pn**	**08 11 58.8**	**+0.2**
EFP	**Efpalio**	**1.49**	**249**	P	**Pb**	**08 11 59.3**	**-0.4**
EFP				AML	AML	08 12 23.1	
	comp=N,1629μm,0.5s						
EFP				AML	AML	08 12 29.5	
	comp=E,3159μm,0.7s						
LIA	**Limnos Island**	**1.49**	**51**	P	**Pn**	**08 11 58.1**	**-0.6**
LIA				S	**Sb**	**08 12 18.5**	**-0.1**
LIA				AML	AML	08 12 22.2	
	comp=E,2162μm,0.6s						
LIA				AML	AML	08 12 24.4	
	comp=N,3007μm,0.8s						
LIA	**Limnos Island**	**1.49**	**51**	P	**Pn**	**08 11 58.1**	**-0.6**
LIA				S	**Sn**	**08 12 16.7**	**-1.4**
	comp=N,1μm,0.7s						
KLV	**Kalavryta, Ach**	**1.51**	**232**	P	**Pn**	**08 11 59.2**	**0.0**
KLV				AML	AML	08 12 24.4	
	comp=N,1330μm,0.6s						
KLV				AML	AML	08 12 24.7	
	comp=E,1285μm,1.1s						
KRND	**KRANIDI**	**1.64**	**195**	P	**Pn**	**08 12 00.8**	**-0.1**
HORT	**Hortiatis**	**1.68**	**345**	P	**Pn**	**08 12 01.1**	**-0.3**
HORT				S	**Sn**	**08 12 22.3**	**-0.6**
HORT				AML	AML	08 12 22.9	
	comp=E,1619μm,0.5s						
HORT				AML	AML	08 12 23.7	
	comp=N,1357μm,0.5s						
HORT	**Hortiatis**	**1.68**	**345**	PN	**Pn**	**08 12 00.9**	**-0.5**
SIGR	**SIGRI**	**1.72**	**82**	P	**Pn**	**08 12 01.4**	**-0.5**
SIGR	**SIGRI**	**1.72**	**82**	PN	**Pn**	**08 12 01.3**	**-0.5**
SIGR	**SIGRI**	**1.72**	**82**	P	**Pn**	**08 12 01.4**	**-0.5**
SIGR				S	**Sn**	**08 12 23.3**	**-0.4**
	comp=N,550nm,0.6s						
THE	**Thessaloniki**	**1.74**	**342**	P	**Pn**	**08 12 01.8**	**-0.4**
THAS	**Thassos island**	**1.82**	**26**	P	**Pn**	**08 12 02.0**	**-1.3**
TRIP	**Tripoli**	**1.82**	**218**	P	**Pn**	**08 12 04.1**	**+0.8**
DRO	**Drossia**	**1.85**	**237**	P	**Pn**	**08 12 04.6**	**+0.9**
TNSA	**Tinos**	**1.86**	**140**	P	**Pn**	**08 12 04.2**	**+0.5**
SOH	**Sokhos**	**1.86**	**353**	P	**Pn**	**08 12 03.7**	**-0.2**
VLX	**Vlachokerasia**	**1.90**	**213**	P	**Pn**	**08 12 05.2**	**+0.7**
RLS	**Riolos of Patr**	**1.96**	**243**	P	**Pb**	**08 12 06.6**	**-1.2**
KZN	**Kozani**	**1.98**	**313**	P	**Pn**	**08 12 06.3**	**+0.7**
BOZC	**Bozcaada**	**2.04**	**64**	PN	**Pn**	**08 12 05.7**	**-0.6**
SMTH	**Samothraki Isl**	**2.07**	**43**	P	**Pn**	**08 12 05.5**	**-1.3**
GADA	**Gvkgeada**	**2.10**	**54**	PN	**Pn**	**08 12 06.9**	**-0.3**
KAVA	**Kavala**	**2.12**	**18**	P	**Pn**	**08 12 06.3**	**-1.1**
SRS	**Serrai**	**2.14**	**358**	P	**Pn**	**08 12 07.3**	**-0.4**
EZN	**Ezine**	**2.23**	**67**	PN	**Pn**	**08 12 08.6**	**-0.2**
ITM	**Ithomi**	**2.26**	**218**	P	**Pn**	**08 12 11.0**	**+1.6**
VLI	**Veliai**	**2.33**	**195**	P	**Pn**	**08 12 10.3**	**0.0**
URLA	**Izmir**	**2.37**	**104**	PN	**Pn**	**08 12 10.8**	**-0.1**
NVR	**Nevrokopi**	**2.37**	**3**	P	**Pn**	**08 12 10.6**	**-0.4**
APE	**Apeiranthos**	**2.41**	**142**	P	**Pn**	**08 12 11.5**	**0.0**
APE	**Apeiranthos**	**2.41**	**142**	⇑P	**Pb**	**08 12 14.2**	**-1.3**
APE				⇑S	**Sb**	**08 12 45.2**	**+0.2**
APE	**Apeiranthos**	**2.41**	**142**	PN	**Pn**	**08 12 11.8**	**+0.4**
APE	**Apeiranthos**	**2.41**	**142**	P	**Pn**	**08 12 11.4**	**0.0**
APE				S	**Sn**	**08 12 40.0**	**-0.8**
	comp=N,812nm,0.6s						
VAY	**Valandovo**	**2.49**	**341**	*i* Pn	**Pn**	**08 12 13.2**	**+0.8**
PYL	**PYLOS**	**2.58**	**217**	P	**Pn**	**08 12 15.8**	**+2.1**
GELI	**Tayfur-Gelibol**	**2.59**	**56**	PN	**Pn**	**08 12 13.7**	**-0.1**
ENEZ	**Enez**	**2.59**	**47**	PN	**Pn**	**08 12 13.9**	**-0.1**
RDO	**Rodhopi**	**2.60**	**33**	P	**Pn**	**08 12 12.9**	**-1.1**
RDO	**Rodhopi**	**2.60**	**33**	PN	**Pn**	**08 12 13.9**	**-0.1**
MMB	**Musomiste**	**2.61**	**1**	*i* P	**Pn**	**08 12 13.3**	**-0.9**
ALN	**Alexandroupoli**	**2.65**	**43**	PN	**Pn**	**08 12 14.6**	**-0.1**
KTHA	**Kythira Island**	**2.76**	**190**	P	**Pn**	**08 12 16.3**	**+0.1**
KTHA	**Kythira Island**	**2.76**	**190**	PN	**Pn**	**08 12 16.4**	**+0.1**
LPK	**Lapseki**	**2.76**	**59**	PN	**Pn**	**08 12 16.0**	**-0.2**
ERIK	**Erikli-Kesan**	**2.77**	**51**	PN	**Pn**	**08 12 16.2**	**-0.1**
RZN	**Rozhen**	**2.82**	**16**	*i* P	**Pn**	**08 12 16.9**	**-0.4**
KKB	**Krupnik**	**2.92**	**351**	*i* P	**Pn**	**08 12 18.3**	**-0.2**
STIP	**Stip**	**2.94**	**338**	*i* Pn	**Pn**	**08 12 19.0**	**+0.3**
KDZ	**Kurdzhali**	**2.98**	**26**	*i* P	**Pn**	**08 12 17.9**	**-1.4**
OHR	**Ohrid**	**3.07**	**315**	*i* Pn	**Pg**	**08 12 31.5**	**+0.6**
ANKY	**Antikythira Is**	**3.12**	**186**	P	**Pn**	**08 12 21.2**	**0.0**
UKOP	**Uzunkopru-Edir**	**3.13**	**46**	PN	**Pn**	**08 12 21.7**	**+0.4**
BALB	**Balikesir**	**3.33**	**77**	PN	**Pn**	**08 12 24.4**	**+0.3**
RODP	**Rodopos**	**3.41**	**179**	PN	**Pn**	**08 12 26.1**	**+0.9**
MRMT	**Marmara Adasi**	**3.43**	**61**	PN	**Pn**	**08 12 25.6**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**3.47**	**106**	PN	**Pn**	**08 12 26.4**	**+0.3**
IMMV	**Iera Moni Meta**	**3.52**	**176**	PN	**Pn**	**08 12 27.8**	**+1.1**
VTS	**Vitosha**	**3.65**	**355**	*i* P	**Pn**	**08 12 28.7**	**+0.1**
IDI	**Anoyia**	**3.81**	**165**	Pn	**Pn**	**08 12 30.2**	**-0.6**
	comp=N,2.8nm,0.3s,baz=343,slow=13,SNR=13						
IDI				Sn	**Sn**	**08 13 13.0**	**-2.5**
	comp=N,4.0nm,0.3s,baz=345,slow=9.4,SNR=4.4						
IDI	**Anoyia**	**3.81**	**165**	⇓P	**Pn**	**08 12 33.3**	**+2.6**
IDI	**Anoyia**	**3.81**	**165**	PN	**Pn**	**08 12 31.7**	**+1.0**
ZKR	**Zakros**	**4.36**	**151**	PN	**Pn**	**08 12 39.3**	**+1.1**
MPEP	**Malo Peshtene**	**4.37**	**1**	*i* P	**Pn**	**08 12 38.9**	**+0.5**
PDG	**Podgorica**	**4.81**	**317**	⇑P	**Pn**	**08 12 44.6**	**+0.2**
PDG				⇓S	**Sn**	**08 13 38.9**	**-1.1**
TIP	**Timpagrande**	**5.38**	**274**	⇑P	**Pn**	**08 12 52.3**	**0.0**
TIP				⇓S	**Sn**	**08 13 52.6**	**-1.7**
MATE	**Matera**	**5.62**	**289**	⇑P	**Pn**	**08 12 55.4**	**0.0**
MATE				⇑S	**Sn**	**08 13 58.2**	**-1.7**
HERR	**Herculane**	**5.97**	**351**	⇓P	**Pn**	**08 12 59.9**	**-0.5**
LSTV	**Lastovo**	**6.38**	**309**	*e*Pn	**Pn**	**08 13 07.9**	**+1.9**
LSTV					**Sn**	**08 14 14.2**	**-4.5**
ARR	**Arges**	**6.42**	**6**	⇓P	**Pn**	**08 13 06.9**	**+0.3**
GZR	**Gura Zlata**	**6.45**	**354**	⇑P	**Pn**	**08 13 07.3**	**+0.4**
LOT	**Lotru**	**6.47**	**1**	⇑P	**Pn**	**08 13 08.0**	**+0.8**
VOIR		**6.54**	**9**	⇓P	**Pn**	**08 13 08.8**	**+0.6**
MAKA	**Makarska**	**6.61**	**313**	*e*Pn	**Pn**	**08 13 11.0**	**+1.9**
MAKA				Sn	**Sn**	**08 14 19.3**	**-5.1**
MLR	**Muntele Rosu**	**6.72**	**14**	Pn	**Pn**	**08 13 12.6**	**+1.8**
	comp=N,1.8nm,0.3s,baz=157,slow=7.7,SNR=9.1						
MLR				Sn	**Sn**	**08 14 29.2**	**+1.8**
	comp=N,0.2nm,0.3s,baz=222,slow=12,SNR=1.2						
MLR	**Muntele Rosu**	**6.72**	**14**	⇑P	**Pn**	**08 13 11.5**	**+0.7**
TPGR	**Topolog**	**6.86**	**30**	⇓P	**Pn**	**08 13 13.8**	**+1.3**
DOPR	**Dopca**	**7.10**	**10**	⇓P	**Pn**	**08 13 16.8**	**+1.0**
PLOR	**Plostina**	**7.21**	**17**	⇑P	**Pn**	**08 13 18.2**	**+0.8**
VRI	**Vrincioaia**	**7.25**	**17**	⇓P	**Pn**	**08 13 18.8**	**+1.0**
KIJV	**Kijevo**	**7.41**	**315**	*e*Pn	**Pn**	**08 13 20.6**	**+0.5**
DUGI	**Dugi Otok**	**8.18**	**311**	*e*Pn	**Pn**	**08 13 31.0**	**+0.4**
BURAR	**Bucovina Array**	**8.71**	**7**	⇑P	**Pn**	**08 13 38.9**	**+1.0**
ESDC	**Sonseca Array**	**21.36**	**281**	P	**P**	**08 16 20.4**	**+1.1**
	comp=N,0.2nm,0.4s,baz=69,slow=10,SNR=1.5						
TORD	**Torodi Ar. Bea**	**32.25**	**223**	P	**P**	**08 18 00.4**	**-0.2**
	comp=N,0.7nm,0.5s,baz=34,slow=9.0,SNR=6.5						
MKAR	**Makanchi Array**	**42.77**	**60**	P	**P**	**08 19 30.8**	**+1.4**
	comp=N,0.2nm,0.5s,baz=269,slow=8.2,SNR=4.7						
ZALV	**Zalesovo Beam**	**43.31**	**49**	P	**P**	**08 19 35.5**	**+1.9**
	comp=N,0.7nm,0.5s,baz=278,slow=9.8,SNR=2.7						

*IDC **15** 08:11:38.4±0.5,1.80N×126.16E,h0km,mb4.3/22, mb1 4.3/26,mb1mx4.2/42,mbtmp4.3/26,ML4.0/4,Error ellipse: s-maj=24.9km s-min=11.1km az=72.0*
*NEIC **15** 08:11:43.5±2.2,1.69N±0.06×126.38E±0.06,h35km±1km, mb4.6/44,Error ellipse: s-maj=12.0km s-min=7.9km az=225.0*
*KLM **15** 08:11:45.0,1.88N×126.50E,h56km,mb4.7*
*DJA **15** 08:11:45.8±0.3,2.1N±2×12.6E±, h46km±5km,M4.8/12, mB5.1/5,mb5.0/8,MLv4.8/12,Mw(mB)4.4/5*

ISC 15 08:11:44.6±0.3,1.73N±0.04×126.40E±0.05,h47km,n122, σ1.937/118,mb4.4/49,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**135**	P	**Pn**	**08 12 07.6**	**+0.4**
TNTI				S	**Sn**	**08 12 28.8**	**+4.8**
TNTI	**Ternate**	**1.36**	**135**	Pn	**Pn**	**08 12 06.8**	**-0.3**
TNTI				Sn	**Sn**	**08 12 21.9**	**-2.1**
SGSI	**Sangihe**	**2.13**	**336**	P	**Pn**	**08 12 17.9**	**+0.2**
SGSI				S	**Sn**	**08 12 42.3**	**-0.6**
LBMI	**Labuha**	**2.60**	**155**	P	**Pn**	**08 12 27.0**	**+2.8**
KMSI	**Cibinong**	**2.68**	**245**	P	**Pn**	**08 12 26.5**	**+1.2**
GTOI	**Gorontalo**	**3.56**	**252**	P	**Pn**	**08 12 39.2**	**+1.8**
GTOI				S	**Sn**	**08 13 18.3**	**+0.1**
DDMP	**Don Marcelino,**	**4.40**	**351**	*e*P	**Pn**	**08 12 48.3**	**-0.6**
LUWI	**Luwuk**	**4.55**	**233**	P	**Pn**	**08 12 53.3**	**+2.2**
LUWI	**Luwuk**	**4.55**	**233**	Pn	**Pn**	**08 12 49.3**	**-1.7**
MRSI	**Marisa**	**4.63**	**254**	P	**Pn**	**08 12 53.8**	**+1.7**
NLAI	**Namlea**	**4.99**	**172**	P	Pn	08 13 12.8	+16
SKMP	**Bagumbayan, Su**	**5.10**	**339**	*e*P	**Pn**	**08 12 57.4**	**-1.1**
DAV	**Davao City (W)**	**5.36**	**351**	Pn	**Pn**	**08 12 59.7**	**-2.4**
	31nm,0.3s,baz=257,slow=16,SNR=1.1						
DAV				Sn	**Sn**	**08 14 06.8**	**+4.1**
	69nm,0.3s,baz=231,slow=9.8,SNR=1.6						
DAV	**Davao City (W)**	**5.36**	**351**		**Pn**	**08 13 02.9**	**+0.7**
APSI	**Ampana**	**5.43**	**241**	P	Pn	08 13 09.3	+6.3
SIJI	**Sorong**	**5.51**	**118**	Pn	**Pn**	**08 13 04.9**	**+0.7**
	1.1nm,0.3s,baz=214,slow=7.1,SNR=4.8						
BUKP	**Musuan**	**6.25**	**348**	*e*P	Pn	08 13 18.4	+4.0
MPSI	**Mapaga**	**6.65**	**258**	P	Pn	08 13 25.0	+5.2
PAGZ	**Pagadian**	**6.78**	**334**	*e*P	**Pn**	**08 13 19.8**	**-1.8**
FAKI	**Fak Fak**	**7.45**	**128**	Pn	**Pn**	**08 13 29.1**	**-1.7**
TTSI	**Tana Toraja**	**8.11**	**234**	P	**Pn**	**08 13 42.7**	**+2.8**
	0.2nm40nm,0.7s						
MYLDM	**Lahad Datu**	**8.60**	**294**	Pn	**Pn**	**08 13 45.5**	**-1.0**
SPSI	**Sidrap Palu**	**8.71**	**229**	P	**Pn**	**08 13 51.2**	**+3.1**
	0.2nm2μm52nm,0.6s						
BNSI	**Bone**	**8.76**	**226**	P	**Pn**	**08 13 51.0**	**+2.3**
	0.2nm691nm49nm,0.5s						
BKSI	**Bulukumba**	**9.40**	**222**	P	**Pn**	**08 14 01.0**	**+3.4**
	39nm,0.7s						
KAPI	**Kappang**	**9.44**	**225**	Pn	**Pn**	**08 13 56.0**	**-2.0**
	0.5nm,0.3s,baz=66,slow=10.0,SNR=3.2						
KAPI				Sn	**Sn**	**08 15 43.0**	**+0.2**
	1.4nm,0.3s,baz=125,slow=16,SNR=1.8						
KAPI	**Kappang**	**9.44**	**225**	Pn	**Pn**	**08 13 58.1**	**+0.1**
BSSI	**Bau Bau, Buton**	**9.80**	**217**	P	**Pn**	**08 14 05.5**	**+2.5**
	586nm47nm,0.5s						
KKM	**Kota Kinabalu**	**11.03**	**293**	Pn	**Pn**	**08 14 19.8**	**-0.1**
SOEI	**Soe**	**11.61**	**190**	P	Pn	08 14 44.5	+17
SOEI	**Soe**	**11.61**	**190**	Pn	**Pn**	**08 14 25.8**	**-2.1**
MTN	**Manton Dam**	**15.22**	**162**	Pn	**Pn**	**08 15 14.4**	**-2.3**
KSM	**Kuching**	**16.09**	**269**	P	**P**	**08 15 30.0**	**-0.4**
KNRA	**Kununurra**	**17.46**	**172**		**Pn**	**08 15 42.6**	**-2.2**
UGM	**Wanagama**	**18.51**	**239**	P	**Pn**	**08 15 57.3**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.72**	**182**	P	**P**	**08 16 09.8**	**-0.6**
	0.5nm,0.3s,

ARMA	**Armidale**	**40.01**	**145**	P		**P**	**08 19 14.6**	**-0.6**
ARMA				IAmb		IAmb	08 19 42.5	
	comp=Z,20nm,1.4s							
LZH	**Lanzhou**	**40.06**	**331**	*e*P		**P**	**08 19 16.3**	**+0.6**
LZH				pP		pP	08 19 22.5	-5.3
LZH				sP		pwP	08 19 26.3	-3.6
LZH				pmax		pmax		
	comp=Z,16nm,0.9s							
HHC	**Hu-ho-hao-te**	**41.19**	**343**	*e*P		P	08 19 32.6	+7.8
HHC				pmax		pmax		
	comp=Z,19nm,1.1s							
HHC				pmax		pmax		
	comp=Z,89nm,5.4s							
USRK	**Ussuriysk Ar.**	**42.58**	**6**	P		**P**	**08 19 35.8**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=210,slow=7.9,SNR=2.5							
USRK	**Ussuriysk Ar.**	**42.58**	**6**	P		**P**	**08 19 35.7**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**42.86**	**64**	T		T	09 06 41.6	
	baz=252,slow=75,SNR=16							
H11S2	**WAKE ISLAND Hy**	**42.87**	**64**	T		T	09 06 41.1	
	baz=252,slow=75,SNR=6.9							
H11S1	**WAKE ISLAND Hy**	**42.87**	**64**	T		T	09 06 46.5	
	baz=252,slow=75,SNR=4.1							
TOO	**Toolangi**	**42.92**	**158**	P		**P**	**08 19 37.6**	**-1.3**
TOO				IAmb		IAmb	08 19 53.3	
	comp=Z,9.3nm,1.1s							
H11N1	**WAKE ISLAND Hy**	**43.43**	**63**	T		T	09 07 38.5	
	baz=251,slow=75							
H11N2	**WAKE ISLAND Hy**	**43.44**	**63**	T		T	09 07 41.3	
	baz=251							
H11N3	**WAKE ISLAND Hy**	**43.45**	**63**	T		T	09 07 34.0	
	baz=251,slow=75							
GTA	**Gaotai**	**44.65**	**330**	*e*P		**P**	**08 19 52.6**	**-0.2**
GTA				pP		pP	08 20 02.1	-3.1
GTA				sP		pwP	08 20 05.9	-1.3
GTA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
SONM	**Songino Array**	**49.08**	**342**	P		**P**	**08 20 26.4**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=160,slow=8.9,SNR=7.5							
SONM	**Songino Array**	**49.08**	**342**	P		**P**	**08 20 27.1**	**-0.2**
TLY	**Talaya**	**53.32**	**343**	P		**P**	**08 20 58.6**	**-0.3**
TLY				IAmb		IAmb	08 21 11.2	
	comp=Z,6.3nm,1.3s							
PETK	**Petropavlovsk-**	**57.39**	**22**	P		**P**	**08 21 29.0**	**+0.8**
	comp=Z,3.4nm,0.9s,baz=177,slow=4.6,SNR=6.8							
PETK	**Petropavlovsk-**	**57.39**	**22**	P		**P**	**08 21 29.9**	**+1.7**
MK31	**Makanchi Array**	**59.01**	**326**			**P**	**08 21 39.1**	**-0.5**
MK31				IAmb		IAmb	08 21 43.2	
	comp=Z,5.0nm,0.9s							
MKAR	**Makanchi Array**	**59.01**	**326**	P		**P**	**08 21 39.1**	**-0.6**
	comp=Z,5.2nm,0.5s,baz=122,slow=8.1,SNR=50							
MAKZ	**Makanchi**	**59.19**	**326**	P		**P**	**08 21 41.9**	**+1.0**
MAKZ				IAmb		IAmb	08 21 44.4	
	comp=Z,6.0nm,0.9s							
KDJ	**Kajisay**	**59.62**	**319**	P		**P**	**08 21 44.6**	**+0.4**
TUWZ	**Tuamarina**	**60.82**	**141**	P		**P**	**08 21 52.4**	**+0.2**
ZALV	**Zalesovo Beam**	**62.21**	**334**	P		**P**	**08 21 59.5**	**-1.7**
	comp=Z,1.1nm,0.5s,baz=128,slow=9.6,SNR=5.6							
ZALV	**Zalesovo Beam**	**62.21**	**334**	P		**P**	**08 22 01.5**	**+0.2**
GAR	**Garm**	**63.04**	**313**	P		**P**	**08 22 06.6**	**-0.7**
GAR				IAmb		IAmb	08 22 10.0	
	comp=Z,6.0nm,0.8s							
KURK	**Kurchatov**	**63.24**	**328**			**P**	**08 22 07.9**	**-0.3**
KKAR	**Karatay Array**	**64.47**	**318**	P		**P**	**08 22 16.0**	**-0.5**
BVAR	**Borovoye Array**	**68.81**	**328**	P		**P**	**08 22 43.4**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=66,slow=15,SNR=6.9							
BRVK	**Borovoye**	**68.88**	**328**			**P**	**08 22 44.2**	**-0.2**
BRVK				IAmb		IAmb	08 22 50.5	
	comp=Z,2.9nm,0.7s							
NRIK	**Noril'sk**	**72.28**	**346**	P		**P**	**08 23 05.5**	**+0.7**
	comp=Z,3.5nm,0.5s,baz=116,slow=5.0,SNR=10							
SOCY	**Socotra**	**72.44**	**282**	P		**P**	**08 23 07.2**	**+0.2**
ABKAR	**Akbulak array**	**73.48**	**321**	P		**P**	**08 23 12.0**	**-0.3**
AKTO	**Aktyubinsk**	**75.01**	**322**	P		**P**	**08 23 20.9**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=107,slow=11,SNR=6.9							
ARU	**Arti**	**76.44**	**328**	P		**P**	**08 23 28.1**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=72,slow=5.0,SNR=6.0							
HPAH	**Hawaii Prepara**	**78.04**	**70**	P		**P**	**08 23 38.1**	**-1.0**
ABPO	**Ambohimpanom**	**80.33**	**250**	P		**P**	**08 23 53.0**	**+1.3**
ABPO				IAmb		IAmb	08 24 19.5	
	comp=Z,9.1nm,1.2s							
RAYN	**Ar Rayn**	**80.96**	**293**	P		**P**	**08 23 55.2**	**+0.4**
RAYN				IAmb		IAmb	08 23 59.0	
	comp=Z,3.6nm,0.8s							
VNDA	**Vanda**	**81.50**	**173**	P		**P**	**08 23 57.4**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=303,slow=7.7,SNR=3.8							
VNDA	**Vanda**	**81.50**	**173**	P		**P**	**08 23 56.7**	**+0.2**
KIRV	**Kirov**	**81.75**	**329**	P		**P**	**08 23 58.3**	**+0.2**
	comp=Z,8.5nm,0.6s,baz=102,slow=3.2,SNR=4.0							
MAW	**Mawson**	**81.78**	**200**	P		**P**	**08 23 58.6**	**+0.5**
TTA	**Tatalina**	**82.82**	**27**	P		**P**	**08 24 05.8**	**+1.9**
TTA				IAmb		IAmb	08 24 12.4	
	comp=Z,5.5nm,1.2s							
IMAR	**Indian Mountai**	**84.29**	**24**	P		**P**	**08 24 12.0**	**+0.8**
TOLK	**Toolik Lake Re**	**86.21**	**21**	P		**P**	**08 24 21.8**	**+1.0**
ILAR	**Eielson Array**	**87.04**	**25**	P		**P**	**08 24 25.0**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=247,slow=4.5,SNR=4.2							
ILAR	**Eielson Array**	**87.04**	**25**	P		**P**	**08 24 25.8**	**+0.9**
BMAR	**Burnt Mountain**	**88.03**	**23**	P		**P**	**08 24 31.1**	**+1.4**
QSPA	**South Pole Qui**	**91.65**	**180**	P		**P**	**08 24 46.5**	**-0.1**
QSPA				IAmb		IAmb	08 24 57.7	
	comp=Z,7.3nm,1.4s							
ARCES	**ARCESS Array B**	**92.20**	**340**	P		**P**	**08 24 48.8**	**-0.2**
	comp=Z,4.3nm,1.0s,baz=86,slow=6.4,SNR=2.4							
AKASG	**Malin Array Be**	**93.22**	**321**	P		**P**	**08 24 53.8**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=73,slow=4.4,SNR=5.7							
FINES	**FINESS Array B**	**93.42**	**332**	P		**P**	**08 24 53.8**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=69,slow=4.6,SNR=2.6							
TORD	**Torodi Ar. Bea**	**123.20**	**287**	PKP		**PKiKP**	**08 30 37.5**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=32,slow=1.5,SNR=4.2							

*IDC **15** 08:18:47.8±1.6, 1°.81N×126°.29E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/41, mbtmp3.6/4, Error ellipse: s-maj=155.0km s-min=21.3km az=66.0*
*DJA **15** 08:18:53.6±0.6, 2°N±4°×12°6E±°, h62km±22km, M3.5/6, MLv3.5/6*
ISC 15 08:18:53.5±1.1, 1°.6N±0°.1×126°.3E±0°.2, h47km, n7, σ1§58/9, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op		h m s	ISC
TNTI	**Ternate**	**1.39**	**128**	P	**Pn**	**08 19 16.6**	**+0.2**
TNTI				S	**Sn**	**08 19 32.8**	**-0.8**
SGSI	**Sangihe**	**2.17**	**340**	P	**Pn**	**08 19 27.0**	**-0.1**
SGSI				S	**Sn**	**08 19 51.3**	**-1.5**
LBMI	**Labuha**	**2.57**	**152**	P	**Pn**	**08 19 30.8**	**-1.9**
WRA	**Warramunga Arr**	**22.86**	**160**	P	**P**	**08 23 54.2**	**+1.2**
	0.6nm,0.4s,baz=340,slow=11,SNR=15						
ASAR	**Alice Springs**	**26.22**	**164**	P	**P**	**08 24 26.7**	**+2.5**
	0.5nm,0.4s,baz=341,slow=7.7,SNR=8.8						
MKAR	**Makanchi Array**	**59.02**	**326**	P	**P**	**08 28 49.3**	**+0.7**
	0.5nm,0.5s,baz=123,slow=8.4,SNR=5.5						
KURBB	**Kurchatov Arra**	**63.26**	**328**	P	**P**	**08 29 16.4**	**-0.7**
	0.4nm,0.5s,baz=124,slow=5.5,SNR=5.6						

*NEIC **15** 08:24:07.7±1.9, 14°.75N±0°.06×93°.77W±0°.05, h33km±9km, Error ellipse: s-maj=8.6km s-min=6.1km az=204.0*
*MEX **15** 08:24:07.5±0.8, 14°.69N×93°.79W, h16km±16km, MD4.2*
ISC 15 08:24:07.6±1.3, 14°.75N±0°.08×93°.79W±0°.06, h35km, n24, σ1§26/33, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op		h m s	ISC
PCIG		**1.09**	**30**	*i* P	**Pn**	**08 24 25.0**	**-1.4**
PCIG				*i* S	**Sn**	**08 24 38.5**	**-1.8**
PCIG		**1.09**	**30**		**Pn**	**08 24 25.0**	**-1.4**
PCIG					**Sn**	**08 24 38.5**	**-1.8**
THIG		**1.48**	**84**	*i* P	**Pn**	**08 24 30.4**	**-1.2**
THIG				*i* S	**Sn**	**08 24 47.6**	**-2.2**
THIG		**1.48**	**84**		**Pn**	**08 24 30.4**	**-1.2**
THIG					**Sn**	**08 24 47.6**	**-2.2**
RTAL	**Retalhuleu**	**2.04**	**96**	Pn	**Pn**	**08 24 40.1**	**+0.7**
TGIG		**2.11**	**17**	*i* P	**Pn**	**08 24 40.5**	**-0.1**
TGIG				*i* S	**Sn**	**08 25 06.2**	**+0.6**
TGIG		**2.11**	**17**		**Pn**	**08 24 40.5**	**-0.1**
TGIG					**Sn**	**08 25 06.2**	**+0.6**
CCIG	**Comitan**	**2.20**	**46**	*i* P	**Pn**	**08 24 41.9**	**+0.1**
CCIG				*i* S	**Sn**	**08 25 07.3**	**-0.6**
CCIG	**Comitan**	**2.20**	**46**		**Pn**	**08 24 43.9**	**+2.1**
CCIG	**Comitan**	**2.20**	**46**		**Sn**	**08 25 07.3**	**-0.6**
HUEH	**Huehuetenango**	**2.28**	**75**		**Pn**	**08 24 44.1**	**+1.2**
CMIG	**Matias Romero**	**2.56**	**336**	*i* P	**Pn**	**08 24 45.6**	**-1.0**
CMIG				*i* S	**Sn**	**08 25 15.9**	**-0.6**
CMIG	**Matias Romero**	**2.56**	**336**		**Pn**	**08 24 45.6**	**-1.0**
CMIG					**Sn**	**08 25 15.9**	**-0.6**
PETF	**Flores**	**4.34**	**60**	Pn	**Pn**	**08 25 14.0**	**+2.9**
TLIG	**Tlapa**	**5.38**	**302**	Pn	**Pn**	**08 25 26.6**	**+1.1**
TEIG	**Tepich**	**7.57**	**43**	Pn	**Pn**	**08 25 56.3**	**+0.9**
735A	**Kenedy**	**14.52**	**346**	Pn	**Pn**	**08 27 31.5**	**+0.9**
HPIG		**16.42**	**319**		**Pn**	**08 27 56.5**	**+0.9**
HPIG				IAmb	IAmb	08 28 07.1	
	comp=Z,4.2nm,1.5s						
NATX	**Nacogdoches**	**16.95**	**357**		**P**	**08 28 02.6**	**-1.1**
NATX				IAmb	IAmb	08 28 20.3	
	comp=Z,8.6nm,1.0s						
237A	**Washetta, Mont**	**17.27**	**354**		**P**	**08 28 07.7**	**+0.5**
237A				IAmb	IAmb	08 28 07.9	
	comp=Z,8.6nm,0.9s						
656A	**Willston**	**17.88**	**34**	P	**P**	**08 28 14.2**	**+0.2**
656A				IAmb	IAmb	08 28 18.6	
	comp=Z,119nm,1.2s						
250A	**Grady**	**18.47**	**21**	P	**Pn**	**08 28 21.0**	**+0.2**
250A				IAmb	IAmb	08 28 23.7	
	comp=Z,26nm,1.4s						
152A	**Waverly Hall**	**19.65**	**23**	P	**P**	**08 28 33.0**	**-0.4**
MNTX	**Cornudas Mount**	**19.93**	**330**	P	**P**	**08 28 36.3**	**-0.1**

*DJA **15** 08:24:25.6±0.5, 1°N±3°×12°7E±°, h45km±49km, M3.4/7, MLv3.4/7*
*IDC **15** 08:24:31.8±1.7, 1°.98N×126°.40E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/42, mbtmp3.6/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/40, Error ellipse: s-maj=165.2km s-min=21.5km az=66.0*
*NEIC **15** 08:24:36.0±0.5, 1°.9N±0°.1×126°.34E±0°.08, h35km±2km, mb4.2/15, Error ellipse: s-maj=19.2km s-min=11.7km az=206.0*
ISC 15 08:24:37.4±0.7, 1°.81N±0°.06×126°.34E±0°.08, h47km, n27, σ1§34/27, mb4.0/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op		h m s	ISC
TNTI	**Ternate**	**1.46**	**135**	Pn	**Pn**	**08 25 00.9**	**-0.4**
SGSI	**Sangihe**	**2.03**	**337**	P	**Pn**	**08 25 08.2**	**-0.9**
SGSI				S	**Sn**	**08 25 37.5**	**+4.2**
GTOI	**Gorontalo**	**3.52**	**251**	P	**Pn**	**08 25 28.7**	**-0.9**
LUWI	**Luwuk**	**4.55**	**232**	Pn	**Pn**	**08 25 43.5**	**-0.2**
FAKI	**Fak Fak**	**7.55**	**128**	Pn	**Pn**	**08 26 24.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.80**	**182**	P	**P**	**08 29 04.5**	**+0.5**
WB0	**Warramunga Arr**	**22.86**	**160**	P	**P**	**08 29 38.1**	**+1.2**
WB0				IAmb	IAmb	08 29 53.9	
	comp=Z,7.0nm,1.4s						
WRAB	**Tennant Creek**	**23.00**	**160**	P	**P**	**08 29 39.3**	**+1.0**
WRA	**Warramunga Arr**	**23.00**	**160**	P	**P**	**08 29 39.9**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=339,slow=11,SNR=16						
WRA	**Warramunga Arr**	**23.00**	**160**	P	**P**	**08 29 39.7**	**+1.3**
WB2	**Warramunga Arr**	**23.00**	**160**	P	**P**	**08 29 40.3**	**+1.9**
WB2				IAmb	IAmb	08 29 53.7	
	comp=Z,7.9nm,1.2s						
PSA00	**Pilbara Seismi**	**24.09**	**195**	P	**P**	**08 29 49.7**	**+1.0**
PSA00				IAmb	IAmb	08 29 52.2	
	comp=Z,7.2nm,1.1s						
AS31	**Alice Springs**	**26.37**	**164**	P	**P**	**08 30 10.8**	**+1.4**
ASAR	**Alice Springs**	**26.37**	**164**	P	**P**	**08 30 11.1**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=345,slow=7.9,SNR=8.4						
ASAR	**Alice Springs**	**26.37**	**164**	P	**P**	**08 30 10.5**	**+1.0**
RPSI	**Rantau Prapat**	**27.41**	**272**	P	**P**	**08 30 18.7**	**-0.2**
RPSI				IAmb	IAmb	08 30 22.1	
	comp=Z,10.0nm,1.1s						
JCJ	**Chichijima**	**29.38**	**30**	P	**P**	**08 30 34.9**	**-1.3**
MORW	**Morawa**	**32.25**	**197**	P	**P**	**08 31 01.2**	**-0.3**
MORW				IAmb	IAmb	08 31 12.6	
	comp=Z,15nm,1.4s						
MJAR	**Matsushiro Arr**	**36.26**	**16**	LR	LR	08 50 02.6	
	comp=Z,11nm,18.2s,baz=285,slow=42						
MK31	**Makanchi Array**	**58.91**	**326**	P	**P**	**08 34 31.1**	**-0.6**
MK31				IAmb	IAmb	08 34 46.4	
	comp=Z,1.5nm,1.3s						
MKAR	**Makanchi Array**	**58.91**	**326**	P	**P**	**08 34 32.6**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=120,slow=8.5,SNR=4.4						
MKAR	**Makanchi Array**	**58.91**	**326**	P	**P**	**08 34 30.9**	**-0.8**
KDJ	**Kajisay**	**59.52**	**319**	P	**P**	**08 34 35.2**	**-1.1**
ZAA0	**Zalesovo Array**	**62.12**	**334**	P	**P**	**08 34 52.5**	**-0.9**
ZAA0				IAmb	IAmb	08 34 52.6	
	comp=Z,1.1nm,0.5s						
BTK	**Batken**	**62.97**	**315**	P	**P**	**08 34 59.1**	**-0.5**
KURBB	**Kurchatov Arra**	**63.14**	**328**	P	**P**	**08 35 00.1**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=126,slow=6.6,SNR=5.4						
KURK	**Kurchatov**	**63.15**	**328**	P	**P**	**08 34 59.6**	**-0.8**
KURK				IAmb	IAmb	08 35 03.9	
	comp=Z,1.6nm,0.6s						

IDC 15 08:27:42.3±1.9, 15°.06S×174°.94W, h0km, mb3.9/6, mb1 4.2/6, mb1mx3.9/35, mbtmp3.9/6, MS3.3/1, Ms1 3.3/1, ms1mx2.7/37, Error ellipse: s-maj=180.9km s-min=21.5km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.92**	**239**	P	P	08 35 42.7	-0.4
	2.5nm,0.9s,baz=80,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**48.47**	**257**	P	P	08 36 27.2	0.0
	0.8nm,0.5s,baz=91,slow=7.0,SNR=20						
ASAR	**Alice Springs**	**48.80**	**252**	P	P	08 36 29.6	-0.1
	5.0nm,0.7s,baz=88,slow=7.7,SNR=84						
SIJI	**Sorong**	**54.93**	**280**	LR	LR	09 02 44.0	
	comp=Z,28nm,18.4s,baz=306,slow=38						
NVAR	**Mina Array Bea**	**75.08**	**43**	P	P	08 39 26.8	+0.3
	0.6nm,0.8s,baz=232,slow=6.7,SNR=5.5						
TXAR	**Lajitas Array**	**81.67**	**57**	P	P	08 40 03.4	+0.4
	0.4nm,1.0s,baz=225,slow=7.5,SNR=3.3						
PDAR	**Pinedale Array**	**83.02**	**42**	P	P	08 40 09.2	-0.7
	0.4nm,0.6s,baz=238,slow=5.2,SNR=4.5						

*IDC **15** 08:32:33.4±1.9, 1°.62N×125°.97E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/50, mbtmp3.7/3, Error ellipse: s-maj=176.5km s-min=24.0km az=65.0*
*NEIC **15** 08:32:36.2±1.1, 1°.63N±0°.07×126°.13E±0°.05, h35km±2km, mb4.3/13, Error ellipse: s-maj=12.2km s-min=6.6km az=150.0*
*DJA **15** 08:32:36.8±0.5, 2°N±5°×12°7E±°, h10km, M3.6/4, MLv3.6/4*
ISC 15 08:32:36.2±0.6, 1°.63N±0°.07×126°.15E±0°.08, h35km, n23, σ1§23/24, mb4.1/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.48**	**125**	P	**Pn**	**08 33 00.4**	**-0.1**
TNTI	**Ternate**	**1.48**	**125**		**Pn**	**08 33 01.1**	**+0.6**
TNTI				Sn	**Sn**	**08 33 18.8**	**+0.2**
SGSI	**Sangihe**	**2.13**	**343**	P	**Pn**	**08 33 10.6**	**+1.2**
LUWI	**Luwuk**	**4.30**	**232**	Pn	**Pn**	**08 33 39.1**	**-0.1**
KAPI	**Kappang**	**9.19**	**224**	Pn	**Pn**	**08 34 46.9**	**+0.5**
JAGI	**Jajag, Banyuwa**	**15.61**	**230**		**Pn**	**08 36 13.1**	**-0.7**
YULB	**Yu-li**	**22.14**	**348**	P	**P**	**08 37 26.8**	**-2.2**
YULB				IAmb	IAmb	08 37 42.3	
	comp=Z,34nm,1.3s						
WB0	**Warramunga Arr**	**22.75**	**160**	P	**P**	**08 37 34.1**	**-1.6**
WRAB	**Tennant Creek**	**22.89**	**160**	P	**P**	**08 37 38.8**	**+1.7**
WRAB				IAmb	IAmb	08 38 03.4	
	comp=Z,4.9nm,1.2s						
WRA	**Warramunga Arr**	**22.89**	**160**	P	**P**	**08 37 39.2**	**+2.1**
	comp=Z,1.5nm,0.5s,baz=338,slow=11,SNR=16						
WB2	**Warramunga Arr**	**22.90**	**160**	P	**P**	**08 37 37.4**	**+0.3**
WB2				IAmb	IAmb	08 37 48.3	
	comp=Z,5.2nm,1.2s						
QIZ	**Qiongzhong**	**23.54**	**318**	P	**P**	**08 37 42.6**	**-1.0**
QIZ				IAmb	IAmb	08 38 07.9	
	comp=Z,47nm,1.4s						
ASAR	**Alice Springs**	**26.25**	**164**	P	**P**	**08 38 11.3**	**+2.9**
	comp=Z,0.5nm,0.7s,baz=345,slow=8.8,SNR=3.4						
ASAR	**Alice Springs**	**26.25**	**164**	P	**P**	**08 38 08.2**	**-0.2**
RPSI	**Rantau Prapat**	**27.23**	**273**	P	**P**	**08 38 17.0**	**-0.3**
RPSI				IAmb	IAmb	08 38 38.1	
	comp=Z,10nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.39**	**193**	P	**P**	**08 39 28.2**	**-0.6**
MJAR	**Matsushiro Arr**	**36.48**	**16**	P	**P**	**08 39 37.9**	**-0.3**
PETK	**Petropavlovsk-**	**57.58**	**22**	P	**P**	**08 42 22.8**	**+0.4**
MK31	**Makanchi Array**	**58.95**	**326**	P	**P**	**08 42 32.2**	**0.0**
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**08 42 33.9**	**+1.7**
	comp=Z,0.5nm,0.3s,baz=120,slow=7.6,SNR=15						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**08 42 33.2**	**+1.0**
VNDA	**Vanda**	**81.43**	**173**	P	**P**	**08 44 49.6**	**+0.4**
VNDA				IAmb	IAmb	08 45 01.2	
	comp=Z,2.7nm,1.4s						
MAW	**Mawson**	**81.60**	**200**	P	**P**	**08 44 49.8**	**-0.4**

*NEIC **15** 08:37:40.9±1.1, 25°.1S±0°.1×180°.0E±0°.2, h485km±11km, mb4.2/23, Error ellipse: s-maj=23.6km s-min=14.3km az=100.0*
*IDC **15** 08:37:40.8±2.7, 25°.11S×179°.99W, h483km±24km, mb3.3/7, mb1 3.4/8, mb1mx3.2/27, mbtmp4.2/8, Error ellipse: s-maj=29.9km s-min=20.6km az=31.0*
ISC 15 08:37:42.1±0.8, 25°.09S±0°.09×180°.0E±0°.1, h500km, n41, σ1§16/43, mb4.1/17, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.53**	**346**	P	**P**	**08 39 31.2**	**-2.7**
URZ	**Urewera**	**13.35**	**190**	P	**P**	**08 40 34.0**	**-0.8**
	0.7nm,0.3s,baz=109,slow=20,SNR=1.4						
URZ				S	**S**	**08 42 54.7**	**-2.5**
	0.6nm,0.3s,baz=17,slow=11,SNR=2.3						
URZ	**Urewera**	**13.35**	**190**	P	**P**	**08 40 33.2**	**-1.5**
BKZ	**Black Stump Fm**	**14.34**	**191**	P	**P**	**08 40 44.1**	**-1.1**
MSWZ	**Moikau Station**	**16.75**	**192**	P	**P**	**08 41 09.3**	**-1.1**
SNZO	**South Karori**	**16.76**	**194**	P	**P**	**08 41 08.8**	**-1.5**
QRZ	**Quartz Range**	**16.88**	**200**	P	**P**	**08 41 10.7**	**-0.9**
BSWZ	**Blackbirch Sta**	**17.33**	**195**	P	**P**	**08 41 16.1**	**+0.1**
ARMA	**Armidale**	**25.59**	**252**	P	**P**	**08 42 32.4**	**+1.5**
ARMA				IAmb	IAmb	08 42 42.8	
	comp=Z,20nm,1.4s						
EIDS	**Eidsvold**	**26.10**	**263**	P	**P**	**08 42 36.8**	**+1.4**
EIDS				IAmb	IAmb	08 42 37.3	
	comp=Z,6.7nm,1.0s						
CTA	**Charters Tower**	**31.46**	**272**	P	**P**	**08 43 23.0**	**+0.8**
	comp=Z,7.1nm,0.4s,baz=96,slow=10,SNR=18						
CTAO	**Charters Tower**	**31.46**	**272**	P	**P**	**08 43 23.3**	**+1.1**
CTAO				IAmb	IAmb	08 43 23.9	
	comp=Z,7.5nm,0.7s						
TOO	**Toolangi**	**31.78**	**239**	P	**P**	**08 43 26.2**	**+1.4**
TOO				IAmb	IAmb	08 43 47.2	
	comp=Z,22nm,1.4s						
STKA	**Stephens Creek**	**34.26**	**250**	P	**P**	**08 43 45.8**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=98,slow=16,SNR=5.9						
STKA	**Stephens Creek**	**34.26**	**250**	P	**P**	**08 43 45.9**	**+0.1**
BBOO	**Buckleboo**	**38.95**	**248**	P	**P**	**08 44 24.5**	**-0.1**
AS31	**Alice Springs**	**41.81**	**262**	P	**P**	**08 44 47.8**	**+0.1**
ASAR	**Alice Springs**	**41.81**	**262**	P	**P**	**08 44 48.0**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=95,slow=7.2,SNR=28						
ASAR				ScP	**ScP**	**08 49 37.0**	**+2.2**
	comp=Z,0.4nm,0.8s,baz=97,slow=4.8,SNR=4.7						
ASAR	**Alice Springs**	**41.81**	**262**	P	**P**	**08 44 47.3**	**-0.4**
WR0	**Warramunga Arr**	**42.11**	**267**	P	**P**	**08 44 49.9**	**-0.1**
WR0				IAmb	IAmb	08 44 50.5	
	comp=Z,6.2nm,1.2s						
WB2	**Warramunga Arr**	**42.29**	**267**	P	**P**	**08 44 51.3**	**-0.1**
WB2				IAmb	IAmb	08 44 52.3	
	comp=Z,3.9nm,1.0s						
WRA	**Warramunga Arr**	**42.30**	**267**	P	**P**	**08 44 51.1**	**-0.4**
	comp=Z,2.5nm,0.4s,baz=102,slow=7.9,SNR=22						
WRA				ScP	**ScP**	**08 49 38.8**	**+2.1**
	comp=Z,0.7nm,0.9s,baz=94,slow=4.0,SNR=4.0						
WRA	**Warramunga Arr**	**42.30**	**267**	P	**P**	**08 44 51.4**	**-0.1**
FORT	**Forrest**	**45.87**	**251**	P	**P**	**08 45 18.1**	**-1.0**
KNRA	**Kununurra**	**48.65**	**271**	P	**P**	**08 45 40.5**	**+0.3**
KNRA				IAmb	IAmb	08 45 41.6	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.71**	**267**	P	**P**	**08 45 55.8**	**+0.4**
VNDA	**Vanda**	**53.20**	**185**	P	**P**	**08 46 13.0**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=350,slow=4.9,SNR=3.5						
VNDA	**Vanda**	**53.20**	**185**	P	**P**	**08 46 13.0**	**+0.6**
MORW	**Morawa**	**56.44**	**251**	P	**P**	**08 46 35.9**	**-0.1**
MORW				IAmb	IAmb	08 46 45.8	
	comp=Z,13nm,1.4s						
QSPA	**South Pole Qui**	**65.00**	**180**	P	**P**	**08 47 33.0**	**+0.9**
QSPA		

VNDA IAmb IAmb 09 00 41.7
comp=Z,2.7nm,1.4s
MAW Mawson 81.63 200 P **P** **09 00 37.2 +0.5**
MAW IAmb IAmb 09 00 39.9
comp=Z,1.3nm,0.7s
RSO Redoubt South 84.14 29 P **P** **09 00 52.5 +2.4**

NEIC ***15*** *08:49:00.5±1.4, 16°.00N±0°.08×94°.14W±0°.04, h73km±12km, Error ellipse: s-maj=11.6km s-min=4.2km az=201.0*
MEX ***15*** *08:49:01.1±0.8, 15°.92N×94°.18W, h82km±13km, MD4.3*
ISC 15 08:49:00.3±0.9, 15°.95N±0°.06×94°.18W±0°.04, h73km±13km, n38, σ0s79/53, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.95**	**105**	*e*P	**Pn**	**08 49 17.6**	**-0.8**
PCIG				*i* S	**Sn**	**08 49 32.0**	**+0.1**
PCIG		**0.95**	**105**		**Pn**	**08 49 17.6**	**-0.8**
PCIG					**Sn**	**08 49 32.0**	**+0.1**
TGIG		**1.30**	**51**	*e*P	**Pn**	**08 49 22.8**	**-0.1**
TGIG				*i* S	**Sn**	**08 49 39.6**	**-0.3**
TGIG		**1.30**	**51**		**Pn**	**08 49 22.8**	**-0.1**
TGIG					**Sn**	**08 49 39.6**	**-0.3**
CMIG	**Matias Romero**	**1.32**	**329**	*i* P	**Pn**	**08 49 22.7**	**-0.4**
CMIG				*i* S	**Sn**	**08 49 40.0**	**-0.3**
CMIG	**Matias Romero**	**1.32**	**329**		**Pn**	**08 49 22.7**	**-0.4**
CMIG					**Sn**	**08 49 40.0**	**-0.3**
CCIG	**Comitan**	**1.99**	**80**	*i* P	**Pn**	**08 49 31.9**	**-0.2**
CCIG				*i* S	**Sn**	**08 49 56.7**	**+0.5**
CCIG	**Comitan**	**1.99**	**80**		**Pn**	**08 49 32.2**	**+0.1**
CCIG					**Sn**	**08 49 56.7**	**+0.5**
THIG		**2.11**	**119**	*i* P	**Pn**	**08 49 32.7**	**-0.9**
THIG				*i* S	**Sn**	**08 49 58.5**	**-0.5**
THIG		**2.11**	**119**		**Pn**	**08 49 32.7**	**-0.9**
THIG					**Sn**	**08 49 58.5**	**-0.5**
HUEH	**Huehuetenango**	**2.65**	**103**	Pn	**Pn**	**08 49 41.5**	**+0.4**
VHO	**Vista Hermosa**	**2.70**	**295**	*e*P	**Pn**	**08 49 42.2**	**+0.5**
VHO				*i* S	**Sn**	**08 50 13.9**	**+0.5**
RTAL	**Retalhuleu**	**2.78**	**120**		**Pn**	**08 49 42.6**	**0.0**
TOIG	**Toxpalan**	**3.49**	**308**	*e*P	**Pn**	**08 49 52.8**	**+0.4**
TOIG				*i* S	**Sn**	**08 50 33.5**	**+0.8**
TXIG	**Tlaxiaco**	**3.68**	**291**	*e*P	**Pn**	**08 49 55.5**	**+0.4**
TXIG				*i* S	**Sn**	**08 50 37.4**	**-0.1**
TPIG	**Tehuac#an**	**3.91**	**309**	*i* P	**Pn**	**08 49 58.1**	**-0.2**
TPIG				*i* S	**Sn**	**08 50 43.1**	**0.0**
TPIG	**Tehuac#an**	**3.91**	**309**		**Pn**	**08 49 58.1**	**-0.2**
TPIG					**Sn**	**08 50 43.1**	**0.0**
HLIG	**Huajuapan de L**	**3.95**	**299**	*i* P	**Pn**	**08 49 59.6**	**+0.9**
PETF	**Flores**	**4.25**	**76**	Pn	**Pn**	**08 50 02.1**	**-0.5**
TLIG	**Tlapa**	**4.50**	**292**		**Pn**	**08 50 06.9**	**+0.7**
ESQI	**Esquipulas**	**4.87**	**106**	Pn	**Pn**	**08 50 11.5**	**+0.3**
MTO3	**Montecristo**	**4.90**	**108**	Pn	**Pn**	**08 50 11.2**	**-0.5**
TGUH	**Tegucigalpa,Un**	**6.93**	**105**	Pn	**Pn**	**08 50 40.4**	**+1.0**
TEIG	**Tepich**	**7.04**	**52**	*i* P	**Pn**	**08 50 39.1**	**-1.7**
TEIG	**Tepich**	**7.04**	**52**		**Pn**	**08 50 39.8**	**-1.0**
CRIN	**San Cristobal**	**7.62**	**114**	Pn	**Pn**	**08 50 48.5**	**-0.3**
MOIG	**Morelia**	**7.64**	**300**	Pn	**Pn**	**08 50 49.9**	**+0.6**
MATN	**Matagalpa**	**8.54**	**110**	Pn	**Pn**	**08 51 02.7**	**+1.4**
833A	**Chaparral WMA,**	**13.23**	**339**	Pn	**Pn**	**08 52 05.8**	**+0.7**
TXAR	**Lajitas Array**	**15.93**	**328**	Pn	**Pn**	**08 52 41.0**	**+0.7**
MTDJ	**Mount Denham**	**16.07**	**80**	P	**Pn**	**08 52 43.0**	**+1.0**
MTDJ				IAmb	IAmb	08 52 45.5	
comp=Z,67nm,1.4s							
WHTX	**Lake Whitney,**	**16.25**	**350**	P	**P**	**08 52 45.7**	**-0.2**
TIGA	**Tifton**	**18.19**	**30**	P	**P**	**08 53 07.4**	**+0.1**
TIGA				IAmb	IAmb	08 53 32.0	
comp=Z,39nm,1.4s							
WMOK	**Wichita Mounta**	**19.16**	**348**	P	**P**	**08 53 15.7**	**-2.2**
WMOK				IAmb	IAmb	08 53 38.7	
comp=Z,7.3nm,0.8s							
W35A	**Tecumseh**	**19.28**	**353**	P	**P**	**08 53 18.6**	**-0.6**
MET	**Memphis--Engin**	**19.47**	**10**	P	**P**	**08 53 19.6**	**-1.6**
OK025	**Westminster Rd**	**19.76**	**352**	P	**P**	**08 53 22.9**	**-1.5**
OK025				IAmb	IAmb	08 53 47.6	
comp=Z,7.1nm,1.0s							
LCAR	**Lake Charles**	**20.22**	**7**	P	**P**	**08 53 27.9**	**-1.5**
LCAR				IAmb	IAmb	08 53 55.5	
comp=Z,5.5nm,1.4s							

IDC ***15*** *08:50:19.6±1.1, 1°.86N×126°.47E, h0km, mb4.0/7, mb1 4.0/8, mb1mx3.7/51, mbtmp3.9/8, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/29, Error ellipse: s-maj=106.9km s-min=16.8km az=72.0*
NEIC ***15*** *08:50:24.4±2.0, 1°.99N±0°.08×126°.70E±0°.08, h35km±2km, mb4.5/19, Error ellipse: s-maj=16.4km s-min=9.2km az=227.0*
DJA ***15*** *08:50:25.3±2.7, 2°.N±5°×12°7E±°, h25km±28km, M4.0/7, MLv4.0/7*
ISC 15 08:50:25.5±0.5, 1°.94N±0°.06×126°.62E±0°.09, h47km, n45, σ1s10/42, mb4.1/16, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.38**	**147**	P	**Pn**	**08 50 48.5**	**+0.1**
TNTI				S	**Sn**	**08 51 08.7**	**+3.2**
TNTI	**Ternate**	**1.38**	**147**		**Pn**	**08 50 47.7**	**-0.7**
SGSI	**Sangihe**	**2.05**	**328**	P	**Pn**	**08 50 57.1**	**-0.4**
KMSI	**Cibinong**	**2.96**	**243**	P	**Pn**	**08 51 09.1**	**-1.0**
GTOI	**Gorontalo**	**3.83**	**250**	P	**Pn**	**08 51 22.5**	**+0.5**
LUWI	**Luwuk**	**4.85**	**232**	Pn	**Pn**	**08 51 36.0**	**0.0**
MRSI	**Marisa**	**4.90**	**253**	P	Pn	08 51 43.4	+6.7
MPSI	**Mapaga**	**6.91**	**257**	P	Pn	08 52 16.7	+12
FAKI	**Fak Fak**	**7.42**	**131**	Pn	**Pn**	**08 52 08.9**	**-2.3**
MYLDM	**Lahad Datu**	**8.72**	**292**	Pn	**Pn**	**08 52 29.4**	**+0.3**
KAPI	**Kappang**	**9.74**	**225**	Pn	**Pn**	**08 52 43.2**	**+0.2**
SOEI	**Soe**	**11.85**	**191**	Pn	**Pn**	**08 53 09.1**	**-3.0**
TGY	**Tagaytay City**	**13.32**	**335**	LR	LR	08 59 08.5	
comp=Z,120nm,22.0s,baz=187,slow=40							
KNRA	**Kununurra**	**17.63**	**173**	P	**Pn**	**08 54 27.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P	**P**	**08 54 52.2**	**-1.4**
0.1nm,0.3s,baz=13,slow=8.4,SNR=1.6							
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P	**P**	**08 54 52.8**	**-0.9**
FITZ				IAmb	IAmb	08 55 07.1	
comp=Z,24nm,0.8s							
YULB	**Yu-li**	**21.94**	**347**	IAmb	IAmb	08 55 26.8	
comp=Z,80nm,1.5s							
TPUB	**Ta-pu**	**22.01**	**345**	P	**P**	**08 55 14.5**	**-1.6**
TPUB				IAmb	IAmb	08 55 38.0	
comp=Z,47nm,1.1s							
WB0	**Warramunga Arr**	**22.88**	**161**	P	**P**	**08 55 24.6**	**-0.7**
WB0				IAmb	IAmb	08 55 39.2	
comp=Z,9.5nm,1.4s							
WRAB	**Tennant Creek**	**23.02**	**161**	P	**P**	**08 55 26.1**	**-0.7**
WRAB				IAmb	IAmb	08 55 34.8	
comp=Z,4.4nm,0.6s							
WRA	**Warramunga Arr**	**23.03**	**161**	P	**P**	**08 55 25.9**	**-0.9**
comp=Z,1.5nm,0.3s,baz=341,slow=11,SNR=22							
WB2	**Warramunga Arr**	**23.03**	**161**	P	**P**	**08 55 26.3**	**-0.5**
WB2				IAmb	IAmb	08 55 55.0	
comp=Z,8.1nm,1.1s							
QIZ	**Qiongzhong**	**23.63**	**317**	P	**P**	**08 55 33.7**	**+1.1**
QIZ				IAmb	IAmb	08 55 58.8	
comp=Z,58nm,1.2s							
AS31	**Alice Springs**	**26.42**	**165**	P	**P**	**08 55 59.0**	**+0.9**
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**08 55 58.3**	**+0.3**
comp=Z,1.4nm,0.5s,baz=342,slow=7.9,SNR=16							
MORW	**Morawa**	**32.46**	**197**	P	**P**	**08 56 51.7**	**+0.2**
MORW				IAmb	IAmb	08 56 52.2	
comp=Z,17nm,0.9s							
KMI	**Kunming**	**32.58**	**317**	P	**P**	**08 56 53.1**	**+0.2**
COCO	**West Island**	**32.75**	**244**	P	**P**	**08 56 53.4**	**-0.9**
BBOO	**Buckleboo**	**35.70**	**166**	P	**P**	**08 57 19.0**	**-0.6**
STKA	**Stephens Creek**	**36.51**	**158**	P	**P**	**08 57 27.8**	**+1.2**
USRK	**Ussuriysk Ar.**	**42.35**	**6**	P	**P**	**08 58 14.3**	**-0.7**
YSS	**Yuzh-Sakhalins**	**46.99**	**15**	P	**P**	**08 58 50.7**	**-1.2**
SONM	**Songino Array**	**48.95**	**342**	P	**P**	**08 59 07.8**	**+0.5**
comp=Z,0.4nm,0.4s,baz=153,slow=8.4,SNR=3.0							
SONM	**Songino Array**	**48.95**	**342**	P	**P**	**08 59 07.2**	**-0.1**
MK31	**Makanchi Array**	**58.96**	**326**	P	**P**	**09 00 21.1**	**+0.8**
MK31				IAmb	IAmb	09 00 27.8	
comp=Z,1.2nm,0.9s							
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**09 00 21.1**	**+0.9**
comp=Z,1.0nm,0.4s,baz=120,slow=7.4,SNR=19							
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**09 00 20.9**	**+0.7**
KURK	**Kurchatov**	**63.18**	**328**	P	**P**	**09 00 49.6**	**+0.9**
KURK				IAmb	IAmb	09 00 51.9	
comp=Z,4.2nm,1.0s							
KKAR	**Karatay Array**	**64.46**	**318**	P	**P**	**09 00 56.8**	**-0.6**
NRIK	**Noril'sk**	**72.13**	**346**	P	**P**	**09 01 46.0**	**+1.2**
comp=Z,1.8nm,0.6s,baz=129,slow=6.8,SNR=6.5							
ABKAR	**Akbulak array**	**73.46**	**321**	P	**P**	**09 01 53.9**	**+0.8**
AKTO	**Aktyubinsk**	**74.99**	**322**	P	**P**	**09 02 02.3**	**+0.3**
comp=Z,1.5nm,0.6s,baz=88,slow=9.4,SNR=4.7							
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**09 02 38.6**	**+0.2**
comp=Z,0.2nm,0.3s,baz=323,slow=4.3,SNR=2.2							
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**09 02 38.9**	**+0.5**
BMAR	**Burnt Mountain**	**87.76**	**23**	P	**P**	**09 03 10.1**	**+0.9**

NEIC ***15*** *08:52:23.7±1.6, 8°.63S±0°.06×118°.33E±0°.06, h144km±8km, mb4.5/13, Error ellipse: s-maj=9.3km s-min=8.2km az=161.0*
IDC ***15*** *08:52:24.8±1.6, 8°.46S×118°.42E, h146km±13km, mb3.9/13, mb1 4.0/17, mb1mx3.7/52, mbtmp4.4/17, MS2.8/2, Ms1 2.8/2, ms1mx2.5/31, Error ellipse: s-maj=21.0km s-min=9.5km az=80.0*
DJA ***15*** *08:52:24.4±0.3, 9°.S±4°×11°8E±°, h116km±5km, M4.6/18, mB5.0/4, mb4.8/3, MLv4.6/18, Mw(mB)4.3/4*
ISC 15 08:52:24.2±0.4, 8°.65S±0°.04×118°.39E±0°.04, h150km, n83, σ1s70/93, mb4.2/17, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.64**	**253**	P	**Pn**	**08 52 43.5**	**-2.8**
PLAI	**Plampang**	**0.64**	**253**	P	**Pn**	**08 52 43.0**	**-3.3**
WBSI	**Waikabubak, Su**	**1.40**	**135**	P	**Pn**	**08 52 50.4**	**-2.4**
TWSI	**Taliwang, Sumb**	**1.50**	**266**	P	**Pn**	**08 52 51.5**	**-2.2**
WSI	**Waingapu**	**2.14**	**119**	P	Pn	08 52 47.0	-14
BASI	**Baing, Sumba**	**2.66**	**126**	P	**Pn**	**08 53 06.6**	**-0.7**
DNP	**Denpasar**	**3.15**	**269**	P	**Pn**	**08 53 14.2**	**+0.7**
SRBI	**Singaraja**	**3.20**	**280**	P	**Pn**	**08 53 12.8**	**-1.3**
BSSI	**Bau Bau, Buton**	**3.24**	**40**	P	**Pn**	**08 53 13.5**	**-1.2**
EDFI	**Ende, Flores**	**3.26**	**92**	P	**Pn**	**08 53 14.9**	**-0.1**
BKSI	**Bulukumba**	**3.72**	**28**	P	**Pn**	**08 53 20.4**	**-0.5**
MMRI	**Maumere**	**3.80**	**90**	P	**Pn**	**08 53 21.7**	**-0.2**
MMRI	**Maumere**	**3.80**	**90**	Pn	**Pn**	**08 53 21.9**	**0.0**
MMRI				Sn	**Sn**	**08 54 08.0**	**+1.3**
KAPI	**Kappang**	**3.85**	**21**	P	**Pn**	**08 53 21.8**	**-0.8**
22nm,0.3s,baz=196,slow=7.6,SNR=88							
KAPI				S	**Sn**	**08 54 05.8**	**-2.1**
baz=201,slow=22,SNR=1.6							
KAPI				LR	LR	08 54 26.2	
comp=Z,117nm,19.0s,baz=286,slow=33							
KAPI	**Kappang**	**3.85**	**21**	Pn	**Pn**	**08 53 22.3**	**-0.2**
KAPI				Sn	**Sn**	**08 54 07.8**	**0.0**
JAGI	**Jajag, Banyuwa**	**4.20**	**272**	P	**Pn**	**08 53 24.8**	**-2.3**
JAGI	**Jajag, Banyuwa**	**4.20**	**272**	Pn	**Pn**	**08 53 25.2**	**-1.9**
JAGI				Sn	**Sn**	**08 54 14.3**	**-1.6**
ABJI	**Asem Bagus**	**4.20**	**281**	P	**Pn**	**08 53 26.9**	**-0.2**
BNSI	**Bone**	**4.55**	**22**	P	**Pn**	**08 53 32.6**	**+0.9**
SPSI	**Sidrap Palu**	**4.85**	**16**	P	**Pn**	**08 53 36.1**	**+0.5**
GMJI	**Gumukmas**	**4.91**	**274**	P	**Pn**	**08 53 39.8**	**+3.3**
BATI	**Baumata**	**5.42**	**107**	P	**Pn**	**08 53 43.3**	**-0.1**
74nm,0.3s,baz=281,slow=2.2,SNR=29							
BATI				S	**Sn**	**08 54 40.1**	**-5.0**
44nm,0.3s,baz=248,slow=6.4,SNR=3.7							
BATI	**Baumata**	**5.42**	**107**	P	**Pn**	**08 53 43.2**	**-0.1**
TTSI	**Tana Toraja**	**5.74**	**14**	P	**Pn**	**08 53 49.7**	**+2.2**
0.4nm1μm91nm,0.9s							
SOEI	**Soe**	**5.90**	**101**	P	**Pn**	**08 53 49.6**	**-0.2**
SOEI	**Soe**	**5.90**	**101**	Pn	**Pn**	**08 53 49.4**	**-0.4**
SOEI				Sn	**Sn**	**08 54 57.7**	**+1.0**
BBKI	**Banjar Baru**	**6.24**	**325**	P	**Pn**	**08 53 56.4**	**+2.2**
UGM	**Wanagama**	**7.82**	**275**	Pn	**Pn**	**08 54 16.3**	**+1.0**
CISI	**Cisompet, Garu**	**10.53**	**275**	Pn	**Pn**	**08 54 49.9**	**-1.4**
FITZ	**Fitzroy Crossi**	**11.74**	**144**	P	**Pn**	**08 55 06.0**	**-1.2**
2.1nm,0.3s,baz=334,slow=6.4,SNR=64							
FITZ				S	Sn	08 57 07.5	-10
1.7nm,0.3s,baz=188,slow=14,SNR=2.8							
FITZ				LR	LR	09 00 41.1	
comp=Z,57nm,21.9s,baz=292,slow=42							
FITZ	**Fitzroy Crossi**	**11.74**	**144**	Pn	**Pn**	**08 55 06.4**	**-0.8**
KNRA	**Kununurra**	**12.31**	**126**	Pn	**Pn**	**08 55 13.6**	**-0.9**
SBUM	**Sibu**	**12.62**	**331**	Pn	**Pn**	**08 55 16.2**	**-2.5**
PSA00	**Pilbara Seismi**	**12.93**	**174**	Pn	**Pn**	**08 55 21.3**	**-1.2**
PSA00	**Pilbara Seismi**	**12.93**	**174**		**Pn**	**08 55 20.1**	**-2.4**
MTN	**Manton Dam**	**13.19**	**110**	Pn	**Pn**	**08 55 24.2**	**-1.8**
MYLDM	**Lahad Datu**	**13.73**	**0**	Pn	**Pn**	**08 55 31.8**	**-1.1**
GIRL	**Giralia**	**14.48**	**196**	Pn	**Pn**	**08 55 40.7**	**-1.5**
SIJI	**Sorong**	**14.97**	**60**	P	**Pn**	**08 55 46.8**	**-1.5**
2.1nm,0.3s,baz=276,slow=5.8,SNR=11							
SIJI				S	**Sn**	**08 58 28.4**	**-6.4**
0.8nm,0.3s,baz=1.6,slow=23,SNR=6.1							
SIJI	**Sorong**	**14.97**	**60**		**Pn**	**08 55 46.8**	**-1.5**
WB0	**Warramunga Arr**	**19.03**	**127**		**P**	**08 56 35.6**	**+0.8**
WB0				IAmb	IAmb	08 56 54.3	
comp=Z,9.1nm,0.6s							
WRA	**Warramunga Arr**	**19.08**	**128**	P	**P**	**08 56 36.2**	**+0.8**
comp=Z,1.0nm,0.3s,baz=297,slow=14,SNR=15							
WRA				S	**S**	**08 59 59.6**	**-4.4**
comp=Z,0.6nm,0.3s,baz=305,slow=22,SNR=8.4							
WRA	**Warramunga Arr**	**19.08**	**128**	P	**P**	**08 56 36.1**	**+0.7**
WRAB	**Tennant Creek**	**19.08**	**128**	P	**P**	**08 56 36.5**	**+1.0**
WRAB				IAmb	IAmb	08 56 44.6	
comp=Z,14nm,0.7s							
WB2	**Warramunga Arr**	**19.09**	**128**		**P**	**08 56 36.0**	**+0.5**
WB2				IAmb	IAmb	08 56 44.6	
comp=Z,14nm,0.7s							
WR0	**Warramunga Arr**	**19.25**	**127**		**P**	**08 56 38.2**	**+1.0**
WR0				IAmb	IAmb	08 56 41.9	
comp=Z,13nm,0.8s							
AS31	**Alice Springs**	**21.06**	**137**	P	**P**	**08 56 57.6**	**+0.9**
ASAR	**Alice Springs**	**21.06**	**137**	P	**P**	**08 56 58.2**	**+1.5**
comp=Z,4.4nm,0.5s,baz=310,slow=9.5,SNR=25							
ASAR				S	**S**	**09 00 43.5**	**+0.7**
comp=Z,3.5nm,0.8s,baz=313,slow=18,SNR=7.5							
ASAR	**Alice Springs**	**21.06**	**137**	P	**P**	**08 56 57.6**	**+0.9**
FORT	**Forrest**	**23.80**	**159**	P	**P**	**08 57 24.4**	**+1.1**
NWAO	**Narrogin (SRO)**	**24.19**	**182**	P	**P**	**08 57 28.7**	**+1.9**
comp=Z,10nm,0.7s,baz=5.6,slow=9.0,SNR=10							
NWAO	**Narrogin (SRO)**	**24.19**	**182**	P	**P**	**08 57 28.2**	**+1.4**
NWAO				IAmb	IAmb	08 57 43.6	
comp=Z,42nm,1.5s							
COEN	**Coen**	**24.86**	**105**	P	**P**	**08 57 33.7**	**+0.6**
COEN				IAmb	IAmb	08 57 34.9	
comp=Z,12nm,0.7s							
STKA	**Stephens Creek**	**31.61**	**140**	P	**P**	**08 58 35.2**	**+2.2**
comp=Z,3.2nm,0.7s,baz=326,slow=12,SNR=4.3							
STKA				PcP	**PcP**	**09 01 23.4**	**+1.7**
comp=Z,2.6nm,0.6s,baz=330,slow=6.9,SNR=5.1							
STKA	**Stephens Creek**	**31.61**	**140**	P	**P**	**08 58 33.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**33.07**	**325**	P	**P**	**08 58 45.6**	**-0.2**
comp=Z,1.6nm,0.3s,baz=152,slow=7.7,SNR=4.2							
NJ2	**Nanjing**	**40.47**	**1**	*e*P	**P**	**08 59 50.8**	**+2.6**
NJ2				pmax	pmax		
comp=Z,16nm,0.9s							
JNU	**Nakatsue**	**43.20**	**15**	P	**P**	**09 00 10.7**	**+0.3**
JNU				IAmb	IAmb	09 00 28.6	
comp=Z,15nm,1.2s							
KSRS	**Korea Array**	**46.72**	**10**	P	**P**	**09 00 37.1**	**-0.9**
comp=Z,2.9nm,0.8s,baz=189,slow=8.3,SNR=12							
MJAR	**Matsushiro Arr**	**48.65**	**21**	P	**P**	**09 00 51.2**	**-1.8**
comp=Z,3.7nm,1.0s,baz=196,slow=8.0,SNR=5.8							
HHC	**Hu-ho-hao-te**	**49.65**	**353**	*e*P	**P**	**09 01 01.8**	**+1.1**
HHC				pmax	pmax		
comp=Z,17nm,1.0s							
HHC				pmax	pmax		
comp=Z,160nm,5.2s							
USRK	**Ussuriysk Ar.**	**54.02**	**12**	P	**P**	**09 01 32.8**	**0.0**
comp=Z,4.4nm,0.6s,baz=169,slow=5.4,SNR=11							
USRK	**Ussuriysk Ar.**	**54.02**	**12**	P	**P**	**09 01 33.0**	**+0.2**
SONM	**Songino Array**	**57.23**	**350**	P	**P**	**09 01 55.8**	**-0.1**
comp=Z,2.1nm,0.7s,baz=166,slow=8.8,SNR=15							
SONM	**Songino Array**	**57.23**	**350**	P	**P**	**09 01 56.1**	**+0.2**
WMQ	**Urumqi**	**59.18**	**335**	*e*P	**P**	**09 02 11.0**	**+1.6**
MKAR	**Makanchi Array**	**63.87**	**333**	P	**P**	**09 02 40.3**	**-0.5**
comp=Z,1.1nm,0.6s,baz=138,slow=7.3,SNR=6.9							
MKAR	**Makanchi Array**	**63.87**	**333**	P	**P**	**09 02 40.1**	**-0.7**
ZALV	**Zalesovo Beam**	**68.50**	**339**	P	**P**	**09 03 08.5**	**-1.6**
comp=Z,2.5nm,0.6s,baz=136,slow=4.4,SNR=9.9							
ZALV	**Zalesovo Beam**	**68.50**	**339**	P	**P**	**09 03 09.4**	**-0.7**
MAW	**Mawson**	**69.36**	**200**	P	**P**	**09 03 18.3**	**+3.0**
comp=Z,2.6nm,0.8s,baz=77,slow=9.4,SNR=4.8							
PEA0B	**Petropavlovsk-**	**69.99**	**24**	P	**P**	**09 03 19.5**	**+0.2**
PETK	**Petropavlovsk-**	**69.99**	**24**	P	**P**	**09 03 19.8**	**+0.5**
comp=Z,4.4nm,0.6s,baz=342,slow=2.1,SNR=8.6							
PETK	**Petropavlovsk-**	**69.99**	**24**	P	**P**	**09 03 20.4**	**+1.0**
VNDA	**Vanda**	**72.43**	**171**	P	**P**	**09 03 36.6**	**+2.9**
comp=Z,0.5nm,0.6s,baz=306,slow=7.0,SNR=5.0							
ABKAR	**Akbulak array**	**76.93**	**325**	P	**P**	**09 03 59.2**	**-0.8**
YKA	**Yellowknife Ar**	**114.11**	**24**	PKiKP	**PKiKP**	**09 10 45.6**	**+0.3**
comp=Z,1.6nm,0.8s,baz=300,slow=1.5,SNR=4.3							
TORD	**Torodi Ar. Bea**	**117.81**	**280**	PKP	**PKiKP**	**09 10 54.6**	**+0.7**
comp=Z,1.6nm,0.5s,baz=44,slow=1.8,SNR=13							
NVAR	**Mina Array Bea**	**121.25**	**50**	PKP	**PKiKP**	**09 11 01.4**	**+1.2**
comp=Z,0.6nm,0.7s,baz=231,slow=2.1,SNR=4.5							
KOWA	**Kowa**	**123.40**	**282**	PKP	**PKiKP**	**09 11 05.3**	**+0.6**
comp=Z,1.0nm,0.4s,baz=74,slow=4.0,SNR=3.8							
PDAR	**Pinedale Array**	**126.06**	**43**	PKP	**PKiKP**	**09 11 10.2**	**+0.6**
comp=Z,0.3nm,0.8s,baz=174,slow=0.9,SNR=3.4							
TXAR	**Lajitas Array**	**135.54**	**57**	PKiKP	PKPpre	09 11 17.5	
comp=Z,0.2nm,0.7s,baz=302,slow=2.0,SNR=2.0							
TXAR				PKP	**PKiKP**	**09 11 28.3**	**-0.7**
comp=Z,0.2nm,0.7s,baz=318,slow=1.2,SNR=2.3							
TXAR				SKPbc	**SKPbc**	**09 14 45.4**	**+0.5**
comp=Z,0.7nm,0.9s,baz=298,slow=2.7,SNR=6.0							
CPUP	**Villa Florida**	**144.99**	**187**	PKPbc	**PKPdf**	**09 11 45.9**	**+1.5**
comp=Z,3.1nm,0.7s,baz=128,slow=3.4,SNR=8.6							

IDC ***15*** *08:54:21.4±1.1, 1°.77N×126°.08E, h0km, mb4.2/9, mb1 4.3/9, mb1mx3.9/53, mbtmp4.2/9, Error ellipse: s-maj=130.1km s-min=17.5km az=69.0*
NEIC ***15*** *08:54:25.5±1.7, 1°.80N±0°.08×126°.16E±0°.07, h30km±5km, mb4.6/24, Error ellipse: s-maj=13.3km s-min=7.8km az=215.0*
DJA ***15*** *08:54:25.9±0.3, 2°.N±5°×12°6E±°, h10km, M4.1/6, MLv4.1/6*
ISC 15 08:54:22.6±0.4, 1°.81N±0°.05×126°.20E±0°.05, h10km, n47, σ0s79/47, mb4.4/19, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.56**	**131**	P	**Pg**	**08 54 51.9**	**-0.6**
TNTI	**Ternate**	**1.56**	**131**		**Pb**	**08 54 51.8**	**+0.3**
TNTI				Sn	**Sg**	**08 55 12.8**	**+0.1**
SGSI	**Sangihe**	**1.98**	**340**	P	**Pg**	**08 55 00.0**	**-0.6**
KMSI	**Cibinong**	**2.53**	**241**	P	**Pg**	**08 55 10.6**	**-0.6**
GTOI	**Gorontalo**	**3.39**	**250**	P	**Pb**	**08 55 22.8**	**0.0**
LUWI	**Luwuk**	**4.44**	**230**	Pn	**Pn**	**08 55 30.7**	**+0.6**
MYLDM	**Lahad Datu**	**8.38**	**294**	Pn	**Pn**	**08 56 25.6**	**+1.4**
KKM	**Kota Kinabalu**	**10.81**	**293**	Pn	**Pn**	**08 56 59.2**	**+1.6**
JAGI	**Jajag, Banyuwa**	**15.76**	**229**	Pn	**Pn**	**08 58 04.3**	**-0.5**
JAGI				IAmb	IAmb	08 58 28.1	
comp=Z,76nm,1.5s							
FITZ	**Fitzroy Crossi**	**19.79**	**182**	P	**P**	**08 58 50.9**	**-2.3**
MANU	**Manus Island**	**21.51**	**100**	P	**P**	**08 59 11.4**	**-0.5**
TPUB	**Ta-pu**	**22.04**	**346**	P	**P**	**08 59 16.4**	**-1.2**
TPUB				IAmb	IAmb	08 59 33.1	
comp=Z,87nm,1.5s							
WB0	**Warramunga Arr**	**22.90**	**160**	P	**P**	**08 59 27.1**	**+0.4**
WB0				IAmb	IAmb	08 59 31.9	
comp=Z,7.7nm,0.6s							
WRAB	**Tennant Creek**	**23.04**	**160**	P	**P**	**08 59 27.3**	**-0.9**
WRAB				IAmb	IAmb	08 59 35.6	
comp=Z,12nm,1.1s							
WRA	**Warramunga Arr**	**23.04**	**160**	P	**P**	**08 59 28.2**	**-0.1**
comp=Z,3.8nm,0.3s,baz=338,slow=11,SNR=13

TNTI	**Ternate**	**1.29 129**	P	Pn	08 58 57.8	-4.7
TNTI	**Ternate**	**1.29 129**		**Pg**	**08 59 03.8**	**+0.6**
SGSI	**Sangihe**	**2.24 338**	P	**Pg**	**08 59 23.1**	**+1.7**
KMSI	**Cibinong**	**2.58 247**	P	**Pg**	**08 59 28.1**	**+0.2**
GTOI	**Gorontalo**	**3.48 254**	P	**Pb**	**08 59 40.2**	**+0.1**
LUWI	**Luwuk**	**4.44 234**	Pn	**Pn**	**08 59 47.1**	**+1.3**
MYLDM	**Lahad Datu**	**8.62 295**	Pn	**Pn**	**09 00 43.6**	**+0.4**
JAGI	**Jajag, Banyuwa**	**15.75 230**	Pn	**Pn**	**09 02 20.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.58 182**	P	**P**	**09 03 07.0**	**+0.4**
TPUB	**Ta-pu**	**22.29 346**	P	**P**	**09 03 34.5**	**-1.6**
WB0	**Warramunga Arr**	**22.64 160**	P	**P**	**09 03 38.3**	**-1.5**
WB0			IAmb	IAmb	09 03 38.4	
	comp=Z,12nm,1.4s					
WRAB	**Tennant Creek**	**22.78 160**	P	**P**	**09 03 42.9**	**+1.6**
WRAB			IAmb	IAmb	09 03 48.7	
	comp=Z,7.6nm,1.2s					
WRA	**Warramunga Arr**	**22.79 160**	P	**P**	**09 03 42.8**	**+1.4**
	comp=Z,1.2nm,0.5s,baz=340,slow=11,SNR=6.1					
WRA	**Warramunga Arr**	**22.79 160**	P	**P**	**09 03 41.9**	**+0.6**
ASAR	**Alice Springs**	**26.15 164**	P	**P**	**09 04 14.3**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=344,slow=8.7,SNR=1.4					
MK31	**Makanchi Array**	**59.10 326**	P	**P**	**09 08 37.5**	**-1.6**
MK31			IAmb	IAmb	09 08 37.9	
	comp=Z,1.3nm,1.2s					
MKAR	**Makanchi Array**	**59.10 326**	P	**P**	**09 08 39.1**	**0.0**
	comp=Z,0.7nm,0.4s,baz=119,slow=7.8,SNR=17					
MKAR	**Makanchi Array**	**59.10 326**	P	**P**	**09 08 37.2**	**-1.9**
KURK	**Kurchatov**	**63.34 328**		**P**	**09 09 06.7**	**-1.0**
KURK			IAmb	IAmb	09 09 10.2	
	comp=Z,2.4nm,0.9s					
ABKAR	**Akbulak array**	**73.57 321**	P	**P**	**09 10 11.1**	**-0.6**
VNDA	**Vanda**	**81.36 173**	P	**P**	**09 10 54.8**	**0.0**

*IDC **15** 09:04:37.3±2.1, 1.°40N×126.°86E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/39, mbtmp3.4/3, Error ellipse: s-maj=180.0km s-min=25.1km az=66.0*
*DJA **15** 09:04:41.9±0.4, 2.°N±4.°×12.°7E±.°, h10km, M3.6/5, MLv3.6/5*
ISC 15 09:04:37.4±1.7,**1.°94N**±0.°08×**127.°7E**±0.°2,**h10**km,**n5,**
σ2$41/6,mb3.4/3,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.21 197**		P	**Pg**	**09 05 03.1**	**+2.4**
TNTI				S	**Sb**	**09 05 13.9**	**-2.3**
SGSI	**Sangihe**	**2.79 308**		P	**Pn**	**09 05 21.1**	**-1.1**
WRA	**Warramunga Arr**	**22.70 164**		P	**P**	**09 09 38.3**	**-1.0**
	0.2nm,0.3s,baz=340,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.15 167**		P	**P**	**09 10 10.4**	**-1.6**
	0.3nm,0.4s,baz=338,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**59.58 325**		P	**P**	**09 14 42.6**	**+1.3**
	0.3nm,0.3s,baz=120,slow=7.9,SNR=7.0						

*NIC **15** 09:04:51.5±0.0, 36.°77N×31.°07E, h19km±2km, Ml4.0/3*
*IDC **15** 09:04:51.3±1.1, 36.°37N×31.°03E, h0km, mb3.7/6, mb1 3.6/12, mb1mx3.5/56, mbtmp3.6/12, ML3.4/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/42, Error ellipse: s-maj=20.5km s-min=17.7km az=102.0*
*HLW **15** 09:04:52.2, 36.°70N×30.°79E, h10km±44km, Md4.2, Ml4.3*
*ISK **15** 09:04:52.8, 36.°41N×30.°89E, h2km, ML3.4/23*
*DDA **15** 09:04:54.0, 36.°48N×30.°82E, h14km±2km, ML3.3*
ISC 15 09:04:52.6±1.0,**36.°39N**±0.°02×**30.°97E**±0.°02,**h9**km±7km,
n100,σ1$29/130,mb3.8/6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMT	**Kemer-ANTALYA**	**0.40 303**		PG	**Pg**	**09 05 00.3**	**-0.1**
KEMT				SG	**Sg**	**09 05 05.1**	**-0.6**
AKUM	**Antalya-Kumluc**	**0.51 263**		*i* P	**Pg**	**09 05 02.9**	**+0.4**
AKUM				*i* S	**Sg**	**09 05 08.8**	**-0.4**
AKUM				IAML		09 05 12.0	
	comp=N,6μm,0.5s						
AKUM				IAML		09 05 12.0	
	comp=E,5μm,0.5s						
KEPZ	**Antalya-Kepez**	**0.73 45**		*i* P	**Pn**	**09 05 09.1**	**0.0**
KEPZ				*i* S	**Sb**	**09 05 19.0**	**+1.4**
KORT	**Korkueli**	**0.79 321**		PG	**Pg**	**09 05 07.8**	**-0.1**
KORT				SG	**Sb**	**09 05 19.3**	**-0.2**
KORT	**Korkueli**	**0.79 321**		*i* P	**Pg**	**09 05 06.3**	**-1.5**
KORT				*i* S	**Sg**	**09 05 16.4**	**-1.9**
DEMR	**Demre-Antalya**	**0.87 261**		PG	**Pg**	**09 05 09.3**	**-0.1**
ALAN	**Alanya-ANTALYA**	**0.88 78**		PG	**Pn**	**09 05 11.4**	**+0.3**
ELL	**Elmali**	**0.93 293**		PG	**Pg**	**09 05 09.2**	**-1.2**
ELL				SG	**Sb**	**09 05 23.3**	**-0.1**
ELL	**Elmali**	**0.93 293**		P	**Pg**	**09 05 09.3**	**-1.2**
ELL				S	**Sg**	**09 05 22.7**	**+0.1**
GAZI	**Gazipasa**	**1.10 97**		PN	**Pn**	**09 05 15.7**	**+1.5**
GAZI	**Gazipasa**	**1.10 97**		*i* P	**Pn**	**09 05 15.9**	**+1.7**
GAZI				*i* S	**Sg**	**09 05 27.3**	**-0.7**
AKAS	**Kas**	**1.11 263**		PG	**Pg**	**09 05 13.7**	**-0.3**
AKAS				SG	**Sb**	**09 05 29.2**	**+0.5**
AKAS	**Kas**	**1.11 263**		*i* P	**Pn**	**09 05 14.4**	**-0.1**
AKAS				*i* S	**Sg**	**09 05 28.1**	**-0.4**
AKAS				IAML		09 05 35.0	
	comp=E,676nm,0.5s						
AKAS				IAML		09 05 37.0	
	comp=N,950nm,0.7s						
BCK	**Bucak**	**1.12 344**		PG	**Pn**	**09 05 14.4**	**-0.1**
KSL	**Kastellorizon**	**1.14 259**		P	**Pn**	**09 05 15.2**	**+0.4**
KSL				S	**Sn**	**09 05 33.3**	**+2.8**
SEYD	**Seydisehir-KON**	**1.23 34**		PN	**Pg**	**09 05 17.2**	**+0.8**
GOLH	**Golhisar**	**1.41 307**		*i* P	**Pg**	**09 05 20.2**	**+0.4**
GOLH				*i* S	**Sg**	**09 05 38.4**	**+0.3**
GOLH				IAML		09 05 48.0	
	comp=N,407nm,1.1s						
CAME	**Cameli-Denizli**	**1.45 293**		PN	**Pb**	**09 05 19.9**	**0.0**
ISP	**Isparta**	**1.48 346**		PN	**Pb**	**09 05 20.5**	**+0.1**
BRDR	**BURDUR-Merkez**	**1.50 331**		*i* P	**Pg**	**09 05 21.2**	**-0.2**
BRDR				*i* S	**Sg**	**09 05 42.6**	**+1.8**
FETY	**Fethiye**	**1.54 280**		PN	**Pb**	**09 05 21.3**	**0.0**
FETY	**Fethiye**	**1.54 280**		*i* P	**Pg**	**09 05 21.7**	**-0.4**
FETY				*i* S	**Sb**	**09 05 40.6**	**-0.3**
BAGO	**Egridir - ISPA**	**1.61 355**		*i* P	**Pn**	**09 05 21.1**	**-0.2**
BAGO				*i* S	**Sn**	**09 05 40.7**	**-1.6**
BASM	**Basmaki-Afyon**	**1.70 335**		PN	**Pb**	**09 05 23.7**	**-0.4**
TEKE	**Tekeli-Mersin**	**1.75 97**		PN	**Pb**	**09 05 25.1**	**+0.2**
AKMS	**Akamas**	**1.76 140**		P	**Pb**	**09 05 24.3**	**-0.8**
AKMS				S	**Sg**	**09 05 49.9**	**+0.7**
AKMS				AML	AML	09 05 59.8	
	comp=N,3.6nm,0.4s						
AKMS				AML	AML	09 05 59.8	
	comp=N,3.6nm,0.4s						
AKMS				AML	AML	09 06 01.9	
	comp=N,2.8nm,0.6s						
AKMS				AML	AML	09 06 01.9	
	comp=N,2.8nm,0.6s						
KMER	**Konya-Meram**	**1.78 39**		*i* P	**Pb**	**09 05 25.2**	**-0.2**
KMER				*i* S	**Sn**	**09 05 42.0**	**-4.4**
ALFC	**Alefka**	**1.81 132**		P	**Pn**	**09 05 23.9**	**-0.1**
ALFC				S	**Sg**	**09 05 50.6**	**-0.1**
ALFC				AML	AML	09 05 55.1	
	comp=N,1.9nm,0.5s						
ALFC				AML	AML	09 05 55.1	
	comp=N,1.9nm,0.5s						
ALFC				AML	AML	09 05 60.0	
	comp=N,2.3nm,0.7s						
ALFC				AML	AML	09 05 60.0	
	comp=N,2.3nm,0.7s						
DOGA	**KONYA_Doganhis**	**1.81 18**		*i* P	**Pb**	**09 05 25.6**	**-0.3**
DOGA				*i* S	**Sn**	**09 05 45.7**	**-1.5**
DOGA				IAML		09 05 55.0	
	comp=N,288nm,0.7s						
BERE	**Bereket-Mersin**	**1.82 91**		PN	**Pg**	**09 05 26.9**	**-0.6**
DALY	**Dalyan (Mula)**	**1.91 284**		PN	**Pb**	**09 05 26.5**	**-1.1**
DALY	**Dalyan (Mula)**	**1.91 284**		*i* P	**Pb**	**09 05 27.0**	**-0.7**
DALY				*i* S	**Sn**	**09 05 49.3**	**-0.2**
DALY				IAML		09 06 05.0	
	comp=N,276nm,1.0s						
AKDN	**Akdeniz- Kıbrı**	**1.95 123**		PN	**Pb**	**09 05 28.7**	**+0.3**
TAVA	**DENIZLI_Tavas**	**1.97 304**		*i* P	**Pb**	**09 05 28.5**	**-0.2**
TAVA				*i* S	**Sn**	**09 05 51.7**	**+0.6**
KZIL	**AFYON_Kizioren**	**1.98 341**		*i* P	**Pn**	**09 05 27.6**	**+1.2**
KZIL				*i* S	**Sb**	**09 05 54.8**	**+1.0**
YORU	**Yoruktepe-Mers**	**1.98 96**		PN	**Pb**	**09 05 29.2**	**+0.3**
TEVE	**Tevekalti-Mers**	**2.00 88**		PN	**Pb**	**09 05 29.8**	**+0.6**
KRMN	**Karaman**	**2.00 66**		PN	**Pb**	**09 05 29.8**	**+0.5**
LEF	**Lefka**	**2.01 128**		PN	**Pb**	**09 05 29.2**	**-0.1**
LEF	**Lefka**	**2.01 128**		*i* P	**Pn**	**09 05 26.3**	**-0.4**
LEF				*i* S	**Sn**	**09 05 47.8**	**-4.1**
OREN	**Orenkoy-Mersin**	**2.02 94**		PN	**Pb**	**09 05 29.8**	**+0.3**
NATA	**Nata**	**2.07 140**		P	**Pb**	**09 05 29.1**	**-1.2**
GULN	**MERSIN_Gulnar**	**2.09 95**		*i* P	**Pb**	**09 05 30.3**	**-0.4**
GULN				*i* S	**Sb**	**09 05 58.3**	**+1.5**
AKK1	**Akkuyu-Mersin**	**2.09 96**		PN	**Pb**	**09 05 31.0**	**+0.3**
AKKU	**Akkuyu-Mersin**	**2.10 95**		PN	**Pb**	**09 05 30.7**	**-0.2**
AKK2	**Akkuyu-Mersin**	**2.10 96**		PN	**Pb**	**09 05 31.4**	**+0.5**
LADK	**Ladik-KONYA**	**2.13 31**		PN	**Pb**	**09 05 31.0**	**-0.4**
YESI	**Yesilovacik-Me**	**2.17 94**		PN	**Pb**	**09 05 31.9**	**-0.1**
SHUT	**Suhut-Afyon**	**2.19 351**		PN	**Pb**	**09 05 30.9**	**+1.6**
IKL	**Isikli**	**2.20 93**		PN	**Pb**	**09 05 32.2**	**-0.4**
TISA	**Tisan-Mersin**	**2.20 95**		PN	**Pb**	**09 05 32.6**	**0.0**
KEBE	**Keben-Mersin**	**2.21 88**		PN	**Pb**	**09 05 32.8**	**-0.1**
TURN	**Turunc**	**2.23 281**		PN	**Pn**	**09 05 30.9**	**+1.2**
TURN	**Turunc**	**2.23 281**		*i* P	**Pb**	**09 05 32.0**	**-1.0**
TURN				*i* S	**Sn**	**09 05 55.9**	**-1.4**
TURN				IAML		09 06 00.0	
	comp=E,251nm,0.9s						
SZAC	**Souni**	**2.25 136**		P	**Pb**	**09 05 32.2**	**-1.3**
SZAC				AML	AML	09 06 15.2	
	comp=E,1.9nm,0.8s						
SZAC				AML	AML	09 06 17.0	
	comp=E,2.1nm,0.6s						
MRSB	**Marmaris-Mugla**	**2.26 279**		PN	**Pn**	**09 05 31.4**	**+1.3**
YER	**Yerkesik**	**2.28 290**		PN	**Pn**	**09 05 31.6**	**+1.1**
ARG	**Arkhangelos**	**2.30 267**		PN	**Pn**	**09 05 31.6**	**+0.9**
CSS	**Mathiatis**	**2.39 126**		P	**Pn**	**09 05 32.4**	**+0.4**
ASGA	**Asgata**	**2.45 130**		P	**Pn**	**09 05 33.9**	**+1.2**
MVOU	**Mavrovouni**	**2.56 121**		P	**Pn**	**09 05 34.0**	**-0.3**
KIZT	**Kizilcal**	**2.59 16**		PN	**Pn**	**09 05 36.0**	**+1.1**
DATC	**Datca-Mugla**	**2.69 279**		PN	**Pn**	**09 05 37.5**	**+1.5**
MLSB	**Milas**	**2.72 290**		PN	**Pn**	**09 05 38.1**	**+1.6**
AYDN	**Tasoluk**	**2.78 298**		*i* P	**Pn**	**09 05 39.3**	**+1.9**
AYDN				*i* S	**Sn**	**09 06 09.8**	**-1.3**
AYDN				IAML		09 06 33.0	
	comp=N,117nm,1.5s						
KULA	**Kula-Manisa**	**2.81 320**		PN	**Pn**	**09 05 39.5**	**+1.7**
OSC1	**CSNet OBS 1**	**2.89 175**		S	**Sb**	**09 06 21.6**	**+1.9**
AYDB	**Zeytinkoy-Aydi**	**2.91 303**		PN	**Pn**	**09 05 40.7**	**+1.5**
SHAP	**Saphane-Kutahy**	**2.98 333**		PN	**Pn**	**09 05 41.5**	**+1.4**
BODT	**Bodrum**	**3.02 284**		PN	**Pn**	**09 05 41.9**	**+1.3**
KARP	**Karpathos**	**3.20 256**		P	**Pn**	**09 05 43.8**	**+0.7**
GCAM	**G?zelcami?**	**3.26 295**		*i* P	**Pn**	**09 05 44.2**	**+0.3**
OSC2	**CSNet OBS 4**	**3.47 162**		S	**Sb**	**09 06 35.1**	**-1.4**
BRTR	**Keskin Aray B**	**3.94 31**		Pn	**Pn**	**09 05 54.7**	**+1.2**
	comp=N,1.1nm,0.3s,baz=194,slow=16,SNR=20						
BRTR				Sn	**Sn**	**09 06 39.9**	**-0.1**
	comp=N,2.0nm,0.3s,baz=203,slow=25,SNR=7.1						
MMAI	**Mount Meron Ar**	**4.96 131**		Pn	**Pn**	**09 06 06.7**	**-0.8**
	comp=N,1.7nm,0.3s,baz=313,slow=13,SNR=3.7						
MMAI				Sn	**Sn**	**09 07 07.3**	**+2.4**
	comp=N,5.8nm,0.3s,baz=317,slow=21,SNR=6.0						
IDI	**Anoyia**	**5.06 259**		Pn	**Pn**	**09 06 08.5**	**-0.2**
	comp=N,3.2nm,0.3s,baz=63,slow=18,SNR=12						
IDI				Sn	**Sn**	**09 07 05.3**	**-1.9**
	comp=N,0.9nm,0.3s,baz=355,slow=18,SNR=1.3						
KOT	**Kottamia**	**6.48 173**		P	**Pn**	**09 06 30.7**	**+2.5**
	baz=172						
HMYD	**Mayadein**	**6.57 181**		P	**Pn**	**09 06 31.6**	**+2.1**
	baz=179						
SUZ	**Suez**	**6.71 166**		P	**Pn**	**09 06 34.6**	**+3.2**
	baz=165						
HNAT	**Natroun**	**6.74 183**		P	**Pn**	**09 06 34.7**	**+2.9**
	baz=182						
HNAT				AMP		09 07 00.0	
	baz=182						
HNAT				S	**Sn**	**09 07 47.9**	**-0.8**
	baz=182						
HSAF	**As Saff**	**6.76 176**		P	**Pn**	**09 06 33.3**	**+1.2**
	baz=174						
GLL	**Jalalah**	**6.82 175**		P	**Pn**	**09 06 34.4**	**+1.5**
	baz=173						
EIL	**Elat**	**7.48 152**		Pn	**Pn**	**09 06 42.2**	**+0.2**
	comp=N,0.5nm,0.3s,baz=345,slow=11,SNR=10						
EIL				Sn	**Sn**	**09 08 01.5**	**-5.5**
	comp=N,0.2nm,0.3s,baz=14,slow=17,SNR=1.2						
NBNS	**Bani Suef**	**7.75 178**		P	**Pn**	**09 06 47.2**	**+1.7**
	baz=176						
AKASG	**Malin Array Be**	**14.37 356**		Pn	**Pn**	**09 08 17.1**	**+1.1**
	baz=4.2,slow=24,SNR=1.3						
GERES	**GERESS Array B**	**17.74 320**		P	**P**	**09 09 00.9**	**+0.2**
	comp=N,0.1nm,0.3s,baz=121,slow=9.3,SNR=2.5						
FINES	**FINESS Array B**	**25.27 354**		P	**P**	**09 10 18.8**	**-0.1**
	comp=N,2.0nm,0.8s,baz=148,slow=15,SNR=5.0						
HFS	**Hagfors**	**26.24 340**		P	**P**	**09 10 28.8**	**+1.1**
	comp=N,2.2nm,0.8s,baz=138,slow=11,SNR=1.2						
ATD	**Arta Tunnel**	**26.97 154**		LR	LR	09 19 56.3	
	comp=N,63nm,20.0s,baz=79,slow=34						
TORD	**Torodi Ar. Bea**	**35.00 236**		P	**P**	**09 11 45.1**	**-0.4**
	comp=N,0.4nm,0.7s,baz=41,slow=9.5,SNR=2.2						
MKAR	**Makanchi Array**	**39.14 58**		P	**P**	**09 12 19.1**	**-1.3**
	comp=N,0.2nm,0.5s,baz=266,slow=10,SNR=2.0						
ZALV	**Zalesovo Beam**	**40.73 47**		P	**P**	**09 12 33.4**	**-0.2**
	comp=N,0.5nm,0.3s,baz=270,slow=11,SNR=2.1						
NRIK	**Noril'sk**	**44.77 25**		P	**P**	**09 13 05.8**	**-0.3**
	comp=N,0.6nm,0.3s,baz=268,slow=12,SNR=1.6						
DANN	**Dangsing**	**44.84 85**		*eP*	**P**	**09 13 08.8**	**+1.2**
	comp=N,29nm,0.6s						
KOLN	**Koldanda**	**44.95 85**		*eP*	**P**	**09 13 08.3**	**0.0**
	comp=N,7.5nm,0.6s						
GKN	**Gorkha**	**45.69 85**		*eP*	**P**	**09 13 15.0**	**+0.9**
	comp=N,8.9nm,0.3s						
DMN	**Daman**	**46.23 85**		*eP*	**P**	**09 13 18.3**	**-0.2**
	comp=N,7.0nm,0.3s						
KKN	**Kakani**	**46.29 85**		*eP*	**P**	**09 13 19.8**	**+0.8**
	comp=N,12nm,0.5s						
GUN	**Gumba**	**46.72 84**		*eP*	**P**	**09 13 23.3**	**+0.8**
	comp=N,9.2nm,0.6s						
RAMN	**Ramite**	**47.71 85**		*eP*	**P**	**09 13 29.9**	**-0.2**
	comp=N,12nm,0.8s						

*IDC **15** 09:10:05.3±1.5, 23.°35N×100.°47E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.2/51, mbtmp3.2/4, ML3.5/1, MS2.8/1, Ms1 3.0/1, ms1mx2.5/23, Error ellipse: s-maj=36.9km s-min=18.5km az=95.0*
ISC 15 09:10:06.9±1.2,**23.°28N**±0.°08×**100.°4E**±0.°2,**h10**km,**n12,**
σ1$76/17,mb3.2/3,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYA	**Payao**	**3.92 187**		Pg	**Pg**	**09 11 21.3**	**-0.8**
PAYA				Sg	**Sg**	**09 12 10.4**	**-2.7**
CMMT	**Chiang Mai**	**4.63 197**		Pg	**Pg**	**09 11 34.2**	**-1.5**
CMMT				Sg	**Sg**	**09 12 34.4**	**-1.5**
LAMP	**Lampang**	**4.78 188**		Pg	**Pg**	**09 11 37.4**	**-1.1**
CM31	**Chiang Mai Arr**	**4.98 196**		Pg	**Pg**	**09 11 41.3**	**-1.0**
CM31				Sg	**Sg**	**09 12 46.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**4.98 196**		Pn	**Pn**	**09 11 22.1**	**+0.3**
	0.5nm,0.3s,baz=3.9,slow=15,SNR=4.9						
CMAR				Pg	**Pb**	**09 11 38.1**	**+3.9**
	0.6nm,0.3s,baz=14,slow=16,SNR=4.2						
CMAR				Lg	Lg	09 12 46.0	
	1.9nm,0.3s,baz=13,slow=28,SNR=12						
CMAR				LR	LR	09 13 42.3	
	comp=Z,106nm,20.6s,baz=25,slow=43						
CM09	**Chiang Mai Arr**	**4.98 195**		Sg	**Sg**	**09 12 47.9**	**+1.0**
CM02	**Chiang Mai Arr**	**5.00 196**		Pg	**Pg**	**09 11 41.2**	**-1.5**
CM04	**Chiang Mai Arr**	**5.02 195**		Pg	**Pg**	**09 11 41.1**	**-2.1**
CM04				Sg	**Sg**	**09 12 47.6**	**-0.7**
CM05	**Chiang Mai Arr**	**5.03 196**		Pg	**Pg**	**09 11 41.6**	**-1.8**
SONM	**Songino Array**	**24.98 10**		P	**P**	**09 15 30.0**	**-0.8**
	0.4nm,0.6s,baz=176,slow=10,SNR=1.9						
MKAR	**Makanchi Array**	**27.61 333**		P	**P**	**09 15 53.9**	**-0.6**
	0.3nm,0.7s,baz=126,slow=7.3,SNR=1.9						
WRA	**Warramunga Arr**	**54.25 140**		P	**P**	**09 19 33.5**	**+0.2**
	0.4nm,0.8s,baz=328,slow=7.8,SNR=2.6						

*DJA **15** 09:11:42.3±2.3, 1.°N±13.°×12.°6E±.°, h159km±24km, M3.6/5, MLv3.6/5*
*IDC **15** 09:11:45.3±2.1, 1.°57N×125.°86E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/33, mbtmp3.6/3, Error ellipse: s-maj=181.1km s-min=26.0km az=65.0*
*NEIC **15** 09:11:49.4±0.8, 1.°7N±0.°1×126.°32E±0.°05, h35km±2km, mb4.0/8, Error ellipse: s-maj=22.3km s-min=7.1km az=193.0*
ISC 15 09:11:49.1±0.9,**1.°61N**±0.°08×**126.°30E**±0.°09,**h35**km,**n15,**
σ1$55/17,mb4.0/7,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36 128**		P	**Pn**	**09 12 08.7**	**-2.8**
TNTI				S	**Sn**	**09 12 29.4**	**+1.1**
TNTI	**Ternate**	**1.36 128**			**Pn**	**09 12 11.5**	**0.0**
TNTI					Sn	**Sn**	**09 12 29.2**	**+0.9**
SGSI	**Sangihe**	**2.20 340**		P	**Pn**	**09 12 23.3**	**+0.2**
LUWI	**Luwuk**	**4.40 233**		Pn	**Pn**	**09 12 52.7**	**-0.7**
WB0	**Warramunga Arr**	**22.68 160**		P	**P**	**09 16 49.7**	**+2.0**
WB0				IAmb	IAmb	09 17 17.9	
	comp=Z,8.3nm,1.4s						
WRAB	**Tennant Creek**	**22.82 160**		P	**P**	**09 16 50.5**	**+1.3**
WRAB				IAmb	IAmb	09 17 00.5	
	comp=Z,9.5nm,1.5s						
WRA	**Warramunga Arr**	**22.83 160**		P	**P**	**09 16 50.6**	**+1.4**
	comp=Z,1.5nm,0.7s,baz=337,slow=11,SNR=21						
WRA	**Warramunga Arr**	**22.83 160**		P	**P**	**09 16 50.0**	**+0.8**
WB2	**Warramunga Arr**	**22.83 160**		P	**P**	**09 16 50.3**	**+1.0**
WB2				IAmb	IAmb	09 17 18.8	
	comp=Z,7.3nm,1.4s						
WC3	**Warramunga Arr**	**22.85 160**		P	**P**	**09 16 51.4**	**+1.9**
WR0	**Warramunga Arr**	**22.91 160**		P	**P**	**09 16 51.1**	**+1.0**
WR0				IAmb	IAmb	09 17 19.0	
	comp=Z,7.9nm,1.5s						
ASAR	**Alice Springs**	**26.19 164**		P	**P**	**09 17 23.1**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=346,slow=10,SNR=9.5						
MKAR	**Makanchi Array**	**59.05 326**		P	**P**	**09 21 45.8**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=119,slow=8.9,SNR=4.5						
GAR	**Garm**	**63.05 314**		P	**P**	**09 22 11.2**	**-1.9**
KURK	**Kurchatov**	**63.29 328**		P	**P**	**09 22 14.2**	**-0.1**

*IDC **15** 09:25:52.5±1.1, 1.°72N×126.°33E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.8/30, mbtmp4.0/8, ML3.7/1, MS3.4/1, Ms1 3.6/1, ms1mx3.0/35, Error ellipse: s-maj=121.8km s-min=16.5km az=70.0*
*NEIC **15** 09:25:57.9±1.2, 1.°7N±0.°1×126.°34E±0.°05, h35km±2km, mb4.1/6, Error ellipse: s-maj=25.9km s-min=6.8km az=193.0*
ISC 15 09:25:57.9±0.9,**1.°7N**±0.°1×**126.°3E**±0.°1,**h35**km,**n19,**
σ0$53/18,mb4.1/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.40 132**		Pn	**Pn**	**09 26 20.3**	**-0.6**
LUWI	**Luwuk**	**4.48 232**		Pn	**Pn**	**09 27 02.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.69 182**		P	**P**	**09 30 24.2**	**0.0**
	0.2nm,0.3s,baz=8.4,slow=10,SNR=2.9						
WB0	**Warramunga Arr**	**22.76 160**		P	**P**	**09 30 56.9**	**-0.5**
WRAB	**Tennant Creek**	**22.90 160**		P	**P**	**09 30 59.0**	**+0.1**
WRAB				IAmb	IAmb	09 31 03.0	
	comp=Z,5.9nm,0.8s						
WRA	**Warramunga Arr**	**22.91 160**		P	**P**	**09 30 57.9**	**-0.9**
	comp=Z,3.4nm,0.5s,baz=341,slow=11,SNR=47						
WRA	**Warramunga Arr**	**22.91 160**		P	**P**	**09 30 58.3**	**-0.6**
WB2	**Warramunga Arr**	**22.91 160**		P	**P**	**09 30 59.3**	**+0.4**
WB2				IAmb	IAmb	09 31 04.9	
	comp=Z,6.5nm,0.7s						
WR0	**Warramunga Arr**	**22.99 160**		P	**P**	**09 30 59.9**	**+0.1**
WR0				IAmb	IAmb	09 31 08.4	
	comp=Z,5.1nm,1.0s						
AS31	**Alice Springs**	**26.28 164**		P	**P**	**09 31 30.4**	**+0.2**
ASAR	**Alice Springs**	**26.28 164**		P	**P**	**09 31 29.5**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=346,slow=8.4,SNR=24						
ASAR	**Alice Springs**	**26.28 164**		P	**P**	**09 31 31.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**31.59 304**		LR	LR	09 47 34.1	
	comp=Z,56nm,18.5s,baz=172,slow=41						
STKA	**Stephens Creek**	**36.41 158**		P	**P**	**09 32 59.6**	**+0.4**
	comp=Z,0.9nm,0.4s,baz=295,slow=2.6,SNR=3.8						
SONM	**Songino Array**	**49.08 342**		P	**P**	**09 34 41.8**	**0.0**
	comp=Z,0.6nm,0.7s,baz=160,slow=6.0,SNR=4.3						
MKAR	**Makanchi Array**	**58.99 326**		P	**P**	**09 35 53.7**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=118,slow=7.6,SNR=24						
MKAR	**Makanchi Array**	**58.99 326**		P	**P**	**09 35 54.0**	**0.0**
ZALV	**Zalesovo Beam**	**62.20 334**		P	**P**	**09 36 15.8**	**0.0**
	comp=

YULB Yu-li 22.02 347 P **P** 09 31 47.0 -3.1
YULB IAmb IAmb 09 31 54.8
comp=Z,123nm,1.5s

TPUB Ta-pu 22.09 345 P **P** 09 31 48.3 -2.6
SSLB Suanglung 22.48 346 P **P** 09 31 52.6 -2.5
SSLB IAmb IAmb 09 31 58.2
comp=Z,38nm,0.7s

COEN Coen 22.74 134 P **P** 09 31 58.8 +0.8
baz=23,SNR=6.1
COEN Coen 22.74 134 P **P** 09 31 56.2 -1.8
WB0 Warramunga Arr 22.81 161 P **P** 09 31 57.9 -0.8
WB0 IAmb IAmb 09 32 08.0
comp=Z,62nm,0.8s

WRAB Tennant Creek 22.95 161 *ce*P **P** 09 32 00.0 -0.1
WRAB pmax pmax
comp=Z,69nm,0.7s

WRAB Tennant Creek 22.95 161 P **P** 09 31 58.4 -1.8
WRAB IAmb IAmb 09 32 04.0
comp=Z,70nm,0.8s

WRA Warramunga Arr 22.96 161 P **P** 09 31 59.0 -1.2
comp=Z,58nm,0.7s,baz=339,slow=11,SNR=49
WRA PcP **PcP** **09 35 49.8 +0.6**
comp=Z,1.8nm,0.6s,baz=314,slow=2.4,SNR=4.5
WRA S **S** **09 36 05.7 -1.4**
comp=Z,3.3nm,0.8s,baz=343,slow=18,SNR=7.1
WRA ScP **ScP** **09 39 27.6 +4.1**
comp=Z,0.8nm,1.0s,baz=345,slow=2.5,SNR=3.0

WRA Warramunga Arr 22.96 161 *i* P **P** 09 31 59.0 -1.2
WRA pmax pmax
comp=Z,57nm,0.7s

WRA Warramunga Arr 22.96 161 P **P** 09 31 58.4 -1.7
WB2 Warramunga Arr 22.96 161 P **P** 09 31 58.2 -2.0
WR0 Warramunga Arr 23.04 161 P **P** 09 31 59.2 -1.8
WR0 IAmb IAmb 09 32 04.8
comp=Z,48nm,0.8s

PMG Port Moresby 23.35 119 P **P** 09 32 04.8 +0.7
comp=Z,21nm,0.8s,baz=272,slow=7.5,SNR=5.0
PMG Port Moresby 23.35 119 *ce*P **P** 09 32 06.5 +2.4
PMG pmax pmax
comp=Z,39nm,1.3s

PMG Port Moresby 23.35 119 IAmb IAmb 09 32 05.9
comp=Z,25nm,0.9s

QIZ Qiongzhong 23.67 317 P **P** 09 32 06.4 -0.7
QIZ S **S** **09 36 20.8 +2.0**
QIZ LR LR
comp=Z,350nm,4.7s
QIZ LR LR
comp=Z,320nm,3.8s
QIZ LR LR
comp=Z,680nm,23.7s

PSA00 Pilbara Seismi 24.20 195 P **P** 09 32 09.8 -2.0
PSA00 Pilbara Seismi 24.20 195 P **P** 09 32 11.3 -0.6
PSA00 IAmb IAmb 09 32 14.3
comp=Z,7.7nm,0.8s

QIS Mount Isa 25.67 151 P **P** 09 32 26.9 +1.5
baz=26,SNR=29
KRVT Keravat (AS076 26.15 104 LR LR 09 42 06.2
comp=Z,214nm,18.8s,baz=251,slow=35

AS31 Alice Springs 26.35 165 P **P** 09 32 31.7 +0.2
ASAR Alice Springs 26.35 165 P **P** 09 32 32.0 +0.5
comp=Z,14nm,0.5s,baz=352,slow=16,SNR=28
ASAR PcP **PcP** **09 35 57.5 +0.8**
comp=Z,2.1nm,0.5s,baz=350,slow=2.3,SNR=5.0
ASAR S **S** **09 37 03.0 +1.6**
comp=Z,1.3nm,0.7s,baz=351,slow=22,SNR=4.1

ASAR Alice Springs 26.35 165 P **P** 09 32 30.1 -1.3
ASAR Alice Springs 26.35 165 P **P** 09 32 30.1 -1.3
MTSU Mount Surprise 26.45 139 P **P** 09 32 33.8 +1.4
baz=26,SNR=23
WRKA Warakurna 26.78 177 P **P** 09 32 35.8 +0.4
baz=27,SNR=26
GIRL Giralia 27.16 206 P **P** 09 32 40.0 +1.2
baz=27,SNR=5.4
RPSI Rantau Prapat 27.65 272 P **P** 09 32 41.8 -1.5
PSI Prapat 27.65 272 P **P** 09 32 41.8 -1.6
PSI pmax pmax
comp=Z,15nm,0.9s

GSI Gunungsitoli 29.00 269 P **P** 09 32 53.8 -1.5
GSI IAmb IAmb 09 32 59.8
comp=Z,27nm,0.7s

CTA Charters Tower 29.12 139 P **P** 09 32 57.3 +1.0
comp=Z,5.2nm,0.8s,baz=328,slow=10,SNR=10
CTAO Charters Tower 29.12 139 P **P** 09 32 57.3 +1.0
CTAO pmax pmax
comp=Z,16nm,0.9s

CTAO Charters Tower 29.12 139 P **P** 09 32 57.3 +1.0
MEEK Meekatharra 29.35 195 P **P** 09 32 58.6 +0.4
baz=30,SNR=9.5
PHIT Phitsanulok 29.90 302 P P 09 33 08.0 +4.8
UTTA Uttaradit 30.04 303 P **P** 09 33 05.6 +1.1
SUKH Sukhothai 30.70 302 P **P** 09 33 11.1 +0.8
WHN Wuhan 30.80 339 P **P** 09 33 13.8 +2.8
NJ2 Nanjing 30.91 347 *e*P **P** 09 33 14.4 +2.5
NJ2 pmax pmax
comp=Z,13nm,0.6s

GYA Guiyang 31.06 324 *e*P **P** 09 33 12.9 -0.6
GYA pmax pmax
comp=Z,11nm,0.7s
GYA LR LR
comp=Z,280nm,19.8s

JNU Nakatsue 31.37 7 P **P** 09 33 16.1 0.0
comp=Z,22nm,0.8s,baz=64,slow=3.9,SNR=13
JNU Nakatsue 31.37 7 P **P** 09 33 14.6 -1.4
JNU IAmb IAmb 09 33 17.7
comp=Z,31nm,0.9s

PAYA Payao 31.40 305 P **P** 09 33 18.0 +1.5
CM36 Chiang Mai Arr 31.63 303 P **P** 09 33 19.0 +0.5
CM35 Chiang Mai Arr 31.66 304 P **P** 09 33 19.0 +0.3
CM04 Chiang Mai Arr 31.67 303 P **P** 09 33 20.5 +1.6
CM09 Chiang Mai Arr 31.68 303 P **P** 09 33 20.9 +1.9
CM01 Chiang Mai Arr 31.70 303 P P 09 33 05.0 -14
CM05 Chiang Mai Arr 31.70 303 P **P** 09 33 21.3 +2.2
CM02 Chiang Mai Arr 31.71 303 P **P** 09 33 20.0 +0.8
CMAR Chiang Mai Arr 31.73 303 P **P** 09 33 18.4 -1.0
comp=Z,4.5nm,0.8s,baz=116,slow=7.1,SNR=17
CMAR Chiang Mai Arr 31.73 303 *i* P **P** 09 33 20.2 +0.8
CMAR pmax pmax
comp=Z,5.0nm,0.8s

CM13 Chiang Mai Arr 31.74 303 P **P** 09 33 21.1 +1.7
CM34 Chiang Mai Arr 31.74 304 P **P** 09 33 20.0 +0.5
CMMT Chiang Mai 31.89 304 P **P** 09 33 21.3 +0.5
CHTO Chiang Mai 31.90 304 P **P** 09 33 19.7 -1.1
CHTO pmax pmax
comp=Z,10.0nm,0.7s

CHTO Chiang Mai 31.90 304 P **P** 09 33 19.7 -1.1
CHTO IAmb IAmb 09 33 22.0
comp=Z,10nm,0.7s

CM33 Chiang Mai Arr 31.90 304 P **P** 09 33 21.0 +0.2
CM32 Chiang Mai Arr 31.90 303 P **P** 09 33 22.0 +1.1
MORW Morawa 32.36 197 P **P** 09 33 24.8 0.0
baz=32,SNR=7.1
MORW Morawa 32.36 197 P **P** 09 33 24.4 -0.4
MORW IAmb IAmb 09 33 41.3
comp=Z,16nm,1.1s

MHMT Maesarieng 32.45 302 P **P** 09 33 27.0 +1.3
FORT Forrest 32.48 178 P **P** 09 33 26.4 +0.7
baz=33,SNR=14
FORT Forrest 32.48 178 P **P** 09 33 25.8 +0.1
KMI Kunming 32.62 317 *e*P **P** 09 33 27.1 -0.3
KMI PP **PnPn** **09 34 37.0 +0.6**
KMI S **S** **09 38 41.1 +0.8**
KMI sS sS 09 39 08.8 +8.5
KMI pmax pmax
comp=Z,15nm,0.5s
KMI pmax pmax
comp=Z,150nm,3.9s
KMI LR LR
comp=Z,190nm,15.7s
KMI LR LR
comp=Z,390nm,19.0s
KMI LR LR
comp=Z,520nm,23.1s

QLP Quilpie 33.01 150 P **P** 09 33 31.9 +1.4
baz=33,SNR=3.4
KMBL Kambalda 33.34 187 P **P** 09 33 33.4 +0.2
baz=34,SNR=7.8
BLDU Ballidu 33.63 195 P **P** 09 33 35.7 -0.1
baz=34,SNR=10
JWT Wachi 34.26 13 P **P** 09 33 41.5 +0.3
KLBR Kellerberrin 34.30 193 P **P** 09 33 41.7 +0.1
baz=34,SNR=22
INU Inuyama 34.71 15 P **P** 09 33 45.7 +0.5
JGF Kuroka 35.04 15 P **P** 09 33 46.1 -1.9
JGF IAmb IAmb 09 33 49.5
comp=Z,23nm,1.0s

MUN Mundaring 35.05 195 P **P** 09 33 48.3 +0.2
baz=35,SNR=6.9
RMQ Roma 35.39 144 P **P** 09 33 51.9 +0.8
baz=36,SNR=4.2
KSAR Wonju Array Be 35.44 2 P **P** 09 33 52.1 +0.8
KSAR Wonju Array Be 35.44 2 P **P** 09 33 52.1 +0.8
KSRS Korea Array 35.45 2 P **P** 09 33 51.4 0.0
comp=Z,4.3nm,0.6s,baz=181,slow=9.6,SNR=25
KS19 Wonju Array Si 35.50 2 P **P** 09 33 50.4 -1.4
KS19 IAmb IAmb 09 34 04.1
comp=Z,12nm,0.8s

BBOO Buckleboo 35.62 166 P **P** 09 33 53.8 +0.8
baz=36,SNR=12
EIDS Eidsvold 35.99 140 P **P** 09 33 57.0 +0.7
baz=36,SNR=4.6
EIDS Eidsvold 35.99 140 P **P** 09 33 54.8 -1.4
EIDS IAmb IAmb 09 34 05.5
comp=Z,16nm,0.9s

XAN Xi'an 36.03 335 P **P** 09 33 56.4 -0.1
XAN pP pP 09 34 05.8 -2.7
XAN pmax pmax
comp=Z,24nm,0.8s
XAN pmax pmax
comp=Z,160nm,4.9s

XAN Xi'an 36.03 335 P **P** 09 33 55.0 -1.5
XAN pmax pmax
comp=Z,16nm,0.9s

XAN Xi'an 36.03 335 P **P** 09 33 55.0 -1.5
XAN IAmb IAmb 09 33 56.9
comp=Z,16nm,0.9s

CD2 Chengdu 36.08 326 *i* P **P** 09 33 56.4 -0.6
CD2 S **S** **09 39 34.3 +1.0**
CD2 pmax pmax
comp=Z,30nm,0.7s
CD2 pmax pmax
comp=Z,160nm,4.9s
CD2 LR LR
comp=Z,1μm,25.0s
CD2 LR LR
comp=Z,1μm,23.5s
CD2 LR LR
comp=Z,1μm,22.6s

MAJO Matsushiro 36.16 16 *i* P **P** 09 33 58.0 +0.4
MAJO pmax pmax
comp=Z,89nm,2.9s

MAJO Matsushiro 36.16 16 P **P** 09 33 55.5 -2.0
MAJO IAmb IAmb 09 34 00.1
comp=Z,21nm,0.8s

MAT Matsushiro 36.16 16 P **P** 09 33 57.8 +0.2
MAT *e*S **S** **09 39 31.8 -2.4**
MJAR Matsushiro Arr 36.16 16 P **P** 09 33 57.2 -0.4
comp=Z,16nm,0.9s,baz=184,slow=9.4,SNR=27
MJAR LR LR 09 47 34.5
comp=Z,119nm,21.9s,baz=200,slow=34

MJAR Matsushiro Arr 36.16 16 P **P** 09 33 56.5 -1.0
MJAR pmax pmax
comp=Z,6.0nm,0.8s

MJAR Matsushiro Arr 36.16 16 P **P** 09 33 56.5 -1.0
STKA Stephens Creek 36.44 158 P **P** 09 34 00.2 +0.1
comp=Z,17nm,0.8s,baz=332,slow=8.7,SNR=16
STKA Stephens Creek 36.44 158 P **P** 09 34 00.2 +0.1
baz=37,SNR=14
STKA Stephens Creek 36.44 158 P **P** 09 33 59.1 -0.9
STKA pmax pmax
comp=Z,3.0nm,0.8s

STKA Stephens Creek 36.44 158 P **P** 09 33 59.1 -0.9
HTT Hallett 36.97 163 P **P** 09 34 06.7 +2.1
baz=37,SNR=8.9
DL2 Dalian 37.16 354 P **P** 09 34 07.8 +1.8
DL2 S **S** **09 39 54.1 +4.8**
DL2 pmax pmax
comp=Z,49nm,0.7s
DL2 LR LR
comp=Z,320nm,14.1s
DL2 LR LR
comp=Z,160nm,16.0s
DL2 LR LR
comp=Z,300nm,17.1s

RKGY Rocky Gully 37.37 193 P **P** 09 34 09.5 +1.6
baz=38,SNR=7.3
CMSA Cobar Meteorol 37.84 153 P **P** 09 34 13.1 +1.2
baz=38,SNR=9.2
JMM Marumori 38.15 18 P **P** 09 34 13.8 -0.6
BJT Baijiatuan 39.15 347 IAmb IAmb 09 34 25.9
comp=Z,16nm,0.8s

BJI Beijing 39.17 347 P **P** 09 34 23.3 +0.4
BJI pmax pmax
comp=Z,20nm,0.7s

ARMA Armidale 40.00 145 P **P** 09 34 30.7 +0.5
baz=40,SNR=9.7
ARMA Armidale 40.00 145 P **P** 09 34 29.4 -0.8
LZH Lanzhou 40.05 331 *e*P **P** 09 34 30.8 +0.2
LZH PP **PnPn** **09 36 07.9 +0.8**
LZH pmax pmax
comp=Z,37nm,1.1s
LZH LR LR
comp=Z,230nm,13.0s
LZH LR LR
comp=Z,180nm,15.7s
LZH LR LR
comp=Z,280nm,14.6s

SHL Shillong 40.89 308 P **P** 09 34 36.4 -1.3
SHL pmax pmax
comp=Z,33nm,0.8s

SHL Shillong 40.89 308 P **P** 09 34 36.4 -1.3
SHL IAmb IAmb 09 34 37.9
comp=Z,33nm,0.8s

ARPS Mount Arapiles 40.96 161 P **P** 09 34 39.0 +1.1
baz=41,SNR=13
HHC Hu-ho-hao-te 41.13 343 *e*P **P** 09 34 38.5 -0.8
HHC pmax pmax
comp=Z,23nm,1.0s
HHC pmax pmax
comp=Z,34nm,5.0s

CN2 Changchun 41.78 359 *e*P **P** 09 34 46.8 +2.3
CN2 pmax pmax
comp=Z,10.0nm,0.6s

USA0B Ussuriysk Arra 42.44 6 P **P** 09 34 49.3 -0.5
USA0B pmax pmax
comp=Z,18nm,0.8s

USA0B Ussuriysk Arra 42.44 6 P **P** 09 34 49.3 -0.5
USA0B IAmb IAmb 09 34 52.4
comp=Z,18nm,0.8s

USRK Ussuriysk Ar. 42.44 6 P **P** 09 34 51.1 +1.3
comp=Z,14nm,0.7s,baz=194,slow=6.4,SNR=34
USRK Ussuriysk Ar. 42.44 6 P **P** 09 34 49.8 0.0
USRK Ussuriysk Ar. 42.44 6 P **P** 09 34 49.8 0.0
H11S3 WAKE ISLAND Hy 42.64 64 T T 10 20 35.2
baz=252,slow=75,SNR=14
H11S2 WAKE ISLAND Hy 42.66 64 T T 10 20 39.2
baz=252,slow=75,SNR=13
H11S1 WAKE ISLAND Hy 42.66 64 T T 10 20 36.7
baz=252,slow=75,SNR=9.5

MDJ Mudanjiang 42.67 3 P **P** 09 34 52.3 +0.6
MDJ pmax pmax
comp=Z,15nm,0.9s
MDJ pmax pmax
comp=Z,150nm,4.7s

MDJ Mudanjiang 42.67 3 P **P** 09 34 53.5 +1.8
CNB Canberra Magne 42.68 152 P **P** 09 34 53.1 +1.1
baz=43,SNR=7.2
H11N1 WAKE ISLAND Hy 43.21 63 T T 10 21 24.3
baz=251
H11N2 WAKE ISLAND Hy 43.23 63 T T 10 21 32.8
baz=251
H11N3 WAKE ISLAND Hy 43.23 63 T T 10 21 22.8
baz=251
LSA Lhasa 43.58 313 IAmb IAmb 09 35 05.0
comp=Z,13nm,0.7s

TEY Ternei 43.91 10 *e*P **P** 09 35 03.4 +1.8
TEY pmax pmax
comp=N,40nm,0.6s
TEY pmax pmax
comp=Z,80nm,0.5s

GTA Gaotai 44.63 330 *e*P **P** 09 35 07.6 -0.2
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,120nm,7.5s
GTA LR LR
comp=Z,170nm,19.3s
GTA LR LR
comp=Z,150nm,18.2s
GTA LR LR
comp=Z,200nm,21.4s

TAPN Taplejung 45.02 308 *e*P **P** 09 35 10.7 -0.6

ODAN Odare 45.05 307 *e*P **P** 09 35 10.9 -0.6
DZM Mont Dzumac 45.60 124 P **P** 09 35 10.9 -4.8
DZM IAmb IAmb 09 35 21.0
comp=Z,19nm,1.0s

RAMN Ramite 45.73 307 *e*P **P** 09 35 16.5 -0.3
comp=Z,28nm,0.7s
GUN Gumba 46.73 308 *e*P **P** 09 35 24.1 -0.6
comp=Z,33nm,0.4s
PKI Pulchoki 46.95 307 *e*P **P** 09 35 25.7 -0.8
comp=Z,23nm,0.8s
PKIN Phulchoki 46.96 307 *e*P **P** 09 35 26.4 -0.1
YSS Yuzh-Sakhalins 47.08 15 *e*P **P** 09 35 28.0 +1.3
KKN Kakani 47.15 307 *e*P **P** 09 35 27.6 -0.3
KLR Kul'dur 47.41 5 *ce*P **P** 09 35 30.9 +1.6
KLR pmax pmax
comp=Z,9.0nm,1.0s

GKN Gorkha 47.75 307 *e*P **P** 09 35 31.7 -0.8
comp=Z,14nm,0.4s
KOLN Koldanda 48.49 306 *e*P **P** 09 35 37.7 -0.6
comp=Z,51nm,0.7s
DANN Dangsing 48.60 307 *e*P **P** 09 35 38.3 -0.9
comp=Z,34nm,0.5s

ULN Ulaanbaatar 48.85 343 *ce*P **P** 09 35 41.5 +0.9
ULN pmax pmax
comp=Z,10.0nm,1.0s

ULN Ulaanbaatar 48.85 343 P **P** 09 35 39.7 -0.9
ULN IAmb IAmb 09 35 50.4
comp=Z,9.0nm,0.8s

SONM Songino Array 49.02 342 P **P** 09 35 42.1 +0.1
comp=Z,7.9nm,0.6s,baz=158,slow=8.6,SNR=24
SONM Songino Array 49.02 342 P **P** 09 35 41.4 -0.5
SONM pmax pmax
comp=Z,6.0nm,0.7s

SONM Songino Array 49.02 342 P **P** 09 35 41.4 -0.5
GRNR Gornyy 49.45 8 *e*P P 09 35 32.0 -13
GRNR MLR MLR
comp=Z,140nm,10.0s

ZEA Zeya 51.72 1 *e*P **P** 09 36 02.6 +0.6
ZEA pmax pmax
comp=Z,10.0nm,0.8s

TLY Talaya 53.26 342 *i* P **P** 09 36 14.2 +0.7
TLY pmax pmax
comp=Z,5.0nm,0.7s

TLY Talaya 53.26 342 P **P** 09 36 11.6 -1.9
MOY Mondy 54.09 341 *e*P **P** 09 36 20.1 +0.4
MOY pmax pmax
comp=Z,15nm,1.2s

WMQ Urumqi 54.18 326 *e*P **P** 09 36 21.4 +1.0
WMQ pP pP 09 36 30.3 -2.6
WMQ PcP **PcP** **09 37 23.3 -1.2**
WMQ pmax pmax
comp=Z,34nm,1.1s
WMQ pmax pmax
comp=Z,140nm,3.7s
WMQ LR LR
comp=Z,930nm,29.3s
WMQ LR LR
comp=Z,2μm,29.0s
WMQ LR LR
comp=Z,590nm,27.7s

BOD Bodaibo 56.69 352 *e*P **P** 09 36 39.2 +1.1
BOD pmax pmax
comp=Z,18nm,1.5s

PETK Petropavlovsk- 57.22 22 P **P** 09 36 43.5 +1.5
comp=Z,5.7nm,0.5s,baz=182,slow=4.3,SNR=40
PETK Petropavlovsk- 57.22 22 P **P** 09 36 41.5 -0.5
PETK Petropavlovsk- 57.22 22 P **P** 09 36 41.5 -0.5
SHLS Shalkode 58.70 321 *e*P **P** 09 36 50.9 -1.9
comp=Z,16nm,0.9s,baz=321
SHLS Shalkode 58.70 321 *e*P **P** 09 36 50.8 -1.9
SHLS pmax pmax
comp=Z,16nm,0.9s

NIL Nilore 58.96 309 P **P** 09 36 55.0 +0.4
NIL pmax pmax
comp=Z,13nm,0.6s

NIL Nilore 58.96 309 P **P** 09 36 55.0 +0.4
MK31 Makanchi Array 59.01 326 *ce*P **P** 09 36 54.7 0.0
MK31 Makanchi Array 59.01 326 P **P** 09 36 53.3 -1.4
MK31 IAmb IAmb 09 36 56.5
comp=Z,11nm,0.8s

MKAR Makanchi Array 59.01 326 P **P** 09 36 54.6 -0.1
comp=Z,8.4nm,0.4s,baz=120,slow=7.5,SNR=81
MKAR Makanchi Array 59.01 326 P **P** 09 36 53.4 -1.3
MKAR Makanchi Array 59.01 326 P **P** 09 36 53.4 -1.3
PRZ Przheval'sk 59.03 320 P **P** 09 36 55.0 -0.1
PRZ pmax pmax
comp=Z,31nm,0.6s

PRZ Przheval'sk 59.03 320 P **P** 09 36 55.0 -0.1
MAKZ Makanchi 59.20 326 P **P** 09 36 55.3 -0.7
MAKZ pmax pmax
comp=Z,20nm,1.0s

MAKZ Makanchi 59.20 326 P **P** 09 36 55.3 -0.7
MAKZ IAmb IAmb 09 36 57.8
comp=Z,20nm,1.0s

KSH Kashi 59.27 316 P **P** 09 36 58.4 +1.6
KSH S **S** **09 45 02.9 +1.1**
KSH pmax pmax
comp=Z,24nm,0.6s
KSH pmax pmax
comp=Z,140nm,4.8s
KSH LR LR
comp=Z,260nm,6.5s
KSH LR LR
comp=Z,330nm,3.9s
KSH LR LR
comp=Z,280nm,6.8s

SATY Saty 59.31 321 *e*P **P** 09 36 57.0 0.0
comp=Z,15nm,0.8s,baz=320
SATY *e*S **S** **09 45 03.3 +1.0**
baz=320
SATY Saty 59.31 321 *e*P **P** 09 36 57.0 0.0
SATY *e*S **S** **09 45 03.2 +1.0**
SATY pmax pmax
comp=Z,15nm,0.8s

KPKS Kokpek 59.34 321 *e*P **P** 09 36 57.0 -0.2
comp=Z,16nm,0.7s,baz=321
KPKS Kokpek 59.34 321 *e*P **P** 09 36 56.9 -0.2
KPKS pmax pmax
comp=Z,16nm,0.7s

KDJ Kajisay 59.65 319 P **P** 09 36 57.2 -2.2
KDJ pmax pmax
comp=Z,23nm,0.9s

KDJ Kajisay 59.65 319 P **P** 09 36 57.2 -2.2
YAK Yakutsk 60.08 2 *e*P **P** 09 37 02.3 +0.6
YAK *e**PP **pwP** **09 37 15.9 -1.3**
YAK *e* 09 37 45.3
YAK *e*S **S** **09 45 12.4 +1.3**
YAK *e**SS **sS** **09 45 37.0 +4.8**
YAK *e*SS **SS** **09 49 09.9 +1.3**
YAK pmax pmax
comp=Z,43nm,0.8s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK smax smax
comp=E,213nm,3.3s
YAK smax smax
comp=N,180nm,2.2s

YAK Yakutsk 60.08 2 P **P** 09 37 01.1 -0.6
MDOK Medeo 60.23 320 *e*P **P** 09 37 03.1 -0.2
baz=320
MDOK Medeo 60.23 320 *e*P **P** 09 37 03.1 -0.2
TNSS Tian-Shan 60.23 320 *e*P **P** 09 37 03.8 +0.1
baz=320
TNSS Tian-Shan 60.23 320 *e*P **P** 09 37 03.8 +0.1
TDK Taldyqorghan 60.30 323 *e*P **P** 09 37 03.4 -0.2
comp=N,16nm,0.6s,baz=322
TDK Taldyqorghan 60.30 323 *e*P **P** 09 37 03.4 -0.2
TDK pmax pmax
comp=Z,16nm,0.6s

AAA Alma-Ata 60.34 320 *e*P **P** 09 37 04.1 +0.2
comp=Z,16nm,0.7s,baz=320
AAA Alma-Ata 60.34 320 *e*P **P** 09 37 04.1 +0.2
AAA pmax pmax
comp=Z,16nm,0.7s

CHKK Chushkaly 60.60 321 *e*P **P** 09 37 05.2 -0.5
baz=321
CHKK Chushkaly 60.60 321 *e*P **P** 09 37 05.2 -0.5
KUU Kurty 61.03 321 *e*P **P** 09 37 08.5 -0.2
comp=Z,30nm,0.9s,baz=320
KUU Kurty 61.03 321 *e*P **P** 09 37 08.4 -0.2
KUU pmax pmax
comp=Z,30nm,0.9s

TKM2 Tokmak 2 61.05 319 P **P** 09 37 09.1 0.0

	SNR=13								
KBK	Karagaybulak	61.36	319	P		P	09 37 12.4	+1.4	
	SNR=5.0								
UCH	Uchtor	61.46	318	P		P	09 37 14.0	+2.0	
	SNR=6.1								
AAK	Ala-Archa	61.65	319	*ce*P		P	09 37 14.6	+1.6	
AAK				pmax		pmax			
	comp=Z,18nm,0.8s								
USP	Ospenovka	61.93	319	P		P	09 37 14.7	0.0	
	SNR=14								
AML	Almayashu	61.96	318	P		P	09 37 15.6	+0.2	
	SNR=18								
EKS2	Erkin-Say	62.14	318	P		P	09 37 17.6	+1.4	
	SNR=7.4								
ZAA0	Zalesovo Array	62.19	334	P		P	09 37 15.0	-1.1	
ZAA0				IAmb		IAmb	09 37 41.8		
	comp=Z,14nm,1.3s								
ZALV	Zalesovo Beam	62.19	334	P		P	09 37 15.1	-1.0	
	comp=Z,1.9nm,0.3s,baz=129,slow=8.7,SNR=8.2								
ZALV	Zalesovo Beam	62.19	334	P		P	09 37 14.3	-1.8	
KBL	Kabul	62.55	308	P		P	09 37 17.2	-2.0	
KBL				pmax		pmax			
	comp=Z,14nm,0.7s								
KBL	Kabul	62.55	308	P		P	09 37 17.2	-2.0	
KBL				IAmb		IAmb	09 37 20.1		
	comp=Z,14nm,0.7s								
BTLS	Baital	63.02	321	*e*P		P	09 37 21.8	-0.1	
	comp=Z,4.0nm,0.9s,baz=321								
BTLS	Baital	63.02	321	*e*P		P	09 37 21.8	-0.1	
BTLS				pmax		pmax			
	comp=Z,4.0nm,0.9s								
GAR	Garm	63.09	313	P		P	09 37 21.6	-1.1	
KURK	Kurchatov	63.24	328	*ce*P		P	09 37 23.1	-0.1	
KURK				pmax		pmax			
	comp=Z,34nm,0.8s								
KURK	Kurchatov	63.24	328	P		P	09 37 22.6	-0.6	
CHGR	Chuyangaron	63.81	313	P		P	09 37 26.7	-0.7	
DZA	Taraz	63.87	318	*e*P		P	09 37 27.2	-0.4	
	baz=318								
DZA	Taraz	63.87	318	*e*P		P	09 37 27.2	-0.4	
IUG	luzhnay	64.46	317	*e*P		P	09 37 31.3	-0.3	
	comp=Z,4.5nm,0.8s,baz=316								
IUG	luzhnay	64.46	317	*e*P		P	09 37 31.2	-0.3	
IUG				pmax		pmax			
	comp=Z,4.0nm,0.8s								
KK31	Karatay Array	64.50	318	P		P	09 37 31.0	-0.7	
KK31				pmax		pmax			
	comp=Z,8.0nm,0.9s								
KK31	Karatay Array	64.50	318	P		P	09 37 31.0	-0.7	
KK31				IAmb		IAmb	09 37 33.9		
	comp=Z,8.2nm,0.9s								
KKAR	Karatay Array	64.50	318	P		P	09 37 30.7	-1.1	
KKAR				pmax		pmax			
	comp=Z,8.0nm,0.9s								
KKAR	Karatay Array	64.50	318	P		P	09 37 30.7	-1.1	
KKAR				IAmb		IAmb	09 37 33.9		
	comp=Z,8.2nm,0.9s								
KKAR	Karatay Array	64.50	318	P		P	09 37 29.9	-1.8	
BRZS	Berezniki	66.13	325	*e*P		P	09 37 41.6	-0.6	
	comp=Z,4.0nm,0.7s,baz=325								
BRZS	Berezniki	66.13	325	*e*P		P	09 37 41.5	-0.6	
BRZS				pmax		pmax			
	comp=Z,4.0nm,0.7s								
BRVK	Borovoye	68.88	327	*ce*P		P	09 37 59.8	+0.4	
BRVK				pmax		pmax			
	comp=Z,13nm,1.3s								
BRVK	Borovoye	68.88	327	P		P	09 37 58.3	-1.1	
BRVK				IAmb		IAmb	09 38 07.6		
	comp=Z,9.5nm,0.6s								
TIXI	Tiksi	69.71	1	*ce*P		P	09 38 04.7	+0.6	
TIXI	Tiksi	69.71	1	P		P	09 38 02.5	-1.7	
GEYT	Alibeck	71.95	309	P		P	09 38 18.8	+0.2	
	comp=Z,5.0nm,0.7s,baz=119,slow=5.2,SNR=6.8								
GEYT	Alibeck	71.95	309	P		P	09 38 17.6	-0.9	
NRIK	Noril'sk	72.21	346	P		P	09 38 20.2	+0.9	
	comp=Z,17nm,0.6s,baz=125,slow=6.1,SNR=39								
ABKAR	Akbulak array	73.51	321	P		P	09 38 26.6	-0.8	
ABKAR				IAmb		IAmb	09 38 29.4		
	comp=Z,9.4nm,0.7s								
ABKAR	Akbulak array	73.51	321	P		P	09 38 25.9	-1.5	
SVE	Sverdlovsk	75.48	329	*e*P		P	09 38 39.2	+0.5	
SVE				pmax		pmax			
	comp=Z,42nm,0.9s								
ARU	Arti	76.44	328	*c i*P		P	09 38 44.1	-0.1	
ARU				S		S	09 48 27.2	+1.1	
ARU				SS		SS	09 53 17.8	-3.6	
ARU				pmax		pmax			
	comp=Z,24nm,0.7s								
ARU	Arti	76.44	328	P		P	09 38 43.0	-1.2	
MAK	Makhachkala	80.75	313	*e*P		P	09 39 06.5	-1.7	
MAK				*e*			09 42 07.9		
MAK				*e*S		S	09 49 12.0	-0.7	
MAK				*e*SS		SS	09 54 30.0	+3.3	
MAK				pmax		pmax			
	comp=Z,195nm,1.0s								
RAYN	Ar Rayn	81.08	293	P		P	09 39 09.5	-1.0	
RAYN				pmax		pmax			
	comp=Z,9.0nm,0.7s								
RAYN	Ar Rayn	81.08	293	P		P	09 39 09.5	-1.0	
RAYN				IAmb		IAmb	09 39 16.4		
	comp=Z,8.8nm,0.7s								
VNDA	Vanda	81.59	173	P		P	09 39 12.8	+0.8	
	comp=Z,4.2nm,0.5s,baz=310,slow=6.5,SNR=28								
VNDA	Vanda	81.59	173	P		P	09 39 12.2	+0.2	
VNDA				pmax		pmax			
	comp=Z,8.0nm,1.0s								
VNDA	Vanda	81.59	173	P		P	09 39 12.2	+0.2	
KIRV	Kirov	81.74	329	*ce*P		P	09 39 15.9	+2.8	
MAW	Mawson	81.95	200	P		P	09 39 14.6	+0.6	
	comp=Z,5.5nm,0.7s,baz=80,slow=6.1,SNR=14								
MAW	Mawson	81.95	200	P		P	09 39 15.2	+1.1	
	baz=82,SNR=7.4								
MAW	Mawson	81.95	200	P		P	09 39 15.0	+1.0	
MAW				pmax		pmax			
	comp=Z,1.0nm,0.8s								
MAW	Mawson	81.95	200	P		P	09 39 15.0	+1.0	
ZEI	Tsey	83.37	313	*e*P		P	09 39 23.0	+0.7	
ZEI				pmax		pmax			
	comp=Z,13nm,0.9s								
GEVA	Gevas	83.77	308	P		P	09 39 23.3	-1.1	
A21K	Barrow	84.04	18	P		P	09 39 27.2	+2.4	
	baz=258								
KBZ	Khabaz	84.16	314	P		P	09 39 26.4	+0.4	
	comp=Z,6.7nm,0.8s,baz=56,slow=24,SNR=8.1								
KBZ	Khabaz	84.16	314	*ce*P		P	09 39 27.7	+1.7	
KBZ				pmax		pmax			
	comp=Z,7.0nm,0.9s								
KIV	Kislovodsk	84.32	314	*e*P		P	09 39 27.7	+0.7	
KIV				pmax		pmax			
	comp=Z,32nm,1.0s								
SKT	Skwentna	84.55	28	IAmb		IAmb	09 39 29.4		
	comp=Z,12nm,0.6s								
MLY	Manley	85.23	25	P		P	09 39 32.7	+1.7	
	baz=264								
RC01	Rabbit Creek A	85.33	29	P		P	09 39 32.8	+1.3	
	baz=265								
VRH	Novokhopyorsk	85.34	321	*e*P		P	09 39 31.5	-0.3	
VRH				pmax		pmax			
	comp=Z,40nm,0.7s								
PMR	Palmer	85.66	29	P		P	09 39 30.3	-2.8	
PMR				pmax		pmax			
	comp=Z,21nm,1.4s								
PMR	Palmer	85.66	29	P		P	09 39 30.3	-2.8	
PMR				IAmb		IAmb	09 39 50.0		
	comp=Z,21nm,1.4s								
COLD	Coldfoot	85.67	23	P		P	09 39 35.5	+2.4	
	baz=264								
COLD	Coldfoot	85.67	23	P		P	09 39 30.1	-3.0	
COLD				IAmb		IAmb	09 39 37.0		
	comp=Z,9.8nm,0.9s								
I23K	Minto, Yukon-K	85.82	25	P		P	09 39 35.7	+1.9	
	baz=265								
MCK	McKinley	85.90	26	P		P	09 39 35.7	+1.4	
	baz=266								
RND	Reindeer	85.91	27	IAmb		IAmb	09 39 42.4		
	comp=Z,6.7nm,1.0s								
TOLK	Toolik Lake Re	86.04	21	P		P	09 39 37.3	+2.3	
	baz=265								
CCB	Clear Creek Bu	86.45	25	P		P	09 39 35.1	-1.9	
SOC	Sochi	86.46	313	*e*P		P	09 39 36.6	-0.9	
SOC				*e*			09 42 58.6		
SOC				*e*S		SKSac	09 49 59.4	-0.9	
SOC				*e*SS		SS	09 55 46.5	-4.7	
SOC				*e*SSS		SSS	09 59 26.2		
SOC				pmax		pmax			
	comp=Z,11nm,0.4s								
HDA	Harding Lake	86.81	26	P		P	09 39 38.8	0.0	
	baz=268								
HDA	Harding Lake	86.81	26	IAmb		IAmb	09 39 39.9		
	comp=Z,7.8nm,1.0s								
ILAR	Eielson Array	86.85	25	P		P	09 39 38.5	-0.4	
	comp=Z,0.9nm,0.5s,baz=253,slow=4.4,SNR=18								
VORD	Divnogorie	86.86	321	*e*P		P	09 39 39.1	-0.2	
VORD				pmax		pmax			
	comp=Z,10.0nm,0.6s								
VSR	Storozhevoye	86.94	321	*e*P		P	09 39 40.1	+0.4	
VSR				pmax		pmax			
	comp=Z,30nm,1.0s								
KLMR	Klimovskoe	86.96	331	*e*P		P	09 39 38.8	-0.7	
KLMR				pmax		pmax			
	comp=Z,14nm,0.9s								
KLMR	Klimovskoe	86.96	331	*e*P		P	09 39 38.9	-0.6	
KLMR				AMP			09 39 48.6		
	comp=Z,14nm,0.9s								
LPSR	Galich'ya Gora	87.11	322	*e*P		P	09 39 41.0	+0.5	
LPSR				pmax		pmax			
	comp=Z,30nm,1.0s								
TMCR	Tamitsa	87.71	334	*e*P		P	09 39 43.1	0.0	
TMCR				pmax		pmax			
	comp=Z,8.0nm,0.5s								
BMAR	Burnt Mountain	87.86	23	P		P	09 39 43.1	-0.7	
MOS	Moscow	87.89	326	*e*P		P	09 39 43.0	-1.1	
SCRK	Sand Creek	88.10	26	P		P	09 39 46.7	+1.6	
	baz=270								
MENT	Mentasta	88.23	27	P		P	09 39 44.2	-1.5	
MENT				IAmb		IAmb	09 40 08.7		
	comp=Z,4.8nm,0.8s								
L26K	Log Cabin Wild	88.39	27	P		P	09 39 48.2	+1.8	
	baz=271								
OBN	Obninsk	88.50	325	*e*P		P	09 39 47.0	0.0	
OBN				*SP		pwP	09 40 04.0	+1.0	
OBN				S		S	09 50 25.0	-4.3	
OBN				pmax		pmax			
	comp=Z,13nm,0.9s								
OBN				MLR		MLR			
	comp=Z,86nm,21.0s								
K27K	Chicken	88.94	26	P		P	09 39 51.2	+2.2	
	baz=272								
KMBO	Kilima Mbogo	89.37	269	P		P	09 39 52.1	-0.2	
	comp=Z,0.8nm,0.3s,baz=107,slow=19,SNR=1.6								
KMBO	Kilima Mbogo	89.37	269	P		P	09 39 51.8	-0.5	
KMBO				pmax		pmax			
	comp=Z,6.0nm,1.2s								
KMBO	Kilima Mbogo	89.37	269	P		P	09 39 51.8	-0.5	
SYO	Syowa Base	90.63	201	*e*P		P	09 39 56.2	-0.5	
SYO	Syowa Base	90.63	201	*e*pP		pP	09 40 07.1	-2.9	
EPYK	Eagle Plains	91.01	24	P		P	09 39 59.5	+0.9	
	baz=277								
BR131	Keskin Array S	91.10	310	P		P	09 39 58.8	-0.9	
BR131				pmax		pmax			
	comp=Z,6.0nm,0.8s								
BR131	Keskin Array S	91.10	310	P		P	09 39 58.8	-0.9	
BR131				IAmb		IAmb	09 40 00.3		
	comp=Z,5.7nm,0.8s								
BRTR	Keskin Array B	91.10	310	P		P	09 39 59.6	-0.1	
	comp=Z,3.3nm,0.8s,baz=123,slow=6.1,SNR=11								
BRTR	Keskin Array B	91.10	310	*i* P		P	09 39 59.7	-0.1	
BRTR				pmax		pmax			
	comp=Z,4.0nm,0.8s								
BRTR	Keskin Array B	91.10	310	P		P	09 39 58.0	-1.8	
QSPA	South Pole Qui	91.77	180	P		P	09 40 02.4	+0.2	
QSPA				IAmb		IAmb	09 40 22.8		
	comp=Z,13nm,1.4s								
ARCES	ARCESS Array B	92.15	340	P		P	09 40 03.1	-0.7	
	comp=Z,2.0nm,0.6s,baz=76,slow=5.1,SNR=13								
AKASG	Malin Array Be	93.25	321	P		P	09 40 08.3	-0.9	
	comp=Z,0.6nm,0.5s,baz=67,slow=4.7,SNR=6.1								
AKASG	Malin Array Be	93.25	321	*i* P		P	09 40 09.3	+0.1	
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.4s								
FINES	FINESS Array B	93.41	332	P		P	09 40 09.2	-0.5	
	comp=Z,2.6nm,0.8s,baz=107,slow=2.0,SNR=9.8								
FINES	FINESS Array B	93.41	332	*i* P		P	09 40 08.1	-1.6	
FINES				pmax		pmax			
	comp=Z,3.0nm,0.8s								
FINES	FINESS Array B	93.41	332	P		P	09 40 07.8	-1.9	
C36M	Paulatuk	95.02	20	P		P	09 40 18.0	+1.1	
	baz=289								
C36M	Paulatuk	95.02	20	P		P	09 40 16.9	0.0	
TESR	Tescani	95.50	317	∥P		P	09 40 20.1	+0.4	
VRI	Vrincioaia	95.54	316	∥P		P	09 40 21.1	+1.2	
VRI	Vrincioaia	95.54	316	∥P		P	09 40 21.1	+1.2	
PLOR	Plostina	95.60	316	∥P		P	09 40 14.0	-6.2	
PLOR	Plostina	95.60	316	∥P		P	09 40 14.0	-6.2	
BISRR	Bisoca	95.60	316	∥P		P	09 40 21.8	+1.6	
BIZ	Bicaz	95.81	317	∥P		P	09 40 25.0	+3.9	
MLR	Muntele Rosu	96.14	316	∥P		P	09 40 23.4	+0.6	
MLR	Muntele Rosu	96.14	316	∥P		P	09 40 23.4	+0.6	
BURAR	Bucovina Array	96.29	318	∥P		P	09 40 23.9	+0.5	
BURAR	Bucovina Array	96.29	318	∥P		P	09 40 23.9	+0.5	
BURAR	Bucovina Array	96.29	318	P		P	09 40 23.6	+0.1	
BUR08	Bucovina Ar. S	96.30	318	P		P	09 40 23.5	0.0	
BUR08				IAmb		IAmb	09 40 31.7		
	comp=Z,5.0nm,0.9s								
VOIR				96.77	316	∥P		P	09 40 19.8	-5.8
VOIR				96.77	316	∥P		P	09 40 19.8	-5.8
ARR	Arges	97.07	316	∥P		Pdif	09 40 27.8	+0.8	
CRVS	Cervenica-Dubn	98.51	320	*e*P		Pdif	09 40 36.0	+2.7	
CRVS	Cervenica-Dubn	98.51	320	*e*PDIFF		Pdif	09 40 36.0	+2.7	
HERR	Herculane	98.70	316	↑P		P	09 40 31.1	-3.1	
PSZ	Piszkesteto	99.75	319	↑P		Pdif	09 40 41.1	+2.2	
PSZ	Piszkesteto	99.75	319	↑P		Pdif	09 40 41.1	+2.2	
NB2	NORSAR Subarra	100.39	333	P		Pdif	09 40 39.8	-1.6	
	comp=Z,4.6nm,1.0s,baz=68,slow=4.4								
NB2	NORSAR Subarra	100.39	333	P		Pdif	09 40 39.8	-1.6	
	baz=68,slow=4.4								
NOA	NORSAR Array B	100.39	333	P		Pdif	09 40 40.5	-1.0	
	comp=Z,1.7nm,0.8s,baz=68,slow=4.6,SNR=5.0								
NVAR	Mina Array Bea	108.26	48	PP		PP	09 45 48.3	+1.0	
	comp=Z,0.3nm,0.6s,baz=272,slow=5.1,SNR=4.0								
SCHQ	Schefferville	122.43	9	PKP		PKiKP	09 45 50.4	+0.4	
	comp=Z,2.8nm,0.8s,baz=34,slow=7.3,SNR=1.2								
TXAR	Lajitas Array	122.85	53	PKP		PKiKP	09 45 52.2	+0.6	
	comp=Z,0.4nm,0.7s,baz=174,slow=1.3,SNR=7.1								
TORD	Torodi Ar. Bea	123.34	287	PKP		PKiKP	09 45 52.9	+0.1	
	comp=Z,1.8nm,0.8s,baz=44,slow=2.1,SNR=9.3								
TORD				PKKPbc		PKKPab	09 55 43.0	+0.7	
	comp=Z,1.0nm,0.7s,baz=281,slow=4.1,SNR=6.8								
TORD	Torodi Ar. Bea	123.34	287			PKiKP	09 45 53.1	+0.3	
F42A	Maple Grove Fa	123.52	29			PKPdf	09 45 50.2	-1.9	
JFWS	Jewell Farm	124.47	32	P		PKiKP	09 45 54.2	-0.1	
	baz=313								
JCT	Junction City	125.38	50	P		PKiKP	09 45 57.2	+0.6	
	baz=298								
DBIC	Dimbokro	130.79	280	PKP		PKPdf	09 46 07.2	+0.3	
	comp=Z,1.6nm,0.6s,baz=130,slow=5.5,SNR=1.6								
PLCA	Paso Flores	138.31	160	PKhKP		PKPpre	09 46 10.8		
	comp=Z,1.1nm,0.9s,baz=260,slow=14,SNR=3.4								
PLCA				PKP		PKPdf	09 46 21.0	+0.7	
	comp=Z,2.6nm,1.0s,baz=100,slow=3.9,SNR=4.1								
ROC1	El Roble	144.91	154	*e*P		PKPdf	09 46 34.4	+1.8	
AAGR	Agrelo	145.73	157	∥*e*P		PKiKP	09 46 36.3	-1.6	
ASAL	Salagasta	146.16	156	*e*P		PKPab	09 46 37.0	+0.8	
AUSP	Uspallata	146.25	155	*e*P		PKPab	09 46 37.6	+0.9	
RTLS	Leoncito	146.66	155	*e*P		PKPab	09 46 38.9	+0.5	
ACCO	Cerro Coronel	147.80	154	*e*P		PKiKP	09 46 42.1	-0.4	
AROD	Rodeo	147.98	153	*e*P		PKiKP	09 46 42.9	0.0	
ACDV	Cuesta del Vie	148.13	154	*e*P		PKiKP	09 46 42.8	-0.2	
ACHE	Chepes	148.27	158	*e*P		PKiKP	09 46 42.9	-0.3	
AVFE	Valle Fertil	148.41	156	*e*P		PKiKP	09 46 43.1	-0.3	
TCA	Tanti	148.83	161	*e*P		PKiKP	09 46 44.2	-0.1	
AGUA	GUANDACOL	149.00	154	*e*P		PKiKP	09 46 45.0	+0.3	
ACLC	CERRO LA CRUZ	149.70	156	*e*P		PKPbc	09 46 45.5	+0.3	
VCA	Vinchina	149.77	154	*e*P		PKiKP	09 46 48.2	+1.8	
CPUP	Villa Florida	155.37	172	PKP		PKPdf	09 46 49.0	+0.2	
	comp=Z,0.4nm,0.4s,baz=217,slow=19,SNR=1.6								
CPUP				PKPbc		pPKPdf	09 46 59.3	-3.0	
	comp=Z,1.5nm,0.6s,baz=246,slow=5.3,SNR=4.3								
CPUP				PKPab		PKPab	09 47 14.1	+0.1	
	comp=Z,3.5nm,0.8s,baz=180,slow=10,SNR=3.7								
LPAZ	La Paz	159.61	136	PKPab		PKPab	09 47 34.8	+1.5	
	comp=Z,3.1nm,0.9s,baz=208,slow=6.8,SNR=6.4								

IDC 15 09:45:20.1±2.2, 1°79N×126°19E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/35, mbtmp3.3/3, Error ellipse: s-maj=183.0km s-min=28.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.03	160	P	P	09 50 26.7	-0.4
	0.7nm,0.6s,baz=338,slow=11,SNR=10						
ASAR	Alice Springs	26.39	164	P	P	09 50 58.9	+0.4
	0.2nm,0.6s,baz=347,slow=8.1,SNR=2.2						
MKAR	Makanchi Array	58.84	326	P	P	09 55 20.7	0.0
	0.1nm,0.4s,baz=124,slow=8.9,SNR=1.9						

IDC **15** *09:47:53.1±0.3, 1°77N×126°40E, h0km, mb5.1/34, mb1 5.1/38, mb1mx5.0/40, mbtmp5.1/38, ML4.4/4, MS4.4/29, Ms1 4.4/29, ms1mx4.3/48, Error ellipse: s-maj=13.2km s-min=8.0km az=72.0*

NEIC **15** *09:47:57.8, 1°75N×126°53E, h47km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.84; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$-0.41; $M_{r\theta}$-1.06; $M_{\theta\phi}$-0.32; $M_{\phi r}$-0.88; Fault plane solution: $M_0$1.59000×10^{17} NP1:ϕ_s229.73000°, δ75.08000°, λ91.55000°. NP2:ϕ_s43.75000°, δ15.00000°, λ84.21000°. Principal axes: T 1.6435, Plg60.0000°, Azm142.0000°; N -0.1076, Plg1.0000°, Azm49.0000°; P -1.5358, Plg30.0000°, Azm318.0000°;*

NEIC **15** *09:47:57.9±1.9, 1°79N±0°05×126°56E±0°05, h35km, mb5.5/167, Ms_20 4.7/104, Mwb5.4/20, Mww5.5, Mwc5.4(GCMT) Error ellipse: s-maj=10.3km s-min=7.3km az=50.0*

MOS **15** *09:47:57.8±1.2, 1°80N×126°41E, h45km, mb5.7/64, MS4.6/18, Error ellipse: s-maj=7.6km s-min=4.2km az=117.0*

BJI **15** *09:47:58.4±0.0, 1°91N×126°21E, h40km, mB5.4/58, mb5.3/77, Ms4.8/68, Ms7 4.7/65*

DJA **15** *09:47:58.9±0.2, 2°N±2°×12°6E±°, h10km, M5.3/42, mb5.6/42, mB5.7/36, MLv5.6/18, Mw(mB)5.2/36, Mwp5.5/8*

KLM **15** *09:47:59.0, 1°86N×126°69E, h61km, mb5.5*

GCMT **15** *09:48:00.8±0.2, 1°96N±0°01×126°38E±0°02, h34km, MW5.5/109, Moment Tensor Solution. s101,c152; s109,c175; Duration: 1ŝ3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.75±.05; $M_{\theta\theta}$-0.82±.03; $M_{\phi\phi}$-0.93±.04; $M_{r\theta}$-0.83±.04; $M_{\theta\phi}$-0.84±.02; $M_{\phi r}$-0.19±.05; Best double couple: $M_0$1.92500×10^{17} NP1:ϕ_s31.00000°, δ35.00000°, λ69.00000°. NP2:ϕ_s236.00000°, δ57.00000°, λ104.00000°. Principal axes: T 1.9940, Plg73.0000°, Azm184.0000°; N -0.1350, Plg12.0000°, Azm49.0000°; P -1.8550, Plg11.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **15** *09:48:02, 1°98N×126°40E, h33km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.70; $M_{\theta\theta}$-0.77; $M_{\phi\phi}$-0.94; $M_{r\theta}$-0.74; $M_{\theta\phi}$-0.86; $M_{\phi r}$-0.20; Fault plane solution: $M_0$1.87000×10^{17} NP1:ϕ_s30.00000°, δ36.00000°, λ70.00000°. NP2:ϕ_s234.00000°, δ57.00000°, λ104.00000°. Principal axes: T 1.9047, Plg74.0000°, Azm183.0000°; N -0.0747, Plg12.0000°, Azm47.0000°; P -1.8300, Plg11.0000°, Azm315.0000°;*

NEIC **15** *09:48:03, 1°77N×126°34E, h24km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.81; $M_{\theta\theta}$-0.55; $M_{\phi\phi}$-1.27; $M_{r\theta}$-0.59; $M_{\theta\phi}$-0.69; $M_{\phi r}$-0.38; Fault plane solution: $M_0$1.89000×10^{17} NP1:ϕ_s23.00000°, δ36.00000°, λ76.00000°. NP2:ϕ_s220.00000°, δ56.00000°, λ99.00000°. Principal axes: T 1.9707, Plg77.0000°, Azm162.0000°; N -0.1716, Plg8.0000°, Azm35.0000°; P -1.7991, Plg10.0000°, Azm303.0000°;*

ISC 15 09:47:59.3±0.4, 1°82N±0°03×126°51E±0°04, h45km±3km, h45km:pP-P, n879, σ1ŝ73/901, mb5.4/195, MS4.7/104, 40C-39D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.35	141	P	Pn	09 48 21.0	-0.7
TNTI	Ternate	1.35	141	Pn	Pn	09 48 20.9	-0.8
TNTI				Sn	Sn	09 48 36.8	-1.6
MNI	Manado	1.71	257	P	Pn	09 48 26.6	-0.1
SGSI	Sangihe	2.10	332	P	Pn	09 48 31.7	-0.3
KMSI	Cibinong	2.82	244	P	Pn	09 48 42.5	+0.6
GTOI	Gorontalo	3.69	251	P	Pn	09 48 54.9	+1.0
DDMP	Don Marcelino,	4.33	349	*e*P	Pn	09 49 01.3	-1.3
LUWI	Luwuk	4.70	233	P	Pn	09 49 10.0	+2.3
LUWI	Luwuk	4.70	233	Pn	Pn	09 49 09.6	+1.8
LUWI				Sn	Sn	09 50 04.4	+3.4
MRSI	Marisa	4.76	254	P	Pn	09 49 10.2	+1.6
NLAI	Namlea	5.06	173	P	Pn	09 49 13.6	+0.9
	2.3nm6µm306nm,1.0s						
SKMP	Bagumbayan, Su	5.07	337	*e*P	Pn	09 49 12.2	-0.6
MATI	Mati	5.10	357	*e*P	Pn	09 49 12.7	-0.6
DAV	Davao City (W)	5.30	350	Pn	Pn	09 49 14.3	-1.6
	25nm,0.3s,baz=54,slow=7.3,SNR=5.8						
DAV				Sn	Sn	09 50 20.1	+4.3
	46nm,0.3s,baz=302,slow=11,SNR=4.6						
DAV	Davao City (W)	5.30	350	∥*e*P	Pn	09 49 17.0	+1.1

BATI Baumata 12.28 193 Pn **Pn** **09 50 49.8 -1.9**
comp=Z,0.0nm,0.3s,baz=230,slow=8.7,SNR=0.9
BATI Baumata 12.28 193 P **P** **09 51 05.1 +2.2**
SMPI Sarmi 12.77 107 P **P** **09 51 04.7 -3.6**
comp=Z,5μmcomp=Z,2μmcomp=Z,84nm,1.3s
BBKI Banjar Baru 12.79 246 P **Pn** **09 51 00.7 +2.0**
comp=Z,3μmcomp=Z,63nm,0.8s
LQP Lukban 13.17 338⇓*e*P **Pn** **09 51 07.4 +3.5**
BASI Baing, Sumba 13.34 206 P **Pn** **09 51 09.8 +3.6**
comp=Z,3μmcomp=Z,330nm,1.5s
LUBP Lubang 13.36 333 *e*P **Pn** **09 51 05.3 -1.1**
TGY Tagaytay City 13.39 336 Pn **Pn** **09 51 09.6 +2.7**
comp=Z,21nm,0.3s,baz=146,slow=18,SNR=1.4
TGY LR LR 09 56 50.3
comp=Z,1μm,21.5s,baz=164,slow=40
WBSI Waikabubak, Su 13.41 212 P **P** **09 51 12.8 -2.8**
comp=Z,3μmcomp=Z,285nm,0.9s
PLAI Plampang 13.70 219 P **Pn** **09 51 13.1 +2.0**
comp=Z,8μmcomp=Z,883nm,1.0s
TWSI Taliwang, Sumb 14.22 222 P **P** **09 51 22.7 -1.8**
comp=Z,5μmcomp=Z,529nm,1.1s
SBUM Sibu 14.30 273 **Pn** **09 51 20.6 +1.5**
SBUM Sibu 14.30 273 P **P** **09 51 23.0 -2.3**
GENI Genyem 14.34 108 P **P** **09 51 23.0 -2.8**
comp=Z,8μmcomp=Z,390nm,1.2s
SRBI Singaraja 14.96 229 P **P** **09 51 33.0 +0.3**
comp=Z,3μmcomp=Z,225nm,0.8s
MTN Manton Dam 15.27 163 P **Pn** **09 51 30.6 -1.4**
baz=15,SNR=56
MTN Manton Dam 15.27 163 **Pn** **09 51 29.9 -2.1**
KMMI Kalianget 15.31 235 P **P** **09 51 38.3 +1.7**
comp=Z,3μmcomp=Z,205nm,1.0s
DNP Denpasar 15.35 227 P **P** **09 51 39.7 +2.6**
comp=Z,116μmcomp=Z,1μm,1.0s
DNP Denpasar 15.35 227 P **P** **09 51 40.1 +3.0**
DNP pmax pmax
comp=Z,1μm,0.9s
SMPP San Manuel, Pa 15.36 338 *e*P **P** **09 51 35.4 -1.7**
ABJI Asem Bagus 15.53 232 P **P** **09 51 42.1 +3.0**
comp=Z,204nm,1.0s
KDU Kakadu 15.58 158 P **Pn** **09 51 33.2 -2.7**
baz=16,SNR=43
CAUP Cauayan 15.72 343 *e*P **Pn** **09 51 39.4 +1.6**
BLJI Banyuglugur 16.01 233 P **P** **09 51 45.7 +1.3**
comp=Z,3μmcomp=Z,362nm,1.1s
JAGI Jajag, Banyuwa 16.01 230 P **P** **09 51 46.8 +2.4**
comp=Z,3μmcomp=Z,282nm,1.2s
JAGI Jajag, Banyuwa 16.01 230 P **P** **09 51 44.2 -0.2**
JAGI IAmb IAmb 09 52 10.0
comp=Z,280nm,1.0s
KSM Kuching 16.20 269 P **P** **09 51 45.9 -0.6**
KSM Kuching 16.20 269 P **P** **09 51 48.0 +1.5**
GMJI Gumukmas 16.44 232 P **P** **09 51 50.1 +0.9**
comp=Z,3μmcomp=Z,322nm,1.1s
KNRA Kununurra 17.53 173 P **Pn** **09 51 59.1 -1.3**
baz=18,SNR=150
KNRA Kununurra 17.53 173 P **Pn** **09 51 59.3 -1.2**
KNRA IAmb IAmb 09 52 08.2
comp=Z,542nm,1.1s
PWJI Pagerwojo 17.63 236 P **Pn** **09 52 01.2 -0.6**
comp=Z,3μmcomp=Z,225nm,0.9s
WOJI Wonogiri, Jawa 18.27 238 P **Pn** **09 52 11.4 +1.8**
comp=Z,138nm,1.2s
SMRI Semarang 18.30 241 P **Pn** **09 52 10.7 +0.7**
comp=Z,197nm,1.0s
SMRI Semarang 18.30 241 P **Pn** **09 52 09.8 -0.2**
TPI Tanjungpandan 19.39 256 P **Pn** **09 52 24.3 +1.1**
KPJI Karang Pucung 19.76 242 P **P** **09 52 25.2 -0.5**
comp=Z,232nm,0.9s
FITZ Fitzroy Crossi 19.81 182 P **P** **09 52 25.0 -1.3**
comp=Z,1.7nm,0.3s,baz=22,slow=11,SNR=47
FITZ S **S** **09 56 04.8 -2.3**
baz=225,slow=16,SNR=4.3
FITZ PcP **PcP** **09 56 43.8 +0.8**
comp=Z,0.5nm,0.3s,baz=270,slow=1.0,SNR=1.4
FITZ Fitzroy Crossi 19.81 182 P **P** **09 52 24.7 -1.5**
baz=20,SNR=47
FITZ Fitzroy Crossi 19.81 182 P **P** **09 52 24.9 -1.3**
DLV T Lat 20.51 300 P **P** **09 52 34.5 +0.4**
LEM Lembang 20.72 245 P **P** **09 52 34.8 -1.6**
comp=Z,89nm,1.0s,baz=41,slow=10.0,SNR=9.7
LEM LR LR 10 01 09.5
comp=Z,1μm,21.7s,baz=56,slow=39
LEM Lembang 20.72 245 P **P** **09 52 36.9 +0.5**
LEM pmax pmax
comp=Z,100nm,0.8s
CISI Cisompet, Garu 20.85 243 P Pn 09 52 56.4 +16
CISI Cisompet, Garu 20.85 243 P **P** **09 52 35.8 -1.8**
CISI IAmb IAmb 09 53 11.0
comp=Z,139nm,0.9s
MANU Manus Island 21.20 100 P **P** **09 52 42.4 +1.1**
TWG Pinlang 21.53 346 P **P** **09 52 43.8 -1.0**
TWG IAmb IAmb 09 52 48.5
comp=Z,118nm,0.6s
TWG IAMs_20 IAMs_20 10 01 19.6
comp=Z,3μm,22.0s
GUMO Guam 21.60 56 P **P** **09 52 46.1 +0.5**
comp=Z,44nm,0.7s,baz=204,slow=22,SNR=2.9
YULB Yu-li 22.03 347 P **P** **09 52 50.0 -0.1**
YULB IAMs_20 IAMs_20 10 02 42.9
comp=Z,2μm,20.0s
DSRI Dabo 22.05 264 P **P** **09 52 52.1 +1.6**
TPUB Ta-pu 22.10 345 P **P** **09 52 47.2 -3.7**
TPUB IAmb IAmb 09 53 01.3
comp=Z,212nm,1.1s
TPUB IAMs_20 IAMs_20 10 02 18.8
comp=Z,2μm,20.0s
PMBI Palembang 22.24 258 IAMs_20 IAMs_20 10 02 02.8
comp=Z,2μm,22.0s
SSLB Suanglung 22.49 347 P **P** **09 52 54.3 -0.9**
SSLB IAmb IAmb 09 53 00.9
comp=Z,79nm,0.6s
SSLB IAMs_20 IAMs_20 10 02 47.1
comp=Z,3μm,22.0s
MYKOM Kota Tinggi 22.65 270 P **P** **09 52 55.9 -1.0**
MYKOM IAmb IAmb 09 53 01.6
comp=Z,354nm,1.5s
MYKOM Kota Tinggi 22.65 270 P **P** **09 53 01.0 +4.1**
COEN Coen 22.77 134 P **P** **09 52 57.4 -0.7**
baz=23,SNR=21
COEN Coen 22.77 134 P **P** **09 52 54.7 -3.4**
WB0 Warramunga Arr 22.80 161 P **P** **09 52 56.4 -2.1**
WRAB Tennant Creek 22.95 161 *ce*P **P** **09 52 58.4 -1.5**
WRAB pmax pmax
comp=Z,299nm,1.0s
WRAB Tennant Creek 22.95 161 P **P** **09 52 58.4 -1.5**
WRA Warramunga Arr 22.95 161 P **P** **09 52 58.3 -1.6**
comp=Z,288nm,1.0s,baz=338,slow=10,SNR=267
WRA PcP **PcP** **09 56 50.0 +0.9**
comp=Z,8.3nm,0.6s,baz=320,slow=2.3,SNR=5.0
WRA S **S** **09 57 02.1 -4.9**
comp=Z,37nm,1.2s,baz=335,slow=18,SNR=5.1
WRA P3KPbc 10 26 20.7
comp=Z,0.3nm,0.9s,baz=157,slow=3.9,SNR=1.4
WRA Warramunga Arr 22.95 161 *ce*P **P** **09 52 58.2 -1.7**
WRA pmax pmax
comp=Z,288nm,1.0s
WB2 Warramunga Arr 22.95 161 P **P** **09 52 58.6 -1.3**
baz=23
WB2 Warramunga Arr 22.95 161 P **P** **09 52 58.7 -1.3**
WR0 Warramunga Arr 23.03 160 P **P** **09 52 59.7 -1.0**
PMG Port Moresby 23.40 119 P **P** **09 53 04.6 +0.2**
comp=Z,18nm,0.8s,baz=326,slow=4.6,SNR=8.1
PMG LR LR 10 04 35.8
comp=Z,2μm,19.0s,baz=324,slow=43
PMG Port Moresby 23.40 119 *ce*P **P** **09 53 05.1 +0.7**
PMG pmax pmax
comp=Z,157nm,2.5s
PMG Port Moresby 23.40 119 P **P** **09 53 00.5 -3.9**
PMG Port Moresby 23.40 119 IAMs_20 IAMs_20 10 03 13.2
comp=Z,2μm,20.0s
TATO Taipei 23.53 349 IAMs_20 IAMs_20 10 03 02.4
comp=Z,2μm,21.0s
QIZ Qiongzhong 23.65 317 P **P** **09 53 06.0 -0.7**
QIZ pmax pmax
comp=Z,74nm,1.0s
QIZ pmax pmax
comp=Z,540nm,4.2s
QIZ LR LR
comp=Z,820nm,27.6s
QIZ LR LR
comp=Z,1μm,22.2s
QIZ LR LR
comp=Z,2μm,24.6s
QIZ Qiongzhong 23.65 317 IAMs_20 IAMs_20 10 01 19.9
comp=Z,3μm,22.0s

MBWA Marble Bar 23.78 196 P **P** **09 53 03.0 -4.9**
MBWA S **S** **09 57 18.8 -1.7**
XMIS Christmas Isla 24.09 239 P **P** **09 53 08.6 -2.3**
XMIS IAmb IAmb 09 53 11.9
comp=Z,212nm,1.0s
PSA00 Pilbara Seismi 24.15 195 P **P** **09 53 10.2 -1.1**
PSA00 Pilbara Seismi 24.15 195 P **P** **09 53 09.0 -2.3**
PSA00 IAmb IAmb 09 53 33.5
comp=Z,29nm,0.8s
IPM Ipoh 25.58 277 P **P** **09 53 22.4 -2.1**
IPM IAmb IAmb 09 53 30.2
comp=Z,146nm,1.4s
IPM IAMs_20 IAMs_20 10 05 15.1
comp=Z,2μm,21.0s
IPM Ipoh 25.58 277 P **P** **09 53 26.0 +1.5**
QIS Mount Isa 25.68 151 P **P** **09 53 25.2 0.0**
baz=26,SNR=35
KULM Kulim 26.04 278 P **P** **09 53 27.8 -0.9**
KULM Kulim 26.04 278 P **P** **09 53 31.0 +2.4**
KRVT Keravat (AS076 26.21 103 P **P** **09 53 30.2 0.0**
comp=Z,39nm,0.7s,baz=78,slow=7.5,SNR=6.2
KRVT LR LR 10 02 22.0
comp=Z,2μm,21.8s,baz=262,slow=33
RABL Rabaul 26.32 103 P **P** **09 53 30.2 -1.0**
RABL IAmb IAmb 09 53 42.9
comp=Z,56nm,0.6s
RABL IAMs_20 IAMs_20 10 02 02.9
comp=Z,2μm,22.0s
AS31 Alice Springs 26.33 165 P **P** **09 53 30.9 -0.3**
ASAR Alice Springs 26.33 165 P **P** **09 53 30.3 -0.9**
comp=Z,20nm,0.6s,baz=347,slow=7.2,SNR=238
ASAR PcP **PcP** **09 56 56.5 0.0**
comp=Z,11nm,0.6s,baz=346,slow=2.3,SNR=7.3
ASAR S **S** **09 58 02.5 +1.2**
comp=Z,17nm,1.1s,baz=346,slow=18,SNR=5.1
ASAR ScP **ScP** **10 00 36.0 +3.1**
comp=Z,1.7nm,0.9s,baz=345,slow=3.2,SNR=2.4
ASAR Alice Springs 26.33 165 P **P** **09 53 30.4 -0.8**
ASAR Alice Springs 26.33 165 P **P** **09 53 30.4 -0.8**
MTSU Mount Surprise 26.47 139 P **P** **09 53 32.6 +0.2**
baz=26,SNR=26
WRKA Warakurna 26.75 176 P **P** **09 53 35.1 +0.1**
baz=27,SNR=62
SRAK Srakaew 27.05 298 P **P** **09 53 34.0 -3.7**
comp=Z,7μmcomp=Z,404nm,0.9s
GIRL Giralia 27.11 206 P **P** **09 53 38.8 +0.7**
baz=27,SNR=24
GIRL Giralia 27.11 206 P **P** **09 53 38.5 +0.4**
TRTT Trang 27.38 284 P **P** **09 53 44.0 +3.3**
comp=Z,35nm,1.4s
KHON Khomkaen 27.43 303 P **P** **09 53 43.0 +2.0**
comp=Z,72nm,0.6s
RPSI Rantau Prapat 27.58 272 P **P** **09 53 41.9 -0.7**
RPSI IAmb IAmb 09 53 45.4
comp=Z,114nm,1.2s
PSI Prapat 27.58 273 P **P** **09 53 41.9 -0.8**
PSI pmax pmax
comp=Z,114nm,1.2s
PSI MLR MLR
comp=Z,1μm,22.0s
CHAI Chaiyaphum 27.93 301 P **P** **09 53 45.0 -0.6**
comp=Z,666nmcomp=Z,84nm,0.8s
NONG Nongkai 28.05 307 P **P** **09 53 46.6 0.0**
comp=Z,70nm,0.8s
PKDT Phuket 28.70 283 P **P** **09 53 55.7 +3.2**
comp=Z,31μmcomp=Z,44nm,0.7s
PHET Kaeng Krachan 28.81 294 P P 09 54 02.1 +8.7
GSI Gunungsitoli 28.93 269 P **P** **09 53 52.9 -1.7**
GSI IAmb IAmb 09 53 56.0
comp=Z,76nm,0.8s
CTA Charters Tower 29.14 139 P **P** **09 53 57.4 +1.1**
comp=Z,36nm,1.1s,baz=315,slow=11,SNR=15
CTA PcP **PcP** **09 57 03.7 +0.4**
comp=Z,7.9nm,1.0s,baz=213,slow=3.0,SNR=3.7
CTA ScP **ScP** **10 00 46.1 +4.6**
comp=Z,8.9nm,1.0s,baz=338,slow=5.6,SNR=3.6
CTA LR LR 10 08 45.5
comp=Z,1μm,18.2s,baz=328,slow=43
CTAO Charters Tower 29.14 139 P **P** **09 53 56.2 -0.1**
CTAO pmax pmax
comp=Z,100nm,1.4s
CTAO MLR MLR
comp=Z,1μm,22.0s
CTAO Charters Tower 29.14 139 P **P** **09 53 56.2 -0.1**
CTAO IAmb IAmb 09 54 02.6
comp=Z,100nm,1.4s
MEEK Meekatharra 29.30 195 P **P** **09 53 56.9 -0.8**
baz=29,SNR=35
SLVN Son La 29.35 313 P **P** **09 53 57.7 -0.6**
SLVN IAMs_20 IAMs_20 10 04 53.9
comp=Z,2μm,21.0s
SSE Sheshan 29.55 351 P **P** **09 54 01.8 +2.0**
SSE S **S** **09 58 52.0 +0.4**
SSE pmax pmax
comp=Z,21nm,0.7s
SSE pmax pmax
comp=Z,170nm,3.6s
SSE LR LR
comp=Z,290nm,22.0s
SSE LR LR
comp=Z,280nm,19.3s
JSU Suzuyama 29.76 7 P **P** **09 54 01.6 0.0**
JSU IAmb IAmb 09 54 05.9
comp=Z,198nm,1.8s
PHIT Phitsanulok 29.86 302 P **P** **09 54 05.6 +2.9**
comp=Z,191nm,0.9s
UTHA Uthaitani 29.98 299 P **P** **09 54 04.3 +0.6**
comp=Z,354nmcomp=Z,36nm,0.9s
UTTA Uttaradit 30.00 303 P **P** **09 54 04.9 +0.9**
comp=Z,333nmcomp=Z,36nm,0.9s
SUKH Sukhothai 30.66 302 P **P** **09 54 10.8 +1.0**
comp=Z,35nm,0.8s
WHN Wuhan 30.81 339⇓P **P** **09 54 13.3 +2.4**
WHN S **S** **09 59 14.8 +3.4**
WHN pmax pmax
comp=Z,76nm,0.8s
WHN LR LR
comp=Z,3μm,22.5s
NJ2 Nanjing 30.93 347 *e*P **P** **09 54 12.3 +0.4**
NJ2 pP **pP** **09 54 21.5 -1.9**
NJ2 sP **sP** **09 54 27.8 -0.7**
NJ2 S **S** **09 59 12.3 -0.9**
NJ2 pmax pmax
comp=Z,27nm,0.6s
NJ2 pmax pmax
comp=Z,170nm,3.9s
NJ2 LR LR
comp=Z,1μm,18.5s
NJ2 LR LR
comp=Z,550nm,17.8s
NJ2 LR LR
comp=Z,2μm,21.1s
GYA Guiyang 31.05 324⇑P **P** **09 54 13.3 0.0**
GYA PcP **PcP** **09 57 10.8 +2.4**
GYA pmax pmax
comp=Z,31nm,1.1s
GYA pmax pmax
comp=Z,210nm,3.7s
GYA LR LR
comp=Z,440nm,17.4s
GYA LR LR
comp=Z,850nm,16.8s
GYA LR LR
comp=Z,1μm,20.0s
LAMP Lampang 31.15 304 P **P** **09 54 18.4 +4.4**
comp=Z,37nm,0.9s
PAYA Payao 31.37 306 P **P** **09 54 17.0 +1.0**
comp=Z,5μmcomp=Z,444nm,1.3s
JNU Nakatsue 31.41 7 P **P** **09 54 16.4 +0.2**
JNU IAmb IAmb 09 54 21.0
comp=Z,86nm,0.9s
CM36 Chiang Mai Arr 31.59 303 P **P** **09 54 18.0 0.0**
CM35 Chiang Mai Arr 31.62 304 P **P** **09 54 19.0 +0.8**
CM04 Chiang Mai Arr 31.63 303 P **P** **09 54 19.9 +1.6**
comp=Z,194nmcomp=Z,24nm,1.0s
CM09 Chiang Mai Arr 31.64 303 P **P** **09 54 20.1 +1.6**
comp=Z,184nmcomp=Z,26nm,0.9s
CM01 Chiang Mai Arr 31.66 303 P **P** **09 54 20.4 +1.8**
comp=Z,172nmcomp=Z,24nm,1.0s
CM05 Chiang Mai Arr 31.66 303 P **P** **09 54 20.0 +1.4**
comp=Z,113nmcomp=Z,15nm,1.0s
CM02 Chiang Mai Arr 31.68 303 P **P** **09 54 19.9 +1.2**
comp=Z,170nmcomp=Z,24nm,1.1s
CM31 Chiang Mai Arr 31.69 303 P **P** **09 54 20.9 +2.0**
comp=Z,7μmcomp=Z,510nm,0.8s
CM31 Chiang Mai Arr 31.69 303 P **P** **09 54 19.6 +0.7**

CMAR Chiang Mai Arr 31.69 303 P **P** **09 54 18.8 -0.1**
comp=Z,17nm,0.9s,baz=118,slow=6.9,SNR=36
CMAR PcP **PcP** **09 57 11.2 +1.1**
comp=Z,9.1nm,0.9s,baz=163,slow=1.7,SNR=9.0
CMAR ScP **ScP** **10 00 53.5 +3.5**
comp=Z,0.4nm,0.3s,baz=128,slow=1.5,SNR=1.3
CMAR LR LR 10 06 58.0
comp=Z,903nm,22.0s,baz=170,slow=36
CMAR Chiang Mai Arr 31.69 303 P **P** **09 54 19.4 +0.5**
CMAR Chiang Mai Arr 31.69 303 P **P** **09 54 19.4 +0.5**
CM13 Chiang Mai Arr 31.70 303 P **P** **09 54 20.0 +1.0**
comp=Z,219nmcomp=Z,18nm,0.9s
CM15 Chiang Mai Arr 31.70 303 P **P** **09 54 20.6 +1.6**
comp=Z,242nmcomp=Z,25nm,1.0s
CM34 Chiang Mai Arr 31.70 304 P **P** **09 54 19.0 0.0**
CMMT Chiang Mai 31.85 304 P **P** **09 54 20.9 +0.6**
comp=Z,287nmcomp=Z,24nm,0.9s
CHTO Chiang Mai 31.86 304 P **P** **09 54 17.9 -2.5**
CHTO P **P** **09 54 17.9 -2.5**
CHTO S **S** **09 59 26.0 -2.2**
CHTO S **S** **09 59 26.0 -2.2**
CHTO Chiang Mai 31.86 304 P **P** **09 54 20.4 0.0**
CHTO pmax pmax
comp=Z,68nm,1.3s
CHTO MLR MLR
comp=Z,1μm,22.0s
CHTO Chiang Mai 31.86 304 P **P** **09 54 20.4 0.0**
CHTO IAmb IAmb 09 54 24.9
comp=Z,68nm,1.2s
CHTO Chiang Mai 31.86 304 IAMs_20 IAMs_20 10 06 51.5
comp=Z,1μm,22.0s
CM33 Chiang Mai Arr 31.86 304 P **P** **09 54 20.0 -0.4**
CM32 Chiang Mai Arr 31.86 303 P **P** **09 54 21.0 +0.6**
MORW Morawa 32.31 197 P **P** **09 54 23.7 -0.5**
baz=32,SNR=24
MORW Morawa 32.31 197 P **P** **09 54 23.1 -1.1**
MORW IAmb IAmb 09 54 24.9
comp=Z,107nm,1.2s
MHMT Maesarieng 32.41 302 P **P** **09 54 26.9 +1.7**
comp=Z,44nm,0.7s
FORT Forrest 32.45 178 P **P** **09 54 25.2 -0.2**
baz=32,SNR=46
FORT Forrest 32.45 178 P **P** **09 54 24.6 -0.8**
ENH Enshi 32.58 332 IAMs_20 IAMs_20 10 09 33.5
comp=Z,1μm,21.0s
KMI Kunming 32.60 317⇑*i*P **P** **09 54 27.9 +0.9**
KMI pP pP 09 54 36.8 -1.7
KMI sP sP 09 54 41.0 -2.7
KMI PP **PP** **09 55 39.5 -1.8**
KMI S **S** **09 59 39.6 -0.4**
KMI sS sS 09 59 55.4 -3.8
KMI pmax pmax
comp=Z,40nm,1.2s
KMI pmax pmax
comp=Z,320nm,4.5s
KMI LR LR
comp=Z,860nm,20.5s
KMI LR LR
comp=Z,2μm,23.2s
KMI LR LR
comp=Z,2μm,22.9s
KMI Kunming 32.60 317 IAmb IAmb 09 54 30.9
comp=Z,82nm,1.3s
KMI Kunming 32.60 317 IAMs_20 IAMs_20 10 06 41.0
comp=Z,2μm,22.0s
QLP Quilpie 33.01 150 P **P** **09 54 30.3 -0.1**
baz=33,SNR=7.4
KMBL Kambalda 33.30 187 P **P** **09 54 32.6 -0.2**
baz=33,SNR=14
JHS Saijyo 33.58 10 P **P** **09 54 37.4 +2.1**
JHS IAmb IAmb 09 55 23.8
comp=Z,148nm,1.5s
BLDU Ballidu 33.58 195 P **P** **09 54 34.7 -0.5**
baz=34,SNR=38
KLBR Kellerberrin 34.25 193 P **P** **09 54 40.8 -0.3**
baz=34,SNR=18
JWT Wachi 34.30 13 P **P** **09 54 42.4 +0.9**
JWT IAmb IAmb 09 54 55.9
comp=Z,51nm,0.8s
JWT IAMs_20 IAMs_20 10 07 11.5
comp=Z,1μm,21.0s
TJN Taejon 34.40 1*ce*P **P** **09 54 44.9 +2.7**
INU Inuyama 34.76 15 P **P** **09 54 45.6 +0.2**
INU IAmb IAmb 09 54 50.9
comp=Z,58nm,0.9s
INU IAMs_20 IAMs_20 10 07 05.6
comp=Z,1μm,21.0s
MUN Mundaring 35.01 195 P **P** **09 54 47.2 -0.4**
baz=35,SNR=18
JGF Kuroka 35.09 15 P **P** **09 54 48.5 +0.2**
JGF IAmb IAmb 09 55 10.1
comp=Z,34nm,0.8s
JGF IAMs_20 IAMs_20 10 07 15.2
comp=Z,1μm,22.0s
TIA Tai'an 35.31 347 P **P** **09 54 49.8 -0.3**
TIA S **S** **10 00 19.1 -2.1**
TIA LR LR
comp=Z,520nm,17.8s
TIA LR LR
comp=Z,780nm,26.3s
RMQ Roma 35.40 144 P **P** **09 54 51.4 +0.3**
baz=35,SNR=8.7
KSAR Wonju Array Be 35.47 2 P **P** **09 54 52.0 +0.5**
KSAR Wonju Array Be 35.47 2 P **P** **09 54 52.0 +0.5**
KSRS Korea Array 35.48 2 P **P** **09 54 53.0 +1.4**
comp=Z,21nm,0.7s,baz=182,slow=10,SNR=58
KSRS PcP **PcP** **09 57 21.5 +1.1**
comp=Z,3.0nm,0.8s,baz=185,slow=3.5,SNR=4.1
KS19 Wonju Array Si 35.53 2 P **P** **09 54 52.5 +0.5**
KS19 IAmb IAmb 09 55 03.0
comp=Z,60nm,1.2s
BBOO Buckleboo 35.61 166 P **P** **09 54 53.4 +0.7**
baz=36,SNR=32
BBOO Buckleboo 35.61 166 P **P** **09 54 52.3 -0.4**
NWAO Narrogin (SRO) 35.66 193 P **P** **09 54 52.8 -0.3**
comp=Z,45nm,0.9s,baz=25,slow=9.5,SNR=19
NWAO PcP **PcP** **09 57 21.7 +0.7**
comp=Z,13nm,0.7s,baz=53,slow=7.0,SNR=2.8
NWAO LR LR 10 10 55.3
comp=Z,207nm,21.4s,baz=42,slow=39
NWAO Narrogin (SRO) 35.66 193 P **P** **09 54 52.6 -0.6**
baz=36,SNR=13
NWAO Narrogin (SRO) 35.66 193 P **P** **09 54 52.7 -0.4**
NWAO Narrogin (SRO) 35.66 193 P **P** **09 54 52.1 -1.0**
NWAO pmax pmax
comp=Z,111nm,1.4s
NWAO Narrogin (SRO) 35.66 193 P **P** **09 54 51.6 -1.5**
NWAO IAmb IAmb 09 54 54.1
comp=Z,140nm,1.4s
NWAO Narrogin (SRO) 35.66 193 P **P** **09 54 52.1 -1.0**
NWAO IAmb IAmb 09 54 54.1
comp=Z,111nm,1.4s
EIDS Eidsvold 36.01 140 P **P** **09 54 56.6 +0.3**
baz=36,SNR=8.6
EIDS Eidsvold 36.01 140 P **P** **09 54 55.1 -1.2**
EIDS IAmb IAmb 09 55 01.6
comp=Z,124nm,1.6s
EIDS IAMs_20 IAMs_20 10 12 15.6
comp=Z,1μm,19.0s
XAN Xi'an 36.03 335 P **P** **09 54 55.6 -0.8**
XAN pP pP 09 55 05.4 -2.7
XAN sP pwP 09 55 09.3 -0.9
XAN PP **PP** **09 56 20.0 +1.0**
XAN S **S** **10 00 29.8 -2.6**
XAN sS sS 10 00 45.3 -6.5
XAN SS **SnSn** **10 02 47.8 -12**
XAN ScS **ScS** **10 05 10.3 -0.3**
XAN pmax pmax
comp=Z,83nm,1.1s
XAN pmax pmax
comp=Z,290nm,3.9s
XAN LR LR
comp=Z,880nm,21.7s
XAN LR LR
comp=Z,480nm,20.1s
XAN LR LR
comp=Z,1μm,24.1s
XAN Xi'an 36.03 335 IAmb IAmb 09 54 56.5
comp=Z,80nm,1.1s
CD2 Chengdu 36.07 326⇓*i*P **P** **09 54 55.6 -1.2**
CD2 pP pP 09 55 06.3 -2.1
CD2 sP pwP 09 55 11.6 +0.9
CD2 S **S** **10 00 35.0 +1.9**
CD2 sS sS 10 00 52.8 +0.3
CD2 ScP **ScP** **10 01 04.0 -1.2**
CD2 pmax pmax

CD2 pmax pmax
comp=Z,340nm,4.3s
CD2 LR LR
comp=Z,1μm,25.6s
CD2 LR LR
comp=Z,1μm,23.4s
CD2 LR LR
comp=Z,2μm,22.9s
MAJO Matsushiro 36.20 16 *c i*P **P 09 54 59.4 +1.6**
MAJO pmax pmax
comp=Z,66nm,1.0s
MAJO Matsushiro 36.20 16 P **P 09 54 57.8 -0.1**
MAJO IAmb IAmb 09 55 01.6
comp=Z,50nm,0.9s
MAT Matsushiro 36.20 16 P **P 09 54 58.0 +0.2**
MAT *e*S **S 10 00 30.6 -4.3**
MJAR Matsushiro Arr 36.20 16 P **P 09 54 57.8 0.0**
comp=Z,24nm,0.8s,baz=182,slow=9.5,SNR=40
MJAR PcP **PcP 09 57 23.8 +1.2**
comp=Z,4.4nm,0.8s,baz=185,slow=3.6,SNR=2.3
MJAR LR LR 10 08 33.8
comp=Z,577nm,21.8s,baz=195,slow=34
MJAR Matsushiro Arr 36.20 16 P **P 09 54 57.8 0.0**
MJAR pmax pmax
comp=Z,12nm,0.8s
MJAR Matsushiro Arr 36.20 16 P **P 09 54 57.8 0.0**
STKA Stephens Creek 36.44 158 P **P 09 54 59.2 -0.7**
comp=Z,24nm,0.8s,baz=328,slow=9.4,SNR=36
STKA PcP **PcP 09 57 23.4 +0.1**
comp=Z,17nm,0.7s,baz=351,slow=6.7,SNR=3.9
STKA LR LR 10 13 14.1
comp=Z,503nm,18.0s,baz=339,slow=42
STKA PKP2ab 10 29 30.2
comp=Z,0.6nm,0.5s,baz=54,slow=4.4,SNR=3.2
STKA Stephens Creek 36.44 158 P **P 09 54 59.3 -0.6**
baz=36,SNR=31
STKA Stephens Creek 36.44 158 P **P 09 54 58.3 -1.6**
STKA pmax pmax
comp=Z,13nm,1.1s
STKA MLR MLR
comp=Z,300nm,22.0s
STKA Stephens Creek 36.44 158 P **P 09 54 58.3 -1.6**
JYT Yasato 36.51 19 P **P 09 55 00.9 +0.6**
HTT Hallett 36.96 163 P **P 09 55 04.9 +0.5**
baz=37,SNR=19
DL2 Dalian 37.18 354 P **P 09 55 06.9 +0.9**
DL2 S **S 10 00 51.8 +2.1**
DL2 pmax pmax
comp=Z,120nm,0.8s
DL2 pmax pmax
comp=Z,330nm,4.5s
DL2 LR LR
comp=Z,870nm,12.9s
DL2 LR LR
comp=Z,390nm,14.6s
DL2 LR LR
comp=Z,1μm,16.5s
RKGY Rocky Gully 37.33 193 P **P 09 55 08.6 +1.2**
baz=37,SNR=21
CMSA Cobar Meteorol 37.85 153 P **P 09 55 11.6 -0.3**
baz=38,SNR=16
TIY Taiyuan 37.99 342 *e*P **P 09 55 13.5 +0.4**
TIY pmax pmax
comp=Z,27nm,0.6s
JMM Marumori 38.20 18 P **P 09 55 15.1 +0.5**
H01W3 Cape Leeuwin H 38.31 197 P **P 09 55 15.4 0.0**
baz=25
H01W1 Cape Leeuwin H 38.32 196 P **P 09 55 15.4 0.0**
baz=25,slow=74
H01W2 Cape Leeuwin H 38.33 197 P **P 09 55 15.3 -0.2**
baz=25,slow=74
SAIH SAIHA 38.50 305 *e*P **P 09 55 16.5 -1.2**
SAIH IAmb IAmb 09 55 20.4
comp=Z,65nm,1.1s
BJT Baijiatuau 39.17 347 IAmb IAmb 09 55 26.0
comp=Z,49nm,0.8s
BJI Beijing 39.19 347 P **P 09 55 23.0 +0.1**
BJI S **S 10 01 20.9 +0.9**
BJI pmax pmax
comp=Z,64nm,0.8s
BJI LR LR
comp=Z,300nm,24.5s
BJI LR LR
comp=Z,390nm,23.5s
BJI LR LR
comp=Z,620nm,28.4s
KOHI KOHIMA 39.21 310 *e*P **P 09 55 22.1 -1.5**
KOHI IAmb IAmb 09 55 26.2
comp=Z,265nm,1.4s
MOKO MOKOCHONG 39.22 311 *e*P **P 09 55 22.2 -1.4**
MOKO IAmb IAmb 09 55 26.3
comp=Z,250nm,1.5s
SILR SILCHAR 39.74 308 *e*P **P 09 55 28.5 +0.7**
SNY Shenyang 39.92 357 ⇓P **P 09 55 30.3 +1.3**
SNY S **S 10 01 27.8 -3.1**
SNY pmax pmax
comp=Z,39nm,0.8s
SNY pmax pmax
comp=Z,280nm,3.6s
SNY LR LR
comp=Z,690nm,24.9s
SNY LR LR
comp=Z,610nm,22.8s
SNY LR LR
comp=Z,970nm,20.6s
ARMA Armidale 40.02 145 P **P 09 55 30.9 +0.8**
baz=40,SNR=29
ARMA Armidale 40.02 145 P **P 09 55 29.9 -0.3**
LZH Lanzhou 40.04 331 *e*P **P 09 55 30.4 0.0**
LZH sP sP 09 55 46.3 -1.0
LZH PcP **PcP 09 57 36.9 +2.2**
LZH S S 10 01 22.6 -11
LZH pmax pmax
comp=Z,140nm,1.3s
LZH pmax pmax
comp=Z,520nm,4.3s
LZH LR LR
comp=Z,610nm,13.3s
LZH LR LR
comp=Z,940nm,14.3s
LZH LR LR
comp=Z,1μm,15.2s
BELO BELONIA 40.11 305 *e*P **P 09 55 28.3 -2.6**
ZIRO ZIRO 40.38 312 *e*P **P 09 55 32.6 -0.7**
AGT Agartala 40.56 306 *e*P **P 09 55 35.0 +0.4**
TEZP TEZPUR 40.68 310 *e*P **P 09 55 34.5 -1.1**
SHL Shillong 40.86 308 *e*P **P 09 55 35.6 -1.7**
SHL IAmb IAmb 09 55 40.2
comp=Z,189nm,1.5s
SHL Shillong 40.86 308 P **P 09 55 36.9 -0.3**
SNR=59
SHL Shillong 40.86 308 P **P 09 55 35.8 -1.5**
SHL pmax pmax
comp=Z,172nm,1.2s
SHL Shillong 40.86 308 P **P 09 55 35.8 -1.5**
SHL IAmb IAmb 09 55 39.4
comp=Z,172nm,1.2s
ARPS Mount Arapiles 40.95 161 P **P 09 55 37.7 +0.1**
baz=41,SNR=38
JTM Tenmabayashi 40.97 17 IAMs_20 IAMs_20 10 10 42.8
comp=Z,1μm,22.0s
HHC Hu-ho-hao-te 41.14 343 *e*P **P 09 55 39.8 +0.5**
HHC S **S 10 01 49.6 +0.2**
HHC pmax pmax
comp=Z,27nm,1.1s
HHC pmax pmax
comp=Z,370nm,5.6s
HHC LR LR
comp=Z,1μm,21.2s
HHC LR LR
comp=Z,420nm,19.4s
HHC LR LR
comp=Z,2μm,21.8s
GUWA GUWAHATI 41.32 309 *e*P **P 09 55 39.5 -1.3**
GUWA IAmb IAmb 09 55 44.1
comp=Z,32nm,0.6s
YNG Young 41.40 152 P **P 09 55 42.0 +0.6**
baz=42,SNR=9.0
VLA Vladivostok 41.40 6 *i*P **P 09 55 43.4 +2.2**
VLA pmax pmax
comp=Z,31nm,0.8s
CN2 Changchun 41.81 359 *e*P **P 09 55 47.8 +3.2**
CN2 *e*pP pwP 09 55 59.9 +0.8
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,5.0s
CN2 LR LR
comp=Z,400nm,19.0s
CN2 LR LR
comp=Z,600nm,19.0s
CN2 LR LR
comp=Z,700nm,21.0s
USA0B Ussuriysk Arra 42.48 6 *c i*P **P 09 55 52.3 +2.3**
USA0B Ussuriysk Arra 42.48 6 P **P 09 55 50.9 +0.9**
USRK Ussuriysk Ar. 42.48 6 P **P 09 55 51.3 +1.3**
comp=Z,38nm,1.0s,baz=190,slow=6.4,SNR=37
USRK LR LR 10 11 55.3
comp=Z,268nm,19.7s,baz=192,slow=34
USRK Ussuriysk Ar. 42.48 6 P **P 09 55 50.9 +0.9**
USRK Ussuriysk Ar. 42.48 6 P **P 09 55 50.9 +0.9**
MDJ Mudanjiang 42.70 3 P **P 09 55 53.6 +1.8**
MDJ pmax pmax
comp=Z,21nm,0.7s
MDJ pmax pmax
comp=Z,310nm,3.7s
H11S3 WAKE ISLAND Hy 42.72 64 T T 10 41 44.6
baz=252,slow=75,SNR=56
H11S2 WAKE ISLAND Hy 42.73 64 T T 10 41 38.7
baz=252,slow=75,SNR=33
H11S1 WAKE ISLAND Hy 42.73 64 T T 10 41 52.6
baz=252,slow=75,SNR=32
TOO Toolangi 42.96 158 P **P 09 55 55.2 +1.1**
baz=43,SNR=14
TOO Toolangi 42.96 158 P **P 09 55 54.7 +0.6**
TOO pmax pmax
comp=Z,118nm,1.8s
TOO Toolangi 42.96 158 P **P 09 55 54.7 +0.6**
TOO IAmb IAmb 09 55 57.7
comp=Z,118nm,1.8s
H11N1 WAKE ISLAND Hy 43.29 63 T T 10 42 35.6
baz=250,slow=75
H11N2 WAKE ISLAND Hy 43.30 63 T T 10 42 36.5
baz=250
H11N3 WAKE ISLAND Hy 43.31 63 T T 10 42 37.1
baz=250,slow=75
LSA Lhasa 43.55 313 P **P 09 56 00.0 +0.5**
LSA S **S 10 02 17.9 -8.2**
LSA pmax pmax
comp=Z,200nm,1.6s
LSA LR LR
comp=Z,1μm,31.3s
LSA LR LR
comp=Z,930nm,27.8s
LSA LR LR
comp=Z,3μm,31.3s
LSA Lhasa 43.55 313 P **P 09 55 59.7 +0.1**
LSA Lhasa 43.55 313 IAmb IAmb 09 56 02.6
comp=Z,104nm,1.3s
SANVU Saraoutou 43.74 115 P **P 09 56 00.2 -0.4**
TEY Ternei 43.95 10⇑ *e*P **P 09 56 03.7 +1.9**
TEY pmax pmax
comp=N,30nm,0.7s
TEY pmax pmax
comp=Z,50nm,0.6s
ASAJ Asahikawa 44.47 17 P **P 09 56 07.4 +1.3**
ASAJ pmax pmax
comp=Z,79nm,1.2s
JKA Kamikawa-asahi 44.47 17 P **P 09 56 07.3 +1.3**
JKA IAmb IAmb 09 56 27.2
comp=Z,79nm,1.2s
GTA Gaotai 44.63 330 ⇑P **P 09 56 07.8 +0.2**
GTA pP pP 09 56 13.6 -5.9
GTA PcP **PP 09 57 51.8 -0.6**
GTA S **S 10 02 37.0 -3.7**
GTA ScS **SS 10 06 02.5 +0.3**
GTA pmax pmax
comp=Z,32nm,1.5s
GTA pmax pmax
comp=Z,210nm,4.3s
GTA LR LR
comp=Z,630nm,22.2s
GTA LR LR
comp=Z,600nm,19.3s
GTA LR LR
comp=Z,1μm,24.4s
CHLP Challavanipeta 44.79 295 *e*P **P 09 56 08.7 -0.3**
TAPN Taplejung 44.99 308 *e*P **P 09 56 10.3 -0.6**
comp=Z,194nm,1.3s
ODAN Odare 45.02 307 *e*P **P 09 56 10.1 -0.9**
comp=Z,135nm,0.9s
YUK Yuzh-Kuril'sk 45.41 20 *e*P **P 09 56 08.9 -4.6**
YUK S **S 10 02 50.8 -0.8**
YUK MLR MLR
comp=Z,1μm,24.0s
DZM Mont Dzumac 45.64 124 LR LR 10 16 36.7
comp=Z,681nm,21.0s,baz=354,slow=38
DZM Mont Dzumac 45.64 124 *e*P **P 09 56 15.9 +0.1**
comp=Z,116nm,1.1s
DZM Mont Dzumac 45.64 124 *e*LR LR 10 09 08.3
comp=Z,2μm,24.6s
DZM Mont Dzumac 45.64 124 P **P 09 56 16.3 +0.5**
DZM IAmb IAmb 09 56 21.0
comp=Z,47nm,1.0s
RAMN Ramite 45.69 307 *e*P **P 09 56 15.6 -0.8**
comp=Z,309nm,1.3s
PALK Pallekele 45.96 278 P **P 09 56 19.2 +0.7**
PALK pmax pmax
comp=Z,59nm,1.3s
PALK MLR MLR
comp=Z,700nm,22.0s
PALK Pallekele 45.96 278 P **P 09 56 19.2 +0.7**
PALK IAmb IAmb 09 56 21.3
comp=Z,59nm,1.2s
PALK Pallekele 45.96 278 IAMs_20 IAMs_20 10 17 26.2
comp=Z,741nm,22.0s
PVM Polavaram 46.69 292 *e*P **P 09 56 24.1 0.0**
GUN Gumba 46.69 308 *e*P **P 09 56 23.1 -1.2**
comp=Z,204nm,0.9s
PKI Pulchoki 46.91 307 *e*P **P 09 56 24.8 -1.3**
comp=Z,206nm,1.3s
PKIN Phulchoki 46.93 307 *e*P **P 09 56 24.9 -1.2**
comp=Z,154nm,1.2s
KKN Kakani 47.11 307 *e*P **P 09 56 26.4 -1.1**
comp=Z,239nm,1.3s
YSS Yuzh-Sakhalins 47.13 15⇑ *e*P **P 09 56 28.3 +1.3**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS Yuzh-Sakhalins 47.13 15 P **P 09 56 28.1 +1.2**
YSS IAmb IAmb 09 56 37.8
comp=Z,93nm,1.3s
DMN Daman 47.17 307 *e*P **P 09 56 27.1 -0.9**
comp=Z,201nm,1.3s
KLR Kul'dur 47.45 5 *c e*P **P 09 56 29.9 +0.5**
KLR pmax pmax
comp=Z,12nm,0.7s
MYLAV Mylavaram 47.49 291 *e*P **P 09 56 29.8 -0.5**
HIA Hailar 47.62 354 IAmb IAmb 09 56 33.6
comp=Z,57nm,1.1s
GKN Gorkha 47.72 307 *e*P **P 09 56 30.7 -1.4**
comp=Z,279nm,1.3s
SKHT Srikalahasti 47.76 287 *e*P **P 09 56 32.3 -0.1**
ADKI Addanki 47.92 290 *e*P **P 09 56 33.1 -0.5**
GGR Gangavaram 48.15 292 *e*P **P 09 56 34.9 -0.5**
KOLN Koldanda 48.45 306 *e*P **P 09 56 36.7 -1.1**
comp=Z,525nm,1.3s
DANN Dangsing 48.56 307 *e*P **P 09 56 37.8 -1.0**
comp=Z,159nm,0.7s
NJS Nagarjunasagar 48.69 290 *e*P **P 09 56 39.3 -0.3**
ULN Ulaanbaatar 48.86 343 P **P 09 56 40.5 -0.2**
ULN Ulaanbaatar 48.86 343 *d i*P **P 09 56 40.3 -0.3**
ULN pmax pmax
comp=Z,38nm,1.1s
ULN Ulaanbaatar 48.86 343 P **P 09 56 40.4 -0.2**
ULN IAmb IAmb 09 56 50.7
comp=Z,37nm,0.9s
ULN Ulaanbaatar 48.86 343 IAMs_20 IAMs_20 10 18 02.2
comp=Z,806nm,22.0s
SONM Songino Array 49.03 342 P **P 09 56 42.4 +0.5**
comp=Z,22nm,0.9s,baz=163,slow=8.6,SNR=65
SONM LR LR 10 20 12.8
comp=Z,412nm,20.4s,baz=156,slow=40
SONM Songino Array 49.03 342 P **P 09 56 41.5 -0.4**
SONM pmax pmax
comp=Z,25nm,0.9s
SONM Songino Array 49.03 342 P **P 09 56 41.5 -0.4**
PYUN Piuthan 49.08 306 *e*P **P 09 56 41.4 -1.3**
comp=Z,549nm,1.1s
CUPL Chouttuppal 49.21 291 *e*P **P 09 56 42.9 -0.7**
GRNR Gornyy 49.49 8⇓ *i*P **P 09 56 46.5 +1.3**
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR MLR MLR
comp=E,260nm,14.0s
GRNR MLR MLR
comp=Z,290nm,15.0s
HYB Hyderabad 49.58 291 *i*P **P 09 56 47.0 +0.6**
HYBB Hyderabad (bro 49.58 291 *e*P **P 09 56 45.7 -0.7**
TRD Trivandrum 49.76 280 *e*P **P 09 56 48.6 +0.8**
URV Uravakonda 50.31 288 *e*P **P 09 56 52.0 0.0**
CIT Chita 51.19 350 *e*P **P 09 57 00.5 +2.4**
CIT *e* 09 57 08.2
CIT *e* 09 57 17.2
CIT pmax pmax
comp=Z,216nm,1.4s
KLRI Killari 51.54 292 *e*P **P 09 56 59.9 -1.3**
ZEA Zeya 51.75 1 *e*P **P 09 57 03.1 +1.0**
ZEA *e*S **S 10 04 25.9 +5.2**
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,30nm,0.8s
ZEA smax smax
comp=N,100nm,11.2s
BHPL Bhopal 52.09 298 *e*P **P 09 57 03.6 -1.7**
BHPL IAmb IAmb 09 57 07.5
comp=Z,36nm,0.8s
ZAK Zakamensk 52.25 341 *e*P **P 09 57 06.1 +0.1**
ZAK pmax pmax
comp=Z,11nm,1.2s
TLY Talaya 53.27 342 P **P 09 57 14.0 +0.5**
comp=Z,10nm,0.7s,baz=172,slow=7.1,SNR=18
TLY Talaya 53.27 342 P **P 09 57 14.3 +0.8**
TLY P **P 09 57 14.3 +0.8**
TLY Talaya 53.27 342 *e*P **P 09 57 14.7 +1.2**
TLY *e*S S 10 04 56.7 +15
TLY pmax pmax
comp=Z,67nm,1.3s
TLY MLR MLR
comp=Z,697nm,16.0s
TLY Talaya 53.27 342 P **P 09 57 13.9 +0.5**
TLY IAMs_20 IAMs_20 10 20 18.8
comp=Z,921nm,22.0s
DDI Dehra Dun 53.91 307 *e*P **P 09 57 18.7 +0.1**
DDI IAmb IAmb 09 57 21.1
comp=Z,40nm,0.7s
NDI New Delhi 54.00 305 *e*P **P 09 57 18.0 -1.2**
MOY Mondy 54.10 341 *e*P **P 09 57 20.7 +1.1**
MOY pmax pmax
comp=Z,107nm,1.6s
WMQ Urumqi 54.17 326 *e*P **P 09 57 20.6 +0.4**
WMQ pP pP 09 57 27.3 -5.1
WMQ pmax pmax
comp=Z,79nm,0.9s
WMQ pmax pmax
comp=Z,200nm,3.8s
WMQ LR LR
comp=Z,950nm,15.9s
WMQ LR LR
comp=Z,740nm,24.7s
WMQ LR LR
comp=Z,3μm,28.1s
WMQ Urumqi 54.17 326 IAmb IAmb 09 57 22.4
comp=Z,66nm,0.9s
WMQ Urumqi 54.17 326 IAMs_20 IAMs_20 10 20 11.7
comp=Z,952nm,22.0s
POO Poona 54.19 292 *e*P **P 09 57 19.7 -1.1**
MSVF Nonsavu 54.34 113 *i*P **P 09 57 23.0 +1.1**
MSVF pmax pmax
comp=Z,62nm,1.0s
MSVF Nonsavu 54.34 113 P **P 09 57 22.0 +0.1**
MSVF IAmb IAmb 09 57 39.2
comp=Z,107nm,1.3s
SMLA Simla 54.93 307 *e*P **P 09 57 25.4 -0.5**
SMLA IAmb IAmb 09 57 30.4
comp=Z,120nm,1.1s
BHK Bhakra 55.63 307 *ex* **P 09 57 35.5 +4.5**
DHRM DHARAMSHALA 56.03 308 *e*P **P 09 57 33.4 -0.7**
DHRM IAmb IAmb 09 57 36.7
comp=Z,154nm,1.3s
BOD Bodaibo 56.71 352 *e*P **P 09 57 38.6 +0.4**
BOD pmax pmax
comp=Z,53nm,1.4s
PETK Petropavlovsk- 57.27 22 P **P 09 57 44.0 +1.8**
comp=Z,4.6nm,0.6s,baz=177,slow=3.3,SNR=29
PETK LR LR 10 21 54.2
comp=Z,138nm,21.9s,baz=218,slow=36
PETK Petropavlovsk- 57.27 22 P **P 09 57 41.7 -0.5**
PETK Petropavlovsk- 57.27 22 P **P 09 57 41.7 -0.5**
OUZ Omahuta 57.38 135 IAMs_20 IAMs_20 10 21 18.4
comp=Z,788nm,19.0s
SHLS Shalkode 58.68 321 *i*P **P 09 57 49.3 -3.2**
comp=Z,46nm,0.9s,baz=321
SHLS Shalkode 58.68 321 *i*P **P 09 57 49.3 -3.2**
SHLS pmax pmax
comp=Z,46nm,0.9s
PDGK Podgornoye 58.75 321 P **P 09 57 51.9 -1.1**
NIL Nilore 58.93 309 P **P 09 57 52.7 -1.5**
NIL P **P 09 57 52.7 -1.5**
NIL Nilore 58.93 309 P **P 09 57 54.0 -0.3**
NIL pmax pmax
comp=Z,74nm,1.3s
NIL Nilore 58.93 309 P **P 09 57 54.0 -0.3**
NIL IAmb IAmb 09 57 57.9
comp=Z,74nm,1.2s
MK31 Makanchi Array 59.00 326 *i*P **P 09 57 53.8 -0.6**
MK31 Makanchi Array 59.00 326 P **P 09 57 53.9 -0.6**
MK31 IAmb IAmb 09 57 56.6
comp=Z,32nm,0.8s
MKAR Makanchi Array 59.00 326 P **P 09 57 54.5 0.0**
comp=Z,30nm,0.6s,baz=120,slow=7.5,SNR=225
MKAR LR LR 10 25 19.5
comp=Z,508nm,18.7s,baz=114,slow=38
MKAR PKPPKP **P'P'df 10 27 31.9 +3.1**
comp=Z,0.9nm,1.0s,baz=304,slow=3.3,SNR=3.6
MKAR Makanchi Array 59.00 326 P **P 09 57 53.9 -0.6**
PRZ Przheval'sk 59.01 320 P **P 09 57 54.9 0.0**
PRZ pmax pmax
comp=Z,78nm,0.8s
PRZ MLR MLR
comp=Z,500nm,22.0s
PRZ Przheval'sk 59.01 320 P **P 09 57 54.9 0.0**
PRZ IAMs_20 IAMs_20 10 24 29.2
comp=Z,488nm,22.0s
MAKZ Makanchi 59.18 326 P **P 09 57 54.9 -0.8**
MAKZ Makanchi 59.18 326 P **P 09 57 54.9 -0.8**
MAKZ IAmb IAmb 09 57 57.8
comp=Z,44nm,0.8s
MAKZ IAMs_20 IAMs_20 10 23 41.7
comp=Z,1μm,22.0s
KSH Kashi 59.25 316 P **P 09 57 58.4 +1.9**
KSH pP pP 09 58 09.8 +1.0
KSH S **S 10 06 03.0 +1.5**
KSH pmax pmax
comp=Z,55nm,0.8s
KSH pmax pmax
comp=Z,370nm,5.2s
KSH LR LR
comp=Z,410nm,7.2s
KSH LR LR
comp=Z,380nm,6.3s
KSH LR LR
comp=Z,990nm,17.4s
SATY Saty 59.30 321 *i*P **P 09 57 55.7 -1.0**
comp=Z,33nm,0.8s,baz=320
SATY *e*S **S 10 06 02.0 0.0**
baz=320
SATY Saty 59.30 321 *i*P **P 09 57 55.7 -1.0**
SATY *e*S **S 10 06 02.0 0.0**
SATY pmax pmax
comp=Z,33nm,0.8s
KPKS Kokpek 59.33 321 *i*P **P 09 57 55.5 -1.5**
comp=Z,52nm,0.8s,baz=321
KPKS Kokpek 59.33 321 *i*P **P 09 57 55.4 -1.5**
KPKS pmax pmax
comp=Z,52nm,0.8s
KDJ Kajisay 59.63 319 P **P 09 57 59.4 +0.3**
KDJ pmax pmax
comp=Z,41nm,0.8s
KDJ MLR MLR
comp=Z,600nm,20.0s
KDJ Kajisay 59.63 319 P **P 09 57 59.4 +0.3**
KDJ IAmb IAmb 09 58 01.5
comp=Z,41nm,0.8s
KDJ IAMs_20 IAMs_20 10 24 27.6
comp=Z,637nm,20.0s

YAK Yakutsk 60.11 2 *e*P **P** **09 58 02.5 +0.7**
YAK *e**PP **pwP** **09 58 15.8 -0.9**
YAK *e* 09 58 48.6
YAK *e* 10 00 11.9
YAK *e*S **S** **10 06 10.9 -0.6**
YAK *e**SS **sS** **10 06 33.4 +1.4**
YAK *e* 10 07 53.3
YAK *e*SS **SS** **10 10 04.7 -4.4**
YAK pmax pmax
comp=Z,95nm,1.1s
YAK pmax pmax
comp=N,46nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=Z,561nm,4.0s
YAK pmax pmax
comp=N,432nm,3.0s
YAK pmax pmax
comp=E,129nm,3.3s
YAK smax smax
comp=E,233nm,3.2s
YAK smax smax
comp=N,118nm,3.3s
YAK Yakutsk 60.11 2 P **P** **09 58 02.0 +0.3**
MDOK Medeo 60.21 320 *i* P **P** **09 58 01.6 -1.5**
baz=320
MDOK *e*S **S** **10 06 13.4 -0.5**
baz=320
MDOK Medeo 60.21 320 *i* P **P** **09 58 01.5 -1.5**
MDOK *e*S **S** **10 06 13.4 -0.5**
TNSS Tian-Shan 60.22 320 *e*P **P** **09 58 03.4 0.0**
baz=320
TNSS Tian-Shan 60.22 320 *e*P **P** **09 58 03.4 0.0**
LBZ Lake Benmore 60.24 145 P **P** **09 58 02.1 -1.0**
AAA Alma-Ata 60.32 320 *e*P **P** **09 58 04.7 +1.0**
baz=320
AAA Alma-Ata 60.32 320 *e*P **P** **09 58 04.7 +1.0**
RPZ Rata Peaks 60.34 144 P **P** **09 58 03.9 +0.2**
comp=N,25nm,0.9s,baz=334,slow=2.7,SNR=6.8
RPZ LR LR 10 24 19.7
comp=N,415nm,21.8s,baz=279,slow=36
CHKK Chushkaly 60.59 321 *e*P **P** **09 58 04.7 -0.8**
baz=321
CHKK Chushkaly 60.59 321 *e*P **P** **09 58 04.6 -0.8**
BOOM Boomskoye usch 60.61 319 IAMs_20 IAMs_20 10 24 15.7
comp=Z,440nm,22.0s
TUWZ Tuamarina 60.81 141 P **P** **09 58 05.8 -1.2**
KUU Kurty 61.02 321 *e*P **P** **09 58 06.9 -1.5**
comp=Z,137nm,1.4s,baz=320
KUU Kurty 61.02 321 *e*P **P** **09 58 06.8 -1.5**
KUU pmax pmax
comp=Z,137nm,1.4s
TKM2 Tokmak 2 61.03 319 P **P** **09 58 10.0 +1.3**
SNR=26
TKM2 Tokmak 2 61.03 319 P **P** **09 58 08.6 -0.2**
URZ Urewera 61.31 136 LR LR 10 27 26.2
comp=Z,410nm,18.2s,baz=213,slow=39
KBK Karagaybulak 61.34 319 P **P** **09 58 12.4 +1.6**
SNR=7.5
UCH Uchtor 61.44 318 P **P** **09 58 13.9 +2.1**
SNR=17
AAK Ala-Archa 61.63 319 P **P** **09 58 12.3 -0.4**
SNR=14
AAK Ala-Archa 61.63 319 *i* P **P** **09 58 13.1 +0.3**
SNR=6.5
AAK Ala-Archa 61.63 319 P **P** **09 58 12.1 -0.6**
AAK P **P** **09 58 12.1 -0.6**
AAK Ala-Archa 61.63 319*c i* P **P** **09 58 13.9 +1.2**
AAK pmax pmax
comp=Z,85nm,1.2s
SGDS Sogindy 61.91 319 *e*P **P** **09 58 13.1 -1.3**
baz=319
SGDS Sogindy 61.91 319 *e*P **P** **09 58 13.1 -1.3**
USP Ospenovka 61.91 319 P **P** **09 58 15.6 +1.1**
SNR=29
BFZ Birch Farm 61.91 139 IAMs_20 IAMs_20 10 25 01.6
comp=Z,610nm,18.0s
AML Almayashu 61.94 318 P **P** **09 58 16.8 +1.6**
SNR=40
EKS2 Erkin-Say 62.12 318 P **P** **09 58 17.6 +1.6**
SNR=23
ZAA0 Zalesovo Array 62.19 334 P **P** **09 58 14.9 -1.1**
ZALV Zalesovo Beam 62.19 334 P **P** **09 58 15.2 -0.8**
comp=Z,4.2nm,0.3s,baz=116,slow=6.6,SNR=23
ZALV LR LR 10 26 01.9
comp=Z,301nm,21.5s,baz=154,slow=37
ZALV PKP2bc 10 27 29.3
comp=Z,0.6nm,0.3s,baz=278,slow=4.3,SNR=5.4
ZALV Zalesovo Beam 62.19 334 P **P** **09 58 14.2 -1.8**
ZALV Zalesovo Beam 62.19 334 P **P** **09 58 14.2 -1.8**
KBL Kabul 62.52 308 P **P** **09 58 18.2 -0.7**
SNR=22
KBL P **P** **09 58 18.2 -0.7**
SNR=22
KBL Kabul 62.52 308 P **P** **09 58 17.3 -1.6**
KBL pmax pmax
comp=Z,33nm,0.8s
KBL Kabul 62.52 308 P **P** **09 58 17.3 -1.6**
KBL IAmb IAmb 09 58 21.8
comp=Z,33nm,0.8s
BTLS Baital 63.00 321 *e*P **P** **09 58 20.7 -1.0**
baz=321
BTLS Baital 63.00 321 *e*P **P** **09 58 20.6 -1.0**
GAR Garm 63.06 313 P **P** **09 58 21.6 -0.7**
BTK Batken 63.09 315 P **P** **09 58 22.1 -0.4**
BTK pmax pmax
comp=Z,56nm,1.1s
BTK MLR MLR
comp=Z,500nm,22.0s
BTK Batken 63.09 315 P **P** **09 58 22.1 -0.4**
BTK IAmb IAmb 09 58 57.5
comp=Z,56nm,1.1s
BTK IAMs_20 IAMs_20 10 28 50.5
comp=Z,546nm,22.0s
KURBB Kurchatov Arra 63.23 328 P **P** **09 58 23.3 +0.3**
comp=Z,49nm,0.8s,baz=124,slow=6.2,SNR=9.3
KURBB PKPPKP **P'P'df** **10 27 21.4 -0.5**
comp=Z,0.7nm,0.5s,baz=289,slow=3.0,SNR=6.1
KURBB Kurchatov Arra 63.23 328 P **P** **09 58 22.2 -0.8**
KURK Kurchatov 63.23 328 P **P** **09 58 22.2 -0.8**
KURK P **P** **09 58 22.2 -0.8**
KURK Kurchatov 63.23 328*c e*P **P** **09 58 22.3 -0.8**
KURK pmax pmax
comp=Z,85nm,1.0s
KURK Kurchatov 63.23 328 P **P** **09 58 22.1 -0.9**
CHGR Chuyangaron 63.78 313 P **P** **09 58 26.6 -0.4**
DZA Taraz 63.84 318 *e*P **P** **09 58 26.2 -1.1**
baz=318
DZA Taraz 63.84 318 *e*P **P** **09 58 26.2 -1.1**
SEY Seymchan 63.93 13 *i* P **P** **09 58 29.1 +1.7**
IUG Iuzhnay 64.44 317 *e*P **P** **09 58 30.5 -0.8**
comp=Z,32nm,1.4s,baz=316
IUG Iuzhnay 64.44 317 *e*P **P** **09 58 30.5 -0.8**
IUG pmax pmax
comp=Z,31nm,1.4s
KK31 Karatay Array 64.48 318 *i* P **P** **09 58 30.5 -1.0**
KK31 Karatay Array 64.48 318 P **P** **09 58 30.3 -1.2**
KK31 IAmb IAmb 09 58 35.7
comp=Z,69nm,1.4s
KKAR Karatay Array 64.48 318 P **P** **09 58 30.3 -1.2**
KKAR pmax pmax
comp=Z,69nm,1.4s
KKAR Karatay Array 64.48 318 P **P** **09 58 30.3 -1.2**
KKAR IAmb IAmb 09 58 35.7
comp=Z,69nm,1.4s
BRZS Berezniki 66.12 325 *e*P **P** **09 58 41.2 -0.7**
comp=Z,17nm,1.0s,baz=325
BRZS Berezniki 66.12 325 *e*P **P** **09 58 41.1 -0.8**
BRZS pmax pmax
comp=Z,17nm,1.0s
HRA Herat 67.88 306 P **P** **09 58 54.4 +0.7**
BVAR Borovoye Array 68.80 327 P **P** **09 58 58.3 -0.4**
comp=Z,4.7nm,0.5s,baz=205,slow=31,SNR=36
BRVK Borovoye 68.87 327 P **P** **09 58 58.9 -0.3**
BRVK P **P** **09 58 58.9 -0.3**
BRVK Borovoye 68.87 327*c e*P **P** **09 58 58.7 -0.5**
BRVK pmax pmax
comp=Z,81nm,1.3s
BRVK Borovoye 68.87 327 P **P** **09 58 58.8 -0.5**
BRVK IAmb IAmb 09 59 03.0
comp=Z,68nm,1.1s
BRVK Borovoye 68.87 327 IAMs_20 IAMs_20 10 29 40.9
comp=Z,505nm,22.0s
CASY Casey 68.91 187 P **P** **09 58 59.2 +0.1**
CASY IAmb IAmb 09 59 00.7
comp=Z,36nm,0.8s
WSAR Wadi Sarin 68.99 294 P **P** **09 59 00.8 +0.3**
comp=Z,13nm,1.0s,baz=149,slow=3.3,SNR=4.8
MHTO MHTO 69.34 292 P **P** **09 59 03.9 +1.1**
BIDO Bidbid 69.48 294 P **P** **09 59 05.8 +2.2**
SNR=5.2
TIXI Tiksi 69.74 1*ce*P **P** **09 59 05.2 +1.0**
TIXI Tiksi 69.74 1 P **P** **09 59 04.0 -0.2**
TIXI IAmb IAmb 09 59 07.8
comp=Z,39nm,1.1s
SOHO SOHO 71.01 295 *i* P **P** **09 59 12.7 -0.2**
SNR=9.4
UOSS Minazif 71.40 296 P **P** **09 59 15.1 -0.2**
UOSS Minazif 71.40 296 P **P** **09 59 14.8 -0.5**
HATD Hatta, Dubai 71.45 295 P **P** **09 59 17.0 +1.3**
SHME Shamm 71.59 297 P **P** **09 59 18.0 +1.6**
ALNE Al Ain 71.71 295 *i* P **P** **09 59 19.4 +2.2**
SNR=6.5
GEYT Alibeck 71.92 309 P **P** **09 59 18.2 -0.1**
comp=Z,7.4nm,0.7s,baz=172,slow=4.5,SNR=13
GEYT Alibeck 71.92 309 P **P** **09 59 18.1 -0.1**
GYA0B ALIBECK ARRAY 71.92 309 P **P** **09 59 17.8 -0.4**
ASUD Al Ashush, Dub 72.15 295 *i* P **P** **09 59 21.0 +1.2**
SNR=6.4
ASUD Al Ashush, Dub 72.15 295 P **P** **09 59 19.5 -0.3**
SNR=5.5
NRIK Noril'sk 72.22 346 P **P** **09 59 20.3 +1.0**
comp=Z,55nm,0.7s,baz=124,slow=6.3,SNR=48
NRIK LR LR 10 36 06.5
comp=Z,254nm,19.1s,baz=172,slow=40
NRIK Noril'sk 72.22 346*ce*P **P** **09 59 19.8 +0.5**
NRIK pmax pmax
comp=Z,58nm,0.7s
AJN Ajban 72.46 295 *i* P **P** **09 59 21.9 +0.3**
SNR=5.8
AJN Ajban 72.46 295 P **P** **09 59 25.2 +3.6**
SNR=6.4
AJN P **P** **09 59 25.2 +3.6**
SNR=6.4
SOCY Socotra 72.54 282 P **P** **09 59 20.9 -1.5**
SOCY IAmb IAmb 09 59 25.7
comp=Z,64nm,0.9s
SOCY IAMs_20 IAMs_20 10 29 06.8
comp=Z,596nm,22.0s
AB31 Akbulak array 73.49 321 *e*P **P** **09 59 26.5 -0.7**
ABKAR Akbulak array 73.49 321 P **P** **09 59 26.4 -0.8**
ABKAR Akbulak array 73.49 321 P **P** **09 59 26.7 -0.6**
AKTO Aktyubinsk 75.02 322 P **P** **09 59 36.0 -0.2**
comp=Z,28nm,0.7s,baz=101,slow=7.2,SNR=87
AKTO LR LR 10 36 16.1
comp=Z,334nm,20.4s,baz=109,slow=39
SVE Sverdlovsk 75.47 329*de*P **P** **09 59 39.0 +0.4**
SVE *e*S **S** **10 09 14.7 -0.7**
SVE pmax pmax
comp=Z,151nm,1.4s
ARU Arti 76.43 328 P **P** **09 59 43.8 -0.2**
comp=Z,14nm,0.7s,baz=98,slow=1.8,SNR=48
ARU LR LR 10 36 48.4
comp=Z,255nm,19.0s,baz=102,slow=38
ARU Arti 76.43 328*c i* P **P** **09 59 43.1 -0.9**
ARU 10 02 30.4
ARU PPP PPP 10 04 18.7
ARU S **S** **10 09 24.5 -1.5**
ARU pmax pmax
comp=Z,91nm,1.0s
ARU MLR MLR
comp=Z,444nm,21.0s
ARU Arti 76.43 328 P **P** **09 59 42.7 -1.3**
ARU IAmb IAmb 09 59 46.9
comp=Z,71nm,0.9s
ABPO Ambohimpanom 80.47 250 P **P** **10 00 06.4 -0.9**
ABPO pmax pmax
comp=Z,42nm,1.3s
ABPO Ambohimpanom 80.47 250 P **P** **10 00 06.4 -0.9**
MAK Makhachkala 80.72 313 *e*P **P** **10 00 05.2 -2.7**
MAK *e* 10 03 10.9
MAK *e*PPP PPP 10 04 59.4
MAK *e*S **S** **10 10 09.6 -2.8**
MAK *e*SS **SS** **10 15 19.5 -6.8**
MAK pmax pmax
comp=Z,249nm,1.2s
MAK MLR MLR
comp=Z,212nm,18.0s
RAYN Ar Rayn 81.03 293 *i* P **P** **10 00 10.6 +0.5**
SNR=26
RAYN Ar Rayn 81.03 293 P **P** **10 00 09.4 -0.7**
RAYN pmax pmax
comp=Z,26nm,0.9s
RAYN MLR MLR
comp=Z,500nm,20.0s
RAYN Ar Rayn 81.03 293 P **P** **10 00 09.4 -0.7**
RAYN IAMs_20 IAMs_20 10 37 48.4
comp=Z,464nm,20.0s
RDOG Red Dog Mine 81.13 21 P **P** **10 00 08.1 -1.5**
RDOG IAmb IAmb 10 00 32.6
comp=Z,144nm,2.0s
VNDA Vanda 81.57 173 P **P** **10 00 11.7 -0.1**
comp=Z,26nm,0.9s,baz=316,slow=6.0,SNR=3.8
VNDA LR LR 10 34 15.6
comp=Z,229nm,21.8s,baz=343,slow=34
VNDA Vanda 81.57 173 P **P** **10 00 11.2 -0.6**
VNDA pmax pmax
comp=Z,42nm,1.1s
VNDA Vanda 81.57 173 P **P** **10 00 11.2 -0.6**
VNDA IAmb IAmb 10 00 13.3
comp=Z,42nm,1.1s
KIRV Kirov 81.73 329 LR LR 10 39 54.5
comp=Z,241nm,20.5s,baz=96,slow=38
KIRV Kirov 81.73 329*ce*P **P** **10 00 14.9 +1.9**
MAW Mawson 81.90 200 P **P** **10 00 14.3 +0.6**
comp=Z,32nm,0.9s,baz=69,slow=5.7,SNR=57
MAW Mawson 81.90 200 P **P** **10 00 14.4 +0.8**
baz=82,SNR=34
MAW Mawson 81.90 200 P **P** **10 00 13.6 -0.1**
MAW pmax pmax
comp=Z,9.0nm,1.0s
MAW Mawson 81.90 200 P **P** **10 00 13.6 -0.1**
GROC Groznyy 81.99 313 *e*P **P** **10 00 15.8 +1.1**
GROC *e**PP **pwP** **10 00 29.5 -0.2**
GROC *e**SP **sP** **10 00 34.5 +2.1**
GROC pmax pmax
comp=Z,122nm,1.5s
GNI Garni 82.54 310 P **P** **10 00 18.5 +0.6**
comp=Z,17nm,0.7s,baz=226,slow=3.6,SNR=9.6
GNI Garni 82.54 310 P **P** **10 00 20.3 +2.4**
GNI Garni 82.54 310 *i* P **P** **10 00 19.3 +1.4**
GNI pmax pmax
comp=Z,19nm,0.8s
GNI Garni 82.54 310 P **P** **10 00 21.9 +4.0**
GNI IAmb IAmb 10 00 41.5
comp=Z,45nm,1.0s
SVW2 Sparrevohn 82.57 29 P **P** **10 00 16.7 -0.6**
SVW2 IAmb IAmb 10 00 21.3
comp=Z,52nm,1.4s
TTA Tatalina 82.69 27 P **P** **10 00 19.2 +1.1**
TTA pmax pmax
comp=Z,35nm,1.2s
TTA Tatalina 82.69 27 P **P** **10 00 19.1 +1.1**
TTA IAmb IAmb 10 00 37.8
comp=Z,35nm,1.2s
KZRT Kazreti 82.88 311 P **P** **10 00 21.0 +1.5**
GUDG Gudauri 82.89 312 P **P** **10 00 22.2 +2.5**
ZEI Tsey 83.34 313 *e*P **P** **10 00 21.3 -0.7**
ZEI pmax pmax
comp=Z,109nm,1.4s
BGD Bogdanovka 83.47 311 P **P** **10 00 25.5 +2.7**
ONI Oni 83.66 312 P **P** **10 00 25.4 +1.9**
GEVA Gevas 83.74 308 P **P** **10 00 24.3 +0.1**
A21K Barrow 84.09 18 P **P** **10 00 27.4 +2.4**
baz=258
A21K Barrow 84.09 18 P **P** **10 00 27.3 +2.4**
A21K IAMs_20 IAMs_20 10 42 34.9
comp=Z,300nm,21.0s
GOF Gofitskoye 84.10 315*i e*P **P** **10 00 27.6 +2.0**
GOF pmax pmax
comp=Z,36nm,0.6s
KBZ Khabaz 84.13 314 P **P** **10 00 26.3 +0.6**
comp=Z,20nm,1.0s,baz=236,slow=24,SNR=22
KBZ LR LR 10 42 22.5
comp=Z,131nm,21.1s,baz=142,slow=39
KBZ Khabaz 84.13 314*ce*P **P** **10 00 26.5 +0.8**
KBZ pmax pmax
comp=Z,37nm,1.1s
IMAR Indian Mountai 84.17 24 P **P** **10 00 25.8 +0.3**
KIV Kislovodsk 84.29 314 ⇓P **P** **10 00 30.0 +3.3**
KIV Kislovodsk 84.29 314 *i* P **P** **10 00 27.9 +1.2**
SNR=8.9
KIV Kislovodsk 84.29 314 *e*P **P** **10 00 26.7 0.0**
KIV *e* 10 10 46.4
KIV pmax pmax
comp=Z,95nm,1.0s
KIV pmax pmax
comp=Z,209nm,4.7s
KIV MLR MLR
comp=Z,411nm,20.0s
KIV Kislovodsk 84.29 314 P **P** **10 00 26.9 +0.1**
KIV IAmb IAmb 10 00 38.2
comp=Z,25nm,0.8s
PPLA Purkeypile 84.42 27 P **P** **10 00 26.3 -0.7**
PPLA IAmb IAmb 10 01 05.1
comp=Z,55nm,1.4s
CNPM China Poot 84.50 30 P **P** **10 00 27.4 +0.1**
CAST Castle Rocks 84.53 27 P **P** **10 00 29.3 +1.9**
CAST IAmb IAmb 10 00 46.4
comp=Z,54nm,1.8s
SKT Skwentna 84.61 28 P **P** **10 00 28.3 +0.4**
CHVG Ch'k'valeri 84.67 313 ⇑P **P** **10 00 29.8 +1.2**
BRLK Bradley Lake 84.70 30 P **P** **10 00 26.0 -2.3**
PPT Papeete 84.74 108 LR LR 10 35 14.6
comp=Z,149nm,21.8s,baz=255,slow=34
PPT2 Papeete2 84.74 108 *e*LR LR 10 27 19.5
comp=Z,411nm,24.0s
SUA Susitna One 84.93 29 P **P** **10 00 29.6 0.0**
SUA IAmb IAmb 10 00 40.1
comp=Z,36nm,0.8s
BPAW Bear Paw Mtn. 85.09 26 P **P** **10 00 31.1 +0.9**
TBI Tubuai 85.23 113 *e*LR LR 10 27 30.0
comp=Z,450nm,31.5s
VRH Novokhopyorsk 85.32 321 *e*P **P** **10 00 31.8 +0.2**
VRH pmax pmax
comp=Z,210nm,1.0s
RC01 Rabbit Creek A 85.39 29 P **P** **10 00 34.4 +2.7**
baz=265
MARD Mardin 85.51 307 P **P** **10 00 32.7 -0.3**
MARD IAmb IAmb 10 00 41.2
comp=Z,45nm,1.0s
PMR Palmer 85.72 29 P **P** **10 00 34.3 +1.0**
PMR pmax pmax
comp=Z,28nm,1.0s
PMR Palmer 85.72 29 P **P** **10 00 34.3 +1.0**
PMR IAmb IAmb 10 00 43.2
comp=Z,28nm,1.0s
COLD Coldfoot 85.72 23 P **P** **10 00 36.4 +3.2**
baz=264
COLD Coldfoot 85.72 23 P **P** **10 00 34.8 +1.5**
KOPT Kop Dagi 85.78 310 P **P** **10 00 35.5 +1.0**
KOPT IAMs_20 IAMs_20 10 41 35.3
comp=Z,302nm,22.0s
GHO Glory Hole Cre 85.83 28 IAMs_20 IAMs_20 10 43 19.0
comp=Z,353nm,20.0s
I23K Minto, Yukon-K 85.88 25 P **P** **10 00 36.4 +2.3**
baz=265
MCK McKinley 85.96 26 P **P** **10 00 36.8 +2.2**
baz=266
RND Reindeer 85.97 27 P **P** **10 00 32.2 -2.5**
RND pmax pmax
comp=Z,8.0nm,0.7s
RND Reindeer 85.97 27 P **P** **10 00 32.2 -2.5**
KNK Knik Glacier 86.03 29 P **P** **10 00 32.7 -2.2**
KNK IAmb IAmb 10 00 54.6
comp=Z,51nm,1.2s
KNK IAMs_20 IAMs_20 10 30 19.3
comp=Z,531nm,19.0s
TOLK Toolik Lake Re 86.09 21 P **P** **10 00 37.7 +2.6**
baz=265
TOLK Toolik Lake Re 86.09 21 P **P** **10 00 35.2 +0.1**
TOLK IAmb IAmb 10 01 09.3
comp=Z,75nm,1.9s
MDM Murphy Dome 86.35 25 P **P** **10 00 36.7 +0.2**
KTUT Trabzon 86.36 311 ⇓P **P** **10 00 40.3 +3.4**
WRH Wood River Hil 86.38 26 P **P** **10 00 36.8 +0.3**
WRH IAmb IAmb 10 01 01.6
comp=Z,41nm,1.8s
SOC Sochi 86.43 313 *e*P **P** **10 00 36.8 -0.5**
SOC *e* 10 04 03.2
SOC *e*PPP PPP 10 05 50.4
SOC *e*S **SKSac** **10 10 59.6 -0.6**
SOC *e*SSS SSS 10 20 18.8
SOC pmax pmax
comp=Z,65nm,0.9s
SOC MLR MLR
comp=Z,152nm,16.0s
CCB Clear Creek Bu 86.51 25 P **P** **10 00 35.6 -1.6**
SCM Sheep Creek Mo 86.59 28 IAMs_20 IAMs_20 10 30 51.1
comp=Z,437nm,22.0s
VORD Divnogorie 86.84 321 *e*P **P** **10 00 38.9 -0.2**
VORD pmax pmax
comp=Z,200nm,1.7s
HDA Harding Lake 86.87 26 P **P** **10 00 40.0 +1.0**
baz=268
HDA Harding Lake 86.87 26 P **P** **10 00 38.5 -0.5**
VORR Voronezh 86.91 321 P **P** **10 00 38.0 -1.4**
VORR pmax pmax
comp=Z,250nm,1.2s
ILAR Eielson Array 86.91 25 P **P** **10 00 39.4 +0.2**
comp=Z,1.0nm,0.4s,baz=262,slow=4.5,SNR=14
ILAR Eielson Array 86.91 25 P **P** **10 00 37.3 -1.9**
ILAR Eielson Array 86.91 25 P **P** **10 00 37.3 -1.9**
VSR Storozhevoye 86.93 321 *e*P **P** **10 00 39.7 +0.2**
VSR pmax pmax
comp=Z,120nm,1.2s
KLMR Klimovskoe 86.95 331 *e*P **P** **10 00 38.9 -0.5**
KLMR pmax pmax
comp=Z,48nm,0.8s
KLMR Klimovskoe 86.95 331 *e*P **P** **10 00 38.9 -0.5**
KLMR AMP 10 00 44.8
comp=Z,48nm,0.8s
LPSR Galich'ya Gora 87.09 322 *e*P **P** **10 00 41.2 +0.9**
LPSR pmax pmax
comp=Z,110nm,0.9s
KLU Klutina 87.25 29 IAMs_20 IAMs_20 10 34 57.6
comp=Z,455nm,21.0s
MALT Malatya 87.38 308 P **P** **10 00 43.3 +1.1**
TMCR Tamitsa 87.71 334 *e*P **P** **10 00 42.2 -0.8**
TMCR pmax pmax
comp=Z,29nm,0.7s
MOS Moscow 87.88 326 *e*P **P** **10 00 43.0 -1.0**
MOS *e* 10 01 04.1
MOS *i*S **SKKSac** **10 11 19.9 +1.3**
MOS pmax pmax
comp=Z,93nm,1.2s
N25K Chitina, Valde 87.88 29 IAMs_20 IAMs_20 10 36 00.4
comp=Z,491nm,22.0s
BMAR Burnt Mountain 87.91 23 P **P** **10 00 45.6 +1.6**
ANN Anapa 88.08 315 *e*P **P** **10 00 44.4 -0.7**
ANN *e* 10 11 23.4
ANN pmax pmax
comp=Z,142nm,0.9s
ANN MLR MLR
comp=Z,415nm,22.0s
SCRK Sand Creek 88.16 26 P **P** **10 00 47.3 +2.0**
baz=270
GAZ Gaziantep 88.36 307 P **P** **10 00 47.4 +0.6**
VRDI Verde Repeater 88.43 29 IAMs_20 IAMs_20 10 33 01.0
comp=Z,469nm,20.0s
L26K Log Cabin Wild 88.45 27 P **P** **10 00 48.8 +2.2**
baz=271
OBN Obninsk 88.49 325*d i*P **P** **10 00 46.8 0.0**
OBN *e**PP **pP** **10 00 56.2 -3.5**
OBN *e*S **SKSac** **10 11 11.1 -1.1**
OBN *e* 10 11 30.1
OBN pmax pmax
comp=Z,66nm,1.2s
OBN MLR MLR
comp=Z,411nm,22.0s
OBN Obninsk 88.49 325 P **P** **10 00 46.5 -0.4**
KIBK Kibwezi 88.54 268 P **P** **10 00 49.3 +1.2**
SNR=18
K27K Chicken 89.00 26 P **P** **10 00 51.8 +2.7**
baz=272
K27K Chicken 89.00 26 IAmb IAmb 10 01 00.1
comp=Z,22nm,1.1s
BCAR Beaver Creek A 89.17 27 P **P** **10 00 51.1 +1.1**
KVT Kavak 89.17 311 P **P** **10 00 51.9 +1.4**
KMBO Kilima Mbogo 89.30 269 P **P** **10 00 51.0 -0.9**
comp=Z,6.1nm,0.9s,baz=78,slow=5.7,SNR=18
KMBO Kilima Mbogo 89.30 269 *i* P **P** **10 00 52.7 +0.8**
SNR=7.6
KMBO Kilima Mbogo 89.30 269 P **P** **10 00 51.2 -0.7**

KMBO pmax pmax
comp=Z,55nm,1.5s
KMBO Kilima Mbogo 89.30 269 P P 10 00 51.2 -0.7
KMBO IAmb IAmb 10 00 57.5
comp=Z,55nm,1.4s
BARN Barnard Glacie 89.31 29 P P 10 00 52.0 +1.1
BARN IAmb IAmb 10 01 16.6
comp=Z,19nm,1.1s
APA Apatity 89.52 337 ⇓ *i*P P 10 00 50.2 -1.3
APA pmax pmax
comp=Z,14nm,1.0s
DIKM Dikmen 89.74 311 ⇑P P 10 00 54.5 +1.4
DAWY Dawson 90.17 26 P P 10 00 54.6 -0.1
SYO Syowa Base 90.58 201 ⇓ *e*P P 10 00 55.6 -0.7
SYO Syowa Base 90.58 201 ⇓ *i*PcP PcP 10 00 57.2 -0.2
BZK Bozkurt 90.67 312 ⇓P P 10 00 60.0 +2.6
ILGA Ilgaz 90.93 311 P P 10 00 57.8 -1.1
ILGA IAmb IAmb 10 01 02.2
comp=Z,26nm,1.1s
LODK Lodwar 91.04 273 P P 10 01 02.0 +2.2
SNR=5.2
BR131 Keskin Array S 91.06 310 P P 10 00 57.3 -2.2
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BR131 Keskin Array S 91.06 310 P P 10 00 57.3 -2.2
BRTR Keskin Array B 91.06 310 P P 10 00 58.8 -0.7
comp=Z,3.8nm,0.8s,baz=110,slow=5.4,SNR=12
BRTR PP PP 10 04 39.0 +2.6
comp=Z,1.0nm,0.7s,baz=147,slow=7.1,SNR=3.7
BRTR LR LR 10 48 10.3
comp=Z,62nm,21.7s,baz=96,slow=40
BRTR Keskin Array B 91.06 310 P P 10 00 57.8 -1.7
EPYK Eagle Plains 91.07 24 P P 10 01 00.4 +1.6
baz=277
EPYK Eagle Plains 91.07 24 P P 10 01 00.0 +1.2
EPYK IAmb IAmb 10 01 17.0
comp=Z,30nm,1.4s
EPYK IAMs_20 IAMs_20 10 47 20.4
comp=Z,304nm,21.0s
CSS Mathiatis 91.58 305 P P 10 01 02.0 +0.2
QSPA South Pole Qui 91.74 180 P P 10 01 02.5 +0.6
INK Inuvik 92.00 21 PKKP PKKPdf 10 18 20.1 +0.6
comp=Z,0.7nm,0.6s,baz=140,slow=2.5,SNR=4.6
INK Inuvik 92.00 21 P P 10 01 02.7 -0.3
INK pmax pmax
comp=Z,18nm,1.3s
INK Inuvik 92.00 21 P P 10 01 02.7 -0.3
INK IAmb IAmb 10 01 04.9
comp=Z,18nm,1.3s
ARD3 ARCESS Array S 92.14 340 P P 10 01 02.7 -0.9
ARD3 IAmb IAmb 10 01 07.4
comp=Z,30nm,1.1s
ARD2 ARCESS Array S 92.14 340 P P 10 01 02.8 -0.9
ARD4 ARCESS Array S 92.14 340 P P 10 01 03.0 -0.7
ARA0 ARCESS Array S 92.15 340 *e*P P 10 01 03.6 -0.1
ARCES ARCESS Array B 92.15 340 P P 10 01 03.5 -0.2
comp=Z,22nm,1.0s,baz=76,slow=6.2,SNR=19
ARCES PKKP PKKPdf 10 18 19.4 +0.2
comp=Z,3.0nm,1.0s,baz=240,slow=1.9,SNR=6.3
ARCES LR LR 10 48 39.5
comp=Z,217nm,18.5s,baz=95,slow=40
ARB5 ARCESS Array S 92.16 340 IAmb IAmb 10 01 07.0
comp=Z,34nm,1.1s
SPA0 Spitsbergen Ar 92.30 349 *e*P P 10 01 05.3 +1.1
HAMF Hammerfest 92.54 341 *e*P P 10 01 05.3 -0.1
SKAG Skagway 92.60 30 IAmb IAmb 10 01 16.7
comp=Z,14nm,1.0s
WHY Whitehorse 92.65 29 IAmb IAmb 10 01 15.1
comp=Z,23nm,1.2s
BESE Bessie Mountai 92.96 31 IAMs_20 IAMs_20 10 35 15.9
comp=Z,394nm,22.0s
KTK1 Kautokeino 93.05 339 *e*P P 10 01 07.4 -0.4
AKASG Malin Array Be 93.23 321 P P **10 01 07.3 -1.8**
comp=Z,3.6nm,0.8s,baz=70,slow=4.6,SNR=10.0
AKASG LR LR 10 47 08.1
comp=Z,363nm,21.2s,baz=80,slow=38
AKASG Malin Array Be 93.23 321 P P **10 01 08.2 -0.8**
AKASG pmax pmax
comp=Z,4.0nm,1.2s
AKASG Malin Array Be 93.23 321 P P **10 01 08.2 -0.8**
AKBB Malin Array Si 93.23 321 *c*e*P P 10 01 09.0 0.0
AKBB Malin Array Si 93.23 321 P P **10 01 08.1 -0.9**
AKBB IAmb IAmb 10 01 38.4
comp=Z,19nm,1.3s
JIS Juneau Island 93.25 32 IAMs_20 IAMs_20 10 35 54.6
comp=Z,427nm,21.0s
PURM Purcari 93.27 317 ⇑P P 10 01 11.6 +2.3
FINES FINESS Array B 93.40 332 P P **10 01 08.7 -0.9**
comp=Z,4.7nm,0.7s,baz=54,slow=5.6,SNR=18
FINES LR LR 10 46 45.0
comp=Z,290nm,21.0s,baz=56,slow=38
FINES FINESS Array B 93.40 332 P P 10 01 09.0 -0.6
TAOE Nuku Hiva Isla 93.57 99 *e*LR LR 10 31 21.5
comp=Z,445nm,25.0s
ISP Isparta 93.63 308 IAMs_20 IAMs_20 10 48 13.4
comp=Z,263nm,20.0s
SORM Soroca 94.11 318 ⇓P P 10 01 12.5 -0.6
SORM Soroca 94.11 318 ⇓P P 10 01 12.5 -0.6
NACGM Naroch 94.12 325 *e* P 10 01 12.0 -1.0
TLCR 94.15 315 ⇑P P 10 01 16.5 +3.1
TLCR 94.15 315 ⇑P P 10 01 16.5 +3.1
TRO Tromso 94.37 340 *e*P P 10 01 13.1 -0.8
TPGR Topolog 94.47 315 ⇓P P 10 01 18.5 +3.5
CFR Carcaliu 94.63 315 ⇑P P 10 01 17.0 +1.4
CFR Carcaliu 94.63 315 ⇑P P 10 01 17.0 +1.4
HARR Harsova 94.83 315 ⇓P P 10 01 21.1 +4.6
HARR Harsova 94.83 315 ⇓P P 10 01 21.1 +4.6
C36M Paulatuk 95.07 20 P P 10 01 18.0 +1.0
baz=289
C36M Paulatuk 95.07 20 P P 10 01 17.3 +0.3
C36M IAmb IAmb 10 01 20.2
comp=Z,12nm,0.8s
TESR Tescani 95.48 317 ⇓P P 10 01 19.9 +0.4
VRI Vrincioaia 95.52 316 ⇑P P 10 01 20.7 +1.0
VRI Vrincioaia 95.52 316 ⇑P P 10 01 20.7 +1.0
PLOR Plostina 95.57 316 ⇓P P 10 01 19.9 -0.1
PLOR Plostina 95.57 316 ⇓P P 10 01 19.9 -0.1
BISRR Bisoca 95.58 316 ⇓P P 10 01 20.8 +0.8
ISR Istrita 95.75 316 ⇓P P 10 01 23.3 +2.5
ISR Istrita 95.75 316 ⇓P P 10 01 23.3 +2.5
BIZ Bicaz 95.78 317 ⇓P P 10 01 21.9 +1.1
NEHR Nehoiu 95.88 316 ⇑P P 10 01 22.4 +1.0
MLR Muntele Rosu 96.11 316 ⇑P P 10 01 23.3 +0.7
MLR Muntele Rosu 96.11 316 ⇑P P 10 01 23.3 +0.7
STEI Steigen 96.19 339 *e*P P 10 01 20.9 -1.3
BURAR Bucovina Array 96.27 318 ⇓P P 10 01 23.7 +0.5
BURAR Bucovina Array 96.27 318 ⇓P P 10 01 23.7 +0.5
BURAR Bucovina Array 96.27 318 P P 10 01 23.4 +0.2
BUR08 Bucovina Ar. S 96.28 318 P P 10 01 23.3 0.0
BUR08 IAmb IAmb 10 01 31.1
comp=Z,15nm,0.8s
SUW Suwalki 96.35 325 P P 10 01 22.5 -0.7
SUW pmax pmax
comp=Z,59nm,1.1s
SUW Suwalki 96.35 325 P P 10 01 22.5 -0.7
FAUS Fauske 96.37 339 *e*P P 10 01 22.5 -0.5
DOPR Dopca 96.42 316 ⇑P P 10 01 23.5 -0.4
EUNU Eureka 96.59 5 IAMs_20 IAMs_20 10 33 54.1
comp=Z,413nm,19.0s
LVV L'vov 96.66 320 *e*P P 10 01 29.7 +4.9
LOF Lofoten 96.71 340 *e*P P 10 01 24.6 0.0
VOIR 96.75 316 ⇓P P 10 01 28.5 +3.1
VOIR 96.75 316 ⇓P P 10 01 28.5 +3.1
ARR Arges 97.05 316 ⇑P Pdif 10 01 27.1 +0.3
MOR8 Moi Rana 97.11 338 *e*P P 10 01 23.9 -2.6
KWP Kalwaria Pacla 97.53 320 IAmb IAmb 10 01 58.7
comp=Z,15nm,0.9s
KOLS Kolonicke sedl 97.96 320 *e*P Pdif 10 01 32.0 +1.3
KOLS Kolonicke sedl 97.96 320 *e*PDIFF Pdif 10 01 32.0 +1.3
UZH Uzhgorod 98.01 320 *e*P Pdif 10 01 31.3 +0.4
UZH *e* 10 01 44.3
UZH *e* 10 01 53.1
GZR Gura Zlata 98.33 316 ⇑P P 10 01 32.1 -0.4
GZR Gura Zlata 98.33 316 ⇑P P 10 01 32.1 -0.4
IDI Anoyia 98.43 306 IAMs_20 IAMs_20 10 41 36.4
comp=Z,195nm,20.0s
CRVS Cervenica-Dubn 98.49 320 *e*P Pdif 10 01 33.2 +0.1
CRVS Cervenica-Dubn 98.49 320 *e*PDIFF Pdif 10 01 33.2 +0.1
LSZ Lusaka 98.51 255 P Pdif 10 01 34.0 0.0
LSZ pmax pmax
comp=Z,10.0nm,1.2s
LSZ Lusaka 98.51 255 P Pdif 10 01 34.0 0.0
NSS Namsos 98.69 337 *e*P P 10 01 31.8 -1.7
SIRR Siria 98.92 317 ⇑P Pdif 10 01 35.8 +0.7

DAG Danmarks Havn 99.11 352 *e* Pdif 10 01 28.9 -6.3
baz=64,slow=7.4
DAG *i*P Pdif 10 01 35.2 0.0
PSZ Piszkesteto 99.73 319 ⇓P Pdif 10 01 44.5 +5.8
PSZ Piszkesteto 99.73 319 ⇓P Pdif 10 01 44.5 +5.8
NB2 NORSAR Subarra1 00.39 333 P **Pdif 10 01 40.1 -1.2**
comp=Z,2.1nm,0.8s,baz=68,slow=4.6
NB2 NORSAR Subarra1 00.39 333 P **Pdif 10 01 40.1 -1.2**
baz=68,slow=4.6
NOA NORSAR Array B 100.39 333 P **Pdif 10 01 40.4 -0.8**
comp=Z,3.2nm,0.9s,baz=68,slow=4.6,SNR=8.2
BRG Berggiesshubel 102.63 323 *e*P Pdif 10 01 51.6 +0.2
comp=Z,4.8nm,1.0s
BRG *e*PP PP 10 06 06.2 +1.3
comp=Z,19nm,1.7s
BRG Berggiesshubel 102.63 323 *e*P Pdif 10 01 51.6 +0.2
BRG *e* 10 06 06.2
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG pmax pmax
comp=Z,19nm,1.7s
CLL Collm 103.05 324 *e*(Pdif) 10 01 57.0
CLL *e*PP PP 10 06 10.0 +2.1
CLL *e*SKSac SKSac 10 12 30.0 +0.6
CLL *e*SP SP 10 15 06.0 -5.0
CLL *e*PS PS 10 15 18.0 +0.8
CLL *e*PPS PPS 10 16 00.0
CLL *e*SS SS 10 20 48.0 +1.6
CLL Collm 103.05 324 *e*P Pdif 10 01 57.0 +3.8
CLL *e* 10 06 10.0
SOKA Soboth 103.25 319 *e*P PKiKP 10 06 12.1 -1.5
comp=Z,6.6nm,1.3s
SNAA Sanae 103.32 195 Pdiff **Pdif 10 01 55.4 +1.2**
GERES GERESS Array B 103.43 321 Pdiff **Pdif 10 01 55.8 +0.6**
comp=Z,0.6nm,0.5s,baz=114,slow=1.6,SNR=5.5
GERES PP **PKiKP 10 06 15.1 +1.1**
comp=Z,0.4nm,0.5s,baz=74,slow=5.7,SNR=4.0
TIP Timpagrande 104.05 311 ⇓P Pdif 10 02 00.7 +2.6
MYKA Terra Mystica 104.17 319 *e*P Pdif 10 01 55.7 -2.8
comp=Z,3.6nm,1.1s
WTTA Wattenberg 105.26 320 *e*P PKiKP 10 06 15.3 -2.2
comp=Z,7.9nm,1.4s
SQTA Sankt Quirin 105.55 320 P **PKiKP 10 06 20.7 +2.7**
comp=Z,8.9nm,1.0s
RETA Reutte 105.74 321 P **PKiKP 10 06 21.3 +3.1**
comp=Z,8.0nm,1.0s
TEOL Teolo 105.88 318 IAMs_20 IAMs_20 10 48 57.5
comp=Z,363nm,22.0s
FETA Feichten 105.93 320 *e*P PKiKP 10 06 23.7 +5.0
comp=Z,8.1nm,1.1s
NVAR Mina Array Bea 108.33 48 Pdiff **Pdif 10 02 17.6 +0.2**
comp=Z,0.1nm,0.3s,baz=265,slow=5.2,SNR=2.4
NVAR PP **PP 10 06 52.9 +5.2**
comp=Z,0.8nm,0.8s,baz=299,slow=3.7,SNR=4.0
NVAR PKKPab **PKKPab 10 17 46.1 -2.2**
comp=Z,1.6nm,0.8s,baz=132,slow=3.2,SNR=10
EKA Eskdalemuir Ar 109.80 332 PKKPbc PKKPbc 10 17 28.6 -2.4
comp=Z,18nm,1.4s,baz=244,slow=3.6,SNR=3.5
ELK Elko 109.81 45 PKKPbc PKKPbc 10 17 29.8 -0.9
comp=Z,0.6nm,0.7s,baz=45,slow=1.4,SNR=4.1
EGMT Eagleton 110.44 37 IAMs_20 IAMs_20 10 45 42.4
comp=Z,258nm,21.0s
PDAR Pinedale Array 112.92 42 PKiKP **PKiKP 10 06 33.2 +1.2**
comp=Z,0.3nm,0.6s,baz=266,slow=1.4,SNR=3.1
PDAR PKKPbc **PKKPbc 10 17 19.3 -1.3**
comp=Z,0.8nm,0.6s,baz=116,slow=6.8,SNR=7.6
O20A White River Ci 114.96 44 P PKPdf 10 06 36.8 +0.8
baz=296
K22A Casper 114.97 41 P PKPdf 10 06 37.2 +1.3
baz=298
RSSD Black Hills 115.82 38 PKIKP **PKiKP 10 06 37.0 -0.5**
RSSD Black Hills 115.82 38 PKiKP 10 06 37.0 -0.5
MVCO Mesa Verde 116.01 47 P **PKiKP 10 06 39.9 +1.7**
baz=294
MVCO Mesa Verde 116.01 47 PKPdf **PKPdf 10 06 35.4 -2.7**
PHWY Pilot Hill 116.31 41 IAMs_20 IAMs_20 10 56 15.0
comp=Z,249nm,21.0s
S22A 4UR Ranch, Cre 116.99 46 P **PKiKP 10 06 42.4 +2.3**
baz=296
HSIG 117.10 56 IAMs_20 IAMs_20 10 55 56.3
comp=Z,250nm,18.0s
SDCO Great Sand Dun 117.93 45 P **PKiKP 10 06 43.3 +1.3**
baz=297
ANMO Albuquerque 118.46 48 PKIKP **PKiKP 10 06 43.2 +0.3**
ANMO Albuquerque 118.46 48 P **PKiKP 10 06 44.7 +1.8**
baz=295
ANMO Albuquerque 118.46 48 PKPdf **PKiKP 10 06 43.1 +0.3**
F33A 5 Mile Ranch, 119.34 33 PKPdf 10 06 43.9 0.0
ECSD EROS Data Cent 120.47 35 P **PKiKP 10 06 46.9 +0.6**
baz=308
ECSD EROS Data Cent 120.47 35 PKPdf **PKPdf 10 06 46.1 -0.2**
MNTX Cornudas Mount 120.61 51 P **PKiKP 10 06 48.7 +1.7**
baz=294
MNTX Cornudas Mount 120.61 51 PKPdf **PKPdf 10 06 46.3 -0.5**
BGNE Belgrade 120.93 38 PKiKP 10 06 47.6 +0.3
SPMN Marine on St. 121.61 32 P **PKiKP 10 06 49.3 +0.8**
baz=312
MSTX Muleshoe 121.62 48 P **PKiKP 10 06 50.1 +1.1**
baz=297
MSTX Muleshoe 121.62 48 PKPdf **PKiKP 10 06 49.6 +0.6**
HPIG 122.20 56 PKPdf **PKPdf 10 06 49.5 -0.8**
SCHQ Schefferville 122.47 9 PKP **PKiKP 10 06 50.8 +0.8**
comp=Z,3.7nm,0.5s,baz=298,slow=2.5,SNR=7.7
G40A Hib Lake 122.92 30 PKPdf **PKPdf 10 06 50.0 -0.9**
TXAR Lajitas Array 122.92 53 PKP **PKiKP 10 06 52.6 +1.0**
comp=Z,1.1nm,0.7s,baz=236,slow=0.6,SNR=13
TXAR PKKPbc **PKKPab 10 16 43.5 -0.5**
comp=Z,1.4nm,1.0s,baz=132,slow=7.4,SNR=7.4
TXAR Lajitas Array 122.92 53 PKIKP **PKiKP 10 06 52.2 +0.5**
TXAR Lajitas Array 122.92 53 PKPdf **PKiKP 10 06 52.2 +0.5**
KSU1 Kansas State U 123.22 39 P **PKiKP 10 06 52.6 +0.7**
baz=305
KSU1 Kansas State U 123.22 39 PKPdf 10 06 51.5 -0.2
TOA0 Torodi Ar. Sit 123.28 287 PKPdf **PKPdf 10 06 52.4 0.0**
TORD Torodi Ar. Bea 123.28 287 PKP **PKiKP 10 06 52.9 +0.3**
comp=Z,3.5nm,0.8s,baz=48,slow=2.5,SNR=17
TORD PP **PP 10 08 37.9 +4.7**
comp=Z,7.4nm,1.2s,baz=64,slow=4.9,SNR=6.0
TORD PKKPbc **PKKPbc 10 16 42.1 0.0**
comp=Z,2.3nm,0.8s,baz=275,slow=3.9,SNR=12
TORD Torodi Ar. Bea 123.28 287 PKPdf 10 06 52.4 0.0
WMOK Wichita Mounta 124.14 45 P **PKiKP 10 06 54.6 +0.8**
baz=301
JFWS Jewell Farm 124.53 32 PKIKP **PKPdf 10 06 53.8 -0.3**
JFWS Jewell Farm 124.53 32 P **PKiKP 10 06 54.4 +0.1**
baz=314
JFWS Jewell Farm 124.53 32 PKPdf **PKPdf 10 06 53.8 -0.3**
L40A Anamosa 124.58 34 PKPdf 10 06 54.1 0.0
P38A Dawn 124.81 37 PKPdf 10 06 54.4 -0.3
JCT Junction City 125.45 50 P **PKiKP 10 06 57.5 +0.9**
baz=298
P40A Paris 125.76 36 PKPdf 10 06 56.0 -0.5
S39A Bolivar 126.13 39 PKPdf 10 06 56.8 -0.5
U38A Gravette 126.20 41 PKPdf **PKiKP 10 06 57.7 -0.1**
R40A Maddies Statio 126.42 38 PKPdf **PKPdf 10 06 58.0 +0.3**
WHTX Lake Whitney, 126.48 47 P **PKiKP 10 06 59.9 +1.3**
baz=300
HHAR Hondos 126.58 41 PKPdf 10 06 58.3 +0.2
HDIL Hopedale 126.67 34 P **PKiKP 10 06 58.9 +0.3**
baz=313
HDIL Hopedale 126.67 34 PKPdf 10 06 57.3 -0.9
833A Chaparral WMA, 126.74 52 P **PKiKP 10 07 00.7 +1.5**
baz=296
M44A Midewin, Midew 126.77 32 PKPdf 10 06 57.6 -0.7
P43A Skaggs, Pawnee 127.16 35 PKiKP 10 06 59.9 +0.2
CCM Cathedral Cave 127.19 37 PKIKP **PKPdf 10 06 59.2 0.0**
CCM Cathedral Cave 127.19 37 P **PKiKP 10 07 00.1 +0.3**
baz=310
CCM Cathedral Cave 127.19 37 PKPdf **PKPdf 10 06 59.2 0.0**
U40A Yellville 127.24 40 P **PKiKP 10 07 00.2 +0.2**
baz=307
U40A Yellville 127.24 40 PKPdf 10 06 59.6 +0.2
FVM French Village 127.73 37 PKIKP **PKPdf 10 07 00.5 +0.2**
FVM French Village 127.73 37 PKPdf 10 07 00.5 +0.2
MIAR Mount Ida 127.83 42 P **PKiKP 10 07 02.7 +1.6**
baz=306
T42A Van Buren 127.93 38 PKPdf 10 07 00.8 +0.1
LATQ La Tuque 128.16 17 P **PKiKP 10 07 01.9 +0.4**
baz=335
L48A N Adams 128.21 29 PKPdf 10 07 00.8 -0.3
KOWA Kowa 128.41 290 PKPdf **PKPdf 10 07 01.5 -0.6**
LCAR Lake Charles 128.50 39 PKPdf **PKPdf 10 06 59.4 -2.4**
PBMO Poplar Bluff 128.50 38 PKPdf 10 07 02.1 +0.4
OLIL Olney 128.59 35 PKPdf 10 06 58.9 -3.0
P48A Milroy 129.54 32 PKPdf 10 07 03.3 -0.4

P49A Miami Univ. Ec 129.86 31 P **PKiKP 10 07 05.4 +0.3**
baz=318
P49A Miami Univ. Ec 129.86 31 PKPdf **PKPdf 10 07 04.2 -0.1**
ACSO Alum Creek Sta 130.22 30 P **PKiKP 10 07 05.6 -0.2**
baz=320
T47A Sharon Grove 130.36 36 PKPdf 10 07 04.9 -0.5
KIC Kosan Boka 130.66 280 *e*PKP2 **PKiKP 10 07 07.0 -0.4**
comp=Z,4.0nm,0.5s
DBIC Dimbokro 130.73 280 PKP **PKiKP 10 07 07.7 +0.2**
comp=Z,6.0nm,1.0s,baz=46,slow=8.4,SNR=4.1
DBIC Dimbokro 130.73 280 PKIKP **PKPdf 10 07 04.6 -2.1**
DBIC Dimbokro 130.73 280 PKPdf 10 07 04.6 -2.1
O52A Adamsville 130.87 29 P **PKiKP 10 07 08.1 +0.9**
baz=321
TIC Toumodi 130.90 280 *e*PKP2 **PKiKP 10 07 08.1 +0.2**
LIC Lamto 130.96 280 *e*PKP2 **PKiKP 10 07 08.1 +0.1**
comp=Z,14nm,0.6s
P52A Corning 131.10 29 PKiKP 10 07 07.9 +0.3
PLAL Pickwick Lake 131.12 38 PKPdf **PKPdf 10 07 07.0 +0.2**
P53A Whipple 131.57 29 PKPdf 10 07 07.3 -0.3
T53A Wise 132.91 32 P **PKiKP 10 07 12.8 +1.4**
baz=319
S54A Dingess, Beckl 132.92 30 P **PKiKP 10 07 12.6 +1.3**
baz=320
LRAL Lakeview Retre 133.07 39 P **PKiKP 10 07 12.8 +1.1**
baz=311
LRAL Lakeview Retre 133.07 39 PKPdf **PKPdf 10 07 10.0 -0.6**
PLCA Paso Flores 138.30 160 PKhKP PKPpre 10 07 10.9
comp=Z,1.6nm,0.8s,baz=238,slow=7.4,SNR=5.7
PLCA PKP **PKiKP 10 07 21.8 -0.5**
comp=Z,8.2nm,0.9s,baz=259,slow=1.6,SNR=14
PLCA Paso Flores 138.30 160 PKIKP **PKPdf 10 07 17.2 -3.0**
PLCA Paso Flores 138.30 160 PKPdf **PKPdf 10 07 17.2 -3.0**
RFA San Rafael 144.37 159 *e*P PKPbc 10 07 30.2 +0.5
MT02 Curacav 144.61 154 PKPbc 10 07 31.1 +0.7
ROC1 El Roble 144.91 154 *e*P **PKPdf 10 07 32.3 -0.2**
PEL Peldehue 144.91 154 PKIKP **PKPdf 10 07 31.9 -0.3**
PEL Peldehue 144.91 154 PKPdf **PKPdf 10 07 31.9 -0.3**
AVIZ Vizcacheras 145.50 157 *e*P **PKPab 10 07 35.3 +1.7**
AAGR Agrelo 145.73 157 ⇓ *e*P **PKPab 10 07 35.9 +1.5**
ARCO CERRO ARCO 145.90 156 *e*P **PKPab 10 07 35.8 +0.6**
ASAL Salagasta 146.16 156 *e*P **PKPab 10 07 36.5 +0.5**
AUSP Uspallata 146.25 155 *e*P **PKPab 10 07 37.4 +0.8**
RTLS Leoncito 146.66 155 *e*P **PKPab 10 07 38.3 0.0**
RTCV Cerro Valdivia 146.92 156 *e*P **PKPbc 10 07 37.9 +0.3**
ZON Zonda 147.14 156 *e*P **PKPbc 10 07 39.0 +0.7**
MRA San Martin 147.46 161 *e*P **PKPbc 10 07 39.0 +0.8**
ACCO Cerro Coronel 147.80 154 *e*P **PKiKP 10 07 41.7 -0.7**
CO01 Juntas del Tor 147.86 152 PKPbc **PKiKP 10 07 42.0 -0.4**
AROD Rodeo 147.98 153 *e*P **PKiKP 10 07 42.5 -0.3**
ACDV Cuesta del Vie 148.14 154 *e*P **PKiKP 10 07 42.5 -0.4**
ACHE Chepes 148.27 158 *e*P **PKPbc 10 07 42.3 +0.9**
AVFE Valle Fertil 148.41 157 *e*P **PKiKP 10 07 42.6 -0.7**
PRVC Isla de Provid 148.50 61 *e*P **PKiKP 10 07 43.8 +0.1**
AC05 El Transito 148.73 151 PKPbc **PKiKP 10 07 44.1 0.0**
TCA Tanti 148.82 161 *e*P **PKiKP 10 07 44.0 -0.2**
AGUA GUANDACOL 149.00 154 *e*P **PKiKP 10 07 44.9 +0.3**
ACLC CERRO LA CRUZ 149.70 156 *e*P **PKiKP 10 07 45.9 -0.3**
VCA Vinchina 149.77 154 *e*P **PKiKP 10 07 46.7 +0.4**
AANI Anillaco 150.25 156 ⇓ *e*P **PKiKP 10 07 47.4 +0.1**
CYA Choya 151.03 157 *e*P **PKiKP 10 07 48.7 0.0**
CPSB Cacapava Do Su 151.57 180 *e*P **PKPbc 10 07 48.2 -1.1**
ITQB Itaqui 152.14 174 *e*P **PKPbc 10 07 48.8 -1.8**
AHML Horco Molle 152.69 156 *e*P **PKiKP 10 07 53.1 +0.9**
PB06 IPOC Station P 154.02 144 PKPdf **PKPdf 10 07 45.8 -1.3**
PB06 **PKiKP 10 07 57.0 +1.8**
CAPC Capurgana 154.04 66 *e*P **PKiKP 10 07 56.7 +1.5**
LVC Limon Verde 154.47 145 PKIKP **PKPdf 10 07 47.2 -0.8**
LVC 10 07 58.6
LVC Limon Verde 154.47 145 PKPdf **PKPdf 10 07 47.2 -0.8**
LVC **PKiKP 10 07 58.6 +2.2**
LVC Limon Verde 154.47 145 *e*P **PKPbc 10 07 52.4 -4.0**
ITAB Concordia 154.70 183 *e*P **PKPbc 10 07 52.8 -3.5**
CPUP Villa Florida 155.35 172 PKP **PKPdf 10 07 49.3 +0.7**
comp=Z,3.6nm,0.9s,baz=101,slow=1.6,SNR=5.3
CPUP PKPbc PKPbc 10 07 58.6
comp=Z,10nm,0.9s,baz=137,slow=1.4,SNR=17
CPUP PKPab **PKPab 10 08 13.2 -0.5**
comp=Z,13nm,0.9s,baz=177,slow=2.3,SNR=9.3
CPUP Villa Florida 155.35 172 PKIKP **PKPdf 10 07 48.4 -0.2**
CPUP 10 07 59.1
CPUP Villa Florida 155.35 172 PKPdf **PKPdf 10 07 48.4 -0.2**
CPUP **pPKPdf 10 07 59.1 -2.9**
CPUP sPKPbc 10 08 15.3 -0.5
DBBC Dabeiba 155.68 69 *e*P **PKPdf 10 07 49.7 +0.2**
YOTC Yotoco, Valle 156.44 76 *e*P **PKPdf 10 07 50.1 -0.5**
MARP Paez Belalcaza 157.07 78 *e*P **PKPdf 10 07 52.3 +0.7**
ESAR Angra dos Reis 157.17 202 *e*P **PKPdf 10 07 56.5 +5.5**
PTGB Pitanga 157.20 183 *e*P **PKPdf 10 07 56.7 +5.5**
ANIL Santa Ana 157.22 74 *e*P **PKPdf 10 07 48.2 -3.5**
TOLC Tolima 157.28 74 ⇑ *e*P **PKPdf 10 07 53.4 +1.5**
PARB Paraibuna 157.29 199 *e*P **PKPdf 10 07 56.1 +4.7**
FLOC Florencia 157.58 81 ⇓ *e*P **PKPdf 10 07 52.7 +0.8**
BETO Betania 157.60 79 *e*P **PKPdf 10 07 52.3 +0.3**
GARC Garzon, Huila 157.64 80 *e*P **PKPdf 10 07 52.7 +0.4**
OCAC Ocana 157.84 63 *e*P **PKPdf 10 07 53.4 +1.1**
SPBC San Pablo de B 158.14 70 *e*P **PKPdf 10 07 54.5 +1.8**
ROSC El Rosal 158.16 72 PKP **PKPdf 10 07 54.0 +1.0**
comp=Z,5.0nm,0.4s,baz=154,slow=4.0,SNR=5.0
ROSC PKPab **PKPab 10 08 27.8 +0.9**
comp=Z,6.4nm,0.3s,baz=94,slow=9.7,SNR=5.8
ROSC El Rosal 158.16 72 PKPdf **PKPdf 10 07 49.8 -3.3**
FRTB Fartura 158.27 190 *e*P **PKPdf 10 07 58.1 +5.6**
PAMC Pamplona, Colo 158.78 64 *e*P **PKPdf 10 07 54.9 +1.0**
CHIC Chingaza 158.78 72 *e*P **PKPdf 10 07 51.2 -2.6**
RUSC La Rusia 158.98 68 *e*P **PKPdf 10 07 54.5 +0.3**
BSCB Bom Sucesso 159.13 203 *e*P **PKPdf 10 07 59.0 +5.4**
LPAZ La Paz 159.64 136 PKP **PKPdf 10 07 56.4 +1.4**
comp=Z,5.6nm,0.9s,baz=87,slow=1.7,SNR=13
LPAZ PKPab **PKPab 10 08 33.8 +0.5**
comp=Z,5.4nm,0.8s,baz=186,slow=2.5,SNR=5.9
LPAZ La Paz 159.64 136 PKIKP **PKPdf 10 07 52.6 -2.4**
LPAZ La Paz 159.64 136 PKPdf 10 07 52.5 -2.4
SDV Santo Domingo 159.87 58 PKPdf **PKPdf 10 07 54.9 +0.1**
GUVC San Jose del G 160.38 77 *e*P **PKPdf 10 07 56.4 +1.2**
RCBR Riachuelo 162.01 257 *e*P **PKPdf 10 08 01.4 +4.4**
BDFB Brasilia 165.24 201 PKPab **PKPab 10 08 57.8 +0.6**
comp=Z,6.8nm,0.8s,baz=157,slow=7.3,SNR=5.3
ARAG Araguaiana, MT 166.10 187 *e*P **PKPdf 10 08 05.8 +5.3**
SAML Samuel 168.03 127 PKIKP **PKPdf 10 08 02.1 +0.1**
SAML Samuel 168.03 127 PKPdf 10 08 02.1 +0.1

IDC ***15*** *09:53:24.0±0.8, 1°.73N×126°.22E, h0km, mb4.2/8, mb1 4.3/9, mb1mx3.9/43, mbtmp4.2/9, ML3.6/1, MS4.2/3, Ms1 4.2/3, ms1mx3.6/54, Error ellipse: s-maj=57.5km s-min=16.6km az=74.0*
NEIC ***15*** *09:53:29.6±0.9, 1°.7N±0°.1×126°.3E±0°.1, h35km±2km, mb4.5/16, Error ellipse: s-maj=29.9km s-min=12.2km az=229.0*
ISC 15 09:53:29.5±0.6, 1°.7N±0°.1×126°.3E±0°.2, h35km, n31, σ0°.71/30, mb4.3/14, MS4.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.41**	**131**				**Pn**	**09 53 51.8**	**-0.9**
TNTI						Sn	**Sn**	**09 54 10.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**19.68**	**182**	P		P	**P**	**09 57 55.7**	**0.0**
	0.1nm,0.3s,baz=356,slow=12,SNR=0.9								
WB0	**Warramunga Arr**	**22.76**	**160**	P		P	**P**	**09 58 29.0**	**0.0**
WRAB	**Tennant Creek**	**22.90**	**160**	P		P	**P**	**09 58 30.9**	**+0.5**
WRAB						IAmb	IAmb	09 58 32.0	
	comp=Z,19nm,0.9s								
WRA	**Warramunga Arr**	**22.90**	**160**	P		P	**P**	**09 58 29.7**	**-0.8**
	comp=Z,5.6nm,0.6s,baz=339,slow=10,SNR=10								
WRA						PcP	**PcP**	**10 02 20.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=336,slow=2.1,SNR=1.3								
WB2	**Warramunga Arr**	**22.91**	**160**	P		P	**P**	**09 58 31.0**	**+0.5**
WR0	**Warramunga Arr**	**22.99**	**160**	P		P	**P**	**09 58 32.5**	**+1.2**
WR0						IAmb	IAmb	09 58 36.8	
	comp=Z,37nm,1.4s								
ASAR	**Alice Springs**	**26.27**	**164**	P		P	**P**	**09 59 02.1**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=347,slow=11,SNR=1.2								
ASAR						PcP	**PcP**	**10 02 27.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=352,slow=2.3,SNR=5.1								
JWT	**Wachi**	**34.48**	**13**	P		P	**P**	**10 00 14.3**	**+0.2**
BBOO	**Buckleboo**

comp=Z,607nm,21.5s,baz=200,slow=32
PEA0B Petropavlovsk- 57.47 22 P P 10 03 13.6 -1.3
PETK Petropavlovsk- 57.47 22 P P 10 03 14.6 -0.3
comp=Z,2.1nm,0.8s,baz=189,slow=3.8,SNR=5.6
PETK Petropavlovsk- 57.47 22 P P 10 03 15.1 +0.2
MK31 Makanchi Array 58.98 326 P P 10 03 25.3 -0.4
MK31 IAmb IAmb 10 03 42.4
comp=Z,3.8nm,1.5s
MKAR Makanchi Array 58.98 326 P P **10 03 25.0 -0.7**
comp=Z,1.0nm,0.3s,baz=119,slow=7.5,SNR=16
MKAR Makanchi Array 58.98 326 P P **10 03 25.3 -0.4**
WHZ Wether Hill Ro 59.96 148 P P **10 03 32.0 -0.4**
KURBB Kurchatov Arra 63.22 328 P P **10 03 53.1 -1.2**
comp=Z,1.4nm,0.4s,baz=126,slow=6.6,SNR=4.3
KURK Kurchatov 63.23 328 P P **10 03 54.2 -0.2**
KURK IAmb IAmb 10 03 56.8
comp=Z,3.6nm,0.7s
GEYT Alibeck 71.84 309 LR LR 10 39 47.2
comp=Z,238nm,21.5s,baz=45,slow=39
NRIK Noril'sk 72.29 347 P P **10 04 51.1 0.0**
comp=Z,2.0nm,0.6s,baz=129,slow=4.7,SNR=2.3
ABKAR Akbulak array 73.45 321 P P **10 04 58.3 -0.1**
ABKAR Akbulak array 73.45 321 P P **10 04 58.1 -0.2**
ABKAR IAmb IAmb 10 05 11.2
comp=Z,1.6nm,0.9s
VNDA Vanda 81.47 173 P P **10 05 43.0 +0.3**
comp=Z,0.7nm,0.5s,baz=314,slow=5.8,SNR=2.2
VNDA Vanda 81.47 173 P P **10 05 43.2 +0.5**
GNI Garni 82.45 310 LR LR 10 47 18.9
comp=Z,61nm,21.1s,baz=72,slow=39
TTA Tatalina 82.90 27 P P **10 05 51.0 +0.4**
TTA IAmb IAmb 10 06 04.6
comp=Z,8.2nm,1.3s
BPAW Bear Paw Mtn. 85.29 26 P P **10 06 04.9 +2.3**
BPAW IAmb IAmb 10 06 19.5
comp=Z,4.8nm,1.0s

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*JMA **15** 09:54:55.7±0.1,24.°69N×122.°76E,h110km±2km,M3.1*
*TAP **15** 09:54:56.1,24.°75N×122.°81E,h104km,ML3.8,C*
ISC 15 09:54:56.8±1.3,24.°71N±0.°04×122.°79E±0.°02,h102km±7km, n108,σ1§10/206,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
JYNG	**Yonagunijimaku**	**0.29**	**151**	P	**Pn**		**09 55 11.6**	**0.0**
JYNG				*e*S	**Sn**		**09 55 23.4**	**+0.8**
YOJ	**Yonaguni jima**	**0.32**	**141**	P	**Pn**		**09 55 11.7**	**0.0**
	baz=154							
YOJ				S	**Sn**		**09 55 23.2**	**+0.4**
	baz=154							
YOJ	**Yonaguni jima**	**0.32**	**141**	P	**Pn**		**09 55 11.7**	**0.0**
YOJ				*e*S	**Sn**		**09 55 23.3**	**+0.4**
TWB1	**Santiao Chiao**	**0.79**	**292**	*e*P	**Pn**		**09 55 15.0**	**-0.2**
	baz=289							
TWC	**Suao**	**0.86**	**264**	P	**Pn**		**09 55 15.4**	**-0.5**
	baz=259							
TWC				S	**Sn**		**09 55 30.0**	**-0.3**
	baz=259							
NTC	**Toucheng**	**0.89**	**280**	P	**Pn**		**09 55 16.0**	**-0.1**
	baz=272							
NTC				S	**Sn**		**09 55 31.1**	**+0.4**
	baz=272							
TIPB	**Shuangxi**	**0.92**	**287**	P	**Pn**		**09 55 16.5**	**0.0**
	baz=278							
TIPB				S	**Sn**		**09 55 30.6**	**-0.8**
	baz=278							
ENAH	**Nanao**	**0.93**	**254**	P	**Pn**		**09 55 16.6**	**0.0**
	baz=248							
ENAH				S	**Sn**		**09 55 32.5**	**+0.9**
	baz=248							
IRIF	**Iriomote-Funau**	**0.93**	**113**	P	**Pn**		**09 55 16.4**	**-0.2**
IRIF				*e*S	**Sn**		**09 55 31.7**	**+0.1**
ILA	**Ilan**	**0.95**	**274**	*e*S	**Sn**		**09 55 32.9**	**+1.0**
	baz=267							
NWF	**Wu-fen Shan**	**0.99**	**292**	*e*P	**Pn**		**09 55 17.2**	**-0.1**
	baz=282							
NWF				*e*S	**Sn**		**09 55 32.7**	**-0.1**
	baz=282							
WFSB	**Wu-fen Shan**	**0.99**	**292**	*e*P	**Pn**		**09 55 17.2**	**0.0**
	baz=282							
WFSB				*e*S	**Sn**		**09 55 32.7**	**+0.1**
	baz=282							
TWE	**Neicheng**	**1.02**	**271**	P	**Pn**		**09 55 17.6**	**0.0**
	baz=270							
TWE				S	**Sn**		**09 55 33.0**	**-0.2**
	baz=270							
PCYT	**Pengchaiyu**	**1.12**	**325**	P	**Pn**		**09 55 18.7**	**-0.1**
	baz=319							
HATJ	**Hateruma jima**	**1.13**	**125**	P	**Pn**		**09 55 19.1**	**+0.3**
HATJ				*e*S	**Sn**		**09 55 36.5**	**+1.1**
TWA	**Mucha**	**1.13**	**284**	*e*P	**Pn**		**09 55 18.9**	**0.0**
	baz=282							
TWA				*e*S	**Sn**		**09 55 35.4**	**0.0**
	baz=282							
NDT	**Datong Townshi**	**1.17**	**265**	P	**Pn**		**09 55 19.8**	**+0.5**
	baz=261							
NDT				S	**Sn**		**09 55 36.5**	**+0.3**
	baz=261							
NWLT	**Wulai**	**1.17**	**274**	P	**Pn**		**09 55 19.2**	**-0.1**
	baz=271							
NWLT				*e*S	**Sn**		**09 55 36.4**	**+0.1**
	baz=271							
NHDH	**Xindian Distri**	**1.18**	**283**	*e*P	**Pn**		**09 55 19.6**	**+0.2**
	baz=273							
NHDH				*e*S	**Sn**		**09 55 36.4**	**+0.1**
	baz=273							
YM01	**YM01**	**1.19**	**292**	*e*P	**Pn**		**09 55 19.5**	**0.0**
	baz=283							
YM01				*e*S	**Sn**		**09 55 37.2**	**+0.5**
	baz=283							
YM11	**YM11**	**1.20**	**293**	*e*P	**Pn**		**09 55 20.7**	**+1.1**
	baz=284							
YM05	**YM05**	**1.20**	**292**	P	**Pn**		**09 55 19.9**	**+0.2**
	baz=285							
YM05				*e*S	**Sn**		**09 55 38.4**	**+1.4**
	baz=285							
YM10	**YM10**	**1.20**	**292**	*e*P	**Pn**		**09 55 20.1**	**+0.4**
	baz=285							
YM10				*e*S	**Sn**		**09 55 37.2**	**+0.3**
	baz=285							
JKRS	**Kuro-shima**	**1.21**	**113**	P	**Pn**		**09 55 19.8**	**+0.2**
JKRS				S	**Sn**		**09 55 38.1**	**+1.2**
NACB	**Ninganchiao**	**1.21**	**244**	P	**Pn**		**09 55 19.0**	**-0.8**
	baz=236							
NACB				S	**Sn**		**09 55 36.0**	**-1.1**
	baz=236							
TATO	**Taipei**	**1.21**	**283**	*e*P	**Pn**		**09 55 19.4**	**-0.3**
	baz=272							
TATO				*e*S	**Sn**		**09 55 36.4**	**-0.7**
	baz=272							
TWY	**Chenhua**	**1.22**	**298**	*e*P	**Pn**		**09 55 19.8**	**0.0**
	baz=295							
TWY				*e*S	**Sn**		**09 55 37.4**	**+0.2**
	baz=295							
YM04	**YM04**	**1.22**	**292**	*e*P	**Pn**		**09 55 20.0**	**+0.2**
	baz=284							
YM04				*e*S	**Sn**		**09 55 36.6**	**-0.7**
	baz=284							
YM03	**YM03**	**1.23**	**293**	*e*P	**Pn**		**09 55 19.9**	**-0.1**
	baz=290							
YM03				*e*S	**Sn**		**09 55 37.1**	**-0.4**
	baz=290							
TWD	**Chiawan**	**1.26**	**240**	P	**Pn**		**09 55 19.6**	**-0.6**
	baz=233							
TWD				S	**Sn**		**09 55 36.9**	**-1.0**
	baz=233							
JIJ	**Ishigaki jima**	**1.28**	**105**	P	**Pn**		**09 55 20.2**	**-0.3**
JIJ				S	**Sn**		**09 55 37.9**	**-0.5**
ETLH	**Xiulin Townshi**	**1.29**	**248**	P	**Pn**		**09 55 20.4**	**-0.4**
	baz=246							
ETLH				*e*S	**Sn**		**09 55 37.8**	**-1.1**
	baz=246							
NTST	**Danshui**	**1.30**	**291**	*e*P	**Pn**		**09 55 20.9**	**+0.2**
	baz=283							
NTST				*e*S	**Sn**		**09 55 39.3**	**+0.4**
	baz=283							
HWA	**Hwalien**	**1.30**	**236**	*e*P	**Pn**		**09 55 21.0**	**+0.2**
	baz=235							
HWA				*e*S	**Sn**		**09 55 39.3**	**+0.4**
	baz=235							
NSK	**Sanguang**	**1.30**	**269**	P	**Pn**		**09 55 21.0**	**+0.2**
	baz=272							
NSK				S	**Sn**		**09 55 39.0**	**-0.1**
	baz=272							
TWS1	**Kuangyinshan**	**1.31**	**288**	*e*P	**Pn**		**09 55 20.9**	**+0.1**
	baz=281							
TWS1				*e*S	**Sn**		**09 55 39.3**	**+0.3**
	baz=281							
NNSB	**Datong**	**1.31**	**258**	P	**Pn**		**09 55 21.0**	**-0.1**
	baz=249							
NNSB				S	**Sn**		**09 55 39.1**	**-0.2**
	baz=249							
NNSH	**Datong**	**1.31**	**258**	*e*P	**Pn**		**09 55 20.9**	**-0.1**
	baz=250							
NNSH				*e*S	**Sn**		**09 55 39.5**	**+0.2**
	baz=250							
NNS	**Nan Shan**	**1.32**	**259**	P	**Pn**		**09 55 21.0**	**-0.1**
	baz=250							
NNS				*e*S	**Sn**		**09 55 39.6**	**+0.1**
	baz=250							
JISG	**Ishigakijimahi**	**1.39**	**95**	P	**Pn**		**09 55 21.4**	**-0.4**
JISG				S	**Sn**		**09 55 40.0**	**-0.7**
NCU	**National Centr**	**1.48**	**280**	*e*P	**Pn**		**09 55 22.9**	**0.0**
	baz=278							
NCU				*e*S	**Sn**		**09 55 43.6**	**+0.9**
	baz=278							
FUSS	**Fushou**	**1.48**	**252**	P	**Pn**		**09 55 23.5**	**+0.3**
	baz=245							
FUSS				*e*S	**Sn**		**09 55 43.6**	**+0.4**
	baz=245							
WHF	**Hehuan Shan**	**1.50**	**248**	P	**Pn**		**09 55 23.5**	**-0.1**
	baz=247							
WHF				S	**Sn**		**09 55 42.8**	**-1.0**
	baz=247							
ESL	**Shilin**	**1.53**	**235**	P	**Pn**		**09 55 22.7**	**-0.8**
	baz=233							
ESL				S	**Sn**		**09 55 42.6**	**-1.1**
	baz=233							
TDCB	**Techi**	**1.56**	**253**	P	**Pn**		**09 55 24.3**	**+0.3**
	baz=247							
TDCB				S	**Sn**		**09 55 44.0**	**-0.6**
	baz=247							
CHGB	**Renai**	**1.61**	**247**	P	**Pn**		**09 55 24.9**	**+0.1**
	baz=239							
CHGB				S	**Sn**		**09 55 45.6**	**-0.3**
	baz=239							
LIOB	**Emei**	**1.62**	**268**	*e*P	**Pn**		**09 55 24.7**	**+0.1**
	baz=267							
LIOB				*e*S	**Sn**		**09 55 45.5**	**-0.2**
	baz=267							
EGFH	**Guangfu**	**1.62**	**231**	*e*P	**Pn**		**09 55 24.3**	**-0.4**
	baz=230							
EGFH				*e*S	**Sn**		**09 55 44.8**	**-1.0**
	baz=230							
NSTT	**Nanjuang**	**1.63**	**268**	*e*P	**Pn**		**09 55 24.8**	**0.0**
	baz=266							
NSTT				*e*S	**Sn**		**09 55 45.9**	**-0.2**
	baz=266							
WHP	**Taichung City**	**1.73**	**256**	*e*P	**Pn**		**09 55 27.1**	**+1.0**
	baz=251							
WHP				*e*S	**Sn**		**09 55 48.9**	**+0.4**
	baz=251							
HGSD	**Ruisui**	**1.74**	**226**	*e*P	**Pn**		**09 55 25.6**	**-0.5**
	baz=224							
HGSD				*e*S	**Sn**		**09 55 47.1**	**-1.3**
	baz=224							
JTJ	**Tarama**	**1.74**	**92**	P	**Pn**		**09 55 26.3**	**+0.2**
JTJ				S	**Sn**		**09 55 48.1**	**-0.3**
EHY	**Hungye**	**1.80**	**229**	*e*P	**Pn**		**09 55 26.1**	**-0.8**
	baz=228							
EHY				*e*S	**Sn**		**09 55 48.2**	**-1.6**
	baz=228							
DPDB	**Guoxing**	**1.83**	**249**	*e*P	**Pn**		**09 55 28.1**	**+0.8**
	baz=244							
NMLH	**Miaoli**	**1.83**	**265**	*e*P	**Pn**		**09 55 27.6**	**+0.3**
	baz=264							
NMLH				*e*S	**Sn**		**09 55 50.2**	**-0.3**
	baz=264							
NSY	**Sanyi**	**1.87**	**261**	*e*P	**Pn**		**09 55 28.3**	**+0.5**
	baz=260							
NSY				*e*S	**Sn**		**09 55 51.8**	**+0.3**
	baz=260							
TWQ1	**Liyutan**	**1.87**	**259**	*e*P	**Pn**		**09 55 28.1**	**+0.2**
	baz=258							
TWQ1				*e*S	**Sn**		**09 55 51.6**	**+0.1**
	baz=258							
YULB	**Yu-li**	**1.89**	**226**	*e*P	**Pn**		**09 55 27.3**	**-0.8**
	baz=233							
YULB				*e*S	**Sn**		**09 55 50.4**	**-1.6**
	baz=233							
EYUL	**Yuli**	**1.91**	**225**	*e*P	**Pn**		**09 55 28.6**	**+0.3**
	baz=232							
EYUL				*e*S	**Sn**		**09 55 52.6**	**+0.2**
	baz=232							
SMLT	**Sun Moon Lake**	**1.91**	**245**	*e*P	**Pn**		**09 55 29.7**	**+1.3**
	baz=238							
SMLT				*e*S	**Sn**		**09 55 55.0**	**+2.4**
	baz=238							
SSLB	**Suanglung**	**1.91**	**242**	*e*P	**Pn**		**09 55 28.6**	**+0.2**
	baz=237							
SSLB				*e*S	**Sn**		**09 55 52.9**	**+0.5**
	baz=237							
TWF1	**Yuli**	**1.92**	**226**	*e*P	**Pn**		**09 55 27.8**	**-0.6**
	baz=232							
TWF1				*e*S	**Sn**		**09 55 50.1**	**-2.5**
	baz=232							
TYC	**Yuchr**	**1.94**	**246**	*e*P	**Pn**		**09 55 29.8**	**+1.1**
	baz=239							
TYC				*e*S	**Sn**		**09 55 53.9**	**+1.0**
	baz=239							
FULB	**Fuli**	**2.03**	**223**	*e*P	**Pn**		**09 55 29.6**	**-0.3**
	baz=216							
FULB				*e*S	**Sn**		**09 55 54.3**	**-0.9**
	baz=216							
WHYT	**Xinyi Township**	**2.04**	**241**	*e*P	**Pn**		**09 55 31.2**	**+1.2**
	baz=238							
WHYT				*e*S	**Sn**		**09 55 57.6**	**+2.3**
	baz=238							
CHKT	**Chengkung**	**2.07**	**219**	*e*P	**Pn**		**09 55 29.4**	**-0.9**
	baz=216							
CHKT				*e*S	**Sn**		**09 55 54.0**	**-1.9**
	baz=216							
WJS	**Zhushan**	**2.08**	**245**	*e*P	**Pn**		**09 55 31.4**	**+0.9**
	baz=237							
WJS				*e*S	**Sn**		**09 55 58.6**	**+2.3**
	baz=237							
WNT	**Mingjian**	**2.09**	**247**	*e*P	**Pn**		**09 55 31.9**	**+1.3**
	baz=256							
WNT				*e*S	**Sn**		**09 55 57.8**	**+1.3**
	baz=256							
JIRB	**Irabujima**	**2.17**	**86**	P	**Pn**		**09 55 31.6**	**0.0**
JIRB				S	**Sn**		**09 55 57.2**	**-1.1**
ALS	**Alishan**	**2.17**	**237**	*e*P	**Pn**		**09 55 32.9**	**+0.9**
	baz=231							
ALS				*e*S	**Sn**		**09 56 01.3**	**+2.4**
	baz=231							
EDH	**Donghe**	**2.20**	**219**	*e*P	**Pn**		**09 55 31.4**	**-0.7**
	baz=214							
EDH				*e*S	**Sn**		**09 55 57.4**	**-1.7**
	baz=214							
ELDTW	**Lidau**	**2.22**	**227**	*e*P	**Pn**		**09 55 32.0**	**-0.4**
	baz=226							
ELDTW				*e*S	**Sn**		**09 55 58.2**	**-1.4**
	baz=226							
CHN5	**Tsauling**	**2.23**	**241**	*e*P	**Pn**		**09 55 33.6**	**+1.1**
	baz=233							
CHN5				*e*S	**Sn**		**09 56 01.6**	**+1.8**
	baz=233							
JIKM	**Ikemajima**	**2.24**	**84**	P	**Pn**		**09 55 32.7**	**+0.1**
JIKM				*e*S	**Sn**		**09 55 59.6**	**-0.4**
JMJ	**Miyako jima 2**	**2.28**	**87**	*e*P	**Pn**		**09 55 33.9**	**+0.9**
	baz=88							
JMJ				*e*S	**Sn**		**09 56 01.3**	**+0.5**
	baz=88							
WDLH	**Douliu**	**2.29**	**244**	*e*P	**Pn**		**09 55 34.3**	**+1.0**
	baz=254							
WDLH				*e*S	**Sn**		**09 56 03.6**	**+2.4**
	baz=254							
JMJ2	**Miyako jima3**	**2.31**	**89**	P	**Pn**		**09 55 33.8**	**+0.4**
JMJ2				*e*S	**Sn**		**09 56 01.1**	**-0.4**
LONT	**Longtian**	**2.35**	**221**	*e*P	**Pn**		**09 55 33.8**	**-0.3**
	baz=220							
LONT				*e*S	**Sn**		**09 56 02.2**	**-0.4**
	baz=220							
LDUT	**Ludao**	**2.36**	**211**	*e*P	**Pn**		**09 55 33.5**	**-0.6**
	baz=208							
LDUT				*e*S	**Sn**		**09 56 01.1**	**-1.7**
	baz=208							
JOGS	**Gusukube**	**2.38**	**88**	P	**Pn**		**09 55 35.1**	**+0.8**
JOGS				*e*S	**Sn**		**09 56 04.6**	**+1.4**
STYT	**Tauyuan**	**2.42**	**231**	*e*P	**Pn**		**09 55 35.9**	**+1.0**
	baz=228							
STYT				*e*S	**Sn**		**09 56 05.8**	**+1.7**
	baz=228							
WTK	**Tuku**	**2.42**	**246**	*e*P	**Pn**		**09 55 35.8**	**+0.9**
	baz=245							
WTK				*e*S	**Sn**		**09 56 04.8**	**+0.7**
	baz=245							
CHN2	**Minshiung**	**2.42**	**242**	*e*P	**Pn**		**09 55 36.2**	**+1.3**
	baz=251							
CHN2				*e*S	**Sn**		**09 56 08.2**	**+4.1**
	baz=251							
CHN4	**Tsaushan**	**2.42**	**237**	*e*P	**Pn**		**09 55 36.2**	**+1.2**
	baz=235							
CHN4				*e*S	**Sn**		**09 56 06.7**	**+2.5**
	baz=235							
TPUB	**Ta-pu**	**2.42**	**235**	*e*P	**Pn**		**09 55 35.9**	**+0.9**
	baz=234							
TPUB				*e*S	**Sn**		**09 56 06.8**	**+2.6**
	baz=234							
TWGBT	**Beinan**	**2.45**	**220**	*e*P	**Pn**		**09 55 34.8**	**-0.5**
	baz=219							
TWGBT				*e*S	**Sn**		**09 56 03.9**	**-1.0**
	baz=219							
WTP	**Ta-pu**	**2.47**	**234**	*e*P	**Pn**		**09 55 36.9**	**+1.3**
	baz=233							
WTP				*e*S	**Sn**		**09 56 07.5**	**+2.1**
	baz=233							
CHY	**Chiayi**	**2.48**	**241**	*e*P	**Pn**		**09 55 36.4**	**+0.8**
	baz=250							
CHY				*e*S	**Sn**		**09 56 06.5**	**+1.0**
	baz=250							
TWK	**Hsinying**	**2.55**	**236**	*e*P	**Pn**		**09 55 37.7**	**+1.1**
	baz=235							
TWK				*e*S	**Sn**		**09 56 09.4**	**+2.1**
	baz=235							
CHN1	**Nanshi**	**2.57**	**234**	*e*P	**Pn**		**09 55 38.1**	**+1.2**
	baz=233							
CHN1				*e*S	**Sn**		**09 56 10.1**	**+2.4**
	baz=233							
SNST	**Tainan City**	**2.57**	**235**	*e*P	**Pn**		**09 55 38.3**	**+1.4**
	baz=234							
SNST				*e*S	**Sn**		**09 56 09.5**	**+1.8**
	baz=234							
SGST	**Jiashian**	**2.59**	**232**	*e*P	**Pn**		**09 55 37.5**	**+0.3**
	baz=239							
SGST				*e*S	**Sn**		**09 56 09.7**	**+1.5**
	baz=239							
SLGT	**Liugui**	**2.60**	**229**	*e*P	**Pn**		**09 55 38.9**	**+1.5**
	baz=234							
SLGT				*e*S	**Sn**		**09 56 10.6**	**+2.1**
	baz=234							
ICHU	**Yijhu**	**2.66**	**240**	*e*P	**Pn**		**09 55 38.7**	**+0.7**
	baz=230							
ICHU				*e*S	**Sn**		**09 56 11.0**	**+1.2**
	baz=230							
ECL	**Taimali**	**2.69**	**219**	*e*P	**Pn**		**09 55 37.6**	**-0.9**
	baz=218							
ECL				*e*S	**Sn**		**09 56 08.8**	**-1.8**
	baz=218							
SSD	**Sandimen**	**2.78**	**226**	*e*P	**Pn**		**09 55 41.6**	**+1.9**
	baz=224							
SSD				*e*S	**Sn**		**09 56 14.2**	**+1.6**
	baz=224							
TSMG	**Majia**	**2.80**	**225**	*e*P	**Pn**		**09 55 41.8**	**+1.9**
	baz=224							
MASBT	**Mashibuluo**	**2.88**	**224**	*e*P	**Pn**		**09 55 42.1**	**+1.1**
	baz=234							
MASBT				*e*S	**Sn**		**09 56 17.6**	**+2.6**
	baz=234							
LAY	**Lan-yu**	**2.89**	**203**	*e*P	**Pn**		**09 55 40.3**	**-0.9**
	baz=197							
LAY				*e*S	**Sn**		**09 56 12.4**	**-2.9**
	baz=197							
EAST	**Anshuo**	**2.92**	**218**	*e*P	**Pn**		**09 55 41.8**	**+0.2**
	baz=217							
EAST				*e*S	**Sn**		**09 56 16.1**	**0.0**
	baz=217							
VWUC	**VWUC**	**3.05**	**276**	*e*P	**Pn**		**09 55 42.4**	**-0.8**
	baz=274							
SCZT	**Fangliau**	**3.06**	**221**	*e*P	**Pn**		**09 55 45.3**	**+1.8**
	baz=214							
SCZT				*e*S	**Sn**		**09 56 19.7**	**+0.3**
	baz=214							
SLIU	**Shizi**	**3.08**	**217**	*e*P	**Pn**		**09 55 44.0**	**+0.2**
	baz=219							
PNG	**Penghu**	**3.17**	**250**	*e*P	**Pn**		**09 55 43.7**	**-1.1**
	baz=249							
PNG				*e*S	**Sn**		**09 56 19.6**	**-2.2**
	baz=249							
PHUB	**P'eng-hu**	**3.17**	**249**	*e*P	**Pn**		**09 55 43.9**	**-1.0**
	baz=248							
PHUB				*e*S	**Sn**		**09 56 19.2**	**-2.8**
	baz=248							
XPSS	**Dashiqiu**	**3.22**	**314**	*e*P	**Pn**		**09 55 44.2**	**-1.4**
	baz=312							
PTMZ	**Houxiangcun**	**3.35**	**276**	*e*P	**Pn**		**09 55 46.5**	**-0.7**
	baz=275							
PTMZ				*e*S	**Sn**		**09 56 23.4**	**-2.9**
	baz=275							
KNMB	**Chin-men Tao**	**4.01**	**267**	*e*P	**Pn**		**09 55 56.0**	**-0.2**
	baz=258							

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*IDC **15** 09:57:35.3±1.9,2.°01N×126.°86E,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.6/43,mbtmp3.8/4,Error ellipse: s-maj=182.8km s-min=22.1km az=67.0*
*NEIC **15** 09:57:40.7±1.2,1.°99N±0.°10×126.°7E±0.°1,h35km±2km, mb4.2/8,Error ellipse: s-maj=25.4km s-min=4.9km az=49.0*
ISC 15 09:57:40.8±1.2,2.°0N±0.°1×126.°7E±0.°1,h35km,n15, σ0§61/15,mb4.1/9,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TNTI	**Ternate**	**1.37**	**151**		**Pn**		**09 58 04.0**	**+0.5**
TNTI				Sn	**Sn**		**09 58 20.9**	**+0.4**
LUWI	**Luwuk**	**4.94**	**233**	Pn	**Pn**		**09 58 52.9**	**+0.2**
COEN	**Coen**	**22.75**	**135**	P	**P**		**10 02 39.6**	**-0.6**
COEN				IAmb	IAmb		10 02 44.1	
	comp=Z,12nm,1.3s							
WB0	**Warramunga Arr**	**22.89**	**161**	P	**P**		**10 02 41.2**	**-0.5**
WB0				IAmb	IAmb		10 02 47.2	
	comp=Z,9.4nm,1.3s							
WRAB	**Tennant Creek**	**23.04**	**161**	P	**P**		**10 02 42.9**	**-0.2**
WRAB				IAmb	IAmb		10 02 54.2	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**		**10 02 42.0**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=341,slow=12,SNR=12							
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**		**10 02 43.1**	**-0.1**
WB2	**Warramunga Arr**	**23.04**	**161**	P	**P**		**10 02 42.6**	**-0.7**
WB2				IAmb	IAmb		10 02 57.3	
	comp=Z,9.0nm,1.2s							
WR0	**Warramunga Arr**	**23.12**	**161**	P	**P**		**10 02 43.1**	**-0.9**
WR0				IAmb	IAmb		10 02 46.8	
	comp=Z,20nm,1.5s							
AS31	**Alice Springs**	**26.44**	**165**	P	**P**		**10 03 15.2**	**+0.6**
ASAR	**Alice Springs**	**26.44**	**165**	P	**P**		**10 03 14.4**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=346,slow=11,SNR=7.6							
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**		**10 07 36.8**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=120,slow=7.8,SNR=5.3							
KURBB	**Kurchatov Arra**	**63.19**	**328**	P	**P**		**10 08 05.8**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=138,slow=6.8,SNR=1.5							
KURK	**Kurchatov**	**63.19**	**328**	P	**P**		**10 08 05.8**	**+0.4**
KURK	**Kurchatov**	**63.19**	**328**	IAmb	IAmb		10 08 10.2	
	comp=Z,2.2nm,0.6s							

WEL 15 09:58:33.8,39.°S±4.°×17.°4E±.°,h5km,M3.6/24,ML4.0/24, MLv3.6/24,Error ellipse: s-maj=0.0km s-min=0.0km az=0.8,Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PKE	**Pukeiti**	**0.17**	**162**	P	Pg		09 58 38.2	+0.9
DREZ	**Durham Road**	**0.27**	**126**	P	Pb		09 58 40.5	-0.7
DREZ				S	Sb		09 58 44.8	-1.3
NEZ	**North Egmont**	**0.28**	**150**	P	Pg		09 58 40.2	+1.0
MHEZ	**Mangahewa**	**0.32**	**99**	P	Pb	

PKVZ	**Pokaka**	**1.14**	**104**	P	Pg	09 58 55.5	-0.2
PKVZ				S	Sb	09 59 11.2	+0.1
TWVZ	**Taurewa**	**1.18**	**92**	P	Pg	09 58 56.2	-0.3
MTVZ	**Mangateitei**	**1.26**	**107**	P	Pn	09 58 58.1	0.0
MTVZ				S	Sn	09 59 15.7	+0.3
FWVZ	**Far West T-bar**	**1.29**	**101**	P	Pn	09 58 58.6	-0.1
FWVZ				S	Sn	09 59 16.2	-0.2
DRZ	**Dome Shelter**	**1.30**	**101**	P	Pb	09 58 59.4	+0.4
DRZ				S	Sn	09 59 17.0	+0.1
WTVZ	**West Tongariro**	**1.30**	**94**	P	Pb	09 58 58.8	0.0
WTVZ				S	Sn	09 59 18.1	+1.5
NGZ	**Ngauruhoe**	**1.32**	**97**	P	Pb	09 58 59.2	+0.1
WHVZ	**Whangaehu Hut**	**1.32**	**102**	P	Pb	09 58 59.5	+0.2
WNVZ	**Wahianoa**	**1.34**	**103**	P	Pb	09 58 59.5	0.0
KRVZ	**Karewarewa**	**1.34**	**93**	P	Pn	09 58 59.3	0.0
OTVZ	**Oturere**	**1.37**	**96**	P	Pg	09 59 00.2	+0.2
OTVZ				S	Sn	09 59 19.1	+0.9
KATZ	**Kakaramea**	**1.39**	**88**	P	Pb	09 59 00.3	0.0
KATZ				S	Sn	09 59 19.6	+0.9
TMVZ	**Te Maari**	**1.39**	**94**	P	Pn	09 59 00.1	+0.1
ETVZ	**East Tongariro**	**1.40**	**95**	P	Pg	09 59 00.6	0.0
TLZ	**Tolley Road**	**1.45**	**62**	P	Pn	09 59 00.4	-0.2
TLZ				S	Sg	09 59 21.3	+1.0
WATZ	**Wairara**	**1.45**	**78**	P	Pb	09 59 01.5	+0.1
RATZ	**Rangitukua**	**1.46**	**84**	P	Pb	09 59 01.3	-0.1
MOVZ	**Moawhango**	**1.47**	**105**	P	Pn	09 59 00.9	-0.2
RITZ	**Rihia Road**	**1.51**	**89**	P	Pg	09 59 02.7	0.0
KUTZ	**Kaahu Road**	**1.58**	**71**	P	Pb	09 59 03.3	-0.3
OHWZ	**Ohakea**	**1.59**	**138**	P	Pb	09 59 03.9	+0.1
BHHZ	**Black Hill Sta**	**1.73**	**106**	P	Pb	09 59 06.2	+0.2
DUWZ	**D'Urville Isla**	**1.77**	**180**	P	Pn	09 59 04.4	-0.7
TOZ	**Tahuroa Road**	**1.80**	**44**	P	Pb	09 59 05.0	-0.4
GRRZ	**Galatos Road**	**1.84**	**69**	P	Pb	09 59 07.1	-0.9
TSZ	**Takapari Road**	**1.89**	**124**	P	Pb	09 59 08.4	-0.3
HSRZ	**Hossack Road**	**1.96**	**69**	P	Pb	09 59 09.0	-1.0
POWZ	**Post Office Ro**	**1.97**	**134**	P	Pb	09 59 10.2	0.0
KIW	**Kapiti Island**	**1.98**	**158**	P	Pn	09 59 08.8	+0.8
BKZ	**Black Stump Fm**	**2.01**	**95**	P	Pb	09 59 10.6	-0.2
OGWZ	**Otaki Gorge**	**2.03**	**152**	P	Pb	09 59 10.1	-1.0
AWAZ	**Awhitu Peninsu**	**2.04**	**16**	P	Pn	09 59 08.6	-0.2
MRZ	**Mangatainoka R**	**2.07**	**142**	P	Pb	09 59 11.2	-0.6
QRZ	**Quartz Range**	**2.09**	**210**	P	Pn	09 59 07.7	-1.7
DVHZ	**Dannevirke**	**2.15**	**127**	P	Pg	09 59 14.5	-0.5
MKAZ	**Moumakai**	**2.16**	**27**	P	Pn	09 59 10.5	+0.1
PRWZ	**Pori Road**	**2.20**	**135**	P	Pb	09 59 13.9	-0.1
TCW	**Tory Channel**	**2.20**	**173**	P	Pn	09 59 11.0	+0.1
WPHZ	**Waipukurau**	**2.21**	**119**	P	Pb	09 59 14.9	+0.7
ETAZ	**East Tamaki Re**	**2.22**	**21**	P	Pn	09 59 11.2	0.0
NNZ	**Nelson**	**2.22**	**191**	P	Pn	09 59 10.7	-0.6
HOWZ	**Holdsworth Sta**	**2.23**	**147**	P	Pn	09 59 12.2	+0.8
TGRZ	**Tauranga**	**2.25**	**56**	P	Pn	09 59 11.5	-0.1
CAW	**Cannon Point**	**2.25**	**157**	P	Pn	09 59 13.0	+1.2
MBAZ	**Motutapu North**	**2.39**	**19**	P	Pb	09 59 16.4	-0.8
TUWZ	**Tuamarina**	**2.40**	**180**	P	Pn	09 59 13.4	-0.2
ANWZ	**Angora Road**	**2.43**	**127**	P	Pg	09 59 20.6	+0.2
BFZ	**Birch Farm**	**2.44**	**133**	P	Pg	09 59 19.7	-0.8
MTW	**Mount Morrison**	**2.45**	**151**	P	Pb	09 59 17.3	-1.0
RAHZ	**Arahi**	**2.47**	**88**	P	Pb	09 59 19.6	+0.9
BHW	**Baring Head**	**2.49**	**163**	P	Pb	09 59 17.5	-1.4
TMWZ	**Te Maipa**	**2.57**	**145**	P	Pb	09 59 20.0	-0.4
MSWZ	**Moikau Station**	**2.59**	**157**	P	Pb	09 59 19.0	-1.8
URZ	**Urewera**	**2.62**	**74**	P	Pb	09 59 21.2	0.0
PAWZ	**Paruwai Farm**	**2.62**	**154**	P	Pb	09 59 22.0	+0.8
BSWZ	**Blackbirch Sta**	**2.68**	**181**	P	Pn	09 59 18.5	+0.9
CMWZ	**Cape Campbell**	**2.73**	**175**	P	Pb	09 59 23.1	+0.1
TRWZ	**Traveller**	**2.73**	**151**	P	Pb	09 59 22.3	-0.8
PLWZ	**Palliser**	**2.73**	**158**	P	Pb	09 59 20.7	-1.2
THZ	**Tophouse**	**2.84**	**195**	P	Pn	09 59 19.9	+0.1
GRZ	**Great Barrier**	**3.03**	**24**	P	Pn	09 59 20.0	-2.3
WCZ	**Waipu Caves**	**3.10**	**6**	P	Pn	09 59 23.6	+0.2
KHZ	**Kahutara**	**3.40**	**185**	P	Pn	09 59 28.3	+0.9
LTZ	**Lake Taylor**	**3.95**	**198**	P	Pn	09 59 35.7	+0.6
INZ	**Inchbonnie**	**4.14**	**206**	P	Pn	09 59 37.4	-0.2
WVZ	**Waitaha Valley**	**4.70**	**210**	P	Pn	09 59 46.1	+0.8
OKCZ	**Okains Bay**	**4.73**	**188**	P	Pn	09 59 45.5	-0.3
GCSZ	**Gaunt Creek Bo**	**5.07**	**211**	P	Pn	09 59 51.4	+1.1

IDC 15 10:04:15.3±3.8, 28°.62S×177°.75W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.4/38, mbtmpb3.7/2, Error ellipse: s-maj=75.1km s-min=19.7km az=80.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.65**	**193**	Pn	Pn	10 04 32.2	+0.4
	337nm,0.3s,baz=68,slow=14,SNR=13						
RAO				Sn	Sn	10 04 42.8	0.0
	1μm,0.3s,baz=101,slow=22,SNR=16						
ASAR	**Alice Springs**	**43.45**	**265**	P	P	10 12 20.3	-0.1
	0.5nm,0.5s,baz=101,slow=7.3,SNR=16						
WRA	**Warramunga Arr**	**44.28**	**270**	P	P	10 12 26.9	-0.1
	0.6nm,0.5s,baz=344,slow=11,SNR=9.1						
FINES	**FINESS Array B**	**143.54**	**341**	PKP	PKPbc	10 23 49.8	+1.1
	1.2nm,0.6s,baz=33,slow=3.3,SNR=7.9						
NB2	**NORSAR Subarra**	**147.03**	**352**	PKP	PKiKP	10 24 14.2	+12
	comp=Z,12nm,2.0s,baz=17,slow=2.6						

IDC 15 10:09:07.9±2.2, 1°.87N×126°.33E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/45, mbtmpb3.4/3, Error ellipse: s-maj=181.9km s-min=26.6km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.06**	**160**	P	P	10 14 14.2	-1.0
	1.3nm,0.8s,baz=339,slow=11,SNR=9.1						
ASAR	**Alice Springs**	**26.44**	**164**	P	P	10 14 47.7	+1.0
	0.6nm,1.0s,baz=344,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	10 19 08.3	-0.1
	0.2nm,0.4s,baz=117,slow=8.0,SNR=4.5						

*REY **15** 10:09:47.5, 64°.67N×17°.46W, h8km*
*MOS **15** 10:09:47.8±0.9, 64°.64N×17°.59W, h10km, mb4.5/21, Error ellipse: s-maj=13.8km s-min=9.2km az=111.8*
*IDC **15** 10:09:48.0±0.6, 64°.58N×17°.65W, h0km, mb3.9/14, mb1 4.1/17, mb1mx3.9/58, mbtmpb3.9/17, ML3.3/3, MS3.8/2, Ms1 3.8/2, ms1mx2.9/48, Error ellipse: s-maj=20.7km s-min=9.7km az=14.0*
*NEIC **15** 10:09:49.0±1.8, 64°.55N±0°.08×17°.7W±0°.1, h8km±4km, mb4.5/31, Error ellipse: s-maj=12.2km s-min=6.4km az=189.0*
ISC 15 10:09:49.5±0.4, 64°.65N±0°.02×17°.52W±0°.02, h10km, n148, σ1s95/154, mb4.3/50, 3C, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.10**	**282**	P	**Pg**	**10 09 50.3**	**-2.0**
	baz=270						
IVON				S	**Sg**	**10 09 52.9**	**-1.3**
	baz=270						
IDYN	**Dyngjuhals**	**0.15**	**25**	P	**Pg**	**10 09 50.5**	**-2.6**
	baz=18						
IDYN				S	**Sg**	**10 09 52.9**	**-2.5**
	baz=18						
IHAM	**Hamarinn**	**0.22**	**217**	P	**Pg**	**10 09 52.4**	**-1.7**
	baz=219						
IHAM				S	**Sg**	**10 09 56.2**	**-1.0**
	baz=219						
IGRF	**Grimsfjall**	**0.27**	**156**	P	**Pg**	**10 09 53.0**	**-2.0**
	baz=163						
IGRF				S	**Sg**	**10 09 57.9**	**-0.8**
	baz=163						
IHUS	**Husbondi**	**0.36**	**190**	P	**Pg**	**10 09 55.1**	**-1.6**
	baz=193						
IHUS				S	**Sb**	**10 10 01.0**	**-2.9**
	baz=193						
IKVE	**Kverkfjoll**	**0.36**	**86**	P	**Pg**	**10 09 54.0**	**-2.8**
	baz=89						
IKVE				S	**Sg**	**10 09 58.6**	**-3.0**
	baz=89						
ISKR	**Skrokkalda**	**0.39**	**257**	P	**Pg**	**10 09 55.4**	**-1.8**
	baz=254						
IVOT	**Vottur**	**0.41**	**159**	P	**Pg**	**10 09 55.4**	**-2.2**
	baz=164						
IJOK	**Jokulheimar**	**0.46**	**222**	P	**Pg**	**10 09 56.5**	**-1.9**
	baz=223						
IJOK				S	**Sb**	**10 10 04.0**	**-2.5**
	baz=223						
THOR	**Thorvaldshraun**	**0.46**	**52**	P	**Pg**	**10 09 55.5**	**-3.0**
	baz=52						
THOR				S	**Sg**	**10 10 01.9**	**-2.7**
	baz=52						
IASK	**Askja**	**0.55**	**42**	P	Pg	10 09 56.9	-3.3
	baz=42						
IASK				S	**Sg**	**10 10 03.9**	**-3.5**
	baz=42						
IMKO	**Mokollar**	**0.60**	**57**	P	Pg	10 09 57.9	-3.3
	baz=57						
IMKO				S	**Sg**	**10 10 06.3**	**-2.8**
	baz=57						
IIEY	**Innrieyrar**	**0.62**	**205**	P	**Pg**	**10 09 59.3**	**-2.2**
	baz=207						
IIEY				S	**Sb**	**10 10 08.2**	**-3.0**
	baz=207						
IKSK	**Karasker**	**0.67**	**137**	P	**Pg**	**10 09 58.9**	**-3.6**
	baz=140						
IKSK				S	**Sg**	**10 10 08.7**	**-2.5**
	baz=140						
ISVA	**Svartarkot**	**0.70**	**9**	P	Pg	10 09 59.5	-3.4
	baz=7.3						
ISVA				S	**Sg**	**10 10 09.3**	**-2.8**
	baz=7.3						
IKAL	**Kalfafell**	**0.71**	**186**	P	**Pg**	**10 10 00.8**	**-2.4**
	baz=188						
IKAL				S	**Sb**	**10 10 11.4**	**-2.4**
	baz=188						
IVAT	**Vatnsfell**	**0.77**	**233**	P	**Pg**	**10 10 01.9**	**-2.4**
	baz=233						
IVSH	**V-Sauoahnukur**	**0.78**	**78**	P	Pg	10 10 00.7	-3.9
	baz=79						
IVSH				S	**Sg**	**10 10 11.2**	**-3.7**
	baz=79						
IFAG	**Fagurholsmyri**	**0.87**	**154**	P	**Pg**	**10 10 02.9**	**-3.3**
	baz=156						
IHVE	**Hveravellir**	**0.91**	**285**	P	**Pg**	**10 10 03.6**	**-3.3**
	baz=283						
IHVE				S	**Sg**	**10 10 16.6**	**-2.1**
	baz=283						
IADA	**Aoalbol**	**0.91**	**65**	P	Pg	10 10 02.7	-4.3
	baz=66						
IADA				S	**Sg**	**10 10 14.9**	**-3.9**
	baz=66						
IMEL	**Melhnausar**	**0.99**	**21**	P	Pg	10 10 04.3	-4.2
	baz=20						
IREN	**Reynihlio**	**1.03**	**14**	P	Pb	10 10 05.1	-4.4
	baz=13						
ISNB	**Snabyli**	**1.04**	**208**	P	**Pg**	**10 10 06.5**	**-3.1**
	baz=209						
ISLY	**Slysaalda**	**1.09**	**221**	P	**Pg**	**10 10 07.3**	**-3.1**
	baz=221						
IKVO	**Krokottuvotn**	**1.10**	**14**	P	Pb	10 10 06.2	-4.4
	baz=13						
IFED	**Fedgar**	**1.14**	**237**	P	**Pg**	**10 10 08.0**	**-3.3**
	baz=237						
IGRS	**Grimsstaoir**	**1.15**	**30**	P	Pn	10 10 07.9	-3.8
	baz=30						
IRJU	**Rjupnafell**	**1.16**	**206**	P	**Pg**	**10 10 08.4**	**-3.2**
	baz=207						
IMJO	**Mjoaskard**	**1.19**	**233**	P	**Pg**	**10 10 08.8**	**-3.4**
	baz=233						
ISKI	**Skildingahlsh**	**1.24**	**9**	P	Pn	10 10 08.6	-4.4
	baz=8.4						
ISKI				S	**Sb**	**10 10 25.3**	**-3.7**
	baz=8.4						
IGHA	**Grjothals**	**1.25**	**16**	P	Pn	10 10 08.5	-4.5
	baz=16						
IGRA	**Granastaoir**	**1.27**	**359**	P	Pn	10 10 09.0	-4.3
	baz=358						
BORG	**Borgarnes**	**1.64**	**275**	Pg		**Pn**	**10 10 15.9**	**-2.5**
	27nm,0.3s,baz=101,slow=13,SNR=59						
BORG				Lg		Lg	10 10 38.7	
	13nm,0.3s,baz=25,slow=23,SNR=9.3						
BORG	**Borgarnes**	**1.64**	**275**			**Pn**	**10 10 15.1**	**-3.2**
BORG						**Sb**	**10 10 38.4**	**-2.1**
SCO	**Scoresbysund**	**6.10**	**346**	P		**Pn**	**10 11 18.8**	**-0.7**
SCO							10 12 33.1	
SCO	**Scoresbysund**	**6.10**	**346**	Pn		**Pn**	**10 11 18.8**	**-0.7**
SCO				Sn		**Sn**	**10 12 33.0**	**+3.8**
SCO	**Scoresbysund**	**6.10**	**346**	*e*		Pn	10 11 15.0	-4.5
	baz=185,slow=7.9							
SCO				*i* P		**Pn**	**10 11 18.6**	**-1.0**
SCO				*e*S		**Sn**	**10 12 31.9**	**+2.7**
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn		**Pn**	**10 12 36.2**	**-0.9**
	baz=323,slow=13,SNR=9.1							
NOA	**NORSAR Array B**	**13.54**	**92**	Pn		**Pn**	**10 12 58.2**	**-3.3**
	0.0nm,0.3s,baz=299,slow=13,SNR=3.4							
KONO	**Kongsberg**	**13.56**	**99**	*i* P		**Pn**	**10 13 03.4**	**+1.8**
SFJD	**Kangerlussuaq**	**13.66**	**295**	LR		LR	10 17 44.4	
	comp=Z,220nm,18.5s,baz=109,slow=35							
SFJD	**Kangerlussuaq**	**13.66**	**295**	P		**Pn**	**10 13 00.3**	**-2.7**
SFJD	**Kangerlussuaq**	**13.66**	**295**	Pn		**Pn**	**10 13 00.3**	**-2.7**
NC602	**NORSAR Array S**	**13.83**	**93**	Pn		**Pn**	**10 13 08.1**	**+2.8**
HFS	**Hagfors**	**15.05**	**93**	Pn		**Pn**	**10 13 18.9**	**-3.1**
	0.1nm,0.3s,baz=290,slow=8.6,SNR=2.1							
ARD2	**ARCESS Array S**	**17.14**	**55**			**P**	**10 13 51.9**	**+1.4**
RGN	**Rugen**	**18.39**	**109**	P		**Pn**	**10 14 05.7**	**+1.4**
FINES	**FINESS Array B**	**19.72**	**79**	P		**P**	**10 14 19.3**	**+0.6**
	0.1nm,0.3s,baz=283,slow=13,SNR=5.8							
MOX	**Moxa**	**20.70**	**119**	P		Pn	10 14 30.8	-1.1
MOX				pmax		pmax		
	comp=Z,10.0nm,2.3s							
CLL	**Collm**	**20.71**	**116**	*e*P		**P**	**10 14 27.0**	**-2.6**
CLL				*e*			10 14 29.0	
	comp=Z,7.0nm,0.9s							
CLL	**Collm**	**20.71**	**116**	P		**P**	**10 14 29.8**	**+0.2**
CLL				pmax		pmax		
	comp=Z,13nm,1.3s							
CLL	**Collm**	**20.71**	**116**	P		**P**	**10 14 29.8**	**+0.2**
LOR	**Lormes**	**20.94**	**136**	P		**P**	**10 14 32.6**	**+0.4**
LOR				pmax		pmax		
	comp=Z,11nm,0.9s							
ECH	**Echery**	**21.15**	**129**	P		**P**	**10 14 31.3**	**-3.2**
ECH				pmax		pmax		
	comp=Z,12nm,1.2s							
ECH	**Echery**	**21.15**	**129**			**P**	**10 14 31.2**	**-3.2**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P		**P**	**10 14 37.1**	**-0.1**
	comp=Z,16nm,1.2s							
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P		**P**	**10 14 37.1**	**-0.1**
BRG				pmax		pmax		
	comp=Z,16nm,1.2s							
VSU	**Vasula**	**21.58**	**86**	*i* P		**P**	**10 14 39.4**	**+0.5**
VSU				pmax		pmax		
	comp=Z,38nm,0.7s							
KSP	**Ksiaz**	**22.37**	**112**	P		**P**	**10 14 47.6**	**+0.2**
KSP				pmax		pmax		
	comp=Z,14nm,1.3s							
WET	**Wettzell**	**22.40**	**119**	P		**P**	**10 14 49.5**	**+1.7**
WET				pmax		pmax		
	comp=Z,7.0nm,1.3s							
CHVC	**Chvalec**	**22.47**	**113**	*e*P		**P**	**10 14 44.0**	**-4.6**
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P		**P**	**10 14 51.2**	**+0.4**
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P		**P**	**10 14 51.2**	**+0.4**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P		**P**	**10 14 52.7**	**+1.0**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P		**P**	**10 14 52.7**	**+1.0**
GEC2	**GERESS Array S**	**22.96**	**119**	P		**P**	**10 14 52.8**	**-1.0**
GERES	**GERESS Array B**	**22.96**	**119**	P		**P**	**10 14 54.0**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=323,slow=8.4,SNR=8.2							
GERES	**GERESS Array B**	**22.96**	**119**	P		**P**	**10 14 53.8**	**0.0**
MOTA	**Moosalm**	**23.26**	**124**	P		**P**	**10 14 56.8**	**-0.1**
	comp=Z,11nm,1.5s							
EUNU	**Eureka**	**23.68**	**336**	P		**P**	**10 15 01.0**	**+0.2**
EUNU				IAmb		IAmb	10 15 12.3	
	comp=Z,19nm,1.5s							
KBA	**Koelnbreinsper**	**24.29**	**122**	*e*P		**P**	**10 15 06.8**	**-0.2**
	comp=Z,5.7nm,1.4s							
CONA	**Conrad Observa**	**24.53**	**117**	*e*P		**P**	**10 15 09.2**	**+0.2**
	comp=Z,5.3nm,0.9s							
ARSA	**Arzberg**	**24.96**	**118**	*e*P		**P**	**10 15 14.4**	**+1.6**
	comp=Z,4.5nm,0.8s							
NIE	**Niedzica**	**25.09**	**109**	P		**P**	**10 15 15.0**	**+1.0**
NIE				pmax		pmax		
	comp=Z,4.0nm,2.3s							
VYHS	**Vyhne**	**25.24**	**112**	*e*P		**P**	**10 15 15.4**	**+0.1**
VYHS	**Vyhne**	**25.24**	**112**	*e*P		**P**	**10 15 15.4**	**+0.1**
KLMR	**Klimovskoe**	**25.62**	**72**	*e*P		**P**	**10 15 16.9**	**-1.6**
KLMR				pmax		pmax		
	comp=Z,16nm,1.3s							
KLMR	**Klimovskoe**	**25.62**	**72**	*e*P		**P**	**10 15 17.0**	**-1.6**
KLMR				AMP			10 15 19.4	
	comp=Z,16nm,1.3s							
KWP	**Kalwaria Pacla**	**25.91**	**106**	P		**P**	**10 15 21.7**	**+0.3**
KWP				pmax		pmax		
	comp=Z,18nm,1.1s							
KWP	**Kalwaria Pacla**	**25.91**	**106**	P		**P**	**10 15 21.7**	**+0.3**
KWP				IAmb		IAmb	10 15 25.3	
	comp=Z,18nm,1.1s							
ESDC	**Sonseca Array**	**26.24**	**156**	P		**P**	**10 15 24.4**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=350,slow=9.9,SNR=6.8							
ESDC	**Sonseca Array**	**26.24**	**156**	IAmb		IAmb	10 15 28.7	
	comp=Z,10.0nm,1.4s							
KOLS	**Kolonicke sedl**	**26.28**	**108**	P		**P**	**10 15 25.3**	**+0.6**
KOLS				pmax		pmax		
	comp=Z,7.0nm,1.1s							
UZH	**Uzhgorod**	**26.52**	**108**	*e*P		**P**	**10 15 25.7**	**-1.2**
UZH				*e*			10 15 28.5	
UZH				*e*			10 15 33.3	
AKASG	**Malin Array Be**	**27.85**	**98**	P		**P**	**10 15 38.9**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=317,slow=9.6,SNR=4.5							
OBN	**Obninsk**	**27.89**	**84**	*e*P		**P**	**10 15 38.7**	**-0.4**
OBN				*e*			10 15 41.0	
OBN				S		**S**	**10 20 23.0**	**+0.8**
OBN				pmax		pmax		
	comp=Z,6.0nm,0.7s							
NRIK	**Noril'sk**	**36.48**	**35**	*i* P		**P**	**10 16 55.7**	**+1.6**
NRIK				pmax		pmax		
	comp=Z,4.0nm,1.1s							
SOC	**Sochi**	**37.87**	**96**	*e*P		**P**	**10 17 09.0**	**+2.8**
SOC				*e*			10 18 31.9	
SOC				*e*S		**S**	**10 23 05.2**	**+8.0**
SOC				*e*SS		**SnSn**	**10 25 35.0**	**-2.7**
SOC				MLR		MLR		
	comp=Z,132nm,21.0s							
BRTR	**Keskin Array B**	**38.48**	**105**	P		**P**	**10 17 12.6**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=346,slow=8.9,SNR=4.1							
KIV	**Kislovodsk**	**38.85**	**92**	*e*P		**P**	**10 17 15.6**	**+1.1**
KIV				pmax		pmax		
	comp=Z,19nm,1.0s							
KBZ	**Khabaz**	**39.12**	**92**	*i* P		**P**	**10 17 17.7**	**+1.0**
KBZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
INK	**Inuvik**	**39.85**	**329**	P		**P**	**10 17 22.6**	**+0.2**
	comp=Z,1.2nm,1.0s,baz=34,slow=11,SNR=4.0							
INK	**Inuvik**	**39.85**	**329**	IAmb		IAmb	10 17 24.0	
	comp=Z,3.4nm,1.1s							
ABKAR	**Akbulak array**	**42.00**	**73**	P		**P**	**10 17 40.4**	**-0.1**
TIXI	**Tiksi**	**42.05**	**15**	*i* P		**P**	**10 17 41.4**	**+0.8**
TIXI	**Tiksi**	**42.05**	**15**	P		**P**	**10 17 41.3**	**+0.8**
TIXI				IAmb		IAmb	10 17 43.1	
	comp=Z,11nm,1.1s							
TOLK	**Toolik Lake Re**	**42.76**	**336**	P		**P**	**10 17 45.4**	**-1.0**
TOLK				IAmb		IAmb	10 17 49.2	
	comp=Z,9.6nm,1.1s							
BMAR	**Burnt Mountain**	**42.90**	**333**	P		**P**	**10 17 48.2**	**+0.6**
BRVK	**Borovoye**	**43.15**	**62**	*i* P		**P**	**10 17 50.1**	**+0.4**
BRVK				pmax		pmax		
	comp=Z,2.0nm,0.7s							
PRP	**Porcupine Dome**	**44.76**	**332**	P		**P**	**10 18 03.7**	**+1.0**
PRP				IAmb		IAmb	10 18 06.0	
	comp=Z,7.3nm,1.3s							
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**	**10 18 10.6**	**+0.6**
	comp=Z,2.2nm,1.0s,baz=25,slow=6.6,SNR=15							
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**	**10 18 10.8**	**+0.9**
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**	**10 18 10.8**	**+0.9**
MDM	**Murphy Dome**	**45.79**	**333**	P		**P**	**10 18 11.6**	**+0.9**
MDM				IAmb		IAmb	10 18 14.4	
	comp=Z,7.9nm,1.2s							
IMAR	**Indian Mountai**	**45.87**	**337**	P		**P**	**10 18 12.5**	**+1.2**
BCAR	**Beaver Creek A**	**46.12**	**329**	P		**P**	**10 18 13.5**	**+0.2**
DLBC	**Dease Lake**	**47.08**	**318**	LR		LR	10 38 15.6	
	comp=Z,166nm,21.9s,baz=281,slow=36							
ZALV	**Zalesovo Beam**	**47.65**	**51**	P		**P**	**10 18 25.9**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=318,slow=10,SNR=1.8							
KURK	**Kurchatov**	**48.13**	**58**	*i* P		**P**	**10 18 29.1**	**0.0**
KURK				pmax		pmax		
	comp=Z,7.0nm,1.0s							
KURK	**Kurchatov**	**48.13**	**58**	P		**P**	**10 18 28.6**	**-0.5**
KURK				IAmb		IAmb	10 18 30.3	
	comp=Z,6.5nm,1.0s							
W50A	**Signal Mountai**	**49.37**	**268**	P		**P**	**10 18 38.7**	**-0.2**
KKAR	**Karatay Array**	**51.29**	**70**	P		**P**	**10 18 53.0**	**-0.3**
KKAR	**Karatay Array**	**51.29**	**70**	P		**P**	**10 18 53.0**	**-0.3**
BOZ	**Bozeman (W)**	**51.61**	**297**	P		**P**	**10 18 56.3**	**+0.5**
BOZ				pmax		pmax		
	comp=Z,6.0nm,1.2s							
BOZ	**Bozeman (W)**	**51.61**	**297**	P		**P**	**10 18 56.3**	**+0.5**
BOZ				IAmb		IAmb	10 18 57.7	
	comp=Z,5.7nm,1.1s							
MK31	**Makanchi Array**	**52.74**	**58**	*i* P		**P**	**10 19 03.0**	**-1.0**
MK31	**Makanchi Array**	**52.74**	**58**	P		**P**	**10 19 02.2**	**-1.8**
MKAR	**Makanchi Array**	**52.74**	**58**	P		**P**	**10 19 04.4**	**+0.3**
	comp=Z,1.9nm,1.0s,baz=335,slow=6.5,SNR=9.5							
MKAR	**Makanchi Array**	**52.74**	**58**	*ce*P		**P**	**10 19 04.0**	**0.0**
MKAR		

SHAP	**Saphane-Kutahy**	**0.36**	**151**	PG	**Pg**	**10 13 38.3**	**+0.2**
SHAP				SG	**Sg**	**10 13 43.3**	**+0.2**
TVSB	**Tavsanli**	**0.37**	**72**	PG	**Pg**	**10 13 38.2**	**-0.3**
TVSB				SG	**Sg**	**10 13 43.3**	**-0.4**
DST	**Dursunbey**	**0.40**	**312**	PG	**Pg**	**10 13 38.9**	**0.0**
GEDZ	**Gediz**	**0.43**	**132**	PG	**Pb**	**10 13 39.9**	**-0.3**
GDZ	**Gediz**	**0.45**	**123**	*i* P	**Pn**	**10 13 45.1**	**+2.3**
USAK	**Uak-Merkez**	**0.62**	**179**	*i* P	**Pg**	**10 13 43.1**	**+0.1**
USAK				*i* S	**Sg**	**10 13 51.2**	**0.0**
ORLT	**Orhaneli**	**0.71**	**353**	PG	**Pb**	**10 13 44.9**	**-0.1**
KULA	**Kula-Manisa**	**0.86**	**198**	PG	**Pb**	**10 13 47.6**	**+0.1**
MANT	**Manisa**	**0.91**	**202**	*i* P	**Pg**	**10 13 48.4**	**-0.1**
MANT				*i* S	**Sg**	**10 13 57.5**	**-3.0**
BALB	**Balikesir**	**0.92**	**290**	PG	**Pb**	**10 13 49.3**	**+0.8**
IGD	**Bursa**	**0.94**	**9**	*i* P	**Pg**	**10 13 48.3**	**-0.7**
IGD				*i* S	**Sg**	**10 14 01.0**	**-0.3**
AUBOZ	**BOZOYUK**	**0.98**	**54**	*i* P	**Sg**	**10 13 49.6**	**-0.2**
AUBOZ				*i* S	**Sg**	**10 14 02.3**	**-0.4**
STEP	**BALIKESIR_Sava**	**1.00**	**273**	*i* P	**Pn**	**10 13 50.7**	**+0.4**
STEP				*i* S	**Sg**	**10 14 02.4**	**-0.7**
STEP				IAML		10 14 26.0	
	comp=N,1μm,0.4s						
AKHS	**Akhisar**	**1.03**	**244**	*i* P	**Pb**	**10 13 50.7**	**+0.4**
AKHS				*i* S	**Sg**	**10 14 03.0**	**-1.2**
AKS	**Akhisar**	**1.03**	**244**	PG	**Pb**	**10 13 50.9**	**+0.5**
MDNY	**Mudanya-Bursa**	**1.04**	**355**	PG	**Pb**	**10 13 50.9**	**+0.4**
CAVI	**Cavuskoy**	**1.08**	**37**	PG	**Pb**	**10 13 51.7**	**+0.4**
KHL	**Karahalli**	**1.09**	**158**	PN	**Pn**	**10 13 52.2**	**+0.6**
GEMT	**Gemlik**	**1.11**	**7**	PN	**Pn**	**10 13 52.5**	**+0.7**
BALY	**Balya**	**1.14**	**291**	*i* P	**Pn**	**10 13 52.9**	**+0.6**
BALY				*i* S	**Sb**	**10 14 07.6**	**+0.6**
BALY				IAML		10 14 32.0	
	comp=N,359nm,0.3s						
BALY				IAML		10 14 32.0	
	comp=E,377nm,0.4s						
ARMT	**Armutlu**	**1.23**	**355**	PN	**Pn**	**10 13 54.8**	**+1.2**
ADVT	**Abdulvahap**	**1.23**	**27**	PN	**Pn**	**10 13 54.8**	**+1.2**
GONE	**Gonen-Balikesi**	**1.24**	**305**	PN	**Pn**	**10 13 55.2**	**+1.6**
BORA	**Eskisehir**	**1.25**	**64**	*i* P	**Pg**	**10 13 54.3**	**-0.6**
BORA				*i* S	**Sg**	**10 14 08.6**	**-2.6**
EDC	**Edincik**	**1.34**	**319**	PN	**Pg**	**10 13 56.5**	**-0.1**
GPA	**Golpazari**	**1.39**	**46**	PN	**Pg**	**10 13 57.2**	**-0.3**
SRCK	**Saricakaya, Es**	**1.44**	**60**	PN	**Pb**	**10 13 57.7**	**+0.4**
SHUT	**Suhut-Afyon**	**1.44**	**122**	PN	**Pb**	**10 13 57.7**	**+0.3**
GEYV	**SAKARYA_Geyve**	**1.52**	**41**	*i* P	**Pb**	**10 13 59.1**	**+0.4**
GEYV				*i* S	**Sn**	**10 14 15.5**	**-1.5**
GEYV				IAML		10 14 44.0	
	comp=E,307nm,0.5s						
GEYV				IAML		10 14 45.0	
	comp=N,271nm,0.3s						
BASM	**Basmaki-Afyon**	**1.64**	**150**	PN	**Pb**	**10 14 00.7**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.64**	**212**	PN	**Pb**	**10 14 00.8**	**0.0**
DKL	**Dikili**	**1.65**	**261**	PN	**Pb**	**10 14 00.9**	**0.0**
BLCB	**Balcova**	**1.80**	**239**	PN	**Pb**	**10 14 03.1**	**-0.4**

ANF ***15*** *10:18:14.0±0.2, 37°.23N×97°.93W, h5km, ML5.1/17, Error ellipse: s-maj=2.3km s-min=1.8km az=65.0*

NEIC ***15*** *10:18:13.5±1.4, 37°.23N±0°.04×98°.03W±0°.05, h6km±7km, mb_Lg4.2/164, Mwr3.8/37, Error ellipse: s-maj=6.1km s-min=4.8km az=50.0*

NEIC ***15*** *10:18:13.6, 37°.21N×98°.06W, h4km, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=4.25; Mθθ=4.77; Mϕϕ=-0.52; Mrθ=1.67; Mrϕ=0.76; Mθϕ=2.26; Fault plane solution: M₀5.39000×10¹⁴ NP1:ϕ₁102.80000°, δ37.29000°, λ-54.13000°. NP2:ϕ₂240.53000°, δ60.60000°, λ-114.04000°. Principal axes: T 5.3124, Plg12.0000°, Azm348.0000°; N 0.1429, Plg21.0000°, Azm253.0000°; P -5.4553, Plg65.0000°, Azm107.0000°;*

IDC ***15*** *10:18:13.6±0.7, 37°.28N×98°.08W, h0km, mb4.1/2, mb1 4.4/9, mb1mx3.8/66, mbtmp4.1/9, ML3.2/5 Error ellipse: s-maj=9.8km s-min=8.3km az=149.0*

ISC 15 10:18:14.1±0.7, 37°.25N±0°.02×98°.01W±0°.02, h17km±4km, n290, σ1°82/327, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h	m	s	Res ISC
KAN08	**Anthony NE Sta**	**0.04**	**122**			**Pg**	**10 18 15.4**			**-1.7**
KAN08						**Pg**	**10 18 15.6**			**-1.7**
KAN12	**Harper NE Stat**	**0.05**	**15**			**Pg**	**10 18 16.3**			**-1.0**
KAN12					Sg	**Sg**	**10 18 18.1**			**-1.5**
KAN05	**Bluff City Nor**	**0.18**	**141**			**Pg**	**10 18 17.2**			**-1.5**
KAN05					Sg	**Sg**	**10 18 19.8**			**-2.0**
KAN09	**Caldwell North**	**0.34**	**109**			**Pg**	**10 18 20.7**			**-0.5**
KAN09					Sg	**Sg**	**10 18 25.0**			**-1.0**
GC02	**Grant County #**	**0.41**	**163**			**Pg**	**10 18 21.1**			**-1.4**
GC02					Sg	**Sg**	**10 18 26.3**			**-2.0**
KAN13	**South Haven SW**	**0.49**	**119**			**Pg**	**10 18 23.2**			**-0.7**
KAN13					Sg	**Sg**	**10 18 29.6**			**-0.9**
CROK	**Carrier**	**0.74**	**178**			**Pg**	**10 18 27.0**			**-1.6**
U32A	**Winter Ranch,**	**1.18**	**223**			**Pg**	**10 18 35.0**			**-1.8**
T35A	**Sooner Cattle**	**1.25**	**105**	Pn		**Pg**	**10 18 37.0**			**-1.2**
R32A	**Long Quarter,**	**1.30**	**335**			**Pn**	**10 18 38.5**			**+1.1**
QUOK	**Quay**	**1.50**	**135**			**Pn**	**10 18 40.7**			**+0.5**
OK029	**Liberty Lake**	**1.52**	**163**			**Pn**	**10 18 40.7**			**+0.3**
OK031	**S. Brethren Rd**	**1.60**	**143**			**Pn**	**10 18 42.9**			**+0.7**
BCOK	**Bluff Creek, N**	**1.62**	**168**			**Pn**	**10 18 41.8**			**0.0**
BCOK					IAmb_Lg		10 19 07.3			
	comp=Z,2μm,0.8s									
OK030	**Cody Creek RV**	**1.65**	**143**			**Pn**	**10 18 43.2**			**+1.0**
OK009	**Oakdale Elemen**	**1.73**	**164**	Pn		**Pn**	**10 18 44.6**			**+1.3**
OK025	**Westminster Rd**	**1.75**	**162**			**Pn**	**10 18 44.5**			**+0.9**
OKCFA	**Oklahoma City**	**1.89**	**166**			**Pn**	**10 18 46.5**			**+1.0**
OKCFA					IAmb_Lg		10 19 15.0			
	comp=Z,741nm,0.8s									
OKCSW	**OKLAHOMA CITY**	**1.90**	**166**			**Pn**	**10 18 46.9**			**+1.2**
FNO	**Franklin**	**2.05**	**166**			**Pn**	**10 18 49.6**			**+1.9**
CBKS	**Cedar Bluff**	**2.07**	**319**	P		**Pn**	**10 18 50.1**			**+2.1**
	baz=141,SNR=279									
CBKS					S	**Sb**	**10 19 17.6**			**+1.0**
	baz=141									
CBKS	**Cedar Bluff**	**2.07**	**319**			**Pn**	**10 18 50.1**			**+2.1**
KSU1	**Kansas State U**	**2.16**	**30**	P		**Pn**	**10 18 51.8**			**+2.6**
	baz=211,SNR=358									
KSU1					Sb	**Sb**	**10 19 21.7**			**+2.7**
	baz=211									
KSU1	**Kansas State U**	**2.16**	**30**			**Pn**	**10 18 51.5**			**+2.3**
KSU1	**Kansas State U**	**2.16**	**30**	IAmb_Lg			10 19 23.2			
	comp=Z,2μm,0.9s									
TUL1	**Leonard**	**2.23**	**126**	P		**Pn**	**10 18 51.4**			**+1.2**
	baz=305,SNR=375									
TUL1					Sb	**Sb**	**10 19 22.3**			**+1.1**
	baz=305									
TUL1	**Leonard**	**2.23**	**126**			**Pn**	**10 18 51.4**			**+1.2**
TUL1				IAmb_Lg			10 19 25.6			
	comp=Z,1μm,0.8s									
W35A	**Tecumseh**	**2.29**	**156**			**Pn**	**10 18 52.0**			**+1.0**
WMOK	**Wichita Mounta**	**2.58**	**194**	P		**Pn**	**10 18 55.7**			**+0.6**
	baz=13,SNR=249									
WMOK	**Wichita Mounta**	**2.58**	**194**	Pn		**Pn**	**10 18 56.5**			**+1.4**
U38A	**Gravette**	**3.02**	**104**	Pn		**Pn**	**10 19 02.7**			**+1.6**
U38A				IAmb_Lg			10 19 55.0			
	comp=Z,660nm,0.8s									
HHAR	**Hobbs**	**3.41**	**105**			**Pn**	**10 19 08.2**			**+1.8**
X37A	**Clayton**	**3.41**	**140**			**Pn**	**10 19 07.4**			**+0.9**
N33A	**J Bar K, Exete**	**3.51**	**7**			**Pn**	**10 19 09.3**			**+1.5**
N33A				IAmb_Lg			10 20 11.9			
	comp=Z,766nm,0.8s									
S39A	**Bolivar**	**3.76**	**82**			**Pn**	**10 19 12.7**			**+1.5**
S39A				IAmb_Lg			10 20 14.0			
	comp=Z,550nm,0.8s									
AMTX	**Amarillo**	**3.79**	**233**	P		**Pn**	**10 19 13.6**			**+1.8**
	baz=51									
AMTX					Sn	**Sn**	**10 19 59.1**			**+3.1**
	baz=51									
AMTX					Sb	**Sg**	**10 20 11.9**			**-4.0**
	baz=51									
AMTX	**Amarillo**	**3.79**	**233**	Pn		**Pn**	**10 19 12.9**			**+1.2**
AMTX				IAmb_Lg			10 20 22.8			
	comp=Z,601nm,0.8s									
Z35A	**Perchaven, San**	**3.96**	**171**			**Pn**	**10 19 14.4**			**+0.4**
W39A	**Magazine**	**3.99**	**120**	Pn		**Pn**	**10 19 14.9**			**+0.6**
	baz=301,SNR=70									
W39A					Pb	**Pb**	**10 19 24.7**			**+0.9**
	baz=301									
W39A					Sn	**Sn**	**10 20 02.1**			**+1.5**
	baz=301									
W39A					Sb	**Sg**	**10 20 17.4**			**-4.7**
	baz=301									
W39A	**Magazine**	**3.99**	**120**			**Pn**	**10 19 15.0**			**+0.7**
W39A				IAmb_Lg			10 20 20.4			
	comp=Z,765nm,0.8s									
KSCO	**Kaye Shedlock'**	**4.04**	**297**	P		**Pn**	**10 19 17.1**			**+1.9**
	baz=116,SNR=23									
KSCO					Pb	**Pb**	**10 19 27.3**			**+2.5**
	baz=116									
KSCO					Sb	**Sg**	**10 20 20.4**			**-3.4**
	baz=116									
KSCO	**Kaye Shedlock'**	**4.04**	**297**	Pn		**Pn**	**10 19 17.3**			**+2.1**
KSCO				IAmb_Lg			10 20 23.2			
	comp=Z,385nm,0.7s									
N35A	**Tabor**	**4.05**	**26**			**Pn**	**10 19 17.5**			**+2.3**
BGNE	**Belgrade**	**4.16**	**359**	P		**Pn**	**10 19 18.5**			**+1.8**
	baz=179,SNR=18									
BGNE					Sb	**Sg**	**10 20 24.0**			**-3.5**
	baz=179									
BGNE	**Belgrade**	**4.16**	**359**	Pn		**Pn**	**10 19 18.9**			**+2.3**
U40A	**Yellville**	**4.24**	**101**	P		**Pn**	**10 19 19.0**			**+1.2**
	baz=283,SNR=134									
U40A					S	**Sn**	**10 20 07.5**			**+0.7**
	baz=283									
U40A	**Yellville**	**4.24**	**101**			**Pn**	**10 19 19.3**			**+1.6**
U40A				IAmb_Lg			10 20 30.7			
	comp=Z,812nm,0.8s									
P38A	**Dawn**	**4.24**	**55**			**Pn**	**10 19 19.7**			**+1.8**
MIAR	**Mount Ida**	**4.50**	**126**	P		**Pn**	**10 19 22.2**			**+0.9**
	baz=307,SNR=111									
MIAR					Sn	**Sn**	**10 20 14.3**			**+1.0**
	baz=307									
MIAR					Sb	**Sb**	**10 20 32.8**			**+6.3**
	baz=307									
MIAR	**Mount Ida**	**4.50**	**126**	Pn		**Pn**	**10 19 22.5**			**+1.1**
MIAR				IAmb_Lg			10 20 42.2			
	comp=Z,519nm,0.9s									
MGMO	**Mountain Grove**	**4.59**	**89**			**Pn**	**10 19 24.0**			**+1.4**
MGMO				IAmb_Lg			10 20 37.6			
	comp=Z,544nm,1.1s									
R40A	**Maddies Statio**	**4.67**	**75**	Pn		**Pn**	**10 19 25.2**			**+1.4**
R40A				IAmb_Lg			10 20 41.3			
	comp=Z,377nm,0.8s									
Z38A	**Mt. Pleasant**	**4.69**	**147**	Pn		**Pn**	**10 19 24.8**			**+0.8**
ABTX	**Abilene, Hawle**	**4.80**	**197**	P		**Pn**	**10 19 26.6**			**+1.0**
	baz=15									
ABTX	**Abilene, Hawle**	**4.80**	**197**			**Pn**	**10 19 25.9**			**+0.3**
ABTX				IAmb_Lg			10 20 56.1			
	comp=Z,358nm,1.1s									
L34A	**Svendsen Farm,**	**4.88**	**15**			**Pn**	**10 19 27.5**			**+0.9**
FCAR	**Ozark Folk Cen**	**4.93**	**104**			**Pn**	**10 19 28.1**			**+0.8**
FCAR				IAmb_Lg			10 20 50.8			
	comp=Z,495nm,1.0s									
WHAR	**Wooly Hollow**	**5.02**	**111**	Pn		**Pn**	**10 19 29.7**			**+1.2**
X40A	**Basin Creek Fa**	**5.03**	**122**	P		**Pn**	**10 19 29.6**			**+1.0**
	baz=304,SNR=29									
X40A					S	**Sn**	**10 20 28.4**			**+2.1**
	baz=304									
X40A	**Basin Creek Fa**	**5.03**	**122**			**Pn**	**10 19 29.7**			**+1.0**
X40A				IAmb_Lg			10 21 00.9			
	comp=Z,519nm,1.1s									
MSTX	**Muleshoe**	**5.07**	**231**	P		**Pn**	**10 19 30.7**			**+1.3**
	baz=49,SNR=23									
MSTX					Sb	**Sb**	**10 20 49.3**			**+6.2**
	baz=49									
MSTX	**Muleshoe**	**5.07**	**231**	Pn		**Pn**	**10 19 28.7**			**-0.7**
MSTX				IAmb_Lg			10 21 07.2			
	comp=Z,266nm,1.0s									
W41B	**Gary Mavity, V**	**5.10**	**112**	P		**Pn**	**10 19 30.4**			**+0.8**
	baz=295									
W41B					Sn	**Sn**	**10 20 28.4**			**+0.3**
	baz=295									
W41B					Sb	**Sb**	**10 20 49.8**			**+6.1**
	baz=295									
W41B	**Gary Mavity, V**	**5.10**	**112**			**Pn**	**10 19 31.2**			**+1.6**
W41B				IAmb_Lg			10 20 52.3			
	comp=Z,374nm,0.7s									
T25A	**Trinidad**	**5.11**	**271**	Pn		**Pn**	**10 19 31.9**			**+1.9**
	baz=88,SNR=9.4									
T25A					Pb	**Pg**	**10 19 48.5**			**-3.4**
	baz=88									
T25A					Sb	**Sg**	**10 20 52.3**			**-5.7**
	baz=88									
T25A	**Trinidad**	**5.11**	**271**	Pn		**Pn**	**10 19 32.6**			**+2.7**
T25A				IAmb_Lg			10 20 55.5			
	comp=Z,376nm,0.9s									
N38A	**Joes South For**	**5.14**	**45**	Pn		**Pn**	**10 19 31.6**			**+1.5**
P40A	**Paris**	**5.21**	**62**			**Pn**	**10 19 32.9**			**+1.7**
P40A				IAmb_Lg			10 21 05.0			
	comp=Z,365nm,0.8s									
WHTX	**Lake Whitney,**	**5.26**	**175**	P		**Pn**	**10 19 32.4**			**+0.5**
	baz=355									
WHTX					Sb	**Sg**	**10 20 57.3**			**-5.8**
	baz=355									
WHTX	**Lake Whitney,**	**5.26**	**175**			**Pn**	**10 19 32.0**			**+0.1**
WLAR	**White Oak Lake**	**5.35**	**130**	Pn		**Pn**	**10 19 34.0**			**+0.9**
WLAR				IAmb_Lg			10 21 06.7			
	comp=Z,500nm,0.7s									
K31A	**O'Neill**	**5.40**	**354**	Pn		**Pn**	**10 19 35.7**			**+2.0**
CCM	**Cathedral Cave**	**5.43**	**79**	P		**Pn**	**10 19 34.9**			**+0.7**
	baz=263									
CCM	**Cathedral Cave**	**5.43**	**79**	Pn		**Pn**	**10 19 34.6**			**+0.4**
CCM				IAmb_Lg			10 21 08.0			
	comp=Z,267nm,0.8s									
T42A	**Van Buren**	**5.53**	**90**			**Pn**	**10 19 36.5**			**+0.9**
237A	**Washetta, Mont**	**5.54**	**160**	Pn		**Pn**	**10 19 35.4**			**-0.3**
237A				IAmb_Lg			10 21 16.1			
	comp=Z,279nm,0.9s									
LCAR	**Lake Charles**	**5.64**	**100**	Pn		**Pn**	**10 19 37.7**			**+0.6**
LCAR				IAmb_Lg			10 21 13.4			
	comp=Z,312nm,0.9s									
Z41A	**Richland Creek**	**5.83**	**132**	P		**Pn**	**10 19 40.1**			**+0.4**
	baz=314,SNR=21									
Z41A					S	**Sn**	**10 20 44.8**			**-1.3**
	baz=314									
Z41A	**Richland Creek**	**5.83**	**132**			**Pn**	**10 19 39.9**			**+0.2**
Z41A				IAmb_Lg			10 21 29.8			
	comp=Z,375nm,0.8s									
Q24A	**Divide**	**5.88**	**289**	P		**Pn**	**10 19 41.8**			**+1.1**
	baz=106,SNR=25									
Q24A	**Divide**	**5.88**	**289**			**Pn**	**10 19 41.6**			**+1.0**
Q24A				IAmb_Lg			10 21 28.8			
	comp=Z,288nm,0.9s									
SCIA	**State Center**	**5.95**	**37**	P		**Pn**	**10 19 44.1**			**+2.8**
	baz=220									
SCIA					S	**Sn**	**10 20 50.0**			**+1.1**
	baz=220									
SCIA	**State Center**	**5.95**	**37**	Pn		**Pn**	**10 19 44.2**			**+3.0**
SDCO	**Great Sand Dun**	**5.97**	**277**	P		**Pn**	**10 19 44.9**			**+2.9**
	baz=93,SNR=9.2									
FVM	**French Village**	**6.07**	**81**			**Pn**	**10 19 43.6**			**+0.7**
CCAR	**Cane Creek**	**6.08**	**121**			**Pn**	**10 19 43.4**			**+0.4**
PBMO	**Poplar Bluff**	**6.09**	**92**	Pn		**Pn**	**10 19 44.2**			**+1.0**
NATX	**Nacogdoches**	**6.13**	**152**	P		**Pn**	**10 19 44.1**			**+0.2**
	baz=334,SNR=6.3									
NATX					S	**Sn**	**10 20 51.1**			**-2.5**
	baz=334									
NATX	**Nacogdoches**	**6.13**	**152**	Pn		**Pn**	**10 19 44.1**			**+0.2**
NATX				IAmb_Lg			10 21 41.9			
	comp=Z,316nm,0.9s									
HBAR	**Harrisburg**	**6.17**	**104**			**Pn**	**10 19 44.9**			**+0.6**
SLM	**Saint Louis**	**6.30**	**75**			**Pn**	**10 19 46.8**			**+0.6**
CPRX	**Cap Rock**	**6.38**	**230**	Pn		**Pn**	**10 19 48.7**			**+1.4**
X43A	**Marvell**	**6.40**	**113**	P		**Pn**	**10 19 49.0**			**+1.5**
	baz=297,SNR=6.1									
X43A					Sb	**Sg**	**10 21 30.9**			**-8.4**
	baz=297									
X43A	**Marvell**	**6.40**	**113**			**Pn**	**10 19 49.0**			**+1.5**
LPAR	**Lepanto**	**6.43**	**102**			**Pn**	**10 19 48.5**			**+0.6**
435B	**Jarrell**	**6.46**	**177**	P		**Pn**	**10 19 49.4**			**+1.1**
	baz=357									
435B					Sb	**Sg**	**10 21 35.4**			**-5.9**
	baz=357									
435B	**Jarrell**	**6.46**	**177**			**Pn**	**10 19 48.5**			**+0.2**
435B				IAmb_Lg			10 21 44.0			
	comp=Z,246nm,0.9s									
ISCO	**Idaho Springs**	**6.48**	**295**	P		**Pn**	**10 19 50.5**			**+1.6**
	baz=112,SNR=24									
ISCO	**Idaho Springs**	**6.48**	**295**	Pn		**Pn**	**10 19 50.7**			**+1.8**
N41A	**Harden Midland**	**6.56**	**56**			**Pn**	**10 19 51.1**			**+1.4**
N41A				IAmb_Lg			10 21 50.9			
	comp=Z,370nm,0.9s									
ECSD	**EROS Data Cent**	**6.57**	**9**	P		**Pn**	**10 19 50.9**			**+1.2**
	baz=190,SNR=10									
ECSD					S	**Sn**	**10 21 04.1**			**-0.1**
	baz=190									
ECSD	**EROS Data Cent**	**6.57**	**9**	Pn		**Pn**	**10 19 51.0**			**+1.2**
ECSD				IAmb_Lg			10 21 46.2			
	comp=Z,192nm,0.8s									
PARMO	**Parma**	**6.64**	**93**			**Pn**	**10 19 52.0**			**+1.2**
PEBM	**Pemiscott Bayo**	**6.65**	**97**	Pn		**Pn**	**10 19 51.9**			**+1.0**
PEBM				IAmb_Lg			10 21 53.7			
	comp=Z,450nm,0.8s									
PVMO	**Portageville**	**6.72**	**95**	Pn		**Pn**	**10 19 52.9**			**+1.0**
PVMO				IAmb_Lg			10 22 04.7			
	comp=Z,464nm,0.7s									
K38A	**Parkersburg**	**6.73**	**35**			**Pn**	**10 19 53.5**			**+1.5**
PENMO	**Penman**	**6.77**	**94**	Pn		**Pn**	**10 19 54.2**			**+1.6**
HENM	**Henderson Moun**	**6.86**	**92**			**Pn**	**10 19 55.4**			**+1.6**
MET	**Memphis--Engin**	**6.87**	**106**	IAmb_Lg			10 21 59.8			
	comp=Z,345nm,0.7s									
JCT	**Junction City**	**6.91**	**193**	P		**Pn**	**10 19 55.3**			**+0.7**
	baz=12									
JCT	**Junction City**	**6.91**	**193**			**Pn**	**10 19 54.5**			**-0.1**
JCT				IAmb_Lg			10 21 57.7			
	comp=Z,366nm,0.8s									
CLNB	**Carlsbad**	**6.93**	**226**	Pn		**Pn**	**10 19 55.2**			**+0.3**
LNXT	**Lenox**	**6.94**	**97**	Pn		**Pn**	**10 19 55.9**			**+1.0**
S44A	**Carbondale**	**6.98**	**84**			**Pn**	**10 19 56.6**			**+1.1**
S44A				IAmb_Lg			10 21 58.0			
	comp=Z,370nm,0.7s									
PHWY	**Pilot Hill**	**7.05**	**307**			**Pn**	**10 19 58.1**			**+1.5**
143A	**Socs Landing,**	**7.07**	**128**			**Pn**	**10 19 57.4**			**+0.7**
143A				IAmb_Lg			10 22 08.7			
	comp=Z,291nm,0.8s									
GLAT	**Glass**	**7.07**	**95**			**Pn**	**10 19 58.5**			**+1.8**
HICK	**Hickman**	**7.08**	**93**			**Pn**	**10 19 57.9**			**+1.1**
P43A	**Skaggs, Pawnee**	**7.08**	**68**			**Pn**	**10 19 57.8**			**+1.0**
HALT	**Halls**	**7.11**	**98**	Pn		**Pn**	**10 19 58.1**			**+0.9**
L40A	**Anamosa**	**7.11**	**45**			**Pn**	**10 19 58.0**			**+0.8**
N23A	**Red Feather La**	**7.16**	**303**	P		**Pn**	**10 20 00.1**			**+1.9**
	baz=119,SNR=17									
N23A	**Red Feather La**	**7.16**	**303**	Pn		**Pn**	**10 20 00.6**			**+2.4**
ANMO	**Albuquerque**	**7.21**	**254**	Pn		**Pn**	**10 20 01.0**			**+2.2**
	comp=Z,0.2nm,0.3s,baz=64,slow=14,SNR=5.4									
ANMO					Pg	**Pb**	**10 20 20.7**			**+1.9**
	comp=Z,1.2nm,0.3s,baz=70,slow=18,SNR=20									
ANMO					Lg	Lg	10 21 57.4			
	comp=Z,5.0nm,0.3s,baz=331,slow=19,SNR=6.0									
ANMO	**Albuquerque**	**7.21**	**254**	IAmb_Lg			10 22 12.2			
	comp=Z,84nm,1.0s									
ANMO				IAmb_Lg			10 22 12.2			
	comp=Z,87nm,1.1s									
SUSD	**Miller**	**7.22**	**355**	P		**Pn**	**10 20 00.5**			**+1.6**
	baz=174,SNR=7.2									
SUSD					S	**Sn**	**10 21 21.1**			**+0.7**
	baz=174									
SUSD	**Miller**	**7.22**	**355**			**Pn**	**10 20 00.4**			**+1.6**
SUSD				IAmb_Lg			10 22 16.9			
	comp=Z,297nm,0.8s									
GDL2	**Guadalupe Moun**	**7.26**	**228**			**Pn**	**10 20 00.5**			**+1.1**
Q44A	**Meyer Farm, Va**	**7.29**	**74**	Pn		**Pn**	**10 20 01.1**			**+1.5**
Q44A				IAmb_Lg			10 22 14.0			
	comp=Z,309nm,1.0s									
SMCO	**Snowmass**	**7.31**	**288**	Pn		**Pn**	**10 20 00.5**			**+0.1**
UTMT	**University of**	**7.40**	**94**	Pn		**Pn**	**10 20 02.8**			**+1.7**
T45A	**Paducah**	**7.49**	**89**	Pn		**Pn**	**10 20 03.5**			**+1.0**
OXF	**Oxford**	**7.50**	**109**	P		**Pn**	**10 20 02.7**			**+0.1**
	baz=293,SNR=64									
OXF	**Oxford**	**7.50**	**109**	Pn		**Pn**	**10 20 02.7**			**+0.1**
HKT	**Hockley**	**7.50**	**165**			**Pn**	**10 20 02.8**			**+0.2**
HDIL	**Hopedale**	**7.56**	**61**	P		**Pn**	**10 20 04.7**			**+1.4**
	baz=246,SNR=49									

baz=241
L44A Lake County Fo 9.21 55 Pn Pn 10 20 26.5 +0.5
K43A Burlington 9.21 51 Pn Pn 10 20 26.2 +0.1
K43A IAmb_Lg 10 23 09.7
comp=Z,299nm,1.0s
F36A Milaca 9.24 20 Pn 10 20 25.9 -0.5
BLO Bloomington 9.25 75 Pn 10 20 26.3 -0.2
BLO IAmb_Lg 10 23 10.0
comp=Z,266nm,0.7s
X48A Hartselle 9.33 104 Pn Pn 10 20 28.2 +0.5
WCI Wyandotte Cave 9.34 80 P Pn 10 20 28.4 +0.6
baz=267
WCI Wyandotte Cave 9.34 80 Pn Pn 10 20 28.2 +0.4
CLTN Cedars of Leba 9.46 94 Pn 10 20 30.3 +0.9
E28A Huff 9.53 349 Pn Pn 10 20 31.2 +0.8
E28A IAmb_Lg 10 23 27.5
comp=Z,174nm,1.0s
I42A Draeger Farm, 9.59 43 Pn Pn 10 20 32.2 +1.0
U49A Red Boiling Sp 9.83 91 Pn 10 20 35.5 +0.9
G40A Rib Lake 9.94 34 Pn 10 20 37.6 +1.6
LRAL Lakeview Retre 9.95 112 P Pn 10 20 36.6 +0.3
baz=298,SNR=7.5
LRAL Lakeview Retre 9.95 112 Pn Pn 10 20 36.5 +0.3
SWET Sewanee 9.97 98 Pn 10 20 37.8 +1.3
Y49A Blount Mountai 10.04 106 Pn 10 20 37.1 -0.3
P48A Milroy 10.13 74 Pn Pn 10 20 38.1 -0.6
L46A Eue Claire 10.21 59 Pn 10 20 39.8 +0.1
R49A Shelbyville 10.22 80 Pn 10 20 39.4 -0.5
FPAL Fort Paine 10.42 101 Pn 10 20 43.4 +0.7
BW06 Boulder Array 10.43 305 P Pn 10 20 43.3 +0.4
baz=119,SNR=13
BW06 Boulder Array 10.43 305 Pn 10 20 43.2 +0.3
PD31 Pinedale Array 10.43 305 Pn 10 20 43.6 +0.7
PDAR Pinedale Array 10.43 305 Pn Pn 10 20 43.4 +0.5
comp=Z,1.2nm,0.3s,baz=118,slow=14,SNR=40
PDAR Pg 10 21 26.1
comp=Z,1.3nm,0.3s,baz=99,slow=18,SNR=6.0
PDAR Lg Lg 10 23 36.7
comp=Z,2.2nm,0.3s,baz=116,slow=25,SNR=3.6
PDAR Pinedale Array 10.43 305 Pn 10 20 42.9 0.0
W50A Signal Mountai 10.46 97 Pn 10 20 44.5 +1.2
E38A The Farm, Brul 10.51 25 Pn Pn 10 20 45.9 +2.0
T50A Nancy 10.52 87 Pn 10 20 44.8 +0.8
H43A Windswept, Lux 10.59 44 Pn Pn 10 20 45.4 +0.5
MDND Maddock 10.66 354 S Sn 10 22 40.5 -4.2
baz=173
P49A Miami Univ. Ec 10.69 74 P Pn 10 20 46.1 -0.1
baz=262,SNR=5.2
P49A Miami Univ. Ec 10.69 74 Pn Pn 10 20 46.2 -0.1
BRAL Brewton 10.91 121 Pn 10 20 49.3 0.0
X51A Calhoun 11.00 100 Pn 10 20 51.1 +0.5
250A Grady 11.01 115 Pn 10 20 50.6 -0.1
CPCT Cooper Cave 11.03 95 Pn Pn 10 20 51.8 +0.8
COWI Conover 11.05 34 Pn 10 20 51.5 +0.2
O49A Covington 11.08 70 Pn 10 20 51.0 -0.7
V51A Loudon 11.09 93 Pn 10 20 52.4 +0.6
AGMN Agassiz Nation 11.15 7 P Pn 10 20 53.3 +0.6
baz=189
AGMN S Sn 10 22 49.9 -6.9
baz=189
Z51A Franklin 11.20 107 Pn 10 20 53.9 +0.5
HWUT Hardware Ranch 11.35 297 Pn 10 20 56.3 +0.9
N49A Columbus Grove 11.36 67 Pn 10 20 54.9 -0.5
S51A Beattyville 11.47 84 Pn Pn 10 20 57.5 +0.4
L48A N Adams 11.48 62 Pn 10 20 57.0 -0.1
REDW Red Top Meadow 11.54 306 Pn Pn 10 20 59.3 +1.1
RLMT Red Lodge 11.56 316 P Pn 10 20 59.5 +1.1
baz=130
RLMT Red Lodge 11.56 316 Pn Pn 10 20 59.8 +1.4
TKL Tuckaleechee C 11.58 94 Pn Pn 10 20 58.7 +0.2
comp=Z,3.8nm,0.3s,baz=236,slow=7.6,SNR=48
TKL Sn Sn 10 23 07.3 -0.1
comp=Z,1.3nm,0.3s,baz=340,slow=5.5,SNR=2.3
TKL Lg Lg 10 24 13.6
comp=Z,4.6nm,0.3s,baz=12,slow=24,SNR=13
TZTN Tazewell 11.61 89 P Pn 10 20 59.8 +0.9
baz=278
V52A Sevierville 11.68 93 Pn Pn 10 20 59.9 -0.1
Q51A Peebles 11.69 77 Pn Pn 10 20 59.1 -0.9
EYMN Ely 11.71 22 S Sn 10 23 06.2 -4.4
baz=206
P51A Williamsport 11.95 75 P Pn 10 21 03.1 -0.4
baz=264,SNR=6.9
DGMT Dagmar 12.09 340 P Pn 10 21 07.3 +1.8
baz=156,SNR=8.9
DGMT S Sn 10 23 16.4 -3.4
baz=156
ACSO Alum Creek Sta 12.11 71 Pn Pn 10 21 04.2 -1.5
GCMT Greycliff 12.20 318 Pn Pn 10 21 07.3 +0.2
M50A Fremont 12.31 66 Pn Pn 10 21 07.7 -0.7
V53A Saluda 12.34 93 Pn Pn 10 21 09.2 +0.2
T53A Wise 12.36 87 P Pn 10 21 09.8 +0.5
baz=276
O51A Pataskala 12.38 72 P Pn 10 21 08.8 -0.7
baz=261,SNR=19
Q52A Bidwell 12.52 77 P Pn 10 21 10.6 -0.8
baz=267,SNR=5.4
Q52A S Sn 10 23 26.5 -4.0
baz=267
P52A Corning 12.68 74 P Pn 10 21 12.6 -1.0
baz=264,SNR=8.3
P52A S Sn 10 23 29.6 -4.7
baz=264
R53A Hurricane 12.76 80 P Pn 10 21 14.6 +0.1
baz=270
O52A Adamsville 12.96 72 P Pn 10 21 17.9 +0.5
baz=262
O52A S Sn 10 23 37.7 -3.4
baz=262
W54A Cherokee Point 12.97 95 P Pn 10 21 17.7 +0.1
baz=284,SNR=11
U54A Nelsons Funny 12.99 88 P Pn 10 21 17.4 -0.5
baz=278,SNR=6.5
V54A Nebo 13.01 92 P Pn 10 21 17.7 -0.4
baz=281
ULM Lac du Bonnet 13.09 6 Pn Pn 10 21 16.5 -2.5
comp=Z,0.7nm,0.3s,baz=187,slow=11,SNR=8.2
ULM Sn Sn 10 23 35.0 -9.1
comp=Z,0.9nm,0.3s,baz=76,slow=19,SNR=3.0
ULM Lg Lg 10 24 57.6
comp=Z,0.7nm,0.3s,baz=104,slow=20,SNR=1.4
Q53A Leroy 13.10 78 P Pn 10 21 18.0 -1.3
baz=268
T54A Tazewell 13.12 86 P Pn 10 21 18.5 -1.1
baz=276
P53A Whipple 13.24 75 P Pn 10 21 19.5 -1.7
baz=265
S54A Dingess, Beckl 13.27 83 P Pn 10 21 20.7 -1.0
baz=272
O53A New Philadelph 13.45 72 P Pn 10 21 23.1 -1.0
baz=262
V55A Taylorsville 13.58 91 P Pn 10 21 24.8 -1.1
baz=281
Q54A Coxs Mills 13.64 77 P Pn 10 21 25.5 -1.1
baz=268
T55A Pulaski 13.74 85 P Pn 10 21 27.2 -0.9
baz=276
EGMT Eagleton 13.79 325 P Pn 10 21 29.7 +1.0
baz=138
S55A Lewisburg 13.92 83 P Pn 10 21 29.3 -1.1
baz=273
P54A Burton 13.95 75 P Pn 10 21 29.2 -1.6
baz=266
BLA Blacksburg 14.02 85 P Pn 10 21 31.1 -0.8
baz=275
M53A WI Miller and 14.05 67 P Pn 10 21 29.9 -2.4
baz=258
M53A S Sn 10 24 00.6 -7.2
baz=258
O54A Avella 14.08 73 P Pn 10 21 30.8 -1.8
baz=263
O54A S Sn 10 24 02.2 -6.2
baz=263
V56A Mocksville 14.16 91 P Pn 10 21 32.7 -1.1
baz=281
R55A Marlinton 14.20 80 P Pn 10 21 32.7 -1.6
baz=271
W56A Indian Trail 14.24 93 P Pn 10 21 34.0 -0.8
baz=283
P55A Reedsville 14.45 75 P Pn 10 21 35.3 -2.4
baz=266
N54A Moraine State 14.48 70 P Pn 10 21 36.2 -1.9
baz=261
V57A Coltrane Farms 14.72 90 P Pn 10 21 39.7 -1.7
baz=280
M54A Oil Creek Stat 14.81 68 P Pn 10 21 40.9 -1.8
baz=259
O55A Ligonier 14.90 73 P Pn 10 21 41.7 -2.2
baz=264
U57A Blanch 14.98 87 P Pn 10 21 43.4 -1.5
baz=278
Q57A Strasburg 15.53 77 P Pn 10 21 51.2 -0.9
baz=269
M56A Emporium 15.90 68 P Pn 10 21 53.5 -3.5
baz=261
NVAR Mina Array Bea 16.07 280 Pn P 10 22 02.3 -0.4
comp=Z,0.1nm,0.3s,baz=98,slow=10,SNR=4.2
SADO Sadowa 16.08 56 Pn Pn 10 21 58.6 -0.7
comp=Z,0.3nm,0.3s,baz=258,slow=15,SNR=1.8
SADO Lg Lg 10 26 30.9
comp=Z,0.8nm,0.3s,baz=333,slow=19,SNR=4.3
O57A Amberson 16.17 73 P Pn 10 21 57.5 -2.9
baz=266
N57A Milroy 16.29 71 P Pn 10 21 58.8 -3.1
baz=264
M57A Sunshine Farm, 16.67 69 P Pn 10 22 04.6 -2.1
baz=262
G54A Lake Saint Pet 17.01 55 P Pn 10 22 08.5 -2.5
baz=248
M58A Price's Panora 17.17 69 P Pn 10 22 11.3 -1.8
baz=263
L58A Harry Jones Me 17.71 67 P Pn 10 22 18.5 -1.3
baz=262
NEW Newport 17.78 314 P P 10 22 23.8 +2.4
comp=Z,0.1nm,0.3s,baz=125,slow=12,SNR=4.2
J58A Remsen 18.35 64 P Pn 10 22 26.0 -1.6
baz=258
I58A Old Forge 18.64 63 P P 10 22 29.6 -1.3
baz=258
O03E Paynes Creek 18.78 287 P Pn 10 22 37.2 +4.2
baz=92
YBH Yreka Blue Hor 19.55 291 P Pn 10 22 45.9 +3.7
comp=Z,0.2nm,0.3s,baz=79,slow=8.5,SNR=11
E58A La Victoria 20.50 56 P P 10 22 52.4 +1.3
baz=252
CHGQ Chibougamau 21.19 46 P P 10 22 59.5 +1.1
baz=242
ILAR Eielson Array 39.69 330 P P 10 25 47.8 +2.9
comp=Z,2.4nm,0.7s,baz=106,slow=6.8,SNR=26
ARCES ARCESS Array B 65.84 19 P P 10 29 00.3 +2.3
comp=Z,1.9nm,0.8s,baz=335,slow=5.4,SNR=5.3
MAW Mawson 147.74 166 PKPbc PKPbc 10 37 58.3 +1.7
comp=Z,3.3nm,0.8s,baz=279,slow=1.7,SNR=6.6

*IDC **15** 10:20:48.0±0.8,37.°03N×141.°66E, h0km, mb3.8/11, mb1 3.9/14,mb1mx3.7/66, mbtmp3.9/14,ML3.4/3, Error ellipse: s-maj=22.3km s-min=15.8km az=109.0*
*JMA **15** 10:20:54.2±0.1,37.°04N×141.°53E, h53km±2km, M3.8*
JMA Felt II J1.
*NEIC **15** 10:20:54.0±0.9,37.°03N±0.°05×141.°6E±0.°1, h45km±9km, mb4.5/4, Error ellipse: s-maj=16.3km s-min=3.8km az=109.0*
ISC 15 10:20:51.6±2.0,37.°00N±0.°04×141.°74E±0.°07, h24km±13km, n63, σ1°36/69, mb3.9/14, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.76	278	P	Pb	10 21 06.7	+0.5
ONAJ				S	Sb	10 21 15.4	-0.7
JFK	Kawauchi	0.78	298	P	Pb	10 21 06.9	+0.4
JFK				S	Sb	10 21 16.0	-0.7
JFFD	Fukushimafurud	0.94	276	P	Pn	10 21 09.1	-0.3
JFFD				S	Sb	10 21 19.8	-1.6
JMST	Minamisoumatoc	0.99	317	P	Pn	10 21 09.9	0.0
JMST				S	Sb	10 21 21.2	-1.5
JHO	Hitachi	1.02	248	P	Pn	10 21 10.3	0.0
JHO				eS	Sn	10 21 21.8	-2.0
JMM	Marumori	1.14	319	P	Pn	10 21 12.2	+0.2
JMM				S	Sn	10 21 25.3	-1.6
JMM	Marumori	1.14	319		Pn	10 21 12.3	+0.2
JMM				Sn	Sn	10 21 25.3	-1.6
JFT	Otama	1.23	295	P	Pn	10 21 13.8	+0.5
JFT				S	Sn	10 21 28.0	-1.1
JYT	Yasato	1.46	239		Pn	10 21 17.2	+0.8
JYT				Sn	Sn	10 21 33.7	-1.1
JIO	Ouri	1.48	348	P	Pn	10 21 17.7	+1.0
JIO				S	Sn	10 21 34.8	-0.8
JOU	Okura	1.60	328	P	Pn	10 21 19.2	+0.8
JOU				eS	Sn	10 21 38.8	+0.4
JFY	Yanaizu	1.67	285	P	Pn	10 21 19.9	+0.5
JYS	Shirataka	1.80	313	P	Pn	10 21 22.4	+1.3
JYS				eS	Sn	10 21 43.4	+0.2
JAG	Ashikaga	1.92	253	P	Pn	10 21 23.2	+0.4
MJAR	Matsushiro Arr	2.87	262	Pn	Pn	10 21 35.9	+0.1
	1.6nm,0.3s,baz=86,slow=14,SNR=78						
MJAR				Sn	Sn	10 22 10.5	+0.9
	1.8nm,0.3s,baz=77,slow=25,SNR=3.5						
MJAR	Matsushiro Arr	2.87	262		Pn	10 21 36.0	+0.1
MAJO	Matsushiro	2.87	262	P	Pn	10 21 37.3	+1.4
MAJO	Matsushiro	2.87	262		Pn	10 21 37.3	+1.4
MAT	Matsushiro	2.87	262	S	Sn	10 22 11.3	+1.7
MAT	Matsushiro	2.87	262	P	Pn	10 21 37.2	+1.3
MJB9	Matsu-Tunnel	2.87	262	Pn	Pn	10 21 37.5	+1.7
JSD	Sado	2.95	292	Pn	Pn	10 21 36.8	-0.1
JGF	Kuroka	3.80	250		Pn	10 21 51.5	+2.8
JTM	Tenmabayashi	3.81	352	Pn	Pn	10 21 51.9	+3.1
INU	Inuyama	4.16	248		Pn	10 21 56.5	+2.9
JHJ	Hachijo jima 2	4.19	203	Pn	Pn	10 21 54.8	+0.7
	8.6nm,0.3s,baz=22,slow=14,SNR=1.7						
JHJ				Sn	Sn	10 22 41.9	-0.3
	34nm,0.3s,baz=84,slow=23,SNR=7.2						
ERM	Erimo	5.12	12	Pn	Pn	10 22 08.2	+1.5
JWT	Wachi	5.41	253	Pn	Pn	10 22 13.9	+3.2
ASAJ	Asahikawa	7.14	5	Pn	Pn	10 22 34.7	+0.3
	1.1nm,0.3s,baz=201,slow=15,SNR=11						
ASAJ				Sn	Sn	10 23 55.5	+0.8
	0.2nm,0.3s,baz=279,slow=28,SNR=1.5						
JMN	Monobe	7.20	245	Pn	Pn	10 22 37.9	+2.5
JHS	Saijyo	7.27	257	Pn	Pn	10 22 40.2	+3.9
H11N2	WAKE ISLAND Hy	27.91	121	T	T	10 56 16.7	
	baz=314,slow=75,SNR=97						
H11N1	WAKE ISLAND Hy	27.92	121	T	T	10 56 22.3	
	baz=314,slow=75,SNR=83						
H11N3	WAKE ISLAND Hy	27.93	121	T	T	10 56 09.6	
	baz=314,slow=75,SNR=85						
SONM	Songino Array	28.02	304	P	P	10 26 40.2	-0.5
	0.6nm,0.5s,baz=102,slow=8.9,SNR=2.2						
H11S1	WAKE ISLAND Hy	28.63	123	T	T	10 57 15.6	
	baz=315,slow=74,SNR=64						
H11S3	WAKE ISLAND Hy	28.63	123	T	T	10 57 15.4	
	baz=315,slow=74,SNR=42						
H11S2	WAKE ISLAND Hy	28.64	123	T	T	10 57 15.7	
	baz=315,SNR=43						
ZALV	Zazovo Beam	42.13	312	P	P	10 28 41.6	0.0
	1.6nm,0.3s,baz=94,slow=5.9,SNR=1.8						
KURK	Kurchatov	46.15	308	P	P	10 29 13.4	-0.5
KURK				IAmb	IAmb	10 29 13.7	
	comp=Z,2.7nm,0.5s						
KURBB	Kurchatov Arra	46.22	308	P	P	10 29 13.9	-0.6
	comp=Z,1.9nm,0.5s,baz=83,slow=7.9,SNR=9.3						
IMAR	Indian Mountai	46.55	31	P	P	10 29 18.5	+1.7
ILAR	Eielson Array	49.38	32	P	P	10 29 39.0	+0.2
	comp=Z,0.7nm,0.7s,baz=271,slow=6.2,SNR=8.5						
ILAR	Eielson Array	49.38	32	P	P	10 29 36.9	-1.9
IL18	Eielson Array	49.43	32	P	P	10 29 39.1	-0.1
INK	Inuvik	54.29	27	P	P	10 30 16.3	+1.0
	baz=284,slow=8.3						
INK	Inuvik	54.29	27	P	P	10 30 15.7	+0.4
INK				IAmb	IAmb	10 30 17.3	
	comp=Z,1.2nm,0.8s						
WRA	Warramunga Arr	57.07	188	P	P	10 30 35.8	0.0
	comp=Z,0.5nm,0.9s,baz=6.9,slow=7.3,SNR=6.6						
ASAR	Alice Springs	60.79	188	P	P	10 31 01.6	0.0
	comp=Z,0.3nm,0.6s,baz=8.8,slow=4.9,SNR=3.3						
ASAR	Alice Springs	60.79	188	P	P	10 31 01.1	-0.5
PSAB2	Pilbara Seismi	61.79	203	P	P	10 31 07.8	-0.5
PSAB2				IAmb	IAmb	10 31 34.5	
	comp=Z,22nm,1.5s						
PSA00	Pilbara Seismi	61.81	203	P	P	10 31 11.3	+2.8
FINES	FINESS Array B	68.96	332	P	P	10 31 53.8	-0.5
	comp=Z,0.9nm,0.7s,baz=64,slow=6.3,SNR=1.4						
HFS	Hagfors	74.22	336	P	P	10 32 25.4	-0.6
	comp=Z,2.0nm,0.8s,baz=46,slow=6.4,SNR=4.1						
NB2	NORSAR Subarra	74.31	337	P	P	10 32 26.2	-0.4
	comp=Z,0.5nm,0.5s,baz=39,slow=6.2						
NOA	NORSAR Array B	74.31	337	P	P	10 32 26.0	-0.6
	comp=Z,1.0nm,0.8s,baz=38,slow=6.0,SNR=3.9						
AKASG	Malin Array Be	74.48	322	P	P	10 32 26.9	-0.8
	comp=Z,0.6nm,0.4s,baz=46,slow=6.2,SNR=4.4						
RMX	La Rumorosa	79.70	57		PcP	10 33 05.7	+0.4
TXAR	Lajitas Array	89.93	53	P	P	10 33 50.2	+1.1
	comp=Z,0.4nm,0.7s,baz=351,slow=3.6,SNR=4.5						
TXAR	Lajitas Array	89.93	53	P	P	10 33 47.4	-1.8
H03N2	Juan Fernandez	146.76	96	T	T	13 24 46.3	
	baz=291,slow=76,SNR=5.8						
H03N3	Juan Fernandez	146.78	96	T	T	13 24 52.6	
	baz=291,slow=76,SNR=6.1						
H03N1	Juan Fernandez	146.78	96	T	T	13 24 49.6	
	baz=291,slow=76,SNR=7.1						

*NORS **15** 10:24:30.7±0.0,41.°52N×46.°73E, h18km, MPVA3.7*
*TIF **15** 10:24:30.1,41.°46N×46.°62E, h16km±1km*
ISC 15 10:24:29.7±1.7,41.°49N±0.°06×46.°72E±0.°05, h10km±12km, n12, σ0°87/23, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LGD	Lagodekhi	0.50	315	P	Pb	10 24 39.6	-0.9
LGD				S	Sb	10 24 47.2	-0.6
AKT	Akhty	0.76	90	ePg	Pn	10 24 46.9	+0.3
AKT				eSg	Sn	10 24 58.5	+0.3
BTLR	Botlikh	1.23	343	ePg	Pn	10 24 53.7	+0.7
BTLR				eSg	Sn	10 25 09.8	+0.1
BTNK	Botanikuri	1.45	278	P	Pg	10 24 57.7	+0.1
DVE	Vedeno	1.53	344	ePg	Pg	10 24 59.6	+0.4
DVE				eSg	Sg	10 25 20.0	+0.9
KZRT	Kazreti	1.75	267	P	Pb	10 25 01.1	-0.8
KZRT				S	Sn	10 25 23.0	+0.6
GROC	Groznyy	1.84	339	ePg	Pg	10 25 04.2	-0.9
GROC				eSg	Sg	10 25 29.9	+0.9
DMNI	Dmanisi	1.91	266	P	Pn	10 25 02.9	+0.6
DMNI				S	Sb	10 25 28.2	-0.3
PNSH	Pansheti	1.94	307	P	Pb	10 25 03.9	-1.3
PNSH				S	Sb	10 25 28.9	-0.6
LACR	Lac	2.24	307	ePg	Pb	10 25 10.2	-0.1
LACR				eSg	Sb	10 25 38.1	0.0
ZEI	Tsey	2.46	303	ePn	Pb	10 25 13.0	-1.2
ZEI				eSn	Sb	10 25 43.7	-0.9
ONI	Oni	2.67	295	P	Pb	10 25 16.4	-1.2
ONI				S	Sb	10 25 52.0	+1.6

*IDC **15** 10:41:46.8±0.5,1.°73N×126.°36E, h0km, mb4.2/20, mb1 4.2/23,mb1mx4.1/48,mbtmp4.2/23,ML3.6/2, MS3.4/1, Ms1 3.4/1,ms1mx2.6/47, Error ellipse: s-maj=25.2km s-min=11.4km az=79.0*
*NEIC **15** 10:41:51.9±1.1,1.°71N±0.°09×126.°44E±0.°08, h35km±2km, mb4.4/24, Error ellipse: s-maj=16.7km s-min=10.3km az=215.0*
*DJA **15** 10:41:52.2±1.5,2.°1N±3.°1×12.°7E±.°, h26km±15km, M4.5/13, mB4.7/2, mb4.7/6, MLv4.4/13, Mw(mB)3.9/2*
ISC 15 10:41:53.1±0.4,1.°82N±0.°05×126.°52E±0.°08, h47km, n73, σ1°50/79, mb4.3/29, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.34	141	P	Pn	10 42 13.2	-2.2
TNTI	Ternate	1.34	141		Pn	10 42 13.8	-1.6
SGSI	Sangihe	2.10	332	P	Pn	10 42 24.8	-1.1
SGSI				S	Sn	10 42 52.7	+1.9
KMSI	Cibinong	2.82	244	P	Pn	10 42 35.8	+0.1
GTOI	Gorontalo	3.70	252	P	Pn	10 42 49.3	+1.5
DDMP	Don Marcelino,	4.33	349	eP	Pn	10 42 55.5	-1.0
DDMP				eS	Sn	10 43 44.8	-1.0
LUWI	Luwuk	4.70	233	P	Pn	10 43 02.2	+0.7
LUWI	Luwuk	4.70	233	Pn	Pn	10 42 58.8	-2.7
MRSI	Marisa	4.77	254	P	Pn	10 43 03.7	+1.3
SKMP	Bagumbayan, Su	5.07	337	eP	Pn	10 43 05.0	-1.7
SKMP				eS	Sn	10 43 59.5	-4.4
KCP	Kidapawan	5.35	345	eP	Pn	10 43 08.6	-1.9
KCP				i S	Sn	10 44 21.8	+11
SIJI	Sorong	5.45	119	Pn	Pn	10 43 12.0	+0.2
	1.0nm,0.3s,baz=334,slow=10,SNR=3.7						
SIJI				LR	LR	10 45 36.2	
	comp=Z,359nm,20.8s,baz=326,slow=41						
APSI	Ampana	5.57	241	P	Pn	10 43 14.8	+1.3
	0.4nm1µm118nm,1.1s						
BUKP	Musuan	6.19	347	eP	Pn	10 43 22.5	+0.4
BUKP				eS	Sn	10 44 29.6	-2.0
MPSI	Mapaga	6.78	258	P	Pn	10 43 31.2	+1.1
	0.2nm53nm,0.9s						
TTSI	Tana Toraja	8.26	234	P	Pn	10 43 49.8	-0.6
	25nm,0.8s						
MYLDM	Lahad Datu	8.67	293	Pn	Pn	10 43 55.7	-0.3
SPSI	Sidrap Palu	8.86	230	P	Pn	10 43 57.6	-1.0
BNSI	Bone	8.90	226	P	Pn	10 44 02.5	+3.3
KAPI	Kappang	9.58	225	Pn	Pn	10 44 04.3	-4.2
	baz=88,slow=14,SNR=1.2						
KAPI	Kappang	9.58	225	Pn	Pn	10 44 10.5	+2.0
KKM	Kota Kinabalu	11.10	293	Pn	Pn	10 44 31.9	+2.4
MTN	Manton Dam	15.27	163	Pn	Pn	10 45 24.4	-1.3
MTN				IAmb	IAmb	10 45 41.0	
	comp=Z,7.8nm,0.5s						
KSM	Kuching	16.21	269	Pn	Pn	10 45 34.7	-3.0
KNRA	Kununurra	17.52	173	P	Pn	10 45 52.7	-1.5
FITZ	Fitzroy Crossi	19.81	182	P	P	10 46 18.8	-1.0
	comp=Z,2.0nm,0.3s,baz=12,slow=11,SNR=4.5						
FITZ	Fitzroy Crossi	19.81	182	P	P	10 46 18.3	-1.6
COEN	Coen	22.77	134	P	P	10 46 51.5	-0.3
COEN				IAmb	IAmb	10 47 17.6	
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	22.80	161	P	P	10 46 50.4	-1.7
WB0				IAmb	IAmb	10 47 12.2	
	comp=Z,11nm,0.9s						
WRAB	Tennant Creek	22.94	161	P	P	10 46 51.9	-1.6
WRAB				IAmb	IAmb	10 46 59.2	
	comp=Z,10nm,0.8s						
WRA	Warramunga Arr	22.95	161	P	P	10 46 51.6	-1.9
	comp=Z,8.2nm,0.8s,baz=340,slow=11,SNR=58						
WRA				PcP	PcP	10 50 43.1	+0.4
	comp=Z,0.5nm,0.5s,baz=322,slow=2.2,SNR=5.2						
WRA	Warramunga Arr	22.95	161	P	P	10 46 51.4	-2.1
WB2	Warramunga Arr	22.95	161	P	P	10 46 51.7	-1.9
WB2				IAmb	IAmb	10 46 59.3	
	comp=Z,12nm,0.8s						
WR0	Warramunga Arr	23.03	160	P	P	10 46 52.5	-1.9
WR0				IAmb	IAmb	10 47 00.3	
	comp=Z,20nm,1.3s						
AS31	Alice Springs	26.33	165	P	P	10 47 24.1	-0.7
ASAR	Alice Springs	26.33	165	P	P	10 47 24.2	-0.6
	comp=Z,2.0nm,0.6s,baz=345,slow=7.9,SNR=38						
ASAR				PcP	PcP	10 50 50.1	0.0
	comp=Z,0.9nm,0.5s,baz=347,slow=2.2,SNR=9.5						
JNU	Nakatsue	31.41	7	P	P	10 48 10.6	+0.7
	comp=Z,7.4nm,0.8s,baz=100,slow=4.7,SNR=4.3						
JNU	Nakatsue	31.41	7	P	P	10 48 10.9	+1.0
CMAR	Chiang Mai Arr	31.69	303	P	P	10 48 12.7	+0.1
	comp=Z,0.5nm,0.3s,baz=114,slow=7.2,SNR=4.2						
MORW	Morawa	32.31	197	P	P	10 48 19.7	+1.9
MORW				IAmb	IAmb	10 48 21.5	
	comp=Z,15nm,1.4s						
FORT	Forrest	32.45	178	P	P	10 48 19.1	+0.2
JMN	Monobe	32.48	11	P	P	10 48 20.4	+1.1
JWT	Wachi	34.30	13	P	P	10 48 36.4	+1.3
KSRS	Korea Array	35.49	2	P	P	10 48 47.3	+2.1
	comp=Z,1.2nm,0.6s,baz=180,slow=9.5,SNR=6.6						
BBOO	Buckleboo	35.60	166	P	P	10 48 45.5	-0.8
MJAR	Matsushiro Arr	36.20	16	P	P	10 48 51.9	+0.5
	comp=Z,2.5nm,0.7s,baz=183,slow=9.9,SNR=6.5						
STKA	Stephens Creek	36.44	158	P	P	10 48 54.0	+0.5
	comp=Z,3.0nm,0.6s,baz=341,slow=8.2,SNR=4.2						
JMM	Marumori	38.20	18	P	P	10 49 09.4	+1.1
USRK	Ussuriysk Ar.	42.48	6	P	P	10 49 44.6	+0.9
	comp=Z,2.2nm,0.8s,baz=179,slow=6.2,SNR=6.9						
USRK	Ussuriysk Ar.	42.48	6	P	P	10 49 45.1	+1.4
KLR	Kul'dur	47.45	5	P	P	10 50 23.7	+0.7
	comp=Z,1.8nm,0.7s,baz=291,slow=7.2,SNR=5.0						
SONM	Songino Array	49.03	342	P	P	10 50 36.0	+0.5
	comp=Z,1.5nm,0.9s,baz=152,slow=8.0,SNR=5.9						
SONM				PcP	PcP	10 51 59.6	+0.8
	comp=Z,0.3nm,0.5s,baz=169,slow=2.9,SNR=1.5						
SONM	Songino Array	49.03	342	IAmb	IAmb	10 50 43.5	
	comp=Z,1.4nm,0.8s						
PETK	Petropavlovsk-	57.27	22	P	P	10 51 37.1	+1.3
	comp=Z,2.7nm,0.8s,baz=188,slow=5.1,SNR=6.8						
PETK	Petropavlovsk-	57.27	22	P	P	10 51 36.7	+0.8
MK31	Makanchi Array	59.00	326	P	P	10 51 47.9	-0.2
MK31				IAmb	IAmb	10 51 51.8	
	comp=Z,2.7nm,0.9s						
MKAR	Makanchi Array	59.00

comp=Z,1.7nm,0.4s,baz=123,slow=8.5,SNR=11
MKAR Makanchi Array 59.00 326 P P 10 51 47.5 -0.6
MAKZ Makanchi 59.19 326 P P 10 51 48.4 -1.0
MAKZ IAmb IAmb 10 51 54.3
comp=Z,3.3nm,0.7s
ZALV Zalesovo Beam 62.19 334 P P 10 52 10.3 +0.7
comp=Z,1.0nm,0.3s,baz=130,slow=6.3,SNR=2.8
KURK Kurchatov 63.23 328 P P 10 52 16.0 -0.7
KKAR Karatay Array 64.48 318 P P 10 52 23.6 -1.6
BRVK Borovoye 68.87 327 P P 10 52 53.5 +0.6
BRVK IAmb IAmb 10 52 54.2
comp=Z,2.9nm,0.6s
NRIK Noril'sk 72.22 346 P P 10 53 13.8 +0.9
comp=Z,2.9nm,0.5s,baz=116,slow=5.0,SNR=5.8
ABKAR Akbulak array 73.49 321 P P 10 53 20.3 -0.5
ABKAR Akbulak array 73.49 321 P P 10 53 19.9 -0.9
AKTO Aktyubinsk 75.02 322 P P 10 53 30.3 +0.6
comp=Z,2.4nm,0.7s,baz=106,slow=8.8,SNR=10
ARU Arti 76.43 328 P P 10 53 37.5 -0.1
comp=Z,0.7nm,0.3s,baz=87,slow=8.2,SNR=4.8
VNDA Vanda 81.57 173 P P 10 54 05.6 +0.2
comp=Z,1.8nm,1.0s,baz=319,slow=6.4,SNR=7.6
MAW Mawson 81.90 200 P P 10 54 07.5 +0.3
comp=Z,1.6nm,0.7s,baz=18,slow=3.2,SNR=2.6
ARCES ARCESS Array B 92.16 340 P P 10 54 58.7 +1.4
comp=Z,1.2nm,0.7s,baz=92,slow=6.5,SNR=1.4
FINES FINESS Array B 93.40 332 P P 10 55 02.3 -0.9
comp=Z,1.4nm,0.8s,baz=107,slow=6.4,SNR=3.7
TORD Torodi Ar. Bea 123.29 287 PKP PKPdf 11 00 46.1 +0.1
comp=Z,0.3nm,0.6s,baz=18,slow=2.4,SNR=2.4

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*IDC **15** 10:43:11.7±0.9,54.°51S×56.°08W,h0km,mb3.9/6, mb1 4.1/8,mb1mx4.0/20,mbtmp4.0/8,ML4.7/2,MS4.0/8, Ms1 4.1/8,ms1mx3.9/18,Error ellipse: s-maj=26.7km s-min=22.7km az=82.0*
*NEIC **15** 10:43:13.3±2.0,54.°62S±0.°06×56.°2W±0.°1,h10km±1km, mb4.7/23,Error ellipse: s-maj=14.6km s-min=9.7km az=80.0*
ISC 15 10:43:13.2±0.5,54.°58S±0.°06×56.°12W±0.°07,h10km,n77, σ1§61/49,mb4.5/13,MS4.1/7,2C,Falkland Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EFI	**East Falkland**	**3.14**	**337**			**Pn**	**10 44 03.2**	**+0.5**
MG01	**Puerto William**	**6.68**	**262**			**Pn**	**10 44 50.4**	**-0.9**
MG01						**Sn**	**10 46 10.1**	**+2.8**
USHA	**Ushuaia**	**7.14**	**263**	Pn		**Pn**	**10 44 56.1**	**-1.5**
	7.5nm,0.3s,baz=90,slow=18,SNR=43							
USHA				Sn		**Sn**	**10 46 20.0**	**+1.2**
	82nm,0.3s,baz=55,slow=3.5,SNR=28							
GO09	**Cerro Castillo**	**10.34**	**282**			**Pn**	**10 45 38.5**	**-2.9**
PMSA	**Palmer Station**	**10.97**	**198**			**Pn**	**10 45 50.9**	**+0.9**
HOPE	**Hope Point**	**11.43**	**97**	Pn		**Pn**	**10 45 56.6**	**+0.3**
LL01	**San Ignacio de**	**16.25**	**312**			**Pn**	**10 47 02.3**	**+0.8**
LL01					IAmb	IAmb	10 47 17.5	
	comp=Z,49nm,1.2s							
PLCA	**Paso Flores**	**16.88**	**319**	Pn		**Pn**	**10 47 08.5**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=156,slow=12,SNR=38							
PLCA					LR	LR	10 54 46.1	
	comp=Z,492nm,18.1s,baz=152,slow=41							
PLCA	**Paso Flores**	**16.88**	**319**	P		**P**	**10 47 10.1**	**-1.4**
PLCA					IAmb	IAmb	10 47 22.6	
	comp=Z,70nm,1.1s							
LC01	**Cunco**	**18.98**	**319**			**P**	**10 47 32.3**	**-2.3**
LC01					IAmb	IAmb	10 47 45.9	
	comp=Z,82nm,1.1s							
BI02	**San Fabin de**	**20.74**	**324**	P		**P**	**10 47 54.5**	**+0.6**
BO02	**Sierra Bellavi**	**22.28**	**327**	P		**P**	**10 48 09.0**	**-1.5**
BO02					IAmb	IAmb	10 48 27.0	
	comp=Z,26nm,0.9s							
PEL	**Peldehue**	**23.77**	**328**	P		**P**	**10 48 25.6**	**-0.3**
MT02	**Curacav**	**23.81**	**327**	P		**P**	**10 48 23.0**	**-3.1**
ROC1	**El Roble**	**24.03**	**328**	P		**P**	**10 48 28.5**	**0.0**
CPSB	**Cacapava Do Su**	**24.24**	**6**	*eP*		**P**	**10 48 36.9**	**+6.7**
BELA	**Belgrano 2**	**24.60**	**169**	P		**P**	**10 48 33.9**	**+0.8**
ZON	**Zonda**	**24.71**	**334**	P		**P**	**10 48 34.1**	**-0.4**
ZON					IAmb	IAmb	10 48 58.3	
	comp=Z,21nm,1.1s							
CO02	**Combarbal**	**25.68**	**329**	P		**P**	**10 48 44.2**	**+0.9**
CO03	**El Pedregal**	**25.93**	**330**	P		**P**	**10 48 46.7**	**+1.1**
VNA3	**Neumayer Olymp**	**25.95**	**148**	P		**P**	**10 48 46.0**	**+0.6**
VNA3				x		x	10 48 46.1	
VNA1	**Neumayer--Stat**	**26.26**	**146**	P		**P**	**10 48 51.6**	**+3.5**
GO04	**Tololo Observa**	**26.59**	**331**	P		**P**	**10 48 52.1**	**+0.4**
GO04					IAmb	IAmb	10 49 16.6	
	comp=Z,23nm,0.9s							
VNA2	**Neumayer--Watz**	**26.60**	**147**	P		**P**	**10 48 51.1**	**-0.1**
AC05	**El Transito**	**27.70**	**333**	P		**P**	**10 49 01.7**	**+0.1**
SNAA	**Sanae**	**28.18**	**148**	P		**P**	**10 49 05.6**	**+0.1**
SNAA	**Sanae**	**28.18**	**148**	P		**P**	**10 49 05.8**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=249,slow=9.1,SNR=4.3							
SNAA					LR	LR	10 58 21.3	
	comp=Z,167nm,19.5s,baz=200,slow=32							
SNAA	**Sanae**	**28.18**	**148**	P		**P**	**10 49 05.6**	**+0.1**
CPUP	**Villa Florida**	**28.24**	**358**	P		**P**	**10 49 07.0**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=181,slow=8.0,SNR=1.7							
CPUP	**Villa Florida**	**28.24**	**358**	P		**P**	**10 49 06.1**	**-0.1**
AC02	**Maricunga**	**29.32**	**336**	P		**P**	**10 49 16.4**	**-0.1**
AC02					IAmb	IAmb	10 49 30.0	
	comp=Z,9.9nm,1.1s							
QSPA	**South Pole Qui**	**35.67**	**180**	P		**P**	**10 50 11.7**	**+0.4**
QSPA					IAmb	IAmb	10 50 20.5	
	comp=Z,11nm,0.8s							
PB08	**IPOC Station P**	**35.79**	**339**	P		**P**	**10 50 12.8**	**-0.1**
PB11	**IPOC Station P**	**36.27**	**338**	P		**P**	**10 50 16.1**	**-0.6**
PB11					IAmb	IAmb	10 50 33.5	
	comp=Z,16nm,1.0s							
PTLB	**Pontes e Lacer**	**39.12**	**355**	*eP*		P	10 50 48.0	+7.4
LPAZ	**La Paz**	**39.34**	**342**	LR		LR	11 09 27.0	
	comp=Z,565nm,19.0s,baz=227,slow=40							
BDFB	**Brasilia**	**39.37**	**12**	P		**P**	**10 50 42.2**	**-0.7**
	comp=Z,2.7nm,0.5s,baz=186,slow=9.2,SNR=5.1							
JANB	**Januaria**	**40.50**	**18**	*eP*		P	10 50 58.2	+5.9
VILB	**Vilhena**	**41.66**	**354**	*eP*		P	10 51 09.0	+7.3
SYO	**Syowa Base**	**42.47**	**148**	*eP*		**P**	**10 51 06.0**	**-1.8**
SNDB	**Serra Nova Dou**	**42.67**	**7**	*eP*		P	10 51 17.3	+7.3
ETMB	**Extrema**	**45.37**	**346**	*eP*		P	10 51 39.9	+8.2
SAML	**Samuel**	**45.86**	**350**	P		**P**	**10 51 35.3**	**-0.2**
SAML					IAmb	IAmb	10 51 45.2	
	comp=Z,12nm,1.1s							
SAML	**Samuel**	**45.86**	**350**	*eP*		P	10 51 43.8	+8.3
VNDA	**Vanda**	**46.07**	**191**	P		**P**	**10 51 38.1**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=151,slow=7.3,SNR=1.9							
VNDA					LR	LR	11 08 55.2	
	comp=Z,136nm,21.5s,baz=149,slow=34							
VNDA	**Vanda**	**46.07**	**191**	P		**P**	**10 51 35.5**	**-1.0**
SMTB	**Santa Maria do**	**46.10**	**12**	*eP*		P	10 51 45.2	+7.7
CZSB	**Cruzeiro do Su**	**48.58**	**338**	*eP*		P	10 52 04.5	+7.8
MAW	**Mawson**	**49.99**	**154**	LR		LR	11 13 00.9	
	comp=Z,150nm,19.4s,baz=237,slow=36							
MACA	**Manacapuru-AM**	**51.40**	**354**	*eP*		P	10 52 25.7	+7.6
MALB	**Monte Alegre**	**52.58**	**2**	*eP*		P	10 52 34.8	+7.8
MCPB	**Macapa, AP**	**54.15**	**5**	*eP*		P	10 52 46.8	+8.4
H10S3	**ASCENSION HYDR**	**56.17**	**52**	T		T	11 53 29.7	
	baz=208,slow=74,SNR=46							
H10S2	**ASCENSION HYDR**	**56.17**	**52**	T		T	11 53 40.0	
	baz=12,slow=74,SNR=78							
H10N3	**ASCENSION HYDR**	**57.22**	**51**	T		T	11 54 55.9	
	baz=207,slow=75,SNR=199							
H10N1	**ASCENSION HYDR**	**57.23**	**52**	T		T	11 54 49.1	
	baz=207,slow=75,SNR=220							
H10N2	**ASCENSION HYDR**	**57.24**	**52**	T		T	11 54 50.0	
	baz=207,slow=75,SNR=220							
CUSE	**Cuicocha Este**	**57.70**	**333**	*eP*		P	10 53 13.9	+9.4
FLOC	**Florencia**	**58.26**	**337**	*eP*		P	10 53 17.3	+9.5
GUVC	**San Jose del G**	**58.55**	**341**	*eP*		P	10 53 18.0	+8.1
GARC	**Garzon, Huila**	**58.81**	**337**	*eP*		P	10 53 22.1	+10
SOTA	**Rioblanco**	**59.02**	**336**	*eP*		P	10 53 25.6	+12
PCON	**Cinco Dias**	**59.15**	**336**	*eP*		P	10 53 25.6	+11
BETC	**Betania**	**59.27**	**337**	*eP*		P	10 53 24.7	+10
ANIL	**Santa Ana**	**61.02**	**338**	*eP*		P	10 53 36.6	+9.5
TOLC	**Tolima**	**61.09**	**338**	*eP*		P	10 53 33.2	+5.5
ROSC	**El Rosal**	**61.13**	**339**	P		**P**	**10 53 27.9**	**-0.2**
PLMC	**San Jos del P**	**61.62**	**337**	*eP*		P	10 53 38.0	+7.1
RUSC	**La Rusia**	**61.90**	**341**	*eP*		P	10 53 40.1	+6.7
DBIC	**Dimbokro**	**74.49**	**54**	LR		LR	11 20 59.7	
	comp=Z,105nm,21.4s,baz=234,slow=30							
TORD	**Torodi Ar. Bea**	**83.20**	**56**	P		**P**	**10 55 38.4**	**-1.2**
	comp=Z,2.2nm,1.0s,baz=208,slow=6.1,SNR=6.7							
TORD					LR	LR	11 26 28.8	
	comp=Z,160nm,21.5s,baz=195,slow=31							
TORD	**Torodi Ar. Bea**	**83.20**	**56**	P		**P**	**10 55 38.1**	**-1.5**
TXAR	**Lajitas Array**	**93.05**	**320**	P		**P**	**10 56 26.6**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=144,slow=6.3,SNR=3.1							
TXAR					LR	LR	11 33 59.0	
	comp=Z,70nm,19.8s,baz=0.0,slow=33							
TXAR	**Lajitas Array**	**93.05**	**320**	P		**P**	**10 56 27.6**	**+0.8**
ILAR	**Eielson Array**	**137.56**	**321**	PKP		**PKiKP**	**11 02 37.7**	**0.0**
	comp=Z,0.2nm,0.6s,baz=178,slow=3.2,SNR=2.1							
CMAR	**Chiang Mai Arr**	**139.19**	**142**	PKP		**PKiKP**	**11 02 42.0**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=238,slow=2.9,SNR=1.2							
MKAR	**Makanchi Array**	**152.86**	**89**	PKPbc		**PKPbc**	**11 03 08.7**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=239,slow=2.5,SNR=8.0							

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*TAP **15** 10:46:00.7,24.°30N×122.°73E,h54km,ML4.4,C*
*NEIC **15** 10:46:00.2±1.2,24.°37N±0.°06×122.°72E±0.°07,h63km±6km, mb4.2/9,Error ellipse: s-maj=10.0km s-min=8.0km az=140.0*
*JMA **15** 10:46:00.3±0.1,24.°29N×122.°72E,h60km±2km,M3.8*
*IDC **15** 10:46:07.0±7.5,24.°45N×122.°75E,h126km±74km,mb3.6/9, mb1 3.7/10,mb1mx3.4/58,mbtmp4.1/10,Error ellipse: s-maj=57.1km s-min=15.2km az=71.0*
ISC 15 10:46:00.0±0.7,24.°31N±0.°02×122.°74E±0.°02,h59km±5km, n178,σ1§74/322,mb4.0/14,1C-21D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.23**	**53**	P		**Pn**	**10 46 10.2**	**+0.6**
JYNG				S		**Sn**	**10 46 17.1**	**+0.6**
YOJ	**Yonaguni jima**	**0.28**	**58**	⇑P		**Pn**	**10 46 10.7**	**+0.7**
	baz=48							
YOJ				S		**Sn**	**10 46 17.7**	**+0.5**
	baz=48							
YOJ	**Yonaguni jima**	**0.28**	**58**	P		**Pn**	**10 46 10.6**	**+0.7**
YOJ				S		**Sn**	**10 46 17.6**	**+0.5**
YOJ	**Yonaguni jima**	**0.28**	**58**			**Pn**	**10 46 10.7**	**+0.7**
ENAH	**Nanao**	**0.86**	**279**	⇓*i*P		**Pn**	**10 46 16.9**	**+0.7**
	baz=281							
ENAH				S		**Sn**	**10 46 29.7**	**+1.5**
	baz=281							
TWC	**Suao**	**0.87**	**290**	⇓*i*P		**Pn**	**10 46 17.0**	**+0.6**
	baz=301							
TWC				*i* S		**Sn**	**10 46 28.3**	**0.0**
	baz=301							
IRIF	**Iriomote-Funau**	**0.90**	**88**	P		**Pn**	**10 46 17.3**	**+0.6**
IRIF				S		**Sn**	**10 46 29.9**	**+0.8**
EGS		**0.91**	**306**	*i* P		**Pn**	**10 46 17.6**	**+0.8**
	baz=307							
EGS				*e*S		**Sn**	**10 46 29.9**	**+0.6**
	baz=307							
TWB1	**Santiao Chiao**	**0.98**	**315**	P		**Pn**	**10 46 18.3**	**+0.5**
	baz=327							
TWB1				S		**Sn**	**10 46 31.1**	**+0.2**
	baz=327							
NTC	**Toucheng**	**0.99**	**303**	*i* P		**Pn**	**10 46 18.8**	**+0.9**
	baz=314							
NTC				*i* S		**Sn**	**10 46 31.9**	**+0.7**
	baz=314							
HATJ	**Hateruma jima**	**1.00**	**104**	P		**Pn**	**10 46 19.3**	**+1.2**
HATJ				*e*S		**Sn**	**10 46 33.4**	**+2.0**
ILA	**Ilan**	**1.01**	**297**	*e*P		**Pn**	**10 46 19.8**	**+1.6**
	baz=306							
ILA				*e*S		**Sn**	**10 46 32.8**	**+1.1**
	baz=306							
NACB	**Ninganchiao**	**1.06**	**263**	⇓P		**Pn**	**10 46 19.3**	**+0.5**
	baz=263							
NACB				S		**Sn**	**10 46 32.8**	**0.0**
	baz=263							
NACB	**Ninganchiao**	**1.06**	**263**			**Pn**	**10 46 19.2**	**+0.3**
TWE	**Neicheng**	**1.06**	**293**	⇓*i*P		**Pn**	**10 46 19.8**	**+0.9**
	baz=301							
TWE				S		**Sn**	**10 46 34.0**	**+1.2**
	baz=301							
TIPB	**Shuangxi**	**1.06**	**308**	⇓*i*P		**Pn**	**10 46 19.7**	**+0.8**
	baz=310							
TIPB				*i* S		**Sn**	**10 46 33.2**	**+0.3**
	baz=310							
TWD	**Chiawan**	**1.07**	**258**	⇓*i*P		**Pn**	**10 46 19.3**	**+0.3**
	baz=247							
TWD				*i* S		**Sn**	**10 46 32.8**	**-0.3**
	baz=247							
HWA	**Hwalien**	**1.09**	**252**	P		**Pn**	**10 46 19.9**	**+0.7**
	baz=252							
HWA				S		**Sn**	**10 46 34.4**	**+0.9**
	baz=252							
ETLH	**Xiulin Townshi**	**1.16**	**265**	P		**Pn**	**10 46 20.8**	**+0.5**
	baz=266							
ETLH				S		**Sn**	**10 46 35.5**	**+0.3**
	baz=266							
JKRS	**Kuro-shima**	**1.16**	**93**	P		**Pn**	**10 46 21.2**	**+1.1**
JKRS				S		**Sn**	**10 46 36.8**	**+1.7**
NWF	**Wu-fen Shan**	**1.16**	**311**	⇓*i*P		**Pn**	**10 46 21.1**	**+0.9**
	baz=312							
NWF				*i* S		**Sn**	**10 46 35.7**	**+0.5**
	baz=312							
WFSB	**Wu-fen Shan**	**1.16**	**311**	⇓P		**Pn**	**10 46 21.1**	**+1.0**
	baz=312							
WFSB				S		**Sn**	**10 46 35.5**	**+0.4**
	baz=312							
NDT	**Datong Townshi**	**1.16**	**285**	⇓*e*P		**Pn**	**10 46 21.8**	**+1.6**
	baz=294							
NDT				*e*S		**Sn**	**10 46 36.9**	**+1.7**
	baz=294							
NWLT	**Wulai**	**1.22**	**293**	*e*P		**Pn**	**10 46 22.8**	**+1.8**
	baz=303							
NWLT				*e*S		**Sn**	**10 46 38.1**	**+1.4**
	baz=303							
NNSB	**Datong**	**1.25**	**276**	⇓P		**Pn**	**10 46 22.4**	**+1.0**
	baz=266							
NNSB				*e*S		**Sn**	**10 46 37.6**	**+0.2**
	baz=266							
NNSH	**Datong**	**1.25**	**276**	⇓*i*P		**Pn**	**10 46 22.4**	**+1.0**
	baz=266							
NNSH				S		**Sn**	**10 46 37.9**	**+0.5**
	baz=266							
TWA	**Mucha**	**1.25**	**302**	⇓*i*P		**Pn**	**10 46 22.5**	**+1.1**
	baz=304							
TWA				S		**Sn**	**10 46 37.8**	**+0.5**
	baz=304							
NNS	**Nan Shan**	**1.26**	**276**	⇓*i*P		**Pn**	**10 46 22.5**	**+0.9**
	baz=267							
NNS				*i* S		**Sn**	**10 46 38.4**	**+0.7**
	baz=267							
JIJ	**Ishigaki jima**	**1.28**	**87**	P		**Pn**	**10 46 22.2**	**+0.5**
JIJ				S		**Sn**	**10 46 38.0**	**+0.1**
NHDH	**Xindian Distri**	**1.28**	**301**	⇓P		**Pn**	**10 46 23.1**	**+1.3**
	baz=302							
NHDH				*e*S		**Sn**	**10 46 39.1**	**+1.0**
	baz=302							
ESL	**Shilin**	**1.30**	**248**	⇓*i*P		**Pn**	**10 46 21.9**	**-0.1**
	baz=238							
ESL				S		**Sn**	**10 46 37.4**	**-1.0**
	baz=238							
NSK	**Sanguang**	**1.31**	**286**	⇓*i*P		**Pn**	**10 46 23.7**	**+1.5**
	baz=276							
NSK				S		**Sn**	**10 46 39.9**	**+1.0**
	baz=276							
TATO	**Taipei**	**1.32**	**300**	⇓P		**Pn**	**10 46 23.4**	**+1.1**
	baz=302							
TATO				*e*S		**Sn**	**10 46 39.8**	**+0.8**
	baz=302							
TATO	**Taipei**	**1.32**	**300**			**Pn**	**10 46 23.4**	**+1.1**
TAP	**Taipei**	**1.34**	**303**	*e*P		**Pn**	**10 46 23.6**	**+1.1**
	baz=304							
TAP				*e*S		**Sn**	**10 46 40.2**	**+0.8**
	baz=304							
YM01	**YM01**	**1.35**	**308**	⇓P		**Pn**	**10 46 23.7**	**+0.9**
	baz=309							
YM01				S		**Sn**	**10 46 40.4**	**+0.6**
	baz=309							
WHF	**Hehuan Shan**	**1.36**	**263**	⇓*i*P		**Pn**	**10 46 23.8**	**+0.5**
	baz=252							
WHF				S		**Sn**	**10 46 40.9**	**+0.3**
	baz=252							
YM11	**YM11**	**1.36**	**309**	*e*P		**Pn**	**10 46 23.8**	**+0.9**
	baz=310							
YM11				S		**Sn**	**10 46 40.7**	**+0.6**
	baz=310							
EGFH	**Guangfu**	**1.36**	**242**	P		**Pn**	**10 46 23.2**	**+0.3**
	baz=242							
EGFH				*e*S		**Sn**	**10 46 40.2**	**+0.2**
	baz=242							
YM08	**YM08**	**1.36**	**310**	P		**Pn**	**10 46 23.6**	**+0.7**
	baz=301							
YM08				*e*S		**Sn**	**10 46 40.3**	**+0.2**
	baz=301							
YM10	**YM10**	**1.36**	**308**	*e*P		**Pn**	**10 46 23.9**	**+0.9**
	baz=309							
YM10				*e*S		**Sn**	**10 46 40.7**	**+0.6**
	baz=309							
YM05	**YM05**	**1.37**	**309**	⇓*e*P		**Pn**	**10 46 23.8**	**+0.8**
	baz=310							
YM05				*e*S		**Sn**	**10 46 40.7**	**+0.5**
	baz=310							
FUSS	**Fushou**	**1.37**	**268**	P		**Pn**	**10 46 24.4**	**+1.1**
	baz=268							
FUSS				*e*S		**Sn**	**10 46 41.2**	**+0.7**
	baz=268							
YM04	**YM04**	**1.38**	**308**	P		**Pn**	**10 46 24.1**	**+0.9**
	baz=309							
YM04				*e*S		**Sn**	**10 46 41.0**	**+0.5**
	baz=309							
YM03	**YM03**	**1.40**	**309**	*e*P		**Pn**	**10 46 24.2**	**+0.9**
	baz=310							
YM03				*e*S		**Sn**	**10 46 42.5**	**+1.6**
	baz=310							
ANP	**Anpu**	**1.41**	**308**	*e*P		**Pn**	**10 46 24.4**	**+0.7**
	baz=310							
ANP				*e*S		**Sn**	**10 46 42.6**	**+1.2**
	baz=310							
TWY	**Chenhua**	**1.42**	**313**	*i* P		**Pn**	**10 46 25.0**	**+1.4**
	baz=314							
TWY				S		**Sn**	**10 46 42.5**	**+1.3**
	baz=314							
TWT	**Tachien**	**1.43**	**268**	P		**Pn**	**10 46 25.6**	**+1.6**
	baz=269							
TWT				*e*S		**Sn**	**10 46 42.8**	**+0.8**
	baz=269							
TWS1	**Kuangyinshan**	**1.44**	**303**	P		**Pn**	**10 46 25.1**	**+1.2**
	baz=305							
TWS1				*e*S		**Sn**	**10 46 42.8**	**+0.9**
	baz=305							
PCYT	**Pengchaiyu**	**1.45**	**335**	P		**Pn**	**10 46 25.4**	**+1.4**
	baz=328							
PCYT				*e*S		**Sn**	**10 46 44.1**	**+2.1**
	baz=328							
TDCB	**Techi**	**1.45**	**268**	P		**Pn**	**10 46 25.4**	**+1.3**
	baz=269							
TDCB				*e*S		**Sn**	**10 46 42.4**	**+0.1**
	baz=269							
NTST	**Danshui**	**1.45**	**306**	*e*P		**Pn**	**10 46 25.3**	**+1.3**
	baz=307							
NTST				*e*S		**Sn**	**10 46 43.1**	**+1.0**
	baz=307							
JISG	**Ishigakijimahi**	**1.45**	**79**	P		**Pn**	**10 46 24.6**	**+0.5**
JISG				*e*S		**Sn**	**10 46 42.6**	**+0.4**
CHGB	**Renai**	**1.46**	**260**	P		**Pn**	**10 46 25.1**	**+0.8**
	baz=251							
CHGB				*e*S		**Sn**	**10 46 43.2**	**+0.7**
	baz=251							
HGSD	**Ruisui**	**1.46**	**236**	P		**Pn**	**10 46 24.1**	**-0.1**
	baz=236							
HGSD				*e*S		**Sn**	**10 46 41.5**	**-0.8**
	baz=236							
EHY	**Hungye**	**1.53**	**239**	P		**Pn**	**10 46 25.2**	**+0.1**
	baz=249							
EHY				*e*S		**Sn**	**10 46 43.0**	**-1.0**
	baz=249							
NCU	**National Centr**	**1.56**	**295**	P		**Pn**	**10 46 27.3**	**+1.7**
	baz=307							
NCU				S		**Sn**	**10 46 47.0**	**+2.3**
	baz=307							
NCUH	**Zhongli**	**1.56**	**295**	*i* P		**Pn**	**10 46 27.4**	**+1.8**
	baz=296							
NCUH				S		**Sn**	**10 46 46.8**	**+2.0**
	baz=296							
LIOB	**Emei**	**1.61**	**282**	*i* P		**Pn**	**10 46 28.1**	**+1.9**
	baz=275							
LIOB				S		**Sn**	**10 46 48.4**	**+2.4**
	baz=275							
YULB	**Yu-li**	**1.61**	**236**	⇓P		**Pn**	**10 46 26.5**	**+0.3**
	baz=248							
YULB				*e*S		**Sn**	**10 46 44.9**	**-1.1**
	baz=248							
YULB	**Yu-li**	**1.61**	**236**			**Pn**	**10 46 26.4**	**+0.1**
EYUL	**Yuli**	**1.62**	**234**	P		**Pn**	**10 46 27.0**	**+0.6**
	baz=233							
EYUL				S		**Sn**	**10 46 46.5**	**+0.3**
	baz=233							
NSTT	**Nanjuang**	**1.62**	**282**	*i* P		**Pn**	**10 46 28.0**	**+1.6**
	baz=283							
NSTT				S		**Sn**	**10 46 48.4**	**+2.2**
	baz=283							
TWF1	**Yuli**	**1.63**	**235**	*i* P		**Pn**	**10 46 26.9**	**+0.4**
	baz=246							
TWF1				*e*S		**Sn**	**10 46 46.0**	**-0.6**
	baz=246							
WHP	**Taichung City**	**1.64**	**269**	*i* P		**Pn**	**10 46 28.7**	**+2.0**
	baz=262							
WHP				*e*S		**Sn**	**10 46 47.6**	**+0.8**
	baz=262							
SBCB	**Hsinchu**	**1.67**	**287**	*e*P		**Pn**	**10 46 28.6**	**+1.6**
	baz=288							
SBCB				*e*S		**Sn**	**10 46 49.0**	**+1.6**
	baz=288							
DPDB	**Guoxing**	**1.68**	**261**	*e*P		**Pn**	**10 46 28.7**	**+1.4**
	baz=255							
DPDB				*e*S		**Sn**	**10 46 48.1**	**+0.3**
	baz=255							
HSN	**Hsinchu**	**1.69**	**287**	*e*P		**Pn**	**10 46 28.4**	**+1.2**
	baz=290							
HSN				*e*S		**Sn**	**10 46 48.2**	**+0.4**
	baz=290							
SSLB	**Suanglung**	**1.72**	**253**	P		**Pn**	**10 46 28.6**	**+0.9**
	baz=253							
SSLB				*e*S		**Sn**	**10 46 48.9**	**+0.3**
	baz=253							
SSLB	**Suanglung**	**1.72**	**253**	Pn		**Pn**	**10 46 28.4**	**+0.7**
FULB	**Fuli**	**1.73**	**230**	*i* P		**Pn**	**10 46 27.6**	**-0.3**
	baz=229							
FULB				S		**Sn**	**10 46 48.0**	**-1.0**
	baz=229							
SMLT	**Sun Moon Lake**	**1.74**	**256**	*i* P		**Pn**	**10 46 29.

LDUT	**Ludao**	**2.01 216**	P	**Pn**	**10 46 31.0**	**-0.6**
	baz=214					
LDUT			S	**Sn**	**10 46 52.8**	**-2.8**
	baz=214					
WCHH	**Zhanghua**	**2.01 264**	P	**Pn**	**10 46 33.7**	**+2.1**
	baz=264					
WCHH			*e*S	**Sn**	**10 46 59.0**	**+3.3**
	baz=264					
CHN5	**Tsauling**	**2.02 250**	*i* P	**Pn**	**10 46 33.7**	**+1.9**
	baz=250					
CHN5			*i* S	**Sn**	**10 46 58.1**	**+2.0**
	baz=250					
LONT	**Longtian**	**2.04 227**	*i* P	**Pn**	**10 46 32.1**	**+0.1**
	baz=237					
LONT			S	**Sn**	**10 46 55.2**	**-1.1**
	baz=237					
WGK	**Gukeng**	**2.09 253**	P	**Pn**	**10 46 35.0**	**+2.3**
	baz=243					
WGK			S	**Sn**	**10 47 00.5**	**+2.9**
	baz=243					
WDLH	**Douliu**	**2.11 253**	P	**Pn**	**10 46 35.6**	**+2.6**
	baz=243					
WDLH			S	**Sn**	**10 47 00.9**	**+2.8**
	baz=243					
TWGBT	**Beinan**	**2.13 226**	P	**Pn**	**10 46 33.2**	**-0.2**
	baz=235					
TWGBT			S	**Sn**	**10 46 57.5**	**-1.1**
	baz=235					
TTN	**Taitung**	**2.13 224**	P	**Pn**	**10 46 34.5**	**+1.2**
	baz=215					
TTN			S	**Sn**	**10 46 59.4**	**+0.7**
	baz=215					
TWG	**Pinlang**	**2.13 226**		**Pn**	**10 46 33.4**	**0.0**
STYT	**Tauyuan**	**2.15 238**	*i* P	**Pn**	**10 46 35.0**	**+1.4**
	baz=237					
STYT			S	**Sn**	**10 46 59.8**	**+0.6**
	baz=237					
TPUB	**Ta-pu**	**2.18 243**	P	**Pn**	**10 46 36.0**	**+2.0**
	baz=242					
TPUB			*e*S	**Sn**	**10 47 02.0**	**+2.0**
	baz=242					
TPUB	**Ta-pu**	**2.18 243**	Pn	**Pn**	**10 46 36.0**	**+2.0**
CHN4	**Tsaushan**	**2.19 245**	P	**Pn**	**10 46 36.3**	**+2.2**
	baz=244					
CHN4			*e*S	**Sn**	**10 47 02.8**	**+2.7**
	baz=244					
CHN2	**Minshiung**	**2.22 250**	P	**Pn**	**10 46 37.1**	**+2.7**
	baz=250					
CHN2			*e*S	**Sn**	**10 47 04.3**	**+3.6**
	baz=250					
RLNB	**Erlin**	**2.22 260**	*e*P	**Pn**	**10 46 36.5**	**+2.1**
	baz=260					
RLNB			*e*S	**Sn**	**10 47 03.8**	**+3.1**
	baz=260					
WTP	**Ta-pu**	**2.22 242**	P	**Pn**	**10 46 36.6**	**+2.1**
	baz=241					
WTP			*e*S	**Sn**	**10 47 03.5**	**+2.5**
	baz=241					
WTK	**Tuku**	**2.24 254**	*i* P	**Pn**	**10 46 37.3**	**+2.5**
	baz=270					
WTK			S	**Sn**	**10 47 05.2**	**+3.9**
	baz=270					
JIRB	**Irabujima**	**2.27 76**	P	**Pn**	**10 46 36.3**	**+1.1**
JIRB			*e*S	**Sn**	**10 47 03.0**	**+1.0**
CHY	**Chiayi**	**2.27 250**	P	**Pn**	**10 46 37.7**	**+2.5**
	baz=249					
CHY			*e*S	**Sn**	**10 47 05.2**	**+3.1**
	baz=249					
WTCT	**Ta-ch'eng**	**2.29 259**	*e*P	**Pn**	**10 46 37.1**	**+1.6**
	baz=260					
WTCT			*e*S	**Sn**	**10 47 06.2**	**+3.6**
	baz=260					
TWK	**Hsinying**	**2.31 244**	*i* P	**Pn**	**10 46 37.8**	**+1.9**
	baz=243					
TWK			S	**Sn**	**10 47 05.9**	**+2.7**
	baz=243					
CHN1	**Nanshi**	**2.32 242**	P	**Pn**	**10 46 38.0**	**+2.1**
	baz=241					
CHN1			S	**Sn**	**10 47 05.6**	**+2.3**
	baz=241					
SNST	**Tainan City**	**2.33 243**	*e*P	**Pn**	**10 46 38.6**	**+2.6**
	baz=242					
SNST			*e*S	**Sn**	**10 47 06.5**	**+3.0**
	baz=242					
SGST	**Jiashian**	**2.33 239**	P	**Pn**	**10 46 37.3**	**+1.3**
	baz=238					
SGST			S	**Sn**	**10 47 05.2**	**+1.7**
	baz=238					
SLGT	**Liugui**	**2.33 236**	P	**Pn**	**10 46 38.0**	**+2.0**
	baz=229					
SLGT			*e*S	**Sn**	**10 47 05.1**	**+1.6**
	baz=229					
JIKM	**Ikemajima**	**2.36 75**	P	**Pn**	**10 46 37.9**	**+1.5**
JIKM			*e*S	**Sn**	**10 47 04.6**	**+0.4**
ECL	**Taimali**	**2.37 224**	P	**Pn**	**10 46 36.1**	**-0.5**
	baz=232					
ECL			*e*S	**Sn**	**10 47 02.4**	**-2.1**
	baz=232					
JMJ	**Miyako jima 2**	**2.38 77**	*e*P	**Pn**	**10 46 38.4**	**+1.8**
	baz=77					
JMJ			*e*S	**Sn**	**10 47 06.1**	**+1.5**
	baz=77					
WLGB	**Puzi**	**2.39 250**	P	**Pn**	**10 46 38.0**	**+1.2**
	baz=250					
WLGB			*e*S	**Sn**	**10 47 07.5**	**+2.7**
	baz=250					
JMJ2	**Miyako jima3**	**2.39 79**	P	**Pn**	**10 46 38.1**	**+1.3**
JMJ2			*e*S	**Sn**	**10 47 06.3**	**+1.3**
ICHU	**Yijhu**	**2.45 248**	P	**Pn**	**10 46 39.9**	**+2.3**
	baz=247					
ICHU			*e*S	**Sn**	**10 47 09.4**	**+3.1**
	baz=247					
JOGS	**Gusukube**	**2.46 79**	P	**Pn**	**10 46 39.5**	**+1.7**
JOGS			*e*S	**Sn**	**10 47 08.9**	**+2.1**
SSD	**Sandimen**	**2.49 232**	P	**Pn**	**10 46 39.7**	**+1.6**
	baz=227					
SSD			*e*S	**Sn**	**10 47 09.9**	**+2.5**
	baz=227					
CHN3	**Shinhua**	**2.50 241**	*e*P	**Pn**	**10 46 41.7**	**+3.4**
	baz=254					
CHN3			*e*S	**Sn**	**10 47 11.8**	**+4.0**
	baz=254					
TSMG	**Majia**	**2.50 231**	*e*P	**Pn**	**10 46 39.8**	**+1.4**
	baz=227					
TSMG			*e*S	**Sn**	**10 47 10.3**	**+2.5**
	baz=227					
SCST	**Cishan**	**2.50 236**	*e*P	**Pn**	**10 46 41.8**	**+3.4**
	baz=247					
SCST			*e*S	**Sn**	**10 47 13.0**	**+5.2**
	baz=247					
CHN8	**Yiju**	**2.51 248**	P	**Pn**	**10 46 40.4**	**+2.0**
	baz=248					
CHN8			*e*S	**Sn**	**10 47 10.8**	**+2.9**
	baz=248					
LAY	**Lan-yu**	**2.52 206**	*e*P	**Pn**	**10 46 37.4**	**-1.2**
	baz=204					
LAY			*e*S	**Sn**	**10 47 04.9**	**-3.2**
	baz=204					
MASBT	**Mashibuluo**	**2.57 229**	*e*P	**Pn**	**10 46 40.4**	**+1.0**
	baz=226					
MASBT			*e*S	**Sn**	**10 47 09.9**	**+0.4**
	baz=226					
TAW	**Tawu**	**2.58 221**	*e*P	**Pn**	**10 46 39.7**	**+0.3**
	baz=227					
TAW			*e*S	**Sn**	**10 47 07.6**	**-2.1**
	baz=227					
EAST	**Anshuo**	**2.59 223**	P	**Pn**	**10 46 40.0**	**+0.3**
	baz=228					
EAST			*e*S	**Sn**	**10 47 08.7**	**-1.3**
	baz=228					
TWM1	**Shoushan**	**2.59 236**	*i* P	**Pn**	**10 46 43.5**	**+3.8**
	baz=245					
TWM1			S	**Sn**	**10 47 15.9**	**+5.8**
	baz=245					
SCLT	**Jiali**	**2.60 245**	*e*P	**Pn**	**10 46 42.1**	**+2.5**
	baz=244					
SCLT			*e*S	**Sn**	**10 47 12.5**	**+2.5**
	baz=244					
SGLT	**Jiouru**	**2.60 233**	*e*P	**Pn**	**10 46 44.0**	**+4.2**
	baz=232					
SGLT			*e*S	**Sn**	**10 47 16.2**	**+6.1**
	baz=232					
SNJT	**Kaohsiung City**	**2.70 235**	*e*P	**Pn**	**10 46 44.3**	**+3.3**
	baz=235					
SSPT	**Xinbi**	**2.70 228**	P	**Pn**	**10 46 43.3**	**+2.2**
	baz=222					
SSPT			*e*S	**Sn**	**10 47 16.0**	**+3.4**
	baz=222					
SCZT	**Fangliau**	**2.75 226**	*e*P	**Pn**	**10 46 43.5**	**+1.9**
	baz=219					
SCZT			*e*S	**Sn**	**10 47 14.6**	**+0.9**
	baz=219					
SLIU	**Shizi**	**2.75 221**	*e*P	**Pn**	**10 46 41.8**	**+0.1**
	baz=226					
SLIU			*e*S	**Sn**	**10 47 12.0**	**-1.7**
	baz=226					
WLCH	**Liuqiu**	**2.92 229**	*e*P	**Pn**	**10 46 48.0**	**+4.0**
	baz=242					
WLCH			*e*S	**Sn**	**10 47 24.0**	**+6.0**
	baz=242					
TWP	**Hsiaoliuchiu**	**2.94 229**	*e*P	**Pn**	**10 46 48.8**	**+4.5**
	baz=242					
TWP			*e*S	**Sn**	**10 47 23.4**	**+5.1**
	baz=242					
TSEB	**Hengchuen, Pin**	**2.94 216**	*e*S	**Sn**	**10 47 20.0**	**+1.5**
	baz=221					
HEN	**Hengchun**	**2.95 219**	*e*P	**Pn**	**10 46 46.8**	**+2.4**
	baz=217					
HEN			*e*S	**Sn**	**10 47 19.4**	**+0.8**
	baz=217					
PTTC	**Pingtan**	**2.95 294**	*e*P	**Pn**	**10 46 44.9**	**+0.5**
	baz=286					
PTTC			*e*S	**Sn**	**10 47 17.2**	**-1.4**
	baz=286					
TWKBT	**Hengchun**	**2.96 217**	*e*P	**Pn**	**10 46 45.5**	**+1.0**
	baz=221					
TWKBT			*e*S	**Sn**	**10 47 19.0**	**+0.1**
	baz=221					
TWK1	**Hengchun**	**2.96 218**	*e*P	**Pn**	**10 46 45.8**	**+1.2**
	baz=221					
TWK1			*e*S	**Sn**	**10 47 18.7**	**-0.1**
	baz=221					
PHUB	**P'eng-hu**	**3.01 255**	*e*P	**Pn**	**10 46 45.8**	**+0.6**
	baz=256					
PHUB			*e*S	**Sn**	**10 47 20.9**	**+0.8**
	baz=256					
PNG	**Penghu**	**3.01 256**	*e*P	**Pn**	**10 46 45.9**	**+0.6**
	baz=257					
PNG			*e*S	**Sn**	**10 47 19.3**	**-0.9**
	baz=257					
WDGT	**Dungji**	**3.01 250**	P	**Pn**	**10 46 46.6**	**+1.2**
	baz=250					
WDGT			*e*S	**Sn**	**10 47 20.5**	**+0.2**
	baz=250					
VWUC	**VWUC**	**3.07 283**	*e*P	**Pn**	**10 46 46.5**	**+0.3**
	baz=285					
VWUC			*e*S	**Sn**	**10 47 19.6**	**-2.0**
	baz=285					
MATB	**Ma-tsu**	**3.13 306**	P	**Pn**	**10 46 47.1**	**+0.2**
	baz=307					
MATB			*e*S	**Sn**	**10 47 22.6**	**-0.4**
	baz=307					
VCHM	**Qimei**	**3.23 251**	*e*P	**Pn**	**10 46 49.2**	**+1.0**
	baz=250					
VCHM			*e*S	**Sn**	**10 47 26.7**	**+1.2**
	baz=250					
PTMZ	**Houxiangcun**	**3.38 283**	*e*P	**Pn**	**10 46 50.8**	**+0.5**
	baz=285					
PTMZ			*e*S	**Sn**	**10 47 27.2**	**-1.9**
	baz=285					
XPSS	**Dashiqiu**	**3.48 319**	*e*P	**Pn**	**10 46 52.3**	**+0.6**
	baz=320					
XPSS			*e*S	**Sn**	**10 47 31.4**	**-0.3**
	baz=320					
LYJJ	**Jianjiangzhen**	**3.50 310**	*e*P	**Pn**	**10 46 52.2**	**+0.2**
	baz=312					
LYJJ			*e*S	**Sn**	**10 47 31.8**	**-0.3**
	baz=312					
MHZQ	**Yeshan**	**3.81 299**	*e*P	**Pn**	**10 46 56.6**	**+0.4**
	baz=300					
MHZQ			*e*S	**Sn**	**10 47 38.7**	**-0.9**
	baz=300					
KNM	**Kinmen**	**3.93 272**	P	**Pn**	**10 46 59.8**	**+1.9**
	baz=272					
KNMB	**Chin-men Tao**	**3.97 273**	*e*P	**Pn**	**10 46 58.5**	**+0.1**
	baz=274					
KNMB	**Chin-men Tao**	**3.97 273**	Pn	**Pn**	**10 46 58.1**	**-0.4**
AXDP	**Jialang**	**4.38 279**	*e*P	**Pn**	**10 47 04.5**	**+0.5**
	baz=280					
AXDP			*e*S	**Sn**	**10 47 53.2**	**-0.7**
	baz=280					
ZPLA	**Ao Xicun**	**4.58 266**	*e*P	**Pn**	**10 47 07.0**	**+0.2**
	baz=266					
ZPLA			*e*S	**Sn**	**10 47 57.2**	**-1.5**
	baz=266					
ZZJH	**Jiuhuzhen**	**4.67 273**	*e*P	**Pn**	**10 47 08.9**	**+1.0**
	baz=285					
ZZJH			*e*S	**Sn**	**10 47 59.4**	**-1.4**
	baz=285					
KSRS	**Korea Array**	**13.83 17**	P	**P**	**10 49 17.4**	**-2.2**
	2.2nm,0.3s,baz=197,slow=11,SNR=57					
USA0B	**Ussuriysk Arra**	**21.23 19**	P	**P**	**10 50 40.6**	**-0.3**
USRK	**Ussuriysk Ar.**	**21.23 19**	P	**P**	**10 50 40.4**	**-0.6**
	3.1nm,0.5s,baz=206,slow=8.4,SNR=8.9					
USRK	**Ussuriysk Ar.**	**21.23 19**	P	**P**	**10 50 40.2**	**-0.8**
SBUM	**Sibu**	**24.00 207**	P	**P**	**10 51 10.3**	**+1.0**
SBUM			IAmb	IAmb	10 51 10.9	
	comp=Z,4.3nm,0.7s					
SONM	**Songino Array**	**26.83 335**	P	**P**	**10 51 34.4**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=148,slow=9.6,SNR=4.6					
SONM	**Songino Array**	**26.83 335**	P	**P**	**10 51 34.2**	**-0.7**
RPSI	**Rantau Prapat**	**31.48 231**	P	**P**	**10 52 16.4**	**0.0**
RPSI			IAmb	IAmb	10 52 34.9	
	comp=Z,8.0nm,1.3s					
MKAR	**Makanchi Array**	**39.24 315**	P	**P**	**10 53 22.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=106,slow=9.1,SNR=1.4					
ZALV	**Zalesovo Beam**	**40.92 326**	P	**P**	**10 53 35.0**	**-1.5**
	comp=Z,1.1nm,0.4s,baz=106,slow=11,SNR=4.0					
ZALV	**Zalesovo Beam**	**40.92 326**	P	**P**	**10 53 35.2**	**-1.2**
FITZ	**Fitzroy Crossi**	**42.25 176**	P	**P**	**10 53 47.9**	**+0.3**
FITZ			IAmb	IAmb	10 54 04.8	
	comp=Z,7.1nm,1.4s					
COEN	**Coen**	**42.95 150**	P	**P**	**10 53 54.7**	**+1.3**
WRAB	**Tennant Creek**	**45.41 165**	P	**P**	**10 54 13.1**	**+0.1**
WRAB			IAmb	IAmb	10 54 15.6	
	comp=Z,2.0nm,0.8s					
WRA	**Warramunga Arr**	**45.41 165**	P	**P**	**10 54 13.7**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=346,slow=8.7,SNR=9.4					
WRA	**Warramunga Arr**	**45.41 165**	P	**P**	**10 54 14.0**	**+0.9**
WR0	**Warramunga Arr**	**45.48 164**	P	**P**	**10 54 13.7**	**+0.1**
WR0			IAmb	IAmb	10 54 13.8	
	comp=Z,4.3nm,1.1s					
ASAR	**Alice Springs**	**48.91 166**	P	**P**	**10 54 41.5**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=347,slow=9.3,SNR=8.4					
ASAR	**Alice Springs**	**48.91 166**	P	**P**	**10 54 41.9**	**+1.7**
ARCES	**ARCESS Array B**	**69.95 338**	P	**P**	**10 57 04.0**	**-0.8**
	comp=Z,2.6nm,0.9s,baz=83,slow=8.3,SNR=1.9					
FINES	**FINESS Array B**	**72.05 330**	P	**P**	**10 57 16.5**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=42,slow=4.5,SNR=11					
HFS	**Hagfors**	**78.15 331**	P	**P**	**10 57 51.3**	**-1.4**
	comp=Z,3.3nm,1.0s,baz=72,slow=4.7,SNR=2.0					

IDC ***15*** *10:45:59.3±1.4, 1.°99N×126.°72E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/46, mbtmp3.9/8, ML3.5/1, Error ellipse: s-maj=127.6km s-min=16.9km az=71.0*
DJA ***15*** *10:46:02.6±0.4, 2.°N±4.°×12.°7E±.°, h10km, M3.9/7, MLv3.9/7*
NEIC ***15*** *10:46:04.5±2.0, 1.°92N±0.°04×126.°7E±0.°1, h35km±2km, mb4.0/10, Error ellipse: s-maj=19.0km s-min=4.7km az=73.0*

ISC 15 10:46:06.0±0.7, 1.°82N±0.°05×126.°57E±0.°10, h47km, n31, σ1s81/33, mb4.0/10, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.31**	**143**	P	**Pn**	**10 46 26.5**	**-1.4**
TNTI				S	**Sn**	**10 46 45.6**	**+1.5**
TNTI	**Ternate**	**1.31**	**143**		**Pn**	**10 46 26.2**	**-1.7**
TNTI				Sn	**Sn**	**10 46 46.6**	**+2.4**
SGSI	**Sangihe**	**2.13**	**331**	P	**Pn**	**10 46 37.4**	**-1.8**
GTOI	**Gorontalo**	**3.75**	**252**	P	Pn	10 47 04.8	+3.4
DDMP	**Don Marcelino,**	**4.35**	**349**	*e*P	**Pn**	**10 47 07.9**	**-1.7**
DDMP				*e*S	**Sn**	**10 48 00.6**	**+1.6**
LUWI	**Luwuk**	**4.75**	**233**	Pn	**Pn**	**10 47 15.6**	**+0.5**
SKMP	**Bagumbayan, Su**	**5.09**	**337**	*e*P	**Pn**	**10 47 17.6**	**-2.3**
SKMP				*e*S	**Sn**	**10 48 14.8**	**-2.6**
KCP	**Kidapawan**	**5.37**	**344**	*e*P	**Pn**	**10 47 27.6**	**+3.9**
KCP				*i* S	**Sn**	**10 48 29.6**	**+5.3**
MYLDM	**Lahad Datu**	**8.72**	**293**		**Pn**	**10 48 11.1**	**+1.5**
KKM	**Kota Kinabalu**	**11.15**	**292**	Pn	Pn	10 48 46.0	+3.0
MTN	**Manton Dam**	**15.25**	**163**		**P**	**10 49 41.4**	**-1.1**
MTN				IAmb	IAmb	10 49 49.9	
	comp=Z,8.6nm,1.1s						
KNRA	**Kununurra**	**17.52**	**173**		**P**	**10 50 07.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.81**	**183**	P	**Pn**	**10 50 33.8**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=7.3,slow=11,SNR=2.3						
FITZ	**Fitzroy Crossi**	**19.81**	**183**	P	**Pn**	**10 50 33.3**	**-1.3**
COEN	**Coen**	**22.72**	**134**	P	**P**	**10 51 05.3**	**+1.1**
COEN				IAmb	IAmb	10 51 13.1	
	comp=Z,6.3nm,0.9s						
WB0	**Warramunga Arr**	**22.78**	**161**	P	**P**	**10 51 04.4**	**-0.4**
WRAB	**Tennant Creek**	**22.92**	**161**	P	**P**	**10 51 05.7**	**-0.5**
WRAB				IAmb	IAmb	10 51 08.5	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**22.93**	**161**	P	**P**	**10 51 05.5**	**-0.8**
	comp=Z,3.4nm,0.6s,baz=340,slow=11,SNR=19						
WRA	**Warramunga Arr**	**22.93**	**161**	P	**P**	**10 51 06.6**	**+0.4**
WB2	**Warramunga Arr**	**22.93**	**161**	P	**P**	**10 51 05.5**	**-0.9**
WR0	**Warramunga Arr**	**23.01**	**161**	P	**P**	**10 51 05.3**	**-1.8**
WR0				IAmb	IAmb	10 51 16.1	
	comp=Z,4.6nm,0.8s						
AS31	**Alice Springs**	**26.31**	**165**		**P**	**10 51 37.9**	**+0.4**
ASAR	**Alice Springs**	**26.32**	**165**	P	**P**	**10 51 38.6**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=351,slow=16,SNR=12						
ASAR	**Alice Springs**	**26.32**	**165**	P	**P**	**10 51 37.9**	**+0.4**
SONM	**Songino Array**	**49.05**	**342**	P	**P**	**10 54 48.0**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=148,slow=10,SNR=3.8						
SONM	**Songino Array**	**49.05**	**342**	IAmb	IAmb	10 54 50.0	
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**59.04**	**326**	P	**P**	**10 56 00.1**	**-1.2**
	comp=Z,1.2nm,0.4s,baz=122,slow=7.3,SNR=12						
MKAR	**Makanchi Array**	**59.04**	**326**	P	**P**	**10 55 59.8**	**-1.4**
ZALV	**Zalesovo Beam**	**62.22**	**334**	P	**P**	**10 56 21.6**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=132,slow=4.1,SNR=1.6						
AKTO	**Aktyubinsk**	**75.06**	**322**	P	**P**	**10 57 43.2**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=91,slow=10,SNR=6.1						
VNDA	**Vanda**	**81.56**	**173**	P	**P**	**10 58 19.7**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=344,slow=4.3,SNR=3.8						

IDC ***15*** *10:51:02.6±2.2, 1.°98N×126.°71E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/42, mbtmp3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/28, Error ellipse: s-maj=186.6km s-min=26.4km az=66.0*
DJA ***15*** *10:51:08.6±1.0, 2.°N±5.°×12.°7E±.°, h42km±112km, M3.5/6, MLv3.5/6*

ISC 15 10:51:07.1±2.3, 2.°0N±0.°4×127.°0E±0.°7, h35km, n6, σ1s44/5, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**164**	P	**Pn**	**10 51 28.1**	**-0.6**
SGSI	**Sangihe**	**2.22**	**318**	P	Pn	10 51 45.6	+4.2
SGSI				S	**Sn**	**10 52 07.6**	**0.0**
LEM	**Lembang**	**21.26**	**245**	LR	LR	11 05 49.1	
	comp=Z,30nm,18.4s,baz=160,slow=42						
WRA	**Warramunga Arr**	**22.98**	**162**	P	**P**	**10 56 08.5**	**-0.3**
	1.2nm,0.5s,baz=340,slow=11,SNR=9.5						
ASAR	**Alice Springs**	**26.40**	**166**	P	**P**	**10 56 42.5**	**+1.9**
	0.2nm,0.4s,baz=343,slow=8.1,SNR=2.1						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**11 01 04.0**	**-0.2**
	0.3nm,0.4s,baz=127,slow=7.1,SNR=5.5						

IDC ***15*** *11:06:35.9±2.0, 1.°95N×126.°80E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/47, mbtmp3.3/4, Error ellipse: s-maj=181.3km s-min=23.2km az=67.0*
DJA ***15*** *11:06:35.8±1.1, 0.°N±12.°×12.°6E±.°, h148km±13km, M3.3/4, MLv3.3/4*

ISC 15 11:06:38.3±1.1, 1.°3N±0.°1×126.°12E±0.°09, h10km, n7, σ2s93/7, mb3.3/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**113**	P	**Pn**	**11 07 01.7**	**-1.6**
SGSI	**Sangihe**	**2.43**	**346**	P	**Pg**	**11 07 26.6**	**+1.7**
GTOI	**Gorontalo**	**3.18**	**258**	P	**Pn**	**11 07 27.2**	**-1.2**
WRA	**Warramunga Arr**	**22.61**	**160**	P	**P**	**11 11 41.0**	**+1.5**
	0.2nm,0.5s,baz=340,slow=11,SNR=8.9						
ASAR	**Alice Springs**	**25.96**	**164**	P	**P**	**11 12 15.4**	**+4.1**
	0.2nm,0.6s,baz=342,slow=11,SNR=6.1						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**11 16 37.6**	**-2.1**
	0.2nm,0.3s,baz=123,slow=9.0,SNR=2.1						
KURBB	**Kurchatov Arra**	**63.45**	**328**	P	**P**	**11 17 06.4**	**-1.9**
	0.2nm,0.4s,baz=123,slow=6.7,SNR=2.3						

THR ***15*** *11:07:52.8±0.3, 27.°49N×54.°04E, h14km±11km, ML3.3*
TEH ***15*** *11:07:54.7, 27.°73N×54.°15E, h14km, ML3.2*
IDC ***15*** *11:08:07.6±3.8, 27.°18N×54.°20E, h145km±52km, mb3.2/5, mb1 3.2/6, mb1mx2.9/54, mbtmp3.6/6, MS3.7/1, Ms1 3.7/1, ms1mx2.5/32, Error ellipse: s-maj=36.6km s-min=22.2km az=164.0*

ISC 15 11:07:54.7±0.9, 27.°63N±0.°06×54.°05E±0.°04, h10km, n33, σ1s04/34, mb3.6/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**0.29**	**82**	*e*Pg	**Pg**	**11 07 59.6**	**-1.1**
LAR1				*e*		11 08 26.4	
LMD1	**Lamerd**	**0.83**	**250**	*e*Pg	**Pn**	**11 08 13.1**	**+0.6**
LMD1				*e*		11 08 36.8	
JHRM	**Jahrom**	**0.97**	**335**	*e*Pg	**Pg**	**11 08 11.5**	**-1.9**
JHRM				*e*		11 08 31.9	
GHIR	**Ghir-Karzin**	**1.14**	**305**	*e*Pg	**Pb**	**11 08 16.5**	**-0.2**
GHIR				*e*Sg	**Sn**	**11 08 33.8**	**+1.1**
GHIR				IAML		11 08 39.5	
	comp=E,601nm,0.3s						
GHIR	**Ghir-Karzin**	**1.14**	**305**	*e*Pg	**Pb**	**11 08 16.5**	**-0.2**
QIR1	**Qir**	**1.23**	**314**	*e*Pg	**Pg**	**11 08 18.4**	**+0.1**
QIR1				*e*Sg	**Sn**	**11 08 35.3**	**+0.7**
QIR1				*e*		11 08 46.9	
BNDS	**Bandar-Abbas**	**1.90**	**96**	*e*Pn	**Pn**	**11 08 26.8**	**-0.6**
BNDS	**Bandar-Abbas**	**1.90**	**96**	*e*Pn	**Pn**	**11 08 26.8**	**-0.6**
GENO	**Geno**	**1.90**	**96**	*e*Pn	**Pn**	**11 08 27.0**	**-0.4**
GENO				*e*		11 09 10.4	
SHI	**Shiraz**	**2.42**	**327**	*e*Pn	**Pn**	**11 08 34.6**	**+0.1**
SHI				*e*		11 09 17.0	
NGRK	**Negar Kerman**	**3.10**	**49**	*e*Pn	**Pn**	**11 08 43.5**	**-0.5**
NGRK				*e*		11 09 45.8	
KRBR	**Kerman**	**3.34**	**45**	*e*Pn	**Pn**	**11 08 48.4**	**+1.1**
KRBR				Sn	**Sn**	**11 09 28.9**	**+1.6**
KRBR	**Kerman**	**3.34**	**45**	*e*Pn	**Pn**	**11 08 48.4**	**+1.1**
TVBK	**TV Kerman**	**3.35**	**45**	*e*Pn	**Pn**	**11 08 46.5**	**-0.9**
TVBK				*e*		11 09 07.1	
KHGB	**Koh Gabri**	**3.47**	**37**	*e*Pn	**Pn**	**11 08 48.9**	**-0.1**
KHGB				*e*		11 09 34.6	
IMEH	**Mehriz**	**3.78**	**7**	*e*Pn	**Pn**	**11 08 53.2**	**-0.1**
KLNJ	**Kolanjah**	**3.99**	**328**	*e*Pn	**Pn**	**11 08 55.7**	**-0.6**
IBAF	**Bafgh**	**4.17**	**18**	*e*Pn	**Pn**	**11 08 58

NEIC ***15*** *11:12:02.7±1.6, 1.78N±0.06, 126.50E±0.06, h35km±1km, mb5.4/172, Error ellipse: s-maj=11.6km s-min=9.8km az=52.0*

DJA ***15*** *11:12:03.4±0.2, 2.2N±3.3, 126.6E±0.1, h10km, M5.3/22, mb5.6/22, mB5.7/22, MLv5.4/19, Mw(mB)5.3/22, Mwp5.5/12*

GCMT ***15*** *11:12:06.7±0.1, 1.95N±0.01, 126.26E±0.01, h34km, MW5.5/127, Moment Tensor Solution. s103,c172; s127,c199; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr1.53±.04; Mθθ0.55±.03; Mφφ-2.08±.03; Mrθ0.71±.05; Mθφ0.33±.02; Mφr-0.50±.04; Best double couple: M=2.07200×10^17 NP1:φs18.00000°, δ42.00000°, λ129.00000°. NP2:φs150.00000°, δ59.00000°, λ61.00000°. Principal axes: T 1.9260, Plg63.0000°, Azm10.0000°; N 0.2870, Plg25.0000°, Azm166.0000°; P -2.2170, Plg9.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***15*** *11:12:08.0, 1.74N×126.57E, h91km, mb5.4*

ISC 15 11:12:04.0±0.4, **1.74N**±0.03×**126.42E**±0.04, **h40**km±3km, **h40**km**:pP-P, n799,** σ1§**70**/837, **mb5.4**/199, **MS4.7**/53, **43C-21D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**136**	P	**Pn**	**11 12 24.7**	**-1.7**
TNTI				S	**Sn**	**11 12 46.9**	**+3.7**
TNTI	**Ternate**	**1.35**	**136**		**Pn**	**11 12 24.7**	**-1.7**
MNI	**Manado**	**1.61**	**259**	P	**Pn**	**11 12 31.5**	**+1.5**
SGSI	**Sangihe**	**2.12**	**335**	P	**Pn**	**11 12 37.2**	**+0.1**
KMSI	**Cibinong**	**2.70**	**245**	P	**Pn**	**11 12 47.2**	**+2.2**
GTOI	**Gorontalo**	**3.58**	**252**	P	**Pn**	**11 13 00.8**	**+3.7**
DDMP	**Don Marcelino,**	**4.39**	**351**	*e*P	**Pn**	**11 13 07.0**	**-1.2**
LUWI	**Luwuk**	**4.58**	**233**	P	**Pn**	**11 13 13.9**	**+3.1**
LUWI	**Luwuk**	**4.58**	**233**	Pn	**Pn**	**11 13 13.1**	**+2.3**
MRSI	**Marisa**	**4.65**	**254**	P	**Pn**	**11 13 14.9**	**+3.1**
NLAI	**Namlea**	**5.00**	**172**	P	**Pn**	**11 13 15.5**	**-1.1**
	1.9nm4µm276nm,0.9s						
SKMP	**Bagumbayan, Su**	**5.10**	**339**	*e*P	**Pn**	**11 13 17.7**	**-0.3**
MATI	**Mati**	**5.17**	**358**	*e*P	**Pn**	**11 13 18.7**	**-0.3**
DAV	**Davao City (W)**	**5.36**	**351**	Pn	**Pn**	**11 13 20.4**	**-1.1**
	39nm,0.3s,baz=249,slow=5.0,SNR=1.7						
DAV				Sn	**Sn**	**11 14 25.0**	**+3.0**
	58nm,0.3s,baz=106,slow=20,SNR=1.4						
DAV	**Davao City (W)**	**5.36**	**351**		**Pn**	**11 13 22.9**	**+1.3**
DAV	**Davao City (W)**	**5.36**	**351**‖	*e*P	**Pn**	**11 13 23.0**	**+1.5**
KCP	**Kidapawan**	**5.40**	**346**‖	*e*P	**Pn**	**11 13 24.4**	**+2.3**
APSI	**Ampana**	**5.45**	**241**	P	**Pn**	**11 13 26.5**	**+3.7**
	11nm12µm26µm3µm,1.1s						
SIJI	**Sorong**	**5.50**	**118**	Pn	**Pn**	**11 13 23.2**	**-0.2**
	4.9nm,0.3s,baz=307,slow=7.6,SNR=41						
SIJI				LR	LR	11 15 58.3	
	comp=Z,6µm,19.8s,baz=292,slow=43						
MSAI	**Masohi**	**5.64**	**154**	P	Pn	11 13 29.9	+4.4
	0.4nm1µm87nm,1.5s						
AAI	**Ambon**	**5.68**	**162**	P	**Pn**	**11 13 29.3**	**+3.4**
	1.5nm4µm392nm,0.9s						
AAI	**Ambon**	**5.68**	**162**	P	**Pn**	**11 13 29.3**	**+3.4**
AAI				pmax	pmax		
	comp=Z,385nm,1.1s						
BUKP	**Musuan**	**6.24**	**348**	*e*P	**Pn**	**11 13 34.9**	**+1.2**
MPSI	**Mapaga**	**6.67**	**258**	P	**Pn**	**11 13 43.5**	**+4.0**
	comp=Z,4.2nmcomp=Z,28µmcomp=Z,11µmcomp=Z,1µm,1.0s						
ZCP	**Zamboanga City**	**6.73**	**320**‖	*e*P	**Pn**	**11 13 41.6**	**+1.2**
ZCP				*e*S	**Sn**	**11 14 58.0**	**+2.1**
PAGZ	**Pagadian**	**6.78**	**334**	*e*P	**Pn**	**11 13 40.6**	**-0.4**
BNDI	**Bandanaira**	**7.13**	**151**	P	Pn	11 13 53.2	+7.3
FAKI	**Fak Fak**	**7.44**	**128**	P	**Pn**	**11 13 52.0**	**+1.8**
	comp=Z,1.0nmcomp=Z,8µmcomp=Z,3µmcomp=Z,236nm,0.9s						
FAKI	**Fak Fak**	**7.44**	**128**	Pn	**Pn**	**11 13 49.7**	**-0.5**
GLSP	**General Luna,**	**7.99**	**358**	*e*P	**Pn**	**11 13 58.5**	**+0.8**
TTSI	**Tana Toraja**	**8.13**	**234**	P	**Pn**	**11 14 02.2**	**+2.5**
	comp=Z,14µmcomp=Z,9µmcomp=Z,825nm,0.8s						
MSLP	**Maasin**	**8.48**	**350**	*e*P	**Pn**	**11 14 04.5**	**+0.1**
MYLDM	**Lahad Datu**	**8.61**	**294**	Pn	**Pn**	**11 14 09.4**	**+3.2**
SPSI	**Sidrap Palu**	**8.74**	**230**	P	**Pn**	**11 14 10.1**	**+2.2**
	comp=Z,12µmcomp=Z,5µmcomp=Z,462nm,1.0s						
BNSI	**Bone**	**8.78**	**226**	P	**Pn**	**11 14 10.1**	**+1.6**
	comp=Z,4µmcomp=Z,289nm,0.6s						
LLP	**Lapu-Lapu**	**8.86**	**344**	*e*P	**Pn**	**11 14 12.9**	**+3.3**
CNOP	**Candoni, Negro**	**8.87**	**335**	*e*P	**Pn**	**11 14 11.2**	**+1.5**
SGKI	**Sangatta, Kali**	**9.10**	**256**	P	**Pn**	**11 14 14.5**	**+1.6**
	comp=Z,11µmcomp=Z,6µmcomp=Z,318nm,0.8s						
BKSI	**Bulukumba**	**9.43**	**222**	P	**Pn**	**11 14 20.6**	**+3.2**
	comp=Z,9µmcomp=Z,3µmcomp=Z,311nm,0.9s						
KAPI	**Kappang**	**9.46**	**225**	Pn	**Pn**	**11 14 20.2**	**+2.4**
	comp=Z,13nm,0.3s,baz=12,slow=7.0,SNR=48						
KAPI				Sn	**Sn**	**11 16 06.3**	**+3.4**
	comp=Z.4.4nm,0.3s,baz=37,slow=20,SNR=1.1						
KAPI	**Kappang**	**9.46**	**225**	P	**Pn**	**11 14 19.4**	**+1.6**
KAPI	**Kappang**	**9.46**	**225**		**Pn**	**11 14 19.4**	**+1.6**
BSSI	**Bau Bau, Buton**	**9.82**	**217**	P	**Pn**	**11 14 25.9**	**+3.1**
	comp=Z,4µmcomp=Z,2µmcomp=Z,229nm,0.6s						
BKB	**Balikpapan**	**9.98**	**253**	P	Pn	11 14 30.2	+5.2
	comp=Z,14µmcomp=Z,4µmcomp=Z,479nm,1.0s						
BKB	**Balikpapan**	**9.98**	**253**		**Pn**	**11 14 24.2**	**-0.7**
BAKI	**Biak**	**10.12**	**107**	P	Pn	11 14 31.4	+4.6
	comp=Z,11µmcomp=Z,722nm,1.3s						
SPMM	**Sapulut**	**10.37**	**287**	P	Pn	11 14 38.0	+7.7
CUYO	**Cuyo Island**	**10.52**	**330**	*e*P	**Pn**	**11 14 32.3**	**-0.1**
KKM	**Kota Kinabalu**	**11.04**	**293**	Pn	**Pn**	**11 14 42.7**	**+3.1**
BATP	**Bataraza**	**11.08**	**310**	*e*P	**Pn**	**11 14 40.0**	**0.0**
KBKI	**Kotabaru**	**11.41**	**244**	P	Pn	11 14 50.5	+6.0
EDFI	**Ende, Flores**	**11.49**	**204**	P	Pn	11 14 49.4	+4.3
	comp=Z,763nmcomp=Z,35nm,0.8s						
SOEI	**Soe**	**11.62**	**191**	P	Pn	11 14 57.0	+9.4
SOEI	**Soe**	**11.62**	**191**	Pn	**Pn**	**11 14 47.2**	**-0.3**
ENPP	**El Nido**	**11.69**	**324**	*e*P	**Pn**	**11 14 47.8**	**-0.5**
MTKI	**Muara Teweh, K**	**11.83**	**257**	P	Pn	11 14 55.6	+5.3
BATI	**Baumata**	**12.19**	**193**	Pn	P	11 15 01.7	-5.3
	comp=Z,3.3nm,0.3s,baz=285,slow=19,SNR=2.1						
BATI				LR	LR	11 20 56.9	
	comp=Z,2µm,20.9s,baz=26,slow=44						
BATI	**Baumata**	**12.19**	**193**	P	**P**	**11 15 04.7**	**-2.2**
BOAC	**Boac**	**12.49**	**339**	*e*P	**P**	**11 15 06.5**	**-3.8**
BBKI	**Banjar Baru**	**12.68**	**246**	P	P	11 15 07.5	-4.9
SMPI	**Sarmi**	**12.84**	**107**	P	**Pn**	**11 15 07.3**	**+3.3**
	comp=Z,4µmcomp=Z,2µmcomp=Z,162nm,1.3s						
JCNP	**Jose Panganiba**	**13.00**	**344**	*e*P	**Pn**	**11 15 07.9**	**+1.7**
LQP	**Lukban**	**13.20**	**339**‖	*e*P	**Pn**	**11 15 13.2**	**+4.0**
BASI	**Baing, Sumba**	**13.23**	**206**	P	**P**	**11 15 21.6**	**+3.1**
WBSI	**Waikabubak, Su**	**13.30**	**212**	P	**P**	**11 15 15.1**	**-4.3**
	comp=Z,2µmcomp=Z,153nm,1.0s						
LUBP	**Lubang**	**13.39**	**333**	*e*P	**Pn**	**11 15 10.7**	**-0.9**
TGY	**Tagaytay City**	**13.42**	**336**	Pn	**P**	**11 15 18.6**	**-2.1**
	comp=Z,87nm,0.3s,baz=120,slow=8.1,SNR=2.6						
TGY				LR	LR	11 20 55.9	
	comp=Z,2µm,20.1s,baz=150,slow=40						
PLAI	**Plampang**	**13.58**	**219**	P	**P**	**11 15 21.9**	**-0.6**
	1.9nm comp=Z,5µmcomp=Z,542nm,1.2s						
POLP	**Polillo Island**	**13.64**	**341**	*e*P	**Pn**	**11 15 16.4**	**+1.4**
TWSI	**Taliwang, Sumb**	**14.10**	**222**	P	**P**	**11 15 31.0**	**+2.8**
SBUM	**Sibu**	**14.21**	**273**	Pn	**Pn**	**11 15 24.0**	**+1.3**
SBUM	**Sibu**	**14.21**	**273**	P	**P**	**11 15 29.0**	**-0.4**
GENI	**Genyem**	**14.40**	**107**	P	**P**	**11 15 30.2**	**-1.4**
BALP	**Baler**	**14.71**	**341**	*e*P	**P**	**11 15 32.6**	**-2.3**
STKI	**Sintang**	**15.03**	**264**	P	**P**	**11 15 40.7**	**+2.1**
MTN	**Manton Dam**	**15.23**	**162**	P	**Pn**	**11 15 36.0**	**-0.4**
	baz=15,SNR=11						
MTN	**Manton Dam**	**15.23**	**162**	Pn	**Pn**	**11 15 34.0**	**-2.4**
DNP	**Denpasar**	**15.23**	**227**	P	**P**	**11 15 45.0**	**+4.2**
DNP				pmax	pmax		
	comp=Z,2µm,1.2s						
SMPP	**San Manuel, Pa**	**15.39**	**339**	*e*P	**P**	**11 15 40.8**	**-1.7**
PBKI	**Pangkalan Bun**	**15.39**	**253**	P	**P**	**11 15 44.4**	**+1.8**
KDU	**Kakadu**	**15.54**	**157**	P	**Pn**	**11 15 39.6**	**-0.9**
	baz=16,SNR=52						
JAGI	**Jajag, Banyuwa**	**15.89**	**230**	Pn	**Pn**	**11 15 45.0**	**0.0**
JAGI				IAmb	IAmb	11 15 57.1	
	comp=Z,507nm,1.0s						
KSM	**Kuching**	**16.11**	**269**	P	**P**	**11 15 49.9**	**-0.7**
KSM				IAmb	IAmb	11 16 01.8	
	comp=Z,285nm,1.0s						
KSM	**Kuching**	**16.11**	**269**	P	**P**	**11 15 53.0**	**+2.4**
ABRA	**Dolores**	**16.77**	**341**	*e*P	**Pn**	**11 15 56.6**	**+0.5**
APYP	**Conner**	**16.80**	**343**	*e*P	**Pn**	**11 15 55.5**	**-1.0**
KNRA	**Kununurra**	**17.46**	**172**	P	**Pn**	**11 16 04.2**	**-0.5**
	baz=18,SNR=68						
KNRA	**Kununurra**	**17.46**	**172**	P	**Pn**	**11 16 04.0**	**-0.7**
KNRA				IAmb	IAmb	11 16 08.6	
	comp=Z,311nm,1.2s						
SMRI	**Semarang**	**18.18**	**241**	P	**P**	**11 16 12.3**	**-1.3**
UGM	**Wanagama**	**18.53**	**239**	P	**Pn**	**11 16 18.1**	**+0.3**
UGM				IAmb	IAmb	11 16 46.6	
	comp=Z,388nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.73**	**182**	P	**P**	**11 16 29.8**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=15,slow=9.5,SNR=39						
FITZ				LR	LR	11 25 10.9	
	comp=Z,608nm,20.7s,baz=12,slow=40						
FITZ	**Fitzroy Crossi**	**19.73**	**182**	P	**P**	**11 16 30.0**	**-0.4**
	baz=20,SNR=85						
FITZ	**Fitzroy Crossi**	**19.73**	**182**	P	**P**	**11 16 29.7**	**-0.7**
DLV	**T Lat**	**20.47**	**300**		Pn	11 16 40.0	-1.0
DLV				IAmb	IAmb	11 16 50.3	
	comp=Z,129nm,1.1s						
LEM	**Lembang**	**20.61**	**245**	P	**P**	**11 16 39.6**	**-0.6**
	comp=Z,80nm,0.9s,baz=71,slow=6.9,SNR=9.1						
CISI	**Cisompet, Garu**	**20.73**	**243**	P	**P**	**11 16 40.5**	**-1.0**
CISI				IAmb	IAmb	11 17 07.9	
	comp=Z,223nm,1.2s						
TWG	**Pinlang**	**21.59**	**346**	P	**P**	**11 16 48.2**	**-2.2**
TWG				IAmb	IAmb	11 16 57.6	
	comp=Z,95nm,0.6s						
GUMO	**Guam**	**21.71**	**56**	P	**P**	**11 16 51.5**	**-0.4**
	comp=Z,69nm,0.7s,baz=180,slow=9.1,SNR=5.3						
GUMO	**Guam**	**21.71**	**56**	P	**P**	**11 16 50.3**	**-1.6**
GUMO				IAmb	IAmb	11 17 05.4	
	comp=Z,319nm,1.4s						
YULB	**Yu-li**	**22.09**	**347**	P	**P**	**11 16 53.3**	**-2.5**
YULB				IAmb	IAmb	11 16 59.4	
	comp=Z,146nm,1.3s						
TPUB	**Ta-pu**	**22.15**	**346**	P	**P**	**11 16 54.5**	**-2.1**
TPUB				IAmb	IAmb	11 17 01.8	
	comp=Z,170nm,0.8s						
SSLB	**Suanglung**	**22.54**	**347**	P	**P**	**11 16 59.2**	**-1.6**
SSLB				IAmb	IAmb	11 17 06.4	
	comp=Z,74nm,0.7s						
MYKOM	**Kota Tinggi**	**22.56**	**270**	P	**P**	**11 17 02.0**	**+0.9**
MYKOM				IAmb	IAmb	11 17 07.8	
	comp=Z,244nm,1.4s						
MYKOM	**Kota Tinggi**	**22.56**	**270**	P	**P**	**11 17 03.0**	**+2.0**
WB0	**Warramunga Arr**	**22.77**	**160**	P	**P**	**11 17 01.5**	**-1.7**
WB0				IAmb	IAmb	11 17 08.9	
	comp=Z,152nm,0.7s						
COEN	**Coen**	**22.79**	**134**	P	**P**	**11 17 04.1**	**+0.7**
	baz=23,SNR=15						
COEN	**Coen**	**22.79**	**134**	P	**P**	**11 17 01.4**	**-1.9**
WRAB	**Tennant Creek**	**22.91**	**161**	*e*P	**P**	**11 17 03.1**	**-1.5**
WRAB	**Tennant Creek**	**22.91**	**161**	P	**P**	**11 17 02.9**	**-1.7**
WRA	**Warramunga Arr**	**22.91**	**161**	P	**P**	**11 17 03.4**	**-1.3**
	comp=Z,118nm,0.6s,baz=340,slow=11,SNR=165						
WRA				S	**S**	**11 21 11.4**	**-0.5**
	comp=Z,32nm,1.2s,baz=340,slow=15,SNR=8.4						
WRA				P3KPbc		11 50 36.0	
	comp=Z,1.3nm,0.9s,baz=158,slow=3.8,SNR=7.1						
WRA	**Warramunga Arr**	**22.91**	**161**	P	**P**	**11 17 03.3**	**-1.3**
WB2	**Warramunga Arr**	**22.91**	**161**	P	**P**	**11 17 02.8**	**-1.9**
WC3	**Warramunga Arr**	**22.94**	**160**	P	**P**	**11 17 03.2**	**-1.7**
WR0	**Warramunga Arr**	**22.99**	**160**	P	**P**	**11 17 04.1**	**-1.4**
PMG	**Port Moresby**	**23.44**	**119**	P	**P**	**11 17 10.7**	**+0.7**
	comp=Z,16nm,0.7s,baz=293,slow=8.7,SNR=5.6						
PMG	**Port Moresby**	**23.44**	**119**	*ce*P	**P**	**11 17 11.0**	**+1.0**
PMG				pmax	pmax		
	comp=Z,63nm,1.7s						
PMG	**Port Moresby**	**23.44**	**119**	P	**P**	**11 17 08.0**	**-2.0**
QIZ	**Qiongzhong**	**23.64**	**318**	P	**P**	**11 17 12.3**	**+0.5**
QIZ				sP	**sP**	**11 17 25.4**	**-1.4**
QIZ				S	**S**	**11 21 27.6**	**+3.7**
QIZ				pmax	pmax		
	comp=Z,69nm,1.3s						
QIZ				LR	LR		
	comp=Z,760nm,15.4s						
QIZ				LR	LR		
	comp=Z,940nm,15.4s						
QIZ				LR	LR		
	comp=Z,1µm,17.3s						
QIZ	**Qiongzhong**	**23.64**	**318**	P	**P**	**11 17 10.2**	**-1.7**
QIZ				IAmb	IAmb	11 17 26.7	
	comp=Z,77nm,1.0s						
MBWA	**Marble Bar**	**23.68**	**196**	P	**P**	**11 17 11.6**	**-0.6**
PSAD1	**Pilbara Seismi**	**23.94**	**195**	P	**P**	**11 17 14.8**	**+0.2**
PSAC1	**Pilbara Seismi**	**24.02**	**195**	P	**P**	**11 17 15.5**	**+0.2**
PSA00	**Pilbara Seismi**	**24.05**	**195**	P	**P**	**11 17 14.9**	**-0.7**
PSA00	**Pilbara Seismi**	**24.05**	**195**	P	**P**	**11 17 14.8**	**-0.8**
PSA00				IAmb	IAmb	11 17 24.9	
	comp=Z,13nm,0.7s						
QZH	**Quanzhou**	**24.27**	**342**	P	**P**	**11 17 16.6**	**-1.0**
QZH				S	**S**	**11 21 33.0**	**-0.8**
QZH				LR	LR		
	comp=Z,1µm,27.9s						
QZH				LR	LR		
	comp=Z,2µm,27.9s						
UBPT	**Khong Chiam**	**24.66**	**304**	P	**P**	**11 17 22.8**	**+1.5**
BKNI	**Bangkinang**	**25.41**	**267**	P	**P**	**11 17 27.8**	**-0.3**
IPM	**Ipoh**	**25.50**	**277**	P	**P**	**11 17 29.3**	**+0.4**
IPM				IAmb	IAmb	11 17 36.4	
	comp=Z,103nm,1.1s						
IPM	**Ipoh**	**25.50**	**277**	P	**P**	**11 17 30.0**	**+1.1**
QIS	**Mount Isa**	**25.66**	**150**	P	**P**	**11 17 31.0**	**+0.7**
	baz=26,SNR=33						
KULM	**Kulim**	**25.96**	**278**	P	**P**	**11 17 34.3**	**+1.2**
KULM				IAmb	IAmb	11 17 57.5	
	comp=Z,73nm,1.0s						
KULM	**Kulim**	**25.96**	**278**	P	**P**	**11 17 34.0**	**+0.9**
KRVT	**Keravat (AS076**	**26.28**	**103**	P	**P**	**11 17 38.4**	**+2.3**
	comp=Z,23nm,0.6s,baz=170,slow=7.3,SNR=7.6						
KRVT				LR	LR	11 27 20.9	
	comp=Z,3µm,19.5s,baz=277,slow=35						
ASAR	**Alice Springs**	**26.29**	**164**	P	**P**	**11 17 36.0**	**+0.1**
	comp=Z,16nm,0.7s,baz=342,slow=6.6,SNR=110						
ASAR				S	**S**	**11 22 12.4**	**+6.3**
	comp=Z,8.4nm,0.9s,baz=346,slow=19,SNR=6.6						
MTSU	**Mount Surprise**	**26.47**	**139**	P	**P**	**11 17 38.2**	**+0.6**
	baz=26,SNR=22						
WRKA	**Warakurna**	**26.68**	**176**	P	**P**	**11 17 39.5**	**0.0**
	baz=27,SNR=121						
GIRL	**Giralia**	**27.00**	**205**	P	**P**	**11 17 43.7**	**+1.4**
	baz=27,SNR=11						
SRAK	**Srakaew**	**27.01**	**298**	P	**P**	**11 17 40.6**	**-1.9**
	comp=Z,4µmcomp=Z,475nm,0.9s						
TRTT	**Trang**	**27.30**	**284**	P	**P**	**11 17 46.9**	**+1.7**
	comp=Z,40nm,1.2s						
KHON	**Khomkaen**	**27.39**	**303**	P	**P**	**11 17 48.5**	**+2.5**
	comp=Z,2µmcomp=Z,72nm,0.9s						
RPSI	**Rantau Prapat**	**27.49**	**272**	P	**P**	**11 17 46.7**	**-0.2**
RPSI				IAmb	IAmb	11 17 51.7	
	comp=Z,99nm,1.1s						
PSI	**Prapat**	**27.49**	**273**	P	**P**	**11 17 46.7**	**-0.4**
PSI				pmax	pmax		
	comp=Z,99nm,1.1s						
CHAI	**Chaiyaphum**	**27.89**	**302**	P	**P**	**11 17 51.0**	**+0.6**
	comp=Z,562nmcomp=Z,58nm,0.8s						
NONG	**Nongkai**	**28.02**	**307**	P	**P**	**11 17 52.2**	**+0.7**
	comp=Z,81nm,0.9s						
SURT	**Suratani**	**28.41**	**286**	P	P	11 17 59.8	+4.8
	comp=Z,1.4nm,1.1s						
PKDT	**Phuket**	**28.63**	**283**	P	P	11 18 03.6	+6.6
	comp=Z,11µmcomp=Z,44nm,0.7s						
PHET	**Kaeng Krachan**	**28.75**	**294**	P	**P**	**11 18 00.9**	**+2.8**
	comp=Z,978nmcomp=Z,44nm,1.0s						
GSI	**Gunungsitoli**	**28.84**	**270**	P	**P**	**11 17 57.4**	**-1.5**
GSI				IAmb	IAmb	11 18 01.8	
	comp=Z,59nm,0.8s						
CTA	**Charters Tower**	**29.14**	**139**	P	**P**	**11 18 02.3**	**+0.8**
	comp=Z,10nm,1.0s,baz=323,slow=11,SNR=9.0						
CTA				ScP	**ScP**	**11 24 50.9**	**+3.5**
	comp=Z,6.3nm,1.0s,baz=172,slow=3.6,SNR=3.7						
CTA				LR	LR	11 31 35.5	
	comp=Z,2µm,19.5s,baz=324,slow=40						
CTAO	**Charters Tower**	**29.14**	**139**	P	**P**	**11 18 00.5**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,31nm,1.0s						
CTAO	**Charters Tower**	**29.14**	**139**	P	**P**	**11 18 00.5**	**-1.0**
MEEK	**Meekatharra**	**29.20**	**194**	P	**P**	**11 18 02.3**	**+0.3**
	baz=29,SNR=8.6						
SLVN	**Son La**	**29.33**	**313**	P	**P**	**11 18 03.1**	**-0.2**
SSE	**Sheshan**	**29.61**	**351**	P	**P**	**11 18 08.0**	**+2.5**
SSE				S	**S**	**11 22 58.4**	**+0.2**
SSE				pmax	pmax		
	comp=Z,31nm,0.8s						
SSE				pmax	pmax		
	comp=Z,140nm,6.2s						
SSE				LR	LR		
	comp=Z,240nm,23.4s						
SSE				LR	LR		
	comp=Z,330nm,20.6s						
JSU	**Suzuyama**	**29.85**	**7**	P	**P**	**11 18 06.7**	**-0.9**
JSU				IAmb	IAmb	11 18 11.0	
	comp=Z,53nm,1.2s						
UTHA	**Uthaitani**	**29.93**	**299**	P	**P**	**11 18 09.4**	**+0.8**
	comp=Z,291nmcomp=Z,35nm,0.8s						
UTTA	**Uttaradit**	**29.97**	**304**	P	**P**	**11 18 11.5**	**+2.6**
	comp=Z,33nm,0.8s						
SUKH	**Sukhothai**	**30.62**	**302**	P	**P**	**11 18 16.3**	**+1.7**
	comp=Z,36nm,0.8s						
WHN	**Wuhan**	**30.84**	**339**	⇓P	**P**	**11 18 16.9**	**+0.5**
WHN				pP	**pP**	**11 18 26.3**	**-0.6**
WHN				sP	**sP**	**11 18 31.1**	**-0.4**
WHN				S	**S**	**11 23 15.5**	**-2.1**
WHN				pmax	pmax		
	comp=Z,26nm,0.5s						
WHN				LR	LR		
	comp=Z,2µm,15.7s						
WHN				LR	LR		
	comp=Z,3µm,18.8s						
WHN				LR	LR		
	comp=Z,5µm,24.8s						
NJ2	**Nanjing**	**30.98**	**347**	*e*P	**P**	**11 18 15.5**	**-2.1**
NJ2				PP	**PnPn**	**11 19 22.9**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,400nm,4.4s						
NJ2				LR	LR		
	comp=Z,610nm,21.3s						
NJ2				LR	LR		
	comp=Z,1µm,18.5s						
NJ2				LR	LR		
	comp=Z,1µm,19.9s						
GYA	**Guiyang**	**31.05**	**324**	⇓P	**P**	**11 18 18.4**	**-0.1**
GYA				PP	**PP**	**11 19 26.9**	**-2.3**
GYA				PcP	**PcP**	**11 21 15.8**	**+2.1**
GYA				S	**S**	**11 23 15.1**	**-6.1**
GYA				pmax	pmax		
	comp=Z,35nm,1.3s						
GYA				pmax	pmax		
	comp=Z,250nm,3.5s						
GYA				LR	LR		
	comp=Z,760nm,19.3s						
GYA				LR	LR		
	comp=Z,490nm,12.9s						
GYA				LR	LR		
	comp=Z,960nm,20.4s						
LAMP	**Lampang**	**31.11**	**304**	P	**P**	**11 18 22.5**	**+3.5**
	comp=Z,354nmcomp=Z,38nm,0.9s						
PAYA	**Payao**	**31.33**	**306**	P	**P**	**11 18 23.1**	**+2.2**
	comp=Z,3µmcomp=Z,202nm,0.9s						
JNU	**Nakatsue**	**31.49**	**7**	P	**P**	**11 18 22.2**	**0.0**
	comp=Z,38nm,0.8s,baz=135,slow=3.6,SNR=18						
JNU				LR	LR	11 31 59.4	
	comp=Z,482nm,20.9s,baz=177,slow=38						
JNU	**Nakatsue**	**31.49**	**7**	IAmb	IAmb	11 18 24.2	
	comp=Z,90nm,1.2s						
CM36	**Chiang Mai Arr**	**31.55**	**304**	P	**P**	**11 18 25.0**	**+2.1**
CM35	**Chiang Mai Arr**	**31.58**	**304**	P	**P**	**11 18 25.0**	**+1.9**
CM04	**Chiang Mai Arr**	**31.59**	**303**	P	**P**	**11 18 26.0**	**+2.7**
	comp=Z,125nmcomp=Z,13nm,1.0s						
CM09	**Chiang Mai Arr**	**31.61**	**303**	P	**P**	**11 18 26.6**	**+3.3**
	comp=Z,118nmcomp=Z,14nm,0.8s						
CM01	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**11 18 26.0**	**+2.5**
	comp=Z,133nmcomp=Z,16nm,1.2s						
CM05	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**11 18 26.3**	**+2.8**
	comp=Z,83nmcomp=Z,10.0nm,1.1s						
CM02	**Chiang Mai Arr**	**31.64**	**303**	P	**P**	**11 18 26.0**	**+2.4**
	comp=Z,111nmcomp=Z,14nm,0.9s						
CM31	**Chiang Mai Arr**	**31.65**	**303**	P	**P**	**11 18 27.1**	**+3.4**
	comp=Z,391nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.65**	**303**	P	**P**	**11 18 24.3**	**+0.5**
	comp=Z,8.9nm,1.0s,baz=130,slow=7.0,SNR=45						
CMAR				PcP	**PcP**	**11 21 17.0**	**+1.7**
	comp=Z,7.8nm,0.9s,baz=152,slow=1.7,SNR=11						
CMAR				ScP	**ScP**	**11 24 58.5**	**+2.9**
	comp=Z,0.6nm,0.3s,baz=108,slow=2.9,SNR=2.0						
CMAR				LR	LR	11 30 18.8	
	comp=Z,705nm,21.9s,baz=166,slow=35						
CMAR	**Chiang Mai Arr**	**31.65**	**303**	P	**

KSRS PcP **PcP** **11 21 26.9 +1.0**
comp=Z,4.1nm,0.8s,baz=186,slow=3.5,SNR=5.7
KS19 Wonju Array Si 35.61 2 P **P** **11 18 57.1 -0.8**
EIDS Eidsvold 36.01 140 P **P** **11 19 01.6 +0.1**
baz=36,SNR=5.7
EIDS Eidsvold 36.01 140 P **P** **11 19 01.5 -0.1**
EIDS IAmb IAmb 11 19 18.9
comp=Z,34nm,1.0s
XAN Xi'an 36.06 335 P **P** **11 19 00.3 -1.5**
XAN pP pP 11 19 10.3 -2.3
XAN PP **PnPn** **11 20 20.9 -2.8**
XAN S **S** **11 24 32.3 -6.1**
XAN ScS **ScS** **11 29 16.5 -0.1**
XAN pmax pmax
comp=Z,72nm,1.2s
XAN pmax pmax
comp=Z,250nm,3.8s
XAN LR LR
comp=Z,930nm,20.9s
XAN LR LR
comp=Z,950nm,18.2s
XAN LR LR
comp=Z,2μm,24.9s
XAN Xi'an 36.06 335 P **P** **11 19 00.7 -1.2**
XAN pmax pmax
comp=Z,116nm,1.4s
XAN Xi'an 36.06 335 P **P** **11 19 00.7 -1.2**
CD2 Chengdu 36.08 326 P **P** **11 19 01.8 -0.3**
CD2 PP **PnPn** **11 20 24.1 0.0**
CD2 PcP **PcP** **11 21 27.1 -0.6**
CD2 S **S** **11 24 41.8 +3.0**
CD2 sS sS 11 24 58.5 +1.8
CD2 pmax pmax
comp=Z,120nm,1.3s
CD2 pmax pmax
comp=Z,390nm,5.4s
CD2 LR LR
comp=Z,1μm,18.2s
CD2 LR LR
comp=Z,2μm,25.3s
CD2 LR LR
comp=Z,1μm,23.7s
MAJO Matsushiro 36.30 16 *i* P **P** **11 19 04.1 +0.2**
MAJO pmax pmax
comp=Z,113nm,1.4s
MAJO Matsushiro 36.30 16 P **P** **11 19 03.6 -0.3**
MAT Matsushiro 36.30 16 P **P** **11 19 03.3 -0.6**
MAT S **S** **11 24 47.1 +5.1**
MJAR Matsushiro Arr 36.30 16 P **P** **11 19 03.3 -0.6**
comp=Z,18nm,0.8s,baz=181,slow=9.1,SNR=29
MJAR PcP **PcP** **11 21 29.9 +1.7**
comp=Z,6.7nm,0.8s,baz=174,slow=3.5,SNR=6.3
MJAR ScP **ScP** **11 25 17.0 +5.3**
comp=Z,2.6nm,1.0s,baz=190,slow=2.5,SNR=4.4
MJAR LR LR 11 33 06.0
comp=Z,836nm,21.6s,baz=195,slow=35
MJAR Matsushiro Arr 36.30 16 P **P** **11 19 02.5 -1.4**
MJB9 Matsu-Tunnel 36.30 16 P **P** **11 19 01.8 -2.1**
MJB9 IAmb IAmb 11 19 24.9
comp=Z,51nm,0.6s
STKA Stephens Creek 36.41 158 P **P** **11 19 04.2 -0.6**
comp=Z,35nm,0.8s,baz=335,slow=8.7,SNR=26
STKA Stephens Creek 36.41 158 P **P** **11 19 04.2 -0.6**
baz=36,SNR=18
STKA Stephens Creek 36.41 158 P **P** **11 19 04.0 -0.8**
HTT Haliett 36.92 162 P **P** **11 19 10.2 +1.0**
baz=37,SNR=4.9
RKGY Rocky Gully 37.23 193 P **P** **11 19 13.5 +1.7**
baz=37,SNR=15
DL2 Dalian 37.24 354 P **P** **11 19 13.3 +1.5**
DL2 S **S** **11 24 59.6 +3.4**
DL2 pmax pmax
comp=Z,95nm,1.0s
DL2 pmax pmax
comp=Z,260nm,3.5s
DL2 LR LR
comp=Z,770nm,15.1s
DL2 LR LR
comp=Z,570nm,16.9s
DL2 LR LR
comp=Z,1μm,19.6s
CMSA Cobar Meteorol 37.82 153 P **P** **11 19 17.7 +0.9**
baz=38,SNR=8.3
TIY Taiyuan 38.04 342 *e*P **P** **11 19 18.8 +0.1**
TIY pmax pmax
comp=Z,24nm,0.5s
BJT Baijiatuau 39.22 348 P **P** **11 19 28.2 -0.3**
BJT pmax pmax
comp=Z,40nm,0.9s
BJT Baijiatuau 39.22 348 P **P** **11 19 28.2 -0.3**
BJT IAmb IAmb 11 19 35.9
comp=Z,40nm,0.9s
BJI Beijing 39.24 348 P **P** **11 19 29.0 +0.4**
BJI PcP **PcP** **11 21 39.6 +2.5**
BJI S **S** **11 25 28.5 +2.1**
BJI pmax pmax
comp=Z,46nm,1.0s
BJI LR LR
comp=Z,360nm,19.6s
BJI LR LR
comp=Z,510nm,19.2s
ARMA Armidale 40.01 145 P **P** **11 19 36.1 +0.9**
baz=40,SNR=14
ARMA Armidale 40.01 145 P **P** **11 19 34.5 -0.8**
ARMA IAmb IAmb 11 19 53.4
comp=Z,60nm,1.1s
LZH Lanzhou 40.06 331 *e*P **P** **11 19 36.5 +0.7**
LZH pP sP 11 19 49.4 -1.8
LZH sP pP 11 19 54.8 +8.2
LZH PcP **PcP** **11 21 42.4 +2.3**
LZH S **S** **11 25 32.4 -6.9**
LZH pmax pmax
comp=Z,130nm,1.2s
LZH LR LR
comp=Z,780nm,13.3s
LZH LR LR
comp=Z,800nm,14.3s
LZH LR LR
comp=Z,1μm,15.2s
SHL Shillong 40.83 308 P **P** **11 19 41.4 -0.9**
SNR=45
SHL Shillong 40.83 308 P **P** **11 19 40.6 -1.7**
SHL pmax pmax
comp=Z,128nm,1.1s
SHL Shillong 40.83 308 P **P** **11 19 40.5 -1.7**
SHL IAmb IAmb 11 19 44.0
comp=Z,128nm,1.1s
ARPS Mount Arapiles 40.91 161 P **P** **11 19 42.9 +0.4**
baz=41,SNR=28
HHC Hu-ho-hao-te 41.18 343 *e*P **P** **11 19 46.9 +2.0**
HHC S **S** **11 25 58.1 +2.4**
HHC pmax pmax
comp=Z,39nm,1.0s
HHC pmax pmax
comp=Z,150nm,5.3s
HHC LR LR
comp=Z,800nm,22.0s
HHC LR LR
comp=Z,570nm,21.2s
HHC LR LR
comp=Z,2μm,23.5s
BTO Baotou 41.44 341 *e*P **P** **11 19 43.8 -3.2**
CN2 Changchun 41.89 359 *e*P **P** **11 19 49.9 -0.5**
CN2 *e*S **S** **11 26 04.6 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,4.0s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,500nm,17.0s
CN2 LR LR
comp=Z,800nm,19.0s
USA0B Ussuriysk Arra 42.56 6 *c i*P **P** **11 19 57.3 +1.4**
USA0B Ussuriysk Arra 42.56 6 P **P** **11 19 56.7 +0.8**
USRK Ussuriysk Ar. 42.56 6 P **P** **11 19 56.3 +0.4**
comp=Z,19nm,0.8s,baz=193,slow=4.1,SNR=23
USRK LR LR 11 35 39.9
comp=Z,381nm,20.8s,baz=185,slow=33
MDJ Mudanjiang 42.78 3 P **P** **11 19 59.0 +1.3**
MDJ PP **PP** **11 21 38.8 +1.2**
MDJ S **S** **11 26 22.3 +3.3**
MDJ pmax pmax
comp=Z,34nm,1.3s
MDJ LR LR
comp=Z,420nm,6.0s
MDJ LR LR
comp=Z,420nm,5.6s
MDJ LR LR
comp=Z,1μm,23.7s
MDJ Mudanjiang 42.78 3 P **P** **11 19 57.6 -0.1**
H11S3 WAKE ISLAND Hy 42.83 64 T T 12 07 03.7
baz=252,slow=75,SNR=70
H11S2 WAKE ISLAND Hy 42.85 64 T T 12 07 26.9
baz=252,slow=75,SNR=47
H11S1 WAKE ISLAND Hy 42.85 64 T T 12 07 26.7
baz=252,slow=75,SNR=33
TOO Toolangi 42.92 158 P **P** **11 20 00.5 +1.5**
baz=43,SNR=10.0
TOO Toolangi 42.92 158 P **P** **11 20 01.6 +2.6**
TOO pmax pmax
comp=Z,58nm,1.4s
TOO Toolangi 42.92 158 P **P** **11 20 01.6 +2.6**
H11N1 WAKE ISLAND Hy 43.41 63 T T 12 07 52.5
baz=251
H11N2 WAKE ISLAND Hy 43.42 63 T T 12 08 12.7
baz=251
H11N3 WAKE ISLAND Hy 43.42 63 T T 12 07 41.5
baz=251
LSA Lhasa 43.54 313 P **P** **11 20 05.0 +0.4**
LSA sP **pwP** **11 20 17.8 +0.2**
LSA pmax pmax
comp=Z,230nm,1.3s
LSA LR LR
comp=Z,1μm,27.0s
LSA LR LR
comp=Z,900nm,24.2s
LSA LR LR
comp=Z,1μm,25.6s
LSA Lhasa 43.54 313 IAmb IAmb 11 20 07.1
comp=Z,51nm,0.9s
TEY Ternei 44.04 10‖ *e*P **P** **11 20 09.1 +1.3**
TEY pmax pmax
comp=N,40nm,0.6s
TEY pmax pmax
comp=Z,80nm,0.7s
ASAJ Asahikawa 44.57 17 P **P** **11 20 13.5 +1.4**
comp=Z,30nm,0.9s,baz=223,slow=7.4,SNR=18
ASAJ LR LR 11 37 58.9
comp=Z,546nm,20.3s,baz=197,slow=35
JKA Kamikawa-asahi 44.57 17 P **P** **11 20 11.2 -0.9**
JKA IAmb IAmb 11 20 15.1
comp=Z,58nm,1.0s
GTA Gaotai 44.65 330 P **P** **11 20 13.4 +0.4**
GTA pP pP 11 20 23.6 -0.3
GTA sP sP 11 20 28.3 -0.2
GTA PcP **PP** **11 21 57.5 -0.2**
GTA S **S** **11 26 44.3 -2.3**
GTA pmax pmax
comp=Z,23nm,1.4s
GTA pmax pmax
comp=Z,180nm,4.8s
GTA LR LR
comp=Z,550nm,21.5s
GTA LR LR
comp=Z,800nm,19.6s
GTA LR LR
comp=Z,1μm,22.9s
TAPN Taplejung 44.96 308 *e*P **P** **11 20 15.4 -0.5**
comp=Z,116nm,1.1s
ODAN Odare 44.99 307 *e*P **P** **11 20 15.7 -0.3**
comp=Z,60nm,0.7s
RAMN Ramite 45.66 307 *e*P **P** **11 20 21.1 -0.3**
comp=Z,93nm,0.9s
DZM Mont Dzumac 45.68 124 *e*P **P** **11 20 20.7 -0.7**
comp=Z,57nm,1.2s
DZM *e*S **S** **11 26 58.8 -3.1**
DZM comp=Z,460nm,38.0s *e*LR LR 11 33 12.2
comp=Z,1μm,23.9s
DZM Mont Dzumac 45.68 124 P **P** **11 20 21.6 +0.3**
PALK Pallekele 45.88 278 P **P** **11 20 24.7 +1.6**
PALK P **P** **11 20 24.7 +1.6**
PALK Pallekele 45.88 278 P **P** **11 20 22.2 -0.9**
PALK pmax pmax
comp=Z,67nm,1.4s
PALK Pallekele 45.88 278 P **P** **11 20 22.2 -0.9**
PALK IAmb IAmb 11 20 27.6
comp=Z,67nm,1.4s
GUN Gumba 46.66 308 *e*P **P** **11 20 28.7 -0.7**
comp=Z,122nm,0.8s
PKI Pulchoki 46.89 307 *e*P **P** **11 20 30.1 -1.0**
comp=Z,119nm,1.3s
PKIN Phulchoki 46.90 307 *e*P **P** **11 20 30.2 -0.9**
comp=Z,131nm,1.5s
KKN Kakani 47.08 307 *e*P **P** **11 20 31.8 -0.7**
comp=Z,26nm,1.4s
DMN Daman 47.14 307 *e*P **P** **11 20 32.4 -0.6**
comp=Z,150nm,1.3s
YSS Yuzh-Sakhalins 47.23 15‖ *e*P **P** **11 20 33.0 0.0**
YSS pmax pmax
comp=Z,50nm,1.2s
YSS MLR MLR
comp=Z,300nm,15.0s
KLR Kul'dur 47.53 5 P **P** **11 20 35.6 +0.3**
comp=Z,16nm,0.8s,baz=177,slow=7.0,SNR=28
KLR Kul'dur 47.53 5 *ce*P **P** **11 20 34.5 -0.8**
KLR pmax pmax
comp=Z,13nm,0.8s
GKN Gorkha 47.69 307 *e*P **P** **11 20 36.3 -0.8**
comp=Z,176nm,1.3s
HIA Hailar 47.69 354 P **P** **11 20 37.9 +1.3**
HIA pmax pmax
comp=Z,70nm,1.2s
HIA Hailar 47.69 354 P **P** **11 20 37.9 +1.3**
HIA IAmb IAmb 11 20 40.5
comp=Z,70nm,1.2s
KOLN Koldanda 48.42 306 *e*P **P** **11 20 42.6 -0.2**
comp=Z,130nm,0.8s
DANN Dangsing 48.54 307 *e*P **P** **11 20 43.3 -0.5**
comp=Z,117nm,0.7s
ULN Ulaanbaatar 48.91 343 P **P** **11 20 46.8 +0.6**
ULN Ulaanbaatar 48.91 343 *ce*P **P** **11 20 46.3 +0.1**
ULN pmax pmax
comp=Z,41nm,1.0s
ULN Ulaanbaatar 48.91 343 P **P** **11 20 45.9 -0.2**
ULN IAmb IAmb 11 20 48.3
comp=Z,44nm,1.1s
PYUN Piuthan 49.05 306 *e*P **P** **11 20 47.6 -0.1**
comp=Z,239nm,0.9s
SONM Songino Array 49.08 342 P **P** **11 20 47.4 0.0**
comp=Z,27nm,1.1s,baz=162,slow=6.2,SNR=67
SONM PcP **PcP** **11 22 11.6 +1.0**
comp=Z,10.0nm,0.9s,baz=163,slow=4.6,SNR=4.4
SONM LR LR 11 44 52.2
comp=Z,555nm,19.0s,baz=164,slow=40
SONM Songino Array 49.08 342 P **P** **11 20 47.0 -0.4**
GRNR Gornyy 49.58 8‖ *i*P **P** **11 20 52.0 +0.9**
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR MLR MLR
comp=N,140nm,15.0s
GRNR MLR MLR
comp=Z,250nm,12.0s
CIT Chita 51.25 350 *e*P **P** **11 21 05.5 +1.8**
CIT *e* 11 21 14.6
CIT *e* 11 22 23.4
CIT pmax pmax
comp=Z,294nm,2.1s
ZEA Zeya 51.83 1 *e*P **P** **11 21 08.0 +0.1**
ZEA *e*S **S** **11 28 32.0 +4.6**
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA smax smax
comp=E,200nm,4.2s
ZEA MLR MLR
comp=N,500nm,13.0s
ZAK Zakamensk 52.29 341 *e*P **P** **11 21 11.5 -0.1**
ZAK pmax pmax
comp=Z,10.0nm,1.1s
TLY Talaya 53.31 343 P **P** **11 21 19.4 +0.4**
comp=Z,7.9nm,0.5s,baz=184,slow=6.0,SNR=12
TLY Talaya 53.31 343 P **P** **11 21 20.0 +1.0**
TLY Talaya 53.31 343 *e*P **P** **11 21 20.3 +1.3**
TLY *e*S **S** **11 28 56.0 +8.2**
TLY pmax pmax
comp=Z,80nm,1.0s
TLY MLR MLR
comp=Z,1μm,19.0s
TLY Talaya 53.31 343 P **P** **11 21 18.7 -0.3**
IRK Irkutsk 53.62 343 *e*P **P** **11 21 22.4 +1.1**
IRK pmax pmax
comp=Z,97nm,2.7s
MOY Mondy 54.14 341 *e*P **P** **11 21 26.5 +1.3**
MOY pmax pmax
comp=Z,81nm,1.7s
WMQ Urumqi 54.18 326 *e*P **P** **11 21 26.3 +0.7**
WMQ pP pwP 11 21 37.9 -0.9
WMQ pmax pmax
comp=Z,48nm,1.3s
WMQ pmax pmax
comp=Z,270nm,3.6s
WMQ LR LR
comp=Z,750nm,20.3s
WMQ LR LR
comp=Z,490nm,13.7s
WMQ LR LR
comp=Z,1μm,26.3s
WMQ Urumqi 54.18 326 P **P** **11 21 25.0 -0.6**
WMQ pmax pmax
comp=Z,65nm,1.3s
WMQ Urumqi 54.18 326 P **P** **11 21 25.0 -0.6**
WMQ IAmb IAmb 11 21 28.7
comp=Z,65nm,1.3s
SKR Severo-Kuril's 54.85 23 *e*P **P** **11 21 32.1 +1.9**
SKR *e*S **S** **11 29 12.9 +4.4**
SKR pmax pmax
comp=Z,24nm,1.4s
SKR pmax pmax
comp=Z,200nm,7.0s
SKR MLR MLR
comp=Z,800nm,15.0s
SKR MLR MLR
comp=Z,400nm,15.0s
BHK Bhakra 55.60 307 *ex* P **P** **11 21 37.0 +1.0**
BOD Bodaibo 56.77 352 *e*P **P** **11 21 44.0 +0.2**
BOD pmax pmax
comp=Z,58nm,1.6s
PEA0B Petropavlovsk- 57.38 22 *ce*P **P** **11 21 51.3 +3.1**
PETK Petropavlovsk- 57.38 22 P **P** **11 21 49.1 +0.9**
comp=Z,14nm,0.8s,baz=182,slow=3.6,SNR=29
PETK LR LR 11 45 22.7
comp=Z,151nm,21.0s,baz=202,slow=35
PETK Petropavlovsk- 57.38 22 P **P** **11 21 46.6 -1.6**
ZSN Zaisan 58.00 328 *e*P **P** **11 21 52.5 -0.3**
comp=Z,11nm,1.2s,baz=328
ZSN Zaisan 58.00 328 *e*P **P** **11 21 52.4 -0.3**
ZSN pmax pmax
comp=Z,11nm,1.2s
SHLS Shalkode 58.68 321 *e*P **P** **11 21 55.8 -1.9**
comp=Z,48nm,1.0s,baz=321
SHLS *e*S **S** **11 29 57.0 -2.7**
baz=321
SHLS Shalkode 58.68 321 *e*P **P** **11 21 55.8 -1.9**
SHLS *e*S **S** **11 29 57.0 -2.7**
SHLS pmax pmax
comp=Z,48nm,1.0s
PDGK Podgornoye 58.75 321 *i* P **P** **11 21 57.1 -1.1**
PDGK pmax pmax
comp=Z,60nm,0.9s
NIL Nilore 58.90 309 P **P** **11 21 58.8 -0.5**
NIL P **P** **11 21 58.8 -0.5**
NIL Nilore 58.90 309 P **P** **11 21 57.9 -1.5**
NIL pmax pmax
comp=Z,33nm,1.0s
NIL Nilore 58.90 309 P **P** **11 21 57.9 -1.5**
NIL IAmb IAmb 11 22 01.1
comp=Z,34nm,0.9s
PRZ Przheval'sk 59.01 320 P **P** **11 21 59.6 -0.5**
PRZ pmax pmax
comp=Z,76nm,0.9s
PRZ Przheval'sk 59.01 320 P **P** **11 21 59.6 -0.5**
MK31 Makanchi Array 59.01 326 *i* P **P** **11 21 59.0 -0.8**
MK31 pmax pmax
comp=Z,14nm,0.5s
MK31 Makanchi Array 59.01 326 P **P** **11 21 59.7 -0.2**
MK31 IAmb IAmb 11 22 02.9
comp=Z,26nm,0.8s
MKAR Makanchi Array 59.01 326 P **P** **11 21 59.5 -0.3**
comp=Z,20nm,0.5s,baz=120,slow=8.0,SNR=95
MKAR PcP **PcP** **11 22 49.5 +1.0**
comp=Z,22nm,0.8s,baz=121,slow=5.8,SNR=6.0
MKAR ScP **ScP** **11 26 49.8 +3.7**
comp=Z,2.5nm,1.0s,baz=104,slow=6.1,SNR=3.7
MKAR S **S** **11 30 08.0 +4.3**
comp=Z,1.2nm,0.9s,baz=123,slow=13,SNR=5.3
MKAR LR LR 11 47 54.1
comp=Z,938nm,21.9s,baz=116,slow=37
MKAR Makanchi Array 59.01 326 P **P** **11 21 59.2 -0.6**
MAKZ Makanchi 59.19 326 P **P** **11 22 00.2 -0.9**
MAKZ pmax pmax
comp=Z,53nm,1.0s
MAKZ Makanchi 59.19 326 P **P** **11 22 00.2 -0.9**
KSH Kashi 59.24 316 P **P** **11 22 03.8 +2.1**
KSH pP pwP 11 22 14.3 -0.7
KSH S **S** **11 30 09.5 +2.4**
KSH pmax pmax
comp=Z,64nm,1.0s
KSH pmax pmax
comp=Z,450nm,4.2s
KSH LR LR
comp=Z,420nm,8.8s
KSH LR LR
comp=Z,420nm,8.9s
KSH LR LR
comp=Z,940nm,17.9s
SATY Saty 59.29 321 *i* P **P** **11 22 01.7 -0.4**
comp=Z,50nm,1.2s,baz=321
SATY *e*S **S** **11 30 08.6 +0.8**
baz=321
SATY Saty 59.29 321 *i* P **P** **11 22 01.6 -0.4**
SATY *e*S **S** **11 30 08.5 +0.8**
SATY pmax pmax
comp=Z,50nm,1.2s
KPKS Kokpek 59.33 321 *e*P **P** **11 22 01.5 -0.7**
comp=Z,45nm,0.9s,baz=321
KPKS Kokpek 59.33 321 *e*P **P** **11 22 01.4 -0.7**
KPKS pmax pmax
comp=Z,45nm,0.9s
YAK Yakutsk 60.19 2 P **P** **11 22 08.0 +0.5**
comp=Z,33nm,0.7s,baz=184,slow=2.7,SNR=25
YAK Yakutsk 60.19 2 *e*P **P** **11 22 07.2 -0.4**
YAK *e**PP **sP** **11 22 22.7 -0.7**
YAK *e* 11 22 49.0
YAK *e* 11 24 21.8
YAK *e*S **S** **11 30 19.6 +1.4**
YAK *e**SS sS 11 30 45.4 +8.5
YAK *e* 11 31 51.1
YAK *e*SS **SS** **11 34 13.3 -2.6**
YAK pmax pmax
comp=Z,95nm,0.9s
YAK pmax pmax
comp=N,25nm,1.0s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=Z,134nm,2.3s
YAK pmax pmax
comp=N,93nm,2.1s
YAK smax smax
comp=N,640nm,4.1s
YAK smax smax
comp=E,408nm,3.0s
YAK Yakutsk 60.19 2 P **P** **11 22 07.0 -0.6**
MDOK Medeo 60.21 320 *e*P **P** **11 22 07.9 -0.5**
baz=320
MDOK Medeo 60.21 320 *e*P **P** **11 22 07.8 -0.5**
TNSS Tian-Shan 60.21 320 *e*P **P** **11 22 08.6 -0.1**
baz=320
TNSS Tian-Shan 60.21 320 *e*P **P** **11 22 08.5 -0.1**
TDK Taldyqorghan 60.29 323 *e*P **P** **11 22 09.0 +0.4**
comp=E,30nm,0.7s,baz=322
TDK Taldyqorghan 60.29 323 *e*P **P** **11 22 09.0 +0.4**
TDK pmax pmax
comp=Z,30nm,0.7s
AAA Alma-Ata 60.32 320 *e*P **P** **11 22 10.1 +1.2**
comp=Z,28nm,0.9s,baz=320
AAA Alma-Ata 60.32 320 *e*P **P** **11 22 10.1 +1.2**
AAA pmax pmax
comp=Z,28nm,0.9s
BOOM Boomskoye usch 60.61 319 P **P** **11 22 11.3 +0.2**
BOOM pmax pmax
comp=Z,34nm,1.1s
BOOM Boomskoye usch 60.61 319 P **P** **11 22 11.3 +0.2**
BOOM IAmb IAmb 11 22 13.8

comp=Z,34nm,1.1s
MA2 Magadan 60.69 14 P **P 11 22 12.9 +1.8**
comp=Z,51nm,0.8s,baz=211,slow=7.4,SNR=12
MA2 Magadan 60.69 14 *ce*P **P 11 22 13.3 +2.2**
MA2 pmax pmax
comp=Z,100nm,1.7s
TUWZ Tuamarina 60.81 141 P **P 11 22 10.9 -1.4**
KUU Kurty 61.01 321 *e*P **P 11 22 12.9 -0.7**
comp=Z,100nm,1.0s,baz=321
KUU Kurty 61.01 321 *e*P **P 11 22 12.9 -0.7**
KUU pmax pmax
comp=Z,100nm,1.0s
TKM2 Tokmak 2 61.03 319 P **P 11 22 13.6 -0.4**
SNR=29
TKM2 Tokmak 2 61.03 319 *i* P **P 11 22 13.3 -0.7**
TKM2 pmax pmax
comp=Z,24nm,0.9s
URZ Urewera 61.32 136 P **P 11 22 15.2 -0.5**
URZ IAmb IAmb 11 22 39.8
comp=Z,35nm,1.0s
KBK Karagaybulak 61.33 319 P **P 11 22 15.9 -0.1**
SNR=16
UCH Uchtor 61.43 318 P **P 11 22 18.9 +1.9**
SNR=18
CHMS Chumysh 61.62 319 P **P 11 22 17.2 -0.5**
SNR=6.2
AAK Ala-Archa 61.62 319 P **P 11 22 17.5 -0.5**
SNR=12
AAK Ala-Archa 61.62 319 P **P 11 22 18.1 +0.1**
AAK Ala-Archa 61.62 319 P **P 11 22 17.2 -0.8**
AAK IAmb IAmb 11 22 31.4
comp=Z,29nm,1.2s
SGDS Sogindy 61.90 320 *e*P **P 11 22 18.4 -1.4**
comp=Z,13nm,1.2s,baz=320
SGDS Sogindy 61.90 320 *e*P **P 11 22 18.3 -1.4**
SGDS pmax pmax
comp=Z,13nm,1.2s
USP Ospenovka 61.90 319 P **P 11 22 19.4 -0.3**
SNR=34
AML Almayashu 61.93 318 P **P 11 22 20.1 -0.3**
SNR=78
EKS2 Erkin-Say 62.11 318 P **P 11 22 21.1 -0.1**
SNR=25
ZAA0 Zalesovo Array 62.21 334 P **P 11 22 20.8 -0.7**
ZALV Zalesovo Beam 62.21 334 P **P 11 22 20.3 -1.1**
comp=Z,5.2nm,0.4s,baz=127,slow=6.2,SNR=28
ZALV LR LR 11 50 08.7
comp=Z,201nm,20.4s,baz=151,slow=37
ZALV PKP2bc 11 51 33.7
comp=Z,0.3nm,0.3s,baz=316,slow=4.0,SNR=2.2
ZALV Zalesovo Beam 62.21 334 *i* P **P 11 22 19.8 -1.6**
ZALV pmax pmax
comp=Z,5.0nm,0.4s
ZALV Zalesovo Beam 62.21 334 P **P 11 22 19.6 -1.8**
KBL Kabul 62.49 308 P **P 11 22 23.7 -0.2**
SNR=23
KBL P **P 11 22 23.7 -0.2**
SNR=23
KBL Kabul 62.49 308 P **P 11 22 23.0 -1.0**
KBL pmax pmax
comp=Z,43nm,1.0s
KBL Kabul 62.49 308 P **P 11 22 23.0 -1.0**
KBL IAmb IAmb 11 22 26.3
comp=Z,43nm,1.0s
BTLS Baital 63.00 321 *e*P **P 11 22 25.9 -1.0**
comp=Z,7.7nm,0.9s,baz=321
BTLS Baital 63.00 321 *e*P **P 11 22 25.9 -1.0**
BTLS pmax pmax
comp=Z,8.0nm,0.9s
GAR Garm 63.04 313 P **P 11 22 26.6 -0.8**
BTK Batken 63.08 315 P **P 11 22 26.8 -0.8**
BTK pmax pmax
comp=Z,38nm,0.9s
BTK Batken 63.08 315 P **P 11 22 26.8 -0.8**
BTK IAmb IAmb 11 22 30.7
comp=Z,38nm,0.8s
KURBB Kurchatov Arra 63.24 328 P **P 11 22 27.9 -0.5**
comp=Z,37nm,0.7s,baz=131,slow=6.2,SNR=111
KURBB Kurchatov Arra 63.24 328 P **P 11 22 27.2 -1.2**
KURK Kurchatov 63.25 328 P **P 11 22 27.7 -0.7**
KURK P **P 11 22 27.7 -0.7**
KURK Kurchatov 63.25 328 *ce*P **P 11 22 27.8 -0.7**
KURK pmax pmax
comp=Z,110nm,1.3s
KURK Kurchatov 63.25 328 P **P 11 22 27.6 -0.7**
CHGR Chuyangaron 63.77 313 P **P 11 22 31.2 -1.0**
DZA Taraz 63.84 318 *e*P **P 11 22 32.7 +0.2**
comp=Z,11nm,0.6s,baz=318
DZA Taraz 63.84 318 *e*P **P 11 22 32.7 +0.2**
DZA pmax pmax
comp=Z,11nm,0.6s
SEY Seymchan 64.02 13 P **P 11 22 34.6 +1.3**
comp=Z,28nm,1.0s,baz=203,slow=6.0,SNR=14
SEY Seymchan 64.02 13 *i* P **P 11 22 35.9 +2.6**
IUG Iuzhnay 64.43 317 *e*P **P 11 22 35.8 -0.7**
comp=Z,20nm,0.8s,baz=317
IUG Iuzhnay 64.43 317 *e*P **P 11 22 35.8 -0.7**
IUG pmax pmax
comp=Z,20nm,0.8s
KK31 Karatay Array 64.47 318 *i* P **P 11 22 35.6 -1.1**
KK31 Karatay Array 64.47 318 IAmb IAmb 11 22 38.3
comp=Z,23nm,0.9s
KKAR Karatay Array 64.47 318 P **P 11 22 35.5 -1.2**
KKAR Karatay Array 64.47 318 P **P 11 22 35.5 -1.2**
KKAR Karatay Array 64.47 318 IAmb IAmb 11 22 38.3
comp=Z,23nm,0.9s
BRZS Berezniki 66.13 325 *e*P **P 11 22 46.5 -0.7**
comp=Z,20nm,1.2s,baz=325
BRZS Berezniki 66.13 325 *e*P **P 11 22 46.5 -0.7**
BRZS pmax pmax
comp=Z,20nm,1.2s
HRA Herat 67.85 307 P **P 11 22 57.0 -1.8**
BVAR Borovoye Array 68.81 328 P **P 11 23 04.5 +0.4**
comp=Z,16nm,0.9s,baz=142,slow=14,SNR=64
BRVK Borovoye 68.88 328 P **P 11 23 04.7 +0.2**
BRVK P **P 11 23 04.7 +0.2**
BRVK Borovoye 68.88 328 *i* P **P 11 23 03.8 -0.8**
BRVK pmax pmax
comp=Z,38nm,0.8s
BRVK Borovoye 68.88 328 P **P 11 23 03.6 -1.0**
BRVK IAmb IAmb 11 23 06.9
comp=Z,44nm,0.8s
MHTO MHTO 69.28 292 P **P 11 23 07.4 -0.2**
MHTO P **P 11 23 07.4 -0.2**
TIXI Tiksi 69.82 1 *ce*P **P 11 23 09.3 -0.7**
TIXI Tiksi 69.82 1 P **P 11 23 09.9 -0.1**
UOSS Minazif 71.35 296 P **P 11 23 19.9 -0.4**
GYB1 ALIBECK ARRAY 71.89 309 P **P 11 23 23.2 -0.2**
GEYT Alibeck 71.90 309 P **P 11 23 24.1 +0.7**
comp=Z,15nm,0.8s,baz=145,slow=5.4,SNR=16
GEYT Alibeck 71.90 309 P **P 11 23 22.7 -0.7**
GYA0B ALIBECK ARRAY 71.90 309 P **P 11 23 22.4 -1.0**
ASUD Al Ashush, Dub 72.10 295 P **P 11 23 29.0 +4.2**
SNR=5.1
ASUD P **P 11 23 29.0 +4.2**
SNR=5.1
NRIK Noril'sk 72.27 346 P **P 11 23 25.1 +0.2**
comp=Z,57nm,0.8s,baz=126,slow=5.5,SNR=66
NRIK S **S 11 32 46.1 +1.4**
comp=Z,3.2nm,0.9s,baz=340,slow=20,SNR=11
NRIK LR LR 11 59 30.7
comp=Z,251nm,19.9s,baz=174,slow=40
NRIK Noril'sk 72.27 346 *ce*P **P 11 23 25.1 +0.2**
NRIK pmax pmax
comp=Z,61nm,0.9s
AJN Ajban 72.41 295 P **P 11 23 28.6 +2.0**
SNR=6.0
AJN P **P 11 23 28.6 +2.0**
SNR=6.0
SOCY Socotra 72.46 282 IAmb IAmb 11 23 28.7
comp=Z,47nm,0.8s
AB31 Akbulak array 73.49 321 *i* P **P 11 23 31.7 -0.8**
ABKAR Akbulak array 73.49 321 P **P 11 23 31.7 -0.8**
AKTO Aktyubinsk 75.02 322 P **P 11 23 41.3 -0.1**
comp=Z,30nm,0.7s,baz=98,slow=7.7,SNR=81
AKTO Aktyubinsk 75.02 322 *i* P **P 11 23 40.6 -0.8**
AKTO pmax pmax
comp=Z,61nm,1.0s
SVE Sverdlovsk 75.48 329 *de*P **P 11 23 43.7 -0.2**
SVE *e*S **S 11 33 20.5 -0.8**
SVE pmax pmax
comp=Z,197nm,1.2s
ARU Arti 76.44 328 P **P 11 23 48.8 -0.6**
comp=Z,20nm,0.8s,baz=83,slow=4.4,SNR=60
ARU Arti 76.44 328 *c* iP **P 11 23 48.5 -0.9**
ARU 11 26 38.1
ARU S **S 11 33 33.7 +1.8**
ARU SS **SS 11 38 27.2 +0.1**
ARU pmax pmax
comp=Z,119nm,1.0s
ARU MLR MLR
comp=Z,332nm,22.0s
ARU Arti 76.44 328 P **P 11 23 48.8 -0.6**
ABPO Ambohimpanom 80.36 250 P **P 11 24 11.0 -1.0**
ABPO pmax pmax
comp=Z,28nm,1.0s
ABPO Ambohimpanom 80.36 250 P **P 11 24 11.0 -1.0**
ABPO IAmb IAmb 11 24 33.0
comp=Z,28nm,1.0s
RAYN Ar Rayn 80.98 293 P **P 11 24 14.5 -0.6**
RAYN Ar Rayn 80.98 293 P **P 11 24 14.5 -0.6**
RAYN IAmb IAmb 11 24 21.1
comp=Z,42nm,0.9s
RDOG Red Dog Mine 81.23 21 IAmb IAmb 11 24 19.7
comp=Z,33nm,0.9s
VNDA Vanda 81.51 173 P **P 11 24 16.9 +0.1**
comp=Z,14nm,0.8s,baz=317,slow=6.0,SNR=50
VNDA LR LR 12 02 31.9
comp=Z,149nm,18.2s,baz=324,slow=37
VNDA Vanda 81.51 173 P **P 11 24 16.9 +0.1**
KIRV Kirov 81.75 329 P **P 11 24 18.8 +0.5**
comp=Z,86nm,0.9s,baz=101,slow=5.2,SNR=40
MAW Mawson 81.80 200 P **P 11 24 19.2 +0.8**
comp=Z,8.3nm,0.9s,baz=85,slow=5.5,SNR=14
MAW Mawson 81.80 200 P **P 11 24 20.0 +1.6**
baz=82,SNR=12
MAW Mawson 81.80 200 P **P 11 24 18.7 +0.3**
GNI Garni 82.51 310 *e*P **P 11 24 24.4 +1.4**
SVW2 Sparrevohn 82.68 29 P **P 11 24 25.4 +2.2**
SVW2 IAmb IAmb 11 24 27.0
comp=Z,45nm,1.3s
KZRT Kazreti 82.86 311 P **P 11 24 26.3 +1.6**
GUDG Gudauri 82.88 312 P **P 11 24 26.9 +2.0**
CLDR Caldiran 83.08 309 *e*P **P 11 24 26.5 +0.4**
CUKT Cukurca 83.22 307 *e*P **P 11 24 27.1 +0.4**
ZEI Tsey 83.32 313 *e*P **P 11 24 25.2 -2.0**
ZEI pmax pmax
comp=Z,100nm,1.3s
BGD Bogdanovka 83.45 311 P **P 11 24 30.2 +2.3**
ONI Oni 83.64 312 P **P 11 24 30.3 +1.6**
AKDM Akdamar-Van 83.77 308 *e*P **P 11 24 30.4 +0.8**
KARS Kars 83.81 310 *e*P **P 11 24 28.8 -0.9**
AGRB Hanur-Agry 83.82 309 *e*P **P 11 24 30.9 +1.0**
GOF Gofitskoye 84.09 315 ⇑*e*P **P 11 24 31.5 +0.7**
GOF pmax pmax
comp=Z,84nm,1.1s
KBZ Khabaz 84.11 314 P **P 11 24 31.1 +0.2**
comp=Z,14nm,0.7s,baz=233,slow=20,SNR=21
KBZ LR LR 12 07 23.0
comp=Z,100nm,20.9s,baz=164,slow=40
KBZ Khabaz 84.11 314 *ce*P **P 11 24 30.5 -0.4**
KBZ pmax pmax
comp=Z,47nm,1.5s
A21K Barrow 84.19 18 P **P 11 24 32.1 +1.4**
baz=258
A21K Barrow 84.19 18 P **P 11 24 29.9 -0.9**
IMAR Indian Mountai 84.27 24 P **P 11 24 31.5 +0.2**
KIV Kislovodsk 84.28 314 ⇑P **P 11 24 33.3 +1.4**
KIV Kislovodsk 84.28 314 *e*P **P 11 24 30.9 -1.0**
KIV *e* 11 34 50.6
KIV *e*SS SS 11 40 21.2 -3.7
KIV pmax pmax
comp=Z,191nm,4.1s
KIV pmax pmax
comp=Z,128nm,0.9s
KIV MLR MLR
comp=Z,635nm,19.0s
KIV Kislovodsk 84.28 314 P **P 11 24 31.7 -0.2**
KIV IAmb IAmb 11 24 37.6
comp=Z,36nm,0.8s
SENK Senkaya-Erzuru 84.36 310 *e*P **P 11 24 34.3 +1.7**
PPLA Purkeypile 84.53 27 IAmb IAmb 11 24 48.9
comp=Z,34nm,1.4s
GURO Guroymak-BITLI 84.53 308 *e*P **P 11 24 34.2 +0.8**
CNPM China Poot 84.61 30 P **P 11 24 33.3 +0.1**
CAST Castle Rocks 84.64 27 P **P 11 24 35.0 +1.8**
CHVG Ch'k'valeri 84.66 313 ⇓P **P 11 24 34.3 +0.5**
CHVG Ch'k'valeri 84.66 313 ⇓P **P 11 24 34.3 +0.5**
SKT Skwentna 84.72 28 P **P 11 24 32.8 -0.9**
SKT IAmb IAmb 11 24 35.5
comp=Z,52nm,1.2s
PPT Papeete 84.81 108 LR LR 12 00 13.8
comp=Z,139nm,20.2s,baz=258,slow=34
PPT2 Papeete2 84.81 108 *e*LR LR 11 51 24.6
comp=Z,477nm,24.8s
BRLK Bradley Lake 84.81 30 P **P 11 24 35.4 +1.2**
BATM Batumi 84.90 311 ⇓P **P 11 24 38.0 +3.0**
BATM Batumi 84.90 311 *e*P **P 11 24 36.8 +1.8**
BATM Batumi 84.90 311 ⇓P **P 11 24 38.0 +3.0**
VRTB Varto-Mus 85.00 309 *e*P **P 11 24 37.9 +2.1**
SUA Susitna One 85.04 29 P **P 11 24 34.5 -0.9**
BPAW Bear Paw Mtn. 85.19 26 P **P 11 24 38.2 +2.2**
TBI Tubuai 85.28 113 *e*LR LR 11 51 39.7
comp=Z,536nm,30.5s
VRH Novokhopyorsk 85.32 321 *e*P **P 11 24 36.8 -0.1**
VRH pmax pmax
comp=Z,290nm,0.9s
CUT Chulitna 85.36 28 P **P 11 24 38.4 +1.6**
baz=265
MLY Manley 85.40 25 P **P 11 24 39.0 +2.0**
baz=264
TRF Thorofare Moun 85.44 27 P **P 11 24 36.7 -0.8**
TRF IAmb IAmb 11 24 40.8
comp=Z,25nm,1.4s
MARD Mardin 85.48 307 P **P 11 24 39.1 +1.0**
RC01 Rabbit Creek A 85.50 29 P **P 11 24 39.1 +1.5**
baz=265
SEW Seward 85.56 30 P **P 11 24 40.0 +2.1**
CHOM Cayeli-Rize 85.58 311 *e*P **P 11 24 39.9 +1.4**
BNGB Bingl 85.60 309 *e*P **P 11 24 39.5 +0.8**
YEDI Yedisu-Bingol 85.71 309 *e*P **P 11 24 41.1 +1.8**
MAZI Mazidag 85.75 307 *e*P **P 11 24 39.5 0.0**
KOPT Kop Dagi 85.76 310 P **P 11 24 40.0 +0.3**
PMR Palmer 85.83 29 IAmb IAmb 11 24 41.2
comp=Z,39nm,1.1s
COLD Coldfoot 85.83 23 P **P 11 24 41.4 +2.3**
baz=264
COLD Coldfoot 85.83 23 P **P 11 24 38.5 -0.6**
COLD IAmb IAmb 11 24 42.9
comp=Z,24nm,0.9s
I23K Minto, Yukon-K 85.99 25 P **P 11 24 41.3 +1.4**
baz=265
I23K Minto, Yukon-K 85.99 25 P **P 11 24 37.2 -2.7**
I23K IAmb IAmb 11 24 43.9
comp=Z,45nm,1.5s
DYBB Diyarbakir 86.00 308 *e*P **P 11 24 41.3 +0.6**
MCK McKinley 86.07 26 P **P 11 24 41.4 +1.0**
baz=266
NEA2 Nenana 86.07 25 P **P 11 24 41.6 +1.3**
baz=266
RND Reindeer 86.08 27 P **P 11 24 39.3 -1.2**
RND pmax pmax
comp=Z,11nm,0.8s
RND Reindeer 86.08 27 P **P 11 24 39.3 -1.2**
KNK Knik Glacier 86.14 29 P **P 11 24 39.4 -1.3**
TOLK Toolik Lake Re 86.19 21 P **P 11 24 42.2 +1.2**
baz=265
TOLK Toolik Lake Re 86.19 21 P **P 11 24 39.9 -1.1**
TOLK IAmb IAmb 11 24 44.6
comp=Z,23nm,0.9s
KTUT Trabzon 86.33 311 ⇑P **P 11 24 44.2 +2.0**
KTUT Trabzon 86.33 311 *e*P **P 11 24 42.3 +0.2**
SOC Sochi 86.42 313 *e*P **P 11 24 39.9 -2.6**
SOC *e* 11 28 01.4
SOC *e*PPP PPP 11 29 55.8
SOC *e*S **SKSac 11 35 02.8 -3.1**
SOC *e*SSS SSS 11 44 21.4
SOC pmax pmax
comp=Z,65nm,0.8s
SOC MLR MLR
comp=Z,189nm,18.0s
MDM Murphy Dome 86.45 25 P **P 11 24 41.4 -0.8**
WRH Wood River Hil 86.48 26 P **P 11 24 41.3 -1.1**
PTK Pertek 86.60 309 *e*P **P 11 24 44.6 +0.8**
CCB Clear Creek Bu 86.62 25 P **P 11 24 41.7 -1.3**
SVRC Sivrice-ELAZID 86.66 308 *e*P **P 11 24 44.8 +0.7**
SCM Sheep Creek Mo 86.70 28 P **P 11 24 43.0 -0.6**
SCM pmax pmax
comp=Z,27nm,0.8s
SCM Sheep Creek Mo 86.70 28 P **P 11 24 43.0 -0.6**
SCM IAmb IAmb 11 25 12.4
comp=Z,27nm,0.8s
POKR Poker Plat Res 86.80 25 P **P 11 24 46.9 +2.9**
baz=267
VORD Divnogorie 86.84 321 *e*P **P 11 24 44.7 +0.3**
VORD pmax pmax
comp=Z,100nm,1.6s
VORR Voronezh 86.91 321 *e*P **P 11 24 43.0 -1.7**
VORR pmax pmax
comp=Z,350nm,1.2s
VSR Storozhevoye 86.93 321 *e*P **P 11 24 44.7 -0.1**
VSR pmax pmax
comp=Z,130nm,1.6s
KLMR Klimovskoe 86.97 331 *e*P **P 11 24 43.4 -1.4**
KLMR *e* 11 28 09.4
KLMR pmax pmax
comp=Z,47nm,0.9s
KLMR Klimovskoe 86.97 331 *e*P **P 11 24 43.5 -1.4**
KLMR AMP 11 24 45.7
comp=Z,47nm,0.9s
KLMR *e*PP **PP 11 28 09.4 +1.3**
HDA Harding Lake 86.98 26 P **P 11 24 45.2 +0.4**
baz=268
HDA Harding Lake 86.98 26 P **P 11 24 42.6 -2.2**
IL31 87.02 25 P **P 11 24 43.9 -1.0**
ILAR Eielson Array 87.02 25 P **P 11 24 45.0 0.0**
comp=Z,3.0nm,0.8s,baz=250,slow=4.5,SNR=20
ILAR Eielson Array 87.02 25 P **P 11 24 43.4 -1.6**
URFA Urfa 87.04 307 *e*P **P 11 24 46.4 +0.6**
IL18 Eielson Array 87.06 25 P **P 11 24 44.3 -1.0**
LPSR Galich'ya Gora 87.10 322 *e*P **P 11 24 46.4 +0.8**
LPSR pmax pmax
comp=Z,130nm,0.9s
ESPY Espiye-Giresun 87.12 311 *e*P **P 11 24 45.6 -0.4**
M24K Tolsona, Glenn 87.25 28 P **P 11 24 48.4 +2.1**
baz=268
M24K Tolsona, Glenn 87.25 28 P **P 11 24 44.3 -1.9**
M24K IAmb IAmb 11 24 50.5
comp=Z,42nm,1.1s
MALT Malatya 87.35 308 *e*P **P 11 24 47.9 +0.6**
KLU Klutina 87.36 29 P **P 11 24 46.3 -0.5**
KLU IAmb IAmb 11 25 14.4
comp=Z,28nm,1.2s
ARPR Arapgir-MALATY 87.42 309 *e*P **P 11 24 48.7 +1.0**
PAX Paxson 87.59 27 P **P 11 24 45.9 -2.0**
PAX pmax pmax
comp=Z,17nm,1.2s
PAX Paxson 87.59 27 P **P 11 24 45.9 -2.0**
PAX IAmb IAmb 11 24 50.1
comp=Z,17nm,1.2s
TMCR Tamitsa 87.73 334 *e*P **P 11 24 45.3 -3.1**
TMCR pmax pmax
comp=Z,49nm,0.7s
MOS Moscow 87.89 326 *e*P **P 11 24 48.1 -1.2**
MOS *e* 11 25 03.1
MOS *e*S **SKKSac 11 35 27.6 +3.2**
MOS pmax pmax
comp=Z,102nm,0.9s
N25K Chitina, Valde 87.99 29 P **P 11 24 51.8 +1.9**
baz=270
N25K Chitina, Valde 87.99 29 P **P 11 24 48.4 -1.4**
BMAR Burnt Mountain 88.02 23 P **P 11 24 47.1 -2.7**
ANN Anapa 88.06 315 *e*P P 11 24 45.8 -4.6
ANN *e* 11 35 19.8
ANN pmax pmax
comp=Z,143nm,0.8s
ANN MLR MLR
comp=Z,521nm,21.0s
RSDY Resadiye-TOKAT 88.19 310 *e*P **P 11 24 52.3 +1.1**
DOT Dot Lake 88.23 27 P **P 11 24 48.9 -1.9**
SCRK Sand Creek 88.27 26 P **P 11 24 52.3 +1.2**
baz=270
GAZ Gaziantep 88.33 307 *e*P **P 11 24 52.3 +0.3**
GLB Gilahina Butte 88.37 29 P **P 11 24 51.1 -0.5**
MENT Mentasta 88.39 27 P **P 11 24 51.5 -0.2**
KIBK Kibwezi 88.45 268 P **P 11 24 55.4 +2.4**
SNR=16
SVSK Karacayir 88.45 310 *e*P **P 11 24 53.9 +1.6**
OBN Obninsk 88.50 325 ⇓P **P 11 24 52.8 +0.6**
OBN Obninsk 88.50 325 *de*P **P 11 24 51.4 -0.8**
OBN *PP **pP 11 25 01.0 -3.1**
OBN *SP **sP 11 25 11.0 +2.5**
OBN *i* S **S 11 35 35.1 0.0**
OBN *e*PS **PnS 11 36 30.5 -12**
OBN pmax pmax
comp=Z,125nm,1.3s
OBN MLR MLR
comp=Z,456nm,22.0s
OBN Obninsk 88.50 325 P **P 11 24 50.7 -1.5**
TOKT Tokat 88.79 310 *e*P **P 11 24 54.7 +0.7**
SARI SarD1z-Kayseri 88.93 308 *e*P **P 11 24 56.0 +1.1**
BALM Baldy 89.09 29 P **P 11 24 53.8 -1.2**
BALM pmax pmax
comp=Z,11nm,0.9s
BALM Baldy 89.09 29 P **P 11 24 53.8 -1.2**
K27K Chicken 89.11 26 P **P 11 24 56.6 +1.7**
baz=272
K27K Chicken 89.11 26 P **P 11 24 55.4 +0.4**
K27K IAmb IAmb 11 24 58.1
comp=Z,29nm,1.0s
KVT Kavak 89.15 311 *e*P **P 11 24 55.9 +0.2**
KMBO Kilima Mbogo 89.20 269 P **P 11 24 59.4 +2.6**
comp=Z,6.1nm,0.7s,baz=62,slow=5.5,SNR=24
KMBO LR LR 12 02 57.4
comp=Z,244nm,19.6s,baz=94,slow=34
KMBO Kilima Mbogo 89.20 269 *i* P **P 11 25 00.7 +3.9**
KMBO pmax pmax
comp=Z,7.0nm,0.7s
KMBO Kilima Mbogo 89.20 269 P **P 11 24 56.1 -0.6**
KMBO IAmb IAmb 11 25 05.3
comp=Z,33nm,1.1s
BCAR Beaver Creek A 89.27 27 P **P 11 24 55.0 -0.8**
BNN Bunyan 89.37 309 *e*P **P 11 24 57.4 +0.5**
BARN Barnard Glacie 89.42 29 P **P 11 24 55.6 -1.1**
BARN IAmb IAmb 11 24 59.5
comp=Z,19nm,1.0s
APA Apatity 89.56 337 ⇓*i* P **P 11 24 56.1 -0.8**
APA pmax pmax
comp=Z,36nm,1.0s
DAWY Dawson 90.28 26 P **P 11 24 59.2 -1.3**
DAWY IAmb IAmb 11 25 02.9
comp=Z,14nm,1.0s
SYO Syowa Base 90.47 201 ⇓*e*P **P 11 25 00.4 -0.7**
SYO Syowa Base 90.47 201 ⇑*e*X P 11 25 10.0 +8.9
BCPM Bancas Point 90.48 30 P **P 11 24 59.4 -2.0**
ILGA Ilgaz 90.91 311 P **P 11 25 03.0 -1.1**
ILGA IAmb IAmb 11 25 05.9
comp=Z,23nm,1.0s
BR131 Keskin Array S 91.04 310 P **P 11 25 03.3 -1.4**
BR131 pmax pmax
comp=Z,8.0nm,1.0s
BR131 Keskin Array S 91.04 310 P **P 11 25 03.3 -1.4**
BRTR Keskin Array B 91.04 310 P **P 11 25 04.2 -0.5**
comp=Z,8.6nm,0.9s,baz=122,slow=4.7,SNR=27
BRTR LR LR 12 11 54.0
comp=Z,84nm,21.9s,baz=100,slow=40
BRTR Keskin Array B 91.04 310 *e*P **P 11 25 04.2 -0.5**
BRTR Keskin Array B 91.04 310 *i* P **P 11 25 04.4 -0.3**
BRTR pmax pmax
comp=Z,9.0nm,0.9s
BRTR Keskin Array B 91.04 310 P **P 11 25 02.4 -2.3**
EPYK Eagle Plains 91.17 24 P **P 11 25 05.0 +0.4**
baz=277
EPYK Eagle Plains 91.17 24 P **P 11 25 04.0 -0.5**
EPYK IAmb IAmb 11 25 06.5
comp=Z,37nm,1.4s
CSS Mathiatis 91.55 305 P **P 11 25 06.1 -0.9**
QSPA South Pole Qui 91.66 180 P **P 11 25 08.0 +1.1**
QSPA IAmb IAmb 11 25 26.8
comp=Z,13nm,1.1s
INK Inuvik 92.11 21 P **P 11 25 08.4 -0.4**
comp=Z,13nm,1.1s,baz=291,slow=5.2,SNR=19
INK Inuvik 92.11 21 IAmb IAmb 11 25 10.6
comp=Z,22nm,1.1s
ARD3 ARCESS Array S 92.18 340 P **P 11 25 08.3 -0.8**
ARA0 ARCESS Array S 92.19 340 *e*P **P 11 25 09.2 0.0**
ARCES ARCESS Array B 92.19 340 P **P 11 25 08.6 -0.6**
comp=Z,26nm,0.8s,baz=87,slow=4.1,SNR=27
ARCES PKKP **PKKPdf 11 42 25.2 +0.7**
comp=Z,1.6nm,0.8s,baz=251,slow=3.0,SNR=6.9
ARCES LR LR 12 10 33.4
comp=Z,295nm,21.7s,baz=55,slow=38
ARD7 ARCESS Array S 92.21 340 P **P 11 25 07.7 -1.5**
SPA0 Spitsbergen Ar 92.35 349 *e*P **P 11 25 09.1 -0.7**

SPITS	Spitsbergen Ar	92.35	349	P		P	11 25 10.1	+0.3		
	comp=Z,7.0nm,0.8s,baz=76,slow=6.1,SNR=1.5									
HAMF	Hammerfest	92.58	341	*eP*		P	11 25 10.5	-0.4		
SKAG	Skagway	92.71	30	P		P	11 25 11.3	-0.5		
SKAG				IAmb		IAmb	11 25 14.7			
	comp=Z,15nm,1.0s									
WHY	Whitehorse	92.76	29	P		P	11 25 11.8	-0.4		
WHY				IAmb		IAmb	11 25 15.1			
	comp=Z,31nm,1.2s									
KBS	Kingsbay	92.89	350	*eP*		P	11 25 11.4	-0.8		
BESE	Bessie Mountai	93.08	31	IAmb		IAmb	11 25 16.6			
	comp=Z,30nm,1.2s									
KTK1	Kautokeino	93.09	339	*eP*		P	11 25 13.0	-0.3		
AKASG	Malin Array Be	93.23	321	P		P	11 25 13.5	-0.9		
	comp=Z,7.1nm,0.8s,baz=70,slow=4.4,SNR=14									
AKASG				LR		LR	12 11 03.9			
	comp=Z,356nm,21.4s,baz=85,slow=38									
AKASG	Malin Array Be	93.23	321	*i* P		P	11 25 14.3	0.0		
AKASG				pmax		pmax				
	comp=Z,7.0nm,0.8s									
AKASG	Malin Array Be	93.23	321	P		P	11 25 13.8	-0.6		
AKBB	Malin Array Si	93.23	321	*ce*P		P	11 25 14.3	0.0		
AKBB	Malin Array Si	93.23	321	P		P	11 25 13.7	-0.7		
AKBB				IAmb		IAmb	11 25 15.1			
	comp=Z,10nm,0.9s									
PURM	Purcari	93.26	317	⇑P		P	11 25 15.8	+1.2		
FINES	FINESS Array B	93.42	332	P		P	11 25 15.2	+0.2		
	comp=Z,9.6nm,0.9s,baz=58,slow=4.6,SNR=23									
FINES				LR		LR	12 10 20.7			
	comp=Z,295nm,21.3s,baz=71,slow=38									
FINES	FINESS Array B	93.42	332	*i* P		P	11 25 14.8	-0.2		
FINES				pmax		pmax				
	comp=Z,10.0nm,0.9s									
TAOE	Nuku Hiva Isla	93.66	99	*e*LR		LR	11 55 27.9			
	comp=Z,526nm,23.7s									
SORM	Soroca	94.10	318	⇑P		P	11 25 18.9	+0.5		
SORM	Soroca	94.10	318	⇑P		P	11 25 18.9	+0.5		
NACGM	Naroch	94.13	325	*e*		P	11 25 18.0	-0.4		
TRO	Tromso	94.41	340	*e*P		P	11 25 18.3	-1.1		
CFR	Carcaliu	94.62	315	⇓P		P	11 25 23.0	+2.1		
CFR	Carcaliu	94.62	315	⇓P		P	11 25 23.0	+2.1		
C36M	Paulatuk	95.17	20	P		P	11 25 23.1	+0.3		
	baz=289									
TESR	Tescani	95.47	317	⇓P		P	11 25 25.6	+0.8		
VRI	Vrincioaia	95.51	316	⇑P		P	11 25 26.5	+1.6		
VRI	Vrincioaia	95.51	316	⇑P		P	11 25 26.5	+1.6		
PLOR	Plostina	95.56	316	⇑P		P	11 25 26.7	+1.4		
PLOR	Plostina	95.56	316	⇑P		P	11 25 26.7	+1.4		
DLBC	Dease Lake	95.59	31	P		P	11 25 27.1	+2.0		
DLBC				IAmb		IAmb	11 25 28.0			
	comp=Z,25nm,1.4s									
BIZ	Bicaz	95.78	317	⇑P		P	11 25 27.4	+1.2		
NEHR	Nehoiu	95.87	316	⇑P		P	11 25 28.3	+1.6		
MLR	Muntele Rosu	96.11	316	⇑P		P	11 25 29.1	+1.3		
MLR	Muntele Rosu	96.11	316	⇑P		P	11 25 29.1	+1.3		
STEI	Steigen	96.23	339	*e*P		P	11 25 26.6	-1.1		
BURAR	Bucovina Array	96.27	318	⇑P		P	11 25 29.6	+1.1		
BURAR	Bucovina Array	96.27	318	⇑P		P	11 25 29.6	+1.1		
BURAR	Bucovina Array	96.27	318	P		P	11 25 28.2	-0.3		
BUR08	Bucovina Ar. S	96.27	318	P		P	11 25 27.5	-1.1		
SUW	Suwalki	96.36	325	P		P	11 25 27.4	-1.2		
SUW				pmax		pmax				
	comp=Z,71nm,1.0s									
SUW	Suwalki	96.36	325	P		P	11 25 27.4	-1.2		
FAUS	Fauske	96.40	339	*e*P		P	11 25 27.4	-1.1		
LVV	L'vov	96.65	320	*e*P		P	11 25 29.8	-0.3		
EUNU	Eureka	96.67	5	P		P	11 25 29.3	-0.4		
EUNU				IAmb		IAmb	11 25 31.4			
	comp=Z,16nm,1.4s									
VOIR		96.73	316	⇑P		P	11 25 31.7	+1.1		
VOIR		96.73	316	⇑P		P	11 25 31.7	+1.1		
ARCR	ARCALIA	96.93	318	⇓P		P	11 25 33.1	+1.7		
ARR	Arges	97.04	316	⇑P		Pdif	11 25 32.1	+1.0		
MOR8	Moi Rana	97.14	338	*e*P		P	11 25 28.5	-3.4		
KOLS	Kolonicke sedl	97.95	320	*e*P		P	11 25 36.0	0.0		
KOLS	Kolonicke sedl	97.95	320	*e*PDIFF		P	11 25 36.0	0.0		
UZH	Uzhgorod	98.00	319	*e*P		Pdif	11 25 36.5	+0.3		
UZH				*e*			11 25 50.1			
UZH				*e*			11 25 57.3			
GZR	Gura Zlata	98.32	316	⇑P		Pdif	11 25 38.9	+1.1		
GZR	Gura Zlata	98.32	316	⇑P		Pdif	11 25 38.9	+1.1		
LSZ	Lusaka	98.40	255	P		P	11 25 37.1	-1.7		
LSZ				pmax		pmax				
	comp=Z,13nm,1.2s									
LSZ	Lusaka	98.40	255	P		P	11 25 37.1	-1.7		
LSZ				IAmb		IAmb	11 25 40.6			
	comp=Z,13nm,1.1s									
CRVS	Cervenica-Dubn	98.48	320	*e*P		Pdif	11 25 38.8	+0.4		
CRVS	Cervenica-Dubn	98.48	320	*e*PDIFF		Pdif	11 25 38.8	+0.4		
SIRR	Siria	98.91	317	⇑P		Pdif	11 25 41.7	+1.4		
BZS	Buzias	99.07	317	⇑P		Pdif	11 25 41.8	+0.8		
BZS	Buzias	99.07	317	⇑P		Pdif	11 25 41.8	+0.8		
DAG	Danmarks Havn	99.17	352	*i* P		Pdif	11 25 40.0	-0.8		
DAG	Danmarks Havn	99.17	352	*i* P		Pdif	11 25 40.0	-0.8		
DAG				*i*			11 27 18.7			
DAG	Danmarks Havn	99.17	352	*i* P		Pdif	11 25 40.0	-0.8		
DAG				*i*			11 27 18.7			
PSZ	Piszkesteto	99.72	319	⇓P		Pdif	11 25 45.6	+1.6		
PSZ	Piszkesteto	99.72	319	⇓P		Pdif	11 25 45.6	+1.6		
RES	Resolute Bay	99.81	10	P		Pdif	11 25 44.0	+0.4		
	comp=Z,4.7nm,0.7s,baz=282,slow=5.5,SNR=14									
NB2	NORSAR Subarra	100.41	333	P		Pdif	11 25 45.3	-1.4		
	comp=Z,7.5nm,0.8s,baz=70,slow=4.4									
NB2	NORSAR Subarra	100.41	333	P		Pdif	11 25 45.3	-1.4		
	baz=70,slow=4.4									
NOA	NORSAR Array B	100.41	333	P		Pdif	11 25 46.5	-0.2		
	comp=Z,4.2nm,0.9s,baz=77,slow=4.3,SNR=15									
PDG	Podgorica	101.42	314	⇑P		Pdif	11 25 53.1	+1.5		
DBG	Daneborg	101.43	351	*i* P		Pdif	11 25 49.0	-1.9		
BRG	Berggiesshubel	102.64	323	*e*PDIFF		Pdif	11 25 57.4	+0.6		
	comp=Z,7.4nm,1.0s									
BRG	Berggiesshubel	102.64	323	*e*P		Pdif	11 25 57.4	+0.6		
BRG				pmax		pmax				
	comp=Z,7.0nm,1.0s									
CLL	Collm	103.05	324	*e*Pdif		Pdif	11 25 59.0	+0.4		
CLL				*e*Sdif		Sdif	11 37 40.0	-2.2		
CLL				*e*SS		SS	11 44 43.0	-9.1		
CLL				LmV			12 17 00.0			
	comp=Z,300nm,21.7s									
CLL	Collm	103.05	324	*e*P		Pdif	11 25 59.0	+0.4		
CLL				*e*S		Sdif	11 37 40.0	-2.2		
GERES	GERESS Array B	103.43	321	PP		PP	11 30 13.7	-2.6		
	comp=Z,0.6nm,0.9s,baz=75,slow=7.5,SNR=1.7									
NVAR	Mina Array Bea	108.45	48	Pdiff		Pdif	11 26 24.8	+1.6		
	comp=Z,0.4nm,0.8s,baz=235,slow=3.2,SNR=2.3									
NVAR				PP		PP	11 30 53.3	-0.5		
	comp=Z,3.1nm,1.1s,baz=273,slow=8.1,SNR=8.8									
PDAR	Pinedale Array	113.04	42	PKiKP		PKiKP	11 30 38.6	+1.0		
	comp=Z,0.5nm,0.9s,baz=336,slow=2.0,SNR=2.4									
PDAR				PKKPbc		PKKPbc	11 41 25.1	-0.4		
	comp=Z,0.3nm,0.5s,baz=124,slow=5.8,SNR=4.8									
O20A	White River Ci	115.08	44	P		PKPdf	11 30 43.0	+1.4		
	baz=296									
RSSD	Black Hills	115.93	38	P		PKPdf	11 30 44.0	+0.9		
	baz=301									
MVCO	Mesa Verde	116.13	47	P		PKiKP	11 30 44.7	+1.0		
	baz=294									
ULM	Lac du Bonnet	116.84	29	PKP		PKiKP	11 30 45.0	+0.7		
	comp=Z,4.1nm,0.7s,baz=68,slow=3.2,SNR=4.8									
ANMO	Albuquerque	118.58	48	PKIKP		PKiKP	11 30 50.3	+1.8		
ANMO	Albuquerque	118.58	48	P		PKiKP	11 30 49.7	+1.3		
	baz=295									
ANMO	Albuquerque	118.58	48	PKPdf		PKiKP	11 30 50.3	+1.8		
ECSD	EROS Data Cent	120.58	35	P		PKiKP	11 30 52.6	+0.7		
	baz=308									
ECSD	EROS Data Cent	120.58	35			PKPdf	11 30 50.4	-1.4		
MNTX	Cornudas Mount	120.73	51	P		PKiKP	11 30 53.5	+1.0		
	baz=294									
F36A	Milaca	120.92	32			PKPdf	11 30 49.0	-3.4		
BGNE	Belgrade	121.04	38	P		PKPdf	11 30 52.5	-0.3		
	baz=305									
SPMN	Marine on St.	121.72	32	P		PKiKP	11 30 54.7	+0.7		
	baz=312									
MSTX	Muleshoe	121.74	48	P		PKiKP	11 30 55.5	+0.9		
	baz=297									
SCHQ	Schefferville	122.56	9	PKP		PKiKP	11 30 55.5	+0.1		
	comp=Z,6.1nm,0.8s,baz=42,slow=3.8,SNR=12									
G40A	Rib Lake	123.03	30			PKiKP	11 30 57.8	+1.1		
TXAR	Lajitas Array	123.04	53	PKP		PKiKP	11 30 57.7	+0.5		
	comp=Z,1.2nm,0.8s,baz=219,slow=1.4,SNR=10									
TXAR				PKKPbc		PKKPab	11 40 48.2	-0.6		
	comp=Z,0.3nm,0.6s,baz=138,slow=9.5,SNR=4.1									
TXAR	Lajitas Array	123.04	53	PKPdf		PKPdf	11 30 55.0	-2.1		
TOA0	Torodi Ar. Sit	123.22	287	PKPdf		PKiKP	11 30 58.4	+0.6		
TORD	Torodi Ar. Bea	123.22	287	PKP		PKPdf	11 30 57.6	0.0		
	comp=Z,3.3nm,0.7s,baz=50,slow=2.0,SNR=18									
TORD				PP		PP	11 32 38.8	+0.8		
	comp=Z,2.9nm,1.1s,baz=73,slow=4.3,SNR=2.8									
TORD				PKKPbc		PKKPbc	11 40 47.7	0.0		
	comp=Z,1.1nm,0.6s,baz=267,slow=2.6,SNR=6.4									
TORD	Torodi Ar. Bea	123.22	287			PKPdf	11 30 57.4	-0.2		
KSU1	Kansas State U	123.33	39	PKPdf		PKiKP	11 30 58.8	+1.4		
SCIA	State Center	123.67	35	P		PKiKP	11 30 58.5	+0.5		
	baz=310									
JFWS	Jewell Farm	124.64	32	P		PKiKP	11 31 00.1	+0.2		
	baz=314									
OK030	Cody Creek RV	125.01	43			PKiKP	11 31 01.9	+1.1		
JCT	Junction City	125.57	50	P		PKiKP	11 31 02.3	+0.2		
	baz=298									
P40A	Paris	125.88	36			PKPdf	11 31 01.9	-0.1		
R40A	Maddies Statio	126.53	38	PKPdf		PKPdf	11 31 02.4	-1.0		
WHTX	Lake Whitney,	126.60	47	P		PKiKP	11 31 05.0	+0.9		
	baz=300									
HHAR	Hobbs	126.70	41			PKPdf	11 31 02.7	-1.1		
HDIL	Hopedale	126.78	34	P		PKiKP	11 31 04.4	+0.2		
	baz=313									
HDIL	Hopedale	126.78	34			PKPdf	11 31 03.0	-0.8		
MGMO	Mountain Grove	127.24	39			PKPdf	11 31 03.7	-1.1		
CCM	Cathedral Cave	127.31	37	PKIKP		PKPdf	11 31 03.8	-1.0		
CCM	Cathedral Cave	127.31	37	P		PKiKP	11 31 05.5	+0.2		
	baz=310									
CCM	Cathedral Cave	127.31	37			PKPdf	11 31 03.8	-1.0		
U40A	Yellville	127.36	40	P		PKPdf	11 31 05.3	+0.3		
	baz=307									
U40A	Yellville	127.36	40			PKPdf	11 31 05.3	+0.3		
W39A	Magazine	127.44	42	P		PKPdf	11 31 05.4	+0.2		
	baz=306									
MIAR	Mount Ida	127.95	42	PKIKP		PKPdf	11 31 05.7	-0.4		
MIAR	Mount Ida	127.95	42	P		PKiKP	11 31 07.7	+0.9		
	baz=306									
MIAR	Mount Ida	127.95	42			PKPdf	11 31 05.7	-0.4		
T42A	Van Buren	128.05	38			PKPdf	11 31 05.2	-1.0		
Q44A	Meyer Farm, Va	128.06	35			PKPdf	11 31 06.4	+0.1		
L48A	N Adams	128.32	29			PKPdf	11 31 06.0	-0.6		
OLIL	Olney	128.70	35			PKPdf	11 31 06.5	-1.0		
E57A	Chemin Saint G	128.73	18	P		PKiKP	11 31 08.8	+0.8		
	baz=333									
GLAT	Glass	129.65	38			PKPdf	11 31 06.1	-3.2		
P48A	Milroy	129.66	32			PKiKP	11 31 10.8	+0.8		
P49A	Miami Univ. Ec	129.97	31	P		PKiKP	11 31 10.9	+0.2		
	baz=318									
P49A	Miami Univ. Ec	129.97	31			PKiKP	11 31 11.3	+0.7		
O51A	Pataskala	130.58	29	P		PKiKP	11 31 12.3	+0.4		
	baz=320									
KIC	Kosan Boka	130.58	280	*e*P		PKiKP	11 31 13.2	+0.6		
	comp=Z,16nm,1.0s									
WVT	Waverly	130.63	37	PKIKP		PKiKP	11 31 13.0	+0.9		
WVT	Waverly	130.63	37	P		PKiKP	11 31 12.4	+0.4		
	baz=312									
WVT	Waverly	130.63	37	PKPdf		PKiKP	11 31 13.0	+0.9		
DBIC	Dimbokro	130.66	280	PKP		PKiKP	11 31 13.2	+0.5		
	comp=Z,3.1nm,0.8s,baz=72,slow=1.6,SNR=4.4									
DBIC	Dimbokro	130.66	280			PKPdf	11 31 09.9	-1.9		
TIC	Toumodi	130.82	280	*e*P		PKiKP	11 31 14.6	+1.5		
P51A	Williamsport	130.86	30	P		PKiKP	11 31 12.4	-0.1		
	baz=319									
P51A	Williamsport	130.86	30			PKPdf	11 31 10.1	-1.5		
LIC	Lamto	130.88	280	*e*P		PKPdf	11 31 12.5	+0.2		
	comp=Z,22nm,0.9s									
PLAL	Pickwick Lake	131.24	38			PKPdf	11 31 11.0	-1.4		
O54A	Avella	131.61	28	P		PKiKP	11 31 15.3	+1.3		
	baz=323									
Q52A	Bidwell	131.66	30	P		PKiKP	11 31 14.2	+0.1		
	baz=320									
P53A	Whipple	131.68	29	P		PKiKP	11 31 14.9	+0.8		
	baz=321									
T50A	Nancy	131.74	34			PKPdf	11 31 12.3	-1.0		
S51A	Beattyville	131.97	32			PKPdf	11 31 11.0	-2.7		
Q55A	Buckhannon	132.70	28	P		PKiKP	11 31 16.9	+0.6		
	baz=323									
S54A	Dingess, Beckl	133.03	30	P		PKiKP	11 31 17.7	+0.7		
	baz=320									
LRAL	Lakeview Retre	133.19	39	P		PKiKP	11 31 17.5	+0.2		
	baz=311									
T56A	Rocky Mt	134.27	30	P		PKiKP	11 31 19.5	+0.1		
	baz=322									
R58B	Mineral	134.55	27	P		PKiKP	11 31 21.1	+1.1		
	baz=325									
V57A	Coltrane Farms	135.29	31	P		PKiKP	11 31 21.1	-0.4		
	baz=321									
PLCA	Paso Flores	138.26	161	PKP		PKiKP	11 31 27.0	-0.5		
	comp=Z,3.7nm,0.8s,baz=280,slow=1.7,SNR=3.2									
PLCA	Paso Flores	138.26	161	PKPdf		PKiKP	11 31 28.2	+0.7		
PLCA	Paso Flores	138.26	161	*e*P		PKiKP	11 31 28.1	+0.5		
MT02	Curacav	144.59	154			PKPdf	11 31 37.7	+0.8		
VA03	San Esteban	145.26	154			PKPdf	11 31 39.1	+0.8		
AVIZ	Vizcacheras	145.47	158	*e*P		PKPab	11 31 39.8	+1.0		
AAGR	Agrelo	145.69	157	*e*P		PKPab	11 31 40.6	+1.0		
ACON	Acoyapa	145.78	66	PKPdf		PKPab	11 31 40.3	-0.1		
ARCO	CERRO ARCO	145.87	157	*e*P		PKPab	11 31 41.6	+1.2		
ASAL	Salagasta	146.13	157	*e*P		PKPab	11 31 41.4	+0.2		
AUSP	Uspallata	146.22	155	*e*P		PKPab	11 31 42.2	+0.4		
CO02	Combarbal	146.38	152			PKPbc	11 31 41.9	+0.4		
RTLS	Leoncito	146.63	155	*e*P		PKPab	11 31 43.1	-0.4		
CO03	El Peregal	146.84	152			PKPbc	11 31 43.4	+0.6		
RTCV	Cerro Valdivia	146.88	156	*e*P		PKPab	11 31 43.6	-0.5		
ACCO	Cerro Coronel	147.78	154	*e*P		PKPdf	11 31 44.0	+1.2		
CO01	Juntas del Tor	147.84	152			PKPbc	11 31 46.3	+0.5		
AROD	Rodeo	147.96	153	*e*P		PKPbc	11 31 46.6	+0.4		
ACDV	Cuesta del Vie	148.11	154	*e*P		PKPbc	11 31 45.5	-0.9		
ACHE	Chepes	148.23	158	*e*P		PKPbc	11 31 46.8	+0.2		
AVFE	Valle Fertil	148.38	157	*e*P		PKPbc	11 31 47.4	+0.5		
AC05	El Transito	148.71	151			PKPbc	11 31 47.8	-0.2		
TCA	Tanti	148.78	162	*e*P		PKPbc	11 31 48.8	+0.8		
APLL	PUNTA DE LOS L	148.97	158	*e*P		PKPbc	11 31 47.4	-1.0		
AGUA	GUANDACOL	148.97	154	*e*P		PKiKP	11 31 49.5	-0.4		
ACLC	CERRO LA CRUZ	149.67	156	*e*P		PKPbc	11 31 50.3	-0.1		
VCA	Vinchina	149.75	154	*e*P		PKiKP	11 31 52.2	+0.7		
PLTB	Pedras Altas	150.14	180	*e*P		PKPbc	11 31 51.2	-0.1		
CYA	Choya	151.00	157	*e*P		PKPbc	11 31 53.8	+0.3		
CPSB	Cacapava Do Su	151.49	180	*e*P		PKPbc	11 31 52.1	-2.3		
ITQB	Itaqui	152.08	174	*e*P		PKPdf	11 31 53.0	+3.4		
CNLB	Canela	152.46	185	*e*P		PKPdf	11 31 53.0	+3.1		
DR12	Loma Pena Alta	154.35	37			PKPab	11 32 16.6	+1.4		
LVC	Limon Verde	154.47	145	PKPbc		PKiKP	11 32 02.9	+1.2		
	comp=Z,4.5nm,0.8s,baz=135,slow=2.9,SNR=2.3									
ITAB	Concordia	154.62	183	*e*P		PKPdf	11 31 56.5	+3.6		
CPUP	Villa Florida	155.29	172	PKPbc		PKPbc	11 32 03.4			
	comp=Z,2.8nm,0.7s,baz=221,slow=2.3,SNR=8.9									
CPUP	Villa Florida	155.29	172			PKPbc	11 32 04.0			
CPUP	Villa Florida	155.29	172	*e*P		PKPdf	11 31 57.0	+3.1		
DBBC	Dabeiba	155.80	69	*e*P		PKPab	11 32 15.7	-5.9		
ESAR	Angra dos Reis	157.06	202	*e*P		PKPdf	11 32 00.5	+4.3		
PTGB	Pitanga	157.12	184	*e*P		PKPdf	11 32 00.4	+4.0		
PARB	Paraibuna	157.19	199	*e*P		PKPdf	11 31 59.5	+2.9		
ANIL	Santa Ana	157.33	74	*e*P		PKPdf	11 31 55.6	-1.7		
TOLC	Toledo	157.38	74	*e*P		PKPdf	11 31 57.7	+0.3		
SPB	Sao Paulo	157.48	195	*e*P		PKPdf	11 32 00.2	+3.4		
OCAC	Ocana	157.96	63	*e*P		PKPdf	11 31 54.7	-3.1		
FRTB	Fartura	158.18	190	*e*P		PKPdf	11 32 02.2	+4.5		
ROSC	El Rosal	158.27	72	PKP		PKPdf	11 31 59.6	+1.0		
	comp=Z,5.1nm,0.3s,baz=181,slow=21,SNR=3.7									
ROSC	El Rosal	158.27	72			PKPdf	11 31 54.9	-3.7		
RCLB	Rio Claro- Sao	158.62	196	*e*P		PKPdf	11 32 01.7	+3.4		
BARC	Barichara	158.75	67	*e*P		PKPdf	11 32 00.5	+1.6		
PAMC	Pamplona, Colo	158.90	64	*e*P		PKPdf	11 31 58.1	-1.3		
BSCB	Bom Sucesso	159.02	204	*e*P		PKPdf	11 32 02.8	+3.9		
TRCB	Terra Rica	159.05	182	*e*P		PKPdf	11 32 02.5	+3.8		
SJMB	Sao Joao De Ma	159.22	215	*e*P		PKPdf	11 32 01.2	+2.2		
LPAZ	La Paz	159.65	136	PKP		PKPdf	11 32 01.2	+0.9		
	comp=Z,1.8nm,0.8s,baz=153,slow=2.3,SNR=6.7									
LPAZ	La Paz	159.65	136	PKIKP		PKPdf	11 31 58.1	-2.3		
LPAZ	La Paz	159.65	136			PKPdf	11 31 58.1	-2.3		
LPAZ	La Paz	159.65	136	*e*P		PKPdf	11 32 02.9	+2.6		
SDV	Santo Domingo	159.99	58	*e*P		PKPdf	11 32 00.9	+0.6		
CZSB	Cruzeiro do Su	160.04	108	*e*P		PKPdf	11 32 01.8	+1.7		
TAMC	Tame, Arauca	160.09	66	*e*P		PKPab	11 32 31.7	-8.5		
IPMB	Ipameri, GO	163.02	198	*e*P		PKPdf	11 32 07.3	+4.2		
ARAG	Araguaiana, MT	166.02	187	*e*P		PKPdf	11 32 07.9	+2.1		
SAML	Samuel	168.06	127	PKIKP		PKPdf	11 32 04.8	-2.5		
SAML	Samuel	168.06	127			PKPdf	11 32 04.8	-2.5		

*IDC **15** 11:20:48.6±1.9, 1.°86N×126.°72E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.5/45, mbtmp3.9/4, ML3.4/1, MS4.1/1, Ms1 4.1/1, ms1mx3.4/39, Error ellipse: s-maj=116.8km s-min=24.2km az=68.0*

*DJA **15** 11:20:50.4±0.3, 2.°N×3.°12°6E±.°, h10km, M4.0/7, MLv4.0/7*

*NEIC **15** 11:20:53.2±1.2, 1.°84N±0.°06×126.°77E±0.°05, h35km±2km, mb4.2/8, Error ellipse: s-maj=11.7km s-min=6.7km az=137.0*

ISC 15 11:20:53.9±1.0, 1.°83N±0.°09×126.°7E±0.°1, h47km, n22, σ0§95/22, mb4.2/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	Ternate	1.24	148	P		Pn	11 21 15.0	+0.2
TNTI				S		Sn	11 21 30.0	-0.4
TNTI	Ternate	1.24	148			Pn	11 21 14.9	+0.1
TNTI				Sn		Sn	11 21 27.9	-2.5
SGSI	Sangihe	2.19	327	P		Pn	11 21 27.4	-0.4
SGSI				S		Sn	11 21 52.4	-1.3
KMSI	Cibinong	3.00	245	P		Pn	11 21 32.8	-6.2
LUWI	Luwuk	4.86	234			Pn	11 22 03.5	-1.0
NLAI	Namlea	5.05	176	P		Pn	11 22 15.2	+8.1
KAPI	Kappang	9.72	226	Pn		Pn	11 23 11.9	+0.7
KNRA	Kununurra	17.51	173	P		P	11 24 55.5	+0.1
KNRA				IAmb		IAmb	11 25 04.8	
	comp=Z,20nm,1.4s							
FITZ	Fitzroy Crossi	19.83	183	P		Pn	11 25 21.9	-0.9
	comp=Z,0.1nm,0.3s,baz=0,slow=11,SNR=1.5							
WB0	Warramunga Arr	22.75	161	P		P	11 25 53.1	+0.8
WB0				IAmb		IAmb	11 25 57.9	
	comp=Z,17nm,1.4s							
WRAB	Tennant Creek	22.89	161	P		P	11 25 53.8	0.0
WRAB				IAmb		IAmb	11 25 55.5	
	comp=Z,6.0nm,0.6s							
WRA	Warramunga Arr	22.90	161	P		P	11 25 53.9	+0.1
	comp=Z,3.8nm,0.5s,baz=340,slow=11,SNR=25							
WRA	Warramunga Arr	22.90	161	P		P	11 25 53.9	+0.1
WB2	Warramunga Arr	22.90	161	P		P	11 25 54.0	+0.1
WB2				IAmb		IAmb	11 25 55.6	
	comp=Z,5.6nm,0.7s							
WR0	Warramunga Arr

KNRA	**Kununurra**	**17.42**	**173**	P	**Pn**	**11 29 59.7**	**-0.4**
KNRA				IAmb	IAmb	11 30 01.3	
	comp=Z,22nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.72**	**183**	P	**P**	**11 30 24.6**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=12,slow=8.4,SNR=8.7						
FITZ	**Fitzroy Crossi**	**19.72**	**183**	P	**P**	**11 30 25.3**	**-0.7**
COEN	**Coen**	**22.64**	**134**	P	**P**	**11 30 57.1**	**-0.5**
COEN				IAmb	IAmb	11 31 10.0	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**22.68**	**161**	P	**P**	**11 30 56.5**	**-1.5**
WRAB	**Tennant Creek**	**22.83**	**161**	P	**P**	**11 30 58.1**	**-1.4**
WRAB				IAmb	IAmb	11 31 00.0	
	comp=Z,11nm,0.6s						
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**11 30 58.0**	**-1.6**
	comp=Z,14nm,0.7s,baz=339,slow=11,SNR=45						
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**11 30 58.6**	**-0.9**
WB2	**Warramunga Arr**	**22.84**	**161**		**P**	**11 30 58.4**	**-1.2**
WR0	**Warramunga Arr**	**22.91**	**161**		**P**	**11 30 59.2**	**-1.2**
WR0				IAmb	IAmb	11 31 01.7	
	comp=Z,7.5nm,0.9s						
AS31	**Alice Springs**	**26.22**	**165**		**P**	**11 31 31.9**	**+0.9**
ASAR	**Alice Springs**	**26.22**	**165**	P	**P**	**11 31 31.4**	**+0.4**
	comp=Z,3.6nm,0.7s,baz=351,slow=14,SNR=25						
ASAR	**Alice Springs**	**26.22**	**165**		**P**	**11 31 31.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**31.82**	**303**	P	**P**	**11 32 20.9**	**0.0**
	comp=Z,0.6nm,0.6s,baz=112,slow=7.5,SNR=5.2						
KSRS	**Korea Array**	**35.58**	**2**	P	**P**	**11 32 54.8**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=175,slow=9.4,SNR=4.9						
STKA	**Stephens Creek**	**36.32**	**158**	P	**P**	**11 32 59.4**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=333,slow=10,SNR=4.9						
STKA	**Stephens Creek**	**36.32**	**158**	P	**P**	**11 32 59.6**	**-0.1**
SONM	**Songino Array**	**49.15**	**342**	P	**P**	**11 34 44.2**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=149,slow=8.7,SNR=6.4						
PETK	**Petropavlovsk-**	**57.32**	**22**	P	**P**	**11 35 44.8**	**+1.4**
	comp=Z,1.6nm,0.9s,baz=219,slow=2.0,SNR=4.4						
MK31	**Makanchi Array**	**59.13**	**326**	P	**P**	**11 35 56.1**	**0.0**
MK31				IAmb	IAmb	11 35 57.0	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**11 35 55.2**	**-1.0**
	comp=Z,1.3nm,0.4s,baz=124,slow=7.6,SNR=20						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**11 35 56.0**	**-0.2**
MAKZ	**Makanchi**	**59.31**	**326**	P	**P**	**11 35 57.0**	**-0.4**
MAKZ				IAmb	IAmb	11 36 01.5	
	comp=Z,5.2nm,1.4s						
KURK	**Kurchatov**	**63.36**	**328**	P	**P**	**11 36 23.6**	**-1.1**
ABKAR	**Akbulak array**	**73.62**	**321**	P	**P**	**11 37 27.6**	**-1.1**
VNDA	**Vanda**	**81.47**	**173**	P	**P**	**11 38 11.9**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=312,slow=7.3,SNR=7.1						
VNDA	**Vanda**	**81.47**	**173**	P	**P**	**11 38 11.7**	**-0.3**
VNDA				IAmb	IAmb	11 38 17.8	
	comp=Z,0.9nm,0.7s						

*IDC **15** 11:26:34.0±2.1, 1°.86N×126°.07E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.6/46, mbtmp4.1/3, Error ellipse: s-maj=196.0km s-min=26.0km az=65.0*
*NEIC **15** 11:26:38.0±1.4, 1°.8N±0°.1×126°.29E±0°.05, h35km±2km, mb4.2/7, Error ellipse: s-maj=23.5km s-min=6.8km az=194.0*

ISC 15 11:26:38.0±1.0, 1°.9N±0°.1×126°.3E±0°.1, h35km, n13, σ1§08/13, mb4.2/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.52**	**135**	Pn	**Pn**	**11 27 01.8**	**-1.0**
LUWI	**Luwuk**	**4.55**	**231**	Pn	**Pn**	**11 27 43.4**	**-1.0**
KNRA	**Kununurra**	**17.59**	**172**	P	**P**	**11 30 42.1**	**+0.8**
KNRA				IAmb	IAmb	11 30 50.4	
	comp=Z,20nm,1.4s						
WRAB	**Tennant Creek**	**23.05**	**160**	P	**P**	**11 31 40.7**	**+0.2**
WRA	**Warramunga Arr**	**23.06**	**160**	P	**P**	**11 31 40.5**	**0.0**
	comp=Z,3.1nm,0.5s,baz=338,slow=10,SNR=5.0						
WRA	**Warramunga Arr**	**23.06**	**160**	P	**P**	**11 31 39.9**	**-0.7**
WB2	**Warramunga Arr**	**23.06**	**160**	P	**P**	**11 31 40.9**	**+0.3**
WB2				IAmb	IAmb	11 31 46.6	
	comp=Z,10nm,1.0s						
WR0	**Warramunga Arr**	**23.14**	**160**	P	**P**	**11 31 41.6**	**+0.2**
WR0				IAmb	IAmb	11 31 47.6	
	comp=Z,6.2nm,0.8s						
ASAR	**Alice Springs**	**26.43**	**164**	P	**P**	**11 32 14.6**	**+2.8**
	comp=Z,1.9nm,0.6s,baz=344,slow=12,SNR=4.2						
STKA	**Stephens Creek**	**36.56**	**158**	P	**P**	**11 33 40.3**	**-0.3**
MKAR	**Makanchi Array**	**58.84**	**326**	P	**P**	**11 36 33.6**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=118,slow=7.5,SNR=6.6						
KURK	**Kurchatov**	**63.08**	**328**	P	**P**	**11 37 01.9**	**+0.1**
ABKAR	**Akbulak array**	**73.32**	**321**	P	**P**	**11 38 05.7**	**-0.4**

JMA 15 11:30:07.4±0.1, 40°.92N×142°.34E, h35km±5km, M2.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JARK	**Aomorirokkasho**	**0.74**	**277**	P	Pn	11 30 21.4	0.0
JARK				S	Sn	11 30 31.1	-0.3
JANG	**Nango**	**0.83**	**229**	P	Pn	11 30 22.8	+0.2
JANG				*e*S	Sn	11 30 33.9	+0.2
JAHD	**Aomorihigashid**	**0.83**	**295**	P	Pn	11 30 22.5	-0.1
JKEN	**Kujiedanarisaw**	**0.86**	**214**	P	Pn	11 30 22.9	-0.1
JKEN				*e*S	Sn	11 30 34.1	-0.2
JTM	**Tenmabayashi**	**0.97**	**263**	P	Pn	11 30 24.9	+0.3
JTM				S	Sn	11 30 37.4	+0.3
JTM	**Tenmabayashi**	**0.97**	**263**	P	Pn	11 30 25.1	+0.6
JOT	**Ohata**	**1.08**	**296**	P	Pn	11 30 25.9	-0.1
JOT				*e*S	Sn	11 30 40.1	+0.4
JEM	**Erimo**	**1.25**	**29**	P	Pn	11 30 29.7	+1.3
JKB	**Kayabe**	**1.38**	**315**	P	Pn	11 30 30.3	+0.2
JKB				*e*S	Sn	11 30 47.5	+0.4
JNBK	**Urakawa-nobuka**	**1.39**	**13**	P	Pn	11 30 32.3	+2.0
JAH	**Hinai**	**1.49**	**241**	*e*S	Sn	11 30 51.5	+1.6
JSR	**Shiriuchi**	**1.57**	**293**	P	Pn	11 30 33.2	+0.4
JSR				*e*S	Sn	11 30 52.5	+0.6
JOM	**Ohasama**	**1.65**	**209**	P	Pn	11 30 35.0	+1.1
JOM				*e*S	Sn	11 30 55.3	+1.4
JIAM	**Iburiatsuma**	**1.73**	**350**	P	Pn	11 30 37.1	+2.2
JIAM				*e*S	Sn	11 30 59.2	+3.4
JNB	**Noboribetsu**	**1.83**	**328**	P	Pn	11 30 36.6	+0.3
JNB				S	Sn	11 30 58.8	+0.6
JBT2	**Biratori 2**	**1.86**	**1**	P	Pn	11 30 38.4	+1.7
JBT2				*e*S	Sn	11 31 02.5	+3.6
JCH	**Churui**	**1.86**	**24**	P	Pn	11 30 37.9	+1.2

*IDC **15** 11:31:58.8±1.1, 1°.69N×126°.21E, h0km, mb3.7/5, mb1 3.7/6, mb1mx3.5/45, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=72.0km s-min=18.5km az=75.0*
*DJA **15** 11:32:02.7±2.0, 2°.N±5°.×12°.7E±°, h21km±20km, M3.8/7, MLv3.8/7*

ISC 15 11:32:04.4±0.9, 1°.68N±0°.06×126°.50E±0°.10, h47km, n12, σ1§54/14, mb3.6/5, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**136**	P	**Pn**	**11 32 24.7**	**-0.8**
SGSI	**Sangihe**	**2.22**	**334**	P	**Pn**	**11 32 36.8**	**-1.9**
KMSI	**Cibinong**	**2.75**	**246**	P	**Pn**	**11 32 46.5**	**+0.5**
DDMP	**Don Marcelino,**	**4.47**	**350**	*e*P	**Pn**	**11 33 10.0**	**+0.4**
DDMP				*e*S	**Sn**	**11 34 00.5**	**+0.1**
SKMP	**Bagumbayan, Su**	**5.19**	**338**	*e*P	**Pn**	**11 33 19.9**	**+0.3**
SKMP				*e*S	**Sn**	**11 34 15.2**	**-3.0**
KCP	**Kidapawan**	**5.48**	**345**	⇓*e*P	**Pn**	**11 33 25.8**	**+2.2**
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P	**Pn**	**11 36 30.1**	**-1.3**
	0.0nm,0.3s,baz=11,slow=16,SNR=1.7						
WRA	**Warramunga Arr**	**22.82**	**161**	P	**P**	**11 37 03.8**	**+0.3**
	1.1nm,0.7s,baz=339,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**26.20**	**164**	P	**P**	**11 37 36.8**	**+1.9**
	0.4nm,0.7s,baz=346,slow=7.8,SNR=5.0						
USRK	**Ussuriysk Ar.**	**42.62**	**6**	P	**P**	**11 39 57.1**	**+1.1**
	2.3nm,0.8s,baz=205,slow=9.5,SNR=4.3						
SONM	**Songino Array**	**49.16**	**342**	P	**P**	**11 40 48.3**	**+0.5**
	0.6nm,0.9s,baz=151,slow=6.5,SNR=3.5						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**11 41 59.3**	**-0.8**
	0.6nm,0.5s,baz=116,slow=8.2,SNR=14						

*SJA **15** 11:34:20.7±0.8, 31°.58S×68°.56W, h103km±2km, ML4.3, MW4.1*
*NEIC **15** 11:34:20.0±2.4, 31°.57S±0°.05×68°.46W±0°.10, h103km±6km, mb4.6/11, Md4.1(SJA), Error ellipse: s-maj=12.3km s-min=7.6km az=93.0*
*IDC **15** 11:34:20.3±0.8, 31°.57S×68°.65W, h105km±7km, mb3.9/7, mb1 3.9/12, mb1mx3.7/35, mbtmp4.2/12, Error ellipse: s-maj=23.1km s-min=14.1km az=97.0*
*GUC **15** 11:34:21.9±0.6, 31°.60S×68°.57W, h116km±17km, ML4.2*

ISC 15 11:34:20.2±0.5, 31°.57S±0°.03×68°.56W±0°.03, h106km±4km, n111, σ1§69/153, mb4.4/10, 6C-6D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.11**	**282**		**Pn**	**11 34 36.2**	**+1.3**
ZON	**Zonda**	**0.11**	**282**	*e*P	**Pn**	**11 34 36.0**	**+1.1**
ZON				*e*S	**Sn**	**11 34 46.6**	**+0.6**
ZON				IAML		11 34 48.2	
	comp=Z,7μm,0.2s						
RTLL	**Cerro Villicun**	**0.25**	**16**	⇓*i*P	**Pn**	**11 34 36.5**	**+1.1**
RTLL				*i* S	**Sn**	**11 34 48.1**	**+1.4**
RTLL				IAML		11 34 49.1	
	comp=N,25μm,0.5s						
RTLL	**Cerro Villicun**	**0.25**	**16**	*e*P	**Pn**	**11 34 36.5**	**+1.1**
RTLL				*e*S	**Sn**	**11 34 47.2**	**+0.5**
RTLL				IAML		11 34 48.6	
	comp=Z,6μm,0.1s						
RTCV	**Cerro Valdivia**	**0.29**	**177**	*e*P	**Pn**	**11 34 36.8**	**+1.2**
RTLS	**Leoncito**	**0.67**	**250**	*e*P	**Pn**	**11 34 39.6**	**+1.4**
RTLS				*e*S	**Sn**	**11 34 52.9**	**+1.1**
RTLS				IAML		11 34 54.2	
	comp=Z,5μm,0.4s						
AUSP	**Uspallata**	**0.96**	**227**	*e*P	**Pn**	**11 34 42.1**	**+1.1**
AUSP				*e*S	**Sn**	**11 34 58.2**	**+1.5**
ASAL	**Salagasta**	**1.05**	**193**	*e*P	**Pn**	**11 34 43.0**	**+1.3**
ASAL				*e*S	**Sn**	**11 34 58.0**	**+0.1**
ACCO	**Cerro Coronel**	**1.07**	**336**	*e*P	**Pn**	**11 34 43.9**	**+1.7**
AVFE	**Valle Fertil**	**1.31**	**46**	*e*P	**Pn**	**11 34 46.1**	**+1.5**
AVFE				*e*S	**Sn**	**11 35 05.0**	**+2.0**
AVFE				IAML		11 35 06.5	
	comp=Z,5μm,0.2s						
ARCO	**CERRO ARCO**	**1.31**	**194**	*e*P	**Pn**	**11 34 46.0**	**+1.3**
ARCO				*e*S	**Sn**	**11 35 05.1**	**+1.9**
ARCO				IAML		11 35 06.4	
	comp=Z,5μm,0.7s						
ACDV	**Cuesta del Vie**	**1.48**	**341**	*e*P	**Pn**	**11 34 48.5**	**+1.9**
ACDV				*e*S	**Sn**	**11 35 09.3**	**+2.6**
ACDV				IAML		11 35 09.9	
	comp=Z,4μm,0.4s						
AAGR	**Agrelo**	**1.53**	**189**	*e*P	**Pn**	**11 34 48.5**	**+1.2**
AROD	**Rodeo**	**1.60**	**330**	*e*P	**Pn**	**11 34 50.4**	**+1.9**
AROD				*e*S	**Sn**	**11 35 12.1**	**+2.3**
ACHE	**Chepes**	**1.67**	**76**	*e*P	**Pn**	**11 34 50.6**	**+1.6**
CO03	**El Pedregal**	**1.97**	**291**	⇑*i*P	**Pn**	**11 34 54.4**	**+1.7**
CO03				*e*S	**Sn**	**11 35 19.4**	**+2.0**
CO03	**El Pedregal**	**1.97**	**291**		**Pn**	**11 34 54.5**	**+1.7**
CO03				Sn	**Sn**	**11 35 20.4**	**+3.0**
CO01	**Juntas del Tor**	**2.07**	**320**	⇑*i*P	**Pn**	**11 34 56.7**	**+2.6**
CO01				*e*S	**Sn**	**11 35 22.9**	**+2.9**
CO01				IAML		11 35 24.5	
	comp=E,2μm,0.2s						
CO01	**Juntas del Tor**	**2.07**	**320**		**Pn**	**11 34 56.8**	**+2.6**
CO01				Sn	**Sn**	**11 35 23.4**	**+3.5**
VA03	**San Esteban**	**2.07**	**234**	*e*P	**Pn**	**11 34 55.5**	**+1.5**
VA03				*e*S	**Sn**	**11 35 21.2**	**+1.4**
VA03				IAML		11 35 23.0	
	comp=E,1μm,0.4s						
VA03	**San Esteban**	**2.07**	**234**		**Pn**	**11 34 55.6**	**+1.5**
VA03				Sn	**Sn**	**11 35 21.9**	**+2.1**
AGUA	**GUANDACOL**	**2.08**	**2**	*e*P	**Pn**	**11 34 56.1**	**+2.0**
AGUA				*e*S	**Sn**	**11 35 23.8**	**+3.8**
AGUA				IAML		11 35 25.2	
	comp=Z,3μm,0.2s						
APLL	**PUNTA DE LOS L**	**2.10**	**57**	*e*P	**Pn**	**11 34 55.9**	**+1.6**
CO02	**Combarbal**	**2.12**	**279**	⇑*i*P	**Pn**	**11 34 55.8**	**+1.2**
CO02				*e*S	**Sn**	**11 35 22.6**	**+1.5**
CO02	**Combarbal**	**2.12**	**279**		**Pn**	**11 34 55.9**	**+1.2**
CO02				Sn	**Sn**	**11 35 23.4**	**+2.3**
GO04	**Tololo Observa**	**2.38**	**305**	⇑*i*P	**Pn**	**11 34 59.1**	**+1.0**
GO04				*i* S	**Sn**	**11 35 29.2**	**+2.0**
GO04	**Tololo Observa**	**2.38**	**305**		**Pn**	**11 34 59.1**	**+1.0**
GO04	**Tololo Observa**	**2.38**	**305**	*e*P	**Pn**	**11 34 59.2**	**+1.0**
GO04				*e*S	**Sn**	**11 35 29.0**	**+1.8**
PEL	**Peldehue**	**2.39**	**228**	⇓*e*P	**Pn**	**11 34 58.9**	**+0.8**
PEL				*e*S	**Sn**	**11 35 28.5**	**+1.3**
PEL				IAML		11 35 34.2	
	comp=N,621nm,0.8s						
PEL	**Peldehue**	**2.39**	**228**		**Pn**	**11 34 58.8**	**+0.7**
PEL	**Peldehue**	**2.39**	**228**	*e*P	**Pn**	**11 34 59.0**	**+0.9**
PEL				*e*S	**Sn**	**11 35 28.5**	**+1.3**
ROC1	**El Roble**	**2.51**	**235**		**Pn**	**11 35 00.6**	**+0.7**
ROC1	**El Roble**	**2.51**	**235**	*e*P	**Pn**	**11 35 00.2**	**+0.3**
ROC1				*e*S	**Sn**	**11 35 30.0**	**-0.3**
MT03	**Universidad Ad**	**2.53**	**220**	⇓*e*P	**Pn**	**11 35 01.3**	**+1.3**
MT03				*e*S	**Sn**	**11 35 30.5**	**-0.1**
ACLC	**CERRO LA CRUZ**	**2.54**	**33**	*e*P	**Pn**	**11 35 01.4**	**+1.1**
ACLC				*e*S	Sn	11 35 17.7	-13
ACLC				IAML		11 35 37.9	
	comp=Z,991nm,0.3s						
MRA	**San Martin**	**2.56**	**110**	*e*P	**Pn**	**11 35 01.8**	**+1.5**
MRA				IAML		11 35 55.9	
	comp=Z,550nm,0.2s						
MT05	**Renca**	**2.59**	**225**	*e*P	**Pn**	**11 35 02.0**	**+1.2**
MT05				*e*S	**Sn**	**11 35 32.4**	**+0.5**
LMEL	**Las Melosas**	**2.66**	**211**	⇓*i*P	**Pn**	**11 35 03.3**	**+1.5**
LMEL				*e*S	**Sn**	**11 35 35.0**	**+1.3**
LMEL				IAML		11 35 44.2	
	comp=N,326nm,0.3s						
MT02	**Curacav**	**2.76**	**232**	*e*P	**Pn**	**11 35 02.8**	**-0.1**
MT02				*e*S	**Sn**	**11 35 32.8**	**-2.9**
MT02	**Curacav**	**2.76**	**232**		**Pn**	**11 35 02.8**	**-0.1**
VCA	**Vinchina**	**2.84**	**6**	⇓*i*P	**Pn**	**11 35 06.0**	**+1.9**
VCA				*i* S	**Sn**	**11 35 40.8**	**+2.8**
VCA	**Vinchina**	**2.84**	**6**	*e*P	**Pn**	**11 35 06.1**	**+1.9**
VCA				*e*S	**Sn**	**11 35 40.9**	**+3.0**
VCA				IAML		11 35 44.0	
	comp=Z,2μm,0.3s						
VA01	**Torpederas**	**2.99**	**240**		**Pn**	**11 35 05.9**	**-0.1**
MT09	**Talagante**	**3.01**	**222**	⇓*i*P	**Pn**	**11 35 06.4**	**0.0**
MT09				*e*S	**Sn**	**11 35 41.4**	**-0.5**
MT09				IAML		11 35 43.1	
	comp=N,1μm,0.5s						
AC05	**El Transito**	**3.10**	**331**	⇑*i*P	**Pn**	**11 35 09.7**	**+2.1**
AC05				*e*S	**Sn**	**11 35 46.1**	**+2.0**
RFA	**San Rafael**	**3.19**	**179**	*e*P	**Pn**	**11 35 09.0**	**+0.2**
RFA				*e*S	**Sn**	**11 35 45.0**	**-1.2**
RFA				IAML		11 35 47.1	
	comp=Z,660nm,0.3s						
VA05	**Santo Domingo**	**3.32**	**230**	*e*P	**Pn**	**11 35 09.8**	**-0.5**
VA05				*e*S	**Sn**	**11 35 47.3**	**-1.7**
VA05				IAML		11 35 54.7	
	comp=E,573nm,0.4s						
TCA	**Tanti**	**3.39**	**87**	*e*P	**Pn**	**11 35 12.3**	**+0.9**
TCA				*e*S	**Sn**	**11 35 48.6**	**-2.4**
TCA				IAML		11 36 07.8	
	comp=Z,523nm,1.0s						
LAMA	**Las Malvinas**	**3.40**	**189**	*e*P	**Pn**	**11 35 11.9**	**+0.4**
BO02	**Sierra Bellavi**	**3.72**	**210**	*e*P	**Pn**	**11 35 16.2**	**+0.4**
BO02	**Sierra Bellavi**	**3.72**	**210**		**Pn**	**11 35 16.6**	**+0.8**
CYA	**Choya**	**3.93**	**38**	*e*P	**Pn**	**11 35 18.7**	**+0.1**
CYA				IAML		11 36 26.4	
	comp=Z,197nm,0.7s						
PIL	**Pilar**	**3.99**	**93**	*e*P	**Pn**	**11 35 21.2**	**+1.9**
PIL				IAML		11 36 23.7	
	comp=Z,690nm,0.9s						
AC04	**Llanos de Chal**	**4.00**	**326**	⇑*e*P	**Pn**	**11 35 19.5**	**0.0**
AC04				*e*S	**Sn**	**11 36 02.9**	**-2.6**
AC04	**Llanos de Chal**	**4.00**	**326**		**Pn**	**11 35 20.0**	**+0.5**
GO03	**Copiap**	**4.22**	**339**		**Pn**	**11 35 23.6**	**+1.0**
GO03				Sn	**Sn**	**11 35 53.8**	**+0.9**
GO03	**Copiap**	**4.22**	**339**	*e*P	**Pn**	**11 35 23.2**	**+0.7**
GO03				*e*S	**Sn**	**11 36 11.0**	**+0.1**
EDS3	**Malargue**	**4.25**	**189**	*e*P	**Pn**	**11 35 23.5**	**+0.5**
AC02	**Maricunga**	**4.74**	**354**		**Pn**	**11 35 31.9**	**+1.9**
AHML	**Horco Molle**	**5.54**	**31**	*e*P	**Pn**	**11 35 40.1**	**-0.3**
AHML				*e*S	**Sn**	**11 36 42.3**	**-0.4**
AHML				IAML		11 37 44.8	
	comp=Z,79nm,0.9s						
BI02	**San Fabin de**	**5.56**	**203**		**Pn**	**11 35 39.3**	**-1.3**
AC01	**Pan de Azucar**	**5.69**	**341**		**Pn**	**11 35 42.1**	**-0.3**
BI03	**Tigo**	**6.43**	**214**		**Pn**	**11 35 48.7**	**-3.7**
GO02	**Mina Guanaco**	**6.45**	**352**		**Pn**	**11 35 52.6**	**-0.3**
PB14	**IPOC Station P**	**7.11**	**346**	Pn	**Pn**	**11 36 01.4**	**-0.4**
LC01	**Cunco**	**7.80**	**199**		**Pn**	**11 36 08.3**	**-2.6**
PB10	**IPOC Station P**	**8.22**	**347**	Pn	**Pn**	**11 36 14.8**	**-1.9**
PB06	**IPOC Station P**	**8.87**	**354**	Pn	**Pn**	**11 36 24.4**	**-1.4**
LVC	**Limon Verde**	**8.93**	**358**	P	**Pn**	**11 36 25.3**	**-1.4**
	comp=Z,7.2nm,0.3s,baz=187,slow=11,SNR=55						
LVC				S	**Sn**	**11 37 58.0**	**-7.7**
	comp=Z,1.7nm,0.3s,baz=170,slow=19,SNR=1.8						
PLCA	**Paso Flores**	**9.29**	**189**	P	**Pn**	**11 36 30.3**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=8.6,slow=11,SNR=16						
PLCA	**Paso Flores**	**9.29**	**189**	Pn	**Pn**	**11 36 30.0**	**-1.1**
PB09	**IPOC Station P**	**9.75**	**356**		**Pn**	**11 36 36.1**	**-1.6**
PB07	**IPOC Station P**	**9.87**	**353**		**Pn**	**11 36 36.5**	**-2.9**
PB01	**IPOC Station P**	**10.52**	**355**		**Pn**	**11 36 44.5**	**-3.5**
CPUP	**Villa Florida**	**11.13**	**65**	P	**Pn**	**11 36 57.0**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=213,slow=14,SNR=1.9						
CPUP				S	**Sn**	**11 39 02.1**	**+3.6**
	comp=Z,0.7nm,0.3s,baz=210,slow=14,SNR=1.4						
CPUP	**Villa Florida**	**11.13**	**65**		**Pn**	**11 36 53.8**	**-2.3**
LL01	**San Ignacio de**	**11.22**	**195**	Pn	**Pn**	**11 36 53.1**	**-4.2**
PB11	**IPOC Station P**	**11.80**	**355**	Pn	Pn	11 37 00.5	-4.8
PSGCX	**Pisagua**	**12.00**	**353**	Pn	Pn	11 37 02.6	-5.3
MNMC	**Minye Minye**	**12.42**	**355**		**Pn**	**11 37 11.2**	**-2.4**
PB16	**IPOC Station P**	**13.20**	**356**		**Pn**	**11 37 22.6**	**-1.5**
LPAZ	**La Paz**	**15.22**	**2**	P	**Pn**	**11 37 50.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=206,slow=7.3,SNR=7.1						
LPAZ	**La Paz**	**15.22**	**2**		**P**	**11 37 52.2**	**-0.4**
SIV	**San Ignacio**	**16.94**	**25**	P	**Pn**	**11 38 11.4**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=217,slow=10,SNR=12						
EFI	**East Falkland**	**21.52**	**162**	P	**P**	**11 39 00.0**	**-0.5**
EFI				IAmb	IAmb	11 39 25.9	
	comp=Z,51nm,1.4s						
SAML	**Samuel**	**23.05**	**14**	P	**P**	**11 39 16.4**	**-0.1**
USHA	**Ushuaia**	**23.25**	**180**	P	**P**	**11 39 17.8**	**-0.3**
	comp=Z,26nm,0.5s,baz=0.8,slow=5.6,SNR=7.1						
BELA	**Belgrano 2**	**48.78**	**171**	P	**P**	**11 42 55.1**	**+1.2**
VNA3	**Neumayer Olymp**	**50.53**	**159**	P	**P**	**11 43 08.2**	**+0.9**
VNA2	**Neumayer--Watz**	**51.15**	**158**	P	**P**	**11 43 12.7**	**+0.9**
	baz=290,slow=7.7						
SNAA	**Sanae**	**52.75**	**159**	P	**P**	**11 43 24.4**	**+0.6**
SNAA	**Sanae**	**52.75**	**159**	P	**P**	**11 43 24.4**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=285,slow=10,SNR=14						
SNAA	**Sanae**	**52.75**	**159**	P	**P**	**11 43 24.3**	**+0.4**
SNAA				IAmb	IAmb	11 43 25.4	
	comp=Z,9.0nm,1.2s						
UNM	**Universidad Na**	**58.52**	**326**	P	**P**	**11 44 05.4**	**-0.5**
QSPA	**South Pole Qui**	**58.66**	**180**	P	**P**	**11 44 07.3**	**+1.1**
QSPA				IAmb	IAmb	11 44 08.1	
	comp=Z,5.2nm,0.8s						
VNDA	**Vanda**	**67.04**	**190**	P	**P**	**11 45 02.3**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=130,slow=5.0,SNR=7.1						
VNDA	**Vanda**	**67.04**	**190**	P	**P**	**11 45 03.4**	**+2.0**
VNDA				IAmb	IAmb	11 45 14.5	
	comp=Z,4.2nm,1.4s						
TXAR	**Lajitas Array**	**69.16**	**327**	P	**P**	**11 45 14.9**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=163,slow=9.4,SNR=2.0						
TXAR				pP	**pP**	**11 45 43.0**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=153,slow=8.2,SNR=4.3						
WVT	**Waverly**	**69.73**	**343**	P	**P**	**11 45 18.3**	**-0.2**
WVT				IAmb	IAmb	11 45 47.1	
	comp=Z,6.6nm,0.8s						
MAW	**Mawson**	**74.65**	**163**	P	**P**	**11 45 48.2**	**+0.7**
	comp=Z,4.0nm,0.8s,baz=209,slow=5.3,SNR=9.1						
MAW				pP	**pP**	**11 46 13.5**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=196,slow=7.4,SNR=1.7						
BOSA	**Boshof**	**78.56**	**116**	P	**P**	**11 46 11.0**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=264,slow=6.7,SNR=6.1						
BOSA	**Boshof**	**78.56**	**116**	P	**P**	**11 46 10.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**80.61**	**68**	P	**P**	**11 46 22.1**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=271,slow=4.7,SNR=6.1						
TORD				pP	**pP**	**11 46

BLCH S Sn 11 36 17.4 +3.0
comp=E,244nm,1.1s
BHE **Schloss Buerre** 1.38 173 ePg Pb 11 35 56.3 +0.1
BHE eSg Sb 11 36 14.1 -0.2
comp=E,141nm,0.6s
KOE **Koeppel** 1.40 158 ePg Pg 11 35 56.1 -0.2
BSTI **Sart Tilman** 1.42 217 P Pn 11 35 56.4 -0.2
BHOU **Houvegnez** 1.48 203 P Pb 11 35 58.9 +1.0
BHOU S Sn 11 36 20.1 +2.6
comp=E,313nm,1.2s
LOH **Wallersheim-Lo** 1.56 189 ePg Pb 11 35 59.2 0.0
LOH eSg Sn 11 36 19.2 -0.2
comp=E,130nm,0.6s
BCLA **Clavier** 1.65 219 ⇑P Pg 11 36 02.2 +1.1
BCLA S Sg 11 36 23.5 +1.1
comp=E,112nm,0.9s
BGES **Gesves** 1.76 221 P Pg 11 36 03.0 -0.3
BGES S Sb 11 36 25.4 +0.1
TNS **Taunus Mts** 1.79 146 ePn Pb 11 36 02.6 -0.6
TNS Pg Pg 11 36 03.2 -0.6
TNS Sn Sn 11 36 24.9 -0.2
TNS Sg Sg 11 36 29.9 +3.0
LVIA **Vianden** 1.84 194 P Pg 11 36 04.4 -0.4
LVIA S Sg 11 36 28.5 -0.1
comp=E,156nm,1.3s
ABH **Alteburg** 1.88 167 ePn Pb 11 36 04.7 -0.1
ABH eSn Sn 11 36 28.0 +0.5
RCHB **Rochefort** 1.89 215 P Pg 11 36 06.9 +1.1
BMRD **Maredsous** 1.96 224 P Pn 11 36 04.8 +0.7
RIVT **Riveris** 2.01 183 eSg Sg 11 36 35.3 +1.0
SNF **Seneffe** 2.05 235 P Pn 11 36 05.9 +0.7
BSKQ **Steenkerk** 2.08 240 P Pb 11 36 08.5 +0.4
BSKQ S Sb 11 36 35.0 +0.7
GIVF **Givet** 2.09 220 eP Pb 11 36 08.8 +0.5
GIVF **Givet** 2.09 220 ePg Pg 11 36 11.7 +2.2
GIVF eSn Sn 11 36 32.0 -0.4
GIVF eSg Sg 11 36 38.9 +2.3
comp=E,196nm,0.8s
WLF **Walferdange** 2.11 193 ⇑P Pg 11 36 10.4 +0.4
WLF S Sb 11 36 34.8 -0.7
WLF **Walferdange** 2.11 193 Pn Pg 11 36 10.4 +0.4
WLF Pg Pb 11 36 13.2 +4.5
NRDL **Niedersach Rie** 2.12 67 Pg Pg 11 36 11.3 +1.1
NRDL Sg Sg 11 36 43.0 +5.3
UBBA **Unterbreizbach** 2.14 114 Pn Pg 11 36 10.1 -0.5
UBBA Pg Pb 11 36 12.2 +3.0
CLZ **Clausthal** 2.16 85 Pn Pb 11 36 09.0 -0.5
CLZ Pg Pg 11 36 11.8 +0.9
CLZ eSg Sb 11 36 36.2 -0.6
DOU **Dourbes** 2.19 223 ⇑P Pg 11 36 13.8 +2.4
DOU S Sg 11 36 38.8 -1.0
comp=N,67nm,1.0s
BAIF **Baives** 2.38 227 ePn Pn 11 36 10.8 +1.0
BAIF **Baives** 2.38 227 ePg Pg 11 36 16.7 +1.5
BAIF eSn Sn 11 36 39.1 -0.6
BAIF eSg Sg 11 36 48.8 +2.7
comp=N,148nm,0.9s
MOX **Moxa** 3.15 108 Pg Pg 11 36 31.8 +1.8
PAGF **Fort de Pagny** 3.26 194 ePn Pn 11 36 21.8 -0.1
baz=15
PAGF **Fort de Pagny** 3.26 194 ePg Pg 11 36 32.1 +0.2
baz=30
PAGF eSn Sn 11 36 59.3 -2.0
baz=16
PAGF eSg Sg 11 37 14.4 +0.3
comp=N,670nm,1.5s,baz=19
CDF **Champ du Feu** 3.32 176 ePn Pn 11 36 22.2 -0.6
CDF **Champ du Feu** 3.32 176 ePg Pg 11 36 32.5 -0.6
CDF eSn Sn 11 36 59.9 -3.1
CDF eSg Sg 11 37 15.4 -0.7
comp=N,148nm,0.9s
MEZF **Maizieres J'vi** 3.43 201 ePn Pn 11 36 24.3 0.0
baz=21
MEZF **Maizieres J'vi** 3.43 201 ePg Pg 11 36 35.5 +0.2
MEZF eSn Sn 11 37 03.7 -2.0
MEZF eSg Sg 11 37 20.7 +0.9
comp=N,259nm,1.2s,baz=14
SFTF **Sexfontaines** 3.72 200 eP Pn 11 36 31.6 +3.4
baz=26
SFTF **Sexfontaines** 3.72 200 ePg Pg 11 36 40.7 -0.1
SFTF eSn Sn 11 37 10.4 -2.3
baz=21
SFTF eSg Sg 11 37 29.4 +0.5
comp=N,505nm,1.4s
HAU **Haudompre** 3.73 186 ePn Pn 11 36 28.2 -0.3
HAU **Haudompre** 3.73 186 ePg Pg 11 36 40.7 -0.4
HAU eSn Sn 11 37 10.2 -2.9
HAU eSg Sg 11 37 29.5 0.0
comp=N,293nm,1.2s
CLL **Collm** 3.83 94 ePg Pg 11 36 41.0 -2.0
CLL eSg Sb 11 37 27.0 +2.1
comp=Z,156nm,1.0s
HINF **Hinteralfeld** 3.91 181 ePn Pn 11 36 30.3 -0.5
HINF **Hinteralfeld** 3.91 181 ePg Pg 11 36 43.6 -0.8
HINF eSn Sn 11 37 13.9 -3.5
HINF eSg Sg 11 37 34.7 -0.3
comp=Z,486nm,1.5s
DAVA **Damuels** 4.84 155 ePn Pn 11 36 47.3 +3.5
comp=Z,0.8nm,0.1s
DAVA eSn Sn 11 37 41.9 +1.3
comp=Z,8.2nm,0.6s
LOR **Lormes** 4.88 205 ePn Pn 11 36 44.5 +0.4
baz=25
LOR **Lormes** 4.88 205 ePn Pn 11 36 47.1 +3.0
LOR **Lormes** 4.88 205 ePg Pg 11 37 01.8 -1.2
baz=26
LOR eSn Sn 11 37 37.7 -3.6
baz=32
LOR eSg Sg 11 38 05.7 -0.4
comp=Z,48nm,0.8s,baz=25
KHC **Kasperske Hory** 4.99 119 ePN Pb 11 36 56.0 -1.8
KHC eSG Sg 11 38 08.1 -1.7
comp=Z,223nm,1.7s
PRU **Pruhonice** 5.14 107 eSG Sg 11 38 13.3 -1.2
comp=Z,295nm,1.6s
CABF **La Chapelle** 5.14 186 ePn Pn 11 36 47.3 -0.5
CABF **La Chapelle** 5.14 186 ePg Pg 11 37 06.7 -1.3
CABF eSn Sn 11 37 44.0 -3.9
CABF eSg Sg 11 38 12.2 -2.4
comp=Z,501nm,1.5s
MOTA **Moosalm** 5.16 146 ePn Pn 11 36 47.9 -0.3
comp=Z,1.0nm,0.5s
MOTA Sn Sn 11 37 53.4 +4.9
comp=Z,6.5nm,0.8s
MOTA Sg Sg 11 38 19.9 +4.6
comp=Z,26nm,1.0s
SSF **Saint Saulge** 5.16 207 ePn Pn 11 36 48.2 +0.1
SSF **Saint Saulge** 5.16 207 ePg Pg 11 37 07.4 -1.0
SSF eSn Sn 11 37 45.0 -3.3
comp=Z,1.0nm,0.2s
SSF eSg Sg 11 38 14.3 -1.0
comp=Z,304nm,1.5s
HYF **Humbligny** 5.25 214 eP Pn 11 36 53.7 +4.4
HYF eSn Sn 11 37 45.0 -5.4
HYF eSg Sg 11 38 18.2 +0.1
SQTA **Sankt Quirin** 5.30 146 ePn Pn 11 36 53.4 +3.3
comp=Z,1.4nm,0.2s
SQTA eSn Sn 11 37 54.9 +3.0
comp=Z,6.3nm,0.7s
SQTA Sg Sg 11 38 25.6 +5.7
comp=Z,19nm,0.8s
FETA **Feichten** 5.32 151 ePn Pn 11 36 55.3 +4.9
comp=Z,2.8nm,0.6s
FETA eSn Sn 11 37 54.1 +1.6
comp=Z,5.1nm,0.8s
FETA Sg Sg 11 38 28.1 +7.6
comp=Z,26nm,1.3s
WATA **Walderalm** 5.34 143 eSn Sn 11 37 56.0 +3.2
comp=Z,4.7nm,0.4s
WATA Sg Sg 11 38 27.1 +6.2
comp=Z,31nm,1.0s
WTTA **Wattenberg** 5.42 144 ePn Pn 11 36 55.3 +3.5
comp=Z,1.3nm,0.4s
WTTA Sg Sg 11 38 25.4 +1.9
comp=Z,28nm,0.9s
AVF **Avril sur Loir** 5.45 207 eP Pn 11 36 56.1 +4.1
AVF eSg Sg 11 38 23.2 -1.4
comp=Z,183nm,1.4s
SMF **Signal de Mont** 5.46 203 ePn Pn 11 36 52.2 0.0
SMF **Signal de Mont** 5.46 203 ePg Pg 11 37 13.0 -1.1
SMF eSn Sn 11 37 52.1 -3.5
SMF eSg Sg 11 38 23.6 -1.3
comp=Z,206nm,1.2s
LDF **La Druitiere** 5.49 238 ePn Pn 11 36 53.1 +0.5
LDF **La Druitiere** 5.49 238 ePg Pg 11 37 14.4 -0.4
LDF eSn Sn 11 37 54.5 -1.9
LDF eSg Sg 11 38 26.2 +0.3
comp=Z,96nm,1.2s
FLN **La Foliniere** 5.59 241 ePn Pn 11 36 54.5 +0.6
baz=62
FLN **La Foliniere** 5.59 241 eP Pn 11 36 58.8 +4.9
FLN eSn Sn 11 37 56.4 -2.3
comp=Z,17nm,0.6s,baz=55
FLN eSg Sg 11 38 29.3 +0.4
comp=Z,142nm,1.3s
BGF **Bois d'Agland** 5.81 209 ePn Pn 11 36 56.5 -0.5
BGF **Bois d'Agland** 5.81 209 ePg Pg 11 37 19.7 -1.2
BGF eSn Sn 11 38 01.2 -3.1
BGF eSg Sg 11 38 35.0 -1.1
comp=Z,27nm,0.5s
UPC **Upice** 5.86 98 eSG Sg 11 38 33.7 -4.1
comp=Z,282nm,1.3s
GRR **Gorron** 6.01 239 ePn Pn 11 36 59.8 +0.1
GRR eSn Sn 11 38 05.7 -3.4
comp=Z,6.1nm,0.4s
GRR eSg Sg 11 38 43.0 +0.6
comp=Z,52nm,1.0s
DPC **Dobruska-Polom** 6.10 99 eSG Sg 11 38 43.1 -2.2
comp=Z,103nm,1.4s
MOA **Molln** 6.14 126 ePn Pn 11 37 04.0 +2.5
comp=Z,0.4nm,0.2s
MOA *i* Sn Sn 11 38 11.2 -1.2
comp=Z,2.2nm,0.3s
MOA Sg Sg 11 38 49.3 +2.7
comp=Z,18nm,0.9s
LPL **La Plagne** 6.21 181 ePn Pn 11 37 01.4 -1.2
LPL **La Plagne** 6.21 181 ePg Pg 11 37 26.2 -2.3
LPL eSn Sn 11 38 09.1 -5.3
LPL eSg Sg 11 38 46.1 -2.8
comp=Z,160nm,1.5s
LPG **La Plagne** 6.23 181 eSg Sg 11 38 46.7 -2.8
comp=Z,128nm,1.3s
TCF **Toulx Ste Croi** 6.25 211 ePn Pn 11 37 02.2 -0.8
TCF **Toulx Ste Croi** 6.25 211 ePg Pg 11 37 28.1 -1.2
TCF eSn Sn 11 38 11.1 -4.0
comp=Z,17nm,1.0s
TCF eSg Sg 11 38 48.8 -1.4
comp=Z,110nm,1.4s
KBA **Koelnbreinsper** 6.26 135 ePn Pn 11 37 06.3 +3.0
comp=Z,1.3nm,0.3s
KBA eSn Sn 11 38 14.1 -1.5
comp=Z,2.9nm,0.6s
KBA Sg Sg 11 38 57.6 +7.0
comp=Z,5.2nm,0.7s
KRUC **Moravsky** 6.62 110 eSG Sg 11 38 57.3 -4.9
VRAC **Vranov** 6.63 108 eSG Sg 11 38 55.9 -6.6
ORIF **Oris-en-Rattie** 6.84 186 eP Pn 11 37 15.2 +4.0
ORIF eSn Sn 11 38 24.0 -5.7
ORIF eSg Sg 11 39 05.2 -3.9
comp=Z,53nm,1.1s
MFF **Saint Martin d** 6.90 225 ePn Pn 11 37 12.0 +0.1
CONA **Conrad Observa** 6.92 120 eSn Sn 11 38 34.1 +2.3
comp=Z,2.1nm,0.6s
CONA Sg Sg 11 39 15.7 +3.9
comp=Z,18nm,1.0s
MBDF **Montbardon** 7.00 181 eP Pn 11 37 17.3 +3.9
MBDF **Montbardon** 7.00 181 ePg Pg 11 37 41.0 -2.6
MBDF eSn Sn 11 38 27.9 -5.8
MBDF eSg Sg 11 39 10.4 -3.8
comp=Z,151nm,1.7s
MORC **Moravsky Berou** 7.02 102 eSG Sg 11 39 12.9 -2.1
ARSA **Arzberg** 7.17 125 eSn Sn 11 38 37.7 -0.1
comp=Z,5.3nm,0.9s
ARSA Sg Sg 11 39 23.6 +3.7
comp=Z,13nm,0.7s
RJF **Les Rejaudoux** 7.35 211 ePn Pn 11 37 17.8 -0.2
RJF eSn Sn 11 38 37.9 -4.2
RJF eSg Sg 11 39 22.9 -2.5
comp=Z,138nm,1.5s
ZST **Bratislava** 7.46 114 eSG Sg 11 39 21.3 -7.7
JAVC **Velka Javorina** 7.47 108 eSG Sg 11 39 29.7 +0.5
MODS **Modra-Piesok** 7.47 113 eSG Sg 11 39 25.2 -4.1
CAF **Calviac** 7.52 207 eP Pn 11 37 25.4 +4.9
CAF **Calviac** 7.52 207 ePg Pg 11 37 50.9 -2.7
CAF eSn Sn 11 38 42.5 -3.9
CAF eSg Sg 11 39 28.7 -2.3
comp=Z,149nm,1.5s
LFF **La Frestale** 7.93 214 eP Pn 11 37 31.2 +5.2
LFF **La Frestale** 7.93 214 ePg Pg 11 37 58.8 -2.5
LFF eSn Sn 11 38 51.5 -4.8
LFF eSg Sg 11 39 41.9 -2.1
comp=Z,40nm,0.9s

*UUSS **15** 11:36:21.3±0.7, 39°.92N±0°.02×111°.95W±0°.02, h4km±7km, ML2.2/10, Error ellipse: s-maj=2.5km s-min=2.4km az=80.0*
*NEIC **15** 11:36:21.4±0.6, 39°.925N±0°.008×111°.95W±0°.02, h7km±9km, Error ellipse: s-maj=2.7km s-min=1.0km az=79.0*
*IDC **15** 11:36:30.9±1.3, 42°.72N×113°.59W, h0km, mb3.9/1, mb1 3.3/4, mb1mx3.2/55, mbtmp2.9/4, ML2.8/3, Error ellipse: s-maj=22.8km s-min=7.2km az=146.0*
ISC 15 11:36:21.1±1.0, **39°.92N**±0°.02×**111°.97W**±0°.02, **h9**km±8km, **n52**, σ0**s73**/51, **Utah**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NLU	**North Lily Min**	0.09	293			**Pg**	**11 36 23.8**	**+0.1**
SUU	**Santaquin Cany**	0.14	103			**Pg**	**11 36 24.3**	**-0.2**
WMUT	**West Mountain**	0.19	35			**Pg**	**11 36 25.1**	**-0.1**
MPU	**Maple Canyon**	0.28	70			**Pg**	**11 36 26.5**	**-0.3**
LEVU	**Levan**	0.43	164			**Pg**	**11 36 29.8**	**+0.2**
CWU	**Camp Williams**	0.53	349			**Pg**	**11 36 32.0**	**+0.4**
WTU	**Western Traver**	0.53	2			**Pg**	**11 36 31.9**	**+0.4**
TCVU	**Timpanogos Cav**	0.56	21			**Pg**	**11 36 32.0**	**0.0**
FLU	**Fool Peak**	0.56	196			**Pg**	**11 36 32.2**	**+0.1**
ELU	**Electric Lake**	0.66	115			**Pg**	**11 36 34.1**	**+0.2**
SNO	**Snow College**	0.69	151			**Pg**	**11 36 35.1**	**+0.6**
DUG	**Dugway, Tooele**	0.70	293			**Pg**	**11 36 35.2**	**+0.6**
DAU	**Daniels Canyon**	0.74	48			**Pg**	**11 36 35.5**	**+0.1**
NOQ	**North Oquirrh**	0.74	351			**Pg**	**11 36 35.8**	**+0.4**
CTU	**Camp Tracy**	0.79	12			**Pg**	**11 36 36.1**	**-0.2**
JLU	**Jordanelle**	0.79	30			**Pg**	**11 36 36.3**	**-0.1**
HLJ	**Hailstone**	0.82	32			**Pg**	**11 36 37.1**	**+0.2**
TMUT	**Trail Mountain**	0.86	136			**Pg**	**11 36 37.4**	**-0.3**
RBU	**Red Butte Cany**	0.87	8			**Pg**	**11 36 37.5**	**-0.3**
EMUT	**Emma Park**	0.90	97			**Pg**	**11 36 38.2**	**-0.3**
SAIU	**Southern Antel**	0.94	350			**Pg**	**11 36 39.5**	**+0.2**
SNUT	**Stansbury Nort**	1.05	337			**Pg**	**11 36 41.8**	**+0.5**
P17A	**Butcher Ranch,**	1.05	115			**Pg**	**11 36 41.0**	**-0.4**
FPU	**Francis Peak**	1.11	5			**Pg**	**11 36 42.4**	**-0.1**
NAIU	**Northern Antel**	1.11	350			**Pg**	**11 36 42.7**	**+0.2**
BSUT	**Blindstream Ca**	1.11	56			**Pb**	**11 36 43.1**	**+0.3**
BCE	**Book Cliffs Ea**	1.25	104			**Pg**	**11 36 44.7**	**-0.4**
TCUT	**Toone Canyon**	1.27	20			**Pg**	**11 36 45.3**	**-0.2**
BGU	**Big Grassy Mou**	1.29	322			**Pg**	**11 36 45.1**	**-0.7**
SRU	**San Rafael Swe**	1.38	125			**Pn**	**11 36 46.7**	**-0.1**
MSU	**Marysvale**	1.42	186			**Pn**	**11 36 48.1**	**+0.9**
MVU	**Marysvale**	1.43	188			**Pn**	**11 36 48.5**	**+1.1**
SPUT	**South Promonto**	1.43	345	Pn		**Pn**	**11 36 47.8**	**+0.3**
GZU	**Grizzly Peak**	1.50	360			**Pn**	**11 36 48.8**	**+0.2**
EPU	**East Promontor**	1.50	347			**Pn**	**11 36 48.8**	**+0.4**
LTU	**Little Mountai**	1.68	353			**Pn**	**11 36 51.4**	**+0.5**
WVUT	**Wellsville**	1.69	0			**Pn**	**11 36 51.6**	**+0.7**
HWUT	**Hardware Ranch**	1.71	10			**Pn**	**11 36 51.9**	**+0.6**
HVU	**Hansel Valley**	1.95	342			**Pn**	**11 36 55.0**	**+0.4**
PSUT	**Pine Spring**	2.01	227			**Pn**	**11 36 56.3**	**+0.9**
SPR3	**Spring Creek 3**	2.04	244			**Pn**	**11 36 57.0**	**+1.0**
ELK	**Elko**	2.63	289	Pn		**Pb**	**11 37 09.4**	**+0.9**
	0.4nm,0.3s,baz=104,slow=13,SNR=19							
ELK				Lg		Lg	11 37 44.9	
	0.9nm,0.3s,baz=28,slow=20,SNR=6.8							
PV10	**Paradox Valley**	2.75	123			Lg	11 37 51.3	
PV14	**Lion Creek, Pa**	2.77	123			Lg	11 37 50.6	
PV03	**Paradox Valley**	2.95	123	Pn		**Pn**	**11 37 09.1**	**+0.8**
KNB	**Kanab**	2.98	193			**Pn**	**11 37 09.1**	**+0.5**
PV13	**Radium Mtn., P**	3.02	125			**Pn**	**11 37 09.7**	**+0.3**
PDAR	**Pinedale Array**	3.37	32	Pn		**Pb**	**11 37 21.8**	**+0.6**
	0.4nm,0.3s,baz=211,slow=15,SNR=8.7							
PDAR				Lg		Lg	11 38 04.7	
	0.6nm,0.3s,baz=284,slow=30,SNR=2.1							
REDW	**Red Top Meadow**	3.54	13	Pn		**Pn**	**11 37 17.0**	**+0.5**
SHPR	**Sheep Range**	4.24	217			**Sg**	**11 38 38.2**	**+1.1**
NVAR	**Mina Array Bea**	5.14	255	Pn		**Pg**	**11 37 57.6**	**-2.0**
	0.2nm,0.3s,baz=80,slow=16,SNR=9.5							
NVAR						Sn	**Sg**	**11 39 03.2**	**-3.0**
	0.2nm,0.3s,baz=60,slow=22,SNR=1.5							
NOA	**NORSAR Array B**	69.30	26	P		**P**	**11 47 27.8**	**-0.6**
	1.0nm,0.8s,baz=320,slow=6.4,SNR=3.5							

*JMA **15** 11:38:49.3±0.2, 26°.99N×143°.48E, h61km, M3.9*
*IDC **15** 11:38:51.0±2.5, 27°.02N×142°.53E, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.5/54, mbtmp3.8/7, ML3.4/2, Error ellipse: s-maj=102.2km s-min=23.4km az=80.0*
ISC 15 11:38:53.8±1.4, **27°.25N**±0°.08×**143°.3E**±0°.1, **h35**km, **n12**, σ1**s87**/14, **mb3.4/5**, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	0.96	261	P		**Pn**	**11 39 09.9**	**-0.9**
CBIJ				S		**Sn**	**11 39 24.8**	**+1.5**
JHH2	**Haha-jima-NKT2**	1.14	238	P		**Pn**	**11 39 10.5**	**-2.7**
JHJ	**Hachijo jima 2**	6.58	334	Pn		**Pn**	**11 40 28.1**	**+0.1**
	4.4nm,0.3s,baz=72,slow=19,SNR=2.0							
JHJ						Sn	**Sn**	**11 41 42.5**	**+0.7**
	9.9nm,0.3s,baz=60,slow=20,SNR=1.9							
JHU	**Hanno**	9.22	339	P		**Pn**	**11 41 03.3**	**-1.0**
JRY	**Ryogami san**	9.50	338	P		**Pn**	**11 41 08.1**	**0.0**
JHO	**Hitachi**	9.61	347	eS		**Sn**	**11 42 52.9**	**-3.5**
MJAR	**Matsushiro Arr**	10.21	336	Pn		**Pn**	**11 41 17.8**	**-0.1**
	0.2nm,0.3s,baz=155,slow=10,SNR=7.4							
KLR	**Kul'dur**	23.68	341	P		**P**	**11 44 02.7**	**+0.6**
	0.6nm,0.4s,baz=120,slow=8.1,SNR=4.1							
SONM	**Songino Array**	35.27	316	P		**P**	**11 45 45.2**	**-0.1**
	0.2nm,0.5s,baz=116,slow=9.8,SNR=2.3							
WRA	**Warramunga Arr**	47.70	191	P		**P**	**11 47 26.2**	**-1.0**
	0.2nm,0.6s,baz=12,slow=8.6,SNR=5.0							
MKAR	**Makanchi Array**	51.11	309	P		**P**	**11 47 52.7**	**-0.3**
	0.4nm,0.8s,baz=96,slow=9.0,SNR=4.6							
FINES	**FINESS Array B**	78.23	334	P		**P**	**11 50 53.1**	**+3.6**
	4.2nm,1.1s,baz=76,slow=5.9,SNR=5.2							

*BER **15** 11:41:53.1±1.4, 81°.53N×3°.08W, h10km, ML2.0, ML2.6(DNK), Confirmed Earthquake*
*DNK **15** 11:41:53.5±1.6, 81°.39N×2°.63W, h18km±148km, ML1.8*
*IEPN **15** 11:41:53.0, 81°.65N×3°.25W, h15km*
ISC 15 11:41:45.7±1.5, **81°.70N**±0°.09×**3°.59W**±0°.06, **h10**km, **n12**, σ3**s28**/25, **1D**, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KBS	**Kingsbay**	3.81	129	eP		**Pn**	**11 42 47.4**	**+3.2**
KBS				eS		**Sn**	**11 43 26.8**	**-2.3**
KBS	**Kingsbay**	3.81	129	*i* P		**Pn**	**11 42 47.9**	**+3.6**
KBS				eS		**Sn**	**11 43 27.1**	**-2.0**
KBS				IAML			11 43 31.3	
	comp=Z,7.7nm,0.3s							
KBS	**Kingsbay**	3.81	129	*i* P		**Pn**	**11 42 47.9**	**+3.6**
KBS				*i* S		**Sn**	**11 43 25.6**	**-3.5**
KBS				IAML			11 43 31.3	
	comp=Z,7.7nm,0.3s							
SPA0	**Spitsbergen Ar**	4.94	125	⇓*i* P		**Pn**	**11 43 03.2**	**+3.5**
SPA0				eS		**Sn**	**11 43 55.4**	**-1.4**
SPA0	**Spitsbergen Ar**	4.94	125	eP		**Pn**	**11 43 03.4**	**+3.6**
SPA0				eS		**Sn**	**11 43 55.7**	**-1.1**
DAG	**Danmarks Havn**	5.67	217	*i* P		**Pn**	**11 43 13.0**	**+3.3**
DAG				eS		**Sn**	**11 44 13.6**	**-1.2**
DAG				IAML			11 44 17.5	
	comp=Z,3.0nm,0.4s							
DAG	**Danmarks Havn**	5.67	217	*i* P		**Pn**	**11 43 13.0**	**+3.3**
DAG				eS		**Sn**	**11 44 13.5**	**-1.2**
DAG	**Danmarks Havn**	5.67	217	*i* P		**Pn**	**11 43 13.0**	**+3.3**
DAG				eS		**Sn**	**11 44 13.6**	**-1.2**
DAG				IAML			11 44 17.5	
	comp=Z,3.0nm,0.4s							
HOPEN	**Hopen**	7.39	119	eP		**Pn**	**11 43 36.3**	**+3.0**
HOPEN				eS		**Sn**	**11 44 53.3**	**-3.8**
ZFI2	**Zemlya Franca-**	7.63	71	eP		**Pn**	**11 43 39.5**	**+2.9**
ZFI2				eS		**Sn**	**11 44 58.6**	**-4.4**
	comp=Z,6.0nm,0.9s							
ZFI	**Zemlya Franca-**	7.63	71	eP		**Pn**	**11 43 40.2**	**+3.5**
ZFI				eS		**Sn**	**11 44 58.9**	**-4.2**
DBG	**Daneborg**	8.14	213	*e*		**Pn**	**11 43 43.3**	**-0.3**
	baz=20,slow=14							
DBG				*i* P		**Pn**	**11 43 46.2**	**+2.7**
DBG				eS		**Sn**	**11 45 10.2**	**-5.1**
DBG				IAML			11 45 21.4	
	comp=Z,2.0nm,0.4s							

*IDC **15** 11:42:39.4±0.8, 1°.82N×126°.78E, h0km, mb4.0/7, mb1 4.1/9, mb1mx3.8/39, mbtmp4.0/9, ML3.9/2, Error ellipse: s-maj=52.3km s-min=16.1km az=74.0*
*NEIC **15** 11:42:44.5±1.6, 1°.82N±0°.06×126°.65E±0°.08, h35km±1km, mb4.2/16, Error ellipse: s-maj=15.4km s-min=6.9km az=241.0*
*DJA **15** 11:42:44.9±0.3, 2°N±4°×12°7E±°, h10km, M4.3/11, mb4.5/4, ML4.2/11*
ISC 15 11:42:45.9±0.6, **1.79N**±0°.04×**126°.62E**±0°.07, **h47**km, **n44**, σ1**s76**/49, **mb4.2**/13, **1D**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TNTI	**Ternate**	1.25	144	P		**Pn**	**11 43 05.8**	**-1.2**
TNTI				S		**Sn**	**11 43 22.8**	**0.0**
TNTI	**Ternate**	1.25	144			**Pn**	**11 43 06.3**	**-0.7**
SGSI	**Sangihe**	2.18	330	P		**Pn**	**11 43 22.1**	**+2.4**
KMSI	**Cibinong**	2.90	246	P		**Pn**	**11 43 28.8**	**-0.8**
GTOI	**Gorontalo**	3.79	252	P		**Pn**	**11 43 44.4**	**+2.6**
DDMP	**Don Marcelino,**	4.38	348	eP		**Pn**	**11 43 51.3**	**+1.3**
DDMP				eS		**Sn**	**11 44 42.1**	**+2.5**
LUWI	**Luwuk**	4.77	234	P		**Pn**	**11 44 01.9**	**+6.7**
LUWI	**Luwuk**	4.77	234	Pn		**Pn**	**11 43 54.5**	**-0.8**
LUWI				Sn		**Sn**	**11 44 49.8**	**+0.5**
MRSI	**Marisa**	4.86	255	P		**Pn**	**11 43 58.2**	**+1.7**
SKMP	**Bagumbayan, Su**	5.14	336	eP		**Pn**	**11 43 59.7**	**-0.7**
SKMP				eS		**Sn**	**11 44 54.3**	**-4.1**
SIJI	**Sorong**	5.34	120	Pn		**Pn**	**11 44 03.2**	**+0.1**
	0.5nm,0.3s,baz=270,slow=20,SNR=1.4							
KCP	**Kidapawan**	5.41	344	‖eP		**Pn**	**11 44 08.0**	**+3.8**
APSI	**Ampana**	5.65	242	P		Pn	11 44 17.0	+10
PAGZ	**Pagadian**	6.83	332	eP		**Pn**	**11 44 21.2**	**-2.4**
PAGZ				eS		**Sn**	**11 45 34.2**	**-5.9**
MPSI	**Mapaga**	6.88	258	P		**Pn**	**11 44 27.0**	**+2.8**
	0.1nm28nm,0.8s							
TTSI	**Tana Toraja**	8.32	235	P		**Pn**	**11 44 48.3**	**+4.2**
MYLDM	**Lahad Datu**	8.78	293	Pn		**Pn**	**11 44 49.4**	**-1.0**
KAPI	**Kappang**	9.63	225	Pn		**Pn**	**11 45 02.1**	**+0.1**
	0.8nm,0.3s,baz=90,slow=10,SNR=4.1							
KAPI	**Kappang**	9.63	225			**Pn**	**11 45 01.5**	**-0.5**
MTN	**Manton Dam**	15.21	163	Pn		**Pn**	**11 46 17.3**	**-0.4**
MTN				IAmb		IAmb	11 46 42.0	
	comp=Z,9.0nm,1.2s							
KNRA	**Kununurra**	17.48	173	P		**Pn**	**11 46 45.7**	**-0.7**
FITZ	**Fitzroy Crossi**	19.78	183	P		**P**	**11 47 12.0**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=9.0,slow=10,SNR=8.1							
FITZ	**Fitzroy Crossi**	19.78	183	P		**P**	**11 47 11.8**	**-0.6**
WB0	**Warramunga Arr**	22.74	161	P		**P**	**11 47 43.0**	**-1.2**
WB0				IAmb		IAmb	11 47 44.7	
	comp=Z,10nm,0.9s							
WRAB	**Tennant Creek**	22.88	161	P		**P**	**11 47 44.7**	**-1.0**
WRAB				IAmb		IAmb	11 47 46.3	
	comp=Z,10.0nm,0.9s							
WRA	**Warramunga Arr**	22.88	161	P		**P**	**11 47 44.2**	**-1.5**
	comp=Z,7.4nm,0.8s,baz=339,slow=11,SNR=39							
WRA				PcP		**PcP**	**11 51 35.9**	**+0.6**
	comp=Z,0.5nm,1.0s,baz=350,slow=2.1,SNR=2.5							
**W

comp=Z,0.6nm,0.5s,baz=142,slow=7.3,SNR=2.9
MK31 Makanchi Array 59.09 326 P **P** **11 52 41.0 -0.5**
MK31 IAmb IAmb 11 53 05.2
comp=Z,2.8nm,1.4s
MKAR Makanchi Array 59.09 326 P **P** **11 52 41.3 -0.2**
comp=Z,0.9nm,0.4s,baz=121,slow=8.0,SNR=12
MKAR PcP **PcP** **11 53 29.9 +0.1**
comp=Z,0.9nm,0.7s,baz=114,slow=4.8,SNR=3.7
MKAR Makanchi Array 59.09 326 P **P** **11 52 40.8 -0.7**
MAKZ Makanchi 59.27 326 P **P** **11 52 42.6 -0.2**
MAKZ IAmb IAmb 11 52 47.6
comp=Z,3.8nm,1.2s
KURK Kurchatov 63.32 328 P **P** **11 53 09.7 -0.3**
NRIK Noril'sk 72.28 346 P **P** **11 54 06.6 +0.6**
comp=Z,3.0nm,0.7s,baz=143,slow=6.1,SNR=4.9
VNDA Vanda 81.53 173 P **P** **11 54 58.1 +0.1**
comp=Z,0.7nm,0.6s,baz=326,slow=5.6,SNR=7.7
VNDA Vanda 81.53 173 P **P** **11 54 58.5 +0.5**
VNDA IAmb IAmb 11 55 17.5
comp=Z,3.4nm,1.5s

*KRNET **15** 11:49:29.1±0.1, 41.42N× 70.88E, h12km, mb2.5*
*NNC **15** 11:49:32.4±3.3, 41.35N× 71.26E, h0km, mb3.2, mpv2.9,*
Error ellipse: s-maj=32.8km s-min=10.3km az=10.0
ISC 15 11:49:29.7±1.4, 41.36N±0.04× 70.92E±0.05, h2km±11km, n13, σ1§43/22, 20C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.24**	**44**	⇑*i*P	**Pg**	**11 49 33.6**	**-0.8**
	baz=78						
TRKS				⇑*i*S	**Sg**	**11 49 37.0**	**-0.5**
	baz=78						
BTK	**Batken**	**1.30**	**183**	⇑*e*P	**Pg**	**11 49 54.6**	**+0.1**
	baz=82						
BTK				⇑*i*S	**Sn**	**11 50 13.4**	**+0.5**
	baz=82						
ARSB	**Arslanbob**	**1.56**	**90**	⇑*i*P	**Pn**	**11 49 58.5**	**0.0**
	baz=93						
ARSB				⇑*i*S	**Sg**	**11 50 20.2**	**+0.6**
	baz=93						
MNAS	**Manas**	**1.64**	**46**	⇑*e*P	**Pn**	**11 49 59.2**	**-0.5**
	baz=48						
MNAS				⇑*i*S	**Sn**	**11 50 21.3**	**-0.1**
	baz=48						
OHH	**Osh**	**1.64**	**120**	⇑*i*P	**Pb**	**11 50 00.7**	**0.0**
	baz=21						
OHH				⇑*i*S	**Sg**	**11 50 23.3**	**+0.9**
	baz=21						
KK31	**Karatay Array**	**1.77**	**350**	P	**Pg**	**11 50 05.4**	**+1.7**
	12nm,0.7s,baz=169,slow=16,SNR=86						
KK31				S	**Sg**	**11 50 29.1**	**+2.5**
	20nm,0.7s,baz=161,slow=29,SNR=25						
AML	**Almayashu**	**2.22**	**69**	⇑*e*P	**Pn**	**11 50 09.0**	**+1.1**
	baz=70						
AML				⇑*i*S	**Sb**	**11 50 38.0**	**-0.8**
	baz=70						
EKS2	**Erkin-Say**	**2.50**	**58**	⇑*e*P	**Pn**	**11 50 11.6**	**+0.1**
	baz=59						
EKS2				⇑*i*S	**Sn**	**11 50 43.8**	**+1.2**
	baz=59						
ARLS	**Aral**	**2.60**	**78**	⇑*i*P	**Pn**	**11 50 14.5**	**+1.6**
	baz=79						
ARLS				⇑*i*S	**Sn**	**11 50 47.7**	**+2.5**
	baz=79						
UCH	**Uchtor**	**2.83**	**71**	⇑*i*P	**Pn**	**11 50 17.6**	**+1.3**
	baz=72						
UCH				⇑*i*S	**Sn**	**11 50 52.9**	**+1.7**
	baz=72						
AAK	**Ala-Archa**	**2.96**	**63**	⇓Pg	**Pb**	**11 50 21.6**	**-1.6**
	3.1nm,0.9s						
AAK				⇑Lg	Lg	11 51 00.7	
	6.3nm,0.8s						
TKM2	**Tokmak 2**	**3.81**	**64**	⇑Lg	Lg	11 51 26.2	
	4.5nm,1.1s						
AKTO	**Aktyubinsk**	**12.76**	**320**	⇓P	**Pn**	**11 52 29.6**	**-2.4**
	30nm,0.7s						

*IDC **15** 12:02:13.6±0.9, 1.83N× 126.28E, h0km, mb3.9/7,*
mb1 4.0/8, mb1mx3.8/37, mbtmp3.9/8, ML3.6/1, Error
ellipse: s-maj=81.3km s-min=16.5km az=74.0
*NEIC **15** 12:02:17.9±1.6, 2.1N±0.1× 126.9E±0.1, h35km±2km,*
mb4.2/15, Error ellipse: s-maj=24.6km s-min=6.0km
az=42.0
*DJA **15** 12:02:18.6±3.2, 2.7N±4.4× 12.7E±°, h16km±31km, M3.9/7,*
MLv3.9/7
ISC 15 12:02:19.9±0.6, 1.95N±0.05× 126.67E±0.09, h47km, n37, σ1§15/41, mb4.1/12, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**149**	P	**Pn**	**12 02 43.0**	**+0.5**
TNTI	**Ternate**	**1.36**	**149**		**Pn**	**12 02 40.9**	**-1.7**
SGSI	**Sangihe**	**2.07**	**326**	P	**Pn**	**12 02 51.6**	**-0.6**
KMSI	**Cibinong**	**3.02**	**243**	P	**Pn**	**12 03 05.1**	**-0.2**
GTOI	**Gorontalo**	**3.89**	**250**	P	**Pn**	**12 03 17.2**	**0.0**
DDMP	**Don Marcelino,**	**4.24**	**347**	*e*P	**Pn**	**12 03 21.4**	**-0.6**
DDMP				*e*S	**Sn**	**12 04 10.6**	**+0.4**
LUWI	**Luwuk**	**4.90**	**233**		**Pn**	**12 03 32.5**	**+1.3**
SKMP	**Bagumbayan, Su**	**5.01**	**335**	*e*P	**Pn**	**12 03 32.1**	**-0.6**
SKMP				*e*S	**Sn**	**12 04 27.2**	**-2.1**
KCP	**Kidapawan**	**5.27**	**343**	⇓*e*P	**Pn**	**12 03 40.4**	**+4.2**
PAGZ	**Pagadian**	**6.71**	**331**	*e*P	**Pn**	**12 03 55.5**	**-0.5**
MYLDM	**Lahad Datu**	**8.76**	**292**		**Pn**	**12 04 24.9**	**+0.8**
KKM	**Kota Kinabalu**	**11.20**	**292**	Pn	**Pn**	**12 04 59.0**	**+1.4**
MTN	**Manton Dam**	**15.35**	**163**	Pn	**Pn**	**12 05 54.2**	**+0.7**
MTN				IAmb	IAmb	12 05 58.9	
	comp=Z,15nm,1.4s						
KNRA	**Kununurra**	**17.64**	**173**		**Pn**	**12 06 21.5**	**-0.9**
KNRA				IAmb	IAmb	12 06 21.7	
	comp=Z,22nm,1.5s						
FITZ	**Fitzroy Crossi**	**19.95**	**183**	P	**P**	**12 06 47.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=360,slow=5.2,SNR=6.2						
FITZ	**Fitzroy Crossi**	**19.95**	**183**	P	**P**	**12 06 48.2**	**0.0**
WB0	**Warramunga Arr**	**22.88**	**161**	P	**P**	**12 07 18.6**	**-1.0**
WRAB	**Tennant Creek**	**23.02**	**161**	P	**P**	**12 07 19.7**	**-1.4**
WRAB				IAmb	IAmb	12 07 21.7	
	comp=Z,6.8nm,0.6s						
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**12 07 19.8**	**-1.4**
	comp=Z,6.1nm,0.6s,baz=340,slow=11,SNR=76						
WRA				PcP	**PcP**	**12 11 09.6**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=344,slow=2.4,SNR=2.1						
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**12 07 19.9**	**-1.3**
WB2	**Warramunga Arr**	**23.02**	**161**	P	**P**	**12 07 20.1**	**-1.1**
WB2				IAmb	IAmb	12 07 21.8	
	comp=Z,7.3nm,0.6s						
WR0	**Warramunga Arr**	**23.10**	**161**	P	**P**	**12 07 20.7**	**-1.2**
WR0				IAmb	IAmb	12 07 22.6	
	comp=Z,4.8nm,0.6s						
AS31	**Alice Springs**	**26.42**	**165**	P	**P**	**12 07 52.4**	**-0.1**
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**12 07 52.5**	**0.0**
	comp=Z,1.2nm,0.4s,baz=347,slow=12,SNR=19						
ASAR				PcP	**PcP**	**12 11 17.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=352,slow=2.2,SNR=4.3						
FORT	**Forrest**	**32.57**	**178**	P	**P**	**12 08 47.6**	**+0.7**
KSRS	**Korea Array**	**35.35**	**2**	P	**P**	**12 09 13.0**	**+2.1**
	comp=Z,0.8nm,0.7s,baz=178,slow=8.6,SNR=2.8						
STKA	**Stephens Creek**	**36.50**	**158**	P	**P**	**12 09 20.8**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=354,slow=12,SNR=3.6						
STKA	**Stephens Creek**	**36.50**	**158**	P	**P**	**12 09 21.0**	**+0.1**
STKA				IAmb	IAmb	12 09 38.4	
	comp=Z,2.7nm,1.5s						
SONM	**Songino Array**	**48.96**	**342**	P	**P**	**12 11 01.3**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=158,slow=10,SNR=2.5						
MK31	**Makanchi Array**	**58.98**	**326**		**P**	**12 12 14.2**	**-0.7**
MK31				IAmb	IAmb	12 12 15.5	
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**12 12 13.8**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=119,slow=7.5,SNR=26						
MKAR	**Makanchi Array**	**58.98**	**326**		**P**	**12 12 14.2**	**-0.7**
MAKZ	**Makanchi**	**59.16**	**326**	P	**P**	**12 12 15.7**	**-0.4**
MAKZ				IAmb	IAmb	12 12 17.0	
	comp=Z,5.0nm,1.4s						
KURK	**Kurchatov**	**63.20**	**328**		**P**	**12 12 42.9**	**-0.4**
ABKAR	**Akbulak array**	**73.49**	**321**	P	**P**	**12 13 46.8**	**-0.8**
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**12 14 33.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=313,slow=5.4,SNR=2.1						
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**12 14 33.3**	**+0.5**

*IDC **15** 12:06:35.8±0.6, 1.72N× 126.22E, h0km, mb4.0/12,*
mb1 4.1/14, mb1mx3.9/34, mbtmp4.0/14, ML3.2/2, Error
ellipse: s-maj=38.5km s-min=13.9km az=77.0
*NEIC **15** 12:06:40.6±1.6, 1.78N±0.08× 126.38E±0.08, h35km±2km,*
mb4.2/17, Error ellipse: s-maj=17.4km s-min=9.5km
az=43.0
*DJA **15** 12:06:42.2±0.3, 2.7N±3.7× 12.6E±°, h43km±8km, M4.2/11,*
mB4.7/1, mb4.5/7, MLv4.1/11, Mw(mB)3.9/1
ISC 15 12:06:42.1±0.5, 1.76N±0.05× 126.43E±0.08, h47km, n56, σ1§35/58, mb4.3/19, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**136**	P	**Pn**	**12 07 04.1**	**-0.6**
TNTI	**Ternate**	**1.35**	**136**	Pn	**Pn**	**12 07 04.1**	**-0.6**
SGSI	**Sangihe**	**2.12**	**335**	P	**Pn**	**12 07 14.1**	**-1.0**
KMSI	**Cibinong**	**2.72**	**244**	P	**Pn**	**12 07 24.0**	**+0.6**
GTOI	**Gorontalo**	**3.60**	**252**	P	**Pn**	**12 07 39.2**	**+3.8**
DDMP	**Don Marcelino,**	**4.38**	**351**	*e*P	**Pn**	**12 07 44.6**	**-1.6**
DDMP				*e*S	**Sn**	**12 08 38.4**	**+2.5**
LUWI	**Luwuk**	**4.60**	**233**	P	**Pn**	**12 07 50.2**	**+1.0**
LUWI	**Luwuk**	**4.60**	**233**	Pn	**Pn**	**12 07 47.5**	**-1.7**
MRSI	**Marisa**	**4.67**	**254**	P	**Pn**	**12 07 49.0**	**-1.1**
SKMP	**Bagumbayan, Su**	**5.09**	**338**	*e*P	**Pn**	**12 07 53.8**	**-2.2**
SKMP				*e*S	**Sn**	**12 08 51.1**	**-2.3**
KCP	**Kidapawan**	**5.38**	**346**	⇓*i*P	Pn	12 08 04.3	+4.3
APSI	**Ampana**	**5.47**	**241**	P	**Pn**	**12 08 04.0**	**+2.9**
	0.2nm686nm56nm,0.7s						
SIJI	**Sorong**	**5.49**	**118**	Pn	**Pn**	**12 08 01.4**	**-0.1**
	0.2nm,0.3s,baz=179,slow=23,SNR=1.8						
MPSI	**Mapaga**	**6.69**	**258**	P	**Pn**	**12 08 19.7**	**+1.9**
	0.0nm11nm,0.6s						
PAGZ	**Pagadian**	**6.77**	**333**	*e*P	**Pn**	**12 08 16.4**	**-2.5**
FAKI	**Fak Fak**	**7.44**	**129**	Pn	**Pn**	**12 08 29.0**	**+0.8**
TTSI	**Tana Toraja**	**8.15**	**234**	P	**Pn**	**12 08 38.6**	**+0.6**
	14nm,0.7s						
MYLDM	**Lahad Datu**	**8.62**	**293**	Pn	**Pn**	**12 08 42.9**	**-1.4**
BNSI	**Bone**	**8.80**	**226**	P	**Pn**	**12 08 47.4**	**+0.6**
	12nm,0.6s						
KAPI	**Kappang**	**9.48**	**225**	Pn	**Pn**	**12 08 54.3**	**-1.9**
KKM	**Kota Kinabalu**	**11.04**	**293**	Pn	**Pn**	**12 09 16.3**	**-1.4**
MTN	**Manton Dam**	**15.24**	**162**	Pn	**Pn**	**12 10 14.1**	**-0.3**
MTN				IAmb	IAmb	12 10 30.4	
	comp=Z,17nm,1.5s						
KNRA	**Kununurra**	**17.48**	**173**	P	**Pn**	**12 10 42.3**	**-0.3**
KNRA				IAmb	IAmb	12 10 44.3	
	comp=Z,11nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.75**	**182**	P	**P**	**12 11 06.8**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=59,slow=7.9,SNR=2.8						
FITZ	**Fitzroy Crossi**	**19.75**	**182**	P	**P**	**12 11 08.1**	**-0.1**
TPUB	**Ta-pu**	**22.14**	**346**	P	**P**	**12 11 32.6**	**-1.4**
WB0	**Warramunga Arr**	**22.78**	**160**	P	**P**	**12 11 39.9**	**-1.0**
COEN	**Coen**	**22.79**	**134**	P	**P**	**12 11 39.6**	**-1.4**
COEN				IAmb	IAmb	12 12 02.0	
	comp=Z,13nm,1.4s						
WRAB	**Tennant Creek**	**22.92**	**161**	P	**P**	**12 11 41.2**	**-1.0**
WRAB				IAmb	IAmb	12 11 45.1	
	comp=Z,7.8nm,0.7s						
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**12 11 41.4**	**-1.0**
	comp=Z,6.2nm,0.4s,baz=340,slow=11,SNR=88						
WRA				PcP	**PcP**	**12 15 32.3**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=331,slow=2.0,SNR=1.9						
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**12 11 39.9**	**-2.5**
WB2	**Warramunga Arr**	**22.93**	**161**	P	**P**	**12 11 40.9**	**-1.5**
WB2				IAmb	IAmb	12 11 45.1	
	comp=Z,8.9nm,0.6s						
WR0	**Warramunga Arr**	**23.00**	**160**	P	**P**	**12 11 42.0**	**-1.2**
WR0				IAmb	IAmb	12 11 45.0	
	comp=Z,6.1nm,0.5s						
AS31	**Alice Springs**	**26.30**	**164**	P	**P**	**12 12 13.5**	**-0.1**
ASAR	**Alice Springs**	**26.30**	**164**	P	**P**	**12 12 13.6**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=344,slow=7.9,SNR=31						
ASAR				PcP	**PcP**	**12 15 39.6**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=350,slow=2.3,SNR=8.2						
CTA	**Charters Tower**	**29.14**	**139**	P	P	12 12 44.6	+5.5
	comp=Z,1.2nm,0.5s,baz=334,slow=12,SNR=1.7						
KSRS	**Korea Array**	**35.55**	**2**	P	**P**	**12 13 35.5**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=186,slow=11,SNR=2.0						
BBOO	**Buckleboo**	**35.57**	**166**	P	**P**	**12 13 34.4**	**-0.6**
NWAO	**Narrogin (SRO)**	**35.58**	**193**	P	**P**	**12 13 35.0**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=23,slow=7.7,SNR=1.4						
STKA	**Stephens Creek**	**36.41**	**158**	P	**P**	**12 13 43.2**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=338,slow=11,SNR=1.6						
STKA	**Stephens Creek**	**36.41**	**158**	P	**P**	**12 13 43.1**	**+0.8**
STKA				IAmb	IAmb	12 14 03.3	
	comp=Z,1.8nm,1.2s						
SONM	**Songino Array**	**49.06**	**342**	P	**P**	**12 15 24.0**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=158,slow=9.6,SNR=2.7						
PETK	**Petropavlovsk-**	**57.35**	**22**	P	**P**	**12 16 27.3**	**+1.9**
	comp=Z,3.4nm,1.0s,baz=229,slow=1.3,SNR=1.3						
MK31	**Makanchi Array**	**59.00**	**326**	P	**P**	**12 16 36.2**	**-0.9**
MK31				IAmb	IAmb	12 16 40.9	
	comp=Z,1.2nm,0.9s						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**12 16 36.5**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=120,slow=7.6,SNR=21						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**12 16 36.2**	**-0.9**
MAKZ	**Makanchi**	**59.19**	**326**	P	**P**	**12 16 37.5**	**-0.9**
MAKZ				IAmb	IAmb	12 16 40.5	
	comp=Z,4.3nm,1.4s						
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**12 17 05.2**	**-0.5**
NRIK	**Noril'sk**	**72.26**	**346**	P	**P**	**12 18 02.6**	**+0.5**
	comp=Z,2.7nm,0.6s,baz=135,slow=12,SNR=6.4						
ABKAR	**Akbulak array**	**73.48**	**321**	P	**P**	**12 18 09.4**	**-0.4**
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**12 18 54.5**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=310,slow=6.9,SNR=5.2						
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**12 18 54.8**	**+0.7**
ILAR	**Eielson Array**	**87.00**	**25**	P	**P**	**12 19 22.1**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=250,slow=5.4,SNR=2.1						
ARCES	**ARCESS Array B**	**92.18**	**340**	P	**P**	**12 19 48.1**	**+1.6**
	comp=Z,2.9nm,0.9s,baz=85,slow=3.9,SNR=2.1						
TORD	**Torodi Ar. Bea**	**123.22**	**287**	PKP	**PKiKP**	**12 25 34.8**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=39,slow=0.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**123.22**	**287**		**PKiKP**	**12 25 35.3**	**+0.2**

IDC 15 12:11:17.9±1.6, 1.66N× 126.31E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/30, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=113.0km s-min=23.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P	Pn	12 15 49.1	-0.5
	0.1nm,0.3s,baz=5.2,slow=11,SNR=1.6						
WRA	**Warramunga Arr**	**22.87**	**160**	P	P	12 16 22.6	-0.6
	1.5nm,0.5s,baz=338,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.24**	**164**	P	P	12 16 55.2	+0.3
	0.3nm,0.5s,baz=338,slow=9.4,SNR=6.2						
ASAR				PcP	PcP	12 20 21.2	-0.7
	0.1nm,0.4s,baz=336,slow=1.8,SNR=1.9						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	12 21 19.6	0.0
	0.4nm,0.3s,baz=122,slow=7.9,SNR=9.1						

IDC 15 12:25:41.9±2.3, 2.02N× 126.69E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.1/43, mbtmp3.2/3, MS2.6/1, Ms1 2.6/1, ms1mx2.4/18, Error ellipse: s-maj=173.0km s-min=28.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.84**	**225**	LR	LR	12 32 19.8	
	comp=Z,38nm,19.6s,baz=24,slow=40						
WRA	**Warramunga Arr**	**23.08**	**161**	P	P	12 30 48.9	-0.5
	0.3nm,0.5s,baz=340,slow=11,SNR=9.9						
ASAR	**Alice Springs**	**26.48**	**165**	P	P	12 31 21.9	+0.8
	0.3nm,0.8s,baz=347,slow=12,SNR=1.6						
MKAR	**Makanchi Array**	**58.93**	**326**	P	P	12 35 42.7	-0.3
	0.2nm,0.6s,baz=131,slow=7.5,SNR=2.2						

IDC 15 12:34:48.0±3.6, 1.93S× 127.48E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/42, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=189.4km s-min=34.6km az=85.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.12**	**160**	P	P	12 39 12.8	+0.1
	0.1nm,0.3s,baz=339,slow=11,SNR=1.5						
ASAR	**Alice Springs**	**22.49**	**164**	P	P	12 39 49.0	-0.3
	0.4nm,0.9s,baz=347,slow=12,SNR=2.7						
ILAR	**Eielson Array**	**89.86**	**25**	P	P	12 47 48.6	+0.1
	0.4nm,0.8s,baz=264,slow=4.9,SNR=5.1						

IDC 15 12:37:26.4±2.0, 1.66N× 126.59E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/40, mbtmp3.3/4, Error ellipse: s-maj=186.6km s-min=24.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.78**	**161**	P	P	12 42 29.4	-1.4
	0.3nm,0.4s,baz=339,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**26.16**	**165**	P	P	12 43 04.2	+1.5
	0.3nm,0.7s,baz=342,slow=11,SNR=2.0						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	12 47 30.3	+1.0
	0.1nm,0.4s,baz=120,slow=8.0,SNR=2.0						
KURBB	**Kurchatov Arra**	**63.40**	**328**	P	P	12 47 56.7	-1.1
	0.1nm,0.3s,baz=124,slow=6.7,SNR=1.6						

*IDC **15** 12:38:59.9±2.0, 37.42N× 142.18E, h0km, mb3.4/3,*
mb1 3.5/6, mb1mx3.3/55, mbtmp3.5/6, ML3.2/3, Error
ellipse: s-maj=39.1km s-min=25.5km az=96.0
*JMA **15** 12:39:04.8±0.1, 37.44N× 141.93E, h34km±3km, M3.5*
ISC 15 12:39:00.8±2.5, 37.43N±0.04× 142.12E±0.07, h11km±15km, n25, σ1§81/32, mb3.3/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.99**	**266**	P	**Pb**	**12 39 20.4**	**+0.4**
JFK				S	**Sg**	**12 39 31.2**	**-1.7**
JIKH	**Ishinomakikobu**	**1.02**	**330**	P	**Pn**	**12 39 21.9**	**+0.9**
JIKH				*e*S	**Sb**	**12 39 33.5**	**-0.3**
JMST	**Minamisoumatoc**	**1.02**	**287**	P	**Pb**	**12 39 20.8**	**+0.3**
JMST				S	**Sb**	**12 39 31.8**	**-2.1**
ONAJ	**Iwakimizuishiy**	**1.10**	**253**	P	**Pb**	**12 39 22.0**	**+0.1**
ONAJ				S	**Sb**	**12 39 34.3**	**-2.1**
JMM	**Marumori**	**1.14**	**293**	P	**Pb**	**12 39 22.8**	**+0.3**
JMM				S	**Sb**	**12 39 35.3**	**-2.0**
JIO	**Ouri**	**1.19**	**329**	P	**Pb**	**12 39 24.4**	**+1.1**
JIO				S	**Sb**	**12 39 37.7**	**-1.0**
JFT	**Otama**	**1.42**	**274**	P	**Pn**	**12 39 27.5**	**+0.9**
JFT				S	**Sn**	**12 39 43.4**	**-1.9**
JOU	**Okura**	**1.48**	**309**	P	**Pb**	**12 39 28.8**	**+0.5**
JOU				*e*S	**Sn**	**12 39 46.1**	**-0.6**
JMK	**Ichinoseki**	**1.67**	**335**	P	**Pb**	**12 39 31.9**	**+0.3**
JYS	**Shirataka**	**1.81**	**296**	S	**Sn**	**12 39 54.9**	**+0.1**
JFY	**Yanaizu**	**1.92**	**270**	P	**Pn**	**12 39 34.6**	**+1.1**
JFY				*e*S	**Sn**	**12 39 56.5**	**-1.2**
JYK	**Kaneyama**	**2.03**	**317**	P	**Pn**	**12 39 36.8**	**+1.9**
MJAR	**Matsushiro Arr**	**3.25**	**255**	Pn	**Pn**	**12 39 53.7**	**+1.9**
	0.3nm,0.3s,baz=78,slow=15,SNR=17						
MJAR				Sn	**Sn**	**12 40 34.0**	**+3.4**
	0.3nm,0.3s,baz=83,slow=22,SNR=5.4						
MAT	**Matsushiro**	**3.26**	**255**	P	**Pn**	**12 39 54.7**	**+2.9**
MAT				*e*S	**Sn**	**12 40 29.5**	**-1.1**
JHJ	**Hachijo jima 2**	**4.71**	**205**	Pn	**Pn**	**12 40 12.1**	**+0.3**
	12nm,0.3s,baz=77,slow=17,SNR=1.3						
JHJ				Sn	**Sn**	**12 41 03.9**	**-2.6**
	11nm,0.3s,baz=19,slow=9.6,SNR=2.0						
ASAJ	**Asahikawa**	**6.69**	**3**	Pn	**Pn**	**12 40 41.1**	**+2.2**
	0.5nm,0.3s,baz=211,slow=12,SNR=9.7						
ASAJ				Sn	**Sn**	**12 41 50.2**	**-4.8**
	0.2nm,0.3s,baz=108,slow=26,SNR=1.0						
H11N2	**WAKE ISLAND Hy**	**27.88**	**122**	T	T	13 14 22.6	
	baz=315,slow=75,SNR=13						
H11N1	**WAKE ISLAND Hy**	**27.89**	**122**	T	T	13 14 22.8	
	baz=315,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**27.89**	**122**	T	T	13 14 23.7	
	baz=315,slow=75,SNR=13						
H11S1	**WAKE ISLAND Hy**	**28.61**	**124**	T	T	13 15 13.5	
	baz=316,slow=76,SNR=16						
H11S3	**WAKE ISLAND Hy**	**28.61**	**125**	T	T	13 15 15.2	
	baz=316,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**28.63**	**125**	T	T	13 15 17.3	
	baz=316,slow=76,SNR=6.2						
MKAR	**Makanchi Array**	**44.38**	**302**	P	**P**	**12 47 11.8**	**+0.5**
	0.3nm,0.7s,baz=84,slow=9.5,SNR=2.4						
KURBB	**Kurchatov Arra**	**46.20**	**308**	P	**P**	**12 47 26.0**	**+0.4**
	0.3nm,0.3s,baz=84,slow=7.9,SNR=5.4						
WRA	**Warramunga Arr**	**57.54**	**189**	P	**P**	**12 48 51.3**	**+1.0**
	0.2nm,0.6s,baz=6.5,slow=7.6,SNR=2.0						

IDC 15 12:42:22.3±1.7, 1.86N× 126.28E, h0km, mb3.2/4, mb1 3.4/5, mb1mx3.2/37, mbtmp3.2/5, ML3.0/1, Error ellipse: s-maj=121.2km s-min=21.3km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.84**	**182**	P	Pn	12 46 55.7	-0.8

	comp=Z,9.3nm,1.1s							
WR0	**Warramunga Arr**	**23.19**	**160**	P	**P**	**12 55 20.5**	**-0.7**
ASAR	**Alice Springs**	**26.49**	**165**	P	**P**	**12 55 52.4**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=347,slow=7.9,SNR=8.0							
ASAR				PcP	**PcP**	**12 59 16.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=352,slow=2.1,SNR=1.5							
ASAR	**Alice Springs**	**26.49**	**165**	P	**P**	**12 55 49.9**	**-1.6**
SONM	**Songino Array**	**48.88**	**342**	P	**P**	**12 59 01.2**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=157,slow=7.8,SNR=1.8							
MK31	**Makanchi Array**	**58.85**	**326**	P	**P**	**13 00 12.9**	**+0.6**
MK31				IAmb	IAmb	13 00 23.2		
	comp=Z,1.8nm,1.3s							
MKAR	**Makanchi Array**	**58.85**	**326**	P	**P**	**13 00 13.1**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=119,slow=8.2,SNR=12							
MKAR	**Makanchi Array**	**58.85**	**326**	P	**P**	**13 00 12.6**	**+0.3**
ZAA0	**Zalesovo Array**	**62.03**	**334**	P	**P**	**13 00 35.2**	**+1.4**
ZALV	**Zalesovo Beam**	**62.03**	**334**	P	**P**	**13 00 33.1**	**-0.8**
KURK	**Kurchatov**	**63.08**	**328**	P	**P**	**13 00 41.8**	**+0.9**
ABKAR	**Akbulak array**	**73.34**	**321**	P	**P**	**13 01 46.5**	**+1.3**
VNDA	**Vanda**	**81.72**	**173**	P	**P**	**13 02 31.4**	**0.0**

*IDC **15** 12:55:17.6±4.7,25°.30S×179°.81E,h502^{km}±56^{km},mb3.0/4, mb1 3.4/7,mb1mx3.0/35,mbtmp4.2/7,Error ellipse: s-maj=38.3km s-min=26.6km az=36.0*

ISC 15 12:55:17.5±1.4,25°.4S±0°.1×179°.9E±0°.2,h500^{km},n7, σ0^{s}96/8,mb3.7/4,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.71**	**282**	P		**P**	**12 58 05.0**	**+1.3**
	0.3nm,0.3s,baz=119,slow=19,SNR=3.1							
URZ	**Urewera**	**13.08**	**190**	P		**P**	**12 58 07.7**	**+0.5**
	1.3nm,0.3s,baz=67,slow=7.7,SNR=2.2							
URZ				S		**S**	**13 00 27.0**	**-0.3**
	0.2nm,0.3s,baz=28,slow=18,SNR=1.2							
RPZ	**Rata Peaks**	**19.68**	**199**	P		**P**	**12 59 13.2**	**+0.2**
	0.5nm,0.3s,baz=29,slow=9.4,SNR=2.2							
CTA	**Charters Tower**	**31.38**	**273**	P		**P**	**13 00 55.4**	**-1.5**
	1.2nm,0.3s,baz=102,slow=9.9,SNR=9.5							
ASAR	**Alice Springs**	**41.68**	**262**	P		**P**	**13 02 22.3**	**+0.3**
	0.6nm,0.4s,baz=82,slow=8.0,SNR=15							
WRA	**Warramunga Arr**	**42.19**	**268**	P		**P**	**13 02 25.6**	**-0.5**
	1.9nm,0.5s,baz=103,slow=8.0,SNR=32							
NVAR	**Mina Array Bea**	**85.89**	**44**	P		**P**	**13 07 04.3**	**0.0**
	0.4nm,0.8s,baz=225,slow=10.0,SNR=2.1							

*IDC **15** 13:00:12.1±1.8,8°.42S×124°.86E,h0^{km},mb3.8/2, mb1 4.1/6,mb1mx3.6/44,mbtmp3.9/6,ML3.9/4,Error ellipse: s-maj=43.9km s-min=26.3km az=70.0*

*DJA **15** 13:00:25.0±1.1,9°.5S±4°.×12°.4E±°,h56^{km}±21^{km},M4.2/9, mb4.6/3,MLv3.9/9*

ISC 15 13:00:15.8±1.2,8°.58S±0°.08×124°.56E±0°.09,h20^{km},n14, σ1^{s}81/16,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.20**	**194**	P		**Pb**	**13 00 42.2**	**+4.2**
SOEI				S		**Sb**	**13 00 52.4**	**-0.8**
BATI	**Baumata**	**1.84**	**209**	Pn		**Pb**	**13 00 49.1**	**+0.2**
	36nm,0.3s,baz=92,slow=2.3,SNR=22							
BATI				Sn		**Sn**	**13 01 07.1**	**-2.0**
	80nm,0.3s,baz=309,slow=2.4,SNR=14							
BATI	**Baumata**	**1.84**	**209**	P		**Pb**	**13 00 48.9**	**0.0**
MMRI	**Maumere**	**2.30**	**268**	P		**Pb**	**13 00 56.7**	**0.0**
EDFI	**Ende, Flores**	**2.85**	**266**	P		**Pn**	**13 01 03.4**	**+3.2**
BASI	**Baing, Sumba**	**4.26**	**247**	P		**Pn**	**13 01 20.5**	**+0.9**
WBSI	**Waikabubak, Su**	**5.22**	**258**	P		**Pn**	**13 01 32.7**	**-0.1**
PLAI	**Plampang**	**6.71**	**267**	P		**Pn**	**13 01 55.5**	**+2.1**
	0.2nm61nm,0.8s							
TWSI	**Taliwang, Sumb**	**7.60**	**268**	P		**Pn**	**13 02 06.7**	**+1.2**
FITZ	**Fitzroy Crossi**	**9.52**	**174**	Pn		**Pn**	**13 02 30.7**	**-1.1**
	1.2nm,0.3s,baz=359,slow=10,SNR=60							
FITZ				Sn		Sn	13 04 06.5	-12
	5.2nm,0.3s,baz=195,slow=15,SNR=23							
WRA	**Warramunga Arr**	**14.73**	**141**	Pn		**Pn**	**13 03 42.2**	**-1.0**
	0.5nm,0.3s,baz=321,slow=14,SNR=15							
WRA				Sn		Sn	13 06 13.7	-12
	1.3nm,0.3s,baz=319,slow=26,SNR=92							
ASAR	**Alice Springs**	**17.46**	**150**	P		**Pn**	**13 04 17.6**	**-0.7**
	0.3nm,0.3s,baz=324,slow=12,SNR=22							
STKA	**Stephens Creek**	**28.07**	**148**	P		**P**	**13 06 05.5**	**-0.6**
	3.8nm,1.0s,baz=323,slow=10,SNR=3.2							
MKAR	**Makanchi Array**	**66.73**	**330**	P		**P**	**13 11 05.1**	**-0.5**
	0.1nm,0.5s,baz=134,slow=4.2,SNR=1.7							

*IDC **15** 13:07:03.0±1.8,1°.77N×126°.34E,h0^{km},mb3.3/4, mb1 3.4/4,mb1mx3.2/46,mbtmp3.3/4,MS3.1/1,Ms1 3.1/1, ms1mx2.4/24,Error ellipse: s-maj=185.0km s-min=22.5km az=66.0*

*DJA **15** 13:07:06.6±2.0,2°.N±5°.×12°.7E±°,h13^{km}±20^{km},M3.3/6, MLv3.3/6*

ISC 15 13:07:08.7±1.4,1°.8N±0°.2×126°.7E±0°.1,h47^{km},n8,σ0^{s}75/7, mb3.3/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**146**	P		**Pn**	**13 07 29.0**	**-0.6**
KMSI	**Cibinong**	**2.95**	**246**	P		**Pn**	**13 07 52.5**	**-0.6**
MRSI	**Marisa**	**4.91**	**254**	P		**Pn**	**13 08 19.7**	**-0.2**
WRA	**Warramunga Arr**	**22.89**	**161**	P		**P**	**13 12 09.0**	**+0.5**
	0.5nm,0.5s,baz=339,slow=10,SNR=7.5							
ASAR	**Alice Springs**	**26.28**	**165**	P		**P**	**13 12 41.0**	**+1.1**
	0.2nm,0.4s,baz=348,slow=12,SNR=2.3							
KLR	**Kul'dur**	**47.45**	**5**	LR		LR	13 36 43.7	
	comp=Z,20nm,18.6s,baz=7.0,slow=38							
MKAR	**Makanchi Array**	**59.10**	**326**	P		**P**	**13 17 04.2**	**-0.1**
	0.2nm,0.3s,baz=122,slow=8.3,SNR=5.5							
KURBB	**Kurchatov Arra**	**63.32**	**328**	P		**P**	**13 17 32.8**	**0.0**
	0.2nm,0.6s,baz=128,slow=6.6,SNR=6.1							

*ATH **15** 13:10:27.3,38°.10N×20°.41E,h17^{km}±1^{km},ML2.6/5,Error ellipse: s-maj=2.5km s-min=1.2km az=62.0*

*THE **15** 13:10:28.4,38°.11N×20°.46E,h12^{km},ML2.8/14,Error ellipse: s-maj=1.0km s-min=0.4km az=74.0*

ISC 15 13:10:27.5±0.9,38°.10N±0°.03×20°.42E±0°.04,h18^{km}±4^{km}, n44,σ0^{s}66/69,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARGA	**Argostoli. Kep**	**0.09**	**32**	P		**Pg**	**13 10 30.8**	**-0.2**
ARGA				S		**Sg**	**13 10 32.8**	**-0.5**
ARG2	**Argostoli**	**0.09**	**35**	P		**Pg**	**13 10 30.9**	**-0.1**
ARG2				S		**Sg**	**13 10 32.9**	**-0.5**
	45μm,0.1s							
LXRA	**Lixouri, Kepha**	**0.10**	**9**	P		**Pg**	**13 10 31.2**	**+0.1**
LXRA				S		**Sg**	**13 10 33.7**	**+0.2**
PSDA	**Pessada-Kefalo**	**0.13**	**84**	P		**Pg**	**13 10 31.1**	**-0.3**
PSDA				S		**Sg**	**13 10 33.4**	**-0.7**
PSDA	**Pessada-Kefalo**	**0.13**	**84**	P		**Pg**	**13 10 31.2**	**-0.3**
PSDA				S		**Sg**	**13 10 33.4**	**-0.7**
	3μm,0.1s							
DMLN	**Damoulianata-K**	**0.14**	**346**	P		**Pg**	**13 10 31.8**	**+0.2**
DMLN				S		**Sb**	**13 10 34.8**	**+0.4**
	15μm,0.2s							
VLS	**Valsamata**	**0.15**	**61**	P		**Pg**	**13 10 31.4**	**-0.3**
VLS				S		**Sg**	**13 10 34.1**	**-0.6**
VLS				AML		AML	13 10 34.2	
	comp=E,56261μm,0.1s							
VLS				AML		AML	13 10 34.5	
	comp=N,23132μm,0.1s							
VLS	**Valsamata**	**0.15**	**61**	P		**Pg**	**13 10 31.4**	**-0.3**
VLS				S		**Sg**	**13 10 34.1**	**-0.6**
	comp=N,22μm,0.0s							
KEF4	**Livadi, Kephal**	**0.16**	**2**	P		**Pg**	**13 10 31.8**	**0.0**
KEF4				S		**Sb**	**13 10 35.0**	**+0.2**
KEF4	**Livadi, Kephal**	**0.16**	**2**	P		**Pg**	**13 10 31.9**	**+0.1**
KEF4				S		**Sb**	**13 10 35.0**	**+0.2**
	comp=N,39μm,0.3s							
KEF5	**Kardakata, Kep**	**0.18**	**13**	P		**Pg**	**13 10 32.1**	**0.0**
KEF5				S		**Sg**	**13 10 35.1**	**-0.2**
KEF5	**Kardakata, Kep**	**0.18**	**13**	P		**Pg**	**13 10 32.1**	**0.0**
KEF5				S		**Sg**	**13 10 35.2**	**-0.1**
	comp=N,19μm,0.1s							
VLMS	**Volimes, Zakyn**	**0.30**	**139**	P		**Pg**	**13 10 33.8**	**-0.1**
VLMS				S		**Sg**	**13 10 38.0**	**-0.3**
VLMS				AML		AML	13 10 39.8	
	comp=N,5532μm,0.2s							
VLMS				AML		AML	13 10 39.8	
	comp=E,4658μm,0.2s							
VLMS	**Volimes, Zakyn**	**0.30**	**139**	P		**Pg**	**13 10 33.8**	**-0.1**
VLMS				S		**Sb**	**13 10 38.8**	**-0.1**
	comp=E,3μm,0.1s							
FSK	**Fiskardo**	**0.38**	**18**	P		**Pg**	**13 10 35.0**	**-0.3**
FSK				S		**Sb**	**13 10 41.2**	**0.0**
FSK				AML		AML	13 10 41.8	
	comp=E,4191μm,0.1s							
FSK				AML		AML	13 10 42.4	
	comp=N,1311μm,0.3s							
FSK	**Fiskardo**	**0.38**	**18**	P		**Pg**	**13 10 35.2**	**-0.1**
FSK				S		**Sg**	**13 10 40.4**	**-0.2**
	comp=N,1μm,0.2s							
KRI1	**kERI**	**0.54**	**144**	P		**Pg**	**13 10 37.8**	**-0.5**
KRI1				S		**Sb**	**13 10 46.1**	**+0.2**
	comp=N,2μm,0.3s							
EVGI	**Lefkada island**	**0.55**	**20**	P		**Pg**	**13 10 38.2**	**-0.3**
EVGI				S		**Sb**	**13 10 46.8**	**+0.5**
EVGI	**Lefkada island**	**0.55**	**20**	P		**Pg**	**13 10 38.3**	**-0.2**
EVGI				S		**Sb**	**13 10 46.4**	**+0.1**
	comp=N,308nm,0.1s							
MGNA	**Meganis**	**0.63**	**28**	P		**Pg**	**13 10 39.4**	**-0.5**
MGNA				S		**Sb**	**13 10 48.7**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.65**	**20**	P		**Pg**	**13 10 39.8**	**-0.5**
NYDR				S		**Sb**	**13 10 49.6**	**+0.5**
	comp=N,325nm,0.4s							
AST1	**Astakos**	**0.69**	**50**	P		**Pg**	**13 10 40.5**	**-0.5**
AST1				S		**Sb**	**13 10 50.9**	**+0.8**
	comp=N,482nm,0.2s							
LKD2	**Lefkada island**	**0.71**	**15**	P		**Pg**	**13 10 40.8**	**-0.7**
LKD2				AML		AML	13 10 57.1	
	comp=N,386μm,0.2s							
LKD2				AML		AML	13 10 57.2	
	comp=L,521μm,0.2s							
LKD2	**Lefkada island**	**0.71**	**15**	P		**Pg**	**13 10 40.9**	**-0.6**
LKD2				S		**Sb**	**13 10 51.5**	**+0.6**
	comp=E,228nm,0.2s							
TSLK	**Tsoukalades, L**	**0.75**	**14**	P		**Pg**	**13 10 42.0**	**-0.1**
TSLK	**Tsoukalades, L**	**0.75**	**14**	P		**Pg**	**13 10 42.0**	**-0.1**
TSLK				S		**Sb**	**13 10 52.4**	**+0.5**
	comp=E,305nm,0.4s							
RLS	**Riolos of Patr**	**0.83**	**93**	P		**Pb**	**13 10 43.8**	**+0.5**
RLS				AML		AML	13 10 58.7	
	comp=N,266μm,0.3s							
RLS				AML		AML	13 11 03.0	
	comp=E,226μm,0.4s							
AMT	**Artemida-Makis**	**1.17**	**119**	P		**Pg**	**13 10 49.9**	**-0.2**
EFP	**Efpalio**	**1.22**	**74**	P		**Pn**	**13 10 49.7**	**+0.1**
ANX	**Ano Chora**	**1.28**	**67**	P		**Pg**	**13 10 52.6**	**+0.4**
ANX	**Ano Chora**	**1.28**	**67**	P		**Pn**	**13 10 51.2**	**+0.6**
KLV	**Kalavryta, Ach**	**1.37**	**92**	P		**Pn**	**13 10 52.6**	**+0.8**
KLV	**Kalavryta, Ach**	**1.37**	**92**	P		**Pn**	**13 10 52.2**	**+0.4**
KALE	**Kalithea**	**1.39**	**77**	P		**Pn**	**13 10 52.8**	**+0.7**
IGT	**Igoumenitsa**	**1.43**	**357**	P		**Pb**	**13 10 53.9**	**+0.2**
IGT	**Igoumenitsa**	**1.43**	**357**	P		**Pb**	**13 10 53.9**	**+0.2**
ITM	**Ithomi**	**1.51**	**127**	P		**Pb**	**13 10 56.0**	**+0.9**
KEK	**Kerkira**	**1.68**	**343**	P		**Pn**	**13 10 57.3**	**+1.2**
KEK	**Kerkira**	**1.68**	**343**	P		**Pn**	**13 10 57.3**	**+1.2**
AGG	**Agios Georgios**	**1.76**	**58**	P		**Pb**	**13 11 00.3**	**+1.1**
STON	**Ston**	**5.20**	**337**	*e*Pn		**Pn**	**13 11 44.0**	**-0.3**
LSTV	**Lastovo**	**5.38**	**331**	*e*Pn		**Pn**	**13 11 47.0**	**+0.1**
KIJV	**Kijevo**	**6.63**	**334**	*e*Pn		**Pn**	**13 12 05.1**	**+1.0**
KIJV				Sn		**Sn**	**13 13 15.8**	**-3.4**
MORI	**Morici**	**6.77**	**330**	*e*Pn		**Pn**	**13 12 07.1**	**+1.1**

*IDC **15** 13:11:05.7±1.3,32°.18N×141°.78E,h0^{km},mb3.4/5, mb1 3.5/6,mb1mx3.3/49,mbtmp3.3/6,ML2.3/1,Error ellipse: s-maj=36.0km s-min=20.5km az=60.0*

*JMA **15** 13:11:08.4±0.3,32°.36N×141°.89E,h87^{km},M3.2*

ISC 15 13:11:10.4±1.2,32°.39N±0°.08×141°.9E±0°.1,h35^{km},n13, σ1^{s}60/17,mb3.4/5,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.91**	**293**	P		**Pn**	**13 11 39.6**	**-0.9**
JHJ	**Hachijo jima 2**	**1.94**	**292**	Pn		**Pn**	**13 11 39.2**	**-1.7**
	29nm,0.3s,baz=344,slow=22,SNR=12							
JHJ				Sn		**Sn**	**13 12 04.8**	**+0.8**
	18nm,0.3s,baz=252,slow=21,SNR=1.7							
BSO1	**Boso 1**	**2.39**	**341**	P		**Pn**	**13 11 46.6**	**0.0**
BSO1				S		**Sn**	**13 12 15.3**	**+1.0**
JHO	**Hitachi**	**4.35**	**346**	P		**Pn**	**13 12 13.0**	**-1.1**
JAG	**Ashikaga**	**4.51**	**334**	P		**Pn**	**13 12 16.1**	**-0.1**
JAG				*e*S		**Sn**	**13 13 07.0**	**-0.4**
MJAR	**Matsushiro Arr**	**5.15**	**324**	Pn		**Pn**	**13 12 25.4**	**+0.3**
	0.1nm,0.3s,baz=146,slow=11,SNR=8.3							
JFT	**Otama**	**5.28**	**346**	P		**Pn**	**13 12 26.8**	**0.0**
JFT				S		**Sn**	**13 13 24.5**	**-1.8**
JMK	**Ichinoseki**	**6.57**	**355**	*e*S		**Sn**	**13 13 54.2**	**-3.9**
SONM	**Songino Array**	**30.92**	**310**	P		**P**	**13 17 25.7**	**+1.8**
	0.3nm,0.5s,baz=122,slow=7.1,SNR=2.6							
MKAR	**Makanchi Array**	**47.06**	**306**	P		**P**	**13 19 38.3**	**-0.3**
	0.2nm,0.4s,baz=91,slow=9.4,SNR=5.0							
WRA	**Warramunga Arr**	**52.54**	**189**	P		**P**	**13 20 19.2**	**-1.3**
	0.4nm,0.5s,baz=5.4,slow=7.7,SNR=6.1							
ILAR	**Eielson Array**	**53.23**	**30**	P		**P**	**13 20 27.1**	**+2.1**
	0.2nm,0.8s,baz=263,slow=24,SNR=1.5							
ASAR	**Alice Springs**	**56.27**	**189**	P		**P**	**13 20 46.3**	**-1.2**
	0.2nm,0.4s,baz=11,slow=6.3,SNR=2.0							

*NEIC **15** 13:12:36.6±1.8,6°.8S±0°.1×155°.5E±0°.1,h66^{km}±13^{km}, mb4.2/11,Error ellipse: s-maj=22.5km s-min=11.5km az=220.0*

*IDC **15** 13:12:37.2±1.6,6°.74S×155°.45E,h70^{km}±15^{km},mb3.8/13, mb1 3.9/16,mb1mx3.7/43,mbtmp4.1/16,MS3.3/5, Ms1 3.3/5,ms1mx2.8/38,Error ellipse: s-maj=15.5km s-min=11.5km az=32.0*

ISC 15 13:12:34.3±0.6,6°.72S±0°.07×155°.48E±0°.07,h35^{km},n43, σ1^{s}71/45,mb4.2/18,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.15**	**307**	Pn		**Pn**	**13 13 38.3**	**+3.0**
KRVT	**Keravat (AS076**	**4.19**	**305**	P		**Pn**	**13 13 39.0**	**+3.3**
	6.6nm,0.3s,baz=175,slow=4.7,SNR=5.3							
KRVT				S		**Sn**	**13 14 26.3**	**+2.7**
	12nm,0.3s,baz=65,slow=18,SNR=1.5							
KRVT				LR		LR	13 15 28.6	
	comp=Z,287nm,20.1s,baz=120,slow=41							
HNR	**Honiara**	**5.18**	**122**	P		**Pn**	**13 13 52.6**	**+3.3**
	12nm,0.3s,baz=224,slow=4.1,SNR=3.6							
HNR				S		**Sn**	**13 14 51.0**	**+3.2**
	5.8nm,0.3s,baz=120,slow=16,SNR=1.5							
HNR				LR		LR	13 16 00.5	
	comp=Z,451nm,18.4s,baz=262,slow=39							
HNR	**Honiara**	**5.18**	**122**	Pn		**Pn**	**13 13 50.4**	**+1.1**
PMG	**Port Moresby**	**8.66**	**252**	P		**Pn**	**13 14 41.2**	**+4.0**
	1.3nm,0.3s,baz=306,slow=3.3,SNR=2.5							
PMG				S		**Sn**	**13 16 14.5**	**+0.8**
	0.6nm,0.3s,baz=78,slow=22,SNR=1.6							
PMG				LR		LR	13 17 51.5	
	comp=Z,156nm,18.1s,baz=55,slow=36							
COEN	**Coen**	**14.07**	**238**	P		**P**	**13 15 58.1**	**-0.5**
CTAO	**Charters Tower**	**16.02**	**213**	Pn		**Pn**	**13 16 15.7**	**-1.4**
WR0	**Warramunga Arr**	**24.21**	**235**	P		**P**	**13 17 47.9**	**0.0**
WB0	**Warramunga Arr**	**24.24**	**236**	P		**P**	**13 17 48.2**	**+0.1**
WB0				IAmb		IAmb	13 17 48.7	
	comp=Z,13nm,1.2s							
WRAB	**Tennant Creek**	**24.35**	**235**	P		**P**	**13 17 48.9**	**-0.3**
WRAB				IAmb		IAmb	13 17 49.5	
	comp=Z,6.0nm,0.8s							
WB2	**Warramunga Arr**	**24.36**	**235**	P		**P**	**13 17 49.0**	**-0.2**
WB2				IAmb		IAmb	13 17 49.6	
	comp=Z,6.4nm,0.8s							
WRA	**Warramunga Arr**	**24.37**	**235**	P		**P**	**13 17 48.8**	**-0.6**
	comp=Z,4.4nm,0.6s,baz=60,slow=9.7,SNR=82							
WRA	**Warramunga Arr**	**24.37**	**235**	P		**P**	**13 17 48.3**	**-1.1**
SIJI	**Sorong**	**24.84**	**283**	P		**P**	**13 17 53.4**	**-0.3**
	comp=Z,6.6nm,0.5s,baz=62,slow=8.2,SNR=12							
ASAR	**Alice Springs**	**26.71**	**229**	P		**P**	**13 18 09.7**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=60,slow=9.6,SNR=28							
ASAR	**Alice Springs**	**26.71**	**229**	P		**P**	**13 18 08.0**	**-2.6**
KNRA	**Kununurra**	**27.65**	**249**	P		**P**	**13 18 19.7**	**+0.7**
KNRA				IAmb		IAmb	13 18 34.1	
	comp=Z,6.9nm,1.1s							
STKA	**Stephens Creek**	**28.19**	**206**	P		**P**	**13 18 23.4**	**-0.2**
	comp=Z,1.9nm,1.1s,baz=7.1,slow=16,SNR=1.3							
STKA				LR		LR	13 28 22.0	
	comp=Z,48nm,19.3s,baz=36,slow=34							
STKA	**Stephens Creek**	**28.19**	**206**	P		**P**	**13 18 23.9**	**+0.2**
FITZ	**Fitzroy Crossi**	**31.20**	**246**	P		**P**	**13 18 49.5**	**-1.0**
	comp=Z,3.3nm,0.8s,baz=106,slow=7.6,SNR=11							
FITZ	**Fitzroy Crossi**	**31.20**	**246**	P		**P**	**13 18 49.8**	**-0.8**
FITZ				IAmb		IAmb	13 18 51.2	
	comp=Z,3.7nm,0.9s							
BATI	**Baumata**	**31.65**	**261**	LR		LR	13 33 04.5	
	comp=Z,65nm,19.8s,baz=139,slow=39							
JNU	**Nakatsue**	**46.01**	**331**	P		**P**	**13 20 53.8**	**-0.7**
	comp=Z,5.7nm,0.9s,baz=216,slow=8.7,SNR=2.4							
JNU	**Nakatsue**	**46.01**	**331**	P		**P**	**13 20 53.6**	**-0.9**
KSRS	**Korea Array**	**50.93**	**332**	P		**P**	**13 21 31.8**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=166,slow=40,SNR=1.8							
PETK	**Petropavlovsk-**	**59.63**	**2**	P		**P**	**13 22 33.6**	**-1.1**
	comp=Z,1.9nm,0.7s,baz=196,slow=6.7,SNR=5.9							
SUKH	**Sukhothai**	**60.17**	**294**	P		**P**	**13 22 41.2**	**+2.2**
CM35	**Chiang Mai Arr**	**60.99**	**296**	P		**P**	**13 22 45.0**	**+0.4**
CM36	**Chiang Mai Arr**	**60.99**	**295**	P		**P**	**13 22 46.0**	**+1.4**
CM04	**Chiang Mai Arr**	**61.05**	**295**	P		**P**	**13 22 46.5**	**+1.5**
CM01	**Chiang Mai Arr**	**61.08**	**295**	P		**P**	**13 22 47.1**	**+1.9**
CM05	**Chiang Mai Arr**	**61.08**	**295**	P		**P**	**13 22 46.0**	**+0.7**
CM02	**Chiang Mai Arr**	**61.09**	**295**	P		**P**	**13 22 47.0**	**+1.6**
CMAR	**Chiang Mai Arr**	**61.10**	**295**	P		**P**	**13 22 43.9**	**-1.6**
	comp=Z,3.0nm,0.9s,baz=116,slow=5.1,SNR=20							
CM15	**Chiang Mai Arr**	**61.12**	**295**	P		**P**	**13 22 47.0**	**+1.5**
CM13	**Chiang Mai Arr**	**61.12**	**295**	P		**P**	**13 22 46.9**	**+1.3**
CM33	**Chiang Mai Arr**	**61.22**	**296**	P		**P**	**13 22 48.0**	**+1.8**
SONM	**Songino Array**	**69.37**	**327**	P		**P**	**13 23 38.3**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=142,slow=6.3,SNR=7.0							
ILAR	**Eielson Array**	**82.95**	**21**	P		**P**	**13 24 54.3**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=251,slow=5.4,SNR=2.5							
QSPA	**South Pole Qui**	**83.25**	**180**	P		**P**	**13 24 54.1**	**-3.0**
QSPA				IAmb		IAmb	13 24 57.1	
	comp=Z,2.9nm,1.2s							
MKAR	**Makanchi Array**	**83.52**	**319**	P		**P**	**13 24 58.0**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=103,slow=5.5,SNR=4.5							
ZALV	**Zalesovo Beam**	**84.23**	**326**	P		**P**	**13 25 00.4**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=134,slow=6.2,SNR=2.2							
TORD	**Torodi Ar. Bea**	**153.42**	**286**	PKPbc		**PKPbc**	**13 32 28.6**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=61,slow=3.0,SNR=2.0							

*IDC **15** 13:15:56.4±2.2,1°.79N×126°.22E,h0^{km},mb3.3/3, mb1 3.5/3,mb1mx3.3/41,mbtmp3.3/3,Error ellipse: s-maj=175.1km s-min=28.0km az=65.0*

DJA 15 13:16:00.7±2.3,1°.N±11°.×12°.7E±°,h26^{km}±23^{km},M3.3/5, MLv3.3/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.04**	**130**	P		Pn	13 16 19.5	-0.1
KMSI	**Cibinong**	**2.73**	**252**	P		Pn	13 16 42.5	-0.3
WRA	**Warramunga Arr**	**22.57**	**161**	P		P	13 21 01.9	+2.6
	0.4nm,0.4s,baz=338,slow=11,SNR=11							
ASAR	**Alice Springs**	**25.95**	**164**	P		P	13 21 36.0	+4.7
	0.2nm,0.4s,baz=348,slow=14,SNR=4.9							
MKAR	**Makanchi Array**	**59.34**	**326**	P		P	13 25 57.0	-3.6
	0.2nm,0.4s,baz=114,slow=7.7,SNR=1.5							

*IDC **15** 13:16:13.5±1.6,36°.63N×143°.42E,h0^{km},mb3.6/4, mb1 3.8/7,mb1mx3.6/48,mbtmp3.7/7,ML3.8/2,Error ellipse: s-maj=34.0km s-min=22.3km az=76.0*

*JMA **15** 13:16:14.3±0.3,37°.21N×143°.46E,h57^{km},M3.2*

ISC 15 13:16:12.7±1.4,37°.15N±0°.05×143°.66E±0°.09,h35^{km},n21, σ1^{s}67/28,mb3.6/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.09**	**304**	P		**Pn**	**13 16 45.3**	**+0.1**
JFK	**Kawauchi**	**2.23**	**276**	P		**Pn**	**13 16 47.7**	**+0.5**
JFK				*e*S		**Sn**	**13 17 11.8**	**-1.8**
**JI

M04C				S	Sg	13 24 29.4	+0.9
	baz=85						
K04D	**Chiloquin, OR**	**1.67**	**297**	P	**Pn**	13 24 06.6	**-1.0**
	baz=114,SNR=26						
K04D				S	**Sg**	13 24 32.3	**+0.7**
	baz=114						
J05D	**Fort Rock, OR**	**1.78**	**322**	Pb	**Pn**	13 24 09.8	**+0.6**
	baz=139,SNR=106						
J05D				Sb	**Sb**	13 24 34.7	**+1.2**
	baz=139						
L04D	**Klamath Falls**	**1.94**	**281**	P	**Pn**	13 24 10.1	**-1.3**
	baz=98,SNR=50						
L04D				S	**Sg**	13 24 40.2	**0.0**
	baz=98						
WVA	**Winnemucca Val**	**1.94**	**182**		**Pn**	13 24 12.4	**+0.9**
BEKR	**Beckworth**	**2.07**	**193**		**Pn**	13 24 14.1	**+0.8**
PINE	**Pine Mountain**	**2.10**	**335**	Pn	**Pn**	13 24 14.9	**+1.3**
PAHR	**Pah Rah Range**	**2.20**	**173**	Pn	**Pn**	13 24 16.3	**+1.4**
I07A	**Izee**	**2.20**	**4**	Pn	**Pn**	13 24 15.9	**+1.0**
J04D	**Umpqua Nationa**	**2.21**	**308**	Pb	**Pb**	13 24 17.5	**-0.8**
	baz=125,SNR=18						
YBH	**Yreka Blue Hor**	**2.23**	**267**	Pn	**Pn**	13 24 13.9	**-1.4**
O03E	**Paynes Creek**	**2.23**	**225**	P	**Pn**	13 24 14.5	**-0.8**
	baz=45						
O03E				S	**Sb**	13 24 47.0	**+0.7**
	baz=45						
LOY	**Loyalton**	**2.26**	**190**		**Pn**	13 24 17.9	**+2.1**
PEAR	**Peavine Mounta**	**2.29**	**184**		**Pn**	13 24 18.6	**+2.4**
M02C	**Callahan**	**2.39**	**259**	P	**Pn**	13 24 16.4	**-1.1**
	baz=77						
KBF	**Kyburz Flat**	**2.41**	**189**		**Pn**	13 24 20.5	**+2.6**
VPK	**Verdi Peak**	**2.42**	**185**		**Pb**	13 24 21.1	**-0.9**
WDC	**Whiskeytown Da**	**2.48**	**239**	Pn	**Pn**	13 24 17.5	**-1.2**
IND	**Independence**	**2.49**	**190**		**Pb**	13 24 22.8	**-0.3**
HUMO	**Hull Mountain**	**2.49**	**288**	Pn	**Pn**	13 24 17.3	**-1.6**
I05D	**Terrebonne, OR**	**2.71**	**335**	Pb	**Pb**	13 24 26.1	**-0.7**
	baz=152,SNR=8.8						
I05D				Sb	**Sb**	13 25 03.2	**+2.9**
	baz=152						
I04A	**Tendick Farm,**	**2.74**	**315**	Pb	**Pb**	13 24 26.7	**-0.4**
	baz=132,SNR=11						
O02D	**Mt. Diablo Mer**	**2.87**	**234**	Pb	**Pb**	13 24 28.3	**-1.2**
	baz=53,SNR=7.7						
O02D				Sb	**Sg**	13 25 08.7	**-1.5**
	baz=53						
L02E	**Cave Junction**	**2.89**	**277**	P	**Pn**	13 24 24.4	**+0.1**
	baz=94,SNR=22						
L02E				Sb	**Sg**	13 25 09.7	**-1.1**
	baz=94						
MFID	**Camas Ranch**	**3.26**	**61**	Pn	**Pn**	13 24 27.1	**-2.5**
KEBM	**Edson Butte**	**3.54**	**288**	Pn	**Pn**	13 24 33.4	**+0.1**
HLID	**Hailey**	**4.26**	**65**	Sg	**Sb**	13 25 47.9	**+2.8**
	baz=248						
HLID	**Hailey**	**4.26**	**65**		**Pn**	13 24 42.2	**-1.2**
R11A	**Troy Canyon, C**	**4.76**	**137**	Pn	**Pn**	13 24 48.6	**-1.6**
PSUT	**Pine Spring**	**5.61**	**125**	Pn	**Pn**	13 24 59.9	**-2.0**
NLU	**North Lily Min**	**6.12**	**106**	Pn	**Pn**	13 25 05.7	**-3.2**

*IDC **15** 13:29:34.3±1.7, 1.72N×126.35E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/45, mbtmp3.6/4, Error ellipse: s-maj=165.6km s-min=20.6km az=66.0*
*DJA **15** 13:29:40.7±1.6, 2.2N±4.4×12.6E±.°, h33km±28km, M3.7/8, MLv3.7/8*

ISC 15 13:29:40.2±1.1, **1.77N**±0.05×**126.44E**±0.08, **h47**km, **n13,** σ1§**91**/14, **mb3.7**/4, **1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**137**	P	**Pn**	**13 30 02.5**	**-0.2**
SGSI	**Sangihe**	**2.11**	**334**	P	**Pn**	**13 30 13.7**	**+0.6**
KMSI	**Cibinong**	**2.73**	**244**	P	**Pn**	**13 30 21.0**	**-0.6**
DDMP	**Don Marcelino,**	**4.37**	**350**	*eP*	**Pn**	**13 30 46.2**	**+2.2**
DDMP				*eS*	**Sn**	**13 31 34.4**	**+0.7**
LUWI	**Luwuk**	**4.61**	**233**	P	**Pn**	**13 30 48.7**	**+1.3**
MRSI	**Marisa**	**4.68**	**254**	P	**Pn**	**13 30 49.8**	**+1.4**
SKMP	**Bagumbayan, Su**	**5.08**	**338**	*eP*	**Pn**	**13 30 54.8**	**+0.9**
SKMP				*eS*	**Sn**	**13 31 46.1**	**-5.3**
KCP	**Kidapawan**	**5.38**	**346**‖	*eP*	Pn	13 31 03.4	+5.5
PAGZ	**Pagadian**	**6.76**	**333**	*eP*	**Pn**	**13 31 16.6**	**-0.4**
WRA	**Warramunga Arr**	**22.93**	**161**	P	**P**	**13 34 40.0**	**-0.5**
	1.0nm,0.4s,baz=339,slow=11,SNR=19						
ASAR	**Alice Springs**	**26.30**	**164**	P	**P**	**13 35 11.8**	**+0.2**
	0.2nm,0.3s,baz=344,slow=7.9,SNR=10						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**13 39 36.0**	**+0.8**
	0.3nm,0.3s,baz=119,slow=8.1,SNR=7.4						
KURBB	**Kurchatov Arra**	**63.23**	**328**	P	**P**	**13 40 04.3**	**+0.6**
	0.4nm,0.5s,baz=128,slow=6.3,SNR=7.6						

*IDC **15** 13:31:34.9±1.7, 1.71N×126.18E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/42, mbtmp3.6/4, Error ellipse: s-maj=173.0km s-min=21.9km az=66.0*
*DJA **15** 13:31:40.8±1.8, 2.1N±5.1×12.7E±.°, h32km±27km, M3.6/7, MLv3.6/7*

ISC 15 13:31:40.7±1.2, **1.81N**±0.09×**126.69E**±0.09, **h47**km, **n9,** σ0§**70**/9, **mb3.7**/4, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**146**	P	**Pn**	**13 32 01.4**	**-0.2**
SGSI	**Sangihe**	**2.19**	**328**	P	**Pn**	**13 32 15.0**	**+0.3**
KMSI	**Cibinong**	**2.97**	**246**	P	**Pn**	**13 32 25.1**	**-0.2**
GTOI	**Gorontalo**	**3.85**	**252**	P	**Pn**	**13 32 38.2**	**+0.7**
MRSI	**Marisa**	**4.92**	**254**	P	**Pn**	**13 32 51.7**	**-0.5**
WRA	**Warramunga Arr**	**22.88**	**161**	P	**P**	**13 36 40.8**	**+0.3**
	1.1nm,0.5s,baz=338,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**26.28**	**165**	P	**P**	**13 37 13.0**	**+1.1**
	0.3nm,0.6s,baz=347,slow=10.0,SNR=2.7						
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**13 41 35.8**	**-0.7**
	0.4nm,0.4s,baz=125,slow=7.4,SNR=7.0						
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	**P**	**13 42 04.4**	**-0.4**
	0.6nm,0.5s,baz=130,slow=6.6,SNR=8.0						

*IDC **15** 13:39:19.6±0.5, 1.82N×126.44E, h0km, mb4.2/18, mb1 4.3/21, mb1mx4.1/45, mbtmp4.2/21, ML3.9/3, MS3.3/7, Ms1 3.3/7, ms1mx2.9/38, Error ellipse: s-maj=23.3km s-min=11.7km az=82.0*
*NEIC **15** 13:39:24.4±1.8, 1.75N±0.04×126.64E±0.08, h35km±1km, mb4.8/18, Error ellipse: s-maj=15.0km s-min=5.3km az=71.0*
*KLM **15** 13:39:25.0, 1.83N×126.77E, h46km, mb4.8*
*BJI **15** 13:39:26.0±0.0, 1.80N×126.60E, h42km, mB4.9/25, mb4.6/38, Ms4.3/2, Ms7 4.0/2*
*DJA **15** 13:39:26.6±0.2, 2.7N±3.3×12.7E±.°, h41km±4km, M4.5/22, mb4.7/22, mB5.1/7, MLv4.5/17, Mw(mB)4.5/7*

ISC 15 13:39:26.0±0.4, **1.76N**±0.04×**126.61E**±0.06, **h47**km, **n90,** σ1§**39**/90, **mb4.4**/34, **MS3.5**/5, **2C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.24**	**142**	P	**Pn**	**13 39 46.1**	**-0.8**
TNTI	**Ternate**	**1.24**	**142**	Pn	**Pn**	**13 39 46.1**	**-0.8**
SGSI	**Sangihe**	**2.20**	**331**	P	**Pn**	**13 40 00.8**	**+0.7**
KMSI	**Cibinong**	**2.88**	**246**	P	**Pn**	**13 40 08.4**	**-1.0**
GTOI	**Gorontalo**	**3.77**	**253**	P	**Pn**	**13 40 22.0**	**+0.4**
DDMP	**Don Marcelino,**	**4.41**	**348**	*eP*	**Pn**	**13 40 29.9**	**-0.5**
DDMP				*eS*	**Sn**	**13 41 22.2**	**+1.7**
LUWI	**Luwuk**	**4.74**	**234**	P	**Pn**	**13 40 35.5**	**+0.5**
LUWI	**Luwuk**	**4.74**	**234**	Pn	**Pn**	**13 40 35.4**	**+0.4**
MRSI	**Marisa**	**4.84**	**255**	P	**Pn**	**13 40 36.5**	**+0.1**
NLAI	**Namlea**	**4.99**	**174**	P	**Pn**	**13 40 39.2**	**+0.8**
	0.2nm47nm,0.7s						
SKMP	**Bagumbayan, Su**	**5.16**	**336**	*eP*	**Pn**	**13 40 38.4**	**-2.4**
MATI	**Mati**	**5.17**	**356**	*eP*	**Pn**	**13 40 42.5**	**+1.7**
SIJI	**Sorong**	**5.34**	**119**	Pn	**Pn**	**13 40 44.7**	**+1.5**
	1.1nm,0.3s,baz=322,slow=3.6,SNR=13						
KCP	**Kidapawan**	**5.43**	**344**‖	*iP*	**Pn**	**13 40 46.5**	**+1.9**
MSAI	**Masohi**	**5.58**	**155**	P	**Pn**	**13 40 50.0**	**+3.6**
	0.1nm13nm,0.8s						
APSI	**Ampana**	**5.63**	**242**	P	**Pn**	**13 40 48.4**	**+1.2**
	0.8nm2µm216nm,1.1s						
BUKP	**Musuan**	**6.27**	**346**	*eP*	**Pn**	**13 40 56.9**	**+0.9**
BUKP				*eS*	**Sn**	**13 42 09.4**	**+2.9**
PAGZ	**Pagadian**	**6.85**	**332**	*eP*	**Pn**	**13 41 03.1**	**-0.9**
MPSI	**Mapaga**	**6.86**	**258**	P	**Pn**	**13 41 04.4**	**+0.3**
	0.3nm701nm87nm,0.9s						
FAKI	**Fak Fak**	**7.30**	**130**	P	**Pn**	**13 41 11.7**	**+1.5**
	0.1nm26nm,1.0s						
TTSI	**Tana Toraja**	**8.30**	**235**	P	**Pn**	**13 41 23.9**	**+0.1**
	672nm72nm,0.7s						
TBP	**Tagbilaran**	**8.34**	**341**‖	*eP*	Pn	13 41 34.7	+10
MSLP	**Maasin**	**8.50**	**348**	*eP*	**Pn**	**13 41 26.7**	**+0.1**
MYLDM	**Lahad Datu**	**8.78**	**293**	Pn	**Pn**	**13 41 31.1**	**+0.7**
SPSI	**Sidrap Palu**	**8.89**	**230**	P	**Pn**	**13 41 32.9**	**+0.9**
	1µm42nm,0.9s						
BNSI	**Bone**	**8.93**	**227**	P	**Pn**	**13 41 32.9**	**+0.5**
	39nm,0.7s						
BKSI	**Bulukumba**	**9.57**	**223**	P	**Pn**	**13 41 44.0**	**+2.8**
	26nm,0.8s						
KAPI	**Kappang**	**9.60**	**225**	Pn	**Pn**	**13 41 40.0**	**-1.7**
	2.1nm,0.3s,baz=43,slow=3.1,SNR=8.1						
KAPI				Sn	**Sn**	**13 43 28.0**	**-0.4**
	6.6nm,0.3s,baz=170,slow=14,SNR=5.6						
KAPI				LR	LR	13 45 21.4	
	comp=Z,136nm,20.8s,baz=52,slow=38						
KAPI	**Kappang**	**9.60**	**225**	Pn	**Pn**	**13 41 41.5**	**-0.3**
BAKI	**Biak**	**9.94**	**107**	P	**Pn**	**13 41 46.2**	**-0.1**
	2µm112nm,1.5s						
KKM	**Kota Kinabalu**	**11.21**	**293**	Pn	**Pn**	**13 42 05.6**	**+1.8**
SOEI	**Soe**	**11.68**	**191**	P	**Pn**	**13 42 13.3**	**+3.1**
	38nm,1.2s						
SBUM	**Sibu**	**14.40**	**273**		**P**	**13 42 52.1**	**-0.9**
SRBI	**Singaraja**	**14.99**	**229**	P	**Pn**	**13 42 56.4**	**+1.4**
	24nm,0.8s						
MTN	**Manton Dam**	**15.19**	**163**		**Pn**	**13 42 55.3**	**-2.2**
KSM	**Kuching**	**16.30**	**269**	P	**P**	**13 43 16.0**	**+1.8**
KNRA	**Kununurra**	**17.45**	**173**	P	**Pn**	**13 43 26.6**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.76**	**183**	P	**P**	**13 43 51.6**	**-0.5**
	0.4nm,0.3s,baz=20,slow=13,SNR=14						
FITZ				LR	LR	13 51 02.0	
	comp=Z,30nm,20.8s,baz=14,slow=36						
FITZ	**Fitzroy Crossi**	**19.76**	**183**	P	**P**	**13 43 49.8**	**-2.4**
GUMO	**Guam**	**21.55**	**56**	LR	LR	13 51 39.4	
	comp=Z,57nm,21.1s,baz=266,slow=34						
TPUB	**Ta-pu**	**22.19**	**345**	P	**P**	**13 44 16.4**	**-1.9**
WB0	**Warramunga Arr**	**22.71**	**161**	P	**P**	**13 44 23.9**	**-0.2**
WB0				IAmb	IAmb	13 44 29.1	
	comp=Z,24nm,0.8s						
WRAB	**Tennant Creek**	**22.86**	**161**	P	**P**	**13 44 25.4**	**-0.1**
WRAB				IAmb	IAmb	13 44 31.3	
	comp=Z,70nm,1.4s						
WRA	**Warramunga Arr**	**22.86**	**161**	P	**P**	**13 44 24.5**	**-1.0**
	comp=Z,9.1nm,0.7s,baz=339,slow=11,SNR=50						
WRA	**Warramunga Arr**	**22.86**	**161**	P	**P**	**13 44 24.5**	**-1.0**
WB2	**Warramunga Arr**	**22.86**	**161**	P	**P**	**13 44 25.0**	**-0.6**
WB2				IAmb	IAmb	13 44 30.8	
	comp=Z,33nm,0.9s						
WR0	**Warramunga Arr**	**22.94**	**161**	P	**P**	**13 44 25.8**	**-0.6**
WR0				IAmb	IAmb	13 44 32.2	
	comp=Z,26nm,1.0s						
SDSI	**Sungai Dareh**	**25.32**	**264**	P	**P**	**13 44 50.5**	**+1.9**
	comp=Z,870nmcomp=Z,11nm,0.9s						
ASAR	**Alice Springs**	**26.25**	**165**	P	**P**	**13 44 57.8**	**+0.8**
	comp=Z,2.5nm,0.4s,baz=346,slow=9.9,SNR=23						
NJ2	**Nanjing**	**31.01**	**347**	*eP*	**P**	**13 45 41.5**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GYA	**Guiyang**	**31.15**	**324**	*eP*	P	13 45 47.8	+7.1
GYA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JNU	**Nakatsue**	**31.45**	**7**	P	**P**	**13 45 42.7**	**-0.4**
	comp=Z,9.0nm,1.0s,baz=174,slow=3.1,SNR=4.4						
JNU	**Nakatsue**	**31.45**	**7**	P	**P**	**13 45 42.7**	**-0.4**
JNU				IAmb	IAmb	13 45 53.9	
	comp=Z,24nm,1.2s						
CMAR	**Chiang Mai Arr**	**31.80**	**303**	P	**P**	**13 45 42.9**	**-3.5**
	comp=Z,0.3nm,0.3s,baz=129,slow=7.5,SNR=4.6						
CMAR				PcP	**PcP**	**13 48 38.3**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=169,slow=1.8,SNR=5.2						
FORT	**Forrest**	**32.39**	**178**	P	**P**	**13 45 50.4**	**-0.9**
KMI	**Kunming**	**32.71**	**317**‖	*eP*	P	13 45 49.1	-5.4
KMI				pP	pP	13 45 53.8	-13
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,220nm,4.5s						
JWT	**Wachi**	**34.34**	**13**	P	**P**	**13 46 08.6**	**+0.3**
KSRS	**Korea Array**	**35.54**	**2**	P	**P**	**13 46 18.6**	**0.0**
	comp=Z,1.8nm,0.7s,baz=174,slow=10.0,SNR=12						
XAN	**Xi'an**	**36.12**	**335**	P	**P**	**13 46 27.0**	**+3.3**
XAN				pP	pP	13 46 35.9	+0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAJO	**Matsushiro**	**36.23**	**16**	P	**P**	**13 46 22.2**	**-2.4**
MAJO				IAmb	IAmb	13 46 40.9	
	comp=Z,10nm,1.1s						
MAT	**Matsushiro**	**36.23**	**16**	P	**P**	**13 46 23.6**	**-1.0**
MJAR	**Matsushiro Arr**	**36.23**	**16**	P	**P**	**13 46 24.4**	**-0.2**
	comp=Z,4.1nm,0.9s,baz=181,slow=9.7,SNR=6.9						
MJAR	**Matsushiro Arr**	**36.23**	**16**	P	**P**	**13 46 23.9**	**-0.7**
STKA	**Stephens Creek**	**36.35**	**158**	P	**P**	**13 46 25.6**	**0.0**
	comp=Z,1.3nm,0.5s,baz=324,slow=14,SNR=2.1						
STKA	**Stephens Creek**	**36.35**	**158**	P	**P**	**13 46 23.9**	**-1.7**
LZH	**Lanzhou**	**40.14**	**331**	*eP*	P	13 47 02.4	+4.7
LZH				pP	pwP	13 47 11.8	-0.5
LZH				sP	sP	13 47 16.8	+1.7
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC	**Hu-ho-hao-te**	**41.23**	**343**	*eP*	**P**	**13 47 07.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.4s						
USRK	**Ussuriysk Ar.**	**42.53**	**6**	P	**P**	**13 47 15.8**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=170,slow=8.8,SNR=4.3						
GTA	**Gaotai**	**44.73**	**330**	P	**P**	**13 47 34.4**	**-0.5**
GTA				PcP	**PP**	**13 49 18.3**	**-1.7**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	**Songino Array**	**49.12**	**342**	P	**P**	**13 48 09.0**	**0.0**
	comp=Z,1.8nm,0.8s,baz=149,slow=8.2,SNR=8.9						
SONM				PcP	**PcP**	**13 49 32.1**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=153,slow=4.9,SNR=4.5						
SONM				LR	LR	14 10 02.9	
	comp=Z,48nm,18.2s,baz=208,slow=38						
SONM	**Songino Array**	**49.12**	**342**	P	**P**	**13 48 08.4**	**-0.6**
WMQ	**Urumqi**	**54.27**	**326**	*eP*	**P**	**13 48 50.0**	**+2.5**
PETK	**Petropavlovsk-**	**57.29**	**22**	P	**P**	**13 49 08.5**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=213,slow=7.7,SNR=1.0						
MK31	**Makanchi Array**	**59.10**	**326**	P	**P**	**13 49 21.1**	**-0.7**
MK31				IAmb	IAmb	13 49 29.7	
	comp=Z,3.6nm,0.7s						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**13 49 21.2**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=121,slow=8.0,SNR=52						
MKAR				PcP	**PcP**	**13 50 10.2**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=129,slow=3.3,SNR=4.8						
MKAR				LR	LR	14 15 05.8	
	comp=Z,45nm,21.3s,baz=95,slow=36						
MAKZ	**Makanchi**	**59.29**	**326**	P	**P**	**13 49 23.0**	**0.0**
MAKZ				IAmb	IAmb	13 49 32.0	
	comp=Z,4.9nm,0.9s						
ZALV	**Zalesovo Beam**	**62.28**	**334**	P	**P**	**13 49 42.7**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=131,slow=6.1,SNR=5.6						
KURK	**Kurchatov**	**63.33**	**328**	P	**P**	**13 49 50.0**	**-0.2**
KURK				IAmb	IAmb	13 49 58.9	
	comp=Z,8.8nm,0.8s						
NRIK	**Noril'sk**	**72.30**	**346**	P	**P**	**13 50 46.6**	**+0.3**
	comp=Z,4.2nm,0.6s,baz=137,slow=5.8,SNR=10.0						
ABKAR	**Akbulak array**	**73.60**	**321**	P	**P**	**13 50 53.8**	**-0.5**
AKTO	**Aktyubinsk**	**75.12**	**322**	LR	LR	14 25 27.3	
	comp=Z,21nm,21.3s,baz=93,slow=37						
VNDA	**Vanda**	**81.50**	**173**	P	**P**	**13 51 39.3**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=301,slow=6.3,SNR=7.5						
MAW	**Mawson**	**81.88**	**200**	P	**P**	**13 51 41.6**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=346,slow=10,SNR=2.4						
ILAR	**Eielson Array**	**86.92**	**25**	P	**P**	**13 52 05.8**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=248,slow=5.2,SNR=5.4						
KLMR	**Klimovskoe**	**87.05**	**331**	*eP*	**P**	**13 52 04.9**	**-1.5**
KLMR				AMP		13 52 16.1	
	comp=Z,14nm,1.3s						
BRTR	**Keskin Array B**	**91.18**	**310**	P	**P**	**13 52 24.3**	**-2.2**
	comp=Z,1.0nm,0.9s,baz=132,slow=5.5,SNR=4.1						
FINES	**FINESS Array B**	**93.50**	**332**	P	**P**	**13 52 36.2**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=180,slow=3.6,SNR=1.5						
FINES				LR	LR	14 36 50.2	
	comp=Z,33nm,19.2s,baz=16,slow=37						
KOLS	**Kolonicke sedl**	**98.07**	**320**	*eP*	DIFF	Pdif	13 52 58.1	+0.4
TXAR	**Lajitas Array**	**122.88**	**53**	PKP	**PKiKP**	**13 58 18.7**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=58,slow=34,SNR=2.6						
TORD	**Torodi Ar. Bea**	**123.40**	**287**	PKP	**PKiKP**	**13 58 19.1**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=56,slow=1.9,SNR=3.4						

*ANF **15** 13:39:57.6±1.7, 36.61N×97.68W, h1km±12km, ML4.1/8, Error ellipse: s-maj=3.6km s-min=2.6km az=109.0*
*TUL **15** 13:39:57.6±1.0, 36.62N±0.01×97.710W±0.009, h6km±7km, ML3.4, Error ellipse: s-maj=2.0km s-min=0.8km az=156.0*
*NEIC **15** 13:39:57.6±0.7, 36.602N±0.004×97.70W±0.01, h5km±2km, Error ellipse: s-maj=3.0km s-min=2.1km az=294.0*

ISC 15 13:39:58.0±0.9, **36.61N**±0.02×**97.71W**±0.03, **h10**km, **n38,** σ1§**17**/43, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.25**	**245**		**Pg**	**13 40 02.9**	**-0.2**
CROK				Sg	**Sg**	**13 40 06.6**	**+0.1**
GC02	**Grant County #**	**0.27**	**333**		**Pg**	**13 40 03.2**	**-0.2**
GC02				Sg	**Sg**	**13 40 07.2**	**0.0**
KAN13	**South Haven SW**	**0.44**	**24**		**Pg**	**13 40 06.4**	**-0.2**
KAN05	**Bluff City Nor**	**0.51**	**345**		**Pg**	**13 40 07.4**	**-0.6**
KAN09	**Caldwell North**	**0.53**	**8**		**Pg**	**13 40 08.0**	**-0.2**
KAN10	**Anthony SW Sta**	**0.60**	**329**		**Pg**	**13 40 09.3**	**-0.3**
KAN08	**Anthony NE Sta**	**0.65**	**341**		**Pg**	**13 40 10.2**	**-0.4**
OK029	**Liberty Lake**	**0.84**	**166**	Pg	**Pg**	**13 40 13.7**	**-0.4**
QUOK	**Quay**	**0.92**	**118**		**Pg**	**13 40 15.1**	**-0.5**
BCOK	**Bluff Creek, N**	**0.96**	**175**		**Pg**	**13 40 15.7**	**-0.7**
OK031	**S. Brethren Rd**	**0.96**	**133**		**Pg**	**13 40 15.9**	**-0.5**
T35A	**Sooner Cattle**	**1.00**	**72**	Pg	**Pg**	**13 40 16.6**	**-0.7**
OK030	**Cody Creek RV**	**1.01**	**132**		**Pg**	**13 40 16.8**	**-0.6**
OK025	**Westminster Rd**	**1.07**	**164**		**Pg**	**13 40 17.9**	**-0.7**
U32A	**Winter Ranch,**	**1.07**	**258**	Pg	**Pg**	**13 40 17.7**	**-0.9**
OKCFA	**Oklahoma City**	**1.21**	**170**		**Pn**	**13 40 20.4**	**-0.6**
OKCSW	**OKLAHOMA CITY**	**1.22**	**170**		**Pn**	**13 40 20.6**	**-0.6**
FNO	**Franklin**	**1.37**	**170**		**Pn**	**13 40 23.1**	**-0.1**
W35A	**Tecumseh**	**1.60**	**155**		**Pn**	**13 40 26.8**	**+0.5**
TUL1	**Leonard**	**1.70**	**114**	P	**Pn**	**13 40 28.3**	**+0.6**
	baz=294						
TUL1				S	**Sb**	**13 40 51.2**	**+0.6**
	baz=294						
TUL1	**Leonard**	**1.70**	**114**	Pn	**Pn**	**13 40 28.2**	**+0.6**
R32A	**Long Quarter,**	**1.98**	**336**		**Pb**	**13 40 33.0**	**-1.0**
WMOK	**Wichita Mounta**	**2.06**	**205**	P	**Pn**	**13 40 33.4**	**+0.6**
	baz=26						
WMOK	**Wichita Mounta**	**2.06**	**205**	Pn	**Pn**	**13 40 33.3**	**+0.6**
KSU1	**Kansas State U**	**2.63**	**19**	Sb	**Sg**	**13 41 20.5**	**-2.0**
	baz=199						
Z35A	**Perchaven, San**	**3.29**	**173**		**Pn**	**13 40 50.8**	**+1.2**
S39A	**Bolivar**	**3.66**	**72**	Pn	**Pn**	**13 40 55.7**	**+1.0**
AMTX	**Amarillo**	**3.67**	**243**	P	**Pn**	**13 40 56.3**	**+1.5**
	baz=61						
AMTX				Sb	**Sg**	**13 41 52.2**	**-3.5**
	baz=61						
U40A	**Yellville**	**3.92**	**92**	P	**Pn**	**13 40 59.3**	**+1.1**
	baz=275						
U40A	**Yellville**	**3.92**	**92**		**Pn**	**13 40 59.3**	**+1.1**
MGMO	**Mountain Grove**	**4.39**	**81**		**Pn**	**13 41 05.7**	**+1.0**
N35A	**Tabor**	**4.54**	**20**	Pn	**Pn**	**13 41 07.8**	**+1.0**
KSCO	**Kaye Shedlock'**	**4.58**	**303**	P	**Pn**	**13 41 08.5**	**+1.1**
	baz=120						
WHTX	**Lake Whitney,**	**4.61**	**177**	P	**Pn**	**13 41 08.2**	**+0.5**
	baz=358						
WHTX				Sb	**Sb**	**13 42 19.0**	**+4.3**
	baz=358						
WHTX	**Lake Whitney,**	**4.61**	**177**	Pn	**Pn**	**13 41 08.2**	**+0.5**
R40A	**Maddies Statio**	**4.64**	**67**	Pn	**Pn**	**13 41 08.7**	**+0.6**
BGNE	**Belgrade**	**4.80**	**356**	P	**Pn**	**13 41 10.4**	**0.0**
	baz=176						
BGNE	**Belgrade**	**4.80**	**356**	Pn	**Pn**	**13 41 10.6**	**+0.2**

*BGR **15** 13:39:47.2±0.0, 22.41S×178.29W, h33km*
*NEIC **15** 13:40:42.3±1.6, 23.1S±0.1×179.4W±0.1, h530km±8km, mb4.5/34, Error ellipse: s-maj=18.7km s-min=15.0km az=106.0*
*IDC **15** 13:40:45.8±1.7, 23.20S×179.62W, h558km±20km, mb3.8/22, mb1 3.9/22, m

WRA Warramunga Arr 42.99 265 P **P** 13 47 54.5 -0.8
comp=Z,5.7nm,0.5s,baz=95,slow=8.4,SNR=36
WRA S **S** 13 53 38.0 -3.3
comp=Z,1.1nm,0.7s,baz=97,slow=14,SNR=8.2
WRA Warramunga Arr 42.99 265 P **P** 13 47 54.4 -0.9
FORT Forrest 47.04 249 P **P** 13 48 26.4 +0.3
FORT IAmb IAmb 13 48 31.8
comp=Z,17nm,1.0s
MTN Manton Dam 47.95 274 P **P** 13 48 32.3 -0.9
MTN IAmb IAmb 13 48 32.7
comp=Z,12nm,0.7s
KNRA Kununurra 49.23 269 P **P** 13 48 42.5 -0.1
FITZ Fitzroy Crossi 51.42 265 P **P** 13 48 58.9 +0.3
comp=Z,6.4nm,0.4s,baz=93,slow=6.1,SNR=42
FITZ S **S** 13 55 37.2 -0.6
comp=Z,1.2nm,0.9s,baz=288,slow=21,SNR=2.2
FITZ Fitzroy Crossi 51.42 265 P **P** 13 48 59.0 +0.5
SIJI Sorong 52.76 288 P **P** 13 49 07.8 -0.4
comp=Z,46nm,0.7s,baz=92,slow=5.1,SNR=62
VNDA Vanda 55.05 185 P **P** 13 49 26.2 +2.8
comp=Z,2.6nm,0.7s,baz=5.2,slow=8.0,SNR=26
VNDA Vanda 55.05 185 P **P** 13 49 26.5 +3.2
SOEI Soe 55.34 274 P **P** 13 49 27.3 +0.8
BATI Baumata 55.73 273 P **P** 13 49 29.7 +0.6
comp=Z,26nm,0.5s,baz=139,slow=2.5,SNR=8.8
PSA00 Pilbara Seismi 55.81 259 P **P** 13 49 27.5 -2.1
GIRL Giralia 60.59 256 P **P** 13 50 02.5 +0.7
CASY Casey 60.91 206 P **P** 13 50 03.8 +0.7
CASY IAmb IAmb 13 50 22.4
comp=Z,22nm,1.1s
QSPA South Pole Qui 66.81 180 P **P** 13 50 43.2 +2.4
QSPA IAmb IAmb 13 50 44.3
comp=Z,6.2nm,0.8s
MJAR Matsushiro Arr 71.69 325 P **P** 13 51 10.2 -0.2
comp=Z,3.7nm,0.8s,baz=151,slow=5.4,SNR=10
MJAR Matsushiro Arr 71.69 325 P **P** 13 51 10.0 -0.4
JMN Monobe 72.04 320 P **P** 13 51 11.9 -0.6
JMN IAmb IAmb 13 51 12.7
comp=Z,16nm,1.0s
JWT Wachi 72.28 322 P **P** 13 51 13.7 -0.1
JWT IAmb IAmb 13 51 23.6
comp=Z,16nm,1.1s
KSM Kuching 72.53 279 P **P** 13 51 15.2 -0.5
KSM IAmb IAmb 13 51 16.8
comp=Z,11nm,0.7s
SSLB Suanglung 74.44 305 P **P** 13 51 25.9 -0.6
SSLB IAmb IAmb 13 51 35.8
comp=Z,9.5nm,0.7s
ADK Adak 74.87 2 P **P** 13 51 27.6 -0.5
ADK IAmb IAmb 13 51 37.6
comp=Z,23nm,1.1s
ASAJ Asahikawa 75.56 333 P **P** 13 51 33.3 +1.2
comp=Z,21nm,0.8s,baz=148,slow=2.4,SNR=7.4
BELA Belgrano 2 76.99 173 P **P** 13 51 40.8 +1.2
KSRS Korea Array 78.12 320 P **P** 13 51 47.1 +0.8
comp=Z,2.5nm,0.7s,baz=133,slow=6.2,SNR=12
PEA0B Petropavlovsk- 78.62 346 P **P** 13 51 48.4 -0.2
PEA0B IAmb IAmb 13 51 49.8
comp=Z,11nm,0.7s
PETK Petropavlovsk- 78.62 346 P **P** 13 51 49.0 +0.4
comp=Z,9.4nm,0.7s,baz=105,slow=8.3,SNR=21
PETK Petropavlovsk- 78.62 346 P **P** 13 51 48.5 -0.1
USRK Ussuriysk Ar. 80.54 327 P **P** 13 52 00.2 +1.3
comp=Z,5.1nm,0.8s,baz=106,slow=2.9,SNR=10
NVAR Mina Array Bea 83.93 44 P **P** 13 52 17.6 +1.1
comp=Z,1.2nm,0.8s,baz=232,slow=7.5,SNR=8.3
KLR Kulʲdur 84.26 330 P **P** 13 52 18.6 +1.0
comp=Z,1.5nm,0.5s,baz=168,slow=4.8,SNR=5.4
G08A Pilot Rock 87.60 38 P **P** 13 52 33.0 -0.7
SEY Seymchan 88.78 348 P **P** 13 52 38.9 +0.3
comp=Z,3.8nm,0.7s,baz=180,slow=7.5,SNR=6.8
TRF Thorofare Moun 89.42 13 P **P** 13 52 40.2 -1.7
TXAR Lajitas Array 89.64 58 P **P** 13 52 45.3 +1.7
comp=Z,1.0nm,0.7s,baz=208,slow=6.9,SNR=13
CMAR Chiang Mai Arr 89.82 290 P **P** 13 52 46.7 +2.1
comp=Z,6.2nm,0.9s,baz=136,slow=3.2,SNR=33
ILAR Eielson Array 91.30 13 P **P** 13 52 49.9 -0.5
comp=Z,0.8nm,0.8s,baz=214,slow=7.3,SNR=5.9
PDAR Pinedale Array 91.86 44 P **P** 13 52 54.5 +0.7
comp=Z,1.0nm,0.8s,baz=209,slow=2.7,SNR=7.8
MKAR Makanchi Array 112.13 313 PKiKP **PKiKP** 13 58 16.5 -0.4
comp=Z,0.6nm,0.6s,baz=217,slow=0.8,SNR=9.0
ARCES ARCESS Array B 131.38 309 PKhKP PKPpre 13 58 43.5
comp=Z,1.1nm,0.8s,baz=46,slow=3.5,SNR=4.0
ARCES PKP **PKPdf** 13 58 53.1 0.0
comp=Z,3.0nm,0.7s,baz=88,slow=1.4,SNR=11
FINES FINESS Array B 138.02 342 PKhKP PKPpre 13 58 55.1
comp=Z,2.5nm,0.9s,baz=8.5,slow=3.9,SNR=4.6
FINES PKP **PKPdf** 13 59 06.1 +0.4
comp=Z,2.0nm,0.6s,baz=106,slow=2.1,SNR=11
NB2 NORSAR Subarra141.54 352 PKP **PKPdf** 13 59 07.6 -4.5
comp=Z,1.1nm,0.6s,baz=16,slow=3.2
NOA NORSAR Array B141.54 352 PKhKP **PKPdf** 13 59 07.8 -4.4
comp=Z,1.5nm,0.7s,baz=16,slow=4.1,SNR=11
AKASG Malin Array Be 144.73 328 PKP **PKPdf** 13 59 18.0 +0.1
comp=Z,9.3nm,0.5s,baz=44,slow=4.2,SNR=50
AKASG Malin Array Be 144.73 328 **PKPdf** 13 59 18.2 +0.3
AKBB Malin Array Si 144.73 328 PKPdf **PKPdf** 13 59 18.2 +0.3
SORM Soroca 146.80 325 ⇓P **PKPbc** 13 59 24.4 +0.1
BRTR Keskin Array B 147.62 308 PKPbc **PKPbc** 13 59 27.3 +0.3
comp=Z,2.3nm,0.6s,baz=138,slow=5.1,SNR=12
BRTR Keskin Array B 147.62 308 **PKPbc** 13 59 27.4 +0.4
TPGR Topolog 148.71 320 ⇑P **PKiKP** 13 59 31.0 +0.6
BIZ Bicaz 148.74 325 ⇑P **PKiKP** 13 59 30.8 +0.4
BURAR Bucovina Array 148.75 327 ⇑P **PKiKP** 13 59 31.3 +0.8
TIRR Tirgusor 148.94 320 ⇓P **PKPbc** 13 59 30.6 +0.7
VRI Vrincioaia 149.08 323 ⇓P **PKPdf** 13 59 24.3 -1.1
KOLS Kolonicke sedl 149.19 332 *e*PKP **PKiKP** 13 59 31.6 +0.4
OZUR 149.45 324 ⇑P **PKPdf** 13 59 27.1 +1.1
CRVS Cervenica-Dubn 149.56 332 *e*PKP **PKiKP** 13 59 32.3 +0.3
DOPR Dopca 149.75 325 ⇑P **PKiKP** 13 59 33.1 +0.6
MLR Muntele Rosu 149.75 323 ⇓P **PKPbc** 13 59 32.6 +0.7
OSTC Ostas 150.17 340 *e*PKP **PKiKP** 13 59 33.7 +0.5
LANS Liptovska Anna 150.19 335 *e*PKP **PKiKP** 13 59 34.1 +0.8
LANS *e* 13 59 42.9
CHVC Chvalec 150.19 340 *e*PKP **PKiKP** 13 59 33.6 +0.3
VOIR 150.27 324 ⇑P **PKiKP** 13 59 33.7 +0.1
UPC Upice 150.27 340 *e*PKP **PKiKP** 13 59 34.0 +0.6
DPC Dobruska-Polom 150.31 339 *e*PKP **PKiKP** 13 59 34.1 +0.6
MORC Moravsky Berou 150.39 338 ⇓P **PKiKP** 13 59 34.2 +0.5
CLL Collm 150.41 344 *i* PKPbc **PKiKP** 13 59 33.7 +0.1
comp=Z,21nm,0.9s
CLL *i* PKPab **PKPab** 13 59 42.3 +0.3
comp=Z,9.0nm,0.8s
CLL Collm 150.41 344 *e*PKPbc **PKiKP** 13 59 33.8 +0.1
baz=19,slow=2.4
CLL *e*PKPab **PKPab** 13 59 42.4 +0.3
baz=21,slow=4.3
CLZ Clausthal 150.50 348 *e*PKPbc **PKiKP** 13 59 34.3 +0.5
baz=19,slow=2.4
CLZ *e*PKPab **PKPab** 13 59 43.0 +0.5
baz=21,slow=4.3
ARR Arges 150.54 324 ⇑P **PKiKP** 13 59 35.5 +1.3
BRG Berggiesshubel 150.56 343 *i* PKP **PKiKP** 13 59 34.1 +0.1
comp=Z,12nm,0.9s
BRG *e* 13 59 42.9
comp=Z,8.3nm,0.9s
BRG Berggiesshubel 150.56 343 *e*PKPbc **PKiKP** 13 59 34.3 +0.4
baz=19,slow=2.4
BRG *e*PKPab **PKPab** 13 59 43.3 +0.7
baz=21,slow=4.3
FBE Freiberg 150.67 343 *e*PKPbc **PKiKP** 13 59 34.9 +0.7
baz=19,slow=2.4
FBE *e*PKPab **PKPab** 13 59 44.1 +0.9
baz=21,slow=4.3
PRU Pruhonice 151.18 341 *e*PKP **PKiKP** 13 59 35.7 +0.4
SIRR Siria 151.43 329 ⇑P **PKiKP** 13 59 36.7 +0.7
GUNZ Gunzen 151.45 344 *e*PKPab **PKPab** 13 59 47.3 +0.8
baz=21,slow=4.3
GZR Gura Zlata 151.49 326 ⇑P **PKPbc** 13 59 36.2 +0.3
WERN Wernitzgruen 151.50 344 *e*PKPab **PKPab** 13 59 47.6 +0.8
baz=21,slow=4.3
PBCC Pribram 151.61 342 *e*PKPbc **PKPbc** 13 59 36.1 +0.2
PBCC *ep*PKP **PKPab** 13 59 47.9 +0.7
BZS Buzias 151.92 328 ⇓P **PKPbc** 13 59 36.9 +0.2
HERR Herculane 152.03 326 ⇑P **PKPdf** 13 59 32.4 +2.5
KHC Kasperske Hory 152.23 342 *e*PKP **PKiKP** 13 59 38.0 +0.5
KHC *ep*PKP **PKPab** 13 59 50.7 +0.8
GRF Grafenberg Arr 152.34 345 *e*PKPab **PKPab** 13 59 51.3 +1.0
baz=21,slow=4.3
WET Wettzell 152.42 342 *e*PKPab **PKPab** 13 59 51.6 +0.9
baz=21,slow=4.3
GERES GERESS Array B 152.45 341 PKPbc **PKPbc** 13 59 38.0 0.0
comp=Z,1.2nm,0.7s,baz=42,slow=2.2,SNR=8.1
GERES PKPab **PKPab** 13 59 50.6 -0.3
comp=Z,1.0nm,0.6s,baz=34,slow=3.4,SNR=6.1
RJOB Jochberg 153.71 341 *e*PKPab **PKPab** 13 59 56.4 +0.1
baz=21,slow=4.3
PDG Podgorica 155.38 325 ⇓P **PKPab** 14 00 04.2 +0.7
KEST Kesra 165.44 330 PKPab **PKPab** 14 00 47.6 -0.2
comp=Z,3.1nm,0.7s,baz=95,slow=5.2,SNR=3.8
TORD Torodi Ar. Bea 169.88 186 PKP **PKPdf** 13 59 49.3 0.0
comp=Z,1.1nm,1.0s,baz=320,slow=2.7,SNR=3.6

IDC 15 13:47:02.8±11.0, 17.97S×177.96W, h500km±128km, mb2.8/5, mb1 3.1/5, mb1mx2.8/42, mbtmp3.7/5, Error ellipse: s-maj=98.3km s-min=43.5km az=140.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.04**	**260**	P	P	13 54 33.5	-0.2
	0.2nm,0.5s,baz=96,slow=7.6,SNR=4.6						
ASAR	**Alice Springs**	**45.18**	**254**	P	P	13 54 34.6	-0.1
	0.6nm,0.6s,baz=89,slow=7.8,SNR=5.4						
PETK	**Petropavlovsk-**	**73.85**	**345**	P	P	13 57 46.1	+0.3
	1.9nm,0.8s,baz=142,slow=4.9,SNR=1.7						
ILAR	**Eielson Array**	**85.85**	**13**	P	P	13 58 48.1	-0.5
	0.2nm,0.4s,baz=217,slow=4.6,SNR=5.5						
PDAR	**Pinedale Array**	**87.11**	**43**	P	P	13 58 55.6	+0.3
	0.2nm,0.7s,baz=224,slow=2.5,SNR=2.3						
BRTR	**Keskin Array B**	**145.13**	**315**	PKPbc	PKPdf	14 05 43.4	0.0
	0.3nm,0.4s,baz=102,slow=2.6,SNR=2.6						
GERES	**GERESS Array B**	**147.78**	**345**	PKPbc	PKPbc	14 05 50.5	-0.6
	0.6nm,0.6s,baz=27,slow=6.6,SNR=3.7						

*IDC **15** 13:58:35.7±0.9, 42.71N×119.62W, h0km, mb3.1/1, mb1 3.3/6, mb1mx3.2/38, mbtmp2.9/6, ML3.1/3, MS2.3/2, Ms1 2.2/2, ms1mx2.1/13, Error ellipse: s-maj=11.4km s-min=5.4km az=14.0*
*ANF **15** 13:58:38.4±0.4, 41.86N×119.72W, h1km, ML3.6/19, Error ellipse: s-maj=3.9km s-min=3.3km az=7.0*
*REN **15** 13:58:38.7±2.4, 41.92N±0.04×119.64W±0.04, h0km±8km, ML3.8/4, ML3.6/52(SEA), Error ellipse: s-maj=6.4km s-min=4.7km az=190.0*
*SEA **15** 13:58:39.7±2.4, 41.85N±0.04×119.69W±0.04, h0km±8km, Error ellipse: s-maj=6.1km s-min=4.6km az=193.0*
*NEIC **15** 13:58:39.5±2.4, 41.90N±0.04×119.66W±0.05, h6km±2km, Error ellipse: s-maj=6.3km s-min=5.1km az=190.0*
ISC 15 13:58:39.3±1.3, 41.92N±0.03×119.70W±0.03, h10km±12km, n63, σ1§19/79, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.45**	**268**		**Pg**	13 58 48.2	**0.0**
MOD					**Sg**	13 58 55.3	**+1.1**
K05A	**Summer Lake**	**1.20**	**313**		**Pg**	13 59 01.9	**-0.5**
M04C	**Macdoel**	**1.60**	**266**	P	**Pn**	13 59 07.5	**-0.3**
	baz=84,SNR=385						
M04C				Sg	**Sb**	13 59 31.0	**+1.5**
	baz=84						
K04D	**Chiloquin, OR**	**1.68**	**295**	P	**Pn**	13 59 08.9	**+0.1**
	baz=114,SNR=138						
K04D				Sb	**Sg**	13 59 33.9	**+0.6**
	baz=114						
J08A	**Circle Bar Ran**	**1.70**	**32**		**Pn**	13 59 08.6	**-0.5**
J05D	**Fort Rock, OR**	**1.77**	**321**	P	**Pn**	13 59 11.7	**+1.6**
	baz=139,SNR=464						
J05D				Sb	**Sg**	13 59 37.6	**+1.2**
	baz=139						
L04D	**Klamath Falls**	**1.96**	**280**	P	**Pn**	13 59 12.3	**-0.5**
	baz=98,SNR=117						
L04D				Sb	**Sb**	13 59 41.9	**+2.2**
	baz=98						
PINE	**Pine Mountain**	**2.08**	**334**		**Pb**	13 59 17.0	**-0.3**
BEKR	**Beckworth**	**2.11**	**194**		**Pb**	13 59 15.0	**+0.2**
I07A	**Izee**	**2.17**	**4**		**Pn**	13 59 16.9	**+1.4**
J04D	**Umpqua Nationa**	**2.21**	**307**	Pb	**Pb**	13 59 19.5	**-0.1**
	baz=125,SNR=44						
PAHR	**Pah Rah Range**	**2.23**	**174**		**Pn**	13 59 15.8	**-0.5**
YBH	**Yreka Blue Hor**	**2.26**	**266**	Pn	**Pn**	13 59 16.0	**-0.7**
	6.3nm,0.3s,baz=52,slow=12,SNR=66						
YBH				Pg	**Pb**	13 59 18.8	**-1.4**
	7.1nm,0.3s,baz=86,slow=12,SNR=40						
YBH				Lg	Lg	13 59 49.1	
	61nm,0.3s,baz=259,slow=3.0,SNR=23						
YBH				LR	LR	14 00 06.2	
	comp=Z,52nm,18.9s,baz=80,slow=39						
YBH	**Yreka Blue Hor**	**2.26**	**266**	Pn	**Pn**	13 59 16.1	**-0.6**
O03E	**Paynes Creek**	**2.27**	**225**	P	**Pn**	13 59 16.5	**-0.5**
	baz=44,SNR=107						
M02C	**Callahan**	**2.42**	**258**	P	**Pn**	13 59 18.0	**-1.0**
	baz=76,SNR=32						
M02C				Sb	**Sb**	13 59 55.5	**+2.6**
	baz=76						
N02D	**Trinity Center**	**2.45**	**248**	P	**Pn**	13 59 18.4	**-0.9**
	baz=66,SNR=24						
N02D				Sg	**Sg**	13 59 56.9	**-1.1**
	baz=66						
HUMO	**Hull Mountain**	**2.51**	**287**	Pn	**Pn**	13 59 19.8	**-0.4**
WDC	**Whiskeytown Da**	**2.53**	**239**	Pn	**Pn**	13 59 19.6	**-0.7**
I05D	**Terrebonne, OR**	**2.70**	**334**	Pb	**Pb**	13 59 27.5	**-0.2**
	baz=152,SNR=9.9						
I05D				Sb	**Sg**	14 00 05.3	**-0.7**
	baz=152						
ORV	**Oroville**	**2.73**	**211**		**Pn**	13 59 22.1	**-1.1**
I04A	**Tendick Farm,**	**2.73**	**314**	Pb	**Pb**	13 59 28.9	**+0.6**
	baz=132,SNR=47						
PNTR	**Pine Nut**	**2.83**	**178**		**Pn**	13 59 24.1	**-0.6**
O02D	**Mt. Diablo Mer**	**2.91**	**234**	Pn	**Pn**	13 59 24.9	**-0.9**
	baz=53,SNR=19						
O02D				Pb	**Pb**	13 59 30.3	**-1.1**
	baz=53						
O02D				Sb	**Sb**	14 00 08.6	**+1.5**
	baz=53						
L02E	**Cave Junction**	**2.92**	**276**	P	**Pn**	13 59 26.2	**+0.5**
	baz=93,SNR=39						
L02E				Sb	**Sb**	14 00 09.2	**+2.1**
	baz=93						
K02D	**Willamette Mer**	**3.04**	**286**	P	**Pn**	13 59 28.8	**+1.3**
	baz=103,SNR=148						
K02D				Sb	**Sg**	14 00 15.2	**-1.8**
	baz=103						
KVN	**Kaiserville**	**3.12**	**156**	Pn	**Pn**	13 59 28.2	**-0.5**
AFDM	**Forest Hills D**	**3.12**	**199**		**Pn**	13 59 29.2	**+0.6**
KRMB	**Red Mountain**	**3.17**	**264**		**Pn**	13 59 30.2	**+0.8**
I03D	**Drain, OR**	**3.22**	**305**	Pb	**Pb**	13 59 37.2	**+0.7**
	baz=122						
I03D				Sb	**Sg**	14 00 20.6	**-2.1**
	baz=122						
MFID	**Camas Ranch**	**3.22**	**61**	Pn	**Pn**	13 59 29.0	**-1.1**
J01E	**Myrtle Point**	**3.36**	**293**	Pg	**Pg**	13 59 44.5	**+0.8**
	baz=110						
RYN	**Ryan**	**3.41**	**164**		**Pn**	13 59 33.2	**+0.5**
WAKR	**Walker**	**3.42**	**177**		**Pn**	13 59 33.6	**+0.8**
H04D	**Lebanon**	**3.42**	**321**	Pb	**Pb**	13 59 41.1	**+1.1**
	baz=138						
KMRM	**Mail Ridge**	**3.47**	**242**		**Pn**	13 59 33.8	**+0.4**
ELK	**Elko**	**3.56**	**108**	Pn	**Pn**	13 59 33.7	**-1.1**
	1.5nm,0.3s,baz=297,slow=14,SNR=35						
ELK				Lg	Lg	14 00 27.7	
	15nm,0.3s,baz=182,slow=16,SNR=7.6						
ELK	**Elko**	**3.56**	**108**		**Pn**	13 59 34.0	**-0.8**
KEBM	**Edson Butte**	**3.56**	**287**		**Pn**	13 59 35.8	**+1.1**
NVAR	**Mina Array Bea**	**3.65**	**162**	Pn	**Pn**	13 59 36.4	**+0.4**
	1.5nm,0.3s,baz=342,slow=13,SNR=28						
NVAR				Pg	**Pb**	13 59 44.3	**+0.4**
	9.4nm,0.3s,baz=331,slow=14,SNR=33						
NVAR				Lg	Lg	14 00 33.2	
	17nm,0.3s,baz=350,slow=32,SNR=11						
NV11	**Mina Array Sit**	**3.68**	**161**		**Pn**	13 59 35.5	**-0.9**
I02D	**Swisshome**	**3.74**	**307**	Pg	**Pg**	13 59 49.6	**-1.4**
	baz=124						
LHV	**Little Huntoon**	**3.78**	**166**		**Pn**	13 59 38.6	**+1.1**
HLID	**Hailey**	**4.22**	**65**	P	**Pn**	13 59 44.1	**+0.2**
	baz=249						
HLID				Sb	**Sb**	14 00 47.0	**+2.1**
	baz=249						
HLID	**Hailey**	**4.22**	**65**	Pn	**Pn**	13 59 43.4	**-0.5**
TPH	**Tonopah**	**4.29**	**153**		**Pn**	13 59 45.9	**+1.2**
R11A	**Troy Canyon, C**	**4.76**	**137**	P	**Pn**	13 59 52.9	**+1.6**
	baz=320						
R11A	**Troy Canyon, C**	**4.76**	**137**		**Pn**	13 59 52.8	**+1.6**
SPR3	**Spring Creek 3**	**5.03**	**124**		**Pn**	13 59 56.9	**+1.8**
BGU	**Big Grassy Mou**	**5.11**	**99**	Pn	**Pn**	13 59 55.6	**-0.5**
DUG	**Dugway, Tooele**	**5.48**	**106**	P	**Pn**	14 00 02.0	**+0.9**
	baz=291						
DUG	**Dugway, Tooele**	**5.48**	**106**	Pn	**Pn**	14 00 01.6	**+0.4**
PSUT	**Pine Spring**	**5.61**	**125**		**Pn**	14 00 03.6	**+0.7**
TPNV	**Topopah Spring**	**5.64**	**151**	P	**Pn**	14 00 05.4	**+2.1**
	baz=333						
TPNV	**Topopah Spring**	**5.64**	**151**	Pn	**Pn**	14 00 04.8	**+1.5**
PRN	**Pahroc Range**	**5.76**	**140**	Pn	**Pn**	14 00 07.0	**+2.1**
MCMT	**McKenzie Canyo**	**5.78**	**57**		**Pn**	14 00 06.5	**+1.2**
MSU	**Marysvale**	**6.69**	**118**	Pn	**Pn**	14 00 18.4	**+0.6**
KNB	**Kanab**	**7.23**	**130**		**Pn**	14 00 26.1	**+0.9**
SRU	**San Rafael Swe**	**7.53**	**109**		**Pn**	14 00 29.8	**+0.4**
PDAR	**Pinedale Array**	**7.56**	**80**	Pn	**Pn**	14 00 28.4	**-1.4**
	baz=266,slow=13,SNR=1.2						
PDAR				LR	LR	14 03 06.4	
	comp=Z,21nm,20.3s,baz=254,slow=36						
TXAR	**Lajitas Array**	**18.06**	**129**	P	**Pn**	14 02 50.3	**-0.2**
	baz=312,slow=8.4,SNR=2.1						
ILAR	**Eielson Array**	**27.64**	**335**	P	**P**	14 04 23.5	**-3.2**
	0.2nm,0.9s,baz=153,slow=8.6,SNR=1.7						

IEPN 15 14:00:50.0, 85.64N×27.48E, h20km, 1C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZFI2	**Zemlya Franca-**	**5.35**	**143**	*e*P	Pn	14 02 06.9	-1.6
ZFI2				*e*S	Sn	14 03 05.0	-4.3
	10nm,1.3s						
ZFI	**Zemlya Franca-**	**5.35**	**143**	*e*P	Pn	14 02 08.8	+0.3
ZFI				*e*S	Sn	14 03 05.3	-4.1
KBS	**Kingsbay**	**7.02**	**205**	*e*P	Pn	14 02 27.6	-3.8
KBS				*e*S	Sn	14 03 39.4	-11
SPA0	**Spitsbergen Ar**	**7.64**	**197**	⇑*i*P	Pn	14 02 37.0	-3.0
SPA0				*e*S	Sn	14 03 55.4	-10
SPA0	**Spitsbergen Ar**	**7.64**	**197**	*e*P	Pn	14 02 37.3	-2.6
HOPEN	**Hopen**	**9.19**	**184**	*e*P	Pn	14 02 58.4	-2.8
HOPEN				*e*S	Sn	14 04 32.8	-11

BER 15 14:01:36.9±0.3, 76.94N×1.74W, h15km, ML1.8, Confirmed Earthquake, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**3.49**	**49**	*e*P	Pn	14 02 28.9	-1.7
KBS				*e*		14 03 43.6	
KBS				IAML		14 03 54.0	
	comp=Z,5.5nm,0.8s						
DAG	**Danmarks Havn**	**3.86**	**276**	*e*P	Pn	14 02 34.0	-1.6

*NEIC **15** 14:02:16.0±2.6, 18.59N±0.06×102.09W±0.04, h87km±13km, mb4.1/13, Md4.3/11(MEX), Error ellipse: s-maj=9.6km s-min=4.4km az=205.0*
*IDC **15** 14:02:16.6±1.3, 18.83N×101.77W, h69km±8km, mb3.8/11, mb1 4.0/11, mb1mx3.7/40, mbtmp4.1/11, MS2.7/2, Ms1 2.7/2, ms1mx2.5/34, Error ellipse: s-maj=36.1km s-min=26.3km az=92.0*
*MEX **15** 14:02:18.4±0.3, 18.71N×102.04W, h10km±5km, MD4.3*
ISC 15 14:02:15.6±0.6, 18.66N±0.04×102.06W±0.04, h64km, n53, σ1§69/60, mb4.1/14, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**1.19**	**152**	*i* P	**Pn**	**14 02 37.9**	**+1.6**
ZIIG				*i* S	**Sn**	**14 02 53.0**	**+1.3**
ZIIG	**Zihuatanejo**	**1.19**	**152**		**Pn**	**14 02 37.9**	**+1.6**
ZIIG					**Sn**	**14 02 53.0**	**+1.3**
MMIG	**Aquila**	**1.28**	**254**	*e*P	**Pn**	**14 02 38.9**	**+1.4**
MMIG				*i* S	**Sn**	**14 02 55.0**	**+1.2**
MMIG	**Aquila**	**1.28**	**254**		**Pn**	**14 02 38.9**	**+1.4**
MOIG	**Morelia**	**1.30**	**39**	Pn	**Pn**	**14 02 41.0**	**+2.9**
ARIG	**Puente Sto Nin**	**1.67**	**103**	*e*P	**Pn**	**14 02 44.7**	**+2.0**
ARIG				*i* S	**Sn**	**14 03 04.4**	**+1.2**
ARIG	**Puente Sto Nin**	**1.67**	**103**		**Pn**	**14 02 44.7**	**+2.0**
IGIG	**Irapuato, Guan**	**2.19**	**18**	*i* P	**Pn**	**14 02 51.0**	**+1.0**
IGIG				*i* S	**Sn**	**14 03 16.6**	**+0.4**
IGIG	**Irapuato, Guan**	**2.19**	**18**		**Pn**	**14 02 51.0**	**+1.0**
UNM	**Universidad Na**	**2.81**	**76**	Pn	**Pn**	**14 03 00.2**	**+1.8**
ANIG	**Ahuacatlan**	**3.33**	**316**	*i* P	**Pn**	**14 03 07.1**	**+1.7**
ANIG				*i* S	**Sn**	**14 03 44.9**	**+1.1**
ANIG	**Ahuacatlan**	**3.33**	**316**		**Pn**	**14 03 07.1**	**+1.7**
TLIG	**Tlapa**	**3.49**	**108**		**Pn**	**14 03 10.7**	**+3.0**
ZAIG	**Zacatecas**	**4.12**	**353**	*i* P	**Pn**	**14 03 18.5**	**+2.1**
ZAIG				*i* S	**Sn**	**14 04 04.9**	**+1.5**
ZAIG	**Zacatecas**	**4.12**	**353**		**Pn**	**14 03 17.7**	**+1.3**
LPIG	**La Paz**	**9.40**	**307**	LR	LR	14 07 24.7	
	comp=Z,27nm,21.8s,baz=219,slow=32						
TX31	**Lajitas Ar. Si**	**10.73**	**352**		**Pn**	**14 04 50.0**	**+3.4**
TX32	**Lajitas Array**	**10.73**	**352**		**Pn**	**14 04 49.4**	**+2.8**
TXAR	**Lajitas Array**	**10.73**	**352**	P	**Pn**	**14 04 49.1**	**+2.4**
	0.2nm,0.3s,baz=175,slow=15,SNR=18						
TXAR				LR	LR	14 09 18.7	
	comp=Z,62nm,20.4s,baz=0.0,slow=40						
TXAR	**Lajitas Array**	**10.73**	**352**	Pn	**Pn**	**14 04 48.8**	**+2.1**
JCT	**Junction City**	**11.95**	**9**		**Pn**	**14 05 04.3**	**+1.1**
MNTX	**Cornudas Mount**	**13.33**	**348**	Pn	**Pn**	**14 05 20.8**	**-1.2**
WMOK	**Wichita Mounta**	**16.28**	**10**		**Pn**	**14 06 00.1**	**-0.2**
TUL1	**Leonard**	**18.06**	**17**	P	**P**	**14 06 21.4**	**-0.4**
SDCO	**Great Sand Dun**	**19.26**	**352**		**P**	**14 06 35.9**	**+0.6**
SDCO				IAmb	IAmb	14 06 38.3	
	comp=Z,5.8nm,1.2s						
OXF	**Oxford**	**19.39**	**33**	P	**P**	**14 06 32.8**	**-3.7**
S39A	**Bolivar**	**20.45**	**20**	P	Pn	14 06 49.5	-1.0
S39A				IAmb	IAmb	14 06 51.7	
	comp=Z,8.2nm,0.7s						
PLAL	**Pickwick Lake**	**20.46**	**35**	P	**P**	**14 06 47.0**	**-1.0**
PLAL				IAmb	IAmb	14 06 48.3	
	comp=Z,9.0nm,1.1s						
ISCO	**Idaho Springs**	**21.29**	**352**	P	**P**	**14 06 54.6**	**-2.7**
R40A	**Maddies Statio**	**21.34**	**22**	P	**P**	**14 06 56.3**	**-1.2**
R40A				IAmb	IAmb	14 06 59.1	
	comp=Z,6.7nm,0.7s						
WVT	**Waverly**	**21.46**	**33**	P	**P**	**14 06 56.5**	**-2.3**
WVT				IAmb	IAmb

comp=Z,0.6nm,0.8s,baz=72,slow=4.1,SNR=5.1
ASAR pPKP **pPKPdf 14 21 34.6 +0.9**
comp=Z,0.6nm,0.8s,baz=120,slow=2.0,SNR=4.3
CMAR Chiang Mai Arr 137.74 330 PKP **PKPdf 14 21 33.6 +0.1**
comp=Z,0.7nm,0.6s,baz=259,slow=1.2,SNR=6.4

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*IDC **15** 14:20:39.1±1.8, 1.64N×126.06E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.3/35, mbtmp3.3/4, Error ellipse: s-maj=167.9km s-min=22.9km az=66.0*
*DJA **15** 14:20:43.1±0.4, 2.7N±4.4×12.7E±.4, h10km, M3.3/6, MLv3.3/6*
ISC 15 14:20:44.9±1.1, 1.82N±0.09×126.6E±0.1, h47km, n7, σ0§48/8, mb3.2/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**144**	P	**Pn**	**14 21 06.1**	**-0.4**
TNTI				S	**Sn**	**14 21 23.4**	**+0.8**
SGSI	**Sangihe**	**2.14**	**330**	P	**Pn**	**14 21 18.2**	**0.0**
KMSI	**Cibinong**	**2.90**	**245**	P	**Pn**	**14 21 28.4**	**-0.1**
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**14 25 44.7**	**-0.3**
	0.5nm,0.5s,baz=338,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**26.31**	**165**	P	**P**	**14 26 16.7**	**+0.3**
	0.3nm,0.8s,baz=351,slow=15,SNR=4.3						
MKAR	**Makanchi Array**	**59.05**	**326**	P	**P**	**14 30 40.3**	**+0.1**
	0.1nm,0.4s,baz=134,slow=7.8,SNR=4.8						
KURBB	**Kurchatov Arra**	**63.27**	**328**	P	**P**	**14 31 08.3**	**-0.4**
	0.2nm,0.6s,baz=132,slow=5.5,SNR=2.1						

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*IDC **15** 14:21:46.8±1.8, 1.84N×126.34E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/36, mbtmp3.4/4, Error ellipse: s-maj=171.6km s-min=21.8km az=66.0*
*DJA **15** 14:21:52.5±1.4, 2.1N±6.6×12.7E±.4, h11km±14km, M3.5/6, MLv3.5/6*
ISC 15 14:21:52.5±1.2, 1.75N±0.09×126.8E±0.1, h35km, n8, σ2§59/8, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.12**	**150**	P	**Pn**	**14 22 12.9**	**+1.2**
SGSI	**Sangihe**	**2.31**	**326**	P	**Pn**	**14 22 30.6**	**+2.4**
KMSI	**Cibinong**	**3.06**	**248**	P	**Pn**	**14 22 38.1**	**-0.3**
GTOI	**Gorontalo**	**3.96**	**254**	P	**Pn**	**14 22 53.4**	**+2.6**
WRA	**Warramunga Arr**	**22.79**	**161**	P	**P**	**14 26 52.9**	**+0.6**
	1.3nm,0.6s,baz=339,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.19**	**165**	P	**P**	**14 27 25.9**	**+1.9**
	0.2nm,0.4s,baz=346,slow=12,SNR=7.1						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**14 31 47.2**	**-3.1**
	0.2nm,0.4s,baz=125,slow=7.6,SNR=4.9						
KURBB	**Kurchatov Arra**	**63.45**	**328**	P	**P**	**14 32 16.4**	**-2.3**
	0.2nm,0.4s,baz=130,slow=6.6,SNR=4.4						

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*IDC **15** 14:26:22.8±2.2, 1.86N×126.75E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/41, mbtmp3.6/3, Error ellipse: s-maj=181.2km s-min=25.5km az=66.0*
*DJA **15** 14:26:27.6±1.5, 2.1N±5.5×12.7E±.4, h11km±16km, M3.5/6, MLv3.5/6*
ISC 15 14:26:29.3±1.6, 1.7N±0.2×126.6E±0.1, h47km, n6, σ0§92/6, mb3.6/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.20**	**143**	P	**Pn**	**14 26 49.6**	**-0.1**
KMSI	**Cibinong**	**2.90**	**247**	P	**Pn**	**14 27 12.2**	**-0.7**
GTOI	**Gorontalo**	**3.79**	**253**	P	**Pn**	**14 27 25.7**	**+0.6**
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**14 31 27.9**	**-0.6**
	3.3nm,1.0s,baz=340,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.22**	**165**	P	**P**	**14 32 01.1**	**+1.2**
	0.7nm,0.7s,baz=348,slow=10,SNR=9.7						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**14 36 25.0**	**-0.2**
	0.2nm,0.4s,baz=119,slow=7.6,SNR=5.6						

IDC 15 14:26:52.6±7.7, 5.10S×146.17E, h141km±81km, mb3.3/3, mb1 3.5/5, mb1mx3.1/36, mbtmp3.7/5, MS2.9/2, Ms1 3.0/2, ms1mx2.4/24, Error ellipse: s-maj=78.9km s-min=27.5km az=141.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.39**	**167**	P	Pn	14 27 59.4	+1.6
	2.0nm,0.3s,baz=322,slow=10.0,SNR=7.1						
PMG				S	Sn	14 28 48.1	-0.4
	5.1nm,0.3s,baz=181,slow=17,SNR=16						
WRA	**Warramunga Arr**	**18.72**	**217**	P	P	14 31 01.1	+0.6
	0.8nm,0.3s,baz=36,slow=12,SNR=20						
ASAR	**Alice Springs**	**21.92**	**211**	P	P	14 31 35.5	+0.7
	0.6nm,0.4s,baz=40,slow=7.6,SNR=33						
FITZ	**Fitzroy Crossi**	**23.86**	**236**	P	P	14 31 52.7	-0.6
	3.0nm,0.5s,baz=50,slow=8.2,SNR=19						
CMAR	**Chiang Mai Arr**	**52.10**	**298**	LR	LR	14 58 58.2	
	comp=Z,6.1nm,20.1s,baz=105,slow=37						
KLR	**Kul'dur**	**55.55**	**349**	LR	LR	14 58 43.9	
	comp=Z,16nm,18.1s,baz=179,slow=34						
ILAR	**Eielson Array**	**84.98**	**23**	P	P	14 39 11.6	-0.3
	0.3nm,0.6s,baz=250,slow=5.9,SNR=4.4						

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*TAP **15** 14:30:38.2, 24.16N×122.28E, h14km±1km, ML2.6, D*
*JMA **15** 14:30:38.2±0.2, 24.02N×122.30E, h19km±4km, M2.3*
ISC 15 14:30:37.9±1.0, 24.08N±0.02×122.29E±0.02, h15km±8km, n77, σ0§57/143, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.57**	**310**	*eP*	**Pg**	**14 30 49.3**	**0.0**
	baz=304						
ENAH				*eS*	**Sg**	**14 30 56.4**	**-0.5**
	baz=304						
NACB	**Ninganchiao**	**0.65**	**278**	*eP*	**Pg**	**14 30 50.9**	**+0.3**
	baz=271						
NACB				*eS*	**Sb**	**14 31 01.0**	**+1.3**
	baz=271						
TWC	**Suao**	**0.66**	**322**	*eP*	**Pg**	**14 30 50.5**	**-0.4**
	baz=319						
TWC				S	**Sg**	**14 30 58.5**	**-1.2**
	baz=319						
JYNG	**Yonagunijimaku**	**0.70**	**58**	P	**Pg**	**14 30 51.8**	**+0.2**
JYNG				*eS*	**Sg**	**14 31 00.9**	**0.0**
ETLH	**Xiulin Townshi**	**0.75**	**280**	*eP*	**Pg**	**14 30 52.8**	**+0.2**
	baz=273						
ETLH				*eS*	**Sb**	**14 31 03.0**	**+0.2**
	baz=273						
YOJ	**Yonaguni jima**	**0.76**	**60**	P	**Pb**	**14 30 52.8**	**0.0**
	baz=64						
YOJ				S	**Sg**	**14 31 02.9**	**+0.3**
	baz=64						
YOJ	**Yonaguni jima**	**0.76**	**60**	P	**Pg**	**14 30 53.1**	**+0.4**
YOJ				*eS*	**Sg**	**14 31 02.4**	**-0.3**
EGS		**0.83**	**337**	*eP*	**Pb**	**14 30 53.8**	**-0.2**
	baz=335						
EGS				*eS*	**Sb**	**14 31 04.5**	**-0.4**
	baz=335						
ESL	**Shilin**	**0.83**	**251**	*eP*	**Pb**	**14 30 53.8**	**-0.3**
	baz=246						
ESL				*eS*	**Sg**	**14 31 05.3**	**+0.2**
	baz=246						
ILA	**Ilan**	**0.84**	**324**	*eS*	**Sg**	**14 31 05.5**	**+0.1**
	baz=321						
TWE	**Neicheng**	**0.85**	**318**	*eP*	**Pb**	**14 30 54.4**	**0.0**
	baz=315						
TWE				*eS*	**Sb**	**14 31 04.9**	**-0.8**
	baz=315						
NDT	**Datong Townshi**	**0.88**	**306**	*eP*	**Pb**	**14 30 55.1**	**+0.2**
	baz=302						
NDT				*eS*	**Sb**	**14 31 06.3**	**-0.2**
	baz=302						
EGFH	**Guangfu**	**0.89**	**243**	*eP*	**Pb**	**14 30 55.0**	**-0.1**
	baz=238						
EGFH				*eS*	**Sg**	**14 31 07.4**	**+0.4**
	baz=238						
NNSB	**Datong**	**0.90**	**293**	*eP*	**Pb**	**14 30 55.5**	**+0.3**
	baz=288						
NNSB				*eS*	**Sg**	**14 31 07.6**	**+0.3**
	baz=288						
NNSH	**Datong**	**0.90**	**293**	*eP*	**Pg**	**14 30 55.8**	**+0.4**
	baz=288						
NNSH				*eS*	**Sb**	**14 31 07.3**	**+0.2**
	baz=288						
NNS	**Nan Shan**	**0.91**	**293**	*eP*	**Pb**	**14 30 55.7**	**+0.2**
	baz=288						
NNS				*eS*	**Sg**	**14 31 08.1**	**+0.4**
	baz=288						
WHF	**Hehuan Shan**	**0.94**	**274**	*eP*	**Pb**	**14 30 55.3**	**-0.9**
	baz=269						
WHF				*eS*	**Sn**	**14 31 09.7**	**-0.6**
	baz=269						
FUSS	**Fushou**	**0.97**	**280**	*eP*	**Pb**	**14 30 56.6**	**-0.1**
	baz=275						
TIPB	**Shuangxi**	**0.98**	**334**	*eP*	**Pb**	**14 30 56.9**	**+0.2**
	baz=332						
TIPB				S	**Sb**	**14 31 08.6**	**-0.8**
	baz=332						
HGSD	**Ruisui**	**0.99**	**234**	*eP*	**Pb**	**14 30 56.8**	**+0.1**
	baz=230						
HGSD				*eS*	**Sg**	**14 31 10.3**	**+0.2**
	baz=230						
NWLT	**Wulai**	**1.00**	**314**	*eP*	**Pn**	**14 30 57.4**	**0.0**
	baz=310						
NWLT				*eS*	**Sb**	**14 31 09.2**	**-0.7**
	baz=310						
CHGB	**Renai**	**1.02**	**269**	*eP*	**Pb**	**14 30 57.3**	**-0.2**
	baz=264						
CHGB				*eS*	**Sb**	**14 31 11.2**	**+0.4**
	baz=264						
TWT	**Tachien**	**1.03**	**280**	*eP*	**Pg**	**14 30 58.5**	**+0.5**
	baz=275						
TWT				*eS*	**Sn**	**14 31 12.2**	**-0.2**
	baz=275						
NSK	**Sanguang**	**1.04**	**305**	*eP*	**Pn**	**14 30 57.9**	**0.0**
	baz=301						
NSK				*eS*	**Sb**	**14 31 10.8**	**-0.3**
	baz=301						
TDCB	**Techi**	**1.05**	**279**	*eP*	**Pn**	**14 30 58.3**	**+0.1**
	baz=275						
EHY	**Hungye**	**1.06**	**237**	*eP*	**Pb**	**14 30 58.0**	**0.0**
	baz=233						
EHY				*eS*	**Sn**	**14 31 12.9**	**+0.2**
	baz=233						
NWF	**Wu-fen Shan**	**1.09**	**335**	*eP*	**Pb**	**14 30 56.9**	**-1.6**
	baz=333						
NWF				*eS*	**Sg**	**14 31 13.1**	**-0.2**
	baz=333						
WFSB	**Wu-fen Shan**	**1.09**	**335**	*eP*	**Pb**	**14 30 57.0**	**-1.5**
	baz=333						
WFSB				*eS*	**Sb**	**14 31 12.3**	**-0.1**
	baz=333						
TWA	**Mucha**	**1.10**	**324**	*eP*	**Pb**	**14 30 58.7**	**0.0**
	baz=322						
TWA				*eS*	**Sb**	**14 31 13.2**	**+0.3**
	baz=322						
NHDH	**Xindian Distri**	**1.12**	**322**	*eS*	**Sb**	**14 31 13.2**	**-0.2**
	baz=319						
YULB	**Yu-li**	**1.14**	**233**	*eP*	**Pn**	**14 30 59.1**	**-0.2**
	baz=229						
YULB				*eS*	**Sn**	**14 31 14.7**	**-0.1**
	baz=229						
EYUL	**Yuli**	**1.16**	**231**	*eP*	**Pn**	**14 30 59.4**	**-0.1**
	baz=227						
EYUL				*eS*	**Sn**	**14 31 15.2**	**+0.1**
	baz=227						
TWF1	**Yuli**	**1.17**	**232**	*eP*	**Pn**	**14 30 59.1**	**-0.6**
	baz=228						
TWF1				*eS*	**Sn**	**14 31 15.7**	**+0.4**
	baz=228						
WHP	**Taichung City**	**1.25**	**279**	*eP*	**Pb**	**14 31 01.6**	**+0.4**
	baz=275						
WHP				*eS*	**Sg**	**14 31 18.1**	**-0.1**
	baz=275						
YM01	**YM01**	**1.25**	**328**	*eP*	**Pn**	**14 31 01.0**	**+0.2**
	baz=326						
YM01				*eS*	**Sb**	**14 31 17.1**	**0.0**
	baz=326						
DPDB	**Guoxing**	**1.25**	**268**	*eP*	**Pn**	**14 31 00.6**	**-0.3**
	baz=264						
YM10	**YM10**	**1.26**	**328**	*eP*	**Pn**	**14 31 01.2**	**+0.1**
	baz=326						
YM10				*eS*	**Sn**	**14 31 17.9**	**+0.2**
	baz=326						
SSLB	**Suanglung**	**1.26**	**257**	*eP*	**Pn**	**14 31 00.9**	**-0.1**
	baz=253						
SSLB				*eS*	**Sg**	**14 31 19.6**	**+0.9**
	baz=253						
YM11	**YM11**	**1.26**	**329**	*eP*	**Pn**	**14 31 01.1**	**0.0**
	baz=327						
YM04	**YM04**	**1.27**	**327**	*eP*	**Pn**	**14 31 01.4**	**+0.3**
	baz=325						
YM04				*eS*	**Sb**	**14 31 17.7**	**+0.1**
	baz=325						
YM08	**YM08**	**1.27**	**330**	*eP*	**Pn**	**14 31 01.4**	**+0.2**
	baz=328						
YM08				*eS*	**Sn**	**14 31 18.2**	**+0.2**
	baz=328						
YM03	**YM03**	**1.29**	**328**	*eP*	**Pn**	**14 31 01.2**	**-0.2**
	baz=326						
TWS1	**Kuangyinshan**	**1.29**	**322**	*eP*	**Pb**	**14 31 01.9**	**0.0**
	baz=320						
TWS1				*eS*	**Sn**	**14 31 18.5**	**+0.2**
	baz=320						
SMLT	**Sun Moon Lake**	**1.29**	**261**	*eP*	**Pg**	**14 31 02.7**	**-0.2**
	baz=257						
SMLT				*eS*	**Sg**	**14 31 20.2**	**+0.5**
	baz=257						
LIOB	**Emei**	**1.29**	**296**	*eP*	**Pb**	**14 31 02.3**	**+0.3**
	baz=292						
LIOB				*eS*	**Sn**	**14 31 18.5**	**0.0**
	baz=292						
NSTT	**Nanjuang**	**1.30**	**295**	*eP*	**Pb**	**14 31 02.1**	**0.0**
	baz=292						
NSTT				*eS*	**Sn**	**14 31 19.2**	**+0.7**
	baz=292						
ANP	**Anpu**	**1.30**	**327**	*eP*	**Pn**	**14 31 00.4**	**-1.3**
	baz=326						
TYC	**Yuchr**	**1.33**	**263**	*eP*	**Pb**	**14 31 03.0**	**+0.5**
	baz=259						
TYC				*eS*	**Sg**	**14 31 20.7**	**-0.1**
	baz=259						
IRIF	**Iriomote-Funau**	**1.33**	**79**	P	**Pn**	**14 31 02.4**	**+0.4**
IRIF				S	**Sb**	**14 31 20.3**	**+0.8**
HATJ	**Hateruma jima**	**1.38**	**91**	*eS*	**Sn**	**14 31 20.0**	**-0.6**
WJS	**Zhushan**	**1.46**	**260**	*eP*	**Pn**	**14 31 03.9**	**+0.2**
	baz=256						
WJS				*eS*	**Sb**	**14 31 23.8**	**+0.8**
	baz=256						
ELDTW	**Lidau**	**1.47**	**233**	*eP*	**Pn**	**14 31 03.8**	**-0.2**
	baz=230						
ELDTW				*eS*	**Sn**	**14 31 21.8**	**-1.2**
	baz=230						
ALS	**Alishan**	**1.48**	**248**	*eP*	**Pn**	**14 31 04.6**	**+0.3**
	baz=244						
ALS				*eS*	**Sn**	**14 31 23.4**	**-0.1**
	baz=244						
WNT	**Mingjian**	**1.49**	**262**	*eP*	**Pn**	**14 31 04.1**	**0.0**
	baz=259						
WNT				*eS*	**Sb**	**14 31 24.6**	**+0.7**
	baz=259						
CHN5	**Tsauling**	**1.56**	**252**	*eP*	**Pn**	**14 31 05.8**	**+0.6**
	baz=249						
CHN5				*eS*	**Sb**	**14 31 26.8**	**+0.8**
	baz=249						
JKRS	**Kuro-shima**	**1.57**	**84**	P	**Pb**	**14 31 06.6**	**-0.1**
JKRS				*eS*	**Sb**	**14 31 26.9**	**+0.5**
LONT	**Longtian**	**1.59**	**223**	*eP*	**Pn**	**14 31 05.0**	**-0.4**
	baz=220						
LONT				*eS*	**Sn**	**14 31 25.5**	**-0.2**
	baz=220						
LDUT	**Ludao**	**1.59**	**209**	*eP*	**Pn**	**14 31 06.0**	**+0.4**
	baz=206						
WDLH	**Douliu**	**1.65**	**257**	*eP*	**Pb**	**14 31 07.6**	**-0.5**
	baz=253						
WDLH				*eS*	**Sb**	**14 31 28.9**	**+0.2**
	baz=253						
STYT	**Tauyuan**	**1.68**	**237**	*eP*	**Pn**	**14 31 07.5**	**+0.7**
	baz=234						
STYT				*eS*	**Sb**	**14 31 29.5**	**-0.1**
	baz=234						
TWGBT	**Beinan**	**1.68**	**222**	*eP*	**Pn**	**14 31 06.5**	**-0.3**
	baz=219						
TWGBT				*eS*	**Sn**	**14 31 28.4**	**+0.4**
	baz=219						
JIJ	**Ishigaki jima**	**1.71**	**80**	P	**Pn**	**14 31 07.1**	**-0.1**
JIJ				S	**Sn**	**14 31 28.6**	**-0.2**
TPUB	**Ta-pu**	**1.71**	**243**	*eP*	**Pn**	**14 31 08.1**	**+0.9**
	baz=240						
TPUB				*eS*	**Sb**	**14 31 30.5**	**+0.1**
	baz=240						
CHN4	**Tsaushan**	**1.72**	**245**	*eP*	**Pb**	**14 31 08.9**	**-0.3**
	baz=242						
CHN4				*eS*	**Sb**	**14 31 30.8**	**+0.1**
	baz=242						
WTP	**Ta-pu**	**1.75**	**242**	*eP*	**Pb**	**14 31 09.1**	**-0.7**
	baz=239						
WTP				*eS*	**Sb**	**14 31 31.9**	**+0.3**
	baz=239						
WTK	**Tuku**	**1.79**	**258**	*eP*	**Pn**	**14 31 08.8**	**+0.5**
	baz=254						
WTK				*eS*	**Sb**	**14 31 32.4**	**-0.2**
	baz=254						
TWK	**Hsinying**	**1.84**	**244**	*eP*	**Pn**	**14 31 09.3**	**+0.2**
	baz=241						
TWK				*eS*	**Sn**	**14 31 33.1**	**+0.9**
	baz=241						
CHN1	**Nanshi**	**1.85**	**241**	*eP*	**Pb**	**14 31 10.9**	**-0.5**
	baz=239						
CHN1				*eS*	**Sb**	**14 31 34.4**	**0.0**
	baz=239						
SGST	**Jiashian**	**1.86**	**238**	*eP*	**Pn**	**14 31 10.1**	**+0.8**
	baz=235						
SGST				*eS*	**Sb**	**14 31 34.1**	**-0.5**
	baz=235						
SLGT	**Liugui**	**1.86**	**235**	*eP*	**Pb**	**14 31 10.9**	**-0.7**
	baz=232						
SLGT				*eS*	**Sb**	**14 31 34.3**	**-0.4**
	baz=232						
JISG	**Ishigakijimahi**	**1.91**	**74**	P	**Pn**	**14 31 10.1**	**+0.2**
JISG				*eS*	**Sn**	**14 31 33.9**	**+0.3**
ECL	**Taimali**	**1.93**	**220**	*eP*	**Pb**	**14 31 11.9**	**-0.8**
	baz=218						
SSD	**Sandimen**	**2.02**	**229**	*eP*	**Pb**	**14 31 13.2**	**-1.2**
	baz=227						
SSD				*eS*	**Sb**	**14 31 38.8**	**-0.6**
	baz=227						
TSMG	**Majia**	**2.04**	**228**	*eP*	**Pb**	**14 31 13.5**	**-1.2**
	baz=226						
TSMG				*eS*	**Sb**	**14 31 38.9**	**-1.0**
	baz=226						
MASBT	**Mashibuluo**	**2.12**	**227**	*eP*	**Pn**	**14 31 13.9**	**+1.2**
	baz=224						
MASBT				*eS*	**Sb**	**14 31 41.1**	**-0.9**
	baz=224						
EAST	**Anshuo**	**2.15**	**218**	*eP*	**Pn**	**14 31 15.0**	**+1.7**
	baz=216						
EAST				*eS*	**Sb**	**14 31 42.7**	**-0.4**
	baz=216						
SCZT	**Fangliau**	**2.30**	**222**	*eP*	**Pb**	**14 31 17.4**	**-1.6**
	baz=220						
SCZT				*eS*	**Sb**	**14 31 45.7**	**-1.5**
	baz=220						

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*IDC **15** 14:30:56.1±2.1, 1.72N×126.62E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/46, mbtmp3.4/3, Error ellipse: s-maj=172.5km s-min=26.4km az=66.0*
*DJA **15** 14:30:59.0±0.3, 2.7N±5.5×12.7E±.4, h10km, M3.3/6, MLv3.3/6*
ISC 15 14:31:02.1±1.2, 1.67N±0.09×126.62E±0.10, h47km, n7, σ1§64/7, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.17**	**140**	P	**Pn**	**14 31 21.8**	**-0.3**
SGSI	**Sangihe**	**2.27**	**331**	P	**Pn**	**14 31 36.8**	**-0.5**
KMSI	**Cibinong**	**2.85**	**248**	P	**Pn**	**14 31 43.4**	**-1.8**
GTOI	**Gorontalo**	**3.75**	**254**	P	**Pn**	**14 31 58.8**	**+1.3**
WRA	**Warramunga Arr**	**22.78**	**161**	P	**P**	**14 35 59.6**	**-1.3**
	1.1nm,0.7s,baz=339,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**26.17**	**165**	P	**P**	**14 36 34.4**	**+2.0**
	0.6nm,1.0s,baz=348,slow=12,SNR=4.9						
MKAR	**Makanchi Array**	**59.18**	**326**	P	**P**	**14 40 58.5**	**+0.1**
	0.2nm,0.4s,baz=120,slow=8.1,SNR=4.9						

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*IDC **15** 14:33:21.8±1.9, 37.25N×142.31E, h0km, mb3.3/3, mb1 3.5/6, mb1mx3.3/59, mbtmp3.5/6, ML2.9/3, Error ellipse: s-maj=37.6km s-min=24.5km az=86.0*
*JMA **15** 14:33:26.0±0.2, 37.32N×142.03E, h35km±4km, M3.5*
ISC 15 14:33:22.5±2.1, 37.31N±0.05×142.07E±0.07, h6km±12km, n25, σ1§29/31, mb3.4/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.96**	**274**	P	**Pn**	**14 33 42.8**	**+0.3**
JFK				S	**Sb**	**14 33 54.3**	**-0.1**
JMST	**Minamisoumatoc**	**1.03**	**294**	P	**Pn**	**14 33 43.8**	**+0.4**
JMST				S	**Sb**	**14 33 56.0**	**-0.5**
ONAJ	**Iwakimizuishiy**	**1.04**	**259**	P	**Pn**	**14 33 43.8**	**+0.2**
ONAJ				*eS*	**Sb**	**14 33 56.6**	**-0.2**
JIKH	**Ishinomakikobu**	**1.11**	**335**	P	**Pn**	**14 33 45.0**	**+0.4**
JMM	**Marumori**	**1.16**	**299**	P	**Pn**	**14 33 45.8**	**+0.6**
JMM				*eS*	**Sg**	**14 33 59.4**	**-0.4**
JIO	**Ouri**	**1.28**	**334**	P	**Pn**	**14 33 47.6**	**+0.7**
JIO				*eS*	**Sg**	**14 34 03.3**	**-0.4**
JFT	**Otama**	**1.40**	**279**	P	**Pg**	**14 33 50.1**	**+0.8**
JFT				S	**Sg**	**14 34 06.9**	**-0.5**
JOU	**Okura**	**1.54**	**314**	P	**Pg**	**14 33 51.8**	**-0.1**
JOU				S	**Sn**	**14 34 11.1**	**+0.4**
JMK	**Ichinoseki**	**1.77**	**338**	P	**Pb**	**14 33 55.1**	**-0.3**
JYS	**Shirataka**	**1.83**	**300**	S	**Sb**	**14 34 19.6**	**0.0**
JFY	**Yanaizu**	**1.89**	**274**	P	**Pb**	**14 33 57.3**	**-0.1**
JFY				S	**Sn**	**14 34 20.1**	**+0.7**
JYK	**Kaneyama**	**2.10**	**320**	P	**Pb**	**14 33 59.9**	**-1.1**
MJAR	**Matsushiro Arr**	**3.19**	**257**	Pn	**Pn**	**14 34 16.0**	**+2.8**
	0.2nm,0.3s,baz=87,slow=6.2,SNR=14						
MJAR				Sn	**Sb**	**14 34 56.3**	**-2.4**
	0.3nm,0.3s,baz=78,slow=31,SNR=5.1						
MAT	**Matsushiro**	**3.19**	**257**	P	**Pb**	**14 34 18.3**	**-1.2**
MAT				*eS*	**Sb**	**14 34 55.9**	**-2.8**
JHJ	**Hachijo jima 2**	**4.58**	**205**	Pn	**Pn**	**14 34 33.6**	**+1.4**
	7.3nm,0.3s,baz=246,slow=21,SNR=1.6						
JHJ				Sn	**Sn**	**14 35 24.4**	**-1.4**
	8.1nm,0.3s,baz=260,slow=23,SNR=1.9						
ASAJ	**Asahikawa**	**6.81**	**3**	Pn	**Pn**	**14 35 05.0**	**+2.0**
	0.3nm,0.3s,baz=180,slow=14,SNR=2.0						
ASAJ				Sn	**Sn**	**14 36 18.2**	**-2.6**
	0.2nm,0.3s,baz=2.0,slow=15,SNR=1.4						
H11N2	**WAKE ISLAND Hy**	**27.84**	**122**	T	T	15 08 43.5	
	baz=314,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**27.85**	**122**	T	T	15 08 48.7	
	baz=314,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**27.86**	**122**	T	T	15 08 46.7	
	baz=314,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**28.57**	**124**	T	T	15 09 43.4	
	baz=316,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**28.57**	**124**	T	T	15 09 41.3	
	baz=316,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**28.59**	**124**	T	T	15 09 40.1	
	baz=316,slow=76,SNR=19						
MKAR	**Makanchi Array**	**44.42**	**302**	P	**P**	**14 41 35.2**	**+1.2**
	0.2nm,0.5s,baz=91,slow=8.3,SNR=2.1						
KURBB	**Kurchatov Arra**	**46.25**	**308**	P	**P**	**14 41 49.5**	**+1.2**
	0.2nm,0.4s,baz=84,slow=8.8,SNR=3.4						
WRA	**Warramunga Arr**	**57.41**	**189**	P	**P**	**14 43 11.9**	**0.0**
	0.3nm,0.8s,baz=7.3,slow=6.7,SNR=6.4						

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*NEIC **15** 14:38:22.5±1.0, 21.7N±0.1×143.4E±0.6, h308km±17km, mb3.7/10, Error ellipse: s-maj=77.0km s-min=17.2km az=80.0*
*IDC **15** 14:38:23.9±5.1, 21.59N×143.15E, h314km±52km, mb3.1/13, mb1 3.2/14, mb1mx3.0/64, mbtmp

WRA	**Warramunga Arr**	**42.16 192**	IAmb	IAmb	14 45 46.9	
	comp=Z,0.1nm,1.1s					
AS31	**Alice Springs**	**45.87 192**	P	**P**	**14 46 15.6**	**-0.2**
ASAR	**Alice Springs**	**45.87 192**	P	**P**	**14 46 15.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=13,slow=6.8,SNR=7.4					
MKAR	**Makanchi Array**	**54.78 313**	P	**P**	**14 47 22.3**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=81,slow=11,SNR=2.0					
KURK	**Kurchatov**	**57.56 317**	P	**P**	**14 47 41.4**	**0.0**
KURK	**Kurchatov**	**57.56 317**	IAmb	IAmb	14 47 45.8	
	comp=Z,1.9nm,1.1s					
KURBB	**Kurchatov Arra**	**57.61 317**	P	**P**	**14 47 41.4**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=92,slow=7.6,SNR=6.0					
ILAR	**Eielson Array**	**62.15 27**	P	**P**	**14 48 11.3**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=262,slow=5.0,SNR=5.4					
BVAR	**Borovoye Array**	**62.76 320**	P	**P**	**14 48 15.8**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=102,slow=9.0,SNR=16					
ABKAR	**Akbulak array**	**69.63 316**	P	**P**	**14 48 59.7**	**-0.2**
ABKAR			IAmb	IAmb	14 48 59.9	
	comp=Z,1.2nm,0.6s					
ABKAR	**Akbulak array**	**69.63 316**	P	**P**	**14 48 59.6**	**-0.2**
YKA	**Yellowknife Ar**	**76.56 28**	P	**P**	**14 49 40.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=149,slow=39,SNR=2.6					
ARCES	**ARCESS Array B**	**79.03 342**	P	**P**	**14 49 53.4**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=72,slow=7.9,SNR=10.0					
NVAR	**Mina Array Bea**	**83.22 51**	P	**P**	**14 50 17.4**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=298,slow=20,SNR=3.8					
FINES	**FINESS Array B**	**83.29 334**	P	**P**	**14 50 14.7**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=68,slow=3.4,SNR=14					

IDC ***15*** *14:44:44.5±2.1, 1°.66N×126°.11E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/47, mbtmp3.3/3, Error ellipse: s-maj=180.9km s-min=26.2km az=65.0*
DJA ***15*** *14:44:49.6±2.2, 2°N±5°×12°6E±°, h37km±55km, M3.3/6, MLv3.3/6*

ISC 15 14:44:49.8±1.2, 1°.75N±0°.09×126°.4E±0°.1, h47km, n6, σ1$55/6, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**136**	P	**Pn**	**14 45 11.3**	**-0.9**
SGSI	**Sangihe**	**2.12**	**335**	P	**Pn**	**14 45 22.0**	**-0.8**
KMSI	**Cibinong**	**2.71**	**245**	P	**Pn**	**14 45 30.1**	**-0.8**
WRA	**Warramunga Arr**	**22.91**	**161**	P	**P**	**14 49 49.2**	**-0.6**
	0.9nm,0.6s,baz=338,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.29**	**164**	P	**P**	**14 50 23.2**	**+2.1**
	0.2nm,0.4s,baz=347,slow=12,SNR=8.1						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**14 54 45.4**	**+0.5**
	0.2nm,0.5s,baz=120,slow=7.9,SNR=4.6						

SKHL ***15*** *14:59:28.8±0.5, 43°.73N×147°.86E, h39km±7km, mb4.3/4*
JMA ***15*** *14:59:32.0±0.4, 44°.00N×147°.09E, h128km, M3.5*
IDC ***15*** *14:59:33.5±2.9, 45°.51N×146°.50E, h113km±74km, mb3.5/8, mb1 3.6/10, mb1mx3.3/41, mbtmp3.8/10, ML2.8/2, Error ellipse: s-maj=167.6km s-min=22.7km az=166.0*

ISC 15 14:59:28.2±1.2, 44°.2N±0°.1×147°.2E±0°.1, h139km±7km, n25, σ1$27/34, mb3.7/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.99**	**260**	*i* P	**Pn**	**14 59 52.0**	**+0.2**
YUK				AMB	AMB	14 59 53.0	
	49nm,0.3s						
YUK				*i* S	**Sn**	**15 00 09.0**	**-0.7**
YUK				A	A	15 00 10.0	
	193nm,0.2s						
YUK				A	A	15 00 10.0	
	143nm,0.2s						
GRPR	**Tuman**	**1.06**	**258**	*i* P	**Pn**	**14 59 53.0**	**+0.5**
GRPR				AMB	AMB	14 59 54.0	
	231nm,0.4s						
GRPR				*i* S	**Sn**	**15 00 10.0**	**-0.9**
GRPR				A	A	15 00 11.0	
	170nm,0.4s						
GRPR				A	A	15 00 11.0	
	621nm,0.4s						
KUR	**Kuril'sk**	**1.12**	**24**	*i* P	**Pn**	**14 59 54.0**	**+1.0**
KUR				AMB	AMB	14 59 54.0	
	44nm,0.3s						
KUR				*i* S	**Sn**	**15 00 11.0**	**-0.9**
KUR				A	A	15 00 14.0	
	398nm,0.2s						
KUR				A	A	15 00 14.0	
	277nm,0.2s						
GLVR	**Golovnino**	**1.31**	**249**	*e*P	**Pn**	**14 59 55.0**	**+0.1**
GLVR				AMB	AMB	14 59 56.0	
	376nm,0.5s						
GLVR				*e*S	**Sn**	**15 00 15.0**	**-0.2**
GLVR				A	A	15 00 16.0	
	148nm,0.3s						
GLVR				A	A	15 00 16.0	
	319nm,0.3s						
NEM2	**Nemuro 2**	**1.36**	**232**	P	**Pn**	**14 59 56.4**	**+1.0**
NEM2				*e*S	**Sn**	**15 00 15.6**	**-0.6**
NMR	**Nemuro--Hokkai**	**1.37**	**232**	*i* P	**Pn**	**14 59 56.0**	**+0.5**
NMR				*i* S	**Sn**	**15 00 15.0**	**-1.3**
JRA	**Rausu**	**1.53**	**260**	P	**Pn**	**14 59 59.9**	**+2.7**
JKHN	**Kushirohamanak**	**1.87**	**233**	P	**Pn**	**15 00 02.3**	**+1.2**
JNK	**Nakash**	**1.91**	**252**	P	**Pn**	**15 00 02.8**	**+1.2**
JAK	**Akkeshi**	**2.20**	**237**	P	**Pn**	**15 00 06.0**	**+1.0**
JAK				*e*S	**Sn**	**15 00 32.4**	**-0.9**
JAR	**Ashorobuto**	**2.66**	**251**	P	**Pn**	**15 00 12.6**	**+1.8**
JOB	**Onbets**	**2.78**	**243**	P	**Pn**	**15 00 13.9**	**+1.5**
JOB				*e*S	**Sn**	**15 00 46.3**	**0.0**
JCH	**Churui**	**3.23**	**242**	P	**Pn**	**15 00 19.2**	**+1.1**
JCH				*e*S	**Sn**	**15 00 56.0**	**-0.6**
ASAJ	**Asahikawa**	**3.32**	**270**	P	**Pn**	**15 00 20.3**	**+1.0**
	1.7nm,0.3s,baz=100,slow=9.7,SNR=25						
JFR	**Furan**	**3.51**	**254**	P	**Pn**	**15 00 24.8**	**+3.0**
JNBK	**Urakawa-nobuka**	**3.79**	**241**	P	**Pn**	**15 00 25.7**	**+0.3**
USRK	**Ussuriysk Ar.**	**10.93**	**275**	P	**Pn**	**15 02 00.1**	**-0.5**
	baz=95,slow=15,SNR=3.3						
SONM	**Songino Array**	**28.34**	**292**	P	**P**	**15 05 09.0**	**0.0**
	0.3nm,0.3s,baz=313,slow=46,SNR=2.9						
ILAR	**Eielson Array**	**41.09**	**37**	P	**P**	**15 06 59.7**	**+1.9**
	0.5nm,0.9s,baz=270,slow=8.0,SNR=4.9						
MKAR	**Makanchi Array**	**44.41**	**297**	P	**P**	**15 07 24.8**	**-0.1**
	0.8nm,0.7s,baz=74,slow=8.9,SNR=8.8						
INK	**Inuvik**	**45.98**	**31**	P	**P**	**15 07 38.3**	**+1.4**
	1.0nm,0.3s,baz=275,slow=6.1,SNR=13						
ARCES	**ARCESS Array B**	**58.83**	**340**	P	**P**	**15 09 09.7**	**-1.8**
	1.8nm,0.9s,baz=46,slow=7.7,SNR=1.2						
FINES	**FINESS Array B**	**64.48**	**333**	P	**P**	**15 09 48.2**	**-1.2**
	1.2nm,0.5s,baz=40,slow=7.8,SNR=16						
NOA	**NORSAR Array B**	**69.19**	**339**	P	**P**	**15 10 18.1**	**-1.2**
	0.3nm,0.6s,baz=42,slow=7.7,SNR=4.4						
AKASG	**Malin Array Be**	**71.23**	**324**	P	**P**	**15 10 31.8**	**0.0**
	1.0nm,0.4s,baz=42,slow=6.7,SNR=3.7						

WEL 15 15:04:08.6, 41°S±3°×17°3E±°, h233km±5km, M2.8/13, MLv2.8/13, Error ellipse: s-maj=0.0km s-min=0.0km az=105.9, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**0.39**	**359**	P	Pn	15 04 39.0	-0.3
QRZ				S	S	15 05 01.3	-1.9
THZ	**Tophouse**	**0.61**	**153**	P	Pn	15 04 40.2	+0.3
THZ				S	S	15 05 02.1	-2.6
NNZ	**Nelson**	**0.64**	**91**	P	Pn	15 04 39.8	-0.1
NNZ				S	S	15 05 03.5	-1.1
DSZ	**Denniston Nort**	**0.76**	**226**	P	Pn	15 04 40.3	-0.3
DSZ				S	S	15 05 03.1	-2.6
TUWZ	**Tuamarina**	**1.08**	**102**	P	Pn	15 04 42.5	+0.2
TUWZ				S	S	15 05 07.0	-1.6
BSWZ	**Blackbirch Sta**	**1.12**	**117**	P	Pn	15 04 42.8	+0.2
BSWZ				S	S	15 05 08.6	-0.5
DUWZ	**D'Urville Isla**	**1.13**	**69**	P	Pn	15 04 42.5	-0.1
DUWZ				S	S	15 05 08.3	-0.9
TCW	**Tory Channel**	**1.31**	**90**	P	Pn	15 04 44.0	+0.1
TCW				S	S	15 05 09.4	-2.1
KHZ	**Kahutara**	**1.42**	**148**	P	Pn	15 04 44.6	+0.1
KHZ				S	S	15 05 10.9	-1.9
LTZ	**Lake Taylor**	**1.58**	**187**	P	Pn	15 04 46.0	+0.1
LTZ				S	S	15 05 12.3	-3.0
WEL	**Wellington**	**1.69**	**93**	P	Pn	15 04 46.8	0.0
INZ	**Inchbonnie**	**1.71**	**208**	P	Pn	15 04 46.8	-0.2
INZ				S	S	15 05 14.4	-2.8
BHW	**Baring Head**	**1.77**	**97**	P	Pn	15 04 47.4	-0.1
GVZ	**Greta Valley S**	**1.79**	**168**	P	Pn	15 04 47.8	+0.1
KIW	**Kapiti Island**	**1.83**	**80**	P	Pn	15 04 48.1	0.0
KIW				S	S	15 05 17.0	-2.0
CAW	**Cannon Point**	**1.91**	**88**	P	Pn	15 04 48.8	-0.1
CAW				S	S	15 05 17.7	-2.6
OGWZ	**Otaki Gorge**	**2.03**	**80**	P	Pn	15 04 50.1	+0.1
MSWZ	**Moikau Station**	**2.05**	**97**	P	Pn	15 04 50.2	0.0
MSWZ				S	S	15 05 21.7	-1.0
PLWZ	**Palliser**	**2.08**	**101**	P	Pn	15 04 50.5	0.0
PLWZ				S	S	15 05 21.5	-1.6
MTW	**Mount Morrison**	**2.24**	**90**	P	Pn	15 04 52.0	0.0
MTW				S	S	15 05 23.5	-2.4
NEZ	**North Egmont**	**2.28**	**32**	S	S	15 05 25.0	-1.9
WVZ	**Waitaha Valley**	**2.29**	**215**	P	Pn	15 04 52.0	-0.4
WVZ				S	S	15 05 23.5	-3.4
MRZ	**Mangatainoka R**	**2.37**	**78**	P	Pn	15 04 53.1	-0.2
MRZ				S	S	15 05 26.0	-2.3
DREZ	**Durham Road**	**2.39**	**33**	S	S	15 05 27.8	-0.9
TMWZ	**Te Maipa**	**2.54**	**89**	P	Pn	15 04 55.4	+0.4
TIWZ	**Tintock**	**2.57**	**81**	P	Pn	15 04 55.8	+0.3
PRWZ	**Pori Road**	**2.69**	**77**	P	Pn	15 04 57.0	+0.3
PRWZ				S	S	15 05 34.6	+0.3
RPZ	**Rata Peaks**	**2.73**	**203**	P	Pn	15 04 55.8	-1.2
BFZ	**Birch Farm**	**2.86**	**81**	P	Pn	15 04 58.5	0.0
ARCZ	**Arundel**	**2.91**	**200**	P	Pn	15 04 58.6	-0.4
FOZ	**Fox Glacier**	**3.07**	**220**	P	Pn	15 04 59.9	-0.8
LBZ	**Lake Benmore**	**3.61**	**208**	P	Pn	15 05 06.2	-0.8
JCZ	**Jackson Bay**	**3.98**	**223**	P	Pn	15 05 10.8	-0.6
JCZ				S	S	15 05 56.3	-4.7

IDC ***15*** *15:04:27.6±0.9, 1°.88N×126°.37E, h0km, mb4.1/7, mb1 4.2/8, mb1mx3.8/36, mbtmp4.1/8, ML3.8/1, Error ellipse: s-maj=98.6km s-min=15.8km az=71.0*
NEIC ***15*** *15:04:32.5±2.6, 1°.86N±0°.10×126°.49E±0°.09, h35km±2km, mb4.3/18, Error ellipse: s-maj=19.9km s-min=10.5km az=40.0*
DJA ***15*** *15:04:32.7±1.7, 2°N±3°×12°6E±°, h13km±15km, M4.0/12, mb4.6/3, mb4.2/7, MLv4.0/12, Mw(mB)3.8/3*
MAN ***15*** *15:04:34.0, 3°.05N×127°.33E, h327km, mb5.0, ML3.9, MS3.9*

ISC 15 15:04:33.7±0.6, 1°.85N±0°.05×126°.45E±0°.09, h47km, n50, σ1$45/53, mb4.2/14, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**139**	P	**Pn**	**15 04 57.8**	**+0.9**
TNTI	**Ternate**	**1.40**	**139**	Pn	**Pn**	**15 04 57.9**	**+0.9**
SGSI	**Sangihe**	**2.05**	**333**	P	**Pn**	**15 05 06.0**	**+0.2**
KMSI	**Cibinong**	**2.78**	**243**	P	**Pn**	**15 05 16.0**	**+0.3**
GTOI	**Gorontalo**	**3.65**	**251**	P	**Pn**	**15 05 28.1**	**+0.4**
DDMP	**Don Marcelino,**	**4.29**	**350**	*e*P	**Pn**	**15 05 36.7**	**+0.1**
DDMP				*e*S	**Sn**	**15 06 25.9**	**+0.5**
LUWI	**Luwuk**	**4.67**	**232**	P	**Pn**	**15 05 42.1**	**+0.4**
LUWI	**Luwuk**	**4.67**	**232**	Pn	**Pn**	**15 05 43.1**	**+1.4**
MRSI	**Marisa**	**4.71**	**253**	P	**Pn**	**15 05 42.8**	**+0.5**
SKMP	**Bagumbayan, Su**	**5.02**	**338**	*e*P	**Pn**	**15 05 46.6**	**+0.1**
SKMP				*e*S	**Sn**	**15 06 43.6**	**+0.3**
NLAI	**Namlea**	**5.09**	**173**	P	**Pn**	**15 05 49.0**	**+1.5**
	0.1nm1µm16nm,0.6s						
KCP	**Kidapawan**	**5.31**	**345**	*e*P	Pn	15 05 57.7	+7.2
KCP				*i* S	**Sn**	**15 06 54.3**	**+3.8**
APSI	**Ampana**	**5.53**	**240**	P	**Pn**	**15 05 53.7**	**+0.1**
	0.2nm447nm54nm,0.8s						
BUKP	**Musuan**	**6.15**	**347**	*e*P	Pn	15 05 56.2	-6.0
PAGZ	**Pagadian**	**6.70**	**333**	*e*P	**Pn**	**15 06 07.7**	**-2.0**
PAGZ				*e*S	**Sn**	**15 07 20.1**	**-4.7**
MPSI	**Mapaga**	**6.72**	**257**	P	**Pn**	**15 06 10.5**	**+0.6**
	0.0nm9.5nm,0.7s						
FAKI	**Fak Fak**	**7.48**	**129**	Pn	**Pn**	**15 06 19.4**	**-1.0**
TTSI	**Tana Toraja**	**8.22**	**234**	P	**Pn**	**15 06 30.6**	**+0.1**
	20nm,1.0s						
MYLDM	**Lahad Datu**	**8.60**	**293**	Pn	**Pn**	**15 06 38.5**	**+2.8**
BNSI	**Bone**	**8.87**	**226**	P	**Pn**	**15 06 39.5**	**+0.1**
	11nm,0.8s						
BKSI	**Bulukumba**	**9.52**	**222**	P	**Pn**	**15 06 48.9**	**+0.6**
KKM	**Kota Kinabalu**	**11.03**	**293**	Pn	**Pn**	**15 07 12.1**	**+3.0**
MTN	**Manton Dam**	**15.31**	**162**	Pn	**Pn**	**15 08 04.9**	**-2.0**
MTN				IAmb	IAmb	15 08 23.1	
	comp=Z,14nm,1.4s						
KNRA	**Kununurra**	**17.56**	**173**	Pn	**Pn**	**15 08 31.6**	**-3.6**
FITZ	**Fitzroy Crossi**	**19.83**	**182**	P	**P**	**15 08 60.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=6.7,slow=11,SNR=8.8						
FITZ	**Fitzroy Crossi**	**19.83**	**182**	P	**P**	**15 08 59.8**	**-1.0**
TPUB	**Ta-pu**	**22.06**	**346**	P	**P**	**15 09 23.1**	**-1.7**
TPUB				IAmb	IAmb	15 09 32.4	
	comp=Z,30nm,1.3s						
WB0	**Warramunga Arr**	**22.85**	**160**	P	**P**	**15 09 33.1**	**-0.1**
WRAB	**Tennant Creek**	**22.99**	**161**	P	**P**	**15 09 33.7**	**-0.9**
WRAB				IAmb	IAmb	15 09 37.3	
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**22.99**	**161**	P	**P**	**15 09 34.2**	**-0.5**
	comp=Z,5.9nm,0.5s,baz=334,slow=11,SNR=79						
WRA	**Warramunga Arr**	**22.99**	**161**	P	**P**	**15 09 33.4**	**-1.2**
WB2	**Warramunga Arr**	**23.00**	**161**	P	**P**	**15 09 34.5**	**-0.2**
WB2				IAmb	IAmb	15 09 37.4	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	**23.08**	**160**	P	**P**	**15 09 34.4**	**-1.1**
WR0				IAmb	IAmb	15 09 36.4	
	comp=Z,4.3nm,0.8s						
PSA00	**Pilbara Seismi**	**24.16**	**195**	P	**P**	**15 09 44.2**	**-1.4**
PSA00	**Pilbara Seismi**	**24.16**	**195**	P	**P**	**15 09 44.0**	**-1.6**
PSA00				IAmb	IAmb	15 09 44.5	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**26.37**	**164**	P	**P**	**15 10 06.7**	**+0.9**
ASAR	**Alice Springs**	**26.38**	**164**	P	**P**	**15 10 06.5**	**+0.7**
	comp=Z,2.3nm,0.5s,baz=345,slow=8.0,SNR=120						
ASAR				PcP	**PcP**	**15 13 32.6**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=356,slow=1.9,SNR=2.2						
FORT	**Forrest**	**32.48**	**177**	P	**P**	**15 10 59.0**	**-0.9**
BBOO	**Buckleboo**	**35.65**	**166**	P	**P**	**15 11 28.1**	**+0.8**
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**15 11 35.0**	**+0.5**
	comp=Z,2.8nm,0.6s,baz=332,slow=11,SNR=8.4						
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**15 11 35.1**	**+0.6**
SONM	**Songino Array**	**48.99**	**342**	P	**P**	**15 13 16.2**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=169,slow=8.9,SNR=4.7						
MK31	**Makanchi Array**	**58.95**	**326**	P	**P**	**15 14 27.9**	**-0.5**
MK31				IAmb	IAmb	15 14 34.6	
	comp=Z,1.5nm,0.8s						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**15 14 28.2**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=123,slow=8.2,SNR=17						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**15 14 29.4**	**+1.0**
MAKZ	**Makanchi**	**59.13**	**326**	P	**P**	**15 14 30.0**	**+0.4**
MAKZ				IAmb	IAmb	15 14 35.8	
	comp=Z,5.0nm,1.4s						
KURK	**Kurchatov**	**63.18**	**328**	P	**P**	**15 14 56.9**	**-0.1**
NRIK	**Noril'sk**	**72.18**	**346**	P	**P**	**15 15 52.8**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=78,slow=6.7,SNR=5.7						
VNDA	**Vanda**	**81.60**	**173**	P	**P**	**15 16 47.3**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=316,slow=7.3,SNR=11						
TORD	**Torodi Ar. Bea**	**123.22**	**287**	PKP	**PKPdf**	**15 23 27.1**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=69,slow=1.2,SNR=2.6						

DJA ***15*** *15:14:27.5±1.2, 2°N±6°×12°7E±°, h11km±18km, M3.0/6, MLv3.0/6*

IDC 15 15:14:22.7±2.5, 1°.94N×126°.50E, h0km, mb3.0/3, mb1 3.3/3, mb1mx3.1/32, mbtmp3.1/3, MS2.4/1, Ms1 2.6/1, ms1mx2.3/10, Error ellipse: s-maj=213.3km s-min=29.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.44**	**143**	P	Pb	15 14 50.7	+0.2
KMSI	**Cibinong**	**2.86**	**242**	P	Pb	15 15 13.4	-1.3
WRA	**Warramunga Arr**	**23.06**	**161**	P	P	15 19 29.0	-1.1
	0.2nm,0.5s,baz=339,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**26.45**	**165**	P	P	15 20 02.6	+1.0
	0.2nm,0.7s,baz=344,slow=9.3,SNR=2.0						
CMAR	**Chiang Mai Arr**	**31.62**	**303**	LR	LR	15 33 40.6	
	comp=Z,6.8nm,19.8s,baz=150,slow=37						
MKAR	**Makanchi Array**	**58.90**	**326**	P	P	15 24 23.5	-0.1
	0.1nm,0.3s,baz=118,slow=7.0,SNR=2.0						

EAF 15 15:19:38.9±1.7, 27°.10S×29°.28E, h10km, MD3.9, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POGA	**Pongola**	**2.18**	**97**	*i* P	Pn	15 20 13.9	-1.3
POGA				*i* S	Sn	15 20 41.9	-0.4
POGA	**Pongola**	**2.18**	**97**	*i* P	Pn	15 20 13.9	-1.3
POGA				*i* S	Sn	15 20 41.9	-0.4
BOSA	**Boshof**	**3.87**	**246**	*i* P	Pn	15 20 37.9	-0.6
BOSA				*i* S	Sn	15 21 22.3	-1.8
BOSA	**Boshof**	**3.87**	**246**	*i* P	Pn	15 20 37.9	-0.6
BOSA				*i* S	Sn	15 21 22.3	-1.8
LBTB	**Lobatse**	**3.91**	**301**	*i* P	Pn	15 20 36.9	-2.2
LBTB				*i* S	Sn	15 21 22.6	-2.6
LBTB	**Lobatse**	**3.91**	**301**	*i* P	Pn	15 20 36.9	-2.2
LBTB				*i* S	Sn	15 21 22.6	-2.6
BLWY	**Bulawayo**	**6.96**	**355**	*i* P	Pn	15 21 19.8	-1.3
BLWY				*i* S	Sn	15 22 34.7	-5.7
BLWY	**Bulawayo**	**6.96**	**355**	*i* P	Pn	15 21 19.8	-1.3
BLWY				*i* S	Sn	15 22 34.7	-5.7

IDC ***15*** *15:20:12.1±2.1, 1°.74N×126°.47E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/34, mbtmp3.4/3, Error ellipse: s-maj=172.1km s-min=26.5km az=66.0*
DJA ***15*** *15:20:16.4±1.7, 2°N±5°×12°6E±°, h34km±31km, M3.2/6, MLv3.2/6*

ISC 15 15:20:13.3±1.1, 1°.8N±0°.3×126°.5E±0°.5, h10km, n5, σ1$12/5, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**139**	P	**Pb**	**15 20 38.5**	**+0.1**
SGSI	**Sangihe**	**2.12**	**333**	P	**Pn**	**15 20 48.4**	**-0.4**
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**15 25 16.5**	**-1.2**
	0.8nm,0.5s,baz=339,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.30**	**165**	P	**P**	**15 25 50.1**	**+0.8**
	0.3nm,0.7s,baz=347,slow=7.8,SNR=9.9						
MKAR	**Makanchi Array**	**59.02**	**326**	P	**P**	**15 30 13.9**	**+0.5**
	0.2nm,0.4s,baz=121,slow=8.1,SNR=4.0						

WEL 15 15:20:24.0, 42°S±2°×17°3E±°, h20km±4km, M2.8/18, ML2.9/19, MLv2.8/18, Error ellipse: s-maj=0.0km s-min=0.0km az=63.9, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHZ	**Kahutara**	**0.35**	**112**	P	Pb	15 20 31.6	+0.3
THZ	**Tophouse**	**0.55**	**344**	P	Pb	15 20 35.1	+0.1
GVZ	**Greta Valley S**	**0.68**	**184**	P	Pn	15 20 38.4	-0.1
LTZ	**Lake Taylor**	**0.79**	**231**	P	Pb	15 20 38.8	-0.2
BSWZ	**Blackbirch Sta**	**0.81**	**45**	P	Pn	15 20 40.4	+0.1
AMCZ	**Amberley**	**0.95**	**200**	P	Pn	15 20 43.6	+1.5
CMWZ	**Cape Campbell**	**0.99**	**57**	P	Pn	15 20 43.6	+1.0
TUWZ	**Tuamarina**	**1.06**	**36**	P	Pn	15 20 44.5	+0.9
NNZ	**Nelson**	**1.09**	**11**	P	Pb	15 20 44.2	+0.1
DSZ	**Denniston Nort**	**1.11**	**299**	P	Pb	15 20 46.1	+1.6
OXZ	**Oxford**	**1.30**	**217**	P	Pb	15 20 47.7	0.0
INZ	**Inchbonnie**	**1.30**	**250**	P	Pb	15 20 48.6	+0.9
TCW	**Tory Channel**	**1.39**	**40**	P	Pb	15 20 49.6	+0.4
OKCZ	**Okains Bay**	**1.43**	**181**	P	Pb	15 20 50.4	+0.4
MQZ	**McQueen's Vall**	**1.45**	**193**	P	Pb	15 20 49.4	+0.3
QRZ	**Quartz Range**	**1.52**	**343**	P	Pb	15 20 52.7	+1.2
AKCZ	**Akaroa Harbour**	**1.59**	**185**	P	Pn	15 20 51.5	+0.6
RACZ	**Rakaia**	**1.60**	**206**	P	Pn	15 20 51.9	+0.8
DUWZ	**D'Urville Isla**	**1.61**	**23**	P	Pb	15 20 53.3	+0.3
MHCZ	**Mount Hutt**	**1.68**	**222**	P	Pn	15 20 52.9	+0.7
CAW	**Cannon Point**	**1.89**	**52**	P	Pb	15 20 56.6	-1.0
WACZ	**Wakanui South**	**1.90**	**209**	P	Pn	15 20 55.9	+0.8
RPZ	**Rata Peaks**	**2.07**	**226**	P	Pn	15 20 58.4	+0.8
OGWZ	**Otaki Gorge**	**2.14**	**47**	P	Pb	15 21 00.4	-1.6
ARCZ	**Arundel**	**2.18**	**220**	P	Pn	15 20 59.9	+0.9
DVHZ	**Dannevirke**	**3.04**	**50**	P	Pn	15 21 11.8	+0.8

IDC ***15*** *15:29:05.8±2.7, 24°.65S×179°.79E, h487km±27km, mb3.4/8, mb1 3.6/10, mb1mx3.2/41, mbtmp4.3/10, Error ellipse: s-maj=27.2km s-min=18.9km az=41.0*

ISC 15 15:29:06.7±1.0, 24°.8S±0°.1×179°.8E±0°.1, h500km, n15, σ0$91/16, mb3.8/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.54**	**280**	P	**P**	**15 31 52.1**	**+0.9**
	0.5nm,0.3s,baz=87,slow=15,SNR=5.9						
URZ	**Urewera**	**13.64**	**189**	P	**P**	**15 32 01.5**	**-0.9**
	2.2nm,0.3s,baz=50,slow=1.9,SNR=14						
CTA	**Charters Tower**	**31

DDMP				*e*S	**Sg**	**15 44 24.8**	**-1.1**
SGSI	**Sangihe**	**2.00 229**		P	**Pn**	**15 44 05.2**	**+0.1**
MATI	**Mati**	**2.06 338**		*e*P	**Pb**	**15 44 07.2**	**-1.6**
KCP	**Kidapawan**	**2.76 316**	⇑	*e*P	**Pg**	**15 44 23.4**	**-0.8**
KCP				*i* S	**Sg**	**15 44 58.7**	**-1.4**
SKMP	**Bagumbayan, Su**	**2.89 301**		*e*P	**Pb**	**15 44 21.9**	**-1.0**
SKMP				*e*S	**Sb**	**15 44 58.5**	**+0.1**
BUKP	**Musuan**	**3.45 326**		*e*P	**Pb**	**15 44 32.4**	**-0.1**
BUKP				*e*S	**Sg**	**15 45 20.9**	**-1.3**
TNTI	**Ternate**	**4.23 175**		P	**Pn**	**15 44 35.7**	**-0.2**
GTOI	**Gorontalo**	**5.92 223**		P	**Pn**	**15 44 59.5**	**+0.4**
	0.0nm8.7nm,0.9s						
SIJI	**Sorong**	**7.22 144**		Pn	**Pn**	**15 45 16.7**	**-0.3**
	1.1nm,0.3s,baz=326,slow=15,SNR=6.8						
SIJI				Sn	**Sn**	**15 46 36.1**	**-3.0**
	0.2nm,0.3s,baz=264,slow=23,SNR=1.2						
LUWI	**Luwuk**	**7.37 215**		P	**Pn**	**15 45 18.1**	**-0.9**
FITZ	**Fitzroy Crossi**	**23.01 183**		P	**P**	**15 48 36.7**	**+0.2**
	0.7nm,0.5s,baz=0.9,slow=7.9,SNR=6.1						
WRA	**Warramunga Arr**	**25.82 164**		P	**P**	**15 49 01.7**	**-1.3**
	1.1nm,0.5s,baz=344,slow=10,SNR=13						
ASAR	**Alice Springs**	**29.29 167**		P	**P**	**15 49 35.2**	**+1.2**
	0.3nm,0.4s,baz=350,slow=7.2,SNR=19						
SONM	**Songino Array**	**46.18 341**		P	**P**	**15 51 59.4**	**+3.0**
	0.7nm,0.5s,baz=155,slow=7.5,SNR=7.8						
MKAR	**Makanchi Array**	**56.68 325**		P	**P**	**15 53 16.1**	**+1.1**
	0.5nm,0.4s,baz=116,slow=7.4,SNR=9.3						

IDC ***15*** *15:47:18.0±2.7,2.85N×97.29E,h0km,mb3.8/6,mb1 3.9/6, mb1mx3.5/45,mbtmp3.8/6,Error ellipse: s-maj=159.2km s-min=23.0km az=53.0*

NEIC ***15*** *15:47:27.6±2.8,2.83N±0.06×97.3E±0.1,h81km±8km, mb4.1/4,Error ellipse: s-maj=15.1km s-min=9.0km az=86.0*

DJA ***15*** *15:47:27.9±0.6,3.N±3.×97.E±,h23km±5km,M3.6/12, MLv3.6/12*

ISC 15 15:47:26.5±0.9,2.83N±0.06×97.39E±0.07,h60km,n28, σ1875/25,mb4.1/9,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPTI		**0.47**	**334**	P	**Pn**	**15 47 38.5**	**+0.3**
KCSI	**Kotacane, Aceh**	**0.79**	**29**	P	**Pn**	**15 47 42.4**	**+0.6**
TSI	**Tuntungan**	**1.35**	**60**	P	**Pn**	**15 47 50.8**	**+1.6**
GSI	**Gunungsitoli**	**1.53**	**173**	P	Pn	15 47 56.2	+4.6
GSI	**Gunungsitoli**	**1.53**	**173**		**Pn**	**15 47 53.4**	**+1.8**
RPSI	**Rantau Prapat**	**1.54**	**95**	Pn	**Pn**	**15 47 52.9**	**+1.2**
MLSI	**Meulaboh, Aceh**	**1.73**	**326**	P	**Pn**	**15 47 56.0**	**+1.7**
LHMI	**Lhok Sumawe**	**2.42**	**350**	P	**Pn**	**15 48 05.2**	**+1.5**
LHMI				S	**Sn**	**15 48 35.7**	**+3.5**
LHMI	**Lhok Sumawe**	**2.42**	**350**	Pn	**Pn**	**15 48 05.7**	**+2.0**
MNSI	**Mandailing Nat**	**2.98**	**133**	P	**Pn**	**15 48 13.4**	**+2.0**
BSI	**Banda Aceh**	**3.37**	**322**	P	**Pn**	**15 48 17.8**	**+1.1**
IPM	**Ipoh**	**3.98**	**66**	Pn	**Pn**	**15 48 26.2**	**+1.1**
KULM	**Kulim**	**4.07**	**53**	Pn	**Pn**	**15 48 27.2**	**+0.9**
H08S2	**Diego Garcia H**	**26.93**	**247**	T	T	16 19 51.3	
	baz=64						
H08S3	**Diego Garcia H**	**26.93**	**247**	T	T	16 20 18.1	
	baz=64						
H08S1	**Diego Garcia H**	**26.95**	**247**	T	T	16 19 46.8	
	baz=64						
WB0	**Warramunga Arr**	**42.72**	**123**	P	**P**	**15 55 13.9**	**-4.2**
WB0				IAmb	IAmb	15 55 23.1	
	comp=Z,6.1nm,1.4s						
WRA	**Warramunga Arr**	**42.76**	**124**	P	**P**	**15 55 18.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=303,slow=9.3,SNR=5.3						
WRA	**Warramunga Arr**	**42.76**	**124**	P	**P**	**15 55 18.1**	**-0.3**
WB2	**Warramunga Arr**	**42.77**	**124**	P	**P**	**15 55 18.2**	**-0.2**
WB2				IAmb	IAmb	15 55 34.0	
	comp=Z,4.7nm,1.2s						
AS31	**Alice Springs**	**44.24**	**129**	P	**P**	**15 55 30.1**	**-0.2**
AS31				IAmb	IAmb	15 55 40.7	
	comp=Z,0.6nm,1.1s						
ASAR	**Alice Springs**	**44.24**	**129**	P	**P**	**15 55 30.3**	**0.0**
	comp=Z,0.1nm,0.5s,baz=299,slow=7.7,SNR=1.2						
ASAR	**Alice Springs**	**44.24**	**129**	P	**P**	**15 55 30.1**	**-0.2**
MKAR	**Makanchi Array**	**45.72**	**346**	P	**P**	**15 55 40.5**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=160,slow=8.6,SNR=4.8						
MKAR	**Makanchi Array**	**45.72**	**346**	P	**P**	**15 55 38.3**	**-3.4**
ZALV	**Zalesovo Beam**	**51.99**	**351**	P	**P**	**15 56 28.6**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=172,slow=7.6,SNR=5.8						
FINES	**FINESS Array B**	**78.65**	**332**	P	**P**	**15 59 21.5**	**-0.4**
	comp=Z,3.8nm,1.0s,baz=75,slow=5.9,SNR=4.4						
ARCES	**ARCESS Array B**	**81.07**	**340**	P	**P**	**15 59 34.5**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=94,slow=8.2,SNR=4.7						

JMA ***15*** *15:56:36.6±0.1,23.66N×121.51E,h0km,M3.1*

TAP ***15*** *15:56:38.0,23.70N×121.43E,h12km,ML3.7,C*

ISC 15 15:56:38.0±0.8,23.68N±0.01×121.48E±0.02,h13km±4km, n131,σ0984/227,9C-18D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGFH	**Guangfu**	**0.04**	**257**	⇑ *i*P	**Pg**	**15 56 40.3**	**-0.1**
	baz=188						
EGFH				*i* S	**Sg**	**15 56 41.9**	**-0.3**
	baz=188						
ESL	**Shilin**	**0.14**	**344**	⇓ *i*P	**Pg**	**15 56 41.3**	**-0.3**
	baz=5.0						
ESL				*i* S	**Sg**	**15 56 43.2**	**-0.8**
	baz=5.0						
HGSD	**Ruisui**	**0.19**	**194**	⇑ *i*P	**Pg**	**15 56 43.0**	**+0.7**
	baz=189						
HGSD				*e*S	**Sg**	**15 56 46.8**	**+1.5**
	baz=189						
EHY	**Hungye**	**0.22**	**219**	⇑ *i*P	**Pg**	**15 56 42.5**	**-0.4**
	baz=212						
EHY				*e*S	**Sg**	**15 56 45.5**	**-0.6**
	baz=212						
HWA	**Hwalien**	**0.32**	**22**	*e*P	**Pb**	**15 56 45.6**	**+0.1**
	baz=23						
HWA				*e*S	**Sg**	**15 56 49.3**	**+0.4**
	baz=23						
YULB	**Yu-li**	**0.33**	**210**	⇑ *i*P	**Pg**	**15 56 44.4**	**-0.3**
	baz=202						
YULB				*e*S	**Sg**	**15 56 48.4**	**-0.8**
	baz=202						
EYUL	**Yuli**	**0.36**	**203**	⇑ *i*P	**Pb**	**15 56 45.4**	**-0.9**
	baz=203						
EYUL				*e*S	**Sb**	**15 56 50.6**	**-1.2**
	baz=203						
TWF1	**Yuli**	**0.36**	**207**	⇑ *i*P	**Pg**	**15 56 45.2**	**-0.1**
	baz=205						
TWF1				*e*S	**Sg**	**15 56 50.2**	**-0.1**
	baz=205						
OWD	**Renai**	**0.39**	**315**	⇓ *i*P	**Pg**	**15 56 45.4**	**-0.4**
	baz=319						
OWD				*e*S	**Sg**	**15 56 49.8**	**-1.4**
	baz=319						
TWD	**Chiawan**	**0.41**	**15**	⇓ *i*P	**Pb**	**15 56 46.5**	**-0.7**
	baz=17						
TWD				*e*S	**Sg**	**15 56 51.5**	**-0.3**
	baz=17						
CHGB	**Renai**	**0.47**	**324**	⇓ *i*P	**Pg**	**15 56 47.1**	**-0.2**
	baz=335						
CHGB				*e*S	**Sg**	**15 56 52.0**	**-1.7**
	baz=335						
SSLB	**Suanglung**	**0.49**	**283**	⇓ *i*P	**Pg**	**15 56 47.1**	**-0.6**
	baz=282						
SSLB				S	**Sg**	**15 56 52.6**	**-1.6**
	baz=282						
WHF	**Hehuan Shan**	**0.50**	**338**	⇓ *i*P	**Pg**	**15 56 47.5**	**-0.5**
	baz=344						
WHF				*e*S	**Sg**	**15 56 54.0**	**-0.9**
	baz=344						
NACB	**Ninganchiao**	**0.51**	**13**	P	**Pg**	**15 56 47.6**	**-0.3**
	baz=19						
NACB				*e*S	**Sg**	**15 56 53.8**	**-0.9**
	baz=19						
FULB	**Fuli**	**0.51**	**199**	*e*P	**Pb**	**15 56 48.8**	**0.0**
	baz=205						
FULB				*e*S	**Sb**	**15 56 56.8**	**+0.8**
	baz=205						
ETLH	**Xiulin Townshi**	**0.53**	**1**	⇓ *i*P	**Pg**	**15 56 48.0**	**-0.3**
	baz=7.0						
ETLH				*e*S	**Sg**	**15 56 54.8**	**-0.6**
	baz=7.0						
SMLT	**Sun Moon Lake**	**0.56**	**291**	⇓ *i*P	**Pg**	**15 56 48.6**	**-0.5**
	baz=291						
SMLT				S	**Sg**	**15 56 55.5**	**-1.1**
	baz=291						
WHYT	**Xinyi Township**	**0.57**	**272**	P	**Pb**	**15 56 49.0**	**-0.8**
	baz=270						
WHYT				*e*S	**Sg**	**15 56 55.8**	**-1.0**
	baz=270						
CHKT	**Chengkung**	**0.58**	**190**	*e*P	**Pb**	**15 56 50.0**	**-0.1**
	baz=172						
CHKT				*e*S	**Sn**	**15 57 00.9**	**-0.6**
	baz=172						
FUSS	**Fushou**	**0.60**	**340**	⇓ *i*P	**Pg**	**15 56 49.7**	**-0.2**
	baz=349						
FUSS				S	**Sg**	**15 56 57.5**	**-0.5**
	baz=349						
TYC	**Yuchr**	**0.61**	**292**	⇓ *i*P	**Pg**	**15 56 49.3**	**-0.6**
	baz=300						
TYC				*e*S	**Sg**	**15 56 56.9**	**-1.1**
	baz=300						
DPDB	**Guoxing**	**0.61**	**305**	⇓ *i*P	**Pb**	**15 56 49.8**	**-0.8**
	baz=317						
DPDB				*e*S	**Sg**	**15 56 57.6**	**-0.6**
	baz=317						
TWT	**Tachien**	**0.63**	**335**	⇓ *i*P	**Pb**	**15 56 50.4**	**-0.7**
	baz=337						
TWT				S	**Sg**	**15 56 58.1**	**-0.8**
	baz=337						
ALS	**Alishan**	**0.64**	**255**	*i* P	**Pb**	**15 56 50.5**	**-0.6**
	baz=251						
ALS				S	**Sg**	**15 56 58.1**	**-0.9**
	baz=251						
TDCB	**Techi**	**0.64**	**333**	⇓ *i*P	**Pb**	**15 56 50.4**	**-0.8**
	baz=337						
TDCB				*e*S	**Sg**	**15 56 57.2**	**-1.9**
	baz=337						
ELDTW	**Lidau**	**0.64**	**221**	⇑ *i*P	**Pg**	**15 56 49.7**	**-0.9**
	baz=208						
ELDTW				*e*S	**Sg**	**15 56 58.1**	**-1.0**
	baz=208						
WJS	**Zhushan**	**0.70**	**282**	*e*P	**Pb**	**15 56 52.0**	**0.0**
	baz=281						
WJS				*e*S	**Sb**	**15 57 02.2**	**+0.6**
	baz=281						
EDH	**Donghe**	**0.72**	**193**	P	**Pb**	**15 56 52.3**	**-0.1**
	baz=190						
EDH				S	**Sb**	**15 57 03.2**	**+1.0**
	baz=190						
CHN5	**Tsauling**	**0.73**	**264**	⇓ *i*P	**Pb**	**15 56 52.5**	**-0.2**
	baz=253						
CHN5				*e*S	**Sb**	**15 57 02.1**	**-0.6**
	baz=253						
NNSB	**Datong**	**0.75**	**354**	⇓ *i*P	**Pg**	**15 56 52.3**	**-0.3**
	baz=6.0						
NNSB				*e*S	**Sg**	**15 57 01.6**	**-0.9**
	baz=6.0						
NNSH	**Datong**	**0.75**	**354**	*i* P	**Pb**	**15 56 52.4**	**-0.6**
	baz=2.0						
NNSH				*e*S	**Sg**	**15 57 01.7**	**-0.8**
	baz=2.0						
WNT	**Mingjian**	**0.75**	**285**	*e*P	**Pb**	**15 56 53.2**	**+0.2**
	baz=287						
WNT				*e*S	**Sb**	**15 57 04.5**	**+1.4**
	baz=287						
NNS	**Nan Shan**	**0.76**	**353**	⇓ *i*P	**Pg**	**15 56 52.6**	**-0.3**
	baz=6.0						
NNS				*e*S	**Sg**	**15 57 02.4**	**-0.5**
	baz=6.0						
WHP	**Taichung City**	**0.77**	**321**	⇓ *i*P	**Pb**	**15 56 52.6**	**-0.7**
	baz=324						
WHP				*e*S	**Sb**	**15 57 03.3**	**-0.4**
	baz=324						
ENAH	**Nanao**	**0.83**	**22**	*e*P	**Pb**	**15 56 53.7**	**-0.5**
	baz=17						
ENAH				*e*S	**Sb**	**15 57 05.2**	**0.0**
	baz=17						
LONT	**Longtian**	**0.83**	**202**	*e*P	**Pb**	**15 56 54.3**	**0.0**
	baz=205						
LONT				*e*S	**Sb**	**15 57 05.7**	**+0.3**
	baz=205						
STYT	**Tauyuan**	**0.84**	**232**	*e*P	**Pb**	**15 56 54.0**	**-0.5**
	baz=224						
STYT				*e*S	**Sb**	**15 57 05.1**	**-0.5**
	baz=224						
WGK	**Gukeng**	**0.84**	**271**	*e*P	**Pb**	**15 56 54.9**	**+0.5**
	baz=269						
WGK				*e*S	**Sb**	**15 57 06.7**	**+1.2**
	baz=269						
WDLH	**Douliu**	**0.86**	**271**	*e*P	**Pb**	**15 56 55.2**	**+0.4**
	baz=269						
WDLH				*e*S	**Sb**	**15 57 07.2**	**+1.0**
	baz=269						
TPUB	**Ta-pu**	**0.86**	**244**	⇑ *i*P	**Pb**	**15 56 55.1**	**+0.2**
	baz=248						
TPUB				S	**Sb**	**15 57 05.9**	**-0.4**
	baz=248						
TCU	**Taichung**	**0.87**	**303**	*e*P	**Pn**	**15 56 55.7**	**-0.2**
	baz=308						
TCU				*e*S	**Sn**	**15 57 08.1**	**-0.3**
	baz=308						
WTP	**Ta-pu**	**0.90**	**242**	⇑ *i*P	**Pb**	**15 56 55.7**	**+0.2**
	baz=245						
WTP				*e*S	**Sb**	**15 57 07.2**	**-0.2**
	baz=245						
NDT	**Datong Townshi**	**0.92**	**2**	*e*P	**Pb**	**15 56 55.4**	**-0.5**
	baz=6.0						
NDT				*e*S	**Sg**	**15 57 07.2**	**-0.7**
	baz=6.0						
TWQ1	**Liyutan**	**0.93**	**316**	*e*P	**Pb**	**15 56 56.2**	**+0.3**
	baz=328						
TWQ1				*e*S	**Sb**	**15 57 08.9**	**+0.8**
	baz=328						
CHN2	**Minshiung**	**0.93**	**261**	*e*P	**Pn**	**15 56 56.7**	**0.0**
	baz=259						
CHN2				*e*S	**Sn**	**15 57 10.0**	**+0.1**
	baz=259						
WCHH	**Zhanghua**	**0.93**	**296**	*e*P	**Pn**	**15 56 56.8**	**0.0**
	baz=296						
WCHH				*e*S	**Sn**	**15 57 09.6**	**-0.3**
	baz=296						
TWG	**Pinlang**	**0.93**	**204**	*e*P	**Pb**	**15 56 55.7**	**-0.3**
	baz=199						
TWG				*e*S	**Sb**	**15 57 08.7**	**+0.5**
	baz=199						
TWGBT	**Beinan**	**0.93**	**203**	*e*P	**Pb**	**15 56 55.7**	**-0.3**
	baz=199						
TWGBT				*e*S	**Sb**	**15 57 08.9**	**+0.6**
	baz=199						
CHY	**Chiayi**	**0.98**	**260**	*e*P	**Pn**	**15 56 57.7**	**+0.3**
	baz=257						
CHY				*e*S	**Sn**	**15 57 11.6**	**+0.4**
	baz=257						
NSY	**Sanyi**	**0.98**	**319**	*e*P	**Pn**	**15 56 57.8**	**+0.3**
	baz=328						
NSY				*e*S	**Sn**	**15 57 11.6**	**+0.3**
	baz=328						
TWC	**Suao**	**0.99**	**20**	*e*P	**Pb**	**15 56 57.0**	**+0.1**
	baz=17						
TWC				*e*S	**Sb**	**15 57 10.5**	**+0.6**
	baz=17						
TWK	**Hsinying**	**0.99**	**246**	P	**Pn**	**15 56 57.5**	**-0.2**
	baz=242						
TWK				*e*S	**Sb**	**15 57 11.2**	**+1.0**
	baz=242						
WTK	**Tuku**	**1.00**	**271**	*e*P	**Pn**	**15 56 57.7**	**0.0**
	baz=269						
WTK				*e*S	**Sb**	**15 57 10.2**	**+0.1**
	baz=269						
CHN1	**Nanshi**	**1.00**	**241**	*e*P	**Pn**	**15 56 57.8**	**0.0**
	baz=250						
CHN1				*e*S	**Sb**	**15 57 11.1**	**+0.8**
	baz=250						
NSK	**Sanguang**	**1.00**	**354**	P	**Pb**	**15 56 57.0**	**-0.2**
	baz=358						
NSK				*e*S	**Sg**	**15 57 09.3**	**-1.0**
	baz=358						
LDUT	**Ludao**	**1.00**	**180**	*e*P	**Pg**	**15 56 55.8**	**-1.5**
	baz=168						
LDUT				*e*S	**Sg**	**15 57 10.0**	**-0.4**
	baz=168						
SNST	**Tainan City**	**1.01**	**243**	*e*P	**Pn**	**15 56 58.0**	**+0.2**
	baz=240						
SNST				*e*S	**Sb**	**15 57 10.8**	**+0.3**
	baz=240						
SGST	**Jiashian**	**1.01**	**234**	⇓ *i*P	**Pg**	**15 56 56.9**	**-0.6**
	baz=230						
SGST				*e*S	**Sb**	**15 57 10.6**	**0.0**
	baz=230						
WDJ	**Dajia District**	**1.01**	**311**	*e*P	**Pn**	**15 56 58.4**	**+0.5**
	baz=324						
WDJ				*e*S	**Sn**	**15 57 13.7**	**+1.6**
	baz=324						
SLGT	**Liugui**	**1.02**	**228**	*e*P	**Pb**	**15 56 57.8**	**+0.2**
	baz=220						
SLGT				*e*S	**Sb**	**15 57 10.8**	**-0.2**
	baz=220						
NSTT	**Nanjuang**	**1.04**	**336**	*e*P	**Pb**	**15 56 58.0**	**+0.1**
	baz=339						
NSTT				*e*S	**Sg**	**15 57 11.1**	**-0.6**
	baz=339						
RLNB	**Erlin**	**1.04**	**282**	*e*P	**Pn**	**15 56 58.2**	**-0.1**
	baz=281						
RLNB				*e*S	**Sn**	**15 57 13.3**	**+0.5**
	baz=281						
LIOB	**Emei**	**1.05**	**337**	P	**Pn**	**15 56 58.3**	**-0.1**
	baz=340						
LIOB				*e*S	**Sb**	**15 57 12.1**	**+0.4**
	baz=340						
TWE	**Neicheng**	**1.05**	**10**	P	**Pn**	**15 56 58.4**	**-0.1**
	baz=14						
TWE				*e*S	**Sb**	**15 57 12.2**	**+0.4**
	baz=14						
NMLH	**Miaoli**	**1.06**	**324**	*e*P	**Pn**	**15 56 59.3**	**+0.7**
	baz=334						
NMLH				*e*S	**Sn**	**15 57 13.0**	**-0.2**
	baz=334						
NWLT	**Wulai**	**1.09**	**1**	*e*P	**Pn**	**15 56 59.1**	**0.0**
	baz=5.0						
NWLT				*e*S	**Sg**	**15 57 12.5**	**-0.9**
	baz=5.0						
WLGB	**Puzi**	**1.10**	**260**	*e*P	**Pb**	**15 56 58.7**	**-0.1**
	baz=257						
WLGB				*e*S	**Sn**	**15 57 14.4**	**+0.3**
	baz=257						
WTCT	**Ta-ch'eng**	**1.11**	**280**	*e*P	**Pg**	**15 56 58.3**	**-1.0**
	baz=266						
WTCT				*e*S	**Sn**	**15 57 15.5**	**+1.2**
	baz=266						
ILA	**Ilan**	**1.11**	**13**	*e*P	**Pn**	**15 56 59.7**	**+0.4**
	baz=17						
WSF	**Szhu**	**1.15**	**268**	*e*P	**Pn**	**15 56 59.9**	**+0.1**
	baz=267						
WSF				*e*S	**Sb**	**15 57 15.3**	**+0.7**
	baz=267						
ECL	**Taimali**	**1.18**	**204**	*e*P	**Pg**	**15 56 59.8**	**-0.9**
	baz=191						
CHN3	**Shinhua**	**1.18**	**240**	*e*P	**Pn**	**15 57 02.1**	**+1.8**
	baz=234						
SBCB	**Hsinchu**	**1.20**	**338**	*e*P	**Pn**	**15 57 01.9**	**+1.5**
	baz=342						
SBCB				*e*S	**Sn**	**15 57 19.1**	**+2.6**
	baz=342						
SCST	**Cishan**	**1.20**	**229**	*e*P	**Pn**	**15 57 02.5**	**+2.0**
	baz=225						
SCST				*e*S	**Sn**	**15 57 20.1**	**+3.5**
	baz=225						
CHN8	**Yiju**	**1.21**	**254**	*e*P	**Pn**	**15 57 00.9**	**+0.3**
	baz=252						
CHN8				*e*S	**Sn**	**15 57 18.0**	**+1.3**
	baz=252						
SSD	**Sandimen**	**1.21**	**220**	*e*P	**Pg**	**15 57 00.5**	**-0.8**
	baz=210						
SSD				*e*S	**Sn**	**15 57 17.3**	**+0.5**
	baz=210						
HSN	**Hsinchu**	**1.21**	**338**	*e*P	**Pn**	**15 57 01.6**	**+1.0**
	baz=343						
HSN				*e*S	**Sn**	**15 57 18.8**	**+1.9**
	baz=343						
NTC	**Toucheng**	**1.22**	**15**	*e*P	**Pg**	**15 57 00.3**	**-1.0**
	baz=20						
NTC				*e*S	**Sb**	**15 57 16.7**	**+0.3**
	baz=20						
EGS		**1.23**	**20**	*e*P	**Pn**	**15 57 02.3**	**+1.4**
	baz=24						
TSMG	**Majia**	**1.23**	**218**	*e*P	**Pb**	**15 57 01.0**	**-0.1**
	baz=209						
TSMG				*e*S	**Sn**	**15 57 17.9**	**+0.5**
	baz=209						
SCLT	**Jiali**	**1.28**	**247**	*e*P	**Pg**	**15 57 02.3**	**-0.3**
	baz=244						
SCLT				*e*S	**Sn**	**15 57 21.0**	**+2.4**
	baz=244						
NHDH	**Xindian Distri**	**1.28**	**2**	*e*P	**Pg**	**15 57 02.3**	**-0.3**
	baz=15						
NHDH				*e*S	**Sg**	**15 57 17.4**	**-1.9**
	baz=15						
TWM1	**Shoushan**	**1.29**	**229**	*e*P	**Pg**	**15 57 04.4**	**+1.6**
	baz=225						
TWM1				*e*S	**Sn**	**15 57 20.9**	**+2.0**
	baz=225						
TATO	**Taipei**	**1.29**	**1**	P	**Pn**	**15 57 01.6**	**-0.1**
	baz=13						
TATO				*e*S	**Sn**	**15 57 19.7**	**+0.9**
	baz=13						
TWA	**Mucha**	**1.30**	**4**	*e*P	**Pg**	**15 57 03.0**	**0.0**
	baz=9.0						
TWA				*e*S	**Sn**	**15 57 19.6**	**+0.4**
	baz=9.0						
NCUH	**Zhongli**	**1.31**	**348**	*e*P	**Pg**	**15 57 03.1**	**-0.1**
	baz=352						
NCUH				*e*S	**Sn**	**15 57 22.2**	**+2.9**
	baz=352						
NCU	**National Centr**	**1.31**	**349**	*e*P	**Pg**	**15 57 03.8**	**+0.6**
	baz=4.0						
NCU				*e*S	**Sn**	**15 57 22.7**	**+3.3**
	baz=4.0						
SGLT	**Jiouru**	**1.31**	**224**	*e*P	**Pg**	**15 57 03.9**	**+0.7**
	baz=205						
MASBT	**Mashibuluo**	**1.31**	**216**	P	**Pn**	**15 57 02.3**	**+0.2**
	baz=207						
MASBT				*e*S	**Sg**	**15 57 19.7**	**-0.7**
	baz=207						
TIPB	**Shuangxi**	**1.33**	**14**	*e*P	**Pg**	**15 57 03.5**	**-0.1**
	baz=18						
TIPB				S	**Sn**	**15 57 20.7**	**+0.9**
	baz=18						
TAP	**Taipei**	**1.35**	**1**	*e*P	**Pg**	**15 57 04.9**	**+0.8**
	baz=14						
TAP				*e*S	**Sn**	**15 57 22.3**	**+1.9**
	baz=14						
TWB1	**Santiao Chiao**	**1.40**	**19**	*e*P	**Pn**	**15 57 03.6**	**+0.3**
	baz=12						
EAST	**Anshuo**	**1.41**	**204**	*e*P	**Pn**	**15 57 02.9**	**-0.5**
	baz=193						
NWF	**Wu-fen Shan**	**1.41**	**11**	*e*P	**Pg**	**15 57 04.5**	**-0.7**
	baz=16						
NWF				*e*S	**Sg**	**15 57 24.0**	**+0.4**
	baz=16						
WFSB	**Wu-fen Shan**	**1.41**	**11**	*e*P	**Pn**	**15 57 03.5**	**0.0**
	baz=16						
WFSB				*e*S	**Sb**	**15 57 22.0**	**-0.2**
	baz=16						
TWS1	**Kuangyinshan**	**1.42**	**358**	*e*P	**Pg**	**15 57 04.7**	**-0.6**
	baz=24						
SSPT	**Xinbi**	**1.45**	**215**	*e*P	**Pg**	**15 57 05.3**	**-0.6**
	baz=200						
YM01	**YM01**	**1.46**	**3**	*e*P	**Pn**	**15 57 04.4**	**+0.3**
	baz=8.0						
YM01				*e*S	**Sg**	**15 57 25.0**	**-0.2**
	baz=8.0						
YM04	**YM04**	**1.47**	**2**	*e*P	**Pn**	**15 57 04.3**	**+0.1**
	baz=6.0						
YM04				*e*S	**Sg**	**15 57 25.1**	**-0.3**
	baz=6.0						
YM10	**YM10**	**1.47**	**3**	*e*P	**Pn**	**15 57 04.7**	**+0.4**
	baz=8.0						
NTST	**Danshui**	**1.48**	**359**	*e*P	**Pg**	**15 57 05.8**	**-0.6**
	baz=23						
YM11	**YM11**	**1.48**	**3**	*e*P	**Pg**	**15 57 06.0**	**-0.6**
	baz=8.0						
YM03	**YM03**	**1.50**	**2**	*e*P	**Pn**	**15 57 04.9**	**+0.3**
	baz=24						
ANP	**Anpu**	**1.50**	**2**	*e*P	**Pb**	**15 57 05.4**	**-0.4**
	baz=24						
YM08	**YM08**

baz=264
PHUB eS Sn 15 57 30.8 +0.6
baz=264
PNG Penghu 1.76 267 eP Pn 15 57 08.4 +0.2
baz=262
HEN Hengchun 1.80 202 eP Pn 15 57 09.0 +0.3
baz=195
TWK1 Hengchun 1.83 200 eP Pn 15 57 08.8 -0.4
baz=194
TWKBT Hengchun 1.83 200 eP Pb 15 57 10.4 -1.0
baz=195
IRIF Iriomote-Funau 2.16 72 P Pn 15 57 14.0 +0.3
IRIF eS Sn 15 57 41.2 +0.8
VWUC VWUC 2.26 306 eP Pn 15 57 14.5 -0.6
baz=307
JKRS Kuro-shima 2.38 76 P Pn 15 57 17.1 +0.3
PTTC Pingtan 2.39 320 eP Pn 15 57 16.5 -0.3
baz=321
JIJ Ishigaki jima 2.53 74 P Pn 15 57 18.7 -0.1
JIJ S Sn 15 57 50.0 +0.5
PTMZ Houxiangcun 2.54 303 eP Pn 15 57 18.2 -0.7
baz=304
JISG Ishigakijimahi 2.74 70 P Pn 15 57 21.5 -0.2
JISG eS Sn 15 57 55.0 +0.3
KNM Kinmen 2.88 285 eP Pn 15 57 25.2 +1.7
baz=284
KNMB Chin-men Tao 2.93 286 eP Pn 15 57 24.2 0.0
baz=286
JTJ Tarama 3.10 71 P Pn 15 57 27.3 +0.7
LYJJ Jianjiangzhen 3.25 332 eP Pn 15 57 28.1 -0.6
baz=334
MHZQ Yeshan 3.28 318 eP Pn 15 57 28.6 -0.4
baz=319
AXDP Jialang 3.42 292 eP Pn 15 57 31.2 +0.1
baz=293
ZPLA Ao Xicun 3.42 275 eP Pn 15 57 31.1 0.0
baz=274

MAN 15 15:59:33.7, 12°.88N×122°.76E, h26km, mb4.4, ML3.2, MS3.0, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
OTRP	**Odiongan**	**0.89**	**235**	eP		Pn	15 59 50.6	+0.1
OTRP				eS		Sn	16 00 03.0	+0.5
BOAC	**Boac**	**1.07**	**303**	eP		Pn	15 59 52.0	-1.0
BOAC				eS		Sb	16 00 07.7	+0.6
GQP	**Guinayangan**	**1.07**	**343**⇓	eP		Pn	15 59 51.5	-1.5
GQP				eS		Sb	16 00 07.6	+0.5
SCSP	**San Jose Seism**	**1.07**	**44**	eP		Pb	15 59 53.3	-0.3
SCSP				eS		Sb	16 00 07.4	+0.3
JCNP	**Jose Panganiba**	**1.41**	**357**	eP		Pn	15 59 56.8	-0.9
JCNP				eS		Sb	16 00 16.3	-0.5
PVCP	**Virac**	**1.53**	**62**	eP		Pn	15 59 59.0	-0.4
PVCP				eS		Sn	16 00 16.8	-1.7
SJMP	**San Jose**	**1.66**	**256**	eP		Pn	16 00 02.1	+1.1
SJMP				eS		Sn	16 00 21.5	0.0
LQP	**Lukban**	**1.71**	**316**⇓	eP		Pn	16 00 01.8	-0.2
LQP				eS		Sb	16 00 25.9	+0.1
CNP	**Catarman**	**1.89**	**101**	eP		Pb	16 00 10.6	+3.1
CNP				eS		Sb	16 00 31.1	+0.3
POLP	**Polilio Island**	**2.01**	**337**	eP		Pn	16 00 06.7	+0.8
POLP				eS		Sn	16 00 31.4	+1.2

*DJA **15** 16:01:01.1±0.3, 1°.N±3°×12°.6E±°, h10km, M3.4/8, MLv3.4/8*
*IDC **15** 16:01:05.4±2.1, 1°.67N×126°.25E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/33, mbtmp3.4/3, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=175.0km s-min=26.2km az=65.0*
ISC 15 16:01:05.2±1.2, **1°.38N**±0°.07×**126°.55E**±0°.07, **h47**km, **n9,** σ**2$97/8, mb3.4/3, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TNTI	**Ternate**	**1.02**	**127**	P		**Pn**	**16 01 20.3**	**-2.8**
TNTI				S		**Sn**	**16 01 37.0**	**+0.7**
SGSI	**Sangihe**	**2.50**	**336**	P		**Pn**	**16 01 41.1**	**-2.3**
SGSI				S		**Sn**	**16 02 11.3**	**-1.5**
KMSI	**Cibinong**	**2.69**	**253**	P		**Pn**	**16 01 43.3**	**-2.7**
GTOI	**Gorontalo**	**3.62**	**258**	P		**Pn**	**16 01 57.5**	**-1.2**
LUWI	**Luwuk**	**4.48**	**237**	P		**Pn**	**16 02 08.7**	**-1.9**
WRA	**Warramunga Arr**	**22.53**	**161**	P		P	16 06 11.0	+10
	0.7nm,0.5s,baz=339,slow=11,SNR=11							
PMG	**Port Moresby**	**23.16**	**118**	LR		LR	16 18 17.3	
	comp=Z,46nm,20.5s,baz=242,slow=44							
ASAR	**Alice Springs**	**25.91**	**164**	P		P	16 06 42.6	+10
	0.2nm,0.5s,baz=340,slow=8.1,SNR=9.1							
MKAR	**Makanchi Array**	**59.38**	**326**	P		**P**	**16 11 06.8**	**+4.0**
	0.1nm,0.3s,baz=118,slow=7.6,SNR=4.4							

*IDC **15** 16:01:10.1±2.3, 20°.79S×178°.05W, h470km±26km, mb3.3/13, mb1 3.6/14, mb1mx3.5/31, mbtmp4.2/14, Error ellipse: s-maj=19.7km s-min=11.4km az=155.0*
ISC 15 16:01:12.3±0.7, **20°.9S**±0°.1×**178°.0W**±0°.1, **h500**km, **n19,** σ**0$90/21, mb3.6**/13, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
URZ	**Urewera**	**17.84**	**193**	P		**P**	**16 04 50.2**	**-0.8**
	0.6nm,0.3s,baz=213,slow=15,SNR=1.2							
CTA	**Charters Tower**	**33.49**	**265**	P		**P**	**16 07 08.8**	**-0.8**
	3.0nm,0.5s,baz=94,slow=11,SNR=11							
ASAR	**Alice Springs**	**44.46**	**257**	P		**P**	**16 08 37.8**	**-0.9**
	3.7nm,0.5s,baz=91,slow=8.1,SNR=99							
ASAR				PcP		**PcP**	**16 10 12.1**	**+0.5**
	0.9nm,0.6s,baz=97,slow=3.8,SNR=6.3							
ASAR				S		**S**	**16 14 36.9**	**-0.1**
	0.8nm,0.8s,baz=90,slow=16,SNR=6.1							
WRA	**Warramunga Arr**	**44.58**	**262**	P		**P**	**16 08 38.3**	**-1.2**
	1.3nm,0.3s,baz=97,slow=7.4,SNR=74							
WRA				S		**S**	**16 14 40.8**	**+2.1**
	0.4nm,0.8s,baz=99,slow=13,SNR=2.7							
FITZ	**Fitzroy Crossi**	**53.01**	**263**	P		**P**	**16 09 41.9**	**-0.3**
	1.4nm,0.5s,baz=151,slow=5.1,SNR=17							
VNDA	**Vanda**	**57.54**	**185**	P		**P**	**16 10 14.1**	**+1.2**
	1.1nm,0.8s,baz=357,slow=7.4,SNR=8.8							
MJAR	**Matsushiro Arr**	**70.53**	**324**	P		**P**	**16 11 35.6**	**-0.8**
	1.8nm,0.7s,baz=164,slow=5.6,SNR=7.1							
KSRS	**Korea Array**	**77.19**	**319**	P		**P**	**16 12 14.8**	**+0.6**
	0.8nm,0.7s,baz=129,slow=7.7,SNR=5.1							
USRK	**Ussuriysk Ar.**	**79.29**	**326**	P		**P**	**16 12 26.0**	**+0.7**
	3.5nm,0.8s,baz=124,slow=4.1,SNR=9.0							
NVAR	**Mina Array Bea**	**81.28**	**43**	P		**P**	**16 12 36.6**	**+0.4**
	1.6nm,0.9s,baz=230,slow=8.9,SNR=9.2							
TXAR	**Lajitas Array**	**87.23**	**57**	P		**P**	**16 13 05.7**	**+0.2**
	0.9nm,0.8s,baz=234,slow=4.2,SNR=8.3							
VNA3	**Neumayer Olymp**	**87.77**	**176**	P		**P**	**16 13 06.7**	**-0.5**
ILAR	**Eielson Array**	**88.67**	**13**	P		**P**	**16 13 10.3**	**-1.0**
	0.7nm,0.6s,baz=216,slow=5.1,SNR=11							
PDAR	**Pinedale Array**	**89.21**	**43**	P		**P**	**16 13 14.8**	**+0.1**
	0.6nm,0.6s,baz=202,slow=2.7,SNR=7.0							
CMAR	**Chiang Mai Arr**	**90.27**	**290**	P		**P**	**16 13 21.0**	**+1.2**
	0.9nm,0.8s,baz=125,slow=3.4,SNR=9.6							
AKASG	**Malin Array Be**	**143.36**	**331**	PKhKP		PKPab	16 19 46.5	-0.6
	3.4nm,0.5s,baz=42,slow=4.6,SNR=19							
EKA	**Eskdalemuir Ar**	**145.38**	**5**	PKPbc		**PKPbc**	**16 19 53.1**	**-0.5**
	0.5nm,0.7s,baz=72,slow=3.1,SNR=3.4							
BRTR	**Keskin Array B**	**147.11**	**312**	PKPbc		**PKPbc**	**16 19 59.1**	**0.0**
	1.2nm,0.6s,baz=136,slow=5.3,SNR=8.4							
GERES	**GERESS Array B**	**150.57**	**344**	PKPbc		**PKiKP**	**16 20 07.8**	**0.0**
	0.8nm,0.9s,baz=34,slow=4.0,SNR=3.8							

*JMA **15** 16:01:21.1±0.1, 22°.62N×121°.98E, h38km, M3.7*
*TAP **15** 16:01:22.8, 22°.61N×121°.91E, h31km, ML3.5, D*
ISC 15 16:01:21.1±1.1, **22°.61N**±0°.03×**121°.99E**±0°.03, **h26**km±12km, **n129,** σ**1$08/208, 1C-11D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LDUT	**Ludao**	**0.49**	**278**⇓	*i*P		**Pb**	**16 01 31.7**	**+0.5**
	baz=279							
LDUT				*i* S		**Sb**	**16 01 38.1**	**+0.1**
	baz=279							
LAY	**Lan-yu**	**0.70**	**216**⇑	*i*P		**Pb**	**16 01 34.4**	**-0.2**
	baz=210							
LAY				*e*S		**Sb**	**16 01 42.7**	**-1.2**
	baz=210							
EDH	**Donghe**	**0.73**	**300**⇓	*i*P		**Pb**	**16 01 35.2**	**-0.1**
	baz=302							
EDH				S		**Sb**	**16 01 43.6**	**-1.3**
	baz=302							
CHKT	**Chengkung**	**0.76**	**310**⇓	*i*P		**Pn**	**16 01 35.3**	**-0.8**
	baz=323							
CHKT				S		**Sb**	**16 01 44.6**	**-1.0**
	baz=323							
TTN	**Taitung**	**0.80**	**281**	*e*P		**Pn**	**16 01 36.5**	**-0.1**
	baz=281							
TTN				*e*S		**Sn**	**16 01 47.6**	**0.0**
	baz=281							
LONT	**Longtian**	**0.85**	**291**	*i* P		**Pn**	**16 01 36.9**	**-0.5**
	baz=292							
LONT				*e*S		**Sb**	**16 01 47.3**	**-1.0**
	baz=292							
TWGBT	**Beinan**	**0.87**	**284**⇓	*i*P		**Pn**	**16 01 37.2**	**-0.5**
	baz=285							
TWGBT				S		**Sn**	**16 01 48.7**	**-0.8**
	baz=285							
FULB	**Fuli**	**0.88**	**313**⇓	*i*P		**Pn**	**16 01 36.9**	**-0.8**
	baz=316							
FULB				S		**Sn**	**16 01 47.6**	**-2.0**
	baz=316							
TWG	**Pinlang**	**0.88**	**284**	*i* P		**Pn**	**16 01 37.2**	**-0.6**
	baz=285							
TWG				*e*S		**Sn**	**16 01 48.1**	**-1.6**
	baz=285							
ECL	**Taimali**	**0.96**	**270**⇓	*i*P		**Pn**	**16 01 38.6**	**-0.3**
	baz=268							
ECL				S		**Sn**	**16 01 50.0**	**-1.7**
	baz=268							
EYUL	**Yuli**	**0.96**	**320**	*e*P		**Pn**	**16 01 38.5**	**-0.4**
	baz=323							
EYUL				*e*S		**Sn**	**16 01 51.1**	**-0.7**
	baz=323							
TWF1	**Yuli**	**0.98**	**319**	*e*P		**Pn**	**16 01 38.8**	**-0.4**
	baz=323							
TWF1				*e*S		**Sn**	**16 01 50.5**	**-1.7**
	baz=323							
YULB	**Yu-li**	**1.01**	**321**	P		**Pn**	**16 01 39.3**	**-0.3**
	baz=324							
YULB				*e*S		**Sn**	**16 01 52.4**	**-0.7**
	baz=324							
HGSD	**Ruisui**	**1.03**	**329**	*i* P		**Pn**	**16 01 38.8**	**-1.0**
	baz=341							
HGSD				S		**Sn**	**16 01 51.0**	**-2.4**
	baz=341							
TAW	**Tawu**	**1.04**	**257**	*e*P		**Pn**	**16 01 40.3**	**+0.3**
	baz=254							
TAW				*e*S		**Sn**	**16 01 52.6**	**-1.2**
	baz=254							
ELDTW	**Lidau**	**1.07**	**303**⇓	*i*P		**Pn**	**16 01 40.0**	**-0.5**
	baz=314							
ELDTW				S		**Sn**	**16 01 52.6**	**-2.0**
	baz=314							
EAST	**Anshuo**	**1.08**	**258**⇓	*i*P		**Pn**	**16 01 40.8**	**+0.2**
	baz=262							
EAST				*e*S		**Sn**	**16 01 53.9**	**-0.9**
	baz=262							
EHY	**Hungye**	**1.09**	**325**	P		**Pn**	**16 01 40.2**	**-0.5**
	baz=329							
EHY				*e*S		**Sn**	**16 01 52.8**	**-2.1**
	baz=329							
SLIU	**Shizi**	**1.17**	**251**	P		**Pn**	**16 01 42.0**	**+0.2**
	baz=249							
SLIU				*e*S		**Sn**	**16 01 55.9**	**-1.0**
	baz=249							
EGFH	**Guangfu**	**1.18**	**334**	*e*P		**Pn**	**16 01 41.6**	**-0.3**
	baz=345							
EGFH				*e*S		**Sn**	**16 01 55.5**	**-1.6**
	baz=345							
TSEB	**Hengchuen, Pin**	**1.23**	**235**	*e*P		**Pn**	**16 01 42.7**	**+0.1**
	baz=234							
TSEB				*e*S		**Sb**	**16 01 59.6**	**+0.4**
	baz=234							
TSMG	**Majia**	**1.25**	**275**	P		**Pn**	**16 01 43.2**	**+0.3**
	baz=270							
TSMG				*e*S		**Sn**	**16 01 58.0**	**-0.9**
	baz=270							
MASBT	**Mashibuluo**	**1.26**	**271**⇓	*i*P		**Pn**	**16 01 43.4**	**+0.5**
	baz=269							
MASBT				*e*S		**Sb**	**16 01 59.0**	**-1.0**
	baz=269							
SSD	**Sandimen**	**1.27**	**277**⇓	*i*P		**Pn**	**16 01 43.3**	**+0.2**
	baz=272							
SSD				*e*S		**Sn**	**16 01 57.6**	**-1.6**
	baz=272							
TWKBT	**Hengchun**	**1.28**	**239**	*e*P		**Pn**	**16 01 43.8**	**+0.6**
	baz=236							
TWKBT				*e*S		**Sn**	**16 01 59.0**	**-0.6**
	baz=236							
TWK1	**Hengchun**	**1.28**	**239**	*e*P		**Pn**	**16 01 44.1**	**+0.8**
	baz=236							
TWK1				*e*S		**Sb**	**16 01 60.0**	**-0.7**
	baz=236							
SCZT	**Fangliau**	**1.29**	**260**	*e*P		**Pn**	**16 01 44.0**	**+0.6**
	baz=259							
SLGT	**Liugui**	**1.30**	**287**	*i* P		**Pn**	**16 01 44.4**	**+0.8**
	baz=284							
HEN	**Hengchun**	**1.31**	**243**	*e*P		**Pn**	**16 01 44.7**	**+1.1**
	baz=233							
HEN				*e*S		**Sn**	**16 02 00.2**	**0.0**
	baz=233							
ESL	**Shilin**	**1.31**	**337**	P		**Pn**	**16 01 43.1**	**-0.6**
	baz=347							
ESL				*e*S		**Sn**	**16 01 58.7**	**-1.6**
	baz=347							
SSPT	**Xinbi**	**1.32**	**265**	*e*P		**Pb**	**16 01 45.0**	**-0.2**
	baz=264							
SSPT				*e*S		**Sn**	**16 01 59.3**	**-1.3**
	baz=264							
SGST	**Jiashian**	**1.39**	**290**	P		**Pn**	**16 01 45.4**	**+0.6**
	baz=292							
SGST				*e*S		**Sb**	**16 02 03.2**	**-0.4**
	baz=292							
SGLT	**Jiouru**	**1.39**	**275**	*e*P		**Pb**	**16 01 46.7**	**+0.3**
	baz=275							
SCST	**Cishan**	**1.41**	**282**	*e*P		**Pb**	**16 01 47.1**	**+0.3**
	baz=279							
ALS	**Alishan**	**1.42**	**310**	P		**Pn**	**16 01 46.5**	**+1.1**
	baz=312							
ALS				*e*S		**Sb**	**16 02 05.3**	**+0.5**
	baz=312							
WTP	**Ta-pu**	**1.42**	**297**	P		**Pb**	**16 01 46.9**	**0.0**
	baz=306							
WTP				*e*S		**Sb**	**16 02 05.1**	**+0.4**
	baz=306							
TPUB	**Ta-pu**	**1.44**	**299**⇓	*i*P		**Pb**	**16 01 47.0**	**-0.2**
	baz=308							
TPUB				*e*S		**Sb**	**16 02 05.4**	**+0.4**
	baz=308							
TWM1	**Shoushan**	**1.47**	**279**	*e*P		**Pb**	**16 01 48.1**	**+0.4**
	baz=288							
CHN1	**Nanshi**	**1.47**	**293**	P		**Pb**	**16 01 48.0**	**+0.2**
	baz=301							
CHN1				*e*S		**Sb**	**16 02 06.7**	**+0.6**
	baz=301							
SNST	**Tainan City**	**1.51**	**294**	*e*P		**Pb**	**16 01 48.5**	**+0.1**
	baz=304							
SNST				*e*S		**Sb**	**16 02 08.8**	**+1.6**
	baz=304							
WHYT	**Xinyi Township**	**1.51**	**316**	*e*P		**Pb**	**16 01 48.2**	**-0.3**
	baz=326							
WHYT				*e*S		**Sb**	**16 02 06.5**	**-0.7**
	baz=326							
TWD	**Chiawan**	**1.51**	**346**	P		**Pn**	**16 01 45.9**	**-0.6**
	baz=350							
TWD				S		**Sn**	**16 02 04.1**	**-1.2**
	baz=350							
SSLB	**Suanglung**	**1.52**	**321**	*e*P		**Pn**	**16 01 47.4**	**+0.8**
	baz=331							
SSLB				*e*S		**Sn**	**16 02 04.7**	**-0.8**
	baz=331							
WLCH	**Liuqiu**	**1.52**	**261**	*e*P		**Pb**	**16 01 48.8**	**+0.3**
	baz=248							
SNJT	**Kaohsiung City**	**1.54**	**276**	*e*P		**Pb**	**16 01 50.3**	**+1.4**
	baz=276							
CHN5	**Tsauling**	**1.56**	**309**	P		**Pb**	**16 01 49.7**	**+0.3**
	baz=312							
CHN5				*e*S		**Sb**	**16 02 09.4**	**+0.6**
	baz=312							
CHN3	**Shinhua**	**1.57**	**288**	*e*P		**Pb**	**16 01 51.4**	**+1.9**
	baz=287							
CHN3				*e*S		**Sb**	**16 02 12.2**	**+3.2**
	baz=287							
NACB	**Ninganchiao**	**1.60**	**347**	P		**Pn**	**16 01 47.3**	**-0.5**
	baz=359							
NACB				*e*S		**Sn**	**16 02 06.4**	**-1.2**
	baz=359							
SMLT	**Sun Moon Lake**	**1.62**	**322**	*e*P		**Pn**	**16 01 49.4**	**+1.3**
	baz=331							
SMLT				*e*S		**Sn**	**16 02 09.3**	**+1.1**
	baz=331							
CHGB	**Renai**	**1.63**	**333**	P		**Pn**	**16 01 48.9**	**+0.5**
	baz=344							
CHGB				*e*S		**Sn**	**16 02 07.6**	**-1.1**
	baz=344							
ETLH	**Xiulin Townshi**	**1.66**	**344**	*e*P		**Pn**	**16 01 48.8**	**+0.2**
	baz=356							
ETLH				*e*S		**Sn**	**16 02 08.2**	**-1.0**
	baz=356							
TYC	**Yuchr**	**1.66**	**321**	*e*P		**Pn**	**16 01 50.1**	**+1.6**
	baz=331							
TYC				*e*S		**Sb**	**16 02 10.5**	**-1.0**
	baz=331							
WHF	**Hehuan Shan**	**1.67**	**337**	*e*P		**Pn**	**16 01 49.2**	**+0.1**
	baz=351							
WHF				*e*S		**Sn**	**16 02 09.6**	**-0.3**
	baz=351							
CHN2	**Minshiung**	**1.68**	**304**	*e*P		**Pb**	**16 01 52.0**	**+0.7**
	baz=306							
CHN2				*e*S		**Sb**	**16 02 13.7**	**+1.8**
	baz=306							
WJS	**Zhushan**	**1.68**	**316**	*e*P		**Pb**	**16 01 50.9**	**-0.4**
	baz=319							
WJS				*e*S		**Sb**	**16 02 12.4**	**+0.3**
	baz=319							
CHY	**Chiayi**	**1.70**	**302**	*e*P		**Pb**	**16 01 52.0**	**+0.5**
	baz=304							
CHY				*e*S		**Sb**	**16 02 12.3**	**-0.2**
	baz=304							
WGK	**Gukeng**	**1.70**	**309**	*e*P		**Pb**	**16 01 52.1**	**+0.4**
	baz=312							
WGK				*e*S		**Sb**	**16 02 13.7**	**+1.0**
	baz=312							
WDLH	**Douliu**	**1.72**	**309**	*e*P		**Pb**	**16 01 52.0**	**0.0**
	baz=311							
WDLH				*e*S		**Sb**	**16 02 14.0**	**+0.8**
	baz=311							
DPDB	**Guoxing**	**1.73**	**326**	*e*P		**Pn**	**16 01 51.0**	**+1.5**
	baz=328							
DPDB				*e*S		**Sb**	**16 02 12.7**	**-0.8**
	baz=328							
WNT	**Mingjian**	**1.75**	**317**	P		**Pb**	**16 01 52.4**	**0.0**
	baz=320							
WNT				*e*S		**Sb**	**16 02 14.6**	**+0.6**
	baz=320							
ICHU	**Yijhu**	**1.75**	**296**	*e*P		**Pb**	**16 01 51.7**	**-0.8**
	baz=296							
ICHU				*e*S		**Sb**	**16 02 14.2**	**+0.2**
	baz=296							
SCLT	**Jiali**	**1.75**	**289**	*e*P		**Pb**	**16 01 52.5**	**-0.1**
	baz=290							
FUSS	**Fushou**	**1.77**	**337**	*e*P		**Pn**	**16 01 51.1**	**+0.8**
	baz=351							
FUSS				*e*S		**Sn**	**16 02 10.5**	**-1.7**
	baz=351							
WLGB	**Puzi**	**1.79**	**299**	*e*P		**Pn**	**16 01 51.7**	**+1.5**
	baz=301							
CHN8	**Yiju**	**1.80**	**294**	*e*P		**Pb**	**16 01 52.5**	**-0.9**
	baz=295							
CHN8				*e*S		**Sb**	**16 02 16.1**	**+0.5**
	baz=295							
TWT	**Tachien**	**1.80**	**336**	*e*P		**Pn**	**16 01 52.0**	**+1.3**
	baz=348							
TWT				*e*S		**Sn**	**16 02 12.6**	**-0.2**
	baz=348							
TDCB	**Techi**	**1.81**	**335**	P		**Pn**	**16 01 51.8**	**+1.1**
	baz=348							
TDCB				*e*S		**Sn**	**16 02 12.7**	**-0.3**
	baz=348							
WTK	**Tuku**	**1.83**	**306**	*e*P		**Pb**	**16 01 52.9**	**-0.9**
	baz=308							
WTK				*e*S		**Sb**	**16 02 16.1**	**-0.2**
	baz=308							
ENAH	**Nanao**	**1.84**	**355**	*e*P		**Pn**	**16 01 51.6**	**+0.6**
	baz=357							
ENAH				*e*S		**Sn**	**16 02 13.4**	**-0.1**
	baz=357							
NNSB	**Datong**	**1.90**	**343**	P		**Pn**	**16 01 52.6**	**+0.7**
	baz=346							
NNSB				*e*S		**Sn**	**16 02 13.7**	**-1.4**
	baz=346							
NNSH	**Datong**	**1.90**	**343**	P		**Pn**	**16 01 52.6**	**+0.6**
	baz=346							
NNSH				*e*S		**Sn**	**16 02 14.2**	**-0.9**
	baz=346							
NNS	**Nan Shan**	**1.91**	**343**	P		**Pn**	**16 01 52.7**	**+0.6**
	baz=346							
NNS				*e*S		**Sn**	**16 02 14.0**	**-1.4**
	baz=346							
WHP	**Taichung City**	**1.92**	**330**	*e*P		**Pb**	**16 01 55.4**	**-0.2**
	baz=340							
WHP				*e*S		**Sb**	**16 02 18.3**	**-0.9**
	baz=340							
WSF	**Szhu**	**1.93**	**303**	*e*P		**Pb**	**16 01 54.9**	**-0.6**
	baz=304							
TCU	**Taichung**	**1.96**	**322**	*e*P		**Pb**	**16 01 55.9**	**-0.1**
	baz=324							
WCHH	**Zhanghua**	**1.97**	**318**	*e*P		**Pn**	**16 01 55.1**	**+2.3**
	baz=320							
RLNB	**Erlin**	**1.97**	**311**	*e*P		**Pb**	**16 01 55.5**	**-0.8**
	baz=313							
TWC	**Suao**	**2.00**	**356**	*e*P		**Pn**	**16 01 54.2**	**+1.0**
	baz=358							
JYNG	**Yonagunijimaku**	**2.03**	**25**	P		**Pn**	**16 01 54.2**	**+0.6**
JYNG				*e*S		**Sn**	**16 02 18.3**	**+0.1**
NDT	**Datong Townshi**	**2.04**	**348**	*e*P		**Pn**	**16 01 55.0**	**+1.3**
	baz=349							
YOJ	**Yonaguni jima**	**2.07**	**27**	*e*P		**Pn**	**16 01 54.9**	**+0.7**
	baz=29							
YOJ				*e*S		**Sn**	**16 02 18.8**	**-0.3**
	baz=29							
YOJ	**Yonaguni jima**	**2.07**	**27**	P		**Pn**	**16 01 54.9**	**+0.7**
YOJ				*e*S		**Sn**	**16 02 19.8**	**+0.7**
TWE	**Neicheng**	**2.13**	**352**	*e*P		**Pn**	**16 01 56.1**	**+1.2**
	baz=354							
NSY	**Sanyi**	**2.13**	**328**	*e*P		**Pb**	**16 01 58.1**	**-0.8**
	baz=342							
NSY				*e*S		**Sb**	**16 02 24.9**	**-0.1**
	baz=342							
WDJ	**Dajia District**	**2.13**	**325**	*e*P		**Pb**	**16 01 58.6**	**-0.4**
	baz=328							
WDJ				*e*S		**Sb**	**16 02 25.0**	**-0.1**
	baz=328							
NSK	**Sanguang**	**2.14**	**344**	*e*P		**Pn**	**16 01 56.6**	**+1.4**
	baz=358							
NSK				*e*S		**Sn**	**16 02 20.4**	**-0.6**
	baz=358							
HATJ	**Hateruma jima**	**2.20**	**49**	P		**Pn**	**16 01 56.6**	**+0.6**
HATJ				S		**Sn**	**16 02 21.4**	**-1.0**
NWLT	**Wulai**	**2.21**	**348**	*e*P		**Pn**	**16 01 57.0**	**+1.0**
	baz=350							
NSTT	**Nanjuang**	**2.21**	**336**	*e*P		**Pn**	**16 01 58.6**	**+2.5**
	baz=346							
NSTT				*e*S		**Sn**	**16 02 24.9**	**+2.2**
	baz=346							
NMLH	**Miaoli**	**2.22**	**330**	*e*P		**Pn**	**16 01 57.4**	**+1.3**
	baz=332							
LIOB	**Emei**	**2.22**	**336**	*e*P		**Pn**	**16 01 59.0**	**+2.8**
	baz=345							
NTC	**Toucheng**	**2.24**	**356**	*e*P		**Pn**	**16 01 57.9**	**+1.4**
	baz=9.0							
IRIF	**Iriomote-Funau**	**2.35**	**42**	P		**Pn**	**16 01 58.8**	**+0.9**
IRIF				S		**Sn**	**16 02 25.9**	**0.0**
TIPB	**Shuangxi**	**2.36**	**356**	*e*P		**Pn**	**16 02 00.0

YM01	**YM01** baz=353	**2.56**	**351**	*e*P		**Pn**	**16 02 02.3**	**+1.4**
YM10	**YM10** baz=353	**2.57**	**351**	*e*P		**Pn**	**16 02 01.9**	**+0.8**
YM04	**YM04** baz=352	**2.57**	**351**	*e*P		**Pn**	**16 02 01.9**	**+0.8**
YM05	**YM05** baz=353	**2.58**	**351**	*e*P		**Pn**	**16 02 02.8**	**+1.6**
YM11	**YM11** baz=353	**2.58**	**352**	*e*P		**Pn**	**16 02 03.0**	**+1.8**
NTST	**Danshui** baz=350	**2.59**	**349**	*e*P		**Pn**	**16 02 03.1**	**+1.7**
YM03	**YM03** baz=352	**2.59**	**351**	*e*P		**Pn**	**16 02 03.0**	**+1.6**
YM08	**YM08** baz=353	**2.60**	**352**	*e*P		**Pn**	**16 02 02.4**	**+1.0**
ANP	**Anpu** baz=352	**2.60**	**351**	*e*P		**Pn**	**16 02 02.5**	**+0.9**
JIJ	**Ishigaki jima**	**2.64**	**48**	P		**Pn**	**16 02 02.3**	**+0.4**
JIJ				S		**Sn**	**16 02 31.1**	**-2.0**
JISG	**Ishigakijimahi**	**2.90**	**47**	P		**Pn**	**16 02 05.7**	**+0.2**
JISG				*e*S		**Sn**	**16 02 38.2**	**-1.4**
JTJ	**Tarama**	**3.21**	**50**	P		**Pn**	**16 02 10.7**	**+1.0**
JTJ				S		**Sn**	**16 02 46.0**	**-1.1**
VWUC	**VWUC** baz=318	**3.33**	**316**	*e*P		**Pn**	**16 02 12.2**	**+0.8**
PTTC	**Pingtan** baz=327	**3.53**	**325**	*e*P		**Pn**	**16 02 15.8**	**+1.7**
PTMZ	**Houxiangcun** baz=315	**3.58**	**313**	*e*P		**Pn**	**16 02 15.7**	**+0.8**
JIRB	**Irabujima**	**3.66**	**52**	P		**Pn**	**16 02 16.6**	**+0.6**
JIRB				*e*S		**Sn**	**16 02 56.5**	**-1.8**
JMJ2	**Miyako jima3**	**3.72**	**55**	S		**Sn**	**16 02 59.6**	**-0.3**
JIKM	**Ikemajima**	**3.77**	**52**	*e*S		**Sn**	**16 03 00.9**	**-0.1**
KNMB	**Chin-men Tao** baz=302	**3.79**	**300**	*e*P		**Pn**	**16 02 19.6**	**+1.8**
MATB	**Ma-tsu** baz=334	**3.99**	**333**	*e*P		**Pn**	**16 02 21.1**	**+0.5**
ZPLA	**Ao Xicun** baz=291	**4.12**	**289**	*e*P		**Pn**	**16 02 23.5**	**+1.2**
AXDP	**Jialang** baz=304	**4.34**	**303**	*e*P		**Pn**	**16 02 26.3**	**+0.9**
MHZQ	**Yeshan** baz=325	**4.41**	**323**	*e*P		**Pn**	**16 02 27.9**	**+1.6**
LYJJ	**Jianjiangzhen** baz=325	**4.42**	**333**	*e*P		**Pn**	**16 02 27.4**	**+0.9**
XPSS	**Dashiqiu** baz=352	**4.61**	**340**	*e*P		**Pn**	**16 02 29.7**	**+0.6**

DJA ***15*** *16:17:42.0±0.7,3°N±2°×12°7E± °, h10km±7km, M4.0/12, mB4.9/3, mb4.0/8, MLv4.0/12, Mw(mB)4.2/3*
IDC ***15*** *16:17:44.1±4.8,2°48N×127°01E, h53km±49km, mb3.8/7, mb1 4.0/8, mb1mx3.6/42, mbtmp4.1/8, ML3.5/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/35, Error ellipse: s-maj=49.7km s-min=17.4km az=72.0*
MAN ***15*** *16:17:45.3,2°76N×126°63E, h18km, mb4.8, ML3.7, MS3.7*
ISC 15 16:17:43.0±0.7,2°69N±0°04×127°24E±0°06,h35km,n23,
σ2°26/31,mb4.1/6,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.91**	**176**	P		P	**Pn**	**16 18 14.1**	**+1.1**
TNTI				S		S	**Sn**	**16 18 39.0**	**+3.2**
SGSI	**Sangihe**	**1.98**	**300**	P		P	**Pn**	**16 18 14.8**	**+0.8**
SGSI				S		S	**Sn**	**16 18 39.7**	**+2.1**
DDMP	**Don Marcelino,**	**3.72**	**336**	*e*P		P	**Pn**	**16 18 38.7**	**+0.6**
DDMP				*e*S		S	**Sn**	**16 19 19.8**	**-0.9**
KMSI	**Cibinong**	**3.87**	**237**	P		P	**Pn**	**16 18 41.1**	**+1.0**
KMSI				S		S	**Sn**	**16 19 27.9**	**+3.5**
MATI	**Mati**	**4.34**	**347**	*e*P		P	**Pn**	**16 18 49.5**	**+2.9**
MATI				*e*S		S	**Sn**	**16 19 39.6**	**+3.5**
SKMP	**Bagumbayan, Su**	**4.66**	**325**	*e*P		P	**Pn**	**16 18 51.1**	**+0.2**
SKMP				*e*S		S	**Sn**	**16 19 41.8**	**-2.1**
GTOI	**Gorontalo**	**4.69**	**244**	P		P	**Pn**	**16 18 53.3**	**+1.9**
KCP	**Kidapawan**	**4.80**	**334**	*e*P		P	**Pn**	**16 18 57.0**	**+4.1**
KCP				*i* S		S	**Sn**	**16 19 51.6**	**+4.2**
SIJI	**Sorong** 1.6nm,0.3s,baz=340,slow=23,SNR=10	**5.35**	**131**	P		P	**Pn**	**16 19 03.1**	**+2.6**
SIJI	0.6nm,0.3s,baz=38,slow=22,SNR=5.8			S		S	**Sn**	**16 20 03.3**	**+2.3**
BUKP	**Musuan**	**5.60**	**337**	*e*P		P	**Pn**	**16 19 06.5**	**+2.6**
BUKP				*e*S		S	**Sn**	**16 20 08.5**	**+1.5**
LUWI	**Luwuk** 0.3nm2µm30nm,1.1s	**5.80**	**230**	P		P	**Pn**	**16 19 08.2**	**+1.6**
APSI	**Ampana** 0.1nm15nm,0.6s	**6.63**	**237**	P		P	**Pn**	**16 19 19.7**	**+1.6**
TTSI	**Tana Toraja** 10nm,1.1s	**9.35**	**233**	P		P	**Pn**	**16 19 55.5**	**+0.1**
BNSI	**Bone** 5.2nm,2.5s	**10.02**	**225**	P		P	**Pn**	**16 20 04.0**	**-0.5**
KAPI	**Kappang** comp=Z,25nm,21.7s,baz=103,slow=34	**10.70**	**224**	LR		LR		16 23 32.3	
FITZ	**Fitzroy Crossi** 3.0nm,0.6s,baz=6,3,slow=12,SNR=16	**20.71**	**184**	P		P		**16 22 18.5**	**-2.0**
WRA	**Warramunga Arr** 6.8nm,0.7s,baz=343,slow=10,SNR=50	**23.54**	**163**	P		P		**16 22 47.8**	**-2.5**
ASAR	**Alice Springs** 1.7nm,0.5s,baz=347,slow=7.6,SNR=61	**26.98**	**166**	P		P		**16 23 19.1**	**-2.6**
ASAR	0.5nm,0.6s,baz=358,slow=2.1,SNR=6.8			PcP		**PcP**		**16 26 42.0**	**-1.0**
STKA	**Stephens Creek** 7.6nm,0.8s,baz=330,slow=9.0,SNR=14	**36.98**	**159**	P		P		**16 24 47.6**	**-1.5**
SONM	**Songino Array** 0.8nm,0.8s,baz=158,slow=7.5,SNR=3.8	**48.44**	**341**	P		P		**16 26 22.4**	**+0.3**
MKAR	**Makanchi Array** 0.6nm,0.4s,baz=116,slow=8.1,SNR=18	**58.70**	**325**	P		P		**16 27 36.4**	**-0.8**
ZALV	**Zalesovo Beam** 0.7nm,0.4s,baz=121,slow=6.9,SNR=2.7	**61.74**	**333**	P		P		**16 27 56.8**	**-1.1**
RAR	**Rarotonga** comp=Z,99nm,21.6s,baz=82,slow=34	**75.17**	**113**	LR		LR		17 00 33.5	

REY ***15*** *16:22:05.6,64°66N×17°49W, h4km*
IDC ***15*** *16:22:06.7±0.8,64°48N×17°79W, h0km, mb3.6/8, mb1 4.0/9, mb1mx3.7/38, mbtmp3.7/9, ML4.1/1, MS3.2/8, Ms1 3.2/8, ms1mx2.8/50, Error ellipse: s-maj=26.1km s-min=11.8km az=18.0*
NEIC ***15*** *16:22:06.6±2.0,64°64N±0°09×17°88W±0°09, h10km±1km, mb4.3/6, Error ellipse: s-maj=16.4km s-min=5.5km az=165.0*
ISC 15 16:22:06.4±0.5,64°67N±0°02×17°51W±0°02,h10km,n65,
σ1°80/71,mb3.8/10,MS3.2/5,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard** baz=278	**0.11**	**271**	P		P	**Pg**	**16 22 08.2**	**-1.0**
IVON				S		S	**Sg**	**16 22 10.4**	**-0.8**
IDYN	**Dyngjuhals** baz=22	**0.13**	**27**	P		P	**Pg**	**16 22 08.8**	**-0.8**
IDYN				S		S	**Sg**	**16 22 11.6**	**-0.3**
IHAM	**Hamarinn** baz=218	**0.24**	**215**	P		P	**Pg**	**16 22 10.3**	**-1.0**
IHAM				S		S	**Sg**	**16 22 13.8**	**-0.8**
IKVE	**Kverkfjoll** baz=86	**0.36**	**89**	S		S	**Sg**	**16 22 17.2**	**-1.1**
IHUS	**Husbondi** baz=191	**0.38**	**190**	P		P	**Pg**	**16 22 12.9**	**-1.1**
ISKR	**Skrokkalda** baz=256	**0.40**	**254**	P		P	**Pg**	**16 22 13.1**	**-1.1**
IJOK	**Jokulheimar** baz=223	**0.47**	**221**	P		P	**Pg**	**16 22 14.4**	**-1.3**
IJOK				S		S	**Sg**	**16 22 21.4**	**-0.5**
IASK	**Askja** baz=42	**0.53**	**43**	P		P	**Pg**	**16 22 15.7**	**-1.1**
IASK				S		S	**Sb**	**16 22 23.6**	**-2.0**
IMKO	**Mokollar** baz=56	**0.59**	**58**	P		P	**Pg**	**16 22 16.5**	**-1.3**
IMKO				S		S	**Sb**	**16 22 25.3**	**-1.9**
IIEY	**Innrieyrar** baz=206	**0.64**	**205**	P		P	**Pg**	**16 22 17.1**	**-1.7**
IIEY				S		S	**Sg**	**16 22 25.9**	**-1.2**
ISVA	**Svartarkot** baz=8.4	**0.68**	**9**	P		P	**Pg**	**16 22 18.1**	**-1.4**
ISVA				S		S	**Sb**	**16 22 27.9**	**-1.9**
IKSK	**Karasker** baz=138	**0.68**	**138**	P		P	**Pg**	**16 22 17.5**	**-2.1**
IKSK				S		S	**Sg**	**16 22 27.6**	**-0.9**
IKAL	**Kalfafell** baz=187	**0.73**	**186**	P		P	**Pg**	**16 22 18.6**	**-1.9**
IKAL				S		S	**Sg**	**16 22 29.4**	**-0.6**
IVSH	**V-Sauoahnukur** baz=78	**0.78**	**79**	P		P	**Pg**	**16 22 19.4**	**-1.9**
IVSH				S		S	**Sg**	**16 22 30.3**	**-1.2**
IVAT	**Vatnsfell** baz=233	**0.78**	**232**	P		P	**Pg**	**16 22 19.8**	**-1.6**
IFAG	**Fagurholsmyri** baz=155	**0.88**	**155**	P		P	**Pg**	**16 22 21.2**	**-2.1**
IADA	**Aoalbol** baz=65	**0.90**	**66**	P		P	**Pg**	**16 22 21.5**	**-2.1**
IADA				S		S	**Sb**	**16 22 34.7**	**-1.3**
IHVE	**Hveravellir** baz=284	**0.91**	**284**	P		P	**Pg**	**16 22 21.6**	**-2.2**
IMEL	**Melhnausar** baz=21	**0.97**	**21**	P		P	**Pg**	**16 22 23.0**	**-2.0**
IMEL				S		S	**Sb**	**16 22 36.8**	**-1.4**
IREN	**Reynihlio** baz=14	**1.01**	**14**	P		P	**Pg**	**16 22 23.5**	**-2.4**
ISNB	**Snabyli** baz=209	**1.06**	**208**	P		P	**Pg**	**16 22 24.4**	**-2.4**
IKVO	**Krokottuvotn** baz=13	**1.08**	**14**	P		P	**Pg**	**16 22 24.5**	**-2.6**
ISLY	**Slysaalda** baz=221	**1.10**	**220**	P		P	**Pb**	**16 22 25.5**	**-2.1**
IGRS	**Grimsstaoir** baz=30	**1.13**	**30**	P		P	**Pb**	**16 22 26.2**	**-1.8**
IFED	**Fedgar** baz=237	**1.15**	**237**	P		P	**Pb**	**16 22 26.1**	**-2.3**
IRJU	**Rjupnafell** baz=207	**1.18**	**206**	P		P	**Pb**	**16 22 26.5**	**-2.2**
ISKI	**Skildingahlsh** baz=9.0	**1.22**	**9**	P		P	**Pn**	**16 22 27.1**	**-2.4**
ISKI				S		S	**Sn**	**16 22 44.2**	**-1.9**
IGHA	**Grjothals** baz=16	**1.23**	**16**	P		P	**Pn**	**16 22 27.0**	**-2.7**
IGYG	**Gygjarholskot** baz=253	**1.24**	**253**	P		P	**Pn**	**16 22 27.2**	**-2.5**
IGRA	**Granastaoir** baz=358	**1.25**	**359**	P		P	**Pn**	**16 22 27.6**	**-2.3**
BORG	**Borgarnes** 21nm,0.3s,baz=103,slow=7.3,SNR=47	**1.64**	**274**	Pg		P	**Pn**	**16 22 33.4**	**-1.9**
BORG	24nm,0.3s,baz=84,slow=23,SNR=12			Lg		Lg		16 22 56.7	
BORG	**Borgarnes**	**1.64**	**274**				**Pn**	**16 22 33.2**	**-2.1**
SCO	**Scoresbysund**	**6.08**	**346**				**Pn**	**16 23 36.7**	**+0.5**
SCO	**Scoresbysund** baz=161,slow=6.5	**6.08**	**346**	*e*		P	**Pn**	**16 23 34.5**	**-1.6**
SCO				*i* P		P	**Pn**	**16 23 37.5**	**+1.4**
SCO				*e*S		S	**Sn**	**16 24 48.9**	**+3.3**
EKA	**Eskdalemuir Ar** baz=324,slow=14,SNR=11	**11.77**	**136**	Pn		P	**Pn**	**16 24 55.3**	**+1.2**
NOA	**NORSAR Array B** comp=Z,9.8nm,19.9s,baz=210,slow=34	**13.54**	**92**	LR		LR		16 29 58.3	
HFS	**Hagfors** comp=Z,36nm,18.4s,baz=240,slow=37	**15.05**	**93**	LR		LR		16 31 21.4	
ARC7	**ARCESS Array S**	**17.11**	**55**	Pn		**Pn**		**16 26 02.9**	**-2.4**
ARCES	**ARCESS Array B** comp=Z,36nm,20.4s,baz=285,slow=31	**17.12**	**55**	LR		LR		16 31 06.4	
CLL	**Collm**	**20.71**	**116**	*e*P		Pn		16 26 48.0	-0.8
CLL				*e*				16 27 02.0	
BRG	**Berggiesshubel** 41nm,2.1s	**21.42**	**115**	*e*(P)		**P**		**16 26 57.7**	**+3.5**
FRB	**Frobisher Bay** comp=Z,52nm,20.3s,baz=24,slow=34	**21.74**	**291**	LR		LR		16 34 15.7	
GERES	**GERESS Array B** 0.6nm,0.7s,baz=338,slow=9.9,SNR=3.4	**22.96**	**119**	P		**P**		**16 27 12.8**	**+2.1**
GERES	**GERESS Array B**	**22.96**	**119**	P		**P**		**16 27 13.0**	**+2.3**
VRAC	**Vranov** comp=Z,54nm,18.7s,baz=310,slow=38	**23.70**	**114**	LR		LR		16 37 17.0	
CTI	**Castel Tesino**	**24.57**	**125**	P		**P**		**16 27 27.2**	**+0.9**
CTI				IAmb		IAmb		16 27 44.6	
VYHS	**Vyhne** comp=Z,13nm,1.4s	**25.24**	**112**	*e*PN		**P**		**16 27 31.6**	**-0.6**
PSZ	**Piszkesteto**	**26.12**	**112**			**P**		**16 27 41.8**	**+1.5**
ESDC	**Sonseca Array** comp=Z,6nm,0.7s,baz=342,slow=8.4,SNR=2.7	**26.26**	**156**	P		**P**		**16 27 43.1**	**+1.5**
RES	**Resolute Bay** comp=Z,74nm,20.4s,baz=250,slow=35	**26.46**	**324**	LR		LR		16 37 32.5	
ABKAR	**Akbulak array**	**41.99**	**73**	P		**P**		**16 29 58.0**	**+0.8**
ILAR	**Eielson Array** comp=Z,2.4nm,1.2s,baz=16,slow=5.3,SNR=8.9	**45.68**	**332**	P		P		16 30 30.1	+3.4
ILAR	comp=Z,0.5nm,0.8s,baz=7.5,slow=4.0,SNR=5.1			PcP		**PcP**		**16 32 06.4**	**+2.0**
ILAR	**Eielson Array**	**45.68**	**332**	P		**P**		**16 30 24.7**	**-2.0**
IMAR	**Indian Mountai**	**45.85**	**337**	P		**P**		**16 30 27.7**	**-0.3**
KKAR	**Karatay Array**	**51.28**	**70**	P		**P**		**16 31 12.4**	**+2.3**
MKAR	**Makanchi Array** comp=Z,0.6nm,0.8s,baz=298,slow=6.2,SNR=3.9	**52.73**	**58**	P		**P**		**16 31 22.6**	**+1.8**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.7s,baz=342,slow=7.9,SNR=4.0	**53.15**	**156**	P		**P**		**16 31 24.7**	**+0.5**
PD31	**Pinedale Array**	**53.17**	**293**	P		**P**		**16 31 23.0**	**-1.5**
PD31	comp=Z,4.3nm,1.2s			IAmb		IAmb		16 31 28.9	
PDAR	**Pinedale Array** comp=Z,1.8nm,1.0s,baz=59,slow=5.7,SNR=7.8	**53.17**	**293**	P		**P**		**16 31 26.0**	**+1.6**
PDAR	**Pinedale Array**	**53.17**	**293**	P		**P**		**16 31 24.6**	**+0.2**
SONM	**Songino Array** comp=Z,0.5nm,0.9s,baz=342,slow=9.1,SNR=2.6	**59.64**	**40**	P		P		16 32 14.5	+4.2
SONM	**Songino Array**	**59.64**	**40**	P		**P**		**16 32 12.7**	**+2.4**
TXAR	**Lajitas Array** comp=Z,0.6nm,0.9s,baz=83,slow=2.9,SNR=4.5	**62.28**	**280**	P		**P**		**16 32 29.3**	**+0.9**
USRK	**Ussuriysk Ar.** comp=Z,53nm,21.2s,baz=51,slow=35	**68.86**	**23**	LR		LR		17 02 25.7	
BDFB	**Brasilia** comp=Z,105nm,21.7s,baz=99,slow=31	**83.39**	**209**	LR		LR		17 04 51.4	

VIE ***15*** *16:27:01.2±0.4,50°22N×19°02E, h0km, mb2.1/3, ml2.4/4, Error ellipse: s-maj=5.7km s-min=2.6km az=163.0 4 km SE of Katowice Suspected Mining induced.*
PRU ***15*** *16:27:01.1±0.0,50°25N×18°98E, h0km*
IDC ***15*** *16:27:01.4±3.1,50°07N×19°14E, h0km, mb1 3.4/3, mb1mx3.1/32, mbtmp3.2/3, ML2.7/3, Error ellipse: s-maj=60.8km s-min=10.5km az=137.0*
ISC 15 16:27:00.2±0.8,50°25N±0°04×18°99E±0°02,h0km,n25,
σ1°03/47,2C-5D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.52**	**93**	*e*Pg		P	**Pg**	**16 27 10.8**	**+0.6**
OJC				*e*Sg		S	**Sg**	**16 27 17.6**	**+0.7**
OKC	**Ostrava-Krasne**	**0.68**	**233**	*e*PG		P	**Pb**	**16 27 14.7**	**-0.3**
OKC	comp=Z,20nm,0.5s			*e*SG		S	**Sb**	**16 27 25.0**	**+0.1**
MORC	**Moravsky Berou**	**1.04**	**244**	||P		P	**Pb**	**16 27 21.2**	**0.0**
MORC				||S		S	**Sn**	**16 27 37.8**	**+0.3**
MORC	**Moravsky Berou**	**1.04**	**244**	*e*PG		P	**Pb**	**16 27 21.2**	**0.0**
MORC				*e*SG		S	**Sg**	**16 27 33.6**	**-0.2**
NIE	**Niedzica**	**1.19**	**134**	*e*Pg		P	**Pg**	**16 27 23.1**	**+0.2**
NIE				*e*Sg		S	**Sb**	**16 27 39.4**	**-0.2**
KRLC	**Kraliky** comp=Z,28nm,0.6s	**1.43**	**264**	*e*PG		P	**Pn**	**16 27 27.6**	**+0.1**
KRLC				*e*SG		S	**Sb**	**16 27 47.3**	**+0.8**
JAVC	**Velka Javorina**	**1.63**	**212**	*e*PN		P	**Pg**	**16 27 31.7**	**+0.2**
JAVC				*e*SG		S	**Sg**	**16 27 52.7**	**0.0**
DPC	**Dobruska-Polom**	**1.71**	**274**	*e*PG		P	**Pn**	**16 27 32.4**	**+1.0**
DPC	comp=Z,22nm,0.5s			*e*SG		S	**Sg**	**16 27 56.2**	**+1.0**
OSTC	**Ostas**	**1.80**	**281**	*e*PG		P	**Pn**	**16 27 33.7**	**+1.1**
OSTC	comp=Z,20nm,0.7s			*e*SG		S	**Sb**	**16 27 58.5**	**+1.3**
VRAC	**Vranov** 6.3nm,0.3s,baz=59,slow=14,SNR=36	**1.81**	**240**	Pg		P	**Pb**	**16 27 34.5**	**+0.2**
VRAC	5.3nm,0.3s,baz=144,slow=20,SNR=14			Lg		Lg		16 27 59.4	
VRAC	**Vranov**	**1.81**	**240**	||P		P	**Pn**	**16 27 33.0**	**+0.3**
VRAC				||S		S	**Sg**	**16 27 59.1**	**+0.6**
VRAC	**Vranov**	**1.81**	**240**	*e*PN		P	**Pb**	**16 27 34.0**	**-0.3**
VRAC				*e*SG		S	**Sb**	**16 27 57.5**	**-0.1**
KSP	**Ksiaz**	**1.82**	**290**	*e*Pg		P	**Pg**	**16 27 36.5**	**+1.4**
KSP				*e*Sg		S	**Sg**	**16 28 00.8**	**+2.1**
CHVC	**Chvalec**	**1.91**	**281**	*e*PG		P	**Pn**	**16 27 35.0**	**+1.0**
CHVC	comp=Z,11nm,0.4s			*e*SG		S	**Sg**	**16 28 02.6**	**+1.1**
KRUC	**Moravsky**	**2.06**	**236**	*e*PN		P	**Pn**	**16 27 37.3**	**+1.2**
KRUC				*e*SG		S	**Sb**	**16 28 05.5**	**+0.8**
PSZ	**Piszkesteto**	**2.41**	**165**	||P		P	**Pb**	**16 27 44.1**	**-0.4**
PSZ				||S		S	**Sg**	**16 28 19.8**	**+2.3**
PRU	**Pruhonice**	**2.87**	**267**	*e*PN		P	**Pn**	**16 27 47.4**	**+0.1**
PRU				*e*PG		P	**Pb**	**16 27 53.1**	**+0.8**
PRU	comp=Z,5.1nm,0.4s			*e*SG		S	**Sg**	**16 28 31.2**	**-1.3**
CONA	**Conrad Observa** 0.4nm,0.2s	**3.10**	**223**	*e*Pn		P	**Pn**	**16 27 50.6**	**+0.1**
CONA	0.7nm,0.2s			*i* Sn		S	**Sn**	**16 28 29.1**	**+0.8**
BRG	**Berggiesshubel**	**3.28**	**283**	PG		P	**Pg**	**16 28 02.0**	**-1.0**
BRG	4.3nm,0.8s			SG		S	**Sg**	**16 28 47.0**	**+1.6**
KHC	**Kasperske Hory**	**3.69**	**254**	*e*PN		P	**Pn**	**16 27 58.9**	**+0.4**
KHC				*e*PG		P	**Pb**	**16 28 06.3**	**+0.1**
KHC	comp=Z,8.4nm,0.6s			*e*SG		S	**Sg**	**16 28 58.5**	**-0.1**
GERES	**GERESS Array B** 0.2nm,0.3s,baz=67,slow=15,SNR=7.6	**3.72**	**250**	Pn		P	**Pn**	**16 28 00.8**	**+1.8**
GERES	0.6nm,0.3s,baz=66,slow=17,SNR=11			Pg		P	**Pg**	**16 28 10.2**	**-1.3**
GERES	1.4nm,0.3s,baz=64,slow=27,SNR=11			Lg		Lg		16 28 57.0	
MOA	**Molln** 0.7nm,0.3s	**3.92**	**234**	*e*Pn		P	**Pn**	**16 28 02.4**	**+0.7**
BURAR	**Bucovina Array**	**4.88**	**120**	||P		P	**Pn**	**16 28 16.4**	**+1.5**
FINES	**FINESS Array B** 0.3nm,0.3s,baz=197,slow=12,SNR=10	**11.90**	**17**	Pn		P	**Pn**	**16 29 48.8**	**-2.1**
ARCES	**ARCESS Array B** baz=191,slow=12,SNR=0.8	**19.60**	**7**	Pn		P	**P**	**16 31 27.5**	**-2.2**

IDC 15 16:40:06.2±7.8,16°12S×175°72W,h0km,mb3.8/3,
mb1 4.1/3,mb1mx3.6/42,mbtmp3.8/3,Error ellipse:
s-maj=342.9km s-min=36.3km az=140.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=94,slow=7.3,SNR=7.1	**47.51**	**258**	P		P	P	16 48 43.0	-0.6
ASAR	**Alice Springs** 2.5nm,0.5s,baz=88,slow=8.5,SNR=79	**47.77**	**253**	P		P	P	16 48 45.9	+0.3
ILAR	**Eielson Array** 0.3nm,0.6s,baz=227,slow=6.1,SNR=6.2	**83.59**	**12**	P		P	P	16 52 36.0	0.0

IPEC ***15*** *16:46:00.8±0.2,49°83N×18°57E, h0km, ML2.0/4, Error ellipse: s-maj=1.3km s-min=1.1km az=154.0*
VIE ***15*** *16:46:00.9±0.5,49°96N×18°48E, h0km, mb1.7/2, ml2.6/4, Error ellipse: s-maj=7.1km s-min=2.8km az=169.0 22 km NE of Ostrava Suspected Mining induced.*
PRU ***15*** *16:46:01.3±0.0,49°79N×18°48E, h0km, Mining Induced Event Csm, E=7.4e+05*
ISC 15 16:46:00.5±0.8,49°83N±0°03×18°54E±0°02,h0km,n26,
σ0°92/50,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**272**	*e*PG		**Pg**		**16 46 06.6**	**+1.3**
OKC	comp=Z,131nm,0.5s			*e*SG		**Sg**		**16 46 10.0**	**+1.4**
MORC	**Moravsky Berou**	**0.65**	**266**	*e*PG		**Pg**		**16 46 13.6**	**+0.8**
MORC				*e*SG		**Sg**		**16 46 21.6**	**+0.4**
MORC	**Moravsky Berou** baz=85	**0.65**	**266**	*e*Pg		**Pg**		**16 46 13.6**	**+0.8**
MORC	38nm,0.2s,baz=85			*e*Sg		**Sg**		**16 46 21.6**	**+0.4**
OJC	**Ojcow**	**0.90**	**64**	*e*Pg		**Pg**		**16 46 17.7**	**0.0**
OJC				*e*Sg		**Sg**		**16 46 29.8**	**+0.4**
JAVC	**Velka Javorina**	**1.12**	**211**	*e*PG		**Pb**		**16 46 22.9**	**+0.1**
JAVC				*e*SG		**Sg**		**16 46 36.5**	**-0.1**
JAVC	**Velka Javorina** baz=31	**1.12**	**211**	*e*Pg		**Pb**		**16 46 22.8**	**0.0**
JAVC	14nm,0.2s,baz=31			*e*Sg		**Sg**		**16 46 36.4**	**-0.1**
KRLC	**Kraliky** comp=Z,36nm,0.3s	**1.16**	**283**	*e*PG		**Pg**		**16 46 21.9**	**-0.8**
KRLC				*e*SG		**Sg**		**16 46 37.8**	**+0.1**
NIE	**Niedzica**	**1.22**	**109**	*e*Pg		**Pb**		**16 46 24.9**	**+0.5**
NIE				*e*Sg		**Sb**		**16 46 41.6**	**+0.9**
VYHS	**Vyhne**	**1.35**	**172**	*e*PG		**Pg**		**16 46 26.0**	**-0.3**
VYHS				*e*SG		**Sb**		**16 46 44.8**	**+0.3**
VRAC	**Vranov**	**1.37**	**248**	*e*PG		**Pg**		**16 46 26.6**	**-0.1**
VRAC				*e*SG		**Sg**		**16 46 44.3**	**-0.2**
VRAC	**Vranov** baz=67	**1.37**	**248**	*e*Pg		**Pg**		**16 46 26.5**	**-0.1**
VRAC	18nm,0.2s,baz=67			*e*Sg		**Sg**		**16 46 44.2**	**-0.2**
DPC	**Dobruska-Polom** comp=Z,30nm,0.6s	**1.52**	**291**	*e*PG		**Pn**		**16 46 28.6**	**-0.3**
DPC				*e*SG		**Sg**		**16 46 47.9**	**-1.3**
KRUC	**Moravsky**	**1.60**	**242**	*e*PG		**Pn**		**16 46 30.0**	**+0.1**
KRUC				*e*SG		**Sb**		**16 46 51.4**	**-0.1**
KRUC	**Moravsky** baz=61	**1.60**	**242**	*e*Pg		**Pn**		**16 46 30.0**	**+0.1**
KRUC	26nm,0.1s,baz=61			*e*Sg		**Sb**		**16 46 51.4**	**-0.1**
OSTC	**Ostas**	**1.66**	**297**	*e*PG		**Pb**		**16 46 31.5**	**-0.4**
OSTC				*e*SG		**Sg**		**16 46 54.0**	**+0.2**
MODS	**Modra-Piesok**	**1.68**	**210**	*e*PG		**Pn**		**16 46 29.8**	**-1.3**
MODS				*e*SG		**Sn**		**16 46 50.6**	**-2.7**
KSP	**Ksiaz**	**1.76**	**306**	*e*Pg		**Pg**		**16 46 35.2**	**+1.0**
KSP				*e*Sg		**Sg**		**16 46 56.8**	**-0.1**
UPC	**Upice**	**1.76**	**294**	*e*PG		**Pb**		**16 46 33.2**	**-0.4**
UPC				*e*SG		**Sg**		**16 46 56.7**	**-0.3**
CHVC	**Chvalec**	**1.77**	**296**	*e*PG		**Pb**		**16 46 33.1**	**-0.6**
CHVC				*e*SG		**Sb**		**16 46 56.3**	**-0.2**
PRU	**Pruhonice** comp=Z,8.2nm,0.4s	**2.59**	**275**	*e*SG		**Sb**		**16 47 20.9**	**+0.9**
CONA	**Conrad Observa** 1.2nm,0.2s	**2.60**	**224**	*e*Pn		**Pn**		**16 46 43.8**	**0.0**
CONA	2.8nm,0.4s			Sn		**Sn**		**16 47 16.1**	**+0.1**
PVCC	**Panska Ves** comp=Z,17nm,0.3s	**2.65**	**287**	*e*SG		**Sg**		**16 47 23.7**	**-1.7**
BRG	**Berggiesshubel**	**3.12**	**291**	PG		**Pb**		**16 46 57.8

0.1nm,0.3s,baz=102,slow=14,SNR=2.9
KSRS LR LR 17 02 42.6
comp=Z,45nm,19.6s,baz=89,slow=37
H11N2 WAKE ISLAND Hy 27.45 120 T T 17 30 19.1
baz=312,slow=75,SNR=24
H11N1 WAKE ISLAND Hy 27.46 120 T T 17 30 17.2
baz=312,slow=75,SNR=22
H11N3 WAKE ISLAND Hy 27.47 120 T T 17 30 16.9
baz=312,slow=75,SNR=22
H11S1 WAKE ISLAND Hy 28.15 123 T T 17 31 14.0
baz=314,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 28.15 123 T T 17 31 12.9
baz=314,slow=76,SNR=14
H11S2 WAKE ISLAND Hy 28.17 123 T T 17 31 14.8
baz=314,slow=76,SNR=11
SONM Songino Array 28.50 305 P **P** **17 01 42.4 +0.8**
1.6nm,0.7s,baz=110,slow=9.9,SNR=7.5
CMAR Chiang Mai Arr 41.74 256 P **P** **17 03 34.9 -0.6**
0.5nm,0.8s,baz=44,slow=5.5,SNR=5.3
ZALV Zalesovo Beam 42.67 313 P **P** **17 03 43.0 +0.4**
0.5nm,0.4s,baz=77,slow=6.5,SNR=4.8
MKAR Makanchi Array 44.83 303 P **P** **17 04 01.1 +1.0**
0.7nm,0.7s,baz=86,slow=12,SNR=6.8
WRA Warramunga Arr 56.47 189 P **P** **17 05 27.8 -0.2**
0.2nm,0.4s,baz=6.7,slow=7.5,SNR=2.4
ASAR Alice Springs 60.20 188 P **P** **17 05 54.0 0.0**
0.3nm,0.7s,baz=5.7,slow=13,SNR=5.1
NOA NORSAR Array B 74.95 338 P **P** **17 07 27.8 +1.1**
0.7nm,0.8s,baz=40,slow=5.7,SNR=3.3

*LDG **15** 17:04:24.0±0.4,51.62N×16.39E,h1km,Ml3.3/6,Error ellipse: s-maj=10.1km s-min=4.0km az=14.0,Suspected Mining induced.*
*DNK **15** 17:04:25.7±1.8,51.52N×16.05E,h12km±84km,ML2.4*
*IPEC **15** 17:04:25.6±0.4,51.61N×16.08E,h1km±1km,ML2.6/3, Error ellipse: s-maj=3.6km s-min=2.1km az=56.0*
*IDC **15** 17:04:27.6±0.8,51.50N×16.08E,h0km,mb1 3.5/7, mb1mx3.3/58,mbtmp3.5/7,ML2.9/7,Error ellipse: s-maj=12.9km s-min=7.7km az=108.0*
*PRU **15** 17:04:27.7±0.0,51.51N×16.10E,h0km*
*BGR **15** 17:04:28.3±0.2,51.50N×16.08E,h1km,ML3.3/20,Error ellipse: s-maj=3.3km s-min=2.2km az=8.0*
*VIE **15** 17:04:28.8±0.7,51.40N×16.11E,h0km,mb2.8/10, ml3.0/13,Error ellipse: s-maj=6.7km s-min=5.0km az=41.0 71 km WNW of Wroclaw Suspected Mining induced.*

ISC 15 17:04:25.1±0.7,51.56N±0.03×16.12E±0.02,h0km,n86,
σ1§67/168,3C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**171**	*e*Pg	**Pb**	**17 04 40.7**	**+0.2**
KSP				*e*Sg	**Sb**	**17 04 50.1**	**-0.8**
KSP	**Ksiaz**	**0.72**	**171**	*e*Pg	**Pb**	**17 04 40.8**	**+0.3**
KSP				*e*Sg	**Sb**	**17 04 50.9**	**-0.1**
CHVC	**Chvalec**	**0.97**	**182**	*e*PG	**Pb**	**17 04 45.5**	**+0.7**
CHVC				*e*SG	**Sb**	**17 04 58.4**	**+0.3**
comp=Z,167nm,0.5s							
OSTC	**Ostas**	**1.00**	**176**	*e*PG	**Pb**	**17 04 45.9**	**+0.6**
OSTC				*e*SG	**Sb**	**17 04 59.1**	**+0.1**
UPC	**Upice**	**1.05**	**184**	*e*PG	**Pb**	**17 04 46.7**	**+0.6**
UPC				*e*SG	**Sb**	**17 05 00.4**	**0.0**
comp=Z,196nm,0.4s							
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pn**	**17 04 49.5**	**+0.2**
DPC				*e*SG	**Sg**	**17 05 04.6**	**+0.6**
comp=Z,239nm,1.4s							
PVCC	**Panska Ves**	**1.42**	**224**	*e*PG	**Pb**	**17 04 53.8**	**+1.4**
PVCC				*e*SG	**Sn**	**17 05 12.7**	**+1.2**
comp=Z,257nm,0.3s							
BRG	**Berggiesshubel**	**1.53**	**244**	PN	**Pg**	**17 04 55.0**	**+0.6**
BRG				PG	**Pb**	**17 04 56.3**	**+2.1**
BRG				SG	**Sn**	**17 05 16.1**	**+1.9**
413nm,0.4s							
BRG	**Berggiesshubel**	**1.53**	**244**	*e*Pn	**Pb**	**17 04 54.3**	**0.0**
BRG				*e*Pg	**Pg**	**17 04 55.6**	**+1.3**
BRG				*e*Sg	**Sn**	**17 05 16.1**	**+1.9**
KRLC	**Kraliky**	**1.54**	**164**	*e*PG	**Pb**	**17 04 54.8**	**+0.3**
KRLC				*e*SG	**Sn**	**17 05 15.1**	**+0.5**
comp=Z,89nm,0.6s							
PRA	**Prague**	**1.83**	**216**	*e*SG	**Sb**	**17 05 23.5**	**+0.7**
comp=Z,48nm,0.6s							
FBE	**Freiberg**	**1.85**	**251**	*e*Pg	**Pg**	**17 05 01.3**	**+0.8**
FBE				*e*Sg	**Sg**	**17 05 26.1**	**+1.7**
GKP	**Gorka Klasztor**	**1.85**	**21**	*e*Pg	Pg	17 05 06.7	+6.2
GKP				*e*Sg	**Sg**	**17 05 30.2**	**+5.7**
PRU	**Pruhonice**	**1.86**	**213**	*e*PN	**Pn**	**17 04 58.9**	**+0.7**
PRU				*e*PG	**Pg**	**17 05 01.4**	**+0.7**
PRU				*e*SG	**Sg**	**17 05 25.4**	**+0.6**
comp=Z,59nm,0.3s							
CLL	**Collm**	**1.96**	**264**	*i* Pn	**Pn**	**17 05 00.0**	**+0.4**
comp=Z,22nm,0.5s							
CLL				*i* Pg	**Pg**	**17 05 03.8**	**+1.1**
CLL				*i*		17 05 06.4	
CLL				*i* Sg	**Sg**	**17 05 29.4**	**+1.3**
comp=Z,74nm,0.4s							
CLL	**Collm**	**1.96**	**264**	*e*Pn	**Pn**	**17 05 00.2**	**+0.6**
CLL				*e*Pg	**Pg**	**17 05 03.9**	**+1.2**
CLL				*e*Sg	**Sg**	**17 05 29.5**	**+1.4**
MORC	**Moravsky Berou**	**2.00**	**152**	⇑P	**Pn**	**17 05 01.2**	**+1.1**
MORC				⇓S	**Sg**	**17 05 29.1**	**-0.2**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*PN	**Pn**	**17 05 00.9**	**+0.8**
MORC				*e*SG	**Sg**	**17 05 30.2**	**+1.0**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**17 05 00.9**	**+0.8**
MORC				*e*Sg	**Sg**	**17 05 30.1**	**+0.8**
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**17 05 00.8**	**+0.7**
baz=334							
MORC				*e*Sg	**Sg**	**17 05 30.2**	**+1.0**
baz=334							
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*PG	**Pg**	**17 05 06.7**	**+0.4**
OKC				*e*SG	**Sg**	**17 05 33.8**	**-0.3**
comp=Z,53nm,0.5s							
VRAC	**Vranov**	**2.27**	**172**	Pn	**Pn**	**17 05 05.0**	**+1.2**
comp=Z,2.3nm,0.3s,baz=350,slow=16,SNR=16							
VRAC				Pg	**Pg**	**17 05 10.3**	**+1.7**
comp=Z,3.8nm,0.3s,baz=351,slow=16,SNR=17							
VRAC				Lg	Lg	17 05 37.2	
comp=Z,9.9nm,0.3s,baz=256,slow=20,SNR=12							
VRAC	**Vranov**	**2.27**	**172**	⇑P	**Pb**	**17 05 06.0**	**-0.9**
VRAC				⇑S	**Sn**	**17 05 33.6**	**+1.1**
VRAC	**Vranov**	**2.27**	**172**	*e*PN	**Pn**	**17 05 05.3**	**+1.5**
VRAC				*e*SG	**Sg**	**17 05 38.4**	**+0.4**
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**17 05 05.3**	**+1.5**
baz=352							
VRAC				*e*Sg	**Sg**	**17 05 38.3**	**+0.3**
comp=Z,28nm,0.2s,baz=352							
TREC	**Trest**	**2.30**	**190**	*e*SG	**Sg**	**17 05 39.3**	**+0.4**
PBCC	**Pribram**	**2.31**	**217**	*e*PN	**Pn**	**17 05 04.9**	**+0.5**
KRUC	**Moravsky**	**2.50**	**176**	*e*PN	**Pn**	**17 05 08.0**	**+1.0**
KRUC				*e*SG	**Sg**	**17 05 45.5**	**+0.1**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn	**Pn**	**17 05 08.0**	**+1.0**
baz=356							
KRUC				*e*Sg	**Sg**	**17 05 45.5**	**+0.1**
comp=Z,16nm,0.2s,baz=356							
TANN	**Tannenbergstha**	**2.58**	**245**	*e*Pn	**Pn**	**17 05 09.4**	**+1.4**
TANN				*e*Pg	**Pg**	**17 05 16.0**	**+1.6**
TANN				*e*Sg	**Sg**	**17 05 49.1**	**+1.3**
NKC	**Novy Kostel**	**2.67**	**242**	*e*SG	**Sg**	**17 05 52.4**	**+1.5**
comp=Z,127nm,0.3s							
GUNZ	**Gunzen**	**2.67**	**245**	*e*Pn	**Pn**	**17 05 10.7**	**+1.3**
GUNZ				*e*Pg	**Pg**	**17 05 17.9**	**+1.6**
GUNZ				*e*Sg	**Sg**	**17 05 52.2**	**+1.3**
WERN	**Wernitzgruen**	**2.69**	**243**	*e*Pn	**Pn**	**17 05 11.8**	**+2.2**
WERN				*e*Pg	**Pg**	**17 05 18.8**	**+2.3**
WERN				*e*Sg	**Sg**	**17 05 52.7**	**+1.4**
OJC	**Ojcow**	**2.69**	**118**	*e*Pn	**Pn**	**17 05 10.5**	**+1.0**
OJC				*e*Pg	**Pg**	**17 05 17.8**	**+1.2**
OJC				*e*Sg	**Sg**	**17 05 52.9**	**+1.5**
NEUB	**Neuenburg**	**2.74**	**264**	*e*Pg	**Pg**	**17 05 19.1**	**+1.5**
NEUB				*e*Sg	**Sg**	**17 05 54.9**	**+1.7**
JAVC	**Velka Javorina**	**2.88**	**159**	*e*PN	**Pn**	**17 05 13.4**	**+1.2**
JAVC				*e*SG	**Sg**	**17 05 57.2**	**-0.3**
JAVC	**Velka Javorina**	**2.88**	**159**	*e*Pn	**Pn**	**17 05 13.4**	**+1.2**
baz=340							
JAVC				*e*Sg	**Sg**	**17 05 57.1**	**-0.4**
comp=Z,27nm,0.6s,baz=340							
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**17 05 14.0**	**+1.2**
KHC				*e*PG	**Pg**	**17 05 20.4**	**-0.6**
KHC				*e*SN	**Sn**	**17 05 48.9**	**+0.3**
KHC				*e*SG	**Sg**	**17 05 59.1**	**+0.2**
comp=Z,28nm,0.5s							
MOX	**Moxa**	**2.98**	**254**	*e*Pn	**Pn**	**17 05 14.6**	**+1.0**
MOX				*e*Pg	**Pg**	**17 05 23.1**	**+1.0**
MOX				*e*Sg	**Sg**	**17 06 01.9**	**+1.1**
MANZ	**Manzenberg**	**2.99**	**240**	*e*Pn	**Pn**	**17 05 15.3**	**+1.6**
MANZ				*e*Pg	**Pg**	**17 05 23.4**	**+1.1**
MANZ				*e*Sg	**Sg**	**17 06 02.0**	**+0.9**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	*e*Pn	**Pn**	**17 05 16.4**	**+1.6**
ROTZ				*e*Sg	**Sg**	**17 06 03.9**	**+0.4**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	**Pn**	**17 05 17.5**	**+1.8**
GEC2				*e*Pg	**Pg**	**17 05 25.4**	**+0.5**
GEC2				*e*Sg	**Sg**	**17 06 04.6**	**-0.9**
GERES	**GERESS Array B**	**3.12**	**211**	Pn	**Pn**	**17 05 17.0**	**+1.3**
comp=Z,2.7nm,0.3s,baz=29,slow=13,SNR=83							
GERES				Pg	**Pg**	**17 05 23.7**	**-1.2**
comp=Z,3.9nm,0.3s,baz=31,slow=16,SNR=32							
GERES				Lg	Lg	17 06 05.7	
comp=Z,9.4nm,0.3s,baz=32,slow=28,SNR=16							
SMOL	**Smolenice**	**3.16**	**164**	*e*SG	**Sg**	**17 06 08.4**	**+1.9**
WET	**Wettzell**	**3.18**	**222**	*e*Pn	**Pn**	**17 05 18.1**	**+1.7**
WET				*e*Sg	**Sg**	**17 06 08.3**	**+1.1**
LANS	**Liptovska Anna**	**3.23**	**137**	*e*PG	**Pg**	**17 05 27.5**	**+0.6**
LANS				*e*SG	**Sg**	**17 06 09.6**	**+1.0**
LANS				*e*LG	Lg	17 06 16.3	
MODS	**Modra-Piesok**	**3.27**	**166**	*e*PG	**Pg**	**17 05 28.0**	**+0.2**
MODS				*e*SG	**Sg**	**17 06 10.1**	**0.0**
MODS				*e*LG	Lg	17 06 21.9	
NIE	**Niedzica**	**3.42**	**127**	*e*P	**Pg**	**17 05 30.9**	**+0.3**
NIE				*e*S	**Sg**	**17 06 15.6**	**+0.6**
NIE	**Niedzica**	**3.42**	**127**	*e*Pg	**Pg**	**17 05 31.3**	**+0.6**
NIE				*e*Sg	**Sg**	**17 06 17.8**	**+2.8**
ZST	**Bratislava**	**3.42**	**169**	*e*SG	**Sg**	**17 06 14.6**	**-0.4**
ZST				*e*LG	Lg	17 06 18.2	
CLZ	**Clausthal**	**3.58**	**277**	*e*Pn	**Pn**	**17 05 23.9**	**+2.0**
CLZ				*e*Pg	**Pg**	**17 05 34.1**	**+0.4**
CLZ				*e*Sg	**Sg**	**17 06 22.3**	**+2.1**
GRF	**Grafenberg Arr**	**3.63**	**241**	*e*Pn	**Pn**	**17 05 24.4**	**+1.8**
GRF				*e*Pg	**Pg**	**17 05 37.2**	**+2.6**
GRF				*e*Sg	**Sg**	**17 06 23.0**	**+1.3**
CONA	**Conrad Observa**	**3.63**	**183**	Pn	**Pn**	**17 05 24.2**	**+1.5**
comp=Z,2.0nm,0.3s,SNR=8.3							
CONA				Sg	**Sg**	**17 06 22.6**	**+0.8**
comp=Z,26nm,0.4s							
BSD	**Bornholm Skovb**	**3.64**	**349**	*e*	**Pn**	**17 05 20.9**	**-1.6**
baz=175,slow=14							
BSD				*i* P	**Pn**	**17 05 22.4**	**-0.2**
BSD				*i* S	**Sn**	**17 06 03.2**	**-2.9**
BSD				IAML		17 06 32.9	
comp=Z,4.4nm,0.4s							
MOA	**Molln**	**3.90**	**199**	*e*Pn	**Pn**	**17 05 27.9**	**+1.6**
comp=Z,7.7nm,0.3s,SNR=7.1							
MOA				Sg	**Sg**	**17 06 31.5**	**+1.2**
comp=Z,38nm,0.8s							
ARSA	**Arzberg**	**4.33**	**185**	*e*Pn	**Pn**	**17 05 34.1**	**+2.0**
comp=Z,3.1nm,0.3s,SNR=5.1							
ARSA				Sg	**Sg**	**17 06 45.8**	**+1.8**
comp=Z,21nm,0.7s							
CRVS	**Cervenica-Dubn**	**4.34**	**126**	*e*PG	**Pg**	**17 05 50.5**	**+2.3**
KBA	**Koelnbreinsper**	**4.83**	**203**	*e*Pn	**Pn**	**17 05 41.1**	**+1.9**
comp=Z,4.7nm,0.3s,SNR=5.4							
KBA				Sg	**Sg**	**17 07 02.0**	**+1.7**
comp=Z,20nm,0.6s							
SOKA	**Soboth**	**4.93**	**189**	*i* Pn	**Pn**	**17 05 41.7**	**+1.3**
comp=Z,1.0nm,0.3s							
SOKA				Sg	**Sg**	**17 07 03.1**	**-0.4**
comp=Z,3.2nm,0.4s							
OBKA	**Obir**	**5.16**	**192**	Sg	**Sg**	**17 07 11.0**	**+0.4**
comp=Z,7.7nm,0.5s							
WATA	**Walderalm**	**5.16**	**217**	*e*Pn	**Pn**	**17 05 45.2**	**+1.6**
comp=Z,3.2nm,0.4s							
WATA				Sg	**Sg**	**17 07 14.3**	**+3.6**
comp=Z,4.1nm,0.3s							
MYKA	**Terra Mystica**	**5.19**	**199**	Sg	**Sg**	**17 07 10.8**	**-0.9**
comp=Z,7.0nm,0.4s							
WTTA	**Wattenberg**	**5.20**	**216**	*i* Pn	**Pn**	**17 05 46.4**	**+2.2**
comp=Z,1.1nm,0.3s							
WTTA				Sg	**Sg**	**17 07 14.2**	**+2.3**
comp=Z,14nm,0.6s							
MOTA	**Moosalm**	**5.33**	**220**	*e*Pn	**Pn**	**17 05 48.3**	**+2.2**
comp=Z,2.2nm,0.4s							
MOTA				Sg	**Sg**	**17 07 17.4**	**+1.1**
comp=Z,6.3nm,0.5s							
ABTA	**Abfaltersbach**	**5.36**	**208**	*i* Pn	**Pn**	**17 05 48.6**	**+2.3**
comp=Z,0.7nm,0.2s							
ABTA				Sg	**Sg**	**17 07 17.1**	**-0.1**
comp=Z,16nm,0.6s							
SQTA	**Sankt Quirin**	**5.39**	**218**	*e*Pn	**Pn**	**17 05 48.8**	**+1.9**
comp=Z,2.0nm,0.3s							
SQTA				*e*Sn	**Sn**	**17 06 54.0**	**+4.3**
comp=Z,1.4nm,0.2s							
FETA	**Feichten**	**5.75**	**220**	Sg	**Sg**	**17 07 30.4**	**+0.9**
comp=Z,7.3nm,0.9s							
DAVA	**Damuels**	**5.90**	**226**	*e*Pn	**Pn**	**17 05 56.4**	**+2.6**
comp=Z,1.7nm,0.4s							
DAVA				Sg	**Sg**	**17 07 38.1**	**+3.6**
comp=Z,7.1nm,0.5s							
DAVOX	**Davos/Dischmat**	**6.29**	**223**	Pn	**Pn**	**17 05 60.0**	**+0.8**
comp=Z,0.3nm,0.3s,baz=106,slow=7.4,SNR=2.3							
DAVOX				Lg	Lg	17 07 47.2	
comp=Z,0.8nm,0.3s,baz=159,slow=16,SNR=4.6							
DRGR		**6.43**	**135**	⇓P	Pn	17 06 06.1	+5.0
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pn	**Pn**	**17 06 02.5**	**+0.4**
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pg	**Pg**	**17 06 29.5**	**-0.3**
CDF				*e*Sg	**Sg**	**17 07 53.4**	**-0.7**
comp=Z,2.5nm,0.4s							
HINF	**Hinteralfeld**	**7.08**	**242**	*e*Pn	**Pn**	**17 06 09.0**	**-0.9**
HINF	**Hinteralfeld**	**7.08**	**242**	*e*Pg	**Pg**	**17 06 39.2**	**-1.4**
HINF				*e*Sn	**Sn**	**17 07 26.1**	**-4.9**
HINF				*e*Sg	**Sg**	**17 08 11.3**	**-0.9**
comp=Z,12nm,0.7s							
HAU	**Haudompre**	**7.25**	**244**	*e*Pn	**Pn**	**17 06 11.4**	**-0.9**
HAU	**Haudompre**	**7.25**	**244**	*e*Pg	**Pg**	**17 06 42.5**	**-1.4**
HAU				*e*Sn	**Sn**	**17 07 30.5**	**-4.8**
HAU				*e*Sg	**Sg**	**17 08 16.8**	**-1.1**
comp=Z,6.7nm,0.5s							
PAGF	**Fort de Pagny**	**7.33**	**250**	*e*Pn	**Pn**	**17 06 13.6**	**+0.3**
PAGF	**Fort de Pagny**	**7.33**	**250**	*e*Pg	**Pg**	**17 06 43.4**	**-2.1**
PAGF				*e*Sn	**Sn**	**17 07 31.6**	**-5.6**
PAGF				*e*Sg	**Sg**	**17 08 19.4**	**-1.0**
comp=Z,7.8nm,0.5s							
CABF	**La Chapelle**	**8.23**	**237**	*e*Pg	**Pg**	**17 07 00.2**	**-2.5**
CABF				*e*Sg	**Sg**	**17 08 47.4**	**-1.9**
comp=Z,5.9nm,0.7s							
AKASG	**Malin Array Be**	**8.29**	**91**	Pn	**Pn**	**17 06 25.4**	**-1.1**
comp=Z,0.9nm,0.3s,baz=280,slow=12,SNR=7.1							
HFS	**Hagfors**	**8.71**	**352**	Pn	**Pn**	**17 06 32.2**	**+0.1**
comp=Z,0.1nm,0.3s,baz=174,slow=16,SNR=3.8							
LOR	**Lormes**	**9.07**	**247**	*e*Pn	**Pn**	**17 06 36.3**	**-0.8**
LOR				*e*Sn	**Sn**	**17 08 13.6**	**-6.3**
comp=Z,0.5nm,0.3s							
SSF	**Saint Saulge**	**9.38**	**246**	*e*Pn	**Pn**	**17 06 40.6**	**-0.8**
FINES	**FINESS Array B**	**11.32**	**25**	Pn	**Pn**	**17 07 07.5**	**-0.3**
comp=Z,0.1nm,0.3s,baz=217,slow=11,SNR=3.8							
EKA	**Eskdalemuir Ar**	**12.09**	**296**	Pn	**Pn**	**17 07 15.3**	**-3.1**
baz=101,slow=13,SNR=3.7							
ARCES	**ARCESS Array B**	**18.58**	**10**	Pn	**P**	**17 08 41.8**	**-1.5**
baz=195,slow=14,SNR=4.4							

*IDC **15** 17:07:51.6±2.7,32.13S×179.46W,h0km,mb3.3/2, mb1 3.7/3,mb1mx3.5/39,mbtmp3.5/3,ML4.0/1,Error ellipse: s-maj=63.6km s-min=43.7km az=114.0*
*NEIC **15** 17:07:56.7±2.4,32.5S±0.1×179.4W±0.3,h32km±11km, mb4.3/2,Error ellipse: s-maj=35.2km s-min=20.4km az=102.0*

ISC 15 17:07:57.3±1.8,32.4S±0.1×179.6W±0.3,h35km,n11,
σ1§61/12,mb3.7/4,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.42**	**204**	Pn	**Pn**	**17 09 31.3**	**+2.0**
3.0nm,0.3s,baz=90,slow=12,SNR=29							
URZ				Sn	**Sn**	**17 10 40.5**	**-0.7**
3.3nm,0.3s,baz=28,slow=20,SNR=10							
BKZ	**Black Stump Fm**	**7.44**	**204**	Pn	**Pn**	**17 09 44.8**	**+1.4**
TUWZ	**Tuamarina**	**10.37**	**208**	Pn	**Pn**	**17 10 22.4**	**-1.0**
NNZ	**Nelson**	**10.43**	**211**	Pn	**Pn**	**17 10 23.7**	**-0.5**
THZ	**Tophouse**	**11.08**	**211**	Pn	**Pn**	**17 10 32.7**	**-0.6**
KHZ	**Kahutara**	**11.37**	**207**	Pn	**Pn**	**17 10 35.3**	**-1.8**
ASAR	**Alice Springs**	**41.72**	**270**	P	**P**	**17 15 45.0**	**+2.0**
0.2nm,0.6s,baz=112,slow=7.7,SNR=5.0							
WRA	**Warramunga Arr**	**42.89**	**275**	P	**P**	**17 15 50.9**	**-1.7**
0.2nm,0.3s,baz=115,slow=7.7,SNR=3.0							
WB0	**Warramunga Arr**	**42.92**	**275**	P	**P**	**17 15 54.5**	**+1.6**
WB0				IAmb	IAmb	17 15 56.9	
comp=Z,7.2nm,1.4s							
QSPA	**South Pole Qui**	**57.68**	**180**	P	**P**	**17 17 44.2**	**+0.2**
QSPA				IAmb	IAmb	17 17 44.7	
comp=Z,4.9nm,1.4s							
FINES	**FINESS Array B**	**146.55**	**338**	PKPbc	**PKPbc**	**17 27 32.7**	**-1.5**
comp=Z,0.8nm,0.4s,baz=35,slow=4.2,SNR=17							

JMA 15 17:12:39.8±0.2,38.75N×144.61E,h42km,M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.32**	**279**	P	**Pn**	**17 13 16.8**	**+1.4**
MIYJ	**Miyakonagasawa**	**2.32**	**292**	P	**Pn**	**17 13 16.7**	**+1.2**
MIYJ				S	**Sn**	**17 13 44.3**	**+1.5**
JTH	**Tanohata**	**2.44**	**300**	P	**Pn**	**17 13 18.4**	**+1.3**
JTH				S	**Sn**	**17 13 46.7**	**+1.0**
JKMT	**Kesennumamotoy**	**2.45**	**272**	P	**Pn**	**17 13 18.7**	**+1.4**
JMK	**Ichinoseki**	**2.66**	**275**	P	**Pn**	**17 13 21.8**	**+1.7**
JMK				S	**Sn**	**17 13 53.5**	**+2.5**
JOM	**Ohasama**	**2.68**	**287**	P	**Pn**	**17 13 22.2**	**+1.8**
JOM				S	**Sn**	**17 13 53.7**	**+2.1**
JANG	**Nango**	**2.89**	**305**	P	**Pn**	**17 13 24.1**	**+0.8**
JANG				S	**Sn**	**17 13 57.0**	**+0.2**
JYK	**Kaneyama**	**3.32**	**274**	P	**Pn**	**17 13 31.4**	**+2.1**
JYK				*e*S	**Sn**	**17 14 10.9**	**+3.4**
JFT	**Otama**	**3.59**	**251**	P	**Pn**	**17 13 34.9**	**+2.0**
JFT				S	**Sn**	**17 14 15.6**	**+1.6**
JOT	**Ohata**	**3.79**	**315**	S	**Sn**	**17 14 19.3**	**+0.3**
JCH	**Churui**	**3.98**	**347**	P	**Pn**	**17 13 37.9**	**-0.3**
JCH				*e*S	**Sn**	**17 14 22.6**	**-0.9**
JKB	**Kayabe**	**4.16**	**320**	*e*S	**Sn**	**17 14 27.4**	**-0.6**
NEM2	**Nemuro 2**	**4.69**	**10**	P	**Pn**	**17 13 46.1**	**-1.9**
NEM2				*e*S	**Sn**	**17 14 35.5**	**-5.6**
JTKR	**Abashiri--Toko**	**5.24**	**354**	P	**Pn**	**17 13 55.6**	**0.0**
JTKR				S	**Sn**	**17 14 51.8**	**-2.9**
JRY	**Ryogami san**	**5.30**	**241**	P	**Pn**	**17 13 57.6**	**+1.1**
JRY				S	**Sn**	**17 14 54.8**	**-1.5**
MAT	**Matsushiro**	**5.54**	**249**	P	**Pn**	**17 14 02.6**	**+2.9**
MAT				*e*S	**Sn**	**17 15 04.6**	**+2.5**

*IDC **15** 17:12:37.1±1.8,1.71N×126.38E,h0km,mb3.4/3, mb1 3.6/4,mb1mx3.4/35,mbtmp3.5/4,ML3.2/1,Error ellipse: s-maj=116.0km s-min=23.2km az=68.0*
*DJA **15** 17:12:41.1±0.3,2.7N±2.2×126.6E±11.0km,mb4.1/1, MLv3.5/10*

ISC 15 17:12:42.7±1.1,1.85N±0.06×126.49E±0.07,h47km,n11,
σ0§82/13,mb3.5/3,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**141**	P	**Pn**	**17 13 06.0**	**+0.5**
SGSI	**Sangihe**	**2.06**	**332**	P	**Pn**	**17 13 14.6**	**-0.3**
SGSI				S	**Sn**	**17 13 39.3**	**-0.1**
KMSI	**Cibinong**	**2.81**	**243**	P	**Pn**	**17 13 25.0**	**-0.1**
KMSI				S	**Sn**	**17 13 58.7**	**+0.9**
GTOI	**Gorontalo**	**3.68**	**251**	P	**Pn**	**17 13 37.3**	**+0.2**
LUWI	**Luwuk**	**4.70**	**232**	P	**Pn**	**17 13 51.0**	**0.0**
MRSI	**Marisa**	**4.75**	**253**	P	**Pn**	**17 13 51.4**	**-0.3**
APSI	**Ampana**	**5.56**	**241**	P	**Pn**	**17 14 02.9**	**0.0**
FITZ	**Fitzroy Crossi**	**19.84**	**182**	P	**P**	**17 17 08.2**	**-1.5**
0.1nm,0.3s,baz=17,slow=11,SNR=3.1							
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**17 17 42.4**	**-1.1**
2.2nm,1.0s,baz=339,slow=11,SNR=12							
ASAR	**Alice Springs**	**26.37**	**165**	P	**P**	**17 18 14.6**	**-0.1**
0.3nm,0.4s,baz=343,slow=8.2,SNR=14							
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**17 22 38.8**	**+1.4**
0.2nm,0.4s,baz=140,slow=9.1,SNR=3.2							

*IDC **15** 17:19:48.7±7.8,6.80S×129.94E,h120km±83km,mb3.5/2, mb1 3.5/6,mb1mx3.2/28,mbtmp3.9/6,ML3.8/4,Error ellipse: s-maj=66.6km s-min=20.3km az=30.0*

ISC 15 17:19:53.1±1.2,7.40S±0.07×130.11E±0.08,h100km,n9,
σ1§86/11,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.86**	**356**	P	**Sn**	**17 21 10.2**	**-0.6**
FAKI	**Fak Fak**	**4.93**	**26**	P	Sn	17 21 46.1	-15
SOEI	**Soe**	**6.23**	**247**	P	**Sn**	**17 22 35.0**	**+2.4**

BBOO	**Buckleboo**	**35.79**	**166**	P	**P**	**17 28 59.1**	**-0.6**
STKA	**Stephens Creek**	**36.62**	**158**	P	**P**	**17 29 05.8**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=349,slow=7.9,SNR=4.2						
STKA	**Stephens Creek**	**36.62**	**158**	IAmb	IAmb	17 29 07.6	
	comp=Z,2.8nm,1.6s						
MK31	**Makanchi Array**	**58.84**	**326**	P	**P**	**17 31 57.8**	**-0.9**
MK31				IAmb	IAmb	17 32 00.0	
	comp=Z,1.2nm,0.7s						
MKAR	**Makanchi Array**	**58.84**	**326**	P	**P**	**17 31 58.3**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=121,slow=8.0,SNR=21						
MAKZ	**Makanchi**	**59.03**	**326**	P	**P**	**17 31 59.4**	**-0.6**
MAKZ				IAmb	IAmb	17 32 02.2	
	comp=Z,3.8nm,1.3s						
KURK	**Kurchatov**	**63.07**	**328**	P	**P**	**17 32 27.0**	**-0.3**
KURK				IAmb	IAmb	17 32 28.7	
	comp=Z,4.3nm,0.5s						
ABKAR	**Akbulak array**	**73.34**	**321**	P	**P**	**17 33 31.8**	**+0.1**

*IDC **15** 17:26:56.0±1.0, 1°70N×126°29E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.6/36, mbtmp3.6/7, ML3.1/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/33, Error ellipse: s-maj=56.5km s-min=17.8km az=68.0*

*DJA **15** 17:27:00.3±0.2, 1°N±3°×12°7E±°, h10km, M4.0/11, mb4.2/6, MLv3.9/11*

*NEIC **15** 17:27:02.5±2.9, 1°75N±0°10×126°68E±0°04, h58km±9km, mb4.2/13, Error ellipse: s-maj=14.6km s-min=5.2km az=189.0*

ISC 15 17:27:01.9±0.7, 1°66N±0°07×126°62E±0°07, h47km, n46, σ1§56/40, mb4.0/9, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.16**	**140**	P		**Pn**	**17 27 22.3**	**+0.5**
TNTI				S		**Sn**	**17 27 35.6**	**-0.9**
TNTI	**Ternate**	**1.16**	**140**	Pn		**Pn**	**17 27 22.8**	**+1.1**
SGSI	**Sangihe**	**2.29**	**332**	P		**Pn**	**17 27 37.5**	**+0.3**
KMSI	**Cibinong**	**2.85**	**248**	P		**Pn**	**17 27 44.4**	**-0.5**
GTOI	**Gorontalo**	**3.75**	**254**	P		**Pn**	**17 27 56.8**	**-0.4**
LUWI	**Luwuk**	**4.69**	**235**	P		**Pn**	**17 28 07.0**	**-3.2**
MRSI	**Marisa**	**4.82**	**256**	P		**Pn**	**17 28 11.6**	**-0.4**
SIJI	**Sorong**	**5.29**	**118**	Pn		**Pn**	**17 28 20.1**	**+1.7**
	0.5nm,0.3s,baz=221,slow=19,SNR=2.5							
KCP	**Kidapawan**	**5.53**	**344**	*eP*			17 28 20.3	-1.4
KCP				*i* S		Sn	17 28 32.0	-52
MPSI	**Mapaga**	**6.84**	**259**	P		**Pn**	**17 28 39.4**	**-0.4**
	0.1nm15nm,1.0s							
TTSI	**Tana Toraja**	**8.25**	**235**	P		**Pn**	**17 28 56.9**	**-2.1**
	12nm,0.9s							
MYLDM	**Lahad Datu**	**8.82**	**294**	Pn		**Pn**	**17 29 07.3**	**+0.4**
BNSI	**Bone**	**8.86**	**227**	P		**Pn**	**17 29 04.9**	**-2.6**
	10nm,0.6s							
BKSI	**Bulukumba**	**9.50**	**223**	P		**Pn**	**17 29 14.1**	**-2.1**
BKB	**Balikpapan**	**10.14**	**253**			**Sn**	**17 31 20.9**	**+3.4**
KKM	**Kota Kinabalu**	**11.25**	**293**	Pn		**Pn**	**17 29 41.1**	**+0.8**
SBIM	**Sibu**	**14.41**	**273**	P		**P**	**17 30 31.2**	**+2.1**
KNRA	**Kununurra**	**17.36**	**173**	P		**P**	**17 32 02.0**	**+0.2**
KNRA				IAmb		IAmb	17 31 22.8	
	comp=Z,17nm,1.2s							
FITZ	**Fitzroy Crossi**	**19.66**	**183**	P		**P**	**17 31 27.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=2.7							
GUMO	**Guam**	**21.60**	**56**	LR		LR	17 39 40.5	
	comp=Z,35nm,18.4s,baz=118,slow=35							
TPUB	**Ta-pu**	**22.28**	**345**	P		**P**	**17 31 55.6**	**+0.3**
WB0	**Warramunga Arr**	**22.62**	**161**	P		**P**	**17 31 59.3**	**+0.3**
WB0				IAmb		IAmb	17 32 04.7	
	comp=Z,5.0nm,0.8s							
WRAB	**Tennant Creek**	**22.76**	**161**	P		**P**	**17 31 59.3**	**-1.1**
WRAB				IAmb		IAmb	17 32 01.6	
	comp=Z,13nm,0.7s							
WRA	**Warramunga Arr**	**22.77**	**161**	P		**P**	**17 32 00.8**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=339,slow=11,SNR=19							
WRA	**Warramunga Arr**	**22.77**	**161**	P		**P**	**17 32 00.7**	**+0.2**
WB2	**Warramunga Arr**	**22.77**	**161**	P		**P**	**17 32 01.1**	**+0.5**
WR0	**Warramunga Arr**	**22.85**	**160**	P		**P**	**17 32 01.7**	**+0.3**
AS31	**Alice Springs**	**26.15**	**165**	P		**P**	**17 32 32.7**	**+0.7**
ASAR	**Alice Springs**	**26.16**	**165**	P		**P**	**17 32 34.1**	**+2.1**
	comp=Z,0.8nm,0.5s,baz=344,slow=8.4,SNR=13							
ASAR	**Alice Springs**	**26.16**	**165**	P		**P**	**17 32 34.5**	**+2.4**
GSI	**Gunungsitoli**	**29.03**	**270**	P		**P**	**17 32 55.8**	**-2.1**
BBOO	**Buckleboo**	**35.43**	**166**	P		**P**	**17 33 55.0**	**+1.3**
H11S3	**WAKE ISLAND Hy**	**42.69**	**64**	T		T	18 19 02.6	
	baz=250,slow=76,SNR=84							
H11S2	**WAKE ISLAND Hy**	**42.71**	**64**	T		T	18 19 04.3	
	baz=250,slow=76,SNR=60							
H11S1	**WAKE ISLAND Hy**	**42.71**	**64**	T		T	18 19 02.0	
	baz=250,slow=76,SNR=131							
H11N1	**WAKE ISLAND Hy**	**43.27**	**63**	T		T	18 19 57.3	
	baz=248,slow=75,SNR=10							
H11N2	**WAKE ISLAND Hy**	**43.28**	**63**	T		T	18 19 55.6	
	baz=248,slow=75,SNR=9.2							
H11N3	**WAKE ISLAND Hy**	**43.29**	**63**	T		T	18 19 54.1	
	baz=248,slow=75,SNR=9.5							
SONM	**Songino Array**	**49.21**	**342**	P		**P**	**17 35 46.5**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=147,slow=8.6,SNR=2.6							
MK31	**Makanchi Array**	**59.19**	**326**	P		**P**	**17 36 56.4**	**-1.8**
MK31				IAmb		IAmb	17 38 17.6	
	comp=Z,2.4nm,1.4s							
MKAR	**Makanchi Array**	**59.19**	**326**	P		**P**	**17 36 56.4**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=118,slow=7.9,SNR=14							
MAKZ	**Makanchi**	**59.37**	**326**	P		**P**	**17 36 57.6**	**-1.8**
MAKZ				IAmb		IAmb	17 37 50.0	
	comp=Z,3.0nm,1.1s							
CMWZ	**Cape Campbell**	**60.97**	**141**	P		**P**	**17 37 08.2**	**-2.2**
ABKAR	**Akbulak array**	**73.67**	**321**	P		**P**	**17 38 29.8**	**-0.9**
VNDA	**Vanda**	**81.40**	**173**	P		**P**	**17 39 14.4**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=317,slow=6.6,SNR=3.6							
VNDA	**Vanda**	**81.40**	**173**	P		**P**	**17 39 14.8**	**+1.5**
VNDA				IAmb		IAmb	17 42 07.4	
	comp=Z,6.3nm,1.8s							

*IDC **15** 17:29:51.7±1.2, 1°80N×126°77E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.6/40, mbtmp3.9/8, ML3.9/2, Error ellipse: s-maj=50.4km s-min=18.4km az=63.0*

*DJA **15** 17:29:56.3±0.2, 2°N±3°×12°6E±°, h10km, M4.2/12, mB4.7/1, mb4.4/7, MLv4.0/12, Mw(mB)3.9/1*

*NEIC **15** 17:29:58.8±2.1, 1°56N±0°08×126°47E±0°07, h36km±8km, mb4.5/21, Error ellipse: s-maj=12.8km s-min=7.8km az=211.0*

ISC 15 17:30:00.2±0.5, 1°59N±0°04×126°47E±0°06, h47km, n57, σ1§70/62, mb4.1/17, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.21**	**132**	P		**Pn**	**17 30 19.8**	**-0.9**
TNTI				S		**Sn**	**17 30 38.5**	**+2.5**
TNTI	**Ternate**	**1.21**	**132**			**Pn**	**17 30 19.3**	**-1.4**
SGSI	**Sangihe**	**2.29**	**336**	P		**Pn**	**17 30 31.3**	**-4.2**
SGSI				S		**Sn**	**17 31 00.1**	**-2.4**
KMSI	**Cibinong**	**2.68**	**248**	P		**Pn**	**17 30 39.3**	**-1.6**
KMSI				S		**Sn**	**17 31 14.6**	**+2.5**
GTOI	**Gorontalo**	**3.58**	**255**	P		**Pn**	**17 30 52.3**	**-1.0**
LUWI	**Luwuk**	**4.52**	**235**	P		**Pn**	**17 31 06.4**	**+0.2**
LUWI	**Luwuk**	**4.52**	**235**	Pn		**Pn**	**17 31 06.2**	**0.0**
MRSI	**Marisa**	**4.66**	**256**	P		**Pn**	**17 31 08.4**	**+0.4**
APSI	**Ampana**	**5.42**	**243**	P		**Pn**	**17 31 18.7**	**+0.2**
	0.2nm618nm52nm,0.8s							
KCP	**Kidapawan**	**5.56**	**346**	*eP*		**Pn**	**17 31 21.6**	**+1.1**
KCP				*i* S		**Sn**	**17 32 22.8**	**-0.4**
MPSI	**Mapaga**	**6.68**	**259**	P		**Pn**	**17 31 36.6**	**+0.7**
	0.1nm17nm,0.8s							
FAKI	**Fak Fak**	**7.31**	**128**	Pn		**Pn**	**17 31 44.2**	**-0.3**
BNSI	**Bone**	**8.70**	**227**	P		**Pn**	**17 32 03.2**	**-0.4**
	15nm,0.6s							
MYLDM	**Lahad Datu**	**8.71**	**294**	Pn		**Pn**	**17 32 03.4**	**-0.3**
BKSI	**Bulukumba**	**9.34**	**223**	P		**Pn**	**17 32 12.5**	**+0.2**
	11nm,0.6s							
KAPI	**Kappang**	**9.38**	**226**	Pn		**Pn**	**17 32 12.9**	**0.0**
	1.8nm,0.3s,baz=119,slow=2.1,SNR=7.7							
KAPI	**Kappang**	**9.38**	**226**	Pn		**Pn**	**17 32 10.1**	**-2.8**
KKM	**Kota Kinabalu**	**11.14**	**294**	Pn		**Pn**	**17 32 36.5**	**-0.6**
SBUM	**Sibu**	**14.26**	**274**			**P**	**17 33 25.7**	**-0.1**
MTN	**Manton Dam**	**15.07**	**162**	Pn		**Pn**	**17 33 28.1**	**-2.0**
MTN				IAmb		IAmb	17 33 49.6	
	comp=Z,20nm,1.6s							
KNRA	**Kununurra**	**17.30**	**173**	Pn		**Pn**	**17 33 56.7**	**-1.8**
UGM	**Wanagama**	**18.49**	**239**			**P**	**17 34 12.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**19.58**	**182**	P		**P**	**17 34 22.7**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=16,slow=9.8,SNR=7.5							
FITZ	**Fitzroy Crossi**	**19.58**	**182**	P		**P**	**17 34 22.8**	**-1.6**
TPUB	**Ta-pu**	**22.32**	**346**	P		**P**	**17 34 49.5**	**-4.5**
WB0	**Warramunga Arr**	**22.60**	**160**	P		**P**	**17 34 55.2**	**-1.9**
WB0				IAmb		IAmb	17 35 03.1	
	comp=Z,5.4nm,0.8s							
WRA	**Warramunga Arr**	**22.75**	**161**	P		**P**	**17 34 56.8**	**-1.8**
	comp=Z,3.0nm,0.5s,baz=339,slow=11,SNR=20							
WRA	**Warramunga Arr**	**22.75**	**161**	P		**P**	**17 34 56.0**	**-2.6**
WB2	**Warramunga Arr**	**22.75**	**161**	P		**P**	**17 34 56.7**	**-2.0**
WB2				IAmb		IAmb	17 35 04.8	
	comp=Z,11nm,1.1s							
WR0	**Warramunga Arr**	**22.83**	**160**	P		**P**	**17 34 57.7**	**-1.7**
WR0				IAmb		IAmb	17 35 05.1	
	comp=Z,6.7nm,1.1s							
AS31	**Alice Springs**	**26.12**	**164**	P		**P**	**17 35 29.3**	**-0.7**
ASAR	**Alice Springs**	**26.12**	**164**	P		**P**	**17 35 29.1**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=343,slow=7.6,SNR=32							
ASAR				PcP		**PcP**	**17 38 56.0**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=354,slow=2.0,SNR=7.6							
ASAR	**Alice Springs**	**26.12**	**164**	P		**P**	**17 35 28.8**	**-1.3**
GIRL	**Giralia**	**26.88**	**206**	P		**P**	**17 35 36.6**	**-0.1**
NJ2	**Nanjing**	**31.14**	**347**	*eP*		**P**	**17 36 16.0**	**+1.4**
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
CMAR	**Chiang Mai Arr**	**31.78**	**304**	P		**P**	**17 36 20.8**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=124,slow=7.1,SNR=4.1							
JMN	**Monobe**	**32.72**	**11**	P		**P**	**17 36 28.9**	**+0.4**
JGF	**Kuroka**	**35.33**	**15**	P		**P**	**17 36 52.2**	**+1.1**
JGF				IAmb		IAmb	17 37 38.7	
	comp=Z,26nm,1.4s							
BBOO	**Buckleboo**	**35.39**	**166**	P		**P**	**17 36 50.8**	**-0.8**
BBOO				IAmb		IAmb	17 37 27.7	
	comp=Z,21nm,1.3s							
NWAO	**Narrogin (SRO)**	**35.42**	**193**	P		**P**	**17 36 51.6**	**-0.3**
NWAO				IAmb		IAmb	17 36 56.5	
	comp=Z,36nm,1.5s							
NWAO	**Narrogin (SRO)**	**35.42**	**193**	P		**P**	**17 36 51.6**	**-0.3**
NWAO				IAmb		IAmb	17 36 56.4	
	comp=Z,44nm,1.5s							
STKA	**Stephens Creek**	**36.24**	**158**	P		**P**	**17 36 57.8**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=2.8,slow=9.7,SNR=4.8							
STKA	**Stephens Creek**	**36.24**	**158**	P		**P**	**17 36 59.6**	**+0.7**
HHC	**Hu-ho-hao-te**	**41.35**	**343**	*eP*		**P**	**17 37 42.8**	**+1.1**
HHC				pmax		pmax		
	comp=Z,11nm,1.1s							
HHC				pmax		pmax		
	comp=Z,150nm,5.6s							
GTA	**Gaotai**	**44.80**	**330**	*eP*		**P**	**17 38 14.1**	**+4.4**
GTA				pP		pP	17 38 21.1	-1.0
GTA				sP		sP	17 38 25.5	-1.9
GTA				pmax		pmax		
	comp=Z,1.0nm,1.0s							
WMQ	**Urumqi**	**54.33**	**326**	*eP*		**P**	**17 39 24.6**	**+2.5**
PETK	**Petropavlovsk-**	**57.50**	**22**	P		**P**	**17 39 45.1**	**+0.6**
MK31	**Makanchi Array**	**59.16**	**326**	P		**P**	**17 39 55.2**	**-1.1**
MKAR	**Makanchi Array**	**59.16**	**326**	P		**P**	**17 39 53.3**	**-3.1**
	comp=Z,0.5nm,0.4s,baz=119,slow=7.5,SNR=12							
MKAR	**Makanchi Array**	**59.16**	**326**	P		**P**	**17 39 53.4**	**-2.9**
MAKZ	**Makanchi**	**59.35**	**326**	P		**P**	**17 39 57.0**	**-0.7**
MAKZ				IAmb		IAmb	17 40 00.5	
	comp=Z,2.1nm,1.1s							
MA2	**Magadan**	**60.84**	**14**	P		**P**	**17 40 07.3**	**-0.1**
KKAR	**Karatay Array**	**64.62**	**318**	P		**P**	**17 40 35.4**	**+2.3**
AMKA	**Amchitka**	**66.43**	**33**	P		**P**	**17 40 45.6**	**+1.1**
GYA0B	**ALIBECK ARRAY**	**72.03**	**309**	P		**P**	**17 41 19.7**	**+0.1**
GYA0B				IAmb		IAmb	17 41 47.7	
	comp=Z,3.6nm,0.6s							
ABKAR	**Akbulak array**	**73.64**	**321**	P		**P**	**17 41 27.6**	**-1.2**
VNDA	**Vanda**	**81.35**	**173**	P		**P**	**17 42 10.2**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=337,slow=3.7,SNR=4.9							

*IDC **15** 17:40:32.0±1.4, 43°32N×144°32E, h136km±9km, mb3.6/14, mb1 3.6/17, mb1mx3.4/47, mbtmp3.9/17, MS3.0/1, Ms1 3.0/1, ms1mx2.4/42, Error ellipse: s-maj=18.0km s-min=13.8km az=110.0*

*NEIC **15** 17:40:31.6±1.2, 43°26N±0°06×144°32E±0°06, h134km±6km, mb4.4/20, Error ellipse: s-maj=9.2km s-min=6.2km az=185.0*

*SKHL **15** 17:40:32.7±0.6, 43°39N×144°56E, h142km±7km, mb4.9/2, msh5.3/3*

*JMA **15** 17:40:32.0±0.1, 43°26N×144°30E, h130km±1km, M3.7*

JMA Felt I J1.

ISC 15 17:40:31.3±0.6, 43°25N±0°05×144°34E±0°04, h134km±5km, n89, σ0§75/104, mb4.0/25, 6C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAK	**Akkeshi**	**0.36**	**133**	⇑P		**Pn**	**17 40 50.4**	**+0.3**
JAK				*e*S		**Sn**	**17 41 04.3**	**+0.1**
JAR	**Ashorobuto**	**0.42**	**277**	⇓P		**Pn**	**17 40 50.8**	**+0.5**
JAR				*e*S		**Sn**	**17 41 04.7**	**0.0**
JNK	**Nakash**	**0.44**	**39**	⇓P		**Pn**	**17 40 50.7**	**+0.3**
JNK				*e*S		**Sn**	**17 41 04.9**	**-0.1**
JOB	**Onbets**	**0.50**	**227**	⇑P		**Pn**	**17 40 51.4**	**+0.7**
JOB				*e*S		**Sn**	**17 41 05.5**	**+0.1**
JKHN	**Kushirohamanak**	**0.62**	**105**	⇑P		**Pn**	**17 40 52.0**	**+0.5**
JKHN				*e*S		**Sn**	**17 41 06.9**	**+0.1**
JTKR	**Abashiri--Toko**	**0.79**	**337**	⇓P		**Pn**	**17 40 53.0**	**+0.3**
JTKR				*e*S		**Sn**	**17 41 08.5**	**-0.5**
JRA	**Rausu**	**0.90**	**39**	⇓P		**Pn**	**17 40 54.1**	**+0.6**
JRA				*e*S		**Sn**	**17 41 11.0**	**+0.5**
JCH	**Churui**	**0.95**	**229**	⇑P		**Pn**	**17 40 54.2**	**+0.1**
JCH				*e*S		**Sn**	**17 41 10.7**	**-0.6**
GLVR	**Golovnino**	**0.99**	**60**	*e*P		**Pn**	**17 40 55.0**	**+0.6**
GLVR				*i* S		**Sn**	**17 41 12.0**	**0.0**
GLVR				A		A	17 41 13.0	
	265nm,0.3s							
GLVR				A		A	17 41 13.0	
	427nm,0.3s							
NMR	**Nemuro--Hokkai**	**1.02**	**83**	*e*P		**Pn**	**17 40 55.0**	**+0.3**
NMR				*i* S		**Sn**	**17 41 11.0**	**-1.5**
NEM2	**Nemuro 2**	**1.03**	**83**	⇑P		**Pn**	**17 40 55.0**	**+0.2**
NEM2				*e*S		**Sn**	**17 41 11.7**	**-0.9**
JMP	**Maruseppu**	**1.04**	**317**	⇓P		**Pn**	**17 40 54.9**	**0.0**
JMP				*e*S		**Sn**	**17 41 11.8**	**-1.1**
JFR	**Furan**	**1.28**	**267**	P		**Pn**	**17 40 57.4**	**+0.2**
JFR				*e*S		**Sn**	**17 41 16.6**	**-0.4**
GRPR	**Tuman**	**1.28**	**54**	*e*P		**Pn**	**17 40 58.0**	**+0.8**
GRPR				AMB		AMB	17 40 59.0	
	179nm,0.2s							
GRPR				*i* S		**Sn**	**17 41 17.0**	**-0.1**
GRPR				A		A	17 41 19.0	
	280nm,0.4s							
GRPR				A		A	17 41 19.0	
	336nm,0.4s							
JKK2	**Kamakawa 2**	**1.31**	**299**	⇓P		**Pn**	**17 40 57.9**	**+0.3**
JKK2				*e*S		**Sn**	**17 41 17.3**	**-0.4**
YUK	**Yuzh-Kuril'sk**	**1.36**	**54**	*i* P		**Pn**	**17 40 58.0**	**0.0**
YUK				AMB		AMB	17 40 59.0	
	220nm,0.3s							
YUK				*i* S		**Sn**	**17 41 19.0**	**+0.5**
YUK				A		A	17 41 21.0	
	2μm,0.6s							
YUK				A		A	17 41 21.0	
	2μm,0.6s							
JEM	**Erimo**	**1.50**	**216**	Pn		**Pn**	**17 41 01.2**	**+1.5**
ERM	**Erimo**	**1.51**	**216**			**Pn**	**17 41 01.2**	**+1.5**
JNBK	**Urakawa-nobuka**	**1.51**	**231**	⇑P		**Pn**	**17 40 59.7**	**0.0**
JNBK				*e*S		**Sn**	**17 41 19.9**	**-1.5**
JKA	**Kamikawa-asahi**	**1.53**	**305**			**Pn**	**17 41 00.7**	**+0.7**
JKA	**Kamikawa-asahi**	**1.53**	**305**			**Sn**	**17 41 22.1**	**+0.2**
ASAJ	**Asahikawa**	**1.53**	**305**	P		**Pn**	**17 41 00.7**	**+0.8**
	73nm,0.3s,baz=153,slow=11,SNR=871							
ASAJ				LR		LR	17 41 12.9	
	comp=Z,29nm,21.6s,baz=182,slow=28							
ASAJ				S		**Sn**	**17 41 22.1**	**+0.2**
	15nm,0.3s,baz=294,slow=33,SNR=15							
JSE	**Soyaes**	**2.13**	**324**	⇓P		**Pn**	**17 41 07.0**	**+0.1**
JSE				*e*S		**Sn**	**17 41 33.7**	**-0.6**
JEW	**Eniwo**	**2.15**	**260**	Pn		**Pn**	**17 41 08.2**	**+0.9**
KUR	**Kuril'sk**	**3.22**	**51**	*e*S		**Sn**	**17 41 57.8**	**-1.4**
JTM	**Tenmabayashi**	**3.46**	**226**	Pn		**Pn**	**17 41 23.5**	**-0.5**
YSS	**Yuzh-Sakhalins**	**3.87**	**344**	*e*P		**Pn**	**17 41 29.7**	**+0.3**
YSS	**Yuzh-Sakhalins**	**3.87**	**344**	Pn		**Pn**	**17 41 29.5**	**+0.2**
JMM	**Marumori**	**6.01**	**208**			**Pn**	**17 41 56.6**	**-1.4**
JYT	**Yasato**	**7.70**	**206**	Pn		**Pn**	**17 42 18.9**	**-1.8**
MAJO	**Matsushiro**	**8.18**	**217**	Pn		**Pn**	**17 42 27.3**	**+0.1**
MJAR	**Matsushiro Arr**	**8.18**	**217**	P		**Pn**	**17 42 27.6**	**+0.4**
	0.1nm,0.3s,baz=27,slow=12,SNR=16							
MJAR	**Matsushiro Arr**	**8.18**	**217**			**Pn**	**17 42 28.3**	**+1.2**
USRK	**Ussuriysk Ar.**	**8.99**	**280**	P		**Pn**	**17 42 37.7**	**-0.3**
	baz=91,slow=15,SNR=2.6							
JGF	**Kuroka**	**9.35**	**218**	Pn		**Pn**	**17 42 43.0**	**+0.2**
INU	**Inuyama**	**9.71**	**218**	Pn		**Pn**	**17 42 47.7**	**+0.1**
JWT	**Wachi**	**10.54**	**224**	Pn		**Pn**	**17 42 59.0**	**+0.3**
MDJ	**Mudanjiang**	**10.73**	**282**	Pn		**Pn**	**17 43 00.3**	**-0.9**
PEA0B	**Petropavlovsk-**	**13.28**	**37**			**Pn**	**17 43 34.6**	**+0.2**
PETK	**Petropavlovsk-**	**13.28**	**37**	P		**Pn**	**17 43 33.2**	**-1.2**
	0.1nm,0.3s,baz=194,slow=12,SNR=8.7							
KSAR	**Wonju Array Be**	**13.81**	**251**	Pn		**Pn**	**17 43 41.5**	**+0.1**
SEY	**Seymchan**	**20.27**	**11**	P		**P**	**17 44 54.2**	**-1.8**
	1.5nm,0.3s,baz=132,slow=21,SNR=7.9							
HHC	**Hu-ho-hao-te**	**24.37**	**276**	*e*P		**P**	**17 45 37.5**	**+0.6**
HHC				pmax		pmax		
	comp=Z,12nm,1.0s							
HHC				pmax		pmax		
	comp=Z,120nm,5.3s							
ULN	**Ulaanbaatar**	**26.34**	**293**	P		**P**	**17 45 55.4**	**+0.7**
SONM	**Songino Array**	**26.78**	**293**	P		**P**	**17 45 59.1**	**+0.5**
	comp=Z,4.4nm,0.5s,baz=88,slow=8.5,SNR=26							
SONM	**Songino Array**	**26.78**	**293**	P		**P**	**17 45 59.1**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**30.14**	**134**	T		T	18 17 52.6	
	baz=328,slow=75,SNR=146							
H11N1	**WAKE ISLAND Hy**	**30.15**	**134**	T		T	18 17 53.6	
	baz=328,slow=75,SNR=98							
H11N3	**WAKE ISLAND Hy**	**30.16**	**134**	T		T	18 17 53.8	
	baz=328,slow=75,SNR=103							
GTA	**Gaotai**	**33.35**	**279**	*e*P		**P**	**17 46 56.8**	**+0.1**
GTA				pP		pP	17 47 26.3	+0.4
GTA				sP		sP	17 47 43.9	+2.6
GTA				pmax		pmax		
	comp=Z,1.0nm,1.1s							
NRIK	**Noril'sk**	**38.71**	**332**	P		**P**	**17 47 40.0**	**-1.6**
	comp=Z,1.0nm,0.4s,baz=117,slow=9.0,SNR=2.4							
ZALV	**Zalesovo Beam**	**39.67**	**307**	P		**P**	**17 47 50.4**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=92,slow=7.6,SNR=6.2							
ZALV	**Zalesovo Beam**	**39.67**	**307**	P		**P**	**17 47 49.6**	**-0.2**
WMQ	**Urumqi**	**40.37**	**291**	*e*P		**P**	**17 47 57.1**	**+1.2**
MK31	**Makanchi Array**	**43.00**	**297**	P		**P**	**17 48 17.6**	**+0.4**
MK31				IAmb		IAmb	17 48 18.2	
	comp=Z,2.7nm,0.8s							
MKAR	**Makanchi Array**	**43.00**	**297**	P		**P**	**17 48 17.4**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=82,slow=9.4,SNR=18							
MKAR	**Makanchi Array**	**43.00**	**297**	P		**P**	**17 48 17.3**	**+0.1**
ILAR	**Eielson Array**	**43.10**	**36**	P		**P**	**17 48 18.6**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=264,slow=6.7,SNR=8.2							
MAKZ	**Makanchi**	**43.20**	**297**	P		**P**	**17 48 19.3**	**+0.5**
PRP	**Porcupine Dome**	**43.61**	**35**	P		**P**	**17 48 22.8**	**+0.9**
PRP				IAmb		IAmb	17 48 36.3	
	comp=Z,4.8nm,1.5s							
KURK	**Kurchatov**	**44.11**	**304**	P		**P**	**17 48 26.2**	**+0.2**
KURK				IAmb		IAmb	17 48 27.2	
	comp=Z,4.2nm,0.8s							
K27K	**Chicken**	**45.26**	**36**	P		**P**	**17 48 36.5**	**+1.6**
INK	**Inuvik**	**47.86**	**30**	P		**P**	**17 48 55.6**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=307,slow=5.1,SNR=1.2							
INK	**Inuvik**	**47.86**	**30**	P		**P**	**17 48 55.8**	**+0.7**
INK				IAmb		IAmb	17 49 01.6	
	comp=Z,11nm,1.6s							
BRVK	**Borovoye**	**48.28**	**309**	P		**P**	**17 48 59.2**	**+0.6**
BESE	**Bessie Mountai**	**50.01**	**42**	P		**P**	**17 49 09.3**	**-2.4**
KKAR	**Karatay Array**	**52.13**	**297**	P		**P**	**17 49 27.4**	**-0.2**
KKAR	**Karatay Array**	**52.13**	**297**	P		**P**	**17 49 27.9

baz=3.1
BBOO S Sn 18 03 42.9 -1.8
baz=3.1
MULG Mulgathing 4.50 278 P Pn 18 03 24.3 +0.5
baz=4.5
MULG S Sn 18 04 16.7 +0.5
baz=4.5
ASAR Alice Springs 8.71 326 Pn Pn 18 04 21.6 0.0
0.1nm,0.3s,baz=147,slow=12,SNR=12
ASAR Sn Sn 18 05 56.3 -3.7
0.1nm,0.3s,baz=150,slow=22,SNR=6.5
WRA Warramunga Arr 11.87 337 Pn Pn 18 05 04.2 -0.7
0.1nm,0.3s,baz=157,slow=12,SNR=4.5
WRA Sn Sn 18 07 08.7 -8.9
0.0nm,0.3s,baz=163,slow=24,SNR=1.5

*REY **15** 18:21:02.9, 64°.68N×17°.48W, h7km*
*IDC **15** 18:21:03.9±0.9, 64°.52N×17°.94W, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.6/41, mbtmp3.7/8, ML3.3/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/45, Error ellipse: s-maj=30.0km s-min=15.5km az=25.0*
*NEIC **15** 18:21:04.7±2.4, 64°.52N±0°.10×17°.7W±0°.1, h5km±3km, mb4.5/11, Error ellipse: s-maj=14.1km s-min=6.1km az=193.0*
ISC 15 18:21:05.4±0.5, 64°.63N±0°.03×17°.53W±0°.03, h10km, n54, σ2.936/56, mb4.0/11, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.11**	**294**	P		**Pg**	**18 21 05.4**	**-2.7**
	baz=268							
IVON				S		**Sg**	**18 21 07.6**	**-2.5**
	baz=268							
IDYN	**Dyngjuhals**	**0.18**	**24**	P		Pg	18 21 05.6	-3.6
	baz=23							
IDYN				S		**Sg**	**18 21 07.9**	**-4.0**
	baz=23							
IHAM	**Hamarinn**	**0.20**	**220**	P		**Pg**	**18 21 07.9**	**-1.6**
	baz=217							
IHAM				S		**Sg**	**18 21 11.3**	**-1.2**
	baz=217							
IGRF	**Grimsfjall**	**0.25**	**153**	P		**Pg**	**18 21 08.6**	**-2.0**
	baz=161							
IHUS	**Husbondi**	**0.34**	**189**	P		**Pg**	**18 21 10.0**	**-2.2**
	baz=191							
IKVE	**Kverkfjoll**	**0.37**	**82**	P		Pg	18 21 09.5	-3.3
	baz=90							
ISKR	**Skrokkalda**	**0.38**	**260**	P		**Pg**	**18 21 10.2**	**-2.6**
	baz=254							
IVOT	**Vottur**	**0.39**	**157**	P		**Pg**	**18 21 10.4**	**-2.7**
	baz=162							
IJOK	**Jokulheimar**	**0.44**	**224**	P		**Pg**	**18 21 11.7**	**-2.2**
	baz=222							
IJOK				S		**Sb**	**18 21 19.1**	**-2.6**
	baz=222							
THOR	**Thorvaldshraun**	**0.48**	**50**	P		Pg	18 21 10.7	-4.0
	baz=53							
THOR				S		**Sg**	**18 21 17.6**	**-3.4**
	baz=53							
IASK	**Askja**	**0.57**	**41**	P		Pg	18 21 12.1	-4.3
	baz=43							
IASK				S		**Sg**	**18 21 19.9**	**-3.9**
	baz=43							
IIEY	**Innrieyrar**	**0.60**	**206**	P		**Pg**	**18 21 14.2**	**-2.7**
	baz=206							
IMKO	**Mokollar**	**0.62**	**55**	P		Pg	18 21 13.2	-4.2
	baz=58							
IMKO				S		**Sg**	**18 21 21.9**	**-3.5**
	baz=58							
IKSK	**Karasker**	**0.66**	**135**	P		**Pg**	**18 21 14.4**	**-3.6**
	baz=139							
IKAL	**Kalfafell**	**0.69**	**186**	P		**Pg**	**18 21 15.8**	**-2.9**
	baz=187							
IKAL				S		**Sg**	**18 21 25.8**	**-1.9**
	baz=187							
ISVA	**Svartarkot**	**0.72**	**9**	P		Pg	18 21 14.8	-4.5
	baz=8.1							
ISVA				S		**Sg**	**18 21 24.1**	**-4.5**
	baz=8.1							
IVAT	**Vatnsfell**	**0.75**	**234**	P		**Pg**	**18 21 17.4**	**-2.4**
	baz=232							
IVSH	**V-Sauoahnukur**	**0.79**	**76**	P		Pg	18 21 16.0	-4.7
	baz=79							
IVSH				S		**Sg**	**18 21 26.4**	**-4.7**
	baz=79							
IADA	**Aoalbol**	**0.92**	**64**	P		Pg	18 21 18.1	-5.0
	baz=66							
ISNB	**Snabyli**	**1.02**	**209**	P		**Pg**	**18 21 21.5**	**-3.4**
	baz=209							
IREN	**Reynihlio**	**1.05**	**14**	P		Pb	18 21 20.3	-5.4
	baz=14							
IKVO	**Krokottuvotn**	**1.12**	**14**	P		Pb	18 21 21.4	-5.4
	baz=13							
BORG	**Borgarnes**	**1.64**	**276**	Pn		**Pn**	**18 21 30.5**	**-3.6**
	14nm,0.3s,baz=100,slow=6.5,SNR=83							
BORG				Sn		**Sb**	**18 21 54.6**	**-1.6**
	10nm,0.3s,baz=18,slow=22,SNR=11							
BORG	**Borgarnes**	**1.64**	**276**			**Pn**	**18 21 30.8**	**-3.4**
SCO	**Scoresbysund**	**6.12**	**346**			**Pn**	**18 22 33.9**	**-1.7**
SCO	**Scoresbysund**	**6.12**	**346**	*e*		Pn	18 22 27.4	-8.2
	baz=153,slow=7.4							
SCO					*i* P	**Pn**	**18 22 34.0**	**-1.7**
SCO					*e*S	**Sn**	**18 23 50.6**	**+5.1**
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn		**Pn**	**18 23 52.0**	**-0.7**
	baz=321,slow=13,SNR=8.9							
ESK	**Eskdalemuir**	**11.74**	**136**	Pn		**Pn**	**18 23 53.1**	**+0.4**
NBO00	**NORSAR Array S**	**13.36**	**93**	Pn		**Pn**	**18 24 16.8**	**+2.0**
FINES	**FINESS Array B**	**19.73**	**79**	P		**Pn**	**18 25 37.3**	**+1.2**
	0.1nm,0.3s,baz=273,slow=9.6,SNR=3.1							
CLL	**Collm**	**20.70**	**116**	*e*P		**P**	**18 25 46.0**	**+0.6**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P		**P**	**18 25 54.0**	**+1.0**
	9.6nm,1.1s							
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P		**P**	**18 26 08.2**	**+1.6**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P		**P**	**18 26 09.2**	**+1.7**
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**	**18 26 10.5**	**+1.0**
	1.0nm,0.9s,baz=344,slow=8.3,SNR=6.3							
GERES					LR	LR	18 35 10.1	
	comp=Z,33nm,19.4s,baz=288,slow=37							
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**	**18 26 09.6**	**0.0**
ESDC	**Sonseca Array**	**26.23**	**156**	P		**P**	**18 26 40.8**	**+0.6**
	1.5nm,0.9s,baz=349,slow=9.6,SNR=5.3							
ESDC					LR	LR	18 35 55.6	
	comp=Z,32nm,18.2s,baz=310,slow=34							
BR131	**Keskin Array S**	**38.48**	**105**	P		**P**	**18 28 29.2**	**+1.8**
BRTR	**Keskin Array B**	**38.48**	**105**	P		**P**	**18 28 28.9**	**+1.4**
	1.3nm,0.8s,baz=325,slow=6.2,SNR=6.7							
ABKAR	**Akbulak array**	**42.02**	**73**	P		**P**	**18 28 57.4**	**+1.0**
ABKAR	**Akbulak array**	**42.02**	**73**	P		**P**	**18 28 57.0**	**+0.6**
ABKAR					IAmb	IAmb	18 29 00.1	
	comp=Z,4.5nm,1.4s							
TIXI	**Tiksi**	**42.07**	**15**	P		**P**	**18 28 58.0**	**+1.4**
TIXI					IAmb	IAmb	18 28 59.2	
	comp=Z,3.0nm,0.8s							
EGAK	**Eagle**	**44.51**	**329**	P		**P**	**18 29 16.8**	**+0.5**
ILAR	**Eielson Array**	**45.71**	**332**	P		**P**	**18 29 26.8**	**+0.9**
	comp=Z,1.0nm,1.1s,baz=23,slow=5.2,SNR=6.5							
ILAR	**Eielson Array**	**45.71**	**332**	P		**P**	**18 29 27.7**	**+1.8**
IMAR	**Indian Mountai**	**45.89**	**337**	P		**P**	**18 29 28.7**	**+1.5**
KURK	**Kurchatov**	**48.14**	**58**	P		**P**	**18 29 45.2**	**+0.1**
KURK					IAmb	IAmb	18 29 46.8	
	comp=Z,3.6nm,1.1s							
EGMT	**Eagleton**	**48.88**	**297**	P		**P**	**18 29 53.1**	**+2.3**
TORD	**Torodi Ar. Bea**	**53.11**	**156**	P		**P**	**18 30 22.6**	**-0.3**
	comp=Z,2.0nm,1.1s,baz=343,slow=3.1,SNR=5.6							
TORD	**Torodi Ar. Bea**	**53.11**	**156**	P		**P**	**18 30 22.5**	**-0.4**
GAR	**Garm**	**54.67**	**73**	P		**P**	**18 30 35.3**	**+1.0**
GAR					IAmb	IAmb	18 30 36.8	
	comp=Z,9.0nm,1.0s							
T25A	**Trinidad**	**55.86**	**285**	P		**P**	**18 30 41.9**	**-1.1**
T25A					IAmb	IAmb	18 30 45.9	
	comp=Z,7.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**84.16**	**59**	P		**P**	**18 33 36.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=331,slow=5.6,SNR=4.1							
CMAR	**Chiang Mai Arr**	**84.16**	**59**	P		**P**	**18 33 37.0**	**+0.4**

*IDC **15** 18:22:41.9±0.5, 57°.97S×25°.50W, h50km±4km, mb4.4/12, mb1 4.5/13, mb1mx4.4/19, mbtmp4.7/13, MS3.7/9, Ms1 3.7/9, ms1mx3.5/21, Error ellipse: s-maj=18.1km s-min=12.5km az=64.0*
*NEIC **15** 18:22:42.3±1.4, 58°.02S±0°.09×25°.4W±0°.2, h56km±4km, mb5.0/46, Error ellipse: s-maj=13.1km s-min=11.8km az=47.0*

*BJI **15** 18:22:43.0±0.0, 58°.00S×25°.40W, h60km, mB5.3/1*
ISC 15 18:22:41.8±0.3, 58°.00S±0°.06×25°.38W±0°.07, h49km, n205, σ0.993/208, mb5.0/32, MS3.7/9, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.23**	**296**	Pn		**Pn**	**18 24 26.6**	**+1.9**
VNA1	**Neumayer--Stat**	**14.61**	**157**	P		**Pn**	**18 26 04.4**	**-0.8**
VNA3	**Neumayer Olymp**	**14.82**	**160**	P		**Pn**	**18 26 07.1**	**-0.9**
VNA2	**Neumayer--Watz**	**15.01**	**157**	P		**Pn**	**18 26 10.4**	**+0.1**
	baz=324,slow=14							
SNAA	**Sanae**	**16.56**	**155**	P		**Pn**	**18 26 30.6**	**+0.5**
SNAA	**Sanae**	**16.56**	**155**	P		**Pn**	**18 26 30.7**	**+0.5**
	4.6nm,0.3s,baz=325,slow=14,SNR=107							
SNAA				S		Sn	18 29 18.2	-14
	0.2nm,0.3s,baz=336,slow=19,SNR=2.1							
SNAA	**Sanae**	**16.56**	**155**			**Pn**	**18 26 30.6**	**+0.5**
PMSA	**Palmer Station**	**19.45**	**234**			**Pn**	**18 27 05.5**	**+0.1**
PMSA	**Palmer Station**	**19.45**	**234**	*e*P		**Pn**	**18 27 06.1**	**+0.8**
EFI	**East Falkland**	**19.71**	**275**			**P**	**18 27 07.1**	**+0.3**
BELA	**Belgrano 2**	**20.22**	**186**	P		**P**	**18 27 11.6**	**-0.5**
USHA	**Ushuaia**	**23.72**	**259**	PcP		**PcP**	**18 31 29.7**	**-1.7**
	12nm,0.3s,baz=90,slow=6.1,SNR=2.7							
QSPA	**South Pole Qui**	**32.25**	**180**	P		**P**	**18 29 06.3**	**+1.1**
	14nm,0.5s,baz=214,slow=1.3,SNR=196							
QSPA					PcP	**PcP**	**18 31 51.6**	**-0.7**
	1.9nm,0.6s,baz=145,slow=3.8,SNR=2.9							
QSPA	**South Pole Qui**	**32.25**	**180**	P		**P**	**18 29 05.9**	**+0.7**
QSPA					IAmb	IAmb	18 29 06.6	
	comp=Z,18nm,0.7s							
PLTB	**Pedras Altas**	**32.53**	**311**	*e*P		**P**	**18 29 07.0**	**-0.8**
PLCA	**Paso Flores**	**33.34**	**281**	P		**P**	**18 29 14.3**	**-0.5**
	comp=Z,3.1nm,0.7s,baz=138,slow=9.3,SNR=6.4							
PLCA					LR	LR	18 42 34.5	
	comp=Z,101nm,18.1s,baz=152,slow=36							
PLCA	**Paso Flores**	**33.34**	**281**	P		**P**	**18 29 14.3**	**-0.5**
PLCA	**Paso Flores**	**33.34**	**281**	*e*P		**P**	**18 29 14.6**	**-0.3**
CPSB	**Cacapava Do Su**	**33.67**	**313**	*e*P		**P**	**18 29 16.9**	**-0.8**
CNLB	**Canela**	**33.68**	**317**	*e*P		**P**	**18 29 17.7**	**-0.2**
ITQB	**Itaqui**	**35.60**	**309**	*e*P		**P**	**18 29 33.4**	**-0.9**
ITAB	**Concordia**	**36.03**	**317**	*e*P		**P**	**18 29 38.2**	**+0.1**
SPB	**Sao Paulo**	**37.85**	**326**	*e*P		**P**	**18 29 53.5**	**-0.1**
MAW	**Mawson**	**38.00**	**142**	P		**P**	**18 29 54.6**	**+0.3**
	comp=Z,4.3nm,0.5s,baz=227,slow=7.8,SNR=17							
MAW					LR	LR	18 43 17.8	
	comp=Z,102nm,20.4s,baz=254,slow=32							
MAW	**Mawson**	**38.00**	**142**	P		**P**	**18 29 54.7**	**+0.4**
VAO	**Valinhos**	**38.27**	**327**	*e*P		**P**	**18 29 57.3**	**+0.2**
CPUP	**Villa Florida**	**38.84**	**311**	P		**P**	**18 30 00.2**	**-1.7**
	comp=Z,1.3nm,0.4s,baz=162,slow=8.1,SNR=6.6							
CPUP					PcP	**PcP**	**18 32 12.1**	**0.0**
	comp=Z,1.8nm,0.7s,baz=160,slow=6.7,SNR=3.4							
CPUP					LR	LR	18 44 48.4	
	comp=Z,58nm,19.8s,baz=197,slow=34							
CPUP	**Villa Florida**	**38.84**	**311**	P		**P**	**18 30 01.6**	**-0.2**
CPUP	**Villa Florida**	**38.84**	**311**	*e*P		**P**	**18 30 00.4**	**-1.5**
MT02	**Curacav**	**39.35**	**289**	P		**P**	**18 30 06.4**	**+0.3**
MT02					IAmb	IAmb	18 30 21.5	
	comp=Z,52nm,1.5s							
BSCB	**Bom Sucesso**	**39.57**	**331**	*e*P		**P**	**18 30 08.4**	**+0.4**
BB19B	**Bebedouro**	**40.55**	**326**	*e*P		**P**	**18 30 16.8**	**+0.6**
SJMB	**Sao Joao De Ma**	**40.93**	**337**	*e*P		**P**	**18 30 20.1**	**+0.8**
CO01	**Juntas del Tor**	**41.48**	**293**	P		**P**	**18 30 24.3**	**+0.2**
ITRB	**Iturama**	**42.40**	**324**	*e*P		**P**	**18 30 32.0**	**+0.7**
AC05	**El Transito**	**42.51**	**294**	P		**P**	**18 30 31.6**	**-0.7**
IPMB	**Ipaneri, GO**	**43.38**	**327**	*e*P		**P**	**18 30 39.5**	**+0.3**
VNDA	**Vanda**	**44.67**	**182**	P		**P**	**18 30 50.3**	**+1.4**
	comp=Z,13nm,0.7s,baz=186,slow=6.6,SNR=136							
VNDA					LR	LR	18 47 54.5	
	comp=Z,50nm,21.3s,baz=207,slow=34							
VNDA	**Vanda**	**44.67**	**182**	P		**P**	**18 30 50.2**	**+1.3**
VNDA					IAmb	IAmb	18 30 51.3	
	comp=Z,15nm,0.7s							
JANB	**Januaria**	**45.16**	**334**	*e*P		**P**	**18 30 53.7**	**+0.2**
GO02	**Mina Guanaco**	**45.27**	**297**	P		**P**	**18 30 53.9**	**-0.7**
GO02					IAmb	IAmb	18 31 29.6	
	comp=Z,15nm,1.3s							
BDFB	**Brasilia**	**45.55**	**329**	P		**P**	**18 30 57.1**	**+0.4**
	comp=Z,7.1nm,0.6s,baz=142,slow=6.4,SNR=8.5							
BDFB	**Brasilia**	**45.55**	**329**	P		**P**	**18 30 57.0**	**+0.4**
BDFB					IAmb	IAmb	18 31 08.8	
	comp=Z,66nm,2.0s							
BOSA	**Boshof**	**45.55**	**72**	P		**P**	**18 30 56.4**	**-0.3**
	comp=Z,5.0nm,0.6s,baz=220,slow=7.5,SNR=9.4							
BOSA					LR	LR	18 45 27.6	
	comp=Z,123nm,20.7s,baz=223,slow=30							
BOSA	**Boshof**	**45.55**	**72**	P		**P**	**18 30 56.6**	**0.0**
ARAG	**Araguaiana, MT**	**46.61**	**324**	*e*P		**P**	**18 31 05.2**	**+0.3**
LVC	**Limon Verde**	**47.13**	**300**	P		**P**	**18 31 08.8**	**-0.6**
PB06	**IPOC Station P**	**47.36**	**299**	P		**P**	**18 31 10.0**	**-0.8**
PB06					IAmb	IAmb	18 31 10.7	
	comp=Z,19nm,1.2s							
SDBA	**SAO DESIDERIO**	**47.85**	**334**	*e*P		**P**	**18 31 15.1**	**+0.5**
PB07	**IPOC Station P**	**48.35**	**299**	P		**P**	**18 31 16.0**	**-2.5**
PB07					IAmb	IAmb	18 31 23.7	
	comp=Z,14nm,0.5s							
LBTB	**Lobatse**	**48.69**	**70**	P		**P**	**18 31 21.4**	**+0.3**
LBTB					IAmb	IAmb	18 31 27.2	
	comp=Z,34nm,1.8s							
PEXB	**Peixe**	**49.00**	**330**	*e*P		**P**	**18 31 24.2**	**+0.9**
PTLB	**Pontes e Lacer**	**49.38**	**315**	*e*P		**P**	**18 31 24.8**	**-1.4**
H10S2	**ASCENSION HYDR**	**49.62**	**14**	T		T	19 26 00.6	
	baz=187,slow=74,SNR=13							
H10S3	**ASCENSION HYDR**	**49.62**	**14**	T		T	19 26 01.0	
	baz=33,slow=74,SNR=64							
TSUM	**Tsumeb**	**49.83**	**57**	P		**P**	**18 31 31.0**	**+1.1**
TSUM					IAmb	IAmb	18 31 50.3	
	comp=Z,27nm,1.6s							
PB11	**IPOC Station P**	**49.94**	**301**	P		**P**	**18 31 30.3**	**-0.5**
PB11					IAmb	IAmb	18 31 33.6	
	comp=Z,24nm,1.0s							
SNDB	**Serra Nova Dou**	**49.97**	**326**	*e*P		**P**	**18 31 31.4**	**+0.6**
MNMC	**Minye Minye**	**50.46**	**301**	P		**P**	**18 31 34.8**	**0.0**
H10N1	**ASCENSION HYDR**	**50.74**	**14**	T		T	19 27 26.2	
	baz=187,slow=75,SNR=9.6							
H10N3	**ASCENSION HYDR**	**50.74**	**14**	T		T	19 27 25.0	
	baz=187,slow=75,SNR=15							
H10N2	**ASCENSION HYDR**	**50.75**	**14**	T		T	19 27 25.8	
	baz=187,slow=75,SNR=59							
CASY	**Casey**	**51.73**	**159**	P		**P**	**18 31 44.4**	**+1.0**
CASY					IAmb	IAmb	18 31 54.2	
	comp=Z,30nm,1.4s							
SMTB	**Santa Maria do**	**51.92**	**332**	*e*P		**P**	**18 31 45.9**	**+0.5**
VILB	**Vilhena**	**52.07**	**315**	*e*P		**P**	**18 31 45.7**	**-0.9**
LPAZ	**La Paz**	**52.30**	**305**	P		**P**	**18 31 48.0**	**-1.0**
	comp=Z,3.3nm,0.6s,baz=172,slow=6.1,SNR=16							
LPAZ	**La Paz**	**52.30**	**305**	P		**P**	**18 31 48.0**	**-1.0**
LPAZ	**La Paz**	**52.30**	**305**	*e*P		**P**	**18 31 48.0**	**-1.0**
CLDB	**Colider**	**52.43**	**321**	*e*P		**P**	**18 31 47.7**	**-1.5**
RCBR	**Riachuelo**	**52.68**	**347**	P		**P**	**18 31 52.8**	**+1.7**
RCBR					IAmb	IAmb	18 32 01.9	
	comp=Z,39nm,1.6s							
RCBR	**Riachuelo**	**52.68**	**347**	*e*P		**P**	**18 31 51.5**	**+0.4**
PRPB	**Parauapebas**	**55.08**	**330**	*e*P		**P**	**18 32 09.0**	**+0.4**
NPGB	**Novo Progresso**	**55.88**	**323**	*e*P		**P**	**18 32 13.7**	**-0.6**
SAML	**Samuel**	**56.87**	**314**	P		**P**	**18 32 20.3**	**-1.1**
SAML					IAmb	IAmb	18 32 21.8	
	comp=Z,8.1nm,0.8s							
SAML	**Samuel**	**56.87**	**314**	*e*P		**P**	**18 32 20.3**	**-1.1**
ROSB	**Rosrio**	**56.90**	**337**	*e*P		**P**	**18 32 22.1**	**+0.5**
ETMB	**Extrema**	**57.28**	**310**	*e*P		**P**	**18 32 24.2**	**-0.1**
LSZ	**Lusaka**	**58.21**	**66**	P		**P**	**18 32 30.5**	**-0.5**
LSZ					IAmb	IAmb	18 32 31.4	
	comp=Z,8.4nm,0.9s							
ITTB	**Itaituba**	**58.52**	**324**	*e*P		**P**	**18 32 32.5**	**-0.4**
MALB	**Monte Alegre**	**60.45**	**326**	*e*P		**P**	**18 32 46.4**	**+0.2**
MCPB	**Macapa, AP**	**61.24**	**329**	*e*P		**P**	**18 32 52.6**	**+1.0**
MACA	**Manacapuru-AM**	**61.29**	**319**	*e*P		**P**	**18 32 52.2**	**+0.2**
LIC	**Lamto**	**66.09**	**22**	*e*P		**P**	**18 33 23.8**	**+0.3**
	comp=Z,56nm,0.8s							
KIC	**Kosan Boka**	**66.28**	**22**	*e*P		**P**	**18 33 24.9**	**+0.2**
	comp=Z,36nm,0.9s							
TIC	**Toumodi**	**66.50**	**22**	*e*P		**P**	**18 33 26.3**	**+0.1**
DBIC	**Dimbokro**	**66.56**	**22**	P		**P**	**18 33 27.1**	**+0.6**
	comp=Z,11nm,0.7s,baz=161,slow=8.4,SNR=18							
DBIC					pP	**pP**	**18 33 41.2**	**+2.0**
	comp=Z,5.5nm,0.7s,baz=157,slow=6.1,SNR=4.3							
DBIC					LR	LR	18 55 07.8	
	comp=Z,55nm,21.9s,baz=138,slow=29							
DBIC	**Dimbokro**	**66.56**	**22**	P		**P**	**18 33 26.3**	**-0.2**
DBIC					IAmb	IAmb	18 33 27.6	
	comp=Z,12nm,0.8s							
TOA0	**Torodi Ar. Sit**	**74.30**	**27**	P		**P**	**18 34 14.2**	**+0.5**
TOA0					IAmb	IAmb	18 34 15.1	
	comp=Z,22nm,1.1s							
TORD	**Torodi Ar. Bea**	**74.30**	**27**	P		**P**	**18 34 14.2**	**+0.6**
	comp=Z,11nm,0.6s,baz=200,slow=6.4,SNR=74							
TORD					LR	LR	19 00 13.3	
	comp=Z,58nm,20.6s,baz=310,slow=30							
TORD	**Torodi Ar. Bea**	**74.30**	**27**	P		**P**	**18 34 14.1**	**+0.4**
KOWA	**Kowa**	**74.35**	**21**	P		**P**	**18 34 14.5**	**+0.6**
KOWA					IAmb	IAmb	18 34 15.2	
	comp=Z,6.1nm,0.7s							
KMBO	**Kilima Mbogo**	**74.85**	**67**	LR		LR	19 03 23.6	
	comp=Z,60nm,20.9s,baz=95,slow=33							
WHZ	**Wether Hill Ro**	**75.89**	**190**	P		**P**	**18 34 23.7**	**+1.1**
SDV	**Santo Domingo**	**76.08**	**314**	*e*P		**P**	**18 34 24.6**	**+0.4**
MLZ	**Mavora Lakes**	**76.39**	**190**	P		**P**	**18 34 25.9**	**+0.5**
TAU	**Tasmania Unive**	**79.27**	**175**	P		**P**	**18 34 41.5**	**0.0**
THZ	**Tophouse**	**79.44**	**194**	P		**P**	**18 34 42.9**	**+0.4**
BHW	**Baring Head**	**79.52**	**195**	P		**P**	**18 34 43.7**	**+0.9**
NNZ	**Nelson**	**79.91**	**194**	P		**P**	**18 34 44.9**	**0.0**
QRZ	**Quartz Range**	**80.41**	**194**	P		**P**	**18 34 46.1**	**-1.6**
BKZ	**Black Stump Fm**	**81.48**	**197**	P		**P**	**18 34 54.0**	**+0.5**
PDPR	**Patillas Dam,**	**82.86**	**321**	P		**P**	**18 34 59.6**	**-1.0**
PDPR					IAmb	IAmb	18 35 02.5	
	comp=Z,13nm,1.1s							
CUPR	**Culebra, Puert**	**82.89**	**322**	P		**P**	**18 35 00.0**	**-0.7**
CUPR					IAmb	IAmb	18 35 00.6	
	comp=Z,26nm,1.0s							
CBYP	**Canovanas**	**83.04**	**322**	P		**P**	**18 35 01.4**	**-0.2**
CBYP					IAmb	IAmb	18 35 01.5	
	comp=Z,11nm,0.7s							
CRPR	**Cabo Rojo, PR**	**83.22**	**320**	P		**P**	**18 35 01.4**	**-1.1**
NWAO	**Narrogin (SRO)**	**84.14**	**149**	P		**P**	**18 35 06.8**	**-0.5**
NWAO					IAmb	IAmb	18 35 08.7	
	comp=Z,53nm,1.9s							
TOO	**Toolangi**	**84.48**	**173**	P		**P**	**18 35 08.7**	**-0.3**
TOO					IAmb	IAmb	18 35 20.7	
	comp=Z,8.9nm,1.1s							
STKA	**Stephens Creek**	**89.81**	**169**	P		**P**	**18 35 34.7**	**-0.2**
	comp=Z,3.4nm,0.9s,baz=150,slow=13,SNR=5.6							
PPT	**Papeete**	**91.81**	**232**	LR		LR	19 07 28.7	
	comp=Z,63nm,20.9s,baz=206,slow=29							
ASAR	**Alice Springs**	**96.83**	**161**	P		**P**	**18 36 06.5**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=181,slow=4.1,SNR=41							
ASAR					pP	**pP**	**18 36 21.4**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=186,slow=3.8,SNR=4.3							
ASAR	**Alice Springs**	**96.83**	**161**	P		**P**	**18 36 06.4**	**-0.9**
AS31	**Alice Springs**	**96.83**	**161**	P		**P**	**18 36 06.4**	**-0.9**
WRA	**Warramunga Arr**	**100.54**	**161**	P		**Pdif**	**18 36 22.6**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=196,slow=4.3,SNR=5.1							
SDCO	**Great Sand Dun**	**116.33**	**299**	P		**PKiKP**	**18 41 19.5**	**+0.1**
	baz=144							
S22A	**4UR Ranch, Cre**	**116.95**	**298**	P		**PKiKP**	**18 41 21.2**	**+0.7**
	baz=144							
ISCO	**Idaho Springs**	**118.04**	**301**	P		**PKiKP**	**18 41 23.1**	**+0.5**
	baz=144							
GMRC	**Granite Mounta**	**118.87**	**290**	P		**PKPdf**	**18 41 23.9**	**-0.2**
	baz=143							
O20A	**White River Ci**	**119.52**	**299**	P		**PKiKP**	**18 41 25.2**	**-0.1**
	baz=143							
MSU	**Marysvale**	**120.10**	**295**	PKPdf		**PKiKP**	**18 41 26.9**	**+0.3**
EDW2	**Edwards Air Fo**	**120.12**	**288**	P		**PKiKP**	**18 41 26.8**	**+0.3**
	baz=142							
RWWY	**Rawlins**	**120.28**	**301**			**PKPdf**	**18 41 26.0**	**-0.8**
RSSD	**Black Hills**	**120.78**	**305**	P		**PKPdf**	**18 41 27.1**	**-0.5**
	baz=143							
MPMC	**Manual Prospec**	**120.79**	**290**	P		**PKiKP**	**18 41 28.6**	**+0.7**
	baz=142							
TPNV	**Topopah Spring**	**120.87**	**291**	P		**PKiKP**	**18 41 28.2**	**+0.1**
	baz=142							
CWC	**Cottonwood Cre**	**121.39**	**289**	P		**PKiKP**	**18 41 29.4**	**+0.3**
	baz=142							
R11A	**Troy Canyon, C**	**121.63**	**293**	P		**PKiKP**	**18 41 29.8**	**+0.2**
	baz=141							
DUG	**Dugway, Tooele**	**121.73**	**296**	P		**PKiKP**	**18 41 29.8**	**+0.2**
	baz=141							

JNU	**Nakatse**	**150.39**	**137**			**PKPbc**	18 42 25.8	**-1.3**
TLY	**Talaya**	**150.59**	**80**	PKPbc		**PKiKP**	18 42 27.2	**-0.4**
	comp=Z,5.7nm,0.6s,baz=246,slow=5.8,SNR=7.5							
TLY	**Talaya**	**150.59**	**80**			**PKPbc**	18 42 26.6	**-0.3**
SCRK	**Sand Creek**	**150.70**	**308**	P		**PKiKP**	18 42 27.9	**+0.3**
	baz=107							
M24K	**Tolsona, Glenn**	**151.07**	**303**	P		**PKPdf**	18 42 23.1	**+1.1**
	baz=109							
M24K	**Tolsona, Glenn**	**151.07**	**303**	PKPdf		**PKPdf**	18 42 21.6	**-0.3**
HDA	**Harding Lake**	**152.07**	**308**	P		**PKPbc**	18 42 29.9	**0.0**
	baz=104							
ILAR	**Eielson Array**	**152.13**	**309**	PKPbc		**PKPbc**	18 42 29.6	**-0.4**
	comp=Z,20nm,0.8s,baz=141,slow=2.4,SNR=94							
ILAR				pPKPbc		**pPKPbc**	18 42 45.0	**+1.3**
	comp=Z,30nm,0.9s,baz=141,slow=1.9,SNR=17							
GHO	**Glory Hole Cre**	**152.19**	**302**			**PKPdf**	18 42 24.2	**+0.6**
RC01	**Rabbit Creek A**	**152.35**	**300**	P		**PKiKP**	18 42 31.3	**+0.4**
	baz=109							
COLA	**College**	**152.56**	**309**			**PKPbc**	18 42 30.2	**-0.7**
TCOL	**CIGO, UAF Yank**	**152.56**	**309**	P		**PKPbc**	18 42 30.7	**-0.3**
	baz=103							
WRH	**Wood River Hil**	**152.56**	**308**			**PKPbc**	18 42 30.8	**-0.2**
MCK	**McKinley**	**152.75**	**306**	P		**PKiKP**	18 42 32.1	**+0.4**
	baz=104							
CUT	**Chulitna**	**152.99**	**303**	P		**PKiKP**	18 42 32.5	**+0.4**
	baz=106							
NEA2	**Nenana**	**153.00**	**308**	P		**PKiKP**	18 42 32.0	**-0.2**
	baz=103							
KSRS	**Korea Array**	**153.02**	**128**	PKPbc		**PKPbc**	18 42 32.5	**-0.4**
	comp=Z,1.4nm,0.6s,baz=170,slow=2.6,SNR=8.2							
KSRS				PKPab		**PKPab**	18 42 44.2	**-0.2**
	comp=Z,1.4nm,0.8s,baz=231,slow=3.3,SNR=5.4							
I23K	**Minto, Yukon-K**	**153.24**	**309**	P		**PKPbc**	18 42 32.2	**-0.3**
	baz=101							
MLY	**Manley**	**153.79**	**308**	P		**PKiKP**	18 42 34.3	**+0.4**
	baz=100							
TOLK	**Toolik Lake Re**	**153.79**	**317**	P		**PKiKP**	18 42 33.7	**-0.1**
	baz=94							
COLD	**Coldfoot**	**153.90**	**313**	P		**PKiKP**	18 42 34.7	**+0.8**
	baz=96							
PPLA	**Purkeypile**	**153.97**	**303**			**PKPbc**	18 42 34.1	**-0.2**
IMAR	**Indian Mountai**	**155.17**	**310**			**PKPdf**	18 42 35.1	**+7.5**
IMAR						**PKPab**	18 42 51.7	**-1.2**
MJAR	**Matsushiro Arr**	**155.95**	**146**	PKPab		**PKPab**	18 42 57.2	**+0.2**
	comp=Z,1.3nm,0.7s,baz=166,slow=5.7,SNR=4.9							
CN2	**Changchun**	**157.00**	**115**	*e*PKP		**PKPdf**	18 42 34.3	**+3.5**
KLR	**Kul'dur**	**163.91**	**113**	PKPab		**PKPab**	18 43 30.8	**-0.6**
	comp=Z,1.8nm,0.8s,baz=254,slow=5.3,SNR=5.2							

IDC 15 18:27:10.0±2.2,1°**81.N**×**126°53.6E**,**h0**km,**mb3.2**/3,
mb1 3.4/3,**mb1mx3.2**/32,**mbtmp3.2**/3,**Error ellipse: s-maj=181.5km s-min=26.5km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.93**	**161**	P	P	18 32 14.3	-1.7
	0.3nm,0.3s,baz=339,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**26.32**	**165**	P	P	18 32 49.1	+1.4
	0.2nm,0.4s,baz=347,slow=12,SNR=7.8						
MKAR	**Makanchi Array**	**59.02**	**326**	P	P	18 37 11.5	-0.3
	0.1nm,0.4s,baz=115,slow=8.4,SNR=4.6						

*IDC **15** 18:28:15.5*±*1.9,1°.95*N*×126°.42E,h0km,mb3.6/3,*
mb1 3.7/4,mb1mx3.4/33,mbtmp3.5/4,ML3.3/1,MS3.1/1,
Ms1 3.1/1,ms1mx2.4/28,Error ellipse: s-maj=117.3km
s-min=24.2km az=69.0
*DJA **15** 18:28:21.1*±*0.3,2°.N*±*4*×*12°.7E*±*°,h10km,M3.6/7,MLv3.6/7*
ISC 15 18:28:22.6±1.2,1°**.92N**±0°.09×**126°.66E**±0°.09,**h47**km,**n10**,
σ1§**41**/10,**mb3.6**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**148**	P	**Pn**	**18 28 45.1**	**+0.2**
TNTI				S	**Sn**	**18 29 04.0**	**+2.4**
SGSI	**Sangihe**	**2.09**	**327**	P	**Pn**	**18 28 56.5**	**+1.4**
KMSI	**Cibinong**	**3.00**	**243**	P	**Pn**	**18 29 08.0**	**+0.4**
GTOI	**Gorontalo**	**3.87**	**251**	P	**Pn**	**18 29 20.5**	**+1.0**
MRSI	**Marisa**	**4.93**	**253**	P	**Pn**	**18 29 34.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.92**	**183**	P	**P**	**18 32 49.3**	**-1.2**
	0.1nm,0.3s,baz=0.0,slow=9.1,SNR=2.9						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**18 33 22.8**	**-0.8**
	1.8nm,0.7s,baz=339,slow=11,SNR=14						
KRVT	**Keravat (AS076**	**26.09**	**104**	LR	LR	18 42 28.1	
	comp=Z,44nm,20.9s,baz=275,slow=32						
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**18 33 55.0**	**+0.1**
	0.7nm,0.6s,baz=345,slow=9.2,SNR=10						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**18 38 15.9**	**-1.6**
	0.4nm,0.5s,baz=120,slow=8.9,SNR=5.6						

IDC 15 18:33:41.5±9.2,**22°.57N**×**144°.07E**,**h0**km,**mb3.3**/4,
mb1 3.5/4,**mb1mx3.2**/43,**mbtmp3.3**/4,**Error ellipse: s-maj=337.0km s-min=25.4km az=73.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.34**	**320**	P	P	18 38 18.2	-1.1
	0.6nm,0.6s,baz=133,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**43.30**	**193**	P	P	18 41 45.5	+0.3
	0.2nm,0.4s,baz=16,slow=9.1,SNR=6.6						
ASAR	**Alice Springs**	**47.01**	**193**	P	P	18 42 13.9	-0.7
	0.2nm,0.6s,baz=16,slow=8.4,SNR=5.8						
MKAR	**Makanchi Array**	**54.72**	**312**	P	P	18 43 13.2	+0.6
	0.2nm,0.6s,baz=84,slow=8.5,SNR=2.5						

*ISK **15** 18:40:59.5,39°.92N×40°.66E,h1km,ML1.9/7,Suspected*
Mining explosion.
*DDA **15** 18:40:59.7,39°.87N×40°.63E,h7km,*±*2km,ML1.9*
*ATA **15** 18:40:59.9*±*1.1,39°.96N×40°.66E,h15km,*±*12km,ML2.2,*
MW3.2
ISC 15 18:40:59.3±0.8,**39°.87N**±0°.03×**40°.72E**±0°.03,**h0**km,**n25**,
σ0§**70**/37,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	**0.23**	**311**	*e*P	**Pg**	**18 41 04.3**	**+0.6**
KOPT	**Kop Dagi**	**0.23**	**311**	*i*P	**Pg**	**18 41 03.8**	**0.0**
KOPT				*i*S	**Sg**	**18 41 07.0**	**+0.3**
KOPT				IAML		18 41 08.0	
	comp=E,322nm,0.2s						
KOPT				IAML		18 41 09.0	
	comp=N,402nm,0.3s						
EMRE	**Erzurum,Aziziy**	**0.26**	**50**	*e*P	**Pb**	**18 41 06.1**	**-0.9**
EMRE	**Erzurum,Aziziy**	**0.26**	**50**	*i*P	**Pb**	**18 41 05.7**	**-1.2**
EMRE				*i*S	**Sb**	**18 41 10.8**	**-1.2**
EMRE				IAML		18 41 14.0	
	comp=N,301nm,0.8s						
EMRE				IAML		18 41 14.0	
	comp=E,248nm,0.5s						
YEDI	**Yedisu-Bingol**	**0.45**	**198**	PG	**Pb**	**18 41 09.9**	**-0.3**
YEDI				SG	**Sb**	**18 41 17.8**	**+0.3**
KRIK	**Erzurum-spir**	**0.50**	**18**	*e*P	**Pg**	**18 41 09.7**	**+0.9**
KRIK				*e*S	**Sg**	**18 41 15.5**	**+0.2**
KRIK				IAML		18 41 21.7	
	comp=E,2μm,0.3s						
KRIK	**Erzurum-spir**	**0.50**	**18**	*i*P	**Pg**	**18 41 10.1**	**+1.3**
KRIK				*i*S	**Sg**	**18 41 17.4**	**+2.1**
BAYB	**BAYBURT**	**0.53**	**318**	*e*P	**Pg**	**18 41 09.6**	**+0.1**
BAYB				*e*S	**Sg**	**18 41 16.8**	**+0.4**
BAYB				IAML		18 41 20.7	
	comp=N,53nm,0.4s						
BAYB	**BAYBURT**	**0.53**	**318**	*i*P	**Pg**	**18 41 09.5**	**+0.1**
BAYB				*i*S	**Sg**	**18 41 17.1**	**+0.8**
BAYB				IAML		18 41 20.0	
	comp=N,52nm,0.4s						
BAYT	**Aydıntepe-Bayb**	**0.69**	**320**	PG	**Pg**	**18 41 12.7**	**+0.2**
BAYT				SG	**Sg**	**18 41 21.9**	**+0.4**
EUZM	**Uzumlu**	**0.81**	**259**	*e*P	**Pg**	**18 41 15.0**	**+0.3**
EUZM	**Uzumlu**	**0.81**	**259**	*i*P	**Pg**	**18 41 14.3**	**-0.5**
ERZN	**Erzincan**	**0.82**	**250**	PG	**Pb**	**18 41 16.3**	**-0.2**
BNGB	**Bingl**	**0.88**	**182**	PG	**Pn**	**18 41 18.1**	**-0.9**
VRTB	**Varto-Mus**	**0.91**	**141**	PG	**Pn**	**18 41 19.3**	**-0.1**
HOMI	**Horasan**	**0.93**	**79**	*i*P	**Pb**	**18 41 18.6**	**+0.1**
HOMI				*i*S	**Sn**	**18 41 33.9**	**-0.1**
KELT	**Kelkit**	**1.16**	**285**	*e*P	**Pg**	**18 41 21.0**	**-0.6**
KELT				*e*S	**Sg**	**18 41 37.5**	**+0.9**
KELT				IAML		18 41 38.8	
	comp=N,9.5nm,0.3s						
KELT	**Kelkit**	**1.16**	**285**	*i*P	**Pg**	**18 41 21.7**	**+0.1**
KELT				*i*S	**Sg**	**18 41 36.4**	**-0.2**
KELT				IAML		18 41 43.0	
	comp=E,13nm,0.4s						
TNCL	**Tunceli-Merkez**	**1.18**	**231**	*e*P	**Pn**	**18 41 23.4**	**+0.2**
TNCL	**Tunceli-Merkez**	**1.18**	**231**	*i*P	**Pb**	**18 41 22.7**	**0.0**
CHOM	**Cayeli-Rize**	**1.23**	**1**	PN	**Pg**	**18 41 22.6**	**-0.3**
CHOM				SN	**Sb**	**18 41 40.6**	**+0.7**
MACK	**Trabzon**	**1.30**	**326**	*i*P	**Pg**	**18 41 23.8**	**-0.5**
DBAD	**Bademkaya**	**1.37**	**33**	*i*P	**Pg**	**18 41 24.8**	**-0.8**
DAGI	**Agillar**	**1.51**	**37**	*i*P	**Pn**	**18 41 27.9**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.75**	**168**	PN	**Pg**	**18 41 33.5**	**+0.6**

*NEIC **15** 18:45:27.1*±*2.1,22°.6S*±*0°.2×170°.8E*±*0°.1,h28km*±*5km,*
mb4.1/6,Error ellipse: s-maj=32.5km s-min=10.7km
az=161.0
*IDC **15** 18:45:38.0*±*5.6,20°.85S×169°.76E,h67km*±*48km,mb3.7/5,*
mb1 3.9/6,mb1mx3.5/36,mbtmp3.9/6,ML2.6/1,MS3.4/5,
Ms1 3.4/5,ms1mx3.0/32,Error ellipse: s-maj=173.3km
s-min=37.7km az=153.0
ISC 15 18:45:28.5±1.2,**22°.5S**±0°.2×**170°.69E**±0°.09,**h35**km,**n19**,
σ1§**03**/17,**mb4.2**/7,**MS3.5**/5,**Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.95**	**275**	P	**Pn**	**18 46 27.5**	**+0.7**
	0.6nm,0.3s,baz=104,slow=12,SNR=27						
DZM				S	**Sn**	**18 47 09.7**	**-2.2**
	4.2nm,0.3s,baz=113,slow=15,SNR=4.1						
DZM				LR	LR	18 47 11.0	
	comp=Z,216nm,21.4s,baz=30,slow=28						
DZM	**Mont Dzumac**	**3.95**	**275**	*e*Pn	**Pn**	**18 46 27.5**	**+0.7**
	8.0nm,0.3s						
DZM				*e*Sn	**Sn**	**18 47 12.1**	**+0.2**
	12nm,0.2s						
DZM				*e*LR	LR	18 47 20.4	
	comp=Z,1μm,25.9s						
SANVU	**Saraoutou**	**7.71**	**334**	Pn	**Pn**	**18 47 19.1**	**+0.7**
MSVF	**Nonsavu**	**8.36**	**57**		**Pn**	**18 47 26.5**	**-0.8**
RPZ	**Rata Peaks**	**21.20**	**179**	LR	LR	18 57 49.0	
	comp=Z,88nm,18.6s,baz=337,slow=32						
CTAO	**Charters Tower**	**22.89**	**271**	P	**P**	**18 50 30.0**	**+0.7**
CTAO				IAmb	IAmb	18 50 48.3	
	comp=Z,5.9nm,1.1s						
RAR	**Rarotonga**	**27.43**	**93**	LR	LR	19 00 21.3	
	comp=Z,42nm,19.6s,baz=258,slow=31						
STKA	**Stephens Creek**	**27.46**	**244**	LR	LR	19 01 35.6	
	comp=Z,139nm,19.2s,baz=38,slow=35						
AS31	**Alice Springs**	**33.81**	**261**	P	**P**	**18 52 07.9**	**+0.3**
ASAR	**Alice Springs**	**33.81**	**261**	P	**P**	**18 52 09.2**	**+1.6**
	comp=Z,3.1nm,0.7s,baz=83,slow=9.3,SNR=42						
WB2	**Warramunga Arr**	**33.92**	**267**	P	**P**	**18 52 07.8**	**-0.8**
WB2				IAmb	IAmb	18 52 23.1	
	comp=Z,3.2nm,1.1s						
WRAB	**Tennant Creek**	**33.92**	**267**	P	**P**	**18 52 08.2**	**-0.3**
WRA	**Warramunga Arr**	**33.93**	**267**	P	**P**	**18 52 07.2**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=95,slow=8.4,SNR=8.4						
WRA				LR	LR	19 05 52.7	
	comp=Z,145nm,21.4s,baz=340,slow=37						
PPT2	**Papeete2**	**37.57**	**90**	*e*LR	LR	19 03 22.1	
	comp=Z,138nm,26.8s						
FITZ	**Fitzroy Crossi**	**42.36**	**267**	P	**P**	**18 53 20.1**	**+0.5**
	comp=Z,3.3nm,0.7s,baz=111,slow=7.4,SNR=17						
FITZ	**Fitzroy Crossi**	**42.36**	**267**	P	**P**	**18 53 19.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**81.05**	**294**	P	**P**	**18 57 39.7**	**-0.7**
	comp=Z,0.2nm,0.6s,baz=133,slow=6.3,SNR=3.3						
ILAR	**Eielson Array**	**92.89**	**17**	P	**P**	**18 58 38.0**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=225,slow=8.9,SNR=6.5						
GERES	**GERESS Array B**	**147.95**	**331**	PKPbc	**PKPdf**	**19 05 07.6**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=316,slow=4.1,SNR=2.7						

*IDC **15** 18:49:04.8*±*4.9,37°.13N×72°.02E,h62km*±*34km,mb3.5/8,*
mb1 3.6/13,mb1mx3.3/57,mbtmp3.8/13,ML3.5/5,MS2.9/1,
Ms1 2.8/1,ms1mx2.1/40,Error ellipse: s-maj=54.9km
s-min=23.8km az=142.0
*BJI **15** 18:49:04.6*±*0.0,37°.50N×71°.08E,h120km,mB5.0/4,*
mb4.5/4
*NEIC **15** 18:49:12.2*±*3.1,37°.51N*±*0°.04×71°.83E*±*0°.09,h119km*±*8km,*
mb4.4/7,Error ellipse: s-maj=10.8km s-min=4.7km
az=101.0
*NNC **15** 18:49:13.1*±*2.2,37°.67N×71°.46E,h127km*±*60km,mb3.4,*
mpv4.0,Error ellipse: s-maj=21.4km s-min=14.9km
az=168.0
ISC 15 18:49:09.5±0.6,**37°.36N**±0°.05×**71°.73E**±0°.05,**h100**km,**n70**,
σ2§**26**/77,**mb3.9**/10,**5C-6D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**1.98**	**326**		**Pn**	**18 49 44.7**	**+2.7**
GAR				Sn	**Sn**	**18 50 08.4**	**+1.7**
CHGR	**Chuyangaron**	**2.41**	**303**	Pn	**Pn**	**18 49 49.8**	**+2.3**
CHGR				Sn	**Sn**	**18 50 18.3**	**+1.7**
BTK	**Batken**	**2.78**	**345**		**Pn**	**18 49 55.8**	**+3.4**
BTK				Sn	**Sn**	**18 50 27.6**	**+2.1**
KBL	**Kabul**	**3.56**	**219**	Pn	Pn	18 50 08.3	+5.3
KBL				Sn	Sn	18 50 51.0	+6.7
NIL	**Nilore**	**3.91**	**161**	Pn	Pn	18 50 11.9	+4.4
NIL				Sn	**Sn**	**18 50 56.2**	**+3.8**
KSH	**Kashi**	**3.97**	**56**	P	**Pn**	**18 50 06.3**	**-2.0**
KSH				S	Sn	18 50 46.3	-7.6
KSH				smax	smax		
	comp=N,440nm,0.4s						
KSH				smax	smax		
	comp=E,270nm,0.4s						
AML	**Almayashu**	**5.00**	**17**	P	**Pn**	**18 50 24.1**	**+1.6**
	SNR=66						
UCH	**Uchtor**	**5.31**	**23**	P	**Sn**	**18 51 25.8**	**-1.1**
	SNR=5.2						
JMU	**Jammu**	**5.32**	**150**	*e*P	**Pn**	**18 50 29.6**	**+3.1**
JMU				*e*S	**Sn**	**18 51 24.1**	**-2.4**
EKS2	**Erkin-Say**	**5.52**	**16**	P	**Pn**	**18 50 31.5**	**+2.1**
	SNR=14						
AAK	**Ala-Archa**	**5.68**	**21**	P	**Pn**	**18 50 33.8**	**+2.2**
	SNR=20						
AAK	**Ala-Archa**	**5.68**	**21**	⇓P	**Pn**	**18 50 32.8**	**+1.2**
	7.9nm,0.4s						
AAK				⇓S	**Sn**	**18 51 34.5**	**-1.0**
	20nm,0.5s						
KK31	**Karatay Array**	**5.81**	**351**	⇑P	**Pn**	**18 50 33.7**	**+0.5**
	10nm,0.3s,baz=175,slow=11,SNR=481						
KK31				S	**Sn**	**18 51 35.7**	**-2.7**
	16nm,0.3s,baz=163,slow=18,SNR=16						
KK31	**Karatay Array**	**5.81**	**351**	Pn	**Pn**	**18 50 34.7**	**+1.5**
KK31				Sn	**Sn**	**18 51 34.8**	**-3.7**
KKAR	**Karatay Array**	**5.81**	**351**		**Pn**	**18 50 34.7**	**+1.5**
BOOM	**Boomskoye usch**	**6.06**	**31**	Pn	**Pn**	**18 50 38.3**	**+1.6**
CHMS	**Chumysh**	**6.09**	**21**	P	**Pn**	**18 50 38.9**	**+1.9**
	SNR=14						
USP	**Ospenovka**	**6.26**	**19**	P	**Pn**	**18 50 41.0**	**+1.6**
	SNR=8.8						
TKM2	**Tokmak 2**	**6.29**	**27**	P	**Pn**	**18 50 41.9**	**+2.0**
	SNR=5.6						
TKM2	**Tokmak 2**	**6.29**	**27**	⇓P	**Pn**	**18 50 41.7**	**+1.8**
	4.7nm,0.6s						
TKM2				⇑S	**Sn**	**18 51 50.8**	**+0.3**
	5.0nm,0.6s						
DHRM	**DHARAMSHALA**	**6.34**	**142**	*e*P	**Pn**	**18 50 42.4**	**+1.7**
DHRM				*e*S	**Sn**	**18 51 49.3**	**-2.4**
DHRM				IAML		18 51 53.6	
	comp=E,506nm,0.6s						
DHRM				IAML		18 51 55.2	
	comp=N,440nm,0.5s						
KDJ	**Kajisay**	**6.35**	**40**	Pn	**Pn**	**18 50 40.7**	**0.0**
DGS	**Degeres**	**6.63**	**26**	P	**Pn**	**18 50 45.8**	**+1.3**
	comp=N,4.3nm,0.6s						
KRBS	**Karabastau**	**7.00**	**24**	Lg	Lg	18 52 02.3	
	comp=N,3.2nm,0.4s						
KOTS	**Kotyrbulak**	**7.16**	**33**	P	**Pn**	**18 50 51.7**	**0.0**
	comp=N,5.8nm,0.3s						
SMLA	**Simla**	**7.68**	**143**	*e*P	**Pn**	**18 51 00.4**	**+1.8**
SMLA				*e*S	**Sn**	**18 52 18.1**	**-5.8**
SMLA				IAML		18 52 23.0	
	comp=N,172nm,0.3s						
SMLA				IAML		18 52 23.6	
	comp=E,240nm,0.3s						
HRA	**Herat**	**8.25**	**252**		Pn	18 51 10.6	+4.0
GEYT	**Alibeck**	**10.81**	**277**	P	**Pn**	**18 51 40.1**	**-1.1**
	comp=E,1.5nm,0.3s,baz=108,slow=13,SNR=24						
GEYT				S	**Sn**	**18 53 33.8**	**-6.4**
	comp=E,1.0nm,0.3s,baz=106,slow=15,SNR=4.8						
GEYT	**Alibeck**	**10.81**	**277**		**Pn**	**18 51 40.4**	**-0.8**
GYA0B	**ALIBECK ARRAY**	**10.81**	**277**	⇑P	**Pn**	**18 51 40.6**	**-0.6**
GYA0B				⇑S	**Sn**	**18 53 37.1**	**-3.1**
GYA0B	**ALIBECK ARRAY**	**10.81**	**277**	Pn	**Pn**	**18 51 40.1**	**-1.1**
MK31	**Makanchi Array**	**12.25**	**36**	Pn	**Pn**	**18 52 01.8**	**+1.4**
MKAR	**Makanchi Array**	**12.25**	**36**	P	Pn	18 51 56.6	-3.8
	comp=E,0.0nm,0.3s,baz=230,slow=16,SNR=3.2						
MKAR	**Makanchi Array**	**12.25**	**36**	Pn	**Pn**	**18 51 57.2**	**-3.2**
PYUN	**Piuthan**	**13.22**	**131**	*e*Pn	**Pn**	**18 52 11.5**	**-2.1**
PYUN				*e*Sn	Sn	18 54 28.1	-11
	comp=E,90nm,0.5s						
DANN	**Dangsing**	**13.52**	**128**	*e*Pn	**Pn**	**18 52 14.8**	**-2.7**
DANN				*e*Sn	Sn	18 54 35.4	-11
	comp=E,37nm,0.5s						
WMQ	**Urumqi**	**13.73**	**57**	*e*P	**Pn**	**18 52 19.6**	**-0.3**
WMQ	**Urumqi**	**13.73**	**57**	P	**Pn**	**18 52 22.9**	**+2.9**
KOLN	**Koldanda**	**13.83**	**130**	*e*Pn	**Pn**	**18 52 19.8**	**-1.7**
KOLN				*e*Sn	Sn	18 54 42.4	-11
	comp=E,42nm,0.8s						
GKN	**Gorkha**	**14.31**	**127**	*e*Pn	**Pn**	**18 52 25.4**	**-2.3**
GKN				*e*Sn	Sn	18 54 52.9	-13
	comp=E,29nm,0.4s						
AB31	**Akbulak array**	**14.64**	**328**	⇓P	**Pn**	**18 52 30.6**	**-0.8**
	comp=E,0.8nm,0.4s,baz=133,slow=14,SNR=36						
AB31				⇓S	Sn	18 55 01.7	-11
	comp=E,3.5nm,0.6s,baz=146,slow=23,SNR=9.6						
ABKAR	**Akbulak array**	**14.64**	**328**	Pn	**Pn**	**18 52 30.5**	**-1.0**
ABKAR	**Akbulak array**	**14.64**	**328**	Pn	**Pn**	**18 52 30.4**	**-1.0**
KKN	**Kakani**	**14.87**	**126**	*e*Pn	**Pn**	**18 52 32.7**	**-2.2**
KKN				*e*Sn	Sn	18 55 06.9	-12
	comp=E,16nm,0.5s						
DMN	**Daman**	**14.89**	**127**	*e*Pn	**Pn**	**18 52 33.6**	**-1.5**
DMN				*e*Sn	Sn	18 55 06.9	-13
	comp=E,21nm,0.5s						
PKIN	**Phulchoki**	**15.09**	**126**	*e*Pn	**Pn**	**18 52 36.9**	**-0.8**
PKIN				*e*Sn	Sn	18 55 12.1	-12
PKI	**Pulchoki**	**15.11**	**126**	*e*Pn	**Pn**	**18 52 36.8**	**-1.1**
PKI				*e*Sn	Sn	18 55 12.2	-13
	comp=E,19nm,0.6s						
GUN	**Gumba**	**15.18**	**124**	*e*Pn	**Pn**	**18 52 36.7**	**-2.2**
GUN				*e*Sn	Sn	18 55 13.5	-13
	comp=E,11nm,0.5s						
BVAR	**Borovoye Array**	**15.69**	**357**	P	**Pn**	**18 52 45.4**	**+0.7**
	comp=E,0.2nm,0.3s,baz=149,slow=12,SNR=6.1						
AKTO	**Aktyubinsk**	**16.35**	**327**	P	**P**	**18 52 54.4**	**+0.4**
	comp=E,1.7nm,0.3s,baz=130,slow=9.5,SNR=30						
AKTO	**Aktyubinsk**	**16.35**	**327**	⇓P	**Pn**	**18 52 53.1**	**+0.2**
	comp=E,7.7nm,0.6s						
AKTO				⇑S	**Sn**	**18 55 46.8**	**-7.1**
	comp=E,5.9nm,0.8s						
ZALV	**Zalesovo Beam**	**18.89**	**24**	P	**P**	**18 53 22.2**	**+0.3**
	comp=E,0.2nm,0.3s,baz=204,slow=9.3,SNR=2.6						
ARU	**Arti**	**21.02**	**339**	P	**P**	**18 53 46.1**	**+1.2**
	comp=E,0.6nm,0.6s,baz=189,slow=13,SNR=3.9						
ARU	**Arti**	**21.02**	**339**	IAmb	IAmb	18 53 54.1	
	comp=Z,14nm,1.8s						
GNI	**Garni**	**21.20**	**286**	P	**P**	**18 53 48.1**	**+0.9**
	comp=Z,4.3nm,0.6s,baz=49,slow=20,SNR=3.6						
GNI	**Garni**	**21.20**	**286**	P	**P**	**18 53 50.4**	**+3.2**
GNI				IAmb	IAmb	18 53 59.0	
	comp=Z,19nm,1.3s						
GTA	**Gaotai**	**22.08**	**76**	*e*P	**P**	**18 53 59.3**	**+2.8**
GTA				pP	pP	18 54 23.0	+6.0
GTA				sP	sP	18 54 36.8	+6.8
KBZ	**Khabaz**	**22.74**	**295**	LR	LR	19 05 47.6	
	comp=Z,34nm,21.2s,baz=144,slow=44						
BRTR	**Keskin Array B**	**29.74**	**286**	P	**P**	**18 55 09.2**	**+2.7**
	comp=Z,0.4nm,0.5s,baz=101,slow=7.2,SNR=3.0						
HHC	**Hu-ho-hao-te**	**30.92**	**71**	*e*P	**P**	**18 55 18.4**	**+1.5**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,150nm,5.6s						
FIA1	**FINESS Array S**	**37.10**	**325**	P	**P**	**18 56 10.4**	**+0.6**
FIA1				IAmb	IAmb	18 56 43.3	
	comp=Z,47nm,1.8s						
FINES	**FINESS Array B**	**37.10**	**325**	P	**P**	**18 56 11.3**	**+1.4**
	comp=Z,4.4nm,1.0s,baz=117,slow=9.6,SNR=9.3						
FINES	**FINESS Array B**	**37.10**	**325**	P	**P**	**18 56 11.1**	**+1.3**
ARCES	**ARCESS Array B**	**40.58**	**337**	P	**P**	**18 56 40.1**	**+1.4**
	comp=Z,1.9nm,0.8s,baz=112,slow=9.3,SNR=5.8						
NC303	**NORSAR Array S**	**43.99**	**323**	P	**P**	**18 57 08.0

MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**19 02 57.2**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=120,slow=7.7,SNR=34						
MAKZ	**Makanchi**	**59.11**	**326**	P	**P**	**19 02 57.3**	**-1.6**
MAKZ				IAmb	IAmb	19 03 47.8	
	comp=Z,3.2nm,1.1s						
ZALV	**Zalesovo Beam**	**62.09**	**334**	P	**P**	**19 03 18.1**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=141,slow=7.4,SNR=2.2						
KURK	**Kurchatov**	**63.15**	**328**	P	**P**	**19 03 25.7**	**-0.4**
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**19 04 30.0**	**-0.5**
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**19 04 29.6**	**-0.9**
ABKAR				IAmb	IAmb	19 05 55.8	
	comp=Z,9.2nm,1.8s						
ARU	**Arti**	**76.35**	**328**	P	**P**	**19 04 47.0**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=66,slow=6.0,SNR=3.5						
ARU	**Arti**	**76.35**	**328**	P	**P**	**19 04 47.0**	**-0.2**
VNDA	**Vanda**	**81.72**	**173**	P	**P**	**19 05 16.0**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=317,slow=9.6,SNR=2.5						
VNDA	**Vanda**	**81.72**	**173**	P	**P**	**19 05 14.6**	**-1.7**
VNDA				IAmb	IAmb	19 07 14.4	
	comp=Z,8.1nm,1.9s						

*IDC **15** 18:56:27.5±0.4,0.˚98S×123.˚31E,h0^{km},mb4.5/23,*
mb1 4.6/26,mb1mx4.5/36,mbtmp4.5/26,ML4.4/3,MS3.7/17,
Ms1 3.7/17,ms1mx3.5/45,Error ellipse: s-maj=20.7km
s-min=10.1km az=75.0
*BJI **15** 18:56:32.0±0.0,1.˚10S×123.˚60E,h40^{km},mB5.1/40,*
mb4.9/60,Ms4.4/13,Ms7 4.1/16
*NEIC **15** 18:56:33.4±2.4,1.˚10S±0.˚06×123.˚56E±0.˚05,h38^{km}±5^{km},*
mb5.0/118,Error ellipse: s-maj=8.2km s-min=7.4km
az=198.0
*DJA **15** 18:56:34.0±0.6,1˚S±1˚×12˚4E±˚,h22^{km}±5^{km},M4.8/44,*
mb5.0/44,mB5.3/28,MLv5.2/28,Mw(mB)4.7/28,Mwp5.3/2
*KLM **15** 18:56:36.0,1.˚27S×123.˚53E,h44^{km},mb4.8*
ISC 15 18:56:34.6±0.6,1.˚15S±0.˚03×123.˚53E±0.˚03,h48^{km}±5^{km},
n316,σ1$54/324,mb4.9/100,MS3.9/19,3C-4D,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.77**	**278**	P	**Pn**	**18 56 47.5**	**-1.6**
LUWI				S	**Sn**	**18 56 58.8**	**-0.9**
LUWI	**Luwuk**	**0.77**	**278**		**Pn**	**18 56 47.2**	**-1.9**
LUWI					**Sn**	**18 56 58.2**	**-1.5**
KMSI	**Cibinong**	**1.77**	**15**	P	**Pn**	**18 57 03.5**	**+0.8**
KMSI				S	**Sn**	**18 57 26.3**	**+2.3**
GTOI	**Gorontalo**	**1.84**	**344**	P	**Pn**	**18 57 06.5**	**+2.7**
GTOI				S	**Sn**	**18 57 32.0**	**+6.0**
APSI	**Ampana**	**1.90**	**277**	P	**Pn**	**18 57 05.1**	**+0.6**
APSI				S	**Sn**	**18 57 30.5**	**+3.2**
MRSI	**Marisa**	**2.27**	**315**	P	**Pn**	**18 57 10.1**	**+0.5**
MRSI				S	**Sn**	**18 57 38.8**	**+2.5**
MPSI	**Mapaga**	**3.92**	**292**	P	**Pn**	**18 57 33.5**	**+1.2**
NLAI	**Namlea**	**4.13**	**120**	P	**Pn**	**18 57 35.4**	**+0.3**
NLAI				S	**Sn**	**18 58 23.3**	**+1.2**
TTSI	**Tana Toraja**	**4.16**	**243**	P	**Pn**	**18 57 35.7**	**+0.1**
TNTI	**Ternate**	**4.28**	**64**	P	**Pn**	**18 57 37.5**	**+0.3**
TNTI	**Ternate**	**4.28**	**64**	Pn	**Pn**	**18 57 36.4**	**-0.9**
SPSI	**Sidrap Palu**	**4.69**	**233**	P	**Pn**	**18 57 43.2**	**+0.4**
BNSI	**Bone**	**4.71**	**227**	P	**Pn**	**18 57 43.6**	**+0.5**
SGSI	**Sangihe**	**5.20**	**23**	P	**Pn**	**18 57 51.6**	**+1.8**
	1.8nm3μm407nm,0.7s						
BKSI	**Bulukumba**	**5.37**	**219**	P	**Pn**	**18 57 52.8**	**+0.7**
	0.9nm3μm245nm,0.7s						
KAPI	**Kappang**	**5.39**	**224**	Pn	**Pn**	**18 57 52.7**	**+0.3**
	18nm,0.3s,baz=49,slow=6.8,SNR=47						
KAPI				Sn	**Sn**	**18 58 53.2**	**0.0**
	23nm,0.3s,baz=130,slow=17,SNR=1.9						
KAPI				LR	LR	19 00 24.4	
	comp=Z,2μm,20.1s,baz=67,slow=44						
MSAI	**Masohi**	**5.82**	**112**	P	**Pn**	**18 57 59.5**	**+1.2**
	0.2nm690nm53nm,0.6s						
BSSI	**Bau Bau, Buton**	**5.82**	**211**	P	**Pn**	**18 57 58.7**	**+0.3**
	1.3nm4μm392nm,0.8s						
BKB	**Balikpapan**	**6.64**	**269**	P	**Pn**	**18 58 10.8**	**+1.2**
	1.8nm5μm638nm,0.8s						
BKB	**Balikpapan**	**6.64**	**269**	Pn	**Pn**	**18 58 10.8**	**+1.2**
BNDI	**Bandanaira**	**7.19**	**118**	P	**Pn**	**18 58 18.2**	**+1.0**
	1.3nm8μm334nm,1.0s						
DDMP	**Don Marcelino,**	**7.52**	**17**	*e*P	**Pn**	**18 58 23.4**	**+1.6**
MMRI	**Maumere**	**7.55**	**190**	P	**Pn**	**18 58 21.8**	**-0.3**
	0.8nm2μm208nm,0.9s						
MMRI	**Maumere**	**7.55**	**190**	Pn	**Pn**	**18 58 21.6**	**-0.5**
KBKI	**Kotabaru**	**7.67**	**254**	P	**Pn**	**18 58 25.3**	**+1.6**
	0.3nm622nm63nm,0.6s						
SKMP	**Bagumbayan, Su**	**7.68**	**8**	*e*P	**Pn**	**18 58 23.4**	**-0.5**
SIJI	**Sorong**	**7.74**	**88**	Pn	**Pn**	**18 58 25.4**	**+0.7**
	12nm,0.3s,baz=247,slow=10,SNR=87						
SIJI				Sn	**Sn**	**18 59 48.6**	**-2.4**
	baz=67,slow=15,SNR=1.3						
EDFI	**Ende, Flores**	**7.77**	**194**	P	**Pn**	**18 58 24.7**	**-0.6**
	0.2nm588nm43nm,0.7s						
MYLDM	**Lahad Datu**	**8.05**	**321**		**Pn**	**18 58 32.3**	**+3.4**
KCP	**Kidapawan**	**8.25**	**11**	*i*P	**Pn**	**18 58 36.3**	**+4.6**
DAV	**Davao City (W)**	**8.41**	**14**	Pn	**Pn**	**18 58 38.1**	**+4.1**
	14nm,0.3s,baz=238,slow=2.3,SNR=6.0						
DAV				LR	LR	19 02 26.9	
	comp=Z,523nm,19.5s,baz=202,slow=43						
DAV	**Davao City (W)**	**8.41**	**14**	Pn	**Pn**	**18 58 36.0**	**+2.0**
SOEI	**Soe**	**8.58**	**175**	P	**Pn**	**18 58 38.7**	**+2.3**
	2μm242nm,0.9s						
SOEI	**Soe**	**8.58**	**175**	Pn	**Pn**	**18 58 38.4**	**+2.0**
MTKI	**Muara Teweh, K**	**8.64**	**271**	P	**Pn**	**18 58 38.3**	**+1.2**
	3μm122nm,0.5s						
FAKI	**Fak Fak**	**8.89**	**102**	P	**Pn**	**18 58 38.5**	**-1.9**
	81nm,0.7s						
FAKI	**Fak Fak**	**8.89**	**102**	Pn	**Pn**	**18 58 38.3**	**-2.2**
PAGZ	**Pagadian**	**8.94**	**359**	*e*P	**Pn**	**18 58 44.4**	**+3.3**
BBKI	**Banjar Baru**	**8.98**	**255**	P	**Pn**	**18 58 43.7**	**+1.9**
	42nm,0.7s						
BATI	**Baumata**	**9.00**	**179**	Pn	**Pn**	**18 58 43.0**	**+0.9**
	8.1nm,0.3s,baz=332,slow=1.8,SNR=22						
BATI	**Baumata**	**9.00**	**179**	P	**Pn**	**18 58 44.3**	**+2.2**
	906nm96nm,0.7s						
BUKP	**Musuan**	**9.09**	**10**	*e*P	**Pn**	**18 58 44.6**	**+1.3**
WBSI	**Waikabubak, Su**	**9.39**	**206**	P	**Pn**	**18 58 47.9**	**+0.5**
	91nm,0.8s						
PLAI	**Plampang**	**9.54**	**217**	P	**Pn**	**18 58 50.1**	**+0.6**
	65nm,1.0s						
CGP	**Cagayan de Oro**	**9.61**	**7**	‖*e*P	Pn	18 59 03.5	+13
TWSI	**Taliwang, Sumb**	**10.04**	**221**	P	**Pn**	**18 58 55.6**	**-0.6**
	12nm,0.7s						
KKM	**Kota Kinabalu**	**10.22**	**314**	Pn	**Pn**	**18 58 58.3**	**-0.5**
SAUI	**Saumlaki**	**10.29**	**132**	Pn	**Pn**	**18 58 59.8**	**+0.1**
SRBI	**Singaraja**	**10.78**	**230**	P	**Pn**	**18 59 06.9**	**+0.5**
	50nm,0.7s						
JAGI	**Jajag, Banyuwa**	**11.84**	**232**		**Pn**	**18 59 21.7**	**+0.8**
SBUM	**Sibu**	**11.86**	**288**	Pn	**Pn**	**18 59 22.5**	**+1.3**
SBUM	**Sibu**	**11.86**	**288**	P	**Pn**	**18 59 23.0**	**+1.8**
BAKI	**Biak**	**12.57**	**90**	P	**Pn**	**18 59 32.3**	**+1.4**
KSM	**Kuching**	**13.48**	**281**	Pn	**Pn**	**18 59 46.8**	**+3.5**
KSM	**Kuching**	**13.48**	**281**	P	**Pn**	**18 59 45.0**	**+1.7**
PWJI	**Pagerwojo**	**13.54**	**239**	P	**Pn**	**18 59 45.4**	**+1.4**
	58nm,1.4s						
MTN	**Manton Dam**	**13.85**	**147**	Pn	**Pn**	**18 59 48.6**	**+0.3**
WOJI	**Wonogiri, Jawa**	**14.21**	**242**	P	**Pn**	**18 59 54.1**	**+0.9**
	62nm,2.2s						
SMRI	**Semarang**	**14.31**	**245**	P	**P**	**18 59 58.6**	**-2.0**
UGM	**Wanagama**	**14.60**	**242**	Pn	**Pn**	**18 59 59.0**	**+0.5**
YOGI	**Yogyakarta**	**14.76**	**243**	P	**P**	**19 00 08.7**	**+3.1**
SMPI	**Sarmi**	**15.19**	**93**	P	**Pn**	**19 00 07.0**	**+0.8**
	480nm38nm,1.5s						
KNRA	**Kununurra**	**15.33**	**161**		**Pn**	**19 00 08.0**	**+0.1**
TGY	**Tagaytay City**	**15.37**	**350**	Pn	**P**	**19 00 13.4**	**+1.1**
	55nm,0.3s,baz=158,slow=14,SNR=3.7						
KPJI	**Karang Pucung**	**15.80**	**247**	P	**P**	**19 00 16.0**	**-1.1**
	91nm,1.3s						
TPI	**Tanjungpandan**	**15.95**	**264**	P	**P**	**19 00 17.4**	**-1.4**
	628nm44nm,1.0s						
GENI	**Genyem**	**16.69**	**95**	P	**P**	**19 00 27.3**	**+0.4**
LEM	**Lembang**	**16.84**	**250**	Pn	**P**	**19 00 28.1**	**-0.8**
	1.4nm,0.3s,baz=150,slow=20,SNR=2.1						
LEM				LR	LR	19 07 26.1	
	comp=Z,368nm,20.4s,baz=68,slow=40						
CISI	**Cisompet, Garu**	**16.91**	**247**	P	**P**	**19 00 31.1**	**+1.7**
CISI				IAmb	IAmb	19 01 24.7	
	comp=Z,114nm,1.3s						
FITZ	**Fitzroy Crossi**	**16.97**	**173**	P	**Pn**	**19 00 27.4**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=6.5,slow=7.8,SNR=8.4						
FITZ				LR	LR	19 07 12.5	
	comp=Z,122nm,21.8s,baz=20,slow=38						
FITZ	**Fitzroy Crossi**	**16.97**	**173**	Pn	**Pn**	**19 00 26.6**	**-2.1**
CBJI	**Citeko**	**17.45**	**252**	P	**P**	**19 00 37.5**	**+2.2**
	comp=Z,117nm,1.0s						
DBJI	**Dramaga**	**17.58**	**252**	P	**P**	19 00 47.6	+11
PMBI	**Palembang**	**18.83**	**264**		**Pn**	**19 00 51.8**	**+0.2**
KLSI		**19.10**	**259**	P	**Pn**	**19 00 54.7**	**-0.1**
	comp=Z,14nm,1.2s						
KASI	**Kota Agung**	**19.49**	**257**	P	**Pn**	**19 00 59.3**	**-0.1**
	comp=Z,108nm,1.1s						
MDSI	**Maura Dua**	**19.61**	**260**	P	**Pn**	**19 01 01.0**	**+0.2**
	comp=Z,585nmcomp=Z,45nm,0.9s						
DLV	**T Lat**	**19.81**	**311**	P	**P**	**19 01 01.8**	**+0.2**
LWLI	**Liwa**	**19.82**	**258**	P	**Pn**	**19 01 04.2**	**+0.8**
	comp=Z,2μmcomp=Z,62nm,0.8s						
MYKOM	**Kota Tinggi**	**19.90**	**278**	P	**Pn**	**19 01 03.4**	**-0.8**
LHSI	**Lahat**	**20.17**	**262**	P	Pn	19 01 09.1	+1.7
	comp=Z,2μmcomp=Z,54nm,1.0s						
MBWA	**Marble Bar**	**20.23**	**190**	P	**P**	**19 01 05.0**	**-0.8**
PSAD1	**Pilbara Seismi**	**20.51**	**190**	P	**P**	**19 01 09.2**	**+0.4**
PSAD1				IAmb	IAmb	19 01 10.2	
	comp=Z,55nm,0.8s						
PSAC1	**Pilbara Seismi**	**20.59**	**190**	P	**P**	**19 01 10.0**	**+0.3**
PSAC1				IAmb	IAmb	19 01 11.1	
	comp=Z,55nm,0.8s						
PSA00	**Pilbara Seismi**	**20.62**	**190**	P	**P**	**19 01 10.3**	**+0.4**
PSA00				IAmb	IAmb	19 01 11.5	
	comp=Z,51nm,0.8s						
PSA00	**Pilbara Seismi**	**20.62**	**190**	P	**P**	**19 01 10.4**	**+0.4**
PSA00				IAmb	IAmb	19 01 11.7	
	comp=Z,23nm,0.8s						
PSAD3	**Pilbara Seismi**	**20.70**	**190**	P	**P**	**19 01 11.1**	**+0.2**
PSAD3				IAmb	IAmb	19 01 12.3	
	comp=Z,53nm,0.9s						
MNAI	**Manna**	**20.80**	**261**	P	**P**	**19 01 11.9**	**-0.1**
KSI	**Kapahiang**	**21.07**	**263**	P	P	19 01 32.1	+17
WB0	**Warramunga Arr**	**21.34**	**151**	P	**P**	**19 01 17.2**	**-0.6**
WB0				IAmb	IAmb	19 01 22.7	
	comp=Z,59nm,0.9s						
WRAB	**Tennant Creek**	**21.46**	**151**	P	**P**	**19 01 19.6**	**+0.4**
WRAB				IAmb	IAmb	19 01 36.9	
	comp=Z,50nm,1.1s						
WRA	**Warramunga Arr**	**21.47**	**151**	P	**P**	**19 01 18.6**	**-0.5**
	comp=Z,12nm,0.6s,baz=332,slow=9.9,SNR=52						
WRA	**Warramunga Arr**	**21.47**	**151**	P	**P**	**19 01 18.0**	**-1.2**
WB2	**Warramunga Arr**	**21.47**	**151**	P	**P**	**19 01 18.8**	**-0.4**
WB2				IAmb	IAmb	19 01 36.9	
	comp=Z,60nm,1.2s						
WC3	**Warramunga Arr**	**21.50**	**151**	P	**P**	**19 01 18.8**	**-0.7**
WC3				IAmb	IAmb	19 01 37.2	
	comp=Z,52nm,1.1s						
WR0	**Warramunga Arr**	**21.58**	**151**	P	**P**	**19 01 19.8**	**-0.6**
WR0				IAmb	IAmb	19 01 38.2	
	comp=Z,49nm,0.9s						
KRJI	**Kerinci**	**22.08**	**267**	P	**P**	**19 01 28.1**	**+2.2**
	comp=Z,3μmcomp=Z,127nm,0.9s						
SDSI	**Sungai Dareh**	**22.10**	**270**		**Pn**	**19 01 27.5**	**+1.5**
	comp=Z,758nmcomp=Z,23nm,0.8s						
BKNI	**Bangkinang**	**22.54**	**274**	P	**P**	**19 01 31.9**	**+1.1**
IPM	**Ipoh**	**23.17**	**284**	P	**P**	**19 01 38.0**	**+0.7**
IPM				IAmb	IAmb	19 01 40.2	
	comp=Z,28nm,0.7s						
IPM	**Ipoh**	**23.17**	**284**	P	**P**	**19 01 38.0**	**+0.7**
GIRL	**Giralia**	**23.20**	**202**	P	**P**	**19 01 38.4**	**+1.0**
COEN	**Coen**	**23.23**	**124**	P	**P**	**19 01 37.9**	**+0.1**
KULM	**Kulim**	**23.73**	**286**	P	**P**	**19 01 43.6**	**+1.0**
KULM				IAmb	IAmb	19 01 44.4	
	comp=Z,148nm,1.8s						
KULM	**Kulim**	**23.73**	**286**	P	**P**	**19 01 44.0**	**+1.4**
TWG	**Pinlang**	**23.94**	**354**	P	**P**	**19 01 43.7**	**-0.7**
UBPT	**Khong Chiam**	**24.20**	**313**	P	**P**	**19 01 48.4**	**+1.5**
	comp=Z,39nm,1.5s						
UBPT	**Khong Chiam**	**24.20**	**313**	P	**P**	**19 01 48.2**	**+1.4**
UBPT				IAmb	IAmb	19 02 00.2	
	comp=Z,56nm,1.0s						
TPUB	**Ta-pu**	**24.46**	**354**	P	**P**	**19 01 48.0**	**-1.2**
TPUB				IAmb	IAmb	19 01 52.2	
	comp=Z,76nm,0.9s						
YULB	**Yu-li**	**24.49**	**355**	P	**P**	**19 01 49.2**	**-0.2**
AS31	**Alice Springs**	**24.54**	**157**	P	**P**	**19 01 50.8**	**+0.8**
ASAR	**Alice Springs**	**24.54**	**157**	P	**P**	**19 01 50.4**	**+0.5**
	comp=Z,11nm,0.7s,baz=340,slow=6.8,SNR=82						
ASAR				PcP	**PcP**	**19 05 28.7**	**+1.3**
	comp=Z,6.2nm,0.6s,baz=352,slow=2.2,SNR=17						
ASAR				LR	LR	19 11 57.8	
	comp=Z,196nm,19.6s,baz=327,slow=38						
ASAR	**Alice Springs**	**24.54**	**157**	P	**P**	**19 01 49.8**	**-0.2**
ASAR					**PcP**	**19 05 28.7**	**+1.3**
PMG	**Port Moresby**	**24.90**	**110**	P	**P**	**19 01 54.5**	**+1.3**
	comp=Z,13nm,0.9s,baz=305,slow=10,SNR=4.2						
PMG	**Port Moresby**	**24.90**	**110**	P	**P**	**19 01 54.7**	**+1.5**
PMG				IAmb	IAmb	19 02 06.6	
	comp=Z,36nm,0.9s						
RPSI	**Rantau Prapat**	**24.90**	**279**	P	**P**	**19 01 53.7**	**+0.5**
RPSI				IAmb	IAmb	19 01 54.7	
	comp=Z,31nm,0.9s						
SSLB	**Suanglung**	**24.91**	**354**	P	**P**	**19 01 53.4**	**+0.1**
SSLB				IAmb	IAmb	19 02 14.3	
	comp=Z,26nm,0.7s						
GUMO	**Guam**	**25.72**	**55**	P	**P**	**19 02 02.3**	**+1.6**
GSI	**Gunungsitoli**	**26.07**	**275**	P	**P**	**19 02 03.3**	**-0.6**
GSI				IAmb	IAmb	19 02 28.1	
	comp=Z,27nm,0.8s						
SRAK	**Srakaew**	**26.08**	**306**	P	**P**	**19 02 02.4**	**-1.6**
	comp=Z,170nm,0.7s						
KHON	**Khomkaen**	**26.83**	**311**	P	**P**	**19 02 13.5**	**+2.8**
	comp=Z,2μmcomp=Z,194nm,0.8s						
NONG	**Nongkai**	**27.70**	**315**	P	**P**	**19 02 20.0**	**+1.6**
	comp=Z,60nm,0.8s						
MORW	**Morawa**	**28.67**	**194**	P	**P**	**19 02 26.9**	**-0.2**
MORW				IAmb	IAmb	19 02 27.9	
	comp=Z,40nm,1.5s						
RABL	**Rabaul**	**28.75**	**97**	P	**P**	**19 02 28.4**	**+0.4**
RABL				IAmb	IAmb	19 02 40.4	
	comp=Z,27nm,0.6s						
UTHA	**Uthaitani**	**29.02**	**306**	P	**P**	**19 02 34.1**	**+3.8**
	comp=Z,229nmcomp=Z,27nm,0.7s						
FORT	**Forrest**	**29.78**	**172**	P	**P**	**19 02 37.0**	**+0.1**
CM04	**Chiang Mai Arr**	**30.99**	**310**	P	**P**	**19 02 50.4**	**+2.7**
	comp=Z,83nmcomp=Z,10nm,1.0s						
CM09	**Chiang Mai Arr**	**31.01**	**310**	P	**P**	**19 02 51.0**	**+3.1**
	comp=Z,86nmcomp=Z,10nm,0.8s						
CM01	**Chiang Mai Arr**	**31.02**	**310**	P	**P**	**19 02 51.0**	**+3.0**
	comp=Z,74nmcomp=Z,8.8nm,0.8s						
CM35	**Chiang Mai Arr**	**31.02**	**311**	P	**P**	**19 02 49.0**	**+1.0**
CM02	**Chiang Mai Arr**	**31.04**	**310**	P	**P**	**19 02 51.0**	**+2.9**
	comp=Z,57nmcomp=Z,8.3nm,0.8s						
CM31	**Chiang Mai Arr**	**31.05**	**310**	P	P	19 02 58.0	+10
CM31	**Chiang Mai Arr**	**31.05**	**310**	P	**P**	**19 02 49.7**	**+1.4**
CMAR	**Chiang Mai Arr**	**31.05**	**310**	P	**P**	**19 02 49.0**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=134,slow=7.2,SNR=24						
CMAR				PcP	**PcP**	**19 05 44.6**	**+1.3**
	comp=Z,1.9nm,0.8s,baz=175,slow=2.1,SNR=7.5						
CMAR				ScP	**ScP**	**19 09 26.6**	**+4.2**
	comp=Z,0.8nm,1.1s,baz=180,slow=3.2,SNR=4.5						
CMAR				LR	LR	19 16 21.5	
	comp=Z,180nm,19.1s,baz=162,slow=39						
CMAR	**Chiang Mai Arr**	**31.05**	**310**	P	**P**	**19 02 48.4**	**+0.1**
CMAR					**PcP**	**19 05 44.3**	**+1.0**
CM15	**Chiang Mai Arr**	**31.07**	**310**	P	**P**	**19 02 50.0**	**+1.6**
	comp=Z,68nmcomp=Z,10.0nm,0.8s						
CMMT	**Chiang Mai**	**31.26**	**311**	P	**P**	**19 02 51.8**	**+1.7**
	comp=Z,8.5nm,0.9s						
CHTO	**Chiang Mai**	**31.26**	**311**	P	**P**	**19 02 50.4**	**+0.3**
CM33	**Chiang Mai Arr**	**31.26**	**311**	P	**P**	**19 02 51.0**	**+0.9**
MHMT	**Maesarieng**	**31.68**	**309**	P	**P**	**19 02 56.5**	**+2.8**
GYA	**Guiyang**	**31.91**	**331**	‖P	**P**	**19 02 56.8**	**+1.0**
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
NWAO	**Narrogin (SRO)**	**32.16**	**190**	P	**P**	**19 02 57.4**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=56,slow=7.3,SNR=2.2						
NWAO				LR	LR	19 16 39.1	
	comp=Z,110nm,18.6s,baz=328,slow=38						
NWAO	**Narrogin (SRO)**	**32.16**	**190**	P	**P**	**19 02 57.8**	**0.0**
NWAO				IAmb	IAmb	19 04 08.0	
	comp=Z,42nm,1.6s						
NWAO	**Narrogin (SRO)**	**32.16**	**190**	P	**P**	**19 02 57.3**	**-0.5**
NWAO				IAmb	IAmb	19 04 08.0	
	comp=Z,31nm,1.5s						
KMI	**Kunming**	**32.98**	**324**	‖*e*P	**P**	**19 03 09.1**	**+3.8**
KMI				pP	pP	19 03 19.1	+1.2
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,4.3s						
KMI				LR	LR		
	comp=Z,150nm,10.1s						
KMI				LR	LR		
	comp=Z,140nm,7.0s						
KMI				LR	LR		
	comp=Z,120nm,11.5s						
JSU	**Suzuyama**	**33.13**	**11**	P	**P**	**19 03 04.8**	**-1.5**
JSU				IAmb	IAmb	19 03 07.4	
	comp=Z,31nm,1.3s						
NJ2	**Nanjing**	**33.31**	**353**	*e*P	**P**	**19 03 08.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
JCJ	**Chichijima**	**33.33**	**31**	P	**P**	**19 03 06.9**	**-1.2**
BBOO	**Buckleboo**	**33.63**	**161**	P	**P**	**19 03 10.8**	**+0.2**
BBOO				IAmb	IAmb	19 03 11.6	
	comp=Z,17nm,0.7s						
ENH	**Enshi**	**33.99**	**338**	P	**P**	**19 03 13.4**	**-0.5**
ENH				IAmb	IAmb	19 03 15.8	
	comp=Z,14nm,0.7s						
JNU	**Nakatsue**	**34.78**	**11**	P	**P**	**19 03 18.2**	**-2.5**
JNU				IAmb	IAmb	19 03 20.6	
	comp=Z,31nm,1.3s						
STKA	**Stephens Creek**	**35.00**	**153**	P	**P**	**19 03 23.3**	**+0.7**
	comp=Z,20nm,0.8s,baz=326,slow=8.9,SNR=32						
STKA				LR	LR	19 18 16.0	
	comp=Z,108nm,20.1s,baz=326,slow=37						
STKA	**Stephens Creek**	**35.00**	**153**	P	**P**	**19 03 23.4**	**+0.8**
JTU	**Tsushima**	**35.91**	**8**	P	**P**	**19 03 30.6**	**+0.4**
JTU				IAmb	IAmb	19 03 52.0	
	comp=Z,42nm,1.2s						
JMN	**Monobe**	**36.03**	**15**	P	**P**	**19 03 30.8**	**-0.6**
JMN				IAmb	IAmb	19 03 31.5	
	comp=Z,27nm,0.7s						
CD2	**Chengdu**	**37.01**	**331**	P	**P**	**19 03 39.8**	**0.0**
CD2				pP	pP	19 03 51.4	-1.3
CD2				sP	sP	19 03 56.3	-2.2
CD2				S	**S**	**19 09 23.6**	**+1.3**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,140nm,4.3s						
CD2				LR	LR		
	comp=Z,200nm,19.6s						
JHS	**Saijyo**	**37.06**	**13**	P	**P**	**19 03 39.2**	**-0.9**
JHS				IAmb	IAmb	19 03 43.7	
	comp=Z,24nm,0.8s						
HNR	**Honiara**	**37.15**	**104**	LR	LR	19 20 09.3	
	comp=Z,82nm,19.4s,baz=252,slow=38						
JHJ2	**Mitsune**	**37.38**	**23**	P	**P**	**19 03 41.2**	**-1.5**
XAN	**Xi'an**	**37.60**	**340**	P	**P**	**19 03 44.6**	**-0.1**
XAN				pP	pP	19 03 54.5	-2.9
XAN				pmax	pmax		
	comp=Z,20nm,0.9s						
XAN				LR	LR		
	comp=Z,260nm,17.6s						
XAN				LR	LR		
	comp=Z,170nm,18.4s						
XAN				LR	LR		
	comp=Z,280nm,18.4s						
XAN	**Xi'an**	**37.60**	**340**	P	**P**	**19 03 44.0**	**-0.7**
XAN				IAmb	IAmb	19 03 45.2	
	comp=Z,13nm,0.9s						
JWT	**Wachi**	**37.90**	**16**	P	**P**	**19 03 46.4**	**-0.8**
INU	**Inuyama**	**38.43**	**18**	P	**P**	**19 03 50.3**	**-1.3**
INU				IAmb	IAmb	19 04 03.1	
	comp=Z,16nm,1.0s						
KSAR	**Wonju Array Be**	**38.61**	**6**	P	**P**	**19 03 51.8**	**-1.3**
KSRS	**Korea Array**	**38.62**	**6**	P	**P**	**19 03 51.9**	**-1.3**
	comp=Z,4.9nm,0.7s,baz=183,slow=9.3,SNR=19						
KSRS				LR	LR	19 18 51.3	
	comp=Z,49nm,21.8s,baz=186,slow=35						
KS19	**Wonju Array Si**	**38.66**	**6**	P	**P**	**19 03 53.2**	**-0.4**
JGF	**Kuroka**	**38.77**	**18**	P	**P**	**19 03 53.1**	**-1.5**
JGF				IAmb	IAmb	19 04 37.8	
	comp=Z,50nm,1.7s						
ARMA	**Armidale**	**39.48**	**140**	P	**P**	**19 04 01.0**	**+0.3**
ARMA				IAmb	IAmb	19 05 07.7	
	comp=Z,66nm,1.9s						
MJAR	**Matsushiro Arr**	**39.90**	**19**	P	**P**	**19 04 02.0**	**-1.9**
	comp=

DMN	**Daman**	**46.69**	**311**	*e*P		**P**	**19 04 58.7**	**-0.5**
	comp=Z,24nm,0.7s							
TAU	**Tasmania Unive**	**46.71**	**156**	P		**P**	**19 04 59.3**	**+0.5**
GKN	**Gorkha**	**47.25**	**311**	*e*P		**P**	**19 05 02.7**	**-0.8**
	comp=Z,26nm,0.8s							
KOLN	**Koldanda**	**47.92**	**310**	*e*P		**P**	**19 05 08.1**	**-0.6**
	comp=Z,35nm,0.7s							
DANN	**Dangsing**	**48.09**	**311**	*e*P		**P**	**19 05 09.3**	**-0.9**
	comp=Z,59nm,0.7s							
JKA	**Kamikawa-asahi**	**48.18**	**18**	P		**P**	**19 05 09.6**	**-0.5**
PYUN	**Piuthan**	**48.56**	**310**	*e*P		**P**	**19 05 13.1**	**-0.5**
	comp=Z,54nm,0.7s							
YSS	**Yuzh-Sakhalins**	**50.78**	**17**	P		**P**	**19 05 28.9**	**-1.0**
ULN	**Ulaanbaatar**	**50.88**	**346**	P		**P**	**19 05 29.5**	**-1.4**
SONM	**Songino Array**	**51.02**	**345**	P		**P**	**19 05 30.1**	**-1.8**
	comp=Z,3.5nm,0.7s,baz=162,slow=8.7,SNR=18							
SONM				LR		LR	19 28 35.7	
	comp=Z,73nm,19.9s,baz=167,slow=38							
SONM	**Songino Array**	**51.02**	**345**	P		**P**	**19 05 30.0**	**-1.9**
WMQ	**Urumqi**	**55.04**	**329**	*e*P		**P**	**19 06 03.8**	**+2.3**
WMQ				pmax		pmax		
	comp=Z,15nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,120nm,5.1s							
WMQ				LR		LR		
	comp=Z,930nm,29.1s							
WMQ				LR		LR		
	comp=Z,2μm,29.0s							
WMQ				LR		LR		
	comp=Z,160nm,29.5s							
NIL	**Nilore**	**58.54**	**311**	P		**P**	**19 06 25.0**	**-1.4**
NIL				IAmb		IAmb	19 06 51.7	
	comp=Z,6.9nm,0.8s							
MLZ	**Mavora Lakes**	**58.93**	**145**	P		**P**	**19 06 29.7**	**+0.7**
ZSN	**Zaisan**	**58.99**	**330**	*e*P		**P**	**19 06 27.3**	**-2.0**
	baz=330							
SHLS	**Shalkode**	**59.20**	**324**	*e*P		**P**	**19 06 28.2**	**-2.8**
	comp=Z,2.9nm,1.1s,baz=324							
KSH	**Kashi**	**59.38**	**318**	*e*P		**P**	**19 06 33.3**	**+1.0**
KSH				pmax		pmax		
	comp=Z,39nm,0.9s							
KSH				pmax		pmax		
	comp=Z,270nm,6.1s							
SATY	**Saty**	**59.77**	**323**	*e*P		**P**	**19 06 33.9**	**-1.0**
	comp=Z,6.2nm,1.0s,baz=323							
RPZ	**Rata Peaks**	**59.78**	**142**	P		**P**	**19 06 36.2**	**+1.4**
	comp=Z,33nm,0.8s,baz=237,slow=2.8,SNR=7.2							
RPZ				LR		LR	19 32 23.0	
	comp=Z,145nm,19.3s,baz=318,slow=36							
RPZ	**Rata Peaks**	**59.78**	**142**	P		**P**	**19 06 37.1**	**+2.2**
KPKS	**Kokpek**	**59.84**	**324**	*e*P		**P**	**19 06 33.9**	**-1.5**
	comp=Z,3.8nm,0.7s,baz=323							
MK31	**Makanchi Array**	**59.86**	**328**	P		**P**	**19 06 34.0**	**-1.4**
MKAR	**Makanchi Array**	**59.86**	**328**	P		**P**	**19 06 33.6**	**-1.7**
	comp=Z,1.9nm,0.5s,baz=120,slow=8.8,SNR=38							
MKAR				PcP		**PcP**	**19 07 20.3**	**-1.2**
	comp=Z,3.3nm,0.6s,baz=171,slow=2.9,SNR=8.1							
MKAR				ScP		**ScP**	**19 11 20.8**	**+2.1**
	comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=3.2							
MKAR				LR		LR	19 33 52.7	
	comp=Z,63nm,20.2s,baz=116,slow=38							
THZ	**Tophouse**	**59.98**	**139**	P		**P**	**19 06 38.1**	**+1.8**
KDJ	**Kajisay**	**60.00**	**322**	P		**P**	**19 06 35.9**	**-0.7**
KDJ				IAmb		IAmb	19 08 03.0	
	comp=Z,16nm,1.1s							
MAKZ	**Makanchi**	**60.04**	**328**	P		**P**	**19 06 35.3**	**-1.3**
NNZ	**Nelson**	**60.04**	**138**	P		**P**	**19 06 36.5**	**-0.1**
TUWZ	**Tuamarina**	**60.51**	**138**	P		**P**	**19 06 40.7**	**+0.9**
TNSS	**Tian-Shan**	**60.64**	**322**	*e*P		**P**	**19 06 39.9**	**-1.3**
	baz=322							
MDOK	**Medeo**	**60.65**	**322**	*e*P		**P**	**19 06 40.5**	**-0.5**
	baz=322							
KHZ	**Kahutara**	**60.71**	**139**	P		**P**	**19 06 42.1**	**+0.9**
TDK	**Taldyorghan**	**60.89**	**325**	*e*P		**P**	**19 06 42.2**	**-0.3**
	comp=Z,5.9nm,1.0s,baz=325							
CHKK	**Chushkaly**	**61.07**	**323**	*e*P		**P**	**19 06 41.9**	**-1.8**
	baz=323							
PEA0B	**Petropavlovsk-**	**61.13**	**23**	P		**P**	**19 06 41.9**	**-1.9**
PETK	**Petropavlovsk-**	**61.13**	**23**	P		**P**	**19 06 44.4**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=194,slow=3.1,SNR=16							
BKZ	**Black Stump Fm**	**61.27**	**135**	P		**P**	**19 06 45.6**	**+0.4**
URZ	**Urewera**	**61.34**	**134**	P		**P**	**19 06 46.4**	**+0.8**
PET	**Petropavlovsk**	**61.43**	**23**	P		**P**	**19 06 47.4**	**+1.5**
KUU	**Kurty**	**61.48**	**323**	*i* P		**P**	**19 06 44.1**	**-2.4**
	comp=Z,13nm,1.2s,baz=323							
KBL	**Kabul**	**62.08**	**310**	P		**P**	**19 06 50.2**	**-0.7**
KBL				IAmb		IAmb	19 06 50.9	
	comp=Z,14nm,0.6s							
BTK	**Batken**	**63.12**	**317**	IAmb		IAmb	19 06 58.6	
	comp=Z,29nm,1.6s							
YAK	**Yakutsk**	**63.18**	**3**	P		**P**	**19 06 55.6**	**-1.8**
BTLS	**Baital**	**63.48**	**323**	*e*P		**P**	**19 06 58.9**	**-0.9**
	baz=323							
ZAA0	**Zalesovo Array**	**63.57**	**336**	P		**P**	**19 06 58.4**	**-1.7**
ZALV	**Zalesovo Beam**	**63.57**	**336**	P		**P**	**19 06 57.8**	**-2.3**
	comp=Z,3.3nm,0.8s,baz=125,slow=5.9,SNR=12							
CHGR	**Chuyangaron**	**63.67**	**315**	P		**P**	**19 07 00.2**	**-1.1**
CHGR				IAmb		IAmb	19 07 01.6	
	comp=Z,28nm,0.8s							
MA2	**Magadan**	**64.19**	**15**	P		**P**	**19 07 04.5**	**+0.4**
KURK	**Kurchatov**	**64.23**	**330**	P		**P**	**19 07 02.0**	**-2.6**
KURK				IAmb		IAmb	19 07 04.2	
	comp=Z,8.5nm,0.6s							
IUG	**Iuzhnay**	**64.60**	**319**	*e*P		**P**	**19 07 06.5**	**-0.7**
	baz=316							
KK06	**Karatay Array**	**64.71**	**320**	P		**P**	**19 07 06.7**	**-1.3**
KK05	**Karatay Array**	**64.72**	**320**	P		**P**	**19 07 07.2**	**-0.7**
KK31	**Karatay Array**	**64.73**	**320**	P		**P**	**19 07 05.7**	**-2.3**
KKAR	**Karatay Array**	**64.73**	**320**	P		**P**	**19 07 06.0**	**-2.0**
KKAR	**Karatay Array**	**64.73**	**320**	IAmb		IAmb	19 07 08.5	
	comp=Z,3.5nm,0.9s							
CASY	**Casey**	**65.65**	**186**	P		**P**	**19 07 13.7**	**+0.2**
CASY				IAmb		IAmb	19 08 02.8	
	comp=Z,31nm,1.4s							
BRZS	**Berezniki**	**66.90**	**327**	*e*P		**P**	**19 07 19.6**	**-2.3**
	baz=327							
BRVK	**Borovoye**	**69.81**	**329**	P		**P**	**19 07 38.6**	**-1.3**
SOCY	**Socotra**	**70.28**	**283**	P		**P**	**19 07 42.1**	**-1.6**
SOCY				IAmb		IAmb	19 08 33.5	
	comp=Z,25nm,1.0s							
GEYT	**Alibeck**	**71.53**	**311**	P		**P**	**19 07 49.3**	**-1.5**
	comp=Z,1.4nm,0.6s,baz=195,slow=10,SNR=4.2							
GEYT	**Alibeck**	**71.53**	**311**	P		**P**	**19 07 50.1**	**-0.7**
TIXI	**Tiksi**	**72.75**	**2**	P		**P**	**19 07 55.0**	**-2.3**
TIXI				IAmb		IAmb	19 08 02.6	
	comp=Z,9.9nm,0.8s							
ADK	**Adak**	**72.77**	**34**	P		**P**	**19 07 55.0**	**-2.7**
AB06	**Akbulak array**	**73.94**	**322**	P		**P**	**19 08 03.8**	**-1.0**
ABKAR	**Akbulak array**	**73.96**	**322**	P		**P**	**19 08 02.1**	**-2.8**
ABKAR	**Akbulak array**	**73.96**	**322**	IAmb		IAmb	19 08 04.8	
	comp=Z,2.6nm,0.8s							
NRIK	**Noril'sk**	**74.42**	**347**	P		**P**	**19 08 04.6**	**-2.6**
	comp=Z,2.4nm,0.5s,baz=144,slow=6.1,SNR=5.7							
NRIK				LR		LR	19 43 18.0	
	comp=Z,72nm,20.8s,baz=198,slow=38							
ABPO	**Ambohimpanom**	**76.68**	**251**	P		**P**	**19 08 22.7**	**+1.3**
ARU	**Ati**	**77.38**	**329**	P		**P**	**19 08 21.5**	**-2.8**
MAW	**Mawson**	**78.11**	**200**	P		**P**	**19 08 29.3**	**+1.1**
	comp=Z,6.3nm,1.0s,baz=38,slow=9.4,SNR=6.9							
MAW	**Mawson**	**78.11**	**200**	P		**P**	**19 08 29.4**	**+1.3**
VNDA	**Vanda**	**79.05**	**172**	P		**P**	**19 08 33.9**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=312,slow=6.7,SNR=34							
VNDA				LR		LR	19 41 45.4	
	comp=Z,75nm,21.9s,baz=324,slow=34							
VNDA	**Vanda**	**79.05**	**172**	P		**P**	**19 08 33.6**	**+0.4**
RAYN	**Ar Rayn**	**79.49**	**294**	P		**P**	**19 08 35.1**	**-1.6**
ANM	**Nome**	**82.99**	**24**	P		**P**	**19 08 55.1**	**+0.8**
ANM				IAmb		IAmb	19 11 39.5	
	comp=Z,52nm,1.5s							
KBZ	**Khabaz**	**84.02**	**314**	P		**P**	**19 08 59.0**	**-1.0**
	comp=Z,2.3nm,0.8s,baz=236,slow=24,SNR=6.5							
KMBO	**Kilima Mbogo**	**86.26**	**269**	P		**P**	**19 09 14.9**	**+2.6**
	comp=Z,7.0nm,0.9s,baz=60,slow=7.3,SNR=23							
KMBO	**Kilima Mbogo**	**86.26**	**269**	P		**P**	**19 09 12.6**	**+0.3**
KMBO				IAmb		IAmb	19 09 15.3	
	comp=Z,13nm,1.0s							
SYO	**Syowa Base**	**86.76**	**201⇑**	*e*P		**P**	**19 09 13.0**	**-0.2**
SYO	**Syowa Base**	**86.76**	**201⇑**	*e*pP		pP	19 09 26.2	-1.2
SYO	**Syowa Base**	**86.76**	**201⇓**	*e*sP		sP	19 09 31.2	-1.6
A21K	**Barrow**	**87.82**	**19**	IAmb		IAmb	19 09 20.6	
	comp=Z,12nm,0.8s							
IMAR	**Indian Mountai**	**88.07**	**24**	P		**P**	**19 09 19.1**	**-0.4**
KLMR	**Klimovskoe**	**88.07**	**331**	*e*P		**P**	**19 09 17.0**	**-2.7**
KLMR				AMP			19 09 21.1	
	comp=Z,7.0nm,0.8s							

QSPA	**South Pole Qui**	**88.79**	**180**	P		**P**	**19 09 24.0**	**+0.8**
QSPA				IAmb		IAmb	19 09 25.4	
	comp=Z,22nm,1.6s							
COLD	**Coldfoot**	**89.60**	**23**	P		**P**	**19 09 27.3**	**+0.5**
COLD				IAmb		IAmb	19 09 28.6	
	comp=Z,6.4nm,0.9s							
BRTR	**Keskin Array B**	**90.64**	**310**	P		**P**	**19 09 29.6**	**-2.9**
	comp=Z,1.2nm,0.9s,baz=101,slow=6.5,SNR=5.4							
ILAR	**Eielson Array**	**90.85**	**25**	P		**P**	**19 09 30.9**	**-1.8**
	comp=Z,0.4nm,0.6s,baz=232,slow=5.3,SNR=5.5							
BMAR	**Burnt Mountain**	**91.78**	**23**	P		**P**	**19 09 37.3**	**+0.3**
K27K	**Chicken**	**92.95**	**26**	IAmb		IAmb	19 09 54.5	
	comp=Z,15nm,1.5s							
AKASG	**Malin Array Be**	**93.62**	**321**	P		**P**	**19 09 42.9**	**-2.9**
	comp=Z,1.0nm,0.5s,baz=68,slow=4.8,SNR=6.1							
AKASG				PKKPbc		**PKKPbc**	**19 26 52.1**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=274,slow=3.5,SNR=4.0							
ARCES	**ARCESS Array B**	**93.88**	**340**	P		**P**	**19 09 45.7**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=64,slow=6.1,SNR=3.5							
FINES	**FINESS Array B**	**94.58**	**331**	P		**P**	**19 09 47.2**	**-2.7**
	comp=Z,4.5nm,1.0s,baz=98,slow=3.9,SNR=5.4							
LSZ	**Lusaka**	**94.86**	**255**	P		**P**	**19 09 53.1**	**+0.7**
LSZ				IAmb		IAmb	19 09 54.0	
	comp=Z,12nm,0.9s							
BURAR	**Bucovina Array**	**96.46**	**318**	P		**P**	**19 09 58.0**	**-1.0**
BUR08	**Bucovina Ar. S**	**96.47**	**318**	IAmb		IAmb	19 11 29.4	
	comp=Z,19nm,1.9s							
BOSA	**Boshof**	**96.72**	**241**	LR		LR	19 48 21.6	
	comp=Z,75nm,18.6s,baz=80,slow=32							
SNAA	**Sanae**	**99.72**	**195**	Pdiff		**Pdif**	**19 10 14.3**	**+1.2**
VYHS	**Vyhne**	**100.58**	**319**	*e*PDIFF		**Pdif**	**19 10 16.4**	**-0.9**
GERES	**GERESS Array B**	**103.83**	**320**	Pdiff		**Pdif**	**19 10 31.8**	**0.0**
	comp=Z,0.2nm,0.5s,baz=101,slow=5.1,SNR=4.0							
TORD	**Torodi Ar. Bea**	**121.22**	**285**	PKP		**PKiKP**	**19 15 23.6**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=55,slow=2.0,SNR=13							
TORD	**Torodi Ar. Bea**	**121.22**	**285**			**PKPdf**	**19 15 23.3**	**0.0**
TXAR	**Lajitas Array**	**127.07**	**53**	PKP		**PKiKP**	**19 15 36.2**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=336,slow=2.7,SNR=5.6							
S39A	**Bolivar**	**130.29**	**39**			**PKPdf**	**19 15 40.1**	**0.0**
ASAL	**Salagasta**	**144.47**	**162**	*i* P		**PKPdf**	**19 16 07.1**	**+0.6**
AUSP	**Uspallata**	**144.63**	**161**	*i* P		**PKPdf**	**19 16 08.0**	**+1.0**
RTLS	**Leoncito**	**145.05**	**161**	*i* P		**PKPdf**	**19 16 09.1**	**+1.4**
RTCV	**Cerro Valdivia**	**145.23**	**162**	*i* P		**PKPdf**	**19 16 09.1**	**+1.4**
MRA	**San Martin**	**145.49**	**166**	*i* P		**PKPab**	**19 16 10.2**	**+1.8**
ACCO	**Cerro Coronel**	**146.24**	**160**	*i* P		**PKPab**	**19 16 12.3**	**+0.7**
AROD	**Rodeo**	**146.48**	**159**	*i* P		**PKPab**	**19 16 12.2**	**-0.3**
AVFE	**Valle Fertil**	**146.69**	**163**	*i* P		**PKPab**	**19 16 12.6**	**-0.5**
TCA	**Tanti**	**146.78**	**167**	*i* P		**PKPab**	**19 16 13.9**	**+0.5**
AGUA	**GUANDACOL**	**147.44**	**160**	*i* P		**PKPab**	**19 16 15.3**	**-0.7**
ACLC	**CERRO LA CRUZ**	**147.99**	**163**	*i* P		**PKPbc**	**19 16 16.0**	**+0.4**
VCA	**Vinchina**	**148.23**	**160**	*i* P		**PKPab**	**19 16 19.6**	**+0.3**
CPUP	**Villa Florida**	**152.67**	**178**	PKPbc		**PKiKP**	**19 16 28.4**	**+1.4**
	comp=Z,5.2nm,0.9s,baz=105,slow=2.6,SNR=12							
CPUP				PKPab		**sPKPdf**	**19 16 38.9**	**-0.7**
	comp=Z,5.8nm,0.9s,baz=199,slow=4.2,SNR=3.6							
LPAZ	**La Paz**	**159.20**	**147**	PKP		**PKPdf**	**19 16 31.4**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=288,slow=3.2,SNR=3.7							
LPAZ				PKPab		**PKPab**	**19 17 08.0**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=272,slow=4.7,SNR=3.7							
BDFB	**Brasilia**	**161.34**	**206**	PKPab		**PKPab**	**19 17 17.1**	**+2.1**
	comp=Z,4.9nm,0.8s,baz=154,slow=8.6,SNR=5.2							

IDC 15 19:06:48.1±2.3, 2°10N×126°68E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/39, mbtmp3.3/3, Error ellipse: s-maj=184.3km s-min=27.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.15**	**161**	P		P	19 11 55.0	-1.4
	0.6nm,0.4s,baz=340,slow=11,SNR=11							
ASAR	**Alice Springs**	**26.55**	**165**	P		P	19 12 29.5	+1.5
	0.2nm,0.3s,baz=346,slow=11,SNR=6.4							
MKAR	**Makanchi Array**	**58.87**	**326**	P		P	19 16 48.4	-0.4
	0.1nm,0.5s,baz=117,slow=7.2,SNR=1.6							

*IDC **15** 19:08:09.3±1.8, 3°53S×144°21E, h0km, mb3.3/5, mb1 3.5/6, mb1mx3.4/34, mbtmp3.3/6, ML3.1/1, Error ellipse: s-maj=54.1km s-min=25.1km az=108.0*

ISC 15 19:08:14.2±1.7, 3°6S±0°2×144°1E±0°3, h31km, n12, σ0°70/6, mb3.4/5, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.87**	**210**	P		**P**	**19 12 32.1**	**0.0**
	0.1nm,0.3s,baz=31,slow=11,SNR=4.0							
ASAR	**Alice Springs**	**22.29**	**205**	P		**P**	**19 13 09.7**	**+0.6**
	0.2nm,0.6s,baz=40,slow=7.4,SNR=6.1							
FITZ	**Fitzroy Crossi**	**23.16**	**230**	P		**P**	**19 13 17.4**	**-0.9**
	0.7nm,0.5s,baz=46,slow=8.4,SNR=8.1							
H11S3	**WAKE ISLAND Hy**	**31.22**	**45**	T		T	19 47 45.3	
	baz=228,slow=76,SNR=3.4							
H11S2	**WAKE ISLAND Hy**	**31.23**	**45**	T		T	19 47 46.6	
	baz=228,slow=76,SNR=3.2							
H11S1	**WAKE ISLAND Hy**	**31.24**	**45**	T		T	19 47 46.6	
	baz=228,slow=76,SNR=3.2							
H11N1	**WAKE ISLAND Hy**	**32.19**	**43**	T		T	19 48 56.8	
	baz=226,slow=74							
H11N2	**WAKE ISLAND Hy**	**32.20**	**43**	T		T	19 48 56.9	
	baz=226,slow=74							
H11N3	**WAKE ISLAND Hy**	**32.20**	**43**	T		T	19 48 56.7	
	baz=226							
CMAR	**Chiang Mai Arr**	**49.60**	**298**	P		**P**	**19 17 03.1**	**+0.1**
	0.2nm,0.5s,baz=108,slow=8.6,SNR=2.4							
MKAR	**Makanchi Array**	**73.83**	**321**	P		**P**	**19 19 46.3**	**+0.4**
	0.4nm,1.0s,baz=117,slow=7.2,SNR=1.7							
ILAR	**Eielson Array**	**84.41**	**24**	P		**P**	**19 20 43.0**	**-0.3**
	0.2nm,0.8s,baz=252,slow=5.6,SNR=2.4							

IDC 15 19:10:18.3±2.3, 1°75N×126°47E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/36, mbtmp3.1/3, Error ellipse: s-maj=181.5km s-min=29.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.90**	**161**	P		P	19 15 22.9	-1.0
	0.2nm,0.4s,baz=339,slow=11,SNR=2.8							
ASAR	**Alice Springs**	**26.28**	**164**	P		P	19 15 56.5	+0.9
	0.1nm,0.4s,baz=347,slow=13,SNR=4.3							
MKAR	**Makanchi Array**	**59.03**	**326**	P		P	19 20 20.0	-0.2
	0.1nm,0.4s,baz=124,slow=7.7,SNR=1.8							

*IDC **15** 19:16:46.4±2.4, 31°59S×177°76W, h0km, mb3.9/3, mb1 4.1/5, mb1mx3.8/22, mbtmp3.9/5, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/35, Error ellipse: s-maj=61.3km s-min=29.2km az=122.0*

ISC 15 19:16:48.5±2.3, 31°6S±0°1×177°6W±0°4, h35km, n7, σ2°16/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**2.40**	**352**	Pn		**Pn**	**19 17 24.8**	**-0.6**
	24nm,0.3s,baz=90,slow=20,SNR=1.3							
RAO				Sn		**Sn**	**19 17 52.2**	**-1.4**
	90nm,0.3s,baz=75,slow=20,SNR=2.5							
URZ	**Urewera**	**7.92**	**212**	Pn		**Pn**	**19 18 40.1**	**-1.0**
	0.2nm,0.3s,baz=29,slow=13,SNR=1.8							
URZ				Sn		**Sn**	**19 20 08.5**	**-0.9**
	0.5nm,0.3s,baz=132,slow=18,SNR=6.4							
DZM	**Mont Dzumac**	**17.15**	**300**	LR		LR	19 26 06.7	
	comp=Z,115nm,19.3s,baz=267,slow=33							
ASAR	**Alice Springs**	**43.44**	**268**	P		**P**	**19 24 49.8**	**+1.5**
	0.5nm,0.6s,baz=108,slow=7.2,SNR=13							
WRA	**Warramunga Arr**	**44.53**	**273**	P		**P**	**19 24 59.0**	**+1.9**
	1.1nm,0.6s,baz=113,slow=7.8,SNR=12							
ILAR	**Eielson Array**	**99.05**	**13**	P		**Pdif**	**19 30 28.7**	**+3.6**
	0.3nm,0.9s,baz=224,slow=6.3,SNR=2.1							
FINES	**FINESS Array B**	**146.44**	**340**	PKPbc		**PKiKP**	**19 36 27.7**	**-0.3**
	3.4nm,1.0s,baz=24,slow=3.8,SNR=6.7							

TAP 15 19:25:02.8, 22°33N×120°81E, h10km, ML1.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EAST	**Anshuo**	**0.07**	**33**	*i* P		Pg	19 25 05.7	+0.6
	baz=38							
EAST				*i* S		Sg	19 25 07.6	+0.8
	baz=38							
TAW	**Tawu**	**0.09**	**70**	P		Pg	19 25 06.0	+0.7
	baz=72							
SLIU	**Shizi**	**0.11**	**185**	*e*P		Pb	19 25 06.4	-0.7
	baz=185							
SLIU				*e*S		Sg	19 25 08.7	+1.1
	baz=185							
SCZT	**Fangliau**	**0.18**	**284**	P		Pb	19 25 07.6	-0.7
	baz=283							
SCZT				*i* S		Sg	19 25 10.6	+1.2
	baz=283							
SSPT	**Xinbi**	**0.27**	**305**	P		Pb	19 25 09.9	+0.1
	baz=304							
SSPT				*e*S		Sb	19 25 14.4	-0.1
	baz=304							
ECL	**Taimali**	**0.30**	**26**	P		Pg	19 25 09.5	+0.7
	baz=27							
MASBT	**Mashibuluo**	**0.33**	**330**	P		Pb	19 25 10.2	-0.5
	baz=329							
HEN	**Hengchun**	**0.33**	**192**	P		Pb	19 25 10.2	-0.5
	baz=190							
HEN				S		Sb	19 25 15.8	-0.2
	baz=190							
TWK1	**Hengchun**	**0.38**	**181**	P		Pb	19 25 11.6	-0.1
	baz=179							
TWK1				S		Sb	19 25 17.7	+0.1
	baz=179							
TWKBT	**Hengchun**	**0.39**	**180**	*e*P		Pg	19 25 11.0	+0.5
	baz=179							
TSMG	**Majia**	**0.41**	**338**	P		Pb	19 25 11.6	-0.5
	baz=337							
TSMG				*e*S		Sb	19 25 18.4	0.0
	baz=337							
TWP	**Hsiaoliuchiu**	**0.41**	**273**	*e*P		Pb	19 25 11.6	-0.6
	baz=272							
TWP				*e*S		Sb	19 25 18.4	-0.1
	baz=272							
TSEB	**Hengchuen, Pin**	**0.43**	**169**	P		Pb	19 25 12.2	-0.4
	baz=174							
TSEB				S		Sb	19 25 19.1	0.0
	baz=174							
SSD	**Sandimen**	**0.45**	**338**	P		Pg	19 25 12.1	+0.5
	baz=339							
SSD				S		Sb	19 25 19.8	+0.2
	baz=339							
SGLT	**Jiouru**	**0.49**	**323**	*e*P		Pb	19 25 13.5	0.0
	baz=323							
SGLT				*e*S		Sb	19 25 20.8	0.0
	baz=323							

IDC 15 19:34:39.3±1.9, 1°91N×126°60E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/37, mbtmp3.3/4, Error ellipse: s-maj=117.6km s-min=23.5km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.91**	**183**	P		Pn	19 39 13.4	-0.8
	baz=11,slow=10							
WRA	**Warramunga Arr**	**23.01**	**161**	P		P	19 39 44.6	-1.5
	0.5nm,0.5s,baz=338,slow=11,SNR=6.8							
ASAR	**Alice Springs**	**26.40**	**165**	P		P	19 40 18.5	+0.8
	0.1nm,0.4s,baz=346,slow=12,SNR=7.9							
MKAR	**Makanchi Array**	**58.97**	**326**	P		P	19 44 40.6	-0.1
	0.2nm,0.4s,baz=113,slow=7.7,SNR=8.0							

*IDC **15** 19:43:54.3±1.0, 36°43N×3°50E, h0km, mb3.5/6, mb1 3.8/11, mb1mx3.5/57, mbtmp3.6/11, ML3.7/5, MS2.9/3, Ms1 2.9/3, ms1mx2.6/44, Error ellipse: s-maj=21.6km s-min=16.4km az=158.0*
*CRAAG **15** 19:43:54.1, 36°36N×3°41E, Ml4.1*
*MDD **15** 19:43:56.4±0.6, 36°35N×3°44E, h0km, mb4.7/32, Error ellipse: s-maj=8.4km s-min=4.5km az=85.0, PRXIMO*
*LDG **15** 19:43:59.5±0.1, 36°42N×3°45E, h10km, Ml3.4/20, Error ellipse: s-maj=3.0km s-min=2.3km az=175.0*

ISC 15 19:43:55.4±0.6, 36°43N±0°03×3°51E±0°03, h10km, n123, σ2°02/164, mb3.5/6, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ADJB	**Djebel Djouab**	**0.28**	**192**	P		**Pg**	**19 44 00.0**	**-1.2**
ADJB	**Djebel Djouab**	**0.28**	**192**	P

CFON	**Fontmartina**	**5.39**	**351**	P	**Pn**	**19 45 17.0 +1.1**
	16nm,0.2s,SNR=20					
CFON				S	**Sn**	**19 46 18.2 +0.2**
	12nm,0.8s					
JBK	**JBK**	**5.39**	**249**	P	**Pn**	**19 45 16.1 0.0**
EQES	**Quesada**	**5.44**	**287**	P	**Pn**	**19 45 18.1 +1.5**
	15nm,0.3s,SNR=37					
EQES				S	**Sn**	**19 46 19.9 +0.6**
	31nm,0.9s					
EQUE	**Quentar**	**5.63**	**280**	P	**Pn**	**19 45 19.6 +0.3**
	7.4nm,0.4s,SNR=9.4					
EQUE				S	**Sn**	**19 46 21.8 -2.3**
	19nm,1.3s					
EMIR	**Miracle**	**5.69**	**345**	P	**Pn**	**19 45 22.4 +2.5**
	62nm,0.4s,SNR=14					
EMIR				S	**Sn**	**19 46 23.2 -2.2**
	14nm,0.5s					
ELGU	**Los Guajares,**	**5.76**	**276**	P	**Pn**	**19 45 20.9 -0.1**
	9.5nm,0.5s,SNR=7.9					
ELGU				S	**Sn**	**19 46 25.5 -1.6**
	20nm,0.6s,SNR=7.9					
EJON	**La Jonquera**	**6.03**	**356**	P	**Pn**	**19 45 27.3 +2.7**
	16nm,0.2s,SNR=26					
EJON				S	**Sn**	**19 46 29.8 -3.9**
	38nm,1.1s					
SJAF	**Saint Jean de**	**6.06**	**356**	P	**Pn**	**19 45 26.8 +1.7**
	16nm,0.3s,SNR=7.9					
SJAF				S	**Sn**	**19 46 32.1 -2.4**
	12nm,0.6s,SNR=7.9					
ESAC	**San Caprasio**	**6.12**	**331**	P	**Pn**	**19 45 28.2 +2.3**
	15nm,0.2s,SNR=7.9					
CLLI	**Llivia**	**6.15**	**349**	P	**Pn**	**19 45 28.9 +2.4**
	4.0nm,0.3s,SNR=14					
CLLI				S	**Sn**	**19 46 32.9 -4.0**
	6.8nm,0.5s,SNR=6.0					
EGOR	**Sierra Gorda,**	**6.16**	**279**	P	**Pn**	**19 45 28.1 +1.6**
	4.5nm,0.4s,SNR=7.9					
EGOR				S	**Sn**	**19 46 40.3 +3.2**
	8.6nm,0.5s,SNR=7.9					
ETOR	**Torete**	**6.18**	**317**	P	**Pn**	**19 45 29.2 +2.5**
	32nm,0.5s,SNR=17					
CSOR	**Sort**	**6.21**	**343**	P	**Pn**	**19 45 29.6 +2.3**
	18nm,0.5s,SNR=24					
CSOR				S	**Sn**	**19 46 35.9 -2.5**
	14nm,0.4s,SNR=11					
ESDC	**Sonseca Array**	**6.73**	**301**	Pn	**Pn**	**19 45 34.0 -0.3**
	0.9nm,0.3s,baz=111,slow=13,SNR=42					
ESDC				Sn	**Sn**	**19 46 51.5 +0.5**
	baz=116,slow=25,SNR=2.3					
ESDC				LR	LR	19 47 39.7
	comp=Z,52nm,20.9s,baz=180,slow=34					
ESDC	**Sonseca Array**	**6.73**	**301**	P	**Pn**	**19 45 34.7 +0.4**
	2.2nm,0.3s,baz=112,slow=13,SNR=5.3					
PAB	**San Pablo**	**6.94**	**299**	P	**Pn**	**19 45 37.9 +0.7**
	5.4nm,0.4s,SNR=7.9					
MTLF	**Montolieu**	**6.97**	**352**	*e*Pn	**Pn**	**19 45 39.6 +2.0**
MTLF				*e*Sn	**Sn**	**19 46 53.7 -3.2**
	2.2nm,0.4s					
EPF	**Esparros**	**7.03**	**341**	*e*Pn	**Pn**	**19 45 40.1 +1.7**
EPF				*e*Sn	**Sn**	**19 46 54.7 -3.6**
	5.7nm,0.4s					
ETSF	**Etsaut**	**7.18**	**335**	*e*Pn	**Pn**	**19 45 41.9 +1.4**
ETSF				*e*Sn	**Sn**	**19 46 58.5 -3.6**
	2.5nm,0.4s					
LMR	**La Mourre**	**7.27**	**18**	*e*Pn	**Pn**	**19 45 42.6 +1.0**
LMR				*e*Sn	**Sn**	**19 47 01.5 -2.6**
	5.5nm,0.3s					
ECAB	**El Cabril**	**7.31**	**286**	P	**Pn**	**19 45 42.0 -0.3**
	4.5nm,0.6s,SNR=6.5					
GUD	**Guadarrama**	**7.33**	**307**	P	**Pn**	**19 45 43.7 +1.1**
	9.7nm,0.6s,SNR=15					
PGF	**Pioggiola**	**7.43**	**33**	*e*Pn	**Pn**	**19 45 45.6 +1.6**
PGF				*e*Sn	**Sn**	**19 47 04.7 -3.7**
	11nm,0.4s					
FRF	**La Foret Royal**	**7.51**	**18**	*e*Pn	**Pn**	**19 45 46.3 +1.3**
FRF				*e*Sn	**Sn**	**19 47 07.6 -2.6**
	4.0nm,0.3s					
SJPF	**Ste Jean**	**7.60**	**333**	*e*Pn	**Pn**	**19 45 47.7 +1.5**
SJPF				*e*Sn	**Sn**	**19 47 08.2 -4.2**
	8.2nm,0.4s					
MDT	**Midelt**	**7.60**	**244**	Pn	**Pn**	**19 45 46.2 -0.2**
	0.3nm,0.3s,baz=58,slow=9.5,SNR=11					
MDT				Lg	Lg	19 47 59.0
	0.4nm,0.3s,baz=317,slow=19,SNR=1.8					
MDT	**Midelt**	**7.60**	**244**	P	**Pn**	**19 45 46.4 0.0**
MDT				Lg	Lg	19 47 56.8
LASF	**Ste Croix**	**7.64**	**2**	*e*Pn	**Pn**	**19 45 48.5 +1.8**
LASF				*e*Sn	**Sn**	**19 47 10.0 -3.3**
	23nm,0.6s					
MD31	**MD31**	**7.69**	**245**	P	**Pn**	**19 45 47.6 +0.1**
MD31				Lg	Lg	19 47 52.9
SMRF	**Simiane la Rot**	**7.70**	**11**	*e*Pn	**Pn**	**19 45 49.5 +1.9**
SMRF				*e*Sn	**Sn**	**19 47 12.9 -1.9**
	1.4nm,0.3s					
ARF	**Arif**	**8.13**	**234**	P	**Pn**	**19 45 54.3 +0.7**
ARF				Lg	Lg	19 48 11.9
VIVF	**Saint-Julien-l**	**8.46**	**6**	*e*Pn	**Pn**	**19 45 59.9 +1.9**
VIVF				*e*Sn	**Sn**	**19 47 29.8 -3.7**
	2.3nm,0.3s					
CAF	**Calviac**	**8.55**	**353**	*e*Pn	**Pn**	**19 46 01.8 +2.5**
CAF				*e*Sn	**Sn**	**19 47 31.5 -4.4**
	3.3nm,0.6s					
ELAN	**Lanestosa**	**8.64**	**324**	P	**Pn**	**19 46 03.1 +2.7**
	11nm,0.7s,SNR=8.7					
MBDF	**Montbardon**	**8.65**	**16**	*e*Pn	**Pn**	**19 46 02.7 +2.0**
MBDF				*e*Sn	**Sn**	**19 47 34.8 -3.5**
	5.5nm,0.7s					
ORIF	**Oris-en-Rattie**	**8.66**	**11**	*e*Pn	**Pn**	**19 46 03.3 +2.4**
ORIF				*e*Sn	**Sn**	**19 47 35.0 -3.7**
	3.7nm,0.6s					
LFF	**La Frestale**	**8.75**	**347**	*e*Pn	**Pn**	**19 46 03.8 +1.8**
LFF				*e*Sn	**Sn**	**19 47 34.1 -6.6**
	12nm,0.8s					
RJF	**Les Rejaudoux**	**8.99**	**351**	*e*Pn	**Pn**	**19 46 07.0 +1.7**
RJF				*e*Sn	**Sn**	**19 47 41.6 -4.9**
	1.3nm,0.4s					
LPG	**La Plagne**	**9.38**	**14**	*e*Pn	**Pn**	**19 46 13.5 +2.6**
LPL	**La Plagne**	**9.39**	**14**	*e*Pn	**Pn**	**19 46 13.4 +2.4**
MVO	**Moncorvo**	**9.49**	**303**	P	**Pn**	**19 46 13.8 +1.6**
	10.0nm,0.7s,SNR=7.9					
EARI	**Arriondas**	**9.59**	**318**	P	**Pn**	**19 46 16.0 +2.5**
	22nm,0.6s,SNR=28					
ECAL	**Calabor**	**9.67**	**308**	P	**Pn**	**19 46 15.0 +0.3**
	8.6nm,0.3s,SNR=6.4					
TCF	**Toulx Ste Croi**	**9.89**	**355**	*e*Pn	**Pn**	**19 46 19.9 +2.2**
ZGR	**Zagora**	**9.90**	**233**	P	**Pn**	**19 46 18.6 +0.7**
ZGR				Lg	Lg	19 49 04.9
BGF	**Bois d'Agland**	**10.13**	**357**	*e*Pn	**Pn**	**19 46 23.3 +2.5**
BGF				*e*Sn	Sn	19 48 06.6 -7.9
	2.8nm,0.4s					
OUZM	**OUZ**	**10.18**	**240**	P	**Pn**	**19 46 23.5 +1.8**
SMF	**Signal de Mont**	**10.21**	**1**	*e*Pn	**Pn**	**19 46 24.1 +2.2**
SMF				*e*Sn	**Sn**	**19 48 09.3 -7.1**
	0.6nm,0.3s					
AVF	**Avril sur Loir**	**10.35**	**359**	*e*Pn	**Pn**	**19 46 26.0 +2.1**
CABF	**La Chapelle**	**10.35**	**10**	*e*Pn	**Pn**	**19 46 25.7 +1.7**
MFF	**Saint Martin d**	**10.52**	**346**	*e*Pn	**Pn**	**19 46 27.6 +1.4**
SSF	**Saint Saulge**	**10.62**	**360**	*e*Pn	**Pn**	**19 46 30.1 +2.5**
LOR	**Lormes**	**10.83**	**1**	*e*Pn	**Pn**	**19 46 31.7 +1.2**
HINF	**Hinteralfeld**	**11.64**	**11**	*e*Pn	**Pn**	**19 46 43.2 +1.6**
HAU	**Haudompre**	**11.75**	**9**	*e*Pn	**Pn**	**19 46 44.7 +1.6**
SFTF	**Sexfontaines**	**11.82**	**5**	*e*Pn	**Pn**	**19 46 46.7 +2.8**
MEZF	**Maizieres J'vi**	**12.11**	**5**	*e*Pn	**Pn**	**19 46 49.8 +1.8**
PAGF	**Fort de Pagny**	**12.22**	**7**	*e*Pn	**Pn**	**19 46 52.2 +2.7**
CDF	**Champ du Feu**	**12.29**	**12**	*e*Pn	**Pn**	**19 46 52.0 +1.6**
GRR	**Gorron**	**12.37**	**346**	*e*Pn	**Pn**	**19 46 52.7 +1.2**
LDF	**La Druiniere**	**12.44**	**349**	*e*Pn	**Pn**	**19 46 53.7 +1.2**
QUIF	**Quistinic**	**12.49**	**339**	P	**Pn**	**19 46 54.2 +1.1**
QUIF	**Quistinic**	**12.49**	**339**	*e*Pn	**Pn**	**19 46 54.2 +1.1**
SGMF	**Saint Gilles**	**12.63**	**341**	P	**Pn**	**19 46 56.1 +1.1**
SGMF	**Saint Gilles**	**12.63**	**341**	*e*Pn	**Pn**	**19 46 56.1 +1.1**
FLN	**La Foliniere**	**12.66**	**348**	P	**Pn**	**19 46 56.6 +1.1**
FLN	**La Foliniere**	**12.66**	**348**	*e*Pn	**Pn**	**19 46 56.6 +1.1**
	baz=170					
ROSF	**Rostrenen**	**12.90**	**339**	P	**Pn**	**19 46 59.6 +0.9**
ROSF	**Rostrenen**	**12.90**	**339**	*e*Pn	**Pn**	**19 46 59.6 +0.9**
BAIF	**Baives**	**13.63**	**2**	P	**Pn**	**19 47 10.3 +1.7**
BAIF	**Baives**	**13.63**	**2**	*e*Pn	**Pn**	**19 47 10.3 +1.7**
GIVF	**Givet**	**13.70**	**4**	P	**Pn**	**19 47 10.3 +0.7**
GIVF	**Givet**	**13.70**	**4**	*e*Pn	**Pn**	**19 47 10.3 +0.7**
GERES	**GERESS Array B**	**14.47**	**28**	Pn	**Pn**	**19 47 20.7 +0.3**
	0.2nm,0.3s,baz=200,slow=11,SNR=5.7					
EKA	**Eskdalemuir Ar**	**19.45**	**348**	P	**Pn**	**19 48 23.8 +0.7**
	baz=164,slow=14,SNR=1.8					
TORD	**Torodi Ar. Bea**	**23.25**	**184**	P	**P**	**19 49 02.9 -0.1**
	1.5nm,0.6s,baz=357,slow=11,SNR=9.8					
AKASG	**Malin Array Be**	**23.31**	**44**	P	**P**	**19 49 04.1 +0.8**
	0.7nm,0.4s,baz=244,slow=9.3,SNR=3.4					
BRTR	**Keskin Array B**	**23.89**	**73**	P	**P**	**19 49 10.8 +1.5**
	0.4nm,0.6s,baz=258,slow=5.6,SNR=2.4					
HFS	**Hagfors**	**24.61**	**12**	LR	LR	19 58 54.1
	comp=Z,91nm,18.6s,baz=62,slow=37					
FINES	**FINESS Array B**	**28.79**	**23**	P	**P**	**19 49 53.3 +0.2**
	1.7nm,0.8s,baz=220,slow=13,SNR=2.6					
MKAR	**Makanchi Array**	**57.49**	**53**	P	**P**	**19 53 43.5 -1.1**
	0.4nm,0.9s,baz=295,slow=6.6,SNR=4.0					
PDAR	**Pinedale Array**	**80.37**	**317**	P	**P**	**19 56 07.3 +0.1**
	0.2nm,0.4s,baz=29,slow=8.4,SNR=1.8					
ASAR	**Alice Springs**	**135.66**	**88**	PKP	**PKPdf**	**20 03 17.8 +1.4**
	0.1nm,0.4s,baz=323,slow=1.4,SNR=1.8					

IDC 15 19:47:17.0±1.8, 1.84N×126.49E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.2/43, mbtmp3.4/4, Error ellipse: s-maj=166.5km s-min=23.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.98**	**161**	P	P	19 52 23.7	+0.3
	0.3nm,0.4s,baz=340,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**26.36**	**165**	P	P	19 52 55.0	-0.1
	0.2nm,0.5s,baz=345,slow=7.9,SNR=6.5						
MKAR	**Makanchi Array**	**58.97**	**326**	P	P	19 57 18.9	+0.5
	0.2nm,0.5s,baz=126,slow=8.5,SNR=2.0						
KURBB	**Kurchatov Arra**	**63.20**	**328**	P	P	19 57 46.4	-0.6
	0.5nm,0.2s,baz=114,slow=7.7,SNR=2.1						

IDC 15 19:54:57.7±2.1, 1.78N×126.26E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.2/43, mbtmp3.4/4, ML2.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/19, Error ellipse: s-maj=121.2km s-min=26.9km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.76**	**182**	P	P	19 59 29.5	+0.2
	0.0nm,0.3s,baz=6.3,slow=10,SNR=1.4						
LEM	**Lembang**	**20.48**	**245**	LR	LR	20 08 26.1	
	comp=Z,48nm,20.0s,baz=317,slow=40						
WRA	**Warramunga Arr**	**22.99**	**160**	P	P	20 00 04.0	-0.2
	0.3nm,0.5s,baz=339,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.36**	**164**	P	P	20 00 35.8	0.0
	0.2nm,0.4s,baz=343,slow=8.2,SNR=6.5						
MKAR	**Makanchi Array**	**58.90**	**326**	P	P	20 04 58.6	+0.1
	0.3nm,0.6s,baz=123,slow=5.3,SNR=1.5						

*MOS **15** 19:56:17.6±1.2,28.2°13N×55.1°41E,h10km,mb4.9/42,Error ellipse: s-maj=5.6km s-min=3.4km az=119.5*
*OMAN **15** 19:56:19.3±10.0,28.2°8N×55.1°9E,h9km±83km,mb6.0/14, ml4.7/12,ms3.5/2,Error ellipse: s-maj=193.9km s-min=110.9km az=18.0*
*DSN **15** 19:56:19.2±1.8,28.1°41N×55.1°33E,h10km,ML4.9/13,Error ellipse: s-maj=22.9km s-min=7.6km az=32.0*
*THR **15** 19:56:20.9±0.3,28.3°38N×55.1°41E,h17km±7km,ML4.7*
*BJI **15** 19:56:21.0±0.0,28.3°30N×55.1°40E,h30km,mB4.9/20, mb4.6/28,Ms4.4/16,Ms7 4.1/16*
*GCMT **15** 19:56:21.0±0.4,28.0°4N±0.0°2×55.1°3E±0.0°3,h22km±1km, MW4.8/71,Moment Tensor Solution. s14,c15; s71,c95; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.72±.17; Mθθ-2.10±.11; Mφφ0.37±.10; Mrθ0.47±.13; Mθφ-0.34±.07; Mφr-0.34±.18; Best double couple: Mo2.03500×10¹⁶ NP1:φs247.00000°,δ41.00000°,λ66.00000°. NP2: φs97.00000°,δ53.00000°,λ109.00000°. Principal axes: T 1.8770, Plg73.0000°, Azm62.0000°; N 0.3130, Plg15.0000°, Azm265.0000°; P -2.1920, Plg6.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*TEH **15** 19:56:21.0,28.4°24N×55.1°38E,h15km,ML4.7*
*NEIC **15** 19:56:23.6±1.4,28.2°3N±0.0°05×55.1°36E±0.0°05,h40km±6km, Error ellipse: s-maj=7.1km s-min=6.5km az=180.0*
*IDC **15** 19:56:23.8±2.3,28.2°7N×55.1°37E,h41km±21km,mb4.2/34, mb1 4.3/40,mb1mx4.2/57,mbtmp4.4/40,ML3.9/6,MS3.8/24, Ms1 3.8/24,ms1mx3.6/60,Error ellipse: s-maj=10.8km s-min=9.7km az=163.0*
*BGR **15** 19:56:43.3±0.0,30.0°25N×53.1°3E,h33km,mb4.6*

ISC 15 19:56:21.6±0.3, 28.3°23N±0.0°03×55.3°37E±0.0°03, h22km, n521, σ1§35/524, mb4.7/129, MS3.8/24, 43C-9D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAR1	**LAR**	**1.04**	**238**	*e*Pg	**Pb**	**19 56 41.8**	**+0.9**
LAR1				*e*		19 57 07.4	
LAR1	**LAR**	**1.04**	**238**		**Pb**	**19 56 41.8**	**+0.9**
BNDS	**Bandar-Abbas**	**1.09**	**139**	*e*Pg	**Pb**	**19 56 43.0**	**+1.2**
BNDS	**Bandar-Abbas**	**1.09**	**139**	*e*Pg	**Pb**	**19 56 43.0**	**+1.2**
BNDS	**Bandar-Abbas**	**1.09**	**139**		**Pb**	**19 56 43.0**	**+1.2**
GENO	**Geno**	**1.09**	**139**	*e*Pg	**Pn**	**19 56 41.4**	**-0.3**
GENO				*e*		19 57 06.5	
GENO	**Geno**	**1.09**	**139**		**Pn**	**19 56 41.3**	**-0.4**
JHRM	**Jahrom**	**1.60**	**280**	*e*Pg	**Pb**	**19 56 50.8**	**+0.3**
JHRM	**Jahrom**	**1.60**	**280**	Pg	**Pb**	**19 56 50.8**	**+0.3**
NGRK	**Negar Kerman**	**1.85**	**40**	*e*Pn	**Pn**	**19 56 52.0**	**-0.3**
NGRK				*e*		19 57 24.1	
NGRK	**Negar Kerman**	**1.85**	**40**	Pn	**Pn**	**19 56 52.0**	**-0.3**
QIR1	**Qir**	**2.06**	**277**	*e*Pn	**Pb**	**19 56 57.6**	**-0.8**
KHNJ	**Kahnooj**	**2.08**	**97**	*e*Pn	**Pn**	**19 56 56.2**	**+1.0**
KHNJ	**Kahnooj**	**2.08**	**97**	Pn	**Pn**	**19 56 56.2**	**+1.0**
GHIR	**Ghir-Karzin**	**2.10**	**272**	*e*Pn	**Pb**	**19 56 57.9**	**-1.2**
GHIR				IAML		19 57 58.8	
	comp=E,4µm,0.6s						
GHIR	**Ghir-Karzin**	**2.10**	**272**	*e*Pn	**Pb**	**19 56 57.9**	**-1.2**
GHIR	**Ghir-Karzin**	**2.10**	**272**	Pn	**Pb**	**19 56 57.8**	**-1.2**
KRBR	**Kerman**	**2.13**	**35**	*e*Pg	**Pn**	**19 56 57.4**	**+1.2**
KRBR				*e*Sg	**Sb**	**19 57 23.8**	**-2.0**
KRBR	**Kerman**	**2.13**	**35**	*e*Pg	**Pn**	**19 56 57.4**	**+1.2**
KRBR	**Kerman**	**2.13**	**35**		**Pn**	**19 56 57.3**	**+1.2**
TVBK	**TV Kerman**	**2.14**	**34**	*e*Pn	**Pn**	**19 56 57.4**	**+1.2**
TVBK				*e*		19 57 34.6	
TVBK	**TV Kerman**	**2.14**	**34**	Pn	**Pn**	**19 56 57.4**	**+1.2**
LMD1	**Lamerd**	**2.14**	**246**	*e*Pn	**Pb**	**19 56 58.6**	**-1.1**
LMD1				*e*		19 57 54.2	
LMD1	**Lamerd**	**2.14**	**246**	Pn	**Pb**	**19 56 58.5**	**-1.1**
SHME	**Shamm**	**2.27**	**162**	*e*P	**Pn**	**19 56 58.7**	**+0.9**
	SNR=46						
SHME	**Shamm**	**2.27**	**162**	*e*Pn	**Pn**	**19 56 59.3**	**+1.5**
KHGB	**Koh Gabri**	**2.35**	**24**	*e*Pn	**Pb**	**19 57 01.5**	**-1.9**
KHGB				*e*		19 57 40.4	
KHGB	**Koh Gabri**	**2.35**	**24**	Pn	**Pb**	**19 57 01.5**	**-1.9**
BANOM	**Banah**	**2.44**	**160**	*e*P	**Pn**	**19 57 01.2**	**+1.1**
	SNR=26						
BANOM				S	**Sb**	**19 57 34.0**	**-0.4**
BANOM	**Banah**	**2.44**	**160**	P	**Pn**	**19 57 01.7**	**+1.6**
	SNR=85						
BANOM				S	**Sb**	**19 57 32.6**	**-1.8**
BANOM	**Banah**	**2.44**	**160**	*e*Pn	**Pn**	**19 57 02.2**	**+2.1**
UMQ	**Umm Al-Quwin**	**2.70**	**174**	*e*P	**Pn**	**19 57 05.6**	**+1.9**
	SNR=22						
UMQ	**Umm Al-Quwin**	**2.70**	**174**	*e*Pn	**Pb**	**19 57 06.7**	**-2.5**
KBAM	**BAM**	**2.86**	**71**	*e*Pn	**Pn**	**19 57 07.7**	**+1.8**
SHI	**Shiraz**	**2.87**	**300**	P	**Pn**	**19 57 07.9**	**+1.7**
SHI	**Shiraz**	**2.87**	**300**	*e*Pn	**Pn**	**19 57 08.0**	**+1.7**
SHI				*e*		19 58 22.4	
MSFE	**Esma-Masafi**	**2.94**	**166**	*i* P	**Pn**	**19 57 09.4**	**+2.4**
	SNR=32						
MSFE	**Esma-Masafi**	**2.94**	**166**	*e*Pn	**Pn**	**19 57 09.4**	**+2.4**
MDH	**Madha**	**3.03**	**164**	*i* P	**Pn**	**19 57 09.6**	**+1.3**
	SNR=27						
MDH	**Madha**	**3.03**	**164**	P	**Pn**	**19 57 09.5**	**+1.3**
	SNR=47						
MDH	**Madha**	**3.03**	**164**	*e*Pn	**Pn**	**19 57 09.8**	**+1.5**
IMEH	**Mehriz**	**3.22**	**348**	*e*Pn	**Pn**	**19 57 12.9**	**+1.8**
NAZ	**Nazwa, Dubai**	**3.24**	**175**	*i* P	**Pn**	**19 57 13.4**	**+2.4**
	SNR=15						
NAZ	**Nazwa, Dubai**	**3.24**	**175**	P	**Pn**	**19 57 14.0**	**+3.0**
	SNR=15						
NAZ	**Nazwa, Dubai**	**3.24**	**175**	*e*Pn	**Pn**	**19 57 13.7**	**+2.6**
UOSS	**Minazif**	**3.35**	**167**	*i* P	**Pn**	**19 57 14.6**	**+1.9**
	SNR=51						
UOSS	**Minazif**	**3.35**	**167**	*e*Pn	**Pn**	**19 57 14.5**	**+1.9**
UOSS	**Minazif**	**3.35**	**167**	Pn	**Pn**	**19 57 14.6**	**+1.9**
UOSS				Sn	**Sn**	**19 57 49.0**	**-2.8**
IBAF	**Bafgh**	**3.36**	**3**	*e*Pn	**Pn**	**19 57 14.7**	**+1.8**
HATD	**Hatta, Dubai**	**3.46**	**168**	*i* P	**Pn**	**19 57 16.7**	**+2.6**
	SNR=31						
HATD	**Hatta, Dubai**	**3.46**	**168**	P	**Pn**	**19 57 16.2**	**+2.1**
	SNR=31						
HATD	**Hatta, Dubai**	**3.46**	**168**	*e*Pn	**Pn**	**19 57 17.1**	**+3.0**
FAQ	**Al Faqa, Dubai**	**3.47**	**177**	*i* P	**Pn**	**19 57 16.8**	**+2.5**
	SNR=37						
FAQ	**Al Faqa, Dubai**	**3.47**	**177**	P	**Pn**	**19 57 16.8**	**+2.5**
	SNR=7.5						
FAQ	**Al Faqa, Dubai**	**3.47**	**177**	*e*Pn	**Pn**	**19 57 16.8**	**+2.5**
KAZ1	**Kazerun**	**3.55**	**294**	*e*Pn	**Pn**	**19 57 16.9**	**+1.4**
KAZ1				*e*		19 58 39.9	
ASUD	**Al Ashush, Dub**	**3.59**	**181**	*i* P	**Pn**	**19 57 19.0**	**+3.2**
	SNR=37						
ASUD	**Al Ashush, Dub**	**3.59**	**181**	P	**Pn**	**19 57 19.0**	**+3.2**
	SNR=37						
ASUD	**Al Ashush, Dub**	**3.59**	**181**	*e*Pn	**Pn**	**19 57 18.6**	**+2.7**
AJN	**Ajban**	**3.67**	**185**	*i* P	**Pn**	**19 57 19.7**	**+2.7**
	SNR=10.0						
AJN	**Ajban**	**3.67**	**185**	P	**Pn**	**19 57 19.6**	**+2.7**
	SNR=7.0						
AJN	**Ajban**	**3.67**	**185**	*e*Pn	**Pn**	**19 57 19.7**	**+2.7**
ISAD	**Sadrabad**	**3.95**	**339**	*e*Pn	**Pn**	**19 57 23.4**	**+2.2**
ICHK	**Chekchek**	**4.09**	**349**	*e*Pn	**Pn**	**19 57 24.7**	**+1.7**
ALNE	**Al Ain**	**4.17**	**175**	*i* P	**Pn**	**19 57 26.6**	**+2.7**
	SNR=5.6						
ALNE	**Al Ain**	**4.17**	**175**	*e*Pn	**Pn**	**19 57 25.9**	**+2.0**
SOHO	**SOHO**	**4.21**	**165**	P	**Pn**	**19 57 25.1**	**+0.7**
SOHO	**SOHO**	**4.21**	**165**	*e*Pn	**Pn**	**19 57 26.4**	**+2.0**
KLNJ	**Kolanjah**	**4.30**	**311**	*e*Pn	**Pn**	**19 57 26.8**	**+0.8**
IRAM	**Rameseh**	**4.41**	**325**	*e*Pn	**Pn**	**19 57 28.9**	**+1.5**
TPRV	**Parvadeh(Tabas**	**4.92**	**13**	*e*Pn	**Pn**	**19 57 36.5**	**+2.2**
HOQ	**Hoqain**	**4.94**	**159**	P	**Pn**	**19 57 34.8**	**+0.3**
	SNR=7.8						
ARQ	**Araqi**	**4.98**	**168**	P	**Pn**	**19 57 38.0**	**+2.9**
	SNR=35						
SZD1	**Zahaedan-tmp**	**4.98**	**74**	*e*Pn	**Pn**	**19 57 38.0**	**+2.8**
IGAR	**Gharneh**	**5.06**	**326**	*e*Pn	**Pn**	**19 57 37.5**	**+1.2**
ANAR	**Anarak**	**5.14**	**344**	*e*Pn	**Pn**	**19 57 38.9**	**+1.5**
NHDN	**Nehbandan**	**5.15**	**51**	*e*Pn	**Pn**	**19 57 38.6**	**+1.1**
IKOO	**Kooshah**	**5.23**	**36**	*e*Pn	**Pn**	**19 57 40.6**	**+1.9**
SLWR	**Sila**	**5.30**	**219**	*e*Pn	**Pn**	**19 57 40.3**	**+0.9**
BIDO	**Bidbid**	**5.30**	**151**	P	**Pn**	**19 57 41.0**	**+1.5**
	SNR=7.7						
IZEF	**Zefreh**	**5.34**	**331**	*e*Pn	**Pn**	**19 57 40.9**	**+0.7**
ITEG	**Tejag**	**5.49**	**31**	*e*Pn	**Pn**	**19 57 44.3**	**+2.1**
UMZA	**Um Al Zommool**	**5.49**	**182**	*e*Pn	**Pn**	**19 57 43.6**	**+1.5**
ZNGN	**Zangian**	**5.50**	**316**	*e*Pn	**Pn**	**19 57 43.2**	**+0.7**
ROKH	**ROKH**	**5.56**	**319**	*e*Pn	**Pn**	**19 57 44.4**	**+1.2**
TKDS	**Koohdasht(Taba**	**5.58**	**15**	*e*Pn	**Pn**	**19 57 46.0**	**+2.7**
TABS	**Tabas**	**5.61**	**15**	*e*Pn	**Pn**	**19 57 43.8**	**0.0**
TABS	**Tabas**	**5.61**	**15**	*e*Pn	**Pn**	**19 57 43.8**	**0.0**
SMDO	**Samad**	**5.69**	**154**	P	**Pn**	**19 57 46.5**	**+1.6**
BSY	**Bisya**	**5.70**	**163**	P	**Pn**	**19 57 47.5**	**+2.5**
WSAR	**Wadi Sarin**	**5.77**	**149**	P	**Pn**	**19 57 46.3**	**+0.3**
	comp=E,13nm,0.3s,baz=326,slow=5.9,SNR=80						
WSAR				S	**Sn**	**19 58 51.7**	**+0.2**
	comp=E,20nm,0.3s,baz=22,slow=16,SNR=9.1						
TNSJ	**Nastanj**	**5.82**	**10**	*e*Pn	**Pn**	**19 57 48.0**	**+1.4**
IPIR	**Pirpir**	**5.89**	**320**	*e*Pn	**Pn**	**19 57 48.3**	**+0.5**
IDAH	**Dahanechah**	**5.94**	**40**	*e*Pn	**Pn**	**19 57 50.8**	**+2.3**
IKLH	**Kolahrood**	**6.03**	**328**	*e*Pn	**Pn**	**19 57 50.3**	**+0.6**
AFRZ	**

TAS IAmb IAmb 20 00 30.1
comp=Z,37nm,0.9s
MALT Malatya 17.35 310 P **P** **20 00 23.3 -0.4**
BTK Batken 17.37 43 P **Pn** **20 00 22.8 +0.2**
BTK pmax pmax
comp=Z,25nm,1.3s
BTK Batken 17.37 43 Pn **Pn** **20 00 22.8 +0.2**
GAZ Gaziantep 17.67 305 P **P** **20 00 26.8 -0.4**
MMAI Mount Meron Ar 17.83 290 P **Pn** **20 00 28.1 -0.2**
comp=Z,1.0nm,0.3s,baz=99,slow=16,SNR=15
MMAI LR LR 20 09 15.6
comp=Z,840nm,18.4s,baz=105,slow=43
EIL Elat 17.93 280 P **P** **20 00 30.2 +0.3**
comp=Z,0.5nm,0.3s,baz=88,slow=5.9,SNR=17
EIL LR LR 20 09 18.4
comp=Z,330nm,18.3s,baz=96,slow=43
KBZ Khabaz 18.44 330 P **Pn** **20 00 36.6 +1.0**
comp=Z,0.1nm,0.3s,baz=53,slow=20,SNR=13
KBZ Khabaz 18.44 330 *ce*P **Pn** **20 00 36.9 +1.3**
KBZ pmax pmax
comp=Z,15nm,1.0s
KVAR Kislovodsk Arr 18.70 330 P **P** **20 00 37.4 -1.1**
baz=158,slow=5.4,SNR=1.4
KIV Kislovodsk 18.71 330 *e*P **Pn** **20 00 40.2 +1.2**
KIV *e*S **S** **20 04 09.6 -0.7**
KIV pmax pmax
comp=Z,68nm,1.0s
KIV MLR MLR
comp=Z,148nm,14.0s
KIV Kislovodsk 18.71 330 **Pn** **20 00 39.0 0.0**
KIV IAmb IAmb 20 00 56.5
comp=Z,37nm,1.0s
KK31 Karatay Array 19.23 36 P **Pn** **20 00 44.8 -0.5**
KK31 pmax pmax
comp=Z,27nm,1.3s
KK31 Karatay Array 19.23 36 P **Pn** **20 00 44.8 -0.5**
KKAR Karatay Array 19.23 36 P **P** **20 00 44.5 +0.2**
KKAR Karatay Array 19.23 36 P **P** **20 00 44.5 +0.2**
KKAR Karatay Array 19.23 36 P **Pn** **20 00 44.7 -0.6**
GOF Gofitskoye 19.45 333⇑ *e*P **Pn** **20 00 49.1 +1.2**
GOF pmax pmax
comp=Z,44nm,0.9s
TOKA Tokat 19.68 313 P **P** **20 00 48.9 -0.3**
SOC Sochi 19.84 325 *e*P **P** **20 00 50.0 -0.8**
SOC *e* 20 04 31.0
SOC pmax pmax
comp=Z,25nm,0.9s
SOC MLR MLR
comp=Z,422nm,17.0s
ATD Arta Tunnel 20.33 218 P **P** **20 00 57.6 +1.1**
comp=Z,15nm,1.0s,baz=32,slow=8.4,SNR=6.6
AML Almayashu 20.36 42 P **P** **20 00 57.2 +0.2**
SNR=17
KVT Kavak 20.37 314 P Pn 20 00 58.4 -0.4
KSH Kashi 20.43 51 P **P** **20 00 56.0 -1.5**
KSH S S 20 04 31.3 -14
KSH pmax pmax
comp=Z,270nm,4.6s
KSH LR LR
comp=Z,850nm,7.5s
KSH LR LR
comp=Z,1μm,11.5s
KSH LR LR
comp=Z,1μm,11.1s
EKS2 Erkin-Say 20.73 41 P Pn 20 01 01.9 -1.2
SNR=14
AAK Ala-Archa 21.14 42 P **P** **20 01 06.3 +1.2**
SNR=9.5
AAK Ala-Archa 21.14 42 *ce*P **P** **20 01 06.2 +1.1**
AAK pmax pmax
comp=Z,70nm,1.3s
AAK Ala-Archa 21.14 42 P **P** **20 01 05.3 +0.2**
AAK IAmb IAmb 20 01 16.0
comp=Z,25nm,0.9s
ABKAR Akbulak array 21.29 8 P **P** **20 01 06.4 -0.1**
ABKAR IAmb IAmb 20 01 12.6
comp=Z,24nm,0.8s
ABKAR Akbulak array 21.29 8 P **P** **20 01 06.3 -0.1**
BRTR Keskin Array B 21.30 308 P **P** **20 01 07.2 +0.2**
comp=Z,32nm,0.9s,baz=129,slow=13,SNR=44
BRTR LR LR 20 11 41.8
comp=Z,201nm,18.7s,baz=123,slow=43
BRTR Keskin Array B 21.30 308 P **P** **20 01 07.0 +0.1**
BR131 Keskin Array S 21.30 308 P **P** **20 01 07.3 +0.4**
BR131 pmax pmax
comp=Z,43nm,0.8s
BR131 Keskin Array S 21.30 308 P **P** **20 01 07.3 +0.4**
BR131 IAmb IAmb 20 01 11.9
comp=Z,43nm,0.8s
FRU1 Bishkek 21.32 42 P **P** **20 01 07.9 +0.9**
FRU1 pmax pmax
comp=Z,22nm,1.1s
FRU1 Bishkek 21.32 42 P **P** **20 01 07.9 +0.9**
FRU1 IAmb IAmb 20 01 18.4
comp=Z,22nm,1.1s
CHMS Chumysh 21.50 42 P **P** **20 01 12.2 +3.3**
SNR=7.3
USP Ospenovka 21.52 41 P **P** **20 01 12.8 +3.7**
SNR=14
ANN Anapa 21.86 324 *e*P **P** **20 01 17.2 +4.6**
ANN pmax pmax
comp=Z,76nm,1.2s
ILGA Ilgaz 21.86 311 P **P** **20 01 12.7 -0.3**
ILGA IAmb IAmb 20 01 23.3
comp=Z,48nm,1.3s
BOOM Boomskoye usch 21.92 44 P **P** **20 01 13.9 +0.3**
BOOM pmax pmax
comp=Z,44nm,1.3s
BOOM Boomskoye usch 21.92 44 P **P** **20 01 13.9 +0.3**
BOOM IAmb IAmb 20 01 19.5
comp=Z,44nm,1.3s
BR231 Keskin MP Arra 21.95 308 P **P** **20 01 14.6 +0.7**
BR231 IAmb IAmb 20 01 21.9
comp=Z,50nm,0.9s
AKTO Aktyubinsk 22.27 4 P **P** **20 01 17.1 0.0**
comp=Z,15nm,0.8s,baz=190,slow=11,SNR=28
AKTO LR LR 20 11 33.8
comp=Z,295nm,20.1s,baz=170,slow=41
ISP Isparta 22.87 301 P **P** **20 01 24.3 +0.7**
ISP pmax pmax
comp=Z,24nm,0.8s
ISP Isparta 22.87 301 P **P** **20 01 24.3 +0.7**
ISP IAmb IAmb 20 01 43.5
comp=Z,24nm,0.8s
ELL Elmali 23.05 298 P **P** **20 01 25.9 +0.4**
ELL pmax pmax
comp=Z,87nm,1.0s
ELL Elmali 23.05 298 P **P** **20 01 25.9 +0.4**
MDUB Mudurnu 23.32 308 P **P** **20 01 28.3 +0.1**
PYUN Piuthan 24.34 84 *e*P **P** **20 01 38.3 +0.2**
comp=Z,54nm,0.6s
MANT Manisa 24.54 302 P **P** **20 01 40.6 +0.7**
KOLN Koldanda 24.91 84 *e*P **P** **20 01 43.4 +0.1**
comp=Z,30nm,1.0s
DANN Dangsing 24.98 83 *e*P **P** **20 01 44.8 +0.7**
comp=Z,210nm,1.2s
VRH Novokhopyorsk 25.15 340 *e*P **P** **20 01 45.3 +0.3**
VRH pmax pmax
comp=Z,40nm,0.6s
VORD Divnogorie 25.76 336 *e*P **P** **20 01 52.1 +1.6**
VORD pmax pmax
comp=Z,20nm,1.0s
GKN Gorkha 25.79 84 *e*P **P** **20 01 51.4 +0.1**
comp=Z,45nm,1.2s
VSR Storozhevoye 26.01 336 *e*P **P** **20 01 54.3 +1.5**
VSR pmax pmax
comp=Z,20nm,1.0s
DMN Daman 26.26 84 *e*P **P** **20 01 55.9 +0.3**
KKN Kakani 26.38 84 *e*P **P** **20 01 56.8 +0.1**
comp=Z,15nm,0.5s
PKIN Phulchoki 26.52 84 *e*P **P** **20 01 57.8 -0.2**
comp=Z,21nm,0.8s
PKI Pulchoki 26.53 84 *e*P **P** **20 01 58.3 +0.2**
comp=Z,17nm,0.7s
IDI Anoyia 26.78 293 P **P** **20 02 01.1 +1.0**
comp=Z,16nm,0.9s,baz=83,slow=17,SNR=11
IDI Anoyia 26.78 293⇑ P **P** **20 02 04.3 +4.3**
IDI Anoyia 26.78 293 P **P** **20 02 02.1 +2.0**
IDI IAmb IAmb 20 02 04.8
comp=Z,48nm,1.3s
GUN Gumba 26.89 83 *e*P **P** **20 02 01.8 +0.4**
comp=Z,43nm,0.8s
TPGR Topolog 27.10 315⇑ P **P** **20 02 03.0 +0.2**
ALN Alexandroupoli 27.12 305 P **P** **20 02 03.8 +0.9**
ALN pmax pmax
comp=Z,24nm,1.1s
ALN Alexandroupoli 27.12 305 P **P** **20 02 03.8 +0.9**
ALN IAmb IAmb 20 02 08.3
comp=Z,24nm,1.1s
BRVK Borovoye 27.15 20 *ce*P **P** **20 02 02.1 -1.0**
BRVK pmax pmax
comp=Z,9.0nm,1.3s
BRVK Borovoye 27.15 20 P **P** **20 02 02.8 -0.3**
ICOR Ion Corvin 27.15 313⇑ P **P** **20 02 01.9 -1.3**
BVAR Borovoye Array 27.16 20 P **P** **20 02 01.8 -1.3**
comp=Z,1.9nm,0.6s,baz=243,slow=6.7,SNR=13
BVAR PcP **PcP** **20 05 22.8 -0.4**
comp=Z,0.9nm,0.4s,baz=126,slow=2.5,SNR=12
LPSR Galich'ya Gora 27.25 338 *e*P **P** **20 02 09.4 +5.5**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
HARR Harsova 27.33 314⇑ P **P** **20 02 04.6 -0.2**
HARR Harsova 27.33 314⇑ P **P** **20 02 04.6 -0.2**
MAKZ Makanchi 27.89 41 P **P** **20 02 09.8 0.0**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MAKZ Makanchi 27.89 41 P **P** **20 02 09.8 0.0**
MAKZ IAmb IAmb 20 02 12.9
comp=Z,8.5nm,0.8s
MILM Milestii Mici 27.92 319⇑ P **P** **20 02 10.8 +0.8**
MK31 Makanchi Array 28.06 41 *ce*P **P** **20 02 11.5 +0.1**
MK31 Makanchi Array 28.06 41 P **P** **20 02 11.2 -0.2**
MK31 IAmb IAmb 20 02 16.7
comp=Z,12nm,1.5s
MKAR Makanchi Array 28.06 41 P **P** **20 02 10.1 -1.2**
comp=Z,2.4nm,0.6s,baz=227,slow=8.1,SNR=24
MKAR PcP **PcP** **20 05 25.5 -0.1**
comp=Z,0.7nm,0.7s,baz=242,slow=3.1,SNR=3.2
MKAR LR LR 20 13 39.7
comp=Z,199nm,20.8s,baz=248,slow=37
MKAR Makanchi Array 28.06 41 *i* P **P** **20 02 11.6 +0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 28.06 41 P **P** **20 02 11.1 -0.3**
ARU Arti 28.28 4 P **P** **20 02 12.9 -0.2**
comp=Z,0.7nm,0.6s,baz=198,slow=19,SNR=3.1
ARU Arti 28.28 4 P **P** **20 02 13.8 +0.7**
ARU 20 03 01.4
ARU S **S** **20 07 02.5 +4.6**
ARU SS **SnSn** **20 08 20.8 +5.3**
ARU Arti 28.28 4 P **P** **20 02 12.8 -0.3**
KURBB Kurchatov Arra 28.42 32 P **P** **20 02 14.2 -0.2**
comp=Z,0.8nm,0.3s,baz=232,slow=8.9,SNR=9.3
KURBB PcP **PcP** **20 05 26.6 +0.3**
comp=Z,0.5nm,0.4s,baz=232,slow=2.8,SNR=2.2
BISRR Bisoca 28.50 315⇑ P 20 02 20.4 +5.1
KURK Kurchatov 28.53 32 *ce*P **P** **20 02 15.0 -0.4**
KURK pmax pmax
comp=Z,4.0nm,1.3s
KURK Kurchatov 28.53 32 P **P** **20 02 15.3 -0.1**
VRI Vrincioaia 28.63 316⇑ P **P** **20 02 19.6 +3.2**
VRI Vrincioaia 28.63 316⇑ P **P** **20 02 19.6 +3.2**
PLOR Plostina 28.67 316⇑ P **P** **20 02 18.0 +1.2**
PLOR Plostina 28.67 316⇑ P **P** **20 02 18.0 +1.2**
NEHR Nehoiu 28.70 315⇑ P **P** **20 02 19.2 +2.1**
SORM Soroca 28.85 321⇑ P **P** **20 02 18.7 +0.5**
SORM Soroca 28.85 321⇑ P **P** **20 02 18.7 +0.5**
MLR Muntele Rosu 28.95 314 P **P** **20 02 19.4 +0.1**
comp=Z,8.9nm,0.8s,baz=117,slow=4.5,SNR=10
MLR Muntele Rosu 28.95 314⇓ P **P** **20 02 21.7 +2.3**
MLR Muntele Rosu 28.95 314⇓ P **P** **20 02 21.7 +2.3**
MLR Muntele Rosu 28.95 314 P **P** **20 02 19.9 +0.6**
MLR IAmb IAmb 20 02 36.2
comp=Z,11nm,0.8s
SRS Serrai 28.96 305 P **P** **20 02 19.3 -0.1**
SRS pmax pmax
comp=Z,11nm,1.2s
TESR Tescani 28.99 317⇑ P **P** **20 02 20.1 +0.5**
SOH Sokhos 29.05 304 P **P** **20 02 20.1 -0.1**
SOH pmax pmax
comp=Z,8.0nm,0.7s
HUMR Humele 29.16 312⇑ P **P** **20 02 22.3 +1.2**
VOIR 29.49 314⇑ P **P** **20 02 25.2 +1.1**
VOIR 29.49 314⇑ P **P** **20 02 25.2 +1.1**
DOPR Dopca 29.51 315⇑ P **P** **20 02 25.2 +0.9**
BIZ Bicaz 29.52 317⇑ P **P** **20 02 26.1 +1.8**
ARR Arges 29.73 313⇑ P **P** **20 02 25.9 -0.4**
GRG Griva 29.78 304 P **P** **20 02 27.3 +0.6**
GRG pmax pmax
comp=Z,6.0nm,1.0s
AKASG Malin Array Be 29.91 326 P **P** **20 02 26.7 -0.9**
comp=Z,7.4nm,0.6s,baz=128,slow=8.2,SNR=24
AKASG LR LR 20 17 17.7
comp=Z,110nm,21.1s,baz=105,slow=42
AKASG Malin Array Be 29.91 326 *i* P **P** **20 02 27.2 -0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 29.91 326 P **P** **20 02 26.8 -0.9**
AKBB Malin Array Si 29.91 326 *o i*P **P** **20 02 27.2 -0.4**
AKBB Malin Array Si 29.91 326 P **P** **20 02 26.5 -1.2**
AKBB IAmb IAmb 20 02 31.4
comp=Z,23nm,0.9s
OBN Obninsk 30.12 338⇓ *e*P **P** **20 02 31.2 +1.8**
OBN *e* 20 02 35.3
OBN *e* 20 02 38.0
OBN pmax pmax
comp=Z,11nm,1.0s
OBN MLR MLR
comp=Z,110nm,17.0s
MOS Moscow 30.31 340 *e*P **P** **20 02 30.8 -0.3**
LOT Lotru 30.32 313⇑ P **P** **20 02 31.4 0.0**
BURAR Bucovina Array 30.38 318⇑ P **P** **20 02 32.8 +0.8**
BURAR Bucovina Array 30.38 318⇑ P **P** **20 02 32.8 +0.8**
BURAR Bucovina Array 30.38 318 P **P** **20 02 31.5 -0.5**
BUR08 Bucovina Ar. S 30.40 318 P **P** **20 02 31.4 -0.9**
KIRV Kirov 30.63 354 P **P** **20 02 34.1 +0.3**
comp=Z,4.4nm,0.5s,baz=156,slow=12,SNR=1.8
GZR Gura Zlata 30.94 312⇑ P **P** **20 02 37.1 +0.2**
CJR Cluj-Napoca 30.95 315⇑ P **P** **20 02 39.1 +2.1**
CJR Cluj-Napoca 30.95 315⇑ P **P** **20 02 39.1 +2.1**
MDVR Moldovita 31.42 311⇑ P **P** **20 02 40.7 -0.5**
BZS Buzias 31.78 312⇓ P **P** **20 02 44.7 +0.5**
BZS Buzias 31.78 312⇓ P **P** **20 02 44.7 +0.5**
SIRR Siria 32.00 313⇑ P **P** **20 02 46.6 +0.5**
KOLS Kolonicke sedl 32.73 318 *e*P **P** **20 02 53.4 +0.8**
KOLS pmax pmax
comp=Z,11nm,0.9s
KOLS Kolonicke sedl 32.73 318 *e*P **P** **20 02 53.4 +0.8**
CRVS Cervenica-Dubn 33.20 318 *e*P **P** **20 02 57.2 +0.5**
CRVS pmax pmax
comp=Z,10.0nm,1.0s
CRVS Cervenica-Dubn 33.20 318 *e*P **P** **20 02 57.2 +0.5**
ZAA0 Zalesovo Array 33.52 32 P **P** **20 02 58.7 -0.6**
ZAA0 IAmb IAmb 20 03 14.1
comp=Z,6.6nm,0.8s
ZALV Zalesovo Beam 33.52 32 P **P** **20 02 58.9 -0.4**
comp=Z,6.5nm,0.5s,baz=238,slow=9.0,SNR=26
ZALV PcP **PcP** **20 05 38.6 -1.2**
comp=Z,1.1nm,0.4s,baz=220,slow=3.0,SNR=5.3
ZALV Zalesovo Beam 33.52 32 P **P** **20 02 58.7 -0.7**
KECS Kecovo 33.61 317 *e*P **P** **20 03 00.8 +0.6**
KECS pmax pmax
comp=Z,6.0nm,1.0s
KECS Kecovo 33.61 317 *e*P **P** **20 03 00.8 +0.6**
TIP Timpagrande 33.70 299⇓ P **P** **20 02 57.9 -3.3**
NACGM Naroch 33.74 330 *e* **P** **20 03 01.0 -0.2**
PSZ Piszkesteto 33.74 315⇓ P P 20 02 54.8 -6.7
PSZ Piszkesteto 33.74 315 P **P** **20 03 00.5 -1.0**
PSZ pmax pmax
comp=Z,9.0nm,1.0s
PSZ Piszkesteto 33.74 315 P **P** **20 03 00.5 -1.0**
PSZ IAmb IAmb 20 03 05.8
comp=Z,8.6nm,1.0s
KMBO Kilima Mbogo 33.97 214 P **P** **20 03 04.4 +0.4**
comp=Z,1.1nm,0.7s,baz=26,slow=18,SNR=3.3
KMBO Kilima Mbogo 33.97 214 P **P** **20 03 04.1 +0.2**
IDID Didziasalis 34.02 331 *e*P **P** **20 03 03.3 -0.4**
BUD Budapest 34.13 314 P **P** **20 03 08.9 +4.2**
BUD pmax pmax
comp=Z,19nm,1.0s
IIGN Ignalina 34.27 330 *e*P **P** **20 03 05.5 -0.3**
KLMR Klimovskoe 34.33 346 *e*P **P** **20 03 05.5 -0.8**
KLMR pmax pmax
comp=Z,17nm,1.5s
KLMR Klimovskoe 34.33 346 *e*P **P** **20 03 05.5 -0.8**
KLMR AMP 20 03 20.4
comp=Z,17nm,1.5s
ISAL Salakas 34.46 331 *e*P **P** **20 03 06.9 -0.6**
LANS Liptovska Anna 34.49 317 *e*P **P** **20 03 07.8 -0.1**
LANS Liptovska Anna 34.49 317 *e*P **P** **20 03 07.8 -0.1**
IZAR Zarasai 34.52 331 *e*P **P** **20 03 07.6 -0.4**
VYHS Vyhne 34.62 316 *e*P **P** **20 03 09.6 +0.6**
VYHS Vyhne 34.62 316 *e*P **P** **20 03 09.6 +0.6**
SRO2 Moca 34.62 314 *e*P **P** **20 03 08.5 -0.5**
SRO2 Moca 34.62 314 *e*P **P** **20 03 08.5 -0.5**
SRO Srobarova 34.69 314 *e*P **P** **20 03 10.3 +0.7**
SRO pmax pmax
comp=Z,22nm,0.9s
SRO Srobarova 34.69 314 *e*P **P** **20 03 10.3 +0.7**
OJC Ojcow 34.75 319 P **P** **20 03 09.3 -0.8**
OJC pmax pmax
comp=Z,7.0nm,0.8s
OJC Ojcow 34.75 319 P **P** **20 03 09.3 -0.8**
OJC IAmb IAmb 20 03 13.3
comp=Z,6.9nm,0.8s
SUW Suwalki 34.86 327 P **P** **20 03 10.5 -0.5**
SUW pmax pmax
comp=Z,76nm,1.0s
SUW Suwalki 34.86 327 P **P** **20 03 10.4 -0.5**
PABE Paberze 35.37 329 *e*P **P** **20 03 15.2 -0.1**
JAVC Velka Javorina 35.47 316 *e*P **P** **20 03 17.3 +0.9**
SMOL Smolenice 35.50 315 *e*P **P** **20 03 16.6 +0.1**
SMOL Smolenice 35.50 315 *e*P **P** **20 03 16.6 +0.1**
MODS Modra-Piesok 35.54 315 *e*P **P** **20 03 16.0 -0.9**
MODS Modra-Piesok 35.54 315 *e*P **P** **20 03 16.0 -0.9**
OKC Ostrava-Krasne 35.56 318 *e*P **P** **20 03 19.5 +2.5**
OKC Ostrava-Krasne 35.56 318 *e*P **P** **20 03 19.5 +2.5**
ZST Bratislava 35.59 315 *e*P **P** **20 03 17.6 +0.3**
ZST Bratislava 35.59 315 *e*P **P** **20 03 17.6 +0.3**
SOP Sopron 35.76 314 P **P** **20 03 20.2 +1.4**
SOP pmax pmax
comp=Z,28nm,1.2s
MORC Moravsky Berou 35.90 317⇑ P P 20 03 06.5 -13
MORC Moravsky Berou 35.90 317 *e*P **P** **20 03 19.7 -0.3**
MORC Moravsky Berou 35.90 317 P **P** **20 03 19.3 -0.7**
MORC pmax pmax
comp=Z,9.0nm,1.3s
MORC Moravsky Berou 35.90 317 P **P** **20 03 19.3 -0.7**
MORC IAmb IAmb 20 03 20.8
comp=Z,9.5nm,1.3s
VSU Vasula 36.16 335 *e*P **P** **20 03 22.2 +0.1**
CONA Conrad Observa 36.29 314 *e*P **P** **20 03 23.4 0.0**
comp=Z,12nm,1.2s,SNR=6.0
VRAC Vranov 36.30 316⇑ P P 20 03 09.7 -14
VRAC Vranov 36.30 316 *e*P **P** **20 03 23.4 0.0**
ARSA Arzberg 36.30 312 *e*P **P** **20 03 23.8 +0.3**
comp=Z,13nm,1.1s
KRUC Moravsky 36.33 316 *e*P **P** **20 03 23.7 0.0**
SOKA Soboth 36.45 311 *e*P **P** **20 03 24.7 -0.1**
comp=Z,6.6nm,1.2s
PBUR Paburge 36.61 329 *e*P **P** **20 03 24.8 -1.1**
DPC Dobruska-Polom 36.84 318 *e*P **P** **20 03 26.9 -1.2**
DPC Dobruska-Polom 36.84 318 *e*P **P** **20 03 26.9 -1.2**
OSTC Ostas 36.98 318 *e*P **P** **20 03 29.2 0.0**
KSP Ksiaz 37.05 318 P **P** **20 03 31.7 +2.0**
CHVC Chvalec 37.09 318 *e*P **P** **20 03 29.5 -0.7**
MBAR Mbarara 37.14 224 P **P** **20 03 30.7 -0.4**
comp=Z,2.8nm,0.4s,baz=39,slow=9.8,SNR=7.2
MBAR Mbarara 37.14 224 *ce*P **P** **20 03 33.0 +1.9**
MBAR pmax pmax
comp=Z,6.0nm,0.7s
MBAR Mbarara 37.14 224 P **P** **20 03 31.3 +0.2**
MBAR IAmb IAmb 20 03 36.7
comp=Z,7.8nm,0.8s
MOA Molln 37.29 313 *e*P **P** **20 03 32.0 +0.1**
comp=Z,7.9nm,1.0s
PRED Cave del Predi 37.37 311 P **P** **20 03 32.5 -0.1**
PRED IAmb IAmb 20 03 36.8
comp=Z,19nm,1.5s
PRU Pruhonice 37.78 316 *e*P **P** **20 03 38.0 +2.0**
PRU Pruhonice 37.78 316 *e*P **P** **20 03 38.0 +2.0**
GEC2 GERESS Array S 37.94 314 P **P** **20 03 36.3 -1.2**
GERES GERESS Array B 37.94 314 P **P** **20 03 36.4 -1.1**
comp=Z,3.7nm,1.0s,baz=124,slow=8.7,SNR=15
GERES GERESS Array B 37.94 314 P **P** **20 03 36.7 -0.8**
GERES GERESS Array B 37.94 314 P **P** **20 03 36.7 -0.8**
PBCC Pribram 38.02 316 *e*P **P** **20 03 37.8 -0.2**
CIMO Cimolais 38.10 310 P **P** **20 03 38.6 -0.1**
KHC Kasperske Hory 38.10 315 *e*P **P** **20 03 38.4 -0.4**
KHC Kasperske Hory 38.10 315 *e*P **P** **20 03 38.4 -0.4**
GTA Gaotai 38.23 61 P **P** **20 03 40.9 +0.8**
GTA pP sP 20 03 50.1 -0.2
GTA sP pP 20 03 54.6 +7.2
GTA pmax pmax
comp=Z,11nm,1.2s
GTA pmax pmax
comp=Z,120nm,4.3s
GTA LR LR
comp=Z,180nm,17.1s
GTA LR LR
comp=Z,160nm,15.6s
GTA LR LR
comp=Z,200nm,16.2s
BRG Berggiesshubel 38.44 318 *e*P **P** **20 03 40.9 -0.6**
comp=Z,8.3nm,1.0s
BRG Berggiesshubel 38.44 318 *e*P **P** **20 03 40.9 -0.6**
BRG pmax pmax
comp=Z,8.0nm,1.0s
FIA1 FINESS Array S 38.52 338 P **P** **20 03 41.2 -0.8**
FIA1 IAmb IAmb 20 03 48.0
comp=Z,33nm,1.4s
FINES FINESS Array B 38.52 338 P **P** **20 03 41.2 -0.8**
comp=Z,2.5nm,0.6s,baz=144,slow=9.7,SNR=28
FINES LR LR 20 22 34.6
comp=Z,172nm,18.6s,baz=159,slow=41
FINES FINESS Array B 38.52 338 *i* P **P** **20 03 41.7 -0.3**
FINES pmax pmax
comp=Z,3.0nm,0.6s
FINES FINESS Array B 38.52 338 P **P** **20 03 41.4 -0.6**
WTTA Wattenberg 38.85 311 *e*P **P** **20 03 44.7 -0.6**
comp=Z,15nm,1.0s
WATA Walderalm 38.91 311 *e*P **P** **20 03 45.0 -0.7**
comp=Z,18nm,1.0s
SQTA Sankt Quirin 39.13 311 *e*P **P** **20 03 46.8 -0.6**
comp=Z,9.4nm,0.6s,SNR=8.9
CLL Collm 39.15 318⇓ *i*P **P** **20 03 47.2 -0.3**
CLL comp=Z,12nm,1.0s *i* PP **PP** **20 05 17.9 +0.6**
CLL comp=Z,24nm,1.9s LmV 20 20 00.0
CLL comp=Z,100nm,21.7s
CLL Collm 39.15 318⇓ *i*P **P** **20 03 47.2 -0.3**
CLL *i* 20 05 17.9
CLL pmax pmax
comp=Z,12nm,1.0s
CLL pmax pmax
comp=Z,24nm,1.9s
CLL Collm 39.15 318 P **P** **20 03 47.0 -0.4**
CLL IAmb IAmb 20 03 51.2
comp=Z,10nm,1.0s
MOTA Moosalm 39.22 311 *e*P **P** **20 03 47.3 -1.1**
comp=Z,14nm,1.0s,SNR=5.0
FETA Feichten 39.40 311 *e*P **P** **20 03 49.3 -0.6**
comp=Z,12nm,1.0s
KEST Kesra 39.46 293 P **P** **20 03 50.6 +0.2**
comp=Z,4.6nm,0.9s,baz=84,slow=2.0,SNR=2.0
KEST Kesra 39.46 293 P **P** **20 03 49.5 -0.8**
KEST IAmb IAmb 20 04 01.4
comp=Z,16nm,1.1s
FUORN Ofenpass-Fuorn 39.63 310 P **P** **20 03 51.1 -0.7**
GRA1 Grafenberg Arr 39.74 315 P **P** **20 03 51.9 -0.5**
GRA1 IAmb IAmb 20 03 56.7
comp=Z,21nm,0.9s
GRF Grafenberg Arr 39.74 315 P **P** **20 03 51.9 -0.5**
GRF pmax pmax
comp=Z,21nm,0.9s
GRF Grafenberg Arr 39.74 315 *e*P **P** **20 03 52.1 -0.3**
comp=Z,14nm,1.2s,baz=111,slow=9.2
DAVA Damuels 40.02 311 *e*P **P** **20 03 54.3 -0.7**
comp=Z,14nm,0.7s
TUE Stuetta 40.22 310 P **P** **20 03 55.9 -0.8**
TUE IAmb IAmb 20 04 02.6
comp=Z,22nm,1.5s
CHTO Chiang Mai 40.86 94 P **P** **20 04 02.3 +0.3**
CHTO pmax pmax
comp=Z,10.0nm,1.4s
CHTO Chiang Mai 40.86 94 P **P** **20 04 02.3 +0.3**
CM31 Chiang Mai Arr 40.99 94 P **P** **20 04 02.9 -0.2**
CMAR Chiang Mai Arr 40.99 94 P **P** **20 04 03.9 +0.8**
comp=Z,1.9nm,0.8s,baz=285,slow=8.5,SNR=13
CMAR PcP **PcP** **20 06 03.4 +0.2**
comp=Z,0.9nm,0.5s,baz=285,slow=4.9,SNR=5.4
CMAR LR LR 20 24 30.9
comp=Z,96nm,18.7s,baz=321,slow=41
CMAR Chiang Mai Arr 40.99 94 *i* P **P** **20 04 04.9 +1.8**

CMAR						pmax	pmax		
	comp=Z,2.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**40.99**	**94**	P		**P**	**20 04 03.0**	**-0.1**	
MBDF	**Montbardon**	**41.76**	**307**	*e*P		**P**	**20 04 12.8**	**+3.5**	
MBDF					pmax	pmax			
	comp=Z,7.0nm,0.6s								
ECH	**Echery**	**42.01**	**312**	P		**P**	**20 04 10.3**	**-0.8**	
ECH					pmax	pmax			
	comp=Z,13nm,1.2s								
ECH	**Echery**	**42.01**	**312**	P		**P**	**20 04 10.3**	**-0.8**	
ECH					IAmb	IAmb	20 04 13.3		
	comp=Z,13nm,1.2s								
HINF	**Hinteralfeld**	**42.14**	**311**	*e*P		**P**	**20 04 11.8**	**-0.5**	
HINF					pmax	pmax			
	comp=Z,15nm,1.5s								
CABF	**La Chapelle**	**42.47**	**309**	*e*P		**P**	**20 04 17.2**	**+2.2**	
CABF					pmax	pmax			
	comp=Z,17nm,1.0s								
HAU	**Haudompre**	**42.50**	**311**	*e*P		**P**	**20 04 15.9**	**+0.7**	
HAU					pmax	pmax			
	comp=Z,14nm,1.2s								
NORES	**NORESS Array B**	**43.73**	**331**	P		**P**	**20 04 25.1**	**+0.2**	
SONM	**Songino Array**	**43.81**	**49**	P		**P**	**20 04 26.0**	**0.0**	
	comp=Z,4.7nm,1.1s,baz=258,slow=9.1,SNR=17								
SONM					LR	LR	20 23 38.1		
	comp=Z,224nm,19.8s,baz=196,slow=37								
SONM	**Songino Array**	**43.81**	**49**	P		**P**	**20 04 26.4**	**+0.5**	
SONM					pmax	pmax			
	comp=Z,4.0nm,1.1s								
SONM	**Songino Array**	**43.81**	**49**	P		**P**	**20 04 26.4**	**+0.5**	
NC405	**NORSAR Array S**	**43.84**	**331**	P		**P**	**20 04 25.0**	**-0.7**	
SMF	**Signal de Mont**	**44.01**	**309**	*e*P		**P**	**20 04 27.3**	**-0.1**	
SMF					pmax	pmax			
	comp=Z,37nm,1.5s								
NB2	**NORSAR Subarra**	**44.02**	**331**	P		**P**	**20 04 26.2**	**-1.1**	
	comp=Z,3.4nm,0.6s,baz=116,slow=7.9								
NOA	**NORSAR Array B**	**44.02**	**331**	P		**P**	**20 04 26.3**	**-0.9**	
	comp=Z,10.0nm,0.9s,baz=117,slow=8.0,SNR=18								
NOA					LR	LR	20 22 25.5		
	comp=Z,43nm,19.8s,baz=125,slow=36								
LOR	**Lormes**	**44.07**	**310**	P		**P**	**20 04 29.0**	**+1.2**	
LOR					pmax	pmax			
	comp=Z,23nm,1.5s								
KONO	**Kongsberg**	**44.12**	**328**	*ce*P		**P**	**20 04 29.4**	**+1.4**	
KONO					pmax	pmax			
	comp=Z,15nm,0.8s								
ULN	**Ulaanbaatar**	**44.26**	**49**	P		**P**	**20 04 29.8**	**+0.2**	
ULN					pmax	pmax			
	comp=Z,4.0nm,0.9s								
ULN	**Ulaanbaatar**	**44.26**	**49**	P		**P**	**20 04 29.8**	**+0.2**	
SSF	**Saint Saulge**	**44.28**	**310**	*e*P		**P**	**20 04 28.6**	**-0.9**	
SSF					pmax	pmax			
	comp=Z,7.0nm,0.9s								
KEV	**Kevo**	**44.66**	**346**	P		**P**	**20 04 31.6**	**-0.6**	
KEV					pmax	pmax			
	comp=Z,68nm,1.4s								
KEV	**Kevo**	**44.66**	**346**	P		**P**	**20 04 31.6**	**-0.6**	
ARCES	**ARCESS Array B**	**44.80**	**346**	P		**P**	**20 04 33.1**	**-0.3**	
	comp=Z,3.6nm,0.8s,baz=165,slow=9.9,SNR=11								
ARCES					PP		**PcP**	**20 06 15.9**	**+0.9**
	comp=Z,3.1nm,1.0s,baz=162,slow=6.6,SNR=1.5								
ARCES					LR	LR	20 27 14.6		
	comp=Z,82nm,18.3s,baz=125,slow=41								
TAM	**Tamanrasset**	**45.06**	**275**	P		**P**	**20 04 35.7**	**-0.6**	
TAM					pmax	pmax			
	comp=Z,9.0nm,1.2s								
TAM	**Tamanrasset**	**45.06**	**275**	P		**P**	**20 04 35.6**	**-0.6**	
TAM					IAmb	IAmb	20 04 38.4		
	comp=Z,9.1nm,1.2s								
TCF	**Toulx Ste Croi**	**45.10**	**308**	*e*P		**P**	**20 04 38.8**	**+2.7**	
TCF					pmax	pmax			
	comp=Z,28nm,1.6s								
CAF	**Calviac**	**45.11**	**306**	*e*P		**P**	**20 04 36.5**	**+0.3**	
CAF					pmax	pmax			
	comp=Z,33nm,1.5s								
NRIK	**Noril'sk**	**45.18**	**15**	LR		LR	20 26 14.8		
	comp=Z,167nm,19.1s,baz=203,slow=40								
NRIK	**Noril'sk**	**45.18**	**15**	*ce*P		**P**	**20 04 36.5**	**+0.2**	
NRIK					pmax	pmax			
	comp=Z,3.0nm,1.1s								
RJF	**Les Rejaudoux**	**45.52**	**307**	*e*P		**P**	**20 04 43.4**	**+4.0**	
RJF					pmax	pmax			
	comp=Z,27nm,1.4s								
XAN	**Xi'an**	**45.78**	**69**	P		**P**	**20 04 41.3**	**-0.4**	
XAN					pP	sP	20 04 53.4	+1.4	
XAN					pmax	pmax			
	comp=Z,14nm,0.6s								
XAN	**Xi'an**	**45.78**	**69**	P		**P**	**20 04 40.5**	**-1.2**	
XAN					pmax	pmax			
	comp=Z,10.0nm,0.5s								
XAN	**Xi'an**	**45.78**	**69**	P		**P**	**20 04 40.5**	**-1.2**	
LFF	**La Frestale**	**46.05**	**306**	*e*P		**P**	**20 04 44.4**	**+0.8**	
LFF					pmax	pmax			
	comp=Z,96nm,1.8s								
BTO	**Baotou**	**46.08**	**60**	*e*P		**P**	**20 04 41.3**	**-2.7**	
LDF	**La Druitiere**	**46.86**	**311**	*e*P		**P**	**20 04 49.0**	**-0.9**	
LDF					pmax	pmax			
	comp=Z,34nm,1.4s								
FLN	**La Foliniere**	**47.12**	**312**	*e*P		**P**	**20 04 51.7**	**-0.2**	
FLN					pmax	pmax			
	comp=Z,51nm,1.6s								
GRR	**Gorron**	**47.34**	**311**	*e*P		**P**	**20 04 52.6**	**-1.0**	
GRR					pmax	pmax			
	comp=Z,121nm,2.2s								
SJPF	**Ste Jean**	**47.45**	**304**	*e*P		**P**	**20 04 55.5**	**+0.8**	
SJPF					pmax	pmax			
	comp=Z,52nm,1.4s								
SGMF	**Saint Gilles**	**48.46**	**311**	*e*P		**P**	**20 05 03.9**	**+1.6**	
SGMF					pmax	pmax			
	comp=Z,215nm,2.0s								
EKA	**Eskdalemuir Ar**	**49.51**	**320**	P		**P**	**20 05 09.6**	**-0.6**	
ESK	**Eskdalemuir**	**49.53**	**320**	P		**P**	**20 05 09.9**	**-0.5**	
ESK					pmax	pmax			
	comp=Z,28nm,1.5s								
ESK	**Eskdalemuir**	**49.53**	**320**	P		**P**	**20 05 09.9**	**-0.5**	
ESDC	**Sonseca Array**	**49.72**	**300**	P		**P**	**20 05 11.5**	**-0.7**	
	comp=Z,1.2nm,0.6s,baz=66,slow=7.0,SNR=16								
BOD	**Bodaibo**	**49.97**	**37**	*e*P		**P**	**20 05 12.2**	**-1.5**	
BOD					pmax	pmax			
	comp=Z,29nm,1.9s								
BJT	**Baijiatuau**	**50.81**	**60**	P		**P**	**20 05 19.1**	**-1.3**	
BJT					pmax	pmax			
	comp=Z,4.0nm,0.5s								
BJT	**Baijiatuau**	**50.81**	**60**	P		**P**	**20 05 19.1**	**-1.3**	
BJT					IAmb	IAmb	20 05 21.5		
	comp=Z,3.9nm,0.5s								
TOA0	**Torodi Ar. Sit**	**52.01**	**265**	P		**P**	**20 05 28.7**	**-1.0**	
TORD	**Torodi Ar. Bea**	**52.01**	**265**	P		**P**	**20 05 29.0**	**-0.7**	
	comp=Z,17nm,0.6s,baz=58,slow=7.2,SNR=49								
TORD	**Torodi Ar. Bea**	**52.01**	**265**	P		**P**	**20 05 28.5**	**-1.2**	
TIA	**Tai'an**	**52.09**	**65**	P		**P**	**20 05 30.4**	**+0.4**	
TIA					pmax	pmax			
	comp=Z,10.0nm,0.9s								
TIA					pmax	pmax			
	comp=Z,130nm,3.4s								
TIA					LR	LR			
	comp=Z,200nm,15.7s								
TIA					LR	LR			
	comp=Z,68nm,7.4s								
SPA0	**Spitsbergen Ar**	**53.00**	**351**	P		**P**	**20 05 36.8**	**+0.6**	
KOWA	**Kowa**	**56.48**	**269**	LR		LR	20 35 01.9		
	comp=Z,160nm,18.7s,baz=262,slow=41								
KOWA	**Kowa**	**56.48**	**269**	P		**P**	**20 06 01.7**	**-0.5**	
KOWA					IAmb	IAmb	20 06 03.0		
	comp=Z,21nm,1.4s								
ZEA	**Zeya**	**57.22**	**42**	*e*P		**P**	**20 06 07.6**	**+0.7**	
ZEA					pmax	pmax			
	comp=Z,10.0nm,1.0s								
ZEA					MLR	MLR			
	comp=Z,100nm,15.0s								
TIXI	**Tiksi**	**58.29**	**21**	*ce*P		**P**	**20 06 14.8**	**+0.7**	
TIXI	**Tiksi**	**58.29**	**21**	P		**P**	**20 06 13.9**	**-0.2**	
TIXI					IAmb	IAmb	20 06 23.1		
	comp=Z,6.0nm,1.1s								
TSUM	**Tsumeb**	**59.65**	**222**	LR		LR	20 33 51.4		
	comp=Z,158nm,18.4s,baz=34,slow=38								
TSUM	**Tsumeb**	**59.65**	**222**	P		**P**	**20 06 24.7**	**+0.2**	
TSUM					IAmb	IAmb	20 06 29.8		
	comp=Z,7.5nm,0.8s								
LBTB	**Lobatse**	**60.19**	**211**	P		**P**	**20 06 28.5**	**+0.5**	
LBTB					pmax	pmax			
	comp=Z,19nm,1.2s								
LBTB	**Lobatse**	**60.19**	**211**	P		**P**	**20 06 28.5**	**+0.5**	
KS19	**Wonju Array Si**	**60.25**	**61**	P		**P**	**20 06 28.4**	**+0.1**	
KSAR	**Wonju Array Be**	**60.27**	**61**	P		**P**	**20 06 28.4**	**-0.1**	
KSAR	**Wonju Array Be**	**60.27**	**61**	P		**P**	**20 06 28.4**	**-0.1**	
KSRS	**Korea Array**	**60.30**	**61**	P		**P**	**20 06 27.4**	**-1.2**	
	comp=Z,2.9nm,0.6s,baz=280,slow=6.6,SNR=20								
KSRS					LR	LR	20 38 18.2		
	comp=Z,60nm,19.8s,baz=142,slow=42								
KLR	**Kul'dur**	**60.56**	**47**	P		**P**	**20 06 29.1**	**-1.2**	
	comp=Z,6.7nm,1.1s,baz=273,slow=12,SNR=6.4								
KLR	**Kul'dur**	**60.56**	**47**	*e*P		**P**	**20 06 29.1**	**-1.2**	
KLR					pmax	pmax			
	comp=Z,4.0nm,1.0s								
DBIC	**Dimbokro**	**60.69**	**261**	P		**P**	**20 06 30.6**	**-1.0**	
	comp=Z,9.1nm,0.8s,baz=35,slow=6.9,SNR=10								
DBIC					LR	LR	20 36 42.2		
	comp=Z,52nm,18.9s,baz=42,slow=40								
DBIC	**Dimbokro**	**60.69**	**261**	P		**P**	**20 06 30.7**	**-0.9**	
DBIC					pmax	pmax			
	comp=Z,12nm,0.9s								
DBIC	**Dimbokro**	**60.69**	**261**	P		**P**	**20 06 30.7**	**-0.9**	
DBIC					IAmb	IAmb	20 06 35.7		
	comp=Z,12nm,0.9s								
KIC	**Kosan Boka**	**60.73**	**261**	*e*P		**P**	**20 06 31.2**	**-0.7**	
	comp=Z,7.2nm,0.6s								
TIC	**Toumodi**	**60.84**	**261**	*e*P		**P**	**20 06 32.1**	**-0.6**	
LIC	**Lamto**	**61.05**	**261**	*e*P		**P**	**20 06 33.5**	**-0.6**	
	comp=Z,18nm,0.6s								
KKM	**Kota Kinabalu**	**61.53**	**99**	P		**P**	**20 06 37.3**	**-0.2**	
USRK	**Ussuriysk Ar.**	**61.72**	**53**	P		**P**	**20 06 37.2**	**-1.0**	
	comp=Z,2.4nm,0.8s,baz=270,slow=7.6,SNR=3.5								
BOSA	**Boshof**	**63.45**	**210**	P		**P**	**20 06 50.1**	**+0.2**	
	comp=Z,2.1nm,0.4s,baz=30,slow=6.3,SNR=11								
BOSA					LR	LR	20 34 30.4		
	comp=Z,84nm,19.6s,baz=37,slow=36								
BOSA	**Boshof**	**63.45**	**210**	P		**P**	**20 06 50.0**	**0.0**	
MYLDM	**Lahad Datu**	**63.94**	**98**	P		**P**	**20 06 54.3**	**+0.9**	
MYLDM					IAmb	IAmb	20 07 12.7		
	comp=Z,13nm,1.2s								
SUMG	**Summit**	**64.47**	**341**	P		**P**	**20 06 55.8**	**-0.7**	
SUMG					pmax	pmax			
	comp=Z,10.0nm,1.0s								
SUMG	**Summit**	**64.47**	**341**	P		**P**	**20 06 55.8**	**-0.7**	
SUMG					IAmb	IAmb	20 07 09.4		
	comp=Z,10nm,1.0s								
MPSI	**Mapaga**	**67.53**	**102**	P		**P**	**20 07 20.7**	**+4.2**	
MJAR	**Matsushiro Arr**	**68.44**	**59**	LR		LR	20 39 39.0		
	comp=Z,39nm,20.6s,baz=280,slow=38								
EUNU	**Eureka**	**69.95**	**353**	P		**P**	**20 07 31.0**	**+0.3**	
EUNU					IAmb	IAmb	20 07 37.9		
	comp=Z,3.9nm,0.8s								
TNTI	**Ternate**	**73.80**	**98**	P		**P**	**20 07 54.5**	**-0.2**	
TNTI					IAmb	IAmb	20 08 03.8		
	comp=Z,12nm,0.9s								
BATI	**Baumata**	**76.21**	**110**	P		**P**	**20 08 09.0**	**+0.4**	
	comp=Z,10nm,0.6s,baz=288,slow=14,SNR=2.5								
SOEI	**Soe**	**76.47**	**109**	P		**P**	**20 08 10.9**	**+0.6**	
SIJI	**Sorong**	**78.00**	**98**	P		**P**	**20 08 18.7**	**-0.1**	
	comp=Z,4.7nm,0.8s,baz=301,slow=7.4,SNR=6.7								
A21K	**Barrow**	**78.21**	**10**	P		**P**	**20 08 18.8**	**-0.1**	
TOLK	**Toolik Lake Re**	**81.68**	**9**			**P**	**20 08 38.5**	**+0.7**	
TOLK					IAmb	IAmb	20 08 43.4		
	comp=Z,6.6nm,0.7s								
FITZ	**Fitzroy Crossi**	**82.07**	**115**	P		**P**	**20 08 40.3**	**-0.3**	
	comp=Z,2.3nm,0.8s,baz=218,slow=0.9,SNR=6.7								
FITZ	**Fitzroy Crossi**	**82.07**	**115**	P		**P**	**20 08 40.1**	**-0.5**	
COLD	**Coldfoot**	**82.91**	**10**			**P**	**20 08 43.6**	**-0.7**	
COLD					IAmb	IAmb	20 08 50.3		
	comp=Z,7.4nm,1.0s								
BMAR	**Burnt Mountain**	**83.46**	**8**	P		**P**	**20 08 48.1**	**+1.0**	
SCHQ	**Schefferville**	**83.59**	**330**	LR		LR	20 47 07.6		
	comp=Z,51nm,19.5s,baz=318,slow=36								
I23K	**Minto, Yukon-K**	**84.97**	**10**	P		**P**	**20 08 54.8**	**0.0**	
I23K					IAmb	IAmb	20 09 11.9		
	comp=Z,8.0nm,1.4s								
PRP	**Porcupine Dome**	**85.17**	**9**	P		**P**	**20 08 56.4**	**+0.4**	
PRP					IAmb	IAmb	20 09 02.3		
	comp=Z,8.5nm,1.2s								
MDM	**Murphy Dome**	**85.32**	**10**			**P**	**20 08 56.4**	**-0.2**	
BPAW	**Bear Paw Mtn.**	**85.67**	**11**			**P**	**20 08 58.5**	**+0.1**	
IL31		**85.69**	**9**	P		**P**	**20 08 57.7**	**-0.7**	
ILAR	**Eielson Array**	**85.69**	**9**	P		**P**	**20 08 57.6**	**-0.8**	
	comp=Z,1.6nm,0.8s,baz=320,slow=4.4,SNR=14								
ILAR					LR	LR	20 52 44.5		
	comp=Z,47nm,18.2s,baz=338,slow=40								
ILAR	**Eielson Array**	**85.69**	**9**	P		**P**	**20 08 57.5**	**-0.9**	
CAST	**Castle Rocks**	**86.11**	**12**	P		**P**	**20 08 59.5**	**-1.0**	
DAWY	**Dawson**	**87.29**	**6**	P		**P**	**20 09 06.3**	**0.0**	
BCAR	**Beaver Creek A**	**88.00**	**8**	P		**P**	**20 09 10.1**	**+0.4**	
SUA	**Susitna One**	**88.15**	**12**	P		**P**	**20 09 10.4**	**-0.2**	
YKA	**Yellowknife Ar**	**89.24**	**355**	P		**P**	**20 09 14.8**	**-0.7**	
	comp=Z,2.3nm,0.9s,baz=7.0,slow=5.6,SNR=3.2								
YKA					LR	LR	20 56 21.0		
	comp=Z,16nm,18.2s,baz=0.0,slow=40								
YKA	**Yellowknife Ar**	**89.24**	**355**	*i* P		P	20 09 20.2	+4.7	
YKA					pmax	pmax			
	comp=Z,2.0nm,0.7s								
WRA	**Warramunga Arr**	**90.04**	**113**	P		**P**	**20 09 19.5**	**-0.5**	
	comp=Z,1.3nm,0.8s,baz=313,slow=3.9,SNR=9.5								
WRA	**Warramunga Arr**	**90.04**	**113**	*i* P		**P**	**20 09 22.2**	**+2.2**	
WRA					pmax	pmax			
	comp=Z,1.0nm,0.8s								
WRA	**Warramunga Arr**	**90.04**	**113**	P		P	**20 09 19.4**	**-0.6**	
ASAR	**Alice Springs**	**91.55**	**116**	P		P	**20 09 25.7**	**-1.2**	
	comp=Z,0.7nm,0.6s,baz=305,slow=4.6,SNR=13								
ASAR	**Alice Springs**	**91.55**	**116**	P		**P**	**20 09 26.1**	**-0.8**	
ASAR	**Alice Springs**	**91.55**	**116**	P		**P**	**20 09 26.1**	**-0.8**	
TXAR	**Lajitas Array**	**119.35**	**339**	PKP		**PKPdf**	**20 15 06.7**	**-3.1**	
	comp=Z,0.2nm,0.7s,baz=316,slow=5.0,SNR=3.7								
TXAR	**Lajitas Array**	**119.35**	**339**	PKIKP		**PKPdf**	**20 15 08.7**	**-1.1**	
TXAR	**Lajitas Array**	**119.35**	**339**			**PKPdf**	**20 15 08.7**	**-1.1**	

IDC 15 20:01:50.5±2.4, 1°90N×126°58E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.1/34, mbtmp3.2/3, Error ellipse: s-maj=205.9km s-min=29.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.00**	**161**	P		20 06 57.2	+0.1
	0.4nm,0.5s,baz=340,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**26.39**	**165**	P		20 07 28.8	0.0
	0.1nm,0.4s,baz=348,slow=14,SNR=2.0						
MKAR	**Makanchi Array**	**58.97**	**326**	P		20 11 51.8	-0.1
	0.2nm,0.4s,baz=126,slow=7.5,SNR=2.2						

*IDC **15** 20:23:28.4±0.6, 36°.45N×28°.84E, h0km, mb4.0/21, mb1 4.1/32, mb1mx4.0/61, mbtmp4.0/32, ML3.7/9, MS2.8/2, Ms1 2.8/2, ms1mx2.4/46, Error ellipse: s-maj=12.7km s-min=10.9km az=167.0*

*ISK **15** 20:23:30.1, 36°.42N×28°.83E, h4km, ML4.2/44*

*NIC **15** 20:23:30.7±0.0, 36°.42N×28°.83E, h18km±1km, Ml4.4/3*

*DDA **15** 20:23:30.6, 36°.43N×28°.82E, h6km±2km, ML4.2*

*ATH **15** 20:23:31.0, 36°.44N×28°.80E, h19km, ML4.1/9, Error ellipse: s-maj=1.7km s-min=0.6km az=183.0*

*HLW **15** 20:23:31.3, 36°.33N×28°.62E, h8km±16km, Ml4.4*

*NEIC **15** 20:23:31.7±1.6, 36°.37N±0°.03×28°.88E±0°.02, h19km±4km, Error ellipse: s-maj=5.0km s-min=2.4km az=186.0*

*THE **15** 20:23:31.6, 36°.46N×28°.87E, h0km, ML4.0/10, Error ellipse: s-maj=1.1km s-min=0.7km az=176.0*

*GII **15** 20:23:32.8±0.0, 35°.99N×28°.99E, h1km, Mm3.6/1*

ISC 15 20:23:30.7±0.9, 36°.39N±0°.02×28°.85E±0°.01, h13km±6km, n406, σ1°68/460, mb4.0/33, 18C-15D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.31**	**38**	PG	**Pg**	**20 23 36.5**	**-0.5**
FETY				SG	**Sg**	**20 23 41.3**	**+0.1**
FETY	**Fethiye**	**0.31**	**38**	*i* P	**Pg**	**20 23 36.4**	**-0.5**
FETY				*i* S	**Sg**	**20 23 41.1**	**-0.1**
FETY				IAML		20 23 44.0	
	comp=E,21μm,0.5s						
FETY	**Fethiye**	**0.31**	**38**	Pg	**Pg**	**20 23 36.3**	**-0.7**
FETY	**Fethiye**	**0.31**	**38**	P	**Pg**	**20 23 36.7**	**-0.3**
FETY				S	**Sg**	**20 23 41.7**	**+0.5**
DALY	**Dalyan (Mula)**	**0.45**	**340**	PG	**Pg**	**20 23 38.8**	**-0.8**
DALY				SG	**Sg**	**20 23 45.3**	**-0.4**
DALY	**Dalyan (Mula)**	**0.45**	**340**	*i* P	**Pg**	**20 23 38.9**	**-0.8**
DALY				*i* S	**Sg**	**20 23 45.2**	**-0.5**
DALY				IAML		20 23 47.0	
	comp=E,16μm,0.4s						
DALY				IAML		20 23 48.0	
	comp=N,18μm,0.6s						
DALY	**Dalyan (Mula)**	**0.45**	**340**	Pg	**Pg**	**20 23 38.9**	**-0.7**
ARG	**Arkhangelos**	**0.61**	**253**	P	**Pg**	**20 23 42.4**	**-0.1**
ARG				S	**Sb**	**20 23 51.9**	**+0.2**
ARG				AML	AML	20 23 53.9	
	comp=N,34404μm,1.0s						
ARG				AML	AML	20 23 58.8	
	comp=E,28147μm,0.3s						
ARG	**Arkhangelos**	**0.61**	**253**	PG	**Pg**	**20 23 42.5**	**-0.1**
ARG	**Arkhangelos**	**0.61**	**253**	*i*P	**Pg**	**20 23 42.4**	**-0.1**
ARG				S	**Sb**	**20 23 52.4**	**+0.7**
ARG	**Arkhangelos**	**0.61**	**253**		**Pg**	**20 23 42.4**	**-0.1**
ARG					**Sb**	**20 23 51.9**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.62**	**302**	PG	**Pg**	**20 23 42.4**	**-0.3**
MRSB	**Marmaris-Mugla**	**0.62**	**302**	Pg	**Pg**	**20 23 42.8**	**+0.1**
TURN	**Turunc**	**0.62**	**308**	PG	**Pg**	**20 23 41.9**	**-0.8**
TURN				SG	**Sg**	**20 23 51.1**	**+0.2**
TURN	**Turunc**	**0.62**	**308**	*i* P	**Pg**	**20 23 42.0**	**-0.8**
TURN				*i* S	**Sg**	**20 23 50.2**	**-0.8**
TURN				IAML		20 23 52.0	
	comp=N,15μm,0.4s						
AKAS	**Kas**	**0.63**	**104**	PG	**Pb**	**20 23 43.5**	**-0.1**
AKAS	**Kas**	**0.63**	**104**	*i* P	**Pb**	**20 23 44.0**	**+0.4**
AKAS	**Kas**	**0.63**	**104**		**Pb**	**20 23 43.6**	**-0.1**
AKAS					**Sg**	**20 23 49.0**	**-2.4**
KSL	**Kastellorizon**	**0.64**	**112**	P	**Pb**	**20 23 44.4**	**+0.7**
KSL				S	**Sn**	**20 23 54.5**	**-1.0**
KSL				AML	AML	20 23 59.1	
	comp=N,13838μm,0.6s						
KSL				AML	AML	20 24 01.7	
	comp=E,31103μm,0.4s						
KSL	**Kastellorizon**	**0.64**	**112**	*i*P	**Pg**	**20 23 43.5**	**+0.4**
KSL				S	**Sb**	**20 23 53.9**	**+1.4**
KSL	**Kastellorizon**	**0.64**	**112**		**Pb**	**20 23 44.4**	**+0.7**
KSL					**Sn**	**20 23 54.5**	**-1.0**
KSL	**Kastellorizon**	**0.64**	**112**	P	**Pg**	**20 23 43.3**	**+0.2**
KSL				S	**Sn**	**20 23 56.6**	**+1.1**
	comp=E,11μm,0.4s						
CAME	**Cameli-Denizli**	**0.66**	**33**	PG	**Pg**	**20 23 43.2**	**-0.4**
CAME	**Cameli-Denizli**	**0.66**	**33**	Pg	**Pg**	**20 23 42.9**	**-0.7**
DEMR	**Demre-Antalya**	**0.87**	**100**	PG	**Pb**	**20 23 47.7**	**+0.1**
DEMR	**Demre-Antalya**	**0.87**	**100**	Pg	**Pb**	**20 23 47.7**	**+0.1**
YER	**Yerkesik**	**0.87**	**329**	PG	**Pg**	**20 23 46.8**	**-0.7**
YER	**Yerkesik**	**0.87**	**329**	Pg	**Pg**	**20 23 46.8**	**-0.7**
YER	**Yerkesik**	**0.87**	**329**	P	**Pg**	**20 23 46.3**	**-1.2**
YER				S	**Sb**	**20 24 00.1**	**+0.9**
ELL	**Elmali**	**0.92**	**67**	PG	**Pg**	**20 23 47.9**	**-0.6**
ELL	**Elmali**	**0.92**	**67**	P	**Pg**	**20 23 48.4**	**-0.2**
ELL	**Elmali**	**0.92**	**67**		**Pb**	**20 23 48.0**	**-0.5**
ELL					**Sg**	**20 23 59.9**	**-0.8**
GOLH	**Golhisar**	**1.02**	**34**	*i* P	**Pb**	**20 23 49.7**	**-0.5**
GOLH				*i* S	**Sn**	**20 24 04.5**	**-0.5**
GOLH				IAML		20 24 11.0	
	comp=N,7μm,0.5s						
DATC	**Datca-Mugla**	**1.02**	**291**	PG	**Pb**	**20 23 49.8**	**-0.5**
TAVA	**DENIZLI_Tavas**	**1.07**	**3**	*i* P	**Pb**	**20 23 51.0**	**-0.1**
TAVA				*i* S	**Sn**	**20 24 07.9**	**+1.6**
TAVA				IAML		20 24 11.0	
	comp=E,4μm,0.4s						
AKUM	**Antalya-Kumluc**	**1.21**	**93**	*i* P	**Pg**	**20 23 54.8**	**+0.9**
MLSB	**Milas**	**1.25**	**317**	PN	**Pb**	**20 23 54.4**	**+0.3**
BDRM	**Kayabasi**	**1.31**	**301**	*i* P	**Pb**	**20 23 55.3**	**+0.1**
BDRM				*i* S	**Sn**	**20 24 12.6**	**+0.4**
BDRM				IAML		20 24 17.0	
	comp=E,6μm,0.4s						
KORT	**Korkueli**	**1.35**	**63**	PN	**Pb**	**20 23 56.4**	**+0.5**
KORT	**Korkueli**	**1.35**	**63**	*i* P	**Pg**	**20 23 57.4**	**+0.8**
KORT				*i* S	**Sg**	**20 24 16.0**	**+1.8**
KORT				IAML		20 24 29.0	
	comp=N,4μm,0.8s						
NIS1	**Nisyros Isl.**	**1.36**	**279**	P	**Pb**	**20 23 56.1**	**0.0**
NIS1				S	**Sb**	**20 24 13.8**	**+0.4**
NIS1				AML	AML	20 24 27.6	
	comp=E,57571μm,0.5s						
NIS1				AML	AML	20 24 28.0	
	comp=N,50090μm,0.7s						
NIS1	**Nisyros Isl.**	**1.36**	**279**	PN	**Pb**	**20 23 56.3**	**+0.2**
NIS1	**Nisyros Isl.**	**1.36**	**279**		**Pb**	**20 23 56.1**	**0.0**
NIS1					**Sb**	**20 24 13.8**	**+0.4**
NIS1	**Nisyros Isl.**	**1.

ZKR Zakros 2.49 240 P Pb 20 24 13.7 -1.6
ZKR S Sn 20 24 43.5 +2.3
comp=E,1µm,0.6s
STIA Sitia Lasithi 2.54 243 P Pb 20 24 14.3 -1.8
STIA S Sb 20 24 45.8 -1.4
SHUT Suhut-Afyon 2.55 32 PN Pn 20 24 13.2 +1.4
ALAN Alanya-ANTALYA 2.57 85 PN Pn 20 24 13.8 +1.8
SEYD Seydisehir-KON 2.60 66 PN Pn 20 24 14.1 +1.6
AKS Akhisar 2.62 342 PN Pn 20 24 12.9 +0.3
SHAP Saphane-Kutahy 2.64 6 PN Pn 20 24 14.5 +1.4
URLA Izmir 2.66 318 PN Pn 20 24 14.7 +1.4
URLA Izmir 2.66 318 *i* **P Pn 20 24 14.7 +1.4**
GEDZ Gediz 2.68 9 PN Pn 20 24 15.2 +1.6
SIMA Simav-Kutahya 2.69 2 PN Pn 20 24 14.7 +1.0
THR8 Santorini-Mono 2.72 271 P Pn 20 24 16.0 +2.0
GDZ Gediz 2.74 10 *i* **P Pn 20 24 17.1 +2.6**
APE Apeiranthos 2.75 285 P Pn 20 24 15.7 +1.3
APE AML AML 20 25 07.8
comp=N,1028µm,0.5s
APE AML AML 20 25 11.4
comp=E,897µm,0.9s
APE Apeiranthos 2.75 285 PN Pn 20 24 15.6 +1.1
APE Apeiranthos 2.75 285 ⇑P Pn 20 24 15.8 +1.3
APE Apeiranthos 2.75 285 P Pn 20 24 15.8 +1.3
APE S Sn **20 24 49.8 +2.1**
comp=E,475nm,0.7s
SNT1 Gialos, Santor 2.76 271 P Pn 20 24 16.3 +1.7
THR7 Fira-Santorini 2.76 272 P Pn 20 24 16.6 +2.0
THT2 Imerovigli 2.77 272 PN Pn 20 24 16.3 +1.6
THT2 Imerovigli 2.77 272 P Pn 20 24 17.0 +2.3
CMBO Columbo, Santo 2.78 273 P Pn 20 24 16.6 +1.7
CMBO Columbo, Santo 2.78 273 P Pn 20 24 17.0 +2.2
THR3 Thira Island, 2.78 271 P Pn 20 24 17.0 +2.1
THR6 Thira Island, 2.79 270 P Pn 20 24 16.9 +2.0
THR6 Thira Island, 2.79 270 P Pn 20 24 17.3 +2.3
GAZI Gazipasa 2.80 92 PN Pn 20 24 15.9 +0.7
GAZI Gazipasa 2.80 92 *i* **P Pn 20 24 16.1 +0.8**
THR9 Santorini-Faro 2.82 270 P Pn 20 24 17.8 +2.4
DOGA KONYA_Doganhis 2.83 52 *i* **P Pb 20 24 19.4 -1.6**
THR5 Thira Island, 2.83 272 P Pn 20 24 17.9 +2.4
SAP3 Santorini-Thir 2.83 272 P Pn 20 24 17.5 +2.0
NPS Neapolis 2.86 248 P Pn 20 24 17.4 +1.3
NPS AML AML 20 25 00.3
comp=E,5401µm,0.6s
NPS AML AML 20 25 00.7
comp=N,3214µm,0.7s
NPS Neapolis 2.86 248 P Pn 20 24 17.5 +1.5
NPS S Sn **20 24 52.1 +1.7**
comp=N,2µm,0.6s
FRMA Ierapetra Chan 2.88 242 P Pn 20 24 17.7 +1.4
FRMA S Sn **20 24 50.1 -0.8**
LAST Lasithi 3.00 247 P Pn 20 24 19.5 +1.5
LAST Lasithi 3.00 247 P Pn 20 24 19.7 +1.7
LAST S Sn **20 24 56.2 +2.2**
comp=N,1µm,0.7s
DKL Dikili 3.09 331 PN Pn 20 24 20.7 +1.6
TVSB Tavsanli 3.09 9 PN Pn 20 24 20.3 +1.1
KMER Konya-Meram 3.13 63 *i* **P Pb 20 24 23.2 -3.1**
AKMS Akamas 3.15 115 P Pn 20 24 20.2 +0.2
AKMS AML AML 20 24 56.8
comp=N,2.4nm,0.8s
AKMS AML AML 20 24 56.8
comp=N,2.4nm,0.8s
AKMS AML AML 20 24 57.9
comp=N,3.0nm,0.5s
AKMS AML AML 20 24 57.9
comp=N,3.0nm,0.5s
AKMS S Sn **20 24 58.3 +0.8**
HRKL Herakleio 3.23 252 PN Pn 20 24 22.9 +1.8
HRKL Herakleio 3.23 252 P Pn 20 24 22.9 +1.8
ALFC Alefka 3.29 111 ⇑P Pn 20 24 22.0 +0.1
ALFC AML AML 20 25 02.3
comp=N,1.4nm,0.5s
ALFC AML AML 20 25 06.5
comp=N,2.0nm,0.3s
BALB Balikesir 3.33 347 PN Pn 20 24 23.9 +1.5
LADK Ladik-KONYA 3.33 56 PN Pn 20 24 24.7 +2.1
IDI Anoyia 3.40 252 Pn Pn 20 24 24.0 +0.5
comp=N,58nm,0.3s,baz=63,slow=13,SNR=113
IDI Sn **Sn 20 25 07.9 +4.2**
comp=N,35nm,0.3s,baz=277,slow=11,SNR=8.2
IDI LR LR 20 26 00.9
comp=N,202nm,21.3s,baz=106,slow=45
IDI Anoyia 3.40 252 P Pn 20 24 24.5 +1.0
IDI Anoyia 3.40 252 P Pg 20 24 45.5 +10
IDI Anoyia 3.40 252 Pn Pn 20 24 24.7 +1.2
IDI Anoyia 3.40 252 P Pn 20 24 24.8 +1.3
NATA Nata 3.43 117 P Pn 20 24 24.4 +0.5
CIFT Cifteler, Eski 3.44 30 PN Pn 20 24 24.7 +1.6
TEKE Tekeli-Mersin 3.46 93 PN Pn 20 24 26.5 +2.3
KIZT Kizilcal 3.46 43 PN Pn 20 24 26.3 +2.0
PRK Paraskevi 3.50 325 P Pn 20 24 27.0 +2.2
PRK Paraskevi 3.50 325 P Pn 20 24 27.3 +2.5
OSC1 CSNet OBS 1 3.51 145 P Pn 20 24 24.9 +0.1
OSC1 S Sn **20 25 06.1 -0.1**
AKDN Akdeniz- Kıbrı 3.52 107 PN Pn 20 24 26.7 +1.7
LEF Lefka 3.52 110 PN Pn 20 24 24.4 -0.7
BERE Bereket-Mersin 3.53 89 PN Pn 20 24 27.5 +2.2
SIVA Sivas 3.56 249 P Pn 20 24 28.8 +3.1
SIVA Sivas 3.56 249 P Pn 20 24 28.7 +3.1
MHLO Agia Marina, M 3.59 276 P Pn 20 24 26.6 +0.5
KRMN Karaman 3.63 76 PN Pn 20 24 28.6 +2.0
SZAC Souni 3.67 115 ⇓P Pn 20 24 27.3 +0.1
SZAC AML AML 20 25 12.8
comp=N,1.8nm,0.3s
SZAC AML AML 20 25 13.0
comp=N,2.4nm,0.5s
SIGR SIGRI 3.68 321 P Pn 20 24 29.0 +1.7
SIGR SIGRI 3.68 321 P Pn 20 24 29.1 +1.9
TEVE Tevekalti-Mers 3.71 88 PN Pn 20 24 29.8 +2.1
SVRH Sivrihisar-ESK 3.71 34 PN Pn 20 24 29.7 +1.9
GONE Gonen-Balikesi 3.76 346 PN Pn 20 24 29.3 +0.9
VAM Vamos 3.90 257 P Pn 20 24 31.4 +1.1
VAM Vamos 3.90 257 P Pn 20 24 32.7 +2.4
ATHAL Athalassa 3.90 107 P Pn 20 24 31.7 +1.4
CSS Mathiatis 3.92 110 Pn Pn 20 24 31.5 +1.0
CSS Mathiatis 3.92 110 ⇑P Pn 20 24 30.8 +0.2
CSS Mathiatis 3.92 110 Pn Pn 20 24 31.0 +0.5
ASGA Asgata 3.93 113 P Pn 20 24 31.0 +0.3
EZN Ezine 3.96 331 P Pn 20 24 32.9 +1.8
IMMV Iera Moni Meta 4.06 258 P Pn 20 24 34.5 +2.0
IMMV Iera Moni Meta 4.06 258 P Pn 20 24 35.2 +2.7
MVOU Mavrovouni 4.13 108 ⇓P Pn 20 24 33.0 -0.4
GVDS Gavdos 4.17 250 P Pn 20 24 36.6 +2.6
GVD Gavdhos 4.18 250 P Pn 20 24 36.5 +2.5
GVD Gavdhos 4.18 250 P Pn 20 24 36.6 +2.5
RODP Rodopos 4.21 260 P Pn 20 24 36.8 +2.2
DION Dionisos Attik 4.27 295 P Pn 20 24 37.4 +2.1
DION Dionisos Attik 4.27 295 P Pn 20 24 37.5 +2.1
VLY Voula,Athens 4.29 291 P Pn 20 24 38.3 +2.6
PTL Penteli 4.31 294 P Pn 20 24 38.1 +2.1
PTL Penteli 4.31 294 P Pn 20 24 38.0 +2.1
OSC2 CSNet OBS 4 4.34 139 P Pn 20 24 36.9 +0.5
MDUB Mudurnu 4.47 24 Pn Pn 20 24 37.6 -0.6
ANKY Antikythira Is 4.52 265 P Pn 20 24 40.7 +1.9
LIA Limnos Island 4.54 322 P Pn 20 24 41.1 +2.1
BR231 Keskin MP Arra 4.63 41 Pn Pn 20 24 42.3 +1.9
KTHA Kythira Island 4.67 270 P Pn 20 24 43.7 +2.8
KTHA Kythira Island 4.67 270 P Pn 20 24 43.9 +2.9
VILL Villia 4.76 293 P Pn 20 24 44.6 +2.5
VLI Veliai 4.77 276 P Pn 20 24 44.9 +2.6
VLI Veliai 4.77 276 P Pn 20 24 45.0 +2.7
AOS Alonnisos 4.81 307 P Pn 20 24 44.5 +1.7
SMTH Samothraki Isl 4.83 328 P Pn 20 24 45.0 +1.9
ALN Alexandroupoli 5.00 335 P Pn 20 24 46.2 +0.8
ALN Alexandroupoli 5.00 335 Pn Pn 20 24 46.5 +1.1
BR131 Keskin Array S 5.04 47 Pn Pn 20 24 47.6 +1.6
BRTR Keskin Array B 5.04 47 Pn Pn 20 24 47.6 +1.6
comp=N,3.3nm,0.3s,baz=221,slow=16,SNR=63
BRTR Sn **Sn 20 25 47.9 +3.8**
comp=N,3.7nm,0.3s,baz=218,slow=26,SNR=8.4
BRTR Keskin Array B 5.04 47 Pn Pn 20 24 47.4 +1.3
VLX Vlachokerasia 5.28 283 P Pn 20 24 52.8 +3.5
NEO Neokhori 5.32 305 P Pn 20 24 52.0 +2.2
PAIG Paliouri 5.39 312 P Pn 20 24 52.3 +1.5
RDO Rodhopi 5.41 332 P Pn 20 24 53.0 +2.1
GUR Goura 5.42 288 P Pn 20 24 54.5 +3.2
OUR Ouranopolis 5.49 317 P Pn 20 24 54.1 +2.1
OUR Ouranopolis 5.49 317 P Pn 20 24 54.3 +2.2
KLV Kalavryta, Ach 5.59 289 P Pn 20 24 56.7 +3.1
KALE Kalithea 5.70 292 P Pn 20 24 58.5 +3.4

KAVA Kavala 5.71 325 P Pn 20 24 56.7 +1.5
KAVA Kavala 5.71 325 P Pn 20 24 57.2 +2.0
TRIZ Trizonia 5.75 292 P Pn 20 24 59.1 +3.5
SERG Sergoula 5.77 292 P Pn 20 24 59.4 +3.4
AGG Agios Georgios 5.80 299 P Pn 20 24 59.1 +2.7
AGG Agios Georgios 5.80 299 Pn Pn 20 24 58.4 +2.0
ILGA Ilgaz 6.01 38 Pn 20 25 00.3 +0.8
BHL Bhannes 6.10 112 *e***P Pn 20 24 59.7 -0.9**
DQRL Deir Qamar 6.13 114 *e***P Pn 20 25 00.9 -0.1**
HNTI Hanita 6.17 121 Pn Pn 20 25 01.5 +0.1
HNTI Sn **Sn 20 26 10.3 -1.5**
HWQ Hawqa 6.17 108 *e***P Pn 20 25 02.0 +0.3**
DIM Dimitrovgrad 6.21 337 P Pn 20 25 04.1 +2.1
LIT Litokhoron 6.22 308 Pn Pn 20 25 03.4 +1.2
MMA0B Mount Meron ar 6.36 120 Pn Pn 20 25 04.0 -0.2
MMAI Mount Meron Ar 6.36 120 Pn Pn 20 25 04.2 0.0
comp=N,27nm,0.3s,baz=304,slow=11,SNR=97
MMAI Sn **Sn 20 26 14.6 -2.1**
comp=N,24nm,0.3s,baz=310,slow=24,SNR=8.0
BLGI Bet Lehem HaGe 6.38 123 Pn Pn 20 25 04.6 +0.3
RCY Rachaya 6.42 115 *e***P Pn 20 25 04.9 -0.2**
GEM Giv'at Ha'Em 6.44 118 Pn Pn 20 25 04.9 -0.3
NATI Neve Ativ 6.47 117 Pn Pn 20 25 05.0 -0.5
MMB Musomiste 6.54 324 P Pn 20 25 09.2 +2.6
PLD Plovdiv 6.55 332 P Pn 20 25 09.5 +2.9
SLTI Sal'it 6.59 127 Pn Pn 20 25 07.1 -0.1
KNT Kendrikon 6.65 317 P Pn 20 25 11.3 +3.1
MMLI Mount Malkishu 6.71 124 Pn Pn 20 25 08.7 -0.3
GAZ Gaziantep 6.76 81 Pn Pn 20 25 09.5 -0.1
BZK Bozkurt 6.85 34 ⇑P Pn 20 25 14.3 +3.5
HMDT Nahal Hemdat 6.89 125 Pn Pn 20 25 11.3 -0.1
HNAT Natroun 6.90 167 P Pn 20 25 11.5 -0.1
baz=165
KOT Kottamia 6.91 158 P Pn 20 25 11.9 +0.1
baz=156
KOT AMP 20 26 00.0
baz=156
KOT S **Sn 20 26 24.6 -5.8**
baz=156
VAY Valandovo 6.94 317 *i* **Pn Pn 20 25 15.9 +3.8**
HHAG Hagoal 6.97 156 P Pn 20 25 13.3 +0.8
baz=154
HHAG S **Sn 20 26 26.1 -5.8**
baz=154
AMAZ Amatzia 6.99 132 Pn Pn 20 25 12.6 -0.2
UJAP Al Uja 7.05 127 Pn Pn 20 25 13.5 0.0
KZIT Kziot 7.16 138 Pn Pn 20 25 14.5 -0.6
KZIT Sn **Sn 20 26 32.7 -3.7**
TOKA Tokat 7.16 54 Pn Pn 20 25 16.4 +1.3
SZH Strazhica 7.22 343 P Pn 20 25 20.0 +4.1
YTIR Yattir 7.23 132 Pn Pn 20 25 15.8 -0.4
YTIR Sn **Sn 20 26 35.4 -2.8**
DIKM Dikmen 7.24 42 P Pn 20 25 19.0 +2.9
DSI Dead Sea 7.25 130 Pn Pn 20 25 15.8 -0.5
DSI Sn **Sn 20 26 36.6 -1.9**
SUZ Suez 7.34 152 P Pn 20 25 17.2 -0.3
baz=150
RAZG Razgrad 7.39 347 ⇑P Pn 20 25 21.2 +3.1
STIP Stip 7.41 318 *i* **Pn Pn 20 25 20.6 +2.2**
GHAJ Ghor Haditha 7.55 130 Pn Pn 20 25 20.1 -0.3
DAMI2 DAM2 7.56 132 Pn Pn 20 25 20.3 -0.3
VTS Vitosha 7.58 327 P Pn 20 25 24.3 +3.3
RMNI Mount Ramon 7.60 138 Pn Pn 20 25 20.4 -0.8
SWA2 7.68 203 P Pn 20 25 22.3 +0.1
baz=202
KARJ KARJ 7.73 131 Pn Pn 20 25 14.1 -8.8
ICOR Ion Corvin 7.76 354 P Pn 20 25 25.8 +2.6
MFTR Murfatlar 7.78 358 P Pn 20 25 26.5 +3.0
OHR Ohrid 7.86 309 *i* **Pn Pn 20 25 29.4 +4.7**
ZFRI Zfri 7.86 136 Pn Pn 20 25 23.2 -1.5
ASF Jabal al Asfar 7.88 120 Pn Pn 20 25 25.7 +0.7
comp=N,0.5nm,0.3s,baz=259,slow=16,SNR=1.4
ASF Sn **Sn 20 26 56.0 +1.9**
comp=N,0.4nm,0.3s,baz=89,slow=16,SNR=1.9
PRNI Paran 7.92 138 Pn Pn 20 25 24.4 -1.2
KRMI Paran Flat 7.96 140 Pn Pn 20 25 24.8 -1.3
MPEP Malo Peshtene 7.99 332 P Pn 20 25 29.3 +2.9
NBNS Bani Suef 8.02 164 P Pn 20 25 25.8 -1.0
baz=162
NBNS AMP 20 26 00.0
baz=162
TIRR Tirgusor 8.06 358 ⇑P Pn 20 25 30.4 +3.0
TIRR Tirgusor 8.06 358 ⇑P Pn 20 25 30.4 +3.0
TIRR Tirgusor 8.06 358 Pn 20 25 28.4 +1.0
TLBR Topalu 8.17 356 ⇓P Pn 20 25 31.1 +2.3
HRFI Mount Harif 8.19 139 Pn Pn 20 25 28.4 -0.8
HRFI Sn **Sn 20 26 58.2 -3.4**
MBRI Mt Berech 8.31 141 Pn Pn 20 25 30.2 -0.8
HARR Harsova 8.32 355 ⇓P Pn 20 25 33.4 +2.5
EIL Elat 8.44 141 Pn Pn 20 25 32.0 -0.6
comp=N,3.9nm,0.3s,baz=318,slow=6.9,SNR=31
EIL Sn Sn 20 26 58.2 -10
comp=N,2.1nm,0.3s,baz=336,slow=17,SNR=1.6
EIL LR LR 20 30 59.8
comp=N,47nm,20.5s,baz=297,slow=53
EIL Elat 8.44 141 Pn Pn 20 25 31.7 -0.9
EIL Sn **Sn 20 27 03.1 -4.6**
AQBJ Aqaba 8.44 140 Pn Pn 20 25 32.3 -0.3
TPGR Topolog 8.46 358 ⇑P Pn 20 25 36.0 +3.1
TIR Tirane 8.58 308 P Pn 20 25 42.7 +8.2
GRB Gharib 8.76 157 P Pn 20 25 36.4 -0.6
baz=155
TLCR 8.79 360 ⇑P Pn 20 25 39.6 +2.3
CFR Carcaliu 8.79 357 ⇓P Pn 20 25 40.4 +3.0
PUNG Punghina 9.08 332 P Pn 20 25 46.2 +4.9
HFRF Wahat Farafira 9.23 183 P Pn 20 25 42.1 -1.3
baz=182
HFRF S Sn 20 27 18.1 -9.1
baz=182
NEHR Nehoiu 9.23 349 ⇑P Pn 20 25 46.4 +2.9
TUDR 9.24 355 P Pn 20 25 46.1 +2.7
BISRR Bisoca 9.29 351 ⇑P Pn 20 25 47.4 +3.1
MLR Muntele Rosu 9.35 347 Pn Pn 20 25 43.9 -1.3
comp=N,0.1nm,0.3s,baz=139,slow=11,SNR=2.5
MLR Sn **Sn 20 27 30.6 +0.4**
comp=N,0.2nm,0.3s,baz=274,slow=18,SNR=1.1
MLR Muntele Rosu 9.35 347 ⇑P Pn 20 25 48.1 +2.9
MLR Muntele Rosu 9.35 347 Pn Pn 20 25 47.1 +1.9
ODBI Odobesti 9.46 352 ⇑P Pn 20 25 49.8 +3.3
VOIR 9.48 344 ⇓P Pn 20 25 50.6 +3.7
ARR Arges 9.52 342 ⇓P Pn 20 25 51.4 +4.0
VARL Varlezi 9.53 356 ⇓P Pn 20 25 50.7 +3.3
PDG Podgorica 9.56 312 ⇑P Pn 20 25 54.5 +6.6
PLOR Plostina 9.59 351 ⇑P Pn 20 25 51.5 +3.0
VRI Vrincioaia 9.60 351 ⇓P Pn 20 25 51.1 +2.6
MARD Mardin 9.61 81 Pn Pn 20 25 49.7 +1.0
LOT Lotru 9.83 339 P Pn 20 25 55.4 +3.6
TIP Timpagrande 9.97 290 Pn Pn 20 25 55.9 +2.3
GZR Gura Zlata 10.10 335 ⇓P Pn 20 25 59.9 +4.5
TESR Tescani 10.24 351 ⇓P Pn 20 26 00.3 +3.0
DIVS Divibare 10.24 321 Pn Pn 20 25 58.5 +1.1
MILM Milestii Mici 10.52 360 ⇑P Pn 20 26 04.0 +2.9
BZS Buzias 10.71 332 ⇓P Pn 20 26 08.5 +4.8
BIZ Bicaz 10.73 350 ⇓P Pn 20 26 07.4 +3.3
BURAR Bucovina Array 11.53 348 ⇓P Pn 20 26 18.3 +3.2
BURAR Bucovina Array 11.53 348 Pn 20 26 16.3 +1.3
BUR08 Bucovina Ar. S 11.56 348 Pn Pn 20 26 16.9 +1.4
SORM Soroca 11.74 358 ⇓P Pn 20 26 20.3 +2.5
KVAR Kislovodsk Arr 12.99 50 Pn Pn 20 26 35.9 +0.8
baz=254,slow=17,SNR=1.7
KOLS Kolonicke sedl 13.43 341 *e***PN P 20 26 52.0 +1.8**
AKASG Malin Array Be 14.31 1 Pn Pn 20 26 51.0 -1.8
comp=N,0.6nm,0.3s,baz=180,slow=12,SNR=1.5
SOKA Soboth 14.56 319 *e***P Pn 20 26 59.1 +2.6**
comp=N,5.2nm,0.9s
ARSA Arzberg 14.69 322 *e***P Pn 20 27 00.8 +2.7**
comp=N,2.9nm,0.6s
CONA Conrad Observa 15.00 324 *e***P Pn 20 27 04.7 +2.4**
comp=N,9.4nm,1.5s
VRAC Vranov 15.70 329 Pn Pn 20 27 13.4 +2.0
baz=335,slow=21,SNR=0.8
KEST Kesra 15.79 273 Pn Pn 20 27 12.8 0.0
comp=N,0.2nm,0.3s,baz=341,slow=19,SNR=2.9
KEST Kesra 15.79 273 P P 20 27 17.9 +1.3
KEST IAmb IAmb 20 27 20.7
comp=Z,15nm,0.8s
ABTA Abfaltersbach 15.98 315 *e***P P 20 27 18.7 -0.1**
comp=Z,6.2nm,0.9s
CTI Castel Tesino 16.11 312 P P 20 27 20.7 +0.5
CTI IAmb IAmb 20 27 26.0
comp=Z,23nm,1.2s
DPC Dobruska-Polom 16.63 331 *e***P P 20 27 25.7 -0.1**
GEC2 GERESS Array S 16.67 323 P 20 27 27.2 +0.9

GERES GERESS Array B 16.67 323 Pn Pn 20 27 23.6 -0.4
comp=Z,0.2nm,0.3s,baz=161,slow=16,SNR=6.5
GERES GERESS Array B 16.67 323 P P 20 27 27.2 +0.9
WTTA Wattenberg 16.77 316 *e***P P 20 27 28.8 +1.3**
comp=Z,13nm,1.3s
WATA Walderalm 16.84 316 *e***P P 20 27 30.3 +1.9**
comp=Z,9.9nm,1.1s
CHVC Chvalec 16.92 331 *e***P P 20 27 29.0 0.0**
KHC Kasperske Hory 16.92 324 *e***P P 20 27 30.2 +1.1**
SQTA Sankt Quirin 16.99 315 *e***P P 20 27 31.4 +1.5**
comp=Z,8.1nm,0.9s
PRU Pruhonice 17.09 327 *e***P P 20 27 33.5 +2.6**
PBCC Pribram 17.11 326 *e***P P 20 27 33.0 +1.8**
MOTA Moosalm 17.12 315 *e***P P 20 27 32.2 +0.8**
comp=Z,9.3nm,1.2s
FETA Feichten 17.16 314 *e***P P 20 27 33.7 +1.9**
comp=Z,17nm,1.3s
FUORN Ofenpass-Fuorn 17.23 312 P P 20 27 32.8 +0.1
RETA Reutte 17.39 315 *e***P P 20 27 35.1 +0.9**
comp=Z,2.9nm,0.6s
PVCC Panska Ves 17.48 328 *e***P P 20 27 35.6 +0.4**
DAVA Damuels 17.79 314 *e***P P 20 27 40.0 +1.2**
comp=Z,3.4nm,0.4s
SUW Suwalki 18.06 349 P P 20 27 42.3 +0.8
SUW IAmb IAmb 20 27 45.1
comp=Z,27nm,0.7s
NKC Novy Kostel 18.21 325 *e***P P 20 27 45.2 +1.9**
CLL Collm 18.72 328 *e*(P) **Pn 20 27 50.0 +0.7**
comp=Z,12nm,1.6s
CLL *e* 20 27 55.0
SENIN Lac Senin/Sane 18.94 308 P Pn 20 27 52.3 +0.2
SENIN IAmb IAmb 20 28 04.2
comp=Z,9.5nm,0.8s
RAYN Ar Rayn 19.27 127 P 20 27 55.3 +0.2
GEYT Alibeck 23.34 77 P P 20 28 38.1 -0.6
comp=Z,2.9nm,0.7s,baz=302,slow=8.6,SNR=3.7
GEYT Alibeck 23.34 77 P P 20 28 37.7 -0.9
GYA0B ALIBECK ARRAY 23.34 77 P P 20 28 37.3 -1.3
GYA0B IAmb IAmb 20 28 52.4
comp=Z,10nm,0.9s
TAM Tamanrasset 24.32 243 P P 20 28 47.2 -1.1
FINES FINESS Array B 25.13 357 P P 20 28 55.1 +0.1
comp=Z,9.4nm,0.5s,baz=159,slow=11,SNR=72
FINES PcP **PcP 20 32 29.0 +0.2**
comp=Z,1.4nm,0.9s,baz=249,slow=3.3,SNR=0.7
FIA1 FINESS Array S 25.14 357 P P 20 28 55.6 +0.5
AKTO Aktyubinsk 25.21 47 P P 20 28 55.7 -0.3
comp=Z,1.0nm,0.4s,baz=289,slow=9.9,SNR=5.0
KLMR Klimovskoe 25.41 12 *e* **P 20 28 56.4 -1.2**
KLMR AMP 20 29 02.7
comp=Z,26nm,1.4s
HFS Hagfors 25.68 342 P P 20 28 59.4 -0.8
comp=Z,2.8nm,0.6s,baz=145,slow=11,SNR=9.1
ESDC Sonseca Array 25.97 287 P P 20 29 02.4 -0.6
comp=Z,1.8nm,0.7s,baz=82,slow=8.9,SNR=17
ABKAR Akbulak array 25.98 51 P P 20 29 02.4 -0.4
ABKAR Akbulak array 25.98 51 P P 20 29 02.6 -0.3
UOSS Minazif 26.06 108 P P 20 29 04.7 +0.8
UOSS IAmb IAmb 20 29 18.9
comp=Z,19nm,1.5s
PAB San Pablo 26.28 287 P P 20 29 05.6 -0.3
NAO01 NORSAR Array S 27.01 341 P P 20 29 12.0 -0.2
NB2 NORSAR Subarra 27.09 341 P P 20 29 10.9 -2.0
comp=Z,0.5nm,0.6s,baz=148,slow=9.3
NOA NORSAR Array B 27.09 341 P P 20 29 11.3 -1.6
comp=Z,0.7nm,0.8s,baz=146,slow=9.6,SNR=2.5
ARU Arti 28.30 36 P P 20 29 24.3 +0.6
ARU IAmb IAmb 20 29 42.5
comp=Z,2.2nm,0.8s
EKA Eskdalemuir Ar 28.87 321 P P 20 29 26.7 -2.0
comp=Z,0.4nm,0.5s,baz=112,slow=9.9,SNR=4.5
EKA PcP **PcP 20 32 37.4 -0.4**
comp=Z,1.2nm,0.7s,baz=116,slow=2.5,SNR=4.1
KK31 Karatay Array 32.47 65 P P 20 30 00.6 -0.1
KK31 IAmb IAmb 20 30 15.4
comp=Z,3.0nm,1.3s
KKAR Karatay Array 32.47 65 P P 20 30 00.4 -0.3
ARCES ARCESS Array B 33.25 358 P P 20 30 06.6 -0.6
comp=Z,0.9nm,0.7s,baz=173,slow=7.3,SNR=5.7
TOA0 Torodi Ar. Sit 33.60 233 P P 20 30 10.9 0.0
TOA0 IAmb IAmb 20 30 14.4
comp=Z,6.1nm,0.7s
TORD Torodi Ar. Bea 33.60 233 P P 20 30 10.6 -0.2
comp=Z,6.0nm,0.7s,baz=38,slow=8.7,SNR=58
TORD PcP **PcP 20 32 51.1 0.0**
comp=Z,0.5nm,0.9s,baz=63,slow=1.5,SNR=2.2
TORD Torodi Ar. Bea 33.60 233 P P 20 30 10.7 -0.1
AAK Ala-Archa 35.42 66 P P 20 30 25.9 -0.7
KOWA Kowa 36.55 242 P P 20 30 36.4 +0.2
comp=Z,1.5nm,0.6s,baz=33,slow=14,SNR=4.9
KOWA Kowa 36.55 242 P P 20 30 36.4 +0.2
KOWA IAmb IAmb 20 30 48.8
comp=Z,2.0nm,0.7s
KURBB Kurchatov Arra 38.01 52 P P 20 30 48.1 -0.2
comp=Z,1.8nm,0.6s,baz=276,slow=8.8,SNR=9.2
KURK Kurchatov 38.07 52 P P 20 30 48.3 -0.4
KURK IAmb IAmb 20 30 58.6
comp=Z,3.0nm,0.9s
MAKZ Makanchi 40.37 58 P P 20 31 08.1 0.0
MK31 Makanchi Array 40.59 58 P P 20 31 10.1 +0.2
MK31 IAmb IAmb 20 31 11.0
comp=Z,2.1nm,0.7s
MKAR Makanchi Array 40.59 58 P P 20 31 10.1 +0.2
comp=Z,2.1nm,0.6s,baz=281,slow=8.2,SNR=24
MKAR Makanchi Array 40.59 58 P P 20 31 10.2 +0.3
ZAA0 Zalesovo Array 41.98 47 P P 20 31 20.4 -0.8
ZALV Zalesovo Beam 41.98 47 P P 20 31 20.0 -1.2
comp=Z,0.7nm,0.6s,baz=272,slow=8.8,SNR=3.7
ZALV Zalesovo Beam 41.98 47 P P 20 31 20.2 -0.9
SPITS Spitsbergen Ar 42.23 356 P P 20 31 21.6 -1.3
comp=Z,17nm,1.0s,baz=141,slow=11,SNR=5.9
DBIC Dimbokro 42.70 234 P P 20 31 26.9 -0.6
comp=Z,2.5nm,0.4s,baz=22,slow=7.3,SNR=9.2
DBIC Dimbokro 42.70 234 P P 20 31 26.8 -0.7
DBIC IAmb IAmb 20 31 41.2
comp=Z,18nm,1.5s
TIC Toumodi 42.83 235 *e*PKP2 **P 20 31 27.8 -0.7**
KIC Kosan Boka 42.86 234 *e*PKP2 **P 20 31 28.2 -0.6**
comp=Z,12nm,0.7s
LIC Lamto 43.15 234 *e*PKP2 **P 20 31 29.3 -1.8**
comp=Z,6.7nm,0.5s
PYUN Piuthan 46.02 84 *e***P P 20 31 56.3 +2.0**
DANN Dangsing 46.54 84 *e***P P 20 32 00.1 +1.7**
comp=Z,33nm,0.7s
KOLN Koldanda 46.65 84 *e***P P 20 32 01.7 +2.5**
GKN Gorkha 47.39 84 *e***P P 20 32 06.1 +1.2**
comp=Z,30nm,1.1s
DMN Daman 47.93 84 *e***P P 20 32 11.4 +2.2**
KKN Kakani 47.99 83 *e***P P 20 32 11.5 +1.8**
comp=Z,8.0nm,0.6s
PKIN Phulchoki 48.17 84 *e***P P 20 32 13.8 +2.7**
PKI Pulchoki 48.19 84 *e***P P 20 32 13.9 +2.6**
GUN Gumba 48.42 83 *e***P P 20 32 15.1 +2.0**
SONM Songino Array 56.37 52 P P 20 33 11.7 0.0
comp=Z,0.4nm,0.5s,baz=290,slow=6.9,SNR=3.8
SONM Songino Array 56.37 52 P P 20 33 11.6 0.0
CM31 Chiang Mai Arr 63.47 86 P P 20 33 59.9 -0.7
CMAR Chiang Mai Arr 63.47 86 P P 20 34 00.3 -0.3
comp=Z,0.5nm,0.6s,baz=300,slow=7.8,SNR=6.9
BOSA Boshof 64.75 183 P P 20 34 09.6 +0.8
GYA Guiyang 65.51 74 *e***P P** 20 34 24.1 +10
GYA pmax pmax
comp=Z,7.0nm,1.1s
USRK Ussuriysk Ar. 73.83 47 P P 20 35 04.3 -0.6
comp=Z,1.0nm,0.6s,baz=312,slow=4.6,SNR=3.2
USRK Ussuriysk Ar. 73.83 47 P P 20 35 04.7 -0.2
KSRS Korea Array 75.14 54 P P 20 35 10.9 -1.7
comp=Z,0.6nm,0.7s,baz=295,slow=4.8,SNR=3.4
BMAR Burnt Mountain 76.38 357 P P 20 35 19.8 +0.6
IMAR Indian Mountai 77.93 1 P P 20 35 28.6 +0.6
MDM Murphy Dome 78.95 359 P P 20 35 33.7 +0.1
MDM IAmb IAmb 20 35 35.8
comp=Z,7.8nm,1.4s
ILAR Eielson Array 79.11 358 P P 20 35 33.5 -1.0
comp=Z,0.3nm,0.7s,baz=323,slow=2.6,SNR=6.8
ILAR Eielson Array 79.11 358 P P 20 35 34.3 -0.1
DAWY Dawson 79.44 355 P P 20 35 36.6 +0.2
DAWY IAmb IAmb 20 35 53.7
comp=Z,11nm,1.5s
PPLA Purkeypile 81.05 0 P P 20 35 45.5 +0.4
SKT Skwentna 81.97 0 P P 20 35 49.0 -0.9
MJAR Matsushiro Arr 82.25 50 P P 20 35 52.4 +0.6
comp=Z,1.3nm,0.9s,baz=313,slow=3.3,SNR=3.0

*IDC **15** 20:28:57.1±1.0,1.86N×126.31E,h0km,mb3.8/5, mb1 3.8/6,mb1mx3.5/45,mbtmp3.7/6,ML3.3/1,Error ellipse: s-maj=61.6km s-min=18.4km az=75.0*
*DJA **15** 20:29:02.8±1.0,2.1N±2.7E±,h36km±20km,M3.6/9, MLv3.6/9*

ISC 15 20:29:03.2±0.8,1.86N±0.06×126.57E±0.07,h47km,n12, σ0.78/15,mb3.8/5,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**144**	P	**Pn**	**20 29 25.1**	**-0.4**
TNTI				S	**Sn**	**20 29 41.9**	**-0.3**
SGSI	**Sangihe**	**2.09**	**330**	P	**Pn**	**20 29 34.8**	**-1.0**
SGSI				S	**Sn**	**20 30 00.9**	**+0.3**
KMSI	**Cibinong**	**2.89**	**244**	P	**Pn**	**20 29 45.8**	**-1.0**
KMSI				S	**Sn**	**20 30 20.3**	**0.0**
GTOI	**Gorontalo**	**3.77**	**251**	P	**Pn**	**20 29 59.7**	**+0.9**
LUWI	**Luwuk**	**4.77**	**233**	P	**Pn**	**20 30 11.9**	**-0.7**
MRSI	**Marisa**	**4.83**	**254**	P	**Pn**	**20 30 13.1**	**-0.3**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=353,slow=8.8,SNR=2.2	**19.86**	**183**	P	**P**	**20 33 30.4**	**0.0**
WRA	**Warramunga Arr** 2.2nm,0.6s,baz=339,slow=11,SNR=16	**22.97**	**161**	P	**P**	**20 34 03.5**	**-0.3**
ASAR	**Alice Springs** 0.4nm,0.3s,baz=351,slow=15,SNR=14	**26.36**	**165**	P	**P**	**20 34 36.2**	**+1.1**
SONM	**Songino Array** 0.4nm,0.7s,baz=153,slow=9.7,SNR=2.0	**49.01**	**342**	P	**P**	**20 37 45.6**	**+0.2**
PETK	**Petropavlovsk-** 3.7nm,1.0s,baz=226,slow=7.7,SNR=2.1	**57.21**	**22**	P	**P**	**20 38 46.7**	**+1.2**
MKAR	**Makanchi Array** 0.7nm,0.5s,baz=122,slow=8.0,SNR=18	**59.00**	**326**	P	**P**	**20 38 57.3**	**-0.9**

MAN 15 20:34:22.6,13.21N×120.81E,h26km,mb4.0,ML2.8, MS2.4,1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.32**	**25**	*e*P	Pn	20 34 31.9	+0.2
PGP				*e*S	Sn	20 34 39.1	+1.5
LUBP	**Lubang**	**0.76**	**314**	*e*P	Pb	20 34 36.4	-0.8
LUBP				*e*S	Sn	20 34 49.4	+1.1
SJMP	**San Jose**	**0.80**	**158**	*e*P	Pb	20 34 38.0	0.0
SJMP				*e*S	Sn	20 34 50.0	+0.7

*IDC **15** 20:34:51.8±0.5,1.80N×126.24E,h0km,mb4.2/19, mb1 4.2/22,mb1mx4.1/45,mbtmp4.2/22,ML3.7/3,MS3.4/3, Ms1 3.4/3,ms1mx2.7/30,Error ellipse: s-maj=24.5km s-min=11.8km az=77.0*
*DJA **15** 20:34:56.8±0.2,2.1N±2.1E±,h10km,M4.4/15, mb4.6/14,mB4.9/4,MLv4.4/15,Mw(mB)4.2/4*
*NEIC **15** 20:34:57.0±1.6,1.83N±0.05×126.37E±0.07,h44km±5km, mb4.4/38,Error ellipse: s-maj=11.2km s-min=6.1km az=63.0*
*KLM **15** 20:34:58.0,1.92N×126.56E,h57km,mb4.4*

ISC 15 20:34:57.9±0.4,1.80N±0.04×126.36E±0.06,h47km,n114, σ1.46/120,mb4.3/MS3.3/3,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**135**	P	**Pn**	**20 35 21.4**	**-0.1**
TNTI	**Ternate**	**1.43**	**135**	Pn	**Pn**	**20 35 20.9**	**-0.6**
TNTI				Sn	**Sn**	**20 35 38.9**	**-0.3**
SGSI	**Sangihe**	**2.05**	**336**	P	**Pn**	**20 35 31.0**	**+1.0**
SGSI				S	**Sn**	**20 35 58.1**	**+3.8**
KMSI	**Cibinong**	**2.67**	**243**	P	**Pn**	**20 35 39.6**	**+1.2**
GTOI	**Gorontalo**	**3.54**	**251**	P	**Pn**	**20 35 53.3**	**+2.9**
DDMP	**Don Marcelino,**	**4.33**	**351**	*e*P	**Pn**	**20 36 03.0**	**+1.7**
DDMP				*e*S	**Sn**	**20 36 48.9**	**-1.5**
LUWI	**Luwuk**	**4.56**	**232**	P	**Pn**	**20 36 06.7**	**+2.3**
LUWI	**Luwuk**	**4.56**	**232**	Pn	**Pn**	**20 36 05.3**	**+0.9**
MRSI	**Marisa**	**4.61**	**254**	P	**Pn**	**20 36 07.5**	**+2.5**
SKMP	**Bagumbayan, Su**	**5.03**	**339**	*e*S	**Sn**	**20 37 04.3**	**-3.4**
SKMP	**Bagumbayan, Su**	**5.03**	**339**	*e*P	**Pn**	**20 36 12.2**	**+1.4**
NLAI	**Namlea** 0.2nm2μm21nm,0.6s	**5.06**	**172**	P	**Pn**	**20 36 13.3**	**+2.1**
MATI	**Mati**	**5.12**	**359**	*e*S	**Sn**	**20 37 11.7**	**+1.8**
MATI	**Mati**	**5.12**	**359**	*e*P	**Pn**	**20 36 16.4**	**+4.3**
DAV	**Davao City (W)**	**5.30**	**352**	Pn	**Pn**	**20 36 12.9**	**-1.7**
KCP	**Kidapawan**	**5.33**	**346**	*i*P	**Pn**	**20 36 17.5**	**+2.5**
KCP				*i* S	**Sn**	**20 37 20.4**	**+5.1**
APSI	**Ampana** 0.7nm2μm144nm,0.9s	**5.42**	**240**	P	**Pn**	**20 36 19.0**	**+2.8**
SIJI	**Sorong** 0.4nm,0.3s,baz=251,slow=22,SNR=2.5	**5.58**	**118**	Pn	**Pn**	**20 36 18.2**	**-0.2**
BUKP	**Musuan**	**6.18**	**348**	*e*P	**Pn**	**20 36 30.2**	**+3.5**
BUKP				*e*S	**Sn**	**20 37 35.5**	**-0.6**
MPSI	**Mapaga** 0.1nm26nm,0.8s	**6.62**	**257**	P	**Pn**	**20 36 35.5**	**+2.8**
PAGZ	**Pagadian**	**6.70**	**334**	*e*P	**Pn**	**20 36 34.3**	**+0.5**
PAGZ				*e*S	**Sn**	**20 37 44.8**	**-4.1**
FAKI	**Fak Fak**	**7.53**	**128**	P	Pn	20 36 59.7	+15
FAKI	**Fak Fak**	**7.53**	**128**	Pn	**Pn**	**20 36 44.6**	**-0.5**
TTSI	**Tana Toraja** 36nm,0.8s	**8.11**	**234**	P	**Pn**	**20 36 54.8**	**+1.6**
MYLDM	**Lahad Datu**	**8.53**	**293**	Pn	**Pn**	**20 36 58.8**	**-0.1**
SPSI	**Sidrap Palu** 23nm,0.7s	**8.72**	**229**	P	**Pn**	**20 37 03.6**	**+2.1**
BNSI	**Bone** 545nm31nm,0.8s	**8.77**	**225**	P	**Pn**	**20 37 03.5**	**+1.3**
BKSI	**Bulukumba** 23nm,0.8s	**9.42**	**221**	P	**Pn**	**20 37 12.1**	**+1.0**
KAPI	**Kappang** 1.3nm,0.3s,baz=175,slow=20,SNR=3.3	**9.45**	**224**	Pn	**Pn**	**20 37 09.9**	**-1.6**
KAPI	**Kappang**	**9.45**	**224**	Pn	**Pn**	**20 37 11.5**	**0.0**
BSSI	**Bau Bau, Buton** 22nm,0.6s	**9.82**	**217**	P	**Pn**	**20 37 17.9**	**+1.3**
EDFI	**Ende, Flores** 6.6nm,0.8s	**11.46**	**204**	P	**Pn**	**20 37 41.3**	**+2.1**
SOEI	**Soe**	**11.66**	**190**	P	**Pn**	**20 37 44.5**	**+2.6**
SOEI	**Soe**	**11.66**	**190**		**Pn**	**20 37 40.9**	**-1.0**
SBUM	**Sibu**	**14.14**	**273**		**Pn**	**20 38 15.8**	**+0.1**
MTN	**Manton Dam**	**15.30**	**162**	Pn	**Pn**	**20 38 29.8**	**-1.1**
KSM	**Kuching**	**16.05**	**269**	P	**P**	**20 38 43.0**	**-0.2**
KNRA	**Kununurra**	**17.52**	**172**		**Pn**	**20 38 58.7**	**-0.3**
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=24,slow=15,SNR=8.5	**19.78**	**182**	P	**P**	**20 39 23.6**	**-0.8**
FITZ	**Fitzroy Crossi**	**19.78**	**182**	LR	LR	**20 39 23.6**	**-0.8**
LEM	**Lembang** comp=Z,144nm,21.0s,baz=62,slow=36	**20.57**	**245**	LR	LR	20 47 01.1	
TWG	**Pinlang** comp=Z,24nm,0.9s	**21.52**	**347**	P	**P**	**20 39 41.7**	**-1.3**
TWG				IAmb	IAmb	20 39 57.3	
WB0	**Warramunga Arr** comp=Z,11nm,0.9s	**22.84**	**160**	P	**P**	**20 39 56.5**	**-0.7**
WB0				IAmb	IAmb	20 40 03.9	
WRA	**Warramunga Arr** comp=Z,5.5nm,0.6s,baz=336,slow=9.4,SNR=34	**22.98**	**160**	P	**P**	**20 39 57.9**	**-0.7**
WRA				PcP	**PcP**	**20 43 49.4**	**+1.9**
	comp=Z,0.3nm,0.6s,baz=338,slow=1.9,SNR=1.9						
WRA				S	**S**	**20 44 06.1**	**+0.3**
WRA	**Warramunga Arr** comp=Z,0.9nm,0.8s,baz=348,slow=22,SNR=6.3	**22.98**	**160**	P	**P**	**20 39 57.7**	**-1.0**
WB2	**Warramunga Arr**	**22.98**	**160**	P	**P**	**20 39 57.7**	**-1.0**
WB2	comp=Z,10.0nm,0.7s			IAmb	IAmb	20 40 08.6	
WR0	**Warramunga Arr**	**23.06**	**160**	P	**P**	**20 39 58.8**	**-0.7**
PMG	**Port Moresby** comp=Z,63nm,18.9s,baz=276,slow=42	**23.52**	**119**	LR	LR	20 51 25.0	
PSA00	**Pilbara Seismi**	**24.08**	**195**	P	**P**	**20 40 08.6**	**-0.5**
PSA00	comp=Z,9.1nm,0.9s			IAmb	IAmb	20 40 11.6	
AS31	**Alice Springs**	**26.35**	**164**	P	**P**	**20 40 29.6**	**-0.2**
ASAR	**Alice Springs** comp=Z,2.8nm,0.5s,baz=347,slow=7.9,SNR=53	**26.35**	**164**	P	**P**	**20 40 30.3**	**+0.5**
ASAR				PcP	**PcP**	**20 43 55.9**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=12,slow=2.5,SNR=2.9						
ASAR	**Alice Springs**	**26.35**	**164**	P	**P**	**20 40 29.3**	**-0.5**
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.8s,baz=117,slow=6.5,SNR=5.2	**31.57**	**303**	P	**P**	**20 41 15.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**31.57**	**303**	P	**P**	**20 41 15.6**	**-0.7**
MORW	**Morawa**	**32.24**	**197**	P	**P**	**20 41 19.7**	**-2.3**
MORW	comp=Z,12nm,1.1s			IAmb	IAmb	20 41 23.3	
ENH	**Enshi**	**32.53**	**332**	P	**P**	**20 41 23.3**	**-1.3**
KSRS	**Korea Array** comp=Z,0.3nm,0.4s,baz=176,slow=9.8,SNR=2.3	**35.51**	**2**	P	**P**	**20 41 49.5**	**-0.7**
NWAO	**Narrogin (SRO)**	**35.60**	**193**	P	**P**	**20 41 51.4**	**+0.3**
BBOO	**Buckleboo**	**35.62**	**166**	P	**P**	**20 41 51.5**	**+0.3**
XAN	**Xi'an**	**35.98**	**335**	P	**P**	**20 41 54.1**	**-0.3**
XAN				pP	pP	20 42 05.3	-1.2
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MJAR	**Matsushiro Arr** comp=Z,0.8nm,0.7s,baz=192,slow=9.6,SNR=2.9	**36.27**	**16**	P	**P**	**20 41 55.8**	**-1.0**
MJAR	**Matsushiro Arr**	**36.27**	**16**	P	**P**	**20 41 56.0**	**-0.8**
STKA	**Stephens Creek** comp=Z,2.6nm,0.7s,baz=321,slow=6.9,SNR=6.0	**36.48**	**158**	P	**P**	**20 41 58.5**	**-0.1**
STKA	**Stephens Creek**	**36.48**	**158**	P	**P**	**20 41 58.4**	**-0.3**
JMM	**Marumori**	**38.27**	**19**	P	**P**	**20 42 13.3**	**-0.4**
SHL	**Shillong**	**40.75**	**308**	P	**P**	**20 42 33.9**	**-0.9**
SHL	comp=Z,4.9nm,0.7s			IAmb	IAmb	20 42 37.9	
USRK	**Ussuriysk Ar.** comp=Z,1.3nm,0.6s,baz=193,slow=7.4,SNR=2.2	**42.52**	**6**	P	**P**	**20 42 49.8**	**+1.1**
LSA	**Lhasa**	**43.45**	**313**	P	**P**	**20 42 57.8**	**+0.6**
LSA	comp=Z,10.0nm,1.7s			pmax	pmax		
LSA	**Lhasa**	**43.45**	**313**	P	**P**	**20 42 56.8**	**-0.3**
LSA	comp=Z,3.7nm,0.7s			IAmb	IAmb	20 43 02.8	
GTA	**Gaotai**	**44.57**	**330**	*e*P	**P**	**20 43 05.8**	**+0.3**
GTA				pP	pP	20 43 16.8	-1.1
GTA				sP	sP	20 43 21.8	-1.4
GTA	comp=Z,4.0nm,1.2s			pmax	pmax		
ODAN	**Odare**	**44.91**	**307**	*e*P	**P**	**20 43 08.4**	**-0.2**
RAMN	**Ramite**	**45.58**	**307**	*e*P	**P**	**20 43 13.4**	**-0.5**
GUN	**Gumba** comp=Z,21nm,0.9s	**46.58**	**308**	*e*P	**P**	**20 43 21.1**	**-0.8**
PKIN	**Phulchoki**	**46.81**	**307**	*e*P	**P**	**20 43 22.4**	**-1.2**
KKN	**Kakani**	**47.00**	**307**	*e*P	**P**	**20 43 24.9**	**-0.1**
KLR	**Kul'dur** comp=Z,1.5nm,0.5s,baz=186,slow=6.6,SNR=6.8	**47.48**	**5**	P	**P**	**20 43 29.1**	**+1.0**
GKN	**Gorkha** comp=Z,9.0nm,0.9s	**47.61**	**307**	*e*P	**P**	**20 43 28.8**	**-0.9**
KOLN	**Koldanda** comp=Z,17nm,0.8s	**48.34**	**306**	*e*P	**P**	**20 43 35.5**	**+0.1**
DANN	**Dangsing** comp=Z,14nm,0.7s	**48.45**	**307**	*e*P	**P**	**20 43 36.1**	**-0.3**
ULN	**Ulaanbaatar**	**48.84**	**343**	P	**P**	**20 43 38.2**	**-0.6**
ULN	comp=Z,5.2nm,1.1s			IAmb	IAmb	20 43 42.7	
PYUN	**Piuthan** comp=Z,28nm,0.9s	**48.97**	**306**	*e*P	**P**	**20 43 39.8**	**-0.4**
SONM	**Songino Array** comp=Z,3.2nm,1.1s,baz=154,slow=7.6,SNR=12	**49.01**	**342**	P	**P**	**20 43 40.3**	**+0.2**
SONM	**Songino Array**	**49.01**	**342**	P	**P**	**20 43 40.0**	**-0.1**
PETK	**Petropavlovsk-** comp=Z,5.2nm,1.1s,baz=209,slow=3.3,SNR=4.5	**57.35**	**22**	P	**P**	**20 44 42.5**	**+1.3**
PETK	**Petropavlovsk-**	**57.35**	**22**	P	**P**	**20 44 41.8**	**+0.6**
MK31	**Makanchi Array**	**58.93**	**326**	P	**P**	**20 44 51.8**	**-0.6**
MK31	comp=Z,4.2nm,0.8s			IAmb	IAmb	20 44 56.9	
MKAR	**Makanchi Array** comp=Z,5.7nm,0.8s,baz=122,slow=7.3,SNR=49	**58.93**	**326**	P	**P**	**20 44 52.2**	**-0.2**
MKAR				LR	LR	21 12 25.0	
	comp=Z,25nm,18.0s,baz=101,slow=38						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**20 44 51.7**	**-0.7**
MAKZ	**Makanchi**	**59.11**	**326**	P	**P**	**20 44 53.2**	**-0.5**
YAK	**Yakutsk** comp=Z,2.7nm,0.3s,baz=100,slow=1.7,SNR=2.4	**60.14**	**2**	P	**P**	**20 45 01.0**	**+0.6**
ZAA0	**Zalesovo Array**	**62.14**	**334**	P	**P**	**20 45 13.0**	**-1.1**
ZAA0	comp=Z,2.3nm,0.9s			IAmb	IAmb	20 45 19.0	
ZALV	**Zalesovo Beam** comp=Z,2.1nm,0.9s,baz=118,slow=9.2,SNR=7.2	**62.14**	**334**	P	**P**	**20 45 12.8**	**-1.2**
ZALV	**Zalesovo Beam**	**62.14**	**334**	P	**P**	**20 45 12.5**	**-1.5**
KBL	**Kabul**	**62.41**	**308**	P	**P**	**20 45 15.4**	**-1.2**
KBL	comp=Z,4.6nm,1.1s			IAmb	IAmb	20 45 19.8	
GAR	**Garm**	**62.96**	**313**	P	**P**	**20 45 19.8**	**-0.3**
BTK	**Batken**	**63.00**	**315**	P	**P**	**20 45 18.4**	**-1.8**
BTK	comp=Z,3.0nm,0.9s			IAmb	IAmb	20 45 25.4	
KURK	**Kurchatov**	**63.17**	**328**	P	**P**	**20 45 20.5**	**-0.5**
KK31	**Karatay Array**	**64.39**	**318**	P	**P**	**20 45 27.9**	**-1.4**
KK31	comp=Z,4.3nm,1.2s			IAmb	IAmb	20 45 34.0	
KKAR	**Karatay Array** comp=Z,4.3nm,1.2s	**64.39**	**318**	P	**P**	**20 45 27.6**	**-1.7**
KKAR				IAmb	IAmb	20 45 34.0	
KKAR	**Karatay Array**	**64.39**	**318**	P	**P**	**20 45 28.0**	**-1.2**
BRVK	**Borovoye**	**68.81**	**328**	P	**P**	**20 45 56.1**	**-1.1**
BRVK	comp=Z,2.8nm,0.8s			IAmb	IAmb	20 46 03.7	
TIXI	**Tiksi**	**69.77**	**1**	P	**P**	**20 46 02.6**	**-0.1**
TIXI	comp=Z,4.6nm,1.1s			IAmb	IAmb	20 46 08.5	
GEYT	**Alibeck** comp=Z,1.8nm,0.7s,baz=123,slow=5.3,SNR=2.7	**71.81**	**309**	P	**P**	**20 46 16.3**	**+0.3**
NRIK	**Noril'sk** comp=Z,3.6nm,0.6s,baz=138,slow=6.5,SNR=9.0	**72.21**	**346**	P	**P**	**20 46 18.4**	**+0.8**
ABKAR	**Akbulak array**	**73.41**	**321**	P	**P**	**20 46 23.9**	**-1.3**
ABKAR	**Akbulak array**	**73.41**	**321**	P	**P**	**20 46 23.9**	**-1.3**
ARU	**Arti**	**76.36**	**328**	P	**P**	**20 46 41.4**	**-0.7**
ARU	comp=Z,4.6nm,0.9s			IAmb	IAmb	20 46 44.7	
OPO	**Ambohidratompo** comp=Z,2.9nm,0.8s,baz=47,slow=6.1,SNR=2.8	**80.31**	**251**	P	**P**	**20 47 05.3**	**+0.5**
RAYN	**Ar Rayn**	**80.90**	**293**	P	**P**	**20 47 07.2**	**-0.6**
RAYN	comp=Z,2.8nm,0.9s			IAmb	IAmb	20 47 12.7	
VNDA	**Vanda** comp=Z,1.0nm,0.9s,baz=314,slow=6.0,SNR=8.5	**81.57**	**173**	P	**P**	**20 47 11.1**	**+0.9**
VNDA	**Vanda**	**81.57**	**173**	P	**P**	**20 47 11.1**	**+0.9**
BRTR	**Keskin Array B** comp=Z,0.5nm,0.8s,baz=108,slow=4.7,SNR=3.8	**90.96**	**310**	P	**P**	**20 47 57.1**	**-0.2**
FINES	**FINESS Array B** comp=Z,2.3nm,0.9s,baz=96,slow=8.5,SNR=2.0	**93.35**	**332**	P	**P**	**20 48 07.8**	**+0.1**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.8s,baz=63,slow=2.2,SNR=3.8	**123.14**	**287**	PKP	**PKiKP**	**20 53 51.5**	**+0.8**

IDC 15 20:36:59.0±2.9,26.67S×71.49E,h0km,mb3.5/6, mb1 3.7/6,mb1mx3.4/40,mbtmp3.5/6,MS3.3/1,Ms1 3.2/1, ms1mx2.6/23,Error ellipse: s-maj=87.1km s-min=33.5km az=41.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H** baz=182	**18.94**	**3**	T	T	21 00 31.7	
H08S2	**Diego Garcia H** baz=182,slow=74	**18.95**	**3**	T	T	21 00 36.7	
H08S3	**Diego Garcia H** baz=182,slow=74	**18.96**	**3**	T	T	21 00 38.6	
BOSA	**Boshof** comp=Z,39nm,19.2s,baz=106,slow=30	**40.81**	**256**	LR	LR	20 57 29.2	
CMAR	**Chiang Mai Arr** 0.8nm,0.9s,baz=216,slow=6.9,SNR=6.6	**52.18**	**34**	P	P	20 46 11.6	-0.1
ASAR	**Alice Springs** 0.1nm,0.3s,baz=249,slow=6.8,SNR=2.3	**56.07**	**102**	P	P	20 46 40.5	+0.2
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=249,slow=7.1,SNR=3.7	**57.62**	**98**	P	P	20 46 50.9	-0.4
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=199,slow=7.6,SNR=1.6	**73.77**	**8**	P	P	20 48 34.6	-0.3
BRTR	**Keskin Array B** 0.4nm,0.7s,baz=146,slow=6.4,SNR=2.0	**74.89**	**331**	P	P	20 48 41.7	0.0
ZALV	**Zalesovo Beam** 0.2nm,0.3s,baz=190,slow=7.3,SNR=2.5	**81.11**	**8**	P	P	20 49 16.3	+0.5

TAP 15 20:39:30.2,22.46N×120.85E,h13km±1km,ML1.1,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EAST	**Anshuo** baz=172	**0.07**	**183**	*e*S	Sg	20 39 35.4	+0.4
ECL	**Taimali** baz=31	**0.17**	**34**	*i* P	Pg	20 39 34.7	+0.5
ECL	baz=31			S	Sg	20 39 36.9	-0.1
SCZT	**Fangliau** baz=247	**0.23**	**249**	P	Pg	20 39 35.4	+0.2
SCZT	baz=247			S	Sg	20 39 39.3	+0.7
SLIU	**Shizi** baz=190	**0.24**	**192**	*e*P	Pb	20 39 37.3	+0.8
SLIU	baz=190			S	Sb	20 39 40.7	0.0
MASBT	**Mashibuluo** baz=314	**0.26**	**307**	P	Pg	20 39 35.2	-0.5
MASBT	baz=314			*e*S	Sg	20 39 38.0	-1.3
TSMG	**Majia** baz=328	**0.31**	**322**	*e*P	Pg	20 39 37.0	+0.3
TSMG				*e*S	Sg	20 39 41.8	+0.8
SSD	**Sandimen** baz=335	**0.35**	**325**	*e*P	Pb	20 39 38.6	+0.2
SSD	baz=335			*e*S	Sb	20 39 43.9	0.0
SLGT	**Liugui** baz=347	**0.57**	**340**	*e*P	Pb	20 39 42.5	+0.5
SLGT	baz=347			*e*S	Sb	20 39 49.9	-0.1
CHN1	**Nanshi** baz=341	**0.79**	**338**	*e*S	Sn	20 39 59.1	+0.5
TPUB	**Ta-pu** baz=346	**0.86**	**346**	*e*P	Pn	20 39 48.2	+0.1
TPUB	**Ta-pu**	**0.86**	**346**	P	Pn	20 39 48.0	-0.1
TWK	**Hsinying** baz=344	**0.87**	**337**	*e*P	Pn	20 39 48.4	+0.1

IDC 15 20:47:10.4±2.1,1.94N×126.66E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.3/28,mbtmp3.5/3,Error ellipse: s-maj=178.7km s-min=25.1km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=340,slow=11,SNR=13	**23.01**	**161**	P	P	20 52 16.9	-0.4
ASAR	**Alice Springs** 0.2nm,0.3s,baz=345,slow=11,SNR=12	**26.41**	**165**	P	P	20 52 49.4	+0.4
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=119,slow=7.6,SNR=6.1	**58.98**	**326**	P	P	20 57 11.8	-0.2

*TEH **15** 20:48:07.4,32.76N×47.60E,h10km,ML2.9*
*ISN **15** 20:48:09.8±1.2,32.91N×47.64E,h36km,ML2.7*

ISC 15 20:48:08.4±1.0,32.79N±0.05×47.58E±0.05,h10km,n15, σ0.96/19,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.77**	**17**	*e*Pg	**Pg**	**20 48 21.6**	**-1.7**
IKFM				*e*		20 48 39.6	
IKMR	**Kamar-syah**	**0.99**	**42**	*e*Pg	**Pg**	**20 48 26.1**	**-1.4**
IKMR				*e*		20 48 29.9	
IDOB	**Doab**	**1.11**	**26**	*e*Pg	**Pg**	**20 48 29.1**	**-0.8**
IDOB				*e*		20 48 32.5	
IDOB				*e*Sg	**Sn**	**20 48 46.2**	**+0.4**
BMDN	**Meydan**	**1.36**	**49**	*e*Pn	**Pg**	**20 48 34.1**	**-0.5**
BMDN				*e*		20 48 37.1	
IKOM	**Komasi**	**1.38**	**357**	*e*Pn	**Pn**	**20 48 34.0**	**0.0**
IKOM				*e*		20 48 59.4	
IBDR	**Badra**	**1.43**	**283**	*e*Pn	**Pn**	**20 48 35.0**	**+0.6**
IBDR				*e*Sn	**Sn**	**20 48 54.0**	**+0.8**
IBDR	comp=N,124nm,0.6s			AML	AML	20 48 57.3	
IBDR	comp=E,108nm,0.6s			AML	AML	20 49 04.2	
KCHF	**Cheshme Sefid,**	**1.55**	**343**	*e*Pn	**Pn**	**20 48 36.0**	**-0.3**
KCHF				*e*		20 49 01.1	
KER	**Kermanshah**	**1.64**	**347**	*e*Pn	**Pb**	**20 48 38.8**	**0.0**
KER				*e*		20 49 06.7	
IBZA	**Bozab**	**1.69**	**8**	*e*Pn	**Pb**	**20 48 39.8**	**-0.1**
IBZA				*e*		20 48 42.5	
IVIS	**Veis**	**1.84**	**341**	*e*Pn	**Pb**	**20 48 42.2**	**0.0**
IVIS				*e*		20 49 15.0	
IDHR	**Dehrash**	**2.15**	**333**	*e*Pn	**Pn**	**20 48 45.4**	**+1.0**
IDHR				*e*		20 49 19.7	
NSR	**Nassriya**	**2.16**	**215**	*e*Pn	**Pb**	**20 48 47.0**	**-0.6**
NSR				*e*Sn	**Sn**	**20 49 12.0**	**+0.8**
BHD	**Baghdad**	**2.73**	**281**	*e*Pn	**Pn**	**20 48 53.0**	**+0.6**
BHD				*e*Sn	**Sn**	**20 49 26.0**	**+0.5**
IPIR	**Pirpir**	**2.79**	**91**	*e*Pn	**Pn**	**20 48 53.7**	**+0.2**
IPIR				*e*		20 49 32.0	
IRAZ	**Razeghan**	**3.25**	**36**	*e*Pn	**Pn**	**20 49 02.1**	**+2.3**
IRAZ				*e*		20 50 08.5	

*VAO **15** 21:16:13.9±0.6,21.65S×68.85W,h133km±5km,mb4.1*
*GUC **15** 21:16:15.9±0.7,21.68S×68.58W,h104km±4km,ML3.8*

ISC 15 21:16:14.8±0.8,21.63S±0.03×68.58W±0.07,h108km±9km, n36,σ1.38/55,12C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.63**	**254**	*i*P	**Pn**	**21 16 33.2**	**+0.6**
PB09				*i* S	**Sn**	**21 16 46.7**	**+0.7**
PB09	comp=E,1μm,0.5s			IAML		21 16 50.3	
PB01	**IPOC Station P**	**1.02**	**304**	*i* P	**Pn**	**21 16 36.6**	**+0.4**
PB01				*i* S	**Sn**	**21 16 52.5**	**+0.2**
PB01	comp=N,2μm,0.5s			IAML		21 16 54.2	
LVC	**Limon Verde**	**1.02**	**197**	*e*P	**Pn**	**21 16 36.8**	**+0.3**
LVC				*e*S	**Sn**	**21 16 52.9**	**+0.1**
LVC	**Limon Verde**	**1.02**	**197**	*e*P	**Pn**	**21 16 36.7**	**+0.1**
PB03	**IPOC Station P**	**1.16**	**249**	*i*P	**Pn**	**21 16 38.0**	**+0.2**
PB03				*i* S	**Sn**	**21 16 54.9**	**-0.2**
PB03	comp=E,1μm,0.3s			IAML		21 16 55.7	
PB07	**IPOC Station P**	**1.22**	**265**	*i*P	**Pn**	**21 16 38.5**	**+0.1**
PB07				*i* S	**Sn**	**21 16 56.7**	**+0.5**
PB07	comp=E,1μm,0.2s			IAML		21 16 57.4	
PB02	**IPOC Station P**	**1.26**	**284**	*i*P	**Pn**	**21 16 39.0**	**+0.1**
PB02				*i* S	**Sn**	**21 16 57.2**	**+0.3**
PB02	comp=E,2μm,0.3s			IAML		21 17 06.4	
PB06	**IPOC Station P**	**1.41**	**220**	*i*P	**Pn**	**21 16 40.9**	**+0.3**
PB06				*i* S	**Sn**	**21 17 00.2**	**0.0**
PB06	comp=E,1μm,0.3s			IAML		21 17 01.6	
PB08	**IPOC Station P**	**1.57**	**340**	*i*P	**Pn**	**21 16 44.6**	**+1.8**
PB08				*i* S	**Sn**	**21 17 06.2**	**+2.3**
PB08	comp=E,694nm,0.4s			IAML		21 17

SAML	**Samuel**	**13.64**	**23**	*eP*		**Pn**	**21 19 22.4**	**-1.4**
CLDB	**Colider**	**16.27**	**51**	*eP*		**P**	**21 19 58.5**	**+0.3**
SNDB	**Serra Nova Dou**	**19.12**	**63**	*eP*		**P**	**21 20 28.3**	**-1.2**
NPGB	**Novo Progresso**	**19.32**	**43**	*eP*		**P**	**21 20 29.8**	**-1.9**
IPMB	**Ipameri, GO**	**19.51**	**83**	*eP*		**Pn**	**21 20 34.6**	**-1.4**
MACA	**Manacapuru-AM**	**19.90**	**24**	*eP*		**P**	**21 20 37.7**	**-0.2**
VAO	**Valinhos**	**20.05**	**98**	*eP*		**P**	**21 20 38.3**	**-1.3**
ITTB	**Itaituba**	**21.21**	**38**	*eP*		**P**	**21 20 50.7**	**-1.4**
PRPB	**Parauapebas**	**23.79**	**52**	*eP*		**P**	**21 21 16.4**	**-1.4**
JANB	**Januaria**	**23.93**	**78**	*eP*		**P**	**21 21 18.3**	**-0.8**
SNAA	**Sanae**	**62.06**	**161**	P		**P**	**21 26 24.1**	**+0.4**

IDC ***15*** *21:17:11.9±1.4, 10°58S×124°04E, h0km, mb3.7/2, mb1 3.7/4, mb1mx3.4/27, mbtmp3.5/4, ML3.2/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/28, Error ellipse: s-maj=57.6km s-min=10.3km az=49.0*

ISC 15 21:17:14.6±1.1, 10°5.5S±0°1×124°0.0E±0°2, h27km, n7, σ1§72/8, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.45**	**317**	Pg		**Pb**	**21 17 22.8**	**-1.4**
	baz=124,slow=3.3							
BATI				Lg		Lg	21 17 28.8	
BATI				LR		LR	21 17 35.3	
	comp=Z,46nm,19.8s,baz=52,slow=45							
FITZ	**Fitzroy Crossi**	**7.69**	**168**	Pn		**Pn**	**21 19 04.9**	**+0.1**
	baz=4.5,slow=11							
FITZ				Sn		**Sn**	**21 20 31.2**	**+0.2**
	0.7nm,0.3s,baz=215,slow=8.4,SNR=8.2							
WRA	**Warramunga Arr**	**13.68**	**134**	Pn		**Pn**	**21 20 28.2**	**+1.3**
	0.1nm,0.3s,baz=308,slow=14,SNR=2.0							
WRA				Sn		**Sn**	**21 22 55.5**	**-2.6**
	0.1nm,0.3s,baz=310,slow=25,SNR=4.7							
ASAR	**Alice Springs**	**16.12**	**145**	Pn		**Pn**	**21 21 00.2**	**+0.7**
	0.2nm,0.3s,baz=317,slow=12,SNR=23							
GUMO	**Guam**	**31.69**	**41**	LR		LR	21 37 39.2	
	comp=Z,31nm,19.7s,baz=90,slow=39							
MKAR	**Makanchi Array**	**68.13**	**331**	P		**P**	**21 28 14.1**	**+1.8**
	0.6nm,0.7s,baz=138,slow=7.3,SNR=6.9							
ZALV	**Zalesovo Beam**	**72.30**	**337**	P		**P**	**21 28 37.9**	**+0.4**
	0.4nm,0.5s,baz=139,slow=9.5,SNR=1.6							

IDC ***15*** *21:22:14.9±0.5, 8°11S×120°71E, h0km, mb4.3/13, mb1 4.4/17, mb1mx4.2/37, mbtmp4.3/17, ML4.1/4, MS3.1/3, Ms1 3.1/3, ms1mx2.6/33, Error ellipse: s-maj=28.7km s-min=11.7km az=69.0*

DJA ***15*** *21:22:18.0±0.2, 8°S±2°×12°1E±°, h10km, M4.5/19, mB4.8/1, mb4.6/4, MLv4.4/19, Mw(mB)4.0/1*

NEIC ***15*** *21:22:18.6±1.4, 8°.09S±0°.07×120°.75E±0°.06, h23km±4km, mb4.5/42, Error ellipse: s-maj=10.8km s-min=6.8km az=217.0*

ISC 15 21:22:16.6±0.3, 8°11S±0°03×120°79E±0°04, h10km, n115, σ1§02/123, mb4.4/32, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**1.09**	**126**	P		**Pn**	**21 22 39.1**	**+1.0**
EDFI				S		**Sn**	**21 22 55.0**	**+1.6**
MMRI	**Maumere**	**1.52**	**110**	P		**Pb**	**21 22 44.8**	**-0.2**
MMRI				S		**Sg**	**21 23 06.4**	**+0.8**
MMRI	**Maumere**	**1.52**	**110**			**Pb**	**21 22 44.7**	**-0.2**
MMRI				Sn		**Sg**	**21 23 06.0**	**+0.4**
WSI	**Waingapu**	**1.63**	**197**	P		**Pb**	**21 22 46.5**	**-0.3**
BSSI	**Bau Bau, Buton**	**1.97**	**351**	P		**Pn**	**21 22 48.8**	**-1.3**
WBSI	**Waikabubak, Su**	**2.06**	**222**	P		**Pn**	**21 22 52.6**	**+1.2**
WBSI				S		**Sb**	**21 23 20.5**	**+0.6**
BASI	**Baing, Sumba**	**2.11**	**186**	P		**Pn**	**21 22 53.2**	**+1.2**
BKSI	**Bulukumba**	**2.85**	**346**	P		**Pn**	**21 23 01.9**	**-0.2**
PLAI	**Plampang**	**3.07**	**256**	P		**Pn**	**21 23 05.6**	**+0.4**
PLAI				S		**Sn**	**21 23 45.1**	**+3.1**
KAPI	**Kappang**	**3.24**	**341**	Pn		**Pn**	**21 23 08.3**	**+0.8**
	19nm,0.3s,baz=178,slow=9.1,SNR=136							
KAPI				Sn		**Sn**	**21 23 48.6**	**+2.4**
	11nm,0.3s,baz=167,slow=18,SNR=2.0							
KAPI	**Kappang**	**3.24**	**341**			**Pn**	**21 23 07.7**	**+0.1**
BATI	**Baumata**	**3.52**	**127**	Pn		**Pb**	**21 23 16.5**	**-2.6**
	14nm,0.3s,baz=128,slow=0.4,SNR=26							
BATI	**Baumata**	**3.52**	**127**	P		**Pn**	**21 23 13.9**	**+2.5**
BNSI	**Bone**	**3.75**	**349**	P		**Pn**	**21 23 15.1**	**+0.6**
SOEI	**Soe**	**3.80**	**116**	P		**Pn**	**21 23 19.5**	**+4.1**
SOEI	**Soe**	**3.80**	**116**			**Pn**	**21 23 17.1**	**+1.7**
TWSI	**Taliwang, Sumb**	**3.92**	**261**	P		**Pn**	**21 23 16.9**	**0.0**
SPSI	**Sidrap Palu**	**4.24**	**346**	P		**Pn**	**21 23 22.5**	**+1.2**
TTSI	**Tana Toraja**	**5.12**	**349**	P		**Pn**	**21 23 35.4**	**+2.0**
	0.3nm844nm74nm,0.9s							
SRBI	**Singaraja**	**5.53**	**270**	P		**Pn**	**21 23 40.8**	**+1.8**
	0.3nm75nm,0.8s							
JAGI	**Jajag, Banyuwa**	**6.58**	**266**	Pn		**Pn**	**21 23 53.7**	**+0.2**
APSI	**Ampana**	**7.20**	**7**	P		**Pn**	**21 24 03.5**	**+1.5**
LUWI	**Luwuk**	**7.29**	**16**	Pn		**Pn**	**21 24 04.2**	**+0.9**
KNRA	**Kununurra**	**10.83**	**135**	Pn		**Pn**	**21 24 52.2**	**+0.4**
FITZ	**Fitzroy Crossi**	**10.99**	**155**	Pn		**Pn**	**21 24 55.3**	**+1.2**
	0.8nm,0.3s,baz=347,slow=5.4,SNR=18							
FITZ				Sn		**Sn**	**21 26 54.8**	**-2.4**
	0.4nm,0.3s,baz=81,slow=13,SNR=2.9							
FITZ	**Fitzroy Crossi**	**10.99**	**155**	Pn		**Pn**	**21 24 55.5**	**+1.5**
MTN	**Manton Dam**	**11.20**	**116**			**Pn**	**21 24 57.5**	**+0.6**
SIJI	**Sorong**	**12.67**	**56**	Pn		Pn	21 25 27.9	+11
	0.5nm,0.3s,baz=225,slow=19,SNR=2.5							
PSA00	**Pilbara Seismi**	**13.42**	**184**	Pn		**Pn**	**21 25 25.7**	**-1.5**
KKM	**Kota Kinabalu**	**14.78**	**342**	Pn		**Pn**	**21 25 48.2**	**+2.2**
GIRL	**Giralia**	**15.77**	**203**	Pn		**Pn**	**21 25 58.4**	**-0.5**
GIRL				IAmb	IAmb		21 26 08.9	
	comp=Z,63nm,1.1s							
WB0	**Warramunga Ar**	**17.55**	**133**			**Pn**	**21 26 21.2**	**-0.4**
WRA	**Warramunga Arr**	**17.62**	**133**	P		**Pn**	**21 26 21.6**	**-0.9**
	comp=Z,0.7nm,0.3s,baz=309,slow=12,SNR=37							
WRA				S		Sn	21 29 26.9	-12
	baz=302,slow=28,SNR=3.2							
WRA	**Warramunga Arr**	**17.62**	**133**			**Pn**	**21 26 22.2**	**-0.3**
WB2	**Warramunga Arr**	**17.63**	**133**			**Pn**	**21 26 21.7**	**-0.9**
WR0	**Warramunga Arr**	**17.78**	**133**	P		**Pn**	**21 26 24.5**	**+0.1**
AS31	**Alice Springs**	**19.93**	**142**			**P**	**21 26 49.3**	**+0.4**
ASAR	**Alice Springs**	**19.93**	**142**	P		**P**	**21 26 49.2**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=333,slow=15,SNR=53							
ASAR				S		**S**	**21 30 31.0**	**-2.3**
	baz=316,slow=23,SNR=4.1							
ASAR				PcP		**PcP**	**21 31 04.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=338,slow=1.7,SNR=4.2							
ASAR				LR		LR	21 34 02.6	
	comp=Z,36nm,18.3s,baz=317,slow=35							
ASAR	**Alice Springs**	**19.93**	**142**	P		**P**	**21 26 49.0**	**+0.1**
MORW	**Morawa**	**21.33**	**192**	P		**P**	**21 27 04.8**	**+0.9**
MORW				IAmb		IAmb	21 27 06.8	
	comp=Z,27nm,1.3s							
COEN	**Coen**	**22.71**	**107**	P		**P**	**21 27 18.7**	**-0.2**
COEN				IAmb		IAmb	21 27 36.4	
	comp=Z,13nm,0.9s							
IPM	**Ipoh**	**23.35**	**302**	P		**P**	**21 27 25.9**	**+0.5**
IPM				IAmb		IAmb	21 27 35.9	
	comp=Z,9.8nm,0.9s							
FORT	**Forrest**	**23.56**	**164**	P		**P**	**21 27 27.4**	**+0.1**
FORT				IAmb		IAmb	21 27 44.7	
	comp=Z,19nm,0.7s							
KULM	**Kulim**	**24.10**	**303**	P		**P**	**21 27 32.3**	**-0.4**
KULM				IAmb		IAmb	21 27 35.4	
	comp=Z,12nm,0.9s							
RPSI	**Rantau Prapat**	**24.31**	**295**	P		**P**	**21 27 34.6**	**0.0**
RPSI				IAmb		IAmb	21 27 37.7	
	comp=Z,10nm,0.9s							
NWAO	**Narrogin (SRO)**	**24.92**	**187**	P		**P**	**21 27 40.2**	**+0.2**
	comp=Z,15nm,0.9s,baz=14,slow=15,SNR=4.0							
NWAO				LR		LR	21 36 35.1	
	comp=Z,43nm,21.1s,baz=294,slow=34							
NWAO	**Narrogin (SRO)**	**24.92**	**187**	P		**P**	**21 27 40.5**	**+0.5**
NWAO				IAmb		IAmb	21 27 49.7	
	comp=Z,21nm,1.1s							
CTA	**Charters Tower**	**27.37**	**118**	P		**P**	**21 28 02.8**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=281,slow=17,SNR=3.8							
CTAO	**Charters Tower**	**27.37**	**118**	P		**P**	**21 28 02.2**	**-0.1**
CTAO				IAmb		IAmb	21 28 12.6	
	comp=Z,7.2nm,0.9s							
BBOO	**Buckleboo**	**28.36**	**152**	P		**P**	**21 28 10.4**	**-0.6**
STKA	**Stephens Creek**	**30.56**	**144**	P		**P**	**21 28 30.6**	**0.0**
	comp=Z,2.3nm,0.4s,baz=318,slow=7.0,SNR=7.1							
STKA				LR		LR	21 42 58.6	
	comp=Z,49nm,18.7s,baz=23,slow=41							
STKA	**Stephens Creek**	**30.56**	**144**	P		**P**	**21 28 30.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**34.08**	**321**	P		**P**	**21 29 01.6**	**0.0**
	comp=Z,0.9nm,0.6s,baz=144,slow=5.9,SNR=9.2							
CMAR	**Chiang Mai Arr**	**34.08**	**321**	P		**P**	**21 29 01.1**	**-0.5**
TOO	**Toolangi**	**36.89**	**146**	P		**P**	**21 29 27.1**	**+1.6**
TOO				IAmb		IAmb	21 29 31.1	
	comp=Z,8.0nm,1.2s							
XAN	**Xi'an**	**43.40**	**346**	P		**P**	**21 30 18.0**	**-1.6**
XAN				pP		pwP	21 30 26.4	-0.2
XAN				pmax		pmax		
	comp=Z,6.0nm,0.9s							
LSA	**Lhasa**	**47.18**	**324**	P		**P**	**21 30 50.0**	**-0.2**
LSA				IAmb		IAmb	21 31 06.1	
	comp=Z,4.8nm,0.9s							
MJAR	**Matsushiro Arr**	**47.33**	**19**	P		**P**	**21 30 51.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=198,slow=9.1,SNR=6.3							
ODAN	**Odare**	**47.51**	**318**	*eP*		**P**	**21 30 53.2**	**+0.7**
TAPN	**Taplejung**	**47.63**	**319**	*eP*		**P**	**21 30 54.0**	**+0.5**
RAMN	**Ramite**	**48.09**	**318**	*eP*		**P**	**21 30 57.9**	**+0.8**
	comp=Z,16nm,0.7s							
GUN	**Gumba**	**49.21**	**318**	*eP*		**P**	**21 31 05.9**	**+0.1**
	comp=Z,29nm,0.7s							
PKI	**Pulchoki**	**49.30**	**317**	*eP*		**P**	**21 31 06.2**	**-0.3**
	comp=Z,8.8nm,0.7s							
PKIN	**Phulchoki**	**49.31**	**317**	*eP*		**P**	**21 31 05.9**	**-0.6**
	comp=Z,9.5nm,0.6s							
DMN	**Daman**	**49.53**	**317**	*eP*		**P**	**21 31 08.3**	**+0.2**
	comp=Z,18nm,0.9s							
KKN	**Kakani**	**49.53**	**317**	*eP*		**P**	**21 31 08.3**	**+0.2**
GKN	**Gorkha**	**50.10**	**317**	*eP*		**P**	**21 31 12.0**	**-0.3**
	comp=Z,11nm,0.8s							
KOLN	**Koldanda**	**50.66**	**316**	*eP*		**P**	**21 31 16.5**	**-0.1**
DANN	**Dangsing**	**50.91**	**317**	*eP*		**P**	**21 31 18.5**	**-0.2**
	comp=Z,9.9nm,0.5s							
GTA	**Gaotai**	**51.12**	**339**	*eP*		**P**	**21 31 20.6**	**+0.8**
GTA				pP		pwP	21 31 25.0	-1.9
GTA				sP		sP	21 31 28.1	+5.6
GTA				pmax		pmax		
	comp=Z,2.0nm,1.2s							
PYUN	**Piuthan**	**51.28**	**316**	*eP*		**P**	**21 31 20.5**	**-0.8**
RPZ	**Rata Peaks**	**56.26**	**138**	P		**P**	**21 31 57.5**	**+0.2**
ULN	**Ulaanbaatar**	**57.04**	**349**	P		**P**	**21 32 02.9**	**0.0**
ULN				IAmb		IAmb	21 32 06.2	
	comp=Z,6.0nm,1.1s							
SONM	**Songino Array**	**57.14**	**348**	P		**P**	**21 32 03.0**	**-0.5**
	comp=Z,2.7nm,1.0s,baz=166,slow=6.8,SNR=12							
SONM	**Songino Array**	**57.14**	**348**	P		**P**	**21 32 03.6**	**0.0**
BKZ	**Black Stump Fm**	**58.54**	**131**	P		**P**	**21 32 14.7**	**+1.1**
WMQ	**Urumqi**	**59.75**	**333**	P		**P**	**21 32 22.0**	**+0.1**
KSH	**Kashi**	**62.97**	**322**	*eP*		**P**	**21 32 43.6**	**-0.2**
KSH				pmax		pmax		
	comp=Z,25nm,1.2s							
KSH				pmax		pmax		
	comp=Z,320nm,5.0s							
MK31	**Makanchi Array**	**64.50**	**332**	P		**P**	**21 32 53.4**	**-0.2**
MK31				IAmb		IAmb	21 32 54.7	
	comp=Z,4.4nm,0.9s							
MKAR	**Makanchi Array**	**64.50**	**332**	P		**P**	**21 32 53.6**	**0.0**
	comp=Z,5.2nm,0.8s,baz=139,slow=7.6,SNR=41							
MKAR	**Makanchi Array**	**64.50**	**332**	P		**P**	**21 32 53.1**	**-0.4**
MAKZ	**Makanchi**	**64.65**	**332**	P		**P**	**21 32 54.3**	**-0.3**
MAKZ				IAmb		IAmb	21 32 55.1	
	comp=Z,2.1nm,0.8s							
KBL	**Kabul**	**64.73**	**314**	P		**P**	**21 32 54.1**	**-1.4**
AAK	**Ala-Archa**	**65.78**	**324**	P		**P**	**21 33 01.2**	**-1.0**
GAR	**Garm**	**66.22**	**319**	P		**P**	**21 33 04.4**	**-0.7**
BTK	**Batken**	**66.49**	**320**	P		**P**	**21 33 06.7**	**0.0**
BTK				IAmb		IAmb	21 33 12.7	
	comp=Z,3.2nm,0.5s							
KK31	**Karatay Array**	**68.41**	**323**	P		**P**	**21 33 18.4**	**-0.3**
KKAR	**Karatay Array**	**68.41**	**323**	P		**P**	**21 33 18.0**	**-0.7**
PETK	**Petropavlovsk-**	**68.56**	**23**	P		**P**	**21 33 20.1**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=187,slow=9.9,SNR=3.0							
PETK	**Petropavlovsk-**	**68.56**	**23**	P		**P**	**21 33 19.7**	**+0.3**
ZAA0	**Zalesovo Array**	**68.86**	**338**	P		**P**	**21 33 20.8**	**-0.4**
ZAA0				IAmb		IAmb	21 33 21.5	
	comp=Z,5.0nm,0.8s							
ZALV	**Zalesovo Beam**	**68.86**	**338**	P		**P**	**21 33 20.0**	**-1.2**
	comp=Z,5.2nm,0.7s,baz=140,slow=4.2,SNR=24							
ZALV	**Zalesovo Beam**	**68.86**	**338**	P		**P**	**21 33 20.2**	**-1.0**
KURK	**Kurchatov**	**69.00**	**333**	P		**P**	**21 33 22.0**	**-0.2**
MAW	**Mawson**	**70.68**	**200**	P		**P**	**21 33 31.2**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=86,slow=10,SNR=1.9							
MAW	**Mawson**	**70.68**	**200**	P		**P**	**21 33 32.4**	**+0.1**
ABPO	**Ambohimpanom**	**71.92**	**253**	P		**P**	**21 33 40.4**	**-0.6**
ABPO				IAmb		IAmb	21 33 52.5	
	comp=Z,8.1nm,1.2s							
VNDA	**Vanda**	**72.59**	**171**	P		**P**	**21 33 44.1**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=318,slow=7.5,SNR=24							
VNDA	**Vanda**	**72.59**	**171**	P		**P**	**21 33 44.2**	**+0.5**
GEYT	**Alibeck**	**74.12**	**313**	P		**P**	**21 33 52.8**	**-0.7**
	comp=Z,1.3nm,0.4s,baz=119,slow=12,SNR=2.0							
GEYT	**Alibeck**	**74.12**	**313**	P		**P**	**21 33 53.2**	**-0.3**
BRVK	**Borovoye**	**74.43**	**331**	P		**P**	**21 33 55.0**	**+0.2**
BRVK				IAmb		IAmb	21 33 56.8	
	comp=Z,4.3nm,1.1s							
ABKAR	**Akbulak array**	**77.87**	**324**	P		**P**	**21 34 13.8**	**-0.7**
ABKAR	**Akbulak array**	**77.87**	**324**	P		**P**	**21 34 13.8**	**-0.7**
ABKAR				IAmb		IAmb	21 34 14.3	
	comp=Z,1.9nm,0.8s							
TIXI	**Tiksi**	**79.77**	**3**	P		**P**	**21 34 23.5**	**-1.0**
TIXI				IAmb		IAmb	21 34 24.4	
	comp=Z,3.3nm,0.8s							
QSPA	**South Pole Qui**	**81.88**	**180**	P		**P**	**21 34 36.8**	**+0.6**
SNAA	**Sanae**	**92.33**	**195**	P		**P**	**21 35 27.6**	**+0.6**
SNAA	**Sanae**	**92.33**	**195**	P		**P**	**21 35 27.3**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=139,slow=6.3,SNR=17							
SNAA	**Sanae**	**92.33**	**195**	P		**P**	**21 35 27.4**	**+0.4**
BELA	**Belgrano 2**	**93.06**	**185**	P		**P**	**21 35 30.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**120.05**	**280**	PKP		**PKPdf**	**21 41 07.5**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=47,slow=0.5,SNR=2.3							
TORD	**Torodi Ar. Bea**	**120.05**	**280**			**PKPdf**	**21 41 07.9**	**-0.8**
CPUP	**Villa Florida**	**145.72**	**183**	PKPbc		**PKPdf**	**21 41 56.1**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=143,slow=3.9,SNR=8.5							
CPUP	**Villa Florida**	**145.72**	**183**			**PKPdf**	**21 41 56.3**	**0.0**
LPAZ	**La Paz**	**154.20**	**160**	PKPab		**PKPab**	**21 42 32.5**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=218,slow=7.3,SNR=10							

IDC ***15*** *21:22:21.7±1.2, 23°09S×66°69W, h202km±18km, mb3.4/1, mb1 3.4/6, mb1mx3.2/36, mbtmp3.9/6, Error ellipse: s-maj=26.4km s-min=14.8km az=129.0*

GUC ***15*** *21:22:23.4±0.5, 23°05S×67°12W, h249km±6km, ML4.1*

ISC 15 21:22:22.4±1.0, 23°04S±0°06×66°9W±0°1, h227km±14km, n23, σ1§16/41, 11C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.91**	**283**	P		**Pn**	**21 23 03.2**	**+0.6**
	16nm,0.3s,baz=139,slow=3.7,SNR=114							
LVC				S		**S**	**21 23 32.7**	**-1.0**
	13nm,0.3s,baz=238,slow=20,SNR=5.9							
LVC	**Limon Verde**	**1.91**	**283**	*i*P		**Pn**	**21 23 03.1**	**+0.6**
LVC				*i* S		**S**	**21 23 33.4**	**-0.3**
PB15	**IPOC Station P**	**2.38**	**265**	*i*P		**Pn**	**21 23 07.7**	**+0.7**
PB15				*i* S		**S**	**21 23 41.7**	**-0.1**
PB06	**IPOC Station P**	**2.49**	**277**	*i*P		**Pn**	**21 23 08.9**	**+0.7**
PB06				*i* S		**S**	**21 23 43.3**	**-0.4**
PB06				IAML			21 23 43.9	
	comp=N,320nm,0.4s							
PB09	**IPOC Station P**	**2.50**	**299**	*i*P		**Pn**	**21 23 09.6**	**+1.3**
PB09				*i* S		**S**	**21 23 44.5**	**+0.5**
PB09				IAML			21 23 48.0	
	comp=E,179nm,0.2s							
PB03	**IPOC Station P**	**2.82**	**290**	*i*P		**Pn**	**21 23 12.3**	**+0.6**
PB03				*i* S		**S**	**21 23 49.2**	**-1.0**
PB03				IAML			21 23 51.3	
	comp=E,532nm,0.2s							
PB05	**IPOC Station P**	**3.06**	**273**	*i*P		**Pn**	**21 23 14.8**	**+0.5**
PB05				*i* S		**S**	**21 23 53.1**	**-1.7**
PB05				IAML			21 23 56.6	
	comp=N,171nm,0.4s							
PB07	**IPOC Station P**	**3.06**	**295**	*i*P		**Pn**	**21 23 15.1**	**+0.6**
PB07				*i* S		**S**	**21 23 53.9**	**-1.2**
PB04	**IPOC Station P**	**3.09**	**283**	*i*P		**Pn**	**21 23 15.2**	**+0.5**
PB04				*i* S		**S**	**21 23 54.4**	**-1.1**
PB01	**IPOC Station P**	**3.12**	**309**	*i*P		**Pn**	**21 23 15.7**	**+0.7**
PB01				*i* S		**S**	**21 23 55.6**	**-0.5**
PB01				IAML			21 23 57.6	
	comp=E,352nm,0.2s							
GO02	**Mina Guanaco**	**3.24**	**229**	*i*P		**Pn**	**21 23 16.6**	**0.0**
GO02				*i* S		**S**	**21 23 58.1**	**-1.0**
PB02	**IPOC Station P**	**3.27**	**301**	*i*P		**Pn**	**21 23 17.3**	**+0.6**
PB02				*i* S		**S**	**21 23 58.0**	**-1.2**
PB10	**IPOC Station P**	**3.40**	**261**	*i*P		**Pn**	**21 23 18.6**	**+0.5**
PB10				*i* S		**S**	**21 23 59.5**	**-2.2**
PB08	**IPOC Station P**	**3.57**	**324**	*e*P		**Pn**	**21 23 22.3**	**+1.7**
PB08				*e*S		**S**	**21 24 06.8**	**+0.7**
PB14	**IPOC Station P**	**3.58**	**243**	*i*P		**Pn**	**21 23 20.4**	**-0.1**
PATCX	**Punta Patache**	**3.75**	**306**	*e*P		**Pn**	**21 23 22.6**	**+0.3**
PATCX				*e*S		**S**	**21 24 07.9**	**-1.5**
MNMC	**Minye Minye**	**4.64**	**327**	*e*P		**Pn**	**21 23 34.7**	**+1.4**
MNMC				*e*S		**S**	**21 24 28.3**	**-1.0**
LPAZ	**La Paz**	**6.82**	**350**	P		**Pn**	**21 24 02.5**	**+1.3**
	comp=E,0.8nm,0.3s,baz=161,slow=6.5,SNR=23							
LPAZ				S		**S**	**21 25 20.3**	**+0.4**
	comp=E,0.1nm,0.3s,baz=304,slow=18,SNR=2.4							
SIV	**San Ignacio**	**8.90**	**39**	P		**Pn**	**21 24 26.8**	**-0.6**
	comp=E,0.8nm,0.3s,baz=245,slow=8.9,SNR=10							
SIV				S		**S**	**21 26 04.1**	**-3.9**
	comp=E,0.2nm,0.3s,baz=163,slow=20,SNR=1.4							
PLCA	**Paso Flores**	**17.91**	**189**	P		**P**	**21 26 16.2**	**+0.8**
	comp=E,0.1nm,0.3s,baz=21,slow=7.6,SNR=5.1							
BDFB	**Brasilia**	**19.26**	**71**	P		**P**	**21 26 29.6**	**-0.8**
	comp=E,0.5nm,0.3s,baz=242,slow=8.9,SNR=9.0							
TORD	**Torodi Ar. Bea**	**76.14**	**69**	P		**P**	**21 33 45.9**	**0.0**
	comp=E,1.1nm,0.9s,baz=255,slow=5.6,SNR=7.8							
MKAR	**Makanchi Array**	**145.72**	**39**	PKPbc		**PKPab**	**21 41 36.5**	**+1.1**
	comp=E,0.4nm,0.5s,baz=327,slow=2.9,SNR=5.0							

IDC ***15*** *21:32:28.8±3.3, 17°.95S×178°.24W, h518km±37km, mb3.4/12, mb1 3.5/13, mb1mx3.3/42, mbtmp4.2/13, Error ellipse: s-maj=30.2km s-min=20.1km az=157.0*

NEIC ***15*** *21:32:34.5±0.9, 17°.9S±0°.1×178°.5W±0°.1, h578km±7km, mb4.2/23, Error ellipse: s-maj=23.7km s-min=10.5km az=54.0*

ISC 15 21:32:34.2±0.8, 18°0S±0°1×178°4W±0°1, h579km, n47, σ0§72/48, mb4.1/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.36**	**273**	P		**P**	**21 33 53.9**	**-0.1**
RAO	**Raoul Island**	**11.25**	**178**	P		P	21 34 59.3	-5.7
	60nm,0.3s,baz=288,slow=20,SNR=2.4							
DZM	**Mont Dzumac**	**14.79**	**251**	P		**P**	**21 35 38.9**	**-2.3**
	0.2nm,0.3s,baz=100,slow=19,SNR=1.7							
ARMA	**Armidale**	**29.90**	**240**	P		**P**	**21 37 56.7**	**+0.3**
ARMA				IAmb		IAmb	21 38 15.1	
	comp=Z,5.1nm,1.0s							
CTA	**Charters Tower**	**33.42**	**261**	P		**P**	**21 38 25.1**	**-1.2**
	comp=Z,2.6nm,0.6s,baz=99,slow=9.5,SNR=6.2							
CTAO	**Charters Tower**	**33.42**	**261**	P		**P**	**21 38 25.4**	**-0.9**
CTAO				IAmb		IAmb	21 38 27.3	
	comp=Z,4.9nm,0.8s							
COEN	**Coen**	**37.09**	**270**	P		**P**	**21 38 57.0**	**+0.3**
COEN				IAmb		IAmb	21 38 58.3	
	comp=Z,7.1nm,0.8s							
TOO	**Toolangi**	**37.12**	**231**	P		**P**	**21 38 57.6**	**+0.9**
TOO				IAmb		IAmb	21 38 58.7	
	comp=Z,3.5nm,0.8s							
STKA	**Stephens Creek**	**38.59**	**241**	P		**P**	**21 39 08.8**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=96,slow=9.5,SNR=7.7							
STKA	**Stephens Creek**	**38.59**	**241**	P		**P**	**21 39 08.8**	**+0.1**
BBOO	**Buckleboo**	**43.

MKAR **Makanchi Array** 58.83 326 P P 21 58 05.1 -0.4
0.3nm,0.5s,baz=124,slow=7.4,SNR=6.8

TEH ***15*** *22:29:23.9, 27°.79N×54°.14E, h9km, ML4.0*
NEIC ***15*** *22:29:24.1±2.0, 27°.77N±0°.07×54°.10E±0°.04, h10km±1km, Error ellipse: s-maj=13.0km s-min=3.9km az=23.0*
THR ***15*** *22:29:24.0±0.3, 27°.62N×54°.15E, h15km, ML3.8*
DSN ***15*** *22:29:25.4±1.2, 27°.69N×54°.01E, h10km, ML4.2/10, Error ellipse: s-maj=17.6km s-min=8.3km az=23.0*
OMAN ***15*** *22:29:28.0±0.4, 27.68N×53.93E, h127km, mb4.6/5, ml4.1/13, Error ellipse: s-maj=7.8km s-min=5.6km az=323.0*
IDC ***15*** *22:29:29.9±2.4, 27°.57N×54°.01E, h66km±25km, mb3.5/16, mb1 3.6/19, mb1mx3.5/51, mbtmp3.8/19, MS3.1/7, Ms1 3.1/7, ms1mx2.8/35, Error ellipse: s-maj=19.2km s-min=13.1km az=22.0*

ISC 15 22:29:24.2±0.4, 27.77N±0°.04×54°.08E±0°.03, h10km, n170, σ1s27/173, mb3.8/21, MS3.0/5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.28**	**111**	*e*Pg		**Pg**		**22 29 29.4**	**-0.6**
LAR1				*e*Sg		**Sg**		**22 29 33.2**	**-0.6**
LAR1				*e*				22 29 45.8	
LAR1	**LAR**	**0.28**	**111**	Pg		**Pg**		**22 29 29.4**	**-0.6**
LAR1				Sg		**Sg**		**22 29 33.2**	**-0.6**
JHRM	**Jahrom**	**0.85**	**329**	*e*Pg		**Pg**		**22 29 39.8**	**-1.0**
JHRM				*e*				22 30 03.3	
JHRM	**Jahrom**	**0.85**	**329**	Pg		**Pg**		**22 29 39.7**	**-1.0**
LMD1	**Lamerd**	**0.92**	**242**	*e*Pg		**Pg**		**22 29 42.3**	**+0.3**
LMD1				*e*				22 30 15.9	
LMD1	**Lamerd**	**0.92**	**242**	Pg		**Pg**		**22 29 42.2**	**+0.3**
GHIR	**Ghir-Karzin**	**1.09**	**298**	*e*Pg		**Pn**		**22 29 46.8**	**+1.0**
GHIR	**Ghir-Karzin**	**1.09**	**298**	*e*Pg		**Pn**		**22 29 46.8**	**+1.0**
GHIR	**Ghir-Karzin**	**1.09**	**298**	Pg		**Pn**		**22 29 46.7**	**+1.0**
QIR1	**Qir**	**1.15**	**308**	*e*Pg		**Pb**		**22 29 46.7**	**+0.4**
QIR1				*e*				22 30 17.5	
BNDS	**Bandar-Abbas**	**1.90**	**101**	*e*Pg		**Pn**		**22 29 57.0**	**+0.2**
BNDS	comp=N,750nm,0.4s			IAML				22 30 34.3	
BNDS	**Bandar-Abbas**	**1.90**	**101**	*e*Pg		**Pn**		**22 29 57.0**	**+0.2**
BNDS	**Bandar-Abbas**	**1.90**	**101**			**Pn**		**22 29 57.0**	**+0.2**
GENO	**Geno**	**1.90**	**101**	*e*Pn		**Pn**		**22 29 57.1**	**+0.2**
GENO				*e*				22 30 32.4	
GENO	**Geno**	**1.90**	**101**	Pn		**Pn**		**22 29 57.0**	**+0.2**
SHI	**Shiraz**	**2.31**	**324**	*e*Pn		**Pn**		**22 30 03.6**	**+1.0**
SHI				*e*				22 30 46.7	
SHI	**Shiraz**	**2.31**	**324**	Pn		**Pn**		**22 30 03.6**	**+1.0**
SHME	**Shamm** SNR=17	**2.52**	**132**	*e*P		**Pn**		**22 30 05.0**	**-0.2**
SHME	**Shamm**	**2.52**	**132**	*e*Pn		**Pn**		**22 30 04.2**	**-1.0**
SHME	**Shamm**	**2.52**	**132**	Pn		**Pn**		**22 30 04.2**	**-1.0**
BANOM	**Banah** SNR=12	**2.71**	**132**	*e*P		**Pn**		**22 30 07.7**	**-0.2**
BANOM	**Banah** SNR=12	**2.71**	**132**	P		**Pn**		**22 30 08.3**	**+0.4**
BANOM				S		**Sn**		**22 30 43.9**	**+3.1**
BANOM	**Banah**	**2.71**	**132**	*e*Pn		**Pn**		**22 30 08.4**	**+0.5**
KAZ1	**Kazerun**	**2.83**	**311**	*e*Pn		**Pn**		**22 30 09.8**	**+0.2**
KAZ1				*e*				22 31 30.8	
NGRK	**Negar Kerman**	**2.99**	**51**	*e*Pn		**Pn**		**22 30 12.9**	**+0.9**
NGRK				*e*				22 31 15.5	
MSFE	**Esma-Masafi**	**3.04**	**142**	P		**Pn**		**22 30 13.8**	**+1.3**
MSFE	**Esma-Masafi**	**3.04**	**142**	*e*Pn		**Pn**		**22 30 14.1**	**+1.6**
NAZ	**Nazwa, Dubai** SNR=6.7	**3.12**	**152**	*i* P		**Pn**		**22 30 15.5**	**+2.1**
NAZ	**Nazwa, Dubai** SNR=21	**3.12**	**152**	P		**Pn**		**22 30 15.9**	**+2.4**
NAZ	**Nazwa, Dubai**	**3.12**	**152**	*e*Pn		**Pn**		**22 30 15.7**	**+2.2**
MDH	**Madha**	**3.17**	**141**	P		**Pn**		**22 30 15.4**	**+1.2**
MDH	**Madha** SNR=17	**3.17**	**141**	P		**Pn**		**22 30 17.0**	**+2.9**
MDH	**Madha**	**3.17**	**141**	*e*Pn		**Pn**		**22 30 15.7**	**+1.5**
KHNJ	**Kahnooj**	**3.22**	**86**	*e*Pn		**Pn**		**22 30 15.0**	**+0.1**
KRBR	**Kerman**	**3.22**	**46**	*e*Pn		**Pn**		**22 30 17.2**	**+1.9**
KRBR	comp=N,227nm,0.6s			IAML				22 31 17.7	
KRBR	**Kerman**	**3.22**	**46**	*e*Pn		**Pn**		**22 30 17.2**	**+1.9**
TVBK	**TV Kerman**	**3.23**	**46**	*e*Pn		**Pn**		**22 30 16.7**	**+1.4**
TVBK				*e*				22 31 18.2	
AJN	**Ajban** SNR=10	**3.30**	**165**	P		**Pb**		**22 30 21.3**	**-1.6**
AJN	**Ajban**	**3.30**	**165**	*e*Pn		**Pn**		**22 30 18.5**	**+2.5**
FAQ	**Al Faqa, Dubai** SNR=10	**3.31**	**155**	*i* P		**Pn**		**22 30 17.5**	**+1.4**
FAQ	**Al Faqa, Dubai** SNR=10.0	**3.31**	**155**	P		**Pn**		**22 30 18.0**	**+1.9**
FAQ	**Al Faqa, Dubai**	**3.31**	**155**	*e*Pn		**Pn**		**22 30 18.3**	**+2.2**
ASUD	**Al Ashush, Dub** SNR=13	**3.33**	**160**	*i* P		**Pn**		**22 30 17.7**	**+1.3**
ASUD	**Al Ashush, Dub** SNR=13	**3.33**	**160**	P		**Pn**		**22 30 19.0**	**+2.6**
ASUD	**Al Ashush, Dub**	**3.33**	**160**	*e*Pn		**Pn**		**22 30 18.9**	**+2.6**
KHGB	**Koh Gabri**	**3.34**	**38**	*e*Pn		**Pn**		**22 30 18.0**	**+1.2**
KHGB				*e*				22 31 30.5	
UOSS	**Minazif** SNR=14	**3.40**	**145**	*i* P		**Pn**		**22 30 18.3**	**+0.9**
UOSS	**Minazif**	**3.40**	**145**	P		**Pn**		**22 30 18.6**	**+1.2**
UOSS	**Minazif**	**3.40**	**145**	*e*Pn		**Pn**		**22 30 18.6**	**+1.2**
UOSS	**Minazif**	**3.40**	**145**	Pn		**Pn**		**22 30 17.6**	**+0.3**
HATD	**Hatta, Dubai** SNR=10	**3.46**	**147**	*i* P		**Pn**		**22 30 19.6**	**+1.3**
HATD				S		**Sn**		**22 30 59.9**	**+0.5**
HATD	**Hatta, Dubai** SNR=13	**3.46**	**147**	P		**Pn**		**22 30 20.0**	**+1.7**
HATD	**Hatta, Dubai**	**3.46**	**147**	*e*Pn		**Pn**		**22 30 19.8**	**+1.5**
IMEH	**Mehriz**	**3.64**	**7**	*e*Pn		**Pn**		**22 30 23.0**	**+2.1**
KLNJ	**Kolanjah**	**3.89**	**327**	*e*Pn		**Pn**		**22 30 24.5**	**+0.1**
ALNE	**Al Ain**	**4.00**	**157**	P		**Pn**		**22 30 26.7**	**+1.2**
ALNE	**Al Ain**	**4.00**	**157**	*e*Pn		**Pn**		**22 30 27.4**	**+1.8**
MZWR	**Madinat Zayed**	**4.00**	**183**	*e*Pn		**Pn**		**22 30 27.7**	**+2.1**
IBAF	**Bafgh**	**4.02**	**18**	*e*Pn		**Pn**		**22 30 27.8**	**+1.7**
KBAM	**BAM**	**4.08**	**70**	*e*Pn		**Pn**		**22 30 27.9**	**+1.0**
ISAD	**Sadrabad**	**4.14**	**355**	*e*Pn		**Pn**		**22 30 30.2**	**+2.3**
SOHO	**SOHO**	**4.24**	**148**	P		**Pn**		**22 30 29.4**	**+0.4**
SOHO	**SOHO**	**4.24**	**148**	P		**Pn**		**22 30 30.0**	**+1.0**
SOHO	**SOHO**	**4.24**	**148**	*e*Pn		**Pn**		**22 30 29.8**	**+0.8**
IRAM	**Ramesheh**	**4.29**	**340**	*e*Pn		**Pn**		**22 30 30.9**	**+1.1**
ICHK	**Chekchek**	**4.47**	**4**	*e*Pn		**Pn**		**22 30 33.8**	**+1.5**
ARQ	**Araqi**	**4.94**	**153**	Pi		**Pn**		**22 30 35.5**	**+2.0**
IGAR	**Gharneh**	**4.94**	**340**	*e*Pn		**Pn**		**22 30 40.3**	**+1.5**
HOQ	**Hoqain** SNR=5.6	**5.09**	**144**	P		**Pn**		**22 30 40.9**	**+0.2**
UMZA	**Um Al Zommool**	**5.13**	**169**	*e*Pn		**Pn**		**22 30 42.3**	**+1.1**
ZNGN	**Zangian**	**5.16**	**328**	*e*Pn		**Pn**		**22 30 42.8**	**+1.0**
IZEF	**Zefreh**	**5.33**	**344**	*e*Pn		**Pn**		**22 30 44.1**	**0.0**
ANAR	**Anarak**	**5.41**	**357**	*e*Pn		**Pn**		**22 30 46.3**	**+1.2**
IPIR	**Pirpir**	**5.62**	**331**	*e*Pn		**Pn**		**22 30 48.5**	**+0.3**
TPRV	**Parvadeh(Tabas**	**5.70**	**23**	*e*Pn		**Pn**		**22 30 50.0**	**+0.9**
BSY	**Bisya** SNR=5.7	**5.75**	**150**	P		**Pn**		**22 30 50.7**	**+1.0**
SMDO	**Samad** SNR=10	**5.91**	**142**	P		**Pn**		**22 30 53.0**	**+1.0**
IKLH	**Kolahrood**	**5.93**	**339**	*e*Pn		**Pn**		**22 30 53.3**	**+0.8**
WSAR	**Wadi Sarin** comp=N,0.9nm,0.3s,baz=338,slow=6.6,SNR=20	**6.11**	**137**	P		**Pn**		**22 30 55.6**	**+1.0**
WSAR				S		**Sn**		**22 32 04.0**	**-0.5**
WSAR	comp=N,1.3nm,0.3s,baz=285,slow=20,SNR=3.7			LR		LR		22 33 55.8	
NHDN	**Nehbandan**	**6.33**	**54**	*e*Pn		**Pn**		**22 30 59.4**	**+1.6**
TKDS	**Koohdasht(Taba**	**6.39**	**23**	*e*Pn		**Pn**		**22 30 59.6**	**+1.1**
QAM	**Ghamsar**	**6.39**	**340**	*e*Pn		**Pn**		**22 30 58.3**	**-0.3**
KRSH	**Karshahi**	**6.40**	**345**	*e*Pn		**Pn**		**22 30 59.3**	**+0.5**
TNSJ	**Nastanj**	**6.54**	**19**	*e*Pn		**Pn**		**22 31 01.1**	**+0.4**
WBK	**Wadi Bani Khal** SNR=16	**6.79**	**138**	P		**Pn**		**22 31 04.0**	**+0.1**
JLN	**Jalan Bani Buh**	**7.40**	**138**	P		**Pn**		**22 31 12.4**	**+0.1**
MHTO	**MHTO** SNR=25	**7.63**	**151**	P		**Pn**		**22 31 15.6**	**+0.1**
IANJ	**Anjilo**	**7.67**	**359**	*e*Pn		**Pn**		**22 31 17.7**	**+1.4**
IDOB	**Doab**	**7.85**	**321**	*e*Pn		**Pn**		**22 31 18.9**	**+0.1**
ISHM	**Shahmirzad**	**8.04**	**355**	*e*Pn		**Pn**		**22 31 22.9**	**+1.5**
IKOM	**Komasi**	**8.51**	**320**	*e*Pn		**Pn**		**22 31 29.0**	**+1.2**
IPRN	**Peran**	**8.57**	**351**	*e*Pn		**Pn**		**22 31 30.2**	**+1.6**
IGLO	**Ghaloghah**	**8.71**	**359**	*e*Pn		**Pn**		**22 31 31.8**	**+1.3**
RAYN	**Ar Rayn** SNR=18	**8.82**	**243**	*i* P		**Pn**		**22 31 30.6**	**-1.3**
RAYN	**Ar Rayn**	**8.82**	**243**	Pn		**Pn**		**22 31 30.7**	**-1.2**
HSRG	**Sareghieh**	**8.94**	**328**	*e*Pn		**Pn**		**22 31 35.1**	**+1.4**
QALM	**Alamut, Qazvin**	**9.11**	**342**	*e*Pn		**Pn**		**22 31 36.8**	**+0.8**
IDHR	**Dehrash**	**9.54**	**318**	*e*Pn		**Pn**		**22 31 42.5**	**+0.6**
HRA	**Herat**	**9.62**	**45**	Pn		**Pn**		**22 31 43.3**	**+0.4**
WHFO	**Wadi Hawf** SNR=28	**9.81**	**182**	P		**Pn**		**22 31 45.3**	**-0.2**
ABTO	**Aybut** SNR=6.6	**10.39**	**184**	P		**Pn**		**22 31 52.7**	**-0.8**
GYA1	**ALIBECK ARRAY**	**10.68**	**18**	Pn		**Pn**		**22 31 58.1**	**+0.8**
GEYT	**Alibeck**	**10.68**	**17**	P		**Pn**		**22 32 03.2**	**+5.8**
GEYT	comp=N,0.1nm,0.3s,baz=237,slow=13,SNR=2.5			LR		LR		22 36 52.7	
GEYT	**Alibeck**	**10.68**	**17**			**Pn**		**22 31 57.6**	**+0.2**
KBL	**Kabul**	**14.47**	**59**	Pn		**Pn**		**22 32 50.1**	**+0.7**
GNI	**Garni** comp=N,0.2nm,0.3s,baz=180,slow=20,SNR=2.2	**14.56**	**330**	P		**P**		**22 32 54.8**	**-2.4**
GNI	**Garni**	**14.56**	**330**	Pn		**Pn**		**22 32 48.7**	**-1.8**
KOPT	**Kop Dagi**	**16.60**	**321**	Pn		**Pn**		**22 33 16.3**	**-1.0**
CHGR	**Chuyangaron**	**16.62**	**45**	Pn		**Pn**		**22 33 17.3**	**-0.2**
GAZ	**Gaziantep**	**17.02**	**308**	Pn		**Pn**		**22 33 22.4**	**-0.1**
NIL	**Nilore**	**17.49**	**66**			**Pn**		**22 33 27.3**	**-1.0**
NIL	comp=Z,14nm,1.1s			IAmb		IAmb		22 33 37.6	
GAR	**Garm**	**17.56**	**46**	P		**Pn**		**22 33 29.2**	**-0.1**
GAR	comp=Z,13nm,1.2s			IAmb		IAmb		22 33 35.8	
BTK	**Batken**	**18.49**	**44**	P		**P**		**22 33 39.0**	**-1.5**
BTK	comp=Z,7.5nm,1.1s			IAmb		IAmb		22 33 47.1	
KIV	**Kislovodsk**	**18.57**	**333**	P		**P**		**22 33 41.2**	**-0.2**
KIV	comp=Z,11nm,1.0s			IAmb		IAmb		22 33 54.9	
KK07	**Karatay Array**	**20.26**	**37**	P		**P**		**22 33 59.4**	**-0.4**
KK08	**Karatay Array**	**20.26**	**37**	P		**P**		**22 33 59.5**	**-0.4**
KK03	**Karatay Array**	**20.27**	**37**	P		**P**		**22 34 00.0**	**+0.1**
KK01	**Karatay Array**	**20.27**	**37**	P		**P**		**22 33 59.4**	**-0.5**
KK02	**Karatay Array**	**20.27**	**37**	P		**P**		**22 33 58.6**	**-1.4**
KK31	**Karatay Array**	**20.27**	**37**	P		**P**		**22 33 58.7**	**-1.3**
KK31	comp=Z,4.2nm,0.9s			IAmb		IAmb		22 34 12.8	
KKAR	**Karatay Array**	**20.27**	**37**	P		**P**		**22 33 59.0**	**-0.9**
KKAR	comp=Z,4.2nm,0.9s			IAmb		IAmb		22 34 12.8	
BR131	**Keskin Array S**	**20.71**	**310**	P		**P**		**22 34 04.8**	**0.0**
BR131	comp=Z,3.8nm,0.8s			IAmb		IAmb		22 34 19.8	
BRTR	**Keskin Array B** comp=Z,2.4nm,0.7s,baz=130,slow=11,SNR=14	**20.71**	**310**	P		**P**		**22 34 06.4**	**+1.6**
BRTR	**Keskin Array B**	**20.71**	**310**	P		**P**		**22 34 05.0**	**+0.2**
ABKAR	**Akbulak array**	**21.92**	**10**	P		**P**		**22 34 17.7**	**+0.1**
ABKAR	comp=Z,6.0nm,0.9s			IAmb		IAmb		22 34 27.1	
ABKAR	**Akbulak array**	**21.92**	**10**	P		**P**		**22 34 17.5**	**-0.2**
AAK	**Ala-Archa**	**22.24**	**43**	P		**P**		**22 34 20.2**	**-1.2**
AKTO	**Aktyubinsk** comp=Z,2.4nm,0.7s,baz=166,slow=9.9,SNR=8.4	**22.83**	**7**	P		**P**		**22 34 30.4**	**+3.1**
PYUN	**Piuthan** comp=Z,25nm,0.7s	**25.52**	**82**	*e*P		**P**		**22 34 52.5**	**-0.8**
IDI	**Anoyia** comp=Z,9.4nm,0.9s,baz=98,slow=15,SNR=2.0	**25.92**	**294**	P		**P**		**22 34 57.0**	**+0.3**
KOLN	**Koldanda** comp=Z,11nm,1.0s	**26.10**	**83**	*e*P		**P**		**22 34 58.7**	**+0.1**
DANN	**Dangsing** comp=Z,26nm,0.7s	**26.17**	**82**	*e*P		**P**		**22 35 00.2**	**+0.9**
GKN	**Gorkha**	**26.98**	**82**	*e*P		**P**		**22 35 07.7**	**+1.2**
KKN	**Kakani**	**27.57**	**83**	*e*P		**P**		**22 35 12.9**	**+1.0**
PKIN	**Phulchoki** comp=Z,14nm,1.0s	**27.70**	**83**	*e*P		**P**		**22 35 13.3**	**+0.2**
PKI	**Pulchoki** comp=Z,14nm,0.9s	**27.71**	**83**	*e*P		**P**		**22 35 14.7**	**+1.4**
GUN	**Gumba**	**28.08**	**82**	*e*P		**P**		**22 35 18.6**	**+2.0**
MLR	**Muntele Rosu** comp=Z,1.1nm,0.7s,baz=270,slow=3.0,SNR=1.3	**28.47**	**316**	P		**P**		**22 35 20.5**	**+0.9**
RAMN	**Ramite**	**28.85**	**84**	*e*P		**P**		**22 35 24.2**	**+0.9**
MAKZ	**Makanchi**	**28.98**	**42**	P		**P**		**22 35 24.4**	**+0.3**
MAKZ	comp=Z,2.2nm,0.9s			IAmb		IAmb		22 35 33.9	
MK31	**Makanchi Array**	**29.16**	**42**	P		**P**		**22 35 25.9**	**+0.3**
MKAR	**Makanchi Array** comp=Z,0.2nm,0.4s,baz=232,slow=8.9,SNR=2.5	**29.16**	**42**	P		**P**		**22 35 27.1**	**+1.4**
MKAR				LR		LR		22 47 19.5	
MKAR	**Makanchi Array** comp=Z,24nm,19.9s,baz=244,slow=36	**29.16**	**42**	P		**P**		**22 35 26.0**	**+0.4**
KURBB	**Kurchatov Arra** comp=Z,0.8nm,0.7s,baz=230,slow=8.5,SNR=7.8	**29.41**	**32**	P		**P**		**22 35 28.1**	**+0.3**
KURK	**Kurchatov**	**29.52**	**32**	P		**P**		**22 35 27.6**	**-1.1**
BURAR	**Bucovina Array**	**29.96**	**319**	P		**P**		**22 35 34.0**	**+1.2**
ZAA0	**Zalesovo Array**	**34.51**	**32**	P		**P**		**22 36 12.6**	**+0.2**
ZALV	**Zalesovo Beam** comp=Z,3.4nm,0.6s,baz=241,slow=9.1,SNR=16	**34.51**	**32**	P		**P**		**22 36 12.7**	**+0.2**
ZALV				LR		LR		22 52 08.5	
FINES	**FINESS Array B** comp=Z,0.8nm,0.4s,baz=135,slow=14,SNR=7.3	**38.52**	**339**	P		**P**		**22 36 45.3**	**-1.2**
FINES	**FINESS Array B**	**38.52**	**339**	P		**P**		**22 36 45.1**	**-1.4**
CLL	**Collm**	**38.73**	**319**	*e*(P)		**P**		**22 36 51.0**	**+2.6**
GTA	**Gaotai**	**39.45**	**61**	*e*P		**P**		**22 36 57.3**	**+2.5**
GTA				pP		sP		22 37 01.5	+1.9
GTA				sP		pP		22 37 04.5	+6.3
GTA	comp=Z,2.0nm,1.0s			pmax		pmax			
CMAR	**Chiang Mai Arr** comp=Z,0.5nm,0.3s,baz=293,slow=7.3,SNR=6.7	**42.10**	**93**	P		**P**		**22 37 16.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**42.10**	**93**	P		**P**		**22 37 17.3**	**+0.5**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.9s,baz=122,slow=8.3,SNR=1.4	**43.86**	**331**	P		**P**		**22 37 30.2**	**-0.4**
NOA	comp=Z,17nm,19.6s,baz=330,slow=39			LR		LR		22 57 54.4	
SONM	**Songino Array** comp=Z,0.5nm,0.8s,baz=279,slow=8.2,SNR=3.4	**44.97**	**49**	P		**P**		**22 37 39.8**	**+0.1**
SONM				LR		LR		22 57 06.8	
SONM	**Songino Array**	**44.97**	**49**	P		**P**		**22 37 39.4**	**-0.3**
HHC	**Hu-ho-hao-te**	**48.45**	**59**	*e*P		**P**		**22 38 09.0**	**+1.9**
HHC	comp=Z,7.0nm,1.1s			pmax		pmax			
HHC	comp=Z,120nm,5.9s			pmax		pmax			
ESDC	**Sonseca Array** comp=Z,0.4nm,0.6s,baz=69,slow=8.1,SNR=1.9	**48.95**	**300**	P		**P**		**22 38 09.8**	**-1.0**
TOA0	**Torodi Ar. Sit**	**50.83**	**264**	P		**P**		**22 38 23.5**	**-1.9**
TOA0	comp=Z,1.4nm,0.9s			IAmb		IAmb		22 38 34.8	
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.6s,baz=60,slow=8.7,SNR=10.0	**50.83**	**264**	P		**P**		**22 38 23.3**	**-2.1**
TORD	**Torodi Ar. Bea**	**50.83**	**264**	P		**P**		**22 38 24.0**	**-1.4**
TIA	**Tai'an**	**53.31**	**64**	P		**P**		**22 38 46.3**	**+2.6**
TIA	comp=Z,8.0nm,0.7s			pmax		pmax			
KOWA	**Kowa**	**55.33**	**269**	P		**P**		**22 38 57.0**	**-1.5**
DBIC	**Dimbokro**	**59.49**	**261**	P		**P**		**22 39 28.6**	**+0.6**
KSRS	**Korea Array** comp=Z,1.3nm,0.7s,baz=276,slow=6.9,SNR=7.2	**61.52**	**60**	P		**P**		**22 39 42.6**	**+1.1**
BOSA	**Boshof** comp=Z,42nm,21.9s,baz=51,slow=39	**62.50**	**209**	LR		LR		23 09 53.6	
USRK	**Ussuriysk Ar.** comp=Z,0.9nm,0.6s,baz=135,slow=42,SNR=2.8	**62.90**	**52**	P		**P**		**22 39 49.4**	**-1.3**
ILAR	**Eielson Array** comp=Z,0.4nm,0.7s,baz=323,slow=4.2,SNR=2.9	**86.32**	**9**	P		**P**		**22 42 04.7**	**-1.5**
ILAR	**Eielson Array**	**86.32**	**9**	P		**P**		**22 42 04.9**	**-1.3**

SOME ***15*** *22:33:48.6, 40°.70N×77°.73E, h15km*
KRNET ***15*** *22:33:50.8±0.1, 40°.82N×77°.74E, h20km, mb3.0*
NNC ***15*** *22:33:52.8±0.9, 40°.88N×77°.76E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=6.7km s-min=5.1km az=162.0*

ISC 15 22:33:53.9±1.3, 40°.95N±0°.04×77°.71E±0°.04, h5km±11km, n63, σ1s26/99, 15C-28D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDJ	**Kajisay** baz=43	**1.24**	**342**	⇓*i*P		**Pn**		**22 34 16.0**	**-2.1**
KDJ				⇓*i*S		**Sb**		**22 34 34.6**	**+0.2**
PRZ	**Przheval'sk** baz=17	**1.61**	**18**	⇓*e*P		**Pb**		**22 34 22.7**	**-1.6**
PRZ				⇓*i*S		**Sg**		**22 34 46.3**	**+0.5**
ULHL	**Ulahol** baz=22	**1.70**	**320**	⇑*i*P		**Pn**		**22 34 24.1**	**-0.3**
ULHL				⇑*i*S		**Sg**		**22 34 48.7**	**+0.2**
ANVS	**Kashi** baz=58	**1.96**	**223**	Pn		**Pg**		**22 34 29.3**	**-2.1**
KSH				Sn		**Sg**		**22 35 01.1**	**+4.4**
KSH	comp=N,54nm,1.0s			smax		smax			
KSH	comp=E,72nm,0.9s			smax		smax			
BOOM	**Boomskoye usch** baz=22	**2.03**	**320**	⇑*i*P		**Pn**		**22 34 29.0**	**+0.1**
BOOM				⇑*i*S		**Sb**		**22 34 56.5**	**-0.5**
TNSS	**Tian-Shan** comp=E,13nm,0.3s	**2.16**	**345**	⇓*i*P		**Pb**		**22 34 33.3**	**-0.4**
TNSS	comp=E,31nm,0.4s			*e*S		**Sg**		**22 35 05.1**	**+1.8**
TNSS	**Tian-Shan** comp=E,13nm,0.3s	**2.16**	**345**	Pg		**Pb**		**22 34 33.3**	**-0.4**
TNSS	comp=E,31nm,0.4s			Lg		Lg		22 35 05.1	
SATY	**Saty** comp=E,5.9nm,0.2s	**2.17**	**14**	*e*P		**Pb**		**22 34 33.0**	**-0.7**
SATY	comp=E,22nm,0.2s			*e*S		**Sg**		**22 35 04.7**	**+1.1**
SATY	**Saty** comp=E,5.9nm,0.2s	**2.17**	**14**	Pg		**Pb**		**22 34 33.0**	**-0.7**
SATY	comp=E,22nm,0.2s			Lg		Lg		22 35 04.7	
MDOK	**Medeo** comp=E,16nm,0.5s	**2.26**	**348**	⇑*i*P		**Pb**		**22 34 34.9**	**-0.5**
MDOK	comp=E,39nm,0.4s			*e*S		**Sg**		**22 35 08.0**	**+1.4**
MDOK	**Medeo** comp=E,16nm,0.5s	**2.26**	**348**	Pg		**Pb**		**22 34 34.9**	**-0.5**
MDOK	comp=E,39nm,0.4s			Lg		Lg		22 35 08.0	
ZHN	**Zhinishke** comp=E,12nm,0.2s	**2.28**	**13**	*e*P		**Pb**		**22 34 35.1**	**-0.5**
ZHN	comp=E,10nm,0.2s			*e*S		**Sg**		**22 35 08.1**	**+1.0**
ZHN	**Zhinishke** comp=E,12nm,0.2s	**2.28**	**13**	Pg		**Pb**		**22 34 35.1**	**-0.5**
ZHN	comp=E,10nm,0.2s			Lg		Lg		22 35 08.1	
KOTS	**Kotyrbulak** comp=E,29nm,0.2s	**2.32**	**349**	*e*P		**Pb**		**22 34 36.4**	**+0.1**
KOTS	comp=E,94nm,0.4s			*e*S		**Sg**		**22 35 10.6**	**+2.1**
KOTS	**Kotyrbulak** comp=E,29nm,0.2s	**2.32**	**349**	Pg		**Pb**		**22 34 36.4**	**+0.1**
KOTS	comp=E,94nm,0.4s			Lg		Lg		22 35 10.6	
KNDC	**Almaty** comp=E,17nm,0.7s	**2.33**	**347**	⇑Pn		**Pb**		**22 34 34.6**	**-1.9**
KNDC	comp=E,84nm,0.6s			⇓Lg		Lg		22 35 09.9	
AAA	**Alma-Ata** comp=E,15nm,0.1s	**2.33**	**346**	*e*P		**Pb**		**22 34 36.2**	**-0.3**
AAA	comp=E,32nm,0.2s			*e*S		**Sg**		**22 35 10.1**	**+1.3**
AAA	**Alma-Ata** comp=E,15nm,0.1s	**2.33**	**346**	Pg		**Pb**		**22 34 36.2**	**-0.3**
AAA	comp=E,32nm,0.2s			Lg		Lg		22 35 10.1	
MTBS	**Maitube** comp=E,5.5nm,0.1s	**2.38**	**337**	*e*P		**Pb**		**22 34 36.9**	**-0.3**
MTBS	comp=E,31nm,0.2s			⇑*i*S		**Sg**		**22 35 11.2**	**+1.0**
MTBS	**Maitube** comp=E,5.5nm,0.1s	**2.38**	**337**	Pg		**Pb**		**22 34 36.9**	**-0.3**
MTBS	comp=E,31nm,0.2s			Lg		Lg		22 35 11.2	
UZB	**Uzynbulak** comp=E,6.1nm,0.2s	**2.40**	**24**	*e*P		**Pb**		**22 34 36.8**	**-0.9**
UZB	comp=E,14nm,0.2s			*e*S		**Sg**		**22 35 11.0**	**0.0**
UZB	**Uzynbulak** comp=E,6.1nm,0.2s	**2.40**	**24**	Pg		**Pb**		**22 34 36.8**	**-0.9**
UZB	comp=E,14nm,0.2s			Lg		Lg		22 35 11.0	
KST	**Kastek** comp=E,3.5nm,0.2s	**2.46**	**329**	*e*P		**Pb**		**22 34 37.4**	**-1.3**
KST	comp=E,37nm,0.3s			*e*S		**Sg**		**22 35 12.3**	**-0.7**
KST	**Kastek** comp=E,3.5nm,0.2s	**2.46**	**329**	Pg		**Pb**		**22 34 37.4**	**-1.3**
KST	comp=E,37nm,0.3s			Lg		Lg		22 35 12.3	
TKM2	**Tokmak 2** baz=23	**2.52**	**322**	⇑*i*P		**Pn**

	comp=E,43nm,0.3s								
CHMS	**Chumysh**	**3.01**	**314**	⇓	*i*	P	**Pn**	**22 34 41.9**	**-0.4**
	baz=15								
CHMS					⇓	*i* S	**Sn**	**22 35 19.5**	**+0.8**
	baz=15								
MNBS	**Baschi**	**3.17**	**9**		*e*	P	**Pb**	**22 34 51.4**	**+0.7**
	comp=E,4.3nm,0.3s								
MNBS					*e*	S	**Sg**	**22 35 36.1**	**+0.5**
	comp=E,22nm,0.2s								
MNBS	**Baschi**	**3.17**	**9**	Pg		Pb	**Pb**	**22 34 51.4**	**+0.7**
	comp=E,4.3nm,0.3s								
MNBS				Lg		Lg		22 35 36.1	
	comp=E,22nm,0.2s								
AML	**Almayashu**	**3.23**	**293**	⇓	*i*	P	**Pn**	**22 34 45.3**	**-0.4**
	baz=95								
AML					⇓	*i* S	**Sn**	**22 35 25.1**	**+0.3**
	baz=95								
ARXS	**Arharly**	**3.26**	**1**		*e*	P	**Pb**	**22 34 53.0**	**+0.7**
	comp=E,7.7nm,0.2s								
ARXS					*e*	S	**Sg**	**22 35 39.0**	**+0.4**
	comp=E,33nm,0.6s								
ARXS	**Arharly**	**3.26**	**1**	Pg		Pb	**Pb**	**22 34 53.0**	**+0.7**
	comp=E,7.7nm,0.2s								
ARXS				Lg		Lg		22 35 39.0	
	comp=E,33nm,0.6s								
SFK	**Sufi-Kurgan**	**3.34**	**255**	⇓	*i*	P	**Pn**	**22 34 45.4**	**-1.7**
	baz=58								
SFK				⇓	*i* S		**Sn**	**22 35 25.1**	**-2.1**
	baz=58								
SGDS	**Sogindy**	**3.39**	**319**	Pg		Pb	**Pb**	**22 34 54.2**	**-0.2**
	comp=E,4.8nm,0.3s								
SGDS				Lg		Lg		22 35 40.9	
	comp=E,8.8nm,0.4s								
EKS2	**Erkin-Say**	**3.40**	**301**	⇓	*e*	P	**Pn**	**22 34 47.6**	**-0.1**
	baz=3.0								
EKS2				⇓	*i* S		**Sn**	**22 35 28.5**	**0.0**
	baz=3.0								
ARSB	**Arslanbob**	**3.59**	**277**	⇓	*e*	P	**Pn**	**22 34 49.6**	**-0.8**
	baz=80								
ARSB				⇓	*i* S		**Sn**	**22 35 32.2**	**-1.0**
	baz=80								
DJR	**Jarkent**	**3.71**	**24**	⇓	*e*	P	**Pb**	**22 35 01.1**	**+1.2**
	comp=E,2.7nm,0.6s								
DJR					*e*	S	**Sg**	**22 35 53.1**	**0.0**
	comp=E,4.7nm,0.4s								
DJR	**Jarkent**	**3.71**	**24**	Pg		Pb	**Pb**	**22 35 01.1**	**+1.2**
	comp=E,2.7nm,0.6s								
DJR				Lg		Lg		22 35 53.1	
	comp=E,4.7nm,0.4s								
TDK	**Taldyorghan**	**4.08**	**7**		*e*	P	**Pb**	**22 35 08.2**	**+2.0**
	comp=E,19nm,0.3s								
TDK					*e*	S	**Sg**	**22 36 05.3**	**+0.4**
	comp=E,24nm,0.3s								
TDK	**Taldyorghan**	**4.08**	**7**	Pg		Pb	**Pb**	**22 35 08.3**	**+2.0**
	comp=E,19nm,0.3s								
TDK				Lg		Lg		22 36 05.3	
	comp=E,24nm,0.3s								
BTLS	**Baital**	**4.89**	**328**		*e*	P	**Pb**	**22 35 22.2**	**+2.2**
	comp=E,2.7nm,0.5s								
BTLS					*e*	S	**Sg**	**22 36 29.0**	**-1.9**
	comp=E,3.9nm,0.5s								
BTLS	**Baital**	**4.89**	**328**	Pg		Pb	**Pb**	**22 35 22.2**	**+2.2**
	comp=E,2.7nm,0.5s								
BTLS				Lg		Lg		22 36 29.0	
	comp=E,3.9nm,0.5s								
KK31	**Karatay Array**	**5.77**	**294**	Pg		Pb	**Pb**	**22 35 39.0**	**+3.9**
	comp=E,0.7nm,0.6s,baz=114,slow=17,SNR=7.6								
KK31				⇑Lg		Lg		22 36 58.0	
	comp=E,0.2nm,0.3s,baz=104,slow=26,SNR=3.6								
WMQ	**Urumqi**	**7.93**	**66**		*e*	P	**Pn**	**22 35 48.3**	**-1.6**

IDC 15 22:34:55.6±2.3, 2°.06N×122°.87E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/31, mbtmp3.2/3, Error ellipse: s-maj=189.8km s-min=27.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.07**	**162**	P	P	22 40 01.2	-1.7
	0.3nm,0.3s,baz=340,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**26.48**	**165**	P	P	22 40 36.3	+1.6
	0.1nm,0.3s,baz=348,slow=12,SNR=2.1						
MKAR	**Makanchi Array**	**59.00**	**326**	P	P	22 44 57.0	-0.2
	0.2nm,0.4s,baz=116,slow=8.7,SNR=4.7						

IDC 15 22:36:04.4±1.7, 2°.21N×122°.30E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/32, mbtmp3.5/4, Error ellipse: s-maj=159.3km s-min=23.4km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.45**	**171**	P	P	22 40 43.4	-0.2
	0.5nm,0.4s,baz=4.5,slow=7.4,SNR=1.7						
WRA	**Warramunga Arr**	**24.99**	**152**	P	P	22 41 30.0	0.0
	0.9nm,0.5s,baz=336,slow=9.9,SNR=9.6						
ASAR	**Alice Springs**	**28.09**	**157**	P	P	22 41 58.1	+0.1
	0.4nm,0.4s,baz=326,slow=7.5,SNR=7.2						
MKAR	**Makanchi Array**	**56.38**	**328**	P	P	22 45 47.5	0.0
	0.2nm,0.4s,baz=119,slow=7.9,SNR=4.4						

IDC 15 22:37:43.2±1.4, 1°.54N×125°.66E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/32, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=67.3km s-min=23.4km az=58.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.09**	**113**	Pn	Pn	22 39 16.4	+1.9
	0.9nm,0.3s,baz=63,slow=14,SNR=3.7						
SIJI				Sn	Sn	22 40 14.7	-10
	2.3nm,0.3s,baz=341,slow=19,SNR=7.3						
WRA	**Warramunga Arr**	**22.98**	**159**	P	P	22 42 48.0	-1.6
	0.5nm,0.3s,baz=340,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**26.30**	**163**	P	P	22 43 21.7	+0.9
	0.3nm,0.6s,baz=343,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**58.76**	**327**	P	P	22 47 43.1	-0.1
	0.2nm,0.4s,baz=120,slow=7.8,SNR=10						

JMA 15 22:38:17.6±0.6, 31°.72N×142°.30E, h0km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.52**	**304**	P	Pn	22 39 00.7	+0.9
BSO1	**Boso 1**	**3.13**	**340**	P	Pn	22 39 09.4	+1.7
BSO4	**Boso 4**	**3.65**	**334**	P	Pn	22 39 16.8	+1.5
JOD2	**Odawara 2**	**4.44**	**324**	P	Pn	22 39 28.2	+2.0
JHU	**Hanno**	**4.83**	**329**	P	Pn	22 39 33.3	+1.8
JHO	**Hitachi**	**5.08**	**344**	P	Pn	22 39 37.2	+2.1
JHO					*e*S Sn	22 40 35.2	+0.7
JRY	**Ryogami san**	**5.13**	**328**	P	Pn	22 39 38.7	+2.9
JAG	**Ashikaga**	**5.25**	**334**	P	Pn	22 39 39.7	+2.3
JAG					*e*S Sn	22 40 41.4	+2.7

*IDC **15** 22:41:19.8±1.7, 8°.16S×120°.63E, h0km, mb3.7/2, mb1 3.6/7, mb1mx3.5/35, mbtmp3.5/7, ML3.2/5, Error ellipse: s-maj=89.3km s-min=17.3km az=61.0*
*DJA **15** 22:41:23.3±0.2, 8°.S±2°×12°.1E±°, h10km, M3.5/11, MLv3.5/11*
ISC 15 22:41:22.2±0.8, 8°.04S±0°.04×120°.90E±0°.04, h10km, n18, σ1s26/25, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.05**	**132**	P	**Pn**	**22 41 43.6**	**+0.5**
EDFI				S	**Sn**	**22 41 58.9**	**+0.9**
MMRI	**Maumere**	**1.45**	**114**	P	**Pg**	**22 41 49.8**	**-0.3**
MMRI				S	**Sg**	**22 42 10.3**	**+1.3**
WSI	**Waingapu**	**1.72**	**200**	P	**Pn**	**22 41 51.7**	**-0.5**
BSSI	**Bau Bau, Buton**	**1.93**	**348**	P	**Pn**	**22 41 55.8**	**+0.7**
WBSI	**Waikabubak, Su**	**2.18**	**223**	P	**Pb**	**22 42 01.0**	**-0.7**
WBSI				S	**Sn**	**22 42 26.8**	**+1.2**
BASI	**Baing, Sumba**	**2.19**	**188**	P	**Pn**	**22 41 58.6**	**0.0**
BKSI	**Bulukumba**	**2.81**	**344**	P	**Pn**	**22 42 06.7**	**-0.5**
BKSI				S	**Sn**	**22 42 42.8**	**+1.7**
PLAI	**Plampang**	**3.18**	**256**	P	**Pn**	**22 42 13.2**	**+0.9**
PLAI				S	**Sn**	**22 42 52.2**	**+1.8**
KAPI	**Kappang**	**3.21**	**339**	Pn	**Pn**	**22 42 12.1**	**-0.6**
	1.6nm,0.3s,baz=160,slow=12,SNR=11						
KAPI				Sn	**Sn**	**22 42 52.2**	**+1.1**
	0.5nm,0.3s,baz=216,slow=17,SNR=1.3						
BATI	**Baumata**	**3.48**	**128**	Pn	**Pn**	**22 42 18.2**	**+1.8**
	1.9nm,0.3s,baz=287,slow=9.5,SNR=1.7						
BATI	**Baumata**	**3.48**	**128**	P	**Pn**	**22 42 18.7**	**+2.3**
SOEI	**Soe**	**3.74**	**117**	P	**Pn**	**22 42 22.4**	**+2.3**
TWSI	**Taliwang, Sumb**	**4.03**	**260**	P	**Pn**	**22 42 25.3**	**+1.3**
FITZ	**Fitzroy Crossi**	**11.01**	**156**	Pn	**Pn**	**22 44 00.2**	**+0.4**
	0.1nm,0.3s,baz=339,slow=12,SNR=2.2						
FITZ				Sn	**Sn**	**22 46 01.7**	**-1.5**
	0.1nm,0.3s,baz=176,slow=16,SNR=1.3						
WRA	**Warramunga Arr**	**17.59**	**134**	P	**Pn**	**22 45 26.9**	**-0.8**
	0.1nm,0.3s,baz=305,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**19.92**	**143**	P	**P**	**22 45 54.8**	**+0.5**
	0.1nm,0.3s,baz=323,slow=11,SNR=10						
STKA	**Stephens Creek**	**30.55**	**144**	P	**P**	**22 47 34.9**	**-1.2**
	0.4nm,0.4s,baz=312,slow=15,SNR=3.1						
MKAR	**Makanchi Array**	**64.48**	**332**	P	**P**	**22 51 58.3**	**-0.8**
	0.4nm,0.6s,baz=145,slow=8.0,SNR=4.1						

IDC 15 22:42:08.2±3.8, 6°.29S×149°.13E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.4/29, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=107.4km s-min=43.4km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.66**	**212**	Pn	Pn	22 43 08.0	+1.9
	5.8nm,0.3s,baz=59,slow=5.9,SNR=6.6						
PMG				Sn	Sn	22 43 47.7	-2.2
	14nm,0.3s,baz=42,slow=11,SNR=11						
WRA	**Warramunga Arr**	**19.76**	**225**	P	P	22 46 38.6	-1.4
	0.2nm,0.3s,baz=50,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**22.64**	**219**	P	P	22 47 10.2	-0.9
	0.6nm,0.7s,baz=54,slow=9.4,SNR=6.8						
FITZ	**Fitzroy Crossi**	**25.74**	**241**	P	P	22 47 41.2	+0.6
	1.8nm,1.0s,baz=62,slow=5.4,SNR=2.1						
TORD	**Torodi Ar. Bea**	**147.21**	**284**	PKPbc	PKPbc	23 01 54.2	-0.4
	0.2nm,0.5s,baz=86,slow=4.2,SNR=4.8						

*IDC **15** 23:07:05.0±1.2, 64°.42N×17°.62W, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.4/49, mbtmp3.6/6, ML3.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/39, Error ellipse: s-maj=40.1km s-min=13.4km az=14.0*
ISC 15 23:07:06.1±0.9, 64°.4N±0°.2×17°.7W±0°.1, h10km, n8, σ1s14/7, mb3.7/5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.62**	**285**	Pg	**Pn**	**23 07 33.1**	**-1.5**
	19nm,0.3s,baz=96,slow=8.5,SNR=51						
BORG				Lg	Lg	23 07 56.8	
	8.7nm,0.3s,baz=233,slow=20,SNR=2.7						
EKA	**Eskdalemuir Ar**	**11.61**	**135**	Pn	**Pn**	**23 09 51.5**	**-0.2**
	baz=325,slow=13,SNR=8.2						
ARCES	**ARCESS Array B**	**17.35**	**54**	LR	LR	23 16 52.7	
	comp=Z,47nm,18.4s,baz=45,slow=34						
GERES	**GERESS Array B**	**22.89**	**118**	P	**P**	**23 12 09.5**	**-0.2**
	0.5nm,0.8s,baz=331,slow=7.9,SNR=2.6						
ILAR	**Eielson Array**	**45.90**	**332**	P	**P**	**23 15 28.1**	**0.0**
	1.1nm,1.2s,baz=26,slow=7.0,SNR=5.6						
KURBB	**Kurchatov Arra**	**48.38**	**58**	P	**P**	**23 15 47.3**	**-0.3**
	0.5nm,0.7s,baz=322,slow=7.4,SNR=4.1						
PDAR	**Pinedale Array**	**53.22**	**293**	P	**P**	**23 16 25.2**	**+0.7**
	1.9nm,0.9s,baz=51,slow=6.0,SNR=10						
TXAR	**Lajitas Array**	**62.26**	**280**	P	**P**	**23 17 29.5**	**+1.5**
	0.5nm,0.9s,baz=45,slow=9.4,SNR=4.1						

IDC 15 23:39:59.3±2.0, 1°.76N×126°.36E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/35, mbtmp3.4/3, MS3.3/1, Ms1 3.2/1, ms1mx2.3/24, Error ellipse: s-maj=178.4km s-min=24.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.94**	**160**	P	P	23 45 04.9	-0.5
	0.6nm,0.6s,baz=339,slow=11,SNR=9.9						
ASAR	**Alice Springs**	**26.32**	**164**	P	P	23 45 37.5	+0.4
	0.2nm,0.5s,baz=341,slow=8.3,SNR=9.3						
STKA	**Stephens Creek**	**36.44**	**158**	LR	LR	00 05 20.3	
	comp=Z,38nm,18.5s,baz=27,slow=42						
MKAR	**Makanchi Array**	**58.96**	**326**	P	P	23 50 00.6	-0.1
	0.2nm,0.4s,baz=117,slow=7.5,SNR=8.1						

*IDC **15** 23:46:08.2±1.4, 38°.87N×143°.66E, h0km, mb3.4/4, mb1 3.7/7, mb1mx3.5/44, mbtmp3.6/7, ML3.3/3, Error ellipse: s-maj=35.2km s-min=23.0km az=108.0*
*JMA **15** 23:46:12.0±0.1, 38°.98N×143°.46E, h30km±5km, M3.6*
*NIED **15** 23:46:12.1, 38°.98N×143°.46E, h30km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}=1.87; $M_{\theta\theta}$=0.16; $M_{\phi\phi}$=2.03; $M_{r\theta}$=0.76; $M_{r\phi}$=0.00; $M_{\theta\phi}$=0.08; Fault plane solution: M_0=2.09000×10^{14} NP1: ϕ_s=200.00000°, δ50.00000°, λ-62.00000°. NP2: ϕ_s=340.00000°, δ47.00000°, λ-119.00000°.*
ISC 15 23:46:12.0±1.2, 38°.97N±0°.05×143°.46E±0°.09, h20km, n25, σ1s77/34, mb3.4/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**1.40**	**275**	P	**Pn**	**23 46 36.2**	**-0.1**
OFUJ				*e*S	**Sn**	**23 46 53.9**	**-0.3**
MIYJ	**Miyakonagasawa**	**1.41**	**296**	P	**Pn**	**23 46 36.1**	**-0.4**
MIYJ				*e*S	**Sn**	**23 46 53.5**	**-0.9**
JKMT	**Kesennumamotoy**	**1.56**	**265**	P	**Pn**	**23 46 38.5**	**0.0**
JKMT				*e*S	**Sn**	**23 46 57.9**	**-0.2**
JTH	**Tanohata**	**1.57**	**308**	P	**Pn**	**23 46 38.3**	**-0.3**
JIO	**Ouri**	**1.73**	**253**	P	**Pn**	**23 46 40.8**	**-0.1**
JIO				*e*S	**Sn**	**23 47 01.9**	**-0.4**
JMK	**Ichinoseki**	**1.75**	**270**	P	**Pn**	**23 46 41.4**	**+0.3**
JMK				*e*S	**Sn**	**23 47 02.7**	**0.0**
JOM	**Ohasama**	**1.75**	**287**	P	**Pn**	**23 46 41.7**	**+0.5**
JOM				*e*S	**Sn**	**23 47 03.4**	**+0.4**
JANG	**Nango**	**2.05**	**314**	P	**Pn**	**23 46 45.0**	**-0.3**
JANG				*e*S	**Sn**	**23 47 10.0**	**-0.3**
JRG	**Rokugo**	**2.23**	**282**	P	**Pn**	**23 46 49.0**	**+1.2**
JOU	**Okura**	**2.27**	**255**	P	**Pn**	**23 46 48.8**	**+0.5**
JMM	**Marumori**	**2.37**	**243**	P	**Pn**	**23 46 49.6**	**0.0**
JMM				*e*S	**Sn**	**23 47 17.5**	**-0.6**
JYK	**Kaneyama**	**2.42**	**270**	P	**Pn**	**23 46 51.9**	**+1.6**
JTM	**Tenmabayashi**	**2.58**	**315**	*e*S	**Sn**	**23 47 22.9**	**-0.5**
JFT	**Otama**	**2.85**	**240**	P	**Pn**	**23 46 57.0**	**+0.6**
JFT				*e*S	**Sn**	**23 47 30.9**	**+0.7**
MJAR	**Matsushiro Arr**	**4.82**	**241**	Pn	**Pn**	**23 47 24.9**	**+1.6**
	0.4nm,0.3s,baz=56,slow=10,SNR=25						
MAT	**Matsushiro**	**4.82**	**241**	P	**Pn**	**23 47 25.4**	**+2.0**
MAT				*e*S	**Sn**	**23 48 24.9**	**+6.3**
ASAJ	**Asahikawa**	**5.18**	**353**	Pn	**Pn**	**23 47 28.4**	**+0.2**
	0.9nm,0.3s,baz=215,slow=9.3,SNR=5.4						
ASAJ				Sn	**Sn**	**23 48 26.6**	**-0.9**
	0.4nm,0.3s,baz=288,slow=20,SNR=1.1						
JHJ	**Hachijo jima 2**	**6.56**	**208**	Pn	**Pn**	**23 47 45.4**	**-1.9**
	6.5nm,0.3s,baz=68,slow=19,SNR=2.0						
JHJ				Sn	**Sn**	**23 48 55.5**	**-6.0**
	9.4nm,0.3s,baz=270,slow=20,SNR=1.4						
H11N2	**WAKE ISLAND Hy**	**27.88**	**127**	T	T	00 21 07.6	
	baz=319						
H11N1	**WAKE ISLAND Hy**	**27.89**	**127**	T	T	00 21 16.3	
	baz=319,slow=74						
H11N3	**WAKE ISLAND Hy**	**27.90**	**127**	T	T	00 21 13.1	
	baz=319,slow=74						
SONM	**Songino Array**	**28.12**	**301**	P	**P**	**23 52 03.0**	**+0.5**
	0.3nm,0.7s,baz=50,slow=12,SNR=2.2						
MKAR	**Makanchi Array**	**44.49**	**301**	P	**P**	**23 54 22.3**	**+0.5**
	0.3nm,0.8s,baz=90,slow=7.6,SNR=2.1						
ILAR	**Eielson Array**	**46.99**	**33**	P	**P**	**23 54 41.1**	**-0.1**
	0.4nm,0.8s,baz=267,slow=6.3,SNR=5.1						
WRA	**Warramunga Arr**	**59.23**	**190**	P	**P**	**23 56 10.2**	**-1.7**
	0.3nm,0.5s,baz=8.4,slow=7.1,SNR=5.5						

IDC 16 00:01:14.3±2.5, 2°.01N×126°.77E, h0km, mb3.0/3, mb1 3.3/3, mb1mx3.1/30, mbtmp3.1/3, Error ellipse: s-maj=216.6km s-min=27.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.05**	**162**	P	P	00 06 21.4	-0.1
	0.2nm,0.5s,baz=340,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**26.45**	**165**	P	P	00 06 53.3	0.0
	0.1nm,0.4s,baz=346,slow=13,SNR=1.9						
MKAR	**Makanchi Array**	**58.99**	**326**	P	P	00 11 15.8	0.0
	0.1nm,0.4s,baz=113,slow=7.6,SNR=4.7						

*IDC **16** 00:27:43.1±1.0, 1°.80N×126°.29E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/33, mbtmp3.8/6, Error ellipse: s-maj=73.1km s-min=19.2km az=72.0*
*DJA **16** 00:27:47.9±0.2, 2°.N±2°×12°.7E±°, h10km, M3.9/13, mB4.6/3, mb4.1/5, MLv3.8/13, Mw(mB)3.8/3*
ISC 16 00:27:49.9±0.8, 1°.84N±0°.07×126°.58E±0°.09, h47km, n19, σ1s01/20, mb3.9/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.32**	**144**	P	**Pn**	**00 28 11.1**	**-0.8**
TNTI				S	**Sn**	**00 28 29.8**	**+1.4**
SGSI	**Sangihe**	**2.11**	**330**	P	**Pn**	**00 28 22.9**	**+0.2**
SGSI				S	**Sn**	**00 28 49.0**	**+1.2**
KMSI	**Cibinong**	**2.89**	**244**	P	**Pn**	**00 28 33.3**	**-0.1**
GTOI	**Gorontalo**	**3.77**	**251**	P	**Pn**	**00 28 46.7**	**+1.3**
LUWI	**Luwuk**	**4.76**	**233**	P	**Pn**	**00 28 57.5**	**-1.7**
MRSI	**Marisa**	**4.83**	**254**	P	**Pn**	**00 29 00.1**	**0.0**
NLAI	**Namlea**	**5.07**	**174**	P	**Pn**	**00 29 04.2**	**+0.8**
APSI	**Ampana**	**5.64**	**241**	P	**Pn**	**00 29 11.5**	**+0.3**
	0.1nm339nm41nm,0.9s						
MSAI	**Masohi**	**5.66**	**156**	P	**Pn**	**00 29 12.1**	**+0.6**
	0.1nm628nm9.0nm,0.7s						
MPSI	**Mapaga**	**6.85**	**257**	P	**Pn**	**00 29 29.3**	**+1.5**
	0.1nm491nm6.0nm,0.7s						
BNSI	**Bone**	**8.96**	**226**	P	**Pn**	**00 29 57.0**	**+0.2**
BSSI	**Bau Bau, Buton**	**9.99**	**217**	P	**Pn**	**00 30 11.5**	**+0.6**
SKJI	**Sukabumi**	**21.83**	**246**	P	P	00 32 27.5	-11
WRA	**Warramunga Arr**	**22.95**	**161**	P	**P**	**00 32 48.9**	**-1.4**
	1.4nm,0.5s,baz=339,slow=11,SNR=25						
ASAR	**Alice Springs**	**26.34**	**165**	P	**P**	**00 33 22.1**	**+0.4**
	0.4nm,0.5s,baz=342,slow=11,SNR=10						
SONM	**Songino Array**	**49.03**	**342**	P	**P**	**00 36 31.7**	**-0.6**
	0.3nm,0.4s,baz=158,slow=8.4,SNR=3.6						
PETK	**Petropavlovsk-**	**57.23**	**22**	P	**P**	**00 37 33.1**	**+0.8**
	3.9nm,1.0s,baz=235,slow=5.1,SNR=1.8						
MKAR	**Makanchi Array**	**59.02**	**326**	P	**P**	**00 37 43.7**	**-1.3**
	0.6nm,0.4s,baz=119,slow=7.9,SNR=24						
NRIK	**Noril'sk**	**72.22**	**346**	P	**P**	**00 39 09.5**	**-0.1**
	1.0nm,0.5s,baz=140,slow=7.9,SNR=3.6						

IDC 16 00:39:38.6±9.4, 13°.96S×167°.33E, h608km±182km, mb2.6/5, mb1 2.8/6, mb1mx2.6/35, mbtmp3.6/6, Error ellipse: s-maj=223.1km s-min=31.3km az=161.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.11**	**186**	P	P	00 41 39.7	+0.4
	0.5nm,0.3s,baz=333,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	**32.08**	**255**	P	P	00 45 17.3	-0.5
	0.5nm,0.7s,baz=84,slow=9.2,SNR=5.5						
ASAR	**Alice Springs**	**33.01**	**248**	P	P	00 45 24.6	-1.0
	0.3nm,0.8s,baz=79,slow=9.1,SNR=5.2						
FITZ	**Fitzroy Crossi**	**40.22**	**258**	P	P	00 46 25.8	+1.3
	0.7nm,0.7s,baz=90,slow=8.1,SNR=1.8						
ILAR	**Eielson Array**	**85.78**	**18**	P	P	00 51 13.7	-0.7
	0.4nm,0.8s,baz=228,slow=6.2,SNR=5.0						
MKAR	**Makanchi Array**	**96.69**	**316**	P	P	00 52 05.9	+0.9
	0.3nm,0.7s,baz=102,slow=6.1,SNR=2.3						

*IDC **16** 00:42:42.0±0.5, 1°.72N×126°.16E, h0km, mb4.5/22, mb1 4.5/24, mb1mx4.5/34, mbtmp4.4/24, ML4.0/2, MS3.2/14, Ms1 3.2/14, ms1mx3.1/36, Error ellipse: s-maj=23.1km s-min=10.6km az=68.0*
*NEIC **16** 00:42:46.5±2.0, 1°.89N±0°.07×126°.40E±0°.06, h35km±1km, mb4.7/76, Error ellipse: s-maj=13.1km s-min=8.8km az=217.0*
*DJA **16** 00:42:47.7±0.2, 2°.N±2°×12°.6E±°, h10km, M4.6/18, mb4.9/17, mB5.1/12, MLv4.7/18, Mw(mB)4.4/12*
*MAN **16** 00:42:48.0, 1°.97N×126°.03E, h1km, MS4.8*
*KLM **16** 00:42:51.0, 1°.71N×126°.45E, h73km, mb4.7*
ISC 16 00:42:48.4±0.3, 1°.82N±0°.03×126°.42E±0°.04, h47km, n208, σ1s64/210, mb4.6/77, MS3.3/15, 6C-3D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**138**	P	**Pn**	**00 43 12.0**	**+0.3**
TNTI				S	**Sn**	**00 43 33.3**	**+4.2**
TNTI	**Ternate**	**1.41**	**138**	Pn	**Pn**	**00 43 11.7**	**0.0**
TNTI					**Sn**	**00 43 29.8**	**+0.7**
SGSI	**Sangihe**	**2.05**	**334**	P	**Pn**	**00 43 22.5**	**+2.0**
SGSI				S	**Sn**	**00 43 48.2**	**+3.3**
KMSI	**Cibinong**	**2.73**	**243**	P	**Pn**	**00 43 31.2**	**+1.4**
KMSI				S	**Sn**	**00 44 04.8**	**+3.1**
GTOI	**Gorontalo**	**3.60**	**251**	P	**Pn**	**00 43 43.4**	**+1.6**
LUWI	**Luwuk**	**4.62**	**232**	P	**Pn**	**00 43 57.6**	**+1.8**
LUWI				S	**Sn**	**00 44 51.8**	**+3.5**
LUWI	**Luwuk**	**4.62**	**232**	Pn	**Pn**	**00 43 57.0**	**+1.2**
MRSI	**Marisa**	**4.67**	**253**	P	**Pn**	**00 43 58.8**	**+2.3**
NLAI	**Namlea**	**5.07**	**172**	P	**

0.9nm,0.7s,baz=336,slow=2.5,SNR=3.0
WRA S **S** **00 51 53.1 -3.3**
3.9nm,0.8s,baz=331,slow=20,SNR=8.4
WRA Warramunga Arr 22.98 161 P **P** **00 47 47.4 -1.9**
WB2 Warramunga Arr 22.99 161 P **P** **00 47 48.3 -1.1**
WB2 IAmb IAmb 00 47 58.1
comp=Z,32nm,0.8s
WR0 Warramunga Arr 23.07 160 P **P** **00 47 49.1 -1.0**
WR0 IAmb IAmb 00 47 58.9
comp=Z,22nm,0.8s
MDSI Maura Dua 23.09 254 P **P** **00 47 52.2 +1.8**
PMG Port Moresby 23.48 119 LR LR 00 57 54.9
comp=Z,90nm,18.0s,baz=250,slow=39
PSA00 Pilbara Seismi 24.12 195 P **P** **00 47 59.0 -1.0**
PSA00 IAmb IAmb 00 48 00.3
comp=Z,34nm,1.5s
SDSI Sungai Dareh 25.14 264 P **P** **00 48 11.1 +1.7**
IPM Ipoh 25.49 277 P **P** **00 48 10.6 -2.0**
IPM Ipoh 25.49 277 P **P** **00 48 12.0 -0.6**
KULM Kulim 25.94 278 P **P** **00 48 17.0 +0.3**
KRVT Keravat (AS076 26.30 103 LR LR 00 58 03.9
comp=Z,73nm,19.8s,baz=283,slow=35
AS31 Alice Springs 26.36 164 P **P** **00 48 19.6 -0.8**
ASAR Alice Springs 26.36 164 P **P** **00 48 19.9 -0.6**
comp=Z,4.3nm,0.4s,baz=345,slow=8.0,SNR=60
ASAR PcP **PcP** **00 51 45.8 +0.3**
comp=Z,0.9nm,0.4s,baz=349,slow=2.9,SNR=3.8
ASAR S **S** **00 52 49.6 -0.9**
comp=Z,2.1nm,1.0s,baz=341,slow=19,SNR=6.7
GIRL Giralia 27.07 205 P **P** **00 48 26.9 +0.2**
CHAI Chaiyaphum 27.84 302 P **P** **00 48 33.9 +0.1**
comp=Z,624nmcomp=Z,16nm,0.7s
GSI Gunungsitoli 28.84 269 P **P** **00 48 40.4 -2.3**
GSI IAmb IAmb 00 48 44.5
comp=Z,13nm,0.6s
CTA Charters Tower 29.20 139 P **P** **00 48 46.1 +0.3**
comp=Z,2.1nm,0.6s,baz=310,slow=12,SNR=2.7
CTAO Charters Tower 29.20 139 P **P** **00 48 45.5 -0.3**
UTHA Uthaitani 29.89 299 P **P** **00 48 51.4 -0.6**
comp=Z,208nmcomp=Z,16nm,0.7s
UTTA Uttaradit 29.92 304 P **P** **00 48 55.0 +2.8**
comp=Z,9.8nm,0.8s
SUKH Sukhothai 30.57 302 P **P** **00 48 58.0 0.0**
comp=Z,17nm,0.6s
CM35 Chiang Mai Arr 31.54 304 P **P** **00 49 07.0 +0.5**
CMAR Chiang Mai Arr 31.61 303 P **P** **00 49 07.3 +0.1**
comp=Z,1.0nm,0.4s,baz=128,slow=9.7,SNR=9.6
CMAR PcP **PcP** **00 52 00.9 +2.1**
comp=Z,0.6nm,0.3s,baz=167,slow=1.8,SNR=4.4
CMAR LR LR 01 03 14.3
comp=Z,36nm,18.9s,baz=171,slow=39
CMAR Chiang Mai Arr 31.61 303 P **P** **00 49 05.2 -1.9**
CM15 Chiang Mai Arr 31.62 303 P **P** **00 49 10.7 +3.5**
CMMT Chiang Mai 31.77 304 P **P** **00 49 08.0 -0.6**
CHTO Chiang Mai 31.78 304 P **P** **00 49 06.0 -2.6**
CHTO IAmb IAmb 00 49 09.9
comp=Z,6.3nm,0.7s
CM33 Chiang Mai Arr 31.78 304 P **P** **00 49 08.0 -0.6**
CM32 Chiang Mai Arr 31.78 304 P **P** **00 49 10.0 +1.4**
MORW Morawa 32.28 197 P **P** **00 49 13.8 +0.9**
MORW IAmb IAmb 00 49 15.1
comp=Z,7.8nm,1.0s
FORT Forrest 32.46 177 P **P** **00 49 14.5 +0.1**
JMN Monobe 32.50 12 P **P** **00 49 13.7 -1.1**
KMI Kunming 32.53 317⇓ *eP* **P** **00 49 17.3 +1.9**
KMI pP sP 00 49 33.6 +0.8
KMI pmax pmax
comp=Z,12nm,0.5s
KMI pmax pmax
comp=Z,96nm,4.9s
ENH Enshi 32.54 332 P **P** **00 49 12.9 -2.3**
ENH IAmb IAmb 00 49 20.4
comp=Z,11nm,0.7s
KSRS Korea Array 35.48 2 P **P** **00 49 42.6 +2.0**
comp=Z,2.7nm,0.6s,baz=185,slow=9.6,SNR=10
KSRS LR LR 01 06 08.0
comp=Z,15nm,18.9s,baz=194,slow=40
BBOO Buckleboo 35.63 166 P **P** **00 49 41.7 -0.2**
BBOO IAmb IAmb 00 49 48.3
comp=Z,9.0nm,0.9s
NWAO Narrogin (SRO) 35.63 193 P **P** **00 49 42.2 +0.2**
NWAO IAmb IAmb 00 49 48.8
comp=Z,15nm,1.1s
XAN Xi'an 35.98 335 P **P** **00 49 44.0 -1.0**
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN Xi'an 35.98 335 P **P** **00 49 42.8 -2.2**
CD2 Chengdu 36.01 326 *eP* **P** **00 49 45.5 +0.2**
MJAR Matsushiro Arr 36.23 16 P **P** **00 49 46.8 -0.3**
comp=Z,1.8nm,0.4s,baz=179,slow=9.5,SNR=6.5
MJAR LR LR 01 02 14.1
comp=Z,18nm,21.9s,baz=155,slow=32
MAJO Matsushiro 36.23 16 P **P** **00 49 45.9 -1.1**
MAJO IAmb IAmb 00 50 02.3
comp=Z,19nm,1.2s
MAT Matsushiro 36.23 16 P **P** **00 49 46.9 -0.1**
STKA Stephens Creek 36.48 158 P **P** **00 49 48.9 -0.3**
comp=Z,7.9nm,0.7s,baz=332,slow=10,SNR=16
STKA LR LR 01 06 19.1
comp=Z,64nm,18.4s,baz=21,slow=39
STKA Stephens Creek 36.48 158 P **P** **00 49 48.5 -0.6**
BJT Baijiatuan 39.14 347 P **P** **00 50 09.8 -1.7**
BJT IAmb IAmb 00 50 15.9
comp=Z,5.9nm,0.6s
BJI Beijing 39.16 348 P **P** **00 50 11.1 -0.6**
BJI pmax pmax
comp=Z,6.0nm,0.9s
LZH Lanzhou 39.99 331⇑ P **P** **00 50 19.4 +0.5**
LZH pP pP 00 50 29.3 -1.8
LZH sP sP 00 50 31.8 -4.7
LZH PP **PP** **00 51 51.8 +0.2**
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,83nm,4.9s
LZH LR LR
comp=N,200nm,15.0s
LZH LR LR
comp=E,170nm,16.2s
LZH LR LR
comp=Z,280nm,16.6s
ARMA Armidale 40.07 145 P **P** **00 50 20.1 +0.5**
ARMA IAmb IAmb 00 50 35.8
comp=Z,15nm,1.1s
SHL Shillong 40.78 308 P **P** **00 50 23.7 -1.9**
SHL IAmb IAmb 00 50 26.6
comp=Z,12nm,0.5s
HHC Hu-ho-hao-te 41.11 343 *eP* **P** **00 50 26.5 -1.5**
HHC pmax pmax
comp=Z,11nm,1.1s
HHC pmax pmax
comp=Z,140nm,5.7s
USRK Ussuriysk Ar. 42.49 6 P **P** **00 50 40.9 +1.9**
comp=Z,1.1nm,0.5s,baz=179,slow=7.1,SNR=3.2
USRK Ussuriysk Ar. 42.49 6 P **P** **00 50 39.0 0.0**
H11S3 WAKE ISLAND Hy 42.80 65 T T 01 37 21.5
baz=249
H11S2 WAKE ISLAND Hy 42.82 65 T T 01 37 44.9
baz=249,slow=74
H11S1 WAKE ISLAND Hy 42.82 65 T T 01 38 00.6
baz=249,slow=74
TOO Toolangi 43.00 158 P **P** **00 50 44.6 +1.2**
TOO IAmb IAmb 00 50 55.4
comp=Z,24nm,1.4s
H11N1 WAKE ISLAND Hy 43.37 63 T T 01 38 29.7
baz=250
H11N2 WAKE ISLAND Hy 43.38 63 T T 01 38 44.8
baz=250
H11N3 WAKE ISLAND Hy 43.39 63 T T 01 38 28.6
baz=250
LSA Lhasa 43.48 313 P **P** **00 50 46.8 -1.2**
LSA IAmb IAmb 00 50 49.9
comp=Z,9.5nm,0.7s
ASAJ Asahikawa 44.50 17 P **P** **00 50 57.0 +1.7**
comp=Z,11nm,0.9s,baz=222,slow=12,SNR=2.2
GTA Gaotai 44.58 330 *eP* **P** **00 50 56.1 0.0**
GTA pP pP 00 51 06.3 -2.2
GTA sP sP 00 51 10.3 -3.5
GTA PcP **PP** **00 52 41.5 +0.6**
GTA S **S** **00 57 32.4 +3.6**
GTA pmax pmax
comp=Z,5.0nm,0.8s
GTA pmax pmax
comp=Z,41nm,7.3s
GTA LR LR
comp=N,80nm,17.5s
GTA LR LR
comp=E,82nm,16.4s
GTA LR LR
comp=Z,91nm,17.5s
DZM Mont Dzumac 45.72 124 P **P** **00 51 06.3 +0.8**
comp=Z,3.3nm,0.6s,baz=278,slow=5.6,SNR=8.1
DZM Mont Dzumac 45.72 124 P **P** **00 51 05.7 +0.2**
PALK Pallekele 45.87 278 P **P** **00 51 05.3 -1.4**
PALK IAmb IAmb 00 51 07.3
comp=Z,8.7nm,0.8s
ULN Ulaanbaatar 48.83 343 P **P** **00 51 28.0 -1.3**
ULN IAmb IAmb 00 51 34.0
comp=Z,3.9nm,0.7s
SONM Songino Array 49.00 342 P **P** **00 51 30.6 +0.1**
comp=Z,2.5nm,0.7s,baz=158,slow=8.5,SNR=22
SONM PcP **PcP** **00 52 54.3 +0.3**
comp=Z,2.1nm,0.8s,baz=160,slow=5.1,SNR=5.2
SONM LR LR 01 15 19.6
comp=Z,33nm,20.2s,baz=182,slow=40
SONM Songino Array 49.00 342 P **P** **00 51 29.6 -1.0**
WMQ Urumqi 54.11 326 *eP* **P** **00 52 08.9 +0.1**
WMQ Urumqi 54.11 326 P **P** **00 52 07.4 -1.4**
WMQ IAmb IAmb 00 52 10.4
comp=Z,7.1nm,0.8s
PEA0B Petropavlovsk- 57.30 22 P **P** **00 52 32.4 +1.0**
PETK Petropavlovsk- 57.30 22 P **P** **00 52 33.1 +1.7**
comp=Z,3.8nm,0.8s,baz=175,slow=2.9,SNR=12
PETK Petropavlovsk- 57.30 22 P **P** **00 52 32.8 +1.4**
ZSN Zaisan 57.94 328 *eP* **P** **00 52 35.1 -0.9**
comp=Z,1.5nm,0.9s,baz=328
ZSN *eS* **S** **01 00 33.1 +0.3**
baz=328
SHLS Shalkode 58.62 321 *eP* **P** **00 52 38.3 -2.6**
comp=Z,5.5nm,0.8s,baz=321
NIL Nilore 58.85 309 P **P** **00 52 41.2 -1.5**
NIL IAmb IAmb 00 52 42.7
comp=Z,6.4nm,0.7s
MK31 Makanchi Array 58.94 326 P **P** **00 52 42.4 -0.6**
MKAR Makanchi Array 58.94 326 P **P** **00 52 42.5 -0.5**
comp=Z,12nm,0.5s,baz=122,slow=8.2,SNR=114
MKAR LR LR 01 20 39.4
comp=Z,24nm,19.4s,baz=110,slow=39
MKAR Makanchi Array 58.94 326 P **P** **00 52 42.2 -0.9**
MAKZ Makanchi 59.13 326 P **P** **00 52 43.3 -1.0**
SATY Saty 59.23 321 *eP* **P** **00 52 44.4 -0.8**
comp=Z,4.8nm,0.7s,baz=321
KPKS Kokpek 59.26 321 *eP* **P** **00 52 44.3 -1.1**
comp=Z,3.3nm,0.6s,baz=321
KDJ Kajisay 59.56 319 P **P** **00 52 46.5 -1.1**
KDJ IAmb IAmb 00 52 49.0
comp=Z,9.3nm,1.0s
YAK Yakutsk 60.11 2 P **P** **00 52 50.8 +0.1**
MDOK Medeo 60.15 320 *eP* **P** **00 52 50.8 -0.8**
baz=320
MDOK *eS* **S** **01 01 02.1 +0.2**
baz=320
TNSS Tian-Shan 60.15 320 *eP* **P** **00 52 51.1 -0.8**
baz=320
TDK Taldyqorghan 60.22 323 *eP* **P** **00 52 50.9 -1.0**
comp=Z,5.4nm,0.5s,baz=322
LBZ Lake Benmore 60.30 145 P **P** **00 52 54.4 +0.1**
CHKK Chushkaly 60.52 321 *eP* **P** **00 52 52.6 -1.4**
baz=321
MA2 Magadan 60.62 14 LR LR 01 16 31.1
comp=Z,15nm,21.6s,baz=228,slow=33
BKZ Black Stump Fm 61.39 137 P **P** **00 52 59.3 -0.7**
AAK Ala-Archa 61.56 319 P **P** **00 53 00.7 -0.5**
ZAA0 Zalesovo Array 62.14 334 P **P** **00 53 03.0 -1.6**
ZALV Zalesovo Beam 62.14 334 P **P** **00 53 03.2 -1.5**
comp=Z,1.7nm,0.4s,baz=134,slow=7.4,SNR=9.9
ZALV LR LR 01 20 12.0
comp=Z,38nm,21.0s,baz=124,slow=36
ZALV Zalesovo Beam 62.14 334 P **P** **00 53 02.4 -2.2**
SEM Semipalatinsk 62.15 329 *eP* **P** **00 53 03.9 -1.2**
comp=Z,1.5nm,0.5s,baz=328
KBL Kabul 62.44 308 P **P** **00 53 05.5 -1.8**
KBL IAmb IAmb 00 53 09.0
comp=Z,5.4nm,0.8s
BTLS Baital 62.94 321 *eP* **P** **00 53 08.6 -1.6**
comp=Z,1.3nm,0.8s,baz=321
GAR Garm 62.99 313 P **P** **00 53 09.2 -1.6**
BTK Batken 63.02 315 P **P** **00 53 09.7 -1.2**
BTK IAmb IAmb 00 53 12.5
comp=Z,5.4nm,1.1s
KURK Kurchatov 63.18 328 P **P** **00 53 10.7 -0.9**
CHGR Chuyangaron 63.71 313 P **P** **00 53 13.9 -1.7**
CHGR IAmb IAmb 00 53 29.9
comp=Z,10nm,1.0s
DZA Taraz 63.78 318 *eP* **P** **00 53 14.0 -1.9**
baz=318
SEY Seymchan 63.95 13 LR LR 01 18 08.6
comp=Z,24nm,21.4s,baz=326,slow=33
IUG Iuzhnay 64.37 317 *eP* **P** **00 53 18.6 -1.2**
comp=Z,2.3nm,0.7s,baz=317
KK31 Karatay Array 64.42 318 P **P** **00 53 18.6 -1.3**
KKAR Karatay Array 64.42 318 P **P** **00 53 18.0 -1.9**
KKAR Karatay Array 64.42 318 P **P** **00 53 18.2 -1.7**
BRZS Berezniki 66.06 325 *eP* **P** **00 53 29.2 -1.3**
comp=Z,1.1nm,0.6s,baz=325
BRVK Borovoye 68.82 327 P **P** **00 53 46.6 -1.2**
BRVK IAmb IAmb 00 53 50.3
comp=Z,8.1nm,0.9s
CASY Casey 68.90 187 P **P** **00 53 48.4 +0.4**
CASY IAmb IAmb 00 54 02.3
comp=Z,14nm,1.4s
TIXI Tiksi 69.74 1 P **P** **00 53 52.6 -0.6**
TIXI IAmb IAmb 00 54 00.0
comp=Z,7.1nm,1.2s
UOSS Minazif 71.31 296 P **P** **00 54 01.3 -2.4**
GEYT Alibeck 71.85 309 P **P** **00 54 06.0 -0.7**
comp=Z,3.1nm,0.8s,baz=92,slow=7.4,SNR=6.0
GEYT Alibeck 71.85 309 P **P** **00 54 05.8 -0.9**
NRIK Noril'sk 72.20 346 P **P** **00 54 08.5 +0.4**
comp=Z,6.2nm,0.7s,baz=131,slow=6.4,SNR=29
SOCY Socotra 72.44 282 P **P** **00 54 09.6 -1.1**
ABKAR Akbulak array 73.42 321 P **P** **00 54 14.8 -1.0**
ABKAR Akbulak array 73.42 321 P **P** **00 54 14.6 -1.2**
AKTO Aktyubinsk 74.95 322 LR LR 01 29 14.3
comp=Z,16nm,20.0s,baz=81,slow=37
AKUT Akutan 75.66 34 P **P** **00 54 27.1 -1.5**
ARU Arti 76.38 328 P **P** **00 54 31.5 -1.1**
ARU IAmb IAmb 00 54 33.6
comp=Z,7.0nm,0.6s
ABPO Ambohimpanom 80.38 250 P **P** **00 54 56.0 +0.3**
ABPO IAmb IAmb 00 54 58.9
comp=Z,8.8nm,1.1s
RAYN Ar Rayn 80.94 293 P **P** **00 54 57.1 -1.5**
RAYN IAmb IAmb 00 55 00.1
comp=Z,6.1nm,0.8s
VNDA Vanda 81.59 173 P **P** **00 55 00.9 +0.1**
comp=Z,1.3nm,0.5s,baz=323,slow=6.6,SNR=20
VNDA Vanda 81.59 173 P **P** **00 55 01.0 +0.1**
AKH Akhalkalaki 83.49 311 P **P** **00 55 11.3 -0.4**
KBZ Khabaz 84.06 314 P **P** **00 55 13.9 -0.4**
comp=Z,1.5nm,0.7s,baz=56,slow=24,SNR=6.8
IMAR Indian Mountai 84.20 24 P **P** **00 55 16.0 +1.4**
KIV Kislovodsk 84.22 314 P **P** **00 55 14.9 -0.4**
KIV IAmb IAmb 00 55 19.1
comp=Z,4.4nm,0.8s
SUA Susitna One 84.98 29 P **P** **00 55 19.2 +0.4**
COLD Coldfoot 85.76 23 P **P** **00 55 23.8 +1.5**
COLD IAmb IAmb 00 55 26.1
comp=Z,4.2nm,0.9s
RND Reindeer 86.01 27 P **P** **00 55 23.9 +0.1**
KLMR Klimovskoe 86.90 331 *eP* **P** **00 55 23.9 -4.2**
KLMR AMP 00 55 40.1
comp=Z,11nm,1.0s
ILAR Eielson Array 86.95 25 P **P** **00 55 27.4 -0.9**
comp=Z,0.4nm,0.6s,baz=252,slow=5.0,SNR=8.3
ILAR Eielson Array 86.95 25 P **P** **00 55 27.8 -0.5**
BMAR Burnt Mountain 87.94 23 P **P** **00 55 34.3 +1.2**
TOKA Tokat 88.79 310 P **P** **00 55 37.6 -0.1**
TOKA IAmb IAmb 00 55 56.7
comp=Z,6.3nm,1.1s
K27K Chicken 89.04 26 P **P** **00 55 39.1 +0.9**
K27K IAmb IAmb 00 55 48.6
comp=Z,3.7nm,1.1s
KMBO Kilima Mbogo 89.20 269 P **P** **00 55 42.2 +1.8**
comp=Z,3.6nm,0.9s,baz=54,slow=3.9,SNR=6.1
KMBO Kilima Mbogo 89.20 269 P **P** **00 55 39.7 -0.7**
KMBO IAmb IAmb 00 55 45.5
comp=Z,4.3nm,0.9s
BRTR Keskin Array B 90.99 310 P **P** **00 55 46.8 -1.3**
comp=Z,1.1nm,0.7s,baz=130,slow=3.9,SNR=7.8
BRTR Keskin Array B 90.99 310 P **P** **00 55 47.1 -1.0**
ARCES ARCESS Array B 92.12 340 P **P** **00 55 53.4 +0.9**
comp=Z,4.0nm,0.8s,baz=74,slow=6.6,SNR=6.2
AKASG Malin Array Be 93.17 321 P **P** **00 55 57.0 -0.6**
comp=Z,0.8nm,0.4s,baz=69,slow=4.3,SNR=3.2
FINES FINESS Array B 93.35 332 P **P** **00 55 57.5 -0.8**
comp=Z,1.6nm,0.5s,baz=76,slow=4.4,SNR=13
TESR Tescani 95.41 317⇑ P **P** **00 56 07.9 -0.2**
VRI Vrincioaia 95.45 316⇑ P **P** **00 56 10.9 +2.5**
BIZ Bicaz 95.72 317⇑ P **P** **00 56 17.2 +7.7**
MLR Muntele Rosu 95.05 316⇓ P **P** **00 56 13.2 +2.0**
BURAR Bucovina Array 96.21 318⇑ P **P** **00 56 13.0 +1.2**
BURAR Bucovina Array 96.21 318 P **P** **00 56 11.1 -0.7**
BUR08 Bucovina Ar. S 96.21 318 P **P** **00 56 12.1 +0.2**
BUR08 IAmb IAmb 00 56 28.8
comp=Z,5.3nm,1.2s
NOA NORSAR Array B 100.34 333 P **Pdif** **00 56 31.2 +1.2**
comp=Z,0.3nm,0.5s,baz=65,slow=3.9,SNR=1.6
TXAR Lajitas Array 123.00 53 PKP **PKiKP** **01 01 41.4 +0.7**
comp=Z,0.5nm,0.8s,baz=215,slow=0.5,SNR=4.7
TXAR Lajitas Array 123.00 53 PKPdf **PKiKP** **01 01 40.7 0.0**
TORD Torodi Ar. Bea 123.19 287 PKP **PKiKP** **01 01 41.5 +0.2**
comp=Z,2.1nm,0.8s,baz=53,slow=2.2,SNR=12

TAP 16 00:47:38.6, 23.65N×121.24E, h4km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHY	**Hungye**	**0.16**	**152**	*i* P		Pg	00 47 42.9	+1.1
	baz=141							
EHY				S		Sg	00 47 45.2	+1.3
	baz=141							
EGFH	**Guangfu**	**0.17**	**84**	*i* P		Pg	00 47 42.7	+0.7
	baz=82							
EGFH				S		Sg	00 47 45.1	+0.8
	baz=82							
HGSD	**Ruisui**	**0.23**	**133**	*eP*		Pg	00 47 43.9	+0.8
	baz=129							
HGSD				S		Sg	00 47 48.2	+2.2
	baz=129							
ESL	**Shilin**	**0.24**	**47**	*i* P		Pg	00 47 43.8	+0.6
	baz=48							
ESL				S		Sg	00 47 47.4	+0.9
	baz=48							
YULB	**Yu-li**	**0.26**	**168**	P		Pg	00 47 44.5	+0.8
	baz=155							
YULB				S		Sg	00 47 47.8	+0.8
	baz=155							
SSLB	**Suanglung**	**0.30**	**298**	P		Pb	00 47 45.5	-1.0
	baz=300							
SSLB				S		Sg	00 47 49.2	+1.0
	baz=300							
TWF1	**Yuli**	**0.30**	**170**	*eP*		Pg	00 47 44.9	+0.5
	baz=157							
TWF1				S		Sg	00 47 49.7	+1.3
	baz=157							
EYUL	**Yuli**	**0.31**	**166**	*eP*		Pg	00 47 45.6	+1.1
	baz=155							
EYUL				S		Sg	00 47 49.7	+1.1
	baz=155							
WHF	**Hehuan Shan**	**0.49**	**3**	*eP*		Pb	00 47 49.1	-1.0
	baz=356							
WHF				*eS*		Sb	00 47 56.2	-1.6
	baz=356							
ELDTW	**Lidau**	**0.50**	**204**	*eP*		Pg	00 47 48.5	+0.2
	baz=219							
ELDTW				*eS*		Sg	00 47 55.4	+0.6
	baz=219							

IDC ***16*** *00:57:13.3±1.8,2˚.14N×127˚.14E,h0km,mb3.3/5, mb1 3.5/5,mb1mx3.2/45,mbtmp3.4/5, Error ellipse: s-maj=121.5km s-min=21.0km az=70.0*
DJA ***16*** *00:57:17.9±1.3,2˚N±4˚×12˚6E±˚,h12km±11km,M3.3/7, MLv3.3/7*

ISC 16 00:57:18.3±1.7,2˚2N±0˚2×127˚2E±0˚3,h35km,n7,σ0§68/8, mb3.5/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**174**	P		**Pn**	**00 57 41.9**	**+0.2**
SGSI	**Sangihe**	**2.23**	**311**	P		**Pn**	**00 57 52.6**	**-0.2**
SGSI				S		**Sn**	**00 58 19.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**20.23**	**184**	P		**P**	**01 01 50.2**	**-0.2**
	0.7nm,0.8s,baz=354,slow=10,SNR=1.5							
WRA	**Warramunga Arr**	**23.09**	**163**	P		**P**	**01 02 19.9**	**-1.2**
	0.3nm,0.3s,baz=340,slow=11,SNR=12							
ASAR	**Alice Springs**	**26.52**	**166**	P		**P**	**01 02 52.7**	**-0.1**
	0.2nm,0.6s,baz=340,slow=7.1,SNR=2.5							
MKAR	**Makanchi Array**	**59.08**	**326**	P		**P**	**01 07 15.1**	**0.0**
	0.2nm,0.3s,baz=123,slow=8.3,SNR=8.1							
KURBB	**Kurchatov Arra**	**63.28**	**328**	P		**P**	**01 07 44.2**	**+0.8**
	0.2nm,0.3s,baz=124,slow=6.7,SNR=1.5							

IDC ***16*** *01:05:43.7±3.3,1˚91N×96˚26E,h0km,mb3.6/4,mb1 3.8/5, mb1mx3.3/51,mbtmp3.6/5,ML4.7/1,Error ellipse: s-maj=132.0km s-min=30.4km az=57.0*
NEIC ***16*** *01:05:52.3±1.4,2˚.06N±0˚.10×96˚.5E±0˚.1,h65km±12km, mb4.1/10,Error ellipse: s-maj=23.5km s-min=6.5km az=55.0*

ISC 16 01:05:48.1±1.2,2˚0N±0˚.1×96˚3E±0˚.1,h28km,n28, σ1§17/22,mb4.0/6,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.45**	**118**			**Pb**	**01 06 15.0**	**+0.6**
RPSI	**Rantau Prapat**	**2.72**	**75**	Pn		**Pn**	**01 06 31.5**	**+1.5**
LHMI	**Lhok Sumawe**	**3.29**	**11**	Pn		**Pn**	**01 06 40.5**	**+2.7**
KULM	**Kulim**	**5.45**	**53**			**Pn**	**01 07 07.7**	**+0.2**
SRIT	**Nakonsritamara**	**7.35**	**26**	Pn		**Pn**	**01 07 34.3**	**+0.6**
KSM	**Kuching**	**14.02**	**92**	Pn		**Pn**	**01 09 04.2**	**-0.8**
CISI	**Cisompet, Garu**	**14.89**	**130**	Pn		**Pn**	**01 09 18.3**	**+1.3**
CM31	**Chiang Mai Arr**	**16.58**	**9**	Pn		**Pn**	**01 09 39.1**	**+0.3**
CM31				IAmb	IAmb		01 10 14.4	
	comp=Z,6.7nm,0.5s							
CMAR	**Chiang Mai Arr**	**16.58**	**9**	Pn		**Pn**	**01 09 39.2**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=197,slow=11,SNR=2.1							
SHL	**Shillong**	**23.84**	**350**	P		**P**	**01 10 57.8**	**-1.5**
KAPI	**Kappang**	**24.44**	**107**	P		**P**	**01 11 03.1**	**-1.7**
KAPI				IAmb	IAmb		01 11 11.5	
	comp=Z,6.7nm,1.1s							
H08S2	**Diego Garcia H**	**25.59**	**248**	T		T	01 37 41.6	
	baz=68,slow=76,SNR=24							
H08S3	**Diego Garcia H**	**25.60**	**248**	T		T	01 37 46.6	
	baz=68,slow=76,SNR=45							
H08S1	**Diego Carcia H**	**25.61**	**248**	T		T	01 37 48.8	
	baz=68,slow=76,SNR=7.6							
H01W3	**Cape Leeuwin H**	**40.31**	**157**	T		T	01 56 23.5	
	baz=332,slow=76,SNR=6.1							
H01W2	**Cape Leeuwin H**	**40.32**	**157**	T		T	01 56 28.9	
	baz=332,slow=76,SNR=5.8							
H01W1	**Cape Leeuwin H**	**40.32**	**157**	T		T	01 56 33.2	
	baz=332,slow=76,SNR=6.2							
WRA	**Warramunga Arr**	**43.21**	**122**	P		**P**	**01 13 46.8**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=300,slow=9.4,SNR=2.2							
WRAB	**Tennant Creek**	**43.22**	**122**	P		**P**	**01 13 47.3**	**+0.1**
CHGR	**Chuyangaron**	**44.14**	**329**	P		**P**	**01 13 54.9**	**+0.5**
MK31	**Makanchi Array**	**46.28**	**347**	P		**P**	**01 14 11.2**	**+0.1**
MKAR	**Makanchi Array**	**46.28**	**347**	P		**P**	**01 14 11.0**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=164,slow=7.7,SNR=10							
SONM	**Songino Array**	**46.51**	**9**	P		**P**	**01 14 12.5**	**-0.6**
ULN	**Ulaanbaatar**	**46.65**	**10**	P		**P**	**01 14 11.8**	**-2.5**
KK31	**Karatay Array**	**46.96**	**334**	P		**P**	**01 14 16.3**	**-0.3**
KK31				IAmb	IAmb		01 16 03.1	
	comp=Z,7.0nm,1.9s							
KURBB	**Kurchatov Arra**	**50.75**	**345**	P		**P**	**01 14 45.9**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=158,slow=7.2,SNR=2.2							
ZALV	**Zalesovo Beam**	**52.66**	**351**	P		**P**	**01 15 00.2**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=171,slow=6.7,SNR=7.3							
ZALV	**Zalesovo Beam**	**52.66**	**351**	P		**P**	**01 15 00.6**	**+1.0**

IDC ***16*** *01:11:38.8±1.4,52˚.74N×106˚.49E,h0km,mb3.8/6, mb1 3.8/11,mb1mx3.6/51,mbtmp3.8/11,ML3.3/5,MS2.9/3, Ms1 2.9/3,ms1mx2.5/59,Error ellipse: s-maj=25.3km s-min=12.9km az=126.0*
NEIC ***16*** *01:11:38.8±1.8,52˚.7N±0˚.1×106˚.8E±0˚.1,h10km±1km, mb4.1/13,Error ellipse: s-maj=17.1km s-min=11.1km az=1.0*
MOS ***16*** *01:11:38.7±0.9,52˚.67N×106˚.69E,h12km,mb4.1/5,Error ellipse: s-maj=9.0km s-min=6.8km az=74.3*
BYKL ***16*** *01:11:40.3±0.1,52˚.69N×106˚.55E,h16km±2km,FELT I=IV*

MSK at Tyrgan,Yelantsy,Petrova,Buguldeyka,II at Irkutsk

ISC 16 01:11:39.5±0.8,52°66N±0°02×106°57E±0°02,h11km±5km, n99,σ2s03/149,mb3.9/12,8C-6D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRG	**Tyrgan**	**0.17**	**305**	*i*Pg	**Pb**	**01 11 44.5**	**-0.2**
TRG				*e*Sg	**Sb**	**01 11 47.4**	**+1.6**
TRG	**Tyrgan**	**0.17**	**305**	*i*PG	**Pb**	**01 11 44.5**	**-0.2**
TRG				*e*		01 11 47.4	
TRG	comp=Z,8μm,0.2s			pmax	pmax		
TRG	comp=N,57μm,0.1s			smax	smax		
ZRHB	**Zarechye**	**0.37**	**107**	*i*Pg	**Pg**	**01 11 47.6**	**+0.7**
ZRHB				Pmax		01 11 50.3	
ZRHB	comp=N,643nm,0.3s			*e*Sg	**Sg**	**01 11 53.2**	**+1.4**
ZRHB				Smax		01 11 55.9	
ZRHB	comp=N,11μm,0.3s			*e*		01 11 58.0	
STDB	**Stepnoy Dvoret**	**0.51**	**194**	*i*Pg	**Pb**	**01 11 51.1**	**+0.5**
STDB				*e*Sg	**Sb**	**01 11 59.7**	**+1.7**
KAB	**Kabansk**	**0.62**	**175**	*e*Pg	**Pg**	**01 11 52.0**	**+0.5**
KAB				*e*		01 11 57.8	
KAB	comp=N,964nm,0.2s			max		01 11 58.0	
KAB				*e*Sg	**Sg**	**01 12 00.9**	**+1.3**
KAB	comp=N,8μm,0.3s			Smax		01 12 02.0	
KAB	**Kabansk**	**0.62**	**175**	*e*PG	**Pg**	**01 11 52.4**	**+0.9**
KAB				*e*		01 12 01.0	
KAB	comp=Z,634nm,0.1s			pmax	pmax		
KAB	comp=E,8μm,0.4s			smax	smax		
FFNB	**Fofonovo**	**0.63**	**169**	*i*Pg	**Pg**	**01 11 52.0**	**+0.3**
FFNB				*e*Sg	**Sg**	**01 12 00.8**	**+0.8**
KELR	**Kotokel**	**0.92**	**83**	*i*Pg	**Pb**	**01 11 56.5**	**-1.1**
KELR				*e*Pb	**Pg**	**01 11 58.4**	**+1.1**
KELR				*e*Sg	**Sb**	**01 12 08.6**	**-1.3**
KELR				*e*Sb	**Sn**	**01 12 11.5**	**-0.3**
BGT	**Bolshoye Golou**	**0.95**	**229**	*e*Pg	**Pb**	**01 11 57.6**	**-0.4**
BGT				*e*Pb	**Pn**	**01 11 59.6**	**+0.8**
BGT	comp=E,490nm,0.3s			max		01 11 59.8	
BGT				*e*Sg	**Sb**	**01 12 10.1**	**-0.4**
BGT	comp=E,2μm,0.2s			Smax		01 12 14.2	
HRMR	**Khuramsha**	**1.06**	**167**	*i*Pg	**Pb**	**01 11 59.8**	**-0.2**
HRMR				Pmax		01 12 01.1	
HRMR	comp=E,2μm,0.3s			*e*Sg	**Sb**	**01 12 14.4**	**+0.5**
HRMR				Smax		01 12 17.6	
OGRR	**Ongureny**	**1.16**	**32**	*i*Pg	**Pb**	**01 12 02.0**	**+0.4**
OGRR				*e*		01 12 04.7	
OGRR	comp=E,146nm,0.3s			max		01 12 05.1	
OGRR				*e*Sg	**Sg**	**01 12 17.3**	**+0.5**
OGRR				*e*Sb	**Sn**	**01 12 21.3**	**+3.7**
OGRR	comp=E,953nm,0.4s			max		01 12 34.1	
OGRR	**Ongureny**	**1.16**	**32**	*i*PG	**Pb**	**01 12 02.0**	**+0.4**
OGRR				*e*		01 12 17.4	
OGRR	comp=Z,161nm,0.4s			pmax	pmax		
OGRR	comp=E,1μm,0.8s			smax	smax		
LSTR	**Listvyanka**	**1.33**	**234**	*i*Pn	**Pn**	**01 12 04.3**	**+0.2**
LSTR				*e*Pg	**Pb**	**01 12 05.3**	**+0.7**
LSTR	comp=E,330nm,0.4s			Pmax		01 12 05.7	
LSTR				*e*Sg	**Sn**	**01 12 21.5**	**-0.4**
LSTR				*e*Sb	**Sg**	**01 12 23.3**	**+0.9**
LSTR	comp=E,1μm,0.4s			max		01 12 24.7	
MXMB	**Maximikha**	**1.45**	**65**	*e*Pg	**Pb**	**01 12 06.5**	**0.0**
MXMB				*e*Sg	**Sg**	**01 12 26.3**	**+0.3**
MXMB				*e*		01 12 30.3	
IRK	**Irkutsk**	**1.47**	**254**	*e*Pg	**Pb**	**01 12 06.8**	**-0.1**
IRK				Pmax		01 12 07.9	
IRK	comp=E,920nm,0.2s			*e*Sg	**Sg**	**01 12 26.6**	**-0.2**
IRK	comp=E,6μm,0.6s			Smax		01 12 27.1	
IRK	**Irkutsk**	**1.47**	**254**	*e*PN	**Pb**	**01 12 06.8**	**-0.1**
IRK				*e*		01 12 26.5	
IRK	comp=Z,1μm,0.3s			pmax	pmax		
IRK	comp=N,6μm,0.4s			smax	smax		
IVK	**Ivanovka**	**1.58**	**238**	*i*Pg	**Pb**	**01 12 08.8**	**0.0**
IVK				*e*		01 12 10.2	
IVK	comp=N,193nm,0.2s			max		01 12 11.3	
IVK				*e*Sg	**Sb**	**01 12 29.3**	**+0.4**
IVK				*e*Sb	**Sg**	**01 12 30.9**	**+0.5**
IVK	comp=N,2μm,0.3s			max		01 12 32.1	
TLY	**Talaya**	**2.05**	**243**	Pn	**Pn**	**01 12 15.1**	**+1.1**
	comp=N,0.7nm,0.3s,baz=62,slow=9.1,SNR=162						
TLY				Pg	**Pb**	**01 12 17.0**	**+0.1**
	comp=N,0.7nm,0.3s,baz=54,slow=13,SNR=48						
TLY				Lg	Lg	01 12 41.9	
	comp=N,0.3nm,0.3s,baz=156,slow=20,SNR=5.0						
TLY				LR	LR	01 13 21.4	
	comp=N,121nm,19.1s,baz=104,slow=50						
TLY	**Talaya**	**2.05**	**243**	*i*	**Pn**	**01 12 15.3**	**+1.2**
TLY				*e*Pg	**Pb**	**01 12 16.9**	**+0.1**
TLY	comp=N,152nm,0.2s			Pmax		01 12 17.6	
TLY				*e*Sn	**Sn**	**01 12 40.9**	**+1.2**
TLY				*e*Sg	**Sb**	**01 12 43.8**	**+1.4**
TLY	comp=N,1μm,0.2s			Smax		01 12 44.6	
TLY	**Talaya**	**2.05**	**243**	*i* PN	**Pn**	**01 12 15.0**	**+0.9**
TLY	**Talaya**	**2.05**	**243**		**Pn**	**01 12 15.4**	**+1.4**
SYVR	**Suvo**	**2.29**	**63**	*e*PN	**Pn**	**01 12 17.8**	**+0.5**
SYVR				*e*		01 12 21.1	
SYVR				*e*		01 12 51.9	
SYVR	comp=Z,67nm,0.4s			pmax	pmax		
SYVR	comp=N,271nm,0.4s			smax	smax		
ARS	**Arshan**	**2.65**	**255**	*e*Pn	**Pn**	**01 12 22.0**	**-0.4**
ARS				*e*		01 12 24.7	
ARS				*e*Pg	**Pb**	**01 12 26.5**	**-0.7**
ARS	comp=N,228nm,0.3s			Pmax		01 12 30.0	
ARS				*e*Sn	**Sn**	**01 12 52.9**	**-1.7**
ARS				*e*Sg	**Sb**	**01 13 00.8**	**+1.1**
ARS				*e*		01 13 03.6	
ARS	comp=N,3μm,0.5s			max		01 13 05.8	
ARS	**Arshan**	**2.65**	**255**	*e*PN	**Pb**	**01 12 26.4**	**-0.7**
ARS				*e*		01 13 00.8	
ARS	comp=Z,220nm,0.2s			pmax	pmax		
ARS	comp=E,2μm,0.4s			smax	smax		
ZAK	**Zakamensk**	**3.07**	**223**	*e*Pn	**Pn**	**01 12 29.7**	**+1.6**
ZAK				*e*Pg	**Pb**	**01 12 35.2**	**+0.9**
ZAK				Pmax		01 12 40.5	
ZAK	comp=E,38nm,0.4s			*e*Sg	**Sg**	**01 13 16.1**	**-2.1**
ZAK				*e*		01 13 18.9	
ZAK	comp=E,184nm,0.4s			max		01 13 20.4	
ZAK	**Zakamensk**	**3.07**	**223**	*e*PN	**Pn**	**01 12 30.2**	**+2.0**
ZAK				*e*		01 12 35.3	
ZAK				*e*		01 13 16.2	
ZAK	comp=Z,33nm,0.2s			pmax	pmax		
ZAK	comp=N,186nm,0.4s			smax	smax		
YLYR	**Ulyunkhan**	**3.51**	**49**	*e*Pn	**Pn**	**01 12 35.0**	**+0.9**
YLYR				*e*Pg	**Pb**	**01 12 42.5**	**+0.8**
YLYR	comp=N,37nm,1.0s			Pmax		01 12 52.2	
YLYR				*e*		01 13 25.1	
YLYR				*e*Sg	**Sb**	**01 13 28.3**	**+4.0**
YLYR	comp=N,280nm,1.4s			Smax		01 13 50.3	
YLYR	**Ulyunkhan**	**3.51**	**49**	*e*PN	**Pn**	**01 12 35.2**	**+1.1**
YLYR				*e*		01 12 43.4	
YLYR				*e*S	**Sn**	**01 13 16.5**	**+0.9**
YLYR				*e*		01 13 28.1	
YLYR	comp=Z,38nm,1.2s			pmax	pmax		
YLYR	comp=N,274nm,1.4s			smax	smax		
NIZ	**Nizh Angarsk**	**3.57**	**28**	*e*Pn	**Pn**	**01 12 36.3**	**+1.4**
NIZ				*e*Pg	**Pb**	**01 12 43.5**	**+0.8**
NIZ				*e*		01 12 48.8	
NIZ	comp=N,38nm,0.6s			max		01 12 54.3	
NIZ				*e*Sn	**Sn**	**01 13 17.3**	**+0.2**
NIZ				*e*		01 13 21.3	
NIZ				*e*Sg	**Sb**	**01 13 29.7**	**+3.7**
NIZ				*e*		01 13 34.4	
NIZ	comp=N,366nm,0.9s			max		01 13 47.4	
NIZ	**Nizh Angarsk**	**3.57**	**28**	*e*PN	**Pn**	**01 12 36.4**	**+1.5**
NIZ				*e*		01 12 44.4	
NIZ				*e*S	**Sn**	**01 13 17.8**	**+0.7**
NIZ				*e*		01 13 29.7	
NIZ	comp=Z,36nm,0.8s			pmax	pmax		
NIZ	comp=E,404nm,1.0s			smax	smax		
MOY	**Mondy**	**3.58**	**256**	*e*	**Sn**	**01 13 21.6**	**+4.2**
MOY				*e*Sg	**Sb**	**01 13 30.0**	**+3.7**
MOY				Smax		01 13 36.7	
MOY	**Mondy**	**3.58**	**256**	*e*PN	**Pn**	**01 12 38.0**	**+2.9**
MOY				*e*		01 12 45.5	
MOY				*e*		01 13 28.5	
MOY	comp=Z,154nm,0.7s			pmax	pmax		
MOY	comp=N,643nm,0.6s			smax	smax		
ORL	**Orlik**	**4.12**	**271**	*i*Pn	**Pn**	**01 12 44.5**	**+1.9**
ORL				*e*		01 12 47.2	
ORL				*e*Pg	**Pb**	**01 12 53.6**	**+1.4**
ORL	comp=N,48nm,0.4s			Pmax		01 12 57.7	
ORL				*e*		01 13 34.7	
ORL				*e*Sg	**Sg**	**01 13 47.1**	**-4.8**
ORL	comp=N,349nm,0.6s			Smax		01 13 52.1	
ORL	**Orlik**	**4.12**	**271**	*i*PN	**Pn**	**01 12 44.5**	**+1.9**
ORL				*e*		01 12 54.5	
ORL				*e*		01 13 47.2	
ORL	comp=Z,58nm,0.4s			pmax	pmax		
ORL	comp=N,354nm,0.7s			smax	smax		
KMO	**Kumora**	**4.22**	**38**	*e*Pn	**Pn**	**01 12 44.6**	**+0.8**
KMO				*e*Pg	**Pb**	**01 12 56.3**	**+2.6**
KMO	comp=N,37nm,0.7s			Pmax		01 13 05.0	
KMO				*e*Sg	**Sb**	**01 13 49.6**	**+5.0**
KMO	comp=N,244nm,1.0s			Smax		01 13 59.8	
KMO				*e*		01 14 04.7	
CIT	**Chita**	**4.33**	**96**	*e*	**Pn**	**01 12 48.0**	**+2.7**
CIT				*e*		01 13 16.3	
CIT				*e*		01 13 40.8	
CIT				*e*Sg	**Sg**	**01 13 55.1**	**-3.3**
CIT	comp=N,400nm,0.4s			Smax		01 13 57.9	
YOA	**Uoyan**	**4.60**	**39**	*e*	**Sn**	**01 13 37.3**	**-5.1**
YOA				*e*Sg	**Sg**	**01 14 01.6**	**-5.4**
YOA	comp=N,804nm,1.7s			Smax		01 14 23.0	
KPC	**Khapcheranga**	**4.70**	**127**	*e*Pn	**Pn**	**01 12 49.7**	**-0.8**
KPC				*e*Pg	**Pb**	**01 13 05.1**	**+3.1**
KPC	comp=N,35nm,0.3s			Pmax		01 13 10.4	
KPC				*e*Sn	**Sn**	**01 13 44.6**	**-0.5**
KPC				*e*Sg	**Sb**	**01 14 05.3**	**+6.6**
KPC	comp=N,233nm,1.0s			Smax		01 14 13.4	
KPC	**Khapcheranga**	**4.70**	**127**	*e*PN	**Pn**	**01 12 49.8**	**-0.8**
KPC				*e*		01 13 03.2	
KPC				*e*S	**Sn**	**01 13 45.4**	**+0.3**
KPC				*e*		01 14 04.4	
KPC	comp=Z,35nm,0.4s			pmax	pmax		
KPC	comp=E,232nm,1.0s			smax	smax		
ULN	**Ulaanbaatar**	**4.81**	**176**	*e*	**Pn**	**01 12 53.4**	**+1.3**
ULN				*e*		01 13 06.5	
ULN				*e*		01 13 52.6	
ULN				*e*Sg	**Sg**	**01 14 09.9**	**-4.1**
ULN				*e*		01 14 15.3	
ULN	**Ulaanbaatar**	**4.81**	**176**	*i* PN	**Pn**	**01 12 53.1**	**+1.0**
ULN	**Ulaanbaatar**	**4.81**	**176**	Pn	**Pn**	**01 12 53.0**	**+0.8**
SONM	**Songino Array**	**4.84**	**181**	Pn	**Pn**	**01 12 53.4**	**+1.0**
	comp=E,1.4nm,0.3s,baz=354,slow=15,SNR=37						
SONM				Pg	**Pb**	**01 13 06.9**	**+2.6**
	comp=E,8.4nm,0.3s,baz=352,slow=17,SNR=25						
SONM				Lg	Lg	01 14 09.9	
	comp=E,30nm,0.3s,baz=0.2,slow=30,SNR=18						
SONM	**Songino Array**	**4.84**	**181**	PN	**Pn**	**01 12 53.3**	**+0.9**
UKT	**Uakit**	**5.03**	**53**	*e*Pn	**Pn**	**01 12 56.3**	**+1.4**
UKT				*e*		01 13 02.8	
UKT				*e*Pg	**Pb**	**01 13 10.4**	**+2.9**
UKT				Pmax		01 13 31.3	
UKT	comp=E,20nm,1.2s			*e*Sg	**Sg**	**01 14 15.9**	**-4.9**
UKT				Smax		01 14 39.8	
	comp=E,110nm,1.9s						
KNGR	**Kungurtug, Tuv**	**6.00**	**254**	*e*Pn	**Pn**	**01 13 09.2**	**+0.8**
KNGR				*e*		01 13 23.5	
KNGR				*e*Pg	**Pb**	**01 13 27.8**	**+3.6**
KNGR				*e*Sg	**Sg**	**01 14 46.8**	**-5.3**
NLYR	**Nelyaty**	**6.55**	**51**	*e*Pn	**Pn**	**01 13 18.3**	**+2.6**
NLYR				*e*		01 13 56.7	
NLYR	comp=E,9.0nm,0.9s			max		01 13 59.5	
NLYR				*e*Sg	**Sg**	**01 15 04.3**	**-5.2**
NLYR	comp=E,130nm,1.7s			Smax		01 15 31.2	
BOD	**Bodaibo**	**6.69**	**36**	*e*		01 14 53.4	
BOD				*e*Sg	**Sg**	**01 15 07.0**	**-6.9**
BOD	comp=E,80nm,1.9s			Smax		01 15 35.9	
CRS	**Chara**	**7.98**	**53**	*e*	Pb	01 13 53.1	-4.7
CRS				*e*		01 14 09.1	
CRS	comp=E,2.0nm,0.1s			max		01 14 18.4	
CRS				*e*Sg	Sb	01 15 46.5	+14
CRS				*e*		01 15 53.7	
CRS	comp=E,56nm,1.8s			max		01 16 34.4	
TUP	**Tupik**	**8.16**	**72**	*e*Pn	**Pn**	**01 13 38.2**	**+0.2**
TUP	comp=E,3.0nm,0.4s			max		01 14 17.7	
TUP				*e*		01 15 24.9	
TUP				*e*Sg	Sb	01 15 53.6	+16
TUP	comp=E,126nm,1.0s			Smax		01 15 59.4	
TUP				*e*		01 16 03.7	
TUP	**Tupik**	**8.16**	**72**	*e*PN	**Pn**	**01 13 38.0**	**0.0**
TUP				*e*		01 14 05.1	
TUP				*e*S	**Sn**	**01 15 10.0**	**-0.2**
TUP	comp=Z,8.0nm,0.6s			pmax	pmax		
TUP	comp=N,126nm,1.0s			smax	smax		
HIA	**Hailar**	**8.98**	**107**	PN	**Pn**	**01 13 46.3**	**-2.8**
HIA	**Hailar**	**8.98**	**107**	Pn	**Pn**	**01 13 46.3**	**-2.8**
YKLR	**Yuktali**	**9.59**	**60**	*e*	Pn	01 14 46.6	+49
YKLR				*e*Sg	Sn	01 16 37.5	+52
CLNS	**Chul'man**	**11.37**	**61**	*e*		01 15 32.9	
CLNS				*e*		01 16 24.7	
CLNS				*e*Sg		01 17 31.7	
ZAA0	**Zalesovo Array**	**13.07**	**284**	Pn	**Pn**	**01 14 46.0**	**+1.1**
ZALV	**Zalesovo Beam**	**13.07**	**284**	Pn	**Pn**	**01 14 46.6**	**+1.6**
	comp=N,0.1nm,0.3s,baz=82,slow=11,SNR=7.5						
ZALV				Lg	Lg	01 18 24.2	
	comp=N,0.2nm,0.3s,baz=83,slow=28,SNR=8.7						
ZALV	**Zalesovo Beam**	**13.07**	**284**	*i* P	**Pn**	**01 14 47.2**	**+2.3**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**13.07**	**284**		**Pn**	**01 14 46.2**	**+1.3**
BJT	**Baijiatuao**	**14.26**	**149**	P	**Pn**	**01 15 00.1**	**-1.3**
BJT	**Baijiatuao**	**14.26**	**149**	Pn	**Pn**	**01 15 00.1**	**-1.3**
KLR	**Kul'dur**	**16.21**	**92**	Lg	Lg	01 20 11.4	
KLR	comp=Z,0.1nm,0.3s,baz=24,slow=20,SNR=2.6			LR	LR	01 22 11.8	
KLR	**Kul'dur**	**16.21**	**92**	*i* P	**Pn**	**01 15 26.9**	**-0.1**
KLR	comp=Z,50nm,18.0s,baz=242,slow=39			pmax	pmax		
MK31	**Makanchi Array**	**16.72**	**259**	*i* P	**P**	**01 15 35.6**	**-0.3**
MK31	**Makanchi Array**	**16.72**	**259**	Pn	**Pn**	**01 15 32.8**	**-0.8**
MKAR	**Makanchi Array**	**16.72**	**259**	Pn	**P**	**01 15 36.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=61,slow=10,SNR=7.4						
MKAR	**Makanchi Array**	**16.72**	**259**	*i* P	**P**	**01 15 37.0**	**+1.1**
MKAR	comp=Z,1.0nm,0.8s			pmax	pmax		
MKAR	**Makanchi Array**	**16.72**	**259**	Pn	**Pn**	**01 15 31.9**	**-1.7**
KURK	**Kurchatov**	**17.40**	**275**	*i* P	**P**	**01 15 44.2**	**+0.9**
KURK	comp=Z,3.0nm,0.8s			pmax	pmax		
KURK	**Kurchatov**	**17.40**	**275**	Pn	**Pn**	**01 15 41.5**	**-0.6**
KURBB	**Kurchatov Arra**	**17.48**	**275**	P	**Pn**	**01 15 42.0**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=64,slow=13,SNR=6.2						
KURBB				Lg	Lg	01 20 48.2	
	comp=Z,0.0nm,0.3s,baz=77,slow=32,SNR=5.5						
NRIK	**Noril'sk**	**18.94**	**339**	P	**P**	**01 15 58.6**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=144,slow=6.7,SNR=6.3						
NRIK				S	Sn	01 19 20.0	-13
	comp=Z,0.2nm,0.3s,baz=217,slow=20,SNR=2.2						
NRIK				Lg	Lg	01 21 27.4	
	comp=Z,0.1nm,0.3s,baz=166,slow=19,SNR=2.9						
NRIK	**Noril'sk**	**18.94**	**339**	*i* P	**Pn**	**01 16 00.4**	**-0.4**
NRIK	comp=Z,2.0nm,0.6s			pmax	pmax		
KSRS	**Korea Array**	**21.30**	**127**	LR	LR	01 25 44.7	
	comp=Z,43nm,18.1s,baz=170,slow=40						
TIXI	**Tiksi**	**21.44**	**19**	P	**P**	**01 16 26.3**	**-1.0**
TIXI	comp=Z,12nm,1.7s			pmax	pmax		
TIXI	**Tiksi**	**21.44**	**19**	P	**P**	**01 16 26.3**	**-1.0**
TIXI	comp=Z,12nm,1.7s			IAmb	IAmb	01 16 27.5	
BVAR	**Borovoye Array**	**21.72**	**285**	P	**P**	**01 16 29.4**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=73,slow=14,SNR=9.2						
BRVK	**Borovoye**	**21.77**	**286**	*i* P	**P**	**01 16 32.3**	**+1.3**
BRVK	comp=Z,2.0nm,0.9s			pmax	pmax		
BRVK	**Borovoye**	**21.77**	**286**	P	**P**	**01 16 31.9**	**+0.8**
BRVK	comp=Z,5.1nm,0.5s			IAmb	IAmb	01 16 37.1	
KK31	**Karatay Array**	**25.76**	**263**	P	**P**	**01 17 10.7**	**+0.6**
KK31	comp=Z,5.0nm,1.7s			pmax	pmax		
KK31	**Karatay Array**	**25.76**	**263**	P	**P**	**01 17 10.7**	**+0.6**
KK31	comp=Z,5.4nm,1.7s			IAmb	IAmb	01 17 28.5	
KKAR	**Karatay Array**	**25.76**	**263**	P	**P**	**01 17 11.5**	**+1.4**
KKAR	**Karatay Array**	**25.76**	**263**	P	**P**	**01 17 11.5**	**+1.4**
MJB9	**Matsu-Tunnel**	**27.40**	**113**	P	**P**	**01 17 22.2**	**-2.8**
ABKAR	**Akbulak array**	**29.17**	**282**	P	**P**	**01 17 40.5**	**0.0**
ABKAR	comp=Z,4.5nm,1.6s			IAmb	IAmb	01 17 42.8	
AKTO	**Aktyubinsk**	**29.82**	**285**	P	**P**	**01 17 47.1**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=74,slow=7.4,SNR=2.8						
ARCES	**ARCESS Array B**	**39.13**	**327**	P	**P**	**01 19 06.8**	**+0.2**
	comp=Z,4.2nm,1.1s,baz=64,slow=8.1,SNR=1.4						
OBN	**Obninsk**	**39.75**	**302**	*e*P	**P**	**01 19 13.3**	**+1.5**
OBN	comp=Z,3.0nm,1.0s			pmax	pmax		
FINES	**FINESS Array B**	**41.94**	**315**	P	**P**	**01 19 29.2**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=84,slow=5.7,SNR=1.9						
IL31		**50.04**	**32**	P	**P**	**01 20 32.1**	**-1.4**
ILAR	**Eielson Array**	**50.04**	**32**	P	**P**	**01 20 34.8**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=306,slow=5.9,SNR=6.1						
ILAR	**Eielson Array**	**50.04**	**32**	P	**P**	**01 20 32.1**	**-1.5**
TGL	**Tana Glacier**	**54.15**	**35**	P	**P**	**01 21 02.0**	**-2.4**
RAYN	**Ar Rayn**	**54.18**	**262**	P	**P**	**01 21 05.7**	**+0.7**
RAYN	comp=Z,3.0nm,1.0s			pmax	pmax		
RAYN	**Ar Rayn**	**54.18**	**262**	P	**P**	**01 21 05.7**	**+0.7**
BARN	**Barnard Glacie**	**54.33**	**34**	P	**P**	**01 21 05.6**	**-0.2**
BKB	**Balikpapan**	**54.43**	**167**	P	**P**	**01 21 04.7**	**-2.0**
CTGM	**Chitina Glacie**	**54.51**	**34**	P	**P**	**01 21 05.0**	**-2.0**
TORD	**Torodi Ar. Bea**	**88.46**	**290**	P	**P**	**01 24 32.5**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=20,slow=3.2,SNR=2.1						

IDC 16 01:19:04.8±1.9,1°95N×126°85E,h0km,mb3.3/3, mb1 3.5/4,mb1mx3.3/34,mbtmp3.3/4,ML3.0/1,Error ellipse: s-maj=118.9km s-min=23.7km az=69.0, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.96**	**183**	P	P	01 23 39.0	+0.3
	0.0nm,0.3s,baz=0.0,slow=13,SNR=1.6						
WRA	**Warramunga Arr**	**22.96**	**162**	P	P	01 24 10.9	-0.2
	0.4nm,0.4s,baz=340,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.37**	**165**	P	P	01 24 43.0	0.0
	0.2nm,0.4s,baz=346,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	**59.08**	**326**	P	P	01 29 07.0	-0.1
	0.3nm,0.4s,baz=118,slow=6.2,SNR=8.8						

IDC 16 01:37:10.5±2.3,1°87N×126°39E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.3/32,mbtmp3.5/3,Error ellipse: s-maj=198.0km s-min=28.0km az=65.0,Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.03**	**161**	P	P	01 42 17.2	-0.3
	0.9nm,0.5s,baz=339,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.41**	**164**	P	P	01 42 49.4	+0.4
	0.2nm,0.4s,baz=344,slow=9.0,SNR=5.3						
MKAR	**Makanchi Array**	**58.89**	**326**	P	P	01 47 11.2	-0.2
	0.3nm,0.3s,baz=134,slow=8.2,SNR=0.9						

*DNK **16** 01:37:13.5±5.1,64°23N×18°45W,h0km±72km,Ms5.1*
*BGS **16** 01:37:14.7±1.9,64°68N×17°57W,h5km,MS5.2*
*IDC **16** 01:37:15.6±0.4,64°63N×17°69W,h0km,mb4.4/29, mb1 4.6/35,mb1mx4.4/50,mbtmp4.4/35,ML3.1/4,MS4.9/42, Ms1 4.9/42,ms1mx4.8/47,Error ellipse: s-maj=12.9km s-min=8.4km az=21.0*
*MOS **16** 01:37:15.7±1.0,64°70N×17°68W,h11km,mb5.2/88, MS4.9/29,Error ellipse: s-maj=6.8km s-min=4.0km az=109.8*
*REY **16** 01:37:15.1,64°67N×17°50W,h7km*
*NEIC **16** 01:37:16.2±1.2,64°60N±0°08×17°68W±0°03,h6km±3km, mb5.1/225,Mww5.3,Error ellipse: s-maj=11.2km s-min=1.2km az=186.0*
*BJI **16** 01:37:16.6±0.0,64°92N×17°05W,h6km,mB5.6/47, mb4.9/51,Ms5.1/46,Ms7 4.8/45*
*GCMT **16** 01:37:18.2±0.1,64°53N±0°01×17°61W±0°01,h12km, MW5.3/149,Moment Tensor Solution. s103,c143; s149,c308; Duration: 1ŝ1 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.22±.01; $M_{\theta\theta}$0.47±.01; $M_{\phi\phi}$0.75±.01; $M_{r\theta}$-0.56±.04; $M_{r\phi}$0.48±.01; $M_{\theta\phi}$-0.06±.04; Best double couple: $M_0$1.28300×10^{17} NP1:ϕ_s203.00000°,δ37.00000°, λ-114.00000°. NP2:ϕ_s53.00000°,δ56.00000°, λ-73.00000°. Principal axes: T 1.1740, Plg10.0000°, Azm130.0000°; N 0.2200, Plg14.0000°, Azm223.0000°; P -1.3910, Plg73.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **16** 01:37:20,64°43N×17°49W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.26; $M_{\theta\theta}$0.55; $M_{\phi\phi}$0.71; $M_{r\theta}$-0.31; $M_{\theta\phi}$0.50; $M_{r\phi}$0.41; Fault plane solution: $M_0$1.31000×10^{17} NP1:ϕ_s57.00000°, δ45.00000°,λ-64.00000°. NP2:ϕ_s203.00000°,δ50.00000°, λ-113.00000°. Principal axes: T 1.1432, Plg3.0000°, Azm309.0000°; N 0.2853, Plg18.0000°, Azm218.0000°; P -1.4284, Plg72.0000°, Azm48.0000°;*

ISC 16 01:37:17.5±0.2,64°67N±0°02×17°58W±0°02,h10km,n870, σ2s02/872,mb5.0/234,MS5.0/83,26C-21D,Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.08**	**270**	P	**Pg**	**01 37 17.6**	**-2.3**

baz=271
IDYN Dyngjuhals 0.15 38 P Pg 01 37 18.0 -2.9
baz=26
IHAM Hamarinn 0.22 209 P Pg 01 37 19.9 -2.3
baz=216
IGRF Grimsfjall 0.30 153 P Pg 01 37 20.6 -3.0
baz=159
ISKR Skrokkalda 0.37 252 P Pg 01 37 22.4 -2.3
baz=254
ISKR S Sg 01 37 28.1 -1.5
baz=254
IHUS Husbondi 0.38 185 P Pg 01 37 22.2 -2.8
baz=190
IKVE Kverkfjoll 0.39 89 P Pg 01 37 21.8 -3.4
baz=88
IVOT Vottur 0.44 157 P Pg 01 37 22.8 -3.3
baz=161
IVOT S Sg 01 37 30.6 -1.3
baz=161
IJOK Jokulheimar 0.46 218 P Pg 01 37 23.5 -2.9
baz=222
IJOK S Sg 01 37 30.1 -2.3
baz=222
THOR Thorvaldshraun 0.47 55 P Pg 01 37 23.2 -3.4
baz=53
THOR S Sg 01 37 29.7 -3.0
baz=53
IASK Askja 0.55 46 P Pg 01 37 24.7 -3.5
baz=43
IMKO Mokollar 0.61 59 P Pg 01 37 25.5 -3.9
baz=58
IMKO S Sg 01 37 34.2 -3.2
baz=58
IIEY Innrieyrar 0.63 202 P Pg 01 37 26.2 -3.4
baz=205
IIEY S Sg 01 37 35.5 -2.3
baz=205
ISVA Svartarkot 0.68 12 P Pg 01 37 27.1 -3.6
baz=8.8
IKSK Karasker 0.70 136 P Pg 01 37 26.8 -4.3
baz=138
IKAL Kalfafell 0.73 184 P Pg 01 37 27.9 -3.6
baz=186
IKAL S Sg 01 37 38.4 -2.6
baz=186
IVAT Vatnsfell 0.76 231 P Pg 01 37 28.8 -3.4
baz=232
IVSH V-Sauoahnukur 0.81 79 P Pg 01 37 28.3 -4.7
baz=79
IVSH S Sg 01 37 39.5 -4.0
baz=79
IHVE Hveravellir 0.88 284 P Pg 01 37 30.6 -3.7
baz=284
IFAG Fagurholsmyri 0.90 153 P Pg 01 37 30.3 -4.4
baz=155
IFAG S Sg 01 37 42.3 -4.1
baz=155
IADA Aoalbol 0.92 67 P Pg 01 37 30.4 -4.9
baz=66
IADA S Sg 01 37 42.9 -4.4
baz=66
IMEL Melhnausar 0.98 23 P Pg 01 37 31.9 -4.5
baz=21
IREN Reynihlio 1.02 16 P Pg 01 37 32.6 -4.5
baz=14
ISNB Snabyli 1.05 207 P Pg 01 37 33.5 -4.1
baz=208
IKVO Krokottuvotn 1.09 15 P Pg 01 37 33.7 -4.6
baz=14
IFED Fedgar 1.13 236 P Pb 01 37 35.3 -3.8
baz=237
IRJU Rjupnafell 1.16 205 P Pb 01 37 35.7 -4.0
baz=206
IMJO Mjoaskard 1.18 232 P Pb 01 37 36.2 -3.7
baz=233
IGYG Gygjarholskot 1.21 252 P Pn 01 37 36.3 -4.1
baz=253
ISKI Skildingahlsh 1.22 11 P Pn 01 37 35.9 -4.7
baz=9.2
IGHA Grjothals 1.24 18 P Pn 01 37 35.9 -4.9
baz=16
IDIM Dimmadalss 1.32 12 P Pn 01 37 37.5 -4.5
baz=10
IALF Alftagrof 1.38 211 P Pn 01 37 39.1 -3.7
baz=213
IGIL Gilhagi 1.50 19 P Pn 01 37 39.9 -4.5
baz=18
BORG Borgarnes 1.61 274 Pn **Pn 01 37 42.5 -3.5**
286nm,0.3s,baz=90,slow=8.4,SNR=338
BORG Sn **Sn 01 38 05.2 -1.5**
117nm,0.3s,baz=131,slow=19,SNR=6.2
BORG Borgarnes 1.61 274 Pn 01 37 42.3 -3.7
BORG Sn **Sn 01 38 04.3 -2.4**
IKRO Krokur 1.64 251 P **Pn 01 37 43.0 -3.4**
baz=252
SOFL Sornfelli, Far 5.44 114 *eP* **Pn 01 38 37.0 -1.6**
SOFL Sornfelli, Far 5.44 114 *eP* **Pn 01 38 38.7 +0.1**
SCO Scoresbysund 6.07 346 *i* P **Pn 01 38 45.2 -1.9**
SCO MLR MLR
comp=Z,39µm,13.0s
SCO Scoresbysund 6.07 346 Pn **Pn 01 38 45.9 -1.2**
SCO Scoresbysund 6.07 346 *i* P **Pn 01 38 45.2 -1.9**
comp=Z,39µm,13.0s
SCO Scoresbysund 6.07 346 *e* Pn 01 38 41.9 -5.2
baz=170,slow=7.4
SCO *i* P **Pn 01 38 45.3 -1.9**
SCO IAMs_20 IAMs_20 01 40 45.0
comp=Z,39µm,13.1s
JMIC Jan Mayen 7.20 24 Pn **Pn 01 39 04.5 +1.8**
baz=236,slow=4.0,SNR=4.5
JMIC LR LR 01 41 09.4
comp=Z,5µm,20.1s,baz=194,slow=32
JMIC Jan Mayen 7.20 24 *eP* **Pn 01 39 05.0 +2.4**
LEWI Lewis, Hebride 8.31 137 *eP* **Pn 01 39 15.3 -2.6**
LEWI IAMs_20 IAMs_20 01 43 12.3
comp=Z,17µm,13.1s
ANGG Ammassalik, Gr 8.49 285 IAMs_20 IAMs_20 01 42 24.0
comp=Z,28µm,14.3s
WAL1 Walls 8.61 114 *eP* **Pn 01 39 19.7 -2.2**
LINV Loch Inver, As 8.82 132 *eP* **Pn 01 39 23.5 -1.4**
LINV IAMs_20 IAMs_20 01 42 51.6
comp=Z,20µm,14.5s
LRW Lerwick 8.85 113 *eP* **Pn 01 39 23.4 -1.9**
LRW IAMs_20 IAMs_20 01 42 58.8
comp=Z,27µm,16.6s
BIGH Upper Bighouse 8.98 127 *eP* **Pn 01 39 25.9 -1.1**
BIGH IAMs_20 IAMs_20 01 42 59.9
comp=Z,19µm,12.2s
KAC Achnashellach 9.32 135 *eP* **Pn 01 39 29.7 -2.0**
KPL Plockton 9.35 136 *eP* **Pn 01 39 29.5 -2.5**
KPL IAMs_20 IAMs_20 01 43 31.9
comp=Z,26µm,12.1s
KPL Plockton 9.35 136 *eP* **Pn 01 39 30.4 -1.6**
DBG Daneborg 9.72 356 Pn Pn 01 39 40.5 +3.3
DBG Daneborg 9.72 356 Pn Pn 01 39 40.5 +3.3
DBG *eP* Pn 01 39 40.6 +3.4
DBG Daneborg 9.72 356 *eP* Pn 01 39 41.0 +3.8
DBG IAMs_20 IAMs_20 01 43 05.6
comp=Z,10µm,10.4s
MCD Coleburn Disti 9.90 129 *eP* **Pn 01 39 37.6 -2.1**
LAWE Loch Awe, Argy 10.34 139 *eP* **Pn 01 39 43.7 -1.9**
LAWE IAMs_20 IAMs_20 01 44 18.9
comp=Z,22µm,11.1s
INVG Invergeldie, C 10.59 135 *eP* **Pn 01 39 47.7 -1.4**
INVG IAMs_20 IAMs_20 01 44 04.2
comp=Z,25µm,12.6s
FOO Floro 10.67 96 *eP* **Pn 01 39 51.5 +1.4**
EAB Aberfoyle 10.71 136 *eP* **Pn 01 39 49.0 -1.7**
SUE Sulen 10.80 99 *eP* **Pn 01 39 50.6 -1.3**
SUMG Summit 10.92 325 *i* P **Pn 01 39 55.0 +1.1**
SUMG MLR MLR
comp=Z,59µm,10.0s
SUMG Summit 10.92 325 Pn **Pn 01 39 53.0 -0.9**
SUMG Summit 10.92 325 *i* P **Pn 01 39 55.0 +1.1**
comp=Z,59µm,10.0s
SUMG Summit 10.92 325 *i* P **Pn 01 39 55.0 +1.1**
SUMG IAMs_20 IAMs_20 01 44 04.8
comp=Z,59µm,10.1s
PGBU Glenifferbraes 10.99 138 *eP* **Pn 01 39 52.8 -1.7**
PGBU IAMs_20 IAMs_20 01 44 31.9
comp=Z,24µm,12.3s
AKN Aaknes 11.26 92 *eP* Pn 01 40 06.3 +8.1
ASK Askoy 11.28 101 *eP* **Pn 01 40 00.1 +1.7**
EDI Edinburgh 11.28 134 *eP* **Pn 01 39 56.6 -1.9**
EDI IAMs_20 IAMs_20 01 44 25.4
comp=Z,20µm,14.5s
BER Bergen 11.39 102 P Pn 01 40 03.3 +3.4
BER pmax pmax
comp=Z,88nm,1.2s
NEWG New Galloway 11.66 139 *eP* **Pn 01 40 01.6 -2.2**
NEWG IAMs_20 IAMs_20 01 45 01.4
comp=Z,27µm,11.6s
GAL1 Galloway 11.75 141 *eP* **Pn 01 40 02.5 -2.4**
GAL1 IAMs_20 IAMs_20 01 45 17.9
comp=Z,18µm,10.5s
EKA Eskdalemuir Ar 11.79 136 Pn **Pn 01 40 04.1 -1.4**
baz=321,slow=13,SNR=112
EKA LR LR 01 44 41.4
comp=Z,13µm,18.6s,baz=320,slow=38
ESK Eskdalemuir 11.79 136 *eP* **Pn 01 40 02.9 -2.6**
ESK IAMs_20 IAMs_20 01 44 50.5
comp=Z,26µm,12.4s
ESK Eskdalemuir 11.79 136 P **Pn 01 40 04.2 -1.3**
ESK Eskdalemuir 11.79 136 Pn **Pn 01 40 04.2 -1.3**
ESK Eskdalemuir 11.79 136 *eP* **Pn 01 40 04.4 -1.1**
DY2G Dye2 11.96 292 IAMs_20 IAMs_20 01 44 34.6
comp=Z,33µm,12.0s
DAG Danmarks Havn 12.17 359 *i* P **Pn 01 40 13.0 +2.5**
DAG Danmarks Havn 12.17 359 *i* P **Pn 01 40 13.0 +2.5**
DAG Danmarks Havn 12.17 359 *i* P **Pn 01 40 13.0 +2.5**
DAG IAMs_20 IAMs_20 01 45 06.0
comp=Z,7µm,9.5s
DOMB Dombas 12.20 90 *eP* **Pn 01 40 08.5 -2.6**
TBLU Trondheim 12.27 84 *eP* Pn 01 40 16.6 +4.6
SKAR Skarslia 12.49 97 *eP* **Pn 01 40 14.2 -0.9**
EDMD Edmundbyers 12.58 134 *eP* **Pn 01 40 15.2 -1.0**
NSS Namsos 12.63 77 *eP* **Pn 01 40 17.9 +1.0**
NSS *eP* Pn 01 40 20.9 +4.0
STOK Stokkvaagen 12.73 69 *eP* **Pn 01 40 19.6 +1.3**
KONS Konsvik 12.76 68 *eP* **Pn 01 40 17.5 -1.1**
LOF Lofoten 12.85 61 *eP* **Pn 01 40 21.4 +1.5**
NRS Narsarsuaq 13.10 267 P **Pn 01 40 22.2 -1.2**
NRS Narsarsuaq 13.10 267 Pn **Pn 01 40 22.1 -1.2**
NRS Narsarsuaq 13.10 267 IAMs_20 IAMs_20 01 45 36.0
comp=Z,12µm,10.2s
NC204 NORSAR Array S 13.26 92 Pn **Pn 01 40 22.9 -2.7**
MOR8 Moi Rana 13.33 69 *eP* P 01 40 29.9 -6.2
SNART Snartemo 13.36 107 *eP* **Pn 01 40 25.3 -1.5**
NBO00 NORSAR Array S 13.38 93 **Pn 01 40 24.2 -3.0**
STEI Steigen 13.49 61 *eP* **Pn 01 40 30.1 +1.6**
NAO01 NORSAR Array S 13.52 93 Pn **Pn 01 40 29.4 +0.3**
FAUS Fauske 13.53 64 *eP* P 01 40 33.6 -4.8
NC303 NORSAR Array S 13.55 91 **Pn 01 40 28.9 -0.6**
NB2 NORSAR Subarra 13.57 92 Pn **Pn 01 40 26.8 -3.0**
comp=Z,200nm,3.3s,baz=298,slow=14
NB2 NORSAR Subarra 13.57 92 Pn **Pn 01 40 26.0 -3.8**
baz=300,slow=14
NB2 NORSAR Subarra 13.57 92 Pn **Pn 01 40 26.0 -3.8**
baz=300,slow=14
NOA NORSAR Array B 13.57 92 Pn **Pn 01 40 26.7 -3.0**
comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=5.7
NOA LR LR 01 45 57.2
comp=Z,5µm,18.2s,baz=300,slow=38
SFJD Kangerlussuaq 13.63 295 LR LR 01 45 18.0
comp=Z,18µm,21.7s,baz=88,slow=36
SFJD Kangerlussuaq 13.63 295 IAMs_20 IAMs_20 01 45 22.4
comp=Z,2µm,12.4s
NC405 NORSAR Array S 13.75 92 Pn **Pn 01 40 31.8 -0.5**
NRA0 NORESS Array S 13.86 93 Pn **Pn 01 40 30.2 -3.4**
NRA0 NORESS Array S 13.86 93 Pn **Pn 01 40 30.2 -3.4**
LBWR Ladybower, Pea 13.88 137 *eP* **Pn 01 40 32.9 -1.2**
LBWR IAMs_20 IAMs_20 01 46 13.0
comp=Z,22µm,12.7s
HOMB Homborsund 13.94 105 *eP* **Pn 01 40 36.7 +2.0**
NUUK Nuuk 14.65 284 IAMs_20 IAMs_20 01 45 42.8
comp=Z,13µm,15.7s
NUUG Nuugaatsiaq 14.73 313 IAMs_20 IAMs_20 01 46 23.8
comp=Z,25µm,10.3s
MCH1 Michaelchurch 14.78 142 *eP* **Pn 01 40 44.0 -2.3**
MCH1 IAMs_20 IAMs_20 01 47 12.2
comp=Z,11µm,10.4s
TRO Tromso 14.83 54 *eP* **P 01 40 48.6 -4.2**
HFS Hagfors 15.08 93 Pn **Pn 01 40 48.3 -2.0**
comp=Z,0.1nm,0.3s,baz=317,slow=6.3,SNR=3.0
HFS LR LR 01 46 35.1
comp=Z,5µm,19.7s,baz=290,slow=37
HFS Hagfors 15.08 93 P **Pn 01 40 48.3 -2.0**
baz=293,slow=16
HFS Hagfors 15.08 93 P **Pn 01 40 48.3 -2.0**
baz=293,slow=16
MUD Monsted U'grnd 15.40 110 *eP* **Pn 01 40 52.9 -1.6**
MUD MLR MLR
comp=Z,8µm,23.0s
MUD Monsted U'grnd 15.40 110 *i* P **Pn 01 40 52.9 -1.6**
MUD *i* 01 44 10.7
comp=Z,8µm,23.0s
MUD Monsted U'grnd 15.40 110 *eP* **Pn 01 40 52.9 -1.6**
MUD *i* 01 44 10.8
MUD IAMs_20 IAMs_20 01 46 39.0
comp=Z,8µm,23.0s
BJO1 Bjornoya 15.76 36 P **P 01 41 01.2 -1.9**
BJO1 Bjornoya 15.76 36 P **P 01 41 01.2 -1.9**
UPNV Upernavik 15.85 317 *eP* **Pn 01 40 59.8 -0.5**
UPNV IAMs_20 IAMs_20 01 46 48.0
comp=Z,18µm,14.3s
HSPB Hornsund (broa 16.08 27 P **P 01 41 06.8 +0.2**
HSPB Hornsund (broa 16.08 27 *eP* **P 01 41 06.6 +0.1**
KTK1 Kautokeino 16.38 57 *eP* **P 01 41 08.8 -1.2**
BRBB Barentsburg B 16.46 23 P **P 01 41 11.7 +0.9**
BRBB Barentsburg B 16.46 23 P **P 01 41 11.7 +0.9**
HAMF Hammerfest 16.48 51 *eP* **P 01 41 09.8 -1.2**
KBS Kingsbay 16.65 19 *i* P **Pn 01 41 09.5 -0.9**
KBS Kingsbay 16.65 19 P **P 01 41 13.7 +0.9**
KBS Kingsbay 16.65 19 *eP* **P 01 41 14.0 +1.2**
KBS Kingsbay 16.65 19 *eP* **P 01 41 15.8 +2.9**
SPITS Spitsbergen Ar 16.88 23 LR LR 01 45 44.9
comp=Z,2µm,21.0s,baz=255,slow=30
ARA0 ARCESS Array S 17.14 55 P **P 01 41 17.2 -1.3**
baz=266,slow=9.3
ARA0 ARCESS Array S 17.14 55 P **P 01 41 17.2 -1.3**
baz=266,slow=9.3
ARCES ARCESS Array B 17.14 55 P **P 01 41 17.1 -1.3**
baz=262,slow=5.6,SNR=12
COP Copenhagen 17.26 107 *eP* **P 01 41 17.9 -1.8**
COP MLR MLR
comp=Z,4µm,16.0s
COP Copenhagen 17.26 107 *i* P **P 01 41 17.9 -1.8**
COP *i* 01 44 43.0
comp=Z,4µm,16.0s
COP Copenhagen 17.26 107 *eP* **P 01 41 17.9 -1.8**
COP *i* 01 44 43.1
COP IAMs_20 IAMs_20 01 49 23.3
comp=Z,4µm,15.6s
VAF Ylistaro 17.60 77 P **P 01 41 22.0 -1.5**
VAF pmax pmax
comp=Z,114nm,2.3s
KEV Kevo 17.65 54 P **P 01 41 23.3 -0.7**
KEV pmax pmax
comp=Z,49nm,1.1s
KEV Kevo 17.65 54 **P 01 41 23.3 -0.7**
BSEG Bad Segeberg 17.67 114 P **P 01 41 22.9 -1.4**
BSEG pmax pmax
comp=Z,77nm,2.0s
SGF Sodankyl 17.82 61 P **P 01 41 26.2 +0.4**
SGF pmax pmax
comp=Z,61nm,2.0s
HOPEN Hopen 17.85 31 P **P 01 41 27.8 +1.7**
HOPEN Hopen 17.85 31 *eP* **P 01 41 28.1 +2.0**
UCC Uccle 18.03 130 Pn **P 01 41 28.6 +0.3**
UCC Uccle 18.03 130 P P 01 41 37.2 +8.9
UCC SnSn **S 01 44 59.7 +4.9**
UCC Uccle 18.03 130 P **Pn 01 41 26.4 -1.4**
UCC pmax pmax
comp=Z,39nm,1.2s
UCC Uccle 18.03 130 **Pn 01 41 26.4 -1.4**
OUL Oulu 18.20 69 P **P 01 41 30.2 +0.2**
OUL pmax pmax
comp=Z,42nm,1.1s
SNF Seneffe 18.25 131 Pn **P 01 41 31.2 +0.4**
SNF x x 01 45 00.8
SGMF Saint Gilles 18.34 147 *eP* **P 01 41 33.5 +1.7**
SGMF pmax pmax
comp=Z,262nm,1.9s
FLN La Foliniere 18.39 142 *eP* **Pn 01 41 33.5 +1.2**
FLN pmax pmax
comp=Z,115nm,1.6s
RGN Rugen 18.42 109 *eP* **Pn 01 41 32.7 +0.1**
BEBN Eben Emael 18.47 128 Pn **Pn 01 41 32.2 -1.1**
BEBN Eben Emael 18.47 128 P Pn 01 41 40.4 +7.1
BEBN S **S 01 45 02.7 -1.0**
BUG Bochum--Univer 18.49 124 P **Pn 01 41 34.9 +1.4**
BUG pmax pmax
comp=Z,47nm,2.1s
BMRD Maredsous 18.59 130 Pn **Pn 01 41 34.1 -0.6**
BSTI Sart Tilman 18.62 128 Pn **Pn 01 41 34.1 -0.9**
BSTI x x 01 41 48.7
BSTI SnSn **S 01 45 12.3 +5.6**
BAIF Baives 18.62 131 *eP* **Pn 01 41 35.1 +0.1**
BAIF pmax pmax
comp=Z,65nm,1.2s
BGES Gesves 18.63 129 Pn **Pn 01 41 35.6 +0.5**
BGES SnSn **S 01 45 12.4 +5.5**
GRR Gorron 18.64 143 *eP* **Pn 01 41 35.5 +0.2**
GRR pmax pmax
comp=Z,59nm,1.0s
LDF La Druitiere 18.64 141 *eP* **Pn 01 41 36.2 +0.8**
LDF pmax pmax
comp=Z,45nm,1.1s
BCLA Clavier 18.67 129 Pn **P 01 41 33.8 -1.5**
BCLA SnSn **S 01 45 13.5 +5.8**
BCLA S Sn 01 45 19.1 +15
BSD Bornholm Skovb 18.68 105 *eP* **Pn 01 41 37.0 +1.3**
BSD MLR MLR
comp=Z,4µm,17.0s
BSD Bornholm Skovb 18.68 105 *i* P **Pn 01 41 37.0 +1.3**
BSD *i* S **S 01 45 14.1 +6.3**
comp=Z,4µm,17.0s
BSD Bornholm Skovb 18.68 105 *eP* **Pn 01 41 37.0 +1.3**
BSD *i* S **S 01 45 14.2 +6.3**
BSD IAMs_20 IAMs_20 01 49 37.7
comp=Z,4µm,16.8s
DOU Dourbes 18.71 131 Pn **Pn 01 41 35.2 -1.0**
DOU Dourbes 18.71 131 P Pn 01 41 42.0 +5.8
DOU PnPn **PnPn 01 41 48.4 +0.5**
DOU SnSn **S 01 45 17.2 +8.7**
DOU PcP **PcP 01 46 04.6 +1.5**
DOU Dourbes 18.71 131 P **Pn 01 41 36.9 +0.7**
DOU pmax pmax
comp=Z,32nm,1.7s
MEM Membach 18.74 128 Pn **Pn 01 41 37.3 +0.8**
MEM Sn **Sn 01 45 04.0 -2.0**
MEM SnSn **SnSn 01 45 16.2 -3.2**
MEM Membach 18.74 128 P **Pn 01 41 38.2 +1.6**
MEM pmax pmax
comp=Z,79nm,1.3s
GIVF Givet 18.78 130 *eP* **Pn 01 41 37.7 +0.7**
GIVF pmax pmax
comp=Z,55nm,1.4s
BTNL Ternell 18.81 127 Pn **Pn 01 41 36.0 -1.3**
comp=Z,102nm,1.8s
BTNL SnSn S 01 45 22.5 +12
RCHB Rochefort 18.87 130 x **Pn 01 41 38.8 +0.7**
RCHB Sn **Sn 01 45 05.4 -3.5**
RCHB SnSn **SnSn 01 45 19.0 -3.5**
BHOU Houvegnez 18.96 128 Pn **Pn 01 41 38.5 -0.7**
BHOU PnPn **PnPn 01 41 52.1 +0.8**
BHOU Sn **S 01 45 11.2 -2.4**
BHOU SnSn **SnSn 01 45 24.0 -0.8**
MSF Maaselka 19.18 65 P **Pn 01 41 41.6 -0.2**
MSF pmax pmax
comp=Z,94nm,1.3s
SUF Sumiainen 19.19 76 P **Pn 01 41 41.1 -0.8**
SUF pmax pmax
comp=Z,47nm,2.3s
WLF Walferdange 19.60 129 Pn **P 01 41 42.4 -3.1**
WLF Walferdange 19.60 129 P **Pn 01 41 47.5 +0.6**
WLF SnSn Sn 01 45 40.4 +14
WLF Walferdange 19.60 129 P **P 01 41 44.2 -1.3**
WLF Walferdange 19.60 129 **P 01 41 44.2 -1.3**
FIA0 FINESS Array S 19.74 79 P **P 01 41 45.9 -1.0**
baz=296,slow=8.6
FIA0 FINESS Array S 19.74 79 P **P 01 41 45.9 -1.0**
baz=296,slow=8.6
FINES FINESS Array B 19.74 79 P **Pn 01 41 47.4 -1.0**
comp=Z,0.3nm,0.3s,baz=308,slow=7.1,SNR=14
FINES LR LR 01 48 55.1
comp=Z,2µm,19.6s,baz=294,slow=35
FINES FINESS Array B 19.74 79 P **Pn 01 41 46.5 -1.9**
FIA1 FINESS Array S 19.74 79 P **P 01 41 46.0 -0.9**
CLF Chambon-Foret 19.82 138 P **P 01 41 46.0 -1.9**
TULEG Thule 19.83 327 P **Pn 01 41 48.4 -1.0**
TULEG Thule 19.83 327 *i* P **Pn 01 41 49.8 +0.4**
TULEG IAMs_20 IAMs_20 01 51 02.4
comp=Z,8µm,6.7s
TNS Taunus Mts 19.92 124 P **Pn 01 41 50.9 +0.2**
TNS pmax pmax
comp=Z,46nm,1.5s
RUE Ruedersdorf 20.14 112 *eP* Pn 01 41 52.0 -1.1
SLIT Slitere, Latvi 20.18 92 *eP* Pn 01 41 52.2 -1.5
APA0 Apatity Array 20.19 59 P **P 01 41 50.6 -1.2**
baz=330,slow=12
APA0 Apatity Array 20.19 59 P **P 01 41 50.6 -1.2**
baz=330,slow=12
MFF Saint Martin d 20.48 144 *eP* Pn 01 41 56.7 -0.5
MFF pmax pmax
comp=Z,115nm,1.6s
KTD Kalmit 20.55 126 P Pn 01 41 56.4 -1.7
TOD Tromm 20.56 125 P Pn 01 41 57.9 -0.4
MOX Moxa 20.74 119 P Pn 01 41 58.2 -2.1
MOX pmax pmax
comp=Z,79nm,1.2s
CLL Collm 20.74 116 *eP* Pn 01 41 58.0 -2.3
CLL *i* 01 41 59.2
comp=Z,227nm,1.7s
CLL *e* 01 42 43.0
CLL *eS* Sn 01 45 53.0 -1.0
CLL Lmax 01 51 00.0
CLL Collm 20.74 116 *eP* Pn 01 41 58.0 -2.3
CLL *i* 01 41 59.2
CLL *eS* Sn 01 45 53.0 -1.0
CLL Collm 20.74 116 P **P 01 41 57.1 -0.7**
CLL IAmb IAmb 01 42 03.2
comp=Z,90nm,1.1s
LANF Langenberg 20.74 127 P Pn 01 42 02.1 +1.7
GKP Gorka Klasztor 20.95 106 *eP* Pn 01 42 02.8 +0.1
GKP Gorka Klasztor 20.95 106 P Pn 01 42 02.8 +0.1
GKP pmax pmax
comp=Z,178nm,2.4s
LOR Lormes 20.98 136 P Pn 01 42 00.7 -2.4
LOR pmax pmax
comp=Z,85nm,1.3s
PBUR Paburge 21.03 96 *eP* **P 01 42 01.6 +0.6**
CDF Champ du Feu 21.05 129 *eP* **P 01 42 02.7 +1.3**
CDF pmax pmax
comp=Z,105nm,1.6s
SSF Saint Saulge 21.06 137 *eP* **P 01 42 01.5 +0.1**
SSF pmax pmax
comp=Z,172nm,1.4s
HAU Haudompre 21.10 131 *eP* **P 01 42 02.9 +1.0**
HAU pmax pmax
comp=Z,55nm,1.0s
ECH Echery 21.18 129 P **P 01 42 02.2 -0.5**
ECH pmax pmax
comp=Z,45nm,1.0s
ECH Echery 21.18 129 P **P 01 42 02.2 -0.5**
JOF Joensuu 21.24 72 P **P 01 42 03.3 +0.2**
JOF pmax pmax
comp=Z,150nm,2.6s
AVF Avril sur Loir 21.26 137 *eP* **P 01 42 03.6 +0.1**
AVF pmax pmax
comp=Z,134nm,1.5s
BGF Bois d'Agland 21.32 139 *eP* **P 01 42 04.3 +0.1**
BGF pmax pmax
comp=Z,134nm,1.3s
GRA1 Grafenberg Arr 21.37 121 P **P 01 42 04.9 +0.2**
GRF Grafenberg Arr 21.37 121 P **P 01 42 04.9 +0.2**
GRF pmax pmax
comp=Z,214nm,1.6s
GRF Grafenberg Arr 21.37 121 *eP* **P 01 42 05.2 +0.5**
comp=Z,212nm,1.7s,baz=325,slow=10
NKC Novy Kostel 21.38 118 *eP* **P 01 42 04.3 -0.6**
NKC *eS* Sn 01 46 06.9 -2.7
NKC MLR MLR
comp=Z,9µm,17.7s
NKC Novy Kostel 21.38 118 *eP* **P 01 42 04.3 -0.6**
NKC *eS* Sn 01 46 06.9 -2.7
NKC AMS AMS 01 51 10.0
comp=Z,9µm,17.7s
TCF Toulx Ste Croi 21.39 140 *eP* **P 01 42 05.4 +0.4**
TCF pmax pmax
comp=Z,175nm,1.4s
STU Stuttgart 21.40 125 P **P 01 42 04.9 -0.2**
STU pmax pmax
comp=Z,81nm,1.0s
STU Stuttgart 21.40 125 P **P 01 42 04.9 -0.2**

STU IAmb IAmb 01 42 08.4
comp=Z,81nm,1.0s
HINF Hinteralfeld 21.43 130 *e*P **P** **01 42 06.5 +1.1**
HINF pmax pmax
comp=Z,83nm,1.5s
BRG Berggiesshubel 21.45 115 *i* P **P** **01 42 05.2 -0.3**
comp=Z,183nm,1.4s
BRG S Sn 01 46 09.0 -2.0
comp=N,7µm,16.8s
comp=E,5µm,14.6s
comp=Z,10µm,16.8s
BRG Berggiesshubel 21.45 115 *i* P **P** **01 42 05.2 -0.3**
BRG S Sn 01 46 09.0 -2.0
BRG pmax pmax
comp=Z,183nm,1.4s
BRG MLR MLR
comp=N,7µm,16.8s
BRG MLR MLR
comp=E,5µm,14.6s
BRG MLR MLR
comp=Z,10µm,16.8s
BFO Black Forest 21.48 127 P **P** **01 42 05.1 -0.8**
BFO pmax pmax
comp=Z,74nm,1.1s
BFO Black Forest 21.48 127 P **P** **01 42 05.1 -0.8**
BFO IAmb IAmb 01 42 11.9
comp=Z,74nm,1.1s
VSU Vasula 21.60 86 *e*P **P** **01 42 06.9 -0.2**
VSU Vasula 21.60 86 *i* P **P** **01 42 06.6 -0.5**
VSU pmax pmax
comp=Z,396nm,1.5s
FRB Frobisher Bay 21.71 291 LR LR 01 50 08.1
comp=Z,6µm,19.0s,baz=66,slow=36
PVCC Panska Ves 21.96 115 *e*P **P** **01 42 14.4 +3.3**
PVCC MLR MLR
comp=Z,8µm,16.4s
PVCC Panska Ves 21.96 115 *e*P **P** **01 42 14.4 +3.3**
PVCC AMS AMS 01 51 50.0
comp=Z,8µm,16.4s
SLE Schleitheim 22.02 128 P **P** **01 42 13.7 +1.9**
SLE pmax pmax
comp=Z,51nm,1.6s
GRC1 Grafenberg Arr 22.05 121 P **P** **01 42 12.9 +0.8**
RJF Les Rejaudoux 22.11 142 *e*P **P** **01 42 13.0 +0.3**
RJF pmax pmax
comp=Z,121nm,1.4s
PABE Paberze 22.25 95 *e*P **P** **01 42 14.9 +0.9**
CABF La Chapelle 22.25 133 *e*P **P** **01 42 15.2 +0.9**
CABF pmax pmax
comp=Z,123nm,1.5s
PRA Prague 22.28 116 *e*P **P** **01 42 15.0 +0.6**
PRA *e*S **S** **01 46 23.2 +4.0**
PRA MLR MLR
comp=Z,4µm,16.7s
PRA Prague 22.28 116 *e*P **P** **01 42 15.0 +0.6**
PRA *e*S **S** **01 46 23.2 +4.0**
PRA AMS AMS 01 52 10.0
comp=Z,4µm,16.7s
PRU Pruhonice 22.38 116 *e*P **P** **01 42 15.2 -0.4**
PRU *e*S Sn 01 46 26.2 -7.3
PRU MLR MLR
comp=Z,8µm,16.4s
PRU Pruhonice 22.38 116 *e*P **P** **01 42 15.2 -0.4**
PRU *e*S Sn 01 46 26.2 -7.3
PRU AMS AMS 01 52 20.0
comp=Z,8µm,16.4s
PUL Pulkovo 22.39 80 *e*P **P** **01 42 15.9 +0.3**
KSP Ksiaz 22.40 112 *e*P **P** **01 42 16.1 +0.4**
KSP Ksiaz 22.40 112 P **P** **01 42 16.1 +0.4**
KSP pmax pmax
comp=Z,88nm,1.5s
WET Wettzell 22.43 119 P **P** **01 42 17.4 +1.2**
WET pmax pmax
comp=Z,54nm,2.9s
CHVC Chvalec 22.50 113 *e*P **P** **01 42 17.8 +0.9**
CHVC AMS AMS 01 52 00.0
comp=Z,7µm,16.7s
UPC Upice 22.55 113 *e*S **S** **01 46 28.6 +4.3**
UPC AMS AMS 01 52 00.0
comp=Z,8µm,17.2s
OSTC Ostas 22.59 113 *e*P **P** **01 42 19.9 +2.1**
OSTC *e*S **S** **01 46 29.1 +4.0**
OSTC AMS AMS 01 51 30.0
comp=Z,7µm,19.3s
CAF Calviac 22.61 142 *e*P **P** **01 42 21.4 +3.3**
CAF pmax pmax
comp=Z,66nm,1.3s
KHC Kasperske Hory 22.71 118 *e*P **P** **01 42 18.9 -0.2**
KHC *e* 01 42 25.0
KHC *e*S **S** **01 46 32.3 +5.0**
KHC MLR MLR
comp=Z,7µm,18.3s
KHC Kasperske Hory 22.71 118 *e*P **P** **01 42 18.9 -0.2**
KHC *ex* x 01 42 25.0
KHC *e*S **S** **01 46 32.3 +5.0**
KHC AMS AMS 01 51 40.0
comp=Z,7µm,18.3s
DPC Dobruska-Polom 22.80 113 *e*P **P** **01 42 20.4 +0.4**
DPC *e*S **S** **01 46 33.3 +4.5**
DPC MLR MLR
comp=Z,7µm,17.7s
DPC Dobruska-Polom 22.80 113 *e*P **P** **01 42 20.4 +0.4**
DPC *e*S **S** **01 46 33.3 +4.5**
DPC AMS AMS 01 52 10.0
comp=Z,7µm,17.7s
SENIN Lac Senin/Sane 22.85 131 P **P** **01 42 20.8 0.0**
SENIN IAmb IAmb 01 42 32.5
comp=Z,120nm,1.4s
DAVA Damuels 22.91 126 *e*P **P** **01 42 22.4 +1.0**
comp=Z,49nm,1.5s
SUW Suwalki 22.92 98 *e*P **P** **01 42 20.6 -0.6**
SUW Suwalki 22.92 98 P **P** **01 42 20.0 -1.2**
SUW pmax pmax
comp=Z,146nm,1.2s
SUW Suwalki 22.92 98 P **P** **01 42 20.0 -1.2**
SSB Saint Sauveur 22.98 137 P **P** **01 42 21.8 -0.1**
SSB pmax pmax
comp=Z,126nm,1.9s
SSB Saint Sauveur 22.98 137 P **P** **01 42 21.8 -0.1**
SSB IAmb IAmb 01 42 42.9
comp=Z,126nm,1.9s
GEC2 GERESS Array S 22.99 119 P **P** **01 42 21.5 -0.6**
GERES GERESS Array B 22.99 119 P **P** **01 42 22.5 +0.4**
comp=Z,8.4nm,0.9s,baz=334,slow=8.9,SNR=39
GERES LR LR 01 52 09.2
comp=Z,7µm,19.6s,baz=331,slow=39
GERES GERESS Array B 22.99 119 P **P** **01 42 22.1 0.0**
GERES GERESS Array B 22.99 119 P **P** **01 42 22.1 0.0**
RETA Reutte 23.05 125 *e*P **P** **01 42 22.7 0.0**
comp=Z,65nm,1.5s
IZAR Zarasai 23.06 92 *e*P **P** **01 42 22.9 +0.3**
ISAL Salakas 23.13 92 *e*P **P** **01 42 24.1 +0.8**
KRLC Kraliky 23.19 113 *e*S **S** **01 46 40.2 +4.5**
KRLC AMS AMS 01 52 30.0
comp=Z,6µm,18.3s
MOTA Moosalm 23.29 124 *e*P **P** **01 42 26.2 +0.9**
comp=Z,76nm,1.4s,SNR=9.1
TREC Trest 23.31 115 AMS AMS 01 53 20.0
comp=Z,8µm,14.0s
IIGN Ignalina 23.32 93 *e*P **P** **01 42 26.0 +0.8**
DAVOX Davos/Dischmat 23.35 127 P **P** **01 42 26.1 +0.2**
comp=Z,12nm,0.9s,baz=313,slow=11,SNR=11
DAVOX LR LR 01 52 26.4
comp=Z,8µm,18.8s,baz=324,slow=39
PGAV Gavieira, Arco 23.37 162 *e*S **S** **01 46 38.5 -0.2**
PGAV *e*LR LR 01 48 41.3
comp=Z,4µm,20.0s
TMCR Tamitsa 23.38 66 *e*P **P** **01 42 25.6 -0.1**
TMCR *e*S **S** **01 46 41.8 +3.5**
TMCR pmax pmax
comp=Z,126nm,1.1s
SQTA Sankt Quirin 23.44 124 *e*P **P** **01 42 27.7 +1.0**
comp=Z,89nm,1.4s,SNR=12
TUE Stuetta 23.44 128 IAmb IAmb 01 42 52.4
comp=Z,102nm,1.5s
FETA Feichten 23.44 125 *e*P **P** **01 42 27.6 +0.8**
comp=Z,46nm,1.5s
LPG La Plagne 23.45 133 *e*P **P** **01 42 28.5 +1.5**
LPG pmax pmax
comp=Z,22nm,1.0s
WATA Walderalm 23.47 124 *e*P **P** **01 42 28.6 +1.6**
comp=Z,35nm,1.3s,SNR=11
BEL Belsk 23.48 105 *e*P **P** **01 42 27.9 +1.1**
BEL Belsk 23.48 105 P **P** **01 42 29.7 +2.8**
WTTA Wattenberg 23.55 124 *e*P **P** **01 42 29.0 +1.2**
comp=Z,43nm,1.4s,SNR=11
WTTA Wattenberg 23.55 124 P **P** **01 42 29.8 +1.9**
IDID Didziasalis 23.56 92 *e*P **P** **01 42 28.2 +0.5**
EUNU Eureka 23.65 336 P **P** **01 42 28.4 0.0**
ORIF Oris-en-Rattie 23.70 135 *e*P **P** **01 42 30.4 +1.1**
ORIF pmax pmax
comp=Z,37nm,1.1s
VRAC Vranov 23.73 114 P **P** **01 42 30.0 +0.6**
comp=Z,13nm,0.9s,baz=323,slow=11,SNR=20
VRAC LR LR 01 53 12.2
comp=Z,9µm,18.1s,baz=326,slow=40
VRAC Vranov 23.73 114 ⇓P **P** **01 42 30.3 +0.9**
VRAC Vranov 23.73 114 *e*P **P** **01 42 31.2 +1.8**
VRAC *e*S **S** **01 46 52.5 +8.2**
VRAC Vranov 23.73 114 P **P** **01 42 30.0 +0.6**
MORC Moravsky Berou 23.73 112 ⇓P **P** **01 42 30.2 +0.7**
MORC Moravsky Berou 23.73 112 *e*P **P** **01 42 31.1 +1.6**
MORC *e*S **S** **01 46 53.3 +8.9**
MORC Moravsky Berou 23.73 112 P **P** **01 42 28.9 -0.5**
MORC Moravsky Berou 23.73 112 P **P** **01 42 28.9 -0.5**
PBRG Braganca 23.74 160 *e*S Sn 01 46 55.8 -10
BNI Bardonecchia 23.83 134 P **P** **01 42 34.5 +4.0**
KRUC Moravsky 23.85 115 *e*P **P** **01 42 31.9 +1.4**
KRUC *e*S **S** **01 46 55.0 +8.9**
NACGM Naroch 23.85 93 *e*P **P** **01 42 31.0 +0.5**
NACGM *e*PP **PnPn** **01 43 04.0 +5.8**
NACGM *e*S **S** **01 46 46.0 -0.1**
NACGM *e*LQ LQ 01 50 12.0
NACGM *e*LR LR 01 51 38.0
NACGM LRM MLR 01 53 24.0
comp=Z,5.3nm,14.0s
OKC Ostrava-Krasne 23.93 111 *e*P **P** **01 42 30.1 -1.2**
OKC MLR MLR
comp=Z,4µm,22.8s
OKC Ostrava-Krasne 23.93 111 *e*P **P** **01 42 30.1 -1.2**
OKC AMS AMS 01 51 30.0
comp=Z,4µm,22.8s
EPF Esparros 23.95 146 *e*P **P** **01 42 36.2 +4.6**
EPF pmax pmax
comp=Z,132nm,2.0s
POLO Lamas de Olo 24.01 162 *e*S **S** **01 46 56.4 +7.4**
MOA Molln 24.02 119 *e*P **P** **01 42 33.8 +1.5**
comp=Z,30nm,1.3s
MTLF Montolieu 24.12 143 *e*P **P** **01 42 33.9 +0.7**
MTLF pmax pmax
comp=Z,113nm,1.3s
MBDF Montbardon 24.15 134 *e*P **P** **01 42 34.9 +1.3**
MBDF pmax pmax
comp=Z,113nm,1.8s
OJC Ojcow 24.30 109 *e*P **P** **01 42 35.3 +0.6**
ABTA Abfaltersbach 24.31 123 *e*P **P** **01 42 38.7 +3.8**
comp=Z,49nm,1.5s
MVO Moncorvo 24.32 160 *e*S **S** **01 47 02.6 +8.6**
MVO *e*LR LR 01 49 17.8
comp=Z,3µm,20.0s
KBA Koelnbreinsper 24.33 122 P **P** **01 42 35.9 +0.6**
comp=Z,58nm,1.9s
JAVC Velka Javorina 24.51 113 *e*P **P** **01 42 39.5 +2.7**
JAVC *e*S S 01 47 09.2 +12
CONA Conrad Observa 24.56 117 *e*P **P** **01 42 38.0 +0.7**
comp=Z,21nm,0.9s,SNR=8.9
MICGM Minsk 24.60 93 ⇑*e*P **P** **01 42 39.0 +1.6**
MICGM PM 01 42 40.0
comp=Z,0.6nm,1.5s
MICGM PM 01 42 41.0
comp=N,0.6nm,1.5s
MICGM PM 01 42 41.0
comp=E,0.4nm,1.5s
MICGM *e*PP **PnPn** **01 43 15.0 +6.6**
MICGM *e*PPP PPP 01 43 47.0
MICGM *e*S **S** **01 47 01.0 +3.0**
MICGM *e*LR LR 01 50 50.0
MICGM LRM MLR 01 53 50.0
comp=Z,5.1nm,18.0s
MNK Minsk 24.60 93 *e*P **P** **01 42 39.0 +1.6**
MNK *e* 01 43 15.0
MNK *e*S **S** **01 47 01.0 +3.0**
MNK pmax pmax
comp=Z,570nm,1.5s
CTI Castel Tesino 24.60 125 P **P** **01 42 36.7 -0.9**
CTI pmax pmax
comp=Z,64nm,1.3s
CTI Castel Tesino 24.60 125 P **P** **01 42 36.7 -0.9**
CTI IAmb IAmb 01 42 52.1
comp=Z,64nm,1.3s
ZOU Zoufplan 24.64 123 P **P** **01 42 37.2 -0.9**
ZOU IAmb IAmb 01 42 53.9
comp=Z,60nm,1.2s
SMOL Smolenice 24.70 114 *e*P **P** **01 42 39.4 +1.1**
SMOL pmax pmax
comp=Z,97nm,2.0s
SMOL Smolenice 24.70 114 *e*P **P** **01 42 39.4 +1.1**
MODS Modra-Piesok 24.75 114 *e*P **P** **01 42 38.6 -0.3**
MODS pmax pmax
comp=Z,116nm,1.8s
MODS Modra-Piesok 24.75 114 *e*P **P** **01 42 38.6 -0.3**
MODS *e*S **S** **01 47 09.2 +8.5**
MODS *e*L L 01 53 44.6
MYKA Terra Mystica 24.82 122 *e*P **P** **01 42 39.8 +0.3**
comp=Z,30nm,1.2s
ZST Bratislava 24.82 115 *e*S S 01 47 13.2 +11
ARSA Arzberg 25.00 118 *e*P **P** **01 42 41.8 +0.7**
comp=Z,17nm,1.0s,SNR=9.1
LANS Liptovska Anna 25.00 111 *e*P **P** **01 42 42.3 +1.2**
LANS pmax pmax
comp=Z,22nm,1.0s
LANS Liptovska Anna 25.00 111 *e*P **P** **01 42 42.3 +1.2**
MTE Manteigas 25.00 162 *e*P **P** **01 42 45.0 +3.8**
MTE *e*S S 01 47 16.0 +11
MTE *e*LR LR 01 49 30.0
comp=Z,4µm,20.0s
NIE Niedzica 25.12 109 *e*P **P** **01 42 43.4 +1.1**
NIE Niedzica 25.12 109 P **P** **01 42 43.7 +1.5**
TEOL Teolo 25.20 126 IAmb IAmb 01 43 23.3
comp=Z,60nm,1.3s
PCAS Casmilo, Conde 25.22 163 *e*S **S** **01 47 15.0 +6.7**
VYHS Vyhne 25.27 112 *e*P **P** **01 42 44.0 +0.5**
VYHS *e*S **S** **01 47 16.0 +7.1**
VYHS MLR MLR
comp=Z,5µm,20.0s
VYHS Vyhne 25.27 112 *e*P **P** **01 42 44.0 +0.5**
VYHS *e*S **S** **01 47 16.0 +7.1**
VYHS *e*L L 01 53 24.0
SOKA Soboth 25.29 120 *e*P **P** **01 42 45.6 +1.8**
comp=Z,17nm,1.2s,SNR=5.3
PCBR Castelo Branco 25.56 162 *e*P **P** **01 42 49.0 +2.8**
KLMR Klimovskoe 25.63 72 *e*P **P** **01 42 45.2 -1.4**
KLMR *e*S **S** **01 47 14.6 +0.1**
KLMR pmax pmax
comp=Z,126nm,1.3s
KLMR Klimovskoe 25.63 72 *e*P **P** **01 42 45.3 -1.4**
KLMR AMP 01 42 53.2
comp=Z,126nm,1.3s
KLMR *e*S **S** **01 47 14.6 +0.1**
KLMR *e*S **S** **01 47 14.6 +0.1**
KLMR LQ LQ 01 49 58.6
KLMR LQ LQ 01 49 58.6
KLMR LR LR 01 50 56.1
PSBE So Bento 25.72 164 *e*S **S** **01 47 24.0 +7.8**
KECS Kecovo 25.94 110 *e*P **P** **01 42 50.7 +1.1**
KECS pmax pmax
comp=Z,12nm,0.9s
KECS Kecovo 25.94 110 *e*P **P** **01 42 50.7 +1.1**
PMRV Marv??o 25.98 162 *e*P **P** **01 42 53.4 +3.4**
comp=Z,82nm,1.6s
PMRV *e*S S 01 47 31.4 +11
PMRV *e*LR LR 01 49 59.0
comp=Z,4µm,20.0s
CRVS Cervenica-Dubn 26.00 109 *e*P **P** **01 42 50.6 +0.4**
CRVS pmax pmax
comp=Z,248nm,2.1s
CRVS Cervenica-Dubn 26.00 109 *e*P **P** **01 42 50.6 +0.4**
CRVS *e*S **S** **01 47 26.0 +5.4**
CRVS *e*L L 01 51 22.0
SCHQ Schefferville 26.00 271 P **P** **01 42 48.4 -1.8**
comp=Z,26nm,0.9s,baz=40,slow=7.0,SNR=9.6
SCHQ LR LR 01 52 07.6
comp=Z,3µm,18.5s,baz=46,slow=34
SCHQ Schefferville 26.00 271 P **P** **01 42 48.6 -1.6**
SCHQ IAmb IAmb 01 43 00.9
comp=Z,42nm,1.2s
PSZ Piszkesteto 26.15 112 ⇓P **P** **01 42 52.1 +0.5**
PSZ Piszkesteto 26.15 112 P **P** **01 42 50.8 -0.8**
PSZ Piszkesteto 26.15 112 P **P** **01 42 50.8 -0.8**
BUD Budapest 26.16 113 P **P** **01 42 54.3 +2.7**
BUD pmax pmax
comp=Z,41nm,1.7s
PMAFR Mafra 26.21 165 *e*S **S** **01 47 29.4 +5.4**
PMTG Montargil 26.23 163 *e*S S 01 47 37.0 +13
ESBB Sonseca Array 26.27 156 P **P** **01 42 51.9 -0.8**
ESBB IAmb IAmb 01 43 09.6
comp=Z,48nm,1.6s
ESDC Sonseca Array 26.27 156 P **P** **01 42 52.4 -0.4**
comp=Z,5.4nm,0.8s,baz=350,slow=9.0,SNR=20
ESDC LR LR 01 53 02.2
comp=Z,4µm,18.1s,baz=330,slow=36
ESDC Sonseca Array 26.27 156 P **P** **01 42 52.3 -0.4**
KOLS Kolonicke sedl 26.31 108 *e*P **P** **01 42 53.7 +0.7**
KOLS pmax pmax
comp=Z,235nm,2.4s
KOLS Kolonicke sedl 26.31 108 *e*P **P** **01 42 53.7 +0.7**
KOLS *e*S S 01 47 41.8 +16
KOLS *e*L L 01 53 05.7
PAB San Pablo 26.33 156 P **P** **01 42 51.6 -1.7**
PAB pmax pmax
comp=Z,87nm,1.9s
PAB San Pablo 26.33 156 P **P** **01 42 51.6 -1.7**
PAB IAmb IAmb 01 43 10.3
comp=Z,87nm,1.9s
LVV L'vov 26.35 104 *e*P **P** **01 42 53.9 +0.6**
LVV *e* 01 43 30.6
LVV *e*S **S** **01 47 25.3 -0.7**
LVV pmax pmax
comp=Z,300nm,1.8s
LVV smax smax
comp=E,3µm,7.2s
LVV smax smax
comp=N,3µm,6.9s
LVV MLR MLR
comp=E,4µm,13.0s
LVV MLR MLR
comp=Z,3µm,13.0s
LVV MLR MLR
comp=N,2µm,14.0s
RES Resolute Bay 26.44 324 P **P** **01 42 54.2 +0.3**
comp=N,5.9nm,1.0s,baz=102,slow=8.7,SNR=4.1
RES LR LR 01 53 16.4
comp=N,5µm,19.3s,baz=84,slow=36
UZH Uzhgorod 26.55 108 ⇑*i*P **P** **01 42 54.0 -1.1**
UZH *i* 01 42 56.4
UZH *i* 01 43 01.0
UZH *e* 01 43 43.7
UZH *e*S **S** **01 47 23.2 -6.0**
UZH MLR MLR
comp=Z,300nm,13.0s
PGF Pioggiola 26.81 133 *e*P **P** **01 43 02.3 +4.7**
PGF pmax pmax
comp=Z,55nm,1.1s
PNCL Nicolau / Gran 27.13 164 *e*S S 01 47 52.0 +14
PCVE Castro Verde 27.67 164 *e*S S 01 48 00.7 +14
AKASG Malin Array Be 27.88 97 P **P** **01 43 05.9 -1.1**
comp=Z,3.9nm,0.8s,baz=322,slow=9.6,SNR=18
AKASG LR LR 01 53 51.8
comp=Z,3µm,20.8s,baz=315,slow=36
AKASG Malin Array Be 27.88 97 P **P** **01 43 08.0 +1.0**
AKASG pmax pmax
comp=Z,6.0nm,1.3s
AKASG Malin Array Be 27.88 97 P **P** **01 43 08.0 +1.0**
AKBB Malin Array Si 27.88 97 *ce*P **P** **01 43 05.8 -1.2**
AKBB Malin Array Si 27.88 97 P **P** **01 43 07.1 +0.1**
AKBB IAmb IAmb 01 43 09.9
comp=Z,79nm,1.8s
MORF Marmelete 27.92 165 *e*S **S** **01 47 59.3 +8.4**
OBN Obninsk 27.92 84 *e*P **P** **01 43 07.1 -0.2**
OBN *i* PPP PPP 01 43 59.6
OBN *e*S **S** **01 47 51.9 +1.4**
OBN pmax pmax
comp=Z,117nm,1.6s
OBN MLR MLR
comp=Z,1µm,23.0s
OBN Obninsk 27.92 84 P **P** **01 43 06.7 -0.6**
PVAQ Vaqueiros 27.93 163 *e*S S 01 48 01.8 +11
PVAQ *e*LR LR 01 50 47.3
comp=Z,3µm,20.0s
MOS Moscow 27.95 82 *e*P **P** **01 43 06.2 -1.4**
MOS *e* 01 43 53.8
MOS *e*S **S** **01 47 53.2 +2.1**
MOS *e*SS **SnSn** **01 49 15.7 +11**
MOS pmax pmax
comp=Z,79nm,1.6s
MOS MLR MLR
comp=Z,2µm,16.0s
PBDV Barranco-do-Ve 28.06 163 *e*S **S** **01 47 54.6 +1.4**
PFVI Vila Bisbo 28.07 165 *e*S S 01 48 07.1 +14
BUR08 Bucovina Ar. S 28.53 106 P **P** **01 43 12.6 -0.4**
BUR08 IAmb IAmb 01 43 58.9
comp=Z,67nm,1.8s
BURAR Bucovina Array 28.56 106 ⇑P **P** **01 43 12.3 -1.0**
BURAR Bucovina Array 28.56 106 P **P** **01 43 13.0 -0.2**
BURAR Bucovina Array 28.56 106 P **P** **01 43 13.0 -0.2**
CJR Cluj-Napoca 28.62 109 ⇓P **P** **01 43 14.2 +0.4**
CJR Cluj-Napoca 28.62 109 P **P** **01 43 14.1 +0.4**
BZS Buzias 28.71 113 ⇓P **P** **01 43 14.7 +0.2**
BZS Buzias 28.71 113 P **P** **01 43 16.0 +1.5**
BZS pmax pmax
comp=Z,41nm,1.4s
MAKA Makarska 28.92 121 Sg S 01 48 20.1 +14
DIVS Divibare 29.35 116 P **P** **01 43 19.3 -1.0**
DIVS IAmb IAmb 01 43 32.9
comp=Z,51nm,2.0s
GZR Gura Zlata 29.36 111 ⇓P **P** **01 43 21.5 +1.2**
SORM Soroca 29.46 102 ⇓P **P** **01 43 20.4 -0.7**
SORM Soroca 29.46 102 P **P** **01 43 20.4 -0.7**
BIZ Bicaz 29.46 106 ⇓P **P** **01 43 21.2 0.0**
STON Ston 29.53 121 Sg **S** **01 48 18.1 +2.1**
HERR Herculane 29.64 112 ⇑P **P** **01 43 23.1 +0.4**
TESR Tescani 30.03 106 ⇓P **P** **01 43 26.0 -0.1**
ARR Arges 30.13 109 ⇓P **P** **01 43 28.1 +0.9**
SRE Strehaia 30.14 112 ⇑P **P** **01 43 27.5 +0.4**
SRE Strehaia 30.14 112 P **P** **01 43 27.5 +0.4**
VOIR 30.24 109 ⇓P **P** **01 43 28.3 +0.1**
VOIR 30.24 109 P **P** **01 43 28.2 +0.1**
PDG Podgorica 30.49 119 ⇑P **P** **01 43 30.4 +0.2**
KIS Kishinev 30.55 103 ⇓*i*P **P** **01 43 30.9 +0.2**
comp=Z,80nm,2.5s
KIS Kishinev 30.55 103 *e*PP PP 01 44 38.0 -1.5
KIS *e*S **S** **01 48 36.0 +4.0**
KIS *e*LR LR 01 55 54.0
comp=Z,700nm,12.0s
KIS Kishinev 30.55 103 *d i*P **P** **01 43 30.9 +0.2**
KIS *e* 01 44 38.0
KIS *e*S **S** **01 48 36.0 +4.0**
KIS pmax pmax
comp=Z,80nm,2.5s
KIS MLR MLR
comp=Z,700nm,12.0s
PLOR Plostina 30.56 107 ⇓P **P** **01 43 31.0 +0.1**
PLOR Plostina 30.56 107 P **P** **01 43 31.0 +0.1**
MLR Muntele Rosu 30.57 108 ⇓P **P** **01 43 31.1 0.0**
MLR Muntele Rosu 30.57 108 P **P** **01 43 31.6 +0.5**
MLR Muntele Rosu 30.57 108 P **P** **01 43 31.6 +0.5**
VRI Vrincioaia 30.58 106 ⇑P **P** **01 43 30.8 -0.2**
VRI Vrincioaia 30.58 106 P **P** **01 43 30.8 -0.2**
MILM Milestii Mici 30.61 103 ⇑P **P** **01 43 30.6 -0.6**
LPSR Galich'ya Gora 30.66 86 *e*P **P** **01 43 31.9 +0.2**
LPSR *e*S **S** **01 48 32.8 -0.9**
LPSR pmax pmax
comp=Z,30nm,1.4s
LPSR smax smax
comp=E,650nm,10.3s
LPSR MLR MLR
comp=Z,2µm,14.0s
NEHR Nehoiu 30.76 107 ⇓P **P** **01 43 32.5 -0.1**
KIRV Kirov 31.01 69 *ce*P **P** **01 43 33.8 -0.8**
SKO Skopje 31.71 117 *i* P **P** **01 43 42.4 +1.4**
CFR Carcaliu 31.72 106 ⇓P **P** **01 43 40.6 -0.5**
VSR Storozhevoye 31.77 87 *e*P **P** **01 43 41.6 +0.2**
VSR *e*S **S** **01 48 48.0 -3.0**
VSR pmax pmax
comp=Z,50nm,1.5s
VSR smax smax
comp=N,350nm,6.6s
VSR MLR MLR
comp=Z,2µm,15.0s
VORD Divnogorie 32.00 88 *e*P **P** **01 43 44.0 +0.5**
VORD pmax pmax
comp=Z,50nm,1.8s
TPGR Topolog 32.10 106 ⇑P **P** **01 43 43.8 -0.6**

OHR Ohrid 32.21 118 *i* P **P 01 43 46.9 +1.4**
STIP Stip 32.24 116 *i* P **P 01 43 43.2 -2.5**
CORL Corleone 32.41 131 P **P 01 43 47.4 +0.2**
VAY Valandovo 32.71 116 *i* P **P 01 43 51.4 +1.7**
CHGQ Chibougamau 32.75 271 P **P 01 43 49.4 -0.7**
baz=42
VRH Novokhopyorsk 32.87 85 *e*P **P 01 43 51.1 0.0**
VRH *e*S **S 01 49 08.0 -0.2**
VRH pmax pmax
comp=Z,50nm,1.4s
VRH smax smax
comp=N,870nm,10.5s
VRH MLR MLR
comp=Z,2µm,13.0s
MDT Midelt 32.87 160 P **P 01 43 51.7 +0.3**
comp=Z,5.8nm,0.9s,baz=15,slow=7.2,SNR=8.2
KNT Kendrikon 32.97 116 P **P 01 43 53.3 +1.2**
KNT pmax pmax
comp=Z,27nm,1.3s
KEST Kesra 33.19 138 P **P 01 43 54.4 +0.3**
comp=Z,6.7nm,1.1s,baz=298,slow=6.9,SNR=5.1
KEST LR LR 01 57 03.7
comp=Z,3µm,18.7s,baz=290,slow=36
KEST Kesra 33.19 138 P **P 01 43 53.9 -0.2**
SRS Serrai 33.28 115 P **P 01 43 55.8 +1.0**
SRS pmax pmax
comp=Z,41nm,1.0s
IGT Igoumenitsa 33.41 120 P **P 01 43 57.6 +1.7**
IGT pmax pmax
comp=Z,28nm,0.7s
G64A Maxfield 33.95 260 P **P 01 44 01.7 +1.1**
baz=37
LATQ La Tuque 33.99 266 P **P 01 44 01.5 +0.6**
baz=39
PKME Peaks-Kenny Pk 34.17 261 P **P 01 44 03.6 +1.2**
baz=37
F61A St Evariste 34.33 263 P **P 01 44 05.2 +1.4**
baz=38
AGG Agios Georgios 34.60 118 P **P 01 44 05.7 -0.6**
AGG Agios Georgios 34.60 118 P **P 01 44 05.7 -0.6**
E57A Chemin Saint G 35.34 267 P **P 01 44 13.0 +0.4**
baz=38
E56A St. Veronique 35.62 268 P **P 01 44 15.4 +0.5**
baz=38
ANN Anapa 35.95 97 *e*P P 01 44 11.1 -6.6
ANN *e**PP pP 01 44 17.5 -3.7
ANN *e* 01 45 35.6
ANN *e*S S 01 49 46.4 -9.3
ANN *e*SS **SnSn 01 52 12.5 -6.6**
ANN pmax pmax
comp=Z,77nm,1.5s
ANN MLR MLR
comp=Z,4µm,15.0s
ANN MLR MLR
comp=E,888nm,11.0s
ANN MLR MLR
comp=N,1µm,11.0s
ARU Arti 36.11 66*c i* P **P 01 44 20.3 +1.2**
ARU 01 45 40.0
ARU PPP PPP 01 45 58.3
ARU 01 46 42.9
ARU S **S 01 50 03.7 +5.6**
ARU SS **SnSn 01 52 21.0 -1.7**
ARU pmax pmax
comp=Z,86nm,2.3s
ARU MLR MLR
comp=Z,692nm,16.0s
ARU Arti 36.11 66 P **P 01 44 19.5 +0.4**
ARU IAmb IAmb 01 44 29.5
comp=Z,38nm,1.4s
NRIK Noril'sk 36.47 35 P **P 01 44 22.2 +0.2**
comp=Z,8.5nm,0.9s,baz=294,slow=4.8,SNR=20
NRIK LR LR 02 02 57.4
comp=Z,544nm,19.0s,baz=355,slow=42
NRIK Noril'sk 36.47 35*ce*P **P 01 44 22.8 +0.8**
NRIK pmax pmax
comp=Z,74nm,2.2s
H59A Cadyville 36.54 264 P **P 01 44 23.7 +0.9**
baz=37
SVE Sverdlovsk 36.64 64 *e*P **P 01 44 23.2 -0.4**
SVE *e*S **S 01 50 07.6 +1.5**
SVE pmax pmax
comp=Z,40nm,1.8s
SVE MLR MLR
comp=Z,796nm,15.0s
G57A Newington 36.73 266 P **P 01 44 25.5 +1.0**
baz=37
C36M Paulatuk 36.80 325 P **P 01 44 25.9 +1.1**
baz=44
C36M Paulatuk 36.80 325 P **P 01 44 24.6 -0.2**
C36M IAmb IAmb 01 44 41.4
comp=Z,43nm,1.8s
MDUB Mudurnu 36.88 107 P **P 01 44 25.5 -0.4**
ILGA Ilgaz 37.44 104 P **P 01 44 30.8 0.0**
ILGA IAmb IAmb 01 44 35.6
comp=Z,69nm,1.7s
MANT Manisa 37.49 112 P **P 01 44 30.9 -0.3**
MANT IAmb IAmb 01 44 33.4
comp=Z,50nm,1.1s
SOC Sochi 37.90 96*c i* P **P 01 44 35.5 +1.1**
SOC *i* 01 46 00.2
SOC *i* S **S 01 50 29.5 +3.9**
SOC *e*SSS SSS 01 53 30.5
SOC pmax pmax
comp=Z,15nm,1.0s
SOC MLR MLR
comp=Z,1µm,15.0s
GOF Gofitskoye 38.15 91⇑ *e*P **P 01 44 37.2 +0.7**
GOF pmax pmax
comp=Z,131nm,1.5s
BRTR Keskin Array B 38.52 105 P **P 01 44 40.1 +0.3**
comp=Z,6.0nm,0.8s,baz=334,slow=5.9,SNR=27
BRTR LR LR 02 02 10.5
comp=Z,438nm,19.8s,baz=314,slow=39
KIV Kislovodsk 38.88 92 *i* P **P 01 44 42.7 0.0**
SNR=16
KIV Kislovodsk 38.88 92 P **P 01 44 43.2 +0.4**
KIV P **P 01 44 43.2 +0.4**
KIV Kislovodsk 38.88 92 *e*P **P 01 44 42.7 0.0**
KIV *e* 01 46 09.7
KIV *e*S **S 01 50 38.7 -1.8**
KIV pmax pmax
comp=Z,41nm,1.0s
KIV MLR MLR
comp=Z,5µm,16.0s
KIV Kislovodsk 38.88 92 P **P 01 44 42.5 -0.2**
KBZ Khabaz 39.15 92 P **P 01 44 46.0 +1.1**
comp=Z,13nm,0.9s,baz=236,slow=24,SNR=21
KBZ LR LR 02 01 13.2
comp=Z,3µm,21.1s,baz=326,slow=37
KBZ Khabaz 39.15 92*ce*P **P 01 44 45.4 +0.5**
KBZ pmax pmax
comp=Z,12nm,0.9s
YKA Yellowknife Ar 39.18 313 P **P 01 44 44.8 -0.2**
comp=Z,7.2nm,1.1s,baz=35,slow=9.0,SNR=5.1
YKA LR LR 02 00 55.4
comp=Z,4µm,18.1s,baz=0.0,slow=36
INK Inuvik 39.82 329 P **P 01 44 50.0 -0.1**
comp=Z,4.8nm,1.0s,baz=37,slow=10.0,SNR=13
INK Inuvik 39.82 329 P **P 01 44 49.5 -0.7**
AKAS Kas 39.86 112 P **P 01 44 51.2 +0.2**
ONI Oni 40.31 93 P P 01 44 59.2 +4.6
ZEI Tsey 40.34 92 *e*P **P 01 44 57.8 +2.7**
ZEI pmax pmax
comp=Z,27nm,2.0s
WVNY West Valley, N 40.46 267 P **P 01 44 54.0 -1.8**
WVNY IAmb IAmb 01 45 01.9
comp=Z,86nm,1.6s
KOPT Kop Dagi 41.16 98 P **P 01 45 01.8 -0.2**
AKH Akhalkalaki 41.29 94 P **P 01 45 03.8 +0.9**
AKH pmax pmax
comp=Z,417nm,1.9s
AKH Akhalkalaki 41.29 94 P **P 01 45 03.8 +0.9**
A21K Barrow 41.41 341 P **P 01 45 05.4 +2.1**
baz=25
A21K Barrow 41.41 341 P **P 01 45 03.8 +0.5**
N56A West Decatur 41.54 265 P **P 01 45 05.5 +0.8**
baz=34
ULM Lac du Bonnet 41.57 289 P **P 01 45 03.9 -0.9**
comp=Z,2.3nm,0.7s,baz=4.6,slow=11,SNR=2.9
ULM LR LR 02 01 26.9
comp=Z,1µm,18.7s,baz=42,slow=35
M54A Oil Creek Stat 41.65 267 P **P 01 45 06.7 +1.1**
baz=35
M54A Oil Creek Stat 41.65 267 P **P 01 45 05.3 -0.3**
M54A IAmb IAmb 01 45 09.3
comp=Z,34nm,1.1s
MALT Malatya 41.71 101 P **P 01 45 09.4 +3.2**
MAK Makhachkala 41.75 89 *e*P **P 01 45 02.6 -3.8**
MAK *e* 01 46 40.6
MAK *e*S **S 01 51 18.0 -5.2**
MAK *e*SS **SS 01 54 27.1 -1.4**
MAK pmax pmax
comp=Z,84nm,0.9s
MAK MLR MLR
comp=Z,2µm,16.0s
ABKAR Akbulak array 42.02 73 P **P 01 45 08.4 -0.2**
ABKAR IAmb IAmb 01 45 11.5
comp=Z,48nm,1.5s
ABKAR Akbulak array 42.02 73 P **P 01 45 08.1 -0.5**
TIXI Tiksi 42.03 15*ce*P **P 01 45 08.8 +0.4**
TIXI pmax pmax
comp=Z,413nm,2.5s
TIXI Tiksi 42.03 15 P **P 01 45 09.3 +1.0**
GAZ Gaziantep 42.16 104 P **P 01 45 10.4 +0.4**
GAZ IAmb IAmb 01 45 15.0
comp=Z,44nm,1.4s
N54A Moraine State 42.23 267 P **P 01 45 11.9 +1.5**
baz=34
N54A Moraine State 42.23 267 IAmb IAmb 01 45 14.9
comp=Z,28nm,1.1s
TOLK Toolik Lake Re 42.73 336 P **P 01 45 16.1 +1.9**
baz=28
TOLK Toolik Lake Re 42.73 336 P **P 01 45 14.4 +0.3**
GNI Garni 42.87 94 P **P 01 45 17.9 +2.2**
GNI Garni 42.87 94 P **P 01 45 16.2 +0.5**
GNI P **P 01 45 16.2 +0.5**
GNI Garni 42.87 94⇓ *e*P **P 01 45 18.3 +2.6**
GNI pmax pmax
comp=Z,121nm,2.0s
GNI Garni 42.87 94 P **P 01 45 16.2 +0.5**
M51A Elyria 42.87 269 P **P 01 45 17.1 +1.5**
baz=35
BMAR Burnt Mountain 42.87 333 P **P 01 45 16.4 +1.1**
SEKA Sheki 43.05 91 P P 01 45 20.4 +3.3
AGMN Agassiz Nation 43.09 287 P **P 01 45 18.1 +0.9**
baz=38
GANJ Ganja 43.13 92 P **P 01 45 20.3 +2.6**
BRVK Borovoye 43.16 62⇓ *e*P **P 01 45 17.5 -0.2**
BRVK pmax pmax
comp=Z,78nm,2.5s
BRVK Borovoye 43.16 62 P **P 01 45 17.5 -0.2**
N51A Ashland 43.30 269 IAmb IAmb 01 45 20.7
comp=Z,27nm,1.0s
O53A New Philadelph 43.35 267 P **P 01 45 21.1 +1.7**
baz=34
O53A New Philadelph 43.35 267 IAmb IAmb 01 45 26.8
comp=Z,42nm,1.3s
MNGR Mingechevir, A 43.36 91 P **P 01 45 22.0 +2.5**
CBN Corbin Frederi 43.41 262 P **P 01 45 18.8 -1.1**
MARD Mardin 43.55 100 P **P 01 45 22.2 +1.0**
MARD IAmb IAmb 01 45 25.3
comp=Z,54nm,1.3s
O52A Adamsville 43.73 268 P **P 01 45 23.8 +1.3**
baz=34
O52A Adamsville 43.73 268 IAmb IAmb 01 45 24.8
comp=Z,22nm,1.0s
FYU Fort Yukon 43.75 333 P **P 01 45 22.9 +0.6**
NAX Nakhchivan 44.00 94 P **P 01 45 27.1 +2.3**
O51A Pataskala 44.03 269 P **P 01 45 26.1 +1.2**
baz=34
P53A Whipple 44.05 267 P **P 01 45 26.7 +1.6**
baz=34
P53A Whipple 44.05 267 IAmb IAmb 01 45 30.0
comp=Z,36nm,1.2s
COLD Coldfoot 44.10 336 P **P 01 45 26.6 +1.5**
baz=27
R56A Bull Pasture M 44.10 264 P **P 01 45 27.1 +1.5**
baz=33
ACSO Alum Creek Sta 44.12 269 P **P 01 45 26.7 +1.1**
baz=34
P52A Corning 44.25 268 P **P 01 45 27.4 +0.7**
baz=34
P52A Corning 44.25 268 IAmb IAmb 01 45 30.2
comp=Z,40nm,1.3s
SPMN Marine on St. 44.26 282 P **P 01 45 27.4 +0.8**
baz=37
SPMN Marine on St. 44.26 282 IAmb IAmb 01 45 34.0
comp=Z,41nm,1.6s
EGAK Eagle 44.46 329 P **P 01 45 27.3 -0.7**
EGAK IAmb IAmb 01 45 40.4
comp=Z,33nm,1.4s
TAM Tamanrasset 44.53 149 P **P 01 45 28.0 -1.3**
TAM pmax pmax
comp=Z,18nm,1.4s
TAM Tamanrasset 44.53 149 P **P 01 45 28.0 -1.3**
Q53A Leroy 44.64 267 P **P 01 45 30.6 +0.8**
baz=33
DAWY Dawson 44.67 328 IAmb IAmb 01 45 36.4
comp=Z,34nm,1.4s
PRP Porcupine Dome 44.73 332 IAmb IAmb 01 45 37.8
comp=Z,57nm,1.7s
O49A Covington 44.74 270 P **P 01 45 29.4 -1.2**
O49A IAmb IAmb 01 45 34.7
comp=Z,27nm,1.1s
P51A Williamsport 44.78 269 P **P 01 45 31.3 +0.4**
baz=34
P51A Williamsport 44.78 269 IAmb IAmb 01 45 34.8
comp=Z,25nm,1.1s
T57A Hurt 45.22 263 P **P 01 45 35.8 +1.3**
baz=32
Q51A Peebles 45.28 268 IAmb IAmb 01 45 41.9
comp=Z,24nm,1.1s
K27K Chicken 45.31 329 P **P 01 45 35.6 +0.8**
baz=30
P49A Miami Univ. Ec 45.45 270 P **P 01 45 36.2 0.0**
baz=34
P49A Miami Univ. Ec 45.45 270 IAmb IAmb 01 45 39.2
comp=Z,29nm,1.2s
POKR Poker Flat Res 45.46 333 P **P 01 45 37.6 +1.6**
baz=28
IL31 45.66 332 IAmb IAmb 01 45 44.4
comp=Z,26nm,1.3s
ILAR Eielson Array 45.66 332 P **P 01 45 38.2 +0.6**
comp=Z,9.3nm,1.2s,baz=24,slow=5.8,SNR=24
ILAR PcP **PcP 01 47 15.3 -0.1**
comp=Z,3.2nm,0.9s,baz=352,slow=2.7,SNR=11
ILAR LR LR 02 07 14.7
comp=Z,2µm,18.2s,baz=33,slow=39
ILAR Eielson Array 45.66 332 P **P 01 45 36.4 -1.3**
ILAR **PcP 01 47 15.3 -0.1**
COLA College 45.76 333 P **P 01 45 38.5 +0.1**
COLA pmax pmax
comp=Z,38nm,1.4s
COLA College 45.76 333 P **P 01 45 38.5 +0.1**
COLA IAmb IAmb 01 45 42.7
comp=Z,38nm,1.4s
TCOL CIGO, UAF Yank 45.77 333 P **P 01 45 40.3 +1.9**
baz=27
TCOL CIGO, UAF Yank 45.77 333 IAmb IAmb 01 45 42.7
comp=Z,40nm,1.4s
SFIN Lafayette 45.77 273 P **P 01 45 39.5 +0.8**
baz=34
LKRN Lenkeran, Azer 45.80 91 P **P 01 45 41.6 +2.6**
I23K Minto, Yukon-K 45.81 334 P **P 01 45 40.3 +1.6**
baz=27
P48A Milroy 45.81 271 IAmb IAmb 01 45 42.1
comp=Z,41nm,1.4s
IMAR Indian Mountai 45.84 337 P **P 01 45 39.5 +0.5**
IMAR **PcP 01 47 16.8 +0.8**
CCB Clear Creek Bu 45.96 333 IAmb IAmb 01 45 46.6
comp=Z,25nm,1.5s
HDA Harding Lake 46.00 332 P **P 01 45 41.2 +0.9**
baz=28
HDA Harding Lake 46.00 332 IAmb IAmb 01 45 47.0
comp=Z,39nm,1.5s
BCAR Beaver Creek A 46.08 328 P **P 01 45 41.8 +0.8**
T54A Tazewell 46.16 265 P **P 01 45 42.4 +0.4**
baz=32
MLY Manley 46.17 335 P **P 01 45 43.5 +1.8**
baz=26
NEA2 Nenana 46.25 333 P **P 01 45 43.8 +1.5**
baz=27
BRZS Berezniki 46.51 63 *e*P **P 01 45 43.7 -0.9**
baz=63
BRZS *e*PP **PP 01 47 33.0 -0.5**
baz=63
BRZS *e*S **S 01 52 32.8 +0.4**
baz=63
BRZS Berezniki 46.51 63 *e*P **P 01 45 43.6 -0.9**
BRZS *e* 01 47 32.9
BRZS *e*S **S 01 52 32.8 +0.4**
S51A Beattyville 46.55 268 IAmb IAmb 01 45 49.0
comp=Z,20nm,1.1s
V56A Mocksville 46.76 263 P **P 01 45 48.2 +1.6**
baz=32
PAX Paxson 46.97 330 P **P 01 45 48.0 -0.1**
PAX pmax pmax
comp=Z,45nm,1.7s
PAX Paxson 46.97 330 P **P 01 45 48.0 -0.1**
MCK McKinley 47.00 333 P **P 01 45 48.8 +0.6**
baz=26
ECSD EROS Data Cent 47.06 284 P **P 01 45 48.2 -0.7**
ECSD IAmb IAmb 01 47 26.7
comp=Z,26nm,1.6s
WCI Wyandotte Cave 47.21 271 P **P 01 45 49.2 -0.9**
WCI pmax pmax
comp=Z,15nm,0.9s
WCI Wyandotte Cave 47.21 271 P **P 01 45 51.0 +0.9**
baz=33
WCI Wyandotte Cave 47.21 271 P **P 01 45 49.2 -0.9**
WCI IAmb IAmb 01 45 52.1
comp=Z,16nm,0.8s
W56A Indian Trail 47.37 263 P **P 01 45 52.3 +0.9**
baz=31
V54A Nebo 47.41 265 P **P 01 45 53.2 +1.5**
baz=32
Y59A Loris 47.62 261 P **P 01 45 53.6 +0.3**
baz=31
ZAA0 Zalesovo Array 47.66 51 P **P 01 45 53.3 -0.1**
ZAA0 IAmb IAmb 01 45 56.4
comp=Z,16nm,1.1s
ZALV Zalesovo Beam 47.66 51 P **P 01 45 53.7 +0.3**
comp=Z,4.4nm,0.8s,baz=325,slow=7.9,SNR=15
ZALV PcP **PcP 01 47 22.1 -0.5**
comp=Z,1.6nm,0.7s,baz=341,slow=3.6,SNR=3.9
ZALV LR LR 02 08 15.6
comp=Z,282nm,18.3s,baz=306,slow=39
ZALV Zalesovo Beam 47.66 51 P **P 01 45 52.8 -0.6**
ZALV **PcP 01 47 23.3 +0.7**
KMSC Kings Mountain 47.69 264 P **P 01 45 54.2 +0.4**
baz=31
W54A Cherokee Point 48.10 264 P **P 01 45 58.4 +1.4**
baz=31
X56A White Oak 48.11 263 P **P 01 45 58.3 +1.2**
baz=31
KURK Kurchatov 48.14 58 P **P 01 45 56.7 -0.5**
KURK Kurchatov 48.14 58*ce*P **P 01 45 55.8 -1.3**
KURK pmax pmax
comp=Z,69nm,2.5s
KURK Kurchatov 48.14 58 P **P 01 45 56.5 -0.6**
V51A Loudon 48.42 267 IAmb IAmb 01 46 03.2
comp=Z,23nm,1.1s
LAO LASA Array 48.56 293 P **P 01 46 01.9 +1.3**
baz=35
LAO LASA Array 48.56 293 IAmb IAmb 01 46 24.0
comp=Z,14nm,1.1s
EGMT Eagleton 48.84 297 P **P 01 46 03.9 +1.2**
baz=35
HODGE Hodges 48.86 264 IAmb IAmb 01 46 07.1
comp=Z,27nm,1.2s
FVM French Village 49.19 274 IAmb IAmb 01 46 08.3
comp=Z,37nm,1.6s
V48A Smith Brothers 49.53 269 IAmb IAmb 01 46 26.9
comp=Z,37nm,1.6s
WVT Waverly 49.64 270 P **P 01 46 08.9 +0.1**
baz=32
RSSD Black Hills 49.80 290 P **P 01 46 09.6 -0.7**
RSSD pmax pmax
comp=Z,17nm,1.5s
RSSD Black Hills 49.80 290 P **P 01 46 11.2 +0.9**
baz=34
RSSD Black Hills 49.80 290 P **P 01 46 09.6 -0.7**
Y52A Lilburn 49.95 265 IAmb IAmb 01 46 15.4
comp=Z,20nm,1.1s
GOGA Godfrey 50.08 265 P **P 01 46 13.2 +1.1**
baz=31
GOGA Godfrey 50.08 265 IAmb IAmb 01 46 16.3
comp=Z,20nm,1.2s
GEYT Alibeck 50.46 84 P **P 01 46 14.2 -0.9**
comp=Z,3.2nm,0.7s,baz=304,slow=6.6,SNR=10.0
GEYT PP **PP 01 48 11.2 +0.8**
comp=Z,4.5nm,1.0s,baz=310,slow=7.0,SNR=4.6
GEYT LR LR 02 09 39.2
comp=Z,910nm,18.1s,baz=335,slow=38
GEYT Alibeck 50.46 84 P **P 01 46 16.3 +1.2**
GYA0B ALIBECK ARRAY 50.46 84 P **P 01 46 15.0 -0.1**
X48A Hartselle 50.72 269 IAmb IAmb 01 46 34.3
comp=Z,39nm,1.6s
KSU1 Kansas State U 50.90 280 P **P 01 46 18.3 0.0**
baz=33
KOWA Kowa 50.98 163 P **P 01 46 17.9 -1.3**
KOWA IAmb IAmb 01 46 23.6
comp=Z,28nm,1.6s
BTLS Baital 51.10 66 *e*P **P 01 46 19.3 -0.4**
comp=Z,7.9nm,1.6s,baz=66
BTLS Baital 51.10 66 *e*P **P 01 46 19.3 -0.4**
BTLS pmax pmax
comp=Z,8.0nm,1.6s
KK31 Karatay Array 51.31 70 P **P 01 46 21.7 +0.3**
KK31 pmax pmax
comp=Z,87nm,1.8s
KK31 Karatay Array 51.31 70 P **P 01 46 21.7 +0.3**
KKAR Karatay Array 51.31 70 P **P 01 46 21.4 0.0**
KKAR Karatay Array 51.31 70 P **P 01 46 21.4 0.0**
BOZ Bozeman (W) 51.57 297 P **P 01 46 24.7 +1.2**
baz=33
BOZ Bozeman (W) 51.57 297 IAmb IAmb 01 46 28.0
comp=Z,23nm,1.1s
U40A Yellville 51.60 275 P **P 01 46 23.5 -0.1**
baz=32
DZA Taraz 51.81 69 *e*P **P 01 46 25.1 -0.2**
baz=69
DZA Taraz 51.81 69 *e*P **P 01 46 25.0 -0.2**
IUG Iuzhnay 51.91 71 *e*P **P 01 46 25.6 -0.5**
comp=Z,15nm,1.4s,baz=71
IUG Iuzhnay 51.91 71 *e*P **P 01 46 25.5 -0.5**
IUG pmax pmax
comp=Z,15nm,1.4s
LRAL Lakeview Retre 51.91 268 P **P 01 46 26.0 0.0**
baz=31
LRAL Lakeview Retre 51.91 268 IAmb IAmb 01 46 28.3
comp=Z,21nm,1.2s
YHL Hebgen Lake 52.03 296 P **P 01 46 26.7 -0.4**
K22A Casper 52.03 291 P **P 01 46 26.7 -0.2**
baz=33
TAS Tashkent 52.30 72 P **P 01 46 29.1 +0.3**
TAS pmax pmax
comp=Z,74nm,1.2s
TAS Tashkent 52.30 72 P **P 01 46 29.1 +0.3**
R32A Long Quarter, 52.35 281 IAmb IAmb 01 46 33.7
comp=Z,26nm,1.4s
FLWY Flagg Ranch 52.48 295 IAmb IAmb 01 46 56.2
comp=Z,29nm,1.6s
MAKZ Makanchi 52.62 58 P **P 01 46 30.8 -0.3**
MAKZ pmax pmax
comp=Z,42nm,1.7s
MAKZ Makanchi 52.62 58 P **P 01 46 30.8 -0.3**
MAKZ IAmb IAmb 01 46 37.8
comp=Z,42nm,1.6s
SGDS Sogindy 52.66 66 *e*P **P 01 46 31.2 -0.3**
comp=Z,8.4nm,1.5s,baz=66
SGDS Sogindy 52.66 66 *e*P **P 01 46 31.2 -0.3**
SGDS pmax pmax
comp=Z,8.0nm,1.5s
T35A Sooner Cattle 52.69 279 IAmb IAmb 01 48 14.3
comp=Z,19nm,0.9s
MK31 Makanchi Array 52.75 58*ce*P **P 01 46 32.4 +0.3**
MK31 Makanchi Array 52.75 58 P **P 01 46 31.7 -0.3**
MK31 IAmb IAmb 01 46 38.6
comp=Z,29nm,1.6s
MKAR Makanchi Array 52.75 58 P **P 01 46 30.9 -1.2**
comp=Z,3.0nm,0.8s,baz=335,slow=5.1,SNR=20
MKAR PP **PP 01 48 30.6 -0.3**
comp=Z,0.5nm,0.8s,baz=323,slow=9.1,SNR=1.6
MKAR Makanchi Array 52.75 58*ce*P **P 01 46 32.0 -0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 52.75 58 P **P 01 46 31.2 -0.9**
TDK Taldyqorghan 52.81 62 *e*P **P 01 46 32.4 -0.2**
baz=62
TDK Taldyqorghan 52.81 62 *e*P **P 01 46 32.4 -0.2**
ZSN Zaisan 53.12 56 *e*P **P 01 46 34.0 -0.9**
baz=56
ZSN Zaisan 53.12 56 *e*P **P 01 46 33.9 -0.9**
BW06 Boulder Array 53.14 293 P **P 01 46 35.3 0.0**
baz=32

PDAR Pinedale Array 53.14 293 P **P** **01 46 35.1 -0.1**
comp=Z,6.0nm,0.7s,baz=55,slow=6.0,SNR=50
PDAR LR LR 02 09 03.6
comp=Z,4μm,18.2s,baz=30,slow=36
PDAR Pinedale Array 53.14 293 P **P** **01 46 34.5 -0.8**
REDW Red Top Meadow 53.15 295 P **P** **01 46 34.0 -1.4**
REDW IAmb IAmb 01 46 40.8
comp=Z,24nm,1.4s
TOA0 Torodi Ar. Sit 53.16 156 P **P** **01 46 34.3 -1.1**
TORD Torodi Ar. Bea 53.16 156 P **P** **01 46 33.8 -1.5**
comp=Z,6.6nm,0.9s,baz=342,slow=6.8,SNR=27
TORD LR LR 02 11 05.3
comp=Z,1μm,18.7s,baz=340,slow=38
TORD Torodi Ar. Bea 53.16 156 P **P** **01 46 34.3 -1.1**
CHKK Chushkaly 53.24 64 *eP* **P** **01 46 35.3 -0.5**
baz=64
CHKK Chushkaly 53.24 64 *eP* **P** **01 46 35.2 -0.5**
N23A Red Feather La 53.27 289 P **P** **01 46 37.4 +1.1**
baz=32
N23A Red Feather La 53.27 289 IAmb IAmb 01 46 41.6
comp=Z,24nm,1.1s
AAK Ala-Archa 53.29 67 *i* P **P** **01 46 36.7 +0.4**
SNR=14
AAK Ala-Archa 53.29 67 P **P** **01 46 37.1 +0.8**
AAK Ala-Archa 53.29 67 *ce*P **P** **01 46 36.9 +0.6**
AAK pmax pmax
comp=Z,190nm,2.5s
PLID Pearl Lake 53.66 300 IAmb IAmb 01 46 43.2
comp=Z,21nm,1.2s
AAA Alma-Ata 53.76 65 *eP* **P** **01 46 40.1 +0.5**
baz=65
AAA *eS* **S** **01 54 15.1 +1.5**
baz=65
AAA Alma-Ata 53.76 65 *eP* **P** **01 46 40.1 +0.5**
AAA *eS* **S** **01 54 15.1 +1.5**
MDOK Medeo 53.85 65 *eP* **P** **01 46 40.4 +0.1**
baz=65
MDOK Medeo 53.85 65 *eP* **P** **01 46 40.4 +0.1**
TNSS Tian-Shan 53.91 65 *eP* **P** **01 46 41.7 +0.6**
baz=65
TNSS Tian-Shan 53.91 65 *eP* **P** **01 46 41.7 +0.6**
BOOM Boomskoye usch 53.98 66 P **P** **01 46 42.1 +0.7**
BOOM pmax pmax
comp=Z,23nm,1.1s
BOOM Boomskoye usch 53.98 66 P **P** **01 46 42.1 +0.7**
BOOM IAmb IAmb 01 48 27.2
comp=Z,23nm,1.1s
BTK Batken 53.99 72 P **P** **01 46 42.0 +0.6**
BTK pmax pmax
comp=Z,38nm,1.1s
BTK Batken 53.99 72 P **P** **01 46 42.0 +0.6**
KPKS Kokpek 54.22 63 *eP* **P** **01 46 42.4 -0.6**
comp=Z,21nm,1.7s,baz=63
KPKS Kokpek 54.22 63 *eP* **P** **01 46 42.4 -0.6**
KPKS pmax pmax
comp=Z,21nm,1.7s
SATY Saty 54.46 64 *eP* **P** **01 46 44.7 -0.2**
comp=Z,8.0nm,1.5s,baz=64
SATY Saty 54.46 64 *eP* **P** **01 46 44.6 -0.2**
SATY pmax pmax
comp=Z,8.0nm,1.5s
CHGR Chuyangaron 54.49 74 P **P** **01 46 44.2 -0.9**
Q24A Divide 54.58 287 P **P** **01 46 46.5 +0.6**
baz=32
MOY Mondy 54.68 42 *eP* **P** **01 46 47.4 +1.2**
MOY pmax pmax
comp=Z,186nm,2.7s
GAR Garm 54.68 73 P **P** **01 46 46.1 -0.3**
KDJ Kajisay 54.77 65 P **P** **01 46 46.9 -0.3**
KDJ pmax pmax
comp=Z,48nm,1.8s
KDJ Kajisay 54.77 65 P **P** **01 46 46.9 -0.3**
SHLS Shalkode 54.78 63 *eP* **P** **01 46 48.2 +1.0**
comp=Z,14nm,1.5s,baz=62
SHLS Shalkode 54.78 63 *eP* **P** **01 46 48.1 +1.0**
SHLS pmax pmax
comp=Z,14nm,1.5s
O20A White River Ci 54.84 290 P **P** **01 46 48.1 +0.4**
baz=32
O20A White River Ci 54.84 290 IAmb IAmb 01 46 51.0
comp=Z,30nm,1.4s
IRK Irkutsk 55.08 40 *eP* **P** **01 46 50.3 +1.3**
IRK pmax pmax
comp=Z,113nm,2.9s
HRA Herat 55.22 82 P **P** **01 46 50.1 -0.4**
TLY Talaya 55.41 40 P **P** **01 46 51.1 -0.3**
WMOK Wichita Mounta 55.51 279 P **P** **01 46 53.3 +0.9**
baz=31
PV22 Blue Mesa, Par 56.43 290 IAmb IAmb 01 47 09.7
comp=Z,32nm,1.9s
ZAK Zakamensk 56.48 41 *eP* **P** **01 46 59.3 +0.1**
ZAK pmax pmax
comp=Z,15nm,1.7s
KSH Kashi 56.53 68 P P 01 47 03.3 +3.6
KSH S **S** **01 54 51.3 +0.4**
KSH sS sS 01 55 03.8 +6.8
KSH pmax pmax
comp=Z,63nm,1.0s
KSH pmax pmax
comp=Z,1μm,5.5s
KSH LR LR
comp=Z,2μm,13.3s
KSH LR LR
comp=Z,1μm,7.9s
KSH LR LR
comp=Z,1μm,8.8s
DUG Dugway, Tooele 56.61 294 P **P** **01 47 01.7 +1.3**
baz=31
PV12 Saucer Basin, 56.62 290 IAmb IAmb 01 47 09.5
comp=Z,18nm,1.2s
J05D Fort Rock, OR 57.14 302 P **P** **01 47 05.2 +1.2**
baz=30
WMQ Urumqi 57.26 56 *eP* **P** **01 47 05.6 +0.9**
WMQ pP sP 01 47 11.1 +1.4
WMQ pmax pmax
comp=Z,36nm,0.9s
WMQ pmax pmax
comp=Z,900nm,3.6s
WMQ LR LR
comp=Z,550nm,22.5s
WMQ LR LR
comp=Z,1μm,18.7s
WMQ LR LR
comp=Z,380nm,19.9s
WMQ Urumqi 57.26 56 P **P** **01 47 04.8 +0.1**
WMQ Urumqi 57.26 56 P **P** **01 47 04.8 +0.1**
WMQ IAmb IAmb 01 47 07.8
comp=Z,16nm,1.0s
MVCO Mesa Verde 57.45 289 P **P** **01 47 07.6 +1.2**
baz=31
RAYN Ar Rayn 57.52 104 *i* P **P** **01 47 07.1 +0.3**
SNR=5.2
RAYN Ar Rayn 57.52 104 P **P** **01 47 05.6 -1.2**
RAYN pmax pmax
comp=Z,9.0nm,1.3s
RAYN Ar Rayn 57.52 104 P **P** **01 47 05.6 -1.2**
MSTX Muleshoe 57.86 282 P **P** **01 47 09.8 +0.6**
baz=30
MSTX Muleshoe 57.86 282 IAmb IAmb 01 48 43.2
comp=Z,33nm,1.8s
KBL Kabul 57.96 76 P **P** **01 47 09.8 -0.2**
SNR=6.2
KBL P **P** **01 47 09.8 -0.2**
SNR=6.2
KBL Kabul 57.96 76 P **P** **01 47 09.2 -0.8**
KBL pmax pmax
comp=Z,8.0nm,1.0s
KBL Kabul 57.96 76 P **P** **01 47 09.2 -0.8**
SPR3 Spring Creek 3 58.24 294 IAmb IAmb 01 47 22.2
comp=Z,38nm,1.6s
ANMO Albuquerque 58.55 286 P **P** **01 47 13.5 -0.6**
comp=Z,2.2nm,0.8s,baz=56,slow=8.2,SNR=1.8
ANMO Albuquerque 58.55 286 *ce*P **P** **01 47 14.5 +0.4**
ANMO pmax pmax
comp=Z,27nm,2.5s
ANMO Albuquerque 58.55 286 P **P** **01 47 14.8 +0.7**
baz=30
ANMO Albuquerque 58.55 286 P **P** **01 47 13.2 -0.9**
DBIC Dimbokro 58.60 165 P **P** **01 47 12.6 -1.7**
comp=Z,6.5nm,0.8s,baz=340,slow=8.3,SNR=7.8
DBIC LR LR 02 13 01.1
comp=Z,885nm,19.8s,baz=351,slow=37
DBIC Dimbokro 58.60 165 P **P** **01 47 13.2 -1.1**
DBIC pmax pmax
comp=Z,9.0nm,1.0s
DBIC Dimbokro 58.60 165 P **P** **01 47 13.2 -1.1**

TIC Toumodi 58.61 165 *eP* **P** **01 47 13.5 -0.9**
KIC Kosan Boka 58.92 165 *eP* **P** **01 47 15.6 -1.0**
comp=Z,25nm,1.0s
LIC Lamto 59.03 165 *eP* **P** **01 47 16.0 -1.3**
comp=Z,7.5nm,0.6s
R11A Troy Canyon, C 59.29 295 P **P** **01 47 20.0 +0.8**
baz=30
PAHR Pah Rah Range 59.56 299 IAmb IAmb 01 47 26.4
comp=Z,26nm,1.4s
JCT Junction City 59.61 277 P **P** **01 47 21.8 +0.5**
baz=30
JCT Junction City 59.61 277 IAmb IAmb 01 47 28.0
comp=Z,18nm,1.1s
KVN Kaiserville 59.65 297 IAmb IAmb 01 47 30.0
comp=Z,31nm,1.7s
U15A North Rim 59.65 291 IAmb IAmb 01 47 24.5
comp=Z,14nm,1.2s
SONM Songino Array 59.66 40 P **P** **01 47 21.6 0.0**
comp=Z,1.3nm,0.8s,baz=328,slow=6.4,SNR=9.9
SONM LR LR 02 15 20.6
comp=Z,1μm,20.8s,baz=346,slow=38
SONM Songino Array 59.66 40 P **P** **01 47 21.1 -0.4**
ULN Ulaanbaatar 59.81 40 *ce*P **P** **01 47 21.6 -1.0**
ULN pmax pmax
comp=Z,54nm,2.5s
ULN Ulaanbaatar 59.81 40 P **P** **01 47 22.5 -0.1**
ULN IAmb IAmb 01 47 29.9
comp=Z,15nm,1.3s
SHME Shamm 59.82 93 P **P** **01 47 23.3 +0.6**
BANOM Banah 59.99 93 *i* P **P** **01 47 23.6 -0.4**
SNR=5.1
BANOM Banah 59.99 93 P **P** **01 47 23.3 -0.7**
BANOM P **P** **01 47 23.3 -0.7**
VCNR Virginia City 60.02 299 P **P** **01 47 23.9 -0.4**
VCNR IAmb IAmb 01 47 50.8
comp=Z,25nm,1.9s
WUAZ Wupatki 60.07 290 P **P** **01 47 25.1 +0.5**
baz=30
WUAZ Wupatki 60.07 290 IAmb IAmb 01 47 30.7
comp=Z,16nm,1.1s
NVAR Mina Array Bea 60.27 297 P **P** **01 47 25.0 -0.9**
comp=Z,1.0nm,0.8s,baz=53,slow=6.1,SNR=5.2
NVAR LR LR 02 13 36.9
comp=Z,7μm,19.7s,baz=32,slow=36
NVAR Mina Array Bea 60.27 297 P **P** **01 47 24.9 -1.0**
MSFE Esma-Masafi 60.43 93 *i* P **P** **01 47 25.9 -1.1**
SNR=11
NIL Nilore 60.48 73 P **P** **01 47 26.8 -0.4**
NIL P **P** **01 47 26.8 -0.4**
NIL Nilore 60.48 73 P **P** **01 47 27.3 +0.1**
NIL pmax pmax
comp=Z,35nm,1.1s
NIL Nilore 60.48 73 P **P** **01 47 27.3 +0.1**
NAZ Nazwa, Dubai 60.54 94 *i* P **P** **01 47 27.0 -0.7**
SNR=5.3
MDH Madha 60.54 93 *i* P **P** **01 47 25.9 -1.7**
SNR=13
MDH Madha 60.54 93 P **P** **01 47 26.0 -1.7**
SNR=7.3
MDH P **P** **01 47 26.0 -1.7**
SNR=7.3
AJN Ajban 60.62 95 *i* P **P** **01 47 29.3 +1.0**
SNR=5.8
WAKR Walker 60.63 298 IAmb IAmb 01 47 37.3
comp=Z,18nm,1.4s
FAQ Al Faqa, Dubai 60.72 94 *i* P **P** **01 47 28.3 -0.6**
SNR=7.4
SHPR Sheep Range 60.73 294 IAmb IAmb 01 47 35.7
comp=Z,36nm,1.7s
TPNV Topopah Spring 60.77 295 P **P** **01 47 28.5 -0.8**
TPNV pmax pmax
comp=Z,33nm,1.8s
TPNV Topopah Spring 60.77 295 P **P** **01 47 29.4 +0.1**
baz=29
TPNV Topopah Spring 60.77 295 P **P** **01 47 28.4 -0.8**
TPNV IAmb IAmb 01 47 57.4
comp=Z,33nm,1.8s
UOSS Minazif 60.81 93 *i* P **P** **01 47 29.4 -0.1**
SNR=6.1
UOSS Minazif 60.81 93 P **P** **01 47 28.8 -0.7**
HATD Hatta, Dubai 60.88 93 *i* P **P** **01 47 29.5 -0.5**
SNR=8.9
HATD Hatta, Dubai 60.88 93 P **P** **01 47 28.0 -2.0**
SNR=10
MNTX Cornudas Mount 60.91 283 P **P** **01 47 30.4 +0.2**
baz=29
MNTX Cornudas Mount 60.91 283 P **P** **01 47 29.1 -1.1**
121A Cookes Peak, D 61.19 285 P **P** **01 47 33.1 +0.8**
baz=29
121A Cookes Peak, D 61.19 285 IAmb IAmb 01 47 36.2
comp=Z,19nm,1.4s
ALNE Al Ain 61.40 94 *i* P **P** **01 47 33.1 -0.4**
SNR=6.4
HIA Hailar 61.64 30 P **P** **01 47 36.6 +1.7**
HIA pmax pmax
comp=Z,36nm,1.6s
HIA Hailar 61.64 30 P **P** **01 47 36.6 +1.7**
SOHO SOHO 61.66 93 *i* P **P** **01 47 34.3 -1.0**
SNR=7.4
SOHO SOHO 61.66 93 P **P** **01 47 34.0 -1.3**
MPMC Manual Prospec 62.03 295 P **P** **01 47 38.6 +0.7**
baz=29
PDMCI Parker Dam,Lak 62.24 292 P **P** **01 47 40.1 +1.0**
baz=29
TXAR Lajitas Array 62.25 280 P **P** **01 47 39.0 -0.3**
comp=Z,4.6nm,1.1s,baz=50,slow=4.2,SNR=21
TXAR PcP **PcP** **01 48 19.1 -0.1**
comp=Z,3.8nm,1.1s,baz=45,slow=1.4,SNR=4.6
TXAR LR LR 02 14 19.9
comp=Z,4μm,18.1s,baz=0.0,slow=36
TXAR Lajitas Array 62.25 280 P **P** **01 47 39.0 -0.3**
TXAR **PcP** **01 48 21.3 +2.2**
ARQ Araqi 62.36 94 P **P** **01 47 39.2 -0.9**
ARQ P **P** **01 47 39.2 -0.9**
GMRC Granite Mounta 62.42 293 P **P** **01 47 41.3 +0.8**
baz=29
HOQ Hoqain 62.48 93 P **P** **01 47 41.2 +0.4**
HOQ P **P** **01 47 41.2 +0.4**
PETK Petropavlovsk- 62.50 3 LR LR 02 16 02.3
comp=Z,255nm,18.6s,baz=359,slow=37
PET Petropavlovsk 62.60 3 *eP* **P** **01 47 41.4 +0.2**
PET *eS* **S** **01 56 03.7 -4.9**
PET *eSS* **SS** **02 00 08.7 -3.0**
PET pmax pmax
comp=Z,200nm,11.7s
PET MLR MLR
comp=Z,500nm,18.0s
TUC Tucson 62.62 288 P **P** **01 47 40.8 -1.0**
TUC pmax pmax
comp=Z,23nm,1.6s
TUC Tucson 62.62 288 P **P** **01 47 43.0 +1.2**
baz=29
TUC Tucson 62.62 288 P **P** **01 47 40.8 -1.0**
TUC IAmb IAmb 01 47 45.8
comp=Z,23nm,1.6s
KIWB Kanaga Island 62.73 346 P **P** **01 47 42.5 +0.4**
IRM Iron Mountain 62.77 292 P **P** **01 47 43.6 +0.9**
baz=29
BIDO Bidbid 62.89 92 P **P** **01 47 44.4 +0.9**
SNR=5.8
DHRM DHARAMSHALA 62.95 72 *eP* **P** **01 47 44.7 +0.6**
DHRM IAmb IAmb 01 47 54.2
comp=Z,118nm,2.0s
BSY Bisya 63.17 93 P **P** **01 47 46.0 +0.6**
BELC Belle Mtn. Jos 63.24 293 P **P** **01 47 47.4 +1.4**
baz=28
SMDO Samad 63.26 92 P **P** **01 47 44.5 -1.7**
SMDO P **P** **01 47 44.5 -1.7**
113A Mohawk Valley, 63.43 291 IAmb IAmb 01 47 55.6
comp=Z,21nm,1.8s
KLR Kul'dur 63.95 22 LR LR 02 16 46.8
comp=Z,416nm,18.1s,baz=350,slow=37
WBK Wadi Bani Khal 64.05 92 P **P** **01 47 51.8 +0.6**
MHTO MHTO 65.06 94 P **P** **01 47 56.4 -1.4**
HPIG 65.19 281 ⇑P **P** **01 47 58.1 -0.8**
GTA Gaotai 65.32 49 ⇑P **P** **01 48 01.8 +2.3**
GTA pP sP 01 48 06.9 +2.4
GTA sP pP 01 48 10.0 +6.9
GTA S **S** **01 56 48.3 +5.2**
GTA pmax pmax
comp=Z,18nm,1.5s
GTA pmax pmax
comp=Z,450nm,6.4s
GTA LR LR
comp=Z,440nm,16.7s
GTA LR LR
comp=Z,670nm,17.1s
GTA LR LR
comp=Z,560nm,18.2s
HSIG 65.57 286 P **P** **01 48 01.4 +0.3**
HSIG IAmb IAmb 01 48 02.0
comp=Z,7.1nm,0.7s
SDV Santo Domingo 66.80 239 P **P** **01 48 08.6 -0.7**
SDV IAmb IAmb 01 48 12.6
comp=Z,12nm,0.9s
SDV Santo Domingo 66.80 239 *eP* **P** **01 48 09.8 +0.5**
HHC Hu-ho-hao-te 67.53 40 *eP* **P** **01 48 14.3 +0.7**
HHC S **S** **01 57 10.8 +1.1**
HHC SKS **SKiKP** **01 58 09.6 -1.6**
HHC pmax pmax
comp=Z,15nm,1.1s
HHC pmax pmax
comp=Z,420nm,5.3s
HHC LR LR
comp=Z,570nm,18.8s
HHC LR LR
comp=Z,400nm,17.3s
HHC LR LR
comp=Z,760nm,20.6s
ZAIG Zacatecas 67.54 276 P **P** **01 48 12.8 -1.2**
ZAIG IAmb IAmb 01 48 20.0
comp=Z,9.3nm,1.0s
YSS Yuzh-Sakhalins 67.65 14 *eP* **P** **01 48 16.2 +2.1**
MDJ Mudanjiang 68.05 25 P **P** **01 48 16.0 -0.6**
MDJ pmax pmax
comp=Z,15nm,1.1s
MDJ pmax pmax
comp=Z,550nm,6.3s
USRK Ussuriysk Ar. 68.87 23 LR LR 02 20 41.2
comp=Z,238nm,18.5s,baz=340,slow=38
PYUN Piuthan 69.31 68 *eP* **P** **01 48 24.9 -0.1**
comp=Z,180nm,1.6s
DANN Dangsing 69.39 67 *eP* **P** **01 48 26.3 +0.7**
comp=Z,151nm,1.8s
BJI Beijing 69.51 36 P **P** **01 48 28.3 +2.6**
BJI PP **PP** **01 50 55.8 -2.9**
BJI pmax pmax
comp=Z,15nm,1.9s
BJI LR LR
comp=Z,250nm,19.6s
BJI LR LR
comp=Z,510nm,17.5s
BJI LR LR
comp=Z,640nm,36.0s
MCPB Macapa, AP 69.58 217 *eP* **P** **01 48 26.9 +0.5**
LZH Lanzhou 69.65 47 ⇓P **P** **01 48 26.8 -0.1**
LZH pP sP 01 48 29.8 -2.1
LZH sP pP 01 48 32.0 +1.4
LZH S **S** **01 57 33.6 -1.6**
LZH sS sS 01 57 45.1 +3.7
LZH SS **SS** **02 02 04.6 +2.5**
LZH pmax pmax
comp=Z,19nm,1.1s
LZH pmax pmax
comp=Z,630nm,4.9s
LZH LR LR
comp=Z,650nm,16.8s
LZH LR LR
comp=Z,680nm,16.8s
LZH LR LR
comp=Z,610nm,16.3s
KOLN Koldanda 69.85 68 *eP* **P** **01 48 28.0 -0.3**
comp=Z,220nm,1.9s
GKN Gorkha 70.05 67 *eP* **P** **01 48 29.9 +0.4**
comp=Z,213nm,2.0s
ASAJ Asahikawa 70.44 15 LR LR 02 22 42.1
comp=Z,253nm,18.0s,baz=12,slow=39
KKN Kakani 70.50 66 *eP* **P** **01 48 32.7 +0.4**
TMAB Tom-Au,PA,Br 70.54 213 *eP* **P** **01 48 33.5 +1.2**
DMN Daman 70.59 67 *eP* **P** **01 48 33.0 +0.1**
GUN Gumba 70.62 66 *eP* **P** **01 48 34.0 +0.8**
comp=Z,143nm,1.7s
PKIN Phulchoki 70.73 66 *eP* **P** **01 48 34.3 +0.5**
PKI Pulchoki 70.74 66 *eP* **P** **01 48 33.7 -0.2**
LSA Lhasa 71.04 61 P **P** **01 48 36.2 +0.3**
LSA pmax pmax
comp=Z,37nm,1.8s
LSA Lhasa 71.04 61 P **P** **01 48 36.2 +0.3**
LSA IAmb IAmb 01 48 42.2
comp=Z,37nm,1.8s
BHPL Bhopal 71.36 75 *eP* **P** **01 48 36.1 -1.2**
MALB Monte Alegre 71.59 219 *eP* **P** **01 48 39.0 +0.3**
RAMN Ramite 71.77 66 *eP* **P** **01 48 39.4 -0.6**
TAPN Taplejung 71.84 65 *eP* **P** **01 48 41.3 +0.8**
ROSC El Rosal 71.90 241 P **P** **01 48 42.3 +1.2**
comp=Z,11nm,0.6s,baz=52,slow=23,SNR=5.9
ROSC LR LR 02 20 34.4
comp=Z,185nm,18.1s,baz=2.5,slow=36
ROSC El Rosal 71.90 241 P **P** **01 48 40.8 -0.3**
ROSC IAmb IAmb 01 48 45.1
comp=Z,13nm,0.7s
DL2 Dalian 71.91 32 ⇓P **P** **01 48 40.4 0.0**
DL2 PP **PP** **01 51 18.8 -0.6**
DL2 S **S** **01 58 03.3 +2.4**
DL2 pmax pmax
comp=Z,22nm,0.9s
DL2 pmax pmax
comp=Z,560nm,5.4s
DL2 LR LR
comp=Z,170nm,17.7s
DL2 LR LR
comp=Z,660nm,23.8s
DL2 LR LR
comp=Z,630nm,22.1s
ODAN Odare 72.16 65 *eP* **P** **01 48 42.4 0.0**
GTK Tadong 72.21 64 *eP* **P** **01 48 45.4 +2.8**
XAN Xi'an 73.11 44 P **P** **01 48 47.6 -0.1**
XAN pmax pmax
comp=Z,22nm,2.1s
XAN pmax pmax
comp=Z,540nm,5.2s
XAN LR LR
comp=Z,720nm,17.4s
XAN LR LR
comp=Z,380nm,17.4s
XAN LR LR
comp=Z,870nm,16.3s
XAN Xi'an 73.11 44 P **P** **01 48 47.8 +0.1**
XAN pmax pmax
comp=Z,71nm,1.8s
XAN Xi'an 73.11 44 P **P** **01 48 47.8 +0.1**
ZIRO ZIRO 74.01 59 *eP* **P** **01 48 54.1 +0.8**
POO Poona 74.04 81 *eP* **P** **01 48 54.5 +1.2**
BOK Bokaro 74.31 68 *eP* **P** **01 48 54.2 -0.7**
BOK IAmb IAmb 01 49 00.5
comp=Z,7.0nm,0.6s
CD2 Chengdu 74.38 50 P **P** **01 48 56.0 +0.8**
CD2 PP **PP** **01 51 43.6 +2.8**
CD2 S **S** **01 58 28.4 -1.1**
CD2 SS **SS** **02 03 15.8 +1.3**
CD2 pmax pmax
comp=Z,30nm,1.4s
CD2 pmax pmax
comp=Z,460nm,7.0s
CD2 LR LR
comp=Z,670nm,16.0s
CD2 LR LR
comp=Z,1μm,17.4s
CD2 LR LR
comp=Z,670nm,18.7s
ITTB Itaituba 74.40 220 *eP* **P** **01 48 53.5 -1.8**
GUWA GUWAHATI 74.41 62 *eP* **P** **01 48 55.6 +0.3**
GUWA *eS* **S** **01 58 33.2 +3.5**
TEZP TEZPUR 74.44 61 *eP* **P** **01 48 57.3 +1.8**
TEZP IAmb IAmb 01 49 01.1
comp=Z,12nm,1.2s
KS19 Wonju Array Si 74.60 28 P **P** **01 48 56.3 -0.1**
KS19 IAmb IAmb 01 49 07.8
comp=Z,16nm,1.1s
KSRS Korea Array 74.66 28 LR LR 02 25 08.4
comp=Z,300nm,18.0s,baz=348,slow=38
SHL Shillong 75.05 62 *eP* **P** **01 48 58.1 -1.2**
SHL Shillong 75.05 62 P **P** **01 48 58.7 -0.6**
SHL pmax pmax
comp=Z,57nm,1.8s
SHL Shillong 75.05 62 P **P** **01 48 58.7 -0.6**
MOKO MOKOCHONG 75.35 59 *eP* **P** **01 49 02.0 +1.0**
MOKO IAmb IAmb 01 49 08.2
comp=Z,12nm,0.6s
KMBO Kilima Mbogo 76.70 123 LR LR 02 26 08.1
comp=Z,841nm,19.4s,baz=280,slow=38

SMTB	**Santa Maria do**	**76.71**	**211**	*eP*		**P**		**01 49 09.2**	**+0.7**
ENH	**Enshi**	**76.79**	**45**	P		**P**		**01 49 09.4**	**+0.4**
NPGB	**Novo Progresso**	**76.85**	**219**	*eP*		**P**		**01 49 10.8**	**+1.4**
MJAR	**Matsushiro Arr**	**77.33**	**20**	P		**P**		**01 49 12.0**	**0.0**
	comp=Z,0.6nm,0.4s,baz=7.7,slow=6.6,SNR=4.1								
MJAR	**Matsushiro Arr**	**77.33**	**20**	P		**P**		**01 49 12.0**	**0.0**
NJ2	**Nanjing**	**77.75**	**37**	*eP*		**P**		**01 49 14.1**	**-0.2**
NJ2				pmax	pmax				
	comp=Z,13nm,0.6s								
WHN	**Wuhan**	**77.96**	**41**	P		**P**		**01 49 14.8**	**-0.7**
WHN				PP		**PP**		**01 52 14.4**	**+3.6**
WHN				S		**S**		**01 59 14.8**	**+6.1**
WHN				LR	LR				
	comp=Z,580nm,12.3s								
WHN				LR	LR				
	comp=Z,1μm,13.2s								
WHN				LR	LR				
	comp=Z,980nm,15.6s								
SAIH	**SAIHA**	**78.25**	**62**	*eP*		**P**		**01 49 17.5**	**+0.1**
SAIH				IAmb	IAmb			01 49 20.4	
	comp=Z,62nm,1.5s								
KMI	**Kunming**	**79.38**	**53**	*iP*		**P**		**01 49 23.3**	**-0.4**
KMI				pP		sP		01 49 26.8	-1.9
KMI				pmax	pmax				
	comp=Z,12nm,0.6s								
KMI				pmax	pmax				
	comp=Z,420nm,6.3s								
KMI				LR	LR				
	comp=Z,240nm,21.6s								
KMI				LR	LR				
	comp=Z,480nm,20.1s								
KMI				LR	LR				
	comp=Z,400nm,24.0s								
JNU	**Nakatsue**	**79.44**	**27**	LR	LR			02 26 00.8	
	comp=Z,152nm,20.8s,baz=355,slow=37								
GYA	**Guiyang**	**79.45**	**49**	*jP*		**P**		**01 49 26.3**	**+2.4**
GYA				PP		**PP**		**01 52 23.8**	**+0.3**
GYA				S		**S**		**01 59 26.3**	**+1.3**
GYA				SS		**SS**		**02 04 32.8**	**+1.5**
GYA				pmax	pmax				
	comp=Z,22nm,2.4s								
GYA				pmax	pmax				
	comp=Z,240nm,5.5s								
GYA				LR	LR				
	comp=Z,280nm,18.5s								
GYA				LR	LR				
	comp=Z,490nm,19.0s								
GYA				LR	LR				
	comp=Z,600nm,18.2s								
SNDB	**Serra Nova Dou**	**80.56**	**213**	*eP*		**P**		**01 49 30.7**	**+1.0**
CLDB	**Colider**	**80.63**	**218**	*eP*		**P**		**01 49 31.2**	**+1.1**
SAML	**Samuel**	**80.92**	**226**	P		**P**		**01 49 31.6**	**-0.1**
SAML				pmax	pmax				
	comp=Z,29nm,1.9s								
SAML	**Samuel**	**80.92**	**226**	P		**P**		**01 49 31.6**	**-0.1**
SAML				IAmb	IAmb			01 49 40.8	
	comp=Z,29nm,1.9s								
SAML	**Samuel**	**80.92**	**226**	*eP*		**P**		**01 49 31.5**	**-0.1**
JHJ	**Hachijo jima 2**	**80.92**	**19**	LR		LR		02 26 37.5	
	comp=Z,91nm,20.4s,baz=130,slow=37								
ETMB	**Extrema**	**82.69**	**228**	*eP*		**P**		**01 49 40.6**	**-0.3**
VILB	**Vilhena**	**83.83**	**222**	*eP*		**P**		**01 49 47.8**	**+1.0**
CHTO	**Chiang Mai**	**83.83**	**58**	P		**P**		**01 49 46.5**	**-0.5**
CHTO				pmax	pmax				
	comp=Z,35nm,1.6s								
CHTO	**Chiang Mai**	**83.83**	**58**	P		**P**		**01 49 46.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**84.16**	**59**	P		**P**		**01 49 48.0**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=317,slow=6.9,SNR=12								
CMAR	**Chiang Mai Arr**	**84.16**	**59**	P		**P**		**01 49 48.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**84.16**	**59**	P		**P**		**01 49 48.4**	**-0.3**
ARAG	**Araguaiana, MT**	**84.28**	**213**	*eP*		**P**		**01 49 49.0**	**-0.1**
IPMB	**Ipameri, GO**	**85.69**	**209**	*eP*		**P**		**01 49 55.3**	**-0.8**
PTLB	**Pontes e Lacer**	**85.91**	**220**	*eP*		**P**		**01 49 57.6**	**+0.4**
QIZ	**Qiongzhong**	**87.40**	**49**	P		**P**		**01 50 04.4**	**-0.4**
QIZ				S		**S**		**02 00 46.3**	**+1.0**
QIZ				LR	LR				
	comp=Z,650nm,16.9s								
QIZ				LR	LR				
	comp=Z,440nm,19.0s								
LPAZ	**La Paz**	**89.38**	**228**	LR		LR		02 28 29.9	
	comp=Z,100nm,19.6s,baz=346,slow=34								
LPAZ	**La Paz**	**89.38**	**228**	*eP*		**P**		**01 50 13.4**	**-1.3**
CPUP	**Villa Florida**	**95.82**	**215**	LR		LR		02 30 53.0	
	comp=Z,181nm,18.3s,baz=19,slow=34								
BOSA	**Boshof**	**98.79**	**143**	LR		LR		02 38 25.8	
	comp=Z,1μm,18.2s,baz=347,slow=37								
TAOE	**Nuku Hiva Isla**	**111.52**	**296**	*eLR*		LR		02 29 01.4	
	comp=Z,789nm,27.7s								
PPT2	**Papeete2**	**123.07**	**302**	*eLR*		LR		02 34 17.8	
	comp=Z,754nm,21.5s								
TBI	**Tubuai**	**128.29**	**299**	*eLR*		LR		02 36 40.0	
	comp=Z,808nm,23.2s								
WRA	**Warramunga Arr**	**131.54**	**36**	PKP		**PKiKP**		**01 56 29.3**	**-1.6**
	comp=Z,1.8nm,1.1s,baz=335,slow=2.5,SNR=5.8								
ASAR	**Alice Springs**	**134.98**	**38**	PKP		**PKiKP**		**01 56 36.7**	**-1.1**
	comp=Z,1.8nm,1.0s,baz=343,slow=2.3,SNR=6.7								
ASAR	**Alice Springs**	**134.98**	**38**	PKIKP		**PKiKP**		**01 56 36.4**	**-1.4**
ASAR	**Alice Springs**	**134.98**	**38**			**PKiKP**		**01 56 36.4**	**-1.4**
DZM	**Mont Dzumac**	**137.33**	**354**	*eLR*		LR		02 41 00.6	
	comp=Z,691nm,23.8s								
STKA	**Stephens Creek**	**144.73**	**32**	PKP		**PKPdf**		**01 56 52.0**	**-1.7**
	comp=Z,4.2nm,0.7s,baz=338,slow=10,SNR=6.1								
STKA	**Stephens Creek**	**144.73**	**32**	PKIKP		**PKPdf**		**01 56 53.2**	**-0.5**
STKA	**Stephens Creek**	**144.73**	**32**			**PKPdf**		**01 56 53.2**	**-0.5**

IDC ***16*** *01:45:15.7±0.6, 1°.64N×126°.29E, h0km, mb4.0/12, mb1 4.1/14, mb1mx3.9/39, mbtmp3.9/14, ML3.2/2, MS3.1/5, Ms1 3.2/5, ms1mx2.8/34, Error ellipse: s-maj=37.4km s-min=13.2km az=77.0*

DJA ***16*** *01:45:19.8±0.2, 2°N±2°×12°.7E±°, h10km, M4.4/13, mB4.9/1, mb4.6/3, MLv4.3/13, Mw(mB)4.2/1*

NEIC ***16*** *01:45:21.9±1.1, 1°.69N±0°.09×126°.52E±0°.07, h49km±8km, mb4.4/23, Error ellipse: s-maj=13.7km s-min=9.5km az=207.0*

ISC 16 01:45:22.1±0.4, 1°.72N±0°.04×126°.54E±0°.06, h47km, n63, σ1§39/69, mb4.2/22, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
TNTI	**Ternate**	**1.25**	**139**	P	**Pn**	**01 45 43.1**	**-0.1**	
TNTI				S	**Sn**	**01 46 02.6**	**+3.6**	
TNTI	**Ternate**	**1.25**	**139**		**Pn**	**01 45 42.2**	**-1.0**	
SGSI	**Sangihe**	**2.20**	**333**	P	**Pn**	**01 45 54.6**	**-1.5**	
SGSI				S	**Sn**	**01 46 22.9**	**+0.8**	
KMSI	**Cibinong**	**2.80**	**246**	P	**Pn**	**01 46 04.9**	**+0.6**	
KMSI				S	**Sn**	**01 46 39.9**	**+3.0**	
GTOI	**Gorontalo**	**3.69**	**253**	P	**Pn**	**01 46 18.6**	**+2.0**	
LUWI	**Luwuk**	**4.66**	**234**	P	**Pn**	**01 46 30.2**	**+0.3**	
LUWI				S	**Sn**	**01 47 25.7**	**+3.0**	
LUWI	**Luwuk**	**4.66**	**234**		**Pn**	**01 46 30.5**	**+0.6**	
MRSI	**Marisa**	**4.76**	**255**	P	**Pn**	**01 46 32.0**	**+0.7**	
SIJI	**Sorong**	**5.38**	**118**	Pn	**Pn**	**01 46 41.3**	**+1.4**	
	0.5nm,0.3s,baz=18,slow=19,SNR=2.1							
SIJI				LR	LR	01 49 14.9		
	comp=Z,245nm,19.2s,baz=43,slow=43							
KCP	**Kidapawan**	**5.45**	**345**	*eP*	**Pn**	**01 46 42.8**	**+1.9**	
KCP				*i* S	**Sn**	**01 47 48.6**	**+6.3**	
APSI	**Ampana**	**5.54**	**242**	P	**Pn**	**01 46 43.0**	**+0.9**	
	0.4nm1μm80nm,0.8s							
MPSI	**Mapaga**	**6.78**	**258**	P	**Pn**	**01 46 58.9**	**-0.1**	
MYLDM	**Lahad Datu**	**8.73**	**293**	Pn	**Pn**	**01 47 25.7**	**-0.1**	
KAPI	**Kappang**	**9.52**	**225**	Pn	**Pn**	**01 47 35.8**	**-0.8**	
SOEI	**Soe**	**11.62**	**191**	Pn	**Pn**	**01 48 04.5**	**-1.0**	
SBUM	**Sibu**	**14.32**	**273**	Pn	**Pn**	**01 48 42.3**	**0.0**	
MTN	**Manton Dam**	**15.17**	**163**	Pn	**Pn**	**01 48 52.7**	**-0.7**	
JAGI	**Jajag, Banyuwa**	**15.96**	**230**	Pn	**Pn**	**01 49 03.1**	**-0.6**	
JAGI				IAmb	IAmb	01 49 32.7		
	comp=Z,40nm,1.2s							
KSM	**Kuching**	**16.22**	**269**		**Pn**	**01 49 07.6**	**+0.7**	
KNRA	**Kununurra**	**17.42**	**173**	Pn	**Pn**	**01 49 20.1**	**-1.8**	
FITZ	**Fitzroy Crossi**	**19.71**	**183**	P	**P**	**01 49 46.9**	**-0.9**	
	comp=Z,0.1nm,0.3s,baz=18,slow=13,SNR=2.8							
FITZ				LR	LR	01 57 15.3		
	comp=Z,38nm,20.4s,baz=44,slow=37							
WB0	**Warramunga Arr**	**22.70**	**161**	P	**P**	**01 50 18.8**	**-1.2**	
WB0				IAmb	IAmb	01 50 30.6		
	comp=Z,16nm,1.1s							
WRAB	**Tennant Creek**	**22.84**	**161**	P	**P**	**01 50 20.3**	**-1.2**	
WRAB				IAmb	IAmb	01 50 25.1		
	comp=Z,17nm,0.8s							
WRA	**Warramunga Arr**	**22.85**	**161**	P	**P**	**01 50 20.2**	**-1.3**	
	comp=Z,5.9nm,0.7s,baz=339,slow=11,SNR=30							
WRA				PcP	**PcP**	**01 54 12.2**	**+0.8**	
	comp=Z,0.5nm,0.8s,baz=342,slow=2.6,SNR=2.3							
WB2	**Warramunga Arr**	**22.85**	**161**	P	**P**	**01 50 20.9**	**-0.6**	
WB2				IAmb	IAmb	01 50 25.7		
	comp=Z,15nm,1.1s							
WR0	**Warramunga Arr**	**22.93**	**160**	P	**P**	**01 50 21.7**	**-0.7**	
WR0				IAmb	IAmb	01 50 35.2		
	comp=Z,7.2nm,0.6s							
KRVT	**Keravat (AS076**	**26.17**	**103**	LR	LR	02 01 22.1		
	comp=Z,45nm,18.2s,baz=280,slow=37							
AS31	**Alice Springs**	**26.23**	**165**	P	**P**	**01 50 52.3**	**-0.6**	
ASAR	**Alice Springs**	**26.23**	**165**	P	**P**	**01 50 52.5**	**-0.3**	
	comp=Z,5.1nm,1.1s,baz=346,slow=9.6,SNR=26							
ASAR				PcP	**PcP**	**01 54 19.2**	**+0.4**	
	comp=Z,0.5nm,0.6s,baz=350,slow=2.3,SNR=5.0							
ASAR				S	**S**	**01 55 23.8**	**+1.7**	
	comp=Z,0.3nm,0.8s,baz=348,slow=17,SNR=2.6							
ASAR				LR	LR	02 00 48.1		
	comp=Z,49nm,20.3s,baz=333,slow=36							
ASAR	**Alice Springs**	**26.23**	**165**	P	**P**	**01 50 51.8**	**-1.0**	
CMAR	**Chiang Mai Arr**	**31.76**	**303**	LR	LR	02 04 32.2		
	comp=Z,31nm,22.0s,baz=315,slow=37							
KSRS	**Korea Array**	**35.58**	**2**	P	**P**	**01 52 16.6**	**+1.5**	
	comp=Z,0.8nm,0.7s,baz=177,slow=10,SNR=2.4							
MJAR	**Matsushiro Arr**	**36.29**	**16**	P	**P**	**01 52 21.5**	**+0.3**	
	comp=Z,1.6nm,0.6s,baz=184,slow=10,SNR=5.7							
STKA	**Stephens Creek**	**36.34**	**158**	P	**P**	**01 52 21.1**	**-0.5**	
	comp=Z,1.8nm,0.6s,baz=15,slow=4.3,SNR=3.6							
SHL	**Shillong**	**40.94**	**308**	P	**P**	**01 52 59.8**	**-0.7**	
SHL				IAmb	IAmb	01 53 07.1		
	comp=Z,4.3nm,0.9s							
USRK	**Ussuriysk Ar.**	**42.58**	**6**	P	**P**	**01 53 13.6**	**+0.2**	
	comp=Z,1.4nm,0.7s,baz=182,slow=8.7,SNR=3.4							
USRK	**Ussuriysk Ar.**	**42.58**	**6**	P	**P**	**01 53 11.4**	**-2.0**	
SONM	**Songino Array**	**49.13**	**342**	P	**P**	**01 54 05.0**	**-0.3**	
	comp=Z,0.7nm,0.9s,baz=153,slow=7.8,SNR=4.1							
SONM				PcP	**PcP**	**01 55 29.0**	**+0.9**	
	comp=Z,0.9nm,1.0s,baz=158,slow=1.6,SNR=2.6							
SONM	**Songino Array**	**49.13**	**342**	IAmb	IAmb	01 54 12.3		
	comp=Z,1.1nm,0.9s							
PETK	**Petropavlovsk-**	**57.35**	**22**	P	**P**	**01 55 06.8**	**+1.4**	
	comp=Z,4.0nm,1.0s,baz=195,slow=10,SNR=2.9							
MK31	**Makanchi Array**	**59.09**	**326**	P	**P**	**01 55 16.6**	**-1.2**	
MK31				IAmb	IAmb	01 55 25.7		
	comp=Z,10nm,2.0s							
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**01 55 17.2**	**-0.5**	
	comp=Z,1.0nm,0.3s,baz=120,slow=7.2,SNR=18							
MKAR	**Makanchi Array**	**59.09**	**326**	P	**P**	**01 55 16.6**	**-1.2**	
ZAA0	**Zalesovo Array**	**62.29**	**334**	P	**P**	**01 55 40.1**	**+0.9**	
ZAA0				IAmb	IAmb	01 56 24.7		
	comp=Z,2.6nm,1.1s							
ZALV	**Zalesovo Beam**	**62.29**	**334**	P	**P**	**01 55 40.4**	**+1.2**	
	comp=Z,0.7nm,0.6s,baz=147,slow=6.1,SNR=3.5							
ZALV	**Zalesovo Beam**	**62.29**	**334**	P	**P**	**01 55 38.6**	**-0.7**	
KBL	**Kabul**	**62.60**	**308**	P	**P**	**01 55 41.8**	**-0.2**	
KBL				IAmb	IAmb	01 55 44.0		
	comp=Z,2.9nm,0.7s							
BTK	**Batken**	**63.18**	**315**	P	**P**	**01 55 44.9**	**-0.7**	
KURK	**Kurchatov**	**63.33**	**328**	P	**P**	**01 55 45.6**	**-0.6**	
KK31	**Karatay Array**	**64.57**	**318**	P	**P**	**01 55 53.8**	**-0.8**	
KK31				IAmb	IAmb	01 56 05.9		
	comp=Z,8.2nm,1.8s							
KKAR	**Karatay Array**	**64.57**	**318**	P	**P**	**01 55 54.2**	**-0.5**	
NRIK	**Noril'sk**	**72.33**	**346**	P	**P**	**01 56 42.5**	**0.0**	
	comp=Z,2.2nm,0.7s,baz=131,slow=4.9,SNR=5.9							
ABKAR	**Akbulak array**	**73.58**	**321**	P	**P**	**01 56 49.8**	**-0.6**	
RAYN	**Ar Rayn**	**81.09**	**293**	P	**P**	**01 57 31.9**	**-1.1**	
RAYN				IAmb	IAmb	01 57 34.6		
	comp=Z,3.2nm,1.2s							
VNDA	**Vanda**	**81.47**	**173**	P	**P**	**01 57 34.1**	**+0.3**	
	comp=Z,1.3nm,0.9s,baz=314,slow=5.8,SNR=5.6							
AKH	**Akhalkalaki**	**83.64**	**311**	P	**P**	**01 57 46.0**	**-0.1**	
A21K	**Barrow**	**84.17**	**18**	P	**P**	**01 57 47.7**	**-0.2**	
IMAR	**Indian Mountai**	**84.25**	**24**	P	**P**	**01 57 48.8**	**+0.3**	
COLD	**Coldfoot**	**85.81**	**23**	P	**P**	**01 57 54.5**	**-1.8**	
BMAR	**Burnt Mountain**	**87.99**	**23**	P	**P**	**01 58 07.3**	**+0.4**	
BURAR	**Bucovina Array**	**96.36**	**318**	P	**P**	**01 58 46.2**	**+0.1**	
TXAR	**Lajitas Array**	**122.97**	**53**	PKP	**PKiKP**	**02 04 15.3**	**+0.9**	
	comp=Z,0.3nm,0.9s,baz=209,slow=1.7,SNR=2.3							
TORD	**Torodi Ar. Bea**	**123.33**	**287**	PKP	**PKPdf**	**02 04 15.0**	**-0.1**	
	comp=Z,0.3nm,0.6s,baz=103,slow=2.1,SNR=2.3							

IDC ***16*** *01:55:30.8±1.8, 17°.86S×178°.63W, h544km±18km, mb3.9/21, mb1 4.0/22, mb1mx3.8/41, mbtmp4.8/22, Error ellipse: s-maj=13.5km s-min=12.9km az=111.0*

NEIC ***16*** *01:55:30.9±1.8, 17°.9S±0°.1×178°.6W±0°.1, h547km±6km, mb4.5/40, Error ellipse: s-maj=17.9km s-min=14.4km az=131.0*

ISC 16 01:55:31.5±0.4, 17°.95S±0°.07×178°.65W±0°.08, h550km, n150, σ1§58/151, mb4.6/33, 7C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
MSVF	**Nonsavu**	**3.15**	**273**	P	**P**	**01 56 48.1**	**+0.5**	
AFI	**Afiamalu**	**7.73**	**60**	P	**P**	01 57 23.6	-3.2	
DZM	**Mont Dzumac**	**14.60**	**251**	P	**P**	**01 58 36.9**	**-0.1**	
	3.1nm,0.3s,baz=78,slow=18,SNR=32							
DZM	**Mont Dzumac**	**14.60**	**251**	P	**P**	**01 58 37.4**	**+0.4**	
NFK	**Norfolk Island**	**16.52**	**226**	P	**P**	**01 58 58.9**	**+3.1**	
	baz=17,SNR=3.1							
KNTN	**Kanton**	**16.54**	**25**	P	**P**	**01 58 54.3**	**-1.9**	
URZ	**Urewera**	**20.58**	**190**	P	**P**	**01 59 31.2**	**-1.4**	
	5.8nm,0.6s,baz=312,slow=3.8,SNR=6.1							
URZ				S	**S**	**02 02 41.1**	**-6.7**	
	4.3nm,0.7s,baz=43,slow=19,SNR=1.1							
RPZ	**Rata Peaks**	**27.12**	**197**	P	**P**	**02 00 31.1**	**+0.3**	
	17nm,1.1s,baz=349,slow=5.2,SNR=1.5							
EIDS	**Eidsvold**	**29.04**	**250**	P	**P**	**02 00 48.0**	**+0.3**	
	baz=29,SNR=11							
EIDS	**Eidsvold**	**29.04**	**250**	P	**P**	**02 00 48.0**	**+0.3**	
ARMA	**Armidale**	**29.73**	**240**	P	**P**	**02 00 55.3**	**+1.6**	
	baz=30,SNR=58							
ARMA	**Armidale**	**29.73**	**240**	P	**P**	**02 00 54.8**	**+1.0**	
MGCD	**Mangrove Creek**	**31.09**	**235**	P	**P**	**02 01 07.0**	**+1.8**	
	baz=31,SNR=5.4							
RMQ	**Roma**	**31.28**	**248**	P	**P**	**02 01 07.7**	**+0.7**	
	baz=31,SNR=5.6							
CTA	**Charters Tower**	**33.22**	**261**	P	**P**	**02 01 23.6**	**0.0**	
	16nm,0.6s,baz=88,slow=10,SNR=49							
CTAO	**Charters Tower**	**33.22**	**261**		**P**	**02 01 23.5**	**0.0**	
CNB	**Canberra Magne**	**33.22**	**232**	P	**P**	**02 01 25.1**	**+1.6**	
	baz=33,SNR=59							
PMG	**Port Moresby**	**34.24**	**280**	P	**P**	**02 01 32.5**	**+0.4**	
	33nm,0.8s,baz=69,slow=7.0,SNR=9.1							
PMG	**Port Moresby**	**34.24**	**280**	P	**P**	**02 01 32.6**	**+0.4**	
CMSA	**Cobar Meteorol**	**34.93**	**240**	P	**P**	**02 01 38.8**	**+1.0**	
	baz=35,SNR=69							
MTSU	**Mount Surprise**	**35.18**	**264**	P	**P**	**02 01 40.1**	**+0.1**	
	baz=35,SNR=25							
QLP	**Quilpie**	**35.31**	**249**	P	**P**	**02 01 41.4**	**+0.4**	
	baz=35,SNR=27							
COEN	**Coen**	**36.88**	**271**	P	**P**	**02 01 54.8**	**+0.7**	
	baz=37,SNR=9.2							
COEN	**Coen**	**36.88**	**271**	P	**P**	**02 01 54.0**	**-0.1**	
TOO	**Toolangi**	**36.97**	**231**	P	**P**	**02 01 56.0**	**+1.4**	
	baz=37,SNR=48							
TOO	**Toolangi**	**36.97**	**231**	P	**P**	**02 01 55.7**	**+1.1**	
MOO	**Moorlands**	**37.91**	**223**	P	**P**	**02 02 03.7**	**+1.5**	
	baz=38,SNR=4.2							
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**02 02 07.3**	**+1.0**	
	39nm,0.4s,baz=92,slow=10,SNR=124							
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**02 02 07.8**	**+1.4**	
	baz=39,SNR=88							
STKA	**Stephens Creek**	**38.41**	**241**	P	**P**	**02 02 07.2**	**+0.8**	
STKA				IAmb	IAmb	02 02 08.5		
	comp=Z,15nm,1.1s							
ARPS	**Mount Arapiles**	**39.45**	**234**	P	**P**	**02 02 15.5**	**+0.8**	
	baz=40,SNR=18							
HTT	**Hallett**	**40.93**	**239**	P	**P**	**02 02 27.7**	**+1.1**	
	baz=41,SNR=44							
BBOO	**Buckleboo**	**43.19**	**241**	P	**P**	**02 02 45.1**	**+0.8**	
	baz=43,SNR=263							
BBOO	**Buckleboo**	**43.19**	**241**	P	**P**	**02 02 44.9**	**+0.6**	
WR0	**Warramunga Arr**	**44.21**	**260**	P	**P**	**02 02 51.9**	**-0.5**	
WR0				IAmb	IAmb	02 02 52.9		
	comp=Z,17nm,1.2s							
WB0	**Warramunga Arr**	**44.37**	**260**	P	**P**	**02 02 53.0**	**-0.6**	
WB0				IAmb	IAmb	02 02 53.8		
	comp=Z,21nm,0.8s							
WC3	**Warramunga Arr**	**44.37**	**260**	P	**P**	**02 02 53.3**	**-0.4**	
	baz=44							
WB2	**Warramunga Arr**	**44.39**	**260**	P	**P**	**02 02 53.0**	**-0.8**	
WRAB	**Tennant Creek**	**44.39**	**260**	P	**P**	**02 02 53.3**	**-0.6**	
WRA	**Warramunga Arr**	**44.40**	**260**	P	**P**	**02 02 52.9**	**-1.0**	
	comp=Z,12nm,0.5s,baz=93,slow=7.3,SNR=70							
AS31	**Alice Springs**	**44.56**	**254**	P	**P**	**02 02 55.3**	**+0.1**	
ASAR	**Alice Springs**	**44.56**	**254**	P	**P**	**02 02 55.0**	**-0.1**	
	comp=Z,181nm,0.5s,baz=87,slow=8.3,SNR=1048							
ASAR				PcP	**PcP**	**02 04 26.0**	**-0.3**	
	comp=Z,4.1nm,0.4s,baz=102,slow=4.2,SNR=4.5							
ASAR				ScP	**ScP**	**02 07 26.8**	**+0.5**	
	comp=Z,0.7nm,0.8s,baz=95,slow=5.7,SNR=2.2							
ASAR				S	**S**	**02 08 48.5**	**-2.8**	
	comp=Z,1.8nm,0.9s,baz=92,slow=16,SNR=8.2							
ASAR	**Alice Springs**	**44.56**	**254**	P	**P**	**02 02 54.6**	**-0.5**	
MTN	**Manton Dam**	**48.57**	**269**	P	**P**	**02 03 24.6**	**-0.8**	
WRKA	**Warakurna**	**49.62**	**252**	P	**P**	**02 03 33.4**	**+0.2**	
	baz=50,SNR=59							
FORT	**Forrest**	**49.79**	**245**	P	**P**	**02 03 34.0**	**-0.2**	
	baz=50,SNR=80							
FORT	**Forrest**	**49.79**	**245**	P	**P**	**02 03 33.9**	**-0.4**	
KNRA	**Kununurra**	**50.26**	**264**	P	**P**	**02 03 37.4**	**-0.5**	
SIJI	**Sorong**	**52.02**	**283**	P	**P**	**02 03 50.1**	**-0.7**	
	comp=Z,41nm,0.6s,baz=88,slow=9.8,SNR=10.0							
FITZ	**Fitzroy Crossi**	**52.80**	**261**	P	**P**	**02 03 56.8**	**+0.6**	
	comp=Z,7.7nm,0.3s,baz=83,slow=4.5,SNR=7.2							
FITZ	**Fitzroy Crossi**	**52.80**	**261**	P	**P**	**02 03 56.1**	**-0.1**	
FITZ				IAmb	IAmb	02 03 56.7		
	comp=Z,7.3nm,0.7s							
KMBL	**Kambalda**	**55.09**	**244**	P	**P**	**02 04 11.6**	**-0.6**	
	baz=55,SNR=6.2							
SOEI	**Soe**	**55.84**	**270**	P	**P**	**02 04 18.4**	**+0.6**	
TNTI	**Ternate**	**56.25**	**283**	P	**P**	**02 04 20.8**	**+0.3**	
BATI	**Baumata**	**56.30**	**270**	P	**P**	**02 04 21.4**	**+0.5**	
	comp=Z,27nm,0.6s,baz=141,slow=3.4,SNR=4.7							
PSA00	**Pilbara Seismi**	**57.68**	**255**	P	**P**	**02 04 29.2**	**-0.9**	
PSA00	**Pilbara Seismi**	**57.68**	**255**	IAmb	IAmb	02 04 30.5		
	comp=Z,28nm,0.6s							
MMRI	**Maumere**	**58.07**	**271**	P	**P**	**02 04 32.6**	**-0.3**	
MMRI				IAmb	IAmb	02 04 33.1		
	comp=Z,28nm,0.9s							
MEEK	**Meekatharra**	**58.21**	**249**	P	**P**	**02 04 33.1**	**-0.6**	
	baz=58,SNR=12							
KLBR	**Kellerberrin**	**58.61**	**244**	P	**P**	**02 04 35.9**	**-0.4**	
	baz=59,SNR=19							
NWAO	**Narrogin (SRO)**	**58.99**	**242**	P	**P**	**02 04 38.2**	**-0.6**	
	comp=Z,5.1nm,0.5s,baz=114,slow=5.9,SNR=9.3							
NWAO	**Narrogin (SRO)**	**58.99**	**242**	P	**P**	**02 04 38.8**	**0.0**	
	baz=59,SNR=5.6							
NWAO	**Narrogin (SRO)**	**58.99**	**242**	IAmb	IAmb	02 04 40.2		
	comp=Z,77nm,2.0s							
RKGY	**Rocky Gully**	**59.16**	**240**	P	**P**	**02 04 40.3**	**+0.5**	
	baz=59,SNR=5.5							
BLDU	**Ballidu**	**59.56**	**245**	P	**P**	**02 04 42.1**	**-0.5**	
	baz=60,SNR=15							
MUN	**Mundaring**	**59.90**	**243**	P	**P**	**02 04 45.2**	**+0.2**	
	baz=60,SNR=5.0							
MORW	**Morawa**	**60.26**	**246**	P	**P**	**02 04 46.9**	**-0.5**	
	baz=60,SNR=9.6							
VNDA	**Vanda**	**60.39**	**185**	P	**P**	**02 04 48.6**	**+1.3**	
	comp=Z,2.2nm,0.8s,baz=347,slow=7.4,SNR=16							
VNDA	**Vanda**	**60.39**	**185**	P	**P**	**02 04 48.5**	**+1.2**	
KAPI	**Kappang**	**61.47**	**274**	P	**P**	**02 04 54.9**	**-0.6**	
	comp=Z,4.0nm,0.4s,baz=121,slow=10,SNR=5.1						

BR131	**Keskin Array S**	**144.65 315**	PKPdf	**PKPdf**	**02 14 05.5**	**-0.7**
BRTR	**Keskin Array B**	**144.65 315**	PKP	**PKPdf**	**02 14 05.5**	**-0.7**
	comp=Z,3.5nm,0.6s,baz=105,slow=2.0,SNR=29					
TESR	**Tescani**	**144.68 329**	⇑P	**PKPdf**	**02 14 01.7**	**-4.1**
BR231	**Keskin MP Arra**	**145.17 315**	PKPbc	**PKPdf**	**02 14 08.0**	**+1.0**
ARCR	**ARCALIA**	**145.32 332**	⇑P	**PKPdf**	**02 14 08.3**	**+1.3**
OSTC	**Ostas**	**145.36 343**	*e*PKP	**PKPdf**	**02 14 08.5**	**+1.6**
CLL	**Collm**	**145.45 347**	*i* PKPbc	**PKPdf**	**02 14 07.4**	**+0.4**
CLL			Lm	MLR	04 03 00.0	
	comp=Z,100nm,19.9s					
DPC	**Dobruska-Polom**	**145.52 343**	*e*PKP	**PKPdf**	**02 14 08.6**	**+1.4**
MBAR	**Mbarara**	**145.71 241**	PKPbc	**PKPdf**	**02 14 10.2**	**+1.4**
CJR	**Cluj-Napoca**	**145.94 332**	⇑P	**PKPdf**	**02 14 10.1**	**+2.0**
PRU	**Pruhonice**	**146.32 345**	*e*PKP	**PKPdf**	**02 14 10.2**	**+1.7**
KHC	**Kasperske Hory**	**147.35 345**	*e*PKP	**PKPdf**	**02 14 13.2**	**+2.9**
GERES	**GERESS Array B**	**147.59 345**	PKPbc	**PKPdf**	**02 14 13.8**	**+3.1**
	comp=Z,3.0nm,0.5s,baz=28,slow=3.1,SNR=33					
CONA	**Conrad Observa**	**147.83 342**	*i* P	**PKPdf**	**02 14 15.0**	**+3.9**
	comp=Z,2.9nm,0.5s,SNR=6.0					
MOA	**Molln**	**148.36 343**	*e*P	**PKPdf**	**02 14 15.7**	**+3.7**
	comp=Z,0.5nm,0.3s					
SOKA	**Soboth**	**149.20 341**	*i* P	**PKPdf**	**02 14 17.4**	**+4.0**
	comp=Z,1.2nm,0.4s					
WATA	**Walderalm**	**149.51 346**	*i* P	**PKPdf**	**02 14 18.3**	**+4.3**
	comp=Z,3.1nm,0.4s					
RETA	**Reutte**	**149.54 347**	*e*P	**PKPdf**	**02 14 18.6**	**+4.6**
	comp=Z,1.5nm,0.4s					
WTTA	**Wattenberg**	**149.56 346**	*e*P	**PKPbc**	**02 14 18.8**	**-0.5**
	comp=Z,3.9nm,0.4s					
MOTA	**Moosalm**	**149.60 347**	*e*P	**PKPdf**	**02 14 18.6**	**+4.5**
	comp=Z,1.6nm,0.4s,SNR=4.6					
MYKA	**Terra Mystica**	**149.65 343**	*e*P	**PKPdf**	**02 14 18.2**	**+4.0**
	comp=Z,2.6nm,0.4s					
SQTA	**Sankt Quirin**	**149.70 347**	*i* P	**PKPdf**	**02 14 18.9**	**+4.7**
	comp=Z,4.7nm,0.5s					
ABTA	**Abfaltersbach**	**149.84 345**	*e*P	**PKPdf**	**02 14 18.8**	**+4.4**
	comp=Z,3.6nm,0.6s					
DAVA	**Damuels**	**149.91 348**	*i* P	**PKPbc**	**02 14 20.5**	**+0.3**
	comp=Z,1.5nm,0.5s					
FETA	**Feichten**	**149.99 347**	*e*P	**PKPbc**	**02 14 20.0**	**-0.3**
	comp=Z,2.1nm,0.6s,SNR=4.9					
TORD	**Torodi Ar. Bea**	**175.22 184**	PKP	**PKPdf**	**02 14 37.3**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=268,slow=1.0,SNR=3.8					
TORD			PKPab	**PKPab**	**02 16 18.6**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=190,slow=4.5,SNR=10					

IDC 16 02:11:08.9±2.2, 1.91N×126.96E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/31, mbtmp3.2/3, Error ellipse: s-maj=176.7km s-min=26.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.89**	**162**	P	P	02 16 13.4	-1.0
	0.3nm,0.4s,baz=340,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**26.31**	**166**	P	P	02 16 47.5	+1.0
	0.1nm,0.4s,baz=348,slow=11,SNR=1.8						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	02 21 11.6	-0.1
	0.2nm,0.4s,baz=124,slow=8.0,SNR=6.0						

*ATH **16** 02:17:51.8, 40.77N×20.80E, h9km±1km, ML3.0/31, Error ellipse: s-maj=1.7km s-min=1.1km az=154.0*
*TIR **16** 02:17:51.0, 40.66N×20.96E, h2km±1km, Ml3.5*
*IDC **16** 02:17:52.2±2.4, 40.68N×21.06E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/33, mbtmp3.4/5, ML3.2/1, Error ellipse: s-maj=59.6km s-min=26.4km az=97.0*
*THE **16** 02:17:53.6, 40.67N×20.82E, h0km±2km, ML3.1/8, Error ellipse: s-maj=2.5km s-min=0.8km az=342.0*
*SKO **16** 02:17:53.7, 40.59N×20.78E, h4km*
*BEO **16** 02:17:54.2±0.7, 40.58N×20.94E, h15km±3km, ML3.1/15*
*PDG **16** 02:17:54.2±0.3, 40.59N×20.83E, h13km, MD5.3/1, ML3.1/13, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

ISC 16 02:17:53.5±1.1, 40.64N±0.01×20.86E±0.02, h3km±9km, n184, σ1s21/239, mb3.6/4, 14C-5D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEST	**Nestorio**	**0.27**	**148**	P	**Pb**	**02 17 59.9**	**-1.1**
NEST				S	**Sb**	**02 18 05.5**	**-0.5**
NEST				AML	AML	02 18 05.8	
	comp=N,18575μm,0.4s						
NEST				AML	AML	02 18 05.9	
	comp=E,23107μm,0.3s						
NEST	**Nestorio**	**0.27**	**148**	P	**Pb**	**02 17 59.9**	**-1.1**
NEST				S	**Sb**	**02 18 03.8**	**-2.2**
	comp=E,8μm,0.3s						
OHR	**Ohrid**	**0.47**	**354**	⇑*i*Pg	**Pg**	**02 18 02.4**	**-0.2**
OHR				*i* Sg	**Sg**	**02 18 10.0**	**+1.3**
OHR				*e*Lg	Lg	02 18 12.6	
	comp=E,3μm,0.4s						
PENT	**Pentalofos**	**0.49**	**155**	P	**Pg**	**02 18 03.5**	**+0.5**
PENT				S	**Sb**	**02 18 12.3**	**-0.2**
PENT				AML	AML	02 18 15.9	
	comp=N,10347μm,0.4s						
PENT				AML	AML	02 18 19.0	
	comp=E,4814μm,0.3s						
PENT	**Pentalofos**	**0.49**	**155**	P	**Pg**	**02 18 03.6**	**+0.7**
PENT				S	**Sb**	**02 18 12.3**	**-0.2**
	comp=E,4μm,0.3s						
LSK	**Leskovik**	**0.53**	**202**	P	**Pg**	**02 18 03.0**	**-0.6**
	baz=209						
LSK				S	**Sg**	**02 18 12.2**	**+1.6**
	baz=209						
LSK				AMP			
	comp=E,20nm,0.5s,baz=209						
LSK	**Leskovik**	**0.53**	**202**	P	**Pg**	**02 18 03.1**	**-0.6**
LSK				S	**Sg**	**02 18 12.1**	**+1.6**
	comp=E,8μm,0.6s						
KZN	**Kozani**	**0.77**	**116**	P	**Pb**	**02 18 09.0**	**-0.6**
KZN				S	**Sb**	**02 18 21.0**	**+0.6**
KZN				AML	AML	02 18 22.2	
	comp=N,4523μm,0.5s						
KZN				AML	AML	02 18 23.6	
	comp=E,4667μm,0.6s						
KZN	**Kozani**	**0.77**	**116**	P	**Pb**	**02 18 09.0**	**-0.6**
KZN				S	**Sb**	**02 18 21.2**	**+0.8**
	comp=E,2μm,0.5s						
KPRO	**Kipourio**	**0.79**	**151**	P	**Pg**	**02 18 08.9**	**+0.4**
KPRO				S	**Sn**	**02 18 22.2**	**-1.6**
KPRO				AML	AML	02 18 29.3	
	comp=N,2727μm,0.3s						
KPRO				AML	AML	02 18 34.0	
	comp=E,4000μm,0.7s						
KPRO	**Kipourio**	**0.79**	**151**	P	**Pg**	**02 18 09.0**	**+0.4**
JAN	**Janina**	**0.98**	**181**	P	**Pg**	**02 18 11.4**	**-1.0**
JAN				AML	AML	02 18 33.9	
	comp=E,1655μm,0.5s						
JAN				AML	AML	02 18 37.9	
	comp=N,1852μm,0.4s						
JAN	**Janina**	**0.98**	**181**	P	**Pg**	**02 18 11.4**	**-1.0**
JAN				S	**Sb**	**02 18 26.7**	**+0.1**
SRN	**Sarande**	**1.01**	**221**	P	**Pg**	**02 18 11.9**	**-0.9**
	baz=224						
SRN				S	**Sb**	**02 18 28.5**	**+1.3**
	baz=224						
SRN				AMP			
	comp=E,2.7nm,0.5s,baz=224						
SRN	**Sarande**	**1.01**	**221**	P	**Pg**	**02 18 11.7**	**-1.1**
SRN				S	**Sb**	**02 18 27.7**	**+0.5**
TIR	**Tirane**	**1.03**	**313**	*e*Pg	**Pg**	**02 18 14.0**	**+0.7**
TIR				*e*Sg	**Sn**	**02 18 31.5**	**+1.6**
TIR	**Tirane**	**1.03**	**313**	P	**Pg**	**02 18 09.1**	**-4.3**
TIR				AML	AML	02 18 41.8	
	comp=N,1988μm,0.6s						
TIR				AML	AML	02 18 43.1	
	comp=E,1745μm,0.8s						
TIR	**Tirane**	**1.03**	**313**	⇑P	**Pg**	**02 18 13.4**	**0.0**
TIR				⇓S	**Sb**	**02 18 28.9**	**+0.9**
TIR	**Tirane**	**1.03**	**313**	P	**Pg**	**02 18 12.8**	**-0.6**
	baz=311						
TIR				S	**Sb**	**02 18 29.0**	**+0.9**
	baz=311						
TIR				AMP			
	comp=N,1.5nm,0.6s,baz=311						
TIR	**Tirane**	**1.03**	**313**	P	**Pg**	**02 18 13.3**	**0.0**
TIR				S	**Sg**	**02 18 26.3**	**-0.4**
VLO	**Vlora**	**1.06**	**261**	P	**Pg**	**02 18 13.8**	**0.0**
	baz=261						
VLO				S	**Sn**	**02 18 30.7**	**+0.3**
	baz=261						
VLO				AMP			
	comp=E,5.9nm,0.5s,baz=261						
VLO	**Vlora**	**1.06**	**261**	P	**Pg**	**02 18 14.1**	**+0.4**
VLO				S	**Sb**	**02 18 29.7**	**+1.1**
PHP	**Peshkopia**	**1.09**	**343**	P	**Pg**	**02 18 12.8**	**-1.6**
	baz=340						
PHP				S	**Sg**	**02 18 29.5**	**+1.0**
	baz=340						
PHP				AMP			
	comp=N,2.5nm,0.6s,baz=340						
PHP	**Peshkopia**	**1.09**	**343**	P	**Pg**	**02 18 13.0**	**-1.4**
PHP				S	**Sg**	**02 18 27.9**	**-0.6**
KASA	**Kassiopi**	**1.14**	**219**	P	**Pg**	**02 18 15.2**	**-0.2**
IGT	**Igoumenitsa**	**1.18**	**200**	P	**Pg**	**02 18 15.5**	**-0.6**
IGT				AML	AML	02 18 38.8	
	comp=E,1203μm,0.6s						
IGT				AML	AML	02 18 41.1	
	comp=N,1045μm,1.0s						
IGT	**Igoumenitsa**	**1.18**	**200**	P	**Pg**	**02 18 15.5**	**-0.6**
	baz=204						
IGT				S	**Sn**	**02 18 34.3**	**+0.8**
	baz=204						
IGT	**Igoumenitsa**	**1.18**	**200**	P	**Pg**	**02 18 15.7**	**-0.4**
IGT				S	**Sb**	**02 18 32.7**	**+0.5**
	comp=N,550nm,0.8s						
GRG	**Griva**	**1.21**	**74**	P	**Pb**	**02 18 16.8**	**-0.2**
KEK	**Kerkira**	**1.24**	**222**	P	**Pg**	**02 18 16.3**	**-0.8**
KEK				AML	AML	02 18 40.9	
	comp=E,1232μm,0.4s						
KEK				AML	AML	02 18 43.1	
	comp=N,1103μm,0.5s						
KEK	**Kerkira**	**1.24**	**222**	P	**Pg**	**02 18 16.4**	**-0.8**
KEK				S	**Sb**	**02 18 34.7**	**+0.9**
	comp=N,578nm,0.6s						
LIT	**Litokhoron**	**1.35**	**113**	P	**Pb**	**02 18 19.7**	**+0.2**
LIT				AML	AML	02 18 46.3	
	comp=N,1307μm,0.4s						
LIT				AML	AML	02 18 46.6	
	comp=E,1145μm,0.3s						
LIT	**Litokhoron**	**1.35**	**113**	P	**Pb**	**02 18 19.7**	**+0.2**
LIT				S	**Sn**	**02 18 39.9**	**+2.1**
	comp=E,612nm,0.3s						
THL	**Klokotos Trika**	**1.39**	**140**	P	**Pn**	**02 18 19.7**	**-0.1**
THL				S	**Sn**	**02 18 40.9**	**+2.3**
THL				AML	AML	02 18 45.1	
	comp=E,501μm,0.5s						
THL				AML	AML	02 18 46.5	
	comp=N,585μm,0.4s						
THL	**Klokotos Trika**	**1.39**	**140**	P	**Pn**	**02 18 19.8**	**0.0**
THL				S	**Sn**	**02 18 41.3**	**+2.7**
	comp=N,280nm,0.4s						
SKO	**Skopje**	**1.40**	**18**	*e*Pg	**Pb**	**02 18 20.3**	**+0.1**
SKO				*e*Sg	**Sn**	**02 18 39.8**	**+0.9**
SKO	**Skopje**	**1.40**	**18**	*i* Pg	**Pn**	**02 18 19.9**	**0.0**
SKO				*i* Sg	**Sn**	**02 18 40.4**	**+1.5**
SKO				*e*Lg	Lg	02 18 44.6	
	comp=N,42nm,0.3s						
STIP	**Stip**	**1.45**	**43**	*i* Pn	**Pg**	**02 18 23.1**	**+1.8**
STIP				*i* Sn	Sn	02 18 49.0	+8.9
STIP				*e*Lg	Lg	02 18 49.7	
	comp=N,53nm,0.6s						
VAY	**Valandovo**	**1.46**	**62**	*e*Pg	**Pb**	**02 18 21.1**	**-0.2**
VAY				*e*Sg	**Sb**	**02 18 39.3**	**-0.9**
VAY	**Valandovo**	**1.46**	**62**	*i* Pn	**Pb**	**02 18 21.1**	**-0.2**
VAY				*i* Sn	**Sn**	**02 18 43.1**	**+2.7**
VAY				*e*Lg	Lg	02 18 44.5	
	comp=E,241nm,0.8s						
PUK	**Puka**	**1.58**	**333**	P	**Pn**	**02 18 22.6**	**+0.2**
	baz=331						
PUK				S	**Sg**	**02 18 45.7**	**+1.4**
	baz=331						
PUK				AMP			
	comp=E,1.7nm,0.4s,baz=331						
THE	**Thessaloniki**	**1.60**	**90**	P	**Pn**	**02 18 22.6**	**0.0**
THE				AML	AML	02 18 49.9	
	comp=N,205μm,0.5s						
THE				AML	AML	02 18 56.5	
	comp=E,227μm,0.6s						
KNT	**Kendrikon**	**1.63**	**71**	P	**Pb**	**02 18 23.5**	**-0.6**
KNT				AML	AML	02 18 52.0	
	comp=N,615μm,0.7s						
KNT				AML	AML	02 18 57.5	
	comp=E,297μm,0.8s						
KNT	**Kendrikon**	**1.63**	**71**	P	**Pb**	**02 18 23.5**	**-0.6**
HORT	**Hortiatis**	**1.70**	**91**	P	**Pn**	**02 18 24.2**	**+0.1**
HORT				AML	AML	02 18 48.0	
	comp=E,293μm,0.8s						
HORT				AML	AML	02 18 54.6	
	comp=N,348μm,0.6s						
ULC	**Ulcinj**	**1.80**	**318**	*e*Pn	**Pn**	**02 18 26.6**	**+1.2**
ULC				*i* Sn	**Sb**	**02 18 51.0**	**+1.0**
TSLK	**Tsoukalades, L**	**1.82**	**185**	P	**Pb**	**02 18 27.9**	**+0.4**
TSLK				AML	AML	02 19 01.8	
	comp=E,456μm,0.6s						
TSLK				AML	AML	02 19 05.7	
	comp=N,724μm,0.6s						
BCI	**Bajram Curri**	**1.82**	**341**	P	**Pn**	**02 18 26.2**	**+0.4**
	baz=339						
BCI				S	**Sg**	**02 18 52.7**	**+0.5**
	baz=339						
BCI				AMP			
	comp=E,1.4nm,0.7s,baz=339						
LKD2	**Lefkada island**	**1.86**	**185**	P	**Pg**	**02 18 29.0**	**-0.1**
LKD2				AML	AML	02 19 02.0	
	comp=N,657μm,0.9s						
LKD2				AML	AML	02 19 02.5	
	comp=E,572μm,0.9s						
EVR	**Evrytania**	**1.87**	**157**	P	**Pb**	**02 18 28.4**	**0.0**
EVR				AML	AML	02 19 00.2	
	comp=N,534μm,0.5s						
EVR				AML	AML	02 19 04.3	
	comp=E,549μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.90**	**149**	P	**Pb**	**02 18 28.3**	**-0.4**
MAKR				AML	AML	02 19 02.2	
	comp=E,407μm,0.7s						
MAKR				AML	AML	02 19 08.6	
	comp=N,438μm,0.7s						
SOH	**Sokhos**	**1.90**	**84**	P	**Pn**	**02 18 27.4**	**+0.6**
SOH				AML	AML	02 19 01.8	
	comp=E,570μm,1.1s						
SOH				AML	AML	02 19 03.7	
	comp=N,371μm,0.5s						
SOH	**Sokhos**	**1.90**	**84**	P	**Pn**	**02 18 27.4**	**+0.6**
SCTE	**Santa Cesarea**	**1.92**	**254**	P	**Pn**	**02 18 26.2**	**-0.8**
SCTE				AML	AML	02 18 59.8	
	comp=E,185μm,1.0s						
SCTE				AML	AML	02 19 00.1	
	comp=N,194μm,0.4s						
SCTE	**Santa Cesarea**	**1.92**	**254**	P	**Pn**	**02 18 28.1**	**+1.1**
	baz=254						
NYDR	**Nydri-Lefkada**	**1.93**	**184**	P	**Pb**	**02 18 29.5**	**+0.3**
AGG	**Agios Georgios**	**1.97**	**145**	P	**Pn**	**02 18 28.6**	**+0.8**
AGG				AML	AML	02 19 00.5	
	comp=E,482μm,0.3s						
AGG				AML	AML	02 19 08.1	
	comp=N,464μm,0.4s						
MGNA	**Meganis**	**1.98**	**182**	P	**Pb**	**02 18 29.8**	**-0.4**
PLG	**Polygyros**	**1.99**	**97**	P	**Pn**	**02 18 28.9**	**+0.9**
PLG				AML	AML	02 19 04.0	
	comp=N,362μm,0.9s						
PLG				AML	AML	02 19 05.1	
	comp=E,221μm,0.5s						
DRME	**Dracevica, Mon**	**2.00**	**321**	⇓*i*Pn	**Pn**	**02 18 29.3**	**+1.2**
DRME				*i* Sn	**Sb**	**02 18 56.1**	**+0.4**
DRME	**Dracevica, Mon**	**2.00**	**321**	*e*Pn	**Pn**	**02 18 29.6**	**+1.5**
EVGI	**Lefkada island**	**2.02**	**185**	P	**Pb**	**02 18 30.5**	**-0.4**
PVY	**Plav**	**2.07**	**341**	*e*Pn	**Pn**	**02 18 30.5**	**+1.3**
PVY				*e*Sn	**Sb**	**02 18 58.5**	**+0.7**
PRVS	**Prvonek**	**2.07**	**26**	*e*Pn	**Pn**	**02 18 29.4**	**+0.2**
SRS	**Serrai**	**2.12**	**76**	P	**Pn**	**02 18 29.6**	**-0.3**
SRS				AML	AML	02 19 11.8	
	comp=N,114μm,0.9s						
SRS				AML	AML	02 19 21.3	
	comp=E,131μm,0.7s						
SRS	**Serrai**	**2.12**	**76**	P	**Pn**	**02 18 30.0**	**+0.1**
PDG	**Podgorica**	**2.16**	**326**	*e*Pn	**Pn**	**02 18 32.0**	**+1.7**
PDG				*e*Sn	**Sn**	**02 18 56.7**	**-0.8**
PDG	**Podgorica**	**2.16**	**326**	⇑P	**Pn**	**02 18 30.6**	**+0.3**
PDG				⇓S	**Sb**	**02 19 00.0**	**-0.3**
PDG	**Podgorica**	**2.16**	**326**	*e*Pn	**Pn**	**02 18 31.8**	**+1.5**
TTG	**Podgorica**	**2.16**	**326**	*e*Pn	**Pn**	**02 18 31.6**	**+1.3**
TTG				*i* Sn	**Sb**	**02 19 00.2**	**-0.1**
FSK	**Fiskardo**	**2.19**	**186**	P	**Pn**	**02 18 32.4**	**+1.6**
FSK				AML	AML	02 19 09.8	
	comp=E,317μm,0.5s						
FSK				AML	AML	02 19 17.9	
	comp=N,242μm,0.6s						
XOR	**Xorichti**	**2.19**	**125**	P	**Pn**	**02 18 31.5**	**+0.7**
XOR				AML	AML	02 19 02.9	
	comp=N,467μm,0.6s						
XOR				AML	AML	02 19 16.4	
	comp=E,274μm,0.8s						
ANX	**Ano Chora**	**2.20**	**158**	P	**Pb**	**02 18 33.9**	**-0.1**
ANX				AML	AML	02 19 11.3	
	comp=N,639μm,0.5s						
ANX				AML	AML	02 19 14.6	
	comp=E,564μm,0.7s						
BOSS	**Bosilegrad**	**2.21**	**33**	*e*Pn	**Pn**	**02 18 31.5**	**+0.4**
BOSS				*e*Sn	**Sn**	**02 18 58.9**	**-0.1**
BUM	**Brajici-Budva**	**2.22**	**319**	⇓*i*Pn	**Pn**	**02 18 32.3**	**+1.0**
BUM				*e*Sn	**Sb**	**02 19 01.6**	**-0.7**
NEO	**Neokhori**	**2.25**	**126**	P	**Pn**	**02 18 32.4**	**+0.8**
NEO				AML	AML	02 19 17.7	
	comp=E,460μm,0.5s						
NEO				AML	AML	02 19 18.0	
	comp=N,403μm,0.7s						
PAIG	**Paliouri**	**2.27**	**107**	P	**Pn**	**02 18 31.9**	**0.0**
AXAR	**Agios Charalam**	**2.33**	**143**	P	**Pb**	**02 18 34.7**	**-1.4**
IVA	**Berane**	**2.34**	**342**	*e*Pn	**Pn**	**02 18 34.2**	**+1.2**
IVA				*e*Sn	**Sb**	**02 19 05.2**	**-0.6**
EFP	**Efpalio**	**2.35**	**160**	P	**Pb**	**02 18 35.8**	**-0.7**
EFP				AML	AML	02 19 23.4	
	comp=N,502μm,0.8s						
EFP				AML	AML	02 19 28.2	
	comp=E,434μm,0.9s						
NVR	**Nevrokopi**	**2.38**	**72**	P	**Pn**	**02 18 33.6**	**+0.2**
NVR				AML	AML	02 19 22.2	
	comp=E,94μm,0.7s						
NVR				AML	AML	02 19 22.8	
	comp=N,134μm,0.7s						
NVR	**Nevrokopi**	**2.38**	**72**	P	**Pn**	**02 18 34.2**	**+0.8**
KEF5	**Kardakata, Kep**	**2.38**	**188**	P	**Pn**	**02 18 34.6**	**+1.2**
OUR	**Ouranopolis**	**2.40**	**96**	P	**Pn**	**02 18 34.5**	**+0.9**
CEME	**Cevo**	**2.40**	**323**	*e*Pn	**Pn**	**02 18 34.8**	**+1.1**
CEME				*e*Sn	**Sn**	**02 19 05.9**	**+2.3**
KEF4	**Livadi, Kephal**	**2.41**	**188**	P	**Pn**	**02 18 35.2**	**+1.5**
SERG	**Sergoula**	**2.41**	**157**	P	**Pb**	**02 18 36.1**	**-1.4**
SERG				AML	AML	02 19 19.9	
	comp=E,374μm,0.8s						
SERG				AML	AML	02 19 21.3	
	comp=N,314μm,0.4s						
KOME	**Kolasin**	**2.43**	**336**	⇑*i*Pn	**Pn**	**02 18 35.2**	**+1.1**
KOME				*i* Sn	**Sb**	**02 19 06.9**	**-1.3**
DMLN	**Damoulianata-K**	**2.43**	**189**	P	**Pn**	**02 18 35.1**	**+1.0**
KALE	**Kalithea**	**2.46**	**156**	P	**Pb**	**02 18 37.0**	**-1.3**
TRIZ	**Trizonia**	**2.46**	**157**	P	**Pb**	**02 18 37.2**	**-1.1**
VLS	**Valsamata**	**2.47**	**185**	P	**Pn**	**02 18 35.7**	**+1.0**
HCY	**Herceg Novi**	**2.53**	**316**	*e*Pn	**Pn**	**02 18 36.4**	**+0.9**
HCY				*e*Sn	**Sn**	**02 19 09.0**	**+2.1**
HCY	**Herceg Novi**	**2.53**	**316**	*e*Pn	**Pn**	**02 18 36.0**	**+0.5**
PSDA	**Pessada-Kefalo**	**2.53**	**185**	P	**Pn**	**02 18 36.9**	**+1.5**
ATAL	**Atalanti**	**2.56**	**139**	P	**Pn**	**02 18 36.9**	**+1.0**
NKME	**Niksic**	**2.56**	**327**	*e*Pn	**Pn**	**02 18 37.0**	**+1.1**
NKME				*e*Sn	**Sn**	**02 19 10.0**	**+2.4**
NKY	**Niksic**	**2.58**	**328**	*e*Pn	**Pn**	**02 18 37.9**	**+1.6**
NKY				*i* Sn	**Sn**	**02 19 10.6**	**+2.4**
LKR	**Lokris**	**2.58**	**140**	P	**Pn**	**02 18 36.3**	**+0.5**
SELS	**Selova**	**2.58**	**4**	*e*Pn	**Pn**	**02 18 35.3**	**-0.9**
RLS	**Riolos of Patr**	**2.62**	**170**	P	**Pb**	**02 18 39.6**	**-1.5**
SJES	**Sjenica**	**2.70**	**346**	*e*Pn	**Pn**	**02 18 37.3**	**-0.6**
SJES				*e*Sn	**Sn**	**02 19 12.4**	**+1.2**
AOS	**Alonnisos**	**2.75**	**121**	P	**Pn**	**02 18 38.3**	**-0.1**
DRO	**Drossia**	**2.77**	**166**	P	**Pb**	**02 18 41.7**	**-1.8**
VLMS	**Volimes, Zakyn**	**2.77**	**183**	P	**Pn**	**02 18 40.2**	**+1.5**
KLV	**Kalavryta, Ach**	**2.78**	**159**	P	**Pn**	**02 18 41.3**	**+2.3**
KAVA	**Kavala**	**2.79**	**82**	P	**Pn**	**02 18 39.7**	**+0.7**
TREB	**Trebinje**	**2.80**	**319**	*e*Pn	**Pn**	**02 18 38.2**	**-1.0**
BRY	**Bratogost**	**2.85**	**323**	*e*Pn	**Pn**	**02 18 41.2**	**+1.2**
BRY				*i* Sn	**Sn**	**02 19 16.5**	**+1.6**
BRY	**Bratogost**	**2.85**	**323**	*e*Pn	**Pn**	**02 18 41.4**	**+1.4**
NOCI	**Noci**	**2.89**	**274**	P	**Pn**	**02 18 39.4**	**-1.0**
NOCI				AML	AML	02 19 37.5	
	comp=N,317μm,0.4s						
NOCI				AML	AML	02 19 47.3	
	comp=E,216μm,0.5s						
PLE	**Pljevlja**	**2.90**	**338**	*e*Pn	**Pn**	**02 18 42.1**	**+1.4**
PLE				*i* Sn	**Sn**	**02 19 18.5**	**+2.4**
THAS	**Thassos island**	**2.93**	**89**	P	**Pn**	**02 18 40.9**	**-0.1**
GUR	**Goura**	**2.94**	**157**	P	**Pn**	**02 18 43.3**	**+2.1**
GUR				AML	AML	02 19 32.3	
	comp=E,126μm,0.5s						
GUR				AML	AML	02 19 39.9	
	comp=N,238μm,0.6s						
ZAPS	**Zavoj**	**2.94**	**26**	*e*Pn	**Pn**	**02 18 41.4**	**+0.2**
ZAPS				*e*Sn	**Sn**	**02 19 15.2**	**-1.8**
UPM	**Unac-Piva**	**2.95**	**331**	*e*Pn	**Pn**	**02 18 42.5**	**+1.1**
UPM				*e*Sn	**Sn**	**02 19 19.6**	**+2.2**
THAL	**Thalero**	**2.95**	**151**	P	**Pn**	**02 18 42.3**	**+1.1**
IVAS	**Ivanjica**	**2.98**	**350**	*e*Pn	**Pn**	**02 18 41.9**	**+0.2**
BOVS	**Bovan**	**3.06**	**12**	*e*Pn	**Pn**	**02 18 42.0**	**-0.7**
BOVS				*e*Sn	**Sn**	**02 19 19.0**	**-0.7**
BAI	**Bari**	**3.06**	**280**	*e*Pn	**Pn**	**02 18 40.7**	**-2.0**
BAI				Sn	**Sn**	**02 19 18.4**	**-1.3**
VIL2	**Platees**	**3.06**	**142**	P	**Pn**	**02 18 44.8**	**+2.0**
LTK	**Loutraki**	**3.08**	**147**	P	**Pn**	**02 18 44.1**	**+1.0**
LOUT	**Loutraki**	**3.12**	**148**	P	**Pn**	**02 18 44.2**	**+0.7**
MATE	**Matera**	**3.17**	**271**	⇑P	**Pn**	**02 18 43.5**	**-0.6**
AMT	**Artemida-Makis**	**3.17**	**168**	P	**Pb**	**02 18 47.6**	**-2.9**
RUDO	**Rudo**	**3.17**	**340**	*e*Pn	**Pn**	**02 18 43.9**	**-0.4**
KYMI	**Kymi,

GERES	**GERESS Array B**	**9.65**	**331**	Pn		**Pn**	**02 20 13.8**	**+0.5**
	comp=N,0.1nm,0.3s,baz=151,slow=12,SNR=2.1							
MOTA	**Moosalm**	**9.71**	**317**	Pn		**Pn**	**02 20 15.7**	**+1.5**
	comp=N,1.2nm,0.4s							
FINES	**FINESS Array B**	**21.07**	**7**	P		**P**	**02 22 37.0**	**-1.6**
	comp=N,3.6nm,1.0s,baz=200,slow=12,SNR=2.7							
NOA	**NORSAR Array B**	**21.27**	**347**	P		**P**	**02 22 40.8**	**0.0**
	comp=N,1.0nm,0.8s,baz=189,slow=11,SNR=1.3							
ARCES	**ARCESS Array B**	**29.06**	**3**	P		**P**	**02 23 53.3**	**-1.3**
	comp=N,1.0nm,0.8s,baz=37,slow=8.5,SNR=2.6							
TORD	**Torodi Ar. Bea**	**32.13**	**217**	P		**P**	**02 24 22.5**	**+0.2**
	comp=N,0.6nm,1.0s,baz=37,slow=8.5,SNR=2.6							

*IDC **16** 02:31:26.0±3.0,3.°12N×94.°52E,h0km,mb3.7/5,mb1 3.9/6, mb1mx3.6/34,mbtmp3.7/6,ML4.1/1,Error ellipse: s-maj=112.4km s-min=21.7km az=62.0*

*NEIC **16** 02:31:29.5±2.4,3.°23N±0.°09×94.°72E±0.°09,h25km±8km, mb4.1/5,Error ellipse: s-maj=13.6km s-min=13.2km az=194.0*

ISC 16 02:31:28.0±1.2,3.°3N±0.°1×94.°8E±0.°2,h10km,n19, σ1s31/13,mb3.9/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**2.90**	**48**		Pn	**Pn**	**02 32 15.4**	**+1.1**
GSI	**Gunungsitoli**	**3.41**	**125**			**Pn**	**02 32 21.5**	**+0.3**
RPSI	**Rantau Prapat**	**4.17**	**98**			**Pn**	**02 32 31.0**	**-0.8**
KULM	**Kulim**	**6.18**	**71**	Pn		**Pn**	**02 32 58.9**	**-0.5**
CM31	**Chiang Mai Arr**	**15.63**	**15**	Pn		**Pn**	**02 35 09.0**	**+0.5**
CM31				IAmb		IAmb	02 35 19.9	
	comp=Z,5.2nm,0.9s							
CMAR	**Chiang Mai Arr**	**15.63**	**15**	Pn		**P**	**02 35 10.4**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=208,slow=11,SNR=9.0							
H08S2	**Diego Garcia H**	**24.74**	**244**	T		T	03 02 22.6	
	baz=64,slow=75,SNR=278							
H08S3	**Diego Garcia H**	**24.75**	**244**	T		T	03 02 22.2	
	baz=64,slow=75,SNR=785							
H08S1	**Diego Carcia H**	**24.76**	**244**	T		T	03 02 23.9	
	baz=64,slow=55,SNR=55							
H01W3	**Cape Leeuwin H**	**42.09**	**156**	T		T	03 24 18.5	
	baz=330,slow=76,SNR=7.2							
H01W2	**Cape Leeuwin H**	**42.10**	**156**	T		T	03 24 21.4	
	baz=330,slow=76,SNR=4.7							
H01W1	**Cape Leeuwin H**	**42.10**	**156**	T		T	03 24 22.2	
	baz=330,slow=76,SNR=5.4							
MK31	**Makanchi Array**	**44.69**	**348**	P		**P**	**02 39 40.2**	**-1.0**
MK31				IAmb		IAmb	02 41 12.4	
	comp=Z,4.9nm,1.6s							
MKAR	**Makanchi Array**	**44.69**	**348**	P		**P**	**02 39 40.0**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=154,slow=7.0,SNR=5.6							
KKAR	**Karatay Array**	**45.16**	**335**	P		**P**	**02 39 44.2**	**-0.8**
KKAR				IAmb		IAmb	02 41 07.3	
	comp=Z,7.1nm,1.7s							
WRA	**Warramunga Arr**	**45.17**	**122**	P		**P**	**02 39 45.9**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=300,slow=9.1,SNR=16							
SONM	**Songino Array**	**45.51**	**11**	P		**P**	**02 39 48.7**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=196,slow=8.4,SNR=3.2							
ASAR	**Alice Springs**	**46.56**	**127**	P		**P**	**02 39 57.0**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=297,slow=7.9,SNR=14							
ZALV	**Zalesovo Beam**	**51.17**	**352**	P		**P**	**02 40 33.5**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=157,slow=5.7,SNR=2.4							

*SOME **16** 02:40:15.4,41.°32N×83.°27E,h5km*

*NNC **16** 02:40:21.6±4.0,41.°49N×83.°09E,h0km,mb3.7,mpv3.3, Error ellipse: s-maj=33.5km s-min=23.3km az=4.0*

ISC 16 02:40:24.1±2.7,41.°5N±0.°1×82.°94E±0.°08,h10km,n19, σ1s04/29,2C-1D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KTMS	**Ketmen**	**2.74**	**317**	*eP*		**Pb**	**02 41 11.7**	**-1.6**
	17nm,0.2s							
KTMS				*eS*		**Sg**	**02 41 52.6**	**+0.4**
	9.7nm,0.5s							
SHLS	**Shalkode**	**3.08**	**304**	*eP*		**Pn**	**02 41 13.3**	**+0.5**
	7.1nm,0.3s							
SHLS				*eS*		**Sb**	**02 41 55.4**	**-1.1**
	39nm,0.5s							
SHLS	**Shalkode**	**3.08**	**304**	Pg		**Pn**	**02 41 13.3**	**+0.5**
	7.1nm,0.3s							
SHLS				Lg		Lg	02 41 56.1	
	39nm,0.5s							
PDGK	**Podgornoye**	**3.15**	**307**	⇑Pn		**Pb**	**02 41 19.2**	**-1.0**
	2.3nm,0.5s							
PDGK				⇑Sn		**Sn**	**02 41 53.2**	**+1.6**
	7.5nm,0.4s							
UZB	**Uzynbulak**	**3.35**	**301**	*eP*		**Pb**	**02 41 22.2**	**-1.4**
	1.6nm,0.3s							
UZB				*eS*		**Sg**	**02 42 10.7**	**-0.9**
	15nm,0.3s							
UZB	**Uzynbulak**	**3.35**	**301**	Pg		**Pb**	**02 41 22.2**	**-1.4**
	1.6nm,0.3s							
UZB				Lg		Lg	02 42 11.4	
	15nm,0.3s							
DJR	**Jarkent**	**3.67**	**322**	*eP*		**Pb**	**02 41 29.0**	**-0.1**
	4.2nm,0.6s							
DJR				*eS*		**Sg**	**02 42 22.3**	**+0.3**
	8.3nm,0.6s							
DJR	**Jarkent**	**3.67**	**322**	Pg		**Pb**	**02 41 29.0**	**-0.1**
	4.2nm,0.6s							
DJR				Lg		Lg	02 42 23.9	
	8.3nm,0.6s							
SATY	**Saty**	**3.71**	**297**	*eP*		**Pb**	**02 41 29.6**	**-0.2**
	2.9nm,0.5s							
SATY				*eS*		**Sg**	**02 42 22.8**	**-0.6**
	8.3nm,0.4s							
SATY	**Saty**	**3.71**	**297**	Pg		**Pb**	**02 41 29.6**	**-0.2**
	2.9nm,0.5s							
SATY				Lg		Lg	02 42 22.8	
	8.3nm,0.4s							
KPKS	**Kokpek**	**3.72**	**304**	*eP*		**Pb**	**02 41 29.5**	**-0.4**
	7.3nm,0.3s							
KPKS				*eS*		**Sg**	**02 42 22.5**	**-1.0**
	16nm,0.3s							
MNBS	**Baschi**	**4.23**	**309**	*eP*		**Pb**	**02 41 39.0**	**+0.3**
	3.4nm,0.5s							
MNBS				*eS*		**Sg**	**02 42 39.4**	**-0.6**
	10nm,0.5s							
MNBS	**Baschi**	**4.23**	**309**	Pg		**Pb**	**02 41 38.9**	**+0.3**
	3.4nm,0.5s							
MNBS				Lg		Lg	02 42 39.4	
	10nm,0.5s							
ARXS	**Arharly**	**4.65**	**308**	*eP*		**Pb**	**02 41 47.2**	**+1.5**
	5.5nm,0.5s							
ARXS				*eS*		**Sg**	**02 42 53.8**	**+0.6**
	5.2nm,0.5s							
ARXS	**Arharly**	**4.65**	**308**	Pg		**Pb**	**02 41 47.2**	**+1.5**
	5.5nm,0.5s							
ARXS				Lg		Lg	02 42 54.1	
	5.2nm,0.5s							
KTBS	**Karatobe**	**5.13**	**298**	*eP*		**Pb**	**02 41 54.9**	**+1.1**
	1.3nm,0.3s							
KTBS				*eS*		**Sg**	**02 43 06.8**	**-1.8**
	15nm,0.4s							
KTBS	**Karatobe**	**5.13**	**298**	Pg		**Pb**	**02 41 54.9**	**+1.1**
	1.3nm,0.3s							
KTBS				Lg		Lg	02 43 06.8	
	15nm,0.4s							
MK31	**Makanchi Array**	**5.34**	**355**	Pg		**Pb**	**02 41 58.4**	**+1.0**
	0.5nm,0.4s,baz=172,slow=16,SNR=4.4							
MK31				⇓Lg		Lg	02 43 09.9	
	4.9nm,0.6s,baz=167,slow=28,SNR=4.9							
ZSN	**Zaisan**	**6.13**	**12**	Pg		**Pb**	**02 42 09.6**	**-1.3**
	2.6nm,0.4s							
ZSN				Lg		Lg	02 43 33.0	
	7.8nm,0.6s							

IDC 16 02:56:17.6±5.3,22.°75S×179.°11W,h0km,mb3.8/2, mb1 4.1/2,mb1mx3.5/37,mbtmp3.8/2,Error ellipse: s-maj=261.1km s-min=80.9km az=159.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**43.04**	**259**	P		P	03 04 18.9	-0.5
	0.4nm,0.4s,baz=93,slow=9.1,SNR=12							
WRA	**Warramunga Arr**	**43.31**	**265**	P		P	03 04 21.9	+0.2
	1.2nm,0.5s,baz=102,slow=8.2,SNR=28							
AKASG	**Malin Array Be**	**144.43**	**329**	PKP		PKPdf	03 15 55.1	-0.6
	0.3nm,0.3s,baz=32,slow=3.2,SNR=1.8							

*IDC **16** 03:05:12.2±1.0,13.°43N×90.°55W,h0km,mb4.2/17,*

mb1 4.4/19,mb1mx4.2/46,mbtmp4.2/19,ML4.1/2,Error ellipse: s-maj=34.4km s-min=14.4km az=42.0

*SNET **16** 03:05:13.2±2.2,13.°32N×91.°19W,h18km±24km,ML3.9*

*UCR **16** 03:05:14.2±1.4,13.°23N×90.°95W,h0km±13km,ML3.7, mb4.4(NEIC)*

*NEIC **16** 03:05:18.3±2.0,13.°26N±0.°07×90.°87W±0.°07,h45km±6km, mb4.4/86,Md4.1/7(MEX),Error ellipse: s-maj=12.2km s-min=7.5km az=225.0*

*GCG **16** 03:05:23.4±0.7,13.°74N×91.°03W,h42km±100km,MD4.0*

ISC 16 03:05:17.2±1.2,13.°18N±0.°06×91.°04W±0.°05,h42km±11km, n186,σ1s56/173,mb4.4/44,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FUG	**Fuego 3**	**1.27**	**9**	*eP*		**Pn**	**03 05 38.0**	**-0.7**
PCG	**Pacaya**	**1.27**	**19**	*eP*		**Pn**	**03 05 38.1**	**-0.8**
ERG	**Entre ros, C**	**1.35**	**338**	*eP*		**Pn**	**03 05 39.4**	**-0.3**
NUBE	**Las Nubes**	**1.42**	**60**	*eP*		**Pn**	**03 05 38.6**	**-2.1**
NUBE				*eS*		**Sn**	**03 05 57.9**	**-0.4**
NUBE	**Las Nubes**	**1.42**	**60**	*eP*		**Pn**	**03 05 38.6**	**-2.1**
NUBE				*eS*		**Sn**	**03 05 57.9**	**-0.4**
RTAL	**Retalhuleu**	**1.48**	**335**	Pn		**Pn**	**03 05 40.0**	**-1.4**
SBLS	**San Blas**	**1.53**	**64**	*eP*		**Pn**	**03 05 41.0**	**-1.3**
SBLS	**San Blas**	**1.53**	**64**	*eP*		**Pn**	**03 05 41.0**	**-1.3**
RTR	**El Retiro**	**1.53**	**62**	*eP*		**Pn**	**03 05 41.1**	**-1.1**
RTR	**El Retiro**	**1.53**	**62**	*eP*		**Pn**	**03 05 41.1**	**-1.1**
NBG	**Las Nubes**	**1.55**	**26**	*eP*		**Pn**	**03 05 43.1**	**+0.4**
SNJE	**San Jose**	**1.56**	**64**	*eP*		**Pn**	**03 05 41.4**	**-1.2**
SNJE	**San Jose**	**1.56**	**64**	*eP*		**Pn**	**03 05 41.4**	**-1.2**
STG3	**Santiaguito 3,**	**1.60**	**341**	*eP*		**Pn**	**03 05 42.8**	**-0.5**
CEDA	**San Andres**	**1.72**	**69**	*eP*		**Pn**	**03 05 43.5**	**-1.2**
CEDA				*eS*		**Sn**	**03 06 06.6**	**+1.2**
CEDA				IAML			03 06 17.4	
	comp=Z,4μm,0.7s							
CEDA	**San Andres**	**1.72**	**69**	*eP*		**Pn**	**03 05 43.5**	**-1.2**
CEDA				*eS*		**Sn**	**03 06 06.6**	**+1.2**
CEDA				IAML			03 06 17.4	
	comp=Z,4μm,0.7s							
BOQS	**Boqueron**	**1.80**	**72**	*eP*		**Pn**	**03 05 44.3**	**-1.7**
BOQS	**Boqueron**	**1.80**	**72**	*eP*		**Pn**	**03 05 44.3**	**-1.7**
TACO	**Tacachico**	**1.82**	**64**	*eP*		**Pn**	**03 05 45.0**	**-1.1**
TACO				IAML			03 06 21.5	
	comp=Z,584nm,0.7s							
TACO	**Tacachico**	**1.82**	**64**	*eP*		**Pn**	**03 05 45.0**	**-1.1**
TACO				IAML			03 06 21.5	
	comp=Z,584nm,0.7s							
SNET	**Serv Nac Est T**	**1.83**	**74**	*eP*		**Pn**	**03 05 45.2**	**-1.1**
SNET				*eS*		**Sn**	**03 06 09.4**	**+1.1**
SNET				IAML			03 06 22.6	
	comp=Z,888nm,0.4s							
SNET	**Serv Nac Est T**	**1.83**	**74**	*eP*		**Pn**	**03 05 45.2**	**-1.1**
SNET				*eS*		**Sn**	**03 06 09.4**	**+1.1**
SNET				IAML			03 06 22.6	
	comp=Z,888nm,0.4s							
SNET	**Serv Nac Est T**	**1.83**	**74**			**Pn**	**03 05 44.5**	**-1.8**
UEES	**Universidad Ev**	**1.83**	**73**	*eP*		**Pn**	**03 05 45.6**	**-0.7**
UEES	**Universidad Ev**	**1.83**	**73**	*eP*		**Pn**	**03 05 45.6**	**-0.7**
LFRS	**El Faro**	**1.98**	**77**	*eP*		**Pn**	**03 05 47.9**	**-0.4**
LFRS	**El Faro**	**1.98**	**77**	*eP*		**Pn**	**03 05 47.9**	**-0.4**
LBRS	**Las Brisas**	**2.02**	**74**	*eP*		**Pn**	**03 05 49.4**	**+0.5**
LBRS	**Las Brisas**	**2.02**	**74**	*eP*		**Pn**	**03 05 49.4**	**+0.5**
MTO3	**Montecristo**	**2.03**	**53**	Pn		**Pn**	**03 05 48.0**	**-1.2**
PAVA	**Las Pavas**	**2.12**	**75**	*eP*		**Pn**	**03 05 50.0**	**-0.2**
PAVA				IAML			03 06 25.0	
	comp=Z,866nm,0.5s							
PAVA	**Las Pavas**	**2.12**	**75**	*eP*		**Pn**	**03 05 50.0**	**-0.2**
PAVA				IAML			03 06 25.0	
	comp=Z,866nm,0.5s							
ESQI	**Esquipulas**	**2.15**	**50**	*eP*		**Pn**	**03 05 50.8**	**+0.2**
ESQI				IAML			03 06 28.2	
	comp=Z,547nm,0.7s							
ESQI	**Esquipulas**	**2.15**	**50**	Pn		**Pn**	**03 05 50.2**	**-0.4**
COEG	**Centro de Oper**	**2.15**	**78**	*eP*		**Pn**	**03 05 49.6**	**-1.1**
COEG				*eS*		**Sn**	**03 06 18.9**	**+2.8**
COEG	**Centro de Oper**	**2.15**	**78**	*eP*		**Pn**	**03 05 49.6**	**-1.1**
COEG				*eS*		**Sn**	**03 06 18.9**	**+2.8**
MRL	**Marmol**	**2.30**	**35**	*eP*		**Pn**	**03 05 53.8**	**+0.9**
ALJI	**Alcalda de J**	**2.41**	**86**	*eP*		**Pn**	**03 05 53.2**	**-0.9**
ALJI	**Alcalda de J**	**2.41**	**86**	*eP*		**Pn**	**03 05 53.2**	**-0.9**
ALJI				*eS*		**Sn**	**03 06 27.5**	**+5.0**
COEB	**Comit de Eme**	**2.46**	**82**	*eP*		**Pn**	**03 05 54.1**	**-0.9**
COEB				IAML			03 06 39.8	
	comp=Z,505nm,0.5s							
COEB	**Comit de Eme**	**2.46**	**82**	*eP*		**Pn**	**03 05 54.1**	**-0.9**
COEB				IAML			03 06 39.8	
	comp=Z,505nm,0.5s							
TECA	**Tecapa**	**2.49**	**83**	*eP*		**Pn**	**03 05 55.0**	**-0.4**
TECA	**Tecapa**	**2.49**	**83**	*eP*		**Pn**	**03 05 55.0**	**-0.4**
PACA	**Pacayal**	**2.66**	**84**	*eP*		**Pn**	**03 05 57.3**	**-0.4**
PACA				*eP*			03 05 58.0	
PACA	**Pacayal**	**2.66**	**84**	*eP*		**Pn**	**03 05 57.3**	**-0.4**
PACA				*eP*			03 05 58.0	
VSM	**San Miguel**	**2.71**	**84**	*eP*		**Pn**	**03 05 58.1**	**-0.3**
VSM	**San Miguel**	**2.71**	**84**	*eP*		**Pn**	**03 05 58.1**	**-0.3**
JUCU	**Jucuarįn**	**2.72**	**88**	*eP*		**Pn**	**03 05 57.3**	**-1.2**
JUCU				IAML			03 06 49.0	
	comp=Z,356nm,0.5s							
JUCU	**Jucuarįn**	**2.72**	**88**	*eP*		**Pn**	**03 05 57.3**	**-1.2**
JUCU				IAML			03 06 49.0	
	comp=Z,356nm,0.5s							
LCND	**La Caada**	**3.07**	**87**	*eP*		**Pn**	**03 06 02.1**	**-1.2**
LCND	**La Caada**	**3.07**	**87**	*eP*		**Pn**	**03 06 02.1**	**-1.2**
CCIG	**Comitan**	**3.26**	**341**			**Pn**	**03 06 07.8**	**+1.7**
TGUH	**Tegucigalpa,Un**	**3.77**	**76**	*eP*		**Pn**	**03 06 12.7**	**-0.2**
TGUH	**Tegucigalpa,Un**	**3.77**	**76**			**Pn**	**03 06 11.9**	**-1.0**
PETF	**Flores**	**3.88**	**17**	Pn		**Pn**	**03 06 13.5**	**-0.9**
CRIN	**San Cristobal**	**3.92**	**97**	Pn		**Pn**	**03 06 13.6**	**-1.4**
MATN	**Matagalpa**	**4.99**	**92**	Pn		**Pn**	**03 06 27.2**	**-2.5**
CMIG	**Matias Romero**	**5.37**	**317**	Pn		**Pn**	**03 06 34.4**	**-0.5**
	comp=Z,2.0nm,0.3s,baz=130,slow=9.3,SNR=19							
CMIG				Sn		**Sn**	**03 07 33.1**	**-2.5**
	comp=Z,1.6nm,0.3s,baz=135,slow=17,SNR=1.9							
ACON	**Acoyapa**	**5.85**	**101**	Pn		**Pn**	**03 06 41.3**	**-0.2**
JTS	**Las Juntas de**	**6.62**	**115**	Pn		**Pn**	**03 06 51.6**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=9.2,slow=21,SNR=16							
JTS				Sn		**Sn**	**03 07 59.9**	**-6.4**
	comp=Z,1.5nm,0.3s,baz=43,slow=18,SNR=0.9							
JTS	**Las Juntas de**	**6.62**	**115**	*eP*		**Pn**	**03 06 51.5**	**-0.4**
JTS	**Las Juntas de**	**6.62**	**115**	Pn		**Pn**	**03 06 51.8**	**-0.2**
ESPN	**Las Esperanzas**	**6.65**	**98**	Pn		**Pn**	**03 06 50.9**	**-1.5**
HDC	**Heredia**	**7.49**	**114**	Pn		**Pn**	**03 07 02.7**	**-1.3**
TEIG	**Tepich**	**7.49**	**20**	*eP*		**Pn**	**03 07 05.0**	**+1.0**
TEIG	**Tepich**	**7.49**	**20**	Pn		**Pn**	**03 07 03.6**	**-0.3**
TLIG	**Tlapa**	**8.46**	**302**	Pn		**Pn**	**03 07 19.8**	**+2.4**
MOIG	**Morelia**	**11.68**	**305**	Pn		**Pn**	**03 08 03.8**	**+2.2**
ZAIG	**Zacatecas**	**14.52**	**313**	Pn		**Pn**	**03 08 40.9**	**+0.5**
DBIC	**Dabeiba**	**15.83**	**111**	*eP*		**P**	**03 09 02.0**	**+1.5**
SJCC	**San Jacinto, C**	**16.88**	**100**	*eP*		**Pn**	**03 08 57.0**	**-1.3**
CBOC	**Ciudad Bolivar**	**16.50**	**115**	*eP*		**P**	**03 09 09.6**	**+1.4**
PLMC	**San Jos del P**	**16.72**	**118**	*eP*		**Pn**	**03 09 08.2**	**-0.5**
HELC	**Santa Helena**	**16.79**	**113**	*eP*		**P**	**03 09 10.4**	**-1.1**
YOTC	**Yotoco, Valle**	**17.15**	**121**	*eP*		**P**	**03 09 14.9**	**-0.4**
PTBC	**PUERTO BERRIO,**	**17.61**	**110**	*eP*		**P**	**03 09 19.4**	**-1.0**
NORC	**Norcasia**	**17.65**	**114**	*eP*		**Pn**	**03 09 19.8**	**-0.4**
ANIL	**Santa Ana**	**17.69**	**118**	*eP*		**P**	**03 09 24.9**	**+3.5**
POPC	**Popayan, Colom**	**17.71**	**125**	*eP*		**Pn**	**03 09 20.2**	**-0.9**
TOLC	**Tolima**	**17.71**	**117**	*eP*		**P**	**03 09 23.4**	**+1.6**
PCON	**Cinco Dias**	**18.06**	**125**	*eP*		**P**	**03 09 27.8**	**+2.0**
ORTC	**Ortega, Tolima**	**18.12**	**119**	*eP*		**P**	**03 09 28.7**	**+2.8**
BRAL	**Brewton**	**18.28**	**11**			**Pn**	**03 09 27.2**	**-0.4**
ROSC	**El Rosal**	**18.46**	**115**	P		**Pn**	**03 09 30.9**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=27,slow=3.9,SNR=11							
ROSC	**El Rosal**	**18.46**	**115**	P		**Pn**	**03 09 31.3**	**+0.8**
ROSC				IAmb		IAmb	03 09 35.8	
	comp=Z,33nm,1.1s							
PRAC	**Prado**	**18.53**	**119**	*eP*		**Pn**	**03 09 31.4**	**+0.5**
BETC	**Betania**	**18.62**	**123**	*eP*		**Pn**	**03 09 34.0**	**+1.9**
BARC	**Barichara**	**18.76**	**109**	*eP*		**Pn**	**03 09 38.0**	**+4.1**
PAMC	**Pamplona, Colo**	**18.95**	**106**	*eP*		**Pn**	**03 09 38.5**	**+2.1**
PUAC	**Puerto Asis, P**	**19.05**	**130**	*eP*		P	03 09 24.7	-11
CHIC	**Chingaza**	**19.08**	**115**	*eP*		**Pn**	**03 09 38.5**	**+0.6**
FLOC	**Florencia**	**19.10**	**126**	*eP*		**Pn**	**03 09 41.2**	**+3.4**
RUSC	**La Rusia**	**19.12**	**111**	*eP*		**Pn**	**03 09 38.1**	**-0.4**
TXAR	**Lajitas Array**	**19.89**	**326**	P		**P**	**03 09 46.8**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=154,slow=13,SNR=27							
TXAR	**Lajitas Array**	**19.89**	**326**	P		**P**	**03 09 46.2**	**+0.9**
TX31	**Lajitas Ar. Si**	**19.89**	**326**	P		**P**	**03 09 46.5**	**+1.2**
TX31				IAmb		IAmb	03 09 51.5	
	comp=Z,26nm,0.9s							
TX32	**Lajitas Array**	**19.89**	**326**	P		**Pn**	**03 09 47.6**	**+0.5**
H06E1	**SOCORRO T-PHAS**	**19.90**	**289**	T		T	03 30 09.7	
	SNR=17							
LRAL	**Lakeview Retre**	**20.11**	**10**			**P**	**03 09 47.2**	**-0.3**
LRAL				IAmb		IAmb	03 10 06.6	
	comp=Z,23nm,1.2s							
Z47A	**Carrollton**	**20.11**	**7**	P		Pn	03 09 48.5	-1.1
Z47A				IAmb		IAmb	03 09 56.1	
	comp=Z,30nm,0.9s							
152A	**Waverly Hall**	**20.24**	**16**	P		**P**	**03 09 49.2**	**+0.2**
SDV	**Santo Domingo**	**20.48**	**100**	P		**P**	**03 09 48.4**	**-3.4**
	comp=Z,13nm,0.8s,baz=279,slow=6.1,SNR=12							
SDV	**Santo Domingo**	**20.48**	**100**	*eP*		**P**	**03 09 47.5**	**-4.4**
SDV	**Santo Domingo**	**20.48**	**100**	P		**P**	**03 09 50.9**	**-1.0**
SDV				IAmb		IAmb	03 09 53.1	
	comp=Z,14nm,0.8s							
Y45A	**Yeager Farm, C**	**20.64**	**4**	P		**P**	**03 09 54.0**	**+0.8**
PTGC	**Puerto Gaitan,**	**20.69**	**114**	*eP*		**P**	**03 09 54.2**	**+0.1**
257A	**Skidaway Islan**	**20.84**	**25**	P		**P**	**03 09 55.7**	**+0.2**
Z35A	**Perchaven, San**	**20.84**	**345**	P		**P**	**03 09 55.1**	**-0.4**
ABTX	**Abilene, Hawle**	**20.89**	**339**	IAmb		IAmb	03 10 10.7	
	comp=Z,23nm,1.3s							
Y49A	**Blount Mountai**	**21.01**	**11**	IAmb		IAmb	03 10 03.3	
	comp=Z,24nm,1.2s							
GUVC	**San Jose del G**	**21.06**	**119**	*eP*		**P**	**03 09 57.3**	**-0.7**
GOGA	**Godfrey**	**21.29**	**18**	P		**P**	**03 09 59.4**	**-0.8**
GOGA				IAmb		IAmb	03 10 06.2	
	comp=Z,16nm,1.0s							
MIAR	**Mount Ida**	**21.39**	**354**	P		**P**	**03 10 01.8**	**+0.4**
WHAR	**Wooly Hollow**	**22.04**	**357**	P		**P**	**03 10 08.3**	**0.0**
W35A	**Tecumseh**	**22.50**	**347**	P		**P**	**03 10 12.5**	**-0.7**
GDL2	**Guadalupe Moun**	**22.53**	**329**	P		**P**	**03 10 14.4**	**+0.7**
MNTX	**Cornudas Mount**	**22.66**	**327**	P		**P**	**03 10 15.3**	**+0.3**
OK025	**Westminster Rd**	**23.02**	**347**	P		**P**	**03 10 17.1**	**-1.6**
U40A	**Yellville**	**23.14**	**356**	IAmb		IAmb	03 10 20.2	
	comp=Z,11nm,0.9s							
BCOK	**Bluff Creek, N**	**23.15**	**346**	P		**P**	**03 10 18.5**	**-1.5**
TKL	**Tuckaleechee C**	**23.32**	**15**	P		**P**	**03 10 20.1**	**-1.5**
	comp=Z,6.8nm,0.7s,baz=183,slow=10,SNR=11							
AMTX	**Amarillo**	**23.66**	**338**	P		**P**	**03 10 25.6**	**+0.6**
U49A	**Red Boiling Sp**	**23.71**	**11**	IAmb		IAmb	03 10 25.3	
	comp=Z,9.3nm,0.8s							
T45A	**Paducah**	**23.84**	**5**	P		**P**	**03 10 25.8**	**-0.7**
MGMO	**Mountain Grove**	**23.90**	**358**	IAmb		IAmb	03 10 28.4	
	comp=Z,17nm,1.1s							
S39A	**Bolivar**	**24.49**	**356**	IAmb		IAmb	03 10 33.7	
	comp=Z,15nm,0.8s							
319A	**Douglas**	**24.69**	**320**	P		**P**	**03 10 36.5**	**+2.0**
319A				IAmb		IAmb	03 10 59.5	
	comp=Z,16nm,1.1s							
CCM	**Cathedral Cave**	**24.77**	**360**	P		**P**	**03 10 35.4**	**+0.3**
CCM				IAmb		IAmb	03 10 36.9	
	comp=Z,8.3nm,0.9s							
MTP	**Monte Pirata**	**25.02**	**75**	P		**P**	**03 10 35.0**	**-2.4**
MTP				IAmb		IAmb	03 10 38.6	
	comp=Z,16nm,0.9s							
WCI	**Wyandotte Cave**	**25.30**	**9**	P		**P**	**03 10 39.3**	**-0.5**
WCI				IAmb		IAmb	03 10 40.0	
	comp=Z,16nm,1.1s							
ANMO	**Albuquerque**	**25.77**	**330**	P		**P**	**03 10 46.5**	**+2.1**
	comp=Z,1.1nm,0.8s,baz=149,slow=16,SNR=4.5							
ANMO	**Albuquerque**	**25.77**	**330**	P		**P**	**03 10 46.3**	**+1.9**
TUC	**Tucson**	**26.26**	**320**	P		**P**	**03 10 51.5**	**+2.8**
MTPU	**Mount Pierson**	**31.10**	**327**	P		**P**	**03 11 34.6**	**+2.5**
TPNV	**Topopah Spring**	**32.69**	**321**	IAmb		IAmb	03 12 10.5	
	comp=Z,8.5nm,1.4s							
SPR3	**Spring Creek 3**	**32.95**	**326**	IAmb		IAmb	03 11 54.6	
	comp=Z,6.3nm,1.1s							
TCUT	**Toone Canyon**	**33.04**	**331**	P		**P**	**03 11 51.0**	**+2.1**
R11A	**Troy Canyon, C**	**33.22**	**323**	IAmb		IAmb	03 11 57.7

mb4.7/259,Md4.6/9(MEX),Error ellipse: s-maj=14.4km s-min=6.4km az=207.0

ISC 16 03:08:30.2-1.4,**13°42N**±0'06×**90°87W**±0'05,**h28**km±9km, **n439**,σ1¶**45**/353,**mb4.7**/110,**Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PCG	**Pacaya**	**1.00**	**15**	*eP* **Pn**	**03 08 51.5**	**+2.9**
FUG	**Fuego 3**	**1.02**	**2**	*eP* **Pn**	**03 08 50.6**	**+1.8**
ERG	**Entre ros, C**	**1.22**	**326**	*eP* **Pb**	**03 08 52.1**	**-0.5**
NBG	**Las Nubes**	**1.27**	**24**	*eP* **Pb**	**03 08 55.8**	**+2.1**
RTR	**El Retiro**	**1.28**	**68**	*eP* **Pb**	**03 08 54.1**	**+0.3**
RTR	**El Retiro**	**1.28**	**68**	*eP* **Pb**	**03 08 54.1**	**+0.3**
SBLS	**San Blas**	**1.28**	**71**	*eP* **Pb**	**03 08 53.8**	**-0.1**
SBLS	**San Blas**	**1.28**	**71**	*eP* **Pb**	**03 08 53.8**	**-0.1**
SNJE	**San Jose**	**1.31**	**70**	*eP* **Pb**	**03 08 54.5**	**+0.2**
SNJE	**San Jose**	**1.31**	**70**	*eP* **Pb**	**03 08 54.5**	**+0.2**
RTAL	**Retalhuleu**	**1.36**	**324**	**Pn**	**03 08 53.2**	**-0.1**
STG3	**Santiaguito 3,**	**1.45**	**332**	*eP* **Pn**	**03 08 54.9**	**+0.1**
CEDA	**San Andres**	**1.49**	**75**	*eP* **Pb**	**03 08 56.8**	**-0.4**
CEDA				IAML	03 10 01.0	
	comp=Z,8μm,0.6s					
CEDA	**San Andres**	**1.49**	**75**	*eP* **Pb**	**03 08 56.8**	**-0.4**
CEDA				IAML	03 10 01.0	
	comp=Z,8μm,0.6s					
TACO	**Tacachico**	**1.57**	**69**	*eP* **Pb**	**03 08 57.9**	**-0.8**
TACO	**Tacachico**	**1.57**	**69**	*eP* **Pb**	**03 08 57.9**	**-0.8**
SNET	**Serv Nac Est T**	**1.62**	**80**	*eP* **Pb**	**03 08 58.8**	**-0.6**
SNET	**Serv Nac Est T**	**1.62**	**80**	*eP* **Pb**	**03 08 58.8**	**-0.6**
SNET	**Serv Nac Est T**	**1.62**	**80**	**Pn**	**03 08 56.3**	**-0.6**
LFRS	**El Faro**	**1.77**	**83**	*eP* **Pb**	**03 09 00.9**	**-1.2**
LFRS	**El Faro**	**1.77**	**83**	*eP* **Pb**	**03 09 00.9**	**-1.2**
LBRS	**Las Brisas**	**1.81**	**80**	*eP* **Pb**	**03 09 01.2**	**-1.5**
LBRS	**Las Brisas**	**1.81**	**80**	*eP* **Pb**	**03 09 01.2**	**-1.5**
ESQI	**Esquipulas**	**1.87**	**52**	Pn **Pb**	**03 09 02.8**	**-1.0**
PAVA	**Las Pavas**	**1.90**	**81**	*eP* **Pb**	**03 09 02.6**	**-1.8**
PAVA				IAML	03 09 57.7	
	comp=Z,1μm,0.6s					
PAVA	**Las Pavas**	**1.90**	**81**	*eP* **Pb**	**03 09 02.6**	**-1.8**
PAVA				IAML	03 09 57.7	
	comp=Z,1μm,0.6s					
COEG	**Centro de Oper**	**1.95**	**84**	*eP* **Pn**	**03 09 02.7**	**+1.3**
COEG				*eS* **Sb**	**03 09 32.9**	**+3.9**
COEG				IAML	03 09 51.0	
	comp=Z,2μm,0.5s					
COEG	**Centro de Oper**	**1.95**	**84**	*eP* **Pn**	**03 09 02.7**	**+1.3**
COEG				*eS* **Sb**	**03 09 32.9**	**+3.9**
COEG				IAML	03 09 51.0	
	comp=Z,2μm,0.5s					
THIG		**2.01**	**318**	**Pn**	**03 09 00.5**	**-1.7**
MRL	**Marmol**	**2.02**	**35**	*eP* **Pb**	**03 09 06.6**	**+0.3**
MRL				*eS* Sb	03 09 39.4	+8.3
ALJI	**Alcalda de J**	**2.24**	**92**	*eP* **Pn**	**03 09 06.7**	**+1.2**
ALJI	**Alcalda de J**	**2.24**	**92**	*eP* **Pn**	**03 09 06.7**	**+1.2**
COEB	**Comit de Eme**	**2.28**	**88**	*eP* **Pn**	**03 09 06.6**	**+0.5**
COEB	**Comit de Eme**	**2.28**	**88**	*eP* **Pn**	**03 09 06.6**	**+0.5**
TECA	**Tecapa**	**2.31**	**88**	*eP* **Pn**	**03 09 08.2**	**+1.7**
TECA	**Tecapa**	**2.31**	**88**	*eP* **Pn**	**03 09 08.2**	**+1.7**
LCND	**La Caada**	**2.90**	**92**	*eP* **Pn**	**03 09 14.8**	**+0.3**
LCND				IAML	03 09 54.5	
	comp=Z,774nm,0.5s					
LCND	**La Caada**	**2.90**	**92**	*eP* **Pn**	**03 09 14.8**	**+0.3**
LCND				IAML	03 09 54.5	
	comp=Z,774nm,0.5s					
CCIG	**Comitan**	**3.10**	**337**	Pn **Pn**	**03 09 20.3**	**+2.8**
CSGN	**Cosiguina Volc**	**3.26**	**97**	**Pn**	**03 09 20.5**	**+1.0**
TGUH	**Tegucigalpa,Un**	**3.55**	**79**	*eP* **Pb**	**03 09 32.8**	**+0.3**
TGUH	**Tegucigalpa,Un**	**3.55**	**79**	Pn **Pn**	**03 09 24.8**	**+1.2**
PETF	**Flores**	**3.61**	**15**	**Pn**	**03 09 26.8**	**+2.5**
CRIN	**San Cristobal**	**3.79**	**100**	**Pn**	**03 09 28.3**	**+1.5**
TGIG		**3.99**	**327**	**Pn**	**03 09 31.2**	**+1.7**
MATN	**Matagalpa**	**4.84**	**95**	Pn **Pn**	**03 09 40.2**	**-1.1**
CMIG	**Matias Romero**	**5.32**	**314**	Pn **Pn**	**03 09 48.4**	**+0.5**
	comp=Z,3.4nm,0.3s,baz=140,slow=12,SNR=12					
CMIG				Sn **Sn**	**03 10 47.6**	**-0.7**
	comp=Z,10.0nm,0.3s,baz=68,slow=19,SNR=1.5					
ACON	**Acoyapa**	**5.74**	**104**	Pn **Pn**	**03 09 54.2**	**+0.6**
BUEV	**Buena Vista**	**5.94**	**115**	*eP* **Pn**	**03 09 56.8**	**+0.3**
ORTG	**Ortega, Santa**	**6.11**	**119**	*eP* **Pn**	**03 09 59.0**	**+0.3**
CUI	**Cuipilapa**	**6.22**	**116**	*eP* **Pn**	**03 10 00.5**	**+0.2**
ESPN	**Las Esperanzas**	**6.52**	**100**	Pn **Pn**	**03 10 05.5**	**+1.2**
JTS	**Las Juntas de**	**6.57**	**118**	Pn **Pn**	**03 10 04.5**	**-0.5**
	comp=Z,2.7nm,0.3s,baz=5.9,slow=19,SNR=18					
JTS				Lg Lg	03 11 41.7	
	baz=54,slow=14,SNR=1.8					
JTS	**Las Juntas de**	**6.57**	**118**	*eP* **Pn**	**03 10 04.7**	**-0.4**
JTS	**Las Juntas de**	**6.57**	**118**	*eP* **Pn**	**03 10 05.1**	**0.0**
JTS	**Las Juntas de**	**6.57**	**118**	Pn **Pn**	**03 10 05.6**	**+0.5**
ARE1	**Arenal 1**	**6.70**	**115**	*eP* **Pn**	**03 10 08.7**	**+1.9**
LAFE	**Finca La Fe, P**	**6.85**	**121**	*eP* **Pn**	**03 10 07.8**	**-1.0**
TEIG	**Tepich**	**7.21**	**20**	*eP* Pn	03 10 18.0	+4.2
TEIG	**Tepich**	**7.21**	**20**	**Pn**	**03 10 16.1**	**+2.3**
HDC	**Heredia**	**7.44**	**116**	Pn **Pn**	**03 10 19.3**	**+2.3**
LCR2	**La Lucha 2**	**7.66**	**118**	*eP* **Pn**	**03 10 21.2**	**+1.1**
RIMA	**Rio Macho**	**7.76**	**117**	*eP* **Pn**	**03 10 22.8**	**+1.3**
TLIG	**Tlapa**	**8.48**	**300**	Pn **Pn**	**03 10 33.2**	**+1.8**
DRK0	**Durika**	**8.54**	**118**	*eP* **Pn**	**03 10 34.8**	**+2.5**
RIOS	**Rincon, Osa**	**8.61**	**122**	*eP* **Pn**	**03 10 34.8**	**+1.8**
UNM	**Universidad Na**	**9.90**	**308**	Pn **Pn**	**03 10 52.5**	**+1.5**
MOIG	**Morelia**	**11.69**	**304**	Pn **Pn**	**03 11 15.7**	**+0.4**
CBCY	**The Bluff, Cay**	**12.37**	**58**	Pn **Pn**	**03 11 24.5**	**+0.1**
ZAIG	**Zacatecas**	**14.49**	**312**	Pn **Pn**	**03 11 54.3**	**+0.6**
SOLC	**Bahia Solano**	**15.06**	**117**	*eP* **P**	**03 12 05.7**	**-0.5**
KVTX	**Kingsville**	**15.51**	**336**	Pn **Pn**	**03 12 07.8**	**+0.8**
KVTX				IAmb IAmb	03 12 14.7	
	comp=Z,62nm,1.0s					
061Z	**Ochoppi**	**15.53**	**36**	Pn **Pn**	**03 12 08.4**	**+1.2**
SJCC	**San Jacinto, C**	**15.76**	**101**	*eP* **Pn**	**03 12 11.1**	**+0.7**
DBBC	**Dabeiba**	**15.76**	**112**	*eP* **P**	**03 12 14.3**	**+0.2**
CBOC	**Ciudad Bolivar**	**16.45**	**116**	*eP* **P**	**03 12 22.0**	**+0.1**
735A	**Kenedy**	**16.66**	**338**	Pn **Pn**	**03 12 21.3**	**-0.4**
735A				IAmb IAmb	03 12 27.9	
	comp=Z,56nm,0.8s					
PLMC	**San Jos del P**	**16.69**	**119**	*eP* **P**	**03 12 24.1**	**-0.3**
HELC	**Santa Helena**	**16.73**	**114**	*eP* **P**	**03 12 26.1**	**+1.0**
833A	**Chaparral WMA,**	**16.82**	**333**	P **P**	**03 12 27.0**	**+1.3**
	baz=150					
833A	**Chaparral WMA,**	**16.82**	**333**	Pn **Pn**	**03 12 24.0**	**+0.2**
HKT	**Hockley**	**17.08**	**345**	**P**	**03 12 27.7**	**-0.8**
YOTC	**Yotoco, Valle**	**17.14**	**122**	*eP* **P**	**03 12 30.2**	**+0.8**
441A	**DeRidder**	**17.38**	**353**	P **P**	**03 12 32.5**	**+0.6**
441A				IAmb IAmb	03 12 39.4	
	comp=Z,55nm,0.9s					
PTBC	**PUERTO BERRIO,**	**17.54**	**111**	*eP* **Pn**	**03 12 33.1**	**+0.2**
NORC	**Norcasia**	**17.60**	**115**	*eP* Pn	03 12 24.3	-9.3
ANIL	**Santa Ana**	**17.66**	**119**	*eP* **Pn**	**03 12 35.0**	**+0.5**
656A	**Willston**	**17.66**	**25**	Pn **P**	**03 12 37.2**	**+2.3**
TOLC	**Tolima**	**17.68**	**118**	*eP* **P**	**03 12 36.1**	**+0.5**
POPC	**Popayan, Colom**	**17.72**	**126**	*eP* **Pn**	**03 12 35.8**	**+0.5**
553A	**Crawfordville**	**17.72**	**19**	**P**	**03 12 37.2**	**+1.6**
451A	**Vernon**	**17.76**	**15**	**P**	**03 12 36.5**	**+0.5**
342A	**Flagon Creek P**	**17.92**	**356**	**Pn**	**03 12 36.4**	**-1.0**
342A				IAmb IAmb	03 12 42.7	
	comp=Z,73nm,1.0s					
346A	**Big Creek Wild**	**17.93**	**4**	Pn **Pn**	**03 12 36.1**	**-1.5**
344A	**Westbrook Farm**	**17.95**	**0**	**Pn**	**03 12 36.7**	**-1.0**
GCUF	**Volcan Galeras**	**18.06**	**131**	*eP* **P**	**03 12 42.8**	**+2.9**
PCON	**Cinco Dias**	**18.07**	**126**	*eP* **P**	**03 12 42.2**	**+2.0**
ORTC	**Ortega, Tolima**	**18.09**	**120**	*eP* **P**	**03 12 41.9**	**+2.0**
SPBC	**San Pablo de B**	**18.27**	**113**	*eP* **Pn**	**03 12 40.9**	**-0.9**
435B	**Jarrell**	**18.36**	**341**	**P**	**03 12 44.4**	**+1.7**
	baz=159					
435B	**Jarrell**	**18.36**	**341**	P **Pn**	**03 12 41.9**	**-0.9**
ROSC	**El Rosal**	**18.42**	**116**	P **P**	**03 12 44.5**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=246,slow=4.9,SNR=8.9					
ROSC	**El Rosal**	**18.42**	**116**	**P**	**03 12 44.3**	**+0.4**
ROSC				IAmb IAmb	03 12 48.6	
	comp=Z,64nm,1.4s					
PRAC	**Prado**	**18.50**	**120**	*eP* **Pn**	**03 12 48.4**	**+3.7**
NATX	**Nacogdoches**	**18.59**	**350**	P **Pn**	**03 12 47.5**	**+2.0**
	baz=188					
NATX	**Nacogdoches**	**18.59**	**350**	P **Pn**	**03 12 45.2**	**-0.4**
BETC	**Betania**	**18.61**	**124**	*eP* **P**	**03 12 45.9**	**+0.3**
BARC	**Barichara**	**18.68**	**110**	*eP* **P**	**03 12 45.5**	**-1.2**
VBMS	**Vicksburg**	**18.72**	**1**	P **Pn**	**03 12 49.5**	**+2.4**
	baz=181					
352A	**Blakely**	**18.79**	**16**	IAmb IAmb	03 12 55.4	
	comp=Z,82nm,1.1s					
PAMC	**Pamplona, Colo**	**18.86**	**107**	*eP* **P**	**03 12 47.6**	**-1.2**
GARC	**Garzon, Huila**	**18.86**	**125**	*eP* **Pn**	**03 12 54.8**	**+5.5**
JCT	**Junction City**	**18.88**	**336**	P **Pn**	**03 12 50.0**	**+0.8**
	baz=152					
JCT	**Junction City**	**18.88**	**336**	P **P**	**03 12 48.2**	**-0.2**
CHIC	**Chingaza**	**19.03**	**116**	*eP* **Pn**	**03 12 52.5**	**+1.1**
RUSC	**La Rusia**	**19.05**	**111**	*eP* **P**	**03 12 48.7**	**-2.3**
FLOC	**Florencia**	**19.11**	**127**	*eP* **Pn**	**03 12 53.0**	**+1.0**
TIGA	**Tifton**	**19.15**	**19**	P **Pn**	**03 12 54.3**	**+2.1**
	baz=202,SNR=5.0					
TIGA	**Tifton**	**19.15**	**19**	P **P**	**03 12 50.7**	**-0.6**
TIGA				IAmb IAmb	03 12 58.3	
	comp=Z,70nm,1.1s					
146A	**Union**	**19.20**	**5**	IAmb IAmb	03 12 59.7	
	comp=Z,71nm,1.1s					
143A	**Socs Landing,**	**19.20**	**359**	IAmb IAmb	03 13 04.7	
	comp=Z,75nm,1.1s					
HPIG		**19.30**	**316**	P **P**	**03 12 53.1**	**-0.1**
WHTX	**Lake Whitney,**	**19.45**	**343**	P **Pn**	**03 12 57.7**	**+1.8**
	baz=160					
TXAR	**Lajitas Array**	**19.79**	**325**	P **Pn**	**03 13 00.1**	**0.0**
	comp=Z,0.6nm,0.3s,baz=154,slow=13,SNR=52					
TXAR				PcP **PcP**	**03 17 16.0**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=146,slow=6.6,SNR=5.4					
TXAR				ScP **ScP**	**03 20 58.6**	**+8.2**
	comp=Z,0.0nm,0.3s,baz=150,slow=2.7,SNR=5.8					
TXAR	**Lajitas Array**	**19.79**	**325**	P **Pn**	**03 12 59.7**	**-0.4**
TX32	**Lajitas Array**	**19.79**	**325**	IAmb IAmb	03 13 06.1	
	comp=Z,30nm,0.9s					
Z41A	**Richland Creek**	**19.83**	**355**	P **Pn**	**03 13 00.9**	**+0.5**
	baz=174					
Z41A	**Richland Creek**	**19.83**	**355**	IAmb IAmb	03 13 19.1	
	comp=Z,30nm,0.9s					
LRAL	**Lakeview Retre**	**19.85**	**10**	P **Pn**	**03 13 01.8**	**+1.1**
	baz=191,SNR=6.6					
LRAL	**Lakeview Retre**	**19.85**	**10**	P **Pn**	**03 13 00.9**	**+0.2**
LRAL				IAmb IAmb	03 13 07.9	
	comp=Z,42nm,1.2s					
152A	**Waverly Hall**	**19.97**	**15**	IAmb IAmb	03 13 07.5	
	comp=Z,36nm,0.9s					
H06E1	**SOCORRO T-PHAS**	**19.99**	**288**	T T	03 33 13.6	
	SNR=258					
Z38A	**Mt. Pleasant**	**20.11**	**350**	IAmb IAmb	03 13 11.8	
	comp=Z,34nm,1.0s					
MACC	**Macarena, Meta**	**20.22**	**122**	*eP* **P**	**03 13 04.2**	**+1.0**
SDV	**Santo Domingo**	**20.36**	**101**	P **P**	**03 13 01.6**	**-3.2**
	comp=Z,0.6nm,0.3s,baz=288,slow=6.3,SNR=7.5					
SDV	**Santo Domingo**	**20.36**	**101**	*eP* **P**	**03 13 04.6**	**-0.2**
SDV	**Santo Domingo**	**20.36**	**101**	P **P**	**03 13 04.7**	**-0.1**
CCAR	**Cane Creek**	**20.43**	**358**	P **P**	**03 13 05.1**	**-0.1**
Z51A	**Franklin**	**20.48**	**14**	IAmb IAmb	03 13 16.8	
	comp=Z,30nm,0.8s					
PTGC	**Puerto Gaitan,**	**20.64**	**115**	*eP* **P**	**03 13 06.3**	**-1.4**
Z35A	**Perchaven, San**	**20.66**	**345**	IAmb IAmb	03 13 17.3	
	comp=Z,26nm,0.8s					
ABTX	**Abilene, Hawle**	**20.73**	**339**	P **P**	**03 13 09.2**	**+0.5**
	baz=155,SNR=11					
ABTX	**Abilene, Hawle**	**20.73**	**339**	IAmb IAmb	03 13 13.0	
	comp=Z,35nm,0.9s					
Y49A	**Blount Mountai**	**20.75**	**11**	IAmb IAmb	03 13 16.2	
	comp=Z,33nm,1.1s					
GOGA	**Godfrey**	**21.02**	**17**	P **P**	**03 13 13.2**	**+1.6**
	baz=200,SNR=7.2					
GUVC	**San Jose del G**	**21.03**	**119**	*eP* **P**	**03 13 12.0**	**+0.1**
OXF	**Oxford**	**21.04**	**3**	P **P**	**03 13 14.5**	**+2.6**
	baz=184,SNR=8.7					
X40A	**Basin Creek Fa**	**21.05**	**355**	P **P**	**03 13 12.8**	**+0.8**
	baz=175					
X40A	**Basin Creek Fa**	**21.05**	**355**	IAmb IAmb	03 13 28.0	
	comp=Z,36nm,1.5s					
MIAR	**Mount Ida**	**21.18**	**354**	P **P**	**03 13 14.1**	**+0.8**
	baz=173,SNR=15					
MIAR	**Mount Ida**	**21.18**	**354**	P **P**	**03 13 13.0**	**-0.3**
MIAR				IAmb IAmb	03 13 27.7	
	comp=Z,41nm,1.2s					
X48A	**Hartselle**	**21.23**	**9**	IAmb IAmb	03 13 29.9	
	comp=Z,29nm,1.1s					
Y52A	**Lilburn**	**21.28**	**16**	IAmb IAmb	03 13 21.6	
	comp=Z,67nm,1.4s					
FPAL	**Fort Paine**	**21.56**	**12**	IAmb IAmb	03 13 24.3	
	comp=Z,48nm,1.0s					
PLAL	**Pickwick Lake**	**21.62**	**6**	P **P**	**03 13 19.3**	**+1.2**
W41B	**Gary Mavity, V**	**21.70**	**357**	P **P**	**03 13 19.4**	**+0.5**
	baz=176					
W41B	**Gary Mavity, V**	**21.70**	**357**	IAmb IAmb	03 13 39.0	
	comp=Z,62nm,1.4s					
WHAR	**Wooly Hollow**	**21.82**	**357**	IAmb IAmb	03 13 21.8	
	comp=Z,25nm,0.9s					
W39A	**Magazine**	**21.84**	**354**	P **P**	**03 13 21.3**	**+0.8**
	baz=172,SNR=8.1					
W39A	**Magazine**	**21.84**	**354**	IAmb IAmb	03 13 32.0	
	comp=Z,49nm,1.4s					
Z58A	**St. Stephen**	**22.24**	**25**	P **P**	**03 13 25.0**	**+0.2**
	baz=210					
W50A	**Signal Mountai**	**22.26**	**12**	IAmb IAmb	03 13 30.4	
	comp=Z,31nm,1.3s					
W35A	**Tecumseh**	**22.31**	**347**	P **P**	**03 13 25.2**	**-0.3**
X54A	**Belton**	**22.40**	**19**	P **P**	**03 13 27.3**	**+0.8**
	baz=202					
WMOK	**Wichita Mounta**	**22.40**	**343**	P **P**	**03 13 25.5**	**-1.0**
	baz=160					
V48A	**Smith Brothers**	**22.52**	**9**	IAmb IAmb	03 13 29.7	
	comp=Z,27nm,1.1s					
MNTX	**Coudas Mount**	**22.55**	**326**	P **P**	**03 13 28.0**	**-0.2**
	baz=141,SNR=116					
MNTX	**Cornudas Mount**	**22.55**	**326**	P **P**	**03 13 27.8**	**-0.3**
LCAR	**Lake Charles**	**22.56**	**359**	IAmb IAmb	03 13 40.6	
	comp=Z,50nm,1.4s					
CPCT	**Cooper Cave**	**22.67**	**14**	IAmb IAmb	03 13 43.5	
	comp=Z,24nm,1.2s					
WVT	**Waverly**	**22.78**	**6**	P **P**	**03 13 31.1**	**+0.6**
	baz=188					
WVT	**Waverly**	**22.78**	**6**	P **P**	**03 13 30.6**	**+0.1**
WVT				IAmb IAmb	03 13 31.3	
	comp=Z,24nm,1.1s					
OK025	**Westminster Rd**	**22.83**	**346**	IAmb IAmb	03 13 31.9	
	comp=Z,28nm,0.8s					
TUL1	**Leonard**	**22.83**	**350**	P **P**	**03 13 30.3**	**-0.8**
	baz=168					
TUL1	**Leonard**	**22.83**	**350**	IAmb IAmb	03 13 46.1	
	comp=Z,25nm,1.0s					
U40A	**Yellville**	**22.91**	**356**	P **P**	**03 13 30.8**	**-1.0**
	baz=175,SNR=18					
U40A	**Yellville**	**22.91**	**356**	IAmb IAmb	03 13 32.9	
	comp=Z,27nm,0.8s					
HHAR	**Hobbs**	**22.93**	**354**	IAmb IAmb	03 13 48.1	
	comp=Z,28nm,1.3s					
CLTN	**Cedars of Leba**	**22.94**	**9**	IAmb IAmb	03 13 33.6	
	comp=Z,35nm,1.2s					
W54A	**Cherokee Point**	**22.96**	**19**	P **P**	**03 13 32.4**	**+0.1**
	baz=202					
TKL	**Tuckaleechee C**	**23.05**	**15**	P **P**	**03 13 33.2**	**-0.1**
	comp=Z,13nm,0.7s,baz=181,slow=11,SNR=18					
U38A	**Gravette**	**23.14**	**353**	IAmb IAmb	03 13 50.0	
	comp=Z,25nm,1.2s					
MSTX	**Muleshoe**	**23.14**	**334**	P **P**	**03 13 34.6**	**+0.2**
	baz=149,SNR=6.8					
MSTX	**Muleshoe**	**23.14**	**334**	P **P**	**03 13 34.8**	**+0.4**
MSTX				IAmb IAmb	03 13 39.3	
	comp=Z,15nm,0.8s					
V52A	**Sevierville**	**23.27**	**15**	IAmb IAmb	03 13 41.5	
	comp=Z,30nm,1.1s					
KMSC	**Kings Mountain**	**23.28**	**20**	P **P**	**03 13 36.0**	**+0.3**
	baz=204,SNR=5.0					
V53A	**Saluda**	**23.32**	**17**	IAmb IAmb	03 13 42.8	
	comp=Z,26nm,1.1s					
U49A	**Red Boiling Sp**	**23.45**	**10**	IAmb IAmb	03 13 43.4	
	comp=Z,29nm,1.0s					
T42A	**Van Buren**	**23.52**	**360**	IAmb IAmb	03 13 55.5	
	comp=Z,23nm,1.2s					
V54A	**Nebo**	**23.67**	**18**	P **P**	**03 13 40.4**	**+0.9**
	baz=202					
MGMO	**Mountain Grove**	**23.67**	**357**	P **P**	**03 13 39.1**	**-0.3**
MGMO				IAmb IAmb	03 13 40.7	
	comp=Z,33nm,0.9s					
X59A	**McDuffie Farm,**	**23.82**	**26**	P **P**	**03 13 41.7**	**+0.9**
	baz=211					
ATAH	**Atahualpa**	**23.88**	**148**	P **P**	**03 13 45.0**	**+3.0**
	comp=Z,7.8nm,0.9s,baz=28,slow=9.4,SNR=6.0					
W58A	**Raeford**	**23.95**	**24**	P **P**	**03 13 41.2**	**-0.7**
	baz=209					
TZTN	**Tazewell**	**23.95**	**15**	P **P**	**03 13 42.1**	**+0.1**
	baz=198					
TZTN	**Tazewell**	**23.95**	**15**	IAmb IAmb	03 13 48.8	
	comp=Z,23nm,0.9s					
V55A	**Taylorsville**	**23.97**	**20**	P **P**	**03 13 41.7**	**-0.6**
	baz=204					
X60A	**Albert Glenn T**	**24.09**	**27**	P **P**	**03 13 43.4**	**+0.1**
	baz=212					
T50A	**Nancy**	**24.12**	**12**	IAmb IAmb	03 13 49.4	
	comp=Z,24nm,1.0s					
HSIG		**24.26**	**313**	P **P**	**03 13 45.3**	**+0.3**
HSIG				IAmb IAmb	03 13 50.2	
	comp=Z,45nm,1.5s					
U54A	**Nelsons Funny**	**24.40**	**18**	P **P**	**03 13 46.2**	**-0.1**
	baz=202					
U54A	**Nelsons Funny**	**24.40**	**18**	IAmb IAmb	03 13 55.0	
	comp=Z,41nm,1.1s					
V57A	**Coltrane Farms**	**24.50**	**22**	P **P**	**03 13 47.2**	**0.0**
	baz=207					
121A	**Cookes Peak, D**	**24.52**	**324**	P **P**	**03 13 49.6**	**+2.0**
	baz=137,SNR=20					
CCM	**Cathedral Cave**	**24.54**	**359**	P **P**	**03 13 46.6**	**-0.9**
	baz=179					
CCM	**Cathedral Cave**	**24.54**	**359**	P **P**	**03 13 46.6**	**-0.9**
CCM				IAmb IAmb	03 13 48.8	
	comp=Z,20nm,0.9s					
T53A	**Wise**	**24.62**	**16**	P **P**	**03 13 48.1**	**-0.3**
	baz=200					
V58A	**Windy Hill, Pi**	**24.67**	**23**	P **P**	**03 13 47.7**	**-1.0**
	baz=208					
T54A	**Tazewell**	**24.97**	**18**	P **P**	**03 13 51.1**	**-0.4**
	baz=202					
S51A	**Beattyville**	**24.98**	**14**	IAmb IAmb	03 13 56.8	
	comp=Z,21nm,1.1s					
V59A	**Middlesex**	**24.99**	**25**	P **P**	**03 13 51.2**	**-0.3**
	baz=210					
WCI	**Wyandotte Cave**	**25.04**	**9**	P **P**	**03 13 52.0**	**0.0**
	baz=191					
WCI	**Wyandotte Cave**	**25.04**	**9**	P **P**	**03 13 51.7**	**-0.3**
U57A	**Blanch**	**25.15**	**22**	P **P**	**03 13 52.4**	**-0.6**
	baz=207					
Y22D	**IRIS PASSCAL I**	**25.20**	**327**	P **P**	**03 13 56.1**	**+2.4**
	baz=141					
T55A	**Pulaski**	**25.27**	**19**	P **P**	**03 13 55.4**	**+1.3**
	baz=204					
R49A	**Shelbyville**	**25.29**	**11**	IAmb IAmb	03 13 54.2	
	comp=Z,23nm,1.1s					
S53A	**Williamson**	**25.39**	**16**	P **P**	**03 13 55.5**	**+0.3**
	baz=200					
R50A	**Paris**	**25.44**	**12**	IAmb IAmb	03 13 56.0	
	comp=Z,21nm,1.1s					
ANMO	**Albuquerque**	**25.65**	**329**	P **P**	**03 13 58.3**	**+0.5**
	comp=Z,7.0nm,1.0s,baz=150,slow=12,SNR=16					
ANMO				PcP **PcP**	**03 17 29.4**	**+1.3**
	comp=Z,2.4nm,0.9s,baz=135,slow=4.3,SNR=3.7					
ANMO	**Albuquerque**	**25.65**	**329**	P **P**	**03 13 58.9**	**+1.1**
	baz=143					
ANMO	**Albuquerque**	**25.65**	**329**	P **P**	**03 13 58.2**	**+0.3**
R32A	**Long Quarter,**	**25.86**	**346**	IAmb IAmb	03 14 00.8	
	comp=Z,15nm,0.8s					
P40A	**Paris**	**26.03**	**358**	IAmb IAmb	03 14 01.1	
	comp=Z,31nm,1.2s					
KSU1	**Kansas State U**	**26.08**	**350**	P **P**	**03 14 01.6**	**+0.2**
	baz=167					
KSU1	**Kansas State U**	**26.08**	**350**	IAmb IAmb	03 14 02.7	
	comp=Z,13nm,0.8s					
TUC	**Tucson**	**26.19**	**319**	P **P**	**03 14 02.9**	**+0.4**
	baz=131					
TUC	**Tucson**	**26.19**	**319**	P **P**	**03 14 03.0**	**+0.4**
TUC				IAmb IAmb	03 14 10.4	
	comp=Z,20nm,1.0s					
Q51A	**Peebles**	**26.36**	**13**	IAmb IAmb	03 14 13.1	
	comp=Z,30nm,1.0s					
P48A	**Milroy**	**26.38**	**10**	IAmb IAmb	03 14 03.9	
	comp=Z,22nm,1.0s					
R55A	**Marlinton**	**26.54**	**19**	P **P**	**03 14 06.1**	**+0.4**
	baz=204					
T25A	**Trinidad**	**26.54**	**335**	P **P**	**03 14 06.2**	**+0.3**
	baz=150					
T25A	**Trinidad**	**26.54**	**335**	IAmb IAmb	03 14 14.0	
	comp=Z,24nm,1.4s					
Q52A	**Bidwell**	**26.56**	**15**	P **P**	**03 14 06.1**	**+0.4**
	baz=199					
Q53A	**Leroy**	**26.66**	**16**	P **P**	**03 14 06.8**	**+0.2**

K58A	Earlville	32.07	21	P	P	03 14 55.0 +0.3
	baz=209					
K22A	Casper	32.12	338	P	P	03 14 55.6 +0.3
	baz=150					
PRN	Pahroc Range	32.18	322	IAmb	IAmb	03 15 16.1
	comp=Z,15nm,1.3s					
F36A	Milaca	32.42	357	IAmb	IAmb	03 14 56.9
	comp=Z,9.3nm,0.9s					
RSSD	Black Hills	32.61	342	P	P	03 14 60.0 +0.3
	baz=156					
TPNV	Topopah Spring	32.62	320	P	P	03 15 01.4 +1.6
	baz=129					
TPNV	Topopah Spring	32.62	320	P	P	03 15 01.0 +1.3
TPNV				IAmb	IAmb	03 15 08.3
	comp=Z,18nm,1.4s					
TPNV				PcP	PcP	03 17 47.5 +1.8
FURC	Furnace Creek,	32.70	319	P	P	03 15 02.5 +2.2
	baz=128					
SADO	Sadowa	32.81	16	P	P	03 14 58.7 -2.4
	comp=Z,11nm,0.9s,baz=224,slow=11,SNR=3.4					
MPMC	Manual Prospec	32.86	318	P	P	03 15 03.0 +1.1
	baz=127,SNR=16					
DUG	Dugway, Tooele	32.90	328	P	P	03 15 02.9 +0.7
	baz=138					
DUG	Dugway, Tooele	32.90	328	IAmb	IAmb	03 15 07.2
	comp=Z,13nm,1.2s					
R11A	Troy Canyon, C	33.13	323	P	P	03 15 06.6 +2.4
	baz=132,SNR=17					
R11A	Troy Canyon, C	33.13	323	IAmb	IAmb	03 15 10.6
	comp=Z,18nm,1.2s					
ARVC	Arvin	33.22	315	P	P	03 15 06.0 +1.2
	baz=124					
ISA	Isabella, Lake	33.28	317	P	P	03 15 05.7 +0.2
	baz=125					
GRAC	Grapevine Rang	33.34	319	P	P	03 15 08.2 +2.2
	baz=128					
BW06	Boulder Array	33.41	335	P	P	03 15 07.5 +0.8
	baz=146					
PDAR	Pinedale Array	33.41	335	P	P	03 15 06.3 -0.4
	comp=Z,2.7nm,1.0s,baz=138,slow=6.9,SNR=9.4					
PDAR				PcP	PcP	03 17 48.1 +0.3
	comp=Z,0.5nm,0.6s,baz=101,slow=3.8,SNR=3.4					
PDAR	Pinedale Array	33.41	335	P	P	03 15 06.5 -0.1
CWC	Cottonwood Cre	33.47	318	P	P	03 15 08.6 +1.4
	baz=126					
VES	Vestal, Richgr	33.79	316	P	P	03 15 11.7 +1.9
	baz=124,SNR=9.4					
TIN	Tinemaha, Big	33.93	319	P	P	03 15 13.4 +2.2
	baz=127					
ALGO	Algonquin Park	34.20	16	P	P	03 15 11.9 -1.3
	baz=203					
EYMN	Ely	34.43	359	P	P	03 15 13.3 -1.9
	baz=179					
PAGB	Antelope Grade	34.52	315	IAmb	IAmb	03 15 21.2
	comp=Z,17nm,1.1s					
ELK	Elko	34.58	326	IAmb	IAmb	03 15 22.0
	comp=Z,9.6nm,1.1s					
OMMB	Old Mammoth Mi	34.76	319	IAmb	IAmb	03 15 25.0
	comp=Z,10nm,1.1s					
NVAR	Mina Array Bea	34.81	321	P	P	03 15 20.8 +1.9
	comp=Z,21nm,0.8s,baz=137,slow=8.6,SNR=45					
NVAR				PcP	PcP	03 17 54.4 +2.5
	comp=Z,3.6nm,0.8s,baz=146,slow=3.1,SNR=4.3					
NVAR				ScP	ScP	03 21 43.0 +7.5
	comp=Z,0.3nm,0.5s,baz=130,slow=4.1,SNR=4.1					
NVAR	Mina Array Bea	34.81	321	P	P	03 15 20.2 +1.3
MDPB	Devils Postpil	34.82	319	IAmb	IAmb	03 15 21.7
	comp=Z,13nm,0.9s					
AGMN	Agassiz Nation	35.02	354	P	P	03 15 19.0 -1.3
	baz=172					
AGMN	Agassiz Nation	35.02	354	IAmb	IAmb	03 15 19.7
	comp=Z,15nm,1.0s					
KVN	Kaiserville	35.08	322	IAmb	IAmb	03 15 27.3
	comp=Z,16nm,1.0s					
E55A	Montcerf-Lytto	35.22	18	P	P	03 15 21.3 -0.6
	baz=206					
WAKR	Walker	35.56	320	IAmb	IAmb	03 15 35.6
	comp=Z,16nm,1.1s					
YHH	Holmes Hill	35.60	335	P	P	03 15 26.7 +1.0
E56A	St. Veronique	35.61	19	P	P	03 15 25.3 -0.1
	baz=207					
CMB	Columbia Colle	35.89	318	IAmb	IAmb	03 15 36.4
	comp=Z,12nm,1.1s					
D55A	Sainte-Anne-du	35.90	18	P	P	03 15 27.1 -0.7
	baz=206,SNR=5.1					
E58A	La Victoria	36.04	21	P	P	03 15 28.3 -0.7
	baz=210					
VCNR	Virginia City	36.17	321	IAmb	IAmb	03 15 34.7
	comp=Z,10nm,1.1s					
HLID	Hailey	36.22	331	P	P	03 15 31.6 +0.8
	baz=139,SNR=12					
HLID	Hailey	36.22	331	IAmb	IAmb	03 15 39.8
	comp=Z,11nm,1.2s					
PAHR	Pah Rah Range	36.26	321	IAmb	IAmb	03 15 42.7
	comp=Z,13nm,1.1s					
MCMT	McKenzie Canyo	36.48	333	P	P	03 15 34.4 +1.3
BOZ	Bozeman (W)	36.58	335	P	P	03 15 34.8 +0.9
	baz=145					
MFID	Camas Ranch	36.80	329	IAmb	IAmb	03 15 45.2
	comp=Z,20nm,1.3s					
BEKR	Beckworth	36.95	321	IAmb	IAmb	03 15 39.8
	comp=Z,14nm,0.9s					
ULM	Lac du Bonnet	36.96	355	P	P	03 15 34.5 -2.3
	comp=Z,21nm,0.8s,baz=180,slow=8.8,SNR=17					
LSQQ	Lebel-sur-Quev	37.34	15	P	P	03 15 38.7 -1.4
	baz=203					
ORV	Oroville	37.48	320	P	P	03 15 42.5 +1.1
WVOR	Wild Horse Val	37.59	326	IAmb	IAmb	03 15 46.5
	comp=Z,19nm,1.1s					
MATQ	Matagami	37.83	14	P	P	03 15 42.8 -1.5
	baz=201					
EGMT	Eagleton	37.91	339	P	P	03 15 45.9 +0.8
	baz=149					
O03E	Paynes Creek	38.10	320	P	P	03 15 47.4 +0.7
	baz=126,SNR=14					
PLID	Pearl Lake	38.11	331	IAmb	IAmb	03 15 48.0
	comp=Z,12nm,0.9s					
MOD	Modoc Plateau	38.18	324	IAmb	IAmb	03 15 52.5
	comp=Z,12nm,1.1s					
MSO	Missoula	38.53	334	P	P	03 15 50.6 +0.3
	baz=142					
MNMC	Minye Minye	38.54	147	P	P	03 15 52.0 +1.1
MNMC				IAmb	IAmb	03 15 52.6
	comp=Z,18nm,1.3s					
O02D	Mt. Diablo Mer	38.65	320	P	P	03 15 51.0 -0.3
	baz=125,SNR=10.0					
CHGQ	Chibougamau	38.82	17	P	P	03 15 50.7 -1.9
	baz=206					
M04C	Macdoel	39.01	322	P	P	03 15 55.1 +0.7
	baz=127					
K05A	Summer Lake	39.04	324	IAmb	IAmb	03 16 03.1
	comp=Z,16nm,1.2s					
I07A	Izee	39.16	327	IAmb	IAmb	03 16 01.7
	comp=Z,18nm,1.2s					
M02C	Callahan	39.39	321	P	P	03 15 56.4 -1.2
	baz=126					
K04D	Chiloquin, OR	39.47	323	P	P	03 15 59.1 +0.9
	baz=128					
L04D	Klamath Falls	39.55	323	P	P	03 15 59.2 +0.3
	baz=127,SNR=11					
J05D	Fort Rock, OR	39.59	325	P	P	03 15 59.6 +0.3
	baz=130,SNR=5.5					
KHMM	Horse Mountain	39.63	320	P	P	03 16 00.6 +0.8
PINE	Pine Mountain	39.75	325	IAmb	IAmb	03 16 05.3
	comp=Z,19nm,1.1s					
J04D	Umpqua Nationa	40.06	324	P	P	03 16 04.3 +1.1
	baz=128					
I04A	Tendick Farm,	40.58	324	P	P	03 16 07.8 +0.4
	baz=129					
K02D	Willamette Mer	40.64	322	P	P	03 16 07.9 0.0
	baz=126					
G05D	Wamic, OR	40.90	327	P	P	03 16 11.0 +1.0
	baz=131,SNR=6.2					
D08A	Wollman Farm,	40.94	331	P	P	03 16 10.5 +0.3
NEW	Newport	41.00	333	P	P	03 16 10.0 -0.7
	comp=Z,4.4nm,0.9s,baz=133,slow=14,SNR=6.8					
NEW	Newport	41.00	333	P	P	03 16 10.1 -0.7
	baz=139					
NEW	Newport	41.00	333	IAmb	IAmb	03 16 14.5
	comp=Z,9.6nm,1.1s					
H04A	Detroit Lake	41.01	326	P	P	03 16 11.1 +0.2
E07A	Sunnyside	41.04	329	P	P	03 16 11.7 +0.5
E07A				IAmb	IAmb	03 16 12.2
	comp=Z,11nm,0.9s					
I03D	Drain, OR	41.05	324	P	P	03 16 11.7 +0.5
	baz=127,SNR=5.4					
J01E	Myrtle Point	41.07	323	P	P	03 16 12.5 +1.2
	baz=126,SNR=8.5					

C09A	Chrisman Ranch	41.17	332	IAmb	IAmb	03 16 13.7
	comp=Z,10nm,0.8s					
H04D	Lebanon	41.21	325	P	P	03 16 12.9 +0.4
	baz=129					
F05D	White Salmon	41.40	327	P	P	03 16 15.1 +1.0
	baz=132					
SIV	San Ignacio	41.50	134	P	P	03 16 12.7 -2.5
	comp=Z,7.4nm,1.1s,baz=318,slow=6.9,SNR=8.8					
G03D	McMinnville, O	41.94	325	P	P	03 16 18.6 +0.2
	baz=129					
FFC	Flin Flon	42.12	350	P	P	03 16 18.8 -1.0
FFC				IAmb	IAmb	03 16 19.8
	comp=Z,11nm,0.9s					
LON	Longmire	42.16	328	IAmb	IAmb	03 16 21.7
	comp=Z,14nm,0.9s					
F04D	Rainier, OR	42.35	327	P	P	03 16 23.0 +1.3
	baz=130					
E04D	Cinebar	42.42	327	P	P	03 16 23.0 +0.6
	baz=131					
B05A	Bryant	43.32	330	P	P	03 16 28.9 -0.7
	baz=133					
D03D	Eldon	43.33	328	P	P	03 16 29.3 -0.5
	baz=131					
SCHQ	Schefferville	45.40	19	P	P	03 16 43.7 -2.4
	comp=Z,20nm,0.9s,baz=224,slow=6.2,SNR=9.5					
SCHQ	Schefferville	45.40	19	P	P	03 16 45.3 -0.9
ZON	Zonda	49.52	155	P	P	03 17 19.2 +0.6
BDFB	Brasilia	51.29	123	PcP	PcP	03 18 48.7 +1.6
	comp=Z,3.0nm,0.8s,baz=207,slow=2.3,SNR=3.2					
YKA	Yellowknife Ar	51.84	346	P	P	03 17 34.6 -0.9
	comp=Z,6.6nm,0.9s,baz=134,slow=8.6,SNR=9.3					
DLBC	Dease Lake	53.63	336	P	P	03 17 49.5 +0.5
	comp=Z,12nm,0.8s,baz=147,slow=6.2,SNR=20					
DLBC	Dease Lake	53.63	336	P	P	03 17 49.6 +0.5
TAOE	Nuku Hiva Isla	53.69	248	*e*LR	LR	03 33 06.0
	comp=Z,257nm,26.6s					
TAOE	Nuku Hiva Isla	53.69	248	*e*T	T	04 15 09.7
	comp=Z,29nm,0.2s					
BCAR	Beaver Creek A	61.01	336	P	P	03 18 40.5 -0.4
RES	Resolute Bay	61.30	359	P	P	03 18 40.6 -2.0
INK	Inuvik	61.31	343	P	P	03 18 41.6 -1.2
	comp=Z,6.9nm,0.8s,baz=114,slow=7.4,SNR=21					
INK	Inuvik	61.31	343	P	P	03 18 41.8 -0.9
INK				IAmb	IAmb	03 18 42.5
	comp=Z,7.6nm,0.8s					
N25K	Chitina, Valde	61.46	334	P	P	03 18 44.6 +0.5
	baz=117					
K27K	Chicken	61.61	337	P	P	03 18 44.9 -0.1
	baz=120					
PRP	Porcupine Dome	63.63	338	P	P	03 18 58.1 -0.5
IL31		63.80	337	IAmb	IAmb	03 19 00.2
	comp=Z,9.0nm,1.0s					
ILAR	Eielson Array	63.80	337	P	P	03 18 58.2 -1.3
	comp=Z,6.7nm,1.0s,baz=130,slow=4.6,SNR=34					
ILAR	Eielson Array	63.80	337	P	P	03 18 58.5 -1.0
RND	Reindeer	64.02	335	P	P	03 19 01.1 +0.1
POKR	Poker Plat Res	64.17	337	P	P	03 19 01.4 -0.5
	baz=116					
MCK	McKinley	64.18	335	P	P	03 19 01.6 -0.5
	baz=114					
BMAR	Burnt Mountain	64.21	340	P	P	03 19 01.7 -0.6
TCOL	CIGO, UAF Yank	64.22	337	P	P	03 19 01.4 -0.8
TCOL				IAmb	IAmb	03 19 02.5
	comp=Z,7.0nm,0.8s					
ICESG	Greenland Ices	64.28	18	*i* P	P	03 19 00.0 -3.0
ICESG				IAmb	IAmb	03 19 01.8
	comp=Z,3μm,6.3s					
ICESG				*i*		03 19 30.1
I23K	Minto, Yukon-K	64.92	337	P	P	03 19 06.4 -0.4
	baz=114,SNR=8.1					
BPAW	Bear Paw Mtn.	65.16	335	IAmb	IAmb	03 19 08.5
	comp=Z,7.3nm,0.9s					
MLY	Manley	65.41	336	P	P	03 19 09.2 -0.9
	baz=112,SNR=7.3					
PPT2	Papeete2	65.62	243	*e*LR	LR	03 38 30.6
	comp=Z,397nm,27.0s					
COLD	Coldfoot	66.07	339	P	P	03 19 14.3 0.0
	baz=114					
TOLK	Toolik Lake Re	66.44	340	P	P	03 19 16.0 -0.7
	baz=115					
SUMG	Summit	66.51	15	P	P	03 19 17.1 -0.4
SUMG	Summit	66.51	15	*i* P	P	03 19 14.0 -3.4
SUMG	Summit	66.51	15	*i* P	P	03 19 14.0 -3.4
TBI	Tubuai	67.96	238	*e*LR	LR	03 39 39.4
	comp=Z,270nm,28.5s					
TBI	Tubuai	67.96	238	*e*T	T	04 33 00.9
	comp=Z,5.0nm,0.3s					
A21K	Barrow	69.69	342	P	P	03 19 36.0 -1.0
	baz=109					
DAG	Danmarks Havn	72.97	13	*i* P	P	03 19 54.1 -2.6
	comp=Z,5.0nm,0.8s					
DAG				*i*		03 20 23.9
DAG	Danmarks Havn	72.97	13	*i* P	P	03 19 54.1 -2.6
DAG				IAmb	IAmb	03 19 54.8
	comp=Z,5.0nm,0.8s					
DAG				*i*		03 20 23.9
ESDC	Sonseca Array	79.22	52	P	P	03 20 30.3 -2.8
	comp=Z,2.1nm,1.0s,baz=276,slow=6.0,SNR=4.9					
TIC	Toumodi	84.47	85	*e*P	P	03 20 58.6 -2.5
LIC	Lamto	84.55	85	*e*P	P	03 20 58.7 -2.8
	comp=Z,0.7nm,0.2s					
DBIC	Dimbokro	84.62	84	P	P	03 21 00.2 -1.6
	comp=Z,4.6nm,0.9s,baz=240,slow=5.1,SNR=5.6					
DBIC	Dimbokro	84.62	84	IAmb	IAmb	03 21 08.7
	comp=Z,9.5nm,1.1s					
KIC	Kosan Boka	84.80	85	*e*P	P	03 21 00.8 -2.0
	comp=Z,30nm,1.2s					
GERES	GERESS Array B	89.35	40	P	P	03 21 21.9 -2.4
	comp=Z,0.7nm,0.8s,baz=305,slow=4.7,SNR=4.4					
TORD	Torodi Ar. Bea	89.45	77	P	P	03 21 21.8 -3.4
	comp=Z,0.7nm,0.8s,baz=294,slow=4.9,SNR=4.2					
SEY	Seymchan	89.73	336	P	P	03 21 25.3 -0.3
	comp=Z,6.3nm,0.9s,baz=65,slow=7.2,SNR=6.1					
KURBB	Kurchatov Arra	115.56	7	PKP	PKiKP	03 27 08.6 -1.1
	comp=Z,0.5nm,0.2s,baz=9.5,slow=2.3,SNR=4.6					
KRVT	Keravat (AS076	117.34	272	PKP	PKiKP	03 27 16.9 +2.9
	comp=Z,79nm,0.8s,baz=4.5,slow=8.2,SNR=3.8					
KSRS	Korea Array	117.64	326	PKP	PKiKP	03 27 15.1 +1.1
	comp=Z,1.6nm,0.9s,baz=3.4,slow=1.8,SNR=5.4					
BOSA	Boshof	119.12	115	PKP	PKiKP	03 27 18.1 +0.8
	comp=Z,6.4nm,1.0s,baz=344,slow=7.6,SNR=3.0					
HHC	Hu-ho-hao-te	122.14	340	*e*P	PKPdf	03 27 21.8 -1.0
WMQ	Urumqi	123.03	1	*e*P	PKiKP	03 27 25.3 +0.7
NJ2	Nanjing	126.57	328	*e*P	PKPdf	03 27 30.9 -0.4
NJ2				pmax	pmax	
	comp=Z,9.0nm,0.6s					
STKA	Stephens Creek	128.72	240	PKP	PKPdf	03 27 34.2 -1.2
	comp=Z,2.4nm,0.9s,baz=68,slow=7.9,SNR=3.5					
LZH	Lanzhou	128.84	345	*e*PKP	PKPdf	03 27 33.9 -1.9
LZH				pPKP	pPKPdf	03 27 44.0 -1.2
LZH				sPKP		03 27 48.4
WRA	Warramunga Arr	136.31	255	PKP	PKPdf	03 27 49.7 -0.4
	comp=Z,1.3nm,0.9s,baz=88,slow=2.0,SNR=7.7					
ASAR	Alice Springs	136.50	250	PKP	PKPdf	03 27 49.4 -1.0
	comp=Z,0.6nm,0.9s,baz=132,slow=1.4,SNR=3.4					
SOEI	Soe	145.41	272		PKPab	03 28 08.1 +1.3
MYLDM	Lahad Datu	145.47	300		PKPab	03 28 08.0 +1.1
CHTO	Chiang Mai	146.54	343		PKPdf	03 28 08.9 +0.5
CMAR	Chiang Mai Arr	146.88	343	PKPbc	PKPbc	03 28 10.8 0.0
	comp=Z,5.3nm,0.6s,baz=334,slow=5.1,SNR=19					

IDC ***16*** *03:08:56.7±0.7, 13.°82N×90.°24W, h0km, mb4.5/18, mb1 4.7/20, mb1mx4.5/41, mbtmp4.5/20, ML4.4/2, Error ellipse: s-maj=29.4km s-min=13.4km az=49.0*

NEIC ***16*** *03:09:02.0±1.6, 13.°57N±0.°07×90.°59W±0.°08, h42km±6km, mb4.8/82, Error ellipse: s-maj=12.5km s-min=8.6km az=224.0*

ISC 16 03:09:01.6±0.4, 13.°60N±0.°06×90.°61W±0.°06, h38km, n132, σ1s92/130, mb4.8/54, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	1.34	86	Pn	Pn	03 09 21.9	-2.0
RTAL	Retalhuleu	1.40	311	Pn	Pn	03 09 21.9	-2.6
MTO3	Montecristo	1.45	57	Pn	Pn	03 09 25.6	+0.2
PETF	Flores	3.37	12	Pn	Pn	03 09 50.8	-0.9
CRIN	San Cristobal	3.58	104	Pn	Pn	03 09 53.6	-1.1
MATN	Matagalpa	4.61	98	Pn	Pn	03 10 08.2	-0.6
CMIG	Matias Romero	5.39	311	Pn	Pn	03 10 20.9	+1.5
	9.8nm,0.3s,baz=84,slow=11,SNR=4.5						
ACON	Acoyapa	5.54	106	Pn	Pn	03 10 19.7	-2.0
JTS	Las Juntas de	6.44	120	Pn	Pn	03 10 34.9	+0.9
	4.8nm,0.3s,baz=173,slow=21,SNR=6.5						
TEIG	Tepich	6.95	18	Pn	Pn	03 10 42.3	+1.3

PAYG	Puerto Ayora	14.19	179	Pn	Pn	03 12 19.8 -0.3
KVTX	Kingsville	15.45	335	Pn	Pn	03 12 34.8 -2.0
KVTX				IAmb	IAmb	03 12 41.8
	comp=Z,40nm,0.7s					
833A	Chaparral WMA,	16.77	332	Pn	Pn	03 12 53.1 -0.6
ROSC	El Rosal	18.27	117	Pn	Pn	03 13 14.6 +1.8
	comp=Z,1.4nm,0.3s,baz=5.3,slow=4.9,SNR=7.1					
ROSC	El Rosal	18.27	117	IAmb	IAmb	03 13 18.5
	comp=Z,62nm,1.1s					
NATX	Nacogdoches	18.45	349	P	Pn	03 13 14.3 -0.1
152A	Waverly Hall	19.73	15	P	P	03 13 28.4 +0.4
TXAR	Lajitas Array	19.79	324	P	Pn	03 13 30.6 +0.1
	comp=Z,0.3nm,0.3s,baz=152,slow=12,SNR=6.0					
TX31	Lajitas Ar. Si	19.79	324	P	Pn	03 13 30.3 -0.3
WLAR	White Oak Lake	20.12	354	P	Pn	03 13 33.3 -1.0
WLAR				IAmb	IAmb	03 13 36.4
	comp=Z,58nm,1.0s					
SDV	Santo Domingo	20.14	101	P	P	03 13 32.4 -0.4
	comp=Z,1.2nm,0.3s,baz=264,slow=7.0,SNR=11					
SDV				PcP	PcP	03 17 47.4 +0.4
	baz=248,slow=2.9,SNR=3.8					
SDV	Santo Domingo	20.14	101	P	P	03 13 32.5 -0.4
W35A	Tecumseh	22.19	346	P	P	03 13 54.5 0.0
FCAR	Ozark Folk Cen	22.23	357	P	P	03 13 55.7 +0.7
V48A	Smith Brothers	22.30	8	P	P	03 13 56.0 +0.3
FNO	Franklin	22.41	345	P	P	03 13 57.7 +0.7
MNTX	Cornudas Mount	22.54	325	P	P	03 13 58.6 +0.3
TKL	Tuckaleechee C	22.81	14	P	P	03 14 01.2 0.0
	comp=Z,22nm,0.7s,baz=180,slow=10.0,SNR=4.2					
CPRX	Cap Rock	22.81	330	P	P	03 14 01.9 +0.6
V52A	Sevierville	23.02	15	P	P	03 14 04.2 +0.8
MSTX	Muleshoe	23.09	333	P	P	03 14 05.5 +1.3
MSTX				IAmb	IAmb	03 14 12.7
	comp=Z,42nm,1.3s					
QUOK	Quay	23.13	347	P	P	03 14 04.5 0.0
QUOK				IAmb	IAmb	03 14 11.0
	comp=Z,28nm,1.0s					
X58A	Rowland	23.22	24	P	P	03 14 05.1 -0.2
T45A	Paducah	23.38	4	P	P	03 14 07.0 +0.2
ATAH	Atahualpa	23.91	149	P	P	03 14 14.7 +2.2
	comp=Z,16nm,1.0s,baz=308,slow=16,SNR=4.9					
SJG	San Juan	23.94	76	P	P	03 14 10.0 -2.3
	comp=Z,6.7nm,0.7s,baz=201,slow=3.3,SNR=3.6					
SJG	San Juan	23.94	76	P	P	03 14 12.6 +0.2
S39A	Bolivar	24.11	355	P	P	03 14 14.8 +1.0
U54A	Nelsons Funny	24.14	18	P	P	03 14 15.1 +0.9
CBYP	Canovanas	24.24	76	P	P	03 14 15.2 0.0
CCM	Cathedral Cave	24.36	359	P	P	03 14 16.4 +0.4
CCM				IAmb	IAmb	03 14 18.7
	comp=Z,22nm,0.9s					
KAN08	Anthony NE Sta	24.43	346	P	P	03 14 17.2 +0.6
U56A	King	24.44	20	P	P	03 14 18.5 +1.7
U56A				IAmb	IAmb	03 14 25.2
	comp=Z,26nm,1.1s					
MTP	Monte Pirata	24.50	76	P	P	03 14 17.0 -0.6
BLA	Blacksburg	25.21	19	P	P	03 14 24.4 +0.6
BLA				IAmb	IAmb	03 14 27.8
	comp=Z,54nm,1.5s					
BLO	Bloomington	25.72	7	P	P	03 14 29.3 +0.9
BLO				IAmb	IAmb	03 14 38.3
	comp=Z,24nm,0.9s					
Q51A	Peebles	26.12	13	P	P	03 14 33.8 +1.8
Q51A				IAmb	IAmb	03 14 43.9
	comp=Z,27nm,0.9s					
O44A	Mansfield	26.51	4	P	P	03 14 36.4 +0.8
O44A				IAmb	IAmb	03 14 37.4
	comp=Z,30nm,1.1s					
Q54A	Coxs Mills	26.72	17	P	P	03 14 39.2 +1.8
Q54A				IAmb	IAmb	03 14 40.4
	comp=Z,25nm,0.8s					
SFIN	Lafayette	26.85	6		P	03 14 38.6 +0.1
SFIN				IAmb	IAmb	03 14 39.8
	comp=Z,21nm,1.0s					
HDIL	Hopedale	26.87	2	P	P	03 14 39.5 +0.7
HDIL				IAmb	IAmb	03 14 50.4
	comp=Z,28nm,1.4s					
P53A	Whipple	27.03	16	P	P	03 14 41.3 +1.0
P53A				IAmb	IAmb	03 14 45.2
	comp=Z,26nm,1.2s					
O52A	Adamsville	27.51	15	P	P	03 14 45.9 +1.3
O52A				IAmb	IAmb	03 14 47.5
	comp=Z,25nm,0.9s					
O54A	Avella	27.96	17	P	P	03 14 49.7 +1.2
O54A				IAmb	IAmb	03 14 51.0
	comp=Z,17nm,0.7s					
L40A	Anamosa	28.36	359	P	P	03 14 52.0 0.0
L40A				IAmb	IAmb	03 14 53.3
	comp=Z,18nm,0.8s					
PV15	Paradox Valley	29.30	330	P	P	03 14 59.9 -0.9
I37A	Lemond, Waseca	30.40	356	P	P	03 15 10.4 +0.3
I37A				IAmb	IAmb	03 15 12.1
	comp=Z,16nm,0.8s					
KNB	Kanab	30.62	324	P	P	03 15 12.9 +0.6
MSU	Marysvale	31.32	326	P	P	03 15 18.9 +0.4
SPMN	Marine on St.	31.57	357	P	P	03 15 20.7 +0.3
SADO	Sadowa	32.56	15	P	P	03 15 30.2 +1.1
	comp=Z,10nm,0.9s,baz=220,slow=9.8,SNR=3.4					
SADO	Sadowa	32.56	15	IAmb	IAmb	03 15 34.8
	comp=Z,22nm,1.2s					
E38A	The Farm, Brul	32.91	359	P	P	03 15 32.4 +0.3
PDAR	Pinedale Array	33.35	334	P	P	03 15 36.3 -0.1
	comp=Z,1.4nm,0.8s,baz=139,slow=7.9,SNR=4.5					
PDAR				PcP	PcP	03 18 18.3 +0.7
	comp=Z,1.0nm,0.7s,baz=122,slow=5.3,SNR=4.7					
REDW	Red Top Meadow	34.39	333	P	P	03 15 46.2 +0.8
SNOW	Snow King Moun	34.43	334	P	P	03 15 46.4 +0.7
NVAR	Mina Array Bea	34.83	320	P	P	03 15 51.0 +1.7
	comp=Z,16nm,0.8s,baz=136,slow=8.6,SNR=8.4					
NVAR				PcP	PcP	03 18 24.4 +2.5
	comp=Z,3.2nm,0.8s,baz=150,slow=5.0,SNR=3.6					
MDPB	Devils Postpil	34.85	319	P	P	03 15 50.8 +1.4
MDPB				IAmb	IAmb	03 15 51.7
	comp=Z,11nm,0.9s					
RYN	Ryan	35.09	320	P	P	03 15 52.3 +0.9
CMB	Columbia Colle	35.92	318	P	P	03 15 59.3 +0.8
MCMT	McKenzie Canyo	36.43	333	P	P	03 16 04.9 +2.1
ULM	Lac du Bon

CPUP	**Villa Florida**	**51.22**	**141**	P		**P**	**03 18 00.8**	**-0.8**
	comp=Z,2.5nm,1.0s,baz=319,slow=4.9,SNR=3.5							
YKA	**Yellowknife Ar**	**51.73**	**346**	P		**P**	**03 18 04.5**	**-0.4**
	comp=Z,3.6nm,0.9s,baz=142,slow=7.8,SNR=5.1							
DLBC	**Dease Lake**	**53.57**	**335**	P		**P**	**03 18 19.7**	**+1.0**
	comp=Z,9.7nm,0.9s,baz=140,slow=6.3,SNR=6.5							
DLBC	**Dease Lake**	**53.57**	**335**	IAmb		IAmb	03 18 21.0	
	comp=Z,12nm,0.9s							
LC01	**Cunco**	**55.09**	**162**			**P**	**03 18 29.4**	**-0.4**
LC01				IAmb		IAmb	03 18 30.3	
	comp=Z,16nm,1.2s							
BCAR	**Beaver Creek A**	**60.94**	**336**	P		**P**	**03 19 09.9**	**-0.7**
RES	**Resolute Bay**	**61.12**	**359**	P		**P**	**03 19 11.0**	**-0.5**
INK	**Inuvik**	**61.20**	**343**	P		**P**	**03 19 11.3**	**-0.8**
	comp=Z,6.7nm,0.8s,baz=119,slow=6.6,SNR=10							
INK	**Inuvik**	**61.20**	**343**	P		**P**	**03 19 11.6**	**-0.6**
INK				IAmb		IAmb	03 19 12.2	
	comp=Z,8.0nm,0.9s							
PAX	**Paxson**	**62.38**	**335**	P		**P**	**03 19 19.9**	**-0.5**
ILAR	**Eielson Array**	**63.74**	**337**	P		**P**	**03 19 28.4**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=163,slow=4.1,SNR=9.4							
FYU	**Fort Yukon**	**63.94**	**339**	P		**P**	**03 19 31.7**	**+1.2**
BMAR	**Burnt Mountain**	**64.13**	**340**	P		**P**	**03 19 32.0**	**+0.2**
COLA	**College**	**64.15**	**336**	P		**P**	**03 19 31.6**	**-0.3**
COLA				IAmb		IAmb	03 19 37.7	
	comp=Z,12nm,0.9s							
MDM	**Murphy Dome**	**64.33**	**336**	P		**P**	**03 19 33.2**	**+0.1**
MDM				IAmb		IAmb	03 19 38.1	
	comp=Z,11nm,1.1s							
SKT	**Skwentna**	**64.58**	**333**	P		**P**	**03 19 35.6**	**+0.8**
SKT				IAmb		IAmb	03 19 48.5	
	comp=Z,14nm,1.1s							
I23K	**Minto, Yukon-K**	**64.85**	**336**	P		**P**	**03 19 36.6**	**+0.1**
I23K				IAmb		IAmb	03 19 37.4	
	comp=Z,13nm,1.0s							
IMAR	**Indian Mountai**	**66.86**	**337**	P		**P**	**03 19 47.7**	**-1.7**
ESDC	**Sonseca Array**	**78.90**	**52**	P		**P**	**03 20 59.0**	**-2.3**
	comp=Z,2.1nm,0.9s,baz=298,slow=7.3,SNR=7.0							
TIC	**Toumodi**	**84.19**	**85**	*eP*		**P**	**03 21 29.2**	**-0.6**
LIC	**Lamto**	**84.28**	**85**	*eP*		**P**	**03 21 29.8**	**-0.4**
	comp=Z,44nm,1.0s							
DBIC	**Dimbokro**	**84.35**	**85**	P		**P**	**03 21 30.0**	**-0.5**
	comp=Z,9.3nm,0.7s,baz=256,slow=4.1,SNR=14							
DBIC	**Dimbokro**	**84.35**	**85**			**P**	**03 21 30.6**	**+0.1**
KIC	**Kosan Boka**	**84.53**	**85**	*eP*		**P**	**03 21 30.8**	**-0.6**
	comp=Z,49nm,0.9s							
STU	**Stuttgart**	**86.23**	**41**	P		**P**	**03 21 39.8**	**+0.5**
GERES	**GERESS Array B**	**89.04**	**40**	P		**P**	**03 21 52.4**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=349,slow=1.4,SNR=4.3							
TORD	**Torodi Ar. Bea**	**89.15**	**77**	P		**P**	**03 21 52.8**	**-1.2**
	comp=Z,1.5nm,0.7s,baz=296,slow=5.4,SNR=7.3							
TORD	**Torodi Ar. Bea**	**89.15**	**77**	P		**P**	**03 21 52.5**	**-1.5**
SEY	**Seymchan**	**89.67**	**336**	P		**P**	**03 21 56.3**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=105,slow=4.3,SNR=5.7							
KURBB	**Kurchatov Arra**	**115.34**	**8**	PKP		**PKiKP**	**03 27 38.1**	**-1.1**
	comp=Z,2.4nm,0.2s,baz=344,slow=2.5,SNR=4.4							
KSRS	**Korea Array**	**117.63**	**326**	PKP		**PKiKP**	**03 27 45.0**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=345,slow=1.2,SNR=4.7							
WRA	**Warramunga Arr**	**136.60**	**255**	PKP		**PKiKP**	**03 28 23.8**	**+1.4**
	comp=Z,1.5nm,0.8s,baz=88,slow=2.1,SNR=6.7							
WRA	**Warramunga Arr**	**136.60**	**255**			**PKPdf**	**03 28 21.0**	**+0.4**
ASAR	**Alice Springs**	**136.80**	**250**	PKP		**PKiKP**	**03 28 24.4**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=114,slow=1.6,SNR=4.9							
ASAR	**Alice Springs**	**136.80**	**250**			**PKPdf**	**03 28 20.3**	**-0.6**
SHL	**Shillong**	**140.99**	**356**	PKPdf		**PKPdf**	**03 28 28.7**	**0.0**
SOEI	**Soe**	**145.65**	**273**			**PKPdf**	**03 28 36.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**146.78**	**343**	PKPbc		**PKPbc**	**03 28 40.7**	**+0.2**
	comp=Z,8.0nm,0.7s,baz=341,slow=3.7,SNR=7.6							

IDC 16 03:23:14.9±3.1, 23°.88S×180°.00W, h496km±32km, mb3.4/4, mb1 3.7/5, mb1mx3.1/30, mbtmp4.3/5, Error ellipse: s-maj=52.4km s-min=25.4km az=173.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.55**	**189**	P	P	03 26 20.5	+0.2
	1.5nm,0.3s,baz=274,slow=4.5,SNR=9.6						
CTA	**Charters Tower**	**31.48**	**270**	P	P	03 28 56.3	+0.9
	5.6nm,0.4s,baz=92,slow=11,SNR=18						
ASAR	**Alice Springs**	**42.04**	**261**	P	P	03 30 22.4	-0.3
	1.0nm,0.3s,baz=98,slow=7.3,SNR=28						
ASAR				ScP	ScP	03 35 09.4	+0.1
	0.6nm,0.9s,baz=106,slow=4.1,SNR=5.9						
WRA	**Warramunga Arr**	**42.41**	**266**	P	P	03 30 24.7	-0.8
	3.5nm,0.5s,baz=103,slow=8.2,SNR=53						
TXAR	**Lajitas Array**	**90.42**	**58**	P	P	03 35 23.4	+0.1
	0.4nm,0.6s,baz=218,slow=5.7,SNR=7.2						
ARCES	**ARCESS Array B**	**131.86**	**348**	PKP	PKPdf	03 41 29.4	-1.2
	2.1nm,0.9s,baz=55,slow=4.7,SNR=3.1						

IDC 16 03:36:54.3±6.6, 8°.35S×130°.03E, h0km, mb3.6/1, mb1 3.4/4, mb1mx3.3/31, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=82.2km s-min=53.5km az=148.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.59**	**203**	Pn	Pn	03 39 26.8	-0.6
	0.2nm,0.3s,baz=25,slow=12,SNR=18						
FITZ				Sn	Sn	03 41 27.5	+0.7
	0.1nm,0.3s,baz=310,slow=7.9,SNR=4.1						
WRA	**Warramunga Arr**	**12.26**	**161**	Pn	Pn	03 39 50.4	+0.1
	0.1nm,0.3s,baz=345,slow=14,SNR=8.2						
WRA				Sn	Sn	03 42 09.3	+1.6
	0.0nm,0.3s,baz=329,slow=22,SNR=2.9						
ASAR	**Alice Springs**	**15.68**	**167**	Pn	Pn	03 40 36.8	+0.1
	0.1nm,0.3s,baz=339,slow=8.9,SNR=6.5						
STKA	**Stephens Creek**	**25.76**	**157**	P	P	03 42 27.0	+0.2
	0.5nm,0.4s,baz=311,slow=11,SNR=3.0						

IDC 16 03:41:51.5±0.6, 29°.59S×178°.67W, h198km±7km, mb3.4/4, mb1 3.5/5, mb1mx3.3/24, mbtmp4.0/5, Error ellipse: s-maj=24.7km s-min=20.4km az=119.0

ISC 16 03:41:52.1±0.8, 29°.74S±0°.09×178°.8W±0°.2, h200km, n22, σ3°30/25, mb3.5/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.88**	**57**	P	**Pn**	**03 42 21.0**	**-0.1**
	140nm,0.3s,baz=74,slow=22,SNR=14						
RAO				S	**Sn**	**03 42 41.2**	**-2.3**
	158nm,0.3s,baz=72,slow=23,SNR=7.4						
PUZ	**Puketiti**	**8.67**	**196**	P	**Sn**	**03 45 34.8**	**+3.5**
RUGZ	**Raukumara Rang**	**8.72**	**199**	P	**Sn**	**03 45 32.5**	**-0.1**
TWGZ	**Tauwhareparae**	**8.84**	**197**	P	**Sn**	**03 45 38.0**	**+2.7**
MWZ	**Matawai**	**9.11**	**199**	P	**Sn**	**03 45 39.7**	**-2.0**
TKGZ	**Te Karaka**	**9.12**	**197**	P	**Sn**	**03 45 42.1**	**+0.2**
URZ	**Urewera**	**9.16**	**201**	P	**Pn**	**03 44 00.2**	**-0.1**
	0.3nm,0.3s,baz=342,slow=18,SNR=4.5						
URZ				S	**Sn**	**03 45 45.7**	**+2.8**
	17nm,0.3s,baz=71,slow=23,SNR=20						
RIGZ	**Rimuhau**	**9.39**	**197**	P	**Sn**	**03 45 42.8**	**-5.7**
PRGZ	**Paritu Road**	**9.57**	**196**	P	**Sn**	**03 45 46.7**	**-6.0**
SNGZ	**Shannon Statio**	**9.57**	**199**	P	**Sn**	**03 45 46.7**	**-6.2**
KNZ	**Kokohu**	**9.71**	**197**	P	**Sn**	**03 45 50.6**	**-5.4**
MHGZ	**Mahia Peninsul**	**9.78**	**195**	P	**Sn**	**03 45 52.3**	**-5.4**
STKA	**Stephens Creek**	**33.99**	**256**	P	**P**	**03 48 16.5**	**-0.4**
	1.9nm,0.9s,baz=80,slow=11,SNR=2.5						
ASAR	**Alice Springs**	**42.49**	**267**	P	**P**	**03 49 28.5**	**+0.6**
	0.5nm,0.5s,baz=102,slow=6.8,SNR=13						
ASAR				PcP	**PcP**	**03 51 16.1**	**-0.8**
	0.5nm,1.0s,baz=119,slow=3.9,SNR=4.6						
WRA	**Warramunga Arr**	**43.41**	**272**	P	**P**	**03 49 35.8**	**+0.4**
	0.5nm,0.3s,baz=111,slow=6.2,SNR=21						
VNDA	**Vanda**	**48.68**	**186**	P	**P**	**03 50 20.1**	**+4.6**
	1.1nm,0.6s,baz=5.0,slow=7.2,SNR=14						
MAW	**Mawson**	**72.69**	**201**	P	**P**	**03 52 59.2**	**+1.6**
	1.5nm,0.5s,baz=143,slow=7.7,SNR=6.4						
VNA3	**Neumayer Olymp**	**79.00**	**176**	P	**P**	**03 53 34.8**	**+1.4**
NRIK	**Noril'sk**	**118.77**	**336**	PKP	**PKPdf**	**04 00 13.2**	**-2.3**
	1.5nm,0.4s,baz=90,slow=3.0,SNR=3.6						
ARCES	**ARCESS Array B**	**137.81**	**348**	PKP	**PKPdf**	**04 00 50.8**	**-0.9**
	2.7nm,0.9s,baz=93,slow=3.6,SNR=2.5						
FINES	**FINESS Array B**	**144.30**	**340**	PKP	**PKPab**	**04 01 00.0**	**-2.0**
	0.8nm,0.6s,baz=48,slow=4.1,SNR=7.3						
TORD	**Torodi Ar. Bea**	**163.48**	**182**	PKPab	**PKPab**	**04 02 23.9**	**+0.3**
	1.0nm,0.7s,baz=170,slow=3.9,SNR=6.7						

IDC 16 03:51:58.0±0.7, 1°.89N×126°.43E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/37, mbtmp3.8/5, Error ellipse: s-maj=77.9km s-min=4.5km az=65.0

NEIC 16 03:52:02.6±1.3, 2°.3N±0°.1×127°.2E±0°.1, h35km±2km, mb4.1/7, Error ellipse: s-maj=30.1km s-min=5.4km az=56.0

DJA 16 03:52:04.4±0.8, 2°.N±2°.×12°.6E±°., h15km±6km, M4.0/13, mb4.3/4, MLv3.9/13

ISC 16 03:52:05.7±0.8, 1°.87N±0°.05×126°.56E±0°.06, h47km, n26, σ1°74/34, mb4.0/10, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.36**	**143**	P	**Pn**	**03 52 27.8**	**-0.5**
TNTI				S	**Sn**	**03 52 49.2**	**+4.0**
TNTI	**Ternate**	**1.36**	**143**		**Pn**	**03 52 27.9**	**-0.3**
SGSI	**Sangihe**	**2.08**	**330**	P	**Pn**	**03 52 37.5**	**-0.6**
SGSI				S	**Sn**	**03 53 02.0**	**-0.8**
KMSI	**Cibinong**	**2.88**	**243**	P	**Pn**	**03 52 49.5**	**+0.4**
KMSI				S	**Sn**	**03 53 23.7**	**+1.2**
GTOI	**Gorontalo**	**3.75**	**251**	P	**Pn**	**03 53 01.4**	**+0.3**
GTOI				S	**Sn**	**03 53 46.0**	**+2.0**
SANI	**Sanana**	**3.93**	**188**	P	**Pn**	**03 53 03.2**	**-0.4**
SANI				S	**Sn**	**03 53 50.4**	**+1.8**
LUWI	**Luwuk**	**4.76**	**233**	P	**Pn**	**03 53 16.1**	**+1.1**
LUWI				S	**Sn**	**03 54 10.5**	**+1.5**
LUWI	**Luwuk**	**4.76**	**233**	Pn	Pn	03 53 22.0	+7.0
MRSI	**Marisa**	**4.82**	**253**	P	**Pn**	**03 53 16.7**	**+1.0**
MRSI				S	**Sn**	**03 54 11.2**	**+0.9**
KCP	**Kidapawan**	**5.31**	**344**	*eP*	**Pn**	**03 53 25.8**	**+3.2**
KCP				*eS*	**Sn**	**03 54 27.2**	**+4.6**
APSI	**Ampana**	**5.63**	**241**	P	**Pn**	**03 53 26.4**	**-0.5**
	0.2nm34nm,0.5s						
MPSI	**Mapaga**	**6.83**	**257**	P	**Pn**	**03 53 43.4**	**0.0**
	0.0nm9.0nm,0.7s						
MYLDM	**Lahad Datu**	**8.69**	**292**		**Pn**	**03 54 11.8**	**+3.0**
WB0	**Warramunga Arr**	**22.84**	**161**	P	**P**	**03 57 03.6**	**-1.5**
WB0				IAmb	IAmb	03 57 07.0	
	comp=Z,4.8nm,0.9s						
WRAB	**Tennant Creek**	**22.98**	**161**	P	**P**	**03 57 05.8**	**-0.7**
WRAB				IAmb	IAmb	03 57 07.3	
	comp=Z,5.0nm,0.7s						
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**03 57 05.1**	**-1.5**
	comp=Z,3.1nm,0.5s,baz=339,slow=11,SNR=48						
WB2	**Warramunga Arr**	**22.99**	**161**	P	**P**	**03 57 05.2**	**-1.4**
WB2				IAmb	IAmb	03 57 07.3	
	comp=Z,4.8nm,0.7s						
WR0	**Warramunga Arr**	**23.07**	**161**	P	**P**	**03 57 06.6**	**-0.8**
WR0				IAmb	IAmb	03 58 01.1	
	comp=Z,15nm,1.8s						
AS31	**Alice Springs**	**26.37**	**165**	P	**P**	**03 57 38.8**	**+1.0**
ASAR	**Alice Springs**	**26.37**	**165**	P	**P**	**03 57 36.7**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=343,slow=7.0,SNR=16						
ASAR				PcP	**PcP**	**04 01 02.4**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=346,slow=1.4,SNR=4.2						
ASAR	**Alice Springs**	**26.37**	**165**	P	**P**	**03 57 38.0**	**+0.2**
MK31	**Makanchi Array**	**58.98**	**326**	P	**P**	**04 01 58.9**	**-1.7**
MK31				IAmb	IAmb	04 02 07.7	
	comp=Z,1.8nm,1.1s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**04 01 58.7**	**-1.9**
	comp=Z,0.4nm,0.4s,baz=120,slow=7.5,SNR=11						
MAKZ	**Makanchi**	**59.17**	**326**	P	**P**	**04 02 00.4**	**-1.5**
KURBB	**Kurchatov Arra**	**63.21**	**328**	P	**P**	**04 02 27.6**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=132,slow=6.3,SNR=4.3						
VNDA	**Vanda**	**81.61**	**173**	P	**P**	**04 04 17.6**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=327,slow=7.5,SNR=3.8						

KRSC 16 04:02:19.7±1.9, 51°.61N×154°.20E, h553km±29km, ML4.0

IDC 16 04:02:20.1±1.5, 52°.36N×152°.31E, h489km±19km, mb2.8/7, mb1 3.0/9, mb1mx2.6/66, mbtmp3.6/9, Error ellipse: s-maj=23.8km s-min=13.8km az=126.0

ISC 16 04:02:20.3±0.8, 52°.1N±0°.1×152°.8E±0°.1, h500km, n34, σ1°79/37, mb3.3/7, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**2.55**	**103**	*eP*	**P**	**04 03 29.2**	**+0.9**
APC	**Apacha**	**2.76**	**71**	*eP*	**P**	**04 03 30.7**	**+1.2**
ASAK	**Asacha**	**3.12**	**83**	*eP*	**P**	**04 03 33.5**	**+1.4**
PETK	**Petropavlovsk-**	**3.12**	**70**	*eP*	**P**	**04 03 32.6**	**+0.6**
	2.8nm,0.3s,baz=270,slow=1.4,SNR=47						
GRL	**Gorelyy**	**3.24**	**80**	*eP*	**P**	**04 03 34.8**	**+1.9**
KDTR	**Khodutka, Kamc**	**3.26**	**94**	*eP*	**P**	**04 03 32.5**	**-0.4**
KDTR				*eS*	**S**	**04 04 29.3**	**-2.9**
KRMR	**Karymshinskiy**	**3.31**	**76**	*eP*	**P**	**04 03 34.8**	**+1.5**
GNL	**Ganaly**	**3.47**	**61**	*eP*	**P**	**04 03 35.4**	**+0.9**
RUS	**Russkaya**	**3.50**	**83**	*eP*	**P**	**04 03 35.3**	**+0.6**
RUS				*eS*	**S**	**04 04 34.4**	**-1.0**
PET	**Petropavlovsk**	**3.66**	**73**	*eP*	**P**	**04 03 36.6**	**+0.8**
KOK	**Koryaka**	**3.71**	**69**	*eP*	**P**	**04 03 38.3**	**+1.9**
DALK	**Dalny**	**3.72**	**74**	*eP*	**P**	**04 03 36.7**	**+0.4**
KRX	**Arik**	**3.74**	**68**	*eP*	**P**	**04 03 38.6**	**+1.9**
AVH	**Avacha**	**3.77**	**70**	*eP*	**P**	**04 03 39.0**	**+2.2**
KRER	**Koryakskii**	**3.78**	**69**	*eP*	**P**	**04 03 38.2**	**+1.1**
SMAR	**Somma**	**3.80**	**70**	*eP*	**P**	**04 03 39.2**	**+2.0**
UGLR	**Uglovaya**	**3.80**	**71**	*eP*	**P**	**04 03 39.0**	**+1.9**
SDLR	**Sedlovina**	**3.85**	**70**	*eP*	**P**	**04 03 38.6**	**+1.1**
SPN	**Mys Shipunski**	**4.49**	**75**	*eP*	**P**	**04 03 42.2**	**-0.4**
SPN				*eS*	**S**	**04 04 45.7**	**-4.2**
KZV	**Kizimen**	**5.35**	**53**	*eP*	**P**	**04 03 51.9**	**+1.5**
TUMR	**Tumrok**	**5.37**	**51**	*eP*	**P**	**04 03 53.9**	**+3.3**
TUMD	**Tumrok D**	**5.45**	**53**	*eP*	**P**	**04 03 53.3**	**+2.1**
KMNR	**Kamenistaya**	**5.69**	**47**	*eP*	**P**	**04 03 55.1**	**+1.6**
SRDR	**Sredinnyy**	**5.82**	**41**	*eP*	**P**	**04 03 56.7**	**+2.0**
ZLN	**Zelenaya**	**6.10**	**47**	*eP*	**P**	**04 03 59.4**	**+2.0**
KBTR	**Krutoberegovo**	**7.14**	**51**	*eP*	**P**	**04 04 06.7**	**-1.0**
MJAR	**Matsushiro Arr**	**18.71**	**219**	P	**P**	**04 06 07.4**	**+0.3**
	0.1nm,0.3s,baz=24,slow=9.8,SNR=10						
ILAR	**Eielson Array**	**32.61**	**44**	P	**P**	**04 08 10.4**	**+1.0**
	0.6nm,0.6s,baz=283,slow=12,SNR=15						
INK	**Inuvik**	**37.30**	**36**	P	**P**	**04 08 49.0**	**+0.5**
	0.8nm,0.3s,baz=300,slow=10,SNR=13						
MKAR	**Makanchi Array**	**44.51**	**292**	P	**P**	**04 09 44.4**	**-2.0**
	0.4nm,0.4s,baz=64,slow=6.9,SNR=5.5						
FINES	**FINESS Array B**	**59.12**	**333**	P	**P**	**04 11 29.2**	**-2.3**
	2.7nm,0.9s,baz=36,slow=7.1,SNR=5.2						
WRA	**Warramunga Arr**	**73.56**	**198**	P	**P**	**04 13 02.8**	**+1.0**
	0.4nm,1.1s,baz=17,slow=6.1,SNR=2.9						
TXAR	**Lajitas Array**	**75.04**	**62**	P	**P**	**04 13 12.4**	**+2.0**
	0.2nm,0.4s,baz=281,slow=4.9,SNR=5.1						
ASAR	**Alice Springs**	**77.27**	**198**	P	**P**	**04 13 24.2**	**+1.8**
	0.3nm,0.8s,baz=12,slow=4.7,SNR=3.3						

IDC 16 04:19:08.9±0.2, 2°.09N×126°.80E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/37, mbtmp3.8/6, Error ellipse: s-maj=30.2km s-min=2.2km az=67.0

NEIC 16 04:19:13.6±1.7, 2°.26N±0°.10×127°.1E±0°.1, h35km±2km, mb4.3/6, Error ellipse: s-maj=29.7km s-min=4.4km az=56.0

DJA 16 04:19:15.3±1.1, 2°.N±3°.×12°.6E±°., h34km±18km, M3.8/9, mb3.9/1, MLv3.8/9

ISC 16 04:19:15.4±0.8, 1°.86N±0°.05×126°.44E±0°.06, h47km, n24, σ1°44/26, mb4.1/8, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.42**	**139**	P	**Pn**	**04 19 39.1**	**+0.3**
TNTI				S	**Sn**	**04 19 57.9**	**+1.5**
TNTI	**Ternate**	**1.42**	**139**		**Pn**	**04 19 39.1**	**+0.3**
SGSI	**Sangihe**	**2.03**	**333**	P	**Pn**	**04 19 46.9**	**-0.3**
SGSI				S	**Sn**	**04 20 11.0**	**-0.4**
KMSI	**Cibinong**	**2.77**	**243**	P	**Pn**	**04 19 58.2**	**+0.9**
KMSI				S	**Sn**	**04 20 30.0**	**+0.5**
GTOI	**Gorontalo**	**3.64**	**251**	P	**Pn**	**04 20 10.3**	**+1.1**
SANI	**Sanana**	**3.91**	**187**	P	**Pn**	**04 20 12.1**	**-0.8**
LUWI	**Luwuk**	**4.66**	**232**	P	**Pn**	**04 20 23.3**	**0.0**
LUWI	**Luwuk**	**4.66**	**232**	Pn	Pn	04 20 32.1	+8.8
KCP	**Kidapawan**	**5.29**	**345**	*eP*	**Pn**	**04 20 36.7**	**+4.7**
MYLDM	**Lahad Datu**	**8.59**	**293**		Pn	04 21 22.3	+5.1
FITZ	**Fitzroy Crossi**	**19.84**	**182**	P	**Pn**	**04 23 44.6**	**+0.1**
	0.6nm,0.4s,baz=0.0,slow=10,SNR=3.3						
WB0	**Warramunga Arr**	**22.86**	**160**	P	**P**	**04 24 15.1**	**0.0**
WB0				IAmb	IAmb	04 24 28.4	
	comp=Z,25nm,1.9s						
WRAB	**Tennant Creek**	**23.00**	**161**	P	**P**	**04 24 17.0**	**+0.5**
WRA	**Warramunga Arr**	**23.01**	**161**	P	**P**	**04 24 16.6**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=339,slow=11,SNR=34						
WB2	**Warramunga Arr**	**23.01**	**161**	P	**P**	**04 24 16.9**	**+0.3**
WB2				IAmb	IAmb	04 24 33.6	
	comp=Z,9.9nm,1.4s						
ASAR	**Alice Springs**	**26.39**	**164**	P	**P**	**04 24 49.3**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=349,slow=13,SNR=11						
ASAR				PcP	**PcP**	**04 28 13.9**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=350,slow=1.7,SNR=4.1						
ASAR	**Alice Springs**	**26.39**	**164**	P	**P**	**04 24 47.5**	**-0.1**
SONM	**Songino Array**	**48.98**	**342**	P	**P**	**04 27 57.3**	**0.0**
	comp=Z,0.5nm,0.7s,baz=144,slow=5.4,SNR=2.9						
MK31	**Makanchi Array**	**58.93**	**326**	P	**P**	**04 29 09.8**	**-0.1**
MK31				IAmb	IAmb	04 29 45.6	
	comp=Z,4.8nm,1.6s						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**04 29 09.9**	**0.0**
	comp=Z,0.8nm,0.4s,baz=122,slow=7.3,SNR=12						
MAKZ	**Makanchi**	**59.11**	**326**	P	**P**	**04 29 11.9**	**+0.7**
KURBB	**Kurchatov Arra**	**63.16**	**328**	P	**P**	**04 29 38.5**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=131,slow=6.8,SNR=19						
KURK	**Kurchatov**	**63.16**	**328**	P	**P**	**04 29 38.7**	**+0.2**
FINES	**FINESS Array B**	**93.33**	**332**	P	**P**	**04 32 21.4**	**-3.8**

IDC 16 04:19:38.4±1.7, 8°.10S×120°.63E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.4/36, mbtmp3.6/5, ML3.1/2, MS3.0/2, Ms1 3.1/2, ms1mx2.5/37, Error ellipse: s-maj=124.8km s-min=18.8km az=60.0

DJA 16 04:19:39.4±0.2, 8°.S±2°.×12°.1E±°., h10km, M3.5/11, MLv3.5/11

ISC 16 04:19:39.3±0.8, 7°.98S±0°.04×120°.76E±0°.05, h10km, n18, σ1°15/23, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDFI	**Ende, Flores**	**1.20**	**130**	P	**Pb**	**04 20 00.4**	**-1.8**
EDFI				S	**Sn**	**04 20 18.7**	**+0.1**
MMRI	**Maumere**	**1.60**	**114**	P	**Pn**	**04 20 07.0**	**-0.7**
MMRI				S	**Sg**	**04 20 30.3**	**-0.6**
WSI	**Waingapu**	**1.74**	**195**	P	**Pn**	**04 20 08.8**	**-0.8**
BSSI	**Bau Bau, Buton**	**1.84**	**352**	P	**Pn**	**04 20 10.8**	**-0.2**
BSSI				S	**Sn**	**04 20 34.9**	**+0.5**
WBSI	**Waikabubak, Su**	**2.13**	**219**	P	**Pn**	**04 20 14.5**	**-0.6**
WBSI				S	**Sn**	**04 20 42.2**	**+0.5**
BASI	**Baing, Sumba**	**2.23**	**185**	P	**Pn**	**04 20 17.4**	**+1.0**
BASI				S	**Sn**	**04 20 45.5**	**+1.5**
BKSI	**Bulukumba**	**2.71**	**346**	P	**Pn**	**04 20 23.6**	**+0.6**
BKSI				S	**Sn**	**04 20 57.2**	**+1.3**
PLAI	**Plampang**	**3.07**	**254**	P	**Pn**	**04 20 27.6**	**-0.3**
KAPI	**Kappang**	**3.11**	**341**	Pn	**Pn**	**04 20 30.3**	**+1.8**
	2.5nm,0.3s,baz=180,slow=10,SNR=9.3						
KAPI				Sn	**Sb**	**04 21 11.4**	**-1.3**
	1.3nm,0.3s,baz=171,slow=8.2,SNR=3.7						
BNSI	**Bone**	**3.61**	**350**	P	**Pn**	**04 20 33.9**	**-1.5**
SOEI	**Soe**	**3.89**	**117**	P	**Pn**	**04 20 41.5**	**+2.2**
TWSI	**Taliwang, Sumb**	**3.91**	**259**	P	**Pn**	**04 20 39.8**	**+0.4**
DAV	**Davao City (W)**	**15.70**	**18**	LR	LR	04 29 04.3	
	comp=Z,65nm,21.2s,baz=160,slow=36						
WRA	**Warramunga Arr**	**17.73**	**134**	P	**Pn**	**04 23 45.4**	**-1.1**
	0.1nm,0.3s,baz=307,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**20.05**	**143**	P	**P**	**04 24 13.7**	**+0.8**
	1.2nm,0.9s,baz=320,slow=10,SNR=10						
STKA	**Stephens Creek**	**30.68**	**144**	P	**P**

YM10	**YM10**	**1.13 301**	P	**Pn**	**04 23 56.3 +0.1**	**CHKT**	**Chengkung**	**1.87 218**	*i* S	**Sn**	**04 24 26.8 -1.9**	**SLIU**	**Shizi**	**2.88 216**	P	**Pn**	**04 24 18.5 -0.1**
	baz=291						baz=210						baz=214				
YM10			*e*S	**Sn**	**04 24 12.0 -0.6**	**WJS**	**Zhushan**	**1.89 247**	*i* P	**Pn**	**04 24 06.9 +1.5**	SLIU			*e*S	**Sn**	**04 24 52.5 0.0**
	baz=291						baz=239						baz=214				
YM05	**YM05**	**1.13 302**	P	**Pn**	**04 23 56.3 +0.1**	WJS			*i* S	**Sn**	**04 24 31.8 +2.7**	**MATB**	**Ma-tsu**	**2.89 304**	P	**Pn**	**04 24 18.3 -0.2**
	baz=292						baz=239						baz=302				
YM05			*e*S	**Sn**	**04 24 12.3 -0.4**	**JTJ**	**Tarama**	**1.89 88**	P	**Pn**	**04 24 05.8 +0.3**	**VWUC**	**VWUC**	**2.92 279**	P	**Pn**	**04 24 18.3 -0.6**
	baz=292					JTJ			*e*S	**Sn**	**04 24 29.7 +0.4**		baz=278				
NNSB	**Datong**	**1.14 263**	P	**Pn**	**04 23 56.6 +0.2**	**WNT**	**Mingjian**	**1.90 249**	*i* P	**Pn**	**04 24 07.2 +1.5**	VWUC			S	**Sn**	**04 24 52.2 -1.0**
	baz=255						baz=248						baz=278				
NNSB			S	**Sn**	**04 24 12.5 -0.5**	WNT			*i* S	**Sn**	**04 24 32.0 +2.5**	**PNG**	**Penghu**	**2.98 251**	P	**Pn**	**04 24 19.2 -0.6**
	baz=255						baz=248						baz=250				
NNSH	**Datong**	**1.14 263**	*i* P	**Pn**	**04 23 56.5 +0.1**	**WCHH**	**Zhanghua**	**1.95 256**	*i* P	**Pn**	**04 24 06.4 +0.2**	PNG			S	**Sn**	**04 24 53.4 -1.4**
	baz=256						baz=262						baz=250				
NNSH			S	**Sn**	**04 24 12.5 -0.5**	WCHH			*i* S	**Sn**	**04 24 30.8 +0.2**	**PHUB**	**P'eng-hu**	**2.98 250**	P	**Pn**	**04 24 19.3 -0.5**
	baz=256						baz=262						baz=249				
YHNB	**Yeheng**	**1.14 275**	P	**Pn**	**04 23 56.9 +0.6**	**ALS**	**Alishan**	**1.97 238**	*i* P	**Pn**	**04 24 07.9 +1.1**	PHUB			S	**Sn**	**04 24 52.7 -2.2**
	baz=274						baz=237						baz=249				
YHNB			S	**Sn**	**04 24 12.9 -0.1**	ALS			S	**Sn**	**04 24 31.9 +0.4**	**WDGT**	**Dungji**	**3.01 245**	P	**Pn**	**04 24 20.4 +0.2**
	baz=274						baz=237						baz=244				
YM04	**YM04**	**1.14 301**	P	**Pn**	**04 23 56.4 +0.1**	**EDH**	**Donghe**	**2.00 217**	*i* P	**Pn**	**04 24 06.6 -0.4**	WDGT			S	**Sn**	**04 24 54.5 -1.1**
	baz=291						baz=215						baz=244				
YM04			S	**Sn**	**04 24 12.5 -0.5**	EDH			*i* S	**Sn**	**04 24 30.4 -1.4**	**HEN**	**Hengchun**	**3.09 215**	*e*S	**Sn**	**04 24 57.6 +0.1**
	baz=291						baz=215						baz=204				
NNS	**Nan Shan**	**1.15 264**	*i* P	**Pn**	**04 23 56.7 +0.2**	**ELDTW**	**Lidau**	**2.02 227**	*i* P	**Pn**	**04 24 07.2 0.0**	**TWKBT**	**Hengchun**	**3.10 213**	*e*P	**Pn**	**04 24 21.4 -0.1**
	baz=256						baz=224						baz=210				
NNS			*i* S	**Sn**	**04 24 13.2 0.0**	ELDTW			S	**Sn**	**04 24 31.1 -1.2**	TWKBT			S	**Sn**	**04 24 57.9 0.0**
	baz=256						baz=224						baz=210				
YM03	**YM03**	**1.16 302**	P	**Pn**	**04 23 56.8 +0.3**	**CHN5**	**Tsauling**	**2.03 242**	*i* P	**Pn**	**04 24 08.8 +1.4**	**TWK1**	**Hengchun**	**3.11 213**	*e*P	**Pn**	**04 24 21.2 -0.3**
	baz=292						baz=241						baz=210				
YM03			*e*S	**Sn**	**04 24 13.6 +0.3**	CHN5			*i* S	**Sn**	**04 24 34.7 +2.2**	TWK1			*e*S	**Sn**	**04 24 57.8 -0.1**
	baz=292						baz=241						baz=210				
NSK	**Sanguang**	**1.16 275**	*i* P	**Pn**	**04 23 57.0 +0.5**	**WGK**	**Gukeng**	**2.08 245**	*e*P	**Pn**	**04 24 09.4 +1.5**	**XPSS**	**Dashiqiu**	**3.21 317**	P	**Pn**	**04 24 22.6 -0.3**
	baz=268						baz=254						baz=308				
NSK			*i* S	**Sn**	**04 24 13.4 +0.1**	WGK			S	**Sn**	**04 24 36.8 +3.2**	**PTMZ**	**Houxiangcun**	**3.22 279**	P	**Pn**	**04 24 22.7 -0.3**
	baz=268						baz=254						baz=278				
TWY	**Chenhua**	**1.16 307**	*i* P	**Pn**	**04 23 57.0 +0.5**	**WDLH**	**Douliu**	**2.10 246**	*i* P	**Pn**	**04 24 09.2 +1.0**	PTMZ			*e*S	**Sn**	**04 25 00.3 -0.3**
	baz=298						baz=255						baz=278				
TWY			S	**Sn**	**04 24 14.1 +0.8**	WDLH			*i* S	**Sn**	**04 24 36.1 +2.1**	**VCHM**	**Qimei**	**3.22 246**	*e*P	**Pn**	**04 24 23.3 +0.3**
	baz=298						baz=255						baz=236				
HATJ	**Hateruma jima**	**1.19 115**	P	**Pn**	**04 23 57.8 +0.9**	**LONT**	**Longtian**	**2.15 220**	*i* P	**Pn**	**04 24 08.8 -0.1**	VCHM			S	**Sn**	**04 24 59.1 -1.6**
HATJ			S	**Sn**	**04 24 15.0 +1.1**		baz=218						baz=236				
TWS1	**Kuangyinshan**	**1.22 296**	*i* P	**Pn**	**04 23 57.3 +0.2**	LONT			*i* S	**Sn**	**04 24 34.2 -1.1**	**LYJJ**	**Jianjiangzhen**	**3.25 308**	P	**Pn**	**04 24 23.0 -0.4**
	baz=290						baz=218						baz=307				
TWS1			*i* S	**Sn**	**04 24 13.9 -0.4**	**LDUT**	**Ludao**	**2.17 209**	*i* P	**Pn**	**04 24 08.5 -0.6**	**MHZQ**	**Yeshan**	**3.59 296**	*e*P	**Pn**	**04 24 27.8 -0.2**
	baz=290						baz=211						baz=295				
FUSS	**Fushou**	**1.30 256**	*i* P	**Pn**	**04 23 58.9 +0.5**	LDUT			*i* S	**Sn**	**04 24 33.6 -2.1**	**KNM**	**Kinmen**	**3.82 269**	P	**Pn**	**04 24 32.2 +1.2**
	baz=251						baz=211						baz=268				
FUSS			S	**Sn**	**04 24 16.3 -0.3**	**RLNB**	**Erlin**	**2.18 252**	S	**Sn**	**04 24 36.7 +0.9**	KNM			*e*S	**Sn**	**04 25 16.7 +1.6**
	baz=251						baz=251						baz=268				
JKRS	**Kuro-shima**	**1.31 105**	P	**Pn**	**04 23 58.7 +0.5**	**CHN2**	**Minshiung**	**2.22 243**	S	**Sn**	**04 24 38.2 +1.4**	**KNMB**	**Chin-men Tao**	**3.86 269**	P	**Pn**	**04 24 30.9 -0.8**
JKRS			S	**Sn**	**04 24 16.9 +0.6**		baz=252						baz=269				
WHF	**Hehuan Shan**	**1.31 251** ⇑	*i*P	**Pn**	**04 23 58.9 +0.1**	**CHN4**	**Tsaushan**	**2.22 237**	*i* P	**Pn**	**04 24 11.6 +1.8**	KNMB			*e*S	**Sn**	**04 25 14.8 -1.2**
	baz=250						baz=236						baz=269				
WHF			*i* S	**Sn**	**04 24 16.2 -0.9**	CHN4			*i* S	**Sn**	**04 24 38.2 +1.3**	**AXDP**	**Jialang**	**4.24 275**	P	**Pn**	**04 24 36.7 -0.1**
	baz=250						baz=236						baz=275				
TWT	**Tachien**	**1.36 257**	*i* P	**Pn**	**04 23 59.9 +0.9**	**TPUB**	**Ta-pu**	**2.22 236**	P	**Pn**	**04 24 11.2 +1.4**	AXDP			S	**Sn**	**04 24 25.1 -0.2**
	baz=255						baz=234						baz=275				
TWT			*i* S	**Sn**	**04 24 17.6 0.0**	TPUB			S	**Sn**	**04 24 38.7 +1.8**	**ZPLA**	**Ao Xicun**	**4.49 263**	*e*P	**Pn**	**04 24 40.5 +0.3**
	baz=255						baz=234						baz=263				
NCU	**National Centr**	**1.36 287**	*i* P	**Pn**	**04 23 59.4 +0.5**	**WTK**	**Tuku**	**2.22 247**	*i* P	**Pn**	**04 24 09.9 +0.1**	ZPLA			*e*S	**Sn**	**04 25 28.9 -2.5**
	baz=294						baz=246						baz=263				
NCU			*i* S	**Sn**	**04 24 18.0 +0.5**	WTK			*i* S	**Sn**	**04 24 37.7 +0.8**						
	baz=294						baz=246										
NCUH	**Zhongli**	**1.37 287**	*i* P	**Pn**	**04 23 59.4 +0.4**	**TWGBT**	**Beinan**	**2.25 219**	P	**Pn**	**04 24 10.0 -0.2**						
	baz=294						baz=218										
NCUH			*i* S	**Sn**	**04 24 18.0 +0.4**	TWGBT			S	**Sn**	**04 24 36.2 -1.4**						
	baz=294						baz=218										
TDCB	**Techi**	**1.37 257**	P	**Pn**	**04 23 59.9 +0.7**	**TWG**	**Pinlang**	**2.25 220**	*i* P	**Pn**	**04 24 09.7 -0.5**						
	baz=256						baz=218										
TDCB			S	**Sn**	**04 24 17.7 -0.2**	TWG			*i* S	**Sn**	**04 24 36.0 -1.6**						
	baz=256						baz=218										
JIJ	**Ishigaki jima**	**1.40 98**	P	**Pn**	**04 23 59.3 0.0**	**TTN**	**Taitung**	**2.26 217**	*e*P	**Pn**	**04 24 10.1 -0.2**						
JIJ			S	**Sn**	**04 24 17.3 -1.0**		baz=211										
EGFH	**Guangfu**	**1.42 231**	*i* P	**Pn**	**04 23 59.2 -0.3**	TTN			*e*S	**Sn**	**04 24 37.9 +0.1**						
	baz=229						baz=211										
EGFH			*i* S	**Sn**	**04 24 17.8 -0.9**	**WTP**	**Ta-pu**	**2.26 235**	*i* P	**Pn**	**04 24 11.8 +1.3**						
	baz=229						baz=233										
CHGB	**Renai**	**1.42 249**	P	**Pn**	**04 24 00.2 +0.4**	WTP			*i* S	**Sn**	**04 24 39.5 +1.5**						
	baz=242						baz=233										
CHGB			S	**Sn**	**04 24 18.5 -0.5**	**CHY**	**Chiayi**	**2.28 242**	*i* P	**Pn**	**04 24 11.9 +1.4**						
	baz=242						baz=252										
LIOB	**Emei**	**1.47 273**	*i* P	**Pn**	**04 24 00.7 +0.6**	CHY			*i* S	**Sn**	**04 24 39.8 +1.5**						
	baz=272						baz=252										
LIOB			*i* S	**Sn**	**04 24 20.1 +0.4**	**JIRB**	**Irabujima**	**2.33 83**	P	**Pn**	**04 24 11.3 +0.1**						
	baz=272					JIRB			S	**Sn**	**04 24 38.6 -0.9**						
NSTT	**Nanjuang**	**1.48 273**	*i* P	**Pn**	**04 24 00.8 +0.5**	**TWK**	**Hsinying**	**2.35 237**	*i* P	**Pn**	**04 24 12.8 +1.3**						
	baz=271						baz=235										
NSTT			*i* S	**Sn**	**04 24 20.1 +0.1**	TWK			S	**Sn**	**04 24 41.1 +1.2**						
	baz=271						baz=235										
SBCB	**Hsinchu**	**1.51 279**	P	**Pn**	**04 24 01.2 +0.6**	**CHN1**	**Nanshi**	**2.36 235**	*i* P	**Pn**	**04 24 12.7 +1.0**						
	baz=277						baz=233										
SBCB			S	**Sn**	**04 24 20.7 +0.1**	CHN1			S	**Sn**	**04 24 41.0 +0.7**						
	baz=277						baz=233										
HSN	**Hsinchu**	**1.52 279**	*i* P	**Pn**	**04 24 01.0 +0.2**	**SNST**	**Tainan City**	**2.37 236**	*i* P	**Pn**	**04 24 12.9 +1.2**						
	baz=279						baz=235										
HSN			S	**Sn**	**04 24 20.7 -0.2**	SNST			*e*S	**Sn**	**04 24 41.2 +0.9**						
	baz=279						baz=235										
JISG	**Ishigakijimahi**	**1.54 89**	P	**Pn**	**04 24 01.0 0.0**	**SGST**	**Jiashian**	**2.39 232**	*i* P	**Pn**	**04 24 12.5 +0.6**						
JISG			S	**Sn**	**04 24 20.7 -0.5**		baz=239										
HGSD	**Ruisui**	**1.54 226**	P	**Pn**	**04 24 01.1 +0.1**	SGST			*i* S	**Sn**	**04 24 42.0 +1.2**						
	baz=224						baz=239										
HGSD			S	**Sn**	**04 24 21.6 +0.3**	**WLGB**	**Puzi**	**2.39 243**	P	**Pn**	**04 24 12.0 +0.1**						
	baz=224						baz=251										
WHP	**Taichung City**	**1.56 259**	*i* P	**Pn**	**04 24 02.7 +1.3**	WLGB			S	**Sn**	**04 24 41.4 +0.6**						
	baz=256						baz=251										
WHP			*i* S	**Sn**	**04 24 22.8 +0.9**	**SLGT**	**Liugui**	**2.40 229**	*i* P	**Pn**	**04 24 13.9 +1.7**						
	baz=256						baz=238										
EHY	**Hungye**	**1.59 229**	*i* P	**Pn**	**04 24 01.4 -0.4**	SLGT			S	**Sn**	**04 24 43.0 +1.9**						
	baz=227						baz=238										
EHY			S	**Sn**	**04 24 21.1 -1.4**	**JIKM**	**Ikemajima**	**2.41 81**	P	**Pn**	**04 24 12.4 +0.2**						
	baz=227					JIKM			S	**Sn**	**04 24 41.1 -0.2**						
DPDB	**Guoxing**	**1.64 251**	P	**Pn**	**04 24 03.5 +1.1**	**JMJ**	**Miyako jima 2**	**2.44 84**	P	**Pn**	**04 24 13.9 +1.3**						
	baz=255						baz=86										
DPDB			S	**Sn**	**04 24 24.6 +1.0**	JMJ			S	**Sn**	**04 24 42.3 +0.3**						
	baz=255						baz=86										
NMLH	**Miaoli**	**1.67 269**	*i* P	**Pn**	**04 24 03.4 +0.7**	**JMJ2**	**Miyako jima3**	**2.47 86**	P	**Pn**	**04 24 13.6 +0.6**						
	baz=259					JMJ2			S	**Sn**	**04 24 42.3 -0.3**						
NMLH			*i* S	**Sn**	**04 24 24.5 +0.3**	**ECL**	**Taimali**	**2.49 218**	*i* P	**Pn**	**04 24 12.1 -1.3**						
	baz=259						baz=216										
YULB	**Yu-li**	**1.69 226**	P	**Pn**	**04 24 02.6 -0.4**	ECL			*i* S	**Sn**	**04 24 41.7 -1.6**						
	baz=231						baz=216										
YULB			*e*S	**Sn**	**04 24 23.1 -1.6**	**CHN8**	**Yiju**	**2.52 242**	*e*P	**Pn**	**04 24 14.1 +0.4**						
	baz=231						baz=251										
TWQ1	**Liyutan**	**1.70 263**	*i* P	**Pn**	**04 24 03.7 +0.6**	CHN8			*e*S	**Sn**	**04 24 44.4 +0.4**						
	baz=262						baz=251										
TWQ1			*i* S	**Sn**	**04 24 25.0 0.0**	**JOGS**	**Gusukube**	**2.54 85**	P	**Pn**	**04 24 14.6 +0.7**						
	baz=262					JOGS			*e*S	**Sn**	**04 24 44.4 +0.1**						
NSY	**Sanyi**	**1.70 265**	*i* P	**Pn**	**04 24 04.0 +0.9**	**SCST**	**Cishan**	**2.58 230**	P	**Pn**	**04 24 15.0 +0.5**						
	baz=264						baz=236										
NSY			*i* S	**Sn**	**04 24 26.0 +1.0**	SCST			S	**Sn**	**04 24 46.9 +1.7**						
	baz=264						baz=236										
EYUL	**Yuli**	**1.71 225**	*i* P	**Pn**	**04 24 03.4 +0.2**	**SSD**	**Sandimen**	**2.58 226**	*i* P	**Pn**	**04 24 16.4 +1.9**						
	baz=231						baz=224										
EYUL			*i* S	**Sn**	**04 24 25.0 -0.1**	SSD			S	**Sn**	**04 24 46.4 +1.1**						
	baz=231						baz=224										
SSLB	**Suanglung**	**1.71 243**	P	**Pn**	**04 24 03.6 +0.3**	**TSMG**	**Majia**	**2.60 225**	*i* P	**Pn**	**04 24 16.0 +1.2**						
	baz=239						baz=223										
SSLB			S	**Sn**	**04 24 25.5 +0.2**	TSMG			*i* S	**Sn**	**04 24 47.3 +1.6**						
	baz=239						baz=223										
SMLT	**Sun Moon Lake**	**1.72 247**	*i* P	**Pn**	**04 24 04.4 +1.0**	**TWM1**	**Shoushan**	**2.67 230**	*e*P	**Pn**	**04 24 18.0 +2.4**						
	baz=240						baz=235										
SMLT			S	**Sn**	**04 24 26.2 +0.7**	TWM1			*e*S	**Sn**	**04 24 49.5 +2.1**						
	baz=240						baz=235										
TWF1	**Yuli**	**1.72 225**	*i* P	**Pn**	**04 24 03.2 -0.1**	**MASBT**	**Mashibuluo**	**2.67 223**	P	**Pn**	**04 24 17.3 +1.5**						
	baz=231						baz=234										
TWF1			S	**Sn**	**04 24 24.1 -1.2**	MASBT			S	**Sn**	**04 24 49.6 +2.0**						
	baz=231						baz=234										
TYC	**Yuchr**	**1.75 248**	*i* P	**Pn**	**04 24 04.8 +1.2**	**LAY**	**Lan-yu**	**2.71 202**	*i* P	**Pn**	**04 24 15.6 -0.7**						
	baz=242						baz=193										
TYC			*i* S	**Sn**	**04 24 27.2 +1.3**	LAY			*e*S	**Sn**	**04 24 46.6 -1.8**						
	baz=242						baz=193										
WDJ	**Dajia District**	**1.82 263**	*i* P	**Pn**	**04 24 05.1 +0.5**	**EAST**	**Anshuo**	**2.72 217**	*i* P	**Pn**	**04 24 16.0 -0.5**						
	baz=262						baz=215										
WDJ			S	**Sn**	**04 24 27.4 -0.2**	EAST			S	**Sn**	**04 24 46.2 -2.6**						
	baz=262						baz=215										
TCU	**Taichung**	**1.83 257**	*i* P	**Pn**	**04 24 05.5 +0.8**	**PTTC**	**Pingtan**	**2.75 290**	P	**Pn**	**04 24 16.1 -0.6**						
	baz=265						baz=289										
TCU			S	**Sn**	**04 24 28.6 +0.9**	PTTC			*e*S	**Sn**	**04 24 48.3 -1.0**						
	baz=265						baz=289										
FULB	**Fuli**	**1.83 222**	*i* P	**Pn**	**04 24 04.5 -0.3**	**SSPT**	**Xinbi**	**2.81 223**	*i* P	**Pn**	**04 24 19.1 +1.6**						
	baz=214						baz=232										
FULB			*i* S	**Sn**	**04 24 27.5 -0.5**	SSPT			*e*S	**Sn**	**04 24 51.6 +0.9**						
	baz=214						baz=232										
WHYT	**Xinyi Township**	**1.84 242**	*i* P	**Pn**	**04 24 06.4 +1.5**	**SCZT**	**Fangliau**	**2.86 220**	*i* P	**Pn**	**04 24 19.4 +1.2**						
	baz=240						baz=229										
WHYT			*i* S	**Sn**	**04 24 29.6 +1.4**	SCZT			*e*S	**Sn**	**04 24 52.6 +0.6**						
	baz=240						baz=229										

NEIC ***16*** *04:34:36.9±1.8, 7.°09S±0.°08×155.°71E±0.°08, h54km±5km, mb4.6/20, Error ellipse: s-maj=13.2km s-min=9.1km az=223.0*

IDC ***16*** *04:34:45.6±2.8, 7.°20S×155.°67E, h134km±21km, mb3.6/8, mb1 3.8/12, mb1mx3.6/36, mbtmp4.1/12, MS3.1/7, Ms1 3.0/7, ms1mx2.8/28, Error ellipse: s-maj=24.3km s-min=14.9km az=87.0*

ISC 16 04:34:41.2±0.5, 7.°17S±0.°08×155.°80E±0.°08, h100km, n47, σ1§66/43, mb4.2/17, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**4.67 309**		Pn	**Pn**	**04 35 44.9**	**-4.7**
HNR	**Honiara**	**4.68 119**		LR	LR	04 37 54.3	
	comp=Z,95nm,19.6s,baz=327,slow=40						
HNR	**Honiara**	**4.68 119**		Pn	**Pn**	**04 35 47.7**	**-2.0**
KRVT	**Keravat (AS076**	**4.71 307**		P	Pn	04 35 55.3	+5.2
	12nm,0.3s,baz=0.0,slow=20,SNR=1.9						
KRVT				S	**Sn**	**04 36 47.9**	**+4.3**
	7.0nm,0.3s,baz=151,slow=19,SNR=3.3						
KRVT				LR	LR	04 37 53.9	
	comp=Z,127nm,18.5s,baz=103,slow=41						
PMG	**Port Moresby**	**8.83 255**		P	**Pn**	**04 36 47.4**	**+1.3**
	5.6nm,0.3s,baz=66,slow=9.5,SNR=13						
PMG				LR	LR	04 39 48.0	
	comp=Z,130nm,20.9s,baz=89,slow=35						
PMG	**Port Moresby**	**8.83 255**			**Pn**	**04 36 42.0**	**-4.2**
PATS	**Pohnpei**	**14.14 10**		Pn	Pn	04 37 52.0	-5.1
CTA	**Chartees Tower**	**15.83 215**		P	**P**	**04 38 20.3**	**0.0**
	0.3nm,0.3s,baz=29,slow=14,SNR=5.5						
CTAO	**Charters Tower**	**15.83 215**		Pn	**Pn**	**04 38 17.0**	**-1.5**
DZM	**Mont Dzumac**	**18.02 146**		P	**Pn**	**04 38 47.0**	**+1.6**
	0.4nm,0.3s,baz=219,slow=9.2,SNR=8.6						
DZM				LR	LR	04 44 11.5	
	comp=Z,80nm,18.9s,baz=214,slow=31						
DZM	**Mont Dzumac**	**18.02 146**		P	**P**	**04 38 43.4**	**-1.2**
MSVF	**Nonsavu**	**24.10 118**		P	**P**	**04 39 49.2**	**+1.4**
MSVF				IAmb	IAmb	04 39 59.2	
	comp=Z,90nm,1.9s						
WR0	**Warramunga Arr**	**24.22 236**		P	**P**	**04 39 47.9**	**-1.0**
WR0				IAmb	IAmb	04 40 08.4	
	comp=Z,13nm,1.4s						
WB0	**Warramunga Arr**	**24.25 237**		P	**P**	**04 39 46.4**	**-2.7**
WB0				IAmb	IAmb	04 40 24.1	
	comp=Z,4.4nm,0.8s						
WRAB	**Tennant Creek**	**24.36 237**		P	**P**	**04 39 49.1**	**-1.1**
WRAB				IAmb	IAmb	04 40 26.9	
	comp=Z,10nm,0.9s						
WB2	**Warramunga Arr**	**24.37 236**		P	**P**	**04 39 48.1**	**-2.1**
WRA	**Warramunga Arr**	**24.38 236**		P	**P**	**04 39 49.1**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=61,slow=9.6,SNR=10						
WRA				PcP	**PcP**	**04 43 28.6**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=58,slow=2.8,SNR=5.3						
WRA				LR	LR	04 48 28.1	
	comp=Z,48nm,19.5s,baz=65,slow=34						
WRA	**Warramunga Arr**	**24.38 236**		P	**P**	**04 39 49.7**	**-0.6**
MTN	**Manton Dam**	**24.93 255**		P	**P**	**04 39 54.8**	**-0.5**
MTN				IAmb	IAmb	04 40 39.7	
	comp=Z,28nm,1.6s						
ASAR	**Alice Springs**	**26.66 230**		P	**P**	**04 40 10.9**	**0.0**
	comp=Z,0.8nm,0.6s,baz=60,slow=9.9,SNR=13						
ASAR				PcP	**PcP**	**04 43 33.2**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=75,slow=2.1,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**27.67 23**		T	T	05 08 40.7	
	baz=204,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**27.68 23**		T	T	05 08 41.1	
	baz=204,slow=76,SNR=44						
H11S1	**WAKE ISLAND Hy**	**27.69 23**		T	T	05 08 39.0	
	baz=204,slow=76,SNR=20						
STKA	**Stephens Creek**	**27.92 206**		P	**P**	**04 40 22.7**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=35,slow=14,SNR=3.9						
STKA				LR	LR	04 51 46.9	
	comp=Z,43nm,18.8s,baz=28,slow=37						
FITZ	**Fitzroy Crossi**	**31.31 247**		P	**P**	**04 40 52.0**	**-0.3**
	comp=Z,5.0nm,0.6s,baz=82,slow=8.2,SNR=23						
FITZ	**Fitzroy Crossi**	**31.31 247**		P	**P**	**04 40 51.9**	**-0.4**
FITZ				IAmb	IAmb	04 40 53.1	
	comp=Z,4.9nm,0.6s						
FORT	**Forrest**	**35.02 224**		P	**P**	**04 41 24.5**	**+0.1**
FORT				IAmb	IAmb	04 41 26.1	
	comp=Z,12nm,0.7s						
THZ	**Tophouse**	**37.65 159**		P	**P**	**04 41 47.8**	**+1.2**
USRK	**Ussuriysk Ar.**	**55.47 339**		P	**P**	**04 44 06.7**	**+1.0**
PETK	**Petropavlovsk-**	**60.07 1**		LR	LR	05 05 55.8	
	comp=Z,15nm,20.7s,baz=113,slow=31						
CM31	**Chiang Mai Arr**	**61.58 295**		P	**P**	**04 44 47.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**61.58 295**		P	**P**	**04 44 49.0**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=107,slow=4.5,SNR=4.6						
SONM	**Songino Array**	**69.92 327**		P	**P**	**04 45 41.8**	**0.0**
	comp=Z,0.7nm,0.3s,baz=145,slow=6.4,SNR=6.2						
SONM	**Songino Array**	**69.92 327**		IAmb	IAmb	04 45 42.7	
	comp=Z,1.3nm,0.9s						
SHL	**Shillong**	**70.07 300**		P	**P**	**04 45 42.7**	**-0.5**
QSPA	**South Pole Qui**	**82.81 180**		P	**P**	**04 46 55.7**	**+1.4**
QSPA				IAmb	IAmb	04 47 16.0	
	comp=Z,14nm,1.7s						
ILAR	**Eielson Array**	**83.25 21**		P	**P**	**04 46 55.2**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=251,slow=5.2,SNR=6.7						
BCPM	**Bancas Point**	**83.84 27**		P	**P**	**04 47 00.1**	**+0.6**
MK31	**Makanchi Array**	**84.06 319**		P	**P**	**04 47 01.3**	**+0.4**
MK31				IAmb	IAmb	04 48 52.1	

comp=Z,7.4nm,1.9s
MKAR Makanchi Array 84.06 319 P **P** **04 47 00.9 0.0**
comp=Z,0.6nm,0.6s,baz=100,slow=7.1,SNR=7.1
MKAR Makanchi Array 84.06 319 P **P** **04 47 01.2 +0.3**
TOLK Toolik Lake Re 84.55 17 P **P** **04 47 06.3 +3.4**
TOLK IAmb IAmb 04 47 39.7
comp=Z,19nm,1.8s
ZALV Zalesovo Beam 84.77 326 P **P** **04 47 04.1 -0.2**
GERES GERESS Array B 127.61 329 PKP **PKPdf** **04 53 34.8 -0.2**
comp=Z,0.5nm,0.6s,baz=70,slow=3.2,SNR=3.1
BDFB Brasilia 147.29 134 PKPbc **PKPab** **04 54 16.1 -0.2**
comp=Z,2.0nm,0.7s,baz=52,slow=0.7,SNR=3.7
TORD Torodi Ar. Bea 153.84 285 PKPbc **PKPbc** **04 54 29.4 -0.5**
comp=Z,0.3nm,0.4s,baz=21,slow=2.6,SNR=9.5
TORD PKPab **PKPab** **04 54 42.9 -0.4**
comp=Z,0.7nm,0.5s,baz=55,slow=3.1,SNR=8.1
DBIC Dimbokro 160.79 270 PKPab **PKPab** **04 55 13.7 +0.3**
comp=Z,0.8nm,0.5s,baz=72,slow=6.4,SNR=4.6

IDC ***16*** *04:44:15.9±1.7,2°.21N×127°.33E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/28,mbtmp3.4/3,Error ellipse: s-maj=162.9km s-min=12.5km az=66.0*
DJA ***16*** *04:44:24.7±0.3,2°.N±3°×12°.6E±°,h10km,M3.4/6,MLv3.4/6*
ISC 16 04:44:25.8±1.1,1°.64N±0°.08×126°.43E±0°.10,h47km,n6, σ2°57/8,**mb3.4/3,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.27**	**133**	P		**Pn**		**04 44 47.8**	**+0.6**
TNTI				S		**Sn**		**04 45 06.0**	**+2.8**
SGSI	**Sangihe**	**2.22**	**336**	P		**Pn**		**04 45 01.2**	**+1.0**
SGSI				S		**Sn**		**04 45 29.4**	**+2.9**
KMSI	**Cibinong**	**2.67**	**247**	P		**Pn**		**04 45 07.5**	**+1.2**
WRA	**Warramunga Arr**	**22.81**	**160**	P		**P**		**04 49 23.2**	**-1.6**
	0.8nm,0.6s,baz=340,slow=11,SNR=20								
ASAR	**Alice Springs**	**26.18**	**164**	P		**P**		**04 49 56.6**	**+0.4**
	0.1nm,0.3s,baz=343,slow=11,SNR=7.4								
MKAR	**Makanchi Array**	**59.10**	**326**	P		**P**		**04 54 18.2**	**-3.3**
	0.2nm,0.4s,baz=121,slow=8.8,SNR=4.2								

IDC ***16*** *04:45:48.8±2.0,1°.89N×126°.60E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/25,mbtmp3.3/3,Error ellipse: s-maj=202.6km s-min=16.9km az=65.0*
DJA ***16*** *04:45:54.1±2.0,2°.N±6°×12°.6E±°,h19km±19km,M3.3/4, MLv3.3/4*
ISC 16 04:45:54.6±2.2,2°.1N±0°.3×127°.2E±1°.0,h50km,n4, σ0°70/5, **mb3.2/3,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**172**	P		**Pn**		**04 46 16.6**	**-0.2**
TNTI				S		**Sn**		**04 46 33.5**	**+0.1**
WRA	**Warramunga Arr**	**23.00**	**163**	P		**P**		**04 50 55.0**	**-0.4**
	0.6nm,0.6s,baz=339,slow=11,SNR=6.5								
ASAR	**Alice Springs**	**26.43**	**166**	P		**P**		**04 51 27.8**	**+0.9**
	0.2nm,0.5s,baz=347,slow=8.5,SNR=4.5								
MKAR	**Makanchi Array**	**59.15**	**326**	P		**P**		**04 55 50.2**	**-0.1**
	0.3nm,0.5s,baz=134,slow=7.7,SNR=2.7								

IDC 16 04:56:59.4±9.3,47°.53N×147°.63E,h482km±117km, mb2.7/5,mb1 2.9/5,mb1mx2.6/40,mbtmp3.5/5,Error ellipse: s-maj=29.0km s-min=23.2km az=91.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**38.28**	**39**	P		P		05 03 36.9	-0.1
	0.2nm,0.5s,baz=286,slow=10,SNR=4.7								
MKAR	**Makanchi Array**	**43.23**	**294**	P		P		05 04 16.9	0.0
	0.2nm,0.4s,baz=78,slow=7.5,SNR=3.6								
FINES	**FINESS Array B**	**61.67**	**332**	P		P		05 06 28.6	-0.4
	1.0nm,0.6s,baz=46,slow=6.1,SNR=6.6								
NOA	**NORSAR Array B**	**66.20**	**338**	P		P		05 06 58.2	+0.2
	0.7nm,0.9s,baz=33,slow=4.9,SNR=2.6								
WRA	**Warramunga Arr**	**68.22**	**193**	P		P		05 07 11.0	0.0
	0.2nm,0.8s,baz=13,slow=7.7,SNR=3.2								

IDC ***16*** *05:05:58.7±0.8,10°.23N×69°.44W,h0km,mb4.1/8, mb1 4.2/10,mb1mx3.9/39,mbtmp4.1/10,ML4.1/2,MS2.9/3, Ms1 2.9/3,ms1mx2.5/32,Error ellipse: s-maj=19.4km s-min=12.4km az=133.0*
NEIC ***16*** *05:06:02.1±1.6,10°.26N±0°.05×69°.36W±0°.06,h21km±3km, mb4.5/14,Error ellipse: s-maj=9.6km s-min=6.6km az=123.0*
ISC 16 05:06:00.2±0.5,10°.26N±0°.05×69°.43W±0°.05,h10km,n83, σ1°08/86,**mb4.4/14,1C,Venezuela**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SDV	**Santo Domingo**	**1.81**	**221**	Pn		**Pb**		**05 06 32.7**	**-0.8**
	102nm,0.3s,baz=60,slow=9.7,SNR=127								
SDV				Lg		Lg		05 06 55.1	
	243nm,0.3s,baz=34,slow=14,SNR=16								
SDV				LR		LR		05 07 08.5	
	comp=Z,66nm,18.4s,baz=260,slow=39								
SDV	**Santo Domingo**	**1.81**	**221**	*eP*		**Pb**		**05 06 32.6**	**-1.0**
SDV				*eS*		**Sn**		**05 06 54.1**	**-0.6**
SDV	**Santo Domingo**	**1.81**	**221**			**Pb**		**05 06 33.6**	**0.0**
SDV					Sn	**Sb**		**05 06 57.3**	**+1.0**
URIC	**Uribia, Colomb**	**2.90**	**300**	*eP*		**Pn**		**05 06 46.4**	**-0.1**
CVALL	**Valledupar, Ce**	**3.78**	**274**	*eP*		**Pn**		**05 06 59.9**	**+1.3**
OCAC	**Ocana**	**4.33**	**243**	*eP*		**Pn**		**05 07 07.2**	**+0.8**
PAMC	**Pamplona, Colo**	**4.34**	**228**	*eP*		**Pn**		**05 07 08.1**	**+1.3**
TAMC	**Tame, Arauca**	**4.46**	**212**	*eP*		**Pn**		**05 07 07.0**	**-0.9**
PCRV	**Puerto La Cruz**	**4.72**	**91**	Pn		**Pn**		**05 07 13.3**	**+1.8**
	3.6nm,0.3s,baz=270,slow=2.7,SNR=20								
PCRV				Sn		**Sn**		**05 08 07.7**	**+1.3**
	2.9nm,0.3s,baz=114,slow=20,SNR=1.6								
ARGC	**Ariguani, Magd**	**4.76**	**266**	*eP*		**Pn**		**05 07 12.6**	**+0.4**
PLCV	**Puerto La Cruz**	**4.76**	**91**			**Sn**		**05 08 07.7**	**+0.2**
SMRC	**Santa Marta, M**	**4.80**	**281**	*eP*		**Pn**		**05 07 11.7**	**-1.0**
SMRC				*eS*		**Sn**		**05 08 04.6**	**-3.8**
BARC	**Barichara**	**5.20**	**226**	*eP*		**Pn**		**05 07 20.8**	**+2.4**
BRRC	**Barranca, Sant**	**5.26**	**234**	*eP*		**Pn**		**05 07 20.4**	**+1.3**
RUSC	**La Rusia**	**5.65**	**220**	*eP*		**Pn**		**05 07 26.0**	**+1.3**
SJCC	**San Jacinto, C**	**5.67**	**267**	*eP*		**Pn**		**05 07 25.9**	**+1.2**
PTBC	**PUERTO BERRIO,**	**6.19**	**234**	*eP*		**Pn**		**05 07 31.3**	**-0.5**
MOTC	**Monteria, Cord**	**6.32**	**257**	*eP*		**Pn**		**05 07 33.1**	**-0.5**
SPBC	**San Pablo de B**	**6.49**	**226**	*eP*		**Pn**		**05 07 37.4**	**+1.4**
SPBC				*eS*		**Sn**		**05 08 51.3**	**+1.2**
URRC	**San Jos de Ur**	**6.52**	**248**	*eP*		**Pn**		**05 07 37.1**	**+0.8**
PTGC	**Puerto Gaitan,**	**6.59**	**204**	*eP*		**Pn**		**05 07 36.6**	**-0.6**
LCBC	**Los crdobas,**	**6.98**	**259**	*eP*		**Pn**		**05 07 43.0**	**+0.3**
CHIC	**Chingaza**	**7.03**	**218**	*eP*		**Pn**		**05 07 44.7**	**+1.0**
NORC	**Norcasia**	**7.12**	**230**	*eP*		**Pn**		**05 07 44.4**	**-0.3**
ROSC	**El Rosal**	**7.24**	**222**	Pn		**Pn**		**05 07 48.5**	**+1.9**
	8.0nm,0.3s,baz=280,slow=20,SNR=9.4								
ROSC				Sn		**Sn**		**05 09 09.2**	**+0.1**
	baz=165,slow=20,SNR=1.1								
ROSC	**El Rosal**	**7.24**	**222**			**Pn**		**05 07 49.0**	**+2.5**
HELC	**Santa Helena**	**7.26**	**237**	*eP*		**Pn**		**05 07 47.8**	**+1.0**
DBBC	**Dabeiba**	**7.44**	**245**	*eP*		**Pn**		**05 07 48.8**	**-0.2**
CBOC	**Ciudad Bolivar**	**7.84**	**237**	*eP*		**Pn**		**05 07 56.5**	**+1.9**
MLPR	**Magueyes Islan**	**8.01**	**17**	Pn		**Pn**		**05 07 55.5**	**-1.2**
CRPR	**Cabo Rojo, PR**	**8.03**	**16**	Pn		**Pn**		**05 07 55.4**	**-1.6**
ICMP	**Isla Caja de M**	**8.09**	**20**	Pn		**Pn**		**05 07 58.6**	**+0.7**
TOLC	**Tolima**	**8.11**	**226**	*eP*		**Pn**		**05 07 59.6**	**+1.0**
OBIP	**Obispado Ponce**	**8.21**	**19**			**Pn**		**05 08 00.2**	**+0.7**
MPR	**Mayaguez**	**8.21**	**15**	Pn		**Pn**		**05 07 58.9**	**-0.7**
ANIL	**Santa Ana**	**8.24**	**226**	*eP*		**Pn**		**05 08 01.7**	**+1.5**
GUVC	**San Jose del G**	**8.29**	**203**	*eP*		**Pn**		**05 07 59.3**	**-1.4**
PDPR	**Patillas Dam,**	**8.39**	**23**			**Pn**		**05 08 02.2**	**+0.1**
SJG	**San Juan**	**8.43**	**22**	Pn		**Pn**		**05 08 03.3**	**+0.7**
	4.4nm,0.3s,baz=190,slow=15,SNR=14								
SJG	**San Juan**	**8.43**	**22**	*eP*		**Pn**		**05 08 02.1**	**-0.4**
SJG	**San Juan**	**8.43**	**22**			**Pn**		**05 08 02.4**	**-0.2**
AOPR	**Arecibo Observ**	**8.45**	**18**			**Pn**		**05 08 03.4**	**+0.5**
PRAC	**Prado**	**8.46**	**220**	*eP*		**Pn**		**05 08 03.0**	**0.0**
AGPR	**Aguadilla, PR**	**8.47**	**15**	Pn		**Pn**		**05 08 02.9**	**-0.1**
DR12	**Loma Pena Alta**	**8.48**	**0**			**Pn**		**05 08 03.4**	**0.0**
ORTC	**Ortega, Tolima**	**8.55**	**223**	*eP*		**Pn**		**05 08 04.3**	**+0.1**
SVB	**Belmont**	**8.55**	**69**	Pn		**Pn**		**05 08 03.3**	**-0.9**
HUMP	**Col San Antoni**	**8.57**	**23**	Pn		**Pn**		**05 08 04.6**	**+0.1**
PLMC	**San Jos del P**	**8.62**	**232**	*eP*		**Pn**		**05 08 05.4**	**+0.1**
EMPR	**Esperanza - Ma**	**8.64**	**19**	Pn		**Pn**		**05 08 06.5**	**+1.1**
MTP	**Monte Pirata**	**8.65**	**25**	Pn		**Pn**		**05 08 05.7**	**+0.1**
CBYP	**Canovanas**	**8.69**	**23**	Pn		**Pn**		**05 08 06.2**	**0.0**
MACC	**Macarena, Meta**	**9.18**	**209**	*eP*		**Pn**		**05 08 11.3**	**-1.5**
FDF	**Fort de France**	**9.23**	**60**	Pn		**Pn**		**05 08 11.3**	**-2.3**
GARC	**Garzon, Huila**	**10.03**	**217**	*eP*		**Pn**		**05 08 24.9**	**+0.2**
PCON	**Cinco Dias**	**10.48**	**222**	*eP*		**Pn**		**05 08 32.2**	**+0.9**
FLOC	**Florencia**	**10.61**	**216**	*eP*		**Pn**		**05 08 31.4**	**-1.0**
GCUF	**Volcan Galeras**	**11.93**	**222**	*eP*		**Pn**		**05 08 51.5**	**+0.5**
ACON	**Acoyapa**	**15.54**	**278**	Pn		**Pn**		**05 09 40.4**	**+0.7**
ATAH	**Atahualpa**	**19.45**	**208**	LR		LR		05 19 01.7	
	comp=Z,44nm,20.0s,baz=39,slow=40								
SAML	**Samuel**	**20.07**	**162**	P		Pn		05 10 34.9	-0.7
NNA	**Nana**	**23.29**	**199**	LR		LR		05 21 17.2	
	comp=Z,21nm,19.4s,baz=316,slow=40								
TKL	**Tuckaleechee C**	**28.46**	**335**	LR		LR		05 25 58.6	
	comp=Z,24nm,18.2s,baz=90,slow=42								
PB11	**IPOC Station P**	**29.83**	**180**	P		**P**		**05 12 07.2**	**-0.7**
PBMO	**Poplar Bluff**	**32.52**	**328**	P		**P**		**05 12 32.9**	**+1.5**
PBMO					IAmb	IAmb		05 12 38.2	
	comp=Z,3.0nm,0.6s								
FCAR	**Ozark Folk Cen**	**32.80**	**325**	P		**P**		**05 12 34.5**	**+0.6**
TXAR	**Lajitas Array**	**37.19**	**306**	P		**P**		**05 13 12.4**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=92,slow=6.5,SNR=3.5								
AGMN	**Agassiz Nation**	**43.93**	**335**	P		**P**		**05 14 07.9**	**+0.6**
AGMN					IAmb	IAmb		05 14 08.3	
	comp=Z,4.9nm,0.7s								
N23A	**Red Feather La**	**44.36**	**320**	P		**P**		**05 14 09.8**	**-1.4**
N23A					IAmb	IAmb		05 14 24.5	
	comp=Z,10nm,1.4s								
SCHQ	**Schefferville**	**44.51**	**2**	P		**P**		**05 14 12.4**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=210,slow=16,SNR=2.3								
ULM	**Lac du Bonnet**	**45.47**	**336**	P		**P**		**05 14 18.6**	**-0.9**
	comp=Z,2.7nm,0.5s,baz=135,slow=8.5,SNR=7.6								
ULM	**Lac du Bonnet**	**45.47**	**336**	P		**P**		**05 14 18.9**	**-0.6**
PDAR	**Pinedale Array**	**47.64**	**320**	P		**P**		**05 14 37.0**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=122,slow=11,SNR=4.3								
PDAR				PcP		**PcP**		**05 16 05.5**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=190,slow=2.7,SNR=1.7								
REDW	**Red Top Meadow**	**48.76**	**320**	P		**P**		**05 14 46.7**	**+1.1**
REDW					IAmb	IAmb		05 14 59.6	
	comp=Z,2.8nm,0.8s								
TPAW	**Teton Pass**	**48.88**	**320**	P		**P**		**05 14 48.1**	**+1.5**
TPAW					IAmb	IAmb		05 14 53.3	
	comp=Z,2.4nm,0.8s								
PLCA	**Paso Flores**	**50.74**	**181**	P		**P**		**05 14 59.5**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=341,slow=13,SNR=3.3								
PLCA	**Paso Flores**	**50.74**	**181**	P		**P**		**05 14 59.6**	**-0.9**
PLCA					IAmb	IAmb		05 15 27.0	
	comp=Z,9.6nm,1.4s								
DBIC	**Dimbokro**	**63.88**	**88**	P		**P**		**05 16 33.9**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=262,slow=7.7,SNR=4.9								
SUMG	**Summit**	**64.98**	**10**	P		**P**		**05 16 40.8**	**+0.3**
SUMG					IAmb	IAmb		05 16 57.1	
	comp=Z,6.4nm,1.2s								
TOA0	**Torodi Ar. Sit**	**69.50**	**80**	P		**P**		**05 17 09.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**69.50**	**80**	P		**P**		**05 17 09.7**	**0.0**
	comp=Z,3.0nm,0.7s,baz=288,slow=5.3,SNR=14								
TORD	**Torodi Ar. Bea**	**69.50**	**80**	P		**P**		**05 17 09.5**	**-0.2**
FINES	**FINESS Array B**	**83.70**	**29**	P		**P**		**05 18 29.9**	**+0.7**
	comp=Z,6.8nm,1.2s,baz=241,slow=8.7,SNR=4.4								

IDC ***16*** *05:07:47.3±1.5,39°.88S×176°.66E,h0km,mb3.9/2, mb1 4.1/3,mb1mx3.7/28,mbtmp3.8/3,ML3.2/1,MS3.3/2, Ms1 3.3/2,ms1mx2.8/25,Error ellipse: s-maj=40.4km s-min=21.3km az=117.0*
WEL ***16*** *05:07:49.9,40°.S±1°.×17°.7E±°,h45km±2km,M3.9/69, ML4.2/69,MLv3.9/69,Error ellipse: s-maj=0.0km s-min=0.0km az=93.1*
ISC 16 05:07:51.1±0.9,40°.01S±0°.03×176°.91E±0°.04,h43km±5km, n143,σ1°26/154,**North Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PXZ	**Pawanui**	**0.04**	**237**	P		**Pn**		**05 07 57.5**	**-0.3**
PXZ				S		**Sn**		**05 08 02.7**	**+0.1**
KAHZ	**Kahuranaki**	**0.21**	**353**	P		**Pn**		**05 07 57.9**	**-1.0**
KAHZ				S		**Sn**		**05 08 03.2**	**-1.1**
PRHZ	**Porangahau**	**0.33**	**219**	P		**Pn**		**05 08 00.6**	**+0.6**
PRHZ				S		**Sn**		**05 08 07.9**	**+1.7**
WPHZ	**Waipukurau**	**0.36**	**261**	P		**Pn**		**05 07 59.8**	**-0.5**
WPHZ				S		**Sn**		**05 08 06.4**	**-0.3**
CKHZ	**Cape Kidnapper**	**0.37**	**20**	P		**Pn**		**05 08 00.1**	**-0.2**
CKHZ				S		**Sn**		**05 08 07.8**	**+0.9**
KRHZ	**Kereru**	**0.55**	**311**	P		**Pn**		**05 08 01.2**	**-1.5**
KRHZ				S		**Sn**		**05 08 08.1**	**-2.7**
PNHZ	**Pukenui**	**0.55**	**280**	P		**Pn**		**05 08 01.7**	**-1.0**
PNHZ				S		**Sn**		**05 08 09.2**	**-1.7**
ANWZ	**Angora Road**	**0.56**	**216**	P		**Pn**		**05 08 03.5**	**+0.8**
ANWZ				S		**Sn**		**05 08 13.8**	**+2.8**
MCHZ	**McNeill Hill**	**0.59**	**344**	P		**Pn**		**05 08 02.5**	**-0.5**
MCHZ				S		**Sn**		**05 08 11.4**	**-0.2**
DVHZ	**Dannevirke**	**0.64**	**243**	P		**Pn**		**05 08 03.9**	**+0.1**
DVHZ				S		**Sn**		**05 08 13.6**	**+0.7**
KWHZ	**Kaweka Forest**	**0.69**	**327**	P		**Pn**		**05 08 03.4**	**-1.1**
KWHZ				S		**Sn**		**05 08 13.1**	**-1.1**
TSZ	**Takapari Road**	**0.73**	**266**	P		**Pn**		**05 08 04.5**	**-0.5**
TSZ				S		**Sn**		**05 08 14.2**	**-0.9**
ARHZ	**Aropaoanui**	**0.75**	**5**	P		**Pn**		**05 08 05.1**	**-0.1**
BHHZ	**Black Hill Sta**	**0.83**	**308**	P		**Pn**		**05 08 05.3**	**-1.1**
BHHZ				S		**Sn**		**05 08 15.7**	**-1.9**
BFZ	**Birch Farm**	**0.84**	**217**	P		**Pn**		**05 08 06.9**	**+0.4**
BFZ				S		**Sn**		**05 08 19.8**	**+2.1**
BKZ	**Black Stump Fm**	**0.90**	**339**	P		**Pn**		**05 08 06.6**	**-0.8**
BKZ				S		**Sn**		**05 08 18.5**	**-0.7**
PRWZ	**Pori Road**	**0.90**	**232**	P		**Pn**		**05 08 07.9**	**+0.5**
NMHZ	**Naumai**	**0.91**	**355**	P		**Pn**		**05 08 07.4**	**-0.1**
NMHZ				S		**Sn**		**05 08 20.0**	**+0.5**
POWZ	**Post Office Ro**	**0.95**	**246**	P		**Pn**		**05 08 08.4**	**+0.4**
WHHZ	**Waihua**	**0.96**	**15**	P		**Pn**		**05 08 08.3**	**+0.1**
CPWZ	**Castlepoint**	**1.05**	**211**	P		**Pn**		**05 08 10.1**	**+0.8**
MOVZ	**Moawhango**	**1.07**	**304**	P		**Pn**		**05 08 09.3**	**-0.5**
MOVZ				S		**Sn**		**05 08 22.8**	**-0.7**
TIWZ	**Tintock**	**1.10**	**225**	P		**Pn**		**05 08 10.3**	**+0.3**
RAHZ	**Arahi**	**1.10**	**7**	P		**Pn**		**05 08 09.9**	**-0.1**
KNZ	**Kokohu**	**1.15**	**31**	P		**Pn**		**05 08 10.4**	**-0.3**
MHGZ	**Mahia Peninsul**	**1.15**	**42**	P		**Pn**		**05 08 11.2**	**+0.5**
MTHZ	**Maungataniwha**	**1.16**	**357**	P		**Pn**		**05 08 10.4**	**-0.4**
MRZ	**Mangatainoka R**	**1.21**	**237**	P		**Pn**		**05 08 11.4**	**-0.1**
TUVZ	**Tukino**	**1.22**	**307**	P		**Pn**		**05 08 12.0**	**+0.3**
WNVZ	**Wahianoa**	**1.22**	**303**	P		**Pn**		**05 08 11.9**	**+0.1**
MRHZ	**Matea Rd**	**1.23**	**342**	P		**Pn**		**05 08 11.8**	**0.0**
OHWZ	**Ohakea**	**1.24**	**260**	P		**Pn**		**05 08 13.7**	**+1.8**
WHVZ	**Whangaehu Hut**	**1.25**	**305**	P		**Pn**		**05 08 12.3**	**0.0**
SNGZ	**Shannon Statio**	**1.27**	**15**	P		**Pn**		**05 08 12.3**	**-0.1**
DRZ	**Dome Shelter**	**1.27**	**305**	P		**Pn**		**05 08 13.0**	**+0.3**
ETVZ	**East Tongariro**	**1.27**	**313**	P		**Pn**		**05 08 12.7**	**+0.3**
MTVZ	**Mangateitei**	**1.27**	**299**	P		**Pn**		**05 08 12.8**	**+0.4**
OTVZ	**Oturere**	**1.28**	**311**	P		**Pn**		**05 08 12.9**	**+0.3**
HATZ	**Hinemaiaia**	**1.28**	**330**	P		**Pn**		**05 08 13.1**	**+0.5**
FWVZ	**Far West T-bar**	**1.29**	**305**	P		**Pn**		**05 08 12.8**	**0.0**
TMVZ	**Te Maari**	**1.29**	**313**	P		**Pn**		**05 08 12.5**	**-0.2**
NGZ	**Ngauruhoe**	**1.31**	**309**	P		**Pn**		**05 08 13.4**	**+0.4**
RITZ	**Rihia Road**	**1.31**	**321**	P		**Pn**		**05 08 13.8**	**+0.8**
PRGZ	**Paritu Road**	**1.32**	**35**	P		**Pn**		**05 08 13.1**	**0.0**
KRVZ	**Karewarewa**	**1.34**	**313**	P		**Pn**		**05 08 13.5**	**+0.2**
TMWZ	**Te Maipa**	**1.34**	**215**	P		**Pn**		**05 08 13.2**	**-0.2**
WTVZ	**West Tongariro**	**1.35**	**311**	P		**Pn**		**05 08 14.1**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.39**	**230**	P		**Pn**		**05 08 13.5**	**-0.4**
RTZ	**Ruatahuna**	**1.39**	**2**	P		**Pn**		**05 08 13.7**	**-0.3**
KATZ	**Kakaramea**	**1.40**	**317**	P		**Pn**		**05 08 15.4**	**+1.2**
PKVZ	**Pokaka**	**1.40**	**300**	P		**Pn**		**05 08 14.7**	**+0.4**
RATZ	**Rangitukua**	**1.44**	**322**	P		**Pn**		**05 08 16.3**	**+1.6**
RIGZ	**Rimuhau**	**1.46**	**27**	P		**Pn**		**05 08 14.7**	**-0.2**
TWVZ	**Taurewa**	**1.47**	**309**	P		**Pn**		**05 08 15.4**	**+0.1**
WAZ	**Wanganui**	**1.50**	**279**	P		**Pn**		**05 08 16.7**	**+1.1**
ALRZ	**Allen Road**	**1.51**	**343**	P		**Pn**		**05 08 15.4**	**-0.2**
WHTZ	**Whakaora**	**1.53**	**331**	P		**Pn**		**05 08 17.8**	**+1.9**
MUGZ	**Murupara**	**1.53**	**356**	P		**Pn**		**05 08 15.7**	**-0.3**
OGWZ	**Otaki Gorge**	**1.56**	**238**	P		**Pn**		**05 08 15.9**	**-0.3**
PRRZ	**Plateau Road**	**1.56**	**345**	P		**Pn**		**05 08 16.2**	**-0.1**
RAGZ	**Rawiri**	**1.56**	**15**	P		**Pn**		**05 08 15.9**	**-0.5**
MTW	**Mount Morrison**	**1.57**	**223**	P		**Pn**		**05 08 15.8**	**-0.7**
WATZ	**Wairara**	**1.59**	**325**	P		**Pn**		**05 08 18.0**	**+1.3**
WPRZ	**Whakapapataran**	**1.59**	**338**	P		**Pn**		**05 08 16.5**	**-0.3**
TRWZ	**Travellers**	**1.67**	**213**	P		**Pn**		**05 08 16.9**	**-0.9**
HRRZ	**Handcock Road**	**1.69**	**343**	P		**Pn**		**05 08 18.4**	**+0.4**
RRRZ	**Republican Roa**	**1.69**	**349**	P		**Pn**		**05 08 18.0**	**-0.2**
TKGZ	**Te Karaka**	**1.73**	**25**	P		**Pn**		**05 08 15.5**	**-3.1**
KUTZ	**Kaahu Road**	**1.73**	**331**	P		**Pn**		**05 08 18.6**	**-0.1**
MWZ	**Matawai**	**1.74**	**16**	P		**Pn**		**05 08 18.0**	**-0.9**
KIW	**Kapiti Island**	**1.75**	**240**	P		**Pn**		**05 08 18.8**	**-0.1**
URZ	**Urewera**	**1.75**	**5**	Pn		**Pn**		**05 08 18.0**	**-0.9**
	20nm,0.3s,baz=218,slow=6.8,SNR=82								
URZ					Sn	**Sn**		**05 08 38.8**	**-1.2**
	54nm,0.3s,baz=354,slow=10,SNR=11								
URZ					LR	LR		05 08 55.1	
	comp=Z,80nm,19.7s,baz=211,slow=41								
URZ	**Urewera**	**1.75**	**5**	P		**Pn**		**05 08 18.1**	**-0.8**
GRRZ	**Galatos Road**	**1.77**	**339**	P		**Pn**		**05 08 19.5**	**+0.3**
HSRZ	**Hossack Road**	**1.77**	**343**	P		**Pn**		**05 08 19.1**	**-0.1**
PAWZ	**Paruwai Farm**	**1.78**	**219**	P		**Pn**		**05 08 18.4**	**-1.0**
CAW	**Cannon Point**	**1.78**	**231**	P		**Pn**		**05 08 18.6**	**-0.8**
TARZ	**Mount Tarawera**	**1.80**	**350**	P		**Pn**		**05 08 19.6**	**-0.1**
HLRZ	**Highlands Stat**	**1.81**	**346**	P		**Pn**		05 08 26.4	+6.6
VRZ	**Vera Road**	**1.88**	**297**	P		**Pn**		**05 08 21.7**	**+1.0**
MSWZ	**Moikau Station**	**1.89**	**221**	P		**Pn**		**05 08 19.5**	**-1.4**
EDRZ	**Edgecumbe**	**1.90**	**356**	P		**Pn**		**05 08 20.8**	**-0.3**
UTU	**Utuhina**	**1.91**	**343**	P		**Pn**		**05 08 22.7**	**+1.6**
OMRZ	**Omania**	**1.94**	**347**	P		**Pn**		**05 08 21.1**	**-0.5**
TLZ	**Tolley Road**	**1.99**	**327**	P		**Pn**		**05 08 22.6**	**+0.4**
PLWZ	**Palliser**	**2.00**	**218**	P		**Pn**		**05 08 21.0**	**-1.4**
LREZ	**Lake Rotokare**	**2.01**	**285**	P		Pn		05 08 26.4	+4.0
TWGZ	**Tauwhareparae**	**2.01**	**25**	P		**Pn**		**05 08 22.6**	**+0.1**
WEL	**Wellington**	**2.07**	**231**	P		**Pn**		**05 08 22.7**	**-0.6**
BHW	**Baring Head**	**2.09**	**227**	P		**Pn**		**05 08 22.1**	**-1.4**
RUGZ	**Raukumara Rang**	**2.12**	**17**	P		**Pn**		**05 08 23.5**	**-0.7**
OPRZ	**Ohinepanea**	**2.18**	**353**	P		**Pn**		**05 08 24.4**	**-0.4**
HIZ	**Hauiti**	**2.18**	**312**	P		**Pn**		**05 08 25.3**	**+0.5**
PUZ	**Puketiti**	**2.20**	**29**	P		**Pn**		**05 08 23.9**	**-1.2**
MHEZ	**

GHIR Ghir-Karzin 3.02 272 ePn Pn 05 13 54.6 +2.0
UOSS Minazif 3.28 183 i P Pn 05 13 57.6 +1.7
SNR=68
UOSS Minazif 3.28 183 P Pn 05 13 58.2 +2.3
UOSS S Sn 05 14 38.4 +3.8
UOSS Minazif 3.28 183 ePn Pn 05 13 57.7 +1.7
UOSS Minazif 3.28 183 Pn Pn 05 13 57.9 +1.9
UOSS Sn Sn 05 14 32.1 -2.5
HATD Hatta, Dubai 3.40 184 i P Pn 05 13 59.5 +1.9
SNR=40
HATD Hatta, Dubai 3.40 184 P Pn 05 14 00.5 +2.9
SNR=41
HATD S Sn 05 14 41.0 +3.4
HATD Hatta, Dubai 3.40 184 ePn Pn 05 14 00.1 +2.4
IBAF Bafgh 3.43 348 ePn Pn 05 14 01.1 +3.0
IMEH Mehriz 3.52 334 ePn Pn 05 14 02.1 +2.7
FAQ Al Faqa, Dubai 3.55 192 i P Pn 05 14 02.4 +2.7
SNR=26
FAQ Al Faqa, Dubai 3.55 192 P Pn 05 14 03.0 +3.3
SNR=20
FAQ S Sb 05 14 47.0 -3.5
FAQ Al Faqa, Dubai 3.55 192 ePn Pn 05 14 02.7 +3.0
SHI Shiraz 3.70 293 P Pn 05 14 04.0 +2.2
SHI Shiraz 3.70 293 ePn Pn 05 14 04.1 +2.2
SHI e 05 15 23.2
ASUD Al Ashush, Dub 3.72 195 i P Pn 05 14 05.3 +3.3
SNR=103
ASUD Al Ashush, Dub 3.72 195 P Pn 05 14 05.7 +3.6
SNR=103
ASUD Al Ashush, Dub 3.72 195 ePn Pn 05 14 05.0 +3.0
AJN Ajban 3.87 200 P Pn 05 14 07.3 +3.3
AJN Ajban 3.87 200 P Pn 05 14 07.4 +3.3
SNR=12
AJN Ajban 3.87 200 ePn Pn 05 14 07.3 +3.3
SZD1 Zahaedan-tmp 4.10 71 ePn Pn 05 14 10.3 +2.9
ALNE Al Ain 4.20 188 i P Pn 05 14 10.9 +2.2
SNR=27
ALNE Al Ain 4.20 188 ePn Pn 05 14 11.7 +3.0
ICHK Chekchek 4.36 337 ePn Pn 05 14 13.6 +2.6
ISAD Sadrabad 4.37 328 ePn Pn 05 14 14.3 +3.1
BSRN Basiran 4.40 32 ePn Pn 05 14 13.6 +2.1
BSRN Basiran 4.40 32 ePn Pn 05 14 13.6 +2.1
YZKH Yazd 4.43 340 ePn Pn 05 14 13.6 +1.6
YZKH Yazd 4.43 340 ePn Pn 05 14 13.6 +1.6
NHDN Nehbandan 4.46 44 ePn Pn 05 14 15.5 +3.2
CHBR Chabahar 4.48 125 ePn Pn 05 14 14.1 +1.6
CHBR Chabahar 4.48 125 ePn Pn 05 14 14.1 +1.6
AHBU AHRAM 4.55 279 ePn Pn 05 14 14.7 +1.3
IKOO Kooshah 4.74 28 ePn Pn 05 14 18.4 +2.1
TPRV Parvadeh(Tabas 4.79 3 ePn Pn 05 14 19.7 +2.9
ARQ Araqi 4.88 179 P Pn 05 14 21.2 +3.2
SNR=42
ARQ S Sn 05 15 18.7 +4.7
IRAM Ramesheh 4.99 317 ePn Pn 05 14 22.1 +2.4
KLNJ Kolanjah 5.03 305 ePn Pn 05 14 22.4 +2.1
KLNJ e 05 14 25.8
ITEG Tejag 5.07 23 ePn Pn 05 14 23.6 +2.9
WSAR Wadi Sarin 5.36 158 Pn Pn 05 14 25.8 +1.3
comp=N,11nm,0.3s,baz=352,slow=7.5,SNR=90
WSAR Sn Sn 05 15 24.3 -1.6
comp=N,11nm,0.3s,baz=68,slow=23,SNR=8.8
IDAH Dahanechah 5.39 33 ePn Pn 05 14 29.9 +4.7
TKDS Koohdasht(Taba 5.40 6 ePn Pn 05 14 28.4 +3.2
TABS Tabas 5.43 6 ePn Pn 05 14 27.3 +1.6
TABS Tabas 5.43 6 ePn Pn 05 14 27.3 +1.6
ANAR Anarak 5.46 336 ePn Pn 05 14 28.4 +2.4
BSY Bisya 5.51 172 P Pn 05 14 29.3 +2.7
SNR=18
NASN Na'in 5.51 327 ePn Pn 05 14 28.8 +1.8
NASN Na'in 5.51 327 ePn Pn 05 14 28.8 +1.8
UMZA Um Al Zommool 5.61 192 ePn Pn 05 14 29.8 +1.8
IGAR Gharneh 5.62 319 ePn Pn 05 14 30.4 +2.1
AFRZ Afriz 5.64 23 ePn Pn 05 14 29.6 +1.1
IMON Monand 5.68 29 ePn Pn 05 14 31.7 +2.5
TNSJ Nastanj 5.72 2 ePn Pn 05 14 32.1 +2.5
IZEF Zefreh 5.83 324 ePn Pn 05 14 33.0 +1.7
WBK Wadi Bani Khal 6.05 157 P Pn 05 14 35.6 +1.5
SNR=8.3
WBK S Sn 05 15 43.6 +0.5
ZNGN Zangian 6.18 310 ePn Pn 05 14 38.7 +2.6
SHRT Shahrakht 6.34 31 ePn Pn 05 14 40.1 +2.0
SHRT Shahrakht 6.34 31 ePn Pn 05 14 40.1 +2.0
IPIR Pirpir 6.51 314 ePn Pn 05 14 42.6 +1.9
IKLH Kolahrood 6.56 322 ePn Pn 05 14 42.3 +1.0
QAM Ghamsar 6.97 323 ePn Pn 05 14 48.9 +2.0
MHTO MHTO 7.35 169 P Pn 05 14 53.6 +1.7
SNR=12
NHRD Haradh 7.50 244 P Pn 05 14 55.1 +1.1
IANJ Anjilo 7.52 344 ePn Pn 05 14 56.2 +1.8
IVRN Varamin 7.84 331 ePn Pn 05 15 01.3 +2.7
HRA Herat 7.91 38 Pn Pn 05 14 54.8 -4.9
ISHM Shahmirzad 8.00 341 ePn Pn 05 15 04.2 +3.1
IFIR Firoozkooh 8.02 338 ePn Pn 05 15 03.9 +2.6
SBZV Sabzevar 8.20 7 ePn Pn 05 15 06.2 +2.5
IDMV Damavand 8.21 334 ePn Pn 05 15 06.6 +2.6
ASAO Ashtian 8.33 321 ePn Pn 05 15 07.5 +1.9
ASAO Ashtian 8.33 321 ePn Pn 05 15 07.1 +1.5
JRKH Jarkhoshk 8.35 23 ePn Pn 05 15 08.7 +3.0
BMDN Meydan 8.48 312 ePn Pn 05 15 08.1 +0.6
IPAY Payeh 8.48 14 ePn Pn 05 15 10.7 +3.1
IGLO Ghaloghah 8.53 346 ePn Pn 05 15 12.0 +3.7
IMYA Miami 8.67 20 ePn Pn 05 15 13.3 +3.2
IKMR Kamar-syah 8.68 309 ePn Pn 05 15 10.5 +0.3
IPRN Peran 8.70 338 ePn Pn 05 15 14.1 +3.6
IKRD Kardeh 8.70 11 ePn Pn 05 15 17.3 +6.6
ISFR Sfrayin 8.90 8 ePn Pn 05 15 17.2 +3.8
HSAM Samen 8.96 314 ePn Pn 05 15 14.5 +0.3
IDOB Doab 8.98 310 ePn Pn 05 15 14.7 +0.3
IRAZ Razeghan 9.03 324 ePn Pn 05 15 16.9 +1.8
IKFM Kafar-mosalman 9.05 308 ePn Pn 05 15 15.2 -0.1
RQBS RQBS 9.30 267 P Pn 05 15 18.1 -0.6
QALM Alamut, Qazvin 9.52 331 ePn Pn 05 15 24.5 +2.6
IBZA Bozab 9.60 313 ePn Pn 05 15 22.9 -0.1
IALM Almabolaq 9.65 315 ePn Pn 05 15 23.8 +0.1
IKOM Komasi 9.65 310 ePn Pn 05 15 23.9 +0.3
GEYT Alibeck 9.78 8 Pn Pn 05 15 26.0 +0.8
comp=N,0.3nm,0.3s,baz=201,slow=7.7,SNR=4.2
GEYT LR LR 05 19 29.9
comp=N,412nm,20.5s,baz=185,slow=40
GEYT Alibeck 9.78 8 Pn 05 15 26.4 +1.2
KCHF Cheshme Sefid, 10.03 309 ePn Pn 05 15 28.4 -0.4
KER Kermanshah 10.03 310 ePn Pn 05 15 28.9 +0.1
SHAO Shalim 10.19 184 P Pn 05 15 31.6 +0.7
SNR=51
IVIS Veis 10.30 310 ePn Pn 05 15 31.9 -0.6
IGHG Ghaleghazi 10.38 308 ePn Pn 05 15 34.1 +0.4
ILIN Lien 10.46 312 ePn Pn 05 15 34.5 -0.2
IDHR Dehrash 10.71 309 ePn Pn 05 15 37.5 -0.7
RAYN Ar Rayn 10.88 247 i P Pn 05 15 39.0 -1.4
SNR=28
RAYN Ar Rayn 10.88 247 P Pn 05 15 39.0 -1.4
RAYN Ar Rayn 10.88 247 Pn 05 15 39.0 -1.4
KBL Kabul 12.48 57 P Pn 05 16 04.4 +2.0
MNGR Mingechevir, A 14.67 331 P P 05 16 41.1 +2.9
GANJ Ganja 14.91 329 P P 05 16 43.9 +3.0
SEKA Sheki 14.99 332 P P 05 16 44.6 +2.8
GNI Garni 15.30 324 Pn P 05 16 47.6 +2.2
comp=N,1.6nm,0.3s,baz=84,slow=3.5,SNR=5.6
GNI LR LR 05 23 04.1
comp=N,175nm,18.7s,baz=132,slow=39
GNI Garni 15.30 324 i P Pn 05 16 41.0 +0.3
GNI Garni 15.30 324 P Pn 05 16 42.6 +2.0
GNI IAmb IAmb 05 16 51.7
comp=Z,18nm,0.7s
NIL Nilore 15.42 65 P P 05 16 48.1 +1.5
NIL pmax pmax
comp=Z,19nm,1.0s
NIL Nilore 15.42 65 P P 05 16 48.1 +1.5
NIL IAmb IAmb 05 17 16.9
comp=Z,19nm,1.0s
LGD Lagodekhi 15.91 331 P P 05 16 52.5 +0.5
MARD Mardin 15.95 309 Pn Pn 05 16 46.2 -2.9
MARD IAmb IAmb 05 16 55.0
comp=Z,66nm,0.7s
SOCY Socotra 16.12 189 P Pn 05 16 49.1 -2.2
SOCY IAmb IAmb 05 16 54.9
comp=Z,37nm,0.9s
MAK Makhachkala 16.37 336 eP Pn 05 16 49.0 -5.3
MAK eS Sn 05 19 46.7 -8.8
MAK pmax pmax
comp=Z,114nm,0.9s
MAK MLR MLR
comp=Z,148nm,13.0s
KARS Kars 16.53 322 P P 05 16 59.2 +0.2
BTK Batken 16.75 41 P Pn 05 16 58.9 -0.3
BTK pmax pmax
comp=Z,18nm,1.3s
BTK Batken 16.75 41 P Pn 05 16 58.9 -0.3
AKH Akhalkalaki 16.87 325 P P 05 17 04.9 +2.1
KOPT Kop Dagi 17.63 316 P P 05 17 14.3 +3.0
ZEI Tsey 17.71 328 eP P 05 17 13.6 +1.5
ZEI pmax pmax
comp=Z,6.0nm,0.8s
ONI Oni 17.77 327 P P 05 17 13.3 +0.7
MALT Malatya 18.06 308 P Pn 05 17 15.3 -0.3
GAZ Gaziantep 18.43 304 P P 05 17 17.4 -2.6
MMAI Mount Meron Ar 18.69 290 P P 05 17 23.7 +0.8
comp=Z,0.9nm,0.3s,baz=102,slow=14,SNR=2.8
MMAI LR LR 05 26 29.3
comp=Z,308nm,18.5s,baz=130,slow=43
KK31 Karatay Array 18.70 34 P P 05 17 23.1 +0.2
KK31 pmax pmax
comp=Z,9.0nm,1.1s
KK31 Karatay Array 18.70 34 P P 05 17 23.1 +0.2
KKAR Karatay Array 18.70 34 P Pn 05 17 23.3 0.0
KKAR pmax pmax
comp=Z,9.0nm,1.1s
KKAR Karatay Array 18.70 34 P Pn 05 17 23.3 0.0
KKAR Karatay Array 18.70 34 P P 05 17 22.4 -0.5
EIL Elat 18.84 280 P Pn 05 17 26.1 +1.1
comp=Z,0.7nm,0.3s,baz=70,slow=4.0,SNR=8.8
EIL LR LR 05 25 26.7
comp=Z,43nm,21.4s,baz=115,slow=40
KBZ Khabaz 18.90 328 P P 05 17 25.4 +0.5
comp=Z,0.1nm,0.3s,baz=233,slow=20,SNR=2.3
KIV Kislovodsk 19.17 329 eP Pn 05 17 30.5 +1.4
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,101nm,14.0s
KSH Kashi 19.71 50 P P 05 17 28.3 -5.8
KSH pP Pn 05 17 36.3 +0.7
KSH S S 05 21 01.3 -15
KSH pmax pmax
comp=Z,11nm,0.6s
KSH pmax pmax
comp=Z,250nm,5.0s
KSH LR LR
comp=N,570nm,8.9s
KSH LR LR
comp=E,650nm,6.3s
KSH LR LR
comp=Z,540nm,11.6s
GOF Gofitskoye 19.88 331 eP Pn 05 17 37.3 -0.1
GOF pmax pmax
comp=Z,28nm,0.8s
SOC Sochi 20.38 323 eP P 05 17 40.7 -0.4
SOC e 05 17 58.1
SOC ePPP PPP 05 18 06.5
SOC eS S 05 21 31.4 +2.6
SOC eSS SnSn 05 21 51.4 +4.3
SOC eSSS SSS 05 22 01.1
SOC pmax pmax
comp=Z,16nm,0.7s
SOC MLR MLR
comp=Z,174nm,17.0s
AAK Ala-Archa 20.52 41 eP P 05 17 43.5 +0.6
AAK pmax pmax
comp=Z,17nm,1.0s
AAK Ala-Archa 20.52 41 P P 05 17 43.1 +0.2
AB31 Akbulak array 21.17 6 i P P 05 17 50.0 +0.4
ABKAR Akbulak array 21.17 6 P P 05 17 50.1 +0.5
ABKAR IAmb IAmb 05 18 06.1
comp=Z,16nm,0.8s
ABKAR Akbulak array 21.17 6 P P 05 17 49.6 0.0
KDJ Kajisay 21.84 45 P P 05 17 57.8 +0.7
KDJ pmax pmax
comp=Z,14nm,0.8s
KDJ Kajisay 21.84 45 P P 05 17 57.8 +0.7
KDJ IAmb IAmb 05 18 05.9
comp=Z,14nm,0.8s
BRTR Keskin Array B 22.03 307 P P 05 18 00.0 +0.8
comp=Z,15nm,0.8s,baz=127,slow=14,SNR=6.3
BRTR Keskin Array B 22.03 307 P P 05 17 59.0 -0.2
BR131 Keskin Array S 22.03 307 P P 05 17 59.0 -0.2
BR131 pmax pmax
comp=Z,14nm,0.9s
BR131 Keskin Array S 22.03 307 P P 05 17 59.0 -0.2
BR131 IAmb IAmb 05 18 03.0
comp=Z,14nm,0.8s
AKTO Aktyubinsk 22.21 3 P P 05 18 02.1 +1.3
comp=Z,16nm,0.7s,baz=190,slow=11,SNR=3.0
AKTO LR LR 05 28 06.5
comp=Z,236nm,18.8s,baz=168,slow=41
ILGA Ilgaz 22.56 310 P P 05 18 03.0 -1.9
BR231 Keskin MP Arra 22.69 307 P P 05 18 07.6 +1.5
BR231 IAmb IAmb 05 18 13.0
comp=Z,18nm,0.8s
HYB Hyderabad 23.03 113 i P P 05 18 11.0 +1.2
PYUN Piuthan 23.42 84 eP P 05 18 15.3 +1.4
comp=Z,31nm,0.6s
ELL Elmali 23.86 298 P P 05 18 16.0 -2.0
ELL pmax pmax
comp=Z,49nm,0.7s
ELL Elmali 23.86 298 P P 05 18 16.0 -2.0
KOLN Koldanda 23.99 85 eP P 05 18 20.2 +0.8
MDUB Mudurnu 24.05 307 P P 05 18 16.7 -3.0
DANN Dangsing 24.06 83 eP P 05 18 21.3 +1.1
comp=Z,85nm,0.6s
GKN Gorkha 24.87 84 eP P 05 18 27.7 +0.3
comp=Z,25nm,0.5s
DMN Daman 25.34 85 eP P 05 18 31.8 +0.1
comp=Z,23nm,0.7s
KKN Kakani 25.46 84 eP P 05 18 33.1 +0.3
comp=Z,63nm,0.9s
PKIN Phulchoki 25.60 85 eP P 05 18 34.7 +0.6
comp=Z,35nm,0.6s
PKI Pulchoki 25.61 85 eP P 05 18 34.7 +0.4
comp=Z,25nm,0.6s
KARP Karpathos 25.82 294 P P 05 18 34.0 -1.8
GUN Gumba 25.97 84 eP P 05 18 38.4 +0.8
comp=Z,77nm,0.8s
RAMN Ramite 26.75 86 eP P 05 18 44.5 -0.1
comp=Z,24nm,0.7s
BRVK Borovoye 26.84 19 i P P 05 18 44.3 -0.5
BRVK pmax pmax
comp=Z,5.0nm,0.9s
BRVK Borovoye 26.84 19 P P 05 18 44.8 0.0
BVAR Borovoye Array 26.84 19 P P 05 18 45.5 +0.7
comp=Z,4.5nm,0.9s,baz=227,slow=32,SNR=14
MAKZ Makanchi 27.28 40 P P 05 18 48.5 -0.3
MAKZ pmax pmax
comp=Z,9.0nm,0.9s
MAKZ Makanchi 27.28 40 P P 05 18 48.5 -0.3
MAKZ IAmb IAmb 05 18 50.9
comp=Z,8.8nm,0.9s
MK31 Makanchi Array 27.45 41 i P P 05 18 50.7 +0.3
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 27.45 41 P P 05 18 49.9 -0.6
MKAR Makanchi Array 27.45 41 P P 05 18 50.9 +0.5
comp=Z,2.7nm,0.6s,baz=226,slow=8.6,SNR=30
MKAR PcP PcP 05 22 07.6 -1.1
comp=Z,0.8nm,0.7s,baz=245,slow=1.7,SNR=4.0
MKAR Makanchi Array 27.45 41 P P 05 18 50.6 +0.2
IDI Anoyia 27.63 293 P P 05 18 52.9 +0.7
comp=Z,10nm,0.6s,baz=56,slow=6.0,SNR=9.0
IDI Anoyia 27.63 293 ⇓P P 05 18 51.1 -1.1
KURBB Kurchatov Arra 27.94 31 P P 05 18 55.1 +0.4
comp=Z,3.2nm,0.9s,baz=230,slow=8.6,SNR=19
KURBB Kurchatov Arra 27.94 31 P P 05 18 54.6 0.0
KURK Kurchatov 28.05 31 ceP P 05 18 56.0 +0.4
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURK Kurchatov 28.05 31 P P 05 18 54.7 -0.8
ARU Arti 28.22 3 P P 05 19 04.0 +6.9
ARU 05 19 50.7
VRI Vrincioaia 29.28 315 ⇑P P 05 19 07.7 +1.0
VRI Vrincioaia 29.28 315 ⇑P P 05 19 07.7 +1.0
SORM Soroca 29.43 320 ⇓P P 05 19 06.9 -1.0
SORM Soroca 29.43 320 ⇓P P 05 19 06.9 -1.0
WMQ Urumqi 29.48 50 eP P 05 19 10.4 +1.9
WMQ pP sP 05 19 15.3 -1.0
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,110nm,3.9s
WMQ LR LR
comp=N,260nm,5.1s
WMQ LR LR
comp=E,290nm,6.1s
WMQ LR LR
comp=Z,110nm,18.3s
MLR Muntele Rosu 29.61 314 P P 05 19 10.2 +0.5
comp=Z,5.0nm,1.0s,baz=48,slow=7.1,SNR=5.2
MLR LR LR 05 32 18.8
comp=Z,36nm,18.3s,baz=33,slow=39
MLR Muntele Rosu 29.61 314 ⇑P P 05 19 12.6 +2.9
MLR Muntele Rosu 29.61 314 ⇑P P 05 19 12.6 +2.9
TESR Tescani 29.62 316 ⇑P P 05 19 09.2 -0.5
BIZ Bicaz 30.15 316 ⇑P P 05 19 14.6 +0.2
VOIR 30.16 313 ⇓P P 05 19 15.6 +1.1
VOIR 30.16 313 ⇓P P 05 19 15.6 +1.1
ARR Arges 30.40 313 ⇑P P 05 19 16.6 -0.1
AKASG Malin Array Be 30.43 325 P P 05 19 16.4 -0.4
comp=Z,2.1nm,0.6s,baz=131,slow=8.6,SNR=14
AKASG PcP PcP 05 22 15.3 -0.7
comp=Z,0.9nm,0.6s,baz=110,slow=2.5,SNR=4.1
AKASG Malin Array Be 30.43 325 P P 05 19 15.2 -1.5
AKASG pmax pmax
comp=Z,2.0nm,0.9s
AKASG Malin Array Be 30.43 325 P P 05 19 15.2 -1.5
AKBB Malin Array Si 30.43 325 P P 05 19 15.4 -1.3
AKBB pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 30.43 325 P P 05 19 15.4 -1.3
AKBB IAmb IAmb 05 19 26.3
comp=Z,5.4nm,0.8s
OBN Obninsk 30.46 337 eP P 05 19 16.5 -0.4
OBN ePPP PPP 05 20 25.1
OBN pmax pmax
comp=Z,23nm,1.4s
KIRV Kirov 30.73 353 i P P 05 19 20.0 +0.7
GZR Gura Zlata 31.62 312 ⇓P P 05 19 33.8 +6.4
GZR Gura Zlata 31.62 312 ⇓P P 05 19 33.8 +6.4
SHL Shillong 31.68 86 P P 05 19 27.5 -0.8
SHL pmax pmax
comp=Z,4.0nm,0.8s
SHL Shillong 31.68 86 P P 05 19 27.5 -0.8
SHL IAmb IAmb 05 19 33.0
comp=Z,3.9nm,0.8s
BZS Buzias 32.46 312 ⇑P P 05 19 35.0 +0.3
BZS Buzias 32.46 312 ⇑P P 05 19 35.0 +0.3
ZAA0 Zalesovo Array 33.03 31 P P 05 19 39.3 -0.3
ZAA0 IAmb IAmb 05 19 42.4
comp=Z,6.6nm,0.8s
ZALV Zalesovo Beam 33.03 31 P P 05 19 39.6 0.0
comp=Z,4.3nm,0.4s,baz=238,slow=8.5,SNR=19
ZALV PcP PcP 05 22 22.1 -0.9
comp=Z,1.2nm,0.3s,baz=214,slow=3.9,SNR=2.4
ZALV LR LR 05 33 27.2
comp=Z,38nm,18.5s,baz=266,slow=37
ZALV Zalesovo Beam 33.03 31 P P 05 19 39.2 -0.3
UZH Uzhgorod 33.21 317 eP P 05 19 40.9 -0.3
UZH i 05 19 46.7
KOLS Kolonicke sedl 33.35 318 eP P 05 19 43.6 +1.1
KOLS pmax pmax
comp=Z,15nm,1.1s
KOLS Kolonicke sedl 33.35 318 eP P 05 19 43.6 +1.1
KMBO Kilima Mbogo 34.50 215 P P 05 19 55.0 +2.0
comp=Z,1.8nm,0.7s,baz=34,slow=12,SNR=7.7
KMBO LR LR 05 33 47.9
comp=Z,47nm,19.1s,baz=89,slow=36
KMBO Kilima Mbogo 34.50 215 P P 05 19 53.3 +0.3
TIP Timpagrande 34.51 299 ⇑P P 05 19 53.3 +0.6
OJC Ojcow 35.35 319 P P 05 19 59.1 -0.7
OJC Ojcow 35.35 319 P P 05 19 59.1 -0.7
MODS Modra-Piesok 36.19 315 eP P 05 20 06.4 -0.6
MODS pmax pmax
comp=Z,14nm,1.4s
MODS Modra-Piesok 36.19 315 eP P 05 20 06.4 -0.6
SOP Sopron 36.43 313 P P 05 20 09.5 +0.5
SOP pmax pmax
comp=Z,18nm,0.9s
MORC Moravsky Berou 36.52 317 eP P 05 20 09.3 -0.6
MORC Moravsky Berou 36.52 317 P P 05 20 07.9 -2.0
MORC Moravsky Berou 36.52 317 P P 05 20 07.9 -2.0
VRAC Vranov 36.93 316 ⇑P P 05 20 13.4 +0.1
VRAC Vranov 36.93 316 eP P 05 20 13.1 -0.2
VRAC Vranov 36.93 316 ⇑P P 05 20 13.4 +0.1
CONA Conrad Observa 36.95 313 eP P 05 20 13.5 -0.1
comp=Z,3.0nm,0.7s,SNR=4.6
KRUC Moravsky 36.97 315 eP P 05 20 13.5 -0.2
ARSA Arzberg 36.98 312 i P P 05 20 14.1 +0.3
comp=Z,5.4nm,0.7s
SOKA Soboth 37.15 311 eP P 05 20 15.2 0.0
comp=Z,11nm,1.5s
GTA Gaotai 37.42 61 ⇓P P 05 20 18.8 +1.1
GTA pP sP 05 20 23.3 -2.2
GTA sP pP 05 20 25.9 +2.6
GTA PcP PcP 05 22 37.3 +1.0
GTA pmax pmax
comp=Z,6.0nm,1.2s
GTA pmax pmax
comp=Z,47nm,6.9s
GTA LR LR
comp=N,85nm,16.0s
GTA LR LR
comp=E,120nm,17.8s
GTA LR LR
comp=Z,120nm,16.7s
DPC Dobruska-Polom 37.46 317 eP P 05 20 17.6 -0.2
DPC Dobruska-Polom 37.46 317 eP P 05 20 17.6 -0.2
OSTC Ostas 37.60 318 eP P 05 20 18.9 -0.1
KSP Ksiaz 37.66 318 P P 05 20 19.8 +0.4
KSP pmax pmax
comp=Z,9.0nm,1.9s
CHVC Chvalec 37.71 318 eP P 05 20 20.0 +0.1
MOA Molln 37.96 313 eP P 05 20 21.7 -0.3
comp=Z,4.4nm,0.6s,SNR=12
MYKA Terra Mystica 38.06 311 eP P 05 20 23.3 +0.3
comp=Z,7.7nm,1.0s
KBA Koelnbreinsper 38.37 311 eP P 05 20 25.4 -0.3
comp=Z,5.9nm,0.6s
GEC2 GERESS Array S 38.60 314 P P 05 20 26.9 -0.6
GERES GERESS Array B 38.60 314 P P 05 20 27.2 -0.3
comp=Z,2.6nm,0.8s,baz=112,slow=8.8,SNR=14
GERES PcP PcP 05 22 37.4 -2.3
comp=Z,0.6nm,0.7s,baz=54,slow=5.0,SNR=2.4
GERES GERESS Array B 38.60 314 P P 05 20 25.9 -1.6
KHC Kasperske Hory 38.76 314 eP P 05 20 28.5 -0.3
KHC Kasperske Hory 38.76 314 eP P 05 20 28.5 -0.3
ABTA Abfaltersbach 38.85 311 i P P 05 20 29.4 -0.2
comp=Z,7.4nm,0.6s,SNR=8.6
FINES FINESS Array B 38.87 337 P P 05 20 28.9 -0.5
comp=Z,2.7nm,0.6s,baz=144,slow=5.5,SNR=12
FINES FINESS Array B 38.87 337 P P 05 20 29.0 -0.5
BRG Berggiesshubel 39.06 317 i P P 05 20 31.0 -0.3
comp=Z,7.4nm,1.0s
BRG Berggiesshubel 39.06 317 i P P 05 20 31.0 -0.3
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 39.06 317 eP P 05 20 31.4 +0.1
comp=Z,7.4nm,1.0s,baz=107,slow=8.4
WTTA Wattenberg 39.54 311 eP P 05 20 35.1 -0.5
comp=Z,18nm,0.6s,SNR=10
WATA Walderalm 39.60 311 eP P 05 20 35.2 -0.8
comp=Z,18nm,1.3s
CLL Collm 39.77 318 i P P 05 20 37.0 -0.1
comp=Z,23nm,1.6s
CLL i 05 20 49.7
CLL i PP PP 05 22 06.1 -2.3
CLL ePPP PPP 05 22 29.0
CLL Collm 39.77 318 i P P 05 20 37.0 -0.1
CLL i 05 20 49.7
CLL pmax pmax
comp=Z,23nm,1.6s
CLL Collm 39.77 318 eP P 05 20 37.5 +0.4
comp=Z,13nm,1.2s,baz=107,slow=8.4
CLL Collm 39.77 318 P P 05 20 35.8 -1.4
ROTZ Rotzenmuhle 39.79 315 eP P 05 20 37.6 +0.2
comp=Z,14nm,1.1s,baz=107,slow=8.4
SQTA Sankt Quirin 39.82 311 eP P 05 20 37.0 -0.7
comp=Z,17nm,0.6s,SNR=8.5
MOTA Moosalm 39.91 311 eP P 05 20 37.4 -1.2
comp=Z,12nm,0.6s,SNR=12
CMAR Chiang Mai Arr 40.07 95 PcP PcP 05 22 45.1 +0.4
comp=Z,2.9nm,0.5s,baz=280,slow=4.4,SNR=6.2
CMAR LR LR 05 41 20.9
comp=Z,39nm,19.8s,baz=330,slow=42
FETA Feichten 40.10 311 eP P 05 20 39.6 -0.6
comp=Z,13nm,0.6s,SNR=18

RETA Reutte 40.17 311 *eP* **P 05 20 39.5 -1.1**
comp=Z,5.6nm,0.7s,SNR=7.0
GRA1 Grafenberg Arr 40.39 315 P **P 05 20 40.4 -1.9**
GRA1 IAmb IAmb 05 20 43.3
comp=Z,20nm,1.0s
GRF Grafenberg Arr 40.39 315 P **P 05 20 40.4 -1.9**
GRF pmax pmax
comp=Z,20nm,1.0s
GRF Grafenberg Arr 40.39 315 *eP* **P 05 20 42.7 +0.3**
comp=Z,21nm,1.0s,baz=107,slow=8.4
MOY Mondy 40.57 42 *eP* **P 05 20 45.4 +1.5**
MOY pmax pmax
comp=Z,17nm,1.6s
LZH Lanzhou 40.58 66 *eP* **P 05 20 48.8 +4.5**
LZH pP sP 05 20 53.5 +1.4
LZH sP pP 05 20 56.4 +6.5
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,79nm,4.3s
UBR Ueberruh 40.65 311 *eP* **P 05 20 44.0 -0.5**
comp=Z,15nm,0.8s,baz=107,slow=8.4
DAVA Damuels 40.72 311 *eP* **P 05 20 44.4 -0.9**
comp=Z,21nm,0.6s,SNR=20
ZAK Zakamensk 41.61 45 *eP* **P 05 20 51.8 -0.7**
ZAK pmax pmax
comp=Z,4.0nm,1.3s
NRDL Niedersach Rie 41.84 318 *eP* **P 05 20 55.3 +1.2**
comp=Z,30nm,1.1s,baz=107,slow=8.4
BSEG Bad Segeberg 42.16 321 *eP* **P 05 20 57.3 +0.5**
comp=Z,21nm,1.2s,baz=107,slow=8.4
TNS Taunus Mts 42.26 315 *eP* **P 05 20 58.3 +0.6**
comp=Z,13nm,1.2s,baz=107,slow=8.4
ECH Echery 42.69 312 P **P 05 21 00.2 -1.0**
ECH pmax pmax
comp=Z,10.0nm,1.1s
ECH Echery 42.69 312 P **P 05 21 00.2 -1.0**
ECH IAmb IAmb 05 21 01.6
comp=Z,10nm,1.1s
SONM Songino Array 43.11 49 P **P 05 21 05.8 +1.0**
comp=Z,7.7nm,1.0s,baz=255,slow=8.4,SNR=36
SONM LR LR 05 40 58.9
comp=Z,85nm,18.7s,baz=206,slow=39
SONM Songino Array 43.11 49 P **P 05 21 04.9 +0.1**
AHRW Bad Neuenahr-A 43.18 315 *eP* **P 05 21 06.0 +0.9**
comp=Z,31nm,1.5s,baz=107,slow=8.4
BUG Bochum--Univer 43.26 316 *eP* **P 05 21 06.6 +0.9**
comp=Z,20nm,1.1s,baz=107,slow=8.4
ULN Ulaanbaatar 43.55 49 *ceP* **P 05 21 08.3 -0.1**
ULN pmax pmax
comp=Z,13nm,1.0s
ULN Ulaanbaatar 43.55 49 P **P 05 21 08.9 +0.5**
ULN IAmb IAmb 05 21 09.9
comp=Z,12nm,1.1s
NB2 NORSAR Subarra 44.47 330 P **P 05 21 14.5 -0.9**
comp=Z,4.0nm,1.0s,baz=117,slow=7.9
NOA NORSAR Array B 44.47 330 P **P 05 21 14.4 -0.9**
comp=Z,1.2nm,0.6s,baz=128,slow=8.7,SNR=4.8
XAN Xi'an 44.91 69 P **P 05 21 19.4 +0.1**
XAN pP sP 05 21 35.6 +8.3
XAN pmax pmax
comp=Z,8.0nm,0.9s
NRIK Noril'sk 44.93 15 P **P 05 21 19.7 +0.8**
comp=Z,3.5nm,0.8s,baz=224,slow=5.6,SNR=6.4
NRIK LR LR 05 43 24.6
comp=Z,116nm,18.7s,baz=197,slow=41
NRIK Noril'sk 44.93 15 *ceP* **P 05 21 18.7 -0.2**
NRIK pmax pmax
comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 45.03 345 P **P 05 21 19.8 +0.1**
comp=Z,4.8nm,0.8s,baz=143,slow=9.0,SNR=14
TAM Tamanrasset 45.98 275 P **P 05 21 27.9 -0.2**
TAM pmax pmax
comp=Z,8.0nm,0.9s
TAM Tamanrasset 45.98 275 P **P 05 21 27.9 -0.2**
TAM IAmb IAmb 05 21 29.7
comp=Z,8.0nm,0.9s
HHC Hu-ho-hao-te 46.44 59 *eP* **P 05 21 31.6 +0.2**
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,54nm,5.2s
OPO Ambohidratompo 47.38 192 P **P 05 21 40.4 +1.6**
comp=Z,5.1nm,0.8s,baz=337,slow=5.7,SNR=5.4
BOD Bodaibo 49.41 37 *eP* **P 05 21 52.8 -1.2**
BOD pmax pmax
comp=Z,16nm,1.1s
ESDC Sonseca Array 50.52 300 P **P 05 22 02.2 -0.5**
comp=Z,1.2nm,0.8s,baz=68,slow=7.9,SNR=12
ESDC Sonseca Array 50.52 300 IAmb IAmb 05 22 03.7
comp=Z,9.5nm,1.4s
TOA0 Torodi Ar. Sit 52.93 265 P **P 05 22 20.3 -0.7**
TORD Torodi Ar. Bea 52.93 265 P **P 05 22 20.4 -0.6**
comp=Z,20nm,0.5s,baz=64,slow=7.5,SNR=261
TORD Torodi Ar. Bea 52.93 265 P **P 05 22 19.4 -1.6**
NJ2 Nanjing 53.47 70 *eP* **P 05 22 23.8 -1.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.7s
KOWA Kowa 57.40 270 P **P 05 22 50.5 -2.9**
KOWA IAmb IAmb 05 22 53.9
comp=Z,14nm,1.1s
INCN Inchon 58.49 61 P **P 05 23 00.6 -0.1**
INCN pmax pmax
comp=Z,11nm,0.7s
INCN Inchon 58.49 61 P **P 05 23 00.6 -0.1**
INCN IAmb IAmb 05 23 01.6
comp=Z,11nm,0.7s
DAG Danmarks Havn 59.32 345 *i* P **P 05 23 05.4 -0.4**
DAG pmax pmax
comp=Z,5.0nm,1.0s
DAG Danmarks Havn 59.32 345 *i* P **P 05 23 05.4 -0.4**
comp=Z,5.2nm,1.0s
DAG Danmarks Havn 59.32 345 *i* P **P 05 23 05.4 -0.4**
DAG IAmb IAmb 05 23 06.6
comp=Z,5.2nm,1.0s
DBG Daneborg 59.45 342 *i* P **P 05 23 07.7 +1.0**
KSAR Wonju Array Be 59.46 61 P **P 05 23 06.5 -0.9**
KSAR Wonju Array Be 59.46 61 P **P 05 23 06.5 -0.9**
KSRS Korea Array 59.49 61 P **P 05 23 06.8 -0.7**
comp=Z,3.6nm,0.5s,baz=279,slow=6.8,SNR=11
KSRS LR LR 05 51 59.3
comp=Z,19nm,18.3s,baz=255,slow=39
KLR Kul'dur 59.88 47 *ceP* **P 05 23 08.6 -1.5**
KLR pmax pmax
comp=Z,4.0nm,0.8s
DBIC Dimbokro 61.60 262 P **P 05 23 21.8 -0.6**
comp=Z,3.1nm,0.5s,baz=29,slow=6.3,SNR=8.3
BOSA Boshof 63.92 210 P **P 05 23 37.9 +0.3**
comp=Z,12nm,0.5s,baz=21,slow=5.9,SNR=59
BOSA LR LR 05 51 08.7
comp=Z,29nm,19.5s,baz=42,slow=36
BOSA Boshof 63.92 210 IAmb IAmb 05 23 38.2
comp=Z,14nm,0.6s
SUMG Summit 64.78 341 P **P 05 23 43.0 0.0**
SUMG Summit 64.78 341 P **P 05 23 43.0 0.0**
SUMG Summit 64.78 341 *i* P **P 05 23 42.7 -0.3**
comp=Z,47nm,1.1s
SUMG Summit 64.78 341 *i* P **P 05 23 42.8 -0.3**
SUMG IAmb IAmb 05 23 44.8
comp=Z,47nm,1.1s
JWT Wachi 65.89 62 P **P 05 23 50.4 +0.1**
MJAR Matsushiro Ar 67.64 60 P **P 05 24 01.2 -0.3**
comp=Z,3.5nm,1.0s,baz=282,slow=11,SNR=6.3
KAPI Kappang 69.29 108 P **P 05 24 10.2 -1.9**
KAPI pmax pmax
comp=Z,22nm,1.5s
KAPI Kappang 69.29 108 P **P 05 24 10.2 -1.9**
A21K Barrow 78.05 10 P **P 05 25 02.8 +0.2**
PSA00 Pilbara Seismi 78.74 122 P **P 05 25 05.5 -1.6**
PSA00 Pilbara Seismi 78.74 122 P **P 05 25 09.3 +2.2**
PSA00 IAmb IAmb 05 25 22.7
comp=Z,9.5nm,0.8s
MORW Morawa 80.61 130 P **P 05 25 15.1 -2.1**
MORW IAmb IAmb 05 25 19.4
comp=Z,9.7nm,1.1s
FITZ Fitzroy Crossi 81.23 116 P **P 05 25 21.0 +0.3**
FITZ IAmb IAmb 05 25 24.0
comp=Z,3.7nm,0.7s
TOLK Toolik Lake Re 81.53 9 P **P 05 25 20.7 -0.9**
C36M Paulatuk 82.71 0 P **P 05 25 26.8 -0.8**
C36M IAmb IAmb 05 25 27.8
comp=Z,4.8nm,0.8s
COLD Coldfoot 82.74 10 P **P 05 25 27.1 -0.8**
COLD IAmb IAmb 05 25 29.7
comp=Z,6.0nm,0.9s
IMAR Indian Mountai 83.27 12 P **P 05 25 29.6 -1.1**

BMAR Burnt Mountain 83.33 8 P **P 05 25 31.7 +0.6**
SCHQ Schefferville 84.03 331 P **P 05 25 34.5 -0.3**
comp=Z,3.8nm,0.6s,baz=40,slow=1.5,SNR=5.3
MDM Murphy Dome 85.15 10 P **P 05 25 39.6 -0.7**
MDM IAmb IAmb 05 25 41.7
comp=Z,9.8nm,1.2s
BPAW Bear Paw Mtn. 85.48 12 P **P 05 25 41.1 -0.9**
IL31 85.53 10 P **P 05 25 41.7 -0.4**
IL31 IAmb IAmb 05 25 43.7
comp=Z,7.3nm,1.4s
ILAR Eielson Array 85.53 10 P **P 05 25 41.2 -0.9**
comp=Z,1.4nm,0.6s,baz=321,slow=4.9,SNR=25
ILAR Eielson Array 85.53 10 P **P 05 25 41.1 -1.1**
CAST Castle Rocks 85.91 12 P **P 05 25 43.4 -0.7**
EGAK Eagle 86.29 7 P **P 05 25 45.0 -0.9**
K27K Chicken 86.90 8 P **P 05 25 47.5 -1.4**
DAWY Dawson 87.17 7 P **P 05 25 50.0 -0.3**
DAWY IAmb IAmb 05 25 51.9
comp=Z,13nm,1.1s
KIWB Kanaga Island 87.47 30 P **P 05 25 49.6 -2.3**
BCAR Beaver Creek A 87.87 8 P **P 05 25 52.9 -0.8**
SUA Susitna One 87.95 13 P **P 05 25 50.7 -3.5**
WB0 Warramunga Arr 89.15 113 P **P 05 25 58.3 -2.0**
WB0 IAmb IAmb 05 26 02.2
comp=Z,12nm,1.5s
WRA Warramunga Arr 89.19 113 P **P 05 26 01.4 +0.8**
comp=Z,1.9nm,0.6s,baz=315,slow=4.2,SNR=37
WRA Warramunga Arr 89.19 113 P **P 05 25 60.0 -0.6**
WB2 Warramunga Arr 89.20 113 P **P 05 25 59.3 -1.3**
WB2 IAmb IAmb 05 26 09.3
comp=Z,7.3nm,1.2s
WR0 Warramunga Arr 89.36 113 P **P 05 26 01.7 +0.4**
WR0 IAmb IAmb 05 26 04.1
comp=Z,13nm,1.4s
ASAR Alice Springs 90.72 116 P **P 05 26 08.2 +0.5**
comp=Z,1.2nm,0.5s,baz=308,slow=4.9,SNR=12
TXAR Lajitas Array 119.67 340 PKP **PKPdf 05 31 54.8 -0.2**
comp=Z,0.3nm,0.7s,baz=129,slow=1.7,SNR=5.0

IDC 16 05:32:13.3±2.1, 1.75N×126.62E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/28, mbtmp3.6/3, MS3.1/1, Ms1 3.1/1, ms1mx2.2/31, Error ellipse: s-maj=171.2km s-min=25.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**20.79**	**246**	LR	LR	05 45 33.6	
	comp=Z,52nm,19.2s,baz=210,slow=38						
WRA	**Warramunga Arr**	**22.85**	**161**	P	P	05 37 18.8	+0.4
	1.0nm,0.4s,baz=340,slow=11,SNR=24						
ASAR	**Alice Springs**	**26.24**	**165**	P	P	05 37 50.0	-0.3
	0.2nm,0.3s,baz=344,slow=7.5,SNR=3.6						
MKAR	**Makanchi Array**	**59.12**	**326**	P	P	05 42 15.8	0.0
	0.6nm,0.5s,baz=116,slow=10,SNR=5.6						

IDC 16 05:52:04.1±18.0, 20.50S×175.41W, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/27, mbtmp4.0/5, Error ellipse: s-maj=345.6km s-min=146.1km az=84.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.90**	**264**	P	P	05 59 08.2	+1.9
	1.1nm,0.3s,baz=95,slow=12,SNR=2.4						
STKA	**Stephens Creek**	**39.97**	**245**	P	P	05 59 40.0	-0.6
	1.1nm,0.4s,baz=102,slow=9.3,SNR=4.5						
ASAR	**Alice Springs**	**46.88**	**256**	P	P	06 00 35.6	-0.9
	1.4nm,0.6s,baz=97,slow=8.2,SNR=23						
WRA	**Warramunga Arr**	**47.00**	**261**	P	P	06 00 36.8	-0.6
	0.5nm,0.4s,baz=95,slow=8.0,SNR=36						
FITZ	**Fitzroy Crossi**	**55.43**	**262**	P	P	06 01 41.0	+0.3
	0.5nm,0.3s,baz=83,slow=8.1,SNR=13						

*IDC **16** 05:59:46.5±1.4, 14.82S×174.12W, h0km, mb4.6/6, mb1 4.7/6, mb1mx4.3/32, mbtmp4.6/6, MS4.1/30, Ms1 4.1/30, ms1mx4.1/43, Error ellipse: s-maj=50.2km s-min=25.3km az=119.0*
*NEIC **16** 05:59:48.9±1.2, 14.77S±0.08×173.87W±0.08, h23km±4km, mb4.8/136, Error ellipse: s-maj=12.4km s-min=11.2km az=202.0*
*GCMT **16** 05:59:50.9±0.2, 14.68S±0.01×173.65W±0.01, h12km±1km, MW4.9/99, Moment Tensor Solution. s38,c46; s99,c154; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.59±.09; $M_{\theta\theta}$-0.41±.09; $M_{\phi\phi}$ 1.01±.08; $M_{r\theta}$-0.42±.22; $M_{\theta\phi}$2.83±.08; $M_{\phi r}$1.31±.26; Best double couple: $M_0$3.26100×10^{16} NP1:ϕ_s81.00000°,δ64.00000°,λ-10.00000°. NP2: ϕ_s175.00000°,δ81.00000°,λ-154.00000°. Principal axes: T 3.3760, Plg12.0000°, Azm306.0000°; N -0.2250, Plg62.0000°, Azm193.0000°; P -3.1460, Plg25.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 05:59:50.5±0.4, 14.89S±0.06×173.79W±0.06, h35km, n215, σ1$23/185, mb4.8/70, MS4.2/32, 1C, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.18**	**64**	Sn	**Sn**	**06 00 47.3**	**-2.9**
NIUE	**Niue**	**5.56**	**139**		**Pn**	**06 01 10.5**	**-0.3**
NIUE				Sn	**Sn**	**06 02 08.1**	**-5.5**
FUNA	**Funafuti**	**9.34**	**312**	Pn	**Pn**	**06 01 58.7**	**-3.9**
KNTN	**Kanton**	**12.21**	**10**	Pn	Pn	06 02 35.6	-6.5
RAO	**Raoul Island**	**14.79**	**194**	LR	LR	06 07 46.7	
	comp=Z,900nm,21.0s,baz=253,slow=32						
DZM	**Mont Dzumac**	**20.05**	**246**	P	**Pn**	**06 04 23.8**	**+1.1**
	0.2nm,0.3s,baz=95,slow=15,SNR=2.9						
DZM				LR	LR	06 11 26.1	
	comp=Z,99nm,18.9s,baz=82,slow=35						
DZM	**Mont Dzumac**	**20.05**	**246**	*eP*	**Pn**	**06 04 24.4**	**+1.6**
	54nm,1.3s						
DZM				*eS*	**S**	**06 08 02.8**	**-1.7**
	184nm,24.8s						
DZM				eLQ	LQ	06 08 13.0	
	2μm,23.3s						
DZM				eLR	LR	06 09 05.4	
	comp=Z,773nm,29.9s						
DZM	**Mont Dzumac**	**20.05**	**246**	P	**P**	**06 04 18.5**	**-2.3**
PPT	**Papeete**	**23.40**	**100**	LR	LR	06 11 44.2	
	comp=Z,263nm,19.7s,baz=274,slow=30						
PPT2	**Papeete2**	**23.40**	**100**	*eS*	**S**	**06 09 05.4**	**-2.0**
	170nm,23.0s						
PPT2				eLQ	LQ	06 09 27.4	
	2μm,27.2s						
PPT2				eLR	LR	06 10 28.7	
	comp=Z,1μm,27.0s,baz=274						
PPT2	**Papeete2**	**23.40**	**100**	*eT*	T	06 28 46.8	
	7.2nm,0.3s						
PAE	**Paea**	**23.40**	**100**	*eT*	T	06 28 50.6	
	6.4nm,0.2s						
TIAR	**Tiarei**	**23.61**	**100**	*eT*	T	06 29 05.9	
	3.8nm,0.3s						
MXZ	**Matakaoa Point**	**23.64**	**196**	P	**P**	**06 04 59.0**	**+0.5**
TVO	**Taravao**	**23.72**	**100**	*eT*	T	06 29 14.5	
	2.5nm,0.3s						
TBI	**Tubuai**	**24.45**	**114**	*eS*	**S**	**06 09 23.7**	**-0.4**
	72nm,21.0s						
TBI				eLQ	LQ	06 09 56.2	
	2μm,26.0s						
TBI				eLR	LR	06 11 03.7	
	comp=Z,1μm,27.2s						
TBI	**Tubuai**	**24.45**	**114**	*eT*	T	06 30 28.3	
	19nm,0.4s						
URZ	**Urewera**	**24.63**	**197**	P	**P**	**06 05 08.6**	**+1.0**
	5.9nm,0.7s,baz=43,slow=18,SNR=1.7						
URZ				LR	LR	06 13 39.1	
	comp=Z,1μm,19.1s,baz=31,slow=34						
VAH	**Vaihoa**	**25.26**	**94**	*eT*	T	06 31 20.9	
	5.0nm,0.3s						
HNR	**Honiara**	**26.23**	**279**	LR	LR	06 13 50.0	
	comp=Z,240nm,19.5s,baz=113,slow=33						
TAOE	**Nuku Hiva Isla**	**33.44**	**84**	eLR	LR	06 14 58.6	
	comp=Z,347nm,25.5s						
EIDS	**Eidsvold**	**34.49**	**247**	P	**P**	**06 06 34.4**	**-1.0**
EIDS				IAmb	IAmb	06 06 57.4	
	comp=Z,19nm,1.4s						
RKT	**Rikitea**	**37.51**	**109**	eLR	LR	06 16 55.0	
	comp=Z,741nm,29.2s						
CTAO	**Charters Tower**	**38.39**	**256**	P	**P**	**06 07 08.8**	**0.0**
PMG	**Port Moresby**	**38.52**	**274**	P	**P**	**06 07 09.5**	**-0.5**
PMG				IAmb	IAmb	06 07 17.5	
	comp=Z,22nm,1.1s						
TOO	**Toolangi**	**42.50**	**230**	P	**P**	**06 07 42.9**	**+0.4**
TAU	**Tasmania Unive**	**43.44**	**222**	P	**P**	**06 07 49.6**	**-0.4**
STKA	**Stephens Creek**	**43.97**	**239**	P	**P**	**06 07 53.9**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=135,slow=7.1,SNR=5.7						
STKA				LR	LR	06 26 09.0	
	comp=Z,173nm,18.1s,baz=46,slow=36						
STKA	**Stephens Creek**	**43.97**	**239**	P	**P**	**06 07 54.0**	**-0.4**
BBOO	**Buckleboo**	**48.74**	**239**	P	**P**	**06 08 31.7**	**-0.3**
BBOO				IAmb	IAmb	06 08 37.7	
	comp=Z,20nm,1.4s						
WR0	**Warramunga Arr**	**49.40**	**256**	P	**P**	**06 08 36.2**	**-1.0**
WR0				IAmb	IAmb	06 08 43.5	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**49.55**	**257**	P	**P**	**06 08 36.7**	**-1.7**
WB2	**Warramunga Arr**	**49.58**	**256**	P	**P**	**06 08 37.8**	**-0.8**
WB2				IAmb	IAmb	06 08 42.1	
	comp=Z,10nm,0.8s						
WRAB	**Tennant Creek**	**49.58**	**256**	P	**P**	**06 08 38.8**	**+0.2**
WRAB				IAmb	IAmb	06 08 42.1	
	comp=Z,12nm,0.9s						
WRA	**Warramunga Arr**	**49.59**	**256**	P	**P**	**06 08 37.0**	**-1.7**
	comp=Z,7.9nm,0.8s,baz=90,slow=7.7,SNR=28						
WRA				LR	LR	06 28 05.5	
	comp=Z,230nm,19.7s,baz=80,slow=34						
WRA	**Warramunga Arr**	**49.59**	**256**	P	**P**	**06 08 37.4**	**-1.3**
GUMO	**Guam**	**49.74**	**303**	LR	LR	06 27 14.8	
	comp=Z,110nm,18.7s,baz=128,slow=33						
AS31	**Alice Springs**	**49.91**	**252**	P	**P**	**06 08 40.1**	**-1.0**
AS31				IAmb	IAmb	06 08 45.4	
	comp=Z,9.8nm,0.7s						
ASAR	**Alice Springs**	**49.91**	**252**	P	**P**	**06 08 39.9**	**-1.2**
	comp=Z,24nm,0.7s,baz=85,slow=8.3,SNR=70						
ASAR				LR	LR	06 27 57.5	
	comp=Z,267nm,19.8s,baz=90,slow=34						
ASAR	**Alice Springs**	**49.91**	**252**	P	**P**	**06 08 39.4**	**-1.7**
MTN	**Manton Dam**	**53.40**	**265**	P	**P**	**06 09 06.5**	**-0.7**
MTN				IAmb	IAmb	06 09 31.4	
	comp=Z,15nm,1.2s						
KNRA	**Kununurra**	**55.27**	**261**	P	**P**	**06 09 19.9**	**-0.9**
KNRA				IAmb	IAmb	06 09 33.2	
	comp=Z,9.9nm,1.1s						
FORT	**Forrest**	**55.31**	**243**	P	**P**	**06 09 19.6**	**-1.3**
FORT				IAmb	IAmb	06 09 31.7	
	comp=Z,14nm,0.9s						
FITZ	**Fitzroy Crossi**	**57.95**	**258**	LR	LR	06 32 31.5	
	comp=Z,115nm,21.1s,baz=94,slow=34						
FITZ	**Fitzroy Crossi**	**57.95**	**258**	P	**P**	**06 09 39.6**	**-0.2**
PSA00	**Pilbara Seismi**	**62.99**	**253**	P	**P**	**06 10 10.2**	**-4.1**
PSA00	**Pilbara Seismi**	**62.99**	**253**	P	**P**	**06 10 12.9**	**-1.4**
PSA00				IAmb	IAmb	06 10 29.9	
	comp=Z,22nm,1.4s						
VNDA	**Vanda**	**63.84**	**186**	LR	LR	06 32 53.6	
	comp=Z,82nm,21.5s,baz=14,slow=31						
VNDA	**Vanda**	**63.84**	**186**	P	**P**	**06 10 19.3**	**+0.4**
ATKA	**Atka Island**	**66.81**	**360**	P	**P**	**06 10 38.0**	**-0.4**
MJAR	**Matsushiro Arr**	**68.31**	**320**	LR	LR	06 34 33.6	
	comp=Z,148nm,21.8s,baz=130,slow=31						
KMRM	**Mail Ridge**	**71.89**	**38**	P	**P**	**06 11 10.9**	**+0.7**
PETK	**Petropavlovsk-**	**72.04**	**342**	P	**P**	**06 11 10.3**	**-0.3**
	comp=Z,9.8nm,1.0s,baz=95,slow=12,SNR=5.0						
PETK				LR	LR	06 37 44.4	
	comp=Z,46nm,21.7s,baz=147,slow=32						
AFDM	**Forest Hills D**	**72.80**	**41**	P	**P**	**06 11 15.5**	**0.0**
WDC	**Whiskeytown Da**	**72.82**	**38**	P	**P**	**06 11 15.6**	**0.0**
PFO	**Pinyon Flats O**	**72.86**	**47**	LR	LR	06 37 25.2	
	comp=Z,282nm,18.3s,baz=248,slow=31						
LPIG	**La Paz**	**73.10**	**59**	LR	LR	06 35 12.3	
	comp=Z,166nm,20.1s,baz=228,slow=29						
MDPB	**Devils Postpil**	**73.25**	**43**	P	P	06 11 10.5	-8.1
OMMB	**Old Mammoth Mi**	**73.29**	**43**	P	**P**	**06 11 16.7**	**-2.2**
OMMB				IAmb	IAmb	06 11 27.8	
	comp=Z,12nm,1.4s						
YBH	**Yreka Blue Hor**	**73.43**	**37**	LR	LR	06 35 41.2	
	comp=Z,212nm,21.9s,baz=258,slow=29						
YBH	**Yreka Blue Hor**	**73.43**	**37**	P	**P**	**06 11 19.1**	**-0.2**
YBH				IAmb	IAmb	06 11 28.0	
	comp=Z,8.2nm,0.9s						
WAKR	**Walker**	**73.52**	**42**	P	**P**	**06 11 20.4**	**+0.3**
BEKR	**Beckworth**	**73.72**	**40**	P	**P**	**06 11 21.2**	**0.0**
VCNR	**Virginia City**	**73.84**	**41**	P	**P**	**06 11 20.7**	**-1.2**
NVAR	**Mina Array Bea**	**74.21**	**42**	LR	LR	06 36 29.6	
	comp=Z,228nm,20.4s,baz=270,slow=30						
NVAR	**Mina Array Bea**	**74.21**	**42**	P	**P**	**06 11 24.4**	**+0.2**
NV11	**Mina Array Sit**	**74.31**	**42**	P	**P**	**06 11 25.0**	**+0.4**
NV11				IAmb	IAmb	06 11 31.3	
	comp=Z,7.4nm,0.9s						
214A	**Organ Pipe Nat**	**74.68**	**50**	P	**P**	**06 11 25.3**	**-1.5**
KVN	**Kaiserville**	**74.69**	**42**	P	**P**	**06 11 26.4**	**-0.4**
KVN				IAmb	IAmb	06 11 35.0	
	comp=Z,10nm,1.2s						
TPH	**Tonopah**	**74.72**	**43**	P	**P**	**06 11 26.9**	**-0.2**
HSIG		**74.74**	**54**	P	**P**	**06 11 26.9**	**-0.2**
HSIG				IAmb	IAmb	06 11 33.7	
	comp=Z,5.8nm,0.7s						
MOD	**Modoc Plateau**	**74.96**	**38**	P	**P**	**06 11 28.8**	**+0.5**
MOD				IAmb	IAmb	06 11 36.5	
	comp=Z,8.2nm,1.1s						
K05A	**Summer Lake**	**75.10**	**37**	P	**P**	**06 11 28.9**	**-0.3**
K05A				IAmb	IAmb	06 11 36.2	
	comp=Z,12nm,1.0s						
QSPA	**South Pole Qui**	**75.15**	**180**	P	**P**	**06 11 29.7**	**+0.7**
QSPA				IAmb	IAmb	06 11 37.7	
	comp=Z,16nm,1.1s						
SHPR	**Sheep Range**	**75.27**	**45**	P	**P**	**06 11 30.0**	**-0.2**
SHPR				IAmb	IAmb	06 11 31.9	
	comp=Z,12nm,1.5s						
KSRS	**Korea Array**	**75.53**	**316**	P	**P**	**06 11 32.9**	**+1.4**
	comp=Z,2.1nm,1.0s,baz=121,slow=6.2,SNR=5.5						
KSRS				LR	LR	06 38 42.8	
	comp=Z,60nm,21.6s,baz=118,slow=31						
KSAR	**Wonju Array Be**	**75.56**	**316**	P	**P**	**06 11 31.5**	**-0.1**
PINE	**Pine Mountain**	**75.72**	**37**	P	**P**	**06 11 33.4**	**+0.7**
PINE				IAmb	IAmb	06 11 41.2	
	comp=Z,15nm,1.1s						
R11A	**Troy Canyon, C**	**75.95**	**44**	P	**P**	**06 11 33.8**	**-0.4**
WVOR	**Wild Horse Val**	**76.28**	**39**	P	**P**	**06 11 35.5**	**-0.3**
WVOR				IAmb	IAmb	06 11 43.0	
	comp=Z,10nm,1.2s						
TUC	**Tucson**	**76.36**	**51**	P	**P**	**06 11 35.7**	**-0.8**
TUC				IAmb	IAmb	06 11 44.5	
	comp=Z,8.0nm,1.1s						
I07A	**Izee**	**76.72**	**37**	P	**P**	**06 11 38.4**	**+0.1**
USRK	**Ussuriysk Ar.**	**76.75**	**323**	LR	LR	06 39 29.7	
	comp=Z,174nm,21.3s,baz=118,slow=31						
X16A	**Lo Mia Camp, P**	**76.87**	**49**	P	**P**	**06 11 40.0**	**+0.6**
J08A	**Circle Bar Ran**	**76.91**	**38**	P	**P**	**06 11 39.1**	**-0.3**
319A	**Douglas**	**77.08**	**52**	P	**P**	**06 11 42.3**	**+1.7**
319A				IAmb	IAmb	06 11 50.0	
	comp=Z,13nm,1.2s						
SPR3	**Spring Creek 3**	**77.13**	**44**	P	**P**	**06 11 40.4**	**-0.5**
KNB	**Kanab**	**77.15**	**46**	P	**P**	**06 11 41.7**	**+0.7**
PSUT	**Pine Spring**	**77.21**	**44**	P	**P**	**06 11 41.1**	**-0.1**
U15A	**North Rim**	**77.23**	**47**	P	**P**	**06 11 41.4**	**-0.1**
U15A				IAmb	IAmb	06 11 50.3	
	comp=Z,9.4nm,1.1s						
D05A	**Enumclaw**	**77.23**	**33**	P	**P**	**06 11 41.3**	**+0.4**
ELK	**Elko**	**77.45**	**42**	LR	LR	06 38 49.4	
	comp=Z,142nm,19.7s,baz=222,slow=30						
ELK	**Elko**	**77.45**	**42**	P	**P**	**06 11 42.9**	**+0.3**
BBB	**Bella Bella**	**77.61**	**27**	LR	LR	06 37 12.0	
	comp=Z,171nm,20.6s,baz=212,slow=29						
G08A	**Pilot Rock**	**77.75**	**36**	P	**P**	**06 11 44.1**	**0.0**
G08A				IAmb	IAmb	06 11 52.0	
	comp=Z,8.9nm,1.1s						
HPIG		**78.08**	**58**	P	**P**	**06 11 47.4**	**+1.0**
HPIG				IAmb	IAmb	06 11 55.5	
	comp=Z,5.6nm,1.1s						
HPIG		**78.08**	**58**	P	**P**	**06 11 47.4**	**+1.0**
MTPU	**Mount Pierson**	**78.10**	**45**	P	**P**	**06 11 47.5**	**+1.1**
TCRU	**Three Creeks R**	**78.20**	**45**	P	**P**	**06 11 48.6**	**+1.8**
BMO	**Blue Mountains**	**78.45**	**37**	P	**P**	**06 11 47.8**	**-0.1**
MFID	**Camas Ranch**	**78.53**	**39**	P	**P**

B08A	**Colville Reser**	**79.36**	**34**	P	**P**	**06 11 51.7**	**-1.1**
TMUT	**Trail Mountain**	**79.38**	**44**	P	**P**	**06 11 53.3**	**-0.1**
HLID	**Hailey**	**79.48**	**40**	P	**P**	**06 11 53.6**	**0.0**
NJ2	**Nanjing**	**79.56**	**307**	*e*P	**P**	**06 11 55.1**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CTU	**Camp Tracy**	**79.70**	**43**	P	**P**	**06 11 54.9**	**0.0**
SRU	**San Rafael Swe**	**79.75**	**45**	P	**P**	**06 11 55.4**	**+0.1**
P17A	**Butcher Ranch,**	**79.78**	**45**	P	**P**	**06 11 55.5**	**+0.1**
JLU	**Jordanelle**	**79.85**	**43**	P	**P**	**06 11 55.6**	**-0.3**
TCUT	**Toone Canyon**	**80.14**	**43**	P	**P**	**06 11 57.1**	**-0.3**
TRF	**Thorofare Moun**	**80.20**	**10**	P	**P**	**06 11 56.7**	**-0.4**
TRF				IAmb	IAmb	06 12 08.9	
	comp=Z,18nm,1.2s						
MNTX	**Cornudas Mount**	**80.23**	**54**	P	**P**	**06 11 58.0**	**+0.2**
MNTX				IAmb	IAmb	06 12 06.3	
	comp=Z,11nm,1.2s						
PV05	**Paradox Valley**	**80.25**	**46**	P	**P**	**06 11 58.9**	**+0.8**
PV05				IAmb	IAmb	06 12 00.2	
	comp=Z,16nm,1.2s						
BNM	**Barren Site**	**80.30**	**51**	P	**P**	**06 11 58.0**	**-0.5**
PV17	**East Wray Mesa**	**80.44**	**46**	P	**P**	**06 11 59.2**	**+0.1**
PV17				IAmb	IAmb	06 12 00.5	
	comp=Z,13nm,1.3s						
PV20	**West Nyswonger**	**80.47**	**46**	P	**P**	**06 11 59.5**	**+0.3**
PV20				IAmb	IAmb	06 12 07.3	
	comp=Z,15nm,1.1s						
PV13	**Radium Mtn., P**	**80.48**	**46**	P	**P**	**06 11 58.9**	**-0.4**
PV13				IAmb	IAmb	06 12 00.1	
	comp=Z,16nm,1.4s						
PV23	**Carpenter Ridg**	**80.49**	**46**	P	**P**	**06 11 58.9**	**-0.5**
PV23				IAmb	IAmb	06 12 09.1	
	comp=Z,8.8nm,0.9s						
PV16	**Nyswonger Mesa**	**80.49**	**46**	P	**P**	**06 11 58.5**	**-0.8**
PV16				IAmb	IAmb	06 12 10.7	
	comp=Z,10.0nm,1.3s						
NEW	**Newport**	**80.50**	**34**	LR	LR	06 41 06.1	
	comp=Z,124nm,18.8s,baz=241,slow=31						
PV03	**Paradox Valley**	**80.51**	**46**	P	**P**	**06 11 59.9**	**+0.5**
PV03				IAmb	IAmb	06 12 00.8	
	comp=Z,9.2nm,1.1s						
PV11	**David Mesa, Pa**	**80.51**	**46**	P	**P**	**06 11 59.6**	**+0.2**
PV11				IAmb	IAmb	06 12 08.4	
	comp=Z,13nm,1.1s						
PV12	**Saucer Basin,**	**80.57**	**46**	P	**P**	**06 12 00.0**	**+0.3**
PV12				IAmb	IAmb	06 12 08.1	
	comp=Z,16nm,1.2s						
TX31	**Lajitas Ar. Si**	**80.64**	**56**	P	**P**	**06 12 00.6**	**+0.4**
TX32	**Lajitas Array**	**80.64**	**56**	P	**P**	**06 12 00.6**	**+0.4**
TX32				IAmb	IAmb	06 12 02.2	
	comp=Z,15nm,1.4s						
PV01	**Paradox Valley**	**80.65**	**47**	P	**P**	**06 12 00.2**	**0.0**
PV01				IAmb	IAmb	06 12 08.3	
	comp=Z,16nm,1.5s						
PAX	**Paxson**	**80.70**	**13**	P	**P**	**06 11 59.4**	**-0.3**
PAX				IAmb	IAmb	06 11 59.9	
	comp=Z,9.5nm,1.1s						
ANMO	**Albuquerque**	**80.77**	**50**	LR	LR	06 41 10.0	
	comp=Z,241nm,19.5s,baz=244,slow=31						
ANMO	**Albuquerque**	**80.77**	**50**	P	**P**	**06 12 01.8**	**+0.9**
HYT	**Haines Junctio**	**80.84**	**17**	P	**P**	**06 12 00.9**	**+0.4**
TLIG	**Tlapa**	**80.87**	**69**	P	**P**	**06 12 03.4**	**+1.7**
BWN	**Browne**	**81.01**	**11**	P	**P**	**06 12 00.4**	**-0.8**
MENT	**Mentasta**	**81.05**	**13**	P	**P**	**06 12 00.9**	**-0.6**
MENT				IAmb	IAmb	06 12 02.6	
	comp=Z,16nm,1.3s						
MCMT	**McKenzie Canyo**	**81.10**	**39**	P	**P**	**06 12 01.8**	**-0.6**
GDL2	**Guadalupe Moun**	**81.22**	**53**	P	**P**	**06 12 03.1**	**-0.2**
DLMT	**Dillon**	**81.53**	**39**	P	**P**	**06 12 04.2**	**-0.4**
DLMT				IAmb	IAmb	06 12 05.9	
	comp=Z,12nm,1.3s						
REDW	**Red Top Meadow**	**81.60**	**41**	P	**P**	**06 12 05.4**	**+0.2**
REDW				IAmb	IAmb	06 12 06.5	
	comp=Z,18nm,1.2s						
TPAW	**Teton Pass**	**81.60**	**41**	P	**P**	**06 12 04.9**	**-0.3**
TPAW				IAmb	IAmb	06 12 06.7	
	comp=Z,16nm,1.2s						
HDA	**Harding Lake**	**81.69**	**11**	P	**P**	**06 12 05.1**	**+0.3**
HDA				IAmb	IAmb	06 12 11.3	
	comp=Z,8.4nm,0.8s						
S22A	**4UR Ranch, Cre**	**81.71**	**47**	P	**P**	**06 12 07.0**	**+1.1**
S22A				IAmb	IAmb	06 12 16.4	
	comp=Z,18nm,1.4s						
SNOW	**Snow King Moun**	**81.71**	**41**	P	**P**	**06 12 06.5**	**+0.7**
SNOW				IAmb	IAmb	06 12 07.2	
	comp=Z,12nm,1.1s						
IMW	**Indian Meadow**	**81.81**	**41**	P	**P**	**06 12 06.8**	**+0.5**
IMW				IAmb	IAmb	06 12 07.8	
	comp=Z,10nm,1.2s						
LRM	**Limekiln Ridge**	**81.85**	**38**	P	**P**	**06 12 04.9**	**-1.6**
I23K	**Minto, Yukon-K**	**81.92**	**10**	P	**P**	**06 12 05.7**	**-0.3**
I23K				IAmb	IAmb	06 12 20.9	
	comp=Z,8.8nm,0.8s						
TCOL	**CIGO, UAF Yank**	**81.94**	**11**	P	**P**	**06 12 05.8**	**-0.3**
COLA	**College**	**81.94**	**11**	P	**P**	**06 12 05.7**	**-0.3**
IL31		**82.03**	**11**	P	**P**	**06 12 05.9**	**-0.6**
IL31				IAmb	IAmb	06 12 13.7	
	comp=Z,21nm,1.4s						
ILAR	**Eielson Array**	**82.03**	**11**	LR	LR	06 41 33.5	
	comp=Z,91nm,21.4s,baz=223,slow=31						
IL18	**Eielson Array**	**82.03**	**11**	P	**P**	**06 12 04.7**	**-1.9**
BW06	**Boulder Array**	**82.14**	**42**	P	**P**	**06 12 07.8**	**-0.2**
YMR	**Madison River**	**82.18**	**40**	P	**P**	**06 12 10.0**	**+1.8**
SMCO	**Snowmass**	**82.23**	**46**	P	**P**	**06 12 09.4**	**+0.6**
SMCO				IAmb	IAmb	06 12 16.5	
	comp=Z,11nm,1.2s						
BOZ	**Bozeman (W)**	**82.23**	**39**	P	**P**	**06 12 07.8**	**-0.5**
BOZ				IAmb	IAmb	06 12 18.0	
	comp=Z,11nm,1.4s						
POKR	**Poker Plat Res**	**82.23**	**11**	P	**P**	**06 12 06.2**	**-1.5**
YHH	**Holmes Hill**	**82.31**	**40**	P	**P**	**06 12 09.3**	**+0.4**
K27K	**Chicken**	**82.37**	**14**	P	**P**	**06 12 09.0**	**+0.6**
K27K				IAmb	IAmb	06 12 16.0	
	comp=Z,9.7nm,1.1s						
SDCO	**Great Sand Dun**	**82.66**	**48**	P	**P**	**06 12 11.4**	**+0.5**
SDCO				IAmb	IAmb	06 12 12.3	
	comp=Z,8.4nm,1.2s						
YNE	**Yellowstone No**	**82.94**	**40**	P	**P**	**06 12 11.9**	**-0.2**
PRP	**Porcupine Dome**	**82.95**	**11**	P	**P**	**06 12 11.6**	**0.0**
DAWY	**Dawson**	**83.03**	**14**	P	**P**	**06 12 11.7**	**-0.2**
DAWY				IAmb	IAmb	06 12 13.0	
	comp=Z,12nm,1.1s						
MSTX	**Muleshoe**	**83.15**	**52**	P	**P**	**06 12 13.8**	**+0.5**
RWWY	**Rawlins**	**83.19**	**44**	P	**P**	**06 12 13.6**	**+0.1**
T25A	**Trinidad**	**83.19**	**49**	P	**P**	**06 12 13.9**	**+0.3**
T25A				IAmb	IAmb	06 12 14.1	
	comp=Z,14nm,1.4s						
Q24A	**Divide**	**83.42**	**47**	P	**P**	**06 12 15.5**	**+0.7**
ISCO	**Idaho Springs**	**83.45**	**46**	P	**P**	**06 12 15.4**	**+0.5**
ISCO				IAmb	IAmb	06 12 20.8	
	comp=Z,8.6nm,1.5s						
RLMT	**Red Lodge**	**83.45**	**40**	P	**P**	**06 12 15.3**	**+0.5**
N23A	**Red Feather La**	**83.69**	**45**	P	**P**	**06 12 16.8**	**+0.7**
COLD	**Coldfoot**	**83.70**	**9**	P	**P**	**06 12 16.0**	**+0.8**
PHWY	**Pilot Hill**	**84.20**	**45**	P	**P**	**06 12 18.5**	**-0.2**
PHWY				IAmb	IAmb	06 12 19.7	
	comp=Z,10nm,1.3s						
AMTX	**Amarillo**	**84.33**	**52**	P	**P**	**06 12 18.9**	**-0.4**
BELA	**Belgrano 2**	**84.55**	**172**	P	**P**	**06 12 22.5**	**+3.0**
BMAR	**Burnt Mountain**	**84.83**	**11**	P	**P**	**06 12 21.4**	**+0.4**
BJI	**Beijing**	**84.85**	**314**	P	**P**	**06 12 23.1**	**+1.5**
BJI	**Beijing**	**84.85**	**314**	S	**S**	**06 22 53.9**	**+6.3**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ABTX	**Abilene, Hawle**	**85.08**	**55**	P	**P**	**06 12 22.5**	**-0.6**
TOLK	**Toolik Lake Re**	**85.10**	**9**	P	**P**	**06 12 22.3**	**-0.1**
RSSD	**Black Hills**	**86.34**	**43**	P	**P**	**06 12 28.6**	**-0.7**
WHTX	**Lake Whitney,**	**86.59**	**56**	P	**P**	**06 12 31.1**	**+0.6**
Z35A	**Perchaven, San**	**87.20**	**55**	P	**P**	**06 12 31.8**	**-1.6**
MAW	**Mawson**	**88.15**	**199**	LR	LR	06 48 57.6	
	comp=Z,139nm,21.5s,baz=78,slow=34						
HHC	**Hu-ho-hao-te**	**88.41**	**313**	*e*P	**P**	**06 12 39.6**	**+0.4**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,78nm,5.3s						
NATX	**Nacogdoches**	**88.77**	**57**	P	**P**	**06 12 41.1**	**+0.1**
YKA	**Yellowknife Ar**	**89.79**	**24**	LR	LR	06 47 43.9	
	comp=Z,126nm,19.3s,baz=0.0,slow=32						
PLCA	**Paso Flores**	**90.13**	**132**	LR	LR	06 45 33.3	
	comp=Z,128nm,19.2s,baz=236,slow=30						
CMAR	**Chiang Mai Arr**	**92.10**	**288**	LR	LR	06 49 07.4	
	comp=Z,67nm,20.4s,baz=167,slow=32						
LZH	**Lanzhou**	**92.62**	**307**	*e*P	**P**	**06 12 59.5**	**+0.5**
LZH				pP	pP	06 13 05.8	-3.5
LZH				sP	pwP	06 13 10.0	-2.8
LZH				PP	**PP**	**06 16 39.3**	**-1.8**
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
SYO	**Syowa Base**	**93.02**	**191**	*e*P	**P**	**06 13 00.5**	**+0.5**
VNA3	**Neumayer Olymp**	**93.39**	**175**	P	**P**	**06 13 05.2**	**+3.4**
VNA1	**Neumayer--Stat**	**94.08**	**175**	P	**P**	**06 13 09.2**	**+4.3**
SONM	**Songino Array**	**94.22**	**318**	LR	LR	06 49 50.2	
	comp=Z,65nm,21.9s,baz=104,slow=32						
DPC	**Dobruska-Polom**	**143.69**	**349**	*e*PKP	**PKPdf**	**06 19 20.8**	**-1.0**
VRAC	**Vranov**	**144.64**	**348**	*e*PKP	**PKPdf**	**06 19 23.3**	**-0.2**
JAVC	**Velka Javorina**	**144.84**	**347**	*e*PKP	**PKPdf**	**06 19 24.6**	**+0.7**
KRUC	**Moravsky**	**144.91**	**348**	*e*PKP	PKPbc	06 19 23.3	+0.2
GRF	**Grafenberg Arr**	**145.06**	**354**	*e*PKPbc	**PKPdf**	**06 19 24.3**	**+0.1**
	baz=8.4,slow=2.9						
KHC	**Kasperske Hory**	**145.33**	**351**	*e*PKP	**PKPdf**	**06 19 25.3**	**+0.6**
KMBO	**Kilima Mbogo**	**145.41**	**245**	PKPbc	**PKPab**	**06 19 27.2**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=51,slow=6.5,SNR=4.3						
BRTR	**Keskin Array B**	**145.53**	**321**	PKPbc	**PKPab**	**06 19 26.3**	**+0.5**
	comp=Z,6.5nm,0.8s,baz=105,slow=2.7,SNR=27						
BRTR	**Keskin Array B**	**145.53**	**321**		**PKPab**	**06 19 26.0**	**+0.1**
GERES	**GERESS Array B**	**145.59**	**351**	PKPbc	**PKPab**	**06 19 25.4**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=52,slow=2.2,SNR=8.0						
CONA	**Conrad Observa**	**146.10**	**348**	*e*S	**PKPab**	**06 19 27.8**	**+0.2**
	comp=Z,24nm,1.5s						
MOA	**Molln**	**146.47**	**350**	*e*S	**PKPab**	**06 19 29.6**	**+0.7**
	comp=Z,14nm,1.6s						
MOTA	**Moosalm**	**147.39**	**354**	*e*S	**PKPab**	**06 19 31.3**	**-1.5**
	comp=Z,12nm,1.7s						
WTTA	**Wattenberg**	**147.41**	**353**	*e*S	**PKPab**	**06 19 33.0**	**+0.2**
	comp=Z,20nm,2.2s						
SOKA	**Soboth**	**147.46**	**349**	*e*S	**PKPab**	**06 19 30.8**	**-2.1**
	comp=Z,9.1nm,1.2s						
SQTA	**Sankt Quirin**	**147.50**	**354**	*e*S	**PKPab**	**06 19 32.7**	**-0.4**
	comp=Z,10nm,1.0s						
DAVA	**Damuels**	**147.56**	**355**	*e*S	**PKPab**	**06 19 32.0**	**-1.4**
	comp=Z,14nm,1.3s						
ABTA	**Abfaltersbach**	**147.81**	**352**	*e*S	**PKPab**	**06 19 31.8**	**-2.5**
	comp=Z,9.0nm,1.4s						
ESDC	**Sonseca Array**	**153.75**	**18**	PKPbc	**PKiKP**	**06 19 47.5**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=317,slow=1.8,SNR=6.4						

*IDC **16** 06:00:11.6±3.3,20.°99S×178.°84W,h602km±40km, mb3.5/13,mb1 3.8/15,mb1mx3.6/31,mbtmp4.5/15,Error ellipse: s-maj=19.4km s-min=17.7km az=42.0*
*NEIC **16** 06:00:12.8±1.4,20.°9S±0.°1×178.°9W±0.°1,h623km±7km, mb4.2/39,Error ellipse: s-maj=20.4km s-min=16.4km az=107.0*

ISC 16 06:00:12.8±0.5,20.°98S±0.°08×178.°90W±0.°09,h619km, n114,σ1°20/117,mb4.2/32,14C-7D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.33**	**318**	P	**P**	**06 01 41.0**	**-1.1**
DZM	**Mont Dzumac**	**13.68**	**263**	P	**P**	**06 03 07.6**	**-0.5**
	0.4nm,0.3s,baz=116,slow=14,SNR=6.7						
SANVU	**Saraoutou**	**14.30**	**290**	P	**P**	**06 03 14.2**	**+0.2**
OUZ	**Omahuta**	**15.64**	**203**	P	**P**	**06 03 27.8**	**+1.9**
KUZ	**Kuaotunu**	**16.39**	**195**	P	**P**	**06 03 33.9**	**+1.2**
WIAZ	**Waiheke Island**	**16.59**	**197**	P	**P**	**06 03 35.7**	**+1.1**
MBAZ	**Motutapu North**	**16.63**	**198**	P	**P**	**06 03 36.4**	**+1.4**
ETAZ	**East Tamaki Re**	**16.80**	**197**	P	**P**	**06 03 38.1**	**+1.7**
MKAZ	**Moumakai**	**16.88**	**197**	P	**P**	**06 03 38.1**	**+1.0**
WTAZ	**Waiatarua**	**16.88**	**198**	P	**P**	**06 03 38.7**	**+1.5**
WMGZ	**Waiomatatini S**	**16.94**	**187**	P	**P**	**06 03 37.4**	**-0.3**
HAZ	**Te Kaha**	**16.96**	**189**	P	**P**	**06 03 37.2**	**-0.7**
AWAZ	**Awhitu Peninsu**	**16.98**	**198**	P	**P**	**06 03 40.0**	**+1.8**
RUGZ	**Raukumara Rang**	**17.18**	**189**	P	**P**	**06 03 38.0**	**-2.1**
URZ	**Urewera**	**17.56**	**190**	P	**P**	**06 03 41.3**	**-2.1**
	2.3nm,0.3s,baz=283,slow=3.2,SNR=15						
URZ	**Urewera**	**17.56**	**190**	P	**P**	**06 03 41.3**	**-2.1**
AMCZ	**Amberley**	**23.23**	**196**	P	**P**	**06 04 27.8**	**-6.5**
EIDS	**Eidsvold**	**27.91**	**255**	P	**P**	**06 05 15.6**	**0.0**
EIDS				IAmb	IAmb	06 05 31.3	
	comp=Z,17nm,1.4s						
ARMA	**Armidale**	**28.10**	**244**	P	**P**	**06 05 18.5**	**+1.1**
ARMA				IAmb	IAmb	06 05 24.0	
	comp=Z,3.8nm,0.9s						
CTAO	**Charters Tower**	**32.60**	**265**	P	**P**	**06 05 56.2**	**+0.4**
STKA	**Stephens Creek**	**36.82**	**245**	P	**P**	**06 06 31.2**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=88,slow=11,SNR=5.5						
STKA	**Stephens Creek**	**36.82**	**245**	P	**P**	**06 06 31.3**	**+0.7**
BBOO	**Buckleboo**	**41.58**	**244**	P	**P**	**06 07 08.8**	**+0.2**
BBOO				IAmb	IAmb	06 07 09.7	
	comp=Z,14nm,1.3s						
WR0	**Warramunga Arr**	**43.51**	**263**	P	**P**	**06 07 23.4**	**-0.4**
AS31	**Alice Springs**	**43.59**	**257**	P	**P**	**06 07 24.4**	**0.0**
ASAR	**Alice Springs**	**43.59**	**257**	P	**P**	**06 07 24.6**	**+0.1**
	comp=Z,6.7nm,0.7s,baz=96,slow=7.8,SNR=110						
ASAR				S	**S**	**06 13 09.3**	**-1.3**
	comp=Z,1.6nm,1.0s,baz=94,slow=16,SNR=7.2						
ASAR	**Alice Springs**	**43.59**	**257**	P	**P**	**06 07 24.2**	**-0.2**
WC3	**Warramunga Arr**	**43.67**	**263**	P	**P**	**06 07 24.4**	**-0.6**
WC3				IAmb	IAmb	06 07 25.5	
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**43.68**	**263**	P	**P**	**06 07 24.6**	**-0.5**
WB0				IAmb	IAmb	06 07 25.5	
	comp=Z,14nm,1.2s						
WB2	**Warramunga Arr**	**43.69**	**263**	P	**P**	**06 07 24.9**	**-0.3**
WB2				IAmb	IAmb	06 07 25.7	
	comp=Z,11nm,1.1s						
WRAB	**Tennant Creek**	**43.69**	**263**	P	**P**	**06 07 24.7**	**-0.5**
WRAB				IAmb	IAmb	06 07 25.7	
	comp=Z,13nm,1.2s						
WRA	**Warramunga Arr**	**43.70**	**263**	P	**P**	**06 07 25.0**	**-0.3**
	comp=Z,4.9nm,0.6s,baz=97,slow=7.7,SNR=154						
WRA				S	**S**	**06 13 07.9**	**-4.2**
	comp=Z,0.6nm,1.0s,baz=96,slow=13,SNR=3.5						
WRA	**Warramunga Arr**	**43.70**	**263**	P	**P**	**06 07 24.8**	**-0.5**
MTN	**Manton Dam**	**48.33**	**271**	P	**P**	**06 08 00.1**	**-0.1**
MTN				IAmb	IAmb	06 08 00.5	
	comp=Z,10nm,0.7s						
FORT	**Forrest**	**48.33**	**247**	P	**P**	**06 07 59.7**	**-0.3**
FORT				IAmb	IAmb	06 08 07.9	
	comp=Z,11nm,1.0s						
KNRA	**Kununurra**	**49.79**	**267**	P	**P**	**06 08 10.9**	**0.0**
KNRA				IAmb	IAmb	06 08 11.3	
	comp=Z,8.3nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.13**	**263**	P	**P**	**06 08 28.5**	**+0.8**
SIJI	**Sorong**	**52.55**	**286**	P	**P**	**06 08 31.3**	**+0.5**
	comp=Z,21nm,0.8s,baz=249,slow=0.8,SNR=3.9						
PSAD2	**Pilbara Seismi**	**56.62**	**257**	P	**P**	**06 08 58.5**	**-0.6**
PSAD2				IAmb	IAmb	06 08 59.6	
	comp=Z,9.3nm,0.8s						
PSAB3	**Pilbara Seismi**	**56.73**	**257**	P	**P**	**06 08 59.7**	**-0.1**
PSAB3				IAmb	IAmb	06 09 00.5	
	comp=Z,13nm,1.0s						
PSA00	**Pilbara Seismi**	**56.74**	**257**	P	**P**	**06 08 58.8**	**-1.1**
PSA00	**Pilbara Seismi**	**56.74**	**257**	P	**P**	**06 08 59.3**	**-0.6**
PSA00				IAmb	IAmb	06 09 00.5	
	comp=Z,7.6nm,0.9s						
VNDA	**Vanda**	**57.36**	**185**	P	**P**	**06 09 04.2**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=5.7,slow=6.1,SNR=6.5						
VNDA	**Vanda**	**57.36**	**185**	P	**P**	**06 09 04.7**	**+1.5**
QSPA	**South Pole Qui**	**69.09**	**180**	P	**P**	**06 10 18.9**	**+0.8**
MJAR	**Matsushiro Arr**	**70.10**	**324**	P	**P**	**06 10 24.3**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=160,slow=6.6,SNR=6.9						
ADK	**Adak**	**72.58**	**1**	P	**P**	**06 10 37.8**	**-0.6**
PEA0B	**Petropavlovsk-**	**76.52**	**346**	P	**P**	**06 11 01.3**	**+0.8**
PETK	**Petropavlovsk-**	**76.52**	**346**	P	**P**	**06 11 00.6**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=134,slow=4.3,SNR=4.3						
PETK	**Petropavlovsk-**	**76.52**	**346**	P	**P**	**06 11 00.7**	**+0.2**
USRK	**Ussuriysk Ar.**	**78.89**	**326**	P	**P**	**06 11 15.0**	**+1.6**
	comp=Z,2.9nm,0.9s,baz=119,slow=3.2,SNR=4.2						
USRK	**Ussuriysk Ar.**	**78.89**	**326**	P	**P**	**06 11 13.9**	**+0.5**
CMB	**Columbia Colle**	**80.39**	**43**	P	**P**	**06 11 20.5**	**-0.9**
MAW	**Mawson**	**80.83**	**200**	P	**P**	**06 11 23.5**	**+0.4**
HUMO	**Hull Mountain**	**81.59**	**38**	P	**P**	**06 11 26.5**	**-0.9**
HUMO				IAmb	IAmb	06 11 30.3	
	comp=Z,10nm,1.1s						
NVAR	**Mina Array Bea**	**81.95**	**44**	P	**P**	**06 11 29.9**	**+0.2**
	comp=Z,8.0nm,1.0s,baz=227,slow=8.3,SNR=19						
W13A	**Hualapai Mount**	**83.12**	**48**	P	**P**	**06 11 34.4**	**-1.2**
X18A	**Snowflake**	**85.63**	**51**	P	**P**	**06 11 46.9**	**-0.9**
X18A				IAmb	IAmb	06 11 54.5	
	comp=Z,5.8nm,1.1s						
HAWA	**Hanford**	**85.84**	**37**	P	**P**	**06 11 46.7**	**-1.5**
HAWA				IAmb	IAmb	06 11 49.9	
	comp=Z,4.5nm,0.8s						
MSU	**Marysvale**	**86.05**	**46**	P	**P**	**06 11 48.9**	**-0.8**
SYO	**Syowa Base**	**86.07**	**193**	*e*P	**P**	**06 11 47.0**	**-2.0**
SYO	**Syowa Base**	**86.07**	**193**	*e*P	**P**	**06 11 51.9**	**+2.9**
D08A	**Wollman Farm,**	**86.57**	**36**	P	**P**	**06 11 51.8**	**+0.2**
D08A				IAmb	IAmb	06 11 57.6	
	comp=Z,11nm,1.2s						
RND	**Reindeer**	**87.35**	**13**	P	**P**	**06 11 54.5**	**-0.5**
SNAA	**Sanae**	**87.55**	**179**	P	**P**	**06 11 55.0**	**-1.0**
SNAA				IAmb	IAmb	06 12 09.4	
	comp=Z,5.3nm,1.5s						
LENM	**Lemitar**	**87.63**	**52**	P	**P**	**06 11 55.2**	**-1.9**
VNA3	**Neumayer Olymp**	**87.72**	**177**	P	**P**	**06 11 56.0**	**-0.7**
XAN	**Xi'an**	**87.75**	**308**	P	**P**	**06 11 59.1**	**+1.5**
XAN				pP	PcP	06 12 13.6	+15
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TXAR	**Lajitas Array**	**88.03**	**58**	P	**P**	**06 12 00.3**	**+1.3**
	comp=Z,3.4nm,1.0s,baz=222,slow=5.0,SNR=20						
TXAR	**Lajitas Array**	**88.03**	**58**	P	**P**	**06 12 00.2**	**+1.2**
VNA1	**Neumayer--Stat**	**88.38**	**177**	P	**P**	**06 11 59.6**	**-0.1**
WRH	**Wood River Hil**	**88.45**	**13**	P	**P**	**06 11 59.4**	**-0.7**
CCB	**Clear Creek Bu**	**88.67**	**13**	P	**P**	**06 12 00.2**	**-0.8**
IMAR	**Indian Mountai**	**88.77**	**10**	P	**P**	**06 12 00.8**	**-0.7**
MDM	**Murphy Dome**	**88.86**	**13**	P	**P**	**06 12 01.4**	**-0.5**
ILAR	**Eielson Array**	**88.97**	**13**	P	**P**	**06 12 01.5**	**-0.9**
	comp=Z,4.8nm,1.3s,baz=226,slow=5.6,SNR=10						
MSO	**Missoula**	**89.27**	**38**	P	**P**	**06 12 03.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**89.48**	**290**	P	**P**	**06 12 08.1**	**+2.2**
	comp=Z,1.2nm,0.3s,baz=126,slow=3.3,SNR=11						
PD31	**Pinedale Array**	**89.89**	**44**	P	**P**	**06 12 07.1**	**-0.4**
PDAR	**Pinedale Array**	**89.89**	**44**	LR	LR	06 44 25.2	
	comp=Z,166nm,18.2s,baz=287,slow=32						
PDAR	**Pinedale Array**	**89.89**	**44**	P	**P**	**06 12 07.5**	**0.0**
	comp=Z,1.0nm,0.6s,baz=219,slow=3.0,SNR=11						
PDAR	**Pinedale Array**	**89.89**	**44**	P	**P**	**06 12 07.4**	**-0.2**
ARCES	**ARCESS Array B**	**129.24**	**349**	PKP	**PKPdf**	**06 18 10.3**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=347,slow=5.0,SNR=4.5						
FINES	**FINESS Array B**	**135.99**	**343**	PKP	**PKPdf**	**06 18 24.3**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=23,slow=5.0,SNR=1.6						
AKASG	**Malin Array Be**	**143.02**	**330**	PKP	PKPab	06 18 34.6	-0.5
	comp=Z,5.5nm,0.5s,baz=40,slow=4.3,SNR=26						
AKBB	**Malin Array Si**	**143.02**	**330**		PKPab	06 18 34.7	-0.4
SORM	**Soroca**	**145.16**	**328**	⇓P	**PKPbc**	**06 18 41.8**	**-0.3**
PURM	**Purcari**	**145.39**	**324**	⇑P	**PKPab**	**06 18 44.9**	**+0.5**
BR131	**Keskin Array S**	**146.53**	**311**		**PKPbc**	**06 18 46.7**	**+0.2**
BRTR	**Keskin Array B**	**146.53**	**311**	PKPbc	**PKPbc**	**06 18 46.2**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=128,slow=3.8,SNR=10						
BRTR	**Keskin Array B**	**146.53**	**311**		**PKPbc**	**06 18 46.5**	**+0.1**
BUR08	**Bucovina Ar. S**	**147.04**	**329**		**PKPbc**	**06 18 47.5**	**0.0**
BUR08				PKPab	**PKiKP**	**06 18 49.8**	**+0.6**
BURAR	**Bucovina Array**	**147.06**	**329**		**PKPbc**	**06 18 48.0**	**+0.5**
BURAR				PKPab	**PKiKP**	**06 18 49.8**	**+0.6**
BIZ	**Bicaz**	**147.09**	**328**	⇓P	**PKPbc**	**06 18 47.9**	**+0.3**
TESR	**Tescani**	**147.11**	**327**	⇑P	**PKPbc**	**06 18

LCND	La Caada	3.12	87	eP		Pn	06 26 24.8	-1.8
CMIG	Matias Romero	5.36	317	Pn		Pn	06 26 57.6	+0.2
	comp=Z,0.3nm,0.3s,baz=232,slow=17,SNR=2.3							
CMIG				Sn		Sn	06 27 54.8	-3.3
	comp=Z,0.8nm,0.3s,baz=132,slow=12,SNR=2.8							
JTS	Las Juntas de	6.65	115	Pn		Pn	06 27 18.8	+3.6
	comp=Z,0.3nm,0.3s,baz=255,slow=20,SNR=2.5							
H06E1	SOCORRO T-PHASE	9.87	289	T		T	06 50 23.8	
	SNR=11							
TXAR	Lajitas Array	19.89	326	P		Pn	06 30 09.9	-0.3
	comp=Z,0.1nm,0.3s,baz=152,slow=12,SNR=10							
TKL	Tuckaleechee C	23.36	15	P		P	06 30 43.6	-1.7
	comp=Z,1.1nm,0.6s,baz=187,slow=8.9,SNR=3.7							
TKL				LR		LR	06 40 12.4	
	comp=Z,100nm,19.6s,baz=166,slow=38							
ANMO	Albuquerque	25.77	330	P		P	06 31 10.7	+3.0
	comp=Z,0.5nm,0.4s,baz=153,slow=9.0,SNR=3.5							
NVAR	Mina Array Bea	34.88	321	P		P	06 32 29.6	+1.4
	comp=Z,2.1nm,0.8s,baz=125,slow=7.8,SNR=9.7							
LPAZ	La Paz	37.02	142	LR		LR	06 48 34.3	
	comp=Z,43nm,19.9s,baz=250,slow=37							
HFS	Hagfors	85.91	29	LR		LR	07 17 33.9	
	comp=Z,62nm,19.4s,baz=16,slow=36							
CMAR	Chiang Mai Arr	147.07	342	PKPbc		PKPbc	06 45 20.4	+0.4
	comp=Z,0.7nm,0.3s,baz=348,slow=3.8,SNR=3.4							

IDC 16 06:36:12.3±4.8, 22°90S×64°14W, h35km±38km, mb3.3/2, mb1 3.4/5, mb1mx3.3/26, mbtmp3.3/5, ML3.2/3, Error ellipse: s-maj=47.0km s-min=21.1km az=45.0, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CPUP	Villa Florida	7.07	120	Pn		Pn	06 37 52.6	-0.7
	0.1nm,0.3s,baz=295,slow=13,SNR=3.2							
CPUP				Lg		Lg	06 39 58.1	
	0.3nm,0.3s,baz=207,slow=20,SNR=2.8							
SIV	San Ignacio	7.46	23	Pn		Pn	06 37 59.1	+0.4
	0.7nm,0.3s,baz=207,slow=12,SNR=15							
SIV				Sn		Sn	06 39 20.4	-1.7
	0.2nm,0.3s,baz=127,slow=20,SNR=2.5							
LPAZ	La Paz	7.58	330	Pn		Pn	06 38 02.9	+2.0
	0.1nm,0.3s,baz=158,slow=5.4,SNR=3.5							
LPAZ				Sn		Sn	06 39 25.4	-0.6
	0.1nm,0.3s,baz=238,slow=19,SNR=1.9							
TXAR	Lajitas Array	64.38	322	P		P	06 46 44.6	-0.3
	0.2nm,0.7s,baz=138,slow=9.5,SNR=2.4							
TORD	Torodi Ar. Bea	73.72	68	P		P	06 47 43.5	+0.3
	0.8nm,0.7s,baz=257,slow=5.6,SNR=3.6							

IDC 16 06:38:38.9±0.6, 1°.83N×126°.25E, h0km, mb4.2/16, mb1 4.3/17, mb1mx4.1/35, mbtmp4.2/17, ML4.2/1, Error ellipse: s-maj=33.8km s-min=12.7km az=76.0
NEIC 16 06:38:42.8±1.1, 2°.07N±0°.04×126°.82E±0°.05, h35km±2km, mb4.6/30, Error ellipse: s-maj=10.0km s-min=5.8km az=299.0
DJA 16 06:38:44.7±1.5, 2°.N±3°×12°.6E±°, h38km±42km, M4.4/13, mB4.9/1, mb4.6/6, MLv4.3/13, Mw(mB)4.2/1
ISC 16 06:38:45.2±0.4, 1°.83N±0°.04×126°.44E±0°.07, h47km, n81, σ1s37/87, mb4.4/32, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	Ternate	1.40	139	P		Pn	06 39 07.9	-0.4
TNTI	Ternate	1.40	139	Pn		Pn	06 39 08.1	-0.2
TNTI				Sn		Sn	06 39 23.2	-2.4
SGSI	Sangihe	2.06	334	P		Pn	06 39 16.2	-1.2
SGSI				S		Sn	06 39 41.1	-0.7
KMSI	Cibinong	2.76	243	P		Pn	06 39 25.6	-1.4
GTOI	Gorontalo	3.63	251	P		Pn	06 39 39.7	+0.8
SANI	Sanana	3.88	187	P		Pn	06 39 41.2	-1.2
DDMP	Don Marcelino,	4.31	350	eP		Pn	06 39 47.3	-1.0
DDMP				eS		Sn	06 40 37.3	0.0
LUWI	Luwuk	4.65	232	P		Pn	06 39 52.6	-0.3
LUWI	Luwuk	4.65	232	Pn		Pn	06 39 56.2	+3.3
MRSI	Marisa	4.70	253	P		Pn	06 39 52.1	-1.5
SKMP	Bagumbayan, Su	5.03	338	eP		Pn	06 39 56.6	-1.6
SKMP				eS		Sn	06 40 52.8	-2.3
MATI	Mati	5.09	358	eP		Pn	06 40 01.3	+2.3
MATI				eS		Sn	06 40 58.9	+2.4
KCP	Kidapawan	5.32	345	⇓iP		Pn	06 40 05.0	+2.8
KCP				iS		Sn	06 41 03.6	+1.3
APSI	Ampana	5.51	240	P		Pn	06 40 04.3	-0.5
	0.4nm1μm88nm,0.6s							
BUKP	Musuan	6.17	347	eP		Pn	06 40 15.0	+1.2
BUKP				eS		Sn	06 41 23.2	+0.1
MPSI	Mapaga	6.71	257	P		Pn	06 40 28.2	+7.0
PAGZ	Pagadian	6.71	333	eP		Pn	06 40 19.9	-1.3
PAGZ				eS		Sn	06 41 32.7	-3.7
TTSI	Tana Toraja	8.20	234	P		Pn	06 40 42.0	+0.3
	23nm,0.6s							
MYLDM	Lahad Datu	8.60	293	Pn		Pn	06 40 48.6	+1.5
SPSI	Sidrap Palu	8.81	229	P		Pn	06 41 00.7	+11
BNSI	Bone	8.85	226	P		Pn	06 40 50.0	-0.6
BSSI	Bau Bau, Buton	9.90	217	P		Pn	06 41 11.8	+6.8
MMRI	Maumere	11.21	202	Pn		Pn	06 41 25.9	+3.0
SBUM	Sibu	14.23	273			P	06 42 08.5	-1.8
MTN	Manton Dam	15.30	162			Pn	06 42 17.5	-0.7
MTN				IAmb		IAmb	06 42 27.8	
	comp=Z,9.1nm,0.5s							
KNRA	Kununurra	17.54	173			Pn	06 42 46.8	+0.3
FITZ	Fitzroy Crossi	19.82	182	P		P	06 43 11.9	-0.1
	comp=Z,0.5nm,0.3s,baz=354,slow=6.7,SNR=14							
FITZ	Fitzroy Crossi	19.82	182	P		P	06 43 13.2	+1.2
WB0	Warramunga Arr	22.84	160	P		P	06 43 43.7	-0.8
WB0				IAmb		IAmb	06 43 49.4	
	comp=Z,12nm,0.6s							
WRAB	Tennant Creek	22.98	161	P		P	06 43 44.4	-1.5
WRAB				IAmb		IAmb	06 43 47.8	
	comp=Z,18nm,0.9s							
WRA	Warramunga Arr	22.98	161	P		P	06 43 45.5	-0.5
	comp=Z,11nm,0.5s,baz=339,slow=11,SNR=89							
WRA	Warramunga Arr	22.98	161	P		P	06 43 44.7	-1.3
WB2	Warramunga Arr	22.99	161	P		P	06 43 45.0	-1.0
WB2				IAmb		IAmb	06 43 47.8	
	comp=Z,16nm,0.8s							
WR0	Warramunga Arr	23.07	160	P		P	06 43 46.1	-0.7
WR0				IAmb		IAmb	06 43 48.6	
	comp=Z,13nm,0.9s							
AS31	Alice Springs	26.36	164	P		P	06 44 18.2	+1.0
AS31				IAmb		IAmb	06 44 24.8	
	comp=Z,3.3nm,0.3s							
ASAR	Alice Springs	26.36	164	P		P	06 44 17.2	0.0
	comp=Z,3.1nm,0.5s,baz=340,slow=7.5,SNR=27							
ASAR				PcP		PcP	06 47 43.6	+1.3
	comp=Z,0.4nm,0.4s,baz=347,slow=2.1,SNR=4.9							
GIRL	Giralia	27.08	205	P		P	06 44 25.9	+2.3
NJ2	Nanjing	30.90	347	eP		P	06 44 57.4	0.0
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.6s							
CMAR	Chiang Mai Arr	31.62	303	P		P	06 45 04.2	+0.2
	comp=Z,0.5nm,0.3s,baz=125,slow=7.7,SNR=4.4							
MORW	Morawa	32.30	197	P		P	06 45 10.8	+1.0
MORW				IAmb		IAmb	06 45 17.8	
	comp=Z,8.6nm,1.1s							
FORT	Forrest	32.46	177	P		P	06 45 12.1	+0.9
KSRS	Korea Array	35.48	2	P		P	06 45 37.9	+0.6
	comp=Z,1.3nm,0.6s,baz=176,slow=9.5,SNR=5.0							
BBOO	Buckleboo	35.63	166	P		P	06 45 39.3	+0.6
NWAO	Narrogin (SRO)	35.65	193	P		P	06 45 40.1	+1.3
MJAR	Matsushiro Arr	36.22	16	P		P	06 45 43.7	0.0
	comp=Z,3.4nm,0.8s,baz=186,slow=9.4,SNR=13							
MJAR	Matsushiro Arr	36.22	16	IAmb		IAmb	06 45 49.5	
	comp=Z,4.7nm,1.5s							
MAT	Matsushiro	36.22	16	P		P	06 45 43.1	-0.6
STKA	Stephens Creek	36.48	158	P		P	06 45 46.4	+0.5
	comp=Z,1.9nm,0.4s,baz=334,slow=9.6,SNR=6.6							
STKA	Stephens Creek	36.48	158	P		P	06 45 46.4	+0.5
LZH	Lanzhou	40.00	331	eP		P	06 46 16.4	+0.7
LZH				pP		pP	06 46 26.8	-1.2
LZH				sP		pwP	06 46 30.1	+2.1
LZH				PP		PnPn	06 47 53.6	+1.5
LZH				pmax		pmax		
	comp=Z,12nm,1.2s							
LZH				pmax		pmax		
	comp=Z,79nm,4.9s							
LZH				LR		LR		
	comp=N,260nm,14.3s							
LZH				LR		LR		
	comp=E,210nm,15.8s							
LZH				LR		LR		
	comp=Z,270nm,16.3s							

HHC	Hu-ho-hao-te	41.11	343	eP		P	06 46 24.5	-0.2
HHC				pmax		pmax		
	comp=Z,11nm,1.1s							
HHC				pmax		pmax		
	comp=Z,68nm,5.2s							
USRK	Ussuriysk Ar.	42.48	6	P		P	06 46 32.3	-3.4
GTA	Gaotai	44.58	330	eP		P	06 46 55.6	+2.7
GTA				pP		pP	06 47 01.8	-3.5
GTA				sP		pwP	06 47 04.8	-0.5
GTA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
SONM	Songino Array	49.00	342	P		P	06 47 27.4	0.0
	comp=Z,1.6nm,0.9s,baz=148,slow=8.6,SNR=5.9							
SONM				PcP		PcP	06 48 51.8	+1.0
	comp=Z,1.0nm,0.8s,baz=151,slow=3.4,SNR=4.2							
WMQ	Urumqi	54.12	326	eP		P	06 48 06.6	+1.0
PETK	Petropavlovsk-	57.29	22	P		P	06 48 29.2	+1.2
	comp=Z,1.6nm,0.6s,baz=184,slow=4.9,SNR=7.1							
MK31	Makanchi Array	58.95	326	P		P	06 48 39.4	-0.5
MKAR	Makanchi Array	58.95	326	P		P	06 48 39.3	-0.6
	comp=Z,2.0nm,0.4s,baz=120,slow=8.5,SNR=27							
MKAR	Makanchi Array	58.95	326	P		P	06 48 39.0	-0.9
MAKZ	Makanchi	59.14	326	P		P	06 48 39.9	-1.2
MAKZ				IAmb		IAmb	06 48 44.3	
	comp=Z,8.6nm,1.4s							
KDJ	Kajisay	59.58	319	P		P	06 48 44.9	+0.4
KDJ				IAmb		IAmb	06 48 51.7	
	comp=Z,6.5nm,0.8s							
ZALV	Zalesovo Beam	62.15	334	P		P	06 49 00.4	-1.0
	comp=Z,0.7nm,0.4s,baz=154,slow=7.9,SNR=2.5							
KBL	Kabul	62.46	308	P		P	06 49 04.9	+0.7
GAR	Garm	63.00	313	P		P	06 49 07.1	-0.5
GAR				IAmb		IAmb	06 49 10.4	
	comp=Z,6.9nm,0.8s							
KURK	Kurchatov	63.19	328	P		P	06 49 07.5	-0.9
KURK				IAmb		IAmb	06 49 08.5	
	comp=Z,5.7nm,0.8s							
KK31	Karatay Array	64.43	318	P		P	06 49 16.4	-0.5
KKAR	Karatay Array	64.43	318	P		P	06 49 16.4	-0.5
KKAR	Karatay Array	64.43	318	P		P	06 49 16.1	-0.7
JOHN	Johnston Islan	64.63	72	P		P	06 49 14.6	-3.9
GEYT	Alibeck	71.86	309	P		P	06 50 03.5	-0.1
NRIK	Noril'sk	72.20	346	P		P	06 50 05.3	+0.5
	comp=Z,3.0nm,0.8s,baz=129,slow=7.5,SNR=5.6							
ABKAR	Akbulak array	73.44	321	P		P	06 50 11.9	-0.7
ABKAR				IAmb		IAmb	06 50 12.9	
	comp=Z,2.2nm,0.6s							
ABKAR	Akbulak array	73.44	321	P		P	06 50 11.5	-1.1
ARU	Arti	76.38	328	P		P	06 50 28.7	-0.8
ARU				IAmb		IAmb	06 50 29.6	
	comp=Z,6.7nm,0.7s							
VNDA	Vanda	81.59	173	P		P	06 50 58.9	+1.3
	comp=Z,0.6nm,0.4s,baz=312,slow=7.2,SNR=8.9							
BCAR	Beaver Creek A	89.19	27	P		P	06 51 33.2	-2.6
BRTR	Keskin Array B	91.00	310	P		P	06 51 43.6	-1.3
	comp=Z,0.8nm,0.7s,baz=119,slow=4.6,SNR=4.6							
ARCES	ARCESS Array B	92.12	340	P		P	06 51 49.3	+0.1
	comp=Z,3.3nm,0.9s,baz=72,slow=5.6,SNR=5.7							
AKASG	Malin Array Be	93.18	321	P		P	06 51 53.1	-1.4
	comp=Z,0.1nm,0.3s,baz=69,slow=5.1,SNR=3.2							
FINES	FINESS Array B	93.36	332	P		P	06 51 54.0	-1.1
	comp=Z,2.9nm,0.9s,baz=27,slow=7.8,SNR=3.1							
TORD	Torodi Ar. Bea	123.21	287	PKP		PKPdf	06 57 38.9	+1.0
	comp=Z,0.7nm,0.6s,baz=79,slow=2.0,SNR=5.2							

IDC 16 06:41:16.1±0.7, 10°.60N×126°.60E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.7/38, mbtmp3.9/10, MS3.0/1, Ms1 3.0/1, ms1mx2.4/48, Error ellipse: s-maj=46.4km s-min=16.3km az=75.0
MAN 16 06:41:19.1, 10°.73N×126°.76E, h34km, mb4.8, ML3.7, MS3.7
ISC 16 06:41:22.1±0.7, 10°.6N±0°.1×126°.7E±0°.3, h44km, n12, σ0s81/13, mb4.0/10, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAPI	Kappang	16.99	204	LR		LR	06 52 38.7	
	comp=Z,59nm,20.8s,baz=52,slow=40							
KSRS	Korea Array	26.76	2	P		P	06 46 57.1	-0.7
	0.4nm,0.4s,baz=167,slow=11,SNR=2.7							
WRA	Warramunga Arr	31.27	166	P		P	06 47 37.1	-1.0
	0.6nm,0.9s,baz=346,slow=9.9,SNR=2.8							
WRA				PcP		PcP	06 50 32.4	+0.5
	0.2nm,0.5s,baz=339,slow=3.0,SNR=7.6							
ASAR	Alice Springs	34.78	168	P		P	06 48 08.4	-0.3
	0.6nm,0.5s,baz=340,slow=6.0,SNR=4.6							
ASAR				PcP		PcP	06 50 42.4	+0.7
	0.7nm,0.5s,baz=342,slow=2.7,SNR=9.3							
STKA	Stephens Creek	44.59	162	P		P	06 49 30.4	+0.3
	2.0nm,0.5s,baz=347,slow=6.3,SNR=5.7							
PETK	Petropavlovsk-	49.16	24	P		P	06 50 06.0	+0.4
	1.9nm,0.8s,baz=195,slow=8.4,SNR=3.2							
MKAR	Makanchi Array	52.02	322	P		P	06 50 28.7	+1.4
	1.5nm,0.8s,baz=120,slow=7.3,SNR=4.2							
ZALV	Zalesovo Beam	54.54	331	P		P	06 50 45.1	-0.5
	0.4nm,0.3s,baz=97,slow=9.0,SNR=2.9							
BRTR	Keskin Array B	85.64	309	P		P	06 53 56.6	0.0
	0.8nm,0.7s,baz=123,slow=4.6,SNR=4.9							
FINES	FINESS Array B	85.80	332	P		P	06 53 57.0	+0.3
	1.4nm,0.5s,baz=79,slow=4.6,SNR=10							
AKASG	Malin Array Be	86.57	321	P		P	06 53 59.6	-1.2
	0.1nm,0.2s,baz=64,slow=4.3,SNR=4.0							
PLCA	Paso Flores	146.34	156	PKPbc		PKPab	07 01 00.1	+0.6
	2.0nm,0.8s,baz=238,slow=5.3,SNR=4.6							

SOME 16 06:45:35.9, 41°.98N×78°.97E, h15km
KRNET 16 06:45:35.4±0.1, 41°.96N×78°.92E, h8km, mb2.0
NNC 16 06:45:36.5±1.9, 42°.01N×78°.98E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=13.4km s-min=6.9km az=158.0
ISC 16 06:45:34.9±2.6, 41°.96N±0°.10×78°.99E±0°.05, h9km±13km, n22, σ0s89/39, 7C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRZ	Przheval'sk	0.68	320	⇑iP		Pg	06 45 48.1	0.0
	baz=25							
PRZ				⇑iS		Sg	06 45 57.2	+0.2
	baz=25							
SATY	Saty	1.18	339	eP		Pb	06 45 57.4	-0.1
	0.6nm,0.1s							
SATY				eS		Sn	06 46 12.8	-1.2
	6.5nm,0.1s							
ANVS	Anan'yevo	1.28	310	⇑iP		Pb	06 45 59.4	+0.1
	baz=12							
ANVS				⇑iS		Sg	06 46 16.5	+0.5
	baz=12							
KDJ	Kajisay	1.36	278	⇑iP		Pn	06 45 59.8	-0.4
	baz=78							
KDJ				⇑iS		Sn	06 46 18.4	-0.1
	baz=78							
PDGK	Podgornoye	1.42	15	P		Pb	06 46 01.9	+0.3
	0.7nm,0.5s							
PDGK				S		Sg	06 46 20.7	+0.2
	1.2nm,0.3s							
PDGK	Podgornoye	1.42	15	⇓P		Pb	06 46 01.7	+0.1
	0.3nm,0.5s							
PDGK				⇑S		Sg	06 46 21.0	+0.5
	1.3nm,0.6s							
TNSS	Tian-Shan	1.85	306	eP		Pb	06 46 09.6	+0.3
	1.9nm,0.2s							
TNSS				eS		Sg	06 46 34.1	-0.4
	1.7nm,0.1s							
TNSS	Tian-Shan	1.85	306	P		Pb	06 46 09.5	+0.3
	1.9nm,0.2s							
TNSS				S		Sg	06 46 34.1	-0.4
	1.7nm,0.1s							
MDOK	Medeo	1.87	311	eP		Pb	06 46 09.8	+0.5
	2.1nm,0.2s							
MDOK				eS		Sg	06 46 34.4	-0.6
	4.4nm,0.1s							
KOTS	Kotyrbulak	1.88	313	eP		Pb	06 46 10.2	+0.7
	4.0nm,0.2s							
KOTS				eS		Sg	06 46 35.0	-0.4
	3.7nm,0.3s							
MNBS	Baschi	2.16	349	eP		Pb	06 46 15.0	+0.7
	3.5nm,0.3s							
MNBS				eS		Sg	06 46 43.0	-1.4
	5.1nm,0.2s							
MNBS	Baschi	2.16	349	Pg		Pb	06 46 15.0	+0.7
	3.5nm,0.3s							
MNBS				Lg		Lg	06 46 43.0	
	5.1nm,0.2s							
BOOM	Boomskoye usch	2.32	284	⇓iP		Pb	06 46 16.5	-0.6
	baz=85							
BOOM				⇓iS		Sb	06 46 46.4	+0.4
	baz=85							
CHKK	Chushkaly	2.40	323	eP		Pb	06 46 19.7	+1.5
	1.8nm,0.1s							
CHKK				eS		Sg	06 46 51.1	-0.7
	14nm,0.1s							
CHKK	Chushkaly	2.40	323	Pg		Pb	06 46 19.7	+1.5
	1.8nm,0.1s							
CHKK				Lg		Lg	06 46 51.1	
	14nm,0.1s							
ARXS	Arharly	2.41	340	eP		Pb	06 46 19.2	+0.7
	2.3nm,0.3s							
ARXS				eS		Sg	06 46 50.4	-1.8
	6.6nm,0.5s							
ARXS	Arharly	2.41	340	Pg		Pb	06 46 19.2	+0.7
	2.3nm,0.3s							
ARXS				Lg		Lg	06 46 50.4	
	6.6nm,0.5s							
KTBS	Karatobe	2.44	317	eP		Pb	06 46 20.4	+1.4
	0.6nm,0.2s							
KTBS				eS		Sg	06 46 52.2	-0.9
	8.4nm,0.2s							
KTBS	Karatobe	2.44	317	Pg		Pb	06 46 20.4	+1.4
	0.6nm,0.2s							
KTBS				Lg		Lg	06 46 52.2	
	8.4nm,0.2s							
DJR	Jarkent	2.44	14	eP		Pb	06 46 20.1	+1.0
	1.3nm,0.4s							
DJR				eS		Sg	06 46 51.9	-1.5
	3.1nm,0.3s							
DJR	Jarkent	2.44	14	Pg		Pb	06 46 20.1	+1.0
	1.3nm,0.4s							
DJR				Lg		Lg	06 46 52.2	
	3.1nm,0.3s							
KST	Kastek	2.48	297	eP		Pb	06 46 20.3	+0.5
	1.6nm,0.3s							
KST				eS		Sb	06 46 52.0	+1.4
	3.2nm,0.8s							

NEIC 16 07:10:28.2±2.0, 6°.86S±0°.08×155°.28E±0°.07, h52km±4km, mb4.5/20, Error ellipse: s-maj=13.0km s-min=8.9km az=217.0
IDC 16 07:10:29.0±2.4, 6°.76S×155°.15E, h56km±21km, mb3.9/17, mb1 4.1/22, mb1mx4.0/41, mbtmp4.2/22, ML3.9/4, MS3.4/11, Ms1 3.4/11, ms1mx3.1/40, Error ellipse: s-maj=16.9km s-min=14.8km az=94.0
ISC 16 07:10:28.1±0.4, 6°.80S±0°.06×155°.27E±0°.06, h50km, n67, σ1s01/64, mb4.2/24, MS3.5/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RABL	Rabaul	4.03	310			Pn	07 11 29.1	+1.7
KRVT	Keravat (AS076	4.07	307	P		Pn	07 11 29.0	+1.2
	13nm,0.3s,baz=339,slow=3.6,SNR=3.9							
KRVT				S		Sn	07 12 27.5	+13
	65nm,0.3s,baz=120,slow=12,SNR=5.0							
KRVT				LR		LR	07 12 33.5	
	comp=Z,72nm,18.4s,baz=120,slow=32							
HNR	Honiara	5.32	120	P		Pn	07 11 46.3	+1.3
	7.8nm,0.3s,baz=176,slow=19,SNR=2.2							
HNR				S		Sn	07 12 55.9	+11
	7.3nm,0.3s,baz=150,slow=5.6,SNR=2.4							
HNR				LR		LR	07 13 57.3	
	comp=Z,530nm,18.3s,baz=206,slow=38							
HNR	Honiara	5.32	120			Pn	07 11 45.1	+0.1
PMG	Port Moresby	8.43	252	P		Pn	07 12 27.5	-0.2
	2.7nm,0.3s,baz=23,slow=7.1,SNR=4.7							
PMG				S		Sn	07 14 02.0	+0.3
	2.1nm,0.3s,baz=67,slow=15,SNR=4.2							
PMG				LR		LR	07 15 39.1	
	comp=Z,196nm,19.8s,baz=64,slow=37							
PMG	Port Moresby	8.43	252			Pn	07 12 28.4	+0.6
COEN	Coen	13.85	238			P	07 13 50.2	+1.4
PATS	Pohnpei	13.88	13	Pn		Pn	07 13 41.3	-1.0
CTA	Charters Tower	15.84	213	P		Pn	07 14 06.8	-1.1
	0.2nm,0.3s,baz=23,slow=16,SNR=1.8							
CTAO	Charters Tower	15.84	213			Pn	07 14 07.4	-0.6
DZM	Mont Dzumac	18.63	146	P		Pn	07 14 44.1	+1.5
	0.3nm,0.3s,baz=320,slow=14,SNR=7.8							
DZM				LR		LR	07 20 53.2	
	comp=Z,92nm,21.0s,baz=31,slow=33							
DZM	Mont Dzumac	18.63	146	P		P	07 14 40.5	-1.3
WR0	Warramunga Arr	23.99	235	P		P	07 15 37.5	-0.8
WR0				IAmb		IAmb	07 15 45.2	
	comp=Z,7.9nm,0.9s							
WB0	Warramunga Arr	24.02	236	P		P	07 15 38.0	-0.5
WB0				IAmb		IAmb	07 15 45.4	
	comp=Z,8.0nm,1.1s							
WRAB	Tennant Creek	24.13	235	P		P	07 15 38.8	-0.9
WRAB				IAmb		IAmb	07 16 03.8	
	comp=Z,5.8nm,0.8s							
WB2	Warramunga Arr	24.14	235	P		P	07 15 39.1	-0.5
WB2				IAmb		IAmb	07 15 58.2	
	comp=Z,5.6nm,0.7s							
WRA	Warramunga Arr	24.15	235	P		P	07 15 39.0	-0.8
	comp=Z,2.4nm,0.5s,baz=59,slow=9.1,SNR=42							
WRA				PcP		PcP	07 19 20.4	+0.5
	comp=Z,1.3nm,0.5s,baz=58,slow=2.3,SNR=12							
WRA				LR		LR	07 25 14.7	
	comp=Z,63nm,18.6s,baz=70,slow=37							
WRA	Warramunga Arr	24.15	235	P		P	07 15 38.0	-1.8
AS31	Alice Springs	26.50	228	P		P	07 16 00.2	-0.9
ASAR	Alice Springs	26.50	228	P		P	07 16 00.2	-0.9
	comp=Z,1.3nm,0.5s,baz=59,slow=9.3,SNR=40							
ASAR				pP		pP	07 16 12.8	+0

CAST	**Castle Rocks**	**80.45**	**21**	P		**P**	**07 22 34.3**	**0.0**
CAST				IAmb		IAmb	07 22 58.8	
	comp=Z,27nm,1.8s							
ILAR	**Eielson Array**	**83.10**	**21**	P		**P**	**07 22 47.5**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=246,slow=5.5,SNR=24							
ILAR				LR		LR	07 56 47.0	
	comp=Z,26nm,18.7s,baz=298,slow=33							
ILAR	**Eielson Array**	**83.10**	**21**	P		**P**	**07 22 48.1**	**-0.1**
QSPA	**South Pole Qui**	**83.17**	**180**	P		**P**	**07 22 49.2**	**+0.3**
QSPA				IAmb		IAmb	07 22 57.7	
	comp=Z,10nm,1.2s							
MKAR	**Makanchi Array**	**83.44**	**319**	P		**P**	**07 22 49.7**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=123,slow=4.5,SNR=6.0							
ZALV	**Zalesovo Beam**	**84.17**	**326**	P		**P**	**07 22 51.9**	**-2.0**
	comp=Z,0.9nm,0.2s,baz=92,slow=4.3,SNR=1.4							
MAW	**Mawson**	**84.68**	**203**	P		**P**	**07 22 56.4**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=88,slow=15,SNR=4.1							
MAW	**Mawson**	**84.68**	**203**	P		**P**	**07 22 57.0**	**+0.8**
MAW				IAmb		IAmb	07 23 24.3	
	comp=Z,8.1nm,1.9s							
KURBB	**Kurchatov Arra**	**86.88**	**322**	P		**P**	**07 23 06.7**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=111,slow=35,SNR=1.7							
INK	**Inuvik**	**89.44**	**21**	P		**P**	**07 23 19.8**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=315,slow=4.6,SNR=4.5							
INK	**Inuvik**	**89.44**	**21**	P		**P**	**07 23 19.9**	**+0.7**
INK				IAmb		IAmb	07 24 32.0	
	comp=Z,8.8nm,1.4s							
NVAR	**Mina Array Bea**	**91.39**	**52**	P		**P**	**07 23 30.4**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=244,slow=7.9,SNR=5.6							
PDAR	**Pinedale Array**	**98.37**	**48**	P		Pdif	07 24 02.2	+1.0
	comp=Z,0.4nm,0.7s,baz=240,slow=3.0,SNR=2.6							
GERES	**GERESS Array B**	**127.03**	**329**	PKP		**PKPdf**	**07 29 25.7**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=20,slow=3.1,SNR=1.7							
CPUP	**Villa Florida**	**134.34**	**137**	PKP		**PKPdf**	**07 29 41.8**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=243,slow=5.3,SNR=5.3							
BDFB	**Brasilia**	**147.92**	**134**	PKPbc		**PKPbc**	**07 30 09.2**	**+0.2**
	comp=Z,7.3nm,0.6s,baz=230,slow=2.1,SNR=16							
MDP	**Montagnes des**	**152.19**	**92**	PKPbc		**PKiKP**	**07 30 19.9**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=256,slow=1.3,SNR=4.7							
TORD	**Torodi Ar. Bea**	**153.23**	**286**	PKPbc		**PKPbc**	**07 30 20.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**153.23**	**286**	PKPdf		**PKPdf**	**07 30 14.0**	**-0.2**
TORD						**PKPbc**	**07 30 20.8**	**-0.8**
DBIC	**Dimbokro**	**160.26**	**271**	PKPab		**PKPab**	**07 31 03.9**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=85,slow=11,SNR=2.5							

IDC ***16*** *07:13:15.4±1.1,36.˚43N×67.˚17E,h0km,mb3.9/13, mb1 4.0/16,mb1mx3.7/55,mbtmp3.9/16,ML3.8/3,MS3.0/3, Ms1 3.1/3,ms1mx2.7/44,Error ellipse: s-maj=25.8km s-min=17.5km az=23.0*

NNC ***16*** *07:13:20.3±6.1,36.˚50N×67.˚17E,h111km±156km,mb3.5, mpv3.9,Error ellipse: s-maj=84.2km s-min=29.2km az=151.0*

NEIC ***16*** *07:13:20.1±2.8,36.˚73N±0.˚03×67.˚01E±0.˚08,h16km±5km, mb4.0/6,Error ellipse: s-maj=9.0km s-min=4.3km az=75.0*

ISC 16 07:13:17.0±0.5,36.˚51N±0.˚05×67.˚06E±0.˚05,h10km,n61, σ1$40/64,mb4.0/12,4C-5D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBL	**Kabul**	**2.54**	**140**	Pn		**Pg**	**07 14 04.6**	**-1.2**
KBL						**Pb**	**07 14 04.8**	**+2.0**
KBL				Sn		**Sg**	**07 14 38.8**	**+0.1**
CHGR	**Chuyangaron**	**2.72**	**37**			**Pn**	**07 14 02.5**	**+1.7**
CHGR				Sn		**Sn**	**07 14 34.1**	**+0.4**
GAR	**Garm**	**3.58**	**45**	Pn		**Pn**	**07 14 14.4**	**+1.6**
HRA	**Herat**	**4.47**	**243**			Pn	07 14 30.1	+5.1
BTK	**Batken**	**4.62**	**39**	Pn		**Pn**	**07 14 28.6**	**+1.6**
NIL	**Nilore**	**5.82**	**118**			Pn	07 14 49.2	+5.8
KK31	**Karatay Array**	**7.10**	**21**	⇓Pn		**Pn**	**07 15 02.3**	**+1.2**
	2.7nm,0.4s,baz=163,slow=22,SNR=35							
KK31				⇑Sn		**Sn**	**07 16 21.1**	**-0.7**
	13nm,0.6s							
KK31				⇑Lg		Lg	07 17 01.7	
	13nm,0.6s,baz=205,slow=30,SNR=5.7							
KK31	**Karatay Array**	**7.10**	**21**	Pn		**Pn**	**07 15 02.2**	**+1.2**
KKAR	**Karatay Array**	**7.10**	**21**			**Pn**	**07 15 00.2**	**-0.8**
KKAR	**Karatay Array**	**7.10**	**21**	Pn		**Pn**	**07 15 00.5**	**-0.5**
GEYT	**Alibeck**	**7.28**	**284**	Pn		**Pn**	**07 15 03.8**	**+0.4**
	2.5nm,0.3s,baz=113,slow=15,SNR=17							
GEYT				Sn		**Sn**	**07 16 24.6**	**-1.6**
	2.9nm,0.3s,baz=90,slow=14,SNR=3.9							
GEYT				LR		LR	07 19 04.3	
	comp=Z,189nm,19.0s,baz=145,slow=47							
GYA0	**ALIBECK ARRAY**	**7.28**	**284**	⇓P		**Pn**	**07 15 03.9**	**+0.5**
GYA0B	**ALIBECK ARRAY**	**7.28**	**284**	Pn		**Pn**	**07 15 03.5**	**+0.1**
AML	**Almayashu**	**7.61**	**40**	P		**Pn**	**07 15 09.4**	**+1.0**
	SNR=10							
EKS2	**Erkin-Say**	**8.04**	**38**	P		**Pn**	**07 15 18.3**	**+4.4**
	SNR=5.8							
UCH	**Uchtor**	**8.12**	**43**	P		**Pn**	**07 15 16.3**	**+1.0**
	SNR=7.7							
AAK	**Ala-Archa**	**8.39**	**41**	P		**Pn**	**07 15 19.7**	**+0.9**
	SNR=7.6							
AAK	**Ala-Archa**	**8.39**	**41**	⇓Pn		**Pn**	**07 15 19.4**	**+0.7**
	3.6nm,0.5s							
AAK				⇓Sn		**Sn**	**07 16 53.1**	**-0.5**
	13nm,0.8s							
AAK	**Ala-Archa**	**8.39**	**41**	Pn		**Pn**	**07 15 19.2**	**+0.5**
KBK	**Karagaybulak**	**8.64**	**42**	P		**Pn**	**07 15 23.9**	**+1.6**
	SNR=14							
BOOM	**Boomskoye usch**	**9.10**	**46**	Pn		**Pn**	**07 15 29.3**	**+0.8**
TKM2	**Tokmak 2**	**9.18**	**43**	P		**Pn**	**07 15 29.7**	**+0.1**
	SNR=7.2							
TKM2	**Tokmak 2**	**9.18**	**43**	⇑Pn		**Pn**	**07 15 29.8**	**+0.1**
	6.5nm,0.6s							
TKM2				Sn		Sn	07 17 04.9	-8.1
KDJ	**Kajisay**	**9.64**	**51**	Pn		**Pn**	**07 15 36.6**	**+0.7**
AB31	**Akbulak array**	**13.76**	**340**	⇓P		**Pn**	**07 16 29.0**	**-3.0**
	0.4nm,0.4s,baz=158,slow=13,SNR=24							
ABKAR	**Akbulak array**	**13.76**	**340**			**Pn**	**07 16 30.5**	**-1.5**
ABKAR	**Akbulak array**	**13.76**	**340**	Pn		**Pn**	**07 16 30.4**	**-1.7**
MK31	**Makanchi Array**	**15.31**	**43**	Pn		**Pn**	**07 16 47.4**	**-5.8**
MK31				IAmb		IAmb	07 16 55.3	
	comp=Z,7.0nm,0.7s							
AKTO	**Aktyubinsk**	**15.38**	**338**	Pn		**Pn**	**07 16 52.8**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=143,slow=13,SNR=8.0							
AKTO	**Aktyubinsk**	**15.38**	**338**	⇑P		**Pn**	**07 16 54.4**	**+0.5**
	comp=Z,7.8nm,1.4s							
DANN	**Dangsing**	**16.26**	**115**	*eP*		**Pn**	**07 17 04.5**	**-1.3**
	comp=Z,14nm,0.5s							
KURBB	**Kurchatov Arra**	**16.35**	**27**	Pn		**Pn**	**07 17 08.1**	**+1.7**
	baz=216,slow=10,SNR=2.3							
KURBB				Lg		Lg	07 21 57.2	
	comp=Z,0.1nm,0.3s,baz=221,slow=28,SNR=1.6							
KOLN	**Koldanda**	**16.48**	**117**	*eP*		**Pn**	**07 17 06.6**	**-1.9**
BVAR	**Borovoye Array**	**16.68**	**7**	Pn		**Pn**	**07 17 09.4**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=189,slow=16,SNR=6.5							
BRVK	**Borovoye**	**16.70**	**7**	Pn		**Pn**	**07 17 10.6**	**-0.4**
GKN	**Gorkha**	**17.09**	**115**	*eP*		**Pn**	**07 17 16.2**	**-0.1**
KKN	**Kakani**	**17.68**	**114**	*eP*		**Pn**	**07 17 22.8**	**-0.9**
PKIN	**Phulchoki**	**17.89**	**115**	*eP*		**Pn**	**07 17 26.5**	**+0.2**
PKI	**Pulchoki**	**17.90**	**115**	*eP*		**P**	**07 17 26.9**	**-0.2**
GUN	**Gumba**	**18.06**	**113**	*eP*		**Pn**	**07 17 28.1**	**-0.4**
KBZ	**Khabaz**	**19.80**	**299**	P		**Pn**	**07 17 49.3**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=53,slow=20,SNR=1.7							
KVAR	**Kislovodsk Arr**	**19.99**	**299**	P		Pn	07 17 51.4	0.0
	comp=Z,2.3nm,0.3s,baz=114,slow=20,SNR=1.8							
ARU	**Arti**	**20.74**	**347**	P		**P**	**07 17 58.0**	**+0.5**
	comp=Z,1.5nm,0.4s,baz=153,slow=9.7,SNR=7.1							
ARU	**Arti**	**20.74**	**347**	P		**P**	**07 17 58.9**	**+1.3**
ARU				IAmb		IAmb	07 17 59.7	
	comp=Z,5.0nm,0.7s							
ZAA0	**Zalesovo Array**	**21.36**	**30**	P		**P**	**07 18 04.6**	**+0.3**
ZAA0				IAmb		IAmb	07 18 24.0	
	comp=Z,5.2nm,0.8s							
ZALV	**Zalesovo Beam**	**21.36**	**30**	P		**P**	**07 18 04.1**	**-0.2**
	comp=Z,5.0nm,0.6s,baz=225,slow=11,SNR=12							
ZALV	**Zalesovo Beam**	**21.36**	**30**	P		**P**	**07 18 04.4**	**+0.2**
SHL	**Shillong**	**23.83**	**110**	P		**P**	**07 18 30.3**	**-0.3**
BRTR	**Keskin Array B**	**26.41**	**287**	P		**P**	**07 18 54.5**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=107,slow=9.4,SNR=7.5							
AKASG	**Malin Array Be**	**30.48**	**310**	P		**P**	**07 19 31.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=83,slow=8.5,SNR=2.5							
CMAR	**Chiang Mai Arr**	**33.30**	**114**	P		**P**	**07 19 55.5**	**+0.5**
	comp=Z,0.8nm,0.4s,baz=278,slow=8.1,SNR=5.0							
CMAR				LR		LR	07 36 09.0	
	comp=Z,8.7nm,19.0s,baz=185,slow=41							
FINES	**FINESS Array B**	**35.74**	**327**	P		**P**	**07 20 16.6**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=116,slow=11,SNR=7.9							
FINES	**FINESS Array B**	**35.74**	**327**	P		**P**	**07 20 16.9**	**+1.3**
ARCES	**ARCESS Array B**	**39.96**	**339**	P		**P**	**07 20 52.0**	**+0.8**
	comp=Z,5.4nm,1.0s,baz=94,slow=7.3,SNR=2.5							
HFS	**Hagfors**	**41.11**	**322**	P		**P**	**07 21 01.6**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=82,slow=11,SNR=2.0							
NB2	**NORSAR Subarra**	**42.47**	**323**	P		**P**	**07 21 13.0**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=84,slow=6.5							
NOA	**NORSAR Array B**	**42.47**	**323**	P		**P**	**07 21 12.3**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=99,slow=8.1,SNR=3.5							
NOA				LR		LR	07 41 44.8	
	comp=Z,30nm,19.5s,baz=105,slow=40							
PETK	**Petropavlovsk-**	**62.15**	**43**	P		**P**	**07 23 36.7**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=329,slow=13,SNR=2.1							
TORD	**Torodi Ar. Bea**	**62.55**	**266**	P		**P**	**07 23 41.7**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=54,slow=6.5,SNR=4.6							
TORD	**Torodi Ar. Bea**	**62.55**	**266**	P		**P**	**07 23 41.9**	**+0.5**
ASAR	**Alice Springs**	**86.90**	**122**	P		**P**	**07 26 01.1**	**-1.2**
	comp=Z,0.2nm,0.7s,baz=298,slow=4.1,SNR=1.9							

JMA ***16*** *07:14:24.2±1.1,44.˚88N×149.˚43E,h30km,M4.0*

SKHL ***16*** *07:14:25.8±0.2,44.˚55N×149.˚41E,h39km±9km,mb3.9/2*

ISC 16 07:14:20.8±4.1,44.˚49N±0.˚10×149.˚8E±0.˚2,h35km,n17, σ2$77/27,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**1.56**	**299**	*i* P		**Pn**	**07 14 46.0**	**0.0**
KUR				AMB		AMB	07 14 49.0	
	39nm,0.3s							
KUR				*i* S		**Sn**	**07 15 01.0**	**-4.0**
KUR				A		A	07 15 05.0	
	468nm,0.3s							
KUR				A		A	07 15 05.0	
	395nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.86**	**262**	*eP*		**Pn**	**07 15 04.0**	**+0.1**
YUK				*eS*		**Sn**	**07 15 37.0**	**0.0**
YUK				A		A	07 15 42.0	
	282nm,0.4s							
YUK				A		A	07 15 42.0	
	125nm,0.4s							
GRPR	**Tuman**	**2.93**	**262**	*eP*		**Pn**	**07 15 06.0**	**+1.1**
GRPR				AMB		AMB	07 15 09.0	
	10.0nm,0.2s							
GRPR				*eS*		**Sn**	**07 15 38.0**	**-0.8**
GRPR				A		A	07 15 44.0	
	80nm,0.4s							
GRPR				A		A	07 15 44.0	
	208nm,0.4s							
NEM2	**Nemuro 2**	**3.13**	**250**	P		**Pn**	**07 15 09.3**	**+1.7**
NEM2				*eS*		**Sn**	**07 15 43.0**	**-0.8**
NMR	**Nemuro--Hokkai**	**3.14**	**251**	*eP*		**Pn**	**07 15 08.0**	**+0.3**
NMR				*eS*		**Sn**	**07 15 43.0**	**-1.0**
GLVR	**Golovnino**	**3.17**	**258**	*eP*		**Pn**	**07 15 11.0**	**+2.9**
GLVR				*eS*		**Sn**	**07 15 45.0**	**+0.4**
GLVR				A		A	07 15 52.0	
	199nm,0.6s							
GLVR				A		A	07 15 52.0	
	353nm,0.6s							
JRA	**Rausu**	**3.40**	**262**	P		**Pn**	**07 15 13.5**	**+2.2**
JNK	**Nakash**	**3.77**	**258**	P		**Pn**	**07 15 18.9**	**+2.5**
JNK				*eS*		**Sn**	**07 15 59.9**	**+0.5**
JAK	**Akkeshi**	**3.98**	**250**	P		**Pn**	**07 15 21.5**	**+2.2**
JAR	**Ashorobuto**	**4.51**	**257**	P		**Pn**	**07 15 29.5**	**+2.9**
JAR				*eS*		**Sn**	**07 16 20.0**	**+2.2**
JOB	**Onbets**	**4.60**	**252**	P		**Pn**	**07 15 30.5**	**+2.7**
JCH	**Churui**	**5.03**	**250**	P		**Pn**	**07 15 36.3**	**+2.5**
JCH				*eS*		**Sn**	**07 16 30.9**	**+0.2**
JNBK	**Urakawa-nobuka**	**5.58**	**249**	P		**Pn**	**07 15 43.4**	**+2.1**
JNBK				*eS*		**Sn**	**07 16 42.7**	**-1.5**
JBT2	**Biratori 2**	**5.66**	**255**	P		**Pn**	**07 15 44.7**	**+2.4**
JANG	**Nango**	**7.37**	**239**	*eS*		**Sn**	**07 17 22.4**	**-5.9**
JTM	**Tenmabayashi**	**7.42**	**243**	*eS*		**Sn**	**07 17 24.6**	**-4.8**
JTH	**Tanohata**	**7.43**	**235**	*eS*		**Sn**	**07 17 23.4**	**-6.4**

IDC ***16*** *07:19:40.6±0.8,21.˚11S×71.˚31W,h0km,mb4.4/2, mb1 4.1/6,mb1mx3.8/37,mbtmp4.1/6,ML4.0/4,MS3.1/4, Ms1 3.1/4,ms1mx2.8/25,Error ellipse: s-maj=31.5km s-min=25.3km az=56.0*

SJA ***16*** *07:19:43.2±0.7,21.˚25S×71.˚25W,h40km±999km,ML4.0, MW3.9*

GUC ***16*** *07:19:44.5±0.5,21.˚26S×71.˚21W,h34km±2km,ML3.8*

ISC 16 07:19:42.9±1.9,21.˚32S±0.˚03×71.˚17W±0.˚06,h13km±10km, n54,σ1$21/76,mb4.4/3,14C,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PATCX	**Punta Patache**	**1.07**	**62**	⇑*iP*		**Pb**	**07 20 03.6**	**+0.4**
PATCX				*i* S		**Sb**	**07 20 16.9**	**-0.3**
PATCX	**Punta Patache**	**1.07**	**62**	*eP*		**Pb**	**07 20 03.6**	**+0.4**
PATCX				*eS*		**Sn**	**07 20 18.6**	**+0.3**
TA01	**Diego Aracena**	**1.19**	**51**	⇑*iP*		**Pn**	**07 20 04.7**	**-0.5**
TA01				*eS*		**Sb**	**07 20 19.2**	**-1.4**
PB07	**IPOC Station P**	**1.26**	**109**	⇑*iP*		**Pg**	**07 20 07.5**	**+0.3**
PB07				*i* S		**Sg**	**07 20 24.3**	**+0.7**
PB07				IAML			07 20 25.6	
	comp=N,2μm,0.4s							
PB07	**IPOC Station P**	**1.26**	**109**	*eP*		**Pg**	**07 20 07.5**	**+0.3**
PB07				*eS*		**Sg**	**07 20 25.1**	**+1.5**
PB07				IAML			07 20 25.7	
	comp=Z,1μm,0.5s							
PB04	**IPOC Station P**	**1.38**	**137**	⇑*iP*		**Pb**	**07 20 08.9**	**+0.2**
PB04				*eS*		**Sg**	**07 20 27.4**	**-0.2**
PB04				IAML			07 20 29.2	
	comp=N,3μm,0.4s							
PB04	**IPOC Station P**	**1.38**	**137**	*eP*		**Pb**	**07 20 09.0**	**+0.3**
PB04				*eS*		**Sg**	**07 20 28.3**	**+0.7**
PB04				IAML			07 20 29.2	
	comp=Z,3μm,0.3s							
TA02	**Huaiquique**	**1.42**	**43**	*eP*		**Pn**	**07 20 07.7**	**-0.8**
TA02				*i* S		**Sn**	**07 20 25.8**	**-1.2**
PB03	**IPOC Station P**	**1.50**	**119**	⇑*iP*		**Pb**	**07 20 11.1**	**+0.3**
PB03				*eS*		**Sg**	**07 20 30.6**	**-0.7**
PB03				IAML			07 20 32.1	
	comp=N,2μm,0.2s							
PB03	**IPOC Station P**	**1.50**	**119**	*eP*		**Pb**	**07 20 11.1**	**+0.3**
PB03				*eS*		**Sg**	**07 20 31.0**	**-0.4**
PB03				IAML			07 20 32.2	
	comp=Z,2μm,0.3s							
PB01	**IPOC Station P**	**1.59**	**80**	⇑*iP*		**Pb**	**07 20 12.2**	**0.0**
PB01				*i* S		**Sb**	**07 20 31.6**	**-0.6**
PB01				IAML			07 20 33.7	
	comp=N,1μm,0.3s							
PB01	**IPOC Station P**	**1.59**	**80**	*eP*		**Pb**	**07 20 12.2**	**0.0**
PB05	**IPOC Station P**	**1.77**	**150**	⇑*iP*		**Pn**	**07 20 13.7**	**+0.4**
PB05				*i* S		**Sn**	**07 20 35.0**	**-0.7**
PB05				IAML			07 20 36.8	
	comp=E,1μm,0.3s							
PB05	**IPOC Station P**	**1.77**	**150**	*eP*		**Pn**	**07 20 13.3**	**0.0**
PB05				*eS*		**Sb**	**07 20 36.1**	**-1.3**
PB05				IAML			07 20 37.4	
	comp=Z,643nm,0.4s							
PB09	**IPOC Station P**	**1.85**	**105**	⇑*iP*		**Pb**	**07 20 17.2**	**+0.4**
PB09				*i* S		**Sg**	**07 20 41.4**	**-1.2**
PB09				IAML			07 20 44.2	
	comp=E,2μm,0.4s							
PB09	**IPOC Station P**	**1.85**	**105**	*eP*		**Pg**	**07 20 17.7**	**-0.8**
PB09				*eS*		**Sg**	**07 20 41.6**	**-1.0**
PB09				IAML			07 20 44.7	
	comp=Z,1μm,0.4s							
PSGC	**Pisagua**	**1.97**	**30**	*eP*		**Pn**	**07 20 14.9**	**-1.2**
PSGCX	**Pisagua**	**1.97**	**30**	*eP*		**Pn**	**07 20 15.4**	**-0.7**
PSGCX				*eS*		**Sn**	**07 20 38.2**	**-2.5**
PB06	**IPOC Station P**	**2.02**	**133**	⇑*iP*		**Pb**	**07 20 18.1**	**-1.5**
PB06				*i* S		**Sb**	**07 20 43.7**	**-1.0**
PB06				IAML			07 20 46.3	
	comp=E,2μm,0.3s							
PB06	**IPOC Station P**	**2.02**	**133**	*eP*		**Pb**	**07 20 18.5**	**-1.1**
PB06				IAML			07 20 47.0	
	comp=Z,656nm,0.7s							
PB11	**IPOC Station P**	**2.10**	**43**	⇑*iP*		**Pn**	**07 20 17.6**	**-0.3**
PB11				*i* S		**Sn**	**07 20 42.7**	**-1.2**
PB11				IAML			07 20 43.8	
	comp=N,515nm,0.6s							
PB11	**IPOC Station P**	**2.10**	**43**	*eP*		**Pn**	**07 20 18.3**	**+0.4**
PB08	**IPOC Station P**	**2.22**	**58**	⇑*iP*		**Pn**	**07 20 20.8**	**+1.1**
PB08				*i* S		**Sn**	**07 20 47.6**	**+0.4**
PB08				IAML			07 20 49.9	
	comp=N,715nm,0.6s							
PB10	**IPOC Station P**	**2.25**	**166**	⇑*iP*		**Pn**	**07 20 19.5**	**-0.4**
PB10				*i* S		**Sn**	**07 20 45.7**	**-1.9**
PB10				IAML			07 20 47.6	
	comp=N,2μm,0.4s							
PB10	**IPOC Station P**	**2.25**	**166**	*eP*		**Pn**	**07 20 19.4**	**-0.5**
PB10				*eS*		**Sn**	**07 20 46.4**	**-1.2**
PB10				IAML			07 20 47.2	
	comp=Z,796nm,0.4s							
PB15	**IPOC Station P**	**2.45**	**140**	⇑*iP*		**Pn**	**07 20 23.9**	**+1.2**
PB15				*i* S		**Sb**	**07 20 54.9**	**-2.2**
PB15	**IPOC Station P**	**2.45**	**140**	*eP*		**Pn**	**07 20 24.1**	**+1.3**
PB15				*eS*		**Sb**	**07 20 54.9**	**-2.2**
PB15				IAML			07 20 57.6	
	comp=Z,2μm,0.3s							
LVC	**Limon Verde**	**2.46**	**122**	Pn		**Pb**	**07 20 25.8**	**-1.3**
	comp=Z,18nm,0.3s,baz=342,slow=6.2,SNR=208							
LVC				Sn		**Sb**	**07 20 56.2**	**-1.2**
	comp=Z,66nm,0.3s,baz=33,slow=21,SNR=24							
LVC				LR		LR	07 21 27.2	
	comp=Z,256nm,19.6s,baz=290,slow=40							
LVC	**Limon Verde**	**2.46**	**122**	*eP*		**Pb**	**07 20 25.7**	**-1.4**
LVC				*eS*		**Sb**	**07 20 55.6**	**-1.9**
LVC	**Limon Verde**	**2.46**	**122**	*eP*		**Pb**	**07 20 25.8**	**-1.3**
LVC				*eS*		**Sb**	**07 20 57.4**	**-0.1**
MNMC	**Minye Minye**	**2.63**	**34**	*eP*		**Pn**	**07 20 25.0**	**-0.3**
MNMC				IAML			07 21 03.2	
	comp=N,563nm,0.7s							
MNMCX	**Minye Minye**	**2.63**	**34**	*eP*		**Pn**	**07 20 25.1**	**-0.2**
PB16	**IPOC Station P**	**3.35**	**28**	*eP*		**Pn**	**07 20 35.2**	**-0.4**
PB16				*eS*		**Sn**	**07 21 12.4**	**-3.1**
PB16				IAML			07 21 19.5	
	comp=E,75nm,0.3s							
PB14	**IPOC Station P**	**3.37**	**168**	⇑*eP*		**Pn**	**07 20 34.3**	**-1.1**
PB14				IAML			07 21 13.1	
	comp=E,314nm,0.3s							
HJA	**Humahuaca**	**5.65**	**110**	*eP*		Pn	07 21 13.1	+6.1
LPAZ	**La Paz**	**5.77**	**30**	Pn		**Pn**	**07 21 11.6**	**+2.8**
	comp=E,0.5nm,0.3s,baz=295,slow=6.3,SNR=17							
LPAZ	**La Paz**	**5.77**	**30**	*eP*		Pn	07 20 58.9	-10
AHML	**Horco Molle**	**7.51**	**137**	*eP*		**Pn**	**07 21 37.4**	**+3.8**
NNA	**Nana**	**10.75**	**329**	Pn		Pn	07 22 11.1	-5.6
	comp=E,0.9nm,0.3s,baz=138,slow=14,SNR=1.6							
NNA				LR		LR	07 25 55.5	
	comp=E,35nm,21.0s,baz=167,slow=36							
SIV	**San Ignacio**	**10.93**	**63**	Pn		**Pn**	**07 22 19.2**	**0.0**
	comp=E,0.7nm,0.3s,baz=251,slow=10,SNR=14							
CPUP	**Villa Florida**	**13.61**	**114**	LR		LR	07 29 09.4	
	comp=E,60nm,19.5s,baz=298,slow=41							
PLCA	**Paso Flores**	**19.36**	**179**	P		**Pn**	**07 24 09.8**	**+0.4**
	comp=E,0.2nm,0.3s,baz=156,slow=6.9,SNR=2.0							
NVAR	**Mina Array Bea**	**74.07**	**323**	P		**P**	**07 31 21.9**	**+3.0**
	comp=E,0.2nm,0.6s,baz=156,slow=6.9,SNR=2.0							
ULM	**Lac du Bonnet**	**74.54**	**344**	LR		LR	08 06 48.1	
	comp=E,58nm,21.1s,baz=150,slow=38							
TORD	**Torodi Ar. Bea**	**79.28**	**71**	P		**P**	**07 31 48.6**	**0.0**
	comp=E,2.9nm,0.8s,baz=252,slow=5.1,SNR=12							
MAW	**Mawson**	**85.09**	**164**	P		**P**	**07 32 19.2**	**+1.0**
	comp=E,2.2nm,0.9s,baz=256,slow=9.6,SNR=4.4							
ASAR	**Alice Springs**	**129.06**	**210**	PKP		**PKPdf**	**07 38 50.8**	**-0.6**
	comp=E,0.6nm,0.9s,baz=98,slow=5.7,SNR=2.5							
PETK	**Petropavlovsk-**	**131.16**	**323**	PKP		**PKPdf**	**07 38 54.2**	**-0.2**
	comp=E,5.0nm,1.0s,baz=83,slow=3.3,SNR=2.8							
WRA	**Warramunga Arr**	**132.00**	**213**	PKP		**PKPdf**	**07 38 56.

comp=E,365nm,0.5s
GLVR Golovnino 4.19 253 *e*PN **Pn** **07 27 06.1 +0.3**
GLVR *e*S **Sn** **07 27 53.6 +0.2**
GLVR pmax pmax
comp=E,112nm,0.6s
GLVR pmax pmax
comp=Z,461nm,0.6s
GLVR pmax pmax
comp=N,109nm,0.4s
GLVR smax smax
comp=N,686nm,0.5s
GLVR smax smax
comp=E,365nm,0.4s
NEM2 Nemuro 2 4.19 247 P **Pn** **07 27 04.8 -1.0**
NEM2 *e*S **Sn** **07 27 52.6 -0.9**
NMR Nemuro--Hokkai 4.20 247 *e*P **Pn** **07 27 04.0 -1.9**
NMR *e*S **Sn** **07 27 52.0 -1.7**
NMR Nemuro--Hokkai 4.20 247 *e*PN **Pn** **07 27 04.8 -1.1**
JRA Rausu 4.39 256 P **Pn** **07 27 09.7 +1.1**
JRA *e*S **Sn** **07 28 00.3 +1.8**
JNK Nakash 4.78 254 P **Pn** **07 27 14.1 +0.1**
JNK *e*S **Sn** **07 28 08.2 0.0**
JAK Akkeshi 5.04 247 P **Pn** **07 27 16.2 -1.3**
JAK *e*S **Sn** **07 28 12.0 -2.4**
JTKR Abashiri--Toko 5.22 260 P **Pn** **07 27 21.1 +1.1**
JAR Ashorobuto 5.53 253 P **Pn** **07 27 24.7 +0.4**
JAR *e*S **Sn** **07 28 27.4 +0.8**
JMP Maruseppu 5.60 261 P **Pn** **07 27 26.6 +1.4**
JOB Onbets 5.65 249 P **Pn** **07 27 25.6 -0.2**
JOB *e*S **Sn** **07 28 28.6 -0.8**
YSS Yuzh-Sakhalins 6.05 291 *e*P **Pn** **07 27 31.3 -0.1**
YSS AMB AMB 07 27 37.1
comp=E,20nm,0.7s
YSS Yuzh-Sakhalins 6.05 291 *e*PN Pn 07 27 35.4 +4.0
YSS *e*S **Sn** **07 28 42.9 +3.6**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,1µm,13.0s
YSS Yuzh-Sakhalins 6.05 291 **Pn** **07 27 28.6 -2.8**
JKK2 Kamakawa 2 6.06 261 P **Pn** **07 27 33.0 +1.5**
JCH Churui 6.09 248 P **Pn** **07 27 30.9 -1.0**
JCH *e*S **Sn** **07 28 38.2 -2.0**
JKA Kamikawa-asahi 6.11 264 *e*P **Pn** **07 27 34.6 +2.4**
JKA Kamikawa-asahi 6.11 264 Pn **Pn** **07 27 34.6 +2.4**
ASAJ Asahikawa 6.11 264 Pn **Pn** **07 27 34.5 +2.3**
comp=Z,2.6nm,0.3s,baz=68,slow=24,SNR=16
ASAJ Sn **Sn** **07 28 45.0 +4.3**
comp=Z,0.2nm,0.3s,baz=98,slow=12,SNR=0.9
ASAJ LR LR 07 30 06.2
comp=Z,563nm,19.0s,baz=138,slow=40
ASAJ Asahikawa 6.11 264 P **Pn** **07 27 34.0 +1.8**
ASAJ Asahikawa 6.11 264 PN **Pn** **07 27 34.6 +2.4**
JFR Furan 6.38 255 P **Pn** **07 27 36.5 +0.5**
ERM Erimo 6.51 244 *ce*PN **Pn** **07 27 39.0 +1.3**
JEM Erimo 6.51 244 **Pn** **07 27 38.8 +1.1**
SKR Severo-Kuril's 6.53 30 *e*P **Pn** **07 27 36.3 -1.6**
SKR AMB AMB 07 27 39.0
comp=Z,48nm,0.7s
SKR *e*S **Sn** **07 28 48.0 -3.0**
SKR A A 07 28 55.0
comp=Z,71nm,1.0s
SKR A A 07 28 55.0
comp=Z,48nm,1.0s
SKR Severo-Kuril's 6.53 30 *e*PN **Pn** **07 27 36.6 -1.3**
SKR pmax pmax
comp=Z,48nm,0.7s
SKR MLR MLR
comp=Z,600nm,16.0s
JNBK Urakawa-nobuka 6.64 248 P **Pn** **07 27 38.3 -1.2**
JNBK *e*S **Sn** **07 28 53.2 -0.7**
JBT2 Biratori 2 6.68 253 P **Pn** **07 27 39.3 -0.8**
JBT2 *e*S **Sn** **07 28 53.8 -1.1**
PAU Pauzhetka 7.43 29 *e*P **Pn** **07 27 48.8 -1.4**
PAU AMB AMB 07 28 28.1
comp=Z,54nm,1.0s
PAU *e*S **Sn** **07 29 08.3 -4.8**
PAU A A 07 29 37.2
comp=Z,126nm,1.0s
PAU A A 07 29 37.2
comp=Z,91nm,1.0s
JNB Noboribetsu 7.70 253 P **Pn** **07 27 53.9 -0.2**
JNB *e*S **Sn** **07 29 18.2 -1.8**
JKB Kayabe 7.96 250 P **Pn** **07 27 56.6 -0.9**
JKB *e*S **Sn** **07 29 20.4 -5.8**
TYV Tymovskoe 8.04 319 *e*P **Pn** **07 27 58.6 0.0**
TYV AMB AMB 07 27 58.9
comp=Z,24nm,1.2s
TYV *e*S **Sn** **07 29 25.3 -2.8**
TYV A A 07 29 25.6
comp=Z,32nm,1.0s
TYV Tymovskoe 8.04 319 *e*PN Pn 07 27 46.8 -12
TYV pmax pmax
comp=Z,24nm,1.2s
TYV pmax pmax
comp=Z,400nm,3.2s
JYM2 Yakumo 2 8.30 253 P **Pn** **07 28 01.8 -0.4**
JANG Nango 8.46 239 P **Pn** **07 28 01.1 -3.3**
JANG *e*S Sn 07 29 29.5 -9.0
JTM Tenmabayashi 8.49 243 P **Pn** **07 28 03.8 -1.1**
JTM *e*S **Sn** **07 29 32.1 -7.3**
JOSM Okushiri--Mats 8.92 254 P **Pn** **07 28 10.4 -0.3**
PEA0B Petropavlovsk- 9.11 26‖ *e*PN **Pn** **07 28 13.2 -0.1**
PEA0B Petropavlovsk- 9.11 26 Pn **Pn** **07 28 09.6 -3.6**
PETK Petropavlovsk- 9.11 26 Pn **Pn** **07 28 13.2 -0.1**
comp=Z,0.3nm,0.3s,baz=178,slow=11,SNR=6.6
PETK LR LR 07 31 52.9
comp=Z,472nm,18.3s,baz=207,slow=39
PETK Petropavlovsk- 9.11 26 PN Pn 07 28 08.2 -5.1
PETK Petropavlovsk- 9.11 26 Pn Pn 07 28 08.2 -5.0
OFUJ Ofunato 9.21 232 P **Pn** **07 28 11.7 -3.0**
JRG Rokugo 9.60 237 P **Pn** **07 28 17.4 -2.6**
JIO Ouri 9.83 231 P **Pn** **07 28 20.2 -3.0**
OKH Okha 9.95 331 *e*P **Pn** **07 28 26.3 +1.5**
OKH *e*S **Sn** **07 30 16.1 +1.1**
TEY Ternei 10.21 275 *e*P **Pn** **07 28 27.6 -0.8**
TEY AMB AMB 07 28 36.1
comp=Z,30nm,1.1s
TEY Ternei 10.21 275‖ *e*PN Pn 07 28 34.8 +6.4
TEY pmax pmax
comp=Z,30nm,1.1s
TEY pmax pmax
comp=E,30nm,1.0s
TEY pmax pmax
comp=N,10.0nm,1.3s
JSD Sado 11.89 238 Pn Pn 07 29 01.4 +10
MAJO Matsushiro 12.94 233‖ *e*PN **Pn** **07 29 05.4 -0.3**
MAJO Matsushiro 12.94 233 Pn **P** **07 29 17.3 +1.9**
MJAR Matsushiro Arr 12.94 233 Pn **Pn** **07 29 03.9 -1.8**
comp=N,0.1nm,0.3s,baz=28,slow=14,SNR=8.6
USA0B Ussuriysk Arra 13.59 273 P **Pn** **07 29 15.1 +0.5**
USA0B Ussuriysk Arra 13.59 273 Pn **Pn** **07 29 15.1 +0.5**
USRK Ussuriysk Ar. 13.59 273 Pn **Pn** **07 29 12.8 -1.8**
baz=88,slow=16,SNR=7.8
USRK Ussuriysk Ar. 13.59 273 P **Pn** **07 29 14.8 +0.2**
USRK Ussuriysk Ar. 13.59 273 Pn **Pn** **07 29 14.8 +0.2**
KLR Kul'dur 13.74 294 Pn **Pn** **07 29 18.8 +2.2**
comp=N,0.1nm,0.3s,baz=96,slow=13,SNR=17
KLR LR LR 07 34 55.6
comp=N,326nm,18.8s,baz=100,slow=39
KLR Kul'dur 13.74 294‖ *e*P **P** **07 29 21.4 -2.9**
KLR pmax pmax
comp=Z,15nm,0.9s
EKMR Ekimchan 14.24 310 *e*P **Pn** **07 29 22.5 -0.9**
EKMR AMB AMB 07 29 27.5
comp=Z,11nm,1.0s
MA2 Magadan 14.48 359 LR LR 07 35 21.0
comp=Z,205nm,18.1s,baz=187,slow=39
JHJ2 Mitsune 14.80 220 Pn P 07 29 45.2 +9.1
JHJ Hachijo jima 2 14.81 220 LR LR 07 37 35.4
comp=Z,49nm,19.2s,baz=79,slow=47
MDJ Mudanjiang 15.21 276 Pn **Pn** **07 29 35.2 -1.1**
BMKR Bomnak 17.15 312 *e*P **Pn** **07 29 58.0 -2.8**
BMKR AMB AMB 07 30 07.2
comp=Z,7.0nm,0.4s
ZEA Zeya 17.65 308 *e*P **Pn** **07 30 04.0 -2.9**
ZEA AMB AMB 07 30 11.3
comp=Z,20nm,1.0s
ZEA AMB AMB 07 30 11.3
comp=Z,20nm,1.0s
ZEA AMB AMB 07 30 11.3
comp=Z,20nm,1.0s
ZEA Zeya 17.65 308 *e*P **P** **07 30 07.9 +0.4**
ZEA pmax pmax
comp=E,20nm,1.1s
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA pmax pmax
comp=N,20nm,1.2s
ZEA MLR MLR
comp=N,300nm,16.0s
KROS Kirovskiy 18.04 310 *e*P **P** **07 30 13.0 +1.1**
KROS AMB AMB 07 30 17.0
comp=N,7.0nm,0.8s
KSRS Korea Array 18.94 254 P **P** **07 30 22.4 +0.6**
comp=N,0.2nm,0.3s,baz=64,slow=12,SNR=3.8
JNU Nakatsue 19.64 239 LR LR 07 38 33.1
comp=N,116nm,19.6s,baz=48,slow=38
JNU Nakatsue 19.64 239 P Pn 07 30 38.7 +7.5
JNU IAmb IAmb 07 30 49.5
comp=Z,51nm,1.5s
TJN Taejon 19.89 252‖ *e*P **Pn** **07 30 34.6 +0.4**
YAK Yakutsk 20.99 331 P **P** **07 30 44.2 +0.3**
comp=Z,11nm,0.4s,baz=126,slow=0.8,SNR=5.6
YAK LR LR 07 38 50.2
comp=Z,180nm,20.5s,baz=90,slow=37
YAK Yakutsk 20.99 331 *e*P Pn 07 30 44.8 -2.0
YAK Yakutsk 20.99 331 *e*P Pn 07 30 44.8 -2.0
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=N,3.0nm,0.9s
HIA Hailar 21.58 292 P **P** **07 30 45.6 -4.8**
HIA pmax pmax
comp=Z,7.0nm,0.8s
HIA Hailar 21.58 292 P **P** **07 30 45.6 -4.8**
NJ2 Nanjing 28.14 254 *e*P **P** 07 31 57.8 +5.2
NJ2 pmax pmax
comp=Z,15nm,0.5s
H11N2 WAKE ISLAND Hy 28.53 147 T T 08 02 44.7
baz=339,slow=74
H11N1 WAKE ISLAND Hy 28.54 147 T T 08 02 48.4
baz=339,slow=74
H11N3 WAKE ISLAND Hy 28.55 147 T T 08 02 48.7
baz=339
HHC Hu-ho-hao-te 28.99 276 *e*P **P** **07 32 02.3 +2.1**
HHC S **S** **07 36 44.8 -3.5**
HHC pmax pmax
comp=Z,24nm,1.1s
HHC pmax pmax
comp=Z,74nm,5.1s
HHC LR LR
comp=N,170nm,13.1s
HHC LR LR
comp=E,350nm,13.9s
HHC LR LR
comp=Z,410nm,14.7s
H11S1 WAKE ISLAND Hy 29.57 149 T T 08 03 59.7
baz=337,slow=76,SNR=134
H11S3 WAKE ISLAND Hy 29.58 149 T T 08 04 04.6
baz=337,slow=76,SNR=88
H11S2 WAKE ISLAND Hy 29.59 149 T T 08 03 56.8
baz=337,slow=76,SNR=60
ULN Ulaanbaatar 30.10 291 *e*P **P** **07 32 10.2 +0.2**
ULN Ulaanbaatar 30.10 291‖ *e*P **P** **07 32 10.2 +0.2**
ULN pmax pmax
comp=Z,6.0nm,1.3s
ULN Ulaanbaatar 30.10 291 P **P** **07 32 09.9 -0.2**
SONM Songino Aray 30.54 291 P **P** **07 32 14.5 +0.6**
comp=Z,1.4nm,0.7s,baz=63,slow=7.9,SNR=6.9
SONM Songino Array 30.54 291 P **P** **07 32 13.5 -0.4**
TLY Talaya 31.68 299 *e*P **P** **07 32 24.3 +0.6**
TLY Talaya 31.68 299 *e*P **P** **07 32 24.3 +0.6**
XAN Xi'an 33.94 266 P **P** **07 32 43.4 -0.3**
XAN pP sP 07 32 58.3 -0.5
XAN pmax pmax
comp=Z,6.0nm,0.9s
IMAR Indian Mountai 35.94 35 P **P** **07 33 00.4 -0.1**
A21K Barrow 36.11 26 P **P** **07 33 01.2 -0.6**
A21K IAmb IAmb 07 33 06.2
comp=Z,9.3nm,0.8s
LZH Lanzhou 36.50 273 *e*P **P** **07 33 07.3 +1.4**
LZH pP pP 07 33 18.9 +2.6
LZH sP sP 07 33 23.8 +2.9
LZH PP PnPn **07 34 26.6 -2.6**
LZH pmax pmax
comp=Z,14nm,1.4s
LZH pmax pmax
comp=Z,79nm,4.5s
LZH LR LR
comp=N,190nm,13.2s
LZH LR LR
comp=E,170nm,12.5s
LZH LR LR
comp=Z,210nm,13.6s
GTA Gaotai 37.81 280 *e*P **P** **07 33 17.8 +0.9**
GTA pP pP 07 33 28.8 +1.5
GTA sP sP 07 33 34.5 +2.7
GTA S **S** **07 38 58.6 -6.3**
GTA SS SnSn 07 41 27.3 -20
GTA pmax pmax
comp=Z,9.0nm,0.7s
GTA pmax pmax
comp=Z,93nm,6.0s
GTA LR LR
comp=N,120nm,15.6s
GTA LR LR
comp=E,290nm,18.2s
GTA LR LR
comp=Z,130nm,16.7s
COLA College 38.31 37‖ *e*P **P** **07 33 21.3 +0.7**
COLA pmax pmax
comp=Z,7.0nm,1.1s
POKR Poker Plat Res 38.49 37 P **P** **07 33 21.7 -0.5**
POKR IAmb IAmb 07 33 23.8
comp=Z,10nm,1.1s
IL31 38.73 37 P **P** **07 33 24.5 +0.4**
ILAR Eielson Array 38.73 37 P **P** **07 33 23.0 -1.1**
comp=Z,3.1nm,1.1s,baz=266,slow=7.7,SNR=15
ILAR Eielson Array 38.73 37 P **P** **07 33 24.1 0.0**
ILAR Eielson Array 38.73 37 P **P** **07 33 24.1 0.0**
IL18 Eielson Array 38.77 37 P **P** **07 33 24.6 +0.1**
CD2 Chengdu 39.30 265 P **P** **07 33 30.1 +0.7**
CD2 pmax pmax
comp=Z,20nm,0.7s
BMAR Burnt Mountain 39.68 33 P **P** **07 33 32.2 +0.1**
GYA Guiyang 39.95 258 *e*P **P** **07 33 38.3 +3.4**
GYA pmax pmax
comp=Z,6.0nm,1.0s
K27K Chicken 40.85 38 P **P** **07 33 41.3 -0.4**
K27K IAmb IAmb 07 33 43.5
comp=Z,10nm,1.1s
BCAR Beaver Creek A 41.08 40 P **P** **07 33 44.0 +0.3**
ISLE Juniper Island 41.16 43 P **P** **07 33 45.5 +1.0**
EGAK Eagle 41.18 37 P **P** **07 33 44.0 -0.4**
ZALV Zalesovo Beam 42.41 307 P **P** **07 33 54.4 -0.2**
comp=Z,1.8nm,0.3s,baz=110,slow=8.3,SNR=3.4
ZALV LR LR 07 52 37.0
comp=Z,80nm,20.6s,baz=82,slow=38
HYT Haines Junctio 43.45 42 P **P** **07 34 04.3 +1.2**
HYT IAmb IAmb 07 34 06.6
comp=Z,15nm,1.4s
INK Inuvik 43.80 31 P **P** **07 34 05.9 +0.3**
comp=Z,2.7nm,0.8s,baz=281,slow=8.3,SNR=3.6
INK Inuvik 43.80 31 P **P** **07 34 05.8 +0.1**
WMQ Urumqi 44.18 292 *e*P **P** **07 34 10.4 +1.3**
WMQ pmax pmax
comp=Z,17nm,0.8s
WMQ pmax pmax
comp=Z,47nm,4.5s
WMQ LR LR
comp=N,120nm,6.7s
WMQ LR LR
comp=E,250nm,5.9s
WMQ LR LR
comp=Z,120nm,29.2s
MK31 Makanchi Array 46.41 298‖ *e*P **P** **07 34 26.3 -0.5**
MK31 Makanchi Array 46.41 298 P **P** **07 34 25.5 -1.2**
MKAR Makanchi Array 46.41 298 P **P** **07 34 26.6 -0.1**
comp=Z,2.9nm,0.8s,baz=71,slow=8.2,SNR=23
MKAR LR LR 07 55 03.3
comp=Z,186nm,18.8s,baz=57,slow=38
MKAR Makanchi Array 46.41 298 P **P** **07 34 26.5 -0.3**
C36M Paulatuk 46.95 29 P **P** **07 34 30.2 -0.3**
C36M IAmb IAmb 07 34 34.8
comp=Z,8.9nm,1.1s
KURK Kurchatov 47.07 304 *e*P **P** **07 34 31.3 -0.5**
KURK Kurchatov 47.07 304‖ *i*P **P** **07 34 31.3 -0.5**
KURK pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 47.07 304 P **P** **07 34 29.6 -2.2**
TDK Taldyqorghan 49.64 297 *e*P **P** **07 34 51.3 -0.4**
comp=Z,9.2nm,0.4s,baz=297
TDK Taldyqorghan 49.64 297 *e*P **P** **07 34 51.3 -0.4**
TDK pmax pmax
comp=Z,9.0nm,0.4s
KPKS Kokpek 50.18 295 *e*P **P** **07 34 55.5 -0.5**
comp=Z,2.4nm,0.7s,baz=296
KPKS Kokpek 50.18 295 *e*P **P** **07 34 55.4 -0.5**
KPKS pmax pmax
comp=Z,2.0nm,0.7s
SATY Saty 50.56 295 *e*P **P** **07 34 58.4 -0.5**
comp=Z,2.0nm,1.0s,baz=295
SATY Saty 50.56 295 *e*P **P** **07 34 58.3 -0.5**
SATY pmax pmax
comp=Z,2.0nm,1.0s
CMAR Chiang Mai Arr 50.57 256 P **P** **07 34 59.8 +0.7**
comp=Z,0.6nm,0.3s,baz=34,slow=6.6,SNR=1.5
BRZS Berezniki 50.84 305 *e*P **P** **07 34 60.0 -0.7**
baz=306
BRZS Berezniki 50.84 305 *e*P **P** **07 34 59.9 -0.7**
EUNU Eureka 51.01 11 P **P** **07 35 01.4 -0.2**
EUNU IAmb IAmb 07 35 05.5
comp=Z,5.8nm,0.9s
MDOK Medeo 51.37 296 *e*P **P** **07 35 05.2 +0.2**
baz=296
MDOK Medeo 51.37 296 *e*P **P** **07 35 05.1 +0.2**
KUU Kurty 51.47 297 *e*P **P** **07 35 04.8 -0.7**
comp=Z,3.0nm,1.0s,baz=297
KUU Kurty 51.47 297 *e*P **P** **07 35 04.8 -0.7**
KUU pmax pmax
comp=Z,3.0nm,1.0s
BOOM Boomskoye usch 52.41 296 P **P** **07 35 12.5 -0.3**
BOOM pmax pmax
comp=Z,10.0nm,1.1s
BOOM Boomskoye usch 52.41 296 P **P** **07 35 12.5 -0.3**
BOOM IAmb IAmb 07 35 17.1
comp=Z,10nm,1.1s
SGDS Sogindy 52.76 297 *e*P **P** **07 35 14.8 -0.5**
comp=Z,2.5nm,0.9s,baz=297
SGDS Sogindy 52.76 297 *e*P **P** **07 35 14.7 -0.5**
SGDS pmax pmax
comp=Z,3.0nm,0.9s
RES Resolute Bay 52.84 18 P **P** **07 35 16.7 +1.5**
comp=Z,4.7nm,0.8s,baz=334,slow=3.3,SNR=5.7
RES Resolute Bay 52.84 18 P **P** **07 35 13.6 -1.6**
RES IAmb IAmb 07 35 19.0
comp=Z,5.7nm,0.8s
AAK Ala-Archa 53.26 296 *e*P **P** **07 35 19.2 +0.2**
AAK Ala-Archa 53.26 296‖ *e*P **P** **07 35 19.2 +0.2**
AAK pmax pmax
comp=Z,10.0nm,0.7s
AAK Ala-Archa 53.26 296 P **P** **07 35 16.9 -2.1**
AAK IAmb IAmb 07 35 20.7
comp=Z,3.6nm,0.8s
GUN Gumba 53.70 275 *e*P **P** **07 35 22.9 +0.3**
comp=Z,38nm,0.9s
RAMN Ramite 53.77 273 *e*P **P** **07 35 23.4 +0.4**
KSH Kashi 53.94 292 *e*P P 07 35 28.8 +4.9
KSH pmax pmax
comp=Z,21nm,1.0s
KSH pmax pmax
comp=Z,200nm,4.5s
KKN Kakani 54.19 275 *e*P **P** **07 35 26.8 +0.8**
comp=Z,25nm,0.8s
PKI Pulchoki 54.23 275 *e*P **P** **07 35 26.6 +0.1**
PKIN Phulchoki 54.24 275 *e*P **P** **07 35 27.0 +0.6**
DMN Daman 54.42 275 *e*P **P** **07 35 28.4 +0.6**
comp=Z,41nm,1.1s
GKN Gorkha 54.52 276 *e*P **P** **07 35 28.5 +0.2**
comp=Z,26nm,0.7s
DANN Dangsing 54.92 277 *e*P **P** **07 35 32.2 +0.7**
comp=Z,20nm,0.6s
ARU Arti 55.24 317 *e*P **P** **07 35 32.1 -0.8**
ARU Arti 55.24 317‖ *e*P **P** **07 35 32.1 -0.8**
ARU pmax pmax
comp=Z,5.0nm,1.1s
KOLN Koldanda 55.39 276 *e*P **P** **07 35 34.0 -0.7**
KK31 Karatay Array 55.52 299 P **P** **07 35 34.9 -0.3**
KK31 pmax pmax
comp=Z,3.0nm,0.8s
KK31 Karatay Array 55.52 299 P **P** **07 35 34.9 -0.3**
KKAR Karatay Array 55.52 299 P **P** **07 35 34.8 -0.4**
KKAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 55.52 299 P **P** **07 35 34.8 -0.4**
KKAR Karatay Array 55.52 299 P **P** **07 35 34.9 -0.2**
IUG luzhnay 56.33 298 *e*P **P** **07 35 40.5 -0.6**
comp=Z,2.6nm,0.8s,baz=298
IUG luzhnay 56.33 298 *e*P **P** **07 35 40.5 -0.6**
IUG pmax pmax
comp=Z,3.0nm,0.8s
BTK Batken 56.98 296 P **P** **07 35 45.8 +0.1**
BTK pmax pmax
comp=Z,11nm,1.1s
BTK Batken 56.98 296 P **P** **07 35 45.8 +0.1**
BTK IAmb IAmb 07 35 51.3
comp=Z,10nm,1.1s
GAR Garm 57.89 295 P **P** **07 35 52.1 -0.1**
DAG Danmarks Havn 58.21 357 *i* P **P** **07 35 52.3 -1.4**
DAG pmax pmax
comp=Z,4.0nm,1.0s
DAG Danmarks Havn 58.21 357 *i* P **P** **07 35 52.3 -1.4**
comp=Z,4.4nm,1.0s
DAG Danmarks Havn 58.21 357 *i* P **P** **07 35 52.3 -1.4**
DAG IAmb IAmb 07 35 53.9
comp=Z,4.4nm,1.0s
ABKAR Akbulak array 58.36 310 P **P** **07 35 54.4 -0.7**
CHGR Chuyangaron 58.83 295 P **P** **07 35 58.5 -0.3**
NIL Nilore 59.04 288 P **P** **07 36 01.4 +1.2**
NIL pmax pmax
comp=Z,26nm,0.8s
NIL Nilore 59.04 288 P **P** **07 36 01.4 +1.2**
KBL Kabul 61.32 291 P **P** **07 36 15.0 -1.0**
KBL pmax pmax
comp=Z,10.0nm,0.7s
KBL Kabul 61.32 291 P **P** **07 36 15.0 -1.0**
SUMG Summit 62.42 3 P **P** **07 36 23.2 +0.2**
SUMG pmax pmax
comp=Z,24nm,1.2s
SUMG Summit 62.42 3 P **P** **07 36 23.2 +0.2**
SUMG Summit 62.42 3 *i* P **P** **07 36 23.0 0.0**
comp=Z,28nm,0.8s
SUMG Summit 62.42 3 *i* P **P** **07 36 23.0 0.0**
SUMG IAmb IAmb 07 36 25.2
comp=Z,28nm,0.8s
LRM Limekiln Ridge 63.34 51 P **P** **07 36 30.9 +1.5**
EGMT Eagleton 63.42 48 P **P** **07 36 29.8 +0.1**
NVAR Mina Array Bea 64.49 60 P **P** **07 36 37.6 +0.6**
comp=Z,0.7nm,0.8s,baz=284,slow=9.0,SNR=5.3
FINES FINESS Array B 64.89 334 P **P** **07 36 37.4 -1.5**
comp=Z,3.6nm,0.9s,baz=61,slow=4.1,SNR=12
FINES LR LR 08 07 28.3
comp=Z,101nm,18.7s,baz=50,slow=38
FINES FINESS Array B 64.89 334 P **P** **07 36 37.6 -1.3**
FINES FINESS Array B 64.89 334 P **P** **07 36 37.6 -1.3**
OBN Obninsk 65.83 325 *e*P **P** **07 36 45.3 +0.2**
OBN Obninsk 65.83 325 *e*P **P** **07 36 45.3 +0.2**
OBN *e* 07 37 16.0
OBN pmax pmax
comp=Z,4.0nm,0.9s
GEYT Alibeck 66.19 300 P **P** **07 36 48.5 +0.7**
comp=Z,3.2nm,0.8s,baz=20,slow=4.7,SNR=5.9
GEYT Alibeck 66.19 300 P **P** **07 36 47.6 -0.2**
WRAB Tennant Creek 66.50 197‖ *e*P **P** **07 36 50.1 +0.3**
WRAB pmax pmax
comp=Z,9.0nm,1.1s
WRA Warramunga Arr 66.51 197 P **P** **07 36 50.1 +0.2**
comp=Z,3.4nm,0.9s,baz=15,slow=6.7,SNR=8.6
WRA Warramunga Arr 66.51 197 P P 07 37 02.0 +12
PDAR Pinedale Array 66.89 52 P **P** **07 36 53.1 +0.7**
comp=Z,0.7nm,0.9s,baz=20,slow=2.2,SNR=5.0
PDAR Pinedale Array 66.89 52 P **P** **07 36 52.4 -0.1**
NB2 NORSAR Subarra 69.29 340 P **P** **07 37 06.0 -1.0**
comp=Z,1.1nm,0.4s,baz=30,slow=6.5
NOA NORSAR Array B 69.29 340 P **P** **07 37 06.0 -1.0**
comp=Z,2.5nm,0.7s,baz=28,slow=6.6,SNR=13
NOA NORSAR Array B 69.29 340 P **P** **07 37 06.0 -1.0**
NORES NORESS Array B 69.48 340 P **P** **07 37 07.1 -0.9**
NORES pmax pmax
comp=Z,1.0nm,0.3s
ASAR Alice Springs 70.22 197 P **P** **07 37 14.4 +1.5**
comp=Z,3.3nm,0.9s,baz=14,slow=6.2,SNR=4.5

KIV **Kislovodsk** 70.89 313 *eP* **P** 07 37 19.1 +2.0
KIV **Kislovodsk** 70.89 313 *eP* **P** 07 37 19.1 +2.0
KIV pmax pmax
comp=Z,31nm,1.1s
KIV MLR MLR
comp=Z,216nm,18.0s
KBZ Khabaz 70.94 313 P **P** 07 37 18.3 +1.1
comp=Z,9.8nm,0.8s,baz=56,slow=24,SNR=26
ZEI Tsey 71.07 312 *eP* **P** 07 37 17.6 -0.8
ZEI Tsey 71.07 312 *eP* **P** 07 37 17.6 -0.8
ZEI pmax pmax
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 72.08 325 P **P** 07 37 23.2 -0.8
comp=Z,0.7nm,0.3s,baz=36,slow=6.3,SNR=8.8
AKASG LR LR 08 11 38.0
comp=Z,78nm,18.6s,baz=70,slow=38
AKASG Malin Array Be 72.08 325 P **P** 07 37 22.5 -1.5
AKBB Malin Array Si 72.08 325⇑ *eP* **P** 07 37 23.0 -1.0
AKBB pmax pmax
comp=Z,4.0nm,0.9s
PSAA2 Pilbara Seismi 72.20 210 P P 07 37 34.7 +10
PSAA2 IAmb IAmb 07 37 37.1
comp=Z,18nm,1.4s
GNI Garni 72.47 310⇑ *eP* **P** 07 37 28.0 +1.3
GNI pmax pmax
comp=Z,27nm,1.6s
ANMO Albuquerque 73.93 57⇓ *eP* **P** 07 37 36.0 +0.5
ANMO pmax pmax
comp=Z,3.0nm,1.7s
SORM Soroca 74.44 324 ⇑P **P** 07 37 36.4 -1.6
SORM Soroca 74.44 324 ⇑P **P** 07 37 36.4 -1.6
OJC Ojcow 76.03 330 P **P** 07 37 46.4 -0.7
OJC pmax pmax
comp=Z,8.0nm,0.8s
OJC Ojcow 76.03 330 P **P** 07 37 46.4 -0.7
OJC IAmb IAmb 07 37 48.6
comp=Z,8.4nm,0.8s
BUR08 Bucovina Ar. S 76.12 326 P **P** 07 37 47.6 -0.2
BUR08 IAmb IAmb 07 37 49.8
comp=Z,7.0nm,0.8s
BURAR Bucovina Array 76.13 326 P **P** 07 37 47.3 -0.6
KOLS Kolonicke sedl 76.20 328 *eP* **P** 07 37 48.4 +0.3
KOLS Kolonicke sedl 76.20 328 *eP* **P** 07 37 48.4 +0.3
BIZ Bicaz 76.32 325 ⇑P **P** 07 37 49.7 +0.9
TESR Tescani 76.44 324 ⇑P **P** 07 37 50.1 +0.6
TLCR 76.57 322 ⇓P **P** 07 37 50.6 +0.4
TLCR 76.57 322 ⇓P **P** 07 37 50.6 +0.4
PETR Petresti 76.82 323 ⇑P **P** 07 37 53.8 +2.2
CFR Carcaliu 76.87 322 ⇑P **P** 07 37 52.4 +0.5
CFR Carcaliu 76.87 322 ⇑P **P** 07 37 52.4 +0.5
VRI Vrincioaia 76.92 324 ⇓P **P** 07 37 51.0 -1.2
VRI Vrincioaia 76.92 324 ⇓P **P** 07 37 51.0 -1.2
N38A Joes South For 76.92 45 P **P** 07 37 55.3 +2.9
TPGR Topolog 77.00 322 ⇑P **P** 07 37 52.9 +0.2
LANS Liptovska Anna 77.05 330 *eP* **P** 07 37 53.6 +0.7
LANS pmax pmax
comp=Z,6.0nm,0.9s
LANS Liptovska Anna 77.05 330 *eP* **P** 07 37 53.6 +0.7
KAN12 Harper NE Stat 77.05 50 P **P** 07 37 56.8 +3.6
DPC Dobruska-Polom 77.11 332 *eP* **P** 07 37 53.9 +0.6
DPC Dobruska-Polom 77.11 332 *eP* **P** 07 37 53.9 +0.6
MORC Moravsky Berou 77.19 331 ⇓P **P** 07 37 54.2 +0.4
MORC Moravsky Berou 77.19 331 *eP* **P** 07 37 54.1 +0.4
MORC Moravsky Berou 77.19 331 ⇓P **P** 07 37 54.2 +0.4
MORC Moravsky Berou 77.19 331 P **P** 07 37 52.0 -1.7
MORC IAmb IAmb 07 37 55.4
comp=Z,8.4nm,0.9s
CLL Collm 77.33 335⇓ *iP* **P** 07 37 54.3 -0.1
comp=Z,11nm,0.9s
CLL LmV 08 16 00.0
comp=Z,100nm,18.6s
CLL Collm 77.33 335⇓ *iP* **P** 07 37 54.3 -0.1
CLL pmax pmax
comp=Z,11nm,0.9s
CLL Collm 77.33 335 *eP* **P** 07 37 54.4 0.0
comp=Z,10nm,0.9s,baz=26,slow=5.8
CLL Collm 77.33 335 P **P** 07 37 53.8 -0.6
CLL IAmb IAmb 07 37 55.4
comp=Z,10nm,0.9s
MLR Muntele Rosu 77.55 324 ⇑P **P** 07 37 56.9 +1.0
MLR Muntele Rosu 77.55 324 ⇑P **P** 07 37 56.9 +1.0
FBE Freiberg 77.56 334 *eP* **P** 07 37 56.0 +0.3
comp=Z,8.4nm,1.0s,baz=26,slow=5.8
L42A Oliver, Polo 77.72 42 P **P** 07 37 59.1 +2.3
L42A IAmb IAmb 07 38 01.2
comp=Z,8.1nm,0.8s
VRAC Vranov 77.91 331 ⇓P **P** 07 37 58.4 +0.7
VRAC Vranov 77.91 331 *eP* **P** 07 37 58.3 +0.6
VRAC Vranov 77.91 331 ⇓P **P** 07 37 58.4 +0.7
JAVC Velka Javorina 77.92 331 *eP* **P** 07 37 59.7 +1.8
PSZ Piszkesteto 77.92 329 P **P** 07 37 57.2 -0.7
PSZ pmax pmax
comp=Z,6.0nm,0.9s
PSZ Piszkesteto 77.92 329 P **P** 07 37 57.2 -0.7
PSZ IAmb IAmb 07 37 59.8
comp=Z,5.7nm,0.9s
VOIR 77.96 324 ⇑P **P** 07 37 59.3 +1.1
VOIR 77.96 324 ⇑P **P** 07 37 59.3 +1.1
PRU Pruhonice 78.00 333 *eP* **P** 07 37 58.3 +0.1
PRU Pruhonice 78.00 333 *eP* **P** 07 37 58.3 +0.1
SULR 78.07 323 ⇑P P 07 37 53.9 -4.7
KRUC Moravsky 78.19 331 *eP* **P** 07 37 59.8 +0.6
ARR Arges 78.19 325 ⇑P **P** 07 38 01.9 +2.5
PLN Plauen 78.31 335 *eP* **P** 07 38 00.2 +0.3
comp=Z,7.7nm,1.5s,baz=26,slow=5.8
PBCC Pribram 78.44 333 *eP* **P** 07 38 00.9 +0.3
MODS Modra-Piesok 78.47 331 *eP* **P** 07 38 00.1 -0.8
MODS Modra-Piesok 78.47 331 *eP* **P** 07 38 00.1 -0.8
BR131 Keskin Array S 78.56 316⇑ *eP* **P** 07 38 02.7 +1.0
BRTR Keskin Array B 78.56 316 P **P** 07 38 02.7 +1.0
comp=Z,1.1nm,0.8s,baz=70,slow=5.3,SNR=5.7
BRTR Keskin Array B 78.56 316 P **P** 07 38 01.2 -0.4
GZR Gura Zlata 78.92 326 ⇑P **P** 07 38 03.0 -0.4
GZR Gura Zlata 78.92 326 ⇑P **P** 07 38 03.0 -0.4
KHC Kasperske Hory 79.06 333 *eP* **P** 07 38 04.8 +0.7
KHC Kasperske Hory 79.06 333 *eP* **P** 07 38 04.8 +0.7
BZS Buzias 79.19 326 ⇑P **P** 07 38 05.4 +0.6
BZS Buzias 79.19 326 ⇑P **P** 07 38 05.4 +0.6
GEC2 GERESS Array S 79.27 333 P **P** 07 38 04.7 -0.6
GEC2 IAmb IAmb 07 38 07.5
comp=Z,4.6nm,1.1s
GERES GERESS Array B 79.27 333 P **P** 07 38 05.2 -0.1
comp=Z,2.4nm,0.7s,baz=35,slow=4.9,SNR=12
GERES GERESS Array B 79.27 333 P **P** 07 38 05.0 -0.3
WET Wettzell 79.27 334 *eP* **P** 07 38 05.8 +0.6
baz=26,slow=5.8
CONA Conrad Observa 79.34 331 *eP* **P** 07 38 06.9 +1.2
comp=Z,5.6nm,1.0s
TXAR Lajitas Array 79.56 59 P **P** 07 38 07.2 0.0
comp=Z,0.7nm,0.9s,baz=236,slow=1.4,SNR=5.3
BTNL Ternell 79.93 338 P **P** 07 38 09.4 +0.6
MOA Molln 79.95 332 *eP* **P** 07 38 10.4 +1.5
comp=Z,3.0nm,0.9s
BSTI Sart Tilman 80.08 338 P **P** 07 38 10.3 +0.8
BCLA Clavier 80.30 339 P **P** 07 38 12.0 +1.3
BMRD Maredsous 80.55 339 P **P** 07 38 11.6 -0.4
SOKA Soboth 80.71 331 *eP* **P** 07 38 13.4 +0.3
comp=Z,5.8nm,1.0s
KBA Koelnbreinsper 80.93 332 *eP* **P** 07 38 16.6 +2.2
comp=Z,4.1nm,0.6s
WATA Walderalm 81.27 333 *eP* **P** 07 38 17.2 +1.0
comp=Z,5.3nm,1.1s
WTTA Wattenberg 81.32 333 *eP* **P** 07 38 18.1 +1.6
comp=Z,3.6nm,0.5s
MOTA Moosalm 81.42 334 *eP* **P** 07 38 17.8 +0.9
comp=Z,7.0nm,1.2s
SQTA Sankt Quirin 81.49 334 *eP* **P** 07 38 17.4 +0.1
comp=Z,8.3nm,1.2s
DAVA Damuels 81.84 334 *eP* **P** 07 38 20.0 +0.8
comp=Z,7.4nm,1.1s
RAYN Ar Rayn 83.90 297 P **P** 07 38 31.0 +0.8
RAYN pmax pmax
comp=Z,3.0nm,0.5s
RAYN Ar Rayn 83.90 297 P **P** 07 38 31.0 +0.8
RAYN IAmb IAmb 07 38 43.0
comp=Z,3.4nm,0.5s
QSPA South Pole Qui 134.85 180 PKP **PKPdf** 07 45 17.7 +0.2
comp=Z,1.8nm,1.1s,baz=225,slow=5.7,SNR=3.1
H03N2 Juan Fernandez 140.19 91 T T 10 22 18.6
baz=306,slow=77,SNR=16
H03N3 Juan Fernandez 140.20 91 T T 10 22 20.2
baz=306,slow=77,SNR=14
H03N1 Juan Fernandez 140.20 91 T T 10 22 19.1
baz=306,slow=77,SNR=19

BDFB Brasilia 146.51 35 PKPbc **PKPdf** 07 45 41.6 +1.5
comp=Z,3.6nm,0.9s,baz=214,slow=5.3,SNR=3.9
PLCA Paso Flores 149.48 97 PKPbc **PKPbc** 07 45 48.8 +0.1
comp=Z,1.9nm,0.8s,baz=281,slow=2.2,SNR=4.7
CPUP Villa Florida 150.53 60 PKPbc **PKPbc** 07 45 51.5 -0.1
comp=Z,1.5nm,0.8s,baz=313,slow=3.3,SNR=4.2
SNAA Sanae 150.58 196 PKPdf **PKPbc** 07 45 50.3 -0.1
VNA3 Neumayer Olymp 152.18 193 PKPdf **PKPbc** 07 45 54.7 +0.6

NEIC ***16*** *07:26:40.3±1.3,36.08N±0.02×97.33W±0.06,h6km±6km, Error ellipse: s-maj=6.9km s-min=2.4km az=73.0*
ANF ***16*** *07:26:40.8±0.7,36.00N×97.26W,h4km±5km,ML4.1/13, Error ellipse: s-maj=4.7km s-min=3.1km az=12.0*
TUL ***16*** *07:26:40.1±2.0,36.07N±0.02×97.32W±0.06,h5km±7km, ML3.4,Error ellipse: s-maj=6.6km s-min=2.1km az=74.0*
IDC ***16*** *07:26:45.0±2.5,36.40N×97.84W,h0km,mb1 3.6/3, mb1mx3.4/47,mbtmp3.2/3,ML3.1/3,Error ellipse: s-maj=48.9km s-min=14.2km az=105.0*
ISC 16 07:26:40.2±1.0,36.07N±0.02×97.30W±0.02,h10km±8km, n75,σ1§35/82,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK029	**Liberty Lake**	**0.30**	**205**		**Pg**	**07 26 46.1**	**-0.2**
OK029				Sg	**Sg**	**07 26 50.4**	**0.0**
OK031	**S. Brethren Rd**	**0.39**	**108**		**Pg**	**07 26 48.4**	**+0.4**
OK031				Sg	**Sg**	**07 26 54.3**	**+1.2**
OK030	**Cody Creek RV**	**0.44**	**109**		**Sg**	**07 26 55.8**	**+1.1**
BCOK	**Bluff Creek, N**	**0.49**	**211**		**Pg**	**07 26 49.5**	**-0.3**
BCOK				Sg	**Sg**	**07 26 56.2**	**+0.1**
QUOK	**Quay**	**0.49**	**78**	Pg	**Pg**	**07 26 49.7**	**-0.1**
OK025	**Westminster Rd**	**0.49**	**184**		**Pg**	**07 26 49.9**	**+0.1**
OK025				Sg	**Sg**	**07 26 57.1**	**+0.8**
OKCFA	**Oklahoma City**	**0.67**	**191**		**Pg**	**07 26 53.0**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**0.68**	**190**		**Pg**	**07 26 53.2**	**-0.1**
CROK	**Carrier**	**0.70**	**308**		**Pg**	**07 26 53.6**	**-0.2**
FNO	**Franklin**	**0.82**	**186**		**Pg**	**07 26 55.6**	**-0.4**
GC02	**Grant County #**	**0.90**	**330**		**Pg**	**07 26 57.2**	**-0.4**
KAN13	**South Haven SW**	**0.95**	**351**	Pg	**Pg**	**07 26 58.2**	**-0.3**
W35A	**Tecumseh**	**0.98**	**159**		**Pg**	**07 26 58.4**	**-0.7**
KAN14	**Manchester OK**	**1.03**	**329**	Pg	**Pg**	**07 26 59.5**	**-0.5**
T35A	**Sooner Cattle**	**1.05**	**37**	Pg	**Pg**	**07 27 00.5**	**0.0**
KAN05	**Bluff City Nor**	**1.13**	**336**	Pg	**Pg**	**07 27 01.5**	**-0.5**
KAN10	**Anthony SW Sta**	**1.23**	**329**		**Pg**	**07 27 03.1**	**-0.8**
TUL1	**Leonard**	**1.23**	**97**	P	**Pg**	**07 27 03.0**	**-0.8**
	baz=278						
TUL1				S	**Sg**	**07 27 20.4**	**+0.5**
	baz=278						
TUL1	**Leonard**	**1.23**	**97**		**Pg**	**07 27 03.1**	**-0.8**
KAN08	**Anthony NE Sta**	**1.27**	**335**	Pn	**Pg**	**07 27 03.9**	**-0.7**
KAN12	**Harper NE Stat**	**1.34**	**336**		**Pn**	**07 27 05.1**	**+0.1**
U32A	**Winter Ranch,**	**1.41**	**283**	Pn	**Pn**	**07 27 05.5**	**-0.4**
WMOK	**Wichita Mounta**	**1.80**	**223**	P	**Pn**	**07 27 12.7**	**+1.4**
	baz=41						
WMOK				S	**Sb**	**07 27 36.4**	**+0.4**
	baz=41						
WMOK	**Wichita Mounta**	**1.80**	**223**		**Pn**	**07 27 12.8**	**+1.4**
X37A	**Clayton**	**2.16**	**133**		**Pn**	**07 27 18.3**	**+2.0**
U38A	**Gravette**	**2.38**	**80**	Pn	**Pn**	**07 27 20.4**	**+1.1**
R32A	**Long Quarter,**	**2.60**	**335**	Pn	**Pn**	**07 27 23.8**	**+1.5**
HHAR	**Hobbs**	**2.73**	**85**		**Pn**	**07 27 25.4**	**+1.3**
Z35A	**Perchaven, San**	**2.74**	**179**		**Pn**	**07 27 26.1**	**+1.9**
W39A	**Magazine**	**2.99**	**106**	P	**Pn**	**07 27 29.0**	**+1.3**
	baz=288						
W39A	**Magazine**	**2.99**	**106**		**Pn**	**07 27 30.9**	**+3.1**
KSU1	**Kansas State U**	**3.07**	**10**	Pb	**Pb**	**07 27 37.0**	**+2.0**
	baz=191						
KSU1	**Kansas State U**	**3.07**	**10**	Pn	**Pb**	**07 27 34.2**	**-0.7**
CBKS	**Cedar Bluff**	**3.35**	**325**	P	**Pn**	**07 27 33.8**	**+1.1**
	baz=144						
CBKS	**Cedar Bluff**	**3.35**	**325**		**Pb**	**07 27 39.0**	**-0.8**
Z38A	**Mt. Pleasant**	**3.39**	**145**		**Pn**	**07 27 34.5**	**+1.3**
MIAR	**Mount Ida**	**3.41**	**116**	P	**Pn**	**07 27 35.1**	**+1.8**
	baz=298						
MIAR	**Mount Ida**	**3.41**	**116**		**Pn**	**07 27 35.0**	**+1.6**
S39A	**Bolivar**	**3.57**	**62**		**Pn**	**07 27 37.1**	**+1.4**
U40A	**Yellville**	**3.61**	**84**	P	**Pn**	**07 27 36.9**	**+0.7**
	baz=267						
U40A	**Yellville**	**3.61**	**84**	Pn	**Pn**	**07 27 36.8**	**+0.6**
ABTX	**Abilene, Hawle**	**3.95**	**210**	S	**Sn**	**07 28 28.6**	**+1.3**
	baz=28						
ABTX	**Abilene, Hawle**	**3.95**	**210**	Pg	**Pb**	**07 27 49.5**	**-0.5**
X40A	**Basin Creek Fa**	**3.98**	**112**	P	**Pn**	**07 27 42.8**	**+1.5**
	baz=295						
X40A	**Basin Creek Fa**	**3.98**	**112**		**Pn**	**07 27 42.7**	**+1.5**
WHTX	**Lake Whitney,**	**4.07**	**182**		**Pn**	**07 27 44.5**	**+1.9**
WHAR	**Wooly Hollow**	**4.15**	**99**	Pn	**Pn**	**07 27 44.9**	**+1.3**
WLAR	**White Oak Lake**	**4.18**	**123**	Pg	**Pb**	**07 27 50.7**	**-3.2**
MGMO	**Mountain Grove**	**4.19**	**74**		**Pn**	**07 27 46.5**	**+2.3**
FCAR	**Ozark Folk Cen**	**4.20**	**91**		**Pn**	**07 27 44.4**	**+0.1**
W41B	**Gary Mavity, V**	**4.21**	**101**	P	**Pn**	**07 27 45.3**	**+0.9**
	baz=284						
W41B				S	**Sn**	**07 28 35.1**	**+1.5**
	baz=284						
W41B	**Gary Mavity, V**	**4.21**	**101**	Pn	**Pn**	**07 27 45.7**	**+1.3**
R40A	**Maddies Statio**	**4.59**	**60**		**Pn**	**07 27 50.4**	**+0.8**
Z41A	**Richland Creek**	**4.65**	**126**	S	**Sn**	**07 28 44.6**	**+0.1**
	baz=308						
NATX	**Nacogdoches**	**4.83**	**152**	S	**Sn**	**07 28 48.7**	**-0.3**
	baz=334						
CCAR	**Cane Creek**	**5.02**	**114**	Pn	**Pn**	**07 27 56.6**	**+1.1**
T42A	**Van Buren**	**5.09**	**77**	Pn	**Pn**	**07 27 57.3**	**+0.8**
KSCO	**Kaye Shedlock'**	**5.15**	**306**	P	**Pn**	**07 28 00.2**	**+2.7**
	baz=123						
OXF	**Oxford**	**6.64**	**101**	Pn	**Pn**	**07 28 17.6**	**-0.1**
Y45A	**Yeager Farm, C**	**6.74**	**107**	Pn	**Pn**	**07 28 20.2**	**+1.1**
SDCO	**Great Sand Dun**	**6.78**	**287**	Pn	**Pn**	**07 28 21.7**	**+1.7**
L40A	**Anamosa**	**7.62**	**36**	Pn	**Pn**	**07 28 32.0**	**+0.7**
WVT	**Waverly**	**7.67**	**87**	Pn	**Pn**	**07 28 31.2**	**+0.4**
ECSD	**EROS Data Cent**	**7.67**	**4**	Pn	**Pn**	**07 28 31.4**	**-0.5**
HDIL	**Hopedale**	**7.72**	**52**	Pn	**Pn**	**07 28 32.5**	**-0.1**
T47A	**Sharon Grove**	**8.26**	**81**	Pn	**Pn**	**07 28 40.5**	**+0.4**
N23A	**Red Feather La**	**8.31**	**308**	Pn	**Pn**	**07 28 42.4**	**+1.4**
TXAR	**Lajitas Array**	**8.60**	**220**	Pn	**Pn**	**07 28 48.8**	**+4.0**
	0.1nm,0.3s,baz=46,slow=13,SNR=7.1						
TXAR				Pg	Pg	07 29 14.2	-11
	0.4nm,0.3s,baz=27,slow=14,SNR=5.5						
TXAR				Lg	Lg	07 31 05.9	
	0.7nm,0.3s,baz=42,slow=21,SNR=3.9						
TXAR	**Lajitas Array**	**8.60**	**220**	Pn	**Pn**	**07 28 42.5**	**-2.3**
LRAL	**Lakeview Retre**	**9.02**	**107**	Pn	**Pn**	**07 28 50.9**	**+0.4**
WCI	**Wyandotte Cave**	**9.05**	**73**	Pn	**Pn**	**07 28 51.1**	**+0.3**
SFIN	**Lafayette**	**9.10**	**59**	Pn	**Pn**	**07 28 52.1**	**+0.5**
Y49A	**Blount Mountai**	**9.21**	**101**	Pn	**Pn**	**07 28 55.8**	**+2.7**
PDAR	**Pinedale Array**	**11.59**	**309**	Pn	**Pn**	**07 29 25.8**	**-0.2**
	0.1nm,0.3s,baz=144,slow=19,SNR=1.4						
PDAR				Lg	Lg	07 32 42.3	
	0.2nm,0.3s,baz=108,slow=34,SNR=4.4						
ULM	**Lac du Bonnet**	**14.21**	**4**	Pn	**Pn**	**07 29 57.8**	**-3.5**
	0.2nm,0.3s,baz=186,slow=10,SNR=2.4						
ULM				Sn	Sn	07 32 26.0	-13
	0.1nm,0.3s,baz=204,slow=14,SNR=1.8						

IDC ***16*** *07:26:48.5±1.5,2.92N×128.09E,h45km±14km,mb3.9/15, mb1 4.1/17,mb1mx3.8/49,mbtmp4.2/17,ML4.4/2,MS3.2/6, Ms1 3.2/6,ms1mx2.9/34,Error ellipse: s-maj=20.8km s-min=9.4km az=73.0*
DJA ***16*** *07:26:49.2±0.9,3°N±3'×12°8E±°,h31km±13km,M4.7/24, mb4.8/24,mB5.2/13,MLv4.7/17,Mw(mB)4.6/13*
NEIC ***16*** *07:26:52.4±1.1,2.76N±0.08×128.02E±0.08,h78km±8km, mb4.5/28, Error ellipse: s-maj=12.1km s-min=10.9km az=46.0*
ISC 16 07:26:54.2±0.4,2.85N±0.04×127.99E±0.05,h100km,n106, σ2§38/106,mb4.4/27,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.15**	**197**	P	**Pn**	**07 27 24.8**	**-4.0**
TNTI				S	**Sn**	**07 27 55.9**	**+0.6**
TNTI	**Ternate**	**2.15**	**197**	Pn	**Pn**	**07 27 26.0**	**-2.8**
SGSI	**Sangihe**	**2.59**	**289**	P	**Pn**	**07 27 30.1**	**-4.4**
SGSI				S	**Sn**	**07 28 02.3**	**-3.2**
DDMP	**Don Marcelino,**	**3.95**	**325**	*eP*	Pn	07 27 47.3	-5.5
DDMP				*eS*	**Sn**	**07 28 37.2**	**-0.9**
MATI	**Mati**	**4.42**	**337**	*eP*	**Pn**	**07 27 59.6**	**+0.5**
MATI				*eS*	Sn	07 29 10.6	+21
KMSI	**Cibinong**	**4.60**	**241**	P	**Pn**	**07 28 00.9**	**-0.6**
DAV	**Davao City (W)**	**4.83**	**330**	P	**Pn**	**07 28 03.2**	**-1.5**
	43nm,0.3s,baz=36,slow=2.1,SNR=2.0						

DAV S Sn 07 29 09.3 +10
37nm,0.3s,baz=230,slow=23,SNR=3.8
SIJI Sorong 4.94 138 P **Pn** 07 28 01.7 -4.4
14nm,0.3s,baz=104,slow=7.6,SNR=40
SIJI S **Sn** 07 28 55.5 -6.6
13nm,0.3s,baz=60,slow=22,SNR=7.4
SIJI LR LR 07 30 11.9
comp=Z,199nm,20.2s,baz=50,slow=41
SKMP Bagumbayan, Su 5.01 317 *eP* Pn 07 28 01.1 -6.0
SKMP *eS* **Sn** 07 28 59.7 -4.0
KCP Kidapawan 5.04 325⇓ *iP* **Pn** 07 28 07.0 -0.5
KCP *i S* **Sn** 07 29 01.0 -3.6
GTOI Gorontalo 5.44 246 P **Pn** 07 28 12.0 -0.9
0.3nm974nm65nm,0.7s
BUKP Musuan 5.78 330 *eP* **Pn** 07 28 15.2 -2.4
BUKP *eS* **Sn** 07 29 17.2 -5.5
NLAI Namlea 6.11 188 P **Pn** 07 28 22.0 -0.1
0.3nm83nm,1.0s
MSAI Masohi 6.23 171 P **Pn** 07 28 21.5 -2.1
0.2nm1µm13nm,0.7s
MRSI Marisa 6.49 249 P **Pn** 07 28 26.7 -0.5
0.9nm3µm279nm,0.5s
LUWI Luwuk 6.49 234 P **Pn** 07 28 27.4 +0.2
0.9nm2µm142nm,0.8s
LUWI Luwuk 6.49 234 Pn **Pn** 07 28 25.1 -2.1
AAI Ambon 6.50 178 P **Pn** 07 28 26.2 -1.1
0.2nm4µm66nm,0.8s
PAGZ Pagadian 6.76 317 *eP* Pn 07 28 18.1 -13
FAKI Fak Fak 7.14 143 P Pn 07 28 31.3 -4.8
0.2nm58nm,0.8s
FAKI Fak Fak 7.14 143 Pn **Pn** 07 28 32.8 -3.2
FAKI Sn **Sn** 07 29 49.5 -6.2
APSI Ampana 7.36 240 P **Pn** 07 28 38.1 -0.9
0.4nm1µm94nm,0.5s
MPSI Mapaga 8.46 253 P **Pn** 07 28 53.5 -0.5
60nm,0.8s
MYLDM Lahad Datu 9.74 284 Pn **Pn** 07 29 12.3 +0.9
TTSI Tana Toraja 10.05 234 P **Pn** 07 29 13.4 -2.2
1µm71nm,0.7s
SPSI Sidrap Palu 10.64 231 P **Pn** 07 29 21.7 -2.0
1µm32nm,0.6s
BNSI Bone 10.67 228 P **Pn** 07 29 22.1 -2.0
22nm,0.5s
BKSI Bulukumba 11.30 224 P **Pn** 07 29 32.9 +0.3
682nm25nm,0.5s
KAPI Kappang 11.35 227 P **Pn** 07 29 29.4 -3.8
2.9nm,0.3s,baz=37,slow=8.9,SNR=10
KAPI S **Sn** 07 31 35.7 -2.4
1.0nm,0.3s,baz=108,slow=17,SNR=1.6
KAPI LR LR 07 34 25.0
comp=Z,63nm,20.6s,baz=51,slow=40
KAPI Kappang 11.35 227 Pn **Pn** 07 29 30.5 -2.7
BSSI Bau Bau, Buton 11.65 220 P **Pn** 07 29 37.9 +0.5
16nm,0.7s
SOEI Soe 13.06 196 P **Pn** 07 29 55.7 -0.4
792nm32nm,0.9s
SOEI Soe 13.06 196 Pn **Pn** 07 29 53.7 -2.4
EDFI Ende, Flores 13.12 209 P **Pn** 07 29 57.7 +0.8
10.0nm,1.0s
TGY Tagaytay City 13.17 328 LR LR 07 35 11.7
comp=Z,237nm,19.3s,baz=261,slow=38
GENI Genyem 13.32 114 P **P** 07 30 08.1 +2.7
MTKI Muara Teweh, K 13.62 254 P **Pn** 07 30 03.5 +0.2
WBSI Waikabubak, Su 15.08 215 P P 07 30 40.5 +16
PLAI Plampang 15.43 221 P **P** 07 30 28.5 -0.4
74nm,0.9s
SBUM Sibu 15.76 269 Pn **Pn** 07 30 30.3 -0.3
MTN Manton Dam 15.90 169 **Pn** 07 30 29.4 -2.9
TWSI Taliwang, Sumb 15.97 224 P **P** 07 30 35.2 +0.4
45nm,1.0s
SRBI Singaraja 16.74 229 P P 07 31 01.6 +18
KSM Kuching 17.72 266 P **P** 07 30 53.9 -0.3
KSM IAmb IAmb 07 31 12.2
comp=Z,13nm,0.7s
KNRA Kununurra 18.42 178 **P** 07 31 00.5 -1.4
KNRA IAmb IAmb 07 31 04.7
comp=Z,38nm,1.0s
PWJI Pagerwojo 19.42 236 P **Pn** 07 31 15.4 +0.5
FITZ Fitzroy Crossi 20.94 186 P **P** 07 31 28.4 -0.8
comp=Z,4.7nm,0.8s,baz=17,slow=7.3,SNR=9.7
FITZ Fitzroy Crossi 20.94 186 P **P** 07 31 28.3 -0.8
KPJI Karang Pucung 21.54 242 P **P** 07 31 41.6 +6.0
COEN Coen 22.49 138 P **P** 07 31 46.7 +1.1
WB0 Warramunga Arr 23.34 165 P **P** 07 31 53.6 -0.3
WRAB Tennant Creek 23.49 165 P **P** 07 31 54.9 -0.3
WRAB IAmb IAmb 07 31 56.4
comp=Z,43nm,1.2s
WRA Warramunga Arr 23.49 165 P **P** 07 31 54.8 -0.4
comp=Z,12nm,0.5s,baz=342,slow=10,SNR=76
WRA S **S** 07 36 08.3 +6.8
comp=Z,1.4nm,1.0s,baz=341,slow=19,SNR=2.8
WRA ScP **ScP** 07 39 11.6 +3.9
comp=Z,0.8nm,0.6s,baz=351,slow=3.1,SNR=7.0
WRA LR LR 07 42 06.6
comp=Z,32nm,20.8s,baz=350,slow=39
WRA Warramunga Arr 23.49 165 P **P** 07 31 53.6 -1.6
WB2 Warramunga Arr 23.50 165 P **P** 07 31 54.8 -0.5
WR0 Warramunga Arr 23.56 164 P **P** 07 31 55.7 -0.2
WR0 IAmb IAmb 07 31 57.1
comp=Z,19nm,0.9s
KLSI 24.41 252 P **P** 07 32 08.0 +4.4
PSA00 Pilbara Seismi 25.55 198 P **P** 07 32 11.6 -2.3
PSA00 IAmb IAmb 07 32 16.8
comp=Z,13nm,0.9s
MNAI Manna 26.02 254 P **P** 07 32 17.9 -0.3
AS31 Alice Springs 26.98 168 P **P** 07 32 26.3 -0.4
ASAR Alice Springs 26.98 168 P **P** 07 32 26.3 -0.4
comp=Z,1.7nm,0.5s,baz=354,slow=8.3,SNR=43
ASAR PcP **PcP** 07 35 47.1 +0.9
comp=Z,1.1nm,0.6s,baz=348,slow=2.3,SNR=7.2
ASAR ScP **ScP** 07 39 23.1 +5.5
comp=Z,1.3nm,0.7s,baz=345,slow=2.4,SNR=8.3
ASAR LR LR 07 44 49.0
comp=Z,44nm,18.8s,baz=345,slow=40
ASAR Alice Springs 26.98 168 P **P** 07 32 26.2 -0.6
WHN Wuhan 30.42 336 P P 07 32 47.3 -10
CMAR Chiang Mai Arr 32.40 301 P **P** 07 33 14.2 -0.5
comp=Z,0.9nm,0.3s,baz=119,slow=7.3,SNR=1.8
FORT Forrest 33.44 180 P **P** 07 33 24.7 +1.1
MORW Morawa 33.74 199 P **P** 07 33 25.9 -0.4
MORW IAmb IAmb 07 33 34.9
comp=Z,15nm,1.4s
KSRS Korea Array 34.44 360 P **P** 07 33 31.3 -0.9
comp=Z,0.8nm,0.6s,baz=180,slow=9.9,SNR=2.3
MJAR Matsushiro Arr 34.83 14 P **P** 07 33 32.9 -2.7
comp=Z,1.4nm,0.7s,baz=185,slow=9.5,SNR=2.0
MJAR LR LR 07 45 21.8
comp=Z,56nm,21.8s,baz=155,slow=32
BBOO Buckleboo 36.28 168 P **P** 07 33 47.8 -0.3
STKA Stephens Creek 36.88 161 P **P** 07 33 53.0 -0.1
comp=Z,12nm,0.6s,baz=332,slow=10,SNR=25
STKA Stephens Creek 36.88 161 P **P** 07 33 53.4 +0.2
STKA IAmb IAmb 07 33 56.5
comp=Z,2.5nm,0.6s
LZH Lanzhou 39.90 329 *eP* **P** 07 34 21.8 +3.2
LZH pP pwP 07 34 43.8 -0.3
LZH sP sP 07 34 54.5 +2.3
LZH PP **PP** 07 35 46.6 -5.7
LZH pmax pmax
comp=Z,12nm,1.0s
LZH pmax pmax
comp=Z,76nm,4.9s
ARMA Armidale 40.05 147 P **P** 07 34 19.9 0.0
ARMA IAmb IAmb 07 34 24.8
comp=Z,6.2nm,1.0s
**HHC Hu-ho-hao-te

KLR	**Kul'dur**	**46.32**	**3**	P	**P**	**07 35 09.8**	**-0.2**
	comp=Z,1.2nm,0.6s,baz=206,slow=10,SNR=4.3						
SONM	**Songino Array**	**48.53**	**341**	P	**P**	**07 35 26.4**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=123,slow=5.3,SNR=2.5						
WMQ	**Urumqi**	**54.16**	**325**	*e*P	**P**	**07 36 12.4**	**+3.1**
MK31	**Makanchi Array**	**58.99**	**325**	P	**P**	**07 36 45.8**	**+2.3**
MK31				IAmb	IAmb	07 36 59.6	
	comp=Z,2.9nm,0.9s						
MKAR	**Makanchi Array**	**58.99**	**325**	P	**P**	**07 36 44.4**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=114,slow=7.7,SNR=8.7						
MKAR	**Makanchi Array**	**58.99**	**325**	P	**P**	**07 36 44.5**	**+1.1**
MAKZ	**Makanchi**	**59.18**	**325**	P	**P**	**07 36 46.5**	**+1.8**
MAKZ				IAmb	IAmb	07 37 00.8	
	comp=Z,5.9nm,0.8s						
ZALV	**Zalesovo Beam**	**61.94**	**333**	P	**P**	**07 37 04.0**	**+0.7**
	comp=Z,1.2nm,0.2s,baz=78,slow=13,SNR=2.3						
KURK	**Kurchatov**	**63.15**	**327**	P	**P**	**07 37 12.4**	**+1.0**
KURK				IAmb	IAmb	07 37 32.5	
	comp=Z,4.9nm,0.8s						
CHGR	**Chuyangaron**	**64.19**	**312**	P	**P**	**07 37 19.6**	**+1.0**
CHGR				IAmb	IAmb	07 37 43.3	
	comp=Z,12nm,1.2s						
AMKA	**Amchitka**	**64.55**	**33**	P	**P**	**07 37 23.6**	**+3.0**
KK31	**Karatay Array**	**64.73**	**317**	P	**P**	**07 37 23.1**	**+1.1**
KKAR	**Karatay Array**	**64.73**	**317**	P	**P**	**07 37 23.5**	**+1.6**
KKAR	**Karatay Array**	**64.73**	**317**	P	**P**	**07 37 23.2**	**+1.3**
KKAR				IAmb	IAmb	07 37 40.0	
	comp=Z,3.2nm,0.9s						
BRVK	**Borovoye**	**68.81**	**327**	P	**P**	**07 37 48.8**	**+1.2**
BRVK				IAmb	IAmb	07 38 05.1	
	comp=Z,4.3nm,0.9s						
NRIK	**Noril'sk**	**71.58**	**346**	P	**P**	**07 38 03.8**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=120,slow=8.1,SNR=1.4						
VNDA	**Vanda**	**82.40**	**173**	P	**P**	**07 39 05.7**	**+1.0**
	comp=Z,1.9nm,0.8s,baz=313,slow=6.9,SNR=16						
VNDA	**Vanda**	**82.40**	**173**	P	**P**	**07 39 04.5**	**-0.2**
VNDA				IAmb	IAmb	07 39 08.0	
	comp=Z,6.5nm,1.4s						
IMAR	**Indian Mountai**	**82.63**	**24**	P	**P**	**07 39 07.2**	**+1.0**
ILAR	**Eielson Array**	**85.35**	**25**	P	**P**	**07 39 20.7**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=242,slow=5.0,SNR=1.6						
BMAR	**Burnt Mountain**	**86.40**	**23**	P	**P**	**07 39 26.1**	**+1.0**
BOSA	**Boshof**	**102.54**	**241**	P	**Pdif**	**07 40 41.6**	**+1.5**
	comp=Z,6.6nm,0.9s,baz=138,slow=8.9,SNR=9.0						
TORD	**Torodi Ar. Bea**	**124.38**	**288**	PKP	**PKiKP**	**07 45 44.8**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=73,slow=2.2,SNR=3.0						

IDC 16 07:31:50.6±3.5, 6°.98S×151°.24E, h0km, mb3.3/2, mb1 3.7/3, mb1mx3.4/34, mbtmp3.6/3, ML2.0/1, Error ellipse: s-maj=123.5km s-min=47.3km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.70**	**239**	Pn	Pn	07 33 04.2	+1.4
	4.8nm,0.3s,baz=300,slow=1.8,SNR=9.3						
PMG				Sn	Sn	07 33 44.9	-13
	1.8nm,0.3s,baz=358,slow=15,SNR=1.8						
WRA	**Warramunga Arr**	**20.85**	**230**	P	P	07 36 32.2	-2.0
	0.7nm,0.3s,baz=55,slow=9.9,SNR=32						
ASAR	**Alice Springs**	**23.50**	**223**	P	P	07 37 03.2	+0.8
	0.4nm,0.6s,baz=56,slow=8.5,SNR=6.4						
TORD	**Torodi Ar. Bea**	**149.41**	**284**	PKPbc	PKPbc	07 51 42.5	-0.2
	0.2nm,0.5s,baz=76,slow=3.0,SNR=1.7						

*THE **16** 07:39:08.7, 38°.82N×20°.60E, h8km±1km, ML2.4/6, Error ellipse: s-maj=2.0km s-min=0.6km az=86.0*
*ATH **16** 07:39:08.1, 38°.85N×20°.56E, h8km±4km, ML2.5/4, Error ellipse: s-maj=4.5km s-min=1.3km az=93.0*
ISC 16 07:39:08.2±0.9, 38°.84N±0°.03×20°.57E±0°.06, h9km±7km, n29, σ0°.56/44, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSLK	**Tsoukalades, L**	**0.07**	**99**	P	**Pg**	**07 39 10.5**	**+0.2**
TSLK				S	**Sg**	**07 39 12.0**	**+0.1**
TSLK	**Tsoukalades, L**	**0.07**	**99**	P	**Pg**	**07 39 10.5**	**+0.2**
TSLK				S	**Sg**	**07 39 11.7**	**-0.1**
	13μm,0.4s						
LKD2	**Lefkada island**	**0.09**	**123**	P	**Pg**	**07 39 10.5**	**-0.1**
LKD2				S	**Sg**	**07 39 11.7**	**-0.5**
LKD2				AML	AML	07 39 11.8	
	comp=E,49189μm,0.2s						
LKD2				AML	AML	07 39 11.8	
	comp=N,39568μm,0.3s						
LKD2	**Lefkada island**	**0.09**	**123**	P	**Pg**	**07 39 10.5**	**-0.1**
LKD2				S	**Sg**	**07 39 11.7**	**-0.5**
	comp=N,22μm,0.3s						
NYDR	**Nydri-Lefkada**	**0.16**	**140**	P	**Pg**	**07 39 11.6**	**0.0**
NYDR				S	**Sg**	**07 39 13.9**	**-0.1**
NYDR	**Nydri-Lefkada**	**0.16**	**140**	P	**Pg**	**07 39 11.6**	**0.0**
NYDR				S	**Sg**	**07 39 13.6**	**-0.4**
	comp=N,2μm,0.3s						
EVGI	**Lefkada island**	**0.23**	**162**	P	**Pg**	**07 39 12.9**	**+0.1**
EVGI				S	**Sg**	**07 39 16.5**	**+0.6**
EVGI	**Lefkada island**	**0.23**	**162**	P	**Pg**	**07 39 13.0**	**+0.1**
EVGI				S	**Sg**	**07 39 16.3**	**+0.4**
	comp=N,885nm,0.2s						
MGNA	**Meganis**	**0.25**	**135**	P	**Pg**	**07 39 13.3**	**0.0**
MGNA				AML	AML	07 39 17.2	
	comp=E,4508μm,0.3s						
MGNA				S	**S**	**07 39 17.2**	**+0.5**
MGNA				AML	AML	07 39 17.8	
	comp=N,2336μm,0.2s						
FSK	**Fiskardo**	**0.38**	**180**	P	**Pg**	**07 39 15.6**	**-0.1**
FSK				S	**Sg**	**07 39 21.3**	**+0.7**
FSK				AML	AML	07 39 22.0	
	comp=N,904μm,0.3s						
FSK				AML	AML	07 39 22.2	
	comp=E,1535μm,0.3s						
FSK	**Fiskardo**	**0.38**	**180**	P	**Pg**	**07 39 15.6**	**-0.1**
FSK				S	**Sg**	**07 39 21.3**	**+0.7**
	comp=E,610nm,0.3s						
PDO	**Prodromos**	**0.54**	**116**	P	**Pg**	**07 39 19.1**	**+0.4**
PDO	**Prodromos**	**0.54**	**116**	P	**Pg**	**07 39 18.9**	**+0.2**
KEF5	**Kardakata, Kep**	**0.56**	**188**	P	**Pg**	**07 39 19.2**	**0.0**
KEF5				S	**Sb**	**07 39 27.9**	**-0.5**
KEF5	**Kardakata, Kep**	**0.56**	**188**	P	**Pg**	**07 39 19.0**	**-0.1**
KEF4	**Livadi, Kephal**	**0.59**	**191**	P	**Pg**	**07 39 19.5**	**-0.1**
KEF4				S	**Sg**	**07 39 28.3**	**+1.0**
KEF4	**Livadi, Kephal**	**0.59**	**191**	P	**Pg**	**07 39 19.7**	**+0.1**
DMLN	**Damoulianata-K**	**0.62**	**194**	P	**Pg**	**07 39 20.0**	**-0.1**
DMLN	**Damoulianata-K**	**0.62**	**194**	P	**Pg**	**07 39 20.0**	**-0.1**
DMLN				S	**Sb**	**07 39 29.6**	**-0.3**
	comp=E,375nm,0.3s						
VLS	**Valsamata**	**0.66**	**178**	P	**Pg**	**07 39 20.5**	**-0.4**
VLS				S	**Sb**	**07 39 30.6**	**-0.5**
VLS				AML	AML	07 39 34.7	
	comp=E,414μm,0.2s						
VLS				AML	AML	07 39 35.2	
	comp=N,617μm,0.4s						
VLS	**Valsamata**	**0.66**	**178**	P	**Pg**	**07 39 20.3**	**-0.7**
PSDA	**Pessada-Kefalo**	**0.72**	**179**	P	**Pg**	**07 39 21.7**	**-0.4**
PSDA	**Pessada-Kefalo**	**0.72**	**179**	P	**Pg**	**07 39 21.6**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.96**	**175**	P	**Pg**	**07 39 25.8**	**-0.9**
KEK	**Kerkira**	**1.06**	**326**	P	**Pb**	**07 39 29.0**	**+0.3**
STON	**Ston**	**4.58**	**333**	Sn	**Sn**	**07 41 10.3**	**-0.6**
RICI	**Ricice**	**5.33**	**332**	*e*Pn	**Pn**	**07 40 26.3**	**-1.6**
KIJV	**Kijevo**	**6.04**	**330**	*e*Pn	**Pn**	**07 40 37.9**	**+0.2**
MORI	**Morici**	**6.21**	**326**	*e*Pn	**Pn**	**07 40 41.8**	**+1.7**

IDC 16 08:10:45.9±2.2, 1°.78N×126°.32E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/41, mbtmp3.2/3, Error ellipse: s-maj=176.0km s-min=28.1km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.98**	**160**	P	P	08 15 51.3	-1.0
	0.3nm,0.4s,baz=338,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**26.35**	**164**	P	P	08 16 25.0	+1.1
	0.2nm,0.5s,baz=352,slow=14,SNR=4.6						
MKAR	**Makanchi Array**	**58.93**	**326**	P	P	08 20 46.8	-0.2
	0.2nm,0.4s,baz=111,slow=7.9,SNR=2.2						

*NEIC **16** 08:16:10±1.2, 7°.2N±0°.1×130°.74E±0°.06, h15km±6km, mb4.2/13, Error ellipse: s-maj=18.1km s-min=4.1km az=205.0*
*IDC **16** 08:16:14.1±0.8, 6°.47N×130°.27E, h0km, mb4.0/12, mb1 4.2/14, mb1mx3.9/46, mbtmp4.1/14, ML4.4/2, MS3.1/10, Ms1 3.1/10, ms1mx2.8/36, Error ellipse: s-maj=29.2km s-min=13.2km az=76.0*
*MAN **16** 08:16:21.4, 6°.82N×129°.65E, h31km, mb5.5, ML4.5, MS4.8*
*DJA **16** 08:16:25.1±1.0, 6°.1N±5°×13°.0E±°, h35km±16km, M4.8/13, mb4.5/13, mB5.2/5, MLv5.0/7, Mw(mB)4.7/5*
ISC 16 08:16:19.4±0.6, 6°.41N±0°.06×130°.20E±0°.07, h35km, n49, σ2°.01/45, mb4.0/14, MS3.0/6, 2C-2D, East of Philippine Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIP	**Bislig**	**4.31**	**295**↓	*e*P	Pn	08 17 16.4	-6.1
DAV	**Davao City (W)**	**4.63**	**278**	Pn	**Pn**	**08 17 25.2**	**-1.8**
	34nm,0.3s,baz=89,slow=0.5,SNR=5.5						
DAV				Sn	**Sn**	**08 18 23.2**	**+3.7**
	15nm,0.3s,baz=85,slow=22,SNR=1.4						
DAV				LR	LR	08 20 20.4	
	comp=Z,96nm,19.2s,baz=121,slow=52						
KCP	**Kidapawan**	**5.11**	**277**↑	*i*P	**Pn**	**08 17 31.1**	**-2.4**
SGSI	**Sangihe**	**5.38**	**240**	P	**Pn**	**08 17 36.7**	**-0.5**
SGSI				S	**Sn**	**08 18 34.3**	**-3.7**
CGP	**Cagayan de Oro**	**5.82**	**291**↓	*e*P	**Pn**	**08 17 39.9**	**-3.4**
TNTI	**Ternate**	**6.27**	**207**		**Pn**	**08 17 50.8**	**+1.2**
TBP	**Tagbilaran**	**7.07**	**298**↑	*i*P	**Pn**	**08 17 56.9**	**-3.5**
SIJI	**Sorong**	**7.31**	**172**	Pn	**Pn**	**08 18 02.1**	**-1.7**
	2.5nm,0.3s,baz=115,slow=23,SNR=7.7						
SIJI				Sn	**Sn**	**08 19 18.9**	**-6.7**
	4.3nm,0.3s,baz=218,slow=22,SNR=7.6						
SIJI				LR	LR	08 20 36.3	
	comp=Z,206nm,21.7s,baz=7.0,slow=36						
GTOI	**Gorontalo**	**9.18**	**232**	P	**Pn**	**08 18 30.4**	**+0.9**
	478nm42nm,0.7s						
SANI	**Sanana**	**9.40**	**207**	P	**Pn**	**08 18 32.9**	**+0.5**
	606nm14nm,0.6s						
FAKI	**Fak Fak**	**9.49**	**167**	Pn	**Pn**	**08 18 34.3**	**+0.5**
MSAI	**Masohi**	**9.78**	**187**	P	**Pn**	**08 18 40.8**	**+3.2**
	1μm31nm,0.7s						
MRSI	**Marisa**	**10.13**	**235**	P	**Pn**	**08 18 43.0**	**+0.5**
	77nm,1.0s						
MYLDM	**Lahad Datu**	**11.70**	**265**	Pn	**Pn**	**08 19 04.5**	**+0.6**
MPSI	**Mapaga**	**11.92**	**240**	P	**Pn**	**08 19 06.7**	**-0.2**
	8.0nm,0.8s						
GENI	**Genyem**	**13.39**	**132**	P	**P**	**08 19 39.0**	**+3.0**
BNSI	**Bone**	**14.72**	**223**	P	P	08 19 56.9	+6.0
KAPI	**Kappang**	**15.41**	**223**	Pn	**P**	**08 19 59.4**	**+0.8**
	2.6nm,0.3s,baz=61,slow=14.5,SNR=4.5						
GUMO	**Guam**	**16.11**	**63**	LR	LR	08 24 55.9	
	comp=Z,77nm,20.4s,baz=222,slow=33						
EDFI	**Ende, Flores**	**17.29**	**209**	P	**P**	**08 20 22.9**	**+3.4**
	6.7nm,0.6s						
BATI	**Baumata**	**17.75**	**202**	LR	LR	08 27 04.6	
	comp=Z,88nm,21.6s,baz=80,slow=36						
SBUM	**Sibu**	**18.34**	**258**	P	**P**	**08 20 31.4**	**+0.3**
SBUM				IAmb	IAmb	08 20 34.0	
	comp=Z,9.1nm,0.7s						
MTN	**Manton Dam**	**19.15**	**177**	P	**Pn**	**08 20 41.0**	**0.0**
MTN				IAmb	IAmb	08 20 54.6	
	comp=Z,8.5nm,0.7s						
KSM	**Kuching**	**20.43**	**257**	P	**P**	**08 20 55.0**	**+1.1**
KSM				IAmb	IAmb	08 20 57.0	
	comp=Z,12nm,0.9s						
JAGI	**Jajag, Banyuwa**	**21.78**	**227**	P	**P**	**08 21 11.1**	**+2.7**
KNRA	**Kununurra**	**21.99**	**184**	P	**P**	**08 21 11.7**	**+1.1**
FITZ	**Fitzroy Crossi**	**24.77**	**190**	P	**P**	**08 21 39.3**	**+1.3**
	comp=Z,2.1nm,0.7s,baz=22,slow=8.9,SNR=9.5						
FITZ	**Fitzroy Crossi**	**24.77**	**190**	P	**P**	**08 21 39.0**	**+1.0**
FITZ				IAmb	IAmb	08 21 58.9	
	comp=Z,6.2nm,1.2s						
WB0	**Warramunga Arr**	**26.34**	**171**	P	**P**	**08 21 51.8**	**-0.5**
WB0				IAmb	IAmb	08 21 54.5	
	comp=Z,5.2nm,0.9s						
WRA	**Warramunga Arr**	**26.51**	**171**	P	**P**	**08 21 53.5**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=353,slow=9.7,SNR=20						
WRA				LR	LR	08 32 50.5	
	comp=Z,45nm,20.0s,baz=270,slow=38						
WRA	**Warramunga Arr**	**26.51**	**171**	P	**P**	**08 21 52.5**	**-1.3**
WB2	**Warramunga Arr**	**26.51**	**171**	P	**P**	**08 21 53.2**	**-0.6**
CBJI	**Cileko**	**26.56**	**242**	P	**P**	**08 21 52.8**	**-1.5**
AS31	**Alice Springs**	**30.11**	**173**	P	**P**	**08 22 25.6**	**-0.4**
ASAR	**Alice Springs**	**30.11**	**173**	P	**P**	**08 22 25.8**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=358,slow=6.7,SNR=21						
MJAR	**Matsushiro Arr**	**30.87**	**13**	P	**P**	**08 22 30.5**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=185,slow=9.8,SNR=2.6						
MJAR				LR	LR	08 35 11.1	
	comp=Z,28nm,19.1s,baz=170,slow=37						
KSRS	**Korea Array**	**30.97**	**356**	LR	LR	08 33 46.2	
	comp=Z,32nm,21.5s,baz=172,slow=34						
CMAR	**Chiang Mai Arr**	**32.72**	**294**	P	**P**	**08 22 50.0**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=119,slow=8.4,SNR=4.1						
USRK	**Ussuriysk Ar.**	**37.67**	**2**	P	**P**	**08 23 31.6**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=189,slow=7.2,SNR=10						
BBOO	**Buckleboo**	**39.40**	**172**	P	**P**	**08 23 45.2**	**-0.8**
BBOO				IAmb	IAmb	08 23 46.4	
	comp=Z,6.9nm,0.9s						
STKA	**Stephens Creek**	**39.60**	**165**	P	**P**	**08 23 48.0**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=332,slow=6.1,SNR=4.6						
STKA				LR	LR	08 42 07.5	
	comp=Z,24nm,18.3s,baz=25,slow=39						
STKA	**Stephens Creek**	**39.60**	**165**	P	**P**	**08 23 47.7**	**+0.1**
ULN	**Ulaanbaatar**	**45.78**	**338**	P	P	08 24 26.2	-12
SONM	**Songino Array**	**46.00**	**338**	P	**P**	**08 24 40.0**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=151,slow=11,SNR=6.4						
MKAR	**Makanchi Array**	**57.43**	**323**	P	**P**	**08 26 03.2**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=114,slow=7.7,SNR=9.9						
ZALV	**Zalesovo Beam**	**59.86**	**331**	P	**P**	**08 26 21.1**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=95,slow=6.5,SNR=1.3						
KURBB	**Kurchatov Arra**	**61.43**	**325**	P	**P**	**08 26 32.4**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=124,slow=5.9,SNR=5.0						
ARCES	**ARCESS Array B**	**89.13**	**340**	P	**P**	**08 29 10.8**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=94,slow=4.6,SNR=1.4						
ARCES				LR	LR	09 12 25.8	
	comp=Z,10nm,20.6s,baz=205,slow=38						
NOA	**NORSAR Array B**	**97.90**	**335**	LR	LR	09 18 50.0	
	comp=Z,8.7nm,18.0s,baz=245,slow=38						

*TAP **16** 08:38:47.1, 24°.65N×122°.74E, h23km, ML2.8, C*
*JMA **16** 08:38:47.3±0.1, 24°.57N×122°.69E, h19km±2km, M2.4*
ISC 16 08:38:47.0±0.9, 24°.64N±0°.04×122°.72E±0°.02, h17km±7km, n44, σ0°.42/80, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.28**	**133**	P	**Pg**	**08 38 53.1**	**-0.1**
JYNG				*e*S	**Sg**	**08 38 57.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.32**	**124**	P	**Pb**	**08 38 54.2**	**-0.1**
	baz=122						
YOJ				*e*S	**Sb**	**08 38 59.3**	**+0.1**
	baz=122						
YOJ	**Yonaguni jima**	**0.32**	**124**	P	**Pg**	**08 38 54.0**	**+0.1**
YOJ				S	**Sg**	**08 38 58.8**	**+0.3**
TWB1	**Santiao Chiao**	**0.76**	**299**	*e*P	**Pb**	**08 39 01.7**	**0.0**
	baz=298						
TWB1				S	**Sb**	**08 39 11.7**	**-0.1**
	baz=298						
TWC	**Suao**	**0.79**	**268**	P	**Pb**	**08 39 01.9**	**-0.5**
	baz=257						
TWC				S	**Sb**	**08 39 12.6**	**-0.2**
	baz=257						
NTC	**Toucheng**	**0.84**	**285**	P	**Pg**	**08 39 03.5**	**+0.2**
	baz=285						
NTC				S	**Sn**	**08 39 15.3**	**-0.6**
	baz=285						
ENAH	**Nanao**	**0.85**	**257**	*e*P	**Pb**	**08 39 03.1**	**-0.2**
	baz=258						
ENAH				S	**Sb**	**08 39 14.7**	**+0.3**
	baz=258						
TIPB	**Shuangxi**	**0.88**	**292**	*e*P	**Pb**	**08 39 03.4**	**-0.4**
	baz=306						
TIPB				S	**Sb**	**08 39 14.9**	**-0.4**
	baz=306						
ILA	**Ilan**	**0.89**	**278**	*e*P	**Pn**	**08 39 04.8**	**+0.1**
	baz=279						
ILA				S	**Sg**	**08 39 16.4**	**+0.2**
	baz=279						
NWF	**Wu-fen Shan**	**0.95**	**297**	*e*P	**Pb**	**08 39 05.2**	**0.0**
	baz=309						
NWF				*e*S	**Sb**	**08 39 17.6**	**+0.1**
	baz=309						
WFSB	**Wu-fen Shan**	**0.95**	**297**	*e*P	**Pb**	**08 39 05.0**	**-0.1**
	baz=309						
TWE	**Neicheng**	**0.96**	**275**	P	**Pb**	**08 39 05.1**	**-0.1**
	baz=263						
TWE				S	**Sb**	**08 39 18.0**	**+0.4**
	baz=263						

IRIF	**Iriomote-Funau**	**0.97**	**108**	P	**Pb**	**08 39 05.2**	**-0.2**
IRIF				S	**Sn**	**08 39 19.8**	**+0.6**
TWA	**Mucha**	**1.09**	**288**	*e*P	**Pb**	**08 39 06.5**	**-0.9**
	baz=289						
TWA				S	**Sb**	**08 39 21.5**	**+0.2**
	baz=289						
NDT	**Datong Townshi**	**1.10**	**268**	*e*P	**Pb**	**08 39 08.0**	**+0.4**
	baz=269						
NDT				S	**Sb**	**08 39 21.6**	**0.0**
	baz=269						
NWLT	**Wulai**	**1.11**	**277**	P	**Pb**	**08 39 08.1**	**+0.2**
	baz=278						
NWLT				*e*S	**Sb**	**08 39 21.6**	**-0.5**
	baz=278						
NACB	**Ninganchiao**	**1.13**	**246**	*e*P	**Pn**	**08 39 07.2**	**-0.8**
	baz=247						
NACB				S	**Sn**	**08 39 22.9**	**-0.1**
	baz=247						
NHDH	**Xindian Distri**	**1.13**	**287**	*e*P	**Pn**	**08 39 07.8**	**-0.3**
	baz=287						
NHDH				*e*S	**Sb**	**08 39 22.7**	**+0.2**
	baz=287						
YM01	**YM01**	**1.16**	**296**	*e*P	**Pn**	**08 39 08.3**	**-0.2**
	baz=281						
YM01				S	**Sb**	**08 39 23.3**	**-0.1**
	baz=281						
TATO	**Taipei**	**1.17**	**287**	*e*P	**Pb**	**08 39 08.8**	**0.0**
	baz=287						
ETLH	**Xiulin Townshi**	**1.21**	**249**	*e*P	**Pn**	**08 39 08.3**	**-0.9**
	baz=250						
ETLH				S	**Sb**	**08 39 24.6**	**-0.3**
	baz=250						
YHNB	**Yeheng**	**1.22**	**272**	P	**Pb**	**08 39 09.8**	**0.0**
	baz=272						
YHNB				S	**Sb**	**08 39 25.3**	**0.0**
	baz=272						
NNSB	**Datong**	**1.23**	**260**	P	**Pn**	**08 39 09.6**	**0.0**
	baz=270						
NNSB				*e*S	**Sb**	**08 39 25.7**	**0.0**
	baz=270						
NNSH	**Datong**	**1.23**	**260**	*e*P	**Pn**	**08 39 09.6**	**0.0**
	baz=261						
NNSH				*e*S	**Sb**	**08 39 24.9**	**-0.7**
	baz=261						
NSK	**Sanguang**	**1.24**	**272**	P	**Pn**	**08 39 09.7**	**+0.1**
	baz=273						
NSK				S	**Sb**	**08 39 25.5**	**-0.2**
	baz=273						
NNS	**Nan Shan**	**1.24**	**261**	P	**Pn**	**08 39 09.7**	**0.0**
	baz=261						
NNS				*e*S	**Sb**	**08 39 25.5**	**-0.4**
	baz=261						
JKRS	**Kuro-shima**	**1.24**	**109**	*e*S	**Sn**	**08 39 26.3**	**+0.4**
JIJ	**Ishigaki jima**	**1.33**	**102**	P	**Pn**	**08 39 10.7**	**-0.1**
FUSS	**Fushou**	**1.40**	**254**	*e*P	**Pb**	**08 39 13.6**	**+0.7**
	baz=255						
FUSS				S	**Sb**	**08 39 31.0**	**+0.4**
	baz=255						
WHF	**Hehuan Shan**	**1.42**	**250**	*e*P	**Pb**	**08 39 12.9**	**-0.4**
	baz=251						
WHF				S	**Sn**	**08 39 31.0**	**+0.2**
	baz=251						
JISG	**Ishigakijimahi**	**1.45**	**92**	P	**Pb**	**08 39 13.2**	**-0.4**
TDCB	**Techi**	**1.47**	**255**	*e*P	**Pb**	**08 39 14.2**	**+0.1**
	baz=256						
TDCB				*e*S	**Sb**	**08 39 32.4**	**-0.1**
	baz=256						
CHGB	**Renai**	**1.52**	**248**	*e*P	**Pb**	**08 39 14.9**	**-0.1**
	baz=249						
CHGB				*e*S	**Sb**	**08 39 34.5**	**+0.4**
	baz=249						
EGFH	**Guangfu**	**1.53**	**231**	*e*P	**Pn**	**08 39 13.1**	**-0.5**
	baz=232						
EGFH				S	**Sn**	**08 39 33.4**	**+0.4**
	baz=232						
LIOB	**Emei**	**1.55**	**271**	*e*P	**Pn**	**08 39 14.2**	**+0.3**
	baz=287						
LIOB				*e*S	**Sb**	**08 39 34.6**	**0.0**
	baz=287						
NSTT	**Nanjuang**	**1.56**	**270**	*e*P	**Pb**	**08 39 15.3**	**-0.3**
	baz=286						
NSTT				S	**Sb**	**08 39 35.5**	**+0.5**
	baz=286						
HGSD	**Ruisui**	**1.65**	**226**	*e*S	**Sn**	**08 39 36.5**	**+0.5**
	baz=213						
WHP	**Taichung City**	**1.66**	**258**	*e*P	**Pb**	**08 39 17.3**	**+0.1**
	baz=245						
WHP				*e*S	**Sb**	**08 39 38.8**	**+1.1**
	baz=245						
VWDT	**VWDT**	**1.69**	**239**	*e*P	**Pn**	**08 39 15.8**	**0.0**
	baz=240						
VWDT				*e*S	**Sn**	**08 39 37.0**	**0.0**
	baz=240						
EHY	**Hungye**	**1.71**	**229**	*e*S	**Sn**	**08 39 37.4**	**0.0**
	baz=230						
YULB	**Yu-li**	**1.80**	**227**	*e*P	**Pn**	**08 39 16.7**	**-0.6**
	baz=245						
YULB				*e*S	**Sn**	**08 39 40.5**	**+0.8**
	baz=245						
EYUL	**Yuli**	**1.82**	**225**	*e*S	**Sn**	**08 39 39.8**	**-0.4**
	baz=243						
SSLB	**Suanglung**	**1.82**	**243**	*e*P	**Pn**	**08 39 17.8**	**+0.2**
	baz=244						
SSLB				*e*S	**Sn**	**08 39 41.0**	**+0.7**
	baz=244						
FULB	**Fuli**	**1.94**	**223**	*e*P	**Pn**	**08 39 17.8**	**-1.4**
	baz=209						
FULB				*e*S	**Sn**	**08 39 43.8**	**+0.6**
	baz=209						

*IDC **16** 08:43:20.3±2.0, 39°.42N×28°.93E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.2/

CAVI	**Cavuskoy**	**1.05**	**37**	PG	**Pg**	**08 43 41.6**	**-0.4**
GOMA	**Golmarmara-Man**	**1.07**	**233**	PG	**Pg**	**08 43 42.1**	**-0.2**
GEMT	**Gemlik**	**1.08**	**7**	PN	**Pb**	**08 43 42.8**	**+0.1**
GEMT				SN	**Sn**	**08 43 58.3**	**-0.1**
KHL	**Karahalli**	**1.11**	**159**	PN	**Pg**	**08 43 42.8**	**-0.3**
AFYO	**Afyonkarahisar**	**1.16**	**119**	*i* P	**Pn**	**08 43 44.5**	**+0.2**
AFYO				*i* S	**Sn**	**08 44 01.4**	**+1.0**
AUKIR	**Kırka- Seyitga**	**1.18**	**94**	*i* P	**Pn**	**08 43 45.0**	**+0.3**
AUKIR				*i* S	**Sb**	**08 43 59.8**	**-0.2**
ARMT	**Armutlu**	**1.21**	**355**	PN	**Pg**	**08 43 44.4**	**-0.5**
ADVT	**Abdulvahap**	**1.21**	**27**	PN	**Pb**	**08 43 44.7**	**-0.1**
BORA	**Eskisehir**	**1.23**	**65**	*i* P	**Pg**	**08 43 44.7**	**-0.5**
BORA				IAML		08 44 02.0	
	comp=N,1μm,0.2s						
BORA				IAML		08 44 03.0	
	comp=E,876nm,0.2s						
GONE	**Gonen-Balikesi**	**1.23**	**304**	PN	**Pg**	**08 43 45.0**	**-0.3**
TRML	**Termal-Yalova**	**1.25**	**6**	PN	**Pg**	**08 43 43.8**	**-1.9**
CFTB	**Yalova**	**1.32**	**10**	PN	**Pb**	**08 43 46.8**	**+0.1**
EDC	**Edincik**	**1.32**	**318**	PN	**Pg**	**08 43 46.1**	**-0.9**
GPA	**Golpazari**	**1.36**	**47**	PN	**Pg**	**08 43 46.9**	**-0.9**
GPA				SN	**Sn**	**08 44 05.8**	**+0.4**
SRCK	**Saricakaya, Es**	**1.42**	**61**	PN	**Pn**	**08 43 47.7**	**-0.2**
SHUT	**Suhut-Afyon**	**1.45**	**124**	PN	**Pn**	**08 43 48.3**	**-0.1**
SHUT				SN	**Sg**	**08 44 07.4**	**-0.9**
GULT	**Gulveren**	**1.57**	**47**	PN	**Pn**	**08 43 49.9**	**-0.2**
CIFT	**Cifteler, Eski**	**1.59**	**89**	PN	**Pn**	**08 43 49.9**	**-0.4**
MRMT	**Marmara Adasi**	**1.65**	**319**	PN	**Pn**	**08 43 50.9**	**-0.2**
SPNC	**Sapanca-Adapaz**	**1.65**	**37**	PN	**Pn**	**08 43 51.1**	**0.0**
BASM	**Basmaki-Afyon**	**1.66**	**150**	PN	**Pn**	**08 43 50.5**	**-0.7**
DKL	**Dikili**	**1.66**	**261**	PN	**Pn**	**08 43 50.7**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.67**	**212**	PN	**Pn**	**08 43 50.2**	**-1.2**
KAVV	**Kandilli-Istan**	**1.70**	**1**	PN	**Pn**	**08 43 51.3**	**-0.4**
ISK	**Istanbul-Kandi**	**1.70**	**1**	PN	**Pn**	**08 43 51.2**	**-0.5**
SAUV	**Serdivan-Sakar**	**1.71**	**36**	PN	**Pn**	**08 43 51.4**	**-0.4**
BLCB	**Balcova**	**1.82**	**238**	PN	**Pn**	**08 43 51.9**	**-1.5**
BGKT	**Bogazkoy**	**1.82**	**354**	PN	**Pn**	**08 43 52.8**	**-0.6**
SILT	**Sile**	**1.85**	**15**	PN	**Pn**	**08 43 53.6**	**-0.2**
KLYT	**Kilyos**	**1.89**	**1**	PN	**Pn**	**08 43 54.4**	**+0.1**
CTKS	**Kestanelik-??a**	**1.91**	**349**	PN	**Pn**	**08 43 54.8**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.93**	**314**	PN	**Pn**	**08 43 55.0**	**0.0**
ISP	**Isparta**	**1.94**	**142**	PN	**Pn**	**08 43 54.3**	**-0.9**
SVRH	**Sivrihisar-ESK**	**1.95**	**87**	PN	**Pn**	**08 43 54.8**	**-0.4**
SLVT	**Silivri**	**1.96**	**342**	PN	**Pn**	**08 43 55.4**	**+0.1**
LPK	**Lapseki**	**2.00**	**301**	PN	**Pn**	**08 43 55.9**	**0.0**
MDB	**Mudurnu**	**2.01**	**56**	PN	**Pn**	**08 43 56.1**	**0.0**
EZN	**Ezine**	**2.12**	**283**	PN	**Pn**	**08 43 57.7**	**+0.1**
URLA	**Izmir**	**2.13**	**243**	PN	**Pn**	**08 43 57.9**	**+0.2**
GCAM	**G?zelcaml?**	**2.17**	**221**	PN	**Pn**	**08 43 58.2**	**+0.1**
CTYL	**Yalikoy Yolu**	**2.18**	**346**	PN	**Pn**	**08 43 58.7**	**+0.4**
GELI	**Tayfur-Gelibol**	**2.21**	**299**	PN	**Pn**	**08 43 59.1**	**+0.4**
BCK	**Bucak**	**2.27**	**146**	PN	**Pn**	**08 43 59.7**	**+0.1**
MLSB	**Milas**	**2.28**	**206**	PN	**Pn**	**08 44 00.4**	**+0.6**
KIZT	**Kizilcal**	**2.28**	**101**	PN	**Pn**	**08 43 59.9**	**0.0**
YER	**Yerkesik**	**2.30**	**195**	PN	**Pn**	**08 43 57.6**	**-2.4**
YUVA	**Yuva-Kibriscik**	**2.30**	**63**	PN	**Pn**	**08 44 00.2**	**+0.1**
ERIK	**Erikli-Kesan**	**2.32**	**305**	PN	**Pn**	**08 44 00.6**	**+0.4**
BOZC	**Bozcaada**	**2.33**	**283**	PN	**Pn**	**08 44 00.6**	**+0.2**
CAME	**Cameli-Denizli**	**2.43**	**174**	PN	**Pn**	**08 44 01.9**	**0.0**
SIGR	**SIGRI**	**2.45**	**267**	PN	**Pn**	**08 44 01.8**	**-0.3**
UKOP	**Uzunkopru-Edir**	**2.53**	**315**	PN	**Pn**	**08 44 03.7**	**+0.5**
GADA	**Gvkgeada**	**2.54**	**290**	PN	**Pn**	**08 44 03.6**	**+0.4**
DALY	**Dalyan (Mula)**	**2.56**	**186**	PN	**Pn**	**08 44 03.8**	**+0.3**
KORT	**Korkueli**	**2.58**	**155**	PN	**Pn**	**08 44 04.1**	**+0.1**
BODT	**Bodrum**	**2.66**	**211**	PN	**Pn**	**08 44 04.9**	**-0.1**
ELL	**Elmali**	**2.71**	**165**	PN	**Pn**	**08 44 05.9**	**+0.2**
FETY	**Fethiye**	**2.73**	**179**	PN	**Pn**	**08 44 06.1**	**+0.2**
ALN	**Alexandroupoli**	**2.74**	**305**	PN	**Pn**	**08 44 06.2**	**+0.2**
SEYD	**Seydisehir-KON**	**2.96**	**130**	PN	**Pn**	**08 44 09.9**	**+0.7**
AKAS	**Kas**	**3.16**	**171**	PN	**Pn**	**08 44 12.4**	**+0.4**
APE	**Apeiranthos**	**3.57**	**231**	⇑S	**Sg**	**08 45 18.5**	**+2.0**
BRTR	**Keskin Array B**	**3.60**	**83**	Pn	**Pn**	**08 44 18.0**	**0.0**
	comp=E,1.7nm,0.3s,baz=255,slow=13,SNR=46						
BRTR				Pg	**Pg**	**08 44 29.7**	**-0.9**
	comp=E,4.3nm,0.3s,baz=253,slow=17,SNR=23						
BRTR				Lg	Lg	08 45 17.4	
	comp=E,5.6nm,0.3s,baz=264,slow=24,SNR=9.6						
BZK	**Bozkurt**	**4.60**	**54**	⇑P	**Pb**	**08 44 44.9**	**+2.2**
TIRR	**Tirgusor**	**5.11**	**355**	⇓P	**Pn**	**08 44 39.0**	**+0.4**
TPGR	**Topolog**	**5.51**	**356**	⇓P	**Pn**	**08 44 44.6**	**+0.5**
STIP	**Stip**	**5.70**	**296**	*i* Pn	**Pn**	**08 44 45.5**	**-1.2**
CFR	**Carcaliu**	**5.85**	**354**	⇑P	**Pn**	**08 44 48.8**	**+0.1**
MLR	**Muntele Rosu**	**6.53**	**341**	⇑P	**Pn**	**08 44 57.4**	**-0.8**
PLOR	**Plostina**	**6.71**	**346**	⇓P	**Pn**	**08 45 00.8**	**+0.1**
VRI	**Vrincioaia**	**6.71**	**346**	⇓P	**Pn**	**08 45 01.5**	**+0.9**
VOIR		**6.74**	**336**	⇓P	**Pn**	**08 45 01.1**	**0.0**
SRE	**Strehaia**	**6.83**	**323**	⇑P	**Pn**	**08 45 02.2**	**-0.1**
DOPR	**Dopca**	**7.12**	**339**	⇓P	**Pn**	**08 45 06.4**	**+0.2**
TESR	**Tescani**	**7.35**	**347**	⇓P	**Pn**	**08 45 10.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**35.54**	**230**	P	**P**	**08 50 19.4**	**0.0**
	comp=E,0.5nm,0.6s,baz=42,slow=9.7,SNR=3.3						
MKAR	**Makanchi Array**	**38.97**	**61**	P	**P**	**08 50 48.2**	**-0.1**
	comp=E,0.3nm,0.6s,baz=265,slow=11,SNR=2.3						

NIED ***16*** *08:51:23.5,34˚.96N×138˚.89E,h170km,MW4.1,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr0.36; Mθθ-0.31; Mφφ-0.05; Mrθ-0.13; Mθφ-0.88; Mφr-1.36; Fault plane solution: M0 1.66000×10¹⁵ NP1: φs190.00000°,δ83.00000°,λ58.00000°. NP2:φs88.00000°, δ33.00000°,λ166.00000°.*

JMA ***16*** *08:51:23.5±0.1,34˚.96N×138˚.89E,h170km±1km,M3.7 Broadband fault plane solution: P waves. NP1: φs75.00000°,δ41.00000°,λ172.00000°. NP2: φs171.00000°,δ85.00000°,λ50.00000°. Principal axes: T Plg37.0000°, Azm46.0000°; N Plg40.0000°, Azm175.0000°; P Plg28.0000°, Azm292.0000°;*

IDC ***16*** *08:51:24.6±0.5,34˚.94N×138˚.74E,h171km±4km,mb3.6/21, mb1 3.7/25,mb1mx3.7/49,mbtmp4.1/25 Error ellipse: s-maj=12.6km s-min=6.6km az=71.0*

NEIC ***16*** *08:51:24.1±1.3,34˚.98N±0˚.06×138˚.85E±0˚.08, h163km±6km,mb4.2/12, Error ellipse: s-maj=9.5km s-min=8.9km az=122.0*

ISC 16 08:51:24.2±0.6,34.97N±0˚.05×138.77E±0˚.05,h168km±5km, n94,σ1s05/102,mb3.9/25,7C-6D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JHTM	**Izuhatsuma**	**0.20**	**94**	P		**Pn**	**08 51 46.3**	**-0.4**
JHTM				S		**Sn**	**08 52 04.1**	**+0.3**
JFNN	**Fujinakano**	**0.23**	**342**	⇑P		**Pn**	**08 51 46.5**	**-0.2**
JFNN				S		**Sn**	**08 52 04.1**	**0.0**
KTJ3	**Kamata3**	**0.25**	**99**	⇓P		**Pn**	**08 51 46.4**	**-0.4**
KTJ3				S		**Sn**	**08 52 03.7**	**-0.3**
JIZS	**Izushimoda**	**0.27**	**161**	⇑P		**Pn**	**08 51 46.4**	**-0.5**
JIZS				S		**Sn**	**08 52 03.8**	**-0.3**
JOD2	**Odawara 2**	**0.39**	**42**	⇓P		**Pn**	**08 51 46.7**	**-0.5**
JOD2				S		**Sn**	**08 52 04.4**	**-0.5**
SHZ3	**Shizuoka 3**	**0.47**	**282**	P		**Pn**	**08 51 47.4**	**-0.2**
SHZ3				S		**Sn**	**08 52 05.9**	**+0.4**
JYN	**Shimob**	**0.56**	**341**	⇑P		**Pn**	**08 51 47.9**	**-0.1**
JYN				S		**Sn**	**08 52 06.3**	**0.0**
JSG	**Sagara**	**0.57**	**238**			**Pn**	**08 51 48.1**	**+0.2**
JIM2	**Oshima 3**	**0.60**	**115**	⇓P		**Pn**	**08 51 47.3**	**-0.9**
JRY	**Ryogami san**	**1.05**	**6**	P		**Pn**	**08 51 51.4**	**+0.3**
JRY				S		**Sn**	**08 52 12.4**	**+0.4**
JGF	**Kuroka**	**1.32**	**299**			**Pn**	**08 51 53.6**	**+0.2**
TK02	**Tokai 2**	**1.32**	**220**	⇑P		**Pn**	**08 51 53.7**	**+0.4**
INU	**Inuyama**	**1.49**	**285**			**Pn**	**08 51 55.3**	**+0.3**
JAG	**Ashikaga**	**1.55**	**21**	⇓P		**Pn**	**08 51 54.7**	**-1.0**
MJAR	**Matsushiro Arr**	**1.63**	**344**	P		**Pn**	**08 51 56.1**	**-0.4**
	1.7nm,0.3s,baz=166,slow=11,SNR=98							
MJAR				S		**Sn**	**08 52 22.5**	**+0.9**
	1.6nm,0.3s,baz=110,slow=13,SNR=3.3							
MJAR	**Matsushiro Arr**	**1.63**	**344**			**Pn**	**08 51 55.7**	**-0.9**
MAJO	**Matsushiro**	**1.63**	**344**			**Pn**	**08 51 56.3**	**-0.3**
MAT	**Matsushiro**	**1.63**	**344**	P		**Pn**	**08 51 56.4**	**-0.1**
MAT				S		**Sn**	**08 52 20.8**	**-0.8**
MAT	**Matsushiro**	**1.63**	**344**	P		**Pn**	**08 51 56.4**	**-0.1**
MAT				S		**Sn**	**08 52 21.4**	**-0.2**
MJB9	**Matsu-Tunnel**	**1.64**	**344**			**Pn**	**08 51 56.4**	**-0.2**
JYT	**Yasato**	**1.71**	**42**	Pn		**Pn**	**08 51 55.7**	**-1.5**
JYTA	**Yamagatataniai**	**1.78**	**291**	⇑P		**Pn**	**08 51 58.5**	**+0.5**
JYTA				S		**Sn**	**08 52 24.5**	**+0.4**
JIE	**Ise**	**1.80**	**252**	⇑P		**Pn**	**08 51 58.5**	**+0.2**
BSO1	**Boso 1**	**1.84**	**99**	P		**Pn**	**08 51 57.1**	**-1.0**
JHJ	**Hachijo jima 2**	**2.03**	**155**	P		**Pn**	**08 52 00.5**	**-0.3**
	137nm,0.3s,baz=319,slow=18,SNR=112							
JHJ				S		**Sn**	**08 52 30.4**	**+1.3**
	72nm,0.3s,baz=104,slow=23,SNR=9.3							
JHJ2	**Mitsune**	**2.05**	**155**	⇓P		**Pn**	**08 52 00.4**	**-0.6**
JHJ2	**Mitsune**	**2.05**	**155**			**Pn**	**08 52 00.3**	**-0.8**
TTO1	**TONANKAI O.B.S**	**2.13**	**231**	⇑P		**Pn**	**08 52 02.3**	**+0.7**
JKG	**Kaga**	**2.38**	**304**	⇓P		**Pn**	**08 52 05.6**	**+0.9**
JKG				S		**Sn**	**08 52 37.6**	**+1.4**
JWT	**Wachi**	**2.78**	**277**	Pn		**Pn**	**08 52 10.4**	**+0.8**
JSD	**Sado**	**3.09**	**352**	Pn		**Pn**	**08 52 13.4**	**0.0**
JMM	**Marumori**	**3.32**	**29**	Pn		**Pn**	**08 52 15.6**	**-0.6**
JMN	**Monobe**	**4.23**	**254**	Pn		**Pn**	**08 52 28.7**	**+0.7**
JHS	**Saijyo**	**4.64**	**272**	Pn		**Pn**	**08 52 34.7**	**+1.4**
JTM	**Tenmabayashi**	**6.08**	**17**	Pn		**Pn**	**08 52 51.3**	**-0.8**
JNU	**Nakatsue**	**6.81**	**256**	P		**Pn**	**08 53 02.4**	**+0.6**
	0.9nm,0.3s,baz=53,slow=2.3,SNR=10							
JNU				S		**Sn**	**08 54 12.8**	**-5.7**
	0.1nm,0.3s,baz=167,slow=18,SNR=1.6							
JNU	**Nakatsue**	**6.81**	**256**	Pn		**Pn**	**08 53 02.6**	**+0.8**
ERM	**Erimo**	**7.83**	**25**	Pn		**Pn**	**08 53 12.8**	**-2.4**
JEW	**Eniwo**	**8.13**	**14**	Pn		**Pn**	**08 53 16.8**	**-2.4**
KSRS	**Korea Array**	**9.11**	**289**	P		**Pn**	**08 53 34.0**	**+1.8**
	0.2nm,0.3s,baz=107,slow=14,SNR=23							
KSAR	**Wonju Array Be**	**9.14**	**289**	Pn		**Pn**	**08 53 33.3**	**+0.8**
KS19	**Wonju Array Si**	**9.16**	**289**	Pn		**Pn**	**08 53 32.9**	**0.0**
ASAJ	**Asahikawa**	**9.60**	**17**	P		Pn	08 53 33.2	-5.3
	1.1nm,0.3s,baz=226,slow=12,SNR=9.8							
ASAJ				S		Sn	08 55 12.9	-12
	0.7nm,0.3s,baz=106,slow=24,SNR=1.5							
JKA	**Kamikawa-asahi**	**9.60**	**17**			**Pn**	**08 53 34.5**	**-4.0**
USRK	**Ussuriysk Ar.**	**10.59**	**332**	P		**Pn**	**08 53 50.9**	**-0.7**
	baz=163,slow=13,SNR=4.6							
KLR	**Kul'dur**	**15.16**	**342**	P		**Pn**	**08 54 46.9**	**-2.7**
	1.0nm,0.3s,baz=151,slow=11,SNR=14							
PETK	**Petropavlovsk-**	**22.55**	**31**	P		**P**	**08 56 10.5**	**+0.5**
	3.6nm,0.8s,baz=227,slow=5.7,SNR=5.1							
PETK	**Petropavlovsk-**	**22.55**	**31**	P		**P**	**08 56 10.9**	**+0.9**
SONM	**Songino Array**	**27.26**	**308**	P		**P**	**08 56 52.4**	**-0.4**
	1.6nm,0.8s,baz=117,slow=8.5,SNR=11							
SONM	**Songino Array**	**27.26**	**308**	P		**P**	**08 56 53.0**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**29.10**	**114**	T		T	09 26 57.5	
	baz=308,slow=75,SNR=3.8							
H11N1	**WAKE ISLAND Hy**	**29.11**	**114**	T		T	09 27 04.3	
	baz=308,slow=75,SNR=3.5							
H11N3	**WAKE ISLAND Hy**	**29.12**	**114**	T		T	09 27 07.3	
	baz=308,slow=75,SNR=2.6							
SEY	**Seymchan**	**29.25**	**13**	P		**P**	**08 57 10.0**	**-0.1**
	1.6nm,0.7s,baz=217,slow=20,SNR=2.2							
H11S3	**WAKE ISLAND Hy**	**29.71**	**116**	T		T	09 27 30.4	
	baz=308,slow=76							
H11S1	**WAKE ISLAND Hy**	**29.71**	**116**	T		T	09 27 50.9	
	baz=308,slow=76							
H11S2	**WAKE ISLAND Hy**	**29.72**	**116**	T		T	09 27 34.9	
	baz=308							
TIXI	**Tiksi**	**37.11**	**355**	P		**P**	**08 58 17.8**	**-0.2**
TIXI				IAmb		IAmb	08 58 28.3	
	comp=Z,4.7nm,1.4s							
CMAR	**Chiang Mai Arr**	**38.90**	**255**	P		**P**	**08 58 33.0**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=40,slow=7.1,SNR=2.1							
ZAA0	**Zalesovo Array**	**41.76**	**314**	P		**P**	**08 58 57.5**	**+0.8**
ZAA0				IAmb		IAmb	08 58 58.2	
	comp=Z,6.3nm,1.1s							
ZALV	**Zalesovo Beam**	**41.76**	**314**	P		**P**	**08 58 57.0**	**+0.3**
	comp=Z,2.1nm,0.5s,baz=90,slow=7.4,SNR=14							
ZALV	**Zalesovo Beam**	**41.76**	**314**	P		**P**	**08 58 57.1**	**+0.4**
MK31	**Makanchi Array**	**43.43**	**304**	P		**P**	**08 59 10.5**	**+0.2**
MKAR	**Makanchi Array**	**43.43**	**304**	P		**P**	**08 59 10.5**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=90,slow=9.5,SNR=8.6							
MKAR	**Makanchi Array**	**43.43**	**304**	P		**P**	**08 59 10.8**	**+0.5**
MAKZ	**Makanchi**	**43.65**	**304**	P		**P**	**08 59 12.8**	**+0.8**
NRIK	**Noril'sk**	**44.27**	**337**	P		**P**	**08 59 16.9**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=104,slow=14,SNR=5.2							
KURK	**Kurchatov**	**45.55**	**309**	P		**P**	**08 59 27.2**	**+0.3**
KDJ	**Kajisay**	**47.78**	**298**	P		**P**	**08 59 45.2**	**+0.5**
TTA	**Tatalina**	**48.33**	**34**	P		**P**	**08 59 47.8**	**-0.6**
TTA				IAmb		IAmb	09 00 07.5	
	comp=Z,6.7nm,1.3s							
IMAR	**Indian Mountai**	**49.51**	**30**	P		**P**	**08 59 58.6**	**+1.3**
KKAR	**Karatay Array**	**52.32**	**301**	P		**P**	**09 00 18.8**	**+0.2**
ILAR	**Eielson Array**	**52.37**	**31**	P		**P**	**09 00 19.1**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=263,slow=4.8,SNR=21							
FITZ	**Fitzroy Crossi**	**54.23**	**195**	P		**P**	**09 00 34.0**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=17,slow=8.6,SNR=2.3							
FITZ	**Fitzroy Crossi**	**54.23**	**195**	P		**P**	**09 00 33.4**	**+0.7**
FITZ				IAmb		IAmb	09 00 35.1	
	comp=Z,5.5nm,1.4s							
WRA	**Warramunga Arr**	**54.77**	**185**	P		**P**	**09 00 35.3**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=1.5,slow=7.6,SNR=18							
INK	**Inuvik**	**57.19**	**26**	P		**P**	**09 00 54.1**	**+1.0**
	comp=Z,3.3nm,0.6s,baz=285,slow=6.4,SNR=7.5							
INK	**Inuvik**	**57.19**	**26**	P		**P**	**09 00 54.0**	**+1.0**
INK				IAmb		IAmb	09 00 54.9	
	comp=Z,3.7nm,0.8s							
ABKAR	**Akbulak array**	**57.63**	**310**	P		**P**	**09 00 56.9**	**+0.3**
ASAR	**Alice Springs**	**58.50**	**185**	P		**P**	**09 01 02.4**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=5.5,slow=6.7,SNR=8.0							
ARCES	**ARCESS Array B**	**65.16**	**339**	P		**P**	**09 01 47.2**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=42,slow=3.8,SNR=3.7							
FINES	**FINESS Array B**	**69.62**	**332**	P		**P**	**09 02 14.9**	**0.0**
	comp=Z,1.6nm,0.4s,baz=56,slow=6.9,SNR=30							
KBZ	**Khabaz**	**70.60**	**310**	P		**P**	**09 02 21.9**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=56,slow=24,SNR=4.6							
AKASG	**Malin Array Be**	**74.59**	**322**	P		**P**	**09 02 44.4**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=48,slow=6.2,SNR=9.1							
AKASG	**Malin Array Be**	**74.59**	**322**	P		**P**	**09 02 44.7**	**+0.1**
AKBB	**Malin Array Si**	**74.59**	**322**	P		**P**	**09 02 44.6**	**0.0**
AKBB				IAmb		IAmb	09 02 44.9	
	comp=Z,3.2nm,0.6s							
NB2	**NORSAR Subarra**	**75.24**	**336**	P		**P**	**09 02 48.3**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=42,slow=5.9							
NOA	**NORSAR Array B**	**75.24**	**336**	P		**P**	**09 02 47.6**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=43,slow=5.7,SNR=6.5							
NVAR	**Mina Array Bea**	**77.94**	**52**	P		**P**	**09 03 04.5**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=289,slow=5.1,SNR=6.3							
BRTR	**Keskin Array B**	**78.59**	**311**	P		**P**	**09 03 08.1**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=94,slow=7.4,SNR=6.7							
PDAR	**Pinedale Array**	**80.64**	**44**	P		**P**	**09 03 18.9**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=240,slow=1.2,SNR=4.7							
GERES	**GERESS Array B**	**83.30**	**327**	P		**P**	**09 03 32.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=31,slow=6.2,SNR=3.5							
BOSA	**Boshof**	**124.05**	**257**	PKP		**PKPdf**	**09 10 02.4**	**-0.5**
	comp=Z,15nm,1.2s,baz=139,slow=7.7,SNR=3.7							
LPAZ	**La Paz**	**149.58**	**59**	PKPbc		**PKPbc**	**09 10 54.9**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=351,slow=2.7,SNR=6.3							

SOME ***16*** *08:53:57.7,40˚.92N×83˚.15E,h10km*

NNC ***16*** *08:53:59.4±2.2,41˚.22N×83˚.31E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=19.4km s-min=14.6km az=26.0*

ISC 16 08:54:00.3±2.7,41˚.1N±0˚.1×82˚.97E±0˚.09,h10km,n27, σ2s30/42,3C-2D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KTMS	**Ketmen**	**3.07**	**322**	*e*P		**Pg**	**08 54 58.4**	**-0.7**
	3.3nm,0.3s							
KTMS				*e*S		**Sg**	**08 55 42.1**	**+3.3**
	14nm,0.5s							
KTMS	**Ketmen**	**3.07**	**322**	Pg		**Pg**	**08 54 58.3**	**-0.7**
	3.3nm,0.3s							
KTMS				Lg		Lg	08 55 42.1	
	14nm,0.5s							
SHLS	**Shalkode**	**3.34**	**310**	*e*P		**Pb**	**08 54 57.9**	**-1.8**
	17nm,0.4s							
SHLS				*e*S		**Sb**	**08 55 41.6**	**+1.2**
	60nm,0.5s							
SHLS	**Shalkode**	**3.34**	**310**	Pg		**Pb**	**08 54 57.9**	**-1.8**
	17nm,0.4s							
SHLS				Lg		Lg	08 55 41.6	
	60nm,0.5s							
PDGK	**Podgornoye**	**3.43**	**312**	Pg		**Pb**	**08 55 03.5**	**+2.2**
	3.0nm,0.4s							
PDGK				Lg		Lg	08 55 51.3	
	8.8nm,0.5s							
PDGK	**Podgornoye**	**3.43**	**312**	⇓Pn		**Pn**	**08 54 54.8**	**+0.9**
	1.1nm,0.4s							
PDGK				⇑Pg		**Pg**	**08 55 06.1**	**+0.1**
	1.6nm,0.5s							
PDGK				⇑Sn		**Sb**	**08 55 39.0**	**-4.0**
	19nm,0.8s							
UZB	**Uzynbulak**	**3.59**	**307**	*e*P		**Pg**	**08 55 07.4**	**-1.8**
	3.2nm,0.5s							
UZB				*e*S		**Sg**	**08 55 57.6**	**+1.9**
	12nm,0.4s							
UZB	**Uzynbulak**	**3.59**	**307**	Pg		**Pg**	**08 55 07.4**	**-1.8**
	3.2nm,0.5s							
UZB				Lg		Lg	08 55 57.6	
	12nm,0.4s							
SATY	**Saty**	**3.93**	**302**	*e*P		**Pg**	**08 55 13.2**	**-2.5**
	2.8nm,0.5s							
SATY				*e*S		**Sg**	**08 56 07.8**	**+1.1**
	8.9nm,0.4s							
SATY	**Saty**	**3.93**	**302**	Pg		**Pg**	**08 55 13.2**	**-2.5**
	2.8nm,0.5s							
SATY				Lg		Lg	08 56 07.8	
	8.9nm,0.4s							
DJR	**Jarkent**	**4.01**	**325**	*e*P		**Pg**	**08 55 14.7**	**-2.5**
	4.8nm,0.5s							
DJR				*e*S		**Sg**	**08 56 10.3**	**+1.1**
	10nm,0.8s							
DJR	**Jarkent**	**4.01**	**325**	Pg		**Pg**	**08 55 14.7**	**-2.5**
	4.8nm,0.5s							
DJR				Lg		Lg	08 56 10.3	
	10nm,0.8s							
MNBS	**Baschi**	**4.52**	**313**	*e*P		**Pb**	**08 55 22.4**	**+2.6**
MNBS				*e*S		**Sg**	**08 56 23.1**	**-2.2**
	0.1nm,0.4s							
MNBS	**Baschi**	**4.52**	**313**	Pg		**Pb**	**08 55 22.4**	**+2.6**
MNBS				Lg		Lg	08 56 23.1	
	0.1nm,0.4s							
KOTS	**Kotyrbulak**	**4.86**	**298**	*e*P		**Pg**	**08 55 31.6**	**-1.7**
	5.7nm,0.3s							
KOTS				*e*S		**Sg**	**08 56 38.9**	**+2.6**
	8.1nm,0.4s							
KOTS	**Kotyrbulak**	**4.86**	**298**	Pg		**Pg**	**08 55 31.6**	**-1.7**
	5.7nm,0.3s							
KOTS				Lg		Lg	08 56 38.9	
	8.1nm,0.4s							
MDOK	**Medeo**	**4.87**	**297**	*e*P		**Pb**	**08 55 28.8**	**+3.0**
	1.5nm,0.2s							
MDOK				*e*S		**Sg**	**08 56 34.2**	**-2.6**
	6.0nm,0.4s							
MDOK	**Medeo**	**4.87**	**297**	Pg		**Pb**	**08 55 28.8**	**+3.0**
	1.5nm,0.2s							
MDOK				Lg		Lg	08 56 34.2	
	6.0nm,0.4s							
IZV	**Izvestkoviy**	**5.12**	**

L34A	**Svendsen Farm,** comp=Z,57nm,0.8s	**4.92**	**14**	IAmb_Lg		09 02 01.4	
FCAR	**Ozark Folk Cen**	**4.93**	**104**	Pn	**Pn**	**09 00 26.6**	**+0.4**
WHAR	**Wooly Hollow**	**5.01**	**111**	Pn	**Pn**	**09 00 28.1**	**+0.8**
WHAR	comp=Z,42nm,0.7s			IAmb_Lg		09 01 53.7	
X40A	**Basin Creek Fa** baz=304	**5.01**	**121**	P	**Pn**	**09 00 28.6**	**+1.3**
X40A	**Basin Creek Fa** comp=Z,30nm,0.8s	**5.01**	**121**	IAmb_Lg		09 01 59.4	
W41B	**Gary Mavity, V** baz=295	**5.09**	**112**	P	**Pn**	**09 00 29.1**	**+0.7**
W41B	**Gary Mavity, V**	**5.09**	**112**	Pn	**Pn**	**09 00 29.2**	**+0.8**
W41B	comp=Z,34nm,0.8s			IAmb_Lg		09 01 59.3	
T25A	**Trinidad** comp=Z,31nm,1.1s	**5.10**	**271**	IAmb_Lg		09 01 58.7	
N38A	**Joes South For**	**5.17**	**45**	Pn	**Pn**	**09 00 30.4**	**+0.9**
N38A	comp=Z,29nm,0.7s			IAmb_Lg		09 01 56.0	
WLAR	**White Oak Lake** comp=Z,28nm,0.7s	**5.33**	**130**	IAmb_Lg		09 02 14.8	
K31A	**O'Neill** comp=Z,48nm,0.8s	**5.44**	**354**	IAmb_Lg		09 02 19.3	
CCM	**Cathedral Cave** baz=263	**5.44**	**79**	P	**Pn**	**09 00 34.8**	**+1.6**
237A	**Washetta, Mont** comp=Z,37nm,0.9s	**5.51**	**160**	IAmb_Lg		09 02 18.9	
T42A	**Van Buren** comp=Z,24nm,0.8s	**5.54**	**90**	IAmb_Lg		09 02 11.8	
Z41A	**Richland Creek** comp=Z,25nm,0.9s	**5.81**	**131**	IAmb_Lg		09 02 28.5	
PBMO	**Poplar Bluff** comp=Z,28nm,0.8s	**6.09**	**92**	IAmb_Lg		09 02 24.9	
X43A	**Marvell** comp=Z,36nm,0.8s	**6.39**	**113**	IAmb_Lg		09 02 37.3	
435B	**Jarrell** comp=Z,21nm,1.0s	**6.42**	**177**	IAmb_Lg		09 02 41.9	
N41A	**Harden Midland** comp=Z,35nm,0.7s	**6.58**	**56**	IAmb_Lg		09 02 41.5	
ECSD	**EROS Data Cent** comp=Z,13nm,0.9s	**6.61**	**9**	IAmb_Lg		09 02 47.7	
JCT	**Junction City** comp=Z,26nm,1.1s	**6.87**	**193**	IAmb_Lg		09 03 00.4	
S44A	**Carbondale** comp=Z,32nm,0.7s	**6.99**	**83**	IAmb_Lg		09 03 01.5	
P43A	**Skaggs, Pawnee** comp=Z,26nm,1.0s	**7.10**	**67**	IAmb_Lg		09 02 59.3	
L40A	**Anamosa** comp=Z,21nm,0.8s	**7.14**	**45**	IAmb_Lg		09 03 14.6	
SUSD	**Miller** comp=Z,27nm,1.1s	**7.26**	**355**	IAmb_Lg		09 03 15.5	
W45A	**Hickory Valley** comp=Z,29nm,0.8s	**7.43**	**103**	IAmb_Lg		09 03 05.1	
OXF	**Oxford** comp=Z,30nm,1.1s	**7.49**	**108**	IAmb_Lg		09 03 17.8	
Y22D	**IRIS PASSCAL I** comp=Z,17nm,0.8s	**7.89**	**249**	IAmb_Lg		09 03 40.8	
PV11	**David Mesa, Pa** comp=Z,22nm,1.3s	**8.67**	**280**	IAmb_Lg		09 03 57.7	
F33A	**5 Mile Ranch,** comp=Z,14nm,1.0s	**8.72**	**8**	IAmb_Lg		09 03 51.4	
BLO	**Bloomington** comp=Z,13nm,0.8s	**9.26**	**74**	IAmb_Lg		09 04 18.8	
CLTN	**Cedars of Leba** comp=Z,14nm,1.2s	**9.46**	**93**	IAmb_Lg		09 04 12.4	

WEL 16 09:01:06.8, 37°S±10″×17°7E±°, h263km±18km, M2.8/24, MLv2.8/24, Error ellipse: s-maj=0.0km s-min=0.0km az=178.7, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZ	**Kuaotunu**	**0.87**	**313**	P	Pn	09 01 41.9	-0.6
URZ	**Urewera**	**1.03**	**153**	P	Pn	09 01 42.4	-0.8
HAZ	**Te Kaha**	**1.09**	**112**	P	Pn	09 01 42.5	-1.1
MKAZ	**Moumakai**	**1.10**	**282**	P	Pn	09 01 44.0	+0.3
RUGZ	**Raukumara Rang**	**1.12**	**124**	P	Pn	09 01 42.4	-1.5
MUGZ	**Murupara**	**1.15**	**170**	P	Pn	09 01 43.8	-0.2
MWZ	**Matawai**	**1.28**	**141**	P	Pn	09 01 44.8	0.0
RTZ	**Ruatahuna**	**1.32**	**164**	P	Pn	09 01 45.2	+0.1
RAGZ	**Rawiri**	**1.35**	**148**	P	Pn	09 01 45.4	+0.1
MBAZ	**Motutapu North**	**1.41**	**294**	P	Pn	09 01 45.9	+0.3
PUZ	**Puketiti**	**1.57**	**118**	P	Pn	09 01 46.2	-0.5
WMGZ	**Waiomatatini S**	**1.59**	**108**	P	Pn	09 01 46.7	-0.2
RIGZ	**Rimuhau**	**1.68**	**144**	P	Pn	09 01 48.2	+0.5
CNGZ	**Carnagh Statio**	**1.76**	**131**	P	Pn	09 01 49.3	+1.0
NMHZ	**Naumai**	**1.77**	**172**	P	Pn	09 01 49.4	+1.1
BKZ	**Black Stump Fm**	**1.82**	**180**	P	Pn	09 01 48.9	+0.1
KNZ	**Kokohu**	**1.91**	**152**	P	Pn	09 01 49.6	+0.2
WNVZ	**Wahianoa**	**2.10**	**200**	P	Pn	09 01 52.2	+0.9
MHGZ	**Mahia Peninsul**	**2.11**	**149**	P	Pn	09 01 52.0	+0.8
BHHZ	**Black Hill Sta**	**2.17**	**189**	P	Pn	09 01 52.3	+0.5
WCZ	**Waipu Caves**	**2.23**	**308**	P	Pn	09 01 53.5	+1.1
KAHZ	**Kahuranaki**	**2.46**	**173**	P	Pn	09 01 55.7	+1.2
PRHZ	**Porangahau**	**2.92**	**178**	P	Pn	09 02 00.1	+1.0
MRZ	**Mangatainoka R**	**3.39**	**192**	P	Pn	09 02 04.5	+0.3
OGWZ	**Otaki Gorge**	**3.62**	**196**	P	Pn	09 02 07.5	+0.8
TCW	**Tory Channel**	**4.23**	**203**	P	Pn	09 02 14.1	+0.4
TUWZ	**Tuamarina**	**4.54**	**205**	P	Pn	09 02 17.8	+0.5
THZ	**Tophouse**	**5.22**	**211**	P	Pn	09 02 26.7	+1.1
KHZ	**Kahutara**	**5.55**	**203**	P	Pn	09 02 30.3	+0.8
LTZ	**Lake Taylor**	**6.33**	**210**	P	Pn	09 02 39.8	+0.6

*STR **16** 09:13:59.5±1.0, 46°N±3°×°±°, h0km, MLv1.5/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*LDG **16** 09:14:01.1±0.0, 46.03N×6.87E, h4km, Md1.1/2, Ml1.1/1, Error ellipse: s-maj=1.0km s-min=0.6km az=116.0*
ZUR 16 09:14:01.2, 46.03N×6.87E, h4km±1km, MLh1.0/6, 10C-6D, Error ellipse: s-maj=3.1km s-min=0.8km az=124.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEMOS	**Emosson Stauma** 0.5nm,SNR=45	**0.06**	**50**	⇑Pg	Pg	09 14 03.0	+0.3
SEMOS				⇑Pg	Pg	09 14 03.0	+0.3
SEMOS				Sg	Sg	09 14 04.1	+0.3
OGSI	**Sixt**	**0.09**	**293**	⇓Pg	Pg	09 14 03.1	0.0
OGSI	0.3nm,SNR=18			⇓Pg	Pg	09 14 03.1	0.0
OGSI				Sg	Sg	09 14 04.4	0.0
SALAN	**Lac Salanfe** 0.2nm,SNR=109	**0.13**	**32**	⇑Pg	Pg	09 14 04.2	+0.2
SALAN				⇑Pg	Pg	09 14 04.2	+0.2
SALAN				Sg	Sg	09 14 06.0	+0.2
SMAO	**Martigny, Rue**	**0.16**	**64**	⇑Pg	Pg	09 14 04.6	+0.4
SMAO	0.4nm,SNR=11			⇑Pg	Pg	09 14 04.6	+0.4
SMAO				Sg	Sg	09 14 06.8	+0.5
GRYON	**Gryon** SNR=31	**0.27**	**37**	⇑Pg	Pg	09 14 06.7	+0.1
GRYON				⇑Pg	Pg	09 14 06.7	+0.1
GRYON				Sg	Sg	09 14 10.4	+0.2
MRGE	**Morge** SNR=33	**0.29**	**153**	⇓Pg	Pg	09 14 07.1	+0.2
MRGE				⇓Pg	Pg	09 14 07.1	+0.2
AIGLE	**Aigle**	**0.32**	**10**	Pg	Pg	09 14 07.3	0.0
AIGLE	0.1nm,SNR=18			Pg	Pg	09 14 07.3	0.0
DIX	**Grande Dixence** SNR=19	**0.38**	**82**	Pg	Pg	09 14 08.8	+0.3
DIX				Pg	Pg	09 14 08.8	+0.3
DIX				Sg	Sg	09 14 13.9	+0.4
RSL	**Roselend** SNR=24	**0.39**	**207**	⇓Pg	Pg	09 14 08.4	-0.2
RSL				⇓Pg	Pg	09 14 08.4	-0.2
RSL	**Roselend**	**0.39**	**207**	Pg	Pg	09 14 08.3	-0.3
RSL				Sg	Sg	09 14 13.2	-0.5
SENIN	**Lac Senin/Sane**	**0.45**	**42**	⇑Pg	Pg	09 14 09.8	0.0
SENIN	SNR=11			⇑Pg	Pg	09 14 09.8	0.0
SENIN				Sg	Sg	09 14 16.1	+0.4
LPL	**La Plagne**	**0.53**	**191**	*e*Pg	Pg	09 14 11.2	-0.1
LPL	2.5nm,0.3s			*e*Sg	Sg	09 14 18.4	+0.3
LPG	**La Plagne**	**0.54**	**189**	*e*Pg	Pg	09 14 12.0	+0.4
LPG	2.8nm,0.2s			*e*Sg	Sg	09 14 19.0	+0.4
CABF	**La Chapelle**	**0.80**	**317**	*e*Pg	Pg	09 14 16.4	0.0
CABF				*e*Sg	Sg	09 14 26.7	-0.1
	0.8nm,0.2s						
OG35	**Corcelles**	**0.91**	**271**	Pg	Pn	09 14 20.1	-0.6
OG35				Sg	Sn	09 14 33.9	-0.4
CHMF	**Charmoille**	**1.23**	**353**	Pg	Pg	09 14 24.4	-0.3
CHMF				Sg	Sn	09 14 41.9	-0.3
MBDF	**Montbardon**	**1.31**	**183**	*e*Pg	Pg	09 14 25.9	-0.3
MBDF	0.2nm,0.2s			*e*Sg	Sg	09 14 42.7	-0.4
ORIF	**Oris-en-Rattie**	**1.31**	**212**	*e*Pg	Pg	09 14 26.4	0.0

*LDG **16** 09:14:15.8±0.0, 46°04N×6°87E, h4km, Md0.7/2, Error ellipse: s-maj=1.0km s-min=0.7km az=122.0*
ZUR 16 09:14:15.9, 46°03N×6°88E, h4km±2km, MLh0.7/1, 4C-2D, Error ellipse: s-maj=5.0km s-min=1.0km az=284.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEMOS	**Emosson Stauma**	**0.05**	**49**	⇑Pg	Pg	09 14 17.6	+0.3
SEMOS	0.1nm,SNR=2.6			⇑Pg	Pg	09 14 17.6	+0.3
SEMOS				Sg	Sg	09 14 18.7	+0.4
OGSI	**Sixt**	**0.09**	**291**	⇓Pg	Pg	09 14 17.7	-0.1
OGSI	0.1nm,SNR=2.3			⇓Pg	Pg	09 14 17.7	-0.1
OGSI				Sg	Sg	09 14 19.1	-0.1
SALAN	**Lac Salanfe**	**0.13**	**31**	⇑Pg	Pg	09 14 18.8	+0.2
SALAN	0.1nm,SNR=2.4			⇑Pg	Pg	09 14 18.8	+0.2
SALAN				Sg	Sg	09 14 20.7	+0.3
SMAO	**Martigny, Rue**	**0.15**	**64**	Sg	Sg	09 14 21.6	+0.6
SMAO	0.1nm,SNR=1.6			Sg	Sg	09 14 21.6	+0.6
DIX	**Grande Dixence** SNR=1.6	**0.37**	**83**	Sg	Sg	09 14 28.5	+0.4
DIX				Sg	Sg	09 14 28.5	+0.4
LPL	**La Plagne**	**0.53**	**191**	*e*Pg		09 14 26.3	
LPL	0.4nm,0.1s			*e*Sg		09 14 33.2	
LPG	**La Plagne**	**0.54**	**189**	*e*Pg		09 14 26.6	
LPG	2.4nm,0.2s			*e*Sg		09 14 33.7	
CABF	**La Chapelle**	**0.80**	**317**	*e*Pg		09 14 31.0	

IDC 16 09:17:18.8±1.7, 11°47S×165°07E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.6/26, mbtmp3.6/4, ML3.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/23, Error ellipse: s-maj=52.1km s-min=32.3km az=126.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara** 10nm,0.3s,baz=156,slow=17,SNR=1.7	**5.43**	**291**	Sn	Sn	09 19 45.4	+1.0
DZM	**Mont Dzumac** 1.0nm,0.3s,baz=304,slow=9.8,SNR=50	**10.62**	**173**	Pn	Pn	09 19 52.4	-0.1
DZM	0.1nm,0.3s,baz=102,slow=20,SNR=0.9			Sn	Sn	09 21 45.3	-6.9
STKA	**Stephens Creek** comp=Z,41nm,18.8s,baz=22,slow=34	**29.68**	**223**	LR	LR	09 34 24.2	
WRA	**Warramunga Arr** 0.6nm,0.9s,baz=79,slow=9.3,SNR=4.4	**30.72**	**250**	P	P	09 23 35.9	+0.1
H11N1	**WAKE ISLAND Hy** baz=180	**31.04**	**3**	T	T	09 56 31.4	
H11N3	**WAKE ISLAND Hy** baz=180	**31.04**	**3**	T	T	09 56 26.3	
H11N2	**WAKE ISLAND Hy** baz=180	**31.06**	**3**	T	T	09 56 31.8	
ASAR	**Alice Springs** 0.2nm,0.8s,baz=78,slow=8.6,SNR=1.7	**32.02**	**244**	P	P	09 23 47.1	-0.1
FITZ	**Fitzroy Crossi** comp=Z,22nm,18.5s,baz=94,slow=36	**38.63**	**255**	LR	LR	09 40 20.4	
ILAR	**Eielson Array** 0.4nm,0.5s,baz=247,slow=4.9,SNR=7.5	**84.12**	**19**	P	P	09 29 51.4	0.0

*IDC **16** 09:22:09.0±2.0, 1°78N×126°37E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/30, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=114.8km s-min=26.6km az=68.0*
*DJA **16** 09:22:13.5±1.3, 2°N±4°×12°6E±°, h12km±11km, M3.4/6, MLv3.4/6*
ISC 16 09:22:15.4±1.1, 1°78N±0°09×126°6E±0°1, h47km, n7, σ0°84/8, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**141**	P	**Pn**	**09 22 37.4**	**+0.4**
SGSI	**Sangihe**	**2.15**	**331**	P	**Pn**	**09 22 48.8**	**0.0**
SGSI				S	**Sn**	**09 23 15.3**	**+1.0**
GTOI	**Gorontalo**	**3.73**	**252**	P	**Pn**	**09 23 10.7**	**+0.2**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=352,slow=15,SNR=2.1	**19.78**	**183**	P	**P**	**09 26 41.4**	**-0.4**
WRA	**Warramunga Arr** 1.7nm,0.7s,baz=338,slow=11,SNR=22	**22.90**	**161**	P	**P**	**09 27 14.3**	**-1.1**
ASAR	**Alice Springs** 0.6nm,0.5s,baz=352,slow=15,SNR=12	**26.29**	**165**	P	**P**	**09 27 47.5**	**+0.8**
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=115,slow=9.0,SNR=2.0	**59.05**	**326**	P	**P**	**09 32 10.2**	**-0.6**

*DJA **16** 09:41:36.9±0.5, 0°S±2°×12°4E±°, h15km±4km, M4.1/17, mb4.4/5, MLv4.0/17*
*IDC **16** 09:41:38.6±3.8, 0°03N×123°56E, h147km±35km, mb3.3/6, mb1 3.4/8, mb1mx3.2/34, mbtmp3.7/8, Error ellipse: s-maj=41.0km s-min=16.6km az=66.0*
ISC 16 09:41:34.0±0.7, 0°11N±0°05×123°85E±0°06, h100km, n22, σ1°72/33, mb4.0/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.48**	**16**	P	**Pn**	**09 41 50.7**	**+1.0**
KMSI				S	**Sn**	**09 42 00.4**	**-1.0**
LUWI	**Luwuk**	**1.57**	**223**	P	**Pn**	**09 42 01.3**	**+0.2**
LUWI				S	**Sn**	**09 42 19.1**	**-2.6**
MRSI	**Marisa**	**1.94**	**281**	P	**Pn**	**09 42 07.3**	**+1.5**
MRSI				S	**Sn**	**09 42 31.1**	**+1.0**
APSI	**Ampana**	**2.42**	**245**	P	**Pn**	**09 42 13.9**	**+1.8**
APSI				S	**Sn**	**09 42 40.4**	**-0.9**
TNTI	**Ternate**	**3.58**	**79**	P	Pn	09 42 34.7	+7.1
TNTI				S	Sn	09 43 19.7	+11
MPSI	**Mapaga**	**3.95**	**273**	P	**Pn**	**09 42 34.6**	**+2.0**
MPSI				S	**Sn**	**09 43 19.6**	**+1.6**
NLAI	**Namlea**	**4.65**	**136**	P	**Pn**	**09 42 46.1**	**+4.1**
TTSI	**Tana Toraja**	**5.10**	**232**	P	**Pn**	**09 42 49.4**	**+1.3**
TTSI				S	**Sn**	**09 43 45.2**	**-0.6**
SPSI	**Sidrap Palu** 0.2nm29nm,0.5s	**5.74**	**225**	P	**Pn**	**09 42 58.7**	**+1.9**
SPSI	0.2nm29nm,0.5s			S	**Sn**	**09 44 01.7**	**+0.3**
AAI	**Ambon** 0.2nm32nm,0.5s	**5.75**	**131**	P	Pn	09 43 03.3	+6.3
BNSI	**Bone** 0.1nm8.9nm,0.7s	**5.83**	**220**	P	**Pn**	**09 42 58.8**	**+0.7**
BNSI	0.1nm8.9nm,0.7s			S	**Sn**	**09 44 03.8**	**+0.2**
SGKI	**Sangatta, Kali** 0.4nm102nm,0.8s	**6.27**	**264**	P	**Pn**	**09 43 05.6**	**+1.5**
KAPI	**Kappang** 2.6nm,0.3s,baz=342,slow=1.3,SNR=7.6	**6.53**	**219**	P	**Pn**	**09 43 09.5**	**+1.9**
KAPI	1.1nm,0.3s,baz=176,slow=21,SNR=1.9			S	**Sn**	**09 44 17.8**	**-2.7**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=79,slow=20,SNR=1.7	**18.18**	**175**	P	**P**	**09 45 39.3**	**+0.3**
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=337,slow=10.0,SNR=19	**22.42**	**153**	P	**P**	**09 46 25.1**	**+0.4**
WRA	0.2nm,0.5s,baz=315,slow=2.6,SNR=5.0			PcP	**PcP**	**09 50 15.1**	**-0.9**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=348,slow=13,SNR=13	**25.57**	**158**	P	**P**	**09 46 54.9**	**+0.9**
ASAR	0.4nm,0.7s,baz=336,slow=11,SNR=3.3			pP	**pwP**	**09 47 22.4**	**+3.1**
ASAR	0.4nm,0.4s,baz=345,slow=2.5,SNR=10			PcP	**PcP**	**09 50 21.8**	**-1.0**
STKA	**Stephens Creek** 1.0nm,0.4s,baz=336,slow=7.3,SNR=6.1	**35.97**	**154**	P	**P**	**09 48 26.0**	**+0.7**
MKAR	**Makanchi Array** 0.7nm,0.5s,baz=116,slow=9.4,SNR=5.6	**58.97**	**328**	P	**P**	**09 51 22.5**	**-0.6**
MKAR	0.5nm,0.4s,baz=128,slow=2.4,SNR=3.0			PcP	**PcP**	**09 52 08.3**	**-2.9**
PETK	**Petropavlovsk-** 1.4nm,0.8s,baz=218,slow=3.2,SNR=5.1	**59.86**	**23**	P	**P**	**09 51 30.1**	**+1.1**
VNDA	**Vanda** 0.5nm,0.6s,baz=312,slow=4.1,SNR=4.2	**80.24**	**172**	P	**P**	**09 53 32.4**	**-0.7**

ARCES	**ARCESS Array B** 4.1nm,1.0s,baz=72,slow=2.9,SNR=1.6	**92.82**	**340**	P	**P**	**09 54 33.7**	**-1.4**
TORD	**Torodi Ar. Bea** 0.3nm,0.5s,baz=72,slow=1.9,SNR=2.3	**121.19**	**285**	PKP	**PKPdf**	**10 00 14.1**	**-2.2**

DJA 16 09:57:28.9±0.6, 7°S±5°×12°8E±°, h296km±7km, M4.1/9, mb4.0/6, mB4.7/2, MLv4.1/9, Mw(mB)3.9/2, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**3.64**	**13**	P	Pn	09 58 29.8	-1.2
MSAI				S	S	09 59 21.5	+0.8
NLAI	**Namlea**	**3.80**	**344**	P	Pn	09 58 34.2	+1.4
SOEI	**Soe**	**4.76**	**233**	P	Pn	09 58 44.4	+0.8
SOEI				S	S	09 59 43.1	-0.4
BATI	**Baumata** 0.5nm2μm83nm,0.4s	**5.50**	**233**	P	Pn	09 58 53.3	+1.1
BATI	0.5nm2μm83nm,0.4s			S	S	10 00 00.2	+1.0
FAKI	**Fak Fak**	**5.71**	**46**	P	Pn	09 58 55.2	+0.5
EDFI	**Ende, Flores** 0.0nm4.1nm,0.6s	**6.64**	**254**	P	Pn	09 59 05.8	-0.2
WBSI	**Waikabubak, Su** 34nm,0.7s	**9.07**	**252**	P	Pn	09 59 34.3	-1.4

*IDC **16** 09:59:45.9±1.0, 64°52N×17°47W, h0km, mb3.6/9, mb1 3.8/9, mb1mx3.5/42, mbtmp3.6/9, Error ellipse: s-maj=28.8km s-min=20.8km az=45.0*
*REY **16** 09:59:46.1, 64°67N×17°45W, h4km*
ISC 16 09:59:45.9±0.9, 64°67N±0°02×17°46W±0°02, h7km±6km, n44, σ1°31/60, mb3.7/9, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard** baz=272	**0.13**	**272**	P	**Pg**	**09 59 48.9**	**+0.3**
IVON				S	**Sg**	**09 59 51.3**	**+0.7**
IDYN	**Dyngjuhals** baz=16	**0.13**	**18**	P	**Pg**	**09 59 49.0**	**+0.2**
IDYN				S	**Sg**	**09 59 51.5**	**+0.8**
IHAM	**Hamarinn** baz=221	**0.24**	**220**	P	**Pg**	**09 59 51.0**	**+0.2**
IHAM				S	**Sg**	**09 59 55.1**	**+1.0**
IGRF	**Grimsfjall** baz=164	**0.28**	**162**	P	**Pg**	**09 59 51.5**	**+0.2**
IKVE	**Kverkfjoll** baz=88	**0.34**	**88**	P	**Pg**	**09 59 52.5**	**0.0**
IKVE				S	**Sg**	**09 59 57.2**	**+0.2**
IHUS	**Husbondi** baz=194	**0.38**	**193**	P	**Pb**	**09 59 53.6**	**-1.4**
IHUS				S	**Sb**	**09 59 59.6**	**-1.6**
ISKR	**Skrokkalda** baz=255	**0.41**	**255**	P	**Pg**	**09 59 53.8**	**-0.1**
IVOT	**Vottur** baz=164	**0.42**	**163**	P	**Pb**	**09 59 53.9**	**-1.7**
THOR	**Thorvaldshraun** baz=51	**0.43**	**51**	P	**Pg**	**09 59 54.0**	**-0.2**
THOR				S	**Sg**	**10 00 00.2**	**+0.4**
IJOK	**Jokulheimar** baz=224	**0.48**	**223**	P	**Pg**	**09 59 55.0**	**-0.2**
IJOK				S	**Sb**	**10 00 02.1**	**-1.9**
IASK	**Askja** baz=41	**0.52**	**42**	P	**Pg**	**09 59 55.4**	**-0.5**
IASK				S	**Sg**	**10 00 02.5**	**-0.1**
IMKO	**Mokollar** baz=56	**0.57**	**57**	P	**Pg**	**09 59 56.4**	**-0.5**
IMKO				S	**Sg**	**10 00 04.5**	**+0.2**
IIEY	**Innrieyrar** baz=207	**0.64**	**207**	P	**Pg**	**09 59 57.7**	**-0.5**
IIEY				S	**Sb**	**10 00 06.8**	**-1.8**
IKSK	**Karasker** baz=140	**0.67**	**139**	P	**Pg**	**09 59 57.4**	**-1.3**
ISVA	**Svartarkot** baz=6.9	**0.68**	**7**	P	**Pg**	**09 59 58.2**	**-0.7**
ISVA				S	**Sg**	**10 00 07.9**	**+0.2**
IKAL	**Kalfafell** baz=188	**0.73**	**188**	P	**Pg**	**09 59 59.3**	**-0.6**
IKAL				S	**Sb**	**10 00 09.4**	**-1.6**
IVSH	**V-Sauoahnukur** baz=79	**0.76**	**79**	P	**Pg**	**09 59 59.3**	**-1.1**
IVSH				S	**Sg**	**10 00 09.8**	**-0.4**
IVAT	**Vatnsfell** baz=233	**0.80**	**233**	P	**Pg**	**10 00 00.5**	**-0.7**
IFAG	**Fagurholsmyri** baz=156	**0.87**	**156**	P	**Pg**	**10 00 01.4**	**-1.1**
IADA	**Aoalbol** baz=66	**0.88**	**66**	P	**Pg**	**10 00 01.3**	**-1.5**
IADA				S	**Sg**	**10 00 13.3**	**-0.8**
IHVE	**Hveravellir** baz=283	**0.93**	**284**	P	**Pg**	**10 00 02.1**	**-1.5**
IHVE				S	**Sg**	**10 00 15.1**	**-0.5**
IMEL	**Melhnausar** baz=20	**0.97**	**20**	P	**Pg**	**10 00 02.8**	**-1.6**
IREN	**Reynihlio** baz=13	**1.01**	**13**	P	**Pg**	**10 00 03.7**	**-1.6**
ISNB	**Snabyli** baz=210	**1.07**	**209**	P	**Pg**	**10 00 04.9**	**-1.4**
ISNB				S	**Sb**	**10 00 19.1**	**-1.6**
IKVO	**Krokottuvotn** baz=13	**1.08**	**13**	P	**Pg**	**10 00 04.7**	**-1.8**
ISLY	**Slysaalda** baz=221	**1.11**	**221**	P	**Pg**	**10 00 05.8**	**-1.4**
IFED	**Fedgar** baz=238	**1.17**	**237**	P	**Pg**	**10 00 06.9**	**-1.3**
IRJU	**Rjupnafell** baz=208	**1.18**	**207**	P	**Pg**	**10 00 06.8**	**-1.6**
IMJO	**Mjoaskard** baz=234	**1.22**	**234**	P	**Pg**	**10 00 07.6**	**-1.6**
ISKI	**Skildingahlsh** baz=8.2	**1.22**	**8**	P	**Pg**	**10 00 07.1**	**-2.1**
IGHA	**Grjothals** baz=15	**1.23**	**16**	P	**Pg**	**10 00 07.0**	**-2.4**
IGRA	**Granastaoir** baz=358	**1.26**	**358**	P	**Pg**	**10 00 07.5**	**-2.4**
IALF	**Alftagrof** baz=214	**1.40**	**213**	P	**Pg**	**10 00 10.6**	**-2.1**
IGIL	**Gilhagi** baz=18	**1.49**	**18**	P	**Pg**	**10 00 10.9**	**-2.1**
IKRO	**Krokur** baz=252	**1.69**	**252**	P	**Pn**	**10 00 14.4**	**-1.3**
GERES	**GERESS Array B** 0.6nm,0.7s,baz=339,slow=11,SNR=3.8	**22.94**	**119**	P	**P**	**10 04 50.5**	**+0.1**
ESDC	**Sonseca Array** 1.4nm,1.1s,baz=345,slow=9.3,SNR=3.3	**26.25**	**156**	P	**P**	**10 05 21.6**	**+0.3**
AKASG	**Malin Array Be** 0.1nm,0.3s,baz=298,slow=9.0,SNR=1.1	**27.83**	**98**	P	**P**	**10 05 35.9**	**+0.5**
ILAR	**Eielson Array** 0.4nm,0.5s,baz=19,slow=5.7,SNR=6.3	**45.69**	**332**	P	**P**	**10 08 08.9**	**+2.2**
KURBB	**Kurchatov Arra** 1.6nm,0.9s,baz=324,slow=7.3,SNR=12	**48.14**	**58**	P	**P**	**10 08 27.9**	**+2.0**
MKAR	**Makanchi Array** 0.6nm,0.9s,baz=2.9,slow=5.8,SNR=3.5	**52.71**	**58**	P	**P**	**10 09 01.9**	**+1.3**
TORD	**Torodi Ar. Bea** 0.9nm,0.9s,baz=332,slow=8.7,SNR=4.4	**53.14**	**156**	P	**P**	**10 09 04.0**	**0.0**
PDAR	**Pinedale Array** 0.9nm,0.9s,baz=38,slow=5.6,SNR=5.5	**53.19**	**293**	P	**P**	**10 09 05.6**	**+1.1**
SONM	**Songino Array** 0.2nm,0.3s,baz=312,slow=8.7,SNR=2.8	**59.63**	**40**	P	**P**	**10 09 52.1**	**+1.9**

*IDC **16** 10:03:57.2±0.5, 1°62N×126°34E, h0km, mb4.3/18, mb1 4.4/20, mb1mx4.2/34, mbtmp4.3/20, ML3.8/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/35, Error ellipse: s-maj=26.6km s-min=11.2km az=72.0*
*NEIC **16** 10:04:02.2

mb4.6/17,mB5.0/7,MLv4.4/19,Mw(mB)4.3/7

ISC 16 10:04:03.9±0.3,1°60N±0°04×126°57E±0°04,h47km,n109,
σ1§47/119,mb4.5/39,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.14**	**136**	P	**Pn**	**10 04 23.4**	**-0.1**
TNTI				S	**Sn**	**10 04 41.3**	**+3.3**
TNTI	**Ternate**	**1.14**	**136**	Pn	**Pn**	**10 04 23.1**	**-0.4**
TNTI				Sn	**Sn**	**10 04 38.3**	**+0.2**
SGSI	**Sangihe**	**2.32**	**333**	P	**Pn**	**10 04 40.1**	**+0.5**
SGSI				S	**Sn**	**10 05 08.6**	**+1.6**
KMSI	**Cibinong**	**2.78**	**249**	P	**Pn**	**10 04 45.7**	**-0.2**
KMSI				S	**Sn**	**10 05 19.8**	**+1.5**
SANI	**Sanana**	**3.67**	**189**	S	**Sn**	**10 05 43.3**	**+3.1**
GTOI	**Gorontalo**	**3.69**	**255**	P	**Pn**	**10 05 00.4**	**+2.1**
GTOI				S	**Sn**	**10 05 45.6**	**+5.0**
LUWI	**Luwuk**	**4.62**	**235**	P	**Pn**	**10 05 11.5**	**+0.4**
LUWI				S	**Sn**	**10 06 05.3**	**+1.8**
LUWI	**Luwuk**	**4.62**	**235**	Pn	**Pn**	**10 05 10.3**	**-0.8**
MRSI	**Marisa**	**4.76**	**257**	P	**Pn**	**10 05 15.1**	**+2.0**
NLAI	**Namlea**	**4.83**	**174**	P	**Pn**	**10 05 15.3**	**+1.2**
SIJI	**Sorong**	**5.30**	**118**	Pn	**Pn**	**10 05 21.0**	**+0.5**
	1.0nm,0.3s,baz=221,slow=22,SNR=3.5						
SIJI				LR	LR	10 07 44.4	
	comp=Z,457nm,18.5s,baz=354,slow=41						
MSAI	**Masohi**	**5.45**	**154**	P	**Pn**	**10 05 23.9**	**+1.3**
	0.1nm16nm,0.7s						
APSI	**Ampana**	**5.51**	**243**	P	**Pn**	**10 05 24.0**	**+0.5**
	0.7nm2µm173nm,0.5s						
KCP	**Kidapawan**	**5.57**	**345**	↓iP	**Pn**	**10 05 27.4**	**+3.0**
KCP				*i* S	**Sn**	**10 06 33.1**	**+5.9**
MPSI	**Mapaga**	**6.79**	**259**	P	**Pn**	**10 05 41.4**	**+0.4**
	0.2nm435nm49nm,0.8s						
FAKI	**Fak Fak**	**7.24**	**128**	P	**Pn**	**10 05 48.7**	**+1.6**
	0.1nm30nm,0.9s						
FAKI	**Fak Fak**	**7.24**	**128**	Pn	**Pn**	**10 05 47.4**	**+0.2**
TTSI	**Tana Toraja**	**8.17**	**236**	P	**Pn**	**10 05 59.9**	**-0.1**
	510nm47nm,0.7s						
TTSI				S	**Sn**	**10 07 33.3**	**+2.2**
	510nm47nm,0.7s						
SPSI	**Sidrap Palu**	**8.76**	**231**	P	**Pn**	**10 06 08.1**	**+0.1**
	29nm,0.5s						
BNSI	**Bone**	**8.79**	**227**	P	**Pn**	**10 06 08.7**	**+0.3**
	25nm,0.7s						
MYLDM	**Lahad Datu**	**8.80**	**294**		**Pn**	**10 06 06.6**	**-2.0**
BKSI	**Bulukumba**	**9.42**	**223**	P	**Pn**	**10 06 19.3**	**+2.2**
	35nm,0.8s						
KAPI	**Kappang**	**9.46**	**226**	Pn	**Pn**	**10 06 16.4**	**-1.2**
	2.5nm,0.3s,baz=109,slow=1.5,SNR=7.0						
BSSI	**Bau Bau, Buton**	**9.80**	**218**	P	**Pn**	**10 06 22.9**	**+0.7**
	18nm,0.8s						
KKM	**Kota Kinabalu**	**11.23**	**293**	Pn	**Pn**	**10 06 40.3**	**-1.7**
EDFI	**Ende, Flores**	**11.37**	**205**	P	**Pn**	**10 06 45.0**	**+1.1**
	4.5nm,0.7s						
SOEI	**Soe**	**11.51**	**191**	P	**Pn**	**10 06 47.1**	**+1.3**
	33nm,0.8s						
SOEI	**Soe**	**11.51**	**191**	Pn	**Pn**	**10 06 45.4**	**-0.4**
TWSI	**Taliwang, Sumb**	**14.10**	**223**	P	**Pn**	**10 07 22.0**	**+1.0**
SBUM	**Sibu**	**14.37**	**274**		**P**	**10 07 30.3**	**-0.2**
MTN	**Manton Dam**	**15.04**	**163**		**Pn**	**10 07 33.6**	**+0.1**
KSM	**Kuching**	**16.26**	**270**	Pn	**Pn**	**10 07 46.2**	**-3.0**
KNRA	**Kununurra**	**17.30**	**173**	P	**Pn**	**10 08 01.4**	**-0.8**
KNRA				IAmb	IAmb	10 08 12.4	
	comp=Z,24nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.59**	**183**	P	**P**	**10 08 27.2**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=29,slow=6.7,SNR=18						
FITZ	**Fitzroy Crossi**	**19.59**	**183**		**P**	**10 08 27.2**	**-1.0**
GUMO	**Guam**	**21.67**	**56**	LR	LR	10 15 16.5	
	comp=Z,20nm,20.5s,baz=232,slow=31						
COEN	**Coen**	**22.58**	**134**	P	**P**	**10 09 00.9**	**+0.4**
COEN				IAmb	IAmb	10 09 19.0	
	comp=Z,17nm,1.4s						
WB0	**Warramunga Arr**	**22.58**	**160**	P	**P**	**10 08 59.9**	**-0.6**
WB0				IAmb	IAmb	10 09 03.5	
	comp=Z,43nm,0.9s						
WRAB	**Tennant Creek**	**22.72**	**161**	P	**P**	**10 09 01.6**	**-0.3**
WRA	**Warramunga Arr**	**22.72**	**161**	P	**P**	**10 09 01.2**	**-0.8**
	comp=Z,52nm,0.8s,baz=340,slow=11,SNR=87						
WRA				PcP	**PcP**	**10 12 53.2**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=326,slow=2.1,SNR=5.2						
WRA				S	**S**	**10 13 08.2**	**+0.7**
	comp=Z,2.4nm,1.1s,baz=334,slow=14,SNR=6.7						
WRA	**Warramunga Arr**	**22.72**	**161**	P	**P**	**10 09 00.9**	**-1.1**
WB2	**Warramunga Arr**	**22.73**	**161**	P	**P**	**10 09 01.5**	**-0.5**
WR0	**Warramunga Arr**	**22.81**	**160**	P	**P**	**10 09 02.4**	**-0.5**
WR0				IAmb	IAmb	10 09 06.3	
	comp=Z,39nm,0.9s						
PSA00	**Pilbara Seismi**	**23.95**	**196**	P	**P**	**10 09 12.8**	**-1.1**
KRVT	**Keravat (AS076**	**26.11**	**103**	LR	LR	10 18 22.4	
	comp=Z,80nm,19.4s,baz=252,slow=33						
AS31	**Alice Springs**	**26.11**	**165**	P	**P**	**10 09 34.2**	**+0.6**
AS31				IAmb	IAmb	10 09 39.4	
	comp=Z,7.2nm,0.5s						
ASAR	**Alice Springs**	**26.11**	**165**	P	**P**	**10 09 33.9**	**+0.4**
	comp=Z,6.2nm,0.6s,baz=345,slow=6.8,SNR=65						
ASAR				PcP	**PcP**	**10 13 01.3**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=353,slow=2.2,SNR=5.8						
ASAR				S	S	10 14 13.3	+11
	comp=Z,1.6nm,0.8s,baz=346,slow=21,SNR=8.0						
ASAR	**Alice Springs**	**26.11**	**165**	P	**P**	**10 09 33.4**	**-0.2**
CTA	**Charters Tower**	**28.93**	**139**	P	**P**	**10 10 01.3**	**+2.4**
	comp=Z,7.1nm,1.0s,baz=330,slow=14,SNR=6.4						
CTAO	**Charters Tower**	**28.93**	**139**	P	**P**	**10 10 00.2**	**+1.3**
CTAO				IAmb	IAmb	10 10 02.1	
	comp=Z,19nm,1.3s						
WHN	**Wuhan**	**31.03**	**339**	P	P	10 10 24.5	+7.2
NJ2	**Nanjing**	**31.15**	**347**	*e*P	**P**	**10 10 19.8**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.86**	**303**	P	**P**	**10 10 23.8**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=112,slow=6.4,SNR=4.4						
CMAR				PcP	**PcP**	**10 13 14.9**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=173,slow=2.9,SNR=6.2						
FORT	**Forrest**	**32.23**	**178**	P	**P**	**10 10 27.3**	**-0.5**
BBOO	**Buckleboo**	**35.38**	**166**	P	**P**	**10 10 55.3**	**+0.1**
BBOO				IAmb	IAmb	10 10 58.6	
	comp=Z,8.6nm,0.9s						
KSRS	**Korea Array**	**35.70**	**2**	P	**P**	**10 10 58.7**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=181,slow=9.8,SNR=6.7						
STKA	**Stephens Creek**	**36.21**	**158**	P	**P**	**10 11 02.5**	**+0.1**
	comp=Z,9.0nm,0.8s,baz=333,slow=7.8,SNR=14						
STKA	**Stephens Creek**	**36.21**	**158**	P	**P**	**10 11 02.0**	**-0.3**
XAN	**Xi'an**	**36.25**	**335**	P	P	10 11 08.6	+5.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
XAN	**Xi'an**	**36.25**	**335**	P	**P**	**10 11 00.9**	**-1.8**
XAN				IAmb	IAmb	10 11 03.8	
	comp=Z,19nm,1.4s						
CD2	**Chengdu**	**36.28**	**326**	*e*P	**P**	**10 11 02.8**	**-0.2**
MAT	**Matsushiro**	**36.40**	**16**	P	**P**	**10 11 00.5**	**-3.4**
MJAR	**Matsushiro Arr**	**36.40**	**16**	P	**P**	**10 11 02.4**	**-1.5**
	comp=Z,1.5nm,0.7s,baz=183,slow=10.0,SNR=7.6						
JMM	**Marumori**	**38.39**	**18**	P	**P**	**10 11 21.1**	**+0.4**
BJT	**Baijiatuan**	**39.40**	**347**	P	**P**	**10 11 28.7**	**-0.4**
BJT				IAmb	IAmb	10 11 29.4	
	comp=Z,7.3nm,1.0s						
BJI	**Beijing**	**39.41**	**347**	P	**P**	**10 11 28.8**	**-0.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARMA	**Armidale**	**39.80**	**145**	P	**P**	**10 11 33.3**	**+0.5**
ARMA				IAmb	IAmb	10 11 37.1	
	comp=Z,16nm,0.9s						
LZH	**Lanzhou**	**40.26**	**331**	*e*P	**P**	**10 11 36.8**	**+0.2**
LZH				pP	pP	10 11 48.3	-0.5
LZH				sP	sP	10 11 51.8	-2.4
LZH				PP	**PnPn**	**10 13 17.6**	**+3.7**
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,95nm,4.9s						
SHL	**Shillong**	**41.04**	**308**	P	**P**	**10 11 41.6**	**-1.6**
HHC	**Hu-ho-hao-te**	**41.37**	**343**	*e*P	**P**	**10 11 46.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,87nm,5.2s						
USRK	**Ussuriysk Ar.**	**42.69**	**6**	P	**P**	**10 11 56.7**	**+0.6**
	comp=Z,5.2nm,0.9s,baz=196,slow=6.6,SNR=7.9						
USRK				LR	LR	10 33 52.3	
	comp=Z,12nm,18.1s,baz=327,slow=42						
USRK	**Ussuriysk Ar.**	**42.69**	**6**	P	**P**	**10 11 56.9**	**+0.7**
MDJ	**Mudanjiang**	**42.92**	**3**	P	**P**	**10 11 56.6**	**-1.4**
MDJ				IAmb	IAmb	10 12 02.9	
	comp=Z,7.6nm,0.7s						
GTA	**Gaotai**	**44.85**	**330**	*e*P	**P**	**10 12 14.1**	**+0.4**
GTA				pP	pP	10 12 20.4	-5.7
GTA				sP	sP	10 12 23.4	-8.0
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**49.26**	**342**	P	**P**	**10 12 46.7**	**-1.3**
	comp=Z,1.5nm,0.9s,baz=157,slow=3.9,SNR=8.5						
SONM	**Songino Array**	**49.26**	**342**	P	**P**	**10 12 47.3**	**-0.7**
WMQ	**Urumqi**	**54.38**	**326**	*e*P	**P**	**10 13 27.8**	**+1.6**
PETK	**Petropavlovsk-**	**57.45**	**22**	P	**P**	**10 13 48.5**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=184,slow=3.1,SNR=10.0						
MK31	**Makanchi Array**	**59.21**	**326**	P	**P**	**10 13 59.4**	**-0.9**
MK31				IAmb	IAmb	10 14 01.7	
	comp=Z,2.9nm,0.8s						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**10 13 58.9**	**-1.4**
	comp=Z,2.1nm,0.4s,baz=120,slow=7.8,SNR=31						
MKAR	**Makanchi Array**	**59.21**	**326**	P	**P**	**10 13 59.0**	**-1.4**
MAKZ	**Makanchi**	**59.40**	**326**	P	**P**	**10 14 00.9**	**-0.7**
MAKZ				IAmb	IAmb	10 14 11.9	
	comp=Z,7.3nm,1.2s						
KDJ	**Kajisay**	**59.83**	**319**	P	**P**	**10 14 04.4**	**-0.5**
TUWZ	**Tuamarina**	**60.61**	**141**	P	**P**	**10 14 10.5**	**+0.6**
BKZ	**Black Stump Fm**	**61.13**	**137**	P	**P**	**10 14 13.0**	**-0.6**
ZAA0	**Zalesovo Array**	**62.41**	**334**	P	**P**	**10 14 21.0**	**-0.9**
ZAA0				IAmb	IAmb	10 14 28.5	
	comp=Z,2.3nm,0.5s						
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	**10 14 20.3**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=116,slow=6.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	**10 14 19.8**	**-2.0**
GAR	**Garm**	**63.25**	**313**	P	**P**	**10 14 26.8**	**-1.2**
KURBB	**Kurchatov Arra**	**63.44**	**328**	P	**P**	**10 14 28.0**	**-0.8**
	comp=Z,3.7nm,0.5s,baz=128,slow=6.1,SNR=30						
KURK	**Kurchatov**	**63.45**	**328**	P	**P**	**10 14 27.9**	**-1.0**
KURK				IAmb	IAmb	10 14 38.3	
	comp=Z,8.4nm,0.8s						
KK31	**Karatay Array**	**64.68**	**318**	P	**P**	**10 14 35.8**	**-1.4**
KKAR	**Karatay Array**	**64.68**	**318**	P	**P**	**10 14 35.6**	**-1.5**
KKAR	**Karatay Array**	**64.68**	**318**	P	**P**	**10 14 35.9**	**-1.3**
KKAR				IAmb	IAmb	10 14 53.8	
	comp=Z,2.9nm,1.1s						
BRVK	**Borovoye**	**69.09**	**327**	P	**P**	**10 15 04.2**	**-0.7**
BRVK				IAmb	IAmb	10 15 17.0	
	comp=Z,11nm,1.5s						
NRIK	**Noril'sk**	**72.45**	**346**	P	**P**	**10 15 24.1**	**-0.9**
	comp=Z,4.0nm,0.7s,baz=107,slow=5.5,SNR=5.5						
ABKAR	**Akbulak array**	**73.69**	**321**	P	**P**	**10 15 31.6**	**-1.3**
ABKAR				IAmb	IAmb	10 15 35.4	
	comp=Z,9.7nm,1.4s						
ABKAR	**Akbulak array**	**73.69**	**321**	P	**P**	**10 15 31.6**	**-1.3**
RAYN	**Ar Rayn**	**81.17**	**293**	P	**P**	**10 16 14.2**	**-1.0**
VNDA	**Vanda**	**81.35**	**173**	P	**P**	**10 16 15.6**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=323,slow=5.9,SNR=15						
VNDA	**Vanda**	**81.35**	**173**	P	**P**	**10 16 14.9**	**-0.1**
VNDA				IAmb	IAmb	10 16 20.3	
	comp=Z,3.4nm,0.8s						
KBZ	**Khabaz**	**84.32**	**314**	P	**P**	**10 16 30.6**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=236,slow=24,SNR=4.2						
ILAR	**Eielson Array**	**87.08**	**25**	P	**P**	**10 16 44.0**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=261,slow=3.7,SNR=4.2						
BMAR	**Burnt Mountain**	**88.09**	**23**	P	**P**	**10 16 49.8**	**+0.6**
ARCES	**ARCESS Array B**	**92.38**	**340**	P	**P**	**10 17 08.6**	**-0.5**
	comp=Z,4.7nm,1.0s,baz=67,slow=6.9,SNR=2.0						
FINES	**FINESS Array B**	**93.62**	**332**	P	**P**	**10 17 14.0**	**-1.0**
	comp=Z,3.5nm,1.0s,baz=148,slow=1.8,SNR=6.7						
TXAR	**Lajitas Array**	**123.01**	**53**	PKP	**PKiKP**	**10 22 56.5**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=213,slow=2.3,SNR=5.5						
TXAR	**Lajitas Array**	**123.01**	**53**	**PKiKP**	**PKiKP**	**10 22 56.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**123.40**	**287**	PKP	**PKPdf**	**10 22 56.8**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=74,slow=1.1,SNR=3.7						
TORD				PP	**PP**	**10 24 41.8**	**+3.4**
	comp=Z,0.9nm,1.1s,baz=108,slow=4.7,SNR=3.6						

*IDC **16** 10:12:15.7±0.6, 1°.58N×126°.41E,h0km,mb4.3/16,*
mb1 4.4/18,mb1mx4.2/36,mbtmp4.3/18,ML4.0/2, Error
ellipse: s-maj=28.7km s-min=11.7km az=77.0
*NEIC **16** 10:12:20.3±1.3, 1°.69N±0°.07×126°.58E±0°.07,h35km±2km,*
mb4.6/35, Error ellipse: s-maj=14.1km s-min=8.4km
az=221.0
*DJA **16** 10:12:20.5±0.2,2°.N±2°×12°.7E±°,h10km,M4.4/18,*
mb4.7/16,mB4.9/6,MLv4.4/18,Mw(mB)4.2/6
*KLM **16** 10:12:22.0, 1°.65N×126°.71E,h34km,mb4.6*

ISC 16 10:12:22.3±0.4,1°67N±0°04×126°64E±0°04,h47km,n107,
σ1§77/122,mb4.6/36,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.16**	**141**	P	**Pn**	**10 12 41.2**	**-0.9**
TNTI				S	**Sn**	**10 12 58.5**	**+1.8**
TNTI	**Ternate**	**1.16**	**141**	Pn	**Pn**	**10 12 41.5**	**-0.5**
TNTI				Sn	**Sn**	**10 12 55.8**	**-0.9**
SGSI	**Sangihe**	**2.29**	**331**	P	**Pn**	**10 12 57.9**	**+0.3**
SGSI				S	**Sn**	**10 13 26.6**	**+2.1**
KMSI	**Cibinong**	**2.87**	**248**	P	**Pn**	**10 13 05.8**	**+0.2**
KMSI				S	**Sn**	**10 13 39.5**	**+0.6**
SANI	**Sanana**	**3.75**	**190**	P	**Pn**	**10 13 17.0**	**-0.7**
SANI				S	**Sn**	**10 14 02.6**	**+1.9**
GTOI	**Gorontalo**	**3.77**	**254**	P	**Pn**	**10 13 17.6**	**-0.3**
GTOI				S	**Sn**	**10 14 04.2**	**+3.1**
LUWI	**Luwuk**	**4.71**	**235**	P	**Pn**	**10 13 31.1**	**+0.2**
LUWI				S	**Sn**	**10 14 24.9**	**+0.6**
LUWI	**Luwuk**	**4.71**	**235**	Pn	**Pn**	**10 13 29.1**	**-1.7**
MRSI	**Marisa**	**4.84**	**256**	P	**Pn**	**10 13 33.6**	**+0.9**
MRSI				S	**Sn**	**10 14 28.0**	**+0.5**
NLAI	**Namlea**	**4.90**	**175**	P	**Pn**	**10 13 33.8**	**+0.3**
NLAI				S	**Sn**	**10 14 31.5**	**+2.5**
SIJI	**Sorong**	**5.27**	**119**	Pn	**Pn**	**10 13 38.6**	**0.0**
	2.4nm,0.3s,baz=337,slow=22,SNR=6.7						
MSAI	**Masohi**	**5.49**	**155**	P	**Pn**	**10 13 43.8**	**+2.3**
	0.1nm13nm,0.7s						
KCP	**Kidapawan**	**5.52**	**344**	↓iP	**Pn**	**10 13 43.7**	**+1.7**
KCP				*i* S	**Sn**	**10 14 48.9**	**+4.6**
AAI	**Ambon**	**5.55**	**164**	P	**Pn**	**10 13 42.7**	**+0.3**
	0.4nm1µm80nm,0.4s						
APSI	**Ampana**	**5.61**	**243**	P	**Pn**	**10 13 44.1**	**+0.9**
	0.4nm1µm130nm,0.7s						
MPSI	**Mapaga**	**6.87**	**259**	P	**Pn**	**10 14 01.6**	**+1.1**
	0.3nm1µm24nm,0.7s						
FAKI	**Fak Fak**	**7.23**	**129**	P	**Pn**	**10 14 07.8**	**+2.3**
	0.1nm35nm,0.9s						
FAKI	**Fak Fak**	**7.23**	**129**	Pn	**Pn**	**10 14 04.3**	**-1.2**
TTSI	**Tana Toraja**	**8.27**	**235**	P	**Pn**	**10 14 18.6**	**-1.1**
	610nm41nm,0.5s						
MYLDM	**Lahad Datu**	**8.84**	**293**		**Pn**	**10 14 28.5**	**+1.0**
SPSI	**Sidrap Palu**	**8.86**	**231**	P	**Pn**	**10 14 28.7**	**+0.9**
	2um35nm,0.6s						
BNSI	**Bone**	**8.89**	**227**	P	**Pn**	**10 14 29.0**	**+0.8**
	38nm,0.6s						
BKSI	**Bulukumba**	**9.52**	**223**	P	**Pn**	**10 14 37.0**	**+0.1**
	31nm,0.5s						
KAPI	**Kappang**	**9.56**	**226**	Pn	**Pn**	**10 14 38.4**	**+0.9**
	5.1nm,0.3s,baz=309,slow=10.0,SNR=4.1						
KAPI	**Kappang**	**9.56**	**226**		**Pn**	**10 14 36.5**	**-0.9**
BAKI	**Biak**	**9.89**	**107**	P	Pn	10 14 54.7	+13
BSSI	**Bau Bau, Buton**	**9.90**	**218**	P	**Pn**	**10 14 42.0**	**0.0**
	459nm15nm,0.5s						
KKM	**Kota Kinabalu**	**11.27**	**293**	Pn	**Pn**	**10 14 57.0**	**-3.9**
EDFI	**Ende, Flores**	**11.47**	**205**	P	**Pn**	**10 15 03.1**	**-0.5**
	4.6nm,0.7s						
SOEI	**Soe**	**11.60**	**192**	P	**Pn**	**10 15 05.7**	**+0.3**
	38nm,0.6s						
SOEI	**Soe**	**11.60**	**192**	Pn	**Pn**	**10 15 03.1**	**-2.2**
SBUM	**Sibu**	**14.43**	**273**		**P**	**10 15 49.6**	**0.0**
SBUM	**Sibu**	**14.43**	**273**	P	**P**	**10 15 50.0**	**+0.4**
MTN	**Manton Dam**	**15.10**	**163**		**Pn**	**10 15 51.4**	**-1.2**
MTN				IAmb	IAmb	10 16 01.0	
	comp=Z,14nm,0.4s						
KSM	**Kuching**	**16.32**	**270**	P	**Pn**	**10 16 09.4**	**+1.0**
KSM	**Kuching**	**16.32**	**270**	P	**P**	**10 16 11.0**	**+0.3**
KNRA	**Kununurra**	**17.37**	**173**	P	**Pn**	**10 16 20.8**	**-0.6**
KNRA				IAmb	IAmb	10 16 24.3	
	comp=Z,28nm,1.0s						
SMRI	**Semarang**	**18.34**	**242**	P	**P**	**10 16 31.6**	**-1.4**
SMRI				IAmb	IAmb	10 16 40.7	
	comp=Z,71nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.67**	**183**	P	**P**	**10 16 45.4**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=7,3,slow=5.7,SNR=14						
FITZ	**Fitzroy Crossi**	**19.67**	**183**		**P**	**10 16 45.8**	**-1.7**
YULB	**Yu-li**	**22.20**	**347**	P	**P**	**10 17 11.6**	**-3.2**
YULB				IAmb	IAmb	10 17 21.2	
	comp=Z,52nm,1.4s						
TPUB	**Ta-pu**	**22.27**	**345**	P	**P**	**10 17 13.8**	**-1.8**
COEN	**Coen**	**22.58**	**134**	P	**P**	**10 17 20.1**	**+1.2**
COEN				IAmb	IAmb	10 17 42.0	
	comp=Z,21nm,1.5s						
WB0	**Warramunga Arr**	**22.63**	**161**	P	**P**	**10 17 18.4**	**-1.0**
SSLB	**Suanglung**	**22.66**	**346**	P	**P**	**10 17 18.4**	**-1.4**
SSLB				IAmb	IAmb	10 17 43.0	
	comp=Z,36nm,1.2s						
WRAB	**Tennant Creek**	**22.77**	**161**	P	**P**	**10 17 20.1**	**-0.8**
WRAB				IAmb	IAmb	10 17 22.7	
	comp=Z,29nm,0.6s						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**10 17 19.9**	**-1.1**
	comp=Z,24nm,0.5s,baz=338,slow=11,SNR=224						
WRA				PcP	**PcP**	**10 21 11.6**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=325,slow=2.4,SNR=3.6						
WRA				S	**S**	**10 21 26.1**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=341,slow=18,SNR=6.0						
WRA	**Warramunga Arr**	**22.77**	**161**	P	**P**	**10 17 19.5**	**-1.5**
WB2	**Warramunga Arr**	**22.78**	**161**	P	**P**	**10 17 20.1**	**-0.9**
WB2				IAmb	IAmb	10 17 25.9	
	comp=Z,34nm,0.7s						
WB2					**S**	**10 21 32.5**	**+5.8**
WR0	**Warramunga Arr**	**22.86**	**161**	P	**P**	**10 17 20.8**	**-1.0**
WR0				IAmb	IAmb	10 17 23.6	
	comp=Z,24nm,0.8s						
YHNB	**Yeheng**	**23.42**	**348**	P	**P**	**10 17 27.1**	**-0.4**
PSA00	**Pilbara Seismi**	**24.04**	**196**	P	**P**	**10 17 32.4**	**-0.7**
AS31	**Alice Springs**	**26.16**	**165**	P	**P**	**10 17 51.4**	**-1.0**
AS31				IAmb	IAmb	10 17 57.0	
	comp=Z,8.4nm,0.8s						
ASAR	**Alice Springs**	**26.16**	**165**	P	**P**	**10 17 52.1**	**-0.3**
	comp=Z,14nm,0.7s,baz=344,slow=7.6,SNR=159						
ASAR				PcP	**PcP**	**10 21 18.9**	**0.0**
	comp=Z,1.0nm,0.5s,baz=353,slow=2.3,SNR=5.9						
ASAR				S	**S**	**10 22 30.4**	**+9.2**
	comp=Z,2.0nm,0.8s,baz=350,slow=22,SNR=11						
ASAR	**Alice Springs**	**26.16**	**165**	P	**P**	**10 17 51.6**	**-0.9**
KULM	**Kulim**	**26.18**	**279**	P	**P**	**10 17 57.0**	**+4.3**
WHN	**Wuhan**	**30.99**	**339**	P	**P**	**10 18 39.1**	**+3.8**
NJ2	**Nanjing**	**31.09**	**347**	*e*P	**P**	**10 18 37.8**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
JNU	**Nakatsue**	**31.54**	**7**	P	**P**	**10 18 42.1**	**+2.0**
	comp=Z,1.1nm,0.9s,baz=182,slow=5.5,SNR=3.8						
CMAR	**Chiang Mai Arr**	**31.87**	**303**	P	**P**	**10 18 43.6**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=109,slow=7.3,SNR=5.9						
FORT	**Forrest**	**32.30**	**178**	P	**P**	**10 18 46.3**	**-0.5**
BBOO	**Buckleboo**	**35.44**	**166**	P	**P**	**10 19 13.6**	**-0.5**
BBOO				IAmb	IAmb	10 19 15.1	
	comp=Z,6.5nm,0.7s						
KSRS	**Korea Array**	**35.62**	**2**	P	**P**	**10 19 17.4**	**+1.8**
	comp=Z,2.6nm,0.7s,baz=183,slow=9.9,SNR=12						
XAN	**Xi'an**	**36.21**	**335**	P	**P**	**10 19 20.1**	**-0.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
STKA	**Stephens Creek**	**36.26**	**158**	P	**P**	**10 19 20.2**	**-0.9**
	comp=Z,4.8nm,0.5s,baz=328,slow=8.8,SNR=10						
STKA	**Stephens Creek**	**36.26**	**158**	P	**P**	**10 19 21.0**	**-0.2**
MJAR	**Matsushiro Arr**	**36.31**	**16**	P	**P**	**10 19 21.0**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=176,slow=9.6,SNR=6.4						
MAT	**Matsushiro**	**36.31**	**16**	P	**P**	**10 19 19.4**	**-2.1**
JMM	**Marumori**	**38.30**	**18**	P	**P**	**10 19 36.7**	**-1.6**
BJI	**Beijing**	**39.35**	**347**	P	**P**	**10 19 50.5**	**+3.4**
BJI				pmax	pmax		
	comp=

	baz=88							
ISKR	**Skrokkalda**	**0.38**	**265**	P		**Pg**	**10 18 45.9**	**-1.1**
	baz=256							
IJOK	**Jokulheimar**	**0.42**	**228**	P		**Pb**	**10 18 47.2**	**-2.0**
	baz=226							
IJOK				S		**Sb**	**10 18 54.4**	**-1.3**
	baz=226							
THOR	**Thorvaldshraun**	**0.49**	**46**	P		Pg	10 18 45.4	-3.5
	baz=49							
IIEY	**Innrieyrar**	**0.57**	**208**	P		**Pb**	**10 18 49.7**	**-2.0**
	baz=209							
IIEY				S		**Sb**	**10 18 59.1**	**-0.9**
	baz=209							
IASK	**Askja**	**0.58**	**38**	P		Pg	10 18 46.9	-3.9
	baz=39							
IASK				S		**Sg**	**10 18 54.3**	**-4.2**
	baz=39							
IKSK	**Karasker**	**0.63**	**134**	P		**Pg**	**10 18 49.0**	**-2.6**
	baz=141							
IKSK				S		**Sg**	**10 18 58.2**	**-1.6**
	baz=141							
IMKO	**Mokollar**	**0.63**	**52**	P		Pg	10 18 47.9	-3.7
	baz=55							
IMKO				S		**Sg**	**10 18 56.1**	**-3.7**
	baz=55							
IKAL	**Kalfafell**	**0.66**	**187**	P		**Pb**	**10 18 50.7**	**-2.4**
	baz=190							
IKAL				S		**Sn**	**10 19 01.4**	**-4.1**
	baz=190							
IVAT	**Vatnsfell**	**0.74**	**237**	P		**Pb**	**10 18 52.6**	**-2.0**
	baz=234							
IVAT				S		**Sn**	**10 19 03.8**	**-3.9**
	baz=234							
ISVA	**Svartarkot**	**0.75**	**8**	P		Pg	10 18 49.8	-4.1
	baz=5.2							
ISVA				S		**Sg**	**10 18 59.5**	**-4.1**
	baz=5.2							
IVSH	**V-Sauoahnukur**	**0.79**	**74**	P		Pg	10 18 50.7	-4.0
	baz=78							
IVSH				S		**Sg**	**10 19 01.1**	**-3.9**
	baz=78							
IADA	**Aoalbol**	**0.93**	**62**	P		Pg	10 18 52.7	-4.6
	baz=65							
IADA				S		**Sg**	**10 19 04.8**	**-4.5**
	baz=65							
IHVE	**Hveravellir**	**0.93**	**288**	S		**Sg**	**10 19 07.6**	**-1.7**
	baz=283							
IHVE				P		**Pg**	**10 18 54.6**	**-2.7**
	baz=283							
ISNB	**Snabyli**	**1.00**	**210**	P		**Pb**	**10 18 56.8**	**-2.1**
	baz=210							
IMEL	**Melhnausar**	**1.04**	**20**	P		Pg	10 18 54.5	-5.0
	baz=19							
ISLY	**Slysaalda**	**1.05**	**223**	P		**Pb**	**10 18 57.8**	**-2.1**
	baz=222							
IREN	**Reynihlio**	**1.08**	**13**	P		Pg	10 18 55.2	-5.0
	baz=12							
IREN				S		**Sg**	**10 19 09.5**	**-4.8**
	baz=12							
IRJU	**Rjupnafell**	**1.11**	**208**	P		**Pb**	**10 18 58.9**	**-2.0**
	baz=208							
IFED	**Fedgar**	**1.11**	**240**	P		**Pg**	**10 18 58.8**	**-2.1**
	baz=238							
IKVO	**Krokottuvotn**	**1.15**	**13**	P		Pn	10 18 56.3	-5.5
	baz=12							
IMJO	**Mjoaskard**	**1.16**	**236**	P		**Pg**	**10 18 59.6**	**-2.1**
	baz=234							
ISKI	**Skildingahlsh**	**1.29**	**9**	P		Pn	10 18 58.7	-5.1
	baz=7.3							
IALF	**Alftagrof**	**1.34**	**214**	P		**Pb**	**10 19 02.6**	**-2.0**
	baz=214							
IGIL	**Gilhagi**	**1.56**	**17**	P		Pn	10 19 03.1	-4.3
	baz=17							
BORG	**Borgarnes**	**1.65**	**277**	Pg		**Pn**	**10 19 06.8**	**-1.9**
	12nm,0.3s,baz=89,slow=8.1,SNR=84							
BORG				Lg		Lg	10 19 31.6	
	12nm,0.3s,baz=240,slow=22,SNR=8.9							
BORG				LR		LR	10 19 40.2	
	comp=Z,146nm,21.4s,baz=121,slow=38							
BORG	**Borgarnes**	**1.65**	**277**	Pn		**Pn**	**10 19 06.7**	**-1.9**
BORG				Sn		**Sn**	**10 19 27.1**	**-2.9**
SCO	**Scoresbysund**	**6.15**	**346**	Pn		**Pn**	**10 20 12.4**	**+2.0**
JMIC	**Jan Mayen**	**7.26**	**24**	LR		LR	10 22 19.0	
	comp=Z,38nm,20.0s,baz=16,slow=30							
EKB9	**Eskdalemuir Ar**	**11.69**	**136**	Pn		**Pn**	**10 21 26.4**	**+0.1**
EKB8	**Eskdalemuir Ar**	**11.69**	**136**	Pn		**Pn**	**10 21 25.9**	**-0.4**
EKA	**Eskdalemuir Ar**	**11.71**	**136**	Pn		**Pn**	**10 21 26.8**	**+0.2**
	baz=325,slow=13,SNR=9.8							
ESK	**Eskdalemuir**	**11.71**	**136**	Pn		**Pn**	**10 21 26.3**	**-0.3**
EKR3	**Eskdalemuir Ar**	**11.71**	**136**	Pn		**Pn**	**10 21 27.4**	**+0.8**
NOA	**NORSAR Array B**	**13.53**	**92**	Pn		**Pn**	**10 21 49.2**	**-2.2**
	0.0nm,0.3s,baz=302,slow=15,SNR=1.5							
SFJD	**Kangerlussuaq**	**13.69**	**295**	LR		LR	10 26 19.5	
	comp=Z,107nm,20.3s,baz=92,slow=34							
HFS	**Hagfors**	**15.04**	**93**	LR		LR	10 27 35.1	
	comp=Z,60nm,20.4s,baz=288,slow=36							
ARCES	**ARCESS Array B**	**17.16**	**54**	LR		LR	10 28 11.0	
	comp=Z,57nm,20.8s,baz=350,slow=33							
FINES	**FINESS Array B**	**19.72**	**79**	P		**Pn**	**10 23 10.9**	**+0.5**
	0.1nm,0.3s,baz=355,slow=6.5,SNR=4.2							
NKC	**Novy Kostel**	**21.32**	**118**	*eP*		**P**	**10 23 31.3**	**+4.9**
BRG	**Berggiesshubel**	**21.39**	**115**	*eP*		**P**	**10 23 27.0**	**-0.1**
	9.3nm,1.2s							
BRG				*ep*P		**sP**	**10 23 36.4**	**+5.2**
	21nm,1.4s							
BFO	**Black Forest**	**21.41**	**127**	P		**P**	**10 23 27.0**	**-0.4**
BFO				IAmb		IAmb	10 23 44.1	
	comp=Z,23nm,1.4s							
FRB	**Frobisher Bay**	**21.77**	**291**	LR		LR	10 31 27.0	
	comp=Z,50nm,21.7s,baz=145,slow=35							
KHC	**Kasperske Hory**	**22.64**	**118**	*eP*		**P**	**10 23 43.2**	**+2.6**
DPC	**Dobruska-Polom**	**22.73**	**113**	*eP*		**P**	**10 23 41.6**	**0.0**
GERES	**GERESS Array B**	**22.92**	**119**	P		**P**	**10 23 44.3**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=325,slow=11,SNR=5.8							
VRAC	**Vranov**	**23.67**	**114**	LR		LR	10 33 33.7	
	comp=Z,31nm,18.3s,baz=280,slow=38							
EUNU	**Eureka**	**23.73**	**336**	P		**P**	**10 23 52.5**	**+1.0**
PSZ	**Piszkesteto**	**26.09**	**112**	P		**P**	**10 24 15.3**	**+1.9**
PSZ				IAmb		IAmb	10 24 17.1	
	comp=Z,9.6nm,1.1s							
ESDC	**Sonseca Array**	**26.19**	**156**	P		**P**	**10 24 15.7**	**+1.5**
	comp=Z,1.6nm,0.9s,baz=343,slow=9.3,SNR=5.6							
RES	**Resolute Bay**	**26.52**	**324**	LR		LR	10 34 14.6	
	comp=Z,52nm,21.2s,baz=147,slow=35							
BRTR	**Keskin Array B**	**38.46**	**105**	P		**P**	**10 26 02.9**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=339,slow=6.6,SNR=3.7							
BRTR	**Keskin Array B**	**38.46**	**105**	P		**P**	**10 26 01.7**	**+0.1**
A21K	**Barrow**	**41.49**	**341**	P		**P**	**10 26 27.8**	**+1.7**
TIXI	**Tiksi**	**42.10**	**15**	P		**P**	**10 26 32.6**	**+1.5**
TOLK	**Toolik Lake Re**	**42.81**	**336**	P		**P**	**10 26 36.8**	**-0.3**
TOLK				IAmb		IAmb	10 26 44.6	
	comp=Z,13nm,1.4s							
BMAR	**Burnt Mountain**	**42.96**	**333**	P		**P**	**10 26 39.1**	**+0.9**
ILAR	**Eielson Array**	**45.74**	**332**	P		**P**	**10 27 03.3**	**+2.8**
	comp=Z,2.1nm,1.1s,baz=20,slow=5.6,SNR=12							
ILAR				PcP		**PcP**	**10 28 40.0**	**+2.0**
	comp=Z,1.5nm,1.1s,baz=4.1,slow=1.9,SNR=6.5							
ILAR	**Eielson Array**	**45.74**	**332**	P		**P**	**10 27 01.5**	**+1.0**
IMAR	**Indian Mountai**	**45.92**	**337**	P		**P**	**10 27 03.3**	**+1.5**
BCAR	**Beaver Creek A**	**46.16**	**329**	P		**P**	**10 27 04.8**	**+0.9**
ZALV	**Zalesovo Beam**	**47.68**	**51**	P		**P**	**10 27 17.6**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=337,slow=6.3,SNR=1.5							
KURK	**Kurchatov**	**48.15**	**58**	P		**P**	**10 27 20.9**	**+1.5**
KURK				IAmb		IAmb	10 27 22.1	
	comp=Z,3.9nm,0.9s							
TTA	**Tatalina**	**49.12**	**336**	P		**P**	**10 27 27.0**	**+0.1**
KK09	**Karatay Array**	**51.28**	**70**	P		**P**	**10 27 43.6**	**+0.1**
KK08	**Karatay Array**	**51.29**	**70**	P		**P**	**10 27 43.9**	**+0.4**
KK04	**Karatay Array**	**51.29**	**70**	P		**P**	**10 27 45.1**	**+1.6**
KKAR	**Karatay Array**	**51.30**	**70**	P		**P**	**10 27 44.8**	**+1.2**
MKAR	**Makanchi Array**	**52.76**	**58**	P		**P**	**10 27 54.8**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=316,slow=5.1,SNR=6.9							
MKAR	**Makanchi Array**	**52.76**	**58**	P		**P**	**10 27 55.6**	**+1.1**
TORD	**Torodi Ar. Bea**	**53.08**	**156**	P		**P**	**10 27 56.9**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=341,slow=8.2,SNR=6.2							
TORD	**Torodi Ar. Bea**	**53.08**	**156**	P		**P**	**10 27 56.7**	**-0.3**
BW06	**Boulder Array**	**53.20**	**293**	P		**P**	**10 27 57.3**	**-0.7**
BW06				IAmb		IAmb	10 28 01.1	
	comp=Z,4.3nm,1.1s							
PDAR	**Pinedale Array**	**53.20**	**293**	P		**P**	**10 27 59.4**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=57,slow=6.2,SNR=11							
PDAR	**Pinedale Array**	**53.20**	**293**	P		**P**	**10 27 57.4**	**-0.5**
BTK	**Batken**	**53.98**	**72**	P		**P**	**10 28 03.7**	**+0.2**
BTK				IAmb		IAmb	10 28 07.3	
	comp=Z,3.6nm,0.8s							
TMUT	**Trail Mountain**	**56.81**	**292**	P		**P**	**10 28 23.3**	**-0.9**
SONM	**Songino Array**	**59.69**	**40**	P		**P**	**10 28 45.6**	**+1.6**
	comp=Z,0.8nm,0.8s,baz=336,slow=6.3,SNR=4.3							
CMAR	**Chiang Mai Arr**	**84.17**	**59**	P		**P**	**10 31 12.2**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=333,slow=5.9,SNR=4.1							

IDC ***16*** *10:20:33.3±0.7, 1.°52N×125.°99E, h0km, mb4.2/12, mb1 4.3/14, mb1mx4.1/32, mbtmp4.1/14, ML3.8/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/33, Error ellipse: s-maj=34.3km s-min=13.2km az=73.0*

NEIC ***16*** *10:20:38.5±1.0, 1.°55N±0.°04×126.°51E±0.°05, h35km±2km, mb4.5/34, Error ellipse: s-maj=8.4km s-min=5.7km az=292.0*

DJA ***16*** *10:20:38.7±0.2, 2.°1N±2.°×12.°7E±.°, h10km, M4.3/15, mB5.6/2, mb4.5/8, MLv4.2/15, Mw(mB)5.1/2*

ISC 16 10:20:40.0±0.4, 1.°57N±0.°04×126.°58E±0.°05, h47km, n83, σ2s03/95, mb4.3/28, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.12**	**135**	P		**Pn**	**10 20 58.8**	**-0.5**
TNTI				S		**Sn**	**10 21 18.0**	**+4.4**
TNTI	**Ternate**	**1.12**	**135**	Pn		**Pn**	**10 20 59.1**	**-0.2**
TNTI				Sn		**Sn**	**10 21 10.4**	**-3.2**
SGSI	**Sangihe**	**2.35**	**333**	P		**Pn**	**10 21 16.9**	**+0.7**
SGSI				S		**Sn**	**10 21 45.3**	**+1.5**
KMSI	**Cibinong**	**2.78**	**249**	P		**Pn**	**10 21 23.6**	**+1.5**
KMSI				S		**Sn**	**10 21 56.8**	**+2.3**
GTOI	**Gorontalo**	**3.69**	**255**	P		**Pn**	**10 21 37.7**	**+3.1**
GTOI				S		**Sn**	**10 22 21.8**	**+4.9**
DDMP	**Don Marcelino,**	**4.58**	**349**	*e*P		Pn	10 21 51.4	+4.5
DDMP				*e*S		**Sn**	**10 22 45.6**	**+6.8**
LUWI	**Luwuk**	**4.61**	**236**	P		**Pn**	**10 21 49.7**	**+2.5**
LUWI	**Luwuk**	**4.61**	**236**	Pn		**Pn**	**10 21 44.8**	**-2.4**
MRSI	**Marisa**	**4.77**	**257**	P		**Pn**	**10 21 50.5**	**+1.1**
NLAI	**Namlea**	**4.81**	**174**	P		**Pn**	**10 21 50.9**	**+1.0**
NLAI				S		**Sn**	**10 22 49.0**	**+4.6**
SIJI	**Sorong**	**5.27**	**117**	Pn		**Pn**	**10 22 00.9**	**+4.6**
	1.4nm,0.3s,baz=256,slow=8.6,SNR=4.2							
SKMP	**Bagumbayan, Su**	**5.32**	**338**	*e*P		**Pn**	**10 21 54.6**	**-2.4**
SKMP				*e*S		**Sn**	**10 22 53.2**	**-3.7**
APSI	**Ampana**	**5.52**	**243**	P		**Pn**	**10 22 01.4**	**+1.7**
	0.3nm761nm62nm,0.5s							
DAV	**Davao City (W)**	**5.55**	**350**	Pn		**Pn**	**10 21 58.7**	**-1.5**
KCP	**Kidapawan**	**5.60**	**345**	*i*P		**Pn**	**10 22 03.3**	**+2.4**
KCP				*i* S		**Sn**	**10 23 09.7**	**+5.7**
BUKP	**Musuan**	**6.45**	**346**	*e*P		**Pn**	**10 22 15.2**	**+2.7**
BUKP				*e*S		**Sn**	**10 23 29.0**	**+4.2**
MPSI	**Mapaga**	**6.79**	**260**	P		**Pn**	**10 22 18.0**	**+0.8**
	0.1nm21nm,1.0s							
PAGZ	**Pagadian**	**7.00**	**333**	*e*P		**Pn**	**10 22 17.7**	**-2.4**
FAKI	**Fak Fak**	**7.21**	**128**	P		**Pn**	**10 22 25.4**	**+2.4**
	0.1nm24nm,1.0s							
FAKI	**Fak Fak**	**7.21**	**128**	Pn		**Pn**	**10 22 21.7**	**-1.3**
TTSI	**Tana Toraja**	**8.17**	**236**	P		**Pn**	**10 22 36.6**	**+0.5**
	19nm,0.7s							
SPSI	**Sidrap Palu**	**8.75**	**231**	P		**Pn**	**10 22 45.6**	**+1.5**
	24nm,0.7s							
BNSI	**Bone**	**8.78**	**227**	P		**Pn**	**10 22 46.0**	**+1.6**
	25nm,0.6s							
MYLDM	**Lead Datu**	**8.83**	**294**	Pn		**Pn**	**10 22 43.5**	**-1.6**
BKSI	**Bulukumba**	**9.41**	**223**	P		**Pn**	**10 22 54.0**	**+0.9**
KKM	**Kota Kinabalu**	**11.26**	**294**	Pn		**Pn**	**10 23 17.6**	**-0.9**
SOEI	**Soe**	**11.49**	**192**	Pn		**Pn**	**10 23 19.9**	**-1.8**
TGY	**Tagaytay City**	**13.64**	**336**	LR		LR	10 28 59.0	
	comp=Z,92nm,21.6s,baz=257,slow=38							
SBUM	**Sibu**	**14.38**	**274**	Pn		**Pn**	**10 24 01.9**	**+1.0**
MTN	**Manton Dam**	**15.02**	**163**	Pn		**Pn**	**10 24 08.0**	**-1.4**
KNRA	**Kununurra**	**17.27**	**173**			**Pn**	**10 24 36.4**	**-1.6**
FITZ	**Fitzroy Crossi**	**19.57**	**183**	P		**P**	**10 25 03.2**	**-0.9**
	0.3nm,0.3s,baz=27,slow=8.8,SNR=12							
FITZ	**Fitzroy Crossi**	**19.57**	**183**			**P**	**10 25 04.7**	**+0.6**
TPUB	**Ta-pu**	**22.36**	**345**	P		**P**	**10 25 33.5**	**-0.8**
COEN	**Coen**	**22.55**	**134**	P		**P**	**10 25 37.9**	**+1.6**
WB0	**Warramunga Arr**	**22.55**	**161**	P		**P**	**10 25 36.0**	**-0.3**
WB0				IAmb		IAmb	10 25 39.3	
	comp=Z,19nm,0.8s							
WRAB	**Tennant Creek**	**22.69**	**161**	P		**P**	**10 25 37.2**	**-0.6**
WRAB				IAmb		IAmb	10 25 41.2	
	comp=Z,24nm,0.8s							
WRA	**Warramunga Arr**	**22.70**	**161**	P		**P**	**10 25 37.1**	**-0.8**
	comp=Z,19nm,0.7s,baz=339,slow=11,SNR=65							
WRA				PcP		**PcP**	**10 29 29.3**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=320,slow=2.4,SNR=3.4							
WRA				S		**S**	**10 29 45.7**	**+2.6**
	comp=Z,1.0nm,0.9s,baz=325,slow=18,SNR=5.2							
WRA	**Warramunga Arr**	**22.70**	**161**	P		**P**	**10 25 36.9**	**-1.0**
WB2	**Warramunga Arr**	**22.70**	**161**	P		**P**	**10 25 37.4**	**-0.5**
WB2				IAmb		IAmb	10 25 41.3	
	comp=Z,27nm,0.8s							
WC3	**Warramunga Arr**	**22.72**	**161**	P		**P**	**10 25 37.8**	**-0.4**
SSLB	**Suanglung**	**22.75**	**347**	P		**P**	**10 25 37.6**	**-0.8**
SSLB				IAmb		IAmb	10 25 42.0	
	comp=Z,21nm,1.0s							
WR0	**Warramunga Arr**	**22.78**	**160**	P		**P**	**10 25 37.9**	**-0.8**
WR0				IAmb		IAmb	10 25 42.6	
	comp=Z,22nm,1.0s							
PSA00	**Pilbara Seismi**	**23.93**	**196**	P		**P**	**10 25 47.6**	**-2.2**
PSA00	**Pilbara Seismi**	**23.93**	**196**	P		**P**	**10 25 48.1**	**-1.7**
PSA00				IAmb		IAmb	10 26 10.8	
	comp=Z,3.0nm,0.8s							
IPM	**Ipoh**	**25.68**	**277**	P		**P**	**10 26 04.8**	**-1.1**
IPM				IAmb		IAmb	10 26 14.0	
	comp=Z,8.8nm,1.0s							
AS31	**Alice Springs**	**26.08**	**165**	P		**P**	**10 26 10.2**	**+0.8**
ASAR	**Alice Springs**	**26.08**	**165**	P		**P**	**10 26 10.0**	**+0.6**
	comp=Z,3.6nm,0.4s,baz=347,slow=7.5,SNR=42							
ASAR				PcP		**PcP**	**10 29 37.2**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=350,slow=2.3,SNR=4.9							
ASAR				S		S	10 30 51.4	+14
	comp=Z,1.0nm,0.9s,baz=341,slow=20,SNR=6.6							
ASAR	**Alice Springs**	**26.08**	**165**	P		**P**	**10 26 08.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**31.88**	**304**	P		**P**	**10 26 57.4**	**-3.7**
	comp=Z,0.4nm,0.3s,baz=114,slow=9.0,SNR=1.6							
FORT	**Forrest**	**32.20**	**178**	P		**P**	**10 27 04.2**	**+0.4**
BBOO	**Buckleboo**	**35.35**	**166**	P		**P**	**10 27 31.2**	**+0.1**
KSRS	**Korea Array**	**35.73**	**2**	P		**P**	**10 27 36.0**	**+1.8**
	comp=Z,1.6nm,0.7s,baz=181,slow=8.6,SNR=3.5							
STKA	**Stephens Creek**	**36.19**	**158**	P		**P**	**10 27 39.0**	**+0.7**
	comp=Z,2.4nm,0.6s,baz=327,slow=9.6,SNR=5.6							
STKA	**Stephens Creek**	**36.19**	**158**	P		**P**	**10 27 39.6**	**+1.3**
JMM	**Marumori**	**38.41**	**18**	P		**P**	**10 27 57.0**	**0.0**
ARMA	**Armidale**	**39.77**	**145**	P		**P**	**10 28 09.1**	**+0.4**
ARMA				IAmb		IAmb	10 28 27.2	
	comp=Z,16nm,1.2s							
LZH	**Lanzhou**	**40.29**	**331**	*e*P		**P**	**10 28 12.8**	**-0.2**
LZH				pP		pP	10 28 23.8	-1.4
LZH				sP		pwP	10 28 26.8	+1.6
LZH				PP		**PnPn**	**10 29 49.9**	**-0.5**
LZH				pmax		pmax		
	comp=Z,18nm,1.1s							
LZH				pmax		pmax		
	comp=Z,75nm,4.3s							
HHC	**Hu-ho-hao-te**	**41.39**	**343**	*e*P		**P**	**10 28 22.8**	**+0.9**
HHC				pmax		pmax		
	comp=Z,15nm,1.0s							
HHC				pmax		pmax		
	comp=Z,110nm,5.3s							
USRK	**Ussuriysk Ar.**	**42.72**	**6**	P		**P**	**10 28 32.6**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=134,slow=6.2,SNR=2.1							
SONM	**Songino Array**	**49.29**	**342**	P		**P**	**10 29 22.4**	**-1.9**
	comp=Z,1.0nm,0.7s,baz=158,slow=9.7,SNR=5.9							
WMQ	**Urumqi**	**54.41**	**326**	*e*P		**P**	**10 30 03.8**	**+1.3**
PETK	**Petropavlovsk-**	**57.47**	**22**	P		**P**	**10 30 25.6**	**+1.4**
	comp=Z,1.2nm,0.6s,baz=163,slow=5.6,SNR=7.3							
PETK	**Petropavlovsk-**	**57.47**	**22**	P		**P**	**10 30 24.1**	**-0.1**
MK31	**Makanchi Array**	**59.24**	**326**	P		**P**	**10 30 35.4**	**-1.3**
MK31				IAmb		IAmb	10 30 37.1	
	comp=Z,2.3nm,1.1s							
MKAR	**Makanchi Array**	**59.24**	**326**	P		**P**	**10 30 33.2**	**-3.5**
	comp=Z,1.4nm,0.5s,baz=120,slow=8.2,SNR=17							
MKAR	**Makanchi Array**	**59.24**	**326**	P		**P**	**10 30 35.3**	**-1.4**
MAKZ	**Makanchi**	**59.42**	**326**	P		**P**	**10 30 37.8**	**-0.2**
MAKZ				IAmb		IAmb	10 30 39.5	
	comp=Z,7.3nm,1.4s							
BKZ	**Black Stump Fm**	**61.10**	**137**	P		**P**	**10 30 50.1**	**+0.6**
ZALV	**Zalesovo Beam**	**62.44**	**334**	P		**P**	**10 30 56.6**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=142,slow=7.3,SNR=3.1							
KURK	**Kurchatov**	**63.48**	**328**	P		**P**	**10 31 03.6**	**-1.6**
KK31	**Karatay Array**	**64.71**	**318**	P		**P**	**10 31 12.2**	**-1.3**
KK31				IAmb		IAmb	10 31 13.5	
	comp=Z,3.2nm,1.4s							
KKAR	**Karatay Array**	**64.71**	**318**	P		**P**	**10 31 12.1**	**-1.4**
KKAR	**Karatay Array**	**64.71**	**318**	P		**P**	**10 31 12.5**	**-1.0**
KKAR				IAmb		IAmb	10 31 13.5	
	comp=Z,3.2nm,1.4s							
BRVK	**Borovoye**	**69.11**	**327**	P		**P**	**10 31 40.8**	**-0.4**
BRVK				IAmb		IAmb	10 32 06.6	
	comp=Z,7.1nm,1.5s							
ATKA	**Atka Island**	**70.35**	**34**	P		**P**	**10 31 49.4**	**+0.6**
ABKAR	**Akbulak array**	**73.72**	**321**	P		**P**	**10 32 08.5**	**-0.6**
ABKAR	**Akbulak array**	**73.72**	**321**	P		**P**	**10 32 07.2**	**-1.9**
ABKAR				IAmb		IAmb	10 32 10.7	
	comp=Z,1.8nm,0.8s							
RAYN	**Ar Rayn**	**81.19**	**293**	P		**P**	**10 32 51.0**	**-0.5**
RAYN				IAmb		IAmb	10 32 52.0	
	comp=Z,2.1nm,0.8s							
VNDA	**Vanda**	**81.32**	**173**	P		**P**	**10 32 51.5**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=306,slow=6.1,SNR=9.6							
VNDA	**Vanda**	**81.32**	**173**	P		**P**	**10 32 51.6**	**+0.6**
VNDA				IAmb		IAmb	10 32 55.2	
	comp=Z,3.6nm,1.2s							
QSPA	**South Pole Qui**	**91.49**	**180**	P		**P**	**10 33 41.1**	**-0.2**
QSPA				IAmb		IAmb	10 33 58.5	
	comp=Z,2.7nm,1.1s							
FINES	**FINESS Array B**	**93.65**	**332**	P		**P**	**10 33 51.5**	**+0.2**
	comp=Z,3.9nm,1.1s,baz=103,slow=4.4,SNR=1.7							

UCR ***16*** *10:21:21.0±1.8, 10.°47N×86.°20W, h21km±7km, ML4.1, MW5.3, mb5.2(NEIC)*

NEIC ***16*** *10:21:21.3±1.9, 10.°57N±0.°03×86.°06W±0.°04, h28km±3km, mb5.2/418, Error ellipse: s-maj=5.3km s-min=4.9km az=85.0*

IDC ***16*** *10:21:22.8±1.5, 10.°86N×85.°72W, h33km±10km, mb4.5/21, mb1 4.7/22, mb1mx4.5/33, mbtmp4.7/22, ML4.7/1, MS4.2/19, Ms1 4.3/19, ms1mx4.2/25, Error ellipse: s-maj=21.4km s-min=10.1km az=54.0*

BJI ***16*** *10:21:25.0±0.0, 10.°60N×86.°00W, h51km, mB5.1/3, Ms5.5/8, Ms7 5.3/12*

GCMT ***16*** *10:21:25.3±0.2, 10.°35N±0.°01×86.°27W±0.°02, h27km, MW5.0/107, Moment Tensor Solution. s57,c76; s107,c151; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.10±.13; Mθθ-2.15±.09; Mϕϕ-0.94±.09; Mrθ2.47±.15; Mθϕ1.60±.05; Mϕr-1.49±.14; Best double couple: Mo4.29200×10^16 NP1:ϕs307.00000°, δ24.00000°, λ95.00000°. NP2:ϕs122.00000°, δ66.00000°, λ88.00000°. Principal axes: T 4.2170, Plg69.0000°, Azm28.0000°; N 0.1580, Plg2.0000°, Azm123.0000°; P -4.3670, Plg21.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

GCG ***16*** *10:22:09.9±3.1, 13.°02N×88.°57W, h139km±312km, MD4.9*

ISC 16 10:21:22.2±0.3, 10.°55N±0.°04×86.°10W±0.°04, h39km±2km, n1014, σ1s27/1011, mb5.2/212, MS4.3/25, 4C-2D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HZTE	**Horizontes, Gu**	**0.52**	**72**	*e*P		**Pn**	**10 21 33.7**	**+0.5**
ORTG	**Ortega, Santa**	**0.65**	**107**	*e*P		**Pn**	**10 21 34.5**	**-0.6**
LAPC	**Finca la Perla**	**0.69**	**72**	*i* P		**Pn**	**10 21 35.9**	**+0.4**
BUEV	**Buena Vista**	**0.72**	**70**	*e*P		**Pn**	**10 21 36.5**	**+0.5**
GB1A	**Borinquen Arri**	**0.73**	**69**	*e*P		**Pn**	**10 21 36.9**	**+0.7**
GB1A				*i* S		**Sn**	**10 21 50.0**	**+3.7**
DUNO	**Dulce Nombre,**	**0.76**	**128**	*e*P		**Pn**	**10 21 34.6**	**-1.8**
GPS2	**Hotel Rincn d**	**0.76**	**75**	*e*P		**Pn**	**10 21 37.5**	**+1.1**
GUAB	**Guayabo de Bag**	**0.86**	**80**	*i* P		**Pn**	**10 21 38.6**	**+0.6**
**M

FSCY **Frank Sound, G** 9.92 28 Pn **Pn** 10 23 42.1 -0.1
DBBC **Dabeiba** 10.38 109 *e*P **Pn** 10 23 47.3 -1.4
MOTC **Monteria, Cord** 10.43 99 *e*P **Pn** 10 23 51.5 +2.2
CMIG **Matias Romero** 10.73 308 Pn **Pn** 10 23 55.0 +1.7
comp=Z,5.3nm,0.3s,baz=102,slow=9.7,SNR=70
CMIG LR LR 10 27 42.3
comp=Z,528nm,20.1s,baz=129,slow=35
SJCC **San Jacinto, C** 10.76 92 *e*P Pn 10 23 58.5 +4.5
UREC **San Jos de Ur** 10.79 104 *e*P **Pn** 10 23 56.0 +1.7
CBCY **The Bluff, Cay** 10.99 33 Pn **Pn** 10 23 55.1 -1.9
PLMC **San Jos del P** 11.22 119 *e*P **Pn** 10 23 59.9 -0.3
HELC **Santa Helena** 11.31 112 *e*P Pn 10 24 07.6 +5.9
YOTC **Yotoco, Valle** 11.66 123 *e*P **Pn** **10 24 06.3 0.0**
PTBC **PUERTO BERRIO,** 12.18 108 *e*P **Pn** **10 24 17.2 +3.9**
TOLC **Tolima** 12.21 118 *e*P **P** **10 24 26.5 +0.7**
SOTA **Rioblanco** 12.60 131 *e*P **Pn** **10 24 17.6 -1.9**
ORTC **Ortega, Tolima** 12.62 121 *e*P **Pn** **10 24 18.1 -1.2**
PCON **Cinco Dias** 12.63 130 *e*P Pn 10 24 24.5 +4.5
GCUF **Volcan Galeras** 12.71 136 *e*P **Pn** **10 24 23.8 +2.8**
OCAC **Ocana** 12.81 99 *e*P **Pn** **10 24 23.8 +1.7**
SPBC **San Pablo de B** 12.86 111 *e*P **P** **10 24 34.4 +1.6**
ROSC **El Rosal** 12.97 115 Pn **P** **10 24 31.6 -2.7**
comp=Z,1.3nm,0.3s,baz=270,slow=19,SNR=1.7
BETC **Betania** 13.15 126 *e*P **Pn** **10 24 29.0 +2.4**
GARC **Garzon, Huila** 13.41 128 *e*P **Pn** **10 24 28.0 -2.4**
CHIC **Chingaza** 13.59 115 *e*P **P** **10 24 44.9 +3.7**
PAMC **Pamplona, Colo** 13.61 102 *e*P **Pn** **10 24 37.1 +3.8**
FLOC **Florencia** 13.68 130 *e*P **Pn** **10 24 35.7 +1.9**
RUSC **La Rusia** 13.68 109 *e*P **P** **10 24 41.3 -1.1**
TLIG **Tlapa** 13.96 301 Pn **Pn** **10 24 38.5 +0.8**
GTBY **Guantanamo Bay** 14.11 47 Pn **Pn** **10 24 37.6 -1.9**
TAMC **Tame, Arauca** 14.72 105 *e*P **Pn** **10 24 49.7 +1.7**
MACC **Macarena, Meta** 14.75 124 *e*P **P** **10 24 53.2 -0.6**
PTGC **Puerto Gaitan,** 15.21 113 *e*P **P** **10 25 01.1 +2.2**
LGNH **Logne** 15.26 57 Pn **Pn** **10 24 55.0 0.0**
SDV **Santo Domingo** 15.33 95 Pn **Pn** **10 24 56.9 +0.8**
comp=Z,0.4nm,0.3s,baz=262,slow=4.2,SNR=6.2
SDV **Santo Domingo** 15.33 95 Pn **Pn** **10 24 55.4 -0.8**
SDV **Santo Domingo** 15.33 95 *e*P **Pn** **10 24 58.1 +2.0**
UNM **Universidad Na** 15.35 306 Pn **Pn** **10 24 57.9 +1.4**
UNM IAmb IAmb 10 25 23.9
comp=Z,96nm,0.7s
GUVC **San Jose del G** 15.56 120 *e*P **Pn** **10 25 00.2 +1.3**
061Z **Ochoppi** 16.00 17 Pn **Pn** **10 25 04.7 +0.1**
061Z IAmb IAmb 10 25 12.2
comp=Z,184nm,0.9s
BANI **BANI** 17.11 61 P **P** **10 25 19.9 -0.1**
MOIG **Morelia** 17.15 304 P **P** **10 25 22.2 +1.6**
SC01 **Santiago de lo** 17.26 57 P **P** **10 25 21.3 -0.2**
DR12 **Loma Pena Alta** 18.11 61 P **P** **10 25 31.3 +0.2**
656A **Willston** 19.02 10 P **P** **10 25 40.7 -0.1**
656A IAmb IAmb 10 25 50.2
comp=Z,192nm,0.9s
553A **Crawfordville** 19.60 4 P **Pn** **10 25 48.2 -0.5**
553A IAmb IAmb 10 25 56.2
comp=Z,131nm,0.7s
MLPR **Magueyes Islan** 19.87 66 P **P** **10 25 50.5 +0.3**
ZAIG **Zacatecas** 19.89 310 P **P** **10 25 50.9 +0.2**
451A **Vernon** 19.97 1 P **P** **10 25 50.6 -0.6**
KVTX **Kingsville** 20.23 328 **P** **10 25 54.1 +0.1**
KVTX IAmb IAmb 10 26 03.8
comp=Z,93nm,0.9s
AOPR **Arecibo Observ** 20.25 65 P **P** **10 25 53.4 -1.1**
OBIP **Obispado Ponce** 20.29 66 P **P** **10 25 54.4 -0.4**
ICMP **Isla Caja de M** 20.31 67 P **P** **10 25 53.2 -1.8**
ICMP IAmb IAmb 10 26 06.9
comp=Z,112nm,0.9s
BRAL **Brewton** 20.54 358 P Pn 10 25 59.8 +0.1
baz=177,SNR=19
BRAL **Brewton** 20.54 358 **P** **10 25 58.0 +0.6**
SJG **San Juan** 20.72 66 P **P** **10 25 58.3 -1.2**
comp=Z,30nm,0.8s,baz=260,slow=6.9,SNR=12
SJG **San Juan** 20.72 66 P **P** **10 25 58.4 -1.1**
PDPR **Patillas Dam,** 20.81 67 P **P** **10 26 00.9 +0.5**
352A **Blakely** 20.85 3 P **P** **10 26 01.6 +0.8**
352A IAmb IAmb 10 26 06.9
comp=Z,111nm,0.7s
TIGA **Tifton** 20.91 6 P Pn 10 26 03.8 -0.4
baz=187,SNR=10
TIGA **Tifton** 20.91 6 P **P** **10 26 01.8 +0.3**
346A **Big Creek Wild** 20.97 352 P **P** **10 26 02.6 +0.6**
346A IAmb IAmb 10 26 07.8
comp=Z,100nm,0.8s
PCRV **Puerto La Cruz** 21.11 89 P **P** **10 26 04.7 +0.8**
comp=Z,26nm,0.6s,baz=232,slow=4.0,SNR=27
441A **DeRidder** 21.15 343 P **P** **10 26 05.5 +1.5**
PLCV **Puerto La Cruz** 21.16 89 P **P** **10 26 04.7 +0.4**
344A **Westbrook Farm** 21.24 349 P **P** **10 26 06.7 +1.8**
MTP **Monte Pirata** 21.26 67 P **P** **10 26 05.6 +0.3**
735A **Kenedy** 21.26 331 P **P** **10 26 07.2 +2.0**
250A **Grady** 21.32 360 P **P** **10 26 07.3 +1.5**
250A IAmb IAmb 10 26 12.2
comp=Z,83nm,0.8s
HKT **Hockley** 21.33 336 P **P** **10 26 07.6 +1.7**
342A **Flagon Creek P** 21.51 345 P **P** **10 26 08.4 +0.6**
342A IAmb IAmb 10 26 12.5
comp=Z,91nm,0.9s
255A **Hazlehurst** 21.53 8 P **P** **10 26 09.5 +1.4**
255A IAmb IAmb 10 26 15.8
comp=Z,80nm,0.7s
833A **Chaparral WMA,** 21.64 327 P **P** **10 26 10.2 +0.9**
baz=142,SNR=28
833A **Chaparral WMA,** 21.64 327 P **P** **10 26 09.5 +0.3**
VBMS **Vicksburg** 21.95 350 P **P** **10 26 15.4 +2.9**
baz=168,SNR=20
VBMS **Vicksburg** 21.95 350 P **P** **10 26 13.6 +1.1**
152A **Waverly Hall** 22.05 3 P **P** **10 26 14.7 +1.1**
154A **Montrose** 22.13 7 P **P** **10 26 16.1 +1.6**
146A **Union** 22.15 353 P **P** **10 26 15.3 +0.6**
LRAL **Lakeview Retre** 22.39 358 P **P** **10 26 18.9 +1.6**
baz=178,SNR=76
LRAL **Lakeview Retre** 22.39 358 P **P** **10 26 18.1 +0.8**
LRAL IAmb IAmb 10 26 21.5
comp=Z,106nm,0.8s
157A **Early Branch** 22.52 11 P **P** **10 26 20.3 +1.7**
baz=193
CZSB **Cruzeiro do Su** 22.53 143 *e*P **P** **10 26 19.6 +0.6**
NATX **Nacogdoches** 22.55 341 P **P** **10 26 19.8 +0.8**
baz=158,SNR=35
NATX **Nacogdoches** 22.55 341 P **P** **10 26 19.6 +0.6**
143A **Socs Landing,** 22.58 348 P **P** **10 26 19.9 +0.6**
143A IAmb IAmb 10 26 23.0
comp=Z,88nm,0.8s
Z47A **Carrollton** 22.61 356 P **P** **10 26 21.0 +1.3**
Z47A IAmb IAmb 10 26 22.7
comp=Z,91nm,0.7s
Z51A **Franklin** 22.67 2 P **P** **10 26 21.3 +1.0**
Z51A IAmb IAmb 10 26 23.5
comp=Z,98nm,0.7s
158A **Hollywood** 22.74 13 P **P** **10 26 22.2 +1.2**
baz=195
435B **Jarrell** 22.79 334 P **P** **10 26 21.7 +0.2**
baz=150,SNR=41
435B **Jarrell** 22.79 334 P **P** **10 26 21.1 -0.5**
GOGA **Godfrey** 22.88 6 P **P** **10 26 23.9 +1.5**
baz=187,SNR=24
GOGA **Godfrey** 22.88 6 P **P** **10 26 23.0 +0.6**
GOGA IAmb IAmb 10 26 26.3
comp=Z,53nm,0.8s
Z56A **Williston** 23.08 10 P **P** **10 26 26.4 +1.9**
baz=192,SNR=7.7
Z56A **Williston** 23.08 10 P **P** **10 26 24.2 -0.3**
Z56A IAmb IAmb 10 26 27.5
comp=Z,93nm,0.7s
NHSC **New Hope** 23.10 13 P **P** **10 26 26.1 +1.4**
baz=195
237A **Washetta, Mont** 23.16 339 P **P** **10 26 26.3 +1.0**
Z57A **Bowman** 23.18 12 P **P** **10 26 27.7 +2.2**
baz=193,SNR=6.9
Y49A **Blount Mountai** 23.20 359 P **P** **10 26 26.1 +0.4**
Y52A **Lilburn** 23.28 4 P **P** **10 26 27.9 +1.5**
Y52A IAmb IAmb 10 26 29.8
comp=Z,80nm,0.7s
Z58A **St. Stephen** 23.40 13 P **P** **10 26 28.7 +1.0**
baz=196,SNR=6.2
Y45A **Yeager Farm, C** 23.42 353 P **P** **10 26 28.9 +1.1**
Z41A **Richland Creek** 23.43 346 P **P** **10 26 27.7 -0.2**
baz=163,SNR=29
Z41A **Richland Creek** 23.43 346 P **P** **10 26 27.1 -0.7**
Y56A **Pelion** 23.55 10 P **P** **10 26 30.3 +1.3**
baz=192,SNR=7.1
JCT **Junction City** 23.58 329 P **P** **10 26 29.5 0.0**
baz=145,SNR=30
JCT **Junction City** 23.58 329 P **P** **10 26 28.8 -0.7**
JCT IAmb IAmb 10 26 39.0
comp=Z,46nm,0.7s
WHTX **Lake Whitney,** 23.78 335 P **P** **10 26 31.5 +0.2**
baz=151,SNR=27
WHTX **Lake Whitney,** 23.78 335 P **P** **10 26 31.5 +0.2**
X48A **Hartselle** 23.81 358 P **P** **10 26 31.6 +0.1**
X48A IAmb IAmb 10 26 33.7
comp=Z,55nm,0.8s
HODGE **Hodges** 23.83 8 P **P** **10 26 32.4 +0.7**
HODGE IAmb IAmb 10 26 33.9
comp=Z,66nm,0.7s
CCAR **Cane Creek** 23.83 348 P **P** **10 26 32.0 +0.3**
CCAR IAmb IAmb 10 26 39.7
comp=Z,88nm,0.8s
FPAL **Fort Paine** 23.88 1 P **P** **10 26 32.5 +0.2**
FPAL IAmb IAmb 10 26 34.8
comp=Z,49nm,0.7s
WLAR **White Oak Lake** 23.91 345 P **P** **10 26 32.8 +0.3**
X51A **Calhoun** 23.93 3 P **P** **10 26 32.9 +0.3**
X51A IAmb IAmb 10 26 34.8
comp=Z,85nm,0.7s
Y57A **Sumter** 23.93 12 P **P** **10 26 33.8 +1.1**
baz=194,SNR=8.5
Y57A **Sumter** 23.93 12 P **P** **10 26 31.4 -1.3**
Y57A IAmb IAmb 10 26 36.0
comp=Z,45nm,0.8s
Y58A **Scranton** 23.98 13 P **P** **10 26 33.8 +0.7**
baz=196,SNR=8.1
Y58A **Scranton** 23.98 13 P **P** **10 26 34.9 +1.8**
Y58A IAmb IAmb 10 26 35.9
comp=Z,64nm,0.8s
GRGR **Grenville** 24.01 84 P **P** **10 26 34.1 +0.4**
JSC **Jenkinsville** 24.03 10 P **P** **10 26 34.2 +0.6**
JSC IAmb IAmb 10 26 36.0
comp=Z,40nm,0.7s
Z38A **Mt. Pleasant** 24.03 341 P **P** **10 26 33.5 -0.1**
OXF **Oxford** 24.04 353 P **P** **10 26 33.4 -0.3**
baz=172
OXF **Oxford** 24.04 353 P **P** **10 26 33.1 -0.6**
X54A **Belton** 24.13 8 P **P** **10 26 35.5 +1.0**
baz=189,SNR=12
X55A **Gracelyn & Ava** 24.16 9 P **P** **10 26 35.9 +1.2**
baz=191,SNR=24
Y59A **Loris** 24.25 15 P **P** **10 26 36.9 +1.3**
baz=197,SNR=7.7
Y59A **Loris** 24.25 15 P **P** **10 26 35.9 +0.3**
Y59A IAmb IAmb 10 26 38.1
comp=Z,77nm,0.7s
X43A **Marvell** 24.25 350 P **P** **10 26 36.7 +1.1**
baz=168,SNR=11
X43A **Marvell** 24.25 350 P **P** **10 26 35.4 -0.3**
X43A IAmb IAmb 10 26 41.7
comp=Z,64nm,0.8s
X56A **White Oak** 24.28 10 P **P** **10 26 37.0 +1.2**
baz=192,SNR=17
PLAL **Pickwick Lake** 24.39 356 P **P** **10 26 36.7 -0.1**
PLAL IAmb IAmb 10 26 39.0
comp=Z,95nm,0.8s
X57A **Johnson Farm,** 24.43 12 P **P** **10 26 38.2 +0.9**
baz=194,SNR=6.6
Y60A **Bolivia** 24.43 16 P **P** **10 26 38.5 +1.2**
baz=199
SVB **Belmont** 24.45 81 P **P** **10 26 38.3 +0.6**
PAULI **Pauline** 24.47 9 P **P** **10 26 38.5 +0.9**
PAULI IAmb IAmb 10 26 40.0
comp=Z,72nm,0.8s
BG3 **Lake Jocassee** 24.50 6 P **P** **10 26 38.8 +0.9**
BG3 IAmb IAmb 10 26 40.7
comp=Z,56nm,0.7s
W52A **Murphy** 24.51 4 P **P** **10 26 38.4 +0.4**
W52A IAmb IAmb 10 26 40.6
comp=Z,92nm,0.8s
BIRD **Birdtown, Kers** 24.53 11 P **P** **10 26 38.7 +0.6**
BIRD IAmb IAmb 10 26 40.7
comp=Z,48nm,0.8s
W50A **Signal Mountai** 24.55 2 P **P** **10 26 38.3 -0.1**
W50A IAmb IAmb 10 26 39.9
comp=Z,68nm,0.7s
SWET **Sewanee** 24.55 0 P **P** **10 26 38.2 -0.3**
X40A **Basin Creek Fa** 24.61 347 P **P** **10 26 38.6 -0.3**
baz=164,SNR=32
X40A **Basin Creek Fa** 24.61 347 P **P** **10 26 38.2 -0.7**
X40A IAmb IAmb 10 26 48.0
comp=Z,50nm,0.9s
HPIG 24.62 314 P **P** **10 26 40.7 +1.4**
W45A **Hickory Valley** 24.66 354 P **P** **10 26 38.2 -1.1**
X58A **Rowland** 24.68 13 P **P** **10 26 40.2 +0.7**
baz=196,SNR=11
X58A **Rowland** 24.68 13 P **P** **10 26 39.8 +0.3**
X58A IAmb IAmb 10 26 42.1
comp=Z,51nm,0.9s
W54A **Cherokee Point** 24.68 8 P **P** **10 26 41.1 +1.6**
baz=189,SNR=29
CPCT **Cooper Cave** 24.83 3 P **P** **10 26 41.1 +0.2**
CPCT IAmb IAmb 10 26 44.7
comp=Z,149nm,1.5s
MIAR **Mount Ida** 24.84 345 P **P** **10 26 40.8 -0.2**
baz=162,SNR=94
MIAR **Mount Ida** 24.84 345 P **P** **10 26 40.8 -0.2**
KMSC **Kings Mountain** 24.86 9 P **P** **10 26 42.1 +1.0**
baz=191,SNR=24
KMSC **Kings Mountain** 24.86 9 P **P** **10 26 41.8 +0.6**
KMSC IAmb IAmb 10 26 43.4
comp=Z,78nm,1.1s
X59A **McDuffie Farm,** 24.87 15 P **P** **10 26 42.0 +0.8**
baz=198,SNR=8.3
TXAR **Lajitas Array** 24.88 321 P **P** **10 26 42.1 +0.6**
comp=Z,41nm,0.7s,baz=139,slow=8.6,SNR=348
TXAR PcP **PcP** **10 30 18.4 +1.5**
comp=Z,8.6nm,0.8s,baz=146,slow=4.6,SNR=12
TXAR ScP **ScP** **10 33 55.8 +2.8**
comp=Z,0.4nm,0.9s,baz=117,slow=3.2,SNR=2.2
TXAR **Lajitas Array** 24.88 321 P **P** **10 26 42.2 +0.7**
TX31 **Lajitas Ar. Si** 24.88 321 P **P** **10 26 42.5 +0.9**
TX32 **Lajitas Array** 24.88 321 P **P** **10 26 42.5 +0.9**
TX32 IAmb IAmb 10 26 44.7
comp=Z,50nm,0.8s
Z35A **Perchaven, San** 24.88 337 P **P** **10 26 41.1 -0.3**
W56A **Indian Trail** 24.98 11 P **P** **10 26 43.1 +0.8**
baz=193,SNR=12
X60A **Albert Glenn T** 25.04 16 P **P** **10 26 43.7 +1.0**
baz=199
TKL **Tuckaleechee C** 25.08 4 P **P** **10 26 42.5 -0.7**
comp=Z,33nm,0.9s,baz=178,slow=10,SNR=29
TKL **Tuckaleechee C** 25.08 4 P **P** **10 26 44.1 +0.9**
TKL IAmb IAmb 10 26 56.9
comp=Z,58nm,0.9s
V48A **Smith Brothers** 25.08 359 P **P** **10 26 43.0 -0.2**
V48A IAmb IAmb 10 26 44.5
comp=Z,66nm,0.8s
W57A **Gilead** 25.11 12 P **P** **10 26 43.9 +0.4**
baz=194,SNR=6.1
W57A **Gilead** 25.11 12 P **P** **10 26 44.0 +0.6**
W57A IAmb IAmb 10 26 53.1
comp=Z,39nm,0.9s
W41B **Gary Mavity, V** 25.14 348 P **P** **10 26 43.4 -0.3**
baz=166,SNR=51
W41B **Gary Mavity, V** 25.14 348 P **P** **10 26 43.0 -0.7**
W41B IAmb IAmb 10 26 45.5
comp=Z,91nm,0.9s
W58A **Raeford** 25.15 13 P **P** **10 26 44.6 +0.9**
baz=196,SNR=13
V53A **Saluda** 25.18 6 P **P** **10 26 44.5 +0.4**
V53A IAmb IAmb 10 26 49.1
comp=Z,72nm,0.8s
V51A **Loudon** 25.19 3 P **P** **10 26 44.4 +0.2**
V51A IAmb IAmb 10 26 48.7
comp=Z,85nm,0.8s
LPAR **Lepanto** 25.23 352 P **P** **10 26 44.7 +0.2**
HBAR **Harrisburg** 25.23 351 P **P** **10 26 44.8 +0.2**
WHAR **Wooly Hollow** 25.26 348 P **P** **10 26 44.1 -0.7**
WHAR IAmb IAmb 10 26 52.4
comp=Z,92nm,0.9s
ABTX **Abilene, Hawle** 25.27 332 P **P** **10 26 45.4 +0.4**
baz=148,SNR=106
ABTX **Abilene, Hawle** 25.27 332 P **P** **10 26 44.4 -0.5**
V52A **Sevierville** 25.28 5 P **P** **10 26 45.4 +0.5**
V52A IAmb IAmb 10 26 49.3
comp=Z,44nm,0.8s
H06E1 **SOCORRO T-PHAS** 25.35 292 T T 10 53 07.6
SNR=136
H06S1 **SOCORRO T** 25.37 292 T T 10 53 07.6
SNR=30
X37A **Clayton** 25.38 342 P **P** **10 26 45.8 -0.1**
X37A IAmb IAmb 10 26 48.1
comp=Z,52nm,0.7s
V54A **Nebo** 25.39 8 P **P** **10 26 47.1 +1.1**
baz=189,SNR=29
HALT **Halls** 25.42 354 P **P** **10 26 45.1 -1.1**
CLTN **Cedars of Leba** 25.43 360 P **P** **10 26 46.4 +0.1**
CLTN IAmb IAmb 10 26 47.7
comp=Z,52nm,0.8s
W39A **Magazine** 25.51 345 P **P** **10 26 47.2 +0.2**
baz=162,SNR=36
W39A **Magazine** 25.51 345 P **P** **10 26 46.7 -0.4**
W39A IAmb IAmb 10 26 48.3
comp=Z,75nm,0.8s
WVT **Waverly** 25.51 357 P **P** **10 26 46.4 -0.6**
baz=176
WVT **Waverly** 25.51 357 P **P** **10 26 46.5 -0.6**
GNAR **Gosnell** 25.55 353 P **P** **10 26 47.1 -0.3**
W60A **Pink Hill** 25.56 16 P **P** **10 26 48.5 +1.0**
baz=199
V55A **Taylorsville** 25.57 9 P **P** **10 26 48.7 +1.1**
baz=191,SNR=13
V55A **Taylorsville** 25.57 9 P **P** **10 26 48.8 +1.1**
LNXT **Lenox** 25.62 354 P **P** **10 26 47.5 -0.5**
V56A **Mocksville** 25.65 11 P **P** **10 26 49.1 +0.7**
baz=193,SNR=6.2
CNNC **Cliffs of the** 25.69 16 P **P** **10 26 49.7 +1.1**
baz=199
CNNC **Cliffs of the** 25.69 16 P **P** **10 26 48.4 -0.2**
GLAT **Glass** 25.77 354 P **P** **10 26 48.8 -0.5**
FCAR **Ozark Folk Cen** 25.81 349 P **P** **10 26 49.2 -0.6**
FCAR IAmb IAmb 10 26 52.1
comp=Z,64nm,0.7s
LCAR **Lake Charles** 25.82 351 P **P** **10 26 49.0 -0.8**
LCAR IAmb IAmb 10 26 50.1
comp=Z,64nm,0.9s
U49A **Red Boiling Sp** 25.85 1 P **P** **10 26 49.5 -0.7**
U49A IAmb IAmb 10 26 51.5
comp=Z,64nm,0.8s
V57A **Coltrane Farms** 25.87 12 P **P** **10 26 51.0 +0.8**
baz=194,SNR=11
V58A **Windy Hill, Pi** 25.92 13 P **P** **10 26 51.5 +0.8**
baz=196,SNR=13
V58A **Windy Hill, Pi** 25.92 13 P **P** **10 26 50.4 -0.4**
V58A IAmb IAmb 10 26 53.2
comp=Z,48nm,0.8s
TZTN **Tazewell** 25.98 5 P **P** **10 26 51.7 +0.4**
baz=186,SNR=7.7
TZTN **Tazewell** 25.98 5 P **P** **10 26 51.3 0.0**
PENMO **Penman** 25.98 353 P **P** **10 26 51.2 -0.1**
HICK **Hickman** 26.03 354 P **P** **10 26 51.4 -0.3**
V59A **Middlesex** 26.09 15 P **P** **10 26 53.1 +0.8**
baz=198,SNR=10
U54A **Nelsons Funny** 26.14 8 P **P** **10 26 53.9 +1.1**
baz=190,SNR=13
U54A **Nelsons Funny** 26.14 8 P **P** **10 26 53.0 +0.1**
U54A IAmb IAmb 10 27 05.0
comp=Z,64nm,0.9s
U56A **King** 26.20 10 P **P** **10 26 54.6 +1.3**
baz=193,SNR=6.6
U56A **King** 26.20 10 P **P** **10 26 54.1 +0.8**
PARMO **Parma** 26.21 353 P **P** **10 26 53.3 0.0**
SLBS **Sierra La Lagu** 26.21 303 P **P** **10 26 55.1 +1.4**
SLBS IAmb IAmb 10 27 06.7
comp=Z,54nm,1.0s
HENM **Henderson Moun** 26.23 354 P **P** **10 26 52.7 -0.8**
T47A **Sharon Grove** 26.34 358 P **P** **10 26 54.1 -0.4**
V60A **Jim Taylor Roa** 26.35 16 P **P** **10 26 55.6 +1.0**
baz=200,SNR=7.5
T50A **Nancy** 26.38 2 P **P** **10 26 54.5 -0.5**
W35A **Tecumseh** 26.39 340 P **P** **10 26 54.3 -0.7**
PBMO **Poplar Bluff** 26.40 352 P **P** **10 26 54.4 -0.8**
PBMO IAmb IAmb 10 26 55.6
comp=Z,77nm,1.2s
U40A **Yellville** 26.41 348 P **P** **10 26 54.8 -0.4**
baz=165,SNR=43
U40A **Yellville** 26.41 348 P **P** **10 26 54.2 -1.0**
U40A IAmb IAmb 10 27 03.4
comp=Z,61nm,0.8s
T45A **Paducah** 26.45 355 P **P** **10 26 55.0 -0.6**
U57A **Blanch** 26.48 12 P **P** **10 26 56.6 +0.7**
baz=195,SNR=11
T53A **Wise** 26.51 6 P **P** **10 26 56.8 +0.6**
baz=188,SNR=11
HHAR **Hobbs** 26.58 346 P **P** **10 26 55.9 -0.9**
HHAR IAmb IAmb 10 27 04.1
comp=Z,41nm,0.8s
U58A **Oxford** 26.62 14 P **P** **10 26 57.5 +0.4**
baz=197,SNR=7.2
FNO **Franklin** 26.66 339 P **P** **10 26 56.4 -1.1**
LPIG **La Paz** 26.70 303 P **P** **10 27 01.8 +3.9**
comp=Z,11nm,0.5s,baz=151,slow=1.6,SNR=2.4
T54A **Tazewell** 26.71 8 P **P** **10 26 58.6 +0.6**
baz=190,SNR=12
WMOK **Wichita Mounta** 26.72 336 P **P** **10 26 57.7 -0.3**
baz=151,SNR=118
WMOK **Wichita Mounta** 26.72 336 P **P** **10 26 57.4 -0.6**
TUL1 **Leonard** 26.74 342 P **P** **10 26 57.3 -0.9**
baz=158,SNR=25
TUL1 **Leonard** 26.74 342 P **P** **10 26 57.6 -0.5**
TUL1 IAmb IAmb 10 27 05.4
comp=Z,95nm,0.9s
T42A **Van Buren** 26.75 351 P **P** **10 26 57.1 -1.1**
T42A IAmb IAmb 10 26 58.9
comp=Z,57nm,0.8s
U59A **Littleton** 26.77 15 P **P** **10 26 59.0 +0.6**
baz=198,SNR=6.0
U59A **Littleton** 26.77 15 P **P** **10 26 59.2 +0.8**
OKCFA **Oklahoma City** 26.82 339 P **P** **10 26 58.8 -0.2**
OKCFA IAmb IAmb 10 27 26.7
comp=Z,52nm,0.8s
U38A **Gravette** 26.84 345 P **P** **10 26 58.1 -1.0**
U38A IAmb IAmb 10 26 59.9
comp=Z,55nm,0.8s
T55A **Pulaski** 26.88 9 P **P** **10 27 00.5 +1.0**
baz=192,SNR=13
T56A **Rocky Mt** 26.92 11 P **P** **10 27 01.0 +1.2**
baz=193,SNR=9.1
OK025 **Westminster Rd** 26.93 339 P **P** **10 26 59.5 -0.4**
BLA **Blacksburg** 27.03 10 P **P** **10 27 01.6 +0.7**
baz=192,SNR=9.1
BLA **Blacksburg** 27.03 10 P **P** **10 27 01.2 +0.3**
BLA IAmb IAmb 10 27 03.1
comp=Z,118nm,1.5s
U60A **Pendleton** 27.04 16 P **P** **10 27 01.5 +0.6**
baz=200
T57A **Hurt** 27.05 12 P **P** **10 27 01.3 +0.3**
baz=195,SNR=11
T57A **Hurt** 27.05 12 P **P** **10 27 01.1 +0.1**
T57A IAmb IAmb 10 27 02.8
comp=Z,49nm,1.2s
OK030 **Cody Creek RV** 27.06 341 P **P** **10 27 00.7 -0.4**
OK030 IAmb IAmb 10 27 01.8
comp=Z,45nm,0.7s
S51A **Beattyville** 27.07 4 P **P** **10 27 01.6 +0.5**
S51A IAmb IAmb 10 27 02.5
comp=Z,62nm,0.8s
MGMO **Mountain Grove** 27.07 349 P **P** **10 27 01.1 -0.1**
MGMO IAmb IAmb 10 27 02.4
comp=Z,40nm,0.8s
BCOK **Bluff Creek, N** 27.09 339 P **P** **10 27 00.5 -0.9**
OK031 **S. Brethren Rd** 27.10 341 P **P** **10 27 00.7 -0.8**
OK031 IAmb IAmb 10 27 02.3
comp=Z,61nm,0.7s
T58A **Grand View Acr** 27.15 13 P **P** **10 27 02.6 +0.8**
baz=196
OK029 **Liberty Lake** 27.17 339 P **P** **10 27 01.3 -0.8**
OK029 IAmb IAmb 10 27 08.2
comp=Z,34nm,0.8s
S44A **Carbondale** 27.17 355 P **P** **10 27 01.9 -0.1**
S53A **Williamson** 27.25 7 P **P** **10 27 03.0 +0.2**
baz=188,SNR=18
QUOK **Quay** 27.26 341 P **P** **10 27 02.1 -0.8**
USIN **University of** 27.33 357 P **P** **10 27 02.6 -0.9**
USIN IAmb IAmb 10 27 04.2
comp=Z,61nm,0.8s
T59A **Double "B" Far** 27.41 15 P **P** **10 27 05.5 +1.3**
baz=198
T59A **Double "B" Far** 27.41 15 P **P** **10 27 04.5 +0.4**
RCRC **Randolf Colleg** 27.46 12 P **P** **10 27 04.5 -0.1**
S54A **Dingess, Beckl** 27.47 8 P **P** **10 27 05.3 +0.5**
baz=190,SNR=6.7
S54A **Dingess, Beckl** 27.47 8 P **P** **10 27 04.7 -0.1**
WCI **Wyandotte Cave** 27.56 360 P **P** **10 27 05.5 0.0**
baz=180
WCI **Wyandotte Cave** 27.56 360 P **P** **10 27 04.6 -0.9**
S55A **Lewisburg** 27.57 10 P **P** **10 27 06.6 +0.9**
baz=192,SNR=15

FVM French Village 27.59 353 P P 10 27 05.0 -0.8
MNTX Cornudas Mount 27.59 323 P P 10 27 06.1 +0.2
baz=136,SNR=22
MNTX Cornudas Mount 27.59 323 P P 10 27 05.9 0.0
R49A Shelbyville 27.64 2 P P 10 27 06.2 0.0
R49A IAmb IAmb 10 27 07.1
comp=Z,49nm,0.8s
S56A Natural Bridge 27.64 11 P P 10 27 07.3 +1.0
baz=194,SNR=7.1
R50A Paris 27.66 3 P P 10 27 06.4 0.0
R50A IAmb IAmb 10 27 07.7
comp=Z,46nm,0.8s
CCM Cathedral Cave 27.77 351 P P 10 27 06.7 -0.8
baz=169
CCM Cathedral Cave 27.77 351 P P 10 27 07.1 -0.3
CCM IAmb IAmb 10 27 14.8
comp=Z,51nm,0.8s
T60A Surry 27.79 16 P P 10 27 08.8 +1.3
baz=200
T60A Surry 27.79 16 P P 10 27 09.1 +1.6
S39A Bolivar 27.79 348 P P 10 27 06.2 -1.5
S39A IAmb IAmb 10 27 14.8
comp=Z,32nm,0.8s
S57A Dark Hollow, R 27.84 12 P P 10 27 08.6 +0.6
baz=195
S57A Dark Hollow, R 27.84 12 P P 10 27 08.4 +0.4
MSTX Muleshoe 27.87 329 P P 10 27 08.5 0.0
baz=143,SNR=37
MSTX Muleshoe 27.87 329 P P 10 27 08.5 0.0
T35A Sooner Cattle 27.89 342 P P 10 27 08.0 -0.5
T35A IAmb IAmb 10 27 15.7
comp=Z,91nm,1.5s
R54A Victor 27.89 9 P P 10 27 09.2 +0.7
baz=191,SNR=11
S58A Poland Farm, P 27.90 14 P P 10 27 09.1 +0.5
baz=197
S58A Poland Farm, P 27.90 14 P P 10 27 08.9 +0.4
R53A Hurricane 27.91 7 P P 10 27 09.2 +0.5
baz=189,SNR=12
R53A Hurricane 27.91 7 P P 10 27 08.8 +0.2
R53A IAmb IAmb 10 27 10.1
comp=Z,50nm,0.9s
CROK Carrier 27.99 339 P P 10 27 09.9 +0.5
AMTX Amarillo 28.09 332 P P 10 27 10.4 0.0
baz=146
AMTX Amarillo 28.09 332 P P 10 27 09.9 -0.5
AMTX IAmb IAmb 10 27 18.0
comp=Z,39nm,0.7s
OLIL Olney 28.12 357 P P 10 27 10.4 -0.1
R55A Marlinton 28.13 10 P P 10 27 11.7 +1.0
baz=192,SNR=12
R55A Marlinton 28.13 10 P P 10 27 12.0 +1.3
R55A IAmb IAmb 10 27 12.9
comp=Z,30nm,0.8s
R40A Maddies Statio 28.17 350 P P 10 27 09.8 -1.2
S59A Mechanicsville 28.23 15 P P 10 27 13.0 +1.6
baz=198
U32A Winter Ranch, 28.25 338 P P 10 27 11.0 -0.7
U32A IAmb IAmb 10 27 17.4
comp=Z,50nm,0.9s
R58B Mineral 28.27 14 P P 10 27 13.1 +1.3
baz=197
R58B Mineral 28.27 14 P P 10 27 13.0 +1.1
ETMB Extrema 28.29 135 eP P 10 27 13.3 +1.0
S60A Water View 28.34 16 P P 10 27 13.7 +1.3
baz=200,SNR=5.1
Q44A Meyer Farm, Va 28.35 355 P P 10 27 12.2 -0.3
R56A Bull Pasture M 28.38 11 P P 10 27 14.0 +1.1
baz=194,SNR=5.5
R57A Stanardsville 28.45 13 P P 10 27 14.3 +0.8
baz=196,SNR=6.5
Q51A Peebles 28.46 4 P P 10 27 13.6 0.0
Q53A Leroy 28.48 7 P P 10 27 14.3 +0.6
baz=189,SNR=9.6
Q52A Bidwell 28.50 6 P P 10 27 14.4 +0.5
baz=188,SNR=16
BLO Bloomington 28.50 359 P P 10 27 13.3 -0.6
BLO IAmb IAmb 10 27 14.5
comp=Z,58nm,0.8s
R58A Rapidan 28.57 13 P P 10 27 15.3 +0.8
baz=197
CBN Corbin Frederi 28.63 14 P P 10 27 16.6 +1.6
baz=198,SNR=6.1
R59A King George, V 28.68 15 P P 10 27 17.2 +1.7
baz=198
Q54A Coxs Mills 28.70 9 P P 10 27 16.2 +0.5
baz=191,SNR=13
Q54A Coxs Mills 28.70 9 P P 10 27 15.9 +0.2
Q54A IAmb IAmb 10 27 17.3
comp=Z,42nm,0.8s
MACA Manacapuru-AM 28.73 117 eP P 10 27 17.8 +1.5
P48A Milroy 28.80 1 P P 10 27 15.6 -0.9
Q55A Buckhannon 28.83 10 P P 10 27 17.8 +0.9
baz=192,SNR=12
P49A Miami Univ. Ec 28.89 2 P P 10 27 16.6 -0.7
baz=183,SNR=14
P49A Miami Univ. Ec 28.89 2 P P 10 27 16.4 -0.9
P49A IAmb IAmb 10 27 17.7
comp=Z,56nm,0.9s
P51A Williamsport 28.94 5 P P 10 27 17.7 0.0
baz=186,SNR=13
P51A Williamsport 28.94 5 P P 10 27 17.3 -0.5
P51A IAmb IAmb 10 27 18.8
comp=Z,49nm,0.8s
P46A Rosedale 28.96 358 P P 10 27 17.4 -0.6
Q56A Snyder Ridge, 29.03 11 P P 10 27 20.1 +1.5
baz=194,SNR=11
Q56A Snyder Ridge, 29.03 11 P P 10 27 20.0 +1.3
Q56A IAmb IAmb 10 27 21.2
comp=Z,42nm,0.8s
P53A Whipple 29.12 7 P P 10 27 20.0 +0.7
baz=190,SNR=17
P53A Whipple 29.12 7 P P 10 27 20.1 +0.7
P43A Skaggs, Pawnee 29.13 355 P P 10 27 19.1 -0.3
P43A IAmb IAmb 10 27 20.1
comp=Z,38nm,0.9s
P52A Corning 29.18 6 P P 10 27 20.2 +0.3
baz=188,SNR=26
P52A Corning 29.18 6 P P 10 27 19.9 0.0
Q57A Strasburg 29.18 12 P P 10 27 21.1 +1.2
baz=196
Q58A Fox Den Farm, 29.25 14 P P 10 27 21.3 +0.7
baz=197
P40A Paris 29.34 351 P P 10 27 20.5 -0.9
P54A Burton 29.36 9 P P 10 27 21.4 -0.2
baz=191
P55A Reedsville 29.37 10 P P 10 27 22.3 +0.6
baz=192,SNR=6.9
MCWV Mont Chateau 29.52 10 P P 10 27 23.6 +0.7
baz=192,SNR=8.1
P56A Dayton Farm, R 29.55 11 P P 10 27 24.8 +1.5
baz=194,SNR=8.8
O44A Mansfield 29.56 356 P P 10 27 22.4 -0.8
O49A Covington 29.56 3 P P 10 27 22.8 -0.4
O49A IAmb IAmb 10 27 23.9
comp=Z,39nm,0.8s
121A Cookes Peak, D 29.64 321 P P 10 27 27.6 +3.3
baz=133,SNR=16
121A Cookes Peak, D 29.64 321 P P 10 27 25.0 +0.7
121A IAmb IAmb 10 27 42.9
comp=Z,23nm,0.8s
O51A Pataskala 29.64 5 P P 10 27 24.1 +0.2
baz=187,SNR=14
O52A Adamsville 29.69 7 P P 10 27 24.9 +0.4
baz=188,SNR=18
O52A Adamsville 29.69 7 P P 10 27 23.9 -0.5
ACSO Alum Creek Sta 29.69 5 P P 10 27 24.4 0.0
baz=186,SNR=14
ACSO Alum Creek Sta 29.69 5 P P 10 27 24.4 0.0
P57A Homestead Farm 29.70 13 P P 10 27 26.0 +1.4
baz=196,SNR=15
P57A Homestead Farm 29.70 13 P P 10 27 25.9 +1.4
P57A IAmb IAmb 10 27 27.0
comp=Z,31nm,0.7s
P38A Dawn 29.70 348 P P 10 27 23.7 -0.8
P38A IAmb IAmb 10 27 24.4
comp=Z,82nm,1.2s
SFIN Lafayette 29.72 358 P P 10 27 23.8 -0.9
baz=178,SNR=16
SFIN Lafayette 29.72 358 P P 10 27 23.6 -1.1
Q60A Greensboro 29.77 16 P P 10 27 27.1 +1.9
baz=200
Q61A Milford 29.81 17 P P 10 27 27.3 +1.9
baz=202
319A Douglas 29.84 317 P P 10 27 27.6 +1.5
319A IAmb IAmb 10 27 30.4
comp=Z,29nm,1.0s
P58A Pank, Wackersv 29.86 14 P P 10 27 26.9 +1.0
baz=197,SNR=8.0
O53A New Philadelph 29.89 8 P P 10 27 26.7 +0.4
baz=190,SNR=21
O53A New Philadelph 29.89 8 P P 10 27 26.5 +0.2
SDMD Soldier's Deli 29.90 14 P P 10 27 27.6 +1.3
SAML Samuel 29.92 130 P P 10 27 27.1 +0.4
SAML Samuel 29.92 130 eP P 10 27 27.1 +0.4
KSU1 Kansas State U 29.94 343 P P 10 27 26.0 -0.7
baz=159,SNR=9.5
O54A Avella 29.94 9 P P 10 27 26.8 +0.1
baz=191,SNR=6.2
O54A Avella 29.94 9 P P 10 27 27.1 +0.4
HDIL Hopedale 30.02 355 P P 10 27 26.9 -0.5
baz=174,SNR=35
HDIL Hopedale 30.02 355 P P 10 27 26.5 -0.8
BNM Barren Site 30.08 325 P P 10 27 30.1 +1.8
P59A Jarrettsville 30.19 15 P P 10 27 29.9 +1.0
baz=199
Y22D IRIS PASSCAL I 30.19 324 P P 10 27 31.3 +2.1
baz=136
Y22D IRIS PASSCAL I 30.19 324 P P 10 27 30.1 +0.9
Y22D IAmb IAmb 10 27 39.5
comp=Z,41nm,0.8s
N49A Columbus Grove 30.30 3 P P 10 27 28.9 -0.9
N41A Harden Midland 30.33 353 P P 10 27 29.1 -1.0
O56A Blue Knob Stat 30.34 11 P P 10 27 31.2 +1.0
baz=195,SNR=9.4
O56A Blue Knob Stat 30.34 11 P P 10 27 31.1 +0.8
O56A IAmb IAmb 10 27 32.6
comp=Z,22nm,0.7s
N51A Ashland 30.42 6 P P 10 27 30.0 -1.0
N51A IAmb IAmb 10 27 31.7
comp=Z,34nm,0.9s
O57A Amberson 30.48 13 P P 10 27 32.2 +0.8
baz=196,SNR=8.0
N53A Lisbon 30.49 8 P P 10 27 30.5 -1.0
N53A IAmb IAmb 10 27 32.6
comp=Z,44nm,0.8s
O58A Lewisberry 30.56 14 P P 10 27 33.2 +1.1
baz=198,SNR=7.1
ANMO Albuquerque 30.57 326 P P 10 27 34.3 +1.8
baz=138
ANMO Albuquerque 30.57 326 P P 10 27 33.6 +1.1
MVL Millersville 30.58 15 P P 10 27 32.7 +0.4
MVL IAmb IAmb 10 27 34.6
comp=Z,39nm,1.2s
P60A Greenville 30.59 16 P P 10 27 33.5 +1.2
baz=200
CBKS Cedar Bluff 30.67 339 P P 10 27 32.7 -0.5
PAGS Pennsylvania G 30.70 14 P P 10 27 33.5 +0.2
PAGS IAmb IAmb 10 27 35.4
comp=Z,44nm,0.8s
N54A Moraine State 30.77 9 P P 10 27 34.3 +0.3
baz=192
N54A Moraine State 30.77 9 P P 10 27 34.5 +0.5
N54A IAmb IAmb 10 27 36.1
comp=Z,41nm,1.4s
N38A Joes South For 30.77 349 P P 10 27 33.0 -1.1
N38A IAmb IAmb 10 27 40.6
comp=Z,25nm,0.7s
M50A Fremont 30.85 4 P P 10 27 34.2 -0.4
M50A IAmb IAmb 10 27 35.3
comp=Z,61nm,0.9s
M51A Elyria 30.85 6 P P 10 27 34.4 -0.3
baz=187
N57A Milroy 31.02 13 P P 10 27 36.9 +0.7
baz=196,SNR=7.0
N56A West Decatur 31.02 12 P P 10 27 37.0 +0.7
baz=195,SNR=19
O60A Telford 31.12 16 P P 10 27 38.4 +1.3
baz=200
M53A WI Miller and 31.13 8 P P 10 27 37.3 +0.1
baz=190,SNR=9.4
M53A WI Miller and 31.13 8 P P 10 27 37.6 +0.4
T25A Trinidad 31.20 331 P P 10 27 39.4 +1.3
baz=144,SNR=17
T25A Trinidad 31.20 331 P P 10 27 40.1 +2.0
N58A Sunbury 31.29 14 P P 10 27 39.4 +0.9
baz=198,SNR=11
N58A Sunbury 31.29 14 P P 10 27 39.2 +0.7
N58A IAmb IAmb 10 27 55.7
comp=Z,42nm,0.9s
L48A N Adams 31.30 2 P P 10 27 37.5 -1.2
N35A Tabor 31.35 346 P P 10 27 38.0 -1.0
M54A Oil Creek Stat 31.35 9 P P 10 27 39.2 +0.1
baz=192,SNR=5.3
M54A Oil Creek Stat 31.35 9 P P 10 27 39.1 0.0
M54A IAmb IAmb 10 27 42.2
comp=Z,25nm,1.1s
LUPA Lehigh Univers 31.39 16 P P 10 27 39.2 -0.3
TUC Tucson 31.43 317 P P 10 27 41.7 +1.7
baz=188
TUC Tucson 31.43 317 P P 10 27 42.1 +2.1
M55A Ridgway 31.46 11 P P 10 27 40.3 +0.2
M55A IAmb IAmb 10 27 57.6
comp=Z,47nm,1.2s
L42A Oliver, Polo 31.49 355 P P 10 27 39.2 -1.1
L44A Lake County Fo 31.55 357 P P 10 27 38.9 -1.8
baz=177
M56A Emporium 31.59 11 P P 10 27 41.7 +0.5
baz=195,SNR=14
M56A Emporium 31.59 11 P P 10 27 41.2 -0.1
N59A State Game Lan 31.59 15 P P 10 27 42.2 +1.0
baz=200,SNR=12
N59A State Game Lan 31.59 15 P P 10 27 42.8 +1.6
N59A IAmb IAmb 10 27 43.4
comp=Z,32nm,0.7s
M57A Sunshine Farm, 31.67 13 P P 10 27 42.7 +0.8
baz=197,SNR=15
M57A Sunshine Farm, 31.67 13 P P 10 27 42.3 +0.4
L53A Girard 31.70 8 P P 10 27 42.0 -0.2
baz=191,SNR=7.4
L40A Anamosa 31.71 353 P P 10 27 41.3 -1.0
N60A Cedar Hill Far 31.72 16 P P 10 27 43.4 +1.0
baz=201
M58A Price's Panora 31.85 14 P P 10 27 44.4 +0.9
baz=198,SNR=9.5
SCIA State Center 31.85 350 P P 10 27 43.0 -0.6
baz=167,SNR=5.7
SCIA State Center 31.85 350 P P 10 27 43.0 -0.6
ERPA Erie 31.90 9 P P 10 27 43.5 -0.4
baz=191
KSCO Kaye Shedlock' 31.95 335 P P 10 27 45.2 +0.6
baz=148,SNR=7.7
KSCO Kaye Shedlock' 31.95 335 P P 10 27 44.9 +0.3
KSCO IAmb IAmb 10 27 52.6
comp=Z,28nm,0.8s
LPAZ La Paz 32.05 146 P P 10 27 46.6 +0.4
comp=Z,1.5nm,0.8s,baz=278,slow=25,SNR=6.3
LPAZ LR LR 10 41 27.3
comp=Z,682nm,19.8s,baz=322,slow=38
LPAZ La Paz 32.05 146 eP P 10 27 46.4 +0.2
K43A Burlington 32.09 357 P P 10 27 44.5 -1.1
PAL Palisades 32.19 17 P P 10 27 47.4 +1.0
baz=203
PAL Palisades 32.19 17 P P 10 27 46.8 +0.4
PAL IAmb IAmb 10 27 48.2
comp=Z,28nm,1.1s
KSPA Keystone Colle 32.19 15 P P 10 27 47.2 +0.7
KSPA IAmb IAmb 10 28 03.2
comp=Z,52nm,1.3s
SDCO Great Sand Dun 32.21 330 P P 10 27 47.9 +0.9
baz=142,SNR=53
SDCO Great Sand Dun 32.21 330 P P 10 27 47.9 +0.9
SDCO IAmb IAmb 10 27 50.2
comp=Z,24nm,0.7s
N62A Caumsett State 32.25 18 P P 10 27 48.5 +1.5
baz=204
M59A Waymart 32.26 15 P P 10 27 48.2 +1.0
baz=200,SNR=9.6
M60A Port Jervis 32.28 16 P P 10 27 48.3 +1.0
baz=201,SNR=6.6
X18A Snowflake 32.31 321 P P 10 27 48.2 +0.3
X18A IAmb IAmb 10 27 52.6
comp=Z,18nm,0.9s
L56A Greenwood 32.34 12 P P 10 27 48.3 +0.5
baz=196
L56A Greenwood 32.34 12 P P 10 27 48.5 +0.6
L56A IAmb IAmb 10 28 04.6
comp=Z,38nm,1.0s
L57A Andrews Acres 32.36 13 P P 10 27 48.1 +0.1
baz=197,SNR=8.7
JFWS Jewell Farm 32.44 354 P P 10 27 47.8 -0.9
baz=172,SNR=16
JFWS Jewell Farm 32.44 354 P P 10 27 47.6 -1.1
K38A Parkersburg 32.50 351 P P 10 27 48.2 -1.0
M61A Granite Spring 32.51 17 P P 10 27 49.3 +0.1
baz=203,SNR=5.6
BGNE Belgrade 32.52 343 P P 10 27 48.7 -0.7
baz=158
BGNE Belgrade 32.52 343 P P 10 27 48.4 -1.0
L34A Svendsen Farm, 32.57 346 P P 10 27 48.8 -1.0
L34A IAmb IAmb 10 28 14.6
comp=Z,28nm,0.8s
W18A Petrified Fore 32.58 322 P P 10 27 52.3 +2.1
baz=133,SNR=9.1
W18A Petrified Fore 32.58 322 P P 10 27 52.0 +1.7
W18A IAmb IAmb 10 27 54.4
comp=Z,34nm,0.8s
J47A Sunmer 32.58 2 P P 10 27 48.8 -1.1
J47A IAmb IAmb 10 27 49.5
comp=Z,27nm,0.8s
214A Organ Pipe Nat 32.60 315 P P 10 27 52.5 +2.2
baz=125
214A Organ Pipe Nat 32.60 315 P P 10 27 52.2 +1.9
L58A Harry Jones Me 32.63 14 P P 10 27 51.0 +0.6
baz=199,SNR=13
BINY Binghamton 32.75 14 P P 10 27 51.9 +0.5
baz=198,SNR=13
BINY Binghamton 32.75 14 P P 10 27 52.0 +0.7
MMNY Mt. Morris Dam 32.85 11 P P 10 27 52.5 +0.2
MMNY IAmb IAmb 10 27 53.1
comp=Z,40nm,0.8s
S22A 4UR Ranch, Cre 32.87 329 P P 10 27 53.9 +1.1
baz=140,SNR=21
S22A 4UR Ranch, Cre 32.87 329 P P 10 27 53.7 +0.9
M62A Hamden 32.89 18 P P 10 27 54.0 +1.4
baz=204
K56A Middlesex 32.93 12 P P 10 27 53.0 0.0
baz=196,SNR=5.4
KSCT Kent School, K 32.97 17 P P 10 27 53.7 +0.4
L59A Walton 32.97 15 P P 10 27 53.7 +0.4
baz=200,SNR=6.0
L59A Walton 32.97 15 P P 10 27 53.3 -0.1
L59A IAmb IAmb 10 28 10.6
comp=Z,36nm,1.1s
L60A Shokan 33.00 16 P P 10 27 54.8 +1.2
baz=202
Q24A Divide 33.02 332 P P 10 27 55.1 +0.9
baz=144
Q24A Divide 33.02 332 P P 10 27 55.7 +1.5
PB16 IPOC Station P 33.04 150 P P 10 27 55.1 +0.3
M63A Gales Ferry 33.13 20 P P 10 27 55.4 +0.7
baz=206
K57A Scipio Center 33.13 13 P P 10 27 55.1 +0.4
baz=197
X16A Lo Mia Camp, P 33.17 320 P P 10 27 57.4 +2.0
I42A Draeger Farm, 33.31 356 P P 10 27 55.4 -0.9
I42A IAmb IAmb 10 27 56.2
comp=Z,49nm,1.1s
MVCO Mesa Verde 33.35 326 P P 10 27 58.1 +1.1
baz=137,SNR=16
MVCO Mesa Verde 33.35 326 P P 10 27 57.9 +0.9
MVCO IAmb IAmb 10 28 06.4
comp=Z,21nm,0.8s
K58A Earlville 33.36 14 P P 10 27 57.0 +0.2
baz=199,SNR=8.7
K58A Earlville 33.36 14 P P 10 27 56.7 -0.1
K58A IAmb IAmb 10 27 59.0
comp=Z,28nm,0.8s
L61A Hillsdale 1, H 33.38 17 P P 10 27 58.0 +1.1
baz=203
I51A Listowel 33.42 7 P P 10 27 57.0 -0.2
baz=189
I40A Norwalk 33.45 354 P P 10 27 56.2 -1.3
L62A Suffield 33.50 18 P P 10 27 59.5 +1.6
baz=204
K59A Cooperstown 33.57 15 P P 10 27 59.4 +0.8
baz=200,SNR=6.3
J56A Wolcott 33.58 12 P P 10 27 58.5 -0.1
baz=196
J56A Wolcott 33.58 12 P P 10 27 58.1 -0.5
ITTB Itaituba 33.67 115 eP P 10 28 00.8 +1.0
MNMC Minye Minye 33.68 151 P P 10 28 01.2 +1.1
MNMC IAmb IAmb 10 28 10.9
comp=Z,44nm,1.2s
L63A North Scituate 33.68 20 P P 10 27 59.9 +0.4
baz=206
113A Mohawk Valley, 33.73 315 P P 10 28 02.2 +2.2
113A IAmb IAmb 10 28 04.1
comp=Z,28nm,1.4s
K31A O'Neill 33.81 343 P P 10 27 59.6 -1.0
WUAZ Wupatki 33.84 321 P P 10 28 03.1 +1.9
baz=131
WUAZ Wupatki 33.84 321 P P 10 28 03.0 +1.8
WUAZ IAmb IAmb 10 28 12.5
comp=Z,22nm,1.1s
L61B Northampton 33.88 18 P P 10 28 01.9 +0.7
baz=204
Y14A Wickenburg 33.89 318 P P 10 28 03.0 +1.4
J57A Williamstown 33.89 13 P P 10 28 01.4 0.0
baz=198
ISCO Idaho Springs 33.90 333 P P 10 28 02.8 +0.9
baz=144,SNR=7.8
ISCO Idaho Springs 33.90 333 P P 10 28 02.0 +0.1
K61A Williamstown 33.90 17 P P 10 28 03.0 +1.5
baz=203
I37A Lemond, Waseca 33.94 351 P P 10 28 00.5 -1.2
MALB Monte Alegre 33.99 109 eP P 10 28 03.5 +1.0
J58A Remsen 34.01 14 P P 10 28 02.6 +0.2
baz=199,SNR=10
J58A Remsen 34.01 14 P P 10 28 02.1 -0.3
J58A IAmb IAmb 10 28 03.5
comp=Z,32nm,0.7s
SMCO Snowmass 34.05 330 P P 10 28 04.0 +0.7
PV01 Paradox Valley 34.07 327 P P 10 28 03.4 +0.2
GLMI Grayling 34.17 2 P P 10 28 02.5 -1.3
baz=183
PV15 Paradox Valley 34.17 328 P P 10 28 05.0 +0.8
K62A Royalston 34.21 18 P P 10 28 05.0 +0.9
baz=205
K62A Royalston 34.21 18 P P 10 28 05.4 +1.4
K62A IAmb IAmb 10 28 05.8
comp=Z,50nm,1.2s
PV02 Paradox Valley 34.21 327 P P 10 28 05.6 +1.2
PV02 IAmb IAmb 10 28 14.1
comp=Z,28nm,1.3s
ECSD EROS Data Cent 34.30 346 P P 10 28 03.2 -1.6
baz=162,SNR=18
ECSD EROS Data Cent 34.30 346 P P 10 28 03.2 -1.6
ECSD IAmb IAmb 10 28 04.2
comp=Z,40nm,1.2s
PV03 Paradox Valley 34.30 327 P P 10 28 05.7 +0.5
PV03 IAmb IAmb 10 28 08.1
comp=Z,28nm,0.8s
J59A Piesco 34.30 15 P P 10 28 05.3 +0.3
baz=200
PV18 Skein Mesa, Pa 34.33 327 P P 10 28 06.4 +1.0
J60A Lant Hill Farm 34.39 16 P P 10 28 06.4 +0.8
baz=202
I58A Old Forge 34.40 14 P P 10 28 05.9 +0.1
baz=200,SNR=8.6
PV20 West Nyswonger 34.43 327 P P 10 28 06.8 +0.5
PV20 IAmb IAmb 10 28 15.5
comp=Z,27nm,0.7s
K63A Dunstable 34.45 19 P P 10 28 07.6 +1.4
baz=206
I57A Carthage 34.47 13 P P 10 28 06.6 +0.3
baz=198
PV22 Blue Mesa, Par 34.48 328 P P 10 28 07.5 +0.7
PV10 Paradox Valley 34.49 327 P P 10 28 07.3 +0.3
H53A Bobcaygeon 34.51 9 P P 10 28 06.4 -0.3
baz=193,SNR=14
PV23 Carpenter Ridg 34.53 327 P P 10 28 08.5 +1.2
PV23 IAmb IAmb 10 28 17.8
comp=Z,20nm,0.7s
SADO Sadowa 34.62 9 P P 10 28 06.7 -0.9
SADO IAmb IAmb 10 28 07.8
comp=Z,46nm,0.9s
GLA Glamis 34.62 315 P P 10 28 10.9 +3.0
baz=124
GLA Glamis 34.62 315 P P 10 28 08.6 +0.7
GLA IAmb IAmb 10 28 12.1
comp=Z,44nm,1.2s
DELO Deloro Mine 34.63 11 P P 10 28 07.7 0.0
DELO IAmb IAmb 10 28 32.3
comp=Z,27nm,1.3s
VILB Vilhena 34.73 132 eP P 10 28 10.0 +1.1
J61A Chester 34.73 17 P P 10 28 09.9 +1.3
baz=204

G40A Rib Lake 34.77 355 P P 10 28 08.2 -0.8
G40A IAmb IAmb 10 28 08.8
comp=Z,23nm,0.7s
I59A Olmsteadville 34.78 16 P P 10 28 09.1 +0.1
baz=201,SNR=9.4
J62A Henniker 34.85 18 P P 10 28 10.6 +1.0
baz=205
PDMCI Parker Dam,Lak 34.87 317 P P 10 28 12.6 +2.7
baz=126,SNR=9.9
N23A Red Feather La 34.94 333 P P 10 28 11.7 +1.0
baz=144,SNR=5.9
N23A Red Feather La 34.94 333 P P 10 28 11.2 +0.4
I60A Shoreham 34.98 16 P P 10 28 11.0 +0.3
baz=202
U15A North Rim 35.00 322 P P 10 28 12.4 +1.1
SPMN Marine on St. 35.03 352 P P 10 28 09.4 -1.7
baz=168,SNR=27
SPMN Marine on St. 35.03 352 P P 10 28 10.0 -1.1
H57A Richville 35.03 13 P P 10 28 11.0 -0.1
baz=198
W13A Hualapai Mount 35.17 318 P P 10 28 13.2 +0.4
W13A IAmb IAmb 10 28 17.2
comp=Z,23nm,0.8s
NPGB Novo Progresso 35.24 118 eP P 10 28 13.3 -0.1
SWSC Sam W. Stewart 35.25 314 P P 10 28 16.4 +3.2
baz=123
H58A Gabriels 35.28 15 P P 10 28 12.9 -0.4
baz=200
IKP In-Ko-Pah, Jac 35.31 313 P P 10 28 17.2 +3.3
baz=122
I61A Oroboro, Fairl 35.37 17 P P 10 28 15.2 +1.2
baz=204
LONY Lake Ozonia 35.37 14 P P 10 28 14.1 0.0
baz=200,SNR=9.9
LONY Lake Ozonia 35.37 14 P P 10 28 13.8 -0.3
LONY IAmb IAmb 10 28 14.9
comp=Z,31nm,0.7s
BC3 Big Chuckawall 35.39 315 P P 10 28 17.9 +3.3
baz=124
G54A Lake Saint Pet 35.40 10 P P 10 28 13.4 -1.0
baz=194,SNR=10
O20A White River Ci 35.41 330 P P 10 28 16.0 +1.3
baz=140,SNR=22
O20A White River Ci 35.41 330 P P 10 28 16.2 +1.5
O20A IAmb IAmb 10 28 30.4
comp=Z,25nm,0.8s
NEE2 Needles Airpor 35.46 317 P P 10 28 18.2 +3.2
baz=126
IRM Iron Mountain 35.46 316 P P 10 28 17.7 +2.6
baz=125,SNR=7.7
CBX Cerro Bola 35.54 312 P P 10 28 17.7 +1.8
MCPB Macapa, AP 35.54 106 eP P 10 28 15.3 -0.7
SUSD Miller 35.55 344 P P 10 28 14.5 -1.1
baz=158,SNR=5.4
I62A Tamworth 35.58 18 P P 10 28 17.1 +1.2
baz=205
H59A Cadyville 35.62 15 P P 10 28 16.4 +0.2
baz=201
MONP2 Monument Peak 35.67 313 P P 10 28 20.2 +3.2
baz=122
PKCU Pink Cliffs 35.68 323 P P 10 28 18.8 +1.6
KNB Kanab 35.71 322 P P 10 28 19.7 +2.4
G57A Newington 35.73 14 P P 10 28 16.9 -0.3
baz=199
LBNH Lisbon 35.73 18 P P 10 28 18.4 +1.2
baz=204
LBNH Lisbon 35.73 18 P P 10 28 18.2 +1.0
F36A Milaca 35.76 351 P P 10 28 15.7 -1.7
H60A Morristown 35.80 16 P P 10 28 18.0 +0.2
baz=203
SRU San Rafael Swe 35.82 327 P P 10 28 19.2 +0.9
ALGO Algonquin Park 35.94 10 P P 10 28 18.5 -0.5
baz=194,SNR=9.1
BELC Belle Mtn. Jos 35.96 315 P P 10 28 22.5 +3.0
baz=124,SNR=6.3
I63A Otisfield 35.98 19 P P 10 28 20.5 +1.2
baz=206
G58A Ormstown 35.99 15 P P 10 28 19.6 +0.2
baz=200
H61A Lyndonville 36.00 17 P P 10 28 20.1 +0.6
baz=204
MTPU Mount Pierson 36.01 324 P P 10 28 21.5 +1.4
Q16A Castle Valley 36.04 326 P P 10 28 21.1 +0.9
TPFO Pinon Flats 36.07 314 P P 10 28 23.3 +2.9
baz=123,SNR=9.5
PFO Pinyon Flats O 36.07 314 P P 10 28 23.4 +3.0
baz=123,SNR=7.1
PFO Pinyon Flats O 36.07 314 P P 10 28 22.6 +2.1
RWWY Rawlins 36.14 333 P P 10 28 22.0 +1.0
RWWY IAmb IAmb 10 28 23.6
comp=Z,27nm,0.8s
109C Camp Elliot, M 36.16 313 P P 10 28 24.1 +3.1
baz=121
109C Camp Elliot, M 36.16 313 P P 10 28 21.6 +0.6
109C IAmb IAmb 10 28 25.0
comp=Z,29nm,1.2s
GMRC Granite Mounta 36.17 317 P P 10 28 23.9 +2.7
baz=125,SNR=9.5
P17A Butcher Ranch, 36.20 327 P P 10 28 22.0 +0.5
H62A Milan 36.27 18 P P 10 28 22.6 +0.8
baz=205
MSU Marysvale 36.32 324 P P 10 28 24.2 +1.6
G60A Masonville 36.40 16 P P 10 28 23.2 +0.3
baz=203
MURC Murrieta 36.59 314 P P 10 28 28.1 +3.4
baz=122,SNR=15
K22A Casper 36.62 334 P P 10 28 26.1 +1.0
baz=145,SNR=8.1
K22A Casper 36.62 334 P P 10 28 25.7 +0.7
K22A IAmb IAmb 10 28 35.3
comp=Z,23nm,0.9s
MOQ Mont Orford 36.62 16 P P 10 28 24.8 -0.1
HEC Hector,Ludlow 36.65 316 P P 10 28 28.2 +2.9
baz=124,SNR=7.6
H63A New Sharon 36.70 19 P P 10 28 26.3 +0.9
baz=207
WVL Waterville 36.74 20 P P 10 28 27.6 +1.9
WVL IAmb IAmb 10 28 36.1
comp=Z,50nm,1.4s
BBRC Big Bear Solar 36.74 315 P P 10 28 30.3 +4.0
baz=123
E55A Montcerf-Lytto 36.79 12 P P 10 28 25.9 -0.3
baz=196
G61A St-Isidore-de- 36.80 17 P P 10 28 26.8 +0.5
baz=204
SHPR Sheep Range 36.85 319 P P 10 28 28.9 +1.9
RSSD Black Hills 36.87 338 P P 10 28 28.2 +1.0
baz=150
RSSD Black Hills 36.87 338 P P 10 28 27.4 +0.2
CLDB Colider 36.88 124 eP P 10 28 26.1 -1.3
H64A Troy 36.95 20 P P 10 28 28.6 +1.0
baz=208
F59A Saint Guilaume 36.97 16 P P 10 28 27.9 +0.2
baz=202
LVC Limon Verde 37.01 153 eP P 10 28 27.8 -1.0
G62A West of Eustis 37.04 18 P P 10 28 28.5 +0.2
baz=206,SNR=9.6
G62A West of Eustis 37.04 18 P P 10 28 28.6 +0.2
G62A IAmb IAmb 10 28 30.2
comp=Z,32nm,0.8s
MPU Maple Canyon 37.07 327 P P 10 28 29.6 +0.7
E56A St. Veronique 37.08 13 P P 10 28 27.7 -1.0
baz=198
RRX Edison Barstow 37.13 316 P P 10 28 31.1 +1.8
baz=123
PTLB Pontes e Lacer 37.15 134 eP P 10 28 30.6 +1.0
E57A Chemin Saint G 37.16 14 P P 10 28 28.6 -0.8
baz=200
GSC Goldstone, Bar 37.23 316 P P 10 28 32.7 +2.4
baz=124,SNR=5.9
GSC Goldstone, Bar 37.23 316 P P 10 28 30.8 +0.5
G63A Kingsbury 37.24 19 P P 10 28 30.8 +0.7
baz=207
BFSC Mount Baldy Ra 37.25 314 P P 10 28 33.3 +2.9
baz=122,SNR=6.7
F60A Warwick 37.31 16 P P 10 28 30.4 -0.2
baz=203,SNR=6.3
PSUT Pine Spring 37.32 323 P P 10 28 32.4 +1.4
PRN Pahroc Range 37.33 321 P P 10 28 33.0 +1.9
E58A La Victoria 37.33 15 P P 10 28 30.2 -0.6
baz=201,SNR=7.6
H65A Eastbrook 37.34 21 P P 10 28 31.6 +0.7
baz=210
CIS Catalina Islan 37.36 313 P P 10 28 33.2 +1.9
baz=120
JLU Jordanelle 37.39 328 P P 10 28 32.1 +0.4

D55A Sainte-Anne-du 37.45 12 P P 10 28 31.2 -0.6
baz=197
PKME Peaks-Kenny Pk 37.48 20 P P 10 28 32.8 +0.8
baz=208,SNR=5.8
PASC Pasadena Art C 37.59 314 P P 10 28 34.3 +1.1
PASC IAmb IAmb 10 28 44.6
comp=Z,28nm,1.1s
CTU Camp Tracy 37.61 327 P P 10 28 34.5 +1.0
D56A ZEC Mazanza, M 37.62 13 P P 10 28 32.2 -1.1
baz=198
G64A Maxfield 37.65 20 P P 10 28 34.3 +0.9
baz=208
DECC Green Verdugo 37.73 314 P P 10 28 37.8 +3.4
baz=121
TCUT Toone Canyon 37.74 328 P P 10 28 36.0 +1.3
TPNV Topopah Spring 37.81 319 P P 10 28 38.4 +3.2
baz=126,SNR=22
TPNV Topopah Spring 37.81 319 P P 10 28 37.6 +2.4
TPNV IAmb IAmb 10 28 39.8
comp=Z,36nm,1.0s
E60A Ste Agathe de 37.81 17 P P 10 28 34.8 0.0
baz=204
EDW2 Edwards Air Fo 37.82 315 P P 10 28 37.8 +2.6
baz=122,SNR=11
DUG Dugway, Tooele 37.84 326 P P 10 28 37.4 +2.0
baz=134,SNR=6.4
DUG Dugway, Tooele 37.84 326 P P 10 28 37.1 +1.7
SPR3 Spring Creek 3 37.90 323 P P 10 28 36.7 +0.5
F63A Nahmakanta, Br 37.93 19 P P 10 28 36.1 +0.2
baz=208
LRMC Laurel Mtn Rad 37.93 316 P P 10 28 39.5 +3.3
baz=123
FURC Furnace Creek, 37.93 318 P P 10 28 39.6 +3.6
baz=125
E28A Huff 37.99 344 P P 10 28 35.6 -0.8
E28A IAmb IAmb 10 28 36.7
comp=Z,54nm,0.9s
G65A Princeton 38.02 21 P P 10 28 37.3 +0.7
baz=200
BW06 Boulder Array 38.06 332 P P 10 28 37.5 +0.1
baz=141,SNR=16
PD31 Pinedale Array 38.06 332 P P 10 28 37.5 +0.2
PDAR Pinedale Array 38.06 332 P P 10 28 37.4 0.0
comp=Z,10.0nm,0.6s,baz=129,slow=9.6,SNR=65
PDAR PcP PcP 10 30 53.5 +1.3
comp=Z,5.3nm,0.8s,baz=140,slow=5.1,SNR=14
PDAR ScP ScP 10 34 39.5 +2.6
comp=Z,0.2nm,0.4s,baz=172,slow=1.8,SNR=2.8
PDAR LR LR 10 47 14.8
comp=Z,437nm,21.0s,baz=141,slow=41
PDAR Pinedale Array 38.06 332 P P 10 28 37.0 -0.3
D58A Chemin du LacG 38.10 15 P P 10 28 37.0 -0.3
baz=201,SNR=10
MPMC Manual Prospec 38.12 317 P P 10 28 40.4 +2.6
baz=124,SNR=16
E61A Lac Etchemin 38.15 18 P P 10 28 38.7 +0.9
baz=205
OSI Osito Audit: C 38.20 314 P P 10 28 41.3 +2.9
baz=121
OSI Osito Audit: C 38.20 314 P P 10 28 38.2 -0.1
OSI IAmb IAmb 10 28 51.4
comp=Z,36nm,1.3s
R11A Troy Canyon, C 38.24 321 P P 10 28 41.2 +2.3
baz=129,SNR=14
R11A Troy Canyon, C 38.24 321 P P 10 28 40.5 +1.7
F64A Sherman 38.32 20 P P 10 28 39.6 +0.5
baz=209
F64A Sherman 38.32 20 P P 10 28 39.4 +0.2
F64A IAmb IAmb 10 28 40.7
comp=Z,35nm,1.0s
LATQ La Tuque 38.40 15 P P 10 28 39.6 -0.2
baz=201,SNR=16
D60A Saint Jean D'O 38.46 17 P P 10 28 40.0 -0.3
baz=204
BGU Big Grassy Mou 38.47 327 P P 10 28 41.6 +1.0
AGMN Agassiz Nation 38.51 350 P P 10 28 39.0 -1.7
baz=164,SNR=19
AGMN Agassiz Nation 38.51 350 P P 10 28 39.5 -1.2
AGMN IAmb IAmb 10 28 41.4
comp=Z,41nm,0.8s
ARVC Arvin 38.54 315 P P 10 28 44.5 +3.4
baz=122,SNR=16
GRAC Grapevine Rang 38.57 318 P P 10 28 45.2 +3.7
baz=125
ISA Isabella, Lake 38.57 316 P P 10 28 44.7 +3.1
baz=123,SNR=8.5
ISA Isabella, Lake 38.57 316 P P 10 28 43.3 +1.8
E62A Clayton Lake 38.61 18 P P 10 28 41.4 -0.2
baz=207
CWC Cottonwood Cre 38.73 317 P P 10 28 45.4 +2.5
baz=124
E63A Oxbow 38.78 20 P P 10 28 43.8 +0.8
baz=208
AHID Auburn Hatcher 38.80 330 P P 10 28 44.0 +0.5
MDND Maddock 38.88 345 P P 10 28 42.9 -0.9
baz=159,SNR=17
MDND Maddock 38.88 345 P P 10 28 43.1 -0.8
HVU Hansel Valley 38.93 328 P P 10 28 45.8 +1.2
D61A St Aubert, Com 38.93 17 P P 10 28 45.1 +0.9
baz=205
E64A Bridgewater 38.98 20 P P 10 28 45.2 +0.5
baz=209
VES Vestal, Richgr 39.09 315 P P 10 28 49.1 +3.3
baz=122,SNR=23
PKM Mcpherson Peak 39.11 314 P P 10 28 48.6 +2.4
baz=120,SNR=7.3
REDW Red Top Meadow 39.13 331 P P 10 28 47.0 +0.7
REDW IAmb IAmb 10 28 48.6
comp=Z,49nm,0.8s
LSQQ Lebel-sur-Quev 39.13 10 P P 10 28 44.7 -1.2
baz=194
SNOW Snow King Moun 39.16 331 P P 10 28 46.7 +0.2
SNOW IAmb IAmb 10 28 56.9
comp=Z,34nm,0.8s
D62A Allapoint, All 39.17 18 P P 10 28 46.2 -0.1
baz=207
TIN Tinemaha, Big 39.17 318 P P 10 28 49.4 +2.9
baz=124
TPAW Teton Pass 39.27 331 P P 10 28 47.4 -0.1
TPAW IAmb IAmb 10 28 59.9
comp=Z,32nm,0.9s
D63A Stockholm 39.43 19 P P 10 28 48.7 +0.3
baz=208
SMMC Simmler 39.45 314 P P 10 28 52.1 +3.3
baz=120,SNR=14
ELK Elko 39.57 324 P P 10 28 50.9 +0.9
IMW Indian Meadow 39.58 332 P P 10 28 49.7 -0.4
FLWY Flagg Ranch 39.61 332 P P 10 28 50.2 0.0
FLWY IAmb IAmb 10 29 01.0
comp=Z,34nm,1.0s
MATQ Matagami 39.71 9 P P 10 28 49.6 -1.1
baz=193
PRPB Paraupebas 39.76 113 eP P 10 28 51.9 +0.3
RLMT Red Lodge 39.78 334 P P 10 28 51.7 +0.1
baz=143
H17A Grant Village 39.79 332 P P 10 28 53.7 +1.9
baz=141
H17A Grant Village 39.79 332 P P 10 28 53.7 +1.9
YPP Pitchstone Pla 39.80 332 P P 10 28 53.7 +1.8
PAGB Antelope Grade 39.84 315 P P 10 28 53.4 +1.4
PAGB IAmb IAmb 10 28 56.1
comp=Z,49nm,0.8s
YMP Mirror Lake Pl 39.87 333 P P 10 28 53.6 +1.1
MLAC Mammoth, Mammo 39.89 318 P P 10 28 56.2 +3.4
baz=124
NV11 Mina Array Sit 39.91 319 P P 10 28 54.9 +2.2
NV11 IAmb IAmb 10 28 57.1
comp=Z,39nm,1.0s
TMAB Tom-Au,PA,Br 39.94 107 eP P 10 28 53.7 +0.6
NVAR Mina Array Bea 40.00 319 P P 10 28 56.2 +2.6
comp=Z,36nm,0.8s,baz=130,slow=7.0,SNR=190
NVAR PcP PcP 10 31 00.8 +2.5
comp=Z,17nm,0.8s,baz=136,slow=4.2,SNR=24
NVAR LR LR 10 47 14.4
comp=Z,425nm,19.8s,baz=135,slow=39
NVAR Mina Array Bea 40.00 319 P P 10 28 55.9 +2.3
LHV Little Huntoon 40.02 319 P P 10 28 55.7 +2.2
LHV IAmb IAmb 10 28 58.3
comp=Z,56nm,0.8s
YNR Norris Junctio 40.09 333 P P 10 28 55.1 +0.9
YMR Madison River 40.18 332 P P 10 28 55.4 +0.4
YHH Holmes Hill 40.22 332 P P 10 28 56.2 +0.8
KVN Kaiserville 40.23 320 P P 10 28 57.1 +1.6
KVN IAmb IAmb 10 28 59.1
comp=Z,28nm,0.8s
RYN Ryan 40.25 319 P P 10 28 56.6 +1.0

RYN IAmb IAmb 10 28 59.6
comp=Z,26nm,0.8s
YHB Horse Butte 40.35 332 P P 10 28 57.3 +0.9
ULM Lac du Bonnet 40.40 350 P P 10 28 54.1 -2.3
comp=Z,28nm,0.8s,baz=171,slow=7.6,SNR=22
ULM PcP PcP 10 31 00.1 +1.2
comp=Z,9.0nm,0.8s,baz=184,slow=5.5,SNR=3.8
ULM LR LR 10 47 25.4
comp=Z,288nm,18.9s,baz=152,slow=39
YHL Hebgen Lake 40.42 332 P P 10 28 58.6 +1.6
CHGQ Chibougamau 40.42 12 P P 10 28 54.5 -2.2
baz=198
PMPB Monarch Peak 40.47 315 P P 10 28 57.3 -0.1
PMPB IAmb IAmb 10 29 01.9
comp=Z,27nm,0.9s
QLMT Earthquake Lak 40.52 332 P P 10 28 59.0 +1.2
AC02 Maricunga 40.65 156 P P 10 29 01.0 +1.7
DGMT Dagmar 40.73 342 P P 10 28 59.2 0.0
baz=152,SNR=17
DGMT Dagmar 40.73 342 P P 10 28 59.0 -0.3
WAKR Walker 40.77 319 P P 10 29 00.6 +0.6
WAKR IAmb IAmb 10 29 04.4
comp=Z,50nm,0.9s
HLID Hailey 41.05 328 P P 10 29 02.8 +0.7
baz=135,SNR=39
HLID Hailey 41.05 328 P P 10 29 02.6 +0.5
BCYI Bear Canyon 41.07 330 P P 10 29 03.3 +0.9
CMB Columbia Colle 41.14 317 P P 10 29 03.9 +1.1
MCMT McKenzie Canyo 41.18 331 P P 10 29 04.7 +1.4
SNDB Serra Nova Dou 41.19 122 eP P 10 29 04.2 +0.8
BOZ Bozeman (W) 41.19 333 P P 10 29 03.9 +0.6
baz=140,SNR=32
BOZ Bozeman (W) 41.19 333 P P 10 29 02.9 -0.4
PNTR Pine Nut 41.21 319 P P 10 29 05.2 +1.6
PNTR IAmb IAmb 10 29 08.0
comp=Z,44nm,0.7s
VCNR Virginia City 41.36 320 P P 10 29 06.4 +1.6
PAHR Pah Rah Range 41.42 320 P P 10 29 07.0 +1.7
DLMT Dillon 41.46 332 P P 10 29 06.0 +0.6
MFID Camas Ranch 41.69 327 P P 10 29 08.1 +0.8
LRM Limekiln Ridge 41.74 332 P P 10 29 07.6 -0.3
AFDM Forest Hills D 42.02 318 P P 10 29 12.3 +2.3
BEKR Beckworth 42.13 320 P P 10 29 12.8 +1.7
BEKR IAmb IAmb 10 29 14.7
comp=Z,38nm,0.9s
HRY Holter Researc 42.14 334 P P 10 29 10.8 -0.2
WVOR Wild Horse Val 42.61 324 P P 10 29 15.2 +0.3
WVOR IAmb IAmb 10 29 17.4
comp=Z,44nm,0.8s
ORV Oroville 42.69 319 P P 10 29 16.8 +1.4
ORV IAmb IAmb 10 29 20.1
comp=Z,40nm,0.9s
ARAG Araguaiana, MT 42.81 127 eP P 10 29 16.8 +0.2
SMTB Santa Maria do 42.90 115 eP P 10 29 17.9 +0.5
PLID Pearl Lake 42.93 329 P P 10 29 17.2 -0.3
PLID IAmb IAmb 10 29 25.6
comp=Z,30nm,0.9s
AQDB Aquidauana 42.95 136 eP P 10 29 18.5 +0.9
J08A Circle Bar Ran 43.10 325 P P 10 29 19.1 +0.3
GDXM Geysers 43.15 317 P P 10 29 20.5 +1.3
MSO Missoula 43.18 332 P P 10 29 19.5 +0.2
baz=138,SNR=19
MSO Missoula 43.18 332 P P 10 29 18.9 -0.4
MOD Modoc Plateau 43.27 322 P P 10 29 20.1 -0.2
O03E Paynes Creek 43.29 319 P P 10 29 21.3 +0.9
baz=123,SNR=15
BMO Blue Mountains 43.44 328 P P 10 29 21.9 +0.3
O02D Mt. Diablo Mer 43.86 319 P P 10 29 25.1 +0.2
baz=122,SNR=16
ROSB Rosrio 43.86 105 eP P 10 29 24.7 -0.5
KCPM Cahto Peak 44.13 318 P P 10 29 28.4 +1.3
KCPM IAmb IAmb 10 29 38.3
comp=Z,40nm,0.9s
I07A Izee 44.14 325 P P 10 29 27.2 +0.1
M04C Macdoel 44.14 321 P P 10 29 28.1 +0.9
baz=125,SNR=26
F10A Beach Ranch, E 44.16 329 P P 10 29 26.7 -0.6
F10A IAmb IAmb 10 29 37.3
comp=Z,21nm,0.8s
N02D Trinity Center 44.23 320 P P 10 29 27.7 -0.2
baz=123
KMRM Mail Ridge 44.48 318 P P 10 29 32.2 +2.2
KMRM IAmb IAmb 10 29 34.2
comp=Z,72nm,1.2s
M02C Callahan 44.55 320 P P 10 29 30.6 +0.1
baz=123
K04D Chiloquin, OR 44.57 322 P P 10 29 32.0 +1.4
baz=125,SNR=7.3
G08A Pilot Rock 44.61 327 P P 10 29 31.2 +0.3
J05D Fort Rock, OR 44.64 323 P P 10 29 32.0 +0.8
baz=126,SNR=6.9
YBH Yreka Blue Hor 44.65 321 P P 10 29 30.9 -0.3
L04D Klamath Falls 44.67 321 P P 10 29 32.1 +0.6
baz=124,SNR=16
PINE Pine Mountain 44.78 324 P P 10 29 32.6 +0.2
PINE IAmb IAmb 10 29 35.2
comp=Z,40nm,0.8s
WALA Waterton Lakes 44.84 334 P P 10 29 32.5 -0.2
KHMM Horse Mountain 44.84 319 P P 10 29 34.1 +1.3
KHMM IAmb IAmb 10 29 36.0
comp=Z,42nm,0.8s
E09A Wood Farm, Sta 45.00 329 P P 10 29 34.5 +0.7
E09A IAmb IAmb 10 29 42.1
comp=Z,42nm,1.4s
JCC Jacoby Creek, 45.00 319 P P 10 29 33.7 -0.2
J04D Umpqua Nationa 45.14 323 P P 10 29 36.9 +1.6
baz=126,SNR=10
KRMB Red Mountain 45.29 320 P P 10 29 36.8 +0.3
KRMB IAmb IAmb 10 29 40.1
comp=Z,30nm,0.9s
I05D Terrebonne, OR 45.33 324 P P 10 29 38.6 +2.0
baz=127,SNR=12
L02E Cave Junction 45.44 321 P P 10 29 38.2 +0.7
baz=123
E08A Dider Farm, El 45.45 328 P P 10 29 36.9 -0.5
E08A IAmb IAmb 10 29 45.4
comp=Z,22nm,1.0s
F07A Phinny Hill Vi 45.52 327 P P 10 29 38.7 +0.8
F07A IAmb IAmb 10 29 46.8
comp=Z,31nm,1.2s
HAWA Hanford 45.63 328 P P 10 29 38.6 -0.2
HAWA IAmb IAmb 10 29 40.7
comp=Z,22nm,0.8s
I04A Tendick Farm, 45.63 323 P P 10 29 39.3 +0.3
baz=126,SNR=20
NEW Newport 45.70 331 P P 10 29 39.5 0.0
baz=135,SNR=6.5
NEW Newport 45.70 331 P P 10 29 39.4 0.0
D08A Wollman Farm, 45.76 329 P P 10 29 39.8 0.0
D08A IAmb IAmb 10 29 49.5
comp=Z,18nm,0.8s
K02D Willamette Mer 45.77 321 P P 10 29 41.2 +1.0
baz=123,SNR=6.4
BDFB Brasilia 45.82 124 P P 10 29 41.9 +1.0
comp=Z,12nm,0.7s,baz=293,slow=11,SNR=15
G05D Wamic, OR 45.87 325 P P 10 29 42.5 +1.7
baz=128,SNR=18
E07A Sunnyside 45.91 328 P P 10 29 41.3 +0.2
C09A Chrisman Ranch 45.94 330 P P 10 29 41.5 +0.2
C09A IAmb IAmb 10 29 49.3
comp=Z,19nm,0.7s
H04A Detroit Lake 46.03 324 P P 10 29 42.2 +0.2
CPUP Villa Florida 46.11 143 P P 10 29 43.1 +0.3
comp=Z,4.8nm,0.9s,baz=328,slow=7.4,SNR=6.4
CPUP LR LR 10 49 23.9
comp=Z,253nm,19.4s,baz=321,slow=36
I03D Drain, OR 46.14 322 P P 10 29 44.2 +1.4
baz=124,SNR=6.2
J01E Myrtle Point 46.19 322 P P 10 29 44.7 +1.4
baz=123,SNR=8.4
H04D Lebanon 46.25 324 P P 10 29 43.8 +0.1
baz=126,SNR=13
KEBM Edson Butte 46.28 321 P P 10 29 46.2 +2.1
F05D White Salmon 46.35 326 P P 10 29 46.1 +1.6
baz=128,SNR=15
I02D Swisshome 46.66 323 P P 10 29 48.3 +1.3
baz=124,SNR=6.7
SCHQ Schefferville 46.73 15 P P 10 29 46.0 -1.3
comp=Z,28nm,0.7s,baz=229,slow=7.2,SNR=29
SCHQ LR LR 10 49 56.1
comp=Z,493nm,18.7s,baz=214,slow=37
LTY Liberty 46.79 328 P P 10 29 48.2 +0.1
LTY IAmb IAmb 10 29 56.6
comp=Z,48nm,1.4s
PCMB Pacaembu 46.81 133 eP P 10 29 48.9 +0.5

B08A	**Colville Reser**	**46.84**	**330**	P	**P**	**10 29 48.1**	**-0.3**
B08A				IAmb	IAmb	10 29 55.8	
	comp=Z,14nm,0.8s						
SDBA	**SAO DESIDERIO**	**46.84**	**118**	*e*P	**P**	**10 29 49.0**	**+0.1**
IPMB	**Ipameri, GO**	**46.94**	**127**	*e*P	**P**	**10 29 49.8**	**+0.3**
G03D	**McMinnville, O**	**46.96**	**324**	P	**P**	**10 29 50.3**	**+1.1**
	baz=126,SNR=16						
LON	**Longmire**	**47.07**	**327**	P	**P**	**10 29 50.4**	**+0.2**
LON				IAmb	IAmb	10 29 54.9	
	comp=Z,14nm,0.8s						
F04D	**Rainier, OR**	**47.33**	**325**	P	**P**	**10 29 53.5**	**+1.4**
	baz=127						
C06D	**Leavenworth**	**47.33**	**329**	P	**P**	**10 29 53.1**	**+0.9**
	baz=130						
D05A	**Enumclaw**	**47.44**	**327**	P	**P**	**10 29 53.5**	**+0.5**
D05A				IAmb	IAmb	10 30 01.6	
	comp=Z,33nm,1.0s						
B06A	**Marblemount**	**48.02**	**329**	P	**P**	**10 29 57.3**	**-0.2**
B05A	**Bryant**	**48.17**	**328**	P	**P**	**10 29 58.1**	**-0.6**
	baz=129						
D03D	**Eldon**	**48.24**	**327**	P	**P**	**10 29 59.5**	**+0.2**
	baz=128,SNR=6.7						
PTGB	**Pitanga**	**48.28**	**137**	*e*P	**P**	**10 29 59.8**	**-0.1**
BB19B	**Bebedouro**	**48.48**	**130**	*e*P	**P**	**10 30 02.0**	**+0.6**
JANB	**Januaria**	**48.59**	**121**	*e*P	**P**	**10 30 02.5**	**+0.1**
ITQB	**Itaqui**	**49.05**	**145**	*e*P	**P**	**10 30 06.5**	**+0.9**
ITAB	**Concordia**	**49.96**	**139**	*e*P	**P**	**10 30 13.2**	**+0.6**
LC01	**Cunco**	**50.95**	**166**	P	**P**	**10 30 23.2**	**+3.3**
CPSB	**Cacapava Do Su**	**51.42**	**143**	*e*P	**P**	**10 30 23.8**	**+0.2**
CNLB	**Canela**	**52.21**	**140**	*e*P	**P**	**10 30 29.6**	**+0.1**
PLTB	**Pedras Altas**	**52.33**	**145**	*e*P	**P**	**10 30 31.2**	**+0.9**
SJMB	**Sao Joao De Ma**	**52.98**	**123**	*e*P	**P**	**10 30 35.7**	**+0.3**
PLCA	**Paso Flores**	**53.01**	**165**	P	**P**	**10 30 36.8**	**+1.5**
	comp=Z,4.4nm,1.0s,baz=336,slow=7.9,SNR=9.1						
PLCA				LR	LR	10 48 23.0	
	comp=Z,95nm,19.2s,baz=4.0,slow=30						
PLCA	**Paso Flores**	**53.01**	**165**	P	**P**	**10 30 36.4**	**+1.1**
PLCA	**Paso Flores**	**53.01**	**165**	*e*P	**P**	**10 30 35.9**	**+0.6**
FRB	**Frobisher Bay**	**54.56**	**9**	P	**P**	**10 30 43.8**	**-2.4**
	comp=Z,9.3nm,0.6s,baz=198,slow=8.2,SNR=7.7						
YKA	**Yellowknife Ar**	**55.78**	**344**	P	**P**	**10 30 53.6**	**-1.4**
	comp=Z,8.9nm,0.9s,baz=136,slow=7.2,SNR=21						
YKA				PcP	**PcP**	**10 31 54.5**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=139,slow=4.4,SNR=9.2						
YKA				LR	LR	10 57 56.4	
	comp=Z,216nm,18.8s,baz=0.0,slow=40						
TAOE	**Nuku Hiva Isla**	**57.14**	**252**	*e*LR	LR	10 47 44.8	
	comp=Z,313nm,24.7s						
TAOE	**Nuku Hiva Isla**	**57.14**	**252**	*e*T	T	11 32 20.3	
	comp=Z,40nm,0.3s						
DLBC	**Dease Lake**	**58.18**	**335**	P	**P**	**10 31 12.3**	**0.0**
DLBC				IAmb	IAmb	10 31 21.2	
	comp=Z,29nm,0.9s						
RES	**Resolute Bay**	**64.30**	**357**	P	**P**	**10 31 51.8**	**-1.4**
	comp=Z,9.2nm,0.6s,baz=177,slow=9.8,SNR=21						
DAWY	**Dawson**	**65.05**	**337**	P	**P**	**10 31 58.2**	**-0.2**
EPYK	**Eagle Plains**	**65.30**	**340**	P	**P**	**10 31 59.9**	**-0.1**
	baz=123						
EPYK	**Eagle Plains**	**65.30**	**340**	P	**P**	**10 31 59.8**	**-0.1**
EPYK				IAmb	IAmb	10 32 00.8	
	comp=Z,16nm,1.0s						
INK	**Inuvik**	**65.41**	**342**	P	**P**	**10 32 00.3**	**-0.2**
INK				IAmb	IAmb	10 32 01.4	
	comp=Z,17nm,1.0s						
BCAR	**Beaver Creek A**	**65.52**	**336**	P	**P**	**10 32 01.5**	**+0.1**
K27K	**Chicken**	**66.07**	**336**	P	**P**	**10 32 05.5**	**+0.5**
	baz=117						
K27K	**Chicken**	**66.07**	**336**	P	**P**	**10 32 05.0**	**+0.1**
N25K	**Chitina, Valde**	**66.09**	**334**	P	**P**	**10 32 06.1**	**+0.9**
	baz=114						
VAH	**Vaihoa**	**66.11**	**248**	*e*T	T	11 43 36.0	
	comp=Z,5.0nm,0.3s						
L26K	**Log Cabin Wild**	**66.14**	**335**	P	**P**	**10 32 06.1**	**+0.6**
	baz=115						
SCRK	**Sand Creek**	**66.81**	**336**	P	**P**	**10 32 10.0**	**+0.2**
	baz=115						
PAX	**Paxson**	**67.00**	**335**	P	**P**	**10 32 10.7**	**-0.4**
PAX				IAmb	IAmb	10 32 18.6	
	comp=Z,16nm,1.2s						
KNK	**Knik Glacier**	**67.73**	**333**	P	**P**	**10 32 16.6**	**+1.0**
KNK				IAmb	IAmb	10 32 16.9	
	comp=Z,29nm,1.0s						
PRP	**Porcupine Dome**	**68.05**	**337**	P	**P**	**10 32 17.3**	**-0.4**
GHO	**Glory Hole Cre**	**68.07**	**333**	P	**P**	**10 32 18.7**	**+1.0**
GHO				IAmb	IAmb	10 32 26.0	
	comp=Z,21nm,0.8s						
HDA	**Harding Lake**	**68.17**	**336**	P	**P**	**10 32 18.0**	**-0.2**
	baz=112,SNR=15						
HDA	**Harding Lake**	**68.17**	**336**	P	**P**	**10 32 18.2**	**-0.1**
HDA				IAmb	IAmb	10 32 19.0	
	comp=Z,27nm,1.0s						
IL31		**68.28**	**336**	P	**P**	**10 32 18.2**	**-0.7**
IL31				IAmb	IAmb	10 32 19.7	
	comp=Z,29nm,1.3s						
ILAR	**Eielson Array**	**68.28**	**336**	P	**P**	**10 32 18.6**	**-0.4**
	comp=Z,10.0nm,0.9s,baz=131,slow=4.6,SNR=64						
ILAR				PP	**PP**	**10 34 46.0**	**-3.8**
	comp=Z,2.2nm,0.8s,baz=114,slow=7.4,SNR=5.7						
ILAR				LR	LR	11 05 37.8	
	comp=Z,246nm,21.5s,baz=126,slow=39						
ILAR	**Eielson Array**	**68.28**	**336**	P	**P**	**10 32 18.4**	**-0.6**
BMAR	**Burnt Mountain**	**68.52**	**339**	P	**P**	**10 32 20.7**	**+0.3**
RND	**Reindeer**	**68.59**	**335**	P	**P**	**10 32 21.3**	**+0.3**
CCB	**Clear Creek Bu**	**68.60**	**336**	P	**P**	**10 32 20.9**	**-0.1**
POKR	**Poker Plat Res**	**68.63**	**337**	P	**P**	**10 32 21.0**	**-0.2**
	baz=112,SNR=7.0						
POKR	**Poker Plat Res**	**68.63**	**337**	P	**P**	**10 32 20.6**	**-0.6**
PPT	**Papeete**	**68.64**	**246**	LR	LR	10 55 10.6	
	comp=Z,218nm,18.4s,baz=70,slow=29						
PPT2	**Papeete2**	**68.65**	**246**	*e*S	**S**	**10 41 22.2**	**-0.5**
	comp=Z,102nm,23.8s						
PPT2	**Papeete2**	**68.65**	**246**	*e*LR	LR	10 53 12.4	
	comp=Z,287nm,26.0s,baz=46						
WRH	**Wood River Hil**	**68.65**	**336**	P	**P**	**10 32 20.5**	**-0.8**
COLA	**College**	**68.70**	**336**	P	**P**	**10 32 21.3**	**-0.2**
COLA				IAmb	IAmb	10 32 22.1	
	comp=Z,13nm,0.8s						
TCOL	**CIGO, UAF Yank**	**68.71**	**336**	P	**P**	**10 32 21.4**	**-0.2**
	baz=112						
TCOL	**CIGO, UAF Yank**	**68.71**	**336**	P	**P**	**10 32 21.3**	**-0.2**
TCOL				IAmb	IAmb	10 32 22.1	
	comp=Z,13nm,0.8s						
MCK	**McKinley**	**68.74**	**335**	P	**P**	**10 32 22.1**	**+0.2**
	baz=110,SNR=13						
CUT	**Chulitna**	**68.87**	**333**	P	**P**	**10 32 22.6**	**-0.1**
	baz=108						
NEA2	**Nenana**	**69.09**	**336**	P	**P**	**10 32 23.9**	**-0.1**
	baz=110,SNR=7.6						
BWN	**Browne**	**69.11**	**335**	P	**P**	**10 32 23.9**	**-0.2**
TRF	**Thorofare Moun**	**69.21**	**334**	P	**P**	**10 32 25.2**	**+0.2**
TRF				IAmb	IAmb	10 32 26.0	
	comp=Z,26nm,1.0s						
SKT	**Skwentna**	**69.30**	**333**	P	**P**	**10 32 25.6**	**+0.2**
SKT				IAmb	IAmb	10 32 26.4	
	comp=Z,42nm,1.3s						
I23K	**Minto, Yukon-K**	**69.40**	**336**	P	**P**	**10 32 26.2**	**+0.3**
	baz=110						
RSO	**Redoubt South**	**69.45**	**331**	P	**P**	**10 32 26.8**	**+0.3**
KTH	**Kantishna Hill**	**69.52**	**334**	P	**P**	**10 32 26.7**	**-0.1**
KTH				IAmb	IAmb	10 32 27.4	
	comp=Z,24nm,1.0s						
BPAW	**Bear Paw Mtn.**	**69.72**	**335**	P	**P**	**10 32 27.8**	**-0.1**
BPAW				IAmb	IAmb	10 32 28.6	
	comp=Z,31nm,0.9s						
PPLA	**Purkeypile**	**69.86**	**334**	P	**P**	**10 32 29.0**	**0.0**
PPLA				IAmb	IAmb	10 32 29.6	
	comp=Z,20nm,0.9s						
MLY	**Manley**	**69.91**	**336**	P	**P**	**10 32 29.1**	**-0.1**
	baz=109,SNR=24						
CAST	**Castle Rocks**	**69.97**	**334**	P	**P**	**10 32 29.1**	**-0.4**
CAST				IAmb	IAmb	10 32 29.8	
	comp=Z,21nm,1.0s						
COLD	**Coldfoot**	**70.44**	**338**	P	**P**	**10 32 33.2**	**+0.9**
	baz=110,SNR=14						
COLD	**Coldfoot**	**70.44**	**338**	P	**P**	**10 32 32.6**	**+0.3**
COLD				IAmb	IAmb	10 32 34.3	
	comp=Z,19nm,1.1s						
TOLK	**Toolik Lake Re**	**70.72**	**340**	P	**P**	**10 32 33.9**	**-0.1**
	baz=111						
IMAR	**Indian Mountai**	**71.40**	**336**	P	**P**	**10 32 37.3**	**-0.8**
TTA	**Tatalina**	**71.56**	**333**	P	**P**	**10 32 38.9**	**-0.3**
TTA				IAmb	IAmb	10 32 39.6	
	comp=Z,14nm,0.9s						
A21K	**Barrow**	**73.87**	**342**	P	**P**	**10 32 52.4**	**-0.2**
	baz=105,SNR=5.5						
A21K	**Barrow**	**73.87**	**342**	P	**P**	**10 32 52.8**	**+0.2**

RDOG	**Red Dog Mine**	**75.35**	**338**	P	**P**	**10 33 00.8**	**-0.6**
AKUT	**Akutan**	**75.48**	**323**	P	**P**	**10 33 03.8**	**+1.5**
ESDC	**Sonseca Array**	**77.32**	**52**	P	**P**	**10 33 11.9**	**-1.2**
	comp=Z,4.5nm,0.8s,baz=287,slow=6.2,SNR=19						
ESDC				LR	LR	11 02 38.0	
	comp=Z,307nm,20.7s,baz=275,slow=32						
ESDC	**Sonseca Array**	**77.32**	**52**	P	**P**	**10 33 11.8**	**-1.2**
TIC	**Toumodi**	**80.07**	**85**	*e*P	**P**	**10 33 27.5**	**-1.2**
LIC	**Lamto**	**80.13**	**85**	*e*P	**P**	**10 33 27.3**	**-1.7**
	comp=Z,15nm,0.7s						
DBIC	**Dimbokro**	**80.23**	**85**	P	**P**	**10 33 28.9**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=240,slow=2.4,SNR=2.6						
DBIC				LR	LR	11 06 03.5	
	comp=Z,91nm,21.9s,baz=264,slow=34						
KIC	**Kosan Boka**	**80.39**	**85**	*e*P	**P**	**10 33 29.7**	**-0.7**
	comp=Z,1.8nm,0.6s						
NOA	**NORSAR Array B**	**84.37**	**29**	P	**P**	**10 33 49.3**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=288,slow=5.2,SNR=2.3						
NOA				LR	LR	11 07 30.1	
	comp=Z,111nm,21.2s,baz=275,slow=33						
AMKA	**Amchitka**	**84.70**	**321**	P	**P**	**10 33 53.5**	**+1.4**
TORD	**Torodi Ar. Bea**	**85.52**	**78**	P	**P**	**10 33 55.1**	**-1.8**
	comp=Z,0.8nm,0.8s,baz=285,slow=6.2,SNR=5.0						
TORD				LR	LR	11 11 58.3	
	comp=Z,140nm,18.7s,baz=305,slow=36						
DAVOX	**Davos/Dischmat**	**86.45**	**43**	P	**P**	**10 34 00.0**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=316,slow=9.9,SNR=3.6						
CLL	**Collm**	**87.48**	**38**	*e*pP	**pP**	**10 34 14.0**	**-3.8**
CLL				*e*PS	PS	10 46 00.0	+9.5
CLL				*e*SSS		10 57 00.0	
ARCES	**ARCESS Array B**	**87.54**	**19**	LR	LR	11 15 39.1	
	comp=Z,97nm,18.1s,baz=350,slow=37						
KEST	**Kesra**	**88.29**	**54**	LR	LR	11 12 13.0	
	comp=Z,106nm,18.6s,baz=264,slow=35						
GERES	**GERESS Array B**	**88.51**	**41**	P	**P**	**10 34 11.7**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=271,slow=4.8,SNR=1.9						
GERES				LR	LR	11 10 24.0	
	comp=Z,188nm,19.1s,baz=280,slow=33						
FINES	**FINESS Array B**	**91.08**	**26**	LR	LR	11 12 29.6	
	comp=Z,223nm,20.3s,baz=289,slow=34						
TIXI	**Tiksi**	**94.74**	**350**	P	**P**	**10 34 38.7**	**-0.5**
SNAA	**Sanae**	**97.82**	**162**	P	Pdif	10 34 54.7	+1.5
H11N3	**WAKE ISLAND Hyd**	**102.11**	**293**	T	T	12 29 15.2	
	baz=77						
H11N2	**WAKE ISLAND Hyd**	**102.12**	**293**	T	T	12 29 14.0	
	baz=77						
H11N1	**WAKE ISLAND Hyd**	**102.13**	**293**	T	T	12 29 14.5	
	baz=77						
H11S1	**WAKE ISLAND Hyd**	**102.63**	**292**	T	T	12 29 45.7	
	baz=77,slow=74,SNR=7.7						
H11S2	**WAKE ISLAND Hyd**	**102.63**	**292**	T	T	12 29 48.4	
	baz=77,slow=74,SNR=9.8						
H11S3	**WAKE ISLAND Hyd**	**102.64**	**292**	T	T	12 29 35.6	
	baz=77,slow=74,SNR=6.2						
DZM	**Mont Dzumac**	**109.98**	**250**	*e*LR	LR	11 12 23.7	
	comp=Z,89nm,22.9s						
SYO	**Syowa Base**	**112.11**	**162**⇑	*e*pPKiKP	**PKiKP**	**10 40 00.4**	**+7.5**
BOSA	**Boshof**	**113.67**	**117**	PKiKP	**PKiKP**	**10 39 58.0**	**+0.6**
	comp=Z,6.7nm,1.0s,baz=62,slow=18,SNR=4.3						
ZALV	**Zalesovo Beam**	**115.29**	**6**	PKP	**PKiKP**	**10 39 59.1**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=290,slow=1.9,SNR=13						
ZALV	**Zalesovo Beam**	**115.29**	**6**		**PKiKP**	**10 39 59.3**	**-0.3**
USRK	**Ussuriysk Ar.**	**115.48**	**331**	PKP	**PKPdf**	**10 40 01.2**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=29,slow=3.3,SNR=2.3						
BRZS	**Berezniki**	**116.92**	**15**	*e*PKP	**PKPdf**	**10 40 01.9**	**-1.0**
	baz=15						
MJAR	**Matsushiro Arr**	**117.31**	**321**	PKP	**PKiKP**	**10 40 05.8**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=103,slow=1.8,SNR=6.2						
KURK	**Kurchatov**	**117.55**	**11**		**PKiKP**	**10 40 04.7**	**+0.7**
SONM	**Songino Array**	**120.82**	**350**	PKP	**PKiKP**	**10 40 11.4**	**+0.6**
	comp=Z,2.9nm,0.7s,baz=342,slow=1.4,SNR=23						
SONM	**Songino Array**	**120.82**	**350**		**PKPdf**	**10 40 11.0**	**+0.4**
BTLS	**Baital**	**121.83**	**16**	*e*PKP	**PKPdf**	**10 40 12.1**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=16						
MAKZ	**Makanchi**	**121.91**	**10**	PKPdf	**PKPdf**	**10 40 12.5**	**-0.1**
MKAR	**Makanchi Array**	**121.98**	**9**	PKP	**PKPdf**	**10 40 12.6**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=353,slow=2.5,SNR=20						
KKAR	**Karatay Array**	**122.49**	**20**		**PKiKP**	**10 40 14.3**	**+0.3**
KSRS	**Korea Array**	**122.58**	**328**	PKP	**PKiKP**	**10 40 15.4**	**+1.1**
	comp=Z,8.3nm,0.6s,baz=11,slow=1.7,SNR=38						
KSAR	**Wonju Array Be**	**122.61**	**328**		**PKiKP**	**10 40 15.2**	**+0.8**
KUU	**Kurty**	**123.51**	**15**	*e*PKP	**PKPdf**	**10 40 15.0**	**-0.8**
	comp=Z,6.0nm,0.6s,baz=15						
CHKK	**Chushkaly**	**123.71**	**15**	*e*PKP	**PKPdf**	**10 40 15.9**	**-0.2**
	comp=Z,47nm,0.7s,baz=15						
MDOK	**Medeo**	**124.37**	**15**	*e*PKP	**PKPdf**	**10 40 16.8**	**-0.8**
	comp=Z,55nm,0.9s,baz=15						
KPKS	**Kokpek**	**124.48**	**13**	*e*PKP	**PKPdf**	**10 40 17.1**	**-0.6**
	comp=Z,2.5nm,1.0s,baz=13						
BOOM	**Boomskoye usch**	**124.71**	**16**		**PKiKP**	**10 40 19.4**	**+0.8**
SATY	**Saty**	**124.80**	**14**	*e*PKP	**PKPdf**	**10 40 17.6**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=14						
SHLS	**Shalkode**	**124.95**	**13**	*e*PKP	**PKPdf**	**10 40 18.3**	**-0.3**
	comp=Z,2.9nm,0.6s,baz=12						
KDJ	**Kajisay**	**125.37**	**15**		**PKiKP**	**10 40 20.7**	**+0.7**
BJI	**Beijing**	**125.59**	**339**	PKP	**PKiKP**	**10 40 20.4**	**+0.2**
BJI				LR	LR		
	comp=Z,350nm,12.7s						
BJI				LR	LR		
	comp=Z,300nm,19.9s						
WMQ	**Urumqi**	**125.59**	**6**	*e*PKP	**PKiKP**	**10 40 21.0**	**+0.8**
WMQ				LR	LR		
	comp=Z,350nm,21.1s						
WMQ				LR	LR		
	comp=Z,790nm,29.5s						
HHC	**Hu-ho-hao-te**	**126.32**	**343**	*e*PKP	**PKPdf**	**10 40 21.8**	**+0.5**
GTA	**Gaotai**	**129.99**	**354**	⇑PKP	**PKPdf**	**10 40 29.1**	**+0.7**
GTA				LR	LR		
	comp=Z,320nm,17.4s						
GTA				LR	LR		
	comp=Z,470nm,20.0s						
GTA				LR	LR		
	comp=Z,530nm,20.7s						
STKA	**Stephens Creek**	**131.20**	**237**	PKP	**PKiKP**	**10 40 32.2**	**+0.6**
	comp=Z,2.7nm,0.6s,baz=61,slow=4.1,SNR=9.2						
STKA	**Stephens Creek**	**131.20**	**237**	PKPdf	**PKiKP**	**10 40 32.9**	**+1.2**
NJ2	**Nanjing**	**131.38**	**331**	*e*PKP	**PKPdf**	**10 40 30.5**	**-0.5**
LZH	**Lanzhou**	**132.68**	**349**	*e*PKP	**PKPdf**	**10 40 33.1**	**-0.5**
LZH				LR	LR		
	comp=Z,160nm,17.8s						
LZH				LR	LR		
	comp=Z,160nm,18.5s						
LZH				LR	LR		
	comp=Z,160nm,20.1s						
XAN	**Xi'an**	**133.41**	**343**	PKP	**PKPdf**	**10 40 35.8**	**+0.9**
XAN	**Xi'an**	**133.41**	**343**		**PKPdf**	**10 40 35.6**	**+0.7**
WHN	**Wuhan**	**134.66**	**335**	PKP	**PKiKP**	**10 40 38.8**	**+0.1**
ENH	**Enshi**	**136.73**	**340**		**PKPdf**	**10 40 41.6**	**+0.4**
CD2	**Chengdu**	**137.71**	**347**	*e*PKP	**PKPdf**	**10 40 41.6**	**-1.4**
ASAR	**Alice Springs**	**139.75**	**246**	PKhKP	PKPpre	10 40 39.1	
	comp=Z,0.6nm,0.5s,baz=121,slow=3.7,SNR=11						
ASAR				PKP	**PKPdf**	**10 40 48.1**	**+1.2**
	comp=Z,2.9nm,0.7s,baz=103,slow=1.9,SNR=20						
ASAR	**Alice Springs**	**139.75**	**246**		**PKPdf**	**10 40 47.5**	**+0.6**
LSA	**Lhasa**	**139.90**	**4**		**PKPdf**	**10 40 48.3**	**+0.7**
WRA	**Warramunga Arr**	**139.98**	**252**	PKhKP	PKPpre	10 40 40.3	
	comp=Z,1.1nm,0.7s,baz=106,slow=2.8,SNR=19						
WRA				PKP	**PKPdf**	**10 40 48.6**	**+1.3**
	comp=Z,4.4nm,0.6s,baz=97,slow=2.5,SNR=44						
DANN	**Dangsing**	**140.10**	**14**	*e*P	**PKPdf**	**10 40 44.4**	**-3.4**
	comp=Z,58nm,0.7s						
GKN	**Gorkha**	**140.64**	**13**	*e*P	**PKPdf**	**10 40 45.0**	**-3.6**
	comp=Z,31nm,0.7s						
GUN	**Gumba**	**140.98**	**11**	*e*P	**PKPdf**	**10 40 48.3**	**-1.2**
	comp=Z,30nm,0.6s						
DMN	**Daman**	**141.12**	**12**	*e*P	**PKPdf**	**10 40 45.2**	**-4.4**
GYA	**Guiyang**	**141.18**	**342**	⇓PKP	**PKPdf**	**10 40 50.8**	**+1.3**
PKI	**Pulchoki**	**141.22**	**12**	*e*P	**PKPdf**	**10 40 44.2**	**-5.7**
	comp=Z,23nm,0.7s						
TAPN	**Taplejung**	**141.85**	**9**	*e*P	**PKPdf**	**10 40 52.5**	**+1.5**
KMI	**Kunming**	**143.51**	**346**⇓	*e*PKP	PKPab	10 40 49.3	-0.8
SLVN	**Son La**	**146.83**	**343**		**PKPab**	**10 41 03.1**	**+0.6**
FITZ	**Fitzroy Crossi**	**148.39**	**253**		**PKPbc**	**10 41 06.3**	**+0.9**
CHTO	**Chiang Mai**	**150.40**	**350**	PKPdf	**PKPdf**	**10 41 06.0**	**+0.8**
CHTO					**PKPbc**	**10 41 11.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**150.75**	**350**	PKP	**PKPdf**	**10 41 07.5**	**+1.7**
	comp=Z,9.6nm,1.0s,baz=309,slow=2.3,SNR=49						
CMAR				PKPbc	**PKiKP**	**10 41 12.6**	**+0.6**
	comp=Z,19nm,0.9s,baz=319,slow=3.9,SNR=22						
CMAR	**Chiang Mai Arr**	**150.75**	**350**		**PKPdf**	**10 41 07.2**	**+1.4**
MORW	**Morawa**	**152.29**	**225**	PKPbc	**PKiKP**	**10 41 15.3**	**+0.5**

*TUL **16** 10:32:40.4±1.1,36°.28N±0°.02×96°.93W±0°.04, h5km±7km, ML3.2, Error ellipse: s-maj=4.2km s-min=2.6km az=85.0*

*NEIC **16** 10:32:40.4±1.2,36°.28N±0°.02×96°.96W±0°.03, h5km±2km, Error ellipse: s-maj=4.1km s-min=3.1km az=95.0*
*ANF **16** 10:32:41.4±0.5,36°.15N×96°.93W, h0km, ML4.0/9, Error ellipse: s-maj=5.4km s-min=3.1km az=175.0*

ISC 16 10:32:40.5±1.1,36°.29N±0°.02×96°.93W±0°.03, h5km±10km, n90, σ0°65/96, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QUOK	**Quay**	**0.21**	**123**	Pg	**Pg**	**10 32 45.1**	**+0.4**
QUOK				Sg	**Sg**	**10 32 48.2**	**+0.7**
OK031	**S. Brethren Rd**	**0.34**	**168**	Pg	**Pg**	**10 32 47.3**	**+0.2**
OK031				Sg	**Sg**	**10 32 52.0**	**+0.5**
OK030	**Cody Creek RV**	**0.38**	**162**	Pg	**Pg**	**10 32 48.0**	**+0.2**
OK030				Sg	**Sg**	**10 32 53.3**	**+0.6**
OK029	**Liberty Lake**	**0.65**	**221**	Pg	**Pg**	**10 32 53.0**	**+0.1**
OK005	**Luther M Schoo**	**0.67**	**199**	Pg	**Pg**	**10 32 53.6**	**+0.3**
T35A	**Sooner Cattle**	**0.71**	**28**	Pg	**Pg**	**10 32 54.4**	**+0.2**
OK025	**Westminster Rd**	**0.78**	**205**		**Pg**	**10 32 55.3**	**-0.2**
OK001	**Jones High Sch**	**0.78**	**202**		**Pb**	**10 32 56.4**	**-0.2**
BCOK	**Bluff Creek, N**	**0.84**	**222**	Pg	**Pg**	**10 32 56.4**	**-0.2**
KAN13	**South Haven SW**	**0.85**	**329**		**Pg**	**10 32 56.8**	**0.0**
CROK	**Carrier**	**0.88**	**285**		**Pg**	**10 32 57.1**	**-0.3**
GC02	**Grant County #**	**0.94**	**307**		**Pg**	**10 32 58.2**	**-0.3**
OKCFA	**Oklahoma City**	**0.97**	**206**	Pg	**Pg**	**10 32 58.4**	**-0.6**
OKCSW	**OKLAHOMA CITY**	**0.97**	**205**		**Pg**	**10 32 58.5**	**-0.7**
TUL1	**Leonard**	**0.99**	**112**	P	**Pg**	**10 32 59.2**	**-0.4**
	baz=292						
TUL1				S	**Sg**	**10 33 12.3**	**-0.2**
	baz=292						
TUL1	**Leonard**	**0.99**	**112**		**Pg**	**10 32 59.1**	**-0.4**
KAN09	**Caldwell North**	**1.01**	**327**		**Pg**	**10 32 59.7**	**-0.3**
KS20	**Mayfield South**	**1.07**	**332**	Pg	**Pg**	**10 33 00.7**	**-0.3**
KAN14	**Manchester OK**	**1.07**	**309**	Pg	**Pg**	**10 33 00.6**	**-0.4**
FNO	**Franklin**	**1.10**	**201**		**Pg**	**10 33 00.7**	**-0.9**
KAN05	**Bluff City Nor**	**1.12**	**317**		**Pb**	**10 33 02.3**	**0.0**
W35A	**Tecumseh**	**1.13**	**178**	Pg	**Pg**	**10 33 01.1**	**-1.1**
KAN10	**Anthony SW Sta**	**1.26**	**312**		**Pg**	**10 33 04.1**	**-0.5**
KAN08	**Anthony NE Sta**	**1.26**	**319**		**Pg**	**10 33 04.2**	**-0.5**
KAN12	**Harper NE Stat**	**1.32**	**320**		**Pn**	**10 33 05.2**	**-0.4**
U32A	**Winter Ranch,**	**1.68**	**274**		**Pn**	**10 33 10.9**	**+0.3**
U38A	**Gravette**	**2.06**	**85**		**Pn**	**10 33 16.1**	**+0.4**
X37A	**Clayton**	**2.12**	**143**		**Pn**	**10 33 17.4**	**+0.8**
WMOK	**Wichita Mounta**	**2.16**	**225**	P	**Pn**	**10 33 17.6**	**+0.4**
	baz=44						
WMOK				Sb	**Sb**	**10 33 47.6**	**+0.3**
	baz=44						
WMOK	**Wichita Mounta**	**2.16**	**225**	Pn	**Pn**	**10 33 17.6**	**+0.4**
R32A	**Long Quarter,**	**2.56**	**327**	Pn	**Pn**	**10 33 22.4**	**-0.3**
W39A	**Magazine**	**2.78**	**112**	Sb	**Sb**	**10 34 05.3**	**+0.3**
	baz=294						
W39A	**Magazine**	**2.78**	**112**	Pn	**Pn**	**10 33 25.4**	**-0.2**
KSU1	**Kansas State U**	**2.82**	**5**	P	**Pb**	**10 33 30.7**	**-0.7**
	baz=185						
S39A	**Bolivar**	**3.21**	**63**	Pn	**Pn**	**10 33 31.9**	**+0.3**
MIAR	**Mount Ida**	**3.24

SMRI	Semarang	18.25	242	P		Pn	10 59 19.2	+2.0
FITZ	Fitzroy Crossi	19.62	183	P		P	10 59 31.3	-0.6
	0.2nm,0.3s,baz=8.9,slow=8.5,SNR=2.4							
FITZ	Fitzroy Crossi	19.62	183	P		Pn	10 59 33.4	-0.2
TPUB	Ta-pu	22.30	346	P		P	10 59 59.3	-1.6
WB0	Warramunga Arr	22.61	160	P		P	11 00 03.3	-0.9
WB0				IAmb	IAmb		11 00 09.6	
	comp=Z,11nm,0.5s							
WRAB	Tennant Creek	22.75	161	P		P	11 00 05.7	0.0
WRAB				IAmb	IAmb		11 00 09.5	
	comp=Z,16nm,0.9s							
WRA	Warramunga Arr	22.75	161	P		P	11 00 05.3	-0.4
	comp=Z,9.5nm,0.8s,baz=340,slow=11,SNR=40							
WRA				PcP		PcP	11 03 57.8	+1.3
	comp=Z,0.3nm,0.6s,baz=328,slow=2.2,SNR=1.9							
WRA	Warramunga Arr	22.75	161	P		P	11 00 05.4	-0.4
WB2	Warramunga Arr	22.75	161	P		P	11 00 05.5	-0.2
WB2				IAmb	IAmb		11 00 09.5	
	comp=Z,15nm,0.9s							
WR0	Warramunga Arr	22.83	160	P		P	11 00 06.2	-0.4
WR0				IAmb	IAmb		11 00 10.2	
	comp=Z,10nm,0.9s							
AS31	Alice Springs	26.13	165	P		P	11 00 36.7	-0.5
AS31				IAmb	IAmb		11 00 43.4	
	comp=Z,2.3nm,0.4s							
ASAR	Alice Springs	26.13	165	P		P	11 00 37.8	+0.7
	comp=Z,1.6nm,0.4s,baz=351,slow=15,SNR=26							
ASAR				PcP		PcP	11 04 04.8	+1.0
	comp=Z,0.4nm,0.4s,baz=343,slow=1.9,SNR=3.1							
ASAR				S		S	11 05 19.1	+13
	comp=Z,0.5nm,0.9s,baz=346,slow=20,SNR=4.2							
ASAR	Alice Springs	26.13	165	P		P	11 00 36.2	-0.9
NJ2	Nanjing	31.13	347	*eP*		P	11 01 19.6	-1.9
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
JNU	Nakatsue	31.59	7	P		P	11 01 28.6	+2.9
	comp=Z,11nm,0.9s,baz=232,slow=4.0,SNR=4.8							
FORT	Forrest	32.25	178	P		P	11 01 31.7	+0.3
STKA	Stephens Creek	36.24	158	P		P	11 02 08.0	+2.0
	comp=Z,1.4nm,0.6s,baz=318,slow=9.4,SNR=3.8							
LZH	Lanzhou	40.24	331	*eP*		P	11 02 41.3	+1.5
LZH				pP		pP	11 02 50.3	-1.5
LZH				sP		pwP	11 02 54.1	-0.2
LZH				PP		PP	11 04 10.5	-2.6
LZH				pmax		pmax		
	comp=Z,19nm,1.0s							
LZH				pmax		pmax		
	comp=Z,140nm,4.9s							
HHC	Hu-ho-hao-te	41.34	343	*eP*		P	11 02 47.1	-1.6
HHC				pmax		pmax		
	comp=Z,17nm,1.1s							
HHC				pmax		pmax		
	comp=Z,80nm,5.3s							
USRK	Ussuriysk Ar.	42.67	6	P		P	11 03 00.9	+1.5
	comp=Z,1.0nm,0.6s,baz=221,slow=12,SNR=2.0							
KLR	Kul'dur	47.64	5	P		P	11 03 39.7	+1.0
	comp=Z,0.9nm,0.6s,baz=151,slow=16,SNR=2.3							
SONM	Songino Array	49.23	342	P		P	11 03 52.1	+0.9
	comp=Z,0.3nm,0.5s,baz=135,slow=6.9,SNR=3.2							
WMQ	Urumqi	54.35	326	*eP*		P	11 04 29.0	-0.4
MK31	Makanchi Array	59.19	326	P		P	11 05 03.0	-0.5
MK31				IAmb	IAmb		11 05 07.2	
	comp=Z,2.1nm,1.2s							
MKAR	Makanchi Array	59.19	326	P		P	11 05 03.5	-0.1
	comp=Z,0.9nm,0.4s,baz=119,slow=7.9,SNR=16							
MKAR	Makanchi Array	59.19	326	P		P	11 05 02.3	-1.3
KURK	Kurchatov	63.42	328	P		P	11 05 29.9	-2.1
KURK				IAmb	IAmb		11 05 38.9	
	comp=Z,2.7nm,0.7s							
GEYT	Alibeck	72.08	309	P		P	11 06 25.8	-1.1
NRIK	Noril'sk	72.42	346	P		P	11 06 30.1	+1.8
	comp=Z,1.9nm,0.5s,baz=134,slow=6.4,SNR=4.1							
ABKAR	Akbulak array	73.67	321	P		P	11 06 34.5	-1.6
VNDA	Vanda	81.37	173	P		P	11 07 19.1	+0.6
	comp=Z,0.7nm,0.5s,baz=308,slow=6.5,SNR=6.9							
VNDA	Vanda	81.37	173	P		P	11 07 17.5	-1.0
BRTR	Keskin Array B	91.22	310	P		P	11 08 07.5	-0.5
QSPA	South Pole Qui	91.54	180	P		P	11 08 07.2	-1.6

SJA ***16*** *10:55:08.0±0.8,20.80S×70.02W,h36km±3km, ML4.2, MW4.0*

NEIC ***16*** *10:55:09.9±1.9,20.82S±0.03×70.06W±0.06,h43km±7km, Error ellipse: s-maj=7.9km s-min=4.4km az=94.0*

GUC ***16*** *10:55:10.5±0.6,20.81S×69.95W,h45km±2km, ML4.0*

VAO ***16*** *10:55:13.2±0.7,20.93S×69.52W,h10km, mb4.3*

ISC 16 10:55:10.4±0.7,20.82S±0.03×70.04W±0.04,h42km±6km, n74,σ1s37/116,4C-7D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PATCX	**Punta Patache**	**0.11**	**270**	⇑*iP*	**Pn**	**10 55 17.6**	**+0.1**
PATCX				*i* S	**Sn**	**10 55 23.3**	**+0.9**
PATCX	**Punta Patache**	**0.11**	**270**		**Pn**	**10 55 17.4**	**0.0**
PATCX				Sn	**Sn**	**10 55 23.6**	**+1.2**
PATCX	**Punta Patache**	**0.11**	**270**	*eP*	**Pn**	**10 55 17.6**	**+0.1**
TA01	**Diego Aracena**	**0.29**	**332**	⇑*iP*	**Pn**	**10 55 18.5**	**-0.2**
TA01				*i* S	**Sn**	**10 55 25.1**	**+0.6**
TA01	**Diego Aracena**	**0.29**	**332**	Pn	**Pn**	**10 55 18.5**	**-0.2**
TA01				Sn	**Sn**	**10 55 25.1**	**+0.6**
TA02	**Huaiquique**	**0.56**	**351**	*i* P	**Pn**	**10 55 21.6**	**-0.3**
TA02				*i* S	**Sn**	**10 55 30.2**	**+0.1**
PB01	**IPOC Station P**	**0.56**	**114**	*i* P	**Pn**	**10 55 20.9**	**-1.2**
PB01				*i* S	**Sn**	**10 55 28.7**	**-1.7**
PB01				IAML		10 55 29.6	
	comp=E,27μm,0.5s						
PB01	**IPOC Station P**	**0.56**	**114**	Pn	**Pn**	**10 55 20.7**	**-1.4**
PB01				Sn	**Sn**	**10 55 28.6**	**-1.7**
PB01	**IPOC Station P**	**0.56**	**114**	*eP*	**Pn**	**10 55 20.7**	**-1.4**
PB01				*eS*	**Pn**	**10 55 20.7**	**-1.4**
PB01				*eS*	**Sn**	**10 55 28.7**	**-1.7**
PB01				IAML		10 55 29.3	
	comp=Z,10μm,0.2s						
PB07	**IPOC Station P**	**0.91**	**171**	*i* P	**Pn**	**10 55 26.3**	**-0.7**
PB07				*i* S	**Sn**	**10 55 38.5**	**-0.6**
PB07				IAML		10 55 39.3	
	comp=N,5μm,0.4s						
PB07	**IPOC Station P**	**0.91**	**171**	Pn	**Pn**	**10 55 26.2**	**-0.7**
PB07				Sn	**Sn**	**10 55 38.0**	**-1.0**
PB07	**IPOC Station P**	**0.91**	**171**	*eP*	**Pn**	**10 55 26.1**	**-0.8**
PB07				*eS*	**Sn**	**10 55 38.4**	**-0.6**
PB07				IAML		10 55 41.4	
	comp=Z,5μm,0.2s						
PB08	**IPOC Station P**	**1.07**	**51**	⇓*iP*	**Pn**	**10 55 28.4**	**-0.9**
PB08				*i* S	**Sn**	**10 55 42.4**	**-0.7**
PB08	**IPOC Station P**	**1.07**	**51**	Pn	**Pn**	**10 55 28.4**	**-0.9**
PB08				Sn	**Sn**	**10 55 42.7**	**-0.4**
PB08	**IPOC Station P**	**1.07**	**51**	*eP*	**Pn**	**10 55 28.4**	**-0.9**
PB08				*eS*	**Sn**	**10 55 42.1**	**-1.0**
PB11	**IPOC Station P**	**1.11**	**19**	⇓*iP*	**Pn**	**10 55 28.7**	**-1.0**
PB11				*eS*	**Sn**	**10 55 43.4**	**-0.5**
PB11				IAML		10 55 46.5	
	comp=N,5μm,0.1s						
PB11	**IPOC Station P**	**1.11**	**19**	Pn	**Pn**	**10 55 28.6**	**-1.0**
PB11				Sn	**Sn**	**10 55 43.6**	**-0.3**
PB11	**IPOC Station P**	**1.11**	**19**	*eP*	**Pn**	**10 55 28.7**	**-1.0**
PB11				*eS*	**Sn**	**10 55 43.8**	**-0.1**
PB11				IAML		10 55 47.0	
	comp=Z,4μm,0.1s						
PB09	**IPOC Station P**	**1.22**	**143**	⇓*iP*	**Pn**	**10 55 31.3**	**+0.1**
PB09				*i* S	**Sn**	**10 55 46.9**	**+0.3**
PB09				IAML		10 55 50.1	
	comp=E,9μm,0.2s						
PB09	**IPOC Station P**	**1.22**	**143**	Pn	**Pn**	**10 55 31.3**	**+0.1**
PB09				Sn	**Sn**	**10 55 47.1**	**+0.6**
PB09	**IPOC Station P**	**1.22**	**143**	*eP*	**Pn**	**10 55 31.1**	**-0.1**
PB09				*eS*	**Sn**	**10 55 47.3**	**+0.7**
PB09				IAML		10 55 49.0	
	comp=Z,7μm,0.2s						
PSGC	**Pisagua**	**1.22**	**356**	⇓*iP*	**Pn**	**10 55 30.2**	**-0.9**
PSGCX	**Pisagua**	**1.22**	**356**	Pn	**Pn**	**10 55 30.2**	**-0.9**
PSGCX				Sn	**Sn**	**10 55 46.1**	**-0.3**
PSGCX	**Pisagua**	**1.22**	**356**	*eP*	Pn	10 55 24.1	-7.0
PSGCX				*eP*	**Pn**	**10 55 30.2**	**-0.9**
PSGCX				*eP*	**Pn**	**10 55 30.2**	**-0.9**
PSGCX				*eS*	**Sn**	**10 55 45.7**	**-0.8**
PB03	**IPOC Station P**	**1.25**	**168**	⇓*iP*	**Pn**	**10 55 31.0**	**-0.5**
PB03				*eS*	**Sn**	**10 55 47.2**	**0.0**
PB03				IAML		10 55 49.0	
	comp=E,8μm,0.2s						
PB03	**IPOC Station P**	**1.25**	**168**	*eP*	**Pn**	**10 55 31.0**	**-0.5**
PB03				*eS*	**Sn**	**10 55 47.6**	**+0.3**
PB03				IAML		10 55 49.7	
	comp=Z,7μm,0.1s						
PB04	**IPOC Station P**	**1.51**	**184**	⇓*iP*	**Pn**	**10 55 34.8**	**-0.3**
PB04				*i* S	**Sn**	**10 55 54.5**	**+0.8**
PB04				IAML		10 55 57.6	
	comp=N,5μm,0.2s						
PB04	**IPOC Station P**	**1.51**	**184**	Pn	**Pn**	**10 55 35.3**	**+0.2**
PB04				Sn	**Sn**	**10 55 53.9**	**+0.2**
PB04	**IPOC Station P**	**1.51**	**184**	*eP*	**Pn**	**10 55 34.9**	**-0.3**
PB04				*eS*	**Sn**	**10 55 55.0**	**+1.3**
PB04				IAML		10 55 59.4	
	comp=Z,3μm,0.2s						
MNMC	**Minye Minye**	**1.73**	**14**	⇓*iP*	**Pn**	**10 55 38.0**	**-0.3**
MNMC				*eS*	**Sn**	**10 55 59.7**	**+0.5**
MNMC				IAML		10 56 10.0	
	comp=E,2μm,0.2s						
MNMC	**Minye Minye**	**1.73**	**14**	Pn	**Pn**	**10 55 37.8**	**-0.4**
MNMC				Sn	**Sn**	**10 56 00.9**	**+1.6**
MNMCX	**Minye Minye**	**1.73**	**14**	*eP*	**Pn**	**10 55 38.1**	**-0.2**
PB06	**IPOC Station P**	**1.93**	**167**	⇑*iP*	**Pn**	**10 55 41.0**	**+0.2**
PB06				*i* S	**Sn**	**10 56 04.7**	**+0.8**
PB06				IAML		10 56 11.6	
	comp=N,2μm,0.6s						
PB06	**IPOC Station P**	**1.93**	**167**	Pn	**Pn**	**10 55 41.1**	**+0.3**
PB06				Sn	**Sn**	**10 56 04.1**	**+0.2**
PB06	**IPOC Station P**	**1.93**	**167**	*eP*	**Pn**	**10 55 41.0**	**+0.2**
PB06				*eS*	**Sn**	**10 56 06.3**	**+2.4**
PB06				IAML		10 56 07.6	
	comp=Z,1μm,0.4s						
PB05	**IPOC Station P**	**2.03**	**184**	⇑*iP*	**Pn**	**10 55 41.7**	**-0.5**
PB05				*eS*	**Sn**	**10 56 07.1**	**+0.7**
PB05				IAML		10 56 15.4	
	comp=E,1μm,0.3s						
PB05	**IPOC Station P**	**2.03**	**184**	*eP*	**Pn**	**10 55 41.9**	**-0.3**
PB05				*eS*	**Sn**	**10 56 09.6**	**+3.2**
PB05				IAML		10 56 15.4	
	comp=Z,769nm,0.4s						
LVC	**Limon Verde**	**2.06**	**150**	*i* P	**Pn**	**10 55 44.2**	**+1.3**
LVC				*i* S	**Sn**	**10 56 09.7**	**+2.0**
LVC	**Limon Verde**	**2.06**	**150**	Pn	**Pn**	**10 55 44.3**	**+1.3**
LVC				Sn	**Sn**	**10 56 09.5**	**+1.8**
LVC	**Limon Verde**	**2.06**	**150**	*eP*	**Pn**	**10 55 44.2**	**+1.3**
LVC				*eS*	**Sn**	**10 56 09.4**	**+1.8**
LVC	**Limon Verde**	**2.06**	**150**	*eP*	**Pn**	**10 55 44.4**	**+1.4**
PB15	**IPOC Station P**	**2.43**	**168**	*eP*	**Pn**	**10 55 48.0**	**+0.1**
PB15	**IPOC Station P**	**2.43**	**168**	Pn	**Pn**	**10 55 47.9**	**+0.1**
PB15				Sn	**Sn**	**10 56 17.2**	**+0.7**
PB15	**IPOC Station P**	**2.43**	**168**	*eP*	**Pn**	**10 55 48.0**	**+0.1**
PB15				*eS*	**Sn**	**10 56 21.0**	**+4.5**
PB15				IAML		10 56 27.5	
	comp=Z,3μm,0.3s						
AP01	**Chacalluta**	**2.45**	**353**	Pn	**Pn**	**10 55 47.4**	**-0.5**
PB16	**IPOC Station P**	**2.52**	**11**	*eP*	**Pn**	**10 55 49.7**	**+0.3**
PB16	**IPOC Station P**	**2.52**	**11**	Pn	**Pn**	**10 55 49.6**	**+0.3**
PB16	**IPOC Station P**	**2.52**	**11**	*eP*	**Pn**	**10 55 49.0**	**-0.4**
PB16				*eS*	Sn	10 56 31.4	+12
PB10	**IPOC Station P**	**2.72**	**190**	*eP*	**Pn**	**10 55 50.3**	**-1.4**
PB10				IAML		10 56 42.6	
	comp=E,309nm,0.3s						
PB10	**IPOC Station P**	**2.72**	**190**	Pn	**Pn**	**10 55 50.5**	**-1.1**
PB10	**IPOC Station P**	**2.72**	**190**	*eP*	**Pn**	**10 55 50.8**	**-0.9**
PB10				*eS*	Sn	10 56 08.0	-15
PB14	**IPOC Station P**	**3.80**	**185**	Pn	**Pn**	**10 56 05.7**	**-1.0**
GO02	**Mina Guanaco**	**4.34**	**175**	Pn	**Pn**	**10 56 13.1**	**-1.0**
YJA	**Yavi**	**4.42**	**109**	*eP*	**Pn**	**10 56 18.4**	**+3.0**
LPAZ	**La Paz**	**4.86**	**22**	Pn	**Pn**	**10 56 22.1**	**+0.6**
LPAZ	**La Paz**	**4.86**	**22**	*eP*	**Pn**	**10 56 24.7**	**+3.1**
LPAZ	**La Paz**	**4.86**	**22**	*eP*	**Pn**	**10 56 24.7**	**+3.1**
HJA	**Humahuaca**	**4.91**	**120**	*eP*	**Pn**	**10 56 24.9**	**+2.9**
AC01	**Pan de Azucar**	**5.33**	**185**	Pn	**Pn**	**10 56 25.5**	**-2.0**
AC02	**Maricunga**	**6.04**	**172**	Pn	**Pn**	**10 56 36.9**	**-0.8**
GO03	**Copiap**	**6.75**	**182**	Pn	**Pn**	**10 56 46.1**	**-0.8**
AGUA	**GUANDACOL**	**8.74**	**171**	*eP*	**Pn**	**10 57 13.2**	**-1.1**
AGUA				*eS*	**Sn**	**10 58 51.5**	**-0.2**
AGUA				IAML		10 59 33.0	
	comp=Z,20nm,2.2s						
PTLB	**Pontes e Lacer**	**11.65**	**64**	*eP*	**Pn**	**10 57 54.5**	**+0.3**
VA03	**San Esteban**	**11.90**	**182**	Pn	**Pn**	**10 57 56.8**	**-0.9**
ROC1	**El Roble**	**12.14**	**184**	Pn	**Pn**	**10 57 58.9**	**-2.1**
VILB	**Vilhena**	**12.23**	**52**	*eP*	**Pn**	**10 58 04.3**	**+2.2**
VA01	**Torpederas**	**12.24**	**186**	Pn	**Pn**	**10 57 57.6**	**-4.5**
MT02	**Curacav**	**12.43**	**184**	Pn	**Pn**	**10 58 03.5**	**-1.2**
FRTB	**Fartura**	**19.14**	**101**	*eP*	**P**	**10 59 29.3**	**-0.8**
ITTB	**Itaituba**	**21.47**	**42**	*eP*	**P**	**11 00 00.4**	**+5.0**
LL01	**San Ignacio de**	**21.59**	**185**	P	**P**	**10 59 56.3**	**-0.1**
LL01				IAmb	IAmb	11 00 02.1	
	comp=Z,13nm,1.4s						
S54A	**Dingess, Beckl**	**59.27**	**350**	P	**P**	**11 05 07.2**	**-0.4**
S54A				IAmb	IAmb	11 05 12.2	
	comp=Z,17nm,1.5s						
TORD	**Torodi Ar. Bea**	**78.12**	**71**	P	**P**	**11 07 03.3**	**-2.2**
F10A	**Beach Ranch, E**	**79.04**	**329**	P	**P**	**11 07 09.5**	**-0.6**
F10A				IAmb	IAmb	11 07 28.4	
	comp=Z,5.3nm,1.5s						

BJI ***16*** *11:06:04.6±0.0,1.30N×98.04E,h36km,mB5.1/58, mb5.1/72,Ms4.9/72,Ms7 4.7/68*

NEIC ***16*** *11:06:09.0±1.8,1.65N±0.05×97.92E±0.05,h36km±1km, mb5.4/164,Mwb5.2/32,Error ellipse: s-maj=9.6km s-min=5.8km az=131.0*

NEIC ***16*** *11:06:09.2,1.61N×97.91E,h36km,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr0.86; Mθθ1.07; Mϕϕ-1.93; Mrθ1.91; Mθϕ-0.27; Mϕr-6.44; Fault plane solution: M0 6.93000×10^16 NP1:φs162.93000°, δ85.05000°,λ81.19000°. NP2:φs43.82000°,δ10.10000°, λ150.51000°. Principal axes: T 6.5655, Plg49.0000°, Azm63.0000°; N 0.6831, Plg9.0000°, Azm164.0000°; P -7.2486, Plg39.0000°, Azm261.0000°;*

MOS ***16*** *11:06:10.3±0.8,1.65N×97.95E,h65km,mb5.6/109, MS4.7/11 Error ellipse: s-maj=6.4km s-min=3.5km az=116.3*

DJA ***16*** *11:06:10.4±0.2,2.2N±1.1×97.8E±.5,h56km±2km,mB5.6/63, mb5.4/82,Mw(mB)5.1/63,Mwp5.3/19*

IDC ***16*** *11:06:10.1±1.9,1.71N×97.93E,h42km±17km,mb4.8/48, mb1 4.8/50,mb1mx4.7/61,mbtmp5.0/50,ML4.4/2,MS4.4/41, Ms1 4.4/41,ms1mx4.3/53,Error ellipse: s-maj=11.7km s-min=7.8km az=48.0*

BGR ***16*** *11:06:11.0±0.0,0.55N×95.91E,h33km,mb5.3,Ms4.2*

GCMT ***16*** *11:06:12.0±0.1,1.67N±0.01×97.85E±0.01,h17km, MW5.4/111,Moment Tensor Solution. s92,c147; s111,c189; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr0.08±.01; Mθθ-0.00±.01; Mϕϕ-0.08±.01; Mrθ0.37±.03; Mθϕ0.04±.01; Mϕr-1.57±.06; Best double couple: M0 1.61500×10^17 NP1:φs325.00000°,δ2.00000°, λ68.00000°. NP2:φs167.00000°,δ88.00000°,λ91.00000°. Principal axes: T 1.6090, Plg47.0000°, Azm77.0000°; N 0.0130, Plg1.0000°, Azm347.0000°; P -1.6220, Plg43.0000°, Azm256.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 11:06:10.0±0.3,1.65N±0.02×97.90E±0.03,h46km±2km, h46km:pP-P,n973,σ1s34/1070,mb5.3/283,MS4.6/72, 37C-51D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.47**	**224**	P	**Pn**	**11 06 20.7**	**0.0**
GSI				S	**Sn**	**11 06 28.1**	**-0.2**
GSI	**Gunungsitoli**	**0.47**	**224**	Pn	**Pn**	**11 06 20.5**	**-0.1**
GSI				Sn	**Sn**	**11 06 28.1**	**-0.2**
RPSI	**Rantau Prapat**	**1.46**	**44**	Pn	**Pn**	**11 06 36.8**	**+3.0**
RPSI				Sn	**Sn**	**11 06 52.8**	**+1.0**
PSI	**Prapat**	**1.54**	**42**	P	**Pn**	**11 06 36.8**	**+1.8**
PSI						11 06 52.8	
PBSI	**Pulau Batu**	**1.73**	**167**	P	**Pn**	**11 06 38.7**	**+1.1**
PBSI				S	**Sn**	**11 06 59.6**	**+1.1**
TPTI		**1.76**	**336**	P	**Pn**	**11 06 38.8**	**+0.8**
KCSI	**Kotacane, Aceh**	**1.87**	**356**	P	**Pn**	**11 06 40.9**	**+1.4**
MNSI	**Mandailing Nat**	**1.88**	**117**	P	**Pn**	**11 06 41.0**	**+1.4**
TSI	**Tuntungan**	**1.96**	**20**	P	**Pn**	**11 06 43.4**	**+2.7**
MLSI	**Meulaboh, Aceh**	**3.00**	**330**	P	**Pn**	**11 06 56.3**	**+1.2**
SISI	**Saibi**	**3.18**	**158**	P	**Pn**	**11 06 57.5**	**0.0**
SISI				S	**Sn**	**11 07 35.1**	**+0.8**
BKNI	**Bangkinang**	**3.40**	**113**	P	**Pn**	**11 07 02.1**	**+1.6**
BKNI	**Bangkinang**	**3.40**	**113**	Pn	**Pn**	**11 07 02.5**	**+1.9**
LHMI	**Lhok Sumawe**	**3.68**	**345**	P	**Pn**	**11 07 06.0**	**+1.6**
LHMI				S	**Sn**	**11 07 48.8**	**+2.2**
LHMI	**Lhok Sumawe**	**3.68**	**345**	Pn	**Pn**	**11 07 05.8**	**+1.4**
IPM	**Ipoh**	**4.20**	**48**	Pn	**Pn**	**11 07 15.1**	**+3.6**
SDSI	**Sungai Dareh**	**4.36**	**126**	P	**Pn**	**11 07 15.7**	**+2.0**
KULM	**Kulim**	**4.54**	**37**	Pn	**Pn**	**11 07 19.0**	**+2.8**
RGRI	**Rengat**	**4.85**	**114**	P	**Pn**	**11 07 21.7**	**+1.2**
KRJI	**Kerinci**	**5.14**	**136**	P	**Pn**	**11 07 25.8**	**+1.2**
	6μm45μm3μm,0.8s						
MYKOM	**Kota Tinggi**	**5.95**	**89**		**Pn**	**11 07 36.1**	**+0.6**
PKDT	**Phuket**	**6.22**	**4**	P	**Pn**	**11 07 40.5**	**+1.3**
TRTT	**Trang**	**6.40**	**16**	P	**Pn**	**11 07 43.6**	**+1.9**
KRAB	**Krabi**	**6.66**	**11**	P	**Pn**	**11 07 48.3**	**+3.0**
KSI	**Kapahiang**	**7.05**	**138**	P	**Pn**	**11 07 52.6**	**+1.9**
	28μm475nm,0.8s						
KSI	**Kapahiang**	**7.05**	**138**	P	**Pn**	**11 07 52.9**	**+2.2**
KSI				pmax	pmax		
	comp=Z,475nm,0.8s						
SURT	**Suratani**	**7.32**	**7**	P	**Pn**	**11 07 54.8**	**+0.5**
MNAI	**Manna**	**7.82**	**140**	P	**Pn**	**11 08 01.7**	**+0.5**
	comp=Z,319nm,0.7s						
MNAI	**Manna**	**7.82**	**140**	Pn	**Pn**	**11 08 01.9**	**+0.7**
LHSI	**Lahat**	**7.82**	**134**	P	**Pn**	**11 08 03.3**	**+2.1**
	comp=Z,5μmcomp=Z,359nm,0.6s						
PMBI	**Palembang**	**8.23**	**123**	Pn	**Pn**	**11 08 06.2**	**-0.7**
MDSI	**Maura Dua**	**8.74**	**134**	P	**Pn**	**11 08 14.8**	**+0.9**
	comp=Z,2μmcomp=Z,221nm,0.7s						
LWLI	**Liwa**	**9.04**	**137**	P	**Pn**	**11 08 19.8**	**+1.8**
	comp=Z,8μmcomp=Z,262nm,0.8s						
PPBI	**Pangkal Pinang**	**9.06**	**115**	P	**Pn**	**11 08 20.5**	**+2.3**
	comp=Z,16μmcomp=Z,86nm,1.0s						
KLSI		**9.28**	**133**	P	**Pn**	**11 08 21.9**	**+0.6**
	comp=Z,572nmcomp=Z,52nm,0.9s						
KASI	**Kota Agung**	**9.70**	**137**	P	**Pn**	**11 08 26.3**	**-0.7**
	comp=Z,6μmcomp=Z,240nm,0.6s						
BLSI	**Bandar Lampung**	**10.12**	**134**	P	**Pn**	**11 08 33.2**	**+0.5**
	comp=Z,5μmcomp=Z,144nm,0.4s						
TPI	**Tanjungpandan**	**10.68**	**114**	P	**Pn**	**11 08 42.5**	**+2.0**
	comp=Z,7μmcomp=Z,1μmcomp=Z,119nm,1.2s						
PHET	**Kaeng Krachan**	**11.32**	**9**	P	**Pn**	**11 08 53.1**	**+3.9**
PATY	**Pattaya**	**11.58**	**15**	P	**Pn**	**11 08 55.7**	**+3.0**
DBJI	**Dramaga**	**12.02**	**133**	P	**Pn**	**11 08 58.4**	**-0.3**
	comp=Z,6μmcomp=Z,89nm,1.1s						
SKJI	**Sukabumi**	**12.18**	**135**	P	**Pn**	**11 09 02.1**	**+1.1**
	comp=Z,2μmcomp=Z,169nm,2.3s						
KSM	**Kuching**	**12.40**	**91**	Pn	**Pn**	**11 09 03.8**	**-0.2**
DGPR	**DIGLIPUR**	**12.47**	**337**	*eP*	**Pn**	**11 09 00.5**	**-4.4**
LEM	**Lembang**	**12.84**	**131**	P	**Pn**	**11 09 09.2**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=176,slow=17,SNR=4.0						
LEM				LR	LR	11 15 06.7	
	comp=Z,3μm,18.9s,baz=308,slow=42						
LEM	**Lembang**	**12.84**	**131**	P	**Pn**	**11 09 09.2**	**-0.9**
	comp=Z,1μmcomp=Z,68nm,1.0s						
SRAK	**Srakaew**	**12.95**	**18**	P	**P**	**11 09 17.1**	**-3.8**
JCJI	**Jatiwangi**	**13.13**	**128**	P	**Pn**	**11 09 16.9**	**+3.0**
	comp=Z,372nm,0.6s						
CISI	**Cisompet, Garu**	**13.47**	**133**	P	**Pn**	**11 09 16.7**	**-1.9**
	comp=Z,3μmcomp=Z,146nm,0.6s						
CISI	**Cisompet, Garu**	**13.47**	**133**	Pn	**Pn**	**11 09 16.5**	**-2.1**
STKI	**Sintang**	**13.66**	**96**	P	**Pn**	**11 09 23.6**	**+2.4**
	comp=Z,68nm,0.7s						
KPJI	**Karang Pucung**	**14.16**	**129**	P	**Pn**	**11 09 27.1**	**-0.9**
	comp=Z,67nm,0.5s						
SBUM	**Sibu**	**14.33**	**87**	Pn	**Pn**	**11 09 31.3**	**+1.1**
PBKI	**Pangkalan Bun**	**14.43**	**107**	P	**Pn**	**11 09 33.7**	**+2.2**
	comp=Z,6μmcomp=Z,291nm,1.4s						
DLV	**T Lat**	**14.66**	**45**		**Pn**	**11 09 35.2**	**+0.5**
SMRI	**Semarang**	**15.20**	**125**		**Pn**	**11 09 42.9**	**+1.1**
SMRI				IAmb	IAmb	11 10 00.9	
	comp=Z,189nm,1.0s						
UBPT	**Khong Chiam**	**15.47**	**28**		**Pn**	**11 09 46.1**	**+0.9**
UGM	**Wanagama**	**15.77**	**127**	P	**Pn**	**11 09 47.0**	**-2.1**
	comp=Z,180nm,1.8s						
SUKH	**Sukhothai**	**15.83**	**6**	P	**P**	**11 09 53.6**	**+0.8**
WOJI	**Wonogiri, Jawa**	**16.04**	**126**	P	**Pn**	**11 09 53.9**	**+1.3**
	comp=Z,34nm,1.6s						
MHMT	**Maesariang**	**16.43**	**0**	P	**P**	**11 09 58.6**	**-1.0**
CM04	**Chiang Mai Arr**	**16.68**	**4**	P	**Pn**	**11 10 00.6**	**0.0**
CM05	**Chiang Mai Arr**	**16.68**	**3**	P	**Pn**	**11 10 00.8**	**+0.2**
CM13	**

KAPI S **S** **11 15 14.5 -0.7**
KAPI Kappang 22.81 107 P **P** **11 11 09.2 +0.1**
KAPI pmax pmax
comp=Z,91nm,1.1s
KAPI Kappang 22.81 107 P **P** **11 11 09.2 +0.1**
KAPI IAmb IAmb 11 11 24.3
comp=Z,91nm,1.1s
BNSI Bone 22.99 105 P **P** **11 11 12.8 +1.9**
comp=Z,3μmcomp=Z,67nm,0.5s
BKSI Bulukumba 23.25 107 P **P** **11 11 14.3 +0.8**
comp=Z,2μmcomp=Z,114nm,1.1s
IMP Imphal 23.36 351 *e*P **P** **11 11 14.1 -0.6**
IMP IAmb IAmb 11 11 18.2
comp=Z,48nm,1.2s
SILR SILCHAR 23.52 348 *e*P **P** **11 11 17.9 +1.9**
KMI Kunming 23.80 11 ⇑*i*P **P** **11 11 19.6 +0.7**
KMI pP pP 11 11 31.1 +0.3
KMI sP sP 11 11 35.4 -1.0
KMI PP **PnPn** **11 11 57.1 +8.6**
KMI S **S** **11 15 25.6 -6.1**
KMI SS **SnSn** **11 16 20.3 +6.5**
KMI pmax pmax
comp=Z,44nm,1.3s
KMI pmax pmax
comp=Z,330nm,3.5s
KMI LR LR
comp=Z,2μm,15.5s
KMI LR LR
comp=Z,1μm,15.1s
KMI LR LR
comp=Z,2μm,14.7s
KMI Kunming 23.80 11 P **P** **11 11 18.5 -0.4**
KMI pmax pmax
comp=Z,50nm,1.0s
KMI Kunming 23.80 11 P **P** **11 11 18.5 -0.4**
BSSI Bau Bau, Buton 23.84 109 P **P** **11 11 18.7 -0.5**
comp=Z,1μmcomp=Z,1μmcomp=Z,100nm,1.2s
APSI Ampana 23.88 96 P **P** **11 11 20.8 +1.3**
comp=Z,1μmcomp=Z,6μmcomp=Z,507nm,1.5s
MRSI Marisa 24.06 93 P **P** **11 11 20.7 -0.5**
comp=Z,2μmcomp=Z,168nm,1.0s
WBSI Waikabubak, Su 24.16 118 P **P** **11 11 20.9 -1.2**
comp=Z,2μmcomp=Z,150nm,0.8s
KOHI KOHIMA 24.21 352 *e*P **P** **11 11 22.5 -0.1**
KOHI IAmb IAmb 11 11 23.9
comp=Z,81nm,1.0s
SHL Shillong 24.48 347 *e*P **P** **11 11 24.6 -0.5**
SHL IAmb IAmb 11 11 33.2
comp=Z,42nm,0.8s
SHL Shillong 24.48 347 P **P** **11 11 24.6 -0.5**
SNR=45
SHL Shillong 24.48 347 P **P** **11 11 24.9 -0.2**
SHL pmax pmax
comp=Z,99nm,0.8s
SHL Shillong 24.48 347 P **P** **11 11 24.9 -0.2**
SHL IAmb IAmb 11 11 45.0
comp=Z,99nm,0.8s
HYB Hyderabad 24.64 311 *i* P **P** **11 11 28.0 +1.5**
HYB *e*pP **pP** **11 11 39.0 +0.6**
HYB *e*S **S** **11 15 54.0 +9.0**
MOKO MOKOCHONG 24.75 353 *e*P **P** **11 11 27.6 +0.1**
MOKO IAmb IAmb 11 11 33.9
comp=Z,188nm,1.1s
BOK Bokaro 24.91 333 *e*P **P** **11 11 30.4 +1.6**
BOK IAmb IAmb 11 11 35.3
comp=Z,97nm,1.1s
LUWI Luwuk 25.01 96 P **P** **11 11 30.4 +0.6**
comp=Z,7μmcomp=Z,621nm,0.8s
LUWI Luwuk 25.01 96 P **P** **11 11 30.5 +0.7**
GTOI Gorontalo 25.12 92 P **P** **11 11 29.1 -1.8**
comp=Z,846nmcomp=Z,98nm,0.9s
GUWA GUWAHATI 25.13 347 *e*P **P** **11 11 30.9 +0.2**
GUWA IAmb IAmb 11 11 32.6
comp=Z,34nm,0.8s
TEZP TEZPUR 25.31 349 *e*P **P** **11 11 31.7 -0.7**
BASI Baing, Sumba 25.46 118 P **P** **11 11 34.1 +0.2**
comp=Z,3μmcomp=Z,231nm,1.3s
EDFI Ende, Flores 25.86 114 P **P** **11 11 34.6 -3.1**
comp=Z,472nmcomp=Z,27nm,0.5s
TGY Tagaytay City 25.91 60 LR LR 11 21 39.7
comp=Z,590nm,21.1s,baz=245,slow=36
ZIRO ZIRO 26.02 352 *e*P **P** **11 11 39.1 +0.1**
GYA Guiyang 26.07 18 ⇓P **P** **11 11 39.4 0.0**
GYA S **S** **11 16 05.0 -2.6**
GYA SS **SnSn** **11 17 12.9 +3.9**
GYA pmax pmax
comp=Z,24nm,1.0s
GYA pmax pmax
comp=Z,150nm,3.5s
GYA LR LR
comp=Z,970nm,12.8s
GYA LR LR
comp=Z,430nm,14.9s
GYA LR LR
comp=Z,1μm,14.8s
KMSI Cibinong 26.09 92 P **P** **11 11 38.4 -1.3**
comp=Z,184nm,1.1s
MMRI Maumere 26.32 113 P **P** **11 11 40.0 -1.7**
comp=Z,106nm,1.2s
MMRI Maumere 26.32 113 P **P** **11 11 41.1 -0.7**
MMRI IAmb IAmb 11 12 01.2
comp=Z,109nm,1.1s
NGP Nagpur 26.71 318 *e*P **P** **11 11 47.1 +1.9**
NGP IAmb IAmb 11 11 57.2
comp=Z,50nm,1.0s
H08S2 Diego Garcia H 26.98 250 T T 11 39 15.4
baz=70,slow=75,SNR=1589
H08S3 Diego Garcia H 26.98 250 T T 11 39 04.2
baz=70,slow=75,SNR=7691
H08S1 Diego Carcia H 26.99 250 T T 11 39 05.1
baz=70,slow=75,SNR=646
ODAN Odare 27.02 339 *e*P **P** **11 11 49.5 +1.3**
comp=Z,157nm,0.9s
GTK Tadong 27.04 342 *e*P **P** **11 11 49.4 +1.2**
GTK IAmb IAmb 11 11 53.5
comp=Z,69nm,1.0s
TAPN Taplejung 27.36 340 *e*P **P** **11 11 52.5 +1.2**
comp=Z,260nm,0.8s
RAMN Ramite 27.40 338 *e*P **P** **11 11 53.3 +1.8**
comp=Z,89nm,0.7s
GOA Goa 27.45 301 *e*P **P** **11 11 54.0 +2.2**
GOA IAmb IAmb 11 11 54.9
comp=Z,29nm,0.8s
DAV Davao City (W) 28.11 78 P **P** **11 11 58.8 +1.0**
comp=Z,58nm,0.4s,baz=190,slow=1.0,SNR=9.1
DAV LR LR 11 25 10.5
comp=Z,970nm,20.3s,baz=232,slow=41
BATI Baumata 28.22 115 P **P** **11 11 57.1 -1.7**
comp=Z,23nm,0.3s,baz=285,slow=5.0,SNR=7.3
BATI LR LR 11 25 10.3
comp=Z,4μm,21.4s,baz=296,slow=40
SANI Sanana 28.32 97 P **P** **11 11 58.4 -1.3**
comp=Z,582nmcomp=Z,36nm,1.3s
PKI Pulchoki 28.42 336 *e*P **P** **11 12 01.7 +0.9**
comp=Z,446nm,1.3s
PKIN Phulchoki 28.43 336 *e*P **P** **11 12 01.8 +1.0**
comp=Z,414nm,1.4s
GUN Gumba 28.54 337 *e*P **P** **11 12 03.1 +1.3**
comp=Z,780nm,1.2s
DMN Daman 28.58 336 *e*P **P** **11 12 03.3 +1.2**
comp=Z,142nm,0.8s
SOEI Soe 28.59 114 P **P** **11 11 59.3 -2.9**
comp=Z,917nmcomp=Z,88nm,1.1s
SOEI Soe 28.59 114 P **P** **11 12 00.2 -2.0**
SOEI IAmb IAmb 11 12 21.8
comp=Z,91nm,1.1s
LSA Lhasa 28.63 348 P **P** **11 12 04.0 +1.3**
LSA S **S** **11 16 46.4 -2.2**
LSA pmax pmax
comp=Z,180nm,1.0s
LSA LR LR
comp=Z,4μm,26.3s
LSA LR LR
comp=Z,1μm,26.3s
LSA LR LR
comp=Z,5μm,23.5s
LSA Lhasa 28.63 348 *i* P **P** **11 12 03.8 +1.1**
SNR=9.1
LSA Lhasa 28.63 348 P **P** **11 12 04.1 +1.4**
LSA P **P** **11 12 04.1 +1.4**
LSA Lhasa 28.63 348 P **P** **11 12 03.5 +0.8**
LSA pmax pmax
comp=Z,95nm,1.3s
LSA Lhasa 28.63 348 P **P** **11 12 03.5 +0.8**
LSA IAmb IAmb 11 12 13.4
comp=Z,95nm,1.3s

KKN Kakani 28.67 336 *e*P **P** **11 12 04.0 +1.2**
comp=Z,284nm,1.0s
POO Poona 28.95 307 *e*P **P** **11 12 06.4 +1.2**
POO IAmb IAmb 11 12 09.3
comp=Z,12nm,0.9s
GKN Gorkha 29.12 335 *e*P **P** **11 12 08.0 +1.2**
comp=Z,511nm,1.2s
BHPL Bhopal 29.25 319 *e*P **P** **11 12 08.9 +1.1**
BHPL IAmb IAmb 11 12 11.2
comp=Z,30nm,1.1s
KOLN Koldanda 29.36 333 *e*P **P** **11 12 10.2 +1.2**
comp=Z,221nm,0.8s
NLAI Namlea 29.59 99 P **P** **11 12 12.0 +1.1**
comp=Z,1μmcomp=Z,112nm,1.0s
CD2 Chengdu 29.63 10 P **P** **11 12 10.6 -0.5**
CD2 S **S** **11 17 05.8 +2.3**
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 pmax pmax
comp=Z,140nm,6.6s
CD2 LR LR
comp=Z,2μm,20.0s
CD2 LR LR
comp=Z,2μm,16.3s
CD2 LR LR
comp=Z,2μm,12.8s
DANN Dangsing 29.80 334 *e*P **P** **11 12 13.8 +0.9**
comp=Z,210nm,0.9s
PYUN Piuthan 29.92 333 *e*P **P** **11 12 15.0 +1.1**
comp=Z,162nm,0.8s
ENH Enshi 30.52 20 P **P** **11 12 18.1 -0.9**
ENH IAmb IAmb 11 12 34.9
comp=Z,51nm,0.8s
AAI Ambon 30.74 100 P **P** **11 12 21.0 -0.1**
comp=Z,2μmcomp=Z,104nm,1.1s
MSAI Masohi 31.41 99 P **P** **11 12 26.7 -0.3**
comp=Z,101μmcomp=Z,1μmcomp=Z,17nm,0.9s
PSA00 Pilbara Seismi 31.51 138 P **P** **11 12 27.6 -0.2**
PSA00 IAmb IAmb 11 12 29.6
comp=Z,56nm,1.0s
PSA00 Pilbara Seismi 31.51 138 P **P** **11 12 29.1 +1.3**
PSA00 IAmb IAmb 11 12 30.7
comp=Z,38nm,1.0s
WHN Wuhan 32.70 27 ⇓P **P** **11 12 38.1 0.0**
WHN S **S** **11 17 54.4 +3.0**
WHN pmax pmax
comp=Z,200nm,1.7s
WHN pmax pmax
comp=Z,1μm,4.1s
WHN LR LR
comp=Z,4μm,17.0s
WHN LR LR
comp=Z,3μm,17.1s
WHN LR LR
comp=Z,3μm,14.2s
SIJI Sorong 33.45 94 LR LR 11 28 40.9
comp=Z,493nm,21.5s,baz=324,slow=40
FITZ Fitzroy Crossi 33.62 127 LR LR 11 27 34.1
comp=Z,375nm,21.0s,baz=302,slow=38
FITZ Fitzroy Crossi 33.62 127 P **P** **11 12 44.8 -1.6**
baz=34,SNR=24
FITZ Fitzroy Crossi 33.62 127 P **P** **11 12 45.6 -0.7**
XAN Xi'an 33.83 17 ⇑P **P** **11 12 46.9 -1.1**
XAN pP pP 11 13 01.8 +1.5
XAN sP sP 11 13 08.5 +2.7
XAN S **S** **11 18 05.3 -3.8**
XAN ScS **ScS** **11 23 07.8 -1.4**
XAN pmax pmax
comp=Z,95nm,1.0s
XAN LR LR
comp=Z,790nm,19.5s
XAN LR LR
comp=Z,2μm,14.1s
XAN LR LR
comp=Z,2μm,20.6s
XAN Xi'an 33.83 17 P **P** **11 12 47.0 -1.1**
XAN pmax pmax
comp=Z,144nm,1.3s
XAN Xi'an 33.83 17 P **P** **11 12 47.0 -1.1**
MEEK Meekatharra 34.50 146 P **P** **11 12 55.8 +1.9**
baz=35,SNR=21
FAKI Fak Fak 34.63 97 P **P** **11 12 54.2 -1.0**
comp=Z,739nmcomp=Z,48nm,1.0s
FAKI Fak Fak 34.63 97 P **P** **11 12 54.0 -1.2**
FAKI IAmb IAmb 11 12 55.6
comp=Z,72nm,1.2s
LZH Lanzhou 34.71 8 ⇑P **P** **11 12 55.3 -0.4**
LZH pP pP 11 13 05.4 -2.6
LZH sP sP 11 13 07.5 -6.0
LZH PP **PnPn** **11 14 10.8 -2.0**
LZH S **S** **11 18 16.3 -6.5**
LZH SS **SnSn** **11 20 41.4 +2.4**
LZH pmax pmax
comp=Z,23nm,1.4s
LZH pmax pmax
comp=Z,140nm,4.3s
LZH LR LR
comp=Z,2μm,15.7s
LZH LR LR
comp=Z,2μm,16.3s
LZH LR LR
comp=Z,2μm,16.8s
KNRA Kununurra 35.03 121 P **P** **11 12 56.8 -1.7**
baz=35,SNR=16
KNRA Kununurra 35.03 121 P **P** **11 12 57.6 -0.9**
KNRA IAmb IAmb 11 12 57.8
comp=Z,48nm,1.1s
MORW Morawa 35.14 152 P **P** **11 13 02.2 +2.9**
baz=35,SNR=6.3
MORW Morawa 35.14 152 P **P** **11 13 00.0 +0.7**
MORW IAmb IAmb 11 13 20.1
comp=Z,59nm,1.3s
SMLA Simla 35.28 328 *e*P **P** **11 13 01.3 +0.8**
BHK Bhakra 35.90 328 *ex* **P** **11 13 05.5 -0.4**
MTN Manton Dam 35.98 115 P **P** **11 13 04.9 -1.9**
baz=36,SNR=20
MTN Manton Dam 35.98 115 P **P** **11 13 05.2 -1.5**
MTN IAmb IAmb 11 13 07.0
comp=Z,36nm,0.9s
NJ2 Nanjing 36.12 31 *e*P **P** **11 13 09.4 +1.7**
NJ2 pmax pmax
comp=Z,14nm,0.6s
NJ2 LR LR
comp=Z,890nm,13.7s
NJ2 LR LR
comp=Z,970nm,15.2s
NJ2 LR LR
comp=Z,1μm,17.1s
DHRM DHARAMSHALA 36.62 328 *e*P **P** **11 13 12.6 +0.4**
DHRM IAmb IAmb 11 13 20.7
comp=Z,129nm,0.6s
SSE Sheshan 36.65 35 P **P** **11 13 12.8 +0.6**
SSE S **S** **11 18 52.4 +0.1**
SSE pmax pmax
comp=Z,33nm,0.6s
SSE pmax pmax
comp=Z,120nm,3.0s
SSE LR LR
comp=Z,690nm,16.3s
SSE LR LR
comp=Z,400nm,13.2s
KDU Kakadu 37.15 114 P **P** **11 13 15.1 -1.6**
baz=37,SNR=20
GTA Gaotai 37.63 2 ⇑P **P** **11 13 20.6 0.0**
GTA pP pP 11 13 28.8 -4.0
GTA sP sP 11 13 33.5 -4.7
GTA PcP **PcP** **11 15 38.8 +1.3**
GTA S **S** **11 19 04.3 -2.9**
GTA sS ScP 11 19 23.5 +2.2
GTA SS **SnSn** **11 21 41.9 -7.5**
GTA ScS **ScS** **11 23 26.6 -3.4**
GTA pmax pmax
comp=Z,21nm,1.3s
GTA pmax pmax
comp=Z,130nm,7.5s
GTA LR LR
comp=Z,320nm,17.5s
GTA LR LR
comp=Z,470nm,18.5s
GTA LR LR
comp=Z,530nm,21.1s
MUN Mundaring 37.68 154 P **P** **11 13 23.9 +2.9**
baz=38,SNR=13
KLBR Kellerberrin 38.05 152 P **P** **11 13 26.6 +2.5**
baz=38,SNR=12
TIA Tai'an 38.73 25 P **P** **11 13 28.6 -1.1**

TIA pmax pmax
comp=Z,8.0nm,1.6s
TIA LR LR
comp=Z,1μm,15.7s
TIA LR LR
comp=Z,740nm,15.3s
TIA LR LR
comp=Z,2μm,16.1s
NWAO Narrogin (SRO) 38.94 154 P **P** **11 13 33.2 +1.7**
comp=Z,25nm,0.9s,baz=319,slow=11,SNR=8.7
NWAO Narrogin (SRO) 38.94 154 P **P** **11 13 34.5 +2.9**
baz=39,SNR=5.4
NWAO Narrogin (SRO) 38.94 154 P **P** **11 13 31.9 +0.3**
NWAO pmax pmax
comp=Z,50nm,1.2s
NWAO Narrogin (SRO) 38.94 154 P **P** **11 13 31.9 +0.3**
NWAO IAmb IAmb 11 13 50.5
comp=Z,50nm,1.1s
NIL Nilore 39.33 327 P **P** **11 13 34.9 0.0**
NIL pmax pmax
comp=Z,110nm,0.8s
NIL Nilore 39.33 327 P **P** **11 13 34.9 0.0**
H01W3 Cape Leeuwin H 39.40 159 T T 11 55 15.4
baz=333,slow=76,SNR=8.8
H01W2 Cape Leeuwin H 39.41 159 T T 11 55 17.8
baz=333,slow=76,SNR=11
H01W1 Cape Leeuwin H 39.41 159 T T 11 55 20.7
baz=333,slow=76,SNR=7.9
WRKA Warakurna 39.63 134 P **P** **11 13 37.4 -0.2**
baz=40,SNR=26
KMBL Kambalda 39.96 147 P **P** **11 13 42.3 +2.2**
baz=40,SNR=15
BTO Baotou 40.31 14 *e*P **P** **11 13 42.8 -0.1**
HHC Hu-ho-hao-te 40.94 16 *e*P **P** **11 13 49.8 +1.6**
HHC S **S** **11 19 59.5 +2.6**
HHC pmax pmax
comp=Z,31nm,1.0s
HHC pmax pmax
comp=Z,230nm,4.8s
HHC LR LR
comp=Z,950nm,17.5s
HHC LR LR
comp=Z,560nm,16.1s
HHC LR LR
comp=Z,910nm,17.3s
SMPI Sarmi 40.96 95 P **P** **11 13 48.4 -0.2**
comp=Z,843nmcomp=Z,53nm,1.2s
WB0 Warramunga Arr 41.65 123 P **P** **11 13 53.0 -1.2**
WB0 IAmb IAmb 11 13 54.9
comp=Z,74nm,0.6s
BJT Baijiatuau 41.65 21 P **P** **11 13 54.5 +0.6**
BJT pmax pmax
comp=Z,23nm,0.8s
BJT Baijiatuau 41.65 21 P **P** **11 13 54.5 +0.6**
BJI Beijing 41.67 21 P **P** **11 13 54.8 +0.8**
BJI PP **PP** **11 15 29.8 -1.3**
BJI S **S** **11 20 08.3 +0.8**
BJI pmax pmax
comp=Z,21nm,1.2s
BJI LR LR
comp=Z,350nm,13.5s
BJI LR LR
comp=Z,600nm,17.8s
BJI LR LR
comp=Z,350nm,22.7s
WRA Warramunga Arr 41.68 123 P **P** **11 13 53.6 -0.9**
comp=Z,50nm,0.6s,baz=302,slow=9.1,SNR=361
WRA PcP **PcP** **11 15 51.6 +0.9**
comp=Z,4.0nm,0.8s,baz=319,slow=2.5,SNR=3.0
WRA S **S** **11 20 02.3 -6.0**
comp=Z,13nm,1.2s,baz=296,slow=16,SNR=13
WRA LR LR 11 32 09.1
comp=Z,734nm,21.6s,baz=295,slow=37
WRA Warramunga Arr 41.68 123 P **P** **11 13 53.3 -1.2**
WRA Warramunga Arr 41.68 123 P **P** **11 13 53.3 -1.2**
WRAB Tennant Creek 41.68 123*c* *i*P **P** **11 13 53.8 -0.7**
WRAB pmax pmax
comp=Z,125nm,1.0s
WRAB Tennant Creek 41.68 123 P **P** **11 13 53.8 -0.7**
WB2 Warramunga Arr 41.69 123 P **P** **11 13 53.8 -0.8**
baz=42
WB2 Warramunga Arr 41.69 123 P **P** **11 13 53.8 -0.8**
WR0 Warramunga Arr 41.86 123 P **P** **11 13 55.4 -0.5**
KBL Kabul 42.37 324 P **P** **11 14 00.3 +0.2**
SNR=9.0
KBL P **P** **11 14 00.3 +0.2**
SNR=9.0
KBL Kabul 42.37 324 P **P** **11 14 00.1 -0.1**
KBL pmax pmax
comp=Z,15nm,0.8s
KBL Kabul 42.37 324 P **P** **11 14 00.1 -0.1**
GENI Genym 42.46 96 P **P** **11 13 59.7 -1.2**
comp=Z,1μmcomp=Z,102nm,0.7s
KSH Kashi 42.66 335 P **P** **11 14 01.8 -0.5**
KSH S **S** **11 20 21.0 -1.5**
KSH pmax pmax
comp=Z,25nm,0.6s
KSH pmax pmax
comp=Z,250nm,4.0s
KSH LR LR
comp=Z,350nm,6.0s
KSH LR LR
comp=Z,260nm,5.9s
KSH LR LR
comp=Z,1μm,20.9s
JSU Suzuyama 42.73 43 P **P** **11 14 03.2 +0.3**
DL2 Dalian 42.96 27 P **P** **11 14 04.1 -0.4**
DL2 S **S** **11 20 25.3 -1.2**
DL2 pmax pmax
comp=Z,52nm,0.9s
DL2 pmax pmax
comp=Z,310nm,5.0s
DL2 LR LR
comp=Z,640nm,18.8s
DL2 LR LR
comp=Z,670nm,16.7s
DL2 LR LR
comp=Z,850nm,18.6s
WMQ Urumqi 42.97 349 *e*P **P** **11 14 05.9 +1.3**
WMQ pP pP 11 14 13.4 -3.7
WMQ sP sP 11 14 19.8 -2.7
WMQ S **S** **11 20 25.8 -0.9**
WMQ pmax pmax
comp=Z,77nm,2.3s
WMQ pmax pmax
comp=Z,370nm,3.7s
WMQ LR LR
comp=Z,860nm,29.2s
WMQ LR LR
comp=Z,3μm,29.0s
WMQ LR LR
comp=Z,250nm,27.9s
WMQ Urumqi 42.97 349 P **P** **11 14 05.3 +0.7**
WMQ pmax pmax
comp=Z,58nm,1.0s
WMQ Urumqi 42.97 349 P **P** **11 14 05.3 +0.7**
WMQ IAmb IAmb 11 14 21.5
comp=Z,58nm,1.0s
AS31 Alice Springs 43.11 128 P **P** **11 14 05.1 -1.0**
ASAR Alice Springs 43.11 128 P **P** **11 14 05.5 -0.6**
comp=Z,20nm,0.6s,baz=300,slow=8.0,SNR=296
ASAR PcP **PcP** **11 15 56.8 +1.4**
comp=Z,9.1nm,1.0s,baz=287,slow=3.0,SNR=6.2
ASAR S **S** **11 20 24.5 -4.8**
comp=Z,5.9nm,1.1s,baz=295,slow=15,SNR=15
ASAR LR LR 11 34 48.1
comp=Z,425nm,19.9s,baz=310,slow=40
ASAR Alice Springs 43.11 128 P **P** **11 14 05.6 -0.4**
WBK Wadi Bani Khal 43.16 302 P **P** **11 14 07.3 +0.8**
FORT Forrest 43.17 141 P **P** **11 14 07.9 +1.5**
baz=43,SNR=134
FORT Forrest 43.17 141 P **P** **11 14 07.3 +1.0**
MHTO MHTO 43.41 299 P **P** **11 14 08.9 +0.4**
MHTO P **P** **11 14 08.9 +0.4**
WSAR Wadi Sarin 43.70 303 P **P** **11 14 12.5 +1.7**
comp=Z,23nm,1.1s,baz=121,slow=7.9,SNR=6.0
TJN Taejon 44.01 35*c* *i*P **P** **11 14 12.8 -0.2**
JNU Nakatsue 44.01 41 LR LR 11 33 17.9
comp=Z,1μm,20.3s,baz=232,slow=37
BIDO Bidbid 44.23 303 P **P** **11 14 17.1 +2.0**
SNR=8.9
PRZ Przheval'sk 44.26 339 P **P** **11 14 15.8 +0.6**
PRZ pmax pmax
comp=Z,83nm,1.3s
PRZ Przheval'sk 44.26 339 P **P** **11 14 15.8 +0.6**
PRZ IAmb IAmb 11 14 18.3

comp=Z,83nm,1.2s
KDJ Kajisay 44.40 338 P **P** **11 14 17.0 +0.7**
KDJ pmax pmax
comp=Z,81nm,1.0s
KDJ Kajisay 44.40 338 P **P** **11 14 17.0 +0.7**
KDJ IAmb IAmb 11 14 18.8
comp=Z,81nm,0.9s
SHLS Shalkode 44.49 341 *i* P **P** **11 14 17.2 +0.2**
comp=Z,33nm,0.9s,baz=341
SHLS *eS* **S** **11 20 48.3 -0.8**
baz=341
SHLS Shalkode 44.49 341 *i* P **P** **11 14 17.2 +0.2**
SHLS *eS* **S** **11 20 48.3 -0.8**
SHLS pmax pmax
comp=Z,33nm,0.9s
PDGK Podgornoye 44.63 341 *i* P **P** **11 14 19.2 +1.1**
PDGK pmax pmax
comp=Z,56nm,0.9s
BSY Bisya 44.72 301 P **P** **11 14 20.6 +1.6**
SNR=8.6
BSY P **P** **11 14 20.6 +1.6**
SNR=8.6
SATY Saty 44.76 340⇓ *i* P **P** **11 14 20.6 +1.4**
comp=Z,34nm,1.0s,baz=340
SATY *eS* **S** **11 20 54.3 +1.2**
baz=340
SATY Saty 44.76 340 *d* *i* P **P** **11 14 20.5 +1.4**
SATY *eS* **S** **11 20 54.3 +1.2**
SATY pmax pmax
comp=Z,34nm,1.0s
SOCY Socotra 44.76 286 P **P** **11 14 20.7 +1.2**
SOCY IAmb IAmb 11 14 21.6
comp=Z,65nm,1.2s
ULHL Ulahol 44.85 337 P **P** **11 14 20.9 +0.9**
SNR=12
GAR Garm 44.91 329 P **P** **11 14 20.4 0.0**
GAR IAmb IAmb 11 14 38.4
comp=Z,95nm,1.0s
HOQ Hoqain 44.95 302 P **P** **11 14 22.5 +1.7**
SNR=7.8
KPKS Kokpek 45.02 340 *i* P **P** **11 14 22.4 +1.1**
comp=Z,39nm,1.1s,baz=340
KPKS Kokpek 45.02 340 *i* P **P** **11 14 22.3 +1.1**
KPKS pmax pmax
comp=Z,39nm,1.1s
KSAR Wonju Array Be 45.05 34 P **P** **11 14 21.4 0.0**
KSAR Wonju Array Be 45.05 34 P **P** **11 14 21.4 0.0**
KSRS Korea Array 45.09 34 P **P** **11 14 21.3 -0.3**
comp=Z,8.7nm,0.8s,baz=217,slow=9.0,SNR=45
KSRS LR LR 11 34 23.1
comp=Z,569nm,19.1s,baz=220,slow=38
KS19 Wonju Array Si 45.09 34 P **P** **11 14 21.6 -0.1**
BOOM Boomskoye usch 45.18 337 P **P** **11 14 23.2 +0.7**
BOOM pmax pmax
comp=Z,47nm,1.1s
BOOM Boomskoye usch 45.18 337 P **P** **11 14 23.2 +0.7**
BOOM IAmb IAmb 11 14 46.1
comp=Z,46nm,1.1s
CHGR Chuyangaron 45.26 328 P **P** **11 14 22.7 -0.4**
MDOK Medeo 45.34 339 *i* P **P** **11 14 25.2 +1.5**
baz=339
MDOK *eS* **S** **11 21 02.8 +1.4**
baz=339
MDOK Medeo 45.34 339 *i* P **P** **11 14 25.2 +1.5**
MDOK *eS* **S** **11 21 02.8 +1.4**
AAA Alma-Ata 45.42 338 *eP* **P** **11 14 25.7 +1.3**
comp=Z,37nm,0.9s,baz=338
AAA *eS* **S** **11 21 03.8 +1.2**
baz=338
AAA Alma-Ata 45.42 338 *eP* **P** **11 14 25.6 +1.3**
AAA *eS* **S** **11 21 03.7 +1.2**
AAA pmax pmax
comp=Z,37nm,0.9s
BTK Batken 45.46 331 P **P** **11 14 26.0 +1.3**
BTK pmax pmax
comp=Z,50nm,1.0s
BTK Batken 45.46 331 P **P** **11 14 26.0 +1.3**
BTK IAmb IAmb 11 14 43.6
comp=Z,50nm,0.9s
UCH Uchtor 45.53 336 P **P** **11 14 27.3 +1.7**
SNR=11
TKM2 Tokmak 2 45.68 337 P **P** **11 14 27.6 +1.1**
SNR=51
TKM2 Tokmak 2 45.68 337 *i* P **P** **11 14 26.7 +0.2**
TKM2 pmax pmax
comp=Z,61nm,1.3s
KBK Karagaybulak 45.71 336 P **P** **11 14 28.6 +1.9**
SNR=33
RBK Rabkut 45.72 293 P **P** **11 14 28.6 +1.5**
SNR=6.7
AML Almayashu 45.79 335 P **P** **11 14 29.0 +1.3**
SNR=7.5
SOHO SOHO 45.82 303 *i* P **P** **11 14 28.6 +1.0**
SNR=5.4
AAK Ala-Archa 45.88 336 P **P** **11 14 29.9 +1.9**
SNR=16
AAK Ala-Archa 45.88 336 *i* P **P** **11 14 29.4 +1.4**
SNR=26
AAK Ala-Archa 45.88 336 P **P** **11 14 29.5 +1.4**
AAK P **P** **11 14 29.5 +1.4**
AAK S **S** **11 21 09.6 +0.3**
AAK S **S** **11 21 09.6 +0.3**
AAK Ala-Archa 45.88 336 *d* *i* P **P** **11 14 29.3 +1.4**
AAK pmax pmax
comp=Z,88nm,1.0s
AAK MLR MLR
comp=Z,2µm,21.0s
CHKK Chushkaly 45.96 339 *eP* **P** **11 14 28.7 +0.2**
baz=339
CHKK Chushkaly 45.96 339 *eP* **P** **11 14 28.7 +0.2**
CHMS Chumysh 46.08 336 P **P** **11 14 30.3 +0.9**
SNR=10
EKS2 Erkin-Say 46.20 335 P **P** **11 14 32.1 +1.6**
SNR=16
KUU Kurty 46.23 338 *eP* **P** **11 14 31.2 +0.6**
comp=Z,74nm,1.1s,baz=338
KUU *eS* **S** **11 21 14.6 +0.7**
baz=338
KUU Kurty 46.23 338 *eP* **P** **11 14 31.1 +0.6**
KUU *eS* **S** **11 21 14.6 +0.7**
KUU pmax pmax
comp=Z,74nm,1.1s
WHFO Wadi Hawf 46.23 293 P **P** **11 14 32.0 +1.0**
SNR=6.6
JMN Monobe 46.38 43 P **P** **11 14 32.0 +0.1**
JMN IAmb IAmb 11 14 33.9
comp=Z,71nm,1.0s
USP Ospenovka 46.40 336 P **P** **11 14 32.8 +0.8**
SNR=32
UOSS Minazif 46.41 304 P **P** **11 14 32.4 +0.1**
UOSS Minazif 46.41 304 P **P** **11 14 32.7 +0.4**
QIS Mount Isa 46.42 121 P **P** **11 14 32.3 -0.2**
baz=46,SNR=36
HATD Hatta, Dubai 46.42 303 *i* P **P** **11 14 33.6 +1.2**
SNR=6.5
ALNE Al Ain 46.45 302 *i* P **P** **11 14 34.2 +1.5**
SNR=5.8
MDH Madha 46.47 304 P **P** **11 14 32.5 -0.3**
TDK Taldygorghan 46.48 341 *eP* **P** **11 14 32.9 +0.4**
comp=Z,25nm,0.8s,baz=341
TDK *eS* **S** **11 21 17.6 0.0**
baz=341
TDK LR LR 11 34 31.8
comp=Z,233nm,17.2s,baz=341
TDK Taldyqorghan 46.48 341 *eP* **P** **11 14 32.9 +0.4**
TDK *eS* **S** **11 21 17.5 0.0**
TDK pmax pmax
comp=Z,25nm,0.8s
TDK MLR MLR
comp=Z,233nm,17.0s
SGDS Sogindy 46.51 337⇓ *i* P **P** **11 14 33.6 +0.8**
comp=Z,15nm,1.6s,baz=337
SGDS *eS* **S** **11 21 17.8 -0.2**
baz=337
SGDS *eS* S 11 21 18.8 +0.7
baz=337
SGDS Sogindy 46.51 337 *d* *i* P **P** **11 14 33.6 +0.8**
SGDS *eS* **S** **11 21 17.8 -0.2**
SGDS *eS* S 11 21 18.7 +0.6
SGDS pmax pmax
comp=Z,15nm,1.6s
HRA Herat 46.55 318 P **P** **11 14 33.4 -0.2**
SONM Songino Array 46.59 8 P **P** **11 14 34.2 +0.7**
comp=Z,16nm,0.8s,baz=189,slow=10.0,SNR=82
SONM PcP **PcP** **11 16 07.9 +0.9**
comp=Z,3.3nm,0.4s,baz=198,slow=4.4,SNR=5.7
SONM ScP **ScP** **11 19 56.5 -0.4**
comp=Z,1.9nm,1.0s,baz=240,slow=4.8,SNR=4.1
SONM LR LR 11 36 08.0
comp=Z,899nm,20.7s,baz=179,slow=39
SONM Songino Array 46.59 8 P **P** **11 14 34.2 +0.7**
SONM pmax pmax
comp=Z,18nm,0.9s
SONM Songino Array 46.59 8 P **P** **11 14 34.2 +0.7**
JHS Saijyo 46.62 41 P **P** **11 14 33.6 -0.2**
ULN Ulaanbaatar 46.72 8 *c* *i* P **P** **11 14 35.1 +0.6**
ULN pmax pmax
comp=Z,41nm,1.7s
ULN Ulaanbaatar 46.72 8 P **P** **11 14 35.1 +0.6**
FAQ Al Faqa, Dubai 46.84 303 *i* P **P** **11 14 36.7 +1.0**
SNR=7.3
NAZ Nazwa, Dubai 46.88 303 P **P** **11 14 37.1 +1.1**
MK31 Makanchi Array 46.98 345 *i* P **P** **11 14 37.1 +0.6**
MK31 pmax pmax
comp=Z,70nm,0.7s
MK31 Makanchi Array 46.98 345 P **P** **11 14 37.1 +0.6**
MKAR Makanchi Array 46.98 345 P **P** **11 14 37.2 +0.7**
comp=Z,29nm,0.4s,baz=158,slow=8.5,SNR=500
MKAR S **S** **11 21 25.0 +0.3**
comp=Z,6.2nm,1.1s,baz=168,slow=12,SNR=8.5
MKAR LR LR 11 37 55.0
comp=Z,301nm,21.5s,baz=166,slow=41
ZSN Zaisan 47.01 348 *i* P **P** **11 14 38.0 +1.4**
comp=Z,19nm,0.8s,baz=348
ZSN *eS* **S** **11 21 26.4 +1.3**
baz=348
ZSN Zaisan 47.01 348 *i* P **P** **11 14 38.0 +1.4**
ZSN *eS* **S** **11 21 26.3 +1.3**
ZSN pmax pmax
comp=Z,19nm,0.8s
ASUD Al Ashush, Dub 47.02 303 *i* P **P** **11 14 38.7 +1.6**
SNR=24
ASUD Al Ashush, Dub 47.02 303 P **P** **11 14 38.8 +1.7**
SNR=17
ASUD P **P** **11 14 38.8 +1.7**
SNR=17
MAKZ Makanchi 47.08 345 P **P** **11 14 37.5 +0.3**
MAKZ Makanchi 47.08 345 P **P** **11 14 37.4 +0.2**
MAKZ IAmb IAmb 11 14 52.9
comp=Z,56nm,0.8s
AJN Ajban 47.28 302 *i* P **P** **11 14 40.0 +0.9**
SNR=5.8
DZA Taraz 47.44 333 *eP* **P** **11 14 40.5 +0.4**
baz=334
DZA Taraz 47.44 333 *eP* **P** **11 14 40.5 +0.4**
IUG luzhnay 47.45 332⇓ *i* P **P** **11 14 41.4 +1.1**
comp=Z,32nm,1.2s,baz=332
IUG *eS* **S** **11 21 32.6 +0.9**
baz=332
IUG luzhnay 47.45 332 *d* *i* P **P** **11 14 41.4 +1.1**
IUG *eS* **S** **11 21 32.5 +0.9**
IUG pmax pmax
comp=Z,32nm,1.2s
COEN Coen 47.46 111 P **P** **11 14 40.0 -0.7**
baz=47,SNR=7.1
COEN Coen 47.46 111 P **P** **11 14 39.8 -0.8**
COEN IAmb IAmb 11 14 41.1
comp=Z,44nm,1.4s
KK31 Karatay Array 47.97 333 P **P** **11 14 44.7 +0.4**
KK31 pmax pmax
comp=Z,22nm,1.1s
KK31 Karatay Array 47.97 333 P **P** **11 14 44.6 +0.4**
KKAR Karatay Array 47.97 333 P **P** **11 14 44.2 0.0**
KKAR pmax pmax
comp=Z,22nm,1.1s
KKAR Karatay Array 47.97 333 P **P** **11 14 44.4 +0.2**
KKAR Karatay Array 47.97 333 P **P** **11 14 44.2 0.0**
BTLS Baital 48.07 337 *i* P **P** **11 14 45.4 +0.4**
comp=Z,13nm,1.3s,baz=337
BTLS *eS* **S** **11 21 40.2 +0.1**
baz=337
BTLS Baital 48.07 337 *i* P **P** **11 14 45.3 +0.4**
BTLS *eS* **S** **11 21 40.1 0.0**
BTLS pmax pmax
comp=Z,13nm,1.3s
JWT Wachi 48.30 42 P **P** **11 14 46.4 -0.4**
JWT IAmb IAmb 11 14 48.3
comp=Z,41nm,1.2s
CN2 Changchun 48.59 27 *eP* **P** **11 14 48.4 -0.5**
CN2 *eS* **S** **11 21 44.6 -2.9**
CN2 pmax pmax
comp=Z,20nm,1.5s
CN2 pmax pmax
comp=Z,210nm,3.3s
CN2 LR LR
comp=Z,1µm,16.0s
CN2 LR LR
comp=Z,370nm,16.0s
CN2 LR LR
comp=Z,1µm,15.0s
ZAK Zakamensk 48.77 5 *eP* **P** **11 14 50.4 +0.1**
ZAK pmax pmax
comp=Z,16nm,1.7s
INU Inuyama 49.42 43 P **P** **11 14 55.6 +0.2**
INU IAmb IAmb 11 14 56.6
comp=Z,61nm,1.2s
BBOO Buckleboo 49.72 137 P **P** **11 14 58.1 +0.3**
baz=50,SNR=39
MTSU Mount Surprise 49.72 115 P **P** **11 14 58.2 +0.2**
baz=50,SNR=37
JGF Kuroka 49.80 43 P **P** **11 14 58.1 -0.3**
JGF IAmb IAmb 11 14 59.3
comp=Z,64nm,1.0s
TLY Talaya 50.09 5 P **P** **11 14 60.0 -0.3**
comp=Z,4.0nm,0.5s,baz=217,slow=11,SNR=6.5
TLY LR LR 11 38 23.7
comp=Z,940nm,18.7s,baz=174,slow=39
TLY Talaya 50.09 5 *c* *i* P **P** **11 15 01.3 +1.1**
TLY *eS* **S** **11 22 05.2 -3.1**
TLY pmax pmax
comp=Z,27nm,1.3s
TLY MLR MLR
comp=Z,907nm,16.0s
TLY Talaya 50.09 5 P **P** **11 15 01.4 +1.1**
JHJ Hachijo jima 2 50.20 47 LR LR 11 34 17.8
comp=Z,223nm,21.8s,baz=262,slow=34
PMG Port Moresby 50.27 104 LR LR 11 40 23.3
comp=Z,398nm,19.5s,baz=242,slow=41
PMG Port Moresby 50.27 104 *de* P **P** **11 15 02.6 +0.3**
PMG pmax pmax
comp=Z,22nm,1.0s
PMG Port Moresby 50.27 104 P **P** **11 15 02.6 +0.3**
PMG IAmb IAmb 11 15 11.8
comp=Z,28nm,0.9s
IRK Irkutsk 50.70 5 *eP* **P** **11 15 05.8 +0.9**
IRK pmax pmax
comp=Z,78nm,2.1s
SEM Semipalatinsk 50.84 346 *eP* **P** **11 15 06.2 -0.1**
comp=Z,8.8nm,0.7s,baz=346
SEM Semipalatinsk 50.84 346 *eP* **P** **11 15 06.1 -0.1**
SEM pmax pmax
comp=Z,9.0nm,0.7s
MAJO Matsushiro 50.89 42 *c* *i* P **P** **11 15 06.0 -0.6**
MAJO pmax pmax
comp=Z,50nm,1.3s
MAJO Matsushiro 50.89 42 P **P** **11 15 06.3 -0.2**
MAJO IAmb IAmb 11 15 07.6
comp=Z,48nm,1.2s
MAT Matsushiro 50.89 42 P **P** **11 15 05.9 -0.7**
MAT S **S** **11 22 16.2 -3.7**
MJAR Matsushiro Arr 50.89 42 P **P** **11 15 06.2 -0.3**
comp=Z,18nm,0.8s,baz=220,slow=6.4,SNR=55
MJAR LR LR 11 38 46.0
comp=Z,352nm,18.5s,baz=255,slow=38
MJAR Matsushiro Arr 50.89 42 P **P** **11 15 06.1 -0.5**
MJAR pmax pmax
comp=Z,19nm,1.1s
MJAR Matsushiro Arr 50.89 42 P **P** **11 15 06.1 -0.5**
HIA Hailar 51.00 18 P **P** **11 15 07.0 -0.2**
HIA pmax pmax
comp=Z,14nm,0.8s
HIA Hailar 51.00 18 P **P** **11 15 07.0 -0.2**
MDJ Mudanjiang 51.14 29 P **P** **11 15 08.9 +0.6**
MDJ pP pP 11 15 19.1 -2.0
MDJ sP sP 11 15 23.5 -2.9
MDJ S **S** **11 22 27.5 +4.5**
MDJ sS sS 11 22 42.3 -1.8
MDJ pmax pmax
comp=Z,22nm,1.1s
MDJ LR LR
comp=Z,1µm,17.8s
MDJ LR LR
comp=Z,420nm,17.1s
MDJ LR LR
comp=Z,2µm,18.5s
VLA Vladivostok 51.22 32 *c* *i* P **P** **11 15 09.6 +0.7**
VLA pmax pmax
comp=Z,114nm,1.6s
GEYT Alibeck 51.33 320 P **P** **11 15 10.2 +0.4**
comp=Z,18nm,0.8s,baz=144,slow=8.3,SNR=23
GEYT Alibeck 51.33 320 P **P** **11 15 08.8 -1.1**
GYA0B ALIBECK ARRAY 51.33 320 P **P** **11 15 10.2 +0.3**
GYA0B IAmb IAmb 11 15 39.8
comp=Z,32nm,0.8s
KURBB Kurchatov Arra 51.49 344 P **P** **11 15 11.4 +0.6**
comp=Z,22nm,0.8s,baz=164,slow=6.8,SNR=78
KURBB S **S** **11 22 21.8 -5.8**
comp=Z,2.1nm,1.0s,baz=153,slow=13,SNR=6.3
KURK Kurchatov 51.55 344 P **P** **11 15 11.8 +0.6**
KURK P **P** **11 15 11.8 +0.6**
KURK S **S** **11 22 28.1 -0.4**
KURK S **S** **11 22 28.1 -0.4**
KURK Kurchatov 51.55 344 *d* *i* P **P** **11 15 11.8 +0.6**
KURK pmax pmax
comp=Z,57nm,1.3s
KURK Kurchatov 51.55 344 P **P** **11 15 11.7 +0.6**
KURK IAmb IAmb 11 15 26.2
comp=Z,46nm,0.8s
USA0B Ussuriysk Arra 52.03 31 *c* *i* P **P** **11 15 15.6 +0.7**
USA0B Ussuriysk Arra 52.03 31 P **P** **11 15 15.4 +0.5**
USA0B IAmb IAmb 11 15 17.0
comp=Z,77nm,1.1s
USRK Ussuriysk Ar. 52.03 31 P **P** **11 15 15.9 +1.0**
comp=Z,18nm,0.6s,baz=230,slow=5.4,SNR=53
USRK LR LR 11 40 16.5
comp=Z,711nm,18.0s,baz=209,slow=39
USRK Ussuriysk Ar. 52.03 31 P **P** **11 15 15.4 +0.5**
USRK Ussuriysk Ar. 52.03 31 P **P** **11 15 15.4 +0.5**
HTT Hallett 52.05 136 P **P** **11 15 16.1 +0.8**
baz=52,SNR=8.3
JYT Yasato 52.07 44 P **P** **11 15 14.8 -0.6**
JYT IAmb IAmb 11 15 22.7
comp=Z,22nm,0.7s
CTA Charters Tower 52.08 117 P **P** **11 15 15.8 0.0**
baz=292,slow=11,SNR=1.6
CTAO Charters Tower 52.08 117 P **P** **11 15 15.2 -0.5**
CTAO pmax pmax
comp=Z,54nm,1.1s
CTAO Charters Tower 52.08 117 P **P** **11 15 15.2 -0.5**
CTAO IAmb IAmb 11 15 17.3
comp=Z,54nm,1.1s
BRZS Berezniki 52.73 340 *i* P **P** **11 15 20.4 +0.3**
comp=Z,19nm,1.6s,baz=340
BRZS *eS* **S** **11 22 45.2 +0.5**
baz=340
BRZS Berezniki 52.73 340 *i* P **P** **11 15 20.3 +0.3**
BRZS *eS* **S** **11 22 45.2 +0.5**
BRZS pmax pmax
comp=Z,19nm,1.6s
QLP Quilpie 52.74 126 P **P** **11 15 21.3 +0.8**
baz=53,SNR=13
STKA Stephens Creek 53.14 133 P **P** **11 15 23.8 +0.4**
comp=Z,14nm,0.5s,baz=308,slow=6.5,SNR=75
STKA LR LR 11 40 33.8
comp=Z,332nm,20.0s,baz=316,slow=39
STKA Stephens Creek 53.14 133 P **P** **11 15 23.6 +0.2**
baz=53,SNR=15
STKA Stephens Creek 53.14 133 P **P** **11 15 22.9 -0.5**
STKA pmax pmax
comp=Z,4.0nm,0.7s
STKA Stephens Creek 53.14 133 P **P** **11 15 22.9 -0.5**
ZAA0 Zalesovo Array 53.23 350 P **P** **11 15 24.2 +0.6**
ZALV Zalesovo Beam 53.23 350 P **P** **11 15 24.0 +0.4**
comp=Z,31nm,0.6s,baz=166,slow=6.3,SNR=128
ZALV S **S** **11 22 51.8 +0.4**
comp=Z,7.1nm,1.0s,baz=158,slow=13,SNR=11
ZALV LR LR 11 41 22.6
comp=Z,254nm,20.4s,baz=182,slow=40
ZALV Zalesovo Beam 53.23 350 P **P** **11 15 24.2 +0.6**
ZALV Zalesovo Beam 53.23 350 P **P** **11 15 24.2 +0.6**
JMM Marumori 53.34 42 P **P** **11 15 24.1 -0.6**
ABPO Ambohimpanom 53.84 245 P **P** **11 15 28.1 -0.8**
ABPO pmax pmax
comp=Z,26nm,1.3s
ABPO Ambohimpanom 53.84 245 P **P** **11 15 28.1 -0.8**
RABL Rabaul 54.53 96 P **P** **11 15 33.3 -0.6**
RABL IAmb IAmb 11 15 35.2
comp=Z,77nm,1.2s
JTM Tenmabayashi 55.10 39 P **P** **11 15 35.1 -2.4**
RAYN Ar Rayn 55.17 298 *i* P **P** **11 15 38.7 +0.3**
SNR=25
RAYN Ar Rayn 55.17 298 P **P** **11 15 38.6 +0.2**
RAYN pmax pmax
comp=Z,36nm,0.8s
RAYN Ar Rayn 55.17 298 P **P** **11 15 38.6 +0.2**
RAYN IAmb IAmb 11 15 52.8
comp=Z,36nm,0.8s
KLR Kul'dur 55.54 26 P **P** **11 15 41.2 +0.6**
comp=Z,49nm,1.0s,baz=242,slow=7.5,SNR=61
KLR LR LR 11 42 37.8
comp=Z,444nm,18.1s,baz=218,slow=39
KLR Kul'dur 55.54 26 *c* *i* P **P** **11 15 41.3 +0.8**
KLR pmax pmax
comp=Z,110nm,1.3s
ARPS Mount Arapiles 55.88 138 P **P** **11 15 46.0 +2.9**
baz=56,SNR=10.0
CMSA Cobar Meteorol 56.04 130 P **P** **11 15 45.1 +0.7**
baz=56,SNR=40
BVAR Borovoye Array 56.06 340 P **P** **11 15 43.5 -0.7**
comp=Z,4.4nm,0.4s,baz=108,slow=11,SNR=42
BVAR S **S** **11 23 28.2 -1.4**
comp=Z,1.8nm,0.9s,baz=248,slow=28,SNR=7.4
BRVK Borovoye 56.13 340 P **P** **11 15 44.5 -0.1**
BRVK P **P** **11 15 44.5 -0.1**
BRVK Borovoye 56.13 340 *d* *i* P **P** **11 15 44.3 -0.3**
BRVK pmax pmax
comp=Z,41nm,1.7s
BRVK Borovoye 56.13 340 P **P** **11 15 44.7 +0.1**
BRVK IAmb IAmb 11 16 02.6
comp=Z,32nm,0.7s
RMQ Roma 56.44 123 P **P** **11 15 48.6 +1.2**
baz=56,SNR=12
JEW Eniwo 56.48 37 P **P** **11 15 47.4 +0.1**
ZEA Zeya 57.28 20 *eP* **P** **11 15 53.8 +1.0**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=N,10.0nm,0.9s
ZEA pmax pmax
comp=Z,20nm,1.5s
ZEA MLR MLR
comp=N,400nm,16.0s
ZEA MLR MLR
comp=Z,500nm,16.0s
BOD Bodaibo 57.45 10 *eP* **P** **11 15 54.8 +0.9**
BOD pmax pmax
comp=Z,53nm,1.1s
AB31 Akbulak array 57.46 331 *i* P **P** **11 15 53.9 -0.2**
ABKAR Akbulak array 57.46 331 P **P** **11 15 53.5 -0.7**
ABKAR IAmb IAmb 11 15 55.1
comp=Z,39nm,0.9s
ASAJ Asahikawa 57.89 37 P **P** **11 15 56.9 -0.4**
comp=Z,17nm,0.9s,baz=258,slow=12,SNR=17
ASAJ LR LR 11 41 13.1
comp=Z,325nm,19.3s,baz=244,slow=36
ASAJ Asahikawa 57.89 37 P **P** **11 15 57.6 +0.3**
ASAJ pmax pmax
comp=Z,62nm,1.0s
JKA Kamikawa-asahi 57.89 37 P **P** **11 15 57.6 +0.3**
EIDS Eidsvold 58.01 121 P **P** **11 15 59.1 +0.6**
baz=58,SNR=13
EIDS Eidsvold 58.01 121 P **P** **11 15 59.0 +0.6**
EIDS IAmb IAmb 11 16 13.8
comp=Z,28nm,0.8s
GRNR Gornyy 58.76 28⇑ *i* P **P** **11 16 04.2 +1.0**
GRNR *eS* **S** **11 24 08.5 +3.5**
GRNR pmax pmax
comp=N,10.0nm,1.0s
GRNR pmax pmax
comp=Z,30nm,1.2s
GRNR smax smax
comp=N,6.0nm,0.9s
GRNR MLR MLR
comp=N,250nm,14.0s
TOO Toolangi 58.78 137 P **P** **11 16 06.4 +2.8**
baz=59,SNR=4.1
AKTO Aktyubinsk 59.17 331 P **P** **11 16 05.6 -0.5**
comp=N,5.7nm,0.3s,baz=128,slow=5.3,SNR=29

AKTO S **S** **11 24 08.8 -1.6**
comp=N,1.1nm,0.6s,baz=346,slow=21,SNR=5.9
YSS Yuzh-Sakhalins 59.59 34 *e*P **P** **11 16 10.3 +1.3**
YSS *e*S **S** **11 24 16.7 +0.9**
YSS pmax pmax
comp=Z,90nm,1.3s
YSS MLR MLR
comp=Z,700nm,13.0s
YSS Yuzh-Sakhalins 59.59 34 P **P** **11 16 09.2 +0.2**
KIBK Kibwezi 59.98 266 P **P** **11 16 13.9 +1.5**
SNR=8.8
ARMA Armidale 60.23 127 P **P** **11 16 15.4 +1.4**
baz=60,SNR=11
ARMA Armidale 60.23 127 P **P** **11 16 13.4 -0.5**
ARMA IAmb IAmb 11 16 17.3
comp=Z,51nm,1.2s
KMBO Kilima Mbogo 60.71 268 P **P** **11 16 19.2 +1.6**
comp=Z,3.7nm,0.8s,baz=60,slow=7.7,SNR=15
KMBO LR LR 11 37 44.6
comp=Z,641nm,21.7s,baz=94,slow=31
KMBO Kilima Mbogo 60.71 268 *i* P **P** **11 16 18.8 +1.2**
SNR=5.4
KMBO Kilima Mbogo 60.71 268 P **P** **11 16 17.0 -0.6**
KMBO pmax pmax
comp=Z,9.0nm,1.0s
KMBO Kilima Mbogo 60.71 268 P **P** **11 16 17.0 -0.6**
LGD Lagodekhi 61.16 318 P **P** **11 16 20.2 +0.3**
GNI Garni 61.46 316 P **P** **11 16 22.1 -0.1**
comp=Z,27nm,0.9s,baz=102,slow=1.1,SNR=6.2
GNI Garni 61.46 316 P **P** **11 16 22.5 +0.4**
GNI Garni 61.46 316 *d i*P **P** **11 16 22.6 +0.4**
GNI pmax pmax
comp=Z,48nm,1.3s
GNI Garni 61.46 316 P **P** **11 16 22.2 0.0**
GROC Groznyy 62.07 319 *e*P **P** **11 16 26.4 +0.4**
GROC *e*S **S** **11 24 55.0 +7.4**
GROC pmax pmax
comp=Z,95nm,1.0s
KZRT Kazreti 62.22 317 P **P** **11 16 27.3 +0.2**
LODK Lodwar 62.50 273 P **P** **11 16 31.2 +1.7**
SNR=9.1
SVE Sverdlovsk 62.54 338⇑ *e*P **P** **11 16 29.0 +0.2**
SVE pmax pmax
comp=Z,70nm,1.2s
GUDG Gudauri 62.62 318 P **P** **11 16 30.6 +0.6**
HNR Honiara 62.76 101 LR LR 11 44 40.4
comp=Z,191nm,21.7s,baz=258,slow=37
HNR Honiara 62.76 101 P **P** **11 16 30.6 -0.5**
HNR pmax pmax
comp=Z,193nm,0.9s
HNR Honiara 62.76 101 P **P** **11 16 30.6 -0.5**
KARS Kars 62.82 316 P **P** **11 16 32.7 +1.4**
ARU Arti 63.05 337 P **P** **11 16 31.7 -0.5**
comp=Z,2.1nm,0.4s,baz=143,slow=4.5,SNR=19
ARU Arti 63.05 337 *d i*P **P** **11 16 31.8 -0.5**
ARU *PP **pP** **11 16 46.8 +1.6**
ARU 11 17 08.3
ARU 11 18 47.4
ARU S **S** **11 25 00.7 +1.2**
ARU SS **SS** **11 29 04.7 -1.2**
ARU pmax pmax
comp=Z,49nm,1.5s
ARU MLR MLR
comp=Z,562nm,23.0s
ARU Arti 63.05 337 P **P** **11 16 31.7 -0.5**
ARU IAmb IAmb 11 16 55.6
comp=Z,41nm,1.1s
MARD Mardin 63.27 311 P **P** **11 16 34.5 +0.2**
ONI Oni 63.36 318 P **P** **11 16 35.4 +0.7**
BATM Batumi 64.16 316 P **P** **11 16 41.8 +1.9**
KBZ Khabaz 64.20 319 P **P** **11 16 40.3 +0.2**
comp=Z,42nm,0.9s,baz=56,slow=24,SNR=79
KBZ Khabaz 64.20 319 *d i*P **P** **11 16 40.0 -0.1**
KBZ pmax pmax
comp=Z,57nm,0.9s
KVAR Kislovodsk Arr 64.43 319 LR LR 11 50 18.6
comp=Z,80nm,18.7s,baz=60,slow=41
KIV Kislovodsk 64.43 319 *i* P **P** **11 16 41.8 0.0**
SNR=7.2
KIV Kislovodsk 64.43 319 P **P** **11 16 41.8 0.0**
KIV P **P** **11 16 41.8 0.0**
KIV Kislovodsk 64.43 319 *e*P **P** **11 16 41.6 -0.2**
KIV pmax pmax
comp=Z,209nm,1.1s
KIV MLR MLR
comp=Z,307nm,17.0s
KIV Kislovodsk 64.43 319 P **P** **11 16 41.2 -0.5**
GOF Gofitskoye 64.66 320⇑ *e*P **P** **11 16 43.2 +0.1**
GOF pmax pmax
comp=Z,58nm,0.9s
YAK Yakutsk 64.80 16 P **P** **11 16 43.6 0.0**
comp=Z,10.0nm,0.3s,baz=221,slow=13,SNR=14
YAK Yakutsk 64.80 16 *c i*P **P** **11 16 43.3 -0.3**
YAK *e**PP **sP** **11 17 02.6 +0.6**
YAK *e* 11 17 12.3
YAK *e* 11 19 05.8
YAK *e*S **S** **11 25 18.1 -2.8**
YAK *e**SS sS 11 26 00.3 +17
YAK pmax pmax
comp=Z,66nm,1.4s
YAK pmax pmax
comp=N,33nm,1.4s
YAK pmax pmax
comp=E,32nm,1.4s
YAK pmax pmax
comp=Z,4.0nm,0.4s
YAK smax smax
comp=E,78nm,11.1s
YAK smax smax
comp=N,253nm,12.8s
YAK MLR MLR
comp=Z,562nm,13.0s
YAK MLR MLR
comp=N,456nm,16.0s
YAK MLR MLR
comp=E,455nm,16.0s
YAK Yakutsk 64.80 16 P **P** **11 16 43.8 +0.1**
MALT Malatya 65.35 312 P **P** **11 16 48.5 +0.6**
EIL Elat 65.82 302 P **P** **11 16 50.6 -0.3**
comp=E,16nm,0.8s,baz=120,slow=3.4,SNR=14
GAZ Gaziantep 65.92 310 P **P** **11 16 51.8 +0.3**
MMAI Mount Meron Ar 66.22 305 P **P** **11 16 54.8 +1.3**
comp=E,17nm,0.8s,baz=104,slow=7.0,SNR=11
MBAR Mbarara 67.19 269 *ce*P **P** **11 17 01.9 +1.7**
MBAR pmax pmax
comp=Z,33nm,1.3s
MBAR Mbarara 67.19 269 P **P** **11 17 01.3 +1.1**
MBAR IAmb IAmb 11 17 02.8
comp=Z,37nm,1.1s
TOKA Tokat 67.42 313 P **P** **11 17 01.3 +0.3**
TOKA IAmb IAmb 11 17 15.6
comp=Z,24nm,0.8s
NRIK Noril'sk 67.93 356 P **P** **11 17 03.7 +0.1**
comp=Z,15nm,0.7s,baz=171,slow=5.0,SNR=22
NRIK S **S** **11 25 57.9 -0.8**
comp=Z,3.2nm,0.9s,baz=352,slow=20,SNR=10
NRIK LR LR 11 50 07.4
comp=Z,346nm,21.6s,baz=198,slow=39
NRIK Noril'sk 67.93 356 *de*P **P** **11 17 03.3 -0.3**
NRIK pmax pmax
comp=Z,44nm,1.4s
KVT Kavak 67.97 314 P **P** **11 17 05.7 +1.3**
VRH Novokhopyorsk 68.15 326 *e*P **P** **11 17 04.3 -1.0**
VRH pmax pmax
comp=Z,90nm,0.9s
KIRV Kirov 68.20 335 P **P** **11 17 05.3 -0.1**
comp=Z,42nm,0.9s,baz=119,slow=4.4,SNR=22
KIRV Kirov 68.20 335 *d i*P **P** **11 17 05.1 -0.3**
ANN Anapa 68.23 318 *e*P **P** **11 17 03.2 -2.7**
ANN *e**PP **pP** **11 17 17.1 -1.9**
ANN *e* 11 17 28.0
ANN *e* 11 19 35.2
ANN *e*S **S** **11 26 00.0 -3.2**
ANN pmax pmax
comp=Z,23nm,0.7s
CSS Mathiatis 68.36 307 P **P** **11 17 06.8 -0.2**
CSS IAmb IAmb 11 17 08.3
comp=Z,54nm,1.1s
CASY Casey 68.38 175 P **P** **11 17 07.2 +0.8**
BR131 Keskin Array S 69.33 312 P **P** **11 17 11.9 -1.2**
BR131 pmax pmax
comp=Z,20nm,1.1s
BR131 Keskin Array S 69.33 312 P **P** **11 17 11.9 -1.2**
BRTR Keskin Array B 69.33 312 P **P** **11 17 12.3 -0.8**
comp=Z,17nm,0.9s,baz=128,slow=6.9,SNR=70

BRTR LR LR 11 49 08.9
comp=Z,81nm,21.4s,baz=120,slow=37
VORD Divnogorie 69.43 325 *e*P **P** **11 17 12.2 -1.0**
VORD pmax pmax
comp=Z,40nm,1.0s
VSR Storozhevoye 69.61 325 *e*P **P** **11 17 12.8 -1.5**
VSR pmax pmax
comp=Z,50nm,0.9s
ILGA Ilgaz 69.64 313 P **P** **11 17 15.0 -0.1**
ILGA IAmb IAmb 11 17 16.2
comp=Z,56nm,1.1s
BZK Bozkurt 69.69 314 ⇓P **P** **11 17 15.5 +0.5**
VORR Voronezh 69.77 325 P **P** **11 17 16.0 +0.7**
VORR pmax pmax
comp=Z,250nm,1.4s
LPSR Galich'ya Gora 70.31 326 *e*P **P** **11 17 17.6 -1.0**
LPSR pmax pmax
comp=Z,90nm,0.9s
MA2 Magadan 70.63 25⇑ *e*P **P** **11 17 21.6 +1.2**
MA2 pmax pmax
comp=Z,86nm,2.0s
DZM Mont Dzumac 70.82 114 P **P** **11 17 23.3 +0.9**
comp=Z,17nm,1.0s,baz=297,slow=4.4,SNR=17
DZM Mont Dzumac 70.82 114 *e*P **P** **11 17 22.4 -0.1**
comp=Z,63nm,1.4s
DZM Mont Dzumac 70.82 114 *e*LR LR 11 38 59.3
comp=Z,746nm,31.4s
DZM Mont Dzumac 70.82 114 P **P** **11 17 23.0 +0.5**
LSZ Lusaka 70.91 253 P **P** **11 17 24.1 +0.9**
LSZ pmax pmax
comp=Z,20nm,0.9s
LSZ Lusaka 70.91 253 P **P** **11 17 24.1 +0.9**
LSZ IAmb IAmb 11 17 39.7
comp=Z,20nm,0.8s
PETK Petropavlovsk- 70.98 33 P **P** **11 17 22.6 -0.1**
comp=Z,5.6nm,0.8s,baz=134,slow=1.5,SNR=11
PETK Petropavlovsk- 70.98 33 P **P** **11 17 23.1 +0.4**
PETK Petropavlovsk- 70.98 33 P **P** **11 17 23.1 +0.4**
ISP Isparta 71.22 309 P **P** **11 17 24.5 -0.2**
ISP pmax pmax
comp=Z,48nm,1.3s
ISP Isparta 71.22 309 P **P** **11 17 24.5 -0.2**
ISP IAmb IAmb 11 17 25.9
comp=Z,48nm,1.3s
MDUB Mudurnu 71.34 312 P **P** **11 17 24.9 -0.4**
ELL Elmali 71.47 308 P **P** **11 17 25.9 -0.3**
ELL pmax pmax
comp=Z,169nm,0.9s
ELL Elmali 71.47 308 P **P** **11 17 25.9 -0.3**
PET Petropavlovsk 71.47 34 *e*P **P** **11 17 25.8 +0.2**
PET *e*S **S** **11 26 40.8 0.0**
PET *e*SS **SS** **11 31 15.4 -0.9**
PET pmax pmax
comp=Z,32nm,1.4s
PET Petropavlovsk 71.47 34 P **P** **11 17 26.3 +0.7**
PET IAmb IAmb 11 17 34.2
comp=Z,78nm,1.3s
MOS Moscow 72.31 329 *e*P **P** **11 17 28.1 -2.5**
MOS *e*S **S** **11 26 43.8 -6.6**
MOS pmax pmax
comp=Z,120nm,1.2s
MOS MLR MLR
comp=Z,500nm,20.0s
OBN Obninsk 72.61 328 *d i*P **P** **11 17 32.1 -0.3**
OBN *e* 11 17 48.5
OBN *e* 11 20 14.5
OBN pmax pmax
comp=Z,104nm,1.4s
OBN MLR MLR
comp=Z,369nm,22.0s
OBN Obninsk 72.61 328 P **P** **11 17 32.0 -0.3**
OBN IAmb IAmb 11 17 33.3
comp=Z,55nm,0.9s
TIXI Tiksi 72.63 10⇑ *e*P **P** **11 17 31.7 -0.5**
TIXI pmax pmax
comp=Z,133nm,1.7s
TIXI Tiksi 72.63 10 P **P** **11 17 31.2 -1.0**
MANT Manisa 72.88 310 P **P** **11 17 34.3 -0.4**
SEY Seymchan 73.08 23 ⇓ *i*P **P** **11 17 35.2 +0.1**
MAW Mawson 73.31 193 P **P** **11 17 37.5 +1.3**
comp=Z,4.2nm,0.9s,baz=36,slow=9.2,SNR=5.9
MAW LR LR 11 43 02.8
comp=Z,380nm,21.7s,baz=52,slow=30
MAW Mawson 73.31 193 P **P** **11 17 35.8 -0.5**
MAW Mawson 73.31 193 P **P** **11 17 35.8 -0.5**
KARP Karpathos 73.42 307 P **P** **11 17 38.2 +0.5**
KLMR Klimovskoe 73.66 334 *e*P **P** **11 17 36.4 -2.1**
KLMR *e* 11 20 20.4
KLMR pmax pmax
comp=Z,60nm,1.4s
KLMR Klimovskoe 73.66 334 *e*P **P** **11 17 36.4 -2.1**
KLMR AMP 11 17 40.0
comp=Z,60nm,1.4s
KLMR *e*PP **PP** **11 20 20.4 -2.8**
TIRR Tirgusor 74.29 316 P **P** **11 17 41.4 -1.1**
TIRR pmax pmax
comp=Z,53nm,0.8s
TIRR Tirgusor 74.29 316 P **P** **11 17 41.4 -1.1**
TIRR IAmb IAmb 11 17 43.2
comp=Z,53nm,0.8s
TPGR Topolog 74.38 316 ⇓P **P** **11 17 42.3 -0.8**
MILM Milestii Mici 74.61 318 ⇑P **P** **11 17 43.1 -1.3**
CFR Carcaliu 74.65 317 ⇓P **P** **11 17 44.2 -0.4**
CFR Carcaliu 74.65 317 ⇓P **P** **11 17 44.2 -0.4**
HARR Harsova 74.68 316 ⇑P **P** **11 17 44.8 0.0**
HARR Harsova 74.68 316 ⇑P **P** **11 17 44.8 0.0**
IDI Anoyia 75.21 306 P **P** **11 17 48.3 +0.1**
comp=Z,16nm,0.7s,baz=78,slow=6.2,SNR=9.0
IDI LR LR 11 54 46.0
comp=Z,168nm,20.8s,baz=96,slow=39
IDI Anoyia 75.21 306 ⇑P **P** **11 17 47.4 -0.7**
IDI Anoyia 75.21 306 P **P** **11 17 48.3 +0.1**
IDI IAmb IAmb 11 18 02.6
comp=Z,29nm,1.1s
SORM Soroca 75.22 320 ⇓P **P** **11 17 47.5 -0.3**
SORM Soroca 75.22 320 ⇓P **P** **11 17 47.5 -0.3**
ALN Alexandroupoli 75.25 312 P **P** **11 17 47.7 -0.5**
ALN pmax pmax
comp=Z,38nm,1.0s
ALN Alexandroupoli 75.25 312 P **P** **11 17 47.7 -0.5**
ALN IAmb IAmb 11 17 49.0
comp=Z,38nm,1.0s
AKASG Malin Array Be 75.34 322 P **P** **11 17 47.7 -0.8**
comp=Z,9.6nm,0.5s,baz=86,slow=4.9,SNR=16
AKASG Malin Array Be 75.34 322 P **P** **11 17 47.5 -1.0**
AKASG pmax pmax
comp=Z,16nm,1.1s
AKASG Malin Array Be 75.34 322 P **P** **11 17 47.5 -1.0**
AKBB Malin Array Si 75.34 322 *d i*P **P** **11 17 47.6 -0.9**
AKBB pmax pmax
comp=Z,29nm,0.9s
AKBB Malin Array Si 75.34 322 P **P** **11 17 47.7 -0.7**
AKBB IAmb IAmb 11 17 48.7
comp=Z,28nm,0.9s
RAZG Razgrad 75.44 315 ⇑P **P** **11 17 49.5 +0.2**
BOSA Boshof 75.61 240 P **P** **11 17 52.2 +1.5**
comp=Z,3.3nm,0.3s,baz=75,slow=3.6,SNR=15
BOSA LR LR 11 45 51.9
comp=Z,530nm,21.4s,baz=59,slow=32
BOSA Boshof 75.61 240 P **P** **11 17 51.1 +0.4**
BOSA pmax pmax
comp=Z,18nm,1.0s
BOSA Boshof 75.61 240 P **P** **11 17 51.0 +0.4**
VRI Vrincioaia 75.77 317 ⇓P **P** **11 17 51.4 +0.3**
VRI Vrincioaia 75.77 317 ⇓P **P** **11 17 51.4 +0.3**
TMCR Tamitsa 75.79 337 *e*P **P** **11 17 51.3 +0.6**
TMCR pmax pmax
comp=Z,51nm,1.0s
PLOR Plostina 75.82 317 ⇑P **P** **11 17 52.0 +0.6**
PLOR ⇑P P 11 17 56.6 +5.2
PLOR Plostina 75.82 317 ⇑P **P** **11 17 52.0 +0.6**
TESR Tescani 75.97 318 ⇓P **P** **11 17 52.4 +0.2**
MLR Muntele Rosu 76.23 316 P **P** **11 17 54.7 +0.8**
comp=Z,50nm,1.0s,baz=138,slow=2.1,SNR=34
MLR Muntele Rosu 76.23 316 ⇓P **P** **11 17 54.3 +0.4**
MLR Muntele Rosu 76.23 316 ⇓P **P** **11 17 54.3 +0.4**
MLR Muntele Rosu 76.23 316 P **P** **11 17 54.0 +0.1**
BIZ Bicaz 76.42 318 ⇑P **P** **11 17 55.3 +0.5**
PLD Plovdiv 76.46 313 P **P** **11 17 55.4 +0.3**
PLD pmax pmax
comp=Z,76nm,1.2s
DOPR Dopca 76.71 317 ⇓P **P** **11 17 56.4 0.0**
MTUR Matau 76.78 316 ⇓P **P** **11 17 53.4 -3.6**
MTUR Matau 76.78 316 ⇓P **P** **11 17 53.4 -3.6**

VOIR 76.83 316 ⇑P **P** **11 17 56.9 -0.3**
VOIR 76.83 316 ⇑P **P** **11 17 56.9 -0.3**
ARR Arges 77.11 316 ⇑P **P** **11 17 58.2 -0.6**
SRS Serrai 77.12 312 P **P** **11 17 57.9 -0.9**
SRS pmax pmax
comp=Z,18nm,1.1s
BURAR Bucovina Array 77.16 319 ⇓P **P** **11 17 59.9 +0.9**
BURAR Bucovina Array 77.16 319 ⇓P **P** **11 17 59.9 +0.9**
BURAR Bucovina Array 77.16 319 P **P** **11 18 00.2 +1.2**
BUR08 Bucovina Ar. S 77.17 319 P **P** **11 18 00.0 +0.9**
BUR08 IAmb IAmb 11 18 01.1
comp=Z,42nm,1.1s
LIT Litokhoron 77.80 311 P **P** **11 18 01.6 -1.1**
LIT pmax pmax
comp=Z,39nm,1.0s
LIT Litokhoron 77.80 311 P **P** **11 18 01.6 -1.1**
LIT IAmb IAmb 11 18 02.4
comp=Z,39nm,1.0s
NACGM Naroch 77.87 326 *e* **P** **11 18 03.0 +0.3**
IDID Didziasalis 78.00 326 *e*P **P** **11 18 03.9 +0.5**
STIP Stip 78.25 312 *i*P **P** **11 18 03.3 -1.8**
IIGN Ignalina 78.30 326 *e*P **P** **11 18 05.5 +0.5**
LVV L'vov 78.37 321 *e*P **P** **11 18 03.4 -2.2**
IZAR Zarasai 78.38 327 *e*P **P** **11 18 06.0 +0.5**
DEV Deva 78.40 316 ⇓P **P** **11 18 07.2 +1.4**
DEV Deva 78.40 316 ⇓P **P** **11 18 07.2 +1.4**
GZR Gura Zlata 78.40 316 ⇑P **P** **11 18 06.2 +0.2**
GZR Gura Zlata 78.40 316 ⇑P **P** **11 18 06.2 +0.2**
ISAL Salakas 78.40 327 *e*P **P** **11 18 05.8 +0.2**
HERR Herculane 78.57 315 ⇑P **P** **11 18 06.8 0.0**
VSU Vasula 78.82 330 *e*P **P** **11 18 07.8 0.0**
VSU Vasula 78.82 330⇑ *e*P **P** **11 18 08.0 +0.2**
VSU pmax pmax
comp=Z,134nm,1.1s
APA Apatity 78.96 339⇑ *i*P **P** **11 18 07.9 -0.5**
APA pmax pmax
comp=Z,14nm,1.0s
RPZ Rata Peaks 79.02 135 P **P** **11 18 10.3 +1.0**
comp=Z,9.1nm,0.5s,baz=264,slow=2.3,SNR=11
BZS Buzias 79.24 316 ⇓P **P** **11 18 10.1 -0.4**
BZS Buzias 79.24 316 ⇓P **P** **11 18 10.1 -0.4**
UZH Uzhgorod 79.27 319 *e*P **P** **11 18 14.1 +3.6**
UZH *i* 11 18 16.5
UZH *i* 11 18 31.1
SIRR Siria 79.31 317 ⇓P **P** **11 18 11.5 +0.7**
KOLS Kolonicke sedl 79.33 319 *e*P **P** **11 18 11.8 +0.9**
KOLS pmax pmax
comp=Z,41nm,1.2s
KOLS Kolonicke sedl 79.33 319 *e*P **P** **11 18 11.8 +0.9**
IGT Igoumenitsa 79.37 310 P **P** **11 18 11.7 +0.4**
IGT pmax pmax
comp=Z,52nm,1.4s
PABE Paberze 79.58 326 *e*P **P** **11 18 12.4 +0.4**
SUW Suwalki 79.72 325 *e*P **P** **11 18 12.3 -0.6**
SUW Suwalki 79.72 325 P **P** **11 18 12.2 -0.6**
SUW pmax pmax
comp=Z,156nm,1.1s
SUW Suwalki 79.72 325 P **P** **11 18 12.2 -0.7**
CRVS Cervenica-Dubn 79.86 319 *e*P **P** **11 18 14.4 +0.6**
CRVS pmax pmax
comp=Z,57nm,1.5s
CRVS Cervenica-Dubn 79.86 319 *e*P **P** **11 18 14.4 +0.6**
FIA1 FINESS Array S 79.93 332 P **P** **11 18 14.0 +0.2**
FIA1 IAmb IAmb 11 18 14.9
comp=Z,28nm,1.0s
FINES FINESS Array B 79.93 332 P **P** **11 18 13.9 0.0**
comp=Z,7.0nm,0.4s,baz=105,slow=4.7,SNR=74
FINES LR LR 11 58 42.3
comp=Z,246nm,20.5s,baz=108,slow=40
DIVS Divibare 80.18 314 *e*P **P** **11 18 13.7 -2.0**
DIVS Divibare 80.18 314 P **P** **11 18 15.3 -0.4**
DIVS IAmb IAmb 11 18 17.6
comp=Z,53nm,1.4s
FRGS Fruska Gora 80.44 315 *e*P **P** **11 18 16.6 -0.4**
PDG Podgorica 80.51 313 ⇓P **P** **11 18 16.3 -1.1**
PDG Podgorica 80.51 313 *e*P **P** **11 18 16.7 -0.7**
PDG Podgorica 80.51 313 P **P** **11 18 17.1 -0.3**
PDG IAmb IAmb 11 18 17.8
comp=Z,70nm,1.1s
DRME Dracevica, Mon 80.54 312 *e*P **P** **11 18 15.8 -1.8**
TEKS Tekeris 80.56 315 *e*P **P** **11 18 16.8 -0.9**
BBLS Lazići 80.57 314 *e*P **P** **11 18 17.6 -0.2**
SYO Syowa Base 80.64 198⇑ *e*P **P** **11 18 17.7 +0.2**
NIE Niedzica 80.69 320 *e*P **P** **11 18 18.8 +0.5**
PSZ Piszkesteto 80.75 318 ⇓P **P** **11 18 18.2 -0.4**
PSZ Piszkesteto 80.75 318 P **P** **11 18 18.9 +0.2**
PSZ pmax pmax
comp=Z,25nm,1.0s
PSZ Piszkesteto 80.75 318 P **P** **11 18 18.9 +0.2**
PBUR Paburgys 80.81 327 *e*P **P** **11 18 18.7 0.0**
UPM Unac-Piva 80.85 313 *e*P **P** **11 18 19.6 +0.1**
HAPS Han Pijesak,BI 80.92 314 *e*P **P** **11 18 18.8 -0.9**
BRY Bratogost 81.09 313 *e*P **P** **11 18 20.2 -0.5**
OJC Ojcow 81.13 320 *e*P **P** **11 18 20.5 0.0**
OJC Ojcow 81.13 320 P **P** **11 18 20.4 -0.2**
OJC pmax pmax
comp=Z,17nm,1.0s
OJC Ojcow 81.13 320 P **P** **11 18 20.4 -0.2**
LANS Liptovska Anna 81.19 319 *e*P **P** **11 18 21.1 +0.1**
LANS pmax pmax
comp=Z,6.0nm,1.1s
LANS Liptovska Anna 81.19 319 *e*P **P** **11 18 21.1 +0.1**
MORH Mrgy, Hungar 81.38 316 *e*P **P** **11 18 21.6 -0.3**
TSUM Tsumeb 81.40 250 P **P** **11 18 22.6 -0.2**
FWVZ Far West T-bar 81.49 130 P **P** **11 18 26.1 +3.1**
WTVZ West Tongariro 81.50 130 P **P** **11 18 24.5 +1.6**
NGZ Ngauruhoe 81.51 130 P **P** **11 18 24.6 +1.6**
VYHS Vyhne 81.52 319 *e*P **P** **11 18 22.5 -0.2**
VYHS pmax pmax
comp=Z,20nm,1.4s
VYHS Vyhne 81.52 319 *e*P **P** **11 18 22.5 -0.2**
WNVZ Wahianoa 81.53 130 P **P** **11 18 24.8 +1.7**
OTVZ Oturere 81.56 130 P **P** **11 18 24.8 +1.5**
ETVZ East Tongariro 81.59 130 P **P** **11 18 25.1 +1.7**
SRO Srobarova 81.79 318 *e*P **P** **11 18 24.9 +0.8**
SRO pmax pmax
comp=Z,34nm,1.0s
SRO Srobarova 81.79 318 *e*P **P** **11 18 24.9 +0.8**
BHHZ Black Hill Sta 81.92 130 P **P** **11 18 25.6 +0.6**
TIP Timpagrande 82.09 309 ⇓P **P** **11 18 26.4 +0.4**
TIP Timpagrande 82.09 309 P **P** **11 18 26.6 +0.6**
TIP IAmb IAmb 11 18 27.7
comp=Z,51nm,1.3s
OKC Ostrava-Krasne 82.13 320 *e*P **P** **11 18 26.5 +0.6**
OKC Ostrava-Krasne 82.13 320 *e*P **P** **11 18 26.5 +0.6**
KWHZ Kaweka Forest 82.18 130 P **P** **11 18 28.0 +1.5**
BKZ Black Stump Fm 82.20 130 P **P** **11 18 27.2 +0.8**
BKZ Black Stump Fm 82.20 130 P **P** **11 18 26.4 -0.1**
BLY Banja Luka 82.25 315 ⇓ *i*P **P** **11 18 26.1 -0.5**
JAVC Velka Javorina 82.33 319 *e*P **P** **11 18 27.9 +0.9**
ARA0 ARCESS Array S 82.36 340 P **P** **11 18 27.3 +0.7**
ARA0 IAmb IAmb 11 18 46.1
comp=Z,44nm,1.2s
ARA0 ARCESS Array S 82.36 340 *e*P **P** **11 18 27.3 +0.7**
ARCES ARCESS Array B 82.36 340 P **P** **11 18 27.1 +0.5**
comp=Z,4.1nm,0.4s,baz=102,slow=5.7,SNR=52
ARCES LR LR 12 00 17.9
comp=Z,107nm,18.5s,baz=115,slow=40
MTHZ Maungataniwha 82.42 129 P **P** **11 18 28.7 +1.0**
RTZ Ruatahuna 82.49 129 P **P** **11 18 28.3 +0.2**
MORC Moravsky Berou 82.52 320 ⇓P **P** **11 18 28.4 +0.5**
MORC Moravsky Berou 82.52 320 *e*P **P** **11 18 28.2 +0.3**
MORC Moravsky Berou 82.52 320 ⇓P **P** **11 18 28.4 +0.5**
MORC Moravsky Berou 82.52 320 P **P** **11 18 28.4 +0.5**
MODS Modra-Piesok 82.54 318 *e*P **P** **11 18 27.4 -0.6**
MODS pmax pmax
comp=Z,38nm,1.4s
MODS Modra-Piesok 82.54 318 *e*P **P** **11 18 27.4 -0.6**
URZ Urewera 82.55 129 P **P** **11 18 27.9 -0.3**
comp=Z,10nm,0.8s,baz=110,slow=4.4,SNR=7.5
URZ LR LR 11 56 48.2
comp=Z,186nm,20.3s,baz=31,slow=37
URZ Urewera 82.55 129 P **P** **11 18 28.3 +0.1**
URZ Urewera 82.55 129 P **P** **11 18 26.9 -1.3**
URZ IAmb IAmb 11 18 52.2
comp=Z,30nm,1.0s
ZST Bratislava 82.64 318 *e*P **P** **11 18 29.1 +0.6**
ZST pmax pmax
comp=Z,88nm,1.1s
ZST Bratislava 82.64 318 *e*P **P** **11 18 29.1 +0.6**
CEL Celeste 82.70 308 P **P** **11 18 29.8 +0.7**
CEL IAmb IAmb 11 18 31.1
comp=Z,51nm,1.0s

RAGZ **Rawiri** 82.81 129 P P 11 18 30.3 +0.6
RUGZ **Raukumara Rang** 82.95 128 P P 11 18 29.9 -0.6
KTK1 **Kautokeino** 83.00 340 *eP* P 11 18 30.4 +0.4
KRLC **Kraliky** 83.04 320 *eP* P 11 18 31.3 +0.7
KRLC **Kraliky** 83.04 320 *eP* P 11 18 31.3 +0.7
KRLC *epP* pP 11 18 42.0 -2.1
VRAC **Vranov** 83.08 319 P P 11 18 30.2 -0.7
comp=Z,3.0nm,0.8s,baz=83,slow=5.8,SNR=5.6
VRAC **Vranov** 83.08 319 *eP* P 11 18 31.1 +0.3
KRUC **Moravsky** 83.19 319 *eP* P 11 18 31.5 +0.1
TWGZ **Tauwhareparae** 83.21 129 P P 11 18 33.0 +1.2
HAMF **Hammerfest** 83.25 341 *eP* P 11 18 32.1 +0.9
DPC **Dobruska-Polom** 83.36 320 *eP* P 11 18 32.7 +0.4
DPC **Dobruska-Polom** 83.36 320 *eP* P 11 18 32.7 +0.4
DPC *epP* pP 11 18 43.1 -2.6
KSP **Ksiaz** 83.42 321 *eP* P 11 18 33.2 +0.7
CONA **Conrad Observa** 83.44 318 *eP* P 11 18 32.4 -0.4
comp=Z,9.5nm,1.0s
OSTC **Ostas** 83.44 321 *eP* P 11 18 32.9 +0.2
CHVC **Chvalec** 83.55 321 *eP* P 11 18 31.9 -1.3
CRES **Cresnjev** 83.55 316 ||*iP* P 11 18 33.0 -0.3
GROS **Grobnik** 83.57 316 *iP* P 11 18 33.7 +0.2
GROS *ePcP* PcP 11 18 38.3 +0.6
ARSA **Arzberg** 83.62 317 *eP* P 11 18 33.7 0.0
comp=Z,29nm,1.1s,SNR=11
BOJS **Bojanci** 83.67 315 *eP* P 11 18 33.9 -0.1
BOJS *iPcP* PcP 11 18 38.4 +0.4
BOJS *iPP* pP 11 18 44.8 -2.6
PDKS **Podkum** 83.89 316 *iP* P 11 18 35.5 +0.4
SOKA **Soboth** 83.91 317 *eP* P 11 18 35.6 +0.3
comp=Z,26nm,1.0s,SNR=14
LJU **Ljubljana** 84.22 316 *iP* P 11 18 37.2 +0.5
LJU *ePcP* PcP 11 18 40.5 +0.1
LJU *epP* pP 11 18 47.9 -2.2
LJU **Ljubljana** 84.22 316 ||*iP* P 11 18 37.0 +0.3
OBKA **Obir** 84.23 316 *eP* P 11 18 37.3 +0.4
comp=Z,22nm,1.2s,SNR=5.5
CEY **Cerknica** 84.27 316 *eP* P 11 18 34.1 -2.9
PRU **Pruhonice** 84.47 320 *eP* P 11 18 38.4 +0.5
PRU **Pruhonice** 84.47 320 *eP* P 11 18 38.4 +0.5
PRU *epP* pP 11 18 49.5 -1.8
MOA **Molln** 84.51 318 *eP* P 11 18 38.1 -0.1
comp=Z,14nm,1.2s
TRO **Tromso** 84.62 340 *eP* P 11 18 38.2 0.0
CORL **Corleone** 84.73 308 P P 11 18 40.2 +0.6
CADS **Cadrg** 84.77 316 *iP* P 11 18 39.5 -0.1
PBCC **Pribram** 84.80 320 *eP* P 11 18 39.6 0.0
PBCC *ex* x 11 18 50.1
AQU **L'Aquila** 84.83 312 P P 11 18 40.2 +0.3
AQU pmax pmax
comp=Z,69nm,1.1s
AQU **L'Aquila** 84.83 312 *eP* P 11 18 39.9 0.0
AQU **L'Aquila** 84.83 312 P P 11 18 40.2 +0.3
MYKA **Terra Mystica** 84.86 316 *eP* P 11 18 40.1 0.0
comp=Z,13nm,1.0s
PRED **Cave del Predi** 84.90 316 P P 11 18 40.4 +0.1
PRED IAmb IAmb 11 18 41.4
comp=Z,37nm,1.0s
BRG **Berggiesshubel** 84.91 321 *eP* P 11 18 40.2 +0.1
comp=Z,21nm,1.2s
BRG **Berggiesshubel** 84.91 321 *eP* P 11 18 40.2 +0.1
BRG pmax pmax
comp=Z,21nm,1.2s
BRG **Berggiesshubel** 84.91 321 *eP* P 11 18 40.5 +0.4
comp=Z,21nm,1.2s,baz=94,slow=4.9
GEC2 **GERESS Array S** 84.94 319 *eP* P 11 18 40.9 +0.4
comp=Z,47nm,1.3s,baz=94,slow=4.9
GEC2 **GERESS Array S** 84.94 319 P P 11 18 40.6 +0.2
GEC2 IAmb IAmb 11 18 42.6
comp=Z,46nm,1.2s
GERES **GERESS Array B** 84.94 319 P P 11 18 40.7 +0.3
comp=Z,12nm,0.9s,baz=101,slow=5.7,SNR=53
GERES LR LR 12 00 54.0
comp=Z,77nm,21.9s,baz=102,slow=39
GERES **GERESS Array B** 84.94 319 P P 11 18 40.4 -0.1
GERES **GERESS Array B** 84.94 319 P P 11 18 40.4 -0.1
KHC **Kasperske Hory** 85.04 319 *eP* P 11 18 40.6 -0.2
KHC **Kasperske Hory** 85.04 319 *eP* P 11 18 40.6 -0.2
KHC *epP* pP 11 18 52.9 -1.4
NRCA **Norcia** 85.06 313 P P 11 18 41.4 +0.3
NRCA IAmb IAmb 11 18 42.3
comp=Z,33nm,1.1s
KBA **Koelnbreinsper** 85.09 317 *eP* P 11 18 40.7 -0.6
comp=Z,13nm,1.1s
FBE **Freiberg** 85.28 321 *eP* P 11 18 42.7 +0.8
comp=Z,26nm,1.2s,baz=94,slow=4.9
ZOU **Zoufplan** 85.32 316 P P 11 18 42.0 -0.5
ZOU IAmb IAmb 11 18 43.5
comp=Z,35nm,1.2s
BJO1 **Bjornoya** 85.46 345 *eP* P 11 18 43.6 +1.3
N2IH **Innhavet** 85.46 338 *eP* P 11 18 42.9 +0.4
STAL **STALIGIAL** 85.49 316 P P 11 18 43.1 -0.1
RJOB **Jochberg** 85.49 318 *eP* P 11 18 41.8 -1.3
comp=Z,15nm,1.1s,baz=94,slow=4.9
WET **Wettzell** 85.50 319 *eP* P 11 18 43.3 +0.2
comp=Z,22nm,1.1s,baz=94,slow=4.9
N2ST **Straumen** 85.52 337 *eP* P 11 18 43.1 +0.4
CLL **Collm** 85.53 321 ||*iP* P 11 18 42.9 -0.2
comp=Z,16nm,1.3s
CLL *iP* pP 11 18 54.0 -2.6
CLL *iS* sP 11 18 57.5 -4.2
CLL *ePP* PP 11 22 02.0 0.0
CLL *epPP* 11 22 13.0
CLL *eS* S 11 29 06.0 -5.4
CLL *ePS* PnS 11 30 12.0 -0.6
CLL **Collm** 85.53 321 P P 11 18 43.0 -0.2
CLL pmax pmax
comp=Z,11nm,1.0s
CLL **Collm** 85.53 321 *eP* P 11 18 43.1 -0.1
comp=Z,16nm,1.3s,baz=94,slow=4.9
CLL **Collm** 85.53 321 P P 11 18 43.0 -0.1
FAUS **Fauske** 85.64 337 *eP* P 11 18 43.6 +0.3
ABTA **Abfaltersbach** 85.64 317 *eP* P 11 18 43.4 -0.6
comp=Z,18nm,1.2s
CIMO **Cimolais** 85.68 316 P P 11 18 44.0 -0.1
STEI **Steigen** 85.72 338 *eP* P 11 18 44.3 +0.6
N2TV **TVrnvik** 85.72 338 *eP* P 11 18 44.3 +0.5
TANN **Tannenbergstha** 85.83 320 *eP* P 11 18 45.2 +0.4
comp=Z,54nm,1.9s,baz=94,slow=4.9
MOR8 **Moi Rana** 85.85 336 *eP* P 11 18 44.4 0.0
WERN **Wernitzgruen** 85.88 320 *eP* P 11 18 45.5 +0.6
comp=Z,8.2nm,1.0s,baz=94,slow=4.9
GUNZ **Gunzen** 85.91 320 *eP* P 11 18 45.7 +0.6
comp=Z,14nm,1.2s,baz=94,slow=4.9
ROTZ **Rotzenmuhle** 85.96 320 *eP* P 11 18 46.0 +0.6
comp=Z,21nm,1.2s,baz=94,slow=4.9
PLN **Plauen** 86.02 320 *eP* P 11 18 46.1 +0.4
comp=Z,8.6nm,1.1s,baz=94,slow=4.9
MANZ **Manzenberg** 86.04 320 *eP* P 11 18 46.4 +0.6
comp=Z,30nm,1.1s,baz=94,slow=4.9
NBB17 **Glomfjord BWr** 86.10 337 *eP* P 11 18 45.6 -0.1
VNDA **Vanda** 86.12 169 P P 11 18 46.2 +0.7
comp=Z,2.2nm,1.1s,baz=302,slow=6.3,SNR=6.5
VNDA LR LR 11 54 42.8
comp=Z,157nm,18.1s,baz=308,slow=34
VNDA **Vanda** 86.12 169 P P 11 18 45.4 -0.2
VNDA pmax pmax
comp=Z,11nm,1.3s
VNDA **Vanda** 86.12 169 P P 11 18 45.4 -0.2
NBB30 **Finnes** 86.20 337 *eP* P 11 18 46.4 +0.2
CTI **Castel Tesino** 86.22 316 P P 11 18 47.2 +0.3
CTI pmax pmax
comp=Z,42nm,1.0s
CTI **Castel Tesino** 86.22 316 P P 11 18 47.1 +0.3
CTI IAmb IAmb 11 18 48.3
comp=Z,42nm,1.0s
WTTA **Wattenberg** 86.26 317 *eP* P 11 18 46.6 -0.5
comp=Z,20nm,1.0s,SNR=5.9
WTTA **Wattenberg** 86.26 317 P P 11 18 46.7 -0.5
WATA **Walderalm** 86.30 317 *eP* P 11 18 46.6 -0.7
comp=Z,4.9nm,0.6s
LOF **Lofoten** 86.37 338 *eP* P 11 18 46.7 -0.2
MOX **Moxa** 86.38 320 *eP* P 11 18 47.8 +0.4
comp=Z,20nm,1.4s,baz=94,slow=4.9
MOX *eL* L 12 02 06.5
comp=Z,134nm,20.1s
KONS **Konsvik** 86.41 336 *eP* P 11 18 47.7 +0.6
SQTA **Sankt Quirin** 86.55 317 *eP* P 11 18 48.1 -0.4
comp=Z,7.3nm,0.6s
GRF **Grafenberg Arr** 86.60 319 P P 11 18 49.5 +1.0
GRF pmax pmax
comp=Z,31nm,1.2s
GRF **Grafenberg Arr** 86.60 319 *eP* P 11 18 49.2 +0.7
comp=Z,24nm,1.1s,baz=94,slow=4.9
GRF *eL* L 12 04 21.4
comp=Z,88nm,21.5s
MOTA **Moosalm** 86.62 317 *eP* P 11 18 48.3 -0.6
comp=Z,16nm,0.9s,SNR=6.4
SPA0 **Spitsbergen Ar** 86.66 348 *eP* P 11 18 48.1 -0.2
SPITS **Spitsbergen Ar** 86.66 348 P P 11 18 47.7 -0.5
comp=Z,17nm,0.9s,baz=122,slow=7.3,SNR=34
SPITS **Spitsbergen Ar** 86.66 348 P P 11 18 48.0 -0.2
SPITS pmax pmax
comp=Z,1.0nm,0.2s
NC405 **NORSAR Array S** 86.72 331 P P 11 18 48.5 -0.4
NC405 IAmb IAmb 11 18 49.7
comp=Z,28nm,0.8s
NSS **Namsos** 86.77 334 *eP* P 11 18 49.1 +0.1
NC602 **NORSAR Array S** 86.79 331 P P 11 18 48.6 -0.6
NC602 **NORSAR Array S** 86.79 331 *eP* P 11 18 49.5 +0.4
NORES **NORESS Array B** 86.79 331 P P 11 18 49.5 +0.3
NORES pmax pmax
comp=Z,1.0nm,0.3s
RETA **Reutte** 86.86 317 *iP* P 11 18 49.5 -0.4
comp=Z,7.7nm,0.7s,SNR=6.8
N2RO **R st** 86.87 337 *eP* P 11 18 48.9 -0.5
FETA **Feichten** 86.87 317 *eP* P 11 18 49.8 -0.3
comp=Z,14nm,1.1s
NB2 **NORSAR Subarra** 86.96 331 P P 11 18 49.7 -0.4
comp=Z,22nm,1.0s,baz=92,slow=5.3
NB2 **NORSAR Subarra** 86.96 331 P P 11 18 49.7 -0.4
baz=92,slow=5.3
NOA **NORSAR Array B** 86.96 331 P P 11 18 49.9 -0.2
comp=Z,11nm,0.8s,baz=94,slow=5.0,SNR=25
NOA LR LR 12 02 24.7
comp=Z,144nm,21.6s,baz=105,slow=39
SALO **Salr** 87.00 315 P P 11 18 50.5 -0.1
PRMA **PARMA** 87.14 315 P P 11 18 52.4 +1.2
PRMA IAmb IAmb 11 19 14.2
comp=Z,14nm,0.7s
NBO00 **NORSAR Array S** 87.17 331 P P 11 18 51.2 +0.1
CLZ **Clausthal** 87.19 322 *eP* P 11 18 51.9 +0.6
comp=Z,33nm,1.4s,baz=94,slow=4.9
NC204 **NORSAR Array S** 87.19 331 P P 11 18 51.2 +0.1
BSEG **Bad Segeberg** 87.25 324 *eP* P 11 18 52.5 +1.0
comp=Z,72nm,1.4s,baz=94,slow=4.9
NRDL **Niedersach Rie** 87.36 322 *eP* P 11 18 53.1 +1.1
comp=Z,47nm,1.2s,baz=94,slow=4.9
ATKA **Atka Island** 87.42 38 P P 11 18 52.2 -0.2
ATKA IAmb IAmb 11 19 06.9
comp=Z,50nm,1.3s
DAVA **Damuels** 87.46 317 *eP* P 11 18 52.9 0.0
comp=Z,18nm,0.9s,SNR=7.5
KBS **Kingsbay** 87.61 349 *eP* P 11 18 53.2 +0.3
KONO **Kongsberg** 87.73 329 *eP* P 11 18 54.5 +0.8
TUE **Stuetta** 87.82 316 P P 11 18 54.5 -0.3
TUE IAmb IAmb 11 18 56.7
comp=Z,22nm,1.3s
KEST **Kesra** 87.88 306 P P 11 18 56.4 +1.3
comp=Z,21nm,0.9s,baz=303,slow=2.8,SNR=16
KEST LR LR 12 01 58.8
comp=Z,64nm,20.8s,baz=344,slow=38
KEST **Kesra** 87.88 306 P P 11 18 56.3 +1.3
KEST IAmb IAmb 11 18 57.5
comp=Z,31nm,1.0s
DOMB **Dombas** 88.01 332 *eP* P 11 18 55.6 +0.5
SKAR **Skarsla** 88.38 331 *eP* P 11 18 57.2 +0.3
TNS **Taunus Mts** 88.40 320 *eP* P 11 18 57.9 +0.7
comp=Z,35nm,1.3s,baz=94,slow=4.9
BFO **Black Forest** 88.50 318 P P 11 18 56.7 -1.0
BFO pmax pmax
comp=Z,9.0nm,1.0s
BFO **Black Forest** 88.50 318 *eP* P 11 18 57.6 -0.1
comp=Z,30nm,1.7s,baz=94,slow=4.9
BFO **Black Forest** 88.50 318 P P 11 18 56.7 -1.0
IBBN **Ibbenburen** 88.80 322 *eP* P 11 18 59.9 +0.9
comp=Z,50nm,1.1s,baz=94,slow=4.9
BUG **Bochum–Univer** 89.12 321 *eP* P 11 19 01.2 +0.8
comp=Z,45nm,1.1s,baz=94,slow=4.9
CDF **Champ du Feu** 89.20 318 *eP* P 11 19 00.4 -0.7
CDF pmax pmax
comp=Z,12nm,1.3s
SENIN **Lac Senin/Sane** 89.24 316 P P 11 19 01.1 -0.3
AHRW **Bad Neuenahr-A** 89.27 320 *eP* P 11 19 02.1 +0.9
comp=Z,24nm,1.0s,baz=94,slow=4.9
ECH **Echery** 89.28 318 P P 11 19 02.3 +0.9
ECH pmax pmax
comp=Z,16nm,1.1s
ECH **Echery** 89.28 318 P P 11 19 02.3 +0.9
ECH IAmb IAmb 11 19 02.6
comp=Z,16nm,1.1s
HINF **Hinteralfeld** 89.50 318 *eP* P 11 19 01.9 -0.5
HINF pmax pmax
comp=Z,34nm,1.8s
LPG **La Plagne** 89.65 315 *eP* P 11 19 00.4 -3.1
LPG pmax pmax
comp=Z,28nm,1.0s
LPL **La Plagne** 89.66 315 *eP* P 11 19 03.3 -0.2
LPL pmax pmax
comp=Z,27nm,1.0s
BNI **Bardonecchia** 89.71 315 P P 11 19 04.0 +0.4
BNI pmax pmax
comp=Z,16nm,1.0s
BNI **Bardonecchia** 89.71 315 P P 11 19 04.0 +0.4
BNI IAmb IAmb 11 19 11.8
comp=Z,16nm,1.0s
FRF **La Foret Royal** 89.79 313 *eP* P 11 19 03.8 0.0
FRF pmax pmax
comp=Z,12nm,0.9s
HAU **Haudompre** 89.83 318 *eP* P 11 19 03.5 -0.5
HAU pmax pmax
comp=Z,41nm,1.3s
BTNL **Ternell** 89.87 320 P P 11 19 03.2 -0.9
BTNL PcP PcP 11 19 04.8 -0.5
BTNL pP pP 11 19 15.8 -1.8
BTNL sP sP 11 19 19.4 -3.2
WLF **Walferdange** 89.89 319 PcP PcP 11 19 04.9 -0.5
WLF pP pP 11 19 15.4 -2.3
WLF sP sP 11 19 19.8 -3.0
WLF **Walferdange** 89.89 319 *eP* P 11 19 05.2 +1.0
comp=Z,29nm,1.1s,baz=94,slow=4.9
MEM **Membach** 89.95 320 PcP PcP 11 19 05.1 -0.5
NVL **N'lazarevskaya** 90.24 199 *eP* P 11 19 06.6 +1.3
NVL pmax pmax
comp=Z,18nm,0.9s
BCLA **Clavier** 90.41 320 PcP PcP 11 19 07.1 -0.5
BGES **Gesves** 90.55 320 PcP PcP 11 19 07.7 -0.5
BMRD **Maredsous** 90.75 320 PcP PcP 11 19 09.0 -0.2
BMRD pP pP 11 19 19.6 -2.1
BMRD sP sP 11 19 23.6 -3.2
DOU **Dourbes** 90.88 320 PcP PcP 11 19 09.5 -0.2
SNF **Seneffe** 91.05 320 PcP PcP 11 19 10.4 -0.1
SNF pP pP 11 19 20.5 -2.6
BAIF **Baives** 91.13 320 *eP* P 11 19 10.3 +0.4
BAIF pmax pmax
comp=Z,34nm,1.0s
VIVF **Saint-Julien-l** 91.15 315 *eP* P 11 19 10.1 -0.1
VIVF pmax pmax
comp=Z,35nm,1.3s
LOR **Lormes** 91.55 317 *eP* P 11 19 11.9 -0.1
LOR pmax pmax
comp=Z,29nm,1.0s
TAM **Tamanrasset** 91.56 293 P P 11 19 13.8 +1.1
TAM pmax pmax
comp=Z,20nm,1.2s
TAM **Tamanrasset** 91.56 293 P P 11 19 13.8 +1.1
TAM IAmb IAmb 11 19 15.5
comp=Z,20nm,1.2s
QSPA **South Pole Qui** 91.59 180 P P 11 19 12.6 +0.8
QSPA IAmb IAmb 11 19 13.6
comp=Z,15nm,1.4s
AVF **Avril sur Loir** 91.93 317 *eP* P 11 19 13.6 -0.1
AVF pmax pmax
comp=Z,32nm,1.2s
BGF **Bois d'Agland** 92.30 317 *eP* P 11 19 15.7 +0.3
BGF pmax pmax
comp=Z,37nm,1.1s
CAF **Calviac** 92.99 315 *eP* P 11 19 19.1 +0.4
CAF pmax pmax
comp=Z,13nm,1.0s
A21K **Barrow** 93.38 18 P P 11 19 20.8 +1.0
A21K IAmb IAmb 11 19 30.3
comp=Z,22nm,1.0s
DAG **Danmarks Havn** 94.31 348 *iP* P 11 19 23.3 -0.7
DAG **Danmarks Havn** 94.31 348 *iP* P 11 19 23.3 -0.7
DAG **Danmarks Havn** 94.31 348 *iP* P 11 19 23.3 -0.7
GRR **Gorron** 94.60 319 *eP* P 11 19 29.7 +3.8
GRR pmax pmax
comp=Z,54nm,1.9s
SNAA **Sanae** 94.94 198 ||*eP* P 11 19 27.8 +0.7
SNAA pmax pmax
comp=Z,6.0nm,1.4s
EKA **Eskdalemuir Ar** 94.94 326 P P 11 19 27.6 +0.3
TOA0 **Torodi Ar. Sit** 95.67 283 P P 11 19 31.4 -0.1
TORD **Torodi Ar. Bea** 95.67 283 P P 11 19 31.9 +0.3
comp=Z,2.1nm,0.9s,baz=60,slow=3.1,SNR=9.8
TORD PP PP 11 23 28.6 +5.0
comp=Z,2.3nm,1.1s,baz=76,slow=5.9,SNR=4.9
TORD LR LR 12 01 02.7
comp=Z,349nm,19.7s,baz=120,slow=34
TORD **Torodi Ar. Bea** 95.67 283 *eP* P 11 19 30.1 -1.4
DBG **Daneborg** 95.78 346 *iP* P 11 19 39.0 +8.2
IMAR **Indian Mountai** 95.90 23 P P 11 19 31.4 -0.1
TOLK **Toolik Lake Re** 96.53 20 P P 11 19 35.3 +0.9
ESDC **Sonseca Array** 98.08 310 LR LR 12 06 40.5
comp=Z,137nm,21.5s,baz=290,slow=37
ILAR **Eielson Array** 99.01 23 PP PP 11 23 38.3 -9.4
comp=Z,0.7nm,1.0s,baz=278,slow=6.4,SNR=4.2
ILAR PKKPbc PKKPbc 11 36 11.8 -2.4
comp=Z,0.9nm,0.9s,baz=128,slow=2.7,SNR=5.5
ILAR LR LR 12 11 34.9
comp=Z,99nm,18.0s,baz=308,slow=40
TBI **Tubuai** 111.40 114 *ePS* PS 11 34 54.0 +0.5
comp=Z,89nm,35.2s
TBI **Tubuai** 111.40 114 *eLR* LR 11 57 49.0
comp=Z,270nm,33.2s
PPT2 **Papeete2** 111.95 108 *ePS* PS 11 34 49.8 -9.1
comp=Z,203nm,31.5s
PPT2 **Papete2** 111.95 108 *eLR* LR 11 58 05.0
comp=Z,427nm,26.8s
TAOE **Nuku Hiva Isla** 121.81 99 *eLR* LR 12 02 37.6
comp=Z,269nm,26.7s
HUMO **Hull Mountain** 122.61 35 PKiKP PKiKP 11 25 02.4 +1.3
F10A **Beach Ranch, E** 123.34 29 PKiKP PKiKP 11 25 03.2 +0.6
MSO **Missoula** 124.21 26 PKiKP PKiKP 11 25 05.4 +1.1
MOD **Modoc Plateau** 124.57 34 PKPdf PKiKP 11 25 05.7 +0.5
J08A **Circle Bar Ran** 124.57 32 PKiKP PKiKP 11 25 06.0 +0.9
PLID **Pearl Lake** 124.58 29 PKPdf PKiKP 11 25 06.3 +1.1
MFID **Camas Ranch** 125.89 30 PKPdf PKiKP 11 25 08.3 +0.6
DLMT **Dillon** 125.94 26 PKiKP PKiKP 11 25 08.4 +0.6
BOZ **Bozeman (W)** 126.18 25 PKiKP PKiKP 11 25 09.5 +1.2
ULM **Lac du Bonnet** 126.97 11 PKP PKPdf 11 25 09.1 +0.1
comp=Z,4.0nm,0.9s,baz=333,slow=2.3,SNR=2.6
KVN **Kaiserville** 127.72 35 PKiKP PKiKP 11 25 12.5 +0.9
KVN **Kaiserville** 127.72 35 PKPdf PKiKP 11 25 12.5 +0.9
NVAR **Mina Array Bea** 128.01 36 PKP PKiKP 11 25 12.2 -0.1
comp=Z,2.1nm,0.9s,baz=282,slow=1.8,SNR=9.1
ELK **Elko** 128.12 32 PKiKP PKiKP 11 25 12.8 +0.4
ELK **Elko** 128.12 32 PKiKP 11 25 12.8 +0.4
SNOW **Snow King Moun** 128.25 26 PKPdf 11 25 12.3 +0.2
REDW **Red Top Meadow** 128.29 27 PKiKP 11 25 12.9 +0.2
BW06 **Boulder Array** 129.33 26 PKiKP 11 25 14.9 +0.1
PD31 **Pinedale Array** 129.33 26 PKiKP 11 25 14.9 +0.1
PDAR **Pinedale Array** 129.33 26 PKP PKiKP 11 25 14.6 -0.2
comp=Z,1.6nm,1.1s,baz=17,slow=1.5,SNR=7.6
PDAR PP PP 11 27 22.6 +0.1
comp=Z,1.4nm,1.0s,baz=318,slow=2.0,SNR=4.5
PDAR **Pinedale Array** 129.33 26 PKiKP 11 25 14.8 0.0
R11A **Troy Canyon, C** 129.63 34 PKiKP 11 25 16.2 +0.7
DUG **Dugway, Tooele** 129.78 31 PKiKP PKiKP 11 25 15.9 +0.2
DUG **Dugway, Tooele** 129.78 31 PKPdf PKiKP 11 25 15.9 +0.2
SPR3 **Spring Creek 3** 129.86 33 PKPdf 11 25 15.6 +0.3
SHPR **Sheep Range** 131.15 36 PKiKP 11 25 18.6 0.0
LCMT **Little Creek M** 131.89 34 PKiKP 11 25 19.7 -0.2
O20A **White River Ci** 132.04 27 PKiKP 11 25 20.7 +0.5
U15A **North Rim** 132.84 34 PKiKP 11 25 21.7 -0.4
ECSD **EROS Data Cent** 132.98 14 PKPdf PKPdf 11 25 19.6 -1.1
K31A **O'Neill** 133.44 17 PKPdf 11 25 21.7 +0.1
ANMO **Albuquerque** 137.03 30 PKiKP PKPdf 11 25 29.3 +0.6
ANMO **Albuquerque** 137.03 30 PKPdf PKPdf 11 25 29.3 +0.6
PLCA **Paso Flores** 139.71 194 PKhKP PKPpre 11 25 31.0
comp=Z,2.4nm,0.9s,baz=245,slow=6.3,SNR=4.4
PLCA PKP2ab 11 40 22.8
comp=Z,2.0nm,0.9s,baz=60,slow=7.6,SNR=3.8
PLCA **Paso Flores** 139.71 194 *eP* PKiKP 11 25 34.5 -1.1
MNTX **Cornudas Mount** 140.15 32 PKiKP 11 25 35.8 -1.0
ABTX **Abilene, Hawle** 142.09 24 PKPdf PKPdf 11 25 39.0 +1.3
TXAR **Lajitas Array** 142.92 32 PKP PKPdf 11 25 36.9 -2.5
comp=Z,0.6nm,0.5s,baz=195,slow=1.0,SNR=13
TXAR SKPbc SKiKP 11 29 14.9 -0.3
comp=Z,0.8nm,0.8s,baz=150,slow=1.0,SNR=3.7
TXAR **Lajitas Array** 142.92 32 PKiKP PKPdf 11 25 38.1 -1.3
TXAR **Lajitas Array** 142.92 32 PKPdf PKPdf 11 25 38.1 -1.3
WLAR **White Oak Lake** 143.35 15 PKPdf 11 25 38.6 -1.4
HPIG 143.62 37 PKPdf PKPdf 11 25 40.3 -0.6
BDFB **Brasilia** 143.64 246 PKP PKPbc 11 25 39.1 +0.6
comp=Z,7.8nm,0.6s,baz=163,slow=6.8,SNR=9.2
BDFB **Brasilia** 143.64 246 PKiKP PKPbc 11 25 39.3 +0.8
BDFB **Brasilia** 143.64 246 PKPdf PKPbc 11 25 39.3 +0.8
BI02 **San Fabin de** 143.75 195 PKPdf PKPbc 11 25 39.1 +0.9
JCT **Junction City** 143.87 26 PKiKP PKPdf 11 25 40.5 -0.5
JCT **Junction City** 143.87 26 PKPdf PKPdf 11 25 40.5 -0.5
PCMB **Pacaembu** 144.01 234 *eP* PKPdf 11 25 40.6 -0.8
ITRB **Iturama** 144.15 238 *eP* PKPbc 11 25 40.6 +0.8
TRCB **Terra Rica** 144.50 231 *eP* PKPbc 11 25 41.5 +0.6
143A **Socs Landing,** 144.72 14 PKPdf 11 25 42.0 -0.3
Z47A **Carrollton** 144.88 9 PKPab 11 25 41.5 +0.2
SMTB **Santa Maria do** 144.92 257 *eP* PKPdf 11 25 43.7 +0.5
PEXB **Peixe** 144.93 251 *eP* PKPdf 11 25 43.5 +0.3
Z51A **Franklin** 145.10 5 PKPbc 11 25 41.9 -0.5
GOGA **Godfrey** 145.11 2 PKiKP PKPbc 11 25 42.2 -0.2
GOGA **Godfrey** 145.11 2 PKPbc 11 25 42.2 -0.2
LRAL **Lakeview Retre** 145.20 7 PKPbc 11 25 42.5 -0.2
146A **Union** 145.27 10 PKPdf 11 25 44.0 +0.7
BO02 **Sierra Bellavi** 145.38 197 PKPab 11 25 44.1 +0.5
152A **Waverly Hall** 145.78 4 PKPdf PKPdf 11 25 44.0 -0.1
CPUP **Villa Florida** 145.81 222 PKPbc PKPab 11 25 45.5 +0.2
comp=Z,25nm,0.9s,baz=122,slow=3.8,SNR=57
CPUP **Villa Florida** 145.81 222 PKP2 PKPab 11 25 45.3 0.0
CPUP **Villa Florida** 145.81 222 PKPab 11 25 45.3 0.0
CPUP **Villa Florida** 145.81 222 *eP* PKPab 11 25 45.5 +0.2
AVIZ **Vizcacheras** 145.88 200 *eP* PKPbc 11 25 44.9 -0.1
833A **Chaparral WMA,** 145.89 28 PKPdf PKPdf 11 25 43.6 -0.8
154A **Montrose** 145.91 2 PKPdf PKPdf 11 25 43.7 -0.7
TMAB **Tom-Au,PA,Br** 146.01 268 *eP* PKPab 11 25 46.2 -0.3
344A **Westbrook Farm** 146.07 13 PKPdf 11 25 44.0 -0.7
344A PKPbc PKPab 11 25 46.6 +0.5
TCA **Tanti** 146.15 208 *eP* PKPab 11 25 46.8 +0.2
250A **Grady** 146.33 6 PKPab 11 25 46.9 -0.2
AAGR **Agrelo** 146.34 200 *iP* PKPab 11 25 48.0 +0.8
346A **Big Creek Wild** 146.41 11 PKPab 11 25 47.5 +0.1
ASAL **Salagasta** 146.79 201 *eP* PKPbc 11 25 47.8 +0.1
PEL **Peldehue** 146.89 198 PKP2 PKPab 11 25 48.8 -0.5
PEL **Peldehue** 146.89 198 PKPab 11 25 48.8 -0.5
MT02 **Curacav** 146.91 197 PKPbc 11 25 48.6 +0.6
352A **Blakely** 146.95 4 PKPbc 11 25 48.4 +0.3
BRAL **Brewton** 147.03 8 PKPab 11 25 49.6 -0.2
ARAG **Araguaiana, MT** 147.04 243 *eP* PKPbc 11 25 47.8 -1.0
ROC1 **El Roble** 147.14 197 PKPbc 11 25 49.6 +0.6
ROC1 **El Roble** 147.14 197 *eP* PKPbc 11 25 49.0 +0.3
VA03 **San Esteban** 147.20 198 PKPbc 11 25 49.2 +0.2
AUSP **Uspallata** 147.31 200 *eP* PKPab 11 25 50.7 -0.6
RTCV **Cerro Valdivia** 147.34 202 *eP* PKPab 11 25 50.2 -0.9
PRPB **Parauapebas** 147.49 261 *eP* PKPbc 11 25 49.6 -0.6
RTLS **Leoncito** 147.67 201 *eP* PKiKP 11 25 51.8 -0.8
ZON **Zonda** 147.67 202 PKP2 PKPbc 11 25 50.5 +0.2
ZON **Zonda** 147.67 202 PKPbc 11 25 50.5 +0.2
SNDB **Serra Nova Dou** 147.78 250 *eP* PKPdf 11 25 48.6 +0.6
APLL **PUNTA DE LOS L** 147.82 206 *eP* PKPbc 11 25 51.5 +0.9
AVFE **Valle Fertil** 147.98 204 *eP* PKPbc 11 25 51.7 +0.6
AQDB **Aquidauana** 148.15 232 *eP* PKPbc 11 25 50.3 -1.4
ZAIG **Zacatecas** 148.58 38 PKPbc 11 25 52.2 -0.9
ACCO **Cerro Coronel** 148.68 202 *eP* PKiKP 11 25 54.2 -0.6
CO02 **Combarbal** 148.78 199 PKiKP 11 25 54.0 -0.7
ACLC **CERRO LA CRUZ** 148.84 206 *eP* PKiKP 11 25 54.4 -0.5
CO03 **El Pedregal** 149.02 199 PKPbc 11 25 54.3 +0.5
ACDV **Cuesta del Vie** 149.07 202 *eP* PKPbc 11 25 54.4 +0.4
CYA **Choya** 149.14 209 *eP* PKPbc 11 25 54.2 +0.1
AROD **Rodeo** 149.21 202 *eP* PKPbc 11 25 55.6 -0.2
AGUA **GUANDACOL** 149.43 204 *eP* PKiKP 11 25 56.0 0.0
CO01 **Juntas del Tor** 149.60 201 PKiKP 11 25 56.7 +0.2
GO04 **Tololo Observa** 149.67 200 PKPbc 11 25 55.6 0.0
MCPB **Macapa, AP** 149.94 272 *eP* PKPdf 11 25 52.8 +1.2
VCA **Vinchina** 149.98 205 *eP* PKiKP 11 25 57.9 +0.7
AHML **Horco Molle** 150.27 211 *eP* PKiKP 11 25 57.4 -0.4
AC05 **El Transito** 150.70 202 PKiKP 11 25 58.6 -0.1
GO03 **Copiap** 151.81 203 PKiKP 11 26 00.9 0.0
GO03 **Copiap** 151.81 203 *eP* PKiKP 11 26 01.8 +0.9
NPGB **Novo Progresso** 152.81 258 *eP* PKPdf 11 25 56.8 +0.8
PTLB **Pontes e Lacer** 153.52 238 *eP* PKPdf 11 25 57.2 +0.4
ITTB **Itaituba** 153.54 264 *eP* PKPdf 11 25 57.9 +1.0

PDPR	**Patillas Dam,**	**154.85**	**322**		**PKPab**	11 26 22.8	**+0.4**
LVC	**Limon Verde**	**155.54**	**211**	PKIKP	**PKPdf**	11 25 59.5	**-0.5**
LVC						11 26 27.0	
LVC	**Limon Verde**	**155.54**	**211**	PKPdf	**PKPdf**	11 25 59.5	**-0.5**
LVC				PKPab	sPKPbc	11 26 27.0	-1.2
LVC	**Limon Verde**	**155.54**	**211**	*eP*	**PKPdf**	11 26 00.6	**+0.6**
VILB	**Vilhena**	**155.58**	**242**	*eP*	**PKPdf**	11 26 01.6	**+1.8**
PB07	**IPOC Station P**	**156.77**	**210**	PKPdf	**PKPdf**	11 26 00.5	**-0.9**
PB07					**PKPab**	11 26 30.5	**-0.3**
PB11	**IPOC Station P**	**158.27**	**213**		**PKPab**	11 26 38.4	**+1.1**
MNMC	**Minye Minye**	**158.74**	**214**		**PKPab**	11 26 39.9	**+0.4**
PB16	**IPOC Station P**	**159.32**	**216**	PKPab	**PKPab**	11 26 42.5	**+0.1**
LPAZ	**La Paz**	**159.98**	**223**	PKP	**PKPab**	11 26 06.0	**+0.1**
	comp=Z,2.0nm,0.9s,baz=33,slow=6.1,SNR=6.6						
LPAZ	**La Paz**	**159.98**	**223**	PKIKP	**PKPdf**	11 26 05.6	**-0.3**
LPAZ	**La Paz**	**159.98**	**223**	PKPdf	**PKPdf**	11 26 05.6	**-0.3**
LPAZ	**La Paz**	**159.98**	**223**	*eP*	**PKPdf**	11 26 06.5	**+0.6**
ETMB	**Extrema**	**162.25**	**242**	*eP*	**PKPdf**	11 26 07.5	**-0.1**
SDV	**Santo Domingo**	**164.51**	**313**	*eP*	**PKPdf**	11 26 11.0	**+1.0**

WEL 16 11:09:15.8,41°S±1°×17°3E±°, h105km±2km, M3.0/27, MLv3.0/27, Error ellipse: s-maj=0.0km s-min=0.0km az=83.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.13**	**326**	P	Pn	11 09 30.6	+0.1
NNZ				S	Sn	11 09 40.9	-0.5
TUWZ	**Tuamarina**	**0.37**	**107**	P	Pn	11 09 32.4	+1.0
TUWZ				S	Sn	11 09 43.3	+0.3
BSWZ	**Blackbirch Sta**	**0.49**	**143**	P	Pn	11 09 33.2	+1.0
BSWZ				S	Sn	11 09 45.5	+1.1
THZ	**Tophouse**	**0.61**	**224**	P	Pn	11 09 33.4	+0.3
THZ				S	Sn	11 09 46.0	-0.1
TCW	**Tory Channel**	**0.61**	**80**	P	Pn	11 09 34.1	+1.1
TCW				S	Sn	11 09 46.2	+0.3
DUWZ	**D'Urville Isla**	**0.62**	**33**	P	Pn	11 09 33.6	+0.5
DUWZ				S	Sn	11 09 46.5	+0.4
CMWZ	**Cape Campbell**	**0.70**	**128**	P	Pn	11 09 35.3	+1.5
QRZ	**Quartz Range**	**0.87**	**304**	P	Pn	11 09 34.7	-0.7
QRZ				S	Sn	11 09 47.6	-2.4
WEL	**Wellington**	**0.98**	**88**	P	Pn	11 09 37.2	+0.9
BHW	**Baring Head**	**1.06**	**95**	P	Pn	11 09 37.9	+0.7
BHW				S	Sn	11 09 53.4	0.0
KHZ	**Kahutara**	**1.09**	**177**	P	Pn	11 09 38.6	+0.9
KIW	**Kapiti Island**	**1.18**	**67**	P	Pn	11 09 39.3	+0.6
KIW				S	Sn	11 09 56.3	+0.5
CAW	**Cannon Point**	**1.22**	**80**	P	Pn	11 09 39.6	+0.5
CAW				S	Sn	11 09 57.0	+0.3
DSZ	**Denniston Nort**	**1.32**	**251**	P	Pn	11 09 39.8	-0.5
DSZ				S	Sn	11 09 56.5	-2.4
MSWZ	**Moikau Station**	**1.34**	**95**	P	Pn	11 09 40.9	+0.5
MSWZ				S	Sn	11 09 58.9	-0.2
PLWZ	**Palliser**	**1.36**	**101**	P	Pn	11 09 41.4	+0.6
PLWZ				S	Sn	11 09 59.3	-0.3
OGWZ	**Otaki Gorge**	**1.38**	**69**	P	Pn	11 09 41.3	+0.4
MTW	**Mount Morrison**	**1.54**	**85**	P	Pn	11 09 43.1	+0.2
MTW				S	Sn	11 10 03.4	+0.1
HOWZ	**Holdsworth Sta**	**1.60**	**75**	P	Pn	11 09 43.7	+0.1
GVZ	**Greta Valley S**	**1.68**	**191**	P	Pn	11 09 44.9	+0.3
LTZ	**Lake Taylor**	**1.71**	**211**	P	Pn	11 09 44.9	-0.1
MRZ	**Mangatainoka R**	**1.73**	**68**	P	Pn	11 09 45.0	-0.1
NMEZ	**Namu Road**	**1.93**	**9**	P	Pn	11 09 48.5	+0.8
WAZ	**Wanganui**	**1.94**	**37**	P	Pn	11 09 49.2	+1.3
LREZ	**Lake Rotokare**	**1.99**	**21**	P	Pn	11 09 50.1	+1.6
PREZ	**Palmer Road**	**2.05**	**15**	P	Pn	11 09 50.1	+0.9
INZ	**Inchbonnie**	**2.06**	**226**	P	Pn	11 09 49.1	-0.3
KHEZ	**Kahui Hut**	**2.07**	**12**	P	Pn	11 09 50.3	+0.8
NBEZ	**Newall Road No**	**2.07**	**8**	P	Pn	11 09 50.2	+0.7
NEZ	**North Egmont**	**2.10**	**13**	P	Pn	11 09 50.6	+0.5
PKE	**Pukeiti**	**2.16**	**11**	P	Pn	11 09 51.4	+0.6
BFZ	**Birch Farm**	**2.19**	**74**	P	Pn	11 09 50.8	-0.3
DREZ	**Durham Road**	**2.20**	**15**	P	Pn	11 09 51.8	+0.6
OXZ	**Oxford**	**2.27**	**208**	P	Pn	11 09 51.2	-0.9
VRZ	**Vera Road**	**2.41**	**25**	P	Pn	11 09 54.5	+0.7
OKCZ	**Okains Bay**	**2.42**	**187**	P	Pn	11 09 53.8	-0.2
MQZ	**McQueen's Vall**	**2.46**	**194**	P	Pn	11 09 53.3	-1.2
PNHZ	**Pukenui**	**2.51**	**57**	P	Pn	11 09 54.4	-0.8
WNVZ	**Wahianoa**	**2.57**	**40**	P	Pn	11 09 56.2	0.0
MOVZ	**Moawhango**	**2.59**	**43**	P	Pn	11 09 55.8	-0.5
RACZ	**Rakaia**	**2.60**	**202**	P	Pn	11 09 55.6	-0.7
WHVZ	**Whangaehu Hut**	**2.60**	**39**	P	Pn	11 09 56.8	+0.2
FWVZ	**Far West T-bar**	**2.61**	**38**	P	Pn	11 09 56.9	+0.2
MHCZ	**Mount Hutt**	**2.62**	**212**	P	Pn	11 09 55.9	-0.8
TUVZ	**Tukino**	**2.64**	**40**	P	Pn	11 09 57.3	+0.2
NGZ	**Ngauruhoe**	**2.69**	**38**	P	Pn	11 09 58.5	+0.7
BHHZ	**Black Hill Sta**	**2.69**	**48**	P	Pn	11 09 57.2	-0.5
TWVZ	**Taurewa**	**2.71**	**34**	P	Pn	11 09 57.8	-0.1
OTVZ	**Oturere**	**2.73**	**39**	P	Pn	11 09 58.4	+0.1
WTVZ	**West Tongariro**	**2.73**	**37**	P	Pn	11 09 58.3	0.0
KRHZ	**Kereru**	**2.77**	**54**	P	Pn	11 09 57.9	-0.8
ETVZ	**East Tongariro**	**2.77**	**39**	P	Pn	11 09 58.3	+0.4
WACZ	**Wakanui South**	**2.88**	**204**	P	Pn	11 09 59.7	-0.4
KWHZ	**Kaweka Forest**	**2.94**	**51**	P	Pn	11 10 00.2	-0.8
RPZ	**Rata Peaks**	**2.99**	**216**	P	Pn	11 10 01.3	-0.2
HIZ	**Hauiti**	**3.00**	**21**	P	Pn	11 10 01.7	-0.1
KAHZ	**Kahuranaki**	**3.01**	**61**	P	Pn	11 10 00.7	-1.1
ARCZ	**Arundel**	**3.12**	**212**	P	Pn	11 10 02.5	-0.9
BKZ	**Black Stump Fm**	**3.16**	**48**	P	Pn	11 10 02.7	-1.2
TLZ	**Tolley Road**	**3.38**	**29**	P	Pn	11 10 06.5	-0.4
FOZ	**Fox Glacier**	**3.49**	**230**	P	Pn	11 10 07.2	-1.0
TOZ	**Tahuroa Road**	**3.91**	**24**	P	Pn	11 10 14.2	+0.3
RAGZ	**Rawiri**	**4.14**	**48**	P	Pn	11 10 16.8	-0.3
RIGZ	**Rimuhau**	**4.20**	**53**	P	Pn	11 10 15.7	-2.2
ODZ	**Otahua Downs**	**4.26**	**208**	P	Pn	11 10 17.7	-0.8
MWZ	**Matawai**	**4.32**	**48**	P	Pn	11 10 17.4	-2.0
MKAZ	**Moumakai**	**4.41**	**18**	P	Pn	11 10 20.7	+0.1
JCZ	**Jackson Bay**	**4.42**	**230**	P	Pn	11 10 19.2	-1.5
RUGZ	**Raukumara Rang**	**4.67**	**45**	P	Pn	11 10 23.0	-1.2

*NEIC **16** 11:10:45.2±1.5,21°.21S×0°.05×68°.57W±0°.09, h104km±8km, Error ellipse: s-maj=11.9km s-min=7.5km az=82.0*
*VAO **16** 11:10:45.6±0.6,21°.05S×68°.71W, h107km, mb4.2*
*GUC **16** 11:10:45.3±0.8,21°.20S×68°.77W, h114km±4km, ML3.9*
*IDC **16** 11:10:47.1±1.2,21°.25S×68°.40W, h109km±11km, mb3.8/3, mb1 3.8/7, mb1mx3.5/31, mbtmp4.2/7, Error ellipse: s-maj=31.9km s-min=14.5km az=118.0*

ISC 16 11:10:45.4±0.6, 21°.22S±0°.03×68°.74W±0°.06, h113km±7km, n95, σ1§14/105, mb4.1/4, 1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.72**	**284**	*eP*	**Pn**	**11 11 04.2**	**-0.1**
PB01				*i* S	**Sn**	**11 11 18.7**	**+0.1**
PB01				IAML		11 11 21.2	
	comp=N,3μm,0.2s						
PB01	**IPOC Station P**	**0.72**	**284**		**Pn**	**11 11 04.4**	**0.0**
PB09	**IPOC Station P**	**0.74**	**219**	*eP*	**Pn**	**11 11 05.4**	**+0.7**
PB09				*i* S	**Sn**	**11 11 20.3**	**+1.1**
PB09				IAML		11 11 21.4	
	comp=N,4μm,0.5s						
PB09	**IPOC Station P**	**0.74**	**219**		**Pn**	**11 11 04.9**	**+0.3**
PB08	**IPOC Station P**	**1.14**	**340**	*eP*	**Pn**	**11 11 09.5**	**+0.7**
PB08				*i* S	**Sn**	**11 11 27.0**	**+0.6**
PB08	**IPOC Station P**	**1.14**	**340**		**Pn**	**11 11 09.6**	**+0.7**
PB07	**IPOC Station P**	**1.18**	**244**	*eP*	**Pn**	**11 11 09.4**	**+0.5**
PB07				*i* S	**Sn**	**11 11 27.4**	**+0.6**
PB07				IAML		11 11 30.6	
	comp=E,3μm,0.4s						
PB07	**IPOC Station P**	**1.18**	**244**		**Pn**	**11 11 09.4**	**+0.5**
PB03	**IPOC Station P**	**1.25**	**229**	*eP*	**Pn**	**11 11 10.3**	**+0.6**
PB03				*i* S	**Sn**	**11 11 28.5**	**+0.3**
PATCX	**Punta Patache**	**1.38**	**286**	*eP*	**Pn**	**11 11 11.6**	**+0.5**
PATCX				*i* S	**Sn**	**11 11 31.0**	**+0.4**
PATCX				IAML		11 11 35.8	
	comp=E,3μm,0.4s						
PATCX	**Punta Patache**	**1.38**	**286**	Pn	**Pn**	**11 11 11.6**	**+0.5**
LVC	**Limon Verde**	**1.39**	**186**	P	**Pn**	**11 11 12.8**	**+1.3**
	comp=E,93nm,0.3s,baz=35,slow=11,SNR=1270						
LVC				S	**Sn**	**11 11 33.3**	**+1.9**
	comp=E,121nm,0.3s,baz=0.9,slow=15,SNR=32						
LVC				LR	LR	11 11 40.0	
	comp=E,96nm,18.5s,baz=188,slow=37						
LVC	**Limon Verde**	**1.39**	**186**	*eP*	**Pn**	**11 11 12.9**	**+1.3**
LVC				*eS*	**Sn**	**11 11 33.0**	**+1.6**
LVC	**Limon Verde**	**1.39**	**186**	Pn	**Pn**	**11 11 12.4**	**+0.8**
LVC	**Limon Verde**	**1.39**	**186**	*eP*	**Pn**	**11 11 12.8**	**+1.3**
TA01	**Diego Aracena**	**1.49**	**296**	*eP*	**Pn**	**11 11 12.6**	**+0.2**
TA01				*i* S	**Sn**	**11 11 32.8**	**0.0**
TA01				IAML		11 11 34.6	
	comp=N,3μm,0.3s						
TA01	**Diego Aracena**	**1.49**	**296**	Pn	**Pn**	**11 11 12.7**	**+0.4**
TA02	**Huaiquique**	**1.61**	**306**	*eP*	**Pn**	**11 11 13.8**	**+0.1**
TA02				*i* S	**Sn**	**11 11 35.8**	**+0.5**
PB06	**IPOC Station P**	**1.67**	**207**	*eP*	**Pn**	**11 11 15.5**	**+0.9**
PB06				*i* S	**Sn**	**11 11 38.0**	**+1.2**
PB06	**IPOC Station P**	**1.67**	**207**		**Pn**	**11 11 15.5**	**+0.9**
PB11	**IPOC Station P**	**1.68**	**329**	*eP*	**Pn**	**11 11 15.1**	**+0.2**
PB11				*i* S	**Sn**	**11 11 37.1**	**-0.1**
PB11				IAML		11 11 38.8	
	comp=E,4μm,0.4s						
PB11	**IPOC Station P**	**1.68**	**329**		**Pn**	**11 11 15.0**	**+0.2**
PB04	**IPOC Station P**	**1.71**	**229**	*eP*	**Pn**	**11 11 15.6**	**+0.4**
PB04				*i* S	**Sn**	**11 11 37.4**	**-0.5**
PB04				IAML		11 11 46.2	
	comp=N,1μm,0.6s						
PB04	**IPOC Station P**	**1.71**	**229**		**Pn**	**11 11 16.2**	**+1.0**
PSGC	**Pisagua**	**2.07**	**321**	*eP*	**Pn**	**11 11 19.2**	**-0.4**
PSGC				*i* S	**Sn**	**11 11 45.0**	**-0.6**
PSGC				IAML		11 11 46.3	
	comp=N,1μm,0.6s						
PSGCX	**Pisagua**	**2.07**	**321**		**Pn**	**11 11 19.4**	**-0.2**
PB15	**IPOC Station P**	**2.09**	**199**	↓*iP*	**Pn**	**11 11 20.8**	**+0.8**
PB15				*i* S	**Sn**	**11 11 48.2**	**+1.8**
PB15	**IPOC Station P**	**2.09**	**199**		**Pn**	**11 11 21.7**	**+1.7**
PB05	**IPOC Station P**	**2.12**	**220**	*eP*	**Pn**	**11 11 20.6**	**+0.4**
PB05				*i* S	**Sn**	**11 11 45.8**	**-0.9**
MNMC	**Minye Minye**	**2.23**	**339**	*eP*	**Pn**	**11 11 22.5**	**+0.8**
MNMC				*i* S	**Sn**	**11 11 50.4**	**+0.9**
MNMC	**Minye Minye**	**2.23**	**339**		**Pn**	**11 11 22.8**	**+1.1**
PB10	**IPOC Station P**	**2.83**	**216**	*eP*	**Pn**	**11 11 30.3**	**+1.0**
PB10				*i* S	**Sn**	**11 11 57.6**	**-5.5**
PB10				IAML		11 12 25.3	
	comp=E,229nm,0.5s						
PB10	**IPOC Station P**	**2.83**	**216**	Pn	**Pn**	**11 11 31.0**	**+1.7**
PB16	**IPOC Station P**	**2.96**	**346**	*eP*	**Pn**	**11 11 32.5**	**+1.0**
PB16				*i* S	**Sn**	**11 12 08.8**	**+1.8**
PB16	**IPOC Station P**	**2.96**	**346**		**Pn**	**11 11 32.5**	**+1.2**
AP01	**Chacalluta**	**3.21**	**332**	Pn	**Pn**	**11 11 36.5**	**+2.2**
PB14	**IPOC Station P**	**3.72**	**204**	Pn	**Pn**	**11 11 42.2**	**+0.8**
GO02	**Mina Guanaco**	**4.00**	**191**	Pn	**Pn**	**11 11 45.5**	**+0.3**
LPAZ	**La Paz**	**4.94**	**7**	P	**Pn**	**11 12 00.6**	**+2.5**
	comp=E,4.2nm,0.3s,baz=208,slow=5.3,SNR=98						
LPAZ	**La Paz**	**4.94**	**7**	Pn	**Pn**	**11 11 58.3**	**+0.2**
AC01	**Pan de Azucar**	**5.19**	**199**		**Pn**	**11 12 00.3**	**-0.6**
AC02	**Maricunga**	**5.60**	**184**		**Pn**	**11 12 07.1**	**+0.2**
GO03	**Copiap**	**6.49**	**192**	Pn	**Pn**	**11 12 18.0**	**-0.5**
AC04	**Llanos de Chal**	**7.27**	**196**	Pn	**Pn**	**11 12 29.2**	**+0.2**
AC05	**El Transito**	**7.71**	**190**	Pn	**Pn**	**11 12 34.4**	**-0.7**
CO01	**Juntas del Tor**	**8.81**	**188**	Pn	**Pn**	**11 12 49.1**	**-1.0**
SIV	**San Ignacio**	**8.94**	**56**	P	**Pn**	**11 12 49.0**	**-2.7**
	comp=E,2.2nm,0.3s,baz=250,slow=13,SNR=61						
GO04	**Tololo Observa**	**9.11**	**191**	Pn	**Pn**	**11 12 53.2**	**-0.9**
CO03	**El Pedregal**	**9.74**	**190**	Pn	**Pn**	**11 13 01.8**	**-0.7**
CO02	**Combarbal**	**10.15**	**191**	Pn	**Pn**	**11 13 08.1**	**+0.1**
ZON	**Zonda**	**10.29**	**180**	Pn	**Pn**	**11 13 10.4**	**+0.5**
PTLB	**Pontes e Lacer**	**10.77**	**59**	*eP*	**Pn**	**11 13 14.3**	**-2.2**
VILB	**Vilhena**	**11.58**	**46**	*eP*	**Pn**	**11 13 27.4**	**0.0**
ETMB	**Extrema**	**11.60**	**12**	*eP*	**Pn**	**11 13 25.2**	**-2.3**
CPUP	**Villa Florida**	**11.62**	**118**	P	**Pn**	**11 13 26.7**	**-1.1**
	comp=E,0.1nm,0.3s,baz=300,slow=11,SNR=4.8						
CPUP	**Villa Florida**	**11.62**	**118**		**Pn**	**11 13 26.2**	**-1.5**
CPUP	**Villa Florida**	**11.62**	**118**	*eP*	**Pn**	**11 13 28.0**	**+0.2**
MT02	**Curacav**	**12.18**	**190**	Pn	**Pn**	**11 13 35.0**	**-0.1**
AQDB	**Aquidauana**	**12.22**	**89**	*eP*	**Pn**	**11 13 35.9**	**+0.2**
H03N1	**Juan Fernandez**	**15.15**	**214**	T	T	11 29 51.5	
	baz=30						
H03N2	**Juan Fernandez**	**15.16**	**214**	T	T	11 30 04.3	
	baz=30						
H03N3	**Juan Fernandez**	**15.17**	**214**	T	T	11 29 47.7	
	baz=30						
PTGB	**Pitanga**	**15.75**	**106**	*eP*	**P**	**11 14 23.1**	**+0.4**
CLDB	**Colider**	**16.13**	**52**	*eP*	**Pn**	**11 14 24.6**	**-1.1**
PCMB	**Pacaembu**	**16.29**	**95**	*eP*	**P**	**11 14 28.9**	**+0.4**
ITAB	**Concordia**	**16.29**	**115**	*eP*	**P**	**11 14 28.6**	**+0.2**
ITRB	**Iturama**	**17.29**	**88**	*eP*	**Pn**	**11 14 40.4**	**+0.4**
FRTB	**Fartura**	**17.88**	**100**	*eP*	**Pn**	**11 14 46.2**	**-0.7**
CNLB	**Canela**	**18.06**	**120**	*eP*	**Pn**	**11 14 48.3**	**-0.9**
BB19B	**Bebedouro**	**18.86**	**93**	*eP*	**P**	**11 14 56.3**	**-0.5**
PLCA	**Paso Flores**	**19.51**	**184**	P	**Pn**	**11 15 06.2**	**-0.1**
	comp=E,0.3nm,0.3s,baz=353,slow=10.0,SNR=12						
PLCA	**Paso Flores**	**19.51**	**184**	P	**P**	**11 15 04.3**	**+0.4**
PLCA	**Paso Flores**	**19.51**	**184**	*eP*	**Pn**	**11 15 07.1**	**+0.8**
IPMB	**Ipameri, GO**	**19.61**	**84**	*eP*	**Pn**	**11 15 05.2**	**-2.3**
BDFB	**Brasilia**	**20.43**	**78**	P	**P**	**11 15 13.1**	**-0.9**
	comp=E,2.4nm,0.4s,baz=249,slow=10,SNR=5.1						
ITTB	**Itaituba**	**20.98**	**39**	*eP*	**P**	**11 15 18.4**	**-1.4**
LL01	**San Ignacio de**	**21.32**	**187**	P	**P**	**11 15 23.5**	**+0.4**
LL01				IAmb	IAmb	11 15 29.5	
	comp=Z,8.1nm,0.9s						
SMTB	**Santa Maria do**	**23.80**	**62**	*eP*	**P**	**11 15 47.4**	**-0.6**
JANB	**Januaria**	**24.00**	**79**	*eP*	**P**	**11 15 49.3**	**-0.6**
SDBA	**SANTA ISIDERIO**	**24.42**	**73**	*eP*	**P**	**11 15 54.4**	**-0.8**
DBIC	**Dimbokro**	**68.50**	**73**	P	**P**	**11 21 36.6**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=209,slow=8.8,SNR=3.5						
QSPA	**South Pole Qui**	**68.97**	**180**	P	**P**	**11 21 38.8**	**+0.5**
QSPA				IAmb	IAmb	11 21 41.7	
	comp=Z,3.5nm,1.2s						
MWC	**Mount Wilson**	**72.39**	**319**	P	**P**	**11 22 01.0**	**+1.5**
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**11 22 27.1**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=256,slow=5.3,SNR=15						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	**P**	**11 22 27.2**	**+0.2**
H11S2	**WAKE ISLAND Hy**	**128.00**	**277**	T	T	13 49 52.7	
	baz=101,slow=74,SNR=11						
H11S1	**WAKE ISLAND Hy**	**128.01**	**277**	T	T	13 49 51.2	
	baz=101,slow=74,SNR=12						
H11S3	**WAKE ISLAND Hy**	**128.01**	**277**	T	T	13 49 50.8	
	baz=101,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**128.07**	**279**	T	T	13 49 33.3	
	baz=108,slow=74,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**128.08**	**279**	T	T	13 49 55.3	
	baz=108,slow=74,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**128.09**	**279**	T	T	13 49 28.5	
	baz=108						
ASAR	**Alice Springs**	**130.23**	**208**	PKP	**PKiKP**	**11 29 44.4**	**+0.5**
	comp=Z,0.3nm,0.9s,baz=128,slow=1.5,SNR=2.0						
WRA	**Warramunga Arr**	**133.27**	**210**	PKP	**PKiKP**	**11 29 50.9**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=153,slow=1.6,SNR=5.5						
MKAR	**Makanchi Array**	**145.31**	**36**	PKPbc	**PKPab**	**11 30 11.5**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=316,slow=4.0,SNR=4.9						
MKAR	**Makanchi Array**	**145.31**	**36**		**PKPab**	**11 30 10.9**	**+0.7**

*IDC **16** 11:28:04.9±2.7, 30°.37N×140°.78E, h104km±24km, mb3.4/8, mb1 3.5/11, mb1mx3.3/48, mbtmp3.8/11, Error ellipse: s-maj=80.7km s-min=16.9km az=78.0*
*JMA **16** 11:28:09.2±0.1, 30°.94N×140°.80E, h145km±4km, M3.5*

ISC 16 11:28:03.7±0.8, 30°.58N±0°.07×141°.2E±0°.1, h100km, n28, σ2§00/31, mb3.5/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.25**	**327**	P	**Pn**	**11 28 41.5**	**+1.9**
JAOM				*eS*	**Sn**	**11 29 06.2**	**-0.8**
JHCJ	**Hachijojimakas**	**2.76**	**335**	P	**Pn**	**11 28 47.9**	**+1.6**
JHCJ				*eS*	**Sn**	**11 29 17.6**	**-1.5**
JHJ2	**Mitsune**	**2.79**	**335**	P	**Pn**	**11 28 48.5**	**+1.8**
JHJ2				*eS*	**Sn**	**11 29 18.3**	**-1.4**
JHJ	**Hachijo jima 2**	**2.81**	**335**	P	**Pn**	**11 28 48.0**	**+1.1**
	11nm,0.3s,baz=240,slow=23,SNR=12						
JHJ				S	**Sn**	**11 29 19.4**	**-0.8**
	45nm,0.3s,baz=79,slow=22,SNR=9.0						
CBIJ	**Chichi jima**	**3.57**	**166**	P	**Pn**	**11 28 58.6**	**+1.4**
CBIJ				*eS*	**Sn**	**11 29 37.3**	**-1.2**
JMKN	**Mikurajimanish**	**3.58**	**338**	P	**Pn**	**11 28 58.4**	**+1.2**
JMKN				*eS*	**Sn**	**11 29 35.9**	**-2.7**
BSO1	**Boso 1**	**4.07**	**357**	P	**Pn**	**11 29 06.1**	**+2.8**
BSO3	**Boso 3**	**4.25**	**352**	P	**Pn**	**11 29 08.5**	**+2.4**
JOD2	**Odawara 2**	**5.00**	**340**	*eS*	**Sn**	**11 30 09.1**	**-4.0**
JYT	**Yasato**	**5.70**	**352**	P	**Pn**	**11 29 27.0**	**+1.1**
JYT				*eS*	**Sn**	**11 30 27.0**	**-2.9**
JAG	**Ashikaga**	**6.01**	**346**	P	**Pn**	**11 29 31.3**	**+1.1**
JAG				*eS*	**Sn**	**11 30 34.3**	**-3.3**
JHO	**Hitachi**	**6.04**	**355**	P	**Pn**	**11 29 32.0**	**+1.5**
JHO				*eS*	**Sn**	**11 30 35.6**	**-2.7**
MJAR	**Matsushiro Arr**	**6.46**	**338**	P	**Pn**	**11 29 39.5**	**+3.3**
	0.1nm,0.3s,baz=163,slow=10,SNR=8.4						
USRK	**Ussuriysk Ar.**	**15.43**	**334**	P	**Pn**	**11 31 35.9**	**+0.1**
	baz=145,slow=9.1,SNR=6.4						
KLR	**Kul'dur**	**19.96**	**342**	P	**P**	**11 32 29.6**	**+1.7**
	3.7nm,0.4s,baz=154,slow=9.7,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**25.57**	**109**	T	T	12 01 24.6	
	baz=300,slow=75,SNR=6.9						
H11N1	**WAKE ISLAND Hy**	**25.58**	**109**	T	T	12 01 23.8	
	baz=300,slow=75,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**25.59**	**109**	T	T	12 01 23.8	
	baz=300,slow=75,SNR=5.9						
H11S3	**WAKE ISLAND Hy**	**26.04**	**112**	T	T	12 01 31.2	
	baz=303,SNR=3.0						
H11S1	**WAKE ISLAND Hy**	**26.05**	**112**	T	T	12 01 34.4	
	baz=303						
H11S2	**WAKE ISLAND Hy**	**26.06**	**112**	T	T	12 01 33.0	
	baz=303						
SONM	**Songino Array**	**31.67**	**313**	P	**P**	**11 34 18.2**	**+0.5**
	0.2nm,0.5s,baz=116,slow=10,SNR=2.3						
MKAR	**Makanchi Array**	**47.65**	**307**	P	**P**	**11 36 28.3**	**-1.5**
	0.3nm,0.7s,baz=104,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**50.66**	**188**	P	**P**	**11 36 51.6**	**-1.3**
	0.4nm,0.3s,baz=4.8,slow=7.7,SNR=13						
ASAR	**Alice Springs**	**54.39**	**188**	P	**P**	**11 37 19.2**	**-1.2**
	0.2nm,0.6s,baz=359,slow=4.4,SNR=12						
ARCES	**ARCESS Array B**	**69.98**	**340**	P	**P**	**11 39 05.6**	**+1.5**
	3.5nm,0.8s,baz=64,slow=8.1,SNR=1.0						
FINES	**FINESS Array B**	**74.46**	**333**	P	**P**	**11 39 31.3**	**+0.5**
	2.3nm,0.9s,baz=35,slow=5.8,SNR=8.3						
BRTR	**Keskin Array B**	**83.03**	**312**	P	**P**	**11 40 18.5**	**+0.2**
	0.5nm,0.7s,baz=108,slow=4.7,SNR=2.8						

IDC 16 11:31:02.4±0.8, 26°.18S×15°.48W, h0km, mb4.1/6, mb1 4.1/6, mb1mx3.8/35, mbtmp4.1/6, Error ellipse: s-maj=30.9km s-min=25.4km az=162.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**17.14**	**3**	T	T	11 52 28.6	
	baz=182,slow=74,SNR=11						
H10S3	**ASCENSION HYDR**	**17.15**	**3**	T	T	11 52 29.1	
	baz=38,slow=74,SNR=22						
H10N1	**ASCENSION HYDR**	**18.26**	**3**	T	T	11 53 49.5	
	baz=191						
H10N3	**ASCENSION HYDR**	**18.26**	**3**	T	T	11 53 46.7	
	baz=191,slow=74,SNR=25						
H10N2	**ASCENSION HYDR**	**18.27**	**3**	T	T	11 53 47.9	
	baz=191,slow=74,SNR=5.2						
TSUM	**Tsumeb**	**31.22**	**84**	P	P	11 37

AHBU	AHRAM	2.68	295	*e*Pn	Pb	11 47 12.1	-1.0	
BANOM	Banah	2.71	132	*i* P	Pn	11 47 09.4	+0.7	
	SNR=8.0							
BANOM	Banah	2.71	132	P	Pn	11 47 09.5	+0.9	
	SNR=7.2							
BANOM	Banah	2.71	132	*e*Pn	Pn	11 47 09.3	+0.7	
NGRK	Negar Kerman	3.01	51	*e*Pn	Pn	11 47 14.6	+1.4	
NGRK				*e*		11 48 10.1		
MSFE	Esma-Masafi	3.03	141	P	Pn	11 47 15.1	+1.9	
MSFE	Esma-Masafi	3.03	141	*e*Pn	Pn	11 47 16.2	+3.0	
MDH	Madha	3.16	140	*e*Pn	Pn	11 47 17.0	+2.1	
KRBR	Kerman	3.25	46	*e*Pn	Pn	11 47 16.8	+0.4	
KRBR				*e*S	Sn	11 47 54.4	-0.8	
KRBR	Kerman	3.25	46	*e*Pn	Pn	11 47 16.8	+0.4	
TVBK	TV Kerman	3.25	46	*e*Pn	Pn	11 47 18.8	+2.3	
FAQ	Al Faqa, Dubai	3.29	155	*i* P	Pn	11 47 17.5	+0.8	
	SNR=10							
ASUD	Al Ashush, Dub	3.31	160	*i* P	Pn	11 47 18.4	+1.4	
	SNR=15							
ASUD				S	Sg	11 48 14.6	+3.0	
ASUD	Al Ashush, Dub	3.31	160	P	Pn	11 47 20.3	+3.3	
	SNR=11							
ASUD	Al Ashush, Dub	3.31	160	*e*Pn	Pn	11 47 19.0	+2.0	
KHGB	Koh Gabri	3.36	38	*e*Pn	Pn	11 47 20.0	+2.1	
KHGB				*e*		11 48 05.4		
UOSS	Minazif	3.39	145	P	Pn	11 47 16.4	-1.7	
UOSS	Minazif	3.39	145	P	Pn	11 47 20.6	+2.5	
UOSS				S	Sn	11 48 01.0	+2.5	
UOSS	Minazif	3.39	145	*e*Pn	Pn	11 47 19.7	+1.6	
UOSS	Minazif	3.39	145	Pn	Pn	11 47 20.2	+2.1	
HATD	Hatta, Dubai	3.46	147	P	Pn	11 47 21.6	+2.6	
HATD				S	Sn	11 48 02.4	+2.4	
HATD	Hatta, Dubai	3.46	147	*e*Pn	Pn	11 47 20.8	+1.8	
IMEH	Mehriz	3.66	7	*e*Pn	Pn	11 47 24.5	+2.5	
KLNJ	Kolanjah	3.90	327	*e*Pn	Pn	11 47 26.1	+0.8	
ALNE	Al Ain	3.98	157	*e*Pn	Pn	11 47 28.6	+2.4	
IBAF	Bafgh	4.04	19	*e*Pn	Pn	11 47 29.2	+2.0	
KBAM	BAM	4.11	69	*e*Pn	Pn	11 47 30.7	+2.7	
ISAD	Sadrabad	4.16	356	*e*Pn	Pn	11 47 31.7	+2.8	
ISAD				*e*		11 47 37.4		
SOHO	SOHO	4.23	148	P	Pn	11 47 32.2	+2.5	
SOHO	SOHO	4.23	148	P	Pn	11 47 32.4	+2.8	
SOHO				S	Sn	11 48 22.3	+3.1	
SOHO	SOHO	4.23	148	*e*Pn	Pn	11 47 31.7	+2.0	
IRAM	Rameshen	4.30	341	*e*Pn	Pn	11 47 32.3	+1.5	
ICHK	Chekchek	4.49	4	*e*Pn	Pn	11 47 35.4	+2.0	
YZKH	Yazd	4.65	6	*e*Pn	Pn	11 47 37.5	+2.1	
YZKH	Yazd	4.65	6	*e*Pn	Pn	11 47 37.5	+2.1	
UMZA	Um Al Zommool	5.11	169	*e*Pn	Pn	11 47 43.7	+1.9	
NASN	Na'in	5.15	348	*e*Pn	Pn	11 47 44.1	+1.6	
NASN	Na'in	5.15	348	*e*Pn	Pn	11 47 44.1	+1.6	
IZEF	Zefreh	5.34	344	*e*Pn	Pn	11 47 46.1	+1.0	
ANAR	Anarak	5.43	357	*e*Pn	Pn	11 47 47.6	+1.4	
IPIR	Pirpir	5.63	332	*e*Pn	Pn	11 47 49.9	+0.8	
SMDO	Samad	5.90	141	P	Pn	11 47 54.6	+1.9	
IKLH	Kolahrood	5.95	340	*e*Pn	Pn	11 47 55.2	+1.7	
WSAR	Wadi Sarin	6.10	136	Pn	Pn	11 47 56.0	+0.7	
	comp=E,1.4nm,0.3s,baz=328,slow=13,SNR=10							
WSAR				Sn	Sn	11 49 04.3	-0.9	
	comp=E,1.2nm,0.3s,baz=6.3,slow=5.5,SNR=2.0							
CHBR	Chabahar	6.13	109	*e*Pn	Pn	11 47 56.1	+0.3	
CHBR	Chabahar	6.13	109	*e*Pn	Pn	11 47 56.1	+0.3	
NHDN	Nehbandan	6.35	54	*e*Pn	Pn	11 48 02.2	+3.3	
KRSH	Karshahi	6.42	346	*e*Pn	Pn	11 48 01.2	+1.4	
TABS	Tabas	6.44	23	*e*Pn	Pn	11 48 01.4	+1.3	
TABS	Tabas	6.44	23	*e*Pn	Pn	11 48 01.4	+1.3	
WBK	Wadi Bani Khal	6.78	138	P	Pn	11 48 05.3	+0.6	
WBK				S	Sn	11 49 23.7	+1.7	
IVRN	Varamin	7.49	345	*e*Pn	Pn	11 48 15.7	+1.2	
MHTO	MHTO	7.62	151	P	Pn	11 48 16.8	+0.6	
	SNR=9.1							
IANJ	Anjilo	7.69	359	*e*Pn	Pn	11 48 19.5	+2.1	
ISHM	Shahmirzad	8.06	356	*e*Pn	Pn	11 48 25.2	+2.7	
RAYN	Ar Rayn	8.79	243	Pn	Pn	11 48 33.1	+0.7	
WHFO	Wadi Hawf	9.79	182	P	Pn	11 48 46.3	+0.3	
	SNR=7.9							
GEYT	Alibeck	10.71	18	Pn	Pn	11 49 05.0	+6.5	
	comp=E,0.4nm,0.3s,baz=163,slow=1.5,SNR=3.5							
KK31	Karatay Array	20.30	37		P	11 51 02.6	+1.5	
KKAR	Karatay Array	20.30	37	P	P	11 51 00.9	-0.2	
BR131	Keskin Array S	20.71	310	P	P	11 51 04.6	-1.0	
BR131				IAmb	IAmb	11 51 14.6		
	comp=Z,14nm,1.1s							
BRTR	Keskin Array B	20.71	310	P	P	11 51 06.3	+0.6	
	comp=Z,1.2nm,0.7s,baz=134,slow=11,SNR=6.7							
BRTR	Keskin Array B	20.71	310	P	P	11 51 05.1	-0.6	
ABKAR	Akbulak array	21.95	10	P	P	11 51 19.1	+0.4	
ABKAR				IAmb	IAmb	11 51 26.6		
	comp=Z,4.5nm,0.7s							
AKTO	Aktyubinsk	22.85	7	P	P	11 51 30.4	+2.0	
	comp=Z,2.1nm,0.6s,baz=173,slow=13,SNR=8.4							
BOOM	Boomskoye usch	23.07	45	P	P	11 51 30.0	-0.9	
BOOM				IAmb	IAmb	11 51 37.9		
	comp=Z,9.9nm,1.2s							
BVAR	Borovoye Array	28.01	21	P	P	11 52 16.1	0.0	
	comp=Z,1.0nm,0.6s,baz=234,slow=39,SNR=6.1							
MKAR	Makanchi Array	29.19	42	P	P	11 52 27.8	+1.1	
	comp=Z,0.4nm,0.7s,baz=229,slow=5.5,SNR=2.8							
MKAR				PcP	PcP	11 55 36.3	+2.4	
	comp=Z,0.2nm,0.5s,baz=238,slow=3.5,SNR=1.9							
KURBB	Kurchatov Arra	29.44	32	P	P	11 52 30.7	+1.9	
	comp=Z,0.7nm,0.6s,baz=227,slow=8.9,SNR=7.3							
BURAR	Bucovina Array	29.97	319	P	P	11 52 32.1	-1.5	
ZAA0	Zalesovo Array	34.53	32	P	P	11 53 11.7	-1.7	
ZAA0				IAmb	IAmb	11 53 16.8		
	comp=Z,3.7nm,0.6s							
ZALV	Zalesovo Beam	34.53	32	P	P	11 53 13.2	-0.2	
	comp=Z,3.4nm,0.4s,baz=242,slow=8.2,SNR=13							
ZALV	Zalesovo Beam	34.53	32	P	P	11 53 12.2	-1.3	
FINES	FINESS Array B	38.53	339	P	P	11 53 46.3	-1.2	
	comp=Z,0.8nm,0.4s,baz=137,slow=9.1,SNR=9.7							
NOA	NORSAR Array B	43.87	331	P	P	11 54 32.6	+1.2	
	comp=Z,0.7nm,0.7s,baz=118,slow=7.8,SNR=1.6							
ARCES	ARCESS Array B	44.98	346	P	P	11 54 39.9	-0.2	
	comp=Z,6.2nm,1.0s,baz=150,slow=8.4,SNR=5.0							
SONM	Songino Array	45.00	49	P	P	11 54 40.6	-0.2	
	comp=Z,0.5nm,0.7s,baz=253,slow=10,SNR=4.3							
ESDC	Sonseca Array	48.95	300	P	P	11 55 10.7	-1.0	
	comp=Z,0.7nm,0.7s,baz=69,slow=7.0,SNR=4.8							
TORD	Torodi Ar. Bea	50.81	264	P	P	11 55 24.1	-1.9	
	comp=Z,1.9nm,0.8s,baz=62,slow=8.2,SNR=8.0							
LBTB	Lobatse	59.20	210	P	P	11 56 24.2	-2.3	
LBTB				IAmb	IAmb	11 56 49.3		
	comp=Z,20nm,1.4s							
KSRS	Korea Array	61.54	60	P	P	11 56 44.3	+1.8	
	comp=Z,0.6nm,0.5s,baz=281,slow=6.3,SNR=4.8							
BOSA	Boshof	62.48	209	P	P	11 56 48.1	-0.7	
	comp=Z,4.6nm,0.9s,baz=41,slow=2.1,SNR=3.5							
BOSA	Boshof	62.48	209	P	P	11 56 46.0	-2.8	
ILAR	Eielson Array	86.34	9	P	P	11 59 06.2	-0.9	
	comp=Z,0.6nm,0.6s,baz=325,slow=4.7,SNR=11							
ILAR	Eielson Array	86.34	9	P	P	11 59 04.5	-2.6	
WRA	Warramunga Arr	90.93	112	P	P	11 59 28.5	-1.1	
	comp=Z,0.2nm,0.5s,baz=316,slow=4.0,SNR=4.5							
WRAB	Tennant Creek	90.94	112	P	P	11 59 27.5	-2.1	
ASAR	Alice Springs	92.38	115	P	P	11 59 35.1	-1.2	
	comp=Z,0.3nm,0.7s,baz=310,slow=4.3,SNR=2.4							

*IDC **16** 12:14:53.0±2.6, 18.00S×174.59W, h0km, mb4.2/7, mb1 4.3/7, mb1mx3.9/44, mbtmp4.2/7, Error ellipse: s-maj=56.0km s-min=31.0km az=56.0*

ISC 16 12:15:08.8±2.5, 18.2S±0.3×174.7W±0.3, h132km, n11, σ1$9^{76}$/8, mb4.2/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
URZ	Urewera	21.29	198	P		P	P	12 19 41.7	-3.1
	4.9nm,0.5s,baz=278,slow=4.3,SNR=9.8								
RPZ	Rata Peaks	28.20	202	P		P	P	12 20 50.4	+1.5
	5.7nm,0.7s,baz=29,slow=19,SNR=1.3								
CTA	Charters Tower	36.92	261	P		P	P	12 22 05.7	+0.5
	3.8nm,0.7s,baz=97,slow=9.3,SNR=11								
WRA	Warramunga Arr	48.09	259	P		P	P	12 23 35.0	-0.4
	0.7nm,0.3s,baz=97,slow=7.5,SNR=32								
ASAR	Alice Springs	48.16	254	P		P	P	12 23 35.4	-0.6
	5.5nm,0.7s,baz=88,slow=8.7,SNR=55								
FITZ	Fitzroy Crossi	56.50	260	P		P	P	12 24 38.0	+0.4
	0.4nm,0.4s,baz=96,slow=6.9,SNR=5.9								
VNDA	Vanda	60.54	186	P		P	P	12 25 05.5	+0.9
	0.6nm,0.7s,baz=6.7,slow=7.1,SNR=7.0								
H03S2	Juan Fernandez	84.69	124	T		T	T	14 00 28.3	
	baz=250,slow=75,SNR=5.8								
H03S1	Juan Fernandez	84.71	124	T		T	T	14 00 14.6	
	baz=250,slow=75,SNR=5.1								
H03S3	Juan Fernandez	84.71	124	T		T		14 00 26.6	
	baz=250,slow=75,SNR=4.4								
BRTR	Keskin Array B	147.43	317	PKPbc		PKiKP		12 34 38.3	-1.4
	0.4nm,0.6s,baz=0.0,slow=2.9,SNR=2.1								

*IDC **16** 12:16:27.3±2.1, 1.85N×126.51E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/38, mbtmp3.6/3, Error ellipse: s-maj=171.7km s-min=25.7km az=66.0*

*DJA **16** 12:16:33.2±0.3, 2.7N±3.3×12.7E±7.1, h10km, M3.6/9, MLv3.6/9*

ISC 16 12:16:34.6±1.2, 1.67N±0.08×126.70E±0.07, h47km, n9, σ1$9^{51}$/11, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
TNTI	Ternate	1.12	143	P			Pn	12 16 54.1	+0.2
TNTI				S			Sn	12 17 09.6	+1.5
SGSI	Sangihe	2.32	330	P			Pn	12 17 11.8	+1.5
KMSI	Cibinong	2.93	248	P			Pn	12 17 18.8	+0.1
KMSI				S			Sn	12 17 53.6	+0.8
GTOI	Gorontalo	3.83	254	P			Pn	12 17 32.1	+1.0
LUWI	Luwuk	4.77	236	P			Pn	12 17 43.9	-0.1
MRSI	Marisa	4.91	256	P			Pn	12 17 46.7	+0.8
WRA	Warramunga Arr	22.75	161	P			P	12 21 32.3	-0.8
	1.1nm,0.5s,baz=339,slow=11,SNR=13								
ASAR	Alice Springs	26.14	165	P			P	12 22 06.6	+1.9
	0.4nm,0.4s,baz=349,slow=14,SNR=9.9								
MKAR	Makanchi Array	59.23	326	P			P	12 26 28.5	-2.6
	0.3nm,0.4s,baz=122,slow=7.9,SNR=5.0								

*IDC **16** 12:17:50.6±1.3, 23.93S×66.77W, h188km±17km, mb3.3/1, mb1 3.3/7, mb1mx3.1/37, mbtmp3.8/7, Error ellipse: s-maj=21.9km s-min=20.8km az=22.0*

*GUC **16** 12:17:52.4±0.7, 23.97S×67.31W, h236km±12km, ML4.1*

ISC 16 12:17:51.1±1.1, 23.98S±0.05×67.2W±0.1, h223km±15km, n23, σ1$9^{03}$/35, 10C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
LVC	Limon Verde	2.08	310	P			Pn	12 18 33.2	+0.6
	1.8nm,0.3s,baz=154,slow=5.9,SNR=12								
LVC				S			S	12 19 05.5	+0.6
	30nm,0.3s,baz=253,slow=22,SNR=11								
LVC	Limon Verde	2.08	310	*e*P			Pn	12 18 33.2	+0.6
PB15	IPOC Station P	2.22	290	⇑*i*P			Pn	12 18 34.9	+1.0
PB15				*i* S			S	12 19 07.5	+0.4
GO02	Mina Guanaco	2.48	241	⇑*i*P			Pn	12 18 37.1	+0.6
GO02				*i* S			S	12 19 12.4	+0.4
GO02				IAML				12 19 13.0	
	comp=N,900nm,0.2s								
PB06	IPOC Station P	2.52	300	⇑*i*P			Pn	12 18 38.0	+1.0
PB06				*i* S			S	12 19 12.3	-0.3
PB06				IAML				12 19 14.4	
	comp=E,437nm,0.4s								
PB09	IPOC Station P	2.88	319	⇑*i*P			Pn	12 18 41.9	+1.0
PB09				*i* S			S	12 19 19.6	0.0
PB09				IAML				12 19 21.3	
	comp=N,201nm,0.6s								
PB05	IPOC Station P	2.98	291	⇑*i*P			Pn	12 18 42.8	+0.9
PB05				*i* S			S	12 19 20.3	-1.2
PB05				IAML				12 19 25.5	
	comp=N,179nm,0.4s								
PB14	IPOC Station P	3.00	257	⇑*i*P			Pn	12 18 43.0	+0.7
PB14				*i* S			S	12 19 21.8	-0.5
PB14				IAML				12 19 24.4	
	comp=E,98nm,0.7s								
PB03	IPOC Station P	3.04	309	⇑*i*P			Pn	12 18 43.4	+0.7
PB03				*i* S			S	12 19 22.1	-0.8
PB03				IAML				12 19 24.4	
	comp=E,256nm,0.3s								
PB10	IPOC Station P	3.11	278	⇑*i*P			Pn	12 18 44.6	+1.4
PB10				*i* S			S	12 19 23.7	-0.4
PB10				IAML				12 19 29.1	
	comp=E,154nm,0.4s								
PB04	IPOC Station P	3.17	300	*e*P			Pn	12 18 45.0	+0.9
PB04				*e*S			S	12 19 25.5	-0.1
PB04				IAML				12 19 27.5	
	comp=N,375nm,0.4s								
AC02	Maricunga	3.34	211	⇑*e*P			Pn	12 18 46.5	+0.1
PB07	IPOC Station P	3.34	312	⇑*i*P			Pn	12 18 46.8	+0.6
PB07				*i* S			S	12 19 28.1	-1.1
PB01	IPOC Station P	3.61	324	*e*P			Pn	12 18 49.4	+0.1
PB01				*i* S			S	12 19 33.2	-1.5
AC01	Pan de Azucar	3.77	234	*e*P			Pn	12 18 50.5	-0.5
GO03	Copiap	4.53	217	*e*P			Pn	12 18 59.0	-1.2
GO03				*i* S			S	12 19 52.1	-2.6
LPAZ	La Paz	7.70	353	P			Pn	12 19 41.5	+0.3
	comp=N,0.2nm,0.3s,baz=99,slow=4.4,SNR=9.3								
LPAZ				S			S	12 21 06.7	-2.3
	comp=N,0.1nm,0.3s,baz=8.8,slow=21,SNR=2.1								
CPUP	Villa Florida	9.24	107	P			Pn	12 19 55.2	-5.1
	comp=N,0.2nm,0.3s,baz=278,slow=11,SNR=5.2								
SIV	San Ignacio	9.81	37	P			Pn	12 20 03.9	-3.8
	comp=N,0.7nm,0.3s,baz=242,slow=8.2,SNR=5.9								
PLCA	Paso Flores	16.94	189	P			Pn	12 21 36.0	+0.5
	comp=N,0.2nm,0.3s,baz=357,slow=11,SNR=6.8								
BDFB	Brasilia	19.84	69	P			P	12 22 03.9	-1.6
	comp=N,0.9nm,0.3s,baz=247,slow=9.5,SNR=13								
TORD	Torodi Ar. Bea	76.73	69	P			P	12 29 18.9	+0.7
	comp=N,0.5nm,0.5s,baz=253,slow=5.8,SNR=5.8								
MKAR	Makanchi Array	146.62	39	PKPbc			PKiKP	12 37 09.1	+0.3
	comp=N,0.7nm,0.6s,baz=336,slow=3.2,SNR=1.9								

*IDC **16** 12:19:45.8±0.7, 15.56S×173.67W, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.1/40, mbtmp4.1/14, ML3.4/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/25, Error ellipse: s-maj=30.0km s-min=16.5km az=134.0*

*NEIC **16** 12:19:54.2±1.8, 15.68S±0.07×173.5W±0.1, h80km±8km, mb4.5/14, Error ellipse: s-maj=15.9km s-min=10.7km az=90.0*

ISC 16 12:19:51.6±0.5, 15.65S±0.07×173.64W±0.07, h42km, n44, σ1$9^{11}$/37, mb4.4/19, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
AFI	Afiamalu	2.50	46				Pn	12 20 31.9	+2.1
AFI				Sn			Sn	12 20 57.7	-1.4
NIUE	Niue	4.91	134				Pn	12 21 05.5	+2.6
NIUE				Sn			Sn	12 21 57.1	-1.4
RAR	Rarotonga	14.27	115	Pn			Pn	12 23 10.0	-1.1
DZM	Mont Dzumac	19.89	248	P			P	12 24 20.3	+0.6
	0.1nm,0.3s,baz=78,slow=16,SNR=1.8								
DZM	Mont Dzumac	19.89	248	P			P	12 24 20.6	+0.8
OUZ	Omahuta	22.60	208	P			P	12 24 46.2	-2.6
URZ	Urewera	23.95	198	P			P	12 25 02.2	+0.2
	3.0nm,0.3s,baz=309,slow=4.0,SNR=7.3								
URZ	Urewera	23.95	198	P			P	12 25 01.4	-0.6
URZ				IAmb		IAmb		12 25 13.7	
	comp=Z,32nm,1.2s								
BKZ	Black Stump Fm	24.97	198	P			P	12 25 11.6	+0.3
BKZ				IAmb		IAmb		12 25 37.0	
	comp=Z,20nm,1.3s								
TUWZ	Tuamarina	27.84	200	P			P	12 25 35.6	-1.5
H11S2	WAKE ISLAND Hy	39.06	330	T			T	13 08 17.3	
	baz=146,slow=76,SNR=11								
H11S3	WAKE ISLAND Hy	39.08	330	T			T	13 08 14.4	
	baz=146,slow=76,SNR=10								
H11S1	WAKE ISLAND Hy	39.08	330	T			T	13 08 18.4	
	baz=146,slow=76,SNR=10.0								
H11N3	WAKE ISLAND Hy	40.02	331	T			T	13 10 40.4	
	baz=150								
H11N1	WAKE ISLAND Hy	40.02	331	T			T	13 11 03.9	
	baz=150								
H11N2	WAKE ISLAND Hy	40.03	331	T			T	13 10 17.8	
	baz=150								
STKA	Stephens Creek	43.71	240	P			P	12 27 52.8	-0.1
	comp=Z,2.0nm,0.6s,baz=90,slow=5.8,SNR=4.6								
BBOO	Buckleboo	48.49	240	P			P	12 28 30.3	-0.1
WR0	Warramunga Arr	49.37	257	P			P	12 28 37.2	-0.2
WR0				IAmb		IAmb		12 28 38.1	
	comp=Z,5.9nm,1.4s								
WB0	Warramunga Arr	49.52	257	P			P	12 28 39.0	+0.5
WB0				IAmb		IAmb		12 29 02.1	
	comp=Z,4.2nm,1.3s								
WC3	Warramunga Arr	49.53	257	P			P	12 28 38.1	-0.5
WC3				IAmb		IAmb		12 28 39.3	
	comp=Z,13nm,1.5s								
WB2	Warramunga Arr	49.55	257	P			P	12 28 37.3	-1.4
WB2				IAmb		IAmb		12 28 39.3	
	comp=Z,4.6nm,0.9s								
WRAB	Tennant Creek	49.55	257	P			P	12 28 38.2	-0.6
WRA	Warramunga Arr	49.56	257	P			P	12 28 38.5	-0.4
	comp=Z,1.1nm,0.5s,baz=93,slow=6.9,SNR=37								
WRA	Warramunga Arr	49.56	257	P			P	12 28 37.8	-1.1
AS31	Alice Springs	49.81	252	P			P	12 28 40.8	0.0
AS31				IAmb		IAmb		12 28 42.1	
	comp=Z,2.5nm,0.7s								
ASAR	Alice Springs	49.81	252	P			P	12 28 40.8	0.0
	comp=Z,9.0nm,0.7s,baz=86,slow=8.4,SNR=134								
ASAR				LR		LR		12 50 37.6	
	comp=Z,68nm,18.6s,baz=6.5,slow=37								
ASAR	Alice Springs	49.81	252	P			P	12 28 40.4	-0.4
SIJI	Sorong	56.27	280	P			P	12 29 27.9	-0.5
	comp=Z,7.4nm,0.9s,baz=129,slow=4.6,SNR=3.9								
VNDA	Vanda	63.10	186	P			P	12 30 16.1	+1.7
	comp=Z,0.5nm,0.7s,baz=21,slow=7.1,SNR=4.1								
PETK	Petropavlovsk-	72.80	342	P			P	12 31 15.9	+0.3
	comp=Z,8.4nm,1.0s,baz=279,slow=10,SNR=4.5								
QSPA	South Pole Qui	74.39	180	P			P	12 31 24.0	-1.0
NVAR	Mina Array Bea	74.67	42	P			P	12 31 28.2	+1.1
	comp=Z,1.2nm,0.9s,baz=232,slow=9.6,SNR=6.3								
F10A	Beach Ranch, E	79.66	36	P			P	12 31 53.9	-0.9
TXAR	Lajitas Array	80.94	56	P			P	12 32 01.9	-0.2
	comp=Z,1.0nm,1.0s,baz=212,slow=4.4,SNR=4.9								
TXAR	Lajitas Array	80.94	56	P			P	12 32 00.5	-1.6
PDAR	Pinedale Array	82.61	42	P			P	12 32 10.6	-0.2
	comp=Z,0.4nm,0.7s,baz=202,slow=3.2,SNR=3.7								
ILAR	Eielson Array	82.74	11	P			P	12 32 10.6	0.0
	comp=Z,0.5nm,0.6s,baz=226,slow=6.5,SNR=8.0								
H03N2	Juan Fernandez	85.36	123	T			T	14 09 25.4	
	baz=268,slow=73,SNR=7.8								
H03N3	Juan Fernandez	85.36	123	T			T	14 09 31.3	
	baz=268,slow=73,SNR=8.0								
H03N1	Juan Fernandez	85.37	123	T			T	14 09 24.2	
	baz=268,slow=73,SNR=10								
MAW	Mawson	87.48	199	P			P	12 32 34.9	+0.5
	comp=Z,1.2nm,0.6s,baz=120,slow=9.3,SNR=2.0								
INK	Inuvik	88.57	14	P			P	12 32 39.0	-0.3
	comp=Z,1.5nm,0.6s,baz=246,slow=10.0,SNR=4.1								
BRTR	Keskin Array B	146.21	321	PKPbc			PKPdf	12 39 28.1	+1.2
	comp=Z,0.7nm,0.6s,baz=52,slow=2.4,SNR=2.9								

*NEIC **16** 12:25:57.8±1.4, 19.68N±0.07×145.3E±0.1, h136km±6km, mb4.6/100, Error ellipse: s-maj=14.5km s-min=9.5km az=80.0*

*IDC **16** 12:26:00.4±2.6, 19.69N×145.37E, h162km±23km, mb4.1/24, mb1 4.2/26, mb1mx4.0/56, mbtmp4.5/26, Error ellipse: s-maj=14.3km s-min=8.9km az=91.0*

ISC 16 12:25:58.7±0.3, 19.66N±0.04×145.36E±0.07, h147km, n160, σ1$9^{00}$/172, mb4.5/73, 1C, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
GUMO	Guam	6.06	185	P			Pn	12 27 26.6	+0.4
	8.0nm,0.3s,baz=181,slow=6.5,SNR=7.9								
GUMO	Guam	6.06	185				Pn	12 27 25.3	-0.9
GUMO						Sn	Sn	12 28 33.6	-1.1
JCJ	Chichijima	7.95	339			Pn	Pn	12 27 49.7	-1.7
JCJ						Sn	Sn	12 29 17.4	-2.6
JYT	Yasato	17.11	346	P			P	12 29 47.9	-0.4
JYT				IAmb		IAmb		12 29 49.7	
	comp=Z,39nm,1.2s								
INU	Inuyama	17.27	336	P			P	12 29 49.8	-0.3
JMN	Monobe	17.34	326				P	12 29 50.8	-0.2
JMN				IAmb		IAmb		12 29 58.6	
	comp=Z,36nm,1.4s								
JGF	Kuroka	17.37	338	P			P	12 29 50.1	-1.1
JGF				IAm

GTA LR LR
comp=E,76nm,16.7s
GTA LR LR
comp=Z,120nm,18.9s
YAK Yakutsk 43.72 349 P **P** **12 33 48.8 -0.1**
CM09 Chiang Mai Arr 43.74 276 P **P** **12 33 52.4 +2.6**
comp=Z,6.2nm,0.5s
CM04 Chiang Mai Arr 43.76 276 P **P** **12 33 52.4 +2.5**
comp=Z,67nmcomp=Z,8.5nm,0.6s
CM02 Chiang Mai Arr 43.78 276 P **P** **12 33 52.0 +1.9**
comp=Z,57nmcomp=Z,6.0nm,0.9s
CM31 Chiang Mai Arr 43.78 276 P **P** **12 33 52.8 +2.7**
comp=Z,244nm,0.5s
CM31 Chiang Mai Arr 43.78 276 P **P** **12 33 50.9 +0.8**
CM31 IAmb IAmb 12 33 53.2
comp=Z,5.9nm,0.6s
CMAR Chiang Mai Arr 43.78 276 P **P** **12 33 51.8 +1.7**
comp=Z,2.4nm,0.5s,baz=83,slow=5.2,SNR=8.1
CMAR Chiang Mai Arr 43.78 276 P **P** **12 33 50.4 +0.3**
CM05 Chiang Mai Arr 43.79 276 P **P** **12 33 52.5 +2.3**
comp=Z,79nmcomp=Z,7.6nm,0.5s
CM13 Chiang Mai Arr 43.82 276 P **P** **12 33 52.6 +2.2**
UTHA Uthaitani 43.85 272 P **P** **12 33 53.3 +2.6**
comp=Z,16nm,0.8s
MYKOM Kota Tinggi 44.30 252 P **P** **12 33 53.4 -0.8**
AS31 Alice Springs 44.49 195 P **P** **12 33 56.6 +1.0**
ASAR Alice Springs 44.49 195 P **P** **12 33 55.9 +0.3**
comp=Z,1.1nm,0.6s,baz=18,slow=7.2,SNR=25
ASAR PcP **PcP** **12 35 35.9 -0.6**
comp=Z,0.6nm,0.6s,baz=31,slow=3.0,SNR=7.3
ASAR Alice Springs 44.49 195 P **P** **12 33 55.3 -0.3**
IPM Ipoh 45.73 257 P **P** **12 34 05.4 -0.2**
IPM IAmb IAmb 12 34 08.6
comp=Z,21nm,0.9s
KULM Kulim 45.77 258 P **P** **12 34 06.1 +0.3**
KULM IAmb IAmb 12 34 09.7
comp=Z,26nm,1.3s
DZM Mont Dzumac 46.32 153 P **P** **12 34 09.8 -0.2**
KNTN Kanton 47.68 113 P **P** **12 34 20.1 -0.6**
PSAD2 Pilbara Seismi 47.96 213 P **P** **12 34 23.3 +0.6**
PSAD2 IAmb IAmb 12 34 24.2
comp=Z,23nm,1.3s
PSA00 Pilbara Seismi 47.98 213 P **P** **12 34 23.3 +0.4**
PSA00 IAmb IAmb 12 34 25.0
comp=Z,29nm,1.5s
PSAC3 Pilbara Seismi 48.03 213 P **P** **12 34 22.7 -0.5**
PSAC3 IAmb IAmb 12 34 24.5
comp=Z,11nm,1.0s
RPSI Rantau Prapat 48.37 256 P **P** **12 34 25.0 -0.9**
RPSI IAmb IAmb 12 34 28.6
comp=Z,13nm,0.9s
GSI Gunungsitoli 50.16 255 P **P** **12 34 40.0 +0.4**
STKA Stephens Creek 51.37 184 P **P** **12 34 48.5 +0.2**
comp=Z,1.2nm,0.7s,baz=12,slow=11,SNR=3.0
STKA Stephens Creek 51.37 184 P **P** **12 34 48.5 +0.2**
GIRL Giralia 51.88 217 P **P** **12 34 51.9 -0.4**
FORT Forrest 52.84 199 P **P** **12 34 58.1 -1.0**
FORT IAmb IAmb 12 34 58.5
comp=Z,16nm,1.1s
TIXI Tiksi 52.88 354 P **P** **12 34 59.3 +0.4**
WMQ Urumqi 53.44 310 *eP* **P** **12 35 05.8 +2.2**
WMQ Urumqi 53.44 310 P **P** **12 35 04.5 +0.8**
CNBA Chernabura Isl 54.18 36 P **P** **12 35 08.5 -0.2**
ZAA0 Zalesovo Array 57.06 322 P **P** **12 35 29.2 -0.1**
ZALV Zalesovo Beam 57.06 322 P **P** **12 35 29.5 +0.3**
comp=Z,9.7nm,0.6s,baz=102,slow=7.5,SNR=38
ZALV PcP **PcP** **12 36 21.3 -1.2**
comp=Z,1.6nm,0.6s,baz=111,slow=3.7,SNR=4.0
MK31 Makanchi Array 57.57 313 P **P** **12 35 33.2 +0.2**
MKAR Makanchi Array 57.57 313 P **P** **12 35 33.5 +0.5**
comp=Z,12nm,0.6s,baz=91,slow=9.0,SNR=133
MKAR PcP **PcP** **12 36 23.9 -0.9**
comp=Z,2.0nm,0.6s,baz=69,slow=5.0,SNR=5.2
MKAR Makanchi Array 57.57 313 P **P** **12 35 32.9 -0.1**
MAKZ Makanchi 57.78 313 P **P** **12 35 34.0 -0.5**
PRZ Przheval'sk 60.14 308 P **P** **12 35 51.8 +0.8**
KURK Kurchatov 60.34 318 P **P** **12 35 51.6 -0.3**
CAST Castle Rocks 60.39 27 P **P** **12 35 53.2 +1.1**
CAST IAmb IAmb 12 35 55.4
comp=Z,9.0nm,1.0s
IMAR Indian Mountai 60.47 24 P **P** **12 35 53.1 +0.4**
NRIK Noril'sk 60.60 340 P **P** **12 35 53.3 -0.1**
comp=Z,3.9nm,0.6s,baz=103,slow=11,SNR=4.4
BPAW Bear Paw Mtn. 61.04 27 P **P** **12 35 57.1 +0.6**
BPAW IAmb IAmb 12 36 03.3
comp=Z,5.2nm,1.0s
A21K Barrow 61.48 18 P **P** **12 35 59.5 +0.2**
A21K IAmb IAmb 12 36 01.4
comp=Z,8.0nm,0.9s
KNK Knik Glacier 61.55 30 P **P** **12 36 01.2 +1.2**
RND Reindeer 61.79 28 P **P** **12 36 02.2 +0.5**
RND IAmb IAmb 12 36 14.5
comp=Z,6.4nm,1.1s
BOOM Boomskoye usch 61.96 308 P **P** **12 36 04.1 +0.8**
ILAR Eielson Array 62.93 26 P **P** **12 36 08.4 -0.7**
comp=Z,1.1nm,0.7s,baz=250,slow=5.0,SNR=16
ILAR PcP **pP** **12 36 43.3 +0.1**
comp=Z,1.2nm,0.8s,baz=252,slow=5.4,SNR=6.1
ILAR Eielson Array 62.93 26 P **P** **12 36 08.3 -0.8**
AAK Ala-Archa 63.02 309 P **P** **12 36 10.2 -0.1**
BMAR Burnt Mountain 64.36 24 P **P** **12 36 19.1 +0.6**
NIL Nilore 64.79 299 P **P** **12 36 21.2 -0.6**
NIL IAmb IAmb 12 36 23.9
comp=Z,8.2nm,0.7s
BRVK Borovoye 65.59 320 P **P** **12 36 26.6 0.0**
KK31 Karatay Array 65.91 309 P **P** **12 36 28.8 -0.1**
KK31 IAmb IAmb 12 36 29.9
comp=Z,6.2nm,0.6s
KKAR Karatay Array 65.91 309 P **P** **12 36 28.8 -0.1**
KKAR IAmb IAmb 12 36 29.9
comp=Z,6.2nm,0.6s
CHGR Chuyangaron 67.41 305 P **P** **12 36 38.6 0.0**
INK Inuvik 68.61 23 P **P** **12 36 45.5 +0.1**
comp=Z,3.7nm,0.8s,baz=246,slow=11,SNR=6.0
INK Inuvik 68.61 23 P **P** **12 36 45.9 +0.5**
INK IAmb IAmb 12 36 46.7
comp=Z,7.2nm,1.1s
ARU Arti 72.10 324 P **P** **12 37 05.9 -0.9**
ARU IAmb IAmb 12 37 07.3
comp=Z,8.7nm,0.7s
ABKAR Akbulak array 72.42 317 P **P** **12 37 08.3 -0.6**
ABKAR IAmb IAmb 12 37 09.2
comp=Z,9.8nm,0.6s
ABKAR Akbulak array 72.42 317 P **P** **12 37 08.5 -0.3**
GEYT Alibeck 76.08 306 P **P** **12 37 30.6 +0.3**
comp=Z,3.3nm,0.8s,baz=128,slow=2.4,SNR=4.8
EUNU Eureka 76.82 8 P **P** **12 37 34.5 +0.7**
EUNU IAmb IAmb 12 37 35.1
comp=Z,6.6nm,0.7s
YKA Yellowknife Ar 77.29 28 P **P** **12 37 36.9 +0.3**
comp=Z,6.6nm,0.7s,baz=289,slow=4.9,SNR=20
E07A Sunnyside 79.17 44 P **P** **12 37 48.5 +1.2**
PINE Pine Mountain 79.24 47 P **P** **12 37 49.8 +1.8**
PINE IAmb IAmb 12 37 50.4
comp=Z,14nm,0.8s
HAWA Hanford 79.44 45 P **P** **12 37 49.2 +0.5**
K05A Summer Lake 79.59 48 P **P** **12 37 50.2 +0.4**
K05A IAmb IAmb 12 37 52.2
comp=Z,9.0nm,0.9s
E09A Wood Farm, Sta 80.31 44 P **P** **12 37 54.6 +1.2**
E09A IAmb IAmb 12 37 55.0
comp=Z,4.3nm,0.6s
NEW Newport 80.42 42 P **P** **12 37 55.4 +1.4**
BEKR Beckworth 80.83 51 P **P** **12 37 56.0 -0.6**
BEKR IAmb IAmb 12 37 58.1
comp=Z,6.3nm,0.7s
J08A Circle Bar Ran 81.08 47 P **P** **12 37 57.3 -0.4**
WVOR Wild Horse Val 81.26 48 P **P** **12 37 59.2 +0.5**
CMB Columbia Colle 81.37 53 P **P** **12 37 59.8 +0.5**
BMO Blue Mountains 81.40 46 P **P** **12 38 00.4 +1.0**
ARCES ARCESS Array B 81.48 342 P **P** **12 37 59.1 -0.1**
comp=Z,3.7nm,0.6s,baz=71,slow=7.7,SNR=22
PNTR Pine Nut 81.63 52 P **P** **12 38 02.6 +1.7**
PNTR IAmb IAmb 12 38 03.9
comp=Z,7.2nm,0.7s
WAKR Walker 81.93 52 P **P** **12 38 03.7 +1.3**
OMMB Old Mammoth Mi 82.55 53 P **P** **12 38 06.7 +0.9**
RYN Ryan 82.57 52 P **P** **12 38 06.5 +0.9**
RYN IAmb IAmb 12 38 07.6
comp=Z,6.7nm,1.0s
LHV Little Huntoon 82.71 52 P **P** **12 38 07.0 +0.9**
LHV IAmb IAmb 12 38 08.7
comp=Z,5.2nm,0.8s
KVN Kaiserville 82.74 51 P **P** **12 38 07.0 +0.3**
KVN IAmb IAmb 12 38 08.4
comp=Z,6.4nm,1.0s
NVAR Mina Array Bea 82.80 52 P **P** **12 38 08.1 +1.1**
comp=Z,6.4nm,0.7s,baz=266,slow=5.8,SNR=49
NVAR Mina Array Bea 82.80 52 P **P** **12 38 07.7 +0.8**
MFID Camas Ranch 82.88 47 P **P** **12 38 07.7 +0.5**
NV11 Mina Array Sit 82.91 52 P **P** **12 38 08.5 +1.1**
NV11 IAmb IAmb 12 38 09.4
comp=Z,4.8nm,0.8s
TPH Tonopah 83.72 52 P **P** **12 38 12.4 +0.8**
ELK Elko 84.23 49 P **P** **12 38 15.2 +1.0**
ELK IAmb IAmb 12 38 16.0
comp=Z,5.3nm,0.9s
R11A Troy Canyon, C 84.83 51 P **P** **12 38 18.3 +1.0**
TPNV Topopah Spring 84.83 53 P **P** **12 38 18.2 +1.0**
TPNV IAmb IAmb 12 38 18.9
comp=Z,6.3nm,0.7s
BOZ Bozeman (W) 84.88 43 P **P** **12 38 18.3 +1.0**
KBZ Khabaz 85.24 315 P **P** **12 38 18.0 -0.8**
comp=Z,2.1nm,0.6s,baz=56,slow=24,SNR=4.7
YHL Hebgen Lake 85.46 44 P **P** **12 38 21.0 +0.6**
YHB Horse Butte 85.49 44 P **P** **12 38 19.8 -0.7**
SPR3 Spring Creek 3 85.51 50 P **P** **12 38 20.8 0.0**
YMR Madison River 85.68 44 P **P** **12 38 21.7 +0.3**
YHH Holmes Hill 85.70 44 P **P** **12 38 22.5 +0.9**
BGU Big Grassy Mou 85.72 48 P **P** **12 38 21.7 +0.2**
FINES FINESS Array B 85.88 335 P **P** **12 38 20.1 -1.5**
comp=Z,3.5nm,0.5s,baz=74,slow=4.5,SNR=45
IMW Indian Meadow 86.00 45 P **P** **12 38 23.4 +0.4**
IMW IAmb IAmb 12 38 25.3
comp=Z,4.3nm,0.8s
DUG Dugway, Tooele 86.15 49 P **P** **12 38 24.5 +0.8**
DUG IAmb IAmb 12 38 25.3
comp=Z,5.8nm,0.6s
KNB Kanab 87.36 52 P **P** **12 38 31.0 +1.3**
PDAR Pinedale Array 87.38 45 P **P** **12 38 29.8 +0.1**
comp=Z,0.4nm,0.6s,baz=214,slow=1.0,SNR=5.3
Y14A Wickenburg 88.40 55 P **P** **12 38 35.2 +0.7**
Y14A IAmb IAmb 12 38 36.4
comp=Z,6.0nm,0.8s
SCO Scoresbysund 89.65 356 P **P** **12 38 39.9 +0.5**
PV11 David Mesa, Pa 89.72 49 P **P** **12 38 40.9 +0.2**
PV11 IAmb IAmb 12 38 44.1
comp=Z,6.0nm,0.7s
BRTR Keskin Array B 93.21 314 P **P** **12 38 55.2 -1.7**
comp=Z,0.8nm,0.8s,baz=122,slow=4.5,SNR=4.2
TORD Torodi Ar. Bea 131.60 309 PKP **PKPdf** **12 44 53.5 -1.4**
comp=Z,0.5nm,0.8s,baz=19,slow=1.6,SNR=4.7
TORD Torodi Ar. Bea 131.60 309 **PKPdf** **12 44 53.9 -1.0**
PLCA Paso Flores 142.89 132 PKP **PKPdf** **12 45 13.2 -1.9**
comp=Z,1.3nm,0.7s,baz=243,slow=6.8,SNR=4.1
LVC Limon Verde 147.94 101 PKPbc **PKPbc** **12 45 28.0 +0.2**
comp=Z,12nm,0.6s,baz=301,slow=1.3,SNR=14
LPAZ La Paz 148.00 89 PKPbc **PKPbc** **12 45 29.0 +0.6**
comp=Z,6.7nm,0.5s,baz=326,slow=2.2,SNR=31
SIV San Ignacio 154.59 86 PKPbc **PKPbc** **12 45 42.4 -0.6**
comp=Z,0.5nm,0.4s,baz=276,slow=9.2,SNR=3.0
CPUP Villa Florida 158.10 112 PKPab **PKPab** **12 46 12.1 -1.0**
comp=Z,1.1nm,0.7s,baz=246,slow=6.4,SNR=3.4
CPUP Villa Florida 158.10 112 **PKPab** **12 46 12.4 -0.7**

IDC ***16*** *12:31:12.8s 0.4, 1.7°N× 126.4°E, h0km, mb4.4/20, mb1 4.5/21, mb1mx4.4/40, mbtmp4.4/21, ML4.2/1, MS3.5/16, Ms1 3.5/16, ms1mx3.3/35, Error ellipse: s-maj=24.9km s-min=9.7km az=76.0*
NEIC ***16*** *12:31:17.8s 1.7, 1.7°N× 0.0°E× 0.6°, h35km± 1km, mb4.8/57, Error ellipse: s-maj=13.6km s-min=9.3km az=35.0*
DJA ***16*** *12:31:18.6s 0.9, 2.1°N× 2.1°E× 7.1°E, h29km± 8km, M4.5/23, mb4.6/23, mbB5.1/10, MLv4.6/19, Mw(mB)4.5/10*
KLM ***16*** *12:31:19.0, 1.6°N× 126.5°E, h54km, mb4.8*
MAN ***16*** *12:31:22.9, 2.2°N× 126.0°E, h17km, mb5.5, ML4.5, MS4.7*
ISC 16 12:31:13.7± 1.5, 1.8°N± 0.0°× 126.6°E± 0.0°, h5km± 9km, n156, σ1± 51/143, mb4.7/57, MS3.6/16, 1C-4D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.32**	**145**	P		**Pg**	**12 31 39.7**	**+0.6**
TNTI	**Ternate**	**1.32**	**145**			**Pg**	**12 31 39.9**	**+0.8**
SGSI	**Sangihe**	**2.11**	**329**		P	**Pb**	**12 31 51.1**	**-1.3**
SGSI					S	**Sb**	**12 32 18.0**	**-0.9**
KMSI	**Cibinong**	**2.92**	**244**		P	**Pn**	**12 32 01.2**	**+0.3**
GTOI	**Gorontalo**	**3.80**	**251**		P	**Pn**	**12 32 13.5**	**+0.5**
SANI	**Sanana**	**3.94**	**189**		P	**Pn**	**12 32 14.7**	**-0.2**
LUWI	**Luwuk**	**4.80**	**233**		P	**Pn**	**12 32 27.1**	**+0.3**
LUWI	**Luwuk**	**4.80**	**233**			**Pn**	**12 32 28.0**	**+1.3**
MRSI	**Marisa**	**4.87**	**254**		P	**Pn**	**12 32 28.0**	**+0.3**
NLAI	**Namlea**	**5.09**	**174**		P	**Pn**	**12 32 32.5**	**+1.7**
	0.4nm4μm53nm,0.6s							
KCP	**Kidapawan**	**5.33**	**344**	*i*	*P*	Pb	12 32 40.9	-6.5
KCP				*i*	S	**Sb**	**12 33 45.8**	**-6.0**
SIJI	**Sorong**	**5.39**	**120**		Pn	Pn	12 32 39.1	+4.2
	2.0nm,0.3s,baz=305,slow=22,SNR=5.9							
SIJI					LR	LR	12 35 12.4	
	comp=Z,1μm,20.3s,baz=352,slow=44							
MSAI	**Masohi**	**5.67**	**156**		P	**Pn**	**12 32 39.4**	**+0.7**
	0.1nm1μm21nm,0.9s							
APSI	**Ampana**	**5.68**	**241**		P	Pn	12 32 42.7	+3.9
	0.9nm3μm261nm,1.4s							
CGP	**Cagayan de Oro**	**6.82**	**344**	*i*	*eP*	Pb	12 33 05.1	-7.6
MPSI	**Mapaga**	**6.88**	**257**		P	**Pn**	**12 32 54.8**	**-0.5**
	0.2nm783nm50nm,1.0s							
FAKI	**Fak Fak**	**7.37**	**130**		P	Pn	12 33 06.9	+4.8
	0.1nm32nm,1.3s							
FAKI	**Fak Fak**	**7.37**	**130**		Pn	**Pn**	**12 33 05.0**	**+2.9**
TTSI	**Tana Toraja**	**8.36**	**234**		P	Pn	12 33 18.9	+3.2
	0.2nm632nm44nm,0.7s							
MYLDM	**Lahad Datu**	**8.74**	**292**		Pn	**Pn**	**12 33 22.6**	**+1.8**
SPSI	**Sidrap Palu**	**8.96**	**230**		P	**Pn**	**12 33 24.9**	**+1.0**
	44nm,0.6s							
BNSI	**Bone**	**9.00**	**226**		P	**Pn**	**12 33 25.8**	**+1.4**
	36nm,0.6s							
BKSI	**Bulukumba**	**9.64**	**222**		P	**Pn**	**12 33 34.2**	**+0.9**
	36nm,0.8s							
KAPI	**Kappang**	**9.68**	**225**		Pn	**Pn**	**12 33 35.9**	**+2.2**
	6.9nm,0.3s,baz=341,slow=5.4,SNR=6.4							
KAPI	**Kappang**	**9.68**	**225**		Pn	Pn	12 33 36.9	+3.2
BAKI	**Biak**	**9.97**	**108**		P	Pn	12 33 51.3	+14
BSSI	**Bau Bau, Buton**	**10.03**	**217**		P	**Pn**	**12 33 40.6**	**+2.0**
	28nm,0.5s							
KKM	**Kota Kinabalu**	**11.17**	**292**			Pn	12 33 58.0	+3.7
EDFI	**Ende, Flores**	**11.63**	**205**		P	**Pn**	**12 34 02.4**	**+1.8**
	180nm7.4nm,0.5s							
SOEI	**Soe**	**11.78**	**191**		P	Pn	12 34 13.0	+10
SOEI	**Soe**	**11.78**	**191**		Pn	**Pn**	**12 34 01.9**	**-0.8**
BATI	**Baumata**	**12.35**	**194**		LR	LR	12 39 35.8	
	comp=Z,148nm,19.9s,baz=355,slow=41							
SMPI	**Sarmi**	**12.69**	**108**		P	Pn	12 34 29.4	+14
GENI	**Genyem**	**14.26**	**108**		P	P	12 34 55.3	+11
TWSI	**Taliwang, Sumb**	**14.32**	**222**		P	**P**	**12 34 46.0**	**+1.4**
SBUM	**Sibu**	**14.39**	**273**			**P**	**12 34 46.6**	**+1.2**
SBUM	**Sibu**	**14.39**	**273**		P	**P**	**12 34 46.0**	**+0.6**
KSM	**Kuching**	**16.30**	**269**		P	**P**	**12 35 07.4**	**+0.8**
KSM	**Kuching**	**16.30**	**269**		P	**P**	**12 35 08.0**	**+1.4**
KNRA	**Kununurra**	**17.56**	**173**		P	**P**	**12 35 20.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.86**	**183**		P	**P**	**12 35 43.7**	**-2.1**
	0.5nm,0.3s,baz=15,slow=10,SNR=4.1							
FITZ	**Fitzroy Crossi**	**19.86**	**183**		P	**P**	**12 35 44.5**	**-1.4**
LEM	**Lembang**	**20.83**	**245**		LR	LR	12 45 20.7	
	comp=Z,154nm,20.5s,baz=48,slow=41							
GUMO	**Guam**	**21.49**	**56**		LR	LR	12 44 02.7	
	comp=Z,29nm,18.7s,baz=229,slow=36							
TWG	**Pinlang**	**21.51**	**346**		P	**P**	**12 36 04.1**	**+0.4**
TWG					IAmb	IAmb	12 36 05.5	
	comp=Z,23nm,0.8s							
YULB	**Yu-li**	**22.01**	**347**		P	**P**	**12 36 08.0**	**-1.1**
YULB					IAmb	IAmb	12 36 31.5	
	comp=Z,21nm,1.1s							
TPUB	**Ta-pu**	**22.08**	**345**		P	**P**	**12 36 08.5**	**-1.3**
TPUB					IAmb	IAmb	12 36 33.7	
	comp=Z,72nm,1.4s							
SSLB	**Suanglung**	**22.47**	**346**		P	**P**	**12 36 16.7**	**+2.7**
SSLB					IAmb	IAmb	12 36 41.4	
	comp=Z,22nm,1.0s							
COEN	**Coen**	**22.73**	**134**		P	**P**	**12 36 17.9**	**+1.0**
WB0	**Warramunga Arr**	**22.82**	**161**		P	**P**	**12 36 16.2**	**-1.5**
WB0					IAmb	IAmb	12 36 20.1	
	comp=Z,25nm,0.6s							
WRAB	**Tennant Creek**	**22.96**	**161**		P	**P**	**12 36 15.0**	**-4.1**
WRAB					IAmb	IAmb	12 36 23.3	
	comp=Z,26nm,0.6s							
WRA	**Warramunga Arr**	**22.96**	**161**		P	**P**	**12 36 17.5**	**-1.7**
WRA					PcP	**PcP**	**12 40 09.1**	**-0.6**
	comp=Z,23nm,0.7s,baz=339,slow=11,SNR=73							
WRA					PcP	**PcP**	**12 40 09.1**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=332,slow=2.1,SNR=5.9							
WRA					S	**S**	**12 40 25.0**	**-5.2**
	comp=Z,1.2nm,0.8s,baz=344,slow=16,SNR=5.4							
WRA	**Warramunga Arr**	**22.96**	**161**		P	**P**	**12 36 18.7**	**-0.5**
WB2	**Warramunga Arr**	**22.97**	**161**		P	**P**	**12 36 18.2**	**-1.1**
WB2					IAmb	IAmb	12 36 25.4	
	comp=Z,47nm,1.1s							
WR0	**Warramunga Arr**	**23.04**	**161**		P	**P**	**12 36 19.1**	**-1.0**
WR0					IAmb	IAmb	12 36 25.9	
	comp=Z,33nm,1.1s							
YHNB	**Yeheng**	**23.23**	**348**		P	**P**	**12 36 20.3**	**-1.7**
YHNB					IAmb	IAmb	12 36 35.1	
	comp=Z,42nm,1.2s							
MDSI	**Maura Dua**	**23.29**	**254**		P	**P**	**12 36 25.4**	**+2.8**
	comp=Z,8.1nm,0.5s							
PMG	**Port Moresby**	**23.33**	**119**		LR	LR	12 46 54.0	
	comp=Z,106nm,20.5s,baz=322,slow=40							
PSA00	**Pilbara Seismi**	**24.22**	**196**		P	**P**	**12 36 29.9**	**-1.6**
SDSI	**Sungai Dareh**	**25.33**	**264**		P	**P**	**12 36 44.7**	**+2.9**
	comp=Z,645nmcomp=Z,15nm,0.8s							
KRVT	**Keravat (AS076**	**26.13**	**104**		LR	LR	12 45 40.5	
	comp=Z,204nm,20.3s,baz=269,slow=33							
AS31	**Alice Springs**	**26.35**	**165**		P	**P**	**12 36 50.4**	**-0.6**
ASAR	**Alice Springs**	**26.35**	**165**		P	**P**	**12 36 50.0**	**-0.9**
	comp=Z,5.0nm,0.5s,baz=345,slow=8.0,SNR=106							
ASAR					PcP	**PcP**	**12 40 16.4**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=351,slow=2.4,SNR=7.5							
ASAR					S	**S**	**12 41 26.3**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=350,slow=20,SNR=6.6							
GIRL	**Giralia**	**27.19**	**206**		P	**P**	**12 36 57.5**	**-0.9**
CTA	**Charters Tower**	**29.11**	**139**		P	**P**	**12 37 17.0**	**+1.3**
	comp=Z,7.7nm,1.2s,baz=338,slow=13,SNR=3.1							
NJ2	**Nanjing**	**30.90**	**347**	*eP*		**P**	**12 37 33.4**	**+2.0**
NJ2					pmax	pmax		
	comp=Z,14nm,0.6s							
JNU	**Nakatsue**	**31.35**	**7**		LR	LR	12 51 20.9	
	comp=Z,95nm,19.6s,baz=150,slow=38							
CMAR	**Chiang Mai Arr**	**31.75**	**303**		P	**P**	**12 37 38.8**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=113,slow=6.6,SNR=12							
CMAR					PcP	**PcP**	**12 40 31.9**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=168,slow=1.8,SNR=10							
MORW	**Morawa**	**32.38**	**197**		P	**P**	**12 37 43.7**	**-0.8**
MORW					IAmb	IAmb	12 37 58.9	
	comp=Z,20nm,1.4s							
JMN	**Monobe**	**32.42**	**11**		P	**P**	**12 37 46.4**	**+1.6**
FORT	**Forrest**	**32.49**	**178**		P	**P**	**12 37 44.5**	**-0.9**
KMI	**Kunming**	**32.63**	**317**	*i*	*eP*	**P**	**12 37 48.9**	**+1.9**
KMI					pP	pwP	12 37 58.3	+7.5
KMI					sP	sP	12 38 03.8	+16
KMI					pmax	pmax		
	comp=Z,15nm,0.5s							
KMI					pmax	pmax		
	comp=Z,71nm,4.3s							
JWT	**Wachi**	**34.24**	**13**		P	**P**	**12 38 02.4**	**+1.9**
INU	**Inuyama**	**34.69**	**15**		P	**P**	**12 38 05.9**	**+1.4**
INU					IAmb	IAmb	12 38 07.1	
	comp=Z,9.4nm,0.8s							
JGF	**Kuroka**	**35.02**	**15**		P	**P**	**12 38 09.2**	**+1.8**
JGF					IAmb	IAmb	12 38 28.9	
	comp=Z,10nm,1.2s							
HNR	**Honiara**	**35.05**	**109**		LR	LR	12 51 24.6	
	comp=Z,69nm,18.7s,baz=256,slow=34							
KSRS	**Korea Array**	**35.44**	**2**		P	**P**	**12 38 12.9**	**+2.1**
	comp=Z,3.9nm,0.8s,baz=177,slow=9.8,SNR=6.6							
BBOO	**Buckleboo**	**35.63**	**166**		P	**P**	**12 38 11.7**	**-0.9**
BBOO					IAmb	IAmb	12 38 24.6	
	comp=Z,19nm,1.2s							
NWAO	**Narrogin (SRO)**	**35.72**	**194**		P	**P**	**12 38 12.6**	**-0.8**
XAN	**Xi'an**	**36.03**	**335**		P	P	12 38 21.0	+4.9
XAN					pmax	pmax		
	comp=Z,11nm,1.2s							
XAN					pmax	pmax		
	comp=Z,190nm,4.3s							
CD2	**Chengdu**	**36.09**	**325**	*eP*		P	12 38 20.0	+3.3
CD2					pmax	pmax		
	comp=Z,20nm,0.8s							
MJAR	**Matsushiro Arr**	**36.13**	**16**		P	**P**	**12 38 17.2**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=182,slow=9.5,SNR=15							
MJAR					PcP	**PcP**	**12 40 43.8**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=182,slow=3.6,SNR=5.4							
MJAR	**Matsushiro Arr**	**36.13**	**16**		P	**P**	**12 38 17.5**	**+0.6**
MAT	**Matsushiro**	**36.13**	**16**		P	**P**	**12 38 17.0**	**+0.1**
STKA	**Stephens Creek**	**36.45**	**158**		P	**P**	**12 38 19.4**	**-0.2**
	comp=Z,4.9nm,0.7s,baz=331,slow=10,SNR=22							
STKA					PcP	**PcP**	**12 40 43.6**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=349,slow=5.3,SNR=3.6							
STKA	**Stephens Creek**	**36.45**	**158**		P	**P**	**12 38 18.1**	**-1.5**
JMM	**Marumori**	**38.12**	**18**			**P**	**12 38 35.0**	**+1.2**
ARMA	**Armidale**	**40.00**	**145**		P	**P**	**12 38 51.2**	**+1.5**
ARMA					IAmb	IAmb	12 39 02.7	
	comp=Z,22nm,1.3s							
LZH	**Lanzhou**	**40.05**	**331**	*eP*		P	12 38 53.5	+3.3
LZH					pP	pwP	12 39 02.0	+8.0
LZH					sP	sP	12 39 05.6	+14
LZH					PP	PcP	12 40 44.4	-11
LZH					pmax	pmax		
	comp=Z,19nm,1.1s							
LZH					pmax	pmax		
	comp=Z,95nm,4.9s							
LZH					LR	LR		
	comp=N,170nm,13.6s							
LZH					LR	LR		
	comp=E,190nm,12.2s							
LZH					LR	LR		
	comp=Z,200nm,15.2s							
SHL	**Shillong**	**40.90**	**308**		P	**P**	**12 38 55.4**	**-2.0**
SHL					IAmb	IAmb	12 39 02.5	
	comp=Z,8.8nm,0.5s							
HHC	**Hu-ho-hao-te**	**41.12**	**343**	*eP*		**P**	**12 39 00.1**	**+1.2**
HHC					pmax	pmax		
	comp=Z,15nm,1.0s							
HHC					pmax	pmax		
	comp=Z,120nm,5.2s							
USRK	**Ussuriysk Ar.**	**42.42**	**6**		P	**P**	**12 39 08.9**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=194,slow=5.4,SNR=6.6							
USRK	**Ussuriysk Ar.**	**42.42**	**6**		P	**P**	**12 39 09.9**	**+0.6**
TOO	**Toolangi**	**42.96**	**158**		P	**P**	**12 39 13.7**	**-0.2**
TOO					IAmb	IAmb	12 39 38.6	
	comp=Z,31nm,1.4s							
GTA	**Gaotai**	**44.63**	**330**	*eP*		P	12 39 32.9	+5.4
GTA					pP	pwP	12 39 43.1	+12
GTA					sP	sP	12 39 46.9	+18
GTA					PcP	**PP**	**12 41 11.3**	**-0.4**
GTA		

MKAR LR LR 13 07 05.4
comp=Z,101nm,21.6s,baz=122,slow=36
MAKZ Makanchi 59.20 326 P P 12 41 15.2 -0.7
MAKZ IAmb IAmb 12 41 21.1
comp=Z,6.8nm,0.9s
KDJ Kajisay 59.66 319 P P 12 41 19.2 -0.2
KDJ IAmb IAmb 12 41 23.5
comp=Z,4.0nm,0.7s
YAK Yakutsk 60.06 2 P P 12 41 21.3 -0.2
TUWZ Tuamarina 60.79 141 P P 12 41 25.9 -1.0
ZALV Zalesovo Beam 62.19 334 P P 12 41 35.3 -0.8
comp=Z,1.7nm,0.4s,baz=118,slow=6.3,SNR=10
ZALV LR LR 13 10 29.2
comp=Z,35nm,18.1s,baz=164,slow=38
ZALV Zalesovo Beam 62.19 334 P P 12 41 34.8 -1.2
KURK Kurchatov 63.24 328 P P 12 41 42.2 -1.0
KKAR Karatay Array 64.51 318 P P 12 41 49.8 -1.9
KKAR Karatay Array 64.51 318 P P 12 41 50.5 -1.3
KKAR IAmb IAmb 12 41 54.7
comp=Z,4.4nm,1.2s
BRVK Borovoye 68.88 327 P P 12 42 18.6 -0.8
BRVK IAmb IAmb 12 42 26.8
comp=Z,4.8nm,0.5s
TIXI Tiksi 69.69 1 P P 12 42 24.0 -0.1
NRIK Noril'sk 72.20 346 P P 12 42 39.9 +0.5
comp=Z,3.5nm,0.5s,baz=120,slow=6.5,SNR=5.7
NRIK LR LR 13 16 05.5
comp=Z,54nm,20.3s,baz=200,slow=37
AB07 Akbulak array 73.50 321 P 12 42 46.5 -0.9
AB03 Akbulak array 73.51 321 P P 12 42 46.4 -1.2
ABKAR Akbulak array 73.51 321 P P 12 42 46.2 -1.4
ABKAR Akbulak array 73.51 321 P P 12 42 46.4 -1.2
ARU Arti 76.44 328 P P 12 43 03.8 -0.6
ARU IAmb IAmb 12 43 08.2
comp=Z,6.6nm,0.8s
VNDA Vanda 81.60 173 P P 12 43 31.7 -0.5
comp=Z,1.9nm,0.5s,baz=316,slow=5.9,SNR=30
VNDA Vanda 81.60 173 P P 12 43 30.9 -1.4
MAW Mawson 81.98 200 P P 12 43 33.9 -0.4
comp=Z,2.5nm,0.6s,baz=100,slow=4.4,SNR=7.0
MAW Mawson 81.98 200 P P 12 43 32.7 -1.6
TTA Tatalina 82.61 27 P P 12 43 38.5 +0.6
TTA IAmb IAmb 12 43 40.7
comp=Z,9.7nm,1.0s
ATD Arta Tunnel 83.52 281 LR LR 13 19 42.3
comp=Z,17nm,20.4s,baz=34,slow=35
A21K Barrow 84.01 18 P P 12 43 44.6 -0.3
IMAR Indian Mountai 84.08 24 P P 12 43 46.3 +1.0
PPLA Purkeypile 84.33 27 P P 12 43 47.6 +0.8
PPLA IAmb IAmb 12 43 51.9
comp=Z,10.0nm,1.2s
CNPM China Poot 84.41 30 P P 12 43 48.0 +0.9
SKT Skwentna 84.53 28 P P 12 43 48.4 +0.7
SKT IAmb IAmb 12 43 53.9
comp=Z,12nm,1.3s
COLD Coldfoot 85.64 23 P P 12 43 54.5 +1.4
COLD IAmb IAmb 12 43 57.0
comp=Z,5.7nm,1.0s
TOLK Toolik Lake Re 86.01 21 P P 12 43 55.8 +0.8
CCB Clear Creek Bu 86.43 25 P P 12 43 56.4 -0.7
ILAR Eielson Array 86.83 25 P P 12 43 58.2 -0.9
comp=Z,0.8nm,0.7s,baz=243,slow=4.8,SNR=13
BMAR Burnt Mountain 87.83 23 P P 12 44 04.3 +0.4
K27K Chicken 88.91 26 P P 12 44 10.2 +1.1
K27K IAmb IAmb 12 44 11.6
comp=Z,5.4nm,1.0s
KMBO Kilima Mbogo 89.39 269 P P 12 44 12.1 -0.6
comp=Z,0.7nm,0.3s,baz=23,slow=8.9,SNR=4.3
SYO Syowa Base 90.66 201⇓ *e*PcP **PcP 12 44 19.0 +0.9**
SYO Syowa Base 90.66 201⇑ *e*X P 12 44 22.4 +5.4
BRTR Keskin Array B 91.11 310 P P 12 44 18.5 -1.6
comp=Z,0.8nm,0.8s,baz=102,slow=6.3,SNR=3.2
BRTR LR LR 13 32 12.2
comp=Z,7.2nm,18.3s,baz=118,slow=40
QSPA South Pole Qui 91.78 180 P P 12 44 21.3 -1.2
QSPA IAmb IAmb 12 44 26.4
comp=Z,5.3nm,1.2s
ARCES ARCESS Array B 92.14 340 P P 12 44 23.6 -0.4
comp=Z,17nm,1.2s,baz=34,slow=7.3,SNR=5.4
ARCES LR LR 13 30 09.1
comp=Z,21nm,18.5s,baz=230,slow=38
AKASG Malin Array Be 93.25 321 LR LR 13 30 27.3
comp=Z,47nm,20.8s,baz=180,slow=38
FINES FINESS Array B 93.41 332 P P 12 44 28.4 -1.5
comp=Z,1.1nm,0.5s,baz=61,slow=6.5,SNR=12
SCHQ Schefferville 122.41 9 PKP PKiKP 12 50 09.6 -0.7
comp=Z,2.2nm,0.4s,baz=6.0,slow=1.8,SNR=10
TXAR Lajitas Array 122.82 53 PKP PKiKP 12 50 12.1 +0.1
comp=Z,0.5nm,0.8s,baz=176,slow=2.1,SNR=6.5
TORD Torodi Ar. Bea 123.36 287 PKP PKiKP 12 50 11.9 -1.4
comp=Z,1.1nm,0.7s,baz=54,slow=1.8,SNR=5.8
TORD Torodi Ar. Bea 123.36 287 PKiKP 12 50 12.0 -1.3
JTS Las Juntas de 146.34 68 PKPbc PKPab 12 50 57.3 -0.3
comp=Z,1.8nm,0.4s,baz=241,slow=19,SNR=2.2

WEL 16 12:31:42.4,44°S±2°×17°0E±°,h12km±3km, M2.8/10, ML2.9/10, MLv2.8/10, Error ellipse: s-maj=0.0km s-min=0.0km az=102.6, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LBZ	**Lake Benmore**	**0.40**	**122**	P		Pb	12 31 51.8	+0.4
LBZ				S		Sb	12 31 58.3	+0.8
FOZ	**Fox Glacier**	**0.65**	**7**	P		Pg	12 31 53.2	-1.7
FOZ				S		Sg	12 32 00.5	-3.0
JCZ	**Jackson Bay**	**0.68**	**278**	P		Pg	12 31 54.3	-1.2
WKZ	**Wanaka**	**0.82**	**217**	P		Pg	12 31 57.7	-0.6
WKZ				S		Sb	12 32 09.3	-0.3
GCSZ	**Gaunt Creek Bo**	**0.97**	**28**	P		Pg	12 31 59.5	-1.5
RPZ	**Rata Peaks**	**1.07**	**65**	P		Pb	12 32 02.8	0.0
RPZ				S		Sb	12 32 16.2	-0.7
ARCZ	**Arundel**	**1.08**	**78**	P		Pn	12 32 03.4	0.0
EAZ	**Earnscleugh**	**1.09**	**195**	P		Pb	12 32 03.2	0.0
EAZ				S		Sn	12 32 18.9	+0.3
ODZ	**Otahua Downs**	**1.09**	**143**	P		Pn	12 32 03.9	+0.4
ODZ				S		Sn	12 32 18.7	+0.1
WVZ	**Waitaha Valley**	**1.33**	**34**	P		Pn	12 32 06.5	-0.2
MSZ	**Milford Sound**	**1.37**	**248**	P		Pn	12 32 07.1	-0.2
MSZ				S		Sn	12 32 23.9	-1.5
MHCZ	**Mount Hutt**	**1.49**	**65**	P		Pb	12 32 10.1	+0.1
WACZ	**Wakanui South**	**1.55**	**82**	P		Pb	12 32 11.0	0.0
MLZ	**Mavora Lakes**	**1.65**	**223**	P		Pb	12 32 12.1	-0.5
MLZ				S		Sg	12 32 35.5	+0.2
TUZ	**Tuapeka**	**1.78**	**182**	P		Pb	12 32 15.2	+0.3
RACZ	**Rakaia**	**1.81**	**76**	P		Pg	12 32 17.3	+0.2
OXZ	**Oxford**	**1.89**	**64**	P		Pg	12 32 18.9	+0.4
INZ	**Inchbonnie**	**1.92**	**42**	P		Pb	12 32 17.2	-0.1
WHZ	**Wether Hill Ro**	**2.12**	**215**	P		Pn	12 32 18.1	+0.4
MQZ	**McQueen's Vall**	**2.18**	**79**	P		Pg	12 32 23.5	-0.6
DCZ	**Deep Cove**	**2.23**	**234**	P		Pb	12 32 21.8	-0.7
LTZ	**Lake Taylor**	**2.33**	**54**	P		Pb	12 32 22.8	-1.5
SYZ	**Scrubby Hill**	**2.40**	**190**	P		Pb	12 32 24.2	-1.2
OKCZ	**Okains Bay**	**2.46**	**81**	P		Pg	12 32 29.2	-0.3
DSZ	**Denniston Nort**	**2.88**	**33**	P		Pb	12 32 31.5	-2.1
APZ	**The Paps**	**2.92**	**204**	P		Pb	12 32 32.8	-1.5
QRZ	**Quartz Range**	**3.94**	**33**	P		Pn	12 32 44.3	+1.6
HLRZ	**Highlands Stat**	**7.75**	**42**	P		Pn	12 33 34.1	-0.9

IDC 16 12:37:07.4±9.6,21°.64S×178°.51W,h607km±115km, mb2.8/5, mb1 3.1/6, mb1mx2.8/38, mbtmp3.9/6, Error ellipse: s-maj=75.4km s-min=44.4km az=10.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**16.99**	**192**	P		P	12 40 32.7	-0.5
0.8nm,0.3s,baz=289,slow=15,SNR=2.7								
STKA	**Stephens Creek**	**36.87**	**245**	P		P	12 43 27.1	+0.9
1.3nm,0.7s,baz=55,slow=12,SNR=1.7								
ASAR	**Alice Springs**	**43.80**	**258**	P		P	12 44 21.5	+0.1
1.9nm,0.5s,baz=90,slow=8.6,SNR=38								
WRA	**Warramunga Array**	**43.98**	**263**	P		P	12 44 22.3	-0.5
0.5nm,0.3s,baz=96,slow=7.6,SNR=21								
FITZ	**Fitzroy Crossi**	**52.41**	**263**	P		P	12 45 24.8	-0.3
0.6nm,0.5s,baz=83,slow=5.3,SNR=6.7								
ILAR	**Eielson Array**	**89.52**	**13**	P		P	12 49 00.7	+0.1
0.2nm,0.8s,baz=217,slow=5.3,SNR=1.7								
AKASG	**Malin Array Be**	**143.76**	**330**	PKP		PKPdf	12 55 34.1	-0.1
1.5nm,0.4s,baz=43,slow=4.5,SNR=9.1								
BRTR	**Keskin Array B**	**147.23**	**311**	PKPbc		PKPbc	12 55 42.9	-1.1
0.4nm,0.5s,baz=354,slow=5.1,SNR=2.0								

IDC **16** *12:45:08.3±1.0, 37°.64N×142°.18E, h0km, mb3.4/6, mb1 3.6/10, mb1mx3.5/34, mbtmp3.5/10, ML3.4/3, Error ellipse: s-maj=25.6km s-min=19.0km az=94.0*
JMA **16** *12:45:10.3±0.1, 37°.62N×141°.96E, h28km±2km, M4.2*
JMA Felt I J1.
NIED **16** *12:45:10.4, 37°.62N×141°.96E, h28km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=3.13; Mθθ=1.79; Mφφ=1.33; Mrθ=1.08; Mθφ=0.48; Mφr=1.87; Fault plane solution: M₀3.36000×10¹⁴ NP1: φs=221.00000°, δ65.00000°, λ-98.00000°. NP2:φs=58.00000°, δ26.00000°, λ-74.00000°.*

ISC 16 12:45:08.0±2.1, 37°.63N±0°.04×142°.03E±0°.06, h3km±12km, n35, σ1s51/40, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.81**	**327**	P		Pn	12 45 25.1	-1.3
JIKH				S		Sb	12 45 35.3	-0.9
JMST	**Minamisoumatoc**	**0.91**	**276**	P		Pb	12 45 26.0	-0.5
JMST				S		Sg	12 45 37.3	-0.1
JFK	**Kawauchi**	**0.96**	**254**	P		Pb	12 45 26.8	-0.5
JFK				*e*S		Sg	12 45 38.6	-0.2
JIO	**Ouri**	**0.98**	**327**	P		Pn	12 45 27.8	-1.0
JIO				*e*S		Sg	12 45 39.8	+0.1
JMM	**Marumori**	**1.01**	**284**	P		Pg	12 45 27.7	+0.3
JMM				S		Sg	12 45 40.1	-0.4
ONAJ	**Iwakimizuishiy**	**1.12**	**242**	P		Pb	12 45 29.1	-0.9
ONAJ				S		Sb	12 45 42.4	-2.6
JKMT	**Kesennumamotoy**	**1.26**	**340**	P		Pb	12 45 32.0	-0.4
JOU	**Okura**	**1.31**	**305**	P		Pb	12 45 32.9	-0.4
JOU				S		Sb	12 45 49.6	-0.9
JFT	**Otama**	**1.35**	**266**	P		Pb	12 45 33.5	-0.5
JFT				*e*S		Sb	12 45 50.2	-1.5
JMK	**Ichinoseki**	**1.47**	**334**	P		Pb	12 45 35.2	-0.8
JYS	**Shirataka**	**1.66**	**291**	P		Pb	12 45 38.6	-0.7
JYS				S		Sb	12 46 00.1	-0.6
JYK	**Kaneyama**	**1.84**	**315**	P		Pn	12 45 40.6	0.0
JFY	**Yanaizu**	**1.86**	**264**	P		Pb	12 45 41.3	-1.5
JOM	**Ohasama**	**1.93**	**343**	P		Pb	12 45 42.1	-1.8
JOM				S		Sn	12 46 05.9	-0.7
MJAR	**Matsushiro Arr**	**3.24**	**252**	Pn		Pn	12 46 01.2	+1.3
1.0nm,0.3s,baz=76,slow=17,SNR=64								
MJAR				Sn		Sb	12 46 42.5	-3.8
0.6nm,0.3s,baz=68,slow=18,SNR=4.9								
MAT	**Matsushiro**	**3.25**	**252**	P		Pn	12 46 01.3	+1.4
MAT				S		Sn	12 46 40.3	+1.2
JHJ	**Hachijo jima 2**	**4.86**	**203**	Pn		Pn	12 46 22.4	+0.4
14nm,0.3s,baz=293,slow=18,SNR=11								
JHJ				Sn		Sn	12 47 15.5	-3.4
4.2nm,0.3s,baz=282,slow=22,SNR=1.4								
ASAJ	**Asahikawa**	**6.49**	**4**	Pn		Pn	12 46 44.0	-0.5
0.8nm,0.3s,baz=204,slow=14,SNR=14								
ASAJ				Sn		Sn	12 47 59.2	+0.1
0.1nm,0.3s,baz=6.5,slow=15,SNR=2.3								
USRK	**Ussuriysk Ar.**	**10.04**	**314**	Pn		Pn	12 47 35.9	+2.8
baz=114,slow=14,SNR=4.1								
SONM	**Songino Array**	**27.87**	**303**	P		P	12 51 02.0	+2.9
0.2nm,0.5s,baz=87,slow=6.1,SNR=2.0								
H11N2	**WAKE ISLAND Hy**	**28.04**	**123**	T		T	13 20 17.7	
baz=315,slow=75,SNR=211								
H11N1	**WAKE ISLAND Hy**	**28.05**	**123**	T		T	13 20 24.9	
baz=315,slow=75,SNR=232								
H11N3	**WAKE ISLAND Hy**	**28.06**	**123**	T		T	13 20 25.6	
baz=315,slow=75,SNR=250								
H11S1	**WAKE ISLAND Hy**	**28.78**	**125**	T		T	13 21 21.0	
baz=317,slow=76,SNR=265								
H11S3	**WAKE ISLAND Hy**	**28.78**	**125**	T		T	13 21 21.1	
baz=317,slow=76,SNR=233								
H11S2	**WAKE ISLAND Hy**	**28.80**	**125**	T		T	13 21 22.2	
baz=317,slow=76,SNR=254								
MKAR	**Makanchi Array**	**44.22**	**302**	P		P	12 53 19.9	+1.4
0.1nm,0.3s,baz=77,slow=6.4,SNR=2.9								
WRA	**Warramunga Arr**	**57.72**	**189**	P		P	12 55 00.5	+0.3
0.4nm,0.6s,baz=4.4,slow=7.0,SNR=3.8								
ASAR	**Alice Springs**	**61.45**	**188**	P		P	12 55 27.1	+1.3
0.3nm,0.7s,baz=0.8,slow=5.7,SNR=5.8								
AKASG	**Malin Array Be**	**74.13**	**322**	P		P	12 56 45.3	-0.2
0.2nm,0.4s,baz=42,slow=4.5,SNR=1.5								
TXAR	**Lajitas Array**	**89.37**	**53**	P		P	12 58 06.5	+0.1
0.2nm,0.7s,baz=288,slow=1.2,SNR=3.6								
LPAZ	**La Paz**	**145.97**	**60**	PKPbc		**PKiKP**	13 04 50.8	-3.0
0.9nm,0.7s,baz=12,slow=5.3,SNR=4.0								
H03N2	**Juan Fernandez**	**146.59**	**95**	T		T	15 48 44.1	
baz=294,slow=76,SNR=19								
H03N3	**Juan Fernandez**	**146.60**	**95**	T		T	15 48 42.3	
baz=294,slow=76,SNR=20								
H03N1	**Juan Fernandez**	**146.61**	**95**	T		T	15 48 45.6	
baz=294,slow=76,SNR=20								

IDC **16** *12:46:24.4±0.8, 22°.27S×68°.36W, h90km±18km, mb3.7/2, mb1 3.5/5, mb1mx3.3/23, mbtmp3.8/5, Error ellipse: s-maj=58.6km s-min=19.3km az=113.0*
GUC **16** *12:46:24.8±0.6, 22°.15S×68°.61W, h108km±3km, ML3.8*

ISC 16 12:46:25.1±0.9, 22°.16S±0°.03×68°.69W±0°.08, h108km±7km, n30, σ0s72/44, 8C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.49**	**204**	P		Pn	12 46 41.5	-0.7
157nm,0.3s,baz=16,slow=3.5,SNR=379								
LVC				S		Sn	12 46 54.0	-1.0
296nm,0.3s,baz=218,slow=19,SNR=32								
LVC	**Limon Verde**	**0.49**	**204**	*e*P		Pn	12 46 41.5	-0.7
LVC				*i* S		Sn	12 46 54.0	-1.0
PB09	**IPOC Station P**	**0.62**	**305**	⇓*i*P		Pn	12 46 43.0	+0.1
PB09				*i* S		Sn	12 46 56.9	+0.6
PB09				IAML			12 46 58.5	
comp=E,2μm,0.5s								
PB06	**IPOC Station P**	**0.98**	**236**	⇑*i*P		Pn	12 46 46.4	+0.3
PB06				*i* S		Sn	12 47 02.9	+0.9
PB06				IAML			12 47 04.7	
comp=E,2μm,0.3s								
PB03	**IPOC Station P**	**0.99**	**276**	⇑*i*P		Pn	12 46 46.2	0.0
PB03				*i* S		Sn	12 47 02.8	+0.7
PB03				IAML			12 47 04.2	
comp=E,3μm,0.2s								
PB07	**IPOC Station P**	**1.19**	**291**	⇑*i*P		Pn	12 46 48.5	+0.1
PB07				*i* S		Sn	12 47 06.5	+0.5
PB07				IAML			12 47 10.8	
comp=E,1μm,0.5s								
PB15	**IPOC Station P**	**1.27**	**214**	*i* P		Pn	12 46 50.0	+0.6
PB15				*i* S		Sn	12 47 08.9	+1.2
PB01	**IPOC Station P**	**1.33**	**326**	⇓*i*P		Pn	12 46 49.6	-0.3
PB01				*i* S		Sn	12 47 09.1	+0.3
PB01				IAML			12 47 10.6	
comp=E,790nm,0.2s								
PB04	**IPOC Station P**	**1.36**	**262**	⇑*i*P		Pn	12 46 50.4	0.0
PB04				*i* S		Sn	12 47 10.2	+0.7
PB04				IAML			12 47 12.6	
comp=E,2μm,0.5s								
PB02	**IPOC Station P**	**1.40**	**306**	⇑*i*P		Pn	12 46 50.6	-0.1
PB02				*i* S		Sn	12 47 10.2	+0.2
PB02				IAML			12 47 16.7	
comp=E,2μm,0.2s								
PB05	**IPOC Station P**	**1.56**	**243**	⇑*i*P		Pn	12 46 52.5	-0.1
PB05				*i* S		Sn	12 47 14.6	+1.0
PATCX	**Punta Patache**	**1.90**	**314**	*i* P		Pn	12 46 56.4	-0.5
PATCX				*i* S		Sn	12 47 20.7	-0.4
PATCX				IAML			12 47 28.1	
comp=E,1μm,0.1s								
PB08	**IPOC Station P**	**2.05**	**348**	⇑*i*P		Pn	12 46 59.8	+0.7
PB08				*e*S		Sn	12 47 26.3	+1.4
TA01	**Diego Aracena**	**2.10**	**318**	⇑*i*P		Pn	12 46 58.5	-0.8
TA01				*i* S		Sn	12 47 25.2	-0.4
TA01				IAML			12 47 32.8	
comp=E,983nm,0.4s								
PB10	**IPOC Station P**	**2.19**	**231**	*e*P		Pn	12 46 60.0	-0.4
PB10				IAML			12 47 37.8	
comp=N,396nm,0.3s								
TA02	**Huaiquique**	**2.31**	**324**	*e*P		Pn	12 47 01.6	-0.4
TA02				*e*S		Sn	12 47 29.9	-0.4
TA02				IAML			12 47 39.5	
comp=N,1μm,0.2s								
PB11	**IPOC Station P**	**2.55**	**339**	*e*P		Pn	12 47 04.5	-0.8
PB11				*e*S		Sn	12 47 35.8	-0.3
PB11				IAML			12 47 42.5	
comp=E,401nm,0.4s								
PSGC	**Pisagua**	**2.88**	**332**	*e*P		Pn	12 47 07.8	-1.7
PSGC				IAML			12 47 51.9	
comp=N,312nm,0.5s								
PB14	**IPOC Station P**	**2.92**	**212**	*e*P		Pn	12 47 09.9	-0.4
PB14				IAML			12 47 56.5	
comp=E,200nm,0.4s								
GO02	**Mina Guanaco**	**3.10**	**195**	*e*P		Pn	12 47 12.4	-0.3
GO02				*e*S		Sn	12 47 49.4	0.0
GO02				IAML			12 48 03.5	
comp=N,318nm,0.1s								
MNMC	**Minye Minye**	**3.13**	**344**	*e*P		Pn	12 47 12.4	-0.7
MNMC				*e*S		Sn	12 47 49.8	-0.1
MNMC				IAML			12 48 08.0	
comp=E,377nm,0.1s								
LPAZ	**La Paz**	**5.86**	**5**	P		Pn	12 47 51.7	+1.5
comp=E,0.5nm,0.3s,baz=136,slow=4.9,SNR=12								
SIV	**San Ignacio**	**9.46**	**51**	P		Pn	12 48 34.1	-4.4
comp=E,3.3nm,0.3s,baz=248,slow=11,SNR=49								
SIV				S		Sn	12 50 11.5	-12
comp=E,0.1nm,0.3s,baz=304,slow=23,SNR=1.6								
H03N1	**Juan Fernandez**	**14.42**	**217**	T		T	13 02 37.4	
baz=41,slow=72,SNR=5.5								
H03N2	**Juan Fernandez**	**14.43**	**217**	T		T	13 02 37.3	
baz=41,slow=72,SNR=4.5								
H03N3	**Juan Fernandez**	**14.43**	**217**	T		T	13 02 30.0	
baz=41,slow=72,SNR=3.1								
PLCA	**Paso Flores**	**18.59**	**184**	P		P	12 50 33.6	-0.2
comp=E,0.1nm,0.3s,baz=350,slow=13,SNR=1.9								
SNAA	**Sanae**	**61.60**	**161**	P		P	12 56 30.7	-0.1
comp=E,0.6nm,0.3s,baz=299,slow=6.6,SNR=6.0								
TORD	**Torodi Ar. Bea**	**77.39**	**70**	P		P	12 58 09.4	+0.7
comp=E,0.5nm,0.3s,baz=254,slow=5.5,SNR=12								
MKAR	**Makanchi Array**	**146.04**	**37**	PKPbc		**PKPbc**	13 05 51.4	-1.0
comp=E,0.4nm,0.6s,baz=305,slow=4.3,SNR=3.8								

IDC **16** *13:04:04.3±9.3, 37°.86N×74°.05E, h145km±85km, mb3.4/3, mb1 3.5/5, mb1mx3.1/49, mbtmp4.0/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/29, Error ellipse: s-maj=64.6km s-min=34.7km az=172.0*
NEIC **16** *13:04:08.4±1.3, 38°.18N±0°.06×74°.0E±0°.1, h178km±8km, mb4.0/5, Error ellipse: s-maj=14.3km s-min=7.2km az=110.0*
BJI **16** *13:04:08.5±0.0, 38°.16N×74°.27E, h176km, mB4.6/2, mb4.4/7*
NNC **16** *13:04:10.3±5.3, 38°.48N×74°.06E, h238km±102km, mb2.0, mpv3.3, Error ellipse: s-maj=79.2km s-min=25.2km az=0.0*

ISC 16 13:04:05.9±0.6, 38°.02N±0°.05×74°.26E±0°.06, h158km, n53, σ2s11/57, mb4.0/6, 4C-4D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.00**	**41**	P		Pn	13 04 40.9	-0.8
KSH				S		Sn	13 05 04.4	-4.9
KSH				smax	smax			
comp=N,740nm,0.3s								
KSH				smax	smax			
comp=E,380nm,0.2s								
GAR	**Garm**	**3.24**	**289**			Pn	13 04 57.2	+0.5
BTK	**Batken**	**3.36**	**308**			Pn	13 04 59.5	+1.3
CHGR	**Chuyangaron**	**4.06**	**281**	Pn		Pn	13 05 06.8	-0.4
AML	**Almayashu**	**4.13**	**354**	P		Pn	13 05 10.0	+1.6
SNR=27								
UCH	**Uchtor**	**4.20**	**3**	P		Pn	13 05 11.6	+2.1
SNR=6.2								
NIL	**Nilore**	**4.44**	**191**			Pn	13 05 16.3	+4.0
ULHL	**Ulahol**	**4.48**	**19**	P		Pn	13 05 15.1	+2.3
SNR=17								
CEP	**Cherat**	**4.60**	**205**	P		Pn	13 05 16.8	+2.3
CEP				S		Sn	13 06 09.0	+1.1
AAK	**Ala-Archa**	**4.61**	**2**	P		Pn	13 05 08.0	-6.5
SNR=6.5								
AAK	**Ala-Archa**	**4.61**	**2**	⇓P		Pn	13 05 16.4	+1.9
2.1nm,0.5s								
AAK				S		Sn	13 06 08.6	+0.5
11nm,0.6s								
BOOM	**Boomskoye usch**	**4.64**	**16**			Pn	13 05 17.0	+2.1
EKS2	**Erkin-Say**	**4.65**	**356**	P		Pn	13 05 17.5	+2.6
SNR=8.5								
KBK	**Karagabulak**	**4.66**	**6**	P		Pn	13 05 17.6	+2.5
SNR=10								
KDJ	**Kajisay**	**4.67**	**28**			Pn	13 05 17.7	+2.4
CHMS	**Chumysh**	**4.98**	**4**	P		Pn	13 05 21.5	+2.2
SNR=16								
TKM2	**Tokmak 2**	**5.00**	**11**	P		Pn	13 05 21.7	+2.1
SNR=11								
TKM2	**Tokmak 2**	**5.00**	**11**	⇓P		Pn	13 05 21.5	+1.9
6.7nm,0.5s								
TKM2				⇑S		Sn	13 06 17.1	-0.1
18nm,0.6s								
USP	**Ospenovka**	**5.24**	**2**	P		Pn	13 05 24.4	+1.8
SNR=7.0								
KBL	**Kabul**	**5.46**	**232**	Pn		Pn	13 05 27.9	+2.1
THW	**Thamme Wali**	**5.61**	**202**	P		Pn	13 05 30.0	+2.4
KK31	**Karatay Array**	**5.82**	**332**	⇓P		Pn	13 05 30.5	+0.2
0.9nm,0.2s,baz=161,slow=18,SNR=18								
KK31				⇓S		Sn	13 06 32.5	-3.9
17nm,0.4s,baz=165,slow=20,SNR=27								
KK31	**Karatay Array**	**5.82**	**332**			Pn	13 05 30.4	+0.2
KKAR	**Karatay Array**	**5.82**	**332**			Pn	13 05 30.5	+0.2
KKAR	**Karatay Array**	**5.82**	**332**			Pn	13 05 30.2	0.0
PDGK	**Podgornoye**	**6.62**	**35**	⇑P		Pn	13 05 39.6	-1.5
0.4nm,0.2s								
PDGK				⇑S		Sn	13 06 57.4	+1.7
11nm,1.1s								
MAKZ	**Makanchi**	**10.46**	**31**	Pn		Pn	13 06 32.6	+0.8
MK31	**Makanchi Array**	**10.58**	**32**	Pn		Pn	13 06 32.6	-0.7
MKAR	**Makanchi Array**	**10.58**	**32**	P		Pn	13 06 35.2	+1.8
0.2nm,0.3s,baz=213,slow=14,SNR=21								
MKAR	**Makanchi Array**	**10.58**	**32**			Pn	13 06 32.9	-0.4
WMQ	**Urumqi**	**11.69**	**56**	*e*P		Pn	13 06 50.3	+2.3
PYUN	**Piuthan**	**12.30**	**141**	*e*P		Pn	13 06 56.4	+0.3
PYU

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.02**	**160**	P	P	13 13 02.0	-0.1
	0.9nm,0.4s,baz=339,slow=11,SNR=25						
ASAR	**Alice Springs**	**26.38**	**164**	P	P	13 13 33.7	+0.2
	0.4nm,0.3s,baz=340,slow=7.3,SNR=20						
MKAR	**Makanchi Array**	**58.81**	**326**	P	P	13 17 55.4	-0.2
	0.1nm,0.4s,baz=122,slow=7.1,SNR=4.4						

IDC ***16*** *13:12:59.4±1.1, 1°.95N×126°.36E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/29, mbtmp3.6/6, ML3.3/1, Error ellipse: s-maj=99.4km s-min=19.0km az=70.0*
NEIC ***16*** *13:13:05.4±0.9, 2°.0N±0°.1×126°.8E±0°.2, h52km±7km, mb4.0/14, Error ellipse: s-maj=28.9km s-min=8.7km az=50.0*

ISC 16 13:13:05.6±0.7, 2°.1N±0°.1×126°.8E±0°.2, h50km, n23, σ0s70/25, mb3.9/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.40**	**156**		**Pn**	**13 13 28.9**	**+0.1**
MYLDM	**Lahad Datu**	**8.84**	**291**	Pn	**Pn**	**13 15 11.1**	**+0.3**
KKM	**Kota Kinabalu**	**11.27**	**291**	Pn	**Pn**	**13 15 44.5**	**+0.3**
MTN	**Manton Dam**	**15.42**	**164**	P	**P**	**13 16 43.1**	**-0.7**
MTN				IAmb	IAmb	13 16 58.9	
	comp=Z,10nm,1.2s						
KNRA	**Kununurra**	**17.73**	**174**		**P**	**13 17 09.0**	**-0.3**
KNRA				IAmb	IAmb	13 17 19.7	
	comp=Z,15nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.07**	**183**	P	**P**	**13 17 33.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=7.1,slow=12,SNR=2.5						
WB0	**Warramunga Arr**	**22.94**	**161**	P	**P**	**13 18 05.2**	**-0.5**
WB0				IAmb	IAmb	13 18 12.0	
	comp=Z,3.1nm,0.6s						
WRA	**Warramunga Arr**	**23.09**	**162**	P	**P**	**13 18 06.9**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=338,slow=11,SNR=21						
WRA				PcP	**PcP**	**13 21 56.2**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=343,slow=1.9,SNR=4.6						
WRA	**Warramunga Arr**	**23.09**	**162**	P	**P**	**13 18 06.0**	**-1.3**
WB2	**Warramunga Arr**	**23.09**	**162**	P	**P**	**13 18 06.7**	**-0.6**
WR0	**Warramunga Arr**	**23.17**	**161**	P	**P**	**13 18 07.5**	**-0.5**
WR0				IAmb	IAmb	13 18 34.3	
	comp=Z,9.1nm,1.4s						
TATO	**Taipei**	**23.35**	**348**	P	**P**	**13 18 09.5**	**-0.2**
PSA00	**Pilbara Seismi**	**24.46**	**196**	P	**P**	**13 18 19.0**	**-1.0**
ASAR	**Alice Springs**	**26.49**	**165**	P	**P**	**13 18 38.6**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=343,slow=7.6,SNR=14						
ASAR				PcP	**PcP**	**13 22 04.0**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=341,slow=2.1,SNR=7.4						
ASAR	**Alice Springs**	**26.49**	**165**	P	**P**	**13 18 38.8**	**+0.3**
DZM	**Mont Dzumac**	**45.54**	**124**	P	**P**	**13 21 20.7**	**-0.2**
DZM				IAmb	IAmb	13 21 27.1	
	comp=Z,5.8nm,1.1s						
SONM	**Songino Array**	**48.89**	**342**	P	**P**	**13 21 46.4**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=142,slow=7.3,SNR=1.7						
MK31	**Makanchi Array**	**58.96**	**326**	P	**P**	**13 22 59.4**	**-0.6**
MK31				IAmb	IAmb	13 23 10.4	
	comp=Z,0.9nm,0.9s						
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**13 22 59.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=121,slow=8.0,SNR=19						
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**13 22 59.4**	**-0.6**
MAKZ	**Makanchi**	**59.15**	**326**	P	**P**	**13 23 00.8**	**-0.5**
KURK	**Kurchatov**	**63.18**	**328**	P	**P**	**13 23 28.0**	**-0.5**
KURK				IAmb	IAmb	13 23 33.3	
	comp=Z,2.4nm,1.1s						
VNDA	**Vanda**	**81.78**	**173**	P	**P**	**13 25 19.6**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=321,slow=5.6,SNR=1.8						

IDC ***16*** *13:37:49.3±0.6, 10°.50N×124°.28E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.0/47, mbtmp4.1/16, MS3.1/4, Ms1 3.2/4, ms1mx2.8/30, Error ellipse: s-maj=32.9km s-min=11.5km az=76.0*
MAN ***16*** *13:37:51.1, 10°.62N×124°.31E, h9km, mb4.9, ML3.8, MS3.8 MAN Intensity I - Bogo, Cebu; Ormoc City.*
NEIC ***16*** *13:37:57.2±1.1, 10°.54N±0°.09×124°.34E±0°.06, h57km±6km, mb4.5/39, Error ellipse: s-maj=12.7km s-min=8.1km az=186.0*

ISC 16 13:37:51.6±1.3, 10°.60N±0°.02×124°.32E±0°.03, h11km±8km, n92, σ1s31/103, mb4.4/34, 5C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.45**	**231**	*iP*	**Pb**	**13 38 00.8**	**-0.8**
LLP				*i* S	**Sb**	**13 38 07.7**	**-0.6**
OCLP	**Ormoc**	**0.53**	**33**	*eP*	**Pg**	**13 38 01.8**	**-0.1**
OCLP				*eS*	**Sb**	**13 38 09.2**	**-1.3**
MSLP	**Maasin**	**0.71**	**131**	*eP*	**Pg**	**13 38 04.9**	**-0.4**
MSLP				*eS*	**Sb**	**13 38 15.8**	**+0.1**
TBP	**Tagbilaran**	**1.01**	**206**	*iP*	**Pg**	**13 38 10.8**	**-0.3**
TBP				*i* S	**Sn**	**13 38 25.5**	**-0.5**
GUIM	**Jordan**	**1.70**	**271**	*eP*	**Pn**	**13 38 20.2**	**-1.0**
GUIM				*eS*	**Sb**	**13 38 43.3**	**-1.0**
CNOP	**Candoni, Negro**	**1.82**	**245**	*eP*	**Pn**	**13 38 21.8**	**-1.1**
CNOP				*eS*	**Sb**	**13 38 46.8**	**-1.0**
CNP	**Catarman**	**1.93**	**10**	*eP*	**Pn**	**13 38 24.1**	**-0.2**
CNP				*eS*	**Sb**	**13 38 49.8**	**-1.0**
GLSP	**General Luna,**	**1.96**	**114**	*eP*	**Pn**	**13 38 24.5**	**-0.3**
GLSP				*eS*	**Sn**	**13 38 50.0**	**+0.7**
CGP	**Cagayan de Oro**	**2.17**	**170**	*iP*	**Pn**	**13 38 28.8**	**+1.1**
CGP				*i* S	**Sn**	**13 38 55.5**	**+1.0**
BUKP	**Musuan**	**2.81**	**165**	*eP*	**Pn**	**13 38 38.5**	**+2.0**
BUKP				*eS*	**Sb**	**13 39 16.7**	**+0.6**
SCSP	**San Jose Seism**	**3.13**	**346**	*eP*	**Pb**	**13 38 46.0**	**-1.3**
SCSP				*eS*	**Sb**	**13 39 25.9**	**+0.4**
KCP	**Kidapawan**	**3.65**	**168**	*eP*	**Pb**	**13 38 52.3**	**-3.9**
DAV	**Davao City (W)**	**3.73**	**160**	Pg	**Pb**	**13 38 54.4**	**-3.0**
	41nm,0.3s,baz=27,slow=7.5,SNR=4.5						
DAV				Lg	Lg	13 39 50.0	
	26nm,0.3s,baz=65,slow=22,SNR=5.8						
JCNP	**Jose Panganiba**	**3.99**	**337**	*eP*	**Pb**	**13 38 59.9**	**-2.1**
JCNP				*eS*	Sn	13 39 19.7	-20
MATI	**Mati**	**4.11**	**152**	*eP*	**Pn**	**13 38 58.4**	**+4.1**
LQP	**Lukban**	**4.42**	**322**	*eP*	Pb	13 39 03.9	-5.5
DDMP	**Don Marcelino,**	**4.68**	**163**	*eP*	**Pn**	**13 39 04.1**	**+1.9**
DDMP				*eS*	**Sn**	**13 39 56.1**	**-0.4**
TGY	**Tagaytay City**	**4.80**	**317**	LR	LR	13 41 08.1	
	comp=Z,230nm,21.8s,baz=140,slow=41						
MYLDM	**Lahad Datu**	**7.89**	**227**	Pn	**Pn**	**13 39 49.1**	**+2.8**
KKM	**Kota Kinabalu**	**9.21**	**241**	Pn	**Pn**	**13 40 08.2**	**+3.7**
LUWI	**Luwuk**	**11.67**	**188**	Pn	**Pn**	**13 40 40.5**	**+2.3**
SBUM	**Sibu**	**14.49**	**237**		**P**	**13 41 25.2**	**+1.8**
BATI	**Baumata**	**20.68**	**182**	P	**P**	**13 42 30.2**	**-1.6**
	14nm,0.6s,baz=44,slow=2.6,SNR=5.1						
WHN	**Wuhan**	**21.90**	**336**	*eP*	P	13 42 57.6	+13
WHN				LR	LR		
	comp=Z,840nm,12.7s						
NJ2	**Nanjing**	**21.93**	**347**	*eP*	**P**	**13 42 48.0**	**+2.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.7s						
CMAR	**Chiang Mai Arr**	**25.75**	**291**	P	**P**	**13 43 22.1**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=105,slow=6.8,SNR=1.8						
CMAR				LR	LR	13 54 41.4	
	comp=Z,16nm,19.6s,baz=190,slow=39						
KNRA	**Kununurra**	**26.48**	**170**	P	**P**	**13 43 29.5**	**+0.5**
KNRA				IAmb	IAmb	13 43 39.9	
	comp=Z,12nm,1.2s						
JWT	**Wachi**	**26.56**	**21**	P	**P**	**13 43 30.7**	**+1.1**
JWT				IAmb	IAmb	13 43 32.8	
	comp=Z,28nm,1.4s						
KSAR	**Wonju Array Be**	**26.91**	**6**	P	**P**	**13 43 33.2**	**+0.4**
KSRS	**Korea Array**	**26.93**	**6**	P	**P**	**13 43 33.2**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=187,slow=10,SNR=19						
KSRS				LR	LR	13 54 17.5	
	comp=Z,31nm,18.7s,baz=180,slow=37						
KS19	**Wonju Array Si**	**26.97**	**6**	P	**P**	**13 43 33.4**	**0.0**
XAN	**Xi'an**	**27.26**	**331**	P	**P**	**13 43 37.0**	**+1.0**
XAN				IAmb	IAmb	13 44 02.1	
	comp=Z,7.0nm,0.5s						
XMIS	**Christmas Isla**	**27.99**	**222**	P	**P**	**13 43 42.9**	**+0.2**
GSI	**Gunungsitoli**	**28.13**	**253**	P	**P**	**13 43 44.4**	**+0.5**
GSI				IAmb	IAmb	13 43 50.0	
	comp=Z,10nm,1.1s						
FITZ	**Fitzroy Crossi**	**28.55**	**177**	P	**P**	**13 43 46.5**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=4.6,slow=8.5,SNR=9.6						
FITZ	**Fitzroy Crossi**	**28.55**	**177**	P	**P**	**13 43 46.7**	**-0.9**
MJAR	**Matsushiro Arr**	**28.72**	**24**	P	**P**	**13 43 50.3**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=198,slow=8.3,SNR=3.5						
LZH	**Lanzhou**	**31.43**	**327**	*eP*	**P**	**13 44 16.0**	**+2.8**
LZH				pP	sP	13 44 32.6	+15
LZH				sP	pP	13 44 37.3	+21
LZH				PP	**PnPn**	**13 45 15.5**	**-0.5**
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,67nm,4.3s						
LZH				LR	LR		
	comp=N,160nm,13.7s						
LZH				LR	LR		
	comp=E,130nm,13.8s						
LZH				LR	LR		
	comp=Z,180nm,15.7s						
WB0	**Warramunga Arr**	**31.77**	**162**	P	**P**	**13 44 14.9**	**-1.2**
WRA	**Warramunga Arr**	**31.92**	**162**	P	**P**	**13 44 15.7**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=344,slow=9.2,SNR=1.7						
WRA				PcP	**PcP**	**13 47 06.3**	**-1.6**
	comp=Z,0.1nm,0.5s,baz=337,slow=2.8,SNR=1.5						
WRA	**Warramunga Arr**	**31.92**	**162**	P	**P**	**13 44 17.3**	**0.0**
WB2	**Warramunga Arr**	**31.92**	**162**	P	**P**	**13 44 16.3**	**-1.1**
WB2				IAmb	IAmb	13 44 27.9	
	comp=Z,6.9nm,1.5s						
HHC	**Hu-ho-hao-te**	**32.16**	**342**	*eP*	**P**	**13 44 21.5**	**+2.0**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,74nm,5.2s						
PSA00	**Pilbara Seismi**	**32.28**	**188**	P	**P**	**13 44 19.4**	**-1.1**
PSA00				IAmb	IAmb	13 44 41.8	
	comp=Z,18nm,1.4s						
SHL	**Shillong**	**34.11**	**300**	P	**P**	**13 44 37.3**	**+0.5**
SHL				IAmb	IAmb	13 44 39.0	
	comp=Z,5.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**34.12**	**10**	P	**P**	**13 44 36.5**	**0.0**
USA0B				IAmb	IAmb	13 44 43.5	
	comp=Z,5.3nm,0.9s						
USRK	**Ussuriysk Ar.**	**34.12**	**10**	P	**P**	**13 44 36.0**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=189,slow=7.3,SNR=5.6						
USRK	**Ussuriysk Ar.**	**34.12**	**10**	P	**P**	**13 44 36.8**	**+0.4**
AS31	**Alice Springs**	**35.33**	**165**	P	**P**	**13 44 46.5**	**-0.5**
ASAR	**Alice Springs**	**35.33**	**165**	P	**P**	**13 44 45.8**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=338,slow=6.9,SNR=34						
ASAR				PcP	**PcP**	**13 47 15.9**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=341,slow=2.6,SNR=4.6						
ERM	**Erimo**	**35.38**	**25**	P	**P**	**13 44 48.6**	**+1.3**
JEM	**Erimo**	**35.38**	**25**	P	P	13 45 02.7	+15
GTA	**Gaotai**	**36.04**	**327**	P	**P**	**13 44 54.3**	**+1.1**
GTA				pP	sP	13 45 07.8	+10
GTA				sP	pP	13 45 12.4	+16
GTA				S	**S**	**13 50 30.0**	**-2.2**
GTA				pmax	pmax		
	comp=Z,1.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,59nm,5.6s						
GTA				LR	LR		
	comp=N,74nm,15.6s						
GTA				LR	LR		
	comp=E,77nm,15.6s						
GTA				LR	LR		
	comp=Z,61nm,17.4s						
SONM	**Songino Array**	**40.06**	**341**	P	**P**	**13 45 27.5**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=153,slow=7.7,SNR=4.0						
SONM	**Songino Array**	**40.06**	**341**	P	**P**	**13 45 28.6**	**+1.6**
MORW	**Morawa**	**40.24**	**191**	P	**P**	**13 45 27.4**	**-1.1**
FORT	**Forrest**	**41.30**	**175**	P	**P**	**13 45 36.8**	**-0.4**
FORT				IAmb	IAmb	13 45 41.9	
	comp=Z,14nm,0.9s						
NWAO	**Narrogin (SRO)**	**43.81**	**189**	P	**P**	**13 45 57.1**	**-0.5**
TLY	**Talaya**	**44.30**	**342**	P	**P**	**13 46 01.7**	**+0.3**
TLY				IAmb	IAmb	13 46 03.3	
	comp=Z,4.8nm,0.9s						
BBOO	**Buckleboo**	**44.60**	**166**	P	**P**	**13 46 03.5**	**-0.5**
BBOO				IAmb	IAmb	13 46 05.5	
	comp=Z,7.4nm,0.8s						
STKA	**Stephens Creek**	**45.36**	**159**	P	**P**	**13 46 09.3**	**-0.8**
	comp=Z,2.9nm,0.8s,baz=345,slow=10.0,SNR=5.6						
STKA	**Stephens Creek**	**45.36**	**159**	P	**P**	**13 46 10.8**	**+0.8**
WMQ	**Urumqi**	**45.79**	**323**	*eP*	**P**	**13 46 14.9**	**+1.4**
MK31	**Makanchi Array**	**50.61**	**323**	P	**P**	**13 46 51.3**	**+0.7**
MK31				IAmb	IAmb	13 47 09.4	
	comp=Z,5.6nm,1.4s						
MKAR	**Makanchi Array**	**50.61**	**323**	P	**P**	**13 46 51.2**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=128,slow=8.0,SNR=19						
MKAR	**Makanchi Array**	**50.61**	**323**	P	**P**	**13 46 51.0**	**+0.4**
MAKZ	**Makanchi**	**50.80**	**323**	P	**P**	**13 46 52.2**	**+0.2**
MAKZ				IAmb	IAmb	13 46 59.8	
	comp=Z,6.3nm,1.5s						
BOOM	**Boomskoye usch**	**52.70**	**316**	P	**P**	**13 47 07.1**	**+0.6**
ZALV	**Zalesovo Beam**	**53.42**	**332**	P	**P**	**13 47 11.0**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=111,slow=7.7,SNR=7.8						
ZALV	**Zalesovo Beam**	**53.42**	**332**	P	**P**	**13 47 10.9**	**-0.5**
KURK	**Kurchatov**	**54.72**	**326**	P	**P**	**13 47 21.2**	**+0.3**
KKAR	**Karatay Array**	**56.66**	**315**	P	**P**	**13 47 34.9**	**-0.1**
KKAR	**Karatay Array**	**56.66**	**315**	P	**P**	**13 47 35.2**	**+0.2**
KKAR				IAmb	IAmb	13 47 36.3	
	comp=Z,2.2nm,0.6s						
NRIK	**Noril'sk**	**63.23**	**346**	P	**P**	**13 48 19.6**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=160,slow=12,SNR=3.9						
ABKAR	**Akbulak array**	**65.37**	**319**	P	**P**	**13 48 33.7**	**-0.4**
ABKAR	**Akbulak array**	**65.37**	**319**	P	**P**	**13 48 33.7**	**-0.4**
RPZ	**Rata Peaks**	**68.73**	**145**	P	**P**	**13 48 55.9**	**+0.4**
	comp=Z,9.0nm,0.9s,baz=334,slow=8.2,SNR=1.7						
RPZ	**Rata Peaks**	**68.73**	**145**	P	**P**	**13 48 55.9**	**+0.4**
UNV	**Unalaska Vale**	**69.25**	**36**	P	**P**	**13 48 58.3**	**-0.2**
BKZ	**Black Stump Fm**	**69.28**	**139**	P	**P**	**13 49 00.0**	**+0.9**
KHZ	**Kahutara**	**69.35**	**143**	P	**P**	**13 48 58.7**	**-0.6**
TTA	**Tatalina**	**75.92**	**28**	P	**P**	**13 49 38.2**	**-0.1**
TTA				IAmb	IAmb	13 49 54.4	
	comp=Z,9.6nm,1.4s						
RSO	**Redoubt Souht**	**77.36**	**30**	P	**P**	**13 49 46.7**	**+0.1**
PPLA	**Purkeypile**	**77.67**	**28**	P	**P**	**13 49 48.1**	**-0.1**
SUA	**Susitna One**	**78.34**	**29**	P	**P**	**13 49 51.5**	**-0.4**
TRF	**Thorolfare Moun**	**78.53**	**27**	P	**P**	**13 49 52.7**	**-0.3**
COLD	**Coldfoot**	**78.55**	**23**	P	**P**	**13 49 54.1**	**+1.3**
ARCES	**ARCESS Array B**	**83.21**	**340**	P	**P**	**13 50 16.8**	**-0.9**
	comp=Z,4.4nm,1.0s,baz=87,slow=6.4,SNR=1.4						
VNDA	**Vanda**	**90.51**	**172**	P	**P**	**13 50 51.2**	**-1.8**
	comp=Z,1.5nm,0.8s,baz=318,slow=5.5,SNR=12						
VNDA	**Vanda**	**90.51**	**172**	P	**P**	**13 50 51.4**	**-1.6**
VNDA				IAmb	IAmb	13 50 53.1	
	comp=Z,1.7nm,0.8s						
NOA	**NORSAR Array B**	**91.61**	**333**	LR	LR	14 34 39.2	
	comp=Z,20nm,19.8s,baz=245,slow=37						
TORD	**Torodi Ar. Bea**	**118.36**	**291**	PKP	**PKPdf**	**13 56 39.3**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=73,slow=3.0,SNR=3.0						

NEIC ***16*** *13:39:24.2±0.8, 15°.17S±0°.07×72°.0W±0°.1, h161km±12km, mb4.2/3, Error ellipse: s-maj=19.3km s-min=2.6km az=60.0*
IDC ***16*** *13:39:24.8±1.8, 14°.90S×71°.82W, h153km±20km, mb3.0/1, mb1 3.3/6, mb1mx3.1/44, mbtmp3.8/6, Error ellipse: s-maj=43.0km s-min=17.6km az=25.0*

ISC 16 13:39:24.1±1.1, 15°.21S±0°.09×72°.06W±0°.08, h150km, n24, σ1s54/25, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**3.55**	**153**	Pn	**Pn**	**13 40 20.3**	**+1.8**
LPAZ	**La Paz**	**3.94**	**106**	P	**Pn**	**13 40 23.9**	**-0.2**
	2.8nm,0.3s,baz=312,slow=10.0,SNR=39						
LPAZ				S	**Sn**	**13 41 09.3**	**-1.4**
	0.3nm,0.3s,baz=7.1,slow=8.0,SNR=3.7						
PB16	**IPOC Station P**	**3.96**	**142**	Pn	**Pn**	**13 40 25.9**	**+1.5**
MNMC	**Minye Minye**	**4.56**	**149**		**Pn**	**13 40 33.0**	**+1.1**
PSGCX	**Pisagua**	**4.74**	**157**		**Pn**	**13 40 34.6**	**+0.4**
PB11	**IPOC Station P**	**5.08**	**153**		**Pn**	**13 40 38.8**	**+0.1**
TA01	**Diego Aracena**	**5.62**	**162**	Pn	**Pn**	**13 40 46.3**	**+0.5**
PB08	**IPOC Station P**	**5.64**	**151**		**Pn**	**13 40 47.2**	**+0.9**
NNA	**Nana**	**5.64**	**304**	P	**Pn**	**13 40 47.6**	**+1.5**
	4.8nm,0.3s,baz=141,slow=7.0,SNR=9.1						
NNA	**Nana**	**5.64**	**304**		**Pn**	**13 40 46.8**	**+0.7**
PATCX	**Punta Patache**	**5.87**	**162**	Pn	**Pn**	**13 40 49.2**	**0.0**
PB01	**IPOC Station P**	**6.30**	**158**	Pn	**Pn**	**13 40 55.0**	**+0.1**
PB07	**IPOC Station P**	**6.81**	**163**		**Pn**	**13 41 02.2**	**+0.4**
PB09	**IPOC Station P**	**7.08**	**158**	Pn	**Pn**	**13 41 06.2**	**+0.8**
PB04	**IPOC Station P**	**7.32**	**166**	Pn	**Pn**	**13 41 08.8**	**+0.3**
PB06	**IPOC Station P**	**7.82**	**163**	Pn	**Pn**	**13 41 15.8**	**+0.5**
LVC	**Limon Verde**	**7.95**	**158**	P	**Pn**	**13 41 18.7**	**+1.6**
	0.7nm,0.3s,baz=345,slow=11,SNR=2.5						
LVC				S	**Sn**	**13 42 44.1**	**-1.8**
	2.6nm,0.3s,baz=175,slow=19,SNR=8.4						
LVC	**Limon Verde**	**7.95**	**158**	Pn	**Pn**	**13 41 16.7**	**-0.4**
SIV	**San Ignacio**	**10.62**	**96**	P	**Pn**	**13 41 49.3**	**-3.1**
	0.4nm,0.3s,baz=288,slow=16,SNR=12						
SIV				S	**Sn**	**13 43 54.4**	**+4.5**
	0.1nm,0.3s,baz=191,slow=22,SNR=2.6						
SAML	**Samuel**	**10.68**	**55**	Pn	Pn	13 41 46.9	-6.3
CPUP	**Villa Florida**	**17.65**	**131**	P	**Pn**	**13 43 21.5**	**+0.6**
	0.1nm,0.3s,baz=321,slow=9.9,SNR=6.9						
CPUP	**Villa Florida**	**17.65**	**131**	IAmb	IAmb	13 43 23.1	
	comp=Z,3.2nm,0.8s						
PMSA	**Palmer Station**	**49.82**	**176**	P	**P**	**13 48 00.5**	**-0.8**
PMSA				IAmb	IAmb	13 48 25.6	
	comp=Z,25nm,1.4s						
TORD	**Torodi Ar. Bea**	**78.22**	**73**	P	**P**	**13 51 06.3**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=249,slow=6.3,SNR=2.1						

DJA 16 14:04:00.0±0.6, 1°S±7°×122°3E±°, h10km, M3.5/8, MLv3.5/8, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.57**	**273**	P	Pg	14 04 11.4	+0.3
LUWI				S	Sg	14 04 18.0	-0.6
APSI	**Ampana**	**1.70**	**275**	P	Pn	14 04 30.3	+0.6
APSI				S	Sb	14 04 53.1	+0.3
GTOI	**Gorontalo**	**1.73**	**349**	P	Pn	14 04 30.0	-0.1
KMSI	**Cibinong**	**1.75**	**21**	P	Pb	14 04 32.0	-0.3
MRSI	**Marisa**	**2.08**	**318**	P	Pn	14 04 32.7	-2.3
MPSI	**Mapaga**	**3.71**	**292**	P	Pn	14 04 59.1	+1.6
TTSI	**Tana Toraja**	**4.03**	**241**	P	Pn	14 05 02.0	+0.2
TNTI	**Ternate**	**4.42**	**66**	P	Pn	14 05 04.4	-2.8

IDC 16 14:06:09.8±1.3, 0°.32N×123°.80E, h0km, mb3.3/5, mb1 3.5/6, mb1mx3.4/31, mbtmp3.3/6, ML3.2/1, Error ellipse: s-maj=80.6km s-min=19.7km az=64.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.39**	**174**	P	P	14 10 26.7	+0.2
	0.1nm,0.3s,baz=354,slow=9.6,SNR=5.7						
WRA	**Warramunga Arr**	**22.63**	**153**	P	P	14 11 13.3	+0.7
	comp=Z,0.5nm,0.5s,baz=331,slow=10,SNR=11						
ASAR	**Alice Springs**	**25.78**	**158**	P	P	14 11 41.4	-1.2
	0.4nm,1.1s,baz=330,slow=11,SNR=1.7						
CMAR	**Chiang Mai Arr**	**30.35**	**308**	P	P	14 12 24.4	+0.9
	0.3nm,0.4s,baz=134,slow=7.6,SNR=4.3						
SONM	**Songino Array**	**49.69**	**345**	P	P	14 15 04.5	+0.8
	0.3nm,0.5s,baz=140,slow=7.0,SNR=2.5						
MKAR	**Makanchi Array**	**58.77**	**328**	P	P	14 16 08.2	-1.6
	0.2nm,0.6s,baz=144,slow=7.5,SNR=2.2						

IDC ***16*** *14:13:44.7±1.7, 1°.76N×126°.57E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.4/39, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=112.5km s-min=25.7km az=69.0*
NEIC ***16*** *14:13:50.3±1.6, 1°.8N±0°.1×126°.8E±0°.1, h36km±12km, mb4.0/10, Error ellipse: s-maj=23.9km s-min=8.0km az=221.0*
DJA ***16*** *14:13:50.7±0.2, 2°.N±3°×12°7E±°, h10km, M3.6/13, mB5.5/1, mb3.6/2, MLv3.6/13, Mw(mB)4.9/1*

ISC 16 14:13:51.7±0.8, 1°.68N±0°.06×126°.66E±0°.08, h47km, n29, σ1s42/31, mb3.9/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.15**	**142**	P	**Pn**	**14 14 11.3**	**-0.1**
TNTI				S	**Sn**	**14 14 29.8**	**+3.9**
TNTI	**Ternate**	**1.15**	**142**		**Pn**	**14 14 11.0**	**-0.4**
SGSI	**Sangihe**	**2.29**	**330**	P	**Pn**	**14 14 27.2**	**+0.1**
SGSI				S	**Sn**	**14 14 57.2**	**+3.1**
KMSI	**Cibinong**	**2.90**	**248**	P	**Pn**	**14 14 34.5**	**-0.9**
SANI	**Sanana**	**3.77**	**190**	P	**Pn**	**14 14 49.3**	**+2.0**
GTOI	**Gorontalo**	**3.79**	**254**	P	**Pn**	**14 14 48.6**	**+0.9**
LUWI	**Luwuk**	**4.74**	**235**	P	**Pn**	**14 15 01.1**	**+0.6**
LUWI	**Luwuk**	**4.74**	**235**	Pn	**Pn**	**14 15 02.5**	**+1.8**
MRSI	**Marisa**	**4.87**	**256**	P	**Pn**	**14 15 03.8**	**+1.3**
MPSI	**Mapaga**	**6.89**	**259**	P	**Pn**	**14 15 30.3**	**0.0**
	0.0nm3.6nm,0.9s						
TTSI	**Tana Toraja**	**8.29**	**236**	P	**Pn**	**14 15 49.3**	**-0.2**
MYLDM	**Lahad

0.1nm,0.3s,baz=346,slow=11,SNR=7.8
MKAR Mankanchi Array 59.03 326 P P 14 32 11.9 -0.1
0.2nm,0.4s,baz=119,slow=7.8,SNR=5.6

IDC 16 14:25:58.5±5.1, 2.57S×139.72E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.1/32, mbtmp3.2/3, ML3.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/12, Error ellipse: s-maj=199.4km s-min=31.7km az=88.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.05**	**197**	P	Pn	14 30 10.6	-0.4
	0.1nm,0.3s,baz=18,slow=12,SNR=2.5						
FITZ	**Fitzroy Crossi**	**20.71**	**221**	LR	LR	14 38 20.9	
	comp=Z,28nm,21.5s,baz=36,slow=36						
ASAR	**Alice Springs**	**21.72**	**195**	P	P	14 30 51.6	+0.1
	0.3nm,0.6s,baz=24,slow=10,SNR=9.1						
MKAR	**Makanchi Array**	**70.30**	**322**	P	P	14 37 14.0	0.0
	0.5nm,0.8s,baz=126,slow=7.3,SNR=3.2						

IDC 16 14:28:29.3±7.4, 17.48S×176.52W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/35, mbtmp3.7/2, Error ellipse: s-maj=309.1km s-min=64.7km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.48**	**259**	P	P	14 36 58.4	-0.3
	0.2nm,0.3s,baz=96,slow=7.8,SNR=10						
ASAR	**Alice Springs**	**46.64**	**254**	P	P	14 36 59.9	0.0
	1.6nm,0.7s,baz=85,slow=8.3,SNR=18						
BRTR	**Keskin Array B**	**145.74**	**317**	PKPbc	PKPdf	14 48 09.8	-0.6
	1.6nm,1.0s,baz=75,slow=1.6,SNR=4.6						

WEL 16 14:49:57.3, 45.5S±2.1×166.7E±1.1, h61km±3km, M3.3/12, ML3.5/12, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=60.7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.29**	**206**	P	Pn	14 50 08.1	+0.7
DCZ				S	Sn	14 50 15.7	+1.0
MLZ	**Mavora Lakes**	**0.58**	**107**	P	Pn	14 50 10.9	+0.7
MLZ				S	Sn	14 50 20.7	+1.1
MSZ	**Milford Sound**	**0.68**	**39**	P	Pn	14 50 11.4	+0.2
MSZ				S	Sn	14 50 21.8	+0.3
WHZ	**Wether Hill Ro**	**0.81**	**148**	P	Pn	14 50 14.2	+1.3
WHZ				S	Sn	14 50 26.3	+1.8
PYZ	**Puysegur Point**	**1.06**	**205**	P	Pn	14 50 18.9	+2.7
PYZ				S	Sn	14 50 36.3	+6.1
WKZ	**Wanaka**	**1.25**	**73**	P	Pn	14 50 19.4	+0.8
WKZ				S	Sn	14 50 35.5	+0.8
EAZ	**Earnscleugh**	**1.40**	**92**	P	Pn	14 50 21.5	+1.0
EAZ				S	Sn	14 50 38.2	+0.2
JCZ	**Jackson Bay**	**1.53**	**43**	P	Pn	14 50 22.4	-0.1
APZ	**The Paps**	**1.69**	**165**	P	Pn	14 50 25.8	+1.2
TUZ	**Tuapeka**	**1.78**	**116**	P	Pn	14 50 27.0	+1.4
SYZ	**Scrubby Hill**	**1.83**	**137**	P	Pn	14 50 27.6	+1.2
LBZ	**Lake Benmore**	**2.19**	**69**	P	Pn	14 50 30.8	-0.4
ODZ	**Otahua Downs**	**2.35**	**87**	P	Pn	14 50 33.5	0.0
HHSZ	**Highcliff Hill**	**2.39**	**108**	P	Pn	14 50 34.9	+0.9
FOZ	**Fox Glacier**	**2.44**	**48**	P	Pn	14 50 34.6	-0.1
GCSZ	**Gaunt Creek Bo**	**2.86**	**50**	P	Pn	14 50 39.9	-0.5
ARCZ	**Arundel**	**3.02**	**67**	P	Pn	14 50 41.1	-1.5
RPZ	**Rata Peaks**	**3.05**	**62**	P	Pn	14 50 41.7	-1.4
WVZ	**Waitaha Valley**	**3.25**	**50**	P	Pn	14 50 44.9	-0.7
WACZ	**Wakanui South**	**3.46**	**70**	P	Pn	14 50 47.2	-1.4
MHCZ	**Mount Hutt**	**3.47**	**63**	P	Pn	14 50 46.7	-2.0
OXZ	**Oxford**	**3.87**	**63**	P	Pn	14 50 51.5	-2.7
INZ	**Inchbonnie**	**3.87**	**52**	P	Pn	14 50 53.2	-1.0
MQZ	**McQueen's Vall**	**4.09**	**70**	P	Pn	14 50 55.4	-1.8
LTZ	**Lake Taylor**	**4.31**	**58**	P	Pn	14 50 57.8	-2.4
OKCZ	**Okains Bay**	**4.36**	**72**	P	Pn	14 50 59.4	-1.6
DSZ	**Denniston Nort**	**4.75**	**45**	P	Pn	14 51 05.3	-1.0
THZ	**Tophouse**	**5.32**	**52**	P	Pn	14 51 12.7	-1.4
QRZ	**Quartz Range**	**5.80**	**43**	P	Pn	14 51 19.6	-1.0
PKE	**Pukeiti**	**7.77**	**42**	P	Pn	14 51 47.6	-0.1

*IDC **16** 14:55:09.1±1.2, 1.66N×126.42E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.6/45, mbtmp3.9/6, ML3.5/1, Error ellipse: s-maj=103.5km s-min=18.9km az=71.0*
*DJA **16** 14:55:13.2±0.3, 2.7N±3.3×12.7E±1.1, h10km, M3.9/13, mB4.6/1, mb4.2/3, MLv3.8/13, Mw(mB)3.8/1*
*NEIC **16** 14:55:15.4±1.7, 1.64N±0.08×126.65E±0.09, h53km±7km, mb4.1/12, Error ellipse: s-maj=15.4km s-min=8.2km az=54.0*
ISC 16 14:55:15.3±0.7, 1.68N±0.05×126.61E±0.08, h47km, n41, σ1s31/39, mb4.1/9, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.17**	**140**	P	**Pn**	**14 55 35.4**	**+0.1**
TNTI				S	**Sn**	**14 55 52.1**	**+1.9**
TNTI	**Ternate**	**1.17**	**140**		**Pn**	**14 55 34.8**	**-0.5**
SGSI	**Sangihe**	**2.27**	**332**	P	**Pn**	**14 55 50.5**	**+0.1**
KMSI	**Cibinong**	**2.85**	**247**	P	**Pn**	**14 55 57.7**	**-0.6**
GTOI	**Gorontalo**	**3.75**	**254**	P	**Pn**	**14 56 12.4**	**+1.8**
SANI	**Sanana**	**3.75**	**190**	P	**Pn**	**14 56 10.3**	**-0.4**
DDMP	**Don Marcelino,**	**4.49**	**348**	*e*P	**Pn**	**14 56 21.1**	**+0.2**
LUWI	**Luwuk**	**4.69**	**235**	P	**Pn**	**14 56 23.5**	**-0.1**
LUWI	**Luwuk**	**4.69**	**235**	Pn	**Pn**	**14 56 23.9**	**+0.2**
MRSI	**Marisa**	**4.82**	**256**	P	Pn	14 56 31.3	+5.9
NLAI	**Namlea**	**4.91**	**174**	P	**Pn**	**14 56 25.8**	**-0.8**
SKMP	**Bagumbayan, Su**	**5.24**	**337**	*e*P	**Pn**	**14 56 29.4**	**-1.7**
MATI	**Mati**	**5.25**	**356**	*e*P	**Pn**	**14 56 33.4**	**+2.1**
KCP	**Kidapawan**	**5.51**	**344**	*i e*P	**Pn**	**14 56 38.5**	**+3.5**
KCP				*i* S	Sn	14 57 46.9	+10
APSI	**Ampana**	**5.59**	**243**	P	**Pn**	**14 56 39.0**	**+3.1**
BUKP	**Musuan**	**6.35**	**346**	*e*P	Pn	14 56 34.8	-12
MPSI	**Mapaga**	**6.84**	**259**	P	**Pn**	**14 56 53.1**	**-0.1**
	0.1nm387nm11nm,0.9s						
PAGZ	**Pagadian**	**6.92**	**332**	*e*P	**Pn**	**14 56 52.4**	**-1.9**
MYLDM	**Lahad Datu**	**8.81**	**293**		**Pn**	**14 57 21.9**	**+1.7**
KKM	**Kota Kinabalu**	**11.24**	**293**	Pn	**Pn**	**14 57 54.7**	**+1.1**
SOEI	**Soe**	**11.59**	**192**	P	Pn	14 58 06.5	+8.1
MTN	**Manton Dam**	**15.11**	**163**	Pn	**Pn**	**14 58 46.0**	**+0.2**
MTN				IAmb	IAmb	14 59 11.7	
	comp=Z,15nm,1.4s						
KNRA	**Kununurra**	**17.37**	**173**	P	**Pn**	**14 59 14.1**	**-0.4**
KNRA				IAmb	IAmb	14 59 38.0	
	comp=Z,16nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.67**	**183**	P	**P**	**14 59 39.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=7.8,slow=11,SNR=3.4						
FITZ	**Fitzroy Crossi**	**19.67**	**183**	IAmb	IAmb	14 59 42.2	
	comp=Z,2.5nm,1.1s						
WB0	**Warramunga Arr**	**22.64**	**161**	P	**P**	**15 00 11.7**	**-0.9**
WB0				IAmb	IAmb	15 00 13.6	
	comp=Z,5.6nm,0.8s						
WRA	**Warramunga Arr**	**22.78**	**161**	P	**P**	**15 00 13.6**	**-0.5**
	comp=Z,6.1nm,0.6s,baz=340,slow=11,SNR=51						
WRA	**Warramunga Arr**	**22.78**	**161**	P	**P**	**15 00 12.7**	**-1.4**
WB2	**Warramunga Arr**	**22.79**	**161**	P	**P**	**15 00 12.6**	**-1.5**
WB2				IAmb	IAmb	15 00 15.7	
	comp=Z,7.8nm,0.8s						
WR0	**Warramunga Arr**	**22.86**	**160**	P	**P**	**15 00 13.7**	**-1.3**
WR0				IAmb	IAmb	15 00 16.9	
	comp=Z,9.4nm,1.1s						
AS31	**Alice Springs**	**26.17**	**165**		**P**	**15 00 45.4**	**-0.1**
ASAR	**Alice Springs**	**26.17**	**165**	P	**P**	**15 00 46.1**	**+0.6**
	comp=Z,2.3nm,0.6s,baz=347,slow=9.5,SNR=52						
ASAR				PcP	**PcP**	**15 04 12.8**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=347,slow=3.8,SNR=2.3						
ASAR	**Alice Springs**	**26.17**	**165**	P	**P**	**15 00 45.2**	**-0.4**
FORT	**Forrest**	**32.30**	**178**	P	**P**	**15 01 40.0**	**+0.1**
JMN	**Monobe**	**32.60**	**11**	P	**P**	**15 01 43.0**	**+0.4**
MJB9	**Matsu-Tunnel**	**36.32**	**16**	P	**P**	**15 02 12.9**	**-1.8**
SONM	**Songino Array**	**49.20**	**342**	P	**P**	**15 03 58.9**	**0.0**
	comp=Z,0.4nm,0.7s,baz=161,slow=9.2,SNR=3.0						
MK31	**Makanchi Array**	**59.17**	**326**	P	**P**	**15 05 10.5**	**-1.0**
MK31				IAmb	IAmb	15 05 11.3	
	comp=Z,1.8nm,1.2s						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**15 05 11.0**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=120,slow=8.4,SNR=18						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**15 05 10.3**	**-1.2**
VNDA	**Vanda**	**81.42**	**173**	P	**P**	**15 07 27.7**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=326,slow=5.0,SNR=7.1						

*IDC **16** 14:56:32.2±0.9, 2.05N×126.75E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/44, mbtmp3.8/8, MS2.8/1, Ms1 2.8/1, ms1mx2.3/36, Error ellipse: s-maj=86.2km s-min=17.5km az=75.0*
*NEIC **16** 14:56:37.5±1.1, 2.05N±0.07×126.75E±0.08, h35km±2km, mb4.4/14, Error ellipse: s-maj=13.5km s-min=10.9km az=242.0*
ISC 16 14:56:37.7±0.6, 2.05N±0.09×126.8E±0.1, h35km, n30, σ0s79/31, mb4.2/13, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**156**	Pn	**Pn**	**14 57 01.6**	**+1.0**
SIJI	**Serong**	**5.33**	**123**	LR	LR	15 00 21.8	
	comp=Z,111nm,21.6s,baz=89,slow=43						
FAKI	**Fak Fak**	**7.36**	**132**	Pn	**Pn**	**14 58 23.9**	**+1.2**
MYLDM	**Lahad Datu**	**8.84**	**291**	Pn	**Pn**	**14 58 42.9**	**-0.2**
KKM	**Kota Kinabalu**	**11.27**	**291**	Pn	**Pn**	**14 59 18.8**	**+2.3**
SBUM	**Sibu**	**14.56**	**272**		**P**	**15 00 06.9**	**-0.6**
KNRA	**Kununurra**	**17.72**	**174**	P	**Pn**	**15 00 42.6**	**+0.7**
KNRA				IAmb	IAmb	15 01 04.1	
	comp=Z,27nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.05**	**183**	P	**P**	**15 01 07.3**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=24,slow=7.3,SNR=7.3						
WB0	**Warramunga Arr**	**22.93**	**161**	P	**P**	**15 01 37.6**	**-1.3**
WB0				IAmb	IAmb	15 01 43.4	
	comp=Z,5.2nm,0.6s						
WRAB	**Tennant Creek**	**23.07**	**162**	P	**P**	**15 01 40.1**	**-0.3**
WRAB				IAmb	IAmb	15 01 41.8	
	comp=Z,8.4nm,0.6s						
WRA	**Warramunga Arr**	**23.07**	**162**	P	**P**	**15 01 40.0**	**-0.4**
	comp=Z,6.4nm,0.5s,baz=340,slow=11,SNR=21						
WRA				PcP	**PcP**	**15 05 28.8**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=333,slow=2.0,SNR=1.6						
WRA	**Warramunga Arr**	**23.07**	**162**	P	**P**	**15 01 39.6**	**-0.9**
WB2	**Warramunga Arr**	**23.08**	**162**	P	**P**	**15 01 40.0**	**-0.5**
WB2				IAmb	IAmb	15 01 41.9	
	comp=Z,7.3nm,0.6s						
WR0	**Warramunga Arr**	**23.15**	**161**	P	**P**	**15 01 40.8**	**-0.4**
AS31	**Alice Springs**	**26.48**	**165**	P	**P**	**15 02 11.9**	**0.0**
ASAR	**Alice Springs**	**26.48**	**165**	P	**P**	**15 02 11.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=346,slow=13,SNR=9.5						
ASAR				PcP	**PcP**	**15 05 36.4**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=347,slow=2.3,SNR=4.2						
JMN	**Monobe**	**32.21**	**11**	P	**P**	**15 03 02.8**	**+0.1**
JMN				IAmb	IAmb	15 03 07.0	
	comp=Z,9.8nm,1.0s						
MORW	**Morawa**	**32.61**	**198**	P	**P**	**15 03 05.7**	**-0.5**
FORT	**Forrest**	**32.66**	**178**	P	**P**	**15 03 06.1**	**-0.5**
JHS	**Saijyo**	**33.31**	**9**	P	**P**	**15 03 12.1**	**-0.2**
KSRS	**Korea Array**	**35.25**	**2**	P	**P**	**15 03 28.5**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=180,slow=9.7,SNR=2.3						
BBOO	**Buckleboo**	**35.76**	**167**	P	**P**	**15 03 33.6**	**+0.2**
BBOO				IAmb	IAmb	15 03 40.0	
	comp=Z,15nm,1.4s						
STKA	**Stephens Creek**	**36.55**	**159**	P	**P**	**15 03 39.2**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=336,slow=13,SNR=3.4						
SONM	**Songino Array**	**48.90**	**342**	P	**P**	**15 05 20.3**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=166,slow=6.7,SNR=2.7						
MK31	**Makanchi Array**	**58.97**	**326**	P	**P**	**15 06 33.2**	**-0.6**
MK31				IAmb	IAmb	15 06 33.4	
	comp=Z,3.1nm,1.2s						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**15 06 33.1**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=126,slow=7.4,SNR=4.2						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**15 06 32.9**	**-0.9**
KKAR	**Karatay Array**	**64.50**	**318**	P	**P**	**15 07 12.4**	**+1.2**
ABKAR	**Akbulak array**	**73.49**	**321**	P	**P**	**15 08 06.4**	**-0.4**
VNDA	**Vanda**	**81.76**	**173**	P	**P**	**15 08 52.5**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=319,slow=5.1,SNR=3.1						

IDC 16 15:33:06.6±3.5, 33.11S×178.07W, h0km, mb3.1/2, mb1 3.5/3, mb1mx3.4/32, mbtmp3.4/3, ML4.0/1, Error ellipse: s-maj=81.2km s-min=48.0km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.47**	**216**	Pn	Pn	15 34 42.6	-0.4
	3.2nm,0.3s,baz=277,slow=2.8,SNR=24						
URZ				Sn	Sn	15 35 49.2	-8.3
	3.6nm,0.3s,baz=342,slow=16,SNR=6.5						
ASAR	**Alice Springs**	**42.97**	**270**	P	P	15 41 07.7	0.0
	0.2nm,0.5s,baz=110,slow=7.3,SNR=8.4						
WRA	**Warramunga Arr**	**44.21**	**275**	P	P	15 41 17.4	-0.3
	0.2nm,0.6s,baz=114,slow=7.6,SNR=4.7						
FINES	**FINESS Array B**	**147.65**	**338**	PKPbc	PKPbc	15 52 51.5	-0.7
	2.8nm,1.0s,baz=48,slow=2.1,SNR=1.5						

*JMA **16** 15:33:56.9±0.1, 29.45N×140.00E, h430km, M3.6*
*NEIC **16** 15:33:57.6±1.5, 29.29N±0.08×139.6E±0.1, h407km±8km, mb4.0/40, Error ellipse: s-maj=15.3km s-min=11.9km az=87.0*
*IDC **16** 15:33:58.3±1.4, 29.39N×139.54E, h416km±16km, mb3.1/17, mb1 3.3/21, mb1mx3.1/43, mbtmp3.9/21, Error ellipse: s-maj=17.1km s-min=10.9km az=85.0*
ISC 16 15:33:57.9±0.4, 29.36N±0.06×139.57E±0.07, h414km, n95, σ1s12/99, mb3.8/34, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.23**	**134**	P	**P**	**15 35 03.1**	**-0.9**
CBIJ				*e*S	**S**	**15 35 54.4**	**-3.3**
JCJ	**Chichijima**	**3.23**	**134**	Pn	**P**	**15 35 03.2**	**-0.8**
JHH2	**Haha-jima-NKT2**	**3.56**	**139**	P	**P**	**15 35 05.9**	**-0.9**
JHH2				*e*S	**S**	**15 36 00.7**	**-2.2**
JHJ2	**Mitsune**	**3.75**	**3**	P	**P**	**15 35 08.7**	**+0.4**
JHJ2	**Mitsune**	**3.75**	**3**	Pn	**P**	**15 35 08.6**	**+0.4**
JHJ	**Hachijo jima 2**	**3.75**	**3**	P	**P**	**15 35 08.7**	**+0.3**
	9.7nm,0.3s,baz=145,slow=22,SNR=13						
JHJ				S	**S**	**15 36 01.5**	**-4.3**
	18nm,0.3s,baz=261,slow=24,SNR=6.5						
JIE	**Ise**	**5.58**	**335**	P	**P**	**15 35 28.1**	**+1.9**
JOD2	**Odawara 2**	**5.90**	**356**	*e*S	**S**	**15 36 40.8**	**-4.0**
JNY	**Yasuok**	**6.15**	**347**	P	**P**	**15 35 33.3**	**+1.0**
INU	**Inuyama**	**6.35**	**341**	Pn	**P**	**15 35 35.8**	**+1.5**
JGF	**Kuroka**	**6.50**	**344**	Pn	**P**	**15 35 35.8**	**-0.2**
JMN	**Monobe**	**6.52**	**313**	Pn	**P**	**15 35 38.4**	**+1.4**
JRY	**Ryogami san**	**6.66**	**355**	P	**P**	**15 35 37.8**	**-0.6**
JRY				*e*S	**S**	**15 36 56.4**	**-3.5**
JWT	**Wachi**	**6.88**	**330**	Pn	**P**	**15 35 41.3**	**+0.5**
MJAR	**Matsushiro Arr**	**7.25**	**351**	P	**P**	**15 35 43.4**	**-1.4**
	0.1nm,0.3s,baz=169,slow=10,SNR=3.3						
MAJO	**Matsushiro**	**7.25**	**351**		**P**	**15 35 44.1**	**-0.8**
JMM	**Marumori**	**8.54**	**7**	P	**P**	**15 35 59.0**	**0.0**
JTM	**Tenmabayashi**	**11.47**	**6**	P	**P**	**15 36 32.7**	**+1.5**
KSRS	**Korea Array**	**12.63**	**313**	P	**P**	**15 36 44.9**	**+0.9**
	0.3nm,0.3s,baz=126,slow=10,SNR=12						
KSAR	**Wonju Array Be**	**12.65**	**313**	P	**P**	**15 36 45.2**	**+1.0**
KS19	**Wonju Array Si**	**12.70**	**313**	P	**P**	**15 36 45.6**	**+0.8**
JEW	**Eniwo**	**13.54**	**6**	P	**P**	**15 36 55.9**	**+2.0**
ASAJ	**Asahikawa**	**14.93**	**8**	P	**P**	**15 37 08.9**	**0.0**
	0.2nm,0.3s,baz=157,slow=16,SNR=2.0						
JKA	**Kamikawa-asahi**	**14.93**	**9**	P	**P**	**15 37 08.9**	**+0.1**
NACB	**Ninganchiao**	**16.86**	**256**	P	**P**	**15 37 28.1**	**-1.7**
YHNB	**Yeheng**	**16.87**	**258**	P	**P**	**15 37 29.0**	**-1.0**
YULB	**Yu-li**	**17.41**	**254**	P	**P**	**15 37 34.4**	**-1.3**
SSLB	**Suanglung**	**17.55**	**256**	P	**P**	**15 37 36.2**	**-1.0**
KLR	**Kul'dur**	**20.72**	**345**	P	**P**	**15 38 08.2**	**+0.4**
	1.3nm,0.8s,baz=180,slow=7.1,SNR=2.1						
ENH	**Enshi**	**26.08**	**280**	P	**P**	**15 38 55.5**	**-0.7**
ENH				IAmb	IAmb	15 38 56.9	
	comp=Z,7.0nm,0.7s						
SONM	**Songino Array**	**31.49**	**315**	P	**P**	**15 39 44.3**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=112,slow=7.0,SNR=7.0						
SONM	**Songino Array**	**31.49**	**315**	IAmb	IAmb	15 39 45.6	
	comp=Z,1.1nm,0.8s						
CHTO	**Chiang Mai**	**38.37**	**263**	P	**P**	**15 40 42.2**	**+0.4**
CHTO				IAmb	IAmb	15 40 42.8	
	comp=Z,3.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.52**	**263**	P	**P**	**15 40 42.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=76,slow=4.5,SNR=8.8						
ADK	**Adak**	**39.32**	**43**	P	**P**	**15 40 50.5**	**+1.6**
ADK				IAmb	IAmb	15 41 15.7	
	comp=Z,31nm,1.2s						
SHL	**Shillong**	**42.26**	**277**	P	**P**	**15 41 13.0**	**-0.3**
MTN	**Manton Dam**	**42.74**	**192**	P	**P**	**15 41 17.5**	**+0.6**
MTN				IAmb	IAmb	15 41 19.4	
	comp=Z,15nm,1.4s						
KULM	**Kulim**	**43.86**	**245**	P	**P**	**15 41 26.2**	**+0.3**
KULM				IAmb	IAmb	15 41 49.0	
	comp=Z,19nm,1.3s						

NIKH	**Nikolski High**	**44.23**	**43**	P	**P**	**15 41 29.6**	**+1.5**
TAPN	**Taplejung**	**45.37**	**281**	*e*P	**P**	**15 41 38.1**	**+0.3**
	comp=Z,9.4nm,0.5s						
ODAN	**Odare**	**45.78**	**280**	*e*P	**P**	**15 41 40.6**	**-0.3**
KNRA	**Kununurra**	**45.97**	**195**	P	**P**	**15 41 43.1**	**+1.1**
KNRA				IAmb	IAmb	15 41 44.9	
	comp=Z,13nm,1.2s						
ZALV	**Zalesovo Beam**	**46.27**	**318**	P	**P**	**15 41 42.9**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=75,slow=6.8,SNR=4.5						
RAMN	**Ramite**	**46.43**	**280**	*e*P	**P**	**15 41 45.9**	**0.0**
	comp=Z,9.0nm,0.4s						
GUN	**Gumba**	**46.80**	**282**	*e*P	**P**	**15 41 49.5**	**+0.7**
	comp=Z,12nm,0.4s						
MK31	**Makanchi Array**	**47.26**	**308**	P	**P**	**15 41 51.8**	**+0.1**
MKAR	**Makanchi Array**	**47.26**	**308**	P	**P**	**15 41 51.9**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=86,slow=10,SNR=19						
MKAR				PcP	**PcP**	**15 43 14.9**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=97,slow=4.9,SNR=2.7						
PKIN	**Phulchoki**	**47.30**	**282**	*e*P	**P**	**15 41 52.5**	**0.0**
	comp=Z,3.9nm,0.4s						
KKN	**Kakani**	**47.34**	**282**	*e*P	**P**	**15 41 53.1**	**+0.3**
MAKZ	**Makanchi**	**47.48**	**308**	P	**P**	**15 41 53.5**	**+0.1**
DMN	**Daman**	**47.53**	**282**	*e*P	**P**	**15 41 54.6**	**+0.3**
GKN	**Gorkha**	**47.83**	**282**	*e*P	**P**	**15 41 57.4**	**+1.0**
	comp=Z,4.6nm,0.3s						
DANN	**Dangsing**	**48.48**	**283**	*e*P	**P**	**15 42 02.2**	**+0.7**
	comp=Z,10nm,0.4s						
KOLN	**Koldanda**	**48.78**	**282**	*e*P	**P**	**15 42 03.9**	**+0.3**
	comp=Z,9.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**49.06**	**198**	P	**P**	**15 42 05.6**	**+0.2**
WB0	**Warramunga Arr**	**49.10**	**186**	P	**P**	**15 42 06.1**	**+0.4**
WB0				IAmb	IAmb	15 42 06.7	
	comp=Z,2.2nm,0.5s						
PYUN	**Piuthan**	**49.21**	**283**	*e*P	**P**	**15 42 07.4**	**+0.6**
	comp=Z,39nm,0.4s						
WRAB	**Tennant Creek**	**49.26**	**186**	P	**P**	**15 42 07.0**	**+0.1**
WRAB				IAmb	IAmb	15 42 11.2	
	comp=Z,8.7nm,1.1s						
WR0	**Warramunga Arr**	**49.27**	**186**	P	**P**	**15 42 07.3**	**+0.3**
WR0				IAmb	IAmb	15 42 32.1	
	comp=Z,6.0nm,1.4s						
WB2	**Warramunga Arr**	**49.27**	**186**	P	**P**	**15 42 07.3**	**+0.3**
WB2				IAmb	IAmb	15 42 27.9	
	comp=Z,5.4nm,1.4s						
WRA	**Warramunga Arr**	**49.27**	**186**	P	**P**	**15 42 07.4**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=2.6,slow=7.9,SNR=46						
WRA	**Warramunga Arr**	**49.27**	**186**	P	**P**	**15 42 06.9**	**-0.2**
KURK	**Kurchatov**	**49.76**	**313**	P	**P**	**15 42 10.1**	**-0.1**
KURBB	**Kurchatov Arra**	**49.81**	**313**	P	**P**	**15 42 10.5**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=92,slow=7.1,SNR=13						
BOOM	**Boomskoye usch**	**52.04**	**303**	P	**P**	**15 42 28.1**	**+0.6**
AS31	**Alice Springs**	**53.00**	**187**	P	**P**	**15 42 34.1**	**-0.2**
ASAR	**Alice Springs**	**53.00**	**187**	P	**P**	**15 42 34.9**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=16,slow=13,SNR=21						
ASAR	**Alice Springs**	**53.00**	**187**	P	**P**	**15 42 34.6**	**+0.3**
CNPM	**China Poot**	**54.71**	**36**	P	**P**	**15 42 47.2**	**+1.1**
BRVK	**Borovoye**	**54.88**	**316**	P	**P**	**15 42 47.7**	**+0.4**
EIDS	**Eidsvold**	**55.53**	**167**	P	**P**	**15 42 51.2**	**-1.0**
EIDS				IAmb	IAmb	15 43 06.1	
	comp=Z,15nm,1.2s						
KK31	**Karatay Array**	**55.90**	**304**	P	**P**	**15 42 55.0**	**+0.3**
KK31				IAmb	IAmb	15 42 55.8	
	comp=Z,2.6nm,0.6s						
KKAR	**Karatay Array**	**55.90**	**304**	P	**P**	**15 42 55.0**	**+0.3**
RND	**Reindeer**	**55.96**	**31**	P	**P**	**15 42 56.3**	**+1.4**
RND				IAmb	IAmb	15 43 04.2	
	comp=Z,11nm,1.4s						
GAR	**Garm**	**56.86**	**300**	P	**P**	**15 43 01.8**	**+0.2**
GAR				IAmb	IAmb	15 43 02.5	
	comp=Z,4.6nm,0.9s						
ILAR	**Eielson Array**	**56.86**	**29**	P	**P**	**15 43 01.9**	**+0.9**
	com

IKMR	**Kamar-syah**	**1.11**	**37**	*e*Pg	**Pn**	**15 47 20.3**	**+0.2**
IKMR				*e*Sg	**Sn**	**15 47 35.8**	**-0.2**
IKMR				*e*		15 47 39.1	
IDOB	**Doab**	**1.26**	**24**	*e*Pg	**Pn**	**15 47 21.3**	**-1.0**
IDOB				*e*Sg	**Sn**	**15 47 39.9**	**0.0**
IDOB				*e*		15 47 42.0	
IBDR	**Badra**	**1.46**	**289**	*e*Pg	**Pn**	**15 47 24.0**	**-0.8**
IBDR				*e*Sg	**Sn**	**15 47 44.0**	**-0.5**
IBDR				AML	AML	15 47 50.5	
	comp=E,133nm,0.7s						
IBDR				AML	AML	15 47 52.8	
	comp=N,81nm,0.8s						
BMDN	**Meydan**	**1.48**	**45**	*e*Pg	**Pn**	**15 47 25.0**	**-0.3**
BMDN				*e*		15 47 57.8	
IKOM	**Komasi**	**1.54**	**358**	*e*Pg	**Pn**	**15 47 26.7**	**+0.6**
IKOM				*e*		15 47 50.7	
HSAM	**Samen**	**1.80**	**28**	*e*Pg	**Pb**	**15 47 31.5**	**+0.2**
HSAM				*e*Sg	**Sg**	**15 47 57.1**	**+1.8**
HSAM				*e*		15 48 02.8	
IGHG	**Ghaleghazi**	**1.89**	**334**	*e*Pg	**Pb**	**15 47 33.2**	**+0.4**
IGHG				*e*		15 48 19.4	
NSR	**Nassriya**	**2.02**	**217**	*e*Pn	**Pn**	**15 47 33.0**	**+0.4**
NSR				*e*Sn	**Sn**	**15 47 58.0**	**-0.4**
BHD	**Baghdad**	**2.76**	**284**	*e*Pn	**Pn**	**15 47 43.0**	**+0.3**
BHD				*e*Sn	**Sn**	**15 48 17.0**	**+0.5**

*IDC **16** 15:50:16.6±0.9, 1°.92N×126°.56E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/36, mbtmp3.6/7, ML3.4/1, Error ellipse: s-maj=67.5km s-min=17.7km az=77.0*
*DJA **16** 15:50:20.9±0.3, 2°.N±4°×12°.7E±°, h10km, M3.8/12, mb3.9/1, MLv3.8/12*
*NEIC **16** 15:50:22.9±1.2, 1°.9N±0°.1×126°.62E±0°.09, h50km±10km, mb4.1/16, Error ellipse: s-maj=20.7km s-min=3.0km az=218.0*

ISC 16 15:50:22.8±0.6,**1°.93N**±0°.04×**126°.57E**±0°.08,**h47**km,**n44, σ1§10/49,mb4.0/13,1C,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**145**	P	**Pn**	**15 50 46.2**	**+0.3**
TNTI	**Ternate**	**1.40**	**145**	Pn	**Pn**	**15 50 45.8**	**-0.1**
SGSI	**Sangihe**	**2.03**	**329**	P	**Pn**	**15 50 54.1**	**-0.5**
KMSI	**Cibinong**	**2.91**	**243**	P	**Pn**	**15 51 07.9**	**+1.2**
GTOI	**Gorontalo**	**3.78**	**250**	P	**Pn**	**15 51 20.2**	**+1.6**
SANI	**Sanana**	**3.99**	**188**	P	**Pn**	**15 51 22.2**	**+0.7**
DDMP	**Don Marcelino,**	**4.24**	**348**	*e*P	**Pn**	**15 51 25.3**	**+0.4**
DDMP				*e*S	**Sn**	**15 52 11.7**	**-1.4**
LUWI	**Luwuk**	**4.80**	**232**	P	**Pn**	**15 51 33.1**	**+0.5**
LUWI	**Luwuk**	**4.80**	**232**	Pn	**Pn**	**15 51 33.4**	**+0.7**
MRSI	**Marisa**	**4.84**	**253**	P	**Pn**	**15 51 34.9**	**+1.7**
SKMP	**Bagumbayan, Su**	**4.99**	**336**	*e*P	**Pn**	**15 51 34.9**	**-0.3**
SKMP				*e*S	**Sn**	**15 52 30.4**	**-1.2**
MATI	**Mati**	**5.00**	**356**	*e*P	**Pn**	**15 51 37.9**	**+2.5**
MATI				*e*S	**Sn**	**15 52 34.5**	**+2.7**
KCP	**Kidapawan**	**5.26**	**344**	*e*P	Pn	15 51 44.8	+5.9
BUKP	**Musuan**	**6.10**	**346**	*e*P	**Pn**	**15 51 52.6**	**+2.1**
BUKP				*e*S	**Sn**	**15 52 59.3**	**+0.2**
PAGZ	**Pagadian**	**6.68**	**332**	*e*P	**Pn**	**15 51 58.9**	**+0.4**
MYLDM	**Lahad Datu**	**8.68**	**292**	Pn	**Pn**	**15 52 26.6**	**+0.8**
SOEI	**Soe**	**11.83**	**191**	Pn	**Pn**	**15 53 05.4**	**-3.6**
MTN	**Manton Dam**	**15.36**	**163**	Pn	**Pn**	**15 53 56.6**	**+0.1**
MTN				IAmb	IAmb	15 54 10.7	
	comp=Z,18nm,1.4s						
KSM	**Kuching**	**16.26**	**269**	Pn	**Pn**	**15 54 06.5**	**-1.5**
KNRA	**Kununurra**	**17.62**	**173**	P	**P**	**15 54 26.3**	**+0.7**
KNRA				IAmb	IAmb	15 54 48.3	
	comp=Z,28nm,1.5s						
FITZ	**Fitzroy Crossi**	**19.92**	**183**	P	**P**	**15 54 50.3**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=3.5,slow=13,SNR=2.0						
FITZ	**Fitzroy Crossi**	**19.92**	**183**	P	**P**	**15 54 50.6**	**-0.1**
COEN	**Coen**	**22.80**	**134**	P	**P**	**15 55 21.4**	**-0.5**
COEN				IAmb	IAmb	15 55 43.9	
	comp=Z,10nm,1.3s						
WB0	**Warramunga Arr**	**22.89**	**161**	P	**P**	**15 55 21.9**	**-0.8**
WB0				IAmb	IAmb	15 55 26.1	
	comp=Z,3.6nm,0.6s						
WRAB	**Tennant Creek**	**23.03**	**161**	P	**P**	**15 55 23.3**	**-0.7**
WRAB				IAmb	IAmb	15 55 43.6	
	comp=Z,6.7nm,0.9s						
WRA	**Warramunga Arr**	**23.03**	**161**	P	**P**	**15 55 23.3**	**-0.8**
	comp=Z,1.8nm,0.4s,baz=339,slow=11,SNR=32						
WRA				PcP	**PcP**	**15 59 13.1**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=328,slow=2.4,SNR=1.3						
WRA	**Warramunga Arr**	**23.03**	**161**	P	**P**	**15 55 23.3**	**-0.8**
WB2	**Warramunga Arr**	**23.04**	**161**	P	**P**	**15 55 23.5**	**-0.6**
WB2				IAmb	IAmb	15 55 27.3	
	comp=Z,5.9nm,1.1s						
WR0	**Warramunga Arr**	**23.11**	**161**	P	**P**	**15 55 24.3**	**-0.6**
AS31	**Alice Springs**	**26.42**	**165**	P	**P**	**15 55 55.7**	**+0.4**
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**15 55 55.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=345,slow=8.2,SNR=20						
ASAR				PcP	**PcP**	**15 59 20.9**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=352,slow=2.1,SNR=7.9						
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**15 55 55.3**	**0.0**
BBOO	**Buckleboo**	**35.70**	**166**	P	**P**	**15 57 17.0**	**+0.2**
MJAR	**Matsushiro Arr**	**36.09**	**16**	P	**P**	**15 57 20.2**	**0.0**
	comp=Z,0.5nm,0.5s,baz=204,slow=8.2,SNR=0.8						
SONM	**Songino Array**	**48.95**	**342**	P	**P**	**15 59 05.1**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=148,slow=5.8,SNR=2.8						
MK31	**Makanchi Array**	**58.94**	**326**	P	**P**	**16 00 17.4**	**0.0**
MK31				IAmb	IAmb	16 00 26.9	
	comp=Z,3.3nm,1.3s						
MKAR	**Makanchi Array**	**58.94**	**326**	P	**P**	**16 00 17.6**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=122,slow=7.8,SNR=12						
MKAR	**Makanchi Array**	**58.94**	**326**	P	**P**	**16 00 17.2**	**-0.2**
MAKZ	**Makanchi**	**59.13**	**326**	P	**P**	**16 00 18.8**	**+0.2**
GAR	**Garm**	**63.03**	**313**	P	**P**	**16 00 45.8**	**+0.4**
KURK	**Kurchatov**	**63.17**	**328**	P	**P**	**16 00 45.9**	**0.0**
KURK				IAmb	IAmb	16 00 47.6	
	comp=Z,1.6nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**71.90**	**309**	P	**P**	**16 01 40.1**	**-1.3**
GYA0B				IAmb	IAmb	16 01 51.8	
	comp=Z,2.8nm,0.6s						
ABKAR	**Akbulak array**	**73.44**	**321**	P	**P**	**16 01 49.7**	**-0.5**
VNDA	**Vanda**	**81.67**	**173**	P	**P**	**16 02 36.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=314,slow=6.3,SNR=5.1						

*REY **16** 16:05:11.7, 64°.67N×17°.44W, h6km*
*NEIC **16** 16:05:12.6±1.7, 64°.53N±0°.09×17°.8W±0°.2, h8km±5km, mb4.4/9, Error ellipse: s-maj=13.7km s-min=9.1km az=191.0*
*IDC **16** 16:05:12.3±0.8, 64°.56N×17°.67W, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.7/40, mbtmp3.7/12, ML3.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/49, Error ellipse: s-maj=24.0km s-min=11.0km az=18.0*

ISC 16 16:05:13.1±0.5,**64°.66N**±0°.02×**17°.46W**±0°.02,**h10**km,**n74, σ2§19/89,mb3.8/14,Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.13**	**274**	P	**Pg**	**16 05 14.5**	**-1.7**
	baz=272						
IVON				S	**Sg**	**16 05 17.2**	**-1.1**
	baz=272						
IDYN	**Dyngjuhals**	**0.13**	**17**	P	**Pg**	**16 05 14.5**	**-1.8**
	baz=15						
IHAM	**Hamarinn**	**0.24**	**221**	P	**Pg**	**16 05 16.6**	**-1.5**
	baz=221						
IHAM				S	**Sg**	**16 05 20.2**	**-1.2**
	baz=221						
IGRF	**Grimsfjall**	**0.27**	**162**	P	**Pg**	**16 05 17.0**	**-1.6**
	baz=164						
IKVE	**Kverkfjoll**	**0.34**	**87**	P	**Pg**	**16 05 18.0**	**-1.9**
	baz=88						
IHUS	**Husbondi**	**0.38**	**193**	P	**Pg**	**16 05 19.1**	**-1.5**
	baz=194						
IHUS				S	**Sg**	**16 05 24.5**	**-1.1**
	baz=194						
IVOT	**Vottur**	**0.41**	**163**	P	**Pg**	**16 05 19.4**	**-1.8**
	baz=164						
ISKR	**Skrokkalda**	**0.41**	**256**	P	**Pg**	**16 05 19.4**	**-1.8**
	baz=255						
THOR	**Thorvaldshraun**	**0.43**	**51**	P	**Pg**	**16 05 19.5**	**-2.1**
	baz=51						
THOR				S	**Sg**	**16 05 25.6**	**-1.7**
	baz=51						
IKRE	**Kreppuhraun**	**0.48**	**75**	P	**Pg**	**16 05 20.1**	**-2.3**
	baz=75						
IKRE				S	**Sg**	**16 05 26.9**	**-1.8**
	baz=75						
IJOK	**Jokulheimar**	**0.48**	**224**	P	**Pg**	**16 05 20.6**	**-1.9**
	baz=224						
IJOK				S	**Sg**	**16 05 27.8**	**-1.0**
	baz=224						
IASK	**Askja**	**0.52**	**41**	P	**Pg**	**16 05 20.9**	**-2.3**
	baz=41						
IASK				S	**Sg**	**16 05 27.9**	**-2.2**
	baz=41						
IMKO	**Mokollar**	**0.57**	**56**	P	**Pg**	**16 05 22.0**	**-2.3**
	baz=56						
IMKO				S	**Sg**	**16 05 30.2**	**-1.5**
	baz=56						
IIEY	**Innrieyrar**	**0.64**	**207**	P	**Pg**	**16 05 23.2**	**-2.2**
	baz=208						
IIEY				S	**Sg**	**16 05 32.1**	**-1.7**
	baz=208						
IKSK	**Karasker**	**0.66**	**139**	P	**Pg**	**16 05 22.9**	**-2.9**
	baz=140						
IKSK				S	**Sg**	**16 05 32.4**	**-2.2**
	baz=140						
ISVA	**Svartarkot**	**0.68**	**7**	P	**Pg**	**16 05 23.7**	**-2.6**
	baz=6.7						
IKAL	**Kalfafell**	**0.72**	**188**	P	**Pg**	**16 05 24.8**	**-2.3**
	baz=188						
IKAL				S	**Sg**	**16 05 34.1**	**-2.4**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.76**	**78**	P	**Pg**	**16 05 24.8**	**-2.9**
	baz=78						
IVSH				S	**Sg**	**16 05 35.0**	**-2.5**
	baz=78						
IVAT	**Vatnsfell**	**0.79**	**234**	P	**Pg**	**16 05 26.0**	**-2.3**
	baz=234						
IVAT				S	**Sg**	**16 05 36.1**	**-2.6**
	baz=234						
IFAG	**Fagurholsmyri**	**0.87**	**156**	P	**Pg**	**16 05 26.9**	**-2.8**
	baz=156						
IFAG				S	**Sg**	**16 05 37.9**	**-3.1**
	baz=156						
IADA	**Aoalbol**	**0.88**	**65**	P	**Pg**	**16 05 26.8**	**-3.2**
	baz=66						
IADA				S	**Sg**	**16 05 38.6**	**-2.9**
	baz=66						
IHVE	**Hveravellir**	**0.93**	**284**	P	**Pg**	**16 05 27.6**	**-3.3**
	baz=283						
IHVE				S	**Sg**	**16 05 40.4**	**-2.6**
	baz=283						
IMEL	**Melhnausar**	**0.97**	**20**	P	**Pg**	**16 05 28.4**	**-3.4**
	baz=20						
IREN	**Reynihlio**	**1.01**	**13**	P	**Pg**	**16 05 29.2**	**-3.4**
	baz=13						
ISNB	**Snabyli**	**1.06**	**209**	P	**Pg**	**16 05 30.5**	**-3.0**
	baz=210						
ISNB				S	**Sg**	**16 05 44.0**	**-3.3**
	baz=210						
IKVO	**Krokottuvotn**	**1.08**	**13**	P	**Pg**	**16 05 30.2**	**-3.7**
	baz=12						
ISLY	**Slysaalda**	**1.11**	**221**	P	**Pb**	**16 05 31.4**	**-3.0**
	baz=222						
IFED	**Fedgar**	**1.16**	**238**	P	**Pb**	**16 05 32.5**	**-2.8**
	baz=238						
IRJU	**Rjupnafell**	**1.18**	**207**	P	**Pb**	**16 05 32.4**	**-3.1**
	baz=208						
IMJO	**Mjoaskard**	**1.21**	**234**	P	**Pb**	**16 05 33.0**	**-3.1**
	baz=234						
ISKI	**Skildingahlsh**	**1.23**	**8**	P	**Pn**	**16 05 32.7**	**-3.6**
	baz=8.1						
IGHA	**Grjothals**	**1.23**	**15**	P	**Pn**	**16 05 32.5**	**-3.8**
	baz=15						
IGRA	**Granastaoir**	**1.26**	**358**	P	**Pn**	**16 05 33.0**	**-3.7**
	baz=358						
IALF	**Alftagrof**	**1.40**	**214**	P	**Pn**	**16 05 36.1**	**-2.5**
	baz=214						
IGIL	**Gilhagi**	**1.49**	**18**	P	**Pn**	**16 05 36.4**	**-3.5**
	baz=17						
BORG	**Borgarnes**	**1.66**	**275**	Pg	**Pn**	**16 05 39.5**	**-2.7**
	24nm,0.3s,baz=101,slow=7.8,SNR=88						
BORG				Lg	Lg	16 06 03.7	
	9.8nm,0.3s,baz=77,slow=17,SNR=3.5						
BORG	**Borgarnes**	**1.66**	**275**	Pn	**Pn**	**16 05 39.4**	**-2.8**
SCO	**Scoresbysund**	**6.09**	**346**	Pn	**Pn**	**16 06 42.7**	**-0.3**
SCO	**Scoresbysund**	**6.09**	**346**	*e*	**Pn**	**16 06 40.6**	**-2.4**
	baz=165,slow=8.6						
SCO				*i* P	Pb	16 06 42.0	-17
SCO				*i* S	**Sn**	**16 07 56.0**	**+3.4**
SCO				IAML		16 08 04.9	
	comp=Z,1.7nm,0.4s						
SUMG	**Summit**	**10.95**	**325**	Pn	**Pn**	**16 07 51.5**	**+1.5**
EKB10	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**16 08 00.5**	**+0.4**
EKB9	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**16 07 59.8**	**-0.3**
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn	**Pn**	**16 08 00.3**	**-0.1**
	baz=322,slow=13,SNR=10						
ESK	**Eskdalemuir**	**11.74**	**136**	Pn	**Pn**	**16 08 00.7**	**+0.2**
NBO00	**NORSAR Array S**	**13.33**	**93**	Pn	**Pn**	**16 08 24.7**	**+2.6**
HFS	**Hagfors**	**15.03**	**93**	Pn	**Pn**	**16 08 45.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=278,slow=10.0,SNR=1.2						
ARB3	**ARCESS Array S**	**17.11**	**55**	Pn	**P**	**16 09 13.9**	**+0.3**
ARB3				IAmb	IAmb	16 09 38.7	
	comp=Z,43nm,1.5s						
ARD2	**ARCESS Array S**	**17.11**	**55**		**P**	**16 09 14.8**	**+1.1**
ARD2				IAmb	IAmb	16 09 41.4	
	comp=Z,46nm,1.4s						
FINES	**FINESS Array B**	**19.69**	**79**	P	**Pn**	**16 09 44.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=265,slow=9.6,SNR=4.0						
CLL	**Collm**	**20.69**	**116**	*i* P	Pn	16 09 54.4	-0.9
	comp=Z,6.0nm,1.4s						
BRG	**Berggiesshubel**	**21.40**	**115**	*e*P	**P**	**16 10 01.1**	**+0.5**
	comp=Z,6.0nm,1.0s						
KHC	**Kasperske Hory**	**22.66**	**118**	*e*P	**P**	**16 10 15.0**	**+0.8**
DPC	**Dobruska-Polom**	**22.74**	**113**	*e*P	**P**	**16 10 16.7**	**+1.6**
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**16 10 17.9**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=341,slow=7.2,SNR=6.0						
EUNU	**Eureka**	**23.68**	**336**	P	**P**	**16 10 26.1**	**+1.8**
EUNU				IAmb	IAmb	16 10 27.8	
	comp=Z,12nm,1.2s						
BNI	**Bardonecchia**	**23.79**	**134**	P	**P**	**16 10 25.9**	**+0.2**
BNI				IAmb	IAmb	16 10 51.1	
	comp=Z,14nm,1.4s						
ESDC	**Sonseca Array**	**26.24**	**156**	P	**P**	**16 10 49.0**	**+0.9**
	comp=Z,1.5nm,0.9s,baz=353,slow=10,SNR=5.4						
RES	**Resolute Bay**	**26.48**	**324**	LR	LR	16 22 11.0	
	comp=Z,28nm,21.2s,baz=182,slow=38						
BRTR	**Keskin Array B**	**38.46**	**105**	P	**P**	**16 12 36.7**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=343,slow=5.3,SNR=4.2						
INK	**Inuvik**	**39.85**	**329**	P	**P**	**16 12 46.6**	**+0.6**
	comp=Z,1.6nm,1.0s,baz=58,slow=12,SNR=3.3						
TIXI	**Tiksi**	**42.03**	**15**	P	**P**	**16 13 05.9**	**+2.0**
ILAR	**Eielson Array**	**45.70**	**332**	P	**P**	**16 13 36.0**	**+2.5**
	comp=Z,1.1nm,1.0s,baz=23,slow=6.5,SNR=7.6						
ZALV	**Zalesovo Beam**	**47.62**	**51**	P	**P**	**16 13 49.3**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=325,slow=7.0,SNR=2.4						
KURK	**Kurchatov**	**48.10**	**58**	P	**P**	**16 13 52.8**	**+0.4**
KKAR	**Karatay Array**	**51.26**	**70**	P	**P**	**16 14 17.7**	**+1.1**
TORD	**Torodi Ar. Bea**	**53.13**	**156**	P	**P**	**16 14 30.6**	**-0.1**
	comp=Z,1.2nm,1.0s,baz=338,slow=7.7,SNR=5.3						
TORD	**Torodi Ar. Bea**	**53.13**	**156**	P	**P**	**16 14 29.8**	**-0.9**
PDAR	**Pinedale Array**	**53.19**	**293**	P	**P**	**16 14 31.3**	**0.0**
	comp=Z,1.1nm,0.8s,baz=64,slow=3.4,SNR=8.7						
PDAR	**Pinedale Array**	**53.19**	**293**	P	**P**	**16 14 29.7**	**-1.5**
BTK	**Batken**	**53.94**	**72**	P	**P**	**16 14 37.8**	**+1.2**
WMQ	**Urumqi**	**57.22**	**56**	*e*P	P	16 15 04.4	+4.3
HHC	**Hu-ho-hao-te**	**67.50**	**40**	*e*P	**P**	**16 16 10.9**	**+1.9**
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,82nm,5.2s						
LZH	**Lanzhou**	**69.62**	**48**	*e*P	**P**	**16 16 21.8**	**-0.5**
LZH				pP	sP	16 16 26.3	-1.1
LZH				sP	pP	16 16 29.1	+3.1
LZH				PP	PP	16 18 44.4	-11
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=N,120nm,15.8s						
LZH				LR	LR		
	comp=E,150nm,16.2s						
LZH				LR	LR		
	comp=Z,150nm,17.2s						
CMAR	**Chiang Mai Arr**	**84.12**	**59**	P	**P**	**16 17 44.6**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=318,slow=6.0,SNR=4.9						

*ISK **16** 16:37:54.7, 37°.82N×29°.35E, h5km, ML3.5/38*
*DDA **16** 16:37:55.9, 37°.82N×29°.39E, h7km±2km, MW3.6*
*IDC **16** 16:37:55.9±1.1, 37°.81N×29°.50E, h0km, mb3.6/3, mb1 3.8/9, mb1mx3.5/48, mbtmp3.7/9, ML3.7/6, MS2.7/6, Ms1 2.8/6, ms1mx2.5/45, Error ellipse: s-maj=17.2km s-min=17.1km az=156.0*
*GII **16** 16:37:56.9±0.0, 37°.82N±0°.03×29°.42E±0°.05, h5km±5km, mb4.2/4, ML3.5(ISK), Error ellipse: s-maj=7.0km s-min=3.4km az=52.0*

ISC 16 16:37:56.6±1.3,**37°.82N**±0°.02×**29°.38E**±0°.02,**h5**km±9km, **n112,σ0§90/119,mb3.9/5,8C-7D,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHL	**Karahalli**	**0.51**	**12**	PG	**Pg**	**16 38 06.4**	**-0.1**
KHL				SG	**Sb**	**16 38 14.5**	**-1.5**
TAVA	**DENIZLI_Tavas**	**0.52**	**226**	*i* P	**Pg**	**16 38 05.7**	**-0.8**
TAVA				*i* S	**Sg**	**16 38 14.2**	**+1.0**
TAVA				IAML		16 38 16.0	
	comp=N,741nm,0.5s						
TAVA				IAML		16 38 16.0	
	comp=E,768nm,0.6s						
BASM	**Basmaki-Afyon**	**0.54**	**80**	PG	**Pg**	**16 38 06.5**	**-0.4**
BASM				SG	**Sb**	**16 38 15.4**	**-1.3**
BRDR	**BURDUR-Merkez**	**0.55**	**103**	*i* P	**Pg**	**16 38 06.8**	**-0.5**
BRDR				*i* S	**Sb**	**16 38 16.9**	**-0.3**
BRDR				IAML		16 38 19.0	
	comp=N,2μm,0.9s						
BRDR				IAML		16 38 22.0	
	comp=E,961nm,0.5s						
GOLH	**Golhisar**	**0.60**	**166**	*i* P	**Pg**	**16 38 07.6**	**-0.6**
GOLH				*i* S	**Sb**	**16 38 18.0**	**-0.6**
GOLH				IAML		16 38 21.0	
	comp=N,2μm,0.8s						
KZIL	**AFYON_Kizioren**	**0.74**	**54**	*i* P	**Pg**	**16 38 10.2**	**-0.6**
KZIL				IAML		16 38 29.0	
	comp=N,1μm,0.9s						
KZIL				IAML		16 38 29.0	
	comp=E,1μm,0.9s						
CAME	**Cameli-Denizli**	**0.88**	**184**	PG	**Pg**	**16 38 11.9**	**-1.6**
KULA	**Kula-Manisa**	**0.89**	**321**	PG	**Pg**	**16 38 13.0**	**-0.8**
ISP	**Isparta**	**0.90**	**90**	PG	**Pg**	**16 38 13.3**	**-0.6**
ISP				SG	**Sb**	**16 38 27.9**	**+0.7**
ISP	**Isparta**	**0.90**	**90**		**Pg**	**16 38 12.9**	**-1.0**
ISP				Sn	**Sb**	**16 38 27.6**	**+0.4**
MANT	**Manisa**	**0.93**	**316**	*i* P	**Pg**	**16 38 13.9**	**-0.6**
MANT				*i* S	**Sb**	**16 38 28.4**	**+0.1**
MANT				IAML		16 38 33.0	
	comp=N,933nm,0.9s						
MANT				IAML		16 38 33.0	
	comp=E,1μm,0.6s						
MANT	**Manisa**	**0.93**	**316**		**Pg**	**16 38 13.7**	**-0.8**
MANT				Sg	**Sb**	**16 38 28.0**	**-0.2**
USAK	**Uak-Merkez**	**0.93**	**342**	*i* P	**Pg**	**16 38 13.8**	**-0.7**
USAK				*i* S	**Sn**	**16 38 31.7**	**+1.3**
USAK				IAML		16 38 32.0	
	comp=E,2μm,1.1s						
USAK				IAML		16 38 33.0	
	comp=N,908nm,0.6s						
BCK	**Bucak**	**1.02**	**110**	PG	**Pg**	**16 38 16.1**	**-0.1**
YER	**Yerkesik**	**1.11**	**232**	PG	**Pg**	**16 38 16.9**	**-1.1**
BAGO	**Egridir - ISPA**	**1.12**	**81**	*i* P	**Pg**	**16 38 18.2**	**0.0**
BAGO				IAML		16 38 39.0	
	comp=E,255nm,1.0s						
BAGO				IAML		16 38 43.0	
	comp=N,168nm,0.6s						
KORT	**Korkueli**	**1.13**	**137**	PN	**Pg**	**16 38 17.9**	**-0.3**
KORT	**Korkueli**	**1.13**	**137**	*i* P	**Pn**	**16 38 19.6**	**+0.3**
ELL	**Elmali**	**1.15**	**159**	PN	**Pg**	**16 38 18.0**	**-0.7**
ELL	**Elmali**	**1.15**	**159**	Pg	**Pg**	**16 38 17.8**	**-0.9**
DALY	**Dalyan (Mula)**	**1.16**	**210**	PN	**Pg**	**16 38 17.9**	**-1.0**
DALY	**Dalyan (Mula)**	**1.16**	**210**	*i* P	**Pg**	**16 38 18.0**	**-0.8**
DALY				IAML		16 38 40.0	
	comp=N,781nm,0.8s						
DALY				IAML		16 38 40.0	
	comp=E,614nm,1.0s						
SHUT	**Suhut-Afyon**	**1.17**	**51**	PN	**Pg**	**16 38 18.4**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.19**	**276**	PN	**Pg**	**16 38 18.5**	**-0.9**
AFYO	**Afyonkarahisar**	**1.20**	**37**	*i* P	**Pn**	**16 38 20.5**	**+0.3**
AYDN	**Tasoluk**	**1.20**	**263**	*i* P	**Pg**	**16 38 19.4**	**-0.2**
AYDN				IAML		16 38 42.0	
	comp=E,558nm,0.6s						
AYDN				IAML		16 38 43.0	
	comp=N,704nm,1.5s						
SHAP	**Saphane-Kutahy**	**1.20**	**354**	PN	**Pg**	**16 38 18.6**	**-1.1**
FETY	**Fethiye**	**1.21**	**191**	PN	**Pg**	**16 38 18.6**	**-1.2**
GEDZ	**Gediz**	**1.22**	**1**	PN	**Pg**	**16 38 18.9**	**-1.1**
GDZ	**Gediz**	**1.27**	**3**	*i* P	**Pg**	**16 38 20.1**	**-0.8**
GDZ				IAML		16 38 45.0	
	comp=N,167nm,1.1s						
GDZ				IAML		16 38 47.0	
	comp=E,241nm,10.5s						
MLSB	**Milas**	**1.38**	**248**	PN	**Pn**	**16 38 22.1**	**-0.5**
TURN	**Turunc**	**1.39**	**221**	PN	**Pn**	**16 38 21.6**	**-1.0**
TURN	**Turunc**	**1.39**	**221**	*i* P	**Pn**	**16 38 22.5**	**-0.1**
TURN				IAML		16 38 46.0	
	comp=E,298nm,0.8s						
TURN				IAML		16 38 52.0	
	comp=N,260nm,1.2s						
GOMA	**Golmarmara-Man**	**1.45**	**308**	PN	**Pn**	**16 38 22.8**	**-0.8**
AKAS	**Kas**	**1.60**	**174**	PN	**Pn**	**16 38 25.2**	**-0.5**
AKAS	**Kas**	**1.60**	**174**	*i* P	**Pn**	**16 38 28.6**	**+1.3**
**A

VOIR		8.27 338	⇑P		Pn	16 39 57.7	+0.4
PLOR	Plostina	8.28 347	⇑P		Pn	16 39 59.5	+2.2
VRI	Vrincioaia	8.28 347	⇓P		Pn	16 39 57.8	+0.5
OZUR		8.69 343	⇓P		Pn	16 40 04.1	+1.2
TESR	Tescani	8.91 348	⇑P		Pn	16 40 06.8	+0.8
EIL	Elat	9.36 149	Pn		Pn	16 40 11.1	-1.2
	comp=N,0.3nm,0.3s,baz=302,slow=9.5,SNR=1.5						
EIL			Sn		Sn	16 41 55.5	-2.3
	comp=N,0.1nm,0.3s,baz=7.2,slow=17,SNR=2.4						
BZS	Buzias	9.71 326	⇑P		Pn	16 40 16.5	-0.4
BURAR	Bucovina Array	10.25 344	⇓P		Pn	16 40 25.7	+1.2
BURAR	Bucovina Array	10.25 344	Pn		Pn	16 40 25.5	+1.0
BUR08	Bucovina Ar. S	10.28 344	Pn		Pn	16 40 25.6	+0.7
SGRT	San Giovanni R	11.20 295	Pn		Pn	16 40 37.6	+0.1
VRAC	Vranov	14.73 325	LR		LR	16 47 42.0	
	comp=N,42nm,18.3s,baz=314,slow=40						
GERES	GERESS Array B	15.82 319	Pn		P	16 41 42.3	-1.8
	comp=N,0.1nm,0.3s,baz=125,slow=12,SNR=7.4						
GERES			LR		LR	16 49 00.7	
	comp=N,40nm,18.7s,baz=192,slow=42						
AKTO	Aktyubinsk	23.94 49	LR		LR	16 54 48.6	
	comp=N,13nm,20.6s,baz=294,slow=42						
HFS	Hagfors	24.46 341	LR		LR	16 54 38.1	
	comp=N,47nm,19.0s,baz=211,slow=41						
NOA	NORSAR Array B	25.89 340	LR		LR	16 55 38.1	
	comp=N,29nm,18.6s,baz=285,slow=41						
TOA0	Torodi Ar. Sit	34.81 232	P		P	16 44 48.8	+0.3
TOA0			IAmb		IAmb	16 45 01.7	
	comp=Z,4.6nm,1.4s						
TORD	Torodi Ar. Bea	34.81 232	P		P	16 44 48.8	+0.3
	comp=Z,1.4nm,0.8s,baz=33,slow=9.7,SNR=7.5						
TORD	Torodi Ar. Bea	34.81 232	IAmb		IAmb	16 44 49.7	
	comp=Z,0.7nm,0.8s						
MKAR	Makanchi Array	39.48 60	P		P	16 45 27.0	-1.0
	comp=Z,0.4nm,0.8s,baz=285,slow=7.9,SNR=2.6						
MKAR	Makanchi Array	39.48 60	P		P	16 45 27.8	-0.2
ZALV	Zalesovo Beam	40.70 48	P		P	16 45 37.5	-0.4
	comp=Z,0.3nm,0.5s,baz=281,slow=8.2,SNR=1.8						
SCHQ	Schefferville	63.35 320	P		P	16 48 26.7	0.0
TOLK	Toolik Lake Re	73.85 360	P		P	16 49 32.8	+0.9
TOLK			IAmb		IAmb	16 49 36.1	
	comp=Z,3.8nm,1.2s						

INET 16 16:40:06.1, 10.51N×86.26W, h30km, MW3.5, Off coast of Costa Rica

*IDC **16** 16:50:44.2±1.9, 1.95N×126.70E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/31, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=118.8km s-min=24.3km az=68.0*
*DJA **16** 16:50:51.1±0.5, 1.1N±6×12.7E±°, h41km±65km, M3.6/7, ML3.6/7*

ISC 16 16:50:51.7±1.1, 1.51N±0.08×126.54E±0.08, h47km, n11, σ1§88/10, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	Ternate	1.10	132	P		Pn	16 51 10.3	-0.5
SGSI	Sangihe	2.39	335	P		Pn	16 51 29.5	+1.0
KMSI	Cibinong	2.72	250	P		Pn	16 51 32.3	-0.7
GTOI	Gorontalo	3.64	256	P		Pn	16 51 46.3	+0.8
LUWI	Luwuk	4.54	236	P		Pn	16 51 57.2	-0.8
MRSI	Marisa	4.71	258	P		Pn	16 52 00.9	+0.5
MPSI	Mapaga	6.75	260	P		Pn	16 52 34.4	+6.2
FITZ	Fitzroy Crossi	19.50	183	P		Pn	16 55 18.2	+1.5
	0.0nm,0.3s,baz=5.2,slow=11,SNR=2.0							
WRA	Warramunga Arr	22.65	161	P		P	16 55 49.7	+0.6
	1.0nm,0.5s,baz=340,slow=11,SNR=21							
ASAR	Alice Springs	26.03	164	P		P	16 56 23.8	+3.1
	0.3nm,0.4s,baz=342,slow=8.5,SNR=13							
MKAR	Makanchi Array	59.27	326	P		P	17 00 45.6	-3.1
	0.4nm,0.5s,baz=119,slow=7.6,SNR=5.5							

TAP 16 17:01:47.0, 23.12N×120.83E, h8km, ML1.0, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STYT	Tauyuan	0.08	303	⇓*i*P		Pg	17 01 49.6	+0.4
	baz=305							
STYT				*i* S		Sg	17 01 51.2	+0.6
	baz=305							
ELDTW	Lidau	0.19	68	*e*P		Pg	17 01 52.0	+1.1
	baz=69							
SLGT	Liugui	0.21	233	P		Pg	17 01 52.5	+1.2
	baz=233							
SGST	Jiashian	0.23	261	*e*P		Pg	17 01 52.0	+0.3
	baz=259							
WTP	Ta-pu	0.23	303	*i* P		Pg	17 01 52.8	+1.1
	baz=303							
TPUB	Ta-pu	0.26	315	P		Pb	17 01 53.3	-0.6
	baz=314							
ALS	Alishan	0.39	357	P		Pg	17 01 55.5	+0.8
	baz=358							
ALS				S		Sb	17 02 01.9	-0.7
	baz=358							

*IDC **16** 17:45:07.6±1.6, 9.12S×106.35E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.3/32, mbtmp3.4/6, ML3.3/1, Error ellipse: s-maj=41.1km s-min=23.6km az=58.0*

ISC 16 17:45:12.3±1.4, 9.10S±0.1×106.15E±0.2, h28km, n6, σ1§33/7, mb3.4/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LEM	Lembang	2.44	28	Pn		Pn	17 45 51.3	+0.8
	5.8nm,0.3s,baz=354,slow=10,SNR=11							
LEM				Sn		Sb	17 46 24.7	-0.8
	7.4nm,0.3s,baz=130,slow=17,SNR=4.2							
CMAR	Chiang Mai Arr	28.28	345	P		P	17 51 02.7	-0.8
	0.3nm,0.4s,baz=178,slow=8.7,SNR=4.3							
WRA	Warramunga Arr	29.04	115	P		P	17 51 11.8	+1.3
	0.2nm,0.8s,baz=285,slow=11,SNR=1.3							
ASAR	Alice Springs	30.01	122	P		P	17 51 17.3	-1.7
	0.2nm,0.8s,baz=303,slow=8.3,SNR=1.9							
MKAR	Makanchi Array	59.59	341	P		P	17 55 13.8	+0.2
	0.6nm,0.7s,baz=160,slow=7.5,SNR=3.7							
KURBB	Kurchatov Arra	64.15	341	P		P	17 55 44.9	+0.8
	0.3nm,0.6s,baz=150,slow=6.2,SNR=3.2							

WEL 16 17:55:47.6, 40.5S±2.2×17.4E±°, h240km±5km, M3.3/61, MLv3.3/61, Error ellipse: s-maj=0.0km s-min=0.0km az=79.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
NBEZ	Newall Road No	0.77	11	P		Pn	17 56 20.8	+0.4
KHEZ	Kahui Hut	0.78	20	P		Pn	17 56 20.8	+0.2
PREZ	Palmer Road	0.78	29	P		Pn	17 56 20.4	-0.1
PREZ				S		S	17 56 44.9	-1.3
DUWZ	D'Urville Isla	0.80	166	P		Pn	17 56 20.9	+0.4
DUWZ				S		S	17 56 44.3	-2.1
NEZ	North Egmont	0.82	23	P		Pn	17 56 20.9	+0.1
NEZ				S		S	17 56 44.3	-2.4
PKE	Pukeiti	0.86	16	P		Pn	17 56 21.1	+0.1
WAZ	Wanganui	1.04	75	P		Pn	17 56 22.7	+0.9
WAZ				S		S	17 56 47.7	-0.9
MHEZ	Mangahewa	1.07	28	P		Pn	17 56 22.5	+0.4
MHEZ				S		S	17 56 47.7	-1.2
QRZ	Quartz Range	1.19	227	P		Pn	17 56 22.7	+0.1
QRZ				S		S	17 56 48.1	-2.1
NNZ	Nelson	1.21	191	P		Pn	17 56 23.1	+0.3
VRZ	Vera Road	1.23	43	P		Pn	17 56 22.6	-0.4
VRZ				S		S	17 56 48.2	-2.5
KIW	Kapiti Island	1.26	132	P		Pn	17 56 23.3	+0.2
TCW	Tory Channel	1.27	159	P		Pn	17 56 23.7	+0.5
OGWZ	Otaki Gorge	1.39	125	P		Pn	17 56 19.5	-4.6
TUWZ	Tuamarina	1.42	172	P		Pn	17 56 24.7	+0.5
PKVZ	Pokaka	1.48	61	P		Pn	17 56 24.9	-0.1
WEL	Wellington	1.51	147	P		Pn	17 56 25.1	+0.1
CAW	Cannon Point	1.52	136	P		Pn	17 56 25.3	+0.3
MTVZ	Mangateitei	1.52	66	P		Pn	17 56 25.2	0.0
MRZ	Mangatainoka R	1.59	114	P		Pn	17 56 25.7	+0.1
DRZ	Dome Shelter	1.64	63	P		Pn	17 56 26.5	0.0
WNVZ	Wahianoa	1.64	65	P		Pn	17 56 26.3	0.0
FWVZ	Far West T-bar	1.64	63	P		Pn	17 56 26.2	-0.2
POWZ	Post Office Ro	1.64	104	P		Pn	17 56 26.4	+0.3
WHVZ	Whangaehu Hut	1.65	64	P		Pn	17 56 26.3	-0.1
HOWZ	Holdsworth Sta	1.65	122	P		Pn	17 56 26.3	+0.2
BHW	Baring Head	1.66	147	P		Pn	17 56 26.0	-0.1
TWVZ	Taurewa	1.66	56	P		Pn	17 56 25.9	-0.5
BSWZ	Blackbirch Sta	1.70	175	P		Pn	17 56 26.9	+0.4
TUVZ	Tukino	1.70	64	P		Pn	17 56 27.0	+0.2
NGZ	Ngauruhoe	1.71	61	P		Pn	17 56 26.7	-0.2
MOVZ	Moawhango	1.72	70	P		Pn	17 56 26.5	-0.4
WTVZ	West Tongariro	1.74	59	P		Pn	17 56 26.9	-0.2
TSZ	Takapari Road	1.75	92	P		Pn	17 56 27.4	+0.3
OTVZ	Oturere	1.76	61	P		Pn	17 56 27.3	0.0
HIZ	Hauiti	1.77	32	P		Pn	17 56 26.6	-0.6
CMWZ	Cape Campbell	1.77	167	P		Pn	17 56 28.6	+1.5
KRVZ	Karewarewa	1.78	59	P		Pn	17 56 27.2	-0.2
MTW	Mount Morrison	1.79	130	P		Pn	17 56 27.5	+0.1
ETVZ	East Tongariro	1.81	61	P		Pn	17 56 27.7	0.0
TMVZ	Te Maari	1.81	61	P		Pn	17 56 28.0	+0.3
THZ	Tophouse	1.83	198	P		Pn	17 56 28.0	+0.3
MSWZ	Moikau Station	1.83	140	P		Pn	17 56 27.8	+0.1
PRWZ	Pori Road	1.83	108	P		Pn	17 56 28.4	+0.7
TIWZ	Tintock	1.85	115	P		Pn	17 56 28.3	+0.4
KATZ	Kakaramea	1.88	57	P		Pn	17 56 28.3	0.0
PAWZ	Paruwai Farm	1.90	136	P		Pn	17 56 28.4	+0.1
BHHZ	Black Hill Sta	1.92	75	P		Pn	17 56 28.1	-0.4
DVHZ	Dannevirke	1.93	99	P		Pn	17 56 28.8	+0.2
PNHZ	Pukenui	1.94	88	P		Pn	17 56 29.1	+0.4
PLWZ	Palliser	1.96	143	P		Pn	17 56 28.8	0.0
RATZ	Rangitukua	1.99	55	P		Pn	17 56 29.4	+0.1
TMWZ	Te Maipa	2.00	123	P		Pn	17 56 29.6	+0.3
TRWZ	Traveller	2.06	133	P		Pn	17 56 30.1	+0.4
WATZ	Wairara	2.07	51	P		Pn	17 56 29.9	-0.1
BFZ	Birch Farm	2.07	109	P		Pn	17 56 30.2	+0.3
KRHZ	Kereru	2.11	80	P		Pn	17 56 30.4	+0.1
CPWZ	Castlepoint	2.12	115	P		Pn	17 56 31.2	+0.9
WPHZ	Waipukurau	2.12	92	P		Pn	17 56 30.9	+0.5
KWHZ	Kaweka Forest	2.20	75	P		Pn	17 56 31.6	+0.3
DSZ	Denniston Nort	2.23	219	P		Pn	17 56 31.4	0.0
PRHZ	Porangahau	2.28	97	P		Pn	17 56 32.6	+0.7
BKZ	Black Stump Fm	2.34	69	P		Pn	17 56 32.3	-0.3
KHZ	Kahutara	2.39	182	P		Pn	17 56 32.8	-0.1
MCHZ	McNeill Hill	2.40	77	P		Pn	17 56 33.9	+0.8
MRHZ	Matea Rd	2.43	62	P		Pn	17 56 32.7	-0.8
PXZ	Pawanui	2.45	91	P		Pn	17 56 34.2	+0.6
KAHZ	Kahuranaki	2.47	86	P		Pn	17 56 34.7	+0.8
NMHZ	Naumai	2.59	70	P		Pn	17 56 35.9	+0.7
CKHZ	Cape Kidnapper	2.65	83	P		Pn	17 56 36.4	+0.7
ARHZ	Aropaoanui	2.67	75	P		Pn	17 56 36.5	+0.5
MTHZ	Maungataniwha	2.72	65	P		Pn	17 56 36.0	-0.5
RAHZ	Arahi	2.86	68	P		Pn	17 56 38.1	+0.1
WHHZ	Waihua	2.91	72	P		Pn	17 56 38.9	+0.4
RTZ	Ruatahuna	2.92	62	P		Pn	17 56 37.9	-0.8
LTZ	Lake Taylor	2.95	201	P		Pn	17 56 38.6	-0.3
GVZ	Greta Valley S	2.98	189	P		Pn	17 56 38.8	-0.4
MKAZ	Moumakai	3.14	22	P		Pn	17 56 41.1	0.0
INZ	Inchbonnie	3.18	211	P		Pn	17 56 41.1	-0.3
URZ	Urewera	3.20	58	P		Pn	17 56 40.4	-1.3
KNZ	Kokohu	3.25	73	P		Pn	17 56 42.2	0.0
RAGZ	Rawiri	3.28	63	P		Pn	17 56 42.4	-0.3
MHGZ	Mahia Peninsul	3.38	76	P		Pn	17 56 44.4	+0.6
RIGZ	Rimuhau	3.43	69	P		Pn	17 56 44.3	-0.1
MWZ	Matawai	3.44	62	P		Pn	17 56 43.7	-0.8
PRGZ	Paritu Road	3.44	73	P		Pn	17 56 44.5	+0.1
OXZ	Oxford	3.52	200	P		Pn	17 56 44.5	-0.8
OKCZ	Okains Bay	3.73	187	P		Pn	17 56 46.9	-0.8
RUGZ	Raukumara Rang	3.73	58	P		Pn	17 56 46.1	-1.9
MQZ	McQueen's Vall	3.76	191	P		Pn	17 56 46.7	-1.3
WVZ	Waitaha Valley	3.76	215	P		Pn	17 56 47.7	-0.3
TWGZ	Tauwhareparae	3.82	63	P		Pn	17 56 48.9	-0.1
CNGZ	Carnagh Static	3.84	68	P		Pn	17 56 49.2	+0.1
MHCZ	Mount Hutt	3.84	204	P		Pn	17 56 48.4	-0.7
RACZ	Rakaia	3.87	197	P		Pn	17 56 49.0	-0.4
AKCZ	Akaroa Harbour	3.89	188	P		Pn	17 56 49.0	-0.5
HAZ	Te Kaha	3.92	56	P		Pn	17 56 48.2	-1.9
PUZ	Puketiti	4.07	63	P		Pn	17 56 50.9	-0.9
GCSZ	Gaunt Creek Bo	4.14	216	P		Pn	17 56 52.0	-0.5
WACZ	Wakanui South	4.15	199	P		Pn	17 56 52.1	-0.5
RPZ	Rata Peaks	4.17	207	P		Pn	17 56 52.5	-0.5
WMGZ	Waiomatatini S	4.30	61	P		Pn	17 56 53.3	-1.3
ARCZ	Arundel	4.34	205	P		Pn	17 56 54.4	-0.6
MXZ	Matakaoa Point	4.37	57	P		Pn	17 56 54.3	-1.2
FOZ	Fox Glacier	4.54	218	P		Pn	17 56 56.5	-0.8
LBZ	Lake Benmore	5.07	210	P		Pn	17 57 03.0	-0.9
JCZ	Jackson Bay	5.44	220	P		Pn	17 57 07.8	-0.7
ODZ	Otahua Downs	5.49	203	P		Pn	17 57 09.3	+0.2

*GCG **16** 18:22:27.1±0.6, 14.45N×90.71W, h0km±22km, MD4.1*
*SNET **16** 18:22:27.8±0.9, 14.38N×90.75W, h6km±6km, ML3.4*
*IDC **16** 18:22:29.4±3.6, 14.78N×90.41W, h0km, mb3.7/2, mb1 4.0/4, mb1mx3.6/43, mbtmp3.6/4, ML3.7/2, MS3.0/3, Ms1 3.0/3, ms1mx2.7/35, Error ellipse: s-maj=84.1km s-min=45.9km az=21.0*

ISC 16 18:22:28.6±0.7, 14.39N±0.07×90.70W±0.04, h10km, n24, σ1§46/25, 5D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCG	Pacaya	0.09	89	*e*P		Pg	18 22 30.9	-0.4
FUG	Fuego 3	0.15	292	⇓*i*P		Pg	18 22 30.8	-1.4
NBG	Las Nubes	0.39	60	*e*P		Pb	18 22 36.4	-1.5
ERG	Entre ros, C	0.85	273	*e*P		Pg	18 22 44.1	-0.9
STG3	Santiaguito 3,	0.90	291	*e*P		Pg	18 22 43.9	-2.2
RTAL	Retalhuleu	0.98	278	⇓*e*P		Pg	18 22 45.1	-2.3
RTAL				*e*S		Sg	18 22 58.6	-1.6
RTAL				IAML			18 23 02.9	
	comp=Z,2μm,0.3s							
NUBE	Las Nubes	1.01	118	⇓*i*P		Pg	18 22 47.1	-1.1
NUBE				*e*S		Sb	18 23 02.1	+0.3
RTR	El Retiro	1.13	116	*e*P		Pb	18 22 49.5	-0.9
SBLS	San Blas	1.18	118	*e*P		Pb	18 22 50.6	-0.6
SNJE	San Jose	1.18	116	*e*P		Pb	18 22 50.4	-0.8
MRL	Marmol	1.20	55	*e*P		Pb	18 22 50.3	-1.3
MTO3	Montecristo	1.29	89	⇓*i*P		Pn	18 22 52.0	-1.0
ESQI	Esquipulas	1.32	82	⇓*e*P		Pn	18 22 52.8	-0.6
ESQI				IAML			18 22 57.3	
	comp=Z,1μm,0.6s							
BOQS	Boqueron	1.52	115	*e*P		Pn	18 22 56.2	+0.1
LBRS	Las Brisas	1.73	112	*e*P		Pb	18 22 59.5	-1.1
LFRS	El Faro	1.76	115	*e*P		Pn	18 22 59.6	+0.3
PAVA	Las Pavas	1.83	111	*e*P		Pb	18 23 01.0	-1.4
CMIG	Matias Romero	4.84	304	Pn		Pn	18 23 42.5	+0.8
	comp=Z,1.6nm,0.3s,baz=122,slow=11,SNR=12							
CMIG				Sn		Sn	18 24 41.4	+3.6
	comp=Z,4.0nm,0.3s,baz=76,slow=22,SNR=1.8							
CMIG				Lg		Lg	18 24 57.4	
	comp=Z,7.8nm,0.3s,baz=23,slow=16,SNR=6.0							
CMIG				LR		LR	18 25 46.7	
	comp=Z,109nm,21.1s,baz=126,slow=40							
TXAR	Lajitas Array	19.11	323	P		Pn	18 26 54.4	+1.7
	comp=Z,0.1nm,0.3s,baz=135,slow=12,SNR=7.4							
TKL	Tuckaleechee C	22.07	15	LR		LR	18 36 19.5	
	comp=Z,62nm,18.4s,baz=159,slow=38							
NNA	Nana	29.59	152	LR		LR	18 40 28.5	
	comp=Z,30nm,19.8s,baz=319,slow=36							
NVAR	Mina Array Bea	34.18	320	P		P	18 29 16.0	+1.5
	comp=Z,0.8nm,0.8s,baz=133,slow=9.0,SNR=5.1							
YKA	Yellowknife Ar	50.95	346	P		P	18 31 29.4	-0.7
	comp=Z,1.1nm,0.7s,baz=141,slow=7.9,SNR=6.7							
WRA	Warramunga Arr	136.71	256	PKP		PKiKP	18 41 55.1	+1.1
	comp=Z,0.4nm,0.9s,baz=85,slow=1.9,SNR=4.5							

*IDC **16** 18:30:30.0±0.7, 0.15S±18.09W, h0km, mb4.1/22, mb1 4.3/23, mb1mx4.1/68, mbtmp4.2/23, ML5.0/2, MS3.9/27, Ms1 3.9/27, ms1mx3.9/30, Error ellipse: s-maj=27.6km s-min=12.6km az=141.0*
*NEIC **16** 18:30:30.7±2.2, 0.1S±0.1×18.1W±0.1, h10km±1km, mb4.7/16, Error ellipse: s-maj=19.7km s-min=17.4km az=119.0*
*GCMT **16** 18:30:33.7±0.3, 0.02S±0.02×18.12W±0.01, h22km±1km, MW4.9/108, Moment Tensor Solution. s38,c45; s108,c139; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.27±.12; Mθθ0.88±.09; Mφφ-0.61±.09; Mrθ0.70±.15; Mrφ-2.61±.09; Mθφ-0.73±.15; Best double couple: M=2.86700×10^16^ NP1:φs81.00000°, δ75.00000°, λ171.00000°. NP2:φs173.00000°, δ82.00000°, λ15.00000°. Principal axes: T 3.1390, Plg16.0000°, Azm37.0000°; N -0.5440, Plg73.0000°, Azm202.0000°; P -2.5950, Plg4.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 18:30:33.0±0.5, 0.15S±0.09×18.08W±0.08, h23km, n72, σ1§37/60, mb4.3/36, MS4.0/25, 1C, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H10N2	ASCENSION HYDR	8.43	155	T		T	18 41 35.5	
	baz=334,slow=74							
H10N3	ASCENSION HYDR	8.43	155	T		T	18 41 39.4	
	baz=334,slow=74							
H10N1	ASCENSION HYDR	8.45	155	T		T	18 41 38.7	
	baz=334							
ASCN	Ascension	8.58	154			Pn	18 32 36.1	+0.2
LIC	Lamto	14.48	64	*e*P		Pn	18 33 55.8	-1.0
	45nm,0.4s							
TIC	Toumodi	14.67	62	*e*P		Pn	18 33 57.9	-1.5
KIC	Kosan Boka	14.80	64	*e*P		Pn	18 33 59.3	-1.8
	100nm,0.5s							
DBIC	Dimbokro	14.83	63	Pn		Pn	18 34 00.3	-1.2
	25nm,0.3s,baz=234,slow=15,SNR=202							
DBIC				Sn		Sn	18 36 35.0	-10
	2.4nm,0.3s,baz=140,slow=4.8,SNR=4.6							
DBIC				LR		LR	18 38 49.9	
	comp=Z,570nm,18.6s,baz=220,slow=34							
RCBR	Riachuelo	18.66	252	P		P	18 34 48.3	-1.4
	1.1nm,0.3s,baz=79,slow=16,SNR=8.6							
RCBR				S		Sn	18 37 58.6	-20
	0.2nm,0.3s,baz=110,slow=4.3,SNR=1.6							
RCBR				LR		LR	18 40 18.7	
	comp=Z,518nm,19.0s,baz=69,slow=32							
RCBR	Riachuelo	18.66	252	P		P	18 34 48.0	-1.7
KOWA	Kowa	20.13	43	P		P	18 35 05.7	+0.1
	19nm,0.6s,baz=227,slow=13,SNR=30							
KOWA				S		S	18 38 38.2	-13
	6.7nm,0.6s,baz=229,slow=20,SNR=2.5							
KOWA				LR		LR	18 42 26.3	
	comp=Z,726nm,19.1s,baz=266,slow=36							
KOWA	Kowa	20.13	43	P		P	18 35 05.8	+0.1
KOWA				IAmb		IAmb	18 35 11.2	
	comp=Z,20nm,0.6s							
TOA0	Torodi Ar. Sit	23.64	55	P		P	18 35 42.6	-0.2
TORD	Torodi Ar. Bea	23.64	55	P		P	18 35 42.8	0.0
	comp=Z,16nm,1.0s,baz=240,slow=10,SNR=40							
TORD				S		S	18 39 55.0	-1.3
	comp=Z,2.2nm,0.8s,baz=249,slow=28,SNR=2.6							
TORD				LR		LR	18 43 52.6	
	comp=Z,255nm,20.8s,baz=235,slow=34							
TORD	Torodi Ar. Bea	23.64	55	P		P	18 35 41.6	-1.3
TAM	Tamanrasset	32.36	44	P		P	18 37 00.4	-0.8
TAM				IAmb		IAmb	18 37 04.6	
	comp=Z,11nm,1.2s							
BDFB	Brasilia	33.32	241	P		P	18 37 09.6	-0.1
	comp=Z,1.5nm,0.4s,baz=58,slow=7.9,SNR=3.4							
BDFB				LR		LR	18 49 03.8	
	comp=Z,332nm,19.3s,baz=101,slow=33							
MDT	Midelt	35.16	20	P		P	18 37 26.9	+1.5
	comp=Z,1.8nm,0.7s,baz=226,slow=7.6,SNR=5.7							
MDT				LR		LR	18 51 13.6	
	comp=Z,212nm,21.3s,baz=220,slow=35							
ESDC	Sonseca Array	41.68	16	P		P	18 38 21.3	+1.3
	comp=Z,1.7nm,1.1s,baz=213,slow=11,SNR=5.4							
ESDC				LR		LR	18 55 39.1	
	comp=Z,145nm,19.9s,baz=210,slow=36							
ESDC	Sonseca Array	41.68	16	P		P	18 38 18.2	-1.8
KEST	Kesra	43.89	33	P		P	18 38 39.6	+1.6
	comp=Z,1.5nm,0.6s,baz=252,slow=11,SNR=1.5							
KEST				LR		LR	18 58 09.5	
	comp=Z,474nm,19.5s,baz=176,slow=38							
KEST	Kesra	43.89	33	P		P	18 38 35.6	-2.4
SIV	San Ignacio	45.24	247	P		P	18 38 49.2	+0.1
	comp=Z,2.2nm,0.8s,baz=100,slow=8.2,SNR=12							
SAML	Samuel	45.76	258	P		P	18 38 52.5	-0.6
CPUP	Villa Florida	45.89	232	P		P	18 38 56.2	+2.1
	comp=Z,2.0nm,0.8s,baz=82,slow=7.1,SNR=3.6							
CPUP				LR		LR	18 56 50.0	
	comp=Z,195nm,18.2s,baz=56,slow=34							
LSZ	Lusaka	48.10	110	P		P	18 39 12.9	+1.3
	comp=Z,2.5nm,0.7s,baz=346,slow=3.7,SNR=6.1							
LSZ	Lusaka	48.10	110	P		P	18 39 11.4	-0.2
LSZ				IAmb		IAmb	18 39 30.1	
	comp=Z,5.8nm,1.1s							
BOSA	Boshof	50.16	128	LR		LR	18 58 28.8	
	comp=Z,90nm,18.1s,baz=263,slow=34							
LPAZ	La Paz	51.88	249	P		P	18 39 41.8	+0.9
	comp=Z,0.7nm,0.6s,baz=79,slow=8.4,SNR=3.7							
LPAZ	

TX32				IAmb	IAmb	18 43 16.0	
	comp=Z,9.7nm,1.5s						
SDCO	**Great Sand Dun**	**88.05 308**		P	**P**	**18 43 22.9**	**+0.6**
SDCO				IAmb	IAmb	18 43 24.7	
	comp=Z,3.1nm,1.0s						
PDAR	**Pinedale Array**	**91.19 313**		P	**P**	**18 43 36.7**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=90,slow=5.4,SNR=2.7						
PDAR				LR	LR	19 18 55.4	
	comp=Z,76nm,20.4s,baz=131,slow=32						
YKA	**Yellowknife Ar**	**93.15 332**		LR	LR	19 21 32.9	
	comp=Z,36nm,19.0s,baz=0.0,slow=33						
NRIK	**Noril'sk**	**95.62 20**		LR	LR	19 30 33.6	
	comp=Z,58nm,18.5s,baz=206,slow=38						
MKAR	**Makanchi Array**	**97.21 43**		LR	LR	19 33 38.5	
	comp=Z,37nm,18.4s,baz=270,slow=39						
ZALV	**Zalesovo Beam**	**97.70 36**		LR	LR	19 31 59.4	
	comp=Z,43nm,19.1s,baz=260,slow=38						
NVAR	**Mina Array Bea**	**98.11 309**		LR	LR	19 25 51.5	
	comp=Z,44nm,19.4s,baz=88,slow=34						
ASAR	**Alice Springs**	**143.94 133**		PKP	PKPbc	18 50 07.3	+1.9
	comp=Z,0.8nm,0.9s,baz=226,slow=2.7,SNR=4.6						
WRA	**Warramunga Arr**	**146.41 128**		PKPbc	**PKPdf**	**18 50 11.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=223,slow=2.1,SNR=1.7						

*ISK **16** 18:36:47.9, 37.°17N×28.°77E, h7km, ML3.7/31*
*IDC **16** 18:36:47.9±1.0, 37.°15N×28.°80E, h0km, mb3.7/4, mb1 3.9/9, mb1mx3.5/60, mbtmp3.8/9, ML3.9/5, MS3.3/4, Ms1 3.4/4, ms1mx2.7/42, Error ellipse: s-maj=22.7km s-min=15.3km az=150.0*
*NIC **16** 18:36:47.4±0.0, 37.°31N×28.°79E, h2km±2km, Ml3.9/4*
*DDA **16** 18:36:48.0, 37.°14N×28.°73E, h7km±2km, MW3.7*
*ATH **16** 18:36:49.2, 37.°22N×28.°71E, h20km±2km, ML3.6/9, Error ellipse: s-maj=3.5km s-min=1.1km az=186.0*
*THE **16** 18:36:49.1, 37.°13N×28.°72E, h1km±1km, ML3.5/4, Error ellipse: s-maj=2.3km s-min=0.8km az=37.0*

ISC 16 18:36:49.2±1.0, 37.°16N±0.°02×28.°76E±0.°02, h5km±8km, n112, σ1°31/138, mb3.4/4, MS3.8/3, 10C-7D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TAVA	**DENIZLI_Tavas**	**0.33**	**22**	*i* P		**Pg**	**Pg**	**18 36 54.9**	**-0.9**
TAVA				*i* S		**Sg**	**Sg**	**18 37 00.2**	**0.0**
TAVA				IAML				18 37 02.0	
	comp=N,4μm,0.7s								
TAVA				IAML				18 37 02.0	
	comp=E,5μm,0.4s								
DALY	**Dalyan (Mula)**	**0.35**	**194**	PG		**Pg**	**Pg**	**18 36 55.3**	**-0.6**
DALY	**Dalyan (Mula)**	**0.35**	**194**	*i* P		**Pg**	**Pg**	**18 36 55.3**	**-0.6**
DALY				IAML				18 37 09.0	
	comp=E,2μm,1.0s								
DALY				IAML				18 37 10.0	
	comp=N,3μm,1.2s								
YER	**Yerkesik**	**0.38**	**267**	PG		**Pg**	**Pg**	**18 36 56.1**	**-0.5**
YER				SG		**Sg**	**Sg**	**18 37 02.0**	**+0.4**
YER	**Yerkesik**	**0.38**	**267**	P		**Pg**	**Pg**	**18 36 56.2**	**-0.4**
YER				S		**Sg**	**Sg**	**18 37 01.6**	**0.0**
CAME	**Cameli-Denizli**	**0.49**	**116**	PG		**Pg**	**Pg**	**18 36 57.7**	**-0.9**
TURN	**Turunc**	**0.56**	**227**	PG		**Pg**	**Pg**	**18 36 58.6**	**-1.4**
TURN				SG		**Sg**	**Sg**	**18 37 08.3**	**+1.1**
TURN	**Turunc**	**0.56**	**227**	*i* P		**Pg**	**Pg**	**18 36 58.6**	**-1.4**
TURN				*i* S		**Sg**	**Sg**	**18 37 07.3**	**+0.1**
TURN				IAML				18 37 11.0	
	comp=E,3μm,0.4s								
TURN				IAML				18 37 12.0	
	comp=N,3μm,0.8s								
FETY	**Fethiye**	**0.58**	**153**	PG		**Pg**	**Pg**	**18 36 59.4**	**-1.0**
FETY	**Fethiye**	**0.58**	**153**	*i* P		**Pg**	**Pg**	**18 36 59.5**	**-1.0**
FETY				IAML				18 37 11.0	
	comp=E,940nm,1.2s								
FETY	**Fethiye**	**0.58**	**153**	P		**Pg**	**Pg**	**18 36 59.8**	**-0.6**
FETY				S		**Sg**	**Sg**	**18 37 09.6**	**+1.6**
MRSB	**Marmaris-Mugla**	**0.63**	**226**	PG		**Pg**	**Pg**	**18 37 00.7**	**-0.6**
GOLH	**Golhisar**	**0.65**	**83**	*i* P		**Pg**	**Pg**	**18 37 00.9**	**-0.8**
GOLH				*i* S		**Sg**	**Sg**	**18 37 09.8**	**-0.3**
GOLH				IAML				18 37 13.0	
	comp=N,2μm,0.9s								
DATC	**Datca-Mugla**	**0.96**	**246**	PG		**Pg**	**Pg**	**18 37 06.9**	**-0.8**
ELL	**Elmali**	**1.01**	**113**	PG		**Pg**	**Pg**	**18 37 07.7**	**-0.9**
ELL	**Elmali**	**1.01**	**113**	P		**Pg**	**Pg**	**18 37 07.8**	**-0.9**
ELL				S		**Sn**	**Sn**	**18 37 24.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**319**	PG		**Pg**	**Pg**	**18 37 08.4**	**-0.9**
ARG	**Arkhangelos**	**1.07**	**209**	P		**Pn**	**Pn**	**18 37 10.9**	**+0.1**
ARG				S		**Sn**	**Sn**	**18 37 25.9**	**-0.1**
ARG				AML	AML			18 37 30.5	
	comp=N,3302μm,0.7s								
ARG				AML	AML			18 37 31.4	
	comp=E,4656μm,0.5s								
ARG	**Arkhangelos**	**1.07**	**209**	PG		**Pg**	**Pg**	**18 37 08.8**	**-0.8**
ARG	**Arkhangelos**	**1.07**	**209**	⇑P		**Pg**	**Pg**	**18 37 08.8**	**-0.8**
ARG	**Arkhangelos**	**1.07**	**209**	P		**Pg**	**Pg**	**18 37 08.6**	**-1.1**
ARG				S		**Sg**	**Sg**	**18 37 24.5**	**+1.0**
	comp=E,2μm,0.7s								
AKAS	**Kas**	**1.15**	**143**	PN		**Pg**	**Pg**	**18 37 10.5**	**-0.7**
AKAS	**Kas**	**1.15**	**143**	*i* P		**Pg**	**Pg**	**18 37 11.1**	**-0.1**
AKAS				IAML				18 37 37.0	
	comp=N,1μm,0.9s								
AKAS				IAML				18 37 37.0	
	comp=E,1μm,0.8s								
BODT	**Bodrum**	**1.16**	**266**	PN		**Pg**	**Pg**	**18 37 10.7**	**-0.8**
BODT	**Bodrum**	**1.16**	**266**	P		**Pg**	**Pg**	**18 37 10.4**	**-1.1**
BODT				S		**Sn**	**Sn**	**18 37 27.2**	**-1.1**
BRDR	**BURDUR-Merkez**	**1.17**	**62**	*i* P		**Pg**	**Pg**	**18 37 10.7**	**-1.0**
BRDR				*i* S		**Sn**	**Sn**	**18 37 31.7**	**+3.0**
BRDR				IAML				18 37 36.0	
	comp=N,865nm,0.6s								
BRDR				IAML				18 37 36.0	
	comp=E,786nm,0.6s								
YKAV	**Yalikavak-Bodr**	**1.18**	**269**	PN		**Pg**	**Pg**	**18 37 11.1**	**-0.7**
KSL	**Kastellorizon**	**1.21**	**146**	P		**Pg**	**Pg**	**18 37 13.8**	**+1.5**
KSL				S		**Sn**	**Sn**	**18 37 30.8**	**+1.4**
KSL				AML	AML			18 37 36.0	
	comp=N,2834μm,0.5s								
KSL				AML	AML			18 37 36.4	
	comp=E,3232μm,0.7s								
KSL	**Kastellorizon**	**1.21**	**146**	P		**Pb**	**Pb**	**18 37 12.1**	**-0.3**
KSL				S		**Sn**	**Sn**	**18 37 32.8**	**+3.4**
KSL	**Kastellorizon**	**1.21**	**146**	P		**Pb**	**Pb**	**18 37 11.9**	**-0.6**
KSL				S		**Sb**	**Sb**	**18 37 28.9**	**+0.6**
	comp=E,2μm,0.6s								
BASM	**Basmaki-Afyon**	**1.28**	**53**	PN		**Pn**	**Pn**	**18 37 12.3**	**-1.5**
KORT	**Korkueli**	**1.28**	**96**	PN		**Pn**	**Pn**	**18 37 12.9**	**-1.0**
KORT	**Korkueli**	**1.28**	**96**	*i* P		**Pg**	**Pg**	**18 37 13.7**	**-0.2**
DEMR	**Demre-Antalya**	**1.30**	**134**	PN		**Pn**	**Pn**	**18 37 13.0**	**-1.0**
KHL	**Karahalli**	**1.31**	**27**	PN		**Pn**	**Pn**	**18 37 13.2**	**-1.1**
GCAM	**G?zelcaml?**	**1.33**	**295**	PN		**Pn**	**Pn**	**18 37 13.2**	**-1.2**
GCAM	**G?zelcaml?**	**1.33**	**295**	*i* P		**Pn**	**Pn**	**18 37 13.4**	**-1.0**
GCAM				IAML				18 37 38.0	
	comp=N,896nm,0.5s								
GCAM				IAML				18 37 38.0	
	comp=E,824nm,0.5s								
MANT	**Manisa**	**1.34**	**353**	*i* P		**Pn**	**Pn**	**18 37 13.7**	**-1.1**
MANT				*i* S		**Sn**	**Sn**	**18 37 32.5**	**-0.7**
MANT				IAML				18 37 38.0	
	comp=E,489nm,0.6s								
MANT				IAML				18 37 39.0	
	comp=N,416nm,0.8s								
KULA	**Kula-Manisa**	**1.36**	**357**	PN		**Pn**	**Pn**	**18 37 13.7**	**-1.2**
NIS1	**Nisyros Isl.**	**1.38**	**247**	P		**Pn**	**Pn**	**18 37 14.8**	**-0.4**
NIS1				S		**Sg**	**Sg**	**18 37 33.7**	**+0.2**
NIS1	**Nisyros Isl.**	**1.38**	**247**	PN		**Pn**	**Pn**	**18 37 14.3**	**-0.8**
NISR	**Nisiros**	**1.41**	**248**	P		**Pb**	**Pb**	**18 37 15.9**	**-0.1**
NISR				AML	AML			18 37 45.1	
	comp=E,6667μm,0.8s								
NISR				AML	AML			18 37 45.5	
	comp=N,2790μm,0.7s								
KOSK	**Kos Island**	**1.48**	**255**	PN		**Pn**	**Pn**	**18 37 15.8**	**-0.7**
KOSK	**Kos Island**	**1.48**	**255**	P		**Pn**	**Pn**	**18 37 15.7**	**-0.7**
KOSK				S		**Sn**	**Sn**	**18 37 35.0**	**-1.1**
	comp=N,2μm,0.7s								
BCK	**Bucak**	**1.49**	**78**	PN		**Pn**	**Pn**	**18 37 16.1**	**-0.6**
AKUM	**Antalya-Kumluc**	**1.52**	**123**	*i* P		**Pg**	**Pg**	**18 37 19.8**	**+1.4**
KEMT	**Kemer-ANTALYA**	**1.54**	**110**	PN		**Pn**	**Pn**	**18 37 16.4**	**-0.9**
ISP	**Isparta**	**1.55**	**64**	P		**Pn**	**Pn**	**18 37 17.3**	**-0.3**
ISP				S		**Sg**	**Sg**	**18 37 39.4**	**+0.2**
ISP				AML	AML			18 37 46.1	
	comp=N,7225μm,0.8s								
ISP				AML	AML			18 37 46.5	
	comp=E,5171μm,0.8s								
ISP	**Isparta**	**1.55**	**64**	PN		**Pn**	**Pn**	**18 37 16.9**	**-0.7**
SMG	**Samos**	**1.62**	**290**	P		**Pn**	**Pn**	**18 37 18.2**	**-0.3**
SMG				S		**Sb**	**Sb**	**18 37 39.6**	**-0.9**
SMG				AML	AML			18 37 46.6	
	comp=E,2101μm,0.5s								
SMG				AML	AML			18 37 49.1	
	comp=N,1690μm,0.5s								
SMG	**Samos**	**1.62**	**290**	P		**Pn**	**Pn**	**18 37 17.4**	**-1.1**
SMG				S		**Sn**	**Sn**	**18 37 39.0**	**-0.8**
	comp=N,950nm,0.6s								
GOMA	**Golmarmara-Man**	**1.69**	**337**	PN		**Pn**	**Pn**	**18 37 18.5**	**-0.8**
BAGO	**Egridir - ISPA**	**1.82**	**62**	*i* P		**Pn**	**Pn**	**18 37 21.2**	**0.0**
BLCB	**Balcova**	**1.83**	**313**	PN		**Pn**	**Pn**	**18 37 20.6**	**-0.7**
BLCB	**Balcova**	**1.83**	**313**	P		**Pn**	**Pn**	**18 37 20.9**	**-0.4**
BLCB				S		**Sn**	**Sn**	**18 37 43.6**	**-1.2**
AKS	**Akhisar**	**1.87**	**337**	PN		**Pn**	**Pn**	**18 37 21.1**	**-0.8**
SIMA	**Simav-Kutahya**	**1.93**	**5**	PN		**Pn**	**Pn**	**18 37 21.8**	**-1.0**
GEDZ	**Gediz**	**1.95**	**15**	PN		**Pn**	**Pn**	**18 37 22.2**	**-0.9**
SHUT	**Suhut-Afyon**	**1.99**	**45**	PN		**Pn**	**Pn**	**18 37 22.8**	**-0.8**
KARP	**Karpathos**	**2.06**	**219**	P		**Pn**	**Pn**	**18 37 25.5**	**+1.0**
KARP				S		**Sn**	**Sn**	**18 37 51.2**	**+0.7**
KARP				AML	AML			18 37 55.8	
	comp=N,2040μm,0.9s								
KARP				AML	AML			18 37 58.1	
	comp=E,1874μm,0.6s								
KARP	**Karpathos**	**2.06**	**219**	PN		**Pn**	**Pn**	**18 37 24.1**	**-0.4**
KARP	**Karpathos**	**2.06**	**219**	⇑P		**Pn**	**Pn**	**18 37 24.9**	**+0.5**
KARP				S		**Sb**	**Sb**	**18 37 53.8**	**+0.8**
KARP				AML	AML			18 37 56.8	
	comp=E,2.0nm,1.2s								
KARP				AML	AML			18 37 56.8	
	comp=E,2.0nm,1.2s								
KARP				AML	AML			18 38 03.9	
	comp=E,2.2nm,0.5s								
KARP				AML	AML			18 38 03.9	
	comp=E,2.2nm,0.5s								
URLA	**Izmir**	**2.09**	**306**	PN		**Pn**	**Pn**	**18 37 24.2**	**-0.7**
DKL	**Dikili**	**2.41**	**323**	PN		**Pn**	**Pn**	**18 37 28.7**	**-0.5**
SEYD	**Seydisehir-KON**	**2.47**	**83**	PN		**Pn**	**Pn**	**18 37 29.7**	**-0.5**
APE	**Apeiranthos**	**2.58**	**269**	P		**Pn**	**Pn**	**18 37 31.1**	**-0.6**
APE	**Apeiranthos**	**2.58**	**269**	PN		**Pn**	**Pn**	**18 37 31.6**	**0.0**
APE	**Apeiranthos**	**2.58**	**269**	⇑P		**Pn**	**Pn**	**18 37 31.0**	**-0.7**
APE	**Apeiranthos**	**2.58**	**269**	P		**Pn**	**Pn**	**18 37 30.9**	**-0.7**
BALY	**Balya**	**2.73**	**341**	*i* P		**Pn**	**Pn**	**18 37 33.4**	**-0.4**
THT2	**Imerovigli**	**2.77**	**256**	PN		**Pn**	**Pn**	**18 37 34.2**	**0.0**
PRK	**Paraskevi**	**2.86**	**318**	P		**Pn**	**Pn**	**18 37 35.9**	**+0.5**
PRK				AML	AML			18 38 27.2	
	comp=N,978μm,0.9s								
PRK				AML	AML			18 38 35.2	
	comp=E,1111μm,0.7s								
ZKR	**Zakros**	**2.89**	**226**	P		**Pn**	**Pn**	**18 37 36.5**	**+0.6**
ZKR				AML	AML			18 38 19.2	
	comp=N,488μm,0.8s								
ZKR				AML	AML			18 38 23.4	
	comp=E,1165μm,0.9s								
ZKR	**Zakros**	**2.89**	**226**	PN		**Pn**	**Pn**	**18 37 36.0**	**+0.1**
KDHN	**Kadinhani**	**2.99**	**62**	*i* P		**Pn**	**Pn**	**18 37 34.0**	**-3.3**
BAYC	**CANAKKALE_Bayr**	**3.11**	**327**	*i* P		**Pn**	**Pn**	**18 37 38.9**	**0.0**
NPS	**Neapolis**	**3.17**	**234**	P		**Pn**	**Pn**	**18 37 41.4**	**+1.7**
LAST	**Lasithi**	**3.32**	**234**	P		**Pn**	**Pn**	**18 37 42.8**	**+1.0**
AKMS	**Akamas**	**3.60**	**125**	P		**Pn**	**Pn**	**18 37 45.1**	**-0.6**
AKMS				S		**Sn**	**Sn**	**18 38 30.9**	**+2.4**
AKMS				AML	AML			18 38 31.9	
	comp=E,0.3nm,0.6s								
AKMS				AML	AML			18 38 31.9	
	comp=E,0.3nm,0.6s								
AKMS				AML	AML			18 38 36.3	
	comp=E,0.4nm,0.7s								
AKMS				AML	AML			18 38 36.3	
	comp=E,0.4nm,0.7s								
IDI	**Anoyia**	**3.64**	**240**	Pn		**Pn**	**Pn**	**18 37 47.7**	**+1.5**
	comp=E,13nm,0.3s,baz=58,slow=14,SNR=132								
IDI				Sn		**Sn**	**Sn**	**18 38 31.6**	**+2.0**
	comp=E,8.6nm,0.3s,baz=292,slow=18,SNR=8.7								
IDI				LR		LR	LR	18 39 26.9	
	comp=E,105nm,20.3s,baz=75,slow=43								
IDI	**Anoyia**	**3.64**	**240**	P		**Pn**	**Pn**	**18 37 47.2**	**+0.9**
IDI				AML	AML			18 38 34.9	
	comp=N,304μm,0.5s								
IDI				AML	AML			18 38 35.2	
	comp=E,288μm,0.6s								
ALFC	**Alefka**	**3.69**	**122**	⇑P		**Pn**	**Pn**	**18 37 46.7**	**-0.3**
ALFC				AML	AML			18 38 32.2	
	comp=E,0.5nm,0.8s								
ALFC				AML	AML			18 38 42.5	
	comp=E,0.3nm,0.9s								
NATA	**Nata**	**3.90**	**126**	P		**Pn**	**Pn**	**18 37 50.0**	**+0.3**
NATA				S		**Sn**	**Sn**	**18 38 37.1**	**+1.2**
SZAC	**Souni**	**4.12**	**124**	P		**Pn**	**Pn**	**18 37 52.7**	**-0.1**
SZAC				AML	AML			18 38 46.4	
	comp=E,0.4nm,0.8s								
SZAC				AML	AML			18 38 49.6	
	comp=E,0.4nm,0.6s								
BBAL	**Bala**	**4.18**	**54**	*i* P		**Pn**	**Pn**	**18 37 53.8**	**+0.1**
OSC1	**CSNet OBS 1**	**4.19**	**150**	P		**Pn**	**Pn**	**18 37 54.9**	**+1.2**
CSS	**Mathiatis**	**4.30**	**119**	⇑P		**Pn**	**Pn**	**18 37 55.4**	**0.0**
ASGA	**Asgata**	**4.34**	**122**	P		**Pn**	**Pn**	**18 37 55.2**	**-0.6**
MVOU	**Mavrovouni**	**4.49**	**117**	P		**Pn**	**Pn**	**18 37 57.8**	**-0.1**
BRTR	**Keskin Array B**	**4.61**	**55**	Pn		**Pn**	**Pn**	**18 38 00.4**	**+0.7**
	comp=E,4.8nm,0.3s,baz=232,slow=16,SNR=201								
BRTR				Sn		**Sn**	**Sn**	**18 38 55.7**	**+2.0**
	comp=E,0.7nm,0.3s,baz=233,slow=22,SNR=5.9								
OSC2	**CSNet OBS 4**	**4.99**	**144**	S		**Sn**	**Sn**	**18 39 05.7**	**+3.0**
MMAI	**Mount Meron Ar**	**6.84**	**125**	Pn		**Pn**	**Pn**	**18 38 29.3**	**-0.9**
	comp=E,6.4nm,0.3s,baz=304,slow=13,SNR=18								
MMAI				Sn		**Sn**	**Sn**	**18 39 45.9**	**-2.6**
	comp=E,2.9nm,0.3s,baz=316,slow=20,SNR=1.9								
CFR	**Carcaliu**	**8.03**	**357**	⇓P		**Pn**	**Pn**	**18 38 48.4**	**+2.0**
BISRR	**Bisoca**	**8.52**	**350**	⇑P				18 39 06.7	
MLR	**Muntele Rosu**	**8.59**	**347**	Pn		**Pn**	**Pn**	**18 38 55.3**	**+1.0**
	comp=E,0.2nm,0.3s,baz=328,slow=20,SNR=4.1								
MLR	**Muntele Rosu**	**8.59**	**347**	⇑P		**Pn**	**Pn**	**18 38 55.7**	**+1.5**
VOIR		**8.73**	**343**	⇓P		**Pn**	**Pn**	**18 38 58.1**	**+2.0**
ARR	**Arges**	**8.77**	**341**	⇑P		**Pg**	**Pg**	**18 39 38.6**	**+1.5**
PLOR	**Plostina**	**8.83**	**350**	⇓P		**Pn**	**Pn**	**18 39 00.1**	**+2.7**
VRI	**Vrincioaia**	**8.83**	**351**	⇑P		**Pn**	**Pn**	**18 38 58.0**	**+0.5**
EIL	**Elat**	**9.08**	**143**	Pn		**Pn**	**Pn**	**18 39 01.4**	**+0.4**
	comp=E,0.7nm,0.3s,baz=335,slow=19,SNR=7.4								
EIL				Sn		**Sn**	**Sn**	**18 40 36.8**	**-6.8**
	comp=E,0.4nm,0.3s,baz=329,slow=22,SNR=2.4								
DOPR	**Dopca**	**9.16**	**345**	⇑P		**Pn**	**Pn**	**18 39 04.6**	**+2.7**
TESR	**Tescani**	**9.48**	**351**	⇓P		**Pn**	**Pn**	**18 39 07.9**	**+1.6**
BZS	**Buzias**	**10.01**	**330**	⇓P		Pn		18 39 17.6	+4.0
BURAR	**Bucovina Array**	**10.77**	**347**	⇓P		**Pn**	**Pn**	**18 39 27.3**	**+3.2**
SORM	**Soroca**	**10.98**	**359**	⇓P		**Pn**	**Pn**	**18 39 28.1**	**+1.4**
AKTO	**Aktyubinsk**	**24.76**	**48**	P		**P**	**P**	**18 42 10.1**	**-1.5**
	comp=E,0.7nm,0.5s,baz=255,slow=8.8,SNR=5.4								
AKTO				LR		LR	LR	18 53 38.8	
	comp=E,17nm,21.7s,baz=250,slow=41								
ESDC	**Sonseca Array**	**25.68**	**286**	P		**P**	**P**	**18 42 20.0**	**-0.1**
	comp=E,0.5nm,0.8s,baz=79,slow=10,SNR=5.0								
TORD	**Torodi Ar. Bea**	**34.01**	**232**	P		**P**	**P**	**18 43 32.7**	**-1.3**
	comp=E,1.6nm,0.5s,baz=35,slow=8.9,SNR=8.0								
KURBB	**Kurchatov Arra**	**37.60**	**53**	P		**P**	**P**	**18 44 04.0**	**-0.5**
	comp=E,0.3nm,0.5s,baz=278,slow=8.6,SNR=4.8								
KMBO	**Kilima Mbogo**	**38.90**	**166**	LR		LR	LR	19 01 36.4	
	comp=E,293nm,19.4s,baz=274,slow=38								
ILAR	**Eielson Array**	**78.35**	**358**	LR		LR	LR	19 25 60.0	
	comp=E,41nm,18.8s,baz=58,slow=38								

*IDC **16** 18:41:16.2±1.8, 1.°85N×126.°57E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.4/39, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=119.0km s-min=22.7km az=68.0*
*DJA **16** 18:41:22.0±1.7, 2.°N±3.°×12.°7E±.°, h28km±18km, M3.7/9, mb4.0/1, MLv3.5/9*

ISC 16 18:41:22.3±1.1, 1.°86N±0.°08×126.°62E±0.°10, h47km, n9, σ0°72/10, mb3.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**145**	P		P	**Pn**	**18 41 43.9**	**-0.3**
TNTI				S		S	**Sn**	**18 42 01.4**	**+0.8**
SGSI	**Sangihe**	**2.12**	**329**	P		P	**Pn**	**18 41 54.8**	**-0.5**
KMSI	**Cibinong**	**2.93**	**244**	P		P	**Pn**	**18 42 05.7**	**-0.7**
GTOI	**Gorontalo**	**3.81**	**251**	P		P	**Pn**	**18 42 18.8**	**+0.3**
SANI	**Sanana**	**3.93**	**189**	P		P	**Pn**	**18 42 19.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**19.85**	**183**	P		P	**P**	**18 45 49.5**	**0.0**
	0.1nm,0.3s,baz=9.5,slow=12,SNR=1.5								
WRA	**Warramunga Arr**	**22.95**	**161**	P		P	**P**	**18 46 21.6**	**-1.1**
	1.7nm,0.5s,baz=339,slow=11,SNR=26								
ASAR	**Alice Springs**	**26.34**	**165**	P		P	**P**	**18 46 54.5**	**+0.4**
	0.5nm,0.3s,baz=344,slow=9.7,SNR=18								
MKAR	**Makanchi Array**	**59.03**	**326**	P		P	**P**	**18 51 17.8**	**+0.3**
	0.5nm,0.4s,baz=119,slow=7.6,SNR=10.0								

*SKHL **16** 18:56:19.4±0.2, 42.°83N×146.°96E, h35km±5km, mb4.0/3*

*JMA **16** 18:56:21.0±0.2, 42.°95N×146.°80E, h62km±3km, M3.0*

ISC 16 18:56:21.4±6.6, 43.°0N±0.°1×146.°9E±0.°1, h37km±8km, n18, σ0°54/29, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.91**	**297**	P		P	**Pn**	**18 56 37.7**	**+0.1**
NEM2				*e*S			**Sn**	**18 56 50.0**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.92**	**297**	*i* P		P	**Pn**	**18 56 37.0**	**-0.7**
NMR				*i* S			**Sn**	**18 56 50.0**	**+0.3**
GLVR	**Golovnino**	**1.25**	**309**	*e*P		P	**Pn**	**18 56 42.0**	**-0.2**
GLVR				*i* S			**Sn**	**18 56 59.0**	**+1.3**
GLVR				A		A		18 57 01.0	
	111nm,0.2s								
GLVR				A		A		18 57 01.0	
	122nm,0.2s								
JKHN	**Kushirohamanak**	**1.25**	**276**	P		P	**Pn**	**18 56 42.2**	**0.0**
JKHN				*e*S			**Sn**	**18 56 58.1**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**1.29**	**326**	*i* P		P	**Pn**	**18 56 42.0**	**-0.8**
YUK				AMB		AMB	AMB	18 56 44.0	
	91nm,0.3s								
YUK				*i* S			**Sn**	**18 56 59.0**	**+0.1**
YUK				A		A		18 57 02.0	
	109nm,0.2s								
YUK				A		A		18 57 02.0	
	141nm,0.2s								
GRPR	**Tuman**	**1.30**	**323**	*e*P		P	**Pn**	**18 56 42.0**	**-0.9**
GRPR				AMB		AMB	AMB	18 56 45.0	
	63nm,0.4s								
GRPR				*i* S			**Sn**	**18 56 59.0**	**0.0**
GRPR				A		A		18 57 00.0	
	138nm,0.2s								
GRPR				A		A		18 57 00.0	
	99nm,0.2s								
JNSB	**Nemuroshibetsu**	**1.57**	**302**	P		P	**Pn**	**18 56 46.6**	**-0.1**
JAK	**Akkeshi**	**1.58**	**272**	P		P	**Pn**	**18 56 46.8**	**0.0**
JAK				*e*S			**Sn**	**18 57 05.9**	**-0.1**
JRA	**Rausu**	**1.59**	**308**	P		P	**Pn**	**18 56 47.2**	**+0.2**
JNK	**Nakash**	**1.68**	**293**	P		P	**Pn**	**18 56 47.8**	**-0.4**
JNK				*e*S			**Sn**	**18 57 08.7**	**-0.6**
JOB	**Onbets**	**2.22**	**270**	P		P	**Pn**	**18 56 55.7**	**+0.2**
JAR	**Ashorobuto**	**2.28**	**279**	P		P	**Pn**	**18 56 56.9**	**+0.4**
JAR				*e*S			**Sn**	**18 57 22.9**	**-0.4**
JTKR	**Abashiri--Toko**	**2.37**	**296**	P		P	**Pn**	**18 56 58.5**	**+0.9**
KUR	**Kuril'sk**	**2.39**	**17**	*e*P		P	**Pn**	**18 56 58.0**	**+0.1**
KUR				AMB		AMB	AMB	18 57 03.0	
	10.0nm,0.3s								
KUR				*i* S			**Sn**	**18 57 26.0**	**+0.2**
KUR				A		A		18 57 27.0	
	31nm,0.2s								
KUR				A		A		18

MMAI Mount Meron Ar 149.22 301 PKPbc **PKiKP 20 00 10.4 -0.2**
2.5nm,0.5s,baz=91,slow=6.7,SNR=10
GERES GERESS Array B 150.12 347 PKPbc **PKPbc 20 00 11.7 +0.4**
0.9nm,0.6s,baz=36,slow=2.5,SNR=7.6
DAVOX Davos/Dischmat 152.78 351 PKPbc **PKPbc 20 00 17.6 0.0**
1.2nm,0.6s,baz=178,slow=9.0,SNR=5.5

*ATH **16** 19:51:57.7,37.26N×28.72E,h13km±3km, ML3.2/7, Error ellipse: s-maj=3.8km s-min=1.3km az=173.0*
*THE **16** 19:51:57.8,37.14N×28.76E,h0km±1km, ML3.1/5, Error ellipse: s-maj=2.5km s-min=0.9km az=37.0*
*DDA **16** 19:51:57.1,37.16N×28.75E,h7km±3km, ML2.9*
*ISK **16** 19:51:57.0,37.14N×28.75E,h9km, ML3.3/31*
*IDC **16** 19:52:02.8±1.2,36.97N×28.93E,h47km±20km,mb3.3/2, mb1 3.6/7,mb1mx3.2/46,mbtmp3.6/7,ML3.6/5,Error ellipse: s-maj=20.3km s-min=9.8km az=152.0*
*HLW **16** 19:52:02.5,37.03N×28.92E,h30km±41km, Ml3.9*
ISC 16 19:51:58.1±0.9, 37.15N±0.02×28.74E±0.02, h12km±7km, n77, σ1§58/104, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mula)**	**0.34**	**191**	*i* P	**Pg**	**19 52 04.2**	**-0.8**
DALY	**Dalyan (Mula)**	**0.34**	**191**	*i* P	**Pg**	**19 52 04.3**	**-0.7**
DALY				*i* S	**Sb**	**19 52 10.8**	**-0.6**
DALY				IAML		19 52 11.0	
	comp=E,658nm,0.5s						
DALY				IAML		19 52 14.0	
	comp=N,955nm,0.5s						
TAVA	**DENIZLI_Tavas**	**0.34**	**24**	*i* P	**Pg**	**19 52 04.1**	**-1.1**
TAVA				*i* S	**Sg**	**19 52 09.1**	**-0.7**
TAVA				IAML		19 52 10.0	
	comp=N,2μm,0.1s						
TAVA				IAML		19 52 11.0	
	comp=E,2μm,0.4s						
YER	**Yerkesik**	**0.36**	**267**	PG	**Pg**	**19 52 04.9**	**-0.5**
YER				SG	**Sg**	**19 52 10.9**	**+0.6**
YER	**Yerkesik**	**0.36**	**267**	P	**Pg**	**19 52 05.4**	**0.0**
YER				S	**Sb**	**19 52 11.5**	**-0.6**
CAME	**Cameli-Denizli**	**0.50**	**115**	PG	**Pg**	**19 52 06.6**	**-1.4**
TURN	**Turunc**	**0.54**	**226**	PG	**Pg**	**19 52 07.7**	**-1.0**
TURN	**Turunc**	**0.54**	**226**	*i* P	**Pg**	**19 52 07.8**	**-1.0**
FETY	**Fethiye**	**0.59**	**151**	PG	**Pg**	**19 52 08.4**	**-1.2**
FETY	**Fethiye**	**0.59**	**151**	*i* P	**Pg**	**19 52 08.7**	**-0.8**
FETY	**Fethiye**	**0.59**	**151**	P	**Pg**	**19 52 08.8**	**-0.8**
FETY				S	**Sb**	**19 52 18.9**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.61**	**225**	PG	**Pg**	**19 52 09.5**	**-0.6**
GOLH	**Golhisar**	**0.67**	**82**	*i* P	**Pg**	**19 52 09.8**	**-1.3**
GOLH				*i* S	**Sg**	**19 52 18.8**	**-1.1**
GOLH				IAML		19 52 22.0	
	comp=N,721nm,0.8s						
MLSB	**Milas**	**0.78**	**281**	PG	**Pg**	**19 52 13.0**	**-0.2**
AYDN	**Tasoluk**	**0.85**	**307**	*i* P	**Pg**	**19 52 14.2**	**-0.4**
AYDN				IAML		19 52 31.0	
	comp=E,868nm,0.4s						
AYDN				IAML		19 52 32.0	
	comp=N,424nm,0.5s						
DATC	**Datca-Mugla**	**0.95**	**246**	PG	**Pb**	**19 52 16.0**	**-0.4**
ELL	**Elmali**	**1.02**	**113**	PG	**Pb**	**19 52 16.9**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.04**	**320**	PG	**Pb**	**19 52 17.7**	**-0.4**
ARG	**Arkhangelos**	**1.05**	**208**	P	**Pn**	**19 52 18.8**	**+0.1**
ARG				S	**Sn**	**19 52 35.2**	**+1.9**
ARG				AML	AML	19 52 39.4	
	comp=N,1308μm,0.4s						
ARG				AML	AML	19 52 39.8	
	comp=E,2912μm,0.4s						
ARG	**Arkhangelos**	**1.05**	**208**	PG	**Pb**	**19 52 17.6**	**-0.7**
ARG	**Arkhangelos**	**1.05**	**208**	P	**Pb**	**19 52 17.6**	**-0.7**
ARG				S	**Sn**	**19 52 33.6**	**+0.3**
	comp=E,1μm,0.4s						
BODT	**Bodrum**	**1.14**	**266**	PN	**Pb**	**19 52 19.5**	**-0.3**
BODT	**Bodrum**	**1.14**	**266**	P	**Pn**	**19 52 19.7**	**-0.2**
BODT				S	**Sn**	**19 52 37.1**	**+1.6**
AKAS	**Kas**	**1.15**	**142**	PN	**Pb**	**19 52 19.4**	**-0.7**
AKAS	**Kas**	**1.15**	**142**	*i* P	**Pg**	**19 52 19.9**	**-0.5**
AKAS				*i* S	**Sn**	**19 52 39.8**	**+3.9**
AKAS				IAML		19 52 42.0	
	comp=E,440nm,0.7s						
AKAS				IAML		19 52 43.0	
	comp=N,373nm,0.5s						
YKAV	**Yalikavak-Bodr**	**1.16**	**269**	PN	**Pn**	**19 52 19.8**	**-0.4**
BRDR	**BURDUR-Merkez**	**1.19**	**62**	*i* P	**Pg**	**19 52 20.5**	**-0.5**
BRDR				*i* S	**Sn**	**19 52 38.1**	**+1.4**
KSL	**Kastellorizon**	**1.21**	**145**	P	**Pg**	**19 52 22.8**	**+1.4**
KSL				S	**Sg**	**19 52 40.8**	**+3.6**
KSL				AML	AML	19 52 45.0	
	comp=N,1215μm,0.7s						
KSL				AML	AML	19 52 45.2	
	comp=E,1446μm,1.1s						
KSL	**Kastellorizon**	**1.21**	**145**	P	**Pg**	**19 52 20.9**	**-0.5**
KSL				S	**Sg**	**19 52 37.5**	**+0.3**
	comp=E,688nm,0.9s						
BASM	**Basmaki-Afyon**	**1.29**	**53**	PN	**Pb**	**19 52 22.1**	**-0.3**
KORT	**Korkueli**	**1.30**	**96**	PN	**Pg**	**19 52 22.4**	**-0.8**
KORT	**Korkueli**	**1.30**	**96**	*i* P	**Pg**	**19 52 22.3**	**-0.8**
KORT				*i* S	**Sg**	**19 52 44.3**	**+4.2**
KORT				IAML		19 52 45.0	
	comp=N,216nm,0.6s						
KORT				IAML		19 52 46.0	
	comp=E,265nm,0.5s						
DEMR	**Demre-Antalya**	**1.31**	**134**	PN	**Pb**	**19 52 22.0**	**-0.7**
GCAM	**G?zelcaml?**	**1.31**	**295**	PN	**Pb**	**19 52 22.7**	**0.0**
KHL	**Karahalli**	**1.32**	**28**	PN	**Pb**	**19 52 22.4**	**-0.6**
MANT	**Manisa**	**1.34**	**354**	*i* P	**Pn**	**19 52 22.7**	**-0.2**
MANT				*i* S	**Sg**	**19 52 41.3**	**-0.1**
MANT				IAML		19 52 46.0	
	comp=E,127nm,0.3s						
MANT				IAML		19 52 47.0	
	comp=N,180nm,0.5s						
KULA	**Kula-Manisa**	**1.36**	**358**	PN	**Pn**	**19 52 22.7**	**-0.3**
NIS1	**Nisyros Isl.**	**1.36**	**247**	P	**Pb**	**19 52 23.3**	**-0.2**
NIS1				S	**Sg**	**19 52 43.4**	**+1.3**
NIS1				AML	AML	19 52 47.2	
	comp=N,3846μm,0.6s						
NIS1				AML	AML	19 52 52.2	
	comp=E,5451μm,0.6s						
NIS1	**Nisyros Isl.**	**1.36**	**247**	PN	**Pb**	**19 52 23.2**	**-0.4**
NIS1	**Nisyros Isl.**	**1.36**	**247**	P	**Pb**	**19 52 23.4**	**-0.2**
NIS1				S	**Sg**	**19 52 43.1**	**+1.0**
	comp=E,2μm,0.6s						
KOSK	**Kos Island**	**1.46**	**255**	PN	**Pn**	**19 52 23.8**	**-0.5**
KOSK	**Kos Island**	**1.46**	**255**	P	**Pb**	**19 52 24.7**	**-0.5**
KOSK				S	**Sg**	**19 52 45.2**	**0.0**
	comp=E,548nm,0.6s						
BCK	**Bucak**	**1.51**	**78**	PN	**Pb**	**19 52 25.1**	**-1.0**
KEMT	**Kemer-ANTALYA**	**1.56**	**110**	PN	**Pn**	**19 52 25.5**	**-0.1**
ISP	**Isparta**	**1.57**	**64**	P	**Pb**	**19 52 26.7**	**-0.5**
ISP				S	**Sb**	**19 52 47.0**	**0.0**
ISP				AML	AML	19 52 55.0	
	comp=N,2005μm,0.7s						
ISP				AML	AML	19 52 55.4	
	comp=E,1567μm,0.8s						
ISP	**Isparta**	**1.57**	**64**	PN	**Pb**	**19 52 26.1**	**-1.1**
USAK	**Uak-Merkez**	**1.57**	**8**	*i* P	**Pn**	**19 52 25.9**	**0.0**
SMG	**Samos**	**1.61**	**291**	P	**Pn**	**19 52 26.5**	**+0.1**
SMG				S	**Sg**	**19 52 49.2**	**-0.7**
SMG				AML	AML	19 52 58.6	
	comp=E,650μm,0.4s						
SMG				AML	AML	19 53 01.3	
	comp=N,492μm,0.4s						
SMG	**Samos**	**1.61**	**291**	P	**Pn**	**19 52 26.6**	**+0.3**
SMG				S	**Sb**	**19 52 48.0**	**0.0**
	comp=N,272nm,0.6s						
BLCB	**Balcova**	**1.82**	**313**	PN	**Pn**	**19 52 29.6**	**+0.4**
BLCB	**Balcova**	**1.82**	**313**	P	**Pn**	**19 52 29.2**	**0.0**
BLCB				S	**Sb**	**19 52 53.5**	**-0.6**
BAGO	**Egridir - ISPA**	**1.83**	**62**	*i* P	**Pb**	**19 52 30.3**	**-1.4**
SHAP	**Saphane-Kutahy**	**1.91**	**11**	PN	**Pn**	**19 52 30.7**	**+0.2**
SIMA	**Simav-Kutahya**	**1.94**	**6**	PN	**Pn**	**19 52 30.7**	**-0.2**
GEDZ	**Gediz**	**1.96**	**16**	PN	**Pn**	**19 52 31.0**	**-0.3**
SHUT	**Suhut-Afyon**	**2.00**	**45**	PN	**Pn**	**19 52 31.8**	**-0.1**
KARP	**Karpathos**	**2.04**	**219**	P	**Pb**	**19 52 34.9**	**-0.2**
KARP				AML	AML	19 53 07.5	
	comp=N,606μm,0.6s						
KARP				AML	AML	19 53 09.5	
	comp=E,513μm,0.7s						
KARP	**Karpathos**	**2.04**	**219**	PN	**Pn**	**19 52 32.7**	**+0.4**
URLA	**Izmir**	**2.08**	**306**	PN	**Pn**	**19 52 32.9**	**+0.1**
DKL	**Dikili**	**2.40**	**324**	PN	**Pn**	**19 52 37.1**	**0.0**
SEYD	**Seydisehir-KON**	**2.49**	**83**	PN	**Pn**	**19 52 39.1**	**+0.6**
APE	**Apeiranthos**	**2.56**	**269**	PN	**Pn**	**19 52 39.7**	**+0.2**
PRK	**Paraskevi**	**2.85**	**318**	P	**Pn**	**19 52 44.5**	**+1.1**
PRK				AML	AML	19 53 37.3	
	comp=N,265μm,0.9s						
PRK				AML	AML	19 53 48.8	
	comp=E,312μm,0.8s						
ZKR	**Zakros**	**2.88**	**226**	P	**Pb**	**19 52 46.6**	**-2.8**
ZKR	**Zakros**	**2.88**	**226**	PN	**Pn**	**19 52 44.9**	**+1.1**
IDI	**Anoyia**	**3.62**	**240**	P	**Pn**	**19 52 57.3**	**+3.2**
	comp=E,5.5nm,0.3s,baz=60,slow=14,SNR=50						
IDI				S	**Sn**	**19 53 40.1**	**+3.3**
	comp=E,2.9nm,0.3s,baz=294,slow=21,SNR=9.3						
BRTR	**Keskin Array B**	**4.63**	**55**	P	**Pn**	**19 53 09.4**	**+1.5**
	comp=E,3.5nm,0.3s,baz=242,slow=17,SNR=143						
BRTR				S	**Sn**	**19 54 03.2**	**+1.5**
	baz=218,slow=22,SNR=1.7						
SLUM	**Salum**	**6.35**	**208**	P	**Pn**	**19 53 33.2**	**+1.7**
	baz=211						
SLUM				AMP		19 54 00.0	
	baz=211						
SLUM				S	**Sn**	**19 54 39.2**	**-4.8**
	baz=211						
MMAI	**Mount Meron Ar**	**6.85**	**125**	P	**Pn**	**19 53 37.7**	**-0.7**
	comp=E,3.1nm,0.3s,baz=309,slow=12,SNR=21						
SUZ	**Suez**	**8.05**	**154**	P	**Pn**	**19 53 55.0**	**+0.2**
	baz=154						
RYAN	**Fayoum**	**8.15**	**170**	P	**Pn**	**19 53 56.2**	**0.0**
	baz=171						
RYAN				AMP		19 55 00.0	
	baz=171						
SWA2		**8.35**	**200**	P	**Pn**	**19 53 59.7**	**+0.7**
	baz=202						
SWA2				AMP		19 55 00.0	
	baz=202						
SWA2				S	**Sn**	**19 55 25.9**	**-7.3**
	baz=202						
MLR	**Muntele Rosu**	**8.59**	**347**	P	**Pn**	**19 54 06.2**	**+3.9**
	comp=E,0.1nm,0.3s,baz=45,slow=22,SNR=1.8						
EIL	**Elat**	**9.09**	**143**	P	**Pn**	**19 54 08.8**	**-0.4**
	comp=E,0.3nm,0.3s,baz=320,slow=19,SNR=1.7						
EIL				S	**Sn**	**19 55 45.6**	**-5.8**
	comp=E,0.4nm,0.3s,baz=135,slow=20,SNR=2.2						
HFRF	**Wahat Farafira**	**9.98**	**182**	P	**Pn**	**19 54 21.4**	**0.0**
	baz=184						
TORD	**Torodi Ar. Bea**	**33.99**	**232**	P	**P**	**19 58 41.6**	**-0.1**
	comp=E,0.7nm,0.5s,baz=37,slow=9.0,SNR=12						
MKAR	**Makanchi Array**	**40.27**	**59**	P	**P**	**19 59 35.4**	**+0.6**
	comp=E,0.5nm,0.9s,baz=300,slow=6.5,SNR=1.9						

*IDC **16** 19:53:36.8±0.8,67.14N×21.22E,h0km, mb1 3.4/5, mb1mx3.1/50,mbtmp3.4/5,ML2.3/5, Error ellipse: s-maj=14.9km s-min=6.4km az=111.0*
*NAO **16** 19:53:36.3±0.8,67.15N×20.94E, ML2.4*
*HEL **16** 19:53:36.8±0.1,67.20N×20.69E, h0km, ML2.1, Explosion*
*BER **16** 19:53:38.8±5.2,67.10N×20.98E, h0km, ML2.0, ML2.4(NAO), Suspected explosion*
ISC 16 19:53:35.0±0.7, 67.11N±0.03×20.72E±0.03, h0km, n33, σ1§93/63, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERTU	**Ertsjaerv**	**0.80**	**133**	*e*P	**Pb**	**19 53 52.3**	**+0.5**
ERTU				*e*S	**Sb**	**19 54 03.8**	**+0.6**
PAJU	**Pajala**	**0.94**	**94**	*e*P	**Pb**	**19 53 54.0**	**-0.2**
PAJU				*e*S	**Sn**	**19 54 08.0**	**-1.6**
KALU	**Kalix**	**1.64**	**139**	*e*P	**Pg**	**19 54 07.0**	**+0.7**
KALU				*e*S	**Sg**	**19 54 29.9**	**+2.3**
TOF	**Tornio**	**1.77**	**124**	*e*P	**Pg**	**19 54 08.9**	**0.0**
TOF				MSG		19 54 30.3	
	comp=Z,20nm,0.2s						
TOF				*e*S	**Sg**	**19 54 33.2**	**+1.4**
KIF	**Kilpisjarvi**	**1.91**	**1**	Pn	**Pn**	**19 54 09.8**	**+1.1**
KIF				Sn	**Sb**	**19 54 35.7**	**+0.9**
KIF	**Kilpisjarvi**	**1.91**	**1**	*e*P	**Pn**	**19 54 09.6**	**+0.9**
KIF				MSG		19 54 31.1	
	comp=Z,10nm,0.2s						
KIF				*e*SG	**Sb**	**19 54 35.2**	**+0.4**
KIF	**Kilpisjarvi**	**1.91**	**1**	*e*P	**Pb**	**19 54 10.6**	**+0.1**
KIF				Sn	**Sb**	**19 54 35.7**	**+0.9**
FAUS	**Fauske**	**2.13**	**280**	*e*P	**Pn**	**19 54 14.1**	**+2.3**
FAUS				*e*S	**Sn**	**19 54 42.3**	**+3.4**
FAUS				IAML		19 54 46.9	
	comp=Z,21nm,0.5s						
KTK1	**Kautokeino**	**2.13**	**25**	*e*P	**Pn**	**19 54 13.6**	**+1.7**
KTK1				*e*S	**Sb**	**19 54 41.0**	**-0.4**
KTK1				IAML		19 54 42.1	
	comp=Z,23nm,0.3s						
RNF	**Rovaniemi**	**2.15**	**101**	*e*P	**Pb**	**19 54 14.5**	**-0.2**
N2TV	**T?rnvik**	**2.22**	**285**	*e*P	**Pn**	**19 54 15.3**	**+2.4**
N2TV				*e*S	**Sn**	**19 54 43.5**	**+2.5**
N2TV				IAML		19 54 49.4	
	comp=Z,14nm,0.4s						
STEI	**Steigen**	**2.26**	**294**	*e*P	**Pn**	**19 54 15.2**	**+1.6**
SGF	**Sodankyl**	**2.28**	**79**	*e*P	**Pb**	**19 54 15.6**	**-1.3**
SGF				*e*SG	**Sg**	**19 54 46.6**	**-1.4**
BURU	**Burvik**	**2.55**	**174**	*e*P	**Pn**	**19 54 20.7**	**+3.1**
MOR8	**Moi Rana**	**2.67**	**252**	*e*P	**Pn**	**19 54 21.4**	**+2.1**
MOR8				*e*S	**Sn**	**19 54 55.1**	**+2.7**
MOR8				IAML		19 54 57.1	
	comp=Z,11nm,0.4s						
ARA0	**ARCESS Array S**	**3.02**	**34**	Pn	**Pn**	**19 54 24.8**	**+0.9**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**19 55 01.5**	**+0.8**
	baz=211,slow=28						
ARA0	**ARCESS Array S**	**3.02**	**34**	Pn	**Pn**	**19 54 24.8**	**+0.9**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**19 55 01.5**	**+0.8**
	baz=211,slow=28						
ARCES	**ARCESS Array B**	**3.02**	**34**	Pn	**Pn**	**19 54 25.1**	**+1.2**
	baz=215,slow=13,SNR=75						
ARCES				Sn	**Sn**	**19 55 00.8**	**+0.1**
	baz=215,slow=26,SNR=3.2						
ARCES				Lg	Lg	19 55 05.4	
	baz=212,slow=29,SNR=5.8						
APA0	**Apatity Array**	**4.77**	**78**	Pn	**Pn**	**19 54 48.1**	**+0.2**
	baz=268,slow=11						
APA0				Sn	**Sn**	**19 55 41.9**	**-2.0**
	baz=260,slow=28						
APA0				Lg	Lg	19 55 59.9	
	baz=280,slow=28						
APA0	**Apatity Array**	**4.77**	**78**	Pn	**Pn**	**19 54 48.1**	**+0.2**
	baz=268,slow=11						
APA0				Sn	**Sn**	**19 55 41.9**	**-2.0**
	baz=260,slow=28						
APA0				Sg	**Sb**	**19 55 59.9**	**+2.8**
	baz=280,slow=28						
FIA0	**FINESS Array S**	**6.14**	**155**	Pn	**Pn**	**19 55 10.0**	**+3.1**
	baz=342,slow=14						
FIA0				Sn	**Sn**	**19 56 19.2**	**+1.4**
	baz=344,slow=28						
FIA0				Lg	Lg	19 56 49.2	
	baz=342,slow=28						
FIA0	**FINESS Array S**	**6.14**	**155**	Pn	**Pn**	**19 55 10.0**	**+3.1**
	baz=342,slow=14						
FIA0				Sn	**Sn**	**19 56 19.2**	**+1.4**
	baz=344,slow=28						
FIA0				Sg	**Sg**	**19 56 49.2**	**-2.9**
	baz=342,slow=28						
FINES	**FINESS Array B**	**6.14**	**155**	Pn	**Pn**	**19 55 07.6**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=344,slow=12,SNR=6.8						
FINES				Sn	**Sn**	**19 56 19.1**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=344,slow=25,SNR=1.9						
FINES				Lg	Lg	19 56 49.2	
	comp=Z,0.4nm,0.3s,baz=342,slow=27,SNR=3.5						
NB2	**NORSAR Subarra**	**7.37**	**219**	Pn	**Pn**	**19 55 25.9**	**+2.2**
NOA	**NORSAR Array B**	**7.37**	**219**	Pn	**Pn**	**19 55 25.8**	**+2.0**
	comp=Z,0.0nm,0.3s,baz=29,slow=11,SNR=1.6						
NOA				Sn	**Sn**	**19 56 48.2**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=46,slow=24,SNR=1.4						
NOA				Lg	Lg	19 57 26.0	
	comp=Z,0.0nm,0.3s,baz=105,slow=15,SNR=3.9						
NRA0	**NORESS Array S**	**7.56**	**217**	Pn	**Pn**	**19 55 28.1**	**+1.8**
	baz=44,slow=12						
NRA0				Sn	**Sn**	**19 56 53.4**	**+0.8**
	baz=28,slow=28						
NRA0				Lg	Lg	19 57 32.7	
	baz=34,slow=28						
NRA0	**NORESS Array S**	**7.56**	**217**	Pn	**Pn**	**19 55 28.1**	**+1.8**
	baz=44,slow=12						
NRA0				Sn	**Sn**	**19 56 53.4**	**+0.8**
	baz=28,slow=28						
NRA0				Sg	**Sg**	**19 57 32.7**	**-4.8**
	baz=34,slow=28						
HFS	**Hagfors**	**7.66**	**207**	Pn	**Pn**	**19 55 29.1**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=16,slow=12,SNR=1.8						
HFS				Sn	**Sn**	**19 56 55.2**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=27,slow=21,SNR=4.2						
HFS	**Hagfors**	**7.66**	**207**	Pn	**Pn**	**19 55 28.8**	**+1.1**
	baz=35,slow=14						
HFS				Sn	**Sn**	**19 56 54.9**	**-0.3**
	baz=29,slow=22						
HFS				Lg	Lg	19 57 34.9	
	baz=39,slow=28						
HFS	**Hagfors**	**7.66**	**207**	Pn	**Pn**	**19 55 28.8**	**+1.1**
	baz=35,slow=14						
HFS				Sn	**Sn**	**19 56 54.9**	**-0.3**
	baz=29,slow=22						
HFS				Sg	**Sg**	**19 57 34.9**	**-5.9**
	baz=39,slow=28						
SPA0	**Spitsbergen Ar**	**11.20**	**355**	Pn	**Pn**	**19 56 13.3**	**-2.7**
SPA0	**Spitsbergen Ar**	**11.20**	**355**	Pn	**Pn**	**19 56 13.3**	**-2.7**
SPITS	**Spitsbergen Ar**	**11.20**	**355**	Pn	**Pn**	**19 56 15.7**	**-0.3**
	baz=186,slow=13,SNR=1.4						

*IDC **16** 19:56:12.9±3.2,6.76S×147.49E,h0km, mb3.0/3, mb1 3.3/5,mb1mx3.2/28,mbtmp3.0/5,ML2.8/1, Error ellipse: s-maj=71.1km s-min=27.2km az=88.0*
ISC 16 19:56:18.4±3.5, 6.78S±0.1×147.76E±0.5, h50km, n6, σ1§91/7, mb3.3/3, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.63**	**189**	Pn	**Pn**	**19 56 57.7**	**-0.8**
	1.7nm,0.3s,baz=324,slow=9.5,SNR=2.8						
PMG				Sn	**Sn**	**19 57 31.4**	**+2.2**
	1.0nm,0.3s,baz=308,slow=23,SNR=1.8						
WRA	**Warramunga Arr**	**18.34**	**223**	P	**P**	**20 00 26.5**	**-2.3**
	0.0nm,0.3s,baz=49,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**21.32**	**217**	P	**P**	**20 01 00.2**	**-1.0**
	0.1nm,0.5s,baz=49,slow=9.2,SNR=4.5						
FITZ	**Fitzroy Crossi**	**24.16**	**240**	P	**P**	**20 01 31.7**	**+1.5**
	0.8nm,0.8s,baz=34,slow=11,SNR=1.7						
CMAR	**Chiang Mai Arr**	**54.13**	**298**	P	**P**	**20 05 39.5**	**+0.6**
	0.4nm,0.9s,baz=123,slow=6.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**145.84**	**283**	PKPbc	**PKPab**	**20 15 54.0**	**+0.3**
	0.4nm,0.8s,baz=72,slow=4.9,SNR=2.2						

*IDC **16** 20:13:41.4±3.0,31.51S×177.86W,h0km, mb3.8/2, mb1 4.1/4,mb1mx3.7/33,mbtmp3.9/4,ML3.6/2,MS3.3/3, Ms1 3.3/3,ms1mx2.7/41, Error ellipse: s-maj=71.3km s-min=30.7km az=117.0*
*NEIC **16** 20:13:42.4±1.1,31.56S±0.07×177.3W±0.2,h35km±2km, mb4.4/8, Error ellipse: s-maj=29.7km s-min=10.4km az=75.0*
ISC 16 20:13:41.1±1.8, 31.6S±0.1×177.4W±0.3, h26km, n17, σ1§35/15, mb4.3/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.38**	**349**	Pn	**Pn**	**20 14 18.8**	**+0.4**
	68nm,0.3s,baz=78,slow=21,SNR=2.0						
RAO				Sn	**Sn**	**20 14 46.1**	**-0.7**
	96nm,0.3s,baz=64,slow=22,SNR=2.3						
URZ	**Urewera**	**8.03**	**213**	Pn	**Pn**	**20 15 35.7**	**-0.3**
	0.2nm,0.3s,baz=6.9,slow=14,SNR=1.8						
DZM	**Mont Dzumac**	**17.25**	**299**	LR	LR	20 22 33.4	
	comp=Z,143nm,20.6s,baz=323,slow=32						
AFI	**Afiamalu**	**18.35**	**18**		**P**	**20 17 53.2**	**-0.6**
EIDS	**Eidsvold**	**28.33**	**275**	P	**P**	**20 19 32.8**	**-0.1**
EIDS				IAmb	IAmb	20 19 45.5	
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**34.73**	**258**	LR	LR	20 33 44.0	
	comp=Z,49nm,19.3s,baz=17,slow=35						
BBOO	**Buckleboo**	**39.16**	**255**	P	**P**	**20 21 04.7**	**-2.0**
BBOO				IAmb	IAmb	20 21 12.2	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	**43.57**	**268**	P	**P**	**20 21 45.7**	**+2.6**
ASAR	**Alice Springs**	**43.57**	**268**	P	**P**	**20 21 44.2**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=108,slow=7.6,SNR=11						
ASAR	**Alice Springs**	**43.57**	**268**	P	**P**	**20 21 44.0**	**+0.9**
WR0	**Warramunga Arr**	**44.49**	**273**	P	**P**	**20 21 51.8**	**+1.3**
WR0				IAmb	IAmb	20 22 07.2	
	comp=Z,3.8nm,1.1s						
WB2	**Warramunga Arr**	**44.66**	**273**	P	**P**	**20 21 53.2**	**+1.4**
WB2				IAmb	IAmb	20 22 08.3	
	comp=Z,4.2nm,0.6s						
WRA	**Warramunga Arr**	**44.67**	**273**	P	**P**	**20 21 52.9**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=111,slow=8.1,SNR=35						
WRA	**Warramunga Arr**	**44.67**	**273**	P	**P**	**20 21 53.0**	**+1.1**
WB0	**Warramunga Arr**	**44.70**	**273**	P	**P**	**20 21 53.6**	**+1.4**
WB0				IAmb	IAmb	20 22 10.0	
	comp=Z,3.4nm,0.8s						
QSPA	**South Pole Qui**	**58.52**	**180**	LR	LR	20 44 43.5	
	comp=Z,20nm,21.4s,baz=330,slow=32						
FINES	**FINESS Array B**	**146.45**	**340**	PKPbc	**PKiKP**	**20 33 22.8**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=33,slow=4.5,SNR=7.3						

IDC 16 20:16:56.0±12.0, 7.20N×94.05E, h0km, mb3.7/2, mb1 3.6/3, mb1mx3.2/44, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=217.3km s-min=92.3km az=153.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**12.16**	**23**	Pn	Pn	20 19 50.6	0.0
	0.1nm,0.3s,baz=212,slow=14,SNR=2.0						
MKAR	**Makanchi Array**	**40.72**	**348**	P	P	20 24 37.3	-1.1
	0.7nm,0

RIGZ	**Rimuhau**	**13.00 187**	P	**P**	20 19 45.4	**-1.0**
RTZ	**Ruatahuna**	**13.02 190**	P	**P**	20 19 47.2	**+0.6**
RTZ			S	**S**	20 22 03.4	**-2.7**
TLZ	**Tolley Road**	**13.02 195**	P	**P**	20 19 48.3	**+1.8**
ALRZ	**Allen Road**	**13.07 192**	P	**P**	20 19 48.3	**+1.3**
PRGZ	**Paritu Road**	**13.21 186**	P	**P**	20 19 50.1	**+1.7**
MTHZ	**Maungataniwha**	**13.27 190**	P	**P**	20 19 48.6	**-0.5**
MTHZ			S	**S**	20 22 07.3	**-3.6**
RAHZ	**Arahi**	**13.30 189**	P	**P**	20 19 50.4	**+1.0**
RAHZ			S	**S**	20 22 09.3	**-2.1**
KNZ	**Kokohu**	**13.33 187**	P	**P**	20 19 50.2	**+0.6**
KNZ			S	**S**	20 22 11.0	**-0.8**
HIZ	**Hauiti**	**13.36 197**	P	**P**	20 19 52.5	**+2.4**
MHGZ	**Mahia Peninsul**	**13.43 186**	P	**P**	20 19 52.5	**+1.7**
MHGZ			S	**S**	20 22 15.6	**+1.7**
WHHZ	**Waihua**	**13.43 188**	P	**P**	20 19 51.9	**+1.1**
WHHZ			S	**S**	20 22 09.7	**-4.3**
RATZ	**Rangitukua**	**13.48 193**	P	**P**	20 19 52.0	**+0.6**
NMHZ	**Naumai**	**13.52 190**	P	**P**	20 19 51.7	**-0.1**
NMHZ			S	**S**	20 22 13.6	**-2.0**
KATZ	**Kakaramea**	**13.60 194**	P	**P**	20 19 53.8	**+1.0**
BKZ	**Black Stump Fm**	**13.63 191**	P	**P**	20 19 52.1	**-0.9**
BKZ			S	**S**	20 22 12.9	**-5.0**
BKZ	**Black Stump Fm**	**13.63 191**		**P**	20 19 51.1	**-1.9**
ARHZ	**Aropaoanui**	**13.65 189**	P	**P**	20 19 53.8	**+0.6**
ARHZ			S	**S**	20 22 15.8	**-2.3**
KRVZ	**Karewarewa**	**13.73 194**	P	**P**	20 19 54.1	**0.0**
TMVZ	**Te Maari**	**13.73 193**	P	**P**	20 19 54.1	**0.0**
TWVZ	**Taurewa**	**13.75 194**	P	**P**	20 19 54.7	**+0.4**
ETVZ	**East Tongariro**	**13.75 193**	P	**P**	20 19 54.2	**-0.2**
WTVZ	**West Tongariro**	**13.76 194**	P	**P**	20 19 53.9	**-0.6**
OTVZ	**Oturere**	**13.79 193**	P	**P**	20 19 53.8	**-1.0**
OTVZ			S	**S**	20 22 20.2	**-0.8**
NGZ	**Ngauruhoe**	**13.81 194**	P	**P**	20 19 55.2	**+0.1**
MCHZ	**McNeill Hill**	**13.87 190**	P	**P**	20 19 54.5	**-0.9**
TUVZ	**Tukino**	**13.89 193**	P	**P**	20 19 55.6	**-0.2**
KWHZ	**Kaweka Forest**	**13.90 191**	P	**P**	20 19 54.2	**-1.6**
FWVZ	**Far West T-bar**	**13.90 194**	P	**P**	20 19 55.2	**-0.8**
DRZ	**Dome Shelter**	**13.92 194**	P	**P**	20 19 55.2	**-1.1**
WHVZ	**Whangaehu Hut**	**13.92 194**	P	**P**	20 19 55.2	**-1.0**
WNVZ	**Wahianoa**	**13.96 193**	P	**P**	20 19 55.4	**-1.1**
VRZ	**Vera Road**	**13.96 196**	P	**P**	20 19 58.5	**+2.1**
MOVZ	**Moawhango**	**14.00 193**	P	**P**	20 19 55.0	**-2.0**
BHHZ	**Black Hill Sta**	**14.02 192**	P	**P**	20 19 54.7	**-2.4**
KRHZ	**Kereru**	**14.12 191**	P	**P**	20 19 56.6	**-1.5**
KAHZ	**Kahuranaki**	**14.19 189**	P	**P**	20 19 58.4	**-0.5**
NEZ	**North Egmont**	**14.27 198**	P	**P**	20 20 04.0	**+4.1**
PNHZ	**Pukenui**	**14.41 191**	P	**P**	20 20 00.4	**-0.8**
TSZ	**Takapari Road**	**14.60 192**	P	**P**	20 20 01.3	**-1.8**
PRHZ	**Porangahau**	**14.69 189**	P	**P**	20 20 03.2	**-0.9**
TUWZ	**Tuamarina**	**16.34 196**	P	**P**	20 20 19.9	**-1.4**
THZ	**Tophouse**	**16.92 198**	P	**P**	20 20 25.9	**-1.5**
LTZ	**Lake Taylor**	**18.04 198**	P	**P**	20 20 36.7	**-1.2**
RPZ	**Rata Peaks**	**19.25 199**	P	**P**	20 20 49.6	**+0.6**
RPZ	3.7nm,0.3s,baz=340,slow=1.4,SNR=13		S	**S**	20 23 55.2	**-2.4**
RPZ	**Rata Peaks**	**19.25 199**	P	**P**	20 20 50.0	**+1.0**
RAR	**Rarotonga**	**19.31 81**	P	**P**	20 20 48.8	**-0.9**
ARMA	**Armidale**	**25.21 253**	P	**P**	20 21 43.1	**+0.3**
ARMA			IAmb	IAmb	20 21 45.5	
EIDS	**Eidsvold**	**25.85 265**	P	**P**	20 21 49.1	**+0.6**
TOO	**Toolangi**	**31.28 240**	P	**P**	20 22 36.3	**+0.6**
TOO			IAmb	IAmb	20 22 37.2	
CTA	**Charters Tower**	**31.32 273**	P	**P**	20 22 36.9	**+0.8**
CTA			S	**S**	20 27 07.9	**+0.3**
CTA			ScP	**ScP**	20 28 13.5	**+2.8**
CTAO	**Charters Tower**	**31.32 273**	P	**P**	20 22 37.0	**+0.8**
STKA	**Stephens Creek**	**33.86 251**	P	**P**	20 22 58.2	**+0.6**
STKA			PcP	**PcP**	20 25 23.4	**+1.1**
STKA			S	**S**	20 27 45.5	**-0.5**
STKA			ScP	**ScP**	20 28 21.2	**+1.8**
STKA	**Stephens Creek**	**33.86 251**	P	**P**	20 22 58.3	**+0.6**
KRVT	**Keravat (AS076**	**34.09 304**	P	**P**	20 22 59.4	**-0.4**
PMG	**Port Moresby**	**34.94 292**	P	**P**	20 23 06.3	**-0.7**
COEN	**Coen**	**36.24 282**	P	**P**	20 23 17.6	**-0.1**
COEN			IAmb	IAmb	20 23 18.8	
BBOO	**Buckleboo**	**38.54 249**	P	**P**	20 23 35.9	**-0.6**
BBOO			IAmb	IAmb	20 23 36.7	
AS31	**Alice Springs**	**41.55 263**	P	**P**	20 24 00.9	**+0.1**
AS31			IAmb	IAmb	20 24 01.6	
ASAR	**Alice Springs**	**41.55 263**	P	**P**	20 23 59.6	**-1.1**
ASAR			PcP	**PcP**	20 25 45.8	**-0.8**
ASAR			ScP	**ScP**	20 28 49.8	**+0.9**
ASAR			S	**S**	20 29 40.3	**+0.1**
ASAR	**Alice Springs**	**41.55 263**	P	**P**	20 23 59.8	**-1.0**
WR0	**Warramunga Arr**	**41.91 268**	P	**P**	20 24 03.2	**-0.4**
WR0			IAmb	IAmb	20 24 04.5	
WB2	**Warramunga Arr**	**42.09 268**	P	**P**	20 24 04.7	**-0.3**
WB2			IAmb	IAmb	20 24 05.9	
WRAB	**Tennant Creek**	**42.09 268**	P	**P**	20 24 04.5	**-0.5**
WRAB			IAmb	IAmb	20 24 05.9	
WRA	**Warramunga Arr**	**42.10 268**	P	**P**	20 24 04.5	**-0.7**
WRA			PcP	**PcP**	20 25 48.2	**-0.3**
WRA			ScP	**ScP**	20 28 53.4	**+2.3**
WRA	**Warramunga Arr**	**42.10 268**	P	**P**	20 24 04.6	**-0.5**
WB0	**Warramunga Arr**	**42.10 269**	P	**P**	20 24 04.7	**-0.5**
WB0			IAmb	IAmb	20 24 05.4	
FORT	**Forrest**	**45.48 251**	P	**P**	20 24 29.6	**-1.7**
MTN	**Manton Dam**	**47.41 276**	P	**P**	20 24 45.2	**-0.9**
MTN			IAmb	IAmb	20 24 48.0	
KNRA	**Kununurra**	**48.49 272**	P	**P**	20 24 54.2	**0.0**
FITZ	**Fitzroy Crossi**	**50.49 267**	P	**P**	20 25 08.8	**-0.2**
FITZ	**Fitzroy Crossi**	**50.49 267**	P	**P**	20 25 09.0	**0.0**
FITZ			IAmb	IAmb	20 25 10.0	
VNDA	**Vanda**	**52.50 185**	P	**P**	20 25 22.7	**+0.1**
VNDA			PcP	**PcP**	20 26 26.1	**+1.2**
VNDA			ScP	**ScP**	20 29 35.5	**+1.5**
VNDA	**Vanda**	**52.50 185**	P	**P**	20 25 23.7	**+1.0**
SIJI	**Sorong**	**52.84 290**	P	**P**	20 25 25.6	**-0.5**
NWAO	**Narrogin (SRO)**	**54.28 247**	P	**P**	20 25 34.9	**-1.2**
SOEI	**Soe**	**54.81 276**	P	**P**	20 25 41.2	**+1.1**
SOEI			IAmb	IAmb	20 25 56.5	
MORW	**Morawa**	**56.05 251**	P	**P**	20 25 47.8	**-0.6**
CASY	**Casey**	**58.34 206**	P	**P**	20 26 03.3	**-0.2**
CASY			IAmb	IAmb	20 26 04.1	
KAPI	**Kappang**	**60.88 279**	P	**P**	20 26 21.2	**-0.2**
QSPA	**South Pole Qui**	**64.32 180**	P	**P**	20 26 44.4	**+1.5**
QSPA			IAmb	IAmb	20 26 45.1	
LEM	**Lembang**	**71.00 272**	P	**P**	20 27 23.8	**-0.9**
KSM	**Kuching**	**72.22 281**	P	**P**	20 27 29.7	**-2.0**
KSM			IAmb	IAmb	20 27 32.4	
MJAR	**Matsushiro Arr**	**73.32 326**	P	**P**	20 27 36.7	**-0.8**
MJAR	**Matsushiro Arr**	**73.32 326**	P	**P**	20 27 35.8	**-1.8**
MAT	**Matsushiro**	**73.32 326**	P	**P**	20 27 36.8	**-0.8**
BELA	**Belgrano 2**	**74.61 173**	P	**P**	20 27 44.3	**0.0**
JNU	**Nakatsue**	**74.79 319**	P	**P**	20 27 45.1	**-0.9**
MAW	**Mawson**	**75.92 201**	P	**P**	20 27 51.8	**0.0**
MAW	**Mawson**	**75.92 201**	P	**P**	20 27 52.4	**+0.6**
KSRS	**Korea Array**	**79.54 320**	P	**P**	20 28 11.4	**-0.4**
KSAR	**Wonju Array Be**	**79.56 320**	P	**P**	20 28 11.4	**-0.4**
PETK	**Petropavlovsk-**	**80.86 347**	P	**P**	20 28 18.6	**+0.3**
SYO	**Syowa Base**	**81.14 194**	*eP*	**P**	20 28 17.9	**-1.8**
SYO	**Syowa Base**	**81.14 194**	*i* PcP	**P**	20 28 20.2	**+0.5**
MNSI	**Mandailing Nat**	**81.50 275**	P	**P**	20 28 20.6	**-1.9**
NJ2	**Nanjing**	**81.73 311**	P	**P**	20 28 24.1	**+0.9**
NJ2	comp=Z,18nm,0.5s		pmax	pmax		
USRK	**Usuriysk Ar.**	**82.22 327**	P	**P**	20 28 26.3	**+0.8**
SNAA	**Sanae**	**82.80 179**	P	**P**	20 28 27.9	**-0.3**
SNAA	**Sanae**	**82.80 179**	P	**P**	20 28 27.1	**-1.1**
VNA3	**Neumayer Olymp**	**83.02 177**	P	**P**	20 28 29.4	**+0.2**
GSI	**Gunungsitoli**	**83.52 275**	P	**P**	20 28 32.3	**-0.5**
CN2	**Changchun**	**85.26 324**	*eP*	**P**	20 28 40.9	**+0.3**
CN2	comp=Z,10.0nm,1.4s		pmax	pmax		
YBH	**Yreka Blue Hor**	**85.67 39**	P	**P**	20 28 44.1	**+1.4**
NVAR	**Mina Array Bea**	**86.25 44**	P	**P**	20 28 46.0	**+0.3**
NVAR	**Mina Array Bea**	**86.25 44**	P	**P**	20 28 46.4	**+0.6**
BJI	**Beijing**	**88.23 317**	P	**P**	20 28 55.8	**+1.1**
BJI	comp=Z,9.0nm,0.8s		pmax	pmax		
BJI	comp=Z,130nm,3.9s		pmax	pmax		
LAMP	**Lampang**	**89.42 291**	P	**P**	20 29 03.0	**+2.2**
PAYA	**Payao**	**89.60 292**	P	**P**	20 29 04.3	**+2.7**
XAN	**Xi'an**	**89.72 308**	P	**P**	20 29 02.5	**+0.6**
XAN	comp=Z,11nm,0.8s		pmax	pmax		
CM36	**Chiang Mai Arr**	**89.87 291**	P	**P**	20 29 05.0	**+2.1**
CM35	**Chiang Mai Arr**	**89.89 291**	P	**P**	20 29 04.0	**+1.0**
CM04	**Chiang Mai Arr**	**89.92 290**	P	**P**	20 29 05.0	**+1.9**
CM09	**Chiang Mai Arr**	**89.92 290**	P	**P**	20 29 05.7	**+2.5**
CM01	**Chiang Mai Arr**	**89.94 290**	P	**P**	20 29 05.0	**+1.8**
CM05	**Chiang Mai Arr**	**89.94 290**	P	**P**	20 29 05.0	**+1.8**
CM02	**Chiang Mai Arr**	**89.96 290**	P	**P**	20 29 05.4	**+2.1**
CM31	**Chiang Mai Arr**	**89.97 290**	P	**P**	20 29 05.6	**+2.2**
CMAR	**Chiang Mai Arr**	**89.97 290**	P	**P**	20 29 04.6	**+1.2**
CMAR	comp=Z,3.3nm,0.9s,baz=139,slow=3.4,SNR=22		PP	**PP**	20 32 45.6	**+0.2**
CMAR	**Chiang Mai Arr**	**89.97 290**	P	**P**	20 29 04.0	**+0.7**
CM34	**Chiang Mai Arr**	**89.97 291**	P	**P**	20 29 05.0	**+1.6**
CM13	**Chiang Mai Arr**	**89.98 290**	P	**P**	20 29 05.0	**+1.6**
CM15	**Chiang Mai Arr**	**89.98 290**	P	**P**	20 29 05.5	**+2.0**
CMMT	**Chiang Mai**	**90.13 291**	P	**P**	20 29 05.6	**+1.6**
CM33	**Chiang Mai Arr**	**90.13 291**	P	**P**	20 29 05.0	**+0.9**
CM32	**Chiang Mai Arr**	**90.14 291**	P	**P**	20 29 07.0	**+2.9**
HHC	**Hu-ho-hao-te**	**91.59 315**	*eP*	**P**	20 29 10.1	**-0.3**
HHC	comp=Z,10.0nm,1.0s		pmax	pmax		
HHC	comp=Z,130nm,5.8s		pmax	pmax		
TXAR	**Lajitas Array**	**91.60 58**	P	**P**	20 29 11.8	**+1.0**
TXAR	**Lajitas Array**	**91.60 58**	P	**P**	20 29 11.4	**+0.6**
CD2	**Chengdu**	**91.92 303**	P	**P**	20 29 13.4	**+1.2**
CD2	comp=Z,20nm,0.7s		pmax	pmax		
PDAR	**Pinedale Array**	**94.18 44**	P	**P**	20 29 21.8	**-0.7**
LZH	**Lanzhou**	**94.35 308**	*eP*	**P**	20 29 22.6	**-0.7**
LZH			pP	pwP	20 31 16.8	-2.3
LZH			sP	sP	20 32 06.8	+3.0
LZH			PP	**PP**	20 33 24.3	**+5.0**
LZH	comp=Z,29nm,1.1s		pmax	pmax		
LZH	comp=Z,92nm,4.5s		pmax	pmax		
SONM	**Songino Array**	**98.38 319**	P	**P**	20 29 41.3	**+0.2**
YKA	**Yellowknife Ar**	**102.14 26**	PKKPbc	PKKPbc	20 45 57.9	-2.3
ZALV	**Zalesovo Beam**	**113.25 320**	PKiKP	**PKiKP**	20 34 36.0	**-1.2**
MKAR	**Makanchi Array**	**113.25 312**	PKiKP	**PKiKP**	20 34 36.5	**-1.1**
KURK	**Kurchatov**	**116.39 316**		**PKPdf**	20 34 41.9	**-1.6**
KURBB	**Kurchatov Arra**	**116.44 316**	PKP	**PKPdf**	20 34 41.9	**-1.6**
KURBB			SKP		20 37 31.8	
BOSA	**Boshof**	**120.63 206**	PKP	**PKiKP**	20 34 53.0	**+0.3**
KKAR	**Karatay Array**	**120.81 306**	PKPdf	**PKPdf**	20 34 51.5	**-0.7**
GEYT	**Aibleck**	**129.70 299**	SKPbc	SKPab	20 37 46.5	+1.7
ARCES	**ARCESS Array B**	**133.67 348**	PKhKP	PKPpre	20 35 09.8	
ARCES	comp=Z,7.6nm,1.2s,baz=11,slow=1.2,SNR=5.0		PKP	**PKPdf**	20 35 16.0	**+0.1**
ARCES	comp=Z,3.0nm,0.8s,baz=82,slow=3.6,SNR=11		SKPbc	**SKPbc**	20 37 57.4	**-0.2**
KMBO	**Kilima Mbogo**	**134.98 239**	SKPbc	**SKPbc**	20 38 06.4	**+2.5**
FINES	**FINESS Array B**	**140.14 341**	PKhKP	PKPpre	20 35 20.4	
FINES	comp=Z,1.0nm,0.4s,baz=57,slow=1.6,SNR=8.5		PKP	**PKPdf**	20 35 29.1	**+1.1**
FINES	comp=Z,3.4nm,0.7s,baz=13,slow=3.0,SNR=8.7		SKPbc	**SKPbc**	20 38 16.6	**-0.1**
MARD	**Mardin**	**143.46 298**	PKPdf	PKPbc	20 35 33.7	+0.3
NB2	**NORSAR Subarra**	**143.89 351**	PKP	PKPbc	20 35 33.2	-0.6
NOA	**NORSAR Array B**	**143.89 351**	PKP	PKPbc	20 35 33.2	-0.6
AKASG	**Malin Array Be**	**146.41 326**	PKPbc	**PKPbc**	20 35 40.7	**-0.9**
AKBB	**Malin Array Si**	**146.41 326**		**PKPbc**	20 35 40.6	**-0.9**
PURM	**Purcari**	**148.36 319**	⇓P	**PKiKP**	20 35 48.8	**+0.8**
SORM	**Soroca**	**148.37 322**	⇑P	**PKPbc**	20 35 46.2	**-0.6**
BR131	**Keskin Array S**	**148.50 305**		**PKPbc**	20 35 47.1	**-0.5**
BRTR	**Keskin Array B**	**148.50 305**	PKPbc	**PKPbc**	20 35 47.1	**-0.5**
BRTR	**Keskin Array B**	**148.50 305**		**PKPbc**	20 35 47.0	**-0.6**
MILM	**Milestii Mici**	**148.78 320**	⇑P	**PKPbc**	20 35 46.9	**-1.0**
ANTO	**Ankara**	**149.08 305**	⇑P	**PKiKP**	20 35 50.3	**+0.4**
TLCR		**149.67 317**	⇑P	**PKPbc**	20 35 50.4	**+0.3**
JURR	**Jurilovca**	**149.84 316**	⇓P	**PKPbc**	20 35 50.8	**+0.3**
VARL	**Varlezi**	**149.89 319**	⇓P	**PKPbc**	20 35 50.3	**-0.3**
LEF	**Lefka**	**150.07 296**	⇑P	**PKPbc**	20 35 51.3	**0.0**
TPGR	**Topolog**	**150.08 317**	⇓P	**PKPbc**	20 35 51.1	**+0.1**
TESR	**Tescani**	**150.24 321**	⇑P	**PKPbc**	20 35 51.6	**+0.2**
BIZ	**Bicaz**	**150.30 322**	⇓P	**PKPbc**	20 35 51.9	**+0.4**
BURAR	**Bucovina Array**	**150.37 324**	⇑P	**PKiKP**	20 35 52.9	**+0.6**
HARR	**Harsova**	**150.46 317**	⇓P	**PKPbc**	20 35 52.2	**+0.3**
TLBR	**Topalu**	**150.47 317**	⇓P	**PKPbc**	20 35 52.2	**+0.2**
VRI	**Vrincioaia**	**150.56 320**	⇓P	**PKPbc**	20 35 51.0	**-1.2**
PLOR	**Plostina**	**150.62 320**	⇓P	**PKiKP**	20 35 53.9	**+1.1**
BISRR	**Bisoca**	**150.75 319**	⇑P	**PKiKP**	20 35 53.3	**+0.2**
ICOR	**Ion Corvin**	**150.83 316**	⇑P	**PKPbc**	20 35 52.7	**-0.1**
KOLS	**Kolonicke sedl**	**150.97 329**	*e*PKP	**PKiKP**	20 35 53.4	**0.0**
KOLS			*e*		20 36 01.0	
OZUR		**150.97 321**	⇓P	**PKPbc**	20 35 53.0	**-0.1**
NEHR	**Nehoiu**	**151.06 319**	⇑P	**PKPbc**	20 35 53.4	**0.0**
OJC	**Ojcow**	**151.11 333**		**PKPbc**	20 35 53.2	**-0.1**
MLR	**Muntele Rosu**	**151.23 320**	⇑P	**PKPbc**	20 35 53.2	**-0.6**
DOPR	**Dopca**	**151.27 321**	⇑P	**PKiKP**	20 35 54.5	**+0.4**
SECR		**151.41 319**	⇑P	**PKPbc**	20 35 53.2	**-0.9**
VOIR		**151.77 321**	⇓P	**PKPbc**	20 35 53.5	**-1.5**
CJR	**Cluj-Napoca**	**151.80 324**	⇑P	**PKPbc**	20 35 54.0	**-1.0**
SGRR	**Singureni**	**151.90 318**	⇑P	**PKPab**	20 36 03.7	**-3.1**
LOZB	**Loznitsa**	**151.96 316**	⇑P	**PKPbc**	20 35 55.1	**-0.3**
ARR	**Arges**	**152.05 321**	⇑P	**PKiKP**	20 35 56.0	**+0.2**
OSTC	**Ostas**	**152.21 337**	⇓*e*PKP	**PKPbc**	20 35 56.0	**+0.3**
CHVC	**Chvalec**	**152.24 337**	⇓*e*PKP	**PKPbc**	20 35 55.8	**0.0**
DPC	**Dobruska-Polom**	**152.34 337**	⇓*e*PKP	**PKPbc**	20 35 56.3	**+0.2**
KRLC	**Kraliky**	**152.40 336**	⇓*e*PKP	**PKPbc**	20 35 56.1	**-0.1**
CLL	**Collm**	**152.57 342**	*i* PKPbc	**PKPbc**	20 35 56.3	**-0.1**
CLL	comp=Z,7.0nm,0.8s		*e*PKPab	**PKPab**	20 36 09.0	**-0.3**
BRG	**Berggiesshubel**	**152.68 340**	*i* PKP	**PKPab**	20 36 03.6	**-6.3**
BRG	comp=Z,5.2nm,1.2s		*i*		20 36 09.8	
GZR	**Gura Zlata**	**153.08 323**	⇓P	**PKPbc**	20 35 57.5	**-0.3**
PRU	**Pruhonice**	**153.26 339**	*e*PKP	**PKPbc**	20 35 57.1	**-0.9**
BZS	**Buzias**	**153.56 324**	⇑P	**PKPbc**	20 35 58.7	**-0.1**
KHC	**Kasperske Hory**	**154.31 339**	*e*PKP	**PKiKP**	20 36 00.1	**-0.2**
GERES	**GERESS Array B**	**154.52 338**	PKPbc	**PKiKP**	20 36 00.2	**-0.6**
GERES	comp=Z,0.4nm,0.7s,baz=48,slow=1.5,SNR=3.7		PKPab	**PKPab**	20 36 15.6	**-2.3**
TORD	**Torodi Ar. Bea**	**167.31 189**	PKP	**PKPdf**	20 36 05.2	**-1.0**
TORD	comp=Z,0.9nm,0.7s,baz=234,slow=2.3,SNR=5.0		PKPab	**PKPab**	20 37 14.1	**-0.3**
	comp=Z,2.7nm,0.6s,baz=167,slow=4.0,SNR=15					

TIR **16** *20:20:37.0,41.°13N×20.°15E,h2km±1km,Ml2.6*
ATH **16** *20:20:37.5,41.°07N×20.°06E,h20km±2km,ML2.1/3,Error ellipse: s-maj=4.1km s-min=1.1km az=234.0*
SKO **16** *20:20:37.9,41.°07N×20.°09E,h6km*
BEO **16** *20:20:38.9±0.6,41.°02N×20.°13E,h0km,ML2.1/11*
ISC 16 20:20:37.7±1.1,41°09N±0°02×20°11E±0°03,h5km±10km, n31,σ1§26/52,Albania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**325**	*e*Pg		**Pg**	**20 20 43.9**	**0.0**
TIR				*e*Sg		**Sb**	20 20 50.7	**-0.7**
TIR	**Tirane**	**0.32**	**325**	P		**Pg**	**20 20 43.9**	**0.0**
TIR				S		**Sg**	**20 20 49.9**	**+1.8**
TIR	comp=N,1936μm,0.2s			AML		AML	20 20 52.3	
TIR	comp=E,1718μm,0.3s			AML		AML	20 20 52.7	
TIR	**Tirane** baz=316	**0.32**	**325**	P		**Pg**	**20 20 43.8**	**0.0**
TIR	baz=316			S		**Sg**	**20 20 48.9**	**+0.8**
TIR	comp=E,1.4nm,0.2s,baz=316			AMP				
OHR	**Ohrid**	**0.53**	**87**	*i* Pg		**Pg**	**20 20 47.5**	**-0.3**
OHR				*i* Sg		**Sb**	20 20 55.7	**-1.7**
PHP	**Peshkopia** baz=21	**0.65**	**23**	P		**Pg**	**20 20 49.4**	**-0.8**
PHP	baz=21			S		**Sg**	**20 20 58.7**	**+0.1**
PHP	comp=N,1.0nm,0.2s,baz=21			AMP				
PUK	**Puka** baz=349	**0.97**	**351**	P		**Pg**	**20 20 55.8**	**-0.5**
PUK	baz=349			S		**Sg**	**20 21 09.8**	**+0.9**
PUK	comp=E,1.0nm,0.2s,baz=349			AMP				
NEST	**Nestorio**	**0.98**	**133**	P		**Pg**	**20 20 56.4**	**-0.1**
NEST				S		**Sb**	**20 21 10.4**	**-0.1**
NEST	comp=N,152μm,0.6s			AML		AML	20 21 16.6	
NEST	comp=E,148μm,0.3s			AML		AML	20 21 20.0	
PENT	**Pentalofos**	**1.19**	**138**	P		**Pg**	**20 21 00.2**	**-0.2**
PENT				S		**Sn**	**20 21 16.5**	**-1.1**
SRN	**Sarande** baz=186	**1.21**	**184**	P		**Pn**	**20 21 01.9**	**+0.7**
SRN	baz=186			S		**Sn**	**20 21 20.5**	**+2.5**
SRN	comp=E,0.4nm,0.5s,baz=186			AMP				
BCI	**Bajram Curri** baz=358	**1.28**	**359**	P		**Pn**	**20 21 01.6**	**-0.7**
BCI	baz=358			S		**Sn**	**20 21 20.2**	**+0.3**
BCI	comp=E,0.5nm,0.5s,baz=358			AMP				
SKO	**Skopje**	**1.34**	**48**	*e*Pg		**Pn**	**20 21 02.8**	**-0.3**
SKO				*e*Sg		**Sn**	**20 21 22.1**	**+0.8**
KEK	**Kerkira**	**1.39**	**190**	P		**Pn**	**20 21 03.7**	**-0.1**
KPRO	**Kipourio**	**1.48**	**139**	P		**Pg**	**20 21 05.6**	**-0.4**
KZN	**Kozani**	**1.49**	**121**	P		**Pg**	**20 21 06.3**	**+0.1**
KZN				S		**Sg**	**20 21 26.0**	**+0.6**
KZN	comp=E,96μm,0.4s			AML		AML	20 21 31.5	
KZN	comp=N,104μm,0.7s			AML		AML	20 21 36.3	
PDG	**Podgorica**	**1.49**	**335**	*e*Pg		**Pg**	**20 21 07.0**	**+0.8**
PDG				*e*Sg		**Sg**	**20 21 26.9**	**+1.4**
JAN	**Janina**	**1.54**	**158**	P		**Pn**	**20 21 05.5**	**-0.3**
IGT	**Igoumenitsa** baz=175	**1.56**	**174**	P		**Pg**	**20 21 08.3**	**+0.7**
STIP	**Stip**	**1.68**	**68**	*i* Pn		**Pg**	**20 21 10.6**	**+0.8**
VAY	**Valandovo**	**1.88**	**82**	*e*Pn		**Pb**	**20 21 12.1**	**-0.3**
VAY				*e*Sg		**Sg**	**20 21 36.9**	**-1.0**
PRVS	**Prvonek**	**2.05**	**45**	*e*Pn		**Pb**	**20 21 14.5**	**-0.9**
PRVS				*e*Sn		**Sb**	**20 21 41.3**	**+0.1**
TREB	**Trebinje**	**2.09**	**322**	*e*Pn		**Pn**	**20 21 14.3**	**+0.9**
SJES	**Sjenica**	**2.18**	**357**	*e*Pn		**Pb**	**20 21 17.7**	**+0.1**
SJES				*e*Sn		**Sb**	**20 21 45.4**	**+0.4**
SELS	**Selova**	**2.26**	**19**	*e*Pn		**Pb**	**20 21 19.5**	**+0.5**
SELS				*e*Sn		**Sb**	**20 21 48.1**	**+0.7**
IVAS	**Ivanjica**	**2.49**	**1**	*e*Pn		**Pb**	**20 21 21.9**	**-1.1**
IVAS				*e*Sn		**Sb**	**20 21 53.9**	**-0.1**
STON	**Ston**	**2.53**	**316**	*e*Pn		**Pn**	**20 21 18.2**	**-1.3**
BBLS	**Lazići**	**2.83**	**350**	*e*Pn		**Pb**	**20 21 26.8**	**-1.9**
BBLS				*e*Sn		**Sb**	**20 22 01.5**	**-2.2**
ZAPS	**Zavoj**	**2.88**	**40**	*e*Pn		**Pb**	**20 21 27.8**	**-1.8**
ZAPS				*e*Sn		**Sn**	**20 22 01.7**	**+2.3**
DIVS	**Divibare**	**3.01**	**358**	*e*Pn		**Pn**	**20 21 29.2**	**+3.0**
DIVS				*e*Sn		**Sb**	**20 22 06.5**	**-2.5**
HAPS	**Han Pijesak,BI**	**3.12**	**345**	*e*Pn		**Pb**	**20 21 31.5**	**-2.2**
ZAGS	**Zajecar**	**3.15**	**29**	*e*Pn		**Pn**	**20 21 30.1**	**+2.2**
RICI	**Ricice**	**3.27**	**319**	*e*Pn		**Pn**	**20 21 27.4**	**-2.2**

NDI **16** *20:33:33.3±5.3,24.°17N×93.°75E,h57km±42km,mb4.1, ML4.0,mb4.3(NEIC)*
NEIC **16** *20:33:34.2±1.7,24.°0N±0.°1×93.°6E±0.°2,h61km±9km, mb4.3/13,Error ellipse: s-maj=29.0km s-min=10.3km az=54.0*
IDC **16** *20:33:35.2±0.7,24.°04N×93.°77E,h70km±5km,mb3.8/14, mb1 3.9/15,mb1mx3.6/51,mbtmp4.1/15,MS3.1/6, Ms1 3.1/6,ms1mx2.7/54,Error ellipse: s-maj=27.4km s-min=10.2km az=59.0*
**ISC 16 20

GUWA IAML 20 34 46.7
comp=E,541nm,0.1s
GUWA IAML 20 34 46.9
comp=N,881nm,0.1s
ZIRO ZIRO 3.40 3 *e*P **Pn** **20 34 23.6 -1.0**
LKP Lekhapani 3.75 31 *e*P **Pn** **20 34 29.1 -0.3**
GTK Tadong 5.57 306 *e*P **Pn** **20 34 54.2 -0.2**
GTK *e*S **Sn** **20 35 54.9 -2.2**
LSA Lhasa 5.99 339 Pn **Pn** **20 35 01.5 +1.0**
TAPN Taplejung 6.26 302 *e*Pn **Pn** **20 35 05.4 +1.4**
TAPN *e*Sn **Sn** **20 36 14.4 0.0**
comp=N,642nm,0.8s
TAPN Taplejung 6.26 302 *e*Pn **Pn** **20 35 04.9 +0.9**
TAPN *e*Sn **Sn** **20 36 12.3 -2.1**
comp=N,642nm,0.8s
ODAN Odare 6.29 297 *e*Pn **Pn** **20 35 05.5 +1.1**
ODAN *e*Sn **Sn** **20 36 12.8 -2.3**
comp=N,843nm,0.6s
ODAN Odare 6.29 297 *e*Pn **Pn** **20 35 05.1 +0.7**
ODAN *e*Sn **Sn** **20 36 12.6 -2.5**
comp=N,843nm,0.6s
RAMN Ramite 6.98 295 *e*Pn **Pn** **20 35 14.9 +1.1**
RAMN *e*Sn **Sn** **20 36 29.7 -2.2**
comp=N,161nm,0.4s
RAMN Ramite 6.98 295 *e*Pn **Pn** **20 35 15.0 +1.1**
RAMN *e*Sn **Sn** **20 36 29.9 -2.0**
comp=N,161nm,0.4s
BOK Bokaro 7.12 269 *e*P **Pn** **20 35 16.2 +0.6**
BOK IAmb IAmb 20 35 19.0
comp=Z,26nm,0.5s
BOK *i* x x 20 35 29.1
MHMT Maesarieng 7.13 145 P **Pn** **20 35 18.6 +2.9**
comp=Z,0.1nmcomp=Z,407nmcomp=Z,26nm,0.8s
CM33 Chiang Mai Arr 7.21 136 P **Pn** **20 35 18.0 +1.1**
CHTO Chiang Mai 7.21 136 Pn **Pn** **20 35 17.3 +0.5**
CMMT Chiang Mai 7.22 136 P **Pn** **20 35 18.0 +1.1**
comp=Z,0.0nmcomp=Z,3.4nm,0.8s
CM32 Chiang Mai Arr 7.27 137 P **Pn** **20 35 18.0 +0.3**
CM34 Chiang Mai Arr 7.32 135 P **Pn** **20 35 18.0 -0.3**
CM35 Chiang Mai Arr 7.45 136 P **Pn** **20 35 21.0 +0.9**
PAYA Payao 7.46 128 P **Pn** **20 35 20.0 -0.2**
comp=Z,1.5nmcomp=Z,5µmcomp=Z,405nm,0.7s
CM15 Chiang Mai Arr 7.47 138 P **Pn** **20 35 21.6 +1.2**
comp=Z,0.0nmcomp=Z,120nmcomp=Z,12nm,1.0s
CM31 Chiang Mai Arr 7.48 138 P **Pn** **20 35 21.8 +1.3**
comp=Z,1.3nmcomp=Z,4µmcomp=Z,256nm,0.7s
CM31 Chiang Mai Arr 7.48 138 Pn **Pn** **20 35 21.1 +0.6**
CMAR Chiang Mai Arr 7.48 138 P **Pn** **20 35 21.1 +0.5**
comp=Z,0.6nm,0.3s,baz=315,slow=13,SNR=39
CMAR S **Sn** **20 36 43.0 -1.0**
baz=329,slow=19,SNR=1.8
CMAR LR LR 20 38 51.2
comp=Z,80nm,20.7s,baz=5.0,slow=43
CMAR Chiang Mai Arr 7.48 138 **Pn** **20 35 20.2 -0.3**
CM13 Chiang Mai Arr 7.49 138 P **Pn** **20 35 21.0 +0.4**
comp=Z,0.0nmcomp=Z,98nmcomp=Z,13nm,0.8s
CM02 Chiang Mai Arr 7.50 138 P **Pn** **20 35 21.0 +0.2**
comp=Z,0.0nmcomp=Z,128nmcomp=Z,16nm,0.8s
CM01 Chiang Mai Arr 7.52 138 P **Pn** **20 35 22.5 +1.5**
comp=Z,0.0nmcomp=Z,133nmcomp=Z,14nm,1.1s
CM09 Chiang Mai Arr 7.52 138 P **Pn** **20 35 22.0 +0.9**
comp=Z,0.0nmcomp=Z,104nmcomp=Z,12nm,0.8s
CM05 Chiang Mai Arr 7.52 138 P **Pn** **20 35 22.3 +1.2**
CM36 Chiang Mai Arr 7.53 137 P **Pn** **20 35 22.0 +0.8**
CM04 Chiang Mai Arr 7.55 138 P **Pn** **20 35 22.6 +1.1**
comp=Z,0.0nmcomp=Z,123nmcomp=Z,8.3nm,0.7s
LAMP Lampang 7.87 134 P **Pn** **20 35 30.0 +4.1**
comp=Z,0.1nmcomp=Z,16nm,0.7s
GUN Gumba 7.96 300 *e*Pn **Pn** **20 35 28.1 +0.8**
GUN *e*Sn **Sn** **20 36 53.3 -2.8**
comp=Z,613nm,0.8s
GUN Gumba 7.96 300 *e*Pn **Pn** **20 35 27.6 +0.3**
GUN *e*Sn **Sn** **20 36 52.6 -3.5**
comp=Z,613nm,0.8s
PKI Pulchoki 8.19 297 *e*Pn **Pn** **20 35 30.5 0.0**
PKI *e*Sn **Sn** **20 36 58.1 -3.8**
comp=Z,121nm,0.5s
PKI Pulchoki 8.19 297 *e*Pn **Pn** **20 35 30.5 0.0**
PKI *e*Sn **Sn** **20 36 58.0 -3.8**
comp=Z,121nm,0.5s
PKIN Phulchoki 8.21 297 *e*Pn **Pn** **20 35 30.5 -0.2**
PKIN *e*Sn **Sn** **20 36 57.5 -4.6**
comp=Z,124nm,0.5s
PKIN Phulchoki 8.21 297 *e*Pn **Pn** **20 35 30.5 -0.2**
KKN Kakani 8.38 298 *e*Pn **Pn** **20 35 32.7 -0.3**
KKN Kakani 8.38 298 *e*Pn **Pn** **20 35 32.8 -0.3**
DMN Daman 8.46 296 *e*Pn **Pn** **20 35 34.3 +0.2**
DMN Daman 8.46 296 *e*Pn **Pn** **20 35 34.3 +0.2**
SUKH Sukhothai 8.64 139 P **Pn** **20 35 38.0 +1.6**
comp=Z,0.1nmcomp=Z,14nm,0.9s
GKN Gorkha 8.99 297 *e*Pn **Pn** **20 35 41.0 -0.3**
GKN Gorkha 8.99 297 *e*Pn **Pn** **20 35 40.6 -0.7**
GKN *e*Sn **Sn** **20 37 16.5 -4.7**
comp=Z,234nm,0.3s
UTTA Uttaradit 9.04 133 P **Pn** **20 35 44.6 +2.8**
KOLN Koldanda 9.76 294 *e*Pn **Pn** **20 35 51.1 -0.8**
KOLN Koldanda 9.76 294 *e*Pn **Pn** **20 35 50.7 -1.2**
KOLN *e*Sn **Sn** **20 37 35.1 -5.0**
comp=Z,78nm,0.3s
DANN Dangsing 9.84 297 *e*Pn **Pn** **20 35 52.1 -1.0**
DANN Dangsing 9.84 297 *e*Pn **Pn** **20 35 52.0 -1.0**
PYUN Piuthan 10.38 295 *e*Pn **Pn** **20 35 59.0 -1.3**
PYUN Piuthan 10.38 295 *e*Pn **Pn** **20 35 59.0 -1.3**
PYUN *e*Sn **Sn** **20 37 49.1 -6.2**
comp=Z,180nm,0.7s
NGP Nagpur 13.82 261 *e*P **Pn** **20 36 46.3 -0.8**
NGP IAmb IAmb 20 36 48.0
comp=Z,4.9nm,0.4s
BHPL Bhopal 14.91 270 *e*P **Pn** **20 37 00.6 -0.9**
BHPL *i* pP P 20 37 11.9 +6.0
SMLA Simla 16.19 299 *e*P **Pn** **20 37 15.1 -2.8**
SMLA IAmb IAmb 20 37 20.6
comp=Z,5.0nm,0.5s
SMLA *i* x x 20 37 21.7
DHRM DHARAMSHALA 17.30 302 *e*P **Pn** **20 37 29.1 -2.8**
DHRM IAmb IAmb 20 37 35.5
comp=Z,7.4nm,0.7s
DHRM *ex* x 20 40 33.3
IPM Ipoh 20.78 159 P **P** **20 38 10.6 +0.1**
KCSI Kotacane, Aceh 20.86 168 P Pn 20 38 13.6 -0.8
comp=Z,2µmcomp=Z,15nm,0.9s
BOOM Boomskoye usch 23.48 326 **P** **20 38 38.8 +0.1**
MK31 Makanchi Array 24.39 341 P **P** **20 38 48.0 +1.1**
MK31 IAmb IAmb 20 38 48.9
comp=Z,6.4nm,0.7s
MKAR Makanchi Array 24.39 341 P **P** **20 38 48.0 +1.1**
comp=Z,5.3nm,0.5s,baz=147,slow=12,SNR=85
MKAR sP **sP** **20 39 14.1 +5.8**
comp=Z,2.1nm,0.6s,baz=147,slow=11,SNR=3.7
MKAR Makanchi Array 24.39 341 P **P** **20 38 47.6 +0.7**
MAKZ Makanchi 24.50 340 P **P** **20 38 49.4 +1.5**
SONM Songino Array 25.74 20 P **P** **20 38 59.6 +0.4**
comp=Z,4.0nm,0.8s,baz=200,slow=10.0,SNR=21
SONM pP **sP** **20 39 18.1 -2.3**
comp=Z,3.0nm,0.9s,baz=202,slow=9.0,SNR=4.9
SONM Songino Array 25.74 20 P **P** **20 39 00.0 +0.8**
ULN Ulaanbaatar 25.98 21 P **P** **20 39 02.2 +0.8**
ULN IAmb IAmb 20 39 04.1
comp=Z,5.6nm,0.7s
KURBB Kurchatov Arra 28.94 340 P **P** **20 39 28.4 +0.6**
comp=Z,2.7nm,0.8s,baz=156,slow=8.0,SNR=15
KURBB PcP **PcP** **20 42 36.1 +0.7**
comp=Z,0.5nm,0.6s,baz=174,slow=2.3,SNR=4.2
KURK Kurchatov 29.00 340 P **P** **20 39 29.3 +1.2**
ZALV Zalesovo Beam 30.52 350 P **P** **20 39 42.3 +0.7**
comp=Z,1.9nm,0.5s,baz=171,slow=8.0,SNR=14
ZALV pP **pP** **20 39 58.8 +2.6**
comp=Z,0.8nm,0.5s,baz=154,slow=8.7,SNR=2.7
ZALV Zalesovo Beam 30.52 350 P **P** **20 39 41.6 0.0**
GEYT Alibeck 33.22 303 LR LR 20 54 56.8
comp=Z,20nm,21.1s,baz=240,slow=38
BVAR Borovoye Array 33.81 335 P **P** **20 40 11.1 +0.6**
comp=Z,0.5nm,0.4s,baz=153,slow=11,SNR=5.7
ABKAR Akbulak array 36.40 322 P **P** **20 40 34.4 +1.7**
ABKAR IAmb IAmb 20 40 51.4
comp=Z,2.3nm,0.6s
ABKAR Akbulak array 36.40 322 P **P** **20 40 34.5 +1.7**
ASAJ Asahikawa 44.42 51 LR LR 21 02 36.3
comp=Z,24nm,18.1s,baz=145,slow=39
MMAI Mount Meron Ar 51.38 294 LR LR 21 08 52.9
comp=Z,23nm,18.0s,baz=190,slow=41
FITZ Fitzroy Crossi 52.28 140 P **P** **20 42 38.8 -1.1**
comp=Z,0.6nm,0.6s,baz=347,slow=7.5,SNR=1.7
BRTR Keskin Array B 52.36 302 LR LR 21 11 22.5
comp=Z,12nm,18.3s,baz=84,slow=43

MA2 Magadan 52.96 32 LR LR 21 06 10.7
comp=Z,34nm,20.1s,baz=329,slow=37
FINES FINESS Array B 58.41 329 P **P** **20 43 24.2 +0.8**
comp=Z,1.8nm,0.8s,baz=126,slow=5.2,SNR=5.0
FINES FINESS Array B 58.41 329 P **P** **20 43 23.9 +0.5**
WB0 Warramunga Arr 58.97 134 P **P** **20 43 26.8 -1.1**
WRA Warramunga Arr 59.06 134 P **P** **20 43 27.6 -1.0**
comp=Z,7.7nm,0.6s,baz=323,slow=7.4,SNR=126
WRA PcP **PcP** **20 44 15.4 -1.5**
comp=Z,0.8nm,0.7s,baz=338,slow=4.3,SNR=5.7
WRA ScP **ScP** **20 48 09.0 -3.7**
comp=Z,0.2nm,0.8s,baz=318,slow=4.6,SNR=1.9
WRA Warramunga Arr 59.06 134 P **P** **20 43 26.9 -1.6**
WB2 Warramunga Arr 59.07 134 P **P** **20 43 27.9 -0.7**
WR0 Warramunga Arr 59.20 134 P **P** **20 43 28.6 -0.8**
AS31 Alice Springs 61.49 138 P **P** **20 43 43.1 -2.0**
AS31 IAmb IAmb 20 43 45.1
comp=Z,1.8nm,0.8s
ASAR Alice Springs 61.49 138 P **P** **20 43 44.5 -0.6**
comp=Z,4.8nm,0.7s,baz=321,slow=7.0,SNR=76
ASAR PcP **PcP** **20 44 25.2 -1.3**
comp=Z,1.2nm,0.7s,baz=317,slow=5.8,SNR=4.3
ASAR Alice Springs 61.49 138 P **P** **20 43 43.3 -1.8**
GERES GERESS Array B 65.78 314 P **P** **20 44 14.2 +1.0**
comp=Z,0.1nm,0.5s,baz=54,slow=5.5,SNR=1.4
GERES pP **pP** **20 44 31.0 +1.8**
comp=Z,0.7nm,0.7s,baz=79,slow=6.9,SNR=4.2
CTA Charters Tower 67.48 126 P **P** **20 44 22.4 -1.9**
comp=Z,3.4nm,0.6s,baz=312,slow=8.6,SNR=5.5
STKA Stephens Creek 72.10 138 P **P** **20 44 51.6 -0.8**
comp=Z,0.8nm,0.4s,baz=20,slow=4.0,SNR=3.5
ILAR Eielson Array 79.94 22 P **P** **20 45 35.8 -0.8**
comp=Z,0.5nm,0.8s,baz=281,slow=3.5,SNR=4.4
ILAR pP **pP** **20 45 54.9 +1.9**
comp=Z,0.3nm,0.6s,baz=297,slow=4.7,SNR=2.6
TORD Torodi Ar. Bea 86.49 283 P **P** **20 46 12.8 +1.5**
comp=Z,0.8nm,0.9s,baz=64,slow=4.0,SNR=3.5
TORD pP **pP** **20 46 30.4 +2.6**
comp=Z,0.9nm,0.8s,baz=54,slow=4.0,SNR=4.3

WEL 16 20:49:59.1,42°S±2°×17°3E±°, h27km±5km, M2.7/19, ML2.8/18, MLv2.7/19, Error ellipse: s-maj=0.0km s-min=0.0km az=77.2, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
KHZ	**Kahutara**	**0.31**	**80**	P	**Pb**	20 50 06.7	+0.4
GVZ	**Greta Valley S**	**0.50**	**188**	P	**Pn**	20 50 10.1	-0.3
LTZ	**Lake Taylor**	**0.71**	**244**	P	**Pb**	20 50 12.0	-0.9
THZ	**Tophouse**	**0.73**	**347**	P	**Pb**	20 50 12.8	-0.5
AMCZ	**Amberley**	**0.79**	**206**	P	**Pn**	20 50 15.2	+0.8
BSWZ	**Blackbirch Sta**	**0.94**	**36**	P	**Pb**	20 50 17.6	+0.9
TUWZ	**Tuamarina**	**1.21**	**30**	P	**Pb**	20 50 21.9	+0.7
DSZ	**Dennistion Nort**	**1.23**	**306**	P	**Pb**	20 50 21.7	+0.1
OKCZ	**Okains Bay**	**1.25**	**182**	P	**Pb**	20 50 22.1	0.0
NNZ	**Nelson**	**1.27**	**8**	P	**Pb**	20 50 22.4	+0.1
INZ	**Inchbonnie**	**1.27**	**258**	P	**Pb**	20 50 21.8	-0.5
MQZ	**McQueen's Vall**	**1.28**	**196**	P	**Pn**	20 50 21.4	+0.2
RACZ	**Rakaia**	**1.45**	**210**	P	**Pn**	20 50 23.9	+0.4
TCW	**Tory Channel**	**1.52**	**35**	P	**Pb**	20 50 26.9	+0.2
MHCZ	**Mount Hutt**	**1.56**	**227**	P	**Pn**	20 50 25.3	+0.2
QRZ	**Quartz Range**	**1.71**	**344**	P	**Pb**	20 50 29.5	-0.2
WACZ	**Wakanui South**	**1.75**	**212**	P	**Pn**	20 50 27.9	+0.3
DUWZ	**D'Urville Isla**	**1.77**	**28**	P	**Pb**	20 50 30.7	-0.2
PLWZ	**Palliser**	**1.82**	**61**	P	**Pn**	20 50 29.9	+1.2
WVZ	**Waitaha Valley**	**1.86**	**250**	P	**Pn**	20 50 30.6	+1.4
RPZ	**Rata Peaks**	**1.96**	**230**	P	**Pn**	20 50 31.0	+0.4
CAW	**Cannon Point**	**1.99**	**47**	P	**Pn**	20 50 32.6	+1.6
ARCZ	**Arundel**	**2.05**	**223**	P	**Pn**	20 50 32.1	+0.3
OGWZ	**Otaki Gorge**	**2.25**	**43**	P	**Pn**	20 50 36.0	+1.4
MRZ	**Mangatainoka R**	**2.58**	**46**	P	**Pn**	20 50 40.0	+1.0

*NEIC **16** 20:58:00.1±1.2,9.5S±0.2×155.4E±0.1, h10km±1km, mb4.2/11, Error ellipse: s-maj=35.5km s-min=12.3km az=28.0*
*IDC **16** 20:58:06.3±3.6,9.52S×155.14E, h44km±32km, mb3.7/10, mb1 4.0/12, mb1mx3.7/40, mbtmp4.0/12, ML3.2/2, MS3.3/20, Ms1 3.4/20, ms1mx3.3/29, Error ellipse: s-maj=28.9km s-min=19.8km az=111.0*
ISC 16 20:58:03.4±0.6, 9.6S±0.1×155.3E±0.1, h29km, n39, σ1s24/26, mb4.1/14, MS3.3/17, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
HNR	**Honiara**	**4.61**	**89**	LR	LR	21 00 37.9	
	comp=Z,275nm,21.7s,baz=96,slow=32						
KRVT	**Keravat (AS076**	**6.15**	**328**	P	**Pn**	**20 59 32.3**	**0.0**
	1.1nm,0.3s,baz=296,slow=12,SNR=5.6						
KRVT				LR	LR	21 01 49.6	
	comp=Z,407nm,20.3s,baz=135,slow=37						
PMG	**Port Moresby**	**8.01**	**271**	LR	LR	21 03 09.6	
	comp=Z,496nm,20.4s,baz=96,slow=38						
SANVU	**Saraoutou**	**13.02**	**118**	Pn	**Pn**	**21 01 04.5**	**-2.0**
DZM	**Mont Dzumac**	**16.41**	**141**	P	**P**	**21 01 55.6**	**+1.2**
	comp=0.3s,baz=358,slow=17,SNR=5.6						
LHI	**Lord Howe Isla**	**22.12**	**171**	P	**P**	**21 02 56.3**	**-0.3**
WR0	**Warramunga Arr**	**22.52**	**240**	P	**P**	**21 03 01.4**	**+0.3**
WR0				IAmb	IAmb	21 03 03.8	
	comp=Z,8.5nm,1.1s						
WB0	**Warramunga Arr**	**22.57**	**241**	P	**P**	**21 03 04.1**	**+2.4**
WB0				IAmb	IAmb	21 03 11.0	
	comp=Z,6.9nm,0.8s						
WRAB	**Tennant Creek**	**22.68**	**241**	P	**P**	**21 03 03.5**	**+0.8**
WRAB				IAmb	IAmb	21 03 11.8	
	comp=Z,7.3nm,0.8s						
WB2	**Warramunga Arr**	**22.68**	**241**	P	**P**	**21 03 04.0**	**+1.2**
WB2				IAmb	IAmb	21 03 12.0	
	comp=Z,6.1nm,0.8s						
WRA	**Warramunga Arr**	**22.69**	**241**	P	**P**	**21 03 03.9**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=65,slow=9.5,SNR=25						
WRA				LR	LR	21 11 45.1	
	comp=Z,107nm,20.8s,baz=70,slow=36						
WRA	**Warramunga Arr**	**22.69**	**241**	P	**P**	**21 03 01.5**	**-1.4**
AS31	**Alice Springs**	**24.76**	**233**	P	**P**	**21 03 23.1**	**+0.3**
ASAR	**Alice Springs**	**24.76**	**233**	P	**P**	**21 03 23.6**	**+0.8**
	comp=Z,11nm,1.1s,baz=63,slow=9.6,SNR=35						
ASAR				LR	LR	21 12 09.2	
	comp=Z,52nm,18.6s,baz=66,slow=34						
ASAR	**Alice Springs**	**24.76**	**233**	P	**P**	**21 03 23.0**	**+0.2**
STKA	**Stephens Creek**	**25.56**	**208**	P	**P**	**21 03 30.5**	**+0.6**
	comp=Z,5.6nm,0.9s,baz=32,slow=11,SNR=7.0						
STKA				LR	LR	21 13 36.6	
	comp=Z,169nm,18.2s,baz=24,slow=36						
STKA	**Stephens Creek**	**25.56**	**208**	P	**P**	**21 03 30.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**29.96**	**250**	P	**P**	**21 04 10.2**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=95,slow=11,SNR=2.5						
FITZ				LR	LR	21 15 14.8	
	comp=Z,48nm,21.0s,baz=56,slow=34						
FITZ	**Fitzroy Crossi**	**29.96**	**250**	IAmb	IAmb	21 04 10.6	
	comp=Z,4.6nm,1.3s						
KAPI	**Kappang**	**35.51**	**275**	LR	LR	21 20 38.3	
	comp=Z,50nm,20.8s,baz=84,slow=38						
TGY	**Tagaytay City**	**41.40**	**304**	LR	LR	21 20 01.1	
	comp=Z,38nm,20.5s,baz=143,slow=32						
KKM	**Kota Kinabalu**	**41.90**	**290**	P	**P**	**21 05 49.0**	**-2.8**
MJAR	**Matsushiro Arr**	**48.60**	**342**	LR	LR	21 28 27.6	
	comp=Z,11nm,18.0s,baz=80,slow=38						
KSRS	**Korea Array**	**53.34**	**333**	LR	LR	21 28 49.7	
	comp=Z,12nm,18.3s,baz=120,slow=35						
PPT	**Papeete**	**54.04**	**105**	LR	LR	21 28 55.9	
	comp=Z,29nm,18.5s,baz=158,slow=34						
USRK	**Ussuriysk Ar.**	**57.54**	**340**	LR	LR	21 30 42.1	
	comp=Z,24nm,21.7s,baz=142,slow=34						
CMAR	**Chiang Mai Arr**	**62.16**	**297**	P	**P**	**21 08 21.8**	**-0.7**
	comp=Z,0.7nm,1.1s,baz=99,slow=5.8,SNR=4.1						
CMAR				LR	LR	21 36 59.3	
	comp=Z,13nm,18.3s,baz=115,slow=38						
PETK	**Petropavlovsk-**	**62.47**	**2**	LR	LR	21 31 18.9	
	comp=Z,35nm,21.4s,baz=178,slow=32						
VNDA	**Vanda**	**68.01**	**178**	LR	LR	21 34 14.9	
	comp=Z,27nm,18.4s,baz=290,slow=32						
SONM	**Songino Array**	**71.65**	**328**	P	**P**	**21 09 23.9**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=139,slow=6.2,SNR=5.4						
SONM	**Songino Array**	**71.65**	**328**	P	**P**	**21 09 22.1**	**-0.3**
MAW	**Mawson**	**82.14**	**203**	LR	LR	21 43 28.9	
	comp=Z,27nm,19.2s,baz=68,slow=33						
MKAR	**Makanchi Array**	**85.52**	**319**	P	**P**	**21 10 39.3**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=128,slow=8.1,SNR=2.1						
ILAR	**Eielson Array**	**85.66**	**21**	P	**P**	**21 10 39.3**	**+0.3**
	comp=Z,1.5nm,1.0s,baz=248,slow=5.2,SNR=7.5						
ILAR				LR	LR	21 43 32.3	
	comp=Z,24nm,21.1s,baz=235,slow=32						

ZALV Zalesovo Beam 86.46 326 P **P** **21 10 43.4 +0.2**
comp=Z,0.3nm,0.4s,baz=64,slow=3.4,SNR=3.5
ZALV LR LR 21 47 30.7
comp=Z,23nm,21.6s,baz=86,slow=34
NRIK Noril'sk 91.25 341 LR LR 21 51 35.2
comp=Z,20nm,21.1s,baz=21,slow=35
NVAR Mina Array Bea 93.09 52 P **P** **21 11 17.3 +2.2**
comp=Z,1.3nm,1.1s,baz=262,slow=8.2,SNR=5.5
GERES GERESS Array B 129.38 328 PKP **PKiKP** **21 17 10.4 +0.3**
comp=Z,0.1nm,0.3s,baz=73,slow=1.3,SNR=1.5
TORD Torodi Ar. Bea 153.87 280 PKPbc **PKPbc** **21 17 60.0 -1.0**
comp=Z,0.9nm,1.1s,baz=95,slow=1.8,SNR=2.6

IDC 16 21:12:37.6±2.1, 1.74N×126.10E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/35, mbtmp3.3/3, Error ellipse: s-maj=178.2km s-min=26.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
WRA	**Warramunga Arr**	**23.02**	**160**	P	P	21 17 43.9	-0.5
	0.5nm,0.4s,baz=338,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**26.37**	**164**	P	P	21 18 16.5	+0.7
	0.1nm,0.3s,baz=342,slow=11,SNR=2.2						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	21 22 38.0	-0.1
	0.2nm,0.5s,baz=117,slow=7.7,SNR=4.9						

*NEIC **16** 21:13:51.3±1.4, 4.56S±0.07×104.68E±0.07, h207km±6km, mb4.1/12, Error ellipse: s-maj=11.1km s-min=9.6km az=222.0*
*IDC **16** 21:13:51.5±1.5, 4.44S×104.67E, h200km±14km, mb3.8/25, mb1 3.8/28, mb1mx3.7/48, mbtmp4.3/28, Error ellipse: s-maj=13.5km s-min=8.5km az=69.0*
*DJA **16** 21:13:52.7±0.3, 5°S±4°×10°5E±°, h188km±4km, M4.5/20, mb4.5/1, MLv4.4/20*
ISC 16 21:13:51.3±0.6, 4.58S±0.05×104.68E±0.05, h202km±5km, n88, σ1s24/104, mb4.0/30, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
KLSI		**0.12**	**154**	P	**Pn**	**21 14 18.2**	**+0.4**
MDSI	**Maura Dua**	**0.51**	**281**	P	**Pn**	**21 14 18.9**	**+0.2**
MDSI				S	**Sn**	**21 14 39.2**	**-0.5**
LWLI	**Liwa**	**0.75**	**235**	P	**Pn**	**21 14 20.7**	**+0.8**
KASI	**Kota Agung**	**0.95**	**191**	P	**Pn**	**21 14 20.5**	**-0.5**
KASI				S	**Sn**	**21 14 42.3**	**-1.8**
BLSI	**Bandar Lampung**	**0.96**	**144**	P	**Pn**	**21 14 21.1**	**0.0**
BLSI				S	**Sn**	**21 14 43.1**	**-1.1**
LHSI	**Lahat**	**1.38**	**303**	P	**Pn**	**21 14 25.5**	**+1.4**
LHSI				S	**Sn**	**21 14 50.3**	**+0.7**
PMBI	**Palembang**	**1.65**	**3**	P	**Pn**	**21 14 28.0**	**+1.4**
PMBI	**Palembang**	**1.65**	**3**	Pn	**Pn**	**21 14 27.4**	**+0.8**
PMBI				Sn	**Sn**	**21 14 56.1**	**+2.0**
MNAI	**Manna**	**1.73**	**277**	P	**Pn**	**21 14 28.6**	**+1.3**
MNAI				S	**Sn**	**21 14 55.2**	**-0.1**
MNAI	**Manna**	**1.73**	**277**		**Pn**	**21 14 28.7**	**+1.3**
MNAI				Sn	**Sn**	**21 14 55.5**	**+0.2**
SBJI	**Serang**	**2.10**	**137**	P	**Pn**	**21 14 31.0**	**0.0**
KSI	**Kapahiang**	**2.28**	**294**	P	**Pn**	**21 14 34.5**	**+1.5**
PPBI	**Pangkal Pinang**	**2.81**	**31**	P	**Pn**	**21 14 39.8**	**+0.9**
DBJI	**Dramaga**	**2.84**	**134**	P	**Pn**	**21 14 39.3**	**0.0**
SKJI	**Sukabumi**	**3.05**	**142**	P	**Pn**	**21 14 40.4**	**-1.2**
TPI	**Tanjungpandan**	**3.48**	**59**	P	**Pn**	**21 14 48.1**	**+1.3**
LEM	**Lembang**	**3.68**	**127**	P	**Pn**	**21 14 50.5**	**+1.1**
	18nm,0.3s,baz=11,slow=6.7,SNR=19						
LEM				S	**Sn**	**21 15 38.7**	**+3.8**
	10nm,0.3s,baz=28,slow=15,SNR=4.5						
LEM	**Lembang**	**3.68**	**127**	P	**Pn**	**21 14 50.2**	**+0.8**
JCJI	**Jatiwangi**	**4.05**	**118**	P	**Pn**	**21 14 56.2**	**+2.5**
KRJI	**Kerinci**	**4.05**	**308**	P	**Pn**	**21 14 55.8**	**+1.8**
CISI	**Cisompet, Garu**	**4.30**	**134**	P	**Pn**	**21 14 55.6**	**-1.3**
CISI	**Cisompet, Garu**	**4.30**	**134**	Pn	**Pn**	**21 14 56.0**	**-1.0**
SDSI	**Sungai Dareh**	**4.87**	**318**	P	**Pn**	**21 15 04.7**	**+0.6**
KPJI	**Karang Pucung**	**5.04**	**123**	P	**Pn**	**21 15 06.7**	**+0.5**
BKNI	**Bangkinang**	**6.08**	**323**	Pn	**Pn**	**21 15 19.9**	**+0.2**
SMRI	**Semarang**	**6.23**	**113**	Pn	**Pn**	**21 15 22.2**	**+0.5**
UGM	**Wanagama**	**6.69**	**120**		**Pn**	**21 15 27.4**	**-0.2**
GSI	**Gunungsitoli**	**9.20**	**309**	Pn	**Pn**	**21 15 58.7**	**-1.5**
RPSI	**Rantau Prapat**	**9.24**	**321**	Pn	**Pn**	**21 15 60.0**	**-0.7**
IPM	**Ipoh**	**9.71**	**338**	Pn	**Pn**	**21 16 06.6**	**-0.3**
JAGI	**Jagiag, Banyuwa**	**10.17**	**113**	Pn	**Pn**	**21 16 11.7**	**-1.2**
SBUM	**Sibu**	**10.28**	**47**	Pn	**Pn**	**21 16 13.8**	**-0.3**
KAPI	**Kappang**	**15.03**	**92**	P	**Pn**	**21 17 14.3**	**+0.4**
	0.7nm,0.3s,baz=255,slow=6.4,SNR=4.7						
KAPI	**Kappang**	**15.03**	**92**	Pn	**Pn**	**21 17 13.6**	**-0.3**
KAPI					**P**	**21 17 13.7**	**-0.8**
MYLDM	**Lahad Datu**	**16.87**	**55**	P	**P**	**21 17 34.6**	**-0.2**
MYLDM				IAmb	IAmb	21 17 52.3	
	comp=Z,8.7nm,0.8s						
BATI	**Baumata**	**19.63**	**108**	P	**P**	**21 18 05.8**	**+0.9**
	comp=Z,3.8nm,0.3s,baz=62,slow=14,SNR=3.4						
BATI				S	**S**	**21 21 29.2**	**-6.3**
	comp=Z,4.3nm,0.3s,baz=278,slow=21,SNR=3.8						
SOEI	**Soe**	**20.10**	**106**	P	**P**	**21 18 09.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**23.58**	**346**	P	**P**	**21 18 43.6**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=183,slow=9.0,SNR=17						
CMAR				PcP	**PcP**	**21 22 24.1**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=205,slow=2.8,SNR=9.7						
CMAR	**Chiang Mai Arr**	**23.58**	**346**	P	**P**	**21 18 43.4**	**-0.5**
CMAR					**PcP**	**21 22 22.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**24.51**	**125**	P	**P**	**21 18 54.1**	**+1.7**
	comp=Z,2.1nm,0.9s,baz=305,slow=9.2,SNR=10						
FITZ	**Fitzroy Crossi**	**24.51**	**125**	P	**P**	**21

MAW	**Mawson**	**69.02 196**	P	**P**	**21 24 36.7**	**+2.1**
	comp=Z,2.4nm,0.5s,baz=68,slow=4.2,SNR=14					
MAW	**Mawson**	**69.02 196**	P	**P**	**21 24 34.6**	**0.0**
PETK	**Petropavlovsk-**	**72.65 30**	P	**P**	**21 24 56.4**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=265,slow=2.9,SNR=6.0					
NRIK	**Noril'sk**	**74.70 354**	P	**P**	**21 25 07.0**	**-1.3**
	comp=Z,3.3nm,0.3s,baz=138,slow=5.2,SNR=9.1					
MATP	**Matopo**	**75.47 250**	P	**P**	**21 25 15.4**	**+1.5**
	comp=Z,1.5nm,0.4s,baz=95,slow=5.1,SNR=11					
LBTB	**Lobatse**	**78.19 246**	P	**P**	**21 25 28.9**	**-0.1**
	comp=Z,3.5nm,0.9s,baz=313,slow=14,SNR=1.1					
BRTR	**Keskin Array B**	**78.50 312**	P	**P**	**21 25 29.4**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=135,slow=7.0,SNR=10					
BOSA	**Boshof**	**78.54 242**	P	**P**	**21 25 32.2**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=57,slow=18,SNR=1.6					
BOSA	**Boshof**	**78.54 242**	P	**P**	**21 25 30.2**	**-0.7**
BOSA			IAmb	IAmb	21 25 39.4	
	comp=Z,4.3nm,1.0s					
VNDA	**Vanda**	**78.75 169**	P	**P**	**21 25 32.3**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=314,slow=5.9,SNR=11					
AKASG	**Malin Array Be**	**84.38 322**	P	**P**	**21 25 59.4**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=88,slow=4.4,SNR=6.0					
KOLS	**Kolonicke sedl**	**88.44 319**	*eP*	**P**	**21 26 21.2**	**+0.6**
FINES	**FINESS Array B**	**88.56 332**	P	**P**	**21 26 20.1**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=103,slow=3.5,SNR=8.2					
ARCES	**ARCESS Array B**	**90.48 340**	P	**P**	**21 26 28.3**	**-1.4**
	comp=Z,8.3nm,1.1s,baz=96,slow=4.8,SNR=8.2					
SNAA	**Sanae**	**91.13 199**	P	**P**	**21 26 35.3**	**+2.4**
	comp=Z,0.6nm,0.6s,baz=195,slow=17,SNR=2.1					
GERES	**GERESS Array B**	**94.06 319**	P	**P**	**21 26 46.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=127,slow=4.2,SNR=1.8					
PDAR	**Pinedale Array**	**131.34 33**	PKP	**PKPdf**	**21 32 40.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=116,slow=2.1,SNR=2.2					
TXAR	**Lajitas Array**	**143.59 44**	PKP	PKPab	21 33 00.6	+0.8
	comp=Z,0.9nm,0.5s,baz=20,slow=0.7,SNR=14					
CPUP	**Villa Florida**	**144.67 209**	PKP	**PKPdf**	**21 33 05.2**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=35,slow=1.9,SNR=6.5					
BDFB	**Brasilia**	**146.32 233**	PKPbc	**PKPbc**	**21 33 10.4**	**+1.0**
	comp=Z,3.1nm,0.4s,baz=132,slow=4.9,SNR=4.9					

IDC 16 21:21:26.5±3.0, 7.°10S×129.°45E, h153km±41km, mb3.0/1, mb1 3.1/5, mb1mx2.9/35, mbtmp3.5/5, Error ellipse: s-maj=68.5km s-min=22.0km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.45**	**16**	P	Pn	21 22 59.7	+0.4
	0.3nm,0.3s,baz=156,slow=20,SNR=1.3						
SIJI				S	Sn	21 24 07.2	-4.7
	0.6nm,0.3s,baz=291,slow=24,SNR=1.8						
FITZ	**Fitzroy Crossi**	**11.55**	**198**	P	Pn	21 24 06.5	-0.4
	0.2nm,0.3s,baz=15,slow=8.8,SNR=1.8						
FITZ				S	Sn	21 26 05.7	-9.0
	0.1nm,0.3s,baz=102,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**13.63**	**160**	P	Pn	21 24 31.7	-2.0
	0.1nm,0.3s,baz=344,slow=13,SNR=3.4						
WRA				S	Sn	21 26 55.9	-8.9
	0.2nm,0.3s,baz=332,slow=22,SNR=6.1						
ASAR	**Alice Springs**	**17.02**	**166**	P	Pn	21 25 17.0	+1.4
	0.4nm,0.3s,baz=342,slow=10,SNR=17						
MKAR	**Makanchi Array**	**68.00**	**327**	P	P	21 32 09.1	-0.2
	0.2nm,0.4s,baz=111,slow=7.9,SNR=4.1						

IDC 16 21:32:51.0±1.8, 6.°34S×129.°91E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.4/30, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=72.1km s-min=28.2km az=80.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.60**	**14**	Pn	Pn	21 34 16.9	+1.2
	2.3nm,0.3s,baz=182,slow=0.6,SNR=61						
SIJI				Sn	Sn	21 35 12.2	-8.6
	6.0nm,0.3s,baz=108,slow=23,SNR=21						
WRA	**Warramunga Arr**	**14.19**	**163**	Pn	Pn	21 36 12.1	-1.4
	0.2nm,0.3s,baz=348,slow=13,SNR=2.6						
WRA				Sn	Sn	21 38 40.3	-11
	0.6nm,0.3s,baz=340,slow=21,SNR=6.5						
ASAR	**Alice Springs**	**17.65**	**168**	P	P	21 36 59.8	+0.2
	0.2nm,0.3s,baz=345,slow=10,SNR=14						
ASAR				S	Sn	21 40 05.2	-11
	0.1nm,0.3s,baz=351,slow=28,SNR=4.1						
MKAR	**Makanchi Array**	**67.62**	**327**	P	P	21 43 49.4	-0.3
	0.3nm,0.4s,baz=114,slow=7.6,SNR=8.3						

IDC 16 21:36:18.4±5.5, 10.°28S×155.°88E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.7/24, mbtmp3.9/3, MS3.2/10, Ms1 3.2/10, ms1mx3.0/32, Error ellipse: s-maj=150.4km s-min=37.6km az=117.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.10**	**79**	LR	LR	21 38 56.7	
	comp=Z,220nm,21.0s,baz=142,slow=39						
KRVT	**Keravat (AS076**	**7.05**	**327**	LR	LR	21 40 55.2	
	comp=Z,201nm,18.4s,baz=144,slow=39						
PMG	**Port Moresby**	**8.64**	**275**	LR	LR	21 41 18.0	
	comp=Z,290nm,20.1s,baz=123,slow=35						
WRA	**Warramunga Arr**	**22.88**	**243**	P	P	21 41 22.8	-1.1
	2.0nm,0.9s,baz=66,slow=9.4,SNR=6.8						
WRA				LR	LR	21 49 43.5	
	comp=Z,65nm,20.5s,baz=150,slow=35						
ASAR	**Alice Springs**	**24.83**	**235**	P	P	21 41 42.6	-0.1
	6.4nm,1.2s,baz=61,slow=9.7,SNR=16						
STKA	**Stephens Creek**	**25.24**	**209**	LR	LR	21 51 55.4	
	comp=Z,100nm,18.8s,baz=27,slow=37						
GUMO	**Guam**	**26.11**	**335**	LR	LR	21 50 47.2	
	comp=Z,38nm,18.9s,baz=140,slow=33						
FITZ	**Fitzroy Crossi**	**30.30**	**252**	LR	LR	21 53 32.3	
	comp=Z,35nm,22.0s,baz=81,slow=34						
MJAR	**Matsushiro Arr**	**49.45**	**341**	LR	LR	22 03 56.6	
	comp=Z,8.9nm,21.7s,baz=200,slow=34						
KSRS	**Korea Array**	**54.23**	**333**	LR	LR	22 08 24.9	
	comp=Z,14nm,18.1s,baz=105,slow=36						
PETK	**Petropavlovsk-**	**63.15**	**1**	LR	LR	22 09 26.9	
	comp=Z,32nm,21.7s,baz=183,slow=32						
SONM	**Songino Array**	**72.55**	**328**	P	P	21 47 48.4	+0.8
	0.8nm,1.0s,baz=139,slow=7.1,SNR=4.0						

IDC 16 21:44:48.2±2.3, 1.°99N×126.°54E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/24, mbtmp3.2/3, Error ellipse: s-maj=187.8km s-min=28.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.10**	**161**	P	P	21 49 54.5	-1.4
	0.2nm,0.5s,baz=339,slow=11,SNR=2.2						
ASAR	**Alice Springs**	**26.49**	**165**	P	P	21 50 28.8	+1.3
	0.2nm,0.5s,baz=349,slow=13,SNR=1.9						
MKAR	**Makanchi Array**	**58.88**	**326**	P	P	21 54 48.8	-0.2
	0.2nm,0.5s,baz=124,slow=8.3,SNR=4.3						

*SOME **16** 21:57:05.1,44.°12N×84.°32E, h15km*
*NNC **16** 21:57:06.1±1.9, 44.°15N×84.°25E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=16.8km s-min=6.5km az=129.0*
ISC 16 21:57:05.3±2.0, 44.°07N±0.°08×84.°13E±0.°09, h10km, n45, σ2s01/64, 5C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.81**	**259**	*eP*	**Pg**	**21 57 58.0**	**-1.2**
	7.9nm,0.1s						
KTMS				*eS*	**Sg**	**21 58 36.4**	**+0.9**
	27nm,0.2s						
KTMS	**Ketmen**	**2.81**	**259**	Pg	**Pg**	**21 57 58.0**	**-1.2**
	7.9nm,0.1s						
KTMS				Lg	Lg	21 58 36.4	
	27nm,0.2s						
MK31	**Makanchi Array**	**3.02**	**335**	⇓Pn	**Pn**	**21 57 51.9**	**-1.3**
	0.2nm,0.2s,baz=324,slow=16,SNR=68						
MK31				⇓Pg	**Pg**	**21 58 03.0**	**-0.1**
	2.6nm,0.3s,baz=142,slow=18,SNR=16						
MK31				⇑Lg	Lg	21 58 42.6	
	9.6nm,0.3s,baz=143,slow=29,SNR=18						
DJR	**Jarkent**	**3.13**	**276**	*eP*	**Pg**	**21 58 04.3**	**-1.1**
	8.5nm,0.3s						
DJR				*eS*	**Sg**	**21 58 47.2**	**+1.3**
	20nm,0.2s						
DJR	**Jarkent**	**3.13**	**276**	Pg	**Pg**	**21 58 04.3**	**-1.1**
	8.5nm,0.3s						
DJR				Lg	Lg	21 58 47.3	
	20nm,0.2s						
ZSN	**Zaisan**	**3.42**	**8**	*eP*	**Pb**	**21 58 05.7**	**-0.4**
	10.0nm,0.2s						
ZSN				*eS*	**Sb**	**21 58 49.5**	**+1.8**
	33nm,0.2s						
ZSN	**Zaisan**	**3.42**	**8**	Pg	**Pb**	**21 58 05.7**	**-0.4**
	10.0nm,0.2s						
ZSN				Lg	Lg	21 58 49.5	
	33nm,0.2s						
PDGK	**Podgornoye**	**3.45**	**259**	Pg	**Pg**	**21 58 10.3**	**-1.1**
	1.3nm,0.2s						
PDGK				Lg	Lg	21 58 57.3	
	7.9nm,0.4s						
PDGK	**Podgornoye**	**3.45**	**259**	⇑Pg	**Pg**	**21 58 11.3**	**-0.1**
	1.2nm,0.4s						
PDGK				⇑Sn	**Sb**	**21 58 45.3**	**-3.1**
	14nm,0.5s						
SHLS	**Shalkode**	**3.51**	**257**	*eP*	**Pb**	**21 58 06.3**	**-1.3**
	8.3nm,0.2s						
SHLS				*eS*	**Sb**	**21 58 50.4**	**0.0**
	40nm,0.2s						
SHLS	**Shalkode**	**3.51**	**257**	Pg	**Pb**	**21 58 06.3**	**-1.3**
	8.3nm,0.2s						
SHLS				Lg	Lg	21 58 50.4	
	40nm,0.2s						
UZB	**Uzynbulak**	**3.82**	**258**	*eP*	**Pg**	**21 58 19.2**	**+0.6**
	3.3nm,0.3s						
UZB				*eS*	**Sg**	**21 59 12.3**	**+4.2**
	9.4nm,0.2s						
UZB	**Uzynbulak**	**3.82**	**258**	Pg	**Pg**	**21 58 19.2**	**+0.6**
	3.3nm,0.3s						
UZB				Lg	Lg	21 59 12.3	
	9.4nm,0.2s						
KPKS	**Kokpek**	**3.99**	**263**	*eP*	**Pg**	**21 58 21.5**	**-0.3**
	6.9nm,0.2s						
KPKS				*eS*	**Sg**	**21 59 16.5**	**+3.0**
	33nm,0.5s						
MNBS	**Baschi**	**4.13**	**272**	*eP*	**Pg**	**21 58 22.7**	**-1.7**
	4.2nm,0.2s						
MNBS				*eS*	**Sg**	**21 59 18.4**	**+0.5**
	24nm,0.2s						
MNBS	**Baschi**	**4.13**	**272**	Pg	**Pg**	**21 58 22.7**	**-1.7**
	4.2nm,0.2s						
MNBS				Lg	Lg	21 59 18.4	
	24nm,0.2s						
TDK	**Taldyqorghan**	**4.20**	**285**	*eP*	**Pg**	**21 58 23.9**	**-1.9**
	16nm,0.4s						
TDK				*eS*	**Sg**	**21 59 20.5**	**+0.4**
	74nm,0.5s						
TDK	**Taldyqorghan**	**4.20**	**285**	Pg	**Pg**	**21 58 23.9**	**-1.9**
	16nm,0.4s						
TDK				Lg	Lg	21 59 20.5	
	74nm,0.5s						
SATY	**Saty**	**4.28**	**258**	*eP*	**Pg**	**21 58 25.6**	**-1.7**
	2.1nm,0.3s						
SATY				*eS*	**Sg**	**21 59 23.3**	**+0.5**
	19nm,0.2s						
SATY	**Saty**	**4.28**	**258**	Pg	**Pg**	**21 58 25.6**	**-1.7**
	2.1nm,0.3s						
SATY				Lg	Lg	21 59 23.3	
	19nm,0.2s						
KURS	**Kuram**	**4.36**	**264**	*eP*	**Pg**	**21 58 27.3**	**-1.4**
	1.9nm,0.4s						
KURS				*eS*	**Sg**	**21 59 26.6**	**+1.5**
	7.0nm,0.3s						
KURS	**Kuram**	**4.36**	**264**	Pg	**Pg**	**21 58 27.3**	**-1.4**
	1.9nm,0.4s						
KURS				Lg	Lg	21 59 26.6	
	7.0nm,0.3s						
ARXS	**Arharly**	**4.54**	**274**	*eP*	**Pg**	**21 58 30.7**	**-1.5**
	6.6nm,0.3s						
ARXS				*eS*	**Sg**	**21 59 32.8**	**+1.7**
	15nm,0.3s						
ARXS	**Arharly**	**4.54**	**274**	Pg	**Pg**	**21 58 30.7**	**-1.5**
	6.6nm,0.3s						
ARXS				Lg	Lg	21 59 32.7	
	15nm,0.3s						
CHKK	**Chushkaly**	**5.16**	**270**	*eP*	**Pg**	**21 58 42.5**	**-1.7**
	1.7nm,0.2s						
CHKK				*eS*	**Sg**	**21 59 52.1**	**+1.1**
	10nm,0.3s						
CHKK	**Chushkaly**	**5.16**	**270**	Pg	**Pg**	**21 58 42.5**	**-1.7**
	1.7nm,0.2s						
KOTS	**Kotyrbulak**	**5.16**	**263**	*eP*	**Pg**	**21 58 44.7**	**+0.5**
	5.3nm,0.3s						
KOTS				*eS*	**Sg**	**21 59 56.0**	**+5.0**
	10nm,0.3s						
KOTS	**Kotyrbulak**	**5.16**	**263**	Pg	**Pg**	**21 58 44.7**	**+0.5**
	5.3nm,0.3s						
MDOK	**Medeo**	**5.22**	**262**	*eP*	**Pg**	**21 58 44.3**	**-1.0**
	3.0nm,0.6s						
MDOK				*eS*	**Sg**	**21 59 55.5**	**+2.5**
	4.3nm,0.4s						
MDOK	**Medeo**	**5.22**	**262**	Pg	**Pg**	**21 58 44.3**	**-1.0**
	3.0nm,0.6s						
TNSS	**Tian-Shan**	**5.32**	**261**	*eP*	**Pg**	**21 58 46.6**	**-0.6**
	1.4nm,0.4s						
TNSS				*eS*	**Sg**	**21 59 59.6**	**+3.4**
	3.3nm,0.3s						
TNSS	**Tian-Shan**	**5.32**	**261**	Pg	**Pg**	**21 58 46.6**	**-0.6**
	1.4nm,0.4s						
KTBS	**Karatobe**	**5.40**	**269**	*eP*	**Pg**	**21 58 47.3**	**-1.3**
	1.7nm,0.6s						
KTBS				*eS*	**Sg**	**22 00 00.7**	**+2.2**
	16nm,0.5s						
KTBS	**Karatobe**	**5.40**	**269**	Pg	**Pg**	**21 58 47.3**	**-1.3**
	1.7nm,0.6s						
KUU	**Kurty**	**5.63**	**271**	*eP*	**Pg**	**21 58 52.4**	**-0.6**
	2.5nm,0.1s						
KUU				*eS*	**Sg**	**22 00 09.5**	**+3.6**
	7.5nm,0.2s						
KUU	**Kurty**	**5.63**	**271**	Pg	**Pg**	**21 58 52.4**	**-0.6**
	2.5nm,0.1s						
KST	**Kastek**	**6.02**	**263**	*eP*	**Pg**	**21 59 00.7**	**0.0**
	1.8nm,0.4s						
KST				⇓*iS*	**Sg**	**22 00 23.4**	**+4.7**
	5.7nm,0.4s						
KST	**Kastek**	**6.02**	**263**	Pg	**Pg**	**21 59 00.7**	**0.0**
	1.8nm,0.4s						
DGS	**Degeres**	**6.12**	**265**	*eP*	**Pg**	**21 59 03.0**	**+0.5**
	1.6nm,0.2s						
DGS				*eS*	**Sg**	**22 00 28.0**	**+6.3**
	5.8nm,0.4s						
DGS	**Degeres**	**6.12**	**265**	Pg	**Pg**	**21 59 03.0**	**+0.5**
	1.6nm,0.2s						
KRBS	**Karabastau**	**6.12**	**269**	*eP*	**Pg**	**21 59 02.3**	**-0.3**
	1.4nm,0.4s						
KRBS				*eS*	**Sg**	**22 00 26.4**	**+4.6**
	2.5nm,0.4s						
KRBS	**Karabastau**	**6.12**	**269**	Pg	**Pg**	**21 59 02.3**	**-0.3**
	1.4nm,0.4s						
TKM2	**Tokmak 2**	**6.31**	**263**	⇓Lg	Lg	22 00 31.1	
	2.3nm,0.6s						
KURBB	**Kurchatov Arra**	**7.58**	**332**	⇑Lg	Lg	22 01 08.8	
	12nm,0.8s						
KURK	**Kurchatov**	**7.63**	**333**	⇑Lg	Lg	22 01 07.9	
	6.8nm,0.6s						

WEL 16 21:59:07.9, 43.°3S±270.°17E×9.°3, h8km±103km, M2.8/5, ML2.8/4, MLv2.8/5, Error ellipse: s-maj=0.4km s-min=0.1km az=166.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INZ	**Inchbonnie**	**0.26**	**134**	P	Pn	21 59 29.2	+11
WVZ	**Waitaha Valley**	**0.63**	**212**	P	Pb	21 59 21.7	+0.6
LTZ	**Lake Taylor**	**0.83**	**107**	P	Sn	21 59 38.9	+0.4
DSZ	**Denniston Nort**	**0.92**	**30**	P	Sn	21 59 47.9	+7.3
GCSZ	**Gaunt Creek Bo**	**1.00**	**219**	P	Pg	21 59 25.9	-1.2
MHCZ	**Mount Hutt**	**1.02**	**164**	P	Pn	21 59 28.8	+0.1
RPZ	**Rata Peaks**	**1.17**	**185**	P	Pg	21 59 27.3	-3.1
ARCZ	**Arundel**	**1.40**	**180**	P	Pn	21 59 31.8	-2.0
FOZ	**Fox Glacier**	**1.41**	**225**	P	Pn	21 59 33.7	-0.2
LBZ	**Lake Benmore**	**1.98**	**201**	P	Pn	21 59 42.3	+0.5
ODZ	**Otahua Downs**	**2.53**	**189**	P	Pn	21 59 49.8	+0.5

IDC 16 22:04:23.8±2.0, 1.°83N×125.°99E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/36, mbtmp3.4/3, Error ellipse: s-maj=175.7km s-min=25.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.14**	**160**	P	P	22 09 30.0	-1.8
	0.6nm,0.4s,baz=338,slow=10,SNR=9.0						
ASAR	**Alice Springs**	**26.49**	**164**	P	P	22 10 04.9	+1.8
	0.2nm,0.3s,baz=348,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**58.70**	**326**	P	P	22 14 23.3	0.0
	0.6nm,0.7s,baz=121,slow=7.4,SNR=7.4						

IDC 16 22:09:39.1±1.9, 1.°90N×126.°52E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.3/38, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=120.8km s-min=24.4km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.89**	**182**	P	P	22 14 12.4	+0.1
	0.1nm,0.3s,baz=8.1,slow=14,SNR=1.1						
WRA	**Warramunga Arr**	**23.02**	**161**	P	P	22 14 45.8	-0.2
	0.6nm,0.3s,baz=339,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.41**	**165**	P	P	22 15 17.6	0.0
	0.2nm,0.4s,baz=349,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**58.94**	**326**	P	P	22 19 40.3	0.0
	0.2nm,0.4s,baz=120,slow=5.9,SNR=6.5						

*NEIC **16** 22:10:51.3±1.8, 4.°89S±0.°10×145.°8E±0.°1, h157km±6km, mb4.3/8, Error ellipse: s-maj=20.0km s-min=14.2km az=85.0*
*IDC **16** 22:10:55.8±3.3, 4.°89S×145.°56E, h192km±30km, mb3.7/9, mb1 3.8/10, mb1mx3.5/36, mbtmp4.2/10, Error ellipse: s-maj=26.6km s-min=10.5km az=107.0*
ISC 16 22:10:50.9±0.7, 4.°87S±0.°07×145.°7E±0.°1, h150km, n24, σ1s02/27, mb4.0/11, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.74**	**162**	S	**Sn**	**22 12 55.5**	**0.0**
	4.2nm,0.3s,baz=152,slow=19,SNR=7.2						
PMG	**Port Moresby**	**4.74**	**162**	Pn	**Pn**	**22 12 01.5**	**+0.6**
PMG					**Sn**	**22 12 55.9**	**+0.4**
COEN	**Coen**	**9.37**	**195**	Pn	**Pn**	**22 13 05.0**	**+2.4**
COEN				Sn	**Sn**	**22 14 46.3**	**-0.2**
WR0	**Warramunga Arr**	**18.52**	**215**	P	**P**	**22 14 56.1**	**+0.1**
WRA	**Warramunga Arr**	**18.62**	**215**	P	**Pn**	**22 14 58.1**	**-1.0**
	1.0nm,0.3s,baz=39,slow=11,SNR=34						
WRA				S	**S**	**22 18 19.8**	**-1.7**
	baz=36,slow=17,SNR=2.4						
KNRA	**Kununurra**	**19.80**	**236**	P	**P**	**22 15 08.9**	**-1.0**
KNRA				IAmb	IAmb	22 15 14.3	
	comp=Z,7.9nm,0.8s						
AS31	**Alice Springs**	**21.88**	**210**	P	**P**	**22 15 32.3**	**+0.4**
ASAR	**Alice Springs**	**21.88**	**210**	P	**P**	**22 15 32.6**	**+0.7**
	comp=Z,2.9nm,0.4s,baz=39,slow=7.7,SNR=42						
ASAR				S	**S**	**22 19 21.5**	**-2.2**
	comp=Z,0.9nm,0.9s,baz=24,slow=20,SNR=5.9						
ASAR	**Alice Springs**	**21.88**	**210**	P	**P**	**22 15 31.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.61**	**235**	P	**P**	**22 15 47.5**	**-0.8**
	comp=Z,5.9nm,0.5s,baz=48,slow=8.7,SNR=41						
FITZ	**Fitzroy Crossi**	**23.61**	**235**	P	**P**	**22 15 47.5**	**-0.8**
FITZ				IAmb	IAmb	22 15 48.1	
	comp=Z,6.1nm,0.6s						
STKA	**Stephens Creek**	**27.14**	**188**	P	**P**	**22 16 21.4**	**+1.3**
	comp=Z,0.9nm,0.4s,baz=22,slow=11,SNR=2.8						
BBOO	**Buckleboo**	**29.22**	**197**	P	**P**	**22 16 39.0**	**+0.4**
BBOO				IAmb	IAmb	22 16 42.4	
	comp=Z,4.4nm,0.9s						
FORT	**Forrest**	**30.66**	**211**	P	**P**	**22 16 51.5**	**+0.3**
FORT				IAmb	IAmb	22 17 07.4	
	comp=Z,12nm,1.1s						
AFI	**Afiamalu**	**42.85**	**105**	P	**P**	**22 18 33.0**	**-1.6**
JTM	**Tenmabayashi**	**45.63**	**355**	P	**P**	**22 18 56.5**	**+0.3**
USRK	**Ussuriysk Ar.**	**50.38**	**347**	P	**P**	**22 19 33.6**	**+1.0**
	comp=Z,1.7nm,0.6s,baz=172,slow=10,SNR=5.6						
CMAR	**Chiang Mai Arr**	**51.57**	**298**	P	**P**	**22 19 42.5**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=124,slow=6.2,SNR=10						
VNDA	**Vanda**	**73.11**	**176**	P	**P**	**22 22 04.6**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=350,slow=5.8,SNR=6.3						
ZALV	**Zalesovo Beam**	**77.37**	**328**	P	**P**	**22 22 28.2**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=122,slow=6.3,SNR=6.4						
ZALV	**Zalesovo Beam**	**77.37**	**328**	P	**P**	**22 22 28.4**	**-0.6**
NRIK	**Noril'sk**	**83.81**	**342**	P	**P**	**22 23 03.3**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=124,slow=4.1,SNR=8.8						
ILAR	**Eielson Array**	**84.96**	**23**	P	**P**	**22 23 09.2**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=251,slow=5.3,SNR=44						
TORD	**Torodi Ar. Bea**	**143.54**	**286**	PKP	PKPab	22 30 05.7	+0.1
	comp=Z,0.5nm,0.8s,baz=76,slow=3.0,SNR=4.7						

*IDC **16** 22:12:09.1±2.0, 1.°78N×126.°47E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.4/39, mbtmp3.8/3, Error ellipse: s-maj=163.4km s-min=24.5km az=66.0*
*DJA **16** 22:12:15.7±1.3, 2.°1N±3.°3×12.°6E±.°, h31km±18km, M4.0/12, mB4.5/1, mb4.2/2, MLv3.8/12, Mw(mB)3.7/1*
ISC 16 22:12:15.5±1.0, 1.°74N±0.°05×126.°42E±0.°07, h47km, n18, σ1s17/20, mb3.8/3, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**135**	P	**Pn**	**22 12 37.9**	**0.0**
SGSI	**Sangihe**	**2.13**	**335**	P	**Pn**	**22 12 48.6**	**-0.1**
SGSI				S	**Sn**	**22 13 15.1**	**+1.1**
KMSI	**Cibinong**	**2.70**	**245**	P	**Pn**	**22 12 55.9**	**-0.6**
GTOI	**Gorontalo**	**3.58**	**252**	P	**Pn**	**22 13 09.2**	**+0.6**
SANI	**Sanana**	**3.79**	**187**	P	**Pn**	**22 13 11.0**	**-0.4**
DDMP	**Don Marcelino,**	**4.40**	**351**	*eP*	**Pn**	**22 13 20.0**	**+0.2**
DDMP				*eS*	**Sn**	**22 14 09.7**	**-0.1**
LUWI	**Luwuk**	**4.58**	**233**	P	**Pn**	**22 13 22.7**	**+0.4**
MRSI	**Marisa**	**4.65**	**254**	P	**Pn**	**22 13 23.3**	**0.0**
SKMP	**Bagumbayan, Su**	**5.11**	**339**	*eP

	baz=46								
THOR					S		**Sg**	**22 27 16.3**	**-2.9**
	baz=46								
IKSK	**Karasker**	**0.57**	**137**		P		**Pg**	**22 27 12.4**	**-2.8**
	baz=137								
IKSK					S		**Sg**	**22 27 21.1**	**-1.6**
	baz=137								
IIEY	**Innrieyrar**	**0.59**	**214**		P		**Pg**	**22 27 12.1**	**-3.4**
	baz=210								
IIEY					S		**Sg**	**22 27 20.8**	**-2.4**
	baz=210								
IMKO	**Mokollar**	**0.59**	**48**		P		**Pg**	**22 27 12.2**	**-3.4**
	baz=52								
IMKO					S		**Sg**	**22 27 21.0**	**-2.4**
	baz=52								
IKAL	**Kalfafell**	**0.65**	**192**		P		**Pg**	**22 27 13.6**	**-3.0**
	baz=189								
IKAL					S		**Sg**	**22 27 23.1**	**-2.0**
	baz=189								
IVSH	**V-Sauoahnukur**	**0.74**	**71**		P		**Pg**	**22 27 14.7**	**-3.6**
	baz=75								
IFAG	**Fagurholsmyri**	**0.78**	**156**		P		**Pg**	**22 27 15.9**	**-3.0**
	baz=155								
IVAT	**Vatnsfell**	**0.78**	**240**		P		**Pg**	**22 27 15.2**	**-3.8**
	baz=237								
IHVE	**Hveravellir**	**0.99**	**288**		P		Pg	22 27 17.7	-5.3
	baz=287								
ISNB	**Snabyli**	**1.01**	**214**		S		**Sg**	**22 27 33.1**	**-3.5**
	baz=211								
ISNB					P		**Pg**	**22 27 19.2**	**-4.2**
	baz=211								
IMEL	**Melhnausar**	**1.04**	**17**		P		Pg	22 27 18.8	-5.2
	baz=19								
ISLY	**Slysaalda**	**1.08**	**226**		P		**Pg**	**22 27 20.1**	**-4.6**
	baz=223								
IREN	**Reynihlio**	**1.09**	**10**		P		Pb	22 27 19.0	-5.9
	baz=12								
IKVO	**Krokottuvotn**	**1.16**	**10**		P		Pb	22 27 20.7	-5.4
	baz=12								
BORG	**Borgarnes**	**1.71**	**277**		Pg		**Pn**	**22 27 29.9**	**-4.0**
	25nn,0.3s,baz=96,slow=7.2,SNR=91								
BORG					Lg		Lg	22 27 54.7	
	14nn,0.3s,baz=232,slow=21,SNR=10								
BORG					LR		LR	22 28 00.3	
	comp=Z,142nn,21.4s,baz=106,slow=36								
BORG	**Borgarnes**	**1.71**	**277**		Pn		Pn	22 27 23.8	-10
BORG					Sn		**Sg**	**22 28 00.3**	**+1.4**
SCO	**Scoresbysund**	**6.18**	**346**	*i*	P		**Pn**	**22 28 34.0**	**-1.2**
SCO				*i*	S		**Sn**	**22 29 50.1**	**+4.3**
SCO	**Scoresbysund**	**6.18**	**346**		Pn		**Pn**	**22 28 34.6**	**-0.6**
SCO	**Scoresbysund**	**6.18**	**346**	*i*	P		**Pn**	**22 28 34.0**	**-1.2**
SCO				*i*	S		**Sn**	**22 29 50.1**	**+4.3**
SCO	**Scoresbysund**	**6.18**	**346**	*e*			Pn	22 28 27.8	-7.4
	baz=163,slow=7.4								
SCO				*i*	P		**Pn**	**22 28 34.0**	**-1.2**
SCO				*i*	S		**Sn**	**22 29 50.1**	**+4.3**
SCO					IAML			22 30 13.0	
	comp=Z,2.5nn,0.4s								
JMIC	**Jan Mayen**	**7.25**	**24**		LR		LR	22 30 44.6	
	comp=Z,107nn,21.7s,baz=92,slow=29								
EKA	**Eskdalemuir Ar**	**11.66**	**136**		Pn		**Pn**	**22 29 49.3**	**-0.9**
	baz=322,slow=13,SNR=12								
ESK	**Eskdalemuir**	**11.66**	**136**		Pn		**Pn**	**22 29 48.6**	**-1.7**
EKR3	**Eskdalemuir Ar**	**11.66**	**136**		Pn		**Pn**	**22 29 48.1**	**-2.2**
EKB3	**Eskdalemuir Ar**	**11.66**	**136**		Pn		**Pn**	**22 29 48.5**	**-1.8**
EKR5	**Eskdalemuir Ar**	**11.68**	**136**		Pn		**Pn**	**22 29 49.0**	**-1.5**
DAG	**Danmarks Havn**	**12.26**	**359**	*eP*			**Pn**	**22 29 59.7**	**+1.4**
DAG	**Danmarks Havn**	**12.26**	**359**	*i P*			**Pn**	**22 29 59.7**	**+1.4**
DAG	**Danmarks Havn**	**12.26**	**359**	*eP*			**Pn**	**22 29 59.7**	**+1.4**
NOA	**NORSAR Array B**	**13.47**	**92**		LR		LR	22 35 29.2	
	comp=Z,42nn,18.4s,baz=300,slow=37								
HFS	**Hagfors**	**14.99**	**93**		LR		LR	22 36 07.5	
	comp=Z,59nn,19.0s,baz=174,slow=36								
ARCES	**ARCESS Array B**	**17.12**	**54**		LR		LR	22 36 23.6	
	comp=Z,111nn,19.4s,baz=290,slow=32								
BGES	**Gesves**	**18.50**	**130**		P		**P**	**22 31 18.9**	**-1.1**
BCLA	**Clavier**	**18.54**	**129**		x		**P**	**22 31 25.6**	**+5.1**
DOU	**Dourbes**	**18.58**	**131**		x		**P**	**22 31 19.7**	**-1.2**
MEM	**Membach**	**18.62**	**128**		Pn		**P**	**22 31 20.4**	**-0.9**
MEM	**Membach**	**18.62**	**128**		P		**Pn**	**22 31 21.7**	**+0.1**
MEM					pmax		pmax		
	comp=Z,17nm,1.4s								
FINES	**FINESS Array B**	**19.67**	**79**		P		**Pn**	**22 31 34.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=242,slow=11,SNR=3.3								
FINES					LR		LR	22 38 33.2	
	comp=Z,62nm,19.9s,baz=292,slow=35								
MOX	**Moxa**	**20.61**	**119**		P		Pn	22 31 43.6	-1.8
MOX					pmax		pmax		
	comp=Z,10.0nm,1.9s								
CLL	**Collm**	**20.62**	**116**	*e*	P		Pn	22 31 44.0	-1.4
	comp=Z,49nm,1.9s								
CLL	**Collm**	**20.62**	**116**	*e*	P		Pn	22 31 44.0	-1.4
CLL					pmax		pmax		
	comp=Z,49nm,1.9s								
CLL	**Collm**	**20.62**	**116**		P		**P**	**22 31 43.3**	**+0.2**
CLL					IAmb		IAmb	22 31 47.4	
	comp=Z,57nm,2.0s								
CDF	**Champ du Feu**	**20.93**	**129**	*e*	P		**P**	**22 31 46.8**	**+0.2**
CDF					pmax		pmax		
	comp=Z,22nm,1.6s								
ECH	**Echery**	**21.06**	**129**		P		**P**	**22 31 42.2**	**-5.7**
GRF	**Grafenberg Arr**	**21.24**	**121**	*e*	P		**P**	**22 31 50.7**	**+0.8**
	comp=Z,25nn,1.6s,baz=316,slow=11								
NKC	**Novy Kostel**	**21.26**	**118**	*e*	P		**P**	**22 31 53.6**	**+3.5**
NKC	**Novy Kostel**	**21.26**	**118**	*e*	P		**P**	**22 31 53.6**	**+3.5**
HINF	**Hinteralfeld**	**21.30**	**130**	*e*	P		**P**	**22 31 50.5**	**-0.1**
HINF					pmax		pmax		
	comp=Z,55nn,2.1s								
BRG	**Berggiesshubel**	**21.33**	**115**	*i*	P		**P**	**22 31 50.6**	**-0.2**
	comp=Z,11nn,1.1s								
BRG				*i*				22 31 59.7	
	comp=Z,82nn,1.9s								
BRG	**Berggiesshubel**	**21.33**	**115**	*i*	P		**P**	**22 31 50.6**	**-0.2**
BRG					pmax		pmax		
	comp=Z,11nn,1.1s								
BFO	**Black Forest**	**21.35**	**127**		P		**P**	**22 31 45.7**	**-5.5**
VSU	**Vasula**	**21.52**	**86**↑	*e*	P		**P**	**22 31 54.8**	**+2.1**
FRB	**Frobisher Bay**	**21.83**	**291**		LR		LR	22 40 28.3	
	comp=Z,63nn,19.7s,baz=15,slow=37								
PRU	**Pruhonice**	**22.26**	**116**	*e*	P		**P**	**22 32 01.4**	**+0.6**
PRU	**Pruhonice**	**22.26**	**116**	*e*	P		**P**	**22 32 01.4**	**+0.6**
KSP	**Ksiaz**	**22.28**	**112**		P		**P**	**22 32 01.5**	**+0.5**
KSP					pmax		pmax		
	comp=Z,17nm,1.2s								
CHVC	**Chvalec**	**22.38**	**113**	*e*	P		**P**	**22 32 03.7**	**+1.5**
OSTC	**Ostas**	**22.47**	**113**	*e*	P		**P**	**22 32 06.4**	**+3.3**
KHC	**Kasperske Hory**	**22.59**	**118**	*e*	P		**P**	**22 32 04.8**	**+0.5**
KHC	**Kasperske Hory**	**22.59**	**118**	*e*	P		**P**	**22 32 04.8**	**+0.5**
DPC	**Dobruska-Polom**	**22.68**	**113**	*e*	P		**P**	**22 32 05.5**	**+0.2**
DPC	**Dobruska-Polom**	**22.68**	**113**	*e*	P		**P**	**22 32 05.5**	**+0.2**
DAVA	**Damuels**	**22.79**	**126**	*e*	P		P	22 32 14.2	+7.6
	comp=Z,11nm,1.2s								
GEC2	**GERESS Array S**	**22.87**	**119**		P		**P**	**22 32 04.6**	**-2.8**
GEC2					IAmb		IAmb	22 32 18.8	
	comp=Z,22nm,1.4s								
GERES	**GERESS Array B**	**22.87**	**119**		P		**P**	**22 32 07.5**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=331,slow=6.9,SNR=9.3								
GERES					LR		LR	22 41 59.7	
	comp=Z,54nm,18.2s,baz=329,slow=39								
GERES	**GERESS Array B**	**22.87**	**119**		P		**P**	**22 32 04.7**	**-2.7**
RETA	**Reutte**	**22.92**	**125**	*e*	P		P	22 32 15.5	+7.6
	comp=Z,4.4nm,1.1s								
KRLC	**Kraliky**	**23.08**	**113**	*e*	P		**P**	**22 32 10.4**	**+0.9**
KRLC	**Kraliky**	**23.08**	**113**	*e*	P		**P**	**22 32 10.4**	**+0.9**
MOTA	**Moosalm**	**23.17**	**124**	*e*	P		**P**	**22 32 14.1**	**+3.5**
	comp=Z,12nm,1.4s								
TREC	**Trest**	**23.19**	**116**	*e*	P		**P**	**22 32 11.3**	**+0.7**
TREC	**Trest**	**23.19**	**116**	*e*	P		**P**	**22 32 11.3**	**+0.7**
DAVOX	**Davos/Dischmat**	**23.22**	**127**		LR		LR	22 42 17.1	
	comp=Z,85nm,18.3s,baz=289,slow=39								
SQTA	**Sankt Quirin**	**23.31**	**125**	*e*	P		**P**	**22 32 13.8**	**+1.8**
	comp=Z,4.8nm,1.1s								
FETA	**Feichten**	**23.31**	**125**	*e*	P		P	22 32 19.2	+7.2
	comp=Z,6.4nm,1.3s								
TMCR	**Tamitsa**	**23.33**	**66**	*e*	P		**P**	**22 32 13.2**	**+1.4**
TMCR					pmax		pmax		
	comp=Z,20nm,0.9s								
WATA	**Walderalm**	**23.34**	**124**	*e*	P		**P**	**22 32 12.6**	**+0.3**
	comp=Z,9.4nm,1.6s								
WTTA	**Wattenberg**	**23.43**	**124**		P		**P**	**22 32 13.9**	**+0.7**
	comp=Z,8.1nm,1.4s								
VRAC	**Vranov**	**23.61**	**114**		P		**P**	**22 32 15.2**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=331,slow=8.4,SNR=4.4								
VRAC					LR		LR	22 42 35.7	
	comp=Z,50nm,18.6s,baz=350,slow=40								
VRAC	**Vranov**	**23.61**	**114**	*eP*			**P**	**22 32 15.0**	**+0.2**
VRAC	**Vranov**	**23.61**	**114**		P		**P**	**22 32 15.2**	**+0.5**
MORC	**Moravsky Berou**	**23.61**	**112**	*eP*			**P**	**22 32 14.8**	**-0.1**
MORC	**Moravsky Berou**	**23.61**	**112**		P		**P**	**22 32 15.3**	**+0.4**
MORC					pmax		pmax		
	comp=Z,27nm,1.6s								
MORC	**Moravsky Berou**	**23.61**	**112**		P		**P**	**22 32 14.5**	**-0.4**
MORC					IAmb		IAmb	22 32 20.2	
	comp=Z,26nm,1.6s								
KRUC	**Moravsky**	**23.73**	**115**	*eP*			**P**	**22 32 15.8**	**-0.1**
NACGM	**Naroch**	**23.76**	**93**	*e*			P	22 32 27.0	+11
MOA	**Molln**	**23.90**	**119**	*eP*			**P**	**22 32 23.4**	**+5.8**
	comp=Z,5.9nm,1.1s								
ABTA	**Abfaltersbach**	**24.18**	**123**	*eP*			**P**	**22 32 21.7**	**+1.4**
	comp=Z,7.6nm,1.4s								
KBA	**Koelnbreinsper**	**24.20**	**122**	*eP*			**P**	**22 32 26.9**	**+6.2**
	comp=Z,13nm,1.3s								
CONA	**Conrad Observa**	**24.44**	**117**		P		**P**	**22 32 23.1**	**+0.4**
	comp=Z,2.9nm,0.9s								
SMOL	**Smolenice**	**24.58**	**114**	*eP*			**P**	**22 32 24.5**	**+0.7**
SMOL					pmax		pmax		
	comp=Z,5.0nm,1.1s								
SMOL	**Smolenice**	**24.58**	**114**	*eP*			**P**	**22 32 24.5**	**+0.7**
ARSA	**Arzberg**	**24.87**	**118**	*eP*			**P**	**22 32 30.2**	**+3.6**
	comp=Z,4.8nm,1.2s								
LANS	**Liptovska Anna**	**24.88**	**111**	*eP*			**P**	**22 32 27.5**	**+0.9**
LANS					pmax		pmax		
	comp=Z,4.0nm,1.1s								
LANS	**Liptovska Anna**	**24.88**	**111**	*eP*			**P**	**22 32 27.5**	**+0.9**
NIE	**Niedzica**	**25.01**	**109**		P		**P**	**22 32 28.3**	**+0.6**
NIE					pmax		pmax		
	comp=Z,5.0nm,1.4s								
VYHS	**Vyhne**	**25.15**	**112**	*eP*			**P**	**22 32 28.6**	**-0.4**
VYHS	**Vyhne**	**25.15**	**112**	*eP*			**P**	**22 32 28.5**	**-0.4**
SOKA	**Soboth**	**25.17**	**120**	*eP*			**P**	**22 32 29.5**	**+0.3**
	comp=Z,6.8nm,1.3s								
KLMR	**Klimovskoe**	**25.58**	**72**	*eP*			**P**	**22 32 34.9**	**+2.2**
KLMR					pmax		pmax		
	comp=Z,18nm,1.2s								
KLMR	**Klimovskoe**	**25.58**	**72**	*eP*			**P**	**22 32 35.0**	**+2.2**
KLMR					AMP			22 32 37.3	
	comp=Z,18nm,1.2s								
PSZ	**Piszkesteto**	**26.04**	**112**		P		**P**	**22 32 37.3**	**+0.2**
PSZ					pmax		pmax		
	comp=Z,23nm,1.3s								
PSZ	**Piszkesteto**	**26.04**	**112**		P		**P**	**22 32 36.2**	**-0.9**
PSZ					IAmb		IAmb	22 32 50.2	
	comp=Z,23nm,1.3s								
ESDC	**Sonseca Array**	**26.15**	**156**		P		**P**	**22 32 37.4**	**-0.8**
	comp=Z,2.0nm,1.0s,baz=350,slow=8.7,SNR=5.1								
ESDC					LR		LR	22 42 46.0	
	comp=Z,53nm,18.7s,baz=335,slow=36								
KOLS	**Kolonicke sedl**	**26.20**	**108**	*eP*			**P**	**22 32 38.6**	**+0.1**
KOLS					pmax		pmax		
	comp=Z,23nm,1.7s								
KOLS	**Kolonicke sedl**	**26.20**	**108**	*eP*			**P**	**22 32 38.6**	**+0.1**
LVV	**L'vov**	**26.24**	**104**	*eP*			**P**	**22 32 40.7**	**+1.8**
MORS	**Morshin**	**26.71**	**105**		P		**P**	**22 32 49.1**	**+6.0**
AKASG	**Malin Array Be**	**27.78**	**98**		P		**P**	**22 32 51.7**	**-0.9**
	comp=Z,0.1nm,0.2s,baz=320,slow=9.7,SNR=8.0								
AKBB	**Malin Array Si**	**27.78**	**98**↓	*eP*			**P**	**22 32 54.9**	**+2.3**
AKBB					pmax		pmax		
	comp=Z,15nm,1.9s								
OBN	**Obninsk**	**27.84**	**84**	*eP*			**P**	**22 32 55.6**	**+2.5**
OBN				*e*	PPP		PPP	22 33 49.3	
OBN				*e*				22 36 13.2	
OBN					pmax		pmax		
	comp=Z,23nm,1.7s								
BURAR	**Bucovina Array**	**28.45**	**106**		P		**P**	**22 33 01.2**	**+2.4**
BURAR	**Bucovina Array**	**28.45**	**106**		P		**P**	**22 33 00.7**	**+1.9**
BZS	**Buzias**	**28.60**	**113**		P		**P**	**22 33 00.0**	**0.0**
BZS					pmax		pmax		
	comp=Z,4.0nm,1.6s								
CFR	**Carcaliu**	**31.61**	**106**		P		**P**	**22 33 29.7**	**+3.1**
CFR					pmax		pmax		
	comp=Z,8.0nm,1.2s								
SRS	**Serrai**	**33.16**	**115**		P		**P**	**22 33 40.5**	**+0.2**
SRS					pmax		pmax		
	comp=Z,9.0nm,1.4s								
ANN	**Anapa**	**35.85**	**97**	*eP*			**P**	**22 34 01.3**	**-2.1**
ANN				*e**PP			**pP**	**22 34 05.2**	**-1.8**
ANN				*e*				22 35 21.2	
ANN				*e*				22 36 29.3	
ANN				*eS			**S**	**22 39 38.2**	**-2.6**
ANN					pmax		pmax		
	comp=Z,36nm,1.1s								
NRIK	**Noril'sk**	**36.50**	**35**↓	*eP*			**P**	**22 34 12.1**	**+3.4**
NRIK					pmax		pmax		
	comp=Z,10.0nm,1.5s								
SOC	**Sochi**	**37.80**	**96**	*eP*			**P**	**22 34 21.8**	**+1.7**
SOC				*e*				22 35 45.1	
SOC				*e**PPP			PPP	22 36 08.9	
SOC				*eS			**S**	**22 40 13.8**	**+3.2**
SOC				*eSS			**SS**	**22 42 56.0**	**-0.2**
GOF	**Gofitskoye**	**38.06**	**91**↑	*eP*			P	22 34 26.8	+4.5
GOF					pmax		pmax		
	comp=Z,30nm,1.3s								
BR131	**Keskin Array S**	**38.40**	**105**	*i P*			**P**	**22 34 26.5**	**+1.1**
BR131	**Keskin Array S**	**38.40**	**105**		P		**P**	**22 34 25.4**	**0.0**
BRTR	**Keskin Array B**	**38.40**	**105**		P		**P**	**22 34 26.7**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=333,slow=5.7,SNR=7.7								
BRTR	**Keskin Array B**	**38.40**	**105**		P		**P**	**22 34 25.1**	**-0.4**
KIV	**Kislovodsk**	**38.78**	**92**	*eP*			**P**	**22 34 30.2**	**+1.7**
KIV					pmax		pmax		
	comp=Z,15nm,1.0s								
KBZ	**Khabaz**	**39.06**	**92**		P		**P**	**22 34 31.3**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=236,slow=24,SNR=3.8								
KBZ	**Khabaz**	**39.06**	**92**↓	*eP*			P	22 34 34.7	+4.1
KBZ					pmax		pmax		
	comp=Z,11nm,1.6s								
YKA	**Yellowknife Ar**	**39.31**	**313**		P		**P**	**22 34 33.4**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=42,slow=9.0,SNR=5.8								
AKH	**Akhalkalaki**	**41.20**	**94**		P		P	22 34 53.8	+5.2
AKH	**Akhalkalaki**	**41.20**	**94**		P		**P**	**22 34 50.5**	**+1.9**
MALT	**Malatya**	**41.60**	**102**		P		**P**	**22 34 57.2**	**+5.3**
ABKAR	**Akbulak array**	**41.96**	**73**		P		**P**	**22 34 58.3**	**+3.7**
ABKAR					IAmb		IAmb	22 34 59.5	
	comp=Z,13nm,1.4s								
ABKAR	**Akbulak array**	**41.96**	**73**		P		**P**	**22 34 57.2**	**+2.6**
TIXI	**Tiksi**	**42.10**	**15**	*ce*	P		**P**	**22 34 57.7**	**+2.3**
TIXI					pmax		pmax		
	comp=Z,58nm,1.7s								
GNI	**Garni**	**42.77**	**94**↓	*eP*			P	22 35 06.2	+4.7
GNI					pmax		pmax		
	comp=Z,32nm,1.7s								
GNI	**Garni**	**42.77**	**94**		P		**P**	**22 35 03.0**	**+1.5**
BRVK	**Borovoye**	**43.12**	**62**↓	*eP*			**P**	**22 35 06.9**	**+2.9**
BRVK					pmax		pmax		
	comp=Z,18nm,2.5s								
BRVK	**Borovoye**	**43.12**	**62**		P		P	22 35 08.8	+4.8
BRVK					IAmb		IAmb	22 35 09.1	
	comp=Z,22nm,1.8s								
ILAR	**Eielson Array**	**45.79**	**333**		P		**P**	**22 35 27.2**	**+2.0**
	comp=Z,1.5nm,1.1s,baz=21,slow=5.4,SNR=7.8								
ILAR					PcP		**PcP**	**22 37 02.2**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=0.0,slow=4.6,SNR=3.3								
COLA	**College**	**45.88**	**333**↑	*eP*			**P**	**22 35 29.1**	**+3.2**
COLA					pmax		pmax		
	comp=Z,8.0nm,1.3s								
ZAA0	**Zalesovo Array**	**47.64**	**51**		P		**P**	**22 35 42.9**	**+3.1**
ZALV	**Zalesovo Beam**	**47.64**	**51**		P		**P**	**22 35 41.2**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=317,slow=8.5,SNR=5.9								
ZALV	**Zalesovo Beam**	**47.64**	**51**		P		**P**	**22 35 42.8**	**+3.0**
KURK	**Kurchatov**	**48.11**	**58**↓	*eP*			**P**	**22 35 45.8**	**+2.4**
KURK					pmax		pmax		
	comp=Z,7.0nm,1.1s								
KURK	**Kurchatov**	**48.11**	**58**		P		**P**	**22 35 46.5**	**+3.1**
KURK					IAmb		IAmb	22 35 47.0	
	comp=Z,19nm,1.6s								
K22A	**Casper**	**52.15**	**291**		P		P	22 35 23.8	-51
MK31	**Makanchi Array**	**52.72**	**58**	*d*	P		**P**	**22 36 21.4**	**+3.0**
MKAR	**Makanchi Array**	**52.72**	**58**		P		**P**	**22 36 21.7**	**+3.3**
	comp=Z,2.3nm,1.1s,baz=15,slow=10.0,SNR=7.3								
MKAR	**Makanchi Array**	**52.72**	**58**		P		**P**	**22 36 21.7**	**+3.3**
TORD	**Torodi Ar. Bea**	**53.04**	**157**		P		**P**	**22 36 19.4**	**-1.6**
	comp=Z,1.8nm,1.0s,baz=350,slow=8.6,SNR=6.3								
AAK	**Ala-Archa**	**53.24**	**67**↓	*eP*			P	22 36 26.4	+3.9
AAK					pmax		pmax		
	comp=Z,41nm,1.7s								
PDAR	**Pinedale Array**	**53.26**	**293**		P		**P**	**22 36 22.0**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=47,slow=6.5,SNR=8.0								
BTK	**Batken**	**53.93**	**72**		P		**P**	**22 36 29.0**	**+1.5**
BTK					IAmb		IAmb	22 36 32.7	
	comp=Z,16nm,1.2s								
CHGR	**Chuyangaron**	**54.44**	**74**		P		**P**	**22 36 33.3**	**+2.1**
CHGR					IAmb		IAmb	22 36 36.2	
	comp=Z,19nm,1.2s								
GAR	**Garm**	**54.62**	**73**		P		**P**	**22 36 34.3**	**+1.7**
WMQ	**Urumqi**	**57.23**	**56**	*eP*			P	22 36 55.1	+4.0
WMQ					pmax		pmax		
	comp=Z,13nm,1.1s								
WMQ					pmax		pmax		
	comp=Z,130nm,3.8s								
WMQ					LR		LR		
	comp=N,6μm,17.5s								
WMQ					LR		LR		
	comp=E,14μm,19.3s								
WMQ					LR		LR		
	comp=Z,14μm,24.3s								
ANMO	**Albuquerque**	**58.66**	**286**↑	*eP*			P	22 37 06.0	+4.6
ANMO					pmax		pmax		
	comp=Z,12nm,3.4s								
SONM	**Songino Array**	**59.67**	**40**		P		**P**	**22 37 10.9**	**+2.7**
	comp=Z,1.2nm,1.1s,baz=350,slow=5.0,SNR=5.3								
SONM	**Songino Array**	**59.67**	**40**		P		**P**	**22 37 06.2**	**-2.0**
ULN	**Ulaanbaatar**	**59.83**	**40**↓	*eP*			**P**	**22 37 12.7**	**+3.5**
ULN					pmax		pmax		
	comp=Z,6.0nm,1.7s								
TXAR	**Lajitas Array**	**62.35**	**280**		P		**P**	**22 37 26.1**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=36,slow=17,SNR=3.7								
GTA	**Gaotai**	**65.31**	**49**	↑	P		**P**	**22 37 49.6**	**+3.6**
GTA					pP		sP	22 37 54.1	+3.0
GTA					sP		pP	22 37 56.6	+6.9
GTA					pmax		pmax		
	comp=Z,4.0nm,1.5s								
GTA					pmax		pmax		
	comp=Z,90nm,7.5s								
GTA					LR		LR		
	comp=N,2μm,17.4s								
GTA					LR		LR		
	comp=E,4μm,18.9s								
GTA					LR		LR		
	comp=Z,3μm,17.1s								
HHC	**Hu-ho-hao-te**	**67.54**	**40**	*eP*			**P**	**22 38 02.0**	**+1.8**
HHC					pmax		pmax		
	comp=Z,11nm,0.9s								
HHC					pmax		pmax		
	comp=Z,140nm,5.4s								
CN2	**Changchun**	**68.09**	**28**	*eP*			**P**	**22 37 59.0**	**-4.4**
CN2					pmax		pmax		
	comp=Z,10.0nm,1.3s								
MDJ	**Mudanjiang**	**68.10**	**25**		P		P	22 37 57.1	-6.4
MDJ					pmax		pmax		
	comp=Z,5.0nm,0.8s								
MDJ					pmax		pmax		
	comp=Z,190nm,4.6s								
LZH	**Lanzhou**	**69.65**	**48**	*eP*			**P**	**22 38 10.0**	**-3.5**
LZH					pP		pP	22 38 16.3	-0.9
LZH					sP		sP	22 38 18.8	+0.2
LZH					PP		**PP**	**22 40 51.5**	**+4.7**
LZH					pmax		pmax		
	comp=Z,17nm,1.1s								
LZH					pmax		pmax		
	comp=Z,66nm,5.4s								
LZH					LR		LR		
	comp=N,130nm,16.4s								
LZH					LR		LR		
	comp=E,130nm,16.3s								
LZH					LR		LR		
	comp=Z,190nm,18.5s								
KSAR	**Wonju Array Be**	**74.70**	**28**		P		P	22 38 34.7	-8.7
NJ2	**Nanjing**	**77.77**	**37**	*eP*			P	22 38 55.6	-5.4
NJ2					pmax		pmax		
	comp=Z,6.0nm,0.5s								
KMI	**Kunming**	**79.36**	**53**↑	*eP*			P	22 39 02.3	-7.8
KMI					pP		pP	22 39 09.5	-4.4
KMI					pmax		pmax		
	comp=Z,6.0nm,0.5s								
KMI					pmax		pmax		
	comp=Z,88nm,4.5s								
KMI					LR		LR		
	comp=N,4μm,25.6s								
KMI					LR		LR		
	comp=E,4μm,26.4s								
KMI					LR		LR		
	comp=Z,6μm,26.6s								
CMAR	**Chiang Mai Arr**	**84.13**	**59**		P		**P**	**22 39 34.8**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=347,slow=7.4

68C-82D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.97**	**257**	P	**Pb**	**22 33 41.3**	**-0.5**
MXZ	**Matakaoa Point**	**1.04**	**272**	P	**Pn**	**22 33 42.1**	**+0.6**
MXZ				S	**Sb**	**22 33 59.4**	**+3.2**
MXZ	**Matakaoa Point**	**1.04**	**272**	Pn	**Pn**	**22 33 42.0**	**+0.6**
MXZ				Sn	**Sn**	**22 33 55.5**	**+0.7**
PUZ	**Puketiti**	**1.17**	**246**	P	**Pn**	**22 33 44.1**	**+0.8**
PUZ				S	**Sb**	**22 34 03.8**	**+3.7**
TWGZ	**Tauwhareparae**	**1.41**	**245**	P	**Pn**	**22 33 47.7**	**+1.0**
TWGZ				S	**Sb**	**22 34 10.3**	**+3.3**
CNGZ	**Carnagh Statio**	**1.42**	**231**	P	**Pn**	**22 33 48.0**	**+1.3**
CNGZ				S	**Sb**	**22 34 11.0**	**+4.0**
HAZ	**Te Kaha**	**1.46**	**263**	P	**Pn**	**22 33 48.1**	**+0.9**
HAZ				S	**Sb**	**22 34 12.6**	**+4.4**
RUGZ	**Raukumara Rang**	**1.57**	**256**	P	**Pn**	**22 33 49.6**	**+0.6**
TKGZ	**Te Karaka**	**1.62**	**238**	P	**Pn**	**22 33 50.6**	**+1.0**
TKGZ				S	**Sb**	**22 34 13.9**	**+1.0**
MWZ	**Matawai**	**1.80**	**245**	P	**Pn**	**22 33 52.5**	**+0.4**
MWZ				S	**Sb**	**22 34 16.9**	**-1.2**
RIGZ	**Rimuhau**	**1.83**	**232**	P	**Pn**	**22 33 53.2**	**+0.8**
RIGZ				S	**Sb**	**22 34 18.6**	**-0.2**
PRGZ	**Paritu Road**	**1.90**	**225**	P	**Pn**	**22 33 53.8**	**+0.5**
PRGZ				S	**Sb**	**22 34 21.4**	**+0.7**
WIZ	**White Island**	**1.93**	**271**	P	**Pn**	**22 33 54.9**	**+1.2**
WSRZ	**White Island S**	**1.94**	**272**	P	**Pb**	**22 33 56.1**	**-1.9**
RAGZ	**Rawiri**	**1.95**	**242**	P	**Pn**	**22 33 55.3**	**+1.2**
MHGZ	**Mahia Peninsul**	**2.05**	**220**	P	**Pn**	**22 33 55.7**	**+0.3**
MHGZ				S	**Sb**	**22 34 24.8**	**-0.3**
KNZ	**Kokohu**	**2.08**	**226**	P	**Pn**	**22 33 55.9**	**+0.1**
KNZ				S	**Sb**	**22 34 24.2**	**-1.9**
URZ	**Urewera**	**2.08**	**251**	Pn	**Pn**	**22 33 56.6**	**+0.8**
	2μm,0.3s,baz=38,slow=1.3,SNR=4000						
URZ	**Urewera**	**2.08**	**251**	P	**Pn**	**22 33 57.0**	**+1.2**
URZ				S	**Sb**	**22 34 24.9**	**-1.2**
URZ	**Urewera**	**2.08**	**251**	Pn	**Pn**	**22 33 56.9**	**+1.0**
WHRZ	**Whale Island**	**2.11**	**262**	P	**Pn**	**22 33 57.4**	**+1.3**
RTZ	**Ruatahuna**	**2.31**	**243**	P	**Pn**	**22 34 00.1**	**+1.0**
EDRZ	**Edgecumbe**	**2.33**	**257**	P	**Pn**	**22 34 00.4**	**+1.1**
MARZ	**Manawahe**	**2.36**	**260**	P	**Pn**	**22 34 00.3**	**+0.7**
WHHZ	**Waihua**	**2.38**	**231**	P	**Pn**	**22 34 00.8**	**+0.8**
RAHZ	**Arahi**	**2.38**	**236**	P	**Pn**	**22 34 00.9**	**+0.9**
MUGZ	**Murupara**	**2.41**	**248**	P	**Pn**	**22 34 01.2**	**+0.8**
OPRZ	**Ohinepanea**	**2.44**	**263**	P	**Pn**	**22 34 01.1**	**+0.5**
MTHZ	**Maungataniwha**	**2.52**	**239**	P	**Pn**	**22 34 02.6**	**+0.8**
TARZ	**Mount Tarawera**	**2.54**	**255**	P	**Pn**	**22 34 03.2**	**+1.0**
MKRZ	**Makatiti**	**2.54**	**257**	P	**Pn**	**22 34 04.1**	**+1.8**
RRRZ	**Republican Roa**	**2.56**	**252**	P	**Pn**	**22 34 03.6**	**+1.2**
LIRZ	**Lichensteins R**	**2.59**	**260**	P	**Pn**	**22 34 04.4**	**+1.6**
OMRZ	**Omania**	**2.61**	**258**	P	**Pn**	**22 34 04.1**	**+0.9**
ARHZ	**Aropaoanui**	**2.64**	**230**	P	**Pn**	**22 34 04.1**	**+0.6**
HLRZ	**Highlands Stat**	**2.66**	**255**	P	**Pn**	**22 34 05.6**	**+1.8**
TGRZ	**Tauranga**	**2.66**	**266**	P	**Pn**	**22 34 04.7**	**+0.9**
NMHZ	**Naumai**	**2.66**	**235**	P	**Pn**	**22 34 04.7**	**+0.8**
PRRZ	**Plateau Road**	**2.69**	**250**	P	**Pn**	**22 34 05.1**	**+0.8**
KARZ	**Kaharoa**	**2.70**	**260**	P	**Pn**	**22 34 05.1**	**+0.7**
MYRZ	**Mayor Island**	**2.70**	**276**	P	**Pn**	**22 34 04.8**	**+0.5**
HRRZ	**Handcock Road**	**2.75**	**252**	P	**Pn**	**22 34 06.0**	**+1.0**
ALRZ	**Allen Road**	**2.75**	**249**	P	**Pn**	**22 34 05.8**	**+0.7**
HSRZ	**Hossack Road**	**2.75**	**254**	P	**Pn**	**22 34 06.5**	**+1.4**
NGRZ	**Ngongotaha**	**2.76**	**258**	P	**Pn**	**22 34 07.1**	**+1.9**
UTU	**Utuhina**	**2.76**	**257**	P	**Pn**	**22 34 07.3**	**+2.1**
MRHZ	**Matea Rd**	**2.80**	**243**	P	**Pn**	**22 34 06.6**	**+0.8**
CKHZ	**Cape Kidnapper**	**2.86**	**223**	P	**Pn**	**22 34 06.3**	**-0.2**
GRRZ	**Galatos Road**	**2.87**	**254**	P	**Pn**	**22 34 07.8**	**+1.2**
WPRZ	**Whakapapatarin**	**2.87**	**250**	P	**Pn**	**22 34 08.4**	**+1.7**
BKZ	**Black Stump Fm**	**2.91**	**236**	P	**Pn**	**22 34 07.7**	**+0.5**
BKZ	**Black Stump Fm**	**2.91**	**236**	Pn	**Pn**	**22 34 07.9**	**+0.7**
KMRZ	**Kaimai**	**2.92**	**264**	P	**Pn**	**22 34 07.9**	**+0.5**
MCHZ	**McNeill Hill**	**2.94**	**230**	P	**Pn**	**22 34 07.9**	**+0.3**
HATZ	**Hinemaiaia**	**3.06**	**244**	P	**Pn**	**22 34 09.7**	**+0.4**
KAHZ	**Kahuranaki**	**3.06**	**223**	P	**Pn**	**22 34 09.0**	**-0.3**
WHTZ	**Whakaora**	**3.07**	**249**	P	**Pn**	**22 34 11.5**	**+1.9**
KWHZ	**Kaweka Forest**	**3.09**	**233**	P	**Pn**	**22 34 10.1**	**+0.3**
KUTZ	**Kaahu Road**	**3.12**	**252**	P	**Pn**	**22 34 11.1**	**+1.0**
KUZ	**Kuaotunu**	**3.22**	**284**	P	**Pn**	**22 34 11.4**	**-0.1**
PXZ	**Pawanui**	**3.24**	**221**	P	**Pn**	**22 34 10.4**	**-1.4**
WATZ	**Wairara**	**3.25**	**249**	P	**Pn**	**22 34 13.2**	**+1.2**
KRHZ	**Kereru**	**3.26**	**230**	P	**Pn**	**22 34 11.7**	**-0.4**
RITZ	**Rihia Road**	**3.26**	**244**	P	**Pn**	**22 34 13.0**	**+1.0**
TOZ	**Tahuroa Road**	**3.26**	**266**	P	**Pn**	**22 34 12.5**	**+0.4**
RATZ	**Rangitukua**	**3.28**	**246**	P	**Pn**	**22 34 13.4**	**+1.0**
TLZ	**Tolley Road**	**3.30**	**256**	P	**Pn**	**22 34 13.3**	**+0.7**
BHHZ	**Black Hill Sta**	**3.30**	**225**	P	**Pn**	**22 34 12.5**	**0.0**
KATZ	**Kakaramea**	**3.37**	**245**	P	**Pn**	**22 34 15.1**	**+1.4**
TMVZ	**Te Maari**	**3.42**	**243**	P	**Pn**	**22 34 14.6**	**+0.2**
ETVZ	**East Tongariro**	**3.43**	**242**	P	**Pn**	**22 34 14.7**	**+0.2**
KRVZ	**Karewarewa**	**3.46**	**243**	P	**Pn**	**22 34 15.7**	**+0.8**
OTVZ	**Oturere**	**3.47**	**242**	P	**Pn**	**22 34 15.1**	**0.0**
WPHZ	**Waipukurau**	**3.49**	**224**	P	**Pn**	**22 34 14.5**	**-0.8**
WTVZ	**West Tongariro**	**3.50**	**243**	P	**Pn**	**22 34 16.6**	**+1.1**
NGZ	**Ngauruhoe**	**3.52**	**242**	P	**Pn**	**22 34 15.9**	**+0.2**
MOVZ	**Moawhango**	**3.52**	**238**	P	**Pn**	**22 34 15.6**	**-0.1**
TUVZ	**Tukino**	**3.52**	**241**	P	**Pn**	**22 34 16.4**	**+0.5**
PNHZ	**Pukenui**	**3.53**	**228**	P	**Pn**	**22 34 15.1**	**-0.6**
PRHZ	**Porangahau**	**3.53**	**220**	P	**Pn**	**22 34 14.0**	**-1.7**
WHVZ	**Whangaehu Hut**	**3.58**	**241**	P	**Pn**	**22 34 16.6**	**0.0**
FWVZ	**Far West T-bar**	**3.59**	**241**	P	**Pn**	**22 34 16.8**	**0.0**
GRZ	**Great Barrier**	**3.59**	**291**	P	**Pn**	**22 34 16.9**	**+0.3**
WNVZ	**Wahianoa**	**3.59**	**240**	P	**Pn**	**22 34 16.8**	**0.0**
TWVZ	**Taurewa**	**3.59**	**245**	P	**Pn**	**22 34 18.4**	**+1.7**
MTVZ	**Mangateitei**	**3.71**	**245**	P	**Pn**	**22 34 18.4**	**+0.5**
PKVZ	**Pokaka**	**3.75**	**242**	P	**Pn**	**22 34 20.9**	**+2.1**
ANWZ	**Angora Road**	**3.76**	**220**	P	**Pn**	**22 34 17.6**	**-1.3**
TSZ	**Takapari Road**	**3.76**	**228**	P	**Pn**	**22 34 17.9**	**-1.1**
ETAZ	**East Tamaki Re**	**3.79**	**278**	P	**Pn**	**22 34 20.5**	**+1.2**
DVHZ	**Dannevirke**	**3.81**	**224**	P	**Pn**	**22 34 18.0**	**-1.6**
MBAZ	**Motutapu North**	**3.85**	**281**	P	**Pn**	**22 34 21.3**	**+1.1**
HIZ	**Hauiti**	**3.86**	**255**	P	**Pn**	**22 34 21.9**	**+1.6**
HIZ	**Hauiti**	**3.86**	**255**	Pn	**Pn**	**22 34 21.4**	**+1.1**
HIZ				Sn	**Sn**	**22 35 02.6**	**-1.9**
ABAZ	**Army Bay**	**3.95**	**283**	P	**Pn**	**22 34 22.7**	**+1.2**
EPAZ	**Eden Park BICE**	**3.95**	**279**	P	**Pn**	**22 34 23.0**	**+1.5**
AWAZ	**Awhitu Peninsu**	**4.00**	**276**	P	**Pn**	**22 34 23.5**	**+1.4**
BFZ	**Birch Farm**	**4.04**	**219**	P	**Pn**	**22 34 20.3**	**-2.5**
BFZ	**Birch Farm**	**4.04**	**219**		**Pn**	**22 34 20.4**	**-2.3**
WTAZ	**Waiatarua**	**4.07**	**278**	P	**Pn**	**22 34 24.8**	**+1.5**
POWZ	**Post Office Ro**	**4.09**	**226**	P	**Pn**	**22 34 22.5**	**-1.0**
PRWZ	**Pori Road**	**4.09**	**283**	P	**Pn**	**22 34 22.4**	**-1.0**
RVAZ	**Riverhead Bore**	**4.10**	**280**	P	**Pn**	**22 34 25.1**	**+1.5**
VRZ	**Vera Road**	**4.11**	**247**	P	**Pn**	**22 34 24.6**	**+0.9**
WAZ	**Wanganui**	**4.21**	**238**	P	**Pn**	**22 34 25.9**	**+0.8**
CPWZ	**Castlepoint**	**4.24**	**218**	P	**Pn**	**22 34 23.3**	**-2.1**
OHWZ	**Ohakea**	**4.24**	**231**	P	**Pn**	**22 34 26.9**	**+1.4**
TIWZ	**Tintock**	**4.29**	**221**	P	**Pn**	**22 34 24.5**	**-1.8**
MRZ	**Mangatainoka R**	**4.38**	**224**	P	**Pn**	**22 34 25.6**	**-1.8**
MHEZ	**Mangahewa**	**4.41**	**249**	P	**Pn**	**22 34 31.5**	**+3.7**
LREZ	**Lake Rotokare**	**4.49**	**244**	P	**Pn**	**22 34 30.7**	**+1.8**
DREZ	**Durham Road**	**4.54**	**248**	P	**Pn**	**22 34 32.3**	**+2.7**
TMWZ	**Te Maipa**	**4.54**	**218**	P	**Pn**	**22 34 26.3**	**-3.3**
WCZ	**Waipu Caves**	**4.54**	**290**	P	**Pn**	**22 34 30.4**	**+0.7**
HOWZ	**Holdsworth Sta**	**4.58**	**223**	P	**Pn**	**22 34 27.7**	**-2.5**
PREZ	**Palmer Road**	**4.62**	**246**	P	**Pn**	**22 34 34.3**	**+3.5**
NEZ	**North Egmont**	**4.64**	**247**	P	**Pn**	**22 34 33.2**	**+2.1**
PKE	**Pukeiti**	**4.70**	**248**	P	**Pn**	**22 34 34.5**	**+2.7**
KHEZ	**Kahui Hut**	**4.71**	**247**	P	**Pn**	**22 34 34.8**	**+2.8**
OGWZ	**Otaki Gorge**	**4.71**	**226**	P	**Pn**	**22 34 29.5**	**-2.1**
MTW	**Mount Morrison**	**4.77**	**221**	P	**Pn**	**22 34 29.7**	**-3.1**
NBEZ	**Newall Road No**	**4.81**	**248**	P	**Pn**	**22 34 36.1**	**+2.8**
NMEZ	**Namu Road**	**4.85**	**246**	P	**Pn**	**22 34 36.4**	**+2.6**
KIW	**Kapiti Island**	**4.89**	**227**	P	**Pn**	**22 34 32.5**	**-2.0**
CAW	**Cannon Point**	**4.97**	**224**	P	**Pn**	**22 34 33.0**	**-2.5**
PAWZ	**Paruwai Farm**	**4.97**	**219**	P	**Pn**	**22 34 32.2**	**-3.4**
MSWZ	**Moikau Station**	**5.09**	**220**	P	**Pn**	**22 34 33.5**	**-3.7**
MSWZ	**Moikau Station**	**5.09**	**220**		**Pn**	**22 34 33.2**	**-4.0**
MSWZ				Sn	**Sn**	**22 35 32.3**	**-2.5**
PLWZ	**Palliser**	**5.20**	**219**	P	**Pn**	**22 34 34.8**	**-3.9**
PLWZ	**Palliser**	**5.20**	**219**		**Pn**	**22 34 34.5**	**-4.2**
WEL	**Wellington**	**5.25**	**224**	P	**Pn**	**22 34 37.1**	**-2.3**
WEL	**Wellington**	**5.25**	**224**	P	**Pn**	**22 34 37.1**	**-2.3**
BHW	**Baring Head**	**5.28**	**222**	P	**Pn**	**22 34 36.6**	**-3.2**
BHW	**Baring Head**	**5.28**	**222**	Pn	**Pn**	**22 34 36.3**	**-3.5**
SNZO	**South Karori**	**5.30**	**224**		**Pn**	**22 34 37.2**	**-2.9**
OUZ	**Omahuta**	**5.40**	**294**	P	**Pn**	**22 34 42.6**	**+1.2**
OUZ	**Omahuta**	**5.40**	**294**	Pn	**Pn**	**22 34 42.6**	**+1.2**
DUWZ	**D'Urville Isla**	**5.45**	**232**	P	**Pn**	**22 34 40.3**	**-1.9**
TCW	**Tory Channel**	**5.48**	**227**	P	**Pn**	**22 34 40.0**	**-2.5**
TUWZ	**Tuamarina**	**5.82**	**227**	P	**Pn**	**22 34 44.0**	**-3.1**
TUWZ	**Tuamarina**	**5.82**	**227**		**Pn**	**22 34 43.7**	**-3.4**
CMWZ	**Cape Campbell**	**5.87**	**223**	P	**Pn**	**22 34 46.0**	**-1.9**
CMWZ	**Cape Campbell**	**5.87**	**223**		**Pn**	**22 34 45.0**	**-3.0**
CMWZ				Sn	**Sn**	**22 35 52.5**	**-1.6**
NNZ	**Nelson**	**6.03**	**231**	P	**Pn**	**22 34 48.4**	**-1.6**
NNZ	**Nelson**	**6.03**	**231**		**Pn**	**22 34 47.9**	**-2.1**
BSWZ	**Blackbirch Sta**	**6.04**	**225**	P	**Pn**	**22 34 47.1**	**-3.1**
BSWZ	**Blackbirch Sta**	**6.04**	**225**		**Pn**	**22 34 46.5**	**-3.7**
QRZ	**Quartz Range**	**6.37**	**237**	P	**Pn**	**22 34 52.2**	**-2.6**
QRZ	**Quartz Range**	**6.37**	**237**	Pn	**Pn**	**22 34 52.2**	**-2.6**
THZ	**Tophouse**	**6.63**	**229**	P	**Pn**	**22 34 55.6**	**-2.8**
THZ	**Tophouse**	**6.63**	**229**	Pn	**Pn**	**22 34 55.7**	**-2.8**
KHZ	**Kahutara**	**6.70**	**222**	P	**Pn**	**22 34 55.2**	**-4.0**
KHZ	**Kahutara**	**6.70**	**222**	Pn	**Pn**	**22 34 55.3**	**-3.9**
I36NZ	**CHATHAM INFRAS**	**6.97**	**156**	Pn	**Pn**	**22 35 03.5**	**+0.6**
	baz=331,slow=16,SNR=0.8						
DSZ	**Denniston Nort**	**7.31**	**233**	P	**Pn**	**22 35 04.4**	**-3.2**
GVZ	**Greta Valley S**	**7.35**	**221**	P	**Pn**	**22 35 04.7**	**-3.4**
LTZ	**Lake Taylor**	**7.64**	**225**	Pn	**Pn**	**22 35 08.1**	**-4.1**
AMCZ	**Amberley**	**7.70**	**221**	P	**Pn**	**22 35 10.6**	**-2.3**
OKCZ	**Okains Bay**	**7.89**	**217**	P	**Pn**	**22 35 11.3**	**-4.3**
AKCZ	**Akaroa Harbour**	**8.07**	**217**	P	**Pn**	**22 35 15.0**	**-3.0**
MQZ	**McQueen's Vall**	**8.07**	**219**	Pn	**Pn**	**22 35 14.8**	**-3.3**
OXZ	**Oxford**	**8.12**	**223**	Pn	**Pn**	**22 35 15.5**	**-3.4**
OXZ				Sn	**Sn**	**22 36 47.2**	**-2.2**
RAO	**Raoul Island**	**8.58**	**15**	Pn	Pn	22 35 19.0	-6.1
	114nm,0.3s,baz=29,slow=22,SNR=10						
RAO				Sn	**Sn**	**22 36 53.6**	**-7.0**
	2μm,0.3s,baz=63,slow=23,SNR=9.2						
RAO	**Raoul Island**	**8.58**	**15**	P	**Pn**	**22 35 21.6**	**-3.5**
RPZ	**Rata Peaks**	**8.92**	**224**	Pn	**Pn**	**22 35 26.6**	**-3.1**
	41nm,0.3s,baz=107,slow=3.2,SNR=56						
RPZ				Sn	**Sn**	**22 37 02.9**	**-6.1**
	493nm,0.3s,baz=1.4,slow=18,SNR=17						
RPZ	**Rata Peaks**	**8.92**	**224**	Pn	**Pn**	**22 35 26.9**	**-2.9**
RPZ					**Sn**	**22 37 07.0**	**-2.0**
FOZ	**Fox Glacier**	**9.52**	**228**		**Pn**	**22 35 36.6**	**-1.3**
LBZ	**Lake Benmore**	**9.83**	**223**	Pn	**Pn**	**22 35 39.1**	**-3.2**
ODZ	**Otahua Downs**	**10.03**	**219**		**Pn**	**22 35 42.1**	**-2.9**
WKZ	**Wanaka**	**10.76**	**225**	Pn	**Pn**	**22 35 52.2**	**-2.7**
MLZ	**Mavora Lakes**	**11.59**	**224**	Pn	**Pn**	**22 36 04.9**	**-1.4**
WHZ	**Wether Hill Ro**	**12.01**	**223**	Pn	**Pn**	**22 36 10.5**	**-1.6**
DCZ	**Deep Cove**	**12.19**	**226**		**Pn**	**22 36 11.7**	**-2.8**
PYZ	**Puysegur Point**	**12.87**	**224**		**Pn**	**22 36 20.9**	**-3.0**
NFK	**Norfolk Island**	**12.95**	**308**	P	**Pn**	**22 36 26.0**	**+1.0**
	baz=13,SNR=8.5						
LHI	**Lord Howe Isla**	**17.96**	**284**	P	**P**	**22 37 31.1**	**+0.4**
	baz=18,SNR=7.1						
LHI	**Lord Howe Isla**	**17.96**	**284**		**Pn**	**22 37 29.7**	**-0.7**
DZM	**Mont Dzumac**	**19.20**	**320**	P	**P**	**22 37 44.5**	**+0.1**
	6.6nm,0.3s,baz=136,slow=12,SNR=136						
DZM				LR	LR	22 44 24.4	
	comp=Z,306μm,18.6s,baz=142,slow=35						
DZM	**Mont Dzumac**	**19.20**	**320**	*e*P	**Pn**	**22 37 45.0**	**-0.5**
	6μm,1.3s						
DZM				*e*S	**Sn**	**22 41 14.9**	**-4.9**
	180μm,27.2s						
DZM				*e*LR	LR	22 42 09.0	
	comp=Z,551μm,24.1s						
DZM	**Mont Dzumac**	**19.20**	**320**	Pn	**Pn**	**22 37 45.1**	**-0.5**
DZM				IAmb	IAmb	22 37 52.6	
	comp=Z,2μm,1.0s						
MSVF	**Nonsavu**	**19.84**	**356**	*c*eP	**P**	**22 37 50.4**	**-1.0**
MSVF				pmax	pmax		
	comp=Z,364nm,0.7s						
MSVF				MLR	MLR		
	comp=Z,107μm,15.0s						
MSVF	**Nonsavu**	**19.84**	**356**	P	**P**	**22 37 49.7**	**-1.7**
MSVF				S	**S**	**22 41 28.8**	**-4.2**
NIUE	**Niue**	**20.60**	**29**	P	**P**	**22 37 59.5**	**0.0**
	baz=20,SNR=11						
NIUE	**Niue**	**20.60**	**29**	P	**P**	**22 37 58.0**	**-1.5**
NIUE				IAmb	IAmb	22 38 16.6	
	comp=Z,1μm,1.1s						
MCQ	**Macquarie Isla**	**22.03**	**213**	P	**P**	**22 38 20.2**	**+5.7**
	baz=22,SNR=3.9						
RIV	**Riverview**	**23.37**	**271**	P	**P**	**22 38 29.8**	**+1.0**
	baz=23,SNR=5.4						
RIV	**Riverview**	**23.37**	**271**	P	**P**	**22 38 32.6**	**+3.8**
RIV				pmax	pmax		
	comp=Z,1μm,1.7s						
MGCD	**Mangrove Creek**	**23.60**	**272**	P	**P**	**22 38 33.4**	**+2.3**
	baz=23,SNR=33						
RAR	**Rarotonga**	**24.19**	**53**	P	**P**	**22 38 37.0**	**+0.4**
	comp=Z,360nm,1.2s,baz=218,slow=6.9,SNR=20						
RAR				S	**S**	**22 42 51.5**	**-1.2**
	comp=Z,29nm,0.7s,baz=86,slow=13,SNR=2.3						
RAR				LR	LR	22 47 48.8	
	comp=Z,50μm,18.5s,baz=221,slow=36						
RAR	**Rarotonga**	**24.19**	**53**	P	**P**	**22 38 35.2**	**-1.4**
RAR				IAmb	IAmb	22 38 48.9	
	comp=Z,669nm,1.1s						
RAR					**S**	**22 42 49.7**	**-2.9**
ARMA	**Armidale**	**24.22**	**279**	P	**P**	**22 38 38.7**	**+1.7**
	baz=24,SNR=29						
ARMA	**Armidale**	**24.22**	**279**	P	**P**	**22 38 36.3**	**-0.8**
ARMA				S	**S**	**22 42 52.2**	**-1.1**
ARMA				IAMs_20	IAMs_20	22 46 58.8	
	comp=Z,182μm,20.0s						
CNB	**Canberra Magne**	**24.39**	**266**	P	**P**	**22 38 40.6**	**+2.1**
	baz=24,SNR=16						
SANVU	**Saraoutou**	**24.65**	**330**	P	**P**	**22 38 39.4**	**-1.4**
AFI	**Afiamalu**	**24.81**	**20**	P	**P**	**22 38 41.3**	**-1.1**
AFI				pmax	pmax		
	comp=Z,3μm,1.1s						
AFI	**Afiamalu**	**24.81**	**20**	P	**P**	**22 38 41.2**	**-1.1**
TAU	**Tasmania Unive**	**25.11**	**248**	P	**P**	**22 38 44.4**	**-0.5**
TAU				pmax	pmax		
	comp=Z,264nm,0.7s						
TAU	**Tasmania Unive**	**25.11**	**248**	P	**P**	**22 38 44.1**	**-0.8**
TAU				IAmb	IAmb	22 38 52.1	
	comp=Z,264nm,0.8s						
TAU				S	**S**	**22 43 04.2**	**-3.1**
TAU	**Tasmania Unive**	**25.11**	**248**	IAMs_20	IAMs_20	22 48 03.6	
	comp=Z,191μm,19.0s						
MOO	**Moorlands**	**25.20**	**249**	P	**P**	**22 38 46.7**	**+1.0**
	baz=25,SNR=18						
YNG	**Young**	**25.42**	**268**	P	**P**	**22 38 49.7**	**+1.9**
	baz=25,SNR=32						
TOO	**Toolangi**	**26.95**	**259**	P	**P**	**22 39 02.9**	**+1.2**
	baz=27,SNR=26						
TOO	**Toolangi**	**26.95**	**259**	P	**P**	**22 39 00.8**	**-0.9**
TOO				pmax	pmax		
	comp=Z,221nm,1.1s						
TOO				MLR	MLR		
	comp=Z,163μm,20.0s						
TOO	**Toolangi**	**26.95**	**259**	P	**P**	**22 39 00.8**	**-0.9**
TOO				IAMs_20	IAMs_20	22 48 51.8	
	comp=Z,163μm,20.0s						
EIDS	**Eidsvold**	**27.10**	**288**	P	**P**	**22 39 03.4**	**+0.4**
	baz=27,SNR=35						
EIDS	**Eidsvold**	**27.10**	**288**	P	**P**	**22 39 02.3**	**-0.8**
EIDS				IAmb	IAmb	22 39 21.6	
	comp=Z,379nm,1.1s						
RMQ	**Roma**	**28.28**	**284**	P	**P**	**22 39 15.0**	**+1.4**
	baz=28,SNR=258						
CMSA	**Cobar Meteorol**	**28.48**	**272**	P	**P**	**22 39 16.1**	**+0.8**
	baz=28,SNR=78						
FUNA	**Funafuti**	**28.95**	**359**	P	**P**	**22 39 18.3**	**-1.2**
ARPS	**Mount Arapiles**	**29.97**	**260**	P	**P**	**22 39 29.7**	**+1.2**
	baz=30,SNR=19						
TBI	**Tubuai**	**30.05**	**71**	*e*P	**P**	**22 39 30.6**	**+1.4**
TBI	comp=Z,413nm,1.1s			*e*S	**S**	**22 44 25.9**	**+0.7**
	comp=Z,18μm,27.0s						
TBI				*e*LQ	LQ	22 45 36.5	
	comp=Z,118μm,27.0s						
TBI				*e*LR	LR	22 47 14.2	
	comp=Z,129μm,26.0s,baz=225						
STKA	**Stephens Creek**	**31.61**	**269**	P	**P**	**22 39 43.7**	**+0.7**
	comp=Z,65nm,0.8s,baz=99,slow=10,SNR=109						
STKA				PcP	**PcP**	**22 42 33.9**	**-0.8**
	comp=Z,51nm,0.9s,baz=45,slow=2.8,SNR=3.1						
STKA				ScP	**ScP**	**22 46 19.0**	**+3.7**
	comp=Z,18nm,0.9s,baz=38,slow=12,SNR=2.8						
STKA				LR	LR	22 52 14.2	
	comp=Z,193μm,19.0s,baz=104,slow=36						
STKA	**Stephens Creek**	**31.61**	**269**	P	**P**	**22 39 43.6**	**+0.6**
	baz=31,SNR=72						
STKA	**Stephens Creek**	**31.61**	**269**	P	**P**	**22 39 42.1**	**-0.9**
STKA					**PcP**	**22 42 33.9**	**-0.8**
QLP	**Quilpie**	**31.75**	**280**	P	**P**	**22 39 45.1**	**+0.8**
	baz=32,SNR=19						
HNR	**Honiara**	**33.19**	**323**	LR	LR	22 52 22.4	
	comp=Z,63μm,18.2s,baz=156,slow=35						
HNR	**Honiara**	**33.19**	**323**	P	**P**	**22 39 55.5**	**-1.4**
HNR				pmax	pmax		
	comp=Z,4μm,1.1s						
HNR				MLR	MLR		
	comp=Z,61μm,20.0s						
HNR	**Honiara**	**33.19**	**323**	P	**P**	**22 39 55.5**	**-1.4**
HTT	**Hallett**	**33.20**	**265**	P	**P**	**22 39 57.4**	**+0.5**
	baz=33,SNR=18						
PAE	**Paea**	**33.52**	**62**	*e*P	**P**	**22 40 00.6**	**+0.8**
	comp=Z,178nm,1.2s						
PAE	**Paea**	**33.52**	**62**	*e*T	T	23 14 59.7	
	comp=Z,99nm,0.3s						
PPT2	**Papeete2**	**33.58**	**62**	*e*P	**P**	**22 40 01.4**	**+1.0**
	comp=Z,904nm,1.4s						
PPT2				*e*S	**S**	**22 45 21.0**	**+0.4**
	comp=Z,15μm,26.5s						
PPT2				*e*LQ	LQ	22 47 10.0	
	comp=Z,90μm,25.2s						
PPT2				*e*LR	LR	22 48 47.4	
	comp=Z,156μm,26.2s,baz=227						
PPT2	**Papeete2**	**33.58**	**62**	*e*T	T	23 15 04.1	
	comp=Z,109nm,0.3s						
PPTF	**Pamatai, Papee**	**33.58**	**62**	P	**P**	**22 39 59.1**	**-1.4**
PPT	**Papeete**	**33.59**	**62**	P	**P**	**22 40 01.5**	**+1.0**
	comp=Z,692nm,1.1s,baz=216,slow=3.7,SNR=32						
PPT				LR	LR	22 50 03.8	
	comp=Z,36μm,20.6s,baz=236,slow=30						
TVO	**Taravao**	**33.68**	**63**	*e*P	**P**	**22 40 02.1**	**+0.9**
	comp=Z,210nm,1.2s						
TVO	**Taravao**	**33.68**	**63**	*e*T	T	23 15 11.1	
	comp=Z,47nm,0.4s						
TIAR	**Tiarei**	**33.76**	**62**	*e*P	**P**	**22 40 02.8**	**+0.9**
	comp=Z,268nm,1.2s						
TIAR	**Tiarei**	**33.76**	**62**	*e*T	T	23 15 17.3	
	comp=Z,28nm,0.3s						
CTA	**Charters Tower**	**33.80**	**292**	P	**P**	**22 40 02.6**	**+0.4**
	comp=Z,337nm,0.9s,baz=123,slow=10.0,SNR=223						
CTA				LR	LR	22

KDU **Kakadu** 48.71 288 P P 22 42 03.5 -1.1
baz=48,SNR=12
MTN **Manton Dam** 49.63 287 P P 22 42 10.4 -1.2
baz=49,SNR=38
MTN **Manton Dam** 49.63 287 P P 22 42 10.7 -1.0
MTN IAmb IAmb 22 42 25.2
comp=Z,295nm,0.8s
KNRA **Kununurra** 49.74 282 P P 22 42 12.0 -0.6
baz=50,SNR=30
KNRA **Kununurra** 49.74 282 P P 22 42 11.0 -1.5
KNRA IAmb IAmb 22 42 21.6
comp=Z,220nm,0.7s
RKGY **Rocky Gully** 49.86 253 P P 22 42 14.1 +0.9
baz=50,SNR=9.5
NWAO **Narrogin (SRO)** 50.33 255 LR LR 23 01 02.6
comp=Z,39µm,21.1s,baz=110,slow=33
NWAO **Narrogin (SRO)** 50.33 255 P P 22 42 16.4 -0.4
baz=50,SNR=14
NWAO **Narrogin (SRO)** 50.33 255 P P 22 42 17.6 +0.8
NWAO P P 22 42 17.6 +0.8
NWAO S S 22 49 25.3 -2.1
NWAO S S 22 49 25.3 -2.1
NWAO **Narrogin (SRO)** 50.33 255 P P 22 42 15.9 -0.9
NWAO pmax pmax
comp=Z,245nm,0.9s
NWAO MLR MLR
comp=Z,32µm,20.0s
NWAO **Narrogin (SRO)** 50.33 255 P P 22 42 15.9 -0.9
NWAO IAmb IAmb 22 42 34.4
comp=Z,245nm,0.8s
NWAO **Narrogin (SRO)** 50.33 255 P P 22 42 16.0 -0.9
NWAO IAmb IAmb 22 42 34.4
comp=Z,197nm,0.8s
NWAO IAMs_20 IAMs_20 23 00 39.4
comp=Z,32µm,20.0s
KLBR **Kellerberrin** 50.47 257 P P 22 42 17.8 -0.2
baz=50,SNR=67
FITZ **Fitzroy Crossi** 50.80 277 P P 22 42 20.1 -0.5
comp=Z,338nm,0.8s,baz=140,slow=7.9,SNR=296
FITZ LR LR 23 04 53.8
comp=Z,66µm,18.1s,baz=118,slow=37
FITZ **Fitzroy Crossi** 50.80 277 P P 22 42 20.1 -0.5
baz=51,SNR=294
FITZ **Fitzroy Crossi** 50.80 277 P P 22 42 19.2 -1.4
FITZ IAMs_20 IAMs_20 23 05 09.0
comp=Z,79µm,18.0s
MUN **Mundaring** 51.51 256 P P 22 42 25.7 0.0
baz=51,SNR=25
BLDU **Balliduu** 51.70 258 P P 22 42 26.7 -0.4
baz=52,SNR=72
H01W1 **Cape Leeuwin H** 51.89 252 P P 22 42 31.7 +3.4
baz=115,slow=8.3,SNR=9.1
H01W2 **Cape Leeuwin H** 51.90 252 P P 22 42 29.6 +1.2
baz=115,slow=8.3,SNR=6.1
H01W3 **Cape Leeuwin H** 51.91 252 P P 22 42 32.4 +4.0
baz=115,slow=8.3,SNR=11
MEEK **Meekatharra** 52.00 263 P P 22 42 28.3 -1.2
baz=52,SNR=82
QSPA **South Pole Qui** 52.53 180 P P 22 42 36.0 +3.0
comp=Z,482nm,0.9s,baz=35,slow=2.7,SNR=324
QSPA LR LR 23 01 20.8
comp=Z,88µm,20.7s,baz=38,slow=32
QSPA **South Pole Qui** 52.53 180 P P 22 42 32.0 -1.0
SAUI **Saumlaki** 52.62 291 P P 22 42 33.3 -0.9
MORW **Morawa** 52.90 259 P P 22 42 35.5 -0.6
baz=53,SNR=108
MORW **Morawa** 52.90 259 P P 22 42 35.4 -0.7
MORW IAmb IAmb 22 42 41.6
comp=Z,316nm,1.0s
PSA00 **Pilbara Seismi** 53.53 270 P P 22 42 39.4 -1.4
PSA00 IAmb IAmb 22 42 47.3
comp=Z,236nm,0.9s
MBWA **Marble Bar** 53.84 270 P P 22 42 41.7 -1.4
MBWA P P 22 42 41.7 -1.4
MBWA S S 22 50 07.6 -8.1
MBWA S S 22 50 07.6 -8.1
JOHN **Johnston Islan** 55.00 13 P P 22 42 51.2 -0.1
FAKI **Fak Fak** 55.38 297 P P 22 42 52.3 -2.1
SOEI **Soe** 56.80 284 P P 22 43 03.3 -1.3
BATI **Baumata** 56.99 283 LR LR 23 09 01.5
comp=Z,199µm,18.1s,baz=147,slow=38
H11S2 **WAKE ISLAND Hy** 57.10 345 T T 23 45 03.9
baz=168,slow=76,SNR=23
H11S3 **WAKE ISLAND Hy** 57.10 345 T T 23 45 04.4
baz=168,slow=76,SNR=23
H11S1 **WAKE ISLAND Hy** 57.12 345 T T 23 45 13.9
baz=168,slow=76,SNR=20
GIRL **Giralia** 57.43 265 P P 22 43 09.3 +0.5
baz=57,SNR=62
GIRL **Giralia** 57.43 265 P P 22 43 07.8 -1.1
SIJI **Sorong** 57.52 298 LR LR 23 08 05.4
comp=Z,66µm,20.7s,baz=122,slow=36
WAKE **Wake Island** 57.88 346 P P 22 43 11.0 -0.8
WAKE IAmb IAmb 22 43 19.3
comp=Z,180nm,0.8s
H11N1 **WAKE ISLAND Hy** 58.25 346 T T 23 46 36.8
baz=170,slow=76,SNR=20
H11N3 **WAKE ISLAND Hy** 58.25 346 T T 23 46 28.5
baz=170,slow=76,SNR=16
H11N2 **WAKE ISLAND Hy** 58.27 346 T T 23 46 47.4
baz=170,slow=76,SNR=15
MMRI **Maumere** 59.06 284 P P 22 43 18.8 -1.5
RPN **Rapa Nui** 59.64 102 P P 22 43 22.9 -1.3
RPN pmax pmax
comp=Z,111nm,0.9s
RPN MLR MLR
comp=Z,34µm,20.0s
RPN **Rapa Nui** 59.64 102 P P 22 43 22.9 -1.3
RPN IAmb IAmb 22 43 30.4
comp=Z,111nm,0.9s
GUMO **Guam** 60.48 320 P P 22 43 29.4 -0.5
comp=Z,69nm,0.8s,baz=40,slow=23,SNR=1.8
GUMO LR LR 23 06 36.1
comp=Z,15µm,21.9s,baz=152,slow=33
GUMO **Guam** 60.48 320 P P 22 43 29.7 -0.2
GUMO pmax pmax
comp=Z,170nm,1.0s
GUMO **Guam** 60.48 320 P P 22 43 29.7 -0.2
GUMO IAmb IAmb 22 43 45.8
comp=Z,170nm,1.0s
HLP **Hilina Pali** 61.32 27 P P 22 43 33.7 -1.9
KHLU **Kahalu`u** 61.38 26 P P 22 43 35.8 -0.3
KHLU IAMs_20 IAMs_20 23 04 44.2
comp=Z,42µm,21.0s
PUH **Pauahi** 61.43 27 P P 22 43 34.8 -1.6
TNTI **Ternate** 61.44 296 P P 22 43 35.3 -1.2
MLOA **Mauna Loa Obse** 61.45 27 IAMs_20 IAMs_20 23 04 47.8
comp=Z,49µm,21.0s
MLH **Mauna Loa** 61.48 27 P P 22 43 35.5 -1.4
HUH **Hualalai** 61.49 26 P P 22 43 35.2 -1.8
HMH **Humu'ula Sheep** 61.54 27 P P 22 43 36.1 -1.3
POHA **Pohakuloa** 61.66 27 P P 22 43 37.0 -1.1
POHA **Pohakuloa** 61.66 27 IAMs_20 IAMs_20 23 04 52.6
comp=Z,51µm,21.0s
HPAH **Hawaii Prepara** 61.86 26 P P 22 43 39.0 -0.2
HPAH IAMs_20 IAMs_20 23 04 47.7
comp=Z,43µm,21.0s
HON **Honolulu** 62.28 24 P P 22 43 41.2 -0.8
HON pmax pmax
comp=Z,439nm,0.9s
HON MLR MLR
comp=Z,16µm,21.0s
HON **Honolulu** 62.28 24 P P 22 43 41.2 -0.8
KIP **Kipapa** 62.37 24 *de*P P 22 43 44.7 +2.1
KIP pmax pmax
comp=Z,543nm,1.2s
KIP MLR MLR
comp=Z,5µm,18.0s
KIP **Kipapa** 62.37 24 P P 22 43 41.6 -0.9
OPA **Opana** 62.62 24 P P 22 43 43.3 -0.9
OPA pmax pmax
comp=Z,496nm,1.0s
OPA MLR MLR
comp=Z,17µm,19.0s
OPA **Opana** 62.62 24 P P 22 43 43.3 -0.9
KAPI **Kappang** 63.25 285 P P 22 43 49.0 +0.3
comp=Z,136nm,0.9s
KAPI LR LR 23 12 46.2
comp=Z,68µm,18.1s,baz=136,slow=38
KAPI **Kappang** 63.25 285 P P 22 43 48.7 0.0
KAPI P P 22 43 48.7 0.0
KAPI S S 22 52 18.6 +0.2
KAPI S S 22 52 18.6 +0.2
KAPI **Kappang** 63.25 285 P P 22 43 49.0 +0.3
KAPI **Kappang** 63.25 285 P P 22 43 47.5 -1.2
KAPI IAmb IAmb 22 44 02.4
comp=Z,313nm,1.1s
LUWI **Luwuk** 63.55 291 P P 22 43 49.7 -1.0
MAW **Mawson** 64.90 202 P P 22 44 00.6 +1.9
comp=Z,162nm,1.0s,baz=126,slow=8.1,SNR=83
MAW LR LR 23 11 28.1
comp=Z,77µm,19.1s,baz=117,slow=35
MAW **Mawson** 64.90 202 P P 22 44 00.5 +1.8
baz=65,SNR=164
MAW **Mawson** 64.90 202 P P 22 43 58.1 -0.6
JAGI **Jajag, Banyuwa** 65.47 278 P P 22 44 02.2 -1.0
PMSA **Palmer Station** 66.55 155 *e*P P 22 44 10.8 +1.4
DAV **Davao City (W)** 67.12 299 LR LR 23 16 03.0
comp=Z,19µm,18.1s,baz=132,slow=38
DAV **Davao City (W)** 67.12 299 P P 22 44 12.8 -1.0
DAV **Davao City (W)** 67.12 299 ‖ *e*P P 22 44 13.4 -0.4
BKB **Balikpapan** 67.83 286 P P 22 44 17.9 -0.5
UGM **Wanagama** 68.66 277 P P 22 44 22.3 -1.2
SMRI **Semarang** 69.24 277 P P 22 44 26.1 -1.1
SYO **Syowa Base** 69.67 194 ‖ *i*P P 22 44 28.6 -0.3
SYO **Syowa Base** 69.67 194 ‖ *i*X P 22 44 40.2 +11
MYLDM **Lahad Datu** 70.87 293 P P 22 44 35.5 -1.5
MYLDM IAmb IAmb 22 44 53.4
comp=Z,316nm,0.9s
XMIS **Christmas Isla** 70.99 271 P P 22 44 36.6 -1.3
XMIS IAmb IAmb 22 44 53.2
comp=Z,297nm,1.1s
CISI **Cisompet, Garu** 71.01 275 P P 22 44 36.4 -1.6
SNAA **Sanae** 71.02 179 P P 22 44 38.3 +1.0
SNAA **Sanae** 71.02 179 LR LR 23 11 49.8
comp=Z,45µm,21.9s,baz=190,slow=32
SNAA **Sanae** 71.02 179 *d* *i*P P 22 44 38.1 +0.9
SNAA pmax pmax
comp=Z,680nm,1.2s
SNAA MLR MLR
comp=Z,17µm,16.0s
SNAA **Sanae** 71.02 179 P P 22 44 36.7 -0.5
SNAA IAmb IAmb 22 44 48.5
comp=Z,159nm,1.1s
SNAA IAMs_20 IAMs_20 23 11 28.4
comp=Z,45µm,21.0s
USHA **Ushuaia** 71.11 145 P P 22 44 40.5 +2.5
comp=Z,58nm,0.8s,baz=234,slow=5.9,SNR=3.3
VNA3 **Neumayer Olymp** 71.26 177 P P 22 44 39.4 +0.8
MG01 **Puerto William** 71.41 146 IAMs_20 IAMs_20 23 09 06.3
comp=Z,38µm,20.0s
GO09 **Cerro Castillo** 71.45 141 IAMs_20 IAMs_20 23 07 59.7
comp=Z,42µm,22.0s
NVL **N'lazarevskaya** 71.58 184 *e*P P 22 44 40.6 +0.1
NVL *e*S S 22 53 55.5 -1.3
NVL pmax pmax
comp=Z,760nm,1.5s
LEM **Lembang** 71.61 276 LR LR 23 18 55.8
comp=Z,93µm,18.9s,baz=117,slow=38
VNA2 **Neumayer--Watz** 71.66 178 P P 22 44 42.4 +1.3
baz=194,slow=5.4
VNA1 **Neumayer--Stat** 71.91 177 P P 22 44 43.9 +1.4
SPMM **Sapulut** 72.06 291 P P 22 44 50.0 +5.7
KKM **Kota Kinabalu** 73.13 292 P P 22 44 49.6 -1.1
KKM IAmb IAmb 22 44 56.2
comp=Z,327nm,0.7s
KKM IAMs_20 IAMs_20 23 17 25.1
comp=Z,29µm,22.0s
JCJ **Chichijima** 73.32 326 P P 22 44 49.9 -1.5
SBUM **Sibu** 73.78 286 P P 22 44 53.1 -1.4
SBUM **Sibu** 73.78 286 P P 22 44 55.0 +0.5
KSM **Kuching** 74.63 284 P P 22 44 58.3 -1.1
KSM IAmb IAmb 22 45 04.8
comp=Z,176nm,0.7s
KSM **Kuching** 74.63 284 P P 22 44 59.0 -0.4
TGY **Tagaytay City** 75.31 301 P P 22 45 04.2 +0.9
comp=Z,2µm,0.8s,baz=185,slow=3.1,SNR=32
TGY LR LR 23 16 41.9
comp=Z,14µm,21.9s,baz=139,slow=35
LL01 **San Ignacio de** 76.92 134 IAMs_20 IAMs_20 23 10 45.7
comp=Z,37µm,21.0s
COCO **West Island** 76.99 265 IAMs_20 IAMs_20 23 18 57.5
comp=Z,41µm,20.0s
EFI **East Falkland** 77.82 147 *ce*P P 22 45 18.8 +1.8
EFI pmax pmax
comp=Z,2µm,1.7s
EFI **East Falkland** 77.82 147 IAMs_20 IAMs_20 23 12 47.9
comp=Z,24µm,20.0s
H03S2 **Juan Fernandez** 78.15 124 T T 00 11 16.6
baz=231,slow=74,SNR=99
H03S1 **Juan Fernandez** 78.16 124 T T 00 11 17.9
baz=231,slow=74,SNR=74
H03S3 **Juan Fernandez** 78.17 124 T T 00 11 19.9
baz=231,slow=74,SNR=85
VA04 **Juan Fernndez** 78.33 123 IAMs_20 IAMs_20 23 11 34.6
comp=Z,36µm,20.0s
H03N3 **Juan Fernandez** 78.38 123 T T 00 11 39.5
baz=234,slow=72,SNR=214
H03N2 **Juan Fernandez** 78.39 123 T T 00 11 32.1
baz=234,slow=72,SNR=177
H03N1 **Juan Fernandez** 78.40 123 T T 00 11 31.2
baz=234,slow=72,SNR=128
PLCA **Paso Flores** 79.04 133 P P 22 45 26.0 +1.9
comp=Z,345nm,1.1s,baz=228,slow=5.5,SNR=140
PLCA LR LR 23 11 19.7
comp=Z,17µm,21.8s,baz=230,slow=29
PLCA PKPPKP P'P'df 23 12 16.3 -7.9
comp=Z,2.1nm,0.8s,baz=67,slow=0.2,SNR=5.0
PLCA **Paso Flores** 79.04 133 P P 22 45 23.0 -1.1
PLCA IAmb IAmb 22 45 31.5
comp=Z,340nm,1.1s
PLCA **Paso Flores** 79.04 133 *e*P P 22 45 26.6 +2.5
LC01 **Cunco** 79.45 131 P P 22 45 27.7 +1.5
LC01 IAmb IAmb 22 45 33.2
comp=Z,350nm,1.0s
LC01 IAMs_20 IAMs_20 23 12 38.3
comp=Z,36µm,20.0s
JHJ2 **Mitsune** 79.52 327 P P 22 45 25.9 -0.5
JHJ2 IAmb IAmb 22 45 45.6
comp=Z,203nm,0.8s
MYKOM **Kota Tinggi** 79.84 280 P P 22 45 27.7 -1.0
BKNI **Bangkinang** 81.14 277 P P 22 45 34.2 -1.4
BKNI IAmb IAmb 22 45 41.1
comp=Z,329nm,1.1s
BI02 **San Fabin de** 81.25 130 P P 22 45 34.5 -1.5
YOJ **Yonaguni jima** 81.47 310 IAMs_20 IAMs_20 23 17 42.3
comp=Z,28µm,21.0s
TWG **Pinlang** 81.48 307 P P 22 45 36.4 -0.7
TWG IAmb IAmb 22 45 51.6
comp=Z,295nm,1.1s
YULB **Yu-li** 81.75 308 P P 22 45 36.5 -2.1
YULB IAmb IAmb 22 45 55.5
comp=Z,220nm,0.9s
YULB IAMs_20 IAMs_20 23 16 36.6
comp=Z,36µm,20.0s
JYT **Yasato** 82.03 329 P P 22 45 39.5 -0.2
JYT IAmb IAmb 22 45 55.4
comp=Z,159nm,1.1s
TPUB **Ta-pu** 82.11 307 P P 22 45 39.8 -0.7
TPUB IAmb IAmb 22 45 55.5
comp=Z,339nm,1.0s
NACB **Ninganchiao** 82.14 309 P P 22 45 39.8 -0.8
NACB IAmb IAmb 22 45 56.4
comp=Z,189nm,1.1s
NACB IAMs_20 IAMs_20 23 17 49.7
comp=Z,30µm,20.0s
SSLB **Suanglung** 82.25 308 P P 22 45 40.1 -1.2
SSLB IAMs_20 IAMs_20 23 16 51.9
comp=Z,41µm,21.0s
INU **Inuyama** 82.64 326 P P 22 45 42.0 -0.9
JSU **Suzuyama** 82.66 319 P P 22 45 42.8 -0.4
JSU IAmb IAmb 22 45 52.9
comp=Z,117nm,1.1s
JGF **Kuroka** 82.70 326 P P 22 45 42.6 -0.7
DLV **T Lat** 82.73 291 P P 22 45 42.9 -1.2
DLV IAmb IAmb 22 45 54.7
comp=Z,175nm,1.0s
JMN **Monobe** 82.75 323 P P 22 45 42.9 -0.7
BO02 **Sierra Bellavi** 82.78 129 P P 22 45 42.4 -1.7
TATO **Taipei** 82.79 309 IAMs_20 IAMs_20 23 17 51.8
comp=Z,41µm,21.0s
EDS3 **Malargue** 82.98 130 *i*P P 22 45 47.0 +1.7
MJAR **Matsushiro Arr** 83.13 328 P P 22 45 44.4 -1.1
comp=Z,23nm,0.9s,baz=161,slow=5.2,SNR=28
MJAR PKPPKP 23 12 12.6
comp=Z,1.3nm,0.4s,baz=352,slow=2.2,SNR=7.7
MJAR LR LR 23 20 42.2
comp=Z,6µm,20.1s,baz=135,slow=34
MJAR **Matsushiro Arr** 83.13 328 P P 22 45 44.0 -1.5
MAJO **Matsushiro** 83.13 328 *d* *i*P P 22 45 44.4 -1.1
MAJO pmax pmax
comp=Z,277nm,2.1s
MAJO MLR MLR
comp=Z,9µm,19.0s
MAJO **Matsushiro** 83.13 328 P P 22 45 44.7 -0.8
MAJO IAmb IAmb 22 45 55.9
comp=Z,98nm,0.9s
MAT **Matsushiro** 83.13 328 P P 22 45 44.4 -1.1
MAT S S 22 55 58.4 -4.4
JMM **Marumori** 83.20 330 P P 22 45 44.9 -0.8
JWT **Wachi** 83.31 325 P P 22 45 46.0 -0.4
JWT IAmb IAmb 22 46 05.6
comp=Z,120nm,0.7s
HOPE **Hope Point** 83.35 160 P P 22 45 45.7 -0.8
HOPE pmax pmax
comp=Z,568nm,1.1s
HOPE MLR MLR
comp=Z,39µm,21.0s
HOPE **Hope Point** 83.35 160 P P 22 45 45.7 -0.8
HOPE **Hope Point** 83.35 160 IAMs_20 IAMs_20 23 15 45.7
comp=Z,39µm,21.0s
VA01 **Torpederas** 83.39 127 P P 22 45 46.0 -1.2
VA01 IAMs_20 IAMs_20 23 13 07.5
comp=Z,29µm,22.0s
MT02 **Curacav** 83.56 127 P P 22 45 46.3 -1.8
MT02 IAmb IAmb 22 46 03.6
comp=Z,323nm,1.1s
MT02 IAMs_20 IAMs_20 23 14 03.7
comp=Z,31µm,21.0s
IPM **Ipoh** 83.71 281 P P 22 45 47.9 -1.1
IPM **Ipoh** 83.71 281 P P 22 45 48.0 -1.1
MT05 **Renca** 83.72 128 P P 22 45 47.3 -1.7
MT05 IAMs_20 IAMs_20 23 13 39.1
comp=Z,39µm,22.0s
JNU **Nakatsue** 83.73 321 P P 22 45 48.9 +0.2
comp=Z,95nm,1.1s,baz=85,slow=3.3,SNR=23
JNU PP PP 22 49 02.1 -0.3
comp=Z,14nm,0.9s,baz=129,slow=4.4,SNR=2.6
JNU **Nakatsue** 83.73 321 P P 22 45 48.1 -0.6
JNU IAmb IAmb 22 45 55.0
comp=Z,137nm,0.9s
ROC1 **El Roble** 83.82 127 P P 22 45 47.2 -2.5
ROC1 **El Roble** 83.82 127 *i* P P 22 45 50.0 +0.2
PEL **Peldehue** 83.92 127 P P 22 45 51.3 +1.3
PEL **Peldehue** 83.92 127 IAMs_20 IAMs_20 23 13 57.5
comp=Z,30µm,21.0s
PEL **Peldehue** 83.92 127 *i* P P 22 45 51.5 +1.6
JHS **Saijyo** 84.14 323 P P 22 45 49.9 -0.8
JHS IAmb IAmb 22 46 04.4
comp=Z,108nm,1.0s
RFA **San Rafael** 84.22 130 *i* P P 22 45 53.3 +1.8
VA03 **San Esteban** 84.25 127 IAMs_20 IAMs_20 23 14 07.2
comp=Z,27µm,22.0s
RPSI **Rantau Prapat** 84.26 278 P P 22 45 50.4 -1.4
RPSI IAmb IAmb 22 45 59.7
comp=Z,97nm,1.0s
PSI **Prapat** 84.32 278 P P 22 45 50.4 -1.9
PSI pmax pmax
comp=Z,97nm,1.0s
PSI MLR MLR
comp=Z,58µm,20.0s
JSD **Sado** 84.38 328 P P 22 45 51.3 -0.5
JSD IAmb IAmb 22 46 01.1
comp=Z,162nm,1.0s
GSI **Gunungsitoli** 84.47 276 P P 22 45 51.9 -1.1
KULM **Kulim** 84.50 281 P P 22 45 52.0 -1.0
KULM **Kulim** 84.50 281 P P 22 45 54.0 +0.9
QZH **Quanzhou** 84.57 307 P P 22 45 54.8 +1.7
QZH SKS SKSac 22 56 12.8 -1.7
QZH S SKKSac 22 56 19.1 -1.1
QZH LR LR
comp=Z,9µm,19.0s
QZH LR LR
comp=Z,8µm,20.3s
QZH LR LR
comp=Z,14µm,19.0s
CO02 **Combarbal** 84.99 126 P P 22 45 53.7 -1.9
CO02 IAMs_20 IAMs_20 23 13 51.9
comp=Z,32µm,22.0s
AVIZ **Vizcaderas** 85.06 129 *i* P P 22 45 58.0 +2.2
AAGR **Agrelo** 85.12 128 *i* P P 22 45 57.9 +1.8
ARCO **CERRO ARCO** 85.22 128 *i* P P 22 45 58.2 +1.5
AUSP **Uspallata** 85.35 127 *i* P P 22 45 59.9 +2.4
CO03 **El Pedregal** 85.43 126 P P 22 45 56.4 -1.3
ASAL **Salagasta** 85.45 128 *i* P P 22 45 59.3 +1.5
HKPS **Hong Kong Po S** 85.62 302 P P 22 45 57.3 -1.1
HKPS IAmb IAmb 22 46 04.6
comp=Z,155nm,1.0s
JTM **Tenmabayashi** 85.62 332 P P 22 45 58.0 +0.1
JTM IAmb IAmb 22 46 07.6
comp=Z,246nm,1.1s
JTM IAMs_20 IAMs_20 23 21 30.6
comp=Z,23µm,21.0s
RTLS **Leoncito** 85.69 127 *i* P P 22 46 01.2 +2.0
GO04 **Tololo Observa** 85.80 125 P P 22 45 58.0 -1.7
GO04 IAMs_20 IAMs_20 23 15 04.3
comp=Z,22µm,20.0s
GO04 **Tololo Observa** 85.80 125 *i* P P 22 45 57.6 -2.2
ERM **Erimo** 85.93 334 *d* *i*P P 22 46 00.4 +0.9
ERM pmax pmax
comp=Z,165nm,1.7s
ERM MLR MLR
comp=Z,10µm,19.0s
ERM **Erimo** 85.93 334 P P 22 45 59.0 -0.4
ERM IAmb IAmb 22 46 12.1
comp=Z,76nm,0.9s
ERM **Erimo** 85.93 334 IAMs_20 IAMs_20 23 19 12.8
comp=Z,30µm,20.0s
JEM **Erimo** 85.93 334 IAMs_20 IAMs_20 23 19 04.9
comp=Z,31µm,20.0s
RTCV **Cerro Valdivia** 86.12 128 *i* P P 22 46 02.3 +1.2
ZON **Zonda** 86.25 127 P P 22 46 00.0 -1.7
ZON pmax pmax
comp=Z,296nm,1.1s
ZON MLR MLR
comp=Z,21µm,21.0s
ZON **Zonda** 86.25 127 P P 22 45 60.0 -1.7
ZON IAmb IAmb 22 46 12.7
comp=Z,296nm,1.1s
ZON **Zonda** 86.25 127 *i* P P 22 46 03.2 +1.6
SJA **San Juan** 86.33 127 *i* P P 22 46 00.3 -1.8
CO01 **Juntas del Tor** 86.39 125 P P 22 46 00.7 -2.0
CO01 IAmb IAmb 22 46 08.2
comp=Z,187nm,1.0s
CO01 IAMs_20 IAMs_20 23 14 54.8
comp=Z,25µm,21.0s
QIZ **Qiongzhong** 86.39 297 P P 22 46 02.3 0.0
QIZ PP PP 22 49 24.5 +0.3
QIZ S S 22 56 32.6 -3.3
QIZ SS SS 23 02 21.3 +4.6
QIZ pmax pmax
comp=Z,36nm,1.7s
QIZ pmax pmax
comp=Z,4µm,12.8s
QIZ LR LR
comp=Z,5µm,22.2s
QIZ LR LR
comp=Z,8µm,26.7s
QIZ LR LR
comp=Z,15µm,20.8s
QIZ **Qiongzhong** 86.39 297 P P 22 46 01.5 -0.8
QIZ IAmb IAmb 22 46 09.2
comp=Z,91nm,0.9s
RTLL **Cerro Villicun** 86.52 127 *i* P P 22 46 03.9 +0.9
ACCO **Cerro Coronel** 86.64 126 *i* P P 22 46 05.8 +1.8
ARGD **Rodeo** 86.66 126 *i* P P 22 46 06.0 +1.9
GZH **Guangzhou** 86.70 302 P P 22 46 05.3 +1.6
GZH SKS SKSac 22 56 27.8 -0.2
GZH S ScS 22 56 42.8 -3.8
GZH SS SS 23 02 27.0 +5.8
GZH pmax pmax
comp=Z,6µm,9.4s
GZH LR LR
comp=Z,9µm,21.0s
GZH LR LR
comp=Z,6µm,21.0s
YUK **Yuzh-Kuril'sk** 86.82 336 *e*P P 22 46 04.3 +0.5
YUK 22 46 08.3
YUK *i* S SKSac 22 56 28.6 +1.0
YUK 22 56 49.2
YUK *i* SS SS 23 02 28.5 +6.2
YUK SSS SSS 23 05 59.5
YUK pmax pmax
comp=N,250nm,1.2s
YUK pmax pmax
comp=Z,422nm,1.2s
YUK pmax pmax

comp=E,370nm,1.1s
ACDV Cuesta del Vie 86.89 126 *i* P **P** **22 46 06.8 +1.8**
AC04 Llanos de Chal 86.92 123 P **P** **22 46 03.5 -1.4**
AC04 IAmb IAmb 22 46 17.2
comp=Z,241nm,1.1s
AC04 IAMs_20 IAMs_20 23 15 55.1
comp=Z,33µm,20.0s
AC05 El Transito 87.03 124 P **P** **22 46 03.8 -1.9**
AC05 IAMs_20 IAMs_20 23 16 09.8
comp=Z,29µm,20.0s
UBPT Khong Chiam 87.11 292 P **P** **22 46 04.6 -1.3**
UBPT IAmb IAmb 22 46 12.6
comp=Z,139nm,1.1s
JEW Eniwo 87.26 333 P **P** **22 46 05.6 -0.4**
JEW IAmb IAmb 22 46 20.0
comp=Z,130nm,1.0s
JEW IAMs_20 IAMs_20 23 20 54.2
comp=Z,32µm,20.0s
KUR Kuril'sk 87.28 338*de*P **P** **22 46 07.0 +1.0**
KUR *i* 22 46 16.1
KUR *i*S **SKSac** **22 56 32.1 +1.7**
KUR *i* 22 56 43.2
KUR *i*SS **SS** **23 02 25.6 -3.5**
KUR pmax pmax
comp=Z,452nm,1.2s
KUR pmax pmax
comp=Z,5µm,8.9s
KUR MLR MLR
comp=Z,11µm,21.0s
KUR MLR MLR
comp=N,9µm,18.0s
KUR MLR MLR
comp=E,5µm,18.0s
LHMI Lhok Sumawe 87.36 279 P **P** **22 46 05.8 -1.4**
LHMI IAmb IAmb 22 46 19.6
comp=Z,250nm,1.0s
SSE Sheshan 87.45 313 P **P** **22 46 08.6 +1.4**
SSE PP **PP** **22 49 35.9 +3.4**
SSE pmax pmax
comp=Z,24nm,0.8s
SSE pmax pmax
comp=Z,2µm,10.8s
SSE LR LR
comp=Z,4µm,23.0s
MRA San Martin 87.49 130 *i* P **P** **22 46 08.8 +1.0**
AVFE Valle Fertil 87.62 127 *i* P **P** **22 46 09.7 +1.3**
ACHE Chepes 87.77 128 *i* P **P** **22 46 10.1 +0.9**
GO03 Copiap 87.88 124 P **P** **22 46 08.1 -1.6**
GO03 IAmb IAmb 22 46 16.7
comp=Z,203nm,1.0s
GO03 IAMs_20 IAMs_20 23 15 46.3
comp=Z,35µm,21.0s
GO03 Copiap 87.88 124 *i* P **P** **22 46 09.3 -0.4**
JKA Kamikawa-asahi 87.97 334 P **P** **22 46 09.0 -0.3**
JKA IAmb IAmb 22 46 27.6
comp=Z,129nm,0.9s
JKA IAMs_20 IAMs_20 23 24 48.9
comp=Z,22µm,19.0s
ASAJ Asahikawa 87.97 334 P **P** **22 46 09.0 -0.4**
ASAJ pmax pmax
comp=Z,129nm,0.9s
ASAJ MLR MLR
comp=Z,22µm,19.0s
TJN Taejon 88.07 320*d* P **P** **22 46 10.5 +0.5**
APLL PUNTA DE LOS L 88.38 128 *i* P **P** **22 46 13.5 +1.5**
VCA Vinchina 88.44 126 *i* P **P** **22 46 14.8 +2.3**
AC01 Pan de Azucar 88.59 122 P **P** **22 46 11.6 -1.4**
AC01 IAmb IAmb 22 46 31.3
comp=Z,68nm,1.0s
AC01 IAMs_20 IAMs_20 23 16 06.5
comp=Z,34µm,22.0s
KSRS Korea Array 88.63 321 P **P** **22 46 13.7 +1.1**
comp=Z,42nm,0.9s,baz=141,slow=5.2,SNR=59
KSRS PP **PP** **22 49 40.6 -1.3**
comp=Z,11nm,0.9s,baz=150,slow=7.9,SNR=5.3
KSRS LR LR 23 25 47.0
comp=Z,5µm,18.1s,baz=176,slow=36
KSAR Wonju Array Be 88.64 321 P **P** **22 46 12.1 -0.6**
KSAR Wonju Array Be 88.64 321 P **P** **22 46 12.1 -0.6**
KS19 Wonju Array Si 88.69 321 P **P** **22 46 12.3 -0.6**
KS19 IAmb IAmb 22 46 25.8
comp=Z,120nm,0.8s
ACLC CERRO LA CRUZ 88.78 127 *i* P **P** **22 46 15.2 +1.2**
TCA Tanti 88.93 130 *i* P **P** **22 46 14.3 -0.3**
ADK Adak 89.17 2 P **P** **22 46 14.5 -0.3**
ADK pmax pmax
comp=Z,365nm,0.9s
ADK MLR MLR
comp=Z,32µm,22.0s
ADK Adak 89.17 2 P **P** **22 46 14.5 -0.3**
ADK Adak 89.17 2 IAMs_20 IAMs_20 23 18 53.9
comp=Z,32µm,22.0s
INCN Inchon 89.30 321 P **P** **22 46 17.4 +1.6**
INCN S **SKSac** **22 56 43.8 +0.8**
INCN Inchon 89.30 321 P **P** **22 46 15.2 -0.6**
INCN pmax pmax
comp=Z,172nm,1.2s
INCN Inchon 89.30 321 P **P** **22 46 15.2 -0.6**
INCN IAmb IAmb 22 46 33.7
comp=Z,172nm,1.1s
NJ2 Nanjing 89.51 312⇑ *i*P **P** **22 46 18.8 +1.9**
NJ2 pP **pP** **22 46 27.3 +0.1**
NJ2 sP **sP** **22 46 32.0 +1.2**
NJ2 SKS **SKSac** **22 56 43.0 -1.4**
NJ2 S **ScS** **22 57 07.6 -1.9**
NJ2 sS **sS** **22 57 21.5 +0.3**
NJ2 pmax pmax
comp=Z,66nm,1.1s
NJ2 pmax pmax
comp=Z,6µm,10.2s
NJ2 LR LR
comp=Z,13µm,18.5s
NJ2 LR LR
comp=Z,9µm,20.8s
NJ2 LR LR
comp=Z,20µm,24.0s
ATKA Atka Island 89.59 4 P **P** **22 46 16.6 -0.1**
ATKA IAMs_20 IAMs_20 23 19 15.1
comp=Z,23µm,21.0s
PAYG Puerto Ayora 89.67 91 P **P** **22 46 16.7 -1.6**
PAYG IAmb IAmb 22 46 31.8
comp=Z,127nm,1.1s
PB14 IPOC Station P 89.73 121 P **P** **22 46 17.1 -1.6**
PB14 IAmb IAmb 22 46 25.8
comp=Z,131nm,1.1s
PB14 IAMs_20 IAMs_20 23 17 28.7
comp=Z,26µm,20.0s
PB14 IPOC Station P 89.73 121 *i* P **P** **22 46 20.2 +1.5**
GO02 Mina Guanaco 89.92 122 IAMs_20 IAMs_20 23 17 16.8
comp=Z,34µm,20.0s
SLBS Sierra La Lagu 89.94 60 P **P** **22 46 17.8 -1.4**
SLBS Sierra La Lagu 89.94 60 IAMs_20 IAMs_20 23 21 46.4
comp=Z,22µm,19.0s
LPIG La Paz 89.97 59 P **P** **22 46 20.4 +1.2**
comp=Z,50nm,1.0s,baz=246,slow=0.8,SNR=16
SMY Shemya 90.08 357 P **P** **22 46 19.1 +0.1**
SMY pmax pmax
comp=Z,469nm,0.9s
SMY MLR MLR
comp=Z,25µm,22.0s
SMY Shemya 90.08 357 P **P** **22 46 19.1 +0.1**
SMY IAMs_20 IAMs_20 23 19 12.2
comp=Z,25µm,22.0s
CYA Choya 90.18 127 *i* P **P** **22 46 21.9 +1.4**
LPA La Plata 90.24 136*d* *i*P **P** **22 46 16.8 -3.7**
LPA pPP 22 49 59.7
LPA PPP PPP 22 51 54.9
LPA SKS **SKSac** **22 56 56.0 +6.8**
LPA PS **PnS** **22 58 21.2 -0.9**
LPA SS **SS** **23 03 11.1 +0.4**
SKR Severo-Kuril's 90.31 345⇑ *i*P **P** **22 46 21.8 +1.7**
SKR *e*S **SKSac** **22 56 52.2 +4.1**
SKR *e* 22 57 12.0
SKR pmax pmax
comp=Z,312nm,1.4s
SKR pmax pmax
comp=Z,3µm,18.3s
SKR pmax pmax
comp=Z,3µm,10.4s
SKR smax smax
comp=N,5µm,13.5s
SKR MLR MLR
comp=Z,7µm,18.0s
PB10 IPOC Station P 90.36 120 P **P** **22 46 19.9 -1.4**
PB10 IAMs_20 IAMs_20 23 17 16.6
comp=Z,25µm,20.0s
PB10 IPOC Station P 90.36 120 *i* P **P** **22 46 20.3 -1.1**
YSS Yuzh-Sakhalins 90.42 336⇑ *e*P **P** **22 46 22.4 +1.7**
YSS *e**SP **pP** **22 46 30.9 -0.2**
YSS *e* 22 49 53.9
YSS *e* 22 56 51.5
YSS *e*S **S** **22 57 13.6 +0.9**
YSS *e*PPS PPS 22 58 26.5
YSS *e*SS **SS** **23 03 21.1 +6.5**
YSS *e*SSS SSS 23 06 59.5
YSS pmax pmax
comp=Z,140nm,1.1s
YSS pmax pmax
comp=Z,4µm,10.8s
YSS Yuzh-Sakhalins 90.42 336 P **P** **22 46 20.5 -0.2**
YSS IAmb IAmb 22 46 36.8
comp=Z,285nm,1.1s
YSS IAMs_20 IAMs_20 23 20 47.5
comp=Z,33µm,20.0s
SNCC San Nicolas Is 90.43 47 P **P** **22 46 23.1 +1.9**
baz=224
HHU Hamhung 90.75 323 P **P** **22 46 23.4 +0.9**
HHU pP **sP** **22 46 36.5 +0.1**
HHU S **S** **22 57 08.6 -7.5**
SCI2 San Clemente I 90.81 48 P **P** **22 46 25.3 +2.4**
baz=224
SRIG Santa Rosalia 90.82 56 IAMs_20 IAMs_20 23 22 00.9
comp=Z,27µm,18.0s
SCZ2 Santa Cruz Isl 90.90 46 P **P** **22 46 25.5 +2.1**
baz=224
PYAG Pyongyang 90.94 321 P **P** **22 46 25.1 +1.7**
PYAG pP **sP** **22 46 37.7 +0.4**
PYAG S **S** **22 57 24.8 +6.9**
TEY Ternei 90.95 331⇑ *e*P **P** **22 46 25.8 +2.5**
TEY *e* 22 50 01.6
TEY 22 56 53.4
TEY pmax pmax
comp=N,20nm,1.4s
TEY pmax pmax
comp=E,20nm,1.4s
TEY pmax pmax
comp=Z,60nm,1.8s
PB05 IPOC Station P 91.04 120 *i* P **P** **22 46 24.6 -0.1**
PYS Pyongsong 91.05 321 P **P** **22 46 25.9 +2.0**
WHN Wuhan 91.17 308⇓ P **P** **22 46 26.6 +1.9**
WHN pP **pP** **22 46 33.4 -1.6**
WHN PP **PP** **22 50 06.8 +4.5**
WHN SKS **SKSac** **22 56 54.8 +0.7**
WHN S **ScS** **22 57 23.3 -0.1**
WHN pmax pmax
comp=Z,420nm,2.1s
WHN LR LR
comp=Z,36µm,21.7s
WHN LR LR
comp=Z,41µm,26.0s
WHN LR LR
comp=Z,51µm,22.5s
SBC Santa Barbara 91.18 46 P **P** **22 46 26.5 +1.9**
baz=224
CIS Catalina Islan 91.19 48 P **P** **22 46 26.1 +1.3**
baz=224
VLA Vladivostok 91.29 327*d* *i*P **P** **22 46 25.7 +0.8**
VLA pmax pmax
comp=Z,243nm,1.9s
VLA MLR MLR
comp=Z,8µm,20.0s
PB15 IPOC Station P 91.31 121 IAMs_20 IAMs_20 23 17 57.6
comp=Z,25µm,21.0s
PB15 IPOC Station P 91.31 121 *i* P **P** **22 46 28.1 +2.1**
TJX Tijuana 91.36 49 IAMs_20 IAMs_20 23 26 23.5
comp=Z,21µm,18.0s
PB04 IPOC Station P 91.42 120 IAMs_20 IAMs_20 23 17 26.7
comp=Z,24µm,21.0s
PB04 IPOC Station P 91.42 120 *i* P **P** **22 46 24.6 -1.9**
PKM Mcpherson Peak 91.44 46 P **P** **22 46 28.1 +2.0**
baz=224,SNR=15
FMP Fort Macarthur 91.48 47 P **P** **22 46 28.0 +2.0**
baz=224
PB06 IPOC Station P 91.58 120 P **P** **22 46 25.5 -1.7**
PB06 IAmb IAmb 22 46 35.3
comp=Z,147nm,1.0s
PB06 IAMs_20 IAMs_20 23 17 33.7
comp=Z,26µm,22.0s
PB06 IPOC Station P 91.58 120 *i* P **P** **22 46 29.0 +1.9**
109C Camp Elliot, M 91.60 49 P **P** **22 46 29.1 +2.5**
baz=225,SNR=8.1
109C Camp Elliot, M 91.60 49 P **P** **22 46 25.5 -1.2**
109C IAmb IAmb 22 46 38.2
comp=Z,78nm,1.1s
109C IAMs_20 IAMs_20 23 25 38.7
comp=Z,21µm,18.0s
AHML Horco Molle 91.62 126 *i* P **P** **22 46 28.8 +1.5**
SMMC Simmler 91.64 45 P **P** **22 46 28.8 +2.0**
baz=224
ESJX Sierra Juarez 91.68 50 IAMs_20 IAMs_20 23 21 52.8
comp=Z,19µm,19.0s
BAR Barrett 91.71 49 P **P** **22 46 26.3 -0.9**
BAR IAMs_20 IAMs_20 23 22 29.7
comp=Z,18µm,19.0s
PAGB Antelope Grade 91.80 45 IAMs_20 IAMs_20 23 26 30.3
comp=Z,22µm,18.0s
DECC Green Verdugo 91.84 47 P **P** **22 46 29.8 +2.0**
baz=224
PMPB Monarch Peak 91.85 44 P **P** **22 46 26.8 -1.0**
PMPB IAmb IAmb 22 46 41.3
comp=Z,147nm,1.2s
PMPB IAMs_20 IAMs_20 23 23 16.5
comp=Z,30µm,19.0s
PASC Pasadena Art C 91.87 47 P **P** **22 46 26.9 -0.9**
PASC IAmb IAmb 22 46 33.7
comp=Z,72nm,0.9s
OSI Osito Audit: C 91.87 47 P **P** **22 46 29.7 +1.8**
baz=224,SNR=11
OSI Osito Audit: C 91.87 47 IAMs_20 IAMs_20 23 24 32.0
comp=Z,20µm,18.0s
PB03 IPOC Station P 91.89 120 *i* P **P** **22 46 29.4 +0.8**
SAO San Andreas Ge 91.89 43 P **P** **22 46 27.0 -0.9**
SAO pmax pmax
comp=Z,56nm,1.1s
SAO MLR MLR
comp=Z,32µm,18.0s
SAO San Andreas Ge 91.89 43 P **P** **22 46 27.0 -0.9**
MWC Mount Wilson 91.98 47 P **P** **22 46 27.7 -0.9**
MWC Mount Wilson 91.98 47 P **P** **22 46 27.7 -0.9**
MWC IAmb IAmb 22 46 35.9
comp=Z,86nm,0.9s
MONP2 Monument Peak 92.01 49 P **P** **22 46 31.0 +2.2**
baz=225,SNR=39
PB07 IPOC Station P 92.01 119 P **P** **22 46 27.3 -1.9**
PB07 IAmb IAmb 22 46 36.7
comp=Z,185nm,1.1s
PB07 IAMs_20 IAMs_20 23 18 33.2
comp=Z,30µm,21.0s
PB07 IPOC Station P 92.01 119 *i* P **P** **22 46 31.3 +2.1**
RMX La Rumorosa 92.02 50 IAMs_20 IAMs_20 23 22 39.6
comp=Z,22µm,18.0s
IKP In-Ko-Pah, Jac 92.03 50 P **P** **22 46 30.9 +2.2**
baz=226,SNR=20
MURC Murrieta 92.05 48 P **P** **22 46 30.7 +2.0**
baz=225,SNR=46
PET Petropavlovsk 92.07 348 *e*P **P** **22 46 29.1 +0.9**
PET *e* 22 50 13.2
PET *e*PPP PPP 22 52 07.7
PET *e* 22 56 57.4
PET *e*S **S** **22 57 27.3 -0.1**
PET *e*PS PS 22 58 40.8 -1.6
PET *e*SS **SS** **23 03 34.2 -4.0**
PET *e*SSS SSS 23 07 25.2
PET pmax pmax
comp=Z,5µm,16.3s
PET pmax pmax
comp=Z,8µm,16.0s
PET pmax pmax
comp=Z,297nm,0.8s
PET pmax pmax
comp=Z,2µm,14.9s
PET MLR MLR
comp=Z,20µm,19.0s
PET Petropavlovsk 92.07 348 P **P** **22 46 28.0 -0.3**
PET IAmb IAmb 22 46 44.0
comp=Z,159nm,0.8s
LVC Limon Verde 92.09 121 P **P** **22 46 32.5 +2.6**
comp=Z,62nm,1.1s,baz=221,slow=4.5,SNR=42
LVC Limon Verde 92.09 121 P **P** **22 46 27.9 -1.9**
LVC IAmb IAmb 22 46 48.2
comp=Z,49nm,0.8s
LVC Limon Verde 92.09 121 IAMs_20 IAMs_20 23 18 32.2
comp=Z,29µm,20.0s
LVC Limon Verde 92.09 121 *i* P **P** **22 46 32.4 +2.6**
SLVN Son La 92.12 295 P **P** **22 46 28.2 -1.2**
SLVN IAMs_20 IAMs_20 23 34 07.0
comp=Z,26µm,19.0s
USA0B Ussuriysk Arra 92.12 328*d* *i*P **P** **22 46 29.3 +0.6**
USA0B Ussuriysk Arra 92.12 328 P **P** **22 46 28.3 -0.4**
USA0B IAmb IAmb 22 46 41.9
comp=Z,66nm,1.0s
USRK Ussuriysk Ar. 92.12 328 P **P** **22 46 29.2 +0.5**
comp=Z,18nm,0.9s,baz=143,slow=3.0,SNR=46
USRK PP **PP** **22 50 09.1 -0.4**
comp=Z,9.6nm,1.0s,baz=154,slow=7.5,SNR=4.0
USRK LR LR 23 27 22.3
comp=Z,8µm,19.1s,baz=146,slow=35
USRK Ussuriysk Ar. 92.12 328 P **P** **22 46 28.3 -0.4**
USRK **PP** **22 50 08.4 -1.1**
MCCM Marconi Confer 92.14 42 P **P** **22 46 28.1 -0.9**
MCCM IAmb IAmb 22 46 35.9
comp=Z,116nm,1.1s
ARVC Arvin 92.17 46 P **P** **22 46 30.7 +1.4**
baz=224
BFSC Mount Baldy Ra 92.22 47 P **P** **22 46 31.2 +1.5**
baz=225,SNR=87
PB02 IPOC Station P 92.27 119 *i* P **P** **22 46 31.3 +1.0**
PEA0B Petropavlovsk- 92.32 347*de*P **P** **22 46 31.2 +1.8**
PEA0B Petropavlovsk- 92.32 347 P **P** **22 46 29.1 -0.4**
PETK Petropavlovsk- 92.32 347 P **P** **22 46 30.4 +1.0**
comp=Z,47nm,0.8s,baz=132,slow=6.2,SNR=28
PETK LR LR 23 23 05.3
comp=Z,15µm,20.2s,baz=157,slow=32
PETK Petropavlovsk- 92.32 347 P **P** **22 46 29.4 -0.1**
PB09 IPOC Station P 92.41 120 IAMs_20 IAMs_20 23 18 28.8
comp=Z,23µm,21.0s
PB09 IPOC Station P 92.41 120 *i* P **P** **22 46 32.1 +1.1**
SWSC Sam W. Stewart 92.42 49 P **P** **22 46 32.6 +2.2**
baz=226,SNR=18
PATCX Punta Patache 92.43 119 P **P** **22 46 29.2 -1.8**
PFO Pinyon Flats O 92.49 49 P **P** **22 46 33.0 +2.1**
comp=Z,57nm,0.9s,baz=255,slow=3.3,SNR=30
PFO Pinyon Flats O 92.49 49*de*P **P** **22 46 33.2 +2.3**
PFO pmax pmax
comp=Z,336nm,1.7s
PFO MLR MLR
comp=Z,17µm,17.0s
PFO Pinyon Flats O 92.49 49 P **P** **22 46 33.0 +2.1**
baz=225,SNR=28
PFO Pinyon Flats O 92.49 49 P **P** **22 46 30.0 -0.9**
PFO IAmb IAmb 22 46 36.9
comp=Z,125nm,1.1s
PFO Pinyon Flats O 92.49 49 IAMs_20 IAMs_20 23 26 21.6
comp=Z,22µm,18.0s
XPFO Pion Flat 92.49 49 IAMs_20 IAMs_20 23 26 39.4
comp=Z,21µm,18.0s
VES Vestal, Richgr 92.54 46 P **P** **22 46 32.0 +1.1**
baz=224,SNR=40
TA01 Diego Aracena 92.58 118 P **P** **22 46 30.1 -1.5**
HOPS Hopland Field 92.67 41 P **P** **22 46 30.6 -0.8**
HOPS IAmb IAmb 22 46 49.4
comp=Z,147nm,1.1s
BBRC Big Bear Solar 92.67 48 P **P** **22 46 33.6 +1.7**
baz=225
GDXM Geysers 92.67 41 P **P** **22 46 30.5 -1.0**
GDXM IAmb IAmb 22 46 47.4
comp=Z,80nm,1.1s
VOG Valley Oaks Go 92.72 45 P **P** **22 46 33.6 +1.9**
baz=224
PB01 IPOC Station P 92.74 119 P **P** **22 46 30.9 -1.6**
PB01 IAmb IAmb 22 46 39.8
comp=Z,120nm,1.0s
PB01 IAMs_20 IAMs_20 23 18 54.6
comp=Z,32µm,20.0s
PB01 IPOC Station P 92.74 119 *i* P **P** **22 46 34.2 +1.7**
ISA Isabella, Lake 92.76 46 P **P** **22 46 30.9 -1.1**
ISA pmax pmax
comp=Z,33nm,0.6s
ISA MLR MLR
comp=Z,19µm,19.0s
ISA Isabella, Lake 92.76 46 P **P** **22 46 33.8 +1.8**
baz=224,SNR=50
ISA Isabella, Lake 92.76 46 P **P** **22 46 30.9 -1.1**
ISA IAmb IAmb 22 46 50.9
comp=Z,33nm,0.6s
ISA IAMs_20 IAMs_20 23 23 31.6
comp=Z,19µm,19.0s
HSIG 92.80 55 IAMs_20 IAMs_20 23 23 35.4
comp=Z,23µm,18.0s
KCPM Cahto Peak 92.92 40 P **P** **22 46 31.9 -0.9**
KCPM IAmb IAmb 22 46 50.6
comp=Z,155nm,1.1s
KCPM IAMs_20 IAMs_20 23 22 43.9
comp=Z,26µm,19.0s
SLA San Lorenzo 92.94 124 *i* P **P** **22 46 35.3 +1.8**
DL2 Dalian 92.95 319⇓ *i*P **P** **22 46 33.6 +0.9**
DL2 PP **PP** **22 50 19.4 +3.2**
DL2 SKS **SKSac** **22 57 01.8 -1.9**
DL2 S **ScS** **22 57 39.3 +1.5**
DL2 pmax pmax
comp=Z,100nm,1.0s
DL2 pmax pmax
comp=Z,3µm,8.4s
DL2 LR LR
comp=Z,11µm,20.0s
DL2 LR LR
comp=Z,7µm,20.8s
DL2 LR LR
comp=Z,17µm,20.4s
BELC Belle Mtn. Jos 93.04 49 P **P** **22 46 35.6 +2.1**
baz=226,SNR=23
RRX Edison Barstow 93.06 47 P **P** **22 46 35.4 +2.0**
baz=225
GLA Glamis 93.08 50 P **P** **22 46 35.9 +2.3**
baz=226
GLA Glamis 93.08 50 IAMs_20 IAMs_20 23 23 05.0
comp=Z,20µm,19.0s
LRMC Laurel Mtn Rad 93.08 47 P **P** **22 46 35.5 +1.9**
baz=225,SNR=27
BC3 Big Chuckawall 93.12 49 P **P** **22 46 36.1 +2.3**
baz=226,SNR=30
FALS False Pass 93.23 10 IAMs_20 IAMs_20 23 27 06.4
comp=Z,20µm,20.0s
NNA Nana 93.25 108 P **P** **22 46 36.3 +1.5**
comp=Z,15nm,0.8s
NNA Nana 93.25 108*de*P **P** **22 46 35.6 +0.7**
NNA pmax pmax
comp=Z,241nm,1.5s
NNA MLR MLR
comp=Z,25µm,16.0s
NNA Nana 93.25 108 P **P** **22 46 33.3 -1.6**
NNA Nana 93.25 108 IAMs_20 IAMs_20 23 19 49.4
comp=Z,25µm,20.0s
KMRM Mail Ridge 93.25 40 P **P** **22 46 33.1 -1.1**
KMRM IAmb IAmb 22 46 50.4
comp=Z,95nm,1.0s
KMRM IAMs_20 IAMs_20 23 19 03.5
comp=Z,29µm,22.0s
PSGCX Pisagua 93.26 118 P **P** **22 46 33.2 -1.7**
PSGCX IAmb IAmb 22 46 41.7
comp=Z,128nm,1.0s
PSGCX Pisagua 93.26 118 *i* P P 22 46 29.3 -5.6
CMB Columbia Colle 93.39 43 P **P** **22 46 34.0 -0.9**
CMB pmax pmax
comp=Z,61nm,1.1s
CMB MLR MLR
comp=Z,22µm,18.0s
CMB Columbia Colle 93.39 43 P **P** **22 46 34.0 -0.9**
CMB IAmb IAmb 22 46 50.5
comp=Z,61nm,1.1s
CMB IAMs_20 IAMs_20 23 27 20.5
comp=Z,22µm,18.0s
HEC Hector,Ludlow 93.41 48 P **P** **22 46 36.8 +1.7**
baz=226,SNR=46
GYA Guiyang 93.47 301⇑ P **P** **22 46 37.1 +1.5**
GYA SKS **SKSac** **22 57 01.5 -6.0**
GYA S **ScS** **22 57 46.3 +3.3**
GYA SS **SS** **23 04 01.9 +2.5**
GYA pmax pmax
comp=Z,19nm,0.9s
GYA pmax pmax
comp=Z,3µm,13.6s
GYA LR LR
comp=Z,4µm,17.4s
GYA LR LR
comp=Z,5µm,21.6s

GYA LR LR
comp=Z,13µm,20.5s
GSC Goldstone, Bar 93.47 47 P **P** **22 46 34.5 -0.8**
GSC pmax pmax
comp=Z,77nm,1.1s
GSC MLR MLR
comp=Z,22µm,18.0s
GSC Goldstone, Bar 93.47 47 P **P** **22 46 37.0 +1.7**
baz=225,SNR=50
GSC Goldstone, Bar 93.47 47 P **P** **22 46 34.5 -0.8**
GSC IAmb IAmb 22 46 41.7
comp=Z,77nm,1.1s
GSC IAMs_20 IAMs_20 23 25 24.3
comp=Z,21µm,18.0s
TIA Tai'an 93.47 314 P **P** **22 46 35.6 +0.4**
TIA PP **PP** **22 50 23.6 +3.2**
TIA SS SS 23 03 57.8 -1.2
TIA pmax pmax
comp=Z,32nm,1.6s
TIA pmax pmax
comp=Z,4µm,14.2s
TIA LR LR
comp=Z,9µm,22.6s
TIA LR LR
comp=Z,6µm,23.0s
TIA LR LR
comp=Z,16µm,24.5s
PB11 IPOC Station P 93.48 118 P **P** **22 46 34.2 -1.8**
PB11 IPOC Station P 93.48 118 *i* P **P** **22 46 37.1 +1.2**
MDJ Mudanjiang 93.48 327 P **P** **22 46 36.0 +1.0**
MDJ pP pP 22 46 43.8 -1.6
MDJ sP pwP 22 46 45.8 -2.1
MDJ S **S** **22 57 44.8 +4.4**
MDJ sS pS 22 57 54.1 +0.5
MDJ pmax pmax
comp=Z,53nm,1.4s
MDJ pmax pmax
comp=Z,5µm,14.1s
MDJ LR LR
comp=Z,7µm,18.5s
MDJ LR LR
comp=Z,6µm,18.5s
MDJ LR LR
comp=Z,12µm,18.5s
MDJ Mudanjiang 93.48 327 P **P** **22 46 34.7 -0.3**
MDJ IAmb IAmb 22 46 45.3
comp=Z,50nm,0.9s
JCC Jacoby Creek, 93.53 39 P **P** **22 46 34.6 -0.7**
JCC IAmb IAmb 22 46 53.0
comp=Z,70nm,1.1s
JCC IAMs_20 IAMs_20 23 19 23.3
comp=Z,21µm,21.0s
CWC Cottonwood Cre 93.54 46 P **P** **22 46 37.8 +2.1**
baz=225
113A Mohawk Valley, 93.54 51 P **P** **22 46 34.6 -1.0**
113A IAMs_20 IAMs_20 23 25 30.0
comp=Z,22µm,18.0s
PB08 IPOC Station P 93.57 119 P **P** **22 46 34.5 -2.2**
PB08 IAmb IAmb 22 46 44.7
comp=Z,70nm,1.0s
PB08 IPOC Station P 93.57 119 *i* P **P** **22 46 37.5 +0.8**
214A Organ Pipe Nat 93.58 52 P **P** **22 46 37.9 +2.0**
baz=227
214A Organ Pipe Nat 93.58 52 P **P** **22 46 34.7 -1.2**
MPMC Manual Prospec 93.60 46 P **P** **22 46 37.7 +1.6**
baz=225
IRM Iron Mountain 93.66 49 P **P** **22 46 38.2 +2.0**
baz=226,SNR=28
O02D Mt. Diablo Mer 93.69 40 P **P** **22 46 37.9 +1.7**
baz=222,SNR=88
KHMM Horse Mountain 93.73 39 P **P** **22 46 35.3 -1.2**
KHMM IAmb IAmb 22 46 52.6
comp=Z,70nm,1.0s
KHMM IAMs_20 IAMs_20 23 23 17.4
comp=Z,23µm,20.0s
AFDM Forest Hills D 93.74 42 P **P** **22 46 35.4 -1.0**
AFDM IAmb IAmb 22 46 41.7
comp=Z,70nm,1.2s
AFDM IAMs_20 IAMs_20 23 28 48.7
comp=Z,26µm,18.0s
CNBA Chernabura Isl 93.77 12 P **P** **22 46 35.8 -0.3**
CNBA IAmb IAmb 22 46 47.4
comp=Z,120nm,1.0s
CNBA IAMs_20 IAMs_20 23 23 44.8
comp=Z,22µm,20.0s
GMRC Granite Mounta 93.78 48 P **P** **22 46 38.8 +1.9**
baz=226,SNR=33
MDPB Devils Postpil 93.82 44 P **P** **22 46 36.2 -0.9**
MDPB IAMs_20 IAMs_20 23 24 09.8
comp=Z,27µm,20.0s
TIN Tinemaha, Big 93.89 45 P **P** **22 46 39.3 +2.1**
baz=225
ORV Oroville 93.90 42 IAmb IAmb 22 46 56.8
comp=Z,66nm,1.1s
ORV IAMs_20 IAMs_20 23 27 54.0
comp=Z,18µm,18.0s
AP01 Chacalluta 93.91 117 IAMs_20 IAMs_20 23 19 51.3
comp=Z,20µm,22.0s
MNMCX Minye Minye 93.94 118 *i* P **P** **22 46 40.0 +1.7**
CM31 Chiang Mai Arr 93.95 290 IAmb IAmb 22 46 52.9
comp=Z,188nm,1.0s
CMAR Chiang Mai Arr 93.95 290 P **P** **22 46 38.6 +0.8**
comp=Z,21nm,0.7s,baz=149,slow=3.5,SNR=117
CMAR PP PP 22 50 15.2 -9.2
comp=Z,12nm,1.0s,baz=142,slow=5.3,SNR=4.3
CMAR PKKP **PKKPbc** **23 03 41.0 +1.5**
comp=Z,2.8nm,0.7s,baz=295,slow=4.0,SNR=8.7
CMAR PKPPKP 23 11 46.4
comp=Z,0.7nm,0.3s,baz=303,slow=6.3,SNR=5.7
CMAR LR LR 23 30 29.2
comp=Z,15µm,22.0s,baz=194,slow=37
CMAR Chiang Mai Arr 93.95 290⇑ *eP* **P** **22 46 38.7 +0.8**
CMAR pmax pmax
comp=Z,22nm,0.7s
CMAR Chiang Mai Arr 93.95 290 P **P** **22 46 36.9 -1.0**
MLAC Mammoth, Mammo 93.96 44 P **P** **22 46 39.6 +1.9**
baz=224
HJA Humahuaca 94.05 123 *i* P **P** **22 46 41.1 +2.3**
TUQ Turquoise Moun 94.08 48 P **P** **22 46 40.0 +1.8**
baz=226,SNR=11
ENH Enshi 94.08 305 P **P** **22 46 37.5 -0.7**
ENH IAmb IAmb 22 46 56.6
comp=Z,66nm,0.8s
ENH IAMs_20 IAMs_20 23 23 57.0
comp=Z,23µm,22.0s
WDC Whiskeytown Da 94.11 40 P **P** **22 46 37.2 -0.8**
WDC pmax pmax
comp=Z,87nm,1.0s
WDC MLR MLR
comp=Z,28µm,22.0s
WDC Whiskeytown Da 94.11 40 P **P** **22 46 37.2 -0.8**
WDC IAmb IAmb 22 46 55.6
comp=Z,87nm,1.0s
WDC IAMs_20 IAMs_20 23 18 59.6
comp=Z,28µm,22.0s
KRMB Red Mountain 94.12 39 P **P** **22 46 37.4 -0.8**
KRMB IAmb IAmb 22 46 56.1
comp=Z,55nm,1.0s
KRMB IAMs_20 IAMs_20 23 20 02.9
comp=Z,23µm,21.0s
SNY Shenyang 94.13 322⇑ P **P** **22 46 39.0 +1.0**
SNY pmax pmax
comp=Z,20nm,1.8s
SNY pmax pmax
comp=Z,4µm,14.7s
SNY LR LR
comp=Z,5µm,17.2s
SNY LR LR
comp=Z,7µm,20.6s
SNY LR LR
comp=Z,14µm,48.0s
SDPT Sand Point 94.14 11 P **P** **22 46 37.4 -0.3**
SDPT IAmb IAmb 22 46 48.1
comp=Z,140nm,1.0s
CHTO Chiang Mai 94.17 290 P **P** **22 46 39.3 +0.5**
CHTO S **SKSac** **22 57 11.2 -0.3**
CHTO Chiang Mai 94.17 290 P **P** **22 46 37.8 -1.1**
CHTO pmax pmax
comp=Z,114nm,1.1s
CHTO MLR MLR
comp=Z,26µm,21.0s
CHTO Chiang Mai 94.17 290 P **P** **22 46 37.8 -1.1**
CHTO IAmb IAmb 22 46 53.7
comp=Z,114nm,1.1s
CHTO Chiang Mai 94.17 290 IAMs_20 IAMs_20 23 30 36.6
comp=Z,26µm,21.0s

SHOC Shoshone, Teco 94.19 47 P **P** **22 46 40.9 +2.3**
baz=226,SNR=8.9
FURC Furnace Creek, 94.25 46 P **P** **22 46 41.0 +2.2**
baz=225,SNR=8.3
WAKR Walker 94.25 43 P **P** **22 46 38.0 -1.0**
WAKR IAmb IAmb 22 46 56.7
comp=Z,74nm,1.2s
WAKR IAMs_20 IAMs_20 23 22 23.1
comp=Z,24µm,20.0s
RUBR Rubicon Trail 94.25 43 IAMs_20 IAMs_20 23 24 19.2
comp=Z,28µm,20.0s
TLIG Tlapa 94.27 71 IAMs_20 IAMs_20 23 22 18.4
comp=Z,23µm,18.0s
O03E Paynes Creek 94.29 41 P **P** **22 46 39.7 +0.7**
baz=223,SNR=40
N02D Trinity Center 94.32 40 P **P** **22 46 40.7 +1.6**
baz=222,SNR=64
GRAC Grapevine Rang 94.33 46 P **P** **22 46 40.9 +1.7**
baz=225
PDMCI Parker Dam,Lak 94.36 49 P **P** **22 46 41.2 +1.8**
baz=227
NEE2 Needles Airpor 94.39 49 P **P** **22 46 41.7 +2.2**
baz=226
KBO Bosley Butte 94.48 38 P **P** **22 46 39.0 -0.8**
KBO IAmb IAmb 22 46 57.8
comp=Z,86nm,1.1s
PB16 IPOC Station P 94.53 117 *i* P **P** **22 46 42.7 +1.3**
ZAIG Zacatecas 94.54 65 P **P** **22 46 39.3 -1.6**
ZAIG IAMs_20 IAMs_20 23 22 24.0
comp=Z,20µm,19.0s
M02C Callahan 94.56 40 P **P** **22 46 41.9 +1.7**
baz=222,SNR=45
PNTR Pine Nut 94.58 43 P **P** **22 46 39.3 -1.2**
PNTR IAmb IAmb 22 46 56.3
comp=Z,91nm,1.1s
PNTR IAMs_20 IAMs_20 23 24 40.9
comp=Z,27µm,20.0s
LHV Little Huntoon 94.58 44 IAmb IAmb 22 46 59.8
comp=Z,76nm,1.1s
LHV IAMs_20 IAMs_20 23 24 44.9
comp=Z,27µm,20.0s
YJA Yavi 94.69 122 *i* P **P** **22 46 44.4 +2.6**
VCNR Virginia City 94.70 43 IAMs_20 IAMs_20 23 24 16.1
comp=Z,27µm,20.0s
CN2 Changchun 94.72 324 *eP* **P** **22 46 41.3 +0.6**
CN2 PP **PP** **22 50 31.8 +1.8**
CN2 pmax pmax
comp=Z,40nm,1.9s
CN2 pmax pmax
comp=Z,3µm,12.9s
CN2 LR LR
comp=Z,9µm,18.0s
CN2 LR LR
comp=Z,7µm,18.0s
CN2 LR LR
comp=Z,11µm,20.0s
BEKR Beckworth 94.73 42 P **P** **22 46 40.2 -1.0**
BEKR IAMs_20 IAMs_20 23 19 42.3
comp=Z,21µm,22.0s
L02E Cave Junction 94.75 39 P **P** **22 46 42.6 +1.6**
baz=222,SNR=18
Y14A Wickenburg 94.80 50 P **P** **22 46 40.5 -1.0**
Y14A IAMs_20 IAMs_20 23 23 58.5
comp=Z,23µm,18.0s
SPIA Saint Paul Isl 94.80 6 IAMs_20 IAMs_20 23 24 43.9
comp=Z,26µm,20.0s
NVAR Mina Array Bea 94.82 44 P **P** **22 46 43.1 +1.5**
comp=Z,21nm,1.0s,baz=220,slow=8.9,SNR=36
NVAR PKKPbc **PKKPbc** **23 03 37.7 -0.7**
comp=Z,1.6nm,0.7s,baz=358,slow=0.3,SNR=4.5
NVAR LR LR 23 26 11.3
comp=Z,20µm,18.1s,baz=227,slow=33
NVAR Mina Array Bea 94.82 44 P **P** **22 46 40.4 -1.2**
RYN Ryan 94.84 44 IAMs_20 IAMs_20 23 24 52.7
comp=Z,22µm,20.0s
ITQB Itaqui 94.87 133 *eP* **P** **22 46 43.4 +1.3**
YBH Yreka Blue Hor 94.88 39 P **P** **22 46 42.5 +0.8**
comp=Z,34nm,1.2s,baz=195,slow=0.7,SNR=31
YBH Yreka Blue Hor 94.88 39 P **P** **22 46 41.0 -0.7**
YBH IAMs_20 IAMs_20 23 19 34.9
comp=Z,23µm,22.0s
UNM Universidad Na 94.89 69 IAMs_20 IAMs_20 23 23 27.0
comp=Z,26µm,18.0s
NV11 Mina Array Sit 94.90 44 IAMs_20 IAMs_20 23 24 54.4
comp=Z,25µm,20.0s
KEBM Edson Butte 94.92 38 P **P** **22 46 41.1 -0.7**
KEBM IAmb IAmb 22 46 47.7
comp=Z,127nm,1.1s
KEBM IAMs_20 IAMs_20 23 19 53.6
comp=Z,21µm,22.0s
TPNV Topopah Spring 94.94 46 P **P** **22 46 43.7 +1.5**
baz=226,SNR=42
TPNV Topopah Spring 94.94 46 IAmb IAmb 22 47 02.7
comp=Z,60nm,1.1s
W13A Hualapai Mount 95.06 49 IAMs_20 IAMs_20 23 25 53.3
comp=Z,18µm,18.0s
TUC Tucson 95.09 53 P **P** **22 46 41.8 -1.1**
TUC pmax pmax
comp=Z,27nm,1.0s
TUC MLR MLR
comp=Z,12µm,18.0s
TUC Tucson 95.09 53 P **P** **22 46 45.1 +2.2**
baz=228
TUC Tucson 95.09 53 P **P** **22 46 41.8 -1.1**
ATAH Atahualpa 95.10 103 PP **PP** **22 50 34.8 +1.3**
comp=Z,6.3nm,1.0s,baz=227,slow=5.3,SNR=3.8
K02D Willamette Mer 95.12 38 P **P** **22 46 44.0 +1.3**
baz=222,SNR=20
TPH Tonopah 95.17 45 P **P** **22 46 42.1 -1.2**
TPH pmax pmax
comp=Z,330nm,1.2s
TPH Tonopah 95.17 45 P **P** **22 46 42.1 -1.2**
SHPR Sheep Range 95.26 47 IAMs_20 IAMs_20 23 26 30.8
comp=Z,18µm,19.0s
DGPR DIGLIPUR 95.33 282 *eP* **P** **22 46 43.7 -0.5**
DGPR *i* PP **PP** **22 50 34.0 -1.0**
J01E Myrtle Point 95.33 38 P **P** **22 46 45.6 +2.1**
baz=222,SNR=8.0
KMI Kunming 95.33 298⇓ *i* P **P** **22 46 47.1 +2.8**
KMI pP pP 22 46 54.5 -0.1
KMI sP sP 22 46 58.5 +0.6
KMI S **S** **22 57 58.3 +0.3**
KMI sS pS 22 58 08.8 -2.7
KMI pmax pmax
comp=Z,24nm,1.2s
KMI pmax pmax
comp=Z,490nm,3.9s
KMI LR LR
comp=Z,12µm,19.6s
KMI LR LR
comp=Z,12µm,19.8s
KMI LR LR
comp=Z,19µm,29.8s
KMI Kunming 95.33 298 IAMs_20 IAMs_20 23 35 46.5
comp=Z,18µm,20.0s
M04C Macdoel 95.36 40 P **P** **22 46 45.5 +1.6**
baz=223,SNR=5.7
KVN Kaiserville 95.37 44 IAMs_20 IAMs_20 23 23 00.7
comp=Z,19µm,20.0s
HUMO Hull Mountain 95.40 39 P **P** **22 46 43.3 -0.6**
CHIR Chirikof Islan 95.42 14 IAMs_20 IAMs_20 23 24 40.3
comp=Z,32µm,21.0s
319A Douglas 95.44 54 IAmb IAmb 22 47 06.1
comp=Z,50nm,1.0s
319A IAMs_20 IAMs_20 23 26 11.2
comp=Z,20µm,19.0s
L04D Klamath Falls 95.44 39 P **P** **22 46 45.1 +0.8**
baz=222,SNR=24
GRNR Gornyy 95.83 334⇓ *i* P **P** **22 46 46.9 +1.2**
GRNR *e* 22 50 33.0
GRNR pmax pmax
comp=Z,20nm,1.0s
PRN Pahroc Range 95.95 47 IAMs_20 IAMs_20 23 27 21.9
comp=Z,19µm,18.0s
K04D Chiloquin, OR 96.02 39 P **P** **22 46 48.4 +1.5**
baz=223
I03D Drain, OR 96.02 38 P **P** **22 46 47.9 +1.3**
baz=222,SNR=7.8
I02D Swisshome 96.08 37 P **P** **22 46 48.2 +1.3**
baz=222
X16A Lo Mia Camp, P 96.08 51 P **P** **22 46 46.5 -1.0**
CPSB Cacapava Do Su 96.11 136 *eP* **P** **22 46 49.0 +1.3**
MOD Modoc Plateau 96.23 41 IAmb IAmb 22 47 03.3
comp=Z,47nm,1.0s
MOD IAMs_20 IAMs_20 23 30 06.7
comp=Z,26µm,18.0s
KLR Kul'dur 96.28 331 P **P** **22 46 49.3 +1.6**
comp=Z,5.6nm,0.8s,baz=158,slow=3.5,SNR=9.9
KLR PP **PP** **22 50 41.4 -0.6**
comp=Z,8.1nm,0.9s,baz=238,slow=3.1,SNR=4.8
KLR Kul'dur 96.28 331 *de*P **P** **22 46 47.9 +0.2**
R11A Troy Canyon, C 96.29 46 P **P** **22 46 49.8 +1.5**
baz=226,SNR=11
R11A Troy Canyon, C 96.29 46 P **P** **22 46 47.2 -1.1**
R11A IAMs_20 IAMs_20 23 33 19.0
comp=Z,26µm,18.0s
J04D Umpqua Nationa 96.29 39 P **P** **22 46 49.5 +1.3**
baz=223,SNR=13
SII Sitkinak Islan 96.39 14 IAMs_20 IAMs_20 23 25 41.0
comp=Z,28µm,20.0s
NKL Nikolayevsk 96.48 338 *eP* **P** **22 46 49.5 +1.0**
NKL *e* 22 50 45.3
NKL *eS* **SKSac** **22 57 17.9 -4.0**
NKL pmax pmax
comp=E,28nm,1.5s
NKL pmax pmax
comp=N,12nm,1.3s
NKL pmax pmax
comp=Z,58nm,1.7s
NKL smax smax
comp=N,13nm,4.0s
NKL smax smax
comp=E,91nm,2.7s
NKL MLR MLR
comp=Z,10µm,18.0s
K05A Summer Lake 96.53 40 IAmb IAmb 22 47 05.1
comp=Z,146nm,1.2s
K05A IAMs_20 IAMs_20 23 20 17.4
comp=Z,24µm,22.0s
I04A Tendick Farm, 96.55 38 P **P** **22 46 50.0 +0.8**
baz=222,SNR=15
BJI Beijing 96.70 316 P **P** **22 46 50.8 +1.0**
BJI PP **PP** **22 50 48.8 +3.5**
BJI SKS **SKSac** **22 57 21.8 -2.0**
BJI S **ScS** **22 58 14.3 +5.3**
BJI pmax pmax
comp=Z,12nm,1.2s
BJI pmax pmax
comp=Z,2µm,11.8s
BJI LR LR
comp=Z,9µm,21.2s
BJI LR LR
comp=Z,6µm,21.0s
BJI LR LR
comp=Z,12µm,22.6s
COR Corvallis 96.70 37 P **P** **22 46 53.6 +3.9**
LCMT Little Creek M 96.73 48 P **P** **22 46 49.2 -1.1**
J05D Fort Rock, OR 96.76 39 P **P** **22 46 51.6 +1.3**
baz=223,SNR=30
CMIG Matias Romero 96.77 74 P **P** **22 46 53.0 +2.2**
comp=Z,3.1nm,0.5s,baz=205,slow=4.6,SNR=9.7
WUAZ Wupatki 96.85 50 P **P** **22 46 52.6 +1.7**
baz=228
WUAZ Wupatki 96.85 50 IAMs_20 IAMs_20 23 25 22.8
comp=Z,16µm,19.0s
LPAZ La Paz 96.87 116 P **P** **22 46 53.6 +1.5**
comp=Z,30nm,0.8s,baz=224,slow=3.1,SNR=66
LPAZ PP **PP** **22 50 49.2 +2.1**
comp=Z,20nm,1.2s,baz=228,slow=8.4,SNR=3.7
LPAZ LR LR 23 22 25.9
comp=Z,9µm,20.5s,baz=204,slow=30
LPAZ La Paz 96.87 116 P **P** **22 46 49.7 -2.4**
LPAZ IAmb IAmb 22 47 02.3
comp=Z,118nm,1.1s
LPAZ La Paz 96.87 116 *i* P **P** **22 46 53.4 +1.3**
LPAZ La Paz 96.87 116 *eP* **P** **22 46 54.0 +1.9**
XAN Xi'an 96.92 308 P **P** **22 46 54.8 +3.7**
XAN pP pwP 22 47 03.5 -0.6
XAN sP sP 22 47 06.9 +1.9
XAN SKS **SKSac** **22 57 22.3 -3.1**
XAN S **ScS** **22 58 14.5 +3.2**
XAN pmax pmax
comp=Z,23nm,0.9s
XAN pmax pmax
comp=Z,3µm,11.7s
XAN LR LR
comp=Z,8µm,22.1s
XAN LR LR
comp=Z,15µm,21.6s
XAN Xi'an 96.92 308 P **P** **22 46 50.3 -0.8**
XAN pmax pmax
comp=Z,26nm,0.9s
XAN Xi'an 96.92 308 P **P** **22 46 50.3 -0.8**
H04D Lebanon 96.92 37 P **P** **22 46 52.0 +1.2**
baz=222
CPUP Villa Florida 96.94 131 P **P** **22 46 51.8 +0.3**
comp=Z,17nm,0.9s,baz=231,slow=5.6,SNR=17
CPUP PKKPbc **PKKPbc** **23 03 31.3 +0.1**
comp=Z,2.8nm,0.7s,baz=45,slow=2.7,SNR=6.2
CPUP PKPPKP 23 11 46.7
comp=Z,3.9nm,1.2s,baz=36,slow=5.2,SNR=3.8
CPUP LR LR 23 23 46.3
comp=Z,54µm,19.6s,baz=234,slow=31
CPUP Villa Florida 96.94 131 P **P** **22 46 50.1 -1.4**
CPUP Villa Florida 96.94 131 *eP* **P** **22 46 51.8 +0.3**
121A Cookes Peak, D 97.16 54 P Pdif 22 46 54.5 +2.0
baz=230
121A Cookes Peak, D 97.16 54 IAMs_20 IAMs_20 23 27 17.7
comp=Z,27µm,18.0s
G03D McMinnville, O 97.18 37 P Pdif 22 46 53.2 +1.2
baz=222
OHAK Old Harbor 97.19 14 IAMs_20 IAMs_20 23 26 05.1
comp=Z,25µm,20.0s
TIY Taiyuan 97.22 313 *eP* Pdif 22 46 53.8 +1.3
TIY sP pP 22 47 03.4 +0.7
TIY SKS **SKSac** **22 57 25.6 -1.2**
TIY S **S** **22 58 12.8 -0.6**
TIY pmax pmax
comp=Z,360nm,6.2s
TIY LR LR
comp=Z,8µm,18.6s
TIY LR LR
comp=Z,9µm,22.9s
TIY LR LR
comp=Z,14µm,24.9s
PINE Pine Mountain 97.27 39 IAmb IAmb 22 47 10.2
comp=Z,58nm,1.1s
H04A Detroit Lake 97.31 38 P **P** **22 46 52.0 -0.6**
H04A IAMs_20 IAMs_20 23 21 21.2
comp=Z,27µm,22.0s
SPR3 Spring Creek 3 97.45 46 IAMs_20 IAMs_20 23 30 01.7
comp=Z,24µm,18.0s
I05D Terrebonne, OR 97.47 38 P Pdif 22 46 54.9 +1.5
baz=223,SNR=6.9
WVOR Wild Horse Val 97.48 41 IAMs_20 IAMs_20 23 21 21.6
comp=Z,24µm,22.0s
EPT El Paso 97.50 56 IAMs_20 IAMs_20 23 27 09.8
comp=Z,19µm,18.0s
W18A Petrified Fore 97.60 51 P Pdif 22 46 56.9 +2.5
baz=229
KDAK Kodiak Island 97.86 15 IAMs_20 IAMs_20 23 26 36.6
comp=Z,21µm,20.0s
TXAR Lajitas Aray 97.86 59 P Pdif 22 46 58.2 +2.6
comp=Z,6.4nm,0.8s,baz=215,slow=6.2,SNR=5.5
TXAR PKKPbc **PKKPbc** **23 03 30.4 +0.9**
comp=Z,1.8nm,0.7s,baz=88,slow=4.3,SNR=7.0
TXAR PKPPKP 23 11 46.1
comp=Z,0.9nm,1.0s,baz=22,slow=5.1,SNR=3.6
TXAR LR LR 23 25 18.7
comp=Z,17µm,18.0s,baz=0.0,slow=32
F04D Rainier, OR 97.94 36 P Pdif 22 46 56.8 +1.4
baz=222
E03A Lebam 98.03 36 IAMs_20 IAMs_20 23 21 58.3
comp=Z,21µm,21.0s
F04A Amboy 98.11 37 IAmb IAmb 22 47 14.8
comp=Z,70nm,1.2s
ELK Elko 98.13 44 P Pdif 22 46 57.4 +0.7
comp=Z,7.1nm,1.1s,baz=206,slow=3.5,SNR=16
ELK PP **PP** **22 50 55.8 -0.9**
comp=Z,14nm,1.3s,baz=232,slow=8.3,SNR=6.7
ELK Elko 98.13 44 IAMs_20 IAMs_20 23 26 48.8
comp=Z,24µm,20.0s
G05D Wamic, OR 98.14 38 Pdiff Pdif 22 46 58.0 +1.7
baz=223
MNTX Cornudas Mount 98.19 56 P Pdif 22 46 58.9 +2.0
baz=231
MNTX Cornudas Mount 98.19 56 IAMs_20 IAMs_20 23 27 17.1
comp=Z,25µm,18.0s
I07A Izee 98.20 40 IAMs_20 IAMs_20 23 23 11.8
comp=Z,19µm,21.0s
J08A Circle Bar Ran 98.22 41 IAmb IAmb 22 47 16.5
comp=Z,66nm,1.2s
J08A IAMs_20 IAMs_20 23 26 00.1
comp=Z,26µm,20.0s

CD2	**Chengdu**	**98.26**	**303**	P	Pdif	22 46 58.5	+1.2		
CD2				PP	**PP**	**22 51 01.6**	**+4.0**		
CD2				SKS	**SKSac**	**22 57 34.9**	**+2.5**		
CD2				S	**ScS**	**22 58 23.6**	**+0.9**		
CD2				SS	**SS**	**23 05 11.4**	**+4.2**		
CD2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
CD2				pmax	pmax				
	comp=Z,2µm,13.5s								
CD2				LR	LR				
	comp=Z,9µm,21.6s								
CD2				LR	LR				
	comp=Z,12µm,21.6s								
CD2				LR	LR				
	comp=Z,16µm,22.1s								
CNLB	**Canela**	**98.37**	**137**	*e*P	Pdif	22 46 58.3	+0.3		
CCIG	**Comitan**	**98.40**	**76**	IAMs_20	IAMs_20	23 24 19.5			
	comp=Z,18µm,19.0s								
E04D	**Cinebar**	**98.50**	**36**	Pdiff	Pdif	22 47 00.4	+2.6		
	baz=223								
NLWA	**Neilton Lookou**	**98.52**	**35**	IAmb	IAmb	22 47 17.2			
	comp=Z,51nm,1.1s								
NLWA				IAMs_20	IAMs_20	23 22 12.2			
	comp=Z,29µm,22.0s								
F05D	**White Salmon**	**98.54**	**37**	Pdiff	Pdif	22 47 00.2	+2.1		
	baz=223								
Y22D	**IRIS PASSCAL I**	**98.70**	**54**	Pdiff	Pdif	22 47 00.8	+1.6		
	baz=230								
Y22D	**IRIS PASSCAL I**	**98.70**	**54**	IAMs_20	IAMs_20	23 29 48.5			
	comp=Z,15µm,18.0s								
D03D	**Eldon**	**98.98**	**35**	Pdiff	Pdif	22 47 02.2	+2.3		
	baz=222								
LON	**Longmire**	**99.00**	**36**	IAMs_20	IAMs_20	23 22 34.0			
	comp=Z,28µm,21.0s								
CZSB	**Cruzeiro do Su**	**99.09**	**107**	*e*P	**Pdif**	**22 47 03.5**	**+2.2**		
DUG	**Dugway, Tooele**	**99.12**	**46**	Pdiff	**Pdif**	**22 47 03.2**	**+2.3**		
	baz=228								
DUG	**Dugway, Tooele**	**99.12**	**46**	IAMs_20	IAMs_20	23 27 35.9			
	comp=Z,21µm,19.0s								
D05A	**Enumclaw**	**99.23**	**36**	IAmb	IAmb	22 47 21.0			
	comp=Z,53nm,1.1s								
D05A				IAMs_20	IAMs_20	23 22 51.2			
	comp=Z,19µm,21.0s								
ITAB	**Concordia**	**99.28**	**135**	*e*P	**Pdif**	**22 47 02.9**	**+0.9**		
F07A	**Phinny Hill Vi**	**99.29**	**38**	IAMs_20	IAMs_20	23 22 35.5			
	comp=Z,26µm,22.0s								
MAPC	**Malpelo**	**99.39**	**92**	*e*P	**Pdif**	**22 47 03.9**	**+1.3**		
ANMO	**Albuquerque**	**99.55**	**53**	P	**Pdif**	**22 47 04.5**	**+1.4**		
	comp=Z,6.2nm,0.9s,baz=195,slow=4.9,SNR=7.4								
ANMO				PP	**PP**	**22 51 08.0**	**+0.4**		
	comp=Z,8.1nm,1.1s,baz=270,slow=9.3,SNR=4.7								
ANMO	**Albuquerque**	**99.55**	**53**	*de*P	**Pdif**	**22 47 05.4**	**+2.3**		
ANMO				pmax	pmax				
	comp=Z,27nm,1.5s								
ANMO				MLR	MLR				
	comp=Z,20µm,17.0s								
ANMO	**Albuquerque**	**99.55**	**53**	Pdiff	**Pdif**	**22 47 04.4**	**+1.4**		
	baz=230								
ANMO	**Albuquerque**	**99.55**	**53**	P	**Pdif**	**22 47 02.0**	**-1.1**		
CUSE	**Cuicocha Este**	**99.68**	**97**	*e*P	**Pdif**	**22 47 05.5**	**+0.9**		
MVCO	**Mesa Verde**	**99.72**	**50**	Pdiff	**Pdif**	**22 47 03.4**	**-0.4**		
	baz=230								
MA2	**Magadan**	**99.72**	**346**	IAMs_20	IAMs_20	23 25 43.3			
	comp=Z,18µm,21.0s								
CNPM	**China Poot**	**99.74**	**15**	IAMs_20	IAMs_20	23 27 58.4			
	comp=Z,20µm,20.0s								
HHC	**Hu-ho-hao-te**	**99.82**	**314**	*e*P	**Pdif**	**22 47 04.8**	**+0.8**		
HHC				sP	sP	22 47 19.3	+1.3		
HHC				SKS	**SKSac**	**22 57 39.4**	**-0.5**		
HHC				S	**ScS**	**22 58 32.8**	**-2.5**		
HHC				SS	**SS**	**23 05 29.8**	**+0.9**		
HHC				pmax	pmax				
	comp=Z,8.0nm,1.0s								
HHC				pmax	pmax				
	comp=Z,450nm,5.5s								
HHC				LR	LR				
	comp=Z,8µm,19.0s								
HHC				LR	LR				
	comp=Z,11µm,18.4s								
HHC				LR	LR				
	comp=Z,12µm,19.0s								
HAWA	**Hanford**	**99.83**	**38**	IAMs_20	IAMs_20	23 22 41.0			
	comp=Z,28µm,22.0s								
BMO	**Blue Mountains**	**99.86**	**40**	IAMs_20	IAMs_20	23 22 37.7			
	comp=Z,24µm,22.0s								
B05A	**Bryant**	**99.97**	**35**	Pdiff	**Pdif**	**22 47 06.1**	**+1.8**		
	baz=223								
A04D	**Lummi Island**	**100.02**	**35**	Pdiff	**Pdif**	**22 47 06.0**	**+1.5**		
	baz=223								
BRLK	**Bradley Lake**	**100.03**	**15**	IAMs_20	IAMs_20	23 27 55.7			
	comp=Z,17µm,20.0s								
PV17	**East Wray Mesa**	**100.12**	**49**	IAMs_20	IAMs_20	23 27 45.4			
	comp=Z,22µm,19.0s								
PV19	**Morning Glory**	**100.13**	**49**	IAMs_20	IAMs_20	23 27 37.5			
	comp=Z,18µm,19.0s								
PV13	**Radium Mtn., P**	**100.13**	**49**	IAMs_20	IAMs_20	23 27 37.6			
	comp=Z,20µm,19.0s								
PV18	**Skein Mesa, Pa**	**100.13**	**49**	IAMs_20	IAMs_20	23 27 37.6			
	comp=Z,19µm,19.0s								
E08A	**Dider Farm., El**	**100.13**	**38**	IAMs_20	IAMs_20	23 23 01.9			
	comp=Z,25µm,22.0s								
PV10	**Paradox Valley**	**100.14**	**49**	IAMs_20	IAMs_20	23 27 45.2			
	comp=Z,21µm,18.0s								
PV14	**Lion Creek, Pa**	**100.14**	**49**	IAMs_20	IAMs_20	23 27 46.9			
	comp=Z,20µm,18.0s								
PV16	**Nyswonger Mesa**	**100.17**	**49**	IAMs_20	IAMs_20	23 27 29.6			
	comp=Z,19µm,19.0s								
PV03	**Paradox Valley**	**100.17**	**49**	IAMs_20	IAMs_20	23 27 38.7			
	comp=Z,19µm,18.0s								
PV11	**David Mesa, Pa**	**100.19**	**49**	IAMs_20	IAMs_20	23 27 48.1			
	comp=Z,22µm,19.0s								
PV23	**Carpenter Ridg**	**100.20**	**49**	IAMs_20	IAMs_20	23 27 39.4			
	comp=Z,21µm,19.0s								
833A	**Chaparral WMA,**	**100.20**	**62**	Pdiff	**Pdif**	**22 47 06.8**	**+0.9**		
	baz=233								
833A	**Chaparral WMA,**	**100.20**	**62**	IAMs_20	IAMs_20	23 27 22.1			
	comp=Z,22µm,19.0s								
PV02	**Paradox Valley**	**100.21**	**49**	IAMs_20	IAMs_20	23 27 31.0			
	comp=Z,25µm,22.0s								
PV04	**Paradox Valley**	**100.23**	**49**	IAMs_20	IAMs_20	23 27 41.2			
	comp=Z,20µm,18.0s								
PV12	**Saucer Basin,**	**100.24**	**49**	IAMs_20	IAMs_20	23 27 40.5			
	comp=Z,22µm,18.0s								
C06D	**Leavenworth**	**100.28**	**36**	Pdiff	**Pdif**	**22 47 07.5**	**+1.7**		
	baz=224								
BBB	**Bella Bella**	**100.34**	**30**	P	**Pdif**	**22 47 06.6**	**+0.8**		
	comp=Z,16nm,1.1s,baz=22,slow=6.1,SNR=2.7								
BBB	**Bella Bella**	**100.34**	**30**	IAMs_20	IAMs_20	23 23 17.3			
	comp=Z,25µm,22.0s								
TUMC	**Tumaco**	**100.35**	**96**	*i* Pg	**Pdif**	**22 47 00.3**	**-6.6**		
PV07	**Paradox Valley**	**100.41**	**49**	IAMs_20	IAMs_20	23 27 38.1			
	comp=Z,18µm,18.0s								
B06A	**Marblemount**	**100.43**	**35**	IAMs_20	IAMs_20	23 23 37.9			
	comp=Z,21µm,22.0s								
PV15	**Paradox Valley**	**100.45**	**49**	IAMs_20	IAMs_20	23 27 48.1			
	comp=Z,20µm,19.0s								
JTS	**Las Juntas de**	**100.48**	**85**	P	**Pdif**	**22 47 09.1**	**+1.6**		
	comp=Z,23nm,1.2s,baz=344,slow=4.6,SNR=5.2								
JTS	**Las Juntas de**	**100.48**	**85**	*de*P	**Pdif**	**22 47 09.1**	**+1.6**		
JTS				pmax	pmax				
	comp=Z,45nm,1.3s								
JTS				MLR	MLR				
	comp=Z,7µm,16.0s								
JTS	**Las Juntas de**	**100.48**	**85**	Pdif	**Pdif**	**22 47 09.7**	**+2.2**		
JTS	**Las Juntas de**	**100.48**	**85**	IAMs_20	IAMs_20	23 25 58.1			
	comp=Z,23µm,18.0s								
HLID	**Hailey**	**100.50**	**42**	Pdiff	**Pdif**	**22 47 09.2**	**+2.2**		
	baz=227								
HLID	**Hailey**	**100.50**	**42**	IAMs_20	IAMs_20	23 32 21.4			
	comp=Z,20µm,18.0s								
PETF	**Flores**	**100.52**	**77**	IAMs_20	IAMs_20	23 22 51.8			
	comp=Z,18µm,21.0s								
BTO	**Baotou**	**100.55**	**313**	*e*P	**Pdif**	**22 47 17.1**	**+10**		
D08A	**Wollman Farm,**	**100.60**	**38**	IAMs_20	IAMs_20	23 23 14.3			
	comp=Z,30µm,22.0s								
PLID	**Pearl Lake**	**100.70**	**41**	IAMs_20	IAMs_20	23 27 37.1			
	comp=Z,22µm,20.0s								
Q23K	**Middleton Isla**	**100.71**	**17**	IAMs_20	IAMs_20	23 31 19.0			
	comp=Z,17µm,19.0s								
SAIH	**SAIHA**	**100.83**	**290**	*e*P	**Pdif**	**22 47 07.4**	**-1.5**		
SAIH				*i* x	x	22 51 16.5			
HDC	**Heredia**	**100.97**	**86**	IAMs_20	IAMs_20	23 23 05.2			
	comp=Z,28µm,21.0s								
GCUF	**Volcan Galeras**	**101.08**	**97**	*e*P	**Pdif**	**22 47 11.2**	**+0.4**		
S22A	**4UR Ranch, Cre**	**101.08**	**51**	Pdiff	**Pdif**	**22 47 10.4**	**+0.4**		
	baz=231								
JCT	**Junction City**	**101.22**	**60**	Pdiff	**Pdif**	**22 47 10.9**	**+0.5**		
	baz=233								
JCT	**Junction City**	**101.22**	**60**	IAMs_20	IAMs_20	23 27 22.9			
	comp=Z,24µm,19.0s								
RER	**Riviere de l'E**	**101.25**	**232**	IAMs_20	IAMs_20	23 25 07.6			
	comp=Z,17µm,20.0s								
MATN	**Matagalpa**	**101.27**	**82**	IAMs_20	IAMs_20	23 24 00.1			
	comp=Z,19µm,20.0s								
GAMB	**Gambell**	**101.27**	**4**	IAMs_20	IAMs_20	23 26 10.9			
	comp=Z,20µm,22.0s								
PUAC	**Puerto Asis, P**	**101.27**	**98**	*e*P	**Pdif**	**22 47 10.6**	**-0.4**		
B08A	**Colville Reser**	**101.32**	**37**	IAMs_20	IAMs_20	23 23 57.4			
	comp=Z,24µm,21.0s								
MSTX	**Muleshoe**	**101.32**	**56**	Pdiff	**Pdif**	**22 47 12.1**	**+1.2**		
	baz=232								
LZH	**Lanzhou**	**101.43**	**307**	⇑P	**Pdif**	**22 47 14.6**	**+3.3**		
LZH				pP	pPdif	22 47 19.9	-1.8		
LZH				sP	pwP	22 47 23.5	-1.1		
LZH				PP	**PP**	**22 51 26.0**	**+4.3**		
LZH				SKS	**SKSac**	**22 57 47.8**	**-0.2**		
LZH				pmax	pmax				
	comp=Z,38nm,1.1s								
LZH				pmax	pmax				
	comp=Z,3µm,8.9s								
LZH				LR	LR				
	comp=Z,10µm,19.0s								
LZH				LR	LR				
	comp=Z,17µm,18.4s								
LZH				LR	LR				
	comp=Z,15µm,19.0s								
HIN	**Hinchinbrook I**	**101.54**	**16**	IAMs_20	IAMs_20	23 25 16.9			
	comp=Z,20µm,21.0s								
ZEA	**Zeya**	**101.57**	**331**	*e*P	**Pdif**	**22 47 12.5**	**+1.2**		
ZEA				*e*		22 51 30.2			
ZEA						22 57 50.7			
ZEA				*e*		23 09 42.5			
ZEA				pmax	pmax				
	comp=Z,800nm,14.6s								
ZEA				pmax	pmax				
	comp=Z,1µm,12.4s								
LKP	**Lekhapani**	**101.58**	**295**	*e*P	**Pdif**	**22 47 10.7**	**-1.3**		
LKP				*i* x	x	22 51 00.4			
KAIM	**Kayak Island**	**101.60**	**18**	IAMs_20	IAMs_20	23 31 36.7			
	comp=Z,26µm,19.0s								
SUA	**Susitna One**	**101.62**	**14**	IAMs_20	IAMs_20	23 28 59.1			
	comp=Z,24µm,20.0s								
735A	**Kenedy**	**101.64**	**63**	IAMs_20	IAMs_20	23 28 10.1			
	comp=Z,24µm,18.0s								
SIT	**Sitka**	**101.67**	**23**	IAMs_20	IAMs_20	23 24 12.6			
	comp=Z,17µm,21.0s								
O20A	**White River Ci**	**101.74**	**48**	Pdiff	**Pdif**	**22 47 12.3**	**-0.3**		
	baz=230								
AHID	**Auburn Hatcher**	**101.78**	**45**	IAMs_20	IAMs_20	23 29 36.4			
	comp=Z,21µm,19.0s								
EYAK	**Cordova Ski Ar**	**101.84**	**17**	IAMs_20	IAMs_20	23 25 04.0			
	comp=Z,23µm,22.0s								
FID	**Port Fidalgo**	**101.86**	**16**	IAMs_20	IAMs_20	23 25 26.2			
	comp=Z,19µm,22.0s								
SUCK	**Suckling Hills**	**101.89**	**18**	IAMs_20	IAMs_20	23 25 14.2			
	comp=Z,27µm,20.0s								
KOHI	**KOHIMA**	**101.89**	**293**	*e*P	**Pdif**	**22 47 11.8**	**-1.9**		
SMCO	**Snowmass**	**101.89**	**50**	IAMs_20	IAMs_20	23 28 27.2			
	comp=Z,17µm,19.0s								
SDCO	**Great Sand Dun**	**101.90**	**51**	Pdiff	**Pdif**	**22 47 15.3**	**+1.8**		
	baz=231								
MOKO	**MOKOCHONG**	**101.95**	**294**	*e*P	**Pdif**	**22 47 11.2**	**-2.7**		
SKT	**Skwentna**	**101.95**	**13**	IAMs_20	IAMs_20	23 28 41.8			
	comp=Z,18µm,21.0s								
SIV	**San Ignacio**	**101.99**	**121**	P	**Pdif**	**22 47 17.0**	**+2.7**		
	comp=Z,7.4nm,1.0s,baz=228,slow=5.0,SNR=21								
SIV				PP	**PP**	**22 51 28.9**	**+3.5**		
	comp=Z,3.3nm,1.0s,baz=233,slow=8.3,SNR=4.9								
ESPN	**Las Esperanzas**	**102.12**	**84**	IAMs_20	IAMs_20	23 23 23.5			
	comp=Z,19µm,20.0s								
T25A	**Trinidad**	**102.21**	**52**	Pdiff	**Pdif**	**22 47 16.7**	**+1.8**		
	baz=232								
SILR	**SILCHAR**	**102.30**	**292**	*e*P	**Pdif**	**22 47 15.0**	**-0.3**		
REDW	**Red Top Meadow**	**102.31**	**44**	IAMs_20	IAMs_20	23 33 34.3			
	comp=Z,18µm,18.0s								
NEW	**Newport**	**102.31**	**38**	P	**Pdif**	**22 47 16.3**	**+1.5**		
	comp=Z,1.6nm,0.9s,baz=246,slow=4.3,SNR=5.8								
NEW				PP	**PP**	**22 51 25.3**	**-2.8**		
	comp=Z,13nm,1.2s,baz=219,slow=9.5,SNR=3.5								
NEW	**Newport**	**102.31**	**38**	Pdiff	**Pdif**	**22 47 15.1**	**+0.3**		
	baz=226								
TPAW	**Teton Pass**	**102.33**	**44**	IAMs_20	IAMs_20	23 32 08.1			
	comp=Z,19µm,18.0s								
JORH	**JORHAT**	**102.38**	**294**	*e*P	**Pdif**	**22 47 17.1**	**+1.6**		
POPC	**Popayan, Colom**	**102.41**	**96**	*e*P	**Pdif**	**22 47 10.6**	**-5.8**		
BELO	**BELONIA**	**102.42**	**290**	*e*P	**Pdif**	**22 47 15.2**	**-0.6**		
BELO				*i* x	x	22 51 38.6			
SNOW	**Snow King Moun**	**102.43**	**44**	IAMs_20	IAMs_20	23 33 29.5			
	comp=Z,20µm,18.0s								
YKU2	**Yakutat**	**102.46**	**20**	IAMs_20	IAMs_20	23 29 41.3			
	comp=Z,20µm,20.0s								
PCON	**Cinco Dias**	**102.50**	**97**	*e*P	**Pdif**	**22 47 15.8**	**-1.4**		
ANM	**Nome**	**102.52**	**7**	IAMs_20	IAMs_20	23 29 55.8			
	comp=Z,20µm,20.0s								
SEY	**Seymchan**	**102.54**	**348**	P	**Pdif**	**22 47 16.1**	**+0.8**		
	comp=Z,4.8nm,0.9s,baz=340,slow=22,SNR=2.5								
SEY	**Seymchan**	**102.54**	**348**	⇓*e*P	**Pdif**	**22 47 15.3**	**-0.1**		
AMTX	**Amarillo**	**102.59**	**56**	Pdiff	**Pdif**	**22 47 18.1**	**+1.6**		
	baz=233								
AMTX	**Amarillo**	**102.59**	**56**	IAMs_20	IAMs_20	23 28 02.6			
	comp=Z,17µm,19.0s								
ABTX	**Abilene, Hawle**	**102.60**	**59**	Pdiff	**Pdif**	**22 47 17.7**	**+1.2**		
	baz=233								
ABTX	**Abilene, Hawle**	**102.60**	**59**	IAMs_20	IAMs_20	23 32 32.8			
	comp=Z,22µm,18.0s								
IMW	**Indian Meadow**	**102.61**	**44**	IAMs_20	IAMs_20	23 34 01.2			
	comp=Z,17µm,18.0s								
FLOC	**Florencia**	**102.63**	**98**	*e*P	**Pdif**	**22 47 17.4**	**+0.3**		
BW06	**Boulder Array**	**102.65**	**45**	Pdiff	**Pdif**	**22 47 18.4**	**+1.7**		
	baz=230								
BW06	**Boulder Array**	**102.65**	**45**	IAMs_20	IAMs_20	23 30 09.3			
	comp=Z,22µm,19.0s								
PDAR	**Pinedale Array**	**102.65**	**45**	P	**Pdif**	**22 47 18.3**	**+1.6**		
	comp=Z,2.4nm,0.8s,baz=211,slow=2.6,SNR=7.8								
PDAR				PP	**PP**	**22 51 27.6**	**-3.3**		
	comp=Z,9.3nm,1.2s,baz=225,slow=4.0,SNR=5.9								
PDAR				PKKPbc	**PKKPbc**	**23 03 18.1**	**+1.6**		
	comp=Z,1.3nm,0.3s,baz=73,slow=3.1,SNR=6.3								
PDAR	**Pinedale Array**	**102.65**	**45**	Pdif	**Pdif**	**22 47 15.9**	**-0.8**		
PPLA	**Purkeypile**	**102.68**	**13**	IAMs_20	IAMs_20	23 29 15.1			
	comp=Z,20µm,20.0s								
PCA	**Pinnacle**	**102.80**	**19**	IAMs_20	IAMs_20	23 25 53.3			
	comp=Z,26µm,21.0s								
BCPM	**Bancas Point**	**102.84**	**20**	IAMs_20	IAMs_20	23 27 20.4			
	comp=Z,18µm,20.0s								
FLWY	**Flagg Ranch**	**102.86**	**44**	IAMs_20	IAMs_20	23 33 16.9			
	comp=Z,18µm,18.0s								
Q24A	**Divide**	**102.87**	**51**	Pdiff	**Pdif**	**22 47 19.8**	**+1.9**		
	baz=232								
Q24A	**Divide**	**102.87**	**51**	IAMs_20	IAMs_20	23 28 43.1			
	comp=Z,16µm,19.0s								
435B	**Jarrell**	**102.93**	**61**	Pdiff	**Pdif**	**22 47 18.2**	**+0.3**		
	baz=234								
435B	**Jarrell**	**102.93**	**61**	IAMs_20	IAMs_20	23 24 40.3			
	comp=Z,22µm,21.0s								
MSO	**Missoula**	**102.93**	**40**	Pdiff	**Pdif**	**22 47 18.3**	**+0.6**		
	baz=228								
MSO	**Missoula**	**102.93**	**40**	IAMs_20	IAMs_20	23 24 23.9			
	comp=Z,27µm,22.0s								
AGT	**Agartala**	**102.93**	**290**	*ex*	**Pdif**	**22 47 06.5**	**-12**		
AGT				*i* x	x	22 51 49.1			
JIS	**Juneau Island**	**102.96**	**23**	IAMs_20	IAMs_20	23 25 11.7			
	comp=Z,22µm,21.0s								
VRDI	**Verde Repeater**	**102.98**	**17**	IAMs_20	IAMs_20	23 32 41.0			
	comp=Z,18µm,19.0s								
BESE	**Bessie Mountai**	**103.06**	**23**	IAMs_20	IAMs_20	23 26 29.4			
	comp=Z,24µm,20.0s								
GLB	**Gilahina Butte**	**103.08**	**17**	IAMs_20	IAMs_20	23 25 43.7			
	comp=Z,18µm,21.0s								
ISCO	**Idaho Springs**	**103.10**	**50**	Pdiff	**Pdif**	**22 47 17.4**	**-1.4**		
	baz=232								
ISCO	**Idaho Springs**	**103.10**	**50**	IAMs_20	IAMs_20	23 29 10.2			
	comp=Z,17µm,19.0s								
GARC	**Garzon, Huila**	**103.12**	**97**	*e*P	**Pdif**	**22 47 19.6**	**0.0**		
H17A	**Grant Village**	**103.13**	**44**	Pdiff	**Pdif**	**22 47 21.3**	**+2.5**		
	baz=230								
ZIRO	**ZIRO**	**103.13**	**295**	*e*P	**Pdif**	**22 47 18.1**	**-1.1**		
ZIRO				IAmb	IAmb	22 47 32.6			
	comp=Z,19nm,1.2s								
MARP	**Paez Belalcaza**	**103.16**	**97**	*e*P	**Pdif**	**22 47 09.9**	**-10**		
MCARA	**McCarthy VSAT**	**103.22**	**17**	IAMs_20	IAMs_20	23 25 46.3			
	comp=Z,18µm,21.0s								
TNA	**Tin City**	**103.29**	**5**	IAMs_20	IAMs_20	23 29 19.2			
	comp=Z,19µm,20.0s								
BOZ	**Bozeman (W)**	**103.33**	**42**	Pdiff	**Pdif**	**22 47 19.3**	**-0.3**		
	baz=229								
TEZP	**TEZPUR**	**103.37**	**293**	*e*P	**Pdif**	**22 47 18.6**	**-1.4**		
JTMT	**Jette**	**103.37**	**39**	IAMs_20	IAMs_20	23 25 09.5			
	comp=Z,20µm,22.0s								
SHL	**Shillong**	**103.43**	**292**	*e*P	**Pdif**	**22 47 19.6**	**-1.0**		
SHL				IAmb	IAmb	22 47 32.6			
	comp=Z,16nm,1.1s								
BETC	**Betania**	**103.47**	**97**	*e*P	**Pdif**	**22 47 21.9**	**+1.0**		
KTH	**Kantishna Hill**	**103.51**	**13**	IAMs_20	IAMs_20	23 30 13.0			
	comp=Z,20µm,21.0s								
YOTC	**Yotoco, Valle**	**103.55**	**95**	*e*P	**Pdif**	**22 47 19.3**	**-2.0**		
N23A	**Red Feather La**	**103.58**	**49**	Pdiff	**Pdif**	**22 47 22.1**	**+1.2**		
	baz=232								
SKAG	**Skagway**	**103.64**	**22**	IAMs_20	IAMs_20	23 27 05.6			
	comp=Z,25µm,21.0s								
HKT	**Hockley**	**103.67**	**63**	IAMs_20	IAMs_20	23 29 56.0			
	comp=Z,21µm,19.0s								
WHTX	**Lake Whitney,**	**103.73**	**60**	Pdiff	**Pdif**	**22 47 21.8**	**+0.3**		
	baz=234								
RND	**Reindeer**	**103.76**	**14**	IAMs_20	IAMs_20	23 30 06.6			
	comp=Z,22µm,20.0s								
GUWA	**GUWAHATI**	**103.94**	**292**	*ex*	**Pdif**	**22 47 21.8**	**-0.8**		
MCK	**McKinley**	**104.04**	**14**	Pdiff	**Pdif**	**22 47 23.5**	**+1.4**		
	baz=205								
HYT	**Haines Junctio**	**104.15**	**20**	IAMs_20	IAMs_20	23 27 43.1			
	comp=Z,25µm,20.0s								
PLMC	**San Jos del P**	**104.15**	**95**	*e*P	**Pdif**	**22 47 18.8**	**-5.1**		
RLMT	**Red Lodge**	**104.31**	**44**	Pdiff	**Pdif**	**22 47 25.6**	**+1.6**		
	baz=231								
RLMT	**Red Lodge**	**104.31**	**44**	IAMs_20	IAMs_20	23 34 58.3			
	comp=Z,18µm,18.0s								
K22A	**Casper**	**104.32**	**47**	Pdiff	**Pdif**	**22 47 24.2**	**+0.1**		
	baz=232								
K22A	**Casper**	**104.32**	**47**	IAMs_20	IAMs_20	23 30 50.5			
	comp=Z,20µm,19.0s								
ORTC	**Ortega, Tolima**	**104.37**	**96**	*e*P	**Pdif**	**22 47 20.3**	**-4.6**		
MACC	**Macarena, Meta**	**104.39**	**99**	*e*P	**Pdif**	**22 47 15.8**	**-9.1**		
MENT	**Mentasta**	**104.41**	**16**	IAMs_20	IAMs_20	23 33 52.9			
	comp=Z,15µm,19.0s								
WALA	**Waterton Lakes**	**104.42**	**39**	IAMs_20	IAMs_20	23 25 59.5			
	comp=Z,15µm,21.0s								
WMOK	**Wichita Mounta**	**104.43**	**57**	Pdiff	**Pdif**	**22 47 26.0**	**+1.5**		
	baz=234								
WMOK	**Wichita Mounta**	**104.43**	**57**	IAMs_20	IAMs_20	23 29 48.2			
	comp=Z,20µm,18.0s								
KSCO	**Kaye Shedlock'**	**104.46**	**52**	Pdiff	**Pdif**	**22 47 26.3**	**+1.5**		
	baz=233								
KSCO	**Kaye Shedlock'**	**104.46**	**52**	IAMs_20	IAMs_20	23 31 52.1			
	comp=Z,14µm,18.0s								
DLBC	**Dease Lake**	**104.49**	**25**	IAMs_20	IAMs_20	23 28 58.1			
	comp=Z,18µm,19.0s								
PRAC	**Prado**	**104.53**	**97**	*e*P	**Pdif**	**22 47 15.1**	**-11**		
L26K	**Log Cabin Wild**	**104.57**	**16**	P	**Pdif**	**22 47 28.4**	**+3.9**		
	baz=210								
ANIL	**Santa Ana**	**104.60**	**96**	*e*P	**Pdif**	**22 47 20.5**	**-5.7**		
SPB	**Sao Paulo**	**104.76**	**136**	IAMs_20	IAMs_20	23 28 24.8			
	comp=Z,24µm,21.0s								
NEA2	**Nenana**	**104.80**	**13**	Pdiff	**Pd

SPBC **San Pablo de B** 106.35 96 *e*P **Pdif** **22 47 30.4 -3.3**
DAWY **Dawson** 106.38 17 IAMs_20 IAMs_20 23 27 50.1
comp=Z,27µm,22.0s
OK031 **S. Brethren Rd** 106.42 57 IAMs_20 IAMs_20 23 26 17.0
comp=Z,16µm,22.0s
LCBC **Los crdobas,** 106.45 91 *e*P **Pdif** **22 47 27.6 -6.4**
UREC **San Jos de Ur** 106.45 93 *e*P **Pdif** **22 47 33.1 -1.0**
PVM **Polavaram** 106.53 279 *e*Pdif **Pdif** **22 47 34.5 +0.3**
PVM IVMs_BB IVMs_BB 23 34 11.7
comp=Z,3µm,22.1s
EGAK **Eagle** 106.58 16 IAMs_20 IAMs_20 23 28 19.2
comp=Z,19µm,21.0s
PTBC **PUERTO BERRIO** 106.58 95 *e*P **Pdif** **22 47 31.5 -3.1**
R32A **Long Quarter,** 106.60 54 IAMs_20 IAMs_20 23 33 36.8
comp=Z,16µm,19.0s
QUOK **Quay** 106.64 57 IAMs_20 IAMs_20 23 38 01.6
comp=Z,17µm,19.0s
RSSD **Black Hills** 106.65 47 Pdiff **Pdif** **22 47 34.3 -0.2**
baz=234
RSSD P **PKiKP** **22 51 47.7 +2.9**
baz=234
KS20 **Mayfield South** 106.67 56 IAMs_20 IAMs_20 23 33 11.6
comp=Z,20µm,19.0s
ULN **Ulaanbaatar** 106.79 318 *d i*P **Pdif** **22 47 36.9 +2.0**
ULN MLR MLR
comp=Z,16µm,21.0s
GTK **Tadong** 106.85 292 *e*P **Pdif** **22 47 39.3 +3.6**
BOK **Bokaro** 106.92 287 *e*P **Pdif** **22 47 35.2 -0.7**
BOK *i* x x 22 51 30.9
LAO **LASA Array** 106.95 44 Pdiff **Pdif** **22 47 35.8 +0.3**
baz=233
LAO P **PKiKP** **22 51 49.0 +4.0**
baz=233
MOTC **Monteria, Cord** 106.96 92 *e*P **Pdif** **22 47 29.9 -6.3**
PTGC **Puerto Gaitan,** 107.00 98 *e*P **Pdif** **22 47 29.3 -7.2**
COLD **Coldfoot** 107.00 12 Pdiff **Pdif** **22 47 38.7 +3.6**
baz=205
COLD P **PKiKP** **22 51 45.9 +1.5**
baz=205
MYLAV **Mylavaram** 107.02 278 *e*Pdif **Pdif** **22 47 35.4 -1.1**
MYLAV IVMs_BB IVMs_BB 23 37 13.6
comp=Z,4µm,18.9s
ADKI **Addanki** 107.03 277 *e*Pdif **Pdif** **22 47 37.1 +0.7**
ADKI *e*PP **PP** **22 52 05.1 +1.7**
ADKI IVMs_BB IVMs_BB 23 39 13.0
comp=Z,6µm,18.9s
TUL1 **Leonard** 107.10 58 Pdiff **Pdif** **22 47 38.6 +2.2**
baz=236
TUL1 P **PKiKP** **22 51 47.7 +2.1**
baz=236
TUL1 **Leonard** 107.10 58 IAMs_20 IAMs_20 23 31 51.9
comp=Z,24µm,19.0s
SONM **Songino Array** 107.12 318 Pdiff **Pdif** **22 47 38.0 +1.7**
comp=Z,1.5nm,0.9s,baz=136,slow=3.9,SNR=7.8
SONM PKiKP **PKiKP** **22 51 46.9 +1.5**
comp=Z,5.0nm,0.9s,baz=155,slow=3.4,SNR=3.9
SONM PKKPbc **PKKPbc** **23 03 04.4 +1.5**
comp=Z,13nm,1.0s,baz=281,slow=1.8,SNR=10
YAK **Yakutsk** 107.14 338 ǁ *i*P **Pdif** **22 47 37.0 +1.2**
T35A **Sooner Cattle** 107.19 57 IAMs_20 IAMs_20 23 32 01.2
comp=Z,23µm,18.0s
RUSC **La Rusia** 107.28 96 *e*P **Pdif** **22 47 35.9 -2.4**
BRRC **Barranca, Sant** 107.51 95 *e*P **Pdif** **22 47 32.4 -6.3**
SUR **Sutherland** 107.62 199 PKiKP **PKiKP** **22 51 47.4 +0.3**
comp=Z,14nm,0.9s,baz=100,slow=4.8,SNR=3.6
SUR PKKPbc **PKKPbc** **23 03 01.5 +0.8**
comp=Z,11nm,1.0s,baz=0.0,slow=2.0,SNR=1.8
SUR **Sutherland** 107.62 199 **PKiKP** **22 51 45.8 -1.4**
Z41A **Richland Creek** 107.67 61 Pdiff **Pdif** **22 47 41.5 +2.5**
baz=236
Z41A **Richland Creek** 107.67 61 IAMs_20 IAMs_20 23 33 34.9
comp=Z,14µm,19.0s
WLAR **White Oak Lake** 107.70 61 IAMs_20 IAMs_20 23 28 00.6
comp=Z,21µm,21.0s
MIAR **Mount Ida** 107.85 60 Pdiff **Pdif** **22 47 41.5 +1.8**
baz=236
MIAR **Mount Ida** 107.85 60 IAMs_20 IAMs_20 23 32 57.6
comp=Z,18µm,18.0s
NJS **Nagarjunasagar** 107.96 277 *e*Pdif **Pdif** **22 47 41.9 +1.3**
NJS IVMs_BB IVMs_BB 23 40 01.7
comp=Z,4µm,19.5s
GGR **Gangavaram** 107.97 279 *e*Pdif **Pdif** **22 47 39.7 -1.0**
GGR IVMs_BB IVMs_BB 23 35 18.6
comp=Z,4µm,21.8s
SJCC **San Jacinto, C** 108.00 91 *e*P **Pdif** **22 47 41.4 +0.4**
ABPO **Ambohimpanom** 108.05 227 IAMs_20 IAMs_20 23 28 48.7
comp=Z,15µm,20.0s
W39A **Magazine** 108.06 59 Pdiff **Pdif** **22 47 41.4 +0.7**
baz=236
W39A **Magazine** 108.06 59 IAMs_20 IAMs_20 23 28 37.4
comp=Z,21µm,20.0s
RAMN **Ramite** 108.13 290 *e*P PKiKP 22 51 32.7 -15
X40A **Basin Creek Fa** 108.33 60 Pdiff **Pdif** **22 47 41.1 -0.8**
baz=236
X40A **Basin Creek Fa** 108.33 60 IAMs_20 IAMs_20 23 31 37.3
comp=Z,19µm,19.0s
KSU1 **Kansas State U** 108.34 55 Pdiff **Pdif** **22 47 43.9 +2.0**
baz=236
KSU1 P **PKiKP** **22 51 47.5 -0.3**
baz=236
U38A **Gravette** 108.34 58 IAMs_20 IAMs_20 23 32 30.7
comp=Z,20µm,19.0s
TOLK **Toolik Lake Re** 108.39 11 Pdiff **Pdif** **22 47 45.3 +3.9**
baz=205
TOLK P **PKiKP** **22 51 50.5 +3.5**
baz=205
TOLK **Toolik Lake Re** 108.39 11 IAMs_20 IAMs_20 23 29 45.0
comp=Z,19µm,22.0s
OPO **Ambohidratompo** 108.42 228 PKiKP **PKiKP** **22 51 48.9 0.0**
comp=Z,5.4nm,0.8s,baz=33,slow=2.7,SNR=3.7
HHAR **Hobbs** 108.56 58 IAMs_20 IAMs_20 23 34 06.3
comp=Z,18µm,18.0s
BGNE **Belgrade** 108.64 52 Pdiff **Pdif** **22 47 44.5 +1.3**
baz=236
URV **Uravakonda** 108.66 275 *e*Pdif **Pdif** **22 47 43.3 -0.5**
URV IVMs_BB IVMs_BB 23 41 06.3
comp=Z,6µm,18.2s
CUPL **Choutuppal** 108.68 278 *e*Pdif **Pdif** **22 47 45.3 +1.5**
CUPL IVMs_BB IVMs_BB 23 40 24.9
comp=Z,4µm,18.6s
N33A **J Bar K, Exete** 108.71 53 IAMs_20 IAMs_20 23 36 15.6
comp=Z,16µm,18.0s
VBMS **Vicksburg** 108.71 64 Pdiff **Pdif** **22 47 47.0 +3.4**
baz=237
K31A **O'Neill** 108.94 51 IAMs_20 IAMs_20 23 35 48.8
comp=Z,17µm,18.0s
HYB **Hyderabad** 109.04 278 *i* Pdif **Pdif** **22 47 52.0 +6.5**
HYB *e*PP **PP** **22 52 20.0 +1.8**
HYB *e*SKS **SKSac** **22 58 20.0 -2.9**
HYBB **Hyderabad (bro** 109.04 278 *e*Pdif **Pdif** **22 47 44.7 -0.7**
HYBB IVMs_BB IVMs_BB 23 40 25.8
comp=Z,4µm,19.0s
W41B **Gary Mavity, V** 109.11 60 Pdiff **Pdif** **22 47 46.9 +1.6**
baz=237
W41B P **PKiKP** **22 51 52.2 +2.8**
baz=237
W41B **Gary Mavity, V** 109.11 60 IAMs_20 IAMs_20 23 33 28.9
comp=Z,20µm,18.0s
WHAR **Wooly Hollow** 109.14 60 IAMs_20 IAMs_20 23 33 20.9
comp=Z,15µm,19.0s
GUN **Gumba** 109.19 291 *e*P **PKKPbc** **23 02 58.3 +2.4**
comp=Z,538nm,1.8s
RPR **Rampur** 109.26 279 *e*Pdif **Pdif** **22 47 47.6 +1.3**
RPR IVMs_BB IVMs_BB 23 35 57.4
comp=Z,4µm,20.8s
U40A **Yellville** 109.33 59 Pdiff **Pdif** **22 47 47.0 +0.7**
baz=237
U40A P **PKiKP** **22 51 51.5 +1.7**
baz=237
PKI **Pulchoki** 109.35 290 *e*P PKiKP 22 51 41.4 -9.1
PKI **Pulchoki** 109.35 290 *e*P **PKKPbc** **23 02 57.0 +1.7**
comp=Z,122nm,1.4s
PKIN **Phulchoki** 109.36 290 *e*P PKiKP 22 51 41.3 -9.1
SMRC **Santa Marta, M** 109.50 91 *e*P **Pdif** **22 47 41.4 -6.2**
KKN **Kakani** 109.57 290 *e*P **PKKPbc** **23 02 56.8 +2.3**
comp=Z,263nm,1.7s
FCAR **Ozark Folk Cen** 109.58 59 IAMs_20 IAMs_20 23 30 12.4
comp=Z,24µm,20.0s
DMN **Daman** 109.60 290 *e*P **PKKPbc** **23 02 56.1 +1.7**
comp=Z,480nm,1.9s
X43A **Marvell** 109.70 61 Pdiff **Pdif** **22 47 48.1 +0.2**
baz=237
X43A P **PKiKP** **22 51 54.1 +3.7**
baz=237
X43A **Marvell** 109.70 61 IAMs_20 IAMs_20 23 29 14.6
comp=Z,18µm,21.0s
S39A **Bolivar** 109.73 57 IAMs_20 IAMs_20 23 29 00.6
comp=Z,19µm,20.0s
SUSD **Miller** 109.83 49 Pdiff **Pdif** **22 47 50.5 +2.2**
baz=236
SUSD **Miller** 109.83 49 IAMs_20 IAMs_20 23 33 22.3
comp=Z,13µm,19.0s
BOSA **Boshof** 109.88 204 PKiKP **PKiKP** **22 51 53.4 +2.0**
comp=Z,7.1nm,0.9s,baz=175,slow=6.5,SNR=3.6
BOSA PKKPbc **PKKPbc** **23 02 54.1 +0.7**
comp=Z,3.5nm,0.8s,baz=325,slow=2.9,SNR=2.2
N35A **Tabor** 109.92 53 IAMs_20 IAMs_20 23 37 04.7
comp=Z,14µm,19.0s
A21K **Barrow** 109.94 8 Pdiff **Pdif** **22 47 50.5 +2.5**
baz=200
A21K P **PKiKP** **22 51 51.0 +1.3**
baz=200
A21K **Barrow** 109.94 8 IAMs_20 IAMs_20 23 35 17.9
comp=Z,19µm,20.0s
E28A **Huff** 109.99 46 IAMs_20 IAMs_20 23 35 21.5
comp=Z,19µm,18.0s
MGMO **Mountain Grove** 110.16 58 IAMs_20 IAMs_20 23 34 31.7
comp=Z,21µm,18.0s
GKN **Gorkha** 110.16 290 *e*P **PKiKP** **22 51 47.9 -3.9**
comp=Z,91nm,1.3s
GKN **Gorkha** 110.16 290 *e*P **PKKPbc** **23 02 54.1 +1.6**
comp=Z,121nm,1.4s
ZAK **Zakamensk** 110.28 318 *e*P **Pdif** **22 47 49.8 -0.5**
ZAK pmax pmax
comp=Z,7.0nm,1.6s
Y45A **Yeager Farm, C** 110.29 62 IAMs_20 IAMs_20 23 35 10.1
comp=Z,12µm,18.0s
LCAR **Lake Charles** 110.34 60 IAMs_20 IAMs_20 23 30 26.5
comp=Z,16µm,20.0s
BDFB **Brasilia** 110.67 130 PKiKP **PKiKP** **22 51 53.5 +0.4**
comp=Z,3.7nm,0.8s,baz=195,slow=3.5,SNR=3.5
BDFB PKKPbc **PKKPbc** **23 02 50.4 -0.1**
comp=Z,3.1nm,0.6s,baz=168,slow=4.5,SNR=3.7
MET **Memphis--Engin** 110.68 61 IAMs_20 IAMs_20 23 29 52.6
comp=Z,18µm,20.0s
NGP **Nagpur** 110.72 281 *ep*Pdiff **Pdif** **22 47 52.9 +0.1**
NGP *i* PP **PP** **22 52 28.7 -1.6**
NGP *e*PPP PPP 22 54 44.6
NGP IVMs_BB IVMs_BB 23 39 32.8
comp=Z,9µm,19.2s
OXF **Oxford** 110.72 62 Pdiff **Pdif** **22 47 54.2 +1.7**
baz=238
R40A **Maddies Statio** 110.76 57 IAMs_20 IAMs_20 23 28 50.7
comp=Z,21µm,22.0s
KOLN **Koldanda** 110.81 289 *e*P **PKiKP** **22 51 49.7 -3.4**
comp=Z,62nm,0.8s
KOLN **Koldanda** 110.81 289 *e*P **PKKPbc** **23 02 49.4 -1.0**
comp=Z,155nm,1.5s
TLY **Talaya** 110.83 320 *e*P **Pdif** **22 47 57.1 +4.5**
TLY *e* 22 58 24.4
TLY *e*PPS PPS 23 03 00.2
TLY pmax pmax
comp=Z,20nm,1.3s
ECSD **EROS Data Cent** 110.86 50 Pdiff **Pdif** **22 47 53.7 +0.8**
baz=238
ECSD P **PKiKP** **22 51 52.1 -0.3**
baz=238
ECSD **EROS Data Cent** 110.86 50 IAMs_20 IAMs_20 23 36 06.6
comp=Z,18µm,18.0s
MTDJ **Mount Denham** 110.91 83 IAMs_20 IAMs_20 23 34 42.5
comp=Z,20µm,18.0s
KLRI **Killari** 110.94 277 *e*Pdif **Pdif** **22 47 53.6 -0.3**
KLRI IVMs_BB IVMs_BB 23 41 20.2
comp=Z,8µm,18.2s
Z47A **Carrollton** 110.98 64 IAMs_20 IAMs_20 23 37 16.4
comp=Z,13µm,18.0s
DANN **Dangsing** 111.00 290 *e*P **PKiKP** **22 51 52.9 -0.6**
comp=Z,94nm,0.8s
DANN **Dangsing** 111.00 290 *e*P **PKKPbc** **23 02 51.0 +1.1**
comp=Z,93nm,1.0s
SDV **Santo Domingo** 111.01 95 *e*P **Pdif** **22 47 42.5 -12**
SDV **Santo Domingo** 111.01 95 IAMs_20 IAMs_20 23 33 52.8
comp=Z,17µm,18.0s
GNAR **Gosnell** 111.06 60 IAMs_20 IAMs_20 23 34 28.8
comp=Z,16µm,19.0s
W45A **Hickory Valley** 111.22 61 IAMs_20 IAMs_20 23 30 09.8
comp=Z,22µm,21.0s
INK **Inuvik** 111.23 17 Pdiff **Pdif** **22 48 04.9 +11**
comp=Z,3.8nm,1.1s,baz=179,slow=7.5,SNR=4.8
INK PKiKP **PKiKP** **22 51 52.2 -0.1**
comp=Z,14nm,0.9s,baz=223,slow=2.2,SNR=11
INK PKKPbc **PKKPbc** **23 02 50.5 +0.6**
comp=Z,6.8nm,1.1s,baz=46,slow=6.1,SNR=5.6
INK **Inuvik** 111.23 17 IAMs_20 IAMs_20 23 31 03.2
comp=Z,25µm,21.0s
PEBM **Pemiscott Bayo** 111.25 60 IAMs_20 IAMs_20 23 34 33.6
comp=Z,14µm,19.0s
MDND **Maddock** 111.31 46 Pdiff **Pdif** **22 47 56.7 +1.9**
baz=237
CCM **Cathedral Cave** 111.32 58 Pdiff **Pdif** **22 47 54.3 -0.7**
baz=238
CCM P **PKiKP** **22 51 54.9 +1.4**
baz=238
CCM **Cathedral Cave** 111.32 58 IAMs_20 IAMs_20 23 38 20.9
comp=Z,19µm,18.0s
N38A **Joes South For** 111.44 55 IAMs_20 IAMs_20 23 33 36.7
comp=Z,14µm,19.0s
PYUN **Piuthan** 111.44 289 *e*P **PKiKP** **22 51 54.5 +0.2**
PYUN **Piuthan** 111.44 289 *e*P **PKKPbc** **23 02 47.5 -0.9**
comp=Z,173nm,1.4s
PVMO **Portageville** 111.52 60 IAMs_20 IAMs_20 23 30 00.8
comp=Z,13µm,20.0s
P40A **Paris** 111.55 56 IAMs_20 IAMs_20 23 37 28.8
comp=Z,19µm,18.0s
URIC **Uribia, Colomb** 111.59 92 *e*P **Pdif** **22 47 51.4 -5.4**
LRAL **Lakeview Retre** 111.66 64 Pdiff **Pdif** **22 47 58.0 +1.3**
baz=238
GOA **Goa** 111.69 273 *ex* **Pdif** **22 48 03.1 +5.9**
PLAL **Pickwick Lake** 111.91 62 IAMs_20 IAMs_20 23 29 40.0
comp=Z,15µm,22.0s
SCIA **State Center** 112.03 54 Pdiff **Pdif** **22 48 00.9 +2.8**
baz=239
SCIA P **PKiKP** **22 51 55.4 +0.7**
baz=239
F33A **5 Mile Ranch,** 112.17 49 IAMs_20 IAMs_20 23 36 03.2
comp=Z,17µm,19.0s
SLM **Saint Louis** 112.30 58 IAMs_20 IAMs_20 23 39 17.5
comp=Z,18µm,18.0s
D32A **Dogwood Acres,** 112.42 47 IAMs_20 IAMs_20 23 36 00.8
comp=Z,17µm,19.0s
061Z **Ocoppi** 112.43 74 IAMs_20 IAMs_20 23 30 41.3
comp=Z,19µm,20.0s
Y49A **Blount Mountai** 112.50 64 IAMs_20 IAMs_20 23 36 30.8
comp=Z,12µm,18.0s
T45A **Paducah** 112.56 60 IAMs_20 IAMs_20 23 31 33.1
comp=Z,14µm,20.0s
WVT **Waverly** 112.67 61 Pdiff **Pdif** **22 48 03.0 +1.9**
baz=239
WVT P **PKiKP** **22 51 57.2 +1.1**
baz=239
WVT **Waverly** 112.67 61 IAMs_20 IAMs_20 23 35 29.2
comp=Z,22µm,19.0s
K38A **Parkersburg** 112.69 53 IAMs_20 IAMs_20 23 39 08.9
comp=Z,15µm,18.0s
YKA **Yellowknife Ar** 112.76 27 Pdiff **Pdif** **22 48 09.0 +8.2**
comp=Z,0.2nm,0.6s,baz=160,slow=28,SNR=3.5
YKA PKiKP **PKiKP** **22 51 55.5 +0.1**
comp=Z,8.9nm,0.8s,baz=257,slow=0.9,SNR=27
YKA PKKPbc **PKKPbc** **23 02 42.8 -1.9**
comp=Z,7.6nm,0.9s,baz=48,slow=3.9,SNR=9.3
YKA SKKPbc SKKPbc 23 06 28.0 -1.6
comp=Z,1.9nm,1.0s,baz=56,slow=5.1,SNR=2.5
N41A **Harden Midland** 112.94 56 IAMs_20 IAMs_20 23 36 56.6
comp=Z,20µm,18.0s
I37A **Lemond, Waseca** 112.99 52 IAMs_20 IAMs_20 23 40 18.9
comp=Z,12µm,18.0s
LBTB **Lobatse** 113.10 206 PKiKP **PKiKP** **22 51 57.2 -0.3**
comp=Z,4.9nm,1.0s,baz=333,slow=23,SNR=2.7
LBTB PKKPbc **PKKPbc** **23 02 42.7 -0.1**
comp=Z,4.9nm,0.8s,baz=333,slow=1.9,SNR=4.5
BHPL **Bhopal** 113.12 282 *ex* **Pdif** **22 47 54.4 -9.1**
BHPL *i* x x 22 52 42.9
V48A **Smith Brothers** 113.17 62 IAMs_20 IAMs_20 23 32 30.5
comp=Z,18µm,20.0s
Q44A **Meyer Farm, Va** 113.26 58 IAMs_20 IAMs_20 23 36 01.3
comp=Z,21µm,18.0s
P43A **Skaggs, Pawnee** 113.29 57 IAMs_20 IAMs_20 23 30 05.7
comp=Z,20µm,22.0s
POO **Poona** 113.37 276 *ex* **Pdif** **22 48 09.6 +4.9**
L40A **Anamosa** 113.39 54 IAMs_20 IAMs_20 23 37 30.3
comp=Z,15µm,19.0s
T47A **Sharon Grove** 113.60 61 IAMs_20 IAMs_20 23 36 05.9
comp=Z,16µm,19.0s
AGMN **Agassiz Nation** 113.68 47 P **PKiKP** **22 51 57.3 -0.3**
baz=240
AGMN **Agassiz Nation** 113.68 47 IAMs_20 IAMs_20 23 36 01.3
comp=Z,15µm,20.0s
CLTN **Cedars of Leba** 113.69 62 IAMs_20 IAMs_20 23 34 45.3
comp=Z,18µm,20.0s
FFC **Flin Flon** 113.72 38 IAMs_20 IAMs_20 23 43 09.4
comp=Z,16µm,18.0s
F36A **Milaca** 113.84 50 IAMs_20 IAMs_20 23 36 32.5
comp=Z,20µm,19.0s
HDIL **Hopedale** 113.89 56 P **PKiKP** **22 51 59.4 +1.1**
baz=240
HDIL **Hopedale** 113.89 56 IAMs_20 IAMs_20 23 34 30.8
comp=Z,19µm,19.0s
SPMN **Marine on St.** 113.97 51 P **PKiKP** **22 51 58.1 -0.1**
baz=240
SPMN **Marine on St.** 113.97 51 IAMs_20 IAMs_20 23 35 33.7
comp=Z,16µm,19.0s
Y52A **Lilburn** 114.19 65 IAMs_20 IAMs_20 23 39 30.4
comp=Z,13µm,18.0s
O44A **Mansfield** 114.25 57 IAMs_20 IAMs_20 23 35 55.0
comp=Z,16µm,18.0s
U49A **Red Boiling Sp** 114.29 62 IAMs_20 IAMs_20 23 35 21.1
comp=Z,18µm,19.0s
C36M **Paulatuk** 114.32 19 P **PKiKP** **22 51 58.2 +0.1**
baz=226
C36M **Paulatuk** 114.32 19 IAMs_20 IAMs_20 23 33 12.7
comp=Z,15µm,21.0s
GOGA **Godfrey** 114.40 66 P **PKiKP** **22 51 59.5 0.0**
baz=240
JFWS **Jewell Farm** 114.43 54 P PKPdf 22 51 59.1 -0.2
baz=241
JFWS **Jewell Farm** 114.43 54 IAMs_20 IAMs_20 23 35 57.0
comp=Z,15µm,19.0s
TIXI **Tiksi** 114.65 344 ǁ *i*PKIKP PKPdf 22 51 58.2 -0.5
TIXI pmax pmax
comp=Z,199nm,1.7s
TIXI **Tiksi** 114.65 344 IAMs_20 IAMs_20 23 33 55.6
comp=Z,17µm,22.0s
ULM **Lac du Bonnet** 114.65 45 PKP PKPdf 22 51 58.6 -0.7
comp=Z,9.1nm,0.6s,baz=18,slow=1.5,SNR=5.9
ULM PKKPab **PKKPbc** **23 02 38.3 +0.4**
comp=Z,8.0nm,1.0s,baz=55,slow=3.1,SNR=3.6
ULM **Lac du Bonnet** 114.65 45 ǁ *i*PKIKP PKPdf 22 51 58.9 -0.5
ULM **Lac du Bonnet** 114.65 45 IAMs_20 IAMs_20 23 42 12.9
comp=Z,14µm,18.0s
CPCT **Cooper Cave** 114.65 63 IAMs_20 IAMs_20 23 32 03.0
comp=Z,15µm,22.0s
I40A **Norwalk** 114.67 53 IAMs_20 IAMs_20 23 37 30.4
comp=Z,12µm,18.0s
WCI **Wyandotte Cave** 114.78 60 P **PKiKP** **22 52 00.6 +0.5**
baz=241
W52A **Murphy** 114.90 64 IAMs_20 IAMs_20 23 38 29.2
comp=Z,13µm,19.0s
M44A **Midewin, Midew** 115.13 56 IAMs_20 IAMs_20 23 35 46.4
comp=Z,20µm,19.0s
T50A **Nancy** 115.20 62 IAMs_20 IAMs_20 23 37 18.1
comp=Z,20µm,19.0s
SFIN **Lafayette** 115.27 57 IAMs_20 IAMs_20 23 37 24.2
comp=Z,19µm,18.0s
TKL **Tuckaleechee C** 115.28 63 PKP **PKiKP** **22 52 02.7 +1.6**
comp=Z,10nm,1.0s,baz=191,slow=9.5,SNR=4.5
HQIL **Hanson Quary C** 115.45 56 IAMs_20 IAMs_20 23 36 13.9
comp=Z,17µm,19.0s
R49A **Shelbyville** 115.58 60 IAMs_20 IAMs_20 23 32 35.3
comp=Z,15µm,22.0s
L44A **Lake County Fo** 115.59 55 P **PKPdf** **22 52 01.4 0.0**
baz=242
L44A **Lake County Fo** 115.59 55 IAMs_20 IAMs_20 23 38 29.7
comp=Z,19µm,18.0s
G40A **Rib Lake** 115.60 52 IAMs_20 IAMs_20 23 38 12.8
comp=Z,18µm,19.0s
X54A **Belton** 115.75 65 P **PKiKP** **22 52 02.6 +0.6**
baz=241
I42A **Draeger Farm,** 115.75 53 IAMs_20 IAMs_20 23 40 24.0
comp=Z,13µm,18.0s
TZTN **Tazewell** 115.87 63 IAMs_20 IAMs_20 23 34 16.0
comp=Z,13µm,20.0s
V53A **Saluda** 115.97 64 IAMs_20 IAMs_20 23 33 19.7
comp=Z,14µm,20.0s
WMQ **Urumqi** 116.00 306 PKP **PKPdf** **22 51 59.1 -3.2**
WMQ PP **PP** **22 53 09.3 +1.7**
WMQ SKKS 22 59 59.6
WMQ SS **SS** **23 09 08.3 +0.7**
WMQ AMB AMB
comp=Z,2µm,8.1s
WMQ LR LR
comp=Z,8µm,25.7s
WMQ LR LR
comp=Z,13µm,25.7s
WMQ LR LR
comp=Z,19µm,20.3s
EYMN **Ely** 116.07 48 P **PKPdf** **22 52 01.6 -0.6**
baz=242
EYMN **Ely** 116.07 48 IAMs_20 IAMs_20 23 34 04.4
comp=Z,13µm,20.0s
W54A **Cherokee Point** 116.14 65 P **PKiKP** **22 52 05.5 +2.8**
baz=241
R50A **Paris** 116.16 61 IAMs_20 IAMs_20 23 40 31.6
comp=Z,12µm,19.0s
MATP **Matopo** 116.20 210 PKP **PKiKP** **22 52 03.3 -0.4**
comp=Z,15nm,1.0s,baz=184,slow=1.3,SNR=4.3
MATP PKKPbc **PKKPbc** **23 02 33.0 +0.8**
comp=Z,3.6nm,0.7s,baz=331,slow=4.4,SNR=6.6
DDI **Dehra Dun** 116.28 289 *ex* **Pdif** **22 48 20.5 +3.1**
DDI *i* x x 22 52 04.4
S51A **Beattyville** 116.36 62 IAMs_20 IAMs_20 23 37 45.0
comp=Z,18µm,19.0s
P49A **Miami Univ. Ec** 116.48 59 P **PKPdf** **22 52 02.9 -0.4**
baz=242
V54A **Nebo** 116.64 64 P **PKiKP** **22 52 04.9 +1.2**
baz=241
KMSC **Kings Mountain** 116.78 65 P **PKiKP** **22 52 04.9 +0.9**
baz=241
T53A **Wise** 116.80 63 P **PKiKP** **22 52 06.0 +1.9**
baz=242
Y57A **Sumter** 116.93 67 IAMs_20 IAMs_20 23 39 13.8
comp=Z,13µm,19.0s
O49A **Covington** 117.05 59 IAMs_20 IAMs_20 23 32 38.1
comp=Z,24µm,22.0s
U54A **Nelsons Funny** 117.09 63 P **PKiKP** **22 52 07.0 +2.3**
baz=242
U54A **Nelsons Funny** 117.09 63 IAMs_20 IAMs_20 23 33 04.1
comp=Z,14µm,22.0s
F42A **Maple Grove Fa** 117.11 52 IAMs_20 IAMs_20 23 41 21.9
comp=Z,14µm,18.0s
BIRD **Birdtown, Kers** 117.18 66 IAMs_20 IAMs_20 23 40 55.4
comp=Z,12µm,18.0s
Q51A **Peebles** 117.19 60 IAMs_20 IAMs_20 23 41 20.8
comp=Z,12µm,19.0s
V55A **Taylorsville** 117.20 64 IAMs_20 IAMs_20 23 39 50.2
comp=Z,12µm,19.0s
SMLA **Simla** 117.34 289 *ex* **PP** **22 53 22.2 +5.1**
SMLA *i* x x 23 02 49.1
Y58A **Scranton** 117.40 67 IAMs_20 IAMs_20 23 39 25.4
comp=Z,11µm,18.0s
S53A **Williamson** 117.41 62 P **PKPdf** **22 52 04.6 -0.6**
baz=242
D41A **Chassel** 117.43 50 IAMs_20 IAMs_20 23 38 35.4
comp=Z,15µm,19.0s
T54A **Tazewell** 117.51 63 P **PKiKP** **22 52 06.2 +0.7**
baz=242
P51A **Williamsport** 117.59 60 P **PKPdf** **22 52 05.1 -0.3**
baz=243
P51A **Williamsport** 117.59 60 IAMs_20 IAMs_20 23 41 43.5
comp=Z,17µm,18.0s
GRTK **Grand Turk** 117.74 83 IAMs_20 IAMs_20 23 39 55.5
comp=Z,13µm,18.0s
W57A **Gilead** 117.75 66 P **PKiKP** **22 52 09.8 +3.9**
baz=242
L48A **N Adams** 117.78 57 IAMs_20 IAMs_20 23 43 03.5
comp=Z,14µm,18.0s
R53A **Hurricane** 117.83 62 P **PKiKP** **22 52 08.7 +2.7**
baz=242
R53A **Hurricane** 117.83 62 IAMs_20 IAMs_20 23 41 07.9
comp=Z,16µm,18.0s
Q52A **Bidwell** 117.90 61 P **PKPdf** **22 52 05.2 -0.9**
baz=243
ACSO **Alum Creek Sta** 117.99 59 P **PKPdf** **22 52 05.0 -1.2**
baz=243
U56A **King** 118.03 64 P **PKiKP** **22 52 07.1 +0.7**
baz=242
U56A **King** 118.03 64 IAMs_20 IAMs_20 23 34 23.0
comp=Z,16µm,21.0s
S54A **Dingess, Beckl** 118.04 62 P **PKiKP** **22 52 08.2 +1.8**
baz=242
BHK **Bhakra** 118.04 289 *ex* **PKPdf** **22 52 07.3 +0.7**
E43A **Lone Tree Farm** 118.09 52 PKPdf **PKPdf** **22 52 06.0 -0.2**
E43A IAMs_20 IAMs_20 23 39 50.0
comp=Z,12µm,19.0s

T55A	**Pulaski**	**118.10**	**63**	P	**PKiKP**	**22 52 08.1**	**+1.6**			
	baz=242									
J47A	**Sunmer**	**118.10**	**56**	IAMs_20	IAMs_20	23 37 55.1				
	comp=Z,16μm,19.0s									
O51A	**Pataskala**	**118.21**	**60**	P	**PKiKP**	**22 52 08.2**	**+1.6**			
	baz=243									
V57A	**Coltrane Farms**	**118.25**	**65**	P	**PKiKP**	**22 52 07.1**	**+0.2**			
	baz=242									
P52A	**Corning**	**118.30**	**60**	P	**PKiKP**	**22 52 08.1**	**+1.3**			
	baz=243									
P52A	**Corning**	**118.30**	**60**	IAMs_20	IAMs_20	23 35 31.3				
	comp=Z,14μm,20.0s									
Q53A	**Leroy**	**118.37**	**61**	P	**PKiKP**	**22 52 07.4**	**+0.4**			
	baz=243									
BLA	**Blacksburg**	**118.40**	**63**	P	**PKPdf**	**22 52 06.8**	**-0.3**			
	baz=243									
BLA	**Blacksburg**	**118.40**	**63**	IAMs_20	IAMs_20	23 33 31.9				
	comp=Z,13μm,22.0s									
AAM	**Ann Arbor**	**118.46**	**57**	P	**PKiKP**	**22 52 08.0**	**+1.0**			
	baz=244									
AAM	**Ann Arbor**	**118.46**	**57**	IAMs_20	IAMs_20	23 37 30.6				
	comp=Z,13μm,19.0s									
DHRM	**DHARAMSHALA**	**118.53**	**290**	*i* x	**PKKPdf**	**23 02 58.4**	**+4.4**			
T56A	**Rocky Mt**	**118.59**	**64**	P	**PKiKP**	**22 52 09.3**	**+1.8**			
	baz=243									
V58A	**Windy Hill, Pi**	**118.69**	**65**	IAMs_20	IAMs_20	23 40 32.4				
	comp=Z,14μm,18.0s									
O52A	**Adamsville**	**118.72**	**60**	P	**PKiKP**	**22 52 08.4**	**+0.7**			
	baz=243									
O52A	**Adamsville**	**118.72**	**60**	IAMs_20	IAMs_20	23 42 27.4				
	comp=Z,18μm,19.0s									
P53A	**Whipple**	**118.75**	**61**	P	**PKiKP**	**22 52 09.4**	**+1.7**			
	baz=243									
P53A	**Whipple**	**118.75**	**61**	IAMs_20	IAMs_20	23 34 24.1				
	comp=Z,15μm,21.0s									
Q54A	**Coxs Mills**	**118.91**	**61**	P	**PKiKP**	**22 52 08.4**	**+0.4**			
	baz=243									
Q54A	**Coxs Mills**	**118.91**	**61**	IAMs_20	IAMs_20	23 39 22.4				
	comp=Z,14μm,19.0s									
GLMI	**Grayling**	**118.93**	**54**	IAMs_20	IAMs_20	23 40 57.9				
	comp=Z,16μm,18.0s									
M51A	**Elyria**	**119.02**	**58**	P	**PKPdf**	**22 52 07.6**	**-0.5**			
	baz=244									
R55A	**Marlinton**	**119.10**	**62**	P	**PKiKP**	**22 52 10.0**	**+1.5**			
	baz=243									
R55A	**Marlinton**	**119.10**	**62**	IAMs_20	IAMs_20	23 39 32.4				
	comp=Z,18μm,18.0s									
T57A	**Hurt**	**119.14**	**64**	P	**PKiKP**	**22 52 08.7**	**+0.2**			
	baz=243									
T57A	**Hurt**	**119.14**	**64**	IAMs_20	IAMs_20	23 34 54.3				
	comp=Z,18μm,22.0s									
O53A	**New Philadelph**	**119.21**	**60**	P	**PKPdf**	**22 52 08.5**	**0.0**			
	baz=244									
V59A	**Middlesex**	**119.31**	**66**	P	**PKiKP**	**22 52 09.3**	**+0.4**			
	baz=243									
CNNC	**Cliffs of the**	**119.32**	**66**	P	**PKiKP**	**22 52 10.0**	**+1.1**			
	baz=243									
CNNC	**Cliffs of the**	**119.32**	**66**	IAMs_20	IAMs_20	23 45 33.2				
	comp=Z,12μm,18.0s									
K50A	**Casco**	**119.35**	**57**	IAMs_20	IAMs_20	23 37 48.1				
	comp=Z,15μm,20.0s									
U58A	**Oxford**	**119.37**	**65**	P	**PKiKP**	**22 52 10.4**	**+1.4**			
	baz=243									
ZSN	**Zaisan**	**119.39**	**309**	*i* PKP	**PKPdf**	**22 52 07.7**	**-0.9**			
	comp=Z,13nm,0.9s,baz=309									
ZSN				*e*SP	SP	23 03 14.2	-0.7			
	baz=309									
ZSN	**Zaisan**	**119.39**	**309**	*i* PKiKP	**PKPdf**	**22 52 07.7**	**-0.9**			
ZSN				*e*SP	SP	23 03 14.1	-0.8			
ZSN				pmax	pmax					
	comp=Z,13nm,0.9s									
Q55A	**Buckhannon**	**119.44**	**62**	P	**PKiKP**	**22 52 10.5**	**+1.4**			
	baz=244									
T58A	**Grand View Acr**	**119.63**	**64**	P	**PKiKP**	**22 52 09.7**	**+0.2**			
	baz=243									
R56A	**Bull Pasture M**	**119.66**	**63**	P	**PKiKP**	**22 52 11.2**	**+1.6**			
	baz=244									
S57A	**Dark Hollow, R**	**119.69**	**63**	P	**PKiKP**	**22 52 09.6**	**0.0**			
	baz=244									
S57A	**Dark Hollow, R**	**119.69**	**63**	IAMs_20	IAMs_20	23 36 56.0				
	comp=Z,14μm,20.0s									
N53A	**Lisbon**	**119.71**	**60**	IAMs_20	IAMs_20	23 34 11.5				
	comp=Z,21μm,22.0s									
O54A	**Avella**	**119.75**	**60**	P	**PKiKP**	**22 52 09.8**	**+0.2**			
	baz=244									
O54A	**Avella**	**119.75**	**60**	IAMs_20	IAMs_20	23 43 10.7				
	comp=Z,19μm,18.0s									
E46A	**Sault Ste Mari**	**119.78**	**52**	IAMs_20	IAMs_20	23 34 06.5				
	comp=Z,17μm,22.0s									
P55A	**Reedsville**	**119.84**	**61**	P	**PKiKP**	**22 52 11.4**	**+1.5**			
	baz=244									
SJG	**San Juan**	**119.86**	**89**	IAMs_20	IAMs_20	23 38 20.3				
	comp=Z,13μm,19.0s									
U59A	**Littleton**	**119.89**	**65**	P	**PKiKP**	**22 52 11.3**	**+1.3**			
	baz=243									
U59A	**Littleton**	**119.89**	**65**	IAMs_20	IAMs_20	23 39 56.4				
	comp=Z,12μm,20.0s									
Q56A	**Snyder Ridge,**	**120.09**	**62**	P	**PKiKP**	**22 52 12.5**	**+2.2**			
	baz=244									
Q56A	**Snyder Ridge,**	**120.09**	**62**	IAMs_20	IAMs_20	23 41 27.5				
	comp=Z,14μm,19.0s									
M53A	**Wl Miller and**	**120.09**	**59**	P	**PKiKP**	**22 52 10.3**	**+0.1**			
	baz=245									
HUMP	**Col San Antoni**	**120.11**	**90**	PKPdf	**PKPdf**	**22 52 09.8**	**-1.0**			
R57A	**Stanardsville**	**120.23**	**63**	P	**PKiKP**	**22 52 12.4**	**+1.8**			
	baz=244									
S58A	**Poland Farm, P**	**120.27**	**64**	P	**PKiKP**	**22 52 12.7**	**+2.0**			
	baz=244									
S58A	**Poland Farm, P**	**120.27**	**64**	IAMs_20	IAMs_20	23 35 57.3				
	comp=Z,14μm,21.0s									
T59A	**Double "B" Far**	**120.34**	**65**	P	**PKiKP**	**22 52 11.6**	**+0.8**			
	baz=244									
T59A	**Double "B" Far**	**120.34**	**65**	IAMs_20	IAMs_20	23 35 43.2				
	comp=Z,13μm,21.0s									
N54A	**Moraine State**	**120.35**	**60**	P	**PKiKP**	**22 52 11.0**	**+0.2**			
	baz=245									
N54A	**Moraine State**	**120.35**	**60**	IAMs_20	IAMs_20	23 34 42.7				
	comp=Z,21μm,21.0s									
P56A	**Dayton Farm, R**	**120.53**	**62**	P	**PKPdf**	**22 52 10.8**	**-0.3**			
	baz=244									
R58B	**Mineral**	**120.54**	**64**	P	**PKiKP**	**22 52 12.3**	**+1.1**			
	baz=244									
R58B	**Mineral**	**120.54**	**64**	IAMs_20	IAMs_20	23 37 21.6				
	comp=Z,13μm,20.0s									
L53A	**Girard**	**120.59**	**59**	P	**PKiKP**	**22 52 12.6**	**+1.4**			
	baz=245									
R58A	**Rapidan**	**120.60**	**63**	P	**PKiKP**	**22 52 12.7**	**+1.3**			
	baz=244									
Q57A	**Strasburg**	**120.63**	**62**	P	**PKiKP**	**22 52 13.1**	**+1.7**			
	baz=244									
MK31	**Makanchi Array**	**120.73**	**308**	*d* iPKIKP	**PKPdf**	**22 52 09.9**	**-1.4**			
MKAR	**Makanchi Array**	**120.73**	**308**	PKP	**PKPdf**	**22 52 10.2**	**-1.0**			
	comp=Z,31nm,0.9s,baz=64,slow=2.8,SNR=27									
MKAR				PKKPbc	**PKKPbc**	**23 02 17.4**	**+1.4**			
	comp=Z,9.8nm,0.7s,baz=298,slow=3.3,SNR=23									
MKAR				SKKPbc	SKKPbc	23 06 11.2	+8.0			
	comp=Z,5.2nm,1.1s,baz=276,slow=2.5,SNR=2.5									
MKAR	**Makanchi Array**	**120.73**	**308**	PKIKP	**PKPdf**	**22 52 10.5**	**-0.8**			
MKAR	**Makanchi Array**	**120.73**	**308**	PKPdf	**PKPdf**	**22 52 10.5**	**-0.8**			
M54A	**Oil Creek Stat**	**120.81**	**59**	P	**PKiKP**	**22 52 12.9**	**+1.2**			
	baz=245									
ERPA	**Erie**	**120.84**	**58**	P	**PKiKP**	**22 52 11.8**	**+0.1**			
	baz=245									
S59A	**Mechanicsville**	**120.87**	**64**	P	**PKiKP**	**22 52 13.1**	**+1.3**			
	baz=244									
MAKZ	**Makanchi**	**120.93**	**307**	PKIKP	**PKPdf**	**22 52 10.5**	**-1.1**			
MAKZ	**Makanchi**	**120.93**	**307**	PKPdf	**PKPdf**	**22 52 10.5**	**-1.1**			
LSZ	**Lusaka**	**120.94**	**213**	PKP	**PKiKP**	**22 52 13.6**	**+0.7**			
	comp=Z,13nm,0.8s,baz=50,slow=0.3,SNR=19									
LSZ				PP	**PP**	**22 53 42.6**	**+1.8**			
	comp=Z,21nm,1.2s,baz=144,slow=4.7,SNR=4.1									
LSZ				PKKPbc	**PKKPbc**	**23 02 15.4**	**+0.4**			
	comp=Z,7.1nm,0.8s,baz=316,slow=4.6,SNR=10.0									
LSZ	**Lusaka**	**120.94**	**213**	PKPdf	**PKPdf**	**22 52 10.9**	**-1.9**			
LSZ	**Lusaka**	**120.94**	**213**	IAMs_20	IAMs_20	23 43 19.6				
	comp=Z,20μm,19.0s									
T60A	**Surry**	**121.00**	**65**	IAMs_20	IAMs_20	23 36 24.7				
	comp=Z,15μm,21.0s									
CBN	**Corbin Frederi**	**121.01**	**64**	P	**PKiKP**	**22 52 13.7**	**+1.6**			
	baz=244									
CBN	**Corbin Frederi**	**121.01**	**64**	IAMs_20	IAMs_20	23 37 44.8				
	comp=Z,14μm,20.0s									
TSUM	**Tsumeb**	**121.02**	**200**		**PKPdf**	**22 52 11.4**	**-1.5**			
O56A	**Blue Knob Stat**	**121.04**	**61**	P	**PKiKP**	**22 52 13.0**	**+0.7**			
	baz=245									
O56A	**Blue Knob Stat**	**121.04**	**61**	IAMs_20	IAMs_20	23 48 16.9				
	comp=Z,11μm,18.0s									
SHLS	**Shalkode**	**121.10**	**303**	*i* PKP	**PKPdf**	**22 52 10.8**	**-1.4**			
	comp=Z,19nm,1.1s,baz=303									
SHLS	**Shalkode**	**121.10**	**303**	*i* PKIKP	**PKPdf**	**22 52 10.8**	**-1.4**			
SHLS				pmax	pmax					
	comp=Z,19nm,1.1s									
P57A	**Homestead Farm**	**121.10**	**62**	P	**PKiKP**	**22 52 14.2**	**+1.9**			
	baz=245									
P57A	**Homestead Farm**	**121.10**	**62**	IAMs_20	IAMs_20	23 40 33.4				
	comp=Z,15μm,19.0s									
Q58A	**Fox Den Farm,**	**121.10**	**63**	P	**PKiKP**	**22 52 13.0**	**+0.7**			
	baz=245									
R59A	**King George, V**	**121.19**	**64**	P	**PKiKP**	**22 52 14.2**	**+1.7**			
	baz=244									
S60A	**Water View**	**121.31**	**64**	P	**PKiKP**	**22 52 14.7**	**+2.0**			
	baz=244									
M55A	**Ridgway**	**121.41**	**60**	IAMs_20	IAMs_20	23 35 46.5				
	comp=Z,20μm,21.0s									
NIL	**Nilore**	**121.45**	**290**	P	**PKPdf**	**22 52 12.8**	**-0.3**			
NIL	**Nilore**	**121.45**	**290**	PKIKP	**PKPdf**	**22 52 12.2**	**-0.9**			
NIL				MLR	MLR					
	comp=Z,15μm,20.0s									
NIL	**Nilore**	**121.45**	**290**	PKPdf	**PKPdf**	**22 52 12.2**	**-0.9**			
NIL	**Nilore**	**121.45**	**290**	IAMs_20	IAMs_20	23 48 50.7				
	comp=Z,15μm,20.0s									
N56A	**West Decatur**	**121.50**	**60**	P	**PKiKP**	**22 52 13.1**	**0.0**			
	baz=246									
R60A	**Leonardtown, M**	**121.60**	**64**	P	**PKiKP**	**22 52 13.4**	**+0.2**			
	baz=245									
P58A	**Pank, Wackersv**	**121.60**	**62**	P	**PKiKP**	**22 52 13.4**	**+0.1**			
	baz=245									
O57A	**Amberson**	**121.67**	**61**	P	**PKPdf**	**22 52 13.1**	**-0.2**			
	baz=245									
SSPA	**Standing Stone**	**121.67**	**61**	IAMs_20	IAMs_20	23 44 01.8				
	comp=Z,11μm,19.0s									
KPKS	**Kokpek**	**121.74**	**303**	*i* PKP	**PKPdf**	**22 52 12.6**	**-0.8**			
	comp=Z,84nm,1.8s,baz=303									
KPKS				*e*SP	SP	23 03 36.0	-0.2			
	baz=303									
KPKS	**Kokpek**	**121.74**	**303**	*i* PKIKP	**PKPdf**	**22 52 12.6**	**-0.8**			
KPKS				*e*SP	SP	23 03 35.9	-0.3			
KPKS				pmax	pmax					
	comp=Z,84nm,1.8s									
SATY	**Saty**	**121.77**	**302**	*i* PKP	**PKPdf**	**22 52 12.9**	**-0.6**			
	comp=Z,21nm,1.0s,baz=302									
SATY				*e*SP	SP	23 03 35.9	-0.6			
	baz=302									
SATY	**Saty**	**121.77**	**302**	*i* PKIKP	**PKPdf**	**22 52 12.9**	**-0.6**			
SATY				*e*SP	SP	23 03 35.9	-0.6			
SATY				pmax	pmax					
	comp=Z,21nm,1.0s									
M56A	**Emporium**	**121.81**	**60**	P	**PKiKP**	**22 52 14.4**	**+0.7**			
	baz=246									
M56A	**Emporium**	**121.81**	**60**	IAMs_20	IAMs_20	23 36 41.2				
	comp=Z,18μm,20.0s									
N57A	**Milroy**	**121.95**	**61**	P	**PKiKP**	**22 52 14.4**	**+0.4**			
	baz=246									
ZALV	**Zalesovo Beam**	**121.96**	**316**	PKP	**PKPdf**	**22 52 12.2**	**-1.1**			
	comp=Z,16nm,0.7s,baz=146,slow=1.7,SNR=23									
ZALV				PKKPbc	**PKKPbc**	**23 02 15.2**	**+3.7**			
	comp=Z,2.6nm,0.8s,baz=245,slow=3.0,SNR=5.3									
ZALV				SKKPbc	SKKPbc	23 05 50.6	-9.1			
	comp=Z,2.6nm,0.9s,baz=309,slow=5.2,SNR=3.5									
KSH	**Kashi**	**122.00**	**298**	PKP	**PKiKP**	**22 52 14.4**	**+0.2**			
KSH				SKS	**SKSdf**	**22 59 19.0**	**-4.4**			
KSH				SKKS	**SKKSac**	**23 00 44.0**	**-1.2**			
KSH				AMB	AMB					
	comp=Z,3μm,8.2s									
KSH				LR	LR					
	comp=Z,8μm,17.1s									
KSH				LR	LR					
	comp=Z,6μm,17.9s									
KSH				LR	LR					
	comp=Z,16μm,21.9s									
S61A	**Accomac**	**122.00**	**65**	IAMs_20	IAMs_20	23 37 04.1				
	comp=Z,15μm,21.0s									
O58A	**Lewisberry**	**122.13**	**62**	P	**PKiKP**	**22 52 14.6**	**+0.3**			
	baz=246,SNR=6.5									
P59A	**Jarrettsville**	**122.26**	**62**	P	**PKiKP**	**22 52 16.4**	**+1.8**			
	baz=246									
PAGS	**Pennsylvania G**	**122.31**	**62**	IAMs_20	IAMs_20	23 43 44.4				
	comp=Z,13μm,19.0s									
Q60A	**Greensboro**	**122.43**	**63**	P	**PKiKP**	**22 52 15.5**	**+0.6**			
	baz=246									
Q60A	**Greensboro**	**122.43**	**63**	IAMs_20	IAMs_20	23 41 29.5				
	comp=Z,18μm,19.0s									
SADO	**Sadowa**	**122.46**	**56**	PKP	**PKiKP**	**22 52 14.9**	**+0.1**			
	comp=Z,8nm,0.5s,baz=314,slow=2.5,SNR=12									
M57A	**Sunshine Farm,**	**122.48**	**60**	P	**PKiKP**	**22 52 15.5**	**+0.6**			
	baz=246									
M57A	**Sunshine Farm,**	**122.48**	**60**	IAMs_20	IAMs_20	23 35 59.8				
	comp=Z,18μm,22.0s									
MVL	**Millersville**	**122.48**	**62**	IAMs_20	IAMs_20	23 42 42.9				
	comp=Z,14μm,18.0s									
L56A	**Greenwood**	**122.50**	**59**	P	**PKiKP**	**22 52 16.0**	**+0.9**			
	baz=246									
R61A	**Willards**	**122.51**	**64**	IAMs_20	IAMs_20	23 41 54.6				
	comp=Z,15μm,18.0s									
TDK	**Taldyqorghan**	**122.53**	**304**	*e*PKP	**PKPdf**	**22 52 13.6**	**-1.2**			
	comp=Z,54nm,1.1s,baz=304									
TDK				*e*SP	SP	23 03 41.7	-1.3			
	baz=304									
TDK				*e*SS	**SS**	**23 10 30.9**	**-0.7**			
	baz=304									
TDK				LR	LR	23 44 50.3				
	comp=Z,8μm,20.2s,baz=304									
TDK	**Taldyqorghan**	**122.53**	**304**	*e*PKIKP	**PKPdf**	**22 52 13.5**	**-1.2**			
TDK				*e*SP	SP	23 03 41.7	-1.3			
TDK				*e*SS	**SS**	**23 10 30.9**	**-0.7**			
TDK				pmax	pmax					
	comp=Z,54nm,1.1s									
TDK				MLR	MLR					
	comp=Z,8μm,20.0s									
MDP	**Montagnes des**	**122.55**	**111**	PKP	**PKiKP**	**22 52 16.5**	**+0.6**			
	comp=Z,13nm,0.8s,baz=200,slow=4.0,SNR=12									
N58A	**Sunbury**	**122.56**	**61**	P	**PKiKP**	**22 52 16.1**	**+0.9**			
	baz=246									
MDOK	**Medeo**	**122.72**	**302**	*e*PKP	**PKPdf**	**22 52 14.9**	**-0.5**			
	baz=302									
MDOK				*e*SKKSac	SKKSac	23 00 47.0	-2.8			
	baz=302									
MDOK				*e*SP	SP	23 03 44.6	-0.4			
	baz=302									
MDOK				*e*PS	PS	23 03 48.7	-0.9			
	baz=302									
MDOK				*e*SS	**SS**	**23 10 34.6**	**+0.1**			
	baz=302									
MDOK				LR	LR	23 45 53.4				
	comp=Z,3μm,22.2s,baz=302									
MDOK	**Medeo**	**122.72**	**302**	*e*PKIKP	**PKPdf**	**22 52 14.9**	**-0.5**			
MDOK				*e*SP	SP	23 03 44.5	-0.5			
MDOK				*e*PS	PS	23 03 48.6	-0.9			
MDOK				*e*SS	**SS**	**23 10 34.6**	**+0.1**			
TNSS	**Tian-Shan**	**122.74**	**302**	*e*PKP	**PKPdf**	**22 52 14.8**	**-0.9**			
	baz=302									
TNSS	**Tian-Shan**	**122.74**	**302**	*e*PKIKP	**PKPdf**	**22 52 14.8**	**-0.9**			
Q61A	**Milford**	**122.75**	**64**	P	**PKiKP**	**22 52 16.9**	**+1.4**			
	baz=246									
H53A	**Bobcaygeon**	**122.76**	**56**	P	**PKiKP**	**22 52 15.7**	**+0.3**			
	baz=247									
AAA	**Alma-Ata**	**122.83**	**302**	*e*PKP	**PKPdf**	**22 52 14.5**	**-1.0**			
	baz=302									
AAA				*e*SKKSac	SKKSac	23 00 47.7	-2.6			
	baz=302									
AAA				*e*SP	SP	23 03 45.2	-0.6			
	baz=302									
AAA				LR	LR	23 47 41.5				
	comp=Z,3μm,23.8s,baz=302									
AAA	**Alma-Ata**	**122.83**	**302**	*e*PKIKP	**PKPdf**	**22 52 14.5**	**-1.0**			
AAA				*e*SP	SP	23 03 45.2	-0.7			
ROSB	**Rosrio**	**122.87**	**125**	*e*P	**PKPdf**	**22 52 16.2**	**-0.2**			
K56A	**Middlesex**	**122.88**	**59**	P	**PKiKP**	**22 52 15.9**	**+0.2**			
	baz=247									
P60A	**Greenville**	**122.91**	**63**	P	**PKiKP**	**22 52 16.0**	**+0.2**			
	baz=246									
P60A	**Greenville**	**122.91**	**63**	IAMs_20	IAMs_20	23 41 38.2				
	comp=Z,16μm,19.0s									
ULHL	**Ulaho**	**122.91**	**301**	P	**PKPdf**	**22 52 15.5**	**-0.4**			
	SNR=16									
L57A	**Andrews Acres**	**122.93**	**60**	P	**PKiKP**	**22 52 16.6**	**+0.8**			
	baz=247,SNR=11									
M58A	**Price's Panora**	**122.95**	**61**	P	**PKPdf**	**22 52 15.5**	**-0.2**			
	baz=247,SNR=6.4									
CHKK	**Chushkaly**	**123.03**	**303**	*e*PKP	**PKPdf**	**22 52 14.0**	**-1.8**			
	baz=303									
CHKK	**Chushkaly**	**123.03**	**303**	*e*PKIKP	**PKPdf**	**22 52 13.9**	**-1.8**			
PSUB	**Penn St. - Bra**	**123.08**	**62**	IAMs_20	IAMs_20	23 43 45.8				
	comp=Z,17μm,18.0s									
BOOM	**Boomskoye usch**	**123.21**	**301**	IAMs_20	IAMs_20	23 49 54.5				
	comp=Z,18μm,22.0s									
N59A	**State Game Lan**	**123.25**	**61**	P	**PKiKP**	**22 52 17.2**	**+0.7**			
	baz=247,SNR=7.9									
N59A	**State Game Lan**	**123.25**	**61**	IAMs_20	IAMs_20	23 44 41.3				
	comp=Z,14μm,20.0s									
O60A	**Telford**	**123.27**	**62**	P	**PKiKP**	**22 52 17.3**	**+0.8**			
	baz=246,SNR=10									
SEM	**Semipalatinsk**	**123.34**	**311**	*e*PKP	**PKPdf**	**22 52 14.7**	**-1.7**			
	comp=Z,64nm,1.7s,baz=311									
SEM	**Semipalatinsk**	**123.34**	**311**	*e*PKIKP	**PKPdf**	**22 52 14.7**	**-1.7**			
SEM				pmax	pmax					
	comp=Z,64nm,1.7s									
DELO	**Deloro Mine**	**123.38**	**57**	IAMs_20	IAMs_20	23 43 21.7				
	comp=Z,16μm,19.0s									
G54A	**Lake Saint Pet**	**123.39**	**56**	P	**PKiKP**	**22 52 17.0**	**+0.4**			
	baz=248									
J56A	**Wolcott**	**123.42**	**58**	P	**PKiKP**	**22 52 16.7**	**0.0**			
	baz=248									
K57A	**Scipio Center**	**123.44**	**59**	P	**PKPdf**	**22 52 16.4**	**-0.1**			
	baz=247,SNR=11									
P61A	**Hammonton**	**123.45**	**63**	P	**PKPdf**	**22 52 16.0**	**-0.6**			
	baz=246									
P61A	**Hammonton**	**123.45**	**63**	IAMs_20	IAMs_20	23 41 58.5				
	comp=Z,16μm,18.0s									
KUU	**Kurty**	**123.48**	**302**	*i* PKP	**PKPdf**	**22 52 15.5**	**-1.1**			
	comp=Z,190nm,2.0s,baz=303									
KUU				*e*SKKSac	SKKSac	23 00 52.5	-1.8			
	baz=303									
KUU				*e*SP	**SP**	**23 03 50.5**	**-1.0**			
	baz=303									
KUU	**Kurty**	**123.48**	**302**	*i* PKIKP	**PKPdf**	**22 52 15.5**	**-1.1**			
KUU				*e*SP	SP	23 03 50.5	-1.0			
KUU				pmax	pmax					
	comp=Z,190nm,2.0s									
KSPA	**Keystone Colle**	**123.50**	**61**	IAMs_20	IAMs_20	23 37 44.0				
	comp=Z,12μm,21.0s									
BINY	**Binghamton**	**123.60**	**60**	P	**PKiKP**	**22 52 17.5**	**+0.4**			
	baz=247,SNR=13									
BINY	**Binghamton**	**123.60**	**60**	IAMs_20	IAMs_20	23 37 25.6				
	comp=Z,20μm,20.0s									
TKM2	**Tokmak 2**	**123.61**	**301**	P	**PKPdf**	**22 52 16.8**	**-0.4**			
	SNR=27									
ALGO	**Algonquin Park**	**123.62**	**55**	P	**PKiKP**	**22 52 17.4**	**+0.3**			
	baz=249									
L58A	**Harry Jones Me**	**123.64**	**60**	P	**PKPdf**	**22 52 16.0**	**-1.0**			
	baz=247,SNR=16									
N60A	**Cedar Hill Far**	**123.70**	**62**	P	**PKiKP**	**22 52 17.4**	**+0.1**			
	baz=247,SNR=5.9									
M59A	**Waymart**	**123.73**	**61**	P	**PKPdf**	**22 52 16.8**	**-0.3**			
	baz=247,SNR=17									
O61A	**Allentown**	**123.78**	**63**	P	**PKiKP**	**22 52 18.0**	**+0.4**			
	baz=247									
KBK	**Karagaybulak**	**123.95**	**301**	P	**PKPdf**	**22 52 17.4**	**-0.4**			
	SNR=23									
BRNJ	**Basking Ridge**	**124.00**	**62**	IAMs_20	IAMs_20	23 45 07.2				
	comp=Z,14μm,20.0s									
K58A	**Earlville**	**124.05**	**59**	P	**PKPdf**	**22 52 17.1**	**-0.7**			
	baz=248,SNR=11									
J57A	**Williamstown**	**124.05**	**58**	P	**PKPdf**	**22 52 17.3**	**-0.3**			
	baz=248,SNR=12									
UCH	**Uchtor**	**124.09**	**300**	P	**PKiKP**	**22 52 18.9**	**+0.2**			
	SNR=17									
M60A	**Port Jervis**	**124.21**	**61**	P	**PKPdf**	**22 52 17.9**	**-0.2**			
	baz=247,SNR=17									
CHMS	**Chumysh**	**124.21**	**301**	P	**PKPdf**	**22 52 17.2**	**-0.9**			
	SNR=26									
N61A	**South Mountain**	**124.22**	**62**	P	**PKiKP**	**22 52 18.8**	**+0.4**			
	baz=247,SNR=9.7									
FRU1	**Bishkek**	**124.23**	**301**	IAMs_20	IAMs_20	23 57 33.3				
	comp=Z,12μm,20.0s									
L59A	**Walton**	**124.25**	**60**	P	**PKiKP**	**22 52 18.4**	**-0.1**			
	baz=248,SNR=15									
L

YLE Yale 125.38 62 IAMs_20 IAMs_20 23 45 47.7
comp=Z,14µm,19.0s
TRY Troy 125.39 60 IAMs_20 IAMs_20 23 39 02.0
comp=Z,18µm,20.0s
BTLS Baital 125.42 303 *i* PKP PKPdf 22 52 19.6 -0.7
comp=Z,52nm,1.8s,baz=303
BTLS Baital 125.42 303 *i* PKIKP PKPdf 22 52 19.6 -0.7
BTLS pmax pmax
comp=Z,52nm,1.8s
LONY Lake Ozonia 125.44 57 P PKPdf 22 52 20.1 -0.2
baz=250,SNR=13
LONY Lake Ozonia 125.44 57 IAMs_20 IAMs_20 23 43 34.2
comp=Z,17µm,18.0s
M62A Hamden 125.46 62 P PKPdf 22 52 20.4 0.0
baz=248,SNR=7.4
N63A Mattituck 125.55 62 P PKiKP 22 52 21.9 +0.9
baz=248
RCBR Riachuelo 125.59 135 PKP PKiKP 22 52 22.6 +0.5
comp=Z,50nm,1.1s,baz=142,slow=0.4,SNR=8.2
RCBR Riachuelo 125.59 135 PKIKP PKPdf 22 52 20.3 -1.4
RCBR MLR MLR
comp=Z,29µm,20.0s
RCBR Riachuelo 125.59 135 PKPdf PKPdf 22 52 20.3 -1.4
RCBR Riachuelo 125.59 135 *e*P PKiKP 22 52 23.2 +1.1
I59A Olmsteadville 125.63 59 P PKPdf 22 52 20.6 -0.1
baz=249,SNR=11
H58A Gabriels 125.64 58 P PKPdf 22 52 20.4 -0.4
baz=250,SNR=12
K61A Williamstown 125.64 60 P PKPdf 22 52 20.1 -0.7
baz=249
D55A Sainte-Anne-du 125.66 54 P PKPdf 22 52 20.7 0.0
baz=251,SNR=28
J60A Lant Hill Farm 125.74 59 P PKPdf 22 52 20.0 -0.9
baz=249,SNR=14
F57A Harrington 125.77 56 P PKPdf 22 52 20.6 -0.3
baz=250
E56A St. Veronique 125.79 55 P PKPdf 22 52 20.9 0.0
baz=251,SNR=14
L62A Suffield 125.83 61 P PKiKP 22 52 22.1 +0.6
baz=249
BTK Batken 125.86 296 IAMs_20 IAMs_20 23 54 24.8
comp=Z,12µm,20.0s
G58A Ormstown 125.97 57 P PKiKP 22 52 21.5 -0.2
baz=250,SNR=19
L61B Northampton 125.97 61 P PKiKP 22 52 22.1 +0.3
baz=249,SNR=15
I60A Shoreham 126.04 59 P PKiKP 22 52 22.6 +0.7
baz=250,SNR=16
M63A Gales Ferry 126.04 62 P PKiKP 22 52 22.4 +0.4
baz=249
H59A Cadyville 126.04 58 P PKiKP 22 52 22.7 +0.7
baz=250,SNR=6.3
D56A ZEC Mazanza, M 126.13 55 P PKPdf 22 52 21.7 +0.2
baz=251,SNR=37
QUA2 Belchertown 126.14 61 IAMs_20 IAMs_20 23 46 57.7
comp=Z,11µm,18.0s
E57A Chemin Saint G 126.33 56 P PKPdf 22 52 21.6 -0.4
baz=251,SNR=18
K62A Royalston 126.36 60 P PKiKP 22 52 23.3 +0.7
baz=249,SNR=7.6
K62A Royalston 126.36 60 IAMs_20 IAMs_20 23 39 21.5
comp=Z,17µm,21.0s
F58A St-Lin Laurent 126.37 56 P PKPdf 22 52 22.2 +0.1
baz=251
J61A Chester 126.37 60 P PKiKP 22 52 23.1 +0.5
baz=250,SNR=17
SHEL Horse Pasture 126.49 174 IAMs_20 IAMs_20 23 44 09.3
comp=Z,18µm,20.0s
L63A North Scituate 126.51 62 P PKiKP 22 52 24.1 +1.2
baz=249
DZA Taraz 126.52 300 *e*PKP PKPdf 22 52 21.9 -0.7
baz=300
DZA LR LR 23 47 17.5
comp=Z,3µm,20.2s,baz=300
DZA Taraz 126.52 300 *e*PKIKP PKPdf 22 52 21.8 -0.7
DZA MLR MLR
comp=Z,3µm,20.0s
BRYW Bryant College 126.58 62 IAMs_20 IAMs_20 23 46 34.4
comp=Z,15µm,19.0s
KIBK Kibwezi 126.66 231 P PKiKP 22 52 25.1 +0.8
SNR=43
M64A Tiverton 126.68 62 P PKiKP 22 52 24.4 +1.2
baz=249,SNR=7.1
H60A Morristown 126.68 58 P PKiKP 22 52 23.4 +0.2
baz=250,SNR=13
HRV Adam Dziewonsk 126.77 61 P PKiKP 22 52 24.7 +1.3
baz=250
HRV Adam Dziewonsk 126.77 61 IAMs_20 IAMs_20 23 41 03.4
comp=Z,14µm,20.0s
I61A Oroboro, Fairl 126.81 59 P PKiKP 22 52 24.3 +0.9
baz=250,SNR=18
J62A Henniker 126.84 60 P PKiKP 22 52 24.0 +0.5
baz=250,SNR=22
K63A Dunstable 126.85 61 P PKiKP 22 52 23.8 +0.2
baz=250,SNR=11
E58A La Victoria 126.88 56 P PKPdf 22 52 23.1 +0.1
baz=252,SNR=19
WES Weston 126.89 61 IAMs_20 IAMs_20 23 47 29.6
comp=Z,16µm,19.0s
BCX Boston College 126.98 61 IAMs_20 IAMs_20 23 47 05.0
comp=Z,14µm,20.0s
F59A Saint Guilaume 127.04 57 P PKPdf 22 52 23.4 +0.1
baz=251,SNR=15
L64A Middleborough 127.07 62 P PKiKP 22 52 24.1 +0.1
baz=250,SNR=8.2
M65A Busby, Falmout 127.08 62 P PKiKP 22 52 24.6 +0.5
baz=249
M65A Busby, Falmout 127.08 62 IAMs_20 IAMs_20 23 44 13.6
comp=Z,11µm,20.0s
LBNH Lisbon 127.10 59 P PKiKP 22 52 24.9 +0.9
baz=251
G60A Masonville 127.10 58 P PKiKP 22 52 24.4 +0.4
baz=251,SNR=16
IUG luzhnay 127.17 298 *i* PKP PKPdf 22 52 23.8 -0.1
comp=Z,98nm,1.6s,baz=299
IUG luzhnay 127.17 298 *i* PKIKP PKPdf 22 52 23.8 -0.1
IUG pmax pmax
comp=Z,98nm,1.6s
H61A Lyndonville 127.19 58 P PKiKP 22 52 24.3 +0.1
baz=251,SNR=16
CHGQ Chibougamau 127.24 51 P PKPdf 22 52 22.7 -0.9
baz=253,SNR=18
J63A Strafford 127.36 60 P PKPdf 22 52 23.3 -0.8
baz=250
D58A Chemin du LacG 127.36 55 P PKPdf 22 52 22.8 -1.1
baz=252,SNR=29
I62A Tamworth 127.38 59 P PKPdf 22 52 23.9 -0.1
baz=251,SNR=21
E59A St. Maurice 127.42 56 P PKPdf 22 52 23.9 -0.1
baz=252
EUNU Eureka 127.44 13 IAMs_20 IAMs_20 23 47 33.3
comp=Z,13µm,20.0s
LATQ La Tuque 127.52 55 P PKPdf 22 52 23.9 -0.3
baz=252,SNR=19
BRLS Boroldav 127.60 299 *e*PKP PKPdf 22 52 23.7 -0.9
baz=299
BRLS Boroldav 127.60 299 *e*PKIKP PKPdf 22 52 23.6 -0.9
F60A Warwick 127.63 57 P PKiKP 22 52 25.2 +0.2
baz=252,SNR=30
L65A Cape Cod Natio 127.66 62 P PKiKP 22 52 26.8 +1.6
baz=250
G61A St-Isidore-de- 127.70 58 P PKiKP 22 52 25.4 +0.2
baz=252,SNR=26
H62A Milan 127.73 59 P PKiKP 22 52 26.3 +1.0
baz=251,SNR=26
BRZS Berezniki 127.83 309 *e*PKP PKPdf 22 52 23.4 -1.4
comp=Z,52nm,1.7s,baz=309
BRZS Berezniki 127.83 309 *e*PKIKP PKPdf 22 52 23.3 -1.4
BRZS pmax pmax
comp=Z,52nm,1.7s
WSAR Wadi Sarin 127.91 272 PKP PKPdf 22 52 26.0 +0.2
comp=Z,20nm,1.1s,baz=106,slow=1.9,SNR=9.0
I63A Otisfield 127.95 59 P PKPdf 22 52 24.4 -0.7
baz=251,SNR=22
D59A Saint-Raymond 128.02 55 P PKPdf 22 52 25.1 -0.1
baz=253,SNR=7.3
E60A Ste Agathe de 128.09 56 P PKiKP 22 52 25.9 0.0
baz=252,SNR=18
KMBO Kilima Mbogo 128.09 231 PKP PKiKP 22 52 29.0 +1.6
comp=Z,21nm,0.9s,baz=49,slow=2.5,SNR=21
KMBO Kilima Mbogo 128.09 231 *i* P PKPdf 22 52 26.8 +0.1
SNR=27
KMBO Kilima Mbogo 128.09 231 P PKiKP 22 52 28.4 +1.0
KMBO Kilima Mbogo 128.09 231 PKIKP PKPdf 22 52 25.0 -1.7
KMBO MLR MLR
comp=Z,21µm,18.0s
KMBO Kilima Mbogo 128.09 231 PKPdf PKPdf 22 52 25.0 -1.7

F61A St Evariste 128.27 57 P PKPdf 22 52 24.9 -0.8
baz=252,SNR=19
G62A West of Eustis 128.35 58 P PKPdf 22 52 25.8 -0.1
baz=252,SNR=14
H63A New Sharon 128.52 59 P PKiKP 22 52 26.9 +0.1
baz=252
I64A Boothbay 128.56 60 P PKPdf 22 52 26.3 0.0
baz=252,SNR=7.3
D60A Saint Jean D'O 128.59 56 P PKPdf 22 52 25.4 -0.8
baz=253,SNR=6.3
E61A Lac Etchemin 128.74 56 P PKPdf 22 52 26.3 -0.3
baz=253,SNR=36
G63A Kingsbury 128.94 58 P PKPdf 22 52 25.5 -1.5
baz=253
H64A Troy 129.07 59 P PKPdf 22 52 25.9 -1.4
baz=252
D61A St Aubert, Com 129.16 56 P PKPdf 22 52 26.6 -0.7
baz=254,SNR=9.1
PKME Peaks-Kenny Pk 129.20 58 P PKPdf 22 52 27.5 0.0
baz=253
E62A Clayton Lake 129.43 56 P PKPdf 22 52 28.1 +0.2
baz=254,SNR=22
F63A Nahmakanta, Br 129.46 58 P PKiKP 22 52 28.4 -0.4
baz=253
G64A Maxfield 129.56 58 P PKPdf 22 52 28.3 +0.2
baz=253
H65A Eastbrook 129.75 59 P PKPdf 22 52 28.6 +0.1
baz=253
D62A Allapoint, All 129.87 56 P PKPdf 22 52 28.0 -0.7
baz=254
BVAR Borovoye Array 129.95 312 PKP PKiKP 22 52 29.7 +0.2
comp=Z,15nm,0.8s,baz=90,slow=3.0,SNR=19
F64A Sherman 130.01 58 P PKiKP 22 52 29.5 -0.3
baz=254
SOHO SOHO 130.02 271 *i* P PKPdf 22 52 29.5 -0.2
SNR=23
BRVK Borovoye 130.02 312 P PKPdf 22 52 27.4 -1.4
BRVK Borovoye 130.02 312 *d*PKIKP PKPdf 22 52 27.7 -1.1
BRVK MLR MLR
comp=Z,10µm,21.0s
BRVK Borovoye 130.02 312 PKPpre 22 52 19.0
BRVK Borovoye 130.02 312 IAMs_20 IAMs_20 23 56 39.0
comp=Z,11µm,20.0s
E63A Oxbow 130.11 57 P PKiKP 22 52 29.7 -0.3
baz=254
G65A Princeton 130.35 59 P PKPdf 22 52 29.2 -0.4
baz=254
H66A Whiting 130.41 59 P PKPdf 22 52 28.9 -0.8
baz=254
D63A Stockholm 130.48 56 P PKPdf 22 52 29.3 -0.5
baz=255
E64A Bridgewater 130.50 57 P PKPdf 22 52 29.4 -0.6
baz=255
ALNE Al Ain 130.60 271 *i* P PKPdf 22 52 30.9 0.0
SNR=8.9
ALE Alert 130.64 9 IAMs_20 IAMs_20 23 48 30.9
comp=Z,11µm,20.0s
HATD Hatta, Dubai 130.68 272 *i* P PKiKP 22 52 31.4 -0.4
SNR=16
UOSS Minazif 130.68 272 *i* P PKPdf 22 52 30.3 -0.6
SNR=14
UOSS Minazif 130.68 272 PKPdf PKPdf 22 52 29.8 -1.2
MDH Madha 130.77 273 *i* P PKPdf 22 52 30.9 -0.3
SNR=13
MSFE Esma-Masafi 130.91 273 *i* P PKPdf 22 52 31.8 +0.4
SNR=11
FAQ Al Faqa, Dubai 131.07 272 *i* P PKPdf 22 52 31.6 -0.1
SNR=8.5
BANOM Banah 131.07 273 P PKPdf 22 52 31.9 +0.2
NAZ Nazwa, Dubai 131.13 272 *i* P PKPdf 22 52 32.1 +0.3
SNR=9.6
ASUD Al Ashush, Dub 131.22 271 *i* P PKiKP 22 52 32.4 -0.5
SNR=15
TULEG Thule 131.23 17 *e*P PKiKP 22 52 31.4 0.0
TULEG IAMs_20 IAMs_20 23 42 29.6
comp=Z,15µm,23.0s
SHME Shamm 131.25 273 *i* P PKPdf 22 52 32.1 +0.1
SNR=16
UMQ Umm Al-Quwin 131.39 273 *i* P PKiKP 22 52 32.9 -0.3
SNR=20
AJN Ajban 131.46 271 *i* P PKiKP 22 52 32.9 -0.5
SNR=14
MBAR Mbarara 132.34 224 PKP PKiKP 22 52 35.9 +0.1
comp=Z,1.7nm,0.3s,baz=81,slow=4.8,SNR=11
MBAR Mbarara 132.34 224 *d*PKIKP PKiKP 22 52 35.5 -0.3
MBAR MLR MLR
comp=Z,27µm,17.0s
FRB Frobisher Bay 132.50 34 PKP PKPdf 22 52 33.5 +0.4
comp=Z,34nm,0.9s
SCHQ Schefferville 132.78 46 PKP PKiKP 22 52 35.2 +0.1
comp=Z,46nm,1.0s,baz=264,slow=2.5,SNR=8.3
SCHQ PP PP 22 54 58.8 -0.9
comp=Z,22nm,1.1s,baz=257,slow=5.9,SNR=4.7
SCHQ SKP 22 56 10.3
comp=Z,9.0nm,0.4s,baz=252,slow=9.7,SNR=4.2
SCHQ Schefferville 132.78 46 IAMs_20 IAMs_20 23 47 22.4
comp=Z,16µm,20.0s
LODK Lodwar 132.80 233 P PKiKP 22 52 36.5 -0.1
SNR=14
ASCN Ascension 132.86 161 IAMs_20 IAMs_20 23 45 01.4
comp=Z,11µm,21.0s
HAL Halifax 132.93 60 IAMs_20 IAMs_20 23 46 19.4
comp=Z,14µm,19.0s
ATD Arta Tunnel 133.46 248 PKP PKiKP 22 52 38.3 +0.5
comp=Z,20nm,0.9s,baz=309,slow=3.8,SNR=7.6
ANKE Ethiopia-Afar 134.39 243 *e*P PKPdf 22 52 39.1 +0.3
ANKE *e*S PP 22 55 13.1 +2.4
GEYT Alibeck 134.43 289 PKP PKPdf 22 52 36.0 -1.7
comp=Z,17nm,0.9s,baz=214,slow=10.0,SNR=7.4
GEYT SKPbc SKPab 22 56 07.7 -0.4
comp=Z,44nm,1.1s,baz=45,slow=0.2,SNR=8.0
GEYT Alibeck 134.43 289 PKPdf 22 52 36.7 -1.0
TEND Ethiopian Broa 134.98 246 *e*P PKPdf 22 52 39.3 -0.1
TEND *e*S PP 22 55 18.9 +4.9
UPNV Upernavik 135.49 21 *e*P PKiKP 22 52 40.8 +0.7
UPNV IAMs_20 IAMs_20 23 43 54.2
comp=Z,13µm,22.9s
ABKAR Akbulak array 135.77 305 PKPpre 22 52 26.6
SVE Sverdlovsk 135.97 316 *i* PKIKP PKiKP 22 52 43.5 +2.0
SVE *e* 22 55 23.3
SVE pmax pmax
comp=Z,125nm,1.4s
SVE MLR MLR
comp=Z,12µm,23.0s
NUUG Nuugaatsiaq 136.79 22 *e*P PKPdf 22 52 38.4 -2.6
NUUG IAMs_20 IAMs_20 23 47 02.3
comp=Z,26µm,21.5s
ARU Arti 137.12 316 PKhKP PKPpre 22 52 32.2
comp=Z,4.5nm,0.5s,baz=109,slow=1.1,SNR=27
ARU PKP PKPdf 22 52 42.9 +0.9
comp=Z,12nm,0.5s,baz=115,slow=0.8,SNR=19
ARU Arti 137.12 316 *i* PKIKP PKPdf 22 52 42.4 +0.4
ARU 22 55 25.7
ARU PPP PPP 22 58 28.0
ARU 22 59 48.2
ARU SSS SSS 23 18 31.0
ARU Arti 137.12 316 PKPpre PKPpre 22 52 31.8
ARU IAMs_20 IAMs_20 00 05 45.4
comp=Z,12µm,20.0s
AKTO Aktyubinsk 137.16 307 PKhKP PKPpre 22 52 32.7
comp=Z,3.0nm,0.6s,baz=85,slow=4.6,SNR=9.4
AKTO PKP PKiKP 22 52 43.9 -0.2
comp=Z,23nm,0.9s,baz=78,slow=7.3,SNR=14
AKTO PP PP 22 55 25.9 -1.7
comp=Z,9.9nm,0.9s,baz=52,slow=3.3,SNR=4.0
DRLN Deer Lake 137.86 55 IAMs_20 IAMs_20 23 49 49.0
comp=Z,16µm,20.0s
KBS Kingsbay 138.25 356 *e*PKP PKPdf 22 52 41.1 -2.4
KBS IVmB_BB 22 52 46.8
comp=Z,1µm,1.6s
KBS *e*SKPdf SKPbc 22 56 16.9 +1.8
KBS *e*SS SS 23 13 44.7 +2.2
KBS IVMs_BB IVMs_BB 23 45 40.8
comp=Z,4µm,22.2s
KBS Kingsbay 138.25 356 *e*P PKPdf 22 52 37.5 -6.1
KBS IAMs_20 IAMs_20 23 44 22.5
comp=Z,31µm,25.1s
RAYN Ar Rayn 138.46 264 *i* P PKPdf 22 52 43.7 -1.9
SNR=14
SPA0 Spitsbergen Ar 138.71 355 PKPdf PKPdf 22 52 42.6 -1.8
SPA0 Spitsbergen Ar 138.71 355 *e*PKPdf PKPdf 22 52 43.1 -1.3
SPA0 *e*SKPdf SKPbc 22 56 17.9 +1.5
SFJD Kangerlussuaq 139.32 28 PP PP 22 55 42.2 +2.0
comp=Z,17nm,0.9s,baz=239,slow=17,SNR=2.9
HOPEN Hopen 139.38 351 *e*PKPdf PKPdf 22 52 44.1 -1.5
HOPEN *e*PP PP 22 55 40.9 +0.5
HOPEN *e*SKPdf SKiKP 22 56 20.8 -0.5

HOPEN *e*SS SS 23 13 54.0 -1.7
HOPEN IVMs_BB IVMs_BB 23 40 52.4
comp=Z,3µm,31.5s
HSPB Hornsund (broa 139.88 354 *e*PKP PKPdf 22 52 42.9 -3.6
HSPB Hornsund (broa 139.88 354 *e*PKPdf PKPdf 22 52 44.4 -2.1
HSPB *e*PP PP 22 55 44.4 +1.0
HSPB *e*SS SS 23 14 05.8 +4.2
HSPB IVMs_BB IVMs_BB 23 44 43.9
comp=Z,3µm,28.5s
DAG Danmarks Havn 139.90 6 *i* PKHKP PKPpre 22 52 37.8
DAG MLR MLR
comp=Z,16µm,26.0s
DAG Danmarks Havn 139.90 6 *i* P PKPdf 22 52 37.8 -8.8
comp=Z,16µm,26.0s
DAG Danmarks Havn 139.90 6 *i* P PKPdf 22 52 37.9 -8.7
DAG IAMs_20 IAMs_20 23 43 36.5
comp=Z,16µm,26.5s
SUMG Summit 140.15 17 *e*PKHKP PKPpre 22 52 40.8
SUMG MLR MLR
comp=Z,30µm,22.0s
SUMG Summit 140.15 17 *i* P PKPdf 22 52 40.8 -6.8
comp=Z,30µm,22.0s
SUMG Summit 140.15 17 *e*P PKPdf 22 52 40.9 -6.8
SUMG IAMs_20 IAMs_20 23 56 06.1
comp=Z,30µm,21.6s
KIRV Kirov 141.82 320 PKhKP PKPpre 22 52 46.1
comp=Z,44nm,0.5s,baz=43,slow=0.6,SNR=6.7
KIRV Kirov 141.82 320 *d*PKIKP PKPdf 22 52 49.2 -1.3
BJO1 Bjornoya 141.87 352 *e*PKPdf PKPdf 22 52 42.4 -7.7
BJO1 *e*PP PP 22 55 56.5 +0.9
BJO1 *e*SS SS 23 14 22.6 -2.2
BJO1 IVMs_BB IVMs_BB 23 42 16.0
comp=Z,2µm,36.5s
ICESG Greenland Ices 141.98 22 *i* P PKPdf 22 52 46.4 -4.6
DBG Daneborg 142.00 9 *i* P PKPdf 22 52 45.7 -4.7
DBG IAMs_20 IAMs_20 23 49 53.7
comp=Z,16µm,21.1s
MAK Makhachkala 143.47 294 *i* P Pdif 22 50 15.9 -2.0
MAK *e* 22 52 51.6
MAK *e* 22 56 04.0
MAK *e*PPP PPP 22 59 14.8
MAK *e* 22 59 58.2
MAK *e*SS SS 23 14 44.1 -1.5
MAK *e*SSS SSS 23 20 10.0
MAK pmax pmax
comp=Z,970nm,1.8s
NRS Narsarsuaq 143.47 35 *i* PKIKP PKPbc 22 52 50.5 -0.2
NRS pmax pmax
comp=Z,78nm,0.8s
NRS Narsarsuaq 143.47 35 *i* P PKPbc 22 52 50.5 -0.2
comp=Z,78nm,0.8s
NRS Narsarsuaq 143.47 35 *i* P PKPbc 22 52 50.6 -0.1
NRS IAmb IAmb 22 52 52.1
comp=Z,78nm,0.8s
LVZ Lovozero 143.95 338 *c*PKIKP PKPbc 22 52 52.9 +0.9
LVZ MLR MLR
comp=Z,9µm,20.0s
LVZ Lovozero 143.95 338 IAMs_20 IAMs_20 00 10 19.3
comp=Z,11µm,19.0s
ISOG Isortoq, Green 144.18 26 *e*P PKPab 22 52 51.4 -0.9
APA Apatity 144.52 338 ⇓*i*PKIKP PKPab 22 52 53.4 -0.1
APA *i* 22 56 15.0
APA *i* 22 59 23.0
APA pmax pmax
comp=Z,94nm,1.5s
HAMF Hammerfest 144.55 346 *e*PKPbc PKPbc 22 52 53.7 0.0
HAMF *e*PP PP 22 56 12.4 +0.7
HAMF *e*SS SS 23 14 53.5 -2.3
HAMF IVMs_BB IVMs_BB 23 45 38.5
comp=Z,4µm,35.0s
KEV Kevo 144.59 344 PKIKP PKPbc 22 52 54.1 +0.2
KEV MLR MLR
comp=Z,10µm,21.0s
KEV Kevo 144.59 344 PKPdf PKPbc 22 52 54.1 +0.3
KEV IAMs_20 IAMs_20 23 52 34.0
comp=Z,10µm,21.0s
ANGG Ammassalik, Gr 144.61 26 *i* P PKPab 22 52 53.4 -0.4
ANGG IAmb IAmb 22 52 59.0
comp=Z,355nm,0.9s
ANGG IAMs_20 IAMs_20 23 57 20.6
comp=Z,23µm,18.6s
GROC Groznyy 144.74 294 *e*PKIKP PKPab 22 52 54.0 -1.1
GNI Garni 145.06 288 PKP PKPab 22 52 56.5 -0.1
comp=Z,72nm,0.9s,baz=149,slow=1.8,SNR=50
GNI Garni 145.06 288 P PKPdf 22 52 57.0 -0.1
GNI Garni 145.06 288 *e*P PKPbc 22 52 56.4 -0.1
GNI Garni 145.06 288 *d*PKIKP PKPab 22 52 56.5 -0.1
GNI MLR MLR
comp=Z,12µm,22.0s
GNI Garni 145.06 288 PKPbc 22 52 56.0 -0.5
GNI Garni 145.06 288 IAMs_20 IAMs_20 23 56 16.1
comp=Z,12µm,22.0s
ARA0 ARCESS Array S 145.09 344 *e*P PKPbc 22 52 54.5 -1.0
ARCES ARCESS Array B 145.09 344 PKP PKPbc 22 52 55.4 -0.1
comp=Z,138nm,0.5s,baz=42,slow=3.2,SNR=284
SCO Scoresbysund 145.13 12 *i* PKIKP PKPdf 22 52 56.0 0.0
SCO MLR MLR
comp=Z,12µm,20.0s
SCO Scoresbysund 145.13 12 PKPdf 22 52 56.0 0.0
SCO Scoresbysund 145.13 12 *i* P PKPdf 22 52 56.0 0.0
comp=Z,12µm,20.0s
SCO Scoresbysund 145.13 12 *i* P PKPdf 22 52 56.0 0.0
SCO IAMs_20 IAMs_20 23 58 59.4
comp=Z,12µm,19.8s
CUKT Cukurca 145.30 283 *e*P PKPbc 22 52 56.9 -0.4
TASB TASBURUN-IGDIR 145.41 288 *e*P PKPbc 22 52 57.6 +0.1
CLDR Calderan 145.49 287 *e*P PKPdf 22 52 57.8 -0.1
VANB Van 145.78 285 *e*P PKPbc 22 52 58.7 -0.1
KLMR Klimovskoe 145.90 326 *e*PKP2 PKPdf 22 52 56.9 -0.6
KLMR *e* 22 56 22.3
KLMR pmax pmax
comp=Z,2µm,1.2s
KLMR Klimovskoe 145.90 326 *e*PKPdf PKPdf 22 52 57.0 -0.6
KLMR AMP 22 53 06.6
comp=Z,2µm,1.2s
KLMR *e*PP PP 22 56 22.3 +2.1
KLMR LR LR 23 51 59.4
KTK1 Kautokeino 145.99 345 *e*PKPdf PKPbc 22 52 58.0 -0.4
AKDM Akdamar-Van 146.03 285 *e*P PKPbc 22 52 59.6 -0.1
ZEI Tsey 146.07 293 *i* PKIKP PKPdf 22 52 56.0 -2.7
ZEI pmax pmax
comp=Z,632nm,1.5s
AKH Akhalkalaki 146.20 290 ⇓P PKPab 22 53 01.2 +0.4
AKH Akhalkalaki 146.20 290 *e*P PKPbc 22 53 00.2 +0.1
TRO Tromso 146.26 348 *e*PKPdf PKPdf 22 52 58.4 +0.4
TRO IVmBBB 22 53 01.7
comp=Z,7µm,1.8s
TRO *i* 23 03 06.9
TRO *e*SS SS 23 15 17.9 +2.7
TRO IVMs_BB IVMs_BB 23 46 05.8
comp=Z,3µm,34.1s
AGRB Hanur-Agry 146.27 287 *e*P PKPbc 22 52 59.9 -0.5
JMIC Jan Mayen 146.28 5 *e*PKPbc PKPbc 22 52 59.1 0.0
KARS Kars 146.39 289 *e*P PKPbc 22 53 00.7 +0.1
MLAZ Malazgirt-MUS 146.53 286 *e*P PKPbc 22 53 01.6 +0.5
GURO Guroymak-BITLI 146.81 285 *e*P PKPbc 22 53 02.1 +0.2
GOF Gofitskoye 146.87 297 ⇓*i*PKP2 PKPbc 22 53 01.6 -0.1
GOF pmax pmax
comp=Z,671nm,0.9s
KBZ Khabaz 146.89 294 PKPbc PKPbc 22 53 01.3 -0.4
KBZ Khabaz 146.89 294 *d*PKP2 PKPdf 22 53 00.2 +0.4
SENK Senkaya-Erzuru 146.93 289 *e*P PKPdf 22 53 00.5 +0.2
KVAR Kislovodsk Arr 147.05 295 PKPbc PKPbc 22 53 01.9 -0.5
comp=Z,15nm,0.9s,baz=86,slow=23,SNR=8.8
KIV Kislovodsk 147.06 295 ⇑P PKPbc 22 53 02.5 +0.2
KIV Kislovodsk 147.06 295 *i* P PKPdf 22 53 00.1 -0.2
SNR=90
KIV Kislovodsk 147.06 295 *i* PKIKP PKPdf 22 52 58.9 -1.3
KIV *e* 22 56 33.6
KIV *e* 22 59 59.2
KIV *e* 23 09 03.0
KIV *e*SSS SSS 23 20 53.4
KIV pmax pmax
comp=Z,620nm,1.0s
KIV Kislovodsk 147.06 295 PKPdf PKPdf 22 52 59.7 -0.6
KOPR Koprukoy-ERZUR 147.21 288 *e*P PKPbc 22 53 03.4 +0.4
SVAN Silvan-Diyarba 147.36 284 *e*P PKPbc 22 53 02.5 -0.8
VRTB Varto-Mus 147.37 286 *e*P PKPbc 22 53 04.2 +0.7
VRH Novokhopyorsk 147.45 308 *e*PKHKP PKPpre 22 52 57.3
VRH *e* 22 56 31.9
VRH *e*SS SS 23 15 32.6 +2.2
VRH pmax pmax
comp=Z,1µm,1.5s
MAZI Mazidag 147.79 282 *e*P PKPbc 22 53 03.7 -0.9

BNGB	Bingl	147.93	285	eP		PKPbc	22 53 04.6	-0.3
YEDI	Yedisu-Bingol	148.11	286	eP		PKPdf	22 53 02.4	+0.2
DYBB	Diyarbakir	148.14	283	eP		PKPdf	22 53 02.7	+0.5
N2VI	Vinje	148.18	350	ePKPdf		PKPdf	22 53 02.0	+0.9
CHOM	Cayeli-Rize	148.20	289	eP		PKPbc	22 53 04.3	-1.1
STEI	Steigen	148.38	349	ePKPdf		PKPdf	22 53 01.4	-0.1
STEI				IVmB_BB			22 53 07.7	
	comp=Z,8μm,2.0s							
STEI				eSS	SS		23 15 39.7	+0.6
STEI				IVMs_BB	IVMs_BB		23 54 28.4	
	comp=Z,3μm,28.0s							
LOF	Lofoten	148.44	350	ePKPdf		PKPdf	22 53 02.6	+1.0
LOF				IVmB_BB			22 53 07.6	
	comp=Z,6μm,1.4s							
LOF				i			23 03 20.7	
LOF				eSS	SS		23 15 39.2	-0.7
LOF				IVMs_BB	IVMs_BB		23 45 48.8	
	comp=Z,2μm,22.1s							
LIC	Lamto	148.49	171	ePKIKP		PKPdf	22 53 03.7	+0.3
	comp=Z,1μm,1.1s							
KIC	Kosan Boka	148.65	172	ePKIKP		PKPdf	22 53 03.8	+0.1
	comp=Z,1μm,1.3s							
N2TV	TVrnvik	148.73	349	ePKPdf		PKPdf	22 53 02.3	+0.3
N2SV	S_rvÿgen	148.74	350	ePKPdf		PKPdf	22 53 02.2	+0.1
MOS	Moscow	148.76	318	ePKIKP		PKPdf	22 53 01.2	-1.3
MOS				e			22 56 33.4	
MOS				eSSS	SSS		23 21 20.4	
MOS				pmax	pmax			
	comp=Z,988nm,1.6s							
MOS				MLR	MLR			
	comp=N,11μm,22.0s							
MOS				MLR	MLR			
	comp=E,6μm,22.0s							
MOS				MLR	MLR			
	comp=Z,10μm,22.0s							
N2ST	Straumen	148.86	348	ePKPdf		PKPdf	22 53 02.2	-0.1
SVRC	Sivrice-ELAZID	148.87	284	eP		PKPdf	22 53 03.1	-0.4
FAUS	Fauske	148.88	348	ePKPdf		PKPdf	22 53 02.7	+0.4
FAUS				IVmB_BB			22 53 08.7	
	comp=Z,4μm,1.9s							
FAUS				eSS	SS		23 15 45.1	+0.4
FAUS				IVMs_BB	IVMs_BB		23 47 22.7	
	comp=Z,3μm,28.3s							
PTK	Pertek	148.90	285	eP		PKPdf	22 53 02.8	-0.8
LPSR	Galich'ya Gora	148.90	312	ePKHKP		PKPpre	22 53 00.6	
LPSR				e			22 56 38.9	
LPSR				pmax	pmax			
	comp=Z,1μm,1.8s							
TIC	Toumodi	148.90	171	ePKIKP		PKPdf	22 53 04.4	+0.3
VORR	Voronezh	148.93	310	ePKHKP		PKPpre	22 53 00.0	
VORR				pmax	pmax			
	comp=Z,2μm,1.6s							
KTUT	Trabzon	148.93	289	⇑P		PKiKP	22 53 07.9	-0.7
KTUT	Trabzon	148.93	289	eP		PKPdf	22 53 01.6	-1.7
DBIC	Dimbokro	148.95	171	PKPbc		PKPbc	22 53 08.0	-0.1
	comp=Z,65nm,0.7s,baz=120,slow=1.9,SNR=20							
DBIC	Dimbokro	148.95	171	PKP2		PKPbc	22 53 08.0	-0.1
NBB08	Skaug oppvekst	148.97	349	ePKPdf		PKPdf	22 53 02.7	+0.3
N2VA	Vr_y	149.00	350	ePKPdf		PKPdf	22 53 02.4	-0.1
VORD	Divnogorie	149.00	308	ePKHKP		PKPpre	22 53 01.2	
VORD				pmax	pmax			
	comp=Z,380nm,1.3s							
VSR	Storozhevoye	149.04	309	ePKIKP		PKPdf	22 53 02.4	-0.7
VSR				e			22 56 33.7	
VSR				pmax	pmax			
	comp=Z,830nm,1.8s							
URFA	Urfa	149.05	282	eP		PKPdf	22 53 02.5	-1.2
ASF	Jabal al Asfar	149.08	271	PKPbc		PKiKP	22 53 09.0	-0.3
	comp=Z,10nm,0.9s,baz=120,slow=8.4,SNR=20							
NBB28	Valnes	149.18	349	ePKPdf		PKPdf	22 53 04.1	+1.3
SOC	Sochi	149.19	294	ePKHKP		PKPpre	22 53 01.3	
SOC				i			22 53 06.8	
SOC				e			22 56 42.4	
SOC				i PPP	PPP		23 00 05.2	
SOC				eSS	SS		23 15 50.8	+0.2
SOC				pmax	pmax			
	comp=Z,33nm,1.3s							
SOC				pmax	pmax			
	comp=Z,416nm,1.2s							
SOC				MLR	MLR			
	comp=Z,8μm,20.0s							
N2RO	R_st	149.21	351	ePKPdf		PKPdf	22 53 03.0	+0.1
NBB05	Inndyr	149.39	349	ePKPdf		PKPdf	22 53 03.2	+0.1
SACV	Santiago Islan	149.48	131			PKPbc	22 53 08.3	-1.1
SACV	Santiago Islan	149.48	131	IAMs_20	IAMs_20		23 58 23.2	
	comp=Z,12μm,18.0s							
NBB30	Finnes	149.50	349	ePKPdf		PKPdf	22 53 04.2	+0.9
OBN	Obninsk	149.53	317	⇑P		PKPbc	22 53 06.2	-2.1
OBN	Obninsk	149.53	317	*d* iPKHKP		PKPpre	22 53 04.1	
OBN				e			22 56 41.7	
OBN				ePPP	PPP		23 00 01.5	
OBN				e			23 00 09.3	
OBN				i SSS	SSS		23 21 35.2	
OBN				pmax	pmax			
	comp=Z,2μm,1.7s							
OBN				MLR	MLR			
	comp=Z,12μm,25.0s							
OBN	Obninsk	149.53	317	PKPdf		PKPdf	22 53 03.7	0.0
OBN				IAMs_20	IAMs_20		00 11 00.6	
	comp=Z,11μm,21.0s							
MALT	Malatya	149.53	283	eP		PKPdf	22 53 04.3	-0.2
ILIC	ilic-Erzincan	149.62	286	eP		PKPdf	22 53 03.6	-1.0
EIL	Elat	149.67	265	PKPbc		PKiKP	22 53 10.2	-0.3
	comp=Z,176nm,0.9s,baz=304,slow=0.5,SNR=84							
ESPY	Espiye-Giresun	149.70	289	eP		PKPdf	22 53 01.9	-2.6
KONS	Konsvik	150.03	349	ePKPbc		PKPbc	22 53 09.4	+0.3
NBB40	Tonnes	150.03	349	eP		PKPdf	22 53 05.2	+1.0
BORG	Borgarnes	150.12	18	PKIKP		PKPbc	22 53 07.3	-2.1
BORG				MLR	MLR			
	comp=Z,10μm,20.0s							
BORG	Borgarnes	150.12	18			PKPbc	22 53 07.3	-2.1
BORG	Borgarnes	150.12	18	IAMs_20	IAMs_20		23 53 57.1	
	comp=Z,10μm,20.0s							
MOR8	Moi Rana	150.12	348	ePKPdf		PKPdf	22 53 04.0	-0.4
MOR8				IVmBBB			22 53 10.6	
	comp=Z,3μm,2.0s							
MOR8				eSS	SS		23 16 01.1	+2.3
MOR8				IVMsBB			23 47 51.5	
	comp=Z,3μm,32.2s							
STOK	Stokkvaagen	150.20	349	ePKPdf		PKPdf	22 53 04.9	+0.5
STOK				eSS	SS		23 16 03.7	+4.3
GAZ	Gaziantep	150.25	281	eP		PKPdf	22 53 05.8	+0.2
RCY	Rachaya	150.36	273	eP		PKPdf	22 53 07.0	+1.0
PUL	Pulkovo	150.41	328	eP		PKPbc	22 53 10.1	-0.2
PUL	Pulkovo	150.41	328	*d* iPKIKP		PKPbc	22 53 10.1	-0.2
MMAI	Mount Meron Ar	150.55	272	PKPbc		PKiKP	22 53 12.4	+0.1
	comp=Z,68nm,0.6s,baz=76,slow=3.5,SNR=119							
BHL	Bhannes	150.63	274	eP		PKPdf	22 53 06.8	+0.5
ANN	Anapa	150.85	296	i PKIKP		PKPbc	22 53 09.6	-2.2
ANN				e			22 56 47.6	
ANN				pmax	pmax			
	comp=Z,331nm,1.6s							
TAHT	Tahtakopru-Hat	150.87	279	eP		PKPdf	22 53 05.9	-0.6
SVSK	Karacayir	150.89	286	eP		PKPdf	22 53 05.4	-1.0
FINES	FINESS Array B	150.98	334	PKPbc		PKPbc	22 53 11.2	-0.4
	comp=Z,169nm,0.7s,baz=118,slow=1.4,SNR=49							
FINES	FINESS Array B	150.98	334	PKIKP		PKPdf	22 53 05.8	0.0
FINES	FINESS Array B	150.98	334			PKPdf	22 53 05.8	0.0
SARI	SarD1z-Kayseri	151.10	283	eP		PKPdf	22 53 05.7	-1.3
TOKT	Tokat	151.28	287	eP		PKPdf	22 53 05.4	-1.7
CEYT	Ceyhan	151.36	280	eP		PKPdf	22 53 05.9	-1.3
KOZT	Kozan	151.39	281	eP		PKPdf	22 53 05.7	-1.6
BNN	Bunyan	151.62	284	eP		PKPdf	22 53 05.9	-1.8
KVT	Kavak	151.74	289	eP		PKPdf	22 53 06.8	-0.9
KARA	Karaisali	151.95	280	eP		PKPdf	22 53 06.5	-1.6
NSS	Namsos	152.04	349	ePKPdf		PKPdf	22 53 07.3	-0.1
NSS				IVmB_BB			22 53 16.5	
	comp=Z,4μm,1.3s							
NSS				eSS	SS		23 16 22.7	+2.8
NSS				IVMs_BB	IVMs_BB		23 50 45.1	
	comp=Z,2μm,25.5s							
MERS	Mersin	152.29	279	eP		PKPdf	22 53 07.1	-1.6
DIKM	Dikmen	152.37	290	⇓P		PKiKP	22 53 17.3	+1.6
VSU	Vasula	152.68	329	eP		PKiKP	22 53 15.9	+0.1
VSU	Vasula	152.68	329	*d* iPKIKP		PKPdf	22 53 09.0	+0.6
CORM	Corum	152.72	286	eP		PKPdf	22 53 07.1	-2.2
CSS	Mathiatis	152.77	275	PKPdf		PKPdf	22 53 08.6	-0.9
LEF	Lefka	153.16	275	⇓P		PKiKP	22 53 17.9	+0.3
BZK	Bozkurt	153.32	290	⇓P		PKiKP	22 53 17.9	+0.3
BR131	Keskin Array S	153.43	285	*de*PKIKP		PKPdf	22 53 07.5	-2.9
BRTR	Keskin Array B	153.43	285	PKPbc		PKPbc	22 53 17.1	-0.9
	comp=Z,39nm,0.9s,baz=150,slow=3.3,SNR=48							
BRTR	Keskin Array B	153.43	285	PKIKP		PKPdf	22 53 09.7	-0.7
BRTR	Keskin Array B	153.43	285	PKPdf		PKPdf	22 53 09.7	-0.7
TBLU	Trondheim	153.51	349	ePKPdf		PKPdf	22 53 09.5	0.0
TBLU				eSKPdf		SKPdf	22 56 42.3	+2.4
TBLU				eSS		SS	23 16 37.3	+1.3
TBLU				IVMs_BB	IVMs_BB		23 51 22.8	
	comp=Z,3μm,20.5s							
MICGM	Minsk	154.36	320	ePKP1		PKPdf	22 53 12.0	+1.0
MICGM				ePKS		PKSdf	22 56 44.0	-0.9
MICGM				ePP		PP	22 57 12.0	+2.9
MICGM				ePPP	PPP		23 00 28.0	
MICGM				eSS	SS		23 17 40.0	+54
MICGM				eSSS	SSS		23 22 24.0	
MICGM				eLR	LR		23 57 44.0	
MICGM				LRM	MLR		00 11 58.0	
	comp=Z,20nm,20.0s							
MICGM				LRM	MLR		00 11 58.0	
	comp=Z,12nm,20.0s							
MNK	Minsk	154.36	320	ePKIKP		PKPdf	22 53 12.0	+1.0
MNK				e			22 57 12.0	
IZAR	Zarasai	154.50	324	eP		PKPbc	22 53 17.7	-1.9
IDID	Didziasalis	154.50	323	eP		PKPdf	22 53 14.0	+2.9
MOL	Molde	154.53	351	ePKPdf		PKPdf	22 53 10.7	-0.3
MOL				IVMs_BB	IVMs_BB		23 52 26.6	
	comp=Z,3μm,23.7s							
ISAL	Salakas	154.65	324	eP		PKPbc	22 53 16.2	-3.7
NACGM	Naroch	154.70	322	ePKP1		PKPdf	22 53 08.0	-3.5
NACGM				ePKP2		sPKPbc	22 53 34.0	-0.1
NACGM				ePP	PP		22 56 48.0	-23
NACGM				ePPP	PPP		23 00 26.0	
NACGM				eSKS			23 01 40.0	
NACGM				eSS	SS		23 16 44.0	-5.9
NACGM				eSSS	SSS		23 22 38.0	
NACGM				eLQ	LQ		23 57 24.0	
NACGM				eLR	LR		00 05 20.0	
NACGM				LRM	MLR		00 09 35.0	
	comp=Z,20nm,20.0s							
IIGN	Ignalina	154.73	323	eP		PKPdf	22 53 14.3	+2.8
DOMB	Dombas	154.84	350	ePKPdf		PKPdf	22 53 10.7	-0.8
DOMB				ePKPab		PKPab	22 53 35.5	0.0
DOMB				ePKSdf		PP	22 56 45.6	-26
DOMB				i			23 03 48.8	
DOMB				eSS	SS		23 16 52.4	+1.9
DOMB				IVMs_BB	IVMs_BB		23 52 03.7	
	comp=Z,3μm,30.9s							
AKN	Aaknes	154.97	352	ePKPdf		PKPdf	22 53 12.7	+1.0
AKN				ePKSdf		PKSdf	22 56 45.9	+0.4
SLIT	Slitere, Latvi	155.01	331	eP		PKPdf	22 53 12.3	+0.6
SOFL	Sornfelli, Far	155.17	7	eP		PKPdf	22 53 02.1	-10
AKASG	Malin Array Be	155.23	311	PKPbc		PKPdf	22 53 21.1	+8.8
	comp=Z,26nm,0.7s,baz=54,slow=2.8,SNR=21							
AKASG	Malin Array Be	155.23	311	PKIKP		PKPdf	22 53 11.2	-1.1
AKASG	Malin Array Be	155.23	311			PKPdf	22 53 11.2	-1.1
AKASG						pPKPdf	22 53 21.4	-1.5
AKBB	Malin Array Si	155.23	311	*d* iPKIKP		PKPdf	22 53 11.4	-0.9
NB2	NORSAR Subarra	155.42	346	PKP		PKPdf	22 53 12.3	0.0
	comp=Z,500nm,2.0s,baz=23,slow=4.4							
NB2	NORSAR Subarra	155.42	346	PKP		PKPdf	22 53 12.3	0.0
	baz=23,slow=4.4							
NOA	NORSAR Array B	155.42	346	PKP		PKPdf	22 53 12.0	-0.3
	comp=Z,23nm,1.1s,baz=18,slow=1.7,SNR=25							
TORD	Torodi Ar. Bea	155.58	185	PKP		PKPdf	22 53 14.2	+0.3
	comp=Z,35nm,0.9s,baz=305,slow=0.6,SNR=62							
TORD				PKPab		PKPab	22 53 39.3	-0.5
	comp=Z,146nm,0.8s,baz=168,slow=1.6,SNR=13							
TORD	Torodi Ar. Bea	155.58	185			PKPdf	22 53 14.3	+0.4
NC602	NORSAR Array S	155.64	346	ePKPdf		PKPdf	22 53 11.7	-0.9
PABE	Paberze	155.69	325	eP		PKPdf	22 53 09.8	-3.0
FOO	Floro	155.74	354	ePKPdf		PKPdf	22 53 12.2	-0.4
FOO				eSKPdf		SKPdf	22 56 44.0	+1.3
FOO				eSS		SS	23 17 01.1	+1.1
H07S1	FLORES T-PHASB	155.87	76	ePKP		PKPdf	22 53 15.0	+1.4
PURM	Purcari	155.95	301	⇓P		PKPdf	22 53 17.0	+3.6
H07N1	FLORES T-PHASB	155.96	75	ePKP		PKPdf	22 53 13.8	+0.1
KSL	Kastellorizon	156.02	276	P		PKPdf	22 53 14.2	+0.3
AKAS	Kas	156.02	276	IAMs_20	IAMs_20		00 00 37.7	
	comp=Z,12μm,22.0s							
HYA	Hoyanger	156.05	352	ePKPdf		PKPdf	22 53 12.8	-0.3
HYA				eSS	SS		23 17 05.0	+1.6
ORH	Orhaniye	156.24	287	P		PKPdf	22 53 18.4	+4.4
PBUR	Paburge	156.25	328	eP		PKPdf	22 53 21.6	+8.2
SKAR	Skarslia	156.25	349	ePKPdf		PKPdf	22 53 14.1	+0.6
SKAR				eSS	SS		23 17 09.7	+3.9
SKAR				IVMs_BB	IVMs_BB		23 52 44.1	
	comp=Z,3μm,26.6s							
SUE	Sulen	156.30	354	ePKPdf		PKPdf	22 53 13.6	+0.2
SUE				eSS	SS		23 17 07.9	+1.8
SUE				IVMs_BB	IVMs_BB		23 54 11.9	
	comp=Z,2μm,27.0s							
FETY	Fethiye	156.52	277	P		PKPdf	22 53 14.7	+0.1
OSL	Oslo	156.54	346	ePKPdf		PKPdf	22 53 13.3	-0.4
OSL				IVmB_BB			22 53 19.8	
	comp=Z,2μm,2.3s							
OSL				ePP		PP	22 57 22.3	+1.6
OSL				eSS	SS		23 17 13.2	+4.4
OSL				IVMs_BB	IVMs_BB		23 54 58.2	
	comp=Z,3μm,21.1s							
KIS	Kishinev	156.56	303	⇓ *i* PKP		PKPdf	22 53 12.7	-1.5
	comp=Z,2μm,12.0s							
KIS	Kishinev	156.56	303	*i* PP	PP		22 57 19.0	-2.8
KIS				*i* SKS	SKSdf		23 00 09.0	-8.5
KIS	Kishinev	156.56	303	*i* PPP	PPP		23 01 03.0	
KIS				eLR	LR		00 03 52.0	
	comp=Z,14μm,19.0s							
KIS	Kishinev	156.56	303	*d* iPKIKP		PKPdf	22 53 12.7	-1.5
KIS				*i*			22 57 19.0	
KIS				*i* PPP	PPP		23 01 03.0	
KIS				pmax	pmax			
	comp=Z,2μm,12.0s							
SORM	Soroca	156.58	306	⇓P		PKPdf	22 53 14.9	+0.7
SORM	Soroca	156.58	306	⇓PKIKP		PKPdf	22 53 14.9	+0.7
MILM	Milestii Mici	156.58	303	⇓P		PKPdf	22 53 16.3	+2.1
KOWA	Kowa	156.77	171	PKPdf		PKPdf	22 53 14.0	-1.5
ASK	Askoy	156.82	353	ePKPdf		PKPdf	22 53 15.7	+1.6
ASK				eSS	SS		23 17 13.3	+1.7
BER	Bergen	156.91	353	ePKPdf		PKPdf	22 53 13.7	-0.5
BER				IVmB_BB			22 53 17.0	
	comp=Z,2μm,2.5s							
BER				eSS	SS		23 17 16.9	+4.3
BER				IVMs_BB	IVMs_BB		23 53 55.9	
	comp=Z,4μm,23.7s							
TLCR		156.91	298	⇓P		PKPdf	22 53 21.3	+6.6
TLCR		156.91	298	⇓PKIKP		PKPdf	22 53 21.3	+6.6
JURR	Jurilovca	156.92	297	⇑P		PKPab	22 53 41.3	-3.6
SUW	Suwalki	156.94	323	ePKP		PKPdf	22 53 04.4	-10
ISK	Istanbul-Kandi	157.01	288	P		PKPdf	22 53 13.8	-1.2
KONO	Kongsberg	157.02	347	*de*PKIKP		PKPdf	22 53 12.0	-2.4
KONO	Kongsberg	157.02	347	PKPdf		PKPdf	22 53 14.9	+0.5
KONO	Kongsberg	157.02	347	IAMs_20	IAMs_20		00 20 15.3	
	comp=Z,10μm,21.0s							
KONO	Kongsberg	157.02	347	ePKPdf		PKPdf	22 53 13.9	-0.5
KONO				ePP		PP	22 57 23.4	+0.1
KONO				eSS	SS		23 17 18.8	+4.8
KONO				IVMs_BB	IVMs_BB		23 56 01.5	
	comp=Z,3μm,19.1s							
KULA	Kula-Manisa	157.14	281	P		PKPdf	22 53 15.5	+0.1
ARG	Arkhangelos	157.19	275	P		PKPdf	22 53 15.5	+0.1
ODD1	Odda	157.22	351	ePKPdf		PKPdf	22 53 14.7	0.0
TPGR	Topolog	157.23	298	⇓P		PKPdf	22 53 16.8	+1.6
YER	Yerkesik	157.24	278	P		PKPdf	22 53 14.7	-0.8
MANR	Mangalia	157.24	295	⇑P		PKPdf	22 53 22.0	+6.8
TIRR	Tirgusor	157.29	297	⇑P		PKPdf	22 53 22.5	+7.3
TIRR	Tirgusor	157.29	297	⇑P		PKPdf	22 53 22.5	+7.3
TIRR	Tirgusor	157.29	297	⇑PKIKP		PKPdf	22 53 22.5	+7.3
MFTR	Murfatlar	157.32	296	⇑P		PKPdf	22 53 23.0	+7.7
IAS	Iasi	157.34	304	⇑P		PKPab	22 53 50.7	+4.0
IAS	Iasi	157.34	304	⇑PKP2		PKPab	22 53 50.7	+4.0
CFR	Carcaliu	157.38	299	⇓P		PKPdf	22 53 16.2	+0.9
CFR	Carcaliu	157.38	299	⇓PKIKP		PKPdf	22 53 16.2	+0.9
LRW	Lerwick	157.44	1	eP		PKPdf	22 53 04.0	-11
LRW				IAMs_20	IAMs_20		00 32 17.7	
	comp=Z,13μm,16.6s							
VARL	Varlezi	157.45	301	⇑P		PKPdf	22 53 18.8	+3.4
TLBR	Topalu	157.54	297	⇑P		PKPdf	22 53 21.7	+6.2
PSN	Preselentsi	157.55	295	P		PKPdf	22 53 14.2	-1.4
HARR	Harsova	157.60	297	⇑P		PKPdf	22 53 21.5	+5.9
HARR	Harsova	157.60	297	⇑PKIKP		PKPdf	22 53 21.5	+5.9
BLS5	Blasjo	157.72	351	ePKPdf		PKPdf	22 53 16.2	+0.8
BLS5				IVmB_BB			22 53 23.3	
	comp=Z,2μm,1.4s							
BLS5				eSKPdf		SKPdf	22 56 41.9	-3.2
BLS5				eSS	SS		23 17 26.9	+5.5
BLS5				IVMs_BB	IVMs_BB		23 55 33.0	
	comp=Z,4μm,28.2s							
CALA	Caldeira	157.73	79	ePKP		PKPdf	22 53 23.4	+7.3
PCED	Cedros	157.73	79	ePKP		PKPdf	22 53 17.2	+1.2
ICOR	Ion Corvin	157.77	296	⇓P		PKPab	22 53 45.2	-3.5
KARP	Karpathos	157.81	273	P		PKPdf	22 53 16.0	-0.2
PCAN	Candelaria	157.88	79	ePKP		PKPdf	22 53 16.3	+0.1
PETR	Petresti	157.91	300	⇓P		PKPdf	22 53 19.2	+3.3
PICO	Pico	157.93	79	ePKP		PKPdf	22 53 19.2	+2.9
BODT	Bodrum	157.99	277	P		PKPdf	22 53 16.2	-0.2
NIS1	Nisyros Isl.	158.01	276	P		PKPdf	22 53 16.5	+0.1
ODBI	Odobesti	158.02	300	⇑P		PKPdf	22 53 19.0	+2.9
AMRR	Amara	158.03	297	⇑P		PKPdf	22 53 22.3	+6.2
AMRR	Amara	158.03	297	⇑PKIKP		PKPdf	22 53 22.3	+6.2
ROSA	Rosais	158.10	78	ePKP		PKPdf	22 53 20.3	+3.8
TESR	Tescani	158.12	303	⇑P		PKPdf	22 53 18.0	+1.8
GRER		158.15	299	⇑P		PKPab	22 53 51.6	+1.3
PID	Ribeirinha	158.16	79	ePKP		PKPdf	22 53 19.1	+2.5
PRAR	RASCA	158.17	305	⇑P		PKPdf	22 53 17.8	+1.5
PMAN	Manadas	158.21	79	ePKP		PKPdf	22 53 18.6	+2.0
VRI	Vrincioaia	158.22	301	⇓P		PKPdf	22 53 18.8	+2.4
VRI	Vrincioaia	158.22	301	⇓PKIKP		PKPdf	22 53 18.8	+2.4
RASA	Rasa	158.22	296	⇓P		PKPdf	22 53 22.9	+6.5
PLOR	Plostina	158.28	301	⇑P		PKPdf	22 53 21.3	+4.8
PLOR	Plostina	158.28	301	⇑PKIKP		PKPdf	22 53 21.3	+4.8
SRBC	Serra Branca	158.28	78	ePKP		PKPdf	22 53 17.5	+0.8
BISRR	Bisoca	158.30	300	⇑P		PKPdf	22 53 19.5	+3.0
PGRA	Graciosa	158.33	78	ePKP		PKPdf	22 53 17.3	+0.6
BIZ	Bicaz	158.37	304	⇑P		PKPdf	22 53 18.9	+2.4
BLCB	Balcova	158.39	281	P		PKPdf	22 53 15.4	-1.4
ZKR	Zakros	158.45	271	P		PKPdf	22 53 16.7	-0.3
SMG	Samos	158.47	279	P		PKPdf	22 53 16.4	-0.5
ISR	Istrita	158.50	299	⇑P		PKPdf	22 53 22.4	+5.6
ISR	Istrita	158.50	299	⇑PKIKP		PKPdf	22 53 22.4	+5.6
HOMB	Homborsund	158.51	347	ePKPdf		PKPdf	22 53 15.3	-1.0
HOMB				IVmB_BB			22 53 22.2	
	comp=Z,3μm,1.7s							
HOMB				eSKPdf		SKPdf	22 56 46.4	+0.5
HOMB				eSS		SS	23 17 32.9	+3.1
HOMB				IVMs_BB	IVMs_BB		23 54 31.7	
	comp=Z,4μm,26.4s							
STIA	Sitia Lasithi	158.57	272	P		PKPdf	22 53 17.4	+0.3
NEHR	Nehoiu	158.61	300	⇓P		PKPdf	22 53 17.5	+0.6
LVV	L'vov	158.64	313	ePKIKP		PKPdf	22 53 16.0	-0.7
LVV				eSS	SS		23 18 24.0	+51
SNART	Snartemo	158.66	349	ePKPdf		PKPdf	22 53 16.3	-0.2
EDRB	Edirne	158.74	290	P		PKPdf	22 53 16.2	-0.9
BURAR	Bucovina Array	158.75	306	⇑P		PKPdf	22 53 19.6	+2.5
BURAR	Bucovina Array	158.75	306	PKIKP		PKPdf	22 53 17.1	0.0
BURAR	Bucovina Array	158.75	306	PKPdf		PKPdf	22 53 17.1	0.0
RAZG	Razgrad	158.77	295	⇑P		PKPdf	22 53 22.4	+5.3
SULR		158.78	298	⇑P		PKPab	22 53 50.3	-2.7
FRMA	Ierapetra Chan	158.81	271	P		PKPdf	22 53 19.5	+2.1
MLR	Muntele Rosu	158.84	300	PKP		PKPdf	22 53 18.6	+1.3
	comp=Z,28nm,1.2s,baz=288,slow=3.8,SNR=5.6							
MLR				PKPab		PKPab	22 53 53.9	+0.5
	comp=Z,39nm,1.0s,baz=154,slow=12,SNR=5.7							
MLR	Muntele Rosu	158.84	300	⇓P		PKPdf	22 53 17.5	+0.2
MLR	Muntele Rosu	158.84	300	PKIKP		PKPdf	22 53 16.7	-0.6
MLR	Muntele Rosu	158.84	300			PKPdf	22 53 16.7	-0.6
S

comp=Z,12µm,21.0s
KYMI Kymi, Euboea I 160.71 281 P PKPdf 22 53 18.1 -1.4
DION Dionisos Attik 160.79 279 P PKPdf 22 53 17.7 -1.9
MPEP Malo Peshtene 160.79 295 P PKPdf 22 53 19.5 +0.1
DEV Deva 160.80 303 ⇓P PKPdf 22 53 19.9 +0.6
DEV Deva 160.80 303 ⇓PKIKP PKPdf 22 53 19.9 +0.6
OJC Ojcow 160.82 318 *e*PKP **PKPdf 22 53 19.5 +0.3**
OJC Ojcow 160.82 318 PKIKP **PKPdf 22 53 19.2 0.0**
PTL Penteli 160.84 279 P **PKPdf 22 53 18.8 -0.9**
OUR Ouranopolis 160.87 286 P **PKPdf 22 53 18.6 -0.9**
VLY Voula,Athens 160.88 278 P **PKPdf 22 53 18.7 -1.0**
ATHU Athens Univers 160.90 279 P **PKPdf 22 53 18.2 -1.5**
AOS Alonnisos 160.92 282 P **PKPdf 22 53 18.0 -1.7**
NVR Nevrokopi 160.93 289 P **PKPdf 22 53 18.7 -1.0**
ANKY Antikythira Is 160.94 272 P **PKPdf 22 53 19.0 -0.8**
ATH Athens Observa 160.95 279 P **PKPdf 22 53 18.8 -0.9**
BAIL Bailesti 160.96 297 ⇓P PKPdf 22 53 23.9 +4.4
NIE Niedzica 160.97 315 *e*PKP **PKPdf 22 53 17.6 -1.9**
NIE Niedzica 160.97 315 PKIKP **PKPdf 22 53 19.7 +0.3**
INVG Invergeldie, C 161.00 6 *e*P PKPdf 22 53 07.5 -12
INVG IAMs_20 IAMs_20 00 21 04.8
comp=Z,16µm,20.4s
MMB Musomiste 161.01 290 P **PKPdf 22 53 17.7 -2.0**
GZR Gura Zlata 161.02 302 ⇑P PKPdf 22 53 21.3 +1.6
GZR Gura Zlata 161.02 302 ⇑PKIKP PKPdf 22 53 21.3 +1.6
LAWE Loch Awe, Argy 161.03 9 *e*P PKPdf 22 53 09.3 -10
LAWE IAMs_20 IAMs_20 00 00 36.7
comp=Z,14µm,23.1s
PAIG Paliouri 161.10 285 P **PKPdf 22 53 19.0 -0.8**
SRS Serrai 161.14 288 P **PKPdf 22 53 17.4 -2.5**
KTHA Kythira Island 161.21 273 P **PKPdf 22 53 20.3 +0.2**
EAB Aberfoyle 161.21 7 *e*P PKPdf 22 53 08.5 -11
VTS Vitosha 161.27 293 P **PKPdf 22 53 18.5 -1.6**
VILL Villia 161.29 279 P **PKPdf 22 53 18.4 -1.8**
KECS Kecovo 161.32 312 *e*PKIKP **PKPdf 22 53 21.4 +1.6**
KECS *e* 22 54 04.3
KECS Kecovo 161.32 312 *e*PKP **PKPdf 22 53 21.4 +1.6**
KECS *e* 22 54 04.3
KRND KRANIDI 161.32 277 P **PKPdf 22 53 19.4 -0.7**
SOH Sokhos 161.34 287 P **PKPdf 22 53 17.8 -2.3**
EPID Epidavros 161.38 277 P **PKPdf 22 53 18.4 -1.8**
VLI Veliai 161.39 274 P **PKPdf 22 53 19.2 -1.1**
HERR Herculane 161.41 300 ⇑P PKPdf 22 53 22.1 +2.1
NEO Neokhori 161.44 283 P **PKPdf 22 53 19.8 -0.5**
XOR Xorichti 161.46 283 P **PKPdf 22 53 19.9 -0.4**
SIRR Siria 161.50 305 ⇑P PKPdf 22 53 19.2 -0.9
HORT Hortiatis 161.53 287 P **PKPdf 22 53 19.4 -1.0**
LOUT Loutraki 161.53 278 P **PKPdf 22 53 19.7 -0.7**
LTK Loutraki 161.54 278 P **PKPdf 22 53 18.4 -2.0**
ATAL Atalanti 161.56 281 P **PKPdf 22 53 18.1 -2.3**
EDI Edinburgh 161.57 5 *e*P PKPdf 22 53 09.7 -10
EDI IAMs_20 IAMs_20 00 20 06.3
comp=Z,17µm,20.9s
PGBU Glenifferbraes 161.57 7 *e*P PKPdf 22 53 09.4 -10
PGBU IAMs_20 IAMs_20 00 21 44.5
comp=Z,14µm,20.3s
LKR Lokris 161.57 280 P **PKPdf 22 53 19.5 -0.9**
LANS Liptovska Anna 161.58 315 *e*PKIKP **PKPdf 22 53 21.0 +0.9**
LANS Liptovska Anna 161.58 315 *e*PKP **PKPdf 22 53 21.0 +0.9**
LANS *e* 22 54 06.4
THE Thessaloniki 161.64 287 P **PKPdf 22 53 19.0 -1.4**
BZS Buzias 161.74 303 ⇓P PKPdf 22 53 21.4 +1.1
BZS Buzias 161.74 303 ⇓PKIKP PKPdf 22 53 21.4 +1.1
THAL Thalero 161.78 278 P **PKPdf 22 53 20.1 -0.5**
AXAR Agios Charalam 161.85 281 P **PKPdf 22 53 20.5 -0.2**
IDGL Inch Island, C 161.86 13 *e*P PKPdf 22 53 09.1 -11
MDVR Moldovita 161.92 300 ⇑P PKPdf 22 53 21.3 +0.7
OKC Ostrava-Krasne 161.92 318 *e*PKIKP **PKPdf 22 53 20.5 +0.1**
OKC MLR MLR
comp=Z,11µm,22.0s
OKC Ostrava-Krasne 161.92 318 *e*PKPDF **PKPdf 22 53 20.5 +0.1**
OKC *e*PKPAB **PKPab 22 54 09.7 +3.2**
OKC AMS AMS 00 05 20.0
comp=Z,11µm,22.0s
DSF Desfina 161.93 280 P **PKPdf 22 53 19.4 -1.4**
VLX Vlachokerasia 161.93 276 P **PKPdf 22 53 19.6 -1.3**
PSZ Piszkesteto 161.94 311 ⇑P PKPdf 22 53 19.5 -1.1
PSZ Piszkesteto 161.94 311 ⇑PKIKP PKPdf 22 53 19.5 -1.1
TIM Timisoara 161.96 304 ⇓P PKPdf 22 53 24.2 +3.7
TIM Timisoara 161.96 304 ⇓PKIKP PKPdf 22 53 24.2 +3.7
LIT Litokhoron 162.01 285 P **PKPdf 22 53 19.2 -1.6**
GUR Goura 162.03 278 P **PKPdf 22 53 20.6 -0.4**
TRIP Tripoli 162.04 277 P **PKPdf 22 53 21.1 +0.1**
GRG Griva 162.05 288 P **PKPdf 22 53 20.2 -0.6**
CLGH Cloghs, Cushen 162.08 11 *e*P PKPdf 22 53 10.4 -10
CLGH IAMs_20 IAMs_20 00 07 50.2
comp=Z,12µm,19.2s
RUE Ruedersdorf 162.12 331 *e*P **PKPdf 22 53 19.8 -0.6**
BANR Banloc 162.13 303 ⇑P PKPdf 22 53 25.2 +4.5
ESK Eskdalemuir 162.17 5 *e*P PKPdf 22 53 08.8 -12
ESK IAMs_20 IAMs_20 00 14 58.2
comp=Z,14µm,19.7s
KLV Kalavryta, Ach 162.19 278 P **PKPdf 22 53 19.8 -1.3**
KSP Ksiaz 162.22 323 *e*PKP **PKPdf 22 53 19.5 -1.1**
KSP Ksiaz 162.22 323 PKIKP **PKPdf 22 53 20.5 -0.1**
KALE Kalithea 162.23 279 P **PKPdf 22 53 20.8 -0.4**
ITM Ithomi 162.26 275 P **PKPdf 22 53 20.1 -1.1**
MORC Moravsky Berou 162.27 319 ⇓P PKPdf 22 53 21.2 +0.4
MORC Moravsky Berou 162.27 319 *e*PKP **PKPdf 22 53 20.5 -0.3**
MORC Moravsky Berou 162.27 319 ⇓PKIKP PKPdf 22 53 21.2 +0.4
MAKR Makrakomi, Fth 162.27 282 P **PKPdf 22 53 21.3 +0.2**
VYHS Vyhne 162.28 314 *e*PKIKP **PKPdf 22 53 22.3 +1.5**
VYHS Vyhne 162.28 314 *e*PKP **PKPdf 22 53 22.3 +1.5**
VYHS *e* 22 54 10.0
TRIZ Trizonia 162.28 279 P **PKPdf 22 53 20.1 -1.0**
NEWG New Galloway 162.28 7 *e*P PKPdf 22 53 09.1 -11
NEWG IAMs_20 IAMs_20 00 16 19.9
comp=Z,16µm,19.4s
SERG Sergoula 162.29 280 P **PKPdf 22 53 19.4 -1.8**
PYL PYLOS 162.37 274 P **PKPdf 22 53 19.6 -1.6**
THL Klokotos Trika 162.38 283 P **PKPdf 22 53 20.1 -1.0**
ANX Ano Chora 162.41 280 P **PKPdf 22 53 20.7 -0.7**
EFP Efpalio 162.41 280 P **PKPdf 22 53 21.9 +0.7**
OSTC Ostas 162.44 323 *e*PKPDF **PKPdf 22 53 20.6 -0.3**
OSTC *e*PP **PP 22 57 51.3 -2.0**
OSTC AMS AMS 00 06 50.0
comp=Z,20µm,23.0s
KRLC Kraliky 162.48 321 *e*PKIKP **PKPdf 22 53 19.9 -1.1**
KRLC *e* 22 57 53.2
KRLC MLR MLR
comp=Z,10µm,21.1s
KRLC Kraliky 162.48 321 *e*PKPDF **PKPdf 22 53 19.9 -1.1**
KRLC *e*PKPAB **PKPab 22 54 11.7 +2.7**
KRLC *e*PP **PP 22 57 53.2 -0.3**
KRLC AMS AMS 00 07 00.0
comp=Z,10µm,21.1s
GAL1 Galloway 162.48 8 *e*P PKPdf 22 53 10.1 -11
GAL1 IAMs_20 IAMs_20 00 08 32.4
comp=Z,12µm,20.1s
AMT Artemida-Makis 162.48 277 P **PKPdf 22 53 20.7 -0.7**
CHVC Chvalec 162.50 323 *e*PKPDF **PKPdf 22 53 19.6 -1.4**
CHVC AMS AMS 00 06 40.0
comp=Z,21µm,21.9s
EVR Evrytania 162.52 281 P **PKPdf 22 53 21.6 +0.1**
DRO Drossia 162.53 278 P **PKPdf 22 53 21.0 -0.4**
DPC Dobruska-Polom 162.53 322 *e*PKIKP **PKPdf 22 53 20.5 -0.5**
DPC *e* 22 57 57.8
DPC MLR MLR
comp=Z,11µm,21.4s
DPC Dobruska-Polom 162.53 322 *e*PKPDF **PKPdf 22 53 20.5 -0.5**
DPC *e*PKPAB **PKPab 22 54 10.9 +1.7**
DPC *e*PP **PP 22 57 57.8 +4.1**
DPC AMS AMS 00 08 30.0
comp=Z,11µm,21.4s
KZN Kozani 162.56 286 P **PKPdf 22 53 20.1 -1.3**
UPC Upice 162.57 323 *e*PKIKP **PKPdf 22 53 21.0 0.0**
UPC *e* 22 54 10.4
UPC MLR MLR
comp=Z,21µm,21.6s
UPC Upice 162.57 323 *e*PKPDF **PKPdf 22 53 21.0 0.0**
UPC *e*PKPAB **PKPab 22 54 10.4 +1.1**
UPC AMS AMS 00 06 40.0
comp=Z,21µm,21.6s
RLS Riolos of Patr 162.73 278 P **PKPdf 22 53 21.7 +0.2**
EDMD Edmundbyers 162.73 3 *e*P PKPdf 22 53 10.7 -10
EDMD IAMs_20 IAMs_20 00 24 35.1
comp=Z,12µm,18.4s
JAVC Velka Javorina 162.73 316 *e*PKP **PKPdf 22 53 21.9 +0.6**
KPRO Kipourio 162.88 285 P **PKPdf 22 53 21.1 -0.7**
KESW Keswick, Cumbr 162.91 5 *e*P PKPdf 22 53 09.7 -11
KESW IAMs_20 IAMs_20 00 09 42.0
comp=Z,17µm,22.6s
SRO Srobarova 162.92 313 *e*PKP2 **PKPab 22 54 11.5 +0.6**
IGLA Glengowla, Co 163.00 19 *e*P PKPdf 22 53 09.7 -12
PENT Pentalofos 163.04 285 P **PKPdf 22 53 20.9 -1.1**
VRAC Vranov 163.04 319 ⇑P PKPdf 22 53 21.3 -0.2
VRAC Vranov 163.04 319 *e*PKP **PKPdf 22 53 21.1 -0.4**
VRAC *e* 22 54 13.8
VRAC Vranov 163.04 319 ⇑PKIKP PKPdf 22 53 21.3 -0.2
SMOL Smolenice 163.06 316 *e*PKIKP **PKPdf 22 53 21.9 +0.3**
SMOL Smolenice 163.06 316 *e*PKP **PKPdf 22 53 21.9 +0.3**
SMOL *e* 22 54 13.2
ILTH Belurgan, Co L 163.06 12 *e*P PKPdf 22 53 11.0 -10
IOMK Kirk Michael 163.09 8 *e*P PKPdf 22 53 10.7 -11
IOMK IAMs_20 IAMs_20 00 19 54.0
comp=Z,22µm,19.3s
GDLE Glaisdale, N Y 163.17 1 *e*P PKPdf 22 53 11.3 -10
GDLE IAMs_20 IAMs_20 00 14 57.9
comp=Z,17µm,18.7s
MODS Modra-Piesok 163.22 316 *e*PKIKP **PKPdf 22 53 21.1 -0.6**
MODS *e* 22 54 13.2
MODS Modra-Piesok 163.22 316 *e*PKP **PKPdf 22 53 21.1 -0.6**
MODS *e* 22 54 13.2
PVCC Panska Ves 163.23 325 *e*PKIKP **PKPdf 22 53 21.2 -0.4**
PVCC *e* 22 54 11.6
PVCC MLR MLR
comp=Z,20µm,22.8s
PVCC Panska Ves 163.23 325 *e*PKPDF **PKPdf 22 53 21.2 -0.4**
PVCC *e*PKPAB **PKPab 22 54 11.6 -0.6**
PVCC AMS AMS 00 06 10.0
comp=Z,20µm,22.8s
BRG Berggiesshubel 163.26 327 *i* PKP **PKPdf 22 53 21.1 -0.6**
comp=Z,179nm,1.9s
BRG Berggiesshubel 163.26 327 *i* PKIKP **PKPdf 22 53 21.1 -0.6**
BRG *i* 22 54 12.5
BRG 22 57 54.0
BRG pmax pmax
comp=Z,179nm,1.9s
BRG pmax pmax
comp=Z,201nm,1.6s
BRG MLR MLR
comp=N,9µm,19.2s
BRG MLR MLR
comp=E,8µm,18.7s
BRG MLR MLR
comp=Z,12µm,17.8s
JAN Janina 163.28 284 P **PKPdf 22 53 22.3 +0.2**
KRUC Moravsky 163.30 319 *e*PKP **PKPdf 22 53 21.1 -0.7**
KRUC *e* 22 54 14.7
KRUC Moravsky 163.30 319 PKIKP **PKPdf 22 53 21.3 -0.5**
CLL Collm 163.33 330 *e*PKPdf **PKPdf 22 53 21.0 -0.7**
CLL comp=Z,79nm,1.5s *e* 22 53 35.0
CLL *i* PKPab **PKPab 22 54 12.2 -0.4**
CLL comp=Z,215nm,1.6s *e*pPKPab **pPKPab 22 54 19.0 -4.0**
CLL *es*PKPab **sPKPab 22 54 21.0 -5.5**
CLL *e*SKPdf **SKPdf 22 56 54.0 +3.2**
CLL *e* 22 57 19.0
CLL *e*Ppk 22 57 49.0
CLL *e*PP **PP 22 57 57.0 -0.7**
CLL *es*PP 22 58 07.0
CLL *e*SKSdf **SKSdf 23 00 28.0 +4.6**
CLL *e* 23 01 05.0
CLL *e* 23 01 32.0
CLL *e* 23 03 01.0
CLL *e*PcPPKPre 23 03 14.0
CLL *e* 23 03 22.0
CLL *e*SKKSac **SKKSac 23 04 47.0 +4.2**
CLL *e*PPPrev 23 05 26.0
CLL *e*PSKS 23 08 24.0
CLL *e* 23 09 10.0
CLL *e*PSKSrev 23 11 18.0
CLL *e* 23 13 46.0
CLL *e* 23 15 54.0
CLL *e*SS **SS 23 18 21.0 0.0**
CLL *e*PSPS 23 20 00.0
CLL *e*SSS SSS 23 24 36.0
CLL *e* 23 32 36.0
CLL LmH 00 11 00.0
comp=N,6µm,21.1s
CLL LmH 00 11 00.0
comp=E,11µm,21.9s
CLL LmV 00 18 00.0
comp=Z,12µm,19.1s
CLL Collm 163.33 330 *e*PKIKP **PKPdf 22 53 21.0 -0.7**
CLL *i* 22 54 12.2
CLL pmax pmax
comp=Z,79nm,1.5s
CLL pmax pmax
comp=Z,215nm,1.6s
CLL MLR MLR
comp=Z,12µm,19.1s
VLMS Volimes, Zakyn 163.34 277 P **PKPdf 22 53 21.6 -0.6**
ZST Bratislava 163.41 315 *e*PKIKP **PKPdf 22 53 23.2 +1.3**
ZST *e* 22 54 14.1
ZST Bratislava 163.41 315 *e*PKP **PKPdf 22 53 23.2 +1.3**
ZST *e* 22 54 14.1
PHP Peshkopia 163.45 291 P **PKPdf 22 53 21.9 -0.3**
LSK Leskovik 163.46 285 P **PKPdf 22 53 22.7 +0.4**
FSK Fiskardo 163.47 279 P **PKPdf 22 53 20.5 -1.7**
PRA Prague 163.62 324 *e*PP PP 22 57 57.8 -1.6
PRA AMS AMS 00 06 30.0
comp=Z,9µm,23.0s
PRU Pruhonice 163.62 324 *e*PKIKP **PKPdf 22 53 24.2 +2.2**
PRU *e* 22 54 14.7
PRU MLR MLR
comp=Z,18µm,21.8s
PRU Pruhonice 163.62 324 *e*PKPDF **PKPdf 22 53 24.2 +2.2**
PRU *e*PKPAB **PKPab 22 54 14.7 +0.8**
PRU AMS AMS 00 06 20.0
comp=Z,18µm,21.8s
TREC Trest 163.62 321 *e*PKIKP **PKPdf 22 53 21.4 -0.7**
TREC MLR MLR
comp=Z,13µm,21.7s
TREC Trest 163.62 321 *e*PKPDF **PKPdf 22 53 21.4 -0.7**
TREC AMS AMS 00 10 10.0
comp=Z,13µm,21.7s
IGT Igoumenitsa 163.68 283 P **PKPdf 22 53 21.7 -0.7**
TIR Tirane 163.92 290 ⇓P PKPdf 22 53 28.0 +5.4
TIR Tirane 163.92 290 ⇓PKIKP PKPdf 22 53 28.0 +5.4
SRN Sarande 163.93 284 P **PKPdf 22 53 22.9 +0.3**
WLF1 Llynfaes 164.06 9 *e*P PKPdf 22 53 11.0 -11
WLF1 IAMs_20 IAMs_20 00 20 31.2
comp=Z,22µm,20.5s
PBCC Pribram 164.09 324 *e*PKPDF **PKPdf 22 53 19.3 -3.2**
KEK Kerkira 164.09 284 P **PKPdf 22 53 23.0 +0.2**
LMK Market Rasen 164.14 360 *e*P PKPdf 22 53 11.3 -11
LMK IAMs_20 IAMs_20 00 12 22.1
comp=Z,15µm,22.0s
LBWR Ladybower, Pea 164.17 3 *e*P PKPdf 22 53 11.5 -11
LBWR IAMs_20 IAMs_20 00 21 58.0
comp=Z,16µm,18.2s
PDG Podgorica 164.20 294 PKPab **PKPab 22 54 16.1 -0.7**
CONA Conrad Observa 164.25 316 *e*P **PKPdf 22 53 22.7 -0.1**
comp=Z,40nm,2.0s,SNR=14
CONA *e*P **PKPab 22 54 18.6 +1.7**
comp=Z,120nm,0.8s
CONA *e*P **PP 22 58 04.8 +1.7**
comp=Z,36nm,1.5s
NKC Novy Kostel 164.38 328 *e*PKIKP **PKPdf 22 53 22.5 -0.2**
NKC MLR MLR
comp=Z,12µm,20.1s
NKC Novy Kostel 164.38 328 *e*PKPDF **PKPdf 22 53 22.5 -0.2**
NKC AMS AMS 00 18 40.0
comp=Z,12µm,20.1s
TAM Tamanrasset 164.39 201 PKIKP **PKPdf 22 53 22.7 -1.1**
TAM Tamanrasset 164.39 201 **PKPdf 22 53 22.7 -1.1**
MOX Moxa 164.40 331 *e*L L 00 16 41.6
comp=Z,15µm,19.3s
STNC Stoke 164.46 4 *e*P PKPdf 22 53 12.3 -10
STNC IAMs_20 IAMs_20 00 11 38.9
comp=Z,15µm,19.0s
LLW Llanuwchllyn 164.58 7 *e*P PKPdf 22 53 12.0 -11
FOEL Foel Wylfa 164.58 6 *e*P PKPdf 22 53 12.9 -10
FOEL IAMs_20 IAMs_20 00 08 49.7
comp=Z,18µm,22.2s
KHC Kasperske Hory 164.67 323 *e*PKIKP **PKPdf 22 53 22.3 -0.8**
KHC *e* 22 54 19.3
KHC *e* 22 58 05.9
KHC MLR MLR
comp=Z,20µm,22.3s
KHC Kasperske Hory 164.67 323 *e*PKPDF **PKPdf 22 53 22.3 -0.8**
KHC *e*pPKP **pPKPdf 22 53 34.5 +1.0**
KHC *e*PKPAB **PKPab 22 54 19.3 +0.7**
KHC *e*PP **PP 22 58 05.9 +0.9**
KHC *ex* x 23 08 12.8
KHC AMS AMS 00 07 00.0
comp=Z,20µm,22.3s
GERES GERESS Array B 164.80 322 PKP **PKPdf 22 53 22.3 -1.0**
comp=Z,6.0nm,0.8s,baz=172,slow=0.9,SNR=23
GERES PKPab **PKPab 22 54 19.9 +0.6**
comp=Z,17nm,0.8s,baz=47,slow=4.4,SNR=13
GERES GERESS Array B 164.80 322 PKIKP **PKPdf 22 53 21.9 -1.4**
GERES GERESS Array B 164.80 322 **PKPdf 22 53 21.9 -1.4**
KOGS Kog 164.82 311 *i* PKPdf **PKPdf 22 53 22.3 -0.9**
KOGS *e*PP **PP 22 58 01.2 -4.8**
ARSA Arzberg 164.82 314 *e*P **PKPdf 22 53 22.9 -0.3**
comp=Z,28nm,1.4s,SNR=13
ARSA *e*P **PKPab 22 54 20.6 +1.2**
comp=Z,108nm,0.9s
ARSA P **PP 22 58 06.0 -0.1**
comp=Z,24nm,1.4s
CWF Charnwood Fore 164.85 2 *e*P PKPdf 22 53 12.3 -11
CWF IAMs_20 IAMs_20 00 11 31.3
comp=Z,17µm,19.8s
WACR West Acre 164.86 358 *e*P PKPdf 22 53 11.6 -11
WACR IAMs_20 IAMs_20 00 22 00.3
comp=Z,18µm,19.4s
HLM1 Long Mynd 164.98 6 *e*P PKPdf 22 53 11.6 -12
HLM1 IAMs_20 IAMs_20 00 22 43.1
comp=Z,17µm,20.1s
WET Wettzell 164.99 324 PKIKP **PKPdf 22 53 22.7 -0.6**
MOA Molln 165.16 318 *e*P **PKPdf 22 53 22.6 -0.9**
comp=Z,19nm,1.8s
MOA *e*P **PKPab 22 54 22.6 +1.7**
comp=Z,29nm,1.1s
MOA P **PP 22 58 08.2 +0.5**
comp=Z,51nm,1.9s
GRF Grafenberg Arr 165.30 329 *e*L L 00 08 38.9
comp=Z,11µm,22.0s
GRF *e*PKPdf **PKPdf 22 53 22.5 -1.1**
baz=39,slow=0.1
GRF *e*PKPab **PKPab 22 54 22.5 +1.2**
PERS Pernice 165.39 313 *e*PKPdf **PKPdf 22 53 22.6 -1.2**
PERS *e* 22 53 41.7
PERS *e*PKPab **pPKPab 22 54 30.4 -1.9**
PERS *e* 23 08 32.0
SOKA Soboth 165.42 313 *e*P **PKPdf 22 53 23.0 -0.8**
comp=Z,90nm,1.4s,SNR=27
SOKA *e*P **PKPab 22 54 22.9 +0.8**
comp=Z,50nm,0.8s
SOKA *e*P **PP 22 58 08.4 -0.8**
comp=Z,36nm,1.5s
PMOZ Porto Moniz, M 165.46 104 *e*PKPdf **PKPdf 22 53 28.7 +4.3**
PMOZ Porto Moniz, M 165.46 104 *e*PP PP 22 58 12.1 +1.9
PMOZ Porto Moniz, M 165.46 104 *e*LR LR 23 56 19.1
comp=Z,13µm,18.0s
MCH1 Michaelchurch 165.49 6 *e*P PKPdf 22 53 12.9 -11
MCH1 IAMs_20 IAMs_20 00 12 46.3
comp=Z,16µm,19.1s
PMAR Madeira 165.64 105 *e*PKPdf **PKPdf 22 53 28.8 +4.2**
PMAR Madeira 165.64 105 *e*PKPab **PKPab 22 54 27.3 +3.6**
MONM Monmouth 165.66 6 *e*P PKPdf 22 53 12.9 -11
MONM IAMs_20 IAMs_20 00 13 18.9
comp=Z,22µm,20.9s
STRD Stroud 165.77 4 *e*P PKPdf 22 53 13.2 -11
STRD IAMs_20 IAMs_20 00 18 12.2
comp=Z,16µm,18.9s
OBKA Obir 165.79 314 *e*P **PKPdf 22 53 22.8 -1.4**
comp=Z,37nm,1.2s,SNR=7.2
OBKA P **PKPab 22 54 25.8 +2.0**
comp=Z,68nm,0.8s
OLDB Oldbury-Upon-S 165.86 6 *e*P PKPdf 22 53 12.6 -11
OLDB IAMs_20 IAMs_20 00 13 51.3
comp=Z,22µm,20.8s
VISS Visnje 165.99 311 *e*PKPdf **PKPdf 22 53 23.3 -1.0**
VISS *e* 22 53 43.8
SWN1 Swindon 166.05 4 *e*P PKPdf 22 53 12.9 -11
SWN1 IAMs_20 IAMs_20 00 20 11.0
comp=Z,15µm,17.6s
LJU Ljubljana 166.06 312 *i* PKPdf **PKPdf 22 53 22.9 -1.4**
LJU *e* 22 53 43.6
LJU *e*PP PP 22 58 20.3 +7.8
LJU *e*SKKSac SKKSac 23 04 56.5 -0.6
LJU *e* 23 08 32.0
BEBN Eben Emael 166.11 344 PKPdf **PKPdf 22 53 22.8 -1.3**
BEBN PKPab **PKPab 22 54 24.5 -0.3**
BEBN PP **PP 22 58 09.4 -2.6**
KBA Koelnbreinsper 166.13 317 *e*P **PKPdf 22 53 23.6 -0.9**
comp=Z,47nm,1.3s,SNR=17
KBA P **PP 22 58 12.3 -0.6**
comp=Z,26nm,1.4s
KBA Koelnbreinsper 166.13 317 PKIKP **PKPdf 22 53 25.5 +1.0**
BTNL Ternell 166.21 342 PKPdf **PKPdf 22 53 23.8 -0.5**
BTNL PKPab **PKPab 22 54 25.9 +0.7**
BTNL PP **PP 22 58 12.2 -0.3**
MEM Membach 166.21 343 PKPdf **PKPdf 22 53 25.2 +1.0**
MEM PKPab **PKPab 22 54 25.7 +0.5**
PMPS Porto Santo 166.22 104 *e*PKPdf **PKPdf 22 53 29.0 +4.2**
PMPS Porto Santo 166.22 104 *e*PKPab **PKPab 22 54 30.0 +4.0**
MYKA Terra Mystica 166.24 315 *e*P **PKPdf 22 53 23.8 -0.7**
comp=Z,56nm,1.7s,SNR=16
MYKA *e*P **PKPab 22 54 26.2 +0.5**
comp=Z,21nm,0.7s
BSTI Sart Tilman 166.34 344 PKPdf **PKPdf 22 53 25.5 +1.2**
BSTI PKPab **PKPab 22 54 26.6 +0.9**
UCC Uccle 166.38 347 PKPdf **PKPdf 22 53 25.1 +0.8**
UCC PKPab **PKPab 22 54 26.2 +0.3**
MATE Matera 166.38 288 ⇑P PKPdf 22 53 26.9 +2.3
ELSH Elham, Standar 166.41 356 *e*P PKPdf 22 53 12.9 -11
ELSH IAMs_20 IAMs_20 00 14 35.6
comp=Z,18µm,21.3s
FUR Furstenfeldbru 166.43 325 PKIKP **PKPdf 22 53 23.8 -0.7**
BHOU Houvegnez 166.45 342 PKPdf **PKPdf 22 53 24.6 +0.2**
BHOU PKPab **PKPab 22 54 25.6 -0.7**
BHOU PP **PP 22 58 17.0 +3.2**
TIP Timpagrande 166.45 282 ⇓P PKPdf 22 53 25.5 +0.6
ROBS Robic 166.54 314 *e*PKPdf **PKPdf 22 53 23.1 -1.5**
ROBS *e*PKPab **pPKPab 22 54 34.8 -2.5**
ROBS *e*PP **PP 22 58 21.7 +6.8**
BCLA Clavier 166.55 344 PKPdf **PKPdf 22 53 24.6 +0.1**
BCLA PKPab **PKPab 22 54 25.1 -1.6**
BGES Gesves 166.63 345 PKPdf **PKPdf 22 53 23.7 -0.9**
BGES PKPab **PKPab 22 54 27.4 +0.3**
ZOU Zoufplan 166.65 316 **PKPdf 22 53 24.5 -0.5**
SNF Seneffe 166.67 347 PKPdf **PKPdf 22 53 24.7 +0.2**
SNF sPKP 22 53 34.7
SNF PKPab **PKPab 22 54 26.9 -0.3**
HMNX Herstmonceux 166.72 358 *e*P PKPdf 22 53 13.9 -11
HMNX IAMs_20 IAMs_20 00 12 02.2
comp=Z,20µm,19.6s
BMRD Maredsous 166.77 345 PKPdf **PKPdf 22 53 25.7 +1.1**
BMRD PKPab **PKPab 22 54 28.6 +0.9**
ABTA Abfaltersbach 166.78 318 *e*P **PKPdf 22 53 23.7 -1.3**
comp=Z,88nm,2.4s,SNR=16
RCHB Rochefort 166.81 344 PKPdf **PKPdf 22 53 25.3 +0.6**
RCHB PKPab **PKPab 22 54 28.6 +0.7**
STU Stuttgart 166.84 331 PKIKP **PKPdf 22 53 23.9 -0.9**
STU Stuttgart 166.84 331 **PKPdf 22 53 23.9 -0.9**
WATA Walderalm 166.87 322 *e*P **PKPdf 22 53 24.4 -0.6**
comp=Z,48nm,1.6s,SNR=14
WATA P **PP 22 58 17.4 +0.8**
comp=Z,22nm,1.3s
WTTA Wattenberg 166.89 321 *e*P **PKPdf 22 53 24.1 -1.1**
comp=Z,70nm,1.5s,SNR=24
WTTA *e*P **PP 22 58 18.9 +2.1**
comp=Z,40nm,1.7s
WTTA Wattenberg 166.89 321 PKIKP **PKPdf 22 53 24.5 -0.6**
DYA Yadsworthy 166.92 10 *e*P PKPdf 22 53 14.8 -10
DYA IAMs_20 IAMs_20 00 20 39.2
comp=Z,20µm,18.8s
CCA1 Carnmenellis 166.95 14 *e*P PKPdf 22 53 13.6 -11
CCA1 IAMs_20 IAMs_20 00 17 18.2
comp=Z,20µm,21.7s
DOU Dourbes 167.00 346 PKPdf **PKPdf 22 53 25.4 +0.5**
DOU PKPab **PKPab 22 54 29.5 +0.8**
WLF Walferdange 167.05 341 PKPdf **PKPdf 22 53 25.1 +0.2**
WLF PKPab **PKPab 22 54 30.6 +1.6**
WLF PP **PP 22 58 16.3 -0.5**
WLF Walferdange 167.05 341 PKP2 **PKPab 22 54 28.6 -0.4**
WLF Walferdange 167.05 341 PKPab **PKPab 22 54 28.6 -0.4**
MOTA Moosalm 167.10 323 *e*P **PKPdf 22 53 24.3 -0.9**
comp=Z,58nm,1.6s,SNR=20
MOTA P **PKPab 22 54 30.3 +0.7**
comp=Z,48nm,1.3s
BAIF Baives 167.11 347 *e*PKIKP **PKPdf 22 53 25.8 +0.9**
BAIF pmax pmax

comp=Z,91nm,1.4s
SQTA Sankt Quirin 167.13 322 *e*P **PKPdf 22 53 24.2 -1.0**
comp=Z,55nm,1.7s,SNR=14
SQTA *e*P **PKPab 22 54 29.9 +0.2**
comp=Z,49nm,1.4s
RETA Reutte 167.16 324 *e*P **PKPdf 22 53 24.9 -0.2**
comp=Z,33nm,1.4s,SNR=8.8
RETA *e*P **PKPab 22 54 30.7 +1.0**
comp=Z,106nm,1.8s
RETA P **PP 22 58 18.6 +0.7**
comp=Z,71nm,2.2s
FETA Feichten 167.51 322 *e*P **PKPdf 22 53 25.0 -0.6**
comp=Z,58nm,1.4s,SNR=31
BFO Black Forest 167.53 332 PKIKP **PKPdf 22 53 25.3 -0.1**
BFO Black Forest 167.53 332 **PKPdf 22 53 25.2 -0.1**
DAVA Damuels 167.71 325 *e*P **PKPdf 22 53 24.7 -1.0**
comp=Z,72nm,1.6s,SNR=19
DAVA *e*P **PKPab 22 54 33.2 +1.0**
comp=Z,52nm,1.0s
DAVA P **PP 22 58 21.2 +0.4**
comp=Z,22nm,1.2s
CDF Champ du Feu 167.83 335 *e*PKIKP **PKPdf 22 53 26.5 +0.9**
CDF pmax pmax
comp=Z,145nm,1.6s
ECH Echery 168.04 335 PKIKP **PKPdf 22 53 25.3 -0.4**
ECH Echery 168.04 335 **PKPdf 22 53 25.3 -0.4**
DAVOX Davos/Dischmat 168.09 324 PKP **PKPdf 22 53 26.9 +0.9**
comp=Z,13nm,0.8s,baz=228,slow=6.3,SNR=3.1
DAVOX PKPab **PKPab 22 54 34.8 +0.8**
comp=Z,20nm,0.8s,baz=26,slow=2.4,SNR=2.3
VAE Valguarnera 168.25 274 PKPab **PKPab 22 54 36.3 +1.3**
comp=Z,19nm,0.9s,baz=337,slow=21,SNR=1.6
NRCA Norcia 168.43 301 **PKPdf 22 53 25.6 -0.7**
HAU Haudompre 168.49 337 *e*PKIKP **PKPdf 22 53 27.1 +1.1**
HAU pmax pmax
comp=Z,196nm,1.6s
HINF Hinteralfeld 168.49 335 *e*PKIKP **PKPdf 22 53 25.3 -0.7**
HINF pmax pmax
comp=Z,227nm,1.6s
SALO Salr 168.57 318 **PKPdf 22 53 25.7 -0.4**
FLN La Foliniere 168.84 0 *e*PKIKP **PKPdf 22 53 27.2 +1.0**
FLN pmax pmax
comp=Z,449nm,1.7s
LDF La Druitiere 169.01 359 *e*PKIKP **PKPdf 22 53 26.2 -0.1**
LDF pmax pmax
comp=Z,138nm,1.4s
ZCCA Zocca 169.08 312 **PKPdf 22 53 26.0 -0.6**
GRR Gorron 169.21 2 *e*PKIKP **PKPdf 22 53 28.8 +2.4**
GRR pmax pmax
comp=Z,275nm,1.6s
OSSC Osservatorio P 169.36 307 **PKPdf 22 53 25.9 -0.8**
CLF Chambon-Foret 169.40 350 PKPab **PKPab 22 54 39.1 -0.2**
LATE Laterza 169.41 302 **PKPdf 22 53 26.2 -0.6**
CABF La Chapelle 169.79 334 *e*PKIKP **PKPdf 22 53 28.0 +1.0**
CABF pmax pmax
comp=Z,404nm,1.8s
LOR Lormes 169.84 343 *e*PKIKP **PKPdf 22 53 25.9 -1.0**
LOR pmax pmax
comp=Z,74nm,1.3s
SSF Saint Saulge 170.12 344 *e*PKIKP **PKPdf 22 53 26.9 -0.1**
SSF pmax pmax
comp=Z,90nm,1.3s
AVF Avril sur Loir 170.41 344 *e*PKIKP **PKPdf 22 53 26.0 -1.2**
AVF pmax pmax
comp=Z,85nm,1.5s
SMF Signal de Mont 170.43 342 *e*PKIKP **PKPdf 22 53 26.9 -0.3**
SMF pmax pmax
comp=Z,108nm,1.5s
LPL La Plagne 170.46 328 *e*PKIKP **PKPdf 22 53 27.6 +0.1**
LPL pmax pmax
comp=Z,133nm,1.5s
LPG La Plagne 170.47 328 *e*PKIKP **PKPdf 22 53 27.7 +0.1**
LPG pmax pmax
comp=Z,71nm,1.2s
BGF Bois d'Agland 170.73 346 *e*PKIKP **PKPdf 22 53 26.6 -0.8**
BGF pmax pmax
comp=Z,156nm,1.3s
BNI Bardonecchia 170.85 327 PKIKP **PKPdf 22 53 26.9 -0.8**
BNI Bardonecchia 170.85 327 **PKPdf 22 53 26.9 -0.8**
MBDF Montbardon 171.07 325 *e*PKIKP **PKPdf 22 53 27.0 -0.8**
MBDF pmax pmax
comp=Z,203nm,1.4s
TCF Toulx Ste Croi 171.10 348 *e*PKIKP **PKPdf 22 53 26.9 -0.7**
TCF pmax pmax
comp=Z,87nm,1.2s
PGF Pioggiola 171.27 307 *e*PKIKP **PKPdf 22 53 31.2 +3.3**
PGF pmax pmax
comp=Z,237nm,1.6s
ORIF Oris-en-Rattie 171.30 329 *e*PKIKP **PKPdf 22 53 27.9 +0.1**
ORIF pmax pmax
comp=Z,178nm,1.6s
SBF Sospel 171.38 319 *e*PKIKP **PKPdf 22 53 28.6 +0.7**
SBF pmax pmax
comp=Z,144nm,1.0s
SSB Saint Sauveur 171.48 336 PKP2 **PKPab 22 54 48.3 -0.5**
SSB Saint Sauveur 171.48 336 PKPab **PKPab 22 54 48.3 -0.5**
VIVF Saint-Julien-I 171.81 334 *e*PKIKP **PKPdf 22 53 31.6 +3.6**
VIVF pmax pmax
comp=Z,199nm,1.5s
KEST Kesra 171.96 260 PKP **PKPdf 22 53 29.3 +0.9**
comp=Z,17nm,1.0s,baz=259,slow=2.2,SNR=10
KEST PKPab **PKPab 22 54 53.2 +1.7**
comp=Z,36nm,0.9s,baz=97,slow=3.1,SNR=4.2
KEST PP **PP 22 58 46.9 +3.8**
comp=Z,22nm,1.1s,baz=96,slow=1.2,SNR=4.4
KEST Kesra 171.96 260 **PKPab 22 54 50.4 -1.1**
FRF La Foret Royal 171.99 320 *e*PKIKP **PKPdf 22 53 29.1 +1.0**
FRF pmax pmax
comp=Z,217nm,1.5s
VSL Villasalto 172.12 287 **PKPdf 22 53 27.8 -0.5**
RJF Les Rejaudoux 172.17 350 *e*PKIKP **PKPdf 22 53 28.8 +0.7**
RJF pmax pmax
comp=Z,203nm,1.5s
LMR La Mourre 172.23 320 *e*PKIKP **PKPdf 22 53 29.7 +1.5**
LMR pmax pmax
comp=Z,126nm,1.4s
PGAV Gavieira, Arco 172.53 52 *e*PKPdf **PKPdf 22 53 29.5 +1.0**
PGAV Gavieira, Arco 172.53 52 *e*PP PP 22 58 48.4 +3.0
PGAV Gavieira, Arco 172.53 52 *e*SS SS 23 20 07.2 +12
PGAV Gavieira, Arco 172.53 52 *e*LR LR 23 55 07.3
comp=Z,21µm,20.0s
PCAB Cabril 172.82 53 *e*PKPdf **PKPdf 22 53 32.2 +3.6**
PCAB Cabril 172.82 53 *e*PKPab **PKPab 22 54 57.3 +2.3**
AVE Averroes 172.84 125 PKP **PKPdf 22 53 28.7 -0.1**
AVE Averroes 172.84 125 PP PP 22 58 46.2 -0.7
PMAFR Mafra 172.87 76 *e*PKPdf **PKPdf 22 53 31.3 +2.7**
PMAFR Mafra 172.87 76 *e*PP PP 22 58 48.8 +1.3
PMAFR Mafra 172.87 76 *e*SS SS 23 20 19.1 +20
LIS Lisbon 173.01 78 *e*PKPdf **PKPdf 22 53 27.8 -0.8**
LIS *e*PP **PP 22 58 46.8 -1.4**
LIS *e*SS SS 23 20 00.1 -0.1
LIS AMS AMS 00 11 21.0
comp=Z,27µm,10.8s
LIS Lisbon 173.01 78 *e*PKIKP **PKPdf 22 53 27.8 -0.8**
LIS *e* 22 58 46.8
LIS Lisbon 173.01 78 *e*PKPdf **PKPdf 22 53 31.8 +3.1**
LIS Lisbon 173.01 78 *e*PP PP 22 58 51.3 +3.1
PSBE So Bento 173.14 71 *e*PKPdf **PKPdf 22 53 31.6 +2.8**
PSBE So Bento 173.14 71 *e*PP PP 22 58 51.2 +2.4
PSBE So Bento 173.14 71 *e*SS SS 23 20 03.3 +1.9
POLO Lamas de Olo 173.15 54 *e*PKPdf **PKPdf 22 53 31.3 +2.5**
POLO Lamas de Olo 173.15 54 *e*PKPab **PKPab 22 54 57.6 +1.1**
POLO Lamas de Olo 173.15 54 *e*PP PP 22 58 50.5 +2.0
POLO Lamas de Olo 173.15 54 *e*SS SS 23 20 17.4 +17
PCAS Casmilo, Conde 173.21 66 *e*PKPdf **PKPdf 22 53 30.4 +1.7**
PCAS Casmilo, Conde 173.21 66 *e*PKPab **PKPab 22 54 58.6 +1.8**
PCAS Casmilo, Conde 173.21 66 *e*PP PP 22 58 51.2 +2.2
PCAS Casmilo, Conde 173.21 66 *e*SS SS 23 20 23.1 +21
COI Coimbra 173.22 65 *e*PKPdf **PKPdf 22 53 29.9 +1.2**
COI Coimbra 173.22 65 *e*PKPab **PKPab 22 54 57.9 +1.1**
COI Coimbra 173.22 65 *e*PP PP 22 58 53.0 +4.0
COI Coimbra 173.22 65 *e*SS SS 23 20 14.0 +12
PFVI Vila Bisbo 173.26 91 *e*PKPdf **PKPdf 22 53 32.4 +3.6**
PFVI Vila Bisbo 173.26 91 *e*PKPab **PKPab 22 54 59.7 +2.6**
PFVI Vila Bisbo 173.26 91 *e*PP PP 22 58 52.6 +3.1
PFVI Vila Bisbo 173.26 91 *e*SS SS 23 20 04.1 +1.3
PTEO Sao Teotonio 173.38 88 *e*PKPdf **PKPdf 22 53 31.3 +2.5**
PTEO Sao Teotonio 173.38 88 *e*PKPab **PKPab 22 55 00.9 +3.3**
PVIS Viseu 173.39 60 *e*PKPdf **PKPdf 22 53 32.2 +3.4**
PVIS Viseu 173.39 60 *e*PKPab **PKPab 22 54 58.8 +1.2**
MORF Marmelete 173.42 90 *e*PKPdf **PKPdf 22 53 28.0 -0.9**
MORF *e*PP **PP 22 58 48.9 -1.5**
MORF *e*SS SS 23 20 04.0 -0.4
MORF AMS AMS 00 19 08.1
comp=Z,18µm,20.3s
MORF Marmelete 173.42 90 *e*PKIKP **PKPdf 22 53 28.0 -0.9**
MORF *e* 22 58 48.9
MORF *e*SS SS 23 20 04.0 -0.5
MORF Marmelete 173.42 90 *e*PKPdf **PKPdf 22 53 30.9 +1.9**
MORF Marmelete 173.42 90 *e*PKPab **PKPab 22 55 00.1 +2.2**
MORF Marmelete 173.42 90 *e*PP PP 22 58 54.8 +4.4
PNCL Nicolau / Gran 173.54 83 *e*PKPdf **PKPdf 22 53 31.0 +2.1**
PNCL Nicolau / Gran 173.54 83 *e*PKPab **PKPab 22 54 58.2 -0.1**
PNCL Nicolau / Gran 173.54 83 *e*PP PP 22 58 55.5 +4.7
PNCL Nicolau / Gran 173.54 83 *e*SS SS 23 20 20.1 +15
PBRG Braganca 173.55 47 *e*PKPdf **PKPdf 22 53 31.2 +2.3**
PBRG Braganca 173.55 47 *e*PKPab **PKPab 22 55 04.2 +6.0**
PBRG Braganca 173.55 47 *e*PP PP 22 58 51.9 +1.7
PBRG Braganca 173.55 47 *e*SS SS 23 20 10.5 +6.2
PMTG Montargil 173.67 74 *e*PKPdf **PKPdf 22 53 30.3 +1.4**
PMTG Montargil 173.67 74 *e*PKPab **PKPab 22 55 02.4 +3.5**
PMTG Montargil 173.67 74 *e*PP PP 22 58 53.4 +2.0
PMTG Montargil 173.67 74 *e*SS SS 23 20 13.4 +6.9
MVO Moncorvo 173.75 53 *e*PKPdf **PKPdf 22 53 31.9 +2.9**
MVO Moncorvo 173.75 53 *e*PKPab **PKPab 22 55 00.1 +0.9**
MVO Moncorvo 173.75 53 *e*PP PP 22 58 54.5 +3.1
MVO Moncorvo 173.75 53 *e*SS SS 23 20 07.3 +0.8
MVO Moncorvo 173.75 53 *e*LR LR 23 55 48.4
comp=Z,17µm,20.0s
MTE Manteigas 173.76 61 *e*PKPdf **PKPdf 22 53 31.6 +2.6**
MTE Manteigas 173.76 61 *e*PP PP 22 58 55.4 +3.7
MTE Manteigas 173.76 61 *e*SS SS 23 20 09.3 +2.2
MTE Manteigas 173.76 61 *e*LR LR 23 56 07.7
comp=Z,17µm,20.0s
MTE Manteigas 173.76 61 **PKPdf 22 53 28.2 -0.8**
MTE PKPab **PKPab 22 54 58.0 -1.3**
EVO Evora 173.91 79 PKP **PKPdf 22 53 27.0 -2.0**
EVO Evora 173.91 79 PP PP 22 58 51.5 -1.1
EVO Evora 173.91 79 *e*PKPdf **PKPdf 22 53 29.5 +0.5**
EVO Evora 173.91 79 *e*PKPab **PKPab 22 55 04.2 +4.2**
EVO Evora 173.91 79 *e*PP PP 22 58 53.7 +1.1
PCVE Castro Verde 173.93 87 *e*PKPdf **PKPdf 22 53 32.3 +3.2**
PCVE Castro Verde 173.93 87 *e*PKPab **PKPab 22 55 01.5 +1.4**
PCVE Castro Verde 173.93 87 *e*PP PP 22 58 54.0 +1.2
PCVE Castro Verde 173.93 87 *e*SS SS 23 20 22.9 +14
PBDV Barranco-do-Ve 173.99 91 *e*PKPdf **PKPdf 22 53 32.6 +3.5**
PBDV Barranco-do-Ve 173.99 91 *e*PKPab **PKPab 22 55 04.0 +3.6**
PBDV Barranco-do-Ve 173.99 91 *e*PP PP 22 58 53.1 0.0
PCBR Castelo Branco 174.02 66 *e*PKPdf **PKPdf 22 53 32.5 +3.5**
PCBR Castelo Branco 174.02 66 *e*PKPab **PKPab 22 55 02.5 +2.1**
PCBR Castelo Branco 174.02 66 *e*PP PP 22 58 53.9 +1.0
PBEJ Beja 174.06 84 *e*PKPdf **PKPdf 22 53 32.5 +3.4**
PBEJ Beja 174.06 84 *e*PKPab **PKPab 22 55 02.9 +2.2**
PBEJ Beja 174.06 84 *e*PP PP 22 58 58.7 +5.3
MDT Midelt 174.11 143 PKP **PKPdf 22 53 31.1 +1.7**
comp=Z,46nm,1.3s,baz=212,slow=0.8,SNR=28
MDT PKPab **PKPab 22 55 03.9 +3.0**
comp=Z,27nm,0.9s,baz=150,slow=0.7,SNR=6.6
MDT PP **PP 22 58 54.8 +2.1**
comp=Z,18nm,1.2s,baz=211,slow=6.2,SNR=4.1
PVAQ Vaqueiros 174.17 90 *e*PKPdf **PKPdf 22 53 32.5 +3.4**
PVAQ Vaqueiros 174.17 90 *e*PKPab **PKPab 22 55 03.5 +2.3**
PVAQ Vaqueiros 174.17 90 *e*PP PP 22 58 55.8 +1.9
PVAQ Vaqueiros 174.17 90 *e*LR LR 23 56 06.4
comp=Z,17µm,20.0s
PVAQ Vaqueiros 174.17 90 **PKPdf 22 53 28.4 -0.8**
PMRV Marv??o 174.21 69 *e*PKPdf **PKPdf 22 53 32.0 +2.9**
PMRV Marv??o 174.21 69 *e*PKPab **PKPab 22 55 02.4 +1.1**
PMRV Marv??o 174.21 69 *e*PP PP 22 58 53.3 -0.7
PMRV Marv??o 174.21 69 *e*SS SS 23 20 30.2 +19
PMRV Marv??o 174.21 69 *e*LR LR 23 56 50.9
comp=Z,19µm,18.0s
IFR Ifrane 174.39 135 PKP **PKPdf 22 53 30.0 +0.4**
IFR Ifrane 174.39 135 PP PP 22 58 51.6 -2.8
EPF Esparros 174.55 354 *e*PKIKP **PKPdf 22 53 30.2 +1.0**
EPF pmax pmax
comp=Z,282nm,1.7s
ETSF Etsaut 174.71 1 *e*PKIKP **PKPdf 22 53 31.5 +2.2**
ETSF pmax pmax
comp=Z,123nm,1.4s
SET Setif 175.16 255 P **PKPdf 22 53 32.0 +2.4**
SFS San Fernando 175.21 102 PKP **PKPdf 22 53 30.8 +1.3**
SFS San Fernando 175.21 102 PP PP 22 59 02.4 +3.5
CEU Ceuta 175.65 111 PKP **PKPdf 22 53 29.6 0.0**
CEU Ceuta 175.65 111 PP PP 22 59 00.8 0.0
MAHO Mahon 175.70 304 PKP **PKPdf 22 53 27.8 -1.7**
MAHO Mahon 175.70 304 PP PP 22 59 00.5 -0.2
PVLZ Peæn de 176.02 126 PKP **PKPdf 22 53 28.7 -1.0**
PVLZ Peæn de 176.02 126 PP PP 22 58 57.6 -4.6
PAB San Pablo 176.34 57 PKIKP **PKPdf 22 53 29.0 -0.8**
PAB San Pablo 176.34 57 **PKPdf 22 53 29.0 -0.8**
UCM Universidad Co 176.50 39 PKP **PKPdf 22 53 29.4 -0.3**
UCM Universidad Co 176.50 39 PP PP 22 59 05.5 +1.4
ESBB Sonseca Array 176.52 52 **PKPdf 22 53 28.9 -0.9**
ESDC Sonseca Array 176.52 52 PKP **PKPdf 22 53 30.9 +1.1**
comp=Z,32nm,1.1s,baz=346,slow=2.1,SNR=43
ESDC PKPab **PKPab 22 55 10.4 -1.1**
comp=Z,14nm,1.0s,baz=304,slow=2.3,SNR=6.4
ESDC PP **PP 22 59 05.6 +0.9**
comp=Z,13nm,1.3s,baz=340,slow=4.2,SNR=5.1
ESDC Sonseca Array 176.52 52 **PKPdf 22 53 29.2 -0.6**
EMAL Malaga-Limoner 176.67 103 PKP **PKPdf 22 53 28.9 -1.0**
EMAL Malaga-Limoner 176.67 103 PP PP 22 59 06.3 +0.5
MELI Melilla 176.92 137 PKP **PKPdf 22 53 28.7 -1.2**
MELI Melilla 176.92 137 PP PP 22 59 06.6 +0.5
OTSS Djebel Tessala 177.66 172 P **PKPdf 22 53 34.0 +3.8**
OJGS Djebel Guires 177.72 204 P **PKPdf 22 53 34.0 +3.8**
ODJA Bouhanifia 177.73 185 P **PKPdf 22 53 32.0 +1.9**
OJBR Djebel Berber 177.90 197 P **PKPdf 22 53 33.0 +2.8**
EANR 'Ain N'Sour 177.97 216 P **PKPdf 22 53 33.0 +2.9**
ECHA Ech Chlef 177.98 225 P **PKPdf 22 53 33.5 +3.5**
EBNR Beni Rached 177.98 230 P **PKPdf 22 53 34.0 +3.9**
OKGL Djebel Kef Gue 178.24 208 P **PKPdf 22 53 35.0 +4.9**
CART Cartagena 179.51 91 PKP **PKPdf 22 53 26.0 -4.1**
CART Cartagena 179.51 91 PP PP 22 59 17.5 -1.7

*TUL **16** 22:41:49.6±1.1,36°.28N±0°.01×97°.24W±0°.01, h3km±8km, ML3.3, Error ellipse: s-maj=1.8km s-min=1.2km az=135.0*
*NEIC **16** 22:41:50.1±1.2,36°.28N±0°.01×97°.24W±0°.01, h4km±8km, Error ellipse: s-maj=1.8km s-min=1.2km az=135.0*
*ANF **16** 22:41:51.0±0.4,36°.14N×97°.17W, h0km, ML4.1/10, Error ellipse: s-maj=5.4km s-min=2.8km az=176.0*

ISC 16 22:41:49.9±1.0,36°.28N±0°.02×97°.24W±0°.02, h8km±9km, n70, σ0s80/85, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
QUOK	**Quay**	**0.44**	**104**			**Pg**	**22 41 58.7**	**+0.2**
QUOK					Sg	**Sg**	**22 42 04.8**	**+0.4**
OK031	**S. Brethren Rd**	**0.46**	**135**			**Pg**	**22 41 59.0**	**+0.1**
OK031					Sg	**Sg**	**22 42 05.4**	**+0.4**
OK030	**Cody Creek RV**	**0.51**	**134**			**Pg**	**22 41 60.0**	**+0.1**
OK030					Sg	**Sg**	**22 42 07.0**	**+0.5**
OK029	**Liberty Lake**	**0.52**	**200**			**Pg**	**22 41 59.9**	**0.0**
OK029					Sg	**Sg**	**22 42 07.0**	**+0.3**
OK005	**Luther M Schoo**	**0.63**	**177**			**Pg**	**22 42 02.3**	**+0.2**
CROK	**Carrier**	**0.64**	**290**			**Pg**	**22 42 02.3**	**0.0**
CROK					Sg	**Sg**	**22 42 11.2**	**+0.5**
BCOK	**Bluff Creek, N**	**0.69**	**206**			**Pg**	**22 42 03.2**	**-0.2**
BCOK					Sg	**Sg**	**22 42 12.6**	**+0.3**
OK025	**Westminster Rd**	**0.70**	**187**			**Pg**	**22 42 03.4**	**-0.1**
KAN13	**South Haven SW**	**0.75**	**345**			**Pg**	**22 42 04.5**	**0.0**
KAN13					Sg	**Sg**	**22 42 14.9**	**+0.6**
GC02	**Grant County #**	**0.76**	**319**			**Pg**	**22 42 04.4**	**-0.1**
GC02					Sg	**Sg**	**22 42 14.8**	**+0.3**
T35A	**Sooner Cattle**	**0.86**	**43**			**Pg**	**22 42 06.4**	**-0.1**
T35A					Sg	**Sg**	**22 42 17.8**	**+0.1**
OKCFA	**Oklahoma City**	**0.88**	**191**			**Pg**	**22 42 06.6**	**-0.3**
KAN14	**Manchester OK**	**0.89**	**319**			**Pg**	**22 42 06.7**	**-0.4**
KAN14					Sg	**Sg**	**22 42 18.8**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**0.89**	**191**			**Pg**	**22 42 06.6**	**-0.5**
KAN09	**Caldwell North**	**0.91**	**340**			**Pg**	**22 42 07.1**	**-0.2**
KAN09					Sg	**Sg**	**22 42 19.6**	**+0.4**
KAN05	**Bluff City Nor**	**0.97**	**328**			**Pg**	**22 42 08.3**	**-0.3**
FNO	**Franklin**	**1.03**	**187**			**Pg**	**22 42 09.0**	**-0.7**
KAN10	**Anthony SW Sta**	**1.09**	**321**			**Pg**	**22 42 10.5**	**-0.3**
KAN08	**Anthony NE Sta**	**1.11**	**328**			**Pg**	**22 42 10.9**	**-0.4**
W35A	**Tecumseh**	**1.17**	**165**			**Pg**	**22 42 10.8**	**-1.5**
KAN12	**Harper NE Stat**	**1.18**	**329**			**Pg**	**22 42 12.2**	**-0.4**
TUL1	**Leonard**	**1.23**	**107**	P		**Pg**	**22 42 12.3**	**-1.2**
	baz=288							
TUL1				S		**Sg**	**22 42 28.8**	**-0.7**
	baz=288							
TUL1	**Leonard**	**1.23**	**107**			**Pg**	**22 42 12.4**	**-1.2**
U32A	**Winter Ranch,**	**1.43**	**274**	Pn		**Pn**	**22 42 16.0**	**-0.2**
WMOK	**Wichita Mounta**	**1.99**	**220**	P		**Pn**	**22 42 25.3**	**+1.4**
	baz=39							
WMOK				S		**Sb**	**22 42 51.9**	**+0.5**
	baz=39							
WMOK	**Wichita Mounta**	**1.99**	**220**			**Pn**	**22 42 24.8**	**+0.9**
X37A	**Clayton**	**2.27**	**137**			**Pn**	**22 42 28.9**	**+1.1**
U38A	**Gravette**	**2.31**	**85**			**Pn**	**22 42 29.3**	**+1.0**
R32A	**Long Quarter,**	**2.44**	**332**	Pn		**Pn**	**22 42 30.9**	**+0.8**
HHAR	**Hobbs**	**2.66**	**89**			**Pn**	**22 42 34.0**	**+0.8**
KSU1	**Kansas State U**	**2.86**	**10**	P		**Pb**	**22 42 39.9**	**-1.3**
	baz=190							
KSU1	**Kansas State U**	**2.86**	**10**			**Pn**	**22 42 37.2**	**+1.4**
Z35A	**Perchaven, San**	**2.94**	**180**			**Pn**	**22 42 38.1**	**+1.1**
W39A	**Magazine**	**3.01**	**110**			**Pn**	**22 42 38.3**	**+0.4**
CBKS	**Cedar Bluff**	**3.21**	**323**			**Pn**	**22 42 40.5**	**-0.3**
S39A	**Bolivar**	**3.44**	**65**			**Pn**	**22 42 44.9**	**+1.1**
MIAR	**Mount Ida**	**3.46**	**119**	P		**Pn**	**22 42 45.1**	**+1.0**
	baz=301							
MIAR				S		**Sn**	**22 43 26.7**	**+1.5**
	baz=301							
MIAR	**Mount Ida**	**3.46**	**119**			**Pn**	**22 42 45.1**	**+1.0**
Z38A	**Mt. Pleasant**	**3.54**	**148**			**Pn**	**22 42 46.0**	**+0.8**
U40A	**Yellville**	**3.54**	**88**	P		**Pn**	**22 42 46.4**	**+1.1**
	baz=270							
U40A	**Yellville**	**3.54**	**88**			**Pn**	**22 42 45.5**	**+0.2**
AMTX	**Amarillo**	**3.88**	**250**	P		**Pn**	**22 42 51.3**	**+1.2**
	baz=68							
AMTX	**Amarillo**	**3.88**	**250**	Pn		**Pn**	**22 42 51.1**	**+1.1**
X40A	**Basin Creek Fa**	**4.02**	**115**	P		**Pn**	**22 42 53.1**	**+1.3**
	baz=298							
X40A	**Basin Creek Fa**	**4.02**	**115**			**Pn**	**22 42 53.3**	**+1.5**
MGMO	**Mountain Grove**	**4.08**	**76**			**Pn**	**22 42 53.9**	**+1.1**
WHAR	**Wooly Hollow**	**4.14**	**102**			**Pn**	**22 42 55.0**	**+1.5**
ABTX	**Abilene, Hawle**	**4.16**	**209**			**Pn**	**22 42 55.6**	**+1.9**
W41B	**Gary Mavity, V**	**4.21**	**104**	P		**Pn**	**22 42 55.2**	**+0.8**
	baz=287							
W41B				S		**Sn**	**22 43 44.4**	**+0.7**
	baz=287							
W41B	**Gary Mavity, V**	**4.21**	**104**			**Pn**	**22 42 54.8**	**+0.4**
WLAR	**White Oak Lake**	**4.26**	**126**			**Pn**	**22 42 55.9**	**+0.7**
WHTX	**Lake Whitney,**	**4.29**	**182**			**Pn**	**22 42 55.7**	**+0.3**
237A	**Washetta, Mont**	**4.43**	**164**			**Pn**	**22 42 57.7**	**+0.2**
P38A	**Dawn**	**4.44**	**40**			**Pn**	**22 42 58.7**	**+1.1**
R40A	**Maddies Statio**	**4.44**	**62**			**Pn**	**22 42 58.4**	**+0.8**
N33A	**J Bar K, Exete**	**4.45**	**358**			**Pn**	**22 42 56.8**	**-1.0**
Z41A	**Richland Creek**	**4.74**	**128**	S		**Sn**	**22 43 56.2**	**-0.5**
	baz=311							
Z41A	**Richland Creek**	**4.74**	**128**	Pn		**Pn**	**22 43 02.1**	**+0.5**
N35A	**Tabor**	**4.74**	**15**			**Pn**	**22 43 01.8**	**+0.1**
NATX	**Nacogdoches**	**4.99**	**154**	S		**Sn**	**22 44 02.5**	**-0.6**
	baz=335							
T42A	**Van Buren**	**5.00**	**80**			**Pn**	**22 43 05.7**	**+0.4**
KSCO	**Kaye Shedlock'**	**5.07**	**304**			**Pn**	**22 43 06.3**	**-0.1**
CCM	**Cathedral Cave**	**5.10**	**68**			**Pn**	**22 43 06.6**	**-0.1**
BGNE	**Belgrade**	**5.17**	**352**			**Pn**	**22 43 07.8**	**+0.2**
P40A	**Paris**	**5.23**	**50**			**Pn**	**22 43 09.7**	**+1.3**
N38A	**Joes South For**	**5.49**	**34**			**Pn**	**22 43 13.1**	**+1.1**
435B	**Jarrell**	**5.49**	**183**			**Pn**	**22 43 11.7**	**-0.4**
T25A	**Trinidad**	**5.83**	**281**			**Pn**	**22 43 17.2**	**+0.3**
SDCO	**Great Sand Dun**	**6.77**	**285**			**Pn**	**22 43 30.9**	**+1.0**
ECSD	**EROS Data Cent**	**7.46**	**3**			**Pn**	**22 43 38.4**	**-0.6**

MEX 16 22:46:09.1±0.7,27°.78N×112°.00W, h79km±9km, MD3.9, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.51**	**205**	*e*P		Pn	22 46 21.9	-0.9
SRIG				*i*S		Sn	22 46 31.0	-1.9
SRIG	**Santa Rosalia**	**0.51**	**205**	P		Pn	22 46 22.1	-0.7
GUYB	**Guaymas**	**1.00**	**83**	*e*P		Pn	22 46 26.7	-1.5
GUYB				*e*S		Sn	22 46 39.8	-2.6
HSIG		**1.54**	**37**	*e*P		Pn	22 46 33.7	-1.3
HSIG				*i*S		Sn	22 46 53.5	-1.0
NZIG	**Nacozari, Sono**	**3.35**	**39**	*e*P		Pn	22 46 57.5	-2.0
NZIG				*i*S		Sn	22 47 36.1	-2.2
CSIG	**Choix**	**3.37**	**105**	*i*P		Pn	22 46 58.5	-0.9
CSIG				*i*S		Sn	22 47 37.2	-1.1

*IDC **16** 22:48:05.0±0.9,2°.82S×122°.88E, h0km, mb4.2/10, mb1 4.4/12, mb1mx4.0/69, mbtmp4.3/12, ML4.1/2, Error ellipse: s-maj=30.1km s-min=17.6km az=81.0*
*DJA **16** 22:48:08.9±1.1,3°.5S±2°×12°.3E±°, h20km±10km, M4.8/25, mB5.6/1, mb4.8/12, MLv4.7/25, Mw(mB)5.1/1, Mwp6.1/2*
*NEIC **16** 22:48:10.2±0.9,2°.92S±0°.05×122°.87E±0°.08, h47km±5km, mb4.4/5, Error ellipse: s-maj=11.6km s-min=7.7km az=94.0*

ISC 16 22:48:09.9±0.6,2°.89S±0°.04×122°.80E±0°.06, h35km, n45, σ0s92/50, mb4.3/10, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.83**	**359**	P		**Pn**	**22 48 38.4**	**-0.6**
LUWI				S		**Sn**	**22 49 02.7**	**+1.8**
LUWI	**Luwuk**	**1.83**	**359**	Pn		**Pn**	**22 48 38.3**	**-0.6**
LUWI				Sn		**Sn**	**22 49 02.8**	**+1.9**
APSI	**Ampana**	**2.27**	**330**	P		**Pn**	**22 48 44.9**	**-0.1**
TTSI	**Tana Toraja**	**2.98**	**267**	P		**Pn**	**22 48 54.5**	**-0.2**
BNSI	**Bone**	**3.08**	**241**	P		**Pn**	**22 48 55.5**	**-0.6**
BNSI				S		**Sn**	**22 49 32.7**	**+0.9**
SPSI	**Sidrap Palu**	**3.21**	**250**	P		**Pn**	**22 48 58.7**	**+0.8**
SPSI				S		**Sn**	**22 49 35.3**	**+0.3**
MRSI	**Marisa**	**3.45**	**346**	P		**Pn**	**22 49 01.1**	**-0.1**
GTOI	**Gorontalo**	**3.50**	**3**	P		**Pn**	**22 49 03.0**	**+1.1**
BKSI	**Bulukumba**	**3.60**	**228**	P		**Pn**	**22 49 04.1**	**+0.8**
KAPI	**Kappang**	**3.70**	**235**	Pn		**Pn**	**22 49 05.8**	**+1.1**
	25nm,0.3s,baz=46,slow=7.2,SNR=21							
KAPI				Sn		**Sn**	**22 49 48.4**	**+1.3**
	84nm,0.3s,baz=3.9,slow=22,SNR=19							
KAPI	**Kappang**	**3.70**	**235**			**Pn**	**22 49 05.4**	**+0.7**
KAPI				Sn		**Sn**	**22 49 47.9**	**+0.8**
BSSI	**Bau

YAK	Yakutsk	64.95	4	P		P	22 58 46.1	+0.3
	comp=Z,14nm,0.7s,baz=281,slow=23,SNR=7.1							
TIXI	Tiksi	74.50	2	P		P	22 59 44.5	+0.1
TIXI				IAmb		IAmb	22 59 46.4	
	comp=Z,8.4nm,1.1s							
BRTR	Keskin Array B	91.18	310	P		P	23 01 11.1	-0.7
	comp=Z,1.7nm,0.9s,baz=124,slow=4.6,SNR=1.8							
TORD	Torodi Ar. Bea	120.92	284	PKP		PKPdf	23 06 59.8	+0.1
	comp=Z,0.6nm,0.7s,baz=83,slow=3.1,SNR=1.1							

WEL 16 22:54:23.8, 43°S±2°×17°E±°, h5km±2km, M2.8/8, ML3.0/7, MLv2.8/8, Error ellipse: s-maj=0.0km s-min=0.0km az=142.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	Waitaha Valley	0.20	294	P	Pg	22 54 29.2	+1.5
GCSZ	Gaunt Creek Bo	0.51	251	P	Pb	22 54 34.8	-0.4
INZ	Inchbonnie	0.55	39	P	Pg	22 54 35.1	+0.8
RPZ	Rata Peaks	0.56	175	P	Pb	22 54 36.3	+0.1
MHCZ	Mount Hutt	0.57	132	P	Pb	22 54 36.6	+0.3
OXZ	Oxford	0.79	103	P	Pb	22 54 40.8	+0.7
ARCZ	Arundel	0.81	170	P	Pb	22 54 40.7	+0.4
FOZ	Fox Glacier	0.93	246	P	Pb	22 54 42.7	+0.3
LTZ	Lake Taylor	1.02	69	P	Pn	22 54 44.8	+0.1
LBZ	Lake Benmore	1.36	205	P	Pg	22 54 49.9	0.0
DSZ	Denniston Nort	1.53	24	P	Pg	22 54 53.7	+0.5
ODZ	Otahua Downs	1.91	187	P	Pb	22 54 58.2	-0.8

IDC ***16*** *23:03:19.1±1.6, 7.6°S×128.4°E, h152km±17km, mb3.4/3, mb1 3.7/8, mb1mx3.4/38, mbtmp4.2/8, Error ellipse: s-maj=23.7km s-min=14.0km az=120.0*

DJA ***16*** *23:03:19.7±0.3, 8°S±3°×12°E±°, h145km±10km, M4.7/11, mB5.9/1, mb4.3/7, MLv4.9/11, Mw(mB)5.5/1*

ISC 16 23:03:18.2±0.7, 7.75S±0.06×128.56E±0.06, h151km, n21, σ2.9 21/26, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.73	95	P	Pn	23 04 03.2	+1.0
SAUI				S	Sn	23 04 40.5	+4.4
SOEI	Soe	4.69	244	P	Pn	23 04 29.4	+1.7
SOEI				S	Sn	23 05 23.5	+1.7
NLAI	Namlea	4.71	342	P	Pn	23 04 28.3	+0.4
BATI	Baumata	5.42	243	P	Pn	23 04 39.1	+1.8
	65nm,0.3s,baz=148,slow=9.5,SNR=53						
BATI				S	Sn	23 05 40.1	+1.1
	40nm,0.3s,baz=36,slow=23,SNR=7.8						
BATI	Baumata	5.42	243	P	Pn	23 04 38.4	+1.1
	1.3nm15µm181nm,0.6s						
FAKI	Fak Fak	6.04	38	P	Pn	23 04 44.9	-0.7
	0.8nm19nm,0.5s						
SANI	Sanana	6.21	336	P	Pn	23 04 48.0	+0.1
	0.2nm12nm,1.0s						
MMRI	Maumere	6.32	262	P	Pn	23 04 50.3	+1.0
EDFI	Ende, Flores	6.87	261	P	Pn	23 04 57.6	+0.9
	0.8nm17nm,0.9s						
SIJI	Sorong	7.34	22	P	Pn	23 05 03.2	+0.2
	4.0nm,0.3s,baz=180,slow=13,SNR=6.3						
SIJI				S	Sn	23 06 22.9	-2.4
	2.0nm,0.3s,baz=226,slow=22,SNR=3.6						
BASI	Baing, Sumba	8.26	252	P	Pn	23 05 15.0	-0.2
	53nm,0.9s						
WSI	Waingapu	8.39	256	P	Pn	23 05 05.6	-11
WBSI	Waikabubak, Su	9.26	258	P	Pn	23 05 29.7	+1.2
	55nm,0.8s						
SRPI	Serui, Papua	9.62	53	P	Pn	23 05 21.8	-12
FITZ	Fitzroy Crossi	10.68	195	P	Pn	23 05 49.4	+2.2
	0.6nm,0.3s,baz=22,slow=11,SNR=18						
FITZ				S	Sn	23 07 41.9	-3.5
	1.8nm,0.3s,baz=108,slow=10,SNR=7.1						
PLAI	Plampang	10.73	263	P	Pn	23 05 47.4	-0.5
WRA	Warramunga Arr	13.36	156	P	Pn	23 06 23.7	+1.7
	1.7nm,0.3s,baz=335,slow=14,SNR=39						
WRA				S	Sn	23 08 45.6	-4.4
	2.9nm,0.3s,baz=334,slow=21,SNR=9.5						
ASAR	Alice Springs	16.64	163	P	Pn	23 07 06.5	+3.7
	0.8nm,0.3s,baz=340,slow=11,SNR=36						
ASAR				S	S	23 10 03.7	-4.1
	0.5nm,0.3s,baz=346,slow=12,SNR=5.8						
SONM	Songino Array	58.71	343	P	P	23 13 00.6	+0.4
	0.3nm,0.4s,baz=166,slow=7.4,SNR=5.2						
MKAR	Makanchi Array	68.08	328	P	P	23 14 01.3	-0.4
	0.7nm,0.6s,baz=124,slow=8.0,SNR=11						
ZALV	Zalesovo Beam	71.63	334	P	P	23 14 22.2	-0.9
	1.0nm,0.4s,baz=136,slow=6.6,SNR=6.6						

IDC ***16*** *23:05:45.4±2.4, 7.4°S×128.6°E, h160km±22km, mb3.5/4, mb1 3.5/6, mb1mx3.2/34, mbtmp3.9/6, Error ellipse: s-maj=27.3km s-min=18.1km az=103.0*

ISC 16 23:05:43.4±0.8, 7.58S±0.06×128.95E±0.10, h150km, n9, σ3.9 10/12, mb3.6/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	5.84	243	P	Pn	23 07 08.3	+0.2
	68nm,0.3s,baz=107,slow=3.5,SNR=22						
BATI				S	Sn	23 08 13.1	-1.1
	35nm,0.3s,baz=186,slow=21,SNR=7.7						
SIJI	Sorong	7.05	19	P	Pn	23 07 25.4	+1.1
	0.7nm,0.3s,baz=221,slow=19,SNR=1.3						
SIJI				S	Sn	23 08 38.7	-4.6
	1.7nm,0.3s,baz=220,slow=23,SNR=1.9						
FITZ	Fitzroy Crossi	10.94	197	S	Sn	23 10 11.9	-5.1
	1.0nm,0.3s,baz=309,slow=13,SNR=1.5						
WRA	Warramunga Arr	13.36	158	S	Sn	23 11 12.9	-2.1
	1.7nm,0.3s,baz=329,slow=23,SNR=5.1						
ASAR	Alice Springs	16.69	164	P	Pn	23 09 32.4	+3.8
	0.4nm,0.3s,baz=338,slow=9.9,SNR=4.9						
ASAR				S	S	23 12 31.1	-3.1
	0.4nm,0.3s,baz=355,slow=29,SNR=1.6						
MKAR	Makanchi Array	68.14	327	P	P	23 16 26.8	-0.5
	1.1nm,0.4s,baz=119,slow=8.1,SNR=23						
ZALV	Zalesovo Beam	71.64	334	P	P	23 16 47.7	-0.8
	0.9nm,0.6s,baz=115,slow=6.8,SNR=4.5						
VNDA	Vanda	72.00	173	P	P	23 16 52.5	+2.2
	0.5nm,0.7s,baz=321,slow=7.4,SNR=1.9						
QSPA	South Pole Qui	82.40	180	P	P	23 17 50.1	+1.5
	0.5nm,0.5s,baz=252,slow=3.2,SNR=1.2						

WEL ***16*** *23:11:15.5±1.1, 38°S±9°×18°E±°, h42km±86km, M3.6/14, ML3.9/14, MLv3.6/14, Error ellipse: s-maj=0.0km s-min=0.0km az=143.1*

NEIC ***16*** *23:11:17.2±2.2, 38°02S±0°06×179°35E±0°10, h10km±2km, mb4.6/5, Error ellipse: s-maj=13.0km s-min=10.3km az=90.0*

IDC ***16*** *23:11:19.6±3.0, 36°81S×178°28E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/33, mbtmp3.6/3, Error ellipse: s-maj=54.7km s-min=28.6km az=80.0*

ISC 16 23:11:14.6±2.1, 37.91S±0.05×179.72E±0.09, h29km±12km, n97, σ1.966/119, mb3.6/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.03	275	P	Pb	23 11 34.0	+0.1
PUZ	Puketiti	1.16	262	P	Pb	23 11 36.5	+0.3
PUZ				S	Sn	23 11 52.5	+2.6
MXZ	Matakaoa Point	1.17	287	P	Pn	23 11 34.5	-0.5
MXZ				S	Sb	23 11 50.3	-0.8
MXZ	Matakaoa Point	1.17	287		Pn	23 11 34.5	-0.5
MXZ				Sn	Sb	23 11 50.2	-0.8
CNGZ	Carnagh Statio	1.32	244	P	Pb	23 11 40.1	+1.3
TWGZ	Tauwhareparae	1.40	259	P	Pb	23 11 40.4	+0.3
TWGZ				S	Sb	23 11 59.5	+1.9
HAZ	Te Kaha	1.54	275	P	Pn	23 11 40.8	+0.8
HAZ				S	Sn	23 12 00.1	+1.0
TKGZ	Te Karaka	1.56	250	P	Pb	23 11 42.6	-0.3
TKGZ				S	Sb	23 12 03.8	+1.6
RUGZ	Raukumara Rang	1.61	268	P	Pb	23 11 42.3	-1.5
RUGZ				S	Sb	23 12 03.6	-0.3
RIGZ	Rimuhau	1.73	242	P	Pb	23 11 45.3	-0.4
RIGZ				S	Sb	23 12 08.7	+1.7
PRGZ	Paritu Road	1.76	234	P	Pb	23 11 46.0	-0.2
MWZ	Matawai	1.78	256	P	Pb	23 11 44.8	-1.7
MWZ				S	Sb	23 12 07.3	-1.1
MHGZ	Mahia Peninsul	1.88	228	P	Pb	23 11 47.7	-0.6
KNZ	Kokohu	1.95	235	P	Pb	23 11 48.0	-1.4
KNZ				S	Sb	23 12 14.3	+1.0
URZ	Urewera	2.08	260	Pn	Pb	23 11 49.8	-2.0
	20nm,0.3s,baz=97,slow=5.5,SNR=39						
URZ				Sn	Sn	23 12 15.2	+2.6
	28nm,0.3s,baz=335,slow=22,SNR=27						
URZ	Urewera	2.08	260	P	Pb	23 11 49.7	-2.0
URZ				S	Sn	23 12 15.1	+2.5
WHRZ	Whale Island	2.17	271	P	Pn	23 11 50.0	+1.2
RTZ	Ruatahuna	2.26	251	P	Pb	23 11 52.5	-2.4
RTZ				S	Sb	23 12 21.0	-1.5
WHHZ	Waihua	2.27	238	P	Pb	23 11 53.2	-1.7
WHHZ				S	Sb	23 12 22.1	-0.4
RAHZ	Arahi	2.30	243	P	Pb	23 11 53.0	-2.4
MUGZ	Murupara	2.39	255	P	Pn	23 11 54.0	+2.2
MARZ	Manawahe	2.41	267	P	Pn	23 11 53.2	+1.2
MTHZ	Maungataniwha	2.45	247	P	Pn	23 11 54.8	+2.2
OPRZ	Ohinepanea	2.50	271	P	Pn	23 11 53.7	+0.4
ARHZ	Aropaoanui	2.52	237	P	Pb	23 11 56.6	-2.7
TARZ	Mount Tarawera	2.55	262	P	Pn	23 11 56.4	+2.3
NMHZ	Naumai	2.57	242	P	Pb	23 11 57.1	-3.0
CKHZ	Cape Kidnapper	2.70	229	P	Pn	23 11 58.3	+2.2
KARZ	Kaharoa	2.75	267	P	Pn	23 11 57.9	+1.2
MCHZ	McNeill Hill	2.81	236	P	Pn	23 12 00.3	+2.7
BKZ	Black Stump Fm	2.82	243	P	Pn	23 11 59.9	+2.2
BKZ	Black Stump Fm	2.82	243	Pn	Pn	23 11 59.8	+2.0
KAHZ	Kahuranaki	2.91	229	P	Pn	23 12 01.1	+2.2
KWHZ	Kaweka Forest	2.99	239	P	Pn	23 12 02.2	+2.1
KRHZ	Kereru	3.13	236	P	Pn	23 12 03.9	+1.8
BHHZ	Black Hill Sta	3.26	240	P	Pn	23 12 05.9	+2.0
WPHZ	Waipukurau	3.33	229	P	Pn	23 12 07.0	+2.2
PRHZ	Porangahau	3.36	225	P	Pn	23 12 06.2	+1.1
TMVZ	Te Maari	3.37	248	P	Pn	23 12 07.2	+1.8
ETVZ	East Tongariro	3.37	248	P	Pn	23 12 08.4	+3.0
KUZ	Kuaotunu	3.39	289	P	Pn	23 12 04.1	-1.5
PNHZ	Pukenui	3.39	233	P	Pn	23 12 07.2	+1.6
OTVZ	Oturere	3.41	247	P	Pn	23 12 07.8	+1.8
NGZ	Ngauruhoe	3.46	247	P	Pn	23 12 08.4	+1.7
FWVZ	Far West T-bar	3.53	246	P	Pn	23 12 10.0	+2.4
ANWZ	Angora Road	3.58	224	P	Pn	23 12 10.0	+1.9
TSZ	Takapari Road	3.63	233	P	Pn	23 12 10.2	+1.4
DVHZ	Dannevirke	3.65	228	P	Pn	23 12 10.0	+0.9
GRZ	Great Barrier	3.79	295	P	Pn	23 12 09.7	-1.3
BFZ	Birch Farm	3.86	223	P	Pn	23 12 12.4	+0.4
BFZ	Birch Farm	3.86	223	Pn	Pn	23 12 13.3	+1.4
BFZ				Sn	Sn	23 12 57.9	+1.5
HIZ	Hauiti	3.88	260	Pn	Pn	23 12 12.6	+0.4
PRWZ	Pori Road	3.92	227	P	Pn	23 12 14.4	+1.5
POWZ	Post Office Ro	3.94	230	P	Pn	23 12 15.6	+2.4
TIWZ	Tintock	4.12	225	P	Pn	23 12 16.5	+0.9
AWAZ	Awhitu Peninsu	4.12	280	P	Pn	23 12 16.3	+0.7
MRZ	Mangatainoka R	4.22	228	P	Pn	23 12 17.6	+0.6
HOWZ	Holdsworth Sta	4.41	226	P	Pn	23 12 20.1	+0.4
OGWZ	Otaki Gorge	4.56	229	P	Pn	23 12 22.4	+0.7
MTW	Mount Morrison	4.59	224	P	Pn	23 12 22.2	+0.1
WCZ	Waipu Caves	4.73	293	P	Pn	23 12 23.4	-0.7
KIW	Kapiti Island	4.75	230	P	Pn	23 12 24.9	+0.8
CAW	Cannon Point	4.81	227	P	Pn	23 12 25.2	+0.2
MSWZ	Moikau Station	4.91	223	Pn	Pn	23 12 26.1	-0.4
MSWZ				Sn	Sn	23 13 22.4	+0.1
PLWZ	Palliser	5.01	222	Pn	Pn	23 12 29.4	+1.5
PLWZ				Sn	Sn	23 13 25.5	+0.6
BHW	Baring Head	5.11	225	Pn	Pn	23 12 29.4	+0.1
BHW				Sn	Sn	23 13 28.8	+1.6
SNZO	South Karori	5.14	227	Pn	Pn	23 12 30.4	+0.7
SNZO				Sn	Sn	23 13 28.3	+0.3
DUWZ	D'Urville Isla	5.34	235	P	Pn	23 13 33.9	+1.6
TCW	Tory Channel	5.34	230	P	Pn	23 12 33.2	+0.9
OUZ	Omahuta	5.61	297	P	Pn	23 12 35.6	-0.5
OUZ	Omahuta	5.61	297		Pn	23 12 35.6	-0.5
TUWZ	Tuamarina	5.67	230	Pn	Pn	23 12 37.8	+0.9
TUWZ				Sn	Sn	23 13 38.8	-2.1
BSWZ	Blackbirch Sta	5.88	228	Pn	Pn	23 12 39.6	-0.2
NNZ	Nelson	5.90	234	Pn	Pn	23 12 41.7	+1.7
QRZ	Quartz Range	6.28	240	P	Pn	23 12 46.4	+1.1
QRZ	Quartz Range	6.28	240	Pn	Pn	23 12 46.6	+1.3
CTZ	Chatham Island	6.45	156	P	Pn	23 12 50.9	+3.4
THZ	Tophouse	6.50	232	Pn	Pn	23 12 49.8	+1.5
THZ				Sn	Sn	23 14 00.4	-1.1
KHZ	Kahutara	6.53	225	Pn	Pn	23 12 48.5	0.0
KHZ				Sn	Sn	23 13 59.7	-2.3
LTZ	Lake Taylor	7.48	227	Pn	Pn	23 13 02.5	+0.7
LTZ				Sn	Sn	23 14 23.1	-2.5
MQZ	McQueen's Vall	7.88	221	Pn	Pn	23 13 08.6	+1.4
MQZ				Sn	Sn	23 14 32.0	-3.3
OXZ	Oxford	7.96	225	Pn	Pn	23 13 08.9	+0.6
OXZ				Sn	Sn	23 14 34.3	-2.9
RPZ	Rata Peaks	8.76	226	Pn	Pn	23 13 21.6	+2.3
RPZ				Sn	Sn	23 14 52.2	-4.7
RAO	Raoul Island	8.86	14	Pn	Pn	23 13 28.1	+7.4
FOZ	Fox Glacier	9.38	230	Pn	Pn	23 13 28.6	+0.9
LBZ	Lake Benmore	9.66	225	Pn	Pn	23 13 31.3	-0.4
ODZ	Otahua Downs	9.85	221	Pn	Pn	23 13 34.9	+0.7
NIUE	Niue	20.83	29	P	Pn	23 16 01.6	+5.2
NIUE				IAmb	IAmb	23 16 19.2	
	comp=Z,145nm,1.0s						
FUNA	Funafuti	29.26	359	P	P	23 17 14.4	+0.2
BBOO	Buckleboo	35.72	265	P	P	23 18 11.4	+0.7
BBOO				IAmb	IAmb	23 18 15.9	
	comp=Z,0.9nm,0.6s						
VNDA	Vanda	40.45	186	P	P	23 19 07.4	+17
	comp=Z,1.1nm,0.9s,baz=323,slow=4.3,SNR=6.0						
ASAR	Alice Springs	41.44	277	P	P	23 18 57.6	-1.1
	comp=Z,0.5nm,0.6s,baz=120,slow=8.4,SNR=4.7						
FORT	Forrest	42.79	264	P	P	23 19 12.7	+3.0
FORT				IAmb	IAmb	23 19 26.5	
	comp=Z,16nm,0.9s						
WB2	Warramunga Arr	43.09	282	P	P	23 19 11.0	-1.3
WRA	Warramunga Arr	43.10	281	P	P	23 19 10.8	-1.6
	comp=Z,0.6nm,0.6s,baz=122,slow=7.8,SNR=5.2						
WB0	Warramunga Arr	43.16	282	P	P	23 19 11.3	-1.5
ARCES	ARCESS Array B	145.41	344	PKhKP	PKPpre	23 30 47.8	
	comp=Z,2.0nm,0.7s,baz=45,slow=1.5,SNR=3.5						

IDC ***16*** *23:17:09.0±0.8, 2.52N×98.43E, h0km, mb4.1/13, mb1 4.2/14, mb1mx3.9/47, mbtmp4.1/14, ML3.6/1, Error ellipse: s-maj=39.6km s-min=15.5km az=52.0*

NEIC ***16*** *23:17:10.4±1.5, 2.67N±0.06×98.53E±0.03, h6km±5km, mb4.4/19, Error ellipse: s-maj=8.5km s-min=4.4km az=165.0*

DJA ***16*** *23:17:10.7±0.2, 3°N±2°×9°9E±°, h10km, M4.5/12, mb4.6/1, MLv4.5/12*

ISC 16 23:17:11.2±0.5, 2.69N±0.03×98.47E±0.04, h10km, n84, σ1.9 70/85, mb4.3/20, 9C-2D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPSI	Rantau Prapat	0.45	89		Pg	23 17 18.6	-1.4
TSI	Tuntungan	0.81	7	P	Pg	23 17 25.2	-1.7
TSI				S	Sg	23 17 36.6	-0.9
KCSI	Kotacane, Aceh	1.08	320	P	Pb	23 17 30.1	-1.9
KCSI				S	Sb	23 17 43.9	-2.4
TPTI		1.41	294	P	Pn	23 17 35.3	-1.6
TPTI				S	Sn	23 17 54.6	-1.0
GSI	Gunungsitoli	1.64	213	P	Pb	23 17 40.3	-1.2
GSI	Gunungsitoli	1.64	213		Pn	23 17 39.8	-0.3
MNSI	Mandailing Nat	2.18	149	P	Pn	23 17 48.2	+0.7
LHMI	Lhok Sumawe	2.95	329	P	Pn	23 17 56.9	-1.2
LHMI	Lhok Sumawe	2.95	329	Pn	Pn	23 17 57.3	-0.8
IPM	Ipoh	3.11	55	Pn	Pn	23 17 59.2	-1.1
KULM	Kulim	3.38	40	Pn	Pn	23 18 02.7	-1.3
BKNI	Bangkinang	3.48	132	P	Pg	23 18 16.6	-1.3
BKNI	Bangkinang	3.48	132	Pg	Pg	23 18 15.7	-2.2
SISI	Saibi	4.04	171	P	Pn	23 18 14.0	+0.9
SDSI	Sungai Dareh	4.66	141	P	Pb	23 18 29.3	-3.7
MYKOM	Kota Tinggi	5.45	99		Pg	23 18 56.3	-0.3
KRJI	Kerinci	5.61	148	P	Pb	23 18 43.3	-6.0
KLSI		9.63	140	P	Pn	23 19 43.2	+13
MHMT	Maesarieng	15.40	358	P	P	23 20 57.5	+4.2
CM04	Chiang Mai Arr	15.62	2	P	P	23 20 57.6	+1.8
CM05	Chiang Mai Arr	15.62	2	P	P	23 20 57.5	+1.7
CM13	Chiang Mai Arr	15.64	2	P	P	23 20 55.0	-1.0
CM02	Chiang Mai Arr	15.66	2	P	Pn	23 20 54.0	+1.9
CM09	Chiang Mai Arr	15.67	2	P	P	23 20 59.1	+2.8
CM15	Chiang Mai Arr	15.67	2	P	P	23 20 59.1	+2.8
CM31	Chiang Mai Arr	15.68	2	P	P	23 21 00.7	+4.2
CM31	Chiang Mai Arr	15.68	2	Pn	Pn	23 20 53.3	+0.9
CM31				IAmb	IAmb	23 21 01.1	
	comp=Z,10nm,0.7s						
CMAR	Chiang Mai Arr	15.68	2	Pn	Pn	23 20 54.6	+2.3
	comp=Z,0.1nm,0.3s,baz=195,slow=11,SNR=12						
CMAR				Lg	Lg	23 25 33.1	
	comp=Z,0.2nm,0.3s,baz=164,slow=28,SNR=1.7						
CMAR	Chiang Mai Arr	15.68	2		Pn	23 20 52.0	-0.4
LAMP	Lampang	15.78	4	P	P	23 21 02.6	+5.0
CM32	Chiang Mai Arr	15.87	1	P	P	23 21 02.0	+3.4
CM35	Chiang Mai Arr	15.91	2	P	Pn	23 20 57.0	+1.7
CMMT	Chiang Mai	16.03	2	P	Pn	23 20 58.3	+1.4
CHTO	Chiang Mai	16.03	2	Pn	Pn	23 20 56.4	-0.5
CM33	Chiang Mai Arr	16.04	2	P	Pn	23 20 58.0	+1.0
CM34	Chiang Mai Arr	16.08	2	P	Pn	23 20 59.0	+1.5
PAYA	Payao	16.63	5	P	P	23 21 12.0	+5.0
MYLDM	Lahad Datu	20.13	82	P	P	23 21 46.2	+0.6
MYLDM				IAmb	IAmb	23 21 57.1	
	comp=Z,30nm,1.2s						
SHL	Shillong	23.61	345	P	P	23 22 24.2	+1.5
SHL				IAmb	IAmb	23 22 34.6	
	comp=Z,21nm,1.2s						
LZH	Lanzhou	33.60	8	eP	P	23 23 54.4	+2.4
LZH				pP	sP	23 23 59.1	+2.2
LZH				sP	pP	23 24 01.0	+5.5
LZH				PP	PnPn	23 25 03.5	-0.1
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LZH				pmax	pmax		
	comp=Z,86nm,4.6s						
LZH				LR	LR		
	comp=N,290nm,13.6s						
LZH				LR	LR		
	comp=E,420nm,12.2s						
LZH				LR	LR		
	comp=Z,340nm,15.2s						
FITZ	Fitzroy Crossi	33.81	129	P	P	23 23 53.0	-0.7
	comp=Z,1.8nm,1.1s,baz=293,slow=7.7,SNR=1.9						
FITZ	Fitzroy Crossi	33.81	129	IAmb	IAmb	23 24 02.4	
	comp=Z,1.0nm,1.0s						
HHC	Hu-ho-hao-te	39.79	16	eP	P	23 24 45.3	+0.8
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,3µm,5.6s						
WRA	Warramunga Arr	41.78	124	P	P	23 24 59.2	-2.0
	comp=Z,1.1nm,0.7s,baz=302,slow=9.2,SNR=9.8						
WRA				PcP	PcP	23 26 58.6	+1.1
	comp=Z,0.2nm,0.4s,baz=311,slow=2.8,SNR=2.3						
WMQ	Urumqi	42.06	348	eP	P	23 25 04.8	+1.6
ASAR	Alice Springs	43.31	129	P	P	23 25 12.1	-1.6
	comp=Z,0.8nm,0.8s,baz=307,slow=7.8,SNR=4.5						
SONM	Songino Array	45.49	7	P	P	23 25 32.1	+1.3
	comp=Z,0.7nm,0.4s,baz=191,slow=9.5,SNR=8.5						
MK31	Makanchi Array	46.13	345	P	P	23 25 35.4	-0.4
MK31				IAmb	IAmb	23 25 45.5	
	comp=Z,4.7nm,1.2s						
MKAR	Makanchi Array	46.13	345	P	P	23 25 36.1	+0.3
	comp=Z,0.8nm,0.4s,baz=158,slow=8.7,SNR=15						
MKAR	Makanchi Array	46.13	345	P	P	23 25 35.3	-0.5
KKAR	Karatay Array	47.32	332	P	P	23 25 45.3	+0.2
GEYT	Alibeck	50.92	319	P	P	23 26 14.2	+1.4
	comp=Z,5.8nm,0.8s,baz=139,slow=7.9,SNR=8.8						
GEYT	Alibeck	50.92	319	IAmb	IAmb	23 26 16.7	
	comp=Z,5.4nm,1.0s						
GYA0B	ALIBECK ARRAY	50.92	319	P	P	23 26 12.7	-0.1
ZAA0	Zalesovo Array	52.31	350	P	P	23 26 23.2	+0.3
ZALV	Zalesovo Beam	52.31	350	P	P	23 26 22.9	0.0
	comp=Z,2.0nm,0.4s,baz=171,slow=6.7,SNR=15						
ZALV	Zalesovo Beam	52.31	350	P	P	23 26 22.6	-0.3
RAYN	Ar Rayn	55.20	297	P	P	23 26 44.6	-0.1
RAYN				IAmb	IAmb	23 26 49.8	
	comp=Z,4.1nm,0.8s						
ABKAR	Akbulak array	56.83	331	P	P	23 26 54.8	-1.0
ABKAR				IAmb	IAmb	23 27 10.1	
	comp=Z,3.9nm,0.9s						
ABKAR	Akbulak array	56.83	331	P	P	23 26 54.5	-1.3
BR131	Keskin Array S	69.07	312	P	P	23 28 18.2	+0.6
BR131				IAmb	IAmb	23 28 20.0	
	comp=Z,2.2nm,1.1s						
BRTR	Keskin Array B	69.07	312	P	P	23 28 17.8	+0.1
	comp=Z,1.4nm,0.6s,baz=128,slow=7.1,SNR=13						
BRTR	Keskin Array B	69.07	312	P	P	23 28 18.0	+0.3
HARR	Harsova	74.33	316	⇑P	P	23 28 48.7	-0.4
SORM	Soroca	74.80	319	⇓P	P	23 28 52.3	+0.5
AKASG	Malin Array Be	74.87	322	P	P	23 28 52.0	0.0
	comp=Z,1.5nm,0.5s,baz=86,slow=5.4,SNR=16						
AKASG	Malin Array Be	74.87	322	P	P	23 28 52.2	+0.2
AKBB	Malin Array Si	74.87	322	P	P	23 28 52.2	+0.1
AKBB				IAmb	IAmb	23 28 52.7	
	comp=Z,4.0nm,0.6s	

therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 57.2842 Y 85.913 Z 13.2792 CovXX 4.77454 XY 1.04461 XZ -5.28756 YY 7.2223 YZ -4.81215 ZZ 69.9074 EllAz1 103.773 Dip1 3.47416 Len1 3.84493 Az2 193.447 Dip2 -5.36748 Len2 4.97347 Len3 1.579883e+01

ISC 16 23:37:38.8±2.1,**0.7S**±0.1×**29.55E**±0.09,**h10**km,**n11,** σ0$40/12,**Zaire**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RGB	**Rumangabo**	**0.69**	**195**	*i* P	**Pb**	**23 37 52.9**	**-0.1**
RGB	**Rumangabo**	**0.69**	**195**	*i* S	**Sg**	**23 38 01.6**	**+0.4**
LBGA	**Luboga**	**0.72**	**217**	*i* P	**Pb**	**23 37 53.6**	**0.0**
LBGA	**Luboga**	**0.72**	**217**	*i* S	**Sg**	**23 38 02.7**	**+0.4**
KTSH	**Kitshanga**	**0.74**	**222**	*i* P	**Pb**	**23 37 54.0**	**-0.1**
KTSH	**Kitshanga**	**0.74**	**222**	*i* S	**Sg**	**23 38 03.1**	**+0.1**
GOM	**Goma**	**1.04**	**198**	*i* S	**Sg**	**23 38 12.4**	**-0.2**
GOM	**Goma**	**1.04**	**198**	*i* P	**Pb**	**23 37 59.3**	**+0.2**
BOBN	**Bobandana**	**1.15**	**208**	*i* P	**Pb**	**23 38 00.3**	**-0.6**
BOBN	**Bobandana**	**1.15**	**208**	*i* S	**Sg**	**23 38 15.2**	**-0.8**
MBAR	**Mbarara**	**1.19**	**86**	*e*P	**Pg**	**23 38 02.0**	**+0.3**
MBAR				*e*S	**Sg**	**23 38 17.0**	**-0.3**

SJA **16** *23:38:00.5±0.6,23.˚43S×66.˚84W,h217*km±*5*km*, ML4.0, MW3.7*

NEIC **16** *23:38:00.6±2.4,23.˚43S±0.˚06×66.˚9W±0.˚1,h223*km±*9*km*, Error ellipse: s-maj=18.0km s-min=9.2km az=92.0*

IDC **16** *23:38:01.0±1.4,23.˚35S×66.˚85W,h217*km±*24*km*,mb3.6/2, mb1 3.5/6,mb1mx3.3/21,mbtmp4.0/6,Error ellipse: s-maj=34.2km s-min=24.7km az=128.0*

VAO **16** *23:38:01.4±0.8,23.˚48S×67.˚04W,h250*km±*10*km*,mb3.9*

GUC **16** *23:38:02.8±0.7,23.˚43S×67.˚03W,h229*km±*9*km*,ML4.3*

ISC 16 23:38:00.5±0.6,**23.˚43S**±0.˚04×**66.˚91W**±0.˚04,**h223**km±6km, **n106,**σ1$03/149,**mb4.4**/5,**10C,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.39**	**81**	*e*P	**Pn**	**23 38 35.4**	**-0.5**
YJA	**Yavi**	**1.79**	**46**	*e*P	**Pn**	**23 38 39.3**	**-0.1**
YJA				*e*S	**S**	**23 39 09.6**	**+0.1**
LVC	**Limon Verde**	**2.02**	**293**	P	**Pn**	**23 38 42.6**	**+1.2**
	6.2nm,0.3s,baz=104,slow=8.3,SNR=296						
LVC				S	**S**	**23 39 13.1**	**+0.1**
	30nm,0.3s,baz=355,slow=21,SNR=34						
LVC	**Limon Verde**	**2.02**	**293**	↑*e*P	**Pn**	**23 38 42.6**	**+1.2**
LVC				*e*S	**S**	**23 39 13.1**	**+0.1**
LVC	**Limon Verde**	**2.02**	**293**	Pn	**Pn**	**23 38 42.3**	**+0.9**
LVC				S	**S**	**23 39 13.2**	**+0.1**
LVC	**Limon Verde**	**2.02**	**293**	*e*P	**Pn**	**23 38 42.6**	**+1.2**
LVC				*e*S	**S**	**23 39 12.4**	**-0.7**
PB15	**IPOC Station P**	**2.37**	**275**	↑*i*P	**Pn**	**23 38 45.9**	**+1.2**
PB15				*i* S	**S**	**23 39 19.4**	**+0.3**
PB15	**IPOC Station P**	**2.37**	**275**		**Pn**	**23 38 45.9**	**+1.2**
PB15				S	**S**	**23 39 19.7**	**+0.6**
PB15	**IPOC Station P**	**2.37**	**275**	*e*P	**Pn**	**23 38 46.0**	**+1.2**
PB15				*e*S	**S**	**23 39 19.4**	**+0.3**
PB06	**IPOC Station P**	**2.56**	**286**	↑*i*P	**Pn**	**23 38 48.0**	**+1.3**
PB06				*i* S	**S**	**23 39 22.4**	**-0.2**
PB06				IAML		23 39 24.4	
	comp=E,656nm,0.2s						
PB06	**IPOC Station P**	**2.56**	**286**		**Pn**	**23 38 47.9**	**+1.1**
PB06				S	**S**	**23 39 22.6**	**0.0**
PB06	**IPOC Station P**	**2.56**	**286**	*e*P	**Pn**	**23 38 47.8**	**+1.1**
PB06				*e*S	**S**	**23 39 22.5**	**-0.2**
PB06				IAML		23 39 26.6	
	comp=Z,363nm,0.1s						
PB09	**IPOC Station P**	**2.70**	**307**	*e*P	**Pn**	**23 38 49.9**	**+1.6**
PB09				*i* S	**S**	**23 39 25.9**	**+0.4**
PB09	**IPOC Station P**	**2.70**	**307**	Pn	**Pn**	**23 38 49.6**	**+1.3**
PB09				S	**S**	**23 39 26.8**	**+1.3**
PB09	**IPOC Station P**	**2.70**	**307**	*e*P	**Pn**	**23 38 49.8**	**+1.5**
PB09				*e*S	**S**	**23 39 26.1**	**+0.6**
FSA	**Cafayete**	**2.80**	**163**	*e*P	**Pn**	**23 38 49.5**	**+0.1**
PB03	**IPOC Station P**	**2.97**	**297**	↑*i*P	**Pn**	**23 38 52.1**	**+0.9**
PB03				*i* S	**S**	**23 39 29.6**	**-1.1**
PB03				IAML		23 39 30.8	
	comp=N,500nm,0.6s						
PB03	**IPOC Station P**	**2.97**	**297**	*e*P	**Pn**	**23 38 52.0**	**+0.8**
PB03				*e*S	**S**	**23 39 29.9**	**-0.8**
PB03				IAML		23 39 32.3	
	comp=Z,464nm,0.3s						
GO02	**Mina Guanaco**	**3.00**	**234**	↑*i*P	**Pn**	**23 38 52.5**	**+0.9**
GO02				*i* S	**S**	**23 39 31.9**	**+0.3**
GO02				IAML		23 39 34.6	
	comp=N,705nm,0.4s						
GO02	**Mina Guanaco**	**3.00**	**234**	Pn	**Pn**	**23 38 52.6**	**+0.9**
GO02				S	**S**	**23 39 31.5**	**-0.1**
PB05	**IPOC Station P**	**3.09**	**280**	↑*i*P	**Pn**	**23 38 53.4**	**+0.9**
PB05				*i* S	**S**	**23 39 32.0**	**-1.2**
PB05				IAML		23 39 36.4	
	comp=E,427nm,0.2s						
PB05	**IPOC Station P**	**3.09**	**280**	*e*P	**Pn**	**23 38 53.4**	**+0.9**
PB05				*e*S	**S**	**23 39 32.5**	**-0.7**
PB05				IAML		23 39 36.5	
	comp=Z,206nm,0.1s						
PB04	**IPOC Station P**	**3.18**	**289**	↑*i*P	**Pn**	**23 38 54.6**	**+0.9**
PB04				*i* S	**S**	**23 39 34.2**	**-1.0**
PB04				IAML		23 39 37.8	
	comp=N,418nm,0.3s						
PB04	**IPOC Station P**	**3.18**	**289**		**Pn**	**23 38 54.6**	**+0.9**
PB04				S	**S**	**23 39 34.6**	**-0.7**
PB04	**IPOC Station P**	**3.18**	**289**	*e*P	**Pn**	**23 38 54.7**	**+1.0**
PB04				*e*S	**S**	**23 39 34.6**	**-0.7**
PB04				IAML		23 39 37.2	
	comp=Z,337nm,0.1s						
PB07	**IPOC Station P**	**3.23**	**301**	↑*i*P	**Pn**	**23 38 55.1**	**+0.8**
PB07				*i* S	**S**	**23 39 34.9**	**-1.4**
PB07	**IPOC Station P**	**3.23**	**301**		**Pn**	**23 38 54.9**	**+0.6**
PB07				S	**S**	**23 39 35.2**	**-1.1**
PB07	**IPOC Station P**	**3.23**	**301**	*e*P	**Pn**	**23 38 55.1**	**+0.8**
PB07				*e*S	**S**	**23 39 35.5**	**-0.8**
PB07				IAML		23 39 40.1	
	comp=Z,309nm,0.2s						
PB10	**IPOC Station P**	**3.35**	**268**	↑*i*P	**Pn**	**23 38 56.3**	**+0.9**
PB10				*i* S	**S**	**23 39 36.6**	**-1.8**
PB10				IAML		23 39 42.0	
	comp=E,181nm,0.2s						
PB10	**IPOC Station P**	**3.35**	**268**	Pn	**Pn**	**23 38 56.3**	**+0.9**
PB10				S	**S**	**23 39 37.4**	**-1.0**
PB10	**IPOC Station P**	**3.35**	**268**	*e*P	**Pn**	**23 38 56.3**	**+0.9**
PB10				*e*S	**S**	**23 39 37.9**	**-0.5**
PB10				IAML		23 39 40.3	
	comp=Z,116nm,0.2s						
PB01	**IPOC Station P**	**3.37**	**314**	*e*P	**Pn**	**23 38 56.6**	**+0.8**
PB01				*i* S	**S**	**23 39 38.2**	**-0.8**
PB01				IAML		23 39 39.7	
	comp=E,297nm,0.2s						
PB01	**IPOC Station P**	**3.37**	**314**		**Pn**	**23 38 56.7**	**+0.8**
PB01				S	**S**	**23 39 39.1**	**0.0**
PB01	**IPOC Station P**	**3.37**	**314**	*e*P	**Pn**	**23 38 56.8**	**+1.0**
PB01				*e*S	**S**	**23 39 38.4**	**-0.7**
PB01				IAML		23 39 40.8	
	comp=Z,152nm,0.1s						
PB14	**IPOC Station P**	**3.41**	**249**	↑*i*P	**Pn**	**23 38 57.1**	**+0.7**
PB14				*i* S	**S**	**23 39 38.8**	**-1.4**
PB14				IAML		23 39 43.3	
	comp=E,99nm,0.2s						
PB14	**IPOC Station P**	**3.41**	**249**	Pn	**Pn**	**23 38 57.0**	**+0.5**
PB14				S	**S**	**23 39 39.8**	**-0.4**
PB14	**IPOC Station P**	**3.41**	**249**	*e*P	**Pn**	**23 38 57.1**	**+0.7**
PB14				*e*S	**S**	**23 39 39.5**	**-0.7**
PB14				IAML		23 39 44.3	
	comp=Z,144nm,0.2s						
PB02	**IPOC Station P**	**3.47**	**307**	*e*P	**Pn**	**23 38 57.7**	**+0.7**
PB02				*i* S	**S**	**23 39 39.2**	**-2.1**
PB02				IAML		23 39 40.5	
	comp=N,287nm,0.4s						
PB02	**IPOC Station P**	**3.47**	**307**	*e*P	**Pn**	**23 38 57.8**	**+0.8**
PB02				*e*S	**S**	**23 39 40.2**	**-1.1**
PB02				IAML		23 39 41.9	
	comp=Z,199nm,0.2s						
AHML	**Horco Molle**	**3.63**	**157**	*e*P	**Pn**	**23 38 58.6**	**-0.1**
AHML				*e*S	**S**	**23 39 43.0**	**-1.6**
PB08	**IPOC Station P**	**3.88**	**327**	*e*P	**Pn**	**23 39 03.9**	**+1.7**
PB08				*i* S	**S**	**23 39 50.8**	**+0.3**
PB08				IAML		23 39 54.9	
	comp=E,77nm,0.2s						
PB08	**IPOC Station P**	**3.88**	**327**		**Pn**	**23 39 04.0**	**+1.7**
PB08				S	**S**	**23 39 51.6**	**+1.1**
AC02	**Maricunga**	**3.94**	**210**	*i*		23 40 05.7	
AC02	**Maricunga**	**3.94**	**210**		**Pn**	**23 39 03.6**	**+0.6**
PATCX	**Punta Patache**	**3.98**	**310**	*e*P	**Pn**	**23 39 03.6**	**+0.7**
PATCX				*i* S	**S**	**23 39 50.2**	**-1.8**
PATCX	**Punta Patache**	**3.98**	**310**	Pn	**Pn**	**23 39 04.0**	**+1.0**
TA01	**Diego Aracena**	**4.17**	**313**	Pn	**Pn**	**23 39 06.3**	**+1.1**
TA01					**S**	**23 39 55.2**	**-0.9**
AC01	**Pan de Azucar**	**4.31**	**230**		**Pn**	**23 39 06.5**	**-0.5**
PB11	**IPOC Station P**	**4.46**	**324**	Pn	**Pn**	**23 39 09.9**	**+1.0**
PSGCX	**Pisagua**	**4.85**	**321**	Pn	**Pn**	**23 39 13.6**	**-0.2**
MNMC	**Minye Minye**	**4.96**	**329**		**Pn**	**23 39 15.8**	**+0.5**
CYA	**Choya**	**5.09**	**169**	*e*P	**Pn**	**23 39 17.1**	**+0.5**
GO03	**Copiap**	**5.12**	**215**	Pn	**Pn**	**23 39 16.1**	**-0.9**
GO03	**Copiap**	**5.12**	**215**	*e*P	**Pn**	**23 39 16.6**	**-0.5**
GO03				*e*S	**S**	**23 40 15.3**	**-2.3**
VCA	**Vinchina**	**5.41**	**192**	*e*P	**Pn**	**23 39 20.3**	**-0.5**
VCA				*e*S	**S**	**23 40 27.8**	**+3.4**
PB16	**IPOC Station P**	**5.62**	**334**	Pn	**Pn**	**23 39 24.6**	**+0.7**
AC04	**Llanos de Chal**	**6.06**	**217**	Pn	**Pn**	**23 39 27.6**	**-1.2**
AC05	**El Transito**	**6.18**	**209**	Pn	**Pn**	**23 39 29.6**	**-0.9**
CO01	**Juntas del Tor**	**7.12**	**203**		**Pn**	**23 39 42.8**	**+0.2**
LPAZ	**La Paz**	**7.20**	**351**	P	**Pn**	**23 39 45.0**	**+0.9**
	comp=E,0.7nm,0.3s,baz=175,slow=11,SNR=24						
LPAZ				S	**S**	**23 41 05.8**	**-0.8**
	comp=E,0.2nm,0.3s,baz=292,slow=9.9,SNR=3.6						
LPAZ	**La Paz**	**7.20**	**351**		**Pn**	**23 39 44.9**	**+0.9**
LPAZ	**La Paz**	**7.20**	**351**	*e*P	**Pn**	**23 39 45.4**	**+1.3**
GO04	**Tololo Observa**	**7.56**	**207**		**Pn**	**23 39 46.5**	**-1.8**
CO03	**El Pedregal**	**8.11**	**204**	Pn	**Pn**	**23 39 54.0**	**-1.3**
CO02	**Combarbal**	**8.55**	**204**	Pn	**Pn**	**23 40 00.2**	**-0.7**
SIV	**San Ignacio**	**9.21**	**38**	P	**Pn**	**23 40 07.6**	**-1.9**
	comp=E,1.4nm,0.3s,baz=236,slow=14,SNR=32						
VA03	**San Esteban**	**9.84**	**198**	Pn	**Pn**	**23 40 15.8**	**-1.6**
ROC1	**El Roble**	**10.18**	**200**	Pn	**Pn**	**23 40 19.5**	**-2.3**
MT02	**Curacav**	**10.48**	**200**	Pn	**Pn**	**23 40 23.0**	**-2.4**
BO02	**Sierra Bellavi**	**11.82**	**196**	Pn	**Pn**	**23 40 43.1**	**+0.6**
VILB	**Vilhena**	**12.21**	**33**	*e*P	**Pn**	**23 40 48.3**	**+0.7**
ITRB	**Iturama**	**15.83**	**80**	*e*P	**Pn**	**23 41 32.4**	**+0.5**
ARAG	**Araguaiana, MT**	**16.16**	**64**	*e*P	**Pn**	**23 41 36.6**	**+0.8**
BB19B	**Bebedouro**	**17.18**	**86**	*e*P	**Pn**	**23 41 47.3**	**-0.6**
PLCA	**Paso Flores**	**17.52**	**189**	P	**P**	**23 41 50.9**	**+1.3**
PLCA	**Paso Flores**	**17.52**	**189**	*e*P	**P**	**23 41 47.8**	**-1.8**
SPB	**Sao Paulo**	**17.86**	**94**	*e*P	**P**	**23 41 53.5**	**+0.1**
IPMB	**Ipameri, GO**	**18.30**	**76**	*e*P	**P**	**23 41 58.8**	**+0.5**
VAO	**Valinhos**	**18.34**	**93**	*e*P	**P**	**23 41 58.5**	**-0.1**
SNDB	**Serra Nova Dou**	**18.71**	**55**	*e*P	**P**	**23 42 02.4**	**-0.3**
BDFB	**Brasilia**	**19.41**	**70**	P	**P**	**23 42 10.7**	**+0.5**
	comp=E,0.5nm,0.3s,baz=242,slow=12,SNR=9.2						
BDFB	**Brasilia**	**19.41**	**70**		**P**	**23 42 10.9**	**+0.7**
BDFB				IAmb	IAmb	23 42 11.6	
	comp=Z,8.0nm,0.9s						
PARB	**Paraibuna**	**19.54**	**94**	*e*P	**P**	**23 42 11.6**	**+0.1**
BSCB	**Bom Sucesso**	**20.63**	**88**	*e*P	**P**	**23 42 23.4**	**+0.2**
ESAR	**Angra dos Reis**	**20.65**	**93**	*e*P	**P**	**23 42 23.9**	**+0.6**
PEXB	**Peixe**	**20.97**	**61**	*e*P	**P**	**23 42 25.8**	**-0.9**
MACA	**Manacapuru-AM**	**21.03**	**18**	*e*P	**P**	**23 42 26.7**	**-0.7**
ITTB	**Itaituba**	**21.81**	**31**	*e*P	**P**	**23 42 34.0**	**-1.1**
JANB	**Jaiuaria**	**22.88**	**73**	*e*P	**P**	**23 42 44.3**	**-0.7**
SMTB	**Santa Maria do**	**23.49**	**55**	*e*P	**P**	**23 42 50.8**	**+0.3**
SDBA	**SAO DESIDERIO**	**23.60**	**66**	*e*P	**P**	**23 42 51.5**	**0.0**
PRPB	**Paraupebas**	**23.77**	**46**	*e*P	**P**	**23 42 52.9**	**-0.2**
SJMB	**Sao Joao De Ma**	**24.44**	**84**	*e*P	**P**	**23 42 58.6**	**-0.5**
MALB	**Monte Alegre**	**24.70**	**32**	*e*P	**P**	**23 43 01.4**	**-0.1**
MCPB	**Macapa, AP**	**27.09**	**34**	*e*P	**P**	**23 43 23.0**	**+0.1**
SDV	**Santo Domingo**	**32.32**	**353**	*e*P	**P**	**23 44 07.8**	**-1.3**
RCBR	**Riachuelo**	**34.60**	**64**	P	**P**	**23 44 29.1**	**+0.4**
	comp=Z,5.2nm,0.9s,baz=251,slow=6.3,SNR=1.6						
RCBR	**Riachuelo**	**34.60**	**64**	P	**P**	**23 44 29.7**	**+1.0**
RCBR				IAmb	IAmb	23 44 40.4	
	comp=Z,11nm,1.1s						
MCLT	**Moule a Chique**	**37.37**	**10**	P	**P**	**23 44 52.0**	**0.0**
SACV	**Santiago Islan**	**57.00**	**52**	P	**P**	**23 47 22.1**	**-1.3**
SACV				IAmb	IAmb	23 47 37.0	
	comp=Z,27nm,0.9s						
QSPA	**South Pole Qui**	**66.77**	**180**	P	**P**	**23 48 29.7**	**+1.9**
HDIL	**Hopedale**	**66.98**	**342**	P	**P**	**23 48 29.7**	**+0.6**
HDIL				IAmb	IAmb	23 48 31.5	
	comp=Z,6.0nm,0.6s						
LBNH	**Lisbon**	**67.50**	**356**	P	**P**	**23 48 31.1**	**-1.2**
LBNH				IAmb	IAmb	23 48 49.5	
	comp=Z,7.6nm,1.1s						
TORD	**Torodi Ar. Bea**	**76.28**	**69**	P	**P**	**23 49 25.8**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=250,slow=5.7,SNR=12						
TORD	**Torodi Ar. Bea**	**76.28**	**69**	IAmb	IAmb	23 49 31.1	
	comp=Z,0.6nm,1.1s						
LZH	**Lanzhou**	**165.06**	**30**	*e*PKP	**PKPdf**	**23 57 40.0**	**+1.7**
LZH				pPKP	PKPab	23 58 34.4	-1.9
LZH				sPKP		23 59 04.4	

NEIC **16** *23:51:14.5±2.8,16.˚12N±0.˚09×97.˚59W±0.˚06,h2*km±*9*km*, Error ellipse: s-maj=15.3km s-min=3.7km az=209.0*

MEX **16** *23:51:16.1±0.7,16.˚07N×97.˚61W,h17*km±*40*km*, MD4.1*

ISC 16 23:51:13.1±1.4,**16.˚10N**±0.˚05×**97.˚56W**±0.˚03,**h10**km±10km, **n31,**σ1$40/45,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEIG	**Puerto Escondi**	**0.41**	**105**	*e*P	**Pn**	**23 51 23.5**	**-1.6**
PEIG				*e*S	**Sb**	**23 51 29.8**	**+1.0**
PNIG	**Pinotepa**	**0.61**	**298**	*e*P	**Pb**	**23 51 25.7**	**-0.2**
PNIG				*e*S	**Sg**	**23 51 33.4**	**+0.3**
PNIG	**Pinotepa**	**0.61**	**298**		**Pb**	**23 51 25.7**	**-0.2**
PNIG					**Sg**	**23 51 33.4**	**+0.3**
YOIG	**Yosondua**	**0.75**	**1**	*i* P	**Pb**	**23 51 28.3**	**-0.1**
YOIG				*e*S	**Sb**	**23 51 38.0**	**-0.8**
TXIG	**Tlaxiaco**	**1.16**	**350**	*e*P	**Pb**	**23 51 34.9**	**-0.6**
TXIG				*e*S	**Sb**	**23 51 49.4**	**-1.2**
VHO	**Vista Hermosa**	**1.25**	**39**	*e*P	**Pg**	**23 51 36.6**	**-0.5**
VHO				*i* S	**Sb**	**23 51 52.2**	**-0.9**
HUIG	**Huatulco**	**1.44**	**103**	*e*P	**Pn**	**23 51 38.7**	**-0.5**
HUIG				*i* S	**Sn**	**23 51 56.0**	**-2.1**
HUIG	**Huatulco**	**1.44**	**103**		**Pn**	**23 51 38.7**	**-0.5**
HLIG	**Huajuapan de L**	**1.73**	**352**	*e*P	**Pn**	**23 51 43.3**	**-0.2**
HLIG				*i* S	**Sn**	**23 52 04.4**	**-1.3**
TLIG	**Tlapa**	**1.74**	**327**	*e*P	**Pn**	**23 51 43.4**	**-0.1**
TLIG				*i* S	**Sn**	**23 52 02.9**	**-2.9**
TLIG	**Tlapa**	**1.74**	**327**		**Pn**	**23 51 43.6**	**+0.1**
TLIG					**Sb**	**23 52 07.1**	**-0.1**
FTIG	**Fresnillo de T**	**1.88**	**343**	*e*P	**Pn**	**23 51 45.4**	**+0.1**
FTIG				*i* S	**Sn**	**23 52 07.2**	**-1.9**
TOIG	**Toxpalan**	**2.04**	**13**	*e*P	**Pn**	**23 51 46.5**	**-1.0**
TOIG				*e*S	**Sn**	**23 52 11.4**	**-1.7**
TPIG	**Tehuac#an**	**2.31**	**5**	*e*P	**Pn**	**23 51 50.8**	**-0.6**
TPIG				*i* S	**Sn**	**23 52 18.9**	**-1.1**
TPIG	**Tehuac#an**	**2.31**	**5**		**Pn**	**23 51 52.5**	**+1.1**
MEIG	**Mezcala**	**2.68**	**313**	*i* P	**Pn**	**23 51 56.6**	**+0.3**
MEIG				*i* S	**Sn**	**23 52 26.3**	**-2.6**
MEIG	**Mezcala**	**2.68**	**313**		**Pn**	**23 51 58.2**	**+1.9**
CAIG	**El Cayaco**	**2.76**	**290**	*e*P	**Pn**	**23 51 57.1**	**-0.2**
CAIG				*i* S	**Sn**	**23 52 28.9**	**-1.9**
CAIG	**El Cayaco**	**2.76**	**290**		**Pb**	**23 52 00.5**	**-2.0**
PLIG	**Platanillo**	**2.94**	**321**	*i* P	**Pn**	**23 51 59.3**	**-0.6**
PLIG				*i* S	**Sn**	**23 52 32.6**	**-2.6**
PLIG	**Platanillo**	**2.94**	**321**		**Pb**	**23 52 04.3**	**-1.3**
YAIG	**Yautepec**	**3.10**	**333**	*e*P	**Pn**	**23 52 02.4**	**+0.2**
YAIG				*i* S	**Sn**	**23 52 37.8**	**-1.5**
YAIG	**Yautepec**	**3.10**	**333**		**Pb**	**23 52 07.4**	**-1.0**
Y22D	**IRIS PASSCAL I**	**19.78**	**336**	P	**P**	**23 55 43.8**	**+0.2**
Y22D				IAmb	IAmb	23 55 47.0	
	comp=Z,22nm,0.8s						
TUL1	**Leonard**	**19.79**	**4**	P	**Pn**	**23 55 46.3**	**+1.2**
CROK	**Carrier**	**20.32**	**359**	P	Pn	23 55 51.9	+0.6
CROK				IAmb	IAmb	23 55 54.9	
	comp=Z,15nm,1.0s						
KAN05	**Bluff City Nor**	**20.92**	**359**	P	Pn	23 55 57.5	-0.9
154A	**Montrose**	**21.02**	**36**	P	**P**	**23 55 60.0**	**+3.0**
154A				IAmb	IAmb	23 56 04.9	
	comp=Z,18nm,1.0s						
PIX	**Pinacate**	**21.13**	**320**	P	**P**	**23 55 59.9**	**+1.8**
T25A	**Trinidad**	**21.81**	**345**	P	**P**	**23 56 07.8**	**+2.1**
T25A				IAmb	IAmb	23 56 11.3	
	comp=Z,4.9nm,0.9s						
BANI	**BANI**	**26.07**	**81**	P	P	23 56 55.0	+7.9

IDC **16** *23:59:35.4±0.7,36.˚89N×140.˚59E,h0*km*,mb3.8/12, mb1 4.0/14,mb1mx3.9/45,mbtmp3.8/14,ML3.6/2,MS4.6/1, Ms1 4.6/1,ms1mx3.8/59,Error ellipse: s-maj=19.5km s-min=14.8km az=100.0*

JMA **16** *23:59:36.5,37.˚00N×140.˚60E,h7*km±*1*km*,M3.8 Broadband fault plane solution: P waves. NP1: ϕs=89.00000˚,δ37.00000˚,λ-85.00000˚. NP2:ϕs=262.00000˚, δ53.00000˚,λ-94.00000˚. Principal axes: T Plg8.0000˚, Azm355.0000˚; N Plg3.0000˚, Azm265.0000˚; P Plg81.0000˚, Azm154.0000˚;*

JMA Felt II J1.

NEIC **16** *23:59:40.5±2.5,36.˚94N±0.˚03×140.˚64E±0.˚08,h37*km±*8*km*, mb4.2/4 Error ellipse: s-maj=9.4km s-min=4.2km az=106.0*

ISC 16 23:59:36.0±1.2,**36.˚94N**±0.˚04×**140.˚62E**±0.˚03,**h4**km±8km, **n61,**σ1$55/64,**mb3.8**/14,**7C,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	**0.15**	**343**	↑P	**Pg**	**23 59 38.9**	**-0.2**
JFFD				S	**Sg**	**23 59 40.5**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.21**	**42**	↑P	**Pg**	**23 59 40.6**	**+0.4**
ONAJ				*e*S	**Sg**	**23 59 43.5**	**+0.5**
JHO	**Hitachi**	**0.33**	**187**	↑P	**Pb**	**23 59 43.9**	**-0.6**
JHO				*e*S	**Sb**	**23 59 49.4**	**-0.8**
JFK	**Kawauchi**	**0.47**	**26**	↑P	**Pg**	**23 59 44.8**	**-0.3**
JFK				S	**Sg**	**23 59 50.7**	**-0.5**
JSB	**Shiboa**	**0.56**	**273**	P	**Pg**	**23 59 47.7**	**+0.9**
JSB				*e*S	**Sb**	**23 59 55.5**	**-1.3**
JFT	**Otama**	**0.62**	**339**	↑P	**Pg**	**23 59 47.5**	**-0.4**
JFT				*e*S	**Sg**	**23 59 55.1**	**-0.8**
JYT	**Yasato**	**0.79**	**206**		**Pb**	**23 59 52.3**	**0.0**
JYT				Sn	**Sb**	**00 00 03.3**	**0.0**
JFY	**Yanaizu**	**0.86**	**303**	↑P	**Pg**	**23 59 52.2**	**-0.4**
JFY				S	**Sg**	**00 00 02.9**	**-0.9**
JMM	**Marumori**	**0.93**	**8**	↑P	**Pg**	**23 59 52.8**	**-1.1**
JMM	**Marumori**	**0.93**	**8**	Pn	**Pg**	**23 59 53.1**	**-0.8**
JMM				Sn	**Sg**	**00 00 07.1**	**+1.1**
MJAR	**Matsushiro Arr**	**1.98**	**259**	Pn	**Pn**	**00 00 10.9**	**+0.6**
	4.6nm,0.3s,baz=81,slow=16,SNR=78						
MJAR				Sn	**Sn**	**00 00 35.6**	**+0.1**
	10nm,0.3s,baz=81,slow=23,SNR=9.2						
MJAR				LR	LR	00 01 13.9	
	comp=Z,3μm,20.1s,baz=270,slow=51						
MJAR	**Matsushiro Arr**	**1.98**	**259**		**Pn**	**00 00 10.7**	**+0.4**
MJAR				Sn	**Sn**	**00 00 36.0**	**+0.6**
MAJO	**Matsushiro**	**1.98**	**259**	Pn	**Pn**	**00 00 10.9**	**+0.6**
MAT	**Matsushiro**	**1.98**	**259**	P	**Pn**	**00 00 11.1**	**+0.8**
MAT				S	**Sb**	**00 00 37.3**	**-0.3**
MJB9	**Matsu-Tunnel**	**1.98**	**259**	Pn	**Pb**	**00 00 11.9**	**-0.7**
JSD	**Sado**	**2.17**	**301**	Pn	**Pn**	**00 00 13.5**	**+0.6**
JGF	**Kuroka**	**2.96**	**244**	Pn	**Pn**	**00 00 25.2**	**+1.5**
INU	**Inuyama**	**3.32**	**242**	Pn	**Pn**	**00 00 30.2**	**+1.5**
JTM	**Tenmabayashi**	**3.85**	**5**	Pn	**Pn**	**00 00 37.6**	**+1.6**
JHJ	**Hachijo jima 2**	**3.88**	**190**	Pn	**Pn**	**00 00 36.9**	**+0.5**
	8.9nm,0.3s,baz=40,slow=16,SNR=2.0						
JHJ				Sn	**Sn**	**00 01 23.1**	**+0.8**
	16nm,0.3s,baz=73,slow=19,SNR=2.2						
JHJ2	**Mitsune**	**3.88**	**190**	Pn	**Pn**	**00 00 38.6**	**+2.3**
JWT	**Wachi**	**4.54**	**250**		**Pn**	**00 00 47.6**	**+2.2**
ERM	**Erimo**	**5.43**	**20**	Pn	**Pn**	**00 01 01.7**	**+4.0**
JMN	**Monobe**	**6.37**	**242**	Pn	**Pn**	**00 01 12.7**	**+2.0**
JHS	**Saijyo**	**6.39**	**255**		**Pn**	**00 01 13.2**	**+2.3**
ASAJ	**Asahikawa**	**7

JSD Sado 20.41 343 P P 00 07 57.2 +0.2
JSD IAmb IAmb 00 08 01.4
comp=Z,34nm,1.1s
SMPI Sarmi 21.60 199 P P 00 08 10.2 +0.5
comp=Z,6µmcomp=Z,33nm,1.1s
GENI Genyem 21.77 195 P P 00 08 11.7 +0.3
comp=Z,123nm,0.7s
BAKI Biak 21.83 207 P P 00 08 13.0 +1.0
comp=Z,90nm,1.3s
KRVT Keravat (AS076 23.62 164 P P 00 08 28.0 -0.4
comp=Z,36nm,0.6s,baz=73,slow=23,SNR=4.0
SIJI Sorong 24.01 218 P P 00 08 31.9 -0.2
comp=Z,11nm,0.6s,baz=21,slow=10,SNR=7.3
KSRS Korea Array 24.39 324 P P 00 08 34.0 -1.2
comp=Z,1.5nm,0.7s,baz=140,slow=8.5,SNR=5.6
KSRS pP **pP 00 09 13.8 +1.1**
comp=Z,2.6nm,0.7s,baz=146,slow=6.6,SNR=3.8
FAKI Fak Fak 25.17 213 P P 00 08 42.0 -0.5
comp=Z,28nm,0.9s
FAKI Fak Fak 25.17 213 P P 00 08 43.2 +0.7
NJ2 Nanjing 27.62 304 *eP* **P 00 09 04.6 +0.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PMG Port Moresby 27.88 177 P P 00 09 08.0 +1.3
comp=Z,32nm,0.6s,baz=343,slow=16,SNR=4.0
PMG Port Moresby 27.88 177 P P 00 09 06.7 0.0
MRSI Marisa 29.48 235 P P 00 09 22.0 +1.1
comp=Z,28nm,1.0s
MYLDM Lahad Datu 29.72 247 P P 00 09 23.4 +0.3
MYLDM IAmb IAmb 00 09 26.3
comp=Z,9.9nm,0.7s
LUWI Luwuk 29.83 232 P P 00 09 23.9 -0.1
comp=Z,3µmcomp=Z,31nm,1.0s
LUWI Luwuk 29.83 232 P P 00 09 22.8 -1.2
APSI Ampana 30.59 233 P P 00 09 30.7 0.0
comp=Z,15nm,1.3s
MPSI Mapaga 31.18 237 P P 00 09 35.8 -0.1
comp=Z,12nm,0.9s
COEN Coen 32.47 185 P P 00 09 46.9 -0.1
COEN IAmb IAmb 00 09 49.2
comp=Z,15nm,0.7s
KLR Kul'dur 32.55 343 P P 00 09 46.8 -0.6
comp=Z,3.6nm,0.6s,baz=166,slow=6.8,SNR=11
TTSI Tana Toraja 33.36 232 P P 00 09 56.6 +1.7
comp=Z,63nm,0.8s
SPSI Sidrap Palu 34.00 231 P P 00 10 01.3 +0.9
comp=Z,41nm,1.0s
BNSI Bone 34.05 230 P P 00 10 02.4 +1.6
comp=Z,40nm,1.1s
MTN Manton Dam 34.41 206 P P 00 10 04.2 +0.3
BKSI Bulukumba 34.67 229 P P 00 10 06.1 0.0
comp=Z,14nm,0.5s
KAPI Kappang 34.72 230 P P 00 10 06.8 +0.2
comp=Z,17nm,0.7s,baz=87,slow=3.5,SNR=6.5
BSSI Bau Bau, Buton 34.98 228 P P 00 10 08.8 0.0
comp=Z,45nm,0.9s
SOEI Soe 35.24 219 P P 00 10 10.1 -1.1
comp=Z,30nm,0.9s
SOEI Soe 35.24 219 P P 00 10 11.8 +0.6
MMRI Maumere 35.63 223 P P 00 10 13.9 -0.4
MMRI Maumere 35.63 223 P P 00 10 14.3 0.0
PETK Petropavlovsk- 35.67 12 P P 00 10 14.9 +0.7
comp=Z,5.3nm,0.6s,baz=188,slow=10,SNR=4.5
PETK Petropavlovsk- 35.67 12 P P 00 10 14.3 +0.1
BATI Baumata 35.96 219 P P 00 10 16.8 -0.4
comp=Z,16nm,0.4s,baz=123,slow=4.8,SNR=5.1
BATI Baumata 35.96 219 P P 00 10 16.0 -1.2
comp=Z,19nm,0.7s
MTKI Muara Teweh, K 35.98 241 P P 00 10 18.0 +0.6
EDFI Ende, Flores 36.07 223 P P 00 10 16.1 -2.1
comp=Z,6.0nm,0.9s
SBUM Sibu 36.52 248 P P 00 10 22.5 +0.6
SBUM IAmb IAmb 00 10 24.2
comp=Z,21nm,1.1s
HHC Hu-ho-hao-te 36.66 315 *eP* **P 00 10 25.1 +2.1**
HHC pmax pmax
comp=Z,16nm,0.8s
HHC pmax pmax
comp=Z,2µm,6.0s
KNRA Kununurra 37.94 207 P P 00 10 34.5 +0.7
WBSI Waikabubak, Su 38.24 225 P P 00 10 35.4 -1.0
comp=Z,43nm,0.7s
CTA Charters Tower 38.47 179 P P 00 10 38.5 +0.4
comp=Z,5.4nm,0.7s,baz=5.4,slow=7.8,SNR=7.8
CTAO Charters Tower 38.47 179 P P 00 10 37.7 -0.4
KSM Kuching 38.66 248 P P 00 10 39.6 -0.2
KSM IAmb IAmb 00 10 40.9
comp=Z,8.6nm,0.8s
PLAI Plampang 38.77 228 P P 00 10 40.6 -0.1
comp=Z,28nm,0.8s
TWSI Taliwang, Sumb 39.34 229 P P 00 10 45.2 -0.2
comp=Z,48nm,0.8s
WB0 Warramunga Arr 39.73 197 P P 00 10 48.5 -0.1
WR0 Warramunga Arr 39.87 197 P P 00 10 50.0 +0.3
WR0 IAmb IAmb 00 10 51.5
comp=Z,8.9nm,0.6s
WRAB Tennant Creek 39.90 197 P P 00 10 50.5 +0.5
WB2 Warramunga Arr 39.91 197 P P 00 10 50.1 0.0
WB2 IAmb IAmb 00 10 51.2
comp=Z,29nm,1.1s
WRA Warramunga Arr 39.91 197 P P 00 10 50.7 +0.6
comp=Z,13nm,0.6s,baz=20,slow=9.1,SNR=97
WRA Warramunga Arr 39.91 197 P P 00 10 49.8 -0.2
SANVU Saraoutou 39.93 147 P P 00 10 49.6 -0.6
SANVU IAmb IAmb 00 10 51.0
comp=Z,33nm,1.1s
SMY Shemya 40.60 26 P P 00 10 54.4 -1.0
LZH Lanzhou 40.70 304 *eP* **P 00 10 59.8 +3.2**
LZH pP pwP 00 11 40.8 -2.5
LZH sP sP 00 12 08.3 +8.3
LZH PP **PP 00 12 32.9 -1.8**
LZH pmax pmax
comp=Z,37nm,1.1s
LZH pmax pmax
comp=Z,100nm,5.0s
FITZ Fitzroy Crossi 41.47 210 P P 00 11 03.5 +0.6
comp=Z,10.0nm,0.6s,baz=28,slow=9.1,SNR=43
FITZ Fitzroy Crossi 41.47 210 P P 00 11 03.4 +0.6
FITZ IAmb IAmb 00 11 05.3
comp=Z,14nm,0.9s
PWJI Pagerwojo 42.65 235 P P 00 11 12.4 -0.1
comp=Z,31nm,0.9s
SONM Songino Array 43.21 321 P P 00 11 16.3 -0.5
comp=Z,1.7nm,0.6s,baz=136,slow=8.9,SNR=15
SONM Songino Array 43.21 321 P P 00 11 16.2 -0.5
AS31 Alice Springs 43.58 196 P P 00 11 20.4 +0.6
ASAR Alice Springs 43.58 196 P P 00 11 19.8 0.0
comp=Z,3.8nm,0.8s,baz=11,slow=5.9,SNR=28
ASAR PcP **PcP 00 13 01.6 -2.2**
comp=Z,1.6nm,0.8s,baz=15,slow=6.7,SNR=4.6
ASAR Alice Springs 43.58 196 P P 00 11 19.4 -0.4
CMAR Chiang Mai Arr 44.23 278 P P 00 11 25.6 +0.4
comp=Z,1.4nm,0.4s,baz=86,slow=7.3,SNR=4.9
KPJI Karang Pucung 44.50 238 P P 00 11 27.0 -0.2
comp=Z,36nm,1.0s
SEY Seymchan 44.52 4 P P 00 11 27.0 +0.3
comp=Z,5.0nm,0.7s,baz=177,slow=10,SNR=5.1
YAK Yakutsk 44.80 349 P P 00 11 28.6 -0.3
DZM Mont Dzumac 45.24 152 P P 00 11 33.9 +0.8
comp=Z,14nm,0.5s,baz=329,slow=4.2,SNR=27
DZM Mont Dzumac 45.24 152 P P 00 11 33.0 -0.1
DZM IAmb IAmb 00 11 34.8
comp=Z,31nm,1.1s
LEM Lembang 45.27 240 P P 00 11 34.2 +0.6
comp=Z,11nm,0.6s
ATKA Atka Island 45.85 34 P P 00 11 37.9 +0.6
GSI Gunungsitoli 50.21 256 P P 00 12 12.2 +0.9
GSI IAmb IAmb 00 12 18.9
comp=Z,12nm,0.6s
STKA Stephens Creek 50.36 185 P P 00 12 11.2 -0.9
comp=Z,3.1nm,0.6s,baz=340,slow=6.7,SNR=7.6
FORT Forrest 51.96 199 P P 00 12 24.8 +0.8
FORT IAmb IAmb 00 12 26.4
comp=Z,23nm,0.8s
BBOO Buckleboo 51.96 190 P P 00 12 24.4 +0.5
BBOO IAmb IAmb 00 12 29.1
comp=Z,14nm,0.8s
WMQ Urumqi 54.37 311 *eP* **P 00 12 43.9 +2.3**
SDPT Sand Point 54.53 34 P P 00 12 43.3 +0.9
MORW Morawa 55.39 212 P P 00 12 49.3 +0.4
MORW IAmb IAmb 00 12 50.4
comp=Z,16nm,0.8s
TOO Toolangi 55.89 180 P P 00 12 52.4 +0.1
CHGN Chignik 55.95 34 P P 00 12 53.0 +0.5
CHIR Chirikof Islan 57.30 35 P P 00 13 03.5 +1.5
NWAO Narrogin (SRO) 58.03 208 P P 00 13 07.9 +0.5
NWAO IAmb IAmb 00 13 08.4
comp=Z,16nm,0.9s
ZALV Zalesovo Beam 58.08 323 P P 00 13 06.2 -1.3
comp=Z,2.9nm,0.6s,baz=106,slow=7.7,SNR=11
ZALV pP **pP 00 13 52.0 +0.1**
comp=Z,1.4nm,0.7s,baz=102,slow=7.6,SNR=3.6
ZALV Zalesovo Beam 58.08 323 P P 00 13 06.7 -0.8
SII Sitkinak Islan 58.27 34 P P 00 13 10.0 +1.1
MK31 Makanchi Array 58.52 314 P P 00 13 10.6 -0.2
MKAR Makanchi Array 58.52 314 P P 00 13 10.2 -0.6
comp=Z,2.4nm,0.7s,baz=95,slow=7.3,SNR=21
MKAR pP **pP 00 13 55.4 +0.3**
comp=Z,1.0nm,0.7s,baz=95,slow=5.7,SNR=2.9
MKAR Makanchi Array 58.52 314 P P 00 13 10.6 -0.2
MAKZ Makanchi 58.74 314 P P 00 13 11.8 -0.5
SVW2 Sparrevohn 58.90 29 P P 00 13 14.6 +1.5
SVW2 IAmb IAmb 00 13 15.6
comp=Z,8.5nm,0.9s
RDOG Red Dog Mine 58.90 20 P P 00 13 14.0 +1.0
RDOG IAmb IAmb 00 13 15.1
comp=Z,13nm,0.9s
OHAK Old Harbor 58.92 34 P P 00 13 13.4 +0.2
KDAK Kodiak Island 59.42 33 P P 00 13 17.5 +0.8
OUZ Omahuta 59.73 154 P P 00 13 20.4 +1.4
OUZ IAmb IAmb 00 13 31.6
comp=Z,18nm,1.2s
CNPM China Poot 60.53 31 P P 00 13 24.9 +0.7
BRLK Bradley Lake 60.76 31 P P 00 13 25.6 -0.2
PPLA Purkeypile 60.97 28 P P 00 13 28.9 +1.6
PPLA IAmb IAmb 00 13 34.1
comp=Z,26nm,1.2s
SKT Skwentna 61.01 29 P P 00 13 27.6 +0.2
SKT IAmb IAmb 00 13 28.3
comp=Z,18nm,1.1s
CAST Castle Rocks 61.16 27 P P 00 13 29.2 +0.8
CAST IAmb IAmb 00 13 30.3
comp=Z,15nm,0.8s
SUA Susitna One 61.24 29 P P 00 13 30.6 +1.5
SUA IAmb IAmb 00 13 31.1
comp=Z,18nm,1.1s
IMAR Indian Mountai 61.29 24 P P 00 13 30.0 +0.8
KURK Kurchatov 61.33 318 P P 00 13 29.9 +0.1
NRIK Noril'sk 61.69 340 P P 00 13 30.9 -0.9
comp=Z,2.8nm,0.4s,baz=110,slow=7.6,SNR=8.2
KTH Kantishna Hill 61.70 27 P P 00 13 33.0 +0.9
KTH IAmb IAmb 00 13 34.0
comp=Z,14nm,1.1s
TRF Thorofare Moun 61.95 27 IAmb IAmb 00 13 34.8
comp=Z,12nm,1.0s
PMR Palmer 62.02 29 P P 00 13 34.2 +0.1
PMR IAmb IAmb 00 13 39.4
comp=Z,9.3nm,0.8s
GHO Glory Hole Cre 62.16 29 P P 00 13 36.1 +1.0
KNIK Knik Glacier 62.30 30 P P 00 13 36.9 +0.9
A21K Barrow 62.37 18 P P 00 13 37.4 +1.1
SML Sawmill 62.44 29 P P 00 13 37.4 +0.4
I23K Minto, Yukon-K 62.78 25 P P 00 13 40.4 +1.3
GLI Glacier Island 62.84 30 P P 00 13 40.1 +0.5
GLI IAmb IAmb 00 13 48.6
comp=Z,17nm,1.0s
BOOM Boomskoye usch 62.86 309 P P 00 13 40.6 +0.3
SCM Sheep Creek Mo 62.91 29 P P 00 13 41.0 +0.8
Q23K Middleton Isla 62.95 32 P P 00 13 40.6 +0.3
MID Middleton Isla 62.96 32 P P 00 13 40.4 0.0
COLD Coldfoot 63.03 23 P P 00 13 42.0 +1.2
COLD IAmb IAmb 00 13 42.7
comp=Z,5.6nm,0.8s
FID Port Fidalgo 63.11 31 P P 00 13 42.2 +0.8
WRH Wood River Hil 63.14 26 IAmb IAmb 00 13 42.1
comp=Z,6.6nm,0.7s
MDM Murphy Dome 63.20 26 P P 00 13 43.6 +1.6
TCOL CIGO, UAF Yank 63.33 26 P P 00 13 43.7 +0.9
TCOL IAmb IAmb 00 13 45.2
comp=Z,11nm,0.8s
COLA College 63.34 26 P P 00 13 43.2 +0.5
COLA IAmb IAmb 00 13 45.2
comp=Z,11nm,0.8s
EYAK Cordova Ski Ar 63.43 31 P P 00 13 44.3 +0.8
M24K Tolsona, Glenn 63.50 29 P P 00 13 45.4 +1.4
M24K IAmb IAmb 00 13 56.2
comp=Z,15nm,0.9s
KLU Klutina 63.51 30 P P 00 13 44.7 +0.6
KLU IAmb IAmb 00 14 02.0
comp=Z,14nm,1.2s
POKR Poker Plat Res 63.56 26 P P 00 13 44.6 +0.3
HDA Harding Lake 63.61 27 IAmb IAmb 00 13 44.8
comp=Z,5.6nm,0.7s
TOLK Toolik Lake Re 63.67 22 IAmb IAmb 00 13 47.0
comp=Z,11nm,0.7s
IL31 63.72 26 IAmb IAmb 00 13 45.3
comp=Z,9.0nm,0.9s
ILAR Eielson Array 63.72 26 P P 00 13 44.5 -0.8
comp=Z,6.8nm,0.8s,baz=252,slow=4.9,SNR=79
ILAR Eielson Array 63.72 26 P P 00 13 44.2 -1.1
MXZ Matakaoa Point 63.76 151 P P 00 13 46.1 +0.3
PAX Paxson 63.97 28 IAmb IAmb 00 13 48.5
comp=Z,8.9nm,0.6s
HMT Hamilton 64.13 31 P P 00 13 50.7 +2.6
N25K Chitina, Valde 64.15 30 P P 00 13 49.0 +0.7
N25K IAmb IAmb 00 13 49.8
comp=Z,4.9nm,0.8s
QRZ Quartz Range 64.18 158 P P 00 13 49.2 +0.6
BKZ Black Stump Fm 64.30 154 P P 00 13 49.1 -0.3
BKZ IAmb IAmb 00 13 49.5
comp=Z,6.7nm,0.7s
RIDG Independent Ri 64.39 28 P P 00 13 50.9 +1.2
RIDG IAmb IAmb 00 14 04.9
comp=Z,9.8nm,0.8s
GLB Gilahina Butte 64.50 30 P P 00 13 51.8 +1.3
GLB IAmb IAmb 00 13 52.0
comp=Z,12nm,1.1s
VRDI Verde Repeater 64.64 30 P P 00 13 52.1 +0.5
DOT Dot Lake 64.72 28 IAmb IAmb 00 13 52.9
comp=Z,9.9nm,0.7s
CRQM Cirque 64.73 31 P P 00 13 52.9 +0.7
NNZ Nelson 64.83 157 P P 00 13 52.8 +0.1
MCARA McCarthy VSAT 64.87 30 P P 00 13 54.0 +1.2
TGL Tana Glacier 64.88 31 P P 00 13 53.7 +0.6
TGL IAmb IAmb 00 14 11.2
comp=Z,14nm,1.0s
BALM Baldy 65.15 31 P P 00 13 55.9 +1.0
BALM IAmb IAmb 00 14 03.3
comp=Z,8.4nm,1.0s
BMAR Burnt Mountain 65.19 24 P P 00 13 56.5 +1.7
YAH Yahtse 65.37 31 P P 00 13 57.8 +1.4
SNZO South Karori 65.41 156 P P 00 13 56.4 -0.1
BARN Barnard Glacie 65.48 31 P P 00 13 57.6 +0.5
BARN IAmb IAmb 00 14 07.3
comp=Z,8.6nm,1.0s
CTGM Chitina Glacie 65.64 31 P P 00 13 59.4 +1.4
CTGM IAmb IAmb 00 14 00.3
comp=Z,9.4nm,0.8s
TABL Table Mountain 65.68 31 P P 00 13 59.4 +1.0
LTZ Lake Taylor 65.81 159 P P 00 13 58.7 -0.4
PLWZ Palliser 65.84 156 P P 00 13 58.7 -0.6
KHZ Kahutara 65.94 158 P P 00 13 57.3 -2.5
KHZ IAmb IAmb 00 13 58.4
comp=Z,13nm,1.0s
RPZ Rata Peaks 66.24 160 P P 00 14 00.6 -1.2
RPZ IAmb IAmb 00 14 00.9
comp=Z,25nm,1.2s
LBZ Lake Benmore 66.57 161 P P 00 14 02.9 -0.9
BRVK Borovoye 66.60 320 P P 00 14 03.5 -0.6
DCZ Deep Cove 66.69 164 P P 00 14 03.7 -0.9
DCZ IAmb IAmb 00 14 05.9
comp=Z,19nm,1.2s
DAWY Dawson 66.82 28 P P 00 14 06.1 +0.8
KKAR Karatay Array 66.82 310 P P 00 14 05.5 -0.2
HYT Haines Junctio 67.49 31 P P 00 14 11.1 +1.4
HYT IAmb IAmb 00 14 12.2
comp=Z,12nm,0.7s
SKAG Skagway 68.56 33 P P 00 14 17.5 +1.3
SKAG IAmb IAmb 00 14 18.1
comp=Z,7.3nm,0.7s
BESE Bessie Mountai 68.82 34 P P 00 14 19.5 +1.6
BESE IAmb IAmb 00 14 33.6
comp=Z,16nm,1.2s
JIS Juneau Island 69.07 34 P P 00 14 20.6 +1.3
JIS IAmb IAmb 00 14 21.1
comp=Z,14nm,0.8s
INK Inuvik 69.44 23 P P 00 14 19.6 -1.9
comp=Z,8.0nm,0.7s,baz=278,slow=7.4,SNR=11
INK Inuvik 69.44 23 P P 00 14 22.1 +0.6
INK IAmb IAmb 00 14 22.4
comp=Z,9.2nm,0.8s
DIB Dawson Inlet, 70.45 39 P P 00 14 27.5 -0.3
DIB IAmb IAmb 00 14 38.6
comp=Z,24nm,1.2s
DLBC Dease Lake 71.36 34 P P 00 14 34.6 +1.3
DLBC IAmb IAmb 00 14 35.7
comp=Z,7.6nm,0.8s
C36M Paulatuk 72.82 22 P P 00 14 42.0 +0.3
C36M IAmb IAmb 00 14 42.1
comp=Z,9.4nm,0.6s
ABKAR Akbulak array 73.40 317 P P 00 14 44.0 -1.5
ABKAR Akbulak array 73.40 317 IAmb IAmb 00 14 46.6
comp=Z,1.0nm,0.6s
NLWA Neilton Lookou 76.82 44 P P 00 15 06.6 +1.5
NLWA IAmb IAmb 00 15 08.5
comp=Z,11nm,1.1s
E03A Lebam 77.22 45 P P 00 15 08.2 +0.9
KEBM Edson Butte 77.55 49 P P 00 15 10.6 +1.3
KEBM IAmb IAmb 00 15 21.7
comp=Z,13nm,1.1s
YKA Yellowknife Ar 78.06 28 P P 00 15 11.8 +0.2
comp=Z,4.9nm,0.7s,baz=289,slow=4.9,SNR=31
YKA pP **pP 00 15 57.5 -1.2**
comp=Z,0.7nm,0.6s,baz=86,slow=21,SNR=1.4
KRMB Red Mountain 78.19 50 P P 00 15 14.1 +1.2
LON Longmire 78.34 45 P P 00 15 13.9 +0.3
KHMM Horse Mountain 78.48 51 P P 00 15 16.5 +1.9
KHMM IAmb IAmb 00 15 17.2
comp=Z,5.8nm,0.7s
KCPM Cahto Peak 78.89 52 P P 00 15 17.8 +1.0
KCPM IAmb IAmb 00 15 18.8
comp=Z,9.7nm,0.6s
LTY Liberty 78.96 44 IAmb IAmb 00 15 18.5
comp=Z,7.6nm,0.8s
YBH Yreka Blue Hor 79.00 50 P P 00 15 18.9 +1.6
RES Resolute Bay 79.50 14 P P 00 15 19.4 +0.2
B08A Colville Reser 79.53 43 IAmb IAmb 00 15 21.6
comp=Z,7.5nm,0.8s
E07A Sunnyside 79.69 44 P P 00 15 22.3 +1.5
E07A IAmb IAmb 00 15 22.9
comp=Z,7.6nm,0.8s
PINE Pine Mountain 79.71 47 IAmb IAmb 00 15 23.6
comp=Z,16nm,0.8s
HAWA Hanford 79.95 44 P P 00 15 23.2 +1.0
K05A Summer Lake 80.03 48 P P 00 15 24.4 +1.4
K05A IAmb IAmb 00 15 25.2
comp=Z,12nm,0.7s
D08A Wollman Farm, 80.16 44 P P 00 15 24.5 +1.2
ORV Oroville 80.47 52 P P 00 15 26.0 +0.8
AFDM Forest Hills D 81.04 52 P P 00 15 28.9 +0.7
BEKR Beckworth 81.23 51 IAmb IAmb 00 15 30.9
comp=Z,9.3nm,0.7s
CMB Columbia Colle 81.74 53 IAmb IAmb 00 15 33.6
comp=Z,5.6nm,0.7s
PNTR Pine Nut 82.02 52 IAmb IAmb 00 15 36.0
comp=Z,14nm,0.7s
ARCES ARCESS Array B 82.57 342 P P 00 15 35.5 0.0
comp=Z,6.2nm,1.1s,baz=34,slow=4.8,SNR=5.6
ARCES pP **pP 00 16 22.7 -0.6**
comp=Z,3.0nm,0.9s,baz=62,slow=5.6,SNR=1.5
ARD7 ARCESS Array S 82.58 342 P P 00 15 33.4 -2.2
ARD7 IAmb IAmb 00 15 41.8
comp=Z,14nm,1.1s
PLID Pearl Lake 82.70 45 P P 00 15 36.9 -0.1
TULEG Thule 82.79 8 P P 00 15 36.2 -0.4
MDPB Devils Postpil 82.85 53 P P 00 15 38.0 0.0
OMMB Old Mammoth Mi 82.91 53 P P 00 15 38.9 +0.6
RYN Ryan 82.96 52 IAmb IAmb 00 15 40.2
comp=Z,7.3nm,0.8s
KVN Kaiserville 83.14 51 IAmb IAmb 00 15 41.1
comp=Z,8.2nm,0.7s
NVAR Mina Array Bea 83.18 52 P P 00 15 40.6 +1.0
comp=Z,8.8nm,0.7s,baz=267,slow=5.9,SNR=92
NVAR pP **pP 00 16 26.8 -0.3**
comp=Z,1.0nm,0.8s,baz=268,slow=5.7,SNR=1.6
NV11 Mina Array Sit 83.29 52 IAmb IAmb 00 15 41.9
comp=Z,6.7nm,0.8s
MFID Camas Ranch 83.36 47 IAmb IAmb 00 15 42.0
comp=Z,6.5nm,0.8s
DLMT Dillon 84.87 44 P P 00 15 48.5 +0.7
MCMT McKenzie Canyo 84.89 44 P P 00 15 48.8 +0.7
TPNV Topopah Spring 85.20 53 IAmb IAmb 00 15 51.3
comp=Z,7.6nm,0.7s
PRN Pahroc Range 85.95 52 P P 00 15 53.9 +0.5
SHPR Sheep Range 86.18 53 P P 00 15 54.2 -0.4
YMR Madison River 86.20 44 P P 00 15 55.4 +0.9
YHH Holmes Hill 86.23 44 P P 00 15 55.3 +0.5
YNR Norris Junctio 86.37 44 P P 00 15 56.4 +1.0
SPUT South Promonto 86.44 48 P P 00 15 56.4 +0.7
IMW Indian Meadow 86.51 45 P P 00 15 57.3 +1.1
DUG Dugway, Tooele 86.59 49 P P 00 15 56.7 +0.2
FLWY Flagg Ranch 86.60 45 P P 00 15 57.8 +1.2
FLWY IAmb IAmb 00 15 58.8
comp=Z,4.6nm,0.7s
TPAW Teton Pass 86.66 45 P P 00 15 57.8 +0.9
YMP Mirror Lake Pl 86.70 44 P P 00 15 57.5 +0.4
FINES FINESS Array B 86.96 335 P P 00 15 55.5 -2.1
comp=Z,1.7nm,0.7s,baz=219,slow=2.4,SNR=10
FINES pP **pP 00 16 44.3 -1.2**
comp=Z,2.1nm,0.6s,baz=72,slow=4.9,SNR=2.3
MSU Marysvale 87.67 50 P P 00 16 02.5 +0.7
KNB Kanab 87.75 52 P P 00 16 03.3 +1.2
MTPU Mount Pierson 87.84 51 P P 00 16 03.4 +0.6
PDAR Pinedale Array 87.88 45 P P 00 16 01.1 -1.5
comp=Z,0.5nm,0.4s,baz=219,slow=1.9,SNR=4.2
Q16A Castle Valley 88.25 49 P P 00 16 05.3 +0.8
P17A Butcher Ranch, 88.34 49 P P 00 16 04.8 0.0
U15A North Rim 88.36 52 P P 00 16 05.8 +0.7
U15A IAmb IAmb 00 16 07.2
comp=Z,5.7nm,1.0s
SRU San Rafael Swe 88.64 49 P P 00 16 06.7 +0.4
RDMU Red Mountain 88.74 47 P P 00 16 06.7 0.0
DGMT Dagmar 88.86 39 P P 00 16 08.0 +1.1
DGMT IAmb IAmb 00 16 20.7
comp=Z,11nm,1.1s
PV23 Carpenter Ridg 89.99 49 P P 00 16 12.8 +0.1
PV23 IAmb IAmb 00 16 16.6
comp=Z,5.7nm,0.7s
PV14 Lion Creek, Pa 90.01 49 P P 00 16 13.1 +0.3
PV14 IAmb IAmb 00 16 14.1
comp=Z,8.1nm,0.6s
PV20 West Nyswonger 90.06 49 P P 00 16 12.5 -0.5
PV20 IAmb IAmb 00 16 14.3
comp=Z,5.3nm,0.7s
PV19 Morning Glory 90.06 49 P P 00 16 14.1 +1.1
PV19 IAmb IAmb 00 16 14.3
comp=Z,6.6nm,0.7s
PV04 Paradox Valley 90.09 49 P P 00 16 13.6 +0.6
PV04 IAmb IAmb 00 16 14.6
comp=Z,5.9nm,1.0s
PV17 East Wray Mesa 90.09 49 P P 00 16 12.9 -0.2
PV17 IAmb IAmb 00 16 15.5
comp=Z,5.4nm,0.6s
PV16 Nyswonger Mesa 90.11 49 P P 00 16 12.8 -0.4
PV16 IAmb IAmb 00 16 14.5
comp=Z,5.3nm,0.7s
PV18 Skein Mesa, Pa 90.14 49 P P 00 16 13.6 +0.2
PV18 IAmb IAmb 00 16 14.5
comp=Z,5.4nm,0.7s
PV03 Paradox Valley 90.18 49 P P 00 16 13.9 +0.4
PV03 IAmb IAmb 00 16 14.7
comp=Z,6.6nm,1.1s
PV12 Saucer Basin, 90.19 49 IAmb IAmb 00 16 17.0
comp=Z,5.8nm,0.9s
PV02 Paradox Valley 90.28 49 P P 00 16 14.4 +0.3
PV02 IAmb IAmb 00 16 14.8
comp=Z,5.3nm,0.7s
SMCO Snowmass 91.14 48 P P 00 16 18.2 0.0
TORD Torodi Ar. Bea 132.51 309 PKP PKPdf 00 22 25.0 -1.9
comp=Z,0.5nm,0.9s,baz=318,slow=1.9,SNR=1.9
TORD SKPbc **SKPbc 00 25 31.1 -4.0**
comp=Z,1.1nm,0.9s,baz=20,slow=3.2,SNR=4.7
LPAZ La Paz 147.67 91 PKPbc PKPbc 00 22 58.7 +0.8
comp=Z,2.1nm,0.7s,baz=241,slow=4.3,SNR=8.4

*IDC **17** 00:17:27.1ₛ2.7, 36˚59Nₓ22˚08E, h0ᵏᵐ, mb3.5/2, mb1 3.3/3, mb1mx3.2/35, mbtmp3.3/3, ML2.5/1, Error ellipse: s-maj=219.9km s-min=26.6km az=143.0*
*THE **17** 00:17:32.9, 34˚20Nₓ24˚26E, h1ᵏᵐ±1ᵏᵐ, ML3.2/5, Error ellipse: s-maj=2.1km s-min=1.3km az=222.0*
*ISK **17** 00:17:34.2, 34˚41Nₓ24˚48E, h19ᵏᵐ, ML3.4/14*
*ATH **17** 00:17:35.1, 34˚43Nₓ24˚31E, h38ᵏᵐ±1ᵏᵐ, ML2.8/7, Error*

ellipse: s-maj=2.7km s-min=1.3km az=2.0
ISC 17 00:17:32.7±1.5, 34°31'N±0'.07 × 24°28E±0'.04, h18km±4km, n59, σ1°25/75, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.55**	**343**	P	**Pn**	**00 17 45.8**	**+0.1**
GVD				S	**Sn**	**00 17 52.8**	**-1.6**
GVD				AML	AML	00 17 59.7	
	comp=E,4407µm,0.4s						
GVD				AML	AML	00 18 03.3	
	comp=N,5502µm,0.4s						
GVD	**Gavdhos**	**0.55**	**343**	PG	**Pn**	**00 17 45.5**	**-0.2**
GVD	**Gavdhos**	**0.55**	**343**	P	**Pn**	**00 17 45.7**	**0.0**
GVD				S	**Sn**	**00 17 55.3**	**+0.9**
	comp=N,3µm,0.6s						
GVDS	**Gavdos**	**0.56**	**343**	PG	**Pn**	**00 17 45.7**	**0.0**
GVDS				SG	**Sn**	**00 17 54.0**	**-0.5**
GVDS	**Gavdos**	**0.56**	**343**	P	**Pn**	**00 17 45.6**	**-0.1**
GVDS				S	**Sn**	**00 17 55.8**	**+1.3**
	comp=N,1µm,0.7s						
SIVA	**Sivas**	**0.83**	**31**	P	**Pn**	**00 17 49.5**	**+0.1**
SIVA				S	**Sn**	**00 18 00.3**	**-1.0**
SIVA				AML	AML	00 18 08.5	
	comp=E,5253µm,0.8s						
SIVA				AML	AML	00 18 09.1	
	comp=N,3735µm,0.6s						
SIVA	**Sivas**	**0.83**	**31**	P	**Pn**	**00 17 49.6**	**+0.1**
SIVA				S	**Sn**	**00 18 03.2**	**+2.0**
	comp=N,2µm,0.6s						
TMBK	**Timbaki Herakl**	**0.86**	**27**	P	**Pn**	**00 17 50.9**	**+1.0**
TMBK				S	**Sn**	**00 18 05.1**	**+3.2**
	comp=N,618nm,0.8s						
KNDR	**Palaiochora Ch**	**1.05**	**332**	PN	**Pg**	**00 17 55.6**	**+2.5**
PRNS	**Prines Rethymn**	**1.07**	**10**	P	**Pg**	**00 17 53.2**	**-0.3**
PRNS				S	**Sn**	**00 18 09.2**	**+2.1**
IDI	**Anoyia**	**1.10**	**27**	P	**Pg**	**00 17 53.5**	**-0.6**
IDI				S	**Sn**	**00 18 07.8**	**-0.1**
IDI				AML	AML	00 18 13.8	
	comp=E,483µm,0.5s						
IDI				AML	AML	00 18 16.9	
	comp=N,627µm,0.7s						
IDI	**Anoyia**	**1.10**	**27**	PG	**Pg**	**00 17 53.3**	**-0.7**
IDI	**Anoyia**	**1.10**	**27**	P	**Pg**	**00 17 54.1**	**+0.1**
IDI				S	**Sn**	**00 18 11.5**	**+3.5**
VAM	**Vamos**	**1.10**	**356**	P	**Pg**	**00 17 54.1**	**0.0**
VAM				S	**Sn**	**00 18 07.7**	**-0.2**
VAM				AML	AML	00 18 19.1	
	comp=N,1296µm,0.7s						
VAM				AML	AML	00 18 20.3	
	comp=E,1503µm,0.6s						
VAM	**Vamos**	**1.10**	**356**	P	**Pg**	**00 17 54.2**	**+0.2**
IMMV	**Iera Moni Meta**	**1.18**	**348**	P	**Pg**	**00 17 55.1**	**-0.5**
IMMV				S	**Sg**	**00 18 10.1**	**-0.8**
IMMV				AML	AML	00 18 19.2	
	comp=N,1537µm,0.6s						
IMMV				AML	AML	00 18 19.7	
	comp=E,1713µm,0.5s						
IMMV	**Iera Moni Meta**	**1.18**	**348**	PN	**Pg**	**00 17 55.0**	**-0.5**
IMMV				SN	**Sg**	**00 18 11.3**	**+0.4**
IMMV	**Iera Moni Meta**	**1.18**	**348**	P	**Pg**	**00 17 54.9**	**-0.6**
IMMV				S	**Sg**	**00 18 12.8**	**+1.9**
	comp=E,815nm,0.5s						
HRKL	**Herakleio**	**1.21**	**34**	PG	**Pn**	**00 17 54.2**	**-0.5**
CHAN	**Chania**	**1.22**	**351**	P	**Pg**	**00 17 56.4**	**0.0**
LAST	**Lasithi**	**1.30**	**49**	P	**Pg**	**00 17 57.4**	**-0.4**
LAST				S	**Sg**	**00 18 13.7**	**-1.2**
LAST				AML	AML	00 18 28.6	
	comp=E,321µm,1.0s						
LAST				AML	AML	00 18 32.7	
	comp=N,323µm,1.1s						
LAST	**Lasithi**	**1.30**	**49**	P	**Pg**	**00 17 57.5**	**-0.4**
RODP	**Rodopos**	**1.32**	**341**	PN	**Pg**	**00 17 57.9**	**-0.4**
RODP	**Rodopos**	**1.32**	**341**	P	**Pg**	**00 17 57.4**	**-0.9**
NPS	**Neapolis**	**1.45**	**49**	P	**Pb**	**00 17 59.5**	**+0.3**
NPS				S	**Sb**	**00 18 16.6**	**-0.6**
NPS				AML	AML	00 18 28.9	
	comp=E,413µm,0.8s						
NPS				AML	AML	00 18 29.2	
	comp=N,219µm,1.3s						
NPS	**Neapolis**	**1.45**	**49**	P	**Pg**	**00 17 59.7**	**-1.0**
ANKY	**Antikythira Is**	**1.75**	**333**	P	**Pb**	**00 18 03.6**	**-0.7**
ZKR	**Zakros**	**1.78**	**63**	P	**Pb**	**00 18 04.5**	**-0.3**
ZKR	**Zakros**	**1.78**	**63**	PN	**Pn**	**00 18 02.2**	**-0.4**
KTHA	**Kythira Island**	**2.19**	**333**	P	**Pb**	**00 18 10.9**	**-0.8**
KTHA	**Kythira Island**	**2.19**	**333**	PN	**Pb**	**00 18 10.9**	**-0.8**
THR6	**Thira Island,**	**2.24**	**24**	P	**Pn**	**00 18 09.5**	**+0.7**
THR6	**Thira Island,**	**2.24**	**24**	P	**Pn**	**00 18 09.4**	**+0.6**
THR5	**Thira Island,**	**2.28**	**22**	P	**Pn**	**00 18 09.9**	**+0.5**
THR5	**Thira Island,**	**2.28**	**22**	P	**Pn**	**00 18 09.9**	**+0.5**
THR3	**Thira Island,**	**2.29**	**23**	P	**Pn**	**00 18 09.9**	**+0.4**
SAR3	**Santorini-Thir**	**2.29**	**22**	P	**Pn**	**00 18 10.0**	**+0.4**
MHLO	**Agia Marina, M**	**2.38**	**2**	P	**Pn**	**00 18 11.5**	**+0.7**
VLI	**Veliai**	**2.64**	**336**	P	**Pn**	**00 18 15.7**	**+1.3**
KARP	**Karpathos**	**2.67**	**62**	P	**Pn**	**00 18 16.9**	**+2.1**
KARP	**Karpathos**	**2.67**	**62**	PN	**Pn**	**00 18 15.8**	**+1.0**
APE	**Apeiranthos**	**2.94**	**20**	PN	**Pn**	**00 18 18.6**	**+0.1**
ITM	**Ithomi**	**3.45**	**327**	P	**Pn**	**00 18 27.8**	**+2.3**
ITM	**Ithomi**	**3.45**	**327**	PN	**Pn**	**00 18 28.8**	**+3.3**
ARG	**Arkhangelos**	**3.67**	**58**	PN	**Pn**	**00 18 29.3**	**+0.7**
LTK	**Loutraki**	**3.86**	**344**	P	**Pn**	**00 18 30.7**	**-0.4**
TURN	**Turunc**	**4.06**	**52**	PN	**Pn**	**00 18 34.7**	**+0.8**
YER	**Yerkesik**	**4.30**	**48**	PN	**Pn**	**00 18 38.2**	**+0.9**
DALY	**Dalyan (Mula)**	**4.35**	**54**	PN	**Pn**	**00 18 39.0**	**+1.1**
FETY	**Fethiye**	**4.55**	**58**	PN	**Pn**	**00 18 40.9**	**+0.2**
AKAS	**Kas**	**4.76**	**65**	PN	**Pn**	**00 18 44.6**	**+1.0**
CAME	**Cameli-Denizli**	**4.86**	**56**	PN	**Pn**	**00 18 46.0**	**+1.0**
ELI	**Elmali**	**5.19**	**60**	PN	**Pn**	**00 18 50.8**	**+1.2**
KORT	**Korkueli**	**5.62**	**60**	PN	**Pn**	**00 18 56.9**	**+1.4**
BCK	**Bucak**	**6.01**	**57**	PN	**Pn**	**00 19 02.4**	**+1.7**
BRTR	**Keskin Array B**	**9.23**	**51**	Pn	**Pn**	**00 19 48.9**	**+3.9**
	comp=N,0.0nm,0.3s,baz=254,slow=15,SNR=2.3						
TORD	**Torodi Ar. Bea**	**29.39**	**230**	P	**P**	**00 23 34.5**	**-0.6**
	comp=N,0.3nm,0.6s,baz=34,slow=8.3,SNR=7.1						
MKAR	**Makanchi Array**	**44.85**	**56**	P	**P**	**00 25 44.7**	**-1.1**
	comp=N,0.4nm,0.7s,baz=267,slow=8.5,SNR=4.5						

IDC 17 00:21:41.7±2.3, 1°71N × 126°21E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/35, mbtmp3.2/3, Error ellipse: s-maj=184.4km s-min=29.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.95**	**160**	P	P	00 26 47.5	-0.2
	0.3nm,0.4s,baz=339,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**26.31**	**164**	P	P	00 27 19.4	+0.2
	0.1nm,0.4s,baz=336,slow=11,SNR=1.7						
MKAR	**Makanchi Array**	**58.92**	**326**	P	P	00 31 42.7	0.0
	0.2nm,0.4s,baz=115,slow=8.1,SNR=2.0						

IDC 17 00:28:09.9±3.2, 8°34S × 155°80E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/37, mbtmp3.6/4, Error ellipse: s-maj=86.1km s-min=34.9km az=107.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.76**	**239**	P	P	00 33 23.8	-0.5
	1.3nm,1.1s,baz=66,slow=9.4,SNR=6.6						
ASAR	**Alice Springs**	**25.92**	**231**	P	P	00 33 43.5	-0.6
	1.2nm,0.9s,baz=57,slow=9.4,SNR=8.1						
STKA	**Stephens Creek**	**26.89**	**207**	P	P	00 33 53.3	+0.7
	3.3nm,0.8s,baz=34,slow=11,SNR=3.0						
SONM	**Songino Array**	**70.89**	**327**	P	P	00 39 29.5	+0.5
	0.1nm,0.3s,baz=141,slow=9.3,SNR=1.6						

ISK 17 00:32:31.3, 39°79N × 41°75E, h2km, ML3.6/35
DDA 17 00:32:33.0, 39°81N × 41°73E, h11km±3km, ML3.4
ISC 17 00:32:32.6±1.2, 39°81N±0'.02 × 41°74E±0'.02, h5km±10km, n67, σ0°99/79, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPR	**Koprukoy-ERZUR**	**0.20**	**25**	PG	**Pg**	**00 32 37.0**	**+0.4**
KOPR				SG	**Sg**	**00 32 40.5**	**+1.1**
HOMI	**Horasan**	**0.27**	**28**	*i* P	**Pg**	**00 32 38.0**	**+0.1**
HOMI				*i* S	**Sb**	**00 32 43.4**	**-1.6**
HOMI				IAML		00 32 46.0	
	comp=E,18µm,0.3s						
HOMI				IAML		00 32 48.0	
	comp=N,20µm,0.4s						
ATA5	**Erzurum, Merke**	**0.40**	**284**	*i* P	**Pb**	**00 32 41.5**	**-0.7**
ATA5				*i* S	**Sb**	**00 32 48.9**	**+0.3**
ATA5				IAML		00 32 49.0	
	comp=E,5µm,0.4s						
ATA5				IAML		00 32 50.0	
	comp=N,4µm,0.9s						
EKAR	**Karacoban**	**0.60**	**156**	*i* P	**Pb**	**00 32 45.4**	**-0.3**
EKAR				*i* S	**Sn**	**00 32 57.9**	**-0.4**
EKAR				IAML		00 32 59.0	
	comp=N,8µm,0.3s						
EKAR				IAML		00 32 59.0	
	comp=E,13µm,0.6s						
EMRE	**Erzurum,Aziziy**	**0.63**	**291**	*i* P	**Pb**	**00 32 45.5**	**-0.7**
EMRE				*i* S	**Sb**	**00 32 53.8**	**-1.6**
EMRE				IAML		00 32 57.0	
	comp=E,3µm,0.4s						
EMRE				IAML		00 33 05.0	
	comp=N,3µm,1.0s						
VRTB	**Varto-Mus**	**0.68**	**199**	PG	**Pg**	**00 32 45.2**	**-0.5**
VRTB	**Varto-Mus**	**0.68**	**199**	*i* P	**Pb**	**00 32 46.0**	**-1.0**
VRTB				*i* S	**Sb**	**00 32 56.7**	**-0.1**
VRTB				IAML		00 33 03.0	
	comp=N,3µm,0.6s						
VRTB				IAML		00 33 04.0	
	comp=E,3µm,0.4s						
KARO	**Karliova-Bingo**	**0.73**	**227**	PG	**Pg**	**00 32 46.3**	**-0.3**
KRIK	**Erzurum-spir**	**0.82**	**310**	*i* P	**Pb**	**00 32 49.3**	**-0.1**
KRIK				*i* S	**Sb**	**00 33 01.0**	**+0.2**
SENK	**Senkaya-Erzuru**	**0.89**	**32**	PG	**Pg**	**00 32 48.5**	**-1.1**
MLAZ	**Malazgirt-MUS**	**0.91**	**137**	PG	**Pg**	**00 32 49.7**	**-0.4**
MLAZ				SG	**Sb**	**00 33 02.9**	**-0.5**
KOPT	**Kop Dagi**	**0.98**	**283**	*i* P	**Pb**	**00 32 51.7**	**-0.5**
KOPT				IAML		00 33 20.0	
	comp=E,812nm,1.3s						
KOPT				IAML		00 33 24.0	
	comp=N,655nm,1.2s						
AGRB	**Hanur-Agry**	**0.99**	**103**	PG	**Pg**	**00 32 51.2**	**-0.4**
YEDI	**Yedisu-Bingol**	**1.00**	**249**	PG	**Pg**	**00 32 51.1**	**-0.6**
DDEM	**Demirkent**	**1.08**	**0**	*i* P	**Pg**	**00 32 53.0**	**-0.4**
DDEM				IAML		00 33 11.0	
	comp=E,2µm,0.4s						
DDEM				IAML		00 33 13.0	
	comp=N,3µm,0.4s						
MUSM	**Mu-Merkez**	**1.10**	**189**	*i* P	**Pb**	**00 32 53.3**	**-0.8**
MUSM				IAML		00 33 10.0	
	comp=N,1µm,0.4s						
MUSM				IAML		00 33 12.0	
	comp=E,708nm,0.5s						
BNGB	**Bingl**	**1.16**	**226**	PN	**Pg**	**00 32 53.9**	**-0.9**
DBAD	**Bademkaya**	**1.21**	**358**	*i* P	**Pg**	**00 32 54.7**	**-1.1**
DBAD				*i* S	**Sn**	**00 33 12.6**	**-0.4**
BAYB	**BAYBURT**	**1.23**	**292**	*i* P	**Pg**	**00 32 55.3**	**-0.8**
BAYB				*i* S	**Sn**	**00 33 15.0**	**+1.4**
ADCV	**BITLIS_Adilcev**	**1.26**	**142**	*i* P	**Pg**	**00 32 55.5**	**-1.1**
DAGI	**Agillar**	**1.27**	**6**	*i* P	**Pn**	**00 32 56.0**	**-1.1**
DAGI				*i* S	**Sn**	**00 33 14.3**	**-0.4**
GURO	**Guroymak-BITLI**	**1.27**	**170**	PN	**Pg**	**00 32 56.1**	**-0.9**
KARS	**Kars**	**1.31**	**51**	PN	**Pn**	**00 32 56.8**	**-0.8**
BAYT	**Aydıntepe-Bayb**	**1.36**	**296**	PN	**Pg**	**00 32 58.4**	**-0.3**
DIGO	**Kars**	**1.39**	**64**	*i* P	**Pn**	**00 32 58.5**	**-0.4**
DIGO				*i* S	**Sn**	**00 33 19.3**	**+1.6**
DIGO				IAML		00 33 22.0	
	comp=N,576nm,0.7s						
DIGO				IAML		00 33 26.0	
	comp=E,557nm,0.6s						
BLIS	**Bitlis-Merkez**	**1.42**	**168**	*i* P	**Pg**	**00 32 59.8**	**-0.1**
BLIS				IAML		00 33 22.0	
	comp=E,596nm,0.9s						
BLIS				IAML		00 33 26.0	
	comp=N,676nm,0.5s						
ERCV	**ERCIS-VAN**	**1.47**	**122**	PN	**Pn**	**00 32 58.9**	**-0.9**
CHOM	**Cayeli-Rize**	**1.49**	**330**	PN	**Pn**	**00 32 59.9**	**-0.1**
CHAY	**Cayeli-Rize**	**1.49**	**329**	PN	**Pb**	**00 33 00.4**	**-0.4**
DYDN	**Diyadin**	**1.52**	**99**	*i* P	**Pg**	**00 33 02.5**	**+0.7**
DYDN				IAML		00 33 27.0	
	comp=E,851nm,0.7s						
DYDN				IAML		00 33 45.0	
	comp=N,535nm,1.4s						
DBOC	**Borcka**	**1.54**	**358**	*i* P	**Pn**	**00 33 00.5**	**-0.1**
ERZN	**Erzincan**	**1.57**	**263**	PN	**Pb**	**00 33 01.2**	**-1.0**
EUZM	**Uzumlu**	**1.58**	**267**	*i* P	**Pg**	**00 33 03.6**	**+0.7**
VMUR	**Van-Muradiye**	**1.64**	**119**	*i* P	**Pg**	**00 33 06.9**	**+3.0**
EAK	**Akyaka**	**1.68**	**58**	*i* P	**Pg**	**00 33 04.5**	**-0.2**
EAK				IAML		00 33 39.0	
	comp=E,571nm,0.8s						
EAK				IAML		00 33 44.0	
	comp=N,536nm,0.9s						
VANB	**Van**	**1.76**	**133**	PN	**Pb**	**00 33 04.7**	**-0.7**
AKDM	**Akdamar-Van**	**1.76**	**146**	PN	**Pn**	**00 33 03.9**	**0.0**
IGDI	**IGDIR**	**1.80**	**87**	*i* P	**Pn**	**00 33 04.4**	**+0.1**
CLDR	**Caldiran**	**1.81**	**111**	PN	**Pn**	**00 33 04.9**	**+0.3**
EPOS	**Posof**	**1.85**	**24**	*i* P	**Pg**	**00 33 07.3**	**-0.8**
EPOS				IAML		00 33 41.0	
	comp=E,166nm,1.0s						
EPOS				IAML		00 33 44.0	
	comp=N,246nm,1.4s						
MACK	**Trabzon**	**1.89**	**308**	*i* P	**Pg**	**00 33 08.3**	**-0.4**
MACK				IAML		00 33 36.0	
	comp=N,232nm,0.3s						
MACK				IAML		00 33 36.0	
	comp=E,191nm,0.3s						
KTUT	**Trabzon**	**1.91**	**309**	PN	**Pb**	**00 33 06.5**	**-1.4**
TASB	**TASBURUN-IGDIR**	**1.93**	**84**	PN	**Pb**	**00 33 06.7**	**-1.5**
BGD	**Bogdanovka**	**2.03**	**44**	P	**Pb**	**00 33 08.8**	**-1.2**
PTK	**Pertek**	**2.04**	**244**	PN	**Pn**	**00 33 08.0**	**+0.3**
AKH	**Akhalkalaki**	**2.08**	**39**	P	**Pb**	**00 33 09.7**	**-1.3**
AKH	**Akhalkalaki**	**2.08**	**39**	PN	**Pn**	**00 33 08.9**	**+0.6**
DYBB	**Diyarbakir**	**2.23**	**215**	PN	**Pn**	**00 33 10.8**	**+0.5**
GNI	**Garni**	**2.33**	**81**	PN	**Pn**	**00 33 12.2**	**+0.5**
SIRT	**Sirnak**	**2.37**	**166**	PN	**Pn**	**00 33 12.5**	**+0.4**
BKRG	**Bakuriani**	**2.37**	**34**	P	**Pn**	**00 33 13.6**	**+1.3**
SVRC	**Sivrice-ELAZID**	**2.37**	**234**	PN	**Pn**	**00 33 12.6**	**+0.3**
DMNI	**Dmanisi**	**2.41**	**50**	P	**Pn**	**00 33 13.8**	**+1.1**
ILIC	**ilic-Erzincan**	**2.48**	**263**	PN	**Pn**	**00 33 14.2**	**+0.6**
MAZI	**Mazidag**	**2.56**	**204**	PN	**Pn**	**00 33 15.2**	**+0.5**
ESPY	**Espiye-Giresun**	**2.56**	**297**	PN	**Pn**	**00 33 15.6**	**+1.0**
TKB	**Tkibuli**	**2.71**	**20**	P	**Pn**	**00 33 18.0**	**+1.2**
CUKT	**Cukurca**	**2.94**	**150**	PN	**Pn**	**00 33 21.0**	**+0.9**
MALT	**Malatya**	**2.98**	**241**	PN	**Pn**	**00 33 21.7**	**+1.1**
BTNK	**Botanikuri**	**2.98**	**50**	P	**Pn**	**00 33 22.7**	**+2.2**
ONI	**Oni**	**3.06**	**24**	P	**Pn**	**00 33 23.2**	**+1.5**
URFA	**Urfa**	**3.29**	**225**	PN	**Pn**	**00 33 25.3**	**+0.5**
RSDY	**Resadiye-TOKAT**	**3.44**	**281**	PN	**Pn**	**00 33 27.9**	**+1.1**
PNSH	**Pansheti**	**3.56**	**37**	P	**Pn**	**00 33 30.9**	**+2.3**
SVSK	**Karacayir**	**3.65**	**273**	PN	**Pn**	**00 33 31.1**	**+1.4**
TOKT	**Tokat**	**4.02**	**279**	PN	**Pn**	**00 33 36.1**	**+1.3**
KIV	**Kislovodsk**	**4.20**	**9**	PN	**Pn**	**00 33 38.7**	**+1.4**

IDC 17 00:32:40.0±0.9, 9°60S × 155°05E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/40, mbtmp3.9/13, ML3.1/1, Error ellipse: s-maj=28.5km s-min=19.5km az=110.0
NEIC 17 00:32:42.1±2.4, 9°65S±0'.1 × 155°2E±0'.1, h24km±6km, mb4.0/12, Error ellipse: s-maj=18.6km s-min=15.1km az=154.0
ISC 17 00:32:43.4±0.6, 9°66S±0'.09 × 155°25E±0'.08, h29km, n32, σ1°42/32, mb3.9/18, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.63**	**88**	Pn	**Pn**	**00 33 52.2**	**+0.7**
SANVU	**Saraoutou**	**13.00**	**117**	Pn	**Pn**	**00 35 44.3**	**-2.0**
CTAO	**Charters Tower**	**13.52**	**219**	Pn	**Pn**	**00 35 53.3**	**-0.2**
DZM	**Mont Dzumac**	**16.36**	**140**	Pn	**P**	**00 36 33.4**	**-0.4**
	0.1nm,0.3s,baz=323,slow=8.6,SNR=3.9						
DZM	**Mont Dzumac**	**16.36**	**140**		**Pn**	**00 36 30.4**	**-0.7**
DZM				IAmb	IAmb	00 36 39.2	
	comp=Z,8.7nm,1.1s						
ARMA	**Armidale**	**20.93**	**189**	P	**P**	**00 37 24.9**	**+0.9**
WR0	**Warramunga Arr**	**22.46**	**241**	P	**P**	**00 37 40.2**	**-0.2**
WR0				IAmb	IAmb	00 37 54.0	
	comp=Z,4.3nm,1.1s						
WB0	**Warramunga Arr**	**22.51**	**241**	P	**P**	**00 37 40.6**	**-0.4**
WB0				IAmb	IAmb	00 37 49.5	
	comp=Z,5.4nm,1.1s						
WB2	**Warramunga Arr**	**22.62**	**241**	P	**P**	**00 37 42.2**	**0.0**
WB2				IAmb	IAmb	00 37 53.9	
	comp=Z,5.6nm,1.1s						
WRA	**Warramunga Arr**	**22.63**	**241**	P	**P**	**00 37 40.1**	**-2.1**
	comp=Z,2.0nm,0.8s,baz=66,slow=9.5,SNR=8.2						
ASAR	**Alice Springs**	**24.69**	**233**	P	**P**	**00 38 02.2**	**0.0**
	comp=Z,3.9nm,1.0s,baz=63,slow=9.6,SNR=22						
ASAR	**Alice Springs**	**24.69**	**233**	P	**P**	**00 38 01.4**	**-0.8**
STKA	**Stephens Creek**	**25.47**	**208**	P	**P**	**00 38 10.2**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=44,slow=14,SNR=7.6						
STKA	**Stephens Creek**	**25.47**	**208**	P	**P**	**00 38 10.3**	**+1.2**
KNRA	**Kununurra**	**26.51**	**254**	P	**P**	**00 38 17.2**	**-1.5**
KNRA				IAmb	IAmb	00 38 22.5	
	comp=Z,4.4nm,1.1s						
BBOO	**Buckleboo**	**29.06**	**215**	P	**P**	**00 38 39.1**	**-2.2**
BBOO				IAmb	IAmb	00 38 51.1	
	comp=Z,3.2nm,1.0s						
FITZ	**Fitzroy Crossi**	**29.91**	**250**	P	**P**	**00 38 48.2**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=69,slow=8.6,SNR=1.3						
OUZ	**Omahuta**	**30.45**	**149**	P	**P**	**00 38 54.1**	**+0.5**
FORT	**Forrest**	**32.89**	**226**	P	**P**	**00 39 15.8**	**+0.7**
USA0B	**Ussuriysk Arra**	**57.61**	**340**	P	**P**	**00 42 29.7**	**-1.0**
USA0B				IAmb	IAmb	00 42 32.6	
	comp=Z,5.4nm,1.1s						
USRK	**Ussuriysk Ar.**	**57.61**	**340**	P	**P**	**00 42 31.1**	**+0.4**
	comp=Z,1.9nm,1.0s,baz=127,slow=9.3,SNR=2.3						
USRK	**Ussuriysk Ar.**	**57.61**	**340**	P	**P**	**00 42 30.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**62.18**	**297**	P	**P**	**00 43 02.9**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=96,slow=5.9,SNR=4.0						
VNDA	**Vanda**	**67.92**	**178**	P	**P**	**00 43 40.4**	**+1.5**
	comp=Z,0.6nm,1.1s,baz=349,slow=8.8,SNR=3.8						
SONM	**Songino Array**	**71.71**	**328**	P	**P**	**00 44 03.6**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=143,slow=40,SNR=2.8						
IMAR	**Indian Mountai**	**84.16**	**19**	P	**P**	**00 45 09.6**	**-1.9**
MKAR	**Makanchi Array**	**85.57**	**319**	P	**P**	**00 45 20.5**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=74,slow=5.1,SNR=1.5						
ILAR	**Eielson Array**	**85.75**	**21**	P	**P**	**00 45 19.9**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=240,slow=5.6,SNR=6.7						
ILAR	**Eielson Array**	**85.75**	**21**	P	**P**	**00 45 15.4**	**-4.1**
ZALV	**Zalesovo Beam**	**86.52**	**326**	P	**P**	**00 45 22.1**	**-1.5**
	comp=Z,0.7nm,0.4s,baz=82,slow=3.1,SNR=3.7						
NVAR	**Mina Array Bea**	**93.16**	**52**	P	**P**	**00 45 58.1**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=236,slow=7.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**153.86**	**280**	PKPbc	**PKiKP**	**00 52 41.5**	**+0.4**
	comp=Z,0.9nm,1.1s,baz=47,slow=2.0,SNR=1.9						

VAO 17 00:33:41.3±0.9, 32°59S × 70°37W, h10km, mb4.7
SJA 17 00:33:45.0±0.6, 32°96S × 70°67W, h102km±4km, ML4.2, MW4.6
GUC 17 00:33:46.3±0.8, 32°95S × 70°60W, h88km±2km, ML5.1
NEIC 17 00:33:46.4±1.5, 32°96S±0'.05 × 70°52W±0'.07, h89km±4km, Error ellipse: s-maj=8.3km s-min=6.7km az=99.0
IDC 17 00:33:46.7±0.6, 32°93S × 70°44W, h93km±4km, mb4.3/15, mb1 4.4/18, mb1mx4.3/28, mbtmp4.6/18, MS4.3/2, Ms1 4.3/2, ms1mx4.0/26, Error ellipse: s-maj=16.6km s-min=11.8km az=82.0
ISC 17 00:33:46.2±0.4, 32°97S±0'.03 × 70°58W±0'.03, h90km±3km, n662, σ1°07/680, mb4.8/143, 8C-7D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.19**	**207**	⇑ *i* P	**Pn**	**00 33 59.7**	**+0.6**
PEL				*e* S	**Sn**	**00 34 09.4**	**+0.6**
PEL				IAML		00 34 10.8	
	comp=E,95µm,0.4s						
PEL	**Peldehue**	**0.19**	**207**		**Pn**	**00 33 59.9**	**+0.7**
PEL				Sn	**Sn**	**00 34 10.1**	**+1.3**
PEL	**Peldehue**	**0.19**	**207**	*i* P	**Pn**	**00 34 00.0**	**+0.9**
PEL				*i* S	**Sn**	**00 34 10.4**	**+1.6**
VA03	**San Esteban**	**0.21**	**7**	⇓ *e* P	**Pn**	**00 34 00.0**	**+0.8**
VA03				*e* S	**Sn**	**00 34 10.6**	**+1.6**
VA03				IAML		00 34 12.5	
	comp=E,238µm,0.5s						
VA03	**San Esteban**	**0.21**	**7**		**Pn**	**00 34 00.1**	**+0.8**
VA03				Sn	**Sn**	**00 34 10.4**	**+1.5**
ROCH	**El Roble**	**0.36**	**270**	⇓ *e* P	**Pn**	**00 34 01.1**	**+0.9**
ROCH				*e* S	**Sn**	**00 34 12.0**	**+1.4**
ROC1	**El Roble**	**0.36**	**269**		**Pn**	**00 34 00.8**	**+0.6**
ROC1				Sn	**Sn**	**00 34 11.7**	**+1.1**
ROC1	**El Roble**	**0.36**	**269**	*i* P	**Pn**	**00 34 01.2**	**+1.0**
ROC1				*i* S	**Sn**	**00 34 12.3**	**+1.6**
MT05	**Renca**	**0.44**	**197**	⇓ *e* P	**Pn**	**00 34 01.6**	**+1.2**
MT05				*e* S	**Sn**	**00 34 13.1**	**+1.9**
MT05	**Renca**	**0.44**	**197**		**Pn**	**00

H03N1 Juan Fernandez 7.00 264 T T 00 42 06.4
baz=87,slow=73,SNR=284
H03N3 Juan Fernandez 7.01 264 T T 00 42 06.4
baz=87,slow=73,SNR=120
H03N2 Juan Fernandez 7.01 264 T T 00 42 06.4
baz=87,slow=73,SNR=108
H03S1 Juan Fernandez 7.01 261 T T 00 41 51.9
baz=85,slow=75,SNR=716
H03S3 Juan Fernandez 7.02 261 T T 00 41 53.3
baz=85,slow=75,SNR=1114
H03S2 Juan Fernandez 7.03 261 T T 00 41 52.6
baz=85,slow=75,SNR=427
PLCA Paso Flores 7.75 180 P **Pn** **00 35 36.6 +0.3**
comp=Z,0.8nm,0.3s,baz=349,slow=12,SNR=9.4
PLCA S Sn 00 37 21.6 +19
baz=346,slow=11,SNR=1.3
PLCA LR LR 00 38 55.3
comp=Z,1µm,19.6s,baz=112,slow=40
PLCA Paso Flores 7.75 180 Pn **Pn** **00 35 37.1 +0.8**
GO02 Mina Guanaco 7.83 7 **Pn** **00 35 34.9 -2.8**
PB14 IPOC Station P 8.31 1 **Pn** **00 35 44.8 +0.6**
PB10 IPOC Station P 9.42 0 Pn **Pn** **00 35 58.9 -0.2**
LL01 San Ignacio de 9.50 188 Pn **Pn** **00 36 00.1 +0.1**
PB15 IPOC Station P 9.77 6 Pn **Pn** **00 36 01.4 -2.7**
PB06 IPOC Station P 10.26 5 Pn **Pn** **00 36 09.9 -0.8**
LVC Limon Verde 10.43 9 P **Pn** **00 36 08.4 -4.7**
comp=Z,0.3nm,0.3s,baz=194,slow=2.3,SNR=2.2
LVC S **Sn** **00 38 10.9 +2.6**
comp=Z,1.2nm,0.3s,baz=162,slow=19,SNR=1.5
LVC LR LR 00 40 28.9
comp=Z,2µm,18.4s,baz=199,slow=39
LVC Limon Verde 10.43 9 **Pn** **00 36 11.3 -1.8**
PB04 IPOC Station P 10.60 2 Pn **Pn** **00 36 15.5 +0.2**
PB09 IPOC Station P 11.19 6 Pn **Pn** **00 36 22.5 -0.9**
PB07 IPOC Station P 11.22 3 Pn **Pn** **00 36 25.0 +1.3**
PB01 IPOC Station P 11.92 5 **Pn** **00 36 33.3 +0.3**
PATCX Punta Patache 12.11 2 Pn **Pn** **00 36 35.9 +0.3**
TA01 Diego Aracena 12.36 2 Pn **Pn** **00 36 39.8 +0.9**
ITQB Itaqui 12.38 78 *eP* **Pn** **00 36 34.3 -4.8**
PB08 IPOC Station P 12.84 6 Pn **Pn** **00 36 46.4 +0.7**
PB11 IPOC Station P 13.18 4 Pn **Pn** **00 36 50.0 0.0**
CPUP Villa Florida 13.28 64 P **Pn** **00 36 47.4 -3.7**
comp=Z,0.1nm,0.3s,baz=241,slow=12,SNR=3.8
CPUP S Sn 00 39 25.1 +8.0
comp=Z,0.6nm,0.3s,baz=336,slow=14,SNR=1.4
CPUP Villa Florida 13.28 64 Pn **Pn** **00 36 50.8 -0.3**
PSGCX Pisagua 13.32 2 Pn **Pn** **00 36 52.2 +0.4**
MNMC Minye Minye 13.81 4 **Pn** **00 36 57.9 -0.5**
PLTB Pedras Altas 14.40 90 *eP* **Pn** **00 37 02.2 -3.5**
PB16 IPOC Station P 14.61 4 **Pn** **00 37 09.2 +0.3**
LPAZ La Paz 16.76 8 P **P** **00 37 36.8 -0.1**
comp=Z,0.7nm,0.3s,baz=196,slow=8.3,SNR=17
LPAZ La Paz 16.76 8 P **Pn** **00 37 36.1 +0.1**
LPAZ La Paz 16.76 8 *eP* **Pn** **00 37 31.0 -5.0**
ITAB Concordia 16.95 75 *eP* **Pn** **00 37 34.2 -3.5**
CNLB Canela 17.28 83 *eP* **Pn** **00 37 40.3 -1.5**
PTGB Pitanga 18.17 68 *eP* **P** **00 37 50.9 -0.9**
AQDB Aquidauana 18.18 51 *eP* **P** **00 37 49.8 -2.0**
GO09 Cerro Castillo 18.33 184 P **P** **00 37 53.8 +0.5**
TRCB Terra Rica 18.80 62 *eP* **P** **00 37 56.0 -2.7**
SIV San Ignacio 18.97 29 P **P** **00 37 59.6 -1.0**
comp=Z,0.8nm,0.3s,baz=220,slow=9.4,SNR=74
PTLB Pontes e Lacer 20.30 33 *eP* **P** **00 38 13.3 -1.6**
PCMB Pacaembu 20.53 61 *eP* **P** **00 38 15.9 -1.5**
EFI East Falkland 20.80 158 P **P** **00 38 19.8 -0.3**
EFI IAmb IAmb 00 38 27.7
comp=Z,81nm,1.0s
FRTB Fartura 20.83 68 *eP* **P** **00 38 20.6 -0.1**
PP1B Ponte de Pedra 20.83 47 *eP* **P** **00 38 19.9 -0.8**
NNA Nana 21.66 343 P **P** **00 38 30.0 +0.4**
comp=Z,10nm,0.7s,baz=190,slow=13,SNR=5.6
NNA Nana 21.66 343 P **P** **00 38 30.9 +1.3**
VILB Vilhena 22.07 28 *eP* **P** **00 38 32.9 -1.0**
ITRB Iturama 22.38 59 *eP* **P** **00 38 35.6 -1.6**
SPB Sao Paulo 22.39 71 P **P** **00 38 35.9 -1.3**
SPB Sao Paulo 22.39 71 *eP* **P** **00 38 37.6 +0.4**
ETMB Extrema 23.39 11 *eP* **P** **00 38 47.3 +0.1**
SAML Samuel 24.86 18 P **P** **00 38 59.8 -0.6**
SAML Samuel 24.86 18 *eP* **P** **00 38 58.9 -1.6**
IPMB Ipameri, GO 25.03 59 *eP* **P** **00 39 01.0 -1.1**
ESAR Angra dos Reis 25.06 73 *eP* **P** **00 39 04.7 +2.4**
CZSB Cruzeiro do Su 25.19 355 *eP* **P** **00 39 04.7 +1.2**
BSCB Bom Sucesso 25.83 69 *eP* **P** **00 39 10.5 +1.1**
BDFB Brasilia 26.75 55 P **P** **00 39 16.3 -1.4**
comp=Z,9.4nm,1.0s,baz=225,slow=7.5,SNR=7.6
BDFB pP **pP** **00 39 38.6 -0.7**
comp=Z,13nm,1.0s,baz=213,slow=7.1,SNR=6.6
BDFB Brasilia 26.75 55 P **P** **00 39 17.3 -0.4**
SJMB Sao Joao De Ma 29.91 69 *eP* **P** **00 39 46.7 +1.0**
MACA Manacapuru-AM 31.07 19 *eP* **P** **00 39 54.8 -1.0**
ITTB Itaituba 31.66 29 *eP* **P** **00 39 59.5 -1.5**
PCON Cinco Dias 35.53 350 *eP* **P** **00 40 38.1 +2.8**
BETC Betania 35.76 352 *eP* **P** **00 40 39.3 +2.7**
POPC Popayan, Colom 35.78 350 *eP* **P** **00 40 38.5 +1.4**
PRAC Prado 36.71 353 *eP* **P** **00 40 45.6 +0.8**
ORTC Ortega, Tolima 36.94 352 *eP* **P** **00 40 48.5 +1.7**
YOTC Yotoco, Valle 37.16 350 *eP* **P** **00 40 48.8 +0.2**
CHIC Chingaza 37.51 355 *eP* **P** **00 40 52.4 +0.4**
TOLC Tolima 37.62 352 *eP* **P** **00 40 55.6 +2.8**
ROSC El Rosal 37.77 354 P **P** **00 40 53.3 -0.8**
ROSC IAmb IAmb 00 40 58.9
comp=Z,11nm,0.7s
PLMC San Jos del P 38.05 351 *eP* **P** **00 40 56.7 +0.5**
NORC Norcasia 38.54 353 *eP* **P** **00 41 01.2 +1.0**
SPBC San Pablo de B 38.55 354 *eP* **P** **00 41 00.7 +0.4**
RUSC La Rusia 38.72 356 *eP* **P** **00 41 02.8 +0.6**
CBOC Ciudad Bolivar 38.96 351 *eP* **P** **00 41 04.2 +0.4**
TAMC Tame, Arauca 39.20 358 *eP* **P** **00 41 04.3 -1.4**
HELC Santa Helena 39.23 352 *eP* **P** **00 41 06.4 +0.1**
BARC Barichara 39.42 356 *eP* **P** **00 41 08.6 +0.8**
PTBC PUERTO BERRIO, 39.46 354 *eP* **P** **00 41 06.7 -1.1**
DBBC Dabeiba 40.12 351 *eP* **P** **00 41 14.6 +1.2**
SDV Santo Domingo 41.62 360 P **P** **00 41 25.0 -0.8**
comp=Z,3.2nm,0.3s,baz=253,slow=9.5,SNR=4.6
SDV Santo Domingo 41.62 360 P **P** **00 41 24.3 -1.5**
SDV Santo Domingo 41.62 360 *eP* **P** **00 41 25.5 -0.3**
TOSP Speyside 45.05 14 P **P** **00 41 52.9 -0.2**
ESPN Las Esperanzas 46.78 341 P **P** **00 42 07.2 +0.5**
ESPN IAmb IAmb 00 42 08.8
comp=Z,16nm,0.7s
SVB Belmont 46.84 12 P **P** **00 42 06.5 -0.7**
BELA Belgrano 2 47.68 170 P **P** **00 42 14.1 +1.0**
MATN Matagalpa 47.94 340 P **P** **00 42 16.3 +0.5**
MATN IAmb IAmb 00 42 19.3
comp=Z,10.0nm,0.7s
TGUH Tegucigalpa,Un 49.41 338 P **P** **00 42 27.5 +0.3**
VNA3 Neumayer Olymp 49.86 158 P **P** **00 42 30.5 +0.6**
MTO3 Montecristo 50.41 336 P **P** **00 42 35.2 +0.4**
MTO3 IAmb IAmb 00 42 36.9
comp=Z,10nm,1.0s
VNA2 Neumayer--Watz 50.49 158 P **P** **00 42 35.5 +0.9**
MLPR Magueyes Islan 50.76 4 P **P** **00 42 35.8 -1.3**
CRPR Cabo Rojo, PR 50.80 4 P **P** **00 42 36.6 -0.8**
BANI BANI 51.07 0 P **P** **00 42 39.4 -0.2**
SNAA Sanae 52.08 158 P **P** **00 42 47.1 +0.5**
SNAA Sanae 52.08 158 P **P** **00 42 47.1 +0.5**
comp=Z,14nm,0.8s,baz=290,slow=6.6,SNR=40
SNAA Sanae 52.08 158 P **P** **00 42 47.1 +0.5**
SC01 Santiago de lo 52.10 360 P **P** **00 42 47.1 -0.1**
TEIG Tepich 55.53 340 P **P** **00 43 11.6 -0.5**
TLIG Tlapa 56.93 328 P **P** **00 43 22.6 +0.4**
TLIG IAmb IAmb 00 43 24.7
comp=Z,7.3nm,0.9s
QSPA South Pole Qui 57.27 180 P **P** **00 43 25.2 +1.0**
QSPA IAmb IAmb 00 43 26.1
comp=Z,7.8nm,0.8s
VNDA Vanda 65.34 191 P **P** **00 44 19.6 +1.3**
comp=Z,1.6nm,0.8s,baz=136,slow=4.7,SNR=11
VNDA Vanda 65.34 191 P **P** **00 44 19.2 +0.9**
352A Blakely 65.52 347 P **P** **00 44 19.8 -0.1**
SYO Syowa Base 66.37 158 *eP* **P** **00 44 23.4 -1.6**
346A Big Creek Wild 66.45 342 P **P** **00 44 26.4 +0.6**
833A Chaparral WMA, 66.81 332 P **P** **00 44 29.2 +1.0**
baz=154
833A Chaparral WMA, 66.81 332 P **P** **00 44 28.4 +0.1**
344A Westbrook Farm 66.85 341 P **P** **00 44 28.6 +0.2**
GOGA Godfrey 67.13 348 P **P** **00 44 30.2 +0.1**
baz=168
GOGA Godfrey 67.13 348 P **P** **00 44 29.8 -0.4**
GOGA IAmb IAmb 00 44 30.6
comp=Z,7.1nm,0.8s
342A Flagon Creek P 67.22 340 P **P** **00 44 31.1 +0.3**
LRAL Lakeview Retre 67.45 345 P **P** **00 44 32.4 +0.2**
baz=165
VBMS Vicksburg 67.51 342 P **P** **00 44 33.1 +0.5**
X58A Rowland 67.67 352 P **P** **00 44 33.9 +0.4**
baz=172
X58A Rowland 67.67 352 P **P** **00 44 33.2 -0.3**
Y52A Lilburn 67.68 348 P **P** **00 44 32.6 -1.0**
Y52A IAmb IAmb 00 44 33.9
comp=Z,12nm,0.8s
X56A White Oak 67.82 351 P **P** **00 44 33.5 -1.0**
baz=170
Z47A Carrollton 67.85 344 P **P** **00 44 34.9 +0.2**
X54A Belton 68.07 350 P **P** **00 44 37.0 +1.0**
baz=169
W58A Raeford 68.12 352 P **P** **00 44 36.7 +0.4**
baz=172
143A Socs Landing, 68.21 341 P **P** **00 44 37.7 +0.8**
HPIG 68.28 326 P **P** **00 44 38.3 +0.5**
HPIG IAmb IAmb 00 44 40.1
comp=Z,20nm,1.1s
NATX Nacogdoches 68.28 338 P **P** **00 44 38.1 +0.7**
baz=158
NATX Nacogdoches 68.28 338 P **P** **00 44 37.2 -0.2**
W57A Gilead 68.34 352 P **P** **00 44 37.6 -0.1**
baz=172
435B Jarrell 68.36 335 P **P** **00 44 38.0 0.0**
435B IAmb IAmb 00 44 43.5
comp=Z,7.4nm,0.5s
KMSC Kings Mountain 68.50 351 P **P** **00 44 38.4 -0.3**
baz=170
X51A Calhoun 68.51 347 P **P** **00 44 39.3 +0.5**
W54A Cherokee Point 68.57 350 P **P** **00 44 38.8 -0.4**
baz=170
BG3 Lake Jocassee 68.59 349 P **P** **00 44 39.4 +0.1**
BG3 IAmb IAmb 00 44 40.2
comp=Z,8.0nm,0.8s
X48A Hartselle 68.83 345 P **P** **00 44 40.7 -0.1**
X48A IAmb IAmb 00 44 41.8
comp=Z,20nm,1.1s
Y45A Yeager Farm, C 68.83 343 P **P** **00 44 40.6 -0.2**
W52A Murphy 68.86 348 P **P** **00 44 39.8 -1.2**
W52A IAmb IAmb 00 44 41.4
comp=Z,9.1nm,0.8s
V58A Windy Hill, Pi 68.87 353 P **P** **00 44 41.9 +0.9**
baz=172
237A Washetta, Mont 68.87 337 P **P** **00 44 41.9 +0.8**
JCT Junction City 68.90 333 P **P** **00 44 42.1 +0.7**
baz=154
JCT Junction City 68.90 333 P **P** **00 44 42.4 +1.0**
JCT IAmb IAmb 00 44 43.2
comp=Z,19nm,0.9s
V57A Coltrane Farms 69.04 352 P **P** **00 44 41.3 -0.7**
baz=171
V56A Mocksville 69.05 351 P **P** **00 44 42.8 +0.7**
baz=160
Z41A Richland Creek 69.12 340 P **P** **00 44 43.2 +0.6**
baz=160
Z41A Richland Creek 69.12 340 P **P** **00 44 42.2 -0.4**
Z41A IAmb IAmb 00 44 46.0
comp=Z,10nm,0.8s
U61A Possum Corner 69.16 355 P **P** **00 44 43.1 +0.4**
baz=175
V55A Taylorsville 69.18 351 P **P** **00 44 42.7 -0.3**
baz=170
V55A Taylorsville 69.18 351 P **P** **00 44 42.5 -0.5**
V55A IAmb IAmb 00 44 43.4
comp=Z,9.8nm,0.7s
V54A Nebo 69.21 350 P **P** **00 44 42.8 -0.4**
baz=170
V53A Saluda 69.24 349 P **P** **00 44 43.7 +0.3**
CPCT Cooper Cave 69.31 348 P **P** **00 44 43.9 +0.1**
CPCT IAmb IAmb 00 44 44.0
comp=Z,10nm,0.8s
SWET Sewanee 69.34 347 P **P** **00 44 44.3 +0.3**
U60A Pendleton 69.36 354 P **P** **00 44 44.0 0.0**
baz=174
WHTX Lake Whitney, 69.42 336 P **P** **00 44 44.5 +0.1**
WHTX IAmb IAmb 00 45 03.9
comp=Z,22nm,0.9s
OXF Oxford 69.42 343 P **P** **00 44 44.1 -0.3**
baz=163
OXF Oxford 69.42 343 P **P** **00 44 44.3 -0.1**
TX32 Lajitas Array 69.45 329 P **P** **00 44 45.4 +0.6**
TX32 IAmb IAmb 00 44 46.8
comp=Z,7.2nm,0.6s
TXAR Lajitas Array 69.45 329 P **P** **00 44 45.8 +0.9**
comp=Z,6.1nm,0.6s,baz=154,slow=8.8,SNR=23
TXAR Lajitas Array 69.45 329 P **P** **00 44 45.7 +0.8**
TX31 Lajitas Ar. Si 69.45 329 P **P** **00 44 45.7 +0.8**
U57A Blanch 69.53 352 P **P** **00 44 44.4 -0.7**
baz=172
V52A Sevierville 69.53 349 P **P** **00 44 44.3 -0.8**
V52A IAmb IAmb 00 44 45.0
comp=Z,12nm,0.8s
PLAL Pickwick Lake 69.56 345 P **P** **00 44 45.3 0.0**
PLAL IAmb IAmb 00 44 46.0
comp=Z,16nm,1.1s
U56A King 69.56 352 P **P** **00 44 45.6 +0.3**
baz=171
U56A King 69.56 352 P **P** **00 44 44.5 -0.8**
WLAR White Oak Lake 69.61 340 P **P** **00 44 45.2 -0.4**
WLAR IAmb IAmb 00 44 47.7
comp=Z,22nm,1.0s
V51A Loudon 69.62 348 P **P** **00 44 45.0 -0.6**
V51A IAmb IAmb 00 44 45.8
comp=Z,9.2nm,0.8s
X43A Marvell 69.79 342 P **P** **00 44 46.8 +0.1**
baz=162
T59A Double "B" Far 69.89 354 P **P** **00 44 47.3 0.0**
baz=174
T59A Double "B" Far 69.89 354 P **P** **00 44 46.9 -0.3**
T59A IAmb IAmb 00 44 48.1
comp=Z,13nm,0.8s
U54A Nelsons Funny 69.92 350 P **P** **00 44 47.8 +0.3**
baz=170
U54A Nelsons Funny 69.92 350 P **P** **00 44 47.9 +0.3**
T58A Grand View Acr 69.95 353 P **P** **00 44 47.7 0.0**
baz=173
T60A Surry 69.98 355 P **P** **00 44 48.2 +0.4**
baz=174
V48A Smith Brothers 70.03 346 P **P** **00 44 48.2 +0.1**
T57A Hurt 70.08 353 P **P** **00 44 48.8 +0.4**
baz=172
T56A Rocky Mt 70.19 352 P **P** **00 44 49.1 0.0**
baz=172
TZTN Tazewell 70.21 349 P **P** **00 44 49.2 0.0**
baz=168
CLTN Cedars of Leba 70.27 346 P **P** **00 44 49.8 +0.2**
CLTN IAmb IAmb 00 44 50.0
comp=Z,7.5nm,0.8s
X40A Basin Creek Fa 70.28 341 P **P** **00 44 51.3 +1.6**
baz=160
T55A Pulaski 70.37 351 P **P** **00 44 50.2 -0.1**
baz=171
T54A Tazewell 70.42 351 P **P** **00 44 50.5 -0.1**
baz=170
T53A Wise 70.48 350 P **P** **00 44 50.5 -0.4**
baz=169
RCRC Randolf Colleg 70.51 353 P **P** **00 44 50.7 -0.3**
S60A Water View 70.54 355 P **P** **00 44 51.1 -0.1**
baz=175
MIAR Mount Ida 70.55 340 P **P** **00 44 51.9 +0.5**
baz=160
MIAR Mount Ida 70.55 340 P **P** **00 44 51.6 +0.3**
S58A Poland Farm, P 70.57 354 P **P** **00 44 51.4 +0.1**
baz=173
S58A Poland Farm, P 70.57 354 P **P** **00 44 51.5 +0.1**
U49A Red Boiling Sp 70.57 347 P **P** **00 44 51.0 -0.4**
Z35A Perchaven, San 70.57 337 P **P** **00 44 51.5 0.0**
WVT Waverly 70.61 345 P **P** **00 44 52.0 +0.3**
baz=165
WVT Waverly 70.61 345 P **P** **00 44 51.7 0.0**
S59A Mechanicsville 70.65 354 P **P** **00 44 51.9 +0.1**
baz=174
ABTX Abilene, Hawle 70.77 334 P **P** **00 44 53.2 +0.4**
baz=154
ABTX Abilene, Hawle 70.77 334 P **P** **00 44 52.5 -0.3**
ABTX IAmb IAmb 00 44 54.3
comp=Z,18nm,0.8s
W41B Gary Mavity, V 70.77 341 P **P** **00 44 52.8 +0.1**
baz=161,SNR=5.1
W41B Gary Mavity, V 70.77 341 P **P** **00 44 51.1 -1.6**
W41B IAmb IAmb 00 44 53.7
comp=Z,8.4nm,0.8s
S57A Dark Hollow, R 70.80 353 P **P** **00 44 53.2 +0.3**
baz=172
S57A Dark Hollow, R 70.80 353 P **P** **00 44 53.1 +0.3**
S57A IAmb IAmb 00 44 53.9
comp=Z,10nm,0.7s
WHAR Wooly Hollow 70.89 341 P **P** **00 44 52.6 -0.8**
T50A Nancy 70.89 348 P **P** **00 44 52.2 -1.2**
R58B Mineral 70.90 354 P **P** **00 44 53.7 +0.4**
baz=174
R58B Mineral 70.90 354 P **P** **00 44 53.2 -0.2**
LNXT Lenox 70.95 344 P **P** **00 44 53.3 -0.5**
S55A Lewisburg 70.98 352 P **P** **00 44 54.3 +0.3**
baz=171
R59A King George, V 71.07 355 P **P** **00 44 54.8 +0.4**
baz=174
CBN Corbin Frederi 71.09 354 P **P** **00 44 54.2 -0.3**
CBN IAmb IAmb 00 45 13.3
comp=Z,16nm,1.1s
R60A Leonardtown, M 71.09 355 P **P** **00 44 55.2 +0.6**
baz=175
S53A Williamson 71.11 350 P **P** **00 44 54.3 -0.4**
baz=170
S54A Dingess, Beckl 71.11 351 P **P** **00 44 54.1 -0.6**
S54A IAmb IAmb 00 44 55.3
comp=Z,8.1nm,0.8s
X37A Clayton 71.12 339 P **P** **00 44 54.9 0.0**
X37A IAmb IAmb 00 45 12.4
comp=Z,12nm,1.1s
W39A Magazine 71.22 340 P **P** **00 44 56.1 +0.8**
baz=160,SNR=15
W39A Magazine 71.22 340 P **P** **00 44 56.7 +1.3**
R58A Rapidan 71.24 354 P **P** **00 44 55.8 +0.4**
baz=173
S51A Beattyville 71.29 349 P **P** **00 44 55.6 -0.2**
S51A IAmb IAmb 00 44 56.2
comp=Z,11nm,0.9s
R57A Stanardsville 71.29 353 P **P** **00 44 55.8 0.0**
baz=173
T47A Sharon Grove 71.29 346 P **P** **00 44 54.8 -1.0**
T47A IAmb IAmb 00 44 56.2
comp=Z,12nm,0.8s
HICK Hickman 71.31 344 P **P** **00 44 55.1 -0.8**
LCAR Lake Charles 71.33 343 P **P** **00 44 56.3 +0.3**
FCAR Ozark Folk Cen 71.41 342 P **P** **00 44 56.7 +0.1**
FCAR IAmb IAmb 00 44 57.2
comp=Z,8.9nm,0.7s
R55A Marlinton 71.44 352 P **P** **00 44 56.9 +0.1**
baz=172
R55A Marlinton 71.44 352 P **P** **00 44 57.3 +0.5**
R55A IAmb IAmb 00 44 58.5
comp=Z,15nm,0.9s
R54A Victor 71.45 351 P **P** **00 44 56.8 0.0**
baz=171
R56A Bull Pasture M 71.49 353 P **P** **00 44 57.3 +0.2**
baz=172
PARMO Parma 71.55 344 P **P** **00 44 57.2 -0.2**
T45A Paducah 71.64 345 P **P** **00 44 58.4 +0.5**
PBMO Poplar Bluff 71.82 343 P **P** **00 44 59.0 0.0**
Q58A Fox Den Farm, 71.85 354 P **P** **00 44 59.1 0.0**
baz=174
Q57A Strasburg 72.01 354 P **P** **00 44 59.7 -0.3**
baz=173
U40A Yellville 72.04 341 P **P** **00 45 00.3 0.0**
baz=160,SNR=9.5
U40A Yellville 72.04 341 P **P** **00 45 00.8 +0.4**
U40A IAmb IAmb 00 45 01.3
comp=Z,14nm,0.6s
W35A Tecumseh 72.11 338 P **P** **00 45 00.3 -0.5**
Q55A Buckhannon 72.14 352 P **P** **00 45 00.9 0.0**
baz=172
R49A Shelbyville 72.19 348 P **P** **00 44 59.8 -1.3**
Q54A Coxs Mills 72.22 352 P **P** **00 45 01.0 -0.3**
baz=171
Q54A Coxs Mills 72.22 352 P **P** **00 45 01.0 -0.3**
Q54A IAmb IAmb 00 45 01.5
comp=Z,10nm,0.9s
T42A Van Buren 72.22 343 P **P** **00 45 01.1 -0.2**
MNTX Cornudas Mount 72.23 329 P **P** **00 45 01.4 -0.1**
baz=150
MNTX Cornudas Mount 72.23 329 P **P** **00 45 01.5 -0.1**
MNTX IAmb IAmb 00 45 02.2
comp=Z,13nm,0.7s
GDL2 Guadalupe Moun 72.23 330 P **P** **00 45 03.0 +1.3**
SDMD Soldier's Deli 72.25 355 P **P** **00 45 01.6 +0.1**
HHAR Hobbs 72.28 340 P **P** **00 45 02.1 +0.4**
HHAR IAmb IAmb 00 45 02.6
comp=Z,14nm,0.8s
WCI Wyandotte Cave 72.33 347 P **P** **00 45 02.0 0.0**
baz=166
USIN University of 72.34 346 P **P** **00 45 01.3 -0.7**
P58A Pank, Wackersv 72.36 355 P **P** **00 45 02.6 +0.5**
baz=174
WMOK Wichita Mounta 72.37 336 P **P** **00 45 03.4 +1.1**
baz=155
WMOK Wichita Mounta 72.37 336 P **P** **00 45 02.5 +0.1**
FNO Franklin 72.38 337 P **P** **00 45 02.5 +0.1**
Q52A Bidwell 72.39 350 P **P** **00 45 01.7 -0.6**
baz=170
P57A Homestead Farm 72.42 354 P **P** **00 45 02.8 +0.4**
baz=173
P59A Jarrettsville 72.42 355 P **P** **00 45 02.8 +0.4**
baz=175
TUL1 Leonard 72.47 339 P **P** **00 45 02.6 -0.3**
baz=158,SNR=5.2
TUL1 Leonard 72.47 339 P **P** **00 45 03.2 +0.3**
TUL1 IAmb IAmb 00 45 03.8
comp=Z,15nm,0.7s
P56A Dayton Farm, R 72.52 353 P **P** **00 45 03.8 +0.7**
baz=173
OKCFA Oklahoma City 72.54 337 P **P** **00 45 03.0 -0.3**
OKCFA IAmb IAmb 00 45 04.2
comp=Z,15nm,0.7s
U38A Gravette 72.55 340 P **P** **00 45 03.3 -0.1**
HSIG 72.57 324 P **P** **00 45 04.1 +0.5**
Q51A Peebles 72.61 350 P **P** **00 45 03.0 -0.6**
Q51A IAmb IAmb 00 45 04.2
comp=Z,9.6nm,0.8s
P55A Reedsville 72.62 353 P **P** **00 45 05.0 +1.3**
baz=172
MGMO Mountain Grove 72.64 342 P **P** **00 45 03.5 -0.3**
MGMO IAmb IAmb 00 45 05.0
comp=Z,9.8nm,0.9s
OK025 Westminster Rd 72.66 337 P **P** **00 45 04.3 +0.3**
WUPA West Chester U 72.69 356 P **P** **00 45 04.2 +0.1**
CPRX Cap Rock 72.75 331 P **P** **00 45 05.4 +0.6**
OK030 Cody Creek RV 72.80 338 P **P** **00 45 05.0 +0.2**
OK030 IAmb IAmb 00 45 05.7
comp=Z,16nm,0.7s
MVL Millersville 72.80 355 P **P** **00 45 05.0 +0.3**
MVL IAmb IAmb 00 45 11.3
comp=Z,12nm,1.2s
BCOK Bluff Creek, N 72.81 337 P **P** **00 45 04.5 -0.5**
OK031 S. Brethren Rd 72.84 338 P **P** **00 45 05.5 +0.4**
OK031 IAmb IAmb 00 45 06.0
comp=Z,17nm,0.8s
OK029 Liberty Lake 72.89 337 P **P** **00 45 05.1 -0.3**
OK029 IAmb IAmb 00 45 05.8
comp=Z,15nm,0.7s
FVM French Village 72.97 344 P **P** **00 45 06.1 +0.3**
QUOK Quay 73.00 338 P **P** **00 45 05.0 -1.0**
QUOK IAmb IAmb 00 45 07.1
comp=Z,11nm,0.7s
P51A Williamsport 73.01 350 P **P** **00 45 06.0 0.0**
baz=169
P51A Williamsport 73.01 350 P **P** **00 45 05.4 -0.6**
P51A IAmb IAmb 00 45 06.4
comp=Z,14nm,0.9s
P52A Corning 73.03 351 P **P** **00 45 05.8 -0.3**
baz=170
O60A Telford 73.06 356 P **P** **00 45 07.0 +0.7**
baz=176
O57A Amberson 73.11 354 P **P** **00 45 06.6 0.0**
baz=174
MSTX Muleshoe 73.14 332 P **P** **00 45 07.2 +0.2**
baz=152
MSTX Muleshoe 73.14 332 P **P** **00 45 07.5 +0.5**
CCM Cathedral Cave 73.24 343 P **P** **00 45 07.9 +0.6**
baz=162
CCM Cathedral Cave 73.24 343 P **P** **00 45 07.5 +0.1**
O56A Blue Knob Stat 73.25 354 P **P** **00 45 07.7 +0.3**
O56A IAmb IAmb 00 45 08.2
comp=Z,9.3nm,0.9s
LIC Lamto 73.29 71 *eP* **P** **00 45 07.8 -0.5**
comp=Z,40nm,1.2s
P49A Miami Univ. Ec 73.32 349 P **P** **00 45 06.5 -1.3**
baz=168
P49A Miami Univ. Ec 73.32 349 P **P** **00 45 07.3 -0.5**
P48A Milroy 73.37 348 P **P** **00 45 07.5 -0.6**

P48A IAmb IAmb 00 45 07.6
comp=Z,8.4nm,0.6s
S39A Bolivar 73.42 341 P P 00 45 09.0 +0.5
S39A IAmb IAmb 00 45 10.1
comp=Z,14nm,0.7s
N61A South Mountain 73.44 357 P P 00 45 09.5 +1.1
baz=177
AMTX Amarillo 73.54 334 P P 00 45 09.6 +0.2
baz=153
AMTX Amarillo 73.54 334 P P 00 45 09.8 +0.4
AMTX IAmb IAmb 00 45 10.3
comp=Z,11nm,0.7s
TIC Toumodi 73.55 71 eP P 00 45 09.4 -0.4
N60A Cedar Hill Far 73.59 356 P P 00 45 09.6 +0.3
baz=176
O51A Pataskala 73.60 350 P P 00 45 09.1 -0.3
baz=170
KIC Kosan Boka 73.60 71 eP P 00 45 09.8 -0.3
comp=Z,30nm,0.9s
T35A Sooner Cattle 73.62 339 P P 00 45 10.2 +0.6
T35A IAmb IAmb 00 45 11.0
comp=Z,16nm,0.9s
N57A Milroy 73.64 354 P P 00 45 10.0 +0.4
baz=174
N58A Sunbury 73.66 355 P P 00 45 10.2 +0.4
baz=175
N59A State Game Lan 73.68 356 P P 00 45 11.2 +1.3
baz=175
N59A State Game Lan 73.68 356 P P 00 45 10.1 +0.2
DBIC Dimbokro 73.69 71 P P 00 45 10.2 -0.5
comp=Z,8.6nm,0.8s,baz=200,slow=6.0,SNR=11
DBIC pP pP 00 45 34.5 -0.2
comp=Z,2.7nm,0.6s,baz=233,slow=8.0,SNR=1.6
DBIC Dimbokro 73.69 71 P P 00 45 10.5 -0.1
DBIC IAmb IAmb 00 45 11.1
comp=Z,8.0nm,0.7s
319A Douglas 73.71 326 P P 00 45 10.5 +0.1
319A IAmb IAmb 00 45 13.1
comp=Z,14nm,0.9s
R40A Maddies Statio 73.71 342 P P 00 45 10.2 0.0
ACSO Alum Creek Sta 73.73 350 P P 00 45 09.6 -0.7
baz=169
ACSO Alum Creek Sta 73.73 350 P P 00 45 10.2 0.0
ODNJ Ogdensburg 73.78 357 P P 00 45 10.7 +0.2
MAW Mawson 73.81 163 P P 00 45 10.9 +0.4
comp=Z,6.1nm,0.7s,baz=217,slow=7.7,SNR=15
MAW Mawson 73.81 163 P P 00 45 11.3 +0.8
P46A Rosedale 73.85 347 P P 00 45 09.8 -1.1
P46A IAmb IAmb 00 45 10.8
comp=Z,15nm,1.0s
Q49A Covington 73.90 349 P P 00 45 10.9 -0.2
Q49A IAmb IAmb 00 45 11.5
comp=Z,15nm,0.8s
U32A Winter Ranch, 73.93 336 P P 00 45 12.2 +0.7
121A Cookes Peak, D 74.00 328 P P 00 45 13.7 +1.5
baz=148
121A Cookes Peak, D 74.00 328 P P 00 45 12.6 +0.4
121A IAmb IAmb 00 45 14.9
comp=Z,16nm,0.8s
KAN13 South Haven SW 74.01 338 P P 00 45 12.9 +0.9
M60A Port Jervis 74.02 357 P P 00 45 12.3 +0.4
baz=176
N54A Moraine State 74.08 353 P P 00 45 11.6 -0.7
baz=172
N54A Moraine State 74.08 353 P P 00 45 12.1 -0.1
N54A IAmb IAmb 00 45 13.1
comp=Z,10nm,0.8s
M58A Price's Panora 74.17 355 P P 00 45 13.5 +0.7
baz=175
KAN05 Bluff City Nor 74.23 338 P P 00 45 13.2 0.0
KS20 Mayfield South 74.24 338 P P 00 45 13.2 0.0
KS20 IAmb IAmb 00 45 14.7
comp=Z,27nm,1.2s
M59A Waymart 74.28 356 P P 00 45 13.7 +0.3
baz=176
P43A Skaggs, Pawnee 74.35 345 P P 00 45 13.1 -0.7
P43A IAmb IAmb 00 45 14.2
comp=Z,18nm,0.8s
KAN08 Anthony NE Sta 74.37 338 P P 00 45 13.8 -0.2
M56A Emporium 74.42 354 P P 00 45 13.4 -0.8
KAN12 Harper NE Stat 74.44 338 P P 00 45 14.1 -0.3
M55A Ridgway 74.45 354 P P 00 45 14.7 +0.3
M55A IAmb IAmb 00 45 15.4
comp=Z,15nm,0.9s
L63A North Scituate 74.47 359 P P 00 45 14.8 +0.4
baz=179
L64A Middleborough 74.54 360 P P 00 45 15.6 +0.8
baz=180
M54A Oil Creek Stat 74.58 353 P P 00 45 14.8 -0.4
N49A Columbus Grove 74.59 349 P P 00 45 14.9 -0.2
N49A IAmb IAmb 00 45 15.2
comp=Z,14nm,0.8s
O44A Mansfield 74.62 346 P P 00 45 14.2 -1.1
O44A IAmb IAmb 00 45 15.3
comp=Z,13nm,0.7s
M53A WI Miller and 74.62 352 P P 00 45 15.6 +0.2
baz=171
L60A Shokan 74.67 357 P P 00 45 17.3 +1.7
baz=177
M51A Elyria 74.70 351 P P 00 45 15.5 -0.3
baz=170
N47A Urbana 74.80 348 P P 00 45 15.7 -0.7
N47A IAmb IAmb 00 45 16.2
comp=Z,18nm,0.9s
P40A Paris 74.83 343 P P 00 45 16.8 +0.2
L61A Hillsdale 1, H 74.85 358 P P 00 45 17.7 +1.1
baz=177
BNM Barren Site 74.87 330 P P 00 45 17.9 +0.7
L59A Walton 74.91 357 P P 00 45 17.7 +0.7
baz=176
L59A Walton 74.91 357 P P 00 45 17.5 +0.4
L59A IAmb IAmb 00 45 18.9
comp=Z,8.7nm,0.8s
L56A Greenwood 75.01 355 P P 00 45 17.6 0.0
baz=174
L56A Greenwood 75.01 355 P P 00 45 18.1 +0.4
L61B Northampton 75.08 358 P P 00 45 18.7 +0.7
baz=178
HDIL Hopedale 75.18 345 P P 00 45 17.9 -0.7
baz=164
HDIL Hopedale 75.18 345 P P 00 45 17.8 -0.7
TUC Tucson 75.19 326 P P 00 45 20.1 +1.1
baz=146
K62A Royalston 75.28 359 P P 00 45 19.8 +0.7
baz=178
P38A Dawn 75.30 342 P P 00 45 19.1 -0.2
P38A IAmb IAmb 00 45 20.0
comp=Z,24nm,1.1s
WVNY West Valley, N 75.37 354 P P 00 45 20.1 +0.5
WVNY IAmb IAmb 00 45 20.5
comp=Z,17nm,0.9s
K59A Cooperstown 75.48 357 P P 00 45 20.8 +0.5
baz=176
ANMO Albuquerque 75.48 330 P P 00 45 22.4 +1.7
baz=150
ANMO Albuquerque 75.48 330 P P 00 45 22.0 +1.3
K58A Earlville 75.51 356 P P 00 45 20.8 +0.3
baz=176
K58A Earlville 75.51 356 P P 00 45 20.9 +0.5
K58A IAmb IAmb 00 45 21.6
comp=Z,12nm,0.9s
MMNY Mt. Morris Dam 75.63 354 P P 00 45 21.2 +0.1
N41A Harden Midland 75.67 344 P P 00 45 21.1 -0.3
KSU1 Kansas State U 75.67 339 P P 00 45 21.6 +0.2
baz=158
KSU1 Kansas State U 75.67 339 P P 00 45 20.8 -0.6
R32A Long Quarter, 75.69 338 P P 00 45 21.8 +0.2
R32A IAmb IAmb 00 45 23.2
comp=Z,14nm,0.8s
M44A Midewin, Midew 75.72 347 P P 00 45 20.9 -0.7
PIX Pinacate 75.89 323 P P 00 45 21.0 -1.8
PIX IAmb IAmb 00 45 25.1
comp=Z,10.0nm,0.9s
J59A Piesco 76.15 357 P P 00 45 23.8 -0.3
baz=177
J59A Piesco 76.15 357 P P 00 45 24.3 +0.2
CBKS Cedar Bluff 76.38 337 P P 00 45 26.3 +0.7
baz=155
I62A Tamworth 76.48 359 P P 00 45 28.3 +2.4
baz=179
I60A Shoreham 76.49 358 P P 00 45 26.3 +0.4
baz=178
T25A Trinidad 76.56 333 P P 00 45 28.4 +1.6
baz=151,SNR=18
T25A Trinidad 76.56 333 P P 00 45 28.3 +1.5
NCB Newcomb 76.64 357 P P 00 45 27.1 +0.2

X18A Snowflake 76.65 327 P P 00 45 28.5 +1.2
I63A Otisfield 76.65 0 P P 00 45 28.9 +2.1
baz=180
I57A Carthage 76.68 356 P P 00 45 27.4 +0.4
baz=176
LBNH Lisbon 76.85 359 P P 00 45 29.4 +1.4
baz=179
LBNH Lisbon 76.85 359 P P 00 45 28.9 +0.9
LBNH IAmb IAmb 00 45 29.6
comp=Z,8.7nm,0.9s
N35A Tabor 77.02 341 P P 00 45 29.2 +0.2
L40A Anamosa 77.04 344 P P 00 45 29.1 0.0
W18A Petrified Fore 77.04 328 P P 00 45 30.9 +1.3
baz=147
H58A Gabriels 77.09 357 P P 00 45 29.0 -0.3
baz=177
H61A Lyndonville 77.15 359 P P 00 45 30.3 +0.7
baz=179
X16A Lo Mia Camp, P 77.24 326 P P 00 45 31.7 +1.0
X16A IAmb IAmb 00 45 33.9
comp=Z,13nm,1.1s
EMMW East Machias 77.36 2 P P 00 45 30.6 -0.2
FRNY Flat Rock 77.48 358 P P 00 45 32.2 +0.7
FRNY IAmb IAmb 00 45 32.4
comp=Z,9.4nm,0.9s
SDCO Great Sand Dun 77.51 332 P P 00 45 33.3 +1.1
baz=150,SNR=15
SDCO Great Sand Dun 77.51 332 P P 00 45 33.3 +1.1
SDCO IAmb IAmb 00 45 34.3
comp=Z,6.7nm,0.7s
Y14A Wickenburg 77.59 325 P P 00 45 33.2 +0.7
JFWS Jewell Farm 77.64 345 P P 00 45 32.0 -0.4
baz=163
JFWS Jewell Farm 77.64 345 P P 00 45 31.6 -0.8
JFWS IAmb IAmb 00 45 32.7
comp=Z,13nm,0.8s
G63A Kingsbury 77.72 1 P P 00 45 32.9 0.0
baz=181
SADO Sadowa 77.76 354 P P 00 45 33.3 +0.2
SADO IAmb IAmb 00 45 47.5
comp=Z,9.5nm,1.0s
GGN Saint George 77.80 3 P P 00 45 33.9 +0.7
GGN IAmb IAmb 00 45 35.0
comp=Z,11nm,0.7s
G57A Newington 77.81 357 P P 00 45 33.3 +0.1
baz=176
G62A West of Eustis 77.82 0 P P 00 45 34.4 +1.0
baz=180
G62A West of Eustis 77.82 0 P P 00 45 34.3 +1.0
G62A IAmb IAmb 00 45 35.2
comp=Z,13nm,0.8s
G65A Princeton 77.85 2 P P 00 45 34.6 +1.1
G65A IAmb IAmb 00 45 41.9
comp=Z,13nm,1.1s
G64A Maxfield 77.87 1 P P 00 45 35.0 +1.4
baz=182
PKME Peaks-Kenny Pk 77.88 1 P P 00 45 34.2 +0.6
PKME IAmb IAmb 00 45 35.2
comp=Z,9.6nm,0.8s
G61A St-Isidore-de- 77.89 359 P P 00 45 34.1 +0.4
baz=179
MOQ Mont Orford 77.93 359 P P 00 45 34.8 +0.7
S22A 4UR Ranch, Cre 78.04 331 P P 00 45 36.2 +1.1
baz=150,SNR=6.2
S22A 4UR Ranch, Cre 78.04 331 P P 00 45 36.5 +1.3
WUAZ Wupatki 78.12 327 P P 00 45 36.8 +1.3
baz=146
MVCO Mesa Verde 78.27 330 P P 00 45 37.7 +1.3
baz=148
I42A Draeger Farm, 78.30 347 P P 00 45 35.9 -0.2
I42A IAmb IAmb 00 45 36.4
comp=Z,9.9nm,0.8s
F63A Nahmakanta, Br 78.32 1 P P 00 45 37.5 +1.3
baz=181
F63A Nahmakanta, Br 78.32 1 P P 00 45 37.1 +0.9
F63A IAmb IAmb 00 45 37.9
comp=Z,14nm,0.8s
Q24A Divide 78.44 333 P P 00 45 38.5 +1.2
baz=151,SNR=6.5
Q24A Divide 78.44 333 P P 00 45 38.6 +1.2
Q24A IAmb IAmb 00 45 39.5
comp=Z,14nm,0.8s
F64A Sherman 78.49 2 P P 00 45 38.1 +1.0
baz=182
F64A Sherman 78.49 2 P P 00 45 38.0 +1.0
F64A IAmb IAmb 00 45 38.4
comp=Z,16nm,1.0s
F58A St-Lin Laurent 78.52 358 P P 00 45 36.9 -0.3
baz=177
BC3 Big Chuckawall 78.57 323 P P 00 45 39.2 +1.2
baz=143
F60A Wawick 78.58 359 P P 00 45 37.6 0.0
baz=179
IRM Iron Mountain 78.82 324 P P 00 45 40.5 +1.3
baz=143
E60A Ste Agathe de 78.97 359 P P 00 45 40.1 +0.4
baz=179
E58A La Victoria 79.01 358 P P 00 45 39.9 0.0
baz=178
TPFO Pinon Flats 79.04 322 P P 00 45 42.1 +1.5
baz=142
E63A Oxbow 79.05 2 P P 00 45 40.1 0.0
baz=182
E63A Oxbow 79.05 2 P P 00 45 40.8 +0.7
E63A IAmb IAmb 00 45 41.3
comp=Z,7.9nm,0.7s
PFO Pinyon Flats O 79.05 322 P P 00 45 42.0 +1.4
baz=142
E57A Chemin Saint G 79.08 357 P P 00 45 40.0 -0.4
baz=177
PV01 Paradox Valley 79.08 330 P P 00 45 42.4 +1.6
KOWA Kowa 79.10 65 P P 00 45 41.0 -0.1
KOWA IAmb IAmb 00 45 41.8
comp=Z,11nm,0.7s
PV13 Radium Mtn., P 79.21 330 P P 00 45 41.8 +0.3
PV02 Paradox Valley 79.22 330 P P 00 45 42.4 +0.9
E62A Clayton Lake 79.23 1 P P 00 45 42.4 +1.3
baz=181
E62A Clayton Lake 79.23 1 P P 00 45 41.9 +0.8
E62A IAmb IAmb 00 45 42.7
comp=Z,8.7nm,0.8s
E56A St. Veronique 79.25 357 P P 00 45 41.2 0.0
baz=176
U15A North Rim 79.29 327 P P 00 45 43.5 +1.5
PV03 Paradox Valley 79.30 330 P P 00 45 43.3 +1.3
PV18 Skein Mesa, Pa 79.32 330 P P 00 45 43.4 +1.3
SMCO Snowmass 79.33 332 P P 00 45 44.6 +2.3
SMCO IAmb IAmb 00 45 44.9
comp=Z,10nm,0.8s
PV12 Saucer Basin, 79.33 330 P P 00 45 43.6 +1.5
ISCO Idaho Springs 79.34 333 P P 00 45 43.4 +1.1
baz=151,SNR=6.6
ISCO Idaho Springs 79.34 333 P P 00 45 44.1 +1.8
PV17 East Wray Mesa 79.37 330 P P 00 45 43.1 +0.8
PV17 IAmb IAmb 00 45 44.1
comp=Z,8.1nm,0.7s
PV16 Nyswonger Mesa 79.38 330 P P 00 45 41.8 -0.7
MURC Murrieta 79.42 322 P P 00 45 44.1 +1.6
baz=142
BOSA Boshof 79.46 117 P P 00 45 43.0 -0.2
comp=Z,6.0nm,0.8s,baz=248,slow=5.9,SNR=5.2
PV22 Blue Mesa, Par 79.51 330 P P 00 45 44.0 +0.9
GMRC Granite Mounta 79.57 324 P P 00 45 45.0 +1.5
baz=143
D63A Stockholm 79.67 2 P P 00 45 44.5 +1.0
baz=182
D58A Chemin du LacG 79.72 358 P P 00 45 44.4 +0.7
baz=178
D56A ZEC Mazanza, M 79.74 357 P P 00 45 44.2 +0.3
baz=176
D55A Sainte-Anne-du 79.74 357 P P 00 45 43.5 -0.3
baz=176
HEC Hector,Ludlow 79.95 323 P P 00 45 47.4 +2.0
baz=142,SNR=7.1
ECSD EROS Data Cent 79.96 341 P P 00 45 45.3 +0.2
baz=158
ECSD EROS Data Cent 79.96 341 P P 00 45 45.3 +0.2
ECSD IAmb IAmb 00 45 46.1
comp=Z,16nm,0.9s
KNB Kanab 80.01 327 P P 00 45 47.9 +2.1
BFSC Mount Baldy Ra 80.16 322 P P 00 45 48.1 +1.5
baz=141
TUQ Turquoise Moun 80.22 324 P P 00 45 48.5 +1.5
baz=143
E43A Lone Tree Farm 80.36 349 P P 00 45 47.5 +0.3
E43A IAmb IAmb 00 45 51.7

comp=Z,17nm,1.1s
SPMN Marine on St. 80.40 344 P P 00 45 46.7 -0.8
baz=161
GSC Goldstone, Bar 80.56 323 P P 00 45 50.2 +1.6
baz=142
MTPU Mount Pierson 80.56 328 P P 00 45 50.3 +1.3
O20A White River Ci 80.65 332 P P 00 45 50.2 +1.0
baz=149
O20A White River Ci 80.65 332 P P 00 45 50.5 +1.3
SHPR Sheep Range 80.70 325 P P 00 45 50.7 +1.2
SRU San Rafael Swe 80.73 330 P P 00 45 50.4 +0.8
EDW2 Edwards Air Fo 80.83 322 P P 00 45 51.7 +1.6
baz=141
Q16A Castle Valley 80.84 329 P P 00 45 52.0 +1.8
MSU Marysvale 80.95 328 P P 00 45 52.0 +1.2
LRMC Laurel Mtn Rad 81.14 323 P P 00 45 53.3 +1.5
baz=142
F36A Milaca 81.17 344 P P 00 45 51.4 -0.2
F36A IAmb IAmb 00 45 51.9
comp=Z,7.5nm,0.8s
TMUT Trail Mountain 81.17 329 P P 00 45 52.9 +0.8
D41A Chassel 81.29 348 P P 00 45 52.4 +0.2
PRN Pahroc Range 81.37 326 P P 00 45 55.5 +2.5
PRN IAmb IAmb 00 45 56.4
comp=Z,14nm,0.9s
MPMC Manual Prospec 81.49 323 P P 00 45 55.0 +1.2
baz=142
FURC Furnace Creek, 81.50 324 P P 00 45 55.9 +2.4
baz=142
RDMU Red Mountain 81.56 331 P P 00 45 54.8 +0.8
TPNV Topopah Spring 81.58 325 P P 00 45 56.0 +1.8
baz=143,SNR=7.6
TPNV Topopah Spring 81.58 325 P P 00 45 55.9 +1.8
LBTB Lobatse 81.62 114 P P 00 45 54.4 -0.4
ISA Isabella, Lake 81.69 322 P P 00 45 56.3 +1.7
baz=141,SNR=5.7
PSUT Pine Spring 81.72 327 P P 00 45 55.5 +0.6
PKM Mcpherson Peak 81.79 321 P P 00 45 57.3 +2.0
baz=140
LSQQ Lebel-sur-Quev 81.86 356 P P 00 45 54.8 -0.3
baz=174
CWC Cottonwood Cre 82.09 323 P P 00 45 58.3 +1.4
baz=141
VES Vestal, Richgr 82.14 322 P P 00 45 58.5 +1.6
baz=141,SNR=5.2
K22A Casper 82.16 334 P P 00 45 58.5 +1.4
baz=150
GRAC Grapevine Rang 82.17 324 P P 00 45 58.7 +1.6
baz=142
SPR3 Spring Creek 3 82.32 327 P P 00 45 59.5 +1.3
SPR3 IAmb IAmb 00 46 00.2
comp=Z,12nm,1.1s
R11A Troy Canyon, C 82.38 326 P P 00 45 59.7 +1.4
baz=143,SNR=9.8
R11A Troy Canyon, C 82.38 326 P P 00 45 59.9 +1.6
RSSD Black Hills 82.57 336 P P 00 45 59.6 +0.4
baz=152
RSSD Black Hills 82.57 336 P P 00 46 00.1 +0.9
RSSD IAmb IAmb 00 46 00.7
comp=Z,10nm,0.8s
DUG Dugway, Tooele 82.61 329 P P 00 46 00.4 +1.0
baz=145,SNR=7.4
DUG Dugway, Tooele 82.61 329 P P 00 46 00.9 +1.4
DRLN Deer Lake 82.69 9 P P 00 46 00.2 +0.9
TOA0 Torodi Ar. Sit 82.71 69 P P 00 46 00.3 -0.1
TOA0 IAmb IAmb 00 46 01.0
comp=Z,12nm,0.7s
TORD Torodi Ar. Bea 82.71 69 P P 00 45 59.9 -0.5
comp=Z,11nm,0.8s,baz=287,slow=5.9,SNR=57
TORD pP pP 00 46 24.5 -0.5
comp=Z,3.4nm,0.8s,baz=292,slow=6.2,SNR=3.6
TORD Torodi Ar. Bea 82.71 69 P P 00 45 59.9 -0.5
HWUT Hardware Ranch 83.25 330 P P 00 46 03.6 +0.9
HWUT IAmb IAmb 00 46 03.8
comp=Z,7.3nm,0.8s
SPUT South Promonto 83.37 330 P P 00 46 04.4 +1.1
BW06 Boulder Array 83.41 332 P P 00 46 03.5 -0.1
baz=148
BW06 Boulder Array 83.41 332 P P 00 46 04.0 +0.4
PD31 Pinedale Array 83.41 332 P P 00 46 03.9 +0.3
PDAR Pinedale Array 83.41 332 P P 00 46 03.9 +0.3
comp=Z,2.0nm,0.7s,baz=131,slow=6.1,SNR=17
PDAR Pinedale Array 83.41 332 P P 00 46 03.5 -0.1
OMMB Old Mammoth Mi 83.46 323 P P 00 46 05.8 +1.7
OMMB IAmb IAmb 00 46 06.4
comp=Z,8.3nm,0.9s
B35A Bob, Littlefor 83.57 345 P P 00 46 03.9 -0.1
B35A IAmb IAmb 00 46 04.4
comp=Z,9.0nm,0.8s
NV11 Mina Array Sit 83.68 324 P P 00 46 06.0 +1.0
LHV Little Huntoon 83.71 324 P P 00 46 07.2 +2.3
LHV IAmb IAmb 00 46 07.8
comp=Z,13nm,0.8s
NVAR Mina Array Bea 83.75 324 P P 00 46 06.3 +0.9
comp=Z,6.8nm,0.8s,baz=157,slow=5.8,SNR=59
NVAR pP pP 00 46 29.8 +0.3
comp=Z,0.9nm,0.7s,baz=140,slow=7.6,SNR=2.0
HVU Hansel Valley 83.90 330 P P 00 46 06.8 +0.8
AGMN Agassiz Nation 84.01 343 P P 00 46 06.0 -0.2
baz=159
RYN Ryan 84.01 324 P P 00 46 08.0 +1.2
RYN IAmb IAmb 00 46 09.0
comp=Z,7.9nm,0.9s
AHID Auburn Hatcher 84.02 331 P P 00 46 07.4 +0.7
AHID IAmb IAmb 00 46 08.1
comp=Z,5.8nm,0.8s
KVN Kaiserville 84.13 325 P P 00 46 08.0 +0.6
KVN IAmb IAmb 00 46 09.3
comp=Z,8.5nm,0.9s
ELK Elko 84.14 328 P P 00 46 08.2 +0.8
ELK IAmb IAmb 00 46 09.2
comp=Z,7.1nm,0.8s
WAKR Walker 84.37 324 P P 00 46 10.5 +1.9
WAKR IAmb IAmb 00 46 11.6
comp=Z,9.1nm,1.1s
REDW Red Top Meadow 84.42 332 P P 00 46 09.2 +0.4
REDW IAmb IAmb 00 46 10.2
comp=Z,9.4nm,1.1s
SNOW Snow King Moun 84.47 332 P P 00 46 09.2 +0.2
CMB Columbia Colle 84.49 323 P P 00 46 10.3 +1.4
MDND Maddock 84.56 341 P P 00 46 09.8 +0.7
baz=156
MDND Maddock 84.56 341 P P 00 46 09.3 +0.3
TPAW Teton Pass 84.57 332 P P 00 46 10.4 +0.8
TPAW IAmb IAmb 00 46 11.1
comp=Z,9.3nm,1.0s
PNTR Pine Nut 84.90 324 P P 00 46 13.3 +2.0
PNTR IAmb IAmb 00 46 13.9
comp=Z,12nm,0.8s
IMW Indian Meadow 84.90 332 P P 00 46 12.2 +0.9
IMW IAmb IAmb 00 46 12.9
comp=Z,11nm,1.1s
FLWY Flagg Ranch 84.96 332 P P 00 46 12.5 +1.0
FLWY IAmb IAmb 00 46 13.4
comp=Z,19nm,1.1s
H17A Grant Village 85.18 332 P P 00 46 14.1 +1.5
baz=147
PAHR Pah Rah Range 85.27 324 P P 00 46 14.6 +1.6
RLMT Red Lodge 85.29 334 P P 00 46 13.9 +0.9
RLMT IAmb IAmb 00 46 14.1
comp=Z,8.6nm,0.8s
YNE Yellowstone No 85.48 333 P P 00 46 14.8 +0.7
AFDM Forest Hills D 85.48 323 P P 00 46 15.2 +1.3
YMR Madison River 85.56 332 P P 00 46 15.5 +1.1
YHH Holmes Hill 85.61 333 P P 00 46 15.5 +0.7
YHB Horse Butte 85.72 332 P P 00 46 15.8 +0.6
YHL Hebgen Lake 85.80 332 P P 00 46 17.2 +1.5
ULM Lac du Bonnet 85.83 344 P P 00 46 14.7 -0.7
comp=Z,4.4nm,0.7s,baz=180,slow=14,SNR=4.2
BEKR Beckworth 85.87 324 P P 00 46 16.8 +0.8
HLID Hailey 86.05 330 P P 00 46 18.4 +1.6
baz=144
HLID Hailey 86.05 330 P P 00 46 17.7 +0.9
HLID IAmb IAmb 00 46 19.1
comp=Z,8.1nm,1.1s
ORV Oroville 86.21 323 P P 00 46 19.0 +1.6
BCYI Bear Canyon 86.24 331 P P 00 46 19.0 +1.2
MCMT McKenzie Canyo 86.44 331 P P 00 46 20.4 +1.7
DGMT Dagmar 86.47 338 P P 00 46 19.5 +0.9
baz=152
DGMT Dagmar 86.47 338 P P 00 46 19.2 +0.7
MFID Camas Ranch 86.54 329 P P 00 46 19.2 +0.1
BOZ Bozeman (W) 86.59 332 P P 00 46 20.0 +0.7
baz=146
BOZ Bozeman (W) 86.59 332 P P 00 46 20.1 +0.7

DLMT	**Dillon**	**86.78**	**332**	P	**P**	**00 46 21.6**	**+1.3**
DLMT				IAmb	IAmb	00 46 23.7	
	comp=Z,9.5nm,1.1s						
O03E	**Paynes Creek**	**86.92**	**323**	P	**P**	**00 46 21.4**	**+0.5**
	baz=139						
LRM	**Limekiln Ridge**	**87.10**	**332**	P	**P**	**00 46 23.1**	**+1.1**
O02D	**Mt. Diablo Mer**	**87.33**	**323**	P	**P**	**00 46 23.5**	**+0.5**
	baz=138						
KCPM	**Cahto Peak**	**87.37**	**322**	P	**P**	**00 46 25.1**	**+1.9**
KCPM				IAmb	IAmb	00 46 25.9	
	comp=Z,12nm,0.8s						
MOD	**Modoc Plateau**	**87.40**	**325**	P	**P**	**00 46 24.8**	**+1.4**
MOD				IAmb	IAmb	00 46 25.5	
	comp=Z,7.7nm,0.8s						
WDC	**Whiskeytown Da**	**87.50**	**323**	P	**P**	**00 46 24.1**	**+0.4**
WDC				IAmb	IAmb	00 46 24.7	
	comp=Z,7.4nm,0.9s						
SCHQ	**Schefferville**	**87.50**	**2**	P	**P**	**00 46 22.6**	**-0.7**
	comp=Z,4.7nm,0.9s,baz=67,slow=19,SNR=1.9						
HRY	**Holter Researc**	**87.50**	**333**	P	**P**	**00 46 25.6**	**+1.4**
J08A	**Circle Bar Ran**	**87.67**	**327**	P	**P**	**00 46 26.1**	**+1.5**
KMRM	**Mail Ridge**	**87.83**	**322**	P	**P**	**00 46 27.4**	**+2.0**
N02D	**Trinity Center**	**87.88**	**323**	P	**P**	**00 46 26.3**	**+0.8**
	baz=138						
PLID	**Pearl Lake**	**87.95**	**330**	P	**P**	**00 46 26.9**	**+0.9**
M04C	**Macdoel**	**88.06**	**324**	P	**P**	**00 46 27.9**	**+1.4**
	baz=139						
M02C	**Callahan**	**88.27**	**323**	P	**P**	**00 46 28.8**	**+1.4**
	baz=138						
K05A	**Summer Lake**	**88.31**	**325**	P	**P**	**00 46 29.6**	**+1.9**
K05A				IAmb	IAmb	00 46 30.3	
	comp=Z,15nm,1.1s						
KHMM	**Horse Mountain**	**88.33**	**323**	P	**P**	**00 46 28.5**	**+0.7**
BMO	**Blue Mountains**	**88.33**	**329**	P	**P**	**00 46 28.6**	**+0.9**
JCC	**Jacoby Creek,**	**88.44**	**322**	P	**P**	**00 46 27.9**	**-0.2**
YBH	**Yreka Blue Hor**	**88.45**	**324**	P	**P**	**00 46 28.8**	**+0.5**
YBH				IAmb	IAmb	00 46 29.5	
	comp=Z,5.9nm,1.1s						
MSO	**Missoula**	**88.52**	**332**	P	**P**	**00 46 29.8**	**+1.3**
	baz=145						
L04D	**Klamath Falls**	**88.61**	**324**	P	**P**	**00 46 29.8**	**+0.7**
	baz=139						
I07A	**Izee**	**88.71**	**327**	P	**P**	**00 46 29.7**	**+0.2**
I07A				IAmb	IAmb	00 46 31.8	
	comp=Z,9.3nm,1.0s						
KRMB	**Red Mountain**	**88.89**	**323**	P	**P**	**00 46 30.3**	**-0.1**
J05D	**Fort Rock, OR**	**88.90**	**326**	P	**P**	**00 46 31.5**	**+1.1**
	baz=140						
PINE	**Pine Mountain**	**89.15**	**326**	P	**P**	**00 46 32.3**	**+0.7**
PINE				IAmb	IAmb	00 46 34.2	
	comp=Z,9.8nm,0.9s						
G08A	**Pilot Rock**	**89.40**	**328**	P	**P**	**00 46 32.6**	**0.0**
JTMT	**Jette**	**89.40**	**332**	P	**P**	**00 46 33.0**	**+0.4**
JTMT				IAmb	IAmb	00 46 34.3	
	comp=Z,5.2nm,0.7s						
K02D	**Willamette Mer**	**89.64**	**324**	P	**P**	**00 46 35.0**	**+1.2**
	baz=138						
I05D	**Terrebonne, OR**	**89.75**	**326**	P	**P**	**00 46 35.5**	**+1.2**
	baz=139						
F07A	**Phinny Hill Vi**	**90.30**	**328**	P	**P**	**00 46 36.5**	**-0.1**
F07A				IAmb	IAmb	00 46 39.0	
	comp=Z,6.6nm,0.9s						
WALA	**Waterton Lakes**	**90.33**	**333**	P	**P**	**00 46 37.0**	**0.0**
WALA				IAmb	IAmb	00 46 38.4	
	comp=Z,8.1nm,1.0s						
HAWA	**Hanford**	**90.51**	**329**	P	**P**	**00 46 38.6**	**+0.9**
HAWA				IAmb	IAmb	00 46 39.7	
	comp=Z,7.5nm,0.9s						
D08A	**Wollman Farm,**	**90.76**	**329**	P	**P**	**00 46 39.0**	**+0.1**
D08A				IAmb	IAmb	00 46 40.3	
	comp=Z,5.8nm,0.9s						
C09A	**Chrisman Ranch**	**91.06**	**330**	P	**P**	**00 46 40.4**	**+0.1**
E04D	**Cinebar**	**91.99**	**327**	P	**P**	**00 46 46.1**	**+1.5**
	baz=138						
ESDC	**Sonseca Array**	**94.99**	**45**	P	**P**	**00 46 57.9**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=96,slow=22,SNR=2.7						
ESDC	**Sonseca Array**	**94.99**	**45**	IAmb	IAmb	00 46 59.0	
	comp=Z,2.9nm,1.1s						
YKA	**Yellowknife Ar**	**101.48**	**341**	P	**Pdif**	**00 47 26.6**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=141,slow=5.4,SNR=4.1						
VYHS	**Vyhne**	**113.50**	**46**	*e*PDIFF	**Pdif**	**00 48 25.1**	**+4.2**
ASAR	**Alice Springs**	**119.03**	**206**	PKP	**PKPdf**	**00 52 23.9**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=145,slow=2.5,SNR=10.0						
ASAR				pPKP	**pPKPdf**	**00 52 49.3**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=163,slow=1.8,SNR=3.4						
A21K	**Barrow**	**119.61**	**338**	P	**PKiKP**	**00 52 24.9**	**+0.4**
	baz=105						
BRTR	**Keskin Array B**	**120.27**	**60**	PKP	**PKPdf**	**00 52 26.1**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=81,slow=15,SNR=4.0						
BRTR				pPKP	**pPKPdf**	**00 52 51.6**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=165,slow=5.1,SNR=3.5						
AKASG	**Malin Array Be**	**120.60**	**47**	PKP	**PKPdf**	**00 52 25.8**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=264,slow=2.6,SNR=9.7						
FINES	**FINESS Array B**	**121.46**	**34**	PKP	**PKPdf**	**00 52 27.6**	**-0.6**
	comp=Z,2.9nm,1.1s,baz=188,slow=7.7,SNR=1.6						
WRA	**Warramunga Arr**	**122.25**	**208**	PKP	**PKPdf**	**00 52 30.5**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=161,slow=1.7,SNR=47						
WRA				pPKP	**pPKPdf**	**00 52 55.5**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=167,slow=1.6,SNR=4.5						
TNA	**Tin City**	**122.50**	**331**	P	**PKPdf**	**00 52 29.7**	**-0.4**
	baz=99						
H11S2	**WAKE ISLAND Hy**	**127.00**	**269**	T	T	03 12 12.9	
	baz=118,slow=75,SNR=253						
H11S1	**WAKE ISLAND Hy**	**127.02**	**269**	T	T	03 12 07.6	
	baz=118,slow=75,SNR=470						
H11S3	**WAKE ISLAND Hy**	**127.02**	**269**	T	T	03 12 13.8	
	baz=118,slow=75,SNR=257						
H11N3	**WAKE ISLAND Hy**	**127.39**	**271**	T	T	03 12 33.1	
	baz=118,slow=76,SNR=38						
H11N1	**WAKE ISLAND Hy**	**127.41**	**271**	T	T	03 12 34.1	
	baz=118,slow=76,SNR=24						
H11N2	**WAKE ISLAND Hy**	**127.41**	**271**	T	T	03 12 34.4	
	baz=118,slow=76,SNR=88						
HYB	**Hyderabad**	**148.22**	**112**	*i* PKP	**PKPbc**	**00 53 21.0**	**-1.4**
KSH	**Kashi**	**152.35**	**67**	*e*PKP	**PKPbc**	**00 53 32.0**	**+0.2**
KSH				pPKP	PKPab	00 53 41.3	-0.9
ZALV	**Zalesovo Beam**	**152.71**	**32**	PKP	**PKPdf**	**00 53 25.2**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=248,slow=1.6,SNR=6.3						
ZALV				PKPbc	**PKPbc**	**00 53 31.6**	**-0.3**
	comp=Z,24nm,0.7s,baz=302,slow=3.0,SNR=89						
ZALV				pPKPbc	**pPKPbc**	**00 53 58.0**	**+0.8**
	comp=Z,8.0nm,0.6s,baz=310,slow=3.2,SNR=5.8						
MKAR	**Makanchi Array**	**155.17**	**48**	PKPbc	PKPdf	00 53 37.4	+8.8
	comp=Z,1.5nm,0.7s,baz=308,slow=2.0,SNR=8.9						
MKAR				pPKPab	**PKPab**	**00 53 53.5**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=298,slow=4.4,SNR=14						
MKAR				pPKPbc	pPKPbc	00 54 02.9	0.0
	comp=Z,1.9nm,0.8s,baz=266,slow=4.2,SNR=3.8						
MKAR				pPKPab	pPKPab	00 54 19.6	+0.9
	comp=Z,1.8nm,0.7s,baz=296,slow=4.2,SNR=3.8						
MJAR	**Matsushiro Arr**	**156.12**	**287**	PKPab	**PKPab**	**00 53 59.3**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=73,slow=3.5,SNR=4.0						
USRK	**Ussuriysk Ar.**	**159.16**	**309**	PKPab	**PKPab**	**00 54 11.3**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=186,slow=1.9,SNR=5.1						
CMAR	**Chiang Mai Arr**	**162.76**	**144**	PKPab	**PKPab**	**00 54 26.6**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=231,slow=4.7,SNR=4.5						
KSRS	**Korea Array**	**164.23**	**292**	PKP	**PKPdf**	**00 53 39.0**	**0.0**
	comp=Z,1.1nm,0.6s,baz=40,slow=36,SNR=2.1						
KSRS				PKPab	**PKPab**	**00 54 33.7**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=111,slow=2.8,SNR=6.8						
SONM	**Songino Array**	**164.98**	**8**	PKPab	**PKPab**	**00 54 36.2**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=324,slow=3.7,SNR=8.9						
GTA	**Gaotai**	**169.93**	**48**	PKP	**PKPdf**	**00 53 44.3**	**+0.9**
GTA				pPKP	pPKPdf	00 54 12.0	+2.9
GTA				sPKP		00 54 20.5	
GTA				PKPab	**PKPab**	**00 54 59.5**	**+0.8**
GTA				LR	LR		
	comp=N,2μm,19.3s						
GTA				LR	LR		
	comp=E,4μm,19.6s						
GTA				LR	LR		
	comp=Z,5μm,20.0s						
LZH	**Lanzhou**	**174.45**	**54**	*e*PKP	**PKPdf**	**00 53 43.9**	**-1.7**
LZH				pPKP	pPKPdf	00 54 09.3	-1.9
LZH				sPKP		00 54 23.4	

IDC 17 00:38:28.3±5.5,6.06S×127.66E,h364km±76km, mb3.0/2, mb1 2.8/5, mb1mx2.6/40, mbtmp3.6/5, Error ellipse: s-maj=110.1km s-min=17.5km az=82.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.29**	**35**	P	Pn	00 40 03.6	+0.6
	3.0nm,0.3s,baz=44,slow=21,SNR=6.9						
SIJI				S	S	00 41 19.7	-0.3
	1.0nm,0.3s,baz=136,slow=23,SNR=1.2						
WRA	**Warramunga Arr**	**15.25**	**155**	P	P	00 41 45.2	+0.2
	0.1nm,0.3s,baz=333,slow=11,SNR=9.2						
ASAR	**Alice Springs**	**18.51**	**162**	P	P	00 42 19.8	-0.1
	0.2nm,0.3s,baz=345,slow=12,SNR=7.0						
SONM	**Songino Array**	**56.85**	**343**	P	P	00 47 36.5	+0.4
	0.3nm,0.5s,baz=160,slow=4.6,SNR=2.4						
MKAR	**Makanchi Array**	**66.18**	**328**	P	P	00 48 37.7	-0.2
	0.6nm,0.4s,baz=110,slow=8.1,SNR=10						

*REY **17** 00:38:50.0, 64.68N×17.42W, h16km*
*IDC **17** 00:38:50.8±0.9, 64.58N×17.56W, h0km, mb3.6/7, mb1 3.8/10, mb1mx3.6/48, mbtmp3.6/10, ML2.6/2, Error ellipse: s-maj=27.7km s-min=11.0km az=15.0*
*NEIC **17** 00:38:51.5±1.5, 64.35N±0.08×17.9W±0.2, h8km±5km, mb4.2/17, Error ellipse: s-maj=11.7km s-min=9.6km az=174.0*

ISC 17 00:38:49.7±1.0, 64.66N±0.03×17.39W±0.02, h5km±7km, n54, σ2.908/59, mb4.0/13, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.14**	**3**	P	**Pg**	**00 38 53.4**	**+0.8**
	baz=11						
IDYN				S	**Sg**	**00 38 55.9**	**+1.5**
	baz=11						
IVON	**Vonarskard**	**0.16**	**276**	P	**Pg**	**00 38 53.5**	**+0.6**
	baz=268						
IVON				S	**Sg**	**00 38 56.2**	**+1.1**
	baz=268						
IKVE	**Kverkfjoll**	**0.30**	**85**	P	**Pg**	**00 38 57.0**	**+1.3**
	baz=90						
IKVE				S	**Sg**	**00 39 00.8**	**+1.0**
	baz=90						
IVOT	**Vottur**	**0.40**	**167**	P	**Pg**	**00 38 58.0**	**+0.6**
	baz=166						
THOR	**Thorvaldshraun**	**0.41**	**47**	P	**Pg**	**00 38 57.4**	**-0.2**
	baz=51						
THOR				S	**Sb**	**00 39 04.5**	**-1.7**
	baz=51						
ISKR	**Skrokkalda**	**0.44**	**258**	P	**Pg**	**00 38 58.5**	**+0.2**
	baz=255						
IJOK	**Jokulheimar**	**0.50**	**227**	P	**Pg**	**00 38 59.2**	**-0.1**
	baz=224						
IJOK				S	**Sg**	**00 39 06.0**	**+0.2**
	baz=224						
IASK	**Askja**	**0.51**	**38**	P	**Pg**	**00 38 59.0**	**-0.5**
	baz=41						
IMKO	**Mokollar**	**0.55**	**54**	P	**Pg**	**00 38 59.8**	**-0.6**
	baz=56						
IMKO				S	**Sg**	**00 39 08.3**	**+0.8**
	baz=56						
IKSK	**Karasker**	**0.64**	**141**	P	**Pg**	**00 39 00.9**	**-1.0**
	baz=141						
IKSK				S	**Sg**	**00 39 10.2**	**+0.1**
	baz=141						
IIEY	**Innrieyrar**	**0.65**	**210**	P	**Pg**	**00 39 01.6**	**-0.5**
	baz=208						
IADA	**Aoalbol**	**0.85**	**64**	P	**Pb**	**00 39 04.3**	**-2.8**
	baz=66						
IADA				S	**Sb**	**00 39 17.7**	**-1.2**
	baz=66						
IMEL	**Melhnausar**	**0.97**	**18**	P	**Pb**	**00 39 06.7**	**-2.3**
	baz=19						
ISNB	**Snabyli**	**1.07**	**211**	S	**Sb**	**00 39 23.8**	**-1.3**
	baz=210						
ISNB				P	**Pb**	**00 39 09.1**	**-1.7**
	baz=210						
ISKI	**Skildingahlsh**	**1.23**	**7**	P	**Pn**	**00 39 10.7**	**-2.9**
	baz=7.7						
BORG	**Borgarnes**	**1.70**	**275**	Pg	**Pn**	**00 39 18.7**	**-1.2**
	20nm,0.3s,baz=96,slow=9.6,SNR=37						
BORG				Lg	Lg	00 39 42.5	
	15nm,0.3s,baz=251,slow=20,SNR=8.9						
BORG	**Borgarnes**	**1.70**	**275**	Pn	**Pn**	**00 39 19.3**	**-0.7**
SCO	**Scoresbysund**	**6.11**	**345**		Pn	00 40 24.9	+4.4
SCO	**Scoresbysund**	**6.11**	**345**	*e*	**Pn**	**00 40 20.1**	**-0.4**
	baz=168,slow=8.6						
SCO				*i* P	**Pn**	**00 40 22.5**	**+2.0**
SCO				*e*S	**Sb**	**00 41 43.5**	**-6.3**
EKA	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**00 41 38.9**	**+1.5**
	baz=326,slow=13,SNR=12						
NC204	**NORSAR Array S**	**13.18**	**92**	Pn	**P**	**00 42 02.9**	**-4.8**
NRS	**Narsarsuaq**	**13.19**	**268**	Pn	**Pn**	**00 41 56.0**	**-1.4**
NBO00	**NORSAR Array S**	**13.30**	**93**	Pn	P	00 42 03.4	-5.5
NOA	**NORSAR Array B**	**13.48**	**92**	Pn	**Pn**	**00 42 01.0**	**-0.5**
	0.0nm,0.3s,baz=159,slow=8.9,SNR=2.2						
KBS	**Kingsbay**	**16.63**	**19**	Pn	**P**	**00 42 47.4**	**+1.7**
KBS				IAmb	IAmb	00 43 06.5	
	comp=Z,9.8nm,0.8s						
ARD1	**ARCESS Array S**	**17.09**	**55**		**P**	**00 42 55.0**	**+4.3**
ARD1				IAmb	IAmb	00 43 12.9	
	comp=Z,12nm,1.1s						
KEV	**Kevo**	**17.59**	**54**	P	P	00 43 02.5	+6.2
FINES	**FINESS Array B**	**19.66**	**79**	P	**Pn**	**00 43 22.2**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=294,slow=12,SNR=1.1						
CLL	**Collm**	**20.66**	**116**	P	Pn	00 43 32.1	-0.1
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P	**P**	**00 43 39.9**	**+2.3**
	comp=Z,9.0nm,1.3s						
KHC	**Kasperske Hory**	**22.63**	**119**	*e*P	**P**	**00 43 55.0**	**+3.8**
DPC	**Dobruska-Polom**	**22.71**	**113**	*e*P	**P**	**00 43 55.3**	**+3.2**
GEC2	**GERESS Array S**	**22.91**	**119**	P	**P**	**00 43 56.1**	**+1.8**
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**00 43 56.8**	**+2.5**
	comp=Z,0.6nm,0.9s,baz=7,9,slow=30,SNR=3.3						
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**00 43 56.1**	**+1.8**
VRAC	**Vranov**	**23.64**	**114**	P	**P**	**00 44 03.7**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=3,3,slow=19,SNR=2.5						
OJC	**Ojcow**	**24.21**	**109**	P	**P**	**00 44 10.1**	**+3.1**
PSZ	**Piszkesteto**	**26.07**	**112**	P	**P**	**00 44 25.8**	**+1.9**
PSZ				IAmb	IAmb	00 44 31.3	
	comp=Z,4.3nm,1.1s						
ESDC	**Sonseca Array**	**26.22**	**156**	P	**P**	**00 44 27.0**	**+1.6**
	comp=Z,1.0nm,1.0s,baz=354,slow=10,SNR=4.8						
ESDC	**Sonseca Array**	**26.22**	**156**	P	**P**	**00 44 25.7**	**+0.3**
OSSC	**Osservatorio P**	**26.59**	**129**	P	**P**	**00 44 29.3**	**+0.7**
OSSC				IAmb	IAmb	00 44 45.1	
	comp=Z,12nm,1.2s						
NRCA	**Norcia**	**27.84**	**127**	P	**P**	**00 44 39.9**	**0.0**
NRCA				IAmb	IAmb	00 44 56.0	
	comp=Z,2.9nm,1.0s						
PFVI	**Vila Bisbo**	**28.03**	**165**	P	**P**	**00 44 38.7**	**-2.8**
TIR	**Tirane**	**31.57**	**119**	P	**P**	**00 45 14.0**	**+1.1**
LMN	**Caledonia Moun**	**31.89**	**257**	P	**P**	**00 45 12.8**	**-2.7**
LMN				IAmb	IAmb	00 45 18.3	
	comp=Z,7.4nm,1.1s						
PQI	**Presque Isle**	**32.59**	**261**	P	**P**	**00 45 20.5**	**-1.2**
PQI				IAmb	IAmb	00 45 26.5	
	comp=Z,6.9nm,1.0s						
D62A	**Allapoint, All**	**32.71**	**263**	P	**P**	**00 45 22.2**	**-0.5**
YKA	**Yellowknife Ar**	**39.26**	**313**	P	**P**	**00 46 20.3**	**+1.7**
	comp=Z,1.6nm,1.0s,baz=41,slow=8.5,SNR=5.3						
P51A	**Williamsport**	**44.86**	**269**	P	**P**	**00 47 03.5**	**-1.1**
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**00 47 14.2**	**+3.0**
	comp=Z,2.2nm,1.2s,baz=20,slow=5.6,SNR=6.4						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**00 48 11.2**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=64,slow=5.1,SNR=4.4						
PDAR	**Pinedale Array**	**53.23**	**293**	P	P	00 48 12.1	+3.2
GAR	**Garm**	**54.61**	**73**	P	P	00 48 22.7	+3.8
SONM	**Songino Array**	**59.62**	**40**	P	**P**	**00 48 55.4**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=350,slow=5.9,SNR=2.4						

WEL 17 00:44:48.2, 43.3S×325.7×17.2E±12.0, h56km±173km, M2.3/4, ML2.3/3, MLv2.3/4, Error ellipse: s-maj=0.5km s-min=0.2km az=171.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.31**	**324**	P	Pn	00 44 58.4	+0.3
OXZ	**Oxford**	**0.43**	**144**	P	Pn	00 45 05.2	+6.0
MHCZ	**Mount Hutt**	**0.56**	**190**	P	Pn	00 45 01.3	+0.7
RPZ	**Rata Peaks**	**0.87**	**212**	P	Pn	00 45 01.9	-2.6
ARCZ	**Arundel**	**1.04**	**201**	P	Pn	00 45 06.3	-0.3
GCSZ	**Gaunt Creek Bo**	**1.06**	**251**	P	Pn	00 44 59.7	-7.1
DSZ	**Denniston Nort**	**1.23**	**4**	P	Pn	00 45 16.7	+7.5
FOZ	**Fox Glacier**	**1.48**	**247**	P	Pn	00 45 08.1	-4.4
LBZ	**Lake Benmore**	**1.78**	**217**	P	Pn	00 45 17.2	+0.5
JCZ	**Jackson Bay**	**2.38**	**242**	P	Pn	00 45 24.9	0.0

IDC 17 00:47:16.3±5.6, 1.41N×165.15E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/40, mbtmp3.8/4, Error ellipse: s-maj=160.0km s-min=37.6km az=99.0, Gilbert Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.92**	**233**	P	P	00 54 26.6	-0.7
	1.2nm,0.8s,baz=66,slow=9.6,SNR=7.2						
ASAR	**Alice Springs**	**39.30**	**229**	P	P	00 54 46.5	-0.8
	1.9nm,0.9s,baz=63,slow=9.1,SNR=16						
STKA	**Stephens Creek**	**39.93**	**212**	P	P	00 54 54.2	+1.7
	1.6nm,0.6s,baz=23,slow=14,SNR=4.6						
SONM	**Songino Array**	**68.44**	**322**	P	P	00 58 20.2	-0.2
	0.2nm,0.3s,baz=106,slow=5.1,SNR=2.0						

*SKHL **17** 00:55:35.3±0.1, 44.86N×151.54E, h54km±4km, mb4.8/3*
*JMA **17** 00:55:38.3±0.7, 45.30N×151.10E, h30km, M4.3*
*IDC **17** 00:55:41.0±4.5, 46.27N×150.52E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/50, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=112.2km s-min=29.3km az=156.0*

ISC 17 00:55:37.0±1.2, 44.7N±0.1×151.3E±0.1, h35km, n35, σ1.992/37, mb3.7/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.53**	**284**	*e*P	**Pn**	**00 56 14.5**	**-1.0**
KUR				AMB	AMB	00 56 19.2	
	70nm,0.3s						
KUR				*i* S	**Sn**	**00 56 43.9**	**-1.1**
KUR				A	A	00 56 47.6	
	270nm,0.4s						
KUR				A	A	00 56 47.6	
	68nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.98**	**262**	*e*P	**Pn**	**00 56 35.5**	**0.0**
YUK				AMB	AMB	00 56 37.0	
	90nm,0.3s						
YUK				*i* S	**Sn**	**00 57 20.7**	**-0.3**
YUK				A	A	00 57 36.2	
	250nm,0.7s						
YUK				A	A	00 57 36.2	
	330nm,0.7s						
GRPR	**Tuman**	**4.06**	**262**	*e*P	**Pn**	**00 56 38.0**	**+1.5**
GRPR				AMB	AMB	00 56 44.0	
	43nm,0.4s						
GRPR				*i* S	**Sn**	**00 57 24.0**	**+1.2**
GRPR				A	A	00 57 26.0	
	112nm,0.3s						
GRPR				A	A	00 57 26.0	
	90nm,0.3s						
NEM2	**Nemuro 2**	**4.25**	**254**	P	**Pn**	**00 56 40.8**	**+1.6**
NEM2				*e*S	**Sn**	**00 57 27.3**	**-0.2**
NMR	**Nemuro--Hokkai**	**4.26**	**254**	*e*P	**Pn**	**00 56 40.0**	**+0.7**
NMR				*e*S	**Sn**	**00 57 27.0**	**-0.7**
GLVR	**Golovnino**	**4.29**	**259**	*e*S	**Sn**	**00 57 30.0**	**+1.4**
JRA	**Rausu**	**4.53**	**263**	P	**Pn**	**00 56 45.8**	**+2.8**
JNK	**Nakash**	**4.89**	**259**	P	**Pn**	**00 56 50.4**	**+2.3**
JNK				*e*S	**Sn**	**00 57 44.4**	**+1.0**
JAK	**Akkeshi**	**5.09**	**253**	P	**Pn**	**00 56 52.3**	**+1.5**
JTKR	**Abashiri--Toko**	**5.38**	**265**	P	**Pn**	**00 56 57.5**	**+2.8**
JAR	**Ashorobuto**	**5.64**	**258**	P	**Pn**	**00 57 00.9**	**+2.6**
JOB	**Onbets**	**5.72**	**254**	P	**Pn**	**00 57 01.5**	**+2.1**
JCH	**Churui**	**6.15**	**253**	P	**Pn**	**00 57 07.1**	**+1.8**
JKK2	**Kamakawa 2**	**6.22**	**265**	P	**Pn**	**00 57 09.7**	**+3.4**
ASAJ	**Asahikawa**	**6.29**	**268**	Pn	**Pn**	**00 57 10.6**	**+3.3**
	1.2nm,0.3s,baz=79,slow=11,SNR=2.1						
JFR	**Furan**	**6.50**	**259**	P	**Pn**	**00 57 12.1**	**+2.0**
JNBK	**Urakawa-nobuka**	**6.70**	**252**	P	**Pn**	**00 57 14.3**	**+1.5**
JBT2	**Biratori 2**	**6.78**	**257**	P	**Pn**	**00 57 16.1**	**+2.2**
JNB	**Noboribetsu**	**7.80**	**257**	P	**Pn**	**00 57 30.0**	**+2.0**
JKB	**Kayabe**	**8.03**	**253**	P	**Pn**	**00 57 32.8**	**+1.8**
JKB				*e*S	**Sn**	**00 58 57.4**	**-3.1**
JANG	**Nango**	**8.44**	**243**	P	**Pn**	**00 57 37.6**	**+0.9**
JANG				*e*S	**Sn**	**00 59 06.9**	**-3.8**
H11N2	**WAKE ISLAND Hy**	**28.05**	**148**	T	T	01 32 17.8	
	baz=332,slow=74,SNR=22						
H11N1	**WAKE ISLAND Hy**	**28.07**	**148**	T	T	01 32 18.2	
H11N3	**WAKE ISLAND Hy**	**28.07**	**147**	T	T	01 32 19.1	
	baz=302,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.09**	**149**	T	T	01 33 40.7	
	baz=339,slow=74,SNR=3.0						
H11S3	**WAKE ISLAND Hy**	**29.10**	**149**	T	T	01 33 40.7	
	baz=107,slow=74,SNR=14						
H11S2	**WAKE ISLAND Hy**	**29.11**	**149**	T	T	01 33 40.4	
	SNR=9.1						
SONM	**Songino Array**	**30.90**	**292**	P	**P**	**01 01 50.4**	**+0.2**
	0.1nm,0.3s,baz=90,slow=4.3,SNR=2.3						
ILAR	**Eielson Array**	**38.94**	**37**	P	**P**	**01 03 00.6**	**+1.5**
	0.7nm,1.0s,baz=245,slow=7.7,SNR=4.2						
MKAR	**Makanchi Array**	**46.81**	**298**	P	**P**	**01 04

RABL **Rabaul** 6.16 330 Pn **Pn** **01 07 29.5 0.0**
PMG **Port Moresby** 7.95 271 Pn **Pn** **01 07 53.9 -0.1**
1.7nm,0.3s,baz=90,slow=8.6,SNR=22
PMG LR LR 01 11 02.5
comp=Z,107μm,20.1s,baz=106,slow=39
PMG **Port Moresby** 7.95 271 *c i*P **Pn** **01 07 55.1 +1.1**
PMG pmax pmax
comp=Z,207nm,1.7s
PMG **Port Moresby** 7.95 271 Pn **Pn** **01 07 55.3 +1.3**
MANU **Manus Island** 10.82 313 Pn **Pn** **01 08 35.5 +2.1**
COEN **Coen** 12.56 249 P **Pn** **01 08 56.9 -0.3**
baz=13,SNR=8.0
COEN **Coen** 12.56 249 Pn **Pn** **01 09 00.0 +2.8**
SANVU **Saraoutou** 13.06 118 Pn **Pn** **01 09 05.9 +1.8**
CTA **Charters Tower** 13.55 219 Pn **Pn** **01 09 11.4 +0.7**
comp=Z,0.3nm,0.3s,baz=46,slow=15,SNR=17
CTA LR LR 01 14 08.7
comp=Z,16μm,18.8s,baz=38,slow=36
CTAO **Charters Tower** 13.55 219 P **Pn** **01 09 12.0 +1.2**
CTAO **Charters Tower** 13.55 219 Pn **Pn** **01 09 11.9 +1.2**
MTSU **Mount Surprise** 13.56 230 P **Pn** **01 09 11.3 +0.5**
baz=14,SNR=35
EIDS **Eidsvold** 16.17 194 P **Pn** **01 09 45.0 -0.7**
baz=16,SNR=31
EIDS **Eidsvold** 16.17 194 Pn **Pn** **01 09 45.1 -0.5**
DZM **Mont Dzumac** 16.43 140 Pn **Pn** **01 09 50.4 +1.3**
comp=Z,0.6nm,0.3s,baz=320,slow=11,SNR=44
DZM **Mont Dzumac** 16.43 140 *e*Pn **Pn** **01 09 48.5 -0.6**
comp=Z,1μm,1.2s
DZM *e*S **Sn** **01 12 48.8 -2.0**
comp=Z,12μm,28.5s
DZM *e*LR LR 01 13 36.8
comp=Z,133μm,24.6s
DZM **Mont Dzumac** 16.43 140 Pn **Pn** **01 09 50.3 +1.2**
DZM IAmb IAmb 01 10 03.8
comp=Z,654nm,1.2s
GENI **Genyem** 16.49 294 P **Pn** **01 09 47.9 -1.9**
comp=Z,12μmcomp=Z,321nm,1.4s
PATS **Pohnpei** 16.61 11 P **Pn** **01 09 47.9 -3.3**
baz=17,SNR=5.7
PATS **Pohnpei** 16.61 11 Pn **Pn** **01 09 49.9 -1.4**
PATS IAmb IAmb 01 10 10.6
comp=Z,730nm,1.3s
RMQ **Roma** 17.88 199 P **P** **01 10 07.6 +0.1**
baz=18,SNR=241
SMPI **Sarmi** 18.07 294 P **Pn** **01 10 08.7 -0.7**
comp=Z,13μmcomp=Z,336nm,1.8s
QIS **Mount Isa** 18.58 232 P **Pn** **01 10 16.6 +1.0**
baz=19,SNR=23
QLP **Quilpie** 19.84 210 P **Pn** **01 10 30.8 +0.1**
baz=20,SNR=32
SRPI **Serui, Papua** 20.37 291 P Pn 01 10 36.9 -0.1
comp=Z,549nm,1.2s
TARA **Tarawa** 20.72 59 P **P** **01 10 39.8 +1.2**
BAKI **Biak** 20.76 293 P **P** **01 10 39.0 -0.1**
comp=Z,14μmcomp=Z,347nm,1.7s
ARMA **Armidale** 20.99 189 P Pn 01 10 43.2 -1.0
baz=21,SNR=18
ARMA **Armidale** 20.99 189 P **P** **01 10 42.7 +1.1**
ARMA IAmb IAmb 01 10 55.2
comp=Z,451nm,1.3s
ARMA IAMs_20 IAMs_20 01 17 48.6
comp=Z,26μm,20.0s
KWAJ **Kwajalein Atol** 22.05 34 P **P** **01 10 53.7 +0.7**
KWAJ pmax pmax
comp=Z,1μm,1.4s
KWAJ **Kwajalein Atol** 22.05 34 P **P** **01 10 53.7 +0.7**
LHI **Lord Howe Isla** 22.11 171 P **P** **01 10 54.3 +0.9**
baz=22,SNR=3.6
LHI **Lord Howe Isla** 22.11 171 P **P** **01 10 55.3 +1.9**
LHI IAmb IAmb 01 11 00.8
comp=Z,871nm,1.6s
LHI IAMs_20 IAMs_20 01 18 16.9
comp=Z,29μm,19.0s
KMPI **Kaimana, Papua** 22.16 284 P **P** **01 10 55.2 +1.1**
comp=Z,12μmcomp=Z,573nm,2.0s
WR0 **Warramunga Arr** 22.46 240 P **P** **01 10 56.5 -0.9**
WR0 IAmb IAmb 01 11 19.7
comp=Z,285nm,1.2s
WB0 **Warramunga Arr** 22.51 241 P **P** **01 10 56.6 -1.4**
KDU **Kakadu** 22.52 260 P **P** **01 10 57.6 -0.5**
baz=23,SNR=17
WRAB **Tennant Creek** 22.62 241 *ce*P **P** **01 10 57.7 -1.3**
WRAB pmax pmax
comp=Z,149nm,1.3s
WRAB MLR MLR
comp=Z,15μm,21.0s
WRAB **Tennant Creek** 22.62 241 P **P** **01 10 58.5 -0.6**
WB2 **Warramunga Arr** 22.62 241 P **P** **01 10 57.6 -1.4**
WRA **Warramunga Arr** 22.63 241 P **P** **01 10 58.2 -1.0**
comp=Z,84nm,1.0s,baz=65,slow=10.0,SNR=50
WRA PcP **PcP** **01 14 52.7 +0.9**
comp=Z,14nm,0.9s,baz=68,slow=1.8,SNR=7.5
WRA LR LR 01 19 29.7
comp=Z,14μm,20.0s,baz=55,slow=36
WRA **Warramunga Arr** 22.63 241 *i* P **P** **01 10 58.2 -1.0**
WRA pmax pmax
comp=Z,90nm,1.0s
WRA **Warramunga Arr** 22.63 241 P **P** **01 10 58.1 -1.1**
CMSA **Cobar Meteorol** 23.56 201 P **P** **01 11 08.5 0.0**
baz=24,SNR=36
MSVF **Nonsavu** 23.60 112 *ce*P **P** **01 11 11.6 +2.5**
MSVF pmax pmax
comp=Z,421nm,1.8s
MSVF MLR MLR
comp=Z,3μm,16.0s
MSVF **Nonsavu** 23.60 112 P **P** **01 11 10.4 +1.4**
MSVF IAmb IAmb 01 11 49.1
comp=Z,607nm,1.6s
MSVF **Nonsavu** 23.60 112 IAMs_20 IAMs_20 01 18 42.5
comp=Z,21μm,20.0s
SAUI **Saumlaki** 23.69 272 P **P** **01 11 10.9 +1.0**
FUNA **Funafuti** 23.70 89 P **P** **01 11 12.1 +2.0**
FAKI **Fak Fak** 23.76 285 P **P** **01 11 11.1 +0.5**
comp=Z,10μmcomp=Z,276nm,1.1s
FAKI **Fak Fak** 23.76 285 P **P** **01 11 10.5 -0.1**
FAKI IAmb IAmb 01 11 22.7
comp=Z,277nm,1.0s
MGCD **Mangrove Creek** 23.80 189 P **P** **01 11 12.7 +1.9**
baz=24,SNR=5.5
MTN **Manton Dam** 23.84 260 P **P** **01 11 11.0 -0.3**
MTN IAmb IAmb 01 11 19.4
comp=Z,318nm,1.5s
RIV **Riverview** 24.41 188 P **P** **01 11 17.0 +0.6**
baz=25,SNR=4.2
AS31 **Alice Springs** 24.70 233 P **P** **01 11 18.7 -0.5**
ASAR **Alice Springs** 24.70 233 P **P** **01 11 17.9 -1.3**
comp=Z,138nm,0.9s,baz=64,slow=9.7,SNR=189
ASAR **Alice Springs** 24.70 233 P **P** **01 11 18.7 -0.5**
ASAR **Alice Springs** 24.70 233 P **P** **01 11 18.7 -0.5**
GUMO **Guam** 25.22 336 P **P** **01 11 23.2 -0.7**
comp=Z,237nm,1.0s,baz=173,slow=3.4,SNR=9.4
GUMO LR LR 01 20 15.2
comp=Z,4μm,21.4s,baz=150,slow=34
GUMO **Guam** 25.22 336 P **P** **01 11 24.8 +0.9**
GUMO pmax pmax
comp=Z,2μm,1.5s
GUMO **Guam** 25.22 336 P **P** **01 11 24.8 +0.9**
SIJI **Sorong** 25.35 289 P **P** **01 11 25.2 0.0**
comp=Z,24nm,0.6s,baz=108,slow=6.4,SNR=12
YNG **Young** 25.37 193 P **P** **01 11 25.8 +0.6**
baz=26,SNR=14
STKA **Stephens Creek** 25.52 208 P **P** **01 11 26.8 +0.3**
comp=Z,116nm,0.8s,baz=357,slow=8.6,SNR=59
STKA LR LR 01 21 33.8
comp=Z,15μm,19.6s,baz=23,slow=37
STKA **Stephens Creek** 25.52 208 P **P** **01 11 26.9 +0.4**
baz=26,SNR=144
STKA **Stephens Creek** 25.52 208 P **P** **01 11 27.1 +0.6**
STKA pmax pmax
comp=Z,65nm,0.9s
STKA MLR MLR
comp=Z,4μm,19.0s
STKA **Stephens Creek** 25.52 208 P **P** **01 11 27.1 +0.6**
BNDI **Bandanaira** 25.61 280 P **P** **01 11 28.1 +0.6**
comp=Z,13μmcomp=Z,523nm,1.2s
CNB **Canberra Magne** 26.15 191 P **P** **01 11 33.6 +1.3**
baz=26,SNR=15
KNRA **Kununurra** 26.50 254 P **P** **01 11 35.0 -0.5**
baz=27,SNR=29
KNRA **Kununurra** 26.50 254 IAmb IAmb 01 11 44.0
comp=Z,192nm,1.1s
MSAI **Masohi** 26.83 282 P **P** **01 11 38.8 +0.2**
comp=Z,1μmcomp=Z,22nm,1.1s
HTT **Hallett** 28.07 210 P **P** **01 11 51.0 +1.4**
baz=28,SNR=19

NLAI **Namlea** 28.63 281 P **P** **01 11 55.5 +0.9**
comp=Z,33nm,1.3s
BBOO **Buckleboo** 29.10 215 P **P** **01 11 59.2 +0.6**
baz=29,SNR=12
BBOO **Buckleboo** 29.10 215 IAmb IAmb 01 12 11.2
BBOO comp=Z,253nm,1.2s IAMs_20 IAMs_20 01 23 58.4
comp=Z,17μm,19.0s
TOO **Toolangi** 29.20 196 P **P** **01 12 01.1 +1.6**
baz=29,SNR=4.0
TOO **Toolangi** 29.20 196 P **P** **01 12 01.9 +2.3**
TOO pmax pmax
comp=Z,199nm,1.9s
TOO MLR MLR
comp=Z,19μm,18.0s
TOO **Toolangi** 29.20 196 P **P** **01 12 01.9 +2.3**
TOO IAmb IAmb 01 12 22.4
comp=Z,199nm,1.9s
TNTI **Ternate** 29.58 289 P **P** **01 12 03.6 +0.5**
comp=Z,3μmcomp=Z,85nm,2.0s
ARPS **Mount Arapiles** 29.65 202 P **P** **01 12 04.0 +0.6**
baz=30,SNR=9.5
WRKA **Warakurna** 29.85 236 P **P** **01 12 04.4 -1.0**
baz=30,SNR=46
FITZ **Fitzroy Crossi** 29.90 250 P **P** **01 12 04.9 -0.9**
comp=Z,8.3nm,0.6s,baz=83,slow=9.0,SNR=44
FITZ LR LR 01 23 52.5
comp=Z,7μm,20.3s,baz=62,slow=36
FITZ **Fitzroy Crossi** 29.90 250 P **P** **01 12 05.0 -0.9**
baz=30,SNR=27
SANI **Sanana** 30.01 283 P **P** **01 12 07.1 +0.2**
comp=Z,6μmcomp=Z,123nm,1.1s
SOEI **Soe** 30.50 267 P **P** **01 12 12.1 +0.7**
comp=Z,3μmcomp=Z,111nm,1.2s
SOEI **Soe** 30.50 267 IAmb IAmb 01 13 11.1
comp=Z,357nm,1.5s
WAKE **Wake Island** 30.83 21 IAMs_20 IAMs_20 01 23 53.4
comp=Z,13μm,18.0s
BATI **Baumata** 31.08 266 P **P** **01 12 17.1 +0.6**
comp=Z,26nm,0.3s,baz=53,slow=1.6,SNR=15
BATI LR LR 01 26 22.9
comp=Z,15μm,18.2s,baz=98,slow=40
BATI **Baumata** 31.08 266 P **P** **01 12 18.1 +1.7**
comp=Z,2μmcomp=Z,84nm,1.2s
RAO **Raoul Island** 31.86 132 LR LR 01 23 06.1
comp=Z,18μm,20.9s,baz=328,slow=32
RAO **Raoul Island** 31.86 132 IAMs_20 IAMs_20 01 22 54.9
comp=Z,17μm,20.0s
SGSI **Sangihe** 32.39 293 P **P** **01 12 28.9 +1.0**
comp=Z,7μmcomp=Z,331nm,1.2s
MMRI **Maumere** 32.57 269 P **P** **01 12 29.5 0.0**
comp=Z,4μmcomp=Z,236nm,1.4s
AFI **Afiamalu** 32.58 101 P **P** **01 12 30.4 +0.8**
AFI pmax pmax
comp=Z,170nm,1.1s
AFI **Afiamalu** 32.58 101 P **P** **01 12 30.4 +0.8**
AFI IAmb IAmb 01 12 34.1
comp=Z,170nm,1.1s
AFI **Afiamalu** 32.58 101 IAMs_20 IAMs_20 01 23 26.3
comp=Z,10μm,19.0s
KMSI **Cibinong** 32.70 286 P P 01 12 37.2 +6.6
FORT **Forrest** 32.91 226 P **P** **01 12 32.8 +0.5**
baz=33,SNR=12
FORT **Forrest** 32.91 226 P **P** **01 12 31.0 -1.2**
FORT IAmb IAmb 01 12 40.1
comp=Z,196nm,1.1s
EDFI **Ende, Flores** 33.10 269 P **P** **01 12 33.7 -0.6**
comp=Z,975nmcomp=Z,49nm,1.6s
LUWI **Luwuk** 33.37 283 P **P** **01 12 37.9 +1.4**
comp=Z,6μmcomp=Z,218nm,1.6s
LUWI **Luwuk** 33.37 283 P **P** **01 12 36.6 +0.2**
KNTN **Kanton** 33.54 80 P **P** **01 12 38.6 +0.7**
KNTN IAmb IAmb 01 12 52.6
comp=Z,318nm,1.6s
GTOI **Gorontalo** 33.63 286 P **P** **01 12 40.1 +1.3**
comp=Z,2μmcomp=Z,72nm,1.4s
TAU **Tasmania Unive** 33.90 190 P **P** **01 12 44.3 +3.6**
TAU pmax pmax
comp=Z,201nm,1.4s
TAU MLR MLR
comp=Z,8μm,18.0s
TAU **Tasmania Unive** 33.90 190 P **P** **01 12 44.2 +3.6**
TAU IAmb IAmb 01 12 59.4
comp=Z,201nm,1.4s
BASI **Baing, Sumba** 34.12 266 P **P** **01 12 43.4 +0.4**
comp=Z,3μmcomp=Z,203nm,1.6s
APSI **Ampana** 34.49 282 P **P** **01 12 47.2 +1.0**
comp=Z,3μmcomp=Z,156nm,1.7s
BSSI **Bau Bau, Buton** 34.56 273 P **P** **01 12 46.8 0.0**
comp=Z,2μmcomp=Z,94nm,1.4s
MRSI **Marisa** 34.60 285 P **P** **01 12 46.5 -0.7**
comp=Z,2μmcomp=Z,45nm,1.4s
URZ **Urewera** 34.67 149 P **P** **01 12 47.8 +0.4**
comp=Z,44nm,1.1s,baz=16,slow=4.1,SNR=10
URZ LR LR 01 25 28.3
comp=Z,22μm,18.6s,baz=17,slow=34
URZ **Urewera** 34.67 149 P **P** **01 12 48.1 +0.7**
URZ IAmb IAmb 01 13 01.1
comp=Z,108nm,1.1s
MXZ **Matakaoa Point** 34.77 147 IAMs_20 IAMs_20 01 24 25.9
comp=Z,13μm,21.0s
NIUE **Niue** 35.00 110 P **P** **01 12 48.8 -1.7**
baz=35,SNR=5.0
BKSI **Bulukumba** 35.04 274 P **P** **01 12 52.2 +1.2**
comp=Z,2μmcomp=Z,59nm,0.9s
BKZ **Black Stump Fm** 35.06 151 P **P** **01 12 51.9 +1.0**
BKZ IAMs_20 IAMs_20 01 25 25.4
comp=Z,14μm,20.0s
BNSI **Bone** 35.21 276 P **P** **01 12 53.8 +1.4**
comp=Z,3μmcomp=Z,142nm,1.3s
WBSI **Waikabubak, Su** 35.31 267 P **P** **01 12 55.3 +1.9**
comp=Z,2μmcomp=Z,87nm,0.9s
KAPI **Kappang** 35.45 275 P **P** **01 12 53.4 -1.2**
comp=Z,45nm,0.9s,baz=96,slow=7.5,SNR=14
KAPI LR LR 01 29 54.9
comp=Z,4μm,18.7s,baz=110,slow=41
KAPI **Kappang** 35.45 275 P **P** **01 12 53.9 -0.7**
KAPI pmax pmax
comp=Z,335nm,1.4s
KAPI MLR MLR
comp=Z,4μm,19.0s
KAPI **Kappang** 35.45 275 P **P** **01 12 53.9 -0.7**
KAPI IAmb IAmb 01 13 03.0
comp=Z,335nm,1.4s
SPSI **Sidrap Palu** 35.62 277 P **P** **01 12 56.1 +0.1**
comp=Z,1μmcomp=Z,53nm,1.1s
THZ **Tophouse** 35.63 157 P **P** **01 12 56.9 +1.1**
TTSI **Tana Toraja** 35.76 278 P P 01 13 02.3 +5.2
PSAD2 **Pilbara Seismi** 35.90 246 IAMs_20 IAMs_20 01 28 02.6
comp=Z,12μm,19.0s
PSAC2 **Pilbara Seismi** 35.95 246 IAMs_20 IAMs_20 01 30 04.8
comp=Z,11μm,19.0s
PSAB2 **Pilbara Seismi** 35.98 246 IAMs_20 IAMs_20 01 28 03.7
comp=Z,10μm,18.0s
PSAD1 **Pilbara Seismi** 35.98 247 IAMs_20 IAMs_20 01 28 02.8
comp=Z,10μm,18.0s
PSAA3 **Pilbara Seismi** 35.99 246 IAMs_20 IAMs_20 01 30 07.0
comp=Z,11μm,18.0s
PSAA2 **Pilbara Seismi** 35.99 246 IAMs_20 IAMs_20 01 28 03.1
comp=Z,11μm,19.0s
PSAB3 **Pilbara Seismi** 35.99 246 IAMs_20 IAMs_20 01 28 13.1
comp=Z,10μm,18.0s
PSA00 **Pilbara Seismi** 36.00 246 IAmb IAmb 01 13 19.5
comp=Z,294nm,1.7s
PSA00 IAMs_20 IAMs_20 01 30 06.2
comp=Z,10μm,18.0s
PSAA1 **Pilbara Seismi** 36.01 246 IAMs_20 IAMs_20 01 28 13.4
comp=Z,11μm,18.0s
PSAB1 **Pilbara Seismi** 36.02 246 IAMs_20 IAMs_20 01 28 12.7
comp=Z,11μm,18.0s
PSAC1 **Pilbara Seismi** 36.02 247 IAMs_20 IAMs_20 01 28 12.8
comp=Z,11μm,18.0s
PSAC3 **Pilbara Seismi** 36.02 246 IAMs_20 IAMs_20 01 28 04.9
comp=Z,10μm,19.0s
BFZ **Birch Farm** 36.14 152 P **P** **01 13 00.9 +0.8**
BFZ IAmb IAmb 01 13 03.2
comp=Z,405nm,2.0s
BFZ IAMs_20 IAMs_20 01 26 35.9
comp=Z,9μm,19.0s
KHZ **Kahutara** 36.43 157 IAmb IAmb 01 13 05.0
comp=Z,379nm,1.7s
MPSI **Mapaga** 36.51 284 P **P** **01 13 03.3 -0.3**
comp=Z,2μmcomp=Z,58nm,2.1s
RPZ **Rata Peaks** 36.68 161 P **P** **01 13 05.0 +0.3**
comp=Z,15nm,0.8s,baz=90,slow=4.1,SNR=4.9
RPZ LR LR 01 26 04.8
comp=Z,13μm,20.5s,baz=320,slow=33

RPZ **Rata Peaks** 36.68 161 IAMs_20 IAMs_20 01 25 43.0
comp=Z,13μm,21.0s
PLAI **Plampang** 36.95 268 P **P** **01 13 06.2 -1.2**
comp=Z,2μmcomp=Z,155nm,1.4s
DCZ **Deep Cove** 37.19 166 IAMs_20 IAMs_20 01 27 41.2
comp=Z,11μm,18.0s
MQZ **McQueen's Vall** 37.22 159 IAmb IAmb 01 13 12.3
comp=Z,253nm,1.5s
MLZ **Mavora Lakes** 37.33 165 P **P** **01 13 10.9 +0.7**
MLZ IAmb IAmb 01 13 13.6
comp=Z,211nm,1.7s
MLZ IAMs_20 IAMs_20 01 27 14.1
comp=Z,12μm,19.0s
PYZ **Puysegur Point** 37.74 167 IAMs_20 IAMs_20 01 26 53.9
comp=Z,9μm,20.0s
KMBL **Kambalda** 37.76 230 P **P** **01 13 14.0 0.0**
baz=38,SNR=7.8
WHZ **Wether Hill Ro** 37.78 165 IAMs_20 IAMs_20 01 28 28.0
comp=Z,11μm,18.0s
TWSI **Taliwang, Sumb** 37.84 268 P **P** **01 13 14.9 0.0**
comp=Z,893nmcomp=Z,35nm,1.5s
MEEK **Meekatharra** 38.51 239 P **P** **01 13 19.6 -0.9**
baz=39,SNR=9.9
KBKI **Kotabaru** 39.28 277 P **P** **01 13 29.9 +2.9**
comp=Z,3μmcomp=Z,16nm,0.9s
MYLDM **Lahad Datu** 39.42 290 P **P** **01 13 29.0 +0.9**
MYLDM IAmb IAmb 01 13 38.4
comp=Z,324nm,1.4s
SRBI **Singaraja** 39.54 269 P P 01 13 41.1 +12
BBKI **Banjar Baru** 40.55 276 P **P** **01 13 38.8 +1.3**
comp=Z,47nm,1.0s
JAGI **Jajag, Banyuwa** 40.55 268 P **P** **01 13 36.0 -1.6**
comp=Z,2μmcomp=Z,188nm,1.1s
JAGI **Jajag, Banyuwa** 40.55 268 P **P** **01 13 35.1 -2.5**
JAGI IAmb IAmb 01 13 43.7
comp=Z,209nm,1.1s
KLBR **Kellerberrin** 41.03 232 P **P** **01 13 40.7 -0.7**
baz=41,SNR=15
SPMM **Sapulut** 41.15 289 P **P** **01 13 43.0 +0.5**
GIRL **Giralia** 41.31 247 P **P** **01 13 43.2 -0.5**
baz=41,SNR=3.9
GIRL **Giralia** 41.31 247 P **P** **01 13 43.9 +0.2**
GIRL IAmb IAmb 01 13 52.5
comp=Z,202nm,1.1s
GIRL IAMs_20 IAMs_20 01 31 11.8
comp=Z,7μm,19.0s
TGY **Tagaytay City** 41.36 304 P **P** **01 13 43.3 -0.9**
comp=Z,109nm,0.3s,baz=90,slow=3.4,SNR=7.4
TGY LR LR 01 27 22.7
comp=Z,5μm,21.7s,baz=126,slow=31
MORW **Morawa** 41.47 237 P **P** **01 13 45.5 +0.5**
baz=42,SNR=6.5
MORW **Morawa** 41.47 237 P **P** **01 13 44.7 -0.2**
KKM **Kota Kinabalu** 41.85 290 P **P** **01 13 47.6 -0.7**
NWAO **Narrogin (SRO)** 41.98 231 P **P** **01 13 48.0 -1.1**
comp=Z,15nm,0.8s,baz=60,slow=8.4,SNR=6.1
NWAO PP **PnPn** **01 15 34.8 +3.0**
comp=Z,65nm,1.1s,baz=60,slow=12,SNR=6.9
NWAO **Narrogin (SRO)** 41.98 231 P **P** **01 13 50.0 +0.9**
baz=42,SNR=4.2
NWAO **Narrogin (SRO)** 41.98 231 P **P** **01 13 48.7 -0.4**
NWAO pmax pmax
comp=Z,49nm,0.9s
NWAO MLR MLR
comp=Z,3μm,18.0s
NWAO **Narrogin (SRO)** 41.98 231 P **P** **01 13 49.5 +0.4**
NWAO **Narrogin (SRO)** 41.98 231 P **P** **01 13 48.7 -0.4**
NWAO IAmb IAmb 01 14 05.8
comp=Z,49nm,0.9s
NWAO IAMs_20 IAMs_20 01 32 56.1
comp=Z,3μm,18.0s
RKGY **Rocky Gully** 42.90 229 P **P** **01 13 56.3 -0.2**
baz=43,SNR=5.5
PWJI **Pagerwojo** 42.91 269 P **P** **01 13 58.0 +1.1**
comp=Z,2μmcomp=Z,108nm,1.4s
WOJI **Wonogiri, Jawa** 43.79 269 P **P** **01 14 04.7 +0.7**
comp=Z,2μmcomp=Z,82nm,1.3s
UGM **Wanagama** 44.18 268 P P 01 14 13.5 +6.3
UGM **Wanagama** 44.18 268 IAmb IAmb 01 14 15.4
comp=Z,288nm,1.1s
SMRI **Semarang** 44.35 270 P **P** **01 14 11.1 +2.6**
comp=Z,119nm,1.5s
YOGI **Yogyakarta** 44.42 269 P P 01 14 17.4 +8.4
SBUM **Sibu** 44.47 283 P **P** **01 14 09.6 +0.1**
SBUM **Sibu** 44.47 283 P **P** **01 14 10.0 +0.6**
RAR **Rarotonga** 44.76 110 LR LR 01 28 46.6
comp=Z,3μm,21.5s,baz=281,slow=31
JHJ **Hachijo jima 2** 44.95 342 P **P** **01 14 11.8 -1.1**
comp=Z,97nm,0.8s,baz=148,slow=8.4,SNR=3.7
KPJI **Karang Pucung** 45.81 269 P **P** **01 14 21.4 +1.3**
comp=Z,2μmcomp=Z,87nm,1.1s
KSM **Kuching** 46.05 281 P **P** **01 14 21.1 -0.9**
KSM **Kuching** 46.05 281 P **P** **01 14 24.0 +2.0**
YOJ **Yonaguni jima** 46.19 318 IAMs_20 IAMs_20 01 29 31.6
comp=Z,8μm,22.0s
JCJI **Jatiwangi** 46.56 270 P P 01 14 33.9 +7.9
YULB **Yu-li** 46.64 315 IAmb IAmb 01 14 38.8
comp=Z,102nm,1.2s
CISI **Cisompet, Garu** 46.89 269 P **P** **01 14 28.0 -0.7**
comp=Z,15μmcomp=Z,204nm,1.8s
CISI **Cisompet, Garu** 46.89 269 P **P** **01 14 26.7 -1.9**
NACB **Ninganchiao** 46.95 316 IAMs_20 IAMs_20 01 29 52.7
comp=Z,8μm,22.0s
SSLB **Suanglung** 47.14 315 IAmb IAmb 01 14 41.8
comp=Z,119nm,1.1s
LEM **Lembang** 47.16 270 P **P** **01 14 30.5 -0.4**
comp=Z,22nm,0.4s,baz=83,slow=4.1,SNR=19
LEM LR LR 01 36 01.1
comp=Z,3μm,20.8s,baz=100,slow=38
JSU **Suzuyama** 47.25 331 P **P** **01 14 31.3 +0.2**
YHNB **Yeheng** 47.43 317 IAMs_20 IAMs_20 01 30 44.3
comp=Z,7μm,20.0s
TATO **Taipei** 47.56 317 IAMs_20 IAMs_20 01 30 47.5
comp=Z,10μm,22.0s
TPI **Tanjungpandan** 47.73 275 P **P** **01 14 37.4 +2.3**
comp=Z,2μmcomp=Z,52nm,2.0s
INU **Inuyama** 47.90 340 P **P** **01 14 35.6 -0.4**
CBJI **Citeko** 47.97 270 P P 01 14 42.6 +5.6
DBJI **Dramaga** 48.05 270 P **P** **01 14 39.4 +1.7**
comp=Z,102nm,1.2s
SKJI **Sukabumi** 48.19 269 P **P** **01 14 40.1 +1.4**
comp=Z,3μmcomp=Z,122nm,1.3s
JNU **Nakatsue** 48.39 332 P **P** **01 14 40.0 +0.1**
comp=Z,70nm,0.9s,baz=108,slow=4.1,SNR=23
JWT **Wachi** 48.41 338 IAmb IAmb 01 14 48.3
comp=Z,204nm,1.3s
MJAR **Matsushiro Arr** 48.60 342 P **P** **01 14 40.7 -0.8**
comp=Z,18nm,0.8s,baz=164,slow=7.3,SNR=34
MJAR LR LR 01 33 31.5
comp=Z,2μm,21.9s,baz=180,slow=34
MJAR **Matsushiro Arr** 48.60 342 P **P** **01 14 40.2 -1.3**
MJAR pmax pmax
comp=Z,13nm,0.9s
MJAR **Matsushiro Arr** 48.60 342 P **P** **01 14 40.2 -1.3**
MAJO **Matsushiro** 48.60 342 *d i*P **P** **01 14 40.9 -0.6**
MAJO pmax pmax
comp=Z,172nm,1.8s
MAJO MLR MLR
comp=Z,2μm,18.0s
MAJO **Matsushiro** 48.60 342 P **P** **01 14 40.4 -1.0**
MAT **Matsushiro** 48.60 342 P **P** **01 14 40.7 -0.8**
MAT S **S** **01 21 42.8 +1.1**
JHS **Saijyo** 49.03 336 IAmb IAmb 01 15 11.1
comp=Z,97nm,1.3s
JMM **Marumori** 49.10 345 IAmb IAmb 01 14 54.7
comp=Z,212nm,1.5s
PPBI **Pangkal Pinang** 49.33 275 P P 01 14 55.8 +8.3
KNMB **Chin-men Tao** 49.37 314 IAMs_20 IAMs_20 01 33 10.8
comp=Z,8μm,20.0s
QZH **Quanzhou** 49.53 315 *e*P **P** **01 14 50.6 +1.9**
QZH S **S** **01 21 56.3 +1.2**
QZH LR LR
comp=Z,5μm,17.8s
QZH LR LR
comp=Z,6μm,18.8s
QZH LR LR
comp=Z,9μm,19.5s
KLSI **50.29 272** P **P** **01 14 54.8 0.0**
comp=Z,338nmcomp=Z,11nm,1.8s
KASI **Kota Agung** 50.41 271 P **P** **01 14 55.9 +0.3**
comp=Z,1μmcomp=Z,98nm,1.1s
MDSI **Maura Dua** 50.87 272 P **P** **01 14 58.5 -0.6**
comp=Z,1μmcomp=Z,64nm,1.3s
LWLI **Liwa** 50.91 271 P P 01 15 06.5 +6.9
DLV **T Lat** 51.13 294 IAmb IAmb 01 15 10.1
comp=Z,129nm,1.3s
DSRI **Dabo** 51.19 277 P **P** **01 15 03.4 +1.9**

comp=Z,1µmcomp=Z,20nm,1.1s
HKPS Hong Kong Po S 51.23 309 IAMs_20 IAMs_20 01 33 08.0
comp=Z,8µm,21.0s
SSE Sheshan 51.97 322 P **P** **01 15 09.4 +2.3**
SSE S **S** **01 22 33.8 +5.0**
SSE pmax pmax
comp=Z,30nm,0.8s
SSE pmax pmax
comp=Z,220nm,4.1s
SSE LR LR
comp=Z,1µm,20.2s
SSE LR LR
comp=Z,2µm,26.5s
SSE Sheshan 51.97 322 IAMs_20 IAMs_20 01 35 49.6
comp=Z,7µm,20.0s
ERM Erimo 52.53 349*de*P **P** **01 15 12.2 +1.2**
ERM pmax pmax
comp=Z,209nm,4.0s
ERM MLR MLR
comp=Z,1µm,18.0s
ERM Erimo 52.53 349 IAMs_20 IAMs_20 01 32 50.9
comp=Z,6µm,21.0s
JEM Erimo 52.54 349 IAMs_20 IAMs_20 01 32 52.5
comp=Z,7µm,22.0s
TJN Taejon 52.71 332*d i*P **P** **01 15 12.4 0.0**
QIZ Qiongzhong 53.01 303 P **P** **01 15 15.8 +0.8**
QIZ S **S** **01 22 45.0 +1.7**
QIZ SS **SS** **01 26 20.8 -2.2**
QIZ LR LR
comp=Z,2µm,21.1s
QIZ LR LR
comp=Z,3µm,22.6s
QIZ LR LR
comp=Z,6µm,24.0s
KSRS Korea Array 53.33 333 P **P** **01 15 17.1 +0.2**
comp=Z,21nm,0.9s,baz=152,slow=8.4,SNR=37
KSRS LR LR 01 33 04.0
comp=Z,1µm,21.4s,baz=154,slow=31
KSAR Wonju Array Be 53.34 333 P **P** **01 15 16.9 -0.2**
KSAR Wonju Array Be 53.34 333 P **P** **01 15 16.9 -0.2**
KRJI Kerinci 53.94 274 P **P** **01 15 22.5 +0.5**
comp=Z,57µmcomp=Z,494nm,0.5s
INCN Inchon 53.95 332 P **P** **01 15 21.8 +0.3**
INCN pmax pmax
comp=Z,356nm,1.6s
INCN Inchon 53.95 332 P **P** **01 15 21.8 +0.3**
NJ2 Nanjing 54.06 322 *e*P **P** **01 15 24.0 +1.5**
NJ2 pP **pP** **01 15 30.8 +0.8**
NJ2 sP **pwP** **01 15 34.5 +0.6**
NJ2 S **S** **01 23 03.8 +6.6**
NJ2 sS **pS** **01 23 06.3 +0.2**
NJ2 SS **SS** **01 26 41.5 +2.2**
NJ2 pmax pmax
comp=Z,49nm,1.1s
NJ2 pmax pmax
comp=Z,1µm,4.6s
NJ2 LR LR
comp=Z,4µm,21.8s
NJ2 LR LR
comp=Z,3µm,16.1s
NJ2 LR LR
comp=Z,6µm,21.6s
PAE Paea 54.09 105 *e*P **P** **01 15 21.8 -1.2**
comp=Z,7.5nm,1.1s
PPT Papeete 54.09 105 LR LR 01 33 28.7
comp=Z,3µm,20.6s,baz=280,slow=30
PPT2 Papeete2 54.09 105 *e*P **P** **01 15 22.4 -0.7**
comp=Z,52nm,1.4s
PPT2 *e*S **S** **01 22 53.4 -4.9**
comp=Z,6µm,29.8s
PPT2 *e*LR LR 01 31 05.6
comp=Z,12µm,28.8s
SDSI Sungai Dareh 54.18 276 P **P** **01 15 22.9 -0.8**
comp=Z,3µmcomp=Z,85nm,1.9s
TVO Taravao 54.41 105 *e*P **P** **01 15 24.5 -0.9**
comp=Z,15nm,1.0s
TBI Tubuai 54.48 112 *e*S **S** **01 22 57.6 -5.7**
comp=Z,6µm,30.5s
TBI *e*LQ LQ 01 28 58.9
comp=Z,5µm,30.0s
TBI *e*LR LR 01 31 17.7
comp=Z,13µm,30.8s
JKA Kamikawa-asahi 54.67 349 IAmb IAmb 01 16 03.4
comp=Z,103nm,1.2s
KUR Kuril'sk 54.97 354*c i*P **P** **01 15 31.5 +2.7**
KUR *i* S **S** **01 23 17.1 +8.1**
KUR pmax pmax
comp=Z,269nm,2.1s
KUR pmax pmax
comp=Z,2µm,6.3s
KUR MLR MLR
comp=Z,3µm,20.0s
PMOR Pomariorio Ree 55.72 102 *e*P **P** **01 15 34.5 -0.3**
comp=Z,216nm,1.2s
IPM Ipoh 55.78 282 IAmb IAmb 01 15 37.9
comp=Z,127nm,1.3s
IPM Ipoh 55.78 282 P **P** **01 15 36.0 +0.7**
WHN Wuhan 55.97 317 ⇓P **P** **01 15 38.1 +1.8**
WHN S **S** **01 23 19.8 -3.0**
WHN pmax pmax
comp=Z,540nm,2.1s
WHN LR LR
comp=Z,10µm,20.8s
WHN LR LR
comp=Z,14µm,20.2s
WHN LR LR
comp=Z,20µm,22.9s
VAH Vaihoa 55.98 102 *e*P **P** **01 15 36.0 -0.6**
comp=Z,84nm,1.2s
MNSI Mandailing Nat 56.34 277 P **P** **01 15 38.7 -0.6**
comp=Z,3µmcomp=Z,66nm,0.8s
KULM Kulim 56.34 283 IAmb IAmb 01 15 40.7
comp=Z,290nm,1.9s
KULM Kulim 56.34 283 P **P** **01 15 39.0 -0.3**
SISI Saibi 56.40 275 P P 01 15 46.4 +6.7
HMH Humu'ula Sheep 56.56 59 P **P** **01 15 42.1 +1.0**
VLA Vladivostok 56.61 340*d i*P **P** **01 15 41.4 +0.8**
VLA pmax pmax
comp=Z,259nm,2.0s
YSS Yuzh-Sakhalins 57.38 350*d i*P **P** **01 15 46.7 +0.7**
YSS pmax pmax
comp=Z,234nm,2.5s
YSS MLR MLR
comp=Z,2µm,18.0s
YSS Yuzh-Sakhalins 57.38 350 P **P** **01 15 46.0 0.0**
YSS IAmb IAmb 01 15 55.7
comp=Z,170nm,1.4s
YSS IAMs_20 IAMs_20 01 35 16.3
comp=Z,4µm,22.0s
DL2 Dalian 57.49 329 P **P** **01 15 48.9 +2.0**
DL2 S **S** **01 23 47.3 +4.6**
DL2 SS **SS** **01 27 34.5 +1.4**
DL2 pmax pmax
comp=Z,61nm,1.2s
DL2 pmax pmax
comp=Z,780nm,9.1s
DL2 LR LR
comp=Z,3µm,21.1s
DL2 LR LR
comp=Z,2µm,26.2s
DL2 LR LR
comp=Z,6µm,28.4s
USA0B Ussuriysk Arra 57.53 340*d i*P **P** **01 15 47.4 +0.3**
USRK Ussuriysk Ar. 57.53 340 P **P** **01 15 47.3 +0.2**
comp=Z,54nm,1.0s,baz=162,slow=7.1,SNR=62
USRK LR LR 01 36 27.3
comp=Z,3µm,21.7s,baz=136,slow=32
USRK Ussuriysk Ar. 57.53 340 P **P** **01 15 46.5 -0.6**
USRK Ussuriysk Ar. 57.53 340 P **P** **01 15 46.5 -0.6**
TRTT Trang 57.95 285 P **P** **01 15 51.1 +0.5**
comp=Z,3µmcomp=Z,111nm,1.5s
TIA Tai'an 57.97 324 P **P** **01 15 49.9 -0.5**
TIA S **S** **01 23 53.4 +4.2**
TIA pmax pmax
comp=Z,27nm,1.3s
TIA LR LR
comp=Z,2µm,18.5s
TIA LR LR
comp=Z,3µm,19.3s
TIA LR LR
comp=Z,4µm,18.6s
NONG Nongkai 58.29 298 P **P** **01 15 53.9 +0.9**
comp=Z,99nm,2.0s
GSI Gunungsitoli 58.40 277 P **P** **01 15 53.8 -0.1**
comp=Z,3µmcomp=Z,164nm,1.5s
KCSI Kotacane, Aceh 58.70 280 P **P** **01 15 55.3 -0.6**
comp=Z,2µmcomp=Z,76nm,1.2s
MDJ Mudanjiang 58.73 339 P **P** **01 15 55.9 +0.4**
MDJ pP pP 01 16 03.9 +1.0
MDJ sP pwP 01 16 07.9 +0.4
MDJ PcS **PcS** **01 20 46.0 -0.7**
MDJ S **S** **01 24 03.6 +5.0**
MDJ sS sS 01 24 15.0 +4.2
MDJ pmax pmax
comp=Z,2µm,4.7s
MDJ LR LR
comp=Z,2µm,22.4s
MDJ LR LR
comp=Z,980nm,23.5s
MDJ LR LR
comp=Z,4µm,21.6s
MDJ Mudanjiang 58.73 339 IAmb IAmb 01 16 05.1
comp=Z,223nm,1.5s
SNY Shenyang 58.84 333 ⇓P **P** **01 15 55.8 -0.5**
SNY S **S** **01 24 03.4 +3.3**
SNY pmax pmax
comp=Z,1µm,5.1s
SNY LR LR
comp=Z,1µm,25.5s
SNY LR LR
comp=Z,2µm,23.5s
SNY LR LR
comp=Z,4µm,26.5s
SLVN Son La 59.01 302 IAMs_20 IAMs_20 01 37 40.1
comp=Z,6µm,21.0s
SURT Suratani 59.12 286 P **P** **01 16 00.0 +1.2**
comp=Z,2.0nm,1.2s
TPTI 59.21 280 P **P** **01 15 58.8 -0.7**
comp=Z,1µmcomp=Z,36nm,1.6s
GYA Guiyang 59.22 309 ⇓P **P** **01 15 58.8 -0.6**
GYA PcP **PcP** **01 16 47.8 +0.1**
GYA S **S** **01 24 02.4 -3.5**
GYA pmax pmax
comp=Z,19nm,0.9s
GYA pmax pmax
comp=Z,2µm,13.8s
GYA LR LR
comp=Z,2µm,22.5s
GYA LR LR
comp=Z,5µm,20.3s
GYA LR LR
comp=Z,7µm,20.6s
PKDT Phuket 59.26 285 P **P** **01 16 00.2 +0.4**
comp=Z,120nm,1.5s
PHET Kaeng Krachan 59.56 291 P **P** **01 16 03.5 +1.7**
comp=Z,811nmcomp=Z,72nm,1.2s
CN2 Changchun 59.63 335 *e*P **P** **01 16 03.0 +1.3**
CN2 *e*S **S** **01 24 10.4 0.0**
CN2 pmax pmax
comp=Z,40nm,1.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,1µm,17.0s
CN2 LR LR
comp=Z,2µm,18.0s
LHMI Lhok Sumawe 59.90 282 P **P** **01 16 06.1 +1.9**
comp=Z,5µmcomp=Z,205nm,1.7s
PHIT Phitsanulok 60.34 296 P **P** **01 16 08.0 +0.8**
comp=Z,112nm,1.1s
SRDT SRDT 60.50 292 P **P** **01 16 09.0 +0.7**
comp=Z,77nm,1.5s
UTHA Uthaitani 60.62 294 P **P** **01 16 10.1 +1.0**
comp=Z,832nmcomp=Z,65nm,1.3s
SUKH Sukhothai 61.15 296 P **P** **01 16 13.7 +1.1**
comp=Z,47nm,1.2s
BJT Baijiatuan 61.18 326 IAMs_20 IAMs_20 01 39 07.3
comp=Z,6µm,22.0s
BJI Beijing 61.19 327 P **P** **01 16 12.3 -0.2**
BJI PP **PP** **01 18 24.6 -3.0**
BJI S **S** **01 24 35.1 +4.6**
BJI SS **SS** **01 28 29.4 -1.7**
BJI pmax pmax
comp=Z,1µm,4.5s
BJI LR LR
comp=Z,3µm,21.4s
BJI LR LR
comp=Z,3µm,21.6s
BJI LR LR
comp=Z,6µm,27.5s
TYV Tymovskoe 61.19 351 *e*P **P** **01 16 12.6 +0.4**
TYV *e*S **S** **01 24 30.3 +0.2**
TYV pmax pmax
comp=Z,47nm,1.5s
TYV pmax pmax
comp=Z,2µm,4.5s
TYV smax smax
comp=N,14nm,0.9s
TYV smax smax
comp=N,900nm,6.8s
LAMP Lampang 61.54 297 P **P** **01 16 16.0 +0.7**
comp=N,832nmcomp=N,52nm,1.0s
PAYA Payao 61.65 298 P **P** **01 16 16.0 -0.1**
comp=N,9µmcomp=N,491nm,0.9s
KMI Kunming 61.67 305⇑ *e*P **P** **01 16 17.3 +1.0**
KMI pP pP 01 16 24.4 +0.5
KMI sP pwP 01 16 29.0 +0.9
KMI S **S** **01 24 34.5 -3.1**
KMI sS pS 01 24 48.3 +1.5
KMI pmax pmax
comp=N,57nm,1.4s
KMI pmax pmax
comp=N,950nm,4.9s
KMI LR LR
comp=N,2µm,25.8s
KMI LR LR
comp=N,3µm,22.9s
KMI LR LR
comp=N,5µm,35.0s
XAN Xi'an 61.73 317 P **P** **01 16 15.5 -0.9**
XAN PcP **PcP** **01 17 02.0 +4.5**
XAN S **S** **01 24 39.6 +1.8**
XAN pmax pmax
comp=N,49nm,1.8s
XAN pmax pmax
comp=N,2µm,4.3s
XAN LR LR
comp=N,5µm,20.6s
XAN LR LR
comp=N,5µm,20.6s
XAN LR LR
comp=N,13µm,20.6s
XAN Xi'an 61.73 317 IAmb IAmb 01 16 24.7
comp=Z,132nm,1.5s
CM04 Chiang Mai Arr 62.07 297 P **P** **01 16 19.6 +0.7**
comp=Z,422nmcomp=Z,32nm,1.1s
CM09 Chiang Mai Arr 62.07 297 P **P** **01 16 19.0 +0.1**
comp=Z,471nmcomp=Z,42nm,1.2s
CM01 Chiang Mai Arr 62.09 297 P **P** **01 16 20.2 +1.2**
comp=Z,467nmcomp=Z,43nm,1.2s
CM05 Chiang Mai Arr 62.10 297 P **P** **01 16 19.9 +0.8**
comp=Z,337nmcomp=Z,27nm,1.1s
KLR Kul'dur 62.10 343*d i*P **P** **01 16 19.0 +0.6**
CM02 Chiang Mai Arr 62.11 297 P **P** **01 16 20.2 +1.1**
comp=Z,480nmcomp=Z,40nm,1.2s
CM31 Chiang Mai Arr 62.12 297 P **P** **01 16 19.5 +0.3**
CM31 IAmb IAmb 01 16 28.7
comp=Z,131nm,1.4s
CMAR Chiang Mai Arr 62.12 297 P **P** **01 16 19.5 +0.3**
comp=Z,13nm,1.0s,baz=121,slow=4.9,SNR=50
CMAR LR LR 01 41 59.9
comp=Z,1µm,21.6s,baz=153,slow=35
CMAR PKPPKP **P'P'df** **01 45 29.0 +1.4**
comp=Z,0.8nm,0.3s,baz=290,slow=4.0,SNR=5.4
CMAR Chiang Mai Arr 62.12 297 P **P** **01 16 19.3 +0.1**
CHTO Chiang Mai 62.25 297 P **P** **01 16 19.5 -0.6**
CHTO pmax pmax
comp=Z,156nm,1.6s
CHTO MLR MLR
comp=Z,2µm,19.0s
CHTO Chiang Mai 62.25 297 P **P** **01 16 19.5 -0.6**
CHTO IAmb IAmb 01 16 23.4
comp=Z,156nm,1.6s
GRNR Gornyy 62.30 347 ⇓*i*P **P** **01 16 20.7 +1.0**
GRNR *e*S **S** **01 24 47.0 +2.8**
GRNR pmax pmax
comp=N,20nm,1.2s
GRNR pmax pmax
comp=Z,40nm,1.1s
GRNR smax smax
comp=N,3.0nm,0.9s
GRNR MLR MLR
comp=N,620nm,14.0s
GRNR MLR MLR
comp=Z,1µm,16.0s
PET Petropavlovsk 62.44 2⇓ *e*P **P** **01 16 20.9 +0.3**
PET pmax pmax
comp=Z,655nm,2.8s
PET MLR MLR
comp=Z,7µm,19.0s
PET Petropavlovsk 62.44 2 IAMs_20 IAMs_20 01 39 18.3
comp=Z,4µm,21.0s
PEA0B Petropavlovsk- 62.49 2⇓ *e*P **P** **01 16 22.7 +1.7**
PEA0B Petropavlovsk- 62.49 2 P **P** **01 16 21.6 +0.6**
PETK Petropavlovsk- 62.49 2 P **P** **01 16 21.0 0.0**
comp=Z,17nm,0.9s,baz=152,slow=6.7,SNR=9.1
PETK LR LR 01 39 16.6
comp=Z,4µm,22.0s,baz=172,slow=32
PETK Petropavlovsk- 62.49 2 P **P** **01 16 20.4 -0.6**
PETK Petropavlovsk- 62.49 2 P **P** **01 16 20.4 -0.6**
MHMT Maesarieng 62.91 296 P **P** **01 16 26.9 +2.4**
CD2 Chengdu 63.67 311 P **P** **01 16 29.3 -0.1**
CD2 PP **PP** **01 18 49.6 -0.2**
CD2 S **S** **01 25 02.9 +0.6**
CD2 SS **SS** **01 29 12.1 +1.6**
CD2 pmax pmax
comp=Z,90nm,1.8s
CD2 pmax pmax
comp=Z,1µm,5.1s
CD2 LR LR
comp=Z,7µm,19.6s
CD2 LR LR
comp=Z,7µm,21.2s
CD2 LR LR
comp=Z,10µm,22.2s
TAOE Nuku Hiva Isla 63.72 95 *e*S **S** **01 24 56.8 -6.7**
comp=Z,3µm,26.3s
TAOE *e*LQ LQ 01 32 32.2
comp=Z,6µm,33.8s
TAOE *e*LR LR 01 35 37.8
comp=Z,6µm,24.9s
NKL Nikolayevsk 63.72 350 *e*P **P** **01 16 30.2 +1.1**
NKL *e* 01 17 06.1
NKL *e* 01 18 47.0
NKL *e*S **S** **01 25 01.0 -0.8**
NKL pmax pmax
comp=N,14nm,1.2s
NKL pmax pmax
comp=E,23nm,1.2s
NKL pmax pmax
comp=Z,86nm,1.2s
NKL pmax pmax
comp=Z,348nm,2.5s
NKL smax smax
comp=E,48nm,5.8s
NKL smax smax
comp=N,14nm,2.8s
CASY Casey 64.21 198 P **P** **01 16 32.2 -0.1**
CASY Casey 64.21 198 IAMs_20 IAMs_20 01 41 22.6
comp=Z,4µm,19.0s
HHC Hu-ho-hao-te 64.32 324 *e*P **P** **01 16 34.8 +1.3**
HHC sP pwP 01 16 47.4 +2.4
HHC S **S** **01 25 09.4 -0.6**
HHC SS **SS** **01 29 17.0 -3.3**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,1µm,8.8s
HHC LR LR
comp=Z,2µm,19.4s
HHC LR LR
comp=Z,3µm,18.8s
HHC LR LR
comp=Z,7µm,17.9s
BTO Baotou 65.05 323 *e*P **P** **01 16 39.4 +1.1**
ADK Adak 65.84 19 P **P** **01 16 43.4 +0.4**
ADK pmax pmax
comp=Z,542nm,1.7s
ADK Adak 65.84 19 P **P** **01 16 43.4 +0.4**
LZH Lanzhou 66.32 316 ⇑P **P** **01 16 46.8 +0.1**
LZH pP pP 01 16 54.1 -0.3
LZH sP pwP 01 17 00.8 +2.5
LZH S **S** **01 25 42.1 +7.2**
LZH sS sS 01 25 50.3 +2.8
LZH pmax pmax
comp=Z,140nm,1.3s
LZH pmax pmax
comp=Z,2µm,4.9s
LZH LR LR
comp=Z,3µm,18.1s
LZH LR LR
comp=Z,6µm,18.4s
LZH LR LR
comp=Z,7µm,19.5s
HIA Hailar 66.36 335 IAmb IAmb 01 16 48.3
comp=Z,41nm,0.8s
ATKA Atka Island 66.92 20 P **P** **01 16 49.0 -0.9**
ZEA Zeya 67.40 342 *e*P **P** **01 16 53.8 +0.9**
ZEA *e*S **S** **01 25 47.8 +0.9**
ZEA 01 33 07.2
ZEA pmax pmax
comp=E,20nm,0.6s
ZEA pmax pmax
comp=N,60nm,1.0s
ZEA pmax pmax
comp=Z,90nm,0.9s
ZEA pmax pmax
comp=N,600nm,5.0s
ZEA pmax pmax
comp=Z,700nm,5.2s
ZEA smax smax
comp=E,500nm,7.5s
ZEA smax smax
comp=N,1µm,12.1s
RKT Rikitea 67.79 111 *e*S **S** **01 25 47.3 -5.5**
comp=N,3µm,38.5s
RKT Rikitea 67.79 111 *e*LR LR 01 37 26.3
comp=N,11µm,32.2s
VNDA Vanda 67.99 178 P **P** **01 16 57.5 +1.1**
comp=N,21nm,0.9s,baz=333,slow=6.6,SNR=85
VNDA LR LR 01 43 59.0
comp=N,2µm,18.0s,baz=346,slow=34
VNDA PKPPKP **P'P'df** **01 45 21.4 +3.4**
comp=N,3.6nm,1.3s,baz=199,slow=4.3,SNR=7.4
VNDA Vanda 67.99 178 P **P** **01 16 56.9 +0.5**
VNDA pmax pmax
comp=Z,21nm,0.9s
VNDA Vanda 67.99 178 P **P** **01 16 56.9 +0.5**
SAIH SAIHA 68.78 299 *e*P **P** **01 17 01.2 -1.2**
SAIH IAmb IAmb 01 17 07.6
comp=Z,47nm,0.9s
MOKO MOKOCHONG 68.89 303 *e*P **P** **01 17 02.0 -1.1**
MOKO IAmb IAmb 01 17 11.2
comp=Z,59nm,0.7s
KOHI KOHIMA 69.00 302 *e*P **P** **01 17 01.4 -2.3**
KOHI IAmb IAmb 01 17 04.2
comp=Z,94nm,1.1s
MA2 Magadan 69.03 358⇑ *e*P **P** **01 17 02.8 -0.2**
MA2 pmax pmax
comp=Z,178nm,3.0s
MA2 MLR MLR
comp=Z,1µm,19.0s
JORH JORHAT 69.27 303 *e*P **P** **01 17 04.3 -1.0**
NIKH Nikolski High 69.45 22 IAMs_20 IAMs_20 01 44 25.7
comp=Z,4µm,21.0s
SILR SILCHAR 69.75 301 *e*P **P** **01 17 08.9 +0.7**
ZIRO ZIRO 69.91 304 *e*P **P** **01 17 08.8 -0.6**
BELO BELONIA 70.37 299 *e*P **P** **01 17 12.1 0.0**
TEZP TEZPUR 70.43 303 *e*P **P** **01 17 11.4 -1.0**
TEZP *i* x 01 17 18.1
AGT Agartala 70.76 299 *e*P **P** **01 17 14.4 0.0**
GTA Gaotai 70.78 318 ⇓P **P** **01 17 14.8 +0.4**
GTA pP pP 01 17 22.5 +0.3
GTA sP pwP 01 17 25.5 -0.6
GTA S **S** **01 26 31.4 +3.6**
GTA sS sS 01 26 44.1 +3.6
GTA pmax pmax
comp=Z,22nm,1.3s
GTA pmax pmax
comp=Z,1µm,8.9s
GTA LR LR
comp=Z,1µm,20.0s
GTA LR LR
comp=Z,4µm,19.6s
GTA LR LR
comp=Z,5µm,19.3s
SHL Shillong 70.81 301 *e*P **P** **01 17 14.5 -0.4**
SHL *i* pP **pP** **01 17 21.9 -0.7**

SHL Shillong 70.81 301 P **P** **01 17 13.8 -1.1**
SHL pmax pmax
comp=Z,272nm,1.5s
SHL Shillong 70.81 301 P **P** **01 17 13.8 -1.1**
UNV Unalaska Valle 71.01 23 IAMs_20 IAMs_20 01 44 32.2
comp=Z,3μm,20.0s
CIT Chita 71.03 334 *e*P **P** **01 17 15.7 +0.2**
CIT *e* 01 17 23.7
CIT *e* 01 17 39.5
CIT pmax pmax
comp=Z,374nm,3.2s
GUWA GUWAHATI 71.20 302 *e*P **P** **01 17 16.2 -0.8**
GUWA IAmb IAmb 01 17 19.6
comp=Z,100nm,1.4s
ULN Ulaanbaatar 71.31 328*d i*P **P** **01 17 17.9 +0.5**
ULN pmax pmax
comp=Z,184nm,2.5s
ULN MLR MLR
comp=Z,2μm,18.0s
ULN Ulaanbaatar 71.31 328 P **P** **01 17 17.6 +0.2**
ULN Ulaanbaatar 71.31 328 IAMs_20 IAMs_20 01 46 21.4
comp=Z,4μm,21.0s
SONM Songino Array 71.63 328 P **P** **01 17 19.7 +0.3**
comp=Z,26nm,0.8s,baz=137,slow=5.8,SNR=110
SONM PKPPKP **P'P'df** **01 45 10.4 +1.3**
comp=Z,1.4nm,1.1s,baz=300,slow=0.7,SNR=6.7
SONM LR LR 01 46 42.9
comp=Z,4μm,21.6s,baz=147,slow=34
SONM Songino Array 71.63 328 P **P** **01 17 19.5 +0.1**
SONM pmax pmax
comp=Z,100nm,1.4s
SONM Songino Array 71.63 328 P **P** **01 17 19.5 +0.1**
SEY Seymchan 72.34 359⇓*e*P **P** **01 17 22.7 -0.4**
LSA Lhasa 72.92 305 P **P** **01 17 28.1 +0.2**
LSA pmax pmax
comp=Z,81nm,1.1s
LSA LR LR
comp=Z,5μm,27.0s
LSA LR LR
comp=Z,5μm,29.9s
LSA LR LR
comp=Z,9μm,29.9s
LSA Lhasa 72.92 305 P **P** **01 17 28.2 +0.3**
LSA pmax pmax
comp=Z,154nm,1.6s
LSA Lhasa 72.92 305 P **P** **01 17 28.2 +0.3**
LSA IAmb IAmb 01 17 37.4
comp=Z,154nm,1.6s
FALS False Pass 72.97 24 IAMs_20 IAMs_20 01 42 19.0
comp=Z,3μm,22.0s
YAK Yakutsk 74.13 348*d i*P **P** **01 17 33.9 +0.2**
YAK MLR MLR
comp=Z,1μm,20.0s
YAK Yakutsk 74.13 348 P **P** **01 17 33.3 -0.3**
GTK Tadong 74.18 302 *ex* P 01 17 23.4 -12
ZAK Zakamensk 74.81 329 *e*P **P** **01 17 37.8 -0.2**
ZAK pmax pmax
comp=Z,61nm,1.7s
TAPN Taplejung 74.93 302 *e*P **P** **01 17 38.9 -0.6**
comp=Z,177nm,1.1s
ODAN Odare 75.04 301 *e*P **P** **01 17 39.8 -0.3**
comp=Z,257nm,1.1s
BOD Bodaibo 75.10 339 *e*P **P** **01 17 38.9 -0.5**
BOD pmax pmax
comp=Z,100nm,1.7s
BOK Bokaro 75.38 298 *e*P **P** **01 17 41.8 0.0**
BOK IAmb IAmb 01 17 45.7
comp=Z,74nm,1.2s
TLY Talaya 75.40 330*d i*P **P** **01 17 41.2 -0.1**
TLY *e* 01 17 55.4
TLY *e*S **S** **01 27 14.9 -4.6**
TLY *e* 01 27 53.3
TLY pmax pmax
comp=Z,125nm,1.3s
TLY MLR MLR
comp=Z,3μm,14.0s
TLY Talaya 75.40 330 P **P** **01 17 41.6 +0.3**
TLY IAMs_20 IAMs_20 01 46 41.7
comp=Z,3μm,22.0s
IRK Irkutsk 75.44 330 *e*P **P** **01 17 42.7 +1.2**
IRK pmax pmax
comp=Z,189nm,2.3s
CHLP Challavanipeta 75.52 292 *e*P **P** **01 17 42.5 -0.1**
CHLP IVmB_BB 01 17 45.6
comp=Z,1μm,2.4s
RAMN Ramite 75.74 301 *e*P **P** **01 17 43.6 -0.5**
comp=Z,208nm,1.7s
CHGN Chignik 76.01 25 IAmb IAmb 01 18 07.0
comp=Z,108nm,1.3s
PALK Pallekele 76.09 280 P **P** **01 17 46.4 +0.3**
PALK pmax pmax
comp=Z,83nm,1.3s
PALK MLR MLR
comp=Z,1μm,21.0s
PALK Pallekele 76.09 280 P **P** **01 17 46.4 +0.3**
PALK IAmb IAmb 01 17 54.8
comp=Z,83nm,1.3s
GUN Gumba 76.65 302 *e*P **P** **01 17 48.8 -0.6**
comp=Z,718nm,1.8s
MOY Mondy 76.73 329 *e*P **P** **01 17 49.5 +0.5**
MOY pmax pmax
comp=Z,329nm,3.1s
PKI Pulchoki 76.94 301 *e*P **P** **01 17 50.3 -0.7**
comp=Z,583nm,1.8s
PKIN Phulchoki 76.95 301 *e*P **P** **01 17 50.1 -0.9**
comp=Z,516nm,1.9s
KKN Kakani 77.12 301 *e*P **P** **01 17 51.2 -0.7**
comp=Z,477nm,1.9s
DMN Daman 77.21 301 *e*P **P** **01 17 52.1 -0.3**
comp=Z,272nm,1.2s
PVM Polavaram 77.44 290 *e*P **P** **01 17 53.3 -0.3**
PVM IVmB_BB 01 17 55.7
comp=Z,630nm,2.3s
GKN Gorkha 77.72 301 *e*P **P** **01 17 54.4 -0.8**
comp=Z,774nm,1.7s
MDRS Chennai 77.76 286 *e*P **P** **01 17 56.6 +1.2**
MYLAV Mylavaram 78.24 289 *e*P **P** **01 17 57.9 -0.1**
MYLAV IVmB_BB 01 18 00.5
comp=Z,690nm,2.1s
SKHT Srikalahasti 78.42 286 *e*P **P** **01 17 58.9 -0.1**
SKHT IVmBBB 01 18 01.6
comp=Z,539nm,2.1s
KOLN Koldanda 78.53 301 *e*P **P** **01 17 59.0 -0.7**
comp=Z,244nm,1.1s
DANN Dangsing 78.57 302 *e*P **P** **01 17 58.8 -1.2**
comp=Z,477nm,1.8s
ADKI Addanki 78.65 288 *e*P **P** **01 18 00.3 0.0**
ADKI IVmB_BB 01 18 02.7
comp=Z,527nm,2.2s
GGR Gangavaram 78.90 290 *e*P **P** **01 18 00.8 -0.9**
GGR IVmB_BB 01 18 03.5
comp=Z,700nm,2.9s
PYUN Piuthan 79.14 301 *e*P **P** **01 18 02.1 -1.0**
comp=Z,265nm,1.1s
NJS Nagarjunasagar 79.43 289 *e*P **P** **01 18 04.1 -0.5**
NJS IVmB_BB 01 18 06.5
comp=Z,620nm,2.0s
ANM Nome 79.65 16 IAmb IAmb 01 18 15.2
comp=Z,123nm,1.2s
TNA Tin City 79.76 15 P **P** **01 18 06.9 +1.6**
baz=217
CUPL Choutuppal 79.96 290 *e*P **P** **01 18 06.7 -0.8**
CUPL IVmB_BB 01 18 09.0
comp=Z,618nm,2.6s
TRD Trivandrum 79.97 280 *e*P **P** **01 18 08.1 +0.5**
RPR Rampur 79.98 291 *e*P **P** **01 18 06.9 -0.7**
RPR IVmB_BB 01 18 09.3
comp=Z,715nm,2.4s
SVW2 Sparrevohn 80.31 22 IAmb IAmb 01 18 13.3
comp=Z,198nm,1.5s
HYB Hyderabad 80.33 290 *i* P **P** **01 18 08.0 -1.5**
HYBB Hyderabad (bro 80.33 290 *e*P **P** **01 18 08.8 -0.8**
HYBB IVmBBB 01 18 11.1
comp=Z,597nm,2.2s
QSPA South Pole Qui 80.40 180 P **P** **01 18 10.4 +1.3**
comp=Z,181nm,0.9s,baz=350,slow=1.4,SNR=294
QSPA South Pole Qui 80.40 180 P **P** **01 18 10.4 +1.3**
QSPA South Pole Qui 80.40 180 IAMs_20 IAMs_20 01 53 59.8
comp=Z,3μm,18.0s
NGP Nagpur 80.75 293 *e*P **P** **01 18 09.9 -1.8**
NGP *i* pP **PcP** **01 18 18.4 0.0**
WMQ Urumqi 80.87 317 P **P** **01 18 12.6 +0.7**
WMQ pP pP 01 18 20.6 +0.8
WMQ S **S** **01 28 19.9 +1.1**
WMQ SKS **SKSac** **01 28 24.4 -4.5**
WMQ pmax pmax
comp=Z,120nm,2.1s
WMQ pmax pmax
comp=Z,2μm,4.7s
WMQ LR LR
comp=Z,1μm,17.3s
WMQ LR LR
comp=Z,3μm,22.1s
WMQ LR LR
comp=Z,5μm,22.1s
WMQ Urumqi 80.87 317 IAMs_20 IAMs_20 01 52 21.4
comp=Z,3μm,20.0s
HOM Homer 80.93 24 P **P** **01 18 13.1 +1.4**
baz=233
URV Uravakonda 81.00 287 *e*P **P** **01 18 13.1 0.0**
URV IVmBBB 01 18 15.4
comp=Z,693nm,1.8s
TTA Tatalina 81.37 20 IAmb IAmb 01 18 24.3
comp=Z,109nm,1.7s
TTA IAMs_20 IAMs_20 01 48 47.7
comp=Z,4μm,22.0s
MAW Mawson 82.10 203 P **P** **01 18 19.0 +1.1**
comp=Z,39nm,0.9s,baz=88,slow=6.3,SNR=78
MAW LR LR 01 52 55.0
comp=Z,1μm,18.1s,baz=90,slow=34
MAW Mawson 82.10 203 P **P** **01 18 18.6 +0.7**
baz=82,SNR=58
MAW Mawson 82.10 203 P **P** **01 18 18.4 +0.5**
MAW pmax pmax
comp=Z,18nm,1.1s
MAW Mawson 82.10 203 P **P** **01 18 18.4 +0.5**
KLRI Killari 82.29 290 *e*P **P** **01 18 20.2 +0.2**
KLRI IVmB_BB 01 18 21.4
comp=Z,769nm,3.6s
RC01 Rabbit Creek A 82.54 24 P **P** **01 18 20.3 +0.1**
baz=235
PPLA Purkeypile 82.69 22 IAmb IAmb 01 18 24.3
comp=Z,165nm,1.7s
PPLA IAMs_20 IAMs_20 01 48 17.9
comp=Z,4μm,22.0s
BHPL Bhopal 82.71 295 *e*P **P** **01 18 21.9 -0.1**
BHPL IAmb IAmb 01 18 24.8
comp=Z,166nm,1.7s
TIXI Tiksi 82.94 352*d i*P **P** **01 18 21.3 -0.8**
TIXI Tiksi 82.94 352 P **P** **01 18 21.4 -0.7**
RDOG Red Dog Mine 82.96 15 IAmb IAmb 01 18 32.4
comp=Z,164nm,1.4s
RDOG IAMs_20 IAMs_20 01 50 04.4
comp=Z,4μm,21.0s
CAST Castle Rocks 83.05 21 IAmb IAmb 01 18 31.8
comp=Z,75nm,1.1s
PMR Palmer 83.07 23 IAmb IAmb 01 18 28.5
comp=Z,116nm,1.4s
PMR IAMs_20 IAMs_20 01 57 51.0
comp=Z,2μm,19.0s
CUT Chulitna 83.11 22 P **P** **01 18 22.9 -0.2**
baz=234
KNK Knik Glacier 83.23 24 IAMs_20 IAMs_20 01 52 18.3
comp=Z,3μm,21.0s
GHO Glory Hole Cre 83.25 23 P **P** **01 18 24.8 +0.7**
GHO IAmb IAmb 01 18 38.2
comp=Z,110nm,1.4s
GHO IAMs_20 IAMs_20 01 51 39.8
comp=Z,3μm,21.0s
KTH Kantishna Hill 83.55 21 IAmb IAmb 01 18 28.9
comp=Z,44nm,1.0s
KTH IAMs_20 IAMs_20 01 54 43.5
comp=Z,3μm,20.0s
TRF Thorofare Moun 83.72 22 IAmb IAmb 01 18 28.2
comp=Z,51nm,1.1s
TRF IAMs_20 IAMs_20 01 54 48.9
comp=Z,3μm,20.0s
BPAW Bear Paw Mtn. 83.85 21 IAmb IAmb 01 18 30.0
comp=Z,63nm,1.4s
BPAW IAMs_20 IAMs_20 01 51 07.5
comp=Z,3μm,21.0s
DDI Dehra Dun 83.90 302 *e*P **P** **01 18 28.1 +0.1**
DDI IAmb IAmb 01 18 29.5
comp=Z,41nm,0.8s
SCM Sheep Creek Mo 83.92 24 IAmb IAmb 01 18 37.5
comp=Z,129nm,1.2s
ZSN Zaisan 84.06 320⇓*i*P **P** **01 18 28.6 +0.1**
comp=Z,362nm,3.4s,baz=320
ZSN LR LR 01 52 57.2
comp=Z,1μm,19.7s,baz=320
ZSN Zaisan 84.06 320*d i*P **P** **01 18 28.5 +0.1**
ZSN pmax pmax
comp=Z,363nm,3.4s
ZSN MLR MLR
comp=Z,1μm,20.0s
RND Reindeer 84.22 22 IAmb IAmb 01 18 37.9
comp=Z,114nm,1.3s
RND IAMs_20 IAMs_20 01 49 28.1
comp=Z,3μm,22.0s
GOA Goa 84.36 287 *e*P **P** **01 18 31.2 +0.7**
MCK McKinley 84.37 22 P **P** **01 18 29.8 +0.1**
baz=235,SNR=54
BWN Browne 84.44 21 P **P** **01 18 29.6 -0.3**
BWN IAMs_20 IAMs_20 01 54 06.5
comp=Z,2μm,20.0s
MLY Manley 84.50 20 P **P** **01 18 30.4 +0.1**
baz=233,SNR=17
M24K Tolsona, Glenn 84.52 24 P **P** **01 18 31.7 +1.2**
baz=238
NEA2 Nenana 84.82 21 P **P** **01 18 31.5 -0.3**
baz=235,SNR=21
SMLA Simla 84.84 303 *e*P **P** **01 18 31.8 -0.9**
N25K Chitina, Valde 84.90 25 P **P** **01 18 33.4 +1.0**
baz=239
N25K Chitina, Valde 84.90 25 IAmb IAmb 01 18 42.8
comp=Z,76nm,1.4s
POO Poona 84.94 290 *e*P **P** **01 18 31.5 -2.1**
POO *i* pP **pP** **01 18 39.6 -1.7**
I23K Minto, Yukon-K 85.04 20 P **P** **01 18 32.9 0.0**
baz=235,SNR=18
CRQM Cirque 85.08 26 IAmb IAmb 01 18 42.9
comp=Z,56nm,1.0s
WRH Wood River Hil 85.10 21 IAmb IAmb 01 18 42.1
comp=Z,88nm,1.2s
WRH IAMs_20 IAMs_20 01 49 44.5
comp=Z,3μm,22.0s
GLB Gilahina Butte 85.14 25 IAmb IAmb 01 18 43.7
comp=Z,122nm,1.4s
VRDI Verde Repeater 85.18 25 P **P** **01 18 35.0 +1.0**
VRDI IAmb IAmb 01 18 44.0
comp=Z,92nm,1.3s
TGL Tana Glacier 85.21 26 IAMs_20 IAMs_20 01 59 36.8
comp=Z,2μm,20.0s
PAX Paxson 85.26 23 IAmb IAmb 01 19 05.8
comp=Z,71nm,1.7s
PAX IAMs_20 IAMs_20 01 53 32.8
comp=Z,3μm,21.0s
CCB Clear Creek Bu 85.30 21 IAmb IAmb 01 18 36.0
comp=Z,154nm,1.7s
CCB IAMs_20 IAMs_20 01 52 02.7
comp=Z,3μm,20.0s
MDM Murphy Dome 85.33 21 IAmb IAmb 01 18 43.1
comp=Z,85nm,1.2s
MDM IAMs_20 IAMs_20 01 52 35.4
comp=Z,3μm,20.0s
TCOL CIGO, UAF Yank 85.41 21 P **P** **01 18 34.7 -0.1**
baz=236,SNR=17
TCOL CIGO, UAF Yank 85.41 21 IAMs_20 IAMs_20 01 52 15.6
comp=Z,2μm,20.0s
COLA College 85.41 21*d i*P **P** **01 18 34.4 -0.3**
COLA pmax pmax
comp=Z,89nm,1.0s
COLA MLR MLR
comp=Z,1μm,19.0s
COLA College 85.41 21 P **P** **01 18 34.5 -0.2**
COLA IAmb IAmb 01 18 43.4
comp=Z,120nm,1.1s
COLA College 85.41 21 IAMs_20 IAMs_20 01 52 16.6
comp=Z,2μm,20.0s
MCARA McCarthy VSAT 85.44 25 IAmb IAmb 01 18 56.4
comp=Z,145nm,1.7s
HDA Harding Lake 85.48 22 P **P** **01 18 34.9 -0.2**
baz=237,SNR=14
HDA Harding Lake 85.48 22 IAmb IAmb 01 18 44.2
comp=Z,58nm,1.1s
HDA IAMs_20 IAMs_20 01 54 37.5
comp=Z,3μm,20.0s
MK31 Makanchi Array 85.49 319 *i* P **P** **01 18 35.0 -0.6**
MK31 pmax pmax
comp=Z,43nm,1.0s
MK31 Makanchi Array 85.49 319 IAmb IAmb 01 18 39.0
comp=Z,54nm,1.3s
MKAR Makanchi Array 85.49 319 P **P** **01 18 35.5 -0.1**
comp=Z,20nm,0.9s,baz=107,slow=4.8,SNR=83
MKAR LR LR 01 56 50.1
comp=Z,2μm,19.3s,baz=100,slow=36
MKAR Makanchi Array 85.49 319 P **P** **01 18 35.1 -0.6**
POKR Poker Plat Res 85.69 21 P **P** **01 18 36.1 -0.1**
baz=236
POKR Poker Plat Res 85.69 21 IAmb IAmb 01 18 39.0
comp=Z,145nm,2.0s
POKR IAMs_20 IAMs_20 01 51 31.2
comp=Z,3μm,21.0s
IL31 85.70 21 IAmb IAmb 01 18 44.8
comp=Z,62nm,1.1s
ILAR Eielson Array 85.70 21 P **P** **01 18 36.0 -0.2**
comp=Z,24nm,0.9s,baz=257,slow=4.9,SNR=111
ILAR LR LR 01 53 08.7
comp=Z,2μm,20.6s,baz=250,slow=33
ILAR Eielson Array 85.70 21 P **P** **01 18 35.2 -1.0**
ILAR Eielson Array 85.70 21 P **P** **01 18 35.2 -1.0**
MAKZ Makanchi 85.70 319 P **P** **01 18 35.8 -0.9**
MAKZ Makanchi 85.70 319 P **P** **01 18 35.8 -0.9**
MAKZ IAmb IAmb 01 18 38.8
comp=Z,61nm,1.1s
MAKZ IAMs_20 IAMs_20 01 54 49.4
comp=Z,3μm,22.0s
DHRM DHARAMSHALA 85.83 304 *e*P **P** **01 18 36.7 -1.3**
DHRM IAmb IAmb 01 18 38.7
comp=Z,81nm,1.0s
BARN Barnard Glacie 85.86 26 IAmb IAmb 01 18 41.0
comp=Z,149nm,1.5s
RIDG Independent Ri 85.90 23 IAMs_20 IAMs_20 01 53 32.8
comp=Z,2μm,18.0s
MENT Mentasta 85.93 24 IAmb IAmb 01 18 47.9
comp=Z,63nm,1.3s
CTGM Chitina Glacie 85.96 26 P **P** **01 18 39.5 +1.7**
CTGM IAmb IAmb 01 18 48.1
comp=Z,93nm,1.2s
COLD Coldfoot 85.99 19 P **P** **01 18 38.8 +1.2**
baz=234
COLD Coldfoot 85.99 19 IAmb IAmb 01 18 48.1
comp=Z,130nm,1.6s
L26K Log Cabin Wild 86.12 24 P **P** **01 18 39.0 +0.6**
baz=240
SHLS Shalkode 86.29 315⇓*i*P **P** **01 18 38.6 -1.2**
comp=Z,251nm,2.5s,baz=315
SHLS *e*S **SKSac** **01 29 00.4 -4.1**
baz=315
SHLS Shalkode 86.29 315*d i*P **P** **01 18 38.6 -1.2**
SHLS *e*S **SKSac** **01 29 00.4 -4.1**
SHLS pmax pmax
comp=Z,251nm,2.5s
SCRK Sand Creek 86.35 23 P **P** **01 18 40.7 +1.0**
baz=240,SNR=26
ZALV Zalesovo Beam 86.44 326 P **P** **01 18 38.9 -1.3**
comp=Z,32nm,0.9s,baz=107,slow=5.0,SNR=120
ZALV PKPPKP **P'P'df** **01 44 45.7 +3.2**
comp=Z,0.6nm,0.6s,baz=267,slow=3.0,SNR=4.9
ZALV LR LR 01 55 47.0
comp=Z,4μm,21.9s,baz=119,slow=35
ZALV Zalesovo Beam 86.44 326 P **P** **01 18 38.3 -1.8**
ZALV Zalesovo Beam 86.44 326 P **P** **01 18 38.3 -1.8**
PRP Porcupine Dome 86.59 21 IAMs_20 IAMs_20 01 53 33.7
comp=Z,3μm,21.0s
A21K Barrow 86.84 14 P **P** **01 18 42.5 +0.8**
baz=227
A21K Barrow 86.84 14 P **P** **01 18 41.4 -0.3**
KPKS Kokpek 86.92 315⇓*i*P **P** **01 18 42.9 0.0**
comp=Z,355nm,2.5s,baz=315
KPKS LR LR 01 56 28.6
comp=Z,984nm,18.1s,baz=315
KPKS Kokpek 86.92 315*d i*P **P** **01 18 42.9 0.0**
KPKS pmax pmax
comp=Z,355nm,2.5s
KPKS MLR MLR
comp=Z,984nm,18.0s
SATY Saty 87.00 314⇓*i*P **P** **01 18 43.2 -0.2**
comp=Z,267nm,3.1s,baz=314
SATY *e*S **SKSac** **01 29 06.7 -2.3**
baz=314
SATY Saty 87.00 314*d i*P **P** **01 18 43.1 -0.2**
SATY *e*S **SKSac** **01 29 06.6 -2.3**
SATY pmax pmax
comp=Z,267nm,3.1s
TOLK Toolik Lake Re 87.02 18 P **P** **01 18 43.9 +1.2**
baz=234
TOLK Toolik Lake Re 87.02 18 IAmb IAmb 01 18 52.8
comp=Z,72nm,1.5s
K27K Chicken 87.11 23 P **P** **01 18 45.3 +2.1**
baz=241
FYU Fort Yukon 87.24 20 IAMs_20 IAMs_20 01 55 12.0
comp=Z,3μm,20.0s
DIB Dawson Inlet, 87.25 35 IAMs_20 IAMs_20 01 55 11.4
comp=Z,3μm,20.0s
TDK Taldyqorghan 87.54 316 *i* P **P** **01 18 45.8 0.0**
comp=Z,825nm,3.5s,baz=316
TDK *e*S **SKSac** **01 29 09.9 -1.9**
baz=316
TDK LR LR 01 56 20.7
comp=Z,1μm,18.0s,baz=316
TDK Taldyqorghan 87.54 316 *i* P **P** **01 18 45.7 0.0**
TDK *e*S **SKSac** **01 29 09.9 -1.9**
TDK pmax pmax
comp=Z,825nm,3.5s
TDK MLR MLR
comp=Z,1μm,18.0s
EGAK Eagle 87.82 23 P **P** **01 18 47.5 +1.0**
EGAK IAMs_20 IAMs_20 01 55 43.4
comp=Z,2μm,21.0s
KSH Kashi 87.85 310⇓*i*P **P** **01 18 47.8 +0.3**
KSH pP sP 01 18 57.3 -0.5
KSH PP **PP** **01 22 17.8 +4.0**
KSH S **S** **01 29 23.5 -5.4**
KSH pmax pmax
comp=Z,40nm,1.0s
KSH pmax pmax
comp=Z,2μm,4.8s
KSH LR LR
comp=Z,4μm,19.4s
KSH LR LR
comp=Z,5μm,17.7s
KSH LR LR
comp=Z,5μm,22.5s
SEM Semipalatinsk 87.91 322 *e*P **P** **01 18 45.9 -1.7**
comp=Z,162nm,3.7s,baz=322
SEM Semipalatinsk 87.91 322 *e*P **P** **01 18 45.9 -1.7**
SEM pmax pmax
comp=Z,162nm,3.7s
MDOK Medeo 87.99 314 *i* P **P** **01 18 48.1 -0.1**
baz=314
MDOK *e*S **SKSac** **01 29 12.9 -2.1**
baz=314
MDOK LR LR 01 54 51.4
comp=Z,632nm,18.1s,baz=314
MDOK Medeo 87.99 314 *i* P **P** **01 18 48.0 -0.1**
MDOK *e*S **SKSac** **01 29 12.8 -2.2**
MDOK MLR MLR
comp=Z,632nm,18.0s
TNSS Tian-Shan 88.03 314⇓*i*P **P** **01 18 49.1 +0.5**
baz=314
TNSS Tian-Shan 88.03 314*d i*P **P** **01 18 49.1 +0.5**
SKAG Skagway 88.03 29 IAmb IAmb 01 18 53.4
comp=Z,93nm,1.3s
JIS Juneau Island 88.04 30 IAMs_20 IAMs_20 01 51 26.9
comp=Z,2μm,21.0s
CHKK Chushkaly 88.21 315 *i* P **P** **01 18 48.4 -0.5**
baz=315
CHKK Chushkaly 88.21 315 *i* P **P** **01 18 48.4 -0.5**
ULHL Ulahol 88.33 313 P **P** **01 18 50.2 +0.4**
SNR=16
WRAK Wrangell Islan 88.41 32 IAMs_20 IAMs_20 01 51 01.0
comp=Z,2μm,20.0s
NIL Nilore 88.64 304 P **P** **01 18 50.1 -1.2**
NIL pmax pmax
comp=Z,190nm,1.6s
NIL MLR MLR
comp=Z,3μm,20.0s
NIL Nilore 88.64 304 P **P** **01 18 50.1 -1.2**
NIL Nilore 88.64 304 IAMs_20 IAMs_20 01 58 28.6
comp=Z,3μm,20.0s
KUU Kurty 88.67 315 *i* P **P** **01 18 50.8 -0.4**
comp=Z,603nm,2.5s,baz=315
KUU *e*S **SKSac** **01 29 16.4 -2.3**
baz=315
KUU LR LR 01 58 03.6
comp=Z,1μm,19.2s,baz=315
KUU Kurty 88.67 315 *i* P **P** **01 18 50.7 -0.4**
KUU *e*S **SKSac** **01 29 16.4 -2.3**
KUU pmax pmax

KUU comp=Z,603nm,2.5s MLR MLR

WHY Whitehorse 88.69 28 P **P** **01 18 51.9 +0.9**
WHY comp=Z,1µm,19.0s IAmb IAmb 01 18 54.3

TKM2 Tokmak 2 88.96 314 P **P** **01 18 52.5 -0.3**
TKM2 SNR=19 pmax pmax

TKM2 Tokmak 2 88.96 314 *i* P **P** **01 18 51.9 -0.9**
TKM2 comp=Z,80nm,1.7s pmax pmax

KURK Kurchatov 89.00 322 *d i* P **P** **01 18 51.2 -1.2**
KURK comp=Z,63nm,2.5s pmax pmax

KURK comp=Z,2µm,20.0s MLR MLR

KURK Kurchatov 89.00 322 P **P** **01 18 52.5 +0.1**
KURK Kurchatov 89.00 322 IAMs_20 IAMs_20 01 58 17.5
comp=Z,2µm,20.0s

KURBB Kurchatov Arra 89.03 322 PKKPbc PKKPbc 01 36 31.9 -0.9
comp=Z,0.7nm,0.5s,baz=295,slow=3.5,SNR=6.8

KURBB PKPPKP **P'P'df** **01 44 39.4 +1.3**
comp=Z,0.9nm,0.3s,baz=282,slow=3.1,SNR=4.5

KBK Karagaybulak 89.36 313 P **P** **01 18 55.1 +0.5**
SNR=12

KCPM Cahto Peak 89.36 50 IAmb IAmb 01 18 59.8
comp=Z,144nm,2.0s

BBB Bella Bella 89.46 37 IAMs_20 IAMs_20 01 53 39.0
comp=Z,2µm,20.0s

KEBM Edson Butte 89.54 46 IAMs_20 IAMs_20 01 53 33.2
comp=Z,2µm,20.0s

UCH Uchtor 89.57 313 P **P** **01 18 55.2 -0.7**
SNR=7.3

CHMS Chumysh 89.58 314 P **P** **01 18 55.4 0.0**
SNR=17

HOPS Hopland Field 89.60 50 IAMs_20 IAMs_20 02 01 33.1
comp=Z,2µm,18.0s

FRU1 Bishkek 89.62 313 IAmb IAmb 01 19 04.9
comp=Z,83nm,1.4s

FRU1 IAMs_20 IAMs_20 01 58 01.5
comp=Z,4µm,22.0s

AAK Ala-Archa 89.68 313 P **P** **01 18 56.2 +0.2**
SNR=20

AAK Ala-Archa 89.68 313 *d i* P **P** **01 18 55.7 -0.4**
AAK comp=Z,232nm,2.1s pmax pmax

AAK comp=Z,12µm,20.0s MLR MLR

SGDS Sogindy 89.77 314 ⇓ *i* P **P** **01 18 55.9 -0.5**
SGDS comp=Z,130nm,2.8s,baz=314 *e* S **SKSac** **01 29 22.9 -2.4**
baz=314

SGDS Sogindy 89.77 314 *d i* P **P** **01 18 55.9 -0.5**
SGDS *e* S **SKSac** **01 29 22.9 -2.4**
SGDS comp=Z,131nm,2.8s pmax pmax

USP Ospenovka 89.82 314 P **P** **01 18 55.9 -0.7**
SNR=23

J01E Myrtle Point 89.89 46 P **P** **01 18 58.9 +2.1**
baz=257

L02E Cave Junction 89.90 47 P **P** **01 18 58.6 +1.7**
baz=257

SYO Syowa Base 89.95 199 ⇓ *i* P **P** **01 18 55.3 -1.3**
SYO Syowa Base 89.95 199 ⇓ *i* PcP **PcP** **01 18 58.3 +0.4**
SYO Syowa Base 89.95 199 ⇓ *i* sP sP 01 19 02.2 -4.9

K02D Willamette Mer 89.98 47 P **P** **01 18 59.1 +1.7**
baz=257

O02D Mt. Diablo Mer 90.07 49 P **P** **01 18 59.6 +1.8**
baz=258

AML Almayashu 90.14 313 P **P** **01 18 59.0 +0.4**
SNR=34

I02D Swisshome 90.17 45 P **P** **01 18 59.0 +1.0**
baz=257

EKS2 Erkin-Say 90.20 313 P **P** **01 18 58.8 +0.4**
SNR=7.7

DLBC Dease Lake 90.25 30 P **P** **01 19 00.3 +2.0**
DLBC comp=Z,59nm,1.4s IAmb IAmb 01 19 10.3

M02C Callahan 90.28 48 P **P** **01 19 00.6 +1.8**
baz=258

N02D Trinity Center 90.30 49 P **P** **01 19 00.7 +1.8**
baz=258

WDC Whiskeytown Da 90.34 49 P **P** **01 19 00.3 +1.3**
WDC comp=Z,77nm,2.0s pmax pmax

WDC Whiskeytown Da 90.34 49 P **P** **01 19 00.3 +1.3**
WDC IAmb IAmb 01 19 15.6
comp=Z,77nm,2.0s

WDC IAMs_20 IAMs_20 01 53 49.6
comp=Z,2µm,19.0s

SAO San Andreas Ge 90.39 53 P **P** **01 19 01.3 +2.0**
SAO comp=Z,35nm,1.2s pmax pmax

SAO San Andreas Ge 90.39 53 P **P** **01 19 01.3 +2.0**
SAO IAMs_20 IAMs_20 01 56 09.2
comp=Z,3µm,19.0s

I03D Drain, OR 90.43 46 P **P** **01 19 00.8 +1.5**
baz=257

BTLS Baital 90.54 316 ⇓ *i* P **P** **01 18 59.4 -0.4**
comp=Z,119nm,2.5s,baz=316

BTLS *e* S **SKSac** **01 29 27.5 -2.1**
baz=316

BTLS LR LR 01 58 00.2
comp=Z,753nm,21.6s,baz=316

BTLS Baital 90.54 316 *d i* P **P** **01 18 59.4 -0.4**
BTLS *e* S **SKSac** **01 29 27.5 -2.1**
BTLS comp=Z,119nm,2.5s pmax pmax

BTLS MLR MLR
comp=Z,753nm,22.0s

PMPB Monarch Peak 90.79 54 IAmb IAmb 01 19 32.7
comp=Z,63nm,1.2s

G03D McMinnville, O 90.82 44 P **P** **01 19 01.8 +0.7**
baz=257

O03E Paynes Creek 90.83 49 P **P** **01 19 02.5 +1.1**
baz=258

L04D Klamath Falls 90.86 47 P **P** **01 19 02.6 +1.0**
baz=258

ORV Oroville 90.91 50 P **P** **01 19 02.0 +0.3**
ORV comp=Z,123nm,2.0s pmax pmax

ORV Oroville 90.91 50 P **P** **01 19 01.9 +0.3**
ORV IAmb IAmb 01 19 06.3
comp=Z,123nm,1.9s

E03A Lebam 90.91 43 IAmb IAmb 01 19 04.3
comp=Z,47nm,1.1s

E03A IAMs_20 IAMs_20 01 53 45.2
comp=Z,2µm,20.0s

H04D Lebanon 91.04 45 P **P** **01 19 03.4 +1.3**
baz=258

M04C Macdoel 91.11 48 P **P** **01 19 04.1 +1.4**
baz=258

I04A Tendick Farm, 91.11 46 P **P** **01 19 03.4 +0.8**
baz=258

PAGB Antelope Grade 91.14 54 IAmb IAmb 01 19 07.3
comp=Z,49nm,1.0s

PAGB IAMs_20 IAMs_20 01 50 36.2
comp=Z,2µm,21.0s

F04D Rainier, OR 91.18 44 P **P** **01 19 03.5 +0.7**
baz=258

J04D Umpqua Nationa 91.21 46 P **P** **01 19 04.1 +0.8**
baz=258

NRIK Noril'sk 91.25 341 P **P** **01 19 01.7 -0.9**
NRIK comp=Z,28nm,1.0s,baz=111,slow=4.8,SNR=44 LR LR 01 58 47.0
comp=Z,1µm,21.9s,baz=122,slow=35

NRIK Noril'sk 91.25 341 *d i* P **P** **01 19 01.3 -1.2**
NRIK comp=Z,41nm,1.1s pmax pmax

NRIK MLR MLR
comp=Z,1µm,23.0s

SMMC Simmler 91.26 55 P **P** **01 19 05.3 +1.9**
baz=259

SNCC San Nicolas Is 91.26 57 P **P** **01 19 04.7 +1.2**
baz=260

SCZ2 Santa Cruz Isl 91.31 56 P **P** **01 19 04.9 +1.2**
baz=259

SBC Santa Barbara 91.33 55 P **P** **01 19 05.3 +1.6**
baz=259

PKM Mcpherson Peak 91.33 55 P **P** **01 19 04.7 +0.8**
baz=259

K04D Chiloquin, OR 91.34 47 P **P** **01 19 04.7 +0.9**
baz=258

D03D Eldon 91.45 42 P **P** **01 19 05.6 +1.7**
baz=258

CMB Columbia Colle 91.47 52 IAmb IAmb 01 19 09.1
comp=Z,65nm,1.8s

F04A Amboy 91.56 44 IAMs_20 IAMs_20 01 52 40.2
comp=Z,2µm,21.0s

D04E Lakebay 91.58 43 P **P** **01 19 06.1 +1.6**
baz=258

E04D Cinebar 91.59 43 P **P** **01 19 05.4 +0.8**
baz=258

BEKR Beckworth 91.83 50 IAmb IAmb 01 19 10.9
comp=Z,142nm,1.9s

J05D Fort Rock, OR 91.85 47 P **P** **01 19 07.6 +1.5**
baz=259

BTK Batken 91.85 310 P **P** **01 19 05.4 -0.7**
BTK pmax pmax

BTK comp=Z,44nm,1.4s MLR MLR

BTK comp=Z,2µm,21.0s

BTK Batken 91.85 310 P **P** **01 19 05.4 -0.7**
BTK IAmb IAmb 01 19 14.4
comp=Z,44nm,1.4s

BTK IAMs_20 IAMs_20 01 58 52.5
comp=Z,2µm,21.0s

VOG Valley Oaks Go 91.94 54 P **P** **01 19 07.9 +1.4**
baz=260

A04D Lummi Island 91.95 41 P **P** **01 19 06.6 +0.4**
baz=258

I05D Terrebonne, OR 91.98 46 P **P** **01 19 07.4 +0.8**
baz=259

DZA Taraz 92.01 313 *e* P **P** **01 19 06.2 -0.5**
baz=313

DZA LR LR 01 57 37.6
comp=Z,1µm,22.3s,baz=313

DZA Taraz 92.01 313 *e* P **P** **01 19 06.2 -0.5**
DZA MLR MLR
comp=Z,1µm,22.0s

SCI2 San Clemente I 92.02 57 P **P** **01 19 08.3 +1.3**
baz=260

INK Inuvik 92.06 21 P **P** **01 19 06.5 +0.2**
INK pmax pmax

INK comp=Z,58nm,1.4s MLR MLR

INK comp=Z,3µm,20.0s

INK Inuvik 92.06 21 P **P** **01 19 06.5 +0.2**
INK IAmb IAmb 01 19 09.0
comp=Z,58nm,1.4s

VES Vestal, Richgr 92.09 54 P **P** **01 19 08.5 +1.3**
baz=260,SNR=6.8

LON Longmire 92.14 43 IAMs_20 IAMs_20 01 54 22.5
comp=Z,2µm,20.0s

PINE Pine Mountain 92.16 46 IAMs_20 IAMs_20 01 56 53.3
comp=Z,2µm,20.0s

OSI Osito Audit: C 92.16 55 P **P** **01 19 09.3 +1.6**
baz=260

ARVC Arvin 92.17 55 P **P** **01 19 07.9 +0.3**
baz=260

G05D Wamic, OR 92.17 45 P **P** **01 19 08.1 +0.6**
baz=259

F05D White Salmon 92.20 44 P **P** **01 19 08.3 +0.8**
baz=259

CIS Catalina Islan 92.20 57 P **P** **01 19 09.1 +1.3**
baz=260

KBL Kabul 92.24 304 P **P** **01 19 06.4 -1.8**
KBL pmax pmax

KBL comp=Z,33nm,1.5s MLR MLR

KBL comp=Z,800nm,21.0s

KBL Kabul 92.24 304 P **P** **01 19 06.4 -1.8**
B05A Bryant 92.25 42 P **P** **01 19 09.0 +1.4**
baz=258

MOD Modoc Plateau 92.26 48 IAMs_20 IAMs_20 01 56 24.2
comp=Z,2µm,19.0s

VCNR Virginia City 92.27 51 IAmb IAmb 01 19 12.3
comp=Z,49nm,1.4s

PNTR Pine Nut 92.27 51 P **P** **01 19 09.9 +1.6**
PNTR IAmb IAmb 01 19 12.3
comp=Z,43nm,1.1s

WAKR Walker 92.29 52 IAmb IAmb 01 19 13.6
comp=Z,101nm,1.8s

FMP Fort Macarthur 92.36 56 P **P** **01 19 10.1 +1.6**
baz=260

MDPB Devils Postpil 92.41 52 IAMs_20 IAMs_20 01 55 51.7
comp=Z,2µm,20.0s

DECC Green Verdugo 92.42 56 P **P** **01 19 10.4 +1.6**
baz=260

OMMB Old Mammoth Mi 92.47 52 IAmb IAmb 01 19 25.7
comp=Z,54nm,1.7s

OMMB IAMs_20 IAMs_20 01 56 13.2
comp=Z,2µm,19.0s

BRZS Berezniki 92.51 320 *i* P **P** **01 19 07.1 -1.7**
baz=320

BRZS Berezniki 92.51 320 *i* P **P** **01 19 07.1 -1.7**
PASC Pasadena Art C 92.53 56 IAMs_20 IAMs_20 02 02 33.1
comp=Z,2µm,18.0s

PAHR Pah Rah Range 92.54 50 IAmb IAmb 01 19 24.8
comp=Z,61nm,1.6s

ISA Isabella, Lake 92.55 54 P **P** **01 19 11.0 +1.6**
baz=260,SNR=7.4

ISA Isabella, Lake 92.55 54 IAMs_20 IAMs_20 01 51 31.5
comp=Z,2µm,22.0s

MLAC Mammoth, Mammo 92.60 52 P **P** **01 19 11.2 +1.3**
baz=260

MWC Mount Wilson 92.64 56 IAmb IAmb 01 19 16.0
comp=Z,49nm,1.3s

MWC IAMs_20 IAMs_20 02 02 45.1
comp=Z,2µm,18.0s

KK31 Karatay Array 92.64 313 *i* P **P** **01 19 08.9 -0.7**
KK31 Karatay Array 92.64 313 IAmb IAmb 01 19 18.2
comp=Z,117nm,1.6s

KKAR Karatay Array 92.64 313 P **P** **01 19 08.6 -1.1**
KKAR Karatay Array 92.64 313 P **P** **01 19 08.6 -1.1**
EDW2 Edwards Air Fo 92.80 55 P **P** **01 19 12.1 +1.5**
baz=260

IUG luzhnay 92.82 312 *i* P **P** **01 19 10.2 -0.5**
comp=Z,12nm,1.5s,baz=312

IUG luzhnay 92.82 312 *i* P **P** **01 19 10.1 -0.5**
IUG pmax pmax
comp=Z,12nm,1.5s

LHV Little Huntoon 92.96 52 P **P** **01 19 12.9 +1.8**
LHV IAmb IAmb 01 19 15.6
comp=Z,36nm,1.0s

BFSC Mount Baldy Ra 92.97 56 P **P** **01 19 12.6 +1.1**
baz=260

C06D Leavenworth 92.98 42 P **P** **01 19 11.6 +0.6**
baz=259

TIN Tinemaha, Big 92.98 53 P **P** **01 19 13.5 +2.0**
baz=260,SNR=6.8

CWC Cottonwood Cre 92.99 54 P **P** **01 19 13.3 +1.7**
baz=260

LTY Liberty 93.00 43 IAmb IAmb 01 19 26.2
comp=Z,53nm,1.9s

RYN Ryan 93.01 52 IAmb IAmb 01 19 15.6
comp=Z,32nm,1.1s

NVAR Mina Array Bea 93.15 52 P **P** **01 19 14.0 +1.7**
comp=Z,19nm,0.9s,baz=244,slow=5.9,SNR=85

NVAR LR LR 01 56 34.0
comp=Z,1µm,19.3s,baz=276,slow=33

LRMC Laurel Mtn Rad 93.15 55 P **P** **01 19 14.4 +2.0**
baz=261,SNR=5.9

TJX Tijuana 93.19 58 IAMs_20 IAMs_20 01 51 38.7
comp=Z,2µm,22.0s

109C Camp Elliot, M 93.20 57 P **P** **01 19 13.7 +1.3**
baz=261

I07A Izee 93.23 46 IAmb IAmb 01 19 15.6
comp=Z,60nm,1.9s

I07A IAMs_20 IAMs_20 01 56 02.7
comp=Z,2µm,20.0s

MURC Murrieta 93.24 57 P **P** **01 19 14.0 +1.3**
baz=261

NV11 Mina Array Sit 93.27 52 IAmb IAmb 01 19 16.8
comp=Z,36nm,1.1s

NV11 IAMs_20 IAMs_20 01 56 31.3
comp=Z,2µm,18.0s

MPMC Manual Prospec 93.40 54 P **P** **01 19 15.4 +1.9**
baz=261,SNR=12

CCX Cicese 93.41 58 IAMs_20 IAMs_20 01 54 29.7
comp=Z,2µm,20.0s

KVN Kaiserville 93.41 51 P **P** **01 19 14.7 +1.2**
KVN pmax pmax
comp=Z,121nm,1.9s

KVN Kaiserville 93.41 51 P **P** **01 19 14.7 +1.2**
KVN IAmb IAmb 01 19 18.3
comp=Z,121nm,1.9s

E07A Sunnyside 93.42 44 IAMs_20 IAMs_20 01 54 53.6
comp=Z,2µm,20.0s

BAR Barrett 93.53 58 IAMs_20 IAMs_20 01 52 08.9
comp=Z,2µm,22.0s

WVOR Wild Horse Val 93.57 48 IAmb IAmb 01 19 31.3
comp=Z,122nm,2.0s

BBRC Big Bear Solar 93.57 56 P **P** **01 19 15.1 +0.6**
baz=261

RRX Edison Barstow 93.61 55 P **P** **01 19 15.7 +1.4**
baz=261

HAWA Hanford 93.61 44 IAMs_20 IAMs_20 01 54 59.7
comp=Z,2µm,21.0s

GRAC Grapevine Rang 93.65 53 P **P** **01 19 16.0 +1.5**
baz=261

MONP2 Monument Peak 93.77 57 P **P** **01 19 16.5 +1.2**
baz=261

GSC Goldstone, Bar 93.83 55 P **P** **01 19 17.2 +1.8**
GSC comp=Z,22nm,1.6s pmax pmax

GSC Goldstone, Bar 93.83 55 P **P** **01 19 16.8 +1.4**
baz=261

GSC Goldstone, Bar 93.83 55 P **P** **01 19 17.2 +1.8**
PFO Pinyon Flats O 93.85 57 P **P** **01 19 17.0 +1.4**
baz=261

PFO Pinyon Flats O 93.85 57 IAMs_20 IAMs_20 02 02 44.4
comp=Z,2µm,18.0s

TPFO Pinon Flats 93.86 57 P **P** **01 19 16.5 +0.9**
baz=261

E08A Dider Farm, El 93.95 44 IAMs_20 IAMs_20 01 54 05.6
comp=Z,2µm,22.0s

FURC Furnace Creek, 93.97 54 P **P** **01 19 17.4 +1.6**
baz=261,SNR=13

RMX La Rumorosa 94.01 58 IAMs_20 IAMs_20 01 53 30.6
comp=Z,3µm,21.0s

ESJX Sierra Juarez 94.03 58 IAMs_20 IAMs_20 01 52 54.2
comp=Z,3µm,21.0s

PNT Penticton 94.06 41 P P 01 19 09.9 -6.1
PNT pmax pmax
comp=Z,43nm,1.1s

HEC Hector,Ludlow 94.14 56 P **P** **01 19 18.8 +2.0**
baz=261

D08A Wollman Farm, 94.14 43 IAMs_20 IAMs_20 01 55 36.6
comp=Z,2µm,20.0s

BELC Belle Mtn. Jos 94.29 56 P **P** **01 19 19.2 +1.6**
baz=261

SPX San Pedro Mart 94.30 59 IAMs_20 IAMs_20 01 54 35.3
comp=Z,3µm,20.0s

SWSC Sam W. Stewart 94.30 57 P **P** **01 19 19.3 +1.8**
baz=262

SHOC Shoshone, Teco 94.35 54 P **P** **01 19 19.2 +1.5**
baz=261

TPNV Topopah Spring 94.53 53 P **P** **01 19 20.5 +1.9**
baz=262,SNR=9.9

TPNV Topopah Spring 94.53 53 IAMs_20 IAMs_20 01 58 31.8
comp=Z,2µm,19.0s

UABX UABC, Campus M 94.55 58 IAMs_20 IAMs_20 01 52 35.8
comp=Z,2µm,22.0s

BRVK Borovoye 94.56 323 *d i* P **P** **01 19 16.0 -2.2**
BRVK pmax MLR MLR
comp=Z,2µm,19.0s

BRVK Borovoye 94.56 323 P **P** **01 19 16.4 -1.7**
TUQ Turquoise Moun 94.56 55 P **P** **01 19 19.9 +1.1**
baz=262

GMRC Granite Mounta 94.68 56 P **P** **01 19 21.0 +1.6**
baz=262

BC3 Big Chuckawall 94.69 57 P **P** **01 19 21.3 +1.9**
baz=262

IRM Iron Mountain 95.01 56 P **P** **01 19 22.4 +1.6**
baz=262

GLA Glamis 95.12 57 P **P** **01 19 23.1 +1.8**
baz=262

R11A Troy Canyon, C 95.25 52 P **P** **01 19 23.7 +1.7**
baz=262,SNR=14

R11A Troy Canyon, C 95.25 52 P **P** **01 19 23.4 +1.5**
R11A IAMs_20 IAMs_20 01 58 22.8
comp=Z,2µm,20.0s

SHPR Sheep Range 95.33 54 IAMs_20 IAMs_20 01 57 41.2
comp=Z,2µm,19.0s

NEW Newport 95.53 42 P **P** **01 19 23.8 +1.0**
baz=262

PRN Pahroc Range 95.54 53 IAmb IAmb 01 19 28.4
comp=Z,50nm,1.7s

PRN IAMs_20 IAMs_20 01 59 14.6
comp=Z,3µm,18.0s

C36M Paulatuk 95.64 21 P **P** **01 19 23.1 +0.4**
baz=258

C36M Paulatuk 95.64 21 IAmb IAmb 01 19 26.1
comp=Z,49nm,1.4s

C36M IAMs_20 IAMs_20 02 00 42.1
comp=Z,2µm,20.0s

MFID Camas Ranch 95.76 47 IAmb IAmb 01 19 41.1
comp=Z,40nm,1.8s

MFID IAMs_20 IAMs_20 01 58 04.8
comp=Z,2µm,19.0s

ELK Elko 95.84 50 P **P** **01 19 27.1 +2.4**
ELK pmax pmax
comp=Z,49nm,1.9s

ELK MLR MLR
comp=Z,900nm,18.0s

ELK Elko 95.84 50 P **P** **01 19 27.1 +2.4**
ELK IAmb IAmb 01 19 29.6
comp=Z,49nm,1.9s

113A Mohawk Valley, 95.97 58 IAMs_20 IAMs_20 01 54 14.4
comp=Z,3µm,21.0s

PIX Pinacate 96.07 59 IAMs_20 IAMs_20 01 56 08.2
comp=Z,2µm,20.0s

NVL N'lazarevskaya 96.09 191 *e* P **P** **01 19 22.1 -2.8**
NVL pmax pmax
comp=Z,5.0nm,0.5s

NVL MLR MLR
comp=Z,4µm,16.0s

W13A Hualapai Mount 96.17 56 IAMs_20 IAMs_20 02 01 57.5
comp=Z,2µm,18.0s

SPR3 Spring Creek 3 96.31 52 IAmb IAmb 01 19 31.8
comp=Z,37nm,1.5s

SPR3 IAMs_20 IAMs_20 01 59 07.8
comp=Z,2µm,20.0s

214A Organ Pipe Nat 96.67 59 IAMs_20 IAMs_20 01 56 07.0
comp=Z,3µm,20.0s

HLID Hailey 96.80 47 P **P** **01 19 30.1 +1.2**
baz=263,SNR=7.1

HLID Hailey 96.80 47 IAmb IAmb 01 19 46.3
comp=Z,49nm,2.0s

HLID IAMs_20 IAMs_20 01 58 08.3
comp=Z,2µm,21.0s

JTMT Jette 97.36 43 IAMs_20 IAMs_20 01 58 04.6
comp=Z,2µm,20.0s

MSO Missoula 97.49 44 IAMs_20 IAMs_20 01 57 19.3
comp=Z,2µm,20.0s

BCYI Bear Canyon 97.60 46 P **P** **01 19 30.1 -2.5**
SNAA Sanae 97.60 187 P Pdif 01 19 32.6 +0.7
SNAA Sanae 97.60 187 ⇓ *e* P Pdif 01 19 32.0 +0.1
SNAA pmax pmax
comp=Z,16nm,1.2s

SNAA MLR MLR
comp=Z,2µm,16.0s

DUG Dugway, Tooele 97.61 51 P Pdif 01 19 33.4 +0.7
baz=264

HRA Herat 97.78 304 IAmb IAmb 01 19 41.3
comp=Z,44nm,2.0s

HSIG 97.91 62 IAMs_20 IAMs_20 01 54 21.3
comp=Z,2µm,21.0s

MSU Marysvale 97.92 52 P Pdif 01 19 37.8 +3.6
MSU Marysvale 97.92 52 P Pdif 01 19 37.8 +3.6
WUAZ Wupatki 98.26 55 IAMs_20 IAMs_20 01 56 46.8
comp=Z,2µm,20.0s

YKA Yellowknife Ar 98.52 28 P **P** **01 19 35.6 -0.3**
comp=Z,2.8nm,0.9s,baz=266,slow=4.4,SNR=10

YKA PKKPbc **PKKPbc** **01 36 06.5 -1.8**
comp=Z,1.4nm,0.9s,baz=75,slow=3.7,SNR=4.6

YKA LR LR 01 59 24.9
comp=Z,690nm,21.9s,baz=0.0,slow=33

TMUT Trail Mountain 98.75 52 P Pdif 01 19 39.7 +1.8
BOZ Bozeman (W) 98.97 45 IAMs_20 IAMs_20 01 57 40.7
comp=Z,2µm,20.0s

AHID Auburn Hatcher 99.13 48 IAMs_20 IAMs_20 01 59 54.1
comp=Z,2µm,20.0s

IMW Indian Meadow 99.34 47 IAMs_20 IAMs_20 02 02 11.4
comp=Z,2µm,19.0s

FLWY Flagg Ranch 99.52 47 IAMs_20 IAMs_20 02 00 07.3
comp=Z,2µm,20.0s

319A Douglas 99.59 60 IAMs_20 IAMs_20 01 59 49.6
comp=Z,2µm,19.0s

H17A Grant Village 99.63 46 P **Pdif** **01 19 41.5 -0.2**
baz=266

BW06 Boulder Array 100.26 48 P **Pdif** **01 19 44.7 +0.2**
baz=266

BW06 Boulder Array 100.26 48 IAMs_20 IAMs_20 02 00 50.1
comp=Z,2µm,20.0s

PDAR Pinedale Array 100.26 48 P **Pdif** **01 19 44.5 0.0**
comp=Z,1.1nm,0.8s,baz=252,slow=0.5,SNR=5.7

PV14 Lion Creek, Pa 100.38 53 IAMs_20 IAMs_20 02 00 50.7
comp=Z,3µm,19.0s

PV20 West Nyswonger 100.42 53 IAMs_20 IAMs_20 02 00 31.8
comp=Z,2µm,21.0s

SVE Sverdlovsk 100.46 326 *e* P **Pdif** **01 19 43.5 -1.2**

SVE eSS SS 01 38 07.1 -8.2
SVE pmax pmax
comp=Z,20nm,1.7s
SVE MLR MLR
comp=Z,2µm,20.0s
PV07 Paradox Valley **100.68 53** IAMs_20 IAMs_20 02 00 59.7
comp=Z,2µm,21.0s
PV15 Paradox Valley **100.80 53** IAMs_20 IAMs_20 02 02 26.9
comp=Z,2µm,20.0s
ASHT Ashkhabad **101.19 307** IAMs_20 IAMs_20 02 04 39.1
comp=Z,2µm,22.0s
GEYT Alibeck **101.41 307** P **Pdif** **01 19 49.5 +0.1**
comp=Z,5.0nm,0.6s,baz=57,slow=20,SNR=5.6
GEYT PP **PP** **01 23 56.4 -3.0**
comp=Z,1.7nm,0.6s,baz=130,slow=8.0,SNR=3.7
GYA0B ALIBECK ARRAY **101.41 307** IAMs_20 IAMs_20 02 05 42.7
comp=Z,3µm,22.0s
ARU Arti **101.61 326** *d* iP **Pdif** **01 19 48.2 -1.6**
ARU 01 23 56.9
ARU pmax pmax
comp=Z,18nm,1.8s
ARU MLR MLR
comp=Z,4µm,21.0s
Y22D IRIS PASSCAL I **101.79 57** IAMs_20 IAMs_20 01 58 00.5
comp=Z,2µm,21.0s
EPT El Paso **101.99 60** IAMs_20 IAMs_20 01 57 42.0
comp=Z,3µm,21.0s
HPIG **102.36 64** IAMs_20 IAMs_20 02 00 19.5
comp=Z,2µm,19.0s
K22A Casper **102.49 48** P **Pdif** **01 19 54.0 -0.4**
baz=268
MNTX Cornudas Mount **102.94 60** IAMs_20 IAMs_20 01 58 32.2
comp=Z,2µm,20.0s
ISCO Idaho Springs **103.10 51** IAMs_20 IAMs_20 02 03 40.6
comp=Z,2µm,19.0s
Q24A Divide **103.44 52** IAMs_20 IAMs_20 02 03 11.6
comp=Z,2µm,20.0s
ABPO Ambohimpanom **103.56 248** IAMs_20 IAMs_20 02 07 22.0
comp=Z,2µm,19.0s
T25A Trinidad **103.97 54** IAMs_20 IAMs_20 02 00 33.9
comp=Z,2µm,21.0s
TXAR Lajitas Array **104.28 62** PP **PKiKP** **01 24 19.9 +0.6**
comp=Z,0.5nm,0.6s,baz=230,slow=7.5,SNR=4.7
RSSD Black Hills **104.32 47** IAMs_20 IAMs_20 02 04 25.3
comp=Z,2µm,20.0s
RES Resolute Bay **104.41 15** IAMs_20 IAMs_20 02 07 02.1
comp=Z,2µm,21.0s
ZAIG Zacatecas **104.85 69** IAMs_20 IAMs_20 01 59 19.7
comp=Z,2µm,20.0s
FFC Flin Flon **105.17 36** IAMs_20 IAMs_20 02 02 58.5
comp=Z,2µm,21.0s
MSTX Muleshoe **105.23 57** IAMs_20 IAMs_20 02 03 37.6
comp=Z,2µm,19.0s
E28A Huff **106.59 44** IAMs_20 IAMs_20 02 03 18.1
comp=Z,2µm,20.0s
MDND Maddock **107.24 43** IAMs_20 IAMs_20 02 04 07.1
comp=Z,1µm,20.0s
JCT Junction City **107.68 61** IAMs_20 IAMs_20 02 00 47.8
comp=Z,2µm,21.0s
UNM Universidad Na **107.76 73** IAMs_20 IAMs_20 02 00 08.0
comp=Z,2µm,21.0s
SUSD Miller **107.95 46** IAMs_20 IAMs_20 02 04 54.4
comp=Z,2µm,20.0s
833A Chaparral WMA, **107.99 63** P **PKiKP** **01 24 26.5 +0.5**
baz=269
833A Chaparral WMA, **107.99 63** IAMs_20 IAMs_20 02 10 32.4
comp=Z,1µm,18.0s
TLIG Tlapa **108.20 75** IAMs_20 IAMs_20 02 00 07.9
comp=Z,2µm,20.0s
K31A O'Neill **108.22 48** IAMs_20 IAMs_20 02 11 51.8
comp=Z,2µm,20.0s
U32A Winter Ranch, **108.32 55** IAMs_20 IAMs_20 02 04 44.0
comp=Z,2µm,20.0s
KBS Kingsbay **108.38 353** IAMs_20 IAMs_20 02 10 22.3
comp=Z,1µm,20.0s
WMOK Wichita Mounta **108.53 57** P **PKiKP** **01 24 27.4 +0.5**
baz=271
WMOK Wichita Mounta **108.53 57** IAMs_20 IAMs_20 02 06 03.0
comp=Z,2µm,19.0s
BGNE Belgrade **108.75 50** IAMs_20 IAMs_20 02 06 22.9
comp=Z,2µm,20.0s
FCC Fort Churchill **108.84 31** IAMs_20 IAMs_20 02 07 34.0
comp=Z,2µm,21.0s
D32A Dogwood Acres, **109.05 43** IAMs_20 IAMs_20 02 05 34.2
comp=Z,2µm,21.0s
N33A J Bar K, Exete **109.32 50** IAMs_20 IAMs_20 02 05 22.1
comp=Z,2µm,20.0s
ULM Lac du Bonnet **109.40 40** IAMs_20 IAMs_20 02 15 07.8
comp=Z,2µm,20.0s
MAK Makhachkala **109.43 312** *i* P **Pdif** **01 20 22.1 -2.8**
MAK *e* 01 24 56.1
MAK *e*PPP PPP 01 27 13.8
MAK *e* 01 30 59.1
MAK *e*PS **PS** **01 34 17.0 -9.4**
MAK eSS SS 01 40 15.3 -3.4
MAK *e*SSS SSS 01 44 17.0
MAK pmax pmax
comp=Z,455nm,1.4s
MAK MLR MLR
comp=Z,1µm,20.0s
435B Jarrell **109.59 61** IAMs_20 IAMs_20 02 03 11.4
comp=Z,2µm,20.0s
OKCFA Oklahoma City **109.60 56** IAMs_20 IAMs_20 02 04 20.2
comp=Z,1µm,20.0s
AGMN Agassiz Nation **109.68 42** IAMs_20 IAMs_20 02 06 28.6
comp=Z,2µm,20.0s
OK025 Westminster Rd **109.69 56** IAMs_20 IAMs_20 02 08 34.5
comp=Z,1µm,19.0s
ECSD EROS Data Cent **109.69 47** P **PKiKP** **01 24 29.1 +0.3**
baz=276
ECSD EROS Data Cent **109.69 47** IAMs_20 IAMs_20 02 20 02.5
comp=Z,1µm,19.0s
Z35A Perchaven, San **109.83 58** IAMs_20 IAMs_20 02 03 54.5
comp=Z,2µm,20.0s
LVZ Lovozero **110.06 340** IAMs_20 IAMs_20 02 17 36.7
comp=Z,2µm,20.0s
OK031 S. Brethren Rd **110.08 55** IAMs_20 IAMs_20 02 05 46.8
comp=Z,2µm,20.0s
KSU1 Kansas State U **110.08 52** P **PKiKP** **01 24 30.4 +0.7**
baz=274
OK030 Cody Creek RV **110.13 55** IAMs_20 IAMs_20 02 05 48.0
comp=Z,2µm,20.0s
T35A Sooner Cattle **110.29 54** IAMs_20 IAMs_20 02 09 26.3
comp=Z,2µm,19.0s
APA Apatity **110.63 340** ⇓ *i* PKIKP **PKiKP** **01 24 25.9 -3.9**
APA pmax pmax
comp=Z,7.0nm,1.1s
N35A Tabor **110.68 50** IAMs_20 IAMs_20 02 06 05.1
comp=Z,2µm,20.0s
KLMR Klimovskoe **110.72 332** P **Pdif** **01 20 22.6 -7.6**
KLMR *i* 01 24 28.7
KLMR pmax pmax
comp=Z,9.0nm,1.4s
KLMR Klimovskoe **110.72 332** Pdif **Pdif** **01 20 22.6 -7.6**
KLMR AMP 01 20 36.8
comp=Z,9.0nm,1.4s
KLMR *e*PKiKP **PKiKP** **01 24 28.7 -1.4**
KLMR *e*PP PP 01 24 58.5 -8.5
KLMR *e*PKKP **PKKPbc** **01 35 29.3 -1.8**
KLMR LR LR 02 09 09.6
TUL1 Leonard **110.93 55** IAMs_20 IAMs_20 02 06 23.3
comp=Z,1µm,21.0s
B35A Bob, Littlefor **111.08 42** IAMs_20 IAMs_20 02 09 23.6
comp=Z,2µm,20.0s
HKT Hockley **111.11 62** IAMs_20 IAMs_20 02 12 01.7
comp=Z,2µm,19.0s
X37A Clayton **111.35 57** IAMs_20 IAMs_20 02 06 08.5
comp=Z,2µm,20.0s
F36A Milaca **111.61 44** IAMs_20 IAMs_20 02 20 53.0
comp=Z,1µm,19.0s
Z38A Mt. Pleasant **111.73 58** IAMs_20 IAMs_20 02 03 52.9
comp=Z,2µm,21.0s
GNI Garni **111.76 309** *d* iPKIKP **PKiKP** **01 24 30.8 -2.2**
U38A Gravette **112.03 55** IAMs_20 IAMs_20 02 10 18.4
comp=Z,2µm,20.0s
ZEI Tsey **112.08 312** *i* PKIKP **PKiKP** **01 24 36.1 +2.5**
ZEI pmax pmax
comp=Z,4.0nm,1.1s
ARCES ARCESS Array B **112.12 343** PKiKP **PKiKP** **01 24 31.9 -0.7**
comp=Z,6.1nm,0.9s,baz=46,slow=3.5,SNR=5.2
SPMN Marine on St. **112.21 45** P **PKiKP** **01 24 34.1 +0.7**
baz=279
SPMN Marine on St. **112.21 45** IAMs_20 IAMs_20 02 06 56.9
comp=Z,2µm,20.0s
LL01 San Ignacio de **112.41 144** IAMs_20 IAMs_20 02 01 05.9
comp=Z,2µm,22.0s
P38A Dawn **112.41 51** IAMs_20 IAMs_20 02 08 47.0
comp=Z,2µm,20.0s
N38A Joes South For **112.51 50** IAMs_20 IAMs_20 02 08 10.3
comp=Z,2µm,20.0s
W39A Magazine **112.61 56** P **PKiKP** **01 24 34.8 +0.3**
baz=274
W39A Magazine **112.61 56** IAMs_20 IAMs_20 02 09 18.9
comp=Z,2µm,21.0s
EYMN Ely **112.63 42** P **PKiKP** **01 24 35.3 +1.1**
baz=281
EYMN Ely **112.63 42** IAMs_20 IAMs_20 02 10 40.5
comp=Z,2µm,20.0s
S39A Bolivar **112.77 53** IAMs_20 IAMs_20 02 07 19.8
comp=Z,2µm,20.0s
KIV Kislovodsk **112.80 314** *i* PKIKP **PKiKP** **01 24 34.8 0.0**
KIV *e* 01 25 22.6
KIV *e*PS **PS** **01 34 52.1 -5.9**
KIV eSS SS 01 41 01.8 -2.0
KIV pmax pmax
comp=Z,11nm,1.0s
KIV MLR MLR
comp=Z,4µm,21.0s
MIAR Mount Ida **112.83 57** P **PKiKP** **01 24 35.5 +0.5**
baz=274
MIAR Mount Ida **112.83 57** IAMs_20 IAMs_20 02 08 11.7
comp=Z,2µm,19.0s
E38A The Farm, Brul **112.84 43** IAMs_20 IAMs_20 02 08 08.3
comp=Z,2µm,20.0s
H03S2 Juan Fernandez **112.90 133** T T 03 27 15.0
baz=238,slow=74,SNR=5.1
H03S1 Juan Fernandez **112.91 133** T T 03 27 16.8
baz=238,slow=74,SNR=4.3
H03S3 Juan Fernandez **112.91 133** T T 03 27 18.3
baz=238,slow=74,SNR=4.7
U40A Yellville **113.27 55** P **PKiKP** **01 24 35.9 +0.1**
baz=275
U40A Yellville **113.27 55** IAMs_20 IAMs_20 02 16 39.1
comp=Z,1µm,20.0s
WLAR White Oak Lake **113.27 58** IAMs_20 IAMs_20 02 07 04.5
comp=Z,2µm,20.0s
X40A Basin Creek Fa **113.44 57** IAMs_20 IAMs_20 02 05 34.0
comp=Z,2µm,21.0s
R40A Maddies Statio **113.54 52** IAMs_20 IAMs_20 02 07 08.0
comp=Z,2µm,20.0s
P40A Paris **113.56 51** IAMs_20 IAMs_20 02 09 42.4
comp=Z,2µm,20.0s
VSR Storozhevoye **113.65 322** *i* PKIKP **PKiKP** **01 24 35.7 -0.3**
VSR pmax pmax
comp=Z,8.0nm,1.3s
MGMO Mountain Grove **113.66 54** IAMs_20 IAMs_20 02 07 36.4
comp=Z,2µm,20.0s
WHAR Wooly Hollow **113.82 56** IAMs_20 IAMs_20 02 07 51.9
comp=Z,2µm,21.0s
L40A Anamosa **113.83 48** IAMs_20 IAMs_20 02 10 53.3
comp=Z,2µm,19.0s
W41B Gary Mavity, V **113.87 56** P **PKiKP** **01 24 37.0 +0.1**
baz=275
W41B Gary Mavity, V **113.87 56** IAMs_20 IAMs_20 02 07 52.1
comp=Z,2µm,21.0s
FCAR Ozark Folk Cen **113.90 55** IAMs_20 IAMs_20 02 10 46.9
comp=Z,2µm,19.0s
I40A Norwalk **113.97 46** IAMs_20 IAMs_20 02 07 31.7
comp=Z,2µm,21.0s
G40A Rib Lake **114.01 45** IAMs_20 IAMs_20 02 08 42.6
comp=Z,2µm,20.0s
OBN Obninsk **114.03 326** *i* PKIKP **PKiKP** **01 24 36.9 +0.3**
OBN *i* 01 25 29.2
OBN pmax pmax
comp=Z,11nm,1.5s
342A Flagon Creek P **114.08 60** IAMs_20 IAMs_20 02 06 25.3
comp=Z,2µm,20.0s
N41A Harden Midland **114.31 50** IAMs_20 IAMs_20 02 09 43.0
comp=Z,2µm,19.0s
CCM Cathedral Cave **114.37 53** P **PKiKP** **01 24 38.2 +0.4**
baz=277
CCM Cathedral Cave **114.37 53** IAMs_20 IAMs_20 02 07 32.9
comp=Z,1µm,20.0s
JFWS Jewell Farm **114.41 47** P **PKiKP** **01 24 37.9 +0.1**
baz=280
JFWS Jewell Farm **114.41 47** IAMs_20 IAMs_20 02 17 46.3
comp=Z,1µm,18.0s
PLCA Paso Flores **114.53 143** PKP PKPdf 01 24 39.5 +1.2
comp=Z,1.3nm,0.9s,baz=179,slow=9.2,SNR=2.0
T42A Van Buren **114.61 54** IAMs_20 IAMs_20 02 08 04.5
comp=Z,2µm,21.0s
D41A Chaseel **114.75 42** IAMs_20 IAMs_20 02 12 15.8
comp=Z,2µm,20.0s
LC01 Cunco **114.86 141** IAMs_20 IAMs_20 02 05 06.2
comp=Z,2µm,19.0s
SOC Sochi **114.98 314** *i* PKIKP **PKiKP** **01 24 38.4 -0.4**
SOC *e* 01 25 38.7
SOC *e*PPP PPP 01 28 00.6
SOC *e*PS **PKKPbc** **01 35 14.8 -1.5**
L42A Oliver, Polo **114.99 48** IAMs_20 IAMs_20 02 10 22.7
comp=Z,2µm,19.0s
FVM French Village **115.02 53** IAMs_20 IAMs_20 02 08 13.1
comp=Z,2µm,20.0s
X43A Marvell **115.05 56** IAMs_20 IAMs_20 02 07 34.4
comp=Z,2µm,20.0s
SLM Saint Louis **115.08 52** IAMs_20 IAMs_20 02 09 50.6
comp=Z,2µm,20.0s
HBAR Harrisburg **115.12 55** IAMs_20 IAMs_20 02 09 39.3
comp=Z,2µm,19.0s
MARD Mardin **115.17 307** IAMs_20 IAMs_20 02 15 46.0
comp=Z,1µm,22.0s
PBMO Pear Bluff **115.17 54** IAMs_20 IAMs_20 02 08 19.2
comp=Z,2µm,20.0s
F42A Maple Grove Fa **115.33 44** IAMs_20 IAMs_20 02 09 45.4
comp=Z,2µm,22.0s
LPAR Lepanto **115.41 55** IAMs_20 IAMs_20 02 08 59.8
comp=Z,1µm,21.0s
344A Westbrook Farm **115.44 60** IAMs_20 IAMs_20 02 07 07.1
comp=Z,2µm,20.0s
P43A Skaggs, Pawnee **115.48 51** **PKPdf** **01 24 40.0 +0.1**
HDIL Hopedale **115.51 50** P **PKiKP** **01 24 39.8 -0.2**
baz=280
HDIL Hopedale **115.51 50** IAMs_20 IAMs_20 02 10 00.7
comp=Z,2µm,20.0s
VBMS Vicksburg **115.56 59** IAMs_20 IAMs_20 02 07 33.2
comp=Z,2µm,21.0s
GNAR Gosnell **115.59 55** IAMs_20 IAMs_20 02 19 43.7
comp=Z,1µm,18.0s
PARMO Parma **115.72 54** IAMs_20 IAMs_20 02 12 42.9
comp=Z,2µm,19.0s
PVMO Poneageville **115.79 54** IAMs_20 IAMs_20 02 11 03.9
comp=Z,2µm,19.0s
K43A Burlington **115.83 47** IAMs_20 IAMs_20 02 18 20.0
comp=Z,1µm,18.0s
PENMO Penman **115.85 54** IAMs_20 IAMs_20 02 11 06.3
comp=Z,2µm,19.0s
H43A Windswept, Lux **115.87 45** IAMs_20 IAMs_20 02 09 37.7
comp=Z,2µm,21.0s
HENM Henderson Moun **115.94 54** IAMs_20 IAMs_20 02 12 59.6
comp=Z,2µm,19.0s
E43A Lone Tree Farm **115.96 43** IAMs_20 IAMs_20 02 08 23.9
comp=Z,2µm,21.0s
S44A Carbondale **115.97 53** IAMs_20 IAMs_20 02 08 22.5
comp=Z,2µm,20.0s
Q44A Meyer Farm, Va **115.98 51** IAMs_20 IAMs_20 02 12 20.5
comp=Z,2µm,19.0s
HICK Hickman **116.15 54** IAMs_20 IAMs_20 02 11 24.4
comp=Z,2µm,20.0s
O44A Mansfield **116.20 50** IAMs_20 IAMs_20 02 11 56.0
comp=Z,2µm,19.0s
Y45A Yeager Farm, C **116.22 57** IAMs_20 IAMs_20 02 18 30.5
comp=Z,1µm,18.0s
L44A Lake County Fo **116.24 48** IAMs_20 IAMs_20 02 09 36.8
comp=Z,2µm,20.0s
OXF Oxford **116.26 56** P **PKPdf** **01 24 41.4 -0.1**
baz=277
OXF Oxford **116.26 56** IAMs_20 IAMs_20 02 08 00.4
comp=Z,1µm,20.0s
M44A Midewin, Midew **116.29 49** IAMs_20 IAMs_20 02 12 23.4
comp=Z,2µm,20.0s
ANN Anapa **116.33 315** *e*PKIKP **PKPdf** **01 24 39.0 -2.3**
ANN *e* 01 25 45.8
ANN pmax pmax
comp=Z,136nm,1.9s
ANN pmax pmax
comp=Z,42nm,1.2s
HQIL Hanson Quary C **116.35 48** IAMs_20 IAMs_20 02 11 51.9
comp=Z,2µm,20.0s
W45A Hickory Valley **116.36 56** IAMs_20 IAMs_20 02 12 48.2
comp=Z,2µm,18.0s
FINES FINESS Array B **116.38 335** PKP **PKPdf** **01 24 39.6 -1.3**
comp=Z,4.5nm,0.9s,baz=74,slow=8.7,SNR=7.6
FINES FINESS Array B **116.38 335** PKIKP **PKPdf** **01 24 40.7 -0.2**
FINES FINESS Array B **116.38 335** **PKPdf** **01 24 40.7 -0.2**
346A Big Creek Wild **116.52 60** IAMs_20 IAMs_20 02 07 51.8
comp=Z,2µm,20.0s
T45A Paducah **116.55 53** IAMs_20 IAMs_20 02 10 09.9
comp=Z,2µm,20.0s
BI02 San Fabin de **116.58 139** IAMs_20 IAMs_20 02 04 51.8
comp=Z,2µm,20.0s
SNET Serv Nac Est T **116.90 80** IAMs_20 IAMs_20 02 12 22.6
comp=Z,1µm,19.0s
USIN University of **117.18 52** IAMs_20 IAMs_20 02 07 52.3
comp=Z,2µm,22.0s
SFIN Lafayette **117.19 50** IAMs_20 IAMs_20 02 08 22.2
comp=Z,2µm,21.0s
P46A Rosedale **117.25 50** IAMs_20 IAMs_20 02 15 24.9
comp=Z,1µm,19.0s
WVT Waverly **117.33 54** P **PKPdf** **01 24 43.0 -0.5**
baz=278
WVT Waverly **117.33 54** IAMs_20 IAMs_20 02 12 09.6
comp=Z,1µm,19.0s
KMBO Kilima Mbogo **117.33 264** PKP **PKiKP** **01 24 46.0 +1.4**
comp=Z,3.5nm,0.9s,baz=4.6,slow=4.4,SNR=11
KMBO PKKPab **PKKPab** **01 35 13.6 +1.9**
comp=Z,0.4nm,0.2s,baz=14,slow=6.3,SNR=3.9
KMBO Kilima Mbogo **117.33 264** PKIKP **PKiKP** **01 24 45.0 +0.4**
KMBO MLR MLR
comp=Z,1µm,20.0s
KMBO Kilima Mbogo **117.33 264** PKPdf **PKiKP** **01 24 45.0 +0.4**
L46A Eue Claire **117.45 48** IAMs_20 IAMs_20 02 13 12.9
comp=Z,2µm,20.0s
Z47A Carrollton **117.51 58** IAMs_20 IAMs_20 02 07 47.9
comp=Z,2µm,22.0s
VSU Vasula **117.61 332** ⇑ *i* PKIKP **PKPdf** **01 24 40.5 -2.9**
E46A Sault Ste Mari **117.76 42** IAMs_20 IAMs_20 02 10 31.5
comp=Z,2µm,21.0s
T47A Sharon Grove **117.78 53** IAMs_20 IAMs_20 02 17 15.2
comp=Z,1µm,19.0s
BLO Bloomington **117.85 51** IAMs_20 IAMs_20 02 08 28.9
comp=Z,2µm,20.0s
GLMI Grayling **117.97 44** IAMs_20 IAMs_20 02 14 13.2
comp=Z,2µm,21.0s
GAZ Gaziantep **118.00 307** IAMs_20 IAMs_20 02 18 55.0
comp=Z,1µm,20.0s
BO02 Sierra Bellavi **118.02 138** IAMs_20 IAMs_20 02 05 03.1
comp=Z,2µm,21.0s
TEIG Tepich **118.05 72** IAMs_20 IAMs_20 02 05 39.6
comp=Z,1µm,22.0s
V48A Smith Brothers **118.19 55** IAMs_20 IAMs_20 02 12 36.5
comp=Z,1µm,20.0s
WCI Wyandotte Cave **118.20 52** PKIKP **PKPdf** **01 24 44.9 -0.3**
WCI Wyandotte Cave **118.20 52** P **PKPdf** **01 24 45.1 0.0**
baz=281
WCI Wyandotte Cave **118.20 52** PKPdf **PKPdf** **01 24 44.9 -0.3**
WCI IAMs_20 IAMs_20 02 08 23.3
comp=Z,2µm,21.0s
X48A Hartselle **118.20 56** IAMs_20 IAMs_20 02 09 30.9
comp=Z,1µm,21.0s
LRAL Lakeview Retre **118.43 58** P **PKiKP** **01 24 45.8 0.0**
baz=277
LRAL Lakeview Retre **118.43 58** IAMs_20 IAMs_20 02 14 08.0
comp=Z,2µm,20.0s
CLTN Cedars of Leba **118.53 54** IAMs_20 IAMs_20 02 15 22.4
comp=Z,1µm,19.0s
BRAL Brewton **118.60 60** IAMs_20 IAMs_20 02 08 05.9
comp=Z,1µm,20.0s
P48A Milroy **118.63 50** IAMs_20 IAMs_20 02 09 53.4
comp=Z,2µm,21.0s
Y49A Blount Mountai **118.80 57** IAMs_20 IAMs_20 02 12 50.9
comp=Z,2µm,19.0s
L48A N Adams **118.82 47** **PKiKP** **01 24 46.3 0.0**
SWET Sewanee **118.99 55** IAMs_20 IAMs_20 02 11 36.8
comp=Z,2µm,20.0s
R49A Shelbyville **119.06 51** IAMs_20 IAMs_20 02 09 52.9
comp=Z,2µm,20.0s
IDID Didziasalis **119.12 329** *e*P **PKiKP** **01 24 48.2 +1.7**
P49A Miami Univ. Ec **119.15 50** P **PKPdf** **01 24 46.5 -0.5**
baz=282
P49A Miami Univ. Ec **119.15 50** IAMs_20 IAMs_20 02 10 49.2
comp=Z,1µm,20.0s
IZAR Zarasai **119.16 330** *e*P **PKiKP** **01 24 48.7 +2.2**
250A Grady **119.17 59** IAMs_20 IAMs_20 02 10 18.9
comp=Z,2µm,20.0s
N49A Columbus Grove **119.24 48** IAMs_20 IAMs_20 02 13 45.4
comp=Z,2µm,19.0s
AAM Ann Arbor **119.29 47** P **PKPdf** **01 24 47.0 -0.2**
baz=285
AAM Ann Arbor **119.29 47** IAMs_20 IAMs_20 02 16 33.5
comp=Z,2µm,22.0s
O49A Covington **119.29 49** PKPdf **PKPdf** **01 24 47.1 -0.1**
O49A IAMs_20 IAMs_20 02 09 02.9
comp=Z,2µm,22.0s
ISAL Salakas **119.31 330** *e*P **PKiKP** **01 24 48.0 +1.2**
FPAL Fort Paine **119.36 56** IAMs_20 IAMs_20 02 10 39.5
comp=Z,2µm,20.0s
IIGN Ignalina **119.36 329** *e*P **PKiKP** **01 24 48.7 +1.8**
W50A Signal Mountai **119.50 55** IAMs_20 IAMs_20 02 12 01.1
comp=Z,2µm,20.0s
T50A Nancy **119.56 53** IAMs_20 IAMs_20 02 15 41.3
comp=Z,1µm,19.0s
R50A Paris **119.71 51** IAMs_20 IAMs_20 02 12 56.1
comp=Z,1µm,19.0s
AKASG Malin Array Be **119.76 324** PKP **PKPdf** **01 24 46.6 -1.1**
comp=Z,9.2nm,1.0s,baz=61,slow=2.4,SNR=22
AKASG PKKPbc **PKKPab** **01 34 58.5 -0.9**
comp=Z,2.5nm,0.9s,baz=264,slow=4.0,SNR=5.9
AKASG Malin Array Be **119.76 324** PKIKP **PKPdf** **01 24 46.9 -0.9**
AKASG Malin Array Be **119.76 324** **PKPdf** **01 24 46.9 -0.9**
AKBB Malin Array Si **119.76 324** ⇑ *i* PKIKP **PKPdf** **01 24 47.5 -0.3**
ILGA Ilgaz **119.87 312** IAMs_20 IAMs_20 02 19 13.0
comp=Z,1µm,22.0s
M50A Fremont **119.96 48** IAMs_20 IAMs_20 02 12 55.3
comp=Z,2µm,21.0s
X51A Calhoun **119.97 56** IAMs_20 IAMs_20 02 10 43.7
comp=Z,2µm,21.0s
V51A Loudon **120.17 54** IAMs_20 IAMs_20 02 15 08.7
comp=Z,2µm,19.0s
BR131 Keskin Array S **120.24 310** PKIKP **PKPdf** **01 24 48.2 -1.0**
BR131 Keskin Array S **120.24 310** PKPdf **PKPdf** **01 24 48.2 -1.0**
BRTR Keskin Array B **120.24 310** PKP **PKPdf** **01 24 48.3 -1.0**
comp=Z,2.4nm,1.0s,baz=124,slow=1.8,SNR=12
BRTR PP **PP** **01 26 12.7 -2.3**
comp=Z,1.3nm,0.9s,baz=170,slow=3.4,SNR=5.4
BRTR PKKPbc **PKKPbc** **01 34 57.3 -0.2**
comp=Z,0.3nm,0.7s,baz=214,slow=4.9,SNR=3.7
BRTR Keskin Array B **120.24 310** PKIKP **PKPdf** **01 24 48.5 -0.8**
BRTR Keskin Array B **120.24 310** PKPdf **PKPdf** **01 24 48.5 -0.8**
ACSO Alum Creek Sta **120.29 49** P **PKPdf** **01 24 48.9 -0.3**
baz=284
ACSO Alum Creek Sta **120.29 49** IAMs_20 IAMs_20 02 16 40.3
comp=Z,2µm,19.0s
Q51A Peebles **120.30 50** IAMs_20 IAMs_20 02 15 14.6
comp=Z,1µm,20.0s
352A Blakely **120.36 59** IAMs_20 IAMs_20 02 11 05.6
comp=Z,2µm,21.0s
P51A Williamsport **120.41 50** P **PKPdf** **01 24 49.1 -0.3**
baz=284
P51A Williamsport **120.41 50** IAMs_20 IAMs_20 02 14 25.5
comp=Z,1µm,20.0s
N51A Ashland **120.57 48** IAMs_20 IAMs_20 02 19 49.5
comp=Z,2µm,20.0s
O51A Pataskala **120.59 49** P **PKPdf** **01 24 49.3 -0.4**
baz=284
M51A Elyria **120.60 47** P **PKPdf** **01 24 49.6 -0.1**
baz=285
W52A Murphy **120.63 55** **PKiKP** **01 24 50.1 0.0**
W52A IAMs_20 IAMs_20 02 13 52.1
comp=Z,1µm,20.0s
TKL Tuckaleechee C **120.65 54** IAMs_20 IAMs_20 02 15 33.6
comp=Z,2µm,18.0s
TZTN Tazewell **120.66 53** P **PKPdf** **01 24 49.5 -0.5**
baz=282
TZTN Tazewell **120.66 53** IAMs_20 IAMs_20 02 11 04.7
comp=Z,2µm,21.0s
GO04 Tololo Observa **120.68 134** IAMs_20 IAMs_20 02 08 32.1
comp=Z,2µm,20.0s
Y52A Lilburn **120.73 56** IAMs_20 IAMs_20 02 11 22.0
comp=Z,1µm,20.0s
V52A Sevierville **120.76 54** IAMs_20 IAMs_20 02 16 39.4
comp=Z,2µm,19.0s
JTS Las Juntas de **120.81 84** IAMs_20 IAMs_20 02 06 54.4
comp=Z,1µm,20.0s
553A Crawfordville **120.95 61** IAMs_20 IAMs_20 02 13 06.3
comp=Z,2µm,21.0s
P52A Corning **121.07 49** P **PKPdf** **01 24 50.0 -0.6**
baz=284
P52A Corning **121.07 49** IAMs_20 IAMs_20 02 10 18.0
comp=Z,1µm,21.0s
Q52A Bidwell **121.13 50** P **PKPdf** **01 24 50.4 -0.4**
baz=284
O52A Adamsville **121.17 49** P **PKPdf** **01 24 50.6 -0.3**

baz=285
O52A Adamsville 121.17 49 IAMs_20 IAMs_20 02 17 34.5
comp=Z,2µm,20.0s
SORM Soroca 121.28 321 ⇑P **PKPdf** 01 24 49.8 -1.0
SORM Soroca 121.28 321 ⇑PKIKP **PKPdf** 01 24 49.8 -1.0
CO01 Juntas del Tor 121.30 134 IAMs_20 IAMs_20 02 08 33.3
comp=Z,2µm,21.0s
GOGA Godfrey 121.30 57 P **PKiKP** 01 24 51.5 +0.1
baz=280
GOGA Godfrey 121.30 57 IAMs_20 IAMs_20 02 10 07.0
comp=Z,2µm,20.0s
T53A Wise 121.37 52 P **PKiKP** 01 24 51.8 +0.2
baz=282
MILM Milestii Mici 121.45 320 ⇑P **PKPdf** 01 24 50.8 -0.4
CSS Mathiatis 121.49 305 IAMs_20 IAMs_20 02 20 20.5
comp=Z,1µm,21.0s
LSQQ Lebel-sur-Quev 121.49 38 P **PKPdf** 01 24 50.9 -0.3
baz=294
TIGA Tifton 121.50 59 P **PKiKP** 01 24 52.2 +0.3
baz=278
S53A Williamson 121.53 52 P **PKPdf** 01 24 51.6 -0.1
baz=283
SUW Suwalki 121.56 329 *e*P **PKPdf** 01 24 51.2 0.0
VLDQ Val d'Or 121.58 39 PKPdf **PKPdf** 01 24 50.3 -1.1
O53A New Philadelph 121.60 48 P **PKPdf** 01 24 51.7 0.0
baz=285
O53A New Philadelph 121.60 48 IAMs_20 IAMs_20 02 18 04.8
comp=Z,2µm,20.0s
HDC Heredia 121.61 84 IAMs_20 IAMs_20 02 08 42.6
comp=Z,1µm,19.0s
P53A Whipple 121.66 49 P **PKPdf** 01 24 51.7 -0.1
baz=285
P53A Whipple 121.66 49 IAMs_20 IAMs_20 02 10 35.6
comp=Z,2µm,21.0s
M53A WI Miller and 121.67 47 P **PKPdf** 01 24 51.6 -0.2
baz=287
SADO Sadowa 121.71 43 IAMs_20 IAMs_20 02 19 23.9
comp=Z,2µm,20.0s
Q53A Leroy 121.72 50 P **PKPdf** 01 24 51.7 -0.2
baz=284
AC05 El Transito 121.81 133 PKPdf **PKiKP** 01 24 52.9 +0.1
AC05 IAMs_20 IAMs_20 02 05 29.1
comp=Z,2µm,22.0s
ERPA Erie 121.96 46 P **PKiKP** 01 24 52.5 0.0
baz=288
ERPA Erie 121.96 46 IAMs_20 IAMs_20 02 28 09.0
comp=Z,1µm,20.0s
X54A Belton 121.99 55 P **PKPdf** 01 24 52.4 -0.2
baz=281,SNR=7.0
LSZ Lusaka 121.99 245 PKIKP **PKiKP** 01 24 53.6 +0.2
LSZ MLR MLR
comp=Z,2µm,19.0s
LSZ Lusaka 121.99 245 PKPdf **PKiKP** 01 24 53.6 +0.2
LSZ Lusaka 121.99 245 IAMs_20 IAMs_20 02 19 07.2
comp=Z,1µm,19.0s
ALGO Algonquin Park 122.01 41 P **PKiKP** 01 24 52.5 0.0
baz=291
U54A Nelsons Funny 122.03 53 P **PKPdf** 01 24 52.7 0.0
baz=283
U54A Nelsons Funny 122.03 53 IAMs_20 IAMs_20 02 13 14.8
comp=Z,1µm,19.0s
W54A Cherokee Point 122.04 55 P **PKiKP** 01 24 52.9 +0.1
baz=282
V54A Nebo 122.09 54 P **PKPdf** 01 24 52.8 0.0
baz=282,SNR=6.0
T54A Tazewell 122.10 52 P **PKiKP** 01 24 53.0 0.0
baz=283
S54A Dingess, Beckl 122.14 51 P **PKPdf** 01 24 52.9 0.0
baz=284
S54A Dingess, Beckl 122.14 51 IAMs_20 IAMs_20 02 20 26.4
comp=Z,2µm,20.0s
HODGE Hodges 122.14 56 IAMs_20 IAMs_20 02 13 31.2
comp=Z,2µm,20.0s
H53A Bobcaygeon 122.15 43 P **PKPdf** 01 24 52.3 -0.3
baz=290
G54A Lake Saint Pet 122.19 42 P **PKiKP** 01 24 52.9 +0.1
baz=291
NB2 NORSAR Subarra 122.21 340 PKPdf **PKPdf** 01 24 51.1 -1.2
comp=Z,2.5nm,0.8s,baz=47,slow=1.9
NOA NORSAR Array B 122.21 340 PKP **PKPdf** 01 24 51.6 -0.6
comp=Z,4.2nm,0.8s,baz=46,slow=1.9,SNR=11
Q54A Coxs Mills 122.21 50 P **PKiKP** 01 24 53.0 0.0
baz=285
Q54A Coxs Mills 122.21 50 IAMs_20 IAMs_20 02 15 38.1
comp=Z,2µm,19.0s
O54A Avella 122.23 48 P **PKiKP** 01 24 53.4 +0.3
baz=286
O54A Avella 122.23 48 IAMs_20 IAMs_20 02 19 45.5
comp=Z,2µm,20.0s
R54A Victor 122.29 51 P **PKPdf** 01 24 53.0 -0.1
baz=284
N54A Moraine State 122.30 47 P **PKPdf** 01 24 53.0 0.0
baz=287
255A Hazlehurst 122.37 58 IAMs_20 IAMs_20 02 18 39.5
comp=Z,1µm,20.0s
M54A Oil Creek Stat 122.37 47 P **PKPdf** 01 24 52.7 -0.4
baz=287
M54A Oil Creek Stat 122.37 47 IAMs_20 IAMs_20 02 13 43.0
comp=Z,1µm,21.0s
PAULI Pauline 122.39 55 PKPdf **PKiKP** 01 24 53.5 0.0
PAULI IAMs_20 IAMs_20 02 11 35.6
comp=Z,2µm,21.0s
CFR Carcaliu 122.52 318 ⇓P **PKiKP** 01 24 53.8 +0.4
CFR Carcaliu 122.52 318 ⇓PKIKP **PKiKP** 01 24 53.8 +0.4
GO03 Copiap 122.53 131 IAMs_20 IAMs_20 02 12 05.3
comp=Z,2µm,18.0s
J54A Appleton 122.55 44 IAMs_20 IAMs_20 02 20 00.3
comp=Z,2µm,21.0s
X55A Gracelyn & Ava 122.61 55 P **PKPdf** 01 24 53.6 -0.2
baz=282,SNR=6.2
V55A Taylorsville 122.65 54 P **PKiKP** 01 24 54.2 +0.2
baz=283
V55A Taylorsville 122.65 54 IAMs_20 IAMs_20 02 15 48.4
comp=Z,1µm,18.0s
CHGQ Chibougamau 122.66 36 P **PKPdf** 01 24 53.2 -0.2
baz=297
656A Willston 122.69 61 IAMs_20 IAMs_20 02 14 01.5
comp=Z,1µm,20.0s
T55A Pulaski 122.70 52 P **PKPdf** 01 24 53.6 -0.3
baz=284
MEDO Medina 122.71 44 IAMs_20 IAMs_20 02 17 34.6
comp=Z,2µm,20.0s
KMSC Kings Mountain 122.71 54 P **PKPdf** 01 24 53.6 -0.3
baz=282,SNR=6.1
S55A Lewisburg 122.77 51 P **PKPdf** 01 24 53.5 -0.5
baz=284
MCWV Mont Chateau 122.77 49 P **PKPdf** 01 24 53.9 0.0
baz=286
Q55A Buckhannon 122.77 50 P **PKPdf** 01 24 53.8 -0.2
baz=286
DELO Deloro Mine 122.81 43 IAMs_20 IAMs_20 02 24 44.1
comp=Z,2µm,19.0s
P55A Reedsville 122.83 49 P **PKPdf** 01 24 53.9 -0.1
baz=286
HARR Harsova 122.83 318 ⇓P **PKiKP** 01 24 54.6 +0.5
HARR Harsova 122.83 318 ⇓PKIKP **PKiKP** 01 24 54.6 +0.5
R55A Marlinton 122.93 50 P **PKPdf** 01 24 54.1 -0.2
baz=285
456A Hilliard 122.94 60 IAMs_20 IAMs_20 02 13 15.8
comp=Z,1µm,20.0s
BLA Blacksburg 122.97 52 P **PKPdf** 01 24 53.5 -0.9
baz=284,SNR=5.3
BLA Blacksburg 122.97 52 IAMs_20 IAMs_20 02 20 50.4
comp=Z,1µm,20.0s
TESR Tescani 122.98 320 ⇑P **PKiKP** 01 24 54.9 +0.5
M55A Ridgway 123.03 46 IAMs_20 IAMs_20 02 15 42.4
comp=Z,2µm,22.0s
AC01 Pan de Azucar 123.04 130 IAMs_20 IAMs_20 02 08 23.0
comp=Z,2µm,20.0s
Z56A Williston 123.04 56 P **PKiKP** 01 24 54.7 -0.1
baz=281
Z56A Williston 123.04 56 IAMs_20 IAMs_20 02 11 00.1
comp=Z,2µm,20.0s
X56A White Oak 123.09 55 P **PKiKP** 01 24 55.0 +0.1
baz=282
E55A Montcerf-Lytto 123.11 40 P **PKPdf** 01 24 54.4 +0.1
baz=294
J55A Hilton 123.11 44 IAMs_20 IAMs_20 02 15 49.3
comp=Z,2µm,20.0s
LVV L'vov 123.15 324 *i* PKIKP **PKiKP** 01 24 55.0 +0.4
LVV *e* 01 31 45.0
LVV MLR MLR
comp=Z,2µm,23.0s
BIZ Bicaz 123.15 321 ⇑P **PKiKP** 01 24 55.4 +0.7
VRI Vrincioaia 123.18 319 ⇑P **PKPdf** 01 24 54.4 -0.2
VRI Vrincioaia 123.18 319 ⇑PKIKP **PKPdf** 01 24 54.4 -0.2
U56A King 123.20 53 P **PKPdf** 01 24 54.9 0.0
baz=284
U56A King 123.20 53 IAMs_20 IAMs_20 02 12 35.8
comp=Z,2µm,21.0s
V56A Mocksville 123.23 53 P **PKiKP** 01 24 55.1 -0.1
baz=283
D55A Sainte-Anne-du 123.25 39 P **PKPdf** 01 24 54.3 -0.3
baz=294
T56A Rock Mt 123.31 52 P **PKPdf** 01 24 55.1 0.0
baz=284
W56A Indian Trail 123.31 54 P **PKiKP** 01 24 55.2 -0.1
baz=283
BISRR Bisoca 123.32 319 ⇓P **PKiKP** 01 24 55.8 +0.6
BURAR Bucovina Array 123.42 322 ⇓P **PKiKP** 01 24 55.2 -0.1
BURAR Bucovina Array 123.42 322 ⇓PKIKP **PKiKP** 01 24 55.2 -0.1
BURAR Bucovina Array 123.42 322 PKPdf **PKiKP** 01 24 56.1 +0.8
Q56A Snyder Ridge, 123.43 49 P **PKPdf** 01 24 55.1 -0.2
baz=286
Q56A Snyder Ridge, 123.43 49 IAMs_20 IAMs_20 02 11 59.4
comp=Z,2µm,21.0s
R56A Bull Pasture M 123.44 50 P **PKPdf** 01 24 55.0 -0.4
baz=286
M56A Emporium 123.44 46 P **PKPdf** 01 24 55.2 0.0
baz=289
M56A Emporium 123.44 46 IAMs_20 IAMs_20 02 18 59.2
comp=Z,1µm,20.0s
PECO Prince Edward 123.44 43 IAMs_20 IAMs_20 02 23 43.8
comp=Z,1µm,20.0s
157A Early Branch 123.47 57 P **PKiKP** 01 24 56.2 +0.5
baz=281
BIRD Birdtown, Kers 123.52 55 IAMs_20 IAMs_20 02 16 35.4
comp=Z,2µm,20.0s
N56A West Decatur 123.54 47 P **PKPdf** 01 24 55.4 0.0
baz=288
O56A Blue Knob Stat 123.54 48 P **PKPdf** 01 24 55.2 -0.3
baz=288
O56A Blue Knob Stat 123.54 48 IAMs_20 IAMs_20 02 13 42.0
comp=Z,2µm,21.0s
P56A Dayton Farm, R 123.56 49 P **PKiKP** 01 24 55.6 -0.1
baz=287
Z57A Bowman 123.59 56 P **PKPdf** 01 24 55.2 -0.5
baz=281
NEHR Nehoiu 123.63 319 ⇑P **PKPdf** 01 24 55.3 -0.2
K56A Middlesex 123.65 45 P **PKiKP** 01 24 55.8 0.0
baz=290
L56A Greenwood 123.67 45 P **PKPdf** 01 24 55.3 -0.4
baz=290
L56A Greenwood 123.67 45 IAMs_20 IAMs_20 02 16 51.2
comp=Z,2µm,20.0s
D56A ZEC Mazanza, M 123.68 39 P **PKPdf** 01 24 55.3 -0.2
baz=295
Y57A Sumter 123.70 55 P **PKiKP** 01 24 56.0 -0.1
baz=282
Y57A Sumter 123.70 55 IAMs_20 IAMs_20 02 15 25.5
comp=Z,2µm,20.0s
E56A St. Veronique 123.72 40 P **PKPdf** 01 24 55.6 0.0
baz=294
AC02 Maricunga 123.77 131 IAMs_20 IAMs_20 02 09 26.1
comp=Z,2µm,21.0s
J56A Wolcott 123.77 44 P **PKPdf** 01 24 55.5 -0.2
baz=291
KONO Kongsberg 123.78 340 IAMs_20 IAMs_20 02 19 03.2
comp=Z,2µm,21.0s
W57A Gilead 123.78 54 P **PKPdf** 01 24 55.8 -0.2
baz=283
V57A Coltrane Farms 123.78 53 P **PKPdf** 01 24 55.8 -0.2
baz=284
MBAR Mbarara 123.81 263 PKIKP **PKiKP** 01 24 57.3 +0.1
MBAR Mbarara 123.81 263 PKPdf **PKiKP** 01 24 57.3 +0.1
MLR Muntele Rosu 123.83 319 ⇑P **PKPdf** 01 24 55.7 -0.4
MLR Muntele Rosu 123.83 319 PKIKP **PKPdf** 01 24 55.6 -0.4
MLR Muntele Rosu 123.83 319 PKPdf **PKPdf** 01 24 55.6 -0.4
X57A Johnson Farm, 123.85 55 P **PKPdf** 01 24 55.5 -0.7
baz=283
T57A Hurt 123.92 52 P **PKiKP** 01 24 56.4 -0.1
baz=285
T57A Hurt 123.92 52 IAMs_20 IAMs_20 02 30 33.7
comp=Z,2µm,18.0s
S57A Dark Hollow, R 123.95 51 P **PKPdf** 01 24 56.2 -0.1
baz=286
NNA Nana 124.00 111 IAMs_20 IAMs_20 02 07 18.3
comp=Z,2µm,21.0s
U57A Blanch 124.00 52 P **PKiKP** 01 24 56.6 0.0
baz=284
DOPR Dopca 124.00 320 ⇓P **PKiKP** 01 24 57.2 +0.8
Q57A Strasburg 124.01 49 P **PKPdf** 01 24 56.3 0.0
baz=287
NHSC New Hope 124.06 57 P **PKiKP** 01 24 56.8 -0.1
baz=282
N57A Milroy 124.12 47 P **PKPdf** 01 24 56.3 -0.2
baz=289,SNR=5.6
R57A Stanardsville 124.14 50 P **PKiKP** 01 24 56.8 -0.1
baz=286
P57A Homestead Farm 124.18 49 P **PKPdf** 01 24 56.7 +0.1
baz=287
P57A Homestead Farm 124.18 49 IAMs_20 IAMs_20 02 18 43.0
comp=Z,2µm,19.0s
ARCR ARCALIA 124.18 321 ⇑P **PKiKP** 01 25 00.4 +3.7
K57A Scipio Center 124.19 44 P **PKPdf** 01 24 56.5 -0.1
baz=291
L57A Andrews Acres 124.21 45 P **PKPdf** 01 24 56.8 +0.1
baz=290
O57A Amberson 124.23 48 P **PKPdf** 01 24 56.5 -0.2
baz=288,SNR=6.9
M57A Sunshine Farm, 124.24 46 P **PKPdf** 01 24 56.7 0.0
baz=289,SNR=6.9
M57A Sunshine Farm, 124.24 46 IAMs_20 IAMs_20 02 17 17.3
comp=Z,2µm,20.0s
J57A Williamstown 124.31 43 P **PKPdf** 01 24 56.5 -0.2
baz=292
H57A Richville 124.32 42 P **PKPdf** 01 24 56.1 -0.7
baz=293
Y58A Scranton 124.32 55 P **PKiKP** 01 24 57.5 +0.2
baz=283
Y58A Scranton 124.32 55 IAMs_20 IAMs_20 02 12 45.7
comp=Z,2µm,21.0s
V58A Windy Hill, Pi 124.33 53 P **PKPdf** 01 24 56.7 -0.3
baz=284
V58A Windy Hill, Pi 124.33 53 IAMs_20 IAMs_20 02 20 51.7
comp=Z,1µm,20.0s
E57A Chemin Saint G 124.33 39 P **PKPdf** 01 24 56.3 -0.5
baz=295,SNR=7.2
G57A Newington 124.33 41 P **PKPdf** 01 24 56.8 0.0
baz=294
GO02 Mina Guanaco 124.34 129 PKPdf **PKiKP** 01 24 58.2 +0.1
GO02 IAMs_20 IAMs_20 02 09 19.4
comp=Z,2µm,22.0s
I57A Carthage 124.34 43 P **PKiKP** 01 24 57.1 0.0
baz=292
W58A Raeford 124.42 54 P **PKPdf** 01 24 57.1 -0.1
baz=284
VOIR 124.43 319 ⇑P **PKiKP** 01 24 59.2 +1.8
VOIR 124.43 319 ⇑PKIKP **PKiKP** 01 24 59.2 +1.8
X58A Rowland 124.44 55 P **PKPdf** 01 24 56.7 -0.6
baz=283
T58A Grand View Acr 124.49 52 P **PKPdf** 01 24 57.4 +0.1
baz=285
R58A Rapidan 124.53 50 P **PKPdf** 01 24 57.0 -0.4
baz=287
KOLS Kolonicke sedl 124.58 324 *e*PKIKP **PKiKP** 01 24 58.1 +0.7
KOLS Kolonicke sedl 124.58 324 *e*PKP **PKiKP** 01 24 58.1 +0.7
Q58A Fox Den Farm, 124.58 49 P **PKiKP** 01 24 57.6 -0.1
baz=287
U58A Oxford 124.62 52 P **PKPdf** 01 24 57.5 -0.1
baz=285
S58A Poland Farm, P 124.68 51 P **PKPdf** 01 24 57.6 0.0
baz=286
N58A Sunbury 124.70 47 P **PKPdf** 01 24 56.9 -0.7
baz=289,SNR=8.0
P58A Pank, Wackersv 124.70 48 P **PKPdf** 01 24 57.5 -0.1
baz=288
M58A Price's Panora 124.70 46 P **PKPdf** 01 24 57.3 -0.4
baz=290,SNR=6.4
UZH Uzhgorod 124.71 324 ⇓*i* PKIKP **PKiKP** 01 24 58.7 +1.0
UZH *i* 01 25 04.0
R58B Mineral 124.72 50 P **PKPdf** 01 24 57.8 +0.1
baz=287
ARR Arges 124.73 319 ⇓P **PKiKP** 01 24 58.9 +0.9
LATQ La Tuque 124.75 38 P **PKPdf** 01 24 57.5 +0.1
baz=297
BINY Binghamton 124.75 45 P **PKPdf** 01 24 57.7 0.0
baz=291
O58A Lewisberry 124.78 47 P **PKPdf** 01 24 57.2 -0.6
baz=289,SNR=6.5
K58A Earlville 124.78 44 P **PKiKP** 01 24 58.1 0.0
baz=292
LONY Lake Ozonia 124.78 42 P **PKPdf** 01 24 57.7 +0.1
baz=294
LONY Lake Ozonia 124.78 42 PKPdf **PKPdf** 01 24 57.6 -0.1
J58A Remsen 124.81 43 P **PKPdf** 01 24 57.7 -0.1
baz=292
J58A Remsen 124.81 43 IAMs_20 IAMs_20 02 27 33.9
comp=Z,2µm,19.0s
CJR Cluj-Napoca 124.81 321 ⇓P **PKiKP** 01 24 58.8 +0.8
CJR Cluj-Napoca 124.81 321 ⇓PKIKP **PKiKP** 01 24 58.8 +0.8
D58A Chemin du LacG 124.81 38 P **PKPdf** 01 24 57.7 0.0
baz=297
COPA Copaceanca 124.84 318 ⇑P **PKiKP** 01 24 58.8 +0.7
HUMR Humele 124.84 318 ⇑P **PKPdf** 01 24 57.8 0.0
E58A La Victoria 124.89 39 P **PKPdf** 01 24 57.6 -0.2
baz=296
I58A Old Forge 124.89 43 P **PKPdf** 01 24 57.6 -0.3
baz=293
PAGS Pennsylvania G 124.89 47 IAMs_20 IAMs_20 02 17 49.8
comp=Z,2µm,21.0s
L58A Harry Jones Me 124.90 45 P **PKPdf** 01 24 57.9 -0.1
baz=291,SNR=5.9
G58A Ormstown 124.92 41 P **PKPdf** 01 24 58.0 +0.1
baz=294
Y59A Loris 124.94 55 P **PKiKP** 01 24 58.9 +0.3
baz=283
Y59A Loris 124.94 55 IAMs_20 IAMs_20 02 17 37.2
comp=Z,1µm,19.0s
W59A Clinton 125.01 54 P **PKiKP** 01 24 58.9 +0.2
baz=284
V59A Middlesex 125.03 53 P **PKiKP** 01 24 58.9 +0.3
baz=285
CBN Corbin Frederi 125.03 50 IAMs_20 IAMs_20 02 16 32.8
comp=Z,2µm,20.0s
CRVS Cervenica-Dubn 125.06 324 *e*PKIKP **PKiKP** 01 24 58.7 +0.3
CRVS Cervenica-Dubn 125.06 324 *e*PKP **PKiKP** 01 24 58.7 +0.3
H58A Gabriels 125.13 42 P **PKPdf** 01 24 57.9 -0.4
baz=294,SNR=6.0
S59A Mechanicsville 125.22 50 P **PKPdf** 01 24 58.7 +0.1
baz=287
U59A Littleton 125.22 52 P **PKPdf** 01 24 58.7 0.0
baz=286
U59A Littleton 125.22 52 IAMs_20 IAMs_20 02 14 06.2
comp=Z,2µm,21.0s
R59A King George, V 125.22 50 P **PKiKP** 01 24 58.8 -0.2
baz=287
MVL Millersville 125.23 47 **PKPdf** 01 24 58.3 -0.3
T59A Double "B" Far 125.24 51 P **PKPdf** 01 24 58.8 +0.1
baz=286
T59A Double "B" Far 125.24 51 IAMs_20 IAMs_20 02 27 04.6
comp=Z,1µm,19.0s
NCB Newcomb 125.28 42 IAMs_20 IAMs_20 02 17 28.3
comp=Z,1µm,20.0s
J59A Piesco 125.29 43 P **PKPdf** 01 24 58.2 -0.4
baz=293,SNR=6.6
J59A Piesco 125.29 43 IAMs_20 IAMs_20 02 23 15.7
comp=Z,2µm,20.0s
P59A Jarrettsville 125.30 48 P **PKiKP** 01 24 59.2 +0.1
baz=289
OJC Ojcow 125.32 326 *e*P **PKiKP** 01 24 59.0 +0.1
K59A Cooperstown 125.32 44 P **PKPdf** 01 24 58.8 0.0
baz=292
FRNY Flat Rock 125.35 41 IAMs_20 IAMs_20 02 17 00.9
comp=Z,2µm,21.0s
N59A State Game Lan 125.35 46 P **PKiKP** 01 24 59.2 -0.1
baz=290
H59A Cadyville 125.36 41 P **PKiKP** 01 24 59.4 +0.3
baz=294
M59A Waymart 125.37 45 P **PKPdf** 01 24 58.5 -0.4
baz=291,SNR=9.3
Q59A Harwood 125.37 49 P **PKiKP** 01 24 59.1 -0.2
baz=288
PB04 IPOC Station P 125.38 126 IAMs_20 IAMs_20 02 09 51.4
comp=Z,2µm,21.0s
L59A Walton 125.41 45 P **PKPdf** 01 24 59.0 +0.1
baz=292
F59A Saint Guilaume 125.43 40 P **PKiKP** 01 24 59.1 -0.1
baz=296
VLAD Vladila 125.44 318 ⇑P **PKPdf** 01 24 59.0 +0.1
NIE Niedzica 125.46 325 *e*P **PKiKP** 01 25 00.1 +0.9
Y60A Bolivia 125.47 55 IAMs_20 IAMs_20 02 16 39.2
comp=Z,2µm,20.0s
D59A Saint-Raymond 125.49 38 P **PKiKP** 01 24 59.2 -0.1
baz=298
I59A Olmsteadville 125.58 42 P **PKPdf** 01 24 59.4 +0.2
baz=294
DEV Deva 125.61 321 ⇓P **PKiKP** 01 24 60.0 +0.4
DEV Deva 125.61 321 ⇓PKIKP **PKiKP** 01 25 00.0 +0.4
KDZ Kurdzhali 125.64 315 P **PKiKP** 01 24 59.7 -0.1
PB06 IPOC Station P 125.64 127 IAMs_20 IAMs_20 02 08 52.4
comp=Z,1µm,22.0s
U60A Pendleton 125.68 52 P **PKPdf** 01 24 59.6 0.0
baz=286
S60A Water View 125.72 50 P **PKiKP** 01 25 00.2 +0.2
baz=287
V60A Jim Taylor Roa 125.79 53 P **PKiKP** 01 25 00.2 0.0
baz=286
V60A Jim Taylor Roa 125.79 53 IAMs_20 IAMs_20 02 14 23.4
comp=Z,2µm,20.0s
WUPA West Chester U 125.80 47 PKPdf **PKPdf** 01 24 59.9 +0.2
WUPA IAMs_20 IAMs_20 02 22 44.7
comp=Z,1µm,20.0s
O60A Telford 125.81 47 P **PKPdf** 01 24 59.4 -0.3
baz=290,SNR=8.0
P60A Greenville 125.81 47 P **PKPdf** 01 24 59.2 -0.6
baz=290,SNR=6.2
T60A Surry 125.82 51 P **PKPdf** 01 24 59.8 -0.1
baz=287
T60A Surry 125.82 51 IAMs_20 IAMs_20 02 13 53.9
comp=Z,2µm,20.0s
N60A Cedar Hill Far 125.84 46 P **PKPdf** 01 24 59.3 -0.5
baz=291,SNR=6.3
F60A Warwick 125.89 39 P **PKPdf** 01 24 59.7 0.0
baz=297
GZR Gura Zlata 125.90 320 ⇑P **PKPdf** 01 24 59.9 +0.1
GZR Gura Zlata 125.90 320 ⇑PKIKP **PKPdf** 01 24 59.9 +0.1
Q60A Greensboro 125.93 48 P **PKiKP** 01 25 00.2 -0.2
baz=289
I60A Shoreham 125.95 42 P **PKPdf** 01 24 59.9 +0.1
baz=294,SNR=8.0
M60A Port Jervis 126.01 45 P **PKPdf** 01 25 00.2 +0.1
baz=292
E60A Ste Agathe de 126.02 39 P **PKiKP** 01 25 00.2 -0.2
baz=298
L60A Shokan 126.05 44 P **PKiKP** 01 25 00.5 -0.1
baz=292
LANS Liptovska Anna 126.06 325 *e*PKIKP **PKiKP** 01 25 00.5 +0.1
LANS Liptovska Anna 126.06 325 *e*PKP **PKiKP** 01 25 00.5 +0.1
D60A Saint Jean D'O 126.09 38 P **PKPdf** 01 25 00.2 +0.2
baz=299
J60A Lant Hill Farm 126.11 43 P **PKiKP** 01 25 00.5 -0.2
baz=294
PATCX Punta Patache 126.13 124 IAMs_20 IAMs_20 02 11 12.5
comp=Z,1µm,22.0s
MPEP Malo Peshtene 126.14 317 P **PKiKP** 01 25 01.0 +0.3
TRY Troy 126.14 43 IAMs_20 IAMs_20 02 25 38.3
comp=Z,2µm,20.0s
W61A Ground Anchor 126.16 53 P **PKPdf** 01 24 60.0 -0.6
baz=285
SIRR Siria 126.20 321 ⇑P **PKiKP** 01 25 01.0 +0.2
LVC Limon Verde 126.22 127 IAMs_20 IAMs_20 02 10 05.4
comp=Z,2µm,22.0s
HERR Herculane 126.36 320 ⇑P **PKPdf** 01 25 00.6 0.0
D61A St Aubert, Com 126.39 37 P **PKiKP** 01 25 00.9 -0.2
baz=300
OKC Ostrava-Krasne 126.42 327 *e*PKIKP **PKiKP** 01 25 01.9 +0.8
OKC *e* 01 25 08.5
OKC MLR MLR
comp=Z,2µm,24.7s
OKC Ostrava-Krasne 126.42 327 *e*PKP **PKiKP** 01 25 01.9 +0.8
OKC *e*PKP **pPKPdf** 01 25 08.5 +0.1
OKC AMS AMS 02 20 40.0
comp=Z,2µm,24.7s
K61A Williamstown 126.44 43 P **PKiKP** 01 25 01.8 +0.5
baz=294,SNR=5.5
N61A South Mountain 126.45 46 P **PKiKP** 01 25 01.6 +0.2
baz=291
PSZ Piszkesteto 126.46 324 ⇑P **PKPdf** 01 25 01.0 +0.2
PSZ Piszkesteto 126.46 324 PKIKP **PKPdf** 01 25 00.8 -0.1
PSZ MLR MLR
comp=Z,2µm,22.0s
PSZ Piszkesteto 126.46 324 PKPdf **PKPdf** 01 25 00.8 -0.1
G61A St-Isidore-de- 126.47 40 P **PKPdf** 01 25 00.9 +0.1
baz=297
P61A Hammonton 126.47 47 P **PKiKP** 01 25 01.8 +0.3
baz=290
P61A Hammonton 126.47 47 IAMs_20 IAMs_20 02 20 17.7
comp=Z,2µm,20.0s
F61A St Evariste 126.49 39 P **PKiKP** 01 25 01.2 -0.2
baz=298

BZS	Buzias	126.53	321	⇑P		PKPdf	01 25 01.0	0.0	
BZS	Buzias	126.53	321	⇑PKIKP		PKPdf	01 25 01.0	0.0	
H61A	Lyndonville baz=296	126.55	41	P		PKiKP	01 25 01.5	0.0	
PB01	IPOC Station P comp=Z,2μm,21.0s	126.56	125	IAMs_20	IAMs_20		02 10 07.8		
E61A	Lac Etchemin baz=299	126.58	38	P		PKiKP	01 25 01.6	0.0	
M61A	Granite Spring baz=292,SNR=5.2	126.62	45	P		PKiKP	01 25 01.8	+0.1	
I61A	Oroboro, Fairl baz=295	126.62	42	P		PKiKP	01 25 01.9	+0.3	
PAL	Palisades baz=292	126.63	45	P		PKiKP	01 25 01.7	0.0	
J61A	Chester baz=295	126.64	42	P		PKiKP	01 25 01.5	-0.2	
LBNH	Lisbon baz=296	126.67	41	P		PKiKP	01 25 01.8	0.0	
LBNH	Lisbon comp=Z,2μm,20.0s	126.67	41	IAMs_20	IAMs_20		02 19 59.0		
VYHS	Vyhne	126.77	325	ePKIKP		PKiKP	01 25 02.2	+0.4	
VYHS	Vyhne	126.77	325	ePKP		PKiKP	01 25 02.2	+0.4	
VTS	Vitosha	126.77	317	P		PKiKP	01 25 02.3	+0.1	
MORC	Moravsky Berou	126.78	327	⇓P		PKiKP	01 25 02.1	+0.3	
MORC	Moravsky Berou	126.78	327	ePKP		PKiKP	01 25 02.0	+0.1	
MORC	Moravsky Berou	126.78	327	⇓PKIKP		PKiKP	01 25 02.1	+0.3	
KSP	Ksiaz	126.83	329	eP		PKiKP	01 25 01.9	0.0	
KSP	Ksiaz	126.83	329	PKIKP		PKiKP	01 25 02.2	+0.4	
MMB	Musomiste	126.84	315	P		PKPdf	01 25 01.5	-0.2	
L61B	Northampton baz=294	126.92	43	P		PKiKP	01 25 02.4	+0.1	
N62A	Caumsett State baz=292	126.97	45	P		PKiKP	01 25 02.4	0.0	
KRLC	Kraliky	127.02	328	ePKIKP		PKiKP	01 25 02.2	-0.1	
KRLC				e			01 25 07.3		
KRLC	comp=Z,2μm,21.2s			MLR	MLR				
KRLC	Kraliky	127.02	328	ePKP		PKiKP	01 25 02.2	-0.1	
KRLC				epPKP		pPKPdf	01 25 07.3	-2.3	
KRLC	comp=Z,2μm,21.2s			AMS	AMS		02 21 00.0		
H62A	Milan baz=297	127.02	40	P		PKiKP	01 25 02.5	+0.1	
OSTC	Ostas	127.03	328	ePKP		PKPdf	01 25 01.8	0.0	
OSTC				ex	x		01 25 09.6		
OSTC	comp=Z,4μm,22.1s			AMS	AMS		02 20 10.0		
PB11	IPOC Station P comp=Z,2μm,22.0s	127.06	124	IAMs_20	IAMs_20		02 08 41.1		
RUE	Ruedersdorf	127.06	331	eP		PKiKP	01 25 03.2	+1.0	
E62A	Clayton Lake baz=300	127.07	37	P		PKiKP	01 25 02.4	-0.1	
E62A	Clayton Lake comp=Z,2μm,21.0s	127.07	37	IAMs_20	IAMs_20		02 18 06.0		
GCUF	Volcan Galeras	127.08	96	eP		PKPdf	01 25 01.6	-2.0	
CHVC	Chvalec	127.10	328	ePKP		PKiKP	01 25 02.4	0.0	
CHVC	comp=Z,4μm,23.5s			AMS	AMS		02 20 30.0		
DPC	Dobruska-Polom	127.10	328	ePKIKP		PKiKP	01 25 02.4	-0.1	
DPC	comp=Z,3μm,25.3s			MLR	MLR				
DPC	Dobruska-Polom	127.10	328	ePKP		PKiKP	01 25 02.4	-0.1	
DPC	comp=Z,3μm,25.3s			AMS	AMS		02 19 30.0		
L62A	Suffield baz=294	127.10	44	P		PKiKP	01 25 02.5	-0.1	
G62A	West of Eustis baz=298	127.12	39	P		PKPdf	01 25 02.3	+0.1	
K62A	Royalston baz=294	127.14	43	P		PKiKP	01 25 02.5	-0.2	
UPC	Upice	127.17	328	ePKIKP		PKiKP	01 25 02.9	+0.4	
UPC	comp=Z,4μm,20.6s			MLR	MLR				
UPC	Upice	127.17	328	ePKP		PKiKP	01 25 02.9	+0.4	
UPC	comp=Z,4μm,20.6s			AMS	AMS		02 20 40.0		
M62A	Hamden baz=293	127.17	45	P		PKiKP	01 25 02.7	-0.1	
J62A	Henniker baz=295	127.18	42	P		PKiKP	01 25 02.7	-0.1	
I62A	Tamworth baz=296	127.22	41	P		PKPdf	01 25 02.3	0.0	
JAVC	Velka Javorina	127.22	326	ePKP		PKiKP	01 25 03.8	+1.0	
PB08	IPOC Station P comp=Z,1μm,20.0s	127.28	124	IAMs_20	IAMs_20		02 14 15.0		
MNMC	Minye Minye	127.41	123			PKiKP	01 25 04.7	+0.4	
SMOL	Smolenice	127.54	326	ePKIKP		PKiKP	01 25 03.8	+0.4	
SMOL	Smolenice	127.54	326	ePKP		PKiKP	01 25 03.8	+0.4	
VRAC	Vranov	127.56	327	⇓P		PKiKP	01 25 04.3	+0.9	
VRAC	Vranov	127.56	327	ePKP		PKiKP	01 25 04.1	+0.7	
VRAC	Vranov	127.56	327	⇓PKIKP		PKiKP	01 25 04.3	+0.9	
K63A	Dunstable baz=295	127.60	43	P		PKiKP	01 25 03.4	-0.2	
I63A	Otisfield baz=297	127.63	41	P		PKiKP	01 25 03.6	-0.1	
BSEG	Bad Segeberg baz=49,slow=2.0	127.63	335	ePKPdf		PKiKP	01 25 04.0	+0.7	
HRV	Adam Dziewonsk baz=295	127.66	43	P		PKiKP	01 25 03.9	+0.1	
H63A	New Sharon baz=298	127.69	40	P		PKiKP	01 25 03.9	+0.2	
D63A	Stockholm baz=301	127.70	36	P		PKiKP	01 25 03.6	-0.1	
MODS	Modra-Piesok	127.70	326	ePKIKP		PKiKP	01 25 03.6	-0.1	
MODS	Modra-Piesok	127.70	326	ePKP		PKiKP	01 25 03.6	-0.1	
PUAC	Puerto Asis, P	127.71	97	eP		PKPdf	01 25 03.5	-0.6	
G63A	Kingsbury baz=299	127.74	39	P		PKiKP	01 25 04.0	+0.1	
M63A	Gales Ferry baz=294	127.78	44	P		PKiKP	01 25 03.9	-0.1	
F63A	Nahmakanta, Br baz=300	127.78	38	P		PKPdf	01 25 03.6	+0.3	
KRUC	Moravsky	127.80	327	ePKP		PKiKP	01 25 03.7	-0.1	
E63A	Oxbow baz=301	127.83	37	P		PKiKP	01 25 03.8	-0.2	
PB16	IPOC Station P comp=Z,1μm,20.0s	127.86	122	IAMs_20	IAMs_20		02 10 51.7		
PKME	Peaks-Kenny Pk baz=299	127.87	39	P		PKiKP	01 25 04.0	-0.1	
L63A	North Scituate baz=294	127.89	44	P		PKiKP	01 25 04.2	0.0	
PVCC	Panska Ves	127.89	329	ePKIKP		PKiKP	01 25 04.7	+0.7	
PVCC	comp=Z,2μm,19.6s			MLR	MLR				
PVCC	Panska Ves	127.89	329	ePKP		PKiKP	01 25 04.7	+0.7	
PVCC	comp=Z,2μm,19.6s			AMS	AMS		02 22 40.0		
ZST	Bratislava	127.90	326	ePKIKP		PKiKP	01 25 04.0	-0.1	
ZST	Bratislava	127.90	326	ePKP		PKiKP	01 25 04.0	-0.1	
PQI	Presque Isle	127.94	37	PKPdf		PKPdf	01 25 02.9	-0.7	
POPC	Popayan, Colom	127.98	94	eP		PKPdf	01 25 04.3	-0.6	
BRG	Berggiesshubel comp=Z,70nm,1.6s	127.99	330	ePKP		PKiKP	01 25 04.3	+0.1	
BRG	comp=Z,21nm,1.6s			PP		PP	01 27 02.1	-3.9	
BRG	Berggiesshubel	127.99	330	ePKIKP		PKiKP	01 25 04.3	+0.1	
BRG							01 27 02.2		
BRG	comp=Z,70nm,1.6s			pmax	pmax				
BRG	comp=Z,21nm,1.6s			pmax	pmax				
IDI	Anoyia	128.12	308	⇑P		PKPdf	01 25 02.6	-1.8	
F64A	Sherman baz=300	128.16	38	P		PKiKP	01 25 04.8	+0.1	
F64A	Sherman comp=Z,2μm,20.0s	128.16	38	IAMs_20	IAMs_20		02 22 22.7		
TREC	Trest	128.16	327	ePKIKP		PKiKP	01 25 05.3	+0.7	
TREC				e			01 25 11.9		
TREC	comp=Z,3μm,22.7s			MLR	MLR				
TREC	Trest	128.16	327	ePKP		PKiKP	01 25 05.3	+0.7	
TREC				ex	x		01 25 11.9		
TREC	comp=Z,3μm,22.7s			AMS	AMS		02 19 50.0		
CLL	Collm comp=Z,31nm,1.2s	128.18	331	i PKPdf		PKPdf	01 25 04.0	+0.1	
CLL	comp=Z,31nm,1.2s			i PKPdf(2)			01 25 11.7		
CLL				e			01 25 18.0		
CLL				e			01 26 47.0		
CLL				ePP		PP	01 27 07.0	-0.2	
CLL				eSKPdf		SKiKP	01 28 44.0	+5.2	
CLL				ePPPP			01 31 49.0		
CLL				ePSKS			01 37 09.0		
CLL				eSS		SS	01 44 24.0	+4.3	
CLL				eSSS	SSS		01 49 06.0		
CLL				eSSSS			01 52 42.0		
CLL	comp=Z,400nm,21.7s			Lm(360			03 08 00.0		
CLL	Collm	128.18	331	i PKIKP		PKPdf	01 25 04.0	+0.1	
CLL				i			01 25 11.7		
CLL	comp=Z,31nm,1.2s			pmax	pmax				
CLL	Collm baz=49,slow=2.0	128.18	331	ePKPdf		PKiKP	01 25 04.6	+0.1	
CLL	Collm comp=Z,2μm,22.0s	128.18	331	IAMs_20	IAMs_20		02 23 56.2		
E64A	Bridgewater baz=301	128.18	37	P		PKiKP	01 25 04.5	-0.2	
G64A	Maxfield baz=300	128.21	39	P		PKiKP	01 25 05.1	+0.3	
H64A	Troy baz=299	128.22	40	P		PKPdf	01 25 04.1	-0.1	
PRU	Pruhonice	128.24	329	ePKIKP		PKPdf	01 25 04.2	+0.1	
PRU	comp=Z,3μm,21.8s			MLR	MLR				
PRU	Pruhonice	128.24	329	ePKP		PKPdf	01 25 04.2	+0.1	
PRU	comp=Z,3μm,21.8s			AMS	AMS		02 21 20.0		
PRA	Prague	128.24	329	ePKIKP		PKiKP	01 25 05.5	+0.8	
PRA	comp=Z,1μm,20.8s			MLR	MLR				
PRA	Prague	128.24	329	ePKP		PKiKP	01 25 05.5	+0.8	
PRA	comp=Z,1μm,20.8s			AMS	AMS		02 21 30.0		
FBE	Freiberg baz=49,slow=2.0	128.25	330	ePKPdf		PKiKP	01 25 05.2	+0.5	
DIVS	Divibare comp=Z,1μm,20.0s	128.26	320	IAMs_20	IAMs_20		02 23 59.3		
M64A	Tiverton baz=295	128.29	44	P		PKPdf	01 25 04.2	-0.2	
I64A	Boothbay baz=298	128.29	40	P		PKPdf	01 25 04.3	-0.1	
L64A	Middleborough baz=295	128.38	43	P		PKPdf	01 25 04.2	-0.3	
YOTC	Yotoco, Valle	128.54	93	eP		PKPdf	01 25 05.0	-0.8	
PBCC	Pribram	128.70	329	ePKP		PKPdf	01 25 04.9	-0.1	
PBCC				ex	x		01 25 10.2		
ASSE	Asse, Remlinge baz=49,slow=2.0	128.72	333	ePKPdf		PKiKP	01 25 06.1	+0.6	
NRDL	Niedersach Rie baz=49,slow=2.0	128.73	333	ePKPdf		PKiKP	01 25 06.2	+0.7	
MARP	Paez Belalcaza	128.74	94	eP		PKiKP	01 25 09.0	+1.9	
CONA	Conrad Observa comp=Z,26nm,1.7s,SNR=8.4	128.74	326	i P		PKiKP	01 25 05.8	0.0	
PLMC	San Jos del P	128.74	91	eP		PKiKP	01 25 06.7	-0.2	
BATG	Bathurst New B	128.75	35	PKPdf		PKPdf	01 25 04.7	-0.4	
H65A	Eastbrook baz=300	128.80	39	P		PKiKP	01 25 05.7	-0.3	
FLOC	Florencia	128.81	96	eP		PKPdf	01 25 05.9	-0.4	
NEUB	Neuenburg baz=49,slow=2.0	128.83	331	ePKPdf		PKiKP	01 25 06.1	+0.2	
G65A	Princeton baz=301	128.97	38	P		PKiKP	01 25 06.1	-0.2	
TANN	Tannenbergstha baz=49,slow=2.0	129.01	330	ePKPdf		PKiKP	01 25 06.6	+0.3	
CLZ	Clausthal baz=49,slow=2.0	129.06	333	ePKPdf		PKiKP	01 25 06.8	+0.5	
GARC	Garzon, Huila	129.08	95	eP		PKPdf	01 25 07.0	0.0	
DBBC	Dabeiba	129.09	89	eP		PKiKP	01 25 07.8	+0.3	
GUNZ	Gunzen baz=49,slow=2.0	129.11	330	ePKPdf		PKiKP	01 25 06.9	+0.4	
PLN	Plauen baz=49,slow=2.0	129.12	330	ePKPdf		PKiKP	01 25 06.7	+0.3	
CBOC	Ciudad Bolivar	129.14	90	eP		PKiKP	01 25 08.2	+0.4	
NKC	Novy Kostel	129.14	330	ePKIKP		PKiKP	01 25 06.3	-0.2	
NKC				e			01 25 12.9		
NKC	comp=Z,2μm,22.8s			MLR	MLR				
NKC	Novy Kostel	129.14	330	ePKP		PKiKP	01 25 06.3	-0.2	
NKC				epPKP		pPKPdf	01 25 12.9	-0.7	
NKC	comp=Z,2μm,22.8s			AMS	AMS		02 24 40.0		
M66A	Nantucket baz=295	129.15	44	P		PKPdf	01 25 05.3	-0.7	
BETC	Betania	129.21	94	eP		PKiKP	01 25 07.8	0.0	
KHC	Kasperske Hory	129.26	328	ePKIKP		PKPdf	01 25 06.4	+0.3	
KHC				e			01 25 14.0		
KHC	comp=Z,4μm,23.6s			MLR	MLR				
KHC	Kasperske Hory	129.26	328	ePKP		PKPdf	01 25 06.4	+0.3	
KHC				ex	x		01 25 14.0		
KHC	comp=Z,4μm,23.6s			AMS	AMS		02 21 40.0		
MOX	Moxa	129.28	331	PKIKP		PKiKP	01 25 06.6	-0.2	
MOX	Moxa baz=49,slow=2.0	129.28	331	ePKPdf		PKiKP	01 25 07.0	+0.2	
MOX	comp=Z,11nm,20.7s			eL	L		02 25 25.7		
ARSA	Arzberg comp=Z,18nm,2.1s	129.31	325	eP		PKiKP	01 25 08.0	+1.0	
H66A	Whiting baz=301	129.33	38	P		PKiKP	01 25 07.1	+0.1	
GEC2	GERESS Array S baz=49,slow=2.0	129.37	328	ePKPdf		PKiKP	01 25 07.1	0.0	
GERES	GERESS Array B comp=Z,5.8nm,0.9s,baz=70,slow=1.6,SNR=32	129.37	328	PKP		PKPdf	01 25 06.1	-0.3	
GERES	GERESS Array B	129.37	328	PKIKP		PKPdf	01 25 05.8	-0.6	
GERES	GERESS Array B	129.37	328			PKPdf	01 25 05.8	-0.6	
GGN	Saint George comp=Z,2μm,20.0s	129.45	38	IAMs_20	IAMs_20		02 17 44.3		
MANZ	Manzenberg baz=49,slow=2.0	129.46	330	ePKPdf		PKiKP	01 25 07.5	+0.3	
PDG	Podgorica comp=Z,1μm,22.0s	129.51	318	IAMs_20	IAMs_20		02 24 55.4		
ANIL	Santa Ana	129.55	92	eP		PKiKP	01 25 08.5	-0.2	
ORTC	Ortega, Tolima	129.61	93	eP		PKPdf	01 25 06.3	-1.6	
TOLC	Tolima	129.64	92	eP		PKPdf	01 25 06.6	-1.7	
HELC	Santa Helena	129.66	90	eP		PKiKP	01 25 09.4	+0.3	
MOA	Molln	129.66	327	eP		PKiKP	01 25 07.4	-0.3	
MOTC	Monteria, Cord	129.80	87	eP		PKPdf	01 25 07.0	-1.0	
UREC	San Jos de Ur	129.83	88	eP		PKPdf	01 25 07.3	-0.8	
SOKA	Soboth comp=Z,20nm,1.5s	129.91	325	eP		PKPdf	01 25 07.6	+0.1	
PRAC	Prado	129.93	93	eP		PKPdf	01 25 08.2	-0.2	
DOBS	Dobrina	129.96	324	ePKPdf		PKiKP	01 25 08.3	+0.1	
LPAZ	La Paz comp=Z,11nm,1.0s,baz=348,slow=1.9,SNR=21	129.99	121	PKP		PKiKP	01 25 10.6	+0.7	
LPAZ	La Paz	129.99	121	eP		PKiKP	01 25 10.2	+0.2	
GRF	Grafenberg Arr baz=49,slow=2.0	130.09	330	ePKPdf		PKiKP	01 25 08.4	0.0	
GRF	comp=Z,2μm,21.9s			eL	L		02 22 59.2		
NORC	Norcasia	130.22	91	eP		PKPdf	01 25 08.2	-0.8	
OBKA	Obir comp=Z,18nm,1.6s	130.28	325	eP		PKPdf	01 25 08.0	-0.3	
SJCC	San Jacinto, C	130.37	85	eP		PKiKP	01 25 10.2	+0.1	
BOJS	Bojanci	130.45	324	ePKPdf		PKiKP	01 25 09.9	+0.7	
LJU	Ljubljana	130.56	324	ePKPdf		PKiKP	01 25 10.5	+1.0	
LJU				eSKPbc		SKPbc	01 28 36.3	+5.8	
KBA	Koelnbreinsper comp=Z,16nm,1.6s	130.62	326	eP		PKiKP	01 25 09.9	+0.1	
ROSC	El Rosal comp=Z,11nm,0.6s,baz=145,slow=6.6,SNR=7.7	130.66	92	PKP		PKiKP	01 25 11.1	0.0	
ROSC	El Rosal comp=Z,977nm,19.0s	130.66	92	IAMs_20	IAMs_20		02 31 27.8		
MACC	Macarena, Meta	130.68	95	eP		PKPdf	01 25 10.2	+0.3	
MYKA	Terra Mystica comp=Z,5.3nm,1.0s	130.72	326	eP		PKiKP	01 25 09.6	-0.3	
PTBC	PUERTO BERRIO	130.76	90	eP		PKPdf	01 25 09.8	-0.2	
PRED	Cave del Predi comp=Z,2μm,22.0s	130.88	325	IAMs_20	IAMs_20		02 23 29.0		
SPBC	San Pablo de B	131.02	91	eP		PKPdf	01 25 10.5	0.0	
ZOU	Zouplan comp=Z,2μm,22.0s	131.14	326	IAMs_20	IAMs_20		02 24 11.9		
CHIC	Chingaza	131.21	92	eP		PKPdf	01 25 10.9	-0.4	
ABTA	Abfaltersbach comp=Z,20nm,1.6s,SNR=6.5	131.28	326	i P		PKiKP	01 25 11.6	+0.6	
EKA	Eskdalemuir Ar comp=Z,6.0nm,1.0s,baz=27,slow=5.8,SNR=4.4	131.28	344	PKP		PKiKP	01 25 10.8	+0.2	
SMRC	Santa Marta, M	131.39	84	eP		PKiKP	01 25 12.9	+0.9	
WATA	Walderalm comp=Z,29nm,1.4s,SNR=7.7	131.42	327	i P		PKiKP	01 25 11.8	+0.4	
WTTA	Wattenberg comp=Z,40nm,1.3s,SNR=9.3	131.43	327	i P		PKiKP	01 25 12.2	+0.8	
WTTA	Wattenberg	131.43	327	PKIKP		PKiKP	01 25 12.8	+1.4	
BRRC	Barranca, Sant	131.56	89	eP		PKiKP	01 25 12.1	-0.3	
MOTA	Moosalm comp=Z,23nm,1.1s	131.66	328	eP		PKPdf	01 25 10.8	-0.1	
SQTA	Sankt Quirin comp=Z,22nm,1.2s,SNR=7.3	131.69	328	i P		PKPdf	01 25 11.0	+0.1	
STU	Stuttgart comp=Z,1μm,20.0s	131.70	330	IAMs_20	IAMs_20		02 22 10.3		
RETA	Reutte comp=Z,13nm,1.3s	131.75	328	eP		PKPdf	01 25 11.2	+0.2	
BTNL	Ternell	131.83	334	PKiKP		PKiKP	01 25 13.0	+1.1	
BTNL				PP		PP	01 27 31.6	+0.7	
MEM	Membach	131.87	334	PKiKP		PKiKP	01 25 13.4	+1.5	
MEM				PP		PP	01 27 27.0	-4.1	
GUVC	San Jose del G	131.96	95	eP		PKPdf	01 25 10.9	-1.3	
BARC	Barichara	132.02	90	eP		PKPdf	01 25 10.2	-2.4	
RUSC	La Rusia	132.03	91	eP		PKPdf	01 25 13.3	+0.3	
BHOU	Houvegnez	132.06	334	PKiKP		PKiKP	01 25 13.9	+1.5	
OCAC	Ocana	132.06	88	eP		PKiKP	01 25 13.3	-0.4	
FETA	Feichten comp=Z,18nm,1.1s,SNR=5.7	132.07	328	i P		PKiKP	01 25 12.3	-0.4	
BSTI	Sart Tilman	132.08	334	PKiKP		PKiKP	01 25 13.3	+0.9	
SGRT	San Giovanni R comp=Z,1μm,20.0s	132.12	319	IAMs_20	IAMs_20		02 27 48.6		
CPUP	Villa Florida comp=Z,8.5nm,1.0s,baz=249,slow=2.3,SNR=14	132.30	139	PKP		PKiKP	01 25 13.7	+0.1	
CPUP	Villa Florida	132.30	139	PKiKP		PKPdf	01 25 12.9	+0.4	
CPUP	Villa Florida	132.30	139	PKPdf		PKPdf	01 25 12.9	+0.4	
BCLA	Clavier	132.31	334	PKiKP		PKiKP	01 25 14.1	+1.2	
DAVA	Damuels comp=Z,22nm,1.9s	132.34	328	eP		PKPdf	01 25 12.0	-0.1	
BFO	Black Forest comp=Z,1μm,20.0s	132.42	330	IAMs_20	IAMs_20		02 27 35.4		
BGES	Gesves	132.43	334	PKiKP		PKiKP	01 25 13.5	+0.4	
WLF	Walferdange	132.49	333	PKiKP		PKiKP	01 25 13.9	+0.7	
PAMC	Pamplona, Colo	132.58	89	eP		PKPdf	01 25 07.8	-6.2	
BMRD	Maredsous	132.63	335	PKiKP		PKiKP	01 25 15.1	+1.6	
SNF	Seneffe	132.67	335	PKiKP		PKiKP	01 25 14.1	+0.5	
TIP	Timpagrande	132.68	315	⇑P		PKPdf	01 25 12.3	-0.6	
TIP	Timpagrande comp=Z,2μm,21.0s	132.68	315	IAMs_20	IAMs_20		02 26 20.7		
DOU	Dourbes	132.85	334	PKiKP		PKiKP	01 25 14.2	+0.3	
DOU				PP		PP	01 27 35.4	-2.0	
ECH	Echery comp=Z,2μm,22.0s	133.06	331	IAMs_20	IAMs_20		02 25 56.4		
NRCA	Norcia comp=Z,1μm,19.0s	133.21	322	IAMs_20	IAMs_20		02 27 44.0		
AQU	L'Aquila comp=Z,2μm,21.0s	133.29	321	IAMs_20	IAMs_20		02 27 00.3		
CEL	Celeste comp=Z,1μm,22.0s	133.70	315	IAMs_20	IAMs_20		02 26 17.8		
SC01	Santiago de lo comp=Z,1μm,19.0s	134.58	72	IAMs_20	IAMs_20		02 21 51.7		
CASP	Castiglione de comp=Z,1μm,21.0s	134.59	323	IAMs_20	IAMs_20		02 28 58.4		
SDV	Santo Domingo	134.76	87	PKPdf		PKPdf	01 25 18.2	+0.5	
BNI	Bardonecchia	135.49	328	PKiKP		PKPdf	01 25 18.5	+0.4	
BNI	Bardonecchia	135.49	328	PKPdf		PKPdf	01 25 18.5	+0.4	
VSL	Villasalto comp=Z,1μm,22.0s	137.42	320	IAMs_20	IAMs_20		02 27 03.6		
SJG	San Juan	139.03	73	eP		PKPdf	01 25 21.4	-3.8	
SJG	San Juan	139.03	73	PKiKP		PKPdf	01 25 25.3	+0.1	
SJG	comp=Z,700nm,20.0s			MLR	MLR				
SJG	San Juan	139.03	73			PKPdf	01 25 25.2	+0.1	
KEST	Kesra comp=Z,9.3nm,1.1s,baz=345,slow=4.5,SNR=4.1	139.50	315	PKP		PKPdf	01 25 26.7	+0.9	
KEST	Kesra comp=Z,1μm,20.0s	139.50	315	IAMs_20	IAMs_20		02 33 21.4		
SPB	Sao Paulo comp=Z,2μm,22.0s	140.27	146	IAMs_20	IAMs_20		02 18 25.2		
SPB	Sao Paulo	140.27	146	eP		PKiKP	01 25 28.7	-1.2	
CDVI	St. Croix	140.38	74	PKPdf		PKPdf	01 25 28.2	+0.6	
VAO	Valinhos	141.00	146	eP		PKPdf	01 25 29.6	+0.8	
BB19B	Bebedouro	141.62	143	eP		PKPdf	01 25 30.2	+0.2	
SEUS	St. Eustatius comp=Z,1μm,20.0s	142.10	74	IAMs_20	IAMs_20		02 38 29.0		
GRGR	Grenville comp=Z,1μm,20.0s	143.72	83	IAMs_20	IAMs_20		02 38 04.6		
IPMB	Ipameri, GO	144.14	140	eP		PKPbc	01 25 32.8	+0.3	
PBRG	Braganca	144.20	337	ePKPdf		PKPbc	01 25 32.5	+0.5	
PGAV	Gavieira, Arco	144.63	339	ePKPdf		PKPbc	01 25 34.0	+0.5	
PGAV	Gavieira, Arco comp=Z,1μm,22.0s	144.63	339	eLR	LR		02 15 44.9		
ES03	SONSECA Array comp=Z,2μm,22.0s	144.75	332	IAMs_20	IAMs_20		02 25 16.6		
ESDC	Sonseca Array comp=Z,18nm,0.9s,baz=28,slow=3.3,SNR=68	144.76	332	PKP		PKPbc	01 25 33.9	0.0	
PCAB	Cabril	144.77	338	ePKPdf		PKPdf	01 25 34.5	-0.4	
TOSP	Speyside	144.81	84	PKPdf		PKPab	01 25 34.4	-0.3	
TOSP	comp=Z,1μm,19.0s			IAMs_20	IAMs_20		02 34 29.6		
CART	Cartagena comp=Z,1μm,20.0s	144.83	326	IAMs_20	IAMs_20		02 31 05.3		
MVO	Moncorvo	144.85	336	ePKPdf		PKPbc	01 25 34.5	+0.3	
MVO	Moncorvo comp=Z,1μm,20.0s	144.85	336	eLR	LR		02 17 46.4		
POLO	Lamas de Olo	144.97	337	ePKPdf		PKPdf	01 25 35.4	+0.1	
PAB	San Pablo	145.04	332	PKiKP		PKPab	01 25 35.0	+0.2	
PAB	San Pablo	145.04	332	PKPdf		PKPab	01 25 35.0	+0.2	
PAB	San Pablo comp=Z,1μm,21.0s	145.04	332	IAMs_20	IAMs_20		02 38 28.3		
NPGB	Novo Progresso	145.34	117	eP		PKPbc	01 25 36.0	-0.4	
PVIS	Viseu	145.58	337	ePKPab		PKPab	01 25 37.4	+0.7	
MTE	Manteigas	145.71	336	ePKPab		PKPab	01 25 37.8	+0.5	
MTE	Manteigas	145.71	336	eSS	SS		01 48 11.7	+24	
MTE	Manteigas comp=Z,1μm,20.0s	145.71	336	eLR	LR		02 17 47.4		
MTE	Manteigas	145.71	336	PKPdf		PKPbc	01 25 37.0	+0.1	
BDFB	Brasilia comp=Z,50nm,1.1s,baz=141,slow=0.8,SNR=38	145.97	137	PKPbc		PKPbc	01 25 38.5	+0.1	
BDFB	Brasilia	145.97	137	PKiKP		PKPbc	01 25 38.2	-0.3	
BDFB	Brasilia	145.97	137			PKPbc	01 25 38.1	-0.3	
PCBR	Castelo Branco	146.16	336	ePKPab		PKPab	01 25 38.7	-0.2	
ITTB	Itaituba	146.18	113	eP		PKPbc	01 25 38.6	-0.5	
COI	Coimbra	146.21

comp=N,12nm,1.2s,baz=144,slow=5.9,SNR=3.4
DBIC PKPab **PKPab** **01 26 38.2 +0.3**
comp=N,6.9nm,0.9s,baz=106,slow=5.7,SNR=5.0
LIC **Lamto** **160.15 262** *eP* **PKPab** **01 26 37.7 -0.6**
comp=N,205nm,1.7s
TIC **Toumodi** **160.22 263** *eP* **PKPab** **01 26 39.1 +0.5**

IDC 17 01:18:40.3±8.2, 9°87S×154°32E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/37, mbtmp3.9/3, Error ellipse: s-maj=125.9km s-min=75.5km az=34.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.72**	**240**	P	P	01 23 34.3	+1.0
	2.2nm,0.8s,baz=66,slow=9.8,SNR=13						
ASAR	**Alice Springs**	**23.83**	**232**	P	P	01 23 55.0	-0.4
	2.0nm,0.8s,baz=63,slow=9.9,SNR=16						
STKA	**Stephens Creek**	**24.87**	**206**	P	P	01 24 04.3	-0.4
	3.7nm,0.9s,baz=23,slow=13,SNR=4.2						

IDC 17 01:22:44.0±3.6, 15°15S×174°82W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.7/37, mbtmp3.9/4, Error ellipse: s-maj=200.0km s-min=29.8km az=146.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.57**	**257**	P	P	01 31 29.4	-0.2
	0.7nm,0.5s,baz=89,slow=7.3,SNR=19						
ASAR	**Alice Springs**	**48.89**	**252**	P	P	01 31 32.0	0.0
	8.1nm,0.7s,baz=87,slow=8.1,SNR=84						
ILAR	**Eielson Array**	**82.47**	**12**	P	P	01 35 07.8	-0.2
	0.3nm,0.6s,baz=224,slow=5.0,SNR=1.8						
PDAR	**Pinedale Array**	**83.00**	**42**	P	P	01 35 11.8	+0.2
	0.2nm,0.5s,baz=228,slow=3.5,SNR=2.1						

*IDC **17** 01:25:23.7±0.8, 29°.27N×70°.06E, h0km, mb4.0/20, mb1 4.1/22, mb1mx3.9/67, mbtmp4.0/22, ML3.5/2, Error ellipse: s-maj=19.5km s-min=14.5km az=26.0*
*NDI **17** 01:25:26.3±2.2, 29°.40N×69°.87E, h10km, ML4.2, mb4.4(NEIC)*
*NEIC **17** 01:25:29.0±2.0, 29°.47N±0°.08×70°.12E±0°.07, h26km±5km, mb4.4/21, Error ellipse: s-maj=13.9km s-min=3.7km az=144.0*

ISC 17 01:25:29.5±0.4, 29°.43N±0°.05×70°.14E±0°.05, h35km, n84, σ2s 10/90, mb4.2/26, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIL	**Nilore**	**4.97**	**31**	Pn	**Pn**	**01 26 43.0**	**+1.3**
KBL	**Kabul**	**5.18**	**350**	Pn	**Pn**	**01 26 46.6**	**+1.9**
DHRM	**DHARAMSHALA**	**5.99**	**60**	*e*P	**Pn**	**01 26 56.5**	**+0.6**
DHRM				*e*S	**Sn**	**01 28 06.5**	**+3.1**
DHRM				IAML		01 28 18.5	
	comp=E,522nm,0.9s						
DHRM				IAML		01 28 19.5	
	comp=N,322nm,0.7s						
BHUJ	**Bhuj**	**6.17**	**184**	*e*P	**Pn**	**01 26 56.3**	**-1.8**
BHUJ				*e*S	**Sn**	**01 28 03.5**	**-3.9**
SONA	**Sohna**	**6.20**	**99**	*e*S	**Sn**	**01 28 09.2**	**+1.0**
NDI	**New Delhi**	**6.24**	**95**	*e*P	**Pn**	**01 27 00.6**	**+1.5**
NDI				*e*S	**Sn**	**01 28 10.4**	**+1.3**
SMLA	**Simla**	**6.30**	**73**	*e*S	**Sn**	**01 28 13.2**	**+2.4**
SMLA				IAML		01 28 16.6	
	comp=N,243nm,0.4s						
DDI	**Dehra Dun**	**6.93**	**81**	*e*P	**Pn**	**01 27 10.2**	**+1.6**
DDI				*ex*	x	01 28 33.6	
HRA	**Herat**	**8.34**	**308**	Pn	**Pn**	**01 27 29.4**	**+1.3**
BHPL	**Bhopal**	**8.98**	**132**	*e*P	**Pn**	**01 27 38.5**	**+1.7**
BHPL				*e*S	**Sn**	**01 29 14.2**	**-2.5**
CHGR	**Chuyangaron**	**9.24**	**355**	Pn	**Pn**	**01 27 40.1**	**-0.2**
GAR	**Garm**	**9.55**	**1**	Pn	**Pn**	**01 27 43.8**	**-0.8**
BTK	**Batken**	**10.62**	**3**	Pn	**Pn**	**01 27 59.7**	**+0.5**
KSH	**Kashi**	**11.15**	**24**	P	**Pn**	**01 28 03.3**	**-3.2**
KSH				sP		01 28 11.1	
KSH				S	**Sn**	**01 30 03.4**	**-6.5**
KSH				pmax	pmax		
	comp=Z,14nm,0.5s						
KSH				pmax	pmax		
	comp=Z,710nm,5.6s						
KSH				LR	LR		
	comp=N,1μm,9.0s						
KSH				LR	LR		
	comp=E,2μm,9.8s						
KSH				LR	LR		
	comp=Z,2μm,14.2s						
PYUN	**Piuthan**	**11.35**	**94**	*e*P	**Pn**	**01 28 09.2**	**-0.2**
	comp=Z,65nm,0.5s						
NGP	**Nagpur**	**11.52**	**134**	*e*P	**Pn**	**01 28 12.4**	**+0.8**
NGP				*e*S	**Sn**	**01 30 12.1**	**-7.0**
KOLN	**Koldanda**	**11.94**	**95**	*e*P	**Pn**	**01 28 16.4**	**-1.1**
	comp=Z,196nm,1.2s						
DANN	**Dangsing**	**11.98**	**92**	*e*P	**Pn**	**01 28 17.2**	**-0.9**
	comp=Z,154nm,0.9s						
WSAR	**Wadi Sarin**	**12.02**	**242**	Pn	Pn	01 28 14.3	-4.1
	comp=Z,0.6nm,0.3s,baz=54,slow=9.9,SNR=5.6						
WSAR				Sn	Sn	01 30 15.8	-16
	comp=Z,0.3nm,0.3s,baz=52,slow=7.5,SNR=4.4						
GKN	**Gorkha**	**12.80**	**93**	*e*P	**Pn**	**01 28 26.8**	**-2.4**
	comp=Z,60nm,0.9s						
UOSS	**Minazif**	**13.19**	**253**	Pn	**Pn**	**01 28 35.1**	**+0.8**
DMN	**Daman**	**13.28**	**94**	*e*P	**Pn**	**01 28 34.6**	**-1.3**
	comp=Z,47nm,0.9s						
KKN	**Kakani**	**13.40**	**93**	*e*P	**Pn**	**01 28 34.4**	**-3.0**
	comp=Z,62nm,0.9s						
PKIN	**Phulchoki**	**13.54**	**94**	*e*P	**Pn**	**01 28 37.1**	**-2.3**
	comp=Z,42nm,0.8s						
PKI	**Pulchoki**	**13.55**	**94**	*e*P	**Pn**	**01 28 36.7**	**-2.9**
	comp=Z,38nm,0.8s						
KK31	**Karatay Array**	**13.65**	**1**	Pn	**Pn**	**01 28 39.2**	**-1.4**
KKAR	**Karatay Array**	**13.65**	**1**	Pn	**Pn**	**01 28 37.8**	**-2.8**
KKAR	**Karatay Array**	**13.65**	**1**	Pn	**Pn**	**01 28 38.4**	**-2.1**
FRU1	**Bishkek**	**13.83**	**14**	Pn	**Pn**	**01 28 41.3**	**-1.8**
BOOM	**Boomskoye usch**	**13.85**	**18**	Pn	**Pn**	**01 28 42.4**	**-1.0**
GUN	**Gumba**	**13.90**	**92**	*e*P	**Pn**	**01 28 41.0**	**-3.4**
	comp=Z,105nm,0.6s						
HYB	**Hyderabad**	**14.22**	**145**	*i* P	**Pn**	**01 28 47.0**	**-1.5**
HYB				*e*S	**Sn**	**01 31 32.0**	**+6.8**
RAMN	**Ramite**	**14.72**	**96**	*e*P	**Pn**	**01 28 53.7**	**-1.8**
	comp=Z,38nm,0.7s						
ODAN	**Odare**	**15.43**	**95**	*e*P	**Pn**	**01 29 02.6**	**-2.2**
TAPN	**Taplejung**	**15.60**	**93**	*e*P	**Pn**	**01 29 02.7**	**-4.4**
MAKZ	**Makanchi**	**19.65**	**25**	P	**P**	**01 29 55.5**	**+0.2**
SHL	**Shillong**	**19.66**	**96**	P	**P**	**01 29 56.0**	**+0.3**
SHL				IAmb	IAmb	01 30 05.2	
	comp=Z,9.0nm,0.7s						
MK31	**Makanchi Array**	**19.75**	**25**	P	**P**	**01 29 56.9**	**+0.6**
MKAR	**Makanchi Array**	**19.75**	**25**	P	**P**	**01 29 56.7**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=211,slow=15,SNR=4.7						
WMQ	**Urumqi**	**20.06**	**40**	*e*P	Pn	01 30 02.3	+0.6
ABKAR	**Akbulak array**	**21.27**	**341**	P	**P**	**01 30 12.7**	**-0.1**
KURBB	**Kurchatov Arra**	**22.09**	**14**	P	**P**	**01 30 21.2**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=207,slow=9.5,SNR=12						
KURK	**Kurchatov**	**22.20**	**14**	P	**P**	**01 30 22.0**	**-0.6**
RAYN	**Ar Rayn**	**22.81**	**261**	P	**P**	**01 30 29.0**	**-0.4**
RAYN				IAmb	IAmb	01 30 30.2	
	comp=Z,15nm,1.4s						
AKTO	**Aktyubinsk**	**22.89**	**340**	P	**P**	**01 30 30.7**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=133,slow=18,SNR=6.3						
GNI	**Garni**	**23.37**	**304**	P	**P**	**01 30 35.5**	**+0.4**
	comp=Z,7.8nm,1.1s,baz=270,slow=5.3,SNR=5.6						
GNI	**Garni**	**23.37**	**304**	P	**P**	**01 30 34.7**	**-0.4**
GNI				IAmb	IAmb	01 30 52.6	
	comp=Z,14nm,1.1s						
BVAR	**Borovoye Array**	**23.57**	**0**	P	**P**	**01 30 37.2**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=236,slow=33,SNR=7.6						
BRVK	**Borovoye**	**23.61**	**0**	P	**P**	**01 30 37.6**	**+0.5**
AKH	**Akhalkalaki**	**24.69**	**306**	P	**P**	**01 30 48.2**	**+0.8**
AKH				IAmb	IAmb	01 30 54.4	
	comp=Z,27nm,1.2s						
MARD	**Mardin**	**25.68**	**296**	P	**P**	**01 30 56.4**	**0.0**
MARD				IAmb	IAmb	01 31 03.6	
	comp=Z,5.4nm,0.5s						
ZALV	**Zalesovo Beam**	**26.73**	**19**	P	**P**	**01 31 06.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=205,slow=6.6,SNR=5.0						
ZALV	**Zalesovo Beam**	**26.73**	**19**	P	**P**	**01 31 05.5**	**0.0**
ARU	**Arti**	**28.21**	**346**	P	**P**	**01 31 18.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=338,slow=22,SNR=1.9						
ARU	**Arti**	**28.21**	**346**	P	**P**	**01 31 17.1**	**-1.6**
ARU				IAmb	IAmb	01 31 24.6	
	comp=Z,11nm,1.3s						
CMAR	**Chiang Mai Arr**	**28.42**	**106**	P	**P**	**01 31 21.6**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=294,slow=8.5,SNR=5.1						
LZH	**Lanzhou**	**29.01**	**68**	*e*P	**P**	**01 31 28.5**	**+2.2**
LZH				pP	pP	01 31 34.8	-1.6
LZH				sP	sP	01 31 38.1	-2.5
LZH				PP	**PP**	**01 32 28.0**	**-4.0**
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,4.6s						
LZH				LR	LR		
	comp=N,170nm,12.5s						
LZH				LR	LR		
	comp=E,180nm,14.6s						
LZH				LR	LR		
	comp=Z,200nm,13.0s						
BR131	**Keskin Array S**	**31.57**	**299**	P	**P**	**01 31 48.7**	**-0.2**
BR131				IAmb	IAmb	01 31 53.8	
	comp=Z,3.2nm,0.8s						
BRTR	**Keskin Array B**	**31.57**	**299**	P	**P**	**01 31 48.4**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=120,slow=8.4,SNR=17						
SONM	**Songino Array**	**33.36**	**46**	P	**P**	**01 32 06.6**	**+2.2**
	comp=Z,1.1nm,0.9s,baz=243,slow=7.4,SNR=7.1						
SONM	**Songino Array**	**33.36**	**46**	P	**P**	**01 32 06.2**	**+1.7**
ELL	**Elmali**	**34.30**	**293**	P	**P**	**01 32 12.7**	**0.0**
MANT	**Manisa**	**35.41**	**296**	P	**P**	**01 32 25.9**	**+3.5**
HHC	**Hu-ho-hao-te**	**35.44**	**60**	*e*P	**P**	**01 32 25.8**	**+3.3**
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,870nm,5.7s						
AKASG	**Malin Array Be**	**37.21**	**316**	P	**P**	**01 32 36.6**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=99,slow=7.1,SNR=5.3						
MLR	**Muntele Rosu**	**38.06**	**307**	P	**P**	**01 32 44.9**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=68,slow=6.4,SNR=4.5						
MLR	**Muntele Rosu**	**38.06**	**307**	P	**P**	**01 32 46.0**	**+1.3**
MLR				IAmb	IAmb	01 32 59.4	
	comp=Z,5.9nm,1.1s						
BUR08	**Bucovina Ar. S**	**38.95**	**311**	P	**P**	**01 32 54.0**	**+1.8**
ARD4	**ARCESS Array S**	**47.46**	**340**	P	**P**	**01 34 01.4**	**+0.9**
ARCES	**ARCESS Array B**	**47.47**	**340**	P	**P**	**01 34 01.2**	**+0.6**
	comp=Z,8.6nm,0.9s,baz=133,slow=7.4,SNR=16						
HFS	**Hagfors**	**48.35**	**326**	P	**P**	**01 34 06.7**	**-0.8**
	comp=Z,6.5nm,0.9s,baz=185,slow=8.9,SNR=4.4						
NC303	**NORSAR Array S**	**49.71**	**327**	P	**P**	**01 34 17.8**	**-0.1**
NB2	**NORSAR Subarra**	**49.75**	**327**	P	**P**	**01 34 16.9**	**-1.3**
	comp=Z,4.7nm,1.0s,baz=103,slow=7.9						
NOA	**NORSAR Array B**	**49.75**	**327**	P	**P**	**01 34 17.1**	**-1.1**
	comp=Z,2.2nm,0.8s,baz=102,slow=7.7,SNR=7.4						
KEST	**Kesra**	**50.91**	**294**	P	**P**	**01 34 28.4**	**+1.0**
	comp=Z,6.2nm,0.9s,baz=7.4,slow=3.4,SNR=5.3						
KEST	**Kesra**	**50.91**	**294**	P	**P**	**01 34 28.3**	**+0.8**
KEST				IAmb	IAmb	01 34 33.0	
	comp=Z,10nm,1.0s						
ESDC	**Sonseca Array**	**60.31**	**301**	P	**P**	**01 35 33.8**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=71,slow=7.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**65.00**	**271**	P	**P**	**01 36 05.0**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=52,slow=4.6,SNR=2.5						
WRA	**Warramunga Arr**	**78.96**	**120**	P	**P**	**01 37 29.2**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=322,slow=5.0,SNR=10						
WB2	**Warramunga Ar**	**78.97**	**120**	P	**P**	**01 37 30.2**	**+0.2**
ASAR	**Alice Springs**	**80.88**	**124**	P	**P**	**01 37 39.2**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=312,slow=5.4,SNR=8.3						
MDM	**Murphy Dome**	**81.30**	**16**	P	**P**	**01 37 42.5**	**+0.5**
MDM				IAmb	IAmb	01 37 48.5	
	comp=Z,4.1nm,1.1s						
FORT	**Forrest**	**81.38**	**132**	P	**P**	**01 37 45.5**	**+2.7**
YKA	**Yellowknife Ar**	**88.32**	**2**	P	**P**	**01 38 17.6**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=0.4,slow=4.9,SNR=7.8						

*REY **17** 01:26:12.7, 64°.67N×17°.45W, h3km*
*IDC **17** 01:26:12.1±0.6, 64°.63N×17°.70W, h0km, mb3.8/15, mb1 4.0/19, mb1mx3.8/55, mbtmp3.8/19, ML2.5/3, Error ellipse: s-maj=18.7km s-min=9.8km az=11.0*
*NEIC **17** 01:26:13.4±2.5, 64°.52N±0°.09×17°.7W±0°.2, h8km±4km, mb4.5/14, Error ellipse: s-maj=13.4km s-min=9.5km az=193.0*

ISC 17 01:26:13.5±0.4, 64°67N±0°.02×17°47W±0°.02, h10km, n106, σ1s 73/123, mb4.0/22, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.12**	**273**	P	**Pg**	**01 26 15.6**	**-1.0**
IVON				S	**Sg**	**01 26 18.0**	**-0.7**
	baz=272						
IDYN	**Dyngjuhals**	**0.13**	**19**	P	**Pg**	**01 26 15.7**	**-1.0**
IDYN				S	**Sg**	**01 26 17.6**	**-1.3**
	baz=15						
IURH	**Urdarhals**	**0.20**	**42**	P	**Pg**	**01 26 17.0**	**-0.9**
	baz=40						
IHAM	**Hamarinn**	**0.24**	**219**	P	**Pg**	**01 26 17.8**	**-0.8**
	baz=221						
IHAM				S	**Sg**	**01 26 21.3**	**-0.6**
	baz=221						
IGRF	**Grimsfjall**	**0.28**	**162**	P	**Pg**	**01 26 18.1**	**-1.0**
	baz=164						
IGRF				S	**Sg**	**01 26 22.7**	**-0.2**
	baz=164						
IKVE	**Kverkfjoll**	**0.34**	**88**	P	**Pg**	**01 26 19.3**	**-1.0**
	baz=88						
IKVE				S	**Sg**	**01 26 23.8**	**-1.1**
	baz=88						
IHUS	**Husbondi**	**0.38**	**193**	P	**Pg**	**01 26 20.3**	**-0.8**
	baz=194						
IHUS				S	**Sg**	**01 26 25.9**	**-0.3**
	baz=194						
ISKR	**Skrokkalda**	**0.41**	**255**	P	**Pg**	**01 26 20.6**	**-1.0**
	baz=255						
IVOT	**Vottur**	**0.42**	**163**	P	**Pg**	**01 26 20.6**	**-1.1**
	baz=164						
THOR	**Thorvaldshraun**	**0.43**	**51**	P	**Pg**	**01 26 20.7**	**-1.3**
	baz=51						
THOR				S	**Sg**	**01 26 27.4**	**-0.3**
	baz=51						
IKRE	**Kreppuhraun**	**0.48**	**75**	P	**Pg**	**01 26 21.4**	**-1.5**
	baz=75						
IKRE				S	**Sg**	**01 26 28.1**	**-1.2**
	baz=75						
IJOK	**Jokulheimar**	**0.48**	**223**	P	**Pg**	**01 26 21.8**	**-1.2**
	baz=224						
IASK	**Askja**	**0.52**	**42**	P	**Pg**	**01 26 22.1**	**-1.5**
	baz=41						
IASK				S	**Sg**	**01 26 29.1**	**-1.4**
	baz=41						
IMKO	**Mokollar**	**0.57**	**57**	P	**Pg**	**01 26 23.1**	**-1.6**
	baz=56						
IMKO				S	**Sg**	**01 26 31.6**	**-0.6**
	baz=56						
IIEY	**Innrieyrar**	**0.64**	**207**	P	**Pg**	**01 26 24.5**	**-1.5**
	baz=208						
IIEY				S	**Sg**	**01 26 33.3**	**-1.0**
	baz=208						
IKSK	**Karasker**	**0.67**	**139**	P	**Pg**	**01 26 24.2**	**-2.2**
	baz=140						
IKSK				S	**Sg**	**01 26 33.6**	**-1.6**
	baz=140						
ISVA	**Svartarkot**	**0.68**	**7**	P	**Pg**	**01 26 24.9**	**-1.7**
	baz=6.8						
ISVA				S	**Sg**	**01 26 34.5**	**-1.0**
	baz=6.8						
IKAL	**Kalfafell**	**0.73**	**188**	P	**Pg**	**01 26 26.0**	**-1.6**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.76**	**79**	P	**Pg**	**01 26 26.1**	**-2.1**
	baz=78						
IVSH				S	**Sg**	**01 26 36.2**	**-1.9**
	baz=78						
IVAT	**Vatnsfell**	**0.79**	**233**	P	**Pg**	**01 26 27.1**	**-1.7**
	baz=234						
IFAG	**Fagurholsmyri**	**0.87**	**156**	P	**Pg**	**01 26 28.0**	**-2.3**
	baz=156						
IADA	**Aoalbol**	**0.88**	**66**	P	**Pg**	**01 26 28.0**	**-2.5**
	baz=65						
IADA				S	**Sg**	**01 26 39.8**	**-2.1**
	baz=65						
IHVE	**Hveravellir**	**0.92**	**284**	P	**Pg**	**01 26 28.9**	**-2.4**
	baz=284						
IHVE				S	**Sg**	**01 26 41.6**	**-1.7**
	baz=284						
IMEL	**Melhnausar**	**0.97**	**20**	P	**Pg**	**01 26 29.6**	**-2.6**
	baz=20						
IREN	**Reynihlio**	**1.01**	**13**	P	**Pg**	**01 26 30.4**	**-2.6**
	baz=13						
ISNB	**Snabyli**	**1.07**	**209**	P	**Pg**	**01 26 31.7**	**-2.3**
	baz=210						
IKVO	**Krokottuvotn**	**1.08**	**13**	P	**Pg**	**01 26 31.5**	**-2.8**
	baz=12						
ISLY	**Slysaalda**	**1.11**	**221**	P	**Pb**	**01 26 32.6**	**-2.2**
	baz=222						
IGRS	**Grimsstaoir**	**1.13**	**30**	P	**Pb**	**01 26 33.1**	**-2.0**
	baz=29						
IFED	**Fedgar**	**1.16**	**237**	P	**Pb**	**01 26 33.7**	**-2.0**
	baz=238						
IRJU	**Rjupnafell**	**1.18**	**207**	P	**Pb**	**01 26 33.6**	**-2.3**
	baz=208						
IMJO	**Mjoaskard**	**1.21**	**234**	P	**Pb**	**01 26 34.2**	**-2.4**
	baz=234						
ISKI	**Skildingahlsh**	**1.22**	**8**	P	**Pn**	**01 26 33.9**	**-2.7**
	baz=8.1						
IGHA	**Grjothals**	**1.23**	**16**	P	**Pn**	**01 26 33.8**	**-3.0**
	baz=15						
IGYG	**Gygjarholskot**	**1.25**	**253**	P	**Pn**	**01 26 34.5**	**-2.6**
	baz=253						
IGRA	**Granastaoir**	**1.26**	**358**	P	**Pn**	**01 26 34.3**	**-2.8**
	baz=358						
IHVO	**Lagu-Hvolar**	**1.30**	**209**	P	**Pn**	**01 26 35.8**	**-1.9**
	baz=209						
IDIM	**Dimmadalss**	**1.32**	**10**	P	**Pn**	**01 26 35.4**	**-2.6**
	baz=9.2						
IHLA	**Hella**	**1.34**	**344**	P	**Pn**	**01 26 36.0**	**-2.3**
	baz=343						
IALF	**Alftagrof**	**1.40**	**213**	P	**Pn**	**01 26 37.4**	**-1.7**
	baz=214						
IHED	**Heoinshofoi**	**1.42**	**3**	P	**Pn**	**01 26 36.9**	**-2.5**
	baz=2.2						
IESK	**Eystri-Skogar**	**1.44**	**218**	P	**Pn**	**01 26 37.8**	**-1.9**
	baz=218						
IBRE	**Brettingsstaoi**	**1.47**	**353**	P	**Pn**	**01 26 37.8**	**-2.3**
	baz=353						
IGIL	**Gilhagi**	**1.49**	**18**	P	**Pn**	**01 26 37.7**	**-2.7**
	baz=18						
ISIG	**Siglufjorour**	**1.59**	**338**	P	**Pn**	**01 26 39.8**	**-1.9**
	baz=338						
IASM	**Asmuli**	**1.61**	**240**	P	**Pn**	**01 26 40.1**	**-1.8**
	baz=240						
BORG	**Borgarnes**	**1.66**	**274**	Pg	**Pn**	**01 26 40.6**	**-2.1**
	26nm,0.3s,baz=99,slow=7.9,SNR=84						
BORG				Lg	Lg	01 27 03.6	
	10nm,0.3s,baz=274,slow=22,SNR=7.6						
IKRO	**Krokur**	**1.69**	**252**	P	**Pn**	**01 26 41.2**	**-1.8**
	baz=252						
ISOL	**Solvholt**	**1.69**	**246**	P	**Pn**	**01 26 41.0**	**-2.0**
	baz=246						
IHEI	**Heioarbar**	**1.70**	**256**	P	**Pn**	**01 26 41.7**	**-1.6**
	baz=256						
ILEI	**Leirhofn**	**1.79**	**13**	P	**Pn**	**01 26 42.5**	**-2.0**
	baz=12						
IHRN	**Hraun**	**1.83**	**324**	P	**Pn**	**01 26 43.0**	**-1.9**
	baz=324						
SCO	**Scoresbysund**	**6.09**	**346**		**Pn**	**01 27 43.3**	**-0.1**
SCO	**Scoresbysund**	**6.09**	**346**	*e*	Pn	01 27 38.4	-5.0
	baz=187,slow=9.3						
SCO				*i* P	**Pn**	**01 27 44.0**	**+0.6**
SCO				*i* S	**Sn**	**01 28 56.7**	**+3.7**
SCO				IAML		01 29 08.4	
	comp=Z,2.3nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn	**Pn**	**01 28 59.4**	**-1.6**
	baz=324,slow=13,SNR=12						
ESK	**Eskdalemuir**	**11.75**	**136**	Pn	**Pn**	**01 29 02.2**	**+1.2**
NC204	**NORSAR Array S**	**13.22**	**92**	Pn	**Pn**	**01 29 20.0**	**-1.1**
NOA	**NORSAR Array B**	**13.52**	**92**	Pn	**Pn**	**01 29 24.0**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=296,slow=14,SNR=3.7						
HFS	**Hagfors**	**15.03**	**93**	Pn	**P**	**01 29 49.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=157,slow=27,SNR=3.1						
ARCES	**ARCESS Array B**	**17.11**	**55**	P	**P**	**01 30 15.2**	**+1.1**
	baz=304,slow=8.1,SNR=2.1						
KEV	**Kevo**	**17.61**	**54**	P	**P**	**01 30 22.6**	**+3.0**
KEV				IAmb	IAmb	01 30 31.1	
	comp=Z,34nm,1.2s						
FINES	**FINESS Array B**	**19.69**	**79**	P	**Pn**	**01 30 43.2**	**-0.6**
	comp=Z,0.0nm,0.3s,baz=283,slow=8.4,SNR=1.4						
FINES	**FINESS Array B**	**19.69**	**79**	P	**Pn**	**01 30 46.0**	**+2.1**
CLL	**Collm**	**20.69**	**116**	*e*P	Pn	01 30 55.0	-0.8
NKC	**Novy Kostel**	**21.34**	**118**	*e*P	**P**	**01 31 04.6**	**+4.2**
BRG	**Berggiesshubel**	**21.40**	**115**	*e*P	**P**	**01 31 02.2**	**+1.2**
	comp=Z,17nm,1.4s						
BRG				SS		01 44 51.0	
	comp=Z,2μm,19.1s						
	comp=N,1μm,20.3s						
	comp=E,1μm,20.3s						
OSTC	**Ostas**	**22.54**	**113**	*e*P	**P**	**01 31 15.8**	**+2.4**
KHC	**Kasperske Hory**	**22.66**	**118**	*e*P	**P**	**01 31 16.0**	**+1.3**
DPC	**Dobruska-Polom**	**22.75**	**113**	*e*P	**P**	**01 31 17.4**	**+1.8**
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**01 31 19.2**	**+1.6**
	comp=E,1.4nm,0.9s,baz=317,slow=5.7,SNR=7.1						
GERES	**GERESS Array B**	**22.94**	**119**	P	**P**	**01 31 18.8**	**+1.1**
SQTA	**Sankt Quirin**	**23.39**	**125**	*e*P	**P**	**01 31 21.0**	**-1.3**
	comp=E,7.3nm,1.2s						
CONA	**Conradi Observa**	**24.52**	**117**	*e*P	**P**	**01 31 34.9**	**+2.0**
	comp=E,5.3nm,1.0s						
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**01 31 49.6**	**+1.0**
	comp=E,1.4nm,0.8s,baz=351,slow=6.6,SNR=6.2						
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**01 31 47.1**	**-1.5**
AKASG	**Malin Array Be**	**27.83**	**98**	P	**P**	**01 32 02.8**	**+0.2**
	comp=E,0.3nm,0.4s,baz=47,slow=37,SNR=2.6						
PKME	**Peaks-Kenny Pk**	**34.22**	**261**	P	**P**	**01 32 58.1**	**-0.8**
BR131	**Keskin Array S**	**38.47**	**105**	P	**P**	**01 33 35.4**	**-0.1**
BRTR	**Keskin Array B**	**38.47**	**105**	P	**P**	**01 33 36.8**	**+1.3**
	comp=E,1.2nm,0.9s,baz=342,slow=14,SNR

ORTG	**Ortega, Santa**	**0.86**	**92**	*eP*	Pg	01 28 51.6	-0.5
DUNO	**Dulce Nombre,**	**0.88**	**111**	*eP*	Pg	01 28 52.6	0.0
DUNO				*eS*	Sb	01 29 05.0	+0.2
GBS3	**Finca Las Img**	**0.94**	**66**	⇑*iP*	Pg	01 28 52.9	-0.8
LAPC	**Finca la Perla**	**0.95**	**67**	⇑*iP*	Pg	01 28 52.9	-1.1
BUEV	**Buena Vista**	**0.99**	**66**	*eP*	Pg	01 28 53.8	-0.9
BUEV				*eS*	Sg	01 29 07.4	-0.2
GB1A	**Borinquen Arri**	**1.00**	**65**	⇑*iP*	Pg	01 28 54.0	-0.9
GPS2	**Hotel Rincn d**	**1.02**	**70**	⇑*iP*	Pg	01 28 54.3	-1.0
GPS2				*eS*	Sg	01 29 08.1	-0.5
GPS1	**Guardaparques**	**1.03**	**69**	*i* P	Pg	01 28 54.5	-1.0
BUAI	**Buenos Aires**	**1.09**	**64**	*i* P	Pg	01 28 55.5	-1.1
LIM1	**Limonal**	**1.10**	**74**	*i* P	Pb	01 28 55.3	-1.5
GUAB	**Guayabo de Bag**	**1.12**	**74**	⇑*iP*	Pb	01 28 55.5	-1.7
CUI	**Cuipilapa**	**1.17**	**77**	*eP*	Pb	01 28 56.6	-1.4
CUI				*eS*	Sb	01 29 12.6	-0.8
HORNC	**Hornillas**	**1.17**	**75**	⇑*iP*	Pb	01 28 56.4	-1.7
PTEN	**Parque Tenorio**	**1.36**	**77**	*i* P	Pn	01 28 59.6	-1.1
JTS	**Las Juntas de**	**1.36**	**94**	*eP*	Pn	01 28 59.0	-1.7
LAFE	**Finca La Fe, P**	**1.52**	**113**	*eP*	Pn	01 29 00.5	-2.3
CASO	**Castillo**	**1.57**	**89**	*i* P	Pn	01 29 02.9	-0.7
ARE1	**Arenal 1**	**1.58**	**88**	*eP*	Pn	01 29 03.2	-0.5
CEDE	**Laguna Cedeo**	**1.60**	**87**	*eP*	Pn	01 29 03.4	-0.6
JACO	**JACO, Garabito**	**1.80**	**114**	*eP*	Pb	01 29 08.8	+0.1
COVE	**Coope Vega, Sa**	**1.92**	**80**	*eP*	Pn	01 29 09.6	+1.2

KRSC 17 01:35:23.6±2.2, 49°39N×156°75E, h9km±39km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.36**	**343**	*eP*	Pn	01 35 47.6	-1.1
SKR				*eS*	Sb	01 36 04.4	-2.3
PAU	**Pauzhetka**	**2.08**	**1**	*eP*	Pn	01 36 00.0	+1.3
PAU				*eS*	Sb	01 36 26.7	-0.8
KDTR	**Khodutka, Kamc**	**2.57**	**19**	*eP*	Pb	01 36 08.7	-1.1
KDTR				*eS*	Sb	01 36 40.6	-0.8
ASAK	**Asacha**	**3.08**	**13**	*eP*	Pb	01 36 16.0	-2.7
RUS	**Russkaya**	**3.25**	**19**	*eP*	Pn	01 36 17.7	+3.0
RUS				*eS*	Sb	01 36 58.1	-2.9
GRL	**Gorelyy**	**3.28**	**14**	*eP*	Pb	01 36 19.0	-3.0
GRL				*eS*	Sb	01 36 58.7	-3.3
AVH	**Avacha**	**4.08**	**17**	*eP*	Pb	01 36 30.9	-4.7
KOK	**Koryaka**	**4.08**	**16**	*eP*	Pb	01 36 31.1	-4.6
SMAR	**Somma**	**4.09**	**18**	*eP*	Pn	01 36 30.4	+3.9
KRX	**Arik**	**4.15**	**16**	*eP*	Pn	01 36 31.9	+4.6
SPN	**Mys Shipunski**	**4.25**	**28**	*eP*	Pn	01 36 32.5	+4.1
MKZ	**Mys Kozlova**	**6.02**	**29**	*eP*	Pn	01 36 55.5	+2.7

IDC 17 01:38:19.7±4.4, 2°80S×147°33E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/29, mbtmp3.7/3, Error ellipse: s-maj=139.6km s-min=64.0km az=115.0, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.24**	**216**	P	P	01 43 07.0	-0.6
	3.5nm,1.0s,baz=38,slow=11,SNR=15						
ASAR	**Alice Springs**	**24.48**	**211**	P	P	01 43 40.8	0.0
	0.9nm,0.7s,baz=41,slow=7.5,SNR=10						
FITZ	**Fitzroy Crossi**	**26.14**	**233**	P	P	01 43 56.4	+0.6
	1.3nm,0.9s,baz=39,slow=9.2,SNR=6.8						
TORD	**Torodi Ar. Bea**	**144.50**	**289**	PKP	PKPbc	01 57 58.2	+0.4
	1.0nm,1.1s,baz=47,slow=0.8,SNR=3.6						

IDC 17 01:55:23.2±1.0, 35°.60N×23°.53E, h0km, mb3.7/10, mb1 3.8/15, mb1mx3.6/47, mbtmp3.6/15, ML3.5/5, Error ellipse: s-maj=20.7km s-min=10.3km az=24.0
ISK 17 01:55:24.6, 35°.71N×23°.62E, h7km, ML3.4/18
ATH 17 01:55:24.8, 35°.67N×23°.59E, h19km, ML3.3/12, Error ellipse: s-maj=1.4km s-min=0.6km az=227.0
HLW 17 01:55:25.5, 35°.76N×23°.44E, h30km±35km, Ml3.8
THE 17 01:55:25.0, 35°.63N×23°.53E, h2km±1km, ML3.2/11, Error ellipse: s-maj=1.6km s-min=0.3km az=222.0

ISC 17 01:55:24.9±0.9, 35°.63N±0°.02×23°.51E±0°.03, h13km±6km, n133, σ1s11/166, mb3.8/10, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RODP	**Rodopos**	**0.21**	**110**	PG	**Pg**	**01 55 29.7**	**+0.1**
RODP	**Rodopos**	**0.21**	**110**	P	**Pg**	**01 55 29.6**	**0.0**
RODP				S	**Sg**	**01 55 32.7**	**-0.1**
ANKY	**Antikythira Is**	**0.29**	**324**	P	**Pb**	**01 55 31.2**	**-0.7**
ANKY				S	**Sb**	**01 55 35.7**	**-1.0**
ANKY				AML	AML	01 55 38.7	
	comp=N,13588μm,0.4s						
ANKY				AML	AML	01 55 39.4	
	comp=E,14580μm,0.3s						
ANKY	**Antikythira Is**	**0.29**	**324**	P	**Pb**	**01 55 31.2**	**-0.7**
ANKY				S	**Sb**	**01 55 35.5**	**-1.2**
	comp=E,7μm,0.3s						
IMMV	**Iera Moni Meta**	**0.42**	**114**	P	**Pg**	**01 55 32.8**	**-0.5**
IMMV				S	**Sg**	**01 55 38.7**	**-0.2**
IMMV				AML	AML	01 55 39.5	
	comp=N,27196μm,0.4s						
IMMV				AML	AML	01 55 41.5	
	comp=E,17007μm,0.3s						
IMMV	**Iera Moni Meta**	**0.42**	**114**	PG	**Pg**	**01 55 32.7**	**-0.5**
IMMV				SG	**Sg**	**01 55 38.5**	**-0.3**
IMMV	**Iera Moni Meta**	**0.42**	**114**	P	**Pg**	**01 55 32.7**	**-0.5**
IMMV				S	**Sg**	**01 55 38.6**	**-0.3**
	comp=E,11μm,0.3s						
KNDR	**Palaiochora Ch**	**0.42**	**161**	PG	**Pb**	**01 55 34.8**	**+0.6**
KNDR				SG	**Sb**	**01 55 41.2**	**+0.8**
CHAN	**Chania**	**0.45**	**105**	P	**Pg**	**01 55 33.4**	**-0.3**
CHAN				S	**Sg**	**01 55 40.2**	**+0.5**
VAM	**Vamos**	**0.60**	**112**	P	**Pg**	**01 55 36.0**	**-0.7**
VAM				S	**Sg**	**01 55 44.4**	**-0.3**
VAM				AML	AML	01 55 46.4	
	comp=E,9306μm,0.4s						
VAM				AML	AML	01 55 47.0	
	comp=N,11901μm,0.2s						
VAM	**Vamos**	**0.60**	**112**	P	**Pg**	**01 55 36.0**	**-0.7**
VAM				S	**Sg**	**01 55 44.4**	**-0.3**
	comp=N,5μm,0.3s						
KTHA	**Kythira Island**	**0.72**	**330**	P	**Pb**	**01 55 39.0**	**-0.4**
KTHA				S	**Sb**	**01 55 49.0**	**-0.2**
KTHA				AML	AML	01 55 52.6	
	comp=E,6282μm,0.3s						
KTHA				AML	AML	01 55 53.6	
	comp=N,4043μm,0.2s						
KTHA	**Kythira Island**	**0.72**	**330**	PG	**Pb**	**01 55 38.9**	**-0.4**
KTHA				SG	**Sb**	**01 55 48.9**	**-0.2**
KTHA	**Kythira Island**	**0.72**	**330**	P	**Pb**	**01 55 39.0**	**-0.4**
KTHA				S	**Sb**	**01 55 49.6**	**+0.5**
	comp=N,3μm,0.2s						
PRNS	**Prines Rethymn**	**0.85**	**108**	P	**Pg**	**01 55 39.7**	**-1.6**
PRNS				S	**Sg**	**01 55 50.8**	**-1.7**
GVDS	**Gavdos**	**0.92**	**149**	P	**Pg**	**01 55 41.4**	**-1.2**
GVDS				S	**Sg**	**01 55 55.0**	**+0.3**
	comp=N,1μm,0.3s						
GVD	**Gavdhos**	**0.92**	**149**	P	**Pg**	**01 55 42.1**	**-0.7**
GVD				S	**Sg**	**01 55 55.7**	**+0.9**
GVD				AML	AML	01 56 05.5	
	comp=E,3298μm,0.5s						
GVD				AML	AML	01 56 06.1	
	comp=N,4726μm,0.4s						
GVD	**Gavdhos**	**0.92**	**149**	PG	**Pg**	**01 55 43.1**	**+0.4**
GVD	**Gavdhos**	**0.92**	**149**	P	**Pg**	**01 55 42.0**	**-0.7**
GVD				S	**Sb**	**01 55 56.0**	**+1.2**
	comp=N,2μm,0.5s						
TMBK	**Timbaki Herakl**	**1.17**	**118**	P	**Pg**	**01 55 45.9**	**-1.5**
TMBK				S	**Sn**	**01 56 03.8**	**+1.2**
	comp=N,680nm,0.5s						
IDI	**Anoyia**	**1.18**	**107**	Pg	**Pg**	**01 55 46.4**	**-1.1**
	comp=N,71nm,0.3s,baz=309,slow=17,SNR=65						
IDI				Lg	Lg	01 56 01.9	
	comp=N,72nm,0.3s,baz=129,slow=24,SNR=7.7						
IDI	**Anoyia**	**1.18**	**107**	P	**Pg**	**01 55 46.2**	**-1.3**
IDI				S	**Sg**	**01 56 02.2**	**-0.7**
IDI				AML	AML	01 56 06.8	
	comp=E,1684μm,0.5s						
IDI				AML	AML	01 56 11.1	
	comp=N,1681μm,0.9s						
IDI	**Anoyia**	**1.18**	**107**	PN	**Pg**	**01 55 45.7**	**-1.8**
IDI	**Anoyia**	**1.18**	**107**	P	**Pg**	**01 55 46.2**	**-1.3**
IDI				S	**Sn**	**01 56 04.1**	**+1.2**
	comp=N,898nm,0.7s						
VLI	**Veliai**	**1.18**	**337**	P	**Pn**	**01 55 47.2**	**+0.2**
VLI				S	**Sb**	**01 56 02.6**	**+0.3**
VLI				AML	AML	01 56 11.5	
	comp=N,1243μm,0.4s						
VLI				AML	AML	01 56 14.5	
	comp=E,2770μm,0.7s						
VLI	**Veliai**	**1.18**	**337**	P	**Pb**	**01 55 47.0**	**-0.1**
VLI				S	**Sn**	**01 56 04.0**	**+1.1**
	comp=E,690nm,0.8s						
SIVA	**Sivas**	**1.23**	**120**	P	**Pb**	**01 55 46.9**	**-1.0**
SIVA				S	**Sg**	**01 56 03.9**	**-0.6**
SIVA				AML	AML	01 56 08.6	
	comp=N,1993μm,0.3s						
SIVA				AML	AML	01 56 20.1	
	comp=E,3523μm,1.0s						
SIVA	**Sivas**	**1.23**	**120**	P	**Pb**	**01 55 46.8**	**-1.0**
SIVA				S	**Sb**	**01 56 04.6**	**+1.0**
	comp=E,1μm,0.7s						
MHLO	**Agia Marina, M**	**1.28**	**34**	P	**Pb**	**01 55 48.1**	**-0.6**
MHLO				S	**Sb**	**01 56 04.6**	**-0.4**
MHLO				AML	AML	01 56 13.3	
	comp=E,7852μm,0.5s						
MHLO				AML	AML	01 56 15.1	
	comp=N,6014μm,0.6s						
MHLO	**Agia Marina, M**	**1.28**	**34**	P	**Pb**	**01 55 48.1**	**-0.6**
IACM	**Heraklion**	**1.31**	**104**	P	**Pb**	**01 55 49.7**	**+0.4**
KSTL	**Kastelli Herak**	**1.31**	**104**	P	**Pg**	**01 55 53.1**	**+3.0**
MHLA	**Plaka, Milos I**	**1.33**	**33**	P	**Pn**	**01 55 49.2**	**0.0**
MHLA				S	**Sb**	**01 56 05.9**	**-0.8**
MHLA				AML	AML	01 56 16.8	
	comp=E,5511μm,0.8s						
MHLA				AML	AML	01 56 17.5	
	comp=N,3115μm,0.7s						
HRKL	**Herakleio**	**1.33**	**103**	PN	**Pn**	**01 55 49.4**	**+0.2**
HRKL	**Herakleio**	**1.33**	**103**	P	**Pn**	**01 55 49.9**	**+0.7**
THR9	**Santorini-Faro**	**1.66**	**64**	P	**Pn**	**01 55 54.2**	**+0.5**
THR9	**Santorini-Faro**	**1.66**	**64**	P	**Pn**	**01 55 54.2**	**+0.5**
LAST	**Lasithi**	**1.67**	**106**	P	**Pn**	**01 55 54.8**	**+0.9**
LAST				S	**Sn**	**01 56 16.3**	**+1.0**
LAST				AML	AML	01 56 25.0	
	comp=N,888μm,0.6s						
LAST				AML	AML	01 56 25.7	
	comp=E,746μm,0.6s						
LAST	**Lasithi**	**1.67**	**106**	P	**Pn**	**01 55 54.8**	**+0.9**
LAST				S	**Sn**	**01 56 15.9**	**+0.7**
	comp=E,408nm,0.5s						
THR5	**Thira Island,**	**1.68**	**62**	P	**Pn**	**01 55 54.3**	**+0.4**
THR5	**Thira Island,**	**1.68**	**62**	P	**Pn**	**01 55 54.4**	**+0.5**
SAP3	**Santorini-Thir**	**1.69**	**61**	P	**Pn**	**01 55 54.4**	**+0.3**
SAP3	**Santorini-Thir**	**1.69**	**61**	P	**Pn**	**01 55 54.3**	**+0.3**
THR6	**Thira Island,**	**1.69**	**64**	P	**Pn**	**01 55 54.4**	**+0.4**
THR6	**Thira Island,**	**1.69**	**64**	P	**Pn**	**01 55 54.5**	**+0.4**
THR3	**Thira Island,**	**1.71**	**63**	P	**Pn**	**01 55 54.6**	**+0.3**
THR3	**Thira Island,**	**1.71**	**63**	P	**Pn**	**01 55 54.7**	**+0.3**
THR7	**Fira-Santorini**	**1.74**	**63**	P	**Pb**	**01 55 56.1**	**-0.6**
CMBO	**Columbo, Santo**	**1.75**	**61**	P	**Pn**	**01 55 55.2**	**+0.4**
CMBO	**Columbo, Santo**	**1.75**	**61**	P	**Pn**	**01 55 55.0**	**+0.2**
NPS	**Neapolis**	**1.75**	**102**	P	**Pn**	**01 55 55.3**	**+0.4**
NPS	**Neapolis**	**1.75**	**102**	P	**Pn**	**01 55 55.4**	**+0.4**
THR8	**Santorini-Mono**	**1.77**	**64**	P	**Pn**	**01 55 55.5**	**+0.3**
THR8	**Santorini-Mono**	**1.77**	**64**	P	**Pn**	**01 55 55.4**	**+0.3**
KRND	**KRANIDI**	**1.77**	**351**	P	**Pn**	**01 55 56.1**	**+0.9**
KRND				S	**Sb**	**01 56 19.1**	**-0.2**
KRND				AML	AML	01 56 30.8	
	comp=E,640μm,0.4s						
KRND				AML	AML	01 56 31.9	
	comp=N,725μm,0.4s						
KRND	**KRANIDI**	**1.77**	**351**	P	**Pn**	**01 55 55.9**	**+0.7**
PYL	**PYLOS**	**1.91**	**312**	P	**Pb**	**01 55 59.0**	**-0.6**
PYL	**PYLOS**	**1.91**	**312**	P	**Pb**	**01 55 58.9**	**-0.6**
VLX	**Vlachokerasia**	**1.96**	**333**	P	**Pg**	**01 56 01.8**	**-0.7**
ANAF	**Anafi Island**	**1.97**	**68**	P	**Pn**	**01 55 58.4**	**+0.6**
ANAF	**Anafi Island**	**1.97**	**68**	P	**Pn**	**01 55 58.5**	**+0.6**
EPID	**Epidavros**	**2.00**	**351**	P	**Pn**	**01 55 59.6**	**+1.2**
ITM	**Ithomi**	**2.00**	**321**	P	**Pb**	**01 56 01.6**	**+0.4**
ITM	**Ithomi**	**2.00**	**321**	PN	**Pn**	**01 55 59.9**	**+1.5**
TRIP	**Tripoli**	**2.14**	**332**	P	**Pg**	**01 56 04.4**	**-1.5**
STIA	**Sitia Lasithi**	**2.15**	**101**	P	**Pn**	**01 56 01.4**	**+1.0**
APE	**Apeiranthos**	**2.17**	**48**	P	**Pn**	**01 56 00.5**	**-0.1**
APE	**Apeiranthos**	**2.17**	**48**	PN	**Pn**	**01 56 00.6**	**-0.1**
APE	**Apeiranthos**	**2.17**	**48**	P	**Pn**	**01 56 00.3**	**-0.4**
VLY	**Voula,Athens**	**2.23**	**6**	P	**Pn**	**01 56 02.0**	**+0.6**
VLY	**Voula,Athens**	**2.23**	**6**	P	**Pn**	**01 56 01.7**	**+0.2**
AMGA	**Amorgos Island**	**2.27**	**57**	P	**Pn**	**01 56 02.1**	**+0.1**
AMGA	**Amorgos Island**	**2.27**	**57**	P	**Pn**	**01 56 01.9**	**-0.1**
ZKR	**Zakros**	**2.27**	**102**	P	**Pn**	**01 56 03.4**	**+1.3**
ZKR	**Zakros**	**2.27**	**102**	PN	**Pn**	**01 56 02.6**	**+0.6**
ZKR	**Zakros**	**2.27**	**102**	P	**Pn**	**01 56 03.5**	**+1.5**
AMT	**Artemida-Makis**	**2.39**	**323**	P	**Pb**	**01 56 07.4**	**-0.4**
LTK	**Loutraki**	**2.42**	**350**	P	**Pn**	**01 56 05.6**	**+1.4**
LTK	**Loutraki**	**2.42**	**350**	P	**Pn**	**01 56 05.5**	**+1.3**
PTL	**Penteli**	**2.43**	**7**	P	**Pn**	**01 56 04.2**	**0.0**
DION	**Dionisos Attik**	**2.46**	**8**	P	**Pn**	**01 56 04.8**	**+0.1**
GUR	**Goura**	**2.48**	**338**	P	**Pn**	**01 56 07.2**	**+2.1**
VILL	**Villia**	**2.53**	**356**	P	**Pn**	**01 56 06.1**	**+0.4**
KLV	**Kalavryta, Ach**	**2.64**	**336**	P	**Pn**	**01 56 08.9**	**+1.7**
KARP	**Karpathos**	**2.97**	**91**	P	**Pn**	**01 56 12.1**	**+0.3**
KARP	**Karpathos**	**2.97**	**91**	PN	**Pn**	**01 56 12.3**	**+0.5**
KARP	**Karpathos**	**2.97**	**91**	P	**Pn**	**01 56 11.9**	**+0.1**
KOSK	**Kos Island**	**3.02**	**67**	PN	**Pn**	**01 56 12.7**	**+0.4**
LKR	**Lokris**	**3.04**	**352**	P	**Pn**	**01 56 13.7**	**+1.1**
ATAL	**Atalanti**	**3.08**	**353**	P	**Pn**	**01 56 14.0**	**+0.8**
NIS1	**Nisyros Isl.**	**3.12**	**71**	PN	**Pn**	**01 56 14.2**	**+0.4**
ANX	**Ano Chora**	**3.22**	**337**	P	**Pn**	**01 56 17.0**	**+1.8**
BODT	**Bodrum**	**3.38**	**64**	PN	**Pn**	**01 56 17.9**	**+0.6**
AGG	**Agios Georgios**	**3.51**	**345**	PN	**Pn**	**01 56 20.5**	**+1.3**
AOS	**Alonnisos**	**3.54**	**5**	PN	**Pn**	**01 56 20.5**	**+1.0**
GCAM	**G?zelcaml?**	**3.63**	**54**	PN	**Pn**	**01 56 21.6**	**+0.8**
URLA	**Izmir**	**3.67**	**41**	PN	**Pn**	**01 56 21.9**	**+0.5**
ARG	**Arkhangelos**	**3.79**	**80**	PN	**Pn**	**01 56 23.8**	**+0.9**
ARG	**Arkhangelos**	**3.79**	**80**	P	**Pn**	**01 56 23.9**	**+1.0**
MLSB	**Milas**	**3.81**	**63**	PN	**Pn**	**01 56 24.1**	**+0.8**
BLCB	**Balcova**	**3.94**	**45**	PN	**Pn**	**01 56 25.7**	**+0.7**
TURN	**Turunc**	**3.99**	**72**	PN	**Pn**	**01 56 26.7**	**+1.0**
SIGR	**SIGRI**	**4.03**	**27**	PN	**Pn**	**01 56 27.1**	**+0.9**
YER	**Yerkesik**	**4.13**	**67**	PN	**Pn**	**01 56 28.6**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**4.20**	**55**	PN	**Pn**	**01 56 29.7**	**+0.9**
DALY	**Dalyan (Mula)**	**4.32**	**73**	PN	**Pn**	**01 56 31.4**	**+1.2**
SLUM	**Salum**	**4.37**	**161**	P	**Pn**	**01 56 31.2**	**+0.4**
SLUM	baz=160			AMP		01 57 00.0	
	baz=160						
SLUM				S	**Sn**	**01 57 18.9**	**-2.7**
	baz=160						
FETY	**Fethiye**	**4.62**	**76**	PN	**Pn**	**01 56 35.6**	**+1.3**
OUR	**Ouranopolis**	**4.71**	**4**	PN	**Pn**	**01 56 37.0**	**+1.5**
CAME	**Cameli-Denizli**	**4.86**	**73**	PN	**Pn**	**01 56 38.9**	**+1.2**
HORT	**Hortiatis**	**4.97**	**356**	PN	**Pn**	**01 56 41.1**	**+1.9**
AKAS	**Kas**	**4.98**	**81**	PN	**Pn**	**01 56 40.8**	**+1.4**
ELL	**Elmali**	**5.29**	**76**	PN	**Pn**	**01 56 45.4**	**+1.7**
SWA2		**6.58**	**165**	P	**Pn**	**01 57 01.1**	**-0.1**
SWA2	baz=164			AMP		01 58 00.0	
	baz=164						
SWA2				S	**Sn**	**01 58 10.8**	**-5.3**
	baz=164						
STON	**Ston**	**8.52**	**330**	*e*Pn	**Pn**	**01 57 27.1**	**-0.7**
RYAN	**Fayoum**	**8.68**	**137**	P	**Pn**	**01 57 30.6**	**+0.4**
RYAN	baz=137			AMP		01 59 00.0	
	baz=137						
BRTR	**Keskin Array B**	**9.01**	**60**	Pn	**Pn**	**01 57 35.7**	**+1.0**
	comp=N,0.2nm,0.3s,baz=243,slow=16,SNR=9.1						
RICI	**Ricice**	**9.27**	**330**	*e*Pn	**Pn**	**01 57 37.0**	**-1.1**
RICI				Sn	Sn	01 59 12.1	-10
KIJV	**Kijevo**	**9.98**	**329**	*e*Pn	**Pn**	**01 57 47.7**	**-0.3**
MLR	**Muntele Rosu**	**10.02**	**10**	Pn	**Pn**	**01 57 50.4**	**+1.8**
	comp=N,0.1nm,0.3s,baz=340,slow=9.5,SNR=2.1						
MMAI	**Mount Meron Ar**	**10.17**	**101**	Pn	**Pn**	**01 57 49.8**	**-0.9**
	comp=N,0.4nm,0.3s,baz=313,slow=12,SNR=1.8						
MMAI				Sn	**Sn**	**01 59 43.9**	**-0.7**
	comp=N,0.6nm,0.3s,baz=326,slow=28,SNR=1.4						
EIL	**Elat**	**11.32**	**118**	Pn	**Pn**	**01 58 05.2**	**-1.1**
	comp=N,0.2nm,0.3s,baz=128,slow=4.4,SNR=1.9						
EIL				Sn	**Sn**	**02 00 06.8**	**-5.9**
	comp=N,0.3nm,0.3s,baz=226,slow=22,SNR=1.7						
GERES	**GERESS Array B**	**15.05**	**334**	Pn	**Pn**	**01 58 58.3**	**+1.1**
	comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=2.6						
ESDC	**Sonseca Array**	**22.09**	**289**	P	**P**	**02 00 21.2**	**+1.5**
	comp=N,0.3nm,0.7s,baz=90,slow=11,SNR=1.8						
HFS	**Hagfors**	**25.33**	**348**	P	**P**	**02 00 51.5**	**+0.5**
	comp=N,1.5nm,0.7s,baz=146,slow=9.0,SNR=6.2						
FINES	**FINESS Array B**	**25.88**	**3**	P	**P**	**02 00 57.3**	**+1.3**
	comp=N,2.7nm,0.9s,baz=208,slow=17,SNR=2.6						
EKA	**Eskdalemuir Ar**	**26.88**	**325**	P	**P**	**02 01 06.5**	**+1.3**
	comp=N,1.0nm,0.5s,baz=128,slow=8.1,SNR=6.0						
TORD	**Torodi Ar. Bea**	**29.80**	**227**	P	**P**	**02 01 31.5**	**0.0**
	comp=N,0.8nm,0.5s,baz=33,slow=9.1,SNR=11						
ARCES	**ARCESS Array B**	**33.98**	**1**	P	**P**	**02 02 09.2**	**+1.5**
	comp=N,2.6nm,1.0s,baz=198,slow=8.5,SNR=1.2						
MKAR	**Makanchi Array**	**44.64**	**57**	P	**P**	**02 03 37.4**	**+0.4**
	comp=N,0.7nm,0.6s,baz=272,slow=7.2,SNR=11						
ZALV	**Zalesovo Beam**	**45.65**	**46**	P	**P**	**02 03 43.9**	**-1.0**
	comp=N,0.5nm,0.3s,baz=255,slow=11,SNR=3.5						
SONM	**Songino Array**	**60.22**	**50**	P	**P**	**02 05 32.5**	**-0.2**
	comp=N,0.2nm,0.5s,baz=288,slow=7.0,SNR=2.1						
YKA	**Yellowknife Ar**	**76.58**	**341**	P	**P**	**02 07 15.0**	**+0.4**
	comp=N,0.2nm,0.5s,baz=34,slow=5.5,SNR=1.5						

IDC 17 02:06:32.2±1.3, 27°.61N×90°.44E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.6/49, mbtmp3.8/8, Error ellipse: s-maj=40.9km s-min=24.8km az=52.0
NDI 17 02:06:36.0±2.5, 27°.68N×90°.29E, h10km, ML3.8, mb4.2(NEIC)
NEIC 17 02:06:37.1±0.8, 27°.52N±0°.08×90°.3E±0°.2, h32km±6km, mb4.2/10, Error ellipse: s-maj=24.5km s-min=7.8km az=69.0

ISC 17 02:06:38.3±0.6, 27°.60N±0°.06×90°.30E±0°.04, h35km, n36, σ1s74/40, mb3.9/10, Bhutan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTK	**Tadong**	**1.54**	**260**	*i* Pg	**Pn**	**02 07 04.9**	**+1.6**
GTK				*eP*	**Pn**	**02 07 05.4**	**+2.1**
GTK				*i* Sg	**Sn**	**02 07 26.9**	**+4.8**
GTK				IAML		02 07 30.9	
	comp=N,738nm,0.6s						
GTK				IAML		02 07 34.6	
	comp=E,619nm,0.0s						
GUWA	**GUWAHATI**	**1.87**	**138**	*eP*	**Pn**	**02 07 08.7**	**+0.9**
GUWA				*eS*	**Sn**	**02 07 32.2**	**+2.1**
GUWA				IAML		02 07 33.7	
	comp=E,1μm,0.7s						
GUWA				IAML		02 07 34.9	
	comp=N,2μm,0.2s						
LSA	**Lhasa**	**2.22**	**19**	Pn	**Pn**	**02 07 15.5**	**+2.4**
TEZP	**TEZPUR**	**2.43**	**113**	*eP*	**Pn**	**02 07 17.5**	**+2.0**
TEZP				*eS*	**Sn**	**02 07 48.2**	**+4.2**
TEZP				IAML		02 07 48.4	
	comp=E,1μm,0.4s						
TEZP				IAML		02 07 49.1	
	comp=N,2μm,0.2s						
SHL	**Shillong**	**2.47**	**145**	*eP*	**Pn**	**02 07 16.1**	**-0.1**
SHL				*i* x	x	02 07 18.4	
SHL				*eS*	**Sn**	**02 07 49.2**	**+4.0**
SHL				IAML		02 07 51.9	
	comp=E,746nm,0.1s						
SHL	**Shillong**	**2.47**	**145**	Pn	**Pn**	**02 07 15.9**	**-0.3**
ZIRO	**ZIRO**	**3.15**	**90**	*eP*	**Pn**	**02 07 25.9**	**+0.4**
ZIRO				IAML		02 08 17.4	
	comp=N,1μm,0.3s						
ZIRO				IAML		02 08 19.9	
	comp=E,1μm,0.3s						
KOHI	**KOHIMA**	**3.88**	**118**	AMP		02 08 42.4	
	comp=N,6μm,0.6s						
MOKO	**MOKOCHONG**	**3.97**	**108**	*ex*	**Pn**	**02 07 41.0**	**+4.2**
MOKO				*eS*	**Sn**	**02 08 22.4**	**+0.2**
MOKO				IAML		02 08 25.9	
	comp=N,100nm,0.1s						
BOK	**Bokaro**	**5.50**	**227**	*eS*	**Sn**	**02 08 59.8**	**+0.1**
BOK				IAML		02 09 31.0	
	comp=E,50nm,0.3s						
SAIH	**SAIHA**	**5.64**	**154**	IAML		02 08 13.4	
	comp=N,21nm,0.5s						
NIL	**Nilore**	**15.86**	**297**	P	**P**	**02 10 22.1**	**-0.3**
NIL				IAmb	IAmb	02 10 22.6	
	comp=E,11nm,0.5s						
MK31	**Makanchi Array**	**20.18**	**344**	P	**P**	**02 11 09.6**	**-0.1**
MKAR	**Makanchi Array**	**20.18**	**344**

TUL1	**Leonard**	**2.21**	**125**	Pn	**Pn**	**02 21 38.9**	**-0.2**
TUL1				IAmb_Lg		02 22 11.1	
	comp=Z,132nm,0.8s						
KSU1	**Kansas State U**	**2.21**	**30**	P	**Pn**	**02 21 39.4**	**+0.3**
	baz=211						
KSU1				S	**Sn**	**02 22 07.8**	**+1.1**
	baz=211						
W35A	**Tecumseh**	**2.24**	**155**		**Pn**	**02 21 39.3**	**-0.1**
WMOK	**Wichita Mounta**	**2.52**	**194**	P	**Pn**	**02 21 43.7**	**+0.2**
	baz=14						
WMOK	**Wichita Mounta**	**2.52**	**194**	Pn	**Pn**	**02 21 43.5**	**+0.1**
U38A	**Gravette**	**3.02**	**103**	Pn	**Pn**	**02 21 50.6**	**+0.5**
U38A				IAmb_Lg		02 22 43.2	
	comp=Z,76nm,0.8s						
X37A	**Clayton**	**3.38**	**140**		**Pn**	**02 21 55.0**	**-0.1**
HHAR	**Hobbs**	**3.41**	**104**		**Pn**	**02 21 55.4**	**-0.1**
N33A	**J Bar K, Exete**	**3.57**	**7**	Pn	**Pn**	**02 21 57.4**	**-0.4**
N33A				IAmb_Lg		02 23 00.6	
	comp=Z,57nm,0.8s						
AMTX	**Amarillo**	**3.75**	**233**	Pn	**Pn**	**02 22 00.9**	**+0.6**
S39A	**Bolivar**	**3.78**	**81**	Pn	**Pn**	**02 22 00.2**	**-0.4**
S39A				IAmb_Lg		02 23 03.2	
	comp=Z,50nm,0.8s						
Z35A	**Perchaven, San**	**3.90**	**170**	Pn	**Pn**	**02 22 02.9**	**+0.5**
W39A	**Magazine**	**3.97**	**119**	Pn	**Pn**	**02 22 03.3**	**+0.1**
W39A				IAmb_Lg		02 23 12.2	
	comp=Z,56nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.06**	**298**	Pn	**Pn**	**02 22 05.6**	**+1.0**
KSCO				IAmb_Lg		02 23 19.4	
	comp=Z,33nm,0.8s						
N35A	**Tabor**	**4.11**	**26**	Pn	**Pn**	**02 22 05.6**	**+0.5**
BGNE	**Belgrade**	**4.21**	**359**	P	**Pn**	**02 22 06.8**	**+0.1**
	baz=179						
BGNE	**Belgrade**	**4.21**	**359**	Pn	**Pn**	**02 22 06.7**	**+0.1**
BGNE				IAmb_Lg		02 23 21.7	
	comp=Z,54nm,0.7s						
U40A	**Yellville**	**4.24**	**100**	P	**Pn**	**02 22 06.8**	**-0.1**
	baz=283						
U40A				S	**Sn**	**02 22 55.8**	**-0.9**
	baz=283						
U40A	**Yellville**	**4.24**	**100**	Pn	**Pn**	**02 22 06.6**	**-0.3**
U40A				IAmb_Lg		02 23 17.3	
	comp=Z,64nm,0.7s						
P38A	**Dawn**	**4.28**	**54**	Pn	**Pn**	**02 22 07.6**	**0.0**
P38A				IAmb_Lg		02 23 24.5	
	comp=Z,50nm,1.2s						
MIAR	**Mount Ida**	**4.47**	**125**	P	**Pn**	**02 22 10.5**	**+0.3**
	baz=308						
MIAR	**Mount Ida**	**4.47**	**125**	Pn	**Pn**	**02 22 10.6**	**+0.4**
MIAR				IAmb_Lg		02 23 34.1	
	comp=Z,35nm,0.8s						
Z38A	**Mt. Pleasant**	**4.65**	**147**	Pn	**Pn**	**02 22 13.1**	**+0.6**
Z38A				IAmb_Lg		02 23 31.6	
	comp=Z,63nm,0.8s						
R40A	**Maddies Statio**	**4.69**	**75**	Pn	**Pn**	**02 22 12.7**	**-0.5**
ABTX	**Abilene, Hawle**	**4.75**	**197**	Pn	**Pn**	**02 22 14.8**	**+0.8**
ABTX				IAmb_Lg		02 23 43.6	
	comp=Z,30nm,1.1s						
FCAR	**Ozark Folk Cen**	**4.93**	**104**	Pn	**Pn**	**02 22 17.1**	**+0.7**
X40A	**Basin Creek Fa**	**5.01**	**121**	P	**Pn**	**02 22 17.6**	**+0.1**
	baz=304						
X40A	**Basin Creek Fa**	**5.01**	**121**	Pn	**Pn**	**02 22 17.4**	**-0.1**
X40A				IAmb_Lg		02 23 51.2	
	comp=Z,31nm,0.9s						
WHAR	**Wooly Hollow**	**5.01**	**111**	Pn	**Pn**	**02 22 17.0**	**-0.5**
MSTX	**Muleshoe**	**5.03**	**232**	Pn	**Pn**	**02 22 19.4**	**+1.5**
W41B	**Gary Mavity, V**	**5.09**	**112**	Sb	**Sb**	**02 23 37.7**	**+5.0**
	baz=295						
W41B	**Gary Mavity, V**	**5.09**	**112**	Pn	**Pn**	**02 22 18.4**	**-0.2**
W41B				IAmb_Lg		02 23 53.2	
	comp=Z,30nm,0.7s						
T25A	**Trinidad**	**5.10**	**271**	IAmb_Lg		02 23 54.0	
	comp=Z,26nm,0.8s						
N38A	**Joes South For**	**5.18**	**45**	Pn	**Pn**	**02 22 20.2**	**+0.3**
WHTX	**Lake Whitney,**	**5.21**	**175**	Pn	**Pn**	**02 22 20.0**	**-0.3**
WHTX				IAmb_Lg		02 23 58.4	
	comp=Z,28nm,0.9s						
P40A	**Paris**	**5.25**	**62**	Pn	**Pn**	**02 22 19.9**	**-0.9**
P40A				IAmb_Lg		02 23 52.3	
	comp=Z,36nm,0.8s						
WLAR	**White Oak Lake**	**5.32**	**130**	Pn	**Pn**	**02 22 22.1**	**+0.3**
WLAR				IAmb_Lg		02 23 50.0	
	comp=Z,40nm,0.7s						
CCM	**Cathedral Cave**	**5.45**	**79**	Pn	**Pn**	**02 22 23.1**	**-0.6**
CCM				IAmb_Lg		02 23 55.3	
	comp=Z,22nm,0.8s						
T42A	**Van Buren**	**5.54**	**90**	Pn	**Pn**	**02 22 24.6**	**-0.2**
LCAR	**Lake Charles**	**5.64**	**99**	Pn	**Pn**	**02 22 26.0**	**-0.2**
Z41A	**Richland Creek**	**5.80**	**131**	S	**Sn**	**02 23 32.3**	**-3.0**
	baz=314						
Z41A	**Richland Creek**	**5.80**	**131**	Pn	**Pn**	**02 22 27.8**	**-0.7**
Z41A				IAmb_Lg		02 24 09.4	
	comp=Z,30nm,0.9s						
Q24A	**Divide**	**5.89**	**290**	Pn	**Pn**	**02 22 30.3**	**+0.3**
Q24A				IAmb_Lg		02 24 16.2	
	comp=Z,23nm,0.8s						
FVM	**French Village**	**6.09**	**80**	Pn	**Pn**	**02 22 31.9**	**-0.4**
NATX	**Nacogdoches**	**6.09**	**152**	IAmb_Lg		02 24 31.6	
	comp=Z,26nm,0.9s						
PBMO	**Poplar Bluff**	**6.09**	**92**	Pn	**Pn**	**02 22 32.1**	**-0.4**
SLM	**Saint Louis**	**6.33**	**74**	IAmb_Lg		02 24 22.5	
	comp=Z,40nm,0.7s						
N41A	**Harden Midland**	**6.60**	**56**	IAmb_Lg		02 24 42.6	
	comp=Z,25nm,0.9s						
ECSD	**EROS Data Cent**	**6.62**	**9**	Pn	**Pn**	**02 22 39.4**	**-0.3**
JCT	**Junction City**	**6.86**	**193**	Pn	**Pn**	**02 22 42.9**	**-0.1**
JCT				IAmb_Lg		02 24 54.7	
	comp=Z,33nm,0.8s						
S44A	**Carbondale**	**7.00**	**83**	Pn	**Pn**	**02 22 43.5**	**-1.4**
S44A				IAmb_Lg		02 24 50.2	
	comp=Z,32nm,0.9s						
143A	**Socs Landing,**	**7.04**	**128**	IAmb_Lg		02 24 57.6	
	comp=Z,21nm,0.7s						
P43A	**Skaggs, Pawnee**	**7.11**	**67**	Pn	**Pn**	**02 22 46.8**	**+0.5**
L40A	**Anamosa**	**7.16**	**45**	Pn	**Pn**	**02 22 46.0**	**-1.0**
L40A				IAmb_Lg		02 24 52.0	
	comp=Z,25nm,0.8s						
N23A	**Red Feather La**	**7.19**	**303**	Pn	**Pn**	**02 22 48.7**	**+1.0**
ANMO	**Albuquerque**	**7.19**	**254**	IAmb_Lg		02 24 59.3	
	comp=Z,6.2nm,0.8s						
SUSD	**Miller**	**7.28**	**355**	IAmb_Lg		02 24 55.6	
	comp=Z,26nm,0.7s						
Q44A	**Meyer Farm, Va**	**7.31**	**74**	IAmb_Lg		02 24 57.2	
	comp=Z,28nm,1.1s						
SMCO	**Snowmass**	**7.32**	**288**	Pn	**Pn**	**02 22 51.5**	**+1.8**
OXF	**Oxford**	**7.49**	**108**	Pn	**Pn**	**02 22 50.4**	**-1.2**
441A	**DeRidder**	**7.58**	**147**	Pn	**Pn**	**02 22 53.8**	**+1.0**
HDIL	**Hopedale**	**7.59**	**61**	Pn	**Pn**	**02 22 52.5**	**-0.5**
HDIL				IAmb_Lg		02 25 12.6	
	comp=Z,22nm,0.8s						
I37A	**Lemond, Waseca**	**7.67**	**26**	IAmb_Lg		02 25 14.2	
	comp=Z,25nm,1.0s						
MNTX	**Cornudas Mount**	**8.18**	**230**	Pn	**Pn**	**02 23 01.2**	**+0.1**
JFWS	**Jewell Farm**	**8.26**	**44**	Pn	**Pn**	**02 23 02.1**	**0.0**
USIN	**University of**	**8.26**	**82**	IAmb_Lg		02 25 30.1	
	comp=Z,20nm,1.0s						
WVT	**Waverly**	**8.26**	**94**	Pn	**Pn**	**02 23 01.5**	**-0.7**
RSSD	**Black Hills**	**8.29**	**328**	Pn	**Pn**	**02 23 03.9**	**+1.1**
PLAL	**Pickwick Lake**	**8.35**	**102**	Pn	**Pn**	**02 23 01.3**	**-2.1**
RWWY	**Rawlins**	**8.40**	**305**	IAmb_Lg		02 25 33.7	
	comp=Z,17nm,1.0s						
PV01	**Paradox Valley**	**8.42**	**280**	Pn	**Pn**	**02 23 04.8**	**+0.3**
K22A	**Casper**	**8.50**	**312**	IAmb_Lg		02 25 40.0	
	comp=Z,17nm,1.0s						
SPMN	**Marine on St.**	**8.94**	**24**	IAmb_Lg		02 25 39.5	
	comp=Z,15nm,0.9s						
BLO	**Bloomington**	**9.27**	**74**	IAmb_Lg		02 25 57.7	
	comp=Z,24nm,0.8s						
W18A	**Petrified Fore**	**9.69**	**261**	IAmb_Lg		02 26 37.0	
	comp=Z,14nm,0.9s						

IDC ***17*** *02:33:34.6±0.8, 8°.02N×94°.82E, h0km, mb3.7/14, mb1 3.8/14, mb1mx3.7/36, mbtmp3.7/14, Error ellipse: s-maj=33.5km s-min=18.3km az=48.0*
NEIC ***17*** *02:33:35.2±1.5, 8°.1N±0°.2×94°.9E±0°.2, h10km±1km, mb4.4/4, Error ellipse: s-maj=34.2km s-min=17.0km az=224.0*

ISC 17 02:33:39.3±0.7, 8°.1N±0°.1×94°.9E±0°.1, h35km, n26, σ1§22/26, mb3.7/16, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.29**	**115**		**Pn**	**02 35 10.0**	**+0.4**
RPSI	**Rantau Prapat**	**6.63**	**143**	Pn	**Pn**	**02 35 15.3**	**+1.0**
IPM	**Ipoh**	**7.01**	**120**	Pn	**Pn**	**02 35 18.1**	**-1.4**
MYLDM	**Lahad Datu**	**23.57**	**95**	P	**P**	**02 38 46.7**	**-0.2**
MYLDM				IAmb	IAmb	02 38 47.1	
	comp=Z,7.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**39.92**	**131**	P	**P**	**02 41 11.7**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=315,slow=14,SNR=1.7						
MKAR	**Makanchi Array**	**40.10**	**346**	P	**P**	**02 41 11.0**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=172,slow=8.2,SNR=6.4						
MKAR	**Makanchi Array**	**40.10**	**346**	P	**P**	**02 41 10.8**	**-0.7**
SONM	**Songino Array**	**40.83**	**12**	P	**P**	**02 41 19.4**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=198,slow=4.1,SNR=2.4						
GEYT	**Alibeck**	**44.61**	**318**	P	**P**	**02 41 47.4**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=138,slow=9.3,SNR=3.9						
KURK	**Kurchatov**	**44.64**	**345**	P	**P**	**02 41 47.9**	**-0.4**
ZALV	**Zalesovo Beam**	**46.49**	**352**	P	**P**	**02 42 03.1**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=168,slow=7.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**46.49**	**352**	P	**P**	**02 42 02.7**	**-0.2**
WB0	**Warramunga Arr**	**47.67**	**126**	P	**P**	**02 42 10.2**	**-2.5**
WRA	**Warramunga Arr**	**47.72**	**126**	P	**P**	**02 42 14.4**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=304,slow=8.6,SNR=2.7						
WB2	**Warramunga Arr**	**47.73**	**126**	P	**P**	**02 42 11.9**	**-1.2**
WB2				IAmb	IAmb	02 42 19.8	
	comp=Z,3.2nm,1.1s						
ASAR	**Alice Springs**	**49.42**	**131**	P	**P**	**02 42 26.3**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=325,slow=7.9,SNR=4.5						
ABKAR	**Akbulak array**	**50.46**	**331**	P	**P**	**02 42 32.3**	**-1.3**
KMBO	**Kilima Mbogo**	**58.23**	**264**	P	**P**	**02 43 30.6**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=51,slow=10.0,SNR=4.3						
BRTR	**Keskin Array B**	**62.92**	**311**	P	**P**	**02 44 01.4**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=131,slow=7.3,SNR=3.7						
BRTR	**Keskin Array B**	**62.92**	**311**	P	**P**	**02 44 01.5**	**-1.0**
FINES	**FINESS Array B**	**72.93**	**332**	P	**P**	**02 45 07.3**	**+2.6**
	comp=Z,1.3nm,0.7s,baz=137,slow=11,SNR=1.8						
GERES	**GERESS Array B**	**78.23**	**318**	P	**P**	**02 45 37.3**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=78,slow=5.1,SNR=5.0						
GERES	**GERESS Array B**	**78.23**	**318**	P	**P**	**02 45 35.2**	**-0.3**
NOA	**NORSAR Array B**	**79.97**	**331**	P	**P**	**02 45 45.0**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=92,slow=6.3,SNR=1.6						
TORD	**Torodi Ar. Bea**	**91.33**	**283**	P	**P**	**02 46 43.0**	**+0.8**
	comp=Z,7nm,1.0s,baz=72,slow=4.7,SNR=2.5						
ILAR	**Eielson Array**	**94.28**	**22**	P	**P**	**02 46 54.7**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=293,slow=7.1,SNR=2.2						

SOME ***17*** *02:49:56.2, 39°.77N×74°.00E, h15km*
KRNET ***17*** *02:50:01.0±0.1, 39°.80N×74°.48E, h12km, mb3.0*
NNC ***17*** *02:50:01.0±2.8, 39°.87N×74°.55E, h6km±18km, mb3.7, mpv3.4, Error ellipse: s-maj=21.6km s-min=16.8km az=143.0*

ISC 17 02:50:03.4±1.1, 39°.92N±0°.05×74°.41E±0°.03, h10km, n52, σ1§55/88, 43C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.70**	**278**	⇑*iP*	**Pg**	**02 50 15.8**	**-1.3**
SFK	baz=86			⇑*iS*	**Sg**	**02 50 26.6**	**+0.3**
	baz=86						
OHH	**Osh**	**1.38**	**296**	⇑*iP*	**Pn**	**02 50 28.6**	**-0.3**
OHH	baz=0.0			⇑*iS*	**Sg**	**02 50 48.9**	**+1.0**
	baz=0.0						
ARSB	**Arslanbob**	**1.77**	**323**	⇑*iP*	**Pb**	**02 50 36.3**	**+0.1**
ARSB	baz=24			⇑*iS*	**Sg**	**02 51 02.0**	**+1.5**
	baz=24						
ARLS	**Aral**	**1.94**	**358**	⇑*eP*	**Pb**	**02 50 38.6**	**-0.4**
ARLS	baz=57			⇑*iS*	**Sg**	**02 51 06.1**	**+0.2**
	baz=57						
DRK	**Karamyk**	**2.06**	**259**	⇑*iP*	**Pn**	**02 50 39.0**	**+0.6**
DRK	baz=62			⇑*iS*	**Sb**	**02 51 07.3**	**+0.4**
	baz=62						
AML	**Almayashu**	**2.27**	**346**	⇑*iP*	**Pb**	**02 50 43.4**	**-1.4**
AML	baz=46			⇑*iS*	**Sb**	**02 51 14.5**	**+1.3**
	baz=46						
UCH	**Uchtor**	**2.31**	**2**	⇓*iP*	**Pb**	**02 50 43.7**	**-1.7**
UCH	baz=1.0			⇓*iS*	**Sb**	**02 51 15.1**	**+0.9**
	baz=1.0						
ULHL	**Ulahol**	**2.71**	**30**	⇑*iP*	**Pn**	**02 50 48.8**	**+1.6**
ULHL	baz=28			⇑*iS*	**Sb**	**02 51 23.3**	**-2.1**
	baz=28						
AAK	**Ala-Archa**	**2.72**	**1**	⇑*iP*	**Pn**	**02 50 49.2**	**+1.9**
AAK	baz=0.0			⇑*iS*	**Sb**	**02 51 24.7**	**-1.0**
	baz=0.0						
AAK	**Ala-Archa**	**2.72**	**1**	Pg	**Pb**	**02 50 51.0**	**-1.2**
AAK	9.7nm,1.0s			Lg	Lg	02 51 27.4	
	8.9nm,0.5s						
BTK	**Batken**	**2.76**	**274**	⇑*iP*	**Pn**	**02 50 49.0**	**+1.1**
BTK	baz=76			⇑*iS*	**Sb**	**02 51 24.2**	**-2.7**
	baz=76						
KBK	**Karagaybulak**	**2.77**	**8**	⇑*iP*	**Pn**	**02 50 49.7**	**+1.7**
KBK	baz=7.0			⇑*iS*	**Sb**	**02 51 25.5**	**-1.6**
	baz=7.0						
EKS2	**Erkin-Say**	**2.78**	**350**	⇑*iP*	**Pn**	**02 50 50.1**	**+1.9**
EKS2	baz=50			⇑*iS*	**Sb**	**02 51 26.2**	**-1.3**
	baz=50						
BOOM	**Boomskoye usch**	**2.82**	**24**	⇑*iP*	**Pn**	**02 50 50.2**	**+1.5**
BOOM	baz=22			⇑*iS*	**Sb**	**02 51 26.3**	**-2.3**
	baz=22						
FRU1	**Bishkek**	**2.89**	**3**	⇑*iP*	**Pn**	**02 50 51.9**	**+2.2**
FRU1	baz=2.0			⇑*iS*	**Sb**	**02 51 28.8**	**-1.9**
	baz=2.0						
MNAS	**Manas**	**2.94**	**331**	⇑*iP*	**Pn**	**02 50 52.6**	**+2.2**
MNAS	baz=32			⇑*iS*	**Sb**	**02 51 30.2**	**-1.9**
	baz=32						
MRKS	**Merke**	**2.96**	**343**	*eP*	**Pn**	**02 50 52.5**	**+1.9**
MRKS	3.9nm,0.3s			*eS*	**Sb**	**02 51 33.0**	**+0.4**
	9.4nm,0.4s						
MRKS	**Merke**	**2.96**	**343**	Pg	**Pn**	**02 50 52.1**	**+1.5**
MRKS	3.9nm,0.3s			Lg	Lg	02 51 33.0	
	9.4nm,0.4s						
KDJ	**Kajisay**	**3.04**	**43**	⇑*iP*	**Pn**	**02 50 53.0**	**+1.2**
KDJ	baz=41			⇑*iS*	**Sn**	**02 51 30.8**	**+2.4**
	baz=41						
CHMS	**Chumysh**	**3.09**	**5**	⇑*iP*	**Pn**	**02 50 54.3**	**+2.0**
CHMS	baz=4.0			⇑*iS*	**Sn**	**02 51 32.9**	**+3.6**
	baz=4.0						
TKM2	**Tokmak 2**	**3.13**	**16**	⇑*iP*	**Pn**	**02 50 54.6**	**+1.6**
TKM2	baz=15			⇑*iS*	**Sn**	**02 51 33.8**	**+3.2**
	baz=15						
TKM2	**Tokmak 2**	**3.13**	**16**	⇓Pg	**Pn**	**02 50 53.7**	**+0.7**
	3.6nm,0.5s						
TKM2	21nm,0.7s			⇓Lg	Lg	02 51 36.5	
GAR	**Garm**	**3.30**	**255**	⇑*iP*	**Pn**	**02 50 56.3**	**+1.0**
GAR	baz=57			⇑*iS*	**Sn**	**02 51 36.0**	**+1.4**
	baz=57						
KST	**Kastek**	**3.33**	**20**	*eP*	**Pb**	**02 51 02.0**	**-0.7**
KST	8.4nm,0.4s			*eS*	**Sg**	**02 51 49.2**	**-1.3**
	20nm,0.7s						
KST	**Kastek**	**3.33**	**20**	Pg	**Pb**	**02 51 02.0**	**-0.7**
KST	8.4nm,0.4s			Lg	Lg	02 51 49.2	
	20nm,0.7s						
USP	**Ospenovka**	**3.35**	**1**	⇑*iP*	**Pn**	**02 50 58.0**	**+2.2**
USP	baz=0.0			⇑*iS*	**Sn**	**02 51 39.2**	**+3.5**
	baz=0.0						
DGS	**Degeres**	**3.47**	**17**	*eP*	**Pb**	**02 51 04.8**	**-0.3**
DGS	7.7nm,0.5s			*eS*	**Sg**	**02 51 54.1**	**-0.9**
	16nm,0.7s						
DGS	**Degeres**	**3.47**	**17**	Pg	**Pb**	**02 51 04.8**	**-0.3**
DGS	7.7nm,0.5s			Lg	Lg	02 51 54.1	
	16nm,0.7s						
IZV	**Izvestkoviy**	**3.53**	**27**	*eP*	**Pb**	**02 51 05.3**	**-0.8**
IZV	8.2nm,0.6s			*eS*	**Sg**	**02 51 55.0**	**-1.8**
	21nm,0.5s						
IZV	**Izvestkoviy**	**3.53**	**27**	Pg	**Pb**	**02 51 05.3**	**-0.8**
IZV	8.2nm,0.6s			Lg	Lg	02 51 55.3	
	21nm,0.5s						
SGDS	**Sogindy**	**3.53**	**3**	Pg	**Pb**	**02 51 05.3**	**-0.8**
SGDS	2.7nm,0.4s			Lg	Lg	02 51 55.3	
	3.1nm,0.5s						
MTBS	**Maitube**	**3.55**	**25**	*eP*	**Pb**	**02 51 06.8**	**+0.5**
MTBS	6.0nm,0.3s			*eS*	**Sg**	**02 51 57.2**	**-0.1**
	9.0nm,0.3s						
MTBS	**Maitube**	**3.55**	**25**	Pg	**Pb**	**02 51 06.8**	**+0.5**
MTBS	6.0nm,0.3s			Lg	Lg	02 51 57.3	
	9.0nm,0.3s						
TNSS	**Tian-Shan**	**3.65**	**31**	*eP*	**Pb**	**02 51 07.9**	**-0.4**
TNSS	11nm,0.5s			*eS*	**Sg**	**02 51 59.3**	**-1.5**
	6.8nm,0.5s						
TNSS	**Tian-Shan**	**3.65**	**31**	Pg	**Pb**	**02 51 07.9**	**-0.4**
TNSS	11nm,0.5s			Lg	Lg	02 51 59.7	
	6.8nm,0.5s						
MDOK	**Medeo**	**3.80**	**31**	*eP*	**Pb**	**02 51 09.8**	**-0.9**
MDOK	6.6nm,0.5s			*eS*	**Sg**	**02 52 02.6**	**-2.8**
	8.6nm,0.6s						
MDOK	**Medeo**	**3.80**	**31**	Pg	**Pb**	**02 51 09.8**	**-0.9**
MDOK	6.6nm,0.5s			Lg	Lg	02 52 02.6	
	8.6nm,0.6s						
KOTS	**Kotyrbulak**	**3.88**	**31**	*eP*	**Pb**	**02 51 12.4**	**+0.3**
KOTS	19nm,0.5s			*eS*	**Sg**	**02 52 07.1**	**-1.0**
	65nm,0.5s						
KOTS	**Kotyrbulak**	**3.88**	**31**	Pg	**Pb**	**02 51 12.4**	**+0.3**
KOTS	19nm,0.5s			Lg	Lg	02 52 07.1	
	65nm,0.5s						
KRBS	**Karabastau**	**3.89**	**14**	*eP*	**Pb**	**02 51 11.6**	**-0.5**
KRBS	3.5nm,0.4s			*eS*	**Sg**	**02 52 05.9**	**-2.4**
	7.8nm,0.4s						
KRBS	**Karabastau**	**3.89**	**14**	Pg	**Pb**	**02 51 11.6**	**-0.5**
KRBS	3.5nm,0.4s			Lg	Lg	02 52 05.9	
	7.8nm,0.4s						
IUG	**Iuzhnay**	**3.99**	**305**	*eP*	**Pn**	**02 51 05.3**	**+0.6**
IUG	4.1nm,0.2s			*eS*	**Sn**	**02 51 54.9**	**+3.2**
	22nm,0.5s						
IUG	**Iuzhnay**	**3.99**	**305**	Pg	**Pn**	**02 51 05.3**	**+0.6**
IUG	4.1nm,0.2s			Lg	Lg	02 51 54.9	
	22nm,0.5s						
KTBS	**Karatobe**	**4.15**	**23**	*eP*	**Pb**	**02 51 17.1**	**+0.5**
KTBS	3.2nm,0.6s			*eS*	**Sg**	**02 52 15.2**	**-1.6**
	17nm,0.6s						
KTBS	**Karatobe**	**4.15**	**23**	Pg	**Pb**	**02 51 17.1**	**+0.5**
KTBS	3.2nm,0.6s			Lg	Lg	02 52 15.2	
	17nm,0.6s						
KUU	**Kurty**	**4.22**	**19**	*eP*	**Pb**	**02 51 18.6**	**+0.8**
KUU	2.3nm,0.5s			*eS*	**Sg**	**02 52 17.6**	**-1.4**
	18nm,0.6s						
KUU	**Kurty**	**4.22**	**19**	Pg	**Pb**	**02 51 18.6**	**+0.8**
KUU	2.3nm,0.5s			Lg	Lg	02 52 17.6	
	18nm,0.6s						
CHGR	**Chuyangaron**	**4.26**	**254**	⇑*iP*	**Pn**	**02 51 09.6**	**+1.1**
CHGR	baz=56			⇑*iS*	**Sn**	**02 51 59.2**	**+0.8**
	baz=56						
KK31	**Karatay Array**	**4.32**	**319**	⇑Pn	**Pn**	**02 51 08.4**	**-0.9**
	0.2nm,0.3s,baz=125,slow=13,SNR=7.5			⇓Pg	**Pg**	**02 51 23.2**	**-3.0**
	0.5nm,0.3s,baz=125,slow=15,SNR=4.4						
KK31	1.4nm,0.5s			⇓Sn	**Sn**	**02 52 01.7**	**+2.1**
KK31	2.4nm,0.6s,baz=127,slow=28,SNR=3.6			⇓Lg	Lg	02 52 22.4	
CHKK	**Chushkaly**	**4.38**	**25**	*eP*	**Pb**	**02 51 22.0**	**+1.6**
CHKK	3.6nm,0.2s			*eS*	**Sg**	**02 52 23.3**	**-0.7**
	7.3nm,0.2s						
CHKK	**Chushkaly**	**4.38**	**25**	Pg	**Pb**	**02 51 22.0**	**+1.6**
CHKK	3.6nm,0.2s			Lg	Lg	02 52 23.3	
	7.3nm,0.2s						
PDGK	**Podgornoye**	**5.11**	**47**	⇑Pg	**Pb**	**02 51 34.2**	**+1.2**
PDGK	1.2nm,0.6s			⇑Lg	Lg	02 52 39.6	
	5.7nm,0.8s						

NNC ***17*** *02:57:36.5±5.4, 46°.00N×75°.73E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=37.2km s-min=21.9km az=160.0*
SOME ***17*** *02:57:39.2, 40°.20N×76°.87E, h5km*
KRNET ***17*** *02:57:43.5±0.1, 40°.19N×76°.80E, mb2.6*

ISC 17 02:57:38.4±1.8, 40°.19N±0°.06×76°.76E±0°.04, h1km±16km, n35, σ1§33/60, 20C-14D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.97**	**9**	⇑*iP*	**Pg**	**02 58 17.9**	**+1.8**
KDJ	baz=9.0			⇑*iS*	**Sg**	**02 58 43.2**	**+1.6**
	baz=9.0						
ULHL	**Ulahol**	**2.09**	**349**	⇑*iP*	**Pg**	**02 58 20.0**	**+1.5**
ULHL	baz=49			⇑*iS*	**Sg**	**02 58 46.5**	**+0.8**
	baz=49						
BOOM	**Boomskoye usch**	**2.38**	**345**	⇑*iP*	**Pg**	**02 58 24.1**	**+0.1**
BOOM	baz=45			⇑*iS*	**Sb**	**02 58 53.4**	**+1.3**
	baz=45						
ARLS	**Aral**	**2.49**	**313**	⇑*iP*	**Pg**	**02 58 25.5**	**-0.6**
ARLS	baz=13			⇑*iS*	**Sb**	**02 58 56.4**	**+1.2**
	baz=13						
SFK	**Sufi-Kurgan**	**2.51**	**267**	⇓*iP*	**Pg**	**02 58 26.3**	**-0.1**
SFK	baz=67			⇓*iS*	**S

MDOK	**Medeo**	**2.98**	**4**	*e*P	**Pb**	**02 58 33.0**	**+0.6**
	2.8nm,0.3s							
MDOK				*e*S	**Sg**	**02 59 12.7**	**-1.5**
	7.6nm,0.4s							
MDOK	**Medeo**	**2.98**	**4**	Pg	**Pb**	**02 58 33.0**	**+0.6**
	2.8nm,0.3s							
MDOK				Lg	Lg	02 59 12.7		
	7.6nm,0.4s							
AAK	**Ala-Archa**	**2.98**	**326**	⇑*i*P	**Pb**	**02 58 32.6**	**+0.2**
	baz=25							
AAK				⇑*i*S	**Sb**	**02 59 08.3**	**-1.1**
	baz=25							
AAK	**Ala-Archa**	**2.98**	**326**	⇓Pg	**Pg**	**02 58 37.0**	**+1.5**
	2.7nm,0.5s							
AAK				⇓Sn	**Sg**	**02 59 15.9**	**+1.7**
	10nm,1.0s							
AML	**Almayashu**	**3.02**	**311**	⇓*i*P	**Pb**	**02 58 33.3**	**+0.1**
	baz=11							
AML				⇓*i*S	**Sb**	**02 59 09.5**	**-1.3**
	baz=11							
KOTS	**Kotyrbulak**	**3.06**	**5**	*e*P	**Pb**	**02 58 34.3**	**+0.7**
	5.5nm,0.4s							
KOTS				*e*S	**Sg**	**02 59 15.1**	**-1.4**
	19nm,0.6s							
KOTS	**Kotyrbulak**	**3.06**	**5**	Pg	**Pb**	**02 58 34.3**	**+0.7**
	5.5nm,0.4s							
KOTS				Lg	Lg	02 59 15.1		
	19nm,0.6s							
OHH	**Osh**	**3.06**	**278**	⇑*i*P	**Pb**	**02 58 33.8**	**+0.2**
	baz=77							
OHH				⇑*i*S	**Sb**	**02 59 10.4**	**-1.1**
	baz=77							
ARSB	**Arslanbob**	**3.09**	**293**	⇑*i*P	**Pb**	**02 58 34.0**	**-0.2**
	baz=92							
ARSB				⇑*i*S	**Sb**	**02 59 11.2**	**-1.2**
	baz=92							
SATY	**Saty**	**3.12**	**23**	*e*P	**Pg**	**02 58 36.9**	**-1.3**
	3.3nm,0.5s							
SATY				*e*S	**Sg**	**02 59 19.5**	**+0.8**
	6.8nm,0.5s							
SATY	**Saty**	**3.12**	**23**	Pg	**Pg**	**02 58 36.9**	**-1.3**
	3.3nm,0.5s							
SATY				Lg	Lg	02 59 18.8		
	6.8nm,0.5s							
DGS	**Degeres**	**3.14**	**347**	*e*P	**Pb**	**02 58 36.3**	**+1.2**
	2.1nm,0.4s							
DGS				*e*S	**Sg**	**02 59 18.2**	**-1.1**
	2.3nm,0.5s							
UZB	**Uzynbulak**	**3.41**	**29**	*e*P	**Pb**	**02 58 39.9**	**+0.3**
	0.8nm,0.5s							
UZB				*e*S	**Sb**	**02 59 24.6**	**+3.0**
	3.5nm,0.9s							
UZB	**Uzynbulak**	**3.41**	**29**	Pg	**Pb**	**02 58 39.9**	**+0.3**
	1.1nm,0.4s							
UZB				Lg	Lg	02 59 24.4		
	2.1nm,0.4s							
USP	**Ospenovka**	**3.51**	**332**	⇑*i*P	**Pb**	**02 58 39.4**	**-1.9**
	baz=31							
USP				⇑*i*S	**Sb**	**02 59 20.4**	**-4.1**
	baz=31							
KTBS	**Karatobe**	**3.52**	**359**	*e*P	**Pb**	**02 58 43.5**	**+1.9**
	1.3nm,0.5s							
KTBS				*e*S	**Sg**	**02 59 31.0**	**-0.5**
	4.7nm,0.4s							
KPKS	**Kokpek**	**3.58**	**23**	*e*P	**Pb**	**02 58 43.5**	**+1.0**
	5.1nm,0.2s							
KPKS				*e*S	**Sg**	**02 59 31.0**	**-2.3**
	8.0nm,0.5s							
MRKS	**Merke**	**3.69**	**315**	Pg	**Pg**	**02 58 49.7**	**+0.7**
	6.1nm,0.4s							
MRKS				Lg	Lg	02 59 41.0		
	3.8nm,0.8s							
PDGK	**Podgornoye**	**3.74**	**32**	Pg	**Pb**	**02 58 47.3**	**+2.0**
	0.7nm,0.4s							
PDGK				Lg	Lg	02 59 36.7		
	2.0nm,0.6s							
PDGK	**Podgornoye**	**3.74**	**32**	⇓Pg	**Pb**	**02 58 44.4**	**-0.9**
	2.0nm,0.9s							
PDGK				⇓Lg	Lg	02 59 36.0		
	3.7nm,0.7s							
MNBS	**Baschi**	**4.08**	**17**	*e*P	**Pg**	**02 58 54.0**	**-2.5**
	1.2nm,0.2s							
MNBS				*e*S	**Sg**	**02 59 48.9**	**-0.4**
	3.8nm,0.3s							

IDC 17 02:59:51.8±11.0, 0.88N×93.72E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.4/42, mbtmp3.7/4, ML4.4/1, Error ellipse: s-maj=233.1km s-min=104.8km az=145.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**18.20**	**16**	P	Pn	03 04 05.2	-0.9
	0.5nm,0.3s,baz=204,slow=11,SNR=5.8						
MKAR	**Makanchi Array**	**46.80**	**349**	P	P	03 08 22.9	-0.4
	0.7nm,0.6s,baz=176,slow=8.5,SNR=4.7						
SONM	**Songino Array**	**48.04**	**11**	P	P	03 08 33.3	+0.3
	0.3nm,0.7s,baz=201,slow=7.6,SNR=3.3						
ZALV	**Zalesovo Beam**	**53.40**	**353**	P	P	03 09 13.3	+0.1
	0.5nm,0.4s,baz=176,slow=8.4,SNR=2.3						

IDC 17 03:00:13.1±6.1, 8.26S×156.18E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/34, mbtmp3.8/3, MS3.7/1, Ms1 3.7/1, ms1mx2.8/31, Error ellipse: s-maj=103.3km s-min=82.6km az=9.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.12**	**239**	P	P	03 05 31.4	+0.5
	1.6nm,0.7s,baz=65,slow=9.4,SNR=11						
ASAR	**Alice Springs**	**26.26**	**232**	P	P	03 05 49.8	-0.6
	1.7nm,0.9s,baz=62,slow=9.3,SNR=15						
STKA	**Stephens Creek**	**27.13**	**208**	P	P	03 05 58.2	+0.2
	0.5nm,0.3s,baz=26,slow=11,SNR=1.8						
URZ	**Urewera**	**35.34**	**151**	LR	LR	03 18 38.1	
	comp=Z,124nm,20.9s,baz=211,slow=31						

*WEL **17** 03:06:16.8±1.1, 38˚S±10˚×18˚0E±˚, h33km, M3.4/18, ML3.7/18, MLv3.4/18, Error ellipse: s-maj=0.0km s-min=0.0km az=171.3*

*IDC **17** 03:06:24.3±3.2, 36.91S×178.03E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/30, mbtmp3.2/2, Error ellipse: s-maj=70.8km s-min=35.3km az=97.0*

ISC 17 03:06:15.3±3.1, 37.5S±0.1×179.82E±0.10, h17km±15km, n27, σ0ˢ74/37, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.15**	**255**	P	**Pb**	**03 06 36.9**	**+0.1**
WMGZ				S	**Sg**	**03 06 52.6**	**-0.1**
MXZ	**Matakaoa Point**	**1.20**	**268**	P	**Pn**	**03 06 37.1**	**-0.2**
MXZ				S	**Sb**	**03 06 53.0**	**+0.1**
PUZ	**Puketiti**	**1.35**	**246**	P	**Pn**	**03 06 39.7**	**+0.3**
PUZ				S	**Sb**	**03 06 57.6**	**+0.4**
CNGZ	**Carnagh Statio**	**1.59**	**233**	P	**Pn**	**03 06 43.3**	**+0.7**
TWGZ	**Tauwhareparae**	**1.60**	**245**	P	**Pn**	**03 06 43.3**	**+0.5**
TWGZ				S	**Sb**	**03 07 04.5**	**+0.3**
HAZ	**Te Kaha**	**1.63**	**261**	P	**Pn**	**03 06 43.7**	**+0.4**
HAZ				S	**Sn**	**03 07 03.7**	**-0.1**
RUGZ	**Raukumara Rang**	**1.75**	**255**	P	**Pn**	**03 06 45.2**	**+0.2**
TKGZ	**Te Karaka**	**1.81**	**239**	P	**Pn**	**03 06 46.0**	**+0.4**
TKGZ				S	**Sn**	**03 07 08.4**	**+0.4**
MWZ	**Matawai**	**1.98**	**245**	P	**Pn**	**03 06 48.3**	**+0.2**
MWZ				S	**Sn**	**03 07 12.4**	**-0.2**
RIGZ	**Rimuhau**	**2.01**	**233**	P	**Pn**	**03 06 48.6**	**+0.2**
RIGZ				S	**Sn**	**03 07 12.6**	**-0.5**
PRGZ	**Paritu Road**	**2.07**	**227**	P	**Pn**	**03 06 49.4**	**+0.2**
MHGZ	**Mahia Peninsul**	**2.21**	**222**	P	**Pn**	**03 06 51.3**	**+0.1**
KNZ	**Kokohu**	**2.26**	**228**	P	**Pn**	**03 06 51.3**	**-0.5**
URZ	**Urewera**	**2.27**	**250**	Pn	**Pn**	**03 06 52.8**	**+0.9**
	20nm,0.3s,baz=237,slow=1.5,SNR=131						
URZ				Sn	**Sn**	**03 07 18.7**	**-0.7**
	14nm,0.3s,baz=190,slow=23,SNR=20						
URZ	**Urewera**	**2.27**	**250**	P	**Pn**	**03 06 52.6**	**+0.7**
URZ				S	**Sn**	**03 07 19.5**	**+0.1**
RTZ	**Ruatahuna**	**2.49**	**243**	P	**Pn**	**03 06 55.9**	**+0.7**
MARZ	**Manawahe**	**2.54**	**259**	P	**Pn**	**03 06 56.2**	**+0.5**
RAHZ	**Arahi**	**2.56**	**236**	P	**Pn**	**03 06 56.5**	**+0.4**
MUGZ	**Murupara**	**2.59**	**248**	P	**Pn**	**03 06 56.9**	**+0.5**
OPRZ	**Ohinepanea**	**2.61**	**262**	P	**Pn**	**03 06 56.0**	**-0.7**
MTHZ	**Maungataniwha**	**2.70**	**240**	P	**Pn**	**03 06 58.4**	**+0.6**
ARHZ	**Aropaoanui**	**2.82**	**231**	P	**Pn**	**03 06 59.9**	**+0.4**
NMHZ	**Naumai**	**2.84**	**236**	P	**Pn**	**03 06 57.1**	**-2.9**
MCHZ	**McNeill Hill**	**3.11**	**231**	P	**Pn**	**03 07 04.0**	**+0.4**
ASAR	**Alice Springs**	**41.48**	**276**	P	**P**	**03 14 01.2**	**-0.3**
	0.1nm,0.4s,baz=122,slow=7.9,SNR=1.5						
WRA	**Warramunga Arr**	**43.11**	**281**	P	**P**	**03 14 13.5**	**-1.3**
	0.3nm,0.8s,baz=120,slow=8.1,SNR=2.4						
FINES	**FINESS Array B**	**150.99**	**334**	PKPbc	**PKPab**	**03 26 14.9**	**+1.2**
	2.4nm,0.9s,baz=48,slow=2.1,SNR=2.3						

IDC 17 03:26:15.0±5.1, 8.45S×156.18E, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/29, mbtmp4.0/4, MS3.5/1, Ms1 3.5/1, ms1mx2.7/29, Error ellipse: s-maj=84.5km s-min=70.8km az=20.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**16.76**	**145**	LR	LR	03 35 40.5	
	comp=Z,149nm,18.9s,baz=1.5,slow=34						
WRA	**Warramunga Arr**	**24.02**	**239**	P	P	03 31 31.1	-0.7
	2.9nm,0.8s,baz=66,slow=9.5,SNR=17						
ASAR	**Alice Springs**	**26.15**	**232**	P	P	03 31 51.5	+0.3
	2.8nm,0.9s,baz=63,slow=9.6,SNR=21						
STKA	**Stephens Creek**	**26.97**	**208**	P	P	03 31 58.6	+0.1
	3.5nm,0.8s,baz=32,slow=12,SNR=4.3						
FITZ	**Fitzroy Crossi**	**31.19**	**249**	P	P	03 32 36.5	+0.3
	0.4nm,0.5s,baz=73,slow=14,SNR=1.5						

IDC 17 03:29:45.1±5.9, 7.98S×155.82E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/28, mbtmp3.8/3, Error ellipse: s-maj=104.6km s-min=79.8km az=179.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.96**	**238**	P	P	03 35 00.8	-0.6
	1.1nm,0.7s,baz=65,slow=9.5,SNR=7.8						
ASAR	**Alice Springs**	**26.16**	**231**	P	P	03 35 21.3	-0.1
	1.6nm,0.8s,baz=65,slow=9.4,SNR=15						
STKA	**Stephens Creek**	**27.21**	**207**	P	P	03 35 31.6	+0.8
	1.6nm,0.8s,baz=38,slow=14,SNR=3.9						

*NEIC **17** 03:47:27.9±0.7, 18.6S±0.1×174.8W±0.1, h84km±17km, mb4.3/5, Error ellipse: s-maj=17.2km s-min=16.4km az=194.0*

*IDC **17** 03:47:28.2±3.5, 18.51S×174.82W, h90km±41km, mb3.4/4, mb1 3.7/5, mb1mx3.4/33, mbtmp3.9/5, Error ellipse: s-maj=54.6km s-min=23.9km az=122.0*

ISC 17 03:47:27.9±0.8, 18.54S±0.08×174.59W±0.09, h100km, n15, σ1ˢ73/17, mb3.6/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.45**	**98**	Pn	**Pn**	**03 48 35.7**	**+2.6**
NIUE				Sn	**Sn**	**03 49 21.3**	**-2.5**
AFI	**Afiamalu**	**5.34**	**31**	P	**Pn**	**03 48 46.8**	**+1.5**
	11nm,0.3s,baz=73,slow=3.4,SNR=6.6						
AFI				S	**Sn**	**03 49 41.9**	**-3.7**
	5.6nm,0.3s,baz=37,slow=20,SNR=2.4						
AFI	**Afiamalu**	**5.34**	**31**	Pn	**Pn**	**03 48 47.0**	**+1.7**
RAO	**Raoul Island**	**11.09**	**195**	Pn	**Pn**	**03 50 01.0**	**-2.4**
URZ	**Urewera**	**20.94**	**199**	P	**P**	**03 52 03.1**	**+0.5**
	9.2nm,0.7s,baz=234,slow=4.6,SNR=9.7						
URZ	**Urewera**	**20.94**	**199**	P	**P**	**03 52 03.3**	**+0.6**
BKZ	**Black Stump Fm**	**21.96**	**199**	P	**P**	**03 52 14.5**	**+0.9**
BKZ				IAmb	IAmb	03 52 22.2	
	comp=Z,18nm,1.3s						
WB0	**Warramunga Arr**	**48.06**	**260**	P	**P**	**03 55 57.7**	**+0.1**
WB2	**Warramunga Arr**	**48.08**	**260**	P	**P**	**03 55 57.9**	**+0.1**
WB2				IAmb	IAmb	03 56 11.3	
	comp=Z,7.7nm,1.4s						
WRA	**Warramunga Arr**	**48.09**	**260**	P	**P**	**03 55 57.4**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=96,slow=7.6,SNR=18						
WRA	**Warramunga Arr**	**48.09**	**260**	P	**P**	**03 55 57.1**	**-0.8**
ASAR	**Alice Springs**	**48.12**	**255**	P	**P**	**03 55 58.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=88,slow=8.7,SNR=11						
ASAR	**Alice Springs**	**48.12**	**255**	P	**P**	**03 55 58.1**	**0.0**
MBWA	**Marble Bar**	**61.44**	**256**	P	**P**	**03 57 34.4**	**+0.2**
ILAR	**Eielson Array**	**85.73**	**12**	P	**P**	**03 59 56.8**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=226,slow=6.2,SNR=6.1						

*JMA **17** 04:08:39.5±0.5, 45.35N×151.16E, h30km, M4.2*

*SKHL **17** 04:08:40.2±0.7, 44.81N×151.31E, h55km±5km, mb4.6/2*

*MOS **17** 04:08:41.5±0.9, 44.76N×150.99E, h52km, mb4.3/1, Error ellipse: s-maj=17.6km s-min=13.6km az=158.0*

*NEIC **17** 04:08:42.8±2.2, 45.3N±0.1×151.1E±0.2, h35km±2km, mb4.4/2, Error ellipse: s-maj=25.8km s-min=19.9km az=150.0*

*IDC **17** 04:08:45.2±5.0, 45.24N×151.00E, h65km±43km, mb3.5/11, mb1 3.6/12, mb1mx3.4/59, mbtmp3.8/12, ML3.6/1, Error ellipse: s-maj=32.2km s-min=21.6km az=95.0*

ISC 17 04:08:41.1±0.9, 45.0N±0.1×151.15E±0.08, h35km, n59, σ1ˢ32/61, mb4.1/13, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.34**	**277**	*e*P	**Pn**	**04 09 17.3**	**+0.3**
KUR				AMB	AMB	04 09 19.9	
	86nm,0.3s						
KUR				*i* S	**Sn**	**04 09 44.9**	**+0.5**
KUR				A	A	04 09 49.2	
	219nm,0.2s						
KUR				A	A	04 09 49.2	
	92nm,0.2s						
KUR	**Kuril'sk**	**2.34**	**277**	*e*PN	**Pn**	**04 09 17.6**	**+0.6**
KUR				*e*S	**Sn**	**04 09 45.1**	**+0.7**
KUR				pmax	pmax		
	comp=Z,94nm,0.4s						
KUR				smax	smax		
	comp=N,234nm,0.5s						
KUR				smax	smax		
	comp=E,79nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.90**	**258**	*e*S	**Sn**	**04 10 22.0**	**-1.1**
GRPR	**Tuman**	**3.98**	**257**	*e*P	**Pn**	**04 09 40.0**	**+0.5**
GRPR				AMB	AMB	04 09 41.0	
	comp=E,33nm,0.3s						
GRPR				*i* S	**Sn**	**04 10 23.0**	**-1.9**
GRPR				A	A	04 10 26.0	
	comp=E,117nm,0.2s						
GRPR				A	A	04 10 26.0	
	comp=E,108nm,0.2s						
GRPR	**Tuman**	**3.98**	**257**	*e*PN	**Pn**	**04 09 40.2**	**+0.7**
GRPR				*i* S	**Sn**	**04 10 23.5**	**-1.4**
GRPR				pmax	pmax		
	comp=Z,33nm,0.1s						
GRPR				smax	smax		
	comp=N,117nm,0.2s						
GRPR				smax	smax		
	comp=E,108nm,0.1s						
NEM2	**Nemuro 2**	**4.22**	**249**	P	**Pn**	**04 09 42.8**	**0.0**
NEM2				*e*S	**Sn**	**04 10 29.4**	**-1.4**
NMR	**Nemuro--Hokkai**	**4.23**	**249**	*e*P	**Pn**	**04 09 42.0**	**-1.0**
NMR				*i* S	**Sn**	**04 10 29.0**	**-2.0**
NMR	**Nemuro--Hokkai**	**4.23**	**249**	*e*PN	**Pn**	**04 09 42.8**	**-0.2**
JRA	**Rausu**	**4.44**	**258**	*e*S	**Sn**	**04 10 39.0**	**+2.6**
JNK	**Nakash**	**4.83**	**255**	*e*S	**Sn**	**04 10 45.0**	**-0.9**
JAK	**Akkeshi**	**5.07**	**249**	P	**Pn**	**04 09 54.2**	**-0.3**
JAK				*e*S	**Sn**	**04 10 50.5**	**-1.3**
JAR	**Ashorobuto**	**5.58**	**255**	P	**Pn**	**04 10 03.0**	**+1.5**
JAR				*e*S	**Sn**	**04 11 05.0**	**+0.6**
JMP	**Maruseppu**	**5.66**	**263**	P	**Pn**	**04 10 04.9**	**+2.2**
JOB	**Onbets**	**5.68**	**251**	P	**Pn**	**04 10 03.5**	**+0.6**
JCH	**Churui**	**6.12**	**250**	P	**Pn**	**04 10 08.9**	**-0.1**
JKK2	**Kamakawa 2**	**6.12**	**262**	P	**Pn**	**04 10 11.1**	**+2.1**
JKA	**Kamikawa-asahi**	**6.17**	**265**	Pn	**Pn**	**04 10 12.3**	**+2.6**
ASAJ	**Asahikawa**	**6.18**	**265**	P	**Pn**	**04 10 12.5**	**+2.8**
	comp=E,1.4nm,0.3s,baz=260,slow=8.9,SNR=4.9						
ERM	**Erimo**	**6.53**	**246**	PN	**Pn**	**04 10 16.7**	**+2.1**
ERM	**Erimo**	**6.53**	**246**	Pn	**Pn**	**04 10 16.7**	**+2.1**
JBT2	**Biratori 2**	**6.73**	**254**	P	**Pn**	**04 10 17.7**	**+0.4**
JNB	**Noboribetsu**	**7.75**	**255**	P	**Pn**	**04 10 32.1**	**+0.8**
JKB	**Kayabe**	**7.99**	**251**	P	**Pn**	**04 10 34.7**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**28.39**	**147**	T	T	04 45 18.5	
	baz=340						
H11N1	**WAKE ISLAND Hy**	**28.40**	**147**	T	T	04 45 27.1	
	baz=340						
H11N3	**WAKE ISLAND Hy**	**28.40**	**147**	T	T	04 45 30.8	
	baz=340						
H11S1	**WAKE ISLAND Hy**	**29.43**	**149**	T	T	04 46 45.0	
	baz=339						
H11S3	**WAKE ISLAND Hy**	**29.44**	**149**	T	T	04 46 36.0	
	baz=339,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.45**	**149**	T	T	04 46 40.6	
	baz=339,slow=74						
SONM	**Songino Array**	**30.66**	**292**	P	**P**	**04 14 51.6**	**-0.6**
	comp=E,0.4nm,0.7s,baz=81,slow=9.1,SNR=2.3						
IMAR	**Indian Mountai**	**35.99**	**35**	P	**P**	**04 15 38.6**	**+0.4**
A21K	**Barrow**	**36.18**	**26**	P	**P**	**04 15 39.8**	**+0.1**
A21K				IAmb	IAmb	04 15 45.6	
	comp=Z,7.4nm,1.2s						
TOLK	**Toolik Lake Re**	**37.95**	**31**	P	**P**	**04 15 55.0**	**+0.1**
ILAR	**Eielson Array**	**38.77**	**37**	P	**P**	**04 16 01.9**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=263,slow=7.8,SNR=4.7						
ILAR	**Eielson Array**	**38.77**	**37**	P	**P**	**04 16 02.0**	**+0.2**
ILAR	**Eielson Array**	**38.77**	**37**	P	**P**	**04 15 59.0**	**-2.8**
BCAR	**Beaver Creek A**	**41.12**	**40**	P	**P**	**04 16 22.8**	**+1.4**
MKAR	**Makanchi Array**	**46.54**	**298**	P	**P**	**04 17 05.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=62,slow=7.8,SNR=2.8						
MKAR	**Makanchi Array**	**46.54**	**298**	*e*P	**P**	**04 17 05.3**	**+0.2**
MKAR	**Makanchi Array**	**46.54**	**298**	P	**P**	**04 17 05.3**	**+0.2**
MKAR	**Makanchi Array**	**46.54**	**298**	P	**P**	**04 17 05.3**	**+0.2**
KURK	**Kurchatov**	**47.20**	**304**	*e*P	**P**	**04 17 10.0**	**-0.1**
KURK	**Kurchatov**	**47.20**	**304**	P	**P**	**04 17 10.0**	**-0.1**
KURBB	**Kurchatov Arra**	**47.29**	**304**	P	**P**	**04 17 10.0**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=71,slow=8.4,SNR=1.5						
ABKAR	**Akbulak array**	**58.49**	**310**	P	**P**	**04 18 32.6**	**-0.9**
FINES	**FINESS Array B**	**65.03**	**334**	P	**P**	**04 19 15.6**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=35,slow=7.5,SNR=5.8						
FINES	**FINESS Array B**	**65.03**	**334**	P	**P**	**04 19 16.2**	**-1.0**
FINES	**FINESS Array B**	**65.03**	**334**	P	**P**	**04 19 16.2**	**-1.0**
WRA	**Warramunga Arr**	**66.42**	**197**	P	**P**	**04 19 28.1**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=13,slow=6.9,SNR=2.7						
NB2	**NORSAR Subarra**	**69.43**	**340**	P	**P**	**04 19 44.0**	**-1.2**
	comp=Z,8.4nm,0.5s,baz=30,slow=6.5						
NB2	**NORSAR Subarra**	**69.43**	**340**	P	**P**	**04 19 44.0**	**-1.2**
	baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.43**	**340**	P	**P**	**04 19 44.4**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=31,slow=6.6,SNR=11						
HFS	**Hagfors**	**69.61**	**339**	P	**P**	**04 19 45.0**	**-1.2**
	comp=Z,1.6nm,0.6s,baz=35,slow=5.3,SNR=1.4						
ASAR	**Alice Springs**	**70.12**	**197**	P	**P**	**04 19 52.0**	**+2.3**
	comp=Z,0.5nm,0.8s,baz=12,slow=4.9,SNR=5.6						
ASAR	**Alice Springs**	**70.12**	**197**	P	**P**	**04 19 52.8**	**+3.0**
AKASG	**Malin Array Be**	**72.23**	**325**	P	**P**	**04 20 01.2**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=35,slow=6.5,SNR=6.1						
BUR08	**Bucovina Ar. S**	**76.26**	**326**	P	**P**	**04 20 26.1**	**+0.1**
BUR08				IAmb	IAmb	04 20 26.4	
	comp=Z,2.2nm,0.6s						
BURAR	**Bucovina Array**	**76.28**	**326**	P	**P**	**04 20 26.1**	**+0.1**
GERES	**GERESS Array B**	**79.41**	**333**	P	**P**	**04 20 43.0**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=24,slow=7.5,SNR=2.3						

*SOME **17** 04:10:59.2, 38.22N×72.23E, h10km*

*BJI **17** 04:11:00.5±0.0, 38.35N×72.16E, h115km, mB4.7/11, mb4.4/14*

*IDC **17** 04:11:00.7±4.4, 38.06N×72.38E, h93km±38km, mb3.6/18, mb1 3.8/20, mb1mx3.5/62, mbtmp4.0/20, Error ellipse: s-maj=27.2km s-min=14.6km az=179.0*

*MOS **17** 04:11:01.2±1.0, 38.27N×72.35E, h104km, mb4.6/9, Error ellipse: s-maj=8.8km s-min=5.2km az=95.3*

*NEIC **17** 04:11:02.7±2.8, 38.30N±0.05×72.27E±0.08, h104km±3km, mb4.5/25, Error ellipse: s-maj=8.8km s-min=6.8km az=89.0*

*NNC **17** 04:11:02.2±3.3, 38.40N×71.93E, h133km±73km, mb3.5, mpv4.1, Error ellipse: s-maj=31.8km s-min=19.5km az=171.0*

ISC 17 04:11:01.6±0.4, 38.26N±0.04×72.32E±0.04, h100km, n145, σ1ˢ86/155, mb4.2/36, 11C-7D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**1.73**	**296**	Pn	**Pn**	**04 11 30.5**	**-0.4**
BTK	**Batken**	**2.14**	**327**	PN	**Pn**	**04 11 37.3**	**+1.2**
BTK						04 12 04.3	
BTK	**Batken**	**2.14**	**327**		**Pn**	**04 11 37.2**	**+1.2**
BTK				Sn	**Sn**	**04 12 04.3**	**+1.9**
CHGR	**Chuyangaron**	**2.51**	**280**		**Pn**	**04 11 39.6**	**-1.4**
CHGR				Sn	**Sn**	**04 12 08.6**	**-2.6**
KSH	**Kashi**	**3.12**	**65**	P	**Pn**	**04 11 46.4**	**-2.6**
KSH				S	**Sn**	**04 12 21.1**	**-4.5**
KSH				smax	smax		
	comp=N,1μm,0.6s						
KSH				smax	smax		
	comp=E,560nm,0.4s						
AML	**Almayashu**	**4.00**	**15**	P	**Pn**	**04 12 02.5**	**+1.3**
	SNR=171						
IUG	**Iuzhnay**	**4.26**	**336**	*e*P	**Pn**	**04 12 04.8**	**+0.4**
	33nm,0.3s						
IUG				*e*S	**Sn**	**04 12 51.6**	**-1.4**
	427nm,0.3s						
IUG	**Iuzhnay**	**4.26**	**336**	*e*PN	**Pn**	**04 12 04.8**	**+0.4**
UCH	**Uchtor**	**4.30**	**22**	P	**Pn**	**04 12 06.6**	**+1.3**
	SNR=29						
CEP	**Cherat**	**4.44**	**184**	P	**Pn**	**04 12 08.0**	**+1.1**
CEP				S	**Sn**	**04 12 59.0**	**+1.4**
MRKS	**Merke**	**4.53**	**8**	*e*P	**Pn**	**04 12 09.3**	**+1.3**
	32nm,0.3s						
MRKS				*e*S	**Sn**	**04 12 58.8**	**-0.8**
	94nm,0.5s						
MRKS	**Merke**	**4.53**	**8**	*e*PN	**Pn**	**04 12 09.3**	**+1.3**
EKS2	**Erkin-Say**	**4.53**	**14**	P	**Pn**	**04 12 10.0**	**+1.9**
	SNR=16						
KBL	**Kabul**	**4.56**	**216**	PN	**Pn**	**04 12 09.7**	**+1.1**
KBL						04 13 03.4	
KBL	**K

comp=Z,4.1nm,0.3s,baz=114,slow=9.6,SNR=7.7
GEYT S Sn 04 15 30.4 -11

comp=Z,5.0nm,0.3s,baz=92,slow=23,SNR=2.6
GYA0B ALIBECK ARRAY 11.20 273 ⇑P Pn 04 13 33.7 -4.8
GYA0B ⇑S Sn 04 15 31.2 -11
GYA0B ALIBECK ARRAY 11.20 273 Pn Pn 04 13 34.1 -4.4
MK31 Makanchi Array 11.25 38 *ce*P **Pn 04 13 40.3 +1.1**
MK31 Makanchi Array 11.25 38 Pn **Pn 04 13 40.0 +0.7**
MKAR Makanchi Array 11.25 38 P **Pn 04 13 39.4 +0.1**
comp=Z,0.6nm,0.3s,baz=226,slow=15,SNR=25
MKAR Makanchi Array 11.25 38 *i* P **Pn 04 13 39.9 +0.7**
MKAR pmax pmax

comp=Z,7.0nm,0.8s
MKAR Makanchi Array 11.25 38 Pn **Pn 04 13 39.0 -0.2**
WMQ Urumqi 12.86 60 *e*P **Pn 04 14 02.5 +1.8**
PYUN Piuthan 13.50 136 *e*Pn Pn 04 14 04.4 -4.9
PYUN *e*Sn Sn 04 16 21.3 -17

comp=Z,177nm,0.5s
DANN Dangsing 13.74 133 *e*Pn Pn 04 14 06.5 -6.0
DANN *e*Sn Sn 04 16 27.0 -17

comp=Z,105nm,0.5s
KOLN Koldanda 14.10 135 *e*Pn Pn 04 14 13.1 -3.9
KOLN *e*Sn Sn 04 16 37.4 -15

comp=Z,85nm,0.7s
AB31 Akbulak array 14.14 325 ⇑P **Pn 04 14 13.7 -3.5**
comp=Z,3.1nm,0.4s,baz=140,slow=11,SNR=116
AB31 ⇑S Sn 04 16 43.7 -9.2

comp=Z,12nm,1.1s,baz=137,slow=23,SNR=7.5
AB31 Akbulak array 14.14 325 *e*P **Pn 04 14 13.6 -3.7**
ABKAR Akbulak array 14.14 325 Pn Pn 04 14 13.4 -3.9
ABKAR Akbulak array 14.14 325 Pn **Pn 04 14 14.6 -2.6**
GKN Gorkha 14.52 131 *e*Pn **Pn 04 14 18.7 -3.7**
GKN *e*Sn Sn 04 16 45.7 -17

comp=Z,51nm,0.4s
BVAR Borovoye Array 14.82 355 P **Pn 04 14 24.2 -1.7**
comp=Z,0.4nm,0.3s,baz=151,slow=9.4,SNR=2.3
BRVK Borovoye 14.86 355 *i* P **Pn 04 14 27.1 +0.7**
DMN Daman 15.09 131 *e*Sn Sn 04 17 02.2 -14

comp=Z,113nm,0.8s
PKIN Phulchoki 15.29 130 *e*Pn **Pn 04 14 27.4 -4.8**
PKIN *e*Sn Sn 04 17 04.7 -16

comp=Z,43nm,0.5s
PKI Pulchoki 15.30 130 *e*Pn **Pn 04 14 30.2 -2.2**
PKI *e*Sn Sn 04 17 06.2 -15

comp=Z,60nm,0.7s
GUN Gumba 15.34 128 *e*Pn **Pn 04 14 29.4 -3.5**
GUN *e*Sn Sn 04 17 06.9 -16
AKTO Aktyubinsk 15.86 325 P **Pn 04 14 37.0 -2.0**
comp=Z,1.0nm,0.3s,baz=146,slow=14,SNR=13
AKTO S Sn 04 17 24.1 -10

comp=Z,0.3nm,0.3s,baz=28,slow=14,SNR=6.3
AKTO Aktyubinsk 15.86 325 ⇓P **Pn 04 14 36.7 -2.3**
comp=Z,9.0nm,0.8s
AKTO ⇓S **Sn 04 17 25.9 -8.5**

comp=Z,5.0nm,0.8s
AKTO Aktyubinsk 15.86 325 P **Pn 04 14 36.7 -2.3**
AKTO S **Sn 04 17 25.9 -8.5**
ZAA0 Zalesovo Array 17.88 25 **P 04 15 02.9 0.0**
ZALV Zalesovo Beam 17.88 25 P **P 04 15 02.7 -0.2**
comp=Z,1.7nm,0.3s,baz=215,slow=12,SNR=31
ZALV Zalesovo Beam 17.88 25 P **P 04 15 02.4 -0.5**
ARU Arti 20.36 338 *d* i P **P 04 15 30.8 +1.0**
ARU 04 15 54.9
ARU S **S 04 19 16.1 +3.9**
ARU pmax pmax

comp=Z,3.0nm,0.6s
SHL Shillong 20.83 122 P **P 04 15 34.5 -0.9**
SHL pmax pmax

comp=Z,13nm,0.4s
SHL Shillong 20.83 122 P **P 04 15 34.5 -0.9**
SHL IAmb IAmb 04 15 44.9

comp=Z,13nm,0.4s
GNI Garni 21.42 284 P **P 04 15 42.8 +1.1**
comp=Z,10nm,0.8s,baz=156,slow=6.8,SNR=5.4
GNI Garni 21.42 284 *de*P **P 04 15 44.0 +2.3**
GNI pmax pmax

comp=Z,20nm,1.0s
GNI Garni 21.42 284 P **P 04 15 42.8 +1.1**
GNI IAmb IAmb 04 15 48.8

comp=Z,16nm,0.9s
GTA Gaotai 21.42 78 *e*P **P 04 15 44.4 +2.8**
GTA pP sP 04 16 10.8 -4.6
GTA sP pP 04 16 23.3 +21
GTA pmax pmax

comp=Z,5.0nm,1.0s
AKH Akhalkalaki 22.31 287 P **P 04 15 52.8 +1.7**
AKH pmax pmax

comp=Z,18nm,0.8s
AKH Akhalkalaki 22.31 287 P **P 04 15 52.8 +1.7**
AKH IAmb IAmb 04 15 59.5

comp=Z,18nm,0.8s
KBZ Khabaz 22.80 293 P **P 04 15 57.4 +1.7**
comp=Z,2.1nm,0.8s,baz=52,slow=20
KBZ Khabaz 22.80 293 *i* P **P 04 15 56.8 +1.0**
KBZ pmax pmax

comp=Z,10.0nm,3.5s
KIV Kislovodsk 22.97 294 *e*P **P 04 15 57.5 -0.1**
KIV pmax pmax

comp=Z,16nm,1.1s
LZH Lanzhou 25.15 85 *e*P **P 04 16 17.6 -0.1**
LZH pP pP 04 16 38.4 -2.7
LZH pmax pmax

comp=Z,22nm,1.1s
LZH pmax pmax

comp=Z,95nm,4.3s
KIRV Kirov 25.16 331 *ce*P **P 04 16 18.9 +1.7**
SONM Songino Array 26.49 58 P **P 04 16 31.3 +1.8**
comp=Z,1.3nm,0.8s,baz=241,slow=12,SNR=7.0
SONM Songino Array 26.49 58 P **P 04 16 31.4 +1.8**
SONM pmax pmax

comp=Z,1.0nm,0.8s
SONM Songino Array 26.49 58 P **P 04 16 31.4 +1.8**
OBN Obninsk 29.33 317 *i* P **P 04 16 55.0 +0.4**
OBN pmax pmax

comp=Z,8.0nm,0.5s
BR131 Keskin Array S 29.94 285 P **P 04 17 02.4 +2.0**
BR131 pmax pmax

comp=Z,2.0nm,1.1s
BR131 Keskin Array S 29.94 285 P **P 04 17 02.4 +2.0**
BRTR Keskin Array B 29.94 285 P **P 04 17 01.9 +1.5**
comp=Z,0.8nm,0.6s,baz=100,slow=7.3,SNR=8.0
BRTR Keskin Array B 29.94 285 *ce*P **P 04 17 02.2 +1.8**
BRTR pmax pmax

comp=Z,1.0nm,0.8s
BRTR Keskin Array B 29.94 285 P **P 04 17 02.1 +1.7**
HHC Hu-ho-hao-te 30.20 73 *e*P **P 04 17 04.3 +1.7**
HHC pmax pmax

comp=Z,100nm,6.1s
NRIK Noril'sk 32.21 10 *i* P **P 04 17 20.6 +0.8**
NRIK pmax pmax

comp=Z,1.0nm,0.9s
AKASG Malin Array Be 32.70 306 P **P 04 17 25.8 +1.5**
comp=Z,0.7nm,0.3s,baz=111,slow=8.5,SNR=4.2
AKASG Malin Array Be 32.70 306 *i* P **P 04 17 23.6 -0.7**
AKASG pmax pmax

comp=Z,1.0nm,0.3s
ELL Elmali 33.47 281 P **P 04 17 32.0 +0.7**
ELL pmax pmax

comp=Z,9.0nm,0.8s
ELL Elmali 33.47 281 P **P 04 17 32.0 +0.7**
ELL IAmb IAmb 04 17 33.6

comp=Z,9.1nm,0.8s
MLR Muntele Rosu 34.88 297 P **P 04 17 45.4 +2.0**
comp=Z,1.6nm,0.7s,baz=170,slow=4.2,SNR=3.3
MLR Muntele Rosu 34.88 297 P **P 04 17 46.1 +2.7**
MLR pmax pmax

comp=Z,7.0nm,1.3s
MLR Muntele Rosu 34.88 297 P **P 04 17 46.1 +2.7**
MLR IAmb IAmb 04 17 47.0

comp=Z,7.1nm,1.3s
FINES FINESS Array B 36.63 324 P **P 04 17 58.9 +0.9**
comp=Z,0.8nm,0.3s,baz=129,slow=11,SNR=9.4
FINES FINESS Array B 36.63 324 P **P 04 17 58.2 +0.2**
IDI Anoyia 37.78 280 P **P 04 18 09.3 +1.2**
IDI IAmb IAmb 04 18 15.4

comp=Z,6.0nm,1.0s
NJ2 Nanjing 38.23 85 P **P 04 18 11.6 -0.2**
NJ2 pmax pmax

comp=Z,10.0nm,0.5s
AGG Agios Georgios 38.65 287 P **P 04 18 15.8 +0.5**
AGG pmax pmax

comp=Z,15nm,1.3s
AGG Agios Georgios 38.65 287 P **P 04 18 15.8 +0.5**
AGG IAmb IAmb 04 18 19.3

comp=Z,15nm,1.3s
DIVS Divibare 39.26 296 P **P 04 18 21.8 +1.3**
DIVS IAmb IAmb 04 18 38.5

comp=Z,5.1nm,1.2s
ARCES ARCESS Array B 39.93 336 P **P 04 18 26.6 +1.0**
comp=Z,2.8nm,0.8s,baz=117,slow=9.4,SNR=2.2
HFS Hagfors 42.35 321 P **P 04 18 46.3 +0.9**
comp=Z,2.1nm,0.5s,baz=98,slow=9.1,SNR=8.6
GERES GERESS Array B 42.80 304 P **P 04 18 50.5 +1.1**
comp=Z,0.3nm,0.7s,baz=93,slow=5.6,SNR=2.1
CLL Collm 42.93 308 *e*P **P 04 18 50.0 -0.2**
CLL *e*PP **PP 04 20 32.0 +0.5**
CLL Collm 42.93 308 *e*P **P 04 18 50.0 -0.2**
NC405 NORSAR Array S 43.39 322 P **P 04 18 54.9 +1.1**
NC405 IAmb IAmb 04 19 04.0

comp=Z,16nm,1.2s
NC303 NORSAR Array S 43.56 322 P **P 04 18 56.5 +1.3**
NB2 NORSAR Subarra 43.62 322 P **P 04 18 56.4 +0.6**
comp=Z,0.6nm,0.4s,baz=93,slow=7.9
NOA NORSAR Array B 43.62 322 P **P 04 18 56.3 +0.5**
comp=Z,0.6nm,0.4s,baz=92,slow=7.6,SNR=8.1
DAVOX Davos/Dischmat 45.71 302 P **P 04 19 13.2 +0.5**
comp=Z,1.3nm,0.4s,baz=124,slow=11,SNR=2.5
BNI Bardonecchia 48.30 300 P **P 04 19 34.5 +1.6**
BNI pmax pmax

comp=Z,6.0nm,1.1s
BNI Bardonecchia 48.30 300 P **P 04 19 34.5 +1.6**
BNI IAmb IAmb 04 19 34.9

comp=Z,5.6nm,1.1s
EKA Eskdalemuir Ar 51.76 315 P **P 04 19 59.2 +0.6**
comp=Z,1.1nm,0.6s,baz=94,slow=8.8,SNR=4.0
ESK Eskdalemuir 51.79 315 P **P 04 19 59.3 +0.4**
ESK pmax pmax

comp=Z,47nm,1.5s
ESK Eskdalemuir 51.79 315 P **P 04 19 59.2 +0.4**
JTM Tenmabayashi 51.83 64 P **P 04 19 59.5 +0.1**
ESDC Sonseca Array 57.57 297 P **P 04 20 41.7 +0.8**
comp=Z,1.3nm,0.7s,baz=56,slow=7.1,SNR=14
TOA0 Torodi Ar. Sit 66.81 269 P **P 04 21 42.5 -0.4**
TOA0 IAmb IAmb 04 21 48.1

comp=Z,6.8nm,1.4s
TORD Torodi Ar. Bea 66.81 269 P **P 04 21 42.2 -0.7**
comp=Z,1.0nm,0.4s,baz=50,slow=5.9,SNR=24
SMY Shemya 66.93 40 P **P 04 21 43.8 +0.8**
SMY pmax pmax

comp=Z,266nm,1.4s
SMY Shemya 66.93 40 P **P 04 21 43.8 +0.8**
INK Inuvik 72.00 10 P **P 04 22 15.3 +1.3**
comp=Z,0.6nm,0.5s,baz=331,slow=6.7,SNR=5.0
INK Inuvik 72.00 10 P **P 04 22 15.1 +1.2**
INK PcP **PcP 04 22 30.0 -2.0**
C36M Paulatuk 72.02 6 P **P 04 22 15.2 +1.2**
C36M IAmb IAmb 04 22 26.9

comp=Z,8.3nm,1.5s
WRH Wood River Hil 72.78 17 P **P 04 22 18.2 -0.5**
PPLA Purkeypile 73.08 20 P **P 04 22 22.0 +1.3**
RND Reindeer 73.50 18 P **P 04 22 23.3 +0.2**
RND pmax pmax

comp=Z,14nm,1.4s
RND Reindeer 73.50 18 P **P 04 22 23.3 +0.2**
RND IAmb IAmb 04 22 42.2

comp=Z,14nm,1.4s
SKT Skwentna 74.01 20 P **P 04 22 26.7 +0.7**
YKA Yellowknife Ar 79.43 3 P **P 04 22 57.7 +1.3**
comp=Z,0.3nm,0.4s,baz=356,slow=5.3,SNR=7.8
WRA Warramunga Arr 82.05 123 P **P 04 23 09.7 -1.3**
comp=Z,0.3nm,0.5s,baz=325,slow=5.0,SNR=8.9
WRA Warramunga Arr 82.05 123 *i* P **P 04 23 09.6 -1.4**
WRA Warramunga Arr 82.05 123 P **P 04 23 09.0 -2.0**
WB2 Warramunga Ar 82.06 123 P **P 04 23 10.2 -0.8**

IDC ***17*** *04:17:01.3± 1.2, 9.53°S× 155.19°E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/23, mbtmp3.7/7, MS3.3/2, Ms1 3.3/2, ms1mx2.8/40, Error ellipse: s-maj=42.6km s-min=24.6km az=119.0*

ISC 17 04:17:06.5± 1.1, 9.6°S± 0.2° × 155.2°E± 0.3°, h33km, n9, σ0s60/9, mb3.7/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.60**	**240**	P	**P**	**04 22 03.7**	**-0.9**
	1.2nm,0.7s,baz=66,slow=9.7,SNR=15						
WRA				PcP	**PcP**	**04 25 57.3**	**+0.1**
	0.1nm,0.5s,baz=64,slow=2.7,SNR=1.3						
ASAR	**Alice Springs**	**24.68**	**233**	P	**P**	**04 22 24.4**	**-0.3**
	2.4nm,0.9s,baz=64,slow=9.8,SNR=16						
STKA	**Stephens Creek**	**25.53**	**208**	P	**P**	**04 22 32.1**	**-0.1**
	1.8nm,0.7s,baz=46,slow=13,SNR=4.8						
STKA				LR	LR	04 30 53.7	
	comp=Z,92nm,21.9s,baz=23,slow=33						
FITZ	**Fitzroy Crossi**	**29.86**	**250**	P	**P**	**04 23 11.7**	**+0.5**
	0.7nm,0.7s,baz=57,slow=6.2,SNR=1.7						
VNDA	**Vanda**	**68.04**	**178**	P	**P**	**04 28 02.6**	**+0.4**
	0.5nm,0.8s,baz=331,slow=3.8,SNR=3.7						
SONM	**Songino Array**	**71.57**	**328**	P	**P**	**04 28 24.9**	**+0.4**
	0.4nm,0.5s,baz=133,slow=6.3,SNR=4.4						
ILAR	**Eielson Array**	**85.68**	**21**	P	**P**	**04 29 41.4**	**-0.3**
	0.7nm,1.0s,baz=247,slow=4.6,SNR=4.3						
ELK	**Elko**	**95.85**	**50**	LR	LR	05 06 25.3	
	comp=Z,10nm,20.0s,baz=204,slow=31						
TORD	**Torodi Ar. Bea**	**153.75**	**280**	PKPbc	**PKPbc**	**04 37 02.4**	**-0.8**
	0.5nm,0.7s,baz=81,slow=2.5,SNR=2.6						

WEL 17 04:25:44.2, 41.7°S± 0.8° × 173.9°E± 1.0°, h19km± 2km, M3.5/19, ML3.7/19, MLv3.5/19, Error ellipse: s-maj=0.0km s-min=0.0km az=104.5, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSWZ	**Blackbirch Sta**	**0.03**	**32**	P	Pg	04 25 46.3	-1.2
BSWZ				S	Sg	04 25 47.6	-2.1
CMWZ	**Cape Campbell**	**0.27**	**92**	P	Pb	04 25 50.5	+0.1
CMWZ				S	Sb	04 25 55.6	+1.1
TUWZ	**Tuamarina**	**0.32**	**12**	P	Pb	04 25 51.6	+0.3
TUWZ				S	Sb	04 25 56.9	+0.7
TCW	**Tory Channel**	**0.62**	**31**	P	Pg	04 25 56.5	0.0
TCW				S	Sg	04 26 05.9	+1.1
NNZ	**Nelson**	**0.63**	**326**	P	Pg	04 25 57.2	+0.4
NNZ				S	Sg	04 26 06.4	+1.1
THZ	**Tophouse**	**0.71**	**268**	P	Pg	04 25 58.5	+0.3
THZ				S	Sg	04 26 08.0	+0.3
KHZ	**Kahutara**	**0.71**	**199**	P	Pb	04 25 58.1	+0.1
KHZ				S	Sg	04 26 08.5	+0.8
WEL	**Wellington**	**0.83**	**57**	P	Pn	04 26 00.6	-0.2
BHW	**Baring Head**	**0.83**	**67**	P	Pn	04 26 00.9	0.0
DUWZ	**D'Urville Isla**	**0.94**	**3**	P	Pn	04 26 02.4	-0.1
DUWZ				S	Sn	04 26 15.3	-0.2
PLWZ	**Palliser**	**1.06**	**81**	P	Pg	04 26 04.7	-0.2
PLWZ				S	Sg	04 26 21.5	+2.6
MSWZ	**Moikau Station**	**1.10**	**73**	P	Pg	04 26 05.3	-0.2
MSWZ				S	Sg	04 26 22.5	+2.5
CAW	**Cannon Point**	**1.11**	**56**	P	Pg	04 26 05.6	-0.2
CAW				S	Sg	04 26 22.1	+1.7
KIW	**Kapiti Island**	**1.19**	**42**	P	Pb	04 26 06.3	+0.1
KIW				S	Sg	04 26 23.4	+0.6
PAWZ	**Paruwai Farm**	**1.23**	**74**	P	Pb	04 26 07.1	+0.1
QRZ	**Quartz Range**	**1.35**	**312**	P	Pg	04 26 09.9	-0.4
OGWZ	**Otaki Gorge**	**1.36**	**47**	P	Pb	04 26 09.4	+0.3
OGWZ				S	Sg	04 26 29.0	+0.9
GVZ	**Greta Valley S**	**1.37**	**206**	P	Pb	04 26 09.3	0.0
MTW	**Mount Morrison**	**1.37**	**65**	P	Pb	04 26 08.9	-0.4
MTW				S	Sg	04 26 28.7	+0.2
TRWZ	**Traveller**	**1.42**	**77**	P	Pn	04 26 09.3	+0.2
HOWZ	**Holdsworth Sta**	**1.51**	**57**	P	Pb	04 26 11.0	-0.6
DSZ	**Denniston Nort**	**1.53**	**269**	P	Pg	04 26 13.1	-0.6
LTZ	**Lake Taylor**	**1.57**	**228**	P	Pb	04 26 12.8	+0.1
TMWZ	**Te Maipa**	**1.66**	**68**	P	Pn	04 26 12.5	+0.1
AMCZ	**Amberley**	**1.69**	**211**	P	Pn	04 26 13.7	+0.9
MRZ	**Mangatainoka R**	**1.69**	**51**	P	Pb	04 26 13.8	-1.0
TIWZ	**Tintock**	**1.81**	**58**	P	Pn	04 26 14.9	+0.5
OHWZ	**Ohakea**	**1.89**	**36**	P	Pb	04 26 19.2	+1.0
CPWZ	**Castlepoint**	**1.96**	**66**	P	Pg	04 26 23.9	+2.1
POWZ	**Post Office Ro**	**1.98**	**48**	P	Pn	04 26 18.0	+1.2
PRWZ	**Pori Road**	**1.99**	**54**	P	Pn	04 26 17.6	+0.6
INZ	**Inchbonnie**	**2.04**	**240**	P	Pb	04 26 19.8	-0.9
OKCZ	**Okains Bay**	**2.06**	**196**	P	Pn	04 26 17.8	-0.2
OXZ	**Oxford**	**2.07**	**220**	P	Pn	04 26 18.7	+0.6
BFZ	**Birch Farm**	**2.09**	**60**	P	Pn	04 26 18.0	-0.4
MQZ	**McQueen's Vall**	**2.15**	**204**	P	Pn	04 26 18.3	-0.8
WAZ	**Wanganui**	**2.16**	**24**	P	Pb	04 26 23.7	+0.9
AKCZ	**Akaroa Harbour**	**2.24**	**198**	P	Pn	04 26 20.4	+0.1
DVHZ	**Dannevirke**	**2.27**	**51**	P	Pn	04 26 20.8	+0.1
LREZ	**Lake Rotokare**	**2.32**	**11**	P	Pb	04 26 26.5	+1.1
TSZ	**Takapari Road**	**2.32**	**44**	P	Pn	04 26 22.7	+1.2
NMEZ	**Namu Road**	**2.33**	**0**	P	Pg	04 26 28.2	-0.7
RACZ	**Rakaia**	**2.35**	**212**	P	Pn	04 26 21.6	-0.3
KHEZ	**Kahui Hut**	**2.45**	**3**	P	Pb	04 26 29.0	+1.3
MHCZ	**Mount Hutt**	**2.46**	**223**	P	Pn	04 26 23.8	+0.4
NBEZ	**Newall Road No**	**2.47**	**0**	P	Pb	04 26 28.1	+0.1
PKE	**Pukeiti**	**2.55**	**2**	P	Pb	04 26 29.3	-0.1
PNHZ	**Pukenui**	**2.55**	**45**	P	Pn	04 26 25.6	+0.9
WPHZ	**Waipukurau**	**2.58**	**50**	P	Pg	04 26 32.5	-1.2
WACZ	**Wakanui South**	**2.65**	**213**	P	Pn	04 26 26.1	+0.2
VRZ	**Vera Road**	**2.71**	**15**	P	Pn	04 26 31.0	-1.0
MOVZ	**Moawhango**	**2.75**	**32**	P	Pb	04 26 33.2	+0.5
WNVZ	**Wahianoa**	**2.75**	**29**	P	Pb	04 26 30.9	-2.1
DRZ	**Dome Shelter**	**2.79**	**28**	P	Pb	04 26 35.2	+1.6
WHVZ	**Whangaehu Hut**	**2.79**	**29**	P	Pb	04 26 32.0	-1.6
FWVZ	**Far West T-bar**	**2.80**	**28**	P	Pb	04 26 32.1	-1.8
BHHZ	**Black Hill Sta**	**2.81**	**38**	P	Pb	04 26 33.2	-0.6
KRHZ	**Kereru**	**2.84**	**43**	P	Pb	04 26 34.2	-0.1
RPZ	**Rata Peaks**	**2.85**	**225**	P	Pn	04 26 29.8	+1.1
NGZ	**Ngauruhoe**	**2.89**	**28**	P	Pb	04 26 36.4	+1.1
OTVZ	**Oturere**	**2.92**	**29**	P	Pn	04 26 32.5	+2.6
WTVZ	**West Tongariro**	**2.94**	**27**	P	Pb	04 26 37.0	+0.9
ARCZ	**Arundel**	**2.95**	**221**	P	Pn	04 26 30.8	+0.7
ETVZ	**East Tongariro**	**2.96**	**29**	P	Pb	04 26 37.5	+0.9
KRVZ	**Karewarewa**	**2.98**	**28**	P	Pb	04 26 35.3	-1.4
TMVZ	**Te Maari**	**2.98**	**29**	P	Pb	04 26 35.3	-1.5
KWHZ	**Kaweka Forest**	**3.03**	**41**	P	Pb	04 26 37.8	+0.2
GCSZ	**Gaunt Creek Bo**	**3.04**	**238**	P	Pn	04 26 34.0	+2.6
KATZ	**Kakaramea**	**3.10**	**28**	P	Pb	04 26 40.5	+1.6
RITZ	**Rihia Road**	**3.16**	**30**	P	Pb	04 26 42.2	+2.4
RATZ	**Rangitukua**	**3.23**	**28**	P	Pb	04 26 42.5	+1.5
BKZ	**Black Stump Fm**	**3.27**	**39**	P	Pb	04 26 43.0	+1.3
HIZ	**Hauiti**	**3.32**	**14**	P	Pb	04 26 40.2	-2.3
HATZ	**Hinemaiaia**	**3.32**	**32**	P	Pb	04 26 43.7	+1.1
FOZ	**Fox Glacier**	**3.47**	**238**	P	Pn	04 26 40.5	+3.2
TLZ	**Tolley Road**	**3.65**	**21**	P	Pb	04 26 48.5	+0.4
LBZ	**Lake Benmore**	**3.77**	**224**	P	Pn	04 26 42.8	+1.4
ODZ	**Otahua Downs**	**4.04**	**214**	P	Pn	04 26 45.2	0.0
JCZ	**Jackson Bay**	**4.39**	**236**	P	Pn	04 26 51.3	+1.3
AWAZ	**Awhitu Peninsu**	**4.71**	**8**	P	Pn	04 26 59.2	+4.9
MKAZ	**Moumakai**	**4.74**	**13**	P	Pn	04 26 59.0	+4.3

MOS ***17*** *04:34:10.7± 1.0, 20.80°N× 94.52°E, h68km, mb5.8/150, Error ellipse: s-maj=5.9km s-min=2.8km az=124.7*

BJI ***17*** *04:34:10.1± 0.0, 20.65°N× 94.33°E, h77km, mB5.1/61, mb5.1/79, Ms5.0/82, Ms7 4.6/77*

BGR ***17*** *04:34:11.6± 0.0, 19.80°N× 94.33°E, h79km± 1km, mb5.7, mB_BB5.9*

NEIC ***17*** *04:34:12.4± 2.0, 20.78°N± 0.07°× 94.42°E± 0.07°, h66km± 1km, mb5.6/299, Mwb5.3/8, Error ellipse: s-maj=13.0km s-min=9.5km az=43.0*

NEIC ***17*** *04:34:13.5, 20.76°N× 94.43°E, h66km, Moment Tensor Solution. Moment tensor: Scale 10 17 Nm; Mrr=0.23; Mθθ=0.03; Mφφ=0.21; Mrθ=0.06; Mrφ=-0.38; Mθφ=-0.98; Fault plane solution: M0 1.08000×10 17 NP1:φs355.25000°, δ82.95000°, λ=-70.39000°. NP2:φs104.26000°, δ20.80000°, λ=-159.77000°. Principal axes: T 1.0976, Plg35.0000°, Azm68.0000°; N -0.0442, Plg19.0000°, Azm173.0000°; P -1.0534, Plg48.0000°, Azm286.0000°;*

IDC ***17*** *04:34:14.0± 0.5, 20.86°N× 94.56°E, h78km± 3km, mb5.0/55, mb1 5.1/56, mb1mx5.1/62, mbtmp5.4/56, MS4.2/38, Ms1 4.2/38, ms1mx4.1/54 Error ellipse: s-maj=8.4km s-min=6.8km az=34.0*

GCMT ***17*** *04:34:14.4± 0.1, 20.78°N± 0.01°× 94.44°E± 0.01°, h90km± 2km, MW5.3/130, Moment Tensor Solution. s91,c131; s130,c217; Duration: 1ꟷ1 Moment tensor: Scale 10 17 Nm; Mrr=0.32±.03; Mθθ=0.21±.02; Mφφ=0.11±.02; Mrθ=0.22±.01; Mrφ=-0.45±.02; Mθr=-1.01±.01; Best double couple: M0 1.16200×10 17 NP1:φs97.00000°, δ23.00000°, λ=-156.00000°. NP2:φs345.00000°, δ81.00000°, λ=-69.00000°. Principal axes: T 1.1760, Plg33.0000°, Azm58.0000°; N -0.0280, Plg21.0000°, Azm162.0000°; P -1.1480, Plg50.0000°, Azm278.0000°; sta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NDI ***17*** *04:34:15.9± 2.9, 20.80°N× 94.18°E, h66km, mb5.7, ML5.2, mb5.6(NEIC)*

ISC 17 04:34:13.4± 0.2, 20.78°N± 0.02° × 94.40°E± 0.02°, h76km± 1km, h76km: pP-P, n1570, σ1s48/1729, mb5.5/462, 54C-110D, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**2.15**	**323**	*e*P	**Pn**	**04 34 48.0**	**+0.6**
BELO	**BELONIA**	**3.68**	**312**	*e*P	**Pn**	**04 35 07.8**	**-0.1**
BELO				*ex*	x	04 35 50.9	
BELO				*ex*	x	04 35 51.0	
IMP	**Imphal**	**4.06**	**354**	*e*P	**Pn**	**04 35 16.6**	**+3.4**
IMP				*ex*	x	04 36 05.7	
IMP				IAML		04 36 14.1	
	comp=N,7μm,0.6s						
MHMT	**Maesarieng**	**4.21**	**127**	P	**Pn**	**04 35 14.8**	**-0.4**
SILR	**SILCHAR**	**4.25**	**340**	*e*P	**Pn**	**04 35 18.3**	**+2.7**
AGT	**Agartala**	**4.25**	**317**	*e*P	**Pn**	**04 35 17.0**	**+1.3**
AGT				*ex*	x	04 36 03.6	
CHTO	**Chiang Mai**	**4.70**	**114**	P	**Pn**	**04 35 22.3**	**+0.4**
CHTO				S	**Sn**	**04 36 13.4**	**-1.8**
CHTO	**Chiang Mai**	**4.70**	**114**	P	**Pn**	**04 35 22.0**	**+0.2**
CHTO				S	**Sn**	**04 36 12.3**	**-2.8**
CHTO	**Chiang Mai**	**4.70**	**114**	Pn	**Pn**	**04 35 21.8**	**0.0**
CHTO				Sn	**Sn**	**04 36 11.3**	**-3.8**
CMMT	**Chiang Mai**	**4.70**	**114**	P	**Pn**	**04 35 22.0**	**+0.1**
CM15	**Chiang Mai Arr**	**4.85**	**118**	P	**Pn**	**04 35 23.9**	**0.0**
CM13	**Chiang Mai Arr**	**4.85**	**118**	P	**Pn**	**04 35 24.0**	**+0.1**
CM31	**Chiang Mai Arr**	**4.86**	**118**	P	**Pn**	**04 35 24.1**	**0.0**
CM31	**Chiang Mai Arr**	**4.86**	**118**	Pn	**Pn**	**04 35 23.9**	**-0.2**
CM31				Sn	**Sn**	**04 36 18.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**4.86**	**118**	P	**Pn**	**04 35 24.0**	**-0.1**
	comp=N,70nm,0.3s,baz=292,slow=14,SNR=1066						
CMAR				S	**Sn**	**04 36 17.0**	**-2.1**
	comp=N,65nm,0.3s,baz=299,slow=23,SNR=5.4						
CMAR				ScP	**ScP**	**04 46 01.4**	**+1.0**
	comp=N,0.9nm,0.3s,baz=287,slow=1.7,SNR=11						
CMAR	**Chiang Mai Arr**	**4.86**	**118**	*i* P	**Pn**	**04 35 24.0**	**-0.1**
CMAR				pmax	pmax		
	comp=Z,905nm,0.7s						
CMAR	**Chiang Mai Arr**	**4.86**	**118**		**Pn**	**04 35 23.8**	**-0.2**
CM02	**Chiang Mai Arr**	**4.88**	**118**	P	**Pn**	**04 35 24.3**	**0.0**
CM04	**Chiang Mai Arr**	**4.92**	**118**	P	**Pn**	**04 35 24.8**	**-0.1**
KOHI	**KOHIMA**	**4.93**	**357**	*e*P	**Pn**	**04 35 27.6**	**+2.5**
KOHI				*e*S	**Sn**	**04 36 18.9**	**-1.9**
SHL	**Shillong**	**5.30**	**335**	*e*P	**Pn**	**04 35 29.7**	**-0.4**
SHL				*e*S	**Sn**	**04 36 26.6**	**-3.4**
SHL	**Shillong**	**5.30**	**335**	P	**Pn**	**04 35 30.3**	**+0.2**
	SNR=901						
SHL				S	**Sn**	**04 36 27.4**	**-2.6**
SHL	**Shillong**	**5.30**	**335**	P	**Pn**	**04 35 30.1**	**-0.1**
SHL	**Shillong**	**5.30**	**335**	Pn	**Pn**	**04 35 30.1**	**-0.1**
PAYA	**Payao**	**5.33**	**104**	P	**Pn**	**04 35 30.3**	**-0.1**

KMI	**Kunming**	**8.81**	**59**	⇓	*e*P	Pn	04 36 23.1	+4.9
KMI					S	**Sn**	**04 38 04.3**	**+8.2**
KMI					SS		04 38 08.3	
KMI					LR	LR		
	comp=E,7μm,7.8s							
KMI					LR	LR		
	comp=E,4μm,5.5s							
KMI					LR	LR		
	comp=E,3μm,13.2s							
KMI	**Kunming**	**8.81**	**59**		P	**Pn**	**04 36 22.9**	**+4.6**
KMI	**Kunming**	**8.81**	**59**		Pn	**Pn**	**04 36 22.9**	**+4.6**
ODAN	**Odare**	**8.82**	**315**		*e*P	**Pn**	**04 36 17.2**	**-1.1**
SLVN	**Son La**	**8.89**	**85**		Pn	**Pn**	**04 36 19.2**	**+0.1**
TAPN	**Taplejung**	**8.95**	**318**		*e*P	**Pn**	**04 36 19.4**	**-0.8**
LSA	**Lhasa**	**9.36**	**342**		P	**Pn**	**04 36 26.3**	**+0.4**
LSA					S	**Sn**	**04 38 03.9**	**-5.8**
LSA					LR	LR		
	comp=E,7μm,11.4s							
LSA					LR	LR		
	comp=E,9μm,7.8s							
LSA					LR	LR		
	comp=E,13μm,11.4s							
LSA	**Lhasa**	**9.36**	**342**		P	**Pn**	**04 36 25.6**	**-0.2**
LSA	**Lhasa**	**9.36**	**342**		P	**Pn**	**04 36 26.0**	**+0.1**
LSA					S	**Sn**	**04 38 07.8**	**-1.9**
LSA	**Lhasa**	**9.36**	**342**		P	**Pn**	**04 36 25.4**	**-0.5**
LSA	**Lhasa**	**9.36**	**342**		Pn	**Pn**	**04 36 25.4**	**-0.5**
RAMN	**Ramite**	**9.42**	**312**		*e*P	**Pn**	**04 36 25.4**	**-1.1**
CHLP	**Challavanipeta**	**10.01**	**259**		*e*P	**Pn**	**04 36 32.7**	**-1.6**
GUN	**Gumba**	**10.52**	**314**		*e*P	**Pn**	**04 36 40.4**	**-1.2**
PKI	**Pulchoki**	**10.63**	**311**		*e*P	**Pn**	**04 36 41.7**	**-1.4**
PKI					*e*S	**Sn**	**04 38 35.6**	**-5.1**
PKIN	**Phulchoki**	**10.65**	**311**		*e*P	**Pn**	**04 36 41.8**	**-1.5**
PKIN					*e*S	**Sn**	**04 38 36.4**	**-4.5**
KKN	**Kakani**	**10.86**	**312**		*e*P	**Pn**	**04 36 44.3**	**-1.8**
DMN	**Daman**	**10.87**	**311**		*e*P	**Pn**	**04 36 44.6**	**-1.7**
VIS	**Vishakhapatnam**	**10.89**	**256**		*e*P	**Pn**	**04 36 45.8**	**-0.6**
VIS					*ex*	x	04 38 33.7	
GKN	**Gorkha**	**11.44**	**311**		*e*P	**Pn**	**04 36 51.9**	**-2.1**
KOLN	**Koldanda**	**12.06**	**307**		*e*P	**Pn**	**04 37 00.0**	**-2.5**
KOLN					*e*S	**Sn**	**04 39 08.2**	**-7.0**
DANN	**Dangsing**	**12.27**	**310**		*e*P	**Pn**	**04 37 02.7**	**-2.7**
DANN					*e*S	**Sn**	**04 39 13.4**	**-7.0**
GYA	**Guiyang**	**12.58**	**61**	⇑	P	**Pn**	**04 37 10.3**	**+0.9**
GYA					S	**Sn**	**04 39 32.3**	**+4.5**
GYA					SS	**S**	**04 39 49.9**	**-0.3**
GYA					pmax	pmax		
	comp=E,130nm,1.3s							
GYA					pmax	pmax		
	comp=E,1μm,4.7s							
GYA					LR	LR		
	comp=E,2μm,7.3s							
GYA					LR	LR		
	comp=E,2μm,6.3s							
GYA					LR	LR		
	comp=E,2μm,6.9s							
PVM	**Polavaram**	**12.59**	**256**		*e*P	**Pn**	**04 37 09.0**	**-0.4**
PVM					IVmB_BB		04 37 15.2	
	comp=Z,2μm,1.1s							
PYUN	**Piuthan**	**12.69**	**307**		*e*P	**Pn**	**04 37 08.2**	**-2.9**
CD2	**Chengdu**	**13.13**	**38**		P	**Pn**	**04 37 16.8**	**0.0**
CD2					PP	P	04 37 31.5	+7.3
CD2					S	**Sn**	**04 39 40.0**	**-1.2**
CD2					ScP	**ScP**	**04 46 10.1**	**+0.6**
CD2					ScS	**ScS**	**04 49 45.8**	**-0.4**
CD2					pmax	pmax		
	comp=Z,160nm,1.0s							
CD2					pmax	pmax		
	comp=Z,770nm,5.6s							
CD2					LR	LR		
	comp=Z,4μm,15.3s							
CD2					LR	LR		
	comp=Z,3μm,18.8s							
CD2					LR	LR		
	comp=Z,4μm,16.3s							
MYLAV	**Mylavaram**	**13.64**	**255**		*e*P	**Pn**	**04 37 22.5**	**-1.1**
MYLAV					IVmB_BB		04 37 33.5	
	comp=Z,2μm,0.7s							
GGR	**Gangavaram**	**13.73**	**260**		*e*P	**Pn**	**04 37 24.1**	**-0.6**
GGR					IVmBBB		04 37 33.6	
	comp=Z,1μm,0.8s							
RPR	**Rampur**	**14.35**	**265**		*e*P	**Pn**	**04 37 31.2**	**-1.6**
RPR					IVmB_BB		04 37 39.8	
	comp=Z,1μm,1.1s							
NGP	**Nagpur**	**14.35**	**274**		*e*P	**Pn**	**04 37 30.7**	**-2.1**
NGP					IAmb	IAmb	04 37 36.3	
	comp=Z,189nm,0.6s							
NGP					*ex*	x	04 39 58.0	
ADKI	**Addanki**	**14.56**	**253**		*e*P	**Pn**	**04 37 34.1**	**-1.4**
ADKI					IVmB_BB		04 37 39.6	
	comp=Z,1μm,1.4s							
QIZ	**Qiongzhong**	**14.63**	**94**		P	**Pn**	**04 37 36.3**	**-0.1**
QIZ					S	**Sn**	**04 40 19.8**	**+2.4**
QIZ					pmax	pmax		
	comp=Z,74nm,1.4s							
QIZ					pmax	pmax		
	comp=Z,780nm,3.6s							
QIZ					LR	LR		
	comp=Z,2μm,17.2s							
QIZ					LR	LR		
	comp=Z,2μm,23.5s							
QIZ					LR	LR		
	comp=Z,3μm,31.9s							
QIZ	**Qiongzhong**	**14.63**	**94**		Pn	**Pn**	**04 37 36.6**	**+0.1**
NJS	**Nagarjunasagar**	**14.91**	**256**		*e*P	**Pn**	**04 37 38.4**	**-1.6**
NJS					IVmB_BB		04 37 46.5	
	comp=Z,2μm,0.8s							
CUPL	**Chouttuppal**	**15.04**	**259**		*e*P	**Pn**	**04 37 41.7**	**-0.1**
CUPL					IVmB_BB		04 37 47.9	
	comp=Z,2μm,0.8s							
HYB	**Hyderabad**	**15.35**	**260**		*i* P	**Pn**	**04 37 42.0**	**-3.7**
	comp=Z,400nm,1.0s							
HYB					*es*P	**sP**	**04 38 10.0**	**-3.8**
HYB					*e*S	**Sn**	**04 40 38.0**	**+3.0**
HYBB	**Hyderabad (bro**	**15.35**	**260**		*e*P	**Pn**	**04 37 43.5**	**-2.3**
HYBB					IVmBBB		04 37 51.8	
	comp=Z,2μm,0.9s							
MDRS	**Chennai**	**15.56**	**243**		*ex*	**Pn**	**04 37 44.7**	**-3.6**
MDRS					*ex*	x	04 40 26.1	
LHMI	**Lhok Sumawe**	**15.65**	**171**		P	**Pn**	**04 37 47.5**	**-2.0**
	comp=Z,6μmcomp=Z,602nm,0.8s							
LHMI	**Lhok Sumawe**	**15.65**	**171**		Pn	**Pn**	**04 37 49.0**	**-0.6**
LHMI					IAmb	IAmb	04 38 00.0	
	comp=Z,556nm,1.0s							
SKHT	**Srikalahasti**	**15.68**	**246**		*e*P	**Pn**	**04 37 48.2**	**-1.6**
SKHT					IVmB_BB		04 37 55.6	
	comp=Z,2μm,1.0s							
BHPL	**Bhopal**	**15.94**	**282**		*e*P	**Pn**	**04 37 51.3**	**-1.9**
BHPL					*ex*	x	04 40 34.2	
DLV	**T Lat**	**16.11**	**121**		Pn	**Pn**	**04 37 54.8**	**-0.7**
KULM	**Kulim**	**16.55**	**158**		Pn	**Pn**	**04 37 59.5**	**-1.3**
KULM	**Kulim**	**16.55**	**158**		P	**Pn**	**04 38 00.0**	**-0.8**
ENH	**Enshi**	**16.56**	**52**			**Pn**	**04 37 59.5**	**-1.4**
ENH					IAmb	IAmb	04 38 13.8	
	comp=Z,302nm,0.8s							
KLRI	**Killari**	**17.01**	**264**		*e*P	**Pn**	**04 38 04.8**	**-1.8**
KLRI					IVmB_BB		04 38 09.9	
	comp=Z,3μm,0.9s							
URV	**Uravakonda**	**17.31**	**253**		*e*P	**Pn**	**04 38 09.1**	**-1.2**
URV					IVmB_BB		04 38 13.8	
	comp=Z,1μm,2.0s							
LZH	**Lanzhou**	**17.35**	**26**	⇑	P	**Pn**	**04 38 10.3**	**-0.4**
LZH					pP	pP	04 38 23.3	-2.9
LZH					PP	**sP**	**04 38 31.6**	**-4.3**
LZH					S	**Sn**	**04 41 21.8**	**-1.5**
LZH					sS	sS	04 41 42.4	-10
LZH					pmax	pmax		
	comp=Z,200nm,1.3s							
LZH					pmax	pmax		
	comp=Z,2μm,5.5s							
LZH					LR	LR		
	comp=Z,2μm,10.8s							
LZH					LR	LR		
	comp=Z,2μm,10.8s							
LZH					LR	LR		
	comp=Z,2μm,11.8s							
IPM	**Ipoh**	**17.43**	**157**			**Pn**	**04 38 10.5**	**-1.2**
IPM	**Ipoh**	**17.43**	**157**		P	**Pn**	**04 38 11.0**	**-0.7**
DDI	**Dehra Dun**	**17.53**	**306**		*e*P	**P**	**04 38 13.4**	**+0.5**
DDI					IAmb	IAmb	04 38 15.6	
	comp=Z,359nm,0.9s							
DDI					*ex*	x	04 41 12.2	
TPTI		**17.62**	**171**		P	**P**	**04 38 12.3**	**-1.6**
	comp=Z,1μmcomp=Z,107nm,0.9s							
TSI	**Tuntungan**	**17.64**	**166**		P	**P**	**04 38 13.5**	**-0.7**
	comp=Z,953nm,1.1s							
PSI	**Prapat**	**18.40**	**166**		P	**Pn**	**04 38 23.7**	**+0.1**
PSI					pmax	pmax		
	comp=Z,156nm,1.0s							
XAN	**Xi'an**	**18.43**	**41**		P	**P**	**04 38 21.6**	**-1.2**
XAN					pP	sP	04 38 43.5	-4.2
XAN					S	**S**	**04 41 46.4**	**-2.2**
XAN					ScP	**ScP**	**04 46 19.3**	**-0.2**
XAN					ScS	**ScS**	**04 49 58.0**	**-2.5**
XAN					pmax	pmax		
	comp=Z,240nm,1.0s							
XAN					pmax	pmax		
	comp=Z,2μm,6.9s							
XAN					LR	LR		
	comp=Z,2μm,10.0s							
XAN					LR	LR		
	comp=Z,3μm,7.7s							
XAN					LR	LR		
	comp=Z,3μm,19.5s							
XAN	**Xi'an**	**18.43**	**41**		P	**P**	**04 38 21.8**	**-1.0**
XAN					pmax	pmax		
	comp=Z,252nm,1.0s							
RPSI	**Rantau Prapat**	**18.51**	**166**		P	**P**	**04 38 23.6**	**0.0**
SMLA	**Simla**	**18.59**	**307**		*e*P	**Pn**	**04 38 26.1**	**+0.5**
SMLA					IAmb	IAmb	04 38 31.2	
	comp=Z,261nm,0.7s							
SMLA					*ex*	x	04 41 36.7	
PALK	**Pallekele**	**18.87**	**227**		P	**Pn**	**04 38 29.1**	**0.0**
PALK					S	**Sn**	**04 41 59.9**	**-0.2**
PALK	**Pallekele**	**18.87**	**227**		P	**P**	**04 38 27.2**	**-0.5**
PALK					pmax	pmax		
	comp=Z,204nm,1.1s							
PALK	**Pallekele**	**18.87**	**227**		P	**P**	**04 38 27.2**	**-0.5**
GTA	**Gaotai**	**19.14**	**13**	⇑	P	**P**	**04 38 29.8**	**-0.8**
GTA					pP	pP	04 38 48.9	+2.9
GTA					sP	sP	04 38 56.9	+1.2
GTA					S	**S**	**04 42 02.3**	**-1.5**
GTA					sS	sS	04 42 24.3	-4.6
GTA					SS	**SnSn**	**04 42 30.8**	**+8.6**
GTA					PcP	**PcP**	**04 42 51.5**	**-0.3**
GTA					ScP	**ScP**	**04 46 21.3**	**+0.3**
GTA					ScS	**ScS**	**04 50 01.6**	**-1.2**
GTA					pmax	pmax		
	comp=Z,30nm,1.3s							
GTA					pmax	pmax		
	comp=Z,410nm,8.0s							
GTA					LR	LR		
	comp=Z,1μm,18.2s							
GTA					LR	LR		
	comp=Z,1μm,15.6s							
GTA					LR	LR		
	comp=Z,1μm,20.0s							
POO	**Poona**	**19.49**	**267**		*e*P	**P**	**04 38 35.4**	**+0.9**
POO					IAmb	IAmb	04 38 38.8	
	comp=Z,280nm,1.0s							
POO					*ex*	x	04 41 57.5	
GSI	**Gunungsitoli**	**19.60**	**171**		P	**P**	**04 38 34.5**	**-1.1**
	comp=Z,156nm,1.2s							
GSI	**Gunungsitoli**	**19.60**	**171**		P	**P**	**04 38 34.7**	**-0.9**
DHRM	**DHARAMSHALA**	**19.79**	**309**		*e*P	**Pn**	**04 38 39.3**	**-0.7**
DHRM					IAmb	IAmb	04 38 42.4	
	comp=Z,539nm,0.8s							
DHRM					*ex*	x	04 42 09.7	
GOA	**Goa**	**20.24**	**258**		*e*P	Pn	04 38 44.7	-0.5
GOA					IAmb	IAmb	04 38 46.9	
	comp=Z,445nm,1.0s							
WHN	**Wuhan**	**20.41**	**58**	⇑	P	**P**	**04 38 44.5**	**+0.2**
WHN					S	**S**	**04 42 29.0**	**+0.2**
WHN					pmax	pmax		
	comp=Z,670nm,0.7s							
WHN					LR	LR		
	comp=Z,5μm,6.6s							
WHN					LR	LR		
	comp=Z,4μm,6.6s							
WHN					LR	LR		
	comp=Z,8μm,36.1s							
MNSI	**Mandailing Nat**	**20.49**	**165**		P	**P**	**04 38 44.0**	**-1.3**
	comp=Z,5μmcomp=Z,238nm,1.0s							
TRD	**Trivandrum**	**20.80**	**237**		*e*P	**P**	**04 38 50.2**	**+1.6**
TRD					IAmb	IAmb	04 38 54.3	
	comp=Z,411nm,0.9s							
MYKOM	**Kota Tinggi**	**21.00**	**153**		P	**P**	**04 38 49.7**	**-1.1**
MYKOM	**Kota Tinggi**	**21.00**	**153**		P	**P**	**04 38 51.0**	**+0.2**
BKNI	**Bangkinang**	**21.34**	**161**		P	P	04 39 05.9	+12
BKNI	**Bangkinang**	**21.34**	**161**		P	**P**	**04 38 52.9**	**-1.5**
SARP	**Sargodha**	**22.37**	**304**		P	**P**	**04 39 04.3**	**-1.0**
SISI	**Saibi**	**22.44**	**168**		P	**P**	**04 39 05.5**	**-0.7**
	comp=Z,2μmcomp=Z,238nm,1.3s							
SDSI	**Sungai Dareh**	**22.65**	**161**		P	**P**	**04 39 10.0**	**+1.6**
	comp=Z,742nmcomp=Z,55nm,1.0s							
QZH	**Quanzhou**	**22.66**	**75**	⇓	*i* P	**P**	**04 39 08.5**	**0.0**
QZH					S	**S**	**04 43 13.8**	**+2.7**
QZH					pmax	pmax		
	comp=Z,96nm,0.8s							
QZH					LR	LR		
	comp=Z,2μm,6.4s							
QZH					LR	LR		
	comp=Z,2μm,6.3s							
QZH					LR	LR		
	comp=Z,2μm,16.1s							
NIL	**Nilore**	**22.71**	**309**		P	**P**	**04 39 08.7**	**-0.3**
NIL	**Nilore**	**22.71**	**309**		P	**P**	**04 39 08.3**	**-0.7**
NIL					pmax	pmax		
	comp=Z,1μm,0.8s							
NIL	**Nilore**	**22.71**	**309**		P	**P**	**04 39 08.3**	**-0.7**
TIY	**Taiyuan**	**23.00**	**39**		*e*P	**P**	**04 39 11.3**	**-0.6**
TIY					pP	**pP**	**04 39 29.1**	**+1.3**
TIY					sP	**sP**	**04 39 38.1**	**+0.8**
TIY					S	**S**	**04 43 19.1**	**+2.5**
TIY					SS	**SnSn**	**04 44 03.1**	**+6.8**
TIY					pmax	pmax		
	comp=Z,79nm,1.0s							
BHUJ	**Bhuj**	**23.07**	**281**		*e*P	**P**	**04 39 14.6**	**+2.0**
BHUJ					*i* x	x	04 39 21.6	
BHUJ					IAmb	IAmb	04 39 21.9	
	comp=Z,734nm,1.6s							
BHUJ					*ex*	x	04 43 10.2	
DSRI	**Dabo**	**23.35**	**154**		P	**P**	**04 39 16.7**	**+1.3**
	comp=Z,2μmcomp=Z,180nm,1.2s							
THW	**Thamme Wali**	**23.45**	**305**		P	**P**	**04 39 15.7**	**-0.5**
WMQ	**Urumqi**	**23.65**	**348**		*e*P	**P**	**04 39 19.0**	**+1.1**
WMQ					pP	pP	04 39 35.1	+0.3
WMQ					sP	sP	04 39 43.4	-0.8
WMQ					S	**S**	**04 43 25.6**	**-1.3**
WMQ					ScP	**ScP**	**04 46 33.5**	**+1.5**
WMQ					ScS	**ScS**	**04 50 19.0**	**+0.3**
WMQ					pmax	pmax		
	comp=Z,270nm,0.9s							
WMQ					pmax	pmax		
	comp=Z,1μm,3.7s							
WMQ					LR	LR		
	comp=Z,980nm,11.7s							
WMQ					LR	LR		
	comp=Z,2μm,16.9s							
WMQ					LR	LR		
	comp=Z,2μm,24.1s							
WMQ	**Urumqi**	**23.65**	**348**		IAmb	IAmb	04 39 38.8	
	comp=Z,144nm,1.0s							
CEP	**Cherat**	**23.78**	**308**		P	**P**	**04 39 19.3**	**+0.1**
BTO	**Baotou**	**23.82**	**30**		*e*P	**P**	**04 39 17.8**	**-1.7**
TPUB	**Ta-pu**	**24.43**	**79**		P	**P**	**04 39 25.1**	**+0.1**
TPUB					IAmb	IAmb	04 39 29.7	
	comp=Z,132nm,0.9s							
KSH	**Kashi**	**24.47**	**324**		P	**P**	**04 39 26.1**	**+0.8**
KSH					pP	pP	04 39 46.8	+3.6
KSH					S	**S**	**04 43 36.3**	**-4.0**
KSH					sS	sS	04 44 09.1	-1.7
KSH					LR	LR		
	comp=Z,840nm,6.8s							
KSH					LR	LR		
	comp=Z,1μm,7.4s							
KSH					LR	LR		
	comp=Z,750nm,11.7s							
NJ2	**Nanjing**	**24.55**	**58**		*e*P	**P**	**04 39 25.1**	**-0.9**
NJ2					pP	**pP**	**04 39 41.6**	**-2.1**
NJ2					S	**S**	**04 43 38.4**	**-3.1**
NJ2					sS	**sS**	**04 44 06.5**	**-5.5**
NJ2					pmax	pmax		
	comp=Z,81nm,0.9s							
NJ2					pmax	pmax		
	comp=Z,900nm,3.5s							
NJ2					LR	LR		
	comp=Z,2μm,6.6s							
NJ2					LR	LR		
	comp=Z,1μm,5.7s							
NJ2					LR	LR		
	comp=Z,1μm,9.0s							
KSM	**Kuching**	**24.68**	**139**		P	**P**	**04 39 26.9**	**-0.4**
KSM	**Kuching**	**24.68**	**139**		P	**P**	**04 39 29.0**	**+1.6**
SSLB	**Suanglung**	**24.74**	**78**		P	**P**	**04 39 28.0**	**+0.1**
HHC	**Hu-ho-hao-te**	**24.76**	**32**		*e*P	**P**	**04 39 28.6**	**+0.6**
HHC					PP	**PnPn**	**04 40 09.5**	**+5.1**
HHC					S	**S**	**04 43 43.3**	**-1.7**
HHC					SS	**SnSn**	**04 44 46.8**	**+7.5**
HHC					pmax	pmax		
	comp=Z,21nm,0.8s							
HHC					pmax	pmax		
	comp=Z,370nm,5.4s							
TWG	**Pinlang**	**24.84**	**80**		P	**P**	**04 39 29.6**	**+0.8**
TWG					IAmb	IAmb	04 39 34.8	
	comp=Z,152nm,0.7s							
YULB	**Yu-li**	**25.04**	**79**		P	**P**	**04 39 32.8**	**+2.1**
YULB					PcP	**PcP**	**04 43 06.3**	**+2.6**
TIA	**Tai'an**	**25.11**	**47**		P	**P**	**04 39 30.3**	**-0.9**
TIA					S	**S**	**04 43 49.4**	**-1.0**
TIA					pmax	pmax		
	comp=Z,79nm,0.7s							
TIA					pmax	pmax		
	comp=Z,540nm,3.8s							
TIA					LR	LR		
	comp=Z,880nm,8.8s							
TIA					LR	LR		
	comp=Z,870nm,11.0s							
TIA					LR	LR		
	comp=Z,960nm,13.9s							
SBUM	**Sibu**	**25.17**	**134**		P	**P**	**04 39 32.0**	**+0.2**
SBUM	**Sibu**	**25.17**	**134**		P	**P**	**04 39 33.0**	**+1.2**
NACB	**Ninganchiao**	**25.34**	**77**		P	**P**	**04 39 34.4**	**+1.1**
NACB						**PcP**	**04 43 08.5**	**+4.1**
PRZ	**Przheval'sk**	**25.49**	**332**		IAmb	IAmb	04 39 38.4	
	comp=Z,190nm,0.8s							
PPBI	**Pangkal Pinang**	**25.53**	**152**		P	**P**	**04 39 36.0**	**+0.9**
	comp=Z,8μmcomp=Z,157nm,1.3s							
KSI	**Kapahiang**	**25.57**	**161**		P	**P**	**04 39 33.0**	**-2.5**
	comp=Z,85nm,0.9s							
KSI	**Kapahiang**	**25.57**	**161**		P	**P**	**04 39 34.4**	**-1.1**
KSI					pmax	pmax		
	comp=Z,85nm,0.9s							
SHLS	**Shalkode**	**25.58**	**334**	⇓	*i*P	**P**	**04 39 35.7**	**+0.2**
	comp=Z,469nm,1.5s,baz=334							
SHLS					*e*S	**S**	**04 43 58.9**	**+0.9**
	baz=334							
SHLS	**Shalkode**	**25.58**	**334**	*d*	*i*P	**P**	**04 39 35.7**	**+0.2**
SHLS					*e*S	**S**	**04 43 58.9**	**+0.9**
SHLS					pmax	pmax		
	comp=Z,469nm,1.5s							
KDJ	**Kajisay**	**25.77**	**330**		P	**P**	**04 39 39.1**	**+1.9**
KDJ					pmax	pmax		
	comp=Z,164nm,0.9s							
KDJ	**Kajisay**	**25.77**	**330**		P	**P**	**04 39 39.1**	**+1.9**
KDJ					IAmb	IAmb	04 39 45.4	
	comp=Z,164nm,0.8s							
SATY	**Saty**	**25.95**	**333**	⇓	*i*P	**P**	**04 39 40.8**	**+2.0**
	comp=Z,167nm,1.4s,baz=332							
SATY					*e*S	**S**	**04 44 07.8**	**+4.0**
	baz=332							
SATY	**Saty**	**25.95**	**333**	*d*	*i*P	**P**	**04 39 40.7**	**+2.0**
SATY					*e*S	**S**	**04 44 07.7**	**+4.0**
SATY					pmax	pmax		
	comp=Z,167nm,1.4s							
LHSI	**Lahat**	**26.04**	**159**		P	P	04 39 47.0	+7.4
SSE	**Sheshan**	**26.12**	**61**		IAmb	IAmb	04 39 46.5	
	comp=Z,196nm,0.8s							
TGY	**Tagaytay City**	**26.15**	**100**		LR	LR	04 51 27.2	
	comp=Z,390nm,18.5s,baz=310,slow=40							
KPKS	**Kokpek**	**26.16**	**333**	⇓	*i*P	**P**	**04 39 42.1**	**+1.5**
	comp=Z,249nm,1.4s,baz=333							
KPKS	**Kokpek**	**26.16**	**333**	*d*	*i*P	**P**	**04 39 42.1**	**+1.5**
KPKS					pmax	pmax		
	comp=Z,249nm,1.4s							
KBL	**Kabul**	**26.23**	**307**		P	**P**	**04 39 43.1**	**+1.6**
	SNR=170							
KBL					S	**S**	**04 44 09.2**	**+0.8**
KBL	**Kabul**	**26.23**	**307**		P	**P**	**04 39 43.1**	**+1.6**
KBL							04 43 08.3	
KBL					pmax	pmax		
	comp=Z,225nm,0.8s							
KBL	**Kabul**	**26.23**	**307**		P	**P**	**04 39 43.1**	**+1.6**
KBL					IAmb	IAmb	04 39 46.1	
	comp=Z,225nm,0.8s							
KBL						**PcP**	**04 43 08.3**	**+1.8**
ULHL	**Ulahol**	**26.31**	**329**		P	**P**	**04 39 44.2**	**+2.1**
	SNR=58							
TNSS	**Tian-Shan**	**26.58**	**331**	⇓	*i*P	**P**	**04 39 46.6**	**+1.7**
	baz=330							
TNSS	**Tian-Shan**	**26.58**	**331**	*d*	*i*P	**P**	**04 39 46.5**	**+1.7**
MDOK	**Medeo**	**26.63**	**331**		*i* P	**P**	**04 39 47.1**	**+2.1**
	baz=330							
MDOK					*i* S	**S**	**04 44 18.0**	**+3.4**
	baz=330							
MDOK	**Medeo**	**26.63**	**331**		*i* P	**P**	**04 39 47.0**	**+2.1**
MDOK					*i* S	**S**	**04 44 18.0**	**+3.4**
BJT	**Baijiatuau**	**26.71**	**39**		P	**P**	**04 39 45.5**	**0.0**
BJT					pmax	pmax		
	comp=Z,72nm,0.8s							
AAA	**Alma-Ata**	**26.73**	**331**		*e*P	**P**	**04 39 48.2**	**+2.4**
	comp=Z,165nm,1.4s,baz=330							
AAA	**Alma-Ata**	**26.73**	**331**		*e*P	**P**	**04 39 48.1**	**+2.4**
AAA					pmax	pmax		
	comp=Z,165nm,1.4s							
BJI	**Beijing**	**26.73**	**39**		P	**P**	**04 39 45.3**	**-0.4**
BJI					sP	**sP**	**04 40 15.9**	**+3.5**
BJI					S	**S**	**04 44 15.1**	**-0.7**
BJI					ScP	**ScP**	**04 46 40.0**	**-0.8**
BJI					ScS	**ScS**	**04 50 29.8**	**-1.6**
BJI					pmax	pmax		
	comp=Z,63nm,0.9s							
BJI					pmax	pmax		
	comp=Z,270nm,5.9s							
BJI					LR	LR		
	comp=Z,810nm,17.7s							
BJI					LR	LR		
	comp=Z,810nm,12.3s							
BJI					LR	LR		
	comp=Z,740nm,36.0s							
TPI	**Tanjungpandan**	**26.75**	**149**		P	**P**	**04 39 51.7**	**+5.6**
MDSI	**Maura Dua**	**26.88**	**158**		P	**P**	**04 39 45.2**	**-2.0**
	comp=Z,95nm,1.0s							
TKM2	**Tokmak 2**	**27.13**	**329**		P	**P**	**04 39 51.2**	**+1.7**
	SNR=129							
UCH	**Uchtor**	**27.17**	**326**		P	**P**	**04 39 51.8**	**+1.6**
	SNR=14							
CHKK	**Chushkaly**	**27.20**	**332**		*e*P	**P**	**04 39 50.9**	**+0.9**
	baz=331							
CHKK	**Chushkaly**	**27.20**	**332**		*e*P	**P**	**04 39 50.8**	**+0.9**
KBK	**Karagaybulak**	**27.25**	**328**		P	**P**	**04 39 52.9**	**+2.3**
	SNR=36							
KLSI		**27.26**	**157**		P	**P**	**04 39 49.8**	**-0.9**
	comp=Z,296nmcomp=Z,26nm,1.2s							
LWLI	**Liwa**	**27.33

comp=Z,39nm,1.8s
MK31 Makanchi Array 27.77 342*d* iP **P** **04 39 55.6 +0.7**
MK31 Makanchi Array 27.77 342 P **P** **04 39 55.7 +0.8**
MKAR Makanchi Array 27.77 342 P **P** **04 39 55.9 +1.0**
comp=Z,75nm,0.6s,baz=154,slow=9.0,SNR=451
MKAR PcP **PcP** **04 43 10.4 +0.7**
comp=Z,7.4nm,0.7s,baz=103,slow=1.9,SNR=2.6
MKAR pPcP 04 43 32.2
comp=Z,29nm,1.1s,baz=115,slow=5.5,SNR=3.7
MKAR ScP **ScP** **04 46 45.0 +1.2**
comp=Z,49nm,1.0s,baz=217,slow=3.9,SNR=20
MKAR Makanchi Array 27.77 342 P **P** **04 39 55.6 +0.6**
BTK Batken 27.84 319 P **P** **04 39 57.7 +2.0**
BTK IAmb IAmb 04 40 04.2
comp=Z,158nm,1.1s
BTK **PcP** **04 43 11.6 +1.5**
EKS2 Erkin-Say 27.86 326 P **P** **04 39 57.8 +1.9**
SNR=65
MAKZ Makanchi 27.87 342 P **P** **04 39 55.8 -0.1**
MAKZ pmax pmax
comp=Z,50nm,0.8s
MAKZ Makanchi 27.87 342 P **P** **04 39 55.8 -0.1**
KASI Kota Agung 27.95 158 P **P** **04 39 57.9 +1.1**
comp=Z,57nm,1.0s
SGDS Sogindy 28.00 328⇓*i* P **P** **04 39 58.5 +1.4**
comp=Z,45nm,1.2s,baz=328
SGDS *e*S **S** **04 44 39.2 +3.2**
baz=328
SGDS Sogindy 28.00 328*d* iP **P** **04 39 58.5 +1.4**
SGDS *e*S **S** **04 44 39.2 +3.2**
SGDS pmax pmax
comp=Z,45nm,1.2s
SONM Songino Array 28.68 17 P **P** **04 40 02.8 -0.4**
comp=Z,4.6nm,0.4s,baz=198,slow=9.0,SNR=44
SONM PcP **PcP** **04 43 13.5 +1.4**
comp=Z,4.1nm,0.8s,baz=190,slow=4.9,SNR=2.0
SONM ScP **ScP** **04 46 46.6 -0.2**
comp=Z,16nm,0.7s,baz=203,slow=3.5,SNR=23
SONM LR LR 04 51 12.1
comp=Z,299nm,18.8s,baz=196,slow=36
SONM Songino Array 28.68 17 P **P** **04 40 01.9 -1.3**
ULN Ulaanbaatar 28.89 18*ce*P **P** **04 40 04.5 -0.6**
ULN pmax pmax
comp=Z,13nm,1.0s
DZA Taraz 29.33 324 *e*P **P** **04 40 10.1 +1.2**
comp=Z,9.5nm,0.6s,baz=324
DZA Taraz 29.33 324 *e*P **P** **04 40 10.0 +1.2**
DZA pmax pmax
comp=Z,10.0nm,0.6s
BTLS Baital 29.46 330⇓*i* P **P** **04 40 10.9 +0.9**
comp=Z,15nm,0.5s,baz=330
BTLS Baital 29.46 330*d* iP **P** **04 40 10.9 +0.9**
BTLS pmax pmax
comp=Z,15nm,0.5s
MTKI Muara Teweh, K 29.46 135 P **P** **04 40 12.2 +1.9**
DL2 Dalian 29.56 46 P **P** **04 40 10.8 -0.1**
DL2 S **S** **04 44 56.0 -4.5**
DL2 ScS **ScS** **04 50 41.1 -3.2**
DL2 pmax pmax
comp=Z,61nm,0.7s
DL2 pmax pmax
comp=Z,260nm,4.1s
DL2 LR LR
comp=Z,740nm,24.1s
DL2 LR LR
comp=Z,600nm,18.4s
DL2 LR LR
comp=Z,960nm,24.7s
IUG luzhnay 29.58 322⇓*i* P **P** **04 40 13.0 +1.7**
comp=Z,66nm,0.8s,baz=321
IUG *e*S **S** **04 45 04.8 +3.8**
baz=321
IUG luzhnay 29.58 322*d* iP **P** **04 40 12.9 +1.7**
IUG *e*S **S** **04 45 04.7 +3.8**
IUG pmax pmax
comp=Z,66nm,0.8s
KK31 Karatay Array 29.92 324 *i* P **P** **04 40 14.9 +0.8**
KKAR Karatay Array 29.92 324 P **P** **04 40 14.1 0.0**
KKAR 04 43 16.4
KKAR Karatay Array 29.92 324 P **P** **04 40 14.1 0.0**
KKAR **PcP** **04 43 16.4 +1.2**
LEM Lembang 30.35 153 P **P** **04 40 20.1 +1.8**
comp=Z,32nm,1.0s,baz=323,slow=20,SNR=3.8
LEM ScS ScS 04 50 48.0 -1.1
comp=Z,111nm,0.4s,baz=311,slow=20,SNR=2.3
ZAK Zakamensk 30.37 11 *e*P **P** **04 40 18.3 +0.3**
ZAK *e* 04 43 17.5
ZAK pmax pmax
comp=Z,28nm,1.1s
ZAK pmax pmax
comp=Z,24nm,1.4s
BKB Balikpapan 31.06 132 P **P** **04 40 20.8 -3.6**
comp=Z,1μmcomp=Z,106nm,1.1s
MOY Mondy 31.26 8 *e*P **P** **04 40 26.6 +0.7**
MOY pmax pmax
comp=Z,26nm,1.4s
BBKI Banjar Baru 31.34 138 P **P** **04 40 28.2 +1.4**
comp=Z,96nm,0.9s
KPJI Karang Pucung 31.37 151 P **P** **04 40 27.9 +0.8**
comp=Z,2μmcomp=Z,328nm,1.1s
HRA Herat 31.42 302 P **P** **04 40 28.3 +0.7**
HRA IAmb IAmb 04 40 29.7
comp=Z,68nm,0.8s
SEM Semipalatinsk 31.61 343 *i* P **P** **04 40 29.2 0.0**
comp=Z,30nm,0.7s,baz=342
SEM Semipalatinsk 31.61 343 *i* P **P** **04 40 29.1 0.0**
SEM pmax pmax
comp=Z,30nm,0.7s
TLY Talaya 31.68 11 P **P** **04 40 30.3 +0.9**
comp=Z,13nm,0.8s,baz=211,slow=7.1,SNR=11
TLY ScP **ScP** **04 46 57.0 +0.6**
comp=Z,13nm,0.8s,baz=204,slow=4.8,SNR=10
TLY ScS **ScS** **04 50 54.0 -0.2**
comp=Z,2.2nm,0.6s,baz=217,slow=20,SNR=7.6
TLY Talaya 31.68 11*c* iP **P** **04 40 30.4 +0.9**
TLY pmax pmax
comp=Z,30nm,1.2s
TLY Talaya 31.68 11 P **P** **04 40 30.2 +0.8**
SMRI Semarang 31.83 149 P **P** **04 40 33.4 +2.3**
comp=Z,7μmcomp=Z,546nm,0.9s
KBKI Kotabaru 32.06 136 P **P** **04 40 34.9 +1.7**
comp=Z,2μmcomp=Z,67nm,1.0s
MPSI Mapaga 32.15 126 P **P** **04 40 35.2 +1.2**
KURBB Kurchatov Arra 32.31 341 P **P** **04 40 35.5 +0.5**
comp=Z,120nm,0.7s,baz=152,slow=8.5,SNR=68
KURBB PcP **PcP** **04 43 22.3 +1.0**
comp=Z,18nm,0.7s,baz=165,slow=2.3,SNR=8.1
KURBB pPcP 04 43 44.0
comp=Z,41nm,0.9s,baz=167,slow=2.3,SNR=12
KURBB S **S** **04 45 42.9 -0.2**
comp=Z,4.7nm,0.9s,baz=159,slow=14,SNR=4.4
KURBB ScP **ScP** **04 46 59.5 +1.1**
comp=Z,87nm,0.7s,baz=151,slow=2.9,SNR=75
KURBB P3KPbc 05 12 01.1
comp=Z,0.3nm,0.6s,baz=330,slow=5.3,SNR=5.1
IRK Irkutsk 32.33 11 *e*P **P** **04 40 35.2 0.0**
IRK pmax pmax
comp=Z,62nm,2.5s
SNY Shenyang 32.33 43 ⇑P **P** **04 40 34.0 -1.3**
SNY S **S** **04 45 35.1 -8.6**
SNY pmax pmax
comp=Z,19nm,1.0s
SNY pmax pmax
comp=Z,170nm,5.5s
SNY LR LR
comp=Z,550nm,17.2s
SNY LR LR
comp=Z,380nm,16.2s
SNY LR LR
comp=Z,660nm,33.8s
KURK Kurchatov 32.36 341 P **P** **04 40 36.1 +0.7**
KURK S **S** **04 45 43.3 -0.7**
KURK Kurchatov 32.36 341*c* iP **P** **04 40 36.1 +0.7**
KURK pmax pmax
comp=Z,160nm,0.7s
KURK Kurchatov 32.36 341 P **P** **04 40 36.2 +0.7**
JLN Jalan Bani Buh 32.55 279 P **P** **04 40 40.2 +2.8**
SNR=28
TJN Taejon 32.66 54*ce*P **P** **04 40 36.3 -1.9**
WBK Wadi Bani Khal 32.93 280 P **P** **04 40 43.7 +2.9**
SNR=13
WSAR Wadi Sarin 33.21 281 P **P** **04 40 45.2 +2.0**
comp=Z,34nm,0.8s,baz=119,slow=8.8,SNR=28
WSAR ScP **ScP** **04 47 02.5 +0.4**
comp=Z,15nm,0.9s,baz=118,slow=4.8,SNR=5.8
WSAR LR LR 04 58 36.2
comp=Z,205nm,18.8s,baz=114,slow=44
PWJI Pagerwojo 33.34 147 P **P** **04 40 44.8 +0.5**
comp=Z,138nm,1.0s
KSAR Wonju Array Be 33.41 53 P **P** **04 40 42.1 -2.7**
KSAR Wonju Array Be 33.41 53 P **P** **04 40 42.1 -2.7**
KSRS Korea Array 33.45 53 P **P** **04 40 43.2 -1.9**
comp=Z,11nm,0.5s,baz=243,slow=8.6,SNR=24
KSRS PP **PP** **04 42 01.6 -0.4**
comp=Z,8.2nm,0.9s,baz=243,slow=11,SNR=4.3
KSRS PcP **PcP** **04 43 24.9 +0.1**
comp=Z,3.9nm,0.7s,baz=239,slow=2.4,SNR=4.5
KSRS S **S** **04 46 02.1 +1.0**
comp=Z,0.8nm,0.5s,baz=243,slow=14,SNR=4.1
KSRS ScP **ScP** **04 47 01.4 -1.3**
comp=Z,12nm,0.9s,baz=250,slow=3.6,SNR=18
KSRS LR LR 04 55 51.8
comp=Z,600nm,18.7s,baz=242,slow=39
MRSI Marisa 33.63 123 P **P** **04 40 48.3 +1.4**
comp=Z,54nm,0.7s
BIDO Bidbid 33.66 281 P **P** **04 40 49.6 +2.5**
SNR=28
KMMI Kalianget 33.68 143 P **P** **04 40 49.6 +2.3**
comp=Z,3μmcomp=Z,294nm,1.1s
JMDO Jabal Madar 33.74 279 P **P** **04 40 50.4 +2.5**
SNR=15
SMDO Samad 33.75 281 P **P** **04 40 50.6 +2.6**
SNR=36
BRZS Berezniki 33.85 335⇓*i* P **P** **04 40 49.6 +1.1**
comp=Z,42nm,0.9s,baz=334
BRZS Berezniki 33.85 335*d* iP **P** **04 40 49.5 +1.1**
BRZS pmax pmax
comp=Z,42nm,0.9s
ZAA0 Zalesovo Array 33.92 350 IAmb IAmb 04 41 06.2
comp=Z,98nm,0.9s
ZALV Zalesovo Beam 33.92 350 P **P** **04 40 49.5 +0.6**
comp=Z,41nm,0.5s,baz=172,slow=9.4,SNR=144
ZALV S **S** **04 46 08.3 +0.3**
comp=Z,14nm,0.9s,baz=169,slow=16,SNR=4.2
ZALV ScP **ScP** **04 47 03.2 -0.7**
comp=Z,14nm,0.8s,baz=157,slow=3.6,SNR=6.9
ZALV ScS **ScS** **04 51 01.4 -4.2**
comp=Z,14nm,0.8s,baz=176,slow=4.3,SNR=13
ZALV LR LR 04 57 23.6
comp=Z,169nm,20.3s,baz=168,slow=41
ZALV Zalesovo Beam 33.92 350 P **P** **04 40 49.1 +0.2**
ZALV **PcP** **04 43 28.5 +2.7**
JSU Suzuyama 33.94 64 IAmb IAmb 04 40 50.9
comp=Z,75nm,0.9s
MHTO MHTO 34.00 277 P **P** **04 40 52.2 +2.1**
SNR=23
APSI Ampana 34.28 126 P **P** **04 40 55.3 +2.7**
comp=Z,608nmcomp=Z,61nm,0.8s
TTSI Tana Toraja 34.37 131 P **P** **04 40 55.1 +1.8**
comp=Z,674nmcomp=Z,53nm,1.0s
GTOI Gorontalo 34.38 122 P **P** **04 40 52.1 -1.3**
comp=Z,1μmcomp=Z,134nm,0.9s
HOQ Hoqain 34.40 282 P **P** **04 40 55.7 +2.1**
SNR=38
DQM DQM 34.53 275 P **P** **04 40 57.2 +2.5**
SNR=12
CN2 Changchun 34.54 41 *e*P **P** **04 40 55.8 +1.3**
CN2 PP **PP** **04 42 13.8 -0.2**
CN2 *e*S **S** **04 46 13.0 -4.9**
CN2 ScS **ScS** **04 51 05.4 -3.9**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,180nm,4.0s
CN2 LR LR
comp=Z,490nm,12.0s
CN2 LR LR
comp=Z,340nm,12.0s
CN2 LR LR
comp=Z,520nm,15.0s
BSY Bisya 34.55 280 P **P** **04 40 57.5 +2.6**
SNR=49
JNU Nakatsue 34.59 61 P **P** **04 40 54.6 -0.5**
comp=Z,20nm,0.8s,baz=225,slow=7.1,SNR=8.3
JNU ScP **ScP** **04 47 05.9 -1.0**
comp=Z,48nm,1.1s,baz=325,slow=4.4,SNR=5.5
JNU LR LR 04 57 55.8
comp=Z,363nm,18.5s,baz=256,slow=41
JNU Nakatsue 34.59 61 IAmb IAmb 04 41 01.6
comp=Z,51nm,1.1s
SGSI Sangihe 34.72 115 P **P** **04 40 58.2 +1.8**
comp=Z,3μmcomp=Z,67nm,0.7s
HIA Hailar 34.87 29 P **P** **04 40 56.8 -0.5**
HIA pmax pmax
comp=Z,13nm,0.7s
HIA Hailar 34.87 29 P **P** **04 40 56.8 -0.5**
JAGI Jajag, Banyuwa 34.95 144 P **P** **04 40 59.3 +1.0**
comp=Z,96nm,1.2s
JAGI Jajag, Banyuwa 34.95 144 IAmb IAmb 04 41 17.2
comp=Z,51nm,0.9s
SPSI Sidrap Palu 34.98 132 P **P** **04 41 01.0 +2.4**
comp=Z,922nmcomp=Z,37nm,0.9s
SOHO SOHO 35.09 283 *i* P **P** **04 41 01.0 +1.5**
SNR=24
SOHO SOHO 35.09 283 P **P** **04 41 01.0 +1.5**
ARQ Araqi 35.14 281 P **P** **04 41 02.4 +2.5**
SNR=18
KMSI Cibinong 35.19 121 P P 04 41 10.3 +10
LUWI Luwuk 35.23 125 P **P** **04 41 02.4 +1.7**
comp=Z,3μmcomp=Z,209nm,0.9s
SRBI Singaraja 35.23 142 P P 04 41 07.5 +6.8
BANOM Banah 35.27 286 *i* P **P** **04 41 03.2 +2.2**
SNR=17
BANOM Banah 35.27 286 P **P** **04 41 03.2 +2.2**
SNR=8.4
MDH Madha 35.27 285 *i* P **P** **04 41 01.8 +0.8**
SNR=9.3
MDH Madha 35.27 285 P **P** **04 41 01.9 +0.8**
UOSS Minazif 35.37 284 *i* P **P** **04 41 02.7 +0.9**
SNR=10
UOSS Minazif 35.37 284 P **P** **04 41 03.5 +1.7**
MSFE Esma-Masafi 35.40 285 *i* P **P** **04 41 04.4 +2.2**
SNR=10
SHME Shamm 35.41 286 *i* P **P** **04 41 04.5 +2.2**
SNR=14
HATD Hatta, Dubai 35.43 284 *i* P **P** **04 41 04.9 +2.4**
SNR=5.4
ASHO Ashiyiah 35.50 284 *i* P **P** **04 41 05.4 +2.3**
SNR=11
ASHO Ashiyiah 35.50 284 P **P** **04 41 05.4 +2.3**
BNSI Bone 35.53 132 P **P** **04 41 04.9 +1.6**
comp=Z,46nm,1.1s
GEYT Alibeck 35.68 307 P **P** **04 41 06.2 +1.8**
comp=Z,122nm,0.8s,baz=134,slow=10,SNR=16
GEYT ScP **ScP** **04 47 11.8 +1.1**
comp=Z,68nm,0.8s,baz=205,slow=2.8,SNR=3.8
GEYT LR LR 05 00 21.3
comp=Z,398nm,18.3s,baz=175,slow=44
GYA0 ALIBECK ARRAY 35.68 307 P **P** **04 41 06.6 +2.2**
KAPI Kappang 35.72 133 ScP **ScP** **04 47 10.9 -0.3**
comp=Z,5.2nm,0.3s,baz=268,slow=2.5,SNR=7.0
KAPI Kappang 35.72 133 P **P** **04 41 05.0 +0.1**
KAPI pmax pmax
comp=Z,77nm,1.0s
KAPI Kappang 35.72 133 P **P** **04 41 05.0 +0.1**
KAPI IAmb IAmb 04 41 07.9
comp=Z,77nm,1.0s
ALNE Al Ain 35.81 283 *i* P **P** **04 41 07.6 +1.9**
SNR=9.3
UMQ Umm Al-Quwin 35.85 285 *i* P **P** **04 41 08.6 +2.7**
SNR=6.4
UMQ Umm Al-Quwin 35.85 285 P **P** **04 41 09.0 +3.1**
SNR=6.3
NAZ Nazwa, Dubai 35.86 284 *i* P **P** **04 41 08.6 +2.5**
SNR=5.4
NAZ Nazwa, Dubai 35.86 284 P **P** **04 41 07.9 +1.9**
NAZ P P 04 41 13.0 +6.9
SNR=6.4
FAQ Al Faqa, Dubai 35.93 284 *i* P **P** **04 41 08.6 +1.9**
SNR=8.4
FAQ Al Faqa, Dubai 35.93 284 P **P** **04 41 08.1 +1.5**
SNR=17
ASUD Al Ashush, Dub 36.17 284 *i* P **P** **04 41 11.1 +2.4**
SNR=15
ASUD Al Ashush, Dub 36.17 284 P **P** **04 41 10.9 +2.2**
SNR=13
BKSI Bulukumba 36.20 133 P **P** **04 41 09.9 +0.9**
comp=Z,1μmcomp=Z,53nm,1.1s
AJN Ajban 36.48 283 *i* P **P** **04 41 13.3 +2.0**
SNR=14
AJN Ajban 36.48 283 P **P** **04 41 13.2 +1.9**
SNR=14
SHAO Shalim 36.62 273 *i* P **P** **04 41 14.7 +2.0**
SNR=10
SHAO Shalim 36.62 273 P **P** **04 41 15.1 +2.5**
SNR=6.0
TWSI Taliwang, Sumb 36.72 141 P **P** **04 41 13.6 +0.1**
comp=Z,23nm,1.4s
JHS Saijyo 36.79 59 IAmb IAmb 04 41 16.9
comp=Z,51nm,0.8s
BVAR Borovoye Array 37.12 336 P **P** **04 41 16.0 -0.4**
comp=Z,6.0nm,0.7s,baz=87,slow=12,SNR=31
BVAR pPcP 04 43 56.3
comp=Z,12nm,0.6s,baz=90,slow=4.3,SNR=4.6
BVAR ScP **ScP** **04 47 15.6 -0.1**
comp=Z,8.8nm,0.6s,baz=58,slow=6.5,SNR=12
JMN Monobe 37.17 61 IAmb IAmb 04 41 27.7
comp=Z,91nm,1.1s
BRVK Borovoye 37.19 336 P **P** **04 41 17.3 +0.3**
BRVK Borovoye 37.19 336*d* iP **P** **04 41 17.3 +0.3**
BRVK pmax pmax
comp=Z,18nm,0.6s
BRVK Borovoye 37.19 336 P **P** **04 41 16.8 -0.2**
BRVK **PcP** **04 43 36.5 +1.0**
DMTO DMTO 37.31 272 P **P** **04 41 20.9 +2.4**
SNR=7.7
PLAI Plampang 37.33 140 P **P** **04 41 19.5 +0.9**
comp=Z,53nm,0.8s
MDJ Mudanjiang 37.53 42 P **P** **04 41 19.0 -1.0**
MDJ S **S** **04 47 07.3 +3.7**
MDJ PcS **PcS** **04 47 25.9 +0.7**
MDJ pmax pmax
comp=Z,18nm,1.1s
MDJ pmax pmax
comp=Z,170nm,4.1s
MDJ LR LR
comp=Z,540nm,11.5s
MDJ LR LR
comp=Z,510nm,12.4s
MDJ LR LR
comp=Z,820nm,17.9s
MDJ Mudanjiang 37.53 42 P **P** **04 41 18.8 -1.3**
RBK Rabkut 38.05 272 P **P** **04 41 27.0 +2.3**
SNR=23
WHFO Wadi Hawf 38.38 273 P **P** **04 41 29.1 +1.6**
SNR=26
VLA Vladivostok 38.38 46⇓*e*P **P** **04 41 26.5 -0.7**
VLA pmax pmax
comp=Z,42nm,0.9s
JWT Wachi 38.69 59 P **P** **04 41 29.6 -0.3**
JWT **PcP** **04 43 41.3 +0.8**
USA0B Ussuriysk Arra 38.89 44⇓*e*P **P** **04 41 29.7 -1.7**
USRK Ussuriysk Ar. 38.89 44 P **P** **04 41 30.1 -1.3**
comp=Z,10nm,0.7s,baz=246,slow=7.9,SNR=20
USRK ScP **ScP** **04 47 20.4 -2.1**
comp=Z,9.0nm,0.7s,baz=245,slow=2.6,SNR=15
USRK LR LR 05 01 03.2
comp=Z,285nm,18.1s,baz=233,slow=42
USRK Ussuriysk Ar. 38.89 44 P **P** **04 41 29.6 -1.8**
ABTO Aybut 38.93 272 P **P** **04 41 33.7 +1.5**
SNR=17
WBSI Waikabubak, Su 38.95 139 P **P** **04 41 31.3 -1.0**
comp=Z,943nmcomp=Z,96nm,0.9s
AB31 Akbulak array 39.47 324 *i* P **P** **04 41 37.7 +1.5**
ABKAR Akbulak array 39.47 324 P **P** **04 41 36.9 +0.7**
ABKAR Akbulak array 39.47 324 IAmb IAmb 04 41 38.6
comp=Z,88nm,0.8s
SOCY Socotra 39.59 264 P **P** **04 41 38.6 +0.8**
SNR=9.6
SOCY Socotra 39.59 264 P **P** **04 41 38.6 +0.8**
BOD Bodaibo 39.68 16 *e*P **P** **04 41 36.9 -0.9**
BOD pmax pmax
comp=Z,32nm,1.5s
EDFI Ende, Flores 39.76 135 P **P** **04 41 37.2 -1.9**
comp=Z,29nm,0.8s
INU Inuyama 40.00 59 IAmb IAmb 04 41 43.4
comp=Z,75nm,0.7s
MMRI Maumere 40.04 134 P **P** **04 41 42.4 +1.1**
comp=Z,6μmcomp=Z,97nm,0.9s
BASI Baing, Sumba 40.14 138 P **P** **04 41 43.6 +1.5**
comp=Z,116nm,0.9s
JGF Kuroka 40.31 59 P **P** **04 41 42.0 -1.4**
JGF IAmb IAmb 04 41 45.9
comp=Z,34nm,0.6s
KLR Kul'dur 41.06 37 P **P** **04 41 48.0 -1.4**
comp=Z,3.9nm,0.5s,baz=210,slow=5.4,SNR=12
KLR ScP **ScP** **04 47 29.1 -1.8**
comp=Z,23nm,1.0s,baz=265,slow=4.2,SNR=15
KLR LR LR 05 00 31.6
comp=Z,439nm,19.2s,baz=222,slow=39
AAI Ambon 41.10 122 P P 04 41 56.0 +5.9
AAI Ambon 41.10 122 P **P** **04 41 51.4 +1.3**
AAI pmax pmax
comp=Z,113nm,1.1s
MAJO Matsushiro 41.15 58 *i* P **P** **04 41 48.9 -1.4**
MAJO pmax pmax
comp=Z,70nm,1.9s
MAJO Matsushiro 41.15 58 P **P** **04 41 49.1 -1.2**
MAT Matsushiro 41.15 58 P **P** **04 41 49.5 -0.8**
MAT S **S** **04 47 58.8 +0.6**
MJAR Matsushiro Arr 41.16 58 P **P** **04 41 49.1 -1.2**
comp=Z,15nm,0.7s,baz=268,slow=10,SNR=28
MJAR PcP **PcP** **04 43 48.6 +0.2**
comp=Z,24nm,1.0s,baz=254,slow=3.2,SNR=9.7
MJAR pPcP 04 44 09.7
comp=Z,12nm,0.9s,baz=252,slow=4.6,SNR=5.2
MJAR ScP **ScP** **04 47 30.2 -1.4**
comp=Z,30nm,0.8s,baz=243,slow=3.7,SNR=32
MJAR LR LR 04 59 38.2
comp=Z,476nm,21.9s,baz=260,slow=37
MJAR Matsushiro Arr 41.16 58 P **P** **04 41 49.3 -1.1**
MJAR 04 43 48.1
MJAR pmax pmax
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 41.16 58 P **P** **04 41 49.3 -1.1**
MJAR **PcP** **04 43 48.1 -0.3**
AKTO Aktyubinsk 41.16 325 P **P** **04 41 50.5 +0.3**
comp=Z,54nm,0.7s,baz=120,slow=8.5,SNR=170
AKTO ScP **ScP** **04 47 31.6 +0.3**
comp=Z,38nm,0.9s,baz=112,slow=4.7,SNR=16
AKTO LR LR 05 01 55.6
comp=Z,626nm,21.6s,baz=129,slow=40
ZEA Zeya 41.35 29 *e*P **P** **04 41 55.0 +3.4**
ZEA pmax pmax
comp=Z,10.0nm,0.9s
ZEA MLR MLR
comp=E,400nm,14.0s
ZEA MLR MLR
comp=Z,400nm,16.0s
MSAI Masohi 41.48 121 P **P** **04 41 53.9 +0.7**
comp=Z,28nm,1.1s
SIJI Sorong 41.99 116 P **P** **04 41 56.8 -0.6**
comp=Z,40nm,0.7s,baz=311,slow=7.7,SNR=17
SOEI Soe 42.22 133 P **P** **04 41 58.1 -1.3**
comp=Z,3μmcomp=Z,466nm,0.9s
SOEI Soe 42.22 133 P P **04 41 57.7 -1.6**
SVE Sverdlovsk 43.76 334*c* iP **P** **04 42 12.1 +1.0**
SVE *e*S **S** **04 48 35.7 -0.1**
SVE pmax pmax
comp=Z,187nm,0.8s
SVE MLR MLR
comp=Z,883nm,21.0s
FAKI Fak Fak 43.93 118 P **P** **04 42 12.7 -0.4**
comp=Z,617nmcomp=Z,66nm,1.1s
FAKI Fak Fak 43.93 118 P **P** **04 42 11.8 -1.3**
JTM Tenmabayashi 44.19 52 P **P** **04 42 13.5 -1.3**
JTM **PcP** **04 43 58.3 -0.1**
AKT Akhty 44.34 309*d* iP **P** **04 42 18.2 +2.0**
ARU Arti 44.39 332 P **P** **04 42 16.3 +0.1**
comp=Z,27nm,0.3s,baz=129,slow=5.3,SNR=76
ARU ScP **ScP** **04 47 45.0 +0.8**
comp=Z,3.1nm,0.2s,baz=183,slow=4.3,SNR=6.5
ARU S **S** **04 48 43.6 -1.3**
comp=Z,2.9nm,0.2s,baz=70,slow=22,SNR=9.0
ARU LR LR 05 04 01.8
comp=Z,522nm,19.8s,baz=116,slow=40
ARU Arti 44.39 332*c* iP **P** **04 42 16.5 +0.4**
ARU *PP **pP** **04 42 35.3 +0.4**
ARU 04 43 59.8
ARU PPP PPP 04 44 38.3
ARU S **S** **04 48 45.2 +0.3**
ARU *SS **sS** **04 49 16.5 -0.4**
ARU SS **SS** **04 52 06.0 -0.1**
ARU pmax pmax
comp=Z,58nm,0.6s
ARU MLR MLR
comp=Z,454nm,18.0s
ARU Arti 44.39 332 P **P** **04 42 16.1 0.0**
GRNR Gornyy 44.45 37⇓*i* P **P** **04 42 14.1 -2.7**

GRNR eS S 04 48 44.5 -1.6
GRNR pmax pmax
comp=Z,10.0nm,1.2s
GRNR smax smax
comp=N,9.0nm,0.9s
GRNR MLR MLR
comp=E,490nm,14.0s
MAK Makhachkala 44.86 311 eP P 04 42 20.8 +0.7
MAK e*PP pP 04 42 34.5 -4.5
MAK e*SP sP 04 42 44.5 -3.4
MAK e 04 44 05.7
MAK eS S 04 48 54.0 +1.9
MAK e*SS sS 04 49 20.4 -3.7
MAK pmax pmax
comp=Z,400nm,1.0s
MAK MLR MLR
comp=Z,141nm,13.0s
RAYN Ar Rayn 45.20 283 *i* P P 04 42 24.7 +1.5
SNR=126
RAYN Ar Rayn 45.20 283 P P 04 42 24.2 +1.0
RAYN pmax pmax
comp=Z,162nm,0.8s
RAYN Ar Rayn 45.20 283 P P 04 42 24.2 +1.0
LGD Lagodekhi 45.51 309 P P 04 42 26.9 +1.6
ERM Erimo 45.98 51 P P 04 42 29.0 +0.1
ERM pmax pmax
comp=Z,50nm,0.9s
ERM Erimo 45.98 51 P P 04 42 29.0 +0.1
ERM IAmb IAmb 04 42 33.2
comp=Z,50nm,0.9s
JEM Erimo 45.98 51 IAmb IAmb 04 42 33.2
comp=Z,50nm,0.9s
ASAJ Asahikawa 46.06 48 P P 04 42 28.4 -1.1
comp=Z,38nm,0.8s,baz=259,slow=13
ASAJ ScP ScP 04 47 49.3 -2.1
comp=Z,8.4nm,0.7s,baz=259,slow=5.2,SNR=3.8
ASAJ Asahikawa 46.06 48 P P 04 42 28.7 -0.9
ASAJ pmax pmax
comp=Z,52nm,1.0s
JKA Kamikawa-asahi 46.06 48 P P 04 42 28.7 -0.9
JKA IAmb IAmb 04 42 39.3
comp=Z,52nm,1.0s
GROC Groznyy 46.13 310 eP P 04 42 31.6 +1.4
GROC e*PP pP 04 42 49.5 +0.3
GROC e 04 44 05.4
GROC e 04 44 22.2
GROC eS S 04 49 13.4 +2.9
GROC pmax pmax
comp=Z,475nm,0.8s
BAKI Biak 46.27 113 P P 04 42 31.7 0.0
comp=Z,88nm,0.8s
GNI Garni 46.31 306 P P 04 42 33.7 +1.9
comp=Z,111nm,0.8s,baz=12,slow=1.2,SNR=65
GNI Garni 46.31 306 P P 04 42 34.6 +2.7
GNI Garni 46.31 306 eP P 04 42 34.2 +2.4
GNI Garni 46.31 306 *d* iP P 04 42 34.0 +2.2
GNI pmax pmax
comp=Z,195nm,1.0s
GNI Garni 46.31 306 P P 04 42 34.0 +2.2
KZRT Kazreti 46.78 308 P P 04 42 37.0 +1.7
CLDR Caldiran 46.79 305 eP P 04 42 38.0 +2.3
CUKT Cukurca 46.80 302 eP P 04 42 37.0 +1.3
GUDG Gudauri 46.92 309 P P 04 42 38.8 +2.1
YSS Yuzh-Sakhalins 46.93 44 eP P 04 42 35.8 -0.5
YSS e 04 42 51.5
YSS e 04 44 21.9
YSS eS S 04 49 20.7 -1.1
YSS eSS ScS 04 52 21.3 -2.1
YSS pmax pmax
comp=Z,50nm,1.0s
YSS MLR MLR
comp=N,200nm,14.0s
YSS MLR MLR
comp=Z,400nm,14.0s
YSS MLR MLR
comp=E,300nm,12.0s
YSS Yuzh-Sakhalins 46.93 44 P P 04 42 35.5 -0.8
YSS IAmb IAmb 04 42 36.9
comp=Z,49nm,1.0s
GIRL Giralia 47.30 155 P P 04 42 40.7 +1.3
baz=47,SNR=7.7
GEVA Gevas 47.35 303 P P 04 42 40.6 +0.6
GEVA IAmb IAmb 04 42 44.0
comp=Z,90nm,0.9s
BGD Bogdanovka 47.35 307 P P 04 42 42.6 +2.6
ZEI Tsey 47.40 309 eP P 04 42 38.5 -1.9
ZEI pmax pmax
comp=Z,715nm,1.3s
AKDM Akdamar-Van 47.41 303 eP P 04 42 42.1 +1.6
AKH Akhalkalaki 47.45 308 eP P 04 42 43.1 +2.4
AGRB Hanur-Agry 47.56 305 eP P 04 42 44.1 +2.5
KARS Kars 47.64 306 eP P 04 42 44.8 +2.6
KARS Kars 47.64 306 P P 04 42 44.6 +2.4
ONI Oni 47.69 309 P P 04 42 45.0 +2.6
MLAZ Malazgirt-MUS 47.84 304 eP P 04 42 46.1 +2.3
YAK Yakutsk 47.84 22 P P 04 42 42.7 -0.5
comp=Z,20nm,0.5s,baz=297,slow=1.1,SNR=11
YAK ScP ScP 04 47 57.5 -1.0
comp=Z,7.6nm,0.3s,baz=164,slow=1.5,SNR=5.3
YAK LR LR 05 05 06.1
comp=Z,506nm,22.0s,baz=268,slow=39
YAK Yakutsk 47.84 22 eP P 04 42 42.1 -1.1
YAK e*PP sP 04 43 11.7 +0.9
YAK eS S 04 49 31.2 -3.1
YAK pmax pmax
comp=Z,51nm,0.7s
YAK pmax pmax
comp=N,21nm,1.0s
YAK pmax pmax
comp=E,13nm,0.9s
YAK smax smax
comp=N,179nm,2.0s
YAK smax smax
comp=E,187nm,1.5s
YAK Yakutsk 47.84 22 P P 04 42 42.8 -0.3
YAK IAmb IAmb 04 42 43.7
comp=Z,64nm,0.8s
GURO Guroymak-BITLI 48.18 304 eP P 04 42 48.9 +2.6
KBZ Khabaz 48.31 311 P P 04 42 48.0 +1.0
comp=Z,41nm,0.9s,baz=53,slow=20,SNR=57
KBZ LR LR 05 09 16.0
comp=Z,240nm,19.0s,baz=128,slow=44
KBZ Khabaz 48.31 311 *d* iP P 04 42 48.3 +1.3
KBZ pmax pmax
comp=Z,83nm,1.0s
GOF Gofitskoye 48.48 312⇓ iP P 04 42 50.0 +1.6
GOF eS S 04 49 47.0 +3.2
GOF pmax pmax
comp=Z,357nm,1.4s
GOF smax smax
comp=E,148nm,1.4s
KOPR Koprukoy-ERZUR 48.48 305 eP P 04 42 51.1 +2.4
KVAR Kislovodsk Arr 48.49 311 P P 04 42 50.0 +1.3
comp=E,49nm,0.9s,baz=99,slow=1,SNR=18
KIV Kislovodsk 48.50 311 *i* P P 04 42 50.3 +1.6
SNR=65
KIV Kislovodsk 48.50 311 P P 04 42 50.4 +1.7
KIV Kislovodsk 48.50 311 eP P 04 42 50.1 +1.4
KIV eS S 04 49 47.5 +3.1
KIV pmax pmax
comp=Z,953nm,1.1s
KIV pmax pmax
comp=Z,111nm,2.7s
KIV Kislovodsk 48.50 311 P P 04 42 49.6 +0.9
VRTB Varto-Mus 48.69 304 eP P 04 42 52.9 +2.6
NRIK Noril'sk 48.74 357 P P 04 42 50.1 +0.1
comp=Z,44nm,0.5s,baz=155,slow=6.1,SNR=55
NRIK ScP ScP 04 48 02.7 +0.5
comp=Z,60nm,0.9s,baz=162,slow=2.9,SNR=15
NRIK S S 04 49 46.5 -0.3
comp=Z,38nm,1.2s,baz=186,slow=13,SNR=12
NRIK ScS ScS 04 52 32.2 -2.5
comp=Z,3.4nm,0.7s,baz=94,slow=21,SNR=8.6
NRIK LR LR 05 06 13.1
comp=Z,324nm,21.7s,baz=194,slow=39
NRIK Noril'sk 48.74 357 *ce* P P 04 42 50.4 +0.4
SVAN Silvan-Diyarba 48.79 303 eP P 04 42 52.9 +2.0
PSA00 Pilbara Seismi 48.88 148 P P 04 42 51.3 -0.4
PSA00 Pilbara Seismi 48.88 148 IAmb IAmb 04 42 56.2
comp=Z,74nm,1.1s
MTN Manton Dam 49.19 130 P P 04 42 53.0 -1.1
baz=49,SNR=17
BNGB Bingl 49.27 304 eP P 04 42 56.7 +2.0
FITZ Fitzroy Crossi 49.30 139 ScP ScP 04 48 04.3 -1.0
comp=Z,16nm,0.9s,baz=319,slow=2.5,SNR=9.1
FITZ ScS ScS 04 52 37.7 -2.3
comp=Z,3.2nm,1.0s,baz=229,slow=19,SNR=9.5
FITZ Fitzroy Crossi 49.30 139 P P 04 42 54.9 0.0
baz=49,SNR=25
FITZ Fitzroy Crossi 49.30 139 IAmb IAmb 04 42 56.4
comp=Z,72nm,0.9s
MAZI Mazidag 49.33 302 eP P 04 42 56.8 +1.6
YEDI Yedisu-Bingol 49.42 305 eP P 04 42 57.8 +1.9
CHOM Cayeli-Rize 49.44 307 eP P 04 42 57.7 +1.9
KNRA Kununurra 49.50 134 P P 04 42 56.3 -0.2
baz=50,SNR=77
KOPT Kop Dagi 49.52 305 IAmb IAmb 04 43 00.9
comp=Z,104nm,1.2s
DYBB Diyarbakir 49.61 303 eP P 04 42 59.2 +2.0
KIRV Kirov 49.68 331 P P 04 42 57.5 +0.2
comp=Z,100nm,0.6s,baz=130,slow=2.0,SNR=38
KIRV ScP ScP 04 48 06.7 +0.3
comp=Z,28nm,0.9s,baz=118,slow=4.5,SNR=6.8
KIRV S S 04 49 58.6 -1.6
comp=Z,9.3nm,0.5s,baz=108,slow=20,SNR=11
KIRV Kirov 49.68 331 *d* iP P 04 42 57.3 0.0
KDU Kakadu 50.06 128 P P 04 43 00.3 -0.5
baz=50,SNR=5.4
ATD Arta Tunnel 50.19 268 P P 04 43 03.4 +1.4
comp=Z,21nm,1.0s,baz=93,slow=5.3,SNR=8.5
PTK Pertek 50.26 304 eP P 04 43 04.1 +1.8
SVRC Sivrice-ELAZID 50.29 303 eP P 04 43 04.0 +1.5
SOC Sochi 50.55 310 eP P 04 43 02.7 -1.5
SOC e*PP pP 04 43 21.7 -1.8
SOC e*SP sP 04 43 28.1 -4.2
SOC e 04 44 57.5
SOC ePPP PPP 04 46 07.8
SOC eS S 04 50 13.7 +0.8
SOC eSS SS 04 53 51.0 +3.3
SOC eSSS SSS 04 55 18.0
SOC pmax pmax
comp=Z,113nm,0.6s
URFA Urfa 50.62 302 eP P 04 43 06.7 +1.8
VRH Novokhopyorsk 50.87 320 eP P 04 43 06.0 -0.4
VRH eS S 04 50 13.6 -3.4
VRH e 04 52 47.3
VRH pmax pmax
comp=Z,150nm,0.8s
VRH smax smax
comp=N,700nm,1.8s
MALT Malatya 50.98 303 eP P 04 43 09.5 +1.9
MALT Malatya 50.98 303 P P 04 43 09.3 +1.7
GAZ Gaziantep 51.89 301 eP P 04 43 15.9 +1.5
RSDY Resadiye-TOKAT 51.97 306 eP P 04 43 16.7 +1.8
SVSK Karacayir 52.19 305 eP P 04 43 18.4 +2.0
VORD Divnogorie 52.29 319 eP P 04 43 16.3 -0.7
VORD eS S 04 50 34.1 -2.4
VORD e 04 52 58.7
VORD pmax pmax
comp=Z,70nm,0.9s
VORD smax smax
comp=N,270nm,1.1s
ANN Anapa 52.35 311 eP P 04 43 16.7 -0.9
ANN e*PP pP 04 43 36.4 -0.4
ANN e 04 45 18.4
ANN eS S 04 50 39.1 +1.6
ANN pmax pmax
comp=Z,83nm,0.9s
ANN pmax pmax
comp=Z,67nm,0.8s
VSR Storozhevoye 52.43 319 eP P 04 43 17.1 -0.9
VSR eS S 04 50 33.6 -4.8
VSR e 04 52 56.8
VSR pmax pmax
comp=Z,30nm,0.7s
VSR smax smax
comp=N,310nm,1.4s
VORR Voronezh 52.52 320 eP P 04 43 18.0 -0.7
VORR pmax pmax
comp=Z,350nm,1.2s
SARI SarD1z-Kayseri 52.56 303 eP P 04 43 21.1 +1.6
TOKT Tokat 52.56 305 eP P 04 43 20.9 +1.6
MEEK Meekatharra 52.65 153 P P 04 43 20.3 +0.3
baz=53,SNR=13
TAHT Tahtakopru-Hat 52.70 300 eP P 04 43 21.9 +1.6
HWQ Hawqa 52.91 298 eP P 04 43 23.8 +1.8
LPSR Galich'ya Gora 52.92 321 eP P 04 43 21.2 -0.4
LPSR eS S 04 50 42.2 -2.8
LPSR e 04 53 02.5
LPSR pmax pmax
comp=Z,130nm,0.8s
LPSR smax smax
comp=N,260nm,2.4s
KVT Kavak 52.99 306 eP P 04 43 24.1 +1.7
KVT Kavak 52.99 306 P P 04 43 24.2 +1.8
KOZT Kozan 53.00 302 eP P 04 43 23.8 +1.3
RCY Rachaya 53.02 297 eP P 04 43 24.5 +1.6
BNN Bunyan 53.02 304 eP P 04 43 24.0 +1.2
CEYT Ceyhan 53.06 301 eP P 04 43 24.8 +1.9
BHL Bhannes 53.16 297 eP P 04 43 25.7 +1.8
KARA Karaisali 53.61 302 eP P 04 43 28.4 +1.4
DIKM Dikmen 53.62 307⇑ P P 04 43 28.7 +1.7
CMRD Camardi-Nigde 53.67 302 eP P 04 43 29.2 +1.6
ANKE Ethiopia-Afar 53.70 267 *i* P P 04 43 31.2 +2.8
MORW Morawa 53.77 156 P P 04 43 28.8 +0.7
baz=54,SNR=22
MORW Morawa 53.77 156 IAmb IAmb 04 43 30.0
comp=Z,89nm,1.1s
CORM Corum 54.02 305 eP P 04 43 31.2 +1.1
MERS Mersin 54.04 301 eP P 04 43 31.3 +1.1
MOS Moscow 54.49 324 eP P 04 43 31.9 -1.2
MOS e*PP pP 04 43 52.3 -0.1
MOS e 04 44 34.8
MOS e 04 45 35.4
MOS eS S 04 51 01.8 -4.4
MOS e 04 53 14.1
MOS pmax pmax
comp=Z,85nm,0.9s
BZK Bozkurt 54.57 307⇓ P P 04 43 35.8 +1.9
TIXI Tiksi 54.63 13 *c* iP P 04 43 32.7 -1.1
TIXI pmax pmax
comp=Z,391nm,1.0s
TIXI Tiksi 54.63 13 P P 04 43 32.7 -1.1
TIXI IAmb IAmb 04 43 34.5
comp=Z,60nm,0.8s
SIM Simferopol' 54.71 311 *i* P P 04 43 34.5 -0.4
SIM eS S 04 51 10.4 +0.9
SIM pmax pmax
comp=Z,121nm,0.9s
BR131 Keskin Array S 54.76 305 *d* iP P 04 43 35.8 +0.3
BR131 Keskin Array S 54.76 305 IAmb IAmb 04 43 37.3
comp=Z,52nm,1.0s
BRTR Keskin Array B 54.76 305 P P 04 43 36.0 +0.5
comp=Z,41nm,0.9s,baz=114,slow=8.2,SNR=264
BRTR ScP ScP 04 48 28.4 -0.6
comp=Z,8.7nm,0.8s,baz=127,slow=5.5,SNR=12
BRTR S S 04 51 14.2 +3.5
comp=Z,0.6nm,0.9s,baz=90,slow=10,SNR=7.6
BRTR LR LR 05 14 29.0
comp=Z,70nm,18.9s,baz=111,slow=44
BRTR Keskin Array B 54.76 305 P P 04 43 35.5 0.0
OBN Obninsk 54.91 324⇑ P P 04 43 36.0 0.0
OBN Obninsk 54.91 324 *d* iP P 04 43 35.5 -0.6
OBN *i* 04 44 37.6
OBN *i* 04 45 40.5
OBN pmax pmax
comp=Z,138nm,1.3s
OBN Obninsk 54.91 324 P P 04 43 36.0 0.0
OBN IAmb IAmb 04 43 37.6
comp=Z,62nm,0.7s
KLMR Klimovskoe 55.18 331 eP P 04 43 35.7 -2.2
KLMR *e* 04 45 39.8
KLMR pmax pmax
comp=Z,100nm,1.1s
KLMR Klimovskoe 55.18 331 eP P 04 43 35.8 -2.2
KLMR AMP 04 43 38.7
comp=Z,100nm,1.1s
KLMR ePP PP 04 45 39.8 -2.1
LEF Lefka 55.40 299⇑ P P 04 43 41.4 +1.5
BLDU Ballidu 55.41 157 P P 04 43 40.2 +0.3
baz=56,SNR=12
MA2 Magadan 55.43 31 P P 04 43 39.2 -0.6
comp=Z,50nm,0.8s,baz=245,slow=5.6,SNR=6.8
MA2 ScP ScP 04 48 29.9 -1.5
comp=Z,42nm,0.9s,baz=233,slow=3.3,SNR=6.8
MA2 LR LR 05 07 37.4
comp=Z,1μm,19.7s,baz=174,slow=36
MA2 Magadan 55.43 31⇑ eP P 04 43 39.0 -0.8
MA2 pmax pmax
comp=Z,63nm,1.0s
MA2 Magadan 55.43 31 P P 04 43 39.1 -0.8
MA2 IAmb IAmb 04 43 42.7
comp=Z,50nm,0.8s
WB0 Warramunga Arr 56.18 133 IAmb IAmb 04 43 46.3
comp=Z,48nm,0.7s
WRKA Warakurna 56.21 143 P P 04 43 46.1 +0.3
baz=56,SNR=119
RER Riviere de l'E 56.26 225 P P 04 43 47.0 +0.8
WRA Warramunga Arr 56.26 133 P P 04 43 45.9 -0.4
comp=Z,55nm,0.7s,baz=323,slow=7.4,SNR=352
WRA PcP PcP 04 44 43.2 +0.1
comp=Z,10nm,0.7s,baz=319,slow=4.1,SNR=1.6
WRA pPcP 04 45 04.6
comp=Z,9.1nm,0.7s,baz=327,slow=3.5,SNR=4.8
WRA ScP ScP 04 48 33.0 -2.6
comp=Z,8.9nm,0.9s,baz=322,slow=4.5,SNR=8.2
WRA S S 04 51 27.1 -3.6
comp=Z,3.1nm,1.1s,baz=314,slow=14,SNR=12
WRA ScS ScS 04 53 25.8 -3.1
comp=Z,1.8nm,1.0s,baz=318,slow=8.4,SNR=5.6
WRA LR LR 05 11 24.4
comp=Z,121nm,20.7s,baz=320,slow=40
WRA PKP2ab 05 14 14.6
comp=Z,7.3nm,1.0s,baz=126,slow=2.3,SNR=5.0
WRA Warramunga Arr 56.26 133 P P 04 43 45.6 -0.6
WRAB Tennant Creek 56.26 133 *c* iP P 04 43 46.1 -0.2
WRAB pmax pmax
comp=Z,81nm,0.9s
WRAB Tennant Creek 56.26 133 P P 04 43 45.7 -0.6
WRAB IAmb IAmb 04 43 47.2
comp=Z,68nm,0.8s
WB2 Warramunga Arr 56.27 133 IAmb IAmb 04 43 47.2
comp=Z,71nm,0.8s
MUN Mundaring 56.46 158 P P 04 43 47.7 +0.3
baz=57,SNR=35
KLBR Kellerberrin 56.68 156 P P 04 43 48.9 -0.1
baz=57,SNR=21
BCK Bucak 57.17 302 P P 04 43 51.8 -0.8
ISP Isparta 57.21 302 P P 04 43 53.0 0.0
ISP pmax pmax
comp=Z,169nm,1.1s
SEY Seymchan 57.28 27 P P 04 43 51.5 -1.4
comp=Z,8.7nm,0.6s,baz=264,slow=4.4,SNR=12
SEY ScP ScP 04 48 38.0 -1.4
comp=Z,14nm,0.8s,baz=228,slow=5.2,SNR=6.9
SEY LR LR 05 11 02.3
comp=Z,382nm,19.4s,baz=244,slow=39
SEY Seymchan 57.28 27⇓ *e* P P 04 43 52.1 -0.7
PETK Petropavlovsk- 57.66 40 P P 04 43 54.3 -1.5
comp=Z,9.3nm,0.8s,baz=224,slow=4.1,SNR=5.4
PETK ScP ScP 04 48 38.5 -2.8
comp=Z,5.8nm,0.8s,baz=222,slow=2.0,SNR=3.5
PETK LR LR 05 10 56.2
comp=Z,220nm,18.8s,baz=248,slow=38
PETK Petropavlovsk- 57.66 40 P P 04 43 53.5 -2.3
PETK PcP 04 44 46.8 -1.2
NWAO Narrogin (SRO) 57.69 157 LR LR 05 12 26.1
comp=Z,102nm,18.1s,baz=72,slow=40
NWAO Narrogin (SRO) 57.69 157 P P 04 43 56.2 +0.1
baz=58,SNR=23
NWAO Narrogin (SRO) 57.69 157 P P 04 43 55.4 -0.7
NWAO pmax pmax
comp=Z,60nm,0.8s
NWAO Narrogin (SRO) 57.69 157 P P 04 43 55.4 -0.7
ELL Elmali 57.74 301 P P 04 43 57.2 +0.4
PURM Purcari 57.80 313⇓ P P 04 43 59.1 +2.4
AKAS Kas 58.02 300 IAmb IAmb 04 43 59.2
comp=Z,62nm,0.9s
KSL Kastellorizon 58.04 300 P P 04 43 58.0 -0.6
KMBL Kambalda 58.17 152 P P 04 43 59.8 +0.4
baz=58,SNR=17
PET Petropavlovsk 58.22 40 eP P 04 44 02.8 +3.2
PET e*SP sP 04 44 30.3 +2.7
PET e 04 44 52.9
PET eS S 04 51 56.4 +0.8
PET pmax pmax
comp=Z,57nm,1.2s
PET MLR MLR
comp=Z,200nm,21.0s
ISK Istanbul-Kandi 58.27 306 P P 04 44 00.6 +0.4
FETY Fethiye 58.41 301 P P 04 44 00.5 -0.8
JURR Jurilovca 58.42 310⇓ P P 04 44 00.8 -0.4
TLCR 58.48 311⇓ P P 04 44 02.1 +0.6
TLCR 58.48 311 P P 04 44 02.1 +0.6
AKASG Malin Array Be 58.54 317 P P 04 44 01.2 -0.6
comp=Z,30nm,0.7s,baz=82,slow=6.3,SNR=136
AKASG pP pP 04 44 22.2 +0.8
comp=Z,22nm,0.7s,baz=79,slow=6.5,SNR=5.3
AKASG PP PP 04 46 11.6 -0.3
comp=Z,24nm,1.1s,baz=83,slow=7.8,SNR=5.9
AKASG ScP ScP 04 48 44.4 -0.8
comp=Z,10nm,0.8s,baz=79,slow=4.5,SNR=11
AKASG S S 04 51 56.2 -3.6
comp=Z,4.8nm,0.8s,baz=90,slow=12,SNR=13
AKASG LR LR 05 13 57.5
comp=Z,325nm,20.1s,baz=85,slow=41
AKASG PKP2ab 05 14 04.0
comp=Z,0.2nm,0.3s,baz=273,slow=3.7,SNR=4.0
AKASG Malin Array Be 58.54 317 *ce* P P 04 44 01.2 -0.6
AKASG pmax pmax
comp=Z,62nm,0.8s
AKASG Malin Array Be 58.54 317 P P 04 44 00.9 -1.0
AKBB Malin Array Si 58.54 317 *d* iP P 04 44 01.2 -0.7
AKBB pmax pmax
comp=Z,61nm,0.9s
AKBB Malin Array Si 58.54 317 IAmb IAmb 04 44 02.3
comp=Z,56nm,0.8s
KIS Kishinev 58.54 313 eP P 04 44 01.0 -1.0
KIS Kishinev 58.54 313 *ce* PcP PcP 04 44 40.0 -12
KIS Kishinev 58.54 313 eP P 04 44 01.0 -1.0
KIS *e* 04 51 59.0
MILM Milestii Mici 58.54 313⇓ P P 04 44 01.9 0.0
TSCT Constanta Port 58.57 310⇓ P P 04 44 03.5 +1.3
ASAR Alice Springs 58.58 137 P P 04 44 03.0 +0.4
comp=Z,34nm,0.6s,baz=318,slow=6.9,SNR=443
ASAR ScP ScP 04 48 44.2 -1.7
comp=Z,6.0nm,0.9s,baz=317,slow=4.7,SNR=6.9
ASAR S S 04 51 58.8 -2.3
comp=Z,1.8nm,0.9s,baz=313,slow=13,SNR=8.6
ASAR ScS ScS 04 53 42.1 -3.6
comp=Z,7.2nm,1.0s,baz=309,slow=6.9,SNR=13
ASAR PKP2ab 05 14 07.8
comp=Z,2.6nm,0.8s,baz=108,slow=2.1,SNR=3.4
ASAR Alice Springs 58.58 137 P P 04 44 03.0 +0.4
ASAR Alice Springs 58.58 137 P P 04 44 02.7 +0.1
MANR Mangalia 58.61 309⇓ P P 04 44 02.3 -0.2
MFTR Murfatlar 58.74 310⇑ P P 04 44 04.4 +1.0
TIRR Tirgusor 58.75 310⇓ P P 04 44 04.1 +0.7
TIRR Tirgusor 58.75 310⇓ P P 04 44 04.1 +0.7
TIRR Tirgusor 58.75 310 P P 04 44 04.4 +1.0
TIRR pmax pmax
comp=Z,154nm,1.1s
TPGR Topolog 58.75 311⇓ P P 04 44 03.8 +0.3
PSN Preselentsi 58.91 309 *i* P P 04 44 05.4 +0.8
SORM Soroca 58.92 314⇓ P P 04 44 04.5 0.0
SORM Soroca 58.92 314 P P 04 44 04.5 0.0
CFR Carcaliu 58.96 311⇑ P P 04 44 05.2 +0.3
CFR Carcaliu 58.96 311 P P 04 44 05.3 +0.4
CFR pmax pmax
comp=Z,53nm,1.1s
TLBR Topalu 59.01 310⇑ P P 04 44 06.2 +0.9
YER Yerkesik 59.02 302 P P 04 44 05.7 +0.1
COEN Coen 59.05 122 P P 04 44 06.1 +0.1
baz=59,SNR=18
COEN Coen 59.05 122 P P 04 44 06.0 +0.1
COEN P PcP 04 44 54.9 +0.7
HARR Harsova 59.09 310⇑ P P 04 44 06.4 +0.6
HARR Harsova 59.09 310 P P 04 44 06.4 +0.6
RKGY Rocky Gully 59.12 158 P P 04 44 06.4 +0.4
baz=59,SNR=12
ICOR Ion Corvin 59.18 310⇓ P P 04 44 07.7 +1.2
ARG Arkhangelos 59.21 300 P P 04 44 07.1 +0.3
ARG pmax pmax
comp=Z,95nm,1.0s
VASR Vaslui 59.23 313⇓ P P 04 44 07.2 +0.4
PUL Pulkovo 59.26 328⇑ eP P 04 44 06.6 -0.1
PUL pmax pmax
comp=Z,90nm,0.5s
TUDR 59.29 311⇑ P P 04 44 08.3 +1.1
BIR Birlad 59.34 312⇓ P P 04 44 09.2 +1.6
BIR Birlad 59.34 312 P P 04 44 09.1 +1.6
IAS Iasi 59.41 313⇑ P P 04 44 09.2 +1.2
IAS Iasi 59.41 313 P P 04 44 09.3 +1.3
IAS pmax pmax

comp=Z,45nm,0.8s
JOF Joensuu 59.51 332 P **P** 04 44 08.7 +0.3
JOF pmax pmax
comp=Z,128nm,1.3s
AMRR Amara 59.52 310 ⇓P **P** 04 44 09.6 +0.9
PETR Petresti 59.60 312 ⇓P **P** 04 44 11.2 +1.9
LVZ Lovozero 59.68 338*de*P **P** 04 44 08.6 -0.9
LVZ pmax pmax
comp=Z,105nm,1.3s
LVZ Lovozero 59.68 338 P **P** 04 44 08.5 -1.1
ODBI Odobesti 59.73 312 ⇑P **P** 04 44 11.8 +1.7
MICGM Minsk 59.74 322⇑ *e*P P 04 44 15.0 +4.9
MICGM PM 04 44 16.0
comp=Z,0.3nm,1.0s
MNK Minsk 59.74 322 *e*P P 04 44 15.0 +4.9
MNK pmax pmax
comp=Z,300nm,1.0s
KIBK Kibwezi 59.76 254 P **P** 04 44 11.8 +0.8
SNR=25
PGOR Pogoanele 59.77 311 ⇑P **P** 04 44 11.1 +0.6
GRER 59.78 311 ⇓P **P** 04 44 12.6 +2.0
BODT Bodrum 59.80 302 P **P** 04 44 10.8 -0.1
LEHL Lehliu 59.89 310 ⇓P **P** 04 44 11.4 +0.1
PMG Port Moresby 59.90 115 P **P** 04 44 11.3 -0.5
comp=Z,28nm,0.8s,baz=276,slow=7.0,SNR=6.9
PMG LR LR 05 12 28.4
comp=Z,138nm,20.1s,baz=271,slow=38
PMG Port Moresby 59.90 115*c iP* **P** 04 44 12.0 +0.2
PMG pmax pmax
comp=Z,34nm,1.0s
PMG Port Moresby 59.90 115 P **P** 04 44 12.0 +0.2
PMG IAmb IAmb 04 44 24.9
comp=Z,40nm,1.1s
LODK Lodwar 59.91 262 P **P** 04 44 13.5 +1.5
SNR=33
BLCB Balcova 59.92 303 P **P** 04 44 12.1 +0.4
NIS1 Nisyros Isl. 59.94 301 P **P** 04 44 11.3 -0.6
VRI Vrincioaia 59.96 312 ⇓P **P** 04 44 13.1 +1.3
VRI Vrincioaia 59.96 312 P **P** 04 44 13.1 +1.3
VRI pmax pmax
comp=Z,199nm,1.1s
KMBO Kilima Mbogo 59.96 256 P **P** 04 44 14.7 +2.2
comp=Z,76nm,0.9s,baz=51,slow=9.6,SNR=170
KMBO LR LR 05 07 47.3
comp=Z,386nm,21.3s,baz=60,slow=34
KMBO Kilima Mbogo 59.96 256 *i* P **P** 04 44 13.6 +1.1
SNR=111
KMBO Kilima Mbogo 59.96 256 P **P** 04 44 13.6 +1.1
KMBO Kilima Mbogo 59.96 256 *i* P **P** 04 44 15.1 +2.5
KMBO pmax pmax
comp=Z,76nm,0.9s
KMBO Kilima Mbogo 59.96 256 P **P** 04 44 13.3 +0.8
PLOR Plostina 60.01 312 ⇓P **P** 04 44 13.7 +1.5
PLOR Plostina 60.01 312 P **P** 04 44 13.7 +1.5
TESR Tescani 60.02 312 ⇓P **P** 04 44 12.8 +0.6
KARP Karpathos 60.05 300 P **P** 04 44 12.9 +0.3
ISR Istrita 60.08 311 ⇑P **P** 04 44 14.6 +1.9
ISR Istrita 60.08 311 P **P** 04 44 14.6 +1.9
ISR pmax pmax
comp=Z,175nm,1.0s
JMB Yambol 60.09 308 *i* P **P** 04 44 14.5 +1.8
RAZG Razgrad 60.12 309 ⇓P **P** 04 44 13.9 +0.9
SMG Samos 60.13 302 P **P** 04 44 13.7 +0.6
NEHR Nehoiu 60.26 311 ⇑P **P** 04 44 15.4 +1.5
SULR 60.29 310 ⇑P **P** 04 44 15.5 +1.5
PRAR RASCA 60.32 313 ⇓P **P** 04 44 14.5 +0.2
QIS Mount Isa 60.35 130 P **P** 04 44 15.0 +0.3
baz=60,SNR=26
EZN Ezine 60.40 305 P **P** 04 44 15.4 +0.6
EZN Ezine 60.40 305 P **P** 04 44 15.2 +0.4
BIZ Bicaz 60.40 313 ⇓P **P** 04 44 15.1 +0.3
NACGM Naroch 60.42 322 *e*P **P** 04 44 15.0 +0.3
NACGM PM 04 44 16.0
comp=Z,0.4nm,1.0s
SECR 60.42 311 ⇓P **P** 04 44 16.3 +1.3
PRK Paraskevi 60.47 304 P **P** 04 44 16.5 +1.1
IDID Didziasalis 60.48 323 *e*P **P** 04 44 15.3 +0.1
SGRR Singureni 60.50 310 ⇑P **P** 04 44 16.6 +1.1
MLR Muntele Rosu 60.51 311 P **P** 04 44 16.7 +1.1
comp=Z,160nm,0.8s,baz=53,slow=1.6,SNR=266
MLR Muntele Rosu 60.51 311 ⇓P **P** 04 44 17.0 +1.3
ALN Alexandroupoli 60.55 306 P **P** 04 44 16.8 +0.9
ALN pmax pmax
comp=Z,146nm,1.3s
ALN Alexandroupoli 60.55 306 P **P** 04 44 16.4 +0.5
OPO Ambohidratompo 60.58 233 P **P** 04 44 17.2 +0.7
comp=Z,74nm,0.9s,baz=58,slow=7.3,SNR=75
FORT Forrest 60.61 147 P **P** 04 44 16.6 +0.3
FORT IAmb IAmb 04 44 30.4
comp=Z,30nm,0.8s
OZUR 60.61 312 ⇓P **P** 04 44 17.2 +0.9
GADA Gvkgeada 60.70 305 P **P** 04 44 17.5 +0.6
IIGN Ignalina 60.78 323 *e*P **P** 04 44 17.6 +0.4
SIGR SIGRI 60.80 304 P **P** 04 44 17.3 -0.3
IZAR Zarasai 60.81 320 *e*P **P** 04 44 17.8 +0.4
ABPO Ambohimpanom 60.82 233 P **P** 04 44 18.3 +0.1
ABPO pmax pmax
comp=Z,131nm,0.9s
ABPO Ambohimpanom 60.82 233 P **P** 04 44 18.3 +0.1
ZKR Zakros 60.86 299 P **P** 04 44 18.4 +0.3
ISAL Salakas 60.86 323 *e*P **P** 04 44 17.8 +0.1
VSU Vasula 60.86 326 *e*P **P** 04 44 17.6 -0.1
VSU Vasula 60.86 326*d iP* **P** 04 44 17.3 -0.4
DIM Dimitrovgrad 60.88 307 *i* P **P** 04 44 19.2 +1.1
DOPR Dopca 60.89 312 ⇑P **P** 04 44 19.1 +0.9
RDO Rodhopi 60.92 306 P **P** 04 44 18.9 +0.5
STIA Sitia Lasithi 60.95 299 P **P** 04 44 19.4 +0.7
ZIMR 60.95 309 ⇓P **P** 04 44 19.5 +1.0
AMGA Amorgos Island 60.95 301 P **P** 04 44 18.1 -0.6
SMTH Samothraki Isl 60.97 306 P **P** 04 44 18.8 0.0
BURAR Bucovina Array 61.01 314 ⇓P **P** 04 44 19.9 +0.8
BURAR Bucovina Array 61.01 314 P **P** 04 44 19.9 +0.8
BURAR Bucovina Array 61.01 314 P **P** 04 44 18.8 -0.2
BUR08 Bucovina Ar. S 61.02 314 IAmb IAmb 04 44 20.7
comp=Z,33nm,0.8s
COPA Copaceanca 61.04 310 ⇓P **P** 04 44 20.2 +1.0
ANAF Anafi Island 61.09 301 P **P** 04 44 19.6 -0.1
VOIR 61.13 311 ⇑P **P** 04 44 20.1 +0.2
VOIR 61.13 311 P **P** 04 44 20.0 +0.1
VOIR pmax pmax
comp=Z,17nm,0.7s
HUMR Humele 61.20 310 ⇑P **P** 04 44 21.2 +0.9
MSF Maaselka 61.20 335 P **P** 04 44 19.8 -0.1
MSF pmax pmax
comp=Z,87nm,1.0s
STFAR Stefanesti-Arg 61.21 311 ⇑P **P** 04 44 21.8 +1.5
APE Apeiranthos 61.22 302 ⇑P **P** 04 44 20.7 +0.1
APE Apeiranthos 61.22 302 *i* P **P** 04 44 20.7 +0.1
APE pmax pmax
comp=Z,110nm,1.7s
APE Apeiranthos 61.22 302 P **P** 04 44 20.2 -0.4
LIA Limnos Island 61.27 305 P **P** 04 44 21.0 +0.2
NPS Neapolis 61.33 300 P **P** 04 44 21.6 +0.3
THR7 Fira-Santorini 61.36 301 P **P** 04 44 21.7 +0.2
CMBO Columbo, Santo 61.38 301 P **P** 04 44 21.4 -0.2
THR3 Thira Island, 61.39 301 P **P** 04 44 21.6 0.0
THR6 Thira Island, 61.39 301 P **P** 04 44 21.6 -0.1
THR9 Santorini-Faro 61.43 301 P **P** 04 44 22.1 +0.2
SAP3 Santorini-Thir 61.43 301 P **P** 04 44 21.6 -0.3
THR5 Thira Island, 61.43 301 P **P** 04 44 21.7 -0.2
ARR Arges 61.43 311 ⇓P **P** 04 44 22.6 +0.7
LAST Lasithi 61.45 300 P **P** 04 44 22.6 +0.4
PLD Plovdiv 61.50 307 P **P** 04 44 23.1 +0.8
PLD pmax pmax
comp=Z,9.0nm,1.1s
PLD Plovdiv 61.50 307 *i* P **P** 04 44 22.7 +0.4
RZN Rozhen 61.51 307 *i* P **P** 04 44 23.5 +0.8
THAS Thassos island 61.58 306 P **P** 04 44 21.9 -0.9
MDB Medias 61.59 312 ⇑P **P** 04 44 24.3 +1.4
ARCR ARCALIA 61.60 313 ⇑P **P** 04 44 24.6 +1.7
FIA1 FINESS Array S 61.62 330 IAmb IAmb 04 44 23.5
comp=Z,49nm,0.8s
FINES FINESS Array B 61.62 330 P **P** 04 44 22.5 -0.2
comp=Z,29nm,0.7s,baz=103,slow=8.4,SNR=74
FINES pP **pP** 04 44 43.8 +1.4
comp=Z,32nm,0.8s,baz=104,slow=5.9,SNR=6.5
FINES LR LR 05 14 54.0
comp=Z,480nm,21.9s,baz=106,slow=40
FINES FINESS Array B 61.62 330 P **P** 04 44 22.1 -0.7
KAVA Kavala 61.71 306 P **P** 04 44 23.8 +0.1
KRVT Keravat (AS076 61.75 107 LR LR 05 12 18.8
comp=Z,63nm,18.0s,baz=293,slow=37
SUF Sumiainen 61.79 331 P **P** 04 44 24.0 +0.1
SUF pmax pmax
comp=Z,124nm,1.0s
LVV L'vov 61.82 316 *e*P **P** 04 44 24.2 -0.1
LVV *e**PP **pP** 04 44 45.5 +1.4
LVV *e*S **S** 04 52 40.0 -1.9
LVV *e*PS **PnS** 04 52 59.7 -7.4
LVV pmax pmax
comp=Z,190nm,1.2s
PGB Panagyurishte 61.87 308 *i* P **P** 04 44 25.7 +0.8
IDI Anoyia 61.92 300 ⇓P **P** 04 44 25.7 +0.4
IDI Anoyia 61.92 300 P **P** 04 44 25.1 -0.2
SIVA Sivas 62.01 299 P **P** 04 44 26.1 +0.2
LOT Lotru 62.04 311 ⇑P **P** 04 44 26.6 +0.6
PABE Paberze 62.08 323 *e*P **P** 04 44 26.2 +0.3
CJR Cluj-Napoca 62.12 313 ⇓P **P** 04 44 28.1 +1.6
MPEP Malo Peshtene 62.14 309 *i* P **P** 04 44 27.8 +1.2
OUR Ouranopolis 62.16 305 P **P** 04 44 26.8 +0.1
MHLO Agia Marina, M 62.16 301 P **P** 04 44 26.3 -0.5
NVR Nevrokopi 62.17 307 P **P** 04 44 26.6 -0.3
BMR Baia Mare 62.17 314 ⇓P **P** 04 44 28.1 +1.4
KYMI Kymi, Euboea I 62.21 304 P **P** 04 44 27.3 +0.2
PRNS Prines Rethymn 62.22 300 P **P** 04 44 27.9 +0.6
MMB Musomiste 62.26 307 *i* P **P** 04 44 27.0 -0.5
OUL Oulu 62.31 334 P **P** 04 44 27.4 +0.1
OUL pmax pmax
comp=Z,63nm,1.1s
AOS Alonnisos 62.33 304 P **P** 04 44 27.9 0.0
MTSU Mount Surprise 62.36 125 P **P** 04 44 29.0 +0.6
baz=62,SNR=9.8
DION Dionisos Attik 62.39 303 P **P** 04 44 27.9 -0.5
SRS Serrai 62.39 306 P **P** 04 44 28.5 +0.1
SRS pmax pmax
comp=Z,92nm,1.1s
SRS Serrai 62.39 306 P **P** 04 44 27.9 -0.5
PAIG Paliouri 62.42 305 P **P** 04 44 29.4 +0.9
PAIG pmax pmax
comp=Z,156nm,1.2s
PAIG Paliouri 62.42 305 P **P** 04 44 28.7 +0.2
PTL Penteli 62.45 303 P **P** 04 44 28.3 -0.5
SUW Suwalki 62.45 321 *e*P **P** 04 44 28.0 -0.5
SUW Suwalki 62.45 321 P **P** 04 44 28.2 -0.3
SUW pmax pmax
comp=Z,224nm,1.1s
VAM Vamos 62.46 300 P **P** 04 44 29.0 +0.1
ATHU Athens Univers 62.52 303 P **P** 04 44 28.6 -0.6
VLY Voula,Athens 62.52 303 P **P** 04 44 28.7 -0.5
VTS Vitosha 62.56 308 *i* P **P** 04 44 30.4 +0.8
PLG Polygyros 62.56 306 P **P** 04 44 29.0 -0.5
ATH Athens Observa 62.57 303 P **P** 04 44 28.9 -0.6
CHAN Chania 62.58 300 P **P** 04 44 29.9 +0.3
SOH Sokhos 62.59 306 P **P** 04 44 30.0 +0.2
SOH pmax pmax
comp=Z,41nm,1.4s
SOH Sokhos 62.59 306 P **P** 04 44 29.2 -0.6
GVDS Gavdos 62.62 299 P **P** 04 44 30.0 0.0
GVD Gavdhos 62.62 299 P **P** 04 44 29.9 -0.1
DEV Deva 62.63 312 P **P** 04 44 31.2 +1.4
DEV pmax pmax
comp=Z,129nm,1.1s
IMMV Iera Moni Meta 62.63 300 P **P** 04 44 30.5 +0.5
PUNG Punghina 62.68 310 ⇓P **P** 04 44 31.1 +1.0
GZR Gura Zlata 62.74 311 ⇑P **P** 04 44 30.3 -0.3
RODP Rodopos 62.80 300 P **P** 04 44 31.8 +0.6
HORT Hortiatis 62.81 306 P **P** 04 44 31.0 -0.2
NEO Neokhori 62.83 304 P **P** 04 44 29.8 -1.5
XOR Xorichti 62.84 304 P **P** 04 44 30.9 -0.5
VILL Villia 62.87 303 P **P** 04 44 30.4 -1.2
KEV Kevo 62.88 339 P **P** 04 44 30.8 -0.2
KEV pmax pmax
comp=Z,41nm,0.8s
KEV Kevo 62.88 339 P **P** 04 44 30.8 -0.2
KEV IAmb IAmb 04 44 32.1
comp=Z,41nm,0.8s
KNDR Palaiochora Ch 62.90 300 P **P** 04 44 35.4 +3.6
THE Thessaloniki 62.91 306 P **P** 04 44 31.7 0.0
THE pmax pmax
comp=Z,93nm,1.1s
VOI Vohitsoka 62.93 230 P **P** 04 44 33.1 +0.8
SNR=7.8
UZH Uzhgorod 62.96 315 ⇓*i*P **P** 04 44 31.0 -1.0
UZH *e* 04 46 47.6
UZH *i* S **S** 04 52 51.3 -4.9
UZH *e*SS **SS** 04 57 02.4 -0.1
UZH MLR MLR
comp=Z,70nm,16.0s
KOLS Kolonicke sedl 62.97 315 *e*P **P** 04 44 32.1 +0.1
KOLS pmax pmax
comp=Z,11nm,1.0s
KOLS Kolonicke sedl 62.97 315 *e*P **P** 04 44 32.1 +0.1
HERR Herculane 63.02 311 ⇑P **P** 04 44 33.1 +0.7
ATAL Atalanti 63.04 304 P **P** 04 44 31.5 -1.2
LKR Lokris 63.06 304 P **P** 04 44 31.3 -1.5
KRND KRANIDI 63.08 302 P **P** 04 44 31.2 -1.7
SLIT Slitere, Latvi 63.13 325 *e*P **P** 04 44 32.0 -0.9
ANKY Antikythira Is 63.13 301 P **P** 04 44 32.9 -0.4
VAY Valandovo 63.15 307 *i* P **P** 04 44 33.4 +0.1
VAY Valandovo 63.15 307 P **P** 04 44 33.1 -0.2
VAY pmax pmax
comp=Z,140nm,1.0s
LOUT Loutraki 63.15 303 P **P** 04 44 31.4 -2.0
LTK Loutraki 63.15 303 P **P** 04 44 31.4 -2.1
PATS Pohnpei 63.23 93 P **P** 04 44 35.6 +1.3
baz=63,SNR=12
PATS Pohnpei 63.23 93 P **P** 04 44 35.1 +0.8
PBUR Paburge 63.25 323 *e*P **P** 04 44 34.5 +0.7
KTHA Kythira Island 63.28 301 P **P** 04 44 33.3 -1.0
GRG Griva 63.30 306 P **P** 04 44 34.5 +0.1
GRG pmax pmax
comp=Z,200nm,0.9s
GRG Griva 63.30 306 P **P** 04 44 33.8 -0.6
LIT Litokhoron 63.31 305 P **P** 04 44 34.1 -0.4
AXAR Agios Charalam 63.32 304 P **P** 04 44 33.3 -1.2
VLI Veliai 63.33 302 P **P** 04 44 33.0 -1.6
ARD3 ARCESS Array S 63.33 338 IAmb IAmb 04 44 35.1
comp=Z,36nm,0.8s
ARD4 ARCESS Array S 63.33 338 IAmb IAmb 04 44 35.1
comp=Z,40nm,0.8s
ARC3 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,39nm,0.8s
ARD2 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.1
comp=Z,34nm,0.8s
ARC2 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,42nm,0.8s
ARD5 ARCESS Array S 63.34 338 P **P** 04 44 34.1 0.0
ARC4 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,36nm,0.8s
ARB2 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,46nm,0.8s
ARB3 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,37nm,0.8s
ARA1 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,39nm,0.8s
ARA2 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,38nm,0.8s
ARA0 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,39nm,0.8s
ARA0 ARCESS Array S 63.34 338 *e*P **P** 04 44 34.5 +0.3
ARB1 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,41nm,0.8s
ARC1 ARCESS Array S 63.34 338 IAmb IAmb 04 44 35.2
comp=Z,41nm,0.8s
ARCES ARCESS Array B 63.34 338 P **P** 04 44 34.3 +0.1
comp=Z,30nm,0.7s,baz=91,slow=7.4,SNR=119
ARCES pP **pP** 04 44 54.8 +0.9
comp=Z,20nm,0.6s,baz=96,slow=7.8,SNR=5.1
ARCES ScP 04 49 07.0
comp=Z,14nm,1.0s,baz=101,slow=4.7,SNR=4.4
ARCES LR LR 05 15 21.7
comp=Z,444nm,21.1s,baz=100,slow=39
ARA3 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,38nm,0.8s
ARB4 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,35nm,0.8s
ARC5 ARCESS Array S 63.35 338 IAmb IAmb 04 44 36.2
comp=Z,50nm,1.1s
ARD1 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,38nm,0.8s
ARB5 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,38nm,0.7s
ARD6 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,37nm,0.7s
ARC7 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,40nm,0.8s
ARC6 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,38nm,0.7s
ARD9 ARCESS Array S 63.35 338 IAmb IAmb 04 44 35.2
comp=Z,40nm,0.7s
ARD7 ARCESS Array S 63.36 338 IAmb IAmb 04 44 36.2
comp=Z,46nm,1.0s
ARD8 ARCESS Array S 63.36 338 IAmb IAmb 04 44 35.3
comp=Z,42nm,0.8s
STIP Stip 63.40 307 *i* P **P** 04 44 33.7 -1.3
VAF Ylistaro 63.41 331 P **P** 04 44 34.9 +0.3
VAF pmax pmax
comp=Z,161nm,1.1s
SIRR Siria 63.48 312 ⇑P **P** 04 44 36.2 +0.7
CRVS Cervenica-Dubn 63.51 315 *e*P **P** 04 44 36.4 +0.8
CRVS pmax pmax
comp=Z,122nm,1.1s
CRVS Cervenica-Dubn 63.51 315 *e*P **P** 04 44 36.4 +0.8
MDVR Moldovita 63.52 311 ⇓P **P** 04 44 36.8 +1.0
BZS Buzias 63.54 312 ⇓P **P** 04 44 36.3 +0.4
BZS Buzias 63.54 312 P **P** 04 44 36.5 +0.6
BZS pmax pmax
comp=Z,55nm,1.3s
AGG Agios Georgios 63.54 304 IAmb IAmb 04 44 36.2
comp=Z,74nm,0.9s
AGG Agios Georgios 63.54 304 P **P** 04 44 34.4 -1.7
KTI Kastanea 63.57 306 P **P** 04 44 35.7 -0.6
GUR Goura 63.65 303 P **P** 04 44 35.4 -1.5
VLX Vlachokerasia 63.69 302 P **P** 04 44 36.0 -1.1
MAKR Makrakomi, Fth 63.70 304 P **P** 04 44 35.9 -1.2
TRIP Tripoli 63.76 302 P **P** 04 44 36.8 -0.7
KLV Kalavryta, Ach 63.79 303 P **P** 04 44 35.9 -1.8
KZN Kozani 63.84 306 P **P** 04 44 37.5 -0.5
BEL Belsk 63.87 318 *e*P **P** 04 44 38.3 +0.4
BEL Belsk 63.87 318 P **P** 04 44 38.6 +0.7
BEL pmax pmax
comp=Z,308nm,0.9s
ANX Ano Chora 63.91 304 P **P** 04 44 37.5 -1.0
SKO Skopje 63.93 307 *i* P **P** 04 44 38.5 -0.1
EVR Evrytania 63.96 304 P **P** 04 44 37.4 -1.5
KTK1 Kautokeino 64.03 338 *e*P **P** 04 44 38.6 -0.1
ITM Ithomi 64.07 302 P **P** 04 44 38.4 -1.1
KECS Kecovo 64.17 315 *e*P **P** 04 44 40.2 +0.3
KECS pmax pmax
comp=Z,18nm,1.1s
KECS Kecovo 64.17 315 *e*P **P** 04 44 40.2 +0.3
HAMF Hammerfest 64.18 340 *e*P **P** 04 44 40.0 +0.4
AMT Artemida-Makis 64.20 303 P **P** 04 44 39.4 -1.0
NIE Niedzica 64.25 316 *e*P **P** 04 44 41.6 +1.1
NIE Niedzica 64.25 316 P **P** 04 44 41.7 +1.2
NIE pmax pmax
comp=Z,59nm,1.0s
PYL PYLOS 64.25 302 P **P** 04 44 39.5 -1.2
PENT Pentalofos 64.33 306 P **P** 04 44 39.3 -2.0
NEST Nestorio 64.38 306 P **P** 04 44 40.6 -1.0
OHR Ohrid 64.50 307 *i* P **P** 04 44 41.3 -1.0
OHR Ohrid 64.50 307 P **P** 04 44 43.4 +1.1
OHR pmax pmax
comp=Z,140nm,1.0s
OJC Ojcow 64.54 317 *e*P **P** 04 44 42.5 +0.1
OJC Ojcow 64.54 317 IAmb IAmb 04 44 43.6
comp=Z,45nm,1.0s
PSZ Piszkesteto 64.59 314 ⇑P **P** 04 44 43.2 +0.3
PSZ Piszkesteto 64.59 314 P **P** 04 44 43.1 +0.3
PSZ pmax pmax
comp=Z,47nm,1.3s
FOMA Nahampoana Res 64.75 228 IAmb IAmb 04 44 45.6
comp=Z,79nm,1.0s
DIVS Divibare 64.80 310 ⇓*i*P **P** 04 44 44.6 +0.3
LANS Liptovska Anna 64.81 316 *e*P **P** 04 44 44.9 +0.8
LANS pmax pmax
comp=Z,12nm,0.9s
LANS Liptovska Anna 64.81 316 *e*P **P** 04 44 44.9 +0.8
FRGS Fruska Gora 64.84 311 ⇓*i*P **P** 04 44 44.2 -0.2
NYDR Nydri-Lefkada 64.84 304 P **P** 04 44 43.2 -1.3
LKD2 Lefkada island 64.87 304 P **P** 04 44 44.0 -0.7
EVGI Lefkada island 64.89 304 P **P** 04 44 43.7 -1.1
CTA Charters Tower 64.98 125 P **P** 04 44 45.6 0.0
comp=Z,22nm,0.9s,baz=314,slow=8.3,SNR=29
CTAO Charters Tower 64.98 125 P **P** 04 44 45.5 -0.1
CTAO pmax pmax
comp=Z,31nm,1.0s
CTAO Charters Tower 64.98 125 P **P** 04 44 45.5 -0.1
IGT Igoumenitsa 65.03 305 P **P** 04 44 44.3 -1.4
IGT pmax pmax
comp=Z,85nm,0.9s
IGT Igoumenitsa 65.03 305 P **P** 04 44 43.7 -2.0
TEKS Tekeris 65.09 310 *e*P **P** 04 44 44.7 -1.4
DMLN Damoulianata-K 65.16 303 P **P** 04 44 45.3 -1.3
TIR Tirane 65.17 307 ⇓P **P** 04 44 46.4 -0.2
TIR Tirane 65.17 307 P **P** 04 44 46.5 -0.1
TIR pmax pmax
comp=Z,89nm,0.9s
TIR Tirane 65.17 307 IAmb IAmb 04 44 47.0
comp=Z,67nm,0.8s
BUD Budapest 65.21 314 P **P** 04 44 44.5 -2.2
BUD pmax pmax
comp=Z,21nm,1.3s
BBLS Lazići 65.25 310 ⇓*i*P **P** 04 44 47.8 +0.7
VYHS Vyhne 65.26 315 *e*P **P** 04 44 47.2 +0.1
VYHS *e* 04 45 08.2
VYHS pmax pmax
comp=Z,28nm,1.1s
VYHS Vyhne 65.26 315 *e*P **P** 04 44 47.2 +0.1
VYHS *e* 04 45 08.2
PLE Pljevlja 65.31 309 P **P** 04 44 49.0 +1.4
PDG Podgorica 65.50 308 ⇓P **P** 04 44 48.5 -0.2
PDG Podgorica 65.50 308 ⇓*i*P **P** 04 44 48.4 -0.3
PDG Podgorica 65.50 308 IAmb IAmb 04 44 49.6
comp=Z,72nm,0.8s
HAPS Han Pijesak,BI 65.55 310 *e*P **P** 04 44 48.5 -0.6
MORH Mrgy, Hungar 65.57 312 ⇓*i*P **P** 04 44 49.1 +0.1
DRME Dracevica, Mon 65.58 308 ⇓*i*P **P** 04 44 48.8 -0.4
OKC Ostrava-Krasne 65.62 316 *e*P **P** 04 44 49.9 +0.5
OKC *e* 04 45 09.8
OKC Ostrava-Krasne 65.62 316 *e*P **P** 04 44 49.9 +0.5
OKC *ep*P **pP** 04 45 09.8 +0.5
TRO Tromso 65.64 338 *e*P **P** 04 44 48.7 -0.3
SRO Srobarova 65.66 314 *e*P **P** 04 44 50.5 +0.9
SRO pmax pmax
comp=Z,69nm,1.1s
SRO Srobarova 65.66 314 *e*P **P** 04 44 50.5 +0.9
MBAR Mbarara 65.71 259 P **P** 04 44 51.9 +1.2
MBAR Mbarara 65.71 259*ce*P **P** 04 44 51.8 +1.2
MBAR pmax pmax
comp=Z,125nm,1.1s
MBAR Mbarara 65.71 259 P **P** 04 44 51.5 +0.8
BRY Bratogost 65.98 309 ⇓*i*P **P** 04 44 51.8 -0.1
GKP Gorka Klasztor 66.00 320 *e*P **P** 04 44 51.5 -0.1
GKP Gorka Klasztor 66.00 320 P **P** 04 44 52.1 +0.5
GKP pmax pmax
comp=Z,91nm,1.3s
JAVC Velka Javorina 66.01 315 ⇓*i*P **P** 04 44 53.1 +1.2
MORC Moravsky Berou 66.02 316 ⇑P **P** 04 44 52.4 +0.5
MORC Moravsky Berou 66.02 316 ⇓*i*P **P** 04 44 52.5 +0.5
MORC *e* 04 45 12.6
MORC Moravsky Berou 66.02 316 P **P** 04 44 52.7 +0.7
MORC pmax pmax
comp=Z,53nm,1.3s
HCY Herceg Novi 66.06 308 *e*P **P** 04 44 51.6 -0.7
TREB Trebinje 66.14 309 *e*P **P** 04 44 52.6 -0.2
SMOL Smolenice 66.19 315 *e*P **P** 04 44 53.4 +0.3
SMOL pmax pmax
comp=Z,10.0nm,0.9s
SMOL Smolenice 66.19 315 *e*P **P** 04 44 53.4 +0.3
MODS Modra-Piesok 66.31 315 *e*P **P** 04 44 53.1 -0.7
MODS *e* 04 45 14.5
MODS pmax pmax
comp=Z,41nm,1.1s
MODS Modra-Piesok 66.31 315 *e*P **P** 04 44 53.1 -0.7
MODS *e* 04 45 14.5
ZST Bratislava 66.44 315 *e*P **P** 04 44 54.8 +0.2
ZST pmax pmax
comp=Z,57nm,0.8s
ZST Bratislava 66.44 315 *e*P **P** 04 44 54.8 +0.2
KRLC Kraliky 66.49 317 *e*P **P** 04 44 55.0 0.0
KRLC *e* 04 45 15.7
KRLC Kraliky 66.49 317 *e*P **P** 04 44 55.0 0.0
KRLC *ex* x 04 45 15.7
BBOO Buckleboo 66.51 142 P **P** 04 44 55.5 +0.3
baz=67,SNR=35
STON Ston 66.59 309 ⇓*i*P **P** 04 44 54.8 -0.8
STON Ston 66.59 309 *e*Pn **P** 04 44 55.1 -0.6
N2IH Innhavet 66.60 336 *e*P **P** 04 44 55.1 -0.1
VRAC Vranov 66.67 316 ⇑P **P** 04 44 57.1 +1.0

VRAC Vranov 66.67 316 ⇓ *i* P P 04 44 56.6 +0.5
VRAC *e* 04 45 17.7
N2ST Straumen 66.70 336 *e* P P 04 44 55.4 -0.5
KSP Ksiaz 66.74 318 *e* P P 04 44 57.1 +0.6
KSP Ksiaz 66.74 318 P P 04 44 57.2 +0.7
KSP pmax pmax
comp=Z,83nm,1.1s
BLY Banja Luka 66.74 311 ⇓ *i* P P 04 44 57.2 +0.6
DPC Dobruska-Polom 66.76 317 *e* P P 04 44 56.5 -0.2
DPC *e* 04 45 18.0
DPC Dobruska-Polom 66.76 317 *e* P P 04 44 56.5 -0.2
DPC *ex* x 04 45 18.0
OSTC Ostas 66.81 317 *e* P P 04 44 57.4 +0.4
FAUS Fauske 66.82 336 *e* P P 04 44 56.3 -0.4
KRUC Moravsky 66.83 316 ⇓ *i* P P 04 44 57.5 +0.4
KRUC *e* 04 45 18.1
KRUC Moravsky 66.83 316 P P 04 44 57.5 +0.4
BEHE Becsehely 66.83 313 ⇓ *i* P P 04 45 00.1 +3.0
MGRS Mrkonjic Grad 66.85 311 *e* P P 04 45 12.2 +15
SOP Sopron 66.85 314 P P 04 44 57.7 +0.5
SOP pmax pmax
comp=Z,59nm,1.1s
STEI Steigen 66.86 336 *e* P P 04 44 56.4 -0.5
N2TV Tvrnvik 66.89 336 *e* P P 04 44 56.5 -0.6
CHVC Chvalec 66.91 317 *e* P P 04 44 57.8 +0.2
RICI Ricice 66.92 310 *e* Pn P 04 44 57.4 -0.5
MOSL Moslavina 66.94 312 *e* Pn P 04 44 57.4 -0.4
UPC Upice 66.94 317 *e* P P 04 44 58.5 +0.7
UPC Upice 66.94 317 *e* P P 04 44 58.5 +0.7
MAKA Makarska 67.03 309 *e* Pn P 04 44 57.7 -0.7
NBB08 Skaug oppvekst 67.08 336 *e* P P 04 44 58.0 -0.3
KALN Kalnik 67.09 312 *i* Pn P 04 44 59.3 +0.5
MOR8 Moi Rana 67.14 334 *e* P P 04 44 57.8 -1.0
NBB28 Valnes 67.14 335 *e* P P 04 44 58.5 -0.1
KOGS Kog 67.19 313 *i* P P 04 44 59.9 +0.5
comp=Z,210nm,1.2s
LSTV Lastovo 67.19 309 *e* Pn P 04 44 58.3 -1.2
BSD Bornholm Skovb 67.25 322 *i* P P 04 44 58.9 -0.7
BSD pmax pmax
comp=Z,91nm,1.2s
BSD Bornholm Skovb 67.25 322 *i* P P 04 44 58.9 -0.7
comp=Z,91nm,1.2s
BSD Bornholm Skovb 67.25 322 *i* P P 04 44 58.0 -1.6
BSD *i* P P 04 44 59.0 -0.7
BSD IAmb IAmb 04 45 01.3
comp=Z,91nm,1.2s
N2VI Vinje 67.26 337 *e* P P 04 44 59.0 -0.4
CONA Conrad Observa 67.29 314 *i* P P 04 45 00.3 +0.1
comp=Z,45nm,1.1s,SNR=27
NBB05 Inndyr 67.31 335 *e* P P 04 44 59.7 -0.1
NBB17 Glomfjord BÝr 67.33 335 *e* P P 04 44 60.0 0.0
SPA0 Spitsbergen Ar 67.35 347 *e* P P 04 45 01.0 +1.1
SPITS Spitsbergen Ar 67.35 347 P P 04 44 59.9 0.0
comp=Z,13nm,0.6s,baz=100,slow=9.6,SNR=21
KIJV Kijevo 67.38 310 *e* Pn P 04 45 00.7 0.0
HSPB Hornsund (broa 67.39 346 *e* P P 04 45 00.4 +0.3
TREC Trest 67.40 316 *e* P P 04 45 01.2 +0.5
TREC *e* 04 45 21.3
TREC Trest 67.40 316 *e* P P 04 45 01.2 +0.5
TREC *e* pP pP 04 45 21.3 +0.6
NBB30 Finnes 67.42 335 *e* P P 04 45 00.2 -0.3
QLP Quilpie 67.45 132 P P 04 45 01.6 +0.4
baz=68,SNR=6.5
LOF Lofoten 67.50 336 *e* P P 04 45 00.1 -0.8
ARSA Arzberg 67.60 314 *i* P P 04 45 02.3 +0.3
comp=Z,25nm,0.8s,SNR=14
KONS Konsvik 67.67 335 *e* P P 04 45 01.7 -0.3
N2SV S rv¥gen 67.70 336 *e* P P 04 45 00.6 -1.6
NBB40 Tonnes 67.71 335 *e* P P 04 45 01.7 -0.6
CRES Cresnjev 67.82 312 ⇓ *i* P P 04 45 03.9 +0.5
TIP Timpagrande 67.82 305 ⇓ P P 04 45 03.9 +0.3
TIP Timpagrande 67.82 305 IAmb IAmb 04 45 04.9
comp=Z,44nm,0.7s
N2VA Vr¸y 67.82 336 *e* P P 04 45 00.9 -2.1
PVCC Panska Ves 67.86 317 *e* P P 04 45 03.9 +0.3
PVCC Panska Ves 67.86 317 *e* P P 04 45 03.9 +0.3
MORI Morici 67.90 310 *e* Pn P 04 45 03.6 -0.3
PRU Pruhonice 67.93 317 *e* P P 04 45 04.4 +0.4
PRU *e* 04 45 25.2
PRU Pruhonice 67.93 317 *e* P P 04 45 04.4 +0.4
PRU *e* pP pP 04 45 25.2 +1.1
ZIRJ Zirje 67.98 310 *i* Pn P 04 45 04.3 -0.1
PRA Prague 67.99 317 *e* P P 04 45 05.1 +0.7
PRA Prague 67.99 317 *e* P P 04 45 05.1 +0.7
SOKA Soboth 68.00 313 *i* P P 04 45 05.1 +0.5
comp=Z,36nm,0.8s,SNR=16
BOJS Bojanci 68.00 312 *i* P P 04 45 05.0 +0.5
BOJS *i* pP pP 04 45 26.9 +2.3
N2RO R¸st 68.05 336 *e* P P 04 45 03.1 -1.2
RUE Ruedersdorf 68.14 319 *e* P P 04 45 05.9 +0.6
SGRT San Giovanni R 68.18 308 IAmb IAmb 04 45 06.6
comp=Z,58nm,0.8s
NSS Namsos 68.21 333 *e* P P 04 45 04.8 -0.6
BRG Berggiesshubel 68.22 318 ⇓ *i* P P 04 45 06.3 +0.5
comp=Z,55nm,0.7s
BRG *i* pP pP 04 45 26.8 +1.0
comp=Z,70nm,1.1s
BRG *i* sP PcP 04 45 32.2 +1.1
comp=Z,34nm,1.0s
BRG PP PP 04 47 38.7 +1.8
comp=Z,16nm,1.1s
BRG S S 04 54 00.0 -0.3
BRG PKPPKP P'P'df 05 13 29.9 +4.0
comp=Z,14nm,1.6s
comp=Z,397nm,21.1s
comp=N,207nm,22.3s
comp=E,257nm,22.3s
BRG Berggiesshubel 68.22 318 ⇓ *i* P P 04 45 06.3 +0.5
BRG *i* *PP pP 04 45 26.8 +1.0
BRG *i* *SP PcP 04 45 32.2 +1.1
BRG 04 47 38.7
BRG S S 04 54 00.0 -0.3
BRG pmax pmax
comp=Z,55nm,0.7s
BRG pmax pmax
comp=Z,16nm,1.1s
BRG Berggiesshubel 68.22 318 *e* P P 04 45 06.5 +0.7
comp=Z,55nm,0.7s,baz=82,slow=6.1
BRG *e* pP pP 04 45 27.1 +1.2
baz=82,slow=6.2
KBS Kingsbay 68.30 348 *e* P P 04 45 06.3 +0.4
PBCC Pribram 68.32 316 *e* P P 04 45 06.9 +0.4
PBCC *ex* x 04 45 13.3
DUGI Dugi Otok 68.35 310 *e* Pn P 04 45 06.6 -0.1
OBKA Obir 68.35 313 *i* P P 04 45 07.2 +0.3
comp=Z,44nm,0.9s,SNR=9.3
MOA Molln 68.37 314 *i* P P 04 45 07.1 +0.2
comp=Z,41nm,0.7s,SNR=24
NVLJ Novalja 68.40 311 *e* Pn P 04 45 06.4 -0.6
LJU Ljubljana 68.43 312 *i* P P 04 45 07.8 +0.6
comp=Z,220nm,1.3s
LJU *i* pP pP 04 45 29.7 +2.4
LJU Ljubljana 68.43 312 ⇓ *i* P P 04 45 07.6 +0.4
NC405 NORSAR Array S 68.52 329 IAmb IAmb 04 45 07.8
comp=Z,70nm,0.8s
CEY Cerknica 68.54 312 ⇓ *i* P P 04 45 08.2 +0.2
RIY Rijeka 68.56 312 ⇓ *i* P P 04 45 07.7 -0.3
FBE Freiberg 68.58 318 *e* P P 04 45 09.0 +0.9
comp=Z,130nm,1.1s,baz=82,slow=6.1
FBE *e* pP pP 04 45 29.7 +1.6
baz=82,slow=6.2
GEC2 GERESS Array S 68.61 316 *e* P P 04 45 09.1 +0.6
comp=Z,74nm,1.0s,baz=82,slow=6.1
GEC2 GERESS Array S 68.61 316 IAmb IAmb 04 45 10.0
comp=Z,62nm,0.8s
GERES GERESS Array B 68.61 316 P P 04 45 08.8 +0.4
comp=Z,46nm,0.8s,baz=76,slow=6.2,SNR=313
GERES PKPPKP P'P'df 05 13 25.6 +0.2
comp=Z,0.2nm,0.4s,baz=172,slow=2.8,SNR=4.1
GERES LR LR 05 21 42.3
comp=Z,151nm,19.1s,baz=80,slow=42
GERES GERESS Array B 68.61 316 P P 04 45 08.7 +0.2
HTT Hallett 68.62 141 P P 04 45 09.3 +0.8
baz=69,SNR=23
NC602 NORSAR Array S 68.64 328 IAmb IAmb 04 45 08.6
comp=Z,76nm,0.8s
KHC Kasperske Hory 68.66 316 *e* P P 04 45 08.7 +0.1
KHC *e* 04 45 29.0
KHC Kasperske Hory 68.66 316 *e* P P 04 45 08.7 +0.1
KHC *e* pP pP 04 45 29.0 +0.3
NC303 NORSAR Array S 68.68 329 IAmb IAmb 04 45 09.2
comp=Z,81nm,0.9s
NB201 NORSAR Array S 68.73 329 IAmb IAmb 04 45 08.9
comp=Z,60nm,0.9s

CLL Collm 68.75 318 ⇓ *i* P P 04 45 09.2 +0.1
comp=Z,53nm,1.2s
CLL *e* pP pP 04 45 26.0 -3.2
CLL *i* pPmax 04 45 29.9
CLL *e* PcP PcP 04 45 34.0 +0.6
CLL *e* PP PP 04 47 42.0 +0.5
CLL *e* PPP PPP 04 49 24.0
CLL *e* S S 04 54 09.0 +2.4
CLL *e* PS PnS 04 54 42.0 +0.9
CLL *e* SS SS 04 58 30.0 -2.3
CLL *e* SSS SSS 05 01 57.0
CLL Collm 68.75 318 ⇓ *i* P P 04 45 09.2 +0.1
CLL *i* *PP pP 04 45 29.9 +0.7
CLL *e* S S 04 54 09.0 +2.4
CLL pmax pmax
comp=Z,53nm,1.2s
CLL Collm 68.75 318 *e* P P 04 45 09.4 +0.2
comp=Z,53nm,1.2s,baz=82,slow=6.1
CLL *e* pP pP 04 45 30.1 +0.9
baz=82,slow=6.2
CLL Collm 68.75 318 P P 04 45 08.7 -0.4
NB2 NORSAR Subarra 68.77 329 P P 04 45 08.3 -0.8
comp=Z,34nm,0.7s,baz=85,slow=6.5
NB2 NORSAR Subarra 68.77 329 P P 04 45 08.3 -0.8
baz=85,slow=6.5
NOA NORSAR Array B 68.77 329 P P 04 45 08.4 -0.8
comp=Z,29nm,0.8s,baz=86,slow=6.2,SNR=110
NOA LR LR 05 17 37.8
comp=Z,242nm,19.4s,baz=85,slow=38
NAO01 NORSAR Array S 68.95 329 IAmb IAmb 04 45 10.6
comp=Z,65nm,0.8s
NAO01 NORSAR Array S 68.95 329 *e* P P 04 45 09.2 -0.9
CADS Cadrg 68.95 313 *i* P P 04 45 10.4 -0.1
comp=Z,155nm,1.3s
MYKA Terra Mystica 68.96 313 *e* P P 04 45 10.4 -0.2
comp=Z,19nm,1.6s
NC204 NORSAR Array S 68.97 329 IAmb IAmb 04 45 11.0
comp=Z,86nm,0.8s
NBO00 NORSAR Array S 68.98 329 IAmb IAmb 04 45 11.9
comp=Z,72nm,1.1s
PRED Cave del Predi 69.04 313 P P 04 45 10.6 -0.5
PRED IAmb IAmb 04 45 12.1
comp=Z,41nm,0.8s
TBLU Trondheim 69.04 331 *e* P P 04 45 09.9 -0.8
KBA Koelnbreinsper 69.09 314 *i* P P 04 45 11.2 -0.4
comp=Z,25nm,0.9s,SNR=9.6
KBA Koelnbreinsper 69.09 314 P P 04 45 11.4 -0.2
KBA pmax pmax
comp=Z,40nm,0.9s
OSL Oslo 69.11 328 *e* P P 04 45 11.3 +0.2
WET Wettzell 69.11 316 P P 04 45 12.2 +0.7
WET pmax pmax
comp=Z,58nm,1.3s
WET Wettzell 69.11 316 *e* P P 04 45 12.2 +0.7
comp=Z,57nm,1.2s,baz=82,slow=6.1
WET *e* pP pP 04 45 32.7 +1.2
baz=82,slow=6.2
STKA Stephens Creek 69.17 138 P P 04 45 12.1 +0.2
comp=Z,54nm,0.8s,baz=319,slow=7.5,SNR=87
STKA LR LR 05 19 03.0
comp=Z,134nm,18.0s,baz=324,slow=39
STKA Stephens Creek 69.17 138 P P 04 45 12.6 +0.7
baz=69,SNR=65
TANN Tannenbergstha 69.21 317 *e* P P 04 45 12.6 +0.6
comp=Z,98nm,1.1s,baz=82,slow=6.1
TANN *e* pP pP 04 45 33.2 +1.1
baz=82,slow=6.2
NKC Novy Kostel 69.24 317 *e* P P 04 45 12.7 +0.5
NKC *e* 04 45 33.7
NKC Novy Kostel 69.24 317 *e* P P 04 45 12.7 +0.5
NKC *e* pP pP 04 45 33.7 +1.4
WERN Wernitzgruen 69.28 317 *e* P P 04 45 13.2 +0.8
comp=Z,63nm,1.2s,baz=82,slow=6.1
WERN *e* pP pP 04 45 33.9 +1.4
baz=82,slow=6.2
GUNZ Gunzen 69.30 317 *e* P P 04 45 13.3 +0.7
comp=Z,81nm,1.1s,baz=82,slow=6.1
GUNZ *e* pP pP 04 45 33.9 +1.2
baz=82,slow=6.2
RJOB Jochberg 69.37 314 *e* P P 04 45 12.2 -0.9
comp=Z,38nm,1.2s,baz=82,slow=6.1
RJOB *e* pP pP 04 45 33.1 0.0
baz=82,slow=6.2
PLN Plauen 69.39 317 *e* P P 04 45 13.7 +0.6
comp=Z,35nm,0.8s,baz=82,slow=6.1
ROTZ Rotzenmuhle 69.46 317 *e* P P 04 45 14.5 +1.0
comp=Z,126nm,1.2s,baz=82,slow=6.1
ROTZ *e* pP PcP 04 45 35.3 -1.1
baz=82,slow=6.2
MANZ Manzenberg 69.49 317 *e* P P 04 45 14.8 +1.0
comp=Z,117nm,1.5s,baz=82,slow=6.1
MANZ *e* pP PcP 04 45 35.3 -1.3
baz=82,slow=6.2
NEUB Neuenburg 69.53 318 *e* P P 04 45 14.5 +0.5
comp=Z,70nm,0.9s,baz=82,slow=6.1
NEUB *e* pP pP 04 45 35.0 +1.0
baz=82,slow=6.2
STAL STALIGIAL 69.65 313 IAmb IAmb 04 45 15.5
comp=Z,95nm,0.9s
DOMB Dombas 69.70 330 *e* P P 04 45 14.8 -0.1
KONO Kongsberg 69.71 327 *c* *i* P P 04 45 14.6 -0.2
KONO pmax pmax
comp=Z,65nm,1.7s
KONO Kongsberg 69.71 327 P P 04 45 14.1 -0.7
KONO Kongsberg 69.71 327 *e* P P 04 45 14.2 -0.7
ABTA Abfaltersbach 69.71 313 *i* P P 04 45 14.2 -1.0
comp=Z,36nm,1.2s,SNR=8.6
MOX Moxa 69.71 318 P P 04 45 15.7 +0.6
MOX pmax pmax
comp=Z,44nm,1.1s
MOX Moxa 69.71 318 *e* P P 04 45 15.6 +0.6
comp=Z,53nm,1.1s,baz=82,slow=6.1
MOX *e* pP pP 04 45 36.3 +1.1
baz=82,slow=6.2
AQU L'Aquila 69.81 309 P P 04 45 16.8 +0.9
AQU pmax pmax
comp=Z,73nm,1.3s
AQU L'Aquila 69.81 309 ⇓ *i* P P 04 45 16.0 +0.1
AQU L'Aquila 69.81 309 IAmb IAmb 04 45 16.9
comp=Z,48nm,1.0s
CIMO Cimolais 69.83 313 IAmb IAmb 04 45 16.7
comp=Z,63nm,0.9s
NRCA Norcia 69.93 309 IAmb IAmb 04 45 18.9
comp=Z,118nm,1.1s
BSEG Bad Segeberg 70.04 321 P P 04 45 18.0 +1.0
BSEG pmax pmax
comp=Z,118nm,1.1s
BSEG Bad Segeberg 70.04 321 *e* P P 04 45 17.9 +1.0
comp=Z,126nm,1.1s,baz=82,slow=6.1
ASSE Asse, Remlinge 70.08 319 *e* P P 04 45 17.5 +0.3
comp=Z,41nm,1.1s,baz=82,slow=6.1
ASSE *e* pP PcP 04 45 38.2 -0.6
baz=82,slow=6.2
GRA1 Grafenberg Arr 70.10 317 P P 04 45 18.3 +0.8
GRA1 IAmb IAmb 04 45 20.4
comp=Z,71nm,1.1s
GRF Grafenberg Arr 70.10 317 P P 04 45 18.3 +0.8
GRF pmax pmax
comp=Z,71nm,1.1s
GRF Grafenberg Arr 70.10 317 *e* P P 04 45 18.6 +1.1
comp=Z,160nm,1.6s,baz=82,slow=6.1
GRF *e* pP PcP 04 45 39.3 +0.2
baz=82,slow=6.2
WTTA Wattenberg 70.22 314 *i* P P 04 45 18.0 -0.5
comp=Z,50nm,0.9s,SNR=13
WTTA Wattenberg 70.22 314 P P 04 45 18.2 -0.3
WTTA pmax pmax
comp=Z,63nm,1.0s
SKAR Skarslia 70.22 329 *e* P P 04 45 18.5 +0.4
WATA Walderalm 70.25 314 *i* P P 04 45 17.8 -0.8
comp=Z,36nm,1.0s,SNR=12
CLZ Clausthal 70.31 319 *e* P P 04 45 19.5 +0.7
comp=Z,108nm,1.3s,baz=82,slow=6.1
CLZ *e* pP PcP 04 45 40.3 +0.3
baz=82,slow=6.2
FUR Furstenfeldbru 70.31 315 P P 04 45 19.2 +0.4
FUR pmax pmax
comp=Z,50nm,1.5s
FUR Furstenfeldbru 70.31 315 *e* P P 04 45 19.4 +0.6
comp=Z,39nm,0.8s,baz=82,slow=6.1
MUD Monsted U'grnd 70.33 324 *i* P P 04 45 19.5 +0.8
MUD pmax pmax
comp=Z,130nm,1.3s
MUD Monsted U'grnd 70.33 324 *i* P P 04 45 19.5 +0.8
comp=Z,127nm,1.3s
MUD Monsted U'grnd 70.33 324 *i* P P 04 45 19.5 +0.8

MUD IAmb IAmb 04 45 20.3
comp=Z,128nm,1.3s
MOL Molde 70.35 331 *e* P P 04 45 18.8 +0.1
NRDL Niedersach Rie 70.37 320 *e* P P 04 45 20.0 +1.1
comp=Z,156nm,1.3s,baz=82,slow=6.1
SQTA Sankt Quirin 70.51 314 *i* P P 04 45 19.6 -0.5
comp=Z,46nm,0.7s,SNR=14
TEOL Teolo 70.52 312 IAmb IAmb 04 45 21.4
comp=Z,51nm,0.8s
MOTA Moosalm 70.56 314 *i* P P 04 45 19.8 -0.7
comp=Z,57nm,0.8s,SNR=15
RMQ Roma 70.59 129 P P 04 45 22.9 +2.1
baz=71,SNR=46
UBBA Unterbreizbach 70.70 318 *e* P P 04 45 21.4 +0.5
comp=Z,47nm,1.4s,baz=82,slow=6.1
UBBA *e* pP PcP 04 45 42.1 +0.7
baz=82,slow=6.2
CORL Corleone 70.72 304 IAmb IAmb 04 45 26.1
comp=Z,56nm,1.0s
RETA Reutte 70.77 314 *i* P P 04 45 21.6 -0.1
comp=Z,64nm,0.7s,SNR=18
CLTB Caltabellotta 70.85 304 IAmb IAmb 04 45 23.4
comp=Z,42nm,0.7s
FETA Feichten 70.87 314 *i* P P 04 45 22.0 -0.4
comp=Z,37nm,0.9s,SNR=18
LATE Laterza 70.92 309 P P 04 45 21.7 -1.0
LATE IAmb IAmb 04 45 23.3
comp=Z,45nm,0.9s
SNART Snartemo 71.11 326 *e* P P 04 45 23.6 +0.3
SNART Snartemo 71.11 326 *i* P P 04 45 23.9 +0.5
OSSC Osservatorio P 71.15 310 IAmb IAmb 04 45 24.8
comp=Z,65nm,1.0s
ODD1 Odda 71.16 328 *e* P P 04 45 23.9 +0.2
UBR Ueberruh 71.17 315 *e* P P 04 45 24.1 +0.1
comp=Z,45nm,0.8s,baz=82,slow=6.1
BLS5 Blasjo 71.32 327 *e* P P 04 45 25.1 +0.4
DAVA Damuels 71.39 314 *i* P P 04 45 25.5 -0.1
comp=Z,69nm,0.9s,SNR=14
DAVOX Davos/Dischmat 71.48 314 P P 04 45 26.1 -0.1
comp=Z,39nm,0.7s,baz=104,slow=5.8,SNR=73
STU Stuttgart 71.57 316 P P 04 45 27.2 +0.8
STU pmax pmax
comp=Z,105nm,1.3s
STU Stuttgart 71.57 316 *e* P P 04 45 27.0 +0.6
comp=Z,67nm,0.9s,baz=82,slow=6.1
STU Stuttgart 71.57 316 IAmb IAmb 04 45 28.0
comp=Z,74nm,0.9s
CMSA Cobar Meteorol 71.57 135 P P 04 45 27.8 +1.2
baz=72,SNR=52
PRMA PARMA 71.57 312 IAmb IAmb 04 45 28.9
comp=Z,63nm,1.0s
EIDS Eidsvold 71.65 127 P P 04 45 28.3 +1.2
baz=72,SNR=6.1
EIDS Eidsvold 71.65 127 IAmb IAmb 04 45 29.6
comp=Z,46nm,1.0s
FOO Floro 71.66 330 *e* P P 04 45 26.9 +0.3
BER Bergen 71.72 328 *e* P P 04 45 27.3 +0.2
ASK Askoy 71.77 329 *e* P P 04 45 27.7 +0.3
TNS Taunus Mts 71.78 318 *e* P P 04 45 28.2 +0.5
comp=Z,72nm,1.0s,baz=82,slow=6.1
TNS *e* pP pP 04 45 49.0 +1.1
baz=82,slow=6.2
IBBN Ibbenburen 71.82 320 *e* P P 04 45 28.5 +0.7
comp=Z,103nm,1.1s,baz=82,slow=6.1
IBBN *e* pP pP 04 45 49.3 +1.3
baz=82,slow=6.2
SUE Sulen 71.88 329 *e* P P 04 45 27.9 -0.1
TUE Stuetta 71.90 314 P P 04 45 28.2 -0.5
TUE IAmb IAmb 04 45 30.8
comp=Z,42nm,0.8s
BFO Black Forest 72.22 316 P P 04 45 30.0 -0.3
BFO pmax pmax
comp=Z,18nm,0.9s
BFO Black Forest 72.22 316 *e* P P 04 45 30.3 0.0
comp=Z,22nm,0.9s,baz=82,slow=6.1
BFO *e* pP pP 04 45 51.2 +0.7
baz=82,slow=6.2
BFO Black Forest 72.22 316 P P 04 45 30.0 -0.3
SLE Schleitheim 72.22 315 P P 04 45 30.4 0.0
SLE pmax pmax
comp=Z,74nm,1.1s
BUG Bochum--Univer 72.28 319 P P 04 45 31.3 +0.7
BUG pmax pmax
comp=Z,71nm,1.1s
BUG Bochum--Univer 72.28 319 *e* P P 04 45 31.2 +0.6
comp=Z,93nm,1.3s,baz=82,slow=6.1
BUG *e* pP pP 04 45 52.0 +1.2
baz=82,slow=6.2
LANF Langenberg 72.43 316 P P 04 45 32.4 +0.8
AHRW Bad Neuenahr-A 72.58 318 *e* P P 04 45 33.2 +0.9
comp=Z,67nm,1.1s,baz=82,slow=6.1
AHRW *e* pP pP 04 45 54.1 +1.5
baz=82,slow=6.2
ARPS Mount Arapiles 72.66 142 P P 04 45 34.2 +1.2
baz=73,SNR=5.8
CDF Champ du Feu 72.89 316 *e* P P 04 45 33.8 -0.6
CDF pmax pmax
comp=Z,38nm,0.8s
PGF Pioggiola 72.96 310 P P 04 45 35.5 +0.5
PGF pmax pmax
comp=Z,86nm,1.2s
ECH Echery 73.01 316 P P 04 45 35.3 +0.3
ECH pmax pmax
comp=Z,26nm,1.1s
MOF Molkenrain 73.10 315 P P 04 45 36.3 +0.6
BTNL Ternell 73.16 318 ⇓ P P 04 45 36.2 +0.3
comp=Z,29nm,1.1s
BTNL pP pP 04 45 57.3 +1.2
MEM Membach 73.23 318 ⇓ P P 04 45 36.6 +0.4
MEM pP pP 04 45 55.8 -0.7
MEM Membach 73.23 318 P P 04 45 36.7 +0.4
MEM pmax pmax
comp=Z,36nm,1.1s
BHOU Houvegnez 73.29 318 ⇓ P P 04 45 37.2 +0.6
comp=Z,36nm,1.3s
BHOU pP pP 04 45 58.4 +1.6
HINF Hinteralfeld 73.29 315 *e* P P 04 45 36.0 -0.7
HINF pmax pmax
comp=Z,42nm,1.3s
SENIN Lac Senin/Sane 73.31 314 IAmb IAmb 04 45 39.4
comp=Z,48nm,0.8s
WLF Walferdange 73.34 317 P P 04 45 37.8 +0.9
WLF pP pP 04 45 58.8 +1.6
WLF Walferdange 73.34 317 *e* P P 04 45 38.0 +1.1
comp=Z,185nm,1.2s,baz=82,slow=6.1
WLF *e* pP pP 04 45 59.0 +1.9
baz=82,slow=6.2
VSL Villasalto 73.37 306 IAmb IAmb 04 45 39.0
comp=Z,84nm,1.0s
BSTI Sart Tilman 73.51 318 ⇓ P P 04 45 38.5 +0.6
BSTI pP pP 04 45 59.1 +1.0
HAU Haudompre 73.58 316 *e* P P 04 45 37.8 -0.6
HAU pmax pmax
comp=Z,51nm,0.9s
SAOF Saorge 73.67 311 P P 04 45 39.2 +0.2
SAOF pmax pmax
comp=Z,54nm,1.1s
BCLA Clavier 73.71 318 ⇓ P P 04 45 39.3 +0.3
comp=Z,25nm,1.4s
BCLA pP pP 04 46 00.1 +0.7
SBF Sospel 73.78 311 *e* P P 04 45 39.2 -0.5
SBF pmax pmax
comp=Z,58nm,0.9s
BGES Gesves 73.86 318 ⇓ P P 04 45 39.2 -0.7
comp=Z,31nm,1.7s
BGES pP pP 04 45 57.9 -2.3
LPG La Plagne 73.88 313 *e* P P 04 45 40.4 -0.1
LPG pmax pmax
comp=Z,59nm,0.9s
LPL La Plagne 73.89 313 *e* P P 04 45 40.4 -0.1
LPL pmax pmax
comp=Z,57nm,0.8s
ISO Isola 73.98 312 P P 04 45 41.8 +1.0
ISO pmax pmax
comp=Z,40nm,2.7s
CABF La Chapelle 74.07 314 *e* P P 04 45 41.1 -0.3
CABF pmax pmax
comp=Z,59nm,1.0s
BMRD Maredsous 74.07 318 ⇓ P P 04 45 41.6 +0.5
BMRD pP pP 04 45 59.9 -1.6
LSZ Lusaka 74.22 247 P P 04 45 43.6 +0.8
LSZ Lusaka 74.22 247 P P 04 45 43.1 +0.4
LSZ pmax pmax
comp=Z,95nm,0.7s
LSZ Lusaka 74.22 247 P P 04 45 43.1 +0.4
DOU Dourbes 74.23 318 ⇓ P P 04 45 42.5 +0.4

DOU pP **pP** 04 46 03.4 +1.1
DOU Dourbes 74.23 318 P **P** 04 45 42.7 +0.6
DOU pmax pmax
comp=Z,42nm,1.3s
KEST Kesra 74.30 303 P **P** 04 45 43.2 +0.3
comp=Z,75nm,1.1s,baz=7.0,slow=1.1,SNR=50
KEST LR LR 05 25 53.7
comp=Z,70nm,18.2s,baz=294,slow=42
KEST Kesra 74.30 303 IAmb IAmb 04 45 45.0
comp=Z,109nm,1.1s
SNF Seneffe 74.33 318 ||P **P** 04 45 43.0 +0.3
comp=Z,39nm,1.3s
SNF pP **pP** 04 46 01.8 -1.2
TNA Tin City 74.41 25 P **P** 04 45 43.5 +0.7
baz=286
ATKA Atka Island 74.70 40 P **P** 04 45 44.5 -0.3
ARMA Armidale 74.94 131 P **P** 04 45 49.0 +2.4
baz=75,SNR=8.7
DAG Danmarks Havn 75.00 347 *i* P **P** 04 45 45.0 -1.1
DAG *i* 04 46 06.6
DAG pmax pmax
comp=Z,37nm,1.0s
DAG Danmarks Havn 75.00 347 *i* P **P** 04 45 45.0 -1.1
comp=Z,37nm,1.0s
DAG *i* 04 46 06.6
DAG Danmarks Havn 75.00 347 *i* P **P** 04 45 45.0 -1.1
DAG IAmb IAmb 04 45 46.4
comp=Z,37nm,1.0s
DAG *i* 04 46 06.7
WAL1 Walls 75.12 329 *e*P **P** 04 45 47.5 +0.5
TOO Toolangi 75.35 140 P **P** 04 45 50.2 +1.5
baz=75,SNR=12
TOO Toolangi 75.35 140 P **P** 04 45 49.1 +0.4
TOO pmax pmax
comp=Z,24nm,0.8s
TOO Toolangi 75.35 140 P **P** 04 45 49.1 +0.4
LOR Lormes 75.39 315 P **P** 04 45 49.1 +0.2
LOR pmax pmax
comp=Z,35nm,1.1s
VIVF Saint-Julien-l 75.46 313 *e*P **P** 04 45 48.9 -0.5
VIVF pmax pmax
comp=Z,39nm,1.0s
ANM Nome 75.74 26 IAmb IAmb 04 45 52.3
comp=Z,65nm,1.1s
AVF Avril sur Loir 75.85 315 *e*P **P** 04 45 51.0 -0.5
AVF pmax pmax
comp=Z,96nm,1.2s
MGCD Mangrove Creek 76.21 134 P **P** 04 45 55.6 +2.0
baz=76,SNR=10
CLF Chambon-Foret 76.24 316 IAmb IAmb 04 45 55.9
comp=Z,87nm,1.0s
BGF Bois d'Agland 76.25 315 *e*P **P** 04 45 53.4 -0.4
BGF pmax pmax
comp=Z,64nm,1.3s
CNB Canberra Magne 76.32 136 P **P** 04 45 55.3 +1.0
baz=76,SNR=11
A21K Barrow 76.36 18 P **P** 04 45 54.2 +0.3
baz=294,SNR=87
DBG Daneborg 76.51 345 *i* P **P** 04 45 54.8 +0.1
DBG IAmb IAmb 04 45 56.1
comp=Z,30nm,1.2s
DBG *i* 04 46 15.9
MCD Coleburn Disti 76.70 327 *e*P **P** 04 45 56.3 +0.2
TCF Toulx Ste Croi 76.75 315 *e*P **P** 04 45 56.6 0.0
TCF pmax pmax
comp=Z,83nm,1.0s
EDMD Edmundbyers 76.84 324 *e*P **P** 04 45 57.1 +0.2
EDMD IAmb IAmb 04 45 58.0
comp=Z,63nm,0.9s
CWF Charnwood Fore 77.09 322 *e*P **P** 04 45 58.5 +0.1
CWF IAmb IAmb 04 46 02.5
comp=Z,21nm,0.9s
LBWR Ladybower, Pea 77.14 322 *e*P **P** 04 45 58.9 +0.2
LBWR IAmb IAmb 04 45 59.9
comp=Z,60nm,0.9s
EBL Broad Law 77.15 325 *e*P **P** 04 45 58.9 +0.3
EDI Edinburgh 77.18 325 *e*P **P** 04 45 59.0 +0.2
EDI IAmb IAmb 04 46 00.1
comp=Z,72nm,0.9s
SET Setif 77.26 304 P **P** 04 46 01.0 +1.2
EKA Eskdalemuir Ar 77.35 325 P **P** 04 45 59.6 -0.1
ESK Eskdalemuir 77.38 325 *e*P **P** 04 45 59.7 -0.2
ESK IAmb IAmb 04 46 01.2
comp=Z,52nm,0.9s
ESK Eskdalemuir 77.38 325 P **P** 04 46 00.2 +0.3
ESK pmax pmax
comp=Z,52nm,0.9s
ESK Eskdalemuir 77.38 325 P **P** 04 46 00.2 +0.3
ESK IAmb IAmb 04 46 01.4
comp=Z,52nm,0.8s
WOL Wolverton 77.47 320 *e*P **P** 04 46 00.8 +0.3
RJF Les Rejaudoux 77.49 314 *e*P **P** 04 46 01.0 +0.2
RJF pmax pmax
comp=Z,128nm,1.4s
KESW Keswick, Cumbr 77.55 324 *e*P **P** 04 46 01.6 +0.7
KESW IAmb IAmb 04 46 02.2
comp=Z,52nm,0.9s
MTLF Montolieu 77.58 312 P **P** 04 46 01.9 +0.6
MTLF pmax pmax
comp=Z,49nm,1.0s
LDF La Druitiere 77.60 317 *e*P **P** 04 46 00.8 -0.5
LDF pmax pmax
comp=Z,30nm,0.8s
EAB Aberfoyle 77.71 326 *e*P **P** 04 46 02.2 +0.4
KAC Achnashellach 77.78 327 *e*P **P** 04 46 02.4 +0.2
FLN La Foliniere 77.78 318 *e*P **P** 04 46 01.9 -0.4
FLN pmax pmax
comp=Z,54nm,1.3s
STRD Stroud 77.89 321 *e*P **P** 04 46 02.8 -0.1
STRD IAmb IAmb 04 46 03.8
comp=Z,65nm,1.0s
PGBU Glenifferbraes 77.91 325 *e*P **P** 04 46 02.8 0.0
PGBU IAmb IAmb 04 46 04.5
comp=Z,43nm,0.8s
NEWG New Galloway 78.00 325 *e*P **P** 04 46 03.9 +0.5
NEWG IAmb IAmb 04 46 07.0
comp=Z,57nm,1.3s
KPL Plockton 78.01 327 *e*P **P** 04 46 04.0 +0.6
HLM1 Long Mynd 78.07 322 *e*P **P** 04 46 04.6 +0.8
HLM1 IAmb IAmb 04 46 04.8
comp=Z,43nm,1.0s
LFF La Frestale 78.12 314 *e*P **P** 04 46 04.3 0.0
LFF pmax pmax
comp=Z,21nm,0.7s
GRR Gorron 78.13 317 *e*P **P** 04 46 03.8 -0.4
GRR pmax pmax
comp=Z,82nm,1.6s
FOEL Foel Wylfa 78.14 322 *e*P **P** 04 46 05.0 +0.7
FOEL IAmb IAmb 04 46 05.3
comp=Z,51nm,0.9s
MFF Saint Martin d 78.21 315 *e*P **P** 04 46 04.4 -0.4
MFF pmax pmax
comp=Z,28nm,0.9s
LAWE Loch Awe, Argy 78.24 326 *e*P **P** 04 46 05.5 +0.8
MONM Monmouth 78.25 321 *e*P **P** 04 46 04.5 -0.3
MONM IAmb IAmb 04 46 06.3
comp=Z,56nm,1.2s
MCH1 Michaelchurch 78.31 321 *e*P **P** 04 46 04.7 -0.5
MCH1 IAmb IAmb 04 46 06.7
comp=Z,53nm,1.1s
GAL1 Galloway 78.34 324 *e*P **P** 04 46 05.5 +0.2
GAL1 IAmb IAmb 04 46 06.7
comp=Z,45nm,0.9s
IOMK Kirk Michael 78.46 324 *e*P **P** 04 46 06.8 +0.8
IOMK IAmb IAmb 04 46 07.7
comp=Z,148nm,1.0s
YLL Llanberis 78.61 323 *e*P **P** 04 46 06.4 -0.4
JSA Saint Aubin 78.70 318 *e*P **P** 04 46 07.9 +0.5
JSA IAmb IAmb 04 46 07.9
comp=Z,29nm,0.9s
YRC Rhoscolyn 78.81 323 *e*P **P** 04 46 08.1 +0.3
SCO Scoresbysund 78.90 342 *e*P **P** 04 46 09.6 +1.6
SCO *i* 04 46 30.0
SCO Scoresbysund 78.90 342 *i* P **P** 04 46 09.6 +1.6
SCO *i* 04 46 30.0
SCO Scoresbysund 78.90 342 *e*P **P** 04 46 09.6 +1.6
SCO *i* 04 46 30.0
EPF Esparros 78.98 312 *e*P **P** 04 46 08.8 -0.3
EPF pmax pmax
comp=Z,39nm,1.5s
SGMF Saint Gilles 79.25 318 *e*P **P** 04 46 10.2 -0.2
SGMF pmax pmax
comp=Z,73nm,1.2s
RSBS Rosebush, Pemb 79.34 322 *e*P **P** 04 46 11.3 +0.4
RSBS IAmb IAmb 04 46 11.8
comp=Z,56nm,0.8s
ETSF Etsaut 79.65 312 *e*P **P** 04 46 12.8 0.0
ETSF pmax pmax
comp=Z,14nm,0.7s
ROSF Rostrenen 79.67 318 P **P** 04 46 13.7 +1.0
ROSF pmax pmax
comp=Z,76nm,1.1s
IMAR Indian Mountai 79.67 23 P **P** 04 46 11.5 -0.9
QUIF Quistinic 79.75 317 *e*P **P** 04 46 12.5 -0.6
QUIF pmax pmax
comp=Z,80nm,1.4s
TOLK Toolik Lake Re 79.76 20 P **P** 04 46 13.4 +0.5
baz=301,SNR=79
SANVU Saraoutou 80.01 111 P **P** 04 46 15.7 +0.7
SANVU IAmb IAmb 04 46 17.4
comp=Z,77nm,1.0s
COLD Coldfoot 80.29 21 P **P** 04 46 16.0 +0.3
baz=301,SNR=28
LBTB Lobatse 80.87 239 IAmb IAmb 04 46 21.0
comp=Z,50nm,0.8s
TAM Tamanrasset 81.22 291 P **P** 04 46 22.8 +1.1
TAM pmax pmax
comp=Z,33nm,1.0s
TAM Tamanrasset 81.22 291 P **P** 04 46 22.8 +1.1
SVW2 Sparrevohn 81.22 28 IAmb IAmb 04 46 22.8
comp=Z,106nm,1.2s
MLY Manley 81.24 23 P **P** 04 46 21.1 +0.2
baz=301,SNR=56
BPAW Bear Paw Mtn. 81.62 24 IAmb IAmb 04 46 25.0
comp=Z,66nm,0.9s
I23K Minto, Yukon-K 81.67 23 P **P** 04 46 23.3 +0.3
baz=302,SNR=23
SUMG Summit 81.69 347 *i* P **P** 04 46 23.6 +0.1
SUMG *i* 04 46 44.7
SUMG pmax pmax
comp=Z,140nm,1.0s
SUMG Summit 81.69 347 P **P** 04 46 22.9 -0.6
SUMG IAmb IAmb 04 46 28.1
comp=Z,56nm,1.0s
SUMG Summit 81.69 347 *i* P **P** 04 46 23.6 +0.1
comp=Z,141nm,1.0s
SUMG *i* 04 46 44.7
SUMG Summit 81.69 347 *i* P **P** 04 46 23.7 +0.1
SUMG IAmb IAmb 04 46 27.8
comp=Z,141nm,1.0s
SUMG *i* 04 46 44.7
CART Cartagena 81.71 307 IAmb IAmb 04 46 25.4
comp=Z,79nm,0.9s
PPLA Purkeypile 81.77 25 IAmb IAmb 04 46 25.6
comp=Z,66nm,1.0s
CNBA Chernabura Isl 82.05 34 P **P** 04 46 23.8 -1.4
CNBA IAmb IAmb 04 46 26.9
comp=Z,63nm,0.9s
NEA2 Nenana 82.08 23 P **P** 04 46 25.0 -0.2
baz=302,SNR=28
DZM Mont Dzumac 82.19 117 P **P** 04 46 27.0 +0.4
comp=Z,33nm,0.9s,baz=314,slow=3.7,SNR=21
DZM Mont Dzumac 82.19 117 *e*P **P** 04 46 28.2 +1.6
comp=Z,96nm,1.1s
DZM Mont Dzumac 82.19 117 P **P** 04 46 27.8 +1.2
TRF Thorofare Moun 82.22 24 IAmb IAmb 04 46 40.2
comp=Z,39nm,0.9s
FYU Fort Yukon 82.30 20 P **P** 04 46 27.3 +1.0
FYU IAmb IAmb 04 46 28.4
comp=Z,78nm,1.0s
TCOL CIGO, UAF Yank 82.36 22 P **P** 04 46 26.2 -0.4
baz=303,SNR=8.9
TCOL CIGO, UAF Yank 82.36 22 IAmb IAmb 04 46 33.8
comp=Z,57nm,1.0s
TULEG Thule 82.36 356 IAmb IAmb 04 46 28.4
comp=Z,38nm,0.9s
TULEG Thule 82.36 356 *i* P **P** 04 46 26.1 -0.3
TULEG IAmb IAmb 04 46 28.1
comp=Z,28nm,0.8s
TULEG *i* 04 46 46.2
COLA College 82.36 22*c i*P **P** 04 46 26.1 -0.5
COLA pmax pmax
comp=Z,57nm,1.1s
COLA College 82.36 22 P **P** 04 46 26.6 0.0
COLA IAmb IAmb 04 46 33.8
comp=Z,56nm,1.0s
POKR Poker Flat Res 82.38 22 P **P** 04 46 26.8 +0.1
baz=304,SNR=66
SKT Skwentna 82.49 26 P **P** 04 46 26.7 -0.7
WRH Wood River Hil 82.50 23 IAmb IAmb 04 46 29.2
comp=Z,42nm,0.9s
VAL Valentia 82.50 323 P **P** 04 46 29.0 +1.4
VAL pmax pmax
comp=Z,93nm,1.5s
MCK McKinley 82.59 24 P **P** 04 46 27.8 -0.1
baz=302,SNR=30
IL31 82.76 22 IAmb IAmb 04 46 29.4
comp=Z,41nm,0.8s
ILAR Eielson Array 82.76 22 P **P** 04 46 27.4 -1.4
comp=Z,34nm,0.8s,baz=296,slow=4.5,SNR=211
ILAR pP **pP** 04 46 48.6 -0.7
comp=Z,8.9nm,1.0s,baz=290,slow=5.1,SNR=5.2
ILAR PKKPbc **PKKPbc** 05 04 52.0 -1.9
comp=Z,1.2nm,0.7s,baz=146,slow=1.8,SNR=11
ILAR LR LR 05 26 02.4
comp=Z,172nm,18.2s,baz=314,slow=38
ILAR Eielson Array 82.76 22 P **P** 04 46 27.2 -1.6
CUT Chulitna 82.78 25 P **P** 04 46 28.1 -0.8
baz=302
RND Reindeer 82.80 24 IAmb IAmb 04 46 29.9
comp=Z,110nm,1.1s
BOSA Boshof 82.83 236 P **P** 04 46 30.5 +0.7
comp=Z,42nm,0.6s,baz=67,slow=3.5,SNR=97
BOSA LR LR 05 18 33.3
comp=Z,398nm,21.5s,baz=64,slow=32
BOSA Boshof 82.83 236 P **P** 04 46 29.8 -0.1
BOSA IAmb IAmb 04 46 31.0
comp=Z,53nm,0.7s
HDA Harding Lake 82.94 23 P **P** 04 46 28.4 -1.3
baz=304,SNR=18
SUA Susitna One 83.08 26 IAmb IAmb 04 46 31.5
comp=Z,88nm,1.0s
ESDC Sonseca Array 83.16 310 P **P** 04 46 31.7 +0.3
comp=Z,14nm,0.9s,baz=55,slow=4.7,SNR=50
ESDC pP **PP** 04 49 44.6 +1.4
comp=Z,9.5nm,1.3s,baz=58,slow=7.7,SNR=6.2
ESDC LR LR 05 31 31.2
comp=Z,111nm,18.2s,baz=15,slow=41
ESDC Sonseca Array 83.16 310 P **P** 04 46 30.8 -0.5
CAPN Captain Cook N 83.27 27 P **P** 04 46 30.5 -0.9
baz=301
PAB San Pablo 83.48 310 P **P** 04 46 33.2 +0.1
PAB pmax pmax
comp=Z,16nm,1.0s
PAB San Pablo 83.48 310 P **P** 04 46 33.2 +0.1
HOM Hoer 83.63 28 P **P** 04 46 32.3 -1.0
baz=301
GHO Glory Hole Cre 83.65 25 IAmb IAmb 04 46 37.2
comp=Z,56nm,0.9s
PMR Palmer 83.67 26 IAmb IAmb 04 46 34.0
comp=Z,65nm,0.9s
RC01 Rabbit Creek A 83.69 26 P **P** 04 46 32.9 -0.7
baz=302,SNR=9.0
RIDG Independent Ri 84.09 23 P **P** 04 46 34.9 -0.7
SCM Sheep Creek Mo 84.25 25 IAmb IAmb 04 46 38.3
comp=Z,92nm,1.0s
SCRK Sand Creek 84.25 22 P **P** 04 46 36.4 -0.1
baz=307,SNR=54
PAX Paxson 84.31 23 IAmb IAmb 04 46 39.5
comp=Z,62nm,1.0s
PBRG Braganca 84.32 313 *e*P **P** 04 46 38.0 +0.7
comp=Z,51nm,1.8s
DOT Dot Lake 84.42 22 IAmb IAmb 04 46 38.4
comp=Z,34nm,0.8s
ICESG Greenland Ices 84.52 345 *i* P **P** 04 46 37.9 -0.1
ICESG IAmb IAmb 04 46 42.5
comp=Z,63nm,0.9s
ICESG *i* 04 46 59.4
M24K Tolsona, Glenn 84.55 24 P **P** 04 46 38.8 +0.8
baz=305,SNR=19
M24K Tolsona, Glenn 84.55 24 P **P** 04 46 38.5 +0.5
RES Resolute Bay 84.57 2 P **P** 04 46 38.4 +0.6
comp=Z,23nm,0.8s,baz=318,slow=3.3,SNR=35
INK Inuvik 84.59 16 P **P** 04 46 37.8 -0.2
comp=Z,84nm,1.1s,baz=333,slow=5.9,SNR=113
INK pP **pP** 04 46 58.7 0.0
comp=Z,110nm,1.3s,baz=323,slow=5.3,SNR=4.8
INK S **S** 04 56 51.0 -7.7
comp=Z,4.5nm,1.1s,baz=54,slow=8.7,SNR=9.8
INK PKKPbc **PKKPbc** 05 04 48.1 -1.7
comp=Z,1.4nm,0.9s,baz=201,slow=5.0,SNR=3.9
INK Inuvik 84.59 16 IAmb IAmb 04 46 40.0
comp=Z,98nm,1.1s
UPNV Upernavik 84.61 352 *i* P **P** 04 46 36.3 -1.7
UPNV IAmb IAmb 04 46 38.7
comp=Z,31nm,0.9s
UPNV *i* 04 46 59.4
MVO Moncorvo 84.77 312 *e*P **P** 04 46 40.5 +0.9
comp=Z,73nm,1.2s
MVO *e*pP **pP** 04 47 02.3 +2.0
K27K Chicken 84.89 22 P **P** 04 46 40.2 +0.6
baz=308
K27K Chicken 84.89 22 IAmb IAmb 04 46 50.0
comp=Z,58nm,1.1s
MENT Mentasta 84.97 23 IAmb IAmb 04 46 55.9
comp=Z,97nm,1.2s
TSUM Tsumeb 85.05 247 P **P** 04 46 41.8 +0.5
L26K Log Cabin Wild 85.06 23 P **P** 04 46 40.9 +0.4
baz=307,SNR=16
POLO Lamas de Olo 85.22 312 *e*P **P** 04 46 42.6 +0.8
comp=Z,27nm,1.7s
POLO *e*pP **pP** 04 47 04.9 +2.3
PCAB Cabril 85.24 313 *e*P **P** 04 46 42.8 +0.9
comp=Z,74nm,1.5s
PGAV Gavieira, Arco 85.31 313 *e*P **P** 04 46 43.0 +0.7
comp=Z,69nm,1.7s
PGAV *e*pP **pP** 04 47 05.0 +2.0
MTE Manteigas 85.43 311 *e*P **P** 04 46 43.7 +0.8
comp=Z,75nm,1.1s
MTE *e*pP **pP** 04 47 05.3 +1.7
MTE Manteigas 85.43 311 IAmb IAmb 04 46 45.1
comp=Z,61nm,1.0s
N25K Chitina, Valde 85.45 24 P **P** 04 46 43.3 +0.7
baz=306,SNR=33
PVIS Viseu 85.55 312 *e*P **P** 04 46 44.6 +1.2
comp=Z,51nm,1.3s
PVIS *e*pP **pP** 04 47 06.8 +2.6
BCAR Beaver Creek A 85.59 22 P **P** 04 46 43.3 +0.1
PCBR Castelo Branco 85.60 311 *e*P **P** 04 46 44.6 +1.0
comp=Z,64nm,1.2s
PCBR *e*pP **pP** 04 47 06.6 +2.2
PMRV Marv??o 85.70 311 *e*P **P** 04 46 45.2 +1.0
comp=Z,33nm,2.0s
PMRV *e*pP **pP** 04 47 06.5 +1.6
C36M Paulatuk 86.00 13 P **P** 04 46 44.3 -0.6
baz=324
COI Coimbra 86.11 312 *e*P **P** 04 46 47.3 +1.1
comp=Z,71nm,1.4s
COI Coimbra 86.11 312 IAmb IAmb 04 46 48.3
comp=Z,62nm,1.1s
VRDI Verde Repeater 86.11 24 IAmb IAmb 04 46 47.4
comp=Z,47nm,0.8s
MCARA McCarthy VSAT 86.18 24 P **P** 04 46 46.7 +0.6
PCAS Casmilo, Conde 86.23 311 *e*P **P** 04 46 47.8 +1.0
comp=Z,71nm,1.8s
PMTG Montargil 86.44 310 *e*P **P** 04 46 48.6 +0.8
comp=Z,60nm,1.3s
PMTG *e*pP **pP** 04 47 10.8 +2.2
EVO Evora 86.50 310 *e*P **P** 04 46 49.3 +1.2
comp=Z,32nm,1.3s
EVO *e*pP **pP** 04 47 11.3 +2.4
PBEJ Beja 86.60 309 *e*P **P** 04 46 50.0 +1.4
comp=Z,24nm,1.2s
TGL Tana Glacier 86.64 24 P **P** 04 46 49.4 +0.9
PVAQ Vaqueiros 86.74 309 *e*P **P** 04 46 50.5 +1.2
comp=Z,59nm,1.4s
PVAQ *e*pP **pP** 04 47 12.7 +2.6
PVAQ Vaqueiros 86.74 309 IAmb IAmb 04 46 51.4
comp=Z,39nm,1.0s
PCVE Castro Verde 86.88 309 *e*P **P** 04 46 51.1 +1.1
comp=Z,35nm,1.3s
PCVE *e*pP **pP** 04 47 13.8 +3.0
BARN Barnard Glacie 86.90 24 IAmb IAmb 04 46 51.8
comp=Z,44nm,0.8s
ISLE Juniper Island 86.93 24 IAmb IAmb 04 46 52.1
comp=Z,71nm,1.1s
PBDV Barranco-do-Ve 86.96 309 *e*P **P** 04 46 51.9 +1.5
comp=Z,117nm,1.5s
PBDV *e*pP **pP** 04 47 14.0 +2.8
PNCL Nicolau / Gran 87.04 310 *e*P **P** 04 46 51.9 +1.1
comp=Z,44nm,1.2s
CTGM Chitina Glacie 87.09 24 P **P** 04 46 50.9 +0.2
PMAFR Mafra 87.24 311 *e*P **P** 04 46 53.0 +1.3
comp=Z,183nm,1.4s
PTEO Sao Teotonio 87.42 309 *e*P **P** 04 46 53.7 +1.1
comp=Z,80nm,1.3s
MORF Marmelete 87.46 309 *e*P **P** 04 46 53.3 +0.4
MORF Marmelete 87.46 309 *e*P **P** 04 46 54.7 +1.8
comp=Z,44nm,1.4s
CASY Casey 87.64 174 P **P** 04 46 53.0 +0.2
PFVI Vila Bisbo 87.66 309 *e*P **P** 04 46 55.3 +1.5
comp=Z,76nm,1.4s
PFVI *e*pP **pP** 04 47 17.0 +2.4
TOA0 Torodi Ar. Sit 87.90 283 IAmb IAmb 04 46 57.0
comp=Z,65nm,1.0s
TORD Torodi Ar. Bea 87.90 283 P **P** 04 46 55.8 +0.5
comp=Z,42nm,0.8s,baz=66,slow=4.3,SNR=208
TORD PP **PP** 04 50 21.8 -0.5
comp=Z,32nm,1.1s,baz=62,slow=6.8,SNR=18
TORD PKKPbc **PKKPbc** 05 04 41.8 +1.4
comp=Z,0.5nm,0.6s,baz=252,slow=4.3,SNR=6.9
TORD LR LR 05 32 11.9
comp=Z,106nm,19.9s,baz=70,slow=40
TORD Torodi Ar. Bea 87.90 283 P **P** 04 46 55.2 -0.1
SUR Sutherland 87.95 234 P **P** 04 46 55.7 +0.3
SUR IAmb IAmb 04 46 58.2
comp=Z,22nm,0.8s
HYT Haines Junctio 88.59 23 IAmb IAmb 04 47 00.1
comp=Z,38nm,1.0s
SFJD Kangerlussuaq 88.69 347 *i* P **P** 04 46 58.0 0.0
SFJD *i* 04 47 19.4
SFJD Kangerlussuaq 88.69 347 P **P** 04 46 57.5 -0.5
SFJD IAmb IAmb 04 46 58.9
comp=Z,50nm,1.0s
SFJD Kangerlussuaq 88.69 347 *i* P **P** 04 46 58.0 0.0
SFJD *i* 04 47 19.4
SFJD Kangerlussuaq 88.69 347 *i* P **P** 04 46 58.0 0.0
SFJD *i* 04 47 19.5
WHY Whitehorse 89.64 22 IAmb IAmb 04 47 07.8
comp=Z,16nm,0.7s
MSVF Nonsavu 90.46 109 P **P** 04 47 06.9 -0.4
MSVF pmax pmax
comp=Z,43nm,1.9s
MAW Mawson 91.15 192 P **P** 04 47 09.8 +0.6
comp=Z,4.0nm,0.7s,baz=22,slow=6.0,SNR=12
MAW PP **PP** 04 50 46.2 -1.0
comp=Z,4.4nm,1.1s,baz=20,slow=11,SNR=4.6
MAW SKKP 05 08 01.1
comp=Z,1.6nm,0.8s,baz=284,slow=4.2,SNR=4.2
MAW LR LR 05 22 10.8
comp=Z,86nm,20.5s,baz=58,slow=32
MAW Mawson 91.15 192 P **P** 04 47 10.1 +1.0
baz=91,SNR=8.1
MAW Mawson 91.15 192 P **P** 04 47 09.6 +0.4
JIS Juneau Island 91.51 23 IAmb IAmb 04 47 13.0
comp=Z,21nm,0.8s
KOWA Kowa 92.58 286 P **P** 04 47 17.4 +0.3
KOWA IAmb IAmb 04 47 18.4
comp=Z,16nm,0.9s
DLBC Dease Lake 92.95 22 P **P** 04 47 18.5 +0.4
comp=Z,14nm,1.1s,baz=313,slow=5.3,SNR=9.8
DLBC Dease Lake 92.95 22 IAmb IAmb 04 47 21.4
comp=Z,22nm,1.1s
YKA Yellowknife Ar 93.88 13 P **P** 04 47 20.6 -1.6
comp=Z,11nm,0.9s,baz=330,slow=4.9,SNR=24
YKA PP **PP** 04 51 09.8 +2.0
comp=Z,2.3nm,0.8s,baz=340,slow=7.5,SNR=3.8
YKA PKKPbc **PKKPdf** 05 04 23.9 -0.4
comp=Z,1.6nm,0.7s,baz=134,slow=2.8,SNR=6.8
YKA LR LR 05 35 36.9
comp=Z,138nm,20.3s,baz=0.0,slow=39
YKA Yellowknife Ar 93.88 13*ce*P **P** 04 47 21.8 -0.3
YKA pmax pmax
comp=Z,11nm,0.9s
DBIC Dimbokro 96.25 280 P **P** 04 47 33.9 -0.1
comp=Z,12nm,0.8s,baz=51,slow=4.7,SNR=12
DBIC LR LR 05 33 18.8
comp=Z,71nm,21.9s,baz=49,slow=37
DBIC Dimbokro 96.25 280 IAmb IAmb 04 47 34.7
comp=Z,11nm,0.8s
KIC Kosan Boka 96.26 279 *e*PKP2 **P** 04 47 34.1 +0.1
comp=Z,78nm,1.3s
TIC Toumodi 96.41 280 *e*PKP2 **P** 04 47 34.7 0.0
LIC Lamto 96.57 279 *e*PKP2 **P** 04 47 35.4 0.0
comp=Z,20nm,0.6s
SYO Syowa Base 97.74 197↑ *e*X P 04 47 33.4 -5.9
SCHQ Schefferville 103.00 349 PP **PKiKP** 04 52 20.3 -2.7
comp=Z,2.4nm,0.2s,baz=50,slow=7.9,SNR=8.5

VNDA Vanda 105.44 168 Pdiff Pdif 04 48 18.2 +4.8
comp=Z,0.4nm,0.8s,baz=330,slow=8.4,SNR=2.7
VNDA PP PP 04 52 41.9 +5.7
comp=Z,0.8nm,0.7s,baz=298,slow=6.3,SNR=3.6
VNDA PKKPbc PKKPbc 05 03 53.0 -2.0
comp=Z,0.9nm,0.8s,baz=85,slow=2.5,SNR=4.9
NEW Newport 105.70 21 PKKPbc PKKPbc 05 03 50.6 -2.6
comp=Z,3.3nm,0.7s,baz=127,slow=3.2,SNR=9.2
NEW Newport 105.70 21 P PKiKP 04 52 25.3 -2.9
baz=330
G03D McMinnville, O 105.91 27 P PKiKP 04 52 25.9 -2.6
baz=324
MSO Missoula 108.00 20 P PKiKP 04 52 31.5 -1.1
baz=332
ULM Lac du Bonnet 108.70 7 PP PP 04 52 56.6 -2.9
comp=Z,5.8nm,1.0s,baz=1.4,slow=7.3,SNR=3.5
YBH Yreka Blue Hor 108.94 29 PP PP 04 53 00.6 -1.2
comp=Z,1.5nm,1.0s,baz=254,slow=7.4,SNR=4.0
YBH PKKPbc PKKPbc 05 03 42.6 -0.4
comp=Z,1.0nm,0.8s,baz=74,slow=7.6,SNR=6.5
BOZ Bozeman (W) 109.83 19 P PKiKP 04 52 36.4 +0.3
baz=334
LSQQ Lebel-sur-Quev 110.06 354 P PKiKP 04 52 35.7 -0.5
baz=8.5
O02D Mt. Diablo Mer 110.15 30 P PKiKP 04 52 35.8 -1.0
baz=323
O03E Paynes Creek 110.51 29 P PKiKP 04 52 36.3 -1.2
baz=324
QSPA South Pole Qui 110.60 180 PKKPbc PKKPbc 05 03 40.1 +1.0
comp=Z,2.9nm,1.0s,baz=178,slow=1.9,SNR=10
QSPA SKKPbc SKKPbc 05 07 14.3 -4.6
comp=Z,1.7nm,0.8s,baz=171,slow=1.9,SNR=5.7
HLID Hailey 110.72 22 P PKiKP 04 52 37.3 -0.6
baz=331
E61A Lac Etchemin 111.72 349 P PKiKP 04 52 40.0 +0.5
baz=15
D56A ZEC Mazanza, M 111.79 352 P PKiKP 04 52 39.2 -0.3
baz=11
SNAA Sanae 111.83 200 PKiKP PKiKP 04 52 38.9 0.0
SNAA Sanae 111.83 200 || /i PKiKP PKiKP 04 52 38.5 -0.4
D55A Sainte-Anne-du 111.91 353 P PKiKP 04 52 38.6 -1.2
baz=10
F61A St Evariste 112.26 349 P PKiKP 04 52 39.8 -0.7
baz=15
E56A St. Veronique 112.32 352 P PKiKP 04 52 40.2 -0.4
baz=11
ELK Elko 112.87 24 PKiKP PKiKP 04 52 42.7 +0.6
comp=Z,0.6nm,0.4s,baz=33,slow=4.9,SNR=5.1
ELK SKP 04 56 10.9
comp=Z,2.9nm,1.1s,baz=304,slow=1.1,SNR=3.7
ELK PKKPbc PKKPbc 05 03 29.1 -1.3
comp=Z,1.3nm,0.4s,baz=180,slow=3.6,SNR=6.9
BW06 Boulder Array 113.02 19 P PKiKP 04 52 41.2 -1.2
baz=336
PDAR Pinedale Array 113.02 19 PKiKP PKiKP 04 52 42.4 0.0
comp=Z,0.9nm,0.7s,baz=66,slow=1.1,SNR=5.9
PDAR SKP 04 56 10.4
comp=Z,2.2nm,0.7s,baz=68,slow=0.6,SNR=7.1
PDAR PKKPbc PKKPbc 05 03 32.0 +2.0
comp=Z,1.4nm,0.8s,baz=143,slow=4.5,SNR=7.8
VNA2 Neumayer--Watz 113.33 201 PKiKP PKiKP 04 52 42.2 +0.6
NVAR Mina Array Bea 113.58 28 PKiKP PKiKP 04 52 44.5 +1.0
comp=Z,1.5nm,0.5s,baz=290,slow=2.4,SNR=16
NVAR SKP 04 56 12.7
comp=Z,3.1nm,0.8s,baz=307,slow=2.3,SNR=11
NVAR PKKPbc PKKPbc 05 03 27.7 -0.2
comp=Z,0.6nm,0.6s,baz=144,slow=4.5,SNR=5.4
NVAR SKKPbc SKKPbc 05 07 04.5 +0.1
comp=Z,0.7nm,0.6s,baz=142,slow=2.6,SNR=5.3
VNA1 Neumayer--Stat 113.63 201 PKiKP PKiKP 04 52 42.6 +0.4
H59A Cadyville 113.99 351 P PKiKP 04 52 44.0 +0.2
baz=12
VNA3 Neumayer Olymp 114.04 200 PKiKP PKiKP 04 52 43.7 +0.6
DUG Dugway, Tooele 114.25 23 P PKPdf 04 52 45.1 +0.4
baz=332
I60A Shoreham 114.71 350 P PKiKP 04 52 44.5 -0.7
baz=13
R11A Troy Canyon, C 114.79 26 P PKPdf 04 52 45.9 +0.1
baz=329
I57A Carthage 114.96 352 P PKiKP 04 52 45.5 -0.2
baz=10
ECSD EROS Data Cent 115.02 9 P PKPdf 04 52 46.3 +0.4
baz=349
CWC Cottonwood Cre 115.34 29 P PKPdf 04 52 47.0 +0.1
baz=326
J58A Remsen 115.48 352 P PKiKP 04 52 46.3 -0.5
baz=11
TPNV Topopah Spring 115.71 27 P PKiKP 04 52 47.1 -0.5
baz=328
ISA Isabella, Lake 115.80 29 P PKiKP 04 52 47.6 -0.1
baz=326
O20A White River Ci 115.83 19 P PKPdf 04 52 47.9 +0.1
baz=336
O20A White River Ci 115.83 19 PKPdf 04 52 47.8 +0.1
MPMC Manual Prospec 115.92 28 P PKPdf 04 52 48.7 +0.7
baz=327
LRMC Laurel Mtn Rad 116.31 29 P PKPdf 04 52 47.3 -1.4
baz=326
EDW2 Edwards Air Fo 116.67 30 P PKPdf 04 52 48.7 -0.7
baz=326
BINY Binghamton 116.71 352 P PKPdf 04 52 48.2 -1.0
baz=10.0
L58A Harry Jones Me 116.85 352 P PKPdf 04 52 49.1 -0.3
baz=10
GSC Goldstone, Bar 116.86 28 P PKiKP 04 52 49.9 +0.2
baz=327
L57A Andrews Acres 117.02 353 P PKPdf 04 52 48.6 -1.2
baz=9.1
M61A Granite Spring 117.26 350 P PKPdf 04 52 49.3 -0.9
baz=12
M59A Waymart 117.29 351 P PKPdf 04 52 50.0 -0.3
baz=11
KSPA Keystone Colle 117.32 352 PKPdf PKiKP 04 52 50.6 +0.2
M56A Emporium 117.68 354 P PKiKP 04 52 51.4 +0.3
baz=7.8
M57A Sunshine Farm, 117.70 353 P PKPdf 04 52 50.8 -0.3
baz=8.9
M54A Oil Creek Stat 117.79 355 P PKPdf 04 52 50.7 -0.6
baz=6.2
Q24A Divide 117.81 17 P PKiKP 04 52 51.9 +0.1
baz=339
N61A South Mountain 117.89 350 P PKPdf 04 52 50.5 -0.9
baz=12
N60A Cedar Hill Far 117.90 351 P PKPdf 04 52 50.1 -1.4
baz=11
N59A State Game Lan 117.95 352 P PKPdf 04 52 51.0 -0.6
baz=10
BELA Belgrano 2 117.99 191 PKPdf PKPdf 04 52 49.6 -0.9
MURC Murrieta 118.10 30 P PKPdf 04 52 51.4 -0.7
baz=326
N58A Sunbury 118.15 352 P PKPdf 04 52 51.2 -0.7
baz=9.4
N56A West Decatur 118.25 354 P PKPdf 04 52 52.2 0.0
baz=7.7
BELC Belle Mtn. Jos 118.31 29 P PKPdf 04 52 52.2 -0.4
baz=328
N57A Milroy 118.33 353 P PKPdf 04 52 51.4 -0.9
baz=8.5
KSCO Kaye Shedlock' 118.42 15 P PKiKP 04 52 52.8 +0.1
baz=342
PFO Pinyon Flats O 118.42 29 PKKPbc PKKPbc 05 03 14.6 +3.8
comp=Z,6.2nm,1.0s,baz=139,slow=3.2,SNR=5.4
PFO Pinyon Flats O 118.42 29 /i PKiKP PKiKP 04 52 57.3 +4.4
O60A Telford 118.48 351 P PKPdf 04 52 50.7 -1.8
baz=11
O61A Allentown 118.58 350 P PKPdf 04 52 51.9 -0.9
baz=12
SDCO Great Sand Dun 118.85 18 P PKPdf 04 52 53.0 -0.7
baz=339
O57A Amberson 118.88 353 P PKPdf 04 52 52.7 -0.6
baz=8.5
O58A Lewisberry 118.88 352 P PKPdf 04 52 51.9 -1.4
baz=9.2
HDIL Hopedale 118.89 3 P PKPdf 04 52 52.5 -0.9
baz=356
O56A Blue Knob Stat 118.92 354 P PKPdf 04 52 51.3 -2.2
baz=7.5
P60A Greenville 119.01 351 P PKPdf 04 52 51.5 -2.2
baz=11
MONP2 Monument Peak 119.04 30 P PKPdf 04 52 53.6 -0.5
baz=327
O53A New Philadelph 119.15 356 P PKPdf 04 52 53.1 -0.8
baz=4.7
O54A Avella 119.16 355 P PKPdf 04 52 53.3 -0.6
baz=5.5
ACSO Alum Creek Sta 119.26 358 P PKPdf 04 52 53.1 -1.0
baz=2.8
SWSC Sam W. Stewart 119.28 29 P PKPdf 04 52 52.4 -1.9
baz=327
P59A Jarrettsville 119.32 352 P PKPdf 04 52 53.6 -0.6
baz=9.8
O52A Adamsville 119.32 357 P PKPdf 04 52 53.2 -1.0
baz=4.0
O51A Pataskala 119.33 357 P PKPdf 04 52 53.9 -0.3
baz=3.2
KSU1 Kansas State U 119.55 10 P PKPdf 04 52 53.7 -1.0
baz=348
P57A Homestead Farm 119.64 353 P PKPdf 04 52 54.0 -0.8
baz=8.1
T25A Trinidad 119.72 17 P PKPdf 04 52 54.7 -0.7
baz=340
P55A Reedsville 119.79 355 P PKPdf 04 52 54.3 -0.9
baz=6.2
P52A Corning 119.82 357 P PKPdf 04 52 54.2 -1.0
baz=3.7
W18A Petrified Fore 119.87 23 P PKiKP 04 52 56.9 +1.1
baz=334
P53A Whipple 119.92 356 P PKPdf 04 52 54.6 -0.8
baz=4.5
P49A Miami Univ. Ec 120.00 359 P PKPdf 04 52 54.6 -1.0
baz=0.9
P51A Williamsport 120.01 358 P PKPdf 04 52 54.9 -0.6
baz=2.7
Q57A Strasburg 120.12 354 P PKPdf 04 52 53.9 -1.9
baz=7.7
Q58A Fox Den Farm, 120.14 353 P PKPdf 04 52 55.1 -0.7
baz=8.5
Q56A Snyder Ridge, 120.19 354 P PKPdf 04 52 54.6 -1.3
baz=6.9
Q55A Buckhannon 120.32 355 P PKPdf 04 52 55.5 -0.7
baz=5.9
Q54A Coxs Mills 120.39 356 P PKPdf 04 52 54.4 -1.9
baz=5.1
Q53A Leroy 120.56 356 P PKPdf 04 52 56.0 -0.7
baz=4.4
R58A Rapidan 120.81 353 P PKPdf 04 52 55.5 -1.6
baz=8.2
R56A Bull Pasture M 120.84 354 P PKPdf 04 52 56.8 -0.5
baz=6.7
R57A Stanardsville 120.86 354 P PKPdf 04 52 56.9 -0.4
baz=7.7
R40A Maddies Statio 120.91 6 PKPdf PKPdf 04 52 56.9 -0.4
R55A Marlinton 121.03 355 P PKPdf 04 52 56.9 -0.7
baz=5.9
R53A Hurricane 121.11 357 P PKPdf 04 52 57.5 -0.2
baz=4.0
R58B Mineral 121.12 353 P PKPdf 04 52 57.0 -0.7
baz=8.4
ANMO Albuquerque 121.15 20 PKP PKiKP 04 52 59.0 +0.8
comp=Z,2.7nm,0.5s,baz=335,slow=0.8,SNR=11
ANMO pPKP pPKPdf 04 53 20.3 +0.5
comp=Z,12nm,1.0s,baz=296,slow=0.4,SNR=8.8
ANMO SKP 04 56 27.5
comp=Z,8.2nm,1.0s,baz=331,slow=0.8,SNR=7.9
ANMO PKKPbc PKKPbc 05 02 60.0 -1.1
comp=Z,0.9nm,0.6s,baz=152,slow=4.4,SNR=4.5
ANMO Albuquerque 121.15 20 /c PKiKP PKiKP 04 52 59.7 +1.4
ANMO pmax pmax
comp=Z,10.0nm,1.3s
ANMO Albuquerque 121.15 20 P PKPdf 04 52 57.8 -0.3
baz=337
TBI Tubuai 121.19 105 eLR LR 05 30 25.4
comp=Z,368nm,36.5s
S59A Mechanicsville 121.25 352 P PKPdf 04 52 57.9 -0.1
baz=9.0
WCI Wyandotte Cave 121.30 1 P PKPdf 04 52 57.7 -0.4
baz=359
S57A Dark Hollow, R 121.44 354 P PKPdf 04 52 57.9 -0.4
baz=7.2
S58A Poland Farm, P 121.49 353 P PKPdf 04 52 56.3 -2.1
baz=8.2
GC02 Grant County # 121.52 12 PKPdf PKiKP 04 52 58.7 0.0
S54A Dingess, Beckl 121.60 356 P PKPdf 04 52 57.9 -0.8
baz=4.7
S53A Williamson 121.76 357 P PKPdf 04 52 58.5 -0.5
baz=3.8
T60A Surry 121.79 352 P PKPdf 04 52 58.6 -0.4
baz=9.7
TUC Tucson 121.97 25 PKiKP PKiKP 04 53 00.8 +1.0
TUC Tucson 121.97 25 P PKiKP 04 52 60.0 +0.2
baz=332
TUC Tucson 121.97 25 PKPdf PKiKP 04 53 00.8 +1.0
T59A Double "B" Far 122.06 352 P PKPdf 04 52 59.5 0.0
baz=8.8
T55A Pulaski 122.24 355 P PKPdf 04 52 59.5 -0.5
baz=5.3
T56A Rocky Mt 122.27 355 P PKPdf 04 52 59.1 -0.9
baz=6.1
T54A Tazewell 122.35 356 P PKPdf 04 52 58.5 -1.8
baz=4.4
T53A Wise 122.48 357 P PKPdf 04 52 59.9 -0.5
baz=3.4
T47A Sharon Grove 122.53 1 PKPdf PKPdf 04 53 00.2 -0.3
U58A Oxford 122.75 353 P PKPdf 04 53 00.8 -0.1
baz=7.8
U40A Yellville 122.76 7 P PKPdf 04 53 00.8 -0.2
baz=352
U57A Blanch 122.79 354 P PKPdf 04 52 59.6 -1.4
baz=6.9
TUL1 Leonard 122.80 10 P PKiKP 04 53 01.2 -0.1
baz=349
TUL1 Leonard 122.80 10 PKPdf PKiKP 04 53 01.1 -0.1
121A Cookes Peak, D 122.90 22 P PKPdf 04 53 01.2 -0.4
baz=335
TZTN Tazewell 122.96 358 P PKPdf 04 53 00.9 -0.5
baz=2.2
U56A King 122.97 355 P PKPdf 04 52 60.0 -1.4
baz=5.8
V61A Roper 123.09 351 P PKPdf 04 53 00.2 -1.3
baz=10.0
MSTX Muleshoe 123.15 17 P PKPdf 04 53 01.2 -0.7
baz=341
V60A Jim Taylor Roa 123.22 352 P PKPdf 04 53 00.1 -1.7
baz=9.3
LCAR Lake Charles 123.22 5 PKPdf PKPdf 04 53 01.5 -0.3
WVT Waverly 123.36 2 PKiKP PKPdf 04 53 01.6 -0.5
WVT Waverly 123.36 2 P PKPdf 04 53 01.6 -0.5
baz=358
WVT Waverly 123.36 2 PKPdf PKPdf 04 53 01.6 -0.5
V57A Coltrane Farms 123.38 354 P PKPdf 04 53 02.0 -0.2
baz=5.5
WMOK Wichita Mounta 123.39 13 P PKPdf 04 53 01.7 -0.6
baz=345
V56A Mocksville 123.52 355 P PKPdf 04 53 01.3 -1.1
baz=5.7
V55A Taylorsville 123.53 356 P PKPdf 04 53 01.9 -0.5
baz=4.9
V54A Nebo 123.65 356 P PKPdf 04 53 02.5 -0.2
baz=4.1
W61A Ground Anchor 123.76 352 P PKPdf 04 53 01.5 -1.4
baz=9.6
W39A Magazine 123.79 8 P PKPdf 04 53 01.8 -1.1
baz=351
TKL Tuckaleechee C 123.85 358 PKP PKiKP 04 53 03.4 +0.1
comp=Z,10nm,0.8s,baz=56,slow=2.9,SNR=11
W60A Pink Hill 123.97 352 P PKiKP 04 53 03.8 +0.3
baz=8.8
W41B Gary Mavity, V 124.00 7 P PKPdf 04 53 03.2 -0.2
baz=352
W56A Indian Trail 124.19 355 P PKPdf 04 53 03.0 -0.8
baz=5.6
KMSC Kings Mountain 124.24 356 P PKPdf 04 53 03.3 -0.5
baz=4.8
W54A Cherokee Point 124.35 357 P PKPdf 04 53 03.5 -0.5
baz=3.8
W52A Murphy 124.41 358 PKPdf PKPdf 04 53 04.1 -0.1
MIAR Mount Ida 124.46 8 P PKPdf 04 53 04.1 -0.2
baz=351
MNTX Marinudas Mount 124.48 20 P PKPdf 04 53 04.4 0.0
baz=338
MNTX Cornudas Mount 124.48 20 PKPdf PKiKP 04 53 04.7 0.0
X40A Basin Creek Fa 124.61 7 P PKPdf 04 53 04.6 +0.1
baz=352
X58A Rowland 124.65 354 P PKPdf 04 53 04.7 +0.1
baz=7.1
X56A White Oak 124.86 355 P PKiKP 04 53 05.4 +0.1
baz=5.2
X54A Belton 124.90 357 P PKPdf 04 53 04.7 -0.4
baz=3.6
OXF Oxford 124.90 4 P PKPdf 04 53 05.0 -0.1
baz=356
ABTX Abilene, Hawle 125.23 15 P PKiKP 04 53 06.2 0.0
baz=344
Y57A Sumter 125.29 355 P PKPdf 04 53 05.9 +0.1
baz=5.9
Z41A Richland Creek 125.83 7 P PKPdf 04 53 07.0 +0.1
baz=352
Z57A Bowman 126.03 355 P PKPdf 04 53 06.1 -1.2
baz=5.6
GOGA Godfrey 126.08 358 P PKiKP 04 53 07.7 0.0
baz=2.4
TAOE Nuku Hiva Isla 126.17 86 eLR LR 05 32 46.6
comp=Z,399nm,34.2s
LRAL Lakeview Retre 126.47 1 P PKPdf 04 53 06.9 -1.2
baz=358
TXAR Lajitas Array 127.22 20 PKP PKiKP 04 53 10.6 +0.2
comp=Z,3.3nm,0.5s,baz=187,slow=0.5,SNR=18
TXAR pPKP pPKPdf 04 53 31.6 +0.1
comp=Z,12nm,0.9s,baz=259,slow=0.6,SNR=8.4
TXAR SKPab SKPab 04 56 22.1
comp=Z,2.7nm,0.8s,baz=36,slow=3.8,SNR=4.3
TXAR SKP 04 56 38.1
comp=Z,3.1nm,0.7s,baz=232,slow=2.1,SNR=4.4
TXAR PKKP PKKPdf 05 03 22.5 0.0
comp=Z,0.8nm,0.8s,baz=167,slow=6.2,SNR=3.6
TXAR SKKPbc SKKPbc 05 06 21.8 +1.2
comp=Z,2.1nm,0.9s,baz=158,slow=6.5,SNR=7.2
TXAR Lajitas Array 127.22 20 PKPdf PKiKP 04 53 10.1 -0.2
JCT Junction City 127.24 15 P PKiKP 04 53 10.6 +0.3
baz=343
435B Jarrell 127.46 13 P PKiKP 04 53 10.4 -0.2
baz=346
TIGA Tifton 128.05 358 P PKPdf 04 53 09.0 -2.2
baz=2.4
HKT Hockley 128.61 11 /i PKiKP PKiKP 04 53 13.8 +0.9
833A Chaparral WMA, 129.40 16 P PKPdf 04 53 12.9 -0.9
baz=343
GDU01 Guandu, BA 135.61 271 eP PKPdf 04 53 26.5 +0.7
ROSB Rosrio 135.89 288 eP PKPdf 04 53 26.7 +0.3
SJMB Sao Joao De Ma 138.24 265 eP PKPdf 04 53 31.2 +0.6
TMAB Tom-Au,PA,Br 139.13 292 eP PKPdf 04 53 32.3 -0.1
CMIG Matias Romero 141.28 14 PP PP 04 56 40.0 +2.8
comp=Z,5.8nm,1.0s,baz=333,slow=5.3,SNR=3.7
CMIG SKPbc SKPbc 04 57 05.7 -0.9
comp=Z,16nm,0.8s,baz=1.8,slow=3.7,SNR=15
CMIG SKKPbc SKKPbc 05 05 29.8 +1.3
comp=Z,1.9nm,0.7s,baz=145,slow=5.7,SNR=5.7
PARB Paraibuna 142.94 258 eP PKPdf 04 53 37.9 -1.1
BDFB Brasilia 143.99 272 PKP PKPbc 04 53 39.7 +0.5
comp=Z,19nm,0.8s,baz=92,slow=3.4,SNR=18
BDFB SKPbc SKiKP 04 57 14.3 0.0
comp=Z,30nm,1.2s,baz=40,slow=4.5,SNR=5.7
BDFB SKKPbc SKKPbc 05 05 17.4 -1.2
comp=Z,4.7nm,0.8s,baz=304,slow=4.4,SNR=5.7
BDFB Brasilia 143.99 272 PKPdf PKPbc 04 53 39.4 +0.2
MALB Monte Alegre 144.12 298 eP PKPbc 04 53 40.0 +0.5
VAO Valinhos 144.15 259 eP PKPbc 04 53 39.9 +0.5
SPB Sao Paulo 144.62 258 eP PKPdf 04 53 42.2 +0.4
IPMB Ipameri, GO 144.67 268 eP PKPbc 04 53 41.4 +0.3
URIC Uribia, Colomb 145.06 336 eP PKPbc 04 53 41.8 -0.6
TGUH Tegucigalpa,Un 145.34 3 PKPab 04 53 45.0 +1.4
BB19B Bebedouro 145.42 263 eP PKPab 04 53 45.0 +1.2
PRVC Isla de Provid 145.81 353 eP PKPab 04 53 45.3 +0.2
SNDB Serra Nova Dou 146.01 279 eP PKPbc 04 53 45.1 -0.3
SMRC Santa Marta, M 146.35 340 eP PKPdf 04 53 42.0 -3.1
FRTB Fartura 146.56 259 eP PKPbc 04 53 47.0 +0.1
ITTB Itaituba 146.71 295 eP PKPbc 04 53 46.9 -0.6
ITRB Iturama 146.96 266 eP PKPbc 04 53 47.4 -0.7
SDV Santo Domingo 147.06 332 eP PKPdf 04 53 47.0 +0.4
SDV Santo Domingo 147.06 332 PKPbc PKPbc 04 53 47.9 +1.0
SDV Santo Domingo 147.06 332 eP PKPdf 04 53 47.4 +0.8
CNLB Canela 147.49 248 eP PKPbc 04 53 48.4 -0.9
ARAG Araguaiana, MT 147.56 273 eP PKPdf 04 53 47.9 +0.8
ARGC Ariguani, Magd 147.57 339 eP PKiKP 04 53 51.4 -0.6
NPGB Novo Progresso 147.71 291 eP PKPdf 04 53 48.1 +0.6
GO09 Cerro Castillo 147.84 196 PKPbc PKPbc 04 53 49.5 0.0
SJCC San Jacinto, C 147.84 340 eP PKiKP 04 53 51.8 -0.8
PCMB Pacaembu 148.01 262 eP PKPdf 04 53 49.2 +1.5
OCAC Ocana 148.74 336 eP PKPdf 04 53 50.2 +0.9
ITAB Concordia 148.82 252 eP PKPdf 04 53 49.4 +0.5
PTGB Pitanga 148.87 256 eP PKPdf 04 53 50.1 +1.0
MOTC Monteria, Cord 149.05 341 eP PKPdf 04 53 50.5 +0.9
LCBC Los crdobas, 149.19 342 eP PKiKP 04 53 55.5 +0.3
PAMC Pamplona, Colo 149.32 334 eP PKPbc 04 53 54.6 -0.4
TRCB Terra Rica 149.36 260 eP PKPdf 04 53 50.5 +0.6
PLTB Pedras Altas 149.40 242 eP PKPdf 04 53 51.1 +1.5
CPSB Cacapava Do Su 149.54 245 eP PKPdf 04 53 51.1 +1.2
CAPC Capurgana 149.67 344 eP PKPbc 04 53 55.3 0.0
CLDB Colider 149.74 284 eP PKPdf 04 53 50.4 -0.2
TAMC Tame, Arauca 149.75 332 eP PKPbc 04 53 55.9 +0.3
BRRC Barranca, Sant 149.93 336 eP PKPbc 04 53 56.1 +0.2
UREC San Jos de Ur 149.97 340 eP PKPbc 04 53 56.3 +0.2
MACA Manacapuru-AM 150.08 303 eP PKPdf 04 53 51.8 +0.5
BARC Barichara 150.19 335 eP PKPbc 04 53 56.7 -0.2
PTBC PUERTO BERRIO 150.73 337 eP PKPdf 04 53 53.2 +0.9
RUSC La Rusia 150.78 334 eP PKPdf 04 53 53.2 +0.2
PP1B Ponte de Pedra 150.84 271 eP PKPdf 04 53 53.2 +0.9
DBBC Dabeiba 150.88 341 eP PKiKP 04 53 59.7 +0.8
PTAC Punta Ardita, 151.21 344 eP PKPbc 04 53 58.8 -0.1
SPBC San Pablo de B 151.40 335 eP PKPdf 04 53 54.2 +0.8
HELC Santa Helena 151.43 339 eP PKPdf 04 53 55.6 +1.8
NORC Norcasia 151.78 337 eP PKPdf 04 53 55.0 +1.1
PTGC Puerto Gaitan, 151.88 330 eP PKPbc 04 53 58.6 -1.9
CBOC Ciudad Bolivar 151.90 339 eP PKPbc 04 53 58.7 -2.1
SOLC Bahia Solano 151.99 342 eP PKiKP 04 54 01.6 +0.6
AQDB Aquidauana 152.03 265 eP PKPdf 04 53 54.4 +0.4
CHIC Chingaza 152.19 334 eP PKPdf 04 53 55.6 +0.6
ROSC El Rosal 152.24 335 PKP PKPdf 04 53 56.5 +1.4
comp=Z,44nm,1.0s,baz=71,slow=3.4,SNR=17
ROSC PKPbc PKiKP 04 54 03.0 +0.9
comp=Z,156nm,0.8s,baz=76,slow=4.2,SNR=26
ITQB Itaqui 152.40 245 eP PKPdf 04 53 56.2 +1.9
TOLC Tolima 152.85 337 eP PKPdf 04 53 56.9 +1.0
PLMC San Jos del P 152.89 339 eP PKPdf 04 53 56.6 +1.0
ANIL Santa Ana 152.97 337 eP PKPdf 04 53 57.5 +1.5
ORTC Ortega, Tolima 153.45 336 eP PKPdf 04 53 56.4 0.0
PRAC Prado 153.49 335 eP PKPdf 04 53 56.8 +0.4
CPUP Villa Florida 153.53 252 PKP PKPdf 04 53 56.5 +0.5
comp=Z,11nm,0.9s,baz=66,slow=2.4,SNR=26
CPUP PKPbc PKPbc 04 54 03.6 -0.2
comp=Z,41nm,0.7s,baz=102,slow=2.2,SNR=101
CPUP PKPab PKPab 04 54 16.7 +0.2
comp=Z,29nm,0.8s,baz=93,slow=4.6,SNR=13
CPUP Villa Florida 153.53 252 PKPdf PKPdf 04 53 56.2 +0.2
CPUP PKPbc PKPbc 04 54 03.4 -0.4
CPUP PKPab PKPab 04 54 16.1 -0.4
CPUP Villa Florida 153.53 252 eP PKPdf 04 53 56.5 +0.5
GUVC San Jose del G 153.56 330 eP PKPbc 04 54 04.0 -0.3
YOTC Yotoco, Valle 153.77 339 eP PKPdf 04 53 56.8 -0.1
PTLB Pontes e Lacer 154.32 278 eP PKPdf 04 53 58.0 +0.6
MACC Macarena, Meta 154.47 332 eP PKPdf 04 53 57.5 -0.3
VILB Vilhena 154.51 284 eP PKPdf 04 53 59.4 +1.7
BETC Betania 154.65 336 eP PKPdf 04 53 59.0 +0.9
MARP Paez Belalcaza 154.69 337 eP PKPbc 04 54 07.0 0.0
GARC Garzon, Huila 155.12 335 eP PKPdf 04 53 58.8 -0.3
POPC Popayan, Colom 155.23 338 eP PKPdf 04 53 57.9 -1.3
PCON Cinco Dias 155.33 337 eP PKPdf 04 54 01.1 +1.4
SAML Samuel 155.39 295 PKiKP PKPdf 04 53 59.3 +0.3
SAML 04 54 21.7
SAML Samuel 155.39 295 PKPdf 04 53 59.3 +0.3
SAML PKPbc pPKPdf 04 54 07.6 -13
SAML PKPab PKPab 04 54 21.6 -3.0
SAML Samuel 155.39 295 eP PKPdf 04 53 59.7 +0.7
FLOC Florencia 155.74 335 eP PKPdf 04 54 00.4 +0.8
SIV San Ignacio 156.26 277 PKP PKPdf 04 54 00.5 +0.4
comp=Z,4.5nm,1.0s,baz=105,slow=1.1,SNR=15
SIV PKPab PKPab 04 54 29.0 +0.6
comp=Z,17nm,0.9s,baz=90,slow=6.7,SNR=16
SIV PP PP 04 58 08.4 +1.9
comp=Z,6.5nm,1.1s,baz=109,slow=7.2,SNR=6.8
PLCA Paso Flores 156.34 209 PKP PKPdf 04 54 00.5 +0.9
comp=Z,6.4nm,0.9s,baz=163,slow=2.6,SNR=10
PLCA PKPab PKPab 04 54 27.9 -0.1
comp=Z,14nm,0.9s,baz=159,slow=5.9,SNR=8.1
PLCA Paso Flores 156.34 209 PKPdf PKPdf 04 54 00.2 +0.6
PLCA Paso Flores 156.34 209 eP PKPdf 04 54 00.7 +1.1
GCUF Volcan Galeras 156.69 339 eP PKPdf 04 54 03.2 +1.8
PUAC Puerto Asis, P 157.04 336 eP PKPdf 04 54 01.2 0.0
CUSE Cuicocha Este 157.90 341 eP PKPdf 04 54 04.9 +2.0
ETMB Extrema 158.39 297 eP PKPdf 04 54 03.0 +0.2
CZSB Cruzeiro do Su 162.01 314 eP PKPdf 04 54 09.1 +2.2
LPAZ La Paz 162.85 282 PKP PKPdf 04 54 08.8 +0.5
comp=Z,7.4nm,0.8s,baz=356,slow=4.2,SNR=24
LPAZ PKPab PKPab 04 54 56.9 -0.9
comp=Z,8.0nm,0.8s,baz=19,slow=14,SNR=4.1
LPAZ PP PP 04 58 45.1 +2.2
comp=Z,3.0nm,0.9s,baz=61,slow=5.1,SNR=5.2
LPAZ La Paz 162.85 282 eP PKPdf 04 54 08.9 +0.5
LPAZ La Paz 162.85 282 PKPdf 04 54 08.6 +0.3

LPAZ	La Paz	162.85 282	*eP*		PKPdf	04 54 09.0	+0.6
LVC	Limon Verde	164.38 260	PKP		PKPdf	04 54 09.9	+0.6
	comp=Z,4.8nm,0.9s,baz=124,slow=4.9,SNR=4.2						
LVC			PKPab		PKPab	04 55 04.8	+0.7
	comp=Z,24nm,0.8s,baz=86,slow=2.8,SNR=16						
LVC			PP		PP	04 58 51.8	+1.0
	comp=Z,11nm,1.0s,baz=74,slow=7.0,SNR=6.7						
LVC	Limon Verde	164.38 260			PKPdf	04 54 09.4	0.0
LVC			PKPab		PKPab	04 55 04.8	+0.7
LVC	Limon Verde	164.38 260	*eP*		PKPdf	04 54 13.2	+3.9
ATAH	Atahualpa	164.75 332	PKP		PKPdf	04 54 11.1	+1.1
	comp=Z,8.7nm,0.9s,baz=342,slow=4.3,SNR=8.0						
ATAH			PKPab		PKPab	04 55 07.4	+1.7
	comp=Z,20nm,0.8s,baz=28,slow=3.1,SNR=6.0						
PB07	IPOC Station P	165.32 263			PKPab	04 55 08.2	+0.1
PSGCX	Pisagua	165.42 272			PKPab	04 55 07.6	-0.9
PB04	IPOC Station P	165.54 261			PKPab	04 55 09.1	0.0

IDC ***17*** *04:47:10.4±1.6, 9.52S×155.11E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/47, mbtmp3.8/5, MS3.4/4, Ms1 3.4/4, ms1mx3.0/36, Error ellipse: s-maj=61.8km s-min=28.6km az=124.0*

ISC 17 04:47:15.6±1.3, 9.6S±0.3×155.1E±0.3, h33km, n10, σ0§62/6, mb3.6/5, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	6.04 330		LR	LR	04 50 58.4	
	comp=Z,192nm,20.5s,baz=166,slow=38						
PMG	Port Moresby	7.81 271		LR	LR	04 52 05.9	
	comp=Z,180nm,20.2s,baz=105,slow=38						
DZM	Mont Dzumac	16.55 140		LR	LR	04 56 42.8	
	comp=Z,220nm,18.9s,baz=358,slow=35						
WRA	Warramunga Arr	22.52 240		P	P	04 52 12.8	0.0
	1.7nm,0.8s,baz=64,slow=9.7,SNR=5.3						
ASAR	Alice Springs	24.61 233		P	P	04 52 33.1	0.0
	1.6nm,0.8s,baz=61,slow=8.6,SNR=6.2						
STKA	Stephens Creek	25.48 207		P	P	04 52 41.2	+0.3
	3.3nm,0.7s,baz=33,slow=10.0,SNR=4.7						
RPZ	Rata Peaks	36.76 161		LR	LR	05 08 48.1	
	comp=Z,58nm,19.5s,baz=296,slow=35						
SONM	Songino Array	71.53 328		P	P	04 58 33.7	+0.3
	0.4nm,0.6s,baz=118,slow=4.3,SNR=2.6						
NVAR	Mina Array Bea	93.24 52		P	P	05 00 27.6	+0.1
	0.4nm,0.7s,baz=232,slow=6.7,SNR=2.2						
TORD	Torodi Ar. Bea	153.66 280		PKPbc	PKPbc	05 07 11.2	-1.0
	0.4nm,0.7s,baz=66,slow=2.0,SNR=1.7						

IDC ***17*** *04:57:04.3±3.2, 35.73S×179.81E, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/40, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=72.9km s-min=45.0km az=123.0*

WEL ***17*** *04:57:09.0, 36°S±7'×18°0W±1°8, h115km±45km, M3.8/10, ML4.0/10, MLv3.8/10, Error ellipse: s-maj=0.0km s-min=0.0km az=89.5*

ISC 17 04:57:11.4±4.0, 36.2S±0.2×179.9W±0.2, h77km±32km, n20, σ0§97/25, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.97 228		P	Pn	04 57 41.5	-1.3
MXZ				S	Sn	04 58 07.5	+0.6
WMGZ	Waiomatatini S	2.09 221		P	Pn	04 57 44.3	-0.2
PUZ	Puketiti	2.37 219		P	Pn	04 57 47.5	-0.7
PUZ				S	Sn	04 58 15.8	-0.5
HAZ	Te Kaha	2.42 231		P	Pn	04 57 48.6	-0.2
HAZ				S	Sn	04 58 19.3	+1.9
TWGZ	Tauwhareparae	2.59 221		P	Pn	04 57 51.5	+0.3
TWGZ				S	Sn	04 58 23.9	+2.2
RUGZ	Raukumara Rang	2.62 228		P	Pn	04 57 51.3	-0.3
CNGZ	Carnagh Statio	2.72 214		P	Pn	04 57 52.8	0.0
MWZ	Matawai	2.95 224		P	Pn	04 57 55.3	-0.7
MWZ				S	Sn	04 58 30.4	-0.1
RIGZ	Rimuhau	3.10 217		P	Pn	04 57 58.0	-0.1
RIGZ				S	Sn	04 58 34.9	+0.7
URZ	Urewera	3.15 229		Pn	Pn	04 57 57.1	-1.6
	5.3nm,0.3s,baz=13,slow=4.5,SNR=30						
URZ				Sn	Sn	04 58 34.3	-0.8
	14nm,0.3s,baz=104,slow=9.8,SNR=11						
URZ	Urewera	3.15 229		P	Pn	04 57 57.4	-1.2
URZ				S	Sn	04 58 34.9	-0.3
PRGZ	Paritu Road	3.22 213		P	Pn	04 57 59.6	-0.1
MYRZ	Mayor Island	3.30 251		P	Pn	04 58 01.5	+0.7
MHGZ	Mahia Peninsul	3.40 211		P	Pn	04 58 01.8	-0.4
ASAR	Alice Springs	41.62 274		P	P	05 04 51.3	-0.8
	1.2nm,0.8s,baz=113,slow=7.2,SNR=8.2						
WRA	Warramunga Arr	43.13 279		P	P	05 05 04.2	-0.3
	1.2nm,0.7s,baz=120,slow=7.7,SNR=12						
H03N3	Juan Fernandez	78.77 123		T	T	06 35 58.7	
	baz=237						
H03N2	Juan Fernandez	78.77 123		T	T	06 36 00.4	
	baz=237						
H03N1	Juan Fernandez	78.78 123		T	T	06 35 58.0	
	baz=237						
FINES	FINESS Array B	149.94 335		PKPbc	PKiKP	05 16 53.9	+1.0
	1.8nm,0.7s,baz=54,slow=3.8,SNR=4.3						

IDC ***17*** *04:57:54.3±1.2, 9.54S×155.26E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/42, mbtmp3.9/8, Error ellipse: s-maj=40.4km s-min=23.8km az=115.0*

NEIC ***17*** *04:57:56.7±3.0, 9.7S±0.1×155.3E±0.1, h10km±1km, mb4.1/8, Error ellipse: s-maj=27.1km s-min=14.1km az=331.0*

ISC 17 04:57:58.8±0.7, 9.6S±0.1×155.3E±0.1, h29km, n20, σ0§97/20, mb3.8/10, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.59	88	Pn	Pn	04 59 06.2	-0.2
WB0	Warramunga Arr	22.58 241		P	P	05 02 58.1	+1.0
WB0				IAmb	IAmb	05 03 07.2	
	comp=Z,4.5nm,1.0s						
WB2	Warramunga Arr	22.68 241		P	P	05 02 59.1	+0.8
WB2				IAmb	IAmb	05 03 12.0	
	comp=Z,8.2nm,1.4s						
WRA	Warramunga Arr	22.70 241		P	P	05 02 58.4	0.0
	comp=Z,1.8nm,0.9s,baz=67,slow=9.6,SNR=14						
WRA	Warramunga Arr	22.70 241		P	P	05 02 57.6	-0.8
ASAR	Alice Springs	24.76 233		P	P	05 03 17.8	-0.5
	comp=Z,2.7nm,1.0s,baz=63,slow=9.7,SNR=18						
ASAR	Alice Springs	24.76 233		P	P	05 03 19.1	+0.9
STKA	Stephens Creek	25.55 208		P	P	05 03 25.4	+0.1
	comp=Z,1.9nm,0.7s,baz=42,slow=12,SNR=5.2						
STKA	Stephens Creek	25.55 208		P	P	05 03 27.1	+1.8
FITZ	Fitzroy Crossi	29.97 250		P	P	05 04 03.8	-1.2
	comp=Z,0.5nm,0.6s,baz=104,slow=4.2,SNR=1.7						
FITZ	Fitzroy Crossi	29.97 250		P	P	05 04 03.6	-1.4
FITZ				IAmb	IAmb	05 04 22.8	
	comp=Z,4.2nm,1.5s						
SNZO	South Karori	35.94 155		P	P	05 04 55.9	-0.9
SONM	Songino Array	71.67 328		P	P	05 09 18.6	+0.5
	comp=Z,0.7nm,0.6s,baz=131,slow=4.5,SNR=3.9						
SONM	Songino Array	71.67 328		P	P	05 09 19.2	+1.1
QSPA	South Pole Qui	80.39 180		P	P	05 10 08.0	+0.5
	comp=Z,1.5nm,0.6s,baz=353,slow=0.9,SNR=12						
QSPA	South Pole Qui	80.39 180		P	P	05 10 08.5	+1.0
QSPA				IAmb	IAmb	05 10 08.7	
	comp=Z,4.8nm,1.2s						
IMAR	Indian Mountai	84.08 19		P	P	05 10 27.9	+1.3
ILAR	Eielson Array	85.67 21		P	P	05 10 34.6	+0.1
	comp=Z,0.4nm,0.9s,baz=235,slow=6.2,SNR=1.9						
ZALV	Zalesovo Beam	86.49 326		P	P	05 10 37.8	-1.0
	comp=Z,0.8nm,0.4s,baz=96,slow=5.9,SNR=2.0						
ESDC	Sonseca Array	144.80 332		PKP	PKPab	05 17 31.9	-0.5
	comp=Z,0.7nm,1.1s,baz=23,slow=3.0,SNR=2.1						

IDC ***17*** *05:06:46.8±0.6, 1.55N×126.29E, h0km, mb4.3/13, mb1 4.4/15, mb1mx4.1/52, mbtmp4.3/15, ML3.8/2, Error ellipse: s-maj=34.7km s-min=12.3km az=74.0*

DJA ***17*** *05:06:50.4±2.3, 2°N±7'×12°7E±°, h14km±24km, M4.4/6, mB4.9/1, mb4.4/1, MLv4.3/6, Mw(mB)4.2/1*

NEIC ***17*** *05:06:51.6±2.0, 1.56N±0.09×126.48E±0.07, h35km±2km, mb4.6/20, Error ellipse: s-maj=17.0km s-min=9.7km az=34.0*

ISC 17 05:06:53.0±0.4, 1.55N±0.05×126.49E±0.07, h47km, n56, σ1§62/61, mb4.6/26, MS4.6/4, 3C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.17 131		P	Pn	05 07 12.3	-0.6
TNTI	Ternate	1.17 131			Pn	05 07 12.0	-0.9
SGSI	Sangihe	2.33 336		P	Pn	05 07 27.9	-1.0
KMSI	Cibinong	2.69 249		P	Pn	05 07 35.9	+2.2
LUWI	Luwuk	4.52 235		Pn	Pn	05 07 57.3	-1.6
SIJI	Sorong	5.34 117		Pn	Pn	05 08 12.0	+1.7
	1.7nm,0.3s,baz=227,slow=22,SNR=2.4						
KCP	Kidapawan	5.61 346		*iP*	Pn	05 08 16.5	+2.6
MPSI	Mapaga	6.70 260		P	Pn	05 08 29.2	+0.4
FAKI	Fak Fak	7.27 128		Pn	Pn	05 08 33.2	-3.5
MYLDM	Lahad Datu	8.76 295		Pn	Pn	05 08 55.6	-1.4
SOEI	Soe	11.44 191		Pn	Pn	05 09 32.2	-1.7
SBUM	Sibu	14.29 274		Pn	Pn	05 10 12.3	-0.4
MTN	Manton Dam	15.02 162			Pn	05 10 21.9	-0.4
MTN				IAmb	IAmb	05 10 26.2	
	comp=Z,10nm,0.9s						
KNRA	Kununurra	17.26 173		Pn	Pn	05 10 50.2	-0.5
KNRA				IAmb	IAmb	05 11 10.2	
	comp=Z,21nm,1.1s						
FITZ	Fitzroy Crossi	19.54 182		P	P	05 11 16.4	-0.3
	comp=Z,0.3nm,0.3s,baz=11,slow=7.9,SNR=18						
FITZ	Fitzroy Crossi	19.54 182			P	05 11 17.2	+0.5
TPUB	Ta-pu	22.36 346		P	P	05 11 43.5	-3.8
WB0	Warramunga Arr	22.55 160		P	P	05 11 48.9	-0.4
WB0				IAmb	IAmb	05 11 52.3	
	comp=Z,27nm,0.8s						
COEN	Coen	22.60 133		P	P	05 11 49.9	+0.1
WRAB	Tennant Creek	22.70 161		P	P	05 11 49.6	-1.2
WRAB				IAmb	IAmb	05 11 53.8	
	comp=Z,29nm,0.8s						
WRA	Warramunga Arr	22.70 161		P	P	05 11 49.7	-1.2
	comp=Z,30nm,0.7s,baz=338,slow=11,SNR=103						
WRA				PcP	PcP	05 15 42.7	+0.7
	comp=Z,0.5nm,0.6s,baz=330,slow=2.1,SNR=2.1						
WRA	Warramunga Arr	22.70 161		P	P	05 11 49.5	-1.4
WB2	Warramunga Arr	22.70 161		P	P	05 11 50.0	-0.8
WB2				IAmb	IAmb	05 11 53.9	
	comp=Z,32nm,0.7s						
SSLB	Suanglung	22.75 347		P	P	05 11 49.5	-1.8
SSLB				IAmb	IAmb	05 11 59.8	
	comp=Z,71nm,1.5s						
WR0	Warramunga Arr	22.78 160		P	P	05 11 51.4	-0.4
WR0				IAmb	IAmb	05 11 54.7	
	comp=Z,33nm,1.1s						
AS31	Alice Springs	26.08 164		P	P	05 12 22.3	0.0
AS31				IAmb	IAmb	05 12 27.3	
	comp=Z,6.3nm,0.7s						
ASAR	Alice Springs	26.08 164		P	P	05 12 22.9	+0.6
	comp=Z,13nm,0.8s,baz=351,slow=7.4,SNR=82						
ASAR				PcP	PcP	05 15 50.4	+1.0
	comp=Z,0.7nm,0.6s,baz=352,slow=1.8,SNR=2.9						
ASAR	Alice Springs	26.08 164		P	P	05 12 23.3	+1.0
CTA	Charters Tower	28.95 139		P	P	05 12 49.0	+1.0
	comp=Z,2.1nm,0.5s,baz=322,slow=6.4,SNR=2.9						
NJ2	Nanjing	31.19 347		*eP*	P	05 13 06.6	-1.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GYA	Guiyang	31.25 324		⇑P	P	05 13 17.3	+8.7
GYA				pP	sP	05 13 28.8	+2.9
GYA				S	S	05 18 11.3	-0.8
GYA				SS	SnSn	05 20 00.9	+2.6
GYA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,200nm,5.3s						
GYA				LR	LR		
	comp=N,1μm,12.8s						
GYA				LR	LR		
	comp=E,2μm,13.5s						
GYA				LR	LR		
	comp=Z,780nm,14.3s						
FORT	Forrest	32.18 177		P	P	05 13 15.7	-0.8
BBOO	Buckleboo	35.35 166		P	P	05 13 44.6	+0.6
STKA	Stephens Creek	36.20 158		P	P	05 13 51.9	+0.6
	comp=Z,5.7nm,0.7s,baz=335,slow=8.2,SNR=9.7						
STKA	Stephens Creek	36.20 158		P	P	05 13 52.3	+1.0
MJAR	Matsushiro Arr	36.47 16		P	P	05 13 54.1	+0.5
	comp=Z,1.5nm,0.7s,baz=183,slow=9.6,SNR=4.6						
ARMA	Armidale	39.80 145		P	P	05 14 23.4	+1.5
ARMA				IAmb	IAmb	05 14 35.0	
	comp=Z,15nm,1.1s						
LZH	Lanzhou	40.27 331		*eP*	P	05 14 26.1	+0.4
LZH				pP	pP	05 14 36.6	-1.3
LZH				sP	sP	05 14 42.9	-0.3
LZH				PP	PP	05 15 54.8	-4.3
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
LZH				LR	LR		
	comp=N,920nm,13.6s						
LZH				LR	LR		
	comp=E,1μm,16.3s						
LZH				LR	LR		
	comp=Z,450nm,16.8s						
HHC	Hu-ho-hao-te	41.39 343		*eP*	P	05 14 38.3	+3.5
HHC				S	S	05 20 50.8	+4.3
HHC				SS	SS	05 23 36.6	-15
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,6.1s						
HHC				LR	LR		
	comp=N,550nm,14.5s						
HHC				LR	LR		
	comp=E,920nm,14.5s						
HHC				LR	LR		
	comp=Z,330nm,15.3s						
USRK	Ussuriysk Ar.	42.75 6		P	P	05 14 46.0	+0.3
	comp=Z,1.5nm,0.7s,baz=213,slow=6.2,SNR=2.5						
GTA	Gaotai	44.85 330		*eP*	P	05 15 00.3	-2.5
GTA				pP	pP	05 15 14.3	-0.9
GTA				sP	sP	05 15 19.4	-1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,6.7s						
GTA				LR	LR		
	comp=N,170nm,15.6s						
GTA				LR	LR		
	comp=E,170nm,17.4s						
GTA				LR	LR		
	comp=Z,200nm,17.8s						
KLR	Kul'dur	47.72 5		P	P	05 15 24.1	-0.9
	comp=Z,0.9nm,0.5s,baz=175,slow=11,SNR=2.2						
SONM	Songino Array	49.28 342		P	P	05 15 36.7	-0.6
	comp=Z,1.1nm,0.8s,baz=151,slow=7.9,SNR=5.7						
SONM	Songino Array	49.28 342		P	P	05 15 37.0	-0.3
WMQ	Urumqi	54.38 326		*eP*	P	05 16 17.1	+1.8
PETK	Petropavlovsk-	57.53 22		P	P	05 16 38.6	+1.0
	comp=Z,5.5nm,0.9s,baz=202,slow=6.7,SNR=2.2						
MK31	Makanchi Array	59.21 326		P	P	05 16 47.8	-1.6
MK31				IAmb	IAmb	05 16 55.2	
	comp=Z,7.1nm,1.4s						
MKAR	Makanchi Array	59.21 326		P	P	05 16 49.5	0.0
	comp=Z,1.5nm,0.4s,baz=121,slow=6.0,SNR=11						
MKAR	Makanchi Array	59.21 326		P	P	05 16 49.1	-0.4
KURBB	Kurchatov Arra	63.45 328		P	P	05 17 17.6	-0.3
	comp=Z,3.0nm,0.5s,baz=128,slow=6.0,SNR=11						
KURK	Kurchatov	63.45 328		P	P	05 17 17.3	-0.6
NRIK	Noril'sk	72.48 346		P	P	05 18 14.8	+0.5
	comp=Z,1.9nm,0.6s,baz=108,slow=4.6,SNR=4.3						
VNDA	Vanda	81.30 173		P	P	05 19 04.8	+1.0
	comp=Z,1.2nm,0.5s,baz=321,slow=5.5,SNR=16						
VNDA	Vanda	81.30 173		P	P	05 19 04.6	+0.8
SYO	Syowa Base	90.31 201		⇑*eP*	P	05 19 51.2	+2.7
TORD	Torodi Ar. Bea	123.34 287		PKP	PKiKP	05 25 46.5	+0.3
	comp=Z,0.6nm,1.0s,baz=66,slow=2.4,SNR=1.6						

NEIC ***17*** *05:07:24.5±0.9, 15.0S±0.1×167.6E±0.1, h123km±7km, mb4.4/12, Error ellipse: s-maj=25.8km s-min=10.3km az=141.0*

IDC ***17*** *05:07:27.4±7.2, 15.4OS×167.47E, h124km±55km, mb3.6/4, mb1 3.8/5, mb1mx3.4/41, mbtmp4.0/5, Error ellipse: s-maj=56.2km s-min=31.9km az=32.0*

ISC 17 05:07:25.2±0.8, 15.20S±0.09×167.7E±0.1, h129km, n22, σ1§42/24, mb4.4/8, 1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.52 242			Pn	05 07 43.7	-0.6
SANVU				Sn	Sn	05 07 57.5	-1.2
DZM	Mont Dzumac	6.93 190		P	Pn	05 09 03.6	-0.8
	3.1nm,0.3s,baz=322,slow=7.2,SNR=41						
DZM				S	Sn	05 10 18.9	-3.1
	3.4nm,0.3s,baz=319,slow=19,SNR=11						
DZM	Mont Dzumac	6.93 190			Pn	05 09 05.7	+1.3
LHI	Lord Howe Isla	18.05 204		P	Pn	05 11 28.1	+0.2
EIDS	Eidsvold	18.55 234		P	P	05 11 32.8	+0.7
EIDS				IAmb	IAmb	05 11 35.0	
	comp=Z,7.9nm,0.8s						
KNTN	Kanton	23.76 61		P	P	05 12 25.5	-0.5
KNTN				IAmb	IAmb	05 12 25.9	
	comp=Z,33nm,1.2s						
WB0	Warramunga Arr	32.04 257		P	P	05 13 39.6	-0.4
WB0				IAmb	IAmb	05 13 58.7	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	32.10 257		P	P	05 13 40.2	-0.2
	comp=Z,1.0nm,0.7s,baz=85,slow=9.1,SNR=2.8						
WRA	Warramunga Arr	32.10 257		P	P	05 13 40.3	-0.2
AS31	Alice Springs	32.88 250		P	P	05 13 46.1	-1.1
ASAR	Alice Springs	32.88 250		P	P	05 13 47.5	+0.2
	comp=Z,2.6nm,0.6s,baz=78,slow=9.0,SNR=7.1						
ASAR	Alice Springs	32.88 250		P	P	05 13 46.6	-0.7
KNRA	Kununurra	37.48 264		P	P	05 14 25.1	-1.6
KNRA				IAmb	IAmb	05 14 28.1	
	comp=Z,13nm,1.2s						
JOHN	Johnston Islan	38.89 36		P	P	05 14 36.6	-1.8
FITZ	Fitzroy Crossi	40.32 260		P	P	05 14 51.4	+1.1
	comp=Z,3.0nm,0.6s,baz=75,slow=8.4,SNR=10						
FITZ	Fitzroy Crossi	40.32 260		P	P	05 14 51.3	+0.9
FITZ				IAmb	IAmb	05 14 52.2	
	comp=Z,9.5nm,1.4s						
VNDA	Vanda	62.40 181		P	P	05 17 35.1	+1.2
	comp=Z,0.2nm,0.4s,baz=343,slow=5.5,SNR=3.5						
VNDA	Vanda	62.40 181		P	P	05 17 35.3	+1.4
VNDA				IAmb	IAmb	05 17 51.7	
	comp=Z,2.5nm,1.5s						
QSPA	South Pole Qui	74.83 180		P	P	05 18 52.9	+1.6
SYO	Syowa Base	88.37 196		⇓*eP*	P	05 20 00.2	-2.0
SNAA	Sanae	93.10 183		P	P	05 20 25.1	+0.9
SNAA				IAmb	IAmb	05 20 40.8	
	comp=Z,4.2nm,1.5s						
ARCES	ARCESS Array B	120.81 345		PKP	PKiKP	05 26 04.5	+2.8
	comp=Z,3.2nm,0.9s,baz=36,slow=1.7,SNR=4.3						

IDC ***17*** *05:08:08.1±0.5, 7.54N×94.18E, h0km, mb4.2/21, mb1 4.3/21, mb1mx4.1/54, mbtmp4.2/21, MS4.0/32, Ms1 4.0/32, ms1mx3.9/43, Error ellipse: s-maj=25.7km s-min=12.9km az=60.0*

NEIC ***17*** *05:08:09.6±1.5, 7.61N±0.09×94.36E±0.08, h10km±1km, mb4.8/48, Error ellipse: s-maj=16.4km s-min=12.6km az=32.0*

BJI ***17*** *05:08:09.8±0.0, 7.33N×94.40E, h28km, mB4.8/20, mb4.5/26, Ms4.6/16, Ms7 4.2/18*

DJA ***17*** *05:08:12.5±0.5, 8°N±3'×9°5E±°, h26km±4km, M4.8/18, mb4.7/18, mB5.4/11, MLv4.9/6, Mw(mB)4.8/11*

NDI ***17*** *05:08:12.2±2.7, 7°28N×94°37E, h30km, mb4.4, ML5.2, mb4.8(NEIC)*

GCMT ***17*** *05:08:13.6±0.4, 7.52N±0.02×94.38E±0.02, h18km±2km, MW5.0/84, Moment Tensor Solution. s6,c6; s84,c109; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.65±.20; Mθθ=1.93±.12; Mφφ2.58±.15; Mrθ=-1.30±.40; Mrφ0.52±.10; Mθφ=2.06±.47; Best double couple: Mo3.31000×10^16 NP1:φs140.00000°, δ41.00000°, λ-171.00000°. NP2: φs43.00000°, δ84.00000°, λ-49.00000°. Principal axes: T 3.7760, Plg27.0000°, Azm102.0000°; N -0.9360, Plg40.0000°, Azm218.0000°; P -2.8440, Plg38.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***17*** *05:08:18.0, 7.53N×94.17E, h10km, mb4.8*

ISC 17 05:08:11.9±0.3, 7.55N±0.04×94.29E±0.04, h24km, n181, σ1§40/157, mb4.6/56, MS4.0/36, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBY	CAMPBELL BAY	0.65 214		*eP*	Pb	05 08 22.8	-1.8
CMBY				*eS*	Sb	05 08 31.4	-1.8
CMBY				IAML		05 08 33.1	
	comp=N,177μm,0.2s						
CMBY				IAML		05 08 33.2	
	comp=E,110μm,0.3s						
LHMI	Lhok Sumawe	3.50 131		P	Pn	05 09 04.6	-0.3
LHMI	Lhok Sumawe	3.50 131		Pn	Pn	05 09 04.2	-0.7
PKDT	Phuket	4.02 85		P	Pn	05 09 12.0	0.0
SURT	Suratani	4.67 72		P	Pb	05 09 32.4	-0.8
TPTI		5.14 146		P	Pn	05 09 28.4	+1.0
	comp=E,0.4nmcomp=E,1μmcomp=E,104nm,1.4s						
KCSI	Kotacane, Aceh	5.29 139		P	Pn	05 09 31.7	+2.2
	comp=E,7.8nmcomp=E,11μmcomp=E,328nm,1.0s						
TRTT	Trang	5.36 87		P	Pn	05 09 30.2	-0.2
DGPR	DIGLIPUR	5.75 347		*eP*	Pn	05 09 40.5	+4.7
DGPR				*ex*	x	05 10 40.6	
RPSI	Rantau Prapat	6.67 136		Pn	Pn	05 09 48.3	-0.2
KULM	Kulim	6.71 109		Pn	Pn	05 09 48.0	-1.0
KULM	Kulim	6.71 109		P	Pn	05 09 48.0	-1.0
GSI	Gunungsitoli	7.02 152		P	Pn	05 09 52.8	-0.4
	comp=E,0.9nmcomp=E,2μmcomp=E,56nm,0.9s						
GSI	Gunungsitoli	7.02 152		Pn	Pn	05 09 53.4	+0.2
IPM	Ipoh	7.36 114		Pn	Pn	05 09 54.9	-3.0
IPM	Ipoh	7.36 114		P	Pn	05 09 56.0	-1.9
PHET	Kaeng Krachan	7.48 44		P	Pn	05 10 01.0	+1.4
SRDT	SRDT	8.25 35		P	Pn	05 10 15.1	+4.9
	comp=E,4.4nmcomp=E,171μmcomp=E,755nm,1.7s						
MNSI	Mandailing Nat	8.53 142		P	Pn	05 10 14.5	+0.4
	comp=E,4μmcomp=E,27nm,0.6s						
UTHA	Uthaitani	9.42 32		P	Pn	05 10 29.0	+2.8
	comp=E,0.1nmcomp=E,333nmcomp=E,39nm,0.8s						
SRAK	Srakaew	9.96 49		P	Pn	05 10 42.0	+8.4
SDSI	Sungai Dareh	11.03 140		P	Pn	05 10 46.7	-1.6
	comp=E,650nmcomp=E,9.8nm,1.5s						
CHAI	Chaiyaphum	11.20 42		P	Pn	05 10 55.5	+4.8
	comp=E,0.1nmcomp=E,26nm,0.8s						
CMAR	Chiang Mai Arr	11.75 22		Pn	Pn	05 11 01.1	+3.0
	comp=E,1.2nm,0.3s,baz=214,slow=16,SNR=6.5						
CMAR				LR	LR	05 15 43.3	
	comp=E,930nm,18.2s,baz=251,slow=39						
UTTA	Uttaradit	11.83 30		P	Pn	05 11 03.2	+4.0
	comp=E,229nmcomp=

KKM IAmb IAmb 05 13 13.2
comp=Z,33nm,1.3s
KKN Kakani 21.86 338 *eP* **P 05 13 03.6 +0.3**
comp=Z,110nm,1.1s
LSA Lhasa 22.23 353 P **P 05 13 07.8 +0.3**
LSA IAmb IAmb 05 13 21.6
comp=Z,37nm,1.1s
GKN Gorkha 22.30 337 *eP* **P 05 13 08.0 +0.1**
comp=Z,118nm,1.1s
BHPL Bhopal 22.49 316 *eP* **P 05 13 11.3 +1.5**
BHPL IAmb IAmb 05 13 16.6
comp=Z,18nm,1.0s
KOLN Koldanda 22.52 335 *eP* **P 05 13 10.1 -0.1**
comp=Z,111nm,1.4s
DANN Dangsang 22.96 336 *eP* **P 05 13 15.1 +0.1**
PYUN Piuthan 23.07 334 *eP* **P 05 13 15.8 -0.2**
comp=Z,78nm,0.9s
BBKI Banjar Baru 23.24 117 P **P 05 13 17.8 +0.1**
comp=Z,14µmcomp=Z,20nm,0.9s
MYLDM Lahad Datu 24.17 94 P **P 05 13 25.2 -1.4**
MYLDM IAmb IAmb 05 13 39.8
comp=Z,55nm,1.2s
H08S3 Diego Garcia H 26.46 236 T T 05 40 25.3
baz=55,slow=75,SNR=471
H08S2 Diego Garcia H 26.46 236 T T 05 40 25.5
baz=55,slow=75,SNR=250
H08S1 Diego Carcia H 26.48 236 T T 05 40 27.9
baz=55,slow=75,SNR=150
MPSI Mapaga 26.51 105 P **P 05 13 46.5 -1.4**
comp=Z,950nmcomp=Z,20nm,1.2s
TGY Tagaytay City 26.95 74 LR LR 05 24 13.8
comp=Z,308nm,18.6s,baz=24,slow=36
KAPI Kappang 28.30 115 LR LR 05 25 27.2
comp=Z,260nm,21.4s,baz=291,slow=37
XAN Xi'an 29.62 25 P P 05 14 23.6 +8.1
XAN pP pwP 05 14 33.3 +8.4
XAN sP sP 05 14 37.8 +13
XAN pmax pmax
comp=Z,11nm,0.8s
XAN pmax pmax
comp=Z,250nm,5.5s
XAN LR LR
comp=N,2µm,13.0s
XAN LR LR
comp=E,2µm,14.2s
XAN LR LR
comp=Z,1µm,13.9s
LZH Lanzhou 29.71 16 *eP* **P 05 14 19.3 +2.9**
LZH pP sP 05 14 25.3 -0.3
LZH sP pwP 05 14 29.0 +3.1
LZH PP **PnPn 05 15 13.9 +1.7**
LZH pmax pmax
comp=Z,24nm,1.1s
LZH pmax pmax
comp=Z,130nm,5.4s
LZH LR LR
comp=Z,930nm,14.6s
LZH LR LR
comp=Z,1µm,12.5s
LZH LR LR
comp=Z,570nm,16.9s
GTA Gaotai 32.11 8 *eP* **P 05 14 39.3 +1.8**
GTA pP pP 05 14 43.8 -0.2
GTA sP sP 05 14 46.4 -0.3
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,54nm,6.2s
GTA LR LR
comp=Z,200nm,16.7s
GTA LR LR
comp=Z,320nm,14.9s
GTA LR LR
comp=Z,240nm,16.0s
NIL Nilore 32.45 326 P **P 05 14 39.6 -0.8**
NJ2 Nanjing 33.42 40 *eP* **P 05 14 48.9 0.0**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 LR LR
comp=Z,950nm,14.7s
NJ2 LR LR
comp=Z,780nm,12.8s
NJ2 LR LR
comp=Z,890nm,12.8s
KBL Kabul 35.52 323 P **P 05 15 06.8 -0.6**
HHC Hu-ho-hao-te 36.56 22 *eP* **P 05 15 16.3 +0.3**
HHC S **S 05 20 53.8 -3.5**
HHC sS sS 05 21 14.3 +6.3
HHC SS **SnSn 05 23 23.5 -4.0**
HHC pmax pmax
comp=Z,12nm,0.6s
HHC pmax pmax
comp=Z,210nm,5.6s
HHC LR LR
comp=Z,540nm,12.8s
HHC LR LR
comp=Z,920nm,13.6s
HHC LR LR
comp=Z,360nm,14.5s
WMQ Urumqi 36.59 352 *eP* **P 05 15 18.1 +2.0**
WMQ pmax pmax
comp=Z,22nm,1.3s
WMQ pmax pmax
comp=Z,150nm,5.1s
WMQ LR LR
comp=Z,190nm,14.1s
WMQ LR LR
comp=Z,390nm,25.9s
WMQ LR LR
comp=Z,390nm,28.7s
GAR Garm 38.03 329 P **P 05 15 26.7 -1.8**
GAR IAmb IAmb 05 15 36.0
comp=Z,19nm,0.9s
PSA00 Pilbara Seismi 38.29 140 P **P 05 15 30.1 -0.7**
PSA00 IAmb IAmb 05 15 42.2
comp=Z,13nm,1.2s
CHGR Chuyangaron 38.38 328 P **P 05 15 31.0 -0.4**
BTK Batken 38.59 331 P **P 05 15 32.9 -0.3**
BTK IAmb IAmb 05 15 42.8
comp=Z,18nm,1.1s
AAK Ala-Archa 39.06 337 P **P 05 15 35.0 -2.2**
FITZ Fitzroy Crossi 40.09 130 P **P 05 15 47.2 +1.4**
comp=Z,2.6nm,0.8s,baz=312,slow=5.1,SNR=2.6
FITZ LR LR 05 33 47.7
comp=Z,201nm,19.4s,baz=302,slow=38
FITZ Fitzroy Crossi 40.09 130 P **P 05 15 45.9 0.0**
MK31 Makanchi Array 40.43 347 P **P 05 15 47.4 -1.0**
MKAR Makanchi Array 40.43 347 P **P 05 15 47.7 -0.7**
comp=Z,5.9nm,0.7s,baz=165,slow=8.0,SNR=34
MKAR Makanchi Array 40.43 347 P **P 05 15 47.6 -0.8**
MAKZ Makanchi 40.52 347 P **P 05 15 47.7 -1.3**
KK31 Karatay Array 41.12 333 P **P 05 15 53.5 -0.6**
KKAR Karatay Array 41.12 333 P **P 05 15 53.3 -0.7**
KKAR Karatay Array 41.12 333 P **P 05 15 53.4 -0.7**
KKAR IAmb IAmb 05 16 09.4
comp=Z,4.6nm,0.9s
SONM Songino Array 41.44 12 P **P 05 15 57.2 +0.4**
comp=Z,0.6nm,0.7s,baz=183,slow=8.8,SNR=2.4
SONM PcP **PcP 05 17 57.0 +2.5**
comp=Z,0.6nm,0.6s,baz=197,slow=3.0,SNR=1.7
SONM LR LR 05 34 10.6
comp=Z,219nm,21.1s,baz=186,slow=38
JNU Nakatsue 42.35 48 LR LR 05 34 21.2
comp=Z,402nm,18.6s,baz=244,slow=37
KSRS Korea Array 42.61 41 LR LR 05 35 54.2
comp=Z,230nm,18.6s,baz=228,slow=39
GEYT Alibeck 44.54 318 LR LR 05 38 07.9
comp=Z,221nm,18.9s,baz=60,slow=40
GYA0B ALIBECK ARRAY 44.54 318 P **P 05 16 23.2 +1.3**
GYA0B IAmb IAmb 05 16 36.3
comp=Z,9.8nm,0.7s
TLY Talaya 44.66 8 LR LR 05 36 13.3
comp=Z,187nm,21.8s,baz=182,slow=38
KURBB Kurchatov Arra 44.89 346 P **P 05 16 24.5 0.0**
comp=Z,7.4nm,0.6s,baz=166,slow=7.1,SNR=62
KURK Kurchatov 44.96 346 P **P 05 16 25.2 +0.2**
ZAA0 Zalesovo Array 46.89 352 P **P 05 16 40.6 +0.4**
ZAA0 IAmb IAmb 05 16 48.8
comp=Z,15nm,1.0s
ZALV Zalesovo Beam 46.89 352 P **P 05 16 40.7 +0.5**
comp=Z,3.8nm,0.4s,baz=179,slow=7.7,SNR=18
ZALV Zalesovo Beam 46.89 352 P **P 05 16 40.1 -0.1**
WB0 Warramunga Arr 47.91 125 P **P 05 16 48.4 -0.3**
WB0 IAmb IAmb 05 17 04.2
comp=Z,5.0nm,0.6s
WRA Warramunga Arr 47.95 125 P **P 05 16 48.0 -1.0**
comp=Z,2.3nm,1.0s,baz=305,slow=8.6,SNR=5.8
WRA PcP **PcP 05 18 19.7 +2.5**
comp=Z,1.0nm,0.6s,baz=310,slow=3.0,SNR=2.3
WRA LR LR 05 38 22.7
comp=Z,260nm,19.9s,baz=295,slow=38
WRA Warramunga Arr 47.95 125 P **P 05 16 48.7 -0.3**
WB2 Warramunga Arr 47.96 125 P **P 05 16 48.4 -0.7**
WB2 IAmb IAmb 05 16 55.8
comp=Z,15nm,1.2s
WR0 Warramunga Arr 48.12 125 P **P 05 16 50.0 -0.3**
WR0 IAmb IAmb 05 16 57.1
comp=Z,11nm,1.2s
JHJ Hachijo jima 2 49.13 52 LR LR 05 37 04.2
comp=Z,195nm,21.4s,baz=262,slow=35
MJAR Matsushiro Arr 49.27 47 LR LR 05 40 26.7
comp=Z,149nm,18.0s,baz=215,slow=39
BRVK Borovoye 49.40 341 P **P 05 16 59.8 +0.1**
BRVK IAmb IAmb 05 17 09.8
comp=Z,4.1nm,0.8s
ASAR Alice Springs 49.59 130 P **P 05 17 00.6 -1.0**
comp=Z,0.8nm,0.4s,baz=295,slow=7.4,SNR=7.1
ASAR PcP **PcP 05 18 21.2 -1.8**
comp=Z,0.7nm,0.8s,baz=306,slow=4.2,SNR=1.2
ASAR LR LR 05 40 03.5
comp=Z,169nm,19.7s,baz=300,slow=39
ASAR Alice Springs 49.59 130 P **P 05 17 01.5 -0.1**
FORT Forrest 49.99 141 P **P 05 17 05.0 +0.6**
GUMO Guam 50.01 79 LR LR 05 37 45.4
comp=Z,69nm,20.6s,baz=274,slow=36
ABKAR Akbulak array 50.59 331 P **P 05 17 08.5 -0.1**
ABKAR Akbulak array 50.59 331 P **P 05 17 07.6 -1.1**
ABKAR IAmb IAmb 05 17 17.9
comp=Z,20nm,1.4s
AKTO Aktyubinsk 52.30 331 P **P 05 17 21.1 -0.4**
comp=Z,3.2nm,0.7s,baz=142,slow=6.1,SNR=8.4
AKTO PcP **PcP 05 18 32.7 +0.2**
comp=Z,1.9nm,0.6s,baz=127,slow=5.1,SNR=1.9
OPO Ambohidratompo 53.22 240 P **P 05 17 28.9 -0.1**
comp=Z,1.0nm,0.4s,baz=104,slow=9.8,SNR=1.5
ARU Arti 56.24 337 P **P 05 17 50.2 +0.1**
comp=Z,2.8nm,0.2s,baz=168,slow=5.8,SNR=6.4
ARU Arti 56.24 337 P **P 05 17 50.5 +0.4**
KBZ Khabaz 57.43 318 LR LR 05 46 14.7
comp=Z,49nm,18.1s,baz=132,slow=40
CTA Charters Tower 58.02 119 LR LR 05 45 35.3
comp=Z,338nm,19.5s,baz=252,slow=39
STKA Stephens Creek 59.78 134 P **P 05 18 16.1 +0.8**
comp=Z,1.4nm,0.9s,baz=312,slow=12,SNR=1.4
STKA LR LR 05 48 53.4
comp=Z,180nm,18.2s,baz=315,slow=41
NRIK Noril'sk 61.87 357 P **P 05 18 29.0 +0.1**
comp=Z,2.1nm,0.5s,baz=126,slow=3.3,SNR=2.6
NRIK LR LR 05 49 26.1
comp=Z,113nm,21.0s,baz=200,slow=40
BR131 Keskin Array S 62.75 311 P **P 05 18 33.7 -1.8**
BR131 IAmb IAmb 05 18 41.0
comp=Z,4.7nm,0.9s
BRTR Keskin Array B 62.75 311 P **P 05 18 34.1 -1.5**
comp=Z,1.9nm,0.8s,baz=128,slow=7.7,SNR=12
BRTR LR LR 05 48 38.9
comp=Z,46nm,20.0s,baz=114,slow=39
ELL Elmali 65.04 307 P **P 05 18 50.5 -0.1**
KLMR Klimovskoe 66.81 334 *eP* **P 05 18 57.5 -3.9**
KLMR AMP 05 19 08.9
comp=Z,23nm,1.3s
TIXI Tiksi 67.52 11 P **P 05 19 06.4 +0.7**
TIXI IAmb IAmb 05 19 13.5
comp=Z,8.5nm,0.8s
PETK Petropavlovsk- 68.18 36 LR LR 05 50 42.5
comp=Z,76nm,18.6s,baz=250,slow=37
AKASG Malin Array Be 68.50 322 P **P 05 19 10.5 -1.8**
comp=Z,1.0nm,0.6s,baz=91,slow=4.2,SNR=5.3
AKASG LR LR 05 53 56.5
comp=Z,69nm,18.2s,baz=115,slow=40
AKASG Malin Array Be 68.50 322 P **P 05 19 11.1 -1.1**
IDI Anoyia 68.87 305 P **P 05 19 14.5 -0.5**
MLR Muntele Rosu 69.51 316 P **P 05 19 18.7 -0.1**
MLR IAmb IAmb 05 19 26.4
comp=Z,11nm,1.0s
BURAR Bucovina Array 70.39 318 P **P 05 19 23.5 -0.6**
BUR08 Bucovina Ar. S 70.40 318 P **P 05 19 23.4 -0.8**
BUR08 IAmb IAmb 05 19 39.1
comp=Z,9.7nm,1.4s
LVZ Lovozero 71.91 340 P **P 05 19 33.4 +0.4**
FIA1 FINESS Array S 73.06 332 P **P 05 19 39.6 -0.2**
FIA1 IAmb IAmb 05 19 47.5
comp=Z,13nm,0.9s
FINES FINESS Array B 73.06 332 P **P 05 19 39.0 -0.8**
comp=Z,4.7nm,0.7s,baz=82,slow=4.9,SNR=17
FINES LR LR 05 57 00.6
comp=Z,61nm,18.3s,baz=111,slow=40
BOSA Boshof 75.54 238 LR LR 05 48 50.5
comp=Z,76nm,21.0s,baz=49,slow=32
ARCES ARCESS Array B 75.62 340 P **P 05 19 54.3 -0.3**
comp=Z,2.0nm,0.8s,baz=95,slow=7.3,SNR=7.7
ARCES LR LR 05 55 52.5
comp=Z,175nm,20.6s,baz=115,slow=38
DPC Dobruska-Polom 76.55 320 *eP* **P 05 20 00.5 +0.2**
ARSA Arzberg 76.87 317 *eP* P 05 20 07.5 +5.3
comp=Z,2.6nm,0.6s
BRG Berggiesshubel 78.09 320 *eP* P 05 20 15.2 +6.3
comp=Z,12nm,1.4s
GEC2 GERESS Array S 78.17 318 P **P 05 20 09.7 +0.2**
GEC2 IAmb IAmb 05 20 16.7
comp=Z,4.8nm,0.8s
GERES GERESS Array B 78.17 318 P **P 05 20 09.2 -0.2**
comp=Z,1.7nm,0.8s,baz=91,slow=5.3,SNR=11
GERES LR LR 05 59 15.6
comp=Z,71nm,20.3s,baz=50,slow=39
GERES GERESS Array B 78.17 318 P **P 05 20 09.7 +0.2**
PRED Cave del Predi 78.18 316 P **P 05 20 08.6 -1.0**
PRED IAmb IAmb 05 20 15.8
comp=Z,9.2nm,1.1s
MAW Mawson 78.25 192 P **P 05 20 09.5 +0.2**
comp=Z,1.6nm,0.7s,baz=63,slow=5.1,SNR=7.1
MAW LR LR 05 50 00.6
comp=Z,69nm,18.6s,baz=56,slow=32
MAW Mawson 78.25 192 P **P 05 20 10.2 +0.9**
KHC Kasperske Hory 78.26 319 *eP* **P 05 20 09.2 -0.7**
KHC *eX* x 05 20 23.3
WTTA Wattenberg 79.52 317 *eP* **P 05 20 19.8 +2.7**
comp=Z,7.2nm,0.9s
SQTA Sankt Quirin 79.81 317 *eP* **P 05 20 18.0 -0.6**
comp=Z,7.2nm,0.9s
NC405 NORSAR Array S 79.84 331 P **P 05 20 18.2 -0.1**
MOTA Moosalm 79.88 317 *eP* **P 05 20 18.5 -0.4**
comp=Z,5.3nm,0.8s
NC602 NORSAR Array S 79.91 330 P **P 05 20 18.4 -0.2**
NC303 NORSAR Array S 80.02 331 P **P 05 20 19.6 +0.4**
NB2 NORSAR Subarra 80.08 331 P **P 05 20 19.2 -0.4**
comp=Z,1.2nm,0.6s,baz=98,slow=4.8
NB2 NORSAR Subarra 80.08 331 P **P 05 20 18.6 -1.0**
comp=Z,4.3nm,0.8s,baz=96,slow=5.1
NOA NORSAR Array B 80.08 331 P **P 05 20 18.9 -0.8**
comp=Z,0.2nm,0.4s,baz=96,slow=5.0,SNR=4.4
NOA LR LR 05 59 35.7
comp=Z,56nm,18.3s,baz=95,slow=39
RETA Reutte 80.11 317 *eP* **P 05 20 17.1 -3.1**
comp=Z,1.8nm,0.5s
FETA Feichten 80.14 316 *eP* **P 05 20 20.2 -0.2**
comp=Z,4.1nm,0.9s
NC204 NORSAR Array S 80.31 331 P **P 05 20 20.6 -0.3**
NC204 IAmb IAmb 05 20 23.6
comp=Z,19nm,1.2s
KEST Kesra 81.55 305 LR LR 06 03 33.0
comp=Z,45nm,18.2s,baz=289,slow=41
TORD Torodi Ar. Bea 90.82 283 P **P 05 21 14.4 +0.3**
comp=Z,0.9nm,0.8s,baz=70,slow=2.6,SNR=4.6
TORD LR LR 06 02 27.1
comp=Z,101nm,18.0s,baz=15,slow=36
TORD Torodi Ar. Bea 90.82 283 P **P 05 21 13.8 -0.2**
ESDC Sonseca Array 91.54 310 P **P 05 21 17.1 0.0**
comp=Z,0.9nm,0.8s,baz=61,slow=3.6,SNR=5.7
ESDC Sonseca Array 91.54 310 P **P 05 21 16.6 -0.4**
IMAR Indian Mountai 91.87 22 P **P 05 21 18.3 +0.4**
VNDA Vanda 92.58 168 LR LR 05 57 21.4
comp=Z,79nm,21.1s,baz=306,slow=32
DBIC Dimbokro 98.14 278 LR LR 06 06 34.6
comp=Z,120nm,18.2s,baz=64,slow=36
NVAR Mina Array Bea 125.11 31 PKP **PKiKP 05 27 12.1 +0.6**
comp=Z,0.1nm,0.3s,baz=282,slow=1.8,SNR=2.0
NVAR Mina Array Bea 125.11 31 PKP **PKPdf 05 27 11.1 0.0**
PDAR Pinedale Array 125.41 21 PKP **PKiKP 05 27 11.9 0.0**
comp=Z,0.4nm,0.7s,baz=330,slow=1.4,SNR=2.2
TXAR Lajitas Array 139.45 24 PKP **PKPdf 05 27 38.2 0.0**
comp=Z,0.3nm,0.6s,baz=324,slow=1.5,SNR=2.7
PLCA Paso Flores 144.30 200 PKP PKPbc 05 27 45.0 +0.2
comp=Z,3.1nm,1.0s,baz=209,slow=2.6,SNR=4.7
PLCA Paso Flores 144.30 200 PKPbc 05 27 45.4 +0.7
CPUP Villa Florida 147.19 232 PKPbc **PKPbc 05 27 53.2 -0.7**
comp=Z,1.7nm,0.8s,baz=33,slow=7.0,SNR=5.3

*IDC **17** 05:08:44.7±1.7, 1°.83N×126°.66E, h0km, mb4.0/4, mb1 4.0/5, mb1mx3.6/50, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=123.1km s-min=21.5km az=69.0*
*NEIC **17** 05:08:50.5±2.1, 1°.79N±0°.09×126°.40E±0°.08, h35km±2km, mb4.3/13, Error ellipse: s-maj=18.3km s-min=10.7km az=39.0*
ISC 17 05:08:51.6±0.7, 1°.75N±0°.10×126°.41E±0°.09, h47km, n23, σ0s80/24, mb4.2/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36**	**135**	Pn		**Pn**	**05 09 14.4**	**+0.3**
TNTI				Sn		**Sn**	**05 09 30.1**	**-0.9**
LUWI	**Luwuk**	**4.57**	**233**	Pn		**Pn**	**05 09 58.0**	**-0.2**
MTN	**Manton Dam**	**15.23**	**162**	Pn		**Pn**	**05 12 24.8**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.73**	**182**	P		**P**	**05 13 17.1**	**-0.4**
	0.1nm,0.3s,baz=360,slow=13,SNR=1.4							
FITZ	**Fitzroy Crossi**	**19.73**	**182**	P		**P**	**05 13 17.4**	**-0.1**
WB0	**Warramunga Arr**	**22.77**	**160**	P		**P**	**05 13 50.4**	**+0.2**
COEN	**Coen**	**22.80**	**134**	P		**P**	**05 13 49.5**	**-0.9**
COEN				IAmb		IAmb	05 14 04.2	
	comp=Z,12nm,1.3s							
WRA	**Warramunga Arr**	**22.92**	**161**	P		**P**	**05 13 50.8**	**-0.9**
	comp=Z,2.4nm,0.5s,baz=340,slow=11,SNR=6.0							
WRA	**Warramunga Arr**	**22.92**	**161**	P		**P**	**05 13 50.3**	**-1.4**
WB2	**Warramunga Arr**	**22.92**	**160**	P		**P**	**05 13 50.9**	**-0.9**
WB2				IAmb		IAmb	05 13 55.7	
	comp=Z,12nm,1.2s							
PMG	**Port Moresby**	**23.45**	**119**	P		**P**	**05 13 56.8**	**-0.3**
PMG				IAmb		IAmb	05 14 07.0	
	comp=Z,13nm,0.9s							
AS31	**Alice Springs**	**26.29**	**164**	P		**P**	**05 14 24.1**	**+1.2**
ASAR	**Alice Springs**	**26.29**	**164**	P		**P**	**05 14 22.2**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=344,slow=8.2,SNR=2.0							
KMI	**Kunming**	**32.58**	**317**	P		**P**	**05 15 17.7**	**-1.2**
BBOO	**Buckleboo**	**35.56**	**166**	P		**P**	**05 15 43.6**	**-0.8**
MDJ	**Mudanjiang**	**42.78**	**3**	P		**P**	**05 16 44.9**	**+0.3**
MKAR	**Makanchi Array**	**59.00**	**326**	P		**P**	**05 18 46.9**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=127,slow=7.9,SNR=3.4							
MKAR	**Makanchi Array**	**59.00**	**326**	P		**P**	**05 18 46.6**	**+0.1**
KURBB	**Kurchatov Arra**	**63.23**	**328**	P		**P**	**05 19 15.6**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=129,slow=6.0,SNR=5.2							
KURK	**Kurchatov**	**63.24**	**328**	P		**P**	**05 19 15.3**	**+0.2**
KURK				IAmb		IAmb	05 19 18.7	
	comp=Z,3.4nm,0.9s							
VNDA	**Vanda**	**81.51**	**173**	P		**P**	**05 21 04.2**	**+0.7**
VNDA				IAmb		IAmb	05 21 04.8	
	comp=Z,2.1nm,1.1s							
QSPA	**South Pole Qui**	**91.67**	**180**	P		**P**	**05 21 54.9**	**+1.2**
TORD	**Torodi Ar. Bea**	**123.21**	**287**	PKP		**PKPdf**	**05 27 44.0**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=81,slow=2.0,SNR=2.5							

*VIE **17** 05:22:28.8±0.3, 49°.77N×18°.57E, h0km, mb2.4/6, ml2.4/7, Error ellipse: s-maj=3.2km s-min=2.3km az=144.0 24 km ESE of Ostrava Suspected Mining induced.*
*IPEC **17** 05:22:29.5±0.2, 49°.84N×18°.57E, h0km, ML2.2/3, Error ellipse: s-maj=1.3km s-min=1.1km az=153.0*
*PRU **17** 05:22:30.1±0.0, 49°.79N×18°.47E, h0km, Mining Induced Event Csm, E=7.0e+05*
*IDC **17** 05:22:30.2±2.5, 49°.80N×18°.35E, h0km, mb3.8/1, mb1 3.9/2, mb1mx3.4/31, mbtmp3.9/2, ML2.5/2, Error ellipse: s-maj=41.5km s-min=13.0km az=139.0*
ISC 17 05:22:28.2±0.7, 49°.84N±0°.03×18°.57E±0°.02, h0km, n39, σ0s84/75, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.27**	**270**	*e*PG		**Pb**	**05 22 35.1**	**-0.9**
OKC				*e*SG		**Sg**	**05 22 38.4**	**+1.5**
	comp=Z,313nm,0.7s							
MORC	**Moravsky Berou**	**0.67**	**265**	*e*PG		**Pb**	**05 22 42.4**	**-0.4**
MORC				*e*SG		**Sg**	**05 22 50.3**	**+0.7**
MORC	**Moravsky Berou**	**0.67**	**265**	*e*Pg		**Pb**	**05 22 42.3**	**-0.5**
	baz=85							
MORC				*e*Sg		**Sg**	**05 22 50.3**	**+0.7**
	46nm,0.3s,baz=85							
OJC	**Ojcow**	**0.88**	**64**	*e*Pg		**Pb**	**05 22 46.4**	**0.0**
OJC				*e*Sg		**Sb**	**05 22 59.1**	**+0.4**
LANS	**Liptovska Anna**	**0.91**	**139**	*e*PG		**Pb**	**05 22 46.9**	**0.0**
LANS				*e*SG		**Sn**	**05 23 00.8**	**-1.3**
LANS				*e*LG		Lg	05 23 05.4	
JAVC	**Velka Javorina**	**1.14**	**211**	*e*PG		**Pn**	**05 22 51.7**	**+0.2**
JAVC				*e*SG		**Sg**	**05 23 05.3**	**+0.4**
JAVC	**Velka Javorina**	**1.14**	**211**	*e*Pg		**Pn**	**05 22 51.7**	**+0.2**
	baz=31							
JAVC				*e*Sg		**Sg**	**05 23 05.3**	**+0.4**
	baz=31							
KRLC	**Kraliky**	**1.18**	**282**	*e*PG		**Pg**	**05 22 50.5**	**-0.3**
KRLC				*e*SG		**Sg**	**05 23 07.0**	**+1.0**
	comp=Z,54nm,0.5s							
NIE	**Niedzica**	**1.20**	**110**	*e*Pg		**Pn**	**05 22 52.8**	**+0.4**
NIE				*e*Sg		**Sn**	**05 23 10.3**	**+0.9**
VYHS	**Vyhne**	**1.36**	**172**	*e*PG		**Pn**	**05 22 54.4**	**-0.1**
VYHS				*e*SG		**Sn**	**05 23 14.0**	**+0.8**
VRAC	**Vranov**	**1.39**	**248**	*e*PG		**Pg**	**05 22 55.1**	**+0.2**
VRAC				*e*SG		**Sg**	**05 23 13.1**	**+0.3**
VRAC	**Vranov**	**1.39**	**248**	*e*Pg		**Pg**	**05 22 55.0**	**+0.2**
	baz=67							
VRAC				*e*Sg		**Sg**	**05 23 13.1**	**+0.3**
	42nm,0.3s,baz=67							
DPC	**Dobruska-Polom**	**1.53**	**290**	*e*PG		**Pn**	**05 22 56.8**	**-0.1**
DPC				*e*SG		**Sb**	**05 23 18.5**	**+1.0**
	comp=Z,35nm,0.8s							
KRUC	**Moravsky**	**1.62**	**242**	*e*PG		**Pn**	**05 22 58.6**	**+0.6**
KRUC				*e*SG		**Sg**	**05 23 20.2**	**+0.1**
KRUC	**Moravsky**	**1.62**	**242**	*e*Pg		**Pn**	**05 22 58.5**	**+0.6**
	baz=60							
KRUC				*e*Sg		**Sg**	**05 23 20.2**	**+0.1**
	24nm,0.4s,baz=60							
OSTC	**Ostas**	**1.67**	**296**	*e*PG		**Pn**	**05 22 59.4**	**+0.6**
OSTC				*e*SG		**Sg**	**05 23 23.4**	**+1.5**
	comp=Z,34nm,0.8s							
MODS	**Modra-Piesok**	**1.69**	**210**	*e*PG		**Pn**	**05 22 58.2**	**-0.9**
MODS				*e*SG		**Sn**	**05 23 20.1**	**-1.4**
MODS				*e*LG		Lg	05 23 21.1	
KSP	**Ksiaz**	**1.77**	**305**	*e*Pb		**Pn**	**05 23 00.3**	**+0.2**
KSP				*e*Pg		**Pg**	**05 23 02.4**	**+0.2**
KSP				*e*Sg		**Sb**	**05 23 25.0**	**+0.8**
UPC	**Upice**	**1.77**	**293**	*e*PG		**Pb**	**05 23 01.6**	**0.0**
UPC				*e*SG		**Sg**	**05 23 25.5**	**+0.4**
	comp=Z,16nm,0.5s							
CHVC	**Chvalec**	**1.78**	**296**	*e*PG		**Pb**	**05 23 01.4**	**-0.3**
CHVC				*e*SG		**Sb**	**05 23 25.1**	**+0.5**
	comp=Z,28nm,0.9s							
KECS	**Kecovo**	**1.85**	**136**	*e*PN		**Pn**	**05 23 01.8**	**+0.6**
KECS				*e*SN		**Sb**	**05 23 26.4**	**-0.3**
KECS				*e*LG		Lg	05 23 27.7	
ZST	**Bratislava**	**1.91**	**211**	*e*PG		**Pn**	**05 23 02.9**	**+0.9**
ZST				*e*SG		**Sn**	**05 23 25.9**	**-0.8**
ZST				*e*LG		Lg	05 23 28.1	
TREC	**Trest**	**2.08**	**256**	*e*PG		**Pb**	**05 23 07.2**	**+0.4**
TREC				*e*SG		**Sb**	**05 23 33.6**	**+0.4**
	comp=Z,16nm,0.4s							
CRVS	**Cervenica-Dubn**	**2.11**	**115**	*e*PN		**Pg**	**05 23 09.0**	**+0.3**
PRU	**Pruhonice**	**2.60**	**275**	*e*PG		**Pg**	**05 23 17.5**	**-0.6**
PRU				*e*SG		**Sg**	**05 23 50.9**	**-1.0**
	comp=Z,9.7nm,0.5s							
CONA	**Conrad Observa**	**2.62**	**224**	*e*Pn		**Pn**	**05 23 11.5**	**-0.3**
	1.9nm,0.3s							
CONA				*e*Sn		**Sn**	**05 23 44.2**	**-0.1**
	4.7nm,0.3s							
PVCC	**Panska Ves**	**2.66**	**287**	*e*PG		**Pb**	**05 23 18.1**	**+1.4**
PVCC				*e*SG		**Sg**	**05 23 53.8**	**+0.2**
	comp=Z,22nm,0.4s							
PRA	**Prague**	**2.68**	**277**	*e*PG		**Pg**	**05 23 18.9**	**-0.6**
PRA				*e*SG		**Sg**	**05 23 53.7**	**-0.5**
	comp=Z,9.4nm,0.9s							
BRG	**Berggiesshubel**	**3.14**	**291**	PG		**Pb**	**05 23 26.1**	**+1.2**
BRG				SG		**Sg**	**05 24 09.2**	**+0.3**
	6.8nm,0.7s							
ARSA	**Arzberg**	**3.29**	**219**	*e*Pn		**Pn**	**05 23 20.1**	**-0.9**
	0.2nm,0.2s							
ARSA				*e*Sg		**Sg**	**05 24 17.1**	**+3.3**
	1.8nm,0.3s							

KHC	**Kasperske Hory**	**3.33**	**260**	*e*PN	**Pn**	**05 23 22.3**	**+0.7**
KHC				*e*PG	**Pb**	**05 23 28.7**	**+0.6**
KHC				*e*SG	**Sg**	**05 24 13.4**	**-1.7**
	comp=Z,13nm,0.8s						
GERES	**GERESS Array B**	**3.33**	**254**	Pn	**Pn**	**05 23 21.8**	**+0.1**
	0.3nm,0.3s,baz=67,slow=13,SNR=6.2						
GERES				Pg	**Pb**	**05 23 28.0**	**-0.3**
	1.8nm,0.3s,baz=69,slow=17,SNR=25						
GERES				Lg	Lg	05 24 11.3	
	3.3nm,0.3s,baz=73,slow=28,SNR=12						
MOA	**Molln**	**3.47**	**237**	*e*Pn	**Pn**	**05 23 23.5**	**0.0**
	0.5nm,0.1s						
MOA				*e*Sn	**Sn**	**05 24 05.8**	**+0.6**
	0.2nm,0.0s						
CLL	**Collm**	**3.84**	**295**	*e*Pg	**Pg**	**05 23 41.0**	**-0.8**
CLL				*e*Sg	**Sg**	**05 24 32.0**	**+0.5**
	comp=Z,8.0nm,0.5s						
NKC	**Novy Kostel**	**3.96**	**278**	*e*SG	**Sg**	**05 24 35.7**	**+0.2**
	comp=Z,9.4nm,0.6s						
KBA	**Koelnbreinsper**	**4.44**	**233**	*e*Pn	**Pn**	**05 23 37.9**	**+0.9**
	comp=Z,0.9nm,0.3s						
KBA				*e*Sn	**Sn**	**05 24 29.1**	**-0.2**
	comp=Z,1.0nm,0.4s						
WTTA	**Wattenberg**	**5.27**	**243**	*e*Sn	**Sn**	**05 24 50.7**	**+0.7**
	comp=Z,1.6nm,0.5s						
FINES	**FINESS Array B**	**12.37**	**17**	Pn	**Pn**	**05 25 22.9**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=198,slow=14,SNR=3.8						
ARCES	**ARCESS Array B**	**20.04**	**7**	P	**P**	**05 27 03.4**	**+1.0**
	comp=Z,6.3nm,1.1s,baz=208,slow=11,SNR=4.1						

*IDC **17** 05:36:21.5±1.4, 35.°71S×179.°89E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.9/24, mbtmp4.0/5, ML4.0/1, MS2.5/1, Ms1 2.5/1, ms1mx2.4/22, Error ellipse: s-maj=38.7km s-min=30.4km az=49.0*
*WEL **17** 05:36:26.4±1.3, 36.°S±14.°×18.°0W±1.°6, h33km, M4.1/9, ML4.4/9, MLv4.1/9, Error ellipse: s-maj=0.0km s-min=0.0km az=128.5*
*NEIC **17** 05:36:27.0±1.9, 35.°94S±0.°09×179.°6E±0.°1, h38km±11km, mb4.2/7, Error ellipse: s-maj=19.3km s-min=5.7km az=53.0*

ISC 17 05:36:21.4±3.2, 36.°07S±0.°07×179.°84W±0.°08, h3km±21km, n76, σ1°$47/74, mb4.2/8, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.11**	**224**	P	**Pn**	**05 36 58.7**	**+1.0**
MXZ				S	**Sn**	**05 37 23.2**	**-1.2**
MXZ	**Matakaoa Point**	**2.11**	**224**		**Pn**	**05 36 58.1**	**+0.5**
WMGZ	**Waiomatatini S**	**2.24**	**218**	P	**Pn**	**05 37 01.2**	**+1.7**
WMGZ				S	**Sn**	**05 37 29.1**	**+1.5**
PUZ	**Puketiti**	**2.51**	**217**	P	**Pn**	**05 37 04.5**	**+1.3**
PUZ				S	**Sn**	**05 37 34.3**	**-0.2**
HAZ	**Te Kaha**	**2.54**	**228**	P	**Pn**	**05 37 05.7**	**+2.1**
HAZ				S	**Sn**	**05 37 35.6**	**+0.5**
TWGZ	**Tauwhareparae**	**2.73**	**219**	P	**Pn**	**05 37 07.9**	**+1.6**
TWGZ				S	**Sn**	**05 37 40.5**	**+0.6**
RUGZ	**Raukumara Rang**	**2.75**	**226**	P	**Pn**	**05 37 07.9**	**+1.4**
RUGZ				S	**Sn**	**05 37 41.0**	**+0.7**
CNGZ	**Carnagh Statio**	**2.87**	**212**	P	**Pn**	**05 37 09.9**	**+1.8**
CNGZ				S	**Sn**	**05 37 44.8**	**+1.6**
MWZ	**Matawai**	**3.09**	**222**	P	**Pn**	**05 37 12.3**	**+1.2**
MWZ				S	**Sn**	**05 37 47.5**	**-1.2**
RIGZ	**Rimuhau**	**3.25**	**215**	P	**Pn**	**05 37 14.4**	**+1.0**
RIGZ				S	**Sn**	**05 37 52.5**	**-0.2**
URZ	**Urewera**	**3.27**	**227**	Pn	**Pn**	**05 37 13.8**	**+0.1**
	14nm,0.3s,baz=328,slow=0.5,SNR=49						
URZ				Sn	**Sn**	**05 37 51.3**	**-1.8**
	24nm,0.3s,baz=96,slow=8.6,SNR=14						
URZ				LR	LR	05 37 58.2	
	comp=Z,79nm,21.4s,baz=32,slow=29						
URZ	**Urewera**	**3.27**	**227**	P	**Pn**	**05 37 14.4**	**+0.7**
URZ				S	**Sn**	**05 37 51.8**	**-1.3**
URZ	**Urewera**	**3.27**	**227**		**Pn**	**05 37 14.4**	**+0.7**
MYRZ	**Mayor Island**	**3.37**	**248**	P	Pn	05 37 13.2	-1.8
PRGZ	**Paritu Road**	**3.38**	**212**	P	**Pn**	**05 37 15.9**	**+0.8**
PRGZ				S	**Sn**	**05 37 54.6**	**-1.2**
MARZ	**Manawahe**	**3.38**	**234**	P	**Pn**	**05 37 17.9**	**+2.7**
OPRZ	**Ohinepanea**	**3.39**	**237**	P	**Pn**	**05 37 16.1**	**+0.9**
TGRZ	**Tauranga**	**3.54**	**241**	P	**Pn**	**05 37 19.1**	**+1.8**
KUZ	**Kuaotunu**	**3.64**	**258**	P	**Pn**	**05 37 19.4**	**+0.7**
KARZ	**Kaharoa**	**3.69**	**237**	P	**Pn**	**05 37 20.0**	**+1.9**
RAHZ	**Arahi**	**3.75**	**220**	P	**Pn**	**05 37 22.0**	**+1.7**
RAHZ				S	**Sn**	**05 38 04.8**	**-0.1**
GRZ	**Great Barrier**	**3.81**	**266**	P	**Pn**	**05 37 21.8**	**+0.8**
MTHZ	**Maungataniwha**	**3.83**	**223**	P	**Pn**	**05 37 23.9**	**+2.5**
NMHZ	**Naumai**	**4.03**	**220**	P	**Pn**	**05 37 25.8**	**+1.6**
ARHZ	**Aropaoanui**	**4.06**	**217**	P	**Pn**	**05 37 25.4**	**+0.9**
TOZ	**Tahuroa Road**	**4.08**	**245**	P	**Pn**	**05 37 26.0**	**+1.2**
BKZ	**Black Stump Fm**	**4.25**	**222**	P	**Pn**	**05 37 28.5**	**+1.4**
BKZ	**Black Stump Fm**	**4.25**	**222**		**Pn**	**05 37 27.4**	**+0.2**
MBAZ	**Motutapu North**	**4.30**	**259**	P	**Pn**	**05 37 30.3**	**+2.5**
ETAZ	**East Tamaki Re**	**4.30**	**257**	P	**Pn**	**05 37 30.0**	**+2.2**
RATZ	**Rangitukua**	**4.47**	**230**	P	**Pn**	**05 37 31.8**	**+1.7**
KAHZ	**Kahuranaki**	**4.54**	**214**	P	**Pn**	**05 37 31.3**	**+0.3**
AWAZ	**Awhitu Peninsu**	**4.55**	**256**	P	**Pn**	**05 37 33.3**	**+2.1**
TMVZ	**Te Maari**	**4.67**	**228**	P	**Pn**	**05 37 33.9**	**+0.9**
BHHZ	**Black Hill Sta**	**4.71**	**222**	P	**Pn**	**05 37 34.6**	**+1.0**
WCZ	**Waipu Caves**	**4.71**	**270**	P	**Pn**	**05 37 35.5**	**+2.0**
HIZ	**Hauiti**	**4.88**	**238**	Pn	Pn	05 37 34.8	-4.0
OUZ	**Omahuta**	**5.41**	**277**	Pn	Pn	05 37 39.5	-3.6
BFZ	**Birch Farm**	**5.54**	**213**	P	Pn	05 37 43.3	-1.5
BFZ	**Birch Farm**	**5.54**	**213**	Pn	**Pn**	**05 37 43.9**	**-0.9**
MSWZ	**Moikau Station**	**6.58**	**214**	Pn	**Pn**	**05 37 58.7**	**-0.4**
PLWZ	**Palliser**	**6.70**	**213**	Pn	**Pn**	**05 38 01.5**	**+0.8**
TUWZ	**Tuamarina**	**7.23**	**220**	Pn	**Pn**	**05 38 08.2**	**+0.2**
CMWZ	**Cape Campbell**	**7.33**	**217**	Pn	**Pn**	**05 38 09.1**	**-0.3**
BSWZ	**Blackbirch Sta**	**7.47**	**219**	Pn	**Pn**	**05 38 12.6**	**+1.3**
QRZ	**Quartz Range**	**7.64**	**229**	Pn	**Pn**	**05 38 13.4**	**-0.2**
THZ	**Tophouse**	**8.02**	**223**	Pn	**Pn**	**05 38 18.2**	**-0.7**
CTZ	**Chatham Island**	**8.05**	**163**	P	**Pn**	**05 38 20.0**	**+0.7**
CTZ				S	Sn	05 39 41.0	-10
KHZ	**Kahutara**	**8.16**	**217**	Pn	**Pn**	**05 38 20.1**	**-0.6**
LTZ	**Lake Taylor**	**9.06**	**220**	Pn	**Pn**	**05 38 32.3**	**-1.0**
MQZ	**McQueen's Vall**	**9.56**	**215**	Pn	**Pn**	**05 38 39.8**	**-0.1**
OXZ	**Oxford**	**9.57**	**218**	Pn	**Pn**	**05 38 40.5**	**+0.4**
LBZ	**Lake Benmore**	**11.27**	**219**	Pn	**Pn**	**05 39 02.9**	**-0.5**
CTA	**Charters Tower**	**33.68**	**289**	P	**P**	**05 43 03.0**	**-0.9**
	2.1nm,0.7s,baz=112,slow=5.4,SNR=4.7						
AS31	**Alice Springs**	**41.62**	**274**	P	P	05 44 06.9	-4.1
ASAR	**Alice Springs**	**41.62**	**274**	P	**P**	**05 44 09.4**	**-1.6**
	1.8nm,0.7s,baz=116,slow=7.4,SNR=20						
ASAR	**Alice Springs**	**41.62**	**274**	P	P	05 44 08.0	-3.0
WR0	**Warramunga Arr**	**42.95**	**279**	P	P	05 44 16.1	-5.8
WR0				IAmb	IAmb	05 44 21.1	
	comp=Z,5.8nm,1.2s						
WC3	**Warramunga Arr**	**43.08**	**279**	P	**P**	**05 44 21.4**	**-1.6**
WB2	**Warramunga Arr**	**43.11**	**279**	P	**P**	**05 44 21.2**	**-2.0**
WB2				IAmb	IAmb	05 44 23.8	
	comp=Z,3.2nm,0.6s						
WRAB	**Tennant Creek**	**43.11**	**279**	P	P	05 44 19.1	-4.1
WRAB				IAmb	IAmb	05 44 29.9	
	comp=Z,4.1nm,1.0s						
WRA	**Warramunga Arr**	**43.12**	**279**	P	**P**	**05 44 21.2**	**-2.1**
	comp=Z,2.3nm,0.6s,baz=120,slow=7.7,SNR=39						
WRA	**Warramunga Arr**	**43.12**	**279**	P	**P**	**05 44 20.6**	**-2.6**
WB0	**Warramunga Arr**	**43.17**	**279**	P	P	05 44 20.5	-3.2
WB0				IAmb	IAmb	05 44 27.9	
	comp=Z,4.2nm,0.9s						
QSPA	**South Pole Qui**	**54.06**	**180**	P	**P**	**05 45 50.2**	**+3.2**
	comp=Z,0.8nm,0.8s,baz=323,slow=1.5,SNR=2.2						
QSPA	**South Pole Qui**	**54.06**	**180**	P	**P**	**05 45 49.4**	**+2.3**
H03S2	**Juan Fernandez**	**78.63**	**124**	T	T	07 14 59.5	
	baz=237						
H03S1	**Juan Fernandez**	**78.64**	**124**	T	T	07 15 03.4	
	baz=237						
H03S3	**Juan Fernandez**	**78.65**	**124**	T	T	07 15 00.4	
	baz=237						
H03N3	**Juan Fernandez**	**78.85**	**123**	T	T	07 15 13.9	
	baz=236,slow=72,SNR=5.2						
H03N2	**Juan Fernandez**	**78.86**	**123**	T	T	07 15 16.7	
	baz=236,slow=72,SNR=5.2						
H03N1	**Juan Fernandez**	**78.87**	**123**	T	T	07 15 14.7	
	baz=236,slow=72,SNR=4.1						
FINES	**FINESS Array B**	**149.79**	**335**	PKPbc	**PKPbc**	**05 56 10.8**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=64,slow=3.2,SNR=9.5						
BRTR	**Keskin Array B**	**153.42**	**288**	PKPbc	**PKPbc**	**05 56 19.9**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=105,slow=3.4,SNR=2.6						
AKASG	**Malin Array Be**	**154.51**	**314**	PKPbc	**PKPbc**	**05 56 21.7**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=49,slow=2.8,SNR=2.3						
TORD	**Torodi Ar. Bea**	**157.14**	**184**	PKPab	**PKPab**	**05 56 53.0**	**+3.4**
	comp=Z,0.7nm,1.1s,baz=166,slow=3.6,SNR=2.1						

IDC 17 05:48:36.8±0.0, 16.°15S×177.°76W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.7/28, mbtmp4.2/3, Error ellipse: s-maj=926.7km s-min=165.0km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.04**	**239**	P	P	05 56 13.2	-0.6
	1.7nm,0.7s,baz=69,slow=8.6,SNR=3.1						
WRA	**Warramunga Arr**	**45.59**	**258**	P	P	05 56 59.3	+0.2
	0.5nm,0.3s,baz=90,slow=7.4,SNR=34						
ASAR	**Alice Springs**	**45.89**	**253**	P	P	05 57 01.2	-0.2
	4.6nm,0.5s,baz=88,slow=8.6,SNR=72						

*IDC **17** 05:48:32.4±1.3, 9.°62S×155.°14E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/25, mbtmp3.8/8, MS3.3/7, Ms1 3.3/7, ms1mx3.1/24, Error ellipse: s-maj=40.4km s-min=26.5km az=117.0*

ISC 17 05:48:37.6±1.2, 9.°6S±0.°2×155.°1E±0.°3, h33km, n14, σ0°$72/8, mb3.8/8, MS3.2/4, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**6.11**	**330**	LR	LR	05 52 20.7	
	comp=Z,380nm,19.6s,baz=140,slow=37						
PMG	**Port Moresby**	**7.83**	**271**	LR	LR	05 53 29.2	
	comp=Z,310nm,20.2s,baz=190,slow=38						
DZM	**Mont Dzumac**	**16.48**	**140**	LR	LR	05 56 40.4	
	comp=Z,62nm,19.1s,baz=312,slow=30						
WRA	**Warramunga Arr**	**22.51**	**241**	P	**P**	**05 53 34.5**	**-0.1**
	2.5nm,0.8s,baz=65,slow=9.7,SNR=14						
ASAR	**Alice Springs**	**24.58**	**233**	P	**P**	**05 53 54.4**	**-0.5**
	2.9nm,0.8s,baz=65,slow=9.0,SNR=15						
GUMO	**Guam**	**25.21**	**336**	LR	LR	06 02 05.3	
	comp=Z,68nm,20.7s,baz=160,slow=32						
STKA	**Stephens Creek**	**25.43**	**208**	P	**P**	**05 54 02.7**	**+0.3**
	4.0nm,0.9s,baz=35,slow=14,SNR=5.4						
STKA				LR	LR	06 03 58.2	
	comp=Z,179nm,18.4s,baz=24,slow=36						
FITZ	**Fitzroy Crossi**	**29.77**	**250**	P	**P**	**05 54 40.9**	**-0.6**
	1.2nm,0.7s,baz=93,slow=6.2,SNR=2.9						
MJAR	**Matsushiro Ar**	**48.60**	**342**	LR	LR	06 17 33.0	
	comp=Z,18nm,18.1s,baz=240,slow=36						
KSRS	**Korea Array**	**53.31**	**333**	LR	LR	06 16 42.9	
	comp=Z,29nm,21.5s,baz=141,slow=32						
VNDA	**Vanda**	**67.96**	**178**	P	**P**	**05 59 33.0**	**+0.3**
	0.3nm,0.4s,baz=336,slow=4.3,SNR=4.8						
SONM	**Songino Array**	**71.60**	**328**	P	**P**	**05 59 56.9**	**+1.0**
	0.5nm,0.8s,baz=112,slow=5.9,SNR=2.1						
MAW	**Mawson**	**82.02**	**203**	P	**P**	**06 00 54.2**	**+0.1**
	1.3nm,0.8s,baz=71,slow=9.4,SNR=4.0						
ILAR	**Eielson Array**	**85.78**	**21**	P	**P**	**06 01 12.4**	**-0.9**
	0.4nm,0.9s,baz=246,slow=4.3,SNR=1.9						

*IDC **17** 05:55:00.8±11.0, 20.°09S×177.°46W, h490km±113km, mb3.3/4, mb1 3.4/5, mb1mx3.0/28, mbtmp4.2/5, Error ellipse: s-maj=79.6km s-min=40.1km az=35.0*
*NEIC **17** 05:55:05.1±1.1, 19.°8S±0.°1×177.°4W±0.°1, h571km±13km, mb4.2/9, Error ellipse: s-maj=21.0km s-min=12.9km az=61.0*

ISC 17 05:55:04.3±0.7, 20.°0S±0.°2×177.°4W±0.°1, h550km, n22, σ1°$23/24, mb4.1/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.87**	**297**	P	**P**	**05 56 32.9**	**-0.3**
NIUE	**Niue**	**7.12**	**84**	P	**P**	**05 56 54.4**	**+1.0**
AFI	**Afiamalu**	**8.13**	**42**	P	**P**	**05 57 04.3**	**+0.8**
DZM	**Mont Dzumac**	**15.21**	**259**	P	**P**	**05 58 18.4**	**+2.4**
DZM				IAmb	IAmb	05 58 21.1	
	comp=Z,7.4nm,1.2s						
URZ	**Urewera**	**18.77**	**193**	P	**P**	**05 58 47.9**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=0,slow=8.1,SNR=1.0						
URZ	**Urewera**	**18.77**	**193**	P	**P**	**05 58 48.2**	**-0.8**
CTA	**Charters Tower**	**34.09**	**264**	P	**P**	**06 01 03.5**	**-0.2**
	comp=Z,1.4nm,0.5s,baz=85,slow=11,SNR=5.0						
STKA	**Stephens Creek**	**38.48**	**244**	P	**P**	**06 01 39.6**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=88,slow=12,SNR=4.5						
STKA	**Stephens Creek**	**38.48**	**244**	P	**P**	**06 01 40.0**	**+0.3**
BBOO	**Buckleboo**	**43.25**	**243**	P	**P**	**06 02 17.2**	**-0.3**
BBOO				IAmb	IAmb	06 02 18.0	
	comp=Z,5.4nm,0.8s						
WR0	**Warramunga Arr**	**45.02**	**261**	P	**P**	**06 02 31.5**	**0.0**
WR0				IAmb	IAmb	06 02 38.4	
	comp=Z,10nm,1.5s						
AS31	**Alice Springs**	**45.16**	**256**	P	**P**	**06 02 32.5**	**+0.1**
ASAR	**Alice Springs**	**45.16**	**256**	P	**P**	**06 02 32.6**	**+0.1**
	comp=Z,5.5nm,0.8s,baz=88,slow=8.3,SNR=44						
ASAR				PcP	**PcP**	**06 04 03.0**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=101,slow=3.5,SNR=4.7						
ASAR	**Alice Springs**	**45.16**	**256**	P	**P**	**06 02 32.3**	**-0.2**
WRA	**Warramunga Arr**	**45.21**	**261**	P	**P**	**06 02 32.7**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=98,slow=8.4,SNR=14						
WRA				PcP	**PcP**	**06 04 03.5**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=93,slow=3.5,SNR=2.8						
FORT	**Forrest**	**49.98**	**246**	P	**P**	**06 03 08.1**	**-0.3**
MORW	**Morawa**	**60.51**	**247**	P	**P**	**06 04 21.7**	**0.0**
MORW				IAmb	IAmb	06 04 48.2	
	comp=Z,18nm,1.4s						
KKM	**Kota Kinabalu**	**70.17**	**284**	P	**P**	**06 05 20.3**	**-2.3**
KKM				IAmb	IAmb	06 06 43.5	
	comp=Z,18nm,1.1s						
GDL2	**Guadalupe Moun**	**87.03**	**54**	P	**P**	**06 06 50.0**	**-2.0**
AKASG	**Malin Array Be**	**142.87**	**332**	PKP	**PKPdf**	**06 13 35.5**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=41,slow=4.5,SNR=9.1						
BRTR	**Keskin Array B**	**146.93**	**313**	PKPbc	**PKPab**	**06 13 48.0**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=160,slow=5.3,SNR=5.4						
GERES	**GERESS Array B**	**149.90**	**345**	PKPbc	**PKiKP**	**06 13 55.5**	**+2.1**
	comp=Z,0.2nm,0.4s,baz=70,slow=3.2,SNR=4.1						

*IDC **17** 05:57:17.5±2.2, 9.°51S×155.°18E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/28, mbtmp3.9/6, MS3.4/4, Ms1 3.4/4, ms1mx3.0/26, Error ellipse: s-maj=59.8km s-min=27.6km az=98.0*

ISC 17 05:57:23.1±2.0, 9.°5S±0.°1×155.°0E±0.°4, h33km, n8, σ0°$34/7, mb3.8/5, MS3.5/3, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**5.97**	**330**	Pn	**Pn**	**05 58 49.5**	**+0.2**
	baz=198,slow=20,SNR=4.8						
KRVT				LR	LR	06 01 06.1	
	comp=Z,256nm,19.8s,baz=139,slow=38						
WRA	**Warramunga Arr**	**22.52**	**240**	P	**P**	**06 02 20.1**	**-0.3**
	1.3nm,0.7s,baz=65,slow=9.4,SNR=23						
WRA				LR	LR	06 10 16.8	
	comp=Z,75nm,20.2s,baz=40,slow=34						
ASAR	**Alice Springs**	**24.61**	**233**	P	**P**	**06 02 40.9**	**+0.2**
	2.1nm,0.8s,baz=62,slow=9.8,SNR=12						
STKA	**Stephens Creek**	**25.51**	**207**	P	**P**	**06 02 48.6**	**0.0**
	2.4nm,0.7s,baz=34,slow=14,SNR=2.8						
STKA				LR	LR	06 12 43.3	
	comp=Z,134nm,18.1s,baz=25,slow=36						
SONM	**Songino Array**	**71.47**	**328**	P	**P**	**06 08 40.3**	**-0.3**
	0.4nm,0.8s,baz=117,slow=6.3,SNR=3.5						
MAW	**Mawson**	**82.11**	**203**	P	**P**	**06 09 40.4**	**+0.3**
	0.9nm,0.6s,baz=72,slow=5.7,SNR=2.6						
YKA	**Yellowknife Ar**	**98.52**	**28**	LR	LR	06 50 57.1	
	comp=Z,20nm,20.4s,baz=0.0,slow=33						
TORD	**Torodi Ar. Bea**	**153.62**	**280**	PKPbc	**PKPbc**	**06 17 19.2**	**-0.3**
	0.4nm,0.7s,baz=64,slow=3.4,SNR=2.4						

*BJI **17** 06:20:26.8±0.0, 21.°26S×178.°71W, h604km, mB5.1/18, mb4.9/37*
*IDC **17** 06:20:28.8±0.6, 21.°44S×179.°31W, h607km±6km, mb4.3/26, mb1 4.4/28, mb1mx4.3/32, mbtmp5.2/28, Error ellipse: s-maj=8.4km s-min=8.3km az=151.0*
*NEIC **17** 06:20:29.1±2.2, 21.°47S±0.°09×179.°25W±0.°10, h612km±5km, mb4.8/254, Error ellipse: s-maj=13.8km s-min=12.3km az=127.0*
*BGR **17** 06:20:30.2±0.0, 22.°00S×177.°81W, h642km*
*GCMT **17** 06:20:33.1±0.2, 21.°52S±0.°02×179.°23W±0.°02, h625km±2km, MW5.5/109, Moment Tensor Solution. s109,c165; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr0.84±.04; Mθθ0.00±.07; Mφφ-0.83±.06; Mrθ-0.79±.06; Mrφ0.96±.05; Mθφ-1.44±.05; Best double couple: Mo2.03800×10^17 NP1:φ297.00000°, δ37.00000°, λ25.00000°. NP2:φ187.00000°, δ76.00000°, λ124.00000°. Principal axes: T 2.2750, Plg48.0000°, Azm134.0000°; N -0.4730, Plg33.0000°, Azm357.0000°; P -1.8010, Plg23.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 17 06:20:29.1±0.3, 21.°57S±0.°04×179.°20W±0.°04, h614km, 3km, h616km:pP-P, n758, σ1°$18/843, mb4.8/171, 10C-33D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.61**	**325**	P	**P**	**06 21 59.9**	**-0.2**
RIZ	**Raoul Island**	**7.73**	**172**	P	**P**	**06 22 26.3**	**0.0**
RIZ				S	**S**	**06 24 02.1**	**-0.2**
RAO	**Raoul Island**	**7.74**	**172**	P	**P**	**06 22 25.7**	**-0.6**
	283nm,0.3s,baz=75,slow=11,SNR=24						
RAO				S	**S**	**06 24 01.3**	**-1.2**
	251nm,0.3s,baz=90,slow=20,SNR=20						
RAO	**Raoul Island**	**7.74**	**172**	P	**P**	**06 22 26.1**	**-0.3**
GLKZ	**Green Lake**	**7.75**	**172**	P	**P**	**06 22 26.3**	**-0.2**
GLKZ				S	**S**	**06 24 02.0**	**-0.7**
NIUE	**Niue**	**9.05**	**76**	P	**P**	**06 22 38.6**	**-0.3**
	baz=9.1,SNR=17						
NIUE				S	**S**	**06 24 25.0**	**-0.4**
	baz=9.1						
NIUE	**Niue**	**9.05**	**76**	P	**P**	**06 22 37.2**	**-1.8**
AFI	**Afiamalu**	**10.39**	**44**	P	**P**	**06 22 48.5**	**-3.7**
DZM	**Mont Dzumac**	**13.34**	**265**	P	**P**	**06 23 19.0**	**-2.2**
	13nm,0.3s,baz=88,slow=13,SNR=107						
DZM				S	**S**	**06 25 42.3**	**0.0**
	baz=59,slow=19,SNR=3.5						
DZM	**Mont Dzumac**	**13.34**	**265**	*e*P	**P**	**06 23 20.2**	**-1.0**
	215nm,0.8s						
DZM	**Mont Dzumac**	**13.34**	**265**	P	**P**	**06 23 20.2**	**-1.0**
NFK	**Norfolk Island**	**13.80**	**235**	P	**P**	**06 23 25.3**	**-0.2**
	baz=14,SNR=6.2						
SANVU	**Saraoutou**	**14.26**	**293**	P	**P**	**06 23 28.1**	**-1.9**
OUZ	**Omahuta**	**15.00**	**203**	P	**P**	**06 23 39.4**	**+2.9**
OUZ	**Omahuta**	**15.00**	**203**	P	**P**	**06 23 39.1**	**+2.7**
MXZ	**Matakaoa Point**	**16.09**	**187**	P	**P**	**06 23 46.5**	**+0.1**
MXZ				S	**S**	**06 26 23.5**	**-3.6**
MXZ	**Matakaoa Point**	**16.09**	**187**	P	**P**	**06 23 46.6**	**+0.3**
MYRZ	**Mayor Island**	**16.15**	**193**	P	**P**	**06 23 50.2**	**+3.2**
WMGZ	**Waiomatatini S**	**16.33**	**187**	P	**P**	**06 23 48.3**	**-0.3**
WMGZ				S	**S**	**06 26 28.4**	**-2.6**
HAZ	**Te Kaha**	**16.34**	**189**	P	**P**	**06 23 48.0**	**-0.7**
HAZ				S	**S**	**06 26 26.5**	**-4.7**
TGRZ	**Tauranga**	**16.58**	**193**	P	**P**	**06 23 53.2**	**+2.3**
PUZ	**Puketiti**	**16.59**	**187**	P	**P**	**06 23 51.7**	**+0.6**
PUZ				S	**S**	**06 26 31.6**	**-3.8**
OPRZ	**Ohinepanea**	**16.63**	**192**	P	**P**	**06 23 53.2**	**+1.9**
TWGZ	**Tauwhareparae**	**16.73**	**188**	P	**P**	**06 23 53.1**	**+0.8**
TWGZ				S	**S**	**06 26 34.1**	**-3.6**
KARZ	**Kaharoa**	**16.86**	**192**	P	**P**	**06 23 55.7**	**+2.2**
URZ	**Urewera**	**16.94**	**190**	P	**P**	**06 23 52.2**	**-1.9**
	17nm,0.3s,baz=5.1,slow=6.2,SNR=92						
URZ				S	**S**	**06 26 35.8**	**-5.1**
	2.6nm,0.3s,baz=144,slow=19,SNR=3.0						
URZ	**Urewera**	**16.94**	**190**	P	**P**	**06 23 52.4**	**-1.7**
URZ				S	**S**	**06 26 34.9**	**-6.0**
URZ	**Urewera**	**16.94**	**190**	P	**P**	**06 23 53.1**	**-1.0**
MWZ	**Matawai**	**16.95**	**189**	P	**P**	**06 23 53.7**	**-0.6**
MWZ				S	**S**	**06 26 37.1**	**-4.1**
CNGZ	**Carnagh Statio**	**17.01**	**187**	P	**P**	**06 23 55.4**	**+0.6**
TKGZ	**Te Karaka**	**17.01**	**188**	P	**P**	**06 23 55.7**	**+1.0**
RRRZ	**Republican Roa**	**17.12**	**192**	P	**P**	**06 23 57.3**	**+1.4**
MUGZ	**Murupara**	**17.21**	**191**	P	**P**	**06 23 56.8**	**+0.2**
HRRZ	**Handcock Road**	**17.21**	**192**	P	**P**	**06 23 57.3**	**+0.6**
RIGZ	**Rimuhau**	**17.28**	**188**	P	**P**	**06 23 57.0**	**-0.4**
MTHZ	**Maungataniwha**	**17.56**	**190**	P	**P**	**06 24 00.2**	**+0.3**
RAHZ	**Arahi**	**17.58**	**190**	P	**P**

STKA S S 06 31 41.0 -0.8
comp=Z,5.6nm,0.8s,baz=9.5,slow=12,SNR=4.2
STKA Stephens Creek 36.32 245 P P 06 26 43.8 +0.8
baz=36,SNR=88
STKA Stephens Creek 36.32 245 P P 06 26 43.7 +0.8
STKA IAmb IAmb 06 26 45.2
comp=Z,24nm,0.9s
COEN Coen 36.55 276 P P 06 26 46.5 +1.4
baz=36,SNR=8.7
COEN Coen 36.55 276 P P 06 26 45.3 +0.3
MCQ Macquarie Isla 36.79 201 P P 06 26 47.7 +1.3
ARPS Mount Arapiles 36.97 237 P P 06 26 48.6 +0.5
baz=37,SNR=18
QIS Mount Isa 38.38 264 P P 06 26 59.2 -0.6
baz=38,SNR=34
HTT Hallett 38.74 243 P P 06 27 03.0 +0.3
baz=39,SNR=71
BBOO Buckleboo 41.07 244 P P 06 27 21.2 0.0
baz=41,SNR=201
BBOO Buckleboo 41.07 244 P P 06 27 21.4 +0.2
WR0 Warramunga Arr 43.16 263 P P 06 27 36.8 -0.9
AS31 Alice Springs 43.19 258 P P 06 27 37.9 0.0
AS31 IAmb IAmb 06 27 39.5
comp=Z,59nm,0.9s
ASAR Alice Springs 43.19 258 P P 06 27 37.5 -0.4
comp=Z,160nm,0.7s,baz=92,slow=7.9,SNR=785
ASAR ScP ScP 06 32 06.8 +0.2
comp=Z,5.7nm,0.8s,baz=107,slow=4.2,SNR=7.3
ASAR S S 06 33 19.6 -2.1
comp=Z,16nm,0.9s,baz=95,slow=16,SNR=30
ASAR ScS ScS 06 36 27.1 -2.8
comp=Z,1.1nm,0.8s,baz=84,slow=6.9,SNR=5.0
ASAR Alice Springs 43.19 258 P P 06 27 37.0 -0.8
WB0 Warramunga Arr 43.34 264 P P 06 27 38.1 -0.8
WB2 Warramunga Arr 43.34 263 P P 06 27 38.4 -0.7
WRAB Tennant Creek 43.34 263 P P 06 27 38.1 -1.0
WRA Warramunga Arr 43.35 263 P P 06 27 38.0 -1.1
comp=Z,118nm,0.8s,baz=96,slow=7.6,SNR=829
WRA PcP PcP 06 29 14.5 +0.9
comp=Z,1.2nm,0.3s,baz=102,slow=3.3,SNR=5.1
WRA ScP ScP 06 32 09.9 +2.6
comp=Z,3.5nm,0.8s,baz=92,slow=4.5,SNR=12
WRA S S 06 33 19.4 -4.6
comp=Z,4.2nm,0.8s,baz=97,slow=13,SNR=7.8
WRA Warramunga Arr 43.35 263 P P 06 27 38.2 -0.9
GENI Genyem 43.77 290 P P 06 27 42.0 -0.4
SMPI Sarmi 45.33 290 P P 06 27 52.9 -1.4
comp=Z,3µmcomp=Z,63nm,0.9s
SMPI Sarmi 45.33 290 P P 06 27 52.9 -1.4
comp=Z,3µmcomp=Z,63nm,0.9s
HMH Humu'ula Sheep 47.04 31 P P 06 28 07.5 +0.1
HPAH Hawaii Prepara 47.30 31 P P 06 28 09.6 +0.6
FORT Forrest 47.85 248 P P 06 28 12.7 -0.3
baz=48,SNR=28
FORT Forrest 47.85 248 P P 06 28 12.6 -0.4
BAKI Biak 48.00 289 P P 06 28 14.6 +0.3
comp=Z,2µmcomp=Z,217nm,0.9s
BAKI Biak 48.00 289 P P 06 28 15.2 +0.9
comp=Z,2µmcomp=Z,217nm,0.9s
MTN Manton Dam 48.06 272 P P 06 28 14.6 -0.2
baz=48,SNR=4.8
MTN Manton Dam 48.06 272 P P 06 28 14.1 -0.7
WRKA Warakurna 48.10 255 P P 06 28 14.7 -0.3
baz=48,SNR=253
KNRA Kununurra 49.48 267 P P 06 28 24.9 -0.3
baz=49,SNR=33
KNRA Kununurra 49.48 267 P P 06 28 25.0 -0.2
GUMO Guam 49.64 312 P P 06 28 26.7 +0.4
FAKI Fak Fak 50.66 285 P P 06 28 34.0 +0.1
comp=Z,1µmcomp=Z,89nm,1.5s
FAKI Fak Fak 50.66 285 P P 06 28 34.0 +0.1
comp=Z,1µmcomp=Z,89nm,1.5s
FAKI Fak Fak 50.66 285 P P 06 28 33.5 -0.3
FAKI IAmb IAmb 06 28 34.6
comp=Z,82nm,1.0s
FITZ Fitzroy Crossi 51.78 264 P P 06 28 41.5 -0.4
comp=Z,26nm,0.3s,baz=98,slow=5.8,SNR=197
FITZ S S 06 35 18.7 -0.9
comp=Z,2.6nm,0.9s,baz=358,slow=11,SNR=2.6
FITZ Fitzroy Crossi 51.78 264 P P 06 28 41.8 -0.1
baz=52,SNR=127
FITZ Fitzroy Crossi 51.78 264 P P 06 28 42.0 +0.2
BNDI Bandanaira 52.12 281 P P 06 28 44.2 -0.1
comp=Z,11µmcomp=Z,384nm,1.0s
BNDI Bandanaira 52.12 281 P P 06 28 44.9 +0.6
comp=Z,11µmcomp=Z,384nm,1.0s
SIJI Sorong 52.44 286 P P 06 28 46.3 -0.3
comp=Z,342nm,0.8s,baz=89,slow=5.8,SNR=120
KMBL Kambalda 53.10 246 P P 06 28 50.8 -0.3
baz=53,SNR=9.6
MSAI Masohi 53.49 282 P P 06 28 53.1 -0.9
comp=Z,1µmcomp=Z,25nm,0.7s
MSAI Masohi 53.49 282 P P 06 28 53.3 -0.7
comp=Z,1µmcomp=Z,25nm,0.7s
AAI Ambon 54.02 282 P P 06 28 56.0 -1.8
comp=Z,97nm,0.5s
AAI Ambon 54.02 282 P P 06 28 56.8 -1.0
comp=Z,97nm,0.5s
NLAI Namlea 55.20 282 P P 06 29 05.4 -0.6
comp=Z,2µmcomp=Z,103nm,1.0s
SOEI Soe 55.42 273 P P 06 29 08.2 +0.6
SOEI Soe 55.42 273 P P 06 29 08.6 +1.0
comp=Z,3µmcomp=Z,396nm,0.8s
SOEI Soe 55.42 273 P P 06 29 09.5 +1.8
LBMI Labuha 55.92 285 P P 06 29 11.7 +0.7
comp=Z,96nm,0.7s
PSA00 Pilbara Seismi 56.34 258 P P 06 29 13.3 -0.5
PSA00 Pilbara Seismi 56.34 258 P P 06 29 12.4 -1.3
PSA00 IAmb IAmb 06 29 13.8
comp=Z,53nm,0.9s
MEEK Meekatharra 56.51 252 P P 06 29 14.0 -0.9
baz=56,SNR=29
KLBR Kellerberrin 56.59 246 P P 06 29 15.1 -0.2
baz=56,SNR=50
TNTI Ternate 56.66 286 P P 06 29 15.7 -0.3
comp=Z,131nm,1.0s
TNTI Ternate 56.66 286 P P 06 29 15.6 -0.4
TNTI IAmb IAmb 06 29 17.6
comp=Z,115nm,1.0s
SANI Sanana 56.70 282 P P 06 29 15.1 -1.1
comp=Z,931nmcomp=Z,84nm,0.9s
VNDA Vanda 56.76 185 P P 06 29 17.8 +2.2
comp=Z,11nm,0.8s,baz=359,slow=7.3,SNR=70
VNDA Vanda 56.76 185 P P 06 29 18.1 +2.6
NWAO Narrogin (SRO) 56.89 244 P P 06 29 16.2 -1.1
comp=Z,28nm,0.8s,baz=80,slow=8.9,SNR=11
NWAO Narrogin (SRO) 56.89 244 P P 06 29 17.3 0.0
baz=57,SNR=6.2
NWAO Narrogin (SRO) 56.89 244 P P 06 29 16.7 -0.6
NWAO IAmb IAmb 06 29 18.9
comp=Z,47nm,1.1s
NWAO Narrogin (SRO) 56.89 244 P P 06 29 16.3 -1.1
NWAO IAmb IAmb 06 29 18.9
comp=Z,39nm,1.1s
RKGY Rocky Gully 56.95 242 P P 06 29 18.7 +1.0
baz=57,SNR=6.4
BLDU Ballidu 57.60 247 P P 06 29 21.8 -0.3
baz=58,SNR=52
MMRI Maumere 57.68 273 P P 06 29 22.1 -0.9
comp=Z,5µmcomp=Z,149nm,0.8s
MMRI Maumere 57.68 273 P P 06 29 22.2 -0.7
MMRI IAmb IAmb 06 29 23.7
comp=Z,126nm,1.0s
MUN Mundaring 57.86 245 P P 06 29 24.3 +0.4
baz=58,SNR=14
EDFI Ende, Flores 58.15 273 P P 06 29 25.3 -0.9
comp=Z,744nmcomp=Z,73nm,0.9s
MORW Morawa 58.39 248 P P 06 29 27.6 +0.1
baz=58,SNR=17
MORW Morawa 58.39 248 P P 06 29 26.8 -0.7
MORW IAmb IAmb 06 29 28.7
comp=Z,62nm,1.0s
BASI Baing, Sumba 58.70 271 P P 06 29 31.7 +1.9
comp=Z,2µmcomp=Z,130nm,0.9s
WBSI Waikabubak, Su 60.00 271 P P 06 29 38.2 -0.2
comp=Z,1µmcomp=Z,78nm,0.8s
LUWI Luwuk 60.04 282 P P 06 29 41.3 +2.6
comp=Z,71nm,0.5s
LUWI Luwuk 60.04 282 P P 06 29 39.2 +0.6
LUWI IAmb IAmb 06 29 40.2
comp=Z,125nm,1.0s
GTOI Gorontalo 60.52 284 P P 06 29 42.0 +0.2
comp=Z,760nmcomp=Z,70nm,0.8s
APSI Ampana 61.12 281 P P 06 29 46.9 +1.2
comp=Z,697nmcomp=Z,59nm,0.9s
BNSI Bone 61.17 277 P P 06 29 46.0 -0.1
comp=Z,973nmcomp=Z,81nm,1.0s

GIRL Giralia 61.19 255 P P 06 29 47.6 +1.5
baz=61,SNR=19
GIRL Giralia 61.19 255 P P 06 29 47.0 +0.9
SPSI Sidrap Palu 61.65 277 P P 06 29 48.2 -1.0
comp=Z,1µmcomp=Z,46nm,0.8s
PLAI Plampang 61.77 271 P P 06 29 49.5 -0.5
comp=Z,2µmcomp=Z,189nm,0.9s
TTSI Tana Toraja 61.95 278 P P 06 29 52.5 +1.4
comp=Z,3µmcomp=Z,26nm,1.1s
CASY Casey 62.52 205 P P 06 29 54.9 +1.0
CASY IAmb IAmb 06 29 56.5
comp=Z,21nm,0.8s
TWSI Taliwang, Sumb 62.63 271 P P 06 29 54.6 -0.9
comp=Z,831nmcomp=Z,95nm,1.0s
MPSI Mapaga 63.22 282 P P 06 29 58.2 -1.1
comp=Z,2µmcomp=Z,60nm,0.9s
SRBI Singaraja 64.40 271 P P 06 30 06.5 -0.3
comp=Z,1µmcomp=Z,96nm,0.9s
JAGI Jajag, Banyuwa 65.26 270 P P 06 30 11.3 -0.8
MYLDM Lahad Datu 66.53 286 P P 06 30 22.4 +2.4
MYLDM IAmb IAmb 06 30 47.5
comp=Z,74nm,1.5s
PWJI Pagerwojo 67.60 270 P P 06 30 26.5 0.0
comp=Z,3µmcomp=Z,73nm,0.9s
LQP Lukban 68.09 296 eP P 06 30 30.0 +0.3
SPMM Sapulut 68.16 285 P P 06 30 32.0 +2.0
QSPA South Pole Qui 68.51 180 P P 06 30 32.7 +1.4
comp=Z,70nm,0.8s,baz=36,slow=2.8
QSPA S S 06 38 49.1 +3.4
comp=Z,1.3nm,0.9s,baz=347,slow=2.3,SNR=17
QSPA South Pole Qui 68.51 180 P P 06 30 33.0 +1.7
TGY Tagaytay City 68.59 296 P P 06 30 32.6 +0.1
comp=Z,116nm,0.3s,baz=190,slow=12,SNR=3.8
UGM Wanagama 68.83 270 P P 06 30 32.9 -1.1
comp=Z,308nm,0.7s
KKM Kota Kinabalu 68.96 286 P P 06 30 34.1 -0.8
KKM IAmb IAmb 06 30 36.3
comp=Z,35nm,1.0s
YOGI Yogyakarta 69.07 270 P P 06 30 34.8 -0.7
JGF Kuroka 70.19 323 P P 06 30 41.7 +0.1
JGF IAmb IAmb 06 30 42.7
comp=Z,24nm,1.2s
MJAR Matsushiro Arr 70.41 325 P P 06 30 42.4 -0.5
comp=Z,9.8nm,0.8s,baz=159,slow=5.9,SNR=18
MJAR Matsushiro Arr 70.41 325 P P 06 30 42.7 -0.2
MAJO Matsushiro 70.42 325 P P 06 30 42.7 -0.2
MAJO IAmb IAmb 06 30 43.9
comp=Z,35nm,1.3s
MAT Matsushiro 70.42 325 P P 06 30 42.8 -0.1
MAT S S 06 39 08.4 +0.4
SBUM Sibu 71.09 281 P P 06 30 48.0 +0.7
SBUM IAmb IAmb 06 30 49.3
comp=Z,21nm,1.1s
SBUM Sibu 71.09 281 P P 06 30 48.0 +0.7
JSU Suzuyama 71.50 316 P P 06 30 49.8 +0.4
JSU IAmb IAmb 06 30 50.7
comp=Z,41nm,1.1s
LEM Lembang 71.91 270 P P 06 30 52.5 +0.2
comp=Z,106nm,0.8s,baz=109,slow=5.3,SNR=14
JHS Saijyo 72.19 320 P P 06 30 53.2 0.0
JHS IAmb IAmb 06 30 55.7
comp=Z,51nm,1.0s
JNU Nakatsue 72.29 318 P P 06 30 53.4 -0.5
comp=Z,21nm,1.0s,baz=135,slow=13,SNR=3.3
KSM Kuching 72.46 279 P P 06 30 54.1 -1.1
KSM IAmb IAmb 06 30 56.8
comp=Z,58nm,1.0s
KSM Kuching 72.46 279 P P 06 30 56.0 +0.7
ADK Adak 73.17 2 P P 06 30 56.5 -1.9
ADK IAmb IAmb 06 30 58.3
comp=Z,23nm,0.8s
NACB Ninganchiao 73.36 305 P P 06 30 58.4 -1.7
NACB IAmb IAmb 06 31 01.2
comp=Z,56nm,0.9s
ATKA Atka Island 73.58 3 P P 06 30 59.4 -1.3
ATKA IAmb IAmb 06 31 00.7
comp=Z,52nm,0.9s
TPUB Ta-pu 73.62 304 P P 06 31 00.8 -0.9
JEW Eniwo 73.63 331 P P 06 31 01.8 +0.6
SSLB Suanglung 73.64 304 P P 06 31 01.1 -0.7
JKA Kamikawa-asahi 74.14 332 P P 06 31 05.1 +1.1
JKA IAmb IAmb 06 31 07.1
comp=Z,55nm,1.3s
KSRS Korea Array 76.95 319 P P 06 31 20.2 +0.5
comp=Z,6.3nm,1.0s,baz=144,slow=5.8,SNR=11
KSAR Wonju Array Be 76.97 319 P P 06 31 18.4 -1.4
PETK Petropavlovsk- 77.02 346 P P 06 31 19.4 -0.4
comp=Z,11nm,0.6s,baz=122,slow=7.7,SNR=9.7
PETK Petropavlovsk- 77.02 346 P P 06 31 19.0 -0.8
MYKOM Kota Tinggi 78.54 277 P P 06 31 30.0 +1.2
BELA Belgrano 2 78.65 173 P P 06 31 28.5 +0.3
USA0B Ussuriysk Arra 79.22 327 P P 06 31 32.4 +0.7
USA0B IAmb IAmb 06 31 34.1
comp=Z,48nm,1.2s
USRK Ussuriysk Ar. 79.22 327 P P 06 31 31.6 -0.1
comp=Z,14nm,0.9s,baz=136,slow=3.9,SNR=28
USRK Ussuriysk Ar. 79.22 327 P P 06 31 32.4 +0.7
PKM Mcpherson Peak 79.54 46 P P 06 31 34.9 +1.0
baz=234
SAO San Andreas Ge 79.57 44 P P 06 31 33.8 0.0
PMPB Monarch Peak 79.66 44 P P 06 31 35.8 +1.4
SMMC Simmler 79.66 46 P P 06 31 35.3 +1.0
baz=234
NJ2 Nanjing 79.70 310 eP P 06 31 34.9 +0.4
NJ2 pmax pmax
comp=Z,18nm,0.5s
PAGB Antelope Grade 79.74 45 P P 06 31 35.8 +1.1
HOPS Hopland Field 79.91 41 P P 06 31 36.8 +1.3
HOPS IAmb IAmb 06 31 37.8
comp=Z,20nm,0.8s
GDXM Geysers 79.96 41 P P 06 31 36.9 +1.1
KCPM Cahto Peak 80.03 40 P P 06 31 37.7 +1.4
KCPM IAmb IAmb 06 31 38.7
comp=Z,20nm,0.8s
DECC Green Verdugo 80.18 47 P P 06 31 38.0 +1.0
baz=236
MAW Mawson 80.18 200 P P 06 31 37.4 +1.0
comp=Z,7.8nm,0.8s,baz=129,slow=6.0,SNR=28
MAW Mawson 80.18 200 P P 06 31 37.7 +1.2
baz=80,SNR=22
MAW Mawson 80.18 200 P P 06 31 37.6 +1.2
109C Camp Elliot, M 80.27 49 P P 06 31 38.3 +0.8
baz=236
KMRM Mail Ridge 80.29 40 P P 06 31 39.4 +1.8
KMRM IAmb IAmb 06 31 40.8
comp=Z,57nm,0.8s
ARVC Arvin 80.33 46 P P 06 31 38.9 +1.1
baz=235
MWC Mount Wilson 80.35 47 P P 06 31 39.0 +0.8
JCC Jacoby Creek, 80.47 39 P P 06 31 39.7 +1.4
VES Vestal, Richgr 80.57 46 P P 06 31 39.6 +0.6
baz=235,SNR=10
MURC Murrieta 80.60 48 P P 06 31 40.2 +1.0
baz=236
BFSC Mount Baldy Ra 80.63 48 P P 06 31 40.3 +0.8
baz=236
KHMM Horse Mountain 80.68 39 P P 06 31 41.5 +1.8
KHMM IAmb IAmb 06 31 42.3
comp=Z,21nm,0.8s
MONP2 Monument Peak 80.75 49 P P 06 31 41.5 +1.2
baz=237
MDJ Mudanjiang 80.75 326 P P 06 31 41.0 +1.3
MDJ pP pwP 06 33 50.5 -0.9
MDJ S S 06 41 02.3 +4.2
MDJ ScS ScS 06 41 12.9 +1.3
MDJ SS SS 06 46 34.9 +4.1
MDJ pmax pmax
comp=Z,20nm,1.3s
MDJ pmax pmax
comp=Z,110nm,3.7s
EDW2 Edwards Air Fo 80.76 47 P P 06 31 41.2 +1.1
baz=236,SNR=9.9
O02D Mt. Diablo Mer 80.81 40 P P 06 31 41.9 +1.7
baz=232,SNR=23
IKP In-Ko-Pah, Jac 80.84 50 P P 06 31 40.8 +0.2
baz=237
ISA Isabella, Lake 80.88 46 P P 06 31 41.6 +1.0
baz=235,SNR=14
ISA Isabella, Lake 80.88 46 P P 06 31 41.3 +0.6
ISA IAmb IAmb 06 31 42.8
comp=Z,15nm,0.8s
KRMB Red Mountain 80.99 39 P P 06 31 42.2 +1.1
KRMB IAmb IAmb 06 31 43.9
comp=Z,16nm,0.7s
CMB Columbia Colle 81.00 43 P P 06 31 41.9 +0.7

SLBS Sierra La Lagu 81.01 60 P P 06 31 42.9 +1.3
SLBS IAmb IAmb 06 31 45.2
comp=Z,22nm,1.1s
PFO Pinyon Flats O 81.12 49 P P 06 31 42.5 +0.5
baz=237
PFO Pinyon Flats O 81.12 49 P P 06 31 42.8 +0.8
TPFO Pinon Flats 81.12 49 P P 06 31 42.5 +0.5
baz=237
WDC Whiskeytown Da 81.21 40 P P 06 31 42.4 +0.3
ORV Oroville 81.21 41 P P 06 31 42.4 +0.2
SWSC Sam W. Stewart 81.22 50 P P 06 31 43.4 +1.0
baz=237
KBO Bosley Butte 81.24 38 P P 06 31 42.5 +0.2
KBO IAmb IAmb 06 31 45.7
comp=Z,20nm,1.1s
LRMC Laurel Mtn Rad 81.31 47 P P 06 31 43.9 +1.0
baz=236,SNR=7.3
N02D Trinity Center 81.35 40 P P 06 31 44.6 +1.6
baz=232,SNR=19
O03E Paynes Creek 81.48 41 P P 06 31 44.5 +0.9
baz=232,SNR=16
M02C Callahan 81.52 39 P P 06 31 45.6 +1.7
baz=232,SNR=36
L02E Cave Junction 81.57 38 P P 06 31 45.6 +1.6
baz=231,SNR=7.3
CWC Cottonwood Cre 81.58 46 P P 06 31 45.2 +0.8
baz=235
MDPB Devils Postpil 81.61 44 P P 06 31 45.4 +0.8
OMMB Old Mammoth Mi 81.65 44 P P 06 31 45.6 +0.7
BELC Belle Mtn. Jos 81.65 49 P P 06 31 45.7 +1.0
baz=237,SNR=5.4
MPMC Manual Prospec 81.76 46 P P 06 31 46.2 +0.9
baz=236,SNR=20
MLAC Mammoth, Mammo 81.76 44 P P 06 31 46.5 +1.2
baz=235,SNR=6.1
GSC Goldstone, Bar 81.80 47 P P 06 31 46.2 +0.8
baz=236,SNR=6.6
GSC Goldstone, Bar 81.80 47 P P 06 31 46.4 +1.0
YBH Yreka Blue Hor 81.82 39 P P 06 31 46.3 +1.0
YBH IAmb IAmb 06 31 47.8
comp=Z,15nm,0.7s
TIN Tinemaha, Big 81.83 45 P P 06 31 46.5 +0.9
baz=235,SNR=8.4
BC3 Big Chuckawall 81.85 49 P P 06 31 46.9 +1.2
baz=237
HEC Hector,Ludlow 81.87 48 P P 06 31 46.5 +0.7
baz=237,SNR=6.6
K02D Willamette Mer 81.87 38 P P 06 31 46.9 +1.3
baz=231,SNR=8.9
WAKR Walker 81.88 43 P P 06 31 46.8 +0.9
WAKR IAmb IAmb 06 31 48.1
comp=Z,16nm,0.7s
GLA Glamis 81.97 50 P P 06 31 47.5 +1.3
baz=238
GLA Glamis 81.97 50 P P 06 31 47.8 +1.6
GLA IAmb IAmb 06 31 48.9
comp=Z,21nm,0.8s
J01E Myrtle Point 82.01 37 P P 06 31 47.4 +1.3
baz=236,SNR=6.5
BEKR Beckworth 82.11 42 P P 06 31 47.5 +0.5
PNTR Pine Nut 82.12 43 P P 06 31 47.6 +0.5
PNTR IAmb IAmb 06 31 49.6
comp=Z,44nm,0.8s
IPM Ipoh 82.16 278 P P 06 31 48.1 +0.5
VCNR Virginia City 82.21 42 P P 06 31 48.7 +1.2
HUMO Hull Mountain 82.22 38 P P 06 31 48.3 +1.0
GMRC Granite Mounta 82.31 48 P P 06 31 48.8 +0.7
baz=237,SNR=7.0
IRM Iron Mountain 82.33 49 P P 06 31 49.4 +1.3
baz=238
LHV Little Huntoon 82.34 44 P P 06 31 49.1 +1.2
LHV IAmb IAmb 06 31 50.2
comp=Z,14nm,0.7s
L04D Klamath Falls 82.36 39 P P 06 31 49.1 +1.0
baz=232,SNR=16
M04C Macdoel 82.36 39 P P 06 31 49.2 +1.0
baz=232,SNR=11
GRAC Grapevine Rang 82.37 45 P P 06 31 49.0 +0.9
baz=236
FURC Furnace Creek, 82.41 46 P P 06 31 48.9 +0.7
baz=236,SNR=10
CN2 Changchun 82.47 323 eP P 06 31 49.0 +0.6
CN2 pmax pmax
comp=Z,30nm,1.2s
TUQ Turquoise Moun 82.48 47 P P 06 31 49.7 +0.8
baz=237
RYN Ryan 82.54 44 P P 06 31 48.9 -0.3
NVAR Mina Array Bea 82.57 44 P P 06 31 49.9 +0.5
comp=Z,8.1nm,0.6s,baz=224,slow=8.3,SNR=79
NVAR pP pwP 06 34 00.6 -0.7
comp=Z,1.2nm,0.8s,baz=219,slow=8.1,SNR=3.8
NVAR PKPPKP P'P'df 06 58 19.2 +5.4
comp=Z,0.7nm,1.0s,baz=90,slow=3.0,SNR=3.9
113A Mohawk Valley, 82.58 51 P P 06 31 49.5 +0.3
PAHR Pah Rah Range 82.62 42 P P 06 31 50.1 +0.6
PAHR IAmb IAmb 06 31 51.4
comp=Z,15nm,0.8s
I02D Swisshome 82.66 37 P P 06 31 50.6 +1.2
baz=230
NV11 Mina Array Sit 82.66 44 P P 06 31 50.3 +0.6
I03D Drain, OR 82.68 37 P P 06 31 50.5 +1.0
baz=231
HSIG 82.78 55 P P 06 31 51.0 +0.6
HSIG IAmb IAmb 06 31 52.5
comp=Z,12nm,0.6s
KULM Kulim 82.81 279 P P 06 31 52.1 +1.2
KULM IAmb IAmb 06 31 52.9
comp=Z,40nm,1.0s
214A Organ Pipe Nat 82.85 52 P P 06 31 52.1 +1.4
baz=239
KLR Kul'dur 82.88 330 P P 06 31 51.0 +0.7
comp=Z,7.0nm,1.0s,baz=80,slow=1.5
K04D Chiloquin, OR 82.93 39 P P 06 31 52.0 +1.1
baz=232
NEE2 Needles Airpor 83.02 49 P P 06 31 52.8 +1.4
baz=238
KVN Kaiserville 83.05 43 P P 06 31 52.4 +0.6
TPH Tonopah 83.07 45 P P 06 31 52.5 +0.6
TPNV Topopah Spring 83.09 46 P P 06 31 52.9 +1.0
baz=237,SNR=15
TPNV Topopah Spring 83.09 46 P P 06 31 52.4 +0.5
J04D Umpqua Nationa 83.10 38 P P 06 31 53.0 +1.1
baz=232,SNR=22
PDMCI Parker Dam,Lak 83.11 49 P P 06 31 53.2 +1.4
baz=238
I04A Tendick Farm, 83.27 38 P P 06 31 53.2 +0.7
baz=232,SNR=10
MOD Modoc Plateau 83.35 40 P P 06 31 53.9 +0.8
RPSI Rantau Prapat 83.43 275 P P 06 31 54.0 0.0
RPSI IAmb IAmb 06 31 54.8
comp=Z,36nm,0.9s
K05A Summer Lake 83.50 39 P P 06 31 55.2 +1.4
K05A IAmb IAmb 06 31 56.2
comp=Z,25nm,0.8s
H04D Lebanon 83.54 37 P P 06 31 55.0 +1.2
baz=231,SNR=6.1
SHPR Sheep Range 83.58 47 P P 06 31 55.2 +0.8
J05D Fort Rock, OR 83.63 39 P P 06 31 55.7 +1.3
baz=232,SNR=45
G03D McMinnville, O 83.68 36 P P 06 31 55.4 +1.0
baz=231
W13A Hualapai Mount 83.71 49 P P 06 31 54.7 -0.4
Y14A Wickenburg 83.73 50 P P 06 31 53.8 -1.2
PINE Pine Mountain 84.11 38 P P 06 31 58.3 +1.4
PINE IAmb IAmb 06 31 59.2
comp=Z,22nm,0.8s
PRN Pahroc Range 84.14 46 P P 06 31 58.0 +1.0
GSI Gunungsitoli 84.17 274 P P 06 31 58.1 +0.5
I05D Terrebonne, OR 84.22 38 P P 06 31 58.2 +1.0
baz=232,SNR=8.4
R11A Troy Canyon, C 84.29 45 P P 06 31 58.2 +0.3
baz=237
R11A Troy Canyon, C 84.29 45 P P 06 31 58.0 +0.1
E03A Lebam 84.37 35 P P 06 31 59.1 +1.4
E03A IAmb IAmb 06 32 01.1
comp=Z,47nm,1.0s
TUC Tucson 84.52 52 P P 06 32 00.7 +1.8
baz=240
TUC Tucson 84.52 52 P P 06 31 59.9 +1.0
F04A Amboy 84.60 36 P P 06 31 59.7 +0.8
F04A IAmb IAmb 06 32 01.8
comp=Z,13nm,0.8s
WVOR Wild Horse Val 84.67 40 P P 06 31 59.9 +0.4
NLWA Neilton Lookou 84.74 34 P P 06 32 00.7 +1.0
NLWA IAmb IAmb 06 32 02.4
comp=Z,35nm,1.4s

G05D **Wamic, OR** 84.78 37 P **P** 06 32 00.5 +0.7
baz=232
E04D **Cinebar** 84.91 35 P **P** 06 32 01.8 +1.5
baz=231
X16A **Lo Mia Camp, P** 85.09 50 P **P** 06 32 02.8 +1.0
F05D **White Salmon** 85.09 36 P **P** 06 32 02.7 +1.4
baz=232
I07A **Izee** 85.12 39 P **P** 06 32 02.3 +0.7
LCMT **Little Creek M** 85.15 47 P **P** 06 32 00.4 -1.6
D04E **Lakebay** 85.19 35 P **P** 06 32 02.5 +0.8
baz=231
D03D **Eldon** 85.24 34 P **P** 06 32 03.0 +1.0
baz=231
J08A **Circle Bar Ran** 85.30 40 P **P** 06 32 01.9 -0.6
J08A IAmb IAmb 06 32 04.5
comp=Z,21nm,1.4s
LON **Longmire** 85.44 36 P **P** 06 32 03.0 0.0
SYO **Syowa Base** 85.44 193 ǁ *i*P **P** 06 32 01.0 -1.6
SYO **Syowa Base** 85.44 193 ǁ *i*PcP **PcP** 06 32 03.7 -0.8
SYO **Syowa Base** 85.44 193 ǁ *e*pP pP 06 34 15.4 +3.0
KNB **Kanab** 85.44 47 P **P** 06 32 04.5 +1.1
SPR3 **Spring Creek 3** 85.47 45 P **P** 06 32 04.1 +0.4
U15A **North Rim** 85.51 48 P **P** 06 32 05.1 +1.2
U15A IAmb IAmb 06 32 06.2
comp=Z,19nm,0.7s
PSUT **Pine Spring** 85.54 46 P **P** 06 32 04.4 +0.5
D05A **Enumclaw** 85.61 35 P **P** 06 32 04.7 +1.0
WUAZ **Wupatki** 85.69 49 P **P** 06 32 05.3 +0.7
baz=240
WUAZ **Wupatki** 85.69 49 P **P** 06 32 05.1 +0.5
RC01 **Rabbit Creek A** 85.73 14 P **P** 06 32 04.5 +0.5
baz=207
PGC **Sidney** 85.76 33 P **P** 06 32 05.4 +1.0
PGC IAmb IAmb 06 32 06.2
comp=Z,14nm,0.7s
ELK **Elko** 85.82 43 P **P** 06 32 05.2 0.0
SUA **Susitna One** 85.85 13 P **P** 06 32 04.0 -0.6
SUA IAmb IAmb 06 32 04.8
comp=Z,21nm,0.8s
BJI **Beijing** 85.87 316 P **P** 06 32 06.1 +1.0
BJI SKS **SKSac** 06 41 31.1 -1.8
BJI S **ScS** 06 41 51.9 -2.1
BJI sS **sS** 06 45 40.3 +0.1
BJI pmax pmax
comp=Z,11nm,1.5s
HPIG 85.94 59 P **P** 06 32 06.7 +0.6
F07A **Phinny Hill Vi** 85.95 37 P **P** 06 32 06.3 +0.9
F07A IAmb IAmb 06 32 07.4
comp=Z,9.7nm,0.8s
G08A **Pilot Rock** 86.14 38 P **P** 06 32 07.2 +0.8
G08A IAmb IAmb 06 32 09.6
comp=Z,16nm,0.8s
TTA **Tatalina** 86.19 10 P **P** 06 32 06.2 0.0
TTA IAmb IAmb 06 32 07.0
comp=Z,19nm,1.5s
A04D **Lummi Island** 86.19 34 P **P** 06 32 07.2 +0.8
baz=231
GYA **Guiyang** 86.21 300 ǁ P **P** 06 32 08.1 +0.9
GYA pP pP 06 34 15.0 -1.9
GYA SKS **SKSac** 06 41 35.8 -0.1
GYA S **S** 06 41 54.1 +1.8
GYA pmax pmax
comp=Z,17nm,1.5s
GYA pmax pmax
comp=Z,210nm,5.5s
B05A **Bryant** 86.22 34 P **P** 06 32 07.5 +0.9
baz=232
KNK **Knik Glacier** 86.31 14 P **P** 06 32 06.6 -0.1
KNK IAmb IAmb 06 32 07.3
comp=Z,27nm,0.8s
PMR **Palmer** 86.31 14 P **P** 06 32 06.3 -0.4
PMR IAmb IAmb 06 32 08.5
comp=Z,48nm,1.4s
LTY **Liberty** 86.36 36 P **P** 06 32 07.9 +0.5
LTY IAmb IAmb 06 32 08.9
comp=Z,10.0nm,0.7s
MTPU **Mount Pierson** 86.41 47 P **P** 06 32 09.3 +1.1
HAWA **Hanford** 86.47 37 P **P** 06 32 08.5 +0.7
HAWA IAmb IAmb 06 32 09.9
comp=Z,18nm,0.8s
TCRU **Three Creeks R** 86.52 46 P **P** 06 32 08.2 -0.4
GHO **Glory Hole Cre** 86.52 14 P **P** 06 32 07.4 -0.4
C06D **Leavenworth** 86.65 35 P **P** 06 32 09.7 +1.0
baz=232
ZAIG **Zacatecas** 86.68 64 P **P** 06 32 08.2 -1.4
E08A **Dider Farm, El** 86.79 37 P **P** 06 32 09.6 +0.3
E08A IAmb IAmb 06 32 11.2
comp=Z,13nm,0.8s
CUT **Chulitna** 86.79 13 P **P** 06 32 08.7 -0.2
baz=207
BMO **Blue Mountains** 86.84 39 P **P** 06 32 10.1 +0.4
121A **Cookes Peak, D** 86.85 53 P **P** 06 32 11.7 +1.5
baz=242
121A **Cookes Peak, D** 86.85 53 P **P** 06 32 11.0 +0.9
MFID **Camas Ranch** 86.92 41 P **P** 06 32 10.5 +0.3
MFID IAmb IAmb 06 32 12.1
comp=Z,10nm,0.8s
SNAA **Sanae** 86.97 179 P **P** 06 32 10.2 +0.2
SNAA **Sanae** 86.97 179 P **P** 06 32 09.8 -0.2
DUG **Dugway, Tooele** 87.10 45 P **P** 06 32 10.8 -0.3
VNA3 **Neumayer Olymp** 87.15 177 P **P** 06 32 11.4 +0.7
D08A **Wollman Farm,** 87.20 36 P **P** 06 32 12.2 +0.9
D08A IAmb IAmb 06 32 13.2
comp=Z,19nm,0.7s
E09A **Wood Farm, Sta** 87.32 37 P **P** 06 32 11.1 -0.7
E09A IAmb IAmb 06 32 13.4
comp=Z,13nm,0.9s
CAST **Castle Rocks** 87.34 12 P **P** 06 32 10.3 -1.3
CAST IAmb IAmb 06 32 10.8
comp=Z,22nm,0.8s
N25K **Chitina, Valde** 87.41 16 P **P** 06 32 12.3 +0.4
baz=212
N25K **Chitina, Valde** 87.41 16 P **P** 06 32 11.9 0.0
N25K IAmb IAmb 06 32 12.8
comp=Z,15nm,0.8s
M24K **Tolsona, Glenn** 87.45 15 P **P** 06 32 12.7 +0.6
baz=210
GLB **Gilahina Butte** 87.47 16 P **P** 06 32 12.5 +0.3
GLB IAmb IAmb 06 32 12.7
comp=Z,12nm,0.8s
F10A **Beach Ranch, E** 87.53 38 P **P** 06 32 13.2 +0.3
F10A IAmb IAmb 06 32 14.3
comp=Z,24nm,0.8s
Q16A **Castle Valley** 87.53 46 P **P** 06 32 13.4 +0.1
VNA2 **Neumayer--Watz** 87.58 177 P **P** 06 32 13.9 +1.2
KTH **Kantishna Hill** 87.69 12 P **P** 06 32 11.8 -1.5
KTH IAmb IAmb 06 32 13.2
comp=Z,21nm,0.9s
TMUT **Trail Mountain** 87.70 46 P **P** 06 32 15.1 +0.9
TRF **Thorofare Moun** 87.72 13 P **P** 06 32 12.3 -1.2
BARN **Barnard Glacie** 87.73 17 P **P** 06 32 13.7 +0.1
BARN IAmb IAmb 06 32 16.0
comp=Z,33nm,0.9s
B08A **Colville Reser** 87.74 35 P **P** 06 32 14.2 +0.4
B08A IAmb IAmb 06 32 15.0
comp=Z,18nm,0.7s
PLID **Pearl Lake** 87.74 39 P **P** 06 32 14.7 +0.6
PLID IAmb IAmb 06 32 17.6
comp=Z,14nm,1.1s
MPU **Maple Canyon** 87.78 45 P **P** 06 32 14.2 -0.1
VNA1 **Neumayer--Stat** 87.81 177 P **P** 06 32 14.8 +1.0
HLID **Hailey** 87.86 41 P **P** 06 32 15.8 +1.2
baz=237
HLID **Hailey** 87.86 41 P **P** 06 32 14.5 -0.2
HLID IAmb IAmb 06 32 16.8
comp=Z,10nm,0.8s
XAN **Xi'an** 87.89 308 P **P** 06 32 16.3 +1.5
XAN pmax pmax
comp=Z,27nm,1.2s
SPUT **South Promonto** 87.91 44 P **P** 06 32 15.5 +0.6
HVU **Hansel Valley** 87.94 43 P **P** 06 32 15.4 +0.4
RND **Reindeer** 87.98 13 P **P** 06 32 14.1 -0.5
C09A **Chrisman Ranch** 87.99 36 P **P** 06 32 15.2 +0.3
C09A IAmb IAmb 06 32 16.5
comp=Z,14nm,0.8s
TLIG **Tlapa** 88.00 70 P **P** 06 32 15.7 -0.1
CTU **Camp Tracy** 88.05 45 P **P** 06 32 14.1 -1.4
SRU **San Rafael Swe** 88.07 46 P **P** 06 32 14.8 -0.9
P17A **Butcher Ranch,** 88.10 46 P **P** 06 32 16.3 +0.4
BPAW **Bear Paw Mtn.** 88.17 12 P **P** 06 32 14.3 -1.1
JLU **Jordanelle** 88.20 45 P **P** 06 32 16.9 +0.5
LENM **Lemitar** 88.21 52 P **P** 06 32 16.1 -0.3
MCK **McKinley** 88.25 13 P **P** 06 32 14.5 -1.2
baz=208

MNTX **Cornudas Mount** 88.28 55 P **P** 06 32 17.6 +0.9
baz=243
MNTX **Cornudas Mount** 88.28 55 P **P** 06 32 17.1 +0.4
MNTX IAmb IAmb 06 32 18.9
comp=Z,11nm,0.8s
BNM **Barren Site** 88.45 52 P **P** 06 32 18.5 +0.8
TCUT **Toone Canyon** 88.49 44 P **P** 06 32 19.1 +1.4
MVCO **Mesa Verde** 88.54 49 P **P** 06 32 15.7 -2.3
baz=242
TX31 **Lajitas Ar. Si** 88.57 58 P **P** 06 32 19.7 +1.5
TX31 IAmb IAmb 06 32 20.8
comp=Z,24nm,0.8s
TX32 **Lajitas Array** 88.57 58 P **P** 06 32 19.2 +1.0
TX32 IAmb IAmb 06 32 20.8
comp=Z,8.3nm,0.8s
TXAR **Lajitas Array** 88.57 58 P **P** 06 32 19.0 +0.8
comp=Z,9.3nm,0.8s,baz=218,slow=6.1,SNR=48
TXAR pP **pP** 06 34 29.7 +0.4
comp=Z,1.1nm,0.8s,baz=198,slow=2.7,SNR=4.2
TXAR PKKPbc **PKKPbc** 06 49 57.2 +1.2
comp=Z,0.2nm,0.5s,baz=66,slow=3.0,SNR=3.5
TXAR **Lajitas Array** 88.57 58 P **P** 06 32 18.1 -0.1
PV17 **East Wray Mesa** 88.73 48 P **P** 06 32 20.2 +1.3
PV14 **Lion Creek, Pa** 88.73 48 P **P** 06 32 18.0 -0.9
PV14 IAmb IAmb 06 32 21.5
comp=Z,11nm,1.4s
BCYI **Bear Canyon** 88.88 41 P **P** 06 32 20.1 +0.7
NEW **Newport** 88.89 36 P **P** 06 32 19.1 -0.1
baz=235
NEW **Newport** 88.89 36 P **P** 06 32 18.8 -0.3
L26K **Log Cabin Wild** 88.92 15 P **P** 06 32 18.8 -0.2
baz=213
ANMO **Albuquerque** 88.94 52 P **P** 06 32 20.4 +0.5
baz=243
ANMO **Albuquerque** 88.94 52 P **P** 06 32 20.4 +0.5
ANMO IAmb IAmb 06 32 23.4
comp=Z,8.0nm,1.0s
PV22 **Blue Mesa, Par** 88.97 48 P **P** 06 32 20.5 +0.5
NEA2 **Nenana** 88.99 13 P **P** 06 32 17.7 -1.4
baz=208
MLY **Manley** 89.06 12 P **P** 06 32 18.6 -0.9
baz=206
WRH **Wood River Hil** 89.08 13 P **P** 06 32 18.4 -1.2
WRH IAmb IAmb 06 32 19.6
comp=Z,18nm,0.8s
HDA **Harding Lake** 89.27 13 P **P** 06 32 19.9 -0.5
baz=210
HDA **Harding Lake** 89.27 13 P **P** 06 32 19.6 -0.8
HDA IAmb IAmb 06 32 21.4
comp=Z,13nm,0.7s
DOT **Dot Lake** 89.28 15 P **P** 06 32 18.7 -1.8
DOT IAmb IAmb 06 32 21.2
comp=Z,14nm,0.9s
GDL2 **Guadalupe Moun** 89.28 55 P **P** 06 32 22.2 +0.8
CCB **Clear Creek Bu** 89.30 13 P **P** 06 32 19.4 -1.2
CCB IAmb IAmb 06 32 20.4
comp=Z,12nm,0.7s
HHC **Hu-ho-hao-te** 89.30 315 *e*P **P** 06 32 21.9 +0.6
HHC pP pP 06 34 29.4 -2.8
HHC sP sP 06 35 30.5 -2.3
HHC SKS **SKSac** 06 41 51.4 -2.1
HHC S **S** 06 42 20.4 +0.2
HHC pmax pmax
comp=Z,18nm,0.6s
HHC pmax pmax
comp=Z,150nm,4.7s
LC01 **Cunco** 89.30 132 P **P** 06 32 22.8 +1.4
LC01 IAmb IAmb 06 32 24.8
comp=Z,12nm,0.8s
PLCA **Paso Flores** 89.35 134 P **P** 06 32 23.2 +1.6
comp=Z,6.6nm,0.7s,baz=226,slow=5.1,SNR=30
PLCA **Paso Flores** 89.35 134 P **P** 06 32 23.7 +2.1
PLCA IAmb IAmb 06 32 24.8
comp=Z,11nm,0.8s
CMAR **Chiang Mai Arr** 89.42 290 P **P** 06 32 24.0 +1.8
comp=Z,17nm,0.9s,baz=127,slow=3.1,SNR=60
CMAR PP **PP** 06 36 05.5 +0.1
comp=Z,2.1nm,0.6s,baz=131,slow=5.9,SNR=4.4
CMAR **Chiang Mai Arr** 89.42 290 P **P** 06 32 24.2 +2.0
RDMU **Red Mountain** 89.42 46 P **P** 06 32 22.3 +0.3
I23K **Minto, Yukon-K** 89.43 12 P **P** 06 32 20.2 -0.9
baz=208
I23K **Minto, Yukon-K** 89.43 12 P **P** 06 32 20.2 -0.9
MDM **Murphy Dome** 89.48 13 P **P** 06 32 20.2 -1.2
MDM IAmb IAmb 06 32 21.3
comp=Z,11nm,0.9s
TCOL **CIGO, UAF Yank** 89.48 13 P **P** 06 32 20.6 -0.9
baz=209
TCOL **CIGO, UAF Yank** 89.48 13 P **P** 06 32 20.5 -0.9
TCOL IAmb IAmb 06 32 22.5
comp=Z,24nm,1.1s
COLA **College** 89.49 13 P **P** 06 32 20.4 -1.0
COLA IAmb IAmb 06 32 22.5
comp=Z,19nm,0.9s
MCMT **McKenzie Canyo** 89.49 41 P **P** 06 32 23.5 +1.2
AHID **Auburn Hatcher** 89.52 43 P **P** 06 32 23.3 +0.9
AHID IAmb IAmb 06 32 24.8
comp=Z,14nm,0.7s
CHTO **Chiang Mai** 89.56 290 P **P** 06 32 24.4 +1.6
SCRK **Sand Creek** 89.57 15 P **P** 06 32 21.5 -0.5
baz=212
IL31 89.60 13 P **P** 06 32 20.9 -1.1
IL31 IAmb IAmb 06 32 22.6
comp=Z,9.4nm,0.9s
ILAR **Eielson Array** 89.60 13 P **P** 06 32 20.8 -1.2
comp=Z,4.1nm,0.6s,baz=222,slow=5.3,SNR=72
ILAR pP **pP** 06 34 33.9 -0.3
comp=Z,1.4nm,0.9s,baz=228,slow=5.5,SNR=5.2
POKR **Poker Plat Res** 89.79 13 P **P** 06 32 21.8 -1.1
baz=209
POKR **Poker Plat Res** 89.79 13 P **P** 06 32 21.8 -1.1
POKR IAmb IAmb 06 32 23.9
comp=Z,13nm,1.2s
MSO **Missoula** 89.90 39 P **P** 06 32 24.4 +0.4
baz=238
DLMT **Dillon** 89.92 40 P **P** 06 32 24.4 +0.3
S22A **4UR Ranch, Cre** 89.96 49 P **P** 06 32 25.2 +0.5
baz=242
S22A **4UR Ranch, Cre** 89.96 49 P **P** 06 32 24.9 +0.3
S22A IAmb IAmb 06 32 27.8
comp=Z,7.2nm,0.9s
REDW **Red Top Meadow** 89.97 43 P **P** 06 32 24.6 0.0
REDW IAmb IAmb 06 32 26.3
comp=Z,10nm,0.8s
TPAW **Teton Pass** 89.98 43 P **P** 06 32 25.2 +0.7
K27K **Chicken** 90.08 15 P **P** 06 32 24.6 +0.4
baz=214
K27K **Chicken** 90.08 15 P **P** 06 32 24.6 +0.4
K27K IAmb IAmb 06 32 27.3
comp=Z,15nm,1.2s
SNOW **Snow King Moun** 90.09 43 P **P** 06 32 25.8 +0.7
SNOW IAmb IAmb 06 32 27.4
comp=Z,13nm,0.9s
O20A **White River Ci** 90.11 46 P **P** 06 32 25.7 +0.5
baz=242
O20A **White River Ci** 90.11 46 P **P** 06 32 25.2 0.0
O20A IAmb IAmb 06 32 26.7
comp=Z,8.9nm,0.8s
IMW **Indian Meadow** 90.19 42 P **P** 06 32 26.2 +0.6
IMW IAmb IAmb 06 32 27.5
comp=Z,7.3nm,0.8s
QLMT **Earthquake Lak** 90.36 41 P **P** 06 32 27.4 +1.2
FLWY **Flagg Ranch** 90.43 42 P **P** 06 32 27.2 +0.6
FLWY IAmb IAmb 06 32 29.9
comp=Z,10.0nm,1.1s
BW06 **Boulder Array** 90.50 44 P **P** 06 32 27.2 +0.2
baz=241
BW06 **Boulder Array** 90.50 44 P **P** 06 32 26.3 -0.7
BW06 IAmb IAmb 06 32 29.3
comp=Z,18nm,1.4s
PD31 **Pinedale Array** 90.50 44 P **P** 06 32 26.7 -0.3
PD31 IAmb IAmb 06 32 29.3
comp=Z,15nm,1.4s
PDAR **Pinedale Array** 90.50 44 P **P** 06 32 27.2 +0.2
comp=Z,5.3nm,0.8s,baz=202,slow=2.7,SNR=31
PDAR **Pinedale Array** 90.50 44 P **P** 06 32 26.5 -0.5
YHL **Hebgen Lake** 90.52 41 P **P** 06 32 28.0 +0.9
SMCO **Snowmass** 90.52 48 P **P** 06 32 26.3 -1.1
YMR **Madison River** 90.56 42 P **P** 06 32 28.2 +1.0
BOZ **Bozeman (W)** 90.62 40 P **P** 06 32 27.8 +0.4
baz=239
BOZ **Bozeman (W)** 90.62 40 P **P** 06 32 28.1 +0.7
H17A **Grant Village** 90.66 42 P **P** 06 32 29.2 +1.5
baz=240
H17A **Grant Village** 90.66 42 P **P** 06 32 27.5 -0.3

YHH **Holmes Hill** 90.69 41 P **P** 06 32 29.5 +1.6
BI02 **San Fabin de** 90.75 130 P **P** 06 32 29.4 +1.2
BI02 IAmb IAmb 06 32 31.8
comp=Z,13nm,0.8s
DAWY **Dawson** 90.79 16 P **P** 06 32 27.6 +0.1
DAWY IAmb IAmb 06 32 29.7
comp=Z,8.2nm,0.9s
SDCO **Great Sand Dun** 90.90 50 P **P** 06 32 28.8 -0.2
baz=243
SDCO **Great Sand Dun** 90.90 50 P **P** 06 32 28.7 -0.3
HRY **Holter Researc** 91.07 39 P **P** 06 32 30.3 +1.0
COLD **Coldfoot** 91.13 11 P **P** 06 32 29.5 +0.6
baz=207
MSTX **Muleshoe** 91.25 54 P **P** 06 32 30.8 +0.4
baz=245
MSTX **Muleshoe** 91.25 54 P **P** 06 32 30.8 +0.4
MSTX IAmb IAmb 06 32 31.3
comp=Z,17nm,1.4s
YNE **Yellowstone No** 91.32 42 P **P** 06 32 32.1 +1.4
T25A **Trinidad** 91.41 50 P **P** 06 32 31.3 0.0
baz=244
T25A **Trinidad** 91.41 50 P **P** 06 32 30.5 -0.7
T25A IAmb IAmb 06 32 32.8
comp=Z,5.9nm,0.8s
833A **Chaparral WMA,** 91.56 60 P **P** 06 32 32.2 +0.3
baz=246
Q24A **Divide** 91.69 49 P **P** 06 32 32.9 +0.3
baz=244
Q24A **Divide** 91.69 49 P **P** 06 32 32.6 0.0
Q24A IAmb IAmb 06 32 34.6
comp=Z,12nm,1.4s
ISCO **Idaho Springs** 91.74 48 P **P** 06 32 33.3 +0.4
baz=243
BO02 **Sierra Bellavi** 91.98 129 P **P** 06 32 34.9 +1.0
BO02 IAmb IAmb 06 32 36.9
comp=Z,10nm,0.6s
N23A **Red Feather La** 92.01 47 P **P** 06 32 34.3 +0.3
baz=243
N23A **Red Feather La** 92.01 47 P **P** 06 32 34.9 +0.9
N23A IAmb IAmb 06 32 36.8
comp=Z,9.9nm,1.2s
JCT **Junction City** 92.10 58 P **P** 06 32 34.1 -0.3
baz=246
JCT **Junction City** 92.10 58 P **P** 06 32 34.8 +0.5
JCT IAmb IAmb 06 32 35.7
comp=Z,5.4nm,0.6s
K22A **Casper** 92.42 45 P **P** 06 32 36.4 +0.7
baz=243
TOLK **Toolik Lake Re** 92.50 10 P **P** 06 32 36.0 +0.7
baz=207
LZH **Lanzhou** 92.53 308 *e*P **P** 06 32 37.8 +1.4
LZH pP pP 06 34 48.1 +0.2
LZH sP sP 06 35 46.1 -2.2
LZH PP **PP** 06 36 37.0 +7.6
LZH pmax pmax
comp=Z,34nm,1.3s
LZH pmax pmax
comp=Z,160nm,5.0s
PEL **Peldehue** 92.82 127 P **P** 06 32 38.7 +0.9
PEL IAmb IAmb 06 32 41.3
comp=Z,12nm,0.9s
ABTX **Abilene, Hawle** 93.08 56 P **P** 06 32 39.0 +0.2
baz=246
ABTX **Abilene, Hawle** 93.08 56 P **P** 06 32 38.6 -0.2
ABTX IAmb IAmb 06 32 41.7
comp=Z,22nm,1.4s
KSCO **Kaye Shedlock'** 93.48 49 P **P** 06 32 41.2 +0.5
baz=245
KSCO **Kaye Shedlock'** 93.48 49 P **P** 06 32 39.9 -0.7
KSCO IAmb IAmb 06 32 42.1
comp=Z,12nm,0.8s
CO02 **Cornbarbal** 93.48 125 P **P** 06 32 40.7 -0.2
A21K **Barrow** 93.96 7 P **P** 06 32 42.0 +0.2
baz=201
RSSD **Black Hills** 94.70 44 P **P** 06 32 46.0 -0.1
baz=244
RSSD **Black Hills** 94.70 44 P **P** 06 32 45.6 -0.5
RSSD IAmb IAmb 06 32 47.4
comp=Z,4.1nm,0.9s
CBKS **Cedar Bluff** 95.46 50 P **P** 06 32 49.6 +0.1
baz=247
SONM **Songino Array** 95.82 319 P **P** 06 32 50.6 -0.4
comp=Z,0.5nm,0.3s,baz=117,slow=4.0,SNR=4.7
SONM **Songino Array** 95.82 319 P **P** 06 32 49.3 -1.7
GTA **Gaotai** 96.78 310 *e*P **P** 06 32 56.8 +1.3
GTA pP pP 06 35 08.3 +0.9
GTA sP sP 06 36 06.9 -0.9
GTA pmax pmax
comp=Z,6.0nm,1.0s
MIAR **Mount Ida** 98.49 56 P Pdif 06 33 03.0 -0.1
baz=250
C36M **Paulatuk** 98.79 17 P **P** 06 33 04.1 +0.5
baz=231
X40A **Basin Creek Fa** 99.05 57 P **Pdif** 06 33 05.4 -0.1
baz=250
ECSD **EROS Data Cent** 99.48 47 P **Pdif** 06 33 08.0 +0.7
baz=249
ZALV **Zalesovo Beam** 110.61 321 PKiKP **PKiKP** 06 37 51.4 -1.2
comp=Z,2.2nm,0.6s,baz=119,slow=1.4,SNR=12
MKAR **Makanchi Array** 111.11 313 PKiKP **PKiKP** 06 37 52.7 -1.2
comp=Z,1.2nm,0.4s,baz=170,slow=0.7,SNR=12
MKAR PKKPbc **PKKPbc** 06 48 52.9 -0.3
comp=Z,1.6nm,0.7s,baz=282,slow=3.9,SNR=9.7
MKAR PKKP **PKKPdf** 06 49 06.9 -3.2
comp=Z,0.4nm,0.7s,baz=318,slow=1.6,SNR=3.8
M56A **Emporium** 112.01 53 P **PKiKP** 06 37 56.3 +0.5
baz=260
O58A **Lewisberry** 112.73 54 P **PKiKP** 06 37 57.9 +0.7
baz=260
K57A **Scipio Center** 113.43 52 P **PKiKP** 06 37 58.1 -0.4
baz=262
L58A **Harry Jones Me** 113.82 52 P **PKiKP** 06 37 59.3 +0.1
baz=262
J57A **Williamstown** 113.90 51 P **PKiKP** 06 37 59.2 -0.1
baz=262
KURK **Kurchatov** 114.01 317 PKiKP PKPdf 06 37 58.5 -0.7
KURBB **Kurchatov Arra** 114.06 317 PKiKP PKPdf 06 37 58.2 -1.1
comp=Z,2.0nm,0.7s,baz=112,slow=1.8,SNR=13
KURBB PP **PP** 06 39 03.8 -2.5
comp=Z,1.3nm,1.0s,baz=105,slow=6.2,SNR=4.4
H57A **Richville** 114.47 50 P PKPdf 06 37 60.0 -0.4
baz=263
E57A **Chemin Saint G** 115.54 48 P **PKPdf** 06 38 01.9 -0.5
baz=265
E58A **La Victoria** 116.14 48 P **PKPdf** 06 38 02.6 -0.9
baz=266
L61B **Northampton** 116.21 52 P **PKPdf** 06 38 03.5 -0.3
baz=264
J61A **Chester** 116.39 51 P **PKPdf** 06 38 03.5 -0.6
baz=265
D58A **Chemin du LacG** 116.46 47 P **PKPdf** 06 38 03.4 -0.7
baz=266
E60A **Ste Agathe de** 117.40 48 P **PKPdf** 06 38 05.3 -0.6
baz=267
J63A **Strafford** 117.46 51 P **PKPdf** 06 38 05.9 -0.2
baz=266
E62A **Clayton Lake** 118.74 48 P **PKiKP** 06 38 08.6 0.0
baz=268
PKME **Peaks-Kenny Pk** 118.86 49 P **PKiKP** 06 38 08.8 0.0
baz=268
KKAR **Karatay Array** 119.03 308 PKPdf **PKPdf** 06 38 08.2 -1.0
D62A **Allapoint, All** 119.07 47 P **PKPdf** 06 38 08.7 -0.4
baz=269
BVAR **Borovoye Array** 119.17 320 PKP **PKPdf** 06 38 08.0 -1.2
comp=Z,1.8nm,0.4s,baz=158,slow=4.4,SNR=16
G64A **Maxfield** 119.23 49 P **PKPdf** 06 38 09.2 -0.3
baz=268
KBL **Kabul** 119.41 298 PKPdf **PKPdf** 06 38 10.0 -0.5
E63A **Oxbow** 119.49 48 P **PKPdf** 06 38 09.7 -0.3
baz=269
BDFB **Brasilia** 119.51 124 PKP **PKPdf** 06 38 10.9 -0.2
comp=Z,1.9nm,0.3s,baz=214,slow=3.6,SNR=5.3
OPO **Ambohidratompo** 119.56 232 PKP **PKPdf** 06 38 10.3 -0.9
comp=Z,1.4nm,0.3s,baz=84,slow=3.0,SNR=3.7
D63A **Stockholm** 119.72 47 P **PKPdf** 06 38 09.5 -0.9
baz=270
CHGR **Chuyangaron** 119.74 303 PKPdf **PKiKP** 06 38 10.9 0.0
E64A **Bridgewater** 119.91 48 P **PKPdf** 06 38 10.1 -0.7
baz=270
SCHQ **Schefferville** 120.20 38 PKP **PKPdf** 06 38 10.2 -0.8
comp=Z,4.5nm,0.9s,baz=225,slow=10.0,SNR=1.8
SUMG **Summit** 124.45 13 PKPdf **PKiKP** 06 38 19.4 -0.2
BOSA **Boshof** 124.81 206 PKP **PKiKP** 06 38 21.9 +0.5
comp=Z,9.5nm,1.1s,baz=58,slow=1.3,SNR=4.7
ARU **Arti** 125.43 325 PKPdf **PKPdf** 06 38 20.3 -0.7
ABKAR **Akbulak array** 126.08 316 PKPdf **PKPdf** 06 38 22.3 -0.2
ABKAR **Akbulak array** 126.08 316 PKPdf **PKPdf** 06 38 21.9 -0.6

JMDO	**Jabal Madar**	**127.14 282**	P	pPKPdf	06 40 43.7	-1.9
BSY	**Bisya**	**128.03 283**	P	pPKPdf	06 40 47.2	-0.1
HOQ	**Hoqain**	**128.07 284**	P	pPKPdf	06 40 47.4	+0.1
GEYT	**Alibeck**	**128.40 302**	PKP	**PKiKP**	**06 38 28.0**	**-0.1**
	comp=Z,6.3nm,0.4s,baz=43,slow=3.9,SNR=5.3					
SHAO	**Shalim**	**128.51 276**	P	pPKPdf	06 40 50.7	+2.4
SOHO	**SOHO**	**128.86 284**	P	pPKPdf	06 40 52.3	+3.6
SOHO			P	**pPKPdf**	**06 40 52.3**	**+3.6**
ASHO	**Ashiyiah**	**129.37 285**	P	SKPbc	06 40 55.0	0.0
	SNR=6.3					
ARD1	**ARCESS Array S**	**129.74 349**		**PKPdf**	**06 38 28.2**	**-0.7**
ARB5	**ARCESS Array S**	**129.75 349**		**PKPdf**	**06 38 28.4**	**-0.6**
ARCES	**ARCESS Array B**	**129.75 349**	PKhKP	PKPpre	06 38 14.0	
	comp=Z,2.2nm,0.9s,baz=37,slow=0.6,SNR=6.1					
ARCES			PKP	**PKPdf**	**06 38 28.4**	**-0.6**
	comp=Z,7.2nm,0.6s,baz=70,slow=1.4,SNR=9.3					
ARCES			SKPbc	SKPab	06 40 56.2	+1.1
	comp=Z,12nm,0.9s,baz=24,slow=4.9,SNR=8.3					
ARCES			PKKP	**PKKPdf**	**06 48 32.2**	**-2.5**
	comp=Z,3.7nm,0.9s,baz=224,slow=2.5,SNR=5.9					
ARA3	**ARCESS Array S**	**129.76 349**		**PKPdf**	**06 38 28.5**	**-0.4**
FAQ	**Al Faqa, Dubai**	**129.80 285**	P	SKPbc	06 40 56.0	-0.5
	SNR=9.9					
FAQ			P	SKPbc	06 40 56.0	-0.5
	SNR=9.9					
ASUD	**Al Ashush, Dub**	**130.02 285**	P	**SKPbc**	**06 40 57.6**	**+0.4**
	SNR=5.1					
WHFO	**Wadi Hawf**	**130.20 276**	P	**SKPbc**	**06 40 59.2**	**+1.0**
	SNR=5.1					
WHFO			P	**SKPbc**	**06 40 59.2**	**+1.0**
	SNR=5.1					
ABTO	**Aybut**	**130.51 275**	P	**SKPbc**	**06 41 00.9**	**+1.5**
KLMR	**Klimovskoe**	**132.39 336**	*e*PKPdf	**PKPdf**	**06 38 33.8**	**-0.3**
KLMR			AMP		06 38 36.3	
	comp=Z,12nm,1.1s					
KLMR			*e*PP	**PP**	**06 41 03.6**	**-3.1**
FINES	**FINESS Array B**	**136.46 343**	PKhKP	PKPpre	06 38 31.7	
	comp=Z,1.0nm,0.5s,baz=29,slow=4.4,SNR=5.6					
FINES			PKP	**PKiKP**	**06 38 42.8**	**-0.8**
	comp=Z,4.7nm,0.7s,baz=23,slow=1.8,SNR=11					
FINES			SKPbc	**SKPbc**	**06 41 18.1**	**+0.8**
	comp=Z,6.7nm,0.9s,baz=129,slow=2.7,SNR=5.8					
KMBO	**Kilima Mbogo**	**137.85 242**	PKhKP	PKPpre	06 38 38.8	
	comp=Z,1.0nm,0.3s,baz=55,slow=12,SNR=3.9					
KMBO			PKP	**PKPdf**	**06 38 46.3**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=55,slow=6.6,SNR=3.9					
NB2	**NORSAR Subarra**	**139.89 352**	PKP	**PKPdf**	**06 38 40.6**	**-7.5**
	comp=Z,1.3nm,0.5s,baz=16,slow=3.2					
NOA	**NORSAR Array B**	**139.89 352**	PKhKP	PKPpre	06 38 40.7	
	comp=Z,2.2nm,0.6s,baz=348,slow=3.7,SNR=12					
NOA			PKP	**PKiKP**	**06 38 50.1**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=14,slow=4.0,SNR=6.9					
NOA			SKPbc	**SKPbc**	**06 41 26.5**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=14,slow=4.5,SNR=4.7					
KOPT	**Kop Dagi**	**141.64 308**	PKPdf	**PKPdf**	**06 38 49.3**	**-2.9**
BNGB	**Bingl**	**141.78 306**	*e*P	**PKPdf**	**06 38 48.8**	**-3.4**
MARD	**Mardin**	**142.12 303**	PKPdf	**PKPdf**	**06 38 50.0**	**-3.0**
SHEL	**Horse Pasture**	**142.16 170**		**PKPdf**	**06 38 52.9**	**-0.6**
PTK	**Pertek**	**142.78 306**	*e*P	**PKPdf**	**06 38 52.9**	**-1.2**
SVRC	**Sivrice-ELAZID**	**142.98 306**	*e*P	**PKPdf**	**06 38 53.5**	**-1.0**
AKASG	**Malin Array Be**	**143.38 330**	PKP	PKPab	06 38 52.1	-1.1
	comp=Z,16nm,0.6s,baz=41,slow=4.1,SNR=18					
AKASG			pPKP	pPKPdf	06 41 15.1	-0.1
	comp=Z,0.2nm,0.3s,baz=45,slow=4.1,SNR=2.0					
AKASG			SKPbc	**SKiKP**	**06 41 36.7**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=49,slow=2.7,SNR=7.2					
AKBB	**Malin Array Si**	**143.38 330**		PKPab	06 38 52.1	-1.1
MBAR	**Mbarara**	**143.40 237**	PKPbc	**PKPdf**	**06 38 55.6**	**-0.3**
SUW	**Suwalki**	**143.42 338**	*e*PKP	PKPab	06 38 52.9	-0.2
SUW	**Suwalki**	**143.42 338**		PKPab	06 38 52.7	-0.5
URFA	**Urfa**	**143.60 304**	*e*P	**PKPdf**	**06 38 55.2**	**-0.2**
MALT	**Malatya**	**143.66 306**	*e*P	**PKPdf**	**06 38 55.5**	**-0.1**
RSDY	**Resadiye-TOKAT**	**143.82 310**	*e*P	**PKPdf**	**06 38 55.9**	**+0.2**
SVSK	**Karacayir**	**144.22 309**	*e*P	**PKPab**	**06 38 57.6**	**+0.9**
TOKT	**Tokat**	**144.41 310**	*e*P	**PKPab**	**06 38 57.6**	**+0.1**
GAZ	**Gaziantep**	**144.91 304**	*e*P	**PKPab**	**06 38 59.2**	**-0.4**
GAZ	**Gaziantep**	**144.91 304**	PKPbc	PKPbc	06 38 59.0	+0.4
SARI	**SarD1z-Kayseri**	**145.14 307**	*e*P	**PKPbc**	**06 38 59.9**	**+0.6**
BNN	**Bunyan**	**145.42 308**	*e*P	**PKPbc**	**06 38 59.8**	**-0.3**
SORM	**Soroca**	**145.50 327**	⇓P	**PKPbc**	**06 38 59.5**	**-0.3**
BZK	**Bozkurt**	**145.52 314**	⇓P	**PKPbc**	**06 39 00.7**	**+0.6**
CORM	**Corum**	**145.82 311**	*e*P	**PKPbc**	**06 39 01.7**	**+0.6**
KOZT	**Kozan**	**145.87 306**	*e*P	**PKPbc**	**06 39 01.4**	**+0.2**
TAHT	**Tahtakopru-Hat**	**145.92 303**	*e*P	**PKPbc**	**06 39 01.9**	**+0.5**
BEL	**Belsk**	**146.03 338**	*e*PKP	**PKPbc**	**06 39 01.4**	**+0.3**
MILM	**Milestii Mici**	**146.04 325**	⇓P	**PKPbc**	**06 39 01.1**	**-0.2**
ILGA	**Ilgaz**	**146.10 313**		**PKPbc**	**06 39 01.9**	**-0.1**
CMRD	**Camardi-Nigde**	**146.45 306**	*e*P	**PKPbc**	**06 39 03.2**	**+0.3**
BR131	**Keskin Array S**	**146.70 310**		**PKPbc**	**06 39 02.6**	**-1.0**
BRTR	**Keskin Array B**	**146.70 310**	PKPbc	**PKPbc**	**06 39 02.9**	**-0.7**
	comp=Z,8.7nm,0.7s,baz=137,slow=3.8,SNR=43					
BRTR			pPKPbc	pPKPab	06 41 20.9	-0.5
	comp=Z,0.7nm,0.6s,baz=57,slow=2.4,SNR=2.3					
BRTR	**Keskin Array B**	**146.70 310**	*e*P	**PKPbc**	**06 39 02.3**	**-1.3**
BRTR	**Keskin Array B**	**146.70 310**	PKPbc	**PKPbc**	**06 39 02.4**	**-1.2**
BSEG	**Bad Segeberg**	**146.88 350**	*e*PKPbc	**PKPbc**	**06 39 03.4**	**0.0**
	baz=18,slow=2.3					
TLCR		**147.09 322**	⇓P	**PKPbc**	**06 39 04.4**	**+0.3**
BUR08	**Bucovina Ar. S**	**147.40 329**		**PKPbc**	**06 39 05.4**	**+0.3**
BURAR	**Bucovina Array**	**147.41 329**	⇓P	**PKPbc**	**06 39 05.8**	**+0.7**
BURAR	**Bucovina Array**	**147.41 329**	PKPbc	**PKPbc**	**06 39 05.5**	**+0.3**
BIZ	**Bicaz**	**147.44 327**	⇓P	**PKiKP**	**06 39 05.9**	**-0.7**
TESR	**Tescani**	**147.44 326**	⇓P	**PKPbc**	**06 39 04.9**	**-0.2**
CFR	**Carcaliu**	**147.48 323**	⇓P	**PKPbc**	**06 39 05.4**	**+0.2**
TPGR	**Topolog**	**147.51 322**	⇓P	**PKPbc**	**06 39 05.5**	**+0.2**
OJC	**Ojcow**	**147.72 337**	*e*PKP	**PKPbc**	**06 39 05.8**	**+0.2**
OJC	**Ojcow**	**147.72 337**		**PKPbc**	**06 39 05.3**	**-0.4**
OJC			PKPab	PKPab	06 39 10.3	0.0
KOLS	**Kolonicke sedl**	**147.77 333**	*e*PKP	**PKPbc**	**06 39 06.5**	**+0.6**
VRI	**Vrincioaia**	**147.82 325**	⇓P	**PKPbc**	**06 39 06.0**	**-0.1**
PLOR	**Plostina**	**147.87 325**	⇓P	**PKPbc**	**06 39 06.3**	**0.0**
HARR	**Harsova**	**147.89 322**	⇓P	**PKPbc**	**06 39 06.5**	**+0.2**
IKL	**Isikli**	**147.89 304**	*e*P	**PKPbc**	**06 39 06.4**	**-0.1**
MANR	**Mangalia**	**148.02 320**	⇓P	**PKiKP**	**06 39 07.4**	**-0.5**
BISRR	**Bisoca**	**148.03 325**	⇓P	**PKPbc**	**06 39 06.9**	**+0.2**
MDUB	**Mudurnu**	**148.08 313**	PKPbc	**PKPbc**	**06 39 06.7**	**-0.4**
CRVS	**Cervenica-Dubn**	**148.13 334**	*e*PKP	**PKPbc**	**06 39 07.2**	**+0.4**
OZUR		**148.16 326**	⇓P	**PKiKP**	**06 39 07.6**	**-0.5**
NIE	**Niedzica**	**148.19 336**	*e*PKP	**PKiKP**	**06 39 07.9**	**-0.2**
NRDL	**Niedersach Rie**	**148.30 349**	*e*PKPbc	**PKPbc**	**06 39 06.9**	**0.0**
	baz=18,slow=2.3					
KSP	**Ksiaz**	**148.35 341**	*e*PKP	**PKiKP**	**06 39 07.8**	**-0.5**
DOPR	**Dopca**	**148.46 326**	⇓P	**PKiKP**	**06 39 08.3**	**-0.5**
MLR	**Muntele Rosu**	**148.48 325**	⇓P	**PKPbc**	**06 39 07.3**	**-0.6**
MLR	**Muntele Rosu**	**148.48 325**	PKPbc	**PKPbc**	**06 39 07.7**	**-0.2**
CSS	**Mathiatis**	**148.54 302**		**PKPbc**	**06 39 07.5**	**-0.7**
ASSE	**Asse, Remlinge**	**148.54 348**	*e*PKPbc	**PKPbc**	**06 39 07.7**	**+0.1**
	baz=18,slow=2.3					
OSTC	**Ostas**	**148.63 341**	⇑*e*PKP	**PKPbc**	**06 39 08.0**	**0.0**
OSTC			*ex*	x	06 41 32.5	
CHVC	**Chvalec**	**148.65 341**	*e*PKPDF	**PKPbc**	**06 39 07.5**	**-0.5**
CHVC			*e*PKPAB	**PKPab**	**06 39 14.5**	**+0.3**
CHVC			*e*pPKP	**pPKPab**	**06 41 32.6**	**+4.2**
SECR		**148.71 324**	⇓P	**PKPbc**	**06 39 07.7**	**-0.6**
UPC	**Upice**	**148.74 341**	⇑*e*PKP	**PKPbc**	**06 39 08.1**	**-0.1**
UPC			*e*pPKP	**pPKPab**	**06 41 31.6**	**+2.9**
DPC	**Dobruska-Polom**	**148.78 341**	*e*PKPDF	**PKPbc**	**06 39 06.9**	**-1.5**
DPC			*e*PKPAB	**PKPab**	**06 39 15.1**	**+0.4**
DPC			*e*pPKP	**pPKPab**	**06 41 29.8**	**+0.8**
CLL	**Collm**	**148.82 345**	*i* PKPbc	**PKPbc**	**06 39 08.3**	**0.0**
	comp=Z,70nm,1.3s					
CLL			*i* PKPab	**PKPab**	**06 39 14.5**	**-0.3**
	comp=Z,36nm,1.5s					
CLL			*e*pPKPab	**pPKPbc**	**06 41 28.0**	**+0.3**
CLL			*e*(SKPdf)		06 41 35.0	
CLL	**Collm**	**148.82 345**	*e*PKPbc	**PKPbc**	**06 39 08.3**	**0.0**
	baz=18,slow=2.3					
CLL	**Collm**	**148.82 345**		**PKPbc**	**06 39 08.3**	**0.0**
CJR	**Cluj-Napoca**	**148.83 329**	⇓P	**PKPbc**	**06 39 08.6**	**0.0**
LEF	**Lefka**	**148.84 303**	⇓P	**PKPbc**	**06 39 09.1**	**+0.1**
IBBN	**Ibbenbueren**	**148.84 352**	*e*PKPbc	**PKPbc**	**06 39 08.6**	**+0.2**
	baz=18,slow=2.3					
KRLC	**Kraliky**	**148.88 340**	⇑*e*PKP	**PKPbc**	**06 39 08.1**	**-0.5**
KRLC			*ex*	x	06 41 34.2	
CLZ	**Clausthal**	**148.88 348**	*e*PKPbc	**PKPbc**	**06 39 08.8**	**+0.3**
	baz=18,slow=2.3					
MORC	**Moravsky Berou**	**148.88 339**	⇓P	**PKPbc**	**06 39 09.1**	**+0.4**
MORC	**Moravsky Berou**	**148.88 339**	*e*PKP	**PKPbc**	**06 39 08.4**	**-0.2**
MORC	**Moravsky Berou**	**148.88 339**		**PKPbc**	**06 39 08.4**	**-0.2**
BRG	**Berggiesshubel**	**148.99 344**	*i* PKP	**PKPbc**	**06 39 08.9**	**+0.1**
	comp=Z,50nm,1.3s					
BRG			pPKP	**pPKPab**	**06 41 32.8**	**+2.9**
	comp=Z,7.7nm,1.1s					
BRG	**Berggiesshubel**	**148.99 344**	*e*PKPbc	**PKPbc**	**06 39 08.9**	**+0.1**
	baz=18,slow=2.3					
VOIR		**148.99 326**	⇓P	**PKPbc**	**06 39 09.1**	**+0.1**
FBE	**Freiberg**	**149.09 344**	*e*PKPbc	**PKiKP**	**06 39 09.5**	**-0.4**
	baz=18,slow=2.3					
PVCC	**Panska Ves**	**149.13 343**	⇑*e*PKP	**PKPbc**	**06 39 09.0**	**-0.1**
NEUB	**Neuenburg**	**149.19 346**	*e*PKPbc	**PKPbc**	**06 39 09.4**	**+0.2**
	baz=18,slow=2.3					
ARR	**Arges**	**149.25 326**	⇓P	**PKiKP**	**06 39 10.7**	**+0.2**
VYHS	**Vyhne**	**149.50 336**	*e*PKP	**PKPbc**	**06 39 10.4**	**+0.3**
VYHS			*e*		06 39 18.2	
PSZ	**Piszkesteto**	**149.55 334**	⇓P	**PKPbc**	**06 39 10.6**	**+0.3**
PSZ	**Piszkesteto**	**149.55 334**		**PKPbc**	**06 39 10.1**	**-0.3**
VRAC	**Vranov**	**149.60 339**	⇓P	**PKiKP**	**06 39 10.9**	**-0.1**
VRAC	**Vranov**	**149.60 339**	*e*PKP	**PKPbc**	**06 39 10.1**	**-0.2**
VRAC			*e*		06 39 17.9	
JAVC	**Velka Javorina**	**149.62 338**	*e*PKP	**PKiKP**	**06 39 11.6**	**+0.5**
PRU	**Pruhonice**	**149.63 342**	⇑*e*PKP	**PKPbc**	**06 39 10.1**	**-0.2**
PRU			*e*PKPAB	**PKPab**	**06 39 17.5**	**-0.7**
PRU			*ex*	x	06 41 36.8	
HUMR	**Humele**	**149.63 325**	⇓P	**PKPbc**	**06 39 10.2**	**-0.3**
ISP	**Isparta**	**149.69 309**		**PKPbc**	**06 39 10.4**	**-0.6**
BUG	**Bochum--Univer**	**149.76 352**	*e*PKPbc	**PKPbc**	**06 39 10.4**	**-0.1**
	baz=18,slow=2.3					
MOX	**Moxa**	**149.76 346**	*e*PKPbc	**PKPbc**	**06 39 10.6**	**0.0**
	baz=18,slow=2.3					
TANN	**Tannenbergstha**	**149.78 345**	*e*PKPbc	**PKPbc**	**06 39 10.8**	**+0.1**
	baz=18,slow=2.3					
PLN	**Plauen**	**149.78 346**	*e*PKPbc	**PKPbc**	**06 39 10.8**	**+0.1**
	baz=18,slow=2.3					
GUNZ	**Gunzen**	**149.86 345**	*e*PKPbc	**PKPbc**	**06 39 11.1**	**+0.2**
	baz=18,slow=2.3					
KRUC	**Moravsky**	**149.88 339**	*e*PKP	**PKPbc**	**06 39 10.7**	**-0.3**
KRUC			*e*		06 39 19.1	
WERN	**Wernitzgruen**	**149.92 345**	*e*PKPbc	**PKiKP**	**06 39 11.4**	**-0.3**
	baz=18,slow=2.3					
NKC	**Novy Kostel**	**149.95 345**	⇑*e*PKP	**PKPbc**	**06 39 11.0**	**-0.1**
NKC			*e*PKPAB	**PKPab**	**06 39 18.8**	**-0.8**
SMOL	**Smolenice**	**150.00 338**	*e*PKP	**PKiKP**	**06 39 11.9**	**+0.1**
SMOL			*e*		06 39 21.0	
PBCC	**Pribram**	**150.05 343**	⇑*e*PKP	**PKPbc**	**06 39 11.2**	**-0.2**
PBCC			*e*PKPAB	**PKPab**	**06 39 19.9**	**-0.1**
SIRR	**Siria**	**150.07 330**	⇓P	**PKiKP**	**06 39 11.8**	**-0.2**
MODS	**Modra-Piesok**	**150.17 338**	*e*PKP	**PKPbc**	**06 39 11.5**	**-0.2**
GZR	**Gura Zlata**	**150.17 328**	⇓P	**PKPbc**	**06 39 11.7**	**-0.1**
MANZ	**Manzenberg**	**150.26 345**	*e*PKPbc	**PKPbc**	**06 39 12.1**	**+0.2**
	baz=18,slow=2.3					
ROTZ	**Rotzenmuhle**	**150.44 345**	*e*PKPbc	**PKPbc**	**06 39 12.3**	**0.0**
	baz=18,slow=2.3					
ELL	**Elmali**	**150.56 307**		**PKPbc**	**06 39 12.7**	**-0.4**
ELL			PKPab	**PKPab**	**06 39 23.8**	**+1.0**
BZS	**Buzias**	**150.57 329**	⇓P	**PKPbc**	**06 39 12.8**	**+0.1**
KHC	**Kasperske Hory**	**150.67 343**	*e*PKPDF	**PKPdf**	**06 39 06.5**	**-0.1**
KHC			⇑*e*PKP	**PKPbc**	**06 39 12.4**	**-0.4**
KHC			*e*PKPAB	**PKPab**	**06 39 22.0**	**-0.7**
KHC			*e*pPKP	**pPKPab**	**06 41 38.1**	**+1.4**
HERR	**Herculane**	**150.72 328**	⇓P	**PKPbc**	**06 39 13.0**	**-0.1**
MEM	**Membach**	**150.73 353**	PKiKP	**PKPbc**	**06 39 13.0**	**+0.2**
BTNL	**Ternell**	**150.74 353**	PKiKP	**PKiKP**	**06 39 13.1**	**-0.2**
GRF	**Grafenberg Arr**	**150.74 346**	*e*PKPbc	**PKPbc**	**06 39 12.8**	**-0.1**
	baz=18,slow=2.3					
GRF			*e*PKPab	**PKPab**	**06 39 23.2**	**+0.3**
GRF			*e*pPKPbc	**pPKPab**	**06 41 38.3**	**+1.4**
TNS	**Taunus Mts**	**150.77 350**	*e*PKPbc	**PKPbc**	**06 39 13.0**	**0.0**
	baz=18,slow=2.3					
BSTI	**Sart Tilman**	**150.80 354**	PKiKP	**PKiKP**	**06 39 13.3**	**-0.1**
MANT	**Manisa**	**150.80 311**		**PKPbc**	**06 39 13.6**	**-0.1**
GEC2	**GERESS Array S**	**150.90 342**	*e*PKPbc	**PKPbc**	**06 39 13.2**	**-0.2**
	baz=18,slow=2.3					
GEC2	**GERESS Array S**	**150.90 342**		**PKPbc**	**06 39 13.2**	**-0.2**
GERES	**GERESS Array B**	**150.90 342**	PKP	**PKPdf**	**06 39 06.5**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=36,slow=2.5,SNR=6.3					
GERES			PKPbc	**PKPbc**	**06 39 13.4**	**0.0**
	comp=Z,7.9nm,0.7s,baz=29,slow=2.4,SNR=40					
AKAS	**Kas**	**150.99 307**		**PKPbc**	**06 39 12.3**	**-1.8**
CONA	**Conrad Observa**	**151.04 339**	*i* P	**PKPbc**	**06 39 13.9**	**+0.1**
	comp=Z,30nm,0.9s,SNR=12					
CONA			*e*P	**PKPab**	**06 39 24.5**	**+0.2**
	comp=Z,16nm,0.9s					
CONA			*e*P	**pPKPab**	**06 41 39.6**	**+1.5**
	comp=Z,6.1nm,1.0s					
BGES	**Gesves**	**151.04 354**	PKiKP	**PKPbc**	**06 39 13.3**	**-0.2**
ALN	**Alexandroupoli**	**151.23 318**		**PKPbc**	**06 39 13.3**	**-1.0**
DOU	**Dourbes**	**151.37 355**	PKiKP	**PKiKP**	**06 39 14.5**	**-0.1**
MOA	**Molln**	**151.62 341**	*e*P	**PKPbc**	**06 39 14.8**	**-0.2**
	comp=Z,5.7nm,0.6s					
MOA			*e*P	**PKPab**	**06 39 26.4**	**-0.3**
	comp=Z,14nm,1.4s					
MOA			*e*P	**pPKPab**	**06 41 40.5**	**0.0**
	comp=Z,4.8nm,0.9s					
WLF	**Walferdange**	**151.64 353**	PKiKP	**PKiKP**	**06 39 15.6**	**+0.4**
WLF	**Walferdange**	**151.64 353**	*e*PKPbc	**PKiKP**	**06 39 15.5**	**+0.3**
	baz=18,slow=2.3					
WLF	**Walferdange**	**151.64 353**		**PKiKP**	**06 39 15.4**	**+0.3**
WLF			PKPab	**PKPab**	**06 39 24.0**	**-2.7**
ARSA	**Arzberg**	**151.74 339**	*e*P	**PKPbc**	**06 39 15.1**	**-0.2**
	comp=Z,6.1nm,0.7s					
ARSA			*e*P	**PKPab**	**06 39 27.6**	**+0.3**
	comp=Z,5.8nm,0.9s					
SOKA	**Soboth**	**152.41 339**	*e*P	**PKPbc**	**06 39 16.2**	**-0.7**
	comp=Z,14nm,1.2s					
SOKA			*e*P	**PKPab**	**06 39 30.4**	**+0.2**
	comp=Z,7.5nm,0.9s					
SOKA			*e*P	**pPKPab**	**06 41 42.7**	**-1.0**
	comp=Z,7.5nm,1.2s					
GROS	**Grobnik**	**152.43 338**	*i* PKPbc	**PKPbc**	**06 39 16.0**	**-0.9**
DIVS	**Divibare**	**152.47 329**		**PKPbc**	**06 39 16.9**	**-0.1**
KBA	**Koelnbreinsper**	**152.59 341**	*e*P	**PKPbc**	**06 39 17.0**	**-0.3**
	comp=Z,9.1nm,0.8s					
KBA			*e*P	**PKPab**	**06 39 31.6**	**+0.5**
	comp=Z,14nm,1.4s					
KBA			*e*P	**pPKPab**	**06 41 42.2**	**-2.4**
	comp=Z,8.8nm,1.1s					
BFO	**Black Forest**	**152.62 349**	*e*PKPbc	**PKPbc**	**06 39 16.8**	**-0.4**
	baz=18,slow=2.3					
BFO	**Black Forest**	**152.62 349**		**PKPbc**	**06 39 16.4**	**-0.8**
BFO			PKPab	**PKPab**	**06 39 29.2**	**-1.7**
OBKA	**Obir**	**152.72 339**	*e*P	**PKPbc**	**06 39 17.4**	**-0.1**
	comp=Z,9.4nm,1.1s					
OBKA			*e*P	**PKPab**	**06 39 31.6**	**+0.1**
	comp=Z,8.6nm,1.1s					
WATA	**Walderalm**	**152.85 344**	*e*P	**PKPbc**	**06 39 16.7**	**-1.2**
	comp=Z,11nm,0.9s					
WATA			*e*P	**PKPab**	**06 39 32.6**	**+0.5**
	comp=Z,16nm,1.1s					
WATA			*e*P	**pPKPab**	**06 41 42.8**	**-3.0**
	comp=Z,7.8nm,0.8s					
UBR	**Ueberruh**	**152.88 346**	*e*PKPbc	**PKPbc**	**06 39 17.4**	**-0.4**
	baz=18,slow=2.3					
MYKA	**Terra Mystica**	**152.90 340**	*e*P	**PKPbc**	**06 39 17.1**	**-0.8**
	comp=Z,6.7nm,0.8s					
MYKA			*e*P	**PKPab**	**06 39 31.6**	**-0.6**
	comp=Z,8.3nm,0.8s					
MYKA			*e*P	**pPKPbc**	**06 41 39.7**	**+1.7**
	comp=Z,5.8nm,1.0s					
WTTA	**Wattenberg**	**152.90 344**	*e*P	**PKPbc**	**06 39 17.5**	**-0.6**
	comp=Z,13nm,0.7s					
WTTA			*e*P	**PKPab**	**06 39 32.6**	**+0.2**
	comp=Z,24nm,1.3s					
WTTA			*e*P	**pPKPbc**	**06 41 41.6**	**+3.5**
	comp=Z,9.6nm,1.0s					
RETA	**Reutte**	**152.92 345**	*e*P	**PKPbc**	**06 39 17.4**	**-0.5**
	comp=Z,7.2nm,0.7s					
RETA			*e*P	**PKPab**	**06 39 32.4**	**+0.1**
	comp=Z,18nm,1.3s					
MOTA	**Moosalm**	**152.97 344**	*e*P	**PKPbc**	**06 39 17.0**	**-1.1**
	comp=Z,9.6nm,0.8s					
MOTA			*e*P	**PKPab**	**06 39 32.2**	**-0.4**
	comp=Z,20nm,1.3s					
MOTA			*e*P	**pPKPbc**	**06 41 37.9**	**-0.4**
	comp=Z,8.5nm,0.9s					
SQTA	**Sankt Quirin**	**153.06 344**	*e*P	**PKPbc**	**06 39 18.2**	**-0.1**
	comp=Z,11nm,0.9s					
SQTA			*e*P	**PKPab**	**06 39 32.5**	**-0.4**
	comp=Z,7.8nm,1.0s					
ABTA	**Abfaltersbach**	**153.14 342**	*e*P	**PKPbc**	**06 39 17.5**	**-0.9**
	comp=Z,21nm,1.1s					
ABTA			*e*P	**PKPab**	**06 39 32.4**	**-0.9**
	comp=Z,12nm,0.9s					
ABTA			*e*P	**pPKPab**	**06 41 44.8**	**-2.1**
	comp=Z,11nm,1.0s					
GBAS	**Gorenja Brezov**	**153.25 339**	*i* PKPbc	**PKPbc**	**06 39 18.1**	**-0.5**
DAVA	**Damuels**	**153.31 346**	*e*P	**PKiKP**	**06 39 19.1**	**+0.2**
	comp=Z,5.9nm,0.6s					
DAVA			*e*P	**PKPab**	**06 39 33.8**	**-0.2**
	comp=Z,4.8nm,0.7s					
DAVA			*e*P	**pPKPbc**	**06 41 36.8**	**-2.3**
	comp=Z,3.2nm,0.5s					
FETA	**Feichten**	**153.36 345**	*e*P	**PKPbc**	**06 39 18.3**	**-0.7**
	comp=Z,8.5nm,0.9s					
FETA			*e*P	**PKPab**	**06 39 35.4**	**+1.1**
	comp=Z,15nm,1.2s					
FETA			*e*P	**pPKPbc**	**06 41 39.6**	**+0.5**
	comp=Z,9.0nm,1.0s					
CIMO	**Cimolais**	**153.56 342**		**PKPbc**	**06 39 17.1**	**-2.2**
TUE	**Stuetta**	**154.20 346**		**PKiKP**	**06 39 20.1**	**-0.8**
TUE			PKPab	**PKPab**	**06 39 36.9**	**-1.0**
ESDC	**Sonseca Array**	**161.50 12**	PKPab	**PKPab**	**06 40 09.4**	**-0.2**
	comp=Z,4.8nm,1.1s,baz=333,slow=4.0,SNR=10					
LIC	**Lamto**	**163.74 159**	*e*PKIKP	**PKPdf**	**06 39 22.8**	**-0.9**
	comp=Z,26nm,0.9s					
LIC	**Lamto**	**163.74 159**	*e*PKP2	**PKPab**	**06 40 21.6**	**+1.6**
	comp=Z,43nm,0.9s					
KIC	**Kosan Boka**	**163.96 160**	*e*PKIKP	**PKPdf**	**06 39 23.3**	**-0.6**
	comp=Z,27nm,0.9s					
KIC	**Kosan Boka**	**163.96 160**	*e*PKP2	**PKPab**	**06 40 22.6**	**+1.6**
	comp=Z,57nm,0.8s					
KEST	**Kesra**	**164.03 334**	PKPab	**PKPab**	**06 40 21.0**	**0.0**
	comp=Z,5.3nm,1.0s,baz=0.8,slow=11,SNR=3.7					
TIC	**Toumodi**	**164.13 158**	*e*PKIKP	**PKPdf**	**06 39 23.5**	**-0.6**
TIC	**Toumodi**	**164.13 158**	*e*PKP2	**PKPab**	**06 40 23.1**	**+1.3**
DBIC	**Dimbokro**	**164.21 159**	PKP	**PKPdf**	**06 39 23.6**	**-0.4**
	comp=Z,6.2nm,0.6s,baz=145,slow=3.6,SNR=13					
DBIC			PKPab	**PKPab**	**06 40 23.9**	**+1.8**
	comp=Z,8.4nm,0.6s,baz=176,slow=5.2,SNR=13					
TORD	**Torodi Ar. Bea**	**171.58 186**	PKP	**PKPdf**	**06 39 28.0**	**-1.0**
	comp=Z,3.4nm,0.9s,baz=355,slow=0.9,SNR=14					
TORD			PKPab	**PKPab**	**06 40 55.7**	**+1.1**
	comp=Z,3.5nm,0.7s,baz=176,slow=3.8,SNR=15					
TORD			PP	**PP**	**06 44 46.9**	**+1.8**
	comp=Z,1.8nm,0.8s,baz=170,slow

comp=Z,2.1nm,0.4s,baz=341,slow=7.9,SNR=8.2
STKA Stephens Creek 53.29 182 P P 07 15 30.4 0.0
ZAA0 Zalesovo Array 54.12 322 P P 07 15 36.1 0.0
ZAA0 IAmb IAmb 07 15 37.3
comp=Z,7.1nm,0.8s
ZALV Zalesovo Beam 54.12 322 P P 07 15 36.1 -0.1
comp=Z,5.0nm,0.6s,baz=102,slow=6.6,SNR=21
ZALV PcP **PcP 07 16 36.5 0.0**
comp=Z,3.6nm,0.5s,baz=129,slow=3.2,SNR=8.5
HON Honolulu 54.55 79 P P 07 15 37.7 -2.1
MK31 Makanchi Array 54.59 313 P P 07 15 39.2 -0.5
MKAR Makanchi Array 54.59 313 P P 07 15 40.5 +0.8
comp=Z,3.9nm,0.6s,baz=91,slow=9.4,SNR=27
MKAR PcP **PcP 07 16 39.1 +0.5**
comp=Z,2.0nm,0.6s,baz=77,slow=4.7,SNR=9.3
MKAR Makanchi Array 54.59 313 P P 07 15 40.4 +0.7
BBOO Buckleboo 54.61 187 P P 07 15 37.3 -2.6
BBOO IAmb IAmb 07 15 46.2
comp=Z,22nm,1.5s
MAKZ Makanchi 54.81 313 P P 07 15 40.6 -0.6
KURK Kurchatov 57.38 317 P P 07 15 59.4 +0.2
KURK IAmb IAmb 07 16 00.4
comp=Z,9.2nm,0.8s
KURBB Kurchatov Arra 57.43 317 P P 07 16 00.0 +0.5
comp=Z,8.1nm,0.5s,baz=95,slow=7.6,SNR=73
KURBB PcP **PcP 07 16 49.6 +0.1**
comp=Z,0.9nm,0.5s,baz=92,slow=4.2,SNR=5.3
NRIK Noril'sk 57.95 340 P P 07 16 03.0 +0.2
comp=Z,4.3nm,0.6s,baz=118,slow=9.4,SNR=8.5
BOOM Boomskoye usch 58.99 307 P P 07 16 12.0 +1.3
PPLA Purkeypile 59.45 29 P P 07 16 14.6 +1.2
BRLK Bradley Lake 59.48 32 P P 07 16 12.5 -1.0
IMAR Indian Mountai 59.54 25 P P 07 16 12.9 -0.9
CAST Castle Rocks 59.61 28 P P 07 16 15.4 +1.1
SUA Susitna One 59.83 31 P P 07 16 17.1 +1.1
SUA IAmb IAmb 07 16 20.3
comp=Z,20nm,1.2s
BPAW Bear Paw Mtn. 60.23 28 P P 07 16 19.7 +1.2
BPAW IAmb IAmb 07 16 20.4
comp=Z,5.0nm,0.8s
A21K Barrow 60.25 19 P P 07 16 19.7 +1.3
A21K IAmb IAmb 07 16 47.9
comp=Z,12nm,1.3s
TRF Thorofare Moun 60.41 28 P P 07 16 20.5 +0.6
TRF IAmb IAmb 07 16 36.3
comp=Z,14nm,1.3s
PMR Palmer 60.62 31 P P 07 16 21.9 +0.8
PMR IAmb IAmb 07 16 38.7
comp=Z,14nm,1.3s
GHO Glory Hole Cre 60.74 30 P P 07 16 22.2 +0.2
I23K Minto, Yukon-K 61.12 27 P P 07 16 26.4 +2.0
NIUE Niue 61.32 128 P P 07 16 26.0 -0.4
CCB Clear Creek Bu 61.69 27 P P 07 16 28.4 +0.2
TOLK Toolik Lake Re 61.77 23 P P 07 16 29.2 +0.5
TOLK IAmb IAmb 07 16 31.2
comp=Z,3.4nm,0.6s
NIL Nilore 61.91 297 P P 07 16 30.8 +0.5
NIL IAmb IAmb 07 16 32.9
comp=Z,9.9nm,1.0s
IL31 62.10 27 P P 07 16 30.2 -0.7
IL31 IAmb IAmb 07 16 39.0
comp=Z,7.7nm,1.3s
ILAR Eielson Array 62.10 27 P P 07 16 30.1 -0.8
comp=Z,2.4nm,0.7s,baz=256,slow=5.2,SNR=27
ILAR Eielson Array 62.10 27 P P 07 16 30.7 -0.3
BVAR Borovoye Array 62.58 319 P P 07 16 34.4 +0.1
comp=Z,7.6nm,0.5s,baz=90,slow=10,SNR=54
BRVK Borovoye 62.64 320 P P 07 16 35.1 +0.4
KK31 Karatay Array 62.94 308 P P 07 16 38.0 +1.1
KK31 IAmb IAmb 07 16 38.7
comp=Z,9.7nm,0.9s
KKAR Karatay Array 62.94 308 P P 07 16 37.7 +0.8
KKAR IAmb IAmb 07 16 38.7
comp=Z,9.7nm,0.9s
KKAR Karatay Array 62.94 308 P P 07 16 37.4 +0.5
BMAR Burnt Mountain 63.40 24 P P 07 16 41.3 +1.8
BCAR Beaver Creek A 64.18 29 P P 07 16 45.6 +1.1
CHGR Chuyangaron 64.47 304 P P 07 16 47.7 +0.7
KBL Kabul 65.22 299 P P 07 16 52.6 +0.6
KBL IAmb IAmb 07 16 53.4
comp=Z,8.1nm,0.8s
INK Inuvik 67.62 24 P P 07 17 06.7 +0.5
comp=Z,3.2nm,0.9s,baz=285,slow=5.2,SNR=12
ARU Arti 69.18 324 P P 07 17 16.3 +0.2
comp=Z,2.0nm,0.6s,baz=71,slow=2.6,SNR=10.0
ARU Arti 69.18 324 P P 07 17 16.3 +0.2
ARU IAmb IAmb 07 17 17.2
comp=Z,8.5nm,0.8s
ABKAR Akbulak array 69.45 316 P P 07 17 17.9 +0.1
AKTO Aktyubinsk 70.47 317 P P 07 17 24.0 0.0
comp=Z,2.6nm,0.6s,baz=92,slow=11,SNR=12
C36M Paulatuk 70.91 22 P P 07 17 26.0 -0.2
C36M IAmb IAmb 07 17 26.9
comp=Z,3.9nm,0.7s
EUNU Eureka 75.11 8 P P 07 17 50.7 0.0
EUNU IAmb IAmb 07 18 06.3
comp=Z,6.0nm,1.2s
NLWA Neilton Lookou 76.37 44 P P 07 18 00.2 +2.0
NLWA IAmb IAmb 07 18 20.6
comp=Z,11nm,1.4s
YKA Yellowknife Ar 76.52 28 P P 07 17 59.0 +0.3
comp=Z,3.6nm,0.6s,baz=292,slow=5.1,SNR=11
RES Resolute Bay 77.10 13 P P 07 18 02.5 +0.8
RES IAmb IAmb 07 18 24.6
comp=Z,6.0nm,1.4s
JCC Jacoby Creek, 78.28 51 P P 07 18 10.7 +1.9
JCC IAmb IAmb 07 18 29.9
comp=Z,7.2nm,1.0s
KEV Kevo 78.31 341 P P 07 18 09.3 +0.9
HUMO Hull Mountain 78.47 49 P P 07 18 11.3 +1.4
KHMM Horse Mountain 78.47 51 P P 07 18 11.9 +1.8
KHMM IAmb IAmb 07 18 16.1
comp=Z,3.4nm,0.8s
LTY Liberty 78.48 44 P P 07 18 10.3 +0.4
LTY IAmb IAmb 07 18 26.3
comp=Z,6.5nm,1.4s
ARD3 ARCESS Array S 78.86 341 P P 07 18 12.2 +0.8
ARB1 ARCESS Array S 78.87 341 P P 07 18 12.7 +1.1
ARCES ARCESS Array B 78.87 341 P P 07 18 12.2 +0.7
comp=Z,13nm,0.6s,baz=71,slow=8.5,SNR=50
ARD8 ARCESS Array S 78.88 341 P P 07 18 12.7 +1.1
YBH Yreka Blue Hor 78.92 50 P P 07 18 13.9 +1.4
YBH IAmb IAmb 07 18 15.3
comp=Z,4.4nm,1.2s
B08A Colville Reser 78.96 42 P P 07 18 13.4 +0.9
B08A IAmb IAmb 07 18 14.2
comp=Z,4.1nm,0.9s
KCPM Cahto Peak 78.96 52 P P 07 18 14.1 +1.3
PINE Pine Mountain 79.47 47 P P 07 18 17.2 +1.7
PINE IAmb IAmb 07 18 17.9
comp=Z,7.4nm,0.8s
D08A Wollman Farm, 79.67 43 P P 07 18 16.7 +0.4
D08A IAmb IAmb 07 18 18.6
comp=Z,4.0nm,1.0s
K05A Summer Lake 79.86 48 P P 07 18 19.0 +1.4
TULEG Thule 80.08 7 P P 07 18 18.5 +0.7
E09A Wood Farm, Sta 80.36 44 P P 07 18 20.0 0.0
NEW Newport 80.37 42 P P 07 18 20.7 +0.7
NEW IAmb IAmb 07 18 21.8
comp=Z,3.3nm,0.8s
BEKR Beckworth 81.24 51 P P 07 18 26.1 +1.1
J08A Circle Bar Ran 81.30 47 P P 07 18 25.5 +0.4
J08A IAmb IAmb 07 18 27.0
comp=Z,4.3nm,0.9s
BMO Blue Mountains 81.53 45 P P 07 18 25.8 -0.5
BMO IAmb IAmb 07 18 28.0
comp=Z,3.4nm,0.8s
CMB Columbia Colle 81.87 52 P P 07 18 27.9 -0.2
CMB IAmb IAmb 07 18 29.9
comp=Z,3.2nm,0.7s
PNTR Pine Nut 82.06 51 P P 07 18 28.8 -0.6
PNTR IAmb IAmb 07 18 31.3
comp=Z,4.0nm,0.9s
KBZ Khabaz 82.27 314 P P 07 18 31.3 +1.4
comp=Z,13nm,0.8s,baz=53,slow=20,SNR=20
AKH Akhalkalaki 82.74 312 P P 07 18 33.6 +1.0
MFID Camas Ranch 83.06 46 P P 07 18 35.1 +0.9
MFID IAmb IAmb 07 18 36.0
comp=Z,5.9nm,1.1s
FINES FINESS Array B 83.12 334 P P 07 18 33.4 -0.5
comp=Z,5.3nm,0.5s,baz=65,slow=4.8,SNR=57
KVN Kaiserville 83.16 51 P P 07 18 35.9 +1.0
NVAR Mina Array Bea 83.25 51 P P 07 18 36.3 +0.9
comp=Z,2.8nm,0.7s,baz=272,slow=5.4,SNR=22
NVAR Mina Array Bea 83.25 51 P P 07 18 36.0 +0.7

NV11 Mina Array Sit 83.36 51 P P 07 18 36.0 +0.2
HLID Hailey 83.94 46 P P 07 18 40.0 +1.2
TPH Tonopah 84.17 51 P P 07 18 40.7 +0.7
LRM Limekiln Ridge 84.27 43 P P 07 18 40.4 0.0
HRY Holter Researc 84.28 42 P P 07 18 40.8 +0.5
BCYI Bear Canyon 84.30 45 P P 07 18 40.6 +0.1
DLMT Dillon 84.38 43 P P 07 18 40.6 -0.2
DLMT IAmb IAmb 07 18 43.0
comp=Z,3.5nm,1.0s
MCMT McKenzie Canyo 84.44 44 P P 07 18 41.8 +0.5
ELK Elko 84.53 48 P P 07 18 41.1 -0.7
ELK IAmb IAmb 07 18 44.2
comp=Z,3.5nm,0.8s
BOZ Bozeman (W) 84.89 43 P P 07 18 44.1 +0.8
BOZ IAmb IAmb 07 18 45.0
comp=Z,3.1nm,0.7s
R11A Troy Canyon, C 85.25 51 P P 07 18 45.7 +0.4
R11A IAmb IAmb 07 18 47.2
comp=Z,3.4nm,1.0s
PRN Pahroc Range 86.02 51 P P 07 18 49.4 +0.3
DUG Dugway, Tooele 86.44 48 P P 07 18 50.7 -0.3
DUG IAmb IAmb 07 18 52.6
comp=Z,3.3nm,0.8s
AKASG Malin Array Be 87.42 324 P P 07 18 54.4 -0.9
comp=Z,2.3nm,0.6s,baz=53,slow=5.0,SNR=10
AKASG Malin Array Be 87.42 324 P P 07 18 54.6 -0.7
PDAR Pinedale Array 87.49 45 P P 07 18 56.6 +0.5
comp=Z,0.3nm,0.4s,baz=162,slow=0.5,SNR=3.6
NOA NORSAR Array B 88.89 339 P P 07 19 01.3 -0.7
comp=Z,0.4nm,0.7s,baz=56,slow=7.2,SNR=2.9
BRTR Keskin Array B 90.24 313 P P 07 19 08.1 -0.8
comp=Z,1.3nm,0.7s,baz=83,slow=4.3,SNR=7.0
GERES GERESS Array B 96.51 329 P P 07 19 37.1 -0.3
comp=Z,0.2nm,0.3s,baz=18,slow=7.2,SNR=2.7
GERES GERESS Array B 96.51 329 P P 07 19 35.5 -1.8
TXAR Lajitas Array 98.17 54 P Pdif 07 19 46.4 +1.1
comp=Z,0.2nm,0.6s,baz=358,slow=5.4,SNR=2.3
TXAR Lajitas Array 98.17 54 P Pdif 07 19 45.9 +0.6
TORD Torodi Ar. Bea 128.63 309 PKP PKPdf 07 25 14.3 +0.3
comp=Z,0.5nm,0.4s,baz=32,slow=1.3,SNR=7.1
TORD Torodi Ar. Bea 128.63 309 PKPdf 07 25 13.6 -0.4
PLCA Paso Flores 145.86 131 PKPbc PKPab 07 25 47.2 +0.1
comp=Z,7.6nm,0.7s,baz=249,slow=4.1,SNR=22
PLCA Paso Flores 145.86 131 PKPab 07 25 47.0 -0.2
LPAZ La Paz 150.08 85 PKPbc PKiKP 07 25 59.5 +0.4
comp=Z,5.1nm,0.6s,baz=348,slow=2.3,SNR=25
LPAZ PKPab PKPab **07 26 06.6 +1.1**
comp=Z,2.8nm,0.5s,baz=16,slow=6.3,SNR=14
LPAZ La Paz 150.08 85 PKPbc 07 25 58.0 -0.4

IDC 17 07:17:28.6±2.6, 2.05N×126.72E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/41, mbtmp3.3/3, Error ellipse: s-maj=226.1km s-min=28.1km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.10**	**161**	P	P	07 22 35.9	-0.3
	0.5nm,0.4s,baz=340,slow=10,SNR=12						
ASAR	**Alice Springs**	**26.50**	**165**	P	P	07 23 08.0	+0.1
	0.3nm,0.6s,baz=343,slow=7.9,SNR=5.5						
MKAR	**Makanchi Array**	**58.93**	**326**	P	P	07 27 29.8	+0.1
	0.3nm,0.6s,baz=128,slow=7.1,SNR=1.6						

*IDC **17** 07:28:17.2±1.2, 18.37N×106.53W, h0km, mb3.6/6, mb1 3.9/9, mb1mx3.8/36, mbtmp3.6/9, ML3.6/3, MS4.1/7, Ms1 4.1/7, ms1mx3.7/28, Error ellipse: s-maj=43.4km s-min=21.6km az=71.0*
*NEIC **17** 07:28:19.4±1.8, 18.50N±0.09×106.31W±0.09, h10km±1km, mb4.5/127, Md4.6/17(MEX), Error ellipse: s-maj=17.7km s-min=11.0km az=35.0*
*GCMT **17** 07:28:20.4±0.4, 18.73N±0.02×106.46W±0.02, h17km±1km, MW4.8/81, Moment Tensor Solution. s14,c15; s81,c110; Duration: 0 Moment tenso: Scale 10^{16}Nm; M_{rr}-0.21±.10; $M_{\theta\theta}$-0.94±.11; $M_{\phi\phi}$ 1.14±.11; $M_{r\theta}$ 0.04±.26; $M_{\theta\phi}$-1.86±.09; $M_{\phi r}$ 0.62±.26; Best double couple: M_o2.21700×10^{16} NP1: ϕ284.00000°, δ74.00000°, λ179.00000°. NP2: ϕ14.00000°, δ89.00000°, λ16.00000°. Principal axes: T 2.3390, Plg12.0000°, Azm241.0000°; N -0.2470, Plg74.0000°, Azm16.0000°; P -2.0950, Plg11.0000°, Azm148.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MEX **17** 07:28:20.0±0.9, 18.63N×106.43W, h11km±34km, MD4.6*
ISC 17 07:28:21.8±0.7, 18.63N±0.06×106.29W±0.06, h27km, n192, σ1.942/187, mb4.5/41, MS4.3/8, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**1.47**	**53**	*e*P	Pn	07 28 43.5	-2.9
CJM				*e*S	Sn	07 29 03.0	-1.7
R15V		**2.25**	**76**	*e*P	Pn	07 28 55.2	-2.1
R15V		**2.25**	**76**		Pn	07 28 55.2	-2.1
COIG	**Colima**	**2.52**	**77**	*e*P	Pn	07 28 59.2	-1.9
EZ5V		**2.68**	**71**	*e*P	Pn	07 29 02.7	-0.8
EZ5V		**2.68**	**71**		Pn	07 29 02.7	-0.8
MMIG	**Aquila**	**2.82**	**96**	*e*P	Pn	07 29 03.4	-1.6
MMIG				*i* S	Sn	07 29 38.0	-0.1
MMIG	**Aquila**	**2.82**	**96**		Pn	07 29 03.4	-1.6
ANIG	**Ahuacatlan**	**2.93**	**34**	*e*P	Pn	07 29 06.0	-0.8
ANIG				*i* S	Sn	07 29 39.9	-1.3
ANIG	**Ahuacatlan**	**2.93**	**34**		Pn	07 29 06.0	-0.8
H06E1	**SOCORRO T-PHAS**	**4.39**	**273**	T	T	07 33 50.4	
	SNR=374						
MAIG	**Mazatlaan**	**4.54**	**358**	*e*P	Pn	07 29 26.0	-2.8
MAIG				*i* S	Sn	07 30 17.5	-3.2
MAIG	**Mazatlaan**	**4.54**	**358**		Pn	07 29 26.0	-2.8
ZIIG	**Zihuatanejo**	**4.70**	**102**	*e*P	Pn	07 29 30.8	-0.2
ZIIG				*i* S	Sn	07 30 24.9	+0.2
ZIIG	**Zihuatanejo**	**4.70**	**102**		Pn	07 29 30.8	-0.2
MOIG	**Morelia**	**4.94**	**77**	Pn	Pn	07 29 34.5	+0.1
AAIG	**Aguscalientes**	**4.95**	**47**	*e*P	Pn	07 29 34.5	-0.2
AAIG				*e*S	Sn	07 30 31.2	0.0
ZAIG	**Zacatecas**	**5.40**	**40**	Pn	Pn	07 29 40.7	-0.1
ARIG	**Puente Sto Nin**	**5.65**	**93**	*i* P	Pn	07 29 44.1	0.0
ARIG				*i* S	Sn	07 30 49.7	+1.5
ARIG	**Puente Sto Nin**	**5.65**	**93**		Pn	07 29 45.1	+1.0
SLBS	**Sierra La Lagu**	**6.08**	**327**	Pn	Pn	07 29 50.6	+0.6
MEIG	**Mezcala**	**6.38**	**95**	*i* P	Pn	07 29 53.9	-0.2
MEIG				*i* S	Sn	07 31 07.2	+1.0
MEIG	**Mezcala**	**6.38**	**95**		Pn	07 29 55.3	+1.2
LPIG	**La Paz**	**6.61**	**326**	LR	LR	07 31 54.7	
	comp=Z,4μm,18.1s,baz=167,slow=32						
UNM	**Universidad Na**	**6.77**	**83**	Pn	Pn	07 29 59.2	-0.4
TLIG	**Tlapa**	**7.42**	**97**	Pn	Pn	07 30 10.1	+1.6
HPIG		**8.29**	**4**	Pn	Pn	07 30 19.2	-1.2
TX31	**Lajitas Ar. Si**	**10.93**	**12**	Pn	Pn	07 31 00.5	+4.0
TX32	**Lajitas Array**	**10.93**	**12**		Pn	07 30 59.9	+3.4
TXAR	**Lajitas Array**	**10.93**	**12**	Pn	Pn	07 31 00.0	+3.5
	0.1nm,0.3s,baz=189,slow=15,SNR=5.4						
TXAR				Lg	Lg	07 34 05.3	
	0.1nm,0.3s,baz=244,slow=30,SNR=1.2						
TXAR	**Lajitas Array**	**10.93**	**12**	Pn	Pn	07 30 59.3	+2.8
CMIG	**Matias Romero**	**10.97**	**96**	Pn	Pn	07 30 58.8	+1.8
	2.3nm,0.3s,baz=280,slow=7.9,SNR=5.8						
CMIG				Lg	Lg	07 33 59.0	
	0.1nm,0.3s,baz=208,slow=16,SNR=1.9						
CMIG				LR	LR	07 35 15.0	
	comp=Z,512nm,20.8s,baz=274,slow=37						
833A	**Chaparral WMA,**	**11.54**	**32**	Pn	Pn	07 31 08.7	+3.9
319A	**Douglas**	**12.98**	**349**	Pn	Pn	07 31 28.0	+3.4
MNTX	**Cornudas Mount**	**13.04**	**3**	Pn	Pn	07 31 27.5	+2.2
JCT	**Junction City**	**13.19**	**25**	Pn	Pn	07 31 29.1	+1.6
CCIG	**Comitan**	**13.71**	**98**	Pn	Pn	07 31 35.5	+0.9
121A	**Cookes Peak, D**	**13.91**	**355**		Pn	07 31 40.0	+2.6
TUC	**Tucson**	**14.21**	**344**	Pn	Pn	07 31 42.9	+1.4
435B	**Jarrell**	**14.45**	**31**		Pn	07 31 47.6	+3.0
ABTX	**Abilene, Hawle**	**15.17**	**22**	Pn	Pn	07 31 54.9	+0.7
BNM	**Barren Site**	**15.46**	**359**	Pn	Pn	07 32 00.4	+2.1
LENM	**Lemitar**	**15.49**	**358**		Pn	07 31 59.2	+0.6
WHTX	**Lake Whitney,**	**15.51**	**29**	Pn	Pn	07 31 59.8	+1.1
WHTX				IAmb	IAmb	07 32 11.9	
	comp=Z,22nm,0.8s						
MSTX	**Muleshoe**	**15.60**	**11**		P	07 32 03.7	-0.2
PETF	**Flores**	**15.74**	**94**		Pn	07 32 00.6	-1.1
X18A	**Snowflake**	**16.17**	**349**		Pn	07 32 09.7	+2.4
ANMO	**Albuquerque**	**16.25**	**360**	Pn	P	07 32 11.2	-0.2
	comp=Z,0.1nm,0.3s,baz=152,slow=15,SNR=1.8						
ANMO				LR	LR	07 38 05.7	
	comp=Z,435nm,20.9s,baz=186,slow=36						
ANMO	**Albuquerque**	**16.25**	**360**	Pn	Pn	07 32 08.1	-0.4
X16A	**Lo Mia Camp, P**	**16.38**	**345**	Pn	Pn	07 32 10.5	+0.4
AMTX	**Amarillo**	**16.70**	**13**		P	07 32 16.2	0.0
AMTX				IAmb	IAmb	07 32 34.4	
	comp=Z,39nm,1.2s						
Z35A	**Perchaven, San**	**16.73**	**27**	Pn	Pn	07 32 15.3	+1.0
ESQI	**Esquipulas**	**16.74**	**101**	Pn	Pn	07 32 12.6	-2.1
MTO3	**Montecristo**	**16.77**	**102**	Pn	Pn	07 32 11.9	-3.2
WMOK	**Wichita Mounta**	**17.38**	**21**	P	Pn	07 32 23.7	+1.2
WUAZ	**Wupatki**	**17.42**	**346**	Pn	Pn	07 32 23.7	+0.7
U15A	**North Rim**	**18.50**	**345**	P	Pn	07 32 38.7	+2.1
MVCO	**Mesa Verde**	**18.61**	**354**	P	P	07 32 38.0	+0.5
MVCO				IAmb	IAmb	07 32 56.3	
	comp=Z,72nm,2.0s						
X37A	**Clayton**	**18.63**	**29**	P	P	07 32 38.0	+0.7
OK025	**Westminster Rd**	**18.66**	**23**	P	P	07 32 38.5	+0.9
TGUH	**Tegucigalpa,Un**	**18.80**	**101**	P	P	07 32 37.7	-1.9
TGUH				IAmb	IAmb	07 32 59.3	
	comp=Z,26nm,1.1s						
U32A	**Winter Ranch,**	**18.82**	**19**	P	Pn	07 32 40.6	+0.6
U32A				IAmb	IAmb	07 33 02.0	
	comp=Z,40nm,1.2s						
Z41A	**Richland Creek**	**18.93**	**37**	P	Pn	07 32 41.9	+0.6
Z41A				IAmb	IAmb	07 32 45.1	
	comp=Z,39nm,1.0s						
S22A	**4UR Ranch, Cre**	**19.05**	**359**		P	07 32 43.6	+1.2
SDCO	**Great Sand Dun**	**19.06**	**2**	P	Pn	07 32 44.2	+0.9
OK030	**Cody Creek RV**	**19.17**	**24**	P	P	07 32 43.9	+0.6
OK031	**S. Brethren Rd**	**19.17**	**24**	P	Pn	07 32 44.7	+0.4
OK031				IAmb	IAmb	07 32 51.9	
	comp=Z,45nm,1.6s						
KNB	**Kanab**	**19.20**	**344**	P	Pn	07 32 46.5	+1.7
LCMT	**Little Creek M**	**19.31**	**343**	P	Pn	07 32 47.4	+1.3
QUOK	**Quay**	**19.42**	**24**	P	Pn	07 32 48.1	+0.8
QUOK				IAmb	IAmb	07 33 04.3	
	comp=Z,37nm,1.3s						
SHPR	**Sheep Range**	**19.45**	**338**	P	Pn	07 32 48.6	+0.8
MIAR	**Mount Ida**	**19.48**	**33**		Pn	07 32 48.5	+0.5
MIAR				IAmb	IAmb	07 33 05.9	
	comp=Z,34nm,1.6s						
TUL1	**Leonard**	**19.56**	**26**	P	Pn	07 32 48.9	0.0
TUL1				IAmb	IAmb	07 33 00.2	
	comp=Z,32nm,1.1s						
PV13	**Radium Mtn., P**	**19.59**	**354**	P	P	07 32 49.1	+1.1
KAN14	**Manchester OK**	**19.67**	**20**	P	P	07 32 48.2	-0.6
PV03	**Paradox Valley**	**19.68**	**354**	P	P	07 32 49.9	+0.8
PV03				IAmb	IAmb	07 33 05.3	
	comp=Z,45nm,1.9s						
PV11	**David Mesa, Pa**	**19.73**	**354**	P	Pn	07 32 51.7	+0.5
PV11				IAmb	IAmb	07 33 10.9	
	comp=Z,58nm,1.7s						
W39A	**Magazine**	**19.89**	**31**	P	P	07 32 50.7	-0.4
W39A				IAmb	IAmb	07 33 11.1	
	comp=Z,34nm,1.2s						
MTPU	**Mount Pierson**	**20.02**	**346**	P	Pn	07 32 55.2	+0.5
ISA	**Isabella, Lake**	**20.10**	**330**		Pn	07 32 56.4	+0.9
T35A	**Sooner Cattle**	**20.15**	**23**	P	P	07 32 54.0	+0.1
PRN	**Pahroc Range**	**20.23**	**339**	P	P	07 32 56.5	+1.6
PRN				IAmb	IAmb	07 33 38.9	
	comp=Z,31nm,1.9s						
TPNV	**Topopah Spring**	**20.24**	**336**		P	07 32 56.5	+1.4
TPNV				IAmb	IAmb	07 33 43.8	
	comp=Z,29nm,1.6s						
MVU	**Marysvale**	**20.47**	**347**	P	P	07 32 58.2	+0.5
MSU	**Marysvale**	**20.47**	**347**	P	P	07 32 58.5	+0.8
SMCO	**Snowmass**	**20.49**	**358**	P	P	07 32 59.7	+1.7
SMCO				IAmb	IAmb	07 33 16.8	
	comp=Z,27nm,1.6s						
KSCO	**Kaye Shedlock'**	**20.56**	**8**	P	P	07 32 59.2	+0.7
KSCO				IAmb	IAmb	07 33 16.8	
	comp=Z,23nm,1.1s						
U38A	**Gravette**	**20.61**	**28**	P	P	07 33 00.2	+1.2
U38A				IAmb	IAmb	07 33 11.5	
	comp=Z,16nm,1.0s						
TCRU	**Three Creeks R**	**20.62**	**346**	P	P	07 33 00.8	+1.4
Q16A	**Castle Valley**	**20.66**	**349**	P	Pn	07 33 01.9	-0.2
W41B	**Gary Mavity, V**	**20.66**	**34**	P	Pn	07 33 01.4	-0.5
W41B				IAmb	IAmb	07 33 12.8	
	comp=Z,34nm,1.3s						
HHAR	**Hobbs**	**20.69**	**29**	P	P	07 33 00.4	+0.6
HHAR				IAmb	IAmb	07 33 14.0	
	comp=Z,28nm,1.1s						
WHAR	**Wooly Hollow**	**20.73**	**34**	P	P	07 33 01.9	+1.6
SRU	**San Rafael Swe**	**20.74**	**351**	P	P	07 33 01.4	+0.9
R32A	**Long Quarter,**	**20.80**	**17**	P	P	07 33 02.5	+1.5
146A	**Union**	**20.84**	**45**	P	P	07 33 02.3	+0.8
PSUT	**Pine Spring**	**20.90**	**343**	P	P	07 33 03.4	+1.1
CBKS	**Cedar Bluff**	**20.91**	**14**		P	07 33 03.0	+0.8
TMUT	**Trail Mountain**	**21.03**	**349**	P	P	07 33 04.0	+0.2
PAGB	**Antelope Grade**	**21.04**	**327**	P	P	07 33 02.9	-0.8
PAGB				IAmb	IAmb	07 33 20.1	
	comp=Z,25nm,1.5s						
ISCO	**Idaho Springs**	**21.11**	**1**	P	P	07 33 05.2	+0.5
ISCO				IAmb	IAmb	07 33 34.8	
	comp=Z,32nm,1.9s						
P17A	**Butcher Ranch,**	**21.13**	**350**	P	P	07 33 06.1	+1.4
R11A	**Troy Canyon, C**	**21.26**	**339**	P	P	07 33 07.6	+1.5
R11A				IAmb	IAmb	07 33 18.9	
	comp=Z,33nm,1.9s						
U40A	**Yellville**	**21.27**	**31**	P	P	07 33 06.6	+0.6
U40A				IAmb	IAmb	07 33 23.1	
	comp=Z,18nm,0.9s						
FCAR	**Ozark Folk Cen**	**21.27**	**33**	P	P	07 33 07.1	+1.0
SPR3	**Spring Creek 3**	**21.47**	**343**	P	P	07 33 09.7	+1.1
O20A	**White River Ci**	**21.50**	**356**	P	P	07 33 10.1	+1.4
O20A				IAmb	IAmb	07 33 49.9	
	comp=Z,24nm,1.4s						
TPH	**Tonopah**	**21.60**	**336**	P	P	07 33 10.6	+0.8
MPU	**Maple Canyon**	**21.81**	**349**	P	P	07 33 13.4	+1.4
LCAR	**Lake Charles**	**21.92**	**35**	P	P	07 33 13.6	+0.5
LCAR				IAmb	IAmb	07 33 30.9	
	comp=Z,32nm,1.2s						
OMMB	**Old Mammoth Mi**	**21.95**	**332**	P	P	07 33 13.0	-0.6
MDPB	**Devils Postpil**	**22.00**	**332**	P	P	07 33 14.7	+0.5
RDMU	**Red Mountain**	**22.05**	**353**	P	P	07 33 14.5	-0.2
S39A	**Bolivar**	**22.12**	**28**	P	P	07 33 15.9	+0.6
S39A				IAmb	IAmb	07 33 33.4	
	comp=Z,19nm,1.1s						
MGMO	**Mountain Grove**	**22.18**	**31**	P	P	07 33 16.2	+0.2
MGMO				IAmb	IAmb	07 33 33.0	
	comp=Z,16nm,0.9s						
N23A	**Red Feather La**	**22.20**	**1**	P	P	07 33 17.8	+1.5
N23A				IAmb	IAmb	07 34 14.9	
	comp=Z,19nm,1.4s						
DUG	**Dugway, Tooele**	**22.22**	**347**	P	P	07 33 16.7	+0.3
LHV	**Little Huntoon**	**22.27**	**334**	P	P	07 33 18.2	+1.5
LHV				IAmb	IAmb	07 33 39.3	
	comp=Z,23nm,1.5s						
NV11	**Mina Array Sit**	**22.28**	**335**	P	P	07 33 18.0	+1.0
NV11				IAmb	IAmb	07 33 37.7	
	comp=Z,19nm,1.4s						
NVAR	**

HWUT	**Hardware Ranch**	**23.34**	**350**	P		**P**	**07 33 28.7**	**+0.5**
ELK	**Elko**	**23.35**	**343**	P		**P**	**07 33 29.5**	**+1.3**
	comp=Z,4.4nm,1.2s,baz=166,slow=6.2,SNR=5.4							
ELK	**Elko**	**23.35**	**343**	P		**P**	**07 33 29.1**	**+0.9**
CCM	**Cathedral Cave**	**23.39**	**31**	P		**P**	**07 33 29.2**	**+0.7**
CCM				IAmb		IAmb	07 33 41.7	
	comp=Z,30nm,1.4s							
PNTR	**Pine Nut**	**23.43**	**333**	P		**P**	**07 33 29.9**	**+0.8**
PNTR				IAmb		IAmb	07 33 49.0	
	comp=Z,38nm,1.8s							
VCNR	**Virginia City**	**23.63**	**333**	P		**P**	**07 33 32.2**	**+1.2**
VCNR				IAmb		IAmb	07 33 43.9	
	comp=Z,19nm,1.6s							
P38A	**Dawn**	**23.66**	**25**	P		**P**	**07 33 32.1**	**+1.1**
P38A				IAmb		IAmb	07 33 49.0	
	comp=Z,20nm,1.2s							
HVU	**Hansel Valley**	**23.73**	**348**	P		**P**	**07 33 32.9**	**+1.0**
FVM	**French Village**	**23.75**	**32**	P		**P**	**07 33 31.7**	**-0.2**
WVT	**Waverly**	**23.86**	**39**	P		**P**	**07 33 34.4**	**+1.4**
WVT				IAmb		IAmb	07 33 49.1	
	comp=Z,19nm,1.2s							
PAHR	**Pah Rah Range**	**23.86**	**334**	P		**P**	**07 33 34.4**	**+1.2**
PAHR				IAmb		IAmb	07 33 46.3	
	comp=Z,39nm,1.9s							
Z51A	**Franklin**	**23.90**	**48**	P		**P**	**07 33 32.4**	**-1.0**
K22A	**Casper**	**23.95**	**360**	P		**P**	**07 33 35.8**	**+1.9**
P40A	**Paris**	**24.20**	**28**	P		**P**	**07 33 36.3**	**+0.2**
P40A				IAmb		IAmb	07 33 59.7	
	comp=Z,16nm,1.1s							
PD31	**Pinedale Array**	**24.22**	**354**	P		**P**	**07 33 37.6**	**+1.1**
PDAR	**Pinedale Array**	**24.22**	**354**	P		**P**	**07 33 37.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=168,slow=10.0,SNR=7.4							
PDAR				LR		LR	07 42 58.3	
	comp=Z,304nm,21.1s,baz=168,slow=36							
PDAR	**Pinedale Array**	**24.22**	**354**	P		**P**	**07 33 37.7**	**+1.1**
V48A	**Smith Brothers**	**24.22**	**41**	P		**P**	**07 33 37.9**	**+1.5**
V48A				IAmb		IAmb	07 33 48.6	
	comp=Z,16nm,1.1s							
FPAL	**Fort Paine**	**24.28**	**45**	P		**P**	**07 33 36.7**	**-0.2**
BEKR	**Beckworth**	**24.41**	**333**	P		**P**	**07 33 39.5**	**+1.3**
ORV	**Oroville**	**24.66**	**331**	P		**P**	**07 33 41.8**	**+1.5**
ORV				IAmb		IAmb	07 34 02.2	
	comp=Z,14nm,1.4s							
CLTN	**Cedars of Leba**	**24.75**	**41**	P		**P**	**07 33 42.1**	**+1.0**
CLTN				IAmb		IAmb	07 33 54.1	
	comp=Z,17nm,1.2s							
T47A	**Sharon Grove**	**24.87**	**39**	P		**P**	**07 33 44.0**	**+1.8**
W50A	**Signal Mountai**	**24.87**	**44**	P		**P**	**07 33 43.6**	**+1.3**
W50A				IAmb		IAmb	07 33 59.9	
	comp=Z,15nm,0.9s							
REDW	**Red Top Meadow**	**24.96**	**352**	P		**P**	**07 33 45.3**	**+2.1**
REDW				IAmb		IAmb	07 34 12.3	
	comp=Z,18nm,1.4s							
SNOW	**Snow King Moun**	**25.05**	**352**	P		**P**	**07 33 45.7**	**+1.7**
SNOW				IAmb		IAmb	07 34 06.8	
	comp=Z,21nm,1.3s							
154A	**Montrose**	**25.05**	**52**	P		**P**	**07 33 44.6**	**+0.8**
TPAW	**Teton Pass**	**25.10**	**352**	P		**P**	**07 33 46.5**	**+2.0**
Q44A	**Meyer Farm, Va**	**25.16**	**33**	P		**P**	**07 33 43.9**	**-0.9**
P43A	**Skaggs, Pawnee**	**25.47**	**31**	P		**P**	**07 33 48.6**	**+1.0**
IMW	**Indian Meadow**	**25.50**	**352**	P		**P**	**07 33 49.3**	**+1.2**
IMW				IAmb		IAmb	07 34 16.1	
	comp=Z,25nm,1.9s							
W52A	**Murphy**	**25.73**	**46**	P		**P**	**07 33 49.1**	**-1.0**
W52A				IAmb		IAmb	07 34 03.4	
	comp=Z,16nm,1.0s							
HLID	**Hailey**	**25.79**	**346**	P		**P**	**07 33 51.3**	**+0.7**
BCYI	**Bear Canyon**	**26.29**	**348**	P		**P**	**07 33 57.0**	**+1.7**
YHH	**Holmes Hill**	**26.36**	**353**	P		**P**	**07 33 58.3**	**+2.3**
BG3	**Lake Jocassee**	**26.36**	**47**	P		**P**	**07 33 57.2**	**+1.4**
YNE	**Yellowstone No**	**26.49**	**354**	P		**P**	**07 33 59.4**	**+2.3**
MCMT	**McKenzie Canyo**	**26.69**	**350**	P		**P**	**07 33 59.7**	**+0.7**
JSC	**Jenkinsville**	**27.20**	**50**	P		**P**	**07 34 04.4**	**+1.2**
JSC				IAmb		IAmb	07 34 10.8	
	comp=Z,8.8nm,1.1s							
JFWS	**Jewell Farm**	**27.76**	**26**	P		**P**	**07 34 09.2**	**+0.9**
MSO	**Missoula**	**28.82**	**349**	P		**P**	**07 34 17.7**	**-0.1**
MSO				IAmb		IAmb	07 34 34.4	
	comp=Z,15nm,1.2s							
ULM	**Lac du Bonnet**	**32.63**	**12**	LR		LR	07 48 29.7	
	comp=Z,500nm,18.4s,baz=222,slow=37							
TAOE	**Nuku Hiva Isla**	**43.14**	**234**	*e*LR		LR	07 48 02.7	
	comp=Z,461nm,25.7s							
TAOE	**Nuku Hiva Isla**	**43.14**	**234**	*e*T		T	08 21 55.7	
	comp=Z,26nm,0.2s							
YKA	**Yellowknife Ar**	**44.21**	**354**	P		**P**	**07 36 29.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=157,slow=8.1,SNR=2.9							
YKA				LR		LR	07 55 57.8	
	comp=Z,293nm,18.7s,baz=0.0,slow=37							
ILAR	**Eielson Array**	**53.46**	**340**	P		**P**	**07 37 40.0**	**+0.8**
	comp=Z,1.2nm,1.1s,baz=146,slow=6.3,SNR=4.8							
ILAR	**Eielson Array**	**53.46**	**340**	P		**P**	**07 37 40.2**	**+0.9**
PPT2	**Papeete2**	**55.73**	**232**	*e*S		**S**	**07 45 41.9**	**+0.1**
PPT2				*e*LR		LR	07 53 53.6	
	comp=Z,478nm,26.0s,baz=38							
H03N2	**Juan Fernandez**	**57.99**	**153**	T		T	08 40 55.3	
	baz=331,slow=78,SNR=30							
H03N1	**Juan Fernandez**	**58.00**	**153**	T		T	08 40 56.1	
	baz=331,slow=78,SNR=37							
H03N3	**Juan Fernandez**	**58.01**	**153**	T		T	08 40 55.2	
	baz=331,slow=78,SNR=33							
TBI	**Tubuai**	**59.30**	**227**	*e*S		**S**	**07 46 29.3**	**+0.9**
	comp=Z,172nm,34.8s							
TBI				*e*LR		LR	07 55 26.7	
	comp=Z,464nm,28.2s,baz=50							
PLCA	**Paso Flores**	**67.76**	**151**	P		**P**	**07 39 16.6**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=319,slow=11,SNR=2.2							
PLCA	**Paso Flores**	**67.76**	**151**	P		**P**	**07 39 16.1**	**-1.0**
DZM	**Mont Dzumac**	**94.39**	**248**	*e*LR		LR	08 12 15.3	
	comp=Z,475nm,27.5s							
LZH	**Lanzhou**	**118.56**	**332**	*e*PKP		**PKPdf**	**07 47 04.0**	**-3.8**
LZH				pPKP		pPKPdf	07 47 14.8	-1.1
LZH				sPKP			07 47 19.3	
WRA	**Warramunga Arr**	**123.04**	**258**	PKP		**PKPdf**	**07 47 15.1**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=62,slow=1.6,SNR=2.6							
ASAR	**Alice Springs**	**123.98**	**254**	PKP		**PKPdf**	**07 47 17.0**	**-1.3**
	comp=Z,0.2nm,0.7s,baz=139,slow=3.1,SNR=2.6							

IDC 17 07:32:47.3±33.0, 7°.85N×103°.47W, h0km, mb3.3/3, mb1 3.8/3, mb1mx3.5/31, mbtmp3.3/3, MS3.8/2, Ms1 3.9/2, ms1mx3.2/15, Error ellipse: s-maj=1072.0km s-min=115.3km az=114.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
TXAR	**Lajitas Array**	**21.37**	**360**	P		P	07 37 36.5	-0.1
	0.6nm,0.8s,baz=175,slow=11,SNR=4.1							
PDAR	**Pinedale Array**	**35.19**	**352**	P		P	07 39 43.4	+0.1
	0.4nm,0.7s,baz=169,slow=10,SNR=2.9							
SJG	**San Juan**	**37.70**	**71**	LR		LR	07 54 08.8	
	comp=Z,103nm,20.3s,baz=264,slow=34							
LPAZ	**La Paz**	**42.41**	**125**	LR		LR	07 57 30.5	
	comp=Z,134nm,18.4s,baz=315,slow=35							
ILAR	**Eielson Array**	**64.47**	**341**	P		P	07 43 25.4	-0.1
	1.1nm,1.1s,baz=178,slow=5.4,SNR=4.3							

SOME 17 07:36:01.5, 40°.77N×70°.28E, h10km
NNC 17 07:36:03.8±4.8, 40°.71N×70°.48E, h14km±34km, mb3.4, mpv2.9, Error ellipse: s-maj=49.4km s-min=25.4km az=172.0
KRNET 17 07:36:08.2±0.1, 41°.28N×70°.42E, h11km, mb2.6

ISC 17 07:36:09.1±1.6, 41°.23N±0°.05×70°.52E±0°.05, h13km±12km, n15, σ2s12/25, 12C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
TRKS	**Terek-Su**	**0.56**	**57**	*i*P		**Pg**	**07 36 19.9**	**-0.2**
	baz=72							
TRKS				*i*S		**Sg**	**07 36 28.3**	**+0.7**
	baz=72							
IUG	**luzhnay**	**0.99**	**339**	*e*P		**Pn**	**07 36 28.5**	**-0.3**
	4.2nm,0.2s							
IUG				*e*S		Sn	07 36 50.9	+8.1
	18nm,0.4s							
IUG	**luzhnay**	**0.99**	**339**	P		**Pn**	**07 36 28.3**	**-0.5**
	7.8nm,0.2s							
IUG				S		Sn	07 36 50.9	+8.1
	20nm,0.3s							
BTK	**Batken**	**1.19**	**169**	*e*P		**Pb**	**07 36 31.8**	**+0.2**
	baz=66							
BTK				*i*S		**Sn**	**07 36 50.0**	**+2.3**
	baz=66							
BRLS	**Boroldoy**	**1.87**	**345**	*e*P		**Pn**	**07 36 39.6**	**-1.3**
	2.8nm,0.1s							
BRLS				*e*S		**Sg**	**07 37 09.2**	**-0.1**
	7.4nm,0.3s							
KK31	**Karatay Array**	**1.88**	**360**	Pn		**Pg**	**07 36 44.5**	**-0.6**
	0.3nm,0.2s,baz=189,slow=16,SNR=30							
KK31				*i*Sn		**Sg**	**07 37 12.0**	**+2.6**
	0.8nm,0.3s,baz=178,slow=26							
MNAS	**Manas**	**1.95**	**49**	*i*P		**Pb**	**07 36 44.9**	**+0.3**
	baz=51							
MNAS				*i*S		**Sg**	**07 37 12.2**	**+0.4**
	baz=51							
MRKS	**Merke**	**2.53**	**52**	*e*P		**Pb**	**07 36 55.3**	**+0.9**
	5.7nm,0.2s							
MRKS				*e*S		**Sg**	**07 37 37.2**	**+6.9**
	1.5nm,0.4s							
MRKS	**Merke**	**2.53**	**52**	Pg		**Pb**	**07 36 55.3**	**+0.9**
	5.7nm,0.2s							
MRKS				Lg		Lg	07 37 37.2	
	1.5nm,0.4s							
AML	**Almayashu**	**2.55**	**68**	*i*P		**Pb**	**07 36 53.7**	**-1.2**
	baz=70							
AML				*i*S		**Sb**	**07 37 27.0**	**+0.7**
	baz=70							
EKS2	**Erkin-Say**	**2.82**	**58**	*i*P		**Pb**	**07 36 57.3**	**-2.2**
	baz=60							
EKS2				*i*S		**Sb**	**07 37 33.8**	**-0.2**
	baz=60							
ARLS	**Aral**	**2.93**	**76**	*i*P		**Pb**	**07 36 59.4**	**-1.9**
	baz=77							
ARLS				*i*S		**Sb**	**07 37 37.7**	**+0.7**
	baz=77							
UCH	**Uchtor**	**3.15**	**70**	*e*P		**Pb**	**07 37 02.5**	**-2.8**
	baz=71							
UCH				*i*S		**Sb**	**07 37 43.2**	**-0.7**
	baz=71							
AAK	**Ala-Archa**	**3.29**	**63**	Pg		**Pb**	**07 37 08.7**	**+1.3**
	1.0nm,0.6s							
AAK				Lg		Lg	07 37 59.7	
	0.9nm,0.6s							
TKM2	**Tokmak 2**	**4.14**	**64**	Pg		**Pg**	**07 37 25.3**	**-3.2**
	1.9nm,0.8s							
TKM2				Lg		Lg	07 38 22.0	
	0.8nm,0.6s							

IDC 17 07:44:02.6±1.1, 1°.85N×126°.84E, h0km, mb4.0/7, mb1 4.0/8, mb1mx3.7/44, mbtmp3.9/8, ML3.6/1, Error ellipse: s-maj=111.3km s-min=15.9km az=69.0
NEIC 17 07:44:07.6±1.3, 1°.8N±0°.1×126°.8E±0°.1, h35km±2km, mb4.2/10, Error ellipse: s-maj=24.0km s-min=11.0km az=50.0
DJA 17 07:44:08.6±3.2, 2°.N±5°×12°.7E±°, h25km±34km, M3.9/8, mb4.0/1, MLv3.9/8

ISC 17 07:44:08.5±0.7, 1°.68N±0°.07×126°.60E±0°.07, h35km, n30, σ1s24/33, mb4.0/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.18**	**140**	P		**Pn**	**07 44 29.4**	**+0.8**
TNTI	**Ternate**	**1.18**	**140**			**Pn**	**07 44 29.2**	**+0.5**
TNTI				Sn		**Sn**	**07 44 43.4**	**-0.1**
SGSI	**Sangihe**	**2.26**	**332**	P		**Pn**	**07 44 46.3**	**+2.8**
KMSI	**Cibinong**	**2.84**	**247**	P		**Pn**	**07 44 52.0**	**+0.6**
GTOI	**Gorontalo**	**3.74**	**254**	P		**Pn**	**07 45 04.9**	**+1.1**
LUWI	**Luwuk**	**4.69**	**235**	Pn		**Pn**	**07 45 19.5**	**+2.6**
MPSI	**Mapaga**	**6.83**	**259**	P		**Pn**	**07 45 44.8**	**-1.5**
MTN	**Manton Dam**	**15.12**	**163**	Pn		**Pn**	**07 47 40.0**	**+0.4**
KNRA	**Kununurra**	**17.38**	**173**	P		**Pn**	**07 48 09.2**	**+0.8**
KNRA				IAmb		IAmb	07 48 10.9	
	comp=Z,36nm,1.9s							
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P		**P**	**07 48 35.9**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=18,slow=10,SNR=2.0							
FITZ	**Fitzroy Crossi**	**19.68**	**183**	P		**P**	**07 48 35.0**	**+0.3**
WB0	**Warramunga Arr**	**22.64**	**161**	P		**P**	**07 49 06.2**	**-0.6**
WB0				IAmb		IAmb	07 49 08.5	
	comp=Z,4.1nm,0.7s							
WRA	**Warramunga Arr**	**22.79**	**161**	P		**P**	**07 49 07.2**	**-1.0**
	comp=Z,3.3nm,0.5s,baz=339,slow=11,SNR=60							
WRA				PcP		**PcP**	**07 52 59.0**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=331,slow=2.1,SNR=1.7							
WRA	**Warramunga Arr**	**22.79**	**161**	P		**P**	**07 49 07.3**	**-1.0**
WB2	**Warramunga Arr**	**22.80**	**161**	P		**P**	**07 49 07.6**	**-0.8**
WB2				IAmb		IAmb	07 49 09.5	
	comp=Z,3.9nm,0.6s							
AS31	**Alice Springs**	**26.18**	**165**	P		**P**	**07 49 40.7**	**+0.8**
ASAR	**Alice Springs**	**26.18**	**165**	P		**P**	**07 49 39.7**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=349,slow=14,SNR=18							
ASAR				PcP		**PcP**	**07 53 06.6**	**0.0**
	comp=Z,0.4nm,1.0s,baz=345,slow=2.9,SNR=2.2							
ASAR	**Alice Springs**	**26.18**	**165**	P		**P**	**07 49 42.0**	**+2.0**
FORT	**Forrest**	**32.31**	**178**	P		**P**	**07 50 35.0**	**+0.7**
STKA	**Stephens Creek**	**36.28**	**158**	P		**P**	**07 51 08.4**	**-0.3**
	comp=Z,1.8nm,1.1s,baz=321,slow=13,SNR=1.5							
SONM	**Songino Array**	**49.19**	**342**	P		**P**	**07 52 52.5**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=147,slow=8.1,SNR=3.8							
MK31	**Makanchi Array**	**59.16**	**326**	P		**P**	**07 54 04.7**	**-1.3**
MK31				IAmb		IAmb	07 54 58.1	
	comp=Z,5.0nm,1.4s							
MKAR	**Makanchi Array**	**59.16**	**326**	P		**P**	**07 54 04.7**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=124,slow=8.6,SNR=6.6							
MKAR	**Makanchi Array**	**59.16**	**326**	P		**P**	**07 54 04.6**	**-1.4**
MAKZ	**Makanchi**	**59.35**	**326**	P		**P**	**07 54 05.7**	**-1.5**
MAKZ				IAmb		IAmb	07 54 48.4	
	comp=Z,5.3nm,1.1s							
KURBB	**Kurchatov Arra**	**63.39**	**328**	P		**P**	**07 54 33.3**	**-1.2**
	comp=Z,2.6nm,0.6s,baz=129,slow=6.2,SNR=14							
KURK	**Kurchatov**	**63.40**	**328**	P		**P**	**07 54 33.5**	**-0.9**
ABKAR	**Akbulak array**	**73.65**	**321**	P		**P**	**07 55 37.2**	**-1.4**
AKTO	**Aktyubinsk**	**75.18**	**322**	P		**P**	**07 55 46.7**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=74,slow=7.4,SNR=3.8							
TORD	**Torodi Ar. Bea**	**123.41**	**287**	PKP		**PKiKP**	**08 03 05.0**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=99,slow=3.1,SNR=1.8							

IDC 17 07:48:16.5±0.9, 18°.40N×106°.49W, h0km, mb4.0/12, mb1 4.2/16, mb1mx4.1/40, mbtmp4.0/16, ML3.7/3, MS4.1/30, Ms1 4.1/30, ms1mx4.0/45, Error ellipse: s-maj=36.5km s-min=13.5km az=58.0
NEIC 17 07:48:17.9±2.5, 18°.44N±0°.1×106°.33W±0°.08, h10km±2km, mb4.6/192, Md4.7/15(MEX), Error ellipse: s-maj=17.8km s-min=10.7km az=208.0
GCMT 17 07:48:19.0±0.3, 18°.67N±0°.02×106°.46W±0°.02, h16km±1km, MW4.9/99, Moment Tensor Solution. s28,c31; s99,c146; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.29±.11; Mθθ=1.40±.10; Mφφ 1.69±.11; Mrθ=0.54±.27; Mθφ=2.55±.08; Mφr 1.28±.31; Best double couple: Mo 3.23100×10^16 NP1: φs284.00000°, δ73.00000°, λ169.00000°. NP2: φs17.00000°, δ79.00000°, λ17.00000°. Principal axes: T 3.6140, Plg19.0000°, Azm241.0000°; N -0.7660, Plg70.0000°, Azm48.0000°; P -2.8480, Plg4.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
MEX 17 07:48:19.2±0.9, 18°.62N×106°.49W, h16km±44km, MD4.7

ISC 17 07:48:18.7±0.6, 18°.54N±0°.06×106°.30W±0°.06, h10km, n395, σ1s34/371, mb4.6/54, MS4.1/30, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
CJM	**Chamela**	**1.53**	**51**	*i*P		**Pn**	**07 48 43.2**	**-2.8**
CJM				*e*S		**Sn**	**07 49 02.3**	**-3.7**
R15V		**2.29**	**74**	*e*P		**Pn**	**07 48 54.8**	**-1.7**
R15V		**2.29**	**74**			**Pn**	**07 48 54.8**	**-1.7**
COIG	**Colima**	**2.56**	**75**	*e*P		**Pn**	**07 48 58.9**	**-1.4**
EZ5V		**2.72**	**69**	*e*P		**Pn**	**07 49 02.4**	**-0.3**
EZ5V		**2.72**	**69**			**Pn**	**07 49 02.4**	**-0.3**
MMIG	**Aquila**	**2.82**	**95**	*e*P		**Pn**	**07 49 02.8**	**-1.0**
MMIG				*i*S		**Sn**	**07 49 37.2**	**-0.6**
MMIG	**Aquila**	**2.82**	**95**			**Pn**	**07 49 02.8**	**-1.0**
MMIG						**Sn**	**07 49 35.3**	**-2.5**
H06E1	**SOCORRO T-PHAS**	**4.39**	**274**	T		T	07 53 44.9	
	SNR=358							
ZIIG	**Zihuatanejo**	**4.69**	**101**	*e*P		**Pn**	**07 49 30.5**	**+0.9**
ZIIG				*e*S		**Sn**	**07 50 24.2**	**+0.1**
ZIIG	**Zihuatanejo**	**4.69**	**101**			**Pn**	**07 49 30.5**	**+0.9**
MOIG	**Morelia**	**4.97**	**76**	Pn		**Pn**	**07 49 31.4**	**-2.1**
AAIG	**Aguscalientes**	**5.02**	**47**	*e*P		**Pn**	**07 49 33.0**	**-1.3**
AAIG				*i*S		**Sn**	**07 50 30.9**	**-1.6**
ZAIG	**Zacatecas**	**5.47**	**39**	Pn		**Pn**	**07 49 40.4**	**-0.2**
ARIG	**Puente Sto Nin**	**5.66**	**92**	*i*P		**Pn**	**07 49 42.9**	**-0.1**
ARIG				*i*S		**Sn**	**07 50 49.4**	**+1.4**
ARIG	**Puente Sto Nin**	**5.66**	**92**			**Pn**	**07 49 44.4**	**+1.5**
SLBS	**Sierra La Lagu**	**6.15**	**327**	Pn		**Pn**	**07 49 50.4**	**+0.7**
LPIG	**La Paz**	**6.68**	**327**	LR		LR	07 51 55.1	
	comp=Z,5μm,18.2s,baz=166,slow=33							
UNM	**Universidad Na**	**6.79**	**82**	Pn		**Pn**	**07 49 57.8**	**-0.9**
TLIG	**Tlapa**	**7.42**	**96**	Pn		**Pn**	**07 50 08.5**	**+1.2**
HPIG		**8.38**	**4**	Pn		**Pn**	**07 50 21.3**	**+0.9**
SRIG	**Santa Rosalia**	**10.31**	**329**	Pn		**Pn**	**07 50 49.5**	**+2.8**
CMIG	**Matias Romero**	**10.97**	**96**	Pn		**Pn**	**07 50 58.2**	**+2.4**
	1.3nm,0.3s,baz=271,slow=9.5,SNR=19							
CMIG				Lg		Lg	07 53 59.5	
	baz=256,slow=17,SNR=2.8							
CMIG				LR		LR	07 54 38.5	
	comp=Z,665nm,18.4s,baz=276,slow=34							
TX31	**Lajitas Ar. Si**	**11.01**	**12**			**Pn**	**07 50 55.9**	**-0.5**
TX32	**Lajitas Array**	**11.01**	**12**			**Pn**	**07 50 58.8**	**+2.4**
TXAR	**Lajitas Array**	**11.01**	**12**	Pn		**Pn**	**07 50 58.8**	**+2.3**
	0.1nm,0.3s,baz=192,slow=11,SNR=7.1							
TXAR				Lg		Lg	07 53 59.9	
	0.0nm,0.3s,baz=228,slow=34,SNR=1.6							
TXAR	**Lajitas Array**	**11.01**	**12**			**Pn**	**07 50 56.3**	**-0.1**
HSIG		**11.27**	**339**			**Pn**	**07 51 00.8**	**+1.0**
833A	**Chaparral WMA,**	**11.62**	**32**	P		**Pn**	**07 51 09.0**	**+4.3**
	baz=215,SNR=9.9							
833A	**Chaparral WMA,**	**11.62**	**32**	Pn		**Pn**	**07 51 09.2**	**+4.6**
319A	**Douglas**	**13.06**	**349**			**Pn**	**07 51 26.0**	**+1.5**
MNTX	**Cornudas Mount**	**13.13**	**3**	P		**Pn**	**07 51 28.4**	**+3.1**
	baz=184,SNR=19							
MNTX	**Cornudas Mount**	**13.13**	**3**			**Pn**	**07 51 27.5**	**+2.2**
JCT	**Junction City**	**13.27**	**25**	P		**Pn**	**07 51 31.5**	**+4.2**
	baz=208,SNR=8.7							
JCT	**Junction City**	**13.27**	**25**	Pn		**Pn**	**07 51 28.0**	**+0.7**
CCIG	**Comitan**	**13.71**	**97**			**Pn**	**07 51 36.2**	**+2.8**
GDL2	**Guadalupe Moun**	**13.72**	**7**			**Pn**	**07 51 36.7**	**+3.3**
121A	**Cookes Peak, D**	**14.00**	**355**	P		**Pn**	**07 51 39.8**	**+2.5**
	baz=175							
121A	**Cookes Peak, D**	**14.00**	**355**			**Pn**	**07 51 35.0**	**-2.3**
TUC	**Tucson**	**14.29**	**344**	P		**Pn**	**07 51 43.2**	**+1.9**
	baz=163							
TUC	**Tucson**	**14.29**	**344**	Pn		**Pn**	**07 51 42.2**	**+0.9**
435B	**Jarrell**	**14.53**	**31**	P		**Pn**	**07 51 47.0**	**+2.5**
	baz=215							
435B	**Jarrell**	**14.53**	**31**			**Pn**	**07 51 45.9**	**+1.5**
214A	**Organ Pipe Nat**	**14.59**	**338**	P		**Pn**	**07 51 47.2**	**+1.9**
	baz=155							
214A	**Organ Pipe Nat**	**14.59**	**338**	Pn		**Pn**	**07 51 46.4**	**+1.1**
SPX	**San Pedro Mart**	**14.96**	**328**			**Pn**	**07 51 51.5**	**+0.9**
SPX				IAmb		IAmb	07 52 08.5	
	comp=Z,45nm,1.5s							
ABTX	**Abilene, Hawle**	**15.25**	**22**	P		**Pn**	**07 51 56.3**	**+2.1**
	baz=205							
ABTX	**Abilene, Hawle**	**15.25**	**22**	Pn		**Pn**	**07 51 56.0**	**+1.8**
ABTX				IAmb		IAmb	07 52 24.9	
	comp=Z,53nm,1.4s							
Y22D	**IRIS PASSCAL I**	**15.48**	**358**	Pn		**Pn**	**07 51 58.0**	**+0.7**
Y22D				IAmb		IAmb	07 52 24.9	
	comp=Z,36nm,1.0s							
BNM	**Barren Site**	**15.55**	**359**	Pn		**Pn**	**07 51 58.3**	**0.0**
LENM	**Lemitar**	**15.58**	**358**	Pn		**Pn**	**07 51 59.5**	**+0.9**
WHTX	**Lake Whitney,**	**15.59**	**29**	P		**Pn**	**07 52 00.7**	**+2.1**
	baz=213							
113A	**Mohawk Valley,**	**15.68**	**336**	Pn		**Pn**	**07 52 00.9**	**+1.2**
113A				IAmb		IAmb	07 52 27.6	
	comp=Z,46nm,1.4s							
MSTX	**Muleshoe**	**15.69**	**11**	P		**P**	**07 52 03.6**	**-0.5**
	baz=193,SNR=19							
MSTX	**Muleshoe**	**15.69**	**11**	P		**Pn**	**07 52 03.4**	**+3.5**
PETF	**Flores**	**15.74**	**93**	P		**P**	**07 52 04.5**	**-0.2**
PETF				IAmb		IAmb	07 52 27.2	
	comp=Z,43nm,1.1s							
X18A	**Snowflake**	**16.25**	**349**	P		**Pn**	**07 52 09.4**	**+2.0**
ANMO	**Albuquerque**	**16.34**	**360**	Pn		**Pn**	**07 52 10.0**	**+1.6**
	baz=170,slow=12,SNR=6.7							
ANMO				LR		LR	07 58 05.9	
	comp=Z,652nm,20.1s,baz=185,slow=36							
ANMO	**Albuquerque**	**16.34**	**360**	P		**Pn**	**07 52 11.1**	**+2.6**
	baz=180							
ANMO	**Albuquerque**	**16.34**	**360**	P		**Pn**	**07 52 09.7**	**+1.2**

SDCO **Great Sand Dun** 19.15 2 P Pn 07 52 45.8 +2.5
SDCO IAmb IAmb 07 53 01.8
comp=Z,41nm,1.5s
OK030 Cody Creek RV 19.26 24 P P 07 52 43.1 -0.2
OK031 S. Brethren Rd 19.26 24 P P 07 52 44.5 +1.1
OK031 IAmb IAmb 07 52 59.4
comp=Z,37nm,1.4s
KNB Kanab 19.28 344 P P 07 52 44.2 +0.5
EDW2 Edwards Air Fo 19.31 330 P P 07 52 45.2 +1.1
baz=145
LCMT Little Creek M 19.39 343 P P 07 52 45.6 +0.7
SHPR Sheep Range 19.53 338 P P 07 52 47.7 +1.2
MIAR Mount Ida 19.56 33 P P 07 52 48.5 +1.9
baz=219
MIAR Mount Ida 19.56 33 P P 07 52 46.1 -0.6
MIAR IAmb IAmb 07 52 55.8
comp=Z,26nm,1.1s
PKCU Pink Cliffs 19.56 346 P P 07 52 45.0 -2.0
PV05 Paradox Valley 19.62 353 P P 07 52 47.3 -0.3
PV05 IAmb IAmb 07 53 10.7
comp=Z,34nm,1.3s
PV01 Paradox Valley 19.62 355 P P 07 52 47.0 -0.6
TUL1 Leonard 19.64 26 P P 07 52 48.5 +1.0
baz=211,SNR=5.4
TUL1 Leonard 19.64 26 P P 07 52 47.3 -0.3
TUL1 IAmb IAmb 07 53 03.8
comp=Z,26nm,0.9s
LRMC Laurel Mtn Rad 19.66 331 P P 07 52 48.7 +0.8
baz=147,SNR=7.7
PV02 Paradox Valley 19.71 354 P P 07 52 49.4 +0.8
PV02 IAmb IAmb 07 53 15.5
comp=Z,33nm,1.3s
KAN14 Manchester OK 19.76 20 P P 07 52 50.1 +1.3
PV18 Skein Mesa, Pa 19.77 354 P P 07 52 48.9 -0.3
PV18 IAmb IAmb 07 53 10.4
comp=Z,44nm,1.4s
PV03 Paradox Valley 19.77 354 P P 07 52 48.9 -0.3
PV03 IAmb IAmb 07 53 13.2
comp=Z,39nm,1.4s
PV17 East Wray Mesa 19.81 354 P P 07 52 49.4 -0.2
PV17 IAmb IAmb 07 53 03.2
comp=Z,21nm,1.0s
PV11 David Mesa, Pa 19.82 354 P P 07 52 49.1 -0.5
PV11 IAmb IAmb 07 53 12.3
comp=Z,32nm,1.2s
PV15 Paradox Valley 19.82 355 P P 07 52 50.2 +0.4
PV15 IAmb IAmb 07 53 07.0
comp=Z,27nm,1.1s
PV12 Saucer Basin, 19.83 354 P P 07 52 49.9 +0.1
PV12 IAmb IAmb 07 53 03.1
comp=Z,31nm,1.2s
PV16 Nyswonger Mesa 19.83 354 P P 07 52 50.9 +1.1
PV16 IAmb IAmb 07 53 11.0
comp=Z,38nm,1.4s
PV19 Morning Glory 19.84 354 P P 07 52 50.2 +0.2
PV19 IAmb IAmb 07 53 07.4
comp=Z,28nm,1.2s
PV20 West Nyswonger 19.87 354 P P 07 52 49.6 -0.7
PV20 IAmb IAmb 07 53 11.3
comp=Z,32nm,1.3s
PV14 Lion Creek, Pa 19.91 354 P P 07 52 51.2 +0.5
PV14 IAmb IAmb 07 53 14.7
comp=Z,33nm,1.3s
PV10 Paradox Valley 19.91 354 P P 07 52 50.0 -0.7
PV10 IAmb IAmb 07 53 04.8
comp=Z,28nm,1.1s
PV04 Paradox Valley 19.91 354 P P 07 52 52.1 +1.3
ARVC Arvin 19.92 329 P P 07 52 51.7 +1.2
baz=143
PV07 Paradox Valley 19.93 355 P P 07 52 50.7 -0.2
PV07 IAmb IAmb 07 53 04.7
comp=Z,28nm,1.2s
W39A Magazine 19.97 31 P P 07 52 52.9 +1.8
baz=217,SNR=6.6
W39A Magazine 19.97 31 P P 07 52 52.9 +1.8
W39A IAmb IAmb 07 53 12.9
comp=Z,58nm,1.3s
KAN13 South Haven SW 19.97 21 P P 07 52 50.3 -0.8
PV23 Carpenter Ridg 19.98 354 P P 07 52 51.3 -0.2
PV22 Blue Mesa, Par 20.04 354 P P 07 52 53.1 +0.9
PV22 IAmb IAmb 07 53 10.0
comp=Z,30nm,1.2s
MPMC Manual Prospec 20.06 333 P P 07 52 53.4 +1.1
baz=148
MTPU Mount Pierson 20.10 346 P P 07 52 54.9 +1.9
FURC Furnace Creek, 20.14 335 P P 07 52 54.4 +1.4
baz=150
ISA Isabella, Lake 20.18 330 P Pn 07 52 56.3 +1.0
baz=145
ISA Isabella, Lake 20.18 330 P P 07 52 52.4 -1.0
T35A Sooner Cattle 20.23 23 P P 07 52 53.7 -0.3
T35A IAmb IAmb 07 53 04.0
comp=Z,26nm,1.0s
PRN Pahroc Range 20.30 340 P P 07 52 54.9 -0.1
TPNV Topopah Spring 20.32 337 P P 07 52 55.9 +0.8
baz=152,SNR=13
TPNV Topopah Spring 20.32 337 P P 07 52 55.3 +0.2
Q24A Divide 20.38 3 P P 07 52 56.6 +0.7
MATN Matagalpa 20.38 103 P Pn 07 52 57.5 -0.5
MATN IAmb IAmb 07 53 24.1
comp=Z,29nm,1.3s
MSU Marysvale 20.55 347 P P 07 52 59.5 +1.8
MVU Marysvale 20.55 347 P P 07 52 57.6 -0.1
SMCO Snowmass 20.57 359 P P 07 52 59.0 +0.8
VES Vestal, Richgr 20.61 329 P Pn 07 52 60.0 -0.4
baz=144
CWC Cottonwood Cre 20.64 332 P P 07 53 00.3 +1.8
baz=147
KSCO Kaye Shedlock' 20.65 8 P Pn 07 53 02.4 +1.4
baz=190
KSCO Kaye Shedlock' 20.65 8 P 07 53 00.3 +1.6
KSCO IAmb IAmb 07 53 18.9
comp=Z,37nm,1.2s
U38A Gravette 20.70 28 P P 07 52 59.9 +0.8
U38A IAmb IAmb 07 53 22.1
comp=Z,29nm,1.1s
TCRU Three Creeks R 20.70 346 P P 07 53 00.8 +1.4
W41B Gary Mavity, V 20.74 34 P P 07 53 00.7 +1.2
baz=221
W41B Gary Mavity, V 20.74 34 P P 07 53 00.4 +0.9
W41B IAmb IAmb 07 53 12.6
comp=Z,23nm,1.1s
Q16A Castle Valley 20.74 349 P P 07 52 59.2 -0.6
HHAR Hobbs 20.77 29 P P 07 53 01.1 +1.3
HHAR IAmb IAmb 07 53 11.4
comp=Z,28nm,1.0s
WHAR Wooly Hollow 20.81 34 P P 07 53 01.4 +1.2
SRU San Rafael Swe 20.82 351 P P 07 53 00.1 -0.5
R32A Long Quarter, 20.89 17 P P 07 53 02.4 +1.2
PSUT Pine Spring 20.98 343 P P 07 53 02.3 0.0
CBKS Cedar Bluff 21.00 14 P P 07 53 04.1 +1.8
baz=198
CBKS Cedar Bluff 21.00 14 P P 07 53 03.5 +1.1
X43A Marvell 21.02 38 P P 07 53 02.6 +0.1
PAGB Antelope Grade 21.11 327 P P 07 53 02.5 -1.0
PAGB IAmb IAmb 07 53 15.8
comp=Z,41nm,1.5s
TMUT Trail Mountain 21.12 349 P P 07 53 03.1 -0.8
ISCO Idaho Springs 21.20 1 P P 07 53 06.8 +2.1
baz=182
ISCO Idaho Springs 21.20 1 P P 07 53 05.3 +0.6
P17A Butcher Ranch, 21.21 350 P P 07 53 05.7 +0.9
R11A Troy Canyon, C 21.34 340 P P 07 53 07.0 +0.9
baz=156,SNR=30
R11A Troy Canyon, C 21.34 340 P P 07 53 06.8 +0.7
U40A Yellville 21.35 31 P P 07 53 07.3 +1.3
baz=217,SNR=6.4
U40A Yellville 21.35 31 P P 07 53 06.8 +0.8
U40A IAmb IAmb 07 53 19.0
comp=Z,23nm,1.1s
FCAR Ozark Folk Cen 21.35 33 P P 07 53 07.3 +1.2
ACON Acoyapa 21.39 105 P P 07 53 05.9 -0.9
SPR3 Spring Creek 3 21.55 343 P P 07 53 08.9 +0.3
O20A White River Ci 21.59 356 P P 07 53 10.3 +1.5
baz=175,SNR=9.8
O20A White River Ci 21.59 356 P P 07 53 10.5 +1.6
TPH Tonopah 21.68 336 P P 07 53 11.1 +1.3
PMPB Monarch Peak 21.77 327 P P 07 53 12.1 +1.5
PMPB IAmb IAmb 07 53 31.0
comp=Z,35nm,1.2s
HBAR Harrisburg 21.89 36 P P 07 53 12.1 +0.2
OXF Oxford 21.89 40 P P 07 53 14.0 +2.1
baz=228
OXF Oxford 21.89 40 P P 07 53 14.3 +2.4
OXF IAmb IAmb 07 53 16.7
comp=Z,40nm,1.1s
Z47A Carrollton 21.91 45 P P 07 53 13.7 +1.6
Z47A IAmb IAmb 07 53 23.5
comp=Z,30nm,0.9s
MLAC Mammoth, Mammo 21.96 333 P P 07 53 14.6 +1.7
baz=147
LCAR Lake Charles 22.00 34 P P 07 53 12.2 -0.9
OMMB Old Mammoth Mi 22.02 332 P P 07 53 14.1 +0.5
OMMB IAmb IAmb 07 53 27.2
comp=Z,33nm,1.3s
MDPB Devils Postpil 22.07 332 P P 07 53 15.2 +1.1
MDPB IAmb IAmb 07 53 28.1
comp=Z,27nm,1.1s
RDMU Red Mountain 22.14 353 P P 07 53 14.9 +0.2
KSU1 Kansas State U 22.15 20 P P 07 53 16.5 +1.8
baz=205
S39A Bolivar 22.21 28 P P 07 53 15.6 +0.3
S39A IAmb IAmb 07 53 35.1
comp=Z,31nm,1.2s
JTS Las Juntas de 22.23 109 P P 07 53 18.3 +2.6
comp=Z,13nm,1.2s,baz=317,slow=19,SNR=2.7
MGMO Mountain Grove 22.27 31 P P 07 53 16.1 +0.2
N23A Red Feather La 22.28 1 P P 07 53 18.1 +1.7
baz=181
N23A Red Feather La 22.28 1 P P 07 53 14.6 -1.8
N23A IAmb IAmb 07 53 33.5
comp=Z,26nm,1.2s
DUG Dugway, Tooele 22.30 347 P P 07 53 17.7 +1.3
baz=164,SNR=13
DUG Dugway, Tooele 22.30 347 P P 07 53 15.3 -1.1
DUG IAmb IAmb 07 53 27.9
comp=Z,21nm,1.2s
LHV Little Huntoon 22.34 334 P P 07 53 15.8 -0.8
LHV IAmb IAmb 07 53 39.9
comp=Z,35nm,1.3s
NV11 Mina Array Sit 22.35 335 P P 07 53 15.6 -1.5
NV11 IAmb IAmb 07 53 43.1
comp=Z,44nm,1.4s
NVAR Mina Array Bea 22.41 335 P P 07 53 18.4 +0.7
comp=Z,7.7nm,1.1s,baz=154,slow=11,SNR=28
NVAR LR LR 08 01 21.9
comp=Z,592nm,20.2s,baz=157,slow=35
NVAR Mina Array Bea 22.41 335 P P 07 53 17.0 -0.7
JLU Jordanelle 22.43 350 P P 07 53 17.0 -0.9
250A Grady 22.47 50 P P 07 53 18.3 +0.1
SAO San Andreas Ge 22.52 327 P P 07 53 18.0 -0.7
LRAL Lakeview Retre 22.54 46 P P 07 53 21.1 +2.2
baz=235,SNR=8.9
LRAL Lakeview Retre 22.54 46 P P 07 53 19.9 +1.0
CTU Camp Tracy 22.57 349 P P 07 53 18.5 -0.9
RYN Ryan 22.67 335 P P 07 53 20.5 +0.1
T42A Van Buren 22.76 33 P P 07 53 21.8 +0.7
T42A IAmb IAmb 07 53 35.4
comp=Z,25nm,1.1s
KVN Kaiserville 22.86 336 P P 07 53 22.6 +0.1
KVN IAmb IAmb 07 53 31.5
comp=Z,24nm,1.2s
PBMO Poplar Bluff 22.91 34 P P 07 53 21.2 -1.6
PBMO IAmb IAmb 07 53 46.7
comp=Z,24nm,1.3s
TCUT Toone Canyon 22.93 350 P P 07 53 23.8 +0.6
WAKR Walker 22.95 333 P P 07 53 24.2 +0.8
CMB Columbia Colle 22.99 331 P P 07 53 24.1 +0.5
BGU Big Grassy Mou 23.05 347 P P 07 53 23.3 -1.0
RWWY Rawlins 23.09 358 P P 07 53 22.6 -2.3
RWWY IAmb IAmb 07 53 39.5
comp=Z,38nm,1.4s
R40A Maddies Statio 23.18 29 P P 07 53 25.9 +0.4
R40A IAmb IAmb 07 53 44.1
comp=Z,24nm,1.1s
352A Blakely 23.21 52 P P 07 53 27.2 +1.3
SPUT South Promonto 23.30 348 P P 07 53 26.7 -0.2
X48A Hartselle 23.35 43 P P 07 53 27.5 +0.2
X48A IAmb IAmb 07 53 29.6
comp=Z,16nm,1.1s
Y49A Blount Mountai 23.41 45 P P 07 53 27.5 -0.5
Y49A IAmb IAmb 07 53 45.9
comp=Z,33nm,1.2s
ELK Elko 23.43 343 P P 07 53 29.4 +1.1
comp=Z,3.8nm,1.0s,baz=172,slow=7.5,SNR=14
ELK Elko 23.43 343 P P 07 53 27.3 -1.0
HWUT Hardware Ranch 23.43 350 P P 07 53 29.1 +0.9
CCM Cathedral Cave 23.48 31 P P 07 53 29.5 +1.1
baz=218
CCM Cathedral Cave 23.48 31 P P 07 53 29.6 +1.1
CCM IAmb IAmb 07 53 52.0
comp=Z,22nm,1.1s
PNTR Pine Nut 23.51 333 P P 07 53 26.8 -2.3
PNTR IAmb IAmb 07 53 41.8
comp=Z,27nm,1.3s
VCNR Virginia City 23.70 334 P P 07 53 31.3 +0.3
VCNR IAmb IAmb 07 53 48.1
comp=Z,20nm,1.3s
P38A Dawn 23.74 25 P P 07 53 31.4 +0.3
P38A IAmb IAmb 07 53 49.2
comp=Z,33nm,1.4s
HVU Hansel Valley 23.82 348 P P 07 53 32.5 +0.5
FVM French Village 23.83 32 P P 07 53 32.0 0.0
FVM IAmb IAmb 07 53 42.4
comp=Z,18nm,1.1s
WVT Waverly 23.93 39 P P 07 53 34.4 +1.4
baz=228
WVT Waverly 23.93 39 P P 07 53 34.0 +1.1
WVT IAmb IAmb 07 53 48.1
comp=Z,18nm,1.3s
PAHR Pah Rah Range 23.94 335 P P 07 53 34.0 +0.8
PAHR IAmb IAmb 07 53 58.0
comp=Z,21nm,1.3s
Z51A Franklin 23.97 48 P P 07 53 33.2 -0.1
AFDM Forest Hills D 24.00 331 P P 07 53 33.8 +0.2
K22A Casper 24.04 360 P P 07 53 34.3 +0.2
T45A Paducah 24.07 37 P P 07 53 35.8 +1.6
TIGA Tifton 24.20 54 P P 07 53 36.7 +1.2
baz=243
TIGA Tifton 24.20 54 P P 07 53 37.1 +1.6
P40A Paris 24.29 28 P P 07 53 36.1 -0.1
V48A Smith Brothers 24.30 41 P P 07 53 36.9 +0.6
V48A IAmb IAmb 07 53 38.8
comp=Z,22nm,1.1s
BW06 Boulder Array 24.31 354 P P 07 53 36.6 -0.1
baz=173
BW06 Boulder Array 24.31 354 P P 07 53 35.9 -0.8
PD31 Pinedale Array 24.31 354 P P 07 53 36.6 -0.1
PDAR Pinedale Array 24.31 354 P P 07 53 37.4 +0.7
comp=Z,0.8nm,0.6s,baz=167,slow=9.2,SNR=8.7
PDAR LR LR 08 02 58.5
comp=Z,479nm,19.8s,baz=181,slow=36
PDAR Pinedale Array 24.31 354 P P 07 53 34.7 -2.0
FPAL Fort Paine 24.35 45 P P 07 53 35.1 -1.8
SLM Saint Louis 24.42 32 P P 07 53 39.2 +1.8
BEKR Beckworth 24.48 333 P P 07 53 38.3 +0.1
BEKR IAmb IAmb 07 53 51.0
comp=Z,14nm,1.1s
AHID Auburn Hatcher 24.49 351 P P 07 53 38.2 -0.1
SWET Sewanee 24.54 43 P P 07 53 36.9 -1.8
SWET IAmb IAmb 07 53 49.4
comp=Z,12nm,1.0s
ORV Oroville 24.73 331 P P 07 53 39.1 -1.2
ORV IAmb IAmb 07 53 53.2
comp=Z,27nm,1.3s
GDXM Geysers 24.77 328 P P 07 53 40.3 -0.4
GDXM IAmb IAmb 07 53 53.7
comp=Z,13nm,1.3s
CLTN Cedars of Leba 24.83 41 P P 07 53 41.8 +0.6
CLTN IAmb IAmb 07 53 43.8
comp=Z,20nm,1.1s
W50A Signal Mountai 24.94 44 P P 07 53 44.3 +2.1
T47A Sharon Grove 24.94 39 P P 07 53 43.4 +1.2
REDW Red Top Meadow 25.04 352 P P 07 53 44.0 +0.7
154A Montrose 25.11 52 P P 07 53 45.5 +1.7
SNOW Snow King Moun 25.13 352 P P 07 53 45.2 +1.1
TPAW Teton Pass 25.18 352 P P 07 53 45.5 +0.9
GOGA Godfrey 25.23 50 P P 07 53 46.8 +1.9
baz=240
Q44A Meyer Farm, Va 25.24 33 P P 07 53 45.9 +1.0
USIN University of 25.29 36 P P 07 53 44.5 -0.8
O03E Paynes Creek 25.46 332 P P 07 53 47.9 +0.9
baz=144
IMW Indian Meadow 25.58 352 P P 07 53 47.0 -1.3
FLWY Flagg Ranch 25.73 353 P P 07 53 48.4 -1.2
N41A Harden Midland 25.77 28 P P 07 53 49.8 +0.1
W52A Murphy 25.80 46 P P 07 53 50.3 +0.2
KCPM Cahto Peak 25.83 328 P P 07 53 51.1 +0.7
KCPM IAmb IAmb 07 53 58.5
comp=Z,18nm,1.3s
HLID Hailey 25.87 346 P P 07 53 52.1 +1.3
baz=162,SNR=14
HLID Hailey 25.87 346 P P 07 53 51.7 +0.9
HLID IAmb IAmb 07 54 14.6
comp=Z,18nm,1.2s
YPP Pitchstone Pla 25.93 353 P P 07 53 51.7 +0.2
WVOR Wild Horse Val 26.02 339 P P 07 53 51.6 -0.6
WVOR IAmb IAmb 07 54 19.8
comp=Z,14nm,1.2s
H17A Grant Village 26.03 353 P P 07 53 51.3 -1.0
WDC Whiskeytown Da 26.03 331 P P 07 53 51.2 -0.9
MFID Camas Ranch 26.07 344 P P 07 53 51.5 -1.0
MOD Modoc Plateau 26.17 336 P P 07 53 51.9 -1.6
MOD IAmb IAmb 07 54 03.8
comp=Z,13nm,1.2s
TKL Tuckaleechee C 26.22 45 LR LR 08 06 37.6
comp=Z,310nm,19.1s,baz=251,slow=42
WCI Wyandotte Cave 26.25 38 P P 07 53 56.5 +2.4
baz=227
KMRM Mail Ridge 26.30 329 P P 07 53 55.4 +0.8
YMP Mirror Lake Pl 26.32 354 P P 07 53 53.5 -1.5
YMR Madison River 26.34 352 P P 07 53 55.9 +0.8
BCYI Bear Canyon 26.38 348 P P 07 53 55.4 -0.1
N02D Trinity Center 26.42 331 P P 07 53 53.8 -1.9
baz=143
BG3 Lake Jocassee 26.43 47 P P 07 53 56.5 +0.8
YHH Holmes Hill 26.45 353 P P 07 53 57.0 +0.9
HODGE Hodges 26.52 49 P P 07 53 58.0 +1.5
YHL Hebgen Lake 26.55 352 P P 07 53 59.5 +2.5
YNE Yellowstone No 26.57 354 P P 07 53 58.6 +1.4
X54A Belton 26.59 48 P P 07 53 59.1 +1.9
baz=239,SNR=5.6
M04C Macdoel 26.69 334 P P 07 53 59.4 +1.2
baz=146
157A Early Branch 26.73 53 P P 07 54 00.9 +2.5
baz=244
MCMT McKenzie Canyo 26.78 350 P P 07 53 57.8 -1.3
J08A Circle Bar Ran 26.79 340 P P 07 54 00.3 +1.3
M02C Callahan 26.82 332 P P 07 53 59.4 +0.2
baz=144
TZTN Tazewell 26.88 44 P P 07 54 01.7 +1.9
baz=234
W54A Cherokee Point 27.00 48 P P 07 54 03.1 +2.2
baz=239
YBH Yreka Blue Hor 27.03 332 P P 07 54 00.3 -0.9
comp=Z,0.9nm,0.9s,baz=47,slow=5.8,SNR=3.7
YBH LR LR 08 04 20.6
comp=Z,573nm,19.2s,baz=112,slow=36
X55A Gracelyn & Ava 27.08 49 P P 07 54 02.8 +1.2
baz=240
L04D Klamath Falls 27.25 333 P P 07 54 03.3 +0.2
baz=146
DLMT Dillon 27.26 350 P P 07 54 02.1 -1.2
DLMT IAmb IAmb 07 54 30.2
comp=Z,12nm,1.2s
JSC Jenkinsville 27.26 50 P P 07 54 01.8 -1.4
JSC IAmb IAmb 07 54 11.2
comp=Z,19nm,1.3s
GCMT Greycliff 27.32 355 P P 07 54 00.5 -3.3
BOZ Bozeman (W) 27.34 352 P P 07 54 05.0 +1.0
baz=169
BOZ Bozeman (W) 27.34 352 P P 07 54 03.5 -0.5
BOZ IAmb IAmb 07 54 21.6
comp=Z,15nm,1.2s
X56A White Oak 27.53 50 P P 07 54 07.8 +2.2
baz=241
V54A Nebo 27.53 47 P P 07 54 07.3 +1.6
baz=238,SNR=6.9
KMSC Kings Mountain 27.63 48 P P 07 54 08.0 +1.5
baz=240
LRM Limekiln Ridge 27.68 351 P P 07 54 08.1 +0.9
PLID Pearl Lake 27.68 345 P P 07 54 07.3 +0.2
J05D Fort Rock, OR 27.71 336 P P 07 54 07.9 +0.6
baz=149
L02E Cave Junction 27.77 332 P P 07 54 07.9 +0.3
baz=143
W56A Indian Trail 28.16 49 P P 07 54 13.1 +1.8
baz=241
K02D Willamette Mer 28.23 332 P P 07 54 12.4 +0.5
baz=144
HRY Holter Researc 28.46 352 P P 07 54 13.4 -0.5
V56A Mocksville 28.56 48 P P 07 54 15.9 +1.2
baz=240
I05D Terrebonne, OR 28.65 337 P P 07 54 17.0 +1.4
baz=149
KEBM Edson Butte 28.66 332 P P 07 54 15.8 0.0
J01E Myrtle Point 28.71 333 P P 07 54 17.4 +1.4
baz=144
MSO Missoula 28.91 349 P P 07 54 18.5 +0.6
baz=165,SNR=10
MSO Missoula 28.91 349 P P 07 54 19.0 +1.1
U56A King 28.91 47 P P 07 54 18.4 +0.5
baz=239
V57A Coltrane Farms 29.10 48 P P 07 54 21.5 +1.8
baz=241
EGMT Eagleton 29.55 355 P P 07 54 25.0 +1.5
baz=174
T57A Hurt 30.02 47 P P 07 54 29.3 +1.5
baz=240
NEW Newport 30.93 346 P P 07 54 37.0 +1.3
baz=160
NEW Newport 30.93 346 P P 07 54 35.2 -0.6
NEW IAmb IAmb 07 54 52.9
comp=Z,13nm,1.2s
V61A Roper 31.37 51 P P 07 54 40.0 +0.4
baz=245
B08A Colville Reser 31.57 343 P P 07 54 39.6 -1.8
B08A IAmb IAmb 07 54 53.4
comp=Z,14nm,1.3s
N54A Moraine State 31.74 40 P P 07 54 42.7 -0.2
baz=233
D03D Eldon 32.02 338 P P 07 54 45.7 +0.4
baz=149
ULM Lac du Bonnet 32.72 12 LR LR 08 08 29.6
comp=Z,675nm,18.2s,baz=232,slow=37
O57A Amberson 32.78 43 P P 07 54 52.8 +0.8
baz=237
N57A Milroy 33.13 42 P P 07 54 54.9 -0.3
baz=237
K56A Middlesex 34.37 39 P P 07 55 07.3 +1.4
baz=234
BINY Binghamton 34.91 41 P P 07 55 10.9 +0.3
baz=237
H57A Richville 36.54 38 P P 07 55 25.5 +1.1
baz=235
I59A Olmsteadville 37.08 40 P P 07 55 30.1 +1.0
baz=238
ATAH Atahualpa 37.53 130 P P 07 55 32.1 -1.6
comp=Z,2.1nm,0.6s,baz=38,slow=7.7,SNR=2.0
H59A Cadyville 37.65 39 P P 07 55 34.9 +1.0
baz=237
E56A St. Veronique 37.96 36 P P 07 55 36.5 0.0
baz=233
D55A Sainte-Anne-du 38.01 35 P P 07 55 37.6 +0.7
baz=232
E57A Chemin Saint G 38.38 36 P P 07 55 41.4 +1.3
baz=234
J63A Strafford 38.57 43 P P 07 55 43.2 +1.6
baz=241
NNA Nana 42.01 134 LR LR 08 10 18.1
comp=Z,221nm,18.1s,baz=333,slow=31
TAOE Nuku Hiva Isla 43.08 234 eLR LR 08 08 02.6
comp=Z,724nm,25.9s
YKA Yellowknife Ar 44.29 354 P P 07 56 26.8 -1.5
comp=Z,0.6nm,0.7s,baz=162,slow=6.5,SNR=3.2
YKA LR LR 08 15 58.3
comp=Z,401nm,19.1s,baz=0.0,slow=37
SCHQ Schefferville 47.04 30 LR LR 08 16 21.8
comp=Z,183nm,20.7s,baz=25,slow=36
LPAZ La Paz 51.08 130 P P 07 57 21.6 -0.8
comp=Z,1.0nm,0.9s,baz=11,slow=5.2,SNR=2.6
LPAZ LR LR 08 16 33.5
comp=Z,215nm,20.6s,baz=314,slow=33
LPAZ La Paz 51.08 130 P P 07 57 20.6 -1.8
C36M Paulatuk 51.98 352 P P 07 57 27.9 +0.3
baz=159
SCRK Sand Creek 52.06 340 P P 07 57 28.3 -0.2
baz=133
INK Inuvik 52.62 348 P P 07 57 31.8 -0.7
comp=Z,6.5nm,1.0s,baz=134,slow=7.3,SNR=10.0
INK Inuvik 52.62 348 P P 07 57 31.5 -1.0
HDA Harding Lake 53.32 339 P P 07 57 37.9 +0.2
baz=130
IL31 53.53 340 P P 07 57 36.8 -2.4
IL31 IAmb IAmb 07 57 50.2
comp=Z,11nm,1.2s

ILAR	**Eielson Array**	**53.53 340**	P	**P**	**07 57 39.2**	**-0.1**
	comp=Z,3.0nm,1.1s,baz=154,slow=7.1,SNR=10						
ILAR			LR	LR	08 20 56.6		
	comp=Z,98nm,18.6s,baz=134,slow=37						
ILAR	**Eielson Array**	**53.53 340**	P	**P**	**07 57 39.4**	**+0.1**
I23K	**Minto, Yukon-K**	**54.59 339**	P	**P**	**07 57 47.2**	**+0.2**
	baz=128						
LVC	**Limon Verde**	**54.85 137**	LR	LR	08 16 07.8		
	comp=Z,121nm,19.4s,baz=307,slow=30						
MLY	**Manley**	**54.99 339**	P	**P**	**07 57 50.1**	**+0.1**
	baz=126						
PPT	**Papeete**	**55.66 232**	LR	LR	08 15 18.9		
	comp=Z,172nm,21.9s,baz=43,slow=29						
PPT2	**Papeete2**	**55.67 232**	*e*S	**S**	**08 05 43.5**	**+1.4**
	comp=Z,120nm,27.8s						
PPT2			*e*LR	LR	08 13 53.0		
	comp=Z,724nm,26.2s,baz=42						
COLD	**Coldfoot**	**56.14 341**	P	**P**	**07 57 59.3**	**+1.2**
	baz=128						
SIV	**San Ignacio**	**56.21 125**	LR	LR	08 19 28.2		
	comp=Z,236nm,19.6s,baz=319,slow=33						
RES	**Resolute Bay**	**56.51 4**	LR	LR	08 21 48.7		
	comp=Z,165nm,19.9s,baz=192,slow=36						
TOLK	**Toolik Lake Re**	**56.83 343**	P	**P**	**07 58 04.2**	**+1.2**
	baz=129						
H03N2	**Juan Fernandez**	**57.92 153**	T	T	09 00 52.7		
	baz=331,slow=77,SNR=24						
H03N1	**Juan Fernandez**	**57.93 153**	T	T	09 00 55.4		
	baz=331,slow=77,SNR=45						
H03N3	**Juan Fernandez**	**57.93 153**	T	T	09 00 56.0		
	baz=331,slow=77,SNR=31						
TBI	**Tubuai**	**59.23 227**	*e*LR	LR	08 15 28.0		
	comp=Z,637nm,27.5s,baz=48						
CPUP	**Villa Florida**	**65.20 132**	P	**P**	**07 58 59.5**	**-1.0**
	comp=Z,1.2nm,1.1s,baz=5.7,slow=10,SNR=2.6						
CPUP			LR	LR	08 25 29.5		
	comp=Z,117nm,21.6s,baz=328,slow=34						
PLCA	**Paso Flores**	**67.69 151**	P	**P**	**07 59 16.4**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=308,slow=8.2,SNR=3.6						
PLCA			LR	LR	08 22 31.3		
	comp=Z,311nm,18.9s,baz=340,slow=30						
PETK	**Petropavlovsk-**	**78.91 322**	LR	LR	08 28 50.1		
	comp=Z,96nm,18.6s,baz=80,slow=31						
NOA	**NORSAR Array B**	**86.40 26**	LR	LR	08 41 30.8		
	comp=Z,72nm,18.6s,baz=285,slow=37						
ESDC	**Sonseca Array**	**87.45 49**	LR	LR	08 40 02.5		
	comp=Z,35nm,20.1s,baz=295,slow=35						
FINES	**FINESS Array B**	**91.73 21**	LR	LR	08 43 04.8		
	comp=Z,159nm,18.8s,baz=356,slow=36						
NRIK	**Noril'sk**	**91.80 355**	LR	LR	08 44 25.2		
	comp=Z,51nm,19.9s,baz=19,slow=37						
DZM	**Mont Dzumac**	**94.35 248**	*e*LR	LR	08 32 04.4		
	comp=Z,494nm,26.6s						
GERES	**GERESS Array B**	**94.37 35**	LR	LR	08 47 33.6		
	comp=Z,55nm,18.4s,baz=302,slow=38						
KLR	**Kul'dur**	**95.19 326**	LR	LR	08 39 09.8		
	comp=Z,68nm,21.4s,baz=14,slow=32						
MJAR	**Matsushiro Arr**	**98.13 313**	LR	LR	08 36 34.2		
	comp=Z,68nm,21.9s,baz=205,slow=30						
KEST	**Kesra**	**98.65 48**	LR	LR	08 48 49.9		
	comp=Z,49nm,18.6s,baz=264,slow=37						
DBIC	**Dimbokro**	**98.66 80**	LR	LR	08 43 30.1		
	comp=Z,48nm,18.7s,baz=270,slow=34						
LZH	**Lanzhou**	**118.64 332**	*e*PKP	**PKPdf**	**08 07 05.3**	**-2.4**
LZH			pPKP	sPKPdf	08 07 15.8	+4.8	
LZH			sPKP		08 07 19.4		
WRA	**Warramunga Arr**	**123.01 258**	PKP	**PKPdf**	**08 07 15.2**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=86,slow=3.3,SNR=2.5						
ASAR	**Alice Springs**	**123.94 254**	PKP	**PKiKP**	**08 07 17.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=64,slow=2.2,SNR=2.7						

*IDC **17** 08:06:45.8±1.5, 9.°39S×155.°10E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/44, mbtmp3.8/7, MS3.4/9, Ms1 3.4/9, ms1mx3.1/32, Error ellipse: s-maj=55.2km s-min=25.7km az=120.0*

ISC 17 08:06:51.1±1.4, 9.°4S±0.°2×155.°0E±0.°3, h33km, n15, σ0°34/8, mb3.8/7, MS3.3/6, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**5.87**	**329**	LR		LR	LR	08 10 35.0	
	comp=Z,255nm,20.6s,baz=148,slow=39								
PMG	**Port Moresby**	**7.77**	**269**	LR		LR	LR	08 11 52.7	
	comp=Z,180nm,19.7s,baz=146,slow=39								
DZM	**Mont Dzumac**	**16.70**	**140**	LR		LR	LR	08 16 29.7	
	comp=Z,378nm,18.6s,baz=346,slow=35								
WRA	**Warramunga Arr**	**22.57**	**240**	P		**P**	**P**	**08 11 48.7**	**-0.2**
	2.2nm,0.7s,baz=64,slow=10.0,SNR=22								
WRA				LR		LR	LR	08 20 36.9	
	comp=Z,45nm,18.3s,baz=60,slow=37								
ASAR	**Alice Springs**	**24.68**	**232**	P		**P**	**P**	**08 12 09.4**	**+0.1**
	3.5nm,0.9s,baz=64,slow=9.7,SNR=30								
GUMO	**Guam**	**24.97**	**336**	LR		LR	LR	08 21 24.8	
	comp=Z,30nm,21.1s,baz=124,slow=35								
STKA	**Stephens Creek**	**25.61**	**207**	P		**P**	**P**	**08 12 17.1**	**-0.5**
	3.1nm,0.8s,baz=44,slow=12,SNR=6.8								
STKA				LR		LR	LR	08 22 01.5	
	comp=Z,115nm,19.6s,baz=23,slow=36								
FITZ	**Fitzroy Crossi**	**29.80**	**250**	P		**P**	**P**	**08 12 55.5**	**+0.2**
	0.9nm,0.8s,baz=100,slow=9.5,SNR=1.8								
USRK	**Ussuriysk Ar.**	**57.29**	**340**	LR		LR	LR	08 39 15.4	
	comp=Z,50nm,21.7s,baz=69,slow=34								
PETK	**Petropavlovsk-**	**62.30**	**2**	LR		LR	LR	08 40 42.3	
	comp=Z,19nm,21.6s,baz=71,slow=33								
SONM	**Songino Array**	**71.37**	**328**	P		**P**	**P**	**08 18 07.7**	**-0.3**
	0.4nm,0.8s,baz=131,slow=5.9,SNR=2.3								
MAW	**Mawson**	**82.21**	**203**	P		**P**	**P**	**08 19 08.8**	**+0.2**
	0.9nm,0.6s,baz=104,slow=5.7,SNR=2.4								
MKAR	**Makanchi Array**	**85.23**	**319**	LR		LR	LR	08 58 59.3	
	comp=Z,39nm,18.7s,baz=4.5,slow=37								
ILAR	**Eielson Array**	**85.58**	**21**	P		**P**	**P**	**08 19 25.8**	**0.0**
	0.6nm,1.0s,baz=234,slow=7.7,SNR=3.0								
TORD	**Torodi Ar. Bea**	**153.60**	**281**	PKPbc		**PKiKP**	**P**	**08 26 48.0**	**+0.3**
	0.4nm,0.6s,baz=108,slow=4.7,SNR=2.9								

*ANF **17** 08:16:12.6±1.3, 41.°85N×119.°60W, h7km±12km, ML4.0/18, Error ellipse: s-maj=5.2km s-min=2.4km az=90.0*

*IDC **17** 08:16:12.3±0.6, 41.°96N×119.°68W, h0km, mb3.8/3, mb1 3.8/9, mb1mx3.6/52, mbtmp3.5/9, ML3.1/5, MS2.8/5, Ms1 2.8/5, ms1mx2.6/57, Error ellipse: s-maj=8.0km s-min=5.1km az=13.0*

*NEIC **17** 08:16:13.5, 41.°93N×119.°63W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.83; $M_{\theta\theta}$=3.10; $M_{\phi\phi}$=5.93; $M_{r\theta}$=-3.22; $M_{\theta\phi}$=0.45; $M_{r\phi}$=5.37; Fault plane solution: $M_0$8.11000×10^{14} NP1:$\phi_0$28.76000°, δ77.42000°, λ-60.27000°. NP2:$\phi_0$139.64000°, δ32.06000°, λ-155.76000°. Principal axes: T 8.5691, Plg26.0000°, Azm96.0000°; N -1.0030, Plg29.0000°, Azm202.0000°; P -7.5661, Plg49.0000°, Azm331.0000°;*

*NEIC **17** 08:16:13.9±3.0, 41.°96N±0.°04×119.°68W±0.°06, h7km±5km Error ellipse: s-maj=6.4km s-min=5.9km az=144.0*

*SEA **17** 08:16:13.1±3.7, 41.°83N±0.°04×119.°61W±0.°04, h0km±7km, Error ellipse: s-maj=5.9km s-min=3.7km az=176.0*

*REN **17** 08:16:13.5±3.0, 41.°93N±0.°04×119.°628W±0.°009, h2km±7km, ML4.0/6, ML3.8/61(SEA), Mwr3.9/81(NEIC), Error ellipse: s-maj=6.3km s-min=0.8km az=177.0*

ISC 17 08:16:12.9±1.3, 41.°94N±0.°03×119.°62W±0.°03, h1km±10km, n110, σ1°44/124, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.51**	**267**			**Pg**	**08 16 22.8**	**+0.1**	
MOD				Sg		**Sg**	**08 16 30.1**	**+0.9**	
WVOR	**Wild Horse Val**	**0.89**	**55**	**Pg**		**Pg**	**08 16 30.3**	**+0.4**	
WVOR				Sg		**Sb**	**08 16 43.5**	**0.0**	
K05A	**Summer Lake**	**1.23**	**310**	Pn		**Pg**	**08 16 36.8**	**+0.3**	
K05A				Sg		**Sn**	**08 16 54.3**	**-0.5**	
J08A	**Circle Bar Ran**	**1.66**	**30**			**Pn**	**08 16 43.0**	**-0.2**	
M04C	**Macdoel**	**1.66**	**265**	P		**Pn**	**08 16 41.9**	**-1.4**	
	baz=85,SNR=667								
M04C				S		**Sn**	**08 17 05.2**	**-0.2**	
	baz=85								
K04D	**Chiloquin, OR**	**1.73**	**294**	P		**Pn**	**08 16 43.2**	**-0.9**	
	baz=114,SNR=114								
K04D				S		**Sb**	**08 17 07.4**	**-0.3**	
	baz=114								
J05D	**Fort Rock, OR**	**1.80**	**319**	P		**Pn**	**08 16 44.8**	**-0.4**	
	baz=139,SNR=936								
J05D				Sb		**Sg**	**08 17 12.3**	**+1.6**	
	baz=139								
L04D	**Klamath Falls**	**2.02**	**279**	P		**Pn**	**08 16 46.8**	**-1.4**	
	baz=98,SNR=363								
L04D				Sb		**Sg**	**08 17 17.4**	**-0.3**	
	baz=98								
PINE	**Pine Mountain**	**2.09**	**333**	Pn		**Pn**	**08 16 49.5**	**+0.2**	
BEKR	**Beckworth**	**2.14**	**195**	Pn		**Pn**	**08 16 50.7**	**+0.8**	
I07A	**Izee**	**2.15**	**2**			**Pn**	**08 16 50.5**	**+0.6**	
PAHR	**Pah Rah Range**	**2.23**	**175**			**Pn**	**08 16 51.7**	**+0.5**	
J04D	**Umpqua National**	**2.25**	**306**	P		**Pn**	**08 16 51.4**	**-0.1**	
	baz=125,SNR=102								
YBH	**Yreka Blue Hor**	**2.32**	**266**	Pn		**Pn**	**08 16 51.0**	**-1.2**	
	9.5nm,0.3s,baz=79,slow=12,SNR=46								
YBH				Pg		**Pb**	**08 16 53.7**	**-1.8**	
	11nm,0.3s,baz=80,slow=14,SNR=66								
YBH				LR		LR	LR	08 17 19.1	
	comp=Z,104nm,19.1s,baz=144,slow=29								
YBH				Lg		Lg		08 17 24.4	
	32nm,0.3s,baz=13,slow=12,SNR=12								
YBH	**Yreka Blue Hor**	**2.32**	**266**	Pn		**Pn**	**08 16 51.0**	**-1.2**	
LOY	**Loyalton**	**2.32**	**192**			**Pn**	**08 16 53.6**	**+1.2**	
O03E	**Paynes Creek**	**2.32**	**226**	P		**Pn**	**08 16 50.9**	**-1.4**	
	baz=45,SNR=172								
O03E				Sb		**Sb**	**08 17 24.7**	**-0.2**	
	baz=45								
PEAR	**Peavine Mounta**	**2.34**	**186**			**Pn**	**08 16 53.0**	**+0.3**	
KBF	**Kyburz Flat**	**2.47**	**191**			**Pn**	**08 16 56.1**	**+1.7**	
M02C	**Callahan**	**2.48**	**258**	P		**Pn**	**08 16 52.4**	**-2.1**	
	baz=77,SNR=68								
M02C				Sb		**Sb**	**08 17 30.3**	**+0.9**	
	baz=77								
N02D	**Trinity Center**	**2.51**	**249**	P		**Pn**	**08 16 52.8**	**-2.1**	
	baz=67,SNR=177								
N02D				Sb		**Sb**	**08 17 31.0**	**+0.8**	
	baz=67								
HUMO	**Hull Mountain**	**2.56**	**286**	Pn		**Pn**	**08 16 54.1**	**-1.5**	
WDC	**Whiskeytown Da**	**2.58**	**239**	Pn		**Pn**	**08 16 54.0**	**-1.9**	
VCNR	**Virginia City**	**2.64**	**180**	Pn		**Pb**	**08 16 59.8**	**-1.2**	
I05D	**Terrebonne, OR**	**2.71**	**333**	Sb		**Sg**	**08 17 39.7**	**-0.3**	
	baz=152								
I04A	**Tendick Farm,**	**2.77**	**313**	Pb		**Pb**	**08 17 03.5**	**+0.3**	
	baz=132								
I04A				Sb		**Sg**	**08 17 41.1**	**-0.7**	
	baz=132								
ORV	**Oroville**	**2.77**	**212**	Pn		**Pn**	**08 16 58.5**	**+0.1**	
PNTR	**Pine Nut**	**2.84**	**180**	Pn		**Pb**	**08 17 02.9**	**-1.7**	
RUBR	**Rubicon Trail**	**2.91**	**188**	Pn		**Pb**	**08 17 04.8**	**-0.9**	
O02D	**Mt. Diablo Mer**	**2.97**	**235**	P		**Pn**	**08 16 59.5**	**-1.7**	
	baz=53								
O02D				Sb		**Sb**	**08 17 44.0**	**+0.5**	
	baz=53								
L02E	**Cave Junction**	**2.97**	**276**	P		**Pn**	**08 17 00.8**	**-0.4**	
	baz=94,SNR=77								
L02E				Sb		**Sb**	**08 17 44.4**	**+0.9**	
	baz=94								
K02D	**Willamette Mer**	**3.09**	**286**	P		**Pn**	**08 17 02.8**	**-0.1**	
	baz=104,SNR=142								
KVN	**Kaiserville**	**3.11**	**158**			**Pn**	**08 17 04.2**	**+1.0**	
AFDM	**Forest Hills D**	**3.16**	**199**	Pn		**Pn**	**08 17 06.2**	**+2.4**	
MFID	**Camas Ranch**	**3.17**	**61**	Pn		**Pn**	**08 17 03.6**	**-0.3**	
KRMB	**Red Mountain**	**3.23**	**264**	Pn		**Pn**	**08 17 04.6**	**-0.3**	
I03D	**Drain, OR**	**3.26**	**304**	Sb		**Sg**	**08 17 55.1**	**-2.5**	
	baz=122								
KHMM	**Horse Mountain**	**3.27**	**252**	Pn		**Pn**	**08 17 07.1**	**+1.7**	
BMO	**Blue Mountains**	**3.37**	**29**	Pn		**Pn**	**08 17 05.8**	**-1.0**	
G08A	**Pilot Rock**	**3.39**	**8**	Pn		**Pn**	**08 17 06.3**	**-0.7**	
RYN	**Ryan**	**3.41**	**165**	Pn		**Pn**	**08 17 09.0**	**+1.7**	
WAKR	**Walker**	**3.43**	**178**	Pn		**Pn**	**08 17 07.0**	**-0.7**	
KBO	**Bosley Butte**	**3.44**	**276**	Pn		**Pn**	**08 17 06.3**	**-1.4**	
H04D	**Lebanon**	**3.45**	**320**	Sb		**Sg**	**08 18 01.7**	**-1.9**	
	baz=138								
JCC	**Jacoby Creek,**	**3.50**	**253**	Pn		**Pn**	**08 17 07.4**	**-1.0**	
ELK	**Elko**	**3.51**	**108**	Pn		**Pn**	**08 17 09.4**	**+0.7**	
	2.4nm,0.3s,baz=297,slow=11,SNR=40								
ELK				Sn		**Sb**	**08 17 55.5**	**-3.5**	
	4.3nm,0.3s,baz=183,slow=15,SNR=3.9								
ELK				Lg		Lg		08 18 03.5	
	27nm,0.3s,baz=6.3,slow=23,SNR=13								
ELK				LR		LR	LR	08 18 33.0	
	comp=Z,53nm,20.0s,baz=272,slow=40								
ELK	**Elko**	**3.51**	**108**	Pn		**Pn**	**08 17 07.6**	**-1.2**	
KMRM	**Mail Ridge**	**3.53**	**242**	Pn		**Pn**	**08 17 06.7**	**-2.2**	
KEBM	**Edson Butte**	**3.61**	**287**	Pn		**Pn**	**08 17 10.4**	**+0.3**	
NVAR	**Mina Array Bea**	**3.64**	**163**	Pn		**Pn**	**08 17 10.8**	**+0.2**	
	0.9nm,0.3s,baz=342,slow=12,SNR=36								
NVAR				Pg		**Pb**	**08 17 18.6**	**+0.4**	
	8.5nm,0.3s,baz=340,slow=15,SNR=61								
NVAR				Lg		Lg		08 18 07.5	
	33nm,0.3s,baz=164,slow=10,SNR=14								
NVAR				LR		LR	LR	08 18 58.3	
	comp=Z,211nm,19.7s,baz=349,slow=45								
NV11	**Mina Array Sit**	**3.67**	**162**	Pn		**Pn**	**08 17 09.1**	**-1.9**	
KCPM	**Cahto Peak**	**3.75**	**235**	Pn		**Pn**	**08 17 12.1**	**0.0**	
LHV	**Little Huntoon**	**3.78**	**167**	Pn		**Pn**	**08 17 12.6**	**+0.3**	
CMB	**Columbia Colle**	**3.94**	**189**	Pn		**Pn**	**08 17 12.3**	**-2.2**	
PLID	**Pearl Lake**	**4.11**	**39**	Pn		**Pn**	**08 17 18.6**	**+1.6**	
HLID	**Hailey**	**4.17**	**65**	P		**Pn**	**08 17 17.4**	**-0.4**	
	baz=248								
HLID	**Hailey**	**4.17**	**65**	Pn		**Pn**	**08 17 18.4**	**+0.6**	
TPH	**Tonopah**	**4.27**	**154**	Pn		**Pn**	**08 17 19.9**	**+0.7**	
MDPB	**Devils Postpil**	**4.32**	**174**	Pn		**Pn**	**08 17 19.6**	**-0.4**	
OMMB	**Old Mammoth Mi**	**4.34**	**173**			**Pn**	**08 17 18.7**	**-1.6**	
F10A	**Beach Ranch, E**	**4.39**	**22**	Pn		**Pn**	**08 17 22.4**	**+1.6**	
HAWA	**Hanford**	**4.46**	**1**	Pn		**Pn**	**08 17 22.5**	**+0.9**	
F04A	**Amboy**	**4.48**	**334**	Pn		**Pn**	**08 17 23.1**	**+1.3**	
E07A	**Sunnyside**	**4.62**	**358**	Pn		**Pn**	**08 17 24.5**	**+0.6**	
R11A	**Troy Canyon, C**	**4.73**	**138**	P		**Pn**	**08 17 27.2**	**+1.6**	
	baz=320								
R11A	**Troy Canyon, C**	**4.73**	**138**	Pn		**Pn**	**08 17 27.0**	**+1.4**	
SPR3	**Spring Creek 3**	**4.99**	**124**			**Pn**	**08 17 31.9**	**+2.7**	
BGU	**Big Grassy Mou**	**5.06**	**99**			**Pn**	**08 17 31.1**	**+1.1**	
HVU	**Hansel Valley**	**5.12**	**89**	Pn		**Pn**	**08 17 31.8**	**+1.0**	
BCYI	**Bear Canyon**	**5.13**	**60**	Pn		**Pn**	**08 17 31.5**	**+0.4**	
D08A	**Wollman Farm,**	**5.15**	**5**	Pn		**Pn**	**08 17 33.1**	**+2.0**	
SAO	**San Andreas Ge**	**5.35**	**196**	Pn		**Pn**	**08 17 33.2**	**-0.7**	
LTY	**Liberty**	**5.37**	**352**	Pn		**Pn**	**08 17 32.7**	**-1.5**	
SPUT	**South Promonto**	**5.41**	**94**	Pn		**Pn**	**08 17 34.5**	**-0.4**	
DUG	**Dugway, Tooele**	**5.43**	**106**	P		**Pn**	**08 17 36.3**	**+1.2**	
	baz=291								
DUG	**Dugway, Tooele**	**5.43**	**106**	Pn		**Pn**	**08 17 35.3**	**+0.1**	
PSUT	**Pine Spring**	**5.57**	**126**	Pn		**Pn**	**08 17 38.9**	**+1.8**	
TPNV	**Topopah Spring**	**5.62**	**151**	P		**Pn**	**08 17 39.2**	**+1.4**	
	baz=333								
TPNV	**Topopah Spring**	**5.62**	**151**	Pn		**Pn**	**08 17 38.9**	**+1.1**	
MCMT	**McKenzie Canyo**	**5.72**	**57**			**Pn**	**08 17 41.2**	**+2.0**	
PRN	**Pahroc Range**	**5.73**	**141**	Pn		**Pn**	**08 17 41.5**	**+2.2**	
HWUT	**Hardware Ranch**	**6.03**	**90**			**Pn**	**08 17 43.3**	**-0.1**	
CTU	**Camp Tracy**	**6.06**	**99**	Pn		**Pn**	**08 17 43.9**	**+0.1**	
JLU	**Corralee**	**6.30**	**99**	Pn		**Pn**	**08 17 48.0**	**+0.9**	
TCRU	**Three Creeks R**	**6.41**	**119**	Pn		**Pn**	**08 17 49.5**	**+0.8**	
LRM	**Limekiln Ridge**	**6.48**	**51**	Pn		**Pn**	**08 17 51.2**	**+1.6**	
ICU	**Indian Springs**	**6.50**	**135**			**Pn**	**08 17 52.0**	**+2.2**	
NEW	**Newport**	**6.57**	**15**	Pn		**Pn**	**08 17 51.7**	**+1.0**	
	0.1nm,0.3s,baz=198,slow=20,SNR=1.4								
NEW				Lg		Lg		08 19 39.8	
	0.0nm,0.3s,baz=300,slow=24,SNR=2.6								
MVU	**Marysvale**	**6.62**	**119**	Pn		**Pn**	**08 17 52.3**	**+0.7**	
MSU	**Marysvale**	**6.64**	**119**	Pn		**Pn**	**08 17 53.5**	**+1.7**	
MTPU	**Mount Pierson**	**6.91**	**122**	Pn		**Pn**	**08 17 55.8**	**+0.2**	
TMUT	**Trail Mountain**	**6.92**	**110**	Pn		**Pn**	**08 17 58.1**	**+2.4**	
LCMT	**Little Creek M**	**6.96**	**133**	Pn		**Pn**	**08 17 58.6**	**+2.4**	
Q16A	**Castle Valley**	**7.12**	**112**			**Pn**	**08 18 00.4**	**+2.1**	
KNB	**Kanab**	**7.20**	**131**	Pn		**Pn**	**08 18 00.2**	**+0.9**	
PKCU	**Pink Cliffs**	**7.20**	**126**	Pn		**Pn**	**08 18 00.5**	**+0.9**	
SRU	**San Rafael Swe**	**7.48**	**109**	Pn		**Pn**	**08 18 04.0**	**+0.7**	
PDAR	**Pinedale Array**	**7.50**	**80**	Pn		**Pn**	**08 18 07.7**	**+4.0**	
	baz=257,slow=12,SNR=7.3								
PDAR				Lg		Lg		08 20 07.2	
	0.1nm,0.3s,baz=255,slow=31,SNR=2.6								
RDMU	**Red Mountain**	**7.70**	**97**	Pn		**Pn**	**08 18 08.3**	**+2.0**	
PV14	**Lion Creek, Pa**	**8.86**	**110**			**Pn**	**08 18 26.3**	**+4.0**	
PV17	**East Wray Mesa**	**8.95**	**111**			**Pn**	**08 18 23.1**	**-0.3**	
ANMO	**Albuquerque**	**12.45**	**120**	Pn		**Pn**	**08 19 13.9**	**+2.5**	
	0.1nm,0.3s,baz=330,slow=8.9,SNR=4.3								
ANMO				LR		LR	LR	08 24 00.3	
	comp=Z,42nm,22.0s,baz=306,slow=38								
T25A	**Trinidad**	**12.68**	**107**			**Pn**	**08 19 18.0**	**+3.5**	
TXAR	**Lajitas Array**	**18.03**	**129**	P		**P**	**08 20 26.6**	**+1.3**	
	0.0nm,0.3s,baz=320,slow=8.3,SNR=5.1								
TXAR	**Lajitas Array**	**18.03**	**129**	P		**Pn**	**08 20 24.7**	**0.0**	
LPIG	**La Paz**	**19.40**	**154**	LR		LR	08 28 10.6		
	comp=Z,72nm,19.3s,baz=284,slow=37								
INK	**Inuvik**	**27.46**	**349**	P		**P**	**08 22 01.0**	**+1.0**	
	1.8nm,1.1s,baz=184,slow=11,SNR=3.2								
ILAR	**Eielson Array**	**27.65**	**335**	P		**P**	**08 22 02.9**	**+1.1**	
	0.9nm,0.9s,baz=150,slow=7.3,SNR=10								
RAR	**Rarotonga**	**72.98**	**219**	LR		LR	08 51 28.3		
	comp=Z,146nm,20.6s,baz=351,slow=29								
KURBB	**Kurchatov Arra**	**86.47**	**349**	P		**P**	**08 28 55.2**	**-1.8**	
	0.3nm,0.6s,baz=25,slow=4.6,SNR=3.0								

IDC 17 08:16:48.6±2.7, 6.°25S×130.°00E, h149km±37km, mb3.3/1, mb1 3.1/5, mb1mx2.9/45, mbtmp3.5/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/19, Error ellipse: s-maj=69.6km s-min=20.3km az=87.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.50**	**13**	P		P	Pn	08 18 08.8	+0.1
	0.9nm,0.3s,baz=216,slow=23,SNR=12								
SIJI				S		Sn		08 19 01.2	-10
	2.5nm,0.3s,baz=224,slow=22,SNR=8.3								
FITZ	**Fitzroy Crossi**	**12.52**	**199**	P		P	Pn	08 19 42.7	+1.0
	0.1nm,0.3s,baz=13,slow=12,SNR=1.3								
FITZ				S		Sn		08 21 55.9	-4.2
	0.2nm,0.3s,baz=137,slow=19,SNR=2.4								
WRA	**Warramunga Arr**	**14.25**	**163**	P		P	Pn	08 20 01.8	-1.9
	0.3nm,0.3s,baz=347,slow=14,SNR=27								
WRA				S		Sn		08 22 29.7	-12
	0.3nm,0.3s,baz=302,slow=9.0,SNR=8.1								
ASAR	**Alice Springs**	**17.72**	**168**	P		P		08 20 45.5	+0.6
	0.3nm,0.3s,baz=353,slow=10.0,SNR=14								
ASAR				S				08 23 54.9	-6.5
	0.1nm,0.3s,baz=3.0,slow=27,SNR=4.2								
KSRS	**Korea Array**	**43.52**	**358**	LR		LR		08 46 00.1	
	comp=Z,28nm,18.8s,baz=68,slow=40								
MKAR	**Makanchi Array**	**67.60**	**327**	P		P		08 27 29.2	0.0
	0.4nm,0.4s,baz=116,slow=6.6,SNR=6.8								

*NEIC **17** 08:28:30.3±1.2, 1.°02N±0.°08×146.°1E±0.°2, h10km±2km, mb4.3/7, Error ellipse: s-maj=28.9km s-min=5.5km az=63.0*

*IDC **17** 08:28:30.5±1.0, 0.°82N×146.°25E, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.8/32, mbtmp4.1/8, ML4.2/1, Error ellipse: s-maj=32.5km s-min=18.3km az=107.0*

ISC 17 08:28:35.5±0.9, 0.°8N±0.°1×146.°3E±0.°1, h35km, n20, σ0°92/17, mb4.1/9, Eastern Caroline Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.03**	**158**	Pn		**Pn**	**Pn**	**08 29 20.0**	**-1.0**
KRVT	**Keravat (AS076**	**7.68**	**131**	Pn		**Pn**	**Pn**	**08 30 26.1**	**+1.2**
	3.8nm,0.3s,baz=172,slow=20,SNR=7.4								
PMG	**Port Moresby**	**10.17**	**175**	Pn		**Pn**	**Pn**	**08 31 00.4**	**+1.2**
CTA	**Charters Tower**	**20.75**	**180**	P		**P**	**P**	**08 33 13.2**	**-0.2**
	0.8nm,0.5s,baz=348,slow=9.1,SNR=2.3								
WB0	**Warramunga Arr**	**23.51**	**209**				**P**	**08 33 42.5**	**0.0**
WB0						IAmb	IAmb	08 33 53.7	
	comp=Z,5.7nm,0.8s								
**WR0

comp=Z,42nm,21.8s,baz=165,slow=33
VNDA Vanda 68.02 178 LR LR 09 12 49.8
comp=Z,29nm,21.0s,baz=14,slow=30
MA2 Magadan 69.01 358 LR LR 09 13 21.4
comp=Z,24nm,21.6s,baz=139,slow=30
SHL Shillong 70.89 301 P **P** **08 49 42.1 -1.6**
SONM Songino Array 71.67 328 P **P** **08 49 49.0 +1.0**
comp=Z,3.6nm,0.9s,baz=139,slow=6.0,SNR=16
SONM Songino Array 71.67 328 P **P** **08 49 48.3 +0.3**
QSPA South Pole Qui 80.42 180 P **P** **08 50 37.5 0.0**
PPLA Purkeypile 82.63 21 P **P** **08 50 49.6 +0.4**
MKAR Makanchi Array 85.54 319 P **P** **08 51 04.1 -0.2**
comp=Z,1.1nm,0.8s,baz=94,slow=5.2,SNR=5.4
ILAR Eielson Array 85.64 21 P **P** **08 51 03.6 -0.7**
comp=Z,1.8nm,0.9s,baz=259,slow=4.6,SNR=17
ILAR LR LR 09 23 32.0
comp=Z,27nm,19.7s,baz=126,slow=32
ZALV Zalesovo Beam 86.48 326 P **P** **08 51 08.3 -0.4**
comp=Z,1.4nm,0.7s,baz=100,slow=6.6,SNR=4.8
ZALV Zalesovo Beam 86.48 326 P **P** **08 51 07.9 -0.8**
KURBB Kurchatov Arra 89.07 322 P **P** **08 51 21.3 +0.2**
comp=Z,0.4nm,0.7s,baz=98,slow=3.9,SNR=4.4
KK31 Karatay Array 92.70 313 P **P** **08 51 38.3 0.0**
KK31 IAmb IAmb 08 51 38.9
comp=Z,1.7nm,0.8s
KKAR Karatay Array 92.70 313 P **P** **08 51 38.3 0.0**
NVAR Mina Array Bea 93.06 52 P **P** **08 51 41.0 +0.7**
comp=Z,2.7nm,0.9s,baz=231,slow=7.6,SNR=14
NVAR Mina Array Bea 93.06 52 P **P** **08 51 40.5 +0.2**
NV11 Mina Array Sit 93.17 52 P **P** **08 51 42.0 +1.3**
ESDC Sonseca Array 144.78 332 PKP PKPbc 08 58 02.4 0.0
comp=Z,2.3nm,1.0s,baz=27,slow=4.0,SNR=6.4
BDFB Brasilia 145.92 137 PKPbc **PKPdf** **08 58 06.1 +0.1**
comp=Z,3.2nm,0.7s,baz=65,slow=3.0,SNR=4.7
TORD Torodi Ar. Bea 153.91 280 PKPbc **PKPbc** **08 58 25.7 -0.7**
comp=Z,0.6nm,0.8s,baz=113,slow=1.8,SNR=2.4

NEIC ***17*** *08:40:33.4±1.9, 17.8S±0.1×178.6W±0.1, h580km±4km, mb4.4/59, Error ellipse: s-maj=17.6km s-min=12.1km az=148.0*
IDC ***17*** *08:40:35.0±4.4, 17.84S×178.61W, h595km±50km, mb3.7/9, mb1 3.9/9, mb1mx3.4/34, mbtmp4.7/9, Error ellipse: s-maj=36.6km s-min=23.2km az=143.0*
ISC 17 08:40:33.2±0.4, 17.81S±0.09×178.57W±0.07, h579km, n82, σ1§01/85, mb4.5/39, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.23**	**271**		**P**	**08 41 54.6**	**+2.5**
AFI	**Afiamalu**	**7.59**	**60**	P	**P**	**08 42 26.2**	**-1.9**
NIUE	**Niue**	**8.30**	**100**	P	**P**	**08 42 37.2**	**+2.5**
SANVU	**Saraoutou**	**13.84**	**278**	P	**P**	**08 43 29.0**	**-1.8**
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**08 43 40.1**	**+0.6**
	comp=Z,1nm,0.3s,baz=90,slow=18,SNR=19						
DZM	**Mont Dzumac**	**14.72**	**251**	P	**P**	**08 43 38.5**	**-0.9**
KNTN	**Kanton**	**16.38**	**25**	P	**P**	**08 43 53.9**	**-1.2**
EIDS	**Eidsvold**	**29.16**	**250**	P	**P**	**08 45 48.4**	**-0.5**
EIDS				IAmb	IAmb	08 45 49.9	
	comp=Z,10nm,0.7s						
MLZ	**Mavora Lakes**	**29.64**	**199**	P	**P**	**08 45 51.5**	**-1.3**
ARMA	**Armidale**	**29.86**	**240**	P	**P**	**08 45 56.1**	**+1.1**
ARMA				IAmb	IAmb	08 45 57.5	
	comp=Z,24nm,1.2s						
WHZ	**Wether Hill Ro**	**30.17**	**199**	P	**P**	**08 45 55.8**	**-1.5**
CTA	**Charters Tower**	**33.31**	**260**	P	**P**	**08 46 24.6**	**+0.2**
	comp=Z,9.0nm,0.6s,baz=95,slow=10,SNR=23						
CTAO	**Charters Tower**	**33.31**	**260**	P	**P**	**08 46 24.8**	**+0.4**
CTAO				IAmb	IAmb	08 46 25.7	
	comp=Z,9.5nm,0.7s						
PMG	**Port Moresby**	**34.29**	**280**	P	**P**	**08 46 33.2**	**+0.5**
COEN	**Coen**	**36.95**	**270**	P	**P**	**08 46 56.2**	**+1.5**
COEN				IAmb	IAmb	08 46 56.8	
	comp=Z,19nm,0.9s						
TOO	**Toolangi**	**37.12**	**231**	P	**P**	**08 46 56.5**	**+0.8**
TOO				IAmb	IAmb	08 46 57.1	
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**38.55**	**241**	P	**P**	**08 47 08.2**	**+0.9**
	comp=Z,10nm,0.5s,baz=87,slow=10,SNR=43						
STKA	**Stephens Creek**	**38.55**	**241**	P	**P**	**08 47 08.3**	**+0.9**
STKA				IAmb	IAmb	08 47 09.1	
	comp=Z,4.0nm,1.0s						
BBOO	**Buckleboo**	**43.32**	**241**	P	**P**	**08 47 45.4**	**+0.2**
BBOO				IAmb	IAmb	08 47 46.1	
	comp=Z,18nm,0.8s						
HMH	**Humu'ula Sheep**	**43.54**	**32**	P	**P**	**08 47 48.2**	**+0.9**
WR0	**Warramunga Arr**	**44.31**	**259**	P	**P**	**08 47 52.4**	**-0.6**
WR0				IAmb	IAmb	08 47 56.7	
	comp=Z,5.6nm,0.5s						
WB0	**Warramunga Arr**	**44.47**	**260**	P	**P**	**08 47 53.7**	**-0.4**
WB0				IAmb	IAmb	08 47 54.7	
	comp=Z,14nm,0.5s						
WB2	**Warramunga Arr**	**44.49**	**259**	P	**P**	**08 47 53.9**	**-0.4**
WRAB	**Tennant Creek**	**44.49**	**259**	P	**P**	**08 47 53.7**	**-0.7**
WRAB				IAmb	IAmb	08 47 54.9	
	comp=Z,10nm,0.6s						
WRA	**Warramunga Arr**	**44.50**	**259**	P	**P**	**08 47 54.1**	**-0.4**
	comp=Z,6.2nm,0.3s,baz=93,slow=7.3,SNR=45						
WRA				PcP	**PcP**	**08 49 25.0**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=94,slow=3.4,SNR=3.5						
WRA	**Warramunga Arr**	**44.50**	**259**	P	**P**	**08 47 54.0**	**-0.4**
AS31	**Alice Springs**	**44.67**	**254**	P	**P**	**08 47 56.2**	**+0.5**
AS31				IAmb	IAmb	08 47 56.6	
	comp=Z,16nm,0.8s						
ASAR	**Alice Springs**	**44.67**	**254**	P	**P**	**08 47 55.7**	**0.0**
	comp=Z,54nm,0.5s,baz=88,slow=8.5,SNR=271						
ASAR				PcP	**PcP**	**08 49 25.4**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=100,slow=3.8,SNR=4.8						
MTN	**Manton Dam**	**48.65**	**268**	P	**P**	**08 48 25.9**	**+0.2**
MTN				IAmb	IAmb	08 48 26.3	
	comp=Z,13nm,0.7s						
FORT	**Forrest**	**49.91**	**245**	P	**P**	**08 48 34.4**	**-0.4**
KNRA	**Kununurra**	**50.35**	**264**	P	**P**	**08 48 38.2**	**0.0**
KNRA				IAmb	IAmb	08 48 39.0	
	comp=Z,18nm,0.7s						
SIJI	**Sorong**	**52.07**	**283**	P	**P**	**08 48 51.6**	**+1.0**
	comp=Z,19nm,0.6s,baz=104,slow=6.9,SNR=15						
FITZ	**Fitzroy Crossi**	**52.90**	**260**	P	**P**	**08 48 57.0**	**+0.6**
SOEI	**Soe**	**55.92**	**270**	P	**P**	**08 49 15.3**	**-2.5**
SOEI				IAmb	IAmb	08 49 20.5	
	comp=Z,21nm,0.6s						
PSA00	**Pilbara Seismi**	**57.79**	**255**	P	**P**	**08 49 30.0**	**-0.3**
PSA00				IAmb	IAmb	08 49 30.9	
	comp=Z,13nm,0.7s						
NWAO	**Narrogin (SRO)**	**59.13**	**242**	P	**P**	**08 49 39.0**	**-0.2**
NWAO				IAmb	IAmb	08 49 49.2	
	comp=Z,23nm,1.3s						
MORW	**Morawa**	**60.38**	**246**	P	**P**	**08 49 47.7**	**+0.1**
MORW				IAmb	IAmb	08 49 52.7	
	comp=Z,17nm,1.4s						
GIRL	**Giralia**	**62.78**	**253**	P	**P**	**08 50 04.4**	**+1.1**
RPN	**Rapa Nui**	**63.97**	**112**	P	**P**	**08 50 09.3**	**-1.5**
UGM	**Wanagama**	**69.50**	**268**	P	**P**	**08 50 45.2**	**+0.2**
SSLB	**Suanglung**	**72.05**	**303**	P	**P**	**08 50 59.7**	**-0.1**
CISI	**Cisompet, Garu**	**72.18**	**268**	P	**P**	**08 51 00.6**	**-0.3**
KSM	**Kuching**	**72.52**	**277**	P	**P**	**08 51 02.4**	**-0.4**
KSM				IAmb	IAmb	08 51 05.2	
	comp=Z,12nm,1.0s						
NJ2	**Nanjing**	**77.76**	**310**	*e*P	**P**	**08 51 31.9**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMB	**Columbia Colle**	**77.87**	**43**	P	**P**	**08 51 32.9**	**+0.9**
PFO	**Pinyon Flats O**	**78.20**	**49**	P	**P**	**08 51 32.7**	**-1.3**
PFO				IAmb	IAmb	08 51 41.6	
	comp=Z,12nm,1.4s						
YBH	**Yreka Blue Hor**	**78.54**	**39**	P	**P**	**08 51 36.8**	**+1.2**
WAKR	**Walker**	**78.75**	**43**	P	**P**	**08 51 37.8**	**+0.9**
HUMO	**Hull Mountain**	**78.91**	**38**	P	**P**	**08 51 38.0**	**+0.6**
HUMO				IAmb	IAmb	08 51 39.8	
	comp=Z,6.4nm,1.2s						
BEKR	**Beckworth**	**78.92**	**42**	P	**P**	**08 51 38.3**	**+0.6**
PNTR	**Pine Nut**	**78.97**	**43**	P	**P**	**08 51 37.7**	**-0.4**
PNTR				IAmb	IAmb	08 51 40.0	
	comp=Z,4.7nm,0.9s						
KVN	**Kaiserville**	**79.92**	**43**	P	**P**	**08 51 42.4**	**-0.6**
TPH	**Tonopah**	**79.98**	**45**	P	**P**	**08 51 44.2**	**+0.9**
TPNV	**Topopah Spring**	**80.06**	**46**	P	**P**	**08 51 44.6**	**+0.9**
K05A	**Summer Lake**	**80.22**	**39**	P	**P**	**08 51 45.5**	**+1.1**
K05A				IAmb	IAmb	08 51 46.6	
	comp=Z,7.7nm,1.1s						
I07A	**Izee**	**81.82**	**39**	P	**P**	**08 51 54.1**	**+1.5**
BELA	**Belgrano 2**	**82.28**	**173**	P	**P**	**08 51 53.5**	**-0.8**
SPR3	**Spring Creek 3**	**82.40**	**45**	P	**P**	**08 51 56.3**	**+0.4**
PSUT	**Pine Spring**	**82.50**	**46**	P	**P**	**08 51 57.1**	**+0.8**
PMR	**Palmer**	**82.54**	**14**	P	**P**	**08 51 55.6**	**0.0**
PMR				IAmb	IAmb	08 52 17.9	
	comp=Z,15nm,1.4s						
U15A	**North Rim**	**82.56**	**48**	P	**P**	**08 51 58.4**	**+1.7**
GHO	**Glory Hole Cre**	**82.74**	**14**	P	**P**	**08 51 57.2**	**+0.5**
GHO				IAmb	IAmb	08 52 25.9	
	comp=Z,22nm,1.2s						
G08A	**Pilot Rock**	**82.82**	**38**	P	**P**	**08 51 58.6**	**+1.0**
SCM	**Sheep Creek Mo**	**83.17**	**14**	P	**P**	**08 51 58.6**	**-0.2**
SCM				IAmb	IAmb	08 52 10.0	
	comp=Z,39nm,1.4s						
N25K	**Chitina, Valde**	**83.64**	**16**	P	**P**	**08 52 01.3**	**0.0**
N25K				IAmb	IAmb	08 52 25.3	
	comp=Z,14nm,1.4s						
M24K	**Tolsona, Glenn**	**83.68**	**15**	P	**P**	**08 52 02.7**	**+1.3**
M24K				IAmb	IAmb	08 52 25.6	
	comp=Z,25nm,1.2s						
GLB	**Gilahina Butte**	**83.71**	**16**	P	**P**	**08 52 01.8**	**+0.3**
GLB				IAmb	IAmb	08 52 18.5	
	comp=Z,26nm,1.5s						
MAW	**Mawson**	**83.91**	**200**	P	**P**	**08 52 02.2**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=155,slow=12,SNR=4.2						
MAW	**Mawson**	**83.91**	**200**	P	**P**	**08 52 01.9**	**-0.6**
PMSA	**Palmer Station**	**83.96**	**157**	P	**P**	**08 52 02.5**	**-0.3**
DHY	**Denali Highway**	**84.24**	**14**	P	**P**	**08 52 04.4**	**+0.2**
DHY				IAmb	IAmb	08 52 06.1	
	comp=Z,10nm,1.0s						
ILAR	**Eielson Array**	**85.82**	**13**	P	**P**	**08 52 11.2**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=220,slow=5.2,SNR=16						
TXAR	**Lajitas Array**	**86.07**	**58**	P	**P**	**08 52 15.2**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=229,slow=6.6,SNR=9.6						
TXAR	**Lajitas Array**	**86.07**	**58**	P	**P**	**08 52 14.6**	**+0.8**
HHC	**Hu-ho-hao-te**	**87.09**	**315**	*e*P	**P**	**08 52 16.9**	**-1.5**
HHC				pmax	pmax		
	comp=Z,22nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,6.0s						
PDAR	**Pinedale Array**	**87.38**	**43**	P	**P**	**08 52 20.3**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=213,slow=3.9,SNR=8.8						
LZH	**Lanzhou**	**90.71**	**308**	*e*P	**P**	**08 52 34.0**	**-1.4**
LZH				pP	pP	08 54 38.9	-2.5
LZH				sP	sP	08 55 48.3	+9.1
LZH				PP	**PP**	**08 56 24.6**	**+2.9**
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,82nm,4.5s						
MKAR	**Makanchi Array**	**108.96**	**314**	PKiKP	**PKiKP**	**08 57 56.3**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=132,slow=2.1,SNR=1.8						
BRTR	**Keskin Array B**	**144.60**	**315**	PKP	PKPbc	08 59 05.2	0.0
	comp=Z,0.9nm,0.4s,baz=117,slow=3.4,SNR=5.9						
BRTR	**Keskin Array B**	**144.60**	**315**	PKPdf	**PKPdf**	**08 59 05.0**	**+0.1**
GERES	**GERESS Array B**	**147.47**	**345**	PKPbc	**PKPbc**	**08 59 13.1**	**+0.2**
	comp=Z,0.3nm,0.2s,baz=95,slow=5.8,SNR=4.9						
TEOL	**Teolo**	**151.23**	**345**	PKPbc	**PKiKP**	**08 59 22.4**	**+0.2**
TEOL				PKPab	**PKPab**	**08 59 31.8**	**-0.7**

IDC 17 08:45:04.6±53.0, 16.48S×174.27W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/36, mbtmp3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/30, Error ellipse: s-maj=1001.0km s-min=194.5km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**22.99**	**198**	LR	LR	08 57 34.3	
	comp=Z,107nm,18.4s,baz=31,slow=33						
STKA	**Stephens Creek**	**42.78**	**241**	P	P	08 53 05.2	+1.0
	0.7nm,0.5s,baz=86,slow=16,SNR=1.9						
WRA	**Warramunga Arr**	**48.79**	**258**	P	P	08 53 51.3	-0.6
	0.2nm,0.7s,baz=97,slow=7.3,SNR=2.2						
ASAR	**Alice Springs**	**48.99**	**253**	P	P	08 53 52.8	-0.6
	1.9nm,0.6s,baz=90,slow=8.1,SNR=32						

NEIC ***17*** *08:47:56.1±1.9, 64.50N±0.09×17.6W±0.1, h8km±4km, mb4.3/10, Error ellipse: s-maj=12.5km s-min=7.8km az=176.0*
REY ***17*** *08:47:56.1, 64.67N×17.44W, h4km*
IDC ***17*** *08:47:56.2±0.8, 64.36N×17.76W, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.5/51, mbtmp3.6/10, ML3.5/2, MS3.2/1, Ms1 3.2/1, ms1mx2.4/47, Error ellipse: s-maj=29.1km s-min=10.7km az=20.0*
ISC 17 08:47:56.5±0.5, 64.66N±0.02×17.43W±0.02, h10km, n67, σ1§64/75, mb3.6/9, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.13**	**12**	P	**Pg**	**08 47 59.0**	**-0.7**
	baz=14						
IDYN				S	**Sg**	**08 48 00.9**	**-1.0**
	baz=14						
IVON	**Vonarskard**	**0.14**	**275**	P	**Pg**	**08 47 59.0**	**-0.8**
	baz=272						
IVON				S	**Sg**	**08 48 01.4**	**-0.6**
	baz=272						
IHAM	**Hamarinn**	**0.25**	**223**	P	**Pg**	**08 48 01.1**	**-0.5**
	baz=221						
IHAM				S	**Sg**	**08 48 04.7**	**-0.3**
	baz=221						
IGRF	**Grimsfjall**	**0.27**	**164**	P	**Pg**	**08 48 01.5**	**-0.4**
	baz=164						
IKVE	**Kverkfjoll**	**0.33**	**87**	P	**Pg**	**08 48 02.5**	**-0.5**
	baz=88						
IKVE				S	**Sg**	**08 48 07.1**	**-0.3**
	baz=88						
IHUS	**Husbondi**	**0.38**	**195**	P	**Pg**	**08 48 03.7**	**-0.4**
	baz=194						
IVOT	**Vottur**	**0.41**	**164**	P	**Pg**	**08 48 03.8**	**-0.7**
	baz=164						
ISKR	**Skrokkalda**	**0.42**	**257**	P	**Pg**	**08 48 03.9**	**-0.9**
	baz=255						
THOR	**Thorvaldshraun**	**0.42**	**49**	P	**Pg**	**08 48 03.9**	**-1.0**
	baz=50						
IKRE	**Kreppuhraun**	**0.47**	**74**	P	**Pg**	**08 48 04.6**	**-1.0**
	baz=75						
IKRE				S	**Sg**	**08 48 10.6**	**-1.2**
	baz=75						
IJOK	**Jokulheimar**	**0.49**	**225**	P	**Pg**	**08 48 05.2**	**-0.8**
	baz=224						
IJOK				S	**Sg**	**08 48 11.9**	**-0.5**
	baz=224						
IMKO	**Mokollar**	**0.57**	**55**	P	**Pg**	**08 48 06.4**	**-1.1**
	baz=56						
IMKO				S	**Sg**	**08 48 14.4**	**-0.6**
	baz=56						
IIEY	**Innrieyrar**	**0.64**	**208**	P	**Pg**	**08 48 07.7**	**-1.2**
	baz=208						
IKSK	**Karasker**	**0.65**	**140**	P	**Pg**	**08 48 07.4**	**-1.7**
	baz=140						
ISVA	**Svartarkot**	**0.68**	**6**	P	**Pg**	**08 48 08.2**	**-1.5**
	baz=6.5						
IKAL	**Kalfafell**	**0.72**	**189**	P	**Pg**	**08 48 09.1**	**-1.3**
	baz=189						
IVSH	**V-Sauoahnukur**	**0.75**	**78**	S	**Sg**	**08 48 19.5**	**-1.2**
	baz=78						
IVSH				P	**Pg**	**08 48 09.2**	**-1.7**
	baz=78						
IVAT	**Vatnsfell**	**0.80**	**234**	P	**Pg**	**08 48 10.4**	**-1.5**
	baz=234						
IFAG	**Fagurholsmyri**	**0.86**	**156**	P	**Pg**	**08 48 11.4**	**-1.6**
	baz=156						
IADA	**Aoalbol**	**0.87**	**65**	P	**Pg**	**08 48 11.2**	**-2.1**
	baz=65						
IHVE	**Hveravellir**	**0.94**	**284**	P	**Pg**	**08 48 12.3**	**-2.3**
	baz=283						
IMEL	**Melhnausar**	**0.97**	**19**	P	**Pg**	**08 48 12.9**	**-2.3**
	baz=20						
IREN	**Reykhlio**	**1.01**	**12**	P	**Pg**	**08 48 13.6**	**-2.4**
	baz=13						
ISNB	**Snabyli**	**1.07**	**210**	P	**Pg**	**08 48 15.0**	**-1.9**
	baz=210						
IKVO	**Krokottuvotn**	**1.08**	**12**	P	**Pg**	**08 48 14.7**	**-2.6**
	baz=12						
IFED	**Fedgar**	**1.17**	**238**	P	**Pb**	**08 48 16.9**	**-1.9**
	baz=238						
IRJU	**Rjupnafell**	**1.18**	**208**	P	**Pb**	**08 48 17.0**	**-1.9**
	baz=208						
IMJO	**Mjoaskard**	**1.22**	**234**	P	**Pn**	**08 48 17.6**	**-2.0**
	baz=234						
ISKI	**Skildingahlsh**	**1.23**	**8**	P	**Pn**	**08 48 17.1**	**-2.6**
	baz=7.9						
IGHA	**Grjothals**	**1.23**	**15**	P	**Pn**	**08 48 17.0**	**-2.8**
	baz=15						
IGRA	**Granastaoir**	**1.26**	**357**	P	**Pn**	**08 48 17.6**	**-2.5**
	baz=357						
IGYG	**Gygjarholskot**	**1.26**	**254**	P	**Pn**	**08 48 17.9**	**-2.2**
	baz=253						
IHVO	**Lagu-Hvolar**	**1.30**	**209**	P	**Pn**	**08 48 19.2**	**-1.5**
	baz=209						
IDIM	**Dimmadalss**	**1.32**	**9**	P	**Pn**	**08 48 18.5**	**-2.5**
	baz=9.0						
IHLA	**Hella**	**1.35**	**343**	P	**Pn**	**08 48 19.2**	**-2.1**
	baz=343						
BORG	**Borgarnes**	**1.68**	**275**	Pg	**Pn**	**08 48 24.2**	**-1.6**
	23nm,0.3s,baz=100,slow=7.6,SNR=60						
BORG				Lg	Lg	08 48 47.7	
	19nm,0.3s,baz=237,slow=23,SNR=11						
BORG	**Borgarnes**	**1.68**	**275**		**Pn**	**08 48 24.1**	**-1.7**
BORG				Sn	**Sn**	**08 48 48.0**	**+0.7**
SCO	**Scoresbysund**	**6.10**	**346**		**Pn**	**08 49 28.3**	**+1.8**
SCO	**Scoresbysund**	**6.10**	**346**	*e*	Pn	08 49 21.4	-5.1
	baz=172,slow=6.9						
SCO				*i* P	**Pn**	**08 49 27.0**	**+0.5**
SCO				*i* S	**Sn**	**08 50 40.2**	**+4.0**
ANGG	**Ammassalik, Gr**	**8.56**	**286**	Pn	**Pn**	**08 50 00.1**	**-0.2**
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn	**Pn**	**08 50 43.2**	**-0.5**
	baz=320,slow=12,SNR=4.3						
ESK	**Eskdalemuir**	**11.73**	**136**	Pn	**Pn**	**08 50 41.1**	**-2.6**
SPA0	**Spitsbergen Ar**	**16.86**	**23**	P	**Pn**	**08 51 52.3**	**+0.1**
SPA0				IAmb	IAmb	08 52 03.4	
	comp=Z,37nm,1.1s						
WLF	**Walferdange**	**19.54**	**129**	P	**P**	**08 52 23.2**	**-0.7**
WLF				IAmb	IAmb	08 52 36.6	
	comp=Z,14nm,1.0s						
FINES	**FINESS Array B**	**19.68**	**79**	P	**Pn**	**08 52 29.2**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=288,slow=10,SNR=1.9						
BFO	**Black Forest**	**21.42**	**127**	P	**P**	**08 52 42.7**	**-1.6**
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**08 53 01.1**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=316,slow=8.3,SNR=5.1						
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**08 53 01.3**	**+0.8**
PSZ	**Piszkesteto**	**26.09**	**112**	P	**P**	**08 53 29.6**	**-0.5**
PSZ				IAmb	IAmb	08 53 42.9	
	comp=Z,6.8nm,1.3s						
ESDC	**Sonseca Array**	**26.24**	**156**	P	**P**	**08 53 29.8**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=355,slow=10,SNR=2.1						
AKASG	**Malin Array Be**	**27.81**	**98**	P	**P**	**08 53 46.9**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=325,slow=9.4,SNR=1.4						
FFD	**Franklin Falls**	**36.68**	**261**	P	**P**	**08 55 02.3**	**-0.8**
BRTR	**Keskin Array B**	**38.45**	**105**	P	**P**	**08 55 21.6**	**+3.3**
	comp=Z,1.0nm,0.9s,baz=325,slow=7.0,SNR=4.6						
BMAR	**Burnt Mountain**	**42.91**	**333**	P	**P**	**08 55 56.4**	**+1.7**
BRVK	**Borovoye**	**43.11**	**62**	P	**P**	**08 55 56.7**	**+0.4**
ILAR	**Eielson Array**	**45.70**	**332**	P	**P**	**08 56 19.8**	**+2.9**
	comp=Z,0.8nm,1.0s,baz=20,slow=6.1,SNR=6.7						
ILAR	**Eielson Array**	**45.70**	**332**	P	**P**	**08 56 19.0**	**+2.1**
IMAR	**Indian Mountait**	**45.87**	**337**	P	**P**	**08 56 18.6**	**+0.3**
ZALV	**Zalesovo Beam**	**47.61**	**51**	P	**P**	**08 56 34.4**	**+2.4**
	comp=Z,0.6nm,0.4s,baz=317,slow=10,SNR=2.2						
ZALV	**Zalesovo Beam**	**47.61**	**51**	P	**P**	**08 56 32.9**	**+0.9**
N25K	**Chitina, Valde**	**48.04**	**329**	P	**P**	**08 56 36.7**	**+1.3**
SEY	**Seymchan**	**52.49**	**6**	LR	LR	09 18 40.5	
	comp=Z,23nm,19.8s,baz=168,slow=35						
TORD	**Torodi Ar. Bea**	**53.12**	**156**	P	**P**	**08 57 13.8**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=337,slow=7.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**53.12**	**156**	IAmb	IAmb	08 57 19.1	
	comp=Z,1.9nm,1.4s						
PD31	**Pinedale Array**	**53.20**	**293**	P	**P**	**08 57 14.7**	**0.0**
PD31				IAmb	IAmb	08 57 22.5	
	comp=Z,6.2nm,1.4s						
PDAR	**Pinedale Array**	**53.20**	**293**	P	**P**	**08 57 15.6**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=64,slow=6.8,SNR=6.7						
PDAR	**Pinedale Array**	**53.20**	**293**	P	**P**	**08 57 14.9**	**+0.2**

IDC ***17*** *09:59:38.5±0.8, 35.18N×76.96E, h0km, mb3.9/12, mb1 4.0/17, mb1mx3.8/49, mbtmp3.8/17, ML3.4/5, MS3.2/9, Ms1 3.2/9, ms1mx2.9/43, Error ellipse: s-maj=22.6km s-min=15.0km az=67.0*
BJI ***17*** *08:59:41.6±0.0, 35.43N×77.23E, h9km, mB4.6/4, mb4.2/10, ML4.3/3, Ms3.8/4, Ms7 3.5/2*
NEIC ***17*** *08:59:44±1.9, 35.36N±0.08×77.12E±0.03, h35km±2km, mb4.4/17, Error ellipse: s-maj=13.4km s-min=4.5km az=176.0*
NNC ***17*** *08:59:50.0±5.9, 35.80N×77.40E, h14km±33km, mb4.4, mpv4.3, Error ellipse: s-maj=40.3km s-min=32.0km az=172.0*
NDI ***17*** *09:00:01.0±2.8, 34.46N×80.09E, h10km, ML4.3, mb4.4(NEIC)*
ISC 17 08:59:44.3±0.5, 35.35N±0.04×77.14E±0.06, h35km, n88, σ1§85/88, mb4.1/18, MS3.2/9, 6C-4D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	**Nilore**	**3.63**	**243**	Pn	**Pn**	**09 00 40.2**	**+2.1**
KSH	**Kashi**	**4.26**	**348**	Pg	**Pn**	**09 00 50.9**	**+4.1**
KSH				Sg	**Sn**	**09 01 41.4**	**+6.0**
KSH				smax	smax		
	comp=N,300nm,0.7s						
KSH				smax	smax		
	comp=E,470nm,0.7s						
CEP	**Cherat**	**4.58**	**252**	P	**Pn**	**09 00 52.8**	**+1.6**
CEP				S	Sn	09 01 53.0	+10
SARP	**Sargodha**	**5.06**	**229**	P	**Pn**	**09 01 00.5**	**+2.8**
THW	**Thamme Wali**	**5.16**	**242**	P	**Pn**	**09 01 01.0**	**+2.0**
GAR	**Garm**	**6.55**	**306**	Pn	**Pn**	**09 01 17.4**	**-0.9**
NDI	**New Delhi**	**6.65**	**179**

MK31	**Makanchi Array**	**12.07**	**17**	Pn		**Pn**	**09 02 34.2**	**+0.5**
MKAR	**Makanchi Array**	**12.07**	**17**	Pn		**Pn**	**09 02 34.4**	**+0.7**
	0.4nm,0.3s,baz=201,slow=13,SNR=12							
MKAR				Sn		Sn	09 04 44.3	-2.7
	0.2nm,0.3s,baz=199,slow=22,SNR=5.5							
MKAR				Lg		Lg	09 06 06.2	
	baz=216,slow=27,SNR=1.6							
BHPL	**Bhopal**	**12.07**	**179**	*eS*		**Sn**	**09 04 43.1**	**-4.2**
KURBB	**Kurchatov Arra**	**15.30**	**3**	Pn		**Pn**	**09 03 17.6**	**+0.1**
	0.0nm,0.3s,baz=197,slow=10.0,SNR=4.0							
KURBB				Lg		Lg	09 07 47.4	
	baz=188,slow=32,SNR=7.4							
KURK	**Kurchatov**	**15.39**	**4**	Pn		**Pn**	**09 03 19.3**	**+0.6**
BVAR	**Borovoye Array**	**18.31**	**347**	P		**P**	**09 03 54.7**	**-0.4**
	0.3nm,0.3s,baz=170,slow=12,SNR=14							
BRVK	**Borovoye**	**18.36**	**347**	P		**P**	**09 03 55.0**	**-0.8**
BRVK				IAmb		IAmb	09 04 01.5	
	comp=Z,9.6nm,0.8s							
GTA	**Gaotai**	**18.46**	**71**	*eP*		**Pn**	**09 04 00.3**	**+2.9**
GTA				pP		pP	09 04 07.3	-0.5
GTA				sP		sP	09 04 10.5	-2.5
GTA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
AB07	**Akbulak array**	**18.76**	**323**	P		**P**	**09 03 57.8**	**-2.4**
ABKAR	**Akbulak array**	**18.78**	**323**	P		**P**	**09 03 58.0**	**-2.4**
ZAA0	**Zalesovo Array**	**19.36**	**14**	P		**P**	**09 04 04.7**	**-1.9**
ZALV	**Zalesovo Beam**	**19.36**	**14**	P		**Pn**	**09 04 07.5**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=207,slow=10,SNR=1.8							
ZALV				LR		LR	09 11 26.9	
	comp=Z,47nm,18.7s,baz=101,slow=36							
ZALV	**Zalesovo Beam**	**19.36**	**14**	P		**P**	**09 04 06.2**	**-0.4**
WSAR	**Wadi Sarin**	**20.12**	**238**	P		**P**	**09 04 10.8**	**-4.5**
	comp=Z,0.1nm,0.3s,baz=51,slow=6.5,SNR=1.5							
AKTO	**Aktyubinsk**	**20.49**	**323**	P		**P**	**09 04 18.4**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=113,slow=9.7,SNR=11							
AKTO				LR		LR	09 12 57.9	
	comp=Z,83nm,19.1s,baz=143,slow=39							
ARU	**Arti**	**24.58**	**335**	P		**P**	**09 05 01.0**	**+0.2**
	comp=Z,2.5nm,0.2s,baz=280,slow=18,SNR=1.4							
ARU	**Arti**	**24.58**	**335**	P		**P**	**09 04 59.7**	**-1.0**
ARU				IAmb		IAmb	09 05 19.3	
	comp=Z,8.0nm,1.0s							
SONM	**Songino Array**	**25.02**	**51**	LR		LR	09 16 04.2	
	comp=Z,92nm,19.6s,baz=242,slow=39							
SONM	**Songino Array**	**25.02**	**51**	P		**P**	**09 05 04.9**	**-0.1**
ULN	**Ulaanbaatar**	**25.45**	**51**	P		**P**	**09 05 08.4**	**-0.5**
ULN				IAmb		IAmb	09 05 09.8	
	comp=Z,5.1nm,0.6s							
CMAR	**Chiang Mai Arr**	**25.62**	**125**	P		**P**	**09 05 10.4**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=315,slow=9.7,SNR=9.9							
CMAR				LR		LR	09 16 50.9	
	comp=Z,35nm,18.6s,baz=330,slow=40							
CMAR	**Chiang Mai Arr**	**25.62**	**125**	P		**P**	**09 05 09.3**	**-1.2**
GNI	**Garni**	**25.98**	**290**	LR		LR	09 17 29.4	
	comp=Z,37nm,19.7s,baz=346,slow=41							
XAN	**Xi'an**	**26.11**	**84**	P		**P**	**09 05 17.6**	**+2.7**
XAN				pP		pP	09 05 27.0	+0.3
XAN				pmax		pmax		
	comp=Z,7.0nm,1.3s							
KBZ	**Khabaz**	**27.55**	**298**	LR		LR	09 18 29.4	
	comp=Z,60nm,19.4s,baz=150,slow=41							
NRIK	**Nori'sk**	**54.53**	**6**	P		**P**	**09 06 30.0**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=208,slow=4.2,SNR=1.1							
AKASG	**Malin Array Be**	**37.54**	**309**	LR		LR	09 25 47.1	
	comp=Z,21nm,18.3s,baz=285,slow=42							
GSI	**Gunungsitoli**	**38.84**	**146**	P		**P**	**09 07 05.0**	**-1.2**
GSI				IAmb		IAmb	09 07 33.1	
	comp=Z,21nm,1.4s							
FINES	**FINESS Array B**	**41.24**	**325**	P		**P**	**09 07 25.1**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=112,slow=8.1,SNR=12							
FINES				LR		LR	09 24 27.0	
	comp=Z,39nm,19.2s,baz=85,slow=36							
FINES	**FINESS Array B**	**41.24**	**325**	P		**P**	**09 07 25.5**	**0.0**
YAK	**Yakutsk**	**42.07**	**34**	LR		LR	09 25 57.4	
	comp=Z,1μm,21.5s,baz=5.0,slow=37							
LIT	**Litokhoron**	**42.92**	**293**	P		**P**	**09 07 38.9**	**-0.7**
AGG	**Agios Georgios**	**43.27**	**292**	P		**P**	**09 07 42.7**	**+0.2**
AGG				IAmb		IAmb	09 07 51.6	
	comp=Z,8.5nm,1.1s							
ARB3	**ARCESS Array S**	**44.14**	**337**	P		**P**	**09 07 48.8**	**-0.2**
ARB3				IAmb		IAmb	09 07 59.6	
	comp=Z,10nm,1.0s							
ARCES	**ARCESS Array B**	**44.14**	**337**	P		**P**	**09 07 48.6**	**-0.4**
	comp=Z,3.4nm,0.9s,baz=108,slow=8.1,SNR=2.6							
ARD1	**ARCESS Array S**	**44.15**	**337**	P		**P**	**09 07 50.5**	**+1.5**
NB2	**NORSAR Subarra**	**48.28**	**323**	P		**P**	**09 08 23.3**	**+1.6**
	comp=Z,1.9nm,0.8s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**48.28**	**323**	P		**P**	**09 08 22.2**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=91,slow=7.6,SNR=5.6							
NOA				LR		LR	09 30 10.9	
	comp=Z,33nm,19.9s,baz=255,slow=38							
TORD	**Torodi Ar. Bea**	**70.72**	**273**	P		**P**	**09 10 55.5**	**-1.6**
	comp=Z,0.8nm,0.7s,baz=32,slow=5.5,SNR=4.3							
TORD	**Torodi Ar. Bea**	**70.72**	**273**	P		**P**	**09 10 56.1**	**-1.0**
IMAR	**Indian Mountai**	**71.67**	**20**	P		**P**	**09 11 02.5**	**+0.4**
ILAR	**Eielson Array**	**74.42**	**18**	P		**P**	**09 11 19.6**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=311,slow=5.9,SNR=4.5							
ILAR	**Eielson Array**	**74.42**	**18**	P		**P**	**09 11 18.1**	**-0.3**
C36M	**Paulatuk**	**74.44**	**8**	P		**P**	**09 11 18.5**	**+0.2**
C36M				IAmb		IAmb	09 11 32.5	
	comp=Z,8.8nm,1.4s							
KOWA	**Kowa**	**74.64**	**277**	P		**P**	**09 11 21.1**	**+0.7**
WRA	**Warramunga Arr**	**77.21**	**126**	P		**P**	**09 11 34.3**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=314,slow=4.6,SNR=9.2							
WRA	**Warramunga Arr**	**77.21**	**126**	P		**P**	**09 11 34.9**	**0.0**
WB2	**Warramunga Arr**	**77.22**	**126**	P		**P**	**09 11 33.7**	**-1.2**
WB2				IAmb		IAmb	09 11 55.2	
	comp=Z,6.1nm,1.4s							
ASAR	**Alice Springs**	**79.58**	**129**	P		**P**	**09 11 47.3**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=322,slow=5.2,SNR=2.4							
YKA	**Yellowknife Ar**	**82.04**	**5**	P		**P**	**09 12 02.4**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=352,slow=5.3,SNR=1.6							

IDC 17 09:04:53.6±6.4, 7.77N×94.38E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/49, mbtmp3.5/5, Error ellipse: s-maj=336.7km s-min=24.1km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**26.66**	**235**	T	T	09 37 18.6	
	baz=55,slow=74						
H08S2	**Diego Garcia H**	**26.66**	**235**	T	T	09 37 13.3	
	baz=55,slow=74						
H08S1	**Diego Carcia H**	**26.67**	**235**	T	T	09 37 19.1	
	baz=55						
MKAR	**Makanchi Array**	**40.24**	**347**	P	P	09 12 31.7	-0.4
	0.7nm,0.6s,baz=168,slow=8.3,SNR=3.9						
KURBB	**Kurchatov Arra**	**44.70**	**346**	P	P	09 13 08.4	0.0
	0.8nm,0.8s,baz=168,slow=6.7,SNR=6.9						
ZALV	**Zalesovo Beam**	**46.69**	**352**	P	P	09 13 24.1	+0.1
	0.9nm,0.2s,baz=182,slow=8.7,SNR=2.0						
WRA	**Warramunga Arr**	**48.01**	**126**	P	P	09 13 34.8	0.0
	0.2nm,0.7s,baz=305,slow=8.6,SNR=2.5						
ASAR	**Alice Springs**	**49.67**	**130**	P	P	09 13 47.4	-0.2
	0.2nm,0.9s,baz=306,slow=7.9,SNR=2.1						

*IDC **17** 09:58:19.3±0.7, 9.62N×126.05E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/50, mbtmp3.9/14, ML4.2/1, MS3.1/10, Ms1 3.2/10, ms1mx2.9/42, Error ellipse: s-maj=34.9km s-min=14.5km az=71.0*

*MAN **17** 09:58:23.5, 9.73N×126.37E, h14km, mb4.8, ML3.7, MS3.6*

*NEIC **17** 09:58:24.7±0.6, 9.5N±0.1×126.0E±0.2, h37km±9km, mb4.1/6, Error ellipse: s-maj=26.8km s-min=10.0km az=62.0*

ISC 17 09:58:23.9±0.9, 9.59N±0.03×126.24E±0.05, h32km±2km, n48, σt1s89/50, mb3.9/14, MS3.2/9, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLSP	**General Luna,**	**0.22**	**330**	*eP*	**Pb**	**09 58 30.0**	**-0.6**
GLSP				*eS*	**Sn**	**09 58 35.6**	**+0.2**
BIP	**Bislig**	**1.36**	**179**	⇑*eP*	**Pb**	**09 58 48.9**	**+0.1**
BIP				*eS*	**Sb**	**09 59 07.2**	**+1.4**
MSLP	**Maasin**	**1.46**	**292**	*eP*	**Pb**	**09 58 50.2**	**-0.3**
MSLP				*eS*	**Sb**	**09 59 10.9**	**+2.2**
CGP	**Cagayan de Oro**	**1.90**	**234**	⇓*iP*	**Pb**	**09 58 57.7**	**-0.2**
CGP				*i* S	**Sb**	**09 59 22.1**	**+0.9**
BUKP	**Musuan**	**2.06**	**214**	*eP*	**Pb**	**09 59 00.3**	**-0.4**
BUKP				*eS*	**Sb**	**09 59 30.9**	**+4.9**
OCLP	**Ormoc**	**2.16**	**312**	*eP*	**Pb**	**09 59 00.4**	**-1.9**
OCLP				*eS*	**Sb**	**09 59 28.6**	**-0.2**
LLP	**Lapu-Lapu**	**2.35**	**288**	*eP*	**Pb**	**09 59 04.0**	**-1.6**
LLP				*i* S	**Sb**	**09 59 34.1**	**-0.1**
DAV	**Davao City (W)**	**2.59**	**195**	Pn	**Pn**	**09 59 02.4**	**-1.1**
	45nm,0.3s,baz=53,slow=5.1,SNR=1.9						
DAV				Sn	**Sb**	**09 59 39.8**	**-1.3**
	30nm,0.3s,baz=248,slow=17,SNR=1.5						
DAV				LR	LR	10 00 27.3	
	comp=Z,412nm,18.4s,baz=43,slow=50						
DAV	**Davao City (W)**	**2.59**	**195**		**Pn**	**09 59 01.5**	**-2.0**
MATI	**Mati**	**2.63**	**180**	*eP*	**Pb**	**09 59 09.0**	**-1.3**
MATI				*eS*	**Sb**	**09 59 46.1**	**+3.9**
KCP	**Kidapawan**	**2.81**	**204**	⇓*iP*	**Pb**	**09 59 12.4**	**-1.0**
KCP				*i* S	**Sb**	**09 59 48.1**	**+0.7**
CNP	**Catarman**	**3.29**	**332**	*eP*	**Pn**	**09 59 13.9**	**+0.8**
CNP				*eS*	**Sn**	**09 59 53.8**	**+2.7**
DDMP	**Don Marcelino,**	**3.50**	**189**	*eP*	**Pn**	**09 59 19.2**	**+3.1**
DDMP				*eS*	**Sb**	**10 00 04.7**	**-2.6**
CNOP	**Candoni, Negro**	**3.55**	**274**	*eP*	**Pn**	**09 59 20.0**	**+3.2**
CNOP				*eS*	**Sn**	**09 59 56.2**	**-1.5**
GUIM	**Jordan**	**3.74**	**286**	*eP*	**Pn**	**09 59 22.8**	**+3.5**
GUIM				*eS*	**Sn**	**10 00 01.6**	**-0.7**
SBUM	**Sibu**	**15.63**	**244**	Pn	**Pn**	**10 01 59.6**	**-2.4**
SBUM				IAmb	IAmb	10 02 18.7	
	comp=Z,9.1nm,0.8s						
KNRA	**Kununurra**	**25.23**	**174**	P	**P**	**10 03 41.4**	**-5.6**
FITZ	**Fitzroy Crossi**	**27.52**	**181**	P	**P**	**10 04 07.7**	**0.0**
	comp=Z,0.9nm,0.3s,baz=27,slow=14,SNR=3.9						
KSRS	**Korea Array**	**27.78**	**3**	LR	LR	10 17 40.7	
	comp=Z,21nm,18.1s,baz=190,slow=42						
CMAR	**Chiang Mai Arr**	**27.88**	**291**	P	**P**	**10 04 09.8**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=123,slow=9.8,SNR=1.6						
CMAR				LR	LR	10 13 54.6	
	comp=Z,21nm,21.9s,baz=120,slow=34						
WRA	**Warramunga Arr**	**30.41**	**165**	P	**P**	**10 04 33.3**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=344,slow=9.5,SNR=2.9						
WRA				LR	LR	10 18 60.0	
	comp=Z,24nm,19.5s,baz=130,slow=41						
WRA	**Warramunga Arr**	**30.41**	**165**	IAmb	IAmb	10 04 40.1	
	comp=Z,0.1nm,1.1s						
WB2	**Warramunga Arr**	**30.42**	**165**	P	**P**	**10 04 34.3**	**+0.9**
WR0	**Warramunga Arr**	**30.48**	**164**	P	**P**	**10 04 35.2**	**+1.2**
WR0				IAmb	IAmb	10 04 48.8	
	comp=Z,5.4nm,1.4s						
ASAR	**Alice Springs**	**33.89**	**167**	P	**P**	**10 05 04.8**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=348,slow=7.3,SNR=5.9						
ASAR				PcP	**PcP**	**10 07 43.0**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=345,slow=2.9,SNR=2.8						
ASAR	**Alice Springs**	**33.89**	**167**	P	**P**	**10 05 03.5**	**-0.5**
HNR	**Honiara**	**38.51**	**118**	LR	LR	10 19 07.6	
	comp=Z,25nm,21.8s,baz=230,slow=32						
H11S3	**WAKE ISLAND Hy**	**40.15**	**73**	T	T	10 48 53.4	
	baz=262,slow=75,SNR=65						
H11S1	**WAKE ISLAND Hy**	**40.16**	**73**	T	T	10 48 55.6	
	baz=262,slow=75,SNR=55						
H11S2	**WAKE ISLAND Hy**	**40.16**	**73**	T	T	10 48 55.5	
	baz=262,slow=75,SNR=69						
H11N1	**WAKE ISLAND Hy**	**40.50**	**71**	T	T	10 49 21.8	
	baz=265,slow=74,SNR=52						
H11N2	**WAKE ISLAND Hy**	**40.51**	**71**	T	T	10 49 26.8	
	baz=265,slow=74,SNR=39						
H11N3	**WAKE ISLAND Hy**	**40.52**	**71**	T	T	10 49 23.2	
	baz=265,slow=74,SNR=54						
SONM	**Songino Array**	**41.64**	**340**	P	**P**	**10 06 08.4**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=151,slow=6.3,SNR=2.2						
PETK	**Petropavlovsk-**	**50.27**	**24**	P	**P**	**10 07 17.6**	**+0.6**
	comp=Z,2.8nm,0.9s,baz=193,slow=5.2,SNR=4.0						
DZM	**Mont Dzumac**	**50.45**	**129**	P	**P**	**10 07 20.9**	**+1.9**
	comp=Z,3.3nm,0.8s,baz=289,slow=9.6,SNR=6.1						
MK31	**Makanchi Array**	**52.55**	**323**	P	**P**	**10 07 34.0**	**-0.3**
MKAR	**Makanchi Array**	**52.55**	**323**	P	**P**	**10 07 34.0**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=124,slow=8.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**55.20**	**332**	P	**P**	**10 07 52.4**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=108,slow=9.5,SNR=1.8						
ZALV				LR	LR	10 32 15.2	
	comp=Z,20nm,18.6s,baz=81,slow=37						
KURBB	**Kurchatov Arra**	**56.61**	**326**	P	**P**	**10 08 02.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=122,slow=7.4,SNR=2.9						
RPZ	**Rata Peaks**	**66.84**	**146**	LR	LR	10 39 36.3	
	comp=Z,21nm,18.4s,baz=20,slow=37						
AKTO	**Aktyubinsk**	**68.82**	**320**	LR	LR	10 40 31.0	
	comp=Z,21nm,20.8s,baz=85,slow=37						
ARU	**Arti**	**69.77**	**327**	LR	LR	10 41 03.8	
	comp=Z,27nm,20.1s,baz=254,slow=37						
ARCES	**ARCESS Array B**	**84.81**	**340**	P	**P**	**10 10 55.1**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=56,slow=7.4,SNR=8.8						
FINES	**FINESS Array B**	**86.47**	**332**	P	**P**	**10 11 02.7**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=92,slow=4.9,SNR=8.4						
VNDA	**Vanda**	**89.27**	**173**	P	**P**	**10 11 17.3**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=317,slow=3.8,SNR=1.8						
NOA	**NORSAR Array B**	**93.35**	**334**	LR	LR	10 58 07.2	
	comp=Z,12nm,19.6s,baz=255,slow=38						
PLCA	**Paso Flores**	**145.60**	**157**	PKPbc	**PKPdf**	**10 17 59.6**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=226,slow=7.7,SNR=2.9						

IDC 17 09:59:26.6±2.6, 6.25S×132.34E, h0km, mb3.7/1, mb1 3.7/5, mb1mx3.5/37, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=108.3km s-min=25.9km az=84.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.45**	**349**	Pn		10 00 48.6	-0.6
	1.1nm,0.3s,baz=135,slow=2.9,SNR=16						
SIJI				Sn		10 01 45.7	-7.0
	2.5nm,0.3s,baz=142,slow=23,SNR=8.6						
FITZ	**Fitzroy Crossi**	**13.47**	**208**	Pn		10 02 39.1	0.0
	0.4nm,0.3s,baz=28,slow=13,SNR=7.7						
FITZ				Sn		10 05 00.9	-8.9
	0.4nm,0.3s,baz=183,slow=16,SNR=5.1						
WRA	**Warramunga Arr**	**13.75**	**172**	Pn		10 02 42.2	-0.8
	0.1nm,0.3s,baz=350,slow=14,SNR=11						
WRA				Sn		10 05 10.0	-6.6
	0.4nm,0.3s,baz=358,slow=23,SNR=8.0						
ASAR	**Alice Springs**	**17.38**	**175**	P		10 03 31.1	+0.3
	0.1nm,0.3s,baz=354,slow=11,SNR=3.1						
ASAR				S		10 06 35.6	-9.4
	0.1nm,0.3s,baz=359,slow=30,SNR=3.4						
MKAR	**Makanchi Array**	**68.90**	**326**	P		10 10 33.7	+0.3
	0.4nm,0.5s,baz=117,slow=6.8,SNR=2.8						

IDC 17 10:00:19.4±337.0, 61.61N×93.98E, h0km, Error ellipse: s-maj=166.4km s-min=128.1km az=55.0, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**9.10**	**216**	*i*		10 53 30.0	
	baz=28,slow=336,SNR=1.7						
I34MN	**SONGINO INFRAS**	**15.55**	**147**	*i*		11 34 30.0	
	baz=340,slow=326,SNR=1.7						
I45RU	**USSURIYSK INFR**	**28.22**	**111**	*i*		12 56 10.0	
	baz=320,slow=322,SNR=2.4						
I18DK	**QAANAAQ INFRAS**	**80.77**	**354**	*i*		14 13 50.0	
	baz=2.8,slow=334,SNR=1.7						
I53US	**FAIRBANKS INFR**	**45.73**	**32**	*i*		14 35 00.0	
	baz=328,slow=329,SNR=1.7						

NNC 17 10:27:16.6±2.0, 53.59N×88.03E, h0km, mb3.7, mpv3.4, 10C-4D, Error ellipse: s-maj=16.1km s-min=8.5km az=61.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.94**	**282**	⇑Pn	Pn	10 27 49.9	-0.9
	4.3nm,0.7s						
ZAA0				⇓Sn	Sb	10 28 17.2	-0.2
	21nm,0.9s						
KURK	**Kurchatov**	**6.46**	**247**	⇓Pn	Pn	10 28 53.2	+0.3
	2.4nm,0.6s						
KURK				⇑Sn	Sn	10 30 07.0	-0.3
	2.3nm,0.8s						
KURK				⇑Lg	Lg	10 30 39.9	
	9.1nm,0.7s						
KURBB	**Kurchatov Arra**	**6.56**	**247**	⇑Pn	Pn	10 28 54.6	+0.4
	4.9nm,0.4s						
KURBB				⇑Sn	Sn	10 30 08.8	-0.8
	7.3nm,0.5s						
KURBB				⇑Lg	Lg	10 30 46.5	
	13nm,0.8s						
MK31	**Makanchi Array**	**7.73**	**211**	⇑Pn	Pn	10 29 12.0	+1.6
	0.4nm,0.5s,baz=30,slow=14,SNR=8.3						
MK31				⇑Sn	Sn	10 30 40.0	+1.4
	1.6nm,0.7s,baz=30,slow=29,SNR=6.7						
MK31				⇓Lg	Lg	10 31 26.7	
	2.1nm,0.6s						
MAKZ	**Makanchi**	**7.82**	**212**	⇓Pn	Pn	10 29 12.4	+0.8
	2.6nm,0.9s						
MAKZ				⇑Sn	Sn	10 30 42.4	+1.7
	3.2nm,1.1s						
MAKZ				⇑Lg	Lg	10 31 26.0	
	5.8nm,1.3s						

IDC 17 10:32:32.7±6.1, 8.04S×156.02E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/40, mbtmp3.7/3, MS3.0/4, Ms1 3.0/4, ms1mx2.6/36, Error ellipse: s-maj=105.2km s-min=83.6km az=5.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**17.19**	**145**	LR	LR	10 41 59.7	
	comp=Z,96nm,19.1s,baz=250,slow=33						
WRA	**Warramunga Arr**	**24.10**	**238**	P	P	10 37 49.8	-0.5
	0.8nm,0.8s,baz=65,slow=9.4,SNR=6.6						
GUMO	**Guam**	**24.17**	**333**	LR	LR	10 46 31.6	
	comp=Z,12nm,19.6s,baz=140,slow=35						
ASAR	**Alice Springs**	**26.28**	**231**	P	P	10 38 10.4	+0.3
	1.3nm,0.9s,baz=63,slow=8.9,SNR=11						
STKA	**Stephens Creek**	**27.26**	**208**	P	P	10 38 19.0	+0.2
	1.4nm,0.8s,baz=15,slow=12,SNR=2.5						
STKA				LR	LR	10 48 03.0	
	comp=Z,45nm,18.9s,baz=23,slow=34						
RPZ	**Rata Peaks**	**37.89**	**162**	LR	LR	10 55 27.2	
	comp=Z,24nm,18.5s,baz=56,slow=36						

*IDC **17** 10:51:49.7±1.2, 9.61S×155.10E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.8/38, mbtmp3.9/8, ML3.9/1, MS3.3/14, Ms1 3.3/14, ms1mx3.1/38, Error ellipse: s-maj=33.9km s-min=23.8km az=108.0*

ISC 17 10:51:54.5±0.9, 9.6S±0.1×155.1E±0.2, h33km, n17, σt0s84/11, mb3.8/7, MS3.2/10, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.83**	**89**	LR	LR	10 54 28.5	
	comp=Z,149nm,19.7s,baz=193,slow=33						
KRVT	**Keravat (AS076**	**6.02**	**330**	Pn	**Pn**	**10 53 20.0**	**-1.3**
	2.9nm,0.3s,baz=336,slow=4.3,SNR=6.3						
KRVT				LR	LR	10 55 37.3	
	comp=Z,317nm,20.2s,baz=144,slow=37						
PMG	**Port Moresby**	**7.79**	**270**	LR	LR	10 56 44.7	
	comp=Z,252nm,20.4s,baz=114,slow=38						
DZM	**Mont Dzumac**	**16.57**	**140**	Pn	**P**	**10 55 45.8**	**-1.0**
	0.1nm,0.3s,baz=315,slow=22,SNR=4.1						
DZM				LR	LR	10 59 41.9	
	comp=Z,101nm,19.9s,baz=330,slow=29						
WRA	**Warramunga Arr**	**22.50**	**240**	P	**P**	**10 56 51.4**	**-0.2**
	2.2nm,0.9s,baz=65,slow=9.5,SNR=22						
WRA				LR	LR	11 04 47.2	
	comp=Z,66nm,20.4s,baz=80,slow=34						
ASAR	**Alice Springs**	**24.59**	**233**	P	**P**	**10 57 11.9**	**+0.1**
	2.9nm,0.8s,baz=62,slow=9.5,SNR=38						
ASAR				LR	LR	11 06 02.2	
	comp=Z,29nm,19.8s,baz=69,slow=35						
GUMO	**Guam**	**25.12**	**336**	LR	LR	11 05 45.6	
	comp=Z,30nm,21.8s,baz=150,slow=33						
SIJI	**Sorong**	**25.19**	**289**	LR	LR	11 08 37.3	
	comp=Z,73nm,20.3s,baz=144,slow=40						
STKA	**Stephens Creek**	**25.47**	**207**	P	**P**	**10 57 19.9**	**+0.2**
	3.0nm,0.7s,baz=37,slow=15,SNR=8.5						
STKA				LR	LR	11 07 33.1	
	comp=Z,124nm,18.3s,baz=25,slow=37						
FITZ	**Fitzroy Crossi**	**29.75**	**250**	P	**P**	**10 57 58.5**	**+0.3**
	1.3nm,0.7s,baz=110,slow=7.1,SNR=1.9						
FITZ				LR	LR	11 09 45.1	
	comp=Z,51nm,18.6s,baz=89,slow=36						
PETK	**Petropavlovsk-**	**62.46**	**2**	LR	LR	11 24 35.0	
	comp=Z,23nm,22.0s,baz=151,slow=31						
VNDA	**Vanda**	**68.03**	**178**	P	**P**	**11 02 49.7**	**-0.4**
	1.2nm,1.0s,baz=333,slow=5.7,SNR=6.1						
MA2	**Magadan**	**68.99**	**358**	LR	LR	11 29 54.1	
	comp=Z,17nm,19.8s,baz=155,slow=33						
SONM	**Songino Array**	**71.52**	**328**	P	**P**	**11 03 13.7**	**+1.4**
	0.2nm,0.3s,baz=132,slow=6.0,SNR=1.9						
SONM				LR	LR	11 32 58.3

NACB	Ninganchiao	4.82	13	Pn		Pn	10 56 47.4	-1.3
YHNB	Yeheng	5.26	9	Pn		Pn	10 56 53.8	-1.1
TGY	Tagaytay City	5.34	175	LR		LR	10 59 09.5	
	comp=Z,172nm,21.6s,baz=61,slow=40							
HKPS	Hong Kong Po S	6.52	297	Pn		Pn	10 57 10.1	-2.1
QIZ	Qiongzhong	10.02	269	Pn		Pn	10 57 58.9	-1.3
DAV	Davao City (W)	13.29	157	LR		LR	11 04 27.5	
	comp=Z,190nm,18.1s,baz=351,slow=40							
KSRS	Korea Array	19.09	18	LR		LR	11 08 46.5	
	comp=Z,31nm,18.9s,baz=201,slow=42							
CMAR	Chiang Mai Arr	20.35	271	P		Pn	11 00 14.7	-0.1
	2.5nm,1.0s,baz=78,slow=9.1,SNR=11							
SIJI	Sorong	22.82	151	P		P	11 00 39.6	+0.5
	3.9nm,0.7s,baz=348,slow=4.8,SNR=3.9							
SONM	Songino Array	30.52	341	P		P	11 01 50.3	+1.0
	0.7nm,0.5s,baz=164,slow=10.0,SNR=4.7							
SONM	Songino Array	30.52	341	IAmb		IAmb	11 01 58.9	
	comp=Z,1.8nm,1.4s							
TLY	Talaya	34.76	342	LR		LR	11 17 19.3	
	comp=Z,25nm,20.2s,baz=156,slow=38							
FITZ	Fitzroy Crossi	37.67	172	P		P	11 02 51.7	+0.5
	comp=Z,1.2nm,0.8s,baz=3.2,slow=7.5,SNR=3.7							
WB0	Warramunga Arr	41.31	160	P		P	11 03 20.8	-0.8
WB0				IAmb		IAmb	11 03 39.3	
	comp=Z,8.4nm,1.4s							
MKAR	Makanchi Array	41.37	320	P		P	11 03 23.6	+1.6
	comp=Z,2.1nm,0.9s,baz=116,slow=8.2,SNR=7.1							
MKAR	Makanchi Array	41.37	320	P		P	11 03 23.1	+1.1
WRAB	Tennant Creek	41.45	160	P		P	11 03 23.4	+0.6
WRA	Warramunga Arr	41.46	160	P		P	11 03 22.8	-0.1
	comp=Z,1.1nm,0.6s,baz=342,slow=9.1,SNR=13							
WRA	Warramunga Arr	41.46	160	P		P	11 03 22.2	-0.6
WB2	Warramunga Arr	41.46	160	P		P	11 03 22.7	-0.1
WB2				IAmb		IAmb	11 03 26.8	
	comp=Z,5.8nm,1.4s							
WR0	Warramunga Arr	41.54	160	P		P	11 03 24.1	+0.6
WR0				IAmb		IAmb	11 03 29.1	
	comp=Z,2.6nm,0.9s							
ZALV	Zalesovo Beam	43.91	330	P		P	11 03 43.0	+0.6
	comp=Z,1.3nm,0.6s,baz=128,slow=8.3,SNR=4.5							
ZALV				LR		LR	11 22 57.0	
	comp=Z,24nm,19.4s,baz=69,slow=37							
AS31	Alice Springs	44.83	162	P		P	11 03 50.7	+0.6
ASAR	Alice Springs	44.83	162	P		P	11 03 51.1	+1.0
	comp=Z,0.8nm,0.4s,baz=340,slow=6.9,SNR=35							
ASAR	Alice Springs	44.83	162	P		P	11 03 50.7	+0.6
KURBB	Kurchatov Arra	45.37	323	P		P	11 03 55.1	+1.1
	comp=Z,1.9nm,0.6s,baz=121,slow=7.8,SNR=19							
KKAR	Karatay Array	47.91	311	P		P	11 04 14.1	0.0
NRIK	Noril'sk	53.79	346	P		P	11 04 57.9	-0.1
	comp=Z,1.9nm,0.7s,baz=95,slow=8.7,SNR=4.6							
FINES	FINESS Array B	75.17	330	P		P	11 07 18.8	+0.8
	comp=Z,0.8nm,0.5s,baz=74,slow=6.8,SNR=3.5							
FINES	FINESS Array B	75.17	330	P		P	11 07 18.4	+0.5
AKASG	Malin Array Be	75.95	319	P		P	11 07 23.0	+0.5
	comp=Z,0.2nm,0.3s,baz=65,slow=5.3,SNR=5.0							

*IDC **17** 11:04:56.8±0.7, 19°.47N×120°.48E, h0km, mb3.9/14, mb1 4.0/14, mb1mx3.8/48, mbtmp3.9/14, Error ellipse: s-maj=30.1km s-min=13.8km az=70.0*
*NEIC **17** 11:04:57.8±1.4, 19°.41N±0°.09×120°.32E±0°.05, h10km±1km, mb4.0/9, Error ellipse: s-maj=17.3km s-min=3.1km az=153.0*

ISC 17 11:04:59.6±0.6, 19°.39N±0°.08×120°.4E±0°.1, h23km, n34, σ1°15/33, mb4.0/17, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CVP	Callao Caves	2.17	141	∥e	P		Pb	11 05 36.9	-1.2
TWG	Pinlang	3.47	11	Pn		Pn	Pn	11 05 51.3	-1.0
TPUB	Ta-pu	3.90	3	Pn		Pn	Pn	11 05 55.4	-2.7
YULB	Yu-li	4.07	12	Pn		Pn	Pn	11 05 58.5	-2.0
SSLB	Suanglung	4.41	7	Pn		Pn	Pn	11 06 04.7	-0.5
NACB	Ninganchiao	4.89	13	Pn		Pn	Pn	11 06 11.0	-0.8
YHNB	Yeheng	5.33	10	Pn		Pn	Pn	11 06 17.7	-0.3
HKPS	Hong Kong Po S	6.50	297	Pn		Pn	Pn	11 06 31.6	-2.4
QIZ	Qiongzhong	9.96	270	Pn		Pn	Pn	11 07 20.5	-1.0
CMAR	Chiang Mai Arr	20.30	271	P		Pn	Pn	11 09 35.1	-1.0
	0.6nm,0.3s,baz=84,slow=9.2,SNR=7.5								
SONM	Songino Array	30.57	341	P		P	P	11 11 11.9	+0.2
	0.6nm,0.6s,baz=156,slow=11,SNR=4.2								
KLR	Kul'dur	31.14	14	P		P	P	11 11 17.3	+0.8
	0.8nm,0.7s,baz=205,slow=1.8,SNR=3.6								
FITZ	Fitzroy Crossi	37.61	172	P		P	P	11 12 13.9	+1.1
	1.4nm,0.7s,baz=18,slow=11,SNR=4.1								
FITZ	Fitzroy Crossi	37.61	172	P		P	P	11 12 13.1	+0.3
WB0	Warramunga Arr	41.27	160	P		P	P	11 12 42.7	-0.6
WB0				IAmb		IAmb	IAmb	11 12 50.3	
	comp=Z,3.9nm,1.2s								
MK31	Makanchi Array	41.39	320	P		P	P	11 12 45.5	+1.4
MKAR	Makanchi Array	41.39	320	P		P	P	11 12 45.6	+1.5
	comp=Z,2.1nm,0.8s,baz=119,slow=10,SNR=8.5								
MKAR	Makanchi Array	41.39	320	P		P	P	11 12 45.2	+1.1
WRAB	Tennant Creek	41.41	160	P		P	P	11 12 45.0	+0.5
WRAB				IAmb		IAmb	IAmb	11 12 46.6	
	comp=Z,1.7nm,0.7s								
WRA	Warramunga Arr	41.42	160	P		P	P	11 12 45.1	+0.6
	comp=Z,1.3nm,0.5s,baz=342,slow=8.9,SNR=33								
WRA	Warramunga Arr	41.42	160	P		P	P	11 12 44.3	-0.2
WB2	Warramunga Arr	41.42	160	P		P	P	11 12 44.6	+0.1
WB2				IAmb		IAmb	IAmb	11 13 02.4	
	comp=Z,4.7nm,1.4s								
WR0	Warramunga Arr	41.50	160	P		P	P	11 12 45.3	+0.1
ZALV	Zalesovo Beam	43.94	330	P		P	P	11 13 04.3	-0.3
	comp=Z,1.5nm,0.6s,baz=110,slow=7.9,SNR=7.6								
ZALV	Zalesovo Beam	43.94	330	P		P	P	11 13 05.1	+0.5
AS31	Alice Springs	44.78	162	P		P	P	11 13 12.5	+0.7
AS31				IAmb		IAmb	IAmb	11 13 22.2	
	comp=Z,1.1nm,0.4s								
ASAR	Alice Springs	44.78	162	P		P	P	11 13 13.1	+1.3
	comp=Z,1.2nm,0.6s,baz=336,slow=6.8,SNR=22								
KURBB	Kurchatov Arra	45.39	323	P		P	P	11 13 17.2	+1.0
	comp=Z,2.9nm,0.8s,baz=123,slow=7.9,SNR=23								
SEY	Seymchan	48.72	19	P		P	P	11 13 42.8	+0.7
	comp=Z,3.2nm,0.8s,baz=213,slow=17,SNR=5.2								
STKA	Stephens Creek	54.88	158	P		P	P	11 14 29.6	+1.1
	comp=Z,1.3nm,0.6s,baz=318,slow=6.3,SNR=4.9								
STKA	Stephens Creek	54.88	158	P		P	P	11 14 29.1	+0.7
STKA				IAmb		IAmb	IAmb	11 14 43.1	
	comp=Z,2.3nm,1.5s								
ILAR	Eielson Array	73.81	26	P		P	P	11 16 30.4	-1.6
	comp=Z,0.4nm,0.8s,baz=251,slow=5.4,SNR=3.3								
FINES	FINESS Array B	75.20	330	P		P	P	11 16 41.5	+1.3
	comp=Z,1.1nm,0.8s,baz=74,slow=15,SNR=1.5								
AKASG	Malin Array Be	75.96	319	P		P	P	11 16 44.6	0.0
	comp=Z,0.2nm,0.3s,baz=63,slow=4.8,SNR=2.4								

*IDC **17** 11:08:03.0±0.9, 19°.43N×120°.46E, h0km, mb3.7/9, mb1 3.8/9, mb1mx3.6/47, mbtmp3.7/9, MS2.8/1, Ms1 2.8/1, ms1mx2.3/45, Error ellipse: s-maj=36.0km s-min=18.0km az=68.0*

ISC 17 11:08:06.6±1.0, 19°.4N±0°.1×120°.5E±0°.2, h23km, n11, σ0°69/9, mb3.6/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
KSRS	Korea Array	19.12	18	LR		LR	LR	11 21 30.1	
	comp=Z,28nm,19.4s,baz=172,slow=42								
CMAR	Chiang Mai Arr	20.38	271	P		P	P	11 12 42.5	+0.6
	0.4nm,0.4s,baz=71,slow=8.7,SNR=1.0								
SONM	Songino Array	30.57	341	P		P	P	11 14 18.4	-0.2
	0.3nm,0.3s,baz=158,slow=9.7,SNR=2.5								
KLR	Kul'dur	31.10	14	P		P	P	11 14 23.9	+0.7
	0.8nm,0.5s,baz=198,slow=4.4,SNR=4.1								
WRA	Warramunga Arr	41.41	160	P		P	P	11 15 50.7	-0.8
	0.6nm,0.6s,baz=334,slow=10,SNR=9.7								
MKAR	Makanchi Array	41.42	320	P		P	P	11 15 50.7	-0.6
	0.8nm,0.7s,baz=113,slow=9.6,SNR=4.8								
ZALV	Zalesovo Beam	43.95	330	P		P	P	11 16 11.1	-0.7
	1.0nm,0.7s,baz=111,slow=9.0,SNR=4.5								
ASAR	Alice Springs	44.78	162	P		P	P	11 16 19.4	+0.6
	0.3nm,0.4s,baz=340,slow=6.7,SNR=7.9								
KURBB	Kurchatov Arra	45.41	323	P		P	P	11 16 23.2	-0.2
	1.7nm,0.6s,baz=122,slow=8.0,SNR=9.9								
ILAR	Eielson Array	73.75	26	P		P	P	11 19 38.6	-0.1
	0.2nm,0.7s,baz=304,slow=6.4,SNR=2.6								
URZ	Urewera	78.19	138	LR		LR	LR	11 58 49.9	
	comp=Z,308nm,18.0s,baz=207,slow=39								

*JMA **17** 11:11:48.9±0.4, 32°.84N×139°.31E, h212km±4km, M3.5*
*IDC **17** 11:11:48.7±0.9, 32°.84N×139°.28E, h204km±15km, mb3.0/2, mb1 3.2/4, mb1mx2.8/46, mbtmp3.7/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/16, Error ellipse: s-maj=89.4km s-min=21.2km az=85.0*

ISC 17 11:11:48.9±1.2, 32°.78N±0°.08×139°.33E±0°.06, h208km±9km, n26, σ0°73/28, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JHJ	Hachijo jima 2	0.52	48	P		Pn	Pn	11 12 17.4	+0.5
	46nm,0.3s,baz=328,slow=15,SNR=55								
JHJ				S		S	S	11 12 38.1	-0.7
	19nm,0.3s,baz=126,slow=20,SNR=1.9								
JHJ2	Mitsune	0.53	51	P		Pn	Pn	11 12 17.4	+0.4
JMKN	Mikurajimanish	1.14	11	P		Pn	Pn	11 12 20.3	0.0
JKO	Kozu shima	1.42	354	P		Pn	Pn	11 12 22.6	+0.1
TK02	Tokai 2	1.76	312	P		Pn	Pn	11 12 25.6	+0.3
TK02				S		S	S	11 12 53.7	+0.3
TTO1	TONANKAI O.B.S	2.29	292	P		Pn	Pn	11 12 30.6	0.0
TTO1				eS		S	S	11 13 03.3	+0.5
BSO1	Boso 1	2.33	36	P		Pn	Pn	11 12 30.7	0.0
BSO1				eS		S	S	11 13 03.2	+0.1
JOD2	Odawara 2	2.49	356	P		Pn	Pn	11 12 33.3	+0.2
JIE	Ise	2.72	307	P		Pn	Pn	11 12 35.5	-0.1
JIE				eS		S	S	11 13 10.6	-1.1
JYN	Shimob	2.79	347	P		Pn	Pn	11 12 36.8	+0.2
JRY	Ryogami san	3.25	354	P		Pn	Pn	11 12 42.3	+0.4
JTNC	Tanabenakahech	3.28	289	P		Pn	Pn	11 12 41.8	-0.4
JWY	Kouya	3.43	296	P		Pn	Pn	11 12 44.1	0.0
JYTA	Yamagatataniai	3.54	323	P		Pn	Pn	11 12 45.4	+0.2
JAG	Ashikaga	3.64	2	P		Pn	Pn	11 12 45.4	-1.1
MJAR	Matsushiro Arr	3.87	347	P		Pn	Pn	11 12 48.4	-0.9
	0.5nm,0.3s,baz=207,slow=7.7,SNR=30								
MAT	Matsushiro	3.87	347	P		Pn	Pn	11 12 49.2	-0.1
MAT				eS		S	S	11 13 38.4	+1.9
MAT	Matsushiro	3.87	347	P		Pn	Pn	11 12 49.6	+0.3
JWT	Wachi	4.11	309	P		Pn	Pn	11 12 52.5	+0.3
ASAJ	Asahikawa	11.61	19	P		Pn	Pn	11 14 26.6	-1.9
	1.1nm,0.3s,baz=232,slow=14,SNR=12								
H11N2	WAKE ISLAND Hy	27.84	111	T		T	T	11 46 59.9	
	baz=314								
H11N1	WAKE ISLAND Hy	27.84	111	T		T	T	11 46 51.6	
	baz=314								
H11N3	WAKE ISLAND Hy	27.86	111	T		T	T	11 46 54.9	
	baz=314								
DAV	Davao City (W)	28.59	210	LR		LR	LR	11 28 27.5	
	comp=Z,38nm,20.9s,baz=142,slow=35								
WRA	Warramunga Arr	52.64	186	P		P	P	11 20 42.1	+0.3
	0.4nm,0.4s,baz=1.2,slow=7.8,SNR=25								
ASAR	Alice Springs	56.36	186	P		P	P	11 21 09.0	+0.5
	0.3nm,0.5s,baz=16,slow=13,SNR=12								

IDC 17 11:17:25.2±4.1, 2°.73S×140°.94E, h0km, mb3.1/2, mb1 3.5/3, mb1mx3.3/38, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=165.9km s-min=29.5km az=92.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
WRA	Warramunga Arr	18.29	200	P		Pn	Pn	11 21 39.0	-1.6
	0.1nm,0.3s,baz=20,slow=12,SNR=13								
ASAR	Alice Springs	21.90	198	P		P	P	11 22 20.9	+0.7
	0.4nm,0.5s,baz=31,slow=9.8,SNR=8.7								
SONM	Songino Array	58.71	333	P		P	P	11 27 24.9	0.0
	0.2nm,0.4s,baz=136,slow=8.0,SNR=2.0								

*IDC **17** 11:18:00.3±4.6, 56°.41N×160°.66E, h0km, mb3.5/4, mb1 4.0/4, mb1mx3.4/54, mbtmp3.5/4, ML2.0/1, Error ellipse: s-maj=211.1km s-min=30.9km az=129.0*
*KRSC **17** 11:18:02.0±0.1, 56°.23N×160°.80E, h22km±3km, ML3.8*

ISC 17 11:18:03.1±0.8, 56°.22N±0°.02×160°.82E±0°.03, h17km±5km, n42, σ1°35/58, mb3.6/4, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CIRR	Tsirk	0.11	199	*i* P		Pg	Pg	11 18 06.8	-0.1
KLY	Klyuchi	0.13	315	*i* P		Pg	Pg	11 18 06.5	-0.4
KLY				eS		Sg	Sg	11 18 09.9	+0.4
KRSR	Krestovskiy	0.14	268	*i* P		Pb	Pb	11 18 06.8	-0.5
KRSR				eS		Sg	Sg	11 18 10.5	+0.6
LGNR	Loginova	0.16	207	*i* P		Pg	Pg	11 18 07.5	-0.1
ZLN	Zelenaya	0.21	182	eP		Pb	Pb	11 18 07.9	-0.6
BZGR	Bezymyannyi-Gr	0.29	193	eP		Pg	Pg	11 18 08.9	-0.5
BZGR				eS		Sg	Sg	11 18 14.2	+0.4
BZWR	Bezymyannyi-We	0.32	215	*i* P		Pg	Pg	11 18 09.5	-0.4
KIRR	Kirishev	0.38	225	*i* P		Pg	Pg	11 18 10.2	-0.8
KIRR				eS		Sg	Sg	11 18 16.3	0.0
BDR	Baidarnaya	0.41	32	eP		Pg	Pg	11 18 11.1	-0.4
BDR				eS		Sb	Sb	11 18 17.5	-0.4
SRKR	Sorokina	0.47	24	*i* P		Pg	Pg	11 18 12.1	-0.6
SRKR				eS		Sb	Sb	11 18 19.8	0.0
SMKR	Semkarok	0.51	45	eP		Pg	Pg	11 18 12.6	-0.7
SMKR				eS		Sb	Sb	11 18 20.8	0.0
KOZ	Kozyrevsk	0.55	253	eP		Pg	Pg	11 18 13.7	-0.4
KMNR	Kamenistaya	0.57	215	eP		Pg	Pg	11 18 13.3	-1.1
KMNR				eS		Sg	Sg	11 18 21.8	-0.2
SRDR	Sredinnyy	0.62	279	*i* P		Pb	Pb	11 18 14.7	-0.8
SRDR				eS		Sg	Sg	11 18 24.2	+0.6
TUMR	Tumrok	1.01	202	eP		Pb	Pb	11 18 21.1	-1.1
TUMD	Tumrok D	1.05	193	eP		Pb	Pb	11 18 21.7	-1.1
TUMD				eS		Sb	Sb	11 18 36.3	+0.1
KBG	Krutoberegovo	1.06	87	eP		Pb	Pb	11 18 21.4	-1.5
KBG				eS		Sb	Sb	11 18 35.7	-0.7
KBTR	Krutoberegovo	1.12	90	eP		Pn	Pn	11 18 22.1	-1.9
KBTR				eS		Sb	Sb	11 18 37.0	-1.2
KZV	Kizimen	1.15	195	eP		Pn	Pn	11 18 23.8	-0.7
ESO	Esso	1.22	257	eP		Pn	Pn	11 18 23.6	-1.8
ESO				eS		Sb	Sb	11 18 39.5	-1.7
MKZ	Mys Kozlova	1.75	162	eP		Pn	Pn	11 18 31.8	-0.8
MKZ				eS		Sn	Sn	11 18 54.1	-0.3
KII	Karymskiy	2.33	200	eP		Pn	Pn	11 18 41.8	+1.2
PALN	Palana	2.91	351	eP		Pn	Pn	11 18 49.8	+1.3
GNL	Ganaly	3.03	214	eP		Pn	Pn	11 18 50.6	+0.3
BKI	Bering	3.09	107	eP		Pn	Pn	11 18 53.6	+2.6
BKI				eS		Sn	Sn	11 19 30.1	+2.6
KRX	Arik	3.13	204	eP		Pn	Pn	11 18 53.6	+1.9
SDLR	Sedlovina	3.16	202	eP		Pn	Pn	11 18 53.1	+1.0
KRER	Koryakskii	3.16	203	eP		Pn	Pn	11 18 54.6	+2.4
SPN	Mys Shipunski	3.17	189	eP		Pn	Pn	11 18 53.2	+1.1
SPN				eS		Sn	Sn	11 19 30.7	+1.3
SMAR	Somma	3.19	202	eP		Pn	Pn	11 18 55.3	+2.7
KOK	Koryaka	3.20	204	eP		Pn	Pn	11 18 54.2	+1.6
AVH	Avacha	3.20	203	eP		Pn	Pn	11 18 54.7	+2.1
OSSR	Ossora	3.27	21	eP		Pn	Pn	11 18 55.2	+1.8
DALK	Dalny	3.42	201	eP		Pn	Pn	11 18 56.8	+1.3
PETK	Petropavlovsk-	3.61	211	Pn		Pn	Pn	11 18 59.1	+0.9
	0.5nm,0.3s,baz=64,slow=16,SNR=13								
KRMR	Karymshinskiy	3.74	206	eP		Pn	Pn	11 19 01.5	+1.5
GRL	Gorelyy	4.01	205	eP		Pn	Pn	11 19 06.6	+2.8
ASAK	Asacha	4.21	205	eP		Pn	Pn	11 19 09.9	+3.4
ILAR	Eielson Array	26.39	50	P		P	P	11 23 37.7	-0.4
	0.3nm,0.7s,baz=261,slow=8.5,SNR=4.2								
NVAR	Mina Array Bea	54.34	73	P		P	P	11 27 29.6	+0.9
	0.5nm,0.7s,baz=297,slow=8.9,SNR=5.0								
PDAR	Pinedale Array	55.68	63	P		P	P	11 27 37.1	-1.2
	0.3nm,0.5s,baz=22,slow=1.6,SNR=4.9								
TXAR	Lajitas Array	69.06	69	P		P	P	11 29 08.0	+0.1
	0.4nm,0.6s,baz=304,slow=4.9,SNR=4.6								

*IDC **17** 11:20:37.1±4.3, 18°.70S×176°.30W, h222km±39km, mb3.6/7, mb1 3.8/7, mb1mx3.4/47, mbtmp4.1/7, Error ellipse: s-maj=26.6km s-min=13.8km az=107.0*

ISC 17 11:20:47.6±0.9, 18°.7S±0°.2×176°.5W±0°.2, h323km, n10, σ2°20/11, mb3.6/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
DZM	Mont Dzumac	16.38	255	P		Pn	Pn	11 24 21.8	+0.3
	0.2nm,0.3s,baz=79,slow=19,SNR=9.1								
URZ	Urewera	20.30	195	P		P	P	11 24 56.2	-3.8
	5.3nm,0.3s,baz=300,slow=6.7,SNR=8.1								
URZ				S		S	S	11 28 32.0	+4.7
	6.9nm,0.6s,baz=148,slow=23,SNR=6.8								
STKA	Stephens Creek	39.90	242	P		P	P	11 27 50.9	-0.4
	1.3nm,0.5s,baz=96,slow=9.6,SNR=5.7								
WRA	Warramunga Arr	46.32	260	P		P	P	11 28 41.8	-0.6
	0.5nm,0.4s,baz=96,slow=7.8,SNR=36								
ASAR	Alice Springs	46.37	255	P		P	P	11 28 42.9	+0.1
	6.2nm,0.6s,baz=92,slow=8.4,SNR=111								
TXAR	Lajitas Array	84.85	57	P		P	P	11 32 46.9	0.0
	0.5nm,0.8s,baz=187,slow=6.4,SNR=3.7								
SEY	Seymchan	84.94	346	P		P	P	11 32 46.9	+0.6
	1.7nm,0.5s,baz=165,slow=3.9,SNR=5.6								
ILAR	Eielson Array	86.23	12	P		P	P	11 32 52.7	+0.1
	0.5nm,0.4s,baz=230,slow=5.5,SNR=14								
BRTR	Keskin Array B	146.63	315	PKPbc		PKPbc	PKPbc	11 39 52.8	+0.9
	0.8nm,0.5s,baz=126,slow=5.2,SNR=3.0								
GERES	GERESS Array B	148.80	347	PKPbc		PKiKP	PKiKP	11 39 58.3	-0.1
	0.4nm,0.5s,baz=10,slow=6.0,SNR=2.2								

IDC 17 11:22:58.4±13.0, 19°.97N×120°.19E, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.3/49, mbtmp3.5/3, Error ellipse: s-maj=362.7km s-min=35.5km az=29.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
CMAR	Chiang Mai Arr	20.12	269	P		P	P	11 27 33.9	-0.2
	0.4nm,0.2s,baz=80,slow=10,SNR=5.9								
WRA	Warramunga Arr	42.02	160	P		P	P	11 30 51.0	-0.7
	0.4nm,0.5s,baz=342,slow=9.1,SNR=9.6								
ASAR	Alice Springs	45.38	162	P		P	P	11 31 19.4	+0.5
	0.3nm,0.4s,baz=340,slow=6.9,SNR=13								

*JMA **17** 11:24:54.9, 38°.17N×141°.59E, h61km, M3.9*
JMA Felt II J1.
*IDC **17** 11:24:54.1±2.1, 38°.21N×141°.69E, h59km±20km, mb3.5/7, mb1 3.7/11, mb1mx3.4/54, mbtmp3.8/11, ML3.1/4, MS3.4/2, Ms1 3.4/2, ms1mx2.5/35, Error ellipse: s-maj=24.7km s-min=13.3km az=100.0*
*NIED **17** 11:24:55.0, 38°.17N×141°.59E, h61km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}5.46; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-5.17; $M_{r\theta}$-1.73; $M_{\theta\phi}$-0.38; $M_{\phi r}$-1.85; Fault plane solution: $M_0$5.88000×10^{14} NP1: ϕ_S199.00000°, δ57.00000°, λ105.00000°. NP2: ϕ_S352.00000°, δ36.00000°, λ68.00000°.*

ISC 17 11:24:54.4±1.0, 38°.17N±0°.04×141°.66E±0°.07, h59km±7km, n35, σ1°17/45, mb3.8/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JIKH	Ishinomakikobu	0.21	313	P		Pn	Pn	11 25 04.4	+0.6
JIKH				S		Sn	Sn	11 25 11.4	+0.9
JIO	Ouri	0.38	319	P		Pn	Pn	11 25 05.7	+0.7
JIO				S		Sn	Sn	11 25 13.2	+0.5
JKMT	Kesennumamotoy	0.66	347	P		Pn	Pn	11 25 08.7	+0.6
JKMT				S		Sn	Sn	11 25 18.5	+0.5
JOFO	Osakifurukawao	0.73	306	P		Pn	Pn	11 25 09.3	+0.4
JOFO				S		Sn	Sn	11 25 20.2	+0.6
JMM	Marumori	0.75	246	P		Pn	Pn	11 25 09.1	-0.1
JMM				S		Sn	Sn	11 25 19.4	-0.6
JOU	Okura	0.81	284	P		Pn	Pn	11 25 10.1	+0.2
JOU				S		Sn	Sn	11 25 21.2	-0.2
JMK	Ichinoseki	0.85	336	P		Pn	Pn	11 25 11.2	+0.7
JMK				S		Sn	Sn	11 25 22.8	+0.5
JFK	Kawauchi	1.01	218	P		Pn	Pn	11 25 12.8	+0.2
JFK				S		Sn	Sn	11 25 26.1	0.0
JFT	Otama	1.23	239	P		Pn	Pn	11 25 15.9	+0.4
JFT				S		Sn	Sn	11 25 31.1	-0.1
JYS	Shirataka	1.26	273	P		Pn	Pn	11 25 16.1	+0.3
JYS				S		Sn	Sn	11 25 32.3	+0.5
JYK	Kaneyama	1.27	307	P		Pn	Pn	11 25 16.2	+0.3
JYK				S		Sn	Sn	11 25 32.4	+0.4
JOM	Ohasama	1.33	348	P		Pn	Pn	11 25 17.5	+0.7
JOM				S		Sn	Sn	11 25 34.3	+0.7

ETLH				S	Sn	11 25 17.8	-0.8		
	baz=336								
CHGB	**Renai**	**0.59**	**314**	P	Pn	11 25 10.6	0.0		
	baz=314								
CHGB				S	Sn	11 25 19.0	-0.1		
	baz=314								
WHF	**Hehuan Shan**	**0.60**	**326**	*i* P	Pn	11 25 10.6	-0.3		
	baz=317								
WHF				S	Sb	11 25 19.6	-0.1		
	baz=317								
SSLB	**Suanglung**	**0.64**	**283**	P	Pn	11 25 10.9	-0.1		
	baz=282								
SSLB				S	Sn	11 25 19.7	-0.4		
	baz=282								
FUSS	**Fushou**	**0.70**	**329**	P	Pn	11 25 12.2	+0.1		
	baz=328								
FUSS				S	Sn	11 25 21.5	-0.4		
	baz=328								
SMLT	**Sun Moon Lake**	**0.71**	**289**	*i* P	Pn	11 25 12.4	+0.2		
	baz=291								
SMLT				*i* S	Sb	11 25 22.6	+0.3		
	baz=291								
WHYT	**Xinyi Township**	**0.72**	**274**	P	Pb	11 25 12.9	+0.2		
	baz=269								
WHYT				S	Sb	11 25 22.9	+0.6		
	baz=269								
ELDTW	**Lidau**	**0.73**	**231**	*i* P	Pn	11 25 11.6	-0.8		
	baz=230								
ELDTW				S	Sn	11 25 21.3	-1.1		
	baz=230								
EDH	**Donghe**	**0.74**	**204**	*e*S	Sn	11 25 22.4	0.0		
	baz=196								
TWT	**Tachien**	**0.74**	**325**	*i* P	Pb	11 25 12.9	-0.2		
	baz=318								
TWT				*i* S	Sn	11 25 22.5	-0.2		
	baz=318								
TDCB	**Techi**	**0.74**	**324**	P	Pb	11 25 13.0	-0.2		
	baz=318								
TDCB				S	Sn	11 25 22.7	-0.2		
	baz=318								
DPDB	**Guoxing**	**0.75**	**301**	*e*S	Sb	11 25 23.4	0.0		
	baz=306								
ALS	**Alishan**	**0.77**	**260**	*i* P	Pb	11 25 13.9	+0.1		
	baz=267								
ALS				S	Sb	11 25 24.8	+0.6		
	baz=267								
NNSB	**Datong**	**0.81**	**344**	*e*P	Pn	11 25 13.5	-0.1		
	baz=342								
NNSB				S	Sn	11 25 24.1	-0.4		
	baz=342								
NNSH	**Datong**	**0.81**	**344**	*i* P	Pb	11 25 14.0	-0.3		
	baz=342								
NNSH				*i* S	Sn	11 25 23.9	-0.6		
	baz=342								
NNS	**Nan Shan**	**0.83**	**343**	*e*S	Sn	11 25 24.3	-0.6		
	baz=343								
WJS	**Zhushan**	**0.85**	**282**	*e*P	Pb	11 25 15.2	+0.3		
	baz=281								
CHN5	**Tsauling**	**0.88**	**267**	P	Pb	11 25 15.7	+0.3		
	baz=276								
CHN5				*e*S	Sb	11 25 28.6	+1.7		
	baz=276								
WHP	**Taichung City**	**0.89**	**315**	*e*P	Pb	11 25 15.7	+0.1		
	baz=314								
WHP				*e*S	Sb	11 25 27.1	-0.1		
	baz=314								
STYT	**Tauyuan**	**0.94**	**239**	P	Pb	11 25 16.1	-0.2		
	baz=238								
STYT				S	Sb	11 25 28.7	+0.1		
	baz=238								
NDT	**Datong Townshi**	**0.96**	**353**	P	Pn	11 25 15.5	0.0		
	baz=353								
TPUB	**Ta-pu**	**0.98**	**250**	P	Pb	11 25 17.4	+0.3		
	baz=249								
TPUB				*e*S	Sb	11 25 30.6	+0.7		
	baz=249								
WTP	**Ta-pu**	**1.02**	**247**	*i* P	Pb	11 25 17.9	+0.2		
	baz=246								
WTP				S	Sb	11 25 32.7	+1.9		
	baz=246								
YHNB	**Yeheng**	**1.05**	**347**	*e*P	Pn	11 25 16.5	-0.3		
	baz=356								
YHNB				*e*S	Sn	11 25 30.6	+0.4		
	baz=356								
NSK	**Sanguang**	**1.06**	**346**	P	Pb	11 25 17.8	-0.6		
	baz=355								
NSK				S	Sn	11 25 30.7	+0.3		
	baz=355								
CHN1	**Nanshi**	**1.11**	**246**	*e*P	Pb	11 25 19.6	+0.3		
	baz=245								
CHN1				*e*S	Sb	11 25 34.7	+1.1		
	baz=245								
SLGT	**Liugui**	**1.12**	**235**	P	Pb	11 25 19.0	-0.3		
	baz=231								
SLGT				S	Sb	11 25 34.8	+1.2		
	baz=231								
LIOB	**Emei**	**1.14**	**331**	P	Pb	11 25 19.8	0.0		
	baz=336								

*IDC **17** 11:27:03.9±0.4,35°.92S×102°.35W,h0km,mb4.7/24, mb1 4.8/24,mb1mx4.7/35,mbtmp4.7/24,MS4.6/15, Ms1 4.5/15,ms1mx4.4/21,Error ellipse: s-maj=14.7km s-min=12.0km az=134.0*

*BJI **17** 11:27:05.2±0.0,36°.00S×102°.20W,h8km,mB5.2/6, Ms5.3/8,Ms7 5.2/10*

*NEIC **17** 11:27:07.0±1.6,36°.00S±0°.09×102°.2W±0°.1,h19km±3km, mb5.1/243,Mwc5.5(GCMT),Error ellipse: s-maj=14.6km s-min=13.5km az=70.0*

*GCMT **17** 11:27:08.0±0.1,36°.01S±0°.01×102°.23W±0°.01,h16km, MW5.4/148,Moment Tensor Solution. s123,c227; s148,c279; Duration: 1ŝ3 Moment tensor: Scale 10^17 Nm; Mrr~0.09±.02; Mθθ~0.36±.02; Mϕϕ0.45±.02; Mrθ0.10±.04; Mrϕ~1.67±.02; Mθr~0.53±.05; Best double couple: M₀1.79700×10^17 NP1:ϕs96.00000°,δ74.00000°, λ177.00000°. NP2:ϕs187.00000°,δ87.00000°,λ16.00000°. Principal axes: T 1.8830, Plg14.0000°, Azm53.0000°; N -0.1710, Plg73.0000°, Azm198.0000°; P -1.7120, Plg9.0000°, Azm321.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **17** 11:27:09,36°.01S×102°.26W,h17km,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr~0.15; Mθθ-0.38; Mϕϕ0.53; Mrθ0.10; Mϕr~1.83; Mθr~0.43; Fault plane solution: M₀1.94000×10^17 NP1:ϕs97.00000°, δ78.00000°,λ177.00000°. NP2:ϕs187.00000°,δ87.00000°, λ12.00000°. Principal axes: T 2.0365, Plg10.0000°, Azm52.0000°; N -0.2059, Plg78.0000°, Azm199.0000°; P -1.8307, Plg7.0000°, Azm321.0000°;*

ISC 17 11:27:05.8±0.3,35°.97S±0°.06×102°.25W±0°.06,h10km, n555,σ1s09/477,mb5.0/136,MS4.7/19,1C-2D,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**10.68**	**324**		Pn		**Pn**	**11 29 40.0**	**+1.2**
H03S2	**Juan Fernandez**	**19.24**	**90**	T	T		T	11 52 10.1	
	baz=254,slow=75,SNR=120								
H03S1	**Juan Fernandez**	**19.26**	**91**	T	T		T	11 52 03.1	
	baz=254,slow=75,SNR=80								
H03S3	**Juan Fernandez**	**19.26**	**90**	T	T		T	11 52 01.8	
	baz=254,slow=75,SNR=73								
H03N2	**Juan Fernandez**	**19.33**	**89**	T	T		T	11 52 17.5	
	baz=247,slow=72,SNR=73								
H03N3	**Juan Fernandez**	**19.33**	**89**	T	T		T	11 52 13.5	
	baz=247,slow=72,SNR=66								
H03N1	**Juan Fernandez**	**19.34**	**89**	T	T		T	11 52 14.3	
	baz=247,slow=72,SNR=97								
LL01	**San Ignacio de**	**23.92**	**115**	P			**P**	**11 32 20.2**	**+0.4**
LC01	**Cunco**	**24.24**	**106**	P			**P**	**11 32 25.1**	**+2.3**
BI02	**San Fabin de**	**24.92**	**101**	P			**P**	**11 32 28.7**	**-0.4**
BI02					IAmb		IAmb	11 32 36.4	
	comp=Z,39nm,1.0s								
PLCA	**Paso Flores**	**25.23**	**110**	P			**P**	**11 32 33.5**	**+1.6**
	comp=Z,5.0nm,0.8s,baz=280,slow=8.8,SNR=11								
PLCA					LR		LR	11 39 54.7	
	comp=Z,1μm,21.2s,baz=267,slow=30								
PLCA	**Paso Flores**	**25.23**	**110**	P			**P**	**11 32 33.7**	**+1.9**
PLCA	**Paso Flores**	**25.23**	**110**	*e*P			**P**	**11 32 33.9**	**+2.0**
BO02	**Sierra Bellavi**	**25.63**	**97**	P			**P**	**11 32 36.1**	**+0.6**
BO02					IAmb		IAmb	11 32 41.7	
	comp=Z,37nm,0.8s								
MT02	**Curacav**	**25.69**	**93**	P			**P**	**11 32 37.0**	**+0.9**
ROC1	**El Roble**	**25.87**	**93**	P			**P**	**11 32 38.3**	**+0.4**
MT05	**Renca**	**25.98**	**94**	P			**P**	**11 32 38.2**	**-0.6**
MT05					IAmb		IAmb	11 32 55.5	
	comp=Z,57nm,1.1s								
PEL	**Peldehue**	**26.09**	**93**	P			**P**	**11 32 38.6**	**-1.1**
PEL					IAmb		IAmb	11 32 55.9	
	comp=Z,61nm,1.3s								
GO09	**Cerro Castillo**	**26.27**	**135**	P			**P**	**11 32 41.4**	**+0.3**
VA03	**San Esteban**	**26.30**	**92**	P			**P**	**11 32 40.5**	**-1.2**
VA03					IAmb		IAmb	11 32 52.1	
	comp=Z,29nm,0.9s								
CO02	**Combarbal**	**26.40**	**89**	P			**P**	**11 32 41.9**	**-0.7**
CO02					IAmb		IAmb	11 32 51.1	
	comp=Z,34nm,1.1s								
CO03	**El Pedregal**	**26.77**	**88**	P			**P**	**11 32 46.0**	**0.0**
GO04	**Tololo Observa**	**26.91**	**87**	P			**P**	**11 32 46.3**	**-1.1**
GO04					IAmb		IAmb	11 32 55.0	
	comp=Z,44nm,0.9s								
AC04	**Llanos de Chal**	**27.44**	**83**	P			**P**	**11 32 51.6**	**-0.3**
CO01	**Juntas del Tor**	**27.55**	**87**	P			**P**	**11 32 53.2**	**+0.1**
AC05	**El Transito**	**27.83**	**84**	P			**P**	**11 32 54.9**	**-0.6**
AC05					IAmb		IAmb	11 33 00.7	
	comp=Z,31nm,1.1s								
GO03	**Copiap**	**28.37**	**82**	P			**P**	**11 33 00.3**	**+0.1**
AC01	**Pan de Azucar**	**28.72**	**79**	P			**P**	**11 33 02.5**	**-0.7**
AC02	**Maricunga**	**29.58**	**81**	P			**P**	**11 33 11.6**	**0.0**
PB14	**IPOC Station P**	**29.60**	**76**	P			**P**	**11 33 10.4**	**-1.1**
PB14					IAmb		IAmb	11 33 17.0	
	comp=Z,52nm,1.5s								
USHA	**Ushuaia**	**29.90**	**140**	P			**P**	**11 33 12.5**	**-0.9**
	comp=Z,13nm,0.6s,baz=226,slow=2.5,SNR=2.5								
USHA					LR		LR	11 42 23.4	
	comp=Z,4μm,19.9s,baz=272,slow=31								
GO02	**Mina Guanaco**	**29.98**	**78**	P			**P**	**11 33 14.3**	**-0.5**
GO02					IAmb		IAmb	11 33 24.2	
	comp=Z,29nm,1.4s								
PB15	**IPOC Station P**	**31.06**	**75**	P			**P**	**11 33 24.1**	**-0.1**
PB15					IAmb		IAmb	11 33 26.7	
	comp=Z,48nm,1.4s								
PB06	**IPOC Station P**	**31.25**	**74**	P			**P**	**11 33 25.0**	**-0.9**
PB06					IAmb		IAmb	11 33 27.7	
	comp=Z,17nm,0.8s								
LVC	**Limon Verde**	**31.81**	**74**	P			**P**	**11 33 32.1**	**+1.0**
	comp=Z,12nm,1.1s,baz=235,slow=10.0,SNR=5.3								
LVC	**Limon Verde**	**31.81**	**74**	P			**P**	**11 33 31.7**	**+0.6**
LVC					IAmb		IAmb	11 33 38.6	
	comp=Z,34nm,1.4s								
LVC	**Limon Verde**	**31.81**	**74**	*e*P			**P**	**11 33 30.6**	**-0.5**
PB09	**IPOC Station P**	**31.99**	**73**	P			**P**	**11 33 33.0**	**+0.5**
PB01	**IPOC Station P**	**32.22**	**71**	P			**P**	**11 33 32.9**	**-1.5**
PB01					IAmb		IAmb	11 33 37.1	
	comp=Z,34nm,1.3s								
PB11	**IPOC Station P**	**32.83**	**69**	P			**P**	**11 33 38.3**	**-1.5**
PB08	**IPOC Station P**	**32.99**	**70**	P			**P**	**11 33 40.5**	**-1.0**
PB08					IAmb		IAmb	11 33 45.1	
	comp=Z,17nm,0.8s								
NNA	**Nana**	**33.10**	**50**	P			**P**	**11 33 41.0**	**-1.1**
	comp=Z,5.3nm,0.4s,baz=223,slow=8.6,SNR=3.7								
NNA	**Nana**	**33.10**	**50**		IAmb		IAmb	11 33 49.5	
	comp=Z,28nm,1.1s								
PB16	**IPOC Station P**	**33.80**	**67**	P			**P**	**11 33 47.0**	**-1.7**
ATAH	**Atahualpa**	**36.06**	**43**	P			**P**	**11 34 08.9**	**+0.8**
	comp=Z,16nm,0.9s,baz=214,slow=6.2,SNR=11								
LPAZ	**La Paz**	**36.10**	**66**	P			**P**	**11 34 09.4**	**+0.7**
	comp=Z,34nm,1.0s,baz=224,slow=6.9,SNR=46								
LPAZ					LR		LR	11 45 44.7	
	comp=Z,480nm,20.0s,baz=232,slow=31								
LPAZ	**La Paz**	**36.10**	**66**	P			**P**	**11 34 09.3**	**+0.7**
LPAZ	**La Paz**	**36.10**	**66**	*e*P			**P**	**11 34 08.5**	**-0.2**
PMSA	**Palmer Station**	**36.73**	**154**	*e*P			**P**	**11 34 16.4**	**+3.7**
ITQB	**Itaqui**	**38.58**	**94**	*e*P			**P**	**11 34 29.0**	**+0.1**
CZSB	**Cruzeiro do Su**	**38.96**	**51**	*e*P			**P**	**11 34 31.0**	**-1.3**
CPUP	**Villa Florida**	**39.33**	**89**	P			**P**	**11 34 34.7**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=254,slow=9.4,SNR=8.6								
CPUP					LR		LR	11 48 03.9	
	comp=Z,392nm,19.2s,baz=249,slow=32								
CPUP	**Villa Florida**	**39.33**	**89**	P			**P**	**11 34 34.1**	**-1.1**
CPUP	**Villa Florida**	**39.33**	**89**	*e*P			**P**	**11 34 34.7**	**-0.5**
PLTB	**Pedras Altas**	**40.28**	**99**	*e*P			**P**	**11 34 43.1**	**0.0**
CPSB	**Cacapava Do Su**	**40.88**	**97**	*e*P			**P**	**11 34 48.1**	**0.0**
SIV	**San Ignacio**	**41.64**	**72**	P			**P**	**11 34 53.9**	**-0.5**
	comp=Z,14nm,0.9s,baz=250,slow=8.9,SNR=48								
ETMB	**Extrema**	**41.79**	**60**	*e*P			**P**	**11 34 54.7**	**-0.9**
TBI	**Tubuai**	**42.53**	**274**	*e*S			**S**	**11 41 25.2**	**+1.1**
TBI					*e*LQ		LQ	11 44 52.2	
	comp=Z,646nm,25.3s								
TBI					*e*LR		LR	11 46 49.2	
	comp=Z,3μm,34.5s								
	comp=Z,2μm,24.0s,baz=114								
ITAB	**Concordia**	**43.17**	**93**	*e*P			**P**	**11 35 06.4**	**-0.4**
CNLB	**Canela**	**43.38**	**96**	*e*P			**P**	**11 35 09.3**	**+0.8**
AQDB	**Aquidauana**	**43.41**	**82**	*e*P			**P**	**11 35 08.2**	**-0.6**
PTLB	**Pontes e Lacer**	**43.46**	**73**	*e*P			**P**	**11 35 08.5**	**-0.7**
VILB	**Vilhena**	**44.15**	**70**	*e*P			**P**	**11 35 13.9**	**-0.9**
MEH	**Mehetia**	**44.21**	**282**	*e*T			T	12 21 51.6	
	comp=Z,25nm,0.2s								
PTGB	**Pitanga**	**44.31**	**90**	*e*P			**P**	**11 35 16.1**	**0.0**
SAML	**Samuel**	**44.55**	**63**	P			**P**	**11 35 16.9**	**-1.1**
SAML	**Samuel**	**44.55**	**63**	*e*P			**P**	**11 35 17.5**	**-0.5**
TRCB	**Terra Rica**	**44.74**	**87**	*e*P			**P**	**11 35 18.9**	**-0.6**
FLOC	**Florencia**	**44.84**	**39**	*e*P			**P**	**11 35 16.6**	**-3.7**
PCON	**Cinco Dias**	**45.10**	**38**	*e*P			**P**	**11 35 19.7**	**-3.2**
POPC	**Popayan, Colom**	**45.15**	**37**	*e*P			P	11 35 15.6	-7.3
TVO	**Taravao**	**45.20**	**281**	*e*T			T	12 22 59.6	
	comp=Z,1.4nm,0.3s								
VAH	**Vaihoa**	**45.35**	**285**	*e*P			**P**	**11 35 23.6**	**-0.7**
	comp=Z,90nm,1.1s								
TIAR	**Tiarei**	**45.40**	**281**	*e*P			**P**	**11 35 24.3**	**-0.4**
	comp=Z,17nm,0.9s								
TIAR	**Tiarei**	**45.40**	**281**	*e*T			T	12 23 20.1	
	comp=Z,6.0nm,0.3s								
PAE	**Paea**	**45.53**	**281**	*e*P			**P**	**11 35 25.0**	**-0.7**
	comp=Z,9.8nm,1.0s								
PAE	**Paea**	**45.53**	**281**	*e*T			T	12 23 36.0	
	comp=Z,1.0nm,0.3s								
PPTF	**Pamatai, Papee**	**45.56**	**281**	P			**P**	**11 35 26.4**	**+0.3**
PPT2	**Papeete2**	**45.56**	**281**	*e*P			**P**	**11 35 25.7**	**-0.4**
	comp=Z,80nm,1.1s								
PPT2					*e*S		**S**	**11 42 08.6**	**0.0**
	comp=Z,204nm,28.0s								
PPT2					*e*LQ		LQ	11 45 40.8	
	comp=Z,2μm,24.2s								
PPT2					*e*LR		LR	11 48 04.0	
	comp=Z,969nm,24.5s,baz=111								
PPT2	**Papeete2**	**45.56**	**281**	*e*T			T	12 23 46.2	
	comp=Z,2.4nm,0.3s								
PPT	**Papeete**	**45.58**	**281**	P			**P**	**11 35 25.9**	**-0.3**
	comp=Z,61nm,0.9s,baz=79,slow=7.4,SNR=5.9								
PPT					LR		LR	11 48 21.9	
	comp=Z,316nm,20.6s,baz=134,slow=28								
PP1B	**Ponte de Pedra**	**45.59**	**79**	*e*P			**P**	**11 35 25.8**	**-0.5**
MARP	**Paez Belalcaza**	**45.76**	**38**	*e*P			**P**	**11 35 26.3**	**-1.6**
MACC	**Macarena, Meta**	**46.26**	**41**	*e*P			**P**	**11 35 27.9**	**-3.6**
PCMB	**Pacaembu**	**46.43**	**86**	*e*P			**P**	**11 35 32.8**	**-0.1**
TIJ01	**Guaruva-PR**	**46.52**	**92**	*e*P			**P**	**11 35 34.5**	**+0.9**
YOTC	**Yotoco, Valle**	**46.56**	**37**	*e*P			**P**	**11 35 30.7**	**-3.2**
FRTB	**Fartura**	**46.97**	**90**	*e*P			**P**	**11 35 37.1**	**-0.1**
ORTC	**Ortega, Tolima**	**47.04**	**38**	*e*P			P	11 35 28.8	-8.8
PRAC	**Prado**	**47.05**	**39**	*e*P			P	11 35 23.0	-15
PLMC	**San Jos del P**	**47.39**	**36**	*e*P			P	11 35 31.2	-9.1
ANIL	**Santa Ana**	**47.46**	**38**	*e*P			**P**	**11 35 40.2**	**-1.0**
TOLC	**Tolima**	**47.58**	**38**	*e*P			**P**	**11 35 40.4**	**-1.8**
ITRB	**Iturama**	**48.11**	**85**	*e*P			**P**	**11 35 45.7**	**-0.3**
ROSC	**El Rosal**	**48.30**	**39**	P			**P**	**11 35 48.6**	**+0.8**
	comp=Z,21nm,0.7s,baz=167,slow=6.5,SNR=8.2								
ROSC					LR		LR	11 52 33.7	
	comp=Z,2μm,20.9s,baz=226,slow=32								
ROSC	**El Rosal**	**48.30**	**39**	P			**P**	**11 35 48.2**	**+0.3**
PET01	**Itanhaem-SP**	**48.39**	**92**	*e*P			**P**	**11 35 48.5**	**+0.5**
CHIC	**Chingaza**	**48.42**	**40**	*e*P			**P**	**11 35 47.0**	**-1.8**
SPB	**Sao Paulo**	**48.58**	**91**	P			**P**	**11 35 48.1**	**-1.5**
SPB	**Sao Paulo**	**48.58**	**91**	*e*P			**P**	**11 35 50.2**	**+0.6**
CLDB	**Colider**	**48.81**	**71**	*e*P			**P**	**11 35 49.9**	**-1.5**
JTS	**Las Juntas de**	**48.82**	**23**	P			**P**	**11 35 55.4**	**+4.1**
	comp=Z,6.9nm,1.0s,baz=162,slow=20,SNR=2.1								
BB19B	**Bebedouro**	**48.91**	**87**	*e*P			**P**	**11 35 52.0**	**-0.1**
ARAG	**Araguaiana, MT**	**49.08**	**79**	*e*P			**P**	**11 35 53.1**	**-0.3**
VAO	**Valinhos**	**49.24**	**91**	*e*P			**P**	**11 35 54.9**	**+0.2**
DBBC	**Dabeiba**	**49.27**	**35**	*e*P			**P**	**11 35 54.3**	**-0.6**
PTBC	**PUERTO BERRIO,**	**49.69**	**37**	*e*P			P	11 35 47.8	-10
RUSC	**La Rusia**	**49.83**	**39**	*e*P			**P**	**11 35 57.0**	**-2.7**
PARB	**Paraibuna**	**50.17**	**92**	*e*P			**P**	**11 36 02.1**	**+0.3**
MACA	**Manacapuru-AM**	**50.35**	**59**	*e*P			**P**	**11 36 02.4**	**-0.7**
BELA	**Belgrano 2**	**50.45**	**165**	P			**P**	**11 36 02.7**	**-0.4**
IPMB	**Ipameri, GO**	**50.74**	**84**	*e*P			**P**	**11 36 05.0**	**-1.1**
MOTC	**Monteria, Cord**	**51.06**	**35**	*e*P			P	11 35 59.2	-9.3
ESAR	**Angra dos Reis**	**51.28**	**92**	*e*P			**P**	**11 36 11.0**	**+0.9**
NPGB	**Novo Progresso**	**51.57**	**68**	*e*P			**P**	**11 36 11.2**	**-1.2**
SNDB	**Serra Nova Dou**	**51.64**	**76**	*e*P			**P**	**11 36 12.0**	**-0.8**
MAN01	**Angra dos Reis**	**51.74**	**92**	*e*P			**P**	**11 36 14.2**	**+0.6**
BSCB	**Bom Sucesso**	**51.99**	**90**	*e*P			**P**	**11 36 15.2**	**-0.3**
BDFB	**Brasilia**	**52.16**	**82**	P			**P**	**11 36 16.4**	**-0.4**
	comp=Z,7.6nm,0.8s,baz=234,slow=6.6,SNR=7.8								
BDFB					LR		LR	11 57 41.7	
	comp=Z,522nm,18.0s,baz=239,slow=35								
BDFB	**Brasilia**	**52.16**	**82**	P			**P**	**11 36 15.8**	**-1.0**
SJCC	**San Jacinto, C**	**52.27**	**35**	*e*P			P	11 36 10.4	-7.2
VAS01	**Vassouras-RJ**	**52.44**	**92**	*e*P			**P**	**11 36 18.6**	**-0.2**
ITTB	**Itaituba**	**53.07**	**65**	*e*P			**P**	**11 36 22.2**	**-1.2**
CMIG	**Matias Romero**	**53.23**	**9**	P			**P**	**11 36 25.4**	**+1.0**
	comp=Z,5.4nm,1.0s,baz=183,slow=9.8,SNR=4.4								
TLIG	**Tlapa**	**53.35**	**4**	P			**P**	**11 36 26.9**	**+1.5**
TLIG					IAmb		IAmb	11 36 35.5	
	comp=Z,33nm,1.3s								
SDV	**Santo Domingo**	**53.63**	**40**	P			**P**	**11 36 26.7**	**-1.0**
	comp=Z,7.9nm,0.7s,baz=205,slow=3.1,SNR=6.9								
SDV	**Santo Domingo**	**53.63**	**40**	P			**P**	**11 36 26.0**	**-1.7**
SDV					IAmb		IAmb	11 36 43.2	
	comp=Z,14nm,0.9s								
SDV	**Santo Domingo**	**53.63**	**40**	*e*P			**P**	**11 36 26.0**	**-1.7**
PETF	**Flores**	**53.88**	**15**	P			**P**	**11 36 30.5**	**+1.3**
PETF					IAmb		IAmb	11 36 36.7	
	comp=Z,18nm,1.0s								
PEXB	**Peixe**	**53.93**	**78**	*e*P			**P**	**11 36 29.4**	**-0.4**
QSPA	**South Pole Qui**	**54.24**	**180**	P			**P**	**11 36 32.0**	**+0.4**
	comp=Z,11nm,0.7s,baz=127,slow=3.1,SNR=17								
QSPA	**South Pole Qui**	**54.24**	**180**	P			**P**	**11 36 33.0**	**+1.4**
QSPA					IAmb		IAmb	11 36 37.4	
	comp=Z,12nm,0.8s								
H06S1	**SOCORRO T**	**55.02**	**350**	T			T	12 35 15.4	
	SNR=23								
JANB	**Januaria**	**55.46**	**84**	*e*P			**P**	**11 36 41.1**	**+0.1**
MALB	**Monte Alegre**	**55.84**	**64**	*e*P			**P**	**11 36 42.9**	**-0.7**
SJMB	**Sao Joao De Ma**	**56.05**	**89**	*e*P			**P**	**11 36 45.4**	**+0.2**
PRPB	**Parauapebas**	**56.34**	**71**	*e*P			**P**	**11 36 49.2**	**+1.9**
RIB01	**Linhares ES**	**56.38**	**90**	*e*P			**P**	**11 36 46.5**	**-1.0**
SMTB	**Santa Maria do**	**56.41**	**75**	*e*P			**P**	**11 36 48.1**	**+0.3**
VNDA	**Vanda**	**56.46**	**195**	P			**P**	**11 36 48.7**	**+1.6**
	comp=Z,5.4nm,1.0s,baz=98,slow=6.6,SNR=21								
VNDA					LR		LR	11 55 15.4	
	comp=Z,530nm,21.3s,baz=98,slow=30								
VNDA	**Vanda**	**56.46**	**195**	P			**P**	**11 36 46.8**	**-0.4**
SDBA	**SAO DESIDERIO**	**56.46**	**81**	*e*P			**P**	**11 36 48.0**	**-0.2**
VNA3	**Neumayer Olymp**	**57.22**	**157**	P			**P**	**11 36 52.8**	**+0.1**
VNA1	**Neumayer--Stat**	**57.83**	**157**	P			**P**	**11 36 57.2**	**+0.3**
ZAIG	**Zacatecas**	**58.42**	**360**	P			**P**	**11 37 03.7**	**+1.8**
ZAIG					IAmb		IAmb	11 37 12.9	
	comp=Z,16nm,1.2s								
MCPB	**Macapa, AP**	**58.47**	**64**	*e*P			**P**	**11 37 01.5**	**-0.7**
SNAA	**Sanae**	**59.16**	**159**	P			**P**	**11 37 06.0**	**-0.3**
SNAA	**Sanae**	**59.16**	**159**	P			**P**	**11 37 05.9**	**-0.3**
SNAA					IAmb		IAmb	11 37 15.8	
	comp=Z,10nm,0.9s								
GDU01	**Guandu, BA**	**60.02**	**85**	*e*P			**P**	**11 37 12.1**	**-0.9**
TMAB	**Tom-Au,PA,Br**	**60.09**	**69**	*e*P			**P**	**11 37 12.9**	**-0.5**
MDP	**Montagnes des**	**61.84**	**59**	P			**P**	**11 37 24.2**	**-1.1**
	comp=Z,10nm,0.7s,baz=210,slow=8.4,SNR=4.6								
ROSB	**Rosrio**	**62.79**	**72**	*e*P			**P**	**11 37 31.6**	**-0.1**
CMWZ	**Cape Campbell**	**62.86**	**237**	P			**P**	**11 37 31.0**	**-0.8**
PDPR	**Patillas Dam,**	**63.71**	**39**	P			**P**	**11 37 39.0**	**+1.4**
TXAR	**Lajitas Array**	**64.97**	**359**	P			**P**	**11 37 44.8**	**-1.0**
	comp=Z,2.2nm,1.1s,baz=183,slow=7.5,SNR

TUL1 Leonard 71.76 6 P P 11 38 28.2 +0.1
baz=185
RRX Edison Barstow 71.81 347 P P 11 38 28.9 +0.5
baz=167
SBC Santa Barbara 71.92 345 P P 11 38 29.3 +0.3
baz=165
EDW2 Edwards Air Fo 72.00 346 P P 11 38 29.7 +0.1
baz=167
U32A Winter Ranch, 72.04 3 P P 11 38 29.0 -0.8
Z58A St. Stephen 72.07 20 P P 11 38 30.1 +0.2
baz=199
FCAR Ozark Folk Cen 72.11 9 P P 11 38 30.9 +0.7
TUQ Turquoise Moun 72.17 348 P P 11 38 30.7 0.0
baz=168
GSC Goldstone, Bar 72.19 348 P P 11 38 30.8 +0.1
baz=168,SNR=8.3
GSC Goldstone, Bar 72.19 348 P P 11 38 30.6 -0.1
GSC IAmb IAmb 11 38 36.2
comp=Z,20nm,1.2s
HHAR Hobbs 72.30 7 P P 11 38 30.9 -0.4
HHAR IAmb IAmb 11 38 42.7
comp=Z,14nm,1.1s
PKM Mcpherson Peak 72.37 345 P P 11 38 31.9 -0.1
baz=165
ARVC Arvin 72.40 346 P P 11 38 32.4 +0.5
baz=166
U38A Gravette 72.41 7 P P 11 38 31.8 -0.1
SWET Sewanee 72.43 14 P P 11 38 31.9 -0.2
U40A Yellville 72.48 8 P P 11 38 32.8 +0.4
baz=188
LRMC Laurel Mtn Rad 72.52 347 P P 11 38 32.9 +0.1
baz=167,SNR=9.0
U15A North Rim 72.63 352 P P 11 38 31.4 -2.2
U15A IAmb IAmb 11 38 39.1
comp=Z,24nm,1.2s
X55A Gracelyn & Ava 72.67 18 P P 11 38 33.6 +0.1
baz=197
SHOC Shoshone, Teco 72.68 348 P P 11 38 34.0 +0.4
baz=168
T35A Sooner Cattle 72.71 5 IAmb IAmb 11 38 45.5
comp=Z,15nm,0.9s
T25A Trinidad 72.76 358 P P 11 38 34.2 -0.1
baz=178
V48A Smith Brothers 72.77 13 P P 11 38 33.0 -1.1
SMMC Simmler 72.82 345 P P 11 38 34.8 +0.3
baz=165
ISA Isabella, Lake 72.85 346 P P 11 38 34.6 0.0
baz=166,SNR=11
ISA Isabella, Lake 72.85 346 IAmb IAmb 11 38 40.1
comp=Z,18nm,1.1s
BG3 Lake Jocassee 72.86 17 IAmb IAmb 11 38 43.2
comp=Z,24nm,1.4s
WVT Waverly 72.97 12 P P 11 38 36.1 +0.8
baz=192
WVT Waverly 72.97 12 P P 11 38 35.7 +0.4
MVCO Mesa Verde 73.04 355 P P 11 38 36.5 +0.6
baz=175
MVCO Mesa Verde 73.04 355 IAmb IAmb 11 38 41.7
comp=Z,25nm,1.1s
MPMC Manual Prospec 73.05 347 P P 11 38 36.1 +0.2
baz=167,SNR=17
SHPR Sheep Range 73.10 349 IAmb IAmb 11 38 41.8
comp=Z,16nm,1.1s
W54A Cherokee Point 73.12 17 P P 11 38 36.5 +0.3
baz=197
VES Vestal, Richgr 73.14 346 P P 11 38 36.9 +0.6
baz=166
PBMO Poplar Bluff 73.20 10 P P 11 38 36.5 -0.1
PAGB Antelope Grade 73.28 345 P P 11 38 37.8 +0.7
TKL Tuckaleechee C 73.31 16 P P 11 38 36.3 -1.0
comp=Z,4.3nm,0.7s,baz=205,slow=4.4,SNR=7.1
FURC Furnace Creek, 73.34 348 P P 11 38 37.6 +0.2
baz=168
MGMO Mountain Grove 73.34 8 P P 11 38 39.4 +2.0
MGMO IAmb IAmb 11 38 59.0
comp=Z,17nm,1.2s
T42A Van Buren 73.36 9 IAmb IAmb 11 38 42.5
comp=Z,30nm,1.4s
SDCO Great Sand Dun 73.40 357 P P 11 38 38.0 -0.2
baz=177,SNR=19
SDCO Great Sand Dun 73.40 357 P P 11 38 36.5 -1.6
S22A 4UR Ranch, Cre 73.47 356 P P 11 38 38.5 -0.1
baz=176
CWC Cottonwood Cre 73.53 347 P P 11 38 38.8 +0.1
baz=167
V53A Saluda 73.53 16 IAmb IAmb 11 38 51.8
comp=Z,15nm,1.0s
TPNV Topopah Spring 73.70 348 P P 11 38 40.2 +0.4
baz=168
TPNV Topopah Spring 73.70 348 IAmb IAmb 11 38 45.5
comp=Z,14nm,1.0s
U49A Red Boiling Sp 73.72 14 IAmb IAmb 11 38 48.5
comp=Z,13nm,0.9s
W57A Gilead 73.73 19 P P 11 38 39.8 0.0
baz=198
S39A Bolivar 73.75 7 P P 11 38 39.8 -0.1
W58A Raeford 73.81 20 P P 11 38 41.1 +0.8
baz=199
PMPB Monarch Peak 73.86 344 P P 11 38 39.8 -0.8
T47A Sharon Grove 73.94 13 IAmb IAmb 11 38 50.4
comp=Z,28nm,1.2s
GRAC Grapevine Rang 73.94 347 P P 11 38 42.3 +1.3
baz=167
PV01 Paradox Valley 73.96 355 P P 11 38 40.8 -0.6
PV01 IAmb IAmb 11 38 47.0
comp=Z,17nm,1.0s
PRN Pahroc Range 73.96 349 IAmb IAmb 11 38 47.8
comp=Z,26nm,1.2s
PV13 Radium Mtn., P 74.01 355 P P 11 38 41.3 -0.3
PV02 Paradox Valley 74.05 355 IAmb IAmb 11 38 47.5
comp=Z,24nm,1.1s
V55A Taylorsville 74.09 18 P P 11 38 42.6 +0.7
baz=198
PV18 Skein Mesa, Pa 74.10 355 IAmb IAmb 11 38 47.1
comp=Z,17nm,1.2s
PV17 East Wray Mesa 74.14 355 P P 11 38 41.8 -0.5
PV17 IAmb IAmb 11 38 47.3
comp=Z,18nm,1.1s
PV11 David Mesa, Pa 74.15 355 IAmb IAmb 11 38 53.1
comp=Z,19nm,1.2s
TIN Tinemaha, Big 74.15 347 P P 11 38 43.4 +1.1
baz=167
PV12 Saucer Basin, 74.16 355 IAmb IAmb 11 38 57.6
comp=Z,16nm,0.9s
PV16 Nyswonger Mesa 74.16 355 IAmb IAmb 11 38 47.5
comp=Z,16nm,1.1s
PV19 Morning Glory 74.17 354 P P 11 38 42.5 0.0
PV19 IAmb IAmb 11 38 47.4
comp=Z,21nm,1.3s
PV20 West Nyswonger 74.20 355 P P 11 38 42.5 -0.2
PV20 IAmb IAmb 11 38 47.6
comp=Z,18nm,1.1s
V56A Mocksville 74.23 18 P P 11 38 43.7 +1.1
baz=198
PV14 Lion Creek, Pa 74.23 354 P P 11 38 42.5 -0.5
PV14 IAmb IAmb 11 38 48.5
comp=Z,26nm,1.0s
PV10 Paradox Valley 74.24 354 pP 11 38 47.4 +2.3
PV04 Paradox Valley 74.25 355 P P 11 38 42.3 -0.7
S44A Carbondale 74.27 11 P P 11 38 43.4 +0.5
PV23 Carpenter Ridg 74.31 354 IAmb IAmb 11 38 49.1
comp=Z,25nm,1.0s
CCM Cathedral Cave 74.35 9 P P 11 38 44.1 +0.7
baz=189
CCM Cathedral Cave 74.35 9 P P 11 38 43.4 0.0
CCM IAmb IAmb 11 38 53.3
comp=Z,18nm,0.8s
PV22 Blue Mesa, Par 74.38 355 IAmb IAmb 11 38 49.3
comp=Z,14nm,1.0s
FVM French Village 74.39 10 P P 11 38 43.9 +0.3
CBKS Cedar Bluff 74.44 2 P P 11 38 45.1 +1.1
baz=182
V57A Coltrane Farms 74.49 19 P P 11 38 44.5 +0.4
baz=199
SAO San Andreas Ge 74.53 344 IAmb IAmb 11 38 49.7
comp=Z,14nm,1.0s
U54A Nelsons Funny 74.58 17 P P 11 38 45.9 +1.1
baz=197
KSCO Kaye Shedlock' 74.61 360 P P 11 38 46.4 +1.4
baz=180
KSCO Kaye Shedlock' 74.61 360 P P 11 38 46.2 +1.2
Q24A Divide 74.61 358 P P 11 38 46.6 +1.4
baz=178
TCRU Three Creeks R 74.80 352 P P 11 38 46.2 0.0
SMCO Snowmass 74.90 356 IAmb IAmb 11 39 02.5
comp=Z,14nm,1.1s
R11A Troy Canyon, C 74.97 349 P P 11 38 48.1 +1.0
baz=169
R11A Troy Canyon, C 74.97 349 IAmb IAmb 11 38 52.7
comp=Z,15nm,1.1s
V60A Jim Taylor Roa 75.06 21 P P 11 38 47.9 +0.4
baz=201
SRU San Rafael Swe 75.10 353 P P 11 38 47.0 -0.9
U57A Blanch 75.11 19 P P 11 38 48.7 +0.9
baz=199
T54A Tazewell 75.15 17 P P 11 38 48.9 +0.8
baz=197
V61A Roper 75.29 21 P P 11 38 49.7 +0.9
baz=201
WCI Wyandotte Cave 75.29 13 P P 11 38 49.5 +0.8
baz=193
U58A Oxford 75.29 20 P P 11 38 49.5 +0.7
baz=200
TMUT Trail Mountain 75.35 353 P P 11 38 49.1 -0.4
T55A Pulaski 75.39 18 P P 11 38 50.0 +0.6
baz=198
SPR3 Spring Creek 3 75.42 350 IAmb IAmb 11 38 54.5
comp=Z,25nm,1.1s
ISCO Idaho Springs 75.46 357 P P 11 38 50.7 +0.6
baz=177
ISCO Idaho Springs 75.46 357 P P 11 38 49.9 -0.2
P17A Butcher Ranch, 75.47 353 P P 11 38 50.0 -0.1
NV11 Mina Array Sit 75.48 347 IAmb IAmb 11 38 55.6
comp=Z,26nm,1.1s
Q44A Meyer Farm, Va 75.50 11 P P 11 38 49.3 -0.6
NVAR Mina Array Bea 75.50 347 P P 11 38 50.9 +0.6
comp=Z,17nm,1.0s,baz=177,slow=7.5,SNR=85
NVAR LR LR 12 04 31.6
comp=Z,252nm,20.1s,baz=173,slow=30
NVAR Mina Array Bea 75.50 347 P P 11 38 50.3 +0.1
CMB Columbia Colle 75.52 345 IAmb IAmb 11 38 51.6
comp=Z,15nm,1.1s
P38A Dawn 75.65 7 IAmb IAmb 11 38 55.8
comp=Z,15nm,1.1s
T57A Hurt 75.67 19 P P 11 38 51.5 +0.5
baz=199
RYN Ryan 75.73 347 P P 11 38 51.8 +0.2
RYN IAmb IAmb 11 38 57.0
comp=Z,22nm,1.0s
WAKR Walker 75.79 346 P P 11 38 51.9 +0.1
WAKR IAmb IAmb 11 38 57.0
comp=Z,15nm,1.2s
O20A White River Ci 75.93 355 P P 11 38 53.2 +0.5
baz=175
O20A White River Ci 75.93 355 IAmb IAmb 11 39 04.9
comp=Z,16nm,1.1s
KVN Kaiserville 76.07 347 IAmb IAmb 11 38 58.8
comp=Z,24nm,1.0s
MAW Mawson 76.13 174 P P 11 38 52.7 -0.6
comp=Z,7.6nm,1.0s,baz=201,slow=7.8,SNR=11
MAW LR LR 12 10 41.4
comp=Z,386nm,19.9s,baz=219,slow=34
MAW Mawson 76.13 174 P P 11 38 52.1 -1.2
PNTR Pine Nut 76.38 346 P P 11 38 55.5 +0.2
PNTR IAmb IAmb 11 39 03.5
comp=Z,15nm,0.9s
DUG Dugway, Tooele 76.41 352 P P 11 38 55.9 +0.6
baz=171
DUG Dugway, Tooele 76.41 352 IAmb IAmb 11 39 00.6
comp=Z,19nm,1.1s
AFDM Forest Hills D 76.52 345 P P 11 38 55.6 -0.3
AFDM IAmb IAmb 11 38 57.1
comp=Z,17nm,1.0s
N23A Red Feather La 76.56 357 P P 11 38 57.2 +0.9
baz=177
N23A Red Feather La 76.56 357 IAmb IAmb 11 39 11.4
comp=Z,23nm,1.4s
S58A Poland Farm, P 76.57 20 P P 11 38 56.4 +0.4
baz=200
VCNR Virginia City 76.59 346 P P 11 38 56.6 +0.2
N35A Tabor 76.69 5 P P 11 38 57.5 +0.8
CTU Camp Tracy 76.78 353 P P 11 38 56.3 -1.1
Q52A Bidwell 76.81 16 P P 11 38 58.1 +0.7
baz=196
PAHR Pah Rah Range 76.94 347 P P 11 38 58.4 0.0
PAHR IAmb IAmb 11 38 59.9
comp=Z,14nm,1.1s
R58B Mineral 76.95 20 P P 11 38 58.9 +0.7
baz=200
PHWY Pilot Hill 76.95 358 P P 11 39 00.1 +1.6
PHWY IAmb IAmb 11 39 07.8
comp=Z,13nm,0.9s
R56A Bull Pasture M 76.96 18 P P 11 38 59.0 +0.6
baz=199
HDIL Hopedale 77.08 10 P P 11 39 00.0 +1.2
baz=191
BGNE Belgrade 77.09 3 P P 11 39 00.7 +1.7
baz=183
P51A Williamsport 77.14 15 P P 11 39 00.0 +0.8
baz=196
ORV Oroville 77.22 345 IAmb IAmb 11 39 01.2
comp=Z,17nm,1.2s
R58A Rapidan 77.23 19 P P 11 39 00.7 +0.9
baz=200
BEKR Beckworth 77.28 346 P P 11 38 59.9 -0.5
BEKR IAmb IAmb 11 39 02.4
comp=Z,23nm,1.2s
Q55A Buckhannon 77.35 18 P P 11 39 02.2 +1.7
baz=198
P52A Corning 77.48 16 P P 11 39 01.7 +0.5
baz=196
P52A Corning 77.48 16 IAmb IAmb 11 39 16.8
comp=Z,19nm,0.8s
KCPM Cahto Peak 77.81 343 P P 11 39 03.2 0.0
KCPM IAmb IAmb 11 39 08.9
comp=Z,25nm,1.2s
O51A Pataskala 77.87 15 P P 11 39 03.9 +0.5
baz=196
ACSO Alum Creek Sta 77.87 15 P P 11 39 04.4 +1.0
baz=196
ACSO Alum Creek Sta 77.87 15 P P 11 39 04.3 +1.0
ACSO IAmb IAmb 11 39 08.2
comp=Z,28nm,1.3s
Q58A Fox Den Farm, 77.92 19 P P 11 39 04.4 +0.8
baz=200
HVU Hansel Valley 77.97 352 P P 11 39 03.1 -1.0
O03E Paynes Creek 77.99 345 P P 11 39 04.3 +0.2
baz=164,SNR=11
O52A Adamsville 78.01 16 P P 11 39 04.4 +0.3
baz=197
O52A Adamsville 78.01 16 P P 11 39 04.4 +0.3
O02D Mt. Diablo Mer 78.09 344 P P 11 39 05.4 +0.7
baz=163,SNR=9.9
O53A New Philadelph 78.28 16 P P 11 39 05.6 0.0
baz=197
K31A O'Neill 78.28 3 P P 11 39 05.6 0.0
P57A Homestead Farm 78.34 19 P P 11 39 06.6 +0.7
baz=200
K22A Casper 78.34 357 P P 11 39 07.0 +0.9
baz=176
K22A Casper 78.34 357 IAmb IAmb 11 39 20.9
comp=Z,18nm,1.1s
KMRM Mail Ridge 78.35 343 P P 11 39 06.6 +0.6
DZM Mont Dzumac 78.39 251 P P 11 39 04.9 -2.1
comp=Z,5.0nm,1.0s,baz=65,slow=18,SNR=4.4
DZM Mont Dzumac 78.39 251 eS S 11 49 01.2 -1.8
comp=Z,392nm,26.1s
DZM Mont Dzumac 78.39 251 eLQ LQ 12 00 08.7
comp=Z,834nm,30.9s
DZM eLR LR 12 03 27.7
comp=Z,2µm,27.6s
WDC Whiskeytown Da 78.42 344 IAmb IAmb 11 39 07.6
comp=Z,25nm,1.0s
BW06 Boulder Array 78.64 355 P P 11 39 07.5 -0.3
baz=174
BW06 Boulder Array 78.64 355 IAmb IAmb 11 39 21.9
comp=Z,11nm,0.9s
PDAR Pinedale Array 78.64 355 P P 11 39 05.9 -1.9
comp=Z,8.3nm,1.0s,baz=163,slow=6.0,SNR=40
PDAR Pinedale Array 78.64 355 P P 11 39 06.7 -1.2
N51A Ashland 78.66 15 P P 11 39 08.6 +0.9
AHID Auburn Hatcher 78.77 353 P P 11 39 08.1 -0.5
N02D Trinity Center 78.84 344 P P 11 39 08.7 -0.1
baz=163,SNR=21
P59A Jarrettsville 78.88 20 P P 11 39 08.5 -0.4
baz=201
O56A Blue Knob Stat 78.93 18 P P 11 39 09.5 +0.2
baz=199
O56A Blue Knob Stat 78.93 18 IAmb IAmb 11 39 20.5
comp=Z,14nm,0.9s
KHMM Horse Mountain 78.97 344 P P 11 39 09.6 0.0
KHMM IAmb IAmb 11 39 12.0
comp=Z,26nm,1.1s
JCC Jacoby Creek, 78.99 343 P P 11 39 10.3 +0.8
JCC IAmb IAmb 11 39 13.7
comp=Z,18nm,0.9s
O57A Amberson 79.12 19 P P 11 39 10.8 +0.6
baz=200
O58A Lewisberry 79.23 20 P P 11 39 11.5 +0.7
baz=200
N54A Moraine State 79.24 17 P P 11 39 11.6 +0.7
baz=198
MOD Modoc Plateau 79.24 346 IAmb IAmb 11 39 13.0
comp=Z,28nm,1.1s
JFWS Jewell Farm 79.27 9 P P 11 39 11.6 +0.7
baz=190
M02C Callahan 79.27 344 P P 11 39 11.4 +0.3
baz=163,SNR=19
REDW Red Top Meadow 79.34 354 P P 11 39 10.9 -0.8
REDW IAmb IAmb 11 39 16.5
comp=Z,26nm,1.3s
M04C Macdoel 79.43 345 P P 11 39 11.7 -0.4
baz=164,SNR=17
SNOW Snow King Moun 79.43 354 P P 11 39 11.4 -0.8
WVOR Wild Horse Val 79.45 348 P P 11 39 12.4 +0.2
WVOR IAmb IAmb 11 39 18.2
comp=Z,28nm,1.1s
TPAW Teton Pass 79.48 354 IAmb IAmb 11 39 17.4
comp=Z,21nm,1.1s
ECSD EROS Data Cent 79.49 4 P P 11 39 11.9 -0.3
baz=184
ECSD EROS Data Cent 79.49 4 IAmb IAmb 11 39 16.9
comp=Z,17nm,1.1s
YBH Yreka Blue Hor 79.56 345 P P 11 39 11.8 -1.0
N57A Milroy 79.65 19 P P 11 39 12.9 -0.2
baz=200
RSSD Black Hills 79.73 359 P P 11 39 13.5 -0.2
baz=178
RSSD Black Hills 79.73 359 P P 11 39 14.0 +0.2
O60A Telford 79.83 21 P P 11 39 14.0 -0.1
baz=202
IMW Indian Meadow 79.88 354 P P 11 39 14.4 -0.3
HLID Hailey 79.92 351 P P 11 39 15.4 +0.6
baz=170
L04D Klamath Falls 79.94 345 P P 11 39 14.7 -0.2
baz=164,SNR=11
FLWY Flagg Ranch 80.04 354 IAmb IAmb 11 39 21.2
comp=Z,25nm,1.1s
K05A Summer Lake 80.15 346 P P 11 39 15.4 -0.6
L02E Cave Junction 80.17 344 P P 11 39 16.0 +0.1
baz=162
M56A Emporium 80.17 18 P P 11 39 16.1 +0.1
baz=200
K04D Chiloquin, OR 80.22 346 P P 11 39 16.7 +0.4
baz=164
N59A State Game Lan 80.28 20 P P 11 39 16.9 +0.4
baz=201
M57A Sunshine Farm, 80.31 19 P P 11 39 17.1 +0.4
baz=200
ERPA Erie 80.33 17 P P 11 39 18.0 +1.2
baz=198
KBO Bosley Butte 80.36 344 pP 11 39 21.7 +2.6
HUMO Hull Mountain 80.45 345 P P 11 39 17.4 -0.1
M58A Price's Panora 80.52 19 P P 11 39 19.2 +1.4
baz=201
K02D Willamette Mer 80.69 344 P P 11 39 19.0 +0.2
baz=162
J05D Fort Rock, OR 80.75 346 P P 11 39 19.7 +0.5
baz=164,SNR=17
J04D Umpqua Nationa 80.88 345 P P 11 39 20.2 +0.3
baz=164
PAL Palisades 80.90 21 P P 11 39 20.2 +0.4
baz=203
YNE Yellowstone No 80.90 354 P P 11 39 19.9 -0.2
RLMT Red Lodge 80.96 355 P P 11 39 20.4 0.0
baz=174
L57A Andrews Acres 81.00 19 P P 11 39 20.0 -0.4
baz=200
PINE Pine Mountain 81.18 346 P P 11 39 21.7 +0.1
I07A Izee 81.20 348 P P 11 39 21.8 +0.2
I07A IAmb IAmb 11 39 27.0
comp=Z,26nm,1.0s
SPMN Marine on St. 81.27 7 P P 11 39 22.6 +1.0
baz=188
SPMN Marine on St. 81.27 7 IAmb IAmb 11 39 27.5
comp=Z,19nm,0.9s
L58A Harry Jones Me 81.31 20 P P 11 39 22.4 +0.4
baz=201
I04A Tendick Farm, 81.48 345 P P 11 39 23.1 +0.2
baz=164
I03D Drain, OR 81.58 345 P P 11 39 23.9 +0.5
baz=163
G40A Rib Lake 81.59 9 IAmb IAmb 11 39 29.3
comp=Z,24nm,1.0s
BMO Blue Mountains 81.59 349 P P 11 39 23.6 0.0
BOZ Bozeman (W) 81.63 353 P P 11 39 23.9 +0.1
baz=172
BOZ Bozeman (W) 81.63 353 P P 11 39 23.5 -0.3
PLID Pearl Lake 81.63 350 IAmb IAmb 11 39 37.9
comp=Z,15nm,1.1s
I51A Listowel 81.71 15 P P 11 39 24.8 +0.8
baz=197
I05D Terrebonne, OR 81.79 346 P P 11 39 24.6 +0.1
baz=164,SNR=8.2
F36A Milaca 81.83 6 P P 11 39 25.4 +0.8
F36A IAmb IAmb 11 39 30.3
comp=Z,26nm,1.1s
K58A Earlville 82.03 19 P P 11 39 25.9 +0.1
baz=201
G08A Pilot Rock 82.28 348 P P 11 39 26.9 -0.3
G08A IAmb IAmb 11 39 28.8
comp=Z,16nm,1.1s
LAO LASA Array 82.36 357 P P 11 39 27.5 +0.1
baz=177,SNR=5.1
LAO LASA Array 82.36 357 IAmb IAmb 11 39 42.5
comp=Z,18nm,0.9s
K61A Williamstown 82.61 21 P P 11 39 28.7 -0.2
baz=203
G05D Wamic, OR 82.65 347 P P 11 39 29.7 +0.7
baz=164
F10A Beach Ranch, E 82.68 350 P P 11 39 29.2 0.0
F10A IAmb IAmb 11 39 37.1
comp=Z,12nm,1.0s
F07A Phinny Hill Vi 83.03 348 IAmb IAmb 11 39 36.5
comp=Z,23nm,1.2s
SADO Sadowa 83.05 16 P P 11 39 28.7 -2.3
comp=Z,17nm,1.1s,baz=242,slow=2.9,SNR=3.7
I58A Old Forge 83.08 20 P P 11 39 30.6 -0.7
baz=202
MSO Missoula 83.09 352 P P 11 39 31.7 +0.4
baz=170
J60A Lant Hill Farm 83.10 21 P P 11 39 30.4 -0.9
baz=203
I57A Carthage 83.12 19 P P 11 39 31.3 -0.1
baz=201
F05D White Salmon 83.30 347 P P 11 39 32.6 +0.2
baz=164
HAWA Hanford 83.45 348 P P 11 39 33.0 -0.1
E08A Dider Farm, El 83.47 348 IAmb IAmb 11 39 38.4
comp=Z,22nm,1.2s
J62A Henniker 83.56 22 P P 11 39 33.8 +0.1
baz=204
E07A Sunnyside 83.66 348 P P 11 39 34.3 +0.1
H57A Richville 83.68 19 P P 11 39 34.2 -0.1
baz=202
I60A Shoreham 83.69 21 P P 11 39 33.9 -0.4
baz=203
EGMT Eagleton 83.89 355 P P 11 39 35.5 +0.1
baz=174
H58A Gabriels 83.97 20 P P 11 39 35.6 -0.2
baz=202
D08A Wollman Farm, 83.99 349 IAmb IAmb 11 39 37.6
comp=Z,14nm,1.0s
JTMT Jette 84.03 352 P P 11 39 36.6 +0.4
JTMT IAmb IAmb 11 39 41.6
comp=Z,14nm,1.0s
LONY Lake Ozonia 84.04 19 P P 11 39 36.3 +0.1
baz=202
LONY Lake Ozonia 84.04 19 P P 11 39 37.1 +0.9
DGMT Dagmar 84.08 359 P P 11 39 37.0 +0.7
baz=178
I61A Oroboro, Fairl 84.08 21 P P 11 39 36.2 -0.2
baz=204
AGMN Agassiz Nation 84.08 4 P P 11 39 36.7 +0.4
baz=185
AGMN Agassiz Nation 84.08 4 IAmb IAmb 11 39 48.5
comp=Z,14nm,1.1s
E04D Cinebar 84.16 346 P P 11 39 37.2 +0.5
baz=164
LON Longmire 84.20 347 IAmb IAmb 11 39 41.3
comp=Z,11nm,1.1s

H59A	**Cadyville**	**84.31**	**20**	P		**P**	**11 39 37.9**	**+0.3**	
	baz=203								
E03A	**Lebam**	**84.35**	**345**	P		**P**	**11 39 37.5**	**-0.1**	
G57A	**Newington**	**84.38**	**19**	P		**P**	**11 39 38.2**	**+0.4**	
	baz=202								
LBNH	**Lisbon**	**84.45**	**21**	P		**P**	**11 39 38.8**	**+0.6**	
	baz=204								
LTY	**Liberty**	**84.48**	**348**	IAmb		IAmb	11 39 39.2		
	comp=Z,11nm,1.1s								
H60A	**Morristown**	**84.51**	**21**	P		**P**	**11 39 38.6**	**0.0**	
	baz=204								
G58A	**Ormstown**	**84.67**	**20**	P		**P**	**11 39 38.5**	**-0.9**	
	baz=202								
H61A	**Lyndonville**	**84.71**	**21**	P		**P**	**11 39 39.4**	**-0.2**	
	baz=204								
NEW	**Newport**	**84.90**	**350**	P		**P**	**11 39 40.6**	**+0.1**	
	baz=168,SNR=15								
D03D	**Eldon**	**85.20**	**346**	P		**P**	**11 39 41.9**	**0.0**	
	baz=163								
B08A	**Colville Reser**	**85.32**	**349**	IAmb		IAmb	11 39 43.1		
	comp=Z,14nm,1.4s								
F59A	**Saint Guilaume**	**85.67**	**20**	P		**P**	**11 39 44.4**	**+0.1**	
	baz=203								
E56A	**St. Veronique**	**85.71**	**18**	P		**P**	**11 39 44.4**	**-0.1**	
	baz=202								
B05A	**Bryant**	**85.71**	**347**	P		**P**	**11 39 44.4**	**0.0**	
	baz=164								
E58A	**La Victoria**	**86.01**	**20**	P		**P**	**11 39 44.8**	**-1.2**	
	baz=203								
F60A	**Warwick**	**86.02**	**21**	P		**P**	**11 39 44.6**	**-1.4**	
	baz=204								
ULM	**Lac du Bonnet**	**86.03**	**4**	P		**P**	**11 39 44.2**	**-1.8**	
	comp=Z,7.7nm,1.1s,baz=200,slow=4.8,SNR=3.7								
ULM				LR		LR	12 14 20.3		
	comp=Z,200nm,21.0s,baz=208,slow=33								
ULM	**Lac du Bonnet**	**86.03**	**4**	IAmb		IAmb	11 39 54.1		
	comp=Z,15nm,1.1s								
D55A	**Sainte-Anne-du**	**86.04**	**18**	P		**P**	**11 39 45.5**	**-0.6**	
	baz=201								
D56A	**ZEC Mazanza, M**	**86.25**	**18**	P		**P**	**11 39 46.7**	**-0.4**	
	baz=202								
A04D	**Lummi Island**	**86.26**	**347**	P		**P**	**11 39 47.9**	**+0.7**	
	baz=164								
E60A	**Ste Agathe de**	**86.52**	**21**	P		**P**	**11 39 48.1**	**-0.4**	
	baz=204								
VLDQ	**Val d'Or**	**86.59**	**16**	P		**P**	**11 39 49.3**	**+0.5**	
F63A	**Nahmakanta, Br**	**86.62**	**23**	P		**P**	**11 39 48.8**	**-0.3**	
	baz=206								
D58A	**Chemin du LacG**	**86.78**	**20**	P		**P**	**11 39 49.9**	**+0.1**	
	baz=203								
CHGQ	**Chibougamau**	**89.00**	**18**	P		**P**	**11 39 59.8**	**-0.4**	
	baz=202								
STKA	**Stephens Creek**	**89.83**	**230**	P		**P**	**11 40 03.5**	**-1.4**	
	comp=Z,3.1nm,0.9s,baz=113,slow=11,SNR=4.5								
SCHQ	**Schefferville**	**95.42**	**20**	LR		LR	12 19 54.8		
	comp=Z,329nm,19.1s,baz=205,slow=33								
BOSA	**Boshof**	**98.96**	**135**	LR		LR	12 20 44.8		
	comp=Z,321nm,19.4s,baz=226,slow=32								
DBIC	**Dimbokro**	**99.86**	**89**	LR		LR	12 22 10.9		
	comp=Z,225nm,19.9s,baz=215,slow=33								
ASAR	**Alice Springs**	**100.42**	**231**	P		**Pdif**	**11 40 51.1**	**-2.4**	
	comp=Z,1.2nm,0.9s,baz=136,slow=3.9,SNR=7.9								
H11S2	**WAKE ISLAND Hy**	**101.44**	**285**	T		T	13 33 47.6		
	baz=126,slow=76,SNR=12								
H11S1	**WAKE ISLAND Hy**	**101.46**	**285**	T		T	13 33 44.9		
	baz=126,slow=76,SNR=13								
H11S3	**WAKE ISLAND Hy**	**101.46**	**285**	T		T	13 33 45.1		
	baz=126,slow=76,SNR=12								
H01W1	**Cape Leeuwin H**	**101.76**	**210**	T		T	13 35 14.8		
	baz=150,slow=76,SNR=705								
H01W2	**Cape Leeuwin H**	**101.76**	**210**	T		T	13 35 12.6		
	baz=150,slow=76,SNR=819								
H01W3	**Cape Leeuwin H**	**101.77**	**210**	T		T	13 35 25.3		
	baz=150,slow=76,SNR=678								
WRA	**Warramunga Arr**	**102.83**	**234**	P		**Pdif**	**11 41 01.8**	**-2.4**	
	comp=Z,1.5nm,1.0s,baz=137,slow=4.2,SNR=8.3								
WRA				PP		**PP**	**11 45 14.3**	**-3.1**	
	comp=Z,1.0nm,1.0s,baz=134,slow=6.9,SNR=5.5								
WRA				PKiKP		**PKiKP**	**11 45 23.8**	**-0.9**	
	comp=Z,0.3nm,0.8s,baz=122,slow=1.4,SNR=2.2								
WRA	**Warramunga Arr**	**102.83**	**234**			**Pdif**	**11 41 02.2**	**-1.9**	
TORD	**Torodi Ar. Bea**	**108.82**	**87**	PP		**PP**	**11 46 01.1**	**-1.5**	
	comp=Z,1.2nm,0.9s,baz=244,slow=6.6,SNR=4.1								
PETK	**Petropavlovsk-**	**123.50**	**315**	PKP		**PKiKP**	**11 46 03.4**	**+0.5**	
	comp=Z,2.3nm,0.8s,baz=61,slow=6.8,SNR=1.9								
CLL	**Collm**	**132.25**	**50**	*e*PP		PP	11 48 41.0	-1.5	
CLL				*e*SKPdf		**SKPab**	**11 49 51.0**	**+4.0**	
CLL				*e*			11 50 29.0		
CLL				*e*PS		**PS**	**11 58 54.0**	**-4.2**	
CLL				*e*PPS		PPS	12 00 38.0		
CLL				*e*SS		SS	12 06 35.0	+14	
CLL				*e*			12 07 12.0		
CLL				*e*SSS		SSS	12 11 20.0		
KHC	**Kasperske Hory**	**132.30**	**53**	*e*PKP		**PKiKP**	**11 46 20.5**	**-0.2**	
GERES	**GERESS Array B**	**132.34**	**53**	PKP		**PKPdf**	**11 46 19.3**	**-0.5**	
	comp=Z,0.4nm,0.5s,baz=172,slow=3.8,SNR=5.8								
USRK	**Ussuriysk Ar.**	**138.35**	**299**	LR		**PKPdf**	**11 46 30.3**	**-0.7**	
	comp=Z,0.5nm,0.5s,baz=186,slow=2.9,SNR=1.7								
FINES	**FINESS Array B**	**138.98**	**35**			PKPpre	11 46 26.3		
BURAR	**Bucovina Array**	**139.86**	**56**			**PKPdf**	**11 46 34.8**	**+0.9**	
MDJ	**Mudanjiang**	**140.11**	**299**	PKP		**PKPdf**	**11 46 33.8**	**-0.4**	
MDJ				sPKP			11 46 41.8		
MDJ				LR		LR			
	comp=Z,140nm,3.9s								
MDJ				LR		LR			
	comp=Z,130nm,4.7s								
MDJ				LR		LR			
	comp=Z,120nm,5.6s								
KSRS	**Korea Array**	**140.14**	**288**	PKP		**PKPdf**	**11 46 35.5**	**+1.1**	
	comp=Z,2.7nm,0.8s,baz=102,slow=3.1,SNR=5.1								
KSAR	**Wonju Array Be**	**140.16**	**288**			**PKPdf**	**11 46 35.2**	**+0.6**	
AKASG	**Malin Array Be**	**142.46**	**51**	PKhKP		PKPpre	11 46 33.6		
	comp=Z,1.1nm,0.6s,baz=276,slow=3.2,SNR=1.1								
BR131	**Keskin Array S**	**145.23**	**70**			**PKPbc**	**11 46 42.3**	**-1.1**	
BRTR	**Keskin Array B**	**145.23**	**70**	PKPbc		**PKPdf**	**11 46 44.5**	**+0.9**	
	comp=Z,11nm,1.0s,baz=199,slow=3.4,SNR=19								
BRTR	**Keskin Array B**	**145.23**	**70**			**PKPbc**	**11 46 43.1**	**-0.3**	
KLMR	**Klimovskoe**	**145.27**	**32**	AMP			**11 46 47.4**		
	comp=Z,84nm,1.3s								
KLMR	**Klimovskoe**	**145.27**	**32**	*e*PKPdf		**PKPbc**	**11 46 42.3**	**-0.3**	
NJ2	**Nanjing**	**145.88**	**276**	*e*PKPbc		**PKPbc**	**11 46 45.9**	**+0.4**	
NRIK	**Noril'sk**	**146.14**	**354**	PKPbc		**PKPdf**	**11 46 44.6**	**+0.5**	
	comp=Z,8.4nm,0.9s,baz=352,slow=4.1,SNR=14								
UBPT	**Khong Chiam**	**147.80**	**237**	P		**PKPab**	**11 46 54.0**	**+0.2**	
	comp=Z,25nm,1.0s								
TIA	**Tai'an**	**148.33**	**282**	PKPbc		**PKPbc**	**11 46 51.3**	**-1.0**	
RAYN	**Ar Rayn**	**149.52**	**105**			**PKPbc**	**11 46 55.5**	**-0.2**	
BJI	**Beijing**	**149.61**	**289**	PKPbc		**PKPbc**	**11 46 54.5**	**-0.8**	
MARD	**Mardin**	**150.42**	**76**			**PKPdf**	**11 46 55.1**	**+2.8**	
KBZ	**Khabaz**	**152.30**	**63**	PKP		**PKPdf**	**11 46 54.8**	**0.0**	
	comp=Z,0.9nm,0.4s,baz=233,slow=20,SNR=2.6								
KBZ				PKPbc		**PKiKP**	**11 47 02.5**	**+0.8**	
	comp=Z,9.6nm,0.9s,baz=236,slow=24,SNR=12								
GEVA	**Gevas**	**152.34**	**75**			**PKPbc**	**11 47 02.0**	**-0.1**	
PHIT	**Phitsanulok**	**152.54**	**233**	P		**PKPab**	**11 47 17.0**	**+3.8**	
	comp=Z,116nm,0.8s								
UTTA	**Uttaradit**	**152.85**	**234**	P		**PKPab**	**11 47 11.3**	**-3.1**	
	comp=Z,16nm,0.8s								
ENH	**Enshi**	**152.89**	**267**			**PKPab**	**11 47 13.5**	**-1.0**	
HHC	**Hu-ho-hao-te**	**153.16**	**291**	*e*PKPbc		**PKPdf**	**11 46 54.8**	**+1.5**	
GYA	**Guiyang**	**153.60**	**257**	∥PKPbc		**PKPdf**	**11 47 00.5**	**+3.1**	
GYA				SKS		**SKSdf**	**11 53 59.3**	**-5.3**	
GYA				AMB		AMB			
	comp=Z,230nm,5.5s								
CM09	**Chiang Mai Arr**	**154.38**	**233**	P		**PKPab**	**11 47 21.6**	**+0.6**	
	comp=Z,116nmcomp=Z,16nm,0.8s								
CM31	**Chiang Mai Arr**	**154.42**	**233**	P		**PKPab**	**11 47 22.1**	**+1.0**	
	comp=Z,4µmcomp=Z,388nm,0.8s								
CM31	**Chiang Mai Arr**	**154.42**	**233**	PKPbc		**PKPdf**	**11 47 02.6**	**+4.0**	
CMAR	**Chiang Mai Arr**	**154.42**	**233**	PKP		**PKPdf**	**11 46 57.9**	**-0.7**	
	comp=Z,0.4nm,0.5s,baz=147,slow=2.2,SNR=1.4								
CMAR				PKPbc		**PKPbc**	**11 47 06.5**	**-0.5**	
	comp=Z,3.4nm,0.9s,baz=223,slow=1.8,SNR=6.3								
CMAR				PKPab		**PKPab**	**11 47 21.3**	**+0.2**	
	comp=Z,9.2nm,0.8s,baz=157,slow=3.5,SNR=16								
CMAR	**Chiang Mai Arr**	**154.42**	**233**			**PKPab**	**11 47 20.5**	**-0.6**	
CM15	**Chiang Mai Arr**	**154.42**	**233**	P		**PKPab**	**11 47 21.6**	**+0.4**	
	comp=Z,14nm,0.8s								
CM35	**Chiang Mai Arr**	**154.44**	**233**	P		**PKiKP**	**11 47 09.0**	**+2.0**	
XAN	**Xi'an**	**154.45**	**275**	PKPbc		**PKiKP**	**11 47 09.3**	**+2.6**	
XAN				pPKP		PKPab	11 47 19.4	-1.6	
CM34	**Chiang Mai Arr**	**154.57**	**234**	P		**PKiKP**	**11 47 11.0**	**+3.7**	
CM32	**Chiang Mai Arr**	**154.62**	**233**	P		**PKPab**	**11 47 22.0**	**0.0**	
MHMT	**Maesariang**	**154.85**	**231**	P		PKPab	11 47 33.0	+10	
SONM	**Songino Array**	**155.75**	**308**	PKP		**PKPdf**	**11 46 59.4**	**-0.3**	
	comp=Z,0.3nm,0.6s,baz=106,slow=2.2,SNR=3.5								
SONM				PKPab		**PKPab**	**11 47 25.6**	**-0.7**	
	comp=Z,2.9nm,0.8s,baz=96,slow=2.8,SNR=5.3								
SONM	**Songino Array**	**155.75**	**308**			**PKPdf**	**11 46 59.0**	**-0.7**	
LZH	**Lanzhou**	**158.91**	**278**	*e*PKP		**PKPdf**	**11 47 03.3**	**-0.8**	
LZH				pPKP		sPKPdf	11 47 10.9	+3.9	
LZH				PKPab		**PKPab**	**11 47 39.9**	**-0.5**	
LZH				LR		LR			
	comp=Z,180nm,17.4s								
LZH				LR		LR			
	comp=Z,180nm,17.2s								
LZH				LR		LR			
	comp=Z,260nm,20.1s								
ZAA0	**Zalesovo Array**	**161.35**	**347**	PKPdf		**PKPdf**	**11 47 02.7**	**-3.3**	
ZALV	**Zalesovo Beam**	**161.35**	**347**	PKP		**PKPdf**	**11 47 03.2**	**-2.8**	
	comp=Z,1.3nm,0.8s,baz=29,slow=3.4,SNR=6.3								
ZALV				PKPab		**PKPab**	**11 47 50.2**	**+0.2**	
	comp=Z,2.0nm,0.8s,baz=48,slow=2.2,SNR=3.7								
ZALV				PP		**PP**	**11 51 32.5**	**-0.5**	
	comp=Z,0.4nm,0.5s,baz=54,slow=7.3,SNR=1.7								
ABKAR	**Akbulak array**	**161.40**	**39**	PKPdf		**PKPdf**	**11 47 07.2**	**+1.0**	
GTA	**Gaotai**	**162.21**	**288**	*e*PKP		**PKPdf**	**11 47 10.9**	**+3.3**	
GTA				LR		LR			
	comp=Z,120nm,18.9s								
GTA				LR		LR			
	comp=Z,130nm,20.0s								
GTA				LR		LR			
	comp=Z,150nm,20.4s								
MKAR	**Makanchi Array**	**168.66**	**344**	PKP		**PKPdf**	**11 47 15.6**	**+3.0**	
	comp=Z,1.6nm,1.0s,baz=266,slow=4.9,SNR=4.8								
MKAR				PKPab		**PKPab**	**11 48 21.0**	**-1.5**	
	comp=Z,0.6nm,0.7s,baz=355,slow=4.6,SNR=2.5								
MKAR				PP		**PP**	**11 52 09.1**	**-2.2**	
	comp=Z,1.2nm,1.0s,baz=39,slow=7.8,SNR=3.7								
MKAR	**Makanchi Array**	**168.66**	**344**			**PKPdf**	**11 47 13.1**	**+0.6**	
WMQ	**Urumqi**	**169.06**	**319**	*e*PKP		**PKPdf**	**11 47 13.5**	**+0.5**	
WMQ				LR		LR			
	comp=Z,400nm,23.3s								
WMQ				LR		LR			
	comp=Z,540nm,24.3s								
WMQ				LR		LR			
	comp=Z,670nm,23.1s								

IDC 17 11:30:59.8±5.4, 8°16S×155°99E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/35, mbtmp3.9/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=97.8km s-min=75.2km az=174.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
DZM	**Mont Dzumac**	**17.10**	**145**	LR		LR	11 40 13.3		
	comp=Z,114nm,18.6s,baz=232,slow=32								
WRA	**Warramunga Arr**	**24.01**	**239**	P		P	11 36 15.8	-0.8	
	1.5nm,0.7s,baz=66,slow=9.5,SNR=13								
ASAR	**Alice Springs**	**26.18**	**231**	P		P	11 36 36.7	+0.4	
	1.9nm,0.8s,baz=63,slow=9.6,SNR=17								
STKA	**Stephens Creek**	**27.13**	**208**	P		P	11 36 45.2	+0.4	
	1.6nm,0.7s,baz=42,slow=13,SNR=3.3								

IDC 17 11:31:58.7±2.5, 4°10S×154°35E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/35, mbtmp3.5/4, ML2.8/1, Error ellipse: s-maj=67.7km s-min=40.0km az=120.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KRVT	**Keravat (AS076**	**2.33**	**265**	Pn		Pn	11 32 37.0		-1.3
	2.4nm,0.3s,baz=53,slow=23,SNR=2.7								
KRVT				Sn		Sn	11 33 01.7		-6.0
	20nm,0.3s,baz=354,slow=21,SNR=9.0								
WRA	**Warramunga Arr**	**25.07**	**229**	P		P	11 37 25.2		+0.1
	0.6nm,0.8s,baz=58,slow=8.8,SNR=2.5								
ASAR	**Alice Springs**	**27.71**	**224**	P		P	11 37 50.2		+1.2
	0.4nm,0.8s,baz=52,slow=9.6,SNR=1.6								
MKAR	**Makanchi Array**	**80.82**	**319**	P		P	11 44 16.1		+1.6
	0.2nm,0.6s,baz=100,slow=7.5,SNR=3.6								
TORD	**Torodi Ar. Bea**	**151.54**	**290**	PKPbc		PKPbc	11 51 53.5		-2.5
	0.4nm,0.6s,baz=68,slow=2.0,SNR=1.9								

IDC 17 11:36:35.3±8.4, 8°18S×156°36E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/31, mbtmp3.9/3, MS3.6/2, Ms1 3.7/2, ms1mx2.8/24, Error ellipse: s-maj=136.5km s-min=88.0km az=36.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
WRA	**Warramunga Arr**	**24.32**	**239**	P		P	11 41 54.0		-0.9
	1.4nm,0.8s,baz=66,slow=9.2,SNR=9.7								
ASAR	**Alice Springs**	**26.46**	**232**	P		P	11 42 14.8		+0.4
	2.1nm,0.9s,baz=66,slow=9.2,SNR=18								
STKA	**Stephens Creek**	**27.29**	**208**	P		P	11 42 22.0		+0.4
	1.9nm,0.7s,baz=35,slow=14,SNR=4.9								
NWAO	**Narrogin (SRO)**	**43.75**	**230**	LR		LR	12 01 33.2		
	comp=Z,78nm,21.3s,baz=274,slow=34								
ILAR	**Eielson Array**	**83.98**	**21**	LR		LR	12 22 19.2		
	comp=Z,36nm,20.2s,baz=134,slow=33								

*NAO **17** 11:42:37.4±2.0, 56°.86N×7°.43E, ML1.7*
*BER **17** 11:42:39.8±2.4, 56°.90N×7°.54E, h15km, ML2.2, ML1.7(NAO), Confirmed Earthquake*
*DNK **17** 11:42:40.7±1.5, 56°.94N×7°.58E, h71km±6km, ML2.8*
*UPP **17** 11:42:42.7±1.7, 57°.15N×8°.20E, h0km, ML2.4, Suspected explosion*
*IDC **17** 11:42:46.8±4.1, 57°.55N×7°.88E, h0km, mb1 3.7/2, mb1mx3.3/32, mbtmp3.7/2, ML2.4/3, Error ellipse: s-maj=37.4km s-min=30.5km az=40.0*

ISC 17 11:42:36.3±0.8, 56°.91N±0°.04×7°.40E±0°.03, h10km, n53, σ2s30/93, North Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
GOET	**G??ttrup**	**1.01**	**82**	*e*		**Pg**	**11 42 56.5**		**+0.8**
	baz=270,slow=10								
GOET				*i* P		**Pn**	**11 42 58.0**		**+1.5**
GOET				*i* S		**Sb**	**11 43 10.3**		**+1.1**
GOET				IAML			11 43 12.9		
	comp=Z,199nm,0.4s								
GOET	**G??ttrup**	**1.01**	**82**	*e*		**Pg**	**11 42 56.5**		**+0.8**
	baz=270,slow=10								
GOET				*i* P		**Pn**	**11 42 58.0**		**+1.5**
GOET				*i* S		**Sb**	**11 43 10.3**		**+1.1**
GOET				IAML			11 43 12.9		
	comp=Z,199nm,0.4s								
MUD	**Monsted U'grnd**	**1.08**	**114**	*e*P		**Pb**	**11 42 58.0**		**+1.0**
MUD				*i* P		**Pb**	**11 42 58.2**		**+1.1**
MUD				*e*S		**Sg**	**11 43 09.7**		**-1.4**
MUD				*i* S		**Sb**	**11 43 13.0**		**+1.8**
MUD				IAML			11 43 13.8		
	comp=Z,140nm,0.4s								
MUD	**Monsted U'grnd**	**1.08**	**114**	*i* P		**Pb**	**11 42 58.1**		**+1.0**
MUD				*i* S		**Sb**	**11 43 13.0**		**+1.8**
MUD	**Monsted U'grnd**	**1.08**	**114**	*i* P		**Pb**	**11 42 58.2**		**+1.1**
MUD				*i* S		**Sb**	**11 43 13.0**		**+1.8**
MUD				IAML			11 43 13.8		
	comp=Z,140nm,0.4s								
SNART	**Snartemo**	**1.44**	**356**	*e*P		**Pg**	**11 43 04.8**		**+0.9**
SNART				*e*S		**Sn**	**11 43 21.8**		**+0.5**
SNART				IAML			11 43 25.2		
	comp=Z,114nm,0.1s								
SNART	**Snartemo**	**1.44**	**356**	*i* P		**Pg**	**11 43 04.8**		**+0.9**
SNART				IAML			11 43 25.7		
	comp=Z,62nm,0.3s								
HOMB	**Homborsund**	**1.49**	**23**	Pg		**Pb**	**11 43 05.1**		**+1.1**
HOMB				Lg		Lg	11 43 25.4		
HOMB	**Homborsund**	**1.49**	**23**	*e*P		**Pb**	**11 43 04.7**		**+0.7**
HOMB				*e*S		**Sn**	**11 43 22.2**		**-0.3**
HOMB				IAML			11 43 26.7		
	comp=Z,88nm,0.2s								
HOMB	**Homborsund**	**1.49**	**23**	*i* P		**Pb**	**11 43 04.8**		**+0.8**
HOMB				*i* S		**Sn**	**11 43 22.6**		**0.0**
HOMB				IAML			11 43 27.1		
	comp=Z,39nm,0.3s								
ONAU	**Onsala**	**2.51**	**77**	P		**Pn**	**11 43 18.5**		**+1.4**
ONAU				S		**Sn**	**11 43 43.9**		**-3.9**
ONAU	**Onsala**	**2.51**	**77**	*i* P		**Pn**	**11 43 18.7**		**+1.6**
TJOU	**Tjoern**	**2.55**	**62**	P		**Pn**	**11 43 18.7**		**+1.1**
TJOU				S		**Sn**	**11 43 45.7**		**-2.9**
TJOU	**Tjoern**	**2.55**	**62**	*i* P		**Pn**	**11 43 19.1**		**+1.6**
BLS5	**Blasjo**	**2.57**	**349**	*e*P		**Pn**	**11 43 20.6**		**+2.7**
BLS5				*e*S		**Sn**	**11 43 48.8**		**-0.5**
BLS5				IAML			11 44 05.2		
	comp=Z,30nm,0.5s								
FABU	**Falkenberg**	**2.92**	**86**	P		**Pn**	**11 43 24.0**		**+1.3**
FABU				S		**Sn**	**11 43 53.4**		**-4.4**
FABU	**Falkenberg**	**2.92**	**86**	*e*P		**Pn**	**11 43 22.9**		**+0.2**
FABU				*i*			11 43 26.0		
STRU	**Stroemstad**	**2.93**	**42**	P		**Pn**	**11 43 23.9**		**+1.0**
STRU				S		**Sn**	**11 43 55.0**		**-3.1**
STRU	**Stroemstad**	**2.93**	**42**	*i* P		**Pn**	**11 43 24.1**		**+1.2**
VANU	**Vaenersborg**	**2.97**	**56**	P		**Pn**	**11 43 24.3**		**+0.9**
VANU				S		**Sn**	**11 43 56.0**		**-3.0**
VANU	**Vaenersborg**	**2.97**	**56**	P		**Pn**	**11 43 24.3**		**+0.9**
VANU				S		**Sn**	**11 43 56.0**		**-3.0**
KONO	**Kongsberg**	**2.98**	**22**	*e*P		**Pn**	**11 43 25.0**		**+1.4**
KONO				*e*S		**Sn**	**11 43 56.9**		**-2.5**
KONO				IAML			11 44 15.9		
	comp=Z,9.4nm,0.9s								
BORU	**Boraas**	**3.01**	**74**	P		**Pn**	**11 43 25.2**		**+1.2**
BORU	**Boraas**	**3.01**	**74**	*i* P		**Pn**	**11 43 25.3**		**+1.4**
ODD1	**Odda**	**3.04**	**353**	*e*P		**Pn**	**11 43 27.3**		**+2.8**
ODD1				*e*S		**Sn**	**11 44 00.9**		**+0.1**
ODD1				IAML			11 44 24.5		
	comp=Z,18nm,0.6s								
DEL	**Delary**	**3.60**	**94**	*e*P		**Pn**	**11 43 33.0**		**+1.0**
LUNU	**Lund**	**3.61**	**108**	*e*P		**Pn**	**11 43 31.9**		**-0.3**
ASK	**Askoy**	**3.76**	**343**	*e*P		**Pn**	**11 43 37.5**		**+3.2**
ASK				*e*S		**Sn**	**11 44 18.3**		**-0.2**
ASK				IAML			11 44 38.6		
	comp=Z,7.6nm,0.5s								
SKAR	**Skarslia**	**3.81**	**7**	*e*P		**Pn**	**11 43 37.3**		**+2.2**
SKAR				*e*S		**Sn**	**11 44 18.3**		**-1.6**
SKAR				IAML			11 44 54.1		
	comp=Z,9.7nm,0.4s								
NAO01	**NORSAR Array S**	**4.34**	**23**	*e*P		**Pn**	**11 43 43.1**		**+0.8**
NAO01				*e*S		**Sn**	**11 44 28.3**		**-4.5**
NAO01				IAML			11 45 00.7		
	comp=Z,7.0nm,0.8s								
SUE	**Sulen**	**4.38**	**343**	*e*P		**Pn**	**11 43 45.8**		**+3.1**
SUE				*e*S		**Sn**	**11 44 32.0**		**-1.7**
SUE				IAML			11 45 00.0		
	comp=Z,6.2nm,0.6s								
NRA0	**NORESS Array S**	**4.40**	**28**	Pn		**Pn**	**11 43 43.6**		**+0.5**
	baz=207,slow=10								
NRA0				Sn		**Sn**	**11 44 29.6**		**-4.7**
	baz=201,slow=22								
NRA0	**NORESS Array S**	**4.40**	**28**	Pn		**Pn**	**11 43 43.6**		**+0.5**
	baz=207,slow=10								
NRA0				Sn		**Sn**	**11 44 29.6**		**-4.7**
	baz=201,slow=22								
BSD	**Bornholm Skovb**	**4.59**	**110**	*i* P		**Pn**	**11 43 45.7**		**0.0**
BSD				*i*			11 44 31.5		
BSD				IAML			11 45 05.2		
	comp=Z,3.6nm,0.4s								
BSD	**Bornholm Skovb**	**4.59**	**110**	*i* P		**Pn**	**11 43 45.6**		**0.0**
BSD				*i*			11 44 31.5		
BSD	**Bornholm Skovb**	**4.59**	**110**	*i* P		**Pn**	**11 43 45.7**		**0.0**
BSD				*i*			11 44 31.5		
BSD				IAML			11 45 05.2		
	comp=Z,3.6nm,0.4s								
NB2	**NORSAR Subarra**	**4.59**	**24**	Pn		**Pn**	**11 43 46.5**		**+0.8**
	baz=204,slow=16								
NB2				Sn		**Sn**	**11 44 35.4**		**-3.6**
	baz=199,slow=22								
NB2	**NORSAR Subarra**	**4.59**	**24**	Pn		**Pn**	**11 43 46.5**		**+0.8**
	baz=204,slow=16								
NB2				Sn		**Sn**	**11 44 35.4**		**-3.6**
	baz=199,slow=22								
NOA	**NORSAR Array B**	**4.59**	**24**	Pn		**Pn**	**11 43 45.5**		**-0.2**
	comp=Z,0.0nm,0.3s,baz=181,slow=14,SNR=6.9								
NOA				Sn

	comp=Z,0.5nm,0.6s,baz=148,slow=3.9,SNR=5.1							
SONM	**Songino Array**	**66.73**	**328**	IAmb	IAmb	12 05 50.5		
	comp=Z,0.6nm,0.7s							
ILAR	**Eielson Array**	**83.11**	**22**	P	**P**	**12 07 22.1**	**-1.2**	
	comp=Z,0.3nm,0.6s,baz=254,slow=5.8,SNR=6.4							
AKTO	**Aktyubinsk**	**97.00**	**320**	LR	LR	12 53 42.9		
	comp=Z,82nm,22.0s,baz=299,slow=36							
TORD	**Torodi Ar. Bea**	**150.05**	**287**	PKPbc	**PKPbc**	**12 14 49.6**	**+0.2**	
	comp=Z,1.3nm,0.3s,baz=89,slow=2.4,SNR=27							
TORD	**Torodi Ar. Bea**	**150.05**	**287**		**PKPbc**	**12 14 49.5**	**0.0**	

*IDC **17** 11:56:55.3±0.9, 9.°45S×155.°15E, h0km, mb4.0/11, mb1 4.2/11,mb1mx3.9/37,mbtmp4.0/11,MS3.6/3, Ms1 3.6/3,ms1mx3.1/24,Error ellipse: s-maj=30.6km s-min=20.3km az=118.0*

ISC 17 11:57:00.3±0.9, 9.°5S±0.°2×155.°1E±0.°2, h33km, n15, σ0°76/12, mb4.0/11, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**6.00**	**329**	LR	LR	12 00 43.3	
	comp=Z,335nm,20.1s,baz=133,slow=38						
WRA	**Warramunga Arr**	**22.61**	**240**	P	**P**	**12 01 58.3**	**-0.1**
	3.2nm,0.8s,baz=65,slow=9.4,SNR=15						
ASAR	**Alice Springs**	**24.70**	**233**	P	**P**	**12 02 18.3**	**-0.3**
	3.9nm,0.8s,baz=64,slow=9.5,SNR=20						
GUMO	**Guam**	**25.09**	**336**	LR	LR	12 11 00.6	
	comp=Z,25nm,19.9s,baz=145,slow=34						
STKA	**Stephens Creek**	**25.57**	**207**	P	**P**	**12 02 26.7**	**+0.3**
	4.3nm,0.7s,baz=41,slow=13,SNR=8.0						
FITZ	**Fitzroy Crossi**	**29.86**	**250**	P	**P**	**12 03 04.8**	**-0.1**
	1.8nm,0.7s,baz=72,slow=13,SNR=2.9						
CMAR	**Chiang Mai Arr**	**62.00**	**297**	P	**P**	**12 07 17.4**	**-0.4**
	0.8nm,0.3s,baz=90,slow=6.3,SNR=1.5						
VNDA	**Vanda**	**68.10**	**178**	P	**P**	**12 07 56.6**	**+0.2**
	0.7nm,1.0s,baz=21,slow=3.7,SNR=4.2						
SONM	**Songino Array**	**71.50**	**328**	P	**P**	**12 08 19.4**	**+1.5**
	0.9nm,0.8s,baz=134,slow=6.4,SNR=5.2						
MKAR	**Makanchi Array**	**85.36**	**319**	P	**P**	**12 09 34.5**	**+0.2**
	0.7nm,0.6s,baz=59,slow=6.3,SNR=4.4						
ILAR	**Eielson Array**	**85.63**	**21**	P	**P**	**12 09 35.2**	**0.0**
	0.9nm,0.9s,baz=263,slow=4.7,SNR=6.4						
ZALV	**Zalesovo Beam**	**86.31**	**326**	P	**P**	**12 09 37.2**	**-1.5**
	0.5nm,0.3s,baz=123,slow=5.5,SNR=4.2						
NRIK	**Noril'sk**	**91.12**	**341**	LR	LR	12 49 44.1	
	comp=Z,201nm,20.6s,baz=19,slow=35						
NVAR	**Mina Array Bea**	**93.15**	**52**	P	**P**	**12 10 11.4**	**-0.3**
	0.5nm,0.7s,baz=252,slow=6.7,SNR=4.4						
BDFB	**Brasilia**	**146.10**	**137**	PKPbc	**PKPbc**	**12 16 38.2**	**0.0**
	1.2nm,0.3s,baz=160,slow=2.6,SNR=3.6						

*REY **17** 12:13:18.4, 64.°66N×17.°40W, h1km*
*IDC **17** 12:13:21.7±1.1, 64.°54N×17.°68W, h0km, mb3.6/6, mb1 4.0/7,mb1mx3.7/36,mbtmp3.7/7,ML4.1/1,MS3.5/3, Ms1 3.6/3,ms1mx2.9/43,Error ellipse: s-maj=34.9km s-min=12.3km az=23.0*

ISC 17 12:13:18.5±0.7, 64.°67N±0.°02×17.°41W±0.°02, h10km, n50, σ1°64/59, mb3.9/7, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.13**	**9**	P	**Pg**	**12 13 21.7**	**+0.2**
	baz=5.8						
IDYN				S	**Sg**	**12 13 24.3**	**+0.6**
	baz=5.8						
IVON	**Vonarskard**	**0.15**	**273**	P	**Pg**	**12 13 22.0**	**+0.2**
	baz=276						
IVON				S	**Sg**	**12 13 24.8**	**+0.5**
	baz=276						
IHAM	**Hamarinn**	**0.26**	**224**	P	**Pb**	**12 13 23.6**	**-1.7**
	baz=226						
IHAM				S	**Sb**	**12 13 28.2**	**-1.7**
	baz=226						
IGRF	**Grimsfjall**	**0.27**	**166**	P	**Pb**	**12 13 24.0**	**-1.5**
	baz=167						
IKVE	**Kverkfjoll**	**0.32**	**88**	P	**Pb**	**12 13 25.1**	**-1.3**
	baz=86						
IKVE				S	**Sb**	**12 13 30.4**	**-1.2**
	baz=86						
IHUS	**Husbondi**	**0.39**	**196**	P	**Pb**	**12 13 26.2**	**-1.3**
	baz=197						
IVOT	**Vottur**	**0.41**	**166**	P	**Pb**	**12 13 26.4**	**-1.4**
	baz=166						
IVOT				S	**Sb**	**12 13 32.5**	**-1.6**
	baz=166						
THOR	**Thorvaldshraun**	**0.41**	**49**	S	**Sb**	**12 13 33.9**	**-0.3**
	baz=48						
THOR				P	**Pb**	**12 13 26.5**	**-1.4**
	baz=48						
ISKR	**Skrokkalda**	**0.43**	**256**	P	**Pb**	**12 13 27.0**	**-1.2**
	baz=257						
IJOK	**Jokulheimar**	**0.50**	**225**	P	**Pb**	**12 13 28.0**	**-1.4**
	baz=226						
IJOK				S	**Sb**	**12 13 35.5**	**-1.2**
	baz=226						
IMKO	**Mokollar**	**0.56**	**55**	P	**Pb**	**12 13 28.9**	**-1.4**
	baz=54						
IMKO				S	**Sb**	**12 13 37.2**	**-1.1**
	baz=54						
IKSK	**Karasker**	**0.65**	**141**	P	**Pg**	**12 13 29.9**	**-1.2**
	baz=141						
IKSK				S	**Sb**	**12 13 38.9**	**-2.2**
	baz=141						
IIEY	**Innrieyrar**	**0.65**	**209**	P	**Pb**	**12 13 30.7**	**-1.2**
	baz=210						
ISVA	**Svartarkot**	**0.68**	**6**	P	**Pb**	**12 13 30.9**	**-1.5**
	baz=5.0						
ISVA				S	**Sb**	**12 13 40.6**	**-1.2**
	baz=5.0						
IKAL	**Kalfafell**	**0.73**	**190**	P	**Pb**	**12 13 31.8**	**-1.5**
	baz=190						
IKAL				S	**Sb**	**12 13 42.0**	**-1.3**
	baz=190						
IVSH	**V-Sauoahnukur**	**0.74**	**78**	P	**Pb**	**12 13 31.8**	**-1.6**
	baz=77						
IVSH				S	**Sb**	**12 13 42.1**	**-1.4**
	baz=77						
IVAT	**Vatnsfell**	**0.81**	**234**	P	**Pb**	**12 13 33.4**	**-1.2**
	baz=235						
IADA	**Aoalbol**	**0.86**	**65**	P	**Pb**	**12 13 33.8**	**-1.7**
	baz=64						
IHVE	**Hveravellir**	**0.95**	**283**	P	**Pg**	**12 13 35.4**	**-1.3**
	baz=284						
IMEL	**Melhnausar**	**0.96**	**19**	P	**Pb**	**12 13 35.6**	**-1.6**
	baz=19						
IMEL				S	**Sn**	**12 13 49.2**	**-2.6**
	baz=19						
IREN	**Reynihlio**	**1.01**	**12**	P	**Pb**	**12 13 36.4**	**-1.6**
	baz=12						
IKVO	**Krokottuvotn**	**1.07**	**12**	P	**Pg**	**12 13 37.5**	**-1.7**
	baz=11						
ISNB	**Snabyli**	**1.08**	**210**	P	**Pg**	**12 13 37.8**	**-1.3**
	baz=211						
ISNB				S	**Sn**	**12 13 52.8**	**-1.7**
	baz=211						
ISLY	**Slysaalda**	**1.13**	**222**	P	**Pg**	**12 13 38.9**	**-1.2**
	baz=223						
IFED	**Fedgar**	**1.18**	**238**	P	**Pg**	**12 13 40.0**	**-1.2**
	baz=238						
IRJU	**Rjupnafell**	**1.19**	**208**	P	**Pb**	**12 13 39.7**	**-1.4**
	baz=209						
ISKI	**Skildingahlsh**	**1.22**	**7**	P	**Pn**	**12 13 39.9**	**-1.7**
	baz=7.1						
IGHA	**Grjothals**	**1.22**	**15**	P	**Pn**	**12 13 39.9**	**-1.8**
	baz=14						
IMJO	**Mjoaskard**	**1.23**	**234**	P	**Pg**	**12 13 40.7**	**-1.3**
	baz=235						
IGRA	**Granastaoir**	**1.26**	**357**	P	**Pn**	**12 13 40.2**	**-1.8**
	baz=357						
IGRA				S	**Sn**	**12 13 58.3**	**-0.8**
	baz=357						
IGYG	**Gygjarholskot**	**1.27**	**254**	P	**Pn**	**12 13 40.9**	**-1.4**
	baz=254						
IDIM	**Dimmadalss**	**1.32**	**9**	P	**Pn**	**12 13 41.2**	**-1.7**
	baz=8.3						
IBRE	**Brettingsstaoi**	**1.48**	**352**	P	**Pn**	**12 13 43.9**	**-1.2**
	baz=352						
IGIL	**Gilhagi**	**1.48**	**17**	P	**Pn**	**12 13 43.7**	**-1.5**
	baz=17						
ISIG	**Siglufjorour**	**1.60**	**338**	P	**Pn**	**12 13 45.9**	**-0.9**
	baz=338						
BORG	**Borgarnes**	**1.68**	**275**	Pg	**Pb**	**12 13 48.7**	**-0.7**
	24nm,0.3s,baz=102,slow=8.9,SNR=53						
BORG				Lg	Lg	12 14 12.3	
	8.1nm,0.3s,baz=242,slow=21,SNR=9.3						
ISOL	**Solvholt**	**1.71**	**246**	P	**Pn**	**12 13 47.7**	**-0.5**
	baz=246						
IKRO	**Krokur**	**1.71**	**252**	P	**Pn**	**12 13 47.5**	**-0.8**
	baz=252						
ILEI	**Leirhofn**	**1.79**	**12**	P	**Pn**	**12 13 48.6**	**-0.8**
	baz=12						
SCO	**Scoresbysund**	**6.09**	**345**	*e*	**Pn**	**12 14 50.0**	**+1.6**
	baz=165,slow=5.9						
SCO				*i* P	Pn	12 14 52.0	+3.6
SCO				IAML		12 15 50.6	
	comp=Z,1.8nm,0.5s						
SCO				*i* S	Sb	12 16 07.1	-10
JMIC	**Jan Mayen**	**7.18**	**24**	LR	LR	12 16 57.1	
	comp=Z,67nm,20.4s,baz=219,slow=29						
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn	**Pn**	**12 16 08.2**	**+2.5**
	baz=324,slow=13,SNR=7.4						
BRG	**Berggiesshubel**	**21.38**	**115**	*e* P	**P**	**12 18 08.1**	**+2.3**
	comp=Z,20nm,1.6s						
GERES	**GERESS Array B**	**22.92**	**119**	P	**P**	**12 18 26.8**	**+4.4**
	comp=Z,0.5nm,0.6s,baz=317,slow=9.5,SNR=3.7						
ESDC	**Sonseca Array**	**26.24**	**156**	P	**P**	**12 18 57.3**	**+3.9**
	comp=Z,1.1nm,0.9s,baz=340,slow=11,SNR=4.3						
ILAR	**Eielson Array**	**45.70**	**332**	P	P	12 21 43.8	+4.9
	comp=Z,2.3nm,1.2s,baz=28,slow=6.0,SNR=8.7						
TORD	**Torodi Ar. Bea**	**53.13**	**157**	P	P	12 22 41.3	+5.2
	comp=Z,0.6nm,0.9s,baz=338,slow=7.9,SNR=2.9						
PDAR	**Pinedale Array**	**53.21**	**293**	P	P	12 22 41.2	+4.4
	comp=Z,1.7nm,0.8s,baz=60,slow=7.4,SNR=12						
NVAR	**Mina Array Bea**	**60.34**	**297**	LR	LR	12 48 37.0	
	comp=Z,112nm,20.2s,baz=56,slow=35						
TXAR	**Lajitas Array**	**62.32**	**280**	P	P	12 23 46.0	+5.2
	comp=Z,0.6nm,0.7s,baz=89,slow=7.6,SNR=4.7						
TXAR				LR	LR	12 49 60.0	
	comp=Z,70nm,19.8s,baz=0.0,slow=35						

WEL 17 12:13:57.1, 41.°5S±2.°×17.°4E±.°, h99km±5km, M2.8/21, ML3.0/21, MLv2.8/21, Error ellipse: s-maj=0.0km s-min=0.0km az=100.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.12**	**288**	P	Pn	12 14 10.7	-0.2
TUWZ	**Tuamarina**	**0.35**	**120**	P	Pn	12 14 12.3	+0.5
BSWZ	**Blackbirch Sta**	**0.53**	**151**	P	Pn	12 14 13.8	+0.8
DUWZ	**D'Urville Isla**	**0.54**	**33**	P	Pn	12 14 13.4	+0.3
TCW	**Tory Channel**	**0.56**	**86**	P	Pn	12 14 13.9	+0.7
THZ	**Tophouse**	**0.69**	**223**	P	Pn	12 14 14.9	+0.4
CMWZ	**Cape Campbell**	**0.71**	**134**	P	Pn	12 14 15.7	+1.2
QRZ	**Quartz Range**	**0.87**	**299**	P	Pn	12 14 15.5	-0.6
WEL	**Wellington**	**0.93**	**92**	P	Pn	12 14 17.2	+0.6
BHW	**Baring Head**	**1.02**	**99**	P	Pn	12 14 18.0	+0.4
KIW	**Kapiti Island**	**1.11**	**70**	P	Pn	12 14 19.2	+0.5
KHZ	**Kahutara**	**1.16**	**180**	P	Pn	12 14 19.9	+0.7
CAW	**Cannon Point**	**1.17**	**83**	P	Pn	12 14 19.6	+0.4
OGWZ	**Otaki Gorge**	**1.31**	**71**	P	Pn	12 14 21.3	+0.3
PLWZ	**Palliser**	**1.33**	**104**	P	Pn	12 14 21.6	+0.3
DSZ	**Denniston Nort**	**1.39**	**249**	P	Pn	12 14 21.8	-0.1
PAWZ	**Paruwai Farm**	**1.43**	**96**	P	Pn	12 14 22.6	+0.1
MTW	**Mount Morrison**	**1.49**	**87**	P	Pn	12 14 23.2	+0.1
HOWZ	**Holdsworth Sta**	**1.54**	**77**	P	Pn	12 14 23.7	-0.1
GVZ	**Greta Valley S**	**1.75**	**192**	P	Pn	12 14 26.2	-0.3
LTZ	**Lake Taylor**	**1.79**	**211**	P	Pn	12 14 27.4	+0.3
PREZ	**Palmer Road**	**1.97**	**14**	P	Pn	12 14 31.2	+2.0
KHEZ	**Kahui Hut**	**1.99**	**11**	P	Pn	12 14 30.7	+1.1
NBEZ	**Newall Road No**	**2.00**	**7**	P	Pn	12 14 30.9	+1.3
INZ	**Inchbonnie**	**2.14**	**226**	P	Pn	12 14 32.0	+0.5
VRZ	**Vera Road**	**2.33**	**24**	P	Pn	12 14 35.1	+1.2
OKCZ	**Okains Bay**	**2.49**	**188**	P	Pn	12 14 36.1	+0.1
MQZ	**McQueen's Vall**	**2.54**	**195**	P	Pn	12 14 35.5	-1.0
MHCZ	**Mount Hutt**	**2.70**	**212**	P	Pn	12 14 40.7	+1.8

WEL 17 12:26:14.2±1.1, 36.°5S±9.°×18.°0W±1.°1, h128km±23km, M3.9/18, ML4.0/13, MLv3.9/18, Error ellipse: s-maj=0.0km s-min=0.0km az=70.1, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**2.14**	**221**	P	Pn	12 26 49.6	-0.2
WMGZ				S	Sn	12 27 18.1	+1.0
PUZ	**Puketiti**	**2.41**	**219**	P	Pn	12 26 52.9	-0.4
PUZ				S	Sn	12 27 22.9	-0.3
HAZ	**Te Kaha**	**2.46**	**230**	P	Pn	12 26 54.2	+0.4
HAZ				S	Sn	12 27 24.9	+0.6
TWGZ	**Tauwhareparae**	**2.64**	**221**	P	Pn	12 26 56.2	+0.1
TWGZ				S	Sn	12 27 28.9	+0.6
RUGZ	**Raukumara Rang**	**2.66**	**228**	P	Pn	12 26 56.7	+0.3
RUGZ				S	Sn	12 27 30.0	+1.0
CNGZ	**Carnagh Statio**	**2.76**	**214**	P	Pn	12 26 58.5	+0.8
MWZ	**Matawai**	**3.00**	**224**	P	Pn	12 27 00.8	+0.1
MWZ				S	Sn	12 27 36.4	-0.2
URZ	**Urewera**	**3.19**	**229**	P	Pn	12 27 02.8	-0.4
URZ				S	Sn	12 27 40.9	-0.2
PRGZ	**Paritu Road**	**3.27**	**213**	P	Pn	12 27 04.3	0.0
PRGZ				S	Sn	12 27 42.3	-0.7
MHGZ	**Mahia Peninsul**	**3.45**	**211**	P	Pn	12 27 07.0	+0.4
KUZ	**Kuaotunu**	**3.63**	**260**	P	Pn	12 27 07.8	-1.1
MTHZ	**Maungataniwha**	**3.74**	**224**	P	Pn	12 27 11.2	+0.7
MTHZ				S	Sn	12 27 55.5	+1.3
ARHZ	**Aropaoanui**	**3.96**	**219**	P	Pn	12 27 13.4	+0.1
ARHZ				S	Sn	12 28 00.4	+1.2
TOZ	**Tahuroa Road**	**4.04**	**246**	P	Pn	12 27 14.6	+0.2
MKAZ	**Moumakai**	**4.13**	**256**	P	Pn	12 27 14.9	-0.7
BKZ	**Black Stump Fm**	**4.16**	**224**	P	Pn	12 27 16.0	0.0
MCHZ	**McNeill Hill**	**4.25**	**219**	P	Pn	12 27 17.2	0.0
ETAZ	**East Tamaki Re**	**4.29**	**258**	P	Pn	12 27 18.2	+0.5
KAHZ	**Kahuranaki**	**4.43**	**215**	P	Pn	12 27 18.6	-1.1
RVAZ	**Riverhead Bore**	**4.54**	**261**	P	Pn	12 27 22.1	+1.0
BHHZ	**Black Hill Sta**	**4.62**	**224**	P	Pn	12 27 23.0	+0.8
WCZ	**Waipu Caves**	**4.73**	**271**	P	Pn	12 27 23.7	+0.1
BFZ	**Birch Farm**	**5.43**	**213**	P	Pn	12 27 32.7	-1.0
OUZ	**Omahuta**	**5.44**	**278**	P	Pn	12 27 32.7	-0.4

*IDC **17** 12:30:04.8±2.0, 1.°60N×126.°18E, h0km, mb3.5/3, mb1 3.6/4,mb1mx3.4/43,mbtmp3.5/4,ML3.4/1,Error ellipse: s-maj=118.3km s-min=26.6km az=68.0*
*DJA **17** 12:30:07.9±1.0, 2.°N±3.°×12.°6E±.°, h12km±8km, M3.7/9, mb4.0/2,MLv3.5/9*

ISC 17 12:30:10.3±1.0, 1.°73N±0.°06×126.°43E±0.°07, h47km, n10, σ0°78/12, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**135**	P	**Pn**	**12 30 32.8**	**+0.3**
SGSI	**Sangihe**	**2.14**	**335**	P	**Pn**	**12 30 42.6**	**-1.0**
SGSI				S	**Sn**	**12 31 09.6**	**+0.6**
KMSI	**Cibinong**	**2.71**	**245**	P	**Pn**	**12 30 50.7**	**-0.6**
KMSI				S	**Sn**	**12 31 23.2**	**+0.4**
GTOI	**Gorontalo**	**3.59**	**252**	P	**Pn**	**12 31 04.1**	**+0.7**
SANI	**Sanana**	**3.78**	**187**	P	**Pn**	**12 31 05.7**	**-0.4**
APSI	**Ampana**	**5.45**	**241**	P	**Pn**	**12 31 28.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**19.72**	**182**	P	**P**	**12 34 35.0**	**-1.1**
	0.1nm,0.3s,baz=9.5,slow=12,SNR=1.4						
WRA	**Warramunga Arr**	**22.89**	**161**	P	**P**	**12 35 09.4**	**-0.8**
	0.6nm,0.4s,baz=338,slow=10,SNR=15						
ASAR	**Alice Springs**	**26.27**	**164**	P	**P**	**12 35 41.6**	**+0.2**
	0.4nm,0.5s,baz=344,slow=7.3,SNR=16						
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	**12 40 06.5**	**+1.0**
	0.2nm,0.4s,baz=118,slow=8.3,SNR=2.6						

IDC 17 12:47:18.3±2.1, 1.°50N×126.°12E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/37, mbtmp3.2/3, Error ellipse: s-maj=187.0km s-min=25.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.78**	**160**	P	P	12 52 22.6	0.0
	0.3nm,0.5s,baz=336,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**26.14**	**164**	P	P	12 52 54.3	-0.1
	0.1nm,0.5s,baz=350,slow=7.9,SNR=5.6						
MKAR	**Makanchi Array**	**59.04**	**326**	P	P	12 57 20.2	0.0
	0.4nm,0.5s,baz=115,slow=8.0,SNR=5.8						

*IDC **17** 12:48:47.8±5.0, 8.°41S×156.°21E, h0km, mb4.3/4, mb1 4.5/4,mb1mx3.7/36,mbtmp4.3/4,MS3.2/5,Ms1 3.2/5, ms1mx2.8/41,Error ellipse: s-maj=82.4km s-min=65.7km az=31.0*
*NEIC **17** 12:49:04.0±0.7, 9.°3S±0.°2×155.°08E±0.°09, h23km±8km, mb4.1/9,Error ellipse: s-maj=27.4km s-min=10.0km az=201.0*

ISC 17 12:49:06.3±2.2, 9.°6S±0.°4×155.°2E±0.°1, h33km, n20, σ0°33/14, mb4.1/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.71**	**88**	Pn	**Pn**	**12 50 15.1**	**0.0**
KRVT	**Keravat (AS076**	**6.13**	**329**	LR	LR	12 51 39.6	
	comp=Z,34nm,20.2s,baz=148,slow=30						
PMG	**Port Moresby**	**7.91**	**271**	LR	LR	12 54 06.4	
	comp=Z,306nm,18.9s,baz=121,slow=35						
DZM	**Mont Dzumac**	**16.45**	**140**	LR	LR	12 57 50.3	
	comp=Z,192nm,20.6s,baz=258,slow=32						
DZM	**Mont Dzumac**	**16.45**	**140**	Pn	**P**	**12 52 57.2**	**0.0**
DZM				IAmb	IAmb	12 53 11.8	
	comp=Z,13nm,1.3s						
WR0	**Warramunga Arr**	**22.42**	**240**	P	**P**	**12 54 02.0**	**-0.4**
WR0				IAmb	IAmb	12 54 05.1	
	comp=Z,7.3nm,0.9s						
WB0	**Warramunga Arr**	**22.47**	**241**	P	**P**	**12 54 02.7**	**-0.3**
WB0				IAmb	IAmb	12 54 05.1	
	comp=Z,5.9nm,0.8s						
WRAB	**Tennant Creek**	**22.57**	**241**	P	**P**	**12 54 04.2**	**+0.1**
WB2	**Warramunga Arr**	**22.58**	**241**	P	**P**	**12 54 03.8**	**-0.3**
WB2				IAmb	IAmb	12 54 06.2	
	comp=Z,6.2nm,0.8s						
WRA	**Warramunga Arr**	**22.59**	**241**	P	**P**	**12 54 04.3**	**+0.1**
	comp=Z,6.4nm,0.8s,baz=65,slow=9.4,SNR=38						
WRA	**Warramunga Arr**	**22.59**	**241**	P	**P**	**12 54 05.0**	**+0.8**
AS31	**Alice Springs**	**24.66**	**233**	P	**P**	**12 54 24.0**	**-0.2**
ASAR	**Alice Springs**	**24.66**	**233**	P	**P**	**12 54 24.1**	**-0.2**
	comp=Z,7.1nm,0.9s,baz=63,slow=9.3,SNR=74						
ASAR	**Alice Springs**	**24.66**	**233**	P	**P**	**12 54 24.3**	**0.0**
GUMO	**Guam**	**25.22**	**336**	LR	LR	13 03 53.5	
	comp=Z,35nm,20.0s,baz=172,slow=37						
STKA	**Stephens Creek**	**25.49**	**208**	P	**P**	**12 54 31.8**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=36,slow=14,SNR=12						
STKA	**Stephens Creek**	**25.49**	**208**	P	**P**	**12 54 31.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**29.86**	**250**	P	**P**	**12 55 10.9**	**0.0**
	comp=Z,2.0nm,1.0s,baz=73,slow=11,SNR=2.4						
FITZ	**Fitzroy Crossi**	**29.86**	**250**	IAmb	IAmb	12 55 16.2	
	comp=Z,5.1nm,1.3s						
URZ	**Urewera**	**34.67**	**149**	LR	LR	13 08 20.9	
	comp=Z,112nm,18.5s,baz=31,slow=33						

IDC 17 12:53:07.0±0.9, 7.°51N×94.°35E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.2/46, mbtmp3.3/4, Error ellipse: s-maj=507.6km s-min=26.2km az=59.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.49**	**236**	T	T	13 25 28.6	
	baz=54,slow=75,SNR=20						
H08S2	**Diego Garcia H**	**26.49**	**236**	T	T	13 25 28.8	
	baz=54,slow=75,SNR=9.7						
H08S1	**Diego Carcia H**	**26.51**	**236**	T	T	13 25 29.0	
	baz=54,slow=75,SNR=8.8						
MKAR	**Makanchi Array**	**40.48**	**347**	P	P	13 00 47.2	-0.4
	0.4nm,0.6s,baz=164,slow=7.9,SNR=4.7						
ZALV	**Zalesovo Beam**	**46.94**	**352**	P	P	13 01 39.6	+0.2
	0.4nm,0.3s,baz=180,slow=7.2,SNR=2.2						
WRA	**Warramunga Arr**	**47.88**	**125**	P	P	13 01 47.1	-0.2
	0.1nm,0.7s,baz=306,slow=8.4,SNR=1.3						
ASAR	**Alice Springs**	**49.52**	**130**	P	P	13 01 59.8	-0.1
	0.1nm,0.7s,baz=305,slow=8.0,SNR=4.2						

*ATH **17** 12:55:24.6, 38.°55N×26.°24E, h50km±12km, ML2.5/2, Error ellipse: s-maj=13.0km s-min=1.6km az=280.0*
*ISK **17** 12:55:24.4, 38.°55N×26.°29E, h20km, ML2.1/12*
*DDA **17** 12:55:24.4, 38.°51N×26.°21E, h7km±3km, ML1.9*
*THE **17** 12:55:25.0, 38.°52N×26.°21E, h13km±9km, ML2.3/3, Error ellipse: s-maj=10.2km s-min=1.2km az=42.0*

ISC 17 12:55:24.7±1.2, 38.°54N±0.°03×26.°22E±0.°04, h19km±3km, n28, σ0°42/41, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.34**	**121**	PG	**Pg**	**12 55 31.7**	**-0.4**
URLA				SG	**Sg**	**12 55 36.7**	**-0.4**
URLA	**Izmir**	**0.34**	**121**	*i* P	**Pg**	**12 55 31.6**	**-0.5**
URLA				*i* S	**Sg**	**12 55 36.5**	**-0.6**
PSRA	**Psara**	**0.52**	**270**	P	**Pn**	**12 55 36.9**	**-0.1**
BLCB	**Balcova**	**0.66**	**103**	PG	**Pb**	**12 55 37.7**	**+0.1**
BLCB				SG	**Sb**	**12 55 45.9**	**-0.5**
BLCB	**Balcova**	**0.66**	**103**	P	**Pg**	**12 55 38.5**	**+0.7**
BLCB				S	**Sb**	**12 55 46.7**	**+0.3**
PRK	**Paraskevi**	**0.71**	**3**	P	**Pg**	**12 55 38.9**	**+0.3**
PRK				S	**Sn**	**12 55 49.8**	**-0.2**
PRK				AML	AML	12 55 51.1	
	comp=E,739μm,0.6s						
PRK				AML	AML	12 55 51.5	
	comp=N,832μm,0.6s						
PRK	**Paraskevi**	**0.71**	**3**	P	**Pg**	**12 55 38.5**	**-0.1**
PRK				S	**Sn**	**12 55 50.2**	**+0.2**
	comp=N,398nm,0.6s						
DGB	**zmir**	**0.71**	**133**	*i* P	**Pb**	**12 55 38.1**	**-0.3**
DGB				*i* S	**Sb**	**12 55 47.3**	**-0.6**
DGB				IAML		12 55 49.0	
	comp=N,63nm,0.2s

FSK					AML	AML	13 10 01.2		
	comp=E,8320µm,0.2s								
FSK	**Fiskardo**	**0.09**	**36**	P		Pg	13 09 58.5	-0.2	
FSK				S		Sg	13 10 00.8	0.0	
	comp=E,3µm,0.2s								
KEF5	**Kardakata, Kep**	**0.11**	**192**	P		Pg	13 09 58.7	-0.3	
KEF5				S		Sg	13 10 01.0	-0.2	
KEF5	**Kardakata, Kep**	**0.11**	**192**	P		Pg	13 09 58.7	-0.3	
KEF5				S		Sg	13 10 00.7	-0.5	
	comp=E,6µm,0.1s								
KEF4	**Livadi, Kephal**	**0.14**	**204**	P		Pg	13 09 59.2	-0.2	
KEF4				S		Sg	13 10 01.8	0.0	
KEF4	**Livadi, Kephal**	**0.14**	**204**	P		Pg	13 09 59.1	-0.3	
KEF4				S		Sg	13 10 01.8	0.0	
DMLN	**Damoulianata-K**	**0.18**	**213**	P		Pg	13 09 59.5	-0.5	
DMLN				S		Sg	13 10 02.6	-0.2	
	comp=E,6µm,0.2s								
LXRA	**Lixouri, Kepha**	**0.19**	**194**	P		Pg	13 10 00.1	-0.1	
LXRA				S		Sg	13 10 03.9	+0.8	
ARGA	**Argostoli. Kep**	**0.21**	**184**	P		Pg	13 10 00.4	-0.1	
ARGA				S		Sg	13 10 04.0	+0.4	
VLS	**Valsamata**	**0.22**	**161**	P		Pg	13 10 00.6	-0.1	
VLS				S		Sg	13 10 04.6	+0.6	
VLS					AML	AML	13 10 05.4		
	comp=E,5067µm,0.1s								
VLS					AML	AML	13 10 05.9		
	comp=N,4169µm,0.2s								
VLS	**Valsamata**	**0.22**	**161**	P		Pg	13 10 00.7	0.0	
VLS				S		Sg	13 10 04.7	+0.7	
	comp=N,2µm,0.1s								
EVGI	**Lefkada island**	**0.26**	**28**	P		Pg	13 10 01.4	-0.1	
EVGI				S		Sg	13 10 05.9	+0.7	
EVGI	**Lefkada island**	**0.26**	**28**	P		Pg	13 10 01.5	+0.1	
EVGI				S		Sb	13 10 06.2	-0.7	
	comp=N,380nm,0.2s								
PSDA	**Pessada-Kefalo**	**0.28**	**166**	P		Pg	13 10 01.7	0.0	
PSDA				S		Sb	13 10 06.6	-0.7	
PSDA	**Pessada-Kefalo**	**0.28**	**166**	P		Pg	13 10 01.7	0.0	
PSDA				S		Sb	13 10 06.6	-0.7	
	comp=N,248nm,0.2s								
MGNA	**Meganis**	**0.35**	**41**	P		Pg	13 10 02.9	-0.1	
MGNA				S		Sg	13 10 08.3	+0.4	
NYDR	**Nydri-Lefkada**	**0.36**	**26**	P		Pg	13 10 02.9	-0.2	
NYDR				S		Sg	13 10 08.3	+0.2	
	comp=N,558nm,0.3s								
LKD2	**Lefkada island**	**0.42**	**17**	P		Pg	13 10 03.8	-0.4	
LKD2				S		Sb	13 10 10.7	-0.7	
LKD2					AML	AML	13 10 11.4		
	comp=N,539µm,0.4s								
LKD2					AML	AML	13 10 16.4		
	comp=E,507µm,0.4s								
LKD2	**Lefkada island**	**0.42**	**17**	P		Pg	13 10 03.9	-0.3	
LKD2				S		Sb	13 10 10.7	-0.7	
	comp=E,250nm,0.4s								
TSLK	**Tsoukalades, L**	**0.45**	**16**	P		Pg	13 10 04.6	-0.2	
TSLK				S		Sg	13 10 11.5	+0.5	
TSLK	**Tsoukalades, L**	**0.45**	**16**	P		Pg	13 10 03.6	-1.2	
TSLK				S		Sb	13 10 11.9	-0.4	
	comp=E,310nm,0.4s								
VLMS	**Volimes, Zakyn**	**0.53**	**166**	P		Pg	13 10 06.0	-0.2	
VLMS				S		Sg	13 10 13.7	+0.6	
VLMS					AML	AML	13 10 17.9		
	comp=N,2151µm,0.2s								
VLMS					AML	AML	13 10 19.5		
	comp=E,1866µm,0.2s								
VLMS	**Volimes, Zakyn**	**0.53**	**166**	P		Pg	13 10 05.8	-0.4	
VLMS				S		Sb	13 10 14.8	+0.4	
	comp=E,1µm,0.2s								
DRO	**Drossia**	**1.05**	**114**	P		Pb	13 10 15.9	+0.1	
DRO					AML	AML	13 10 43.1		
	comp=N,462µm,0.5s								
DRO					AML	AML	13 10 43.5		
	comp=E,437µm,0.5s								
EFP	**Efpalio**	**1.11**	**88**	P		Pb	13 10 16.3	-0.5	
EFP					AML	AML	13 10 39.6		
	comp=N,644µm,0.7s								
EFP					AML	AML	13 10 40.1		
	comp=E,1293µm,0.6s								
ANX	**Ano Chora**	**1.14**	**79**	P		Pg	13 10 17.8	+0.1	
ANX					AML	AML	13 10 41.0		
	comp=N,853µm,0.6s								
ANX					AML	AML	13 10 41.5		
	comp=E,1019µm,0.6s								
IGT	**Igoumenitsa**	**1.15**	**354**	P		Pg	13 10 17.9	-0.1	
EVR	**Evrytania**	**1.16**	**62**	P		Pb	13 10 17.2	-0.4	
EVR					AML	AML	13 10 42.3		
	comp=E,198µm,0.6s								
EVR					AML	AML	13 10 46.0		
	comp=N,223µm,0.6s								
KALE	**Kalithea**	**1.29**	**89**	P		Pn	13 10 19.6	0.0	
KALE					AML	AML	13 10 45.6		
	comp=E,197µm,0.8s								
KALE					AML	AML	13 10 46.2		
	comp=N,340µm,0.5s								
KLV	**Kalavryta, Ach**	**1.35**	**104**	P		Pb	13 10 20.7	-0.2	
GUR	**Goura**	**1.52**	**107**	P		Pb	13 10 23.8	-0.1	
GUR					AML	AML	13 10 50.5		
	comp=N,275µm,0.3s								
GUR					AML	AML	13 10 50.6		
	comp=E,233µm,0.3s								
AGG	**Agios Georgios**	**1.57**	**66**	P		Pg	13 10 25.8	-0.2	
AGG					AML	AML	13 10 54.6		
	comp=N,197µm,0.4s								
AGG					AML	AML	13 10 56.0		
	comp=E,138µm,0.4s								
ITM	**Ithomi**	**1.65**	**136**	P		Pg	13 10 27.2	-0.4	

IDC ***17*** *13:22:35.5±2.2, 1°.76N×126°.14E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/40, mbtmp3.1/3, Error ellipse: s-maj=172.9km s-min=28.6km az=65.0*

DJA ***17*** *13:22:38.1±1.3, 2°.N±3°×12°.6E±°, h12km±11km, M3.5/7, mb3.9/1, MLv3.2/7*

ISC 17 13:22:41.1±1.1, 1°.8N±0°.1×126°.5E±0°.3, h47km, n6, σ0§96/7, mb3.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**139**	P	**Pn**	**13 23 02.8**	**-0.6**
SGSI	**Sangihe**	**2.11**	**333**	P	**Pn**	**13 23 13.3**	**-0.7**
SGSI				S	**Sn**	**13 23 39.6**	**+0.5**
NLAI	**Namlea**	**5.04**	**173**	P	**Pn**	**13 23 53.4**	**-0.8**
WRA	**Warramunga Arr**	**22.93**	**161**	P	**P**	**13 27 42.1**	**+0.7**
	0.5nm,0.6s,baz=338,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**26.31**	**165**	P	**P**	**13 28 13.9**	**+1.2**
	0.2nm,0.5s,baz=346,slow=13,SNR=2.2						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**13 32 36.0**	**-0.2**
	0.1nm,0.5s,baz=114,slow=7.1,SNR=1.2						

IDC ***17*** *13:23:17.6±0.7, 9°.54S×155°.49E, h0km, mb4.1/13, mb1 4.3/16, mb1mx4.1/38, mbtmp4.1/16, ML3.8/3, Error ellipse: s-maj=23.7km s-min=16.6km az=103.0*

NEIC ***17*** *13:23:19.2±1.9, 9°.70S±0°.09×155°.50E±0°.10, h22km±5km, mb4.4/15, Error ellipse: s-maj=16.3km s-min=10.5km az=47.0*

DJA ***17*** *13:23:46.3±2.7, 11°.S±11°×15°.5E±1°.6, h143km±19km, M4.2/13, mb4.2/13, mB5.4/2, Mw(mB)4.8/2*

ISC 17 13:23:21.1±0.5, 9°.61S±0°.07×155°.5E±0°.1, h29km, n46, σ1§78/42, mb4.2/23, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**6.29**	**327**	Pn	**Pn**	**13 24 52.0**	**-0.1**
	12nm,0.3s,baz=359,slow=2.4,SNR=12						
CTA	**Charters Tower**	**13.71**	**220**	Pn	**Pn**	**13 26 36.1**	**+2.3**
	0.3nm,0.3s,baz=60,slow=11,SNR=4.8						
EIDS	**Eidsvold**	**16.22**	**194**		**Pn**	**13 27 07.8**	**+0.7**
EIDS					IAmb	IAmb	13 27 12.7
	comp=Z,22nm,0.8s						
DZM	**Mont Dzumac**	**16.25**	**141**	Pn	**Pn**	**13 27 10.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=324,slow=12,SNR=4.8						
DZM	**Mont Dzumac**	**16.25**	**141**	Pn	**Pn**	**13 27 04.8**	**-2.7**
PATS	**Pohnpei**	**16.58**	**10**	Pn	**Pn**	**13 27 10.3**	**-1.3**
PATS					IAmb	IAmb	13 27 19.7
	comp=Z,79nm,1.4s						
ARMA	**Armidale**	**21.01**	**189**	P	**P**	**13 28 01.1**	**-1.6**
ARMA					IAmb	IAmb	13 28 07.7
	comp=Z,33nm,1.2s						
WR0	**Warramunga Arr**	**22.69**	**241**	P	**P**	**13 28 18.4**	**-2.2**
WR0					IAmb	IAmb	13 28 31.2
	comp=Z,14nm,1.2s						
WB0	**Warramunga Arr**	**22.75**	**241**	P	**P**	**13 28 19.1**	**-2.1**
WB0					IAmb	IAmb	13 28 33.7
	comp=Z,11nm,1.3s						
WC3	**Warramunga Arr**	**22.84**	**241**	P	**P**	**13 28 19.4**	**-2.8**
WC3					IAmb	IAmb	13 28 35.4
	comp=Z,8.4nm,0.9s						
WB2	**Warramunga Arr**	**22.85**	**241**	P	**P**	**13 28 20.4**	**-1.9**
WB2					IAmb	IAmb	13 28 35.0
	comp=Z,8.9nm,0.9s						
WRA	**Warramunga Arr**	**22.86**	**241**	P	**P**	**13 28 23.1**	**+0.6**
	comp=Z,3.8nm,0.8s,baz=66,slow=9.6,SNR=26						
WRA	**Warramunga Arr**	**22.86**	**241**	P	**P**	**13 28 22.8**	**+0.3**
AS31	**Alice Springs**	**24.91**	**233**	P	**P**	**13 28 41.0**	**-0.9**
ASAR	**Alice Springs**	**24.91**	**233**	P	**P**	**13 28 42.5**	**+0.5**
	comp=Z,4.5nm,0.9s,baz=64,slow=10.0,SNR=37						
ASAR	**Alice Springs**	**24.91**	**233**	P	**P**	**13 28 40.1**	**-1.8**
STKA	**Stephens Creek**	**25.63**	**208**	P	**P**	**13 28 50.5**	**+2.2**
	comp=Z,3.6nm,0.6s,baz=55,slow=14,SNR=8.0						
STKA	**Stephens Creek**	**25.63**	**208**	P	**P**	**13 28 46.6**	**-1.6**
KNRA	**Kununurra**	**26.75**	**254**	P	**P**	**13 28 55.7**	**-2.9**
KNRA					IAmb	IAmb	13 29 09.5
	comp=Z,15nm,1.1s						
BBOO	**Buckleboo**	**29.24**	**215**	P	**P**	**13 29 18.8**	**-1.9**
FITZ	**Fitzroy Crossi**	**30.15**	**251**	P	**P**	**13 29 29.6**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=76,slow=12,SNR=1.8						
KMSI	**Cibinong**	**32.97**	**286**	P	P	13 30 02.6	+8.9
	comp=Z,52nm,0.5s						
FORT	**Forrest**	**33.10**	**227**	P	**P**	**13 29 54.0**	**-0.6**
LUWI	**Luwuk**	**33.64**	**283**	P	P	13 30 08.2	+8.6
MPSI	**Mapaga**	**36.79**	**284**	P	P	13 30 18.8	-7.9
KLR	**Kul'dur**	**62.20**	**343**	P	**P**	**13 33 41.6**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=161,slow=3.7,SNR=3.4						
CMAR	**Chiang Mai Arr**	**62.37**	**297**	P	**P**	**13 33 42.6**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=120,slow=4.9,SNR=5.4						
HHC	**Hu-ho-hao-te**	**64.49**	**324**	*e*P	P	13 33 50.4	-5.0
HHC				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC				pmax	pmax		
	comp=Z,93nm,4.9s						
LZH	**Lanzhou**	**66.53**	**316**	*e*P	P	13 33 59.5	-9.2
LZH				pP	pP	13 34 06.8	-10
LZH				sP	sP	13 34 09.3	-10
LZH				PP	**PP**	**13 36 30.6**	**-5.0**
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,72nm,5.4s						
VNDA	**Vanda**	**67.97**	**179**	P	**P**	**13 34 18.4**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=320,slow=5.0,SNR=4.2						
GTA	**Gaotai**	**70.98**	**317**	*e*P	**P**	**13 34 38.3**	**+1.9**
GTA				pP	pP	13 34 43.9	-0.5
GTA				sP	sP	13 34 47.0	-0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**71.79**	**328**	P	**P**	**13 34 42.6**	**+1.5**
	comp=Z,2.3nm,0.8s,baz=134,slow=5.5,SNR=15						
QSPA	**South Pole Qui**	**80.38**	**180**	P	**P**	**13 35 30.4**	**+0.7**
WMQ	**Urumqi**	**81.07**	**317**	*e*P	**P**	**13 35 29.9**	**-3.8**
MAW	**Mawson**	**82.19**	**203**	P	**P**	**13 35 39.3**	**+0.2**
	comp=Z,1.5nm,0.9s,baz=111,slow=8.6,SNR=2.3						
ILAR	**Eielson Array**	**85.61**	**21**	P	**P**	**13 35 56.4**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=264,slow=5.0,SNR=12						
MKAR	**Makanchi Array**	**85.69**	**319**	P	**P**	**13 35 57.9**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=102,slow=5.2,SNR=6.5						
MKAR	**Makanchi Array**	**85.69**	**319**	P	**P**	**13 35 57.8**	**+0.4**
ZALV	**Zalesovo Beam**	**86.61**	**326**	P	**P**	**13 36 01.2**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=104,slow=6.1,SNR=6.7						
ZALV	**Zalesovo Beam**	**86.61**	**326**	P	**P**	**13 36 01.0**	**-0.7**
NVAR	**Mina Array Bea**	**92.94**	**52**	P	**P**	**13 36 33.9**	**+1.8**
	comp=Z,1.9nm,0.9s,baz=249,slow=7.1,SNR=10						
ESDC	**Sonseca Array**	**144.90**	**332**	PKP	**PKPdf**	**13 42 55.6**	**-0.3**
	comp=Z,1.6nm,1.0s,baz=19,slow=3.0,SNR=6.4						
ESDC	**Sonseca Array**	**144.90**	**332**		**PKPab**	**13 42 55.0**	**0.0**
BDFB	**Brasilia**	**145.77**	**137**	PKPbc	**PKPab**	**13 42 59.6**	**+0.7**
	comp=Z,4.3nm,0.7s,baz=85,slow=2.5,SNR=6.1						
TORD	**Torodi Ar. Bea**	**154.08**	**280**	PKPbc	**PKiKP**	**13 43 19.7**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=92,slow=2.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**154.08**	**280**		**PKPbc**	**13 43 17.6**	**-1.6**

IDC ***17*** *13:27:14.8±0.5, 9°.76S×155°.16E, h0km, mb5.0/29, mb1 5.1/33, mb1mx5.0/44, mbtmp5.0/33, ML4.3/4, MS4.7/21, Ms1 4.7/21, ms1mx4.4/40, Error ellipse: s-maj=15.1km s-min=11.5km az=97.0*

MOS ***17*** *13:27:14.9±1.0, 9°.79S×155°.15E, h13km, mb5.6/62, Error ellipse: s-maj=6.9km s-min=5.8km az=117.3*

NEIC ***17*** *13:27:17.4±1.9, 9°.78S±0°.07×155°.14E±0°.07, h20km±2km, mb5.5/174, Mwc5.3(GCMT), Error ellipse: s-maj=10.6km s-min=9.4km az=204.0*

BJI ***17*** *13:27:17.0±0.0, 9°.28S×154°.97E, h10km, mB5.5/48, mb5.0/64, Ms5.7/50, Ms7 5.4/50*

GCMT ***17*** *13:27:18.4±0.1, 9°.77S±0°.01×155°.20E±0°.01, h12km, MW5.3/121, Moment Tensor Solution. s101,c170; s121,c232; Duration: 1§1 Moment tensor: Scale 10¹⁷ Nm; Mrr=1.06±.02; Mθθ 0.56±.02; Mφφ 0.50±.02; Mrθ 0.12±.05; Mθφ 0.80±.02; Mφr=0.09±.05; Best double couple: M₀1.20700×10¹⁷ NP1:φs=36.00000°, δ45.00000°, λ=104.00000°. NP2:φs=236.00000°, δ46.00000°, λ=76.00000°. Principal axes: T 1.3280, Plg1.0000°, Azm316.0000°; N -0.2400, Plg10.0000°, Azm46.0000°; P -1.0850, Plg80.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***17*** *13:27:19, 9°.76S×155°.21E, h12km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=1.17; Mθθ 0.62; Mφφ 0.54; Mrθ 0.14; Mθφ 0.79; Mφr=0.18; Fault plane solution: M₀1.31000×10¹⁷ NP1:φs239.00000°, δ46.00000°, λ=72.00000°. NP2:φs=34.00000°, δ47.00000°, λ=108.00000°. Principal axes: T 1.3796, Plg1.0000°, Azm136.0000°; N -0.1572, Plg13.0000°, Azm46.0000°; P -1.2224, Plg77.0000°, Azm229.0000°;*

DJA ***17*** *13:27:19.6±0.9, 10°.S±2°×15°.5E±°, h25km±7km, M5.2/85, mb5.2/85, mB5.7/56, MLv5.0/3, Mw(mB)5.2/56, Mwp5.4/11*

ISC 17 13:27:17.0±0.5, 9°.83S±0°.04×155°.21E±0°.05, h18km±2km, h18km:pP-P, n759, σ1§36/762, mb5.4/219, MS4.9/35, 11C-12D, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.68**	**86**	Pn	**Pn**	**13 28 28.9**	**+2.0**
	5.1nm,0.3s,baz=207,slow=5.7,SNR=3.8						
HNR					LR	LR	13 29 58.3
	comp=Z,7µm,21.3s,baz=262,slow=34						
HNR	**Honiara**	**4.68**	**86**	P	**Pn**	**13 28 26.1**	**-0.8**
HNR	**Honiara**	**4.68**	**86**		**Pn**	**13 28 26.1**	**-0.8**
KRVT	**Keravat (AS076**	**6.34**	**330**	Pn	**Pn**	**13 28 48.2**	**-1.4**
	30nm,0.3s,baz=3.7,slow=2.7,SNR=46						
KRVT					LR	LR	13 31 06.8
	comp=Z,10µm,20.4s,baz=119,slow=37						
RABL	**Rabaul**	**6.37**	**331**	Pn	**Pn**	**13 28 46.7**	**-3.4**
PMG	**Port Moresby**	**7.95**	**272**	Pn	**Pn**	**13 29 14.5**	**+2.6**
	1.9nm,0.3s,baz=86,slow=5.2,SNR=16						
PMG					LR	LR	13 32 20.3
	comp=Z,15µm,19.9s,baz=106,slow=39						
PMG	**Port Moresby**	**7.95**	**272**	*i* P	**Pn**	**13 29 13.7**	**+1.8**
PMG	**Port Moresby**	**7.95**	**272**		**Pn**	**13 29 12.1**	**+0.2**
MANU	**Manus Island**	**10.99**	**314**	Pn	**Pn**	**13 29 51.7**	**-1.8**
COEN	**Coen**	**12.47**	**250**	P	**Pn**	**13 30 13.3**	**-0.5**
	baz=12,SNR=5.9						
COEN	**Coen**	**12.47**	**250**	Pn	**Pn**	**13 30 13.0**	**-0.8**
SANVU	**Saraoutou**	**12.96**	**117**	Pn	**Pn**	**13 30 20.1**	**-0.4**
CTA	**Charters Tower**	**13.37**	**219**	Pn	**Pn**	**13 30 26.4**	**+0.4**
	0.5nm,0.3s,baz=46,slow=14,SNR=13						
CTAO	**Charters Tower**	**13.37**	**219**	P	**Pn**	**13 30 25.4**	**-0.7**
CTAO	**Charters Tower**	**13.37**	**219**	Pn	**Pn**	**13 30 25.4**	**-0.7**
MTSU	**Mount Surprise**	**13.41**	**231**	P	**Pn**	**13 30 27.9**	**+1.3**
	baz=14,SNR=13						
EIDS	**Eidsvold**	**15.94**	**194**	P	**Pn**	**13 31 02.0**	**+1.4**
	baz=16,SNR=14						
EIDS	**Eidsvold**	**15.94**	**194**	Pn	**Pn**	**13 31 01.3**	**+0.7**
DZM	**Mont Dzumac**	**16.25**	**140**	Pn	**P**	**13 31 08.2**	**+0.5**
	2.2nm,0.3s,baz=339,slow=13,SNR=60						
DZM					LR	LR	13 36 25.0
	comp=Z,11µm,21.7s,baz=302,slow=34						
DZM	**Mont Dzumac**	**16.25**	**140**	*e*Pn	**Pn**	**13 30 59.1**	**-5.6**
	522nm,1.1s						
DZM				*e*LR	LR	13 34 54.2	
	comp=Z,19µm,24.6s						
DZM	**Mont Dzumac**	**16.25**	**140**	Pn	**P**	**13 31 06.8**	**-0.9**
GENI	**Genyem**	**16.59**	**295**	P	**Pn**	**13 31 06.2**	**-2.7**
	4µm5µm175nm,1.8s						
PATS	**Pohnpei**	**16.84**	**11**	P	**P**	**13 31 14.2**	**+0.1**
	baz=17,SNR=4.3						
PATS	**Pohnpei**	**16.84**	**11**	Pn	**Pn**	**13 31 09.9**	**-2.2**
PATS					IAmb	IAmb	13 31 16.3
	comp=Z,489nm,1.4s						
RMQ	**Roma**	**17.66**	**199**	P	**P**	**13 31 23.6**	**+0.5**
	baz=18,SNR=204						
SMPI	**Sarmi**	**18.16**	**294**	P	**P**	**13 31 28.6**	**-0.1**
	comp=Z,3µmcomp=Z,3µmcomp=Z,178nm,2.0s						
QIS	**Mount Isa**	**18.44**	**233**	P	**Pn**	**13 31 34.2**	**+2.4**
	baz=18,SNR=24						
QLP	**Quilpie**	**19.63**	**211**	P	**Pn**	**13 31 47.4**	**+1.2**
	baz=20,SNR=28						
SRPI	**Serui, Papua**	**20.45**	**292**	P	Pn	13 31 55.9	-0.1
	comp=Z,5µmcomp=Z,8µmcomp=Z,314nm,1.3s						
ARMA	**Armidale**	**20.75**	**189**	P	Pn	13 31 59.9	+0.4
	baz=21,SNR=9.0						
ARMA	**Armidale**	**20.75**	**189**	P	**P**	**13 31 57.5**	**+0.4**
TARA	**Tarawa**	**20.84**	**59**	P	**P**	**13 31 58.5**	**+0.4**
TARA					IAmb	IAmb	13 32 07.2
	comp=Z,348nm,1.4s						
BAKI	**Biak**	**20.85**	**293**	P	**P**	**13 31 58.9**	**+0.8**
	comp=Z,4µmcomp=Z,235nm,1.9s						
WR0	**Warramunga Arr**	**22.35**	**241**	P	**P**	**13 32 12.8**	**-1.4**
WB0	**Warramunga Arr**	**22.40**	**241**	P	**P**	**13 32 14.7**	**-0.1**
WB0					IAmb	IAmb	13 32 24.8
	comp=Z,195nm,1.1s						
KDU	**Kakadu**	**22.48**	**261**	P	**P**	**13 32 15.2**	**-0.4**
	baz=22,SNR=11						
WC3	**Warramunga Arr**	**22.49**	**241**	P	**P**	**13 32 15.2**	**-0.6**
WC3					IAmb	IAmb	13 32 25.7
	comp=Z,128nm,0.9s						
WRAB	**Tennant Creek**	**22.50**	**241**	*i* P	**P**	**13 32 16.0**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,111nm,0.9s						
WRAB	**Tennant Creek**	**22.50**	**241**	P	**P**	**13 32 16.0**	**+0.1**
WRAB					IAmb	IAmb	13 32 25.7
	comp=Z,122nm,0.9s						
WB2	**Warramunga Arr**	**22.50**	**241**	P	**P**	**13 32 15.9**	**0.0**
WB2					IAmb	IAmb	13 32 25.8
	comp=Z,126nm,0.9s						
WRA	**Warramunga Arr**	**22.51**	**241**	P	**P**	**13 32 16.5**	**+0.5**
	comp=Z,71nm,0.8s,baz=66,slow=9.6,SNR=130						
WRA				PcP	**PcP**	**13 36 10.3**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=61,slow=1.5,SNR=5.5						
WRA				LR	LR	13 40 35.1	
	comp=Z,841nm,20.4s,baz=55,slow=36						
WRA	**Warramunga Arr**	**22.51**	**241**	*i* P	**P**	**13 32 16.2**	**+0.2**
WRA				pmax	pmax		
	comp=Z,71nm,0.8s						
WRA	**Warramunga Arr**	**22.51**	**241**	P	**P**	**13 32 14.5**	**-1.6**
CMSA	**Cobar Meteorol**	**23.34**	**201**	P	**P**	**13 32 24.3**	**-0.1**
	baz=24,SNR=61						
MSVF	**Nonsavu**	**23.51**	**112**	*i* P	**P**	**13 32 28.0**	**+1.7**
MSVF				pmax	pmax		
	comp=Z,43nm,1.1s						
MSVF	**Nonsavu**	**23.51**	**112**	P	**P**	**13 32 26.0**	**-0.3**
MSVF					IAmb	IAmb	13 32 48.1
	comp=Z,152nm,1.4s						
MGCD	**Mangrove Creek**	**23.57**	**189**	P	**P**	**13 32 29.5**	**+2.8**
	baz=24,SNR=5.9						
MTN	**Manton Dam**	**23.80**	**260**	P	**P**	**13 32 29.3**	**+0.2**
	baz=24,SNR=5.5						
MTN	**Manton Dam**	**23.80**	**260**	P	**P**	**13 32 27.9**	**-1.2**
FAKI	**Fak Fak**	**23.82**	**285**	P	**P**	**13 32 30.0**	**+0.7**
	comp=Z,4µmcomp=Z,132nm,1.2s						
FAKI	**Fak Fak**	**23.82**	**285**	P	**P**	**13 32 27.8**	**-1.5**
FAKI					IAmb	IAmb	13 32 39.5
	comp=Z,161nm,1.2s						
AS31	**Alice Springs**	**24.56**	**233**	P	**P**	**13 32 36.0**	**-0.1**
ASAR	**Alice Springs**	**24.56**	**233**	P	**P**	**13 32 36.6**	**+0.5**
	comp=Z,101nm,0.8s,baz=62,slow=7.3,SNR=189						
ASAR	**Alice Springs**	**24.56**	**233**	P	**P**	**13 32 35.4**	**-0.7**
ASAR	**Alice Springs**	**24.56**	**233**	P	**P**	**13 32 35.4**	**-0.7**
YNG	**Young**	**25.14**	**193**	P	**P**	**13 32 43.1**	**+1.8**
	baz=25,SNR=10						
STKA	**Stephens Creek**	**25.31**	**208**	P	**P**	**13 32 43.6**	**+0.9**
	comp=Z,37nm,0.8s,baz=18,slow=9.5,SNR=51						
STKA				LR	LR	13 42 44.1	
	comp=Z,2µm,19.3s,baz=24,slow=37						
STKA	**Stephens Creek**	**25.31**	**208**	P	**P**	**13 32 43.8**	**+1.0**
	baz=26,SNR=39						
STKA	**Stephens Creek**	**25.31**	**208**	P	**P**	**13 32 43.0**	**+0.2**
STKA				pmax	pmax		
	comp=Z,21nm,1.0s						
STKA	**Stephens Creek**	**25.31**	**208**	P	**P**	**13 32 43.0**	**+0.2**
SIJI	**Sorong**	**25.43**	**289**	P	**P**	**13 32 43.8**	**-0.2**
	comp=Z,8.6nm,0.9s,baz=88,slow=6.9,SNR=10						
SIJI				LR	LR	13 43 49.6	
	comp=Z,1µm,20.8s,baz=120,slow=39						
GUMO	**Guam**	**25.43**	**336**	P	**P**	**13 32 44.2**	**+0.2**
	comp=Z,191nm,1.0s,baz=164,slow=6.3,SNR=7.1						
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WBSI Waikabubak, Su 35.30 267 P **P** **13 34 14.9 +3.5**
comp=Z,62nm,0.9s
KAPI Kappang 35.47 275 P **P** **13 34 13.2 +0.3**
comp=Z,54nm,1.2s,baz=102,slow=10,SNR=4.8
KAPI Kappang 35.47 275 P **P** **13 34 13.1 +0.2**
KAPI pmax pmax
comp=Z,131nm,1.3s
KAPI Kappang 35.47 275 P **P** **13 34 13.1 +0.2**
TUWZ Tuamarina 35.54 155 P **P** **13 34 14.5 +1.4**
SPSI Sidrap Palu 35.65 277 P **P** **13 34 17.3 +2.9**
comp=Z,558nmcomp=Z,30nm,1.2s
TTSI Tana Toraja 35.79 278 P **P** **13 34 16.1 +0.5**
comp=Z,3µmcomp=Z,26nm,1.3s
PSAD2 Pilbara Seismi 35.81 247 P **P** **13 34 14.5 -1.3**
PSAD2 IAmb IAmb 13 34 18.1
comp=Z,70nm,1.4s
PSAC2 Pilbara Seismi 35.85 247 P **P** **13 34 14.0 -2.1**
PSAB2 Pilbara Seismi 35.88 247 P **P** **13 34 14.6 -1.8**
PSAB2 IAmb IAmb 13 34 24.1
comp=Z,52nm,1.1s
PSA00 Pilbara Seismi 35.90 247 P **P** **13 34 15.8 -0.7**
PSA00 IAmb IAmb 13 34 19.0
comp=Z,63nm,1.3s
PSA00 Pilbara Seismi 35.90 247 P **P** **13 34 15.8 -0.7**
RPZ Rata Peaks 36.46 161 LR LR 13 47 48.3
comp=Z,2µm,18.7s,baz=323,slow=34
MPSI Mapaga 36.57 284 P **P** **13 34 21.7 -0.6**
comp=Z,564nmcomp=Z,32nm,1.8s
PLAI Plampang 36.94 268 P **P** **13 34 23.9 -1.6**
comp=Z,1µmcomp=Z,93nm,1.1s
KMBL Kambalda 37.61 230 P **P** **13 34 31.2 +0.2**
baz=38,SNR=10
TWSI Taliwang, Sumb 37.83 268 P **P** **13 34 31.6 -1.4**
comp=Z,367nmcomp=Z,27nm,1.3s
MEEK Meekatharra 38.39 239 P **P** **13 34 37.7 +0.1**
baz=38,SNR=8.1
KBKI Kotabaru 39.30 277 P P 13 34 53.2 +7.8
MYLDM Lahad Datu 39.50 291 P **P** **13 34 47.1 +0.1**
SRBI Singaraja 39.54 269 P P 13 35 03.2 +16
JAGI Jajag, Banyuwa 40.55 268 P **P** **13 34 54.5 -1.2**
comp=Z,99nm,1.0s
JAGI Jajag, Banyuwa 40.55 268 P **P** **13 34 53.5 -2.2**
JAGI IAmb IAmb 13 35 02.0
comp=Z,77nm,1.0s
BBKI Banjar Baru 40.57 276 P **P** **13 34 56.4 +0.5**
comp=Z,1µmcomp=Z,46nm,1.5s
KLBR Kellerberrin 40.89 232 P **P** **13 34 58.3 0.0**
baz=41,SNR=12
MORW Morawa 41.34 237 P **P** **13 35 02.7 +0.6**
baz=41,SNR=5.7
MORW Morawa 41.34 237 P **P** **13 35 01.0 -1.1**
TGY Tagaytay City 41.49 304 P **P** **13 35 03.6 +0.1**
comp=Z,50nm,0.3s,baz=149,slow=5.9,SNR=4.8
NWAO Narrogin (SRO) 41.83 231 LR LR 13 53 28.7
comp=Z,790nm,18.8s,baz=78,slow=38
NWAO Narrogin (SRO) 41.83 231 P **P** **13 35 06.5 +0.4**
baz=42,SNR=5.6
NWAO Narrogin (SRO) 41.83 231 P **P** **13 35 05.7 -0.4**
NWAO pmax pmax
comp=Z,53nm,1.0s
NWAO Narrogin (SRO) 41.83 231 P **P** **13 35 05.7 -0.4**
NWAO Narrogin (SRO) 41.83 231 P **P** **13 35 06.2 0.0**
NWAO IAmb IAmb 13 35 13.7
comp=Z,42nm,0.9s
KKM Kota Kinabalu 41.93 291 P **P** **13 35 06.4 -0.9**
RKGY Rocky Gully 42.74 229 P **P** **13 35 13.6 +0.1**
baz=43,SNR=4.4
PWJI Pagerwojo 42.90 269 P **P** **13 35 16.0 +1.0**
comp=Z,1µmcomp=Z,42nm,2.0s
WOJI Wonogiri, Jawa 43.79 269 P **P** **13 35 22.1 -0.1**
comp=Z,62nm,1.4s
PBKI Pangkalan Bun 43.82 276 P **P** **13 35 23.1 +0.6**
comp=Z,5µmcomp=Z,108nm,0.8s
SMRI Semarang 44.35 270 P **P** **13 35 25.9 -0.9**
YOGI Yogyakarta 44.41 269 P **P** **13 35 28.2 +1.0**
comp=Z,127nm,0.9s
SBUM Sibu 44.52 284 P **P** **13 35 27.7 -0.4**
SBUM Sibu 44.52 284 P **P** **13 35 30.0 +1.9**
RAR Rarotonga 44.68 110 LR LR 13 50 37.7
comp=Z,390nm,20.7s,baz=190,slow=31
KPJI Karang Pucung 45.81 269 P **P** **13 35 39.2 +0.9**
comp=Z,51nm,1.2s
KSM Kuching 46.10 282 P **P** **13 35 38.1 -2.5**
KSM IAmb IAmb 13 35 53.8
comp=Z,47nm,1.3s
KSM Kuching 46.10 282 P **P** **13 35 41.0 +0.4**
JCJI Jatiwangi 46.56 270 P P 13 35 51.7 +7.5
CISI Cisompet, Garu 46.88 269 P **P** **13 35 45.9 -0.9**
comp=Z,2µmcomp=Z,167nm,1.7s
CISI Cisompet, Garu 46.88 269 P **P** **13 35 44.4 -2.4**
LEM Lembang 47.16 270 P **P** **13 35 49.4 +0.2**
comp=Z,55nm,0.9s,baz=80,slow=9.1,SNR=15
LEM LR LR 13 59 27.9
comp=Z,409nm,19.4s,baz=94,slow=41
LEM Lembang 47.16 270 P **P** **13 35 49.1 0.0**
comp=Z,1µmcomp=Z,67nm,1.8s
TPI Tanjungpandan 47.75 275 P **P** **13 35 54.5 +1.0**
comp=Z,594nmcomp=Z,30nm,1.3s
JMN Monobe 47.84 336 P **P** **13 35 54.0 +0.1**
JYT Yasato 47.95 344 P **P** **13 35 53.7 -0.9**
CBJI Citeko 47.97 270 P **P** **13 35 55.5 +0.3**
comp=Z,131nm,1.4s
INU Inuyama 48.12 340 P **P** **13 35 55.6 -0.4**
SKJI Sukabumi 48.18 269 P P 13 36 07.1 +10
JGF Kuroka 48.23 340 P **P** **13 35 53.7 -3.2**
JNU Nakatsue 48.60 333 P **P** **13 35 59.5 -0.3**
comp=Z,19nm,1.0s,baz=58,slow=11,SNR=4.6
JNU Nakatsue 48.60 333 P **P** **13 35 57.6 -2.2**
JWT Wachi 48.62 338 P **P** **13 35 59.8 0.0**
JWT IAmb IAmb 13 36 07.6
comp=Z,94nm,1.3s
MJAR Matsushiro Arr 48.82 342 P **P** **13 36 00.6 -0.8**
comp=Z,13nm,0.8s,baz=166,slow=7.6,SNR=33
MJAR LR LR 13 54 41.9
comp=Z,418nm,21.5s,baz=180,slow=34
MJAR Matsushiro Arr 48.82 342 P **P** **13 36 00.1 -1.3**
MJAR pmax pmax
comp=Z,8.0nm,0.7s
MJAR Matsushiro Arr 48.82 342 P **P** **13 36 00.1 -1.3**
MAJO Matsushiro 48.83 342 P **P** **13 35 59.9 -1.5**
MAJO pmax pmax
comp=Z,30nm,1.1s
MAJO Matsushiro 48.83 342 P **P** **13 35 59.9 -1.5**
MAT Matsushiro 48.83 342 P **P** **13 36 00.3 -1.1**
MAT S **S** **13 43 03.4 -0.6**
PPBI Pangkal Pinang 49.35 276 P **P** **13 36 06.2 +0.3**
comp=Z,4µmcomp=Z,30nm,1.1s
KLSI 50.30 272 P **P** **13 36 16.0 +2.9**
comp=Z,5.9nm,1.6s
KASI Kota Agung 50.41 271 P **P** **13 36 15.0 +1.1**
comp=Z,59nm,1.2s
MDSI Maura Dua 50.87 272 P **P** **13 36 15.7 -1.7**
comp=Z,480nmcomp=Z,36nm,1.3s
LWLI Liwa 50.91 272 P P 13 36 24.5 +6.6
LHSI Lahat 51.62 273 P P 13 36 29.2 +6.1
comp=Z,33nm,1.5s
JTM Tenmabayashi 52.03 346 P **P** **13 36 24.8 -0.8**
JTM IAmb IAmb 13 36 33.4
comp=Z,73nm,1.0s
MYKOM Kota Tinggi 52.43 280 P **P** **13 36 29.0 -0.1**
RGRI Rengat 53.43 277 P **P** **13 36 35.1 -1.4**
comp=Z,51µmcomp=Z,344nm,0.5s
KSRS Korea Array 53.54 333 P **P** **13 36 36.4 -0.4**
comp=Z,3.6nm,0.8s,baz=150,slow=7.6,SNR=12
KS19 Wonju Array Si 53.61 333 P **P** **13 36 36.8 -0.5**
JEW Eniwo 53.91 347 P **P** **13 36 39.3 0.0**
PPT2 Papeete2 54.03 105 *e*S **S** **13 44 15.0 -1.7**
comp=Z,671nm,27.8s
PPT2 *e*LQ LQ 13 50 04.9
comp=Z,1µm,29.5s
PPT2 *e*LR LR 13 52 27.0
comp=Z,2µm,29.2s,baz=276
PPT Papeete 54.03 105 LR LR 13 54 46.2
comp=Z,442nm,20.8s,baz=273,slow=30
SDSI Sungai Dareh 54.20 276 P **P** **13 36 41.9 -0.2**
comp=Z,837nmcomp=Z,46nm,1.4s
NJ2 Nanjing 54.24 322 *e*P **P** **13 36 43.8 +1.7**
NJ2 pP **pP** **13 36 46.0 -0.7**
NJ2 sP **pwP** **13 36 50.4 -0.6**
NJ2 S **S** **13 44 20.4 +1.5**
NJ2 pmax pmax
comp=Z,12nm,0.6s
NJ2 LR LR
comp=Z,3µm,10.6s
NJ2 LR LR
comp=Z,2µm,9.7s
NJ2 LR LR
comp=Z,3µm,10.5s
TBI Tubuai 54.40 112 *e*S **S** **13 44 19.5 -1.8**
comp=Z,821nm,29.8s
TBI *e*LQ LQ 13 50 15.6
comp=Z,606nm,29.8s
TBI *e*LR LR 13 52 35.2
comp=Z,2µm,31.5s,baz=272
BKNI Bangkinang 54.84 277 P **P** **13 36 46.0 -0.8**
BKNI IAmb IAmb 13 36 54.5
comp=Z,80nm,1.1s
JKA Kamikawa-asahi 54.90 349 P **P** **13 36 46.9 +0.3**
JKA IAmb IAmb 13 36 49.7
comp=Z,115nm,1.5s
ASAJ Asahikawa 54.90 349 P **P** **13 36 47.0 +0.3**
comp=Z,36nm,1.1s,baz=206,slow=7.9,SNR=18
ASAJ LR LR 14 00 37.1
comp=Z,142nm,18.4s,baz=191,slow=36
ASAJ Asahikawa 54.90 349 P **P** **13 36 46.9 +0.3**
ASAJ pmax pmax
comp=Z,115nm,1.5s
IPM Ipoh 55.82 282 P **P** **13 36 52.0 -1.9**
IPM IAmb IAmb 13 37 01.5
comp=Z,55nm,1.0s
IPM Ipoh 55.82 282 P **P** **13 36 54.0 +0.1**
WHN Wuhan 56.14 317 ⇓P **P** **13 36 54.3 -1.4**
WHN LR LR
comp=Z,9µm,11.0s
WHN LR LR
comp=Z,4µm,10.8s
WHN LR LR
comp=Z,11µm,11.7s
MNSI Mandailing Nat 56.37 278 P **P** **13 36 57.3 -0.4**
comp=Z,47nm,1.0s
KULM Kulim 56.40 283 P **P** **13 36 56.9 -1.1**
KULM IAmb IAmb 13 37 05.4
comp=Z,37nm,1.0s
KULM Kulim 56.40 283 P **P** **13 36 58.0 +0.1**
TEY Ternei 57.14 344 *e*P **P** **13 37 02.9 +0.3**
RPSI Rantau Prapat 57.42 280 P **P** **13 37 01.1 -4.2**
RPSI IAmb IAmb 13 37 17.6
comp=Z,102nm,1.5s
PSI Prapat 57.45 280 P **P** **13 37 01.1 -4.5**
PSI pmax pmax
comp=Z,102nm,1.5s
YSS Yuzh-Sakhalins 57.62 350⇑ *e*P **P** **13 37 06.2 +0.3**
YSS *e* 13 37 13.3
YSS *e* 13 39 11.7
YSS *e*S **S** **13 44 59.7 -3.5**
YSS pmax pmax
comp=Z,50nm,1.1s
YSS pmax pmax
comp=Z,400nm,4.0s
YSS smax smax
comp=N,200nm,13.0s
YSS smax smax
comp=E,100nm,11.0s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS MLR MLR
comp=N,300nm,13.0s
YSS MLR MLR
comp=E,300nm,12.0s
YSS Yuzh-Sakhalins 57.62 350 P **P** **13 37 04.5 -1.4**
YSS IAmb IAmb 13 37 14.3
comp=Z,71nm,1.1s
DL2 Dalian 57.69 329 P **P** **13 37 09.4 +2.8**
DL2 pmax pmax
comp=Z,28nm,1.0s
DL2 pmax pmax
comp=Z,370nm,5.5s
DL2 LR LR
comp=Z,760nm,26.2s
DL2 LR LR
comp=Z,910nm,24.3s
DL2 LR LR
comp=Z,1µm,22.6s
USA0B Ussuriysk Arra 57.76 340 *i* P **P** **13 37 07.5 +0.5**
USA0B Ussuriysk Arra 57.76 340 P **P** **13 37 06.7 -0.2**
USA0B IAmb IAmb 13 37 15.3
comp=Z,73nm,1.3s
USRK Ussuriysk Ar. 57.76 340 P **P** **13 37 07.3 +0.3**
comp=Z,21nm,1.0s,baz=151,slow=6.2,SNR=19
USRK Ussuriysk Ar. 57.76 340 P **P** **13 37 06.2 -0.8**
USRK Ussuriysk Ar. 57.76 340 P **P** **13 37 06.2 -0.8**
TSI Tuntungan 57.96 280 P P 13 37 16.2 +7.2
GSI Gunungsitoli 58.43 278 P **P** **13 37 13.2 +0.9**
comp=Z,78nm,1.7s
GSI Gunungsitoli 58.43 278 P **P** **13 37 11.3 -1.0**
MDJ Mudanjiang 58.95 339 P **P** **13 37 15.3 0.0**
MDJ pP sP 13 37 22.1 +0.5
MDJ ScP **ScP** **13 42 01.0 -3.3**
MDJ PcS **PcS** **13 42 03.3 -2.7**
MDJ ScS **ScS** **13 47 06.0 +1.5**
MDJ pmax pmax
comp=Z,22nm,1.3s
MDJ pmax pmax
comp=Z,200nm,4.6s
MDJ LR LR
comp=Z,900nm,11.1s
MDJ LR LR
comp=Z,510nm,10.5s
MDJ LR LR
comp=Z,1µm,10.5s
MDJ Mudanjiang 58.95 339 P **P** **13 37 14.9 -0.4**
SLVN Son La 59.14 302 P **P** **13 37 17.4 +0.3**
TPTI 59.25 280 P **P** **13 37 16.5 -1.5**
comp=Z,446nmcomp=Z,20nm,1.4s
ENH Enshi 59.33 314 P **P** **13 37 17.0 -1.3**
ENH IAmb IAmb 13 37 25.6
comp=Z,47nm,1.1s
GYA Guiyang 59.36 309 ⇓P **P** **13 37 18.8 +0.1**
GYA pmax pmax
comp=Z,9.0nm,0.6s
GYA LR LR
comp=Z,2µm,11.4s
GYA LR LR
comp=Z,3µm,11.6s
GYA LR LR
comp=Z,4µm,11.5s
CN2 Changchun 59.84 335 *e*P **P** **13 37 20.6 -0.9**
BJI Beijing 61.38 327 P **P** **13 37 32.6 +0.5**
BJI pmax pmax
comp=Z,5.0nm,0.9s
TYV Tymovskoe 61.42 351 *e*P **P** **13 37 33.4 +1.3**
TYV pmax pmax
comp=Z,200nm,2.4s
TYV pmax pmax
comp=Z,34nm,1.4s
LAMP Lampang 61.64 297 P **P** **13 37 35.8 +1.5**
comp=Z,458nmcomp=Z,34nm,0.9s
KMI Kunming 61.80 305⇑ *e*P **P** **13 37 36.6 +1.1**
KMI pP pwP 13 37 43.3 -1.3
KMI PP **PP** **13 39 55.4 +3.6**
KMI S **S** **13 45 58.4 -0.1**
KMI sS sS 13 46 09.8 +3.6
KMI pmax pmax
comp=Z,30nm,1.3s
KMI pmax pmax
comp=Z,200nm,5.2s
KMI LR LR
comp=Z,970nm,9.5s
KMI LR LR
comp=Z,1µm,9.2s
KMI LR LR
comp=Z,1µm,9.8s
KMI Kunming 61.80 305 P **P** **13 37 35.3 -0.2**
KMI pmax pmax
comp=Z,52nm,1.3s
KMI Kunming 61.80 305 P **P** **13 37 35.3 -0.2**
KMI IAmb IAmb 13 37 38.8
comp=Z,52nm,1.3s
XAN Xi'an 61.91 317 P **P** **13 37 34.6 -1.2**
XAN pmax pmax
comp=Z,18nm,1.7s
XAN LR LR
comp=Z,2µm,10.6s
XAN LR LR
comp=Z,890nm,20.6s
XAN LR LR
comp=Z,3µm,16.1s
XAN Xi'an 61.91 317 P **P** **13 37 34.0 -1.8**
XAN pmax pmax
comp=Z,26nm,1.2s
XAN Xi'an 61.91 317 P **P** **13 37 34.0 -1.8**
CM35 Chiang Mai Arr 62.12 297 P **P** **13 37 37.0 -0.5**
CM04 Chiang Mai Arr 62.17 297 P **P** **13 37 38.9 +1.1**
comp=Z,197nmcomp=Z,18nm,0.9s
CM09 Chiang Mai Arr 62.18 297 P **P** **13 37 39.1 +1.2**
comp=Z,231nmcomp=Z,20nm,1.2s
CM01 Chiang Mai Arr 62.20 297 P **P** **13 37 39.0 +1.0**
comp=Z,791nmcomp=Z,18nm,0.9s
CM05 Chiang Mai Arr 62.20 297 P **P** **13 37 39.0 +1.0**
comp=Z,156nmcomp=Z,14nm,0.9s
CM02 Chiang Mai Arr 62.21 297 P **P** **13 37 39.0 +0.9**
comp=Z,210nmcomp=Z,17nm,1.0s
CM31 Chiang Mai Arr 62.22 297 P **P** **13 37 39.3 +1.1**
comp=Z,6µmcomp=Z,414nm,0.8s
CM31 Chiang Mai Arr 62.22 297 P **P** **13 37 38.3 +0.1**
CM31 IAmb IAmb 13 37 48.1
comp=Z,47nm,1.2s
CMAR Chiang Mai Arr 62.22 297 P **P** **13 37 38.9 +0.7**
comp=Z,9.0nm,0.8s,baz=126,slow=5.0,SNR=64
CMAR PcP **PcP** **13 38 19.1 +1.0**
comp=Z,4.6nm,0.9s,baz=90,slow=1.4,SNR=4.6
CMAR Chiang Mai Arr 62.22 297 P **P** **13 37 38.1 -0.1**
CM15 Chiang Mai Arr 62.24 297 P **P** **13 37 39.0 +0.7**
comp=Z,176nmcomp=Z,19nm,0.9s
CM13 Chiang Mai Arr 62.24 297 P **P** **13 37 39.4 +1.0**
comp=Z,173nmcomp=Z,18nm,1.0s
KLR Kul'dur 62.32 343 P **P** **13 37 38.9 +0.7**
comp=Z,13nm,0.8s,baz=156,slow=3.3,SNR=36
KLR Kul'dur 62.32 343 *i* P **P** **13 37 38.9 +0.7**
KLR pmax pmax
comp=Z,39nm,1.2s
CHTO Chiang Mai 62.36 297 P **P** **13 37 38.6 -0.5**
CHTO pmax pmax
comp=Z,62nm,1.5s
CHTO Chiang Mai 62.36 297 P **P** **13 37 38.6 -0.5**
CHTO IAmb IAmb 13 37 52.7
comp=Z,62nm,1.5s
GRNR Gornyy 62.52 347⇑ *i* P **P** **13 37 40.0 +0.4**
GRNR *e*S **S** **13 46 10.3 +4.0**
GRNR pmax pmax
comp=N,20nm,1.2s
GRNR pmax pmax
comp=Z,40nm,1.2s
GRNR smax smax
comp=N,1.0nm,0.6s
GRNR MLR MLR
comp=N,170nm,14.0s
GRNR MLR MLR
comp=E,120nm,14.0s
GRNR MLR MLR
comp=Z,430nm,11.0s
PET Petropavlovsk 62.68 2 *e*P P 13 37 45.7 +5.2
PET *e*S **S** **13 46 10.3 +2.3**
PET *e*SS **SS** **13 50 20.2 +7.2**
PET pmax pmax
comp=Z,100nm,14.0s
PEA0B Petropavlovsk- 62.73 2 *i* P **P** **13 37 41.8 +0.9**
PEA0B Petropavlovsk- 62.73 2 P **P** **13 37 41.2 +0.4**
PETK Petropavlovsk- 62.73 2 P **P** **13 37 41.3 +0.4**
comp=Z,17nm,1.1s,baz=134,slow=8.5,SNR=7.4
PETK Petropavlovsk- 62.73 2 P **P** **13 37 41.1 +0.2**
PETK Petropavlovsk- 62.73 2 P **P** **13 37 41.1 +0.2**
MHMT Maesarieng 63.01 296 P **P** **13 37 44.4 +1.0**
comp=Z,650nmcomp=Z,30nm,1.1s
TAOE Nuku Hiva Isla 63.70 95 *e*LR LR 13 56 53.5
comp=Z,899nm,26.7s
CD2 Chengdu 63.83 311 P **P** **13 37 48.3 -0.4**
CD2 pmax pmax
comp=Z,40nm,1.1s
NKL Nikolayevsk 63.95 350 *e*P P 13 37 42.4 -6.5
NKL *e* 13 38 30.7
NKL *e*S S 13 46 13.8 -10
NKL pmax pmax
comp=E,63nm,0.8s
NKL pmax pmax
comp=N,12nm,0.9s
NKL pmax pmax
comp=Z,42nm,1.5s
NKL pmax pmax
comp=Z,119nm,2.1s
NKL MLR MLR
comp=N,101nm,14.0s
NKL MLR MLR
comp=E,972nm,11.0s
NKL MLR MLR
comp=Z,424nm,11.0s
HHC Hu-ho-hao-te 64.51 325 *e*P **P** **13 37 52.9 -0.1**
HHC S **S** **13 46 29.8 -1.8**
HHC pmax pmax
comp=Z,16nm,0.7s
HHC pmax pmax
comp=Z,180nm,4.8s
HHC LR LR
comp=Z,830nm,13.2s
HHC LR LR
comp=Z,780nm,13.2s
HHC LR LR
comp=Z,710nm,14.7s
ADK Adak 66.06 19 P **P** **13 38 03.6 +0.9**
ADK pmax pmax
comp=Z,172nm,1.4s
ADK Adak 66.06 19 P **P** **13 38 03.6 +0.9**
LZH Lanzhou 66.49 316 ⇓P **P** **13 38 06.9 +0.8**
LZH sP sP 13 38 13.3 +0.8
LZH PP **PP** **13 40 36.8 +4.1**
LZH pmax pmax
comp=Z,31nm,1.3s
LZH pmax pmax
comp=Z,230nm,7.0s
LZH LR LR
comp=Z,2µm,13.6s
LZH LR LR
comp=Z,2µm,13.6s
LZH LR LR
comp=Z,2µm,13.9s
HIA Hailar 66.58 336 *i* P **P** **13 38 06.7 +0.6**
HIA pmax pmax
comp=Z,16nm,1.1s
HIA Hailar 66.58 336 P **P** **13 38 06.8 +0.6**
ZEA Zeya 67.63 342⇓ *e*P **P** **13 38 13.6 +1.0**
ZEA *e* 13 38 20.5
ZEA pmax pmax
comp=E,10.0nm,1.0s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA pmax pmax
comp=N,30nm,0.8s
VNDA Vanda 67.76 178 P **P** **13 38 14.3 +1.1**
comp=N,4.3nm,0.9s,baz=336,slow=7.2,SNR=30
VNDA LR LR 14 04 43.7
comp=N,292nm,18.4s,baz=5.5,slow=33
LKP Lekhapani 68.33 305 *e*P **P** **13 38 17.6 0.0**
SAIH SAIHA 68.89 299 *e*P **P** **13 38 21.3 -0.1**
SAIH IAmb IAmb 13 38 28.6
comp=Z,46nm,1.1s
MOKO MOKOCHONG 69.02 303 *e*P **P** **13 38 20.5 -1.6**
MOKO IAmb IAmb 13 38 28.8
comp=Z,35nm,1.2s
KOHI KOHIMA 69.12 302 *e*P **P** **13 38 20.5 -2.3**
KOHI IAmb IAmb 13 38 28.9
comp=Z,26nm,0.8s
MA2 Magadan 69.27 358 *i* P **P** **13 38 25.5 +2.7**
MA2 pmax pmax
comp=Z,21nm,1.1s
JORH JORHAT 69.40 303 *e*P **P** **13 38 22.7 -1.6**
SILR SILCHAR 69.87 301 *e*P **P** **13 38 27.8 +0.6**
ZIRO ZIRO 70.04 304 *e*P **P** **13 38 28.5 +0.1**
BELO BELONIA 70.48 299 *e*P **P** **13 38 32.4 +1.4**
TEZP TEZPUR 70.55 303 *e*P **P** **13 38 30.0 -1.4**
AGT Agartala 70.87 299 *e*P **P** **13 38 33.5 +0.1**
AGT IAmb IAmb 13 38 42.8
comp=Z,66nm,0.5s
SHL Shillong 70.93 301 *e*P **P** **13 38 32.9 -1.1**
SHL IAmb IAmb 13 38 41.0
comp=Z,26nm,0.7s
SHL Shillong 70.93 301 P **P** **13 38 33.6 -0.4**
SHL pmax pmax
comp=Z,119nm,1.5s
SHL Shillong 70.93 301 P **P** **13 38 33.6 -0.4**
GTA Gaotai 70.96 318⇑ P **P** **13 38 34.3 +0.5**
GTA pP pP 13 38 38.9 +0.4
GTA sP sP 13 38 41.5 +1.3
GTA S **S** **13 47 51.8 +2.8**
GTA sS sS 13 47 59.0 +2.2
GTA pmax pmax
comp=Z,19nm,1.8s
GTA pmax pmax
comp=Z,250nm,7.8s

GTA LR LR
comp=Z,600nm,19.6s
GTA LR LR
comp=Z,490nm,21.4s
GTA LR LR
comp=Z,680nm,21.1s
GUWA GUWAHATI 71.32 302 *e*P **P 13 38 35.8 -0.3**
GUWA IAmb IAmb 13 38 42.7
comp=Z,25nm,0.7s
ULN Ulaanbaatar 71.51 328 *i* P **P 13 38 37.4 +0.4**
ULN pmax pmax
comp=Z,57nm,1.7s
ULN Ulaanbaatar 71.51 328 P **P 13 38 37.3 +0.4**
SONM Songino Array 71.83 328 P **P 13 38 39.4 +0.5**
comp=Z,8.5nm,0.8s,baz=139,slow=5.8,SNR=52
SONM Songino Array 71.83 328 P **P 13 38 38.8 -0.1**
SONM pmax pmax
comp=Z,17nm,1.0s
SONM Songino Array 71.83 328 P **P 13 38 38.8 -0.1**
SEY Seymchan 72.58 359 *i* P **P 13 38 44.0 +1.2**
DHUB DHUBRI 72.68 301⇑ *e*P **P 13 38 43.1 -1.2**
DHUB IAmb IAmb 13 38 46.2
comp=Z,26nm,0.9s
LSA Lhasa 73.06 305 P **P 13 38 47.6 +0.6**
LSA pmax pmax
comp=Z,89nm,1.4s
LSA LR LR
comp=Z,2μm,10.7s
LSA LR LR
comp=Z,2μm,11.4s
LSA LR LR
comp=Z,3μm,10.0s
LSA Lhasa 73.06 305 P **P 13 38 47.0 0.0**
LSA pmax pmax
comp=Z,43nm,1.3s
LSA Lhasa 73.06 305 P **P 13 38 47.0 0.0**
LSA IAmb IAmb 13 38 54.8
comp=Z,43nm,1.3s
GTK Tadong 74.30 302 *e*P **P 13 38 53.2 -0.7**
GTK IAmb IAmb 13 39 01.7
comp=Z,46nm,1.1s
YAK Yakutsk 74.36 348 P **P 13 38 53.7 +0.4**
comp=Z,26nm,0.8s,baz=271,slow=0.9,SNR=6.5
YAK Yakutsk 74.36 348*d* iP **P 13 38 53.7 +0.4**
YAK pmax pmax
comp=Z,82nm,1.0s
YAK Yakutsk 74.36 348 P **P 13 38 53.5 +0.2**
YAK IAmb IAmb 13 38 56.1
comp=Z,65nm,0.9s
ZAK Zakamensk 75.01 329 *e*P **P 13 38 56.8 -0.7**
ZAK pmax pmax
comp=Z,27nm,1.4s
TAPN Taplejung 75.06 302 *e*P **P 13 38 58.3 -0.2**
comp=Z,319nm,1.7s
ODAN Odare 75.16 301 *e*P **P 13 38 59.2 +0.1**
comp=Z,126nm,1.1s
BOD Bodaibo 75.32 339 *e*P **P 13 38 57.9 -1.1**
BOD pmax pmax
comp=Z,43nm,1.4s
BOK Bokaro 75.49 298 *e*P **P 13 39 01.4 +0.7**
BOK IAmb IAmb 13 39 09.0
comp=Z,23nm,0.9s
TLY Talaya 75.60 330 P **P 13 39 01.4 +0.6**
comp=Z,3.1nm,0.7s,baz=188,slow=4.2,SNR=10
TLY Talaya 75.60 330*d* iP **P 13 39 01.4 +0.6**
TLY pmax pmax
comp=Z,75nm,1.6s
TLY Talaya 75.60 330 P **P 13 39 01.1 +0.3**
CHLP Challavanipeta 75.61 292 *e*P **P 13 39 02.1 +0.7**
CHLP IVmB_BB 13 39 09.6
comp=Z,527nm,1.5s
IRK Irkutsk 75.64 330 *e*P **P 13 39 00.1 -0.9**
IRK pmax pmax
comp=Z,61nm,1.9s
RAMN Ramite 75.86 301 *e*P **P 13 39 02.6 -0.5**
comp=Z,121nm,1.6s
PALK Pallekele 76.13 280 P **P 13 39 04.8 +0.2**
PALK pmax pmax
comp=Z,40nm,1.4s
GUN Gumba 76.77 302 *e*P **P 13 39 08.3 -0.1**
comp=Z,417nm,1.8s
MOY Mondy 76.93 329 *e*P **P 13 39 09.7 +1.2**
MOY pmax pmax
comp=Z,81nm,2.7s
PKI Pulchoki 77.06 301 *e*P **P 13 39 09.5 -0.5**
comp=Z,238nm,1.5s
PKIN Phulchoki 77.07 301 *e*P **P 13 39 09.4 -0.6**
comp=Z,193nm,1.5s
KKN Kakani 77.24 301 *e*P **P 13 39 10.7 -0.2**
comp=Z,249nm,1.7s
DMN Daman 77.33 301 *e*P **P 13 39 11.4 0.0**
comp=Z,152nm,1.2s
PVM Polavaram 77.52 290 *e*P **P 13 39 11.9 -0.4**
PVM IVmB_BB 13 39 19.6
comp=Z,306nm,1.3s
GKN Gorkha 77.85 301 *e*P **P 13 39 14.0 -0.2**
comp=Z,432nm,1.6s
MYLAV Mylavaram 78.32 289 *e*P **P 13 39 17.1 +0.3**
MYLAV IVmB_BB 13 39 24.3
comp=Z,325nm,1.2s
SKHT Srikalahasti 78.48 286 *e*P **P 13 39 17.8 +0.1**
SKHT IVmB_BB 13 39 25.2
comp=Z,277nm,1.6s
KOLN Koldanda 78.65 301 *e*P **P 13 39 18.4 -0.3**
comp=Z,351nm,1.5s
DANN Dangsing 78.69 302 *e*P **P 13 39 18.3 -0.7**
comp=Z,248nm,1.5s
ADKI Addanki 78.72 288 *e*P **P 13 39 19.1 +0.1**
ADKI IVmB_BB 13 39 26.5
comp=Z,254nm,1.4s
GGR Gangavaram 78.98 290 *e*P **P 13 39 20.0 -0.5**
GGR IVmB_BB 13 39 27.5
comp=Z,308nm,1.6s
PYUN Piuthan 79.26 301 *e*P **P 13 39 21.4 -0.7**
comp=Z,164nm,1.1s
NJS Nagarjunasagar 79.51 289 *e*P **P 13 39 23.0 -0.3**
NJS IVmB_BB 13 39 35.6
comp=Z,233nm,1.6s
ANM Nome 79.88 16 P **P 13 39 25.5 +1.2**
ANM pmax pmax
comp=Z,60nm,1.2s
ANM Nome 79.88 16 P **P 13 39 25.4 +1.2**
ANM IAmb IAmb 13 39 33.7
comp=Z,60nm,1.2s
TNA Tin City 79.99 15 P **P 13 39 27.0 +2.1**
baz=217
CUPL Choutuppal 80.04 290 *e*P **P 13 39 25.5 -0.7**
CUPL IVmB_BB 13 39 33.1
comp=Z,308nm,1.4s
RPR Rampur 80.06 291 *e*P **P 13 39 24.3 -2.1**
RPR IVmB_BB 13 39 38.5
comp=Z,260nm,1.7s
QSPA South Pole Qui 80.16 180 P **P 13 39 26.7 +0.5**
QSPA IAmb IAmb 13 39 35.6
comp=Z,53nm,1.1s
HYB Hyderabad 80.41 290 *i* P P 13 39 23.0 -5.3
HYB *e*PcP sP 13 39 34.0 -0.7
HYB *e* 13 39 39.0
HYBB Hyderabad (bro 80.41 290 *e*P **P 13 39 27.6 -0.7**
HYBB IVmB_BB 13 39 35.0
comp=Z,280nm,1.3s
SVW2 Sparrevohn 80.53 22 P **P 13 39 29.2 +1.2**
SVW2 IAmb IAmb 13 39 37.6
comp=Z,80nm,1.2s
WMQ Urumqi 81.04 317 P **P 13 39 31.9 +0.8**
WMQ pP pP 13 39 36.6 +0.7
WMQ sP pwP 13 39 43.6 +3.3
WMQ S **S 13 49 39.3 -0.6**
WMQ pmax pmax
comp=Z,51nm,1.5s
WMQ pmax pmax
comp=Z,440nm,4.7s
WMQ LR LR
comp=Z,2μm,11.9s
WMQ LR LR
comp=Z,1μm,12.1s
WMQ LR LR
comp=Z,2μm,18.5s
WMQ Urumqi 81.04 317 P **P 13 39 29.5 -1.7**
WMQ pmax pmax
comp=Z,78nm,1.4s
WMQ Urumqi 81.04 317 P **P 13 39 29.5 -1.7**
WMQ IAmb IAmb 13 39 46.1
comp=Z,78nm,1.4s
URV Uravakonda 81.06 287 *e*P **P 13 39 32.0 +0.2**
URV IVmB_BB 13 39 39.2
comp=Z,377nm,1.3s
HOM Homer 81.14 24 P **P 13 39 33.0 +1.8**
baz=233
CNPM China Poot 81.23 25 P **P 13 39 33.8 +2.1**
TTA Tatalina 81.59 20 P **P 13 39 35.5 +1.9**
TTA pmax pmax
comp=Z,33nm,1.2s
TTA Tatalina 81.59 20 P **P 13 39 35.5 +1.9**
MAW Mawson 81.88 203 P **P 13 39 36.1 +1.0**
comp=Z,12nm,0.8s,baz=93,slow=6.3,SNR=28
MAW Mawson 81.88 203 P **P 13 39 36.0 +1.0**
baz=82,SNR=14
MAW Mawson 81.88 203 P **P 13 39 35.8 +0.8**
MAW Mawson 81.88 203 P **P 13 39 35.8 +0.8**
KLRI Killari 82.37 290 *e*P **P 13 39 37.6 -1.1**
KLRI IVmB_BB 13 39 50.4
comp=Z,222nm,2.3s
BHPL Bhopal 82.81 295 *e*P **P 13 39 40.1 -0.8**
BHPL IAmb IAmb 13 39 47.8
comp=Z,42nm,1.3s
PPLA Purkeypile 82.91 22 P **P 13 39 41.1 +0.4**
PPLA IAmb IAmb 13 39 48.6
comp=Z,52nm,1.3s
TIXI Tiksi 83.18 352 *i* P **P 13 39 41.7 +0.1**
TIXI Tiksi 83.18 352 P **P 13 39 40.7 -0.9**
RDOG Red Dog Mine 83.19 15 P **P 13 39 42.0 +0.2**
RDOG IAmb IAmb 13 39 50.9
comp=Z,40nm,1.1s
CAST Castle Rocks 83.27 21 P **P 13 39 42.1 -0.2**
CAST IAmb IAmb 13 39 50.3
comp=Z,39nm,1.0s
PMR Palmer 83.29 23 P **P 13 39 44.3 +1.9**
PMR pmax pmax
comp=Z,78nm,1.3s
PMR Palmer 83.29 23 P **P 13 39 44.3 +1.9**
CUT Chulitna 83.32 22 P **P 13 39 43.5 +1.0**
baz=234
SML Sawmill 83.72 23 P **P 13 39 44.0 -0.7**
KTH Kantishna Hill 83.77 21 P **P 13 39 45.5 +0.5**
KTH IAmb IAmb 13 39 52.5
comp=Z,53nm,1.1s
TRF Thorofare Moun 83.94 22 P **P 13 39 45.7 -0.3**
TRF IAmb IAmb 13 39 53.5
comp=Z,31nm,1.0s
DDI Dehra Dun 84.02 302 *e*P **P 13 39 45.8 -1.2**
DDI *ex* x 13 41 41.8
BPAW Bear Paw Mtn. 84.08 21 P **P 13 39 46.4 -0.1**
BPAW IAmb IAmb 13 39 54.2
comp=Z,27nm,1.2s
SCM Sheep Creek Mo 84.13 24 P **P 13 39 48.9 +2.0**
SCM pmax pmax
comp=Z,82nm,1.2s
SCM Sheep Creek Mo 84.13 24 P **P 13 39 48.9 +2.0**
ZSN Zaisan 84.24 320 *i* P **P 13 39 47.9 +0.2**
comp=Z,59nm,2.5s,baz=320
ZSN Zaisan 84.24 320 *i* P **P 13 39 47.8 +0.2**
ZSN pmax pmax
comp=Z,59nm,2.5s
RND Reindeer 84.44 22 P **P 13 39 48.2 -0.1**
RND pmax pmax
comp=Z,56nm,1.1s
RND Reindeer 84.44 22 P **P 13 39 48.2 -0.1**
RND IAmb IAmb 13 39 56.4
comp=Z,56nm,1.1s
MCK McKinley 84.59 22 P **P 13 39 49.8 +0.7**
baz=235,SNR=23
BWN Browne 84.66 21 P **P 13 39 49.8 +0.4**
MLY Manley 84.72 20 P **P 13 39 50.3 +0.6**
baz=233,SNR=16
M24K Tolsona, Glenn 84.74 24 P **P 13 39 50.8 +0.9**
baz=238
M24K Tolsona, Glenn 84.74 24 P **P 13 39 51.1 +1.2**
DHY Denali Highway 84.80 23 P **P 13 39 50.8 +0.5**
DHY IAmb IAmb 13 39 59.0
comp=Z,44nm,1.3s
SMLA Simla 84.97 303 *e*P **P 13 39 51.2 -0.5**
SMLA IAmb IAmb 13 39 58.8
comp=Z,117nm,1.3s
NEA2 Nenana 85.04 21 P **P 13 39 51.5 +0.2**
baz=235,SNR=19
N25K Chitina, Valde 85.11 25 P **P 13 39 52.8 +0.9**
baz=239
I23K Minto, Yukon-K 85.26 20 P **P 13 39 53.5 +1.2**
baz=235
I23K Minto, Yukon-K 85.26 20 P **P 13 39 52.9 +0.6**
WRH Wood River Hil 85.32 21 P **P 13 39 52.4 -0.3**
WRH IAmb IAmb 13 40 00.5
comp=Z,42nm,1.1s
GLB Gilahina Butte 85.36 25 P **P 13 39 54.2 +1.3**
GLB IAmb IAmb 13 40 02.0
comp=Z,62nm,1.2s
CCB Clear Creek Bu 85.52 21 P **P 13 39 53.5 -0.1**
CCB IAmb IAmb 13 40 01.2
comp=Z,29nm,1.0s
MDM Murphy Dome 85.55 21 P **P 13 39 54.6 +0.8**
MDM IAmb IAmb 13 40 01.5
comp=Z,45nm,1.2s
TCOL CIGO, UAF Yank 85.63 21 P **P 13 39 55.0 +0.8**
baz=236,SNR=16
TCOL CIGO, UAF Yank 85.63 21 P **P 13 39 54.2 0.0**
COLA College 85.63 21 *i* P **P 13 39 55.6 +1.4**
COLA pmax pmax
comp=Z,41nm,1.0s
COLA College 85.63 21 P **P 13 39 54.3 +0.2**
MCARA McCarthy VSAT 85.65 25 P **P 13 39 54.3 -0.1**
MCARA IAmb IAmb 13 40 03.6
comp=Z,49nm,1.2s
MK31 Makanchi Array 85.67 319 *i* P **P 13 39 55.3 +0.4**
MK31 Makanchi Array 85.67 319 P **P 13 39 54.8 0.0**
MKAR Makanchi Array 85.67 319 P **P 13 39 55.0 +0.1**
comp=Z,6.2nm,0.8s,baz=107,slow=5.8,SNR=30
MKAR Makanchi Array 85.67 319 P **P 13 39 54.7 -0.2**
HDA Harding Lake 85.70 22 P **P 13 39 55.2 +0.6**
baz=237,SNR=6.9
HDA Harding Lake 85.70 22 P **P 13 39 54.7 +0.1**
HDA IAmb IAmb 13 40 02.6
comp=Z,39nm,1.3s
MAKZ Makanchi 85.88 319 P **P 13 39 55.2 -0.7**
MAKZ pmax pmax
comp=Z,45nm,1.4s
MAKZ Makanchi 85.88 319 P **P 13 39 55.2 -0.7**
MAKZ IAmb IAmb 13 39 58.6
comp=Z,45nm,1.4s
POKR Poker Plat Res 85.92 21 P **P 13 39 56.5 +0.8**
baz=236
POKR Poker Plat Res 85.92 21 P **P 13 39 55.7 +0.1**
POKR IAmb IAmb 13 40 03.2
comp=Z,24nm,1.2s
IL31 85.92 21 P **P 13 39 55.8 +0.2**
IL31 IAmb IAmb 13 40 03.2
comp=Z,37nm,1.2s
ILAR Eielson Array 85.92 21 P **P 13 39 55.5 -0.2**
comp=Z,8.6nm,0.9s,baz=255,slow=4.4,SNR=46
ILAR LR LR 14 14 32.2
comp=Z,211nm,20.1s,baz=268,slow=33
ILAR Eielson Array 85.92 21 P **P 13 39 54.8 -0.9**
ILAR Eielson Array 85.92 21 P **P 13 39 54.8 -0.9**
IL18 Eielson Array 85.95 21 P **P 13 39 54.5 -1.3**
DHRM DHARAMSHALA 85.96 304 *e*P **P 13 39 56.0 -0.9**
DHRM AMP 13 39 57.9
comp=Z,160nm,0.9s
DHRM *ex* x 13 42 16.8
BARN Barnard Glacie 86.08 26 P **P 13 39 57.3 +0.5**
BARN IAmb IAmb 13 40 06.2
comp=Z,40nm,1.2s
MENT Mentasta 86.15 24 P **P 13 39 58.4 +1.6**
MENT IAmb IAmb 13 40 06.3
comp=Z,49nm,1.5s
COLD Coldfoot 86.21 19 P **P 13 39 58.1 +1.0**
baz=234,SNR=16
COLD Coldfoot 86.21 19 P **P 13 39 57.6 +0.5**
COLD IAmb IAmb 13 40 05.6
comp=Z,35nm,1.4s
L26K Log Cabin Wild 86.34 24 P **P 13 39 58.9 +1.1**
baz=240,SNR=15
DOT Dot Lake 86.37 23 P **P 13 39 59.1 +1.2**
SHLS Shalkode 86.45 315 *e*P **P 13 39 57.8 -1.2**
comp=Z,56nm,1.7s,baz=315
SHLS LR LR 14 19 53.0
baz=315
SHLS Shalkode 86.45 315 *e*P **P 13 39 57.8 -1.2**
SHLS pmax pmax
comp=Z,57nm,1.7s
SCRK Sand Creek 86.57 23 P **P 13 40 00.0 +1.0**
baz=240,SNR=16
ZAA0 Zalesovo Array 86.64 326 P **P 13 39 57.7 -1.7**
ZALV Zalesovo Beam 86.64 326 P **P 13 39 58.5 -0.9**
comp=Z,10nm,0.9s,baz=110,slow=5.2,SNR=30
ZALV Zalesovo Beam 86.64 326 P **P 13 39 57.5 -1.9**
ZALV Zalesovo Beam 86.64 326 P **P 13 39 57.5 -1.9**
PRZ Przheval'sk 87.01 314 P **P 13 40 03.5 +1.7**
PRZ pmax pmax
comp=Z,165nm,1.2s
PRZ Przheval'sk 87.01 314 P **P 13 40 03.5 +1.7**
A21K Barrow 87.07 14 P **P 13 40 01.4 +0.3**
A21K IAmb IAmb 13 40 15.9
comp=Z,34nm,1.2s
KPKS Kokpek 87.09 315 *e*P **P 13 40 02.4 +0.4**
comp=Z,105nm,2.3s,baz=315
KPKS LR LR 14 21 09.1
baz=315
KPKS Kokpek 87.09 315 *e*P **P 13 40 02.4 +0.4**
KPKS pmax pmax
comp=Z,105nm,2.3s
SATY Saty 87.17 314 *e*P **P 13 40 02.8 +0.4**
comp=Z,49nm,2.2s,baz=314
SATY Saty 87.17 314 *e*P **P 13 40 02.8 +0.4**
SATY pmax pmax
comp=Z,49nm,2.2s
TOLK Toolik Lake Re 87.24 18 P **P 13 40 03.2 +1.0**
baz=234,SNR=9.5
TOLK Toolik Lake Re 87.24 18 P **P 13 40 01.8 -0.3**
TOLK IAmb IAmb 13 40 10.6
comp=Z,26nm,1.2s
FYU Fort Yukon 87.47 20 P **P 13 40 03.9 +0.7**
FYU IAmb IAmb 13 40 25.1
comp=Z,51nm,1.5s
TDK Taldyqorghan 87.71 316 *e*P **P 13 40 04.7 -0.2**
comp=Z,29nm,1.8s,baz=316
TDK Taldyqorghan 87.71 316 *e*P **P 13 40 04.7 -0.2**
TDK pmax pmax
comp=Z,29nm,1.8s
HYT Haines Junctio 87.79 27 P **P 13 40 06.8 +1.7**
KDJ Kajisay 87.79 313 P **P 13 40 05.6 +0.1**
KDJ Kajisay 87.79 313 P **P 13 40 05.6 +0.1**
KSH Kashi 88.01 311 P **P 13 40 09.8 +3.2**
KSH sP pwP 13 40 15.4 -0.4
KSH S **S 13 50 50.5 +0.8**
KSH pmax pmax
comp=Z,33nm,0.8s
KSH pmax pmax
comp=Z,430nm,4.6s
KSH LR LR
comp=Z,1μm,12.7s
KSH LR LR
comp=Z,1μm,7.1s
KSH LR LR
comp=Z,1μm,12.8s
EGAK Eagle 88.03 23 P **P 13 40 06.2 +0.3**
SEM Semipalatinsk 88.10 322 *e*P **P 13 40 05.6 -1.3**
baz=322
SEM Semipalatinsk 88.10 322 *e*P **P 13 40 05.5 -1.3**
MDOK Medeo 88.15 314 *i* P **P 13 40 07.5 +0.3**
baz=314
MDOK Medeo 88.15 314 *i* P **P 13 40 07.5 +0.3**
TNSS Tian-Shan 88.19 314 *e*P **P 13 40 08.4 +0.6**
baz=314
TNSS Tian-Shan 88.19 314 *e*P **P 13 40 08.3 +0.6**
SKAG Skagway 88.24 29 P **P 13 40 07.2 +0.2**
AAA Alma-Ata 88.26 314 *e*P **P 13 40 08.3 +0.7**
baz=314
AAA Alma-Ata 88.26 314 *e*P **P 13 40 08.3 +0.7**
CHKK Chushkaly 88.38 315 *e*P **P 13 40 07.6 -0.5**
baz=315
CHKK Chushkaly 88.38 315 *e*P **P 13 40 07.5 -0.5**
DAWY Dawson 88.39 24 P **P 13 40 07.3 -0.4**
ULHL Ulahol 88.49 313 P **P 13 40 09.6 +0.6**
SNR=12
BOOM Boomskoye usch 88.77 313 P **P 13 40 10.3 +0.1**
BOOM pmax pmax
comp=Z,115nm,1.3s
BOOM Boomskoye usch 88.77 313 P **P 13 40 10.3 +0.1**
NIL Nilore 88.78 304 P **P 13 40 08.5 -1.7**
NIL pmax pmax
comp=Z,56nm,1.0s
NIL Nilore 88.78 304 P **P 13 40 08.4 -1.7**
KUU Kurty 88.84 315 *i* P **P 13 40 10.2 0.0**
comp=Z,124nm,1.7s,baz=315
KUU LR LR 14 20 59.4
baz=315
KUU Kurty 88.84 315 *i* P **P 13 40 10.2 0.0**
KUU pmax pmax
comp=Z,124nm,1.7s
WHY Whitehorse 88.91 28 P **P 13 40 09.8 -0.5**
WHY IAmb IAmb 13 40 18.9
comp=Z,22nm,1.2s
KURK Kurchatov 89.18 322 *i* P **P 13 40 12.3 +0.7**
KURK pmax pmax
comp=Z,4.0nm,1.2s
KURK Kurchatov 89.18 322 P **P 13 40 10.9 -0.8**
KURBB Kurchatov Arra 89.21 322 P **P 13 40 11.8 0.0**
comp=Z,3.1nm,1.2s,baz=104,slow=4.0,SNR=12
KBK Karagaybulak 89.52 313 P **P 13 40 13.9 +0.2**
SNR=9.1
SYO Syowa Base 89.73 199⇑ *e*P **P 13 40 12.3 -1.6**
SYO Syowa Base 89.73 199⇑ *e*pP pP 13 40 20.2 +1.5
CHMS Chumysh 89.74 314 P **P 13 40 15.0 +0.5**
SNR=11
FRU1 Bishkek 89.78 313 P **P 13 40 13.8 -1.0**
FRU1 pmax pmax
comp=Z,44nm,1.0s
FRU1 Bishkek 89.78 313 P **P 13 40 13.8 -1.0**
FRU1 IAmb IAmb 13 40 23.1
comp=Z,44nm,1.0s
AAK Ala-Archa 89.84 313 P **P 13 40 15.9 +0.7**
SNR=13
AAK Ala-Archa 89.84 313*d* iP **P 13 40 15.4 +0.2**
AAK pmax pmax
comp=Z,75nm,1.1s
GDXM Geysers 89.92 51 P **P 13 40 14.3 -1.2**
SGDS Sogindy 89.93 314 *e*P **P 13 40 15.3 -0.2**
comp=Z,23nm,1.6s,baz=314
SGDS Sogindy 89.93 314 *e*P **P 13 40 15.2 -0.2**
SGDS pmax pmax
comp=Z,23nm,1.6s
USP Ospenovka 89.98 314 P **P 13 40 16.0 +0.3**
SNR=19
O02D Mt. Diablo Mer 90.22 49 P **P 13 40 17.9 +1.0**
baz=257
AML Almayashu 90.30 313 P **P 13 40 18.1 +0.5**
SNR=41
EKS2 Erkin-Say 90.36 313 P **P 13 40 17.9 +0.4**
SNR=22
WDC Whiskeytown Da 90.50 49 P **P 13 40 16.4 -1.7**
WDC pmax pmax
comp=Z,2.0nm,1.2s
WDC Whiskeytown Da 90.50 49 P **P 13 40 16.4 -1.7**
SAO San Andreas Ge 90.53 53 P **P 13 40 16.8 -1.5**
SAO pmax pmax
comp=Z,25nm,1.3s
SAO San Andreas Ge 90.53 53 P **P 13 40 16.8 -1.5**
SAO IAmb IAmb 13 40 39.2
comp=Z,25nm,1.2s
YBH Yreka Blue Hor 90.62 48 P **P 13 40 16.9 -1.8**
YBH pmax pmax
comp=Z,8.0nm,1.4s
YBH Yreka Blue Hor 90.62 48 P **P 13 40 16.9 -1.8**
BTLS Baital 90.71 316 *i* P **P 13 40 18.8 -0.2**
comp=Z,36nm,2.1s,baz=316
BTLS Baital 90.71 316 *i* P **P 13 40 18.7 -0.2**
BTLS pmax pmax
comp=Z,36nm,2.1s
PMPB Monarch Peak 90.93 54 P **P 13 40 22.0 +1.7**
ORV Oroville 91.06 50 P **P 13 40 21.8 +1.1**
ORV pmax pmax
comp=Z,32nm,1.5s
ORV Oroville 91.06 50 P **P 13 40 21.8 +1.1**
ORV IAmb IAmb 13 40 30.5
comp=Z,32nm,1.5s
H04D Lebanon 91.20 45 P **P 13 40 22.3 +1.0**
baz=258
PAGB Antelope Grade 91.28 54 P **P 13 40 22.2 +0.4**
I04A Tendick Farm, 91.28 46 P **P 13 40 22.7 +1.1**
baz=258
AFDM Forest Hills D 91.34 51 P **P 13 40 22.7 +0.7**
AFDM IAmb IAmb 13 40 31.9
comp=Z,35nm,1.3s
NRIK Noril'sk 91.47 341 P **P 13 40 21.4 -0.6**
comp=Z,9.5nm,1.0s,baz=118,slow=5.2,SNR=14
NRIK Noril'sk 91.47 341*d* iP **P 13 40 21.0 -0.9**

NRIK pmax pmax
comp=Z,29nm,1.4s
CMB Columbia Colle 91.61 52 P **P** **13 40 24.3 +0.9**
CMB pmax pmax
comp=Z,27nm,1.5s
CMB Columbia Colle 91.61 52 P **P** **13 40 24.3 +0.9**
CMB IAmb IAmb 13 40 33.2
comp=Z,27nm,1.5s
BEKR Beckworth 91.99 50 P **P** **13 40 26.7 +1.4**
BEKR IAmb IAmb 13 40 34.2
comp=Z,24nm,1.5s
BTK Batken 92.00 310 P **P** **13 40 24.8 -0.4**
BTK pmax pmax
comp=Z,22nm,1.3s
BTK Batken 92.00 310 P **P** **13 40 24.8 -0.4**
BTK IAmb IAmb 13 40 32.6
comp=Z,22nm,1.2s
K05A Summer Lake 92.14 47 P **P** **13 40 27.0 +1.0**
K05A IAmb IAmb 13 40 47.3
comp=Z,23nm,1.4s
DZA Taraz 92.17 313 *eP* **P** **13 40 25.6 -0.3**
baz=313
DZA Taraz 92.17 313 *eP* **P** **13 40 25.5 -0.3**
GAR Garm 92.18 309 P **P** **13 40 25.4 -0.7**
GAR IAmb IAmb 13 40 33.4
comp=Z,28nm,1.2s
BELA Belgrano 2 92.26 178 P **P** **13 40 25.3 -0.3**
INK Inuvik 92.28 21 P **P** **13 40 26.0 +0.4**
INK pmax pmax
comp=Z,41nm,1.3s
INK Inuvik 92.28 21 P **P** **13 40 26.0 +0.4**
KBL Kabul 92.37 304 P **P** **13 40 25.6 -1.6**
KBL pmax pmax
comp=Z,11nm,1.1s
KBL Kabul 92.37 304 P **P** **13 40 25.6 -1.6**
MOD Modoc Plateau 92.42 48 P **P** **13 40 27.3 +0.1**
MOD IAmb IAmb 13 40 36.0
comp=Z,16nm,1.3s
PNTR Pine Nut 92.42 51 P **P** **13 40 28.0 +0.7**
PNTR IAmb IAmb 13 40 37.5
comp=Z,30nm,1.3s
VCNR Virginia City 92.42 51 P **P** **13 40 28.0 +0.7**
VCNR IAmb IAmb 13 40 37.4
comp=Z,17nm,1.2s
WAKR Walker 92.44 52 P **P** **13 40 28.9 +1.5**
WAKR IAmb IAmb 13 40 37.6
comp=Z,31nm,1.4s
MDPB Devils Postpil 92.56 52 P **P** **13 40 29.3 +1.3**
MDPB IAmb IAmb 13 40 37.9
comp=Z,23nm,1.4s
OMMB Old Mammoth Mi 92.61 52 P **P** **13 40 30.6 +2.2**
OMMB IAmb IAmb 13 40 38.3
comp=Z,18nm,1.4s
ISA Isabella, Lake 92.69 54 P **P** **13 40 28.4 0.0**
ISA pmax pmax
comp=Z,16nm,1.4s
ISA Isabella, Lake 92.69 54 P **P** **13 40 28.4 0.0**
BRZS Berezniki 92.69 320 *eP* **P** **13 40 26.5 -1.5**
comp=Z,2.6nm,1.7s,baz=320
BRZS Berezniki 92.69 320 *eP* **P** **13 40 26.5 -1.5**
BRZS pmax pmax
comp=Z,3.0nm,1.7s
PAHR Pah Rah Range 92.69 50 P **P** **13 40 29.0 +0.5**
PAHR IAmb IAmb 13 40 38.4
comp=Z,32nm,1.4s
MWC Mount Wilson 92.77 56 P **P** **13 40 30.9 +1.9**
MWC pmax pmax
comp=Z,13nm,1.2s
MWC Mount Wilson 92.77 56 P **P** **13 40 30.9 +1.9**
KK31 Karatay Array 92.80 313 P **P** **13 40 28.1 -0.6**
KK31 pmax pmax
comp=Z,44nm,1.2s
KK31 Karatay Array 92.80 313 P **P** **13 40 28.1 -0.6**
KKAR Karatay Array 92.80 313 P **P** **13 40 27.7 -1.0**
KKAR Karatay Array 92.80 313 P **P** **13 40 27.5 -1.3**
KKAR Karatay Array 92.80 313 P **P** **13 40 27.7 -1.0**
IUG luzhnay 92.97 312 *eP* **P** **13 40 29.2 -0.5**
comp=Z,5.2nm,1.6s,baz=312
IUG luzhnay 92.97 312 *eP* **P** **13 40 29.1 -0.5**
IUG pmax pmax
comp=Z,5.0nm,1.6s
CHGR Chuyangaron 93.01 309 P **P** **13 40 29.2 -0.7**
LHV Little Huntoon 93.11 52 P **P** **13 40 32.6 +2.4**
LHV IAmb IAmb 13 40 40.6
comp=Z,27nm,1.3s
CWC Cottonwood Cre 93.13 54 P **P** **13 40 31.7 +1.1**
baz=260
RYN Ryan 93.16 52 P **P** **13 40 30.5 -0.2**
RYN IAmb IAmb 13 40 40.6
comp=Z,29nm,1.4s
NVAR Mina Array Bea 93.30 52 P **P** **13 40 32.9 +1.5**
comp=Z,8.5nm,1.0s,baz=246,slow=5.6,SNR=27
NVAR Mina Array Bea 93.30 52 P **P** **13 40 32.3 +0.9**
NV11 Mina Array Sit 93.41 52 P **P** **13 40 33.3 +1.4**
NV11 IAmb IAmb 13 40 41.8
comp=Z,42nm,1.4s
MPMC Manual Prospec 93.54 54 P **P** **13 40 33.8 +1.3**
baz=261
KVN Kaiserville 93.56 51 P **P** **13 40 32.3 -0.3**
KVN pmax pmax
comp=Z,28nm,1.3s
KVN Kaiserville 93.56 51 P **P** **13 40 32.3 -0.3**
KVN IAmb IAmb 13 40 42.4
comp=Z,28nm,1.3s
WVOR Wild Horse Val 93.73 48 P **P** **13 40 33.1 -0.1**
WVOR pmax pmax
comp=Z,22nm,1.5s
WVOR Wild Horse Val 93.73 48 P **P** **13 40 33.1 -0.1**
WVOR IAmb IAmb 13 40 50.0
comp=Z,22nm,1.4s
G08A Pilot Rock 93.99 45 P **P** **13 40 34.6 +0.3**
J08A Circle Bar Ran 94.00 47 P **P** **13 40 35.2 +0.9**
TPH Tonopah 94.08 52 P **P** **13 40 34.8 -0.2**
TPH pmax pmax
comp=Z,96nm,1.3s
TPH Tonopah 94.08 52 P **P** **13 40 34.8 -0.2**
PNT Penticton 94.24 41 P P 13 40 28.0 -7.2
PNT pmax pmax
comp=Z,30nm,1.3s
TPNV Topopah Spring 94.67 53 P **P** **13 40 36.6 -1.1**
TPNV pmax pmax
comp=Z,26nm,1.5s
TPNV Topopah Spring 94.67 53 P **P** **13 40 36.6 -1.1**
TPNV IAmb IAmb 13 40 47.7
comp=Z,26nm,1.4s
BRVK Borovoye 94.74 323 *i* P **P** **13 40 37.0 -0.4**
BRVK pmax pmax
comp=Z,3.0nm,1.3s
BRVK Borovoye 94.74 323 P **P** **13 40 35.4 -2.0**
R11A Troy Canyon, C 95.39 52 P **P** **13 40 42.6 +1.7**
R11A IAmb IAmb 13 40 50.9
comp=Z,18nm,1.5s
PRN Pahroc Range 95.68 53 P **P** **13 40 40.8 -1.4**
PRN IAmb IAmb 13 40 53.5
comp=Z,18nm,1.5s
C36M Paulatuk 95.87 21 P **P** **13 40 43.1 +1.0**
baz=258
C36M Paulatuk 95.87 21 P **P** **13 40 42.0 -0.1**
C36M IAmb IAmb 13 40 50.3
comp=Z,20nm,1.2s
ELK Elko 95.99 50 P **P** **13 40 44.7 +1.0**
ELK pmax pmax
comp=Z,1.0nm,1.0s
ELK Elko 95.99 50 P **P** **13 40 44.6 +1.0**
SPR3 Spring Creek 3 96.45 52 P **P** **13 40 46.1 +0.2**
SPR3 IAmb IAmb 13 40 56.0
comp=Z,18nm,1.4s
SNAA Sanae 97.37 187 *i* P **P** **13 40 47.4 -1.7**
SNAA pmax pmax
comp=Z,14nm,2.7s
HVU Hansel Valley 97.96 49 P Pdif 13 40 52.8 +0.3
HVU pmax pmax
comp=Z,14nm,1.4s
HVU Hansel Valley 97.96 49 P Pdif 13 40 52.8 +0.2
ABKAR Akbulak array 100.81 318 Pdif **Pdif** **13 41 03.1 -1.7**
ARU Arti 101.80 326 P **Pdif** **13 41 09.7 +0.7**
ARU 13 45 20.9
ARU S **SKSac** **13 51 49.2 +1.6**
ARU SP **SP** **13 54 19.6 -2.2**
ARU SS **SS** **13 59 48.5 -4.5**
GROC Groznyy 110.81 312 *i* PKIKP **PKiKP** **13 45 48.1 -1.1**
GROC *e* 13 46 26.2
GROC pmax pmax
comp=Z,23nm,0.5s
OBN Obninsk 114.22 326 *i* PKIKP **PKiKP** **13 45 56.6 +1.3**
OBN pmax pmax
comp=Z,15nm,1.2s
WVT Waverly 117.47 54 P **PKPdf** **13 46 02.0 -0.2**
baz=278
VSU Vasula 117.82 332 *i* PKIKP **PKiKP** **13 46 02.6 +0.4**
BRTR Keskin Array B 120.40 310 PKP **PKPdf** **13 46 07.4 -0.6**
comp=Z,4.2nm,1.1s,baz=15,slow=6.0,SNR=9.7
O51A Pataskala 120.75 49 P **PKiKP** **13 46 09.2 +0.6**
baz=284
AC05 El Transito 121.65 133 PKPdf **PKiKP** **13 46 11.2 +0.3**
LSQQ Lebel-sur-Quev 121.68 38 P **PKiKP** **13 46 10.8 +0.8**
baz=294
P53A Whipple 121.82 49 P **PKiKP** **13 46 10.6 0.0**
baz=285
Q54A Coxs Mills 122.36 50 P **PKPdf** **13 46 11.3 -0.2**
baz=285
O54A Avella 122.39 48 P **PKPdf** **13 46 11.5 -0.1**
baz=286
NB2 NORSAR Subarra 122.43 340 PKPdf **PKPdf** **13 46 08.9 -2.2**
comp=Z,4.3nm,1.0s,baz=44,slow=1.9
NOA NORSAR Array B 122.43 340 PKP **PKPdf** **13 46 10.8 -0.2**
comp=Z,2.5nm,0.8s,baz=47,slow=1.9,SNR=6.9
R54A Victor 122.44 51 P **PKPdf** **13 46 11.6 -0.2**
baz=284
N54A Moraine State 122.46 47 P **PKPdf** **13 46 11.3 -0.4**
baz=287
M54A Oil Creek Stat 122.54 47 P **PKPdf** **13 46 11.7 -0.1**
baz=287
KMSC Kings Mountain 122.85 54 P **PKPdf** **13 46 12.7 +0.1**
baz=282
CHGQ Chibougamau 122.85 36 P **PKiKP** **13 46 12.7 +0.4**
baz=297
T55A Pulaski 122.85 52 P **PKPdf** **13 46 12.6 0.0**
baz=284
Q55A Buckhannon 122.93 50 P **PKiKP** **13 46 13.1 +0.2**
baz=285
R55A Marinton 123.08 51 P **PKPdf** **13 46 12.8 -0.2**
baz=285
BLA Blacksburg 123.11 52 P **PKPdf** **13 46 13.0 -0.1**
baz=284
V56A Mocksville 123.38 54 P **PKPdf** **13 46 13.6 0.0**
baz=283
D55A Sainte-Anne-du 123.43 39 P **PKiKP** **13 46 13.7 +0.1**
baz=294
W56A Indian Trail 123.45 54 P **PKiKP** **13 46 14.0 0.0**
baz=282
T56A Rocky Mt 123.46 52 P **PKPdf** **13 46 13.9 +0.1**
baz=284
Q56A Snyder Ridge, 123.58 49 P **PKiKP** **13 46 14.1 -0.1**
baz=286
R56A Bull Pasture M 123.59 50 P **PKPdf** **13 46 13.9 -0.2**
baz=286
BUR08 Bucovina Ar. S 123.61 322 PKPdf **PKPdf** **13 46 12.1 -1.7**
M56A Emporium 123.61 46 P **PKiKP** **13 46 14.7 +0.5**
baz=288
BURAR Bucovina Array 123.61 322 PKPdf **PKPdf** **13 46 13.1 -0.7**
O56A Blue Knob Stat 123.70 48 P **PKPdf** **13 46 14.2 0.0**
baz=287
P56A Dayton Farm, R 123.72 49 P **PKPdf** **13 46 14.0 -0.1**
baz=287
D56A ZEC Mazanza, M 123.86 39 P **PKPdf** **13 46 14.2 0.0**
baz=295
E56A St. Veronique 123.90 40 P **PKiKP** **13 46 15.2 +0.7**
baz=294
W57A Gilead 123.92 54 P **PKPdf** **13 46 14.8 +0.1**
baz=283
V57A Coltrane Farms 123.93 53 P **PKiKP** **13 46 15.2 +0.3**
baz=284
J56A Wolcott 123.94 44 P **PKiKP** **13 46 15.2 +0.5**
baz=291
T57A Hurt 124.07 52 P **PKPdf** **13 46 15.0 +0.1**
baz=285
U57A Blanch 124.14 53 P **PKiKP** **13 46 15.4 +0.1**
baz=284
Q57A Strasburg 124.17 49 P **PKiKP** **13 46 15.2 -0.1**
baz=287
GO02 Mina Guanaco 124.19 129 PKPdf **PKiKP** **13 46 16.3 +0.1**
NHSC New Hope 124.20 57 P **PKPdf** **13 46 15.1 -0.1**
baz=281
N57A Milroy 124.29 47 P **PKPdf** **13 46 15.1 -0.1**
baz=288
K57A Scipio Center 124.36 44 P **PKPdf** **13 46 15.4 +0.1**
baz=291
M57A Sunshine Farm, 124.40 46 P **PKPdf** **13 46 15.5 +0.1**
baz=289
V58A Windy Hill, Pi 124.47 53 P **PKPdf** **13 46 15.6 -0.1**
baz=284
I57A Carthage 124.51 43 P **PKPdf** **13 46 15.5 -0.1**
baz=292
E57A Chemin Saint G 124.51 40 P **PKPdf** **13 46 15.5 0.0**
baz=295
VOIR 124.61 319 ⇑P **PKiKP** **13 46 16.2 +0.1**
VOIR 124.61 319 ⇑P **PKiKP** **13 46 16.2 +0.1**
T58A Grand View Acr 124.64 52 P **PKPdf** **13 46 15.8 -0.2**
baz=285
R58A Rapidan 124.68 50 P **PKPdf** **13 46 15.8 -0.2**
baz=286
Q58A Fox Den Farm, 124.74 49 P **PKPdf** **13 46 15.8 -0.3**
baz=287
U58A Oxford 124.77 52 P **PKPdf** **13 46 15.8 -0.4**
baz=285
KOLS Kolonicke sedl 124.77 324 *e*PKIKP **PKiKP** **13 46 16.7 +0.5**
KOLS Kolonicke sedl 124.77 324 *e*PKP **PKiKP** **13 46 16.7 +0.5**
N58A Sunbury 124.86 47 P **PKPdf** **13 46 16.3 0.0**
baz=289
M58A Price's Panora 124.87 46 P **PKPdf** **13 46 16.4 +0.1**
baz=290
R58B Mineral 124.87 50 P **PKPdf** **13 46 16.2 -0.2**
baz=286
BINY Binghamton 124.92 45 P **PKPdf** **13 46 16.5 +0.1**
baz=291
O58A Lewisberry 124.94 48 P **PKiKP** **13 46 17.1 +0.3**
baz=288
K58A Earlville 124.95 44 P **PKPdf** **13 46 16.5 +0.1**
baz=291
E58A La Victoria 125.07 39 P **PKPdf** **13 46 16.6 +0.1**
baz=296
G58A Ormstown 125.09 41 P **PKiKP** **13 46 17.0 +0.1**
baz=294
V59A Middlesex 125.17 53 P **PKiKP** **13 46 17.8 +0.5**
baz=285
J59A Pesco 125.47 43 P **PKPdf** **13 46 17.6 +0.2**
baz=293
M59A Waymart 125.53 46 P **PKiKP** **13 46 17.9 -0.1**
baz=291
X60A Albert Glenn T 125.67 54 P **PKPdf** **13 46 18.2 +0.2**
baz=284
I59A Olmsteadville 125.76 42 P **PKiKP** **13 46 18.9 +0.5**
baz=294
S60A Water View 125.87 50 P **PKPdf** **13 46 18.2 -0.1**
baz=287
T60A Gray 125.97 51 P **PKiKP** **13 46 18.8 -0.2**
baz=287
O60A Telford 125.97 47 P **PKPdf** **13 46 18.5 +0.1**
baz=290
N60A Cedar Hill Far 126.00 46 P **PKiKP** **13 46 18.9 0.0**
baz=291
F60A Warwick 126.08 39 P **PKPdf** **13 46 18.4 0.0**
baz=297
GZR Gura Zlata 126.08 320 ⇑P **PKiKP** **13 46 20.1 +1.1**
GZR Gura Zlata 126.08 320 ⇑PKIKP **PKiKP** **13 46 20.1 +1.1**
I60A Shoreham 126.12 42 P **PKiKP** **13 46 19.1 +0.1**
baz=294
L60A Shokan 126.22 45 P **PKPdf** **13 46 19.1 +0.2**
baz=292
LANS Liptovska Anna 126.26 325 *e*PKIKP **PKiKP** **13 46 20.6 +1.4**
LANS Liptovska Anna 126.26 325 *e*PKP **PKiKP** **13 46 20.6 +1.4**
D60A Saint Jean D'O 126.28 38 P **PKPdf** **13 46 19.0 +0.2**
baz=298
G61A St-Isidore-de- 126.65 40 P **PKiKP** **13 46 20.0 -0.1**
baz=297
BZS Buzias 126.71 321 ⇓P **PKiKP** **13 46 21.1 +0.9**
BZS Buzias 126.71 321 ⇓PKIKP **PKiKP** **13 46 21.1 +0.9**
H61A Lyndonville 126.73 41 P **PKiKP** **13 46 20.6 +0.3**
baz=296
E61A Lac Etchemin 126.77 38 P **PKiKP** **13 46 20.7 +0.5**
baz=298
PAL Palisades 126.80 46 P **PKiKP** **13 46 20.4 0.0**
baz=292
I61A Oroboro, Fairl 126.80 42 P **PKiKP** **13 46 20.5 +0.1**
baz=295
J61A Chester 126.82 42 P **PKiKP** **13 46 20.4 0.0**
baz=294
PB11 IPOC Station P 126.93 124 **PKPdf** **13 46 20.6 -0.5**
MORC Moravsky Berou 126.98 327 *eP* **PKiKP** **13 46 22.8 +2.2**
MORC *e* 13 46 27.6
MORC Moravsky Berou 126.98 327 PKIKP **PKiKP** **13 46 21.1 +0.5**
MORC Moravsky Berou 126.98 327 PKPdf **PKiKP** **13 46 21.1 +0.5**
PB08 IPOC Station P 127.15 124 **PKPdf** **13 46 21.1 -0.6**
KRLC Kraliky 127.22 328 *e*PKIKP **PKiKP** **13 46 27.5 +6.4**
KRLC Kraliky 127.22 328 *e*pPKP **PKiKP** **13 46 27.5 +6.4**
OSTC Ostas 127.23 328 *e*PKP **PKiKP** **13 46 23.0 +1.9**
OSTC *e*pPKP **sPKPdf** **13 46 28.1 +0.9**
CHVC Chvalec 127.30 328 *e*PKP **PKiKP** **13 46 28.4 +7.2**
DPC Dobruska-Polom 127.30 328 *e*PKIKP **PKiKP** **13 46 23.7 +2.4**
DPC *e* 13 46 27.9
DPC Dobruska-Polom 127.30 328 *e*PKP **PKiKP** **13 46 23.7 +2.4**
DPC *e*pPKP **sPKPdf** **13 46 27.9 +0.6**
G62A West of Eustis 127.31 40 P **PKiKP** **13 46 21.7 +0.3**
baz=298
M62A Hamden 127.34 45 P **PKiKP** **13 46 21.6 +0.1**
baz=293
J62A Henniker 127.36 42 P **PKiKP** **13 46 21.8 +0.2**
baz=295
JAVC Velka Javorina 127.42 326 *eP* **PKiKP** **13 46 24.8 +3.3**
JAVC *e* 13 46 29.6
VRAC Vranov 127.75 327 ⇓P **PKiKP** **13 46 29.4 +7.3**
VRAC Vranov 127.75 327 *eP* **PKiKP** **13 46 24.3 +2.1**
VRAC *e* 13 46 29.0
VRAC Vranov 127.75 327 ⇓PKIKP **PKiKP** **13 46 29.4 +7.3**
K63A Dunstable 127.77 43 P **PKiKP** **13 46 22.4 +0.1**
baz=295
N63A Mattituck 127.78 45 P **PKiKP** **13 46 22.5 +0.1**
baz=293
J63A Strafford 127.82 42 P **PKiKP** **13 46 22.9 +0.4**
baz=296
HRV Adam Dziewonsk 127.83 43 P **PKiKP** **13 46 22.6 +0.1**
baz=295
MODS Modra-Piesok 127.90 326 *e*PKIKP **PKiKP** **13 46 24.1 +1.6**
MODS Modra-Piesok 127.90 326 *e*PKP **PKiKP** **13 46 24.1 +1.6**
G63A Kingsbury 127.93 39 P **PKiKP** **13 46 22.8 +0.2**
baz=298
KRUC Moravsky 128.00 327 *eP* **PKiKP** **13 46 24.8 +2.2**
KRUC *e* 13 46 29.5
E63A Oxbow 128.02 37 P **PKiKP** **13 46 22.8 0.0**
baz=300
PKME Peaks-Kenny Pk 128.06 39 P **PKiKP** **13 46 22.6 -0.2**
baz=299
BRG Berggiesshubel 128.20 330 PKP **PKPdf** **13 46 22.7 +0.3**
comp=Z,30nm,1.6s
BRG *i* 13 46 30.0
comp=Z,32nm,1.3s
BRG *i* 13 46 50.0
comp=Z,29nm,1.4s
BRG PP PP 13 48 36.6 +11
comp=Z,12nm,1.3s
BRG Berggiesshubel 128.20 330 *e*PKPdf **PKiKP** **13 46 25.4 +2.4**
baz=49,slow=2.0
IDI Anoyia 128.26 307 PKPdf **PKPdf** **13 46 22.0 -1.0**
F64A Sherman 128.34 38 P **PKiKP** **13 46 23.3 -0.1**
baz=300
CLL Collm 128.38 331 *e*PKPdf **PKiKP** **13 46 25.0 +1.7**
CLL *i* pPKPdf **sPKPdf** **13 46 30.2 +0.9**
comp=Z,22nm,1.2s
CLL *e* 13 57 18.0
CLL *e*PSKS 13 58 24.0
CLL *e*SS SS 14 06 00.0 +19
CLL Collm 128.38 331 *e*PKIKP **PKiKP** **13 46 25.0 +1.7**
CLL *i* 13 46 30.2
DIVS Divibare 128.44 320 PKPdf **PKPdf** **13 46 22.5 -0.7**
FBE Freiberg 128.46 330 *e*PKPdf **PKiKP** **13 46 26.2 +2.7**
baz=49,slow=2.0
PBCC Pribram 128.90 328 *e*PKP **PKPdf** **13 46 24.1 +0.3**
PBCC *e*pPKP **sPKPdf** **13 46 30.7 +0.3**
CONA Conrad Observa 128.93 326 *eP* **PKiKP** **13 46 25.9 +1.2**
comp=Z,11nm,1.3s
NRDL Niedersach Rie 128.94 333 *e*PKPdf **PKiKP** **13 46 27.1 +2.8**
baz=49,slow=2.0
FNA Florina 128.96 315 PKIKP **PKPdf** **13 46 23.5 -0.7**
FNA Florina 128.96 315 **PKPdf** **13 46 23.5 -0.7**
TANN Tannenbergstha 129.22 330 *e*PKPdf **PKiKP** **13 46 27.4 +2.3**
baz=49,slow=2.0
GUNZ Gunzen 129.31 330 *e*PKPdf **PKiKP** **13 46 27.8 +2.5**
baz=49,slow=2.0
KHC Kasperske Hory 129.46 328 *e*PKIKP **PKiKP** **13 46 25.7 +0.1**
KHC *e* 13 46 32.7
KHC Kasperske Hory 129.46 328 *e*PKP **PKiKP** **13 46 25.7 +0.1**
KHC *e*pPKP **sPKPdf** **13 46 32.7 +1.2**
MOX Moxa 129.48 331 *e*PKPdf **PKiKP** **13 46 27.9 +2.3**
baz=49,slow=2.0
GEC2 GERESS Array S 129.56 328 *e*PKPdf **PKiKP** **13 46 28.1 +2.2**
baz=49,slow=2.0
GEC2 GERESS Array S 129.56 328 PKPdf **PKPdf** **13 46 25.3 +0.2**
GERES GERESS Array B 129.56 328 PKP **PKPdf** **13 46 25.5 +0.3**
comp=Z,2.8nm,0.8s,baz=90,slow=1.3,SNR=15
GERES GERESS Array B 129.56 328 PKIKP **PKPdf** **13 46 24.5 -0.7**
GERES GERESS Array B 129.56 328 **PKPdf** **13 46 24.5 -0.7**
MANZ Manzenberg 129.67 330 *e*PKPdf **PKiKP** **13 46 28.5 +2.5**
baz=49,slow=2.0
WET Wettzell 129.81 329 *e*PKPdf **PKiKP** **13 46 28.7 +2.4**
baz=49,slow=2.0
MOA Molln 129.86 326 P **PKiKP** **13 46 27.6 +1.1**
comp=Z,5.8nm,1.0s
LPAZ La Paz 129.87 121 PKP **PKiKP** **13 46 28.4 +0.3**
comp=Z,4.9nm,1.0s,baz=291,slow=1.7,SNR=9.8
LPAZ La Paz 129.87 121 PKIKP **PKPdf** **13 46 26.5 -0.8**
LPAZ La Paz 129.87 121 PKPdf **PKPdf** **13 46 26.5 -0.8**
IBBN Ibbenburen 130.09 334 *e*PKPdf **PKiKP** **13 46 29.4 +2.7**
baz=49,slow=2.0
SOKA Soboth 130.11 325 *i* P **PKiKP** **13 46 28.6 +1.6**
comp=Z,11nm,1.4s
UBBA Unterbreizbach 130.13 332 *e*PKPdf **PKiKP** **13 46 29.2 +2.5**
baz=49,slow=2.0
GRF Grafenberg Arr 130.30 330 *e*PKPdf **PKiKP** **13 46 29.7 +2.4**
baz=49,slow=2.0
OBKA Obir 130.48 325 *eP* **PKiKP** **13 46 29.0 +1.2**
comp=Z,9.4nm,1.2s
KBA Koelnbreinsper 130.82 326 *eP* **PKiKP** **13 46 29.2 +0.6**
comp=Z,1.9nm,0.7s
MYKA Terra Mystica 130.92 325 *eP* **PKiKP** **13 46 29.2 +0.6**
comp=Z,7.6nm,1.8s
WATA Walderalm 131.62 327 *eP* **PKiKP** **13 46 31.0 +0.8**
comp=Z,13nm,1.0s
WTTA Wattenberg 131.63 327 *eP* **PKiKP** **13 46 30.9 +0.7**
comp=Z,23nm,1.4s
MOTA Moosalm 131.86 328 *eP* **PKiKP** **13 46 30.5 -0.2**
comp=Z,9.7nm,1.0s
SQTA Sankt Quirin 131.88 327 *eP* **PKiKP** **13 46 30.4 -0.3**
comp=Z,11nm,1.3s
RETA Reutte 131.95 328 *eP* **PKiKP** **13 46 30.8 +0.1**
comp=Z,11nm,1.1s
CPUP Villa Florida 132.12 139 PKP **PKiKP** **13 46 31.4 -0.3**
comp=Z,4.4nm,0.9s,baz=234,slow=0.9,SNR=6.5
CPUP Villa Florida 132.12 139 PKIKP **PKPdf** **13 46 29.5 -1.1**
CPUP Villa Florida 132.12 139 **PKPdf** **13 46 29.5 -1.1**
DAVA Damuels 132.54 328 *eP* **PKPdf** **13 46 31.0 +0.1**
comp=Z,11nm,0.9s
SDV Santo Domingo 134.78 87 **PKPdf** **13 46 34.5 -1.7**
BNI Bardonecchia 135.69 328 PKIKP **PKiKP** **13 46 38.6 +0.2**
BNI Bardonecchia 135.69 328 PKPdf **PKiKP** **13 46 38.6 +0.2**
KEST Kesra 139.67 315 PKP **PKPdf** **13 46 44.3 -0.2**
comp=Z,4.3nm,0.8s,baz=153,slow=2.3,SNR=3.0
PBRG Braganca 144.41 337 *e*PKPdf **PKPdf** **13 46 52.8 +0.1**
PGAV Gavieira, Arco 144.85 338 *e*PKPdf **PKPdf** **13 46 53.6 +0.1**
ESBB Sonseca Array 144.96 331 PKPdf **PKPdf** **13 46 53.6 -0.1**
ESDC Sonseca Array 144.97 331 PKP **PKPdf** **13 46 53.6 -0.1**
comp=Z,16nm,1.0s,baz=27,slow=3.1,SNR=36
ESDC Sonseca Array 144.97 331 **PKPab** **13 46 52.3 -0.6**
PCAB Cabril 144.99 338 *e*PKPdf **PKPdf** **13 46 53.3 -0.3**
MVO Moncorvo 145.07 336 *e*PKPdf **PKPdf** **13 46 53.9 0.0**
POLO Lamas de Olo 145.19 337 *e*PKPdf **PKPdf** **13 46 54.1 0.0**
PAB San Pablo 145.25 332 PKIKP **PKPdf** **13 46 54.3 +0.1**
PAB San Pablo 145.25 332 **PKPdf** **13 46 54.3 +0.1**
PVIS Viseu 145.79 337 *e*PKPab **PKiKP** **13 46 57.7 -1.5**
BDFB Brasilia 145.80 137 PKPbc **PKPab** **13 46 56.8 +0.2**
comp=Z,36nm,1.1s,baz=200,slow=2.1,SNR=16
BDFB Brasilia 145.80 137 PKP2 **PKPdf** **13 46 55.7 -0.2**
BDFB Brasilia 145.80 137 PKPdf **PKPdf** **13 46 55.7 -0.2**
MTE Manteigas 145.93 336 *e*PKPab **PKPab** **13 46 56.9 +0.5**
MTE Manteigas 145.93 336 PKPdf **PKPdf** **13 46 55.0 -0.3**
PCBR Castelo Branco 146.38 336 *e*PKPab **PKPab** **13 46 58.8 +0.8**
PCAS Casmilo, Conde 146.60 337 *e*PKPab **PKPbc** **13 46 58.4 +0.5**
PMRV Marv??o 146.69 335 *e*PKPab **PKiKP** **13 47 00.4 -0.6**
PSBE So Bento 147.18 337 *e*PKPab **PKiKP** **13 47 01.7 -0.3**
PMTG Montargil 147.34 336 *e*PKPab **PKPbc** **13 47 00.5 +0.5**
EVO Evora 147.70 335 *e*PKPab **PKiKP** **13 47 03.1 0.0**
PBEJ Beja 148.07 334 *e*PKPab **PKiKP** **13 47 04.3 +0.4**
JBK JBK 148.24 324 P **PKPab** **13 47 05.4 -0.4**
SNR=21
TAM Tamanrasset 148.27 298 PKP2 **PKPbc** **13 47 03.2 0.0**
TAM Tamanrasset 148.27 298 **PKPbc** **13 47 03.2 0.0**

PNCL	**Nicolau / Gran**	**148.27**	**335**	*e*PKPab	**PKPbc**	**13 47 03.4**	**+0.8**
PCVE	**Castro Verde**	**148.47**	**334**	*e*PKPab	**PKiKP**	**13 47 04.3**	**-0.4**
PVAQ	**Vaqueiros**	**148.52**	**333**	P	**PKPab**	**13 47 06.2**	**-0.3**
	SNR=7.2						
PVAQ	**Vaqueiros**	**148.52**	**333**	*e*PKPab	**PKPab**	**13 47 05.9**	**-0.7**
PVAQ	**Vaqueiros**	**148.52**	**333**	PKPab	**PKiKP**	**13 47 04.8**	**0.0**
PTEO	**Sao Teotonio**	**148.84**	**335**	*e*PKPdf	**PKPdf**	**13 47 00.8**	**+0.6**
PTEO	**Sao Teotonio**	**148.84**	**335**	*e*PKPab	**PKPab**	**13 47 06.9**	**-0.9**
FIGM	**Figuig**	**148.92**	**319**	P	**PKiKP**	**13 47 06.2**	**+0.2**
	SNR=17						
MORF	**Marmolete**	**149.01**	**335**	*e*PKPbc	**PKiKP**	**13 47 06.9**	**+1.0**
PFVI	**Vila Bisbo**	**149.23**	**335**		**PKPbc**	**13 47 05.6**	**+0.5**
MDT	**Midelt**	**150.51**	**324**	P	**PKiKP**	**13 47 09.2**	**0.0**
	SNR=13						
ZHG	**ZHG**	**151.17**	**327**	P	**PKiKP**	**13 47 10.8**	**+0.3**
	SNR=14						
TOA0	**Torodi Ar. Sit**	**153.85**	**280**	PKPdf	**PKPdf**	**13 47 06.6**	**-1.8**
TORD	**Torodi Ar. Bea**	**153.85**	**280**	PKP	**PKPdf**	**13 47 08.4**	**-0.1**
	comp=Z,2.5nm,1.0s,baz=21,slow=1.6,SNR=9.0						
TORD				PKPbc	**sPKPdf**	**13 47 15.7**	**+0.7**
	comp=Z,5.4nm,0.9s,baz=51,slow=1.8,SNR=16						
TORD				PP	**PP**	**13 51 00.9**	**-3.2**
	comp=Z,1.4nm,1.0s,baz=48,slow=4.5,SNR=3.5						
TORD	**Torodi Ar. Bea**	**153.85**	**280**		**PKPdf**	**13 47 06.4**	**-2.0**
KOWA	**Kowa**	**159.18**	**285**	PKPab	**PKPab**	**13 47 52.0**	**-0.3**
KIC	**Kosan Boka**	**159.86**	**262**	*e*PKP2	**PKPab**	**13 48 01.7**	**+6.3**
	comp=Z,68nm,1.4s						
LIC	**Lamto**	**160.11**	**261**	*e*PKP2	**PKPab**	**13 48 02.8**	**+6.3**
	comp=Z,22nm,1.1s						
TIC	**Toumodi**	**160.19**	**262**	*e*PKP2	**PKPab**	**13 48 02.3**	**+5.5**

*IDC **17** 13:32:27.4±1.5, 9.68S×155.04E, h0km, mb4.1/5, mb1 4.3/6, mb1mx3.8/42, mbtmp4.1/6, ML3.6/1, Error ellipse: s-maj=41.8km s-min=28.0km az=135.0*
*NEIC **17** 13:32:32.7±1.4, 10.1S±0.2×154.8E±0.1, h15km±6km, mb4.3/9, Error ellipse: s-maj=30.3km s-min=12.3km az=156.0*

ISC 17 13:32:33.9±1.0, 9.9S±0.2×154.8E±0.1, h35km, n18, σ1§25/18, mb4.0/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.10**	**86**	Pn	**Pn**	**13 33 49.9**	**+2.0**
EIDS	**Eidsvold**	**15.82**	**192**	Pn	**Pn**	**13 36 13.4**	**-0.7**
EIDS				IAmb	IAmb	13 36 38.6	
	comp=Z,29nm,1.3s						
DZM	**Mont Dzumac**	**16.50**	**139**	Pn	**Pn**	**13 36 22.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=332,slow=15,SNR=7.4						
DZM	**Mont Dzumac**	**16.50**	**139**	Pn	**Pn**	**13 36 20.5**	**-2.4**
DZM				IAmb	IAmb	13 36 23.2	
	comp=Z,13nm,1.0s						
WR0	**Warramunga Arr**	**21.97**	**241**	P	**P**	**13 37 25.2**	**+0.2**
WB0	**Warramunga Arr**	**22.02**	**241**	P	**P**	**13 37 25.6**	**0.0**
WB0				IAmb	IAmb	13 37 51.1	
	comp=Z,18nm,1.2s						
WB2	**Warramunga Arr**	**22.13**	**241**	P	**P**	**13 37 26.9**	**+0.2**
WB2				IAmb	IAmb	13 37 43.3	
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**22.14**	**241**	P	**P**	**13 37 27.8**	**+1.0**
	comp=Z,2.4nm,0.6s,baz=69,slow=9.9,SNR=8.2						
WRA	**Warramunga Arr**	**22.14**	**241**	P	**P**	**13 37 27.4**	**+0.6**
AS31	**Alice Springs**	**24.21**	**233**	P	**P**	**13 37 47.6**	**+0.1**
ASAR	**Alice Springs**	**24.21**	**233**	P	**P**	**13 37 47.5**	**0.0**
	comp=Z,4.0nm,0.8s,baz=61,slow=10,SNR=10						
STKA	**Stephens Creek**	**25.09**	**207**	P	**P**	**13 37 56.9**	**+1.6**
	comp=Z,8.9nm,0.9s,baz=36,slow=15,SNR=7.2						
STKA	**Stephens Creek**	**25.09**	**207**	P	**P**	**13 37 55.4**	**+0.1**
BBOO	**Buckleboo**	**28.64**	**214**	P	**P**	**13 38 28.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**29.42**	**251**	P	**P**	**13 38 35.1**	**+0.7**
	comp=Z,2.7nm,0.9s,baz=82,slow=7.1,SNR=1.4						
FITZ	**Fitzroy Crossi**	**29.42**	**251**	P	**P**	**13 38 34.7**	**+0.3**
ILAR	**Eielson Array**	**86.10**	**21**	P	**P**	**13 45 08.4**	**-2.5**
	comp=Z,0.9nm,0.9s,baz=250,slow=5.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**153.45**	**280**	PKPbc	**PKiKP**	**13 52 31.0**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=91,slow=2.5,SNR=3.1						

*IDC **17** 13:34:11.5±0.4, 19.51N×120.48E, h0km, mb4.7/36, mb1 4.8/37, mb1mx4.7/52, mbtmp4.7/37, ML3.9/1, MS4.4/7, Ms1 4.4/7, ms1mx3.8/60, Error ellipse: s-maj=15.1km s-min=8.5km az=74.0*
*NEIC **17** 13:34:11.9±1.8, 19.54N±0.06×120.27E±0.08, h10km±1km, mb5.1/155, Error ellipse: s-maj=12.3km s-min=9.9km az=291.0*
*MOS **17** 13:34:13.4±1.4, 19.45N×120.34E, h30km, mb5.3/65, MS4.5/7, Error ellipse: s-maj=8.7km s-min=5.3km az=110.8*
*GCMT **17** 13:34:13.9±0.2, 19.52N±0.02×120.31E±0.02, h12km, MW5.0/110, Moment Tensor Solution. s49,c62; s110,c173; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-4.51±.11; Mθθ1.31±.10; Mϕϕ3.20±.11; Mrθ0.53±.37; Mθϕ1.44±.09; Mrϕ0.31±.36; Best double couple: Mo4.28500×10¹⁶ NP1:ϕs25.00000°, δ42.00000°, λ-95.00000°. NP2:ϕs212.00000°, δ49.00000°, λ-85.00000°. Principal axes: T 4.0090, Plg3.0000°, Azm299.0000°; N 0.5520, Plg4.0000°, Azm29.0000°; P -4.5610, Plg85.0000°, Azm164.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MAN **17** 13:34:13.9, 19.57N×120.59E, h15km, mb5.8, ML4.8, MS5.2*
*BJI **17** 13:34:13.6±0.0, 19.75N×120.28E, h10km, mB5.3/52, mb4.8/64, Ms5.0/70, Ms7 4.8/68*
*KLM **17** 13:34:24.0, 19.77N×120.87E, h101km, mb5.3*

ISC 17 13:34:14.7±0.2, 19.50N±0.03×120.35E±0.04, h23km, n535, σ1§76/502, mb5.1/168, MS4.6/27, 22C-15D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**1.57**	**176**	⇓*e*P	**Pn**	**13 34 40.9**	**-0.3**
CVP	**Callao Caves**	**2.27**	**142**	⇑P	**Pn**	**13 34 51.0**	**+0.2**
CVP				*i* S	**Sn**	**13 35 18.6**	**+0.5**
TWG	**Pinlang**	**3.37**	**11**		**Pn**	**13 35 03.8**	**-2.2**
TPUB	**Ta-pu**	**3.79**	**4**		**Pn**	**13 35 09.2**	**-2.6**
YULB	**Yu-li**	**3.97**	**13**		**Pn**	**13 35 11.7**	**-2.5**
SSLB	**Suanglung**	**4.30**	**7**		**Pn**	**13 35 16.7**	**-2.1**
NACB	**Ninganchiao**	**4.79**	**14**		**Pn**	**13 35 23.3**	**-2.2**
YHNB	**Yeheng**	**5.23**	**10**	Pn	**Pn**	**13 35 30.7**	**-0.9**
KNMB	**Chin-men Tao**	**5.26**	**340**		**Pn**	**13 35 29.1**	**-2.9**
TGY	**Tagaytay City**	**5.40**	**174**	Pn	**Pn**	**13 35 37.4**	**+3.5**
	4.4nm,0.3s,baz=258,slow=7.7,SNR=4.3						
TGY				Sn	**Sn**	**13 36 37.2**	**+1.8**
	baz=1.7,slow=7.2,SNR=3.8						
TGY				LR	LR	13 38 03.0	
	comp=Z,2µm,20.7s,baz=23,slow=43						
YOJ	**Yonaguni jima**	**5.52**	**26**	P	**Pn**	**13 35 34.3**	**-1.2**
YOJ	**Yonaguni jima**	**5.52**	**26**	Pn	**Pn**	**13 35 34.3**	**-1.2**
TATO	**Taipei**	**5.55**	**11**	Pn	**Pn**	**13 35 33.5**	**-2.4**
QZH	**Quanzhou**	**5.66**	**344**	*e*Pn	**Pn**	**13 35 35.1**	**-2.2**
QZH				Sn	**Sn**	**13 36 38.1**	**-3.5**
QZH				LR	LR		
	comp=N,5µm,9.8s						
QZH				LR	LR		
	comp=E,6µm,9.0s						
QZH				LR	LR		
	comp=Z,8µm,10.2s						
PGP	**Puerto Galera**	**5.99**	**174**	⇑*e*P	**Pb**	**13 35 60.0**	**+1.4**
HKPS	**Hong Kong Po S**	**6.43**	**297**		**Pn**	**13 35 45.9**	**-2.0**
MCO	**Taipa Grande**	**6.87**	**293**	P	**Pn**	**13 35 53.0**	**-1.0**
QIZ	**Qiongzhong**	**9.93**	**269**	pmax	pmax		
	comp=Z,350nm,2.9s						
QIZ	**Qiongzhong**	**9.93**	**269**	P	**Pn**	**13 36 34.9**	**-1.2**
QIZ				S	**Sn**	**13 38 24.1**	**-2.9**
QIZ				pmax	pmax		
	comp=Z,29nm,0.7s						
QIZ				LR	LR		
	comp=Z,3µm,14.3s						
QIZ				LR	LR		
	comp=Z,2µm,21.6s						
QIZ				LR	LR		
	comp=Z,4µm,10.4s						
QIZ	**Qiongzhong**	**9.93**	**269**	P	**Pn**	**13 36 33.8**	**-2.3**
QIZ	**Qiongzhong**	**9.93**	**269**	P	**Pn**	**13 36 35.0**	**-1.2**
SSE	**Sheshan**	**11.57**	**4**	P	**Pn**	**13 36 57.8**	**-0.7**
SSE				S	**Sn**	**13 39 09.6**	**+2.6**
SSE				pmax	pmax		
	comp=Z,29nm,0.7s						
SSE				pmax	pmax		
	comp=Z,260nm,4.5s						
SSE				LR	LR		
	comp=Z,1µm,13.9s						
SSE				LR	LR		
	comp=Z,1µm,13.5s						
NJ2	**Nanjing**	**12.57**	**354**	⇑P	**Pn**	**13 37 11.4**	**-0.7**
NJ2				S	**Sn**	**13 39 36.9**	**+5.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				LR	LR		
	comp=Z,3µm,10.9s						
NJ2				LR	LR		
	comp=Z,4µm,12.8s						
NJ2				LR	LR		
	comp=Z,3µm,11.8s						
DAV	**Davao City (W)**	**13.36**	**157**	LR	LR	13 43 16.0	
	comp=Z,3µm,21.5s,baz=352,slow=41						
MYLDM	**Lahad Datu**	**14.35**	**187**	Pn	**Pn**	**13 37 35.9**	**-0.6**
GYA	**Guiyang**	**14.37**	**301**	⇑P	**Pn**	**13 37 36.8**	**-0.1**
GYA				S	**Sn**	**13 40 15.4**	**-0.3**
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
GYA				pmax	pmax		
	comp=Z,300nm,3.8s						
GYA				LR	LR		
	comp=Z,2µm,11.4s						
GYA				LR	LR		
	comp=Z,3µm,11.6s						
GYA				LR	LR		
	comp=Z,4µm,11.5s						
JSU	**Suzuyama**	**15.03**	**35**	P	**P**	**13 37 50.9**	**0.0**
JSU				IAmb	IAmb	13 37 54.9	
	comp=Z,92nm,1.4s						
SPMM	**Sapulut**	**15.18**	**195**	P	P	13 38 00.0	+7.3
NONG	**Nongkai**	**16.35**	**268**	P	**P**	**13 38 10.0**	**+4.3**
	comp=Z,6µmcomp=Z,115nm,1.1s						
JNU	**Nakatsue**	**16.51**	**33**	Pn	**P**	**13 38 07.5**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=208,slow=5.4,SNR=8.4						
KHON	**Khonkaen**	**16.97**	**262**	P	**P**	**13 38 16.3**	**+3.8**
	comp=Z,4µmcomp=Z,74nm,1.2s						
JTU	**Tsushima**	**16.98**	**26**	P	**Pn**	**13 38 10.9**	**+0.1**
JTU				IAmb	IAmb	13 38 23.4	
	comp=Z,169nm,1.5s						
KMI	**Kunming**	**17.22**	**292**	⇓*e*P	**P**	**13 38 18.5**	**+3.0**
KMI				pmax	pmax		
	comp=Z,41nm,1.7s						
KMI				pmax	pmax		
	comp=Z,430nm,3.9s						
KMI				LR	LR		
	comp=Z,4µm,11.6s						
KMI				LR	LR		
	comp=Z,4µm,13.3s						
KMI				LR	LR		
	comp=Z,3µm,14.1s						
XAN	**Xi'an**	**17.69**	**327**	P	**Pn**	**13 38 19.5**	**-0.2**
XAN				pmax	pmax		
	comp=Z,55nm,2.0s						
XAN				pmax	pmax		
	comp=Z,1µm,5.3s						
XAN				LR	LR		
	comp=Z,2µm,13.0s						
XAN				LR	LR		
	comp=Z,3µm,12.2s						
XAN				LR	LR		
	comp=Z,3µm,11.2s						
XAN	**Xi'an**	**17.69**	**327**	P	**Pn**	**13 38 17.7**	**-2.0**
XAN				pmax	pmax		
	comp=Z,114nm,1.5s						
XAN	**Xi'an**	**17.69**	**327**		**Pn**	**13 38 17.7**	**-2.0**
CHAI	**Chaiyaphum**	**17.86**	**261**	P	**P**	**13 38 27.0**	**+4.7**
	comp=Z,624nmcomp=Z,45nm,1.4s						
SRAK	**Srakaew**	**18.35**	**256**	P	**Pn**	**13 38 29.7**	**+1.8**
MNI	**Manado**	**18.48**	**166**	P	**Pn**	**13 38 34.3**	**+4.9**
MNI				pmax	pmax		
	comp=Z,90nm,0.9s						
JMN	**Monobe**	**18.60**	**38**	P	**P**	**13 38 28.6**	**-1.9**
SBUM	**Sibu**	**18.72**	**206**		**P**	**13 38 31.5**	**-0.3**
CD2	**Chengdu**	**18.80**	**310**	*e*P	**P**	**13 38 32.3**	**-0.4**
CD2				pmax	pmax		
	comp=Z,60nm,1.5s						
CD2				pmax	pmax		
	comp=Z,1µm,8.4s						
CD2				LR	LR		
	comp=Z,4µm,8.5s						
CD2				LR	LR		
	comp=Z,4µm,10.5s						
CD2				LR	LR		
	comp=Z,5µm,10.5s						
GTOI	**Gorontalo**	**18.93**	**172**	P	**P**	**13 38 33.9**	**-0.2**
	comp=Z,22nm,1.1s						
MRSI	**Marisa**	**18.97**	**175**	P	**Pn**	**13 38 37.4**	**+2.1**
	comp=Z,882nmcomp=Z,76nm,1.1s						
KSAR	**Wonju Array Be**	**19.05**	**19**	P	**P**	**13 38 32.0**	**-3.3**
KSAR	**Wonju Array Be**	**19.05**	**19**	P	**P**	**13 38 32.0**	**-3.3**
MPSI	**Mapaga**	**19.05**	**181**	P	**Pn**	**13 38 38.1**	**+1.8**
	comp=Z,594nmcomp=Z,30nm,1.1s						
PHIT	**Phitsanulok**	**19.06**	**266**	P	Pn	13 38 47.4	+11
	comp=Z,252nm,1.2s						
KSRS	**Korea Array**	**19.07**	**19**	P	**P**	**13 38 35.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=202,slow=11,SNR=17						
JHS	**Saijyo**	**19.13**	**34**	P	**P**	**13 38 35.0**	**-1.2**
PAYA	**Payao**	**19.32**	**273**	P	**Pn**	**13 38 43.7**	**+4.1**
	comp=Z,9µmcomp=Z,848nm,1.4s						
DL2	**Dalian**	**19.37**	**3**	P	**Pn**	**13 38 41.3**	**+1.3**
DL2				pmax	pmax		
	comp=Z,34nm,0.9s						
DL2				pmax	pmax		
	comp=Z,990nm,7.1s						
DL2				LR	LR		
	comp=Z,1µm,12.1s						
DL2				LR	LR		
	comp=Z,2µm,13.6s						
DL2				LR	LR		
	comp=Z,2µm,12.3s						
TIY	**Taiyuan**	**19.41**	**341**	*e*P	**Pn**	**13 38 42.9**	**+2.3**
TIY				pmax	pmax		
	comp=Z,50nm,0.5s						
TIY				LR	LR		
	comp=Z,2µm,12.6s						
TIY				LR	LR		
	comp=Z,820nm,11.4s						
TIY				LR	LR		
	comp=Z,2µm,13.0s						
LAMP	**Lampang**	**19.61**	**271**	P	Pn	13 38 50.8	+7.8
	comp=Z,478nmcomp=Z,28nm,0.8s						
SUKH	**Sukhothai**	**19.75**	**268**	P	**Pn**	**13 38 49.6**	**+4.9**
	comp=Z,48nm,1.3s						
TNTI	**Ternate**	**19.84**	**159**	P	**Pn**	**13 38 46.8**	**+1.0**
	comp=Z,984nmcomp=Z,40nm,1.8s						
TNTI	**Ternate**	**19.84**	**159**	P	**P**	**13 38 43.4**	**-0.7**
CM34	**Chiang Mai Arr**	**20.04**	**272**	P	Pn	13 38 49.0	+0.9
SMKI	**Samarinda**	**20.06**	**189**	P	Pn	13 38 59.0	+11
CM36	**Chiang Mai Arr**	**20.12**	**271**	P	Pn	13 38 58.0	+8.9
CM09	**Chiang Mai Arr**	**20.23**	**271**	P	Pn	13 38 55.0	+4.7
	comp=Z,302nmcomp=Z,24nm,1.5s						
CMMT	**Chiang Mai**	**20.23**	**272**	P	Pn	13 38 51.6	+1.2
	comp=Z,620nmcomp=Z,33nm,1.8s						
CM33	**Chiang Mai Arr**	**20.23**	**272**	P	Pn	13 38 51.0	+0.6
CHTO	**Chiang Mai**	**20.23**	**272**	P	Pn	13 38 51.0	+0.6
CHTO				pmax	pmax		
	comp=Z,40nm,1.8s						
CM04	**Chiang Mai Arr**	**20.24**	**270**	P	Pn	13 38 53.5	+2.9
	comp=Z,388nmcomp=Z,46nm,1.1s						
CM01	**Chiang Mai Arr**	**20.26**	**270**	P	Pn	13 38 56.0	+5.3
	comp=Z,40nm,1.1s						
CM02	**Chiang Mai Arr**	**20.27**	**271**	P	Pn	13 38 55.8	+5.0
	comp=Z,349nmcomp=Z,33nm,1.1s						
CM31	**Chiang Mai Arr**	**20.27**	**271**	P	Pn	13 38 56.2	+5.4
	comp=Z,9µmcomp=Z,662nm,1.6s						
CM31	**Chiang Mai Arr**	**20.27**	**271**	P	**P**	**13 38 46.9**	**-1.9**
CMAR	**Chiang Mai Arr**	**20.27**	**271**	P	Pn	13 38 51.0	+0.2
	comp=Z,29nm,1.1s,baz=78,slow=8.1,SNR=16						
CMAR				PcP	**PcP**	**13 43 03.6**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=54,slow=0.5,SNR=8.2						
CMAR				LR	LR	13 46 10.0	
	comp=Z,564nm,20.8s,baz=124,slow=35						
CMAR	**Chiang Mai Arr**	**20.27**	**271**	P	**P**	**13 38 47.0**	**-1.8**
CMAR	**Chiang Mai Arr**	**20.27**	**271**	P	**P**	**13 38 47.0**	**-1.8**
CM05	**Chiang Mai Arr**	**20.27**	**270**	P	Pn	13 38 56.3	+5.4
	comp=Z,313nmcomp=Z,31nm,1.1s						
CM15	**Chiang Mai Arr**	**20.29**	**271**	P	Pn	13 38 56.0	+5.0
	comp=Z,259nmcomp=Z,26nm,1.1s						
CM13	**Chiang Mai Arr**	**20.31**	**271**	P	Pn	13 38 56.4	+5.1
	comp=Z,351nmcomp=Z,32nm,1.1s						
UTHA	**Uthaitani**	**20.31**	**262**	P	Pn	13 38 55.4	+4.1
	comp=Z,749nmcomp=Z,83nm,1.4s						
APSI	**Ampana**	**20.32**	**176**	P	Pn	13 38 51.8	+0.4
	comp=Z,3µmcomp=Z,1µmcomp=Z,87nm,1.2s						
CM32	**Chiang Mai Arr**	**20.34**	**271**	P	Pn	13 38 56.0	+4.3
KSM	**Kuching**	**20.44**	**210**	P	**P**	**13 38 49.7**	**-0.9**
KSM				IAmb	IAmb	13 39 01.7	
	comp=Z,186nm,1.2s						
KSM	**Kuching**	**20.44**	**210**	P	Pn	13 39 01.0	+8.2
LUWI	**Luwuk**	**20.55**	**173**	P	Pn	13 38 55.8	+1.7
	comp=Z,4µmcomp=Z,6µmcomp=Z,112nm,1.4s						
LUWI	**Luwuk**	**20.55**	**173**	P	**P**	**13 38 51.5**	**-0.3**
LUWI				IAmb	IAmb	13 39 18.5	
	comp=Z,106nm,1.0s						
JWT	**Wachi**	**20.59**	**37**	P	**P**	**13 38 51.1**	**-1.1**
BJT	**Baijiatuau**	**20.76**	**351**	P	**P**	**13 38 53.9**	**0.0**
BJT				pmax	pmax		
	comp=Z,114nm,1.3s						
BJT	**Baijiatuau**	**20.76**	**351**		**P**	**13 38 53.9**	**0.0**
BJT				IAmb	IAmb	13 39 05.5	
	comp=Z,114nm,1.3s						
BJI	**Beijing**	**20.78**	**351**	P	Pn	13 38 55.4	-1.2
BJI				S	**S**	**13 42 47.6**	**+2.6**
BJI				pmax	pmax		
	comp=Z,60nm,0.9s						
BJI				pmax	pmax		
	comp=Z,510nm,3.5s						
BJI				LR	LR		
	comp=Z,2µm,10.6s						
BJI				LR	LR		
	comp=Z,1µm,13.3s						
BJI				LR	LR		
	comp=Z,520nm,12.3s						
BKB	**Balikpapan**	**20.91**	**190**	P	**P**	**13 38 53.3**	**-2.4**
PHET	**Kaeng Krachan**	**20.93**	**255**	P	Pn	13 39 02.0	+3.4
	comp=Z,832nmcomp=Z,83nm,1.1s						
MTKI	**Muara Teweh, K**	**21.01**	**195**	P	**P**	**13 39 02.2**	**+5.4**
	comp=Z,4µmcomp=Z,77nm,1.3s						
STKI	**Sintang**	**21.18**	**205**	P	**P**	**13 39 04.6**	**+5.9**
	comp=Z,38µmcomp=Z,32nm,0.4s						
MHMT	**Maesarieng**	**21.26**	**270**	P	P	13 39 09.0	+10
	comp=Z,1µmcomp=Z,103nm,1.4s						
JCJ	**Chichijima**	**21.41**	**65**	P	**P**	**13 39 01.7**	**+0.7**
INU	**Inuyama**	**21.59**	**40**	P	**P**	**13 39 02.9**	**+0.1**
INU				IAmb	IAmb	13 39 13.3	
	comp=Z,141nm,1.4s						
JGF	**Kuroka**	**21.96**	**40**	P	**P**	**13 39 06.7**	**-0.3**
JGF				IAmb	IAmb	13 39 34.1	
	comp=Z,64nm,1.0s						
LZH	**Lanzhou**	**21.99**	**322**	⇓P	**P**	**13 39 09.1**	**+1.7**
LZH				pP	pP	13 39 13.3	+0.5
LZH				sP	pwP	13 39 17.8	+0.1
LZH				SS	Sn	13 43 40.5	+20
LZH				pmax	pmax		
	comp=Z,65nm,1.5s						
LZH				pmax	pmax		
	comp=Z,780nm,8.1s						
LZH				LR	LR		
	comp=Z,3µm,11.4s						
LZH				LR	LR		
	comp=Z,3µm,11.9s						
LZH				LR	LR		
	comp=Z,3µm,12.5s						
JHJ2	**Mitsune**	**22.05**	**48**	P	**P**	**13 39 07.4**	**-0.5**
SANI	**Sanana**	**22.12**	**165**	P	**P**	**13 39 07.7**	**-1.0**
	comp=Z,40nm,0.9s						
TTSI	**Tana Toraja**	**22.41**	**181**	P	**P**	**13 39 16.2**	**+4.4**
	comp=Z,1µmcomp=Z,59nm,1.2s						
SNY	**Shenyang**	**22.43**	**6**	⇑P	**P**	**13 39 11.5**	**-0.3**
SNY				S	**S**	**13 43 17.3**	**+0.5**
SNY				pmax	pmax		
	comp=Z,20nm,0.7s						
SNY				pmax	pmax		
	comp=Z,240nm,4.8s						
SNY				LR	LR		
	comp=Z,1µm,12.0s						
SNY				LR	LR		
	comp=Z,2µm,12.2s						
SNY				LR	LR		
	comp=Z,2µm,12.2s						
HHC	**Hu-ho-hao-te**	**22.57**	**342**	*e*P	**P**	**13 39 13.3**	**-0.2**
HHC				SS	Sn	13 43 54.3	+21
HHC				pmax	pmax		
	comp=Z,32nm,0.7s						
HHC				pmax	pmax		
	comp=Z,560nm,4.7s						
HHC				LR	LR		
	comp=Z,3µm,10.2s						
HHC				LR	LR		
	comp=Z,1µm,10.6s						
HHC				LR	LR		
	comp=Z,2µm,10.6s						
BTO	**Baotou**	**22.82**	**339**	*e*P	**P**	**13 39 19.1**	**+3.0**
SIJI	**Sorong**	**22.90**	**151**	P	**P**	**13 39 16.0**	**-1.1**
	comp=Z,29nm,0.7s,baz=2.9,slow=5.6,SNR=24						
MAJO	**Matsushiro**	**23.10**	**39**	*i* P	**P**	**13 39 20.6**	**+1.6**
MAJO				pmax	pmax		
	comp=Z,51nm,1.3s						
MAJO	**Matsushiro**	**23.10**	**39**	P	**P**	**13 39 18.2**	**-0.8**
MAT	**Matsushiro**	**23.10**	**39**	P	**P**	**13 39 19.4**	**+0.4**
MAT				S	**S**	**13 43 30.8**	**+1.9**
MJAR	**Matsushiro Arr**	**23.10**	**39**	P	**P**	**13 39 19.9**	**+0.9**
	comp=Z,23nm,0.9s,baz=244,slow=11,SNR=9.2						
MJAR	**Matsushiro Arr**	**23.10**	**39**	P	**P**	**13 39 18.3**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,22nm,1.1s						
MJAR	**Matsushiro Arr**	**23.10**	**39**	P	**P**	**13 39 18.3**	**-0.7**
TRTT	**Trang**	**23.15**	**243**	P	P	13 39 33.0	+13
	comp=Z,37nm,0.9s						
SPSI	**Sidrap Palu**	**23.32**	**181**	P	**P**	**13 39 23.3**	**+2.0**
	comp=Z,3µmcomp=Z,2µmcomp=Z,186nm,1.2s						
SURT	**Suratani**	**23.34**	**246**	P	P	13 39 34.5	+13
BBKI	**Banjar Baru**	**23.45**	**194**	P	**P**	**13 39 24.3**	**+1.7**
	comp=Z,2µmcomp=Z,130nm,1.4s						
NLAI	**Namlea**	**23.55**	**163**	P	**P**	**13 39 26.5**	**+2.9**
	comp=Z,2µmcomp=Z,172nm,1.1s						
PBKI	**Pangkalan Bun**	**23.66**	**202**	P	**P**	**13 39 29.0**	**+4.4**
	comp=Z,3µmcomp=Z,255nm,1.2s						
BNSI	**Bone**	**23.75**	**181**	P	**P**	**13 39 25.6**	**+0.1**
	comp=Z,2µmcomp=Z,109nm,1.4s						
KULM	**Kulim**	**23.82**	**236**	P	**P**	**13 39 23.5**	**-2.7**
KULM				IAmb	IAmb	13 39 37.2	
	comp=Z,94nm,1.3s						
KULM	**Kulim**	**23.82**	**236**	P	P	13 39 37.0	+11
MYKOM	**Kota Tinggi**	**23.

MDJ sP sP 13 39 56.8 +0.8
MDJ S **S** **13 44 21.0 +2.6**
MDJ PcS **PcS** **13 46 54.8 -0.2**
MDJ ScS **ScS** **13 50 42.6 +0.2**
MDJ pmax pmax
comp=Z,64nm,0.7s
MDJ pmax pmax
comp=Z,290nm,7.0s
MDJ LR LR
comp=Z,1µm,13.4s
MDJ LR LR
comp=Z,930nm,12.3s
MDJ LR LR
comp=Z,2µm,14.8s
MDJ Mudanjiang 26.20 15 P **P** **13 39 46.4 -1.2**
MDJ IAmb IAmb 13 39 49.1
comp=Z,56nm,1.0s
USA0B Ussuriysk Arra 26.48 19 P **P** **13 39 48.6 -1.5**
USA0B pmax pmax
comp=Z,13nm,0.9s
USA0B Ussuriysk Arra 26.48 19 P **P** **13 39 48.6 -1.5**
USRK Ussuriysk Ar. 26.48 19 P **P** **13 39 49.9 -0.3**
comp=Z,6.4nm,0.7s,baz=204,slow=7.3,SNR=11
USRK Ussuriysk Ar. 26.48 19 P **P** **13 39 48.7 -1.4**
USRK Ussuriysk Ar. 26.48 19 P **P** **13 39 48.7 -1.4**
GTA Gaotai 26.59 323 ⇓P **P** **13 39 51.8 +0.4**
GTA pP pP 13 39 56.5 -0.6
GTA sP sP 13 39 59.1 -0.4
GTA PcP **PcP** **13 43 16.4 +1.0**
GTA S **S** **13 44 27.6 +2.6**
GTA sS sS 13 44 34.4 +0.1
GTA pmax pmax
comp=Z,6.0nm,1.5s
GTA pmax pmax
comp=Z,370nm,8.0s
GTA LR LR
comp=Z,2µm,10.5s
GTA LR LR
comp=Z,2µm,13.1s
GTA LR LR
comp=Z,2µm,10.9s
PSI Prapat 26.72 234 P **P** **13 39 51.2 -1.5**
PSI pmax pmax
comp=Z,67nm,1.2s
RPSI Rantau Prapat 26.79 234 P **P** **13 39 51.2 -2.0**
RPSI IAmb IAmb 13 40 03.3
comp=Z,66nm,1.2s
BKNI Bangkinang 26.86 227 P **P** **13 39 58.3 +4.5**
comp=Z,138nm,1.0s
BKNI Bangkinang 26.86 227 P **P** **13 39 51.7 -2.1**
SHL Shillong 26.94 288 P **P** **13 39 52.3 -2.4**
SHL pmax pmax
comp=Z,78nm,1.4s
SHL Shillong 26.94 288 P **P** **13 39 52.3 -2.4**
SHL IAmb IAmb 13 40 05.0
comp=Z,78nm,1.4s
GRJI Gresik 27.37 197 P P 13 40 09.8 +11
TBJI Tambak Boyo 27.46 199 P P 13 40 12.6 +13
SDSI Sungai Dareh 27.52 225 P **P** **13 40 04.6 +4.9**
comp=Z,1µmcomp=Z,12nm,0.9s
MNSI Mandailing Nat 27.56 230 P P 13 40 09.6 +9.5
JTM Tenmabayashi 27.64 35 P **P** **13 39 57.2 -3.4**
SRBI Singaraja 27.87 191 P **P** **13 40 07.3 +4.4**
comp=Z,40nm,1.0s
MMRI Maumere 28.02 176 P **P** **13 40 03.8 -0.4**
EDFI Ende, Flores 28.10 177 P **P** **13 40 07.2 +2.1**
comp=Z,697nmcomp=Z,62nm,1.4s
SMRI Semarang 28.13 201 P **P** **13 40 09.7 +4.5**
comp=Z,122nm,1.0s
SMRI Semarang 28.13 201 P **P** **13 40 04.9 -0.3**
PLAI Plampang 28.26 185 P P 13 40 17.0 +11
TWSI Taliwang, Sumb 28.27 187 P P 13 40 19.7 +13
LSA Lhasa 28.35 297 P **P** **13 40 05.4 -2.3**
LSA pmax pmax
comp=Z,40nm,1.1s
LSA Lhasa 28.35 297 P **P** **13 40 05.4 -2.3**
LSA IAmb IAmb 13 40 19.7
comp=Z,40nm,1.1s
JAGI Jajag, Banyuwa 28.46 193 P **P** **13 40 07.3 -0.7**
KLSI 28.53 214 P P 13 40 14.1 +5.3
comp=Z,21nm,1.6s
PWJI Pagerwojo 28.61 198 P **P** **13 40 12.4 +2.9**
comp=Z,114nm,1.1s
MDSI Maura Dua 28.66 215 P P 13 40 15.9 +6.0
comp=Z,20nm,1.1s
GSI Gunungsitoli 28.71 234 P **P** **13 40 07.0 -3.4**
WOJI Wonogiri, Jawa 28.71 200 P **P** **13 40 13.8 +3.5**
comp=Z,2µmcomp=Z,140nm,1.4s
KSI Kapahiang 28.88 219 P P 13 40 23.1 +11
KPJI Karang Pucung 28.94 204 P P 13 40 18.4 +6.0
comp=Z,1µmcomp=Z,134nm,1.5s
LEM Lembang 29.01 207 P **P** **13 40 15.9 +2.7**
comp=Z,9.0nm,0.3s,baz=345,slow=23,SNR=1.8
SOEI Soe 29.33 172 P P 13 40 26.3 +10
SOEI Soe 29.33 172 P **P** **13 40 14.7 -1.3**
SOEI IAmb IAmb 13 40 33.4
comp=Z,53nm,1.0s
SISI Saibi 29.39 228 P P 13 40 29.8 +13
ERM Erimo 29.62 36 P **P** **13 40 18.5 +0.3**
ERM pmax pmax
comp=Z,31nm,1.1s
ERM Erimo 29.62 36 P **P** **13 40 18.5 +0.3**
ERM IAmb IAmb 13 40 26.7
comp=Z,31nm,1.1s
BATI Baumata 29.70 173 P **P** **13 40 19.0 -0.2**
comp=Z,69nm,0.8s,baz=33,slow=0.9,SNR=12
HIA Hailar 29.70 359 *i* P **P** **13 40 17.5 -1.4**
HIA pmax pmax
comp=Z,9.0nm,0.8s
HIA Hailar 29.70 359 P **P** **13 40 17.9 -1.0**
ULN Ulaanbaatar 30.29 342 *ce* P **P** **13 40 25.5 +1.2**
ULN pmax pmax
comp=Z,38nm,2.1s
ULN Ulaanbaatar 30.29 342 P **P** **13 40 23.9 -0.3**
SONM Songino Array 30.45 341 P **P** **13 40 26.5 +0.8**
comp=Z,5.8nm,0.6s,baz=162,slow=10,SNR=9.6
SONM LR LR 13 52 58.9
comp=Z,783nm,19.8s,baz=160,slow=37
SONM Songino Array 30.45 341 P **P** **13 40 25.1 -0.6**
SONM pmax pmax
comp=Z,12nm,1.2s
SONM Songino Array 30.45 341 P **P** **13 40 25.1 -0.6**
ASAJ Asahikawa 30.79 32 P **P** **13 40 29.5 +1.0**
comp=Z,10nm,1.1s,baz=2.2,slow=17,SNR=2.4
KLR Kul'dur 31.04 15 P **P** **13 40 31.2 +0.5**
comp=Z,13nm,0.8s,baz=232,slow=6.8,SNR=18
KLR Kul'dur 31.04 15 *ce* P **P** **13 40 30.7 0.0**
KLR pmax pmax
comp=Z,32nm,1.0s
YSS Yuzh-Sakhalins 32.95 29 *i* P **P** **13 40 48.3 +0.9**
YSS pmax pmax
comp=Z,30nm,1.4s
MTN Manton Dam 33.85 161 P **P** **13 40 53.5 -2.1**
MTN IAmb IAmb 13 41 04.9
comp=Z,31nm,1.4s
ZEA Zeya 34.59 7 *e* P **P** **13 41 02.6 +1.0**
ZEA *e* 13 51 24.9
ZEA pmax pmax
comp=E,10.0nm,0.9s
ZEA pmax pmax
comp=Z,40nm,0.9s
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=N,100nm,5.4s
ZEA pmax pmax
comp=Z,200nm,8.7s
ZEA MLR MLR
comp=N,800nm,16.0s
ZEA MLR MLR
comp=Z,700nm,14.0s
TLY Talaya 34.69 342 P **P** **13 41 03.5 +0.8**
comp=Z,7.7nm,0.8s,baz=348,slow=10,SNR=2.6
TLY Talaya 34.69 342 *e* P **P** **13 41 03.8 +1.2**
TLY *e* 13 42 31.7
TLY *e* SS SS 13 48 47.1 -15
TLY pmax pmax
comp=Z,25nm,0.9s
TLY MLR MLR
comp=Z,2µm,11.0s
TLY Talaya 34.69 342 P **P** **13 40 59.8 -2.8**
MOY Mondy 35.52 339 *e* P **P** **13 41 12.3 +2.4**
KNRA Kununurra 35.92 166 P **P** **13 41 11.5 -2.0**
KNRA IAmb IAmb 13 41 15.2
comp=Z,50nm,1.3s

WMQ Urumqi 36.50 319 *e* P **P** **13 41 18.4 +0.1**
WMQ pP pP 13 41 24.0 -0.2
WMQ pmax pmax
comp=Z,26nm,1.3s
WMQ pmax pmax
comp=Z,380nm,4.1s
WMQ LR LR
comp=Z,1µm,18.3s
WMQ LR LR
comp=Z,2µm,15.3s
WMQ LR LR
comp=Z,2µm,17.7s
WMQ Urumqi 36.50 319 P **P** **13 41 14.6 -3.7**
WMQ pmax pmax
comp=Z,40nm,1.4s
WMQ Urumqi 36.50 319 P **P** **13 41 14.6 -3.7**
WMQ IAmb IAmb 13 41 40.0
comp=Z,40nm,1.4s
FITZ Fitzroy Crossi 37.72 172 P **P** **13 41 28.0 -0.8**
comp=Z,17nm,0.8s,baz=351,slow=5.9,SNR=22
FITZ Fitzroy Crossi 37.72 172 P **P** **13 41 26.7 -2.1**
FITZ IAmb IAmb 13 41 30.8
comp=Z,40nm,1.1s
PATS Pohnpei 38.95 104 P **P** **13 41 37.5 -1.8**
PMG Port Moresby 39.02 135 P **P** **13 41 39.2 -0.6**
comp=Z,8.0nm,0.7s,baz=5.7,slow=9.5,SNR=2.8
PMG Port Moresby 39.02 135 *ce* P **P** **13 41 40.4 +0.6**
PMG pmax pmax
comp=Z,19nm,0.8s
PMG Port Moresby 39.02 135 P **P** **13 41 37.3 -2.5**
KRVT Keravat (AS076 39.12 124 LR LR 13 54 43.1
comp=Z,1µm,21.0s,baz=261,slow=32
ZSN Zaisan 40.09 322 *e* P **P** **13 41 49.3 +0.8**
comp=Z,6.8nm,1.5s,baz=322
ZSN LR LR 13 59 44.0
comp=Z,175nm,12.4s,baz=322
ZSN Zaisan 40.09 322 *e* P **P** **13 41 49.2 +0.8**
ZSN pmax pmax
comp=Z,7.0nm,1.5s
ZSN MLR MLR
comp=Z,175nm,12.0s
COEN Coen 40.13 144 P **P** **13 41 47.4 -1.6**
PSA00 Pilbara Seismi 40.82 181 P **P** **13 41 53.5 -1.2**
PSA00 IAmb IAmb 13 42 05.0
comp=Z,55nm,1.3s
PSA00 Pilbara Seismi 40.82 181 P **P** **13 41 53.0 -1.6**
PSA00 IAmb IAmb 13 42 10.7
comp=Z,26nm,1.2s
MK31 Makanchi Array 41.28 320 *ce* P **P** **13 41 59.7 +1.4**
MK31 Makanchi Array 41.28 320 P **P** **13 41 58.4 +0.1**
MKAR Makanchi Array 41.28 320 P **P** **13 41 59.9 +1.6**
comp=Z,12nm,0.8s,baz=116,slow=8.6,SNR=26
MKAR Makanchi Array 41.28 320 P **P** **13 41 58.0 -0.3**
WB0 Warramunga Arr 41.38 160 P **P** **13 41 57.8 -1.5**
MAKZ Makanchi 41.48 320 P **P** **13 42 00.0 +0.1**
MAKZ pmax pmax
comp=Z,54nm,1.5s
MAKZ Makanchi 41.48 320 P **P** **13 42 00.0 +0.1**
MAKZ IAmb IAmb 13 42 21.0
comp=Z,54nm,1.4s
WRAB Tennant Creek 41.52 160 *ce* P **P** **13 41 59.3 -1.2**
WRAB pmax pmax
comp=Z,43nm,1.7s
WRAB Tennant Creek 41.52 160 P **P** **13 41 58.9 -1.6**
WRAB IAmb IAmb 13 42 11.0
comp=Z,46nm,1.4s
WRA Warramunga Arr 41.53 160 P **P** **13 41 59.2 -1.3**
comp=Z,8.1nm,0.6s,baz=343,slow=9.2,SNR=63
WRA PcP **PcP** **13 43 58.0 +0.2**
comp=Z,3.7nm,0.9s,baz=343,slow=3.0,SNR=2.6
WRA Warramunga Arr 41.53 160 P **P** **13 41 58.8 -1.7**
WRA 13 43 58.1
WRA Warramunga Arr 41.53 160 P **P** **13 41 58.8 -1.7**
WB2 Warramunga Arr 41.53 160 P **P** **13 41 58.5 -2.1**
WB2 IAmb IAmb 13 42 10.4
comp=Z,51nm,1.4s
WR0 Warramunga Arr 41.61 160 P **P** **13 41 59.2 -2.0**
PRZ Przheval'sk 42.07 312 P **P** **13 42 01.2 -3.8**
PRZ pmax pmax
comp=Z,60nm,1.3s
PRZ Przheval'sk 42.07 312 P **P** **13 42 01.2 -3.8**
PRZ IAmb IAmb 13 42 27.6
comp=Z,60nm,1.2s
SATY Saty 42.27 313 *e* P **P** **13 42 07.4 +0.9**
comp=Z,11nm,2.0s,baz=314
SATY Saty 42.27 313 *e* P **P** **13 42 07.4 +0.9**
SATY pmax pmax
comp=Z,11nm,2.0s
GIRL Giralia 42.31 188 P **P** **13 42 05.5 -1.3**
KSH Kashi 42.96 307 P **P** **13 42 16.8 +4.6**
KSH S **S** **13 48 41.4 +5.1**
KSH sS sS 13 48 55.3 +10
KSH pmax pmax
comp=Z,49nm,1.2s
KSH pmax pmax
comp=Z,480nm,6.3s
KSH LR LR
comp=Z,1µm,10.3s
KSH LR LR
comp=Z,1µm,14.8s
KSH LR LR
comp=Z,2µm,12.9s
TDK Taldyqorghan 42.97 316 *e* P **P** **13 42 12.6 +0.5**
baz=316
TDK LR LR 14 00 47.6
comp=Z,497nm,13.4s,baz=316
TDK Taldyqorghan 42.97 316 *e* P **P** **13 42 12.6 +0.5**
TDK MLR MLR
comp=Z,465nm,13.0s
YAK Yakutsk 42.99 6 P **P** **13 42 11.7 -0.2**
comp=Z,9.1nm,0.7s,baz=86,slow=0.9,SNR=2.5
YAK Yakutsk 42.99 6 *ce* P **P** **13 42 12.3 +0.4**
YAK pmax pmax
comp=Z,17nm,0.8s
YAK Yakutsk 42.99 6 P **P** **13 42 09.6 -2.3**
AAA Alma-Ata 43.34 313 *e* P **P** **13 42 16.1 +0.8**
baz=313
AAA Alma-Ata 43.34 313 *e* P **P** **13 42 16.0 +0.8**
H11S3 WAKE ISLAND Hy 43.72 83 T T 14 28 32.9
SNR=5.7
H11S1 WAKE ISLAND Hy 43.73 83 T T 14 27 57.8
SNR=8.7
H11N1 WAKE ISLAND Hy 43.73 82 T T 14 27 59.2
baz=278,slow=75,SNR=5.7
H11N2 WAKE ISLAND Hy 43.74 82 T T 14 27 57.6
baz=278,slow=75,SNR=4.4
H11S2 WAKE ISLAND Hy 43.74 83 T T 14 29 56.2
SNR=5.8
H11N3 WAKE ISLAND Hy 43.75 82 T T 14 27 59.4
baz=278,slow=75,SNR=3.8
ZAA0 Zalesovo Array 43.83 330 P **P** **13 42 17.2 -1.6**
ZALV Zalesovo Beam 43.83 330 P **P** **13 42 19.4 +0.7**
comp=Z,16nm,0.7s,baz=114,slow=7.8,SNR=36
ZALV Zalesovo Beam 43.83 330 P **P** **13 42 17.0 -1.8**
KUU Kurty 43.97 314 *e* P **P** **13 42 20.7 +0.6**
comp=Z,31nm,2.3s,baz=314
KUU LR LR 14 02 52.1
comp=Z,332nm,12.2s,baz=314
KUU Kurty 43.97 314 *e* P **P** **13 42 20.6 +0.5**
KUU pmax pmax
comp=Z,31nm,2.3s
KUU MLR MLR
comp=Z,332nm,12.0s
PETK Petropavlovsk- 44.20 32 P **P** **13 42 21.0 -0.9**
comp=Z,3.3nm,0.8s,baz=235,slow=5.1,SNR=2.6
PETK Petropavlovsk- 44.20 32 P **P** **13 42 20.3 -1.6**
PETK Petropavlovsk- 44.20 32 P **P** **13 42 20.3 -1.6**
AAK Ala-Archa 44.86 311 *i* P **P** **13 42 28.9 +1.4**
AAK pmax pmax
comp=Z,64nm,2.4s
AS31 Alice Springs 44.90 162 P **P** **13 42 26.9 -0.8**
ASAR Alice Springs 44.90 162 P **P** **13 42 27.4 -0.4**
comp=Z,13nm,0.8s,baz=342,slow=6.9,SNR=88
ASAR LR LR 14 03 14.5
comp=Z,285nm,19.6s,baz=7.0,slow=39
ASAR Alice Springs 44.90 162 P **P** **13 42 26.6 -1.1**
ASAR Alice Springs 44.90 162 P **P** **13 42 26.6 -1.1**
SGDS Sogindy 45.00 313 *e* P **P** **13 42 28.5 0.0**
baz=313
SGDS Sogindy 45.00 313 *e* P **P** **13 42 28.5 0.0**
KURK Kurchatov 45.27 323 *ce* P **P** **13 42 31.6 +1.2**
KURK pmax pmax
comp=Z,77nm,1.7s
KURK Kurchatov 45.27 323 P **P** **13 42 28.9 -1.5**
KURBB Kurchatov Arra 45.28 323 P **P** **13 42 31.7 +1.3**
comp=Z,24nm,0.7s,baz=122,slow=8.0,SNR=126

KURBB Kurchatov Arra 45.28 323 P **P** **13 42 30.8 +0.3**
BTLS Baital 45.89 314 *e* P **P** **13 42 35.8 +0.4**
comp=Z,5.4nm,2.3s,baz=315
BTLS Baital 45.89 314 *e* P **P** **13 42 35.7 +0.4**
BTLS pmax pmax
comp=Z,5.0nm,2.3s
CTA Charters Tower 46.82 146 P **P** **13 42 44.4 +1.5**
comp=Z,8.3nm,0.8s,baz=324,slow=9.0,SNR=10
CTAO Charters Tower 46.82 146 P **P** **13 42 43.1 +0.1**
CTAO pmax pmax
comp=Z,12nm,0.9s
CTAO Charters Tower 46.82 146 P **P** **13 42 43.1 +0.1**
CTAO IAmb IAmb 13 42 48.5
comp=Z,12nm,0.8s
BTK Batken 46.95 307 P **P** **13 42 41.1 -2.8**
BTK pmax pmax
comp=Z,25nm,1.3s
BTK Batken 46.95 307 P **P** **13 42 41.1 -2.8**
BTK IAmb IAmb 13 43 10.2
comp=Z,24nm,1.3s
DZA Taraz 47.18 311 *e* P **P** **13 42 47.0 +1.4**
baz=311
DZA Taraz 47.18 311 *e* P **P** **13 42 47.0 +1.4**
KBL Kabul 47.61 299 P **P** **13 42 49.1 -0.2**
KBL pmax pmax
comp=Z,31nm,1.2s
KBL Kabul 47.61 299 P **P** **13 42 49.1 -0.2**
KBL IAmb IAmb 13 43 10.9
comp=Z,31nm,1.2s
KK31 Karatay Array 47.81 311 P **P** **13 42 48.0 -2.5**
KK31 pmax pmax
comp=Z,25nm,1.3s
KK31 Karatay Array 47.81 311 P **P** **13 42 48.0 -2.5**
KK31 IAmb IAmb 13 43 11.6
comp=Z,24nm,1.3s
KKAR Karatay Array 47.81 311 P **P** **13 42 48.2 -2.3**
KKAR Karatay Array 47.81 311 P **P** **13 42 49.1 -1.4**
KKAR IAmb IAmb 13 43 11.6
comp=Z,24nm,1.3s
KKAR Karatay Array 47.81 311 P **P** **13 42 48.2 -2.3**
IUG Iuzhnay 47.95 310 *e* P **P** **13 42 53.2 +1.5**
baz=310
IUG Iuzhnay 47.95 310 *e* P **P** **13 42 53.2 +1.5**
CHGR Chuyangaron 47.98 305 P **P** **13 42 50.2 -1.8**
CHGR IAmb IAmb 13 43 12.6
comp=Z,24nm,0.9s
BRZS Berezniki 48.43 320 *e* P **P** **13 42 56.4 +1.2**
comp=Z,3.3nm,0.9s,baz=320
BRZS Berezniki 48.43 320 *e* P **P** **13 42 56.4 +1.2**
BRZS pmax pmax
comp=Z,3.0nm,0.9s
HNR Honiara 48.46 123 LR LR 14 00 13.6
comp=Z,524nm,21.6s,baz=292,slow=32
MORW Morawa 48.46 185 P **P** **13 42 55.0 -0.5**
SEY Seymchan 48.63 19 *i* P **P** **13 42 57.4 +1.0**
FORT Forrest 50.54 171 P **P** **13 43 11.5 +0.2**
BRVK Borovoye 50.95 323 *ce* P **P** **13 43 14.6 +0.4**
BRVK pmax pmax
comp=Z,9.0nm,0.7s
BRVK Borovoye 50.95 323 P **P** **13 43 13.2 -1.0**
BRVK IAmb IAmb 13 43 25.9
comp=Z,41nm,1.5s
NWAO Narrogin (SRO) 52.22 183 P **P** **13 43 23.7 -0.2**
NWAO pmax pmax
comp=Z,44nm,0.8s
NWAO Narrogin (SRO) 52.22 183 P **P** **13 43 23.7 -0.2**
NWAO Narrogin (SRO) 52.22 183 P **P** **13 43 23.7 -0.2**
NWAO IAmb IAmb 13 43 34.1
comp=Z,44nm,0.8s
TIXI Tiksi 52.39 3 *ce* P **P** **13 43 24.4 -0.3**
TIXI pmax pmax
comp=Z,113nm,2.5s
TIXI Tiksi 52.39 3 P **P** **13 43 23.8 -0.9**
EIDS Eidsvold 53.69 145 P **P** **13 43 33.6 -1.2**
EIDS IAmb IAmb 13 43 38.9
comp=Z,22nm,1.3s
NRIK Noril'sk 53.72 346 P **P** **13 43 35.3 +0.7**
comp=Z,9.9nm,0.7s,baz=126,slow=6.9,SNR=12
NRIK Noril'sk 53.72 346 *ce* P **P** **13 43 35.5 +0.9**
NRIK pmax pmax
comp=Z,50nm,2.3s
BBOO Buckleboo 54.14 164 P **P** **13 43 37.8 -0.3**
STKA Stephens Creek 55.00 158 P **P** **13 43 45.0 +0.7**
comp=Z,9.5nm,0.7s,baz=330,slow=8.8,SNR=13
STKA Stephens Creek 55.00 158 P **P** **13 43 42.2 -2.1**
STKA pmax pmax
comp=Z,7.0nm,1.1s
STKA Stephens Creek 55.00 158 P **P** **13 43 42.2 -2.1**
AB31 Akbulak array 56.23 317 *i* P **P** **13 43 53.7 +0.7**
ABKAR Akbulak array 56.23 317 P **P** **13 43 52.5 -0.6**
ABKAR Akbulak array 56.23 317 P **P** **13 43 52.8 -0.2**
GEYT Alibeck 56.59 303 P **P** **13 43 57.7 +1.9**
comp=Z,7.5nm,0.6s,baz=122,slow=1.9,SNR=5.9
GYA0B ALIBECK ARRAY 56.59 303 P **P** **13 43 55.0 -0.9**
SVE Sverdlovsk 57.40 326 *e* P **P** **13 44 02.8 +1.6**
SVE pmax pmax
comp=Z,43nm,1.3s
SANVU Saraoutou 57.71 124 P **P** **13 44 04.9 +1.0**
ARU Arti 58.42 325 *d i* P **P** **13 44 09.0 +0.6**
ARU 13 44 57.8
ARU 13 46 14.9
ARU S **S** **13 52 13.2 +3.2**
ARU SS **SS** **13 56 04.1 +2.0**
ARU pmax pmax
comp=Z,16nm,0.8s
ARU MLR MLR
comp=Z,352nm,14.0s
ARU Arti 58.42 325 P **P** **13 44 08.0 -0.4**
DZM Mont Dzumac 61.13 130 P **P** **13 44 27.9 +0.3**
comp=Z,9.0nm,0.9s,baz=336,slow=15,SNR=8.4
DZM Mont Dzumac 61.13 130 *e* LR LR 14 02 47.1
comp=Z,770nm,22.9s
DZM Mont Dzumac 61.13 130 P **P** **13 44 27.4 -0.2**
TOO Toolangi 61.51 157 P **P** **13 44 29.8 0.0**
TOO pmax pmax
comp=Z,77nm,1.4s
TOO Toolangi 61.51 157 P **P** **13 44 29.8 0.0**
KIRV Kirov 63.63 326 *i* P **P** **13 44 43.5 -0.2**
MAK Makhachkala 64.56 309 *e* P **P** **13 44 45.7 -4.4**
MAK *e* S **S** **13 53 24.2 -4.1**
MAK *e* SS **SS** **13 57 38.2 -0.5**
MAK MLR MLR
comp=Z,260nm,16.0s
GNI Garni 66.87 306 *i* P **P** **13 45 05.9 +0.6**
GNI pmax pmax
comp=Z,35nm,1.7s
GNI Garni 66.87 306 P **P** **13 45 03.6 -1.7**
ZEI Tsey 67.21 309 *e* P **P** **13 45 07.6 +0.1**
ZEI pmax pmax
comp=Z,31nm,1.3s
GOF Gofitskoye 67.60 312 ⇑ *e* P **P** **13 45 12.0 +2.4**
MSVF Nonsavu 67.67 119 P **P** **13 45 10.2 -0.3**
MSVF pmax pmax
comp=Z,59nm,1.4s
MSVF Nonsavu 67.67 119 P **P** **13 45 10.2 -0.3**
KBZ Khabaz 67.84 310 P **P** **13 45 12.4 +1.3**
comp=Z,11nm,0.9s,baz=236,slow=24,SNR=21
KBZ Khabaz 67.84 310 *ce* P **P** **13 45 11.2 +0.1**
KBZ pmax pmax
comp=Z,11nm,0.9s
KIV Kislovodsk 67.97 310 *e* P **P** **13 45 13.4 +1.3**
KIV *e* S **S** **13 54 13.2 +3.2**
KIV *e* SS **SS** **13 58 36.4 +4.5**
KIV pmax pmax
comp=Z,138nm,3.5s
KIV pmax pmax
comp=Z,122nm,1.0s
KIV MLR MLR
comp=Z,422nm,17.0s
KIV Kislovodsk 67.97 310 P **P** **13 45 11.1 -1.0**
VRH Novokhopyorsk 67.98 318 *e* P **P** **13 45 11.9 +0.1**
VRH *e* 13 45 21.3
VRH pmax pmax
comp=Z,40nm,0.8s
GEVA Gevas 68.40 304 P **P** **13 45 12.8 -2.2**
KLMR Klimovskoe 68.72 329 *e* P **P** **13 45 15.5 -0.8**
KLMR pmax pmax
comp=Z,47nm,1.5s
KLMR Klimovskoe 68.72 329 *e* P **P** **13 45 15.6 -0.8**
KLMR AMP 13 45 27.4
comp=Z,47nm,1.5s
RAYN Ar Rayn 69.02 288 P **P** **13 45 17.2 -1.8**
RAYN Ar Rayn 69.02 288 P **P** **13 45 17.2 -1.8**
RAYN IAmb IAmb 13 45 29.9

comp=Z,18nm,1.1s
TMCR Tamitsa 69.29 332 *e*P **P** **13 45 18.4 -1.4**
TMCR pmax pmax
comp=Z,42nm,1.4s
A21K Barrow 69.45 20 P **P** **13 45 22.2 +1.5**
baz=270
A21K Barrow 69.45 20 P **P** **13 45 20.4 -0.2**
VORD Divnogorie 69.52 318 *e*P **P** **13 45 21.5 0.0**
VORD *e* 13 45 30.5
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 69.58 318 *e*P **P** **13 45 21.7 -0.1**
VSR *e* 13 45 30.7
VSR pmax pmax
comp=Z,30nm,0.9s
LPSR Galich'ya Gora 69.59 320 *e*P **P** **13 45 21.8 0.0**
LPSR *e* 13 45 31.2
LPSR pmax pmax
comp=Z,40nm,0.7s
TTA Tatalina 69.95 29 P **P** **13 45 23.4 -0.6**
TTA pmax pmax
comp=Z,15nm,1.3s
TTA Tatalina 69.95 29 P **P** **13 45 23.4 -0.6**
TTA lAmb lAmb 13 45 39.4
comp=Z,15nm,1.3s
MOS Moscow 70.05 323 *e*P **P** **13 45 23.8 -0.8**
MOS *e* 13 45 33.6
MOS *e* 13 45 42.6
MOS pmax pmax
comp=Z,48nm,0.7s
KOPT Kop Dagi 70.11 306 P **P** **13 45 25.4 -0.3**
KOPT lAmb lAmb 13 45 38.0
comp=Z,19nm,1.2s
SOC Sochi 70.15 310 *e*P **P** **13 45 25.5 0.0**
SOC *e* 13 47 57.4
SOC *e*PPP PPP 13 49 40.5
SOC *i* S **S** **13 54 38.3 +2.7**
SOC *e*SS **SS** **13 59 09.4 +4.1**
SOC *e*SSS SSS 14 02 15.6
SOC pmax pmax
comp=Z,22nm,0.9s
SVW2 Sparrevohn 70.28 31 P **P** **13 45 26.4 +0.3**
SVW2 lAmb lAmb 13 45 28.2
comp=Z,20nm,1.3s
MARD Mardin 70.34 304 P **P** **13 45 26.8 -0.2**
MARD lAmb lAmb 13 45 48.3
comp=Z,23nm,0.9s
OBN Obninsk 70.71 323 *i* P **P** **13 45 28.7 0.0**
OBN *i* 13 45 46.7
OBN pmax pmax
comp=Z,15nm,0.8s
OBN MLR MLR
comp=Z,185nm,15.0s
ANN Anapa 71.59 312 *e*P **P** **13 45 31.4 -2.8**
ANN *e*S **S** **13 54 55.7 +3.5**
ANN pmax pmax
comp=Z,77nm,1.6s
CAST Castle Rocks 71.68 28 P **P** **13 45 34.6 +0.1**
CAST lAmb lAmb 13 45 36.4
comp=Z,15nm,0.9s
PPLA Purkeypile 71.69 29 P **P** **13 45 35.1 +0.4**
PPLA lAmb lAmb 13 45 45.8
comp=Z,31nm,1.5s
RSO Redoubt South 71.73 31 P **P** **13 45 34.9 -0.2**
OHAK Old Harbor 71.88 35 P **P** **13 45 35.3 -0.4**
OHAK lAmb lAmb 13 46 04.7
comp=Z,19nm,1.2s
COLD Coldfoot 71.99 24 P **P** **13 45 37.7 +1.5**
baz=277
COLD Coldfoot 71.99 24 P **P** **13 45 35.9 -0.3**
TOLK Toolik Lake Re 72.04 23 P **P** **13 45 37.9 +1.3**
baz=278
TOLK Toolik Lake Re 72.04 23 P **P** **13 45 37.2 +0.6**
TOLK lAmb lAmb 13 45 39.7
comp=Z,12nm,0.8s
MLY Manley 72.06 26 P **P** **13 45 38.2 +1.4**
baz=278
BPAW Bear Paw Mtn. 72.08 27 P **P** **13 45 36.5 -0.4**
KTH Kantishna Hill 72.18 28 P **P** **13 45 37.4 -0.1**
KTH lAmb lAmb 13 45 39.9
comp=Z,15nm,1.0s
KDAK Kodiak Island 72.18 34 P **P** **13 45 36.8 -0.7**
KDAK pmax pmax
comp=Z,83nm,1.5s
KDAK Kodiak Island 72.18 34 P **P** **13 45 36.8 -0.7**
TRF Thorofare Moun 72.47 28 P **P** **13 45 39.2 -0.2**
TRF lAmb lAmb 13 45 52.8
comp=Z,23nm,1.3s
SUA Susitna One 72.56 30 P **P** **13 45 38.7 -1.2**
CNPM China Poot 72.61 32 P **P** **13 45 40.1 0.0**
I23K Minto, Yukon-K 72.62 26 P **P** **13 45 41.2 +1.2**
baz=279
I23K Minto, Yukon-K 72.62 26 P **P** **13 45 39.6 -0.4**
I23K lAmb lAmb 13 45 50.4
comp=Z,20nm,1.4s
BWN Browne 72.72 27 P **P** **13 45 40.7 +0.1**
BRLK Bradley Lake 72.75 32 P **P** **13 45 40.7 -0.3**
NEA2 Nenana 72.83 27 P **P** **13 45 42.2 +0.9**
baz=279
MCK McKinley 73.03 28 P **P** **13 45 43.3 +0.8**
baz=280
RND Reindeer 73.12 28 P **P** **13 45 42.8 -0.3**
RND pmax pmax
comp=Z,25nm,0.8s
RND Reindeer 73.12 28 P **P** **13 45 42.8 -0.3**
MDM Murphy Dome 73.12 26 P **P** **13 45 43.0 -0.1**
MDM lAmb lAmb 13 45 53.9
comp=Z,33nm,1.2s
WRH Wood River Hil 73.27 27 P **P** **13 45 43.7 -0.2**
WRH lAmb lAmb 13 45 46.6
comp=Z,9.8nm,0.8s
TCOL CIGO, UAF Yank 73.29 26 P **P** **13 45 44.5 +0.6**
baz=280
TCOL CIGO, UAF Yank 73.29 26 P **P** **13 45 43.7 -0.3**
COLA College 73.30 26 *i* P **P** **13 45 44.5 +0.5**
COLA pmax pmax
comp=Z,28nm,2.4s
COLA College 73.30 26 P **P** **13 45 43.4 -0.6**
PMR Palmer 73.30 30 P **P** **13 45 43.4 -0.7**
PMR pmax pmax
comp=Z,20nm,1.2s
PMR Palmer 73.30 30 P **P** **13 45 43.4 -0.7**
PMR lAmb lAmb 13 46 06.2
comp=Z,20nm,1.2s
CCB Clear Creek Bu 73.36 27 P **P** **13 45 43.8 -0.6**
GHO Glory Hole Cre 73.37 30 P **P** **13 45 44.5 -0.2**
GHO lAmb lAmb 13 46 04.0
comp=Z,24nm,1.1s
POKR Poker Plat Res 73.43 26 P **P** **13 45 46.3 +1.5**
baz=280
POKR Poker Plat Res 73.43 26 P **P** **13 45 43.5 -1.4**
ARD2 ARCESS Array S 73.57 339 P **P** **13 45 45.7 +0.1**
ARD2 lAmb lAmb 13 46 01.4
comp=Z,26nm,1.3s
ARC1 ARCESS Array S 73.58 339 P **P** **13 45 46.0 +0.3**
ARC1 lAmb lAmb 13 45 58.2
comp=Z,32nm,1.3s
ARC4 ARCESS Array S 73.58 339 P **P** **13 45 45.7 0.0**
ARC4 lAmb lAmb 13 45 51.2
comp=Z,34nm,1.4s
ARCES ARCESS Array B 73.58 339 P **P** **13 45 46.2 +0.5**
comp=Z,4.6nm,0.8s,baz=87,slow=8.2,SNR=8.1
KNK Knik Glacier 73.65 30 P **P** **13 45 46.2 0.0**
KNK lAmb lAmb 13 45 58.0
comp=Z,22nm,1.0s
IL31 73.72 26 P **P** **13 45 45.8 -0.7**
ILAR Eielson Array 73.72 26 P **P** **13 45 45.5 -1.0**
comp=Z,4.3nm,0.7s,baz=269,slow=4.3,SNR=26
ILAR Eielson Array 73.72 26 P **P** **13 45 45.8 -0.8**
ILAR Eielson Array 73.72 26 P **P** **13 45 45.8 -0.8**
HDA Harding Lake 73.77 27 P **P** **13 45 46.4 -0.4**
baz=281
HDA Harding Lake 73.77 27 P **P** **13 45 45.8 -1.0**
DHY Denali Highway 73.83 28 P **P** **13 45 46.9 -0.5**
SPA0 Spitsbergen Ar 73.88 348 P **P** **13 45 47.5 +0.2**
FYU Fort Yukon 74.03 25 P **P** **13 45 48.2 -0.1**
FYU lAmb lAmb 13 46 06.5
comp=Z,30nm,1.3s
SCM Sheep Creek Mo 74.10 30 P **P** **13 45 48.7 -0.2**
SCM pmax pmax
comp=Z,31nm,1.0s
SCM Sheep Creek Mo 74.10 30 P **P** **13 45 48.7 -0.2**
SCM lAmb lAmb 13 45 50.2
comp=Z,31nm,1.0s
PRP Porcupine Dome 74.14 26 P **P** **13 45 48.9 -0.3**

KBS Kingsbay 74.46 349 P **P** **13 45 50.2 -0.4**
KBS pmax pmax
comp=Z,51nm,1.2s
KBS Kingsbay 74.46 349 P **P** **13 45 50.2 -0.4**
M24K Tolsona, Glenn 74.58 29 P **P** **13 45 53.1 +1.4**
baz=282
M24K Tolsona, Glenn 74.58 29 P **P** **13 45 51.2 -0.5**
RIDG Independent Ri 74.81 27 P **P** **13 45 52.5 -0.5**
RIDG lAmb lAmb 13 46 09.6
comp=Z,16nm,1.0s
KLU Klutina 74.83 30 P **P** **13 45 52.4 -0.8**
KLU lAmb lAmb 13 46 11.1
comp=Z,37nm,1.4s
FIA1 FINESS Array S 75.09 330 P **P** **13 45 54.2 -0.3**
FINES FINESS Array B 75.09 330 P **P** **13 45 54.6 0.0**
comp=Z,11nm,0.8s,baz=90,slow=7.6,SNR=22
FINES FINESS Array B 75.09 330 *i* P **P** **13 45 55.2 +0.7**
FINES pmax pmax
comp=Z,11nm,0.8s
FINES FINESS Array B 75.09 330 P **P** **13 45 53.8 -0.7**
SCRK Sand Creek 75.12 27 P **P** **13 45 55.1 +0.2**
baz=284
DOT Dot Lake 75.17 27 P **P** **13 45 54.9 -0.1**
BRTR Keskin Array B 75.34 307 P **P** **13 45 56.8 +0.2**
comp=Z,1.0nm,0.8s,baz=307,slow=37,SNR=2.7
BRTR Keskin Array B 75.34 307 P **P** **13 45 54.6 -2.1**
BRTR Keskin Array B 75.34 307 P **P** **13 45 54.5 -2.1**
VSU Vasula 75.46 327 *e*P **P** **13 45 55.6 -1.1**
VSU Vasula 75.46 327 *i* P **P** **13 45 57.0 +0.3**
MENT Mentasta 75.49 28 P **P** **13 45 56.6 -0.3**
L26K Log Cabin Wild 75.64 28 P **P** **13 45 58.8 +1.1**
baz=285
MICGM Minsk 75.77 323 *e* P **P** **13 46 01.0 +2.4**
MNK Minsk 75.77 323 *e*P **P** **13 46 01.0 +2.4**
GLB Gilahina Butte 75.83 30 P **P** **13 45 57.6 -1.3**
GLB lAmb lAmb 13 46 04.6
comp=Z,19nm,1.1s
AKASG Malin Array Be 75.86 319 P **P** **13 45 59.0 -0.1**
comp=Z,6.4nm,0.8s,baz=61,slow=5.8,SNR=16
AKASG Malin Array Be 75.86 319 PKIKP P **13 45 59.1 -0.1**
AKASG Malin Array Be 75.86 319 *i* P **P** **13 45 59.0 -0.1**
AKASG pmax pmax
comp=Z,7.0nm,0.7s
KIEV Kiev 75.87 319 P **P** **13 45 58.0 -1.2**
K27K Chicken 75.93 27 P **P** **13 46 00.7 +1.4**
baz=286
ANTO Ankara 75.94 308 P **P** **13 45 58.6 -1.4**
ANTO Ankara 75.94 308 P **P** **13 45 58.6 -1.4**
MCARA McCarthy VSAT 76.21 29 P **P** **13 46 01.3 +0.3**
MCARA lAmb lAmb 13 46 05.3
comp=Z,17nm,0.9s
IDID Didziasalis 76.21 324 *e*P **P** **13 46 00.7 -0.3**
NACGM Naroch 76.29 324 *e* **P** **13 46 02.0 +0.5**
IZAR Zarasai 76.38 325 *e*P **P** **13 46 01.5 -0.5**
TGL Tana Glacier 76.46 30 P **P** **13 46 02.0 -0.6**
TGL lAmb lAmb 13 46 13.8
comp=Z,28nm,1.2s
ISAL Salakas 76.49 324 *e*P **P** **13 46 02.1 -0.6**
IIGN Ignalina 76.49 324 *e*P **P** **13 46 01.6 -1.0**
CSS Mathiatis 76.73 303 P **P** **13 46 02.9 -1.6**
CSS lAmb lAmb 13 46 15.3
comp=Z,22nm,1.2s
BARN Barnard Glacie 76.93 30 P **P** **13 46 04.4 -0.9**
BARN lAmb lAmb 13 46 07.8
comp=Z,11nm,0.8s
SORM Soroca 77.03 317 ⇓P **P** **13 46 05.6 -0.3**
SORM Soroca 77.03 317 ⇓P **P** **13 46 05.6 -0.3**
MESA MESA 77.04 31 P **P** **13 46 05.3 -0.7**
DAWY Dawson 77.05 26 P **P** **13 46 04.9 -0.8**
DAWY lAmb lAmb 13 46 20.9
comp=Z,19nm,1.4s
CTGM Chitina Glacie 77.11 30 P **P** **13 46 07.0 +0.8**
PABE Paberze 77.69 325 *e*P **P** **13 46 08.9 -0.5**
TPGR Topolog 77.84 313 ⇓P **P** **13 46 11.3 +0.8**
INK Inuvik 77.84 21 P **P** **13 46 09.8 -0.1**
comp=Z,1.6nm,0.8s,baz=313,slow=6.1,SNR=7.7
INK Inuvik 77.84 21 P **P** **13 46 09.9 -0.1**
INK pmax pmax
comp=Z,21nm,1.5s
INK Inuvik 77.84 21 P **P** **13 46 09.8 -0.1**
INK lAmb lAmb 13 46 35.6
comp=Z,21nm,1.5s
HORU Horodok 77.98 318 P **P** **13 46 11.0 -0.2**
KMPD K-Podol'skiy 78.14 317 P **P** **13 46 12.0 0.0**
SUW Suwalki 78.56 323 P **P** **13 46 12.8 -1.4**
SUW Suwalki 78.56 323 P **P** **13 46 12.8 -1.4**
PRAR RASCA 78.62 316 ⇓P **P** **13 46 12.6 -2.2**
VRI Vrincioaia 78.71 315 ⇓P **P** **13 46 14.4 -0.9**
VRI Vrincioaia 78.71 315 ⇓P **P** **13 46 14.4 -0.9**
BISRR Bisoca 78.81 314 ⇑P **P** **13 46 17.7 +1.7**
HYT Haines Junctio 78.93 29 P **P** **13 46 15.6 -0.8**
HYT lAmb lAmb 13 46 32.0
comp=Z,22nm,1.2s
ELL Elmali 78.94 305 pmax pmax
comp=Z,74nm,1.1s
ELL Elmali 78.94 305 **P** **13 46 13.4 -3.5**
ELL Elmali 78.94 305 PKIKP P **13 46 13.4 -3.5**
KSV Kosov 79.10 317 P **P** **13 46 14.6 -2.8**
BURAR Bucovina Array 79.21 317 ⇓P **P** **13 46 16.3 -1.8**
BURAR Bucovina Array 79.21 317 ⇓P **P** **13 46 16.3 -1.8**
BURAR Bucovina Array 79.21 317 P **P** **13 46 15.3 -2.8**
LVV L'vov 79.31 319 *e*P **P** **13 46 19.7 +1.2**
MLR Muntele Rosu 79.34 314 ⇓P **P** **13 46 14.9 -4.0**
MLR Muntele Rosu 79.34 314 PKIKP P **13 46 14.6 -4.3**
MLR Muntele Rosu 79.34 314 P **P** **13 46 15.4 -3.5**
MLR pmax pmax
comp=Z,23nm,1.0s
MLR Muntele Rosu 79.34 314 PKPdf **P** **13 46 14.6 -4.3**
MLR Muntele Rosu 79.34 314 P **P** **13 46 15.4 -3.5**
MLR lAmb lAmb 13 46 30.1
comp=Z,23nm,1.0s
DOPR Dopca 79.58 315 ⇓P **P** **13 46 16.5 -3.6**
MORS Morshin 79.60 318 P **P** **13 46 16.5 -3.5**
EUNU Eureka 79.61 5 P **P** **13 46 19.3 -0.4**
EUNU lAmb lAmb 13 46 34.7
comp=Z,35nm,1.5s
ARR Arges 80.26 315 ⇑P P 13 46 18.3 -5.5
C36M Paulatuk 80.46 19 P **P** **13 46 24.3 +0.1**
baz=300
C36M Paulatuk 80.46 19 P **P** **13 46 24.1 -0.1**
C36M lAmb lAmb 13 46 26.6
comp=Z,21nm,1.4s
KOLS Kolonicke sedl 80.67 319 *e*P **P** **13 46 24.3 -1.6**
KOLS Kolonicke sedl 80.67 319 *e*P **P** **13 46 24.2 -1.6**
UZH Uzhgorod 80.76 318 *e*P **P** **13 46 23.5 -2.8**
UZH *e* 13 46 33.7
DAG Danmarks Havn 80.85 351 *i* P **P** **13 46 26.0 -0.3**
DAG pmax pmax
comp=Z,11nm,0.8s
DAG Danmarks Havn 80.85 351 *i* P P **13 46 26.0 -0.3**
comp=Z,11nm,0.8s
DAG Danmarks Havn 80.85 351 *i* P **P** **13 46 26.0 -0.3**
DAG lAmb lAmb 13 46 28.2
comp=Z,11nm,0.8s
ABPO Ambohimpanom 81.28 246 P **P** **13 46 28.2 -1.5**
ABPO pmax pmax
comp=Z,32nm,1.1s
ABPO Ambohimpanom 81.28 246 P **P** **13 46 28.2 -1.5**
ABPO lAmb lAmb 13 46 40.8
comp=Z,32nm,1.1s
KARP Karpathos 81.41 305 P **P** **13 46 25.9 -4.2**
NC405 NORSAR Array S 81.74 332 P **P** **13 46 30.3 -1.0**
NB2 NORSAR Subarra 81.99 332 P **P** **13 46 32.2 -0.5**
comp=Z,18nm,1.1s,baz=66,slow=5.6
NB2 NORSAR Subarra 81.99 332 P **P** **13 46 32.2 -0.5**
baz=66,slow=5.6
NOA NORSAR Array B 81.99 332 P **P** **13 46 32.7 0.0**
comp=Z,4.5nm,0.8s,baz=64,slow=5.3,SNR=13
PSZ Piszkesteto 82.51 318 ⇑P P 13 46 25.6 -10
PSZ Piszkesteto 82.51 318 ⇑PKIKP P 13 46 25.6 -10
DBG Daneborg 83.05 350 *i* P **P** **13 46 37.6 -0.3**
DBG lAmb lAmb 13 46 38.9
comp=Z,6.1nm,1.0s
MORC Moravsky Berou 83.28 320 ⇑P P 13 46 28.3 -11
RES Resolute Bay 83.39 9 P **P** **13 46 39.9 +0.3**
RES pmax pmax
comp=Z,7.0nm,0.9s
RES Resolute Bay 83.39 9 P **P** **13 46 39.9 +0.3**
KMBO Kilima Mbogo 83.86 267 P **P** **13 46 45.6 +2.1**
comp=Z,1.2nm,0.3s,baz=69,slow=5.0,SNR=12
KMBO Kilima Mbogo 83.86 267 P **P** **13 46 42.4 -1.1**
KMBO pmax pmax
comp=Z,18nm,1.5s
KMBO Kilima Mbogo 83.86 267 P **P** **13 46 42.4 -1.1**
KMBO lAmb lAmb 13 46 57.5
comp=Z,18nm,1.4s
CLL Collm 85.31 323 *e*P **P** **13 46 50.0 +0.2**
CLL *i* 13 46 59.5
comp=Z,23nm,1.3s
CLL *e* 13 49 54.0
CLL *e*S **S** **13 57 20.0 +0.9**
CLL *e* 14 03 48.0
CLL *e*SSS SSS 14 06 30.0
CLL Collm 85.31 323 *e*P **P** **13 46 50.0 +0.2**
CLL *i* 13 46 59.5
CLL *e*S **S** **13 57 20.0 +0.9**
GERES GERESS Array B 85.95 321 P **P** **13 46 54.1 +0.9**
comp=Z,3.0nm,0.9s,baz=57,slow=5.1,SNR=6.7
SUMG Summit 87.05 354 *i* P P 13 47 11.1 +13
comp=Z,65nm,1.3s
SUMG Summit 87.05 354 *i* P P 13 47 11.1 +13
SUMG lAmb lAmb 13 47 14.0
comp=Z,65nm,1.3s
YKA Yellowknife Ar 87.57 22 P **P** **13 47 01.0 +0.3**
comp=Z,4.4nm,0.8s,baz=320,slow=4.5,SNR=4.2
YKA Yellowknife Ar 87.57 22 *i* P **P** **13 47 01.6 +0.9**
YKA pmax pmax
comp=Z,4.0nm,0.8s
PPT2 Papeete2 95.79 107 *e*LR LR 14 18 42.5
comp=Z,331nm,24.8s
TBI Tubuai 97.68 112 *e*LR LR 14 19 34.9
comp=Z,273nm,31.8s
BEKR Beckworth 98.24 43 P **P** **13 47 49.7 -1.0**
BEKR lAmb lAmb 13 48 01.5
comp=Z,4.7nm,1.1s
NVAR Mina Array Bea 100.37 43 P **Pdif** **13 48 01.3 +1.0**
comp=Z,0.6nm,0.9s,baz=293,slow=9.5,SNR=3.6
TAOE Nuku Hiva Isla 101.81 95 *e*LR LR 14 21 34.9
comp=Z,389nm,23.3s
TXAR Lajitas Array 115.51 42 PKP **PKPdf** **13 52 55.8 +0.2**
comp=Z,0.5nm,0.7s,baz=191,slow=1.3,SNR=5.5
SJCC San Jacinto, C 147.02 29 *e*P **PKPdf** **13 53 55.5 +0.9**
CAPC Capurgana 147.05 34 *e*P **PKiKP** **13 54 02.5 +3.4**
MOTC Monteria, Cord 147.77 31 *e*P **PKPbc** **13 53 57.6 -1.0**
SDV Santo Domingo 149.79 22 PKPbc **PKPbc** **13 54 02.8 -1.2**
BRRC Barranca, Sant 150.15 29 *e*P **PKPbc** **13 54 02.5 -2.2**
PTBC PUERTO BERRIO 150.30 31 *e*P **PKPdf** **13 53 50.0 +0.1**
PAMC Pamplona, Colo 150.39 27 *e*P **PKPab** **13 54 12.6 +0.6**
BARC Barichara 150.85 28 *e*P **PKPbc** **13 54 04.8 -1.8**
SPBC San Pablo de B 151.25 31 *e*P **PKPbc** **13 54 06.8 -0.6**
YOTC Yotoco, Valle 151.47 37 *e*P **PKPbc** **13 54 07.6 -0.3**
RUSC La Rusia 151.51 29 *e*P **PKPbc** **13 54 07.5 -1.0**
TOLC Tolima 151.53 34 *e*P **PKPbc** **13 54 08.3 0.0**
ANIL Santa Ana 151.56 35 *e*P **PKPdf** **13 54 04.1 +1.9**
ROSC El Rosal 151.83 32 PKPbc **PKPbc** **13 54 09.3 +0.2**
comp=Z,16nm,0.8s,baz=28,slow=8.6,SNR=6.4
ROSC El Rosal 151.83 32 PKPdf **PKPdf** **13 54 00.8 -1.9**
ORTC Ortega, Tolima 152.14 35 *e*P **PKPbc** **13 54 08.5 -0.9**
CHIC Chingaza 152.31 31 *e*P **PKPdf** **13 54 03.4 -0.1**
PRAC Prado 152.49 35 *e*P **PKPbc** **13 54 09.5 -0.7**
MARP Paez Belalcaza 152.62 38 *e*P **PKiKP** **13 54 11.3 +0.3**
PCON Cinco Dias 152.77 39 *e*P **PKPbc** **13 54 11.3 -0.1**
CPAS2 Pasto 153.12 42 *e*P **PKPab** **13 54 27.0 +3.6**
LPAZ La Paz 171.32 70 PKP **PKPdf** **13 54 23.5 +0.6**
comp=Z,2.0nm,1.0s,baz=244,slow=1.1,SNR=6.9
LPAZ La Paz 171.32 70 PKIKP **PKPdf** **13 54 21.8 -1.1**
LPAZ La Paz 171.32 70 **PKPdf** **13 54 21.8 -1.1**

*IDC **17** 13:36:19.0±5.2,8.4°S×156.6°E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.6/41, mbtmp4.2/3, Error ellipse: s-maj=90.4km s-min=70.8km az=1.0*
*NEIC **17** 13:36:20.8±1.5,8.5°S±0.2°×156.2°E±0.2°, h10km±2km, mb4.3/8, Error ellipse: s-maj=38.2km s-min=15.9km az=41.0*
ISC 17 13:36:23.4±3.4,8.4°S±0.4°×156.1°E±0.1°, h35km, n13, σ0.46/13, mb4.2/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**12.91**	**124**	Pn	**Pn**	**13 39 24.3**	**-0.1**
EIDS	**Eidsvold**	**17.58**	**195**	P	**Pn**	**13 40 26.0**	**+0.2**
EIDS				lAmb	lAmb	13 40 33.6	
	comp=Z,14nm,1.2s						
ARMA	**Armidale**	**22.34**	**190**	P	**P**	**13 41 18.2**	**-0.2**
ARMA				lAmb	lAmb	13 41 28.8	
	comp=Z,17nm,1.4s						
WR0	**Warramunga Arr**	**23.87**	**239**	P	**P**	**13 41 32.8**	**-1.1**
WR0				lAmb	lAmb	13 42 02.2	
	comp=Z,11nm,0.7s						
WB0	**Warramunga Arr**	**23.91**	**239**	P	**P**	**13 41 34.7**	**+0.5**
WB0				lAmb	lAmb	13 42 00.7	
	comp=Z,10nm,0.7s						
WB2	**Warramunga Arr**	**24.02**	**239**	P	**P**	**13 41 35.7**	**+0.4**
WRA	**Warramunga Arr**	**24.03**	**239**	P	**P**	**13 41 35.3**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=65,slow=9.6,SNR=12						
WRA	**Warramunga Arr**	**24.03**	**239**	P	**P**	**13 41 35.8**	**+0.4**
AS31	**Alice Springs**	**26.17**	**232**	P	**P**	**13 41 54.6**	**-0.2**
ASAR	**Alice Springs**	**26.17**	**232**	P	**P**	**13 41 54.5**	**-0.3**
	comp=Z,4.7nm,0.8s,baz=64,slow=9.1,SNR=26						
STKA	**Stephens Creek**	**27.02**	**208**	P	**P**	**13 42 02.5**	**+0.1**
	comp=Z,6.0nm,0.9s,baz=20,slow=9.1,SNR=7.3						
STKA	**Stephens Creek**	**27.02**	**208**	P	**P**	**13 42 02.1**	**-0.2**
STKA				lAmb	lAmb	13 42 04.5	
	comp=Z,2.2nm,1.1s						
TUWZ	**Tuamarina**	**36.51**	**157**	P	**P**	**13 43 25.7**	**+0.3**

IDC 17 13:40:25.9±2.1,19.51N×120.62E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/51, mbtmp3.8/5, MS4.2/1, Ms1 4.2/1, ms1mx3.2/61, Error ellipse: s-maj=219.5km s-min=19.9km az=63.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
USRK	**Ussuriysk Ar.**	**26.39**	**19**	LR	LR	13 57 48.5	
	comp=Z,507nm,20.1s,baz=149,slow=40						
MKAR	**Makanchi Array**	**41.44**	**320**	P	P	13 48 14.3	-0.1
	1.1nm,0.8s,baz=114,slow=7.3,SNR=3.7						
WRA	**Warramunga Arr**	**41.45**	**160**	P	P	13 48 13.8	-0.8
	1.1nm,0.6s,baz=342,slow=8.9,SNR=6.4						
ZALV	**Zalesovo Beam**	**43.95**	**330**	P	P	13 48 34.4	-0.2
	1.0nm,0.7s,baz=111,slow=7.9,SNR=3.6						
ASAR	**Alice Springs**	**44.83**	**163**	P	P	13 48 42.5	+0.5
	0.4nm,0.4s,baz=341,slow=6.9,SNR=9.9						
KURBB	**Kurchatov Arra**	**45.43**	**323**	P	P	13 48 46.3	-0.1
	1.4nm,0.6s,baz=123,slow=7.7,SNR=11						

*IDC **17** 13:58:16.4±1.3,3.34N×129.57E, h0km, mb4.1/8, mb1 4.2/8, mb1mx3.7/53, mbtmp4.1/8, MS4.2/2, Ms1 4.2/2, ms1mx3.3/50, Error ellipse: s-maj=97.6km s-min=15.7km az=72.0*
*NEIC **17** 13:58:36.3±1.1,3.1N±0.1°×129.3E±0.2°, h178km±8km, mb4.1/17, Error ellipse: s-maj=27.9km s-min=17.7km az=79.0*
*DJA **17** 13:58:46.8±1.2,3°N±7°×12°8E±1°2, h198km±7km, M4.0/7, mB5.2/3, mb4.1/5, MLv3.9/7, Mw(mB)4.5/3*
ISC 17 13:58:39.2±0.8,2.92N±0.09×129.0E±0.1, h200km, n39, σ0.97/36, mb4.0/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.65**	**217**	P	**Pn**	**13 59 26.9**	**+2.0**
TNTI	**Ternate**	**2.65**	**217**	Pn	Pn	**13 59 26.7**	**+1.8**
SGSI	**Sangihe**	**3.50**	**283**	P	Pn	**13 59 36.2**	**+1.3**
SANI	**Sanana**	**5.75**	**211**	P	**Pn**	**14 00 01.1**	**-2.3**
	0.2nm992nm33nm,0.7s						
GTOI	**Gorontalo**	**6.35**	**249**	P	**Pn**	**14 00 10.3**	**-0.8**
	0.0nm5.6nm,0.8s						
NLAI	**Namlea**	**6.39**	**197**	P	**Pn**	**14 00 13.2**	**+1.6**
	0.1nm7.8nm,0.6s						
LUWI	**Luwuk**	**7.32**	**238**	P	**Pn**	**14 00 22.4**	**-1.3**
	0.3nm2µm20nm,0.7s						
SOEI	**Soe**	**13.42**	**200**	P	**P**	**14 01 46.2**	**+1.3**
MTN	**Manton Dam**	**15.81**	**172**		**P**	**14 02 10.5**	**-0.7**
MTN				lAmb	lAmb	14 02 29.2	
	comp=Z,23nm,1.4s						
KNRA	**Kununurra**	**18.48**	**181**	P	**P**	**14 02 40.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.14**	**189**	P	**P**	**14 03 08.0**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=17,slow=7.6,SNR=14						
FITZ	**Fitzroy Crossi**	**21.14**	**189**	P	**P**	**14 03 07.8**	**-1.0**
WB0	**Warramunga Arr**	**23.17**	**167**	P	**P**	**14 03 28.0**	**-0.3**
WB0				lAmb	lAmb	14 03 39.9	
	comp=Z,8.3nm,1.5s						
WRA	**Warramunga Arr**	**23.33**	**167**	P	**P**	**14 03 29.4**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=342,slow=10,SNR=27						

WB2	**Warramunga Arr**	**23.33**	**167**	P	**P**	**14 03 29.9**	**+0.1**
WB2				IAmb	IAmb	14 03 32.8	
	comp=Z,4.0nm,0.9s						
WR0	**Warramunga Arr**	**23.39**	**167**	P	**P**	**14 03 30.3**	**+0.1**
TNG	**Tangerang**	**24.03**	**248**	P	**P**	**14 03 38.0**	**+1.8**
AS31	**Alice Springs**	**26.86**	**170**	P	**P**	**14 04 01.4**	**-0.2**
ASAR	**Alice Springs**	**26.86**	**170**	P	**P**	**14 04 01.6**	**0.0**
	comp=Z,1.4nm,0.5s,baz=352,slow=7.9,SNR=58						
ASAR	**Alice Springs**	**26.86**	**170**	P	**P**	**14 04 01.2**	**-0.4**
JHJ	**Hachijo jima 2**	**31.71**	**17**	LR	LR	14 15 39.9	
	comp=Z,319nm,20.2s,baz=264,slow=34						
MJAR	**Matsushiro Arr**	**34.53**	**13**	LR	LR	14 18 06.4	
	comp=Z,646nm,20.9s,baz=250,slow=35						
BBOO	**Buckleboo**	**36.17**	**170**	P	**P**	**14 05 22.6**	**0.0**
STKA	**Stephens Creek**	**36.63**	**162**	P	**P**	**14 05 26.7**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=338,slow=9.7,SNR=8.6						
STKA	**Stephens Creek**	**36.63**	**162**	IAmb	IAmb	14 05 28.4	
	comp=Z,1.0nm,1.2s						
MK31	**Makanchi Array**	**59.49**	**325**	P	**P**	**14 08 21.8**	**+0.4**
MK31				IAmb	IAmb	14 08 39.3	
	comp=Z,2.7nm,1.2s						
MKAR	**Makanchi Array**	**59.49**	**325**	P	**P**	**14 08 21.9**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=117,slow=8.5,SNR=15						
MAKZ	**Makanchi**	**59.68**	**324**	P	**P**	**14 08 23.3**	**+0.7**
THZ	**Tophouse**	**59.72**	**143**	P	**P**	**14 08 21.9**	**-1.1**
ZALV	**Zalesovo Beam**	**62.32**	**332**	P	**P**	**14 08 40.0**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=134,slow=7.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**62.32**	**332**	P	**P**	**14 08 39.4**	**-0.8**
KURK	**Kurchatov**	**63.62**	**327**	P	**P**	**14 08 49.0**	**+0.2**
KURK				IAmb	IAmb	14 08 49.9	
	comp=Z,2.5nm,0.7s						
KURBB	**Kurchatov Arra**	**63.62**	**327**	P	**P**	**14 08 49.3**	**+0.5**
	comp=Z,2.2nm,0.6s,baz=127,slow=6.0,SNR=21						
KK31	**Karatay Array**	**65.33**	**317**	P	**P**	**14 08 59.9**	**-0.2**
KK31				IAmb	IAmb	14 09 25.7	
	comp=Z,3.7nm,1.5s						
KKAR	**Karatay Array**	**65.33**	**317**	P	**P**	**14 08 59.6**	**-0.5**
KKAR	**Karatay Array**	**65.33**	**317**	P	**P**	**14 08 59.9**	**-0.3**
KKAR				IAmb	IAmb	14 09 25.7	
	comp=Z,3.7nm,1.5s						
BRVK	**Borovoye**	**69.28**	**327**	P	**P**	**14 09 24.4**	**-0.3**
BRVK				IAmb	IAmb	14 09 25.3	
	comp=Z,1.4nm,0.6s						
ABKAR	**Akbulak array**	**74.18**	**321**	P	**P**	**14 09 53.3**	**-0.7**
ARCES	**ARCESS Array B**	**91.97**	**340**	P	**P**	**14 11 24.5**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=79,slow=6.7,SNR=4.4						

*IDC **17** 14:01:26.9±0.3, 19.47N×120.49E, h0km, mb5.1/52, mb1 5.1/55, mb1mx5.1/65, mbtmp5.1/55, ML4.8/3, MS4.8/30, Ms1 4.8/30, ms1mx4.6/52, Error ellipse: s-maj=11.0km s-min=7.2km az=70.0*

*NEIC **17** 14:01:27.5±2.0, 19.57N±0.05×120.35E±0.05, h10km±1km, mb5.3/245, Error ellipse: s-maj=10.1km s-min=5.0km az=225.0*

*MOS **17** 14:01:27.2±1.0, 19.48N×120.47E, h16km, mb5.5/106, MS4.8/22, Error ellipse: s-maj=6.4km s-min=3.4km az=118.3*

*BJI **17** 14:01:29.4±0.0, 19.81N×120.29E, h10km, mB5.6/63, mb5.1/73, Ms5.5/88, Ms7 5.3/82*

*MAN **17** 14:01:30.4, 19.53N×120.67E, h15km, mb5.4, ML4.3, MS4.5*

MAN Intensity I - Pasuquin, Ilocos Norte.

*GCMT **17** 14:01:30.5±0.1, 19.57N±0.01×120.32E±0.01, h12km, MW5.4/143, Moment Tensor Solution. s93,c144; s143,c287; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr-1.33±.02; Mθθ 0.40±.01; Mϕϕ 0.93±.02; Mrθ 0.22±.05; Mϕθ 0.63±.01; Mϕr 0.25±.05; Best double couple: M=1.38200×10^17 NP1:ϕs32.00000°, δ38.00000°, λ-93.00000°. NP2:ϕs216.00000°, δ52.00000°, λ-88.00000°. Principal axes: T 1.3910, Plg7.0000°, Azm304.0000°; N -0.0160, Plg2.0000°, Azm34.0000°; P -1.3720, Plg83.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **17** 14:01:35.3±0.0, 19.66N×119.70E, h33km, mb5.5*

*KLM **17** 14:01:36.0, 19.59N×120.53E, h75km, mb5.4*

ISC 17 14:01:28.6±0.5, **19.54N**±0.02×**120.44E**±0.03, **h13**km±2km, **h13**km:**pP-P, n1225,** σ**1**s**44**/1286, **mb5.3**/313, **MS4.9**/60, **35C-72D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SJPP	**Brgy, Tapao**	**1.61**	**179**	⇑*i*	*i*	P	**Pn**	**14 01 56.9**	**+0.1**
SJPP					*e*	S	Sg	14 02 35.9	+15
BBP	**Basco**	**1.69**	**58**	*e*	*e*	P	**Pn**	**14 01 56.5**	**-1.4**
BBP					*e*	S	**Sn**	**14 02 16.8**	**-2.7**
APYP	**Conner**	**1.84**	**155**	*e*	*e*	P	**Pn**	**14 01 59.6**	**-0.3**
APYP					*e*	S	**Sn**	**14 02 23.0**	**0.0**
SGCP	**Mt. Cagua**	**2.00**	**130**	*e*	*e*	P	**Pn**	**14 02 01.7**	**-0.4**
SGCP					*e*	S	**Sb**	**14 02 30.8**	**+1.1**
CVP	**Callao Caves**	**2.25**	**144**	⇑*i*	*i*	P	**Pn**	**14 02 07.0**	**+1.4**
CVP					*i*	S	**Sb**	**14 02 35.5**	**-1.4**
CAUP	**Cauayan**	**2.90**	**153**	*e*	*e*	P	**Pn**	**14 02 16.8**	**+2.3**
CAUP					*e*	S	**Sn**	**14 02 50.2**	**+0.9**
BOLP	**Bolinao**	**3.18**	**189**	*e*	*e*	P	**Pn**	**14 02 21.3**	**+2.9**
BOLP					*e*	S	**Sb**	**14 03 06.7**	**+2.9**
TWG	**Pinlang**	**3.32**	**10**				**Pn**	**14 02 18.2**	**-2.0**
SMPP	**San Manuel, Pa**	**3.38**	**176**	*e*	*e*	P	**Pn**	**14 02 19.1**	**-2.1**
SMPP					*e*	S	**Sn**	**14 02 59.3**	**-1.9**
TPUB	**Ta-pu**	**3.74**	**3**				**Pn**	**14 02 24.4**	**-1.7**
YULB	**Yu-li**	**3.91**	**12**				**Pn**	**14 02 26.7**	**-1.7**
BALP	**Baler**	**3.93**	**164**	*e*	*e*	P	**Pn**	**14 02 30.6**	**+1.8**
SSLB	**Suanglung**	**4.25**	**6**				**Pn**	**14 02 32.0**	**-1.1**
NACB	**Ninganchiao**	**4.73**	**13**				**Pn**	**14 02 38.5**	**-1.2**
YHNB	**Yeheng**	**5.18**	**10**				**Pn**	**14 02 45.0**	**-0.9**
KNMB	**Chin-men Tao**	**5.25**	**339**	Pn		P	**Pn**	**14 02 42.4**	**-4.4**
TGY	**Tagaytay City**	**5.43**	**175**	Pn		P	**Pn**	**14 02 49.9**	**+0.5**
	35nm,0.3s,baz=201,slow=6.2,SNR=10								
TGY				LR		LR	LR	14 05 19.3	
	comp=Z,11μm,19.8s,baz=65,slow=43								
TGY	**Tagaytay City**	**5.43**	**175**	⇑*i*	*i*	P	**Pb**	**14 03 02.1**	**-1.3**
TGY					*i*	S	**Pg**	**14 03 15.3**	**+2.6**
YOJ	**Yonaguni jima**	**5.45**	**26**	P		P	**Pn**	**14 02 49.4**	**-0.1**
YOJ	**Yonaguni jima**	**5.45**	**26**				**Pn**	**14 02 49.4**	**-0.1**
TATO	**Taipei**	**5.49**	**10**	P		P	**Pn**	**14 02 52.4**	**+2.2**
TATO	**Taipei**	**5.49**	**10**				**Pn**	**14 02 51.0**	**+0.9**
LQP	**Lukban**	**5.50**	**169**	⇓*e*	*e*	P	**Pn**	**14 02 50.9**	**+0.4**
QZH	**Quanzhou**	**5.64**	**343**	*e*	*e*	P	**Pn**	**14 02 50.6**	**-1.5**
QZH						Sn	**Sn**	**14 03 51.1**	**-5.7**
QZH						LR	LR		
	comp=N,14μm,9.7s								
QZH						LR	LR		
	comp=E,21μm,9.7s								
QZH						LR	LR		
	comp=Z,24μm,10.2s								
GQP	**Guinayangan**	**5.93**	**161**	⇓*e*	*e*	P	**Pn**	**14 02 57.6**	**+1.4**
GQP						eS	Sn	14 03 43.6	-20
PGP	**Puerto Galera**	**6.03**	**175**	⇑*e*	*e*	P	**Pn**	**14 02 57.7**	**+0.1**
HKPS	**Hong Kong Po S**	**6.48**	**296**	Pn		P	**Pn**	**14 03 01.5**	**-2.2**
MCO	**Taipa Grande**	**6.92**	**293**	P		P	**Pn**	**14 03 08.0**	**-1.8**
GZH	**Guangzhou**	**7.49**	**299**	Pn		P	**Pn**	**14 03 15.6**	**-2.0**
GZH						Sn	**Sn**	**14 04 36.1**	**-6.4**
QIZ	**Qiongzhong**	**10.02**	**269**	P		P	**Pn**	**14 03 49.9**	**-2.4**
QIZ						S	**Sn**	**14 05 44.3**	**-0.3**
QIZ						pmax	pmax		
	comp=Z,23nm,0.9s								
QIZ						LR	LR		
	comp=N,10μm,16.2s								
QIZ						LR	LR		
	comp=E,5μm,20.6s								
QIZ						LR	LR		
	comp=Z,6μm,20.6s								
QIZ	**Qiongzhong**	**10.02**	**269**			Pn	**Pn**	**14 03 50.2**	**-2.1**
SSE	**Sheshan**	**11.52**	**3**			P	**Pn**	**14 04 12.8**	**-0.1**
SSE						S	**Sn**	**14 06 27.1**	**+5.6**
SSE						pmax	pmax		
	comp=Z,41nm,0.7s								
SSE						pmax	pmax		
	comp=Z,170nm,5.5s								
SSE						LR	LR		
	comp=N,3μm,9.9s								
SSE						LR	LR		
	comp=E,4μm,13.6s								
WHN	**Wuhan**	**12.26**	**334**			P	**Pn**	**14 04 20.8**	**-2.1**
WHN						S	**Sn**	**14 06 30.8**	**-8.7**
WHN						pmax	pmax		
	comp=Z,63nm,0.7s								
WHN						LR	LR		
	comp=N,33μm,11.4s								
WHN						LR	LR		
	comp=E,14μm,12.2s								
WHN						LR	LR		
	comp=Z,36μm,11.1s								
NJ2	**Nanjing**	**12.54**	**354**	*e*	P		**Pn**	**14 04 25.8**	**-0.9**
NJ2						pmax	pmax		
	comp=Z,23nm,0.7s								
NJ2						LR	LR		
	comp=N,6μm,14.2s								
NJ2						LR	LR		
	comp=E,13μm,12.8s								
NJ2						LR	LR		
	comp=Z,10μm,13.3s								
DAV	**Davao City (W)**	**13.37**	**157**			LR	LR	14 10 52.4	
	comp=Z,10μm,19.3s,baz=328,slow=43								
KKM	**Kota Kinabalu**	**14.03**	**198**				**Pn**	**14 04 47.1**	**-0.2**
MYLDM	**Lahad Datu**	**14.40**	**188**		Pn		**Pn**	**14 04 52.6**	**+0.4**
GYA	**Guiyang**	**14.42**	**301**	⇓*i*	P		**Pn**	**14 04 51.3**	**-1.4**
GYA					S		**Sn**	**14 07 33.6**	**+1.0**
GYA					pmax	pmax			
	comp=Z,1μm,9.1s								
GYA					LR	LR			
	comp=N,4μm,13.8s								
GYA					LR	LR			
	comp=E,7μm,11.9s								
GYA					LR	LR			
	comp=Z,9μm,12.8s								
ENH	**Enshi**	**14.57**	**319**		Pn		**Pn**	**14 04 52.5**	**-2.2**
UBPT	**Khong Chiam**	**14.90**	**256**		P		**P**	**14 05 05.6**	**+0.9**
	25nm,2.3s								
UBPT	**Khong Chiam**	**14.90**	**256**				**Pn**	**14 05 01.3**	**+2.3**
JSU	**Suzuyama**	**14.95**	**35**				**Pn**	**14 04 59.9**	**+0.2**
SPMM	**Sapulut**	**15.24**	**195**		P		**P**	**14 05 07.0**	**-1.6**
SLVN	**Son La**	**15.60**	**279**		Pn		**Pn**	**14 05 06.3**	**-2.1**
JNU	**Nakatsue**	**16.43**	**33**		Pn		**P**	**14 05 21.2**	**-0.5**
	2.3nm,0.3s,baz=216,slow=12,SNR=20								
JNU	**Nakatsue**	**16.43**	**33**				**Pn**	**14 05 15.9**	**-3.1**
NONG	**Nongkai**	**16.44**	**268**		P		**P**	**14 05 24.3**	**+2.4**
	165nm,0.9s								
TIA	**Tai'an**	**16.86**	**351**		P		**P**	**14 05 25.3**	**-1.1**
TIA					pmax	pmax			
	comp=Z,27nm,2.5s								
TIA					pmax	pmax			
	comp=Z,3μm,11.3s								
TIA					LR	LR			
	comp=N,7μm,9.8s								
TIA					LR	LR			
	comp=E,5μm,12.7s								
TIA					LR	LR			
	comp=Z,10μm,10.8s								
KHON	**Khomkaen**	**17.06**	**262**		P		**P**	**14 05 31.0**	**+2.2**
	4μm143nm,1.0s								
KMI	**Kunming**	**17.28**	**292**	⇑*i*	P		**P**	**14 05 34.5**	**+3.1**
KMI					pP		sP	14 05 36.1	+0.8
KMI					sP		pwP	14 05 42.3	+3.9
KMI					S		**Sn**	**14 08 44.4**	**+2.1**
KMI					sS		S	14 08 49.5	-1.7
KMI					SS		**SnSn**	**14 09 01.1**	**+5.4**
KMI					pmax	pmax			
	comp=Z,30nm,1.4s								
KMI					pmax	pmax			
	comp=Z,1μm,6.2s								
KMI					LR	LR			
	comp=N,14μm,12.1s								
KMI					LR	LR			
	comp=E,13μm,13.4s								
KMI					LR	LR			
	comp=Z,8μm,11.3s								
KMI	**Kunming**	**17.28**	**292**		P		**Pn**	**14 05 27.4**	**-2.6**
KMI					pmax	pmax			
	comp=Z,100nm,1.3s								
KMI	**Kunming**	**17.28**	**292**		Pn		**Pn**	**14 05 27.4**	**-2.6**
XAN	**Xi'an**	**17.70**	**327**		P		**Pn**	**14 05 34.3**	**-0.7**
XAN					S		**Sn**	**14 08 54.1**	**+2.0**
XAN					pmax	pmax			
	comp=Z,93nm,1.2s								
XAN					pmax	pmax			
	comp=Z,3μm,10.3s								
XAN					LR	LR			
	comp=Z,9μm,9.3s								
XAN					LR	LR			
	comp=Z,8μm,10.3s								
XAN					LR	LR			
	comp=Z,11μm,10.6s								
XAN	**Xi'an**	**17.70**	**327**		P		**Pn**	**14 05 34.0**	**-1.0**
XAN					pmax	pmax			
	comp=Z,127nm,1.3s								
XAN	**Xi'an**	**17.70**	**327**				**Pn**	**14 05 34.0**	**-1.0**
CHAI	**Chaiyaphum**	**17.94**	**261**		P		**P**	**14 05 39.0**	**+0.5**
	comp=Z,915nmcomp=Z,78nm,0.9s								
SRAK	**Srakaew**	**18.44**	**255**		P		**P**	**14 05 40.0**	**-4.0**
	comp=Z,6μmcomp=Z,513nm,0.9s								
MNI	**Manado**	**18.50**	**166**		P		**Pn**	**14 05 49.2**	**+4.4**
MNI					pmax	pmax			
	comp=Z,235nm,0.9s								
JMN	**Monobe**	**18.52**	**38**				**P**	**14 05 42.3**	**-2.5**
INCN	**Inchon**	**18.68**	**16**		P		**Pn**	**14 05 47.1**	**+0.2**
INCN	**Inchon**	**18.68**	**16**		P		**P**	**14 05 43.7**	**-2.8**
INCN					pmax	pmax			
	comp=Z,53nm,1.2s								
INCN	**Inchon**	**18.68**	**16**		P		**P**	**14 05 43.7**	**-2.8**
SBUM	**Sibu**	**18.79**	**206**		P		**P**	**14 05 48.0**	**+0.1**
SBUM	**Sibu**	**18.79**	**206**		P		**Pn**	**14 05 49.0**	**+0.7**
CD2	**Chengdu**	**18.83**	**310**		P		**P**	**14 05 48.3**	**0.0**
CD2					S		**Sn**	**14 09 17.5**	**-2.1**
CD2					pmax	pmax			
	comp=Z,90nm,1.5s								
CD2					pmax	pmax			
	comp=Z,3μm,10.8s								
CD2					LR	LR			
	comp=Z,9μm,9.6s								
CD2					LR	LR			
	comp=Z,13μm,10.8s								
CD2					LR	LR			
	comp=Z,16μm,11.6s								
UTTA	**Uttaradit**	**18.92**	**268**		P		**Pn**	**14 05 50.8**	**+0.8**
	comp=Z,603nmcomp=Z,46nm,0.9s								
GTOI	**Gorontalo**	**18.96**	**172**		P		**P**	**14 05 50.1**	**+0.4**
	comp=Z,806nmcomp=Z,62nm,1.1s								
KSAR	**Wonju Array Be**	**18.98**	**18**		P		**P**	**14 05 47.9**	**-1.9**
KSAR	**Wonju Array Be**	**18.98**	**18**		P		**Pn**	**14 05 47.9**	**-1.9**
MRSI	**Marisa**	**19.00**	**175**		P		**Pn**	**14 05 53.9**	**+3.0**
	comp=Z,2μmcomp=Z,2μmcomp=Z,188nm,0.9s								
KSRS	**Korea Array**	**19.01**	**19**		P		**Pn**	**14 05 50.5**	**-0.3**
	comp=Z,2.8nm,0.3s,baz=199,slow=11,SNR=50								
KSRS					PcP		**PcP**	**14 10 16.0**	**+0.8**
	baz=202,slow=2.0,SNR=6.0								
KSRS					LR		LR	14 13 41.6	
	comp=Z,1μm,19.7s,baz=206,slow=39								
KS19	**Wonju Array Si**	**19.04**	**18**		P		**P**	**14 05 50.1**	**-0.3**
JHS	**Saijyo**	**19.05**	**34**		P		**Pn**	**14 05 50.9**	**-0.6**
MPSI	**Mapaga**	**19.09**	**182**		P		**Pn**	**14 05 53.4**	**+1.4**
	comp=Z,3μmcomp=Z,1μmcomp=Z,49nm,1.0s								
PHIT	**Phitsanulok**	**19.14**	**266**		P		**Pn**	**14 05 54.1**	**+1.5**
	comp=Z,3μmcomp=Z,440nm,0.9s								
KMSI	**Cibinong**	**19.17**	**169**		P		**P**	**14 05 51.3**	**-0.7**
	comp=Z,302nm,0.9s								
DL2	**Dalian**	**19.32**	**3**		P		**Pn**	**14 05 55.4**	**+0.8**
DL2					pmax	pmax			
	comp=Z,67nm,1.2s								
DL2					pmax	pmax			
	comp=Z,3μm,4.4s								
DL2					LR	LR			
	comp=Z,3μm,13.2s								
DL2					LR	LR			
	comp=Z,6μm,13.3s								
DL2					LR	LR			
	comp=Z,5μm,10.7s								
PAYA	**Payao**	**19.39**	**273**		P		**Pn**	**14 05 56.9**	**+1.2**
	comp=Z,906nm,0.9s								
TIY	**Taiyuan**	**19.40**	**341**	*e*	P		**Pn**	**14 05 57.3**	**+1.6**
TIY					pmax	pmax			
	comp=Z,55nm,0.7s								
TIY					LR	LR			
	comp=Z,7μm,14.4s								
TIY					LR	LR			
	comp=Z,2μm,12.8s								
TIY					LR	LR			
	comp=Z,6μm,13.4s								
LAMP	**Lampang**	**19.69**	**270**		P		**Pn**	**14 06 01.0**	**+1.8**
	comp=Z,499nmcomp=Z,48nm,0.8s								
SUKH	**Sukhothai**	**19.83**	**267**		P		**Pn**	**14 06 01.5**	**+0.6**
	comp=Z,58nm,0.9s								
TNTI	**Ternate**	**19.85**	**159**		P		**P**	**14 05 58.8**	**-0.7**
PATY	**Pattaya**	**19.90**	**254**		P		**Pn**	**14 06 04.3**	**+2.7**
	comp=Z,78nm,0.9s								
PYAG	**Pyongyang**	**19.98**	**12**		P		**Pn**	**14 06 03.7**	**+1.3**
PYAG					S		Sn	14 10 01.2	+14
CM34	**Chiang Mai Arr**	**20.11**	**272**		P		**P**	**14 06 03.0**	**+0.6**
SMKI	**Samarinda**	**20.11**	**189**		P		Pn	14 06 05.7	+1.5
	comp=Z,6μmcomp=Z,401nm,1.2s								
CM35	**Chiang Mai Arr**	**20.13**	**271**		P		**P**	**14 06 03.0**	**+0.5**
CM36	**Chiang Mai Arr**	**20.20**	**271**		P		**P**	**14 06 04.0**	**+0.7**
CM09	**Chiang Mai Arr**	**20.31**	**270**		P		Pn	14 06 06.5	0.0
	comp=Z,390nmcomp=Z,56nm,1.0s								
CMMT	**Chiang Mai**	**20.31**	**272**		P		Pn	14 06 05.8	-0.7
	comp=Z,889nmcomp=Z,49nm,1.0s								
CM33	**Chiang Mai Arr**	**20.31**	**272**		P		**P**	**14 06 05.0**	**+0.5**
CHTO	**Chiang Mai**	**20.31**	**272**		P		Pn	14 06 06.1	-0.5
CHTO					P		Pn	14 06 06.1	-0.5
CHTO	**Chiang Mai**	**20.31**	**272**		P		**P**	**14 06 04.1**	**-0.4**
CHTO					pmax		pmax		
	comp=Z,82nm,1.0s								
CHTO	**Chiang Mai**	**20.31**	**272**				**P**	**14 06 04.1**	**-0.4**
CM04	**Chiang Mai Arr**	**20.32**	**270**		P		Pn	14 06 06.3	-0.4
	comp=Z,635nmcomp=Z,86nm,1.0s								
CM01	**Chiang Mai Arr**	**20.34**	**270**		P		Pn	14 06 06.8	-0.1
	comp=Z,650nmcomp=Z,86nm,1.1s								
CM02	**Chiang Mai Arr**	**20.35**	**270**		P		**P**	**14 06 06.0**	**+1.1**
	comp=Z,526nmcomp=Z,62nm,1.1s								
CM31	**Chiang Mai Arr**	**20.35**	**271**		P		Pn	14 06 07.0	-0.1
	comp=Z,17μmcomp=Z,1μm,0.9s								
CM31	**Chiang Mai Arr**	**20.35**	**271**		P		**P**	**14 06 05.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**20.35**	**271**		P		Pn	14 06 06.4	-0.6
	comp=Z,53nm,1.1s,baz=76,slow=8.9,SNR=125								
CMAR					PcP		**PcP**	**14 10 19.4**	**+1.4**
	comp=Z,11nm,0.8s,baz=34,slow=0.4,SNR=24								
CMAR					LR		LR	14 13 26.5	
	comp=Z,2μm,20.6s,baz=125,slow=35								
CM05	**Chiang Mai Arr**	**20.36**	**270**		P		Pn	14 06 06.8	-0.3
	comp=Z,452nmcomp=Z,64nm,1.0s								
APSI	**Ampana**	**20.36**	**177**		P		Pn	14 06 06.9	-0.2
	comp=Z,1μmcomp=Z,2μmcomp=Z,147nm,1.3s								
CM15	**Chiang Mai Arr**	**20.37**	**271**		P		**P**	**14 06 06.0**	**+0.9**
	comp=Z,410nmcomp=Z,59nm,1.0s								
CM13	**Chiang Mai Arr**	**20.39**	**270**		P		Pn	14 06 07.0	-0.5
	comp=Z,385nmcomp=Z,53nm,1.0s								
UTHA	**Uthaitani**	**20.40**	**262**		P		Pn	14 06 07.4	-0.2
	comp=Z,1μmcomp=Z,117nm,0.8s								
CM32	**Chiang Mai Arr**	**20.42**	**271**		P		Pn	14 06 07.0	-0.8
JWT	**Wachi**	**20.51**	**37**				**P**	**14 06 05.9**	**-0.7**
KSM	**Kuching**	**20.51**	**210**		P		**P**	**14 06 06.4**	**-0.3**
KSM					IAmb		IAmb	14 06 18.0	
	comp=Z,218nm,1.3s								
KSM	**Kuching**	**20.51**	**210**		P		Pn	14 06 08.0	-0.9
LUWI	**Luwuk**	**20.58**	**173**		P		**P**	**14 06 08.3**	**+0.9**
	comp=Z,3μmcomp=Z,4μmcomp=Z,263nm,1.3s								
LUWI	**Luwuk**	**20.58**	**173**		P		**P**	**14 06 06.3**	**-1.2**
BJT	**Baijiatuan**	**20.73**	**351**		P		**P**	**14 06 09.7**	**+0.8**
BJT					pmax		pmax		
	comp=Z,244nm,1.1s								
BJT	**Baijiatuan**	**20.73**	**351**		Pn		**P**	**14 06 09.7**	**+0.8**
BJT					IAmb		IAmb	14 06 13.3	
	comp=Z,244nm,1.1s								
BJI	**Beijing**	**20.75**	**351**		P		Pn	14 06 10.8	-0.7
BJI					pmax		pmax		
	comp=Z,180nm,1.2s								
BJI					pmax		pmax		
	comp=Z,1μm,3.5s								
BJI					LR		LR		
	comp=Z,7μm,10.7s								
BJI					LR		LR		
	comp=Z,4μm,11.0s								
BJI					LR		LR		
	comp=Z,1μm,12.3s								
SUJ	**Sinuiju**	**20.79**	**9**		P		**P**	**14 06 09.5**	**+0.1**
SUJ					S		Sn	14 10 05.2	-1.2
BKB	**Balikpapan**	**20.96**	**190**		P		Pn	14 06 13.6	-0.5
	comp=Z,5μmcomp=Z,400nm,1.1s								
BKB	**Balikpapan**	**20.96**	**190**		P		**P**	**14 06 11.2**	**-0.3**
PHET	**Kaeng Krachan**	**21.02**	**255**		P		**P**	**14 06 15.0**	**+2.8**
	comp=Z,770nmcomp=Z,97nm,1.0s								
SRDT	**SRDT**	**21.02**	**259**		P		**P**	**14 06 16.2**	**+4.0**
	comp=Z,13μmcomp=Z,39nm,1.1s								
MTKI	**Muara Teweh, K**	**21.07**	**196**		P		**P**	**14 06 14.0**	**+1.3**
	comp=Z,1μmcomp=Z,98nm,1.2s								
JCJ	**Chichijima**	**21.32**	**65**		P		**P**	**14 06 15.4**	**0.0**
MHMT	**Maesarieng**	**21.34**	**270**		P		**P**	**14 06 17.3**	**+1.6**
	comp=Z,2μmcomp=Z,181nm,1.0s								
INU	**Inuyama**	**21.50**	**40**		P		**P**	**14 06 17.9**	**+0.7**
INU					IAmb		IAmb	14 06 37.3	
	comp=Z,183nm,1.2s								
JSG	**Sagara**	**21.78**	**43**		P		**P**	**14 06 20.4**	**+0.1**
JSG					IAmb		IAmb	14 06 47.3	
	comp=Z,100nm,0.9s								
JGF	**Kuroka**	**21.88**	**40**		P		**P**	**14 06 21.8**	**+0.5**
JGF					IAmb		IAmb	14 06 34.6	
	comp=Z,108nm,1.0s								
JHJ	**Hachijo jima 2**	**21.94**	**48**		P		**P**	**14 06 23.6**	**+1.6**
	comp=Z,104nm,0.7s,baz=60,slow=13,SNR=5.4								
LZH	**Lanzhou**	**22.01**	**322**	⇓*i*	P		**P**	**14 06 24.8**	**+1.9**

comp=Z,3µmcomp=Z,147nm,1.2s
LKP Lekhapani 23.83 294 *e*P **P 14 06 41.3 -0.2**
KULM Kulim 23.91 236 P **P 14 06 41.1 -1.3**
KULM Kulim 23.91 236 P **P 14 06 43.0 +0.6**
MYKOM Kota Tinggi 23.97 225 P **P 14 06 41.6 -1.3**
MYKOM IAmb IAmb 14 06 54.4
comp=Z,78nm,1.0s
MYKOM Kota Tinggi 23.97 225 P **P 14 06 43.0 0.0**
JYT Yasato 24.03 42 P **P 14 06 40.6 -2.8**
IPM Ipoh 24.13 234 P **P 14 06 43.0 -1.5**
IPM IAmb IAmb 14 06 54.5
comp=Z,131nm,1.2s
IPM Ipoh 24.13 234 P **P 14 06 44.0 -0.5**
GUMO Guam 24.14 100 P **P 14 06 43.1 -1.5**
comp=Z,123nm,0.8s,baz=278,slow=2.7,SNR=5.0
GUMO LR LR 14 14 01.8
comp=Z,2µm,21.8s,baz=281,slow=31
GUMO Guam 24.14 100 P **P 14 06 43.3 -1.3**
GUMO pmax pmax
comp=Z,406nm,1.3s
GUMO Guam 24.14 100 P **P 14 06 43.3 -1.3**
MSAI Masohi 24.23 159 P **P 14 06 47.2 +1.9**
comp=Z,557nmcomp=Z,38nm,0.9s
KAPI Kappang 24.41 182 P **P 14 06 46.6 -0.4**
comp=Z,34nm,0.6s,baz=2.5,slow=7.3,SNR=26
KAPI LR LR 14 17 05.1
comp=Z,2µm,19.3s,baz=28,slow=38
KAPI Kappang 24.41 182 P **P 14 06 48.5 +1.5**
KAPI P **P 14 06 48.5 +1.5**
KAPI Kappang 24.41 182 P **P 14 06 46.9 -0.1**
KAPI pmax pmax
comp=Z,315nm,1.4s
KAPI Kappang 24.41 182 P **P 14 06 46.9 -0.1**
CN2 Changchun 24.55 9 *e*P **P 14 06 48.4 +0.4**
CN2 *e*S **S 14 11 10.6 +2.2**
CN2 pmax pmax
comp=Z,30nm,0.7s
CN2 pmax pmax
comp=Z,1µm,6.0s
CN2 LR LR
comp=Z,3µm,14.0s
CN2 LR LR
comp=Z,3µm,14.0s
CN2 LR LR
comp=Z,3µm,15.0s
DIBR DIBRUGARH 24.67 293 *e*P **P 14 06 49.4 +0.2**
BKSI Bulukumba 24.71 181 P **P 14 06 50.7 +1.0**
comp=Z,2µmcomp=Z,2µmcomp=Z,84nm,0.9s
JORH JORHAT 25.09 291 *e*P **P 14 06 52.9 -0.2**
FAKI Fak Fak 25.16 151 P **P 14 06 56.4 +2.6**
comp=Z,1µmcomp=Z,52nm,0.7s
FAKI Fak Fak 25.16 151 P **P 14 06 52.9 -0.9**
FAKI IAmb IAmb 14 06 58.1
comp=Z,38nm,0.7s
VLA Vladivostok 25.41 20 *i*P **P 14 06 56.3 +0.5**
VLA pmax pmax
comp=Z,44nm,1.3s
JMM Marumori 25.44 40 P **P 14 06 55.6 -0.6**
TPI Tanjungpandan 25.47 211 P **P 14 06 57.6 +1.0**
comp=Z,1µmcomp=Z,101nm,0.9s
ZIRO ZIRO 25.60 293 *e*P **P 14 06 58.7 +0.8**
ZIRO IAmb IAmb 14 07 01.9
comp=Z,119nm,1.0s
BNDI Bandanaira 25.66 158 P **P 14 06 58.5 +0.2**
comp=Z,4µmcomp=Z,264nm,0.9s
BAKI Biak 25.71 142 P **P 14 07 01.9 +3.1**
comp=Z,2µmcomp=Z,78nm,1.1s
PPBI Pangkal Pinang 25.74 215 P **P 14 07 00.0 +1.0**
comp=Z,2µmcomp=Z,76nm,1.2s
SAIH SAIHA 25.77 281 *e*P **P 14 06 58.9 -0.6**
SAIH IAmb IAmb 14 07 04.7
comp=Z,77nm,0.8s
SILR SILCHAR 26.09 287 *e*P **P 14 07 02.4 +0.2**
MDJ Mudanjiang 26.14 15 P **P 14 07 03.6 +1.1**
MDJ sP pwP 14 07 13.5 +3.8
MDJ S **S 14 11 34.3 +0.5**
MDJ sS sS 14 11 45.5 +6.8
MDJ ScS **ScS 14 18 02.1 +3.2**
MDJ pmax pmax
comp=Z,150nm,1.9s
MDJ pmax pmax
comp=Z,1µm,8.7s
MDJ LR LR
comp=Z,2µm,12.7s
MDJ LR LR
comp=Z,2µm,13.2s
MDJ LR LR
comp=Z,2µm,11.3s
MDJ Mudanjiang 26.14 15 P **P 14 07 01.8 -0.6**
TEZP TEZPUR 26.34 291 *e*P **P 14 07 04.2 -0.3**
TEZP IAmb IAmb 14 07 08.3
comp=Z,104nm,1.3s
USRK Ussuriysk Ar. 26.41 19 P **P 14 07 06.3 +1.4**
comp=Z,12nm,0.7s,baz=198,slow=9.2,SNR=23
USRK PcP **PcP 14 10 30.3 +0.1**
comp=Z,4.4nm,0.7s,baz=239,slow=3.0,SNR=4.2
USRK LR LR 14 17 33.6
comp=Z,1µm,20.4s,baz=196,slow=36
USA0B Ussuriysk Arra 26.42 19*d i*P **P 14 07 05.7 +0.8**
USA0B Ussuriysk Arra 26.42 19 P **P 14 07 04.0 -0.9**
GTA Gaotai 26.61 322 ⇓P **P 14 07 07.8 +0.9**
GTA pP sP 14 07 11.9 +0.7
GTA sP pwP 14 07 14.6 -0.1
GTA PcP **PcP 14 10 32.3 +1.3**
GTA S **S 14 11 43.3 +1.7**
GTA sS sS 14 11 49.3 +3.0
GTA ScP **ScP 14 14 10.6 -0.3**
GTA PcS **PcS 14 14 11.8 -0.5**
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,1µm,8.2s
GTA LR LR
comp=Z,7µm,10.2s
GTA LR LR
comp=Z,5µm,11.6s
GTA LR LR
comp=Z,7µm,10.9s
PSI Prapat 26.81 234 P **P 14 07 07.3 -1.6**
PSI pmax pmax
comp=Z,49nm,1.0s
RPSI Rantau Prapat 26.88 234 P **P 14 07 07.2 -2.1**
LHMI Lhok Sumawe 26.94 241 P **P 14 07 11.0 +1.1**
LHMI IAmb IAmb 14 07 35.6
comp=Z,79nm,0.9s
BKNI Bangkinang 26.95 227 P **P 14 07 08.8 -1.2**
SHL Shillong 27.01 288 *e*P **P 14 07 10.7 0.0**
SHL IAmb IAmb 14 07 21.8
comp=Z,34nm,0.8s
SHL Shillong 27.01 288 P **P 14 07 10.8 0.0**
SNR=23
SHL Shillong 27.01 288 P **P 14 07 09.3 -1.4**
SHL pmax pmax
comp=Z,60nm,0.9s
SHL Shillong 27.01 288 P **P 14 07 09.3 -1.4**
SHL IAmb IAmb 14 07 32.6
comp=Z,60nm,0.9s
BELO BELONIA 27.22 283 *e*P **P 14 07 13.7 +1.3**
AGT Agartala 27.43 284 *e*P **P 14 07 16.3 +2.0**
JTM Tenmabayashi 27.56 35 P **P 14 07 15.6 +0.3**
JTM IAmb IAmb 14 07 44.1
comp=Z,67nm,1.1s
SDSI Sungai Dareh 27.60 225 P **P 14 07 16.9 +1.0**
comp=Z,28nm,0.9s
MNSI Mandailing Nat 27.65 230 P **P 14 07 16.2 -0.1**
comp=Z,1µmcomp=Z,63nm,0.8s
SMPI Sarmi 27.93 138 P **P 14 07 21.7 +2.9**
comp=Z,2µmcomp=Z,31nm,1.2s
SRBI Singaraja 27.93 191 P **P 14 07 19.5 +0.7**
comp=Z,48nm,1.1s
MMRI Maumere 28.06 176 P **P 14 07 20.0 +0.1**
comp=Z,2µmcomp=Z,111nm,1.5s
MMRI Maumere 28.06 176 P **P 14 07 19.8 -0.1**
EDFI Ende, Flores 28.14 177 P **P 14 07 20.9 +0.1**
comp=Z,766nmcomp=Z,51nm,0.9s
SMRI Semarang 28.20 201 P **P 14 07 21.8 +0.6**
comp=Z,86nm,0.9s
SMRI Semarang 28.20 201 P **P 14 07 19.8 -1.4**
SMRI IAmb IAmb 14 07 26.4
comp=Z,75nm,0.9s
PLAI Plampang 28.31 186 P **P 14 07 23.9 +1.7**
comp=Z,2µmcomp=Z,113nm,1.0s
TWSI Taliwang, Sumb 28.32 187 P **P 14 07 25.8 +3.6**
comp=Z,699nmcomp=Z,30nm,1.6s
LSA Lhasa 28.41 297 P **P 14 07 25.3 +1.7**
LSA Lhasa 28.41 297 P **P 14 07 25.3 +1.7**
LSA Lhasa 28.41 297 P **P 14 07 23.4 -0.1**
LSA pmax pmax
comp=Z,52nm,0.9s
LSA Lhasa 28.41 297 P **P 14 07 23.4 -0.1**
LSA IAmb IAmb 14 07 31.6
comp=Z,52nm,0.9s
JAGI Jajag, Banyuwa 28.52 193 P **P 14 07 25.1 +1.1**
JAGI IAmb IAmb 14 07 30.8
comp=Z,38nm,0.9s
KLSI 28.61 214 P **P 14 07 27.8 +2.9**
comp=Z,305nmcomp=Z,23nm,2.1s
PWJI Pagerwojo 28.68 198 P **P 14 07 25.9 +0.5**
comp=Z,1µmcomp=Z,92nm,1.3s
MDSI Maura Dua 28.74 215 P **P 14 07 28.6 +2.6**
comp=Z,21nm,0.8s
DHUB DHUBRI 28.75 289 *e*P **P 14 07 26.3 +0.2**
DHUB IAmb IAmb 14 07 28.8
comp=Z,71nm,1.3s
WOJI Wonogiri, Jawa 28.77 200 P **P 14 07 27.2 +0.9**
comp=Z,105nm,1.6s
GSI Gunungsitoli 28.80 234 P **P 14 07 26.5 -0.1**
comp=Z,74nm,0.8s
GSI Gunungsitoli 28.80 234 P **P 14 07 24.3 -2.3**
TNG Tangerang 28.93 209 P **P 14 07 28.0 +0.3**
comp=Z,9µmcomp=Z,633nm,0.4s
KPJI Karang Pucung 29.01 204 P **P 14 07 29.1 +0.7**
comp=Z,2µmcomp=Z,81nm,1.3s
WBSI Waikabubak, Su 29.02 182 P **P 14 07 30.2 +1.7**
comp=Z,85nm,0.9s
LEM Lembang 29.09 207 P **P 14 07 29.1 -0.2**
comp=Z,13nm,0.5s,baz=166,slow=22,SNR=4.5
JEW Eniwo 29.21 33 P **P 14 07 26.2 -3.8**
JEW IAmb IAmb 14 07 44.4
comp=Z,63nm,0.8s
GENI Genyem 29.32 136 P **P 14 07 33.3 +2.1**
comp=Z,4µmcomp=Z,76nm,1.2s
SOEI Soe 29.36 172 P **P 14 07 31.6 0.0**
comp=Z,1µmcomp=Z,76nm,0.9s
SOEI Soe 29.36 172 P **P 14 07 30.1 -1.5**
HIA Hailar 29.66 359 *i*P **P 14 07 34.2 +0.3**
HIA pmax pmax
comp=Z,24nm,0.9s
HIA Hailar 29.66 359 P **P 14 07 31.2 -2.7**
BATI Baumata 29.73 174 P **P 14 07 34.1 -0.6**
comp=Z,314nm,0.9s,baz=223,slow=0.4,SNR=44
BATI Baumata 29.73 174 P **P 14 07 34.2 -0.6**
comp=Z,2µmcomp=Z,191nm,1.0s
GTK Tadong 30.15 291 *e*P **P 14 07 39.7 +1.0**
ULN Ulaanbaatar 30.27 342 P **P 14 07 40.7 +1.2**
ULN Ulaanbaatar 30.27 342*ce*P **P 14 07 39.0 -0.5**
ULN pmax pmax
comp=Z,78nm,1.8s
ULN Ulaanbaatar 30.27 342 P **P 14 07 37.0 -2.5**
ULN IAmb IAmb 14 07 42.5
comp=Z,31nm,0.8s
SONM Songino Array 30.44 341 P **P 14 07 41.9 +0.9**
comp=Z,13nm,0.7s,baz=161,slow=10,SNR=80
SONM LR LR 14 20 24.6
comp=Z,3µm,20.2s,baz=151,slow=37
SONM Songino Array 30.44 341 P **P 14 07 39.4 -1.6**
ASAJ Asahikawa 30.71 32 P **P 14 07 44.2 +1.0**
comp=Z,5.0nm,0.7s,baz=242,slow=12,SNR=10
TAPN Taplejung 30.94 291 *e*P **P 14 07 46.8 +0.9**
comp=Z,126nm,1.0s
KLR Kul'dur 30.98 14 P **P 14 07 46.7 +1.1**
comp=Z,22nm,0.5s,baz=233,slow=7.0,SNR=58
KLR PcP **PcP 14 10 42.4 +0.9**
comp=Z,8.3nm,0.8s,baz=231,slow=4.8,SNR=7.8
KLR LR LR 14 21 18.1
comp=Z,1µm,19.0s,baz=208,slow=38
KLR Kul'dur 30.98 14*ce*P **P 14 07 46.7 +1.1**
KLR pmax pmax
comp=Z,161nm,1.5s
ODAN Odare 31.17 290 *e*P **P 14 07 48.8 +1.0**
comp=Z,163nm,0.8s
RAMN Ramite 31.88 290 *e*P **P 14 07 55.3 +1.2**
comp=Z,226nm,1.0s
BOK Bokaro 32.34 284 *e*P **P 14 07 59.1 +1.3**
GUN Gumba 32.63 291 *e*P **P 14 08 01.8 +1.1**
comp=Z,221nm,0.9s
YSS Yuzh-Sakhalins 32.87 29⇑ *i*P **P 14 08 04.1 +1.9**
YSS *e* 14 08 07.4
YSS *e* 14 08 13.4
YSS pmax pmax
comp=Z,20nm,0.8s
PKI Pulchoki 33.00 291 *e*P **P 14 08 04.3 +0.3**
comp=Z,150nm,1.3s
PKIN Phulchoki 33.01 291 *e*P **P 14 08 04.3 +0.3**
comp=Z,96nm,1.0s
KKN Kakani 33.14 291 *e*P **P 14 08 05.6 +0.5**
comp=Z,96nm,0.9s
DMN Daman 33.27 291 *e*P **P 14 08 06.8 +0.5**
comp=Z,184nm,1.2s
GRNR Gornyy 33.64 18⇓ *i*P **P 14 08 09.6 +0.8**
GRNR *e*S **S 14 13 34.9 +3.7**
GRNR pmax pmax
comp=E,6.0nm,0.9s
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR pmax pmax
comp=N,6.0nm,0.8s
GRNR smax smax
comp=Z,2.0nm,0.9s
GRNR MLR MLR
comp=E,300nm,16.0s
GRNR MLR MLR
comp=N,770nm,14.0s
GRNR MLR MLR
comp=Z,1µm,14.0s
ZAK Zakamensk 33.66 340 *e*P **P 14 08 09.4 +0.2**
ZAK pmax pmax
comp=Z,20nm,1.4s
GKN Gorkha 33.73 291 *e*P **P 14 08 10.4 +0.3**
comp=Z,128nm,0.9s
MTN Manton Dam 33.86 161 P **P 14 08 09.4 -1.7**
MTN IAmb IAmb 14 08 27.0
comp=Z,38nm,1.2s
CHLP Challavanipeta 34.37 274 *e*P **P 14 08 16.9 +1.4**
CHLP IVmB_BB 14 08 17.7
comp=Z,413nm,2.5s
CHLP IVMsBB 14 29 26.3
comp=Z,454nm,10.3s
ZEA Zeya 34.53 7*de*P **P 14 08 17.6 +1.0**
ZEA *e* 14 09 56.8
ZEA *e*S **S 14 13 47.3 +2.3**
ZEA *e* 14 18 43.0
ZEA pmax pmax
comp=N,30nm,0.8s
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=Z,80nm,0.8s
ZEA pmax pmax
comp=N,300nm,6.7s
ZEA pmax pmax
comp=Z,300nm,4.7s
ZEA smax smax
comp=E,400nm,6.8s
ZEA MLR MLR
comp=N,2µm,15.0s
ZEA MLR MLR
comp=E,900nm,15.0s
ZEA MLR MLR
comp=Z,2µm,15.0s
DANN Dangsing 34.54 292 *e*P **P 14 08 17.6 +0.3**
comp=Z,85nm,0.8s
KOLN Koldanda 34.62 291 *e*P **P 14 08 18.4 +0.5**
comp=Z,295nm,1.3s
TLY Talaya 34.68 342 P **P 14 08 19.4 +1.5**
comp=Z,10nm,0.7s,baz=159,slow=10,SNR=17
TLY LR LR 14 23 23.7
comp=Z,2µm,20.1s,baz=144,slow=38
TLY Talaya 34.68 342 P **P 14 08 19.5 +1.6**
TLY Talaya 34.68 342*d i*P **P 14 08 18.9 +1.0**
TLY pmax pmax
comp=Z,182nm,2.0s
TLY MLR MLR
comp=Z,5µm,13.0s
TLY Talaya 34.68 342 P **P 14 08 18.0 +0.1**
IRK Irkutsk 34.99 343 *e*P **P 14 08 21.0 +0.4**
IRK pmax pmax
comp=Z,141nm,2.3s
PYUN Piuthan 35.19 291 *e*P **P 14 08 23.5 +0.7**
comp=Z,140nm,1.0s
MOY Mondy 35.51 339 *e*P **P 14 08 26.2 +1.0**
MOY pmax pmax
comp=Z,136nm,3.1s
KNRA Kununurra 35.94 166 P **P 14 08 27.6 -1.4**
WMQ Urumqi 36.52 319 *e*P **P 14 08 36.3 +2.4**
WMQ pP pwP 14 08 39.8 -1.9
WMQ pmax pmax
comp=Z,51nm,1.5s
WMQ pmax pmax
comp=Z,950nm,3.9s
WMQ LR LR
comp=Z,3µm,17.5s
WMQ LR LR
comp=Z,6µm,13.9s
WMQ LR LR
comp=Z,5µm,18.5s
WMQ Urumqi 36.52 319 P **P 14 08 32.3 -1.6**
WMQ pmax pmax
comp=Z,48nm,1.1s
WMQ Urumqi 36.52 319 P **P 14 08 32.3 -1.6**
WMQ IAmb IAmb 14 08 49.1
comp=Z,48nm,1.1s
PVM Polavaram 36.85 273 *e*P **P 14 08 37.6 +0.8**
PVM IVmB_BB 14 08 38.4
comp=Z,300nm,2.5s
PVM IVMs_BB IVMs_BB 14 28 45.5
comp=Z,288nm,12.5s
FITZ Fitzroy Crossi 37.75 172 P **P 14 08 43.7 -0.7**
comp=Z,62nm,1.0s,baz=356,slow=8.2,SNR=58
FITZ PcP **PcP 14 11 01.3 -0.1**
comp=Z,7.1nm,0.7s,baz=253,slow=2.4,SNR=2.7
FITZ Fitzroy Crossi 37.75 172 P **P 14 08 43.0 -1.4**
FITZ IAmb IAmb 14 08 46.8
comp=Z,69nm,1.1s
MYLAV Mylavaram 37.87 272 *e*P **P 14 08 46.3 +0.7**
MYLAV IVmB_BB 14 08 47.2
comp=Z,256nm,2.8s
MYLAV IVMs_BB IVMs_BB 14 30 04.3
comp=Z,331nm,12.2s
GGR Gangavaram 38.09 274 *e*P **P 14 08 47.9 +0.3**
GGR IVmB_BB 14 08 48.6
comp=Z,345nm,2.8s
GGR IVMs_BB IVMs_BB 14 31 37.3
comp=Z,340nm,12.4s
BOD Bodaibo 38.52 354 *e*P **P 14 08 50.3 -0.2**
BOD pmax pmax
comp=Z,15nm,2.0s
ADKI Addanki 38.66 271 *e*P **P 14 08 53.4 +1.1**
ADKI IVmB_BB 14 08 54.0
comp=Z,292nm,2.5s
ADKI IVMs_BB IVMs_BB 14 30 00.3
comp=Z,311nm,13.7s
RPR Rampur 38.79 276 *e*P **P 14 08 53.8 +0.5**
RPR IVmB_BB 14 08 54.3
comp=Z,378nm,3.1s
RPR IVMs_BB IVMs_BB 14 29 14.8
comp=Z,257nm,12.6s
PMG Port Moresby 39.00 135 P **P 14 08 54.3 -0.7**
comp=Z,28nm,0.8s,baz=309,slow=8.2,SNR=9.1
PMG LR LR 14 25 14.8
comp=Z,459nm,20.2s,baz=302,slow=37
PMG Port Moresby 39.00 135*ce*P **P 14 08 55.1 +0.1**
PMG pmax pmax
comp=Z,37nm,1.0s
PMG Port Moresby 39.00 135 P **P 14 08 53.0 -2.0**
KRVT Keravat (AS076 39.08 124 P **P 14 08 55.4 -0.3**
comp=Z,122nm,1.1s,baz=288,slow=9.6,SNR=8.8
KRVT LR LR 14 21 59.2
comp=Z,3µm,21.5s,baz=310,slow=32
RABL Rabaul 39.11 124 P **P 14 08 53.8 -2.2**
NJS Nagarjunasagar 39.15 272 *e*P **P 14 08 57.0 +0.6**
NJS IVmB_BB 14 08 57.8
comp=Z,295nm,2.4s
NJS IVMs_BB IVMs_BB 14 32 18.4
comp=Z,371nm,12.1s
SKHT Srikalahasti 39.38 268 *e*P **P 14 08 59.4 +1.2**
SKHT IVmB_BB 14 09 00.7
comp=Z,370nm,1.0s
SKHT IVMs_BB IVMs_BB 14 27 23.0
comp=Z,181nm,9.2s
CUPL Choutuppal 39.38 274 *e*P **P 14 08 58.8 +0.5**
CUPL IVmBBB 14 09 00.9
comp=Z,306nm,2.7s
CUPL IVMs_BB IVMs_BB 14 32 19.9
comp=Z,338nm,9.8s
DDI Dehra Dun 39.70 294 *e*P **P 14 09 01.4 +0.6**
HYB Hyderabad 39.71 274 *i*P **P 14 09 00.0 -1.1**
HYBB Hyderabad (bro 39.71 274 *e*P **P 14 09 01.3 +0.2**
HYBB IVmB_BB 14 09 02.1
comp=Z,299nm,2.9s
HYBB IVMs_BB IVMs_BB 14 30 05.5
comp=Z,400nm,12.5s
ZSN Zaisan 40.11 322⇓ *i*P **P 14 09 05.2 +1.2**
comp=Z,95nm,2.8s,baz=322
ZSN LR LR 14 26 00.9
comp=Z,417nm,11.8s,baz=322
ZSN Zaisan 40.11 322*d i*P **P 14 09 05.2 +1.2**
ZSN pmax pmax
comp=Z,95nm,2.8s
ZSN MLR MLR
comp=Z,417nm,12.0s
BHPL Bhopal 40.11 283 *e*P **P 14 09 04.8 +0.5**
BHPL AMP 14 09 06.2
comp=Z,141nm,0.8s
COEN Coen 40.12 144 P **P 14 09 03.1 -1.3**
PALK Pallekele 40.42 258 P **P 14 09 06.3 -0.7**
PALK P **P 14 09 06.3 -0.7**
PALK P **P 14 09 06.3 -0.7**
PALK P **pP 14 09 06.5 -3.5**
PALK P **pP 14 09 06.5 -3.5**
PALK P **pP 14 09 06.5 -3.5**
PALK Pallekele 40.42 258 P **P 14 09 05.5 -1.5**
PALK pmax pmax
comp=Z,27nm,0.9s
PALK Pallekele 40.42 258 P **P 14 09 05.5 -1.5**
MBWA Marble Bar 40.46 181 P **P 14 09 06.8 -0.3**
SMLA Simla 40.54 295 *e*P **P 14 09 08.0 +0.3**
SMLA IAmb IAmb 14 09 28.8
comp=Z,92nm,1.2s
PSA00 Pilbara Seismi 40.87 181 P **P 14 09 08.3 -2.1**
PSA00 Pilbara Seismi 40.87 181 P **P 14 09 08.9 -1.6**
PSA00 IAmb IAmb 14 09 14.0
comp=Z,19nm,0.8s
BHK Bhakra 41.21 296 *ex* x 14 09 13.0
MK31 Makanchi Array 41.30 320*ce*P **P 14 09 15.3 +1.4**
MK31 Makanchi Array 41.30 320 P **P 14 09 13.8 -0.1**
MK31 IAmb IAmb 14 09 18.1
comp=Z,74nm,1.2s
MKAR Makanchi Array 41.30 320 P **P 14 09 15.4 +1.5**
comp=Z,35nm,0.8s,baz=112,slow=9.8,SNR=150
MKAR LR LR 14 27 28.4
comp=Z,1µm,18.6s,baz=108,slow=38
MKAR Makanchi Array 41.30 320*ce*P **P 14 09 15.3 +1.4**
MKAR pmax pmax
comp=Z,36nm,0.8s
MKAR Makanchi Array 41.30 320 P **P 14 09 14.0 +0.1**
WB0 Warramunga Arr 41.39 160 P **P 14 09 12.9 -1.9**
WB0 IAmb IAmb 14 09 20.5
comp=Z,34nm,0.7s
DHRM DHARAMSHALA 41.40 297 *e*P **P 14 09 15.3 +0.2**
DHRM IAmb IAmb 14 09 27.8
comp=Z,54nm,0.8s
URV Uravakonda 41.41 271 *e*P **P 14 09 15.6 +0.5**
URV IVmBBB 14 09 17.7
comp=Z,301nm,2.6s
URV IVMs_BB IVMs_BB 14 33 52.3
comp=Z,316nm,11.5s
KLRI Killari 41.44 275 *e*P **P 14 09 15.5 +0.1**
KLRI IVmB_BB 14 09 16.1
comp=Z,507nm,2.6s
KLRI IVMs_BB IVMs_BB 14 31 26.6
comp=Z,455nm,13.3s
MAKZ Makanchi 41.50 320 P **P 14 09 15.8 +0.3**
MAKZ pmax pmax
comp=Z,57nm,1.0s
MAKZ Makanchi 41.50 320 P **P 14 09 15.8 +0.3**
MAKZ IAmb IAmb 14 09 28.1
comp=Z,57nm,1.0s
WRAB Tennant Creek 41.53 160*ce*P **P 14 09 14.6 -1.4**
WRAB pmax pmax
comp=Z,39nm,0.8s
WRAB Tennant Creek 41.53 160 P **P 14 09 14.3 -1.7**
WRAB IAmb IAmb 14 09 21.8
comp=Z,46nm,0.7s
WRA Warramunga Arr 41.54 160 P **P 14 09 15.0 -1.0**
comp=Z,28nm,0.6s,baz=343,slow=9.1,SNR=115
WRA PcP **PcP 14 11 13.9 +0.5**

comp=Z,13nm,0.7s,baz=342,slow=3.5,SNR=9.0
WRA ScP **ScP** **14 15 02.6 -0.8**
comp=Z,1.7nm,1.0s,baz=336,slow=3.5,SNR=4.9
WRA S **S** **14 15 25.0 -6.7**
comp=Z,8.6nm,0.8s,baz=339,slow=15,SNR=12
WRA PKiKP **PKiKP** **14 18 22.5 +1.6**
comp=Z,1.3nm,0.7s,baz=343,slow=3.2,SNR=5.1
WRA LR LR 14 27 00.0
comp=Z,643nm,21.5s,baz=335,slow=37
WRA Warramunga Arr 41.54 160 P **P** **14 09 14.3 -1.7**
WRA PcP **PcP** **14 11 13.7 +0.3**
WB2 Warramunga Arr 41.54 160 P **P** **14 09 14.6 -1.4**
WB2 IAmb IAmb 14 09 21.8
comp=Z,48nm,0.7s
SHLS Shalkode 41.61 314⇓*i*P **P** **14 09 16.1 -0.4**
comp=Z,117nm,2.5s,baz=314
SHLS Shalkode 41.61 314*d i*P **P** **14 09 16.1 -0.4**
SHLS pmax pmax
comp=Z,117nm,2.5s
WR0 Warramunga Arr 41.62 160 P **P** **14 09 14.7 -1.9**
WR0 IAmb IAmb 14 09 22.4
comp=Z,44nm,0.7s
PRZ Przheval'sk 42.10 312 P **P** **14 09 22.8 +2.1**
PRZ pmax pmax
comp=Z,74nm,1.2s
PRZ Przheval'sk 42.10 312 P **P** **14 09 22.8 +2.1**
PRZ IAmb IAmb 14 09 26.4
comp=Z,74nm,1.2s
KPKS Kokpek 42.25 314⇓*i*P **P** **14 09 23.3 +1.5**
comp=Z,125nm,2.7s,baz=314
KPKS LR LR 14 27 15.9
comp=Z,526nm,12.0s,baz=314
KPKS Kokpek 42.25 314*d i*P **P** **14 09 23.2 +1.5**
KPKS pmax pmax
comp=Z,125nm,2.7s
KPKS MLR MLR
comp=Z,525nm,12.0s
SATY Saty 42.30 313⇓*i*P **P** **14 09 24.1 +1.8**
comp=Z,105nm,2.6s,baz=313
SATY *e*S **S** **14 15 45.6 +2.7**
baz=313
SATY LR LR 14 27 26.1
comp=Z,391nm,11.7s,baz=313
SATY Saty 42.30 313*d i*P **P** **14 09 24.0 +1.8**
SATY *e*S **S** **14 15 45.5 +2.7**
SATY pmax pmax
comp=Z,105nm,2.6s
SATY MLR MLR
comp=Z,391nm,12.0s
KDJ Kajisay 42.85 311 P **P** **14 09 27.6 +0.8**
KDJ pmax pmax
comp=Z,32nm,1.1s
KDJ Kajisay 42.85 311 P **P** **14 09 27.6 +0.8**
YAK Yakutsk 42.94 6 P **P** **14 09 27.4 +0.5**
comp=Z,19nm,0.7s,baz=85,slow=0.9,SNR=15
YAK LR LR 14 28 31.5
comp=Z,963nm,20.7s,baz=206,slow=38
YAK Yakutsk 42.94 6 *e*P **P** **14 09 27.0 +0.1**
YAK *e**PP **pwP** **14 09 35.8 +1.7**
YAK *e* 14 11 03.3
YAK *e*S **S** **14 15 52.9 +1.5**
YAK pmax pmax
comp=Z,30nm,0.8s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,3.0nm,0.9s
YAK pmax pmax
comp=Z,236nm,2.8s
YAK pmax pmax
comp=N,104nm,2.0s
YAK pmax pmax
comp=E,111nm,2.1s
YAK smax smax
comp=E,154nm,3.5s
YAK smax smax
comp=N,133nm,3.1s
YAK MLR MLR
comp=Z,2μm,16.0s
YAK MLR MLR
comp=N,1μm,15.0s
YAK Yakutsk 42.94 6 P **P** **14 09 25.6 -1.3**
YAK IAmb IAmb 14 09 37.9
comp=Z,44nm,0.8s
KSH Kashi 43.00 307 P **P** **14 09 31.8 +3.9**
KSH sP pwP 14 09 37.0 +1.6
KSH S **S** **14 16 01.8 +8.6**
KSH pmax pmax
comp=Z,130nm,1.2s
KSH pmax pmax
comp=Z,2μm,6.7s
KSH LR LR
comp=Z,1μm,9.8s
KSH LR LR
comp=Z,850nm,10.1s
KSH LR LR
comp=Z,1μm,9.7s
TDK Taldyqorghan 43.00 316 *i* P **P** **14 09 29.8 +2.1**
comp=Z,40nm,1.0s,baz=316
TDK LR LR 14 28 03.3
comp=Z,1μm,13.7s,baz=316
TDK Taldyqorghan 43.00 316 *i* P **P** **14 09 29.8 +2.1**
TDK pmax pmax
comp=Z,40nm,1.0s
TDK MLR MLR
comp=Z,1μm,14.0s
MDOK Medeo 43.27 313 *i* P **P** **14 09 32.1 +1.9**
baz=312
MDOK *e*S **S** **14 15 59.9 +2.7**
baz=312
MDOK LR LR 14 28 00.6
comp=Z,857nm,12.7s,baz=312
MDOK Medeo 43.27 313 *i* P **P** **14 09 32.0 +1.9**
MDOK *e*S **S** **14 15 59.9 +2.7**
MDOK MLR MLR
comp=Z,857nm,13.0s
TNSS Tian-Shan 43.30 313⇓*i*P **P** **14 09 32.9 +2.3**
baz=312
TNSS LR LR 14 28 01.2
comp=Z,900nm,13.5s,baz=312
TNSS Tian-Shan 43.30 313*d i*P **P** **14 09 32.9 +2.3**
TNSS MLR MLR
comp=Z,900nm,13.0s
AAA Alma-Ata 43.38 313⇓*i*P **P** **14 09 33.1 +2.2**
baz=312
AAA *e*S **S** **14 16 01.6 +3.0**
baz=312
AAA Alma-Ata 43.38 313*d i*P **P** **14 09 33.0 +2.2**
AAA *e*S **S** **14 16 01.6 +3.0**
CHKK Chushkaly 43.54 314⇓*i*P **P** **14 09 33.0 +0.9**
baz=313
CHKK Chushkaly 43.54 314*d i*P **P** **14 09 33.0 +0.9**
ULHL Ulahol 43.55 311 P **P** **14 09 35.0 +2.5**
SNR=10
H11S3 WAKE ISLAND Hy 43.64 83 T T 14 55 16.0
baz=276,slow=75,SNR=19
H11N1 WAKE ISLAND Hy 43.65 82 T T 14 55 13.9
baz=278,slow=75,SNR=14
H11S1 WAKE ISLAND Hy 43.65 83 T T 14 55 18.1
baz=276,slow=75,SNR=10
H11N2 WAKE ISLAND Hy 43.65 82 T T 14 55 28.4
baz=278,slow=75,SNR=11
H11S2 WAKE ISLAND Hy 43.66 83 T T 14 54 59.5
baz=276,slow=75,SNR=12
H11N3 WAKE ISLAND Hy 43.66 82 T T 14 55 14.4
baz=278,slow=75,SNR=12
ZAA0 Zalesovo Array 43.83 330 P **P** **14 09 34.3 +0.1**
ZAA0 IAmb IAmb 14 09 36.8
comp=Z,47nm,0.8s
ZALV Zalesovo Beam 43.83 330 P **P** **14 09 35.0 +0.7**
comp=Z,39nm,0.7s,baz=116,slow=7.8,SNR=164
ZALV LR LR 14 28 41.4
comp=Z,2μm,20.5s,baz=126,slow=37
ZALV Zalesovo Beam 43.83 330 *i* P **P** **14 09 35.0 +0.7**
ZALV pmax pmax
comp=Z,39nm,0.7s
ZALV Zalesovo Beam 43.83 330 P **P** **14 09 34.4 +0.1**
BOOM Boomskoye usch 43.83 312 P **P** **14 09 33.0 -1.7**
BOOM pmax pmax
comp=Z,35nm,1.4s
BOOM Boomskoye usch 43.83 312 P **P** **14 09 33.0 -1.7**
POO Poona 43.94 277 *e*P **P** **14 09 36.0 +0.2**
POO IAmb IAmb 14 09 46.5
comp=Z,51nm,1.1s
KUU Kurty 43.99 314⇓*i*P **P** **14 09 37.6 +1.7**
comp=Z,214nm,2.1s,baz=313
KUU Kurty 43.99 314*d i*P **P** **14 09 37.5 +1.7**
KUU pmax pmax
comp=Z,214nm,2.1s
NIL Nilore 44.10 298 P **P** **14 09 37.6 +0.8**
NIL Nilore 44.10 298 P **P** **14 09 35.0 -1.8**
NIL pmax pmax
comp=Z,75nm,0.9s
NIL Nilore 44.10 298 P **P** **14 09 35.0 -1.8**
PETK Petropavlovsk- 44.13 32 P **P** **14 09 37.4 +0.7**
comp=Z,4.1nm,0.6s,baz=204,slow=5.1,SNR=20
PETK Petropavlovsk- 44.13 32 P **P** **14 09 36.6 0.0**
TKM2 Tokmak 2 44.20 312 P **P** **14 09 39.7 +2.0**
SNR=18
SEM Semipalatinsk 44.23 324 *e*P **P** **14 09 38.6 +0.7**
comp=Z,63nm,1.5s,baz=323
SEM LR LR 14 28 11.4
comp=Z,441nm,12.1s,baz=323
SEM Semipalatinsk 44.23 324 *e*P **P** **14 09 38.5 +0.7**
SEM pmax pmax
comp=Z,63nm,1.5s
SEM MLR MLR
comp=Z,441nm,12.0s
PET Petropavlovsk 44.55 32 *e*P **P** **14 09 40.3 +0.2**
PET *e*S **S** **14 16 14.3 -1.0**
PET pmax pmax
comp=Z,500nm,15.0s
PET MLR MLR
comp=Z,800nm,14.0s
PET Petropavlovsk 44.55 32 P **P** **14 09 39.5 -0.6**
PET IAmb IAmb 14 09 52.1
comp=Z,99nm,1.5s
KBK Karagaybulak 44.58 311 P **P** **14 09 43.0 +2.3**
SNR=19
UCH Uchtor 44.77 311 P **P** **14 09 45.6 +3.1**
SNR=9.7
CHMS Chumysh 44.82 312 P **P** **14 09 44.1 +1.6**
SNR=16
FRU1 Bishkek 44.85 312 P **P** **14 09 41.4 -1.3**
FRU1 pmax pmax
comp=Z,48nm,1.2s
FRU1 Bishkek 44.85 312 P **P** **14 09 41.4 -1.3**
FRU1 IAmb IAmb 14 09 47.6
comp=Z,48nm,1.1s
AAK Ala-Archa 44.90 311 P **P** **14 09 45.2 +2.0**
SNR=9.3
AAK Ala-Archa 44.90 311 *i* P **P** **14 09 45.2 +2.0**
SNR=12
AAK Ala-Archa 44.90 311 P **P** **14 09 44.9 +1.7**
AAK Ala-Archa 44.90 311*de*P **P** **14 09 44.7 +1.5**
AAK pmax pmax
comp=Z,148nm,2.2s
AS31 Alice Springs 44.91 162 P **P** **14 09 42.9 -0.4**
ASAR Alice Springs 44.91 162 P **P** **14 09 43.1 -0.1**
comp=Z,23nm,0.6s,baz=341,slow=6.9,SNR=292
ASAR ScP **ScP** **14 15 16.8 -0.2**
comp=Z,1.2nm,0.8s,baz=348,slow=3.9,SNR=2.8
ASAR S **S** **14 16 19.3 -1.8**
comp=Z,4.0nm,0.7s,baz=359,slow=16,SNR=10
ASAR LR LR 14 30 09.6
comp=Z,452nm,20.8s,baz=356,slow=38
ASAR Alice Springs 44.91 162 P **P** **14 09 41.2 -2.1**
SGDS Sogindy 45.04 312 *e*P **P** **14 09 45.4 +1.2**
comp=Z,65nm,2.7s,baz=312
SGDS Sogindy 45.04 312 *e*P **P** **14 09 45.4 +1.2**
SGDS pmax pmax
comp=Z,65nm,2.7s
KURK Kurchatov 45.29 323 P **P** **14 09 47.3 +1.3**
KURK Kurchatov 45.29 323*ce*P **P** **14 09 47.0 +1.0**
KURK pmax pmax
comp=Z,232nm,1.7s
KURK Kurchatov 45.29 323 P **P** **14 09 46.4 +0.4**
KURBB Kurchatov Arra 45.30 323 P **P** **14 09 47.2 +1.2**
comp=Z,79nm,0.8s,baz=122,slow=8.0,SNR=354
KURBB Kurchatov Arra 45.30 323 P **P** **14 09 47.0 +1.0**
AML Almayashu 45.33 310 P **P** **14 09 49.0 +2.0**
SNR=40
MA2 Magadan 45.53 21 P **P** **14 09 48.9 +1.2**
comp=Z,19nm,0.9s,baz=311,slow=10,SNR=3.8
BTLS Baital 45.92 314⇓*i*P **P** **14 09 52.3 +1.2**
comp=Z,74nm,3.2s,baz=314
BTLS Baital 45.92 314*d i*P **P** **14 09 52.2 +1.2**
BTLS pmax pmax
comp=Z,75nm,3.2s
CTA Charters Tower 46.81 146 P **P** **14 09 58.5 +0.2**
comp=Z,15nm,0.9s,baz=329,slow=9.9,SNR=23
CTAO Charters Tower 46.81 146 P **P** **14 09 56.7 -1.6**
CTAO pmax pmax
comp=Z,28nm,0.9s
CTAO Charters Tower 46.81 146 P **P** **14 09 56.7 -1.6**
CTAO IAmb IAmb 14 10 11.0
comp=Z,28nm,0.9s
BTK Batken 46.99 307 P **P** **14 09 58.8 -0.9**
BTK pmax pmax
comp=Z,78nm,1.5s
BTK Batken 46.99 307 P **P** **14 09 58.8 -0.9**
GAR Garm 47.19 305 P **P** **14 10 02.0 +0.8**
DZA Taraz 47.21 311 *e*P **P** **14 10 02.8 +1.4**
comp=Z,22nm,1.3s,baz=310
DZA LR LR 14 30 34.1
comp=Z,280nm,12.0s,baz=310
DZA Taraz 47.21 311 *e*P **P** **14 10 02.7 +1.4**
DZA pmax pmax
comp=Z,22nm,1.3s
DZA MLR MLR
comp=Z,280nm,12.0s
KBL Kabul 47.66 299 P **P** **14 10 05.6 +0.4**
SNR=41
KBL P **P** **14 10 05.6 +0.4**
SNR=41
KBL Kabul 47.66 299 P **P** **14 10 05.4 +0.2**
KBL pmax pmax
comp=Z,54nm,1.0s
KBL Kabul 47.66 299 P **P** **14 10 05.4 +0.2**
KK31 Karatay Array 47.85 311 *i* P **P** **14 10 07.4 +1.2**
KK31 Karatay Array 47.85 311 P **P** **14 10 06.6 +0.3**
KK31 IAmb IAmb 14 10 11.7
comp=Z,34nm,1.1s
KKAR Karatay Array 47.85 311 P **P** **14 10 06.2 0.0**
KKAR pmax pmax
comp=Z,34nm,1.1s
KKAR Karatay Array 47.85 311 P **P** **14 10 06.2 0.0**
KKAR IAmb IAmb 14 10 11.7
comp=Z,34nm,1.1s
IUG luzhnay 47.98 310⇓*i*P **P** **14 10 09.2 +1.8**
comp=Z,46nm,1.3s,baz=309
IUG *e*S **S** **14 17 07.7 +2.6**
baz=309
IUG LR LR 14 31 43.0
comp=Z,258nm,11.6s,baz=309
IUG luzhnay 47.98 310*d i*P **P** **14 10 09.2 +1.8**
IUG *e*S **S** **14 17 07.7 +2.6**
IUG pmax pmax
comp=Z,46nm,1.3s
IUG MLR MLR
comp=Z,258nm,12.0s
CHGR Chuyangaron 48.03 305 P **P** **14 10 07.6 -0.2**
HNR Honiara 48.41 123 LR LR 14 27 29.3
comp=Z,1μm,21.6s,baz=295,slow=32
BRZS Berezniki 48.45 320⇓*i*P **P** **14 10 12.2 +1.4**
comp=Z,60nm,2.5s,baz=320
BRZS *e*S **S** **14 17 13.7 +2.4**
baz=320
BRZS Berezniki 48.45 320*d i*P **P** **14 10 12.1 +1.4**
BRZS *e*S **S** **14 17 13.7 +2.4**
BRZS pmax pmax
comp=Z,60nm,2.5s
MORW Morawa 48.51 185 P **P** **14 10 11.1 -0.3**
SEY Seymchan 48.56 19 P **P** **14 10 13.0 +1.6**
comp=Z,48nm,0.7s,baz=227,slow=6.2,SNR=100
SEY Seymchan 48.56 19 *i* P **P** **14 10 12.6 +1.2**
FORT Forrest 50.57 171 P **P** **14 10 26.9 -0.1**
BVAR Borovoye Array 50.89 323 P **P** **14 10 30.5 +1.2**
comp=Z,11nm,0.7s,baz=208,slow=28,SNR=56
BRVK Borovoye 50.96 323 P **P** **14 10 31.2 +1.4**
BRVK Borovoye 50.96 323*ce*P **P** **14 10 30.7 +0.9**
BRVK pmax pmax
comp=Z,86nm,1.7s
BRVK Borovoye 50.96 323 P **P** **14 10 30.5 +0.7**
BRVK IAmb IAmb 14 10 33.0
comp=Z,39nm,0.9s
NWAO Narrogin (SRO) 52.26 183 P **P** **14 10 39.9 +0.2**
comp=Z,50nm,0.8s,baz=10,slow=5.2,SNR=31
NWAO Narrogin (SRO) 52.26 183 P **P** **14 10 40.2 +0.6**
NWAO Narrogin (SRO) 52.26 183 P **P** **14 10 39.1 -0.6**
NWAO Narrogin (SRO) 52.26 183 P **P** **14 10 39.6 0.0**
NWAO IAmb IAmb 14 10 50.3
comp=Z,51nm,0.8s
TIXI Tiksi 52.35 3*ce*P **P** **14 10 39.4 -0.4**
TIXI pmax pmax
comp=Z,214nm,1.7s
TIXI Tiksi 52.35 3 P **P** **14 10 38.6 -1.2**
TIXI IAmb IAmb 14 10 43.5
comp=Z,54nm,1.4s
HRA Herat 53.27 299 P **P** **14 10 47.5 -0.1**
HRA IAmb IAmb 14 10 51.4
comp=Z,45nm,1.4s
EIDS Eidsvold 53.68 145 P **P** **14 10 49.8 -0.4**
EIDS IAmb IAmb 14 10 57.3
comp=Z,18nm,0.7s
NRIK Noril'sk 53.70 346 P **P** **14 10 50.8 +0.9**
comp=Z,22nm,0.7s,baz=131,slow=7.4,SNR=40
NRIK LR LR 14 35 23.0
comp=Z,2μm,20.5s,baz=150,slow=38
NRIK Noril'sk 53.70 346*ce*P **P** **14 10 50.7 +0.9**
NRIK pmax pmax
comp=Z,38nm,0.9s
BBOO Buckleboo 54.16 164 P **P** **14 10 53.8 +0.1**
STKA Stephens Creek 55.01 158 P **P** **14 10 59.8 0.0**
comp=Z,25nm,0.8s,baz=340,slow=7.4,SNR=34
STKA LR LR 14 36 22.7
comp=Z,585nm,20.6s,baz=346,slow=38
STKA Stephens Creek 55.01 158 P **P** **14 11 00.0 +0.2**
STKA pmax pmax
comp=Z,12nm,1.1s
STKA Stephens Creek 55.01 158 P **P** **14 10 60.0 +0.2**
AB31 Akbulak array 56.25 317 *i* P **P** **14 11 09.4 +0.8**
ABKAR Akbulak array 56.25 317 P **P** **14 11 09.1 +0.5**
ABKAR IAmb IAmb 14 11 11.8
comp=Z,52nm,1.4s
ABKAR Akbulak array 56.25 317 P **P** **14 11 08.8 +0.1**
GEYT Alibeck 56.63 303 P **P** **14 11 13.0 +1.3**
comp=Z,14nm,0.8s,baz=65,slow=7.0,SNR=19
GEYT LR LR 14 39 02.4
comp=Z,2μm,20.6s,baz=90,slow=40
GEYT Alibeck 56.63 303 P **P** **14 11 10.7 -0.9**
GYA0B ALIBECK ARRAY 56.63 303 P **P** **14 11 11.8 +0.2**
GYA0B IAmb IAmb 14 11 26.3
comp=Z,52nm,1.1s
WSAR Wadi Sarin 57.29 286 P **P** **14 11 17.1 +0.6**
comp=Z,7.6nm,0.9s,baz=112,slow=6.3,SNR=10
SVE Sverdlovsk 57.41 326⇑*e*P **P** **14 11 17.9 +1.1**
SVE pmax pmax
comp=Z,116nm,1.4s
SANVU Saraoutou 57.66 124 P **P** **14 11 18.5 -0.6**
AKTO Aktyubinsk 57.66 318 P **P** **14 11 19.6 +0.9**
comp=Z,16nm,0.9s,baz=95,slow=7.5,SNR=34
BIDO Bidbid 57.71 286 P **P** **14 11 20.0 +0.6**
SNR=10
SMDO Samad 57.85 285 P **P** **14 11 20.2 -0.4**
SNR=5.8
SMDO P **P** **14 11 20.2 -0.4**
SNR=5.8
SMDO P **P** **14 11 20.2 -0.4**
SNR=5.8
ARMA Armidale 58.04 148 P **P** **14 11 19.9 -1.6**
ARMA IAmb IAmb 14 11 25.9
comp=Z,51nm,1.4s
ARU Arti 58.43 325 P **P** **14 11 24.6 +0.6**
comp=Z,5.9nm,0.5s,baz=108,slow=3.3,SNR=31
ARU Arti 58.43 325*d i*P **P** **14 11 24.5 +0.6**
ARU 14 12 17.9
ARU 14 13 31.8
ARU S **S** **14 19 29.7 +3.1**
ARU 14 21 13.9
ARU SS **SS** **14 23 20.6 +1.9**
ARU pmax pmax
comp=Z,83nm,1.2s
ARU MLR MLR
comp=Z,2μm,16.0s
ARU Arti 58.43 325 P **P** **14 11 23.1 -0.8**
HOQ Hoqain 58.44 286 P **P** **14 11 24.5 0.0**
SNR=6.4
HOQ P **P** **14 11 24.5 0.0**
SNR=6.4
BANOM Banah 59.00 289 P **P** **14 11 29.7 +1.2**
BANOM Banah 59.00 289 P **P** **14 11 29.2 +0.7**
SNR=6.4
BANOM P **P** **14 11 29.2 +0.7**
SNR=6.4
SOHO SOHO 59.05 287 P **P** **14 11 28.9 +0.1**
SHME Shamm 59.12 289 *i* P **P** **14 11 30.3 +1.0**
SNR=9.7
ARQ Araqi 59.19 286 P **P** **14 11 29.7 -0.1**
SNR=5.9
MSFE Esma-Masafi 59.20 288 *i* P **P** **14 11 30.7 +0.9**
SNR=7.7
UOSS Minazif 59.23 288 *i* P **P** **14 11 29.9 -0.1**
SNR=6.9
UOSS Minazif 59.23 288 P **P** **14 11 28.5 -1.5**
UOSS IAmb IAmb 14 11 40.1
comp=Z,22nm,1.1s
HATD Hatta, Dubai 59.31 288 *i* P **P** **14 11 31.3 +0.7**
SNR=9.4
HATD Hatta, Dubai 59.31 288 P **P** **14 11 31.1 +0.5**
SNR=7.7
HATD P **P** **14 11 31.1 +0.5**
SNR=7.7
ASHO Ashiyiah 59.40 288 P **P** **14 11 32.0 +0.8**
ASHO Ashiyiah 59.40 288 P **P** **14 11 34.0 +2.8**
SNR=9.3
UMQ Umm Al-Quwin 59.62 289 *i* P **P** **14 11 34.6 +1.9**
SNR=5.9
NAZ Nazwa, Dubai 59.70 288 *i* P **P** **14 11 33.9 +0.6**
SNR=5.6
NAZ Nazwa, Dubai 59.70 288 P **P** **14 11 33.9 +0.6**
SNR=8.2
ALNE Al Ain 59.77 287 *i* P **P** **14 11 34.6 +0.8**
SNR=11
FAQ Al Faqa, Dubai 59.80 288 *i* P **P** **14 11 34.5 +0.5**
SNR=10
FAQ Al Faqa, Dubai 59.80 288 P **P** **14 11 34.4 +0.4**
SNR=9.2
ASUD Al Ashush, Dub 60.06 288 *i* P **P** **14 11 36.6 +0.8**
SNR=12
ASUD Al Ashush, Dub 60.06 288 P **P** **14 11 36.4 +0.7**
SNR=9.5
ASUD P **P** **14 11 36.4 +0.7**
SNR=9.5
ASUD P **P** **14 11 36.4 +0.7**
SNR=9.5
AJN Ajban 60.38 288 *i* P **P** **14 11 38.2 +0.3**
SNR=6.9
DZM Mont Dzumac 61.09 130 *e*P **P** **14 11 44.3 +1.5**
comp=Z,115nm,1.2s
DZM *e*S **S** **14 20 01.6 -0.4**
comp=Z,436nm,28.6s
DZM *e*LR LR 14 29 48.0
comp=Z,2μm,22.5s
DZM Mont Dzumac 61.09 130 P **P** **14 11 43.0 +0.2**
TOO Toolangi 61.51 157 P **P** **14 11 45.7 +0.4**
TOO pmax pmax
comp=Z,98nm,1.4s
TOO Toolangi 61.51 157 P **P** **14 11 45.7 +0.4**
LHI Lord Howe Isla 62.86 143 P **P** **14 11 55.2 +0.8**
KIRV Kirov 63.65 326 P **P** **14 11 59.8 +0.6**
comp=Z,62nm,0.7s,baz=79,slow=1.3,SNR=25
KIRV Kirov 63.65 326*ce*P **P** **14 11 59.6 +0.4**
SOCY Socotra 64.01 274 P **P** **14 12 00.0 -2.5**
MAK Makhachkala 64.59 309 *e*P **P** **14 12 02.0 -3.8**
MAK *e* 14 14 23.9
MAK *e*S **S** **14 20 39.3 -5.9**
MAK *e*SS **SS** **14 24 55.9 +0.3**
MAK pmax pmax
comp=Z,261nm,1.0s
MAK MLR MLR
comp=Z,1μm,14.0s
TNA Tin City 64.79 26 P **P** **14 12 07.9 +1.3**
baz=262
LGD Lagodekhi 65.61 308 P **P** **14 12 13.9 +1.4**
GROC Groznyy 65.83 309 *e*P **P** **14 12 14.9 +1.1**
GROC *e* 14 12 44.5
GROC *e* 14 14 41.1
GROC pmax pmax
comp=Z,56nm,0.8s
GUDG Gudauri 66.86 309 P **P** **14 12 23.1 +2.4**
TAU Tasmania Unive 66.89 159 P **P** **14 12 20.4 0.0**
TAU pmax pmax
comp=Z,92nm,1.3s
TAU Tasmania Unive 66.89 159 P **P** **14 12 20.4 0.0**
GNI Garni 66.91 306 P **P** **14 12 22.5 +1.5**
comp=Z,25nm,1.0s,baz=90,slow=6.9,SNR=16
GNI Garni 66.91 306 P **P** **14 12 22.8 +1.8**
GNI Garni 66.91 306 *e*P **P** **14 12 23.0 +2.0**

GNI Garni 66.91 306 P **P** **14 12 22.7 +1.6**
GNI P **P** **14 12 22.7 +1.6**
GNI Garni 66.91 306 *ce*P **P** **14 12 22.7 +1.6**
GNI pmax pmax
comp=Z,94nm,1.7s
GNI Garni 66.91 306 P **P** **14 12 19.4 -1.7**
KZRT Kazreti 67.03 308 P **P** **14 12 23.0 +1.4**
RDOG Red Dog Mine 67.05 23 P **P** **14 12 21.2 0.0**
ZEI Tsey 67.25 309 *e*P **P** **14 12 23.3 +0.1**
ZEI pmax pmax
comp=Z,49nm,0.9s
ONI Oni 67.60 309 P **P** **14 12 27.3 +2.1**
MSVF Nonsavu 67.62 119 P **P** **14 12 25.1 -0.6**
MSVF pmax pmax
comp=Z,33nm,1.0s
MSVF Nonsavu 67.62 119 P **P** **14 12 25.1 -0.6**
MSVF IAmb IAmb 14 12 43.1
comp=Z,33nm,0.9s
GOF Gofitskoye 67.64 312 ⇑ *i*P **P** **14 12 27.0 +1.7**
GOF pmax pmax
comp=Z,178nm,1.9s
BGD Bogdanovka 67.64 307 P **P** **14 12 28.0 +2.3**
CLDR Caldiran 67.66 305 *e*P **P** **14 12 27.8 +1.9**
KBZ Khabaz 67.88 310 P **P** **14 12 27.9 +1.0**
comp=Z,45nm,0.9s,baz=74,slow=7.4
KBZ LR LR 14 46 03.8
comp=Z,1µm,18.4s,baz=76,slow=39
KBZ Khabaz 67.88 310 *ce*P **P** **14 12 27.8 +1.0**
KBZ pmax pmax
comp=Z,52nm,0.9s
KVAR Kislovodsk Arr 68.00 310 P **P** **14 12 30.0 +2.2**
comp=Z,36nm,0.7s,baz=349,slow=16,SNR=15
VRH Novokhopyorsk 68.00 318 *e*P **P** **14 12 27.4 -0.1**
VRH pmax pmax
comp=Z,140nm,0.7s
VRH MLR MLR
comp=Z,620nm,12.0s
KIV Kislovodsk 68.00 310 *i* P **P** **14 12 29.2 +1.4**
SNR=23
KIV Kislovodsk 68.00 310 *e*P **P** **14 12 29.2 +1.4**
KIV Kislovodsk 68.00 310 P **P** **14 12 29.3 +1.5**
KIV Kislovodsk 68.00 310 *e*P **P** **14 12 29.0 +1.2**
KIV *e* 14 12 55.1
KIV *e*S **S** **14 21 29.0 +2.1**
KIV pmax pmax
comp=Z,381nm,0.9s
KIV pmax pmax
comp=Z,319nm,3.3s
KIV MLR MLR
comp=Z,2µm,17.0s
KIV Kislovodsk 68.00 310 P **P** **14 12 27.8 0.0**
KARS Kars 68.11 307 *e*P **P** **14 12 30.7 +2.1**
KARS Kars 68.11 307 P **P** **14 12 31.8 +3.2**
VANB Van 68.15 305 *e*P **P** **14 12 29.9 +1.1**
CUKT Cukurca 68.17 303 *e*P **P** **14 12 29.9 +0.9**
AGRB Hanur-Agry 68.32 306 *e*P **P** **14 12 31.8 +1.8**
GEVA Gevas 68.44 304 P **P** **14 12 31.8 +1.0**
AKDM Akdamar-Van 68.50 304 *e*P **P** **14 12 32.8 +1.7**
KLMR Klimovskoe 68.72 329 *e*P **P** **14 12 30.7 -1.1**
KLMR *e* 14 15 01.2
KLMR pmax pmax
comp=Z,100nm,1.4s
KLMR Klimovskoe 68.72 329 *e*P **P** **14 12 30.8 -1.1**
KLMR AMP 14 12 34.5
comp=Z,100nm,1.4s
KLMR *e*PP **PP** **14 15 01.2 -2.1**
BATM Batumi 69.02 308 *e*P **P** **14 12 36.5 +2.4**
BATM Batumi 69.02 308 P **P** **14 12 37.6 +3.5**
SIRT Sirnak 69.05 304 *e*P **P** **14 12 35.7 +1.2**
RAYN Ar Rayn 69.08 288 *i* P **P** **14 12 35.0 +0.2**
SNR=7.9
RAYN Ar Rayn 69.08 288 P **P** **14 12 34.2 -0.7**
RAYN pmax pmax
comp=Z,29nm,1.0s
RAYN Ar Rayn 69.08 288 P **P** **14 12 34.1 -0.7**
RAYN IAmb IAmb 14 12 37.1
comp=Z,29nm,0.9s
KOPR Koprukoy-ERZUR 69.13 306 *e*P **P** **14 12 36.8 +1.8**
GURO Guroymak-BITLI 69.20 305 *e*P **P** **14 12 37.3 +1.8**
TMCR Tamitsa 69.30 332 *e*P **P** **14 12 36.3 +1.0**
TMCR pmax pmax
comp=Z,54nm,0.9s
A21K Barrow 69.39 20 P **P** **14 12 37.3 +1.6**
baz=270,SNR=12
A21K Barrow 69.39 20 P **P** **14 12 36.6 +0.9**
VORD Divnogorie 69.55 318 *e*P **P** **14 12 36.6 -0.5**
VORD pmax pmax
comp=Z,40nm,0.9s
VRTB Varto-Mus 69.56 305 *e*P **P** **14 12 39.8 +2.2**
VSR Storozhevoye 69.60 318 *e*P **P** **14 12 37.3 -0.2**
VSR pmax pmax
comp=Z,60nm,0.8s
VSR MLR MLR
comp=Z,750nm,20.0s
LPSR Galich'ya Gora 69.61 320 *e*P **P** **14 12 37.4 -0.1**
LPSR pmax pmax
comp=Z,160nm,0.8s
LPSR MLR MLR
comp=Z,590nm,17.0s
CHOM Cayeli-Rize 69.79 308 *e*P **P** **14 12 40.2 +1.3**
TTA Tatalina 69.87 29 P **P** **14 12 40.0 +1.0**
TTA pmax pmax
comp=Z,32nm,1.2s
TTA Tatalina 69.87 29 P **P** **14 12 40.0 +1.0**
TTA IAmb IAmb 14 12 42.2
comp=Z,32nm,1.2s
SVAN Silvan-Diyarba 69.92 304 *e*P **P** **14 12 41.0 +1.3**
MOS Moscow 70.06 323 *e*P **P** **14 12 39.2 -1.0**
MOS *e* 14 12 58.7
MOS *e* 14 15 17.4
MOS pmax pmax
comp=Z,81nm,0.6s
KOPT Kop Dagi 70.15 306 P **P** **14 12 42.8 +1.3**
KOPT IAmb IAmb 14 12 47.1
comp=Z,23nm,0.8s
KNTN Kanton 70.17 100 P **P** **14 12 40.6 -1.0**
BNGB Bingl 70.18 305 *e*P **P** **14 12 42.9 +1.5**
SOC Sochi 70.19 310 *e*P **P** **14 12 41.4 +0.2**
SOC *e* 14 12 59.6
SOC *e* 14 15 11.5
SOC *e*PPP PPP 14 17 03.2
SOC *e*S **S** **14 22 00.7 +8.2**
SOC *e* 14 22 37.9
SOC *e*SS **SS** **14 26 20.9 -1.3**
SOC pmax pmax
comp=Z,48nm,0.8s
SVW2 Sparrevohn 70.20 31 P **P** **14 12 41.5 +0.5**
SVW2 IAmb IAmb 14 12 53.5
comp=Z,29nm,1.3s
MARD Mardin 70.38 304 P **P** **14 12 43.1 +0.4**
MAZI Mazidag 70.62 304 *e*P **P** **14 12 45.1 +0.9**
OBN Obninsk 70.73 323 ⇓ *i*P **P** **14 12 44.3 0.0**
OBN *i* 14 12 49.9
OBN *i* 14 13 07.5
OBN pmax pmax
comp=Z,63nm,1.1s
OBN MLR MLR
comp=Z,586nm,16.0s
OBN Obninsk 70.73 323 P **P** **14 12 42.9 -1.3**
DYBB Diyarbakir 70.77 304 *e*P **P** **14 12 46.6 +1.6**
APA Apatity 70.98 336 ⇓ *i*P **P** **14 12 46.0 +0.4**
APA pmax pmax
comp=Z,145nm,1.0s
PTK Pertek 71.19 305 *e*P **P** **14 12 49.1 +1.4**
ESPY Espiye-Giresun 71.33 308 *e*P **P** **14 12 48.5 +0.2**
SVRC Sivrice-ELAZID 71.34 305 *e*P **P** **14 12 50.0 +1.4**
CAST Castle Rocks 71.60 28 P **P** **14 12 49.6 +0.1**
PPLA Purkeypile 71.62 29 P **P** **14 12 49.5 -0.2**
PPLA IAmb IAmb 14 13 06.9
comp=Z,44nm,1.2s
ANN Anapa 71.62 312 *e*P **P** **14 12 47.9 -2.0**
ANN *e**PP **pP** **14 12 52.1 -0.9**
ANN *e*S **S** **14 22 08.5 -0.6**
ANN pmax pmax
comp=Z,137nm,1.5s
ANN MLR MLR
comp=Z,879nm,14.0s
RSO Redoubt South 71.65 31 P **P** **14 12 49.8 -0.3**
URFA Urfa 71.89 304 *e*P **P** **14 12 53.1 +1.3**
COLD Coldfoot 71.92 24 P **P** **14 12 52.8 +1.4**
baz=277,SNR=13
COLD Coldfoot 71.92 24 P **P** **14 12 52.4 +1.1**
TOLK Toolik Lake Re 71.97 23 P **P** **14 12 53.0 +1.3**
baz=277,SNR=31
TOLK Toolik Lake Re 71.97 23 P **P** **14 12 53.0 +1.3**
MLY Manley 71.98 27 P **P** **14 12 53.3 +1.5**
baz=278,SNR=40
BPAW Bear Paw Mtn. 72.00 27 P **P** **14 12 52.5 +0.6**
BPAW IAmb IAmb 14 12 55.1
comp=Z,44nm,1.0s
MALT Malatya 72.03 305 *e*P **P** **14 12 54.3 +1.6**
MALT Malatya 72.03 305 P **P** **14 12 54.4 +1.7**
SKT Skwentna 72.04 30 P **P** **14 12 51.6 -0.5**
KTH Kantishna Hill 72.10 28 P **P** **14 12 52.4 -0.1**
KTH IAmb IAmb 14 12 55.4
comp=Z,35nm,1.1s
TRF Thorofare Moun 72.40 28 P **P** **14 12 55.0 +0.6**
SUA Susitna One 72.48 30 P **P** **14 12 54.7 -0.2**
I23K Minto, Yukon-K 72.55 26 P **P** **14 12 56.2 +1.2**
baz=279,SNR=25
I23K Minto, Yukon-K 72.55 26 P **P** **14 12 53.8 -1.2**
I23K IAmb IAmb 14 12 59.1
comp=Z,22nm,0.8s
CUT Chulitna 72.56 29 P **P** **14 12 54.8 -0.4**
baz=279
BWN Browne 72.65 27 P **P** **14 12 56.5 +0.8**
NEA2 Nenana 72.75 27 P **P** **14 12 57.2 +0.8**
baz=279,SNR=13
SVSK Karacayir 72.82 307 *e*P **P** **14 12 55.2 -1.9**
MCK McKinley 72.95 28 P **P** **14 12 57.9 +0.3**
baz=280,SNR=14
RC01 Rabbit Creek A 73.02 31 P **P** **14 12 58.2 +0.2**
baz=280
RND Reindeer 73.04 28 P **P** **14 12 57.7 -0.5**
RND pmax pmax
comp=Z,69nm,0.8s
RND Reindeer 73.04 28 P **P** **14 12 57.7 -0.5**
MDM Murphy Dome 73.05 26 P **P** **14 12 58.0 -0.1**
TOKT Tokat 73.08 307 *e*P **P** **14 12 59.8 +1.0**
TOKA Tokat 73.13 307 P **P** **14 12 55.5 -3.5**
TOKA IAmb IAmb 14 13 10.9
comp=Z,19nm,0.7s
WRH Wood River Hil 73.19 27 P **P** **14 12 59.0 +0.1**
WRH IAmb IAmb 14 13 02.2
comp=Z,36nm,1.0s
GAZ Gaziantep 73.20 304 *e*P **P** **14 13 00.6 +1.0**
GAZ Gaziantep 73.20 304 P **P** **14 12 59.8 +0.2**
GAZ IAmb IAmb 14 13 02.7
comp=Z,32nm,1.0s
TCOL CIGO, UAF Yank 73.22 26 P **P** **14 12 59.4 +0.3**
baz=280,SNR=13
TCOL CIGO, UAF Yank 73.22 26 P **P** **14 12 58.5 -0.6**
TCOL IAmb IAmb 14 13 02.7
comp=Z,28nm,0.8s
COLA College 73.22 26 *i* P **P** **14 12 59.4 +0.3**
COLA pmax pmax
comp=Z,22nm,0.7s
COLA College 73.22 26 P **P** **14 12 58.7 -0.3**
COLA IAmb IAmb 14 13 02.8
comp=Z,29nm,0.8s
PMR Palmer 73.22 30 P **P** **14 12 58.6 -0.6**
PMR pmax pmax
comp=Z,47nm,1.2s
PMR Palmer 73.22 30 P **P** **14 12 58.6 -0.6**
PMR IAmb IAmb 14 13 01.1
comp=Z,47nm,1.2s
CCB Clear Creek Bu 73.28 27 P **P** **14 12 58.3 -1.1**
GHO Glory Hole Cre 73.29 30 P **P** **14 12 59.6 0.0**
KVT Kavak 73.30 308 *e*P **P** **14 13 01.4 +1.3**
KVT Kavak 73.30 308 P **P** **14 13 01.7 +1.6**
POKR Poker Plat Res 73.36 26 P **P** **14 13 00.4 +0.5**
baz=280,SNR=14
POKR Poker Plat Res 73.36 26 P **P** **14 12 58.9 -1.0**
POKR IAmb IAmb 14 13 03.5
comp=Z,32nm,0.9s
ARD3 ARCESS Array S 73.56 339 P **P** **14 13 01.5 +0.5**
ARD3 IAmb IAmb 14 13 03.7
comp=Z,26nm,1.0s
SML Sawmill 73.56 30 P **P** **14 13 00.0 -1.2**
SML IAmb IAmb 14 13 04.3
comp=Z,40nm,0.9s
SARI SarD1z-Kayseri 73.56 305 *e*P **P** **14 13 02.7 +0.8**
ARD2 ARCESS Array S 73.56 339 P **P** **14 12 59.6 -1.4**
ARD2 IAmb IAmb 14 13 15.3
comp=Z,37nm,1.2s
ARD4 ARCESS Array S 73.56 339 P **P** **14 13 01.8 +0.7**
ARD4 IAmb IAmb 14 13 03.3
comp=Z,18nm,0.8s
ARC2 ARCESS Array S 73.57 339 P **P** **14 13 01.1 +0.1**
ARC2 IAmb IAmb 14 13 15.4
comp=Z,45nm,1.4s
ARC3 ARCESS Array S 73.57 339 P **P** **14 13 00.2 -0.9**
ARC3 IAmb IAmb 14 13 20.4
comp=Z,41nm,1.2s
ARD1 ARCESS Array S 73.57 339 P **P** **14 12 59.8 -1.3**
ARD1 IAmb IAmb 14 13 15.3
comp=Z,40nm,1.2s
ARB2 ARCESS Array S 73.57 339 P **P** **14 12 59.8 -1.3**
ARB2 IAmb IAmb 14 13 15.4
comp=Z,50nm,1.4s
ARC1 ARCESS Array S 73.57 339 P **P** **14 13 00.1 -1.0**
ARC1 IAmb IAmb 14 13 15.4
comp=Z,44nm,1.3s
ARB1 ARCESS Array S 73.57 339 P **P** **14 13 00.2 -0.9**
ARB1 IAmb IAmb 14 13 15.4
comp=Z,43nm,1.4s
ARB3 ARCESS Array S 73.57 339 P **P** **14 13 00.1 -1.0**
ARC4 ARCESS Array S 73.57 339 P **P** **14 13 00.1 -1.0**
ARA0 ARCESS Array S 73.57 339 P **P** **14 13 00.1 -1.0**
ARA1 ARCESS Array S 73.57 339 P **P** **14 13 00.1 -1.0**
ARA1 IAmb IAmb 14 13 15.4
comp=Z,42nm,1.4s
ARA2 ARCESS Array S 73.57 339 P **P** **14 13 00.1 -1.0**
ARCES ARCESS Array B 73.57 339 P **P** **14 13 01.9 +0.9**
comp=Z,14nm,0.8s,baz=71,slow=7.8,SNR=19
ARCES LR LR 14 48 47.9
comp=Z,676nm,18.1s,baz=120,slow=39
ARCES ARCESS Array B 73.57 339 P **P** **14 13 02.0 +0.9**
ARD5 ARCESS Array S 73.58 339 P **P** **14 12 59.4 -1.7**
ARD5 IAmb IAmb 14 13 21.9
comp=Z,27nm,1.1s
KNK Knik Glacier 73.58 30 P **P** **14 13 00.2 -1.1**
ARA3 ARCESS Array S 73.58 339 P **P** **14 13 00.2 -0.9**
ARA3 IAmb IAmb 14 13 04.7
comp=Z,34nm,1.3s
ARB4 ARCESS Array S 73.58 339 P **P** **14 12 59.7 -1.5**
ARB4 IAmb IAmb 14 13 04.7
comp=Z,34nm,1.3s
ARB5 ARCESS Array S 73.58 339 P **P** **14 13 00.1 -1.0**
ARB5 IAmb IAmb 14 13 04.7
comp=Z,27nm,1.1s
ARC5 ARCESS Array S 73.58 339 P **P** **14 12 59.8 -1.3**
ARC5 IAmb IAmb 14 13 04.8
comp=Z,38nm,1.4s
ARC7 ARCESS Array S 73.58 339 P **P** **14 12 59.5 -1.6**
ARC7 IAmb IAmb 14 13 04.6
comp=Z,23nm,1.0s
ARD9 ARCESS Array S 73.58 339 P **P** **14 12 59.4 -1.7**
ARD9 IAmb IAmb 14 13 15.5
comp=Z,54nm,1.4s
ARD6 ARCESS Array S 73.58 339 P **P** **14 12 58.5 -2.7**
ARD8 ARCESS Array S 73.59 339 P **P** **14 12 59.9 -1.3**
ARD8 IAmb IAmb 14 13 12.4
comp=Z,23nm,0.9s
ARD7 ARCESS Array S 73.59 339 P **P** **14 12 59.9 -1.3**
ARD7 IAmb IAmb 14 13 12.4
comp=Z,26nm,1.1s
IL31 73.65 26 P **P** **14 13 00.5 -1.1**
ILAR Eielson Array 73.65 26 P **P** **14 13 01.1 -0.6**
comp=Z,12nm,0.7s,baz=274,slow=4.7,SNR=62
ILAR Eielson Array 73.65 26 P **P** **14 12 59.7 -2.0**
HDA Harding Lake 73.69 27 P **P** **14 13 01.5 -0.4**
baz=281,SNR=13
HDA Harding Lake 73.69 27 P **P** **14 13 01.3 -0.6**
HDA IAmb IAmb 14 13 03.3
comp=Z,27nm,0.9s
SNOP Sinop 73.73 309 *e*P **P** **14 13 03.1 +0.6**
DHY Denali Highway 73.76 28 P **P** **14 13 02.2 -0.3**
DHY IAmb IAmb 14 13 04.9
comp=Z,18nm,0.8s
SPA0 Spitsbergen Ar 73.85 348 P **P** **14 13 02.0 -0.6**
SPA0 Spitsbergen Ar 73.85 348 *e*P **P** **14 13 03.8 +1.2**
SPITS Spitsbergen Ar 73.85 348 P **P** **14 13 03.6 +1.0**
comp=Z,26nm,0.7s,baz=81,slow=8.9,SNR=17
BNN Bunyan 73.91 306 *e*P **P** **14 13 04.5 +0.7**
FYU Fort Yukon 73.96 25 P **P** **14 13 02.7 -0.7**
FYU IAmb IAmb 14 13 23.5
comp=Z,38nm,1.2s
SCM Sheep Creek Mo 74.03 30 P **P** **14 13 04.6 +0.6**
SCM pmax pmax
comp=Z,41nm,0.7s
SCM Sheep Creek Mo 74.03 30 P **P** **14 13 04.6 +0.6**
PRP Porcupine Dome 74.06 26 P **P** **14 13 04.4 +0.2**
KOZT Kozan 74.22 305 *e*P **P** **14 13 06.3 +0.8**
KBS Kingsbay 74.43 349 *e*P **P** **14 13 07.1 +1.1**
KTK1 Kautokeino 74.48 338 *e*P **P** **14 13 07.1 +0.7**
M24K Tolsona, Glenn 74.50 29 P **P** **14 13 07.9 +1.1**
baz=282,SNR=6.3
M24K Tolsona, Glenn 74.50 29 P **P** **14 13 07.7 +0.9**
CORM Corum 74.54 308 *e*P **P** **14 13 08.4 +0.9**
PAX Paxson 74.63 28 P **P** **14 13 07.8 +0.3**
PAX pmax pmax
comp=Z,28nm,0.8s
PAX Paxson 74.63 28 **P** **14 13 07.8 +0.3**
PAX IAmb IAmb 14 13 12.2
comp=Z,28nm,0.8s
RIDG Independent Ri 74.73 27 P **P** **14 13 08.1 0.0**
RIDG IAmb IAmb 14 13 10.2
comp=Z,46nm,1.0s
KLU Klutina 74.75 30 P **P** **14 13 08.5 +0.2**
CMRD Camardi-Nigde 74.83 305 *e*P **P** **14 13 10.3 +1.1**
KARA Karaisali 74.87 305 *e*P **P** **14 13 10.1 +0.8**
Q23K Middlein Isla 75.00 32 P **P** **14 13 09.3 -0.2**
baz=283
ILGA Ilgaz 75.03 309 P **P** **14 13 10.6 +0.2**
ILGA IAmb IAmb 14 13 14.2
comp=Z,28nm,1.0s
SCRK Sand Creek 75.05 27 P **P** **14 13 10.2 +0.2**
baz=284,SNR=15
DOT Dot Lake 75.10 27 P **P** **14 13 10.7 +0.6**
DOT IAmb IAmb 14 13 14.3
comp=Z,23nm,0.8s
FIA1 FINESS Array S 75.10 330 P **P** **14 13 10.0 -0.1**
FINES FINESS Array B 75.10 330 P **P** **14 13 10.6 +0.6**
comp=Z,36nm,0.8s,baz=93,slow=7.6,SNR=56
FINES LR LR 14 49 18.4
comp=Z,1µm,18.6s,baz=76,slow=38
FINES FINESS Array B 75.10 330 P **P** **14 13 09.4 -0.6**
CANT Cankiri 75.20 308 *e*P **P** **14 13 08.8 -2.4**
N25K Chitina, Valde 75.34 29 P **P** **14 13 12.5 +0.9**
baz=284
N25K Chitina, Valde 75.34 29 P **P** **14 13 10.4 -1.3**
N25K IAmb IAmb 14 13 14.7
comp=Z,43nm,1.4s
BR131 Keskin Array S 75.39 307 P **P** **14 13 10.4 -2.0**
BR131 pmax pmax
comp=Z,23nm,1.5s
BR131 Keskin Array S 75.39 307 P **P** **14 13 10.4 -2.0**
BRTR Keskin Array B 75.39 307 P **P** **14 13 12.6 +0.2**
comp=Z,4.1nm,1.0s,baz=145,slow=8.9,SNR=14
BRTR LR LR 14 51 34.1
comp=Z,213nm,18.9s,baz=75,slow=40
BRTR Keskin Array B 75.39 307 *e*P **P** **14 13 12.4 0.0**
BRTR Keskin Array B 75.39 307 *i* P **P** **14 13 12.6 +0.2**
BRTR pmax pmax
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 75.39 307 P **P** **14 13 11.3 -1.1**
MENT Mentasta 75.42 28 P **P** **14 13 12.2 +0.2**
MENT IAmb IAmb 14 13 17.0
comp=Z,27nm,1.0s
VSU Vasula 75.47 327 *e*P **P** **14 13 13.0 +0.8**
VSU Vasula 75.47 327 *i* P **P** **14 13 11.7 -0.6**
L26K Log Cabin Wild 75.56 28 P **P** **14 13 13.7 +0.9**
baz=285,SNR=11
MMAI Mount Meron Ar 75.58 300 P **P** **14 13 14.4 +0.8**
comp=Z,0.6nm,0.3s,baz=82,slow=8.5,SNR=4.3
SERE Sereflikochisa 75.62 307 *e*P **P** **14 13 13.9 +0.2**
GLB Gilahina Butte 75.75 30 P **P** **14 13 13.1 -0.8**
GLB IAmb IAmb 14 13 31.5
comp=Z,30nm,1.1s
YESY Yesilyurt 75.76 305 *e*P **P** **14 13 15.1 +0.6**
MICGM Minsk 75.78 323 ⇓ *e*P **P** **14 13 14.0 -0.2**
MICGM PM 14 13 15.0
comp=Z,0.4nm,1.0s
MICGM *e*LR LR 14 47 30.0
MNK Minsk 75.78 323 *e*P **P** **14 13 14.0 -0.2**
MNK pmax pmax
comp=Z,380nm,1.0s
TRO Tromso 75.78 339 *e*P **P** **14 13 14.5 +0.7**
AFSR Afar-Bala (An 75.88 307 *e*P **P** **14 13 15.8 +0.6**
AKASG Malin Array Be 75.88 319 P **P** **14 13 14.7 -0.1**
comp=Z,36nm,0.8s,baz=62,slow=5.9,SNR=78
AKASG Malin Array Be 75.88 319 P **P** **14 13 13.9 -0.9**
AKBB Malin Array Si 75.88 319 *i* P **P** **14 13 13.3 -1.5**
AKBB Malin Array Si 75.88 319 P **P** **14 13 14.2 -0.6**
KIEV Kiev 75.89 319 P **P** **14 13 14.0 -0.8**
EGAK Eagle 76.03 26 P **P** **14 13 14.7 -0.7**
EGAK IAmb IAmb 14 13 17.8
comp=Z,24nm,0.8s
KEBE Keben-Mersin 76.10 304 *e*P **P** **14 13 16.5 0.0**
MCARA McCarthy VSAT 76.13 30 P **P** **14 13 15.7 -0.4**
MCARA IAmb IAmb 14 13 20.9
comp=Z,31nm,0.8s
IKL Isikli 76.18 304 *e*P **P** **14 13 16.8 0.0**
IDID Didziasalis 76.23 324 *e*P **P** **14 13 17.7 +1.0**
NACGM Naroch 76.30 324 *e*P **P** **14 13 17.0 -0.1**
NACGM PM 14 13 20.0
comp=Z,0.6nm,1.0s
NACGM *e*LQ LQ 14 41 04.0
NACGM *e*LR LR 14 45 28.0
TEVE Tevekalti-Mers 76.32 304 *e*P **P** **14 13 18.0 +0.3**
TGL Tana Glacier 76.39 30 P **P** **14 13 18.1 +0.5**
TGL IAmb IAmb 14 13 20.2
comp=Z,22nm,0.8s
IZAR Zarasai 76.39 325 *e*P **P** **14 13 18.5 +0.9**
ISAL Salakas 76.50 324 *e*P **P** **14 13 18.8 +0.6**
IIGN Ignalina 76.50 324 *e*P **P** **14 13 19.1 +0.8**
BERE Bereket-Mersin 76.51 304 *e*P **P** **14 13 19.1 +0.2**
YUVA Yuva-Kibriscik 76.68 308 *e*P **P** **14 13 20.0 +0.3**
CSS Mathiatis 76.77 303 *e*P **P** **14 13 20.6 +0.4**
CSS Mathiatis 76.77 303 P **P** **14 13 19.9 -0.3**
EIL Elat 76.80 297 P **P** **14 13 21.0 +0.6**
comp=Z,11nm,1.1s,baz=65,slow=4.0,SNR=9.3
BARN Barnard Glacie 76.85 30 P **P** **14 13 21.1 +0.8**
BARN IAmb IAmb 14 13 23.4
comp=Z,38nm,0.9s
DAWY Dawson 76.97 26 P **P** **14 13 20.9 0.0**
DAWY IAmb IAmb 14 13 23.6
comp=Z,26nm,0.8s
MDUB Mudurnu 77.02 308 *e*P **P** **14 13 22.0 +0.4**
MDUB Mudurnu 77.02 308 P **P** **14 13 21.2 -0.5**
CTGM Chitina Glacie 77.03 30 P **P** **14 13 22.3 +0.9**
KIS Kishinev 77.04 315 *e*P **P** **14 13 21.0 -0.5**
KIS Kishinev 77.04 315 *e*PP PP 14 16 11.0 -3.6
KIS Kishinev 77.04 315 *e*P **P** **14 13 21.0 -0.5**
KIS *e* 14 16 11.0
SORM Soroca 77.06 317 ⇓ P **P** **14 13 21.8 +0.3**
LEF Lefka 77.08 303 *e*P **P** **14 13 20.2 -1.7**
GAZI Gazipasa 77.25 304 *e*P **P** **14 13 22.4 -0.5**
TABL Table Mountain 77.28 30 P **P** **14 13 23.0 +0.2**
TABL IAmb IAmb 14 13 25.8
comp=Z,36nm,0.8s
TLCR 77.51 314 ⇓ P **P** **14 13 24.6 +0.5**
GULT Gulveren 77.54 309 *e*P **P** **14 13 24.7 +0.2**
SRCK Saricakaya, Es 77.56 308 *e*P **P** **14 13 24.5 0.0**
STEI Steigen 77.62 338 *e*P **P** **14 13 24.6 +0.4**
PABE Paberze 77.70 325 *e*P **P** **14 13 25.7 +0.8**
INK Inuvik 77.77 21 P **P** **14 13 24.1 -1.0**
INK pmax pmax
comp=Z,24nm,1.5s
INK Inuvik 77.77 21 P **P** **14 13 24.1 -1.0**
FAUS Fauske 77.80 338 *e*P **P** **14 13 25.6 +0.4**
PCA Pinnacle 77.80 30 P **P** **14 13 24.8 -0.7**
TPGR Topolog 77.87 313 ⇑ P **P** **14 13 26.8 +0.6**
CFR Carcaliu 77.98 314 ⇓ P **P** **14 13 27.1 +0.4**
SHUT Suhut-Afyon 78.00 307 *e*P **P** **14 13 26.1 -1.1**
HORU Horodok 78.01 318 P **P** **14 13 26.7 -0.1**
CAVI Cavuskoy 78.09 308 *e*P **P** **14 13 27.7 +0.2**
ADVT Abdulvahap 78.11 309 *e*P **P** **14 13 27.7 +0.1**
LOF Lofoten 78.13 339 *e*P **P** **14 13 28.4 +1.2**
KMPD K-Podol'skiy 78.16 317 P **P** **14 13 28.0 +0.3**
RPZ Rata Peaks 78.18 145 P **P** **14 13 28.3 +0.6**
ISP Isparta 78.22 306 *e*P **P** **14 13 27.9 -0.5**
ISP Isparta 78.22 306 P **P** **14 13 27.3 -1.1**
ISP pmax pmax
comp=Z,33nm,0.9s
ISP Isparta 78.22 306 P **P** **14 13 27.3 -1.1**
ISP IAmb IAmb 14 13 38.8
comp=Z,33nm,0.9s
HARR Harsova 78.25 313 ⇑ P **P** **14 13 28.7 +0.5**
ISK Istanbul-Kandi 78.44 310 *e*P **P** **14 13 29.7 +0.4**
KAVV Kandilli-Istan 78.44 310 *e*P **P** **14 13 29.6 +0.3**

MOR8 **Moi Rana** 78.56 337 *e*P P 14 13 29.0 -0.6
KORT **Korkueli** 78.57 305 *e*P P 14 13 29.8 -0.6
SUW **Suwalki** 78.57 323 P P 14 13 29.2 -0.6
SUW **Suwalki** 78.57 323 P P 14 13 29.2 -0.6
TVSB **Tavsanli** 78.58 308 *e*P P 14 13 30.7 +0.4
TESR **Tescani** 78.61 315 ⇓P P 14 13 30.8 +0.6
PBUR **Paburge** 78.65 326 *e*P P 14 13 27.4 -2.7
ARMT **Armutlu** 78.72 309 *e*P P 14 13 30.6 -0.3
VRI **Vrincioaia** 78.74 315 ⇓P P 14 13 31.9 +1.0
PLOR **Plostina** 78.80 315 ⇓P P 14 13 32.1 +0.8
BISRR **Bisoca** 78.84 314 ⇓P P 14 13 32.8 +1.2
BIZ **Bicaz** 78.85 316 ⇓P P 14 13 32.3 +0.8
HYT **Haines Junctio** 78.85 29 P P 14 13 31.2 -0.3
HYT IAmb IAmb 14 13 34.8
comp=Z,32nm,1.0s
ELL **Elmali** 78.98 305 *e*P P 14 13 32.7 +0.1
ELL **Elmali** 78.98 305 P P 14 13 30.9 -1.8
ELL pmax pmax
comp=Z,201nm,1.3s
ELL **Elmali** 78.98 305 P P 14 13 30.9 -1.8
KSV **Kosov** 79.12 317 P P 14 13 32.8 -0.2
BURAR **Bucovina Array** 79.23 317 ⇓P P 14 13 34.5 +0.8
BURAR **Bucovina Array** 79.23 317 P P 14 13 33.0 -0.7
BURAR **Bucovina Array** 79.23 317 P P 14 13 33.0 -0.7
BUR08 **Bucovina Ar. S** 79.23 317 P P 14 13 32.9 -0.9
OZUR 79.30 315 ⇓P P 14 13 35.2 +1.1
LVV **L'vov** 79.33 319 *e*P P 14 13 34.4 +0.3
MLR **Muntele Rosu** 79.37 314 P P 14 13 35.3 +0.7
comp=Z,22nm,0.8s,baz=221,slow=2.7,SNR=36
MLR **Muntele Rosu** 79.37 314 ⇓P P 14 13 35.3 +0.7
MLR **Muntele Rosu** 79.37 314 P P 14 13 34.0 -0.6
EDC **Edincik** 79.51 309 *e*P P 14 13 35.7 +0.4
MANT **Manisa** 79.52 307 P P 14 13 34.8 -0.9
RAZG **Razgrad** 79.55 312 ⇓P P 14 13 36.1 +0.7
EUNU **Eureka** 79.56 5 P P 14 13 35.4 +0.5
EUNU IAmb IAmb 14 13 38.6
comp=Z,53nm,1.2s
DOPR **Dopca** 79.61 315 ⇑P P 14 13 36.5 +0.8
MORS **Morshin** 79.62 318 P P 14 13 36.6 +0.9
BALB **Balikesir** 79.70 308 *e*P P 14 13 36.4 +0.1
DALY **Dalyan (Mula)** 79.93 305 *e*P P 14 13 37.3 -0.3
VOIR 79.99 315 ⇓P P 14 13 38.7 +0.8
WHY **Whitehorse** 80.12 29 P P 14 13 38.3 0.0
YER **Yerkesik** 80.12 306 *e*P P 14 13 38.7 0.0
YER **Yerkesik** 80.12 306 P P 14 13 42.8 +4.1
NSS **Namsos** 80.17 335 *e*P P 14 13 38.2 -0.1
KWP **Kalwaria Pacla** 80.20 319 P P 14 13 37.8 -1.1
KWP pmax pmax
comp=Z,83nm,1.0s
KWP **Kalwaria Pacla** 80.20 319 P P 14 13 37.8 -1.1
ARR **Arges** 80.29 315 ⇑P P 14 13 40.7 +1.2
SKAG **Skagway** 80.36 30 P P 14 13 39.1 -0.3
SKAG IAmb IAmb 14 13 42.9
comp=Z,22nm,0.9s
C36M **Paulatuk** 80.39 19 P P 14 13 38.7 -0.7
baz=300
C36M **Paulatuk** 80.39 19 P P 14 13 38.8 -0.7
TRSU **Trosnyk** 80.53 318 P P 14 13 41.2 +0.6
CJR **Cluj-Napoca** 80.56 316 ⇓P P 14 13 42.5 +1.6
ALN **Alexandroupoli** 80.67 310 P P 14 13 40.8 -0.7
ALN **Alexandroupoli** 80.67 310 P P 14 13 40.8 -0.7
KOLS **Kolonicke sedl** 80.70 319 *e*P P 14 13 41.8 +0.3
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS **Kolonicke sedl** 80.70 319 *e*P P 14 13 41.8 +0.3
UZH **Uzhgorod** 80.78 318 *e*P P 14 13 38.5 -3.4
UZH *i* 14 13 41.0
UZH *i* 14 13 46.2
UZH *e* 14 16 55.0
UZH *e*S S 14 23 41.8 -7.9
UZH *e* 14 24 35.3
EZN **Ezine** 80.79 309 P P 14 13 43.0 +0.8
DAG **Danmarks Havn** 80.83 351 *i*P P 14 13 41.6 -0.1
DAG pmax pmax
comp=Z,30nm,0.8s
DAG **Danmarks Havn** 80.83 351 *i*P P 14 13 41.6 -0.1
comp=Z,30nm,0.8s
DAG **Danmarks Havn** 80.83 351 *i*P P 14 13 41.6 -0.1
DAG IAmb IAmb 14 13 43.7
comp=Z,30nm,0.8s
CRVS **Cervenica-Dubn** 81.21 319 *e*P P 14 13 45.1 +0.8
CRVS pmax pmax
comp=Z,458nm,2.7s
CRVS **Cervenica-Dubn** 81.21 319 *e*P P 14 13 45.1 +0.8
PLD **Plovdiv** 81.25 311 P P 14 13 47.7 +3.1
PLD pmax pmax
comp=Z,78nm,1.5s
PLD **Plovdiv** 81.25 311 P P 14 13 44.5 -0.1
SIT **Sitka** 81.27 32 P P 14 13 44.3 -0.1
SIT pmax pmax
comp=Z,36nm,0.9s
SIT **Sitka** 81.27 32 P P 14 13 44.3 -0.1
SIT IAmb IAmb 14 13 47.8
comp=Z,36nm,0.9s
DEV **Deva** 81.28 316 ⇑P P 14 13 45.9 +1.2
ABPO **Ambohimpanom** 81.37 246 P P 14 13 44.6 -1.2
ABPO pmax pmax
comp=Z,36nm,0.9s
ABPO **Ambohimpanom** 81.37 246 P P 14 13 44.6 -1.2
ABPO IAmb IAmb 14 13 57.0
comp=Z,36nm,0.9s
TBLU **Trondheim** 81.41 335 *e*P P 14 13 45.1 +0.1
KARP **Karpathos** 81.46 305 P P 14 13 44.9 -1.0
GZR **Gura Zlata** 81.52 315 ⇓P P 14 13 46.5 +0.4
MPEP **Malo Peshtene** 81.53 313 *i*P P 14 13 46.7 +0.6
NC405 **NORSAR Array S** 81.74 332 P P 14 13 46.0 -0.8
OJC **Ojcow** 81.78 320 P P 14 13 46.5 -0.7
OJC **Ojcow** 81.78 320 P P 14 13 46.5 -0.7
PUNG **Punghina** 81.78 314 ⇑P P 14 13 48.1 +0.7
NC303 **NORSAR Array S** 81.84 332 P P 14 13 46.9 -0.5
HERR **Herculane** 81.93 315 ⇑P P 14 13 48.3 +0.1
NB201 **NORSAR Array S** 81.95 332 P P 14 13 48.0 0.0
KECS **Kecovo** 81.96 319 *e*P P 14 13 49.4 +1.2
KECS pmax pmax
comp=Z,10.0nm,0.8s
KECS **Kecovo** 81.96 319 *e*P P 14 13 49.4 +1.2
SIRR **Siria** 81.97 316 ⇑P P 14 13 49.4 +1.0
NC602 **NORSAR Array S** 81.98 332 *e*P P 14 13 47.6 -0.5
NORES **NORESS Array B** 81.98 332 P P 14 13 48.0 -0.1
NORES pmax pmax
comp=Z,6.0nm,0.8s
NB2 **NORSAR Subarra** 81.99 332 P P 14 13 47.7 -0.5
comp=Z,208nm,2.5s,baz=64,slow=5.3
NB2 **NORSAR Subarra** 81.99 332 P P 14 13 45.5 -2.7
NB2 **NORSAR Subarra** 81.99 332 P P 14 13 47.7 -0.5
baz=64,slow=5.3
NOA **NORSAR Array B** 81.99 332 P P 14 13 47.9 -0.3
comp=Z,14nm,0.8s,baz=64,slow=5.3,SNR=37
NOA LR LR 14 53 13.1
comp=Z,2μm,18.6s,baz=55,slow=38
NC204 **NORSAR Array S** 82.09 333 P P 14 13 47.4 -1.2
VTS **Vitosha** 82.12 312 *i*P P 14 13 50.1 +0.7
BZS **Buzias** 82.22 316 P P 14 13 51.0 +1.4
NAO01 **NORSAR Array S** 82.22 332 P P 14 13 48.2 -1.2
SRS **Serrai** 82.36 311 P P 14 13 51.2 +0.7
SRS pmax pmax
comp=Z,20nm,1.0s
MDVR **Moldovita** 82.44 315 ⇓P P 14 13 51.3 +0.4
DOMB **Dombas** 82.45 334 *e*P P 14 13 49.9 -0.7
PSZ **Piszkesteto** 82.53 318 ⇑P P 14 13 52.0 +0.6
PSZ **Piszkesteto** 82.53 318 P P 14 13 48.9 -2.4
PSZ pmax pmax
comp=Z,14nm,1.0s
PSZ **Piszkesteto** 82.53 318 P P 14 13 48.9 -2.4
PAIG **Paliouri** 82.69 310 P P 14 13 52.4 +0.2
BSD **Bornholm Skovb** 82.69 326 *e*P P 14 13 50.1 -1.8
BSD **Bornholm Skovb** 82.69 326 *i*P P 14 13 50.1 -1.8
BSD **Bornholm Skovb** 82.69 326 *e*P P 14 13 50.1 -1.8
OSL **Oslo** 82.70 331 *e*P P 14 13 50.1 -1.7
MOL **Molde** 82.83 335 *e*P P 14 13 53.3 +0.8
VYHS **Vyhne** 82.98 319 *e*P P 14 13 54.1 +0.5
VYHS pmax pmax
comp=Z,61nm,1.8s
VYHS **Vyhne** 82.98 319 *e*P P 14 13 54.1 +0.5
VAY **Valandovo** 83.02 311 *i*P P 14 13 53.7 -0.2
VAY **Valandovo** 83.02 311 P P 14 13 54.5 +0.6
VAY pmax pmax
comp=Z,37nm,2.0s
DBG **Daneborg** 83.02 350 *i*P P 14 13 53.5 +0.2
DBG IAmb IAmb 14 13 55.6
comp=Z,23nm,0.9s
STIP **Stip** 83.17 312 *i*P P 14 13 53.7 -1.0

AKN **Aaknes** 83.24 334 *e*P P 14 13 55.3 +0.6
GRG **Griva** 83.26 311 P P 14 13 54.7 -0.5
DLBC **Dease Lake** 83.29 30 P P 14 13 54.5 -0.5
DLBC IAmb IAmb 14 13 58.7
comp=Z,39nm,1.4s
MORC **Moravsky Berou** 83.30 320 ⇑P P 14 13 56.3 +1.0
MORC **Moravsky Berou** 83.30 320 ⇓*i*P P 14 13 55.9 +0.7
MORC **Moravsky Berou** 83.30 320 P P 14 13 53.7 -1.5
MORC **Moravsky Berou** 83.30 320 P P 14 13 53.7 -1.5
IDI **Anoyia** 83.30 305 P P 14 13 55.1 -0.5
comp=Z,4.4nm,0.6s,baz=89,slow=7.1,SNR=8.4
IDI **Anoyia** 83.30 305 P P 14 13 54.3 -1.3
KONO **Kongsberg** 83.33 331 *e*P P 14 13 54.8 -0.3
RES **Resolute Bay** 83.33 9 P P 14 13 54.9 0.0
RES pmax pmax
comp=Z,27nm,0.9s
RES **Resolute Bay** 83.33 9 P P 14 13 54.9 0.0
RES IAmb IAmb 14 13 57.3
comp=Z,27nm,0.9s
SKAR **Skarslia** 83.42 333 *e*P P 14 13 56.4 +0.7
LIT **Litokhoron** 83.49 310 P P 14 13 54.7 -1.7
LIT **Litokhoron** 83.49 310 P P 14 13 54.7 -1.7
JAVC **Velka Javorina** 83.56 320 ⇓*i*P P 14 13 58.6 +1.9
FRGS **Fruska Gora** 83.57 316 ⇓*i*P P 14 13 56.9 +0.2
KIBK **Kibwezi** 83.61 265 P P 14 13 58.0 +0.5
SNR=10
KSP **Ksiaz** 83.62 322 P P 14 13 57.6 +0.8
KRLC **Kraliky** 83.64 321 *e*P P 14 13 57.6 +0.6
KRLC **Kraliky** 83.64 321 *e*P P 14 13 57.6 +0.6
OSTC **Ostas** 83.78 322 *e*P P 14 13 58.6 +0.9
DPC **Dobruska-Polom** 83.80 321 *e*P P 14 13 58.6 +0.8
DPC *e* 14 14 03.0
DPC **Dobruska-Polom** 83.80 321 *e*P P 14 13 58.6 +0.8
DPC *e*pP PcP 14 14 03.0 +1.1
DIVS **Divibare** 83.83 315 ⇓*i*P P 14 13 58.2 0.0
DIVS **Divibare** 83.83 315 P P 14 13 57.6 -0.6
SMOL **Smolenice** 83.84 319 *e*P P 14 13 59.1 +1.1
SMOL pmax pmax
comp=Z,30nm,1.9s
SMOL **Smolenice** 83.84 319 *e*P P 14 13 59.1 +1.1
CHVC **Chvalec** 83.86 322 *e*P P 14 13 59.1 +1.0
CHVC *ex* x 14 14 07.3
UPC **Upice** 83.92 322 *e*P P 14 13 59.2 +0.8
UPC *e* 14 14 02.4
UPC **Upice** 83.92 322 *e*P P 14 13 59.2 +0.8
UPC *e*pP sP 14 14 02.4 -0.4
MORH **Mrgy, Hungar** 83.95 317 ⇓*i*P P 14 13 58.6 +0.1
KMBO **Kilima Mbogo** 83.95 267 P P 14 14 01.6 +2.1
comp=Z,1.9nm,0.3s,baz=58,slow=5.5,SNR=22
KMBO **Kilima Mbogo** 83.95 267 *i*P P 14 14 00.5 +1.1
SNR=11
KMBO **Kilima Mbogo** 83.95 267 P P 14 13 59.5 0.0
KMBO pmax pmax
comp=Z,22nm,1.3s
KMBO **Kilima Mbogo** 83.95 267 P P 14 13 59.5 0.0
KMBO IAmb IAmb 14 14 13.1
comp=Z,22nm,1.3s
AGG **Agios Georgios** 83.98 309 P P 14 13 56.4 -2.5
AGG **Agios Georgios** 83.98 309 P P 14 13 56.4 -2.5
MODS **Modra-Piesok** 83.99 319 *e*P P 14 13 58.8 0.0
MODS pmax pmax
comp=Z,50nm,1.8s
MODS **Modra-Piesok** 83.99 319 *e*P P 14 13 58.8 0.0
VRAC **Vranov** 84.05 320 ⇑P P 14 14 00.2 +1.1
VRAC **Vranov** 84.05 320 ⇓*i*P P 14 13 59.9 +0.9
FNA **Florina** 84.05 311 P P 14 13 57.4 -1.9
FNA pmax pmax
comp=Z,32nm,1.2s
FNA **Florina** 84.05 311 P P 14 13 56.9 -2.4
SJES **Sjenica** 84.15 314 ⇓*i*P P 14 14 00.4 +0.6
LODK **Lodwar** 84.23 272 P P 14 14 01.6 +0.9
SNR=10.0
KRUC **Moravsky** 84.26 320 ⇓*i*P P 14 14 00.9 +0.8
BBLS **Lazići** 84.31 314 ⇓*i*P P 14 14 01.2 +0.6
FOO **Floro** 84.34 334 *e*P P 14 14 01.2 +1.0
HAPS **Han Pijesak,Bl** 84.53 315 ⇓*i*P P 14 14 01.7 -0.1
TREC **Trest** 84.72 321 *e*P P 14 13 02.2 +0.7
TREC **Trest** 84.72 321 *e*P P 14 13 02.2 +0.7
SUE **Sulen** 84.73 334 *e*P P 14 14 02.9 +0.7
PVCC **Panska Ves** 84.75 322 *e*P P 14 13 03.4 +0.8
PVCC **Panska Ves** 84.75 322 *e*P P 14 13 03.4 +0.8
BLS5 **Blasjo** 84.85 332 *e*P P 14 13 03.6 +0.7
ASK **Askoy** 84.85 333 *e*P P 14 13 03.1 +0.3
ITM **Ithomi** 84.91 308 P P 14 14 02.2 -1.5
PDG **Podgorica** 84.94 313 ⇓P P 14 14 04.0 +0.3
PDG **Podgorica** 84.94 313 *e*P P 14 13 03.8 +0.1
BRG **Berggiesshubel** 84.97 322 *e*P P 14 14 04.2 +0.5
comp=Z,48nm,1.3s
BRG *i* 14 14 14.1
comp=Z,32nm,1.1s
BRG **Berggiesshubel** 84.97 322 *e*P P 14 14 04.2 +0.5
BRG *i* 14 14 14.1
comp=Z,48nm,1.3s
BRG **Berggiesshubel** 84.97 322 *e*P P 14 14 04.3 +0.7
comp=Z,49nm,1.3s,baz=64,slow=4.9
PRU **Pruhonice** 84.99 321 *e*P P 14 14 04.7 +0.9
PRU *e* 14 14 14.2
PRU **Pruhonice** 84.99 321 *e*P P 14 14 04.7 +0.9
PRU *ex* x 14 14 14.2
CONA **Conrad Observa** 85.04 319 *e*P P 14 14 05.4 +1.2
comp=Z,32nm,1.6s,SNR=12
BEHE **Becsehely** 85.05 318 ⇓*i*P P 14 14 07.5 +3.4
DRME **Dracevica, Mon** 85.08 313 ⇓*i*P P 14 14 03.6 -0.8
IGT **Igoumenitsa** 85.25 310 P P 14 14 04.2 -1.1
IGT pmax pmax
comp=Z,36nm,1.4s
BRY **Bratogost** 85.26 314 P P 14 14 06.0 +0.5
BRY **Bratogost** 85.26 314 *e*P P 14 14 05.2 -0.3
FBE **Freiberg** 85.29 323 *e*P P 14 14 06.1 +0.9
comp=Z,141nm,1.8s,baz=64,slow=4.9
CLL **Collm** 85.33 323 ⇓*i*P P 14 14 05.6 +0.2
comp=Z,34nm,1.2s
CLL *i* 14 14 15.5
CLL *i* 14 14 20.8
CLL *e*PP PP 14 17 23.0 +0.2
CLL *e*S S 14 24 36.0 +0.2
CLL *e*PS PnS 14 25 30.0 -1.5
CLL Lmax 15 00 00.0
CLL **Collm** 85.33 323 ⇓*i*P P 14 14 05.6 +0.2
CLL *i* 14 14 15.5
CLL pmax pmax
comp=Z,34nm,1.2s
CLL **Collm** 85.33 323 *e*P P 14 14 05.9 +0.4
comp=Z,34nm,1.2s,baz=64,slow=4.9
CLL **Collm** 85.33 323 P P 14 14 04.0 -1.4
CLL IAmb IAmb 14 14 16.6
comp=Z,26nm,1.0s
PBCC **Pribram** 85.44 321 *e*P P 14 14 06.6 +0.5
PBCC *ex* x 14 14 10.7
BLY **Banja Luka** 85.45 316 ⇓*i*P P 14 14 06.7 +0.5
ARSA **Arzberg** 85.52 319 P P 14 14 07.4 +0.8
comp=Z,14nm,1.0s
BSEG **Bad Segeberg** 85.62 326 *e*P P 14 14 07.8 +1.0
comp=Z,41nm,1.4s,baz=64,slow=4.9
GROS **Grobnik** 85.86 318 *e*P P 14 14 07.8 -0.5
GROS *e*PP PP 14 17 28.5 +1.1
KHC **Kasperske Hory** 85.92 321 *ce*P P 14 14 07.5 -1.0
KHC pmax pmax
comp=Z,61nm,2.5s
KHC **Kasperske Hory** 85.92 321 *e*P P 14 14 09.0 +0.5
KHC *ex* x 14 14 19.0
KHC **Kasperske Hory** 85.92 321 P P 14 14 08.1 -0.4
GEC2 **GERESS Array S** 85.97 321 *e*P P 14 14 08.9 +0.1
comp=Z,27nm,1.1s,baz=64,slow=4.9
GEC2 **GERESS Array S** 85.97 321 P P 14 14 08.9 +0.1
GEC2 IAmb IAmb 14 14 11.2
comp=Z,20nm,1.0s
GERES **GERESS Array B** 85.97 321 P P 14 14 09.6 +0.8
comp=Z,9.1nm,0.8s,baz=60,slow=5.3,SNR=42
DOBS **Dobrina** 86.00 318 *e*P P 14 14 09.3 +0.4
DOBS *e*pP pwP 14 14 24.2 +7.4
DOBS *e*PP PP 14 17 29.6 +1.1
TANN **Tannenbergstha** 86.02 322 *e*P P 14 14 09.4 +0.4
comp=Z,67nm,1.5s,baz=64,slow=4.9
MOA **Molln** 86.05 320 *e*P P 14 14 10.3 +1.1
comp=Z,25nm,1.2s,SNR=5.6
NEUB **Neuenburg** 86.06 323 *e*P P 14 14 09.8 +0.7
comp=Z,50nm,1.4s,baz=64,slow=4.9
SOKA **Soboth** 86.06 318 *e*P P 14 14 10.0 +0.7
comp=Z,18nm,1.3s,SNR=7.8
GUNZ **Gunzen** 86.12 322 *e*P P 14 14 09.8 +0.3
comp=Z,25nm,1.2s,baz=64,slow=4.9

CRES **Cresnjev** 86.14 317 ⇓*i*P P 14 14 09.8 +0.2
PLN **Plauen** 86.17 323 *e*P P 14 14 09.4 -0.3
comp=Z,221nm,2.9s,baz=64,slow=4.9
ASSE **Asse, Remlinge** 86.26 324 *e*P P 14 14 10.7 +0.7
comp=Z,44nm,1.5s,baz=64,slow=4.9
WET **Wettzell** 86.33 321 *e*P P 14 14 11.2 +0.7
comp=Z,75nm,2.5s,baz=64,slow=4.9
NRDL **Niedersach Rie** 86.40 325 *e*P P 14 14 11.6 +1.0
comp=Z,116nm,2.1s,baz=64,slow=4.9
MOX **Moxa** 86.40 323 *e*P P 14 14 11.0 +0.2
comp=Z,35nm,1.7s,baz=64,slow=4.9
MANZ **Manzenberg** 86.41 322 *e*P P 14 14 11.8 +0.9
comp=Z,75nm,2.2s,baz=64,slow=4.9
OBKA **Obir** 86.44 318 *e*P P 14 14 11.3 +0.1
comp=Z,12nm,1.1s
ROTZ **Rotzenmuhle** 86.45 322 *e*P P 14 14 12.0 +0.9
comp=Z,23nm,1.1s,baz=64,slow=4.9
CLZ **Clausthal** 86.56 324 *e*P P 14 14 12.2 +0.6
comp=Z,94nm,1.9s,baz=64,slow=4.9
LJU **Ljubljana** 86.64 318 *e*P P 14 14 12.5 +0.4
LJU *e*pP pwP 14 14 27.5 +7.6
LJU **Ljubljana** 86.64 318 ⇓*i*P P 14 14 12.4 +0.3
CEY **Cerknica** 86.83 318 ⇓*i*P P 14 14 13.1 0.0
KBA **Koelnbreinsper** 86.94 319 *e*P P 14 14 13.6 -0.2
comp=Z,8.4nm,1.0s
SUMG **Summit** 87.02 354 *i*P P 14 14 14.3 +0.4
SUMG pmax pmax
comp=Z,83nm,1.2s
SUMG **Summit** 87.02 354 P P 14 14 12.6 -1.3
SUMG **Summit** 87.02 354 *i*P P 14 14 14.3 +0.4
comp=Z,83nm,1.2s
SUMG **Summit** 87.02 354 *i*P P 14 14 14.3 +0.4
SUMG IAmb IAmb 14 14 16.8
comp=Z,83nm,1.2s
GRF **Grafenberg Arr** 87.06 322 *e*P P 14 14 14.5 +0.4
comp=Z,120nm,2.4s,baz=64,slow=4.9
PRED **Cave del Predi** 87.08 319 P P 14 14 11.7 -2.6
UBBA **Unterbreizbach** 87.24 323 *e*P P 14 14 15.3 +0.5
comp=Z,56nm,2.0s,baz=64,slow=4.9
ZOU **Zoufplan** 87.40 319 P P 14 14 12.7 -3.3
ZOU IAmb IAmb 14 14 31.1
comp=Z,30nm,1.5s
YKA **Yellowknife Ar** 87.50 22 P P 14 14 16.5 +0.6
comp=Z,11nm,0.8s,baz=316,slow=4.7,SNR=12
YKA **Yellowknife Ar** 87.50 22 *i*P P 14 14 16.5 +0.6
YKA pmax pmax
comp=Z,12nm,0.8s
ABTA **Abfaltersbach** 87.60 319 *e*P P 14 14 16.5 -0.4
comp=Z,13nm,1.1s
CIMO **Cimolais** 87.84 319 P P 14 14 16.4 -1.6
WTTA **Wattenberg** 87.91 320 *e*P P 14 14 18.6 +0.2
comp=Z,15nm,1.0s
SQTA **Sankt Quirin** 88.19 320 *e*P P 14 14 19.9 +0.2
comp=Z,12nm,0.9s
MOTA **Moosalm** 88.20 320 *e*P P 14 14 19.4 -0.3
comp=Z,8.2nm,0.9s
RETA **Reutte** 88.34 320 *e*P P 14 14 20.3 0.0
comp=Z,3.4nm,0.6s
CTI **Castel Tesino** 88.45 319 P P 14 14 18.8 -2.1
CTI pmax pmax
comp=Z,14nm,1.2s
CTI **Castel Tesino** 88.45 319 P P 14 14 18.8 -2.1
FETA **Feichten** 88.57 320 *e*P P 14 14 22.0 +0.4
comp=Z,12nm,1.1s
TEOL **Teolo** 88.74 318 P P 14 14 20.6 -1.5
CEL **Celeste** 88.93 310 P P 14 14 23.2 -0.1
MURB **Monte Urbino** 89.13 316 P P 14 14 23.1 -1.0
ZCCA **Zocca** 89.64 317 P P 14 14 29.2 +2.8
TUE **Stuetta** 89.67 320 P P 14 14 27.1 +0.3
VAE **Valguarnera** 90.32 310 P P 14 14 29.3 -0.5
comp=Z,13nm,0.3s,baz=44,slow=15,SNR=1.8
ICESG **Greenland Ices** 90.46 353 *i*P P 14 14 28.9 -1.2
ICESG IAmb IAmb 14 14 32.7
comp=Z,35nm,1.2s
SENIN **Lac Senin/Sane** 90.96 320 P P 14 14 32.9 +0.2
SENIN IAmb IAmb 14 14 46.4
comp=Z,17nm,1.1s
PCP **Piancastagn** 91.09 318 ⇑*e*P P 14 14 43.6 +10
BNI **Bardonecchia** 91.99 320 P P 14 14 37.6 +0.1
BNI **Bardonecchia** 91.99 320 P P 14 14 37.6 +0.1
D03D **Eldon** 92.31 37 P P 14 14 39.1 +0.4
baz=302
B06A **Marblemount** 92.68 36 P P 14 14 38.6 -1.8
B06A IAmb IAmb 14 14 44.3
comp=Z,24nm,1.4s
B08A **Colville Reser** 93.95 35 P P 14 14 46.4 0.0
G05D **Wamic, OR** 94.59 39 P P 14 14 48.9 -0.4
baz=304
I04A **Tendick Farm,** 94.72 40 P P 14 14 49.7 -0.3
baz=303
KEST **Kesra** 94.75 310 LR LR 15 05 04.5
comp=Z,282nm,19.2s,baz=344,slow=40
L02E **Cave Junction** 94.86 42 P P 14 14 50.4 -0.2
baz=302
HUMO **Hull Mountain** 95.02 42 P P 14 14 49.6 -1.8
I05D **Terrebonne, OR** 95.08 39 P P 14 14 51.2 -0.4
baz=304
NEW **Newport** 95.20 34 P P 14 14 50.2 -1.9
NEW pmax pmax
comp=Z,7.0nm,1.1s
NEW **Newport** 95.20 34 P P 14 14 52.0 -0.1
baz=307
NEW **Newport** 95.20 34 P P 14 14 50.2 -1.9
J04D **Umpqua Nationa** 95.21 41 P P 14 14 52.4 0.0
baz=303
PINE **Pine Mountain** 95.62 40 P P 14 14 52.1 -2.2
PINE IAmb IAmb 14 15 07.5
comp=Z,19nm,1.4s
L04D **Klamath Falls** 95.64 42 P P 14 14 54.3 0.0
baz=303
YBH **Yreka Blue Hor** 95.64 42 LR LR 14 50 46.4
comp=Z,776nm,21.9s,baz=163,slow=31
YBH **Yreka Blue Hor** 95.64 42 P P 14 14 53.9 -0.4
YBH pmax pmax
comp=Z,6.0nm,1.2s
YBH **Yreka Blue Hor** 95.64 42 P P 14 14 53.9 -0.4
J05D **Fort Rock, OR** 95.72 40 P P 14 14 55.1 +0.4
baz=304
PPT2 **Papeete2** 95.72 107 *e*LR LR 14 45 43.5
comp=Z,2μm,32.0s,baz=293
M02C **Callahan** 95.73 42 P P 14 14 55.2 +0.5
baz=302
K04D **Chiloquin, OR** 95.76 41 P P 14 14 55.2 +0.3
baz=303
N02D **Trinity Center** 96.05 43 P P 14 14 56.4 +0.3
baz=302
M04C **Macdoel** 96.17 42 P P 14 14 56.2 -0.5
baz=303
K05A **Summer Lake** 96.24 41 P P 14 14 57.1 0.0
K05A IAmb IAmb 14 15 15.1
comp=Z,11nm,1.0s
WDC **Whiskeytown Da** 96.37 43 P P 14 14 56.4 -1.1
WDC pmax pmax
comp=Z,4.0nm,1.0s
WDC **Whiskeytown Da** 96.37 43 P P 14 14 56.4 -1.1
O02D **Mt. Diablo Mer** 96.42 44 P P 14 14 56.3 -1.6
baz=302
O03E **Paynes Creek** 97.00 43 P P 14 14 59.4 -1.1
baz=303
LSZ **Lusaka** 97.05 256 P P 14 14 58.0 -3.1
LSZ pmax pmax
comp=Z,7.0nm,0.7s
LSZ **Lusaka** 97.05 256 P P 14 14 58.0 -3.1
LSZ IAmb IAmb 14 15 11.5
comp=Z,6.5nm,0.7s
MOD **Modoc Plateau** 97.06 41 P P 14 14 57.7 -3.1
MOD IAmb IAmb 14 15 19.4
comp=Z,8.2nm,1.1s
ORV **Oroville** 97.59 43 P P 14 15 03.0 -0.1
ORV pmax pmax
comp=Z,6.0nm,1.1s
ORV **Oroville** 97.59 43 P P 14 15 03.0 -0.1
TBI **Tubuai** 97.62 112 *e*LR LR 14 46 36.0
comp=Z,829nm,33.5s,baz=300
MSO **Missoula** 97.78 34 P P 14 15 02.9 -1.0
baz=310
BEKR **Beckworth** 98.16 43 P P 14 15 04.2 -1.7
BEKR IAmb IAmb 14 15 17.1
comp=Z,6.9nm,1.1s
AFDM **Forest Hills D** 98.27 44 P P 14 15 06.1 -0.1
AFDM IAmb IAmb 14 15 17.2
comp=Z,8.2nm,1.4s
PAHR **Pah Rah Range** 98.87 42 P P 14 15 08.4 -0.5
PAHR IAmb IAmb 14 15 26.9
comp=Z,8.9nm,1.2s
EGMT **Eagleton** 99.14 31 P Pdif 14 15 09.3 -0.6

baz=313
CMB Columbia Colle 99.15 44 P **Pdif** 14 15 07.3 -2.9
CMB pmax pmax
comp=Z,12nm,1.4s
CMB Columbia Colle 99.15 44 P **Pdif** 14 15 07.3 -2.9
CMB IAmb IAmb 14 15 28.4
comp=Z,12nm,1.4s
HLID Hailey 99.58 37 P **Pdif** 14 15 10.9 -1.2
baz=309
BOZ Bozeman (W) 99.81 34 P **Pdif** 14 15 12.4 -0.6
baz=311
VNDA Vanda 99.83 172 LR LR 15 04 23.6
comp=Z,252nm,18.2s,baz=344,slow=38
NVAR Mina Array Bea 100.29 43 P **Pdif** 14 15 16.1 +0.7
comp=Z,1.4nm,0.8s,baz=286,slow=4.9,SNR=11
NVAR PKKPbc **PKKPbc** 14 31 33.2 +0.5
comp=Z,0.6nm,0.7s,baz=123,slow=3.3,SNR=4.2
NVAR Mina Array Bea 100.29 43 Pdif **Pdif** 14 15 16.3 +0.9
TAOE Nuku Hiva Isla 101.73 95 eLR LR 14 48 33.9
comp=Z,1µm,22.8s
SCZ2 Santa Cruz Isl 101.88 47 P **Pdif** 14 15 21.8 -0.6
baz=304
TPNV Topopah Spring 102.47 43 P **Pdif** 14 15 24.0 -1.1
baz=306
PFO Pinyon Flats O 104.28 46 P **Pdif** 14 15 32.0 -1.1
baz=306
BELC Belle Mtn. Jos 104.37 46 P **Pdif** 14 15 32.1 -1.5
baz=306
TORD Torodi Ar. Bea 111.50 293 PKiKP **PKiKP** 14 20 03.0 -0.6
comp=Z,2.3nm,0.7s,baz=14,slow=2.5,SNR=13
TORD PKKPbc **PKKPbc** 14 30 58.4 +0.8
comp=Z,0.6nm,0.7s,baz=296,slow=2.6,SNR=3.5
TORD Torodi Ar. Bea 111.50 293 PKKPbc 14 30 59.6 +2.1
E61A Lac Etchemin 113.60 8 P **PKiKP** 14 20 06.2 -0.7
baz=349
PKME Peaks-Kenny Pk 114.90 8 P **PKiKP** 14 20 07.7 -1.7
baz=350
G64A Maxfield 114.98 7 P **PKiKP** 14 20 07.4 -2.1
baz=350
G65A Princeton 115.16 6 P **PKiKP** 14 20 09.1 -0.8
baz=352
H62A Milan 115.32 9 P **PKiKP** 14 20 09.5 -0.7
baz=348
TXAR Lajitas Array 115.42 42 PKP **PKPdf** 14 20 11.6 +0.6
comp=Z,1.7nm,0.8s,baz=252,slow=1.7,SNR=14
TXAR PKKPab **PKKPab** 14 30 49.8 -2.0
comp=Z,0.4nm,0.7s,baz=131,slow=5.7,SNR=3.4
CCM Cathedral Cave 115.43 27 P **PKiKP** 14 20 09.8 -0.8
baz=327
J56A Wolcott 115.50 14 P **PKiKP** 14 20 09.9 -0.7
baz=342
I58A Old Forge 115.51 12 P **PKiKP** 14 20 09.6 -1.0
baz=344
J58A Remsen 115.76 13 P **PKiKP** 14 20 10.6 -0.5
baz=344
J59A Piseco 115.82 12 P **PKiKP** 14 20 10.6 -0.7
baz=344
I63A Otisfield 115.92 9 P **PKiKP** 14 20 09.5 -1.8
baz=348
K57A Scipio Center 116.10 14 P **PKiKP** 14 20 11.2 -0.5
baz=342
U40A Yellville 116.11 30 P **PKiKP** 14 20 11.3 -0.7
baz=325
I64A Boothbay 116.18 8 P **PKiKP** 14 20 10.9 -0.9
baz=350
M53A WI Miller and 116.25 18 P **PKiKP** 14 20 11.7 -0.4
baz=338
K58A Earlville 116.26 13 P **PKiKP** 14 20 11.5 -0.6
baz=343
J61A Chester 116.29 11 P **PKiKP** 14 20 10.2 -1.9
baz=346
K59A Cooperstown 116.41 13 P **PKiKP** 14 20 10.4 -2.0
baz=344
L56A Greenwood 116.42 15 P **PKiKP** 14 20 11.4 -1.1
baz=341
M54A Oil Creek Stat 116.47 17 P **PKiKP** 14 20 11.6 -0.9
baz=339
W39A Magazine 116.61 31 P **PKPdf** 14 20 12.1 -0.8
baz=324
ACSO Alum Creek Sta 116.66 20 P **PKPdf** 14 20 12.1 -0.8
baz=335
P49A Miami Univ. Ec 116.70 22 P **PKPdf** 14 20 11.9 -1.1
baz=334
L57A Andrews Acres 116.71 14 P **PKPdf** 14 20 11.9 -1.2
baz=342
BINY Binghamton 116.72 14 P **PKPdf** 14 20 11.7 -1.3
baz=343
M56A Emporium 116.88 16 P **PKPdf** 14 20 12.6 -0.7
baz=340
N54A Moraine State 116.88 17 P **PKPdf** 14 20 12.8 -0.6
baz=338
O52A Adamsville 117.12 19 P **PKPdf** 14 20 12.9 -0.9
baz=336
L61B Northampton 117.14 11 P **PKPdf** 14 20 12.8 -1.0
baz=346
L61A Hillsdale 1, H 117.23 12 P **PKPdf** 14 20 12.6 -1.3
baz=345
MIAR Mount Ida 117.23 31 P **PKPdf** 14 20 14.0 -0.2
baz=324
P52A Corning 117.47 20 P **PKPdf** 14 20 13.3 -1.2
baz=336
M59A Waymart 117.47 13 P **PKPdf** 14 20 13.8 -0.7
baz=343
O54A Avella 117.50 18 P **PKPdf** 14 20 13.8 -0.7
baz=338
N59A State Game Lan 117.99 14 P **PKPdf** 14 20 14.8 -0.7
baz=343
Q52A Bidwell 118.04 20 P **PKPdf** 14 20 14.8 -0.8
baz=336
435B Jarrell 118.04 37 P **PKiKP** 14 20 16.6 +0.8
baz=319
O57A Amberson 118.22 16 P **PKiKP** 14 20 16.3 +0.4
baz=341
Q53A Leroy 118.37 19 P **PKPdf** 14 20 15.5 -0.7
baz=336
Q54A Coxs Mills 118.47 19 P **PKPdf** 14 20 15.7 -0.7
baz=337
WVT Waverly 118.51 26 PKIKP **PKPdf** 14 20 13.5 -3.1
WVT Waverly 118.51 26 P **PKPdf** 14 20 16.2 -0.4
baz=330
WVT Waverly 118.51 26 **PKPdf** 14 20 13.5 -3.1
P56A Dayton Farm, R 118.56 17 P **PKPdf** 14 20 16.2 -0.4
baz=339
SNAA Sanae 118.63 198 PKiKP **PKPdf** 14 20 15.3 -0.4
O60A Telford 118.65 14 P **PKPdf** 14 20 16.3 -0.3
baz=343
Q55A Buckhannon 118.68 18 P **PKPdf** 14 20 16.3 -0.6
baz=338
P58A Pank, Wackersv 118.98 16 P **PKPdf** 14 20 16.5 -0.8
baz=341
P60A Greenville 119.08 14 P **PKPdf** 14 20 17.3 -0.3
baz=343
Q57A Strasburg 119.11 17 P **PKPdf** 14 20 17.1 -0.5
baz=340
R54A Victor 119.16 19 P **PKPdf** 14 20 17.3 -0.5
baz=337
OXF Oxford 119.21 28 P **PKPdf** 14 20 17.6 -0.3
baz=328
S53A Williamson 119.25 20 P **PKPdf** 14 20 17.8 -0.2
baz=336
R55A Marlinton 119.33 18 P **PKPdf** 14 20 17.7 -0.5
baz=338
Q58A Fox Den Farm, 119.40 16 P **PKPdf** 14 20 17.5 -0.7
baz=340
S54A Dingess, Beckl 119.40 20 P **PKPdf** 14 20 18.2 -0.1
baz=336
R56A Bull Pasture M 119.42 18 P **PKPdf** 14 20 17.6 -0.8
baz=339
S55A Lewisburg 119.68 19 P **PKPdf** 14 20 18.2 -0.6
baz=337
R57A Stanardsville 119.77 17 P **PKPdf** 14 20 18.2 -0.8
baz=340
TZTN Tazewell 119.79 22 P **PKPdf** 14 20 18.4 -0.7
baz=334
R58A Rapidan 119.92 17 P **PKPdf** 14 20 18.7 -0.5
baz=340
T54A Tazewell 119.99 20 P **PKPdf** 14 20 18.2 -1.3
baz=336
Q61A Milford 120.04 14 P **PKPdf** 14 20 18.1 -1.3
baz=343
S56A Natural Bridge 120.05 18 P **PKPdf** 14 20 17.7 -1.8
baz=338
S57A Dark Hollow, R 120.15 18 P **PKPdf** 14 20 18.8 -0.9
baz=339
T55A Pulaski 120.20 20 P **PKPdf** 14 20 19.5 -0.4
baz=337
BLA Blacksburg 120.22 19 P **PKPdf** 14 20 19.4 -0.5
baz=337
R58B Mineral 120.26 17 P **PKPdf** 14 20 19.2 -0.7
baz=340
VNA2 Neumayer--Watz 120.28 198 PKiKP **PKiKP** 14 20 19.2 +0.2
V52A Sevierville 120.40 23 **PKPdf** 14 20 19.5 -0.8
T56A Rocky Mt 120.51 19 P **PKPdf** 14 20 18.8 -1.6
baz=338
S58A Poland Farm, P 120.55 17 P **PKPdf** 14 20 19.2 -1.2
baz=340
S59A Mechanicsville 120.61 16 P **PKPdf** 14 20 19.7 -0.9
baz=341
VNA3 Neumayer Olymp 120.74 197 PKiKP **PKPdf** 14 20 19.4 -0.3
T57A Hurt 120.77 18 P **PKPdf** 14 20 20.7 -0.2
baz=338
S60A Water View 120.83 16 P **PKPdf** 14 20 20.1 -0.9
baz=341
W52A Murphy 120.94 23 **PKPdf** 14 20 19.6 -1.8
V54A Nebo 121.04 21 P **PKPdf** 14 20 21.1 -0.4
baz=335
V55A Taylorsville 121.21 21 P **PKPdf** 14 20 21.5 -0.3
baz=336
U57A Blanch 121.27 19 P **PKPdf** 14 20 21.3 -0.6
baz=338
T60A Surry 121.34 16 P **PKPdf** 14 20 21.3 -0.7
baz=341
V56A Mocksville 121.49 20 P **PKPdf** 14 20 21.6 -0.7
baz=337
LRAL Lakeview Retre 121.52 27 P **PKPdf** 14 20 21.7 -0.7
baz=330
U58A Oxford 121.54 18 P **PKPdf** 14 20 21.7 -0.7
baz=339
W54A Cherokee Point 121.58 22 P **PKPdf** 14 20 21.9 -0.6
baz=335
V57A Coltrane Farms 121.64 19 P **PKPdf** 14 20 22.2 -0.4
baz=338
KMSC Kings Mountain 121.82 21 P **PKPdf** 14 20 22.1 -0.9
baz=336
V58A Windy Hill, Pi 121.93 19 P **PKPdf** 14 20 22.4 -0.7
baz=338
X54A Belton 122.00 22 P **PKPdf** 14 20 22.9 -0.4
baz=335
V59A Middlesex 122.22 18 P **PKPdf** 14 20 23.3 -0.4
baz=339
W57A Gilead 122.25 20 P **PKPdf** 14 20 23.6 -0.2
baz=337
X55A Gracelyn & Ava 122.33 22 P **PKPdf** 14 20 23.8 -0.2
baz=335
X56A White Oak 122.51 21 P **PKPdf** 14 20 23.8 -0.5
baz=336
W58A Raeford 122.61 19 P **PKPdf** 14 20 24.0 -0.5
baz=338
GOGA Godfrey 122.61 24 P **PKPdf** 14 20 24.3 -0.2
baz=333
Z57A Bowman 123.71 21 P **PKPdf** 14 20 26.1 -0.6
baz=336
157A Early Branch 124.17 22 P **PKPdf** 14 20 26.3 -1.2
baz=336
TIGA Tifton 124.31 25 P **PKPdf** 14 20 26.8 -1.0
baz=332
BCIP Isla Barro Col 145.18 37 PKIKP **PKPbc** 14 21 05.6 -0.9
BCIP Isla Barro Col 145.18 37 **PKPbc** 14 21 05.6 -0.9
FDF Fort de France 145.90 3 PKIKP **PKPdf** 14 21 06.2 -2.0
FDF Fort de France 145.90 3 **PKPdf** 14 21 06.2 -2.0
SMRC Santa Marta, M 146.24 27 *eP* **PKPdf** 14 21 09.1 +0.3
URIC Uribia, Colomb 146.63 23 *eP* **PKPdf** 14 21 06.4 -3.0
SJCC San Jacinto, C 146.95 29 *eP* **PKPbc** 14 21 11.2 -0.8
CAPC Capurgana 146.97 34 *eP* **PKPdf** 14 21 09.8 -0.2
ARGC Ariguani, Magd 147.40 28 *eP* **PKPbc** 14 21 12.7 -0.5
MOTC Monteria, Cord 147.70 31 *eP* **PKPdf** 14 21 12.3 +1.1
EFI East Falkland 147.91 182 *c i* PKP2 **PKiKP** 14 21 15.6 +0.3
EFI pmax pmax
comp=Z,213nm,1.7s
UREC San Jos de Ur 148.65 32 *eP* **PKPdf** 14 21 13.2 +0.4
DBBC Dabeiba 148.93 33 *eP* **PKPbc** 14 21 15.7 -1.6
OCAC Ocana 149.25 27 *eP* **PKPbc** 14 21 18.8 +0.6
SDV Santo Domingo 149.72 22 *eP* **PKPdf** 14 21 14.9 +0.2
SDV Santo Domingo 149.72 22 *eP* **PKPdf** 14 21 15.1 +0.3
HELC Santa Helena 149.99 33 *eP* PKPdf 14 21 03.4 -12
BRRC Barranca, Sant 150.08 29 *eP* **PKPdf** 14 21 16.2 +1.1
PTBC PUERTO BERRIO 150.22 31 *eP* **PKPdf** 14 21 15.1 -0.3
PAMC Pamplona, Colo 150.32 27 *eP* **PKPbc** 14 21 21.3 0.0
PLMC San Jos del P 150.66 36 *eP* **PKPdf** 14 21 17.0 +0.9
BARC Barichara 150.77 29 *eP* **PKPbc** 14 21 22.2 +0.1
NORC Norcasia 150.86 33 *eP* **PKPbc** 14 21 20.1 -1.9
SPBC San Pablo de B 151.18 31 *eP* **PKPbc** 14 21 22.7 -0.1
YOTC Yotoco, Valle 151.38 37 *eP* **PKPdf** 14 21 18.1 +0.8
RUSC La Rusia 151.44 29 *eP* **PKPbc** 14 21 22.9 -1.0
TOLC Tolima 151.45 34 *eP* **PKPbc** 14 21 23.1 -0.7
ANIL Santa Ana 151.48 35 *eP* **PKPbc** 14 21 23.1 -0.6
TAMC Tame, Arauca 151.52 26 *eP* **PKPdf** 14 21 17.5 +0.1
ROSC El Rosal 151.75 32 PKP **PKPdf** 14 21 18.9 +0.7
comp=Z,7.1nm,0.4s,baz=117,slow=22,SNR=6.9
ROSC PKPbc **PKiKP** 14 21 25.4 +0.5
comp=Z,46nm,0.8s,baz=34,slow=1.3,SNR=15
ORTC Ortega, Tolima 152.06 35 *eP* **PKPbc** 14 21 24.1 -0.7
CHIC Chingaza 152.23 32 *eP* **PKPdf** 14 21 19.5 +0.6
POPC Popayan, Colom 152.36 39 *eP* **PKPdf** 14 21 19.5 +0.6
PRAC Prado 152.41 35 *eP* **PKPbc** 14 21 22.1 -3.4
MARP Paez Belalcaza 152.53 38 *eP* **PKPdf** 14 21 20.8 +1.6
PCON Cinco Dias 152.69 39 *eP* **PKPbc** 14 21 25.1 -1.8
BETA Betania 152.96 37 *eP* **PKiKP** 14 21 27.4 +0.4
GCUF Volcan Galeras 152.97 42 *eP* **PKPdf** 14 21 18.6 -1.6
RCBR Riachuelo 153.24 298 *eP* **PKPdf** 14 21 19.7 -0.3
GARC Garzon, Huila 153.33 38 *eP* **PKPdf** 14 21 21.9 +1.6
MACC Macarena, Meta 154.28 35 *eP* **PKPdf** 14 21 17.1 -4.3
NBMO Morrinhos-CE 155.02 308 *eP* **PKPdf** 14 21 24.5 +2.1
PLCA Paso Flores 156.88 158 PKP **PKPdf** 14 21 25.1 +0.9
comp=Z,2.9nm,0.8s,baz=200,slow=1.1,SNR=5.7
PLCA PKPbc **sPKPdf** 14 21 35.2 +6.5
comp=Z,4.0nm,0.8s,baz=12,slow=0.8,SNR=10
PLCA Paso Flores 156.88 158 *eP* **PKPdf** 14 21 26.4 +2.2
ROSB Rosrio 157.61 316 *eP* **PKPdf** 14 21 25.9 +0.2
LC01 Cunco 157.96 154 **PKPdf** 14 21 25.6 +0.1
TMAB Tom-Au,PA,Br 159.58 325 *eP* **PKPdf** 14 21 29.2 +1.1
NAN01 Guarapari, ES 161.51 272 *eP* **PKPdf** 14 21 31.6 +1.5
BO02 Sierra Bellavi 161.85 149 **PKPdf** 14 21 28.4 -1.7
CZSB Cruzeiro do Su 162.67 49 *eP* **PKPdf** 14 21 32.5 +1.1
MACA Manacapuru-AM 163.68 4 *eP* **PKPdf** 14 21 33.2 +0.8
SDBA SAO DESIDERIO 164.23 295 *eP* **PKPdf** 14 21 32.8 -0.1
SMTB Santa Maria do 164.28 311 *eP* **PKPdf** 14 21 33.1 +0.2
ITTB Itaituba 164.46 346 *eP* **PKPdf** 14 21 33.6 +0.5
CO02 Combarbal 164.47 141 **PKPdf** 14 21 31.1 -1.6
CO01 Juntas del Tor 165.89 139 **PKPdf** 14 21 34.7 +0.5
AC05 El Transito 166.55 135 **PKPdf** 14 21 33.3 -1.3
PLTB Pedras Altas 166.70 203 *eP* **PKPdf** 14 21 35.4 +1.0
PEXB Peixe 166.88 303 *eP* **PKPdf** 14 21 35.2 +0.1
NPGB Novo Progresso 166.92 341 *eP* **PKPdf** 14 21 35.6 +0.5
PET01 Itanhaem-SP 167.66 245 *eP* **PKPdf** 14 21 39.0 +3.6
CPSB Cacapava Do Su 167.84 206 *eP* **PKPdf** 14 21 36.2 +0.9
SPB Sao Paulo 168.01 248 *eP* **PKPdf** 14 21 38.7 +3.1
BDFB Brasilia 168.32 288 PKP **PKPdf** 14 21 35.9 -0.2
comp=Z,3.7nm,0.6s,baz=190,slow=2.8,SNR=5.3
ETMB Extrema 168.39 35 *eP* **PKPdf** 14 21 36.2 +0.1
SAML Samuel 168.90 19 PKP2 **PKPab** 14 22 45.1 -1.8
SAML 15 21 34.4
SAML Samuel 168.90 19 **PKPdf** 14 21 34.4 -2.1
SAML **PKPab** 14 22 45.1 -1.8
SAML Samuel 168.90 19 *eP* **PKPdf** 14 21 37.0 +0.6
SNDB Serra Nova Dou 169.05 312 *eP* **PKPdf** 14 21 36.1 -0.4
IPMB Ipameri, GO 169.13 276 *eP* **PKPdf** 14 21 36.0 -0.5
BB19B Bebedouro 169.53 260 *eP* **PKPdf** 14 21 38.7 +2.0
ITQB Itaqui 169.57 194 *eP* **PKPdf** 14 21 38.2 +1.9
FRTB Fartura 169.95 246 *eP* **PKPdf** 14 21 37.7 +0.8
PB16 IPOC Station P 170.51 84 **PKPdf** 14 21 35.9 -2.1
LVC Limon Verde 170.76 111 *eP* **PKPdf** 14 21 39.9 +2.2
LPAZ La Paz 171.23 70 PKP **PKPdf** 14 21 39.8 +1.2
comp=Z,5.2nm,0.9s,baz=50,slow=0.5,SNR=16
LPAZ PKPab **PKPab** 14 22 57.9 -0.4
comp=Z,2.1nm,0.7s,baz=256,slow=4.2,SNR=5.8
LPAZ La Paz 171.23 70 PKIKP **PKPdf** 14 21 36.3 -2.2
LPAZ La Paz 171.23 70 **PKPdf** 14 21 36.2 -2.2
LPAZ La Paz 171.23 70 *eP* **PKPdf** 14 21 39.7 +1.2
ITRB Iturama 171.32 267 *eP* **PKPdf** 14 21 38.2 +0.5
ARAG Araguaiana, MT 171.68 296 *eP* **PKPdf** 14 21 38.7 +0.8
PCMB Pacaembu 171.95 254 *eP* **PKPdf** 14 21 38.8 +0.8
TRCB Terra Rica 172.77 242 *eP* **PKPdf** 14 21 38.6 +0.3
CPUP Villa Florida 172.94 197 PKP **PKPdf** 14 21 38.4 +0.2
comp=Z,1.8nm,0.6s,baz=162,slow=1.0,SNR=7.0
CPUP Villa Florida 172.94 197 PKIKP **PKPdf** 14 21 36.6 -1.6
CPUP Villa Florida 172.94 197 **PKPdf** 14 21 36.6 -1.6
CPUP Villa Florida 172.94 197 *eP* **PKPdf** 14 21 39.1 +0.9
VILB Vilhena 173.42 5 *eP* **PKPdf** 14 21 40.5 +1.7
PTLB Pontes e Lacer 175.91 354 *eP* **PKPdf** 14 21 40.1 +0.7

*IDC **17** 14:04:25.1±0.6, 19°.48N×120°.40E, h0km, mb4.5/22, mb1 4.6/24, mb1mx4.4/61, mbtmp4.5/24, ML3.7/2, Error ellipse: s-maj=21.0km s-min=12.1km az=79.0*
*NEIC **17** 14:04:26.6±1.8, 19°.51N±0°.08×120°.31E±0°.08, h10km±1km, mb4.9/46, Error ellipse: s-maj=13.9km s-min=12.7km az=178.0*

ISC 17 14:04:28.4±0.5, **19°.51N**±0°.06×**120°.31E**±0°.08, **h23**km, **n89,** σ1**9**04/87, **mb4.7**/39, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TWG	**Pinlang**	**3.37**	**12**	Pn	Pn	**Pn**	**14 05 17.5**	**-2.1**
TPUB	**Ta-pu**	**3.78**	**5**	Pn	Pn	**Pn**	**14 05 23.9**	**-1.4**
YULB	**Yu-li**	**3.97**	**13**	Pn	Pn	**Pn**	**14 05 26.6**	**-1.3**
SSLB	**Suanglung**	**4.30**	**8**	Pn	Pn	**Pn**	**14 05 31.0**	**-1.4**
NACB	**Ninganchiao**	**4.79**	**14**	Pn	Pn	**Pn**	**14 05 37.6**	**-1.6**
YHNB	**Yeheng**	**5.23**	**11**	Pn	Pn	**Pn**	**14 05 45.2**	**-0.1**
KNMB	**Chin-men Tao**	**5.24**	**340**	Pn	Pn	**Pn**	**14 05 42.9**	**-2.4**
TATO	**Taipei**	**5.55**	**11**	Pn	Pn	**Pn**	**14 05 49.1**	**-0.4**
HKPS	**Hong Kong Po S**	**6.39**	**297**	Pn	Pn	**Pn**	**14 05 59.8**	**-1.3**
JNU	**Nakatsue**	**16.52**	**33**	Pn	Pn	**Pn**	**14 08 16.4**	**-2.3**
	0.2nm,0.3s,baz=197,slow=14,SNR=2.3							
JNU	**Nakatsue**	**16.52**	**33**	P	P	**P**	**14 08 21.8**	**+0.6**
KSAR	**Wonju Array Be**	**19.05**	**19**	P	P	**P**	**14 08 48.5**	**-0.5**
KSRS	**Korea Array**	**19.07**	**19**	P	P	**P**	**14 08 48.4**	**-0.9**
	0.2nm,0.3s,baz=197,slow=11,SNR=4.4							
JHS	**Saijyo**	**19.14**	**34**	P	P	**P**	**14 08 49.4**	**-0.7**
JHS					IAmb	IAmb	14 08 54.0	
	comp=Z,103nm,1.5s							
CMAR	**Chiang Mai Arr**	**20.23**	**271**	P	Pn		14 09 04.2	+0.1
	comp=Z,6.4nm,1.1s,baz=78,slow=9.3,SNR=3.4							
JWT	**Wachi**	**20.61**	**37**	P		**P**	**14 09 06.3**	**+0.3**
BJT	**Baijiatuau**	**20.75**	**351**			**P**	**14 09 08.1**	**+0.6**
BJT					IAmb	IAmb	14 09 09.9	
	comp=Z,52nm,1.0s							
INU	**Inuyama**	**21.60**	**40**	P	P	**P**	**14 09 16.9**	**+0.2**
INU					IAmb	IAmb	14 09 42.3	
	comp=Z,39nm,1.1s							
JGF	**Kuroka**	**21.98**	**40**	P	P	**P**	**14 09 20.7**	**0.0**
JGF					IAmb	IAmb	14 09 23.2	
	comp=Z,31nm,1.0s							
SIJI	**Sorong**	**22.93**	**151**	P	P	**P**	**14 09 29.8**	**-1.3**
	comp=Z,13nm,0.8s,baz=322,slow=19,SNR=5.0							
MJAR	**Matsushiro Arr**	**23.12**	**39**	P	P	**P**	**14 09 33.4**	**+0.6**
	comp=Z,7.0nm,0.8s,baz=229,slow=9.7,SNR=3.6							
MJAR	**Matsushiro Arr**	**23.12**	**39**	P	P		**14 09 33.8**	**+1.0**
FAKI	**Fak Fak**	**25.19**	**151**	P	P		**14 09 51.8**	**-0.6**
MDJ	**Mudanjiang**	**26.20**	**15**	P	P		**14 10 01.5**	**+0.2**
MDJ					IAmb	IAmb	14 10 03.1	
	comp=Z,26nm,0.9s							
USRK	**Ussuriysk Ar.**	**26.48**	**19**	P	P	**P**	**14 10 04.2**	**+0.3**
	comp=Z,4.2nm,0.7s,baz=228,slow=9.0,SNR=5.8							
LSA	**Lhasa**	**28.31**	**297**	P	P	**P**	**14 10 21.4**	**+0.4**
LSA					IAmb	IAmb	14 10 40.0	
	comp=Z,48nm,1.7s							
JEM	**Erimo**	**29.64**	**36**	P	P		14 10 40.3	+8.3
BATI	**Baumata**	**29.71**	**173**	P	P	**P**	**14 10 32.8**	**-0.2**
	comp=Z,49nm,0.9s,baz=18,slow=6.4,SNR=4.7							
SONM	**Songino Array**	**30.43**	**341**	P	P	**P**	**14 10 40.0**	**+0.8**
	comp=Z,7.4nm,1.1s,baz=162,slow=8.6,SNR=4.4							
SONM	**Songino Array**	**30.43**	**341**	P	P	**P**	**14 10 38.1**	**-1.0**
ASAJ	**Asahikawa**	**30.80**	**32**	P	P	**P**	**14 10 41.5**	**-0.8**
	comp=Z,4.9nm,0.7s,baz=194,slow=4.2,SNR=2.1							
FITZ	**Fitzroy Crossi**	**37.74**	**172**	P	P	**P**	**14 11 42.2**	**-0.3**
	comp=Z,9.6nm,0.8s,baz=347,slow=6.4,SNR=3.1							
FITZ	**Fitzroy Crossi**	**37.74**	**172**	P	P		**14 11 41.5**	**-1.1**
COEN	**Coen**	**40.16**	**144**	P	P		**14 12 01.5**	**-1.5**
MK31	**Makanchi Array**	**41.25**	**320**	P	P		**14 12 13.0**	**+1.3**
MKAR	**Makanchi Array**	**41.25**	**320**	P	P		**14 12 13.5**	**+1.8**
	comp=Z,7.1nm,0.9s,baz=112,slow=9.3,SNR=4.9							
MKAR	**Makanchi Array**	**41.25**	**320**	P	P		**14 12 12.8**	**+1.1**
MAKZ	**Makanchi**	**41.45**	**320**	P	P		**14 12 15.0**	**+1.7**
WRA	**Warramunga Arr**	**41.55**	**160**	P	P		**14 12 13.7**	**-0.7**
	comp=Z,7.2nm,0.7s,baz=348,slow=8.8,SNR=5.2							
WRA	**Warramunga Arr**	**41.55**	**160**	P	P		**14 12 13.5**	**-0.9**
WB2	**Warramunga Arr**	**41.56**	**160**	P	P		**14 12 13.6**	**-0.9**
WR0	**Warramunga Arr**	**41.63**	**160**	P	P		**14 12 14.1**	**-0.9**
ZAA0	**Zalesovo Array**	**43.80**	**330**	P	P		**14 12 32.7**	**+0.5**
ZALV	**Zalesovo Beam**	**43.80**	**330**	P	P		**14 12 33.4**	**+1.1**
	comp=Z,6.8nm,0.8s,baz=109,slow=8.3,SNR=4.5							
ZALV	**Zalesovo Beam**	**43.80**	**330**	P	P		**14 12 32.6**	**+0.3**
AS31	**Alice Springs**	**44.92**	**162**	P	P		**14 12 41.7**	**+0.1**
ASAR	**Alice Springs**	**44.92**	**162**	P	P		**14 12 42.0**	**+0.4**
	comp=Z,3.8nm,0.7s,baz=343,slow=6.9,SNR=6.9							
ASAR	**Alice Springs**	**44.92**	**162**	P	P		**14 12 41.7**	**+0.1**
KURK	**Kurchatov**	**45.24**	**323**	P	P		**14 12 45.4**	**+1.5**
KURK					IAmb	IAmb	14 12 46.4	
	comp=Z,22nm,1.0s							
KURBB	**Kurchatov Arra**	**45.25**	**323**	P	P		**14 12 45.3**	**+1.4**
	comp=Z,14nm,0.8s,baz=122,slow=7.9,SNR=5.8							
MORW	**Morawa**	**48.47**	**185**	P	P		**14 13 08.9**	**-0.4**
MORW					IAmb	IAmb	14 13 23.4	
	comp=Z,20nm,1.1s							
SEY	**Seymchan**	**48.63**	**19**	P	P		**14 13 11.3**	**+1.2**
	comp=Z,12nm,0.8s,baz=216,slow=4.7,SNR=5.0							
BRVK	**Borovoye**	**50.91**	**323**	P	P		**14 13 29.5**	**+1.9**
BRVK					IAmb	IAmb	14 13 30.2	
	comp=Z,8.0nm,0.8s							
NWAO	**Narrogin (SRO)**	**52.23**	**183**	P	P		**14 13 37.5**	**-0.1**
	comp=Z,10nm,1.0s,baz=5.7,slow=10,SNR=2.3							
NWAO	**Narrogin (SRO)**	**52.23**	**183**	P	P		**14 13 38.4**	**+0.9**
NWAO					IAmb	IAmb	14 14 02.6	
	comp=Z,36nm,1.4s							
NWAO	**Narrogin (SRO)**	**52.23**	**183**	P	P		**14 13 38.5**	**+0.9**
NWAO					IAmb	IAmb	14 14 02.6	
	comp=Z,40nm,1.4s							
NRIK	**Noril'sk**	**53.70**	**346**	P	P		**14 13 49.0**	**+0.9**
	comp=Z,4.9nm,0.7s,baz=130,slow=6.9,SNR=2.7							
BBOO	**Buckleboo**	**54.16**	**164**	P	P		**14 13 52.0**	**0.0**
GEYT	**Alibeck**	**56.55**	**303**	P	P		**14 14 07.1**	**-2.2**
GYA0B	**ALIBECK ARRAY**	**56.55**	**303**	P	P		**14 14 07.0**	**-2.3**
GYA0B					IAmb	IAmb	14 14 07.8	
	comp=Z,6.6nm,0.8s							
TOO	**Toolangi**	**61.53**	**157**	P	P		**14 14 45.5**	**+1.9**
KBZ	**Khabaz**	**67.81**	**310**	P	P		**14 15 25.4**	**+0.9**
	comp=Z,8.6nm,0.9s,baz=233,slow=20							
TTA	**Tatalina**	**69.96**	**29**	P	P		**14 15 37.9**	**+0.1**
TTA					IAmb	IAmb	14 15 39.5	
	comp=Z,5.9nm,0.9s							
IMAR	**Indian Mountai**	**70.72**	**26**	P	P		**14 15 43.1**	**+0.8**
CAST	**Castle Rocks**	**71.69**	**28**	P	P		**14 15 49.1**	**+0.9**
CAST					IAmb	IAmb	14 15 50.0	
	comp=Z,6.1nm,0.7s							
TOLK	**Toolik Lake Re**	**72.05**	**23**	P	P		**14 15 51.0**	**+0.7**
TOLK					IAmb	IAmb	14 15 52.5	
	comp=Z,6.5nm,0.8s							
BPAW	**Bear Paw Mtn.**	**72.08**	**27**	P	P		**14 15 51.3**	**+0.7**
I23K	**Minto, Yukon-K**	**72.63**	**26**	P	P		**14 15 54.9**	**+1.1**
I23K					IAmb	IAmb	14 16 31.6	
	comp=Z,22nm,1.6s							
RND	**Reindeer**	**73.13**	**28**	P	P		**14 15 57.1**	**+0.3**
RND					IAmb	IAmb	14 15 58.7	
	comp=Z,12nm,0.9s							
MDM	**Murphy Dome**	**73.13**	**26**	P	P		**14 15 56.7**	**-0.1**
MDM					IAmb	IAmb	14 15 58.9	
	comp=Z,6.9nm,0.8s							
WRH	**Wood River Hil**	**73.27**	**27**	P	P		**14 15 58.1**	**+0.5**
WRH					IAmb	IAmb	14 16 10.5	
	comp=Z,16nm,1.3s							
PMR	**Palmer**	**73.31**	**30**	P	P		**14 15 57.9**	**+0.1**
ILAR	**Eielson Array**	**73.73**	**26**	P	P		**14 16 01.4**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=284,slow=5.8,SNR=6.5							
ILAR	**Eielson Array**	**73.73**	**26**	P	P		**14 16 01.0**	**+0.7**
BMAR	**Burnt Mountain**	**74.11**	**24**	P	P		**14 16 03.9**	**+1.4**
SCM	**Sheep Creek Mo**	**74.11**	**30**	P	P		**14 16 03.2**	**+0.5**
PRP	**Porcupine Dome**	**74.14**	**26**	P	P		**14 16 03.5**	**+0.7**

	comp=Z,14nm,1.4s						
NOA	**NORSAR Array B**	**81.96**	**332**	P	**P**	**14 16 46.5**	**+0.3**
	comp=Z,3.1nm,0.8s,baz=64,slow=5.3,SNR=3.9						
GERES	**GERESS Array B**	**85.92**	**321**	P	**P**	**14 17 06.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=58,slow=5.9,SNR=5.3						

IDC ***17*** *14:05:58.3±1.6, 19°.55N×120°.75E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/60, mbtmp3.8/7, Error ellipse: s-maj=174.5km s-min=21.3km az=65.0*
NEIC ***17*** *14:05:58.3±2.3, 19°.7N±0°.1×121°.0E±0°.2, h10km±1km, mb4.6/8, Error ellipse: s-maj=38.6km s-min=17.0km az=267.0*
ISC 17 14:06:01.9±0.8, 19°.7N±0°.1×121°.1E±0°.3, h32km, n18, σ1s18/17, mb3.8/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSAR	**Wonju Array Be**	**18.67**	**17**	P	**P**	**14 10 15.9**	**-1.4**
LUWI	**Luwuk**	**20.64**	**175**	P	**P**	**14 10 38.2**	**-0.7**
LUWI				IAmb	IAmb	14 10 38.8	
	comp=Z,32nm,0.8s						
SAUI	**Saumlaki**	**29.24**	**159**	P	**P**	**14 11 59.7**	**-1.4**
SONM	**Songino Array**	**30.54**	**340**	P	**P**	**14 12 14.1**	**+1.6**
	comp=Z,0.7nm,0.9s,baz=171,slow=8.9,SNR=0.7						
KNRA	**Kununurra**	**35.91**	**167**	P	**P**	**14 13 00.9**	**+1.5**
KNRA				IAmb	IAmb	14 13 28.5	
	comp=Z,23nm,1.5s						
WRA	**Warramunga Arr**	**41.44**	**161**	P	**P**	**14 13 46.1**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=344,slow=9.4,SNR=1.2						
WRA	**Warramunga Arr**	**41.44**	**161**	P	**P**	**14 13 45.6**	**-0.2**
MKAR	**Makanchi Array**	**41.64**	**320**	P	**P**	**14 13 47.6**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=116,slow=9.4,SNR=0.9						
MKAR	**Makanchi Array**	**41.64**	**320**	P	**P**	**14 13 45.4**	**-1.9**
ZAA0	**Zalesovo Array**	**44.05**	**330**	P	**P**	**14 14 05.8**	**-0.8**
ZALV	**Zalesovo Beam**	**44.05**	**330**	P	**P**	**14 14 06.4**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=118,slow=7.8,SNR=1.7						
ASAR	**Alice Springs**	**44.83**	**163**	P	**P**	**14 14 15.0**	**+1.7**
	comp=Z,1.3nm,0.9s,baz=338,slow=6.9,SNR=1.2						
KURK	**Kurchatov**	**45.59**	**323**	P	**P**	**14 14 18.9**	**0.0**
KURK	**Kurchatov**	**45.59**	**323**	IAmb	IAmb	14 14 19.5	
	comp=Z,3.6nm,0.9s						
KURBB	**Kurchatov Arra**	**45.59**	**323**	P	**P**	**14 14 18.9**	**-0.1**
	comp=Z,3.5nm,0.9s,baz=120,slow=7.5,SNR=2.7						
FINES	**FINESS Array B**	**75.32**	**330**	P	**P**	**14 17 42.4**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=80,slow=7.6,SNR=2.0						
FINES	**FINESS Array B**	**75.32**	**330**	P	**P**	**14 17 40.3**	**-1.5**
MCARA	**McCarthy VSAT**	**75.70**	**30**	P	**P**	**14 17 44.6**	**+0.6**

IDC ***17*** *14:08:27.0±0.6, 19°.52N×120°.47E, h0km, mb4.0/17, mb1 4.2/18, mb1mx3.9/53, mbtmp4.0/18, ML3.4/1, Error ellipse: s-maj=24.9km s-min=13.0km az=73.0*
NEIC ***17*** *14:08:29.1±1.4, 19°.53N±0°.08×120°.60E±0°.07, h10km±1km, mb4.5/24, Error ellipse: s-maj=12.8km s-min=10.6km az=185.0*
ISC 17 14:08:30.9±0.5, 19°.52N±0°.06×120°.53E±0°.09, h23km, n58, σ0s89/56, mb4.3/25, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.33**	**9**	Pn	**Pn**	**14 09 20.2**	**-1.4**
TPUB	**Ta-pu**	**3.77**	**1**	Pn	**Pn**	**14 09 26.3**	**-1.3**
YULB	**Yu-li**	**3.92**	**10**	Pn	**Pn**	**14 09 29.6**	**-0.2**
SSLB	**Suanglung**	**4.27**	**5**	Pn	**Pn**	**14 09 34.8**	**+0.2**
NACB	**Ninganchiao**	**4.74**	**12**	Pn	**Pn**	**14 09 41.2**	**+0.2**
YHNB	**Yeheng**	**5.19**	**9**	Pn	**Pn**	**14 09 47.1**	**-0.2**
KNMB	**Chin-men Tao**	**5.31**	**338**	Pn	**Pn**	**14 09 50.1**	**+1.3**
HKPS	**Hong Kong Po S**	**6.57**	**296**	Pn	Pn	14 10 03.0	-3.2
QIZ	**Qiongzhong**	**10.10**	**269**	Pn	**Pn**	**14 10 52.5**	**-2.1**
KKM	**Kota Kinabalu**	**14.03**	**198**	Pn	**Pn**	**14 11 49.4**	**+0.8**
XAN	**Xi'an**	**17.77**	**327**	P	**Pn**	**14 12 38.2**	**+1.4**
KSRS	**Korea Array**	**19.00**	**18**	P	**P**	**14 12 50.4**	**-0.6**
	0.1nm,0.3s,baz=200,slow=11,SNR=2.6						
CHTO	**Chiang Mai**	**20.40**	**272**	P	**P**	**14 13 06.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**20.44**	**271**	P	**P**	**14 13 05.9**	**-1.0**
	0.6nm,0.3s,baz=74,slow=9.3,SNR=5.1						
CMAR	**Chiang Mai Arr**	**20.44**	**271**	P	**P**	**14 13 07.0**	**+0.2**
LUWI	**Luwuk**	**20.55**	**174**	P	**P**	**14 13 08.2**	**+0.2**
LUWI				IAmb	IAmb	14 13 28.4	
	comp=Z,33nm,1.1s						
BJT	**Baijiatuan**	**20.77**	**351**	P	**P**	**14 13 11.0**	**+0.7**
BJT				IAmb	IAmb	14 13 13.4	
	comp=Z,28nm,1.3s						
SIJI	**Sorong**	**22.84**	**151**	P	**P**	**14 13 32.9**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=337,slow=13,SNR=3.2						
MJAR	**Matsushiro Arr**	**22.98**	**39**	P	**P**	**14 13 35.1**	**+1.1**
	comp=Z,4.3nm,1.0s,baz=235,slow=12,SNR=2.3						
KAPI	**Kappang**	**24.39**	**182**	P	**P**	**14 13 48.9**	**+1.2**
	comp=Z,2.2nm,0.4s,baz=346,slow=8.3,SNR=5.3						
KAPI	**Kappang**	**24.39**	**182**	IAmb	IAmb	14 13 50.9	
	comp=Z,49nm,1.5s						
MDJ	**Mudanjiang**	**26.14**	**15**	P	**P**	**14 14 04.1**	**+0.7**
USA0B	**Ussuriysk Arra**	**26.41**	**19**	P	**P**	**14 14 06.3**	**+0.6**
USRK	**Ussuriysk Ar.**	**26.41**	**19**	P	**P**	**14 14 06.3**	**+0.6**
SOEI	**Soe**	**29.32**	**172**	P	**P**	**14 14 30.9**	**-1.3**
SONM	**Songino Array**	**30.49**	**341**	P	**P**	**14 14 42.6**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=156,slow=9.9,SNR=3.4						
SONM	**Songino Array**	**30.49**	**341**	P	**P**	**14 14 42.2**	**-0.1**
KLR	**Kul'dur**	**30.98**	**14**	P	**P**	**14 14 45.8**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=194,slow=6.1,SNR=4.3						
FITZ	**Fitzroy Crossi**	**37.72**	**172**	P	**P**	**14 15 44.6**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=0.0,slow=11,SNR=3.2						
FITZ	**Fitzroy Crossi**	**37.72**	**172**	P	**P**	**14 15 45.0**	**0.0**
FITZ				IAmb	IAmb	14 15 54.3	
	comp=Z,6.6nm,0.8s						
MK31	**Makanchi Array**	**41.38**	**320**	P	**P**	**14 16 16.3**	**+1.0**
MK31				IAmb	IAmb	14 16 18.0	
	comp=Z,7.7nm,1.4s						
MKAR	**Makanchi Array**	**41.38**	**320**	P	**P**	**14 16 14.5**	**-0.8**
	comp=Z,4.0nm,1.1s,baz=105,slow=8.4,SNR=5.6						
MKAR	**Makanchi Array**	**41.38**	**320**	P	**P**	**14 16 15.9**	**+0.5**
WRA	**Warramunga Arr**	**41.49**	**160**	P	**P**	**14 16 14.4**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=343,slow=9.1,SNR=5.9						
WRA	**Warramunga Arr**	**41.49**	**160**	P	**P**	**14 16 16.2**	**-0.3**
WB2	**Warramunga Arr**	**41.49**	**160**	P	**P**	**14 16 16.4**	**-0.1**
WB2				IAmb	IAmb	14 16 16.9	
	comp=Z,11nm,1.3s						
WR0	**Warramunga Arr**	**41.57**	**160**	P	**P**	**14 16 16.8**	**-0.3**
WR0				IAmb	IAmb	14 16 27.3	
	comp=Z,11nm,1.3s						
ZAA0	**Zalesovo Array**	**43.89**	**330**	P	**P**	**14 16 35.9**	**+0.3**
ZALV	**Zalesovo Beam**	**43.89**	**330**	P	**P**	**14 16 33.0**	**-2.6**
	comp=Z,1.9nm,0.7s,baz=114,slow=7.7,SNR=5.8						
ZALV	**Zalesovo Beam**	**43.89**	**330**	P	**P**	**14 16 35.4**	**-0.2**
ASAR	**Alice Springs**	**44.86**	**162**	P	**P**	**14 16 42.8**	**-0.9**
	comp=Z,1.5nm,0.4s,baz=343,slow=6.9,SNR=14						
KURK	**Kurchatov**	**45.36**	**323**	P	**P**	**14 16 47.5**	**+0.1**
KURK				IAmb	IAmb	14 16 49.2	
	comp=Z,11nm,1.0s						
KURBB	**Kurchatov Arra**	**45.37**	**323**	P	**P**	**14 16 46.2**	**-1.2**
	comp=Z,4.9nm,0.8s,baz=121,slow=8.0,SNR=10						
GAR	**Garm**	**47.27**	**305**	P	**P**	**14 17 03.2**	**+0.5**
GAR				IAmb	IAmb	14 17 04.6	
	comp=Z,7.2nm,1.0s						
KBL	**Kabul**	**47.75**	**299**	P	**P**	**14 17 07.4**	**+0.7**
KBL				IAmb	IAmb	14 17 25.5	
	comp=Z,6.6nm,1.2s						
KKAR	**Karatay Array**	**47.93**	**311**	P	**P**	**14 17 08.4**	**+0.7**
CHGR	**Chuyangaron**	**48.11**	**305**	P	**P**	**14 17 09.6**	**+0.4**
BRVK	**Borovoye**	**51.03**	**323**	P	**P**	**14 17 31.5**	**+0.4**
BBOO	**Buckleboo**	**54.11**	**164**	P	**P**	**14 17 55.1**	**+1.0**
ABKAR	**Akbulak array**	**56.33**	**317**	P	**P**	**14 18 10.4**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**56.72**	**303**	P	**P**	**14 18 12.9**	**-0.1**
GYA0B				IAmb	IAmb	14 18 16.0	
	comp=Z,5.6nm,0.8s						
KBZ	**Khabaz**	**67.96**	**310**	P	**P**	**14 19 28.7**	**+0.6**
	comp=Z,3.0nm,1.0s,baz=53,slow=20						
RND	**Reindeer**	**73.02**	**28**	P	**P**	**14 19 58.4**	**-0.5**
RND				IAmb	IAmb	14 20 15.1	
	comp=Z,7.0nm,1.0s						
ILAR	**Eielson Array**	**73.63**	**27**	P	**P**	**14 20 02.3**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=285,slow=6.8,SNR=4.5						
FINES	**FINESS Array B**	**75.16**	**330**	P	**P**	**14 20 11.3**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=66,slow=5.5,SNR=4.2						
AKASG	**Malin Array Be**	**75.95**	**319**	P	**P**	**14 20 15.4**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=58,slow=6.3,SNR=4.3						
DAWY	**Dawson**	**76.96**	**26**	P	**P**	**14 20 21.1**	**-0.4**
DAWY				IAmb	IAmb	14 20 38.8	
	comp=Z,4.3nm,1.2s						
NOA	**NORSAR Array B**	**82.05**	**332**	P	**P**	**14 20 48.0**	**-1.3**
	comp=Z,1.5nm,0.9s,baz=70,slow=5.2,SNR=3.5						

IDC ***17*** *14:13:39.6±0.3, 19°.50N×120°.40E, h0km, mb5.0/50, mb1 5.0/53, mb1mx4.9/70, mbtmp5.0/53, ML4.6/3, MS4.5/4, Ms1 4.5/4, ms1mx3.9/40, Error ellipse: s-maj=12.3km s-min=7.3km az=70.0*
BJI ***17*** *14:13:39.1±0.0, 19°.50N×120°.50E, h10km, mB5.4/7, mb5.0/66, Ms5.3/54, Ms7 5.2/52*
KLM ***17*** *14:13:41.0, 19°.67N×120°.33E, h11km, mb5.5*
NEIC ***17*** *14:13:41.1±1.9, 19°.63N±0°.06×120°.43E±0°.09, h10km±1km, mb5.4/208, Error ellipse: s-maj=13.8km s-min=9.8km az=270.0*
MOS ***17*** *14:13:41.8±1.0, 19°.56N×120°.46E, h26km, mb5.5/89, MS4.9/7, Error ellipse: s-maj=7.0km s-min=3.9km az=116.1*
MAN ***17*** *14:13:42.7, 19°.53N×120°.60E, h15km, mb5.4, ML4.4, MS4.7*
GCMT ***17*** *14:13:43.1±0.2, 19°.54N±0°.02×120°.32E±0°.01, h12km, MW5.2/128, Moment Tensor Solution. s41,c51; s128,c224; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr-7.13±.14; Mθθ2.07±.12; Mφφ5.05±.13; Mrθ-1.32±.53; Mrφ3.52±.10; Mθφ0.68±.50; Best double couple: Ms7.41000×10^16 NP1:ϕ1=202.00000°, δ46.00000°, λ-106.00000°. NP2:ϕ2=45.00000°, δ47.00000°, λ-74.00000°. Principal axes: T 7.3840, Plg1.0000°, Azm124.0000°; N 0.0420, Plg12.0000°, Azm214.0000°; P -7.4360, Plg78.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***17*** *14:13:52.7±0.0, 20°.31N×118°.89E, h33km, mb5.4*
ISC 17 14:13:43.0±0.2, 19°.58N±0°.03×120°.46E±0°.03, h23km, n925, σ1s28/924, mb5.3/269, MS4.9/16, 22C-40D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**1.64**	**180**	↓*e*P	**Pn**	**14 14 09.3**	**-1.2**
BBP	**Basco**	**1.65**	**58**	*e*P	**Pn**	**14 14 09.4**	**-1.2**
BBP				*e*S	**Sn**	**14 14 26.5**	**-4.6**
APYP	**Conner**	**1.86**	**156**	*e*P	**Pn**	**14 14 11.9**	**-1.5**
APYP				*e*S	**Sn**	**14 14 30.9**	**-5.3**
SGCP	**Mt. Cagua**	**2.00**	**131**	*e*P	**Pn**	**14 14 14.1**	**-1.3**
SGCP				*e*S	**Sn**	**14 14 38.5**	**-1.2**
CVP	**Callao Caves**	**2.26**	**145**	↑*i*P	**Pn**	**14 14 19.5**	**+0.5**
CVP				*i* S	**Sb**	**14 14 49.1**	**-1.7**
CAUP	**Cauayan**	**2.92**	**154**	*e*P	**Pn**	**14 14 29.2**	**+1.2**
CAUP				*e*S	Sb	14 15 24.8	+15
TWG	**Pinlang**	**3.28**	**10**		**Pn**	**14 14 31.0**	**-2.0**
SMPP	**San Manuel, Pa**	**3.41**	**176**	*e*P	**Pn**	**14 14 32.3**	**-2.6**
SMPP				*e*S	**Sn**	**14 15 14.2**	**-0.5**
TPUB	**Ta-pu**	**3.71**	**2**	Pn	**Pn**	**14 14 37.3**	**-1.7**
YULB	**Yu-li**	**3.88**	**11**		**Pn**	**14 14 39.2**	**-2.0**
BALP	**Baler**	**3.96**	**164**	*e*P	**Pn**	**14 14 43.1**	**+0.7**
BALP				*e*S	Sn	14 15 16.4	-12
SSLB	**Suanglung**	**4.22**	**6**	Pn	**Pn**	**14 14 44.9**	**-1.0**
NACB	**Ninganchiao**	**4.70**	**13**		**Pn**	**14 14 50.1**	**-2.4**
YHNB	**Yeheng**	**5.14**	**9**		**Pn**	**14 14 57.3**	**-1.4**
KNMB	**Chin-men Tao**	**5.23**	**339**	Pn	**Pn**	**14 14 55.7**	**-4.2**
YOJ	**Yonaguni jima**	**5.41**	**25**	Pn	**Pn**	**14 14 58.0**	**-4.2**
TATO	**Taipei**	**5.46**	**10**		**Pn**	**14 15 00.5**	**-2.4**
TGY	**Tagaytay City**	**5.46**	**175**	Pn	**Pn**	**14 15 03.4**	**+0.3**
	41nm,0.3s,baz=300,slow=7.0,SNR=6.4						
TGY				LR	LR	14 17 45.9	
	comp=Z,5μm,18.0s,baz=74,slow=46						
LQP	**Lukban**	**5.53**	**169**	↓*e*P	**Pn**	**14 15 04.4**	**+0.2**
QZH	**Quanzhou**	**5.62**	**342**	*e*Pn	**Pn**	**14 15 03.3**	**-1.8**
QZH				Sn	**Sn**	**14 16 04.3**	**-4.6**
QZH				LR	LR		
	comp=N,7μm,7.6s						
QZH				LR	LR		
	comp=E,17μm,8.5s						
QZH				LR	LR		
	comp=Z,16μm,10.7s						
HKPS	**Hong Kong Po S**	**6.49**	**296**	Pn	**Pn**	**14 15 14.6**	**-2.5**
MCO	**Taipa Grande**	**6.94**	**293**	P	**Pn**	**14 15 21.0**	**-2.3**
GZH	**Guangzhou**	**7.50**	**299**	Pn	**Pn**	**14 15 29.3**	**-1.7**
GZH				Sn	**Sn**	**14 16 49.6**	**-5.8**
QIZ	**Qiongzhong**	**10.04**	**269**	P	**Pn**	**14 16 03.3**	**-2.7**
QIZ				S	**Sn**	**14 17 53.3**	**-4.7**
QIZ				pmax	pmax		
	comp=Z,17nm,0.6s						
QIZ				LR	LR		
	comp=N,9μm,10.0s						
QIZ				LR	LR		
	comp=E,6μm,11.6s						
QIZ				LR	LR		
	comp=Z,7μm,10.8s						
QIZ	**Qiongzhong**	**10.04**	**269**	Pn	**Pn**	**14 16 02.2**	**-3.8**
WHN	**Wuhan**	**12.24**	**334**	↑P	**Pn**	**14 16 33.8**	**-2.2**
WHN				LR	LR		
	comp=N,20μm,9.9s						
WHN				LR	LR		
	comp=E,6μm,7.1s						
WHN				LR	LR		
	comp=Z,21μm,11.6s						
NJ2	**Nanjing**	**12.51**	**354**	*e*P	**Pn**	**14 16 41.8**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,36nm,1.3s						
NJ2				LR	LR		
	comp=N,7μm,12.3s						
NJ2				LR	LR		
	comp=E,7μm,9.5s						
NJ2				LR	LR		
	comp=Z,7μm,11.8s						
KKM	**Kota Kinabalu**	**14.07**	**198**	Pn	**Pn**	**14 16 59.0**	**-2.2**
GYA	**Guiyang**	**14.43**	**301**	↑P	**Pn**	**14 17 05.3**	**-0.7**
GYA				S	**Sn**	**14 19 50.3**	**+4.9**
GYA				pmax	pmax		
	comp=Z,17nm,1.0s						
GYA				LR	LR		
	comp=N,7μm,9.7s						
GYA				LR	LR		
	comp=E,6μm,10.2s						
GYA				LR	LR		
	comp=Z,7μm,10.6s						
MYLDM	**Lahad Datu**	**14.44**	**188**	Pn	**Pn**	**14 17 07.4**	**+1.4**
ENH	**Enshi**	**14.57**	**319**	Pn	**Pn**	**14 17 06.3**	**-1.6**
JSU	**Suzuyama**	**14.90**	**35**		**Pn**	**14 17 11.2**	**-1.2**
SPMM	**Sapulut**	**15.28**	**195**	P	**P**	**14 17 22.0**	**-0.1**
SLVN	**Son La**	**15.62**	**279**	Pn	**Pn**	**14 17 20.6**	**-1.2**
JNU	**Nakatsue**	**16.39**	**33**	Pn	**P**	**14 17 34.5**	**+0.2**
	1.6nm,0.3s,baz=166,slow=5.0,SNR=18						
JNU	**Nakatsue**	**16.39**	**33**		**Pn**	**14 17 29.5**	**-2.1**
NONG	**Nongkai**	**16.46**	**268**	P	**P**	**14 17 37.0**	**+1.8**
	148nm,1.2s						
KHON	**Khomkaen**	**17.09**	**262**	P	**P**	**14 17 44.9**	**+2.7**
	4μm114nm,1.4s						
KMI	**Kunming**	**17.29**	**292**	↑*e*P	**P**	**14 17 47.5**	**+2.9**
KMI				pmax	pmax		
	comp=Z,31nm,1.0s						
KMI				LR	LR		
	comp=N,5μm,12.2s						
KMI				LR	LR		
	comp=E,8μm,10.6s						
KMI				LR	LR		
	comp=Z,6μm,11.2s						
KMI	**Kunming**	**17.29**	**292**	P	**Pn**	**14 17 41.0**	**-2.3**
KMI				pmax	pmax		
	comp=Z,100nm,1.3s						
KMI	**Kunming**	**17.29**	**292**		**Pn**	**14 17 41.0**	**-2.3**
XAN	**Xi'an**	**17.69**	**327**	P	**Pn**	**14 17 47.3**	**-0.7**
XAN				pmax	pmax		
	comp=Z,110nm,1.7s						
XAN				LR	LR		
	comp=Z,8μm,9.4s						
XAN				LR	LR		
	comp=Z,7μm,10.6s						
XAN				LR	LR		
	comp=Z,10μm,11.8s						
XAN	**Xi'an**	**17.69**	**327**	P	**Pn**	**14 17 47.2**	**-0.7**
XAN				pmax	pmax		
	comp=Z,217nm,1.5s						
XAN	**Xi'an**	**17.69**	**327**		**Pn**	**14 17 47.2**	**-0.7**
CHAI	**Chaiyaphum**	**17.97**	**261**	P	**P**	**14 17 53.3**	**+1.4**
	comp=Z,2μmcomp=Z,45nm,1.4s						
SRAK	**Srakaew**	**18.48**	**255**	P	**Pn**	**14 18 00.8**	**+3.1**
	comp=Z,5μmcomp=Z,418nm,1.1s						
JMN	**Monobe**	**18.48**	**38**	P	**P**	**14 17 55.5**	**-1.9**
MNI	**Manado**	**18.52**	**166**	P	**Pn**	**14 18 00.0**	**+1.8**
MNI				pmax	pmax		
	comp=Z,249nm,0.9s						
SBUM	**Sibu**	**18.83**	**206**	P	**P**	**14 18 01.4**	**+0.1**
SBUM				IAmb	IAmb	14 18 11.8	
	comp=Z,387nm,1.5s						
SBUM	**Sibu**	**18.83**	**206**	P	**Pn**	**14 18 03.0**	**+1.0**
CD2	**Chengdu**	**18.83**	**310**	P	**Pn**	**14 18 02.1**	**+0.1**
CD2				pmax	pmax		
	comp=Z,100nm,1.6s						
CD2				LR	LR		
	comp=Z,11μm,11.0s						
CD2				LR	LR		
	comp=Z,15μm,9.8s						
CD2				LR	LR		
	comp=Z,15μm,11.8s						
KSAR	**Wonju Array Be**	**18.95**	**18**	P	**P**	**14 18 00.3**	**-2.2**
KSAR	**Wonju Array Be**	**18.95**	**18**	P	**P**	**14 18 00.2**	**-2.2**
UTTA	**Uttaradit**	**18.95**	**268**	P	**Pn**	**14 18 04.2**	**+0.8**
	comp=Z,499nmcomp=Z,37nm,1.0s						
KSRS	**Korea Array**	**18.97**	**19**	P	**Pn**	**14 18 03.2**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=198,slow=11,SNR=26						
KSRS				LR	LR	14 26 49.9	
	comp=Z,975nm,19.6s,baz=206,slow=42						
GTOI	**Gorontalo**	**18.99**	**172**	P	**P**	**14 18 02.2**	**-0.9**
	comp=Z,89μmcomp=Z,2μmcomp=Z,64nm,1.4s						
KS19	**Wonju Array Si**	**19.00**	**18**	P	**P**	**14 18 01.8**	**-1.3**
JHS	**Saijyo**	**19.01**	**34**	P	**P**	**14 18 01.0**	**-2.3**
MRSI	**Marisa**	**19.04**	**175**	P	**Pn**	**14 18 04.1**	**-0.3**
	comp=Z,186nm,0.9s						
MPSI	**Mapaga**	**19.13**	**182**	P	**Pn**	**14 18 06.1**	**+0.6**
	comp=Z,70nm,1.5s						
PHIT	**Phitsanulok**	**19.17**	**266**	P	**Pn**	**14 18 12.0**	**+5.9**
	comp=Z,161nm,0.9s						
KMSI	**Cibinong**	**19.20**	**169**	P	**Pn**	**14 18 08.2**	**+1.8**
	comp=Z,2μmcomp=Z,168nm,1.0s						
DL2	**Dalian**	**19.29**	**3**	P	**Pn**	**14 18 07.6**	**+0.3**
DL2				pmax	pmax		
	comp=Z,66nm,1.1s						
DL2				LR	LR		
	comp=Z,3μm,9.9s						
DL2				LR	LR		
	comp=Z,4μm,12.3s						
DL2				LR	LR		
	comp=Z,4μm,10.4s						
TIY	**Taiyuan**	**19.38**	**340**	*e*P	**Pn**	**14 18 08.9**	**+0.4**
TIY				LR	LR		
	comp=Z,4μm,11.8s						
TIY				LR	LR		
	comp=Z,3μm,14.8s						
TIY				LR	LR		
	comp=Z,5μm,12.2s						
PAYA	**Payao**	**19.42**	**273**	P	**Pn**	**14 18 10.3**	**+1.2**
	comp=Z,9μmcomp=Z,724nm,1.1s						
LAMP	**Lampang**	**19.72**	**270**	P	**Pn**	**14 18 18.7**	**+6.0**
SUKH	**Sukhothai**	**19.86**	**267**	P	**Pn**	**14 18 16.0**	**+1.7**
	comp=Z,60nm,1.1s						
TNTI	**Ternate**	**19.87**	**159**	P	**P**	**14 18 10.7**	**-2.1**
	comp=Z,1μmcomp=Z,97nm,1.6s						
TNTI	**Ternate**	**19.87**	**159**	P	**P**	**14 18 09.8**	**-2.9**
PATY	**Pattaya**	**19.93**	**254**	P	Pn	**14 18 26.0**	**+11**
SMKI	**Samarinda**	**20.15**	**189**	P	Pn	14 18 16.7	-1.0
	comp=Z,16μmcomp=Z,489nm,1.7s						
CM35	**Chiang Mai Arr**	**20.15**	**271**	P	**P**	**14 18 16.0**	**+0.1**
CM36	**Chiang Mai Arr**	**20.23**	**271**	P	**P**	**14 18 17.0**	**+0.3**
CM09	**Chiang Mai Arr**	**20.33**	**270**	P	Pn	14 18 19.2	-0.7
	comp=Z,422nmcomp=Z,46nm,1.0s						
CMMT	**Chiang Mai**	**20.34**	**271**	P	Pn	14 18 18.5	-1.4
	comp=Z,37nm,1.2s						
CM33	**Chiang Mai Arr**	**20.34**	**271**	P	**P**	**14 18 18.0**	**+0.2**
CHTO	**Chiang Mai**	**20.34**	**271**	P	**P**	**14 18 18.0**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,71nm,1.0s						
CHTO	**Chiang Mai**	**20.34**	**271**		**P**	**14 18 18.0**	**+0.1**
CM04	**Chiang Mai Arr**	**20.35**	**270**	P	Pn	14 18 19.0	-1.1
	comp=Z,566nmcomp=Z,68nm,1.0s						
CM01	**Chiang Mai Arr**	**20.37**	**270**	P	**P**	**14 18 17.8**	**-0.4**
CM02	**Chiang Mai Arr**	**20.38**	**270**	P	Pn	14 18 19.6	-0.8
	comp=Z,360nmcomp=Z,43nm,1.0s						
CM31	**Chiang Mai Arr**	**20.38**	**270**	P	Pn	14 18 19.0	-1.4
	comp=Z,871nm,1.0s						
CM31	**Chiang Mai Arr**	**20.38**	**270**	P	Pn	14 18 19.1	-1.3
CMAR	**Chiang Mai Arr**	**20.38**	**270**	P	**P**	**14 18 18.2**	**-0.1**
	comp=Z,24nm,1.0s,baz=74,slow=9.2,SNR=41						
CMAR					PcP	**14 22 31.9**	**+1.1**
	comp=Z,5.5nm,0.7s,baz=58,slow=0.7,SNR=9.7						
CM05	**Chiang Mai Arr**	**20.38**	**270**	P	Pn	14 18 19.7	-0.8
	comp=Z,345nmcomp=Z,44nm,1.0s						
APSI	**Ampana**	**20.39**	**177**	P	**P**	**14 18 18.3**	**-0.1**
	comp=Z,146nm,1.3s						
CM15	**Chiang Mai Arr**	**20.39**	**270**	P	Pn	14 18 19.7	-0.9
	comp=Z,332nmcomp=Z,44nm,0.9s						
CM13	**Chiang Mai Arr**	**20.42**	**270**	P	**P**	**14 18 19.0**	**+0.3**
	comp=Z,340nmcomp=Z,42nm,1.0s						
UTHA	**Uthitani**	**20.43**	**262**	P	Pn	14 18 20.2	-0.8
	comp=Z,790nmcomp=Z,91nm,0.9s						
CM32	**Chiang Mai Arr**

SURT **Suratani** 23.47 246 P P 14 19 03.3 +12
BBKI **Banjar Baru** 23.55 194 P P **14 18 51.5 -0.4**
comp=Z,4µmcomp=Z,184nm,1.2s
NLAI **Namlea** 23.59 163 P P **14 18 54.1 +1.8**
comp=Z,3µmcomp=Z,297nm,1.0s
PBKI **Pangkalan Bun** 23.77 202 P P **14 18 53.2 -0.8**
comp=Z,4µmcomp=Z,239nm,1.2s
BNSI **Bone** 23.83 181 P P **14 18 55.5 +1.0**
comp=Z,3µmcomp=Z,174nm,1.6s
KULM **Kulim** 23.95 236 P P **14 18 55.5 -0.2**
KULM IAmb IAmb 14 19 05.5
comp=Z,112nm,1.3s
KULM **Kulim** 23.95 236 P P **14 18 57.0 +1.2**
JYT **Yasato** 23.99 42 P P **14 18 55.9 0.0**
JYT IAmb IAmb 14 19 17.2
comp=Z,86nm,1.2s
MYKOM **Kota Tinggi** 24.01 225 P P **14 18 55.7 -0.6**
MYKOM IAmb IAmb 14 19 05.8
comp=Z,158nm,1.3s
MYKOM **Kota Tinggi** 24.01 225 P P **14 18 56.0 -0.3**
GUMO **Guam** 24.12 101 P P **14 18 57.0 -0.3**
comp=Z,332nm,1.2s,baz=80,slow=5.3,SNR=5.0
GUMO LR LR 14 27 05.2
comp=Z,1µm,20.3s,baz=278,slow=33
GUMO **Guam** 24.12 101 P P **14 18 56.8 -0.6**
IPM **Ipoh** 24.17 234 P P **14 18 56.7 -1.1**
IPM IAmb IAmb 14 19 06.6
comp=Z,150nm,1.2s
IPM **Ipoh** 24.17 234 P P **14 18 57.0 -0.8**
MSAI **Masohi** 24.25 159 P P **14 18 59.3 +0.8**
comp=Z,539nmcomp=Z,32nm,1.4s
PKDT **Phuket** 24.39 245 P P 14 19 11.7 +12
KAPI **Kappang** 24.45 182 P P **14 18 59.9 -0.4**
comp=Z,36nm,0.7s,baz=356,slow=7.1,SNR=36
KAPI LR LR 14 29 17.6
comp=Z,1µm,18.5s,baz=37,slow=38
KAPI **Kappang** 24.45 182 P P **14 18 60.0 -0.3**
KAPI **Kappang** 24.45 182 P P **14 19 00.1 -0.1**
KAPI pmax pmax
comp=Z,562nm,1.5s
KAPI **Kappang** 24.45 182 P P **14 19 00.1 -0.1**
CN2 **Changchun** 24.51 9 eP P **14 19 00.6 -0.1**
CN2 eS S **14 23 18.4 -1.4**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
CN2 LR LR
comp=Z,2µm,14.0s
BKSI **Bulukumba** 24.74 181 P P **14 19 02.5 -0.4**
comp=Z,2µmcomp=Z,80nm,1.7s
FAKI **Fak Fak** 25.18 151 P P **14 19 06.8 -0.1**
comp=Z,49nm,0.6s
FAKI **Fak Fak** 25.18 151 P P **14 19 06.7 -0.2**
VLA **Vladivostok** 25.37 20 i P P **14 19 07.5 -0.9**
VLA pmax pmax
comp=Z,72nm,1.5s
TPI **Tanjungpandan** 25.51 211 P P **14 19 10.7 +0.8**
comp=Z,123nm,1.1s
BSSI **Bau Bau, Buton** 25.56 180 P P **14 19 09.7 -0.6**
comp=Z,1µmcomp=Z,68nm,1.3s
BNDI **Bandanaira** 25.68 158 P P **14 19 10.4 -1.1**
comp=Z,324nm,1.1s
BAKI **Biak** 25.72 142 P P **14 19 10.9 -1.0**
comp=Z,80nm,0.8s
PPBI **Pangkal Pinang** 25.78 215 P P **14 19 13.2 +0.8**
comp=Z,4µmcomp=Z,108nm,1.5s
MDJ **Mudanjiang** 26.10 15 P P **14 19 15.5 +0.4**
MDJ pP sP 14 19 22.1 -1.3
MDJ sP pwP 14 19 24.9 -0.8
MDJ S S **14 23 44.4 -0.8**
MDJ sS sS 14 23 55.4 +0.3
MDJ ScP **ScP** **14 26 23.3 +2.6**
MDJ pmax pmax
comp=Z,100nm,1.0s
MDJ LR LR
comp=Z,3µm,10.5s
MDJ LR LR
comp=Z,2µm,9.8s
MDJ LR LR
comp=Z,3µm,10.8s
MDJ **Mudanjiang** 26.10 15 P P **14 19 15.2 +0.1**
SRPI **Serui, Papua** 26.35 142 P P **14 19 16.9 -0.6**
USA0B **Ussuriysk Arra** 26.38 19 i P P **14 19 16.7 -0.8**
USA0B **Ussuriysk Arra** 26.38 19 P P **14 19 15.8 -1.7**
USRK **Ussuriysk Ar.** 26.38 19 P P **14 19 18.6 +1.1**
comp=Z,12nm,0.8s,baz=194,slow=3.9,SNR=24
USRK **Ussuriysk Ar.** 26.38 19 P P **14 19 16.8 -0.7**
GTA **Gaotai** 26.60 322 P P **14 19 20.1 +0.3**
GTA pP pP 14 19 24.8 -0.8
GTA sP sP 14 19 27.3 -0.9
GTA pmax pmax
comp=Z,11nm,1.4s
GTA LR LR
comp=Z,5µm,10.5s
GTA LR LR
comp=Z,5µm,9.8s
GTA LR LR
comp=Z,5µm,10.2s
PSI **Prapat** 26.85 234 P P **14 19 21.3 -0.9**
PSI pmax pmax
comp=Z,54nm,1.0s
RPSI **Rantau Prapat** 26.92 234 P P **14 19 21.3 -1.4**
BKNI **Bangkinang** 26.99 227 P P **14 19 23.3 0.0**
comp=Z,2µmcomp=Z,163nm,1.0s
BKNI **Bangkinang** 26.99 227 P P **14 19 22.7 -0.6**
SHL **Shillong** 27.02 288 P P **14 19 23.0 -0.8**
SNR=22
SHL **Shillong** 27.02 288 P P **14 19 23.2 -0.6**
SHL pmax pmax
comp=Z,113nm,1.3s
SHL **Shillong** 27.02 288 P P **14 19 23.1 -0.6**
SHL IAmb IAmb 14 19 43.2
comp=Z,113nm,1.3s
KCSI **Kotacane, Aceh** 27.30 237 P P **14 19 25.8 -0.4**
comp=Z,38nm,1.1s
GRJI **Gresik** 27.47 197 P P **14 19 28.6 +1.0**
comp=Z,1µmcomp=Z,154nm,1.0s
JTM **Tenmabayashi** 27.52 35 P P **14 19 25.8 -2.0**
TBJI **Tambak Boyo** 27.57 199 P P **14 19 28.8 +0.4**
comp=Z,2µmcomp=Z,176nm,1.2s
SDSI **Sungai Dareh** 27.64 225 P P **14 19 29.0 -0.2**
comp=Z,24nm,1.0s
MNSI **Mandailing Nat** 27.69 230 P P **14 19 29.0 -0.6**
comp=Z,76nm,1.1s
SMPI **Sarmi** 27.93 138 P P **14 19 32.2 +0.4**
comp=Z,2µmcomp=Z,21nm,1.2s
SRBI **Singaraja** 27.97 191 P P **14 19 32.1 +0.1**
comp=Z,78nm,1.4s
BLJI **Banyuglugur** 27.98 195 P P **14 19 32.4 +0.3**
comp=Z,92nm,1.2s
MMRI **Maumere** 28.09 176 P P **14 19 32.2 -0.9**
comp=Z,3µmcomp=Z,175nm,1.6s
MMRI **Maumere** 28.09 176 P P **14 19 33.8 +0.7**
EDFI **Ende, Flores** 28.17 177 P P **14 19 32.9 -1.1**
comp=Z,1µmcomp=Z,65nm,1.3s
SMRI **Semarang** 28.24 201 P P 14 19 45.1 +11
SMRI **Semarang** 28.24 201 P P **14 19 35.3 +0.8**
PLAI **Plampang** 28.35 186 P P **14 19 35.4 0.0**
comp=Z,2µmcomp=Z,131nm,1.7s
TWSI **Taliwang, Sumb** 28.36 187 P P **14 19 36.9 +1.4**
comp=Z,41nm,1.4s
LSA **Lhasa** 28.42 296 P P **14 19 38.0 +1.4**
LSA pmax pmax
comp=Z,110nm,1.3s
LSA **Lhasa** 28.42 296 P P **14 19 37.8 +1.2**
LSA **Lhasa** 28.42 296 P P **14 19 37.5 +1.0**
LSA **Lhasa** 28.42 296 P P **14 19 36.0 -0.5**
LSA pmax pmax
comp=Z,78nm,1.0s
LSA **Lhasa** 28.42 296 P P **14 19 36.0 -0.5**
LSA IAmb IAmb 14 19 48.5
comp=Z,78nm,1.0s
GMJI **Gumukmas** 28.52 195 P P **14 19 37.8 +0.8**
comp=Z,74nm,1.7s
DNP **Denpasar** 28.55 191 P P **14 19 36.2 -1.0**
comp=Z,275nm,1.7s
JAGI **Jajag, Banyuwa** 28.55 193 P P **14 19 38.8 +1.5**
comp=Z,61nm,2.2s
LHSI **Lahat** 28.61 217 P P **14 19 40.0 +2.2**
comp=Z,33nm,1.7s
KLSI **28.65 214** P P **14 19 38.6 +0.4**
comp=Z,462nmcomp=Z,24nm,1.3s
PWJI **Pagerwojo** 28.72 198 P P **14 19 38.2 -0.5**
comp=Z,2µmcomp=Z,150nm,1.1s
MDSI **Maura Dua** 28.78 215 P P **14 19 41.0 +1.7**
comp=Z,24nm,1.6s
WOJI **Wonogiri, Jawa** 28.82 200 P P **14 19 40.4 +0.8**
comp=Z,2µmcomp=Z,168nm,1.4s
GSI **Gunungsitoli** 28.84 234 P P **14 19 40.5 +0.6**
comp=Z,60nm,0.9s
GSI **Gunungsitoli** 28.84 234 P P **14 19 37.0 -2.9**
KSI **Kapahiang** 29.01 219 P P 14 19 51.0 +10
UGM **Wanagama** 29.02 201 P P 14 19 51.2 +10
KPJI **Karang Pucung** 29.05 204 P P **14 19 42.7 +1.0**
comp=Z,3µmcomp=Z,168nm,1.5s
WBSI **Waikabubak, Su** 29.05 182 P P **14 19 38.9 -2.8**
comp=Z,62nm,0.8s
LEM **Lembang** 29.13 207 P P **14 19 43.3 +0.7**
comp=Z,7.8nm,0.4s,baz=174,slow=20,SNR=4.4
JEW **Eniwo** 29.17 33 P P **14 19 41.9 -0.7**
JEW IAmb IAmb 14 20 04.1
comp=Z,75nm,0.9s
DBJI **Dramaga** 29.27 209 P P 14 19 54.2 +11
GENI **Genyem** 29.33 137 P P 14 19 54.5 +10
SOEI **Soe** 29.39 172 P P **14 19 45.0 +0.2**
comp=Z,2µmcomp=Z,117nm,1.0s
SOEI **Soe** 29.39 172 P P **14 19 42.7 -2.1**
KASI **Kota Agung** 29.48 214 P P 14 19 59.1 +14
ERM **Erimo** 29.50 36 P P **14 19 45.9 +0.4**
ERM pmax pmax
comp=Z,35nm,0.9s
ERM **Erimo** 29.50 36 P P **14 19 45.9 +0.4**
ERM IAmb IAmb 14 20 03.5
comp=Z,35nm,0.8s
JEM **Erimo** 29.50 36 P P 14 19 54.4 +8.9
JEM IAmb IAmb 14 20 03.5
comp=Z,38nm,0.9s
SISI **Saibi** 29.52 228 P P 14 19 56.1 +10
BASI **Baing, Sumba** 29.61 180 P P 14 19 56.9 +10
HIA **Hailar** 29.63 359 i P P **14 19 45.3 -1.3**
HIA pmax pmax
comp=Z,22nm,0.9s
HIA **Hailar** 29.63 359 P P **14 19 45.2 -1.3**
HIA IAmb IAmb 14 20 00.3
comp=Z,40nm,0.9s
CISI **Cisompet, Garu** 29.70 206 P P 14 19 56.8 +9.3
CISI **Cisompet, Garu** 29.70 206 P P **14 19 45.0 -2.5**
BATI **Baumata** 29.76 174 P P **14 19 46.8 -1.2**
comp=Z,117nm,0.7s,baz=277,slow=0.5,SNR=35
BATI **Baumata** 29.76 174 P P **14 19 47.0 -1.0**
comp=Z,136nm,0.8s
ULN **Ulaanbaatar** 30.25 342 i P P **14 19 51.2 -1.1**
ULN pmax pmax
comp=Z,51nm,1.8s
ULN **Ulaanbaatar** 30.25 342 P P **14 19 52.7 +0.5**
ULN IAmb IAmb 14 20 02.9
comp=Z,35nm,0.8s
SONM **Songino Array** 30.42 341 P P **14 19 54.4 +0.7**
comp=Z,11nm,0.7s,baz=162,slow=9.9,SNR=66
SONM **Songino Array** 30.42 341 P P **14 19 53.8 +0.1**
ASAJ **Asahikawa** 30.67 32 P P **14 19 57.8 +2.0**
comp=Z,6.4nm,0.7s,baz=245,slow=14,SNR=7.7
KLR **Kul'dur** 30.95 14 P P **14 19 59.7 +1.5**
comp=Z,27nm,0.8s,baz=231,slow=6.1,SNR=52
KLR **Kul'dur** 30.95 14 i P P **14 19 57.4 -0.8**
KLR pmax pmax
comp=Z,101nm,1.5s
TAPN **Taplejung** 30.96 291 eP P **14 19 59.5 +0.6**
comp=Z,140nm,1.1s
ODAN **Odare** 31.18 290 eP P **14 20 01.3 +0.5**
comp=Z,144nm,0.9s
RAMN **Ramite** 31.89 290 eP P **14 20 07.9 +0.8**
comp=Z,247nm,0.9s
GUN **Gumba** 32.64 291 eP P **14 20 14.2 +0.4**
comp=Z,223nm,1.0s
YSS **Yuzh-Sakhalins** 32.83 29⇑ eP P **14 20 15.4 +0.7**
YSS e 14 20 21.0
YSS e 14 20 29.9
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,900nm,12.0s
YSS **Yuzh-Sakhalins** 32.83 29 P P **14 20 14.1 -0.7**
YSS IAmb IAmb 14 20 34.6
comp=Z,35nm,0.9s
CIT **Chita** 32.83 352 eP P **14 20 15.4 +0.6**
CIT e 14 20 23.4
CIT e 14 20 29.4
CIT pmax pmax
comp=Z,53nm,1.8s
PKI **Pulchoki** 33.01 291 eP P **14 20 16.8 -0.2**
comp=Z,147nm,1.2s
PKIN **Phulchoki** 33.03 291 eP P **14 20 17.0 -0.1**
comp=Z,119nm,1.0s
KKN **Kakani** 33.15 291 eP P **14 20 18.0 -0.1**
comp=Z,126nm,1.0s
DMN **Daman** 33.28 291 eP P **14 20 19.3 0.0**
comp=Z,174nm,1.2s
GRNR **Gornyy** 33.60 18⇑ iP P **14 20 21.4 0.0**
GRNR eS S **14 25 46.9 +4.3**
GRNR pmax pmax
comp=E,5.0nm,0.9s
GRNR pmax pmax
comp=N,7.0nm,1.1s
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR smax smax
comp=N,2.0nm,0.6s
GRNR MLR MLR
comp=E,420nm,11.0s
GRNR MLR MLR
comp=N,660nm,13.0s
GRNR MLR MLR
comp=Z,1µm,12.0s
ZAK **Zakamensk** 33.64 340 eP P **14 20 21.9 0.0**
ZAK pmax pmax
comp=Z,14nm,1.7s
GKN **Gorkha** 33.74 291 eP P **14 20 22.5 -0.7**
comp=Z,206nm,1.1s
MTN **Manton Dam** 33.88 161 P P **14 20 21.4 -2.9**
ZEA **Zeya** 34.50 7 eP P **14 20 30.0 +0.8**
ZEA e 14 20 40.2
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=E,80nm,0.8s
ZEA pmax pmax
comp=N,30nm,0.9s
DANN **Dangsing** 34.55 292 eP P **14 20 30.3 0.0**
comp=N,90nm,0.9s
KOLN **Koldanda** 34.63 291 eP P **14 20 30.8 -0.1**
comp=N,160nm,1.0s
TLY **Talaya** 34.66 342 P P **14 20 31.8 +1.1**
comp=N,10nm,0.7s,baz=167,slow=6.1,SNR=8.0
TLY **Talaya** 34.66 342 P P **14 20 31.4 +0.8**
TLY P P **14 20 31.4 +0.8**
TLY **Talaya** 34.66 342⇓ eP P **14 20 32.2 +1.6**
TLY pmax pmax
comp=Z,90nm,1.5s
TLY MLR MLR
comp=Z,5µm,14.0s
TLY **Talaya** 34.66 342 P P **14 20 31.1 +0.4**
IRK **Irkutsk** 34.97 343 eP P **14 20 34.1 +0.8**
IRK e 14 20 49.6
IRK pmax pmax
comp=Z,119nm,2.4s
PYUN **Piuthan** 35.20 291 eP P **14 20 36.0 +0.1**
comp=Z,159nm,1.0s
MOY **Mondy** 35.49 339 eP P **14 20 38.6 +0.7**
MOY pmax pmax
comp=Z,121nm,2.5s
KNRA **Kununurra** 35.97 166 P P **14 20 40.7 -1.5**
KNRA IAmb IAmb 14 20 50.5
comp=Z,52nm,1.0s
WMQ **Urumqi** 36.52 319 eP P **14 20 48.3 +1.5**
WMQ pP sP 14 20 54.8 -0.5
WMQ pmax pmax
comp=Z,85nm,1.3s
WMQ LR LR
comp=Z,3µm,13.1s
WMQ LR LR
comp=Z,4µm,12.1s
WMQ LR LR
comp=Z,3µm,14.1s
FITZ **Fitzroy Crossi** 37.78 172 P P **14 20 56.3 -1.3**
comp=Z,32nm,0.8s,baz=4.0,slow=5.8,SNR=54
FITZ **Fitzroy Crossi** 37.78 172 P P **14 20 56.3 -1.3**
FITZ IAmb IAmb 14 21 06.7
comp=Z,86nm,1.1s
BOD **Bodaibo** 38.49 354 eP P **14 21 03.3 +0.1**
BOD pmax pmax
comp=Z,14nm,0.8s
PATS **Pohnpei** 38.86 104 P P **14 21 06.5 -0.3**
PMG **Port Moresby** 39.00 135 P P **14 21 07.7 -0.3**
comp=Z,13nm,0.6s,baz=332,slow=4.6,SNR=7.4
PMG **Port Moresby** 39.00 135 i P P **14 21 07.1 -0.8**
PMG pmax pmax
comp=Z,33nm,1.0s
PMG **Port Moresby** 39.00 135 P P **14 21 07.9 -0.1**
KRVT **Keravat (AS076** 39.07 124 P P **14 21 09.3 +0.7**
comp=Z,52nm,0.9s,baz=136,slow=9.4,SNR=6.9
HYB **Hyderabad** 39.73 274 i P P **14 21 13.0 -1.2**
ZSN **Zaisan** 40.10 322⇓ iP P **14 21 17.8 +0.9**
comp=Z,44nm,2.5s,baz=322
ZSN eS S **14 27 24.8 +3.1**
baz=322
ZSN **Zaisan** 40.10 322 d iP P **14 21 17.7 +0.9**
ZSN eS S **14 27 24.8 +3.1**
ZSN pmax pmax
comp=Z,43nm,2.5s
COEN **Coen** 40.13 144 P P **14 21 15.2 -2.1**
PSAD1 **Pilbara Seismi** 40.78 181 P P **14 21 21.9 -0.8**
PSAC1 **Pilbara Seismi** 40.86 181 P P **14 21 22.1 -1.2**
PSAC1 IAmb IAmb 14 21 47.8
comp=Z,79nm,1.3s
PSAB2 **Pilbara Seismi** 40.88 181 P P **14 21 22.4 -1.1**
PSAB2 IAmb IAmb 14 21 48.5
comp=Z,67nm,1.1s
PSAC2 **Pilbara Seismi** 40.89 181 P P **14 21 22.1 -1.5**
PSAC2 IAmb IAmb 14 21 33.3
comp=Z,58nm,0.9s
PSAA2 **Pilbara Seismi** 40.89 181 P P **14 21 21.9 -1.6**
PSAA2 IAmb IAmb 14 21 48.7
comp=Z,70nm,1.2s
PSAB1 **Pilbara Seismi** 40.90 181 P P **14 21 22.2 -1.3**
PSA00 **Pilbara Seismi** 40.90 181 P P **14 21 22.4 -1.2**
PSA00 IAmb IAmb 14 21 48.1
comp=Z,58nm,1.1s
PSA00 **Pilbara Seismi** 40.90 181 P P **14 21 22.5 -1.1**
PSA00 IAmb IAmb 14 21 45.1
comp=Z,22nm,0.9s
PSAA1 **Pilbara Seismi** 40.90 181 P P **14 21 22.6 -1.1**
BHK **Bhakra** 41.22 296 ex P P **14 21 26.8 +0.5**
MK31 **Makanchi Array** 41.30 320 i P P **14 21 26.8 +0.1**
MK31 **Makanchi Array** 41.30 320 P P **14 21 27.4 +0.6**
MK31 IAmb IAmb 14 21 38.3
comp=Z,79nm,1.1s
MKAR **Makanchi Array** 41.30 320 P P **14 21 27.9 +1.2**
comp=Z,24nm,0.8s,baz=114,slow=9.9,SNR=119
MKAR **Makanchi Array** 41.30 320 i P P **14 21 27.8 +1.1**
MKAR pmax pmax
comp=Z,24nm,0.8s
MKAR **Makanchi Array** 41.30 320 P P **14 21 26.7 0.0**
WB0 **Warramunga Arr** 41.41 160 P P **14 21 26.1 -1.8**
WB0 IAmb IAmb 14 21 37.3
comp=Z,92nm,1.5s
MAKZ **Makanchi** 41.49 320 i P P **14 21 29.0 +0.6**
MAKZ pmax pmax
comp=Z,88nm,1.2s
MAKZ **Makanchi** 41.49 320 P P **14 21 28.8 +0.4**
MAKZ IAmb IAmb 14 21 39.9
comp=Z,78nm,1.1s
WRAB **Tennant Creek** 41.56 160 i P P **14 21 27.7 -1.4**
WRAB pmax pmax
comp=Z,86nm,1.6s
WRAB **Tennant Creek** 41.56 160 P P **14 21 26.9 -2.2**
WRAB IAmb IAmb 14 21 33.6
comp=Z,112nm,1.5s
WRA **Warramunga Arr** 41.56 160 P P **14 21 27.5 -1.6**
comp=Z,20nm,0.5s,baz=342,slow=9.1,SNR=119
WRA PcP PcP **14 23 26.5 +0.2**
comp=Z,7.3nm,0.8s,baz=334,slow=3.8,SNR=5.8
WRA **Warramunga Arr** 41.56 160 i P P **14 21 27.5 -1.6**
WRA pmax pmax
comp=Z,22nm,0.5s
WRA **Warramunga Arr** 41.56 160 P P **14 21 26.9 -2.2**
WB2 **Warramunga Arr** 41.56 160 P P **14 21 27.6 -1.5**
WB2 IAmb IAmb 14 21 33.7
comp=Z,35nm,0.7s
WC3 **Warramunga Arr** 41.59 160 P P **14 21 27.4 -1.9**
WC3 IAmb IAmb 14 21 33.9
comp=Z,38nm,0.7s
SHLS **Shalkode** 41.61 314⇓ iP P **14 21 28.6 -0.9**
comp=Z,94nm,2.8s,baz=314
SHLS **Shalkode** 41.61 314 d iP P **14 21 28.5 -0.9**
SHLS pmax pmax
comp=Z,94nm,2.8s
WR0 **Warramunga Arr** 41.64 160 P P **14 21 28.3 -1.5**
WR0 IAmb IAmb 14 21 31.3
comp=Z,34nm,0.6s
KPKS **Kokpek** 42.25 314⇓ iP P **14 21 35.8 +1.1**
comp=Z,151nm,3.7s,baz=314
KPKS **Kokpek** 42.25 314 d iP P **14 21 35.7 +1.1**
KPKS pmax pmax
comp=Z,151nm,3.7s
SATY **Saty** 42.30 313⇓ iP P **14 21 36.3 +1.2**
comp=Z,69nm,2.5s,baz=313
SATY **Saty** 42.30 313 d iP P **14 21 36.2 +1.2**
SATY pmax pmax
comp=Z,69nm,2.5s
KDJ **Kajisay** 42.85 311 P P **14 21 40.0 +0.4**
KDJ pmax pmax
comp=Z,74nm,1.4s
KDJ **Kajisay** 42.85 311 P P **14 21 40.0 +0.4**
KDJ IAmb IAmb 14 22 01.1
comp=Z,74nm,1.4s
YAK **Yakutsk** 42.90 6 P P **14 21 39.3 -0.1**
comp=Z,12nm,0.6s,baz=240,slow=0.3,SNR=16
YAK **Yakutsk** 42.90 6 eP P **14 21 39.4 -0.1**
YAK e*PP sP **14 21 47.8 -0.2**
YAK e 14 23 16.0
YAK eS S **14 28 02.9 +0.1**
YAK pmax pmax
comp=Z,31nm,0.8s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK pmax pmax
comp=Z,96nm,2.0s
YAK pmax pmax
comp=N,146nm,2.3s
YAK pmax pmax
comp=E,98nm,2.5s
YAK smax smax
comp=E,433nm,5.6s
YAK smax smax
comp=N,275nm,5.3s
YAK MLR MLR
comp=Z,1µm,14.0s
YAK MLR MLR
comp=N,587nm,12.0s
YAK **Yakutsk** 42.90 6 P P **14 21 38.7 -0.8**
YAK IAmb IAmb 14 21 50.2
comp=Z,69nm,0.8s
TDK **Taldyqorghan** 43.00 316 i P P **14 21 42.1 +1.4**
comp=Z,201nm,2.5s,baz=316
TDK eS S **14 28 08.4 +3.5**
baz=316
TDK **Taldyqorghan** 43.00 316 i P P **14 21 42.0 +1.4**
TDK eS S **14 28 08.3 +3.5**
TDK pmax pmax
comp=Z,201nm,2.5s
KSH **Kashi** 43.00 307 P P **14 21 44.3 +3.5**
KSH sP pwP 14 21 53.8 +2.3
KSH S S **14 28 09.3 +4.1**
KSH pmax pmax
comp=Z,30nm,0.6s
KSH LR LR
comp=Z,3µm,9.5s
KSH LR LR
comp=Z,3µm,10.1s
KSH LR LR
comp=Z,4µm,10.7s
MDOK **Medeo** 43.27 313 i P P **14 21 44.7 +1.6**
baz=312
MDOK eS S **14 28 12.6 +3.4**
baz=312
MDOK **Medeo** 43.27 313 i P P **14 21 44.6 +1.6**
MDOK eS S **14 28 12.5 +3.4**
TNSS **Tian-Shan** 43.30 313 eP P **14 21 45.4 +1.8**
baz=312
TNSS **Tian-Shan** 43.30 313 eP P **14 21 45.3 +1.8**
AAA **Alma-Ata** 43.37 313 eP P **14 21 45.6 +1.8**
baz=312

AAA eS S 14 28 14.1 +3.6
baz=312
AAA Alma-Ata 43.37 313 eP P 14 21 45.6 +1.8
AAA eS S 14 28 14.0 +3.6
CHKK Chushkaly 43.54 314⇓ iP P 14 21 45.7 +0.7
baz=314
CHKK Chushkaly 43.54 314⇓ iP P 14 21 45.7 +0.7
H11S3 WAKE ISLAND Hy 43.61 83 T T 15 07 20.3
baz=278,slow=74
H11N1 WAKE ISLAND Hy 43.62 82 T T 15 07 27.1
baz=278,slow=75
H11S1 WAKE ISLAND Hy 43.62 83 T T 15 07 21.3
baz=278,slow=74
H11N2 WAKE ISLAND Hy 43.62 82 T T 15 07 27.5
baz=278,slow=75
H11S2 WAKE ISLAND Hy 43.62 83 T T 15 07 24.2
baz=278,slow=74
H11N3 WAKE ISLAND Hy 43.63 82 T T 15 07 31.7
baz=278,slow=75
ZAA0 Zalesovo Array 43.82 330 P P 14 21 47.3 +0.3
ZAA0 IAmb IAmb 14 21 57.7
comp=Z,53nm,0.8s
ZALV Zalesovo Beam 43.82 330 P P 14 21 47.4 +0.4
comp=Z,26nm,0.7s,baz=115,slow=7.9,SNR=110
ZALV Zalesovo Beam 43.82 330 P P 14 21 47.1 +0.1
BOOM Boomskoye usch 43.83 312 P P 14 21 48.4 +0.8
BOOM pmax pmax
comp=Z,22nm,1.2s
BOOM Boomskoye usch 43.83 312 P P 14 21 48.4 +0.8
KUU Kurty 43.99 314⇓ iP P 14 21 49.9 +1.2
comp=Z,227nm,2.5s,baz=313
KUU Kurty 43.99 314d iP P 14 21 49.9 +1.2
KUU pmax pmax
comp=Z,227nm,2.5s
PETK Petropavlovsk- 44.09 32 P P 14 21 50.2 +0.9
comp=Z,3.8nm,0.6s,baz=250,slow=0.1,SNR=13
PETK Petropavlovsk- 44.09 32 P P 14 21 50.7 +1.5
PETK Petropavlovsk- 44.09 32 P P 14 21 50.7 +1.5
NIL Nilore 44.11 298 P P 14 21 50.0 +0.2
NIL Nilore 44.11 298 P P 14 21 49.7 -0.1
NIL pmax pmax
comp=Z,106nm,0.9s
NIL Nilore 44.11 298 P P 14 21 49.7 -0.1
SEM Semipalatinsk 44.22 324 eP P 14 21 51.0 +0.4
comp=Z,111nm,2.6s,baz=323
SEM Semipalatinsk 44.22 324 eP P 14 21 51.0 +0.4
SEM pmax pmax
comp=Z,111nm,2.6s
PET Petropavlovsk 44.51 32 eP P 14 21 54.7 +2.1
PET pmax pmax
comp=Z,26nm,0.7s
FRU1 Bishkek 44.85 312 P P 14 21 55.2 -0.4
FRU1 pmax pmax
comp=Z,56nm,1.3s
FRU1 Bishkek 44.85 312 P P 14 21 55.2 -0.4
FRU1 IAmb IAmb 14 22 16.2
comp=Z,56nm,1.2s
AAK Ala-Archa 44.90 311 i P P 14 21 57.6 +1.5
SNR=7.9
AAK Ala-Archa 44.90 311 P P 14 21 57.7 +1.6
AAK Ala-Archa 44.90 311 i P P 14 21 56.3 +0.2
AAK pmax pmax
comp=Z,81nm,2.3s
AS31 Alice Springs 44.93 162 P P 14 21 55.5 -0.8
AS31 IAmb IAmb 14 22 05.9
comp=Z,16nm,0.5s
ASAR Alice Springs 44.93 162 P P 14 21 55.5 -0.8
comp=Z,21nm,0.5s,baz=342,slow=6.5,SNR=159
ASAR Alice Springs 44.93 162 P P 14 21 55.8 -0.6
ASAR Alice Springs 44.93 162 P P 14 21 55.8 -0.6
SGDS Sogindy 45.03 312⇓ iP P 14 21 57.8 +0.7
comp=Z,61nm,3.7s,baz=312
SGDS eS S 14 28 37.4 +2.7
baz=312
SGDS Sogindy 45.03 312d iP P 14 21 57.8 +0.7
SGDS eS S 14 28 37.4 +2.7
SGDS pmax pmax
comp=Z,61nm,3.7s
KURK Kurchatov 45.28 323 P P 14 21 59.6 +0.9
KURK Kurchatov 45.28 323 i P P 14 21 58.9 +0.1
KURK pmax pmax
comp=Z,53nm,0.9s
KURK Kurchatov 45.28 323 P P 14 21 59.3 +0.5
KURBB Kurchatov Arra 45.29 323 P P 14 21 59.2 +0.3
comp=Z,52nm,0.7s,baz=122,slow=8.0,SNR=121
KURBB Kurchatov Arra 45.29 323 P P 14 21 58.8 0.0
BTLS Baital 45.91 314 i P P 14 22 04.8 +0.8
comp=Z,24nm,2.1s,baz=314
BTLS Baital 45.91 314 i P P 14 22 04.7 +0.8
BTLS pmax pmax
comp=Z,24nm,2.1s
CTA Charters Tower 46.82 146 P P 14 22 11.8 +0.5
comp=Z,9.1nm,0.6s,baz=327,slow=9.7,SNR=15
CTAO Charters Tower 46.82 146 P P 14 22 12.3 +1.0
CTAO pmax pmax
comp=Z,17nm,0.9s
CTAO Charters Tower 46.82 146 P P 14 22 12.3 +1.0
BTK Batken 46.99 307 P P 14 22 13.3 +0.7
BTK pmax pmax
comp=Z,34nm,1.2s
BTK Batken 46.99 307 P P 14 22 13.3 +0.7
BTK IAmb IAmb 14 22 33.5
comp=Z,34nm,1.1s
GAR Garm 47.19 305 P P 14 22 14.9 +0.7
DZA Taraz 47.21 311⇓ iP P 14 22 15.3 +1.0
baz=310
DZA Taraz 47.21 311d iP P 14 22 15.2 +1.0
KBL Kabul 47.67 299 P P 14 22 16.9 -1.2
SNR=21
KBL P P 14 22 16.9 -1.2
SNR=21
KBL P P 14 22 16.9 -1.2
SNR=21
KBL Kabul 47.67 299 P P 14 22 18.8 +0.7
KBL pmax pmax
comp=Z,64nm,1.2s
KBL Kabul 47.67 299 P P 14 22 18.8 +0.7
KK06 Karatay Array 47.84 311 P P 14 22 19.1 +0.1
KK05 Karatay Array 47.84 311 P P 14 22 19.8 +0.7
KK02 Karatay Array 47.85 311 P P 14 22 19.4 +0.3
KK31 Karatay Array 47.85 311 i P P 14 22 19.7 +0.6
KK31 Karatay Array 47.85 311 P P 14 22 20.2 +1.1
KK31 IAmb IAmb 14 22 31.2
comp=Z,40nm,1.0s
KKAR Karatay Array 47.85 311 P P 14 22 19.3 +0.2
KKAR pmax pmax
comp=Z,40nm,1.0s
KKAR Karatay Array 47.85 311 P P 14 22 20.1 +1.0
KKAR IAmb IAmb 14 22 31.3
comp=Z,40nm,1.0s
KKAR Karatay Array 47.85 311 P P 14 22 19.3 +0.2
IUG luzhnay 47.98 310 eP P 14 22 21.9 +1.6
comp=Z,37nm,1.5s,baz=309
IUG luzhnay 47.98 310 eP P 14 22 21.9 +1.6
IUG pmax pmax
comp=Z,37nm,1.5s
CHGR Chuyangaron 48.03 305 P P 14 22 20.6 -0.1
BRZS Berezniki 48.44 320⇓ iP P 14 22 24.6 +0.9
comp=Z,47nm,2.5s,baz=320
BRZS eS S 14 29 25.9 +2.8
baz=320
BRZS Berezniki 48.44 320d iP P 14 22 24.5 +0.9
BRZS eS S 14 29 25.9 +2.8
BRZS pmax pmax
comp=Z,47nm,2.5s
SEY Seymchan 48.53 19 i P P 14 22 23.8 -0.2
MORW Morawa 48.55 185 P P 14 22 23.9 -0.6
FORT Forrest 50.59 172 P P 14 22 39.5 -0.5
BRVK Borovoye 50.95 323 P P 14 22 43.3 +0.7
BRVK P P 14 22 43.3 +0.7
BRVK Borovoye 50.95 323 i P P 14 22 42.4 -0.2
BRVK pmax pmax
comp=Z,17nm,0.9s
BRVK Borovoye 50.95 323 P P 14 22 43.3 +0.7
BRVK IAmb IAmb 14 22 53.9
comp=Z,46nm,0.8s
NWAO Narrogin (SRO) 52.30 183 P P 14 22 52.5 -0.3
comp=Z,27nm,0.7s,baz=12,slow=6.5,SNR=14
NWAO Narrogin (SRO) 52.30 183 P P 14 23 00.6 +7.8
NWAO Narrogin (SRO) 52.30 183 P P 14 22 52.3 -0.5
NWAO Narrogin (SRO) 52.30 183 P P 14 22 51.9 -0.9
NWAO IAmb IAmb 14 23 02.2
comp=Z,72nm,0.8s
TIXI Tiksi 52.31 3 i P P 14 22 52.0 -0.5
TIXI Tiksi 52.31 3 P P 14 22 51.9 -0.5

SMY Shemya 52.82 38 P P 14 22 55.7 -0.8
SMY pmax pmax
comp=Z,90nm,1.2s
SMY Shemya 52.82 38 P P 14 22 55.7 -0.8
HRA Herat 53.28 299 P P 14 22 59.3 -1.2
NRIK Noril'sk 53.68 346 P P 14 23 03.2 +0.6
comp=Z,17nm,0.7s,baz=128,slow=7.2,SNR=34
NRIK Noril'sk 53.68 346d iP P 14 23 02.9 +0.3
NRIK pmax pmax
comp=Z,36nm,0.9s
EIDS Eidsvold 53.69 145 P P 14 23 03.1 -0.1
EIDS IAmb IAmb 14 23 08.8
comp=Z,22nm,0.8s
BBOO Buckleboo 54.18 164 P P 14 23 06.5 -0.2
STKA Stephens Creek 55.02 158 P P 14 23 13.2 +0.3
comp=Z,18nm,0.6s,baz=333,slow=6.6,SNR=38
STKA Stephens Creek 55.02 158 P P 14 23 12.9 0.0
AB06 Akbulak array 56.23 317 P P 14 23 21.5 +0.1
AB07 Akbulak array 56.23 317 P P 14 23 21.2 -0.1
AB31 Akbulak array 56.25 317 i P P 14 23 21.6 +0.1
ABKAR Akbulak array 56.25 317 P P 14 23 22.0 +0.5
ABKAR Akbulak array 56.25 317 P P 14 23 21.6 +0.1
GYB1 ALIBECK ARRAY 56.63 303 P P 14 23 24.0 -0.5
GYB1 IAmb IAmb 14 23 36.5
comp=Z,63nm,1.2s
GYA2 ALIBECK ARRAY 56.63 303 P P 14 23 24.9 +0.3
GYA2 IAmb IAmb 14 23 46.0
comp=Z,59nm,1.1s
GEYT Alibeck 56.64 303 P P 14 23 25.1 +0.6
comp=Z,7.7nm,0.8s,baz=116,slow=3.4,SNR=11
GEYT Alibeck 56.64 303 P P 14 23 23.5 -1.0
GYA0B ALIBECK ARRAY 56.64 303 P P 14 23 25.2 +0.7
GYA0B IAmb IAmb 14 23 46.6
comp=Z,69nm,1.3s
GYA1 ALIBECK ARRAY 56.64 303 P P 14 23 24.0 -0.5
GYA1 IAmb IAmb 14 23 36.6
comp=Z,44nm,1.1s
SVE Sverdlovsk 57.40 326ce P P 14 23 30.5 +1.0
SVE pmax pmax
comp=Z,108nm,1.3s
SANVU Saraoutou 57.66 124 P P 14 23 33.3 +1.5
SANVU IAmb IAmb 14 23 35.1
comp=Z,51nm,1.0s
AKTO Aktyubinsk 57.66 318 P P 14 23 32.0 +0.6
comp=Z,7.9nm,0.7s,baz=93,slow=8.3,SNR=30
AKTO PKiKP PKiKP 14 30 48.1 -1.7
comp=Z,0.6nm,0.5s,baz=16,slow=1.1,SNR=3.5
AKTO Aktyubinsk 57.66 318 i P P 14 23 31.4 -0.1
AKTO pmax pmax
comp=Z,19nm,0.8s
BIDO Bidbid 57.72 286 P P 14 23 31.5 -0.9
SNR=8.3
ARMA Armidale 58.05 148 P P 14 23 34.9 +0.4
ARMA IAmb IAmb 14 23 41.5
comp=Z,32nm,1.2s
ARU Arti 58.42 325 P P 14 23 37.1 +0.3
comp=Z,7.8nm,0.6s,baz=126,slow=3.2,SNR=30
ARU Arti 58.42 325d iP P 14 23 37.0 +0.3
ARU 14 24 22.5
ARU 14 25 45.0
ARU S S 14 31 42.4 +4.1
ARU SS SS 14 35 24.7 -5.8
ARU pmax pmax
comp=Z,26nm,0.7s
ARU MLR MLR
comp=Z,749nm,16.0s
ARU Arti 58.42 325 P P 14 23 36.0 -0.7
HOQ Hoqain 58.45 286 P P 14 23 36.6 -0.9
SNR=6.4
HOQ P P 14 23 36.6 -0.9
SNR=6.4
BANOM Banah 59.01 289 P P 14 23 42.3 +0.9
BANOM Banah 59.01 289 P P 14 23 40.1 -1.3
SNR=7.9
BANOM P P 14 23 40.1 -1.3
SNR=7.9
SOHO SOHO 59.07 287 P P 14 23 41.5 -0.3
MDH Madha 59.10 288 P P 14 23 41.1 -0.8
SHME Shamm 59.13 289 P P 14 23 42.6 +0.4
MSFE Esma-Masafi 59.22 288 i P P 14 23 43.4 +0.5
SNR=6.0
UOSS Minazif 59.24 288 P P 14 23 43.0 0.0
HATD Hatta, Dubai 59.32 288 i P P 14 23 45.0 +1.4
SNR=6.0
ASHO Ashiyiah 59.41 288 P P 14 23 44.6 +0.4
ALNE Al Ain 59.79 287 i P P 14 23 47.0 +0.2
SNR=7.8
FAQ Al Faqa, Dubai 59.82 288 P P 14 23 46.8 -0.1
FAQ Al Faqa, Dubai 59.82 288 P P 14 23 46.7 -0.3
SNR=7.6
ASUD Al Ashush, Dub 60.08 288 i P P 14 23 49.3 +0.6
SNR=7.3
ASUD Al Ashush, Dub 60.08 288 P P 14 23 46.9 -1.8
SNR=6.5
DZM Mont Dzumac 61.09 130 P P 14 23 57.0 +1.4
DZM IAmb IAmb 14 24 00.1
comp=Z,29nm,1.1s
TOO Toolangi 61.53 158 P P 14 23 59.4 +1.1
TOO pmax pmax
comp=Z,129nm,1.5s
TOO Toolangi 61.53 158 P P 14 23 59.4 +1.1
KIRV Kirov 63.63 326 i P P 14 24 12.2 +0.2
comp=Z,42nm,0.8s,baz=100,slow=3.6,SNR=13
KIRV Kirov 63.63 326 i P P 14 24 11.6 -0.4
MAK Makhachkala 64.59 309 eP P 14 24 12.7 -5.9
MAK eS S 14 32 50.8 -6.3
MAK eSS SS 14 37 03.9 -3.7
TNA Tin City 64.75 26 P P 14 24 19.5 +0.3
baz=262
GROC Groznyy 65.83 309 eP P 14 24 24.0 -2.6
GROC e 14 24 54.5
GROC e 14 26 47.0
GROC pmax pmax
comp=Z,25nm,0.6s
GUDG Gudauri 66.86 309 P P 14 24 35.6 +2.0
GNI Garni 66.91 306 P P 14 24 34.3 +0.4
comp=Z,5.4nm,0.4s,baz=179,slow=3.0,SNR=10
GNI Garni 66.91 306 P P 14 24 35.0 +1.1
GNI Garni 66.91 306 eP P 14 24 35.2 +1.3
GNI Garni 66.91 306 P P 14 24 34.9 +1.0
GNI Garni 66.91 306 i P P 14 24 34.0 +0.1
GNI pmax pmax
comp=Z,52nm,1.6s
GNI Garni 66.91 306 P P 14 24 33.7 -0.1
RDOG Red Dog Mine 67.01 23 P P 14 24 34.9 +1.1
RDOG IAmb IAmb 14 24 50.7
comp=Z,39nm,1.1s
KZRT Kazreti 67.03 308 P P 14 24 35.7 +1.2
ZEI Tsey 67.25 309 eP P 14 24 35.7 -0.3
ZEI pmax pmax
comp=Z,104nm,1.4s
ONI Oni 67.60 309 P P 14 24 40.0 +1.9
MSVF Nonsavu 67.61 120 i P P 14 24 41.2 +2.7
MSVF pmax pmax
comp=Z,30nm,1.1s
MSVF Nonsavu 67.61 120 P P 14 24 39.9 +1.4
GOF Gofitskoye 67.64 312⇓ iP P 14 24 39.4 +1.2
GOF pmax pmax
comp=Z,76nm,0.9s
BGD Bogdanovka 67.64 307 P P 14 24 40.9 +2.3
CLDR Calderan 67.67 305 eP P 14 24 39.9 +1.1
KBZ Khabaz 67.88 310 P P 14 24 40.7 +1.0
comp=Z,27nm,0.8s,baz=72,slow=13
KBZ Khabaz 67.88 310 i P P 14 24 39.1 -0.6
KBZ pmax pmax
comp=Z,25nm,0.9s
VRH Novokhopyorsk 68.00 318 eP P 14 24 40.3 0.0
VRH e 14 24 49.4
VRH pmax pmax
comp=Z,100nm,0.8s
KIV Kislovodsk 68.00 310 i P P 14 24 41.2 +0.6
SNR=15
KIV Kislovodsk 68.00 310 eP P 14 24 41.6 +1.0
KIV Kislovodsk 68.00 310 P P 14 24 41.5 +0.8
KIV Kislovodsk 68.00 310 eP P 14 24 40.1 -0.5
KIV e 14 27 10.4
KIV eS S 14 33 40.0 +1.3
KIV pmax pmax
comp=Z,164nm,4.1s
KIV pmax pmax
comp=Z,180nm,0.9s
KIV MLR MLR
comp=Z,1μm,17.0s
KIV Kislovodsk 68.00 310 P P 14 24 41.3 +0.6

KARS Kars 68.11 307 eP P 14 24 43.2 +1.7
VANB Van 68.15 305 eP P 14 24 42.7 +1.0
AGRB Hanur-Agry 68.32 306 eP P 14 24 44.2 +1.4
GEVA Gevas 68.45 304 P P 14 24 44.3 +0.7
AKDM Akdamar-Van 68.50 304 eP P 14 24 45.1 +1.1
SENK Senkaya-Erzuru 68.67 307 eP P 14 24 46.5 +1.5
KLMR Klimovskoe 68.71 329 eP P 14 24 44.1 -0.5
KLMR e 14 27 15.5
KLMR pmax pmax
comp=Z,97nm,1.1s
KLMR Klimovskoe 68.71 329 eP P 14 24 44.1 -0.5
KLMR AMP 14 24 54.8
comp=Z,97nm,1.1s
KLMR ePP PP 14 27 15.5 -0.6
SIRT Sirnak 69.05 304 eP P 14 24 48.2 +0.9
RAYN Ar Rayn 69.10 288 i P P 14 24 47.6 -0.1
SNR=19
RAYN Ar Rayn 69.10 288 P P 14 24 47.4 -0.4
RAYN pmax pmax
comp=Z,32nm,1.0s
RAYN Ar Rayn 69.10 288 P P 14 24 47.4 -0.4
RAYN IAmb IAmb 14 24 58.0
comp=Z,32nm,0.9s
TMCR Tamitsa 69.28 332 eP P 14 24 48.3 +0.3
TMCR pmax pmax
comp=Z,49nm,1.1s
A21K Barrow 69.34 20 P P 14 24 49.6 +1.3
baz=270,SNR=11
A21K Barrow 69.34 20 P P 14 24 48.8 +0.4
VORD Divnogorie 69.54 318 eP P 14 24 49.8 -0.1
VORD e 14 24 58.8
VORD pmax pmax
comp=Z,30nm,0.8s
VSR Storozhevoye 69.59 318 eP P 14 24 49.7 -0.6
VSR e 14 24 59.3
VSR pmax pmax
comp=Z,50nm,0.8s
LPSR Galich'ya Gora 69.60 320 eP P 14 24 49.9 -0.3
LPSR e 14 24 59.4
LPSR pmax pmax
comp=Z,90nm,0.8s
TTA Tatalina 69.83 29 P P 14 24 52.5 +0.9
TTA pmax pmax
comp=Z,43nm,1.4s
TTA Tatalina 69.83 29 P P 14 24 52.5 +0.9
TTA IAmb IAmb 14 24 55.3
comp=Z,43nm,1.4s
SVAN Silvan-Diyarba 69.92 304 eP P 14 24 53.5 +0.9
MOS Moscow 70.05 323 eP P 14 24 51.0 -2.0
MOS e 14 25 01.2
MOS e 14 25 10.4
MOS e 14 27 32.5
MOS pmax pmax
comp=Z,75nm,1.2s
KOPT Kop Dagi 70.16 306 P P 14 24 53.3 -1.0
KOPT IAmb IAmb 14 25 16.7
comp=Z,35nm,1.0s
SVW2 Sparrevohn 70.16 31 P P 14 24 54.9 +1.3
BNGB Bingl 70.18 305 eP P 14 24 55.5 +1.2
SOC Sochi 70.19 310 eP P 14 24 53.3 -0.7
SOC e 14 25 02.3
SOC eS S 14 34 03.6 -0.7
SOC pmax pmax
comp=Z,33nm,0.8s
MARD Mardin 70.39 304 P P 14 24 55.0 -0.6
MAZI Mazidag 70.62 304 eP P 14 24 57.6 +0.6
OBN Obninsk 70.72 323 i P P 14 24 56.5 -0.5
OBN i 14 25 05.3
OBN i 14 25 19.9
OBN i 14 27 36.3
OBN pmax pmax
comp=Z,30nm,0.8s
OBN MLR MLR
comp=Z,438nm,14.0s
OBN Obninsk 70.72 323 P P 14 24 55.2 -1.9
DYBB Diyarbakir 70.78 304 eP P 14 24 59.0 +1.1
APA Apatity 70.97 336⇓ iP P 14 25 07.5 +9.2
APA pmax pmax
comp=Z,20nm,0.9s
CAST Castle Rocks 71.56 28 P P 14 25 02.8 +0.7
CAST IAmb IAmb 14 25 13.4
comp=Z,36nm,0.9s
PPLA Purkeypile 71.58 29 P P 14 25 03.0 +0.6
PPLA IAmb IAmb 14 25 18.2
comp=Z,30nm,1.0s
RSO Redoubt South 71.61 31 P P 14 25 02.7 +0.1
COLD Coldfoot 71.88 24 P P 14 25 04.7 +0.8
baz=277,SNR=11
COLD Coldfoot 71.88 24 P P 14 25 04.7 +0.8
COLD IAmb IAmb 14 25 22.7
comp=Z,42nm,1.4s
URFA Urfa 71.90 304 eP P 14 25 05.5 +0.8
TOLK Toolik Lake Re 71.93 23 P P 14 25 05.2 +1.0
baz=277,SNR=26
TOLK Toolik Lake Re 71.93 23 P P 14 25 05.0 +0.7
MLY Manley 71.94 27 P P 14 25 05.4 +1.0
baz=278,SNR=24
BPAW Bear Paw Mtn. 71.96 28 P P 14 25 05.2 +0.7
BPAW IAmb IAmb 14 25 15.9
comp=Z,38nm,1.0s
SKT Skwentna 72.00 30 P P 14 25 05.0 +0.2
SKT IAmb IAmb 14 25 15.0
comp=Z,29nm,1.2s
MALT Malatya 72.04 305 eP P 14 25 06.8 +1.3
MALT Malatya 72.04 305 P P 14 25 06.9 +1.4
KTH Kantishna Hill 72.06 28 P P 14 25 06.0 +0.9
KTH IAmb IAmb 14 25 07.8
comp=Z,30nm,1.1s
TRF Thorofare Moun 72.36 28 P P 14 25 08.2 +1.2
SUA Susitna One 72.44 30 P P 14 25 07.9 +0.4
SUA IAmb IAmb 14 25 18.2
comp=Z,38nm,0.9s
I23K Minto, Yukon-K 72.50 26 P P 14 25 08.3 +0.7
baz=279,SNR=10
I23K Minto, Yukon-K 72.50 26 P P 14 25 08.6 +0.9
CUT Chulitna 72.52 29 P P 14 25 08.0 +0.2
baz=279
BWN Browne 72.61 27 P P 14 25 09.8 +1.4
NEA2 Nenana 72.71 27 P P 14 25 09.5 +0.5
baz=279,SNR=12
SVSK Karacayir 72.82 307 eP P 14 25 10.9 +0.9
MCK McKinley 72.91 28 P P 14 25 10.1 -0.1
baz=280,SNR=14
RC01 Rabbit Creek A 72.98 31 P P 14 25 10.0 -0.5
baz=280
RND Reindeer 73.00 28 P P 14 25 10.5 -0.2
RND pmax pmax
comp=Z,49nm,0.8s
RND Reindeer 73.00 28 P P 14 25 10.5 -0.2
MDM Murphy Dome 73.01 26 P P 14 25 11.1 +0.4
MDM IAmb IAmb 14 25 21.9
comp=Z,39nm,0.9s
WRH Wood River Hil 73.15 27 P P 14 25 12.0 +0.5
WRH IAmb IAmb 14 25 22.5
comp=Z,22nm,0.8s
TCOL CIGO, UAF Yank 73.18 26 P P 14 25 11.6 0.0
baz=280,SNR=7.6
TCOL CIGO, UAF Yank 73.18 26 P P 14 25 12.0 +0.4
TCOL IAmb IAmb 14 25 24.2
comp=Z,23nm,0.8s
COLA College 73.18 26 i P P 14 25 11.5 -0.1
COLA pmax pmax
comp=Z,18nm,0.8s
COLA College 73.18 26 P P 14 25 12.1 +0.4
COLA IAmb IAmb 14 25 24.2
comp=Z,23nm,0.8s
PMR Palmer 73.18 30 P P 14 25 11.7 0.0
PMR pmax pmax
comp=Z,19nm,0.7s
PMR Palmer 73.18 30 P P 14 25 11.7 0.0
PMR IAmb IAmb 14 25 21.6
comp=Z,19nm,0.7s
GAZ Gaziantep 73.21 304 P P 14 25 12.5 0.0
GAZ IAmb IAmb 14 25 23.7
comp=Z,36nm,1.0s
CCB Clear Creek Bu 73.24 27 P P 14 25 12.1 0.0
GHO Glory Hole Cre 73.25 30 P P 14 25 12.7 +0.4
GHO IAmb IAmb 14 25 40.8
comp=Z,23nm,1.0s
KVT Kavak 73.30 308 eP P 14 25 13.6 +0.7
KVT Kavak 73.30 308 P P 14 25 14.6 +1.7
POKR Poker Plat Res 73.31 26 P P 14 25 12.8 +0.3
baz=280,SNR=12
POKR Poker Plat Res 73.31 26 P P 14 25 13.4 +0.9

POKR IAmb IAmb 14 25 15.9
comp=Z,25nm,0.9s
SML Sawmill 73.52 30 P P 14 25 14.3 +0.5
KNK Knik Glacier 73.53 30 P P 14 25 14.4 +0.5
ARD2 ARCESS Array S 73.54 339 P P 14 25 13.9 +0.1
ARD2 IAmb IAmb 14 25 34.7
comp=Z,36nm,1.4s
ARB2 ARCESS Array S 73.55 339 P P 14 25 14.1 +0.3
ARB2 IAmb IAmb 14 25 16.7
comp=Z,32nm,1.1s
ARCES ARCESS Array B 73.55 339 P P 14 25 14.7 +0.9
comp=Z,8.0nm,0.8s,baz=72,slow=5.2,SNR=10
ARD6 ARCESS Array S 73.56 339 P P 14 25 14.4 +0.5
ARD6 IAmb IAmb 14 25 24.3
comp=Z,33nm,0.9s
SARI SarD1z-Kayseri 73.57 305 eP P 14 25 15.6 +0.9
IL31 73.61 27 P P 14 25 13.5 -0.7
ILAR Eielson Array 73.61 27 P P 14 25 13.8 -0.4
comp=Z,8.0nm,0.8s,baz=272,slow=4.8,SNR=45
ILAR Eielson Array 73.61 27 P P 14 25 13.1 -1.1
HDA Harding Lake 73.65 27 P P 14 25 13.5 -1.0
baz=281,SNR=8.6
HDA Harding Lake 73.65 27 P P 14 25 14.0 -0.5
HDA IAmb IAmb 14 25 24.1
comp=Z,22nm,0.8s
IL18 Eielson Array 73.66 27 P P 14 25 13.8 -0.7
DHY Denali Highway 73.72 28 P P 14 25 15.3 +0.2
SPB1 Spitsbergen Ar 73.82 348 P P 14 25 15.1 -0.1
SPA1 Spitsbergen Ar 73.83 348 P P 14 25 15.2 -0.1
SPB2 Spitsbergen Ar 73.83 348 P P 14 25 15.3 0.0
SPA0 Spitsbergen Ar 73.83 348 P P 14 25 15.3 0.0
SPITS Spitsbergen Ar 73.83 348 P P 14 25 15.8 +0.5
comp=Z,29nm,0.8s,baz=79,slow=8.7,SNR=11
FYU Fort Yukon 73.92 25 P P 14 25 16.7 +0.7
SCM Sheep Creek Mo 73.98 30 P P 14 25 17.5 +0.9
SCM pmax pmax
comp=Z,51nm,0.8s
SCM Sheep Creek Mo 73.98 30 P P 14 25 17.4 +0.9
PRP Porcupine Dome 74.02 26 P P 14 25 17.1 +0.2
M24K Tolsona, Glenn 74.46 29 P P 14 25 20.1 +0.8
baz=282
M24K Tolsona, Glenn 74.46 29 P P 14 25 20.7 +1.4
CORM Corum 74.54 308 eP P 14 25 20.9 +0.6
RIDG Independent Ri 74.69 27 P P 14 25 20.8 +0.2
RIDG IAmb IAmb 14 25 30.9
comp=Z,34nm,0.9s
KLU Klutina 74.71 30 P P 14 25 21.6 +0.8
KLU IAmb IAmb 14 25 36.5
comp=Z,27nm,1.1s
KARA Karaisali 74.87 305 eP P 14 25 22.6 +0.5
SCRK Sand Creek 75.01 27 P P 14 25 22.0 -0.6
baz=284,SNR=14
ILGA Ilgaz 75.03 309 P P 14 25 23.8 +0.6
DOT Dot Lake 75.06 27 P P 14 25 23.0 +0.3
FIA1 FINESS Array S 75.08 330 P P 14 25 22.9 +0.2
FINES FINESS Array B 75.08 330 P P 14 25 22.9 +0.1
comp=Z,18nm,0.8s,baz=93,slow=7.6,SNR=39
FINES FINESS Array B 75.08 330 *i* P **P 14 25 22.8 0.0**
FINES pmax pmax
comp=Z,18nm,0.8s
CANT Cankiri 75.20 308 eP P 14 25 24.3 +0.3
N25K Chitina, Valde 75.30 29 P P 14 25 24.6 +0.4
baz=284
N25K Chitina, Valde 75.30 29 P P 14 25 25.1 +0.9
MERS Mersin 75.38 304 eP P 14 25 24.8 -0.3
MENT Mentasta 75.38 28 P P 14 25 25.4 +0.8
MENT IAmb IAmb 14 25 44.1
comp=Z,25nm,1.0s
BR131 Keskin Array S 75.39 307 P P 14 25 24.2 -1.0
BR131 pmax pmax
comp=Z,13nm,1.2s
BR131 Keskin Array S 75.39 307 P P 14 25 24.2 -1.0
BRTR Keskin Array B 75.39 307 P P 14 25 25.5 +0.3
comp=Z,1.6nm,0.5s,baz=105,slow=3.3,SNR=8.4
BRTR Keskin Array B 75.39 307 P P 14 25 24.5 -0.8
VSU Vasula 75.46 327 *i* P **P 14 25 24.8 -0.2**
L26K Log Cabin Wild 75.52 28 P P 14 25 25.7 +0.3
baz=284,SNR=8.9
GLB Gilahina Butte 75.71 30 P P 14 25 26.7 +0.1
GLB IAmb IAmb 14 25 37.5
comp=Z,33nm,1.0s
YESY Yesilyurt 75.76 305 eP P 14 25 27.8 +0.4
MICGM Minsk 75.77 323 ⇑ *e*P **P 14 25 27.0 +0.1**
MICGM PM 14 25 28.0
comp=Z,0.2nm,1.0s
*e*LR LR 14 58 08.0
MNK Minsk 75.77 323 *e*P **P 14 25 27.0 +0.1**
MNK pmax pmax
comp=Z,230nm,1.0s
AKASG Malin Array Be 75.87 319 P P 14 25 27.1 -0.4
comp=Z,15nm,0.8s,baz=62,slow=5.7,SNR=23
AKASG Malin Array Be 75.87 319 *i* P **P 14 25 27.1 -0.4**
AKASG pmax pmax
comp=Z,27nm,0.9s
AKASG Malin Array Be 75.87 319 P P 14 25 27.2 -0.3
AKBB Malin Array Si 75.87 319 *i* P **P 14 25 26.6 -1.0**
AKBB Malin Array Si 75.87 319 P P 14 25 27.0 -0.5
ANTO Ankara 75.99 308 P P 14 25 27.6 -1.0
ANTO Ankara 75.99 308 P P 14 25 27.6 -1.0
EGAK Eagle 75.99 26 P P 14 25 28.1 +0.1
EGAK IAmb IAmb 14 25 38.9
comp=Z,20nm,0.8s
MCARA McCarthy VSAT 76.09 30 P P 14 25 29.6 +1.0
MCARA IAmb IAmb 14 25 32.0
comp=Z,20nm,0.9s
CRQM Cirque 76.20 30 P P 14 25 30.4 +0.9
CRQM IAmb IAmb 14 25 39.8
comp=Z,40nm,1.0s
NACGM Naroch 76.29 324 eP P 14 25 30.0 +0.1
NACGM PM 14 25 32.0
comp=Z,0.5nm,1.0s
ISLE Juniper Island 76.62 30 P P 14 25 30.1 -1.7
ISLE IAmb IAmb 14 25 42.5
comp=Z,36nm,1.0s
TEKE Tekeli-Mersin 76.65 304 eP P 14 25 32.1 -0.2
LADK Ladik-KONYA 76.72 306 eP P 14 25 31.7 -1.1
CSS Mathiatis 76.78 303 eP P 14 25 33.0 -0.1
CSS Mathiatis 76.78 303 P P 14 25 31.0 -2.1
BARN Barnard Glacie 76.81 30 P P 14 25 33.9 +1.0
BARN IAmb IAmb 14 25 44.2
comp=Z,25nm,0.7s
KIZT Kizilcal 76.92 307 eP P 14 25 33.6 -0.3
DAWY Dawson 76.93 26 P P 14 25 34.0 +0.5
DAWY IAmb IAmb 14 25 44.4
comp=Z,24nm,0.8s
CTGM Chitina Glacie 76.99 30 P P 14 25 35.5 +1.6
SORM Soroca 77.06 317 ⇓ *i*P **P 14 25 33.8 -0.5**
GAZI Gazipasa 77.25 304 eP P 14 25 36.0 +0.3
TLCR 77.51 314 ⇑ *i*P **P 14 25 36.7 -0.2**
SRCK Saricakaya, Es 77.56 308 eP P 14 25 36.7 -0.6
INK Inuvik 77.73 21 P P 14 25 37.6 -0.1
INK pmax pmax
comp=Z,21nm,1.0s
INK Inuvik 77.73 21 P P 14 25 37.6 -0.1
INK IAmb IAmb 14 25 53.3
comp=Z,21nm,1.0s
PCA Pinnacle 77.76 30 P P 14 25 39.4 +1.2
TPGR Topolog 77.87 313 ⇓ *i*P **P 14 25 39.3 +0.3**
SHUT Suhut-Afyon 78.00 307 eP P 14 25 40.1 +0.1
LBZ Lake Benmore 78.17 146 P P 14 25 42.5 +2.0
RPZ Rata Peaks 78.19 145 P P 14 25 41.6 +1.1
comp=Z,20nm,0.8s,baz=351,slow=2.2,SNR=5.1
RPZ Rata Peaks 78.19 145 P P 14 25 42.3 +1.7
SUW Suwalki 78.56 323 eP P 14 25 42.5 0.0
SUW Suwalki 78.56 323 P P 14 25 42.6 0.0
SUW pmax pmax
comp=Z,250nm,1.1s
SUW Suwalki 78.56 323 P P 14 25 42.6 0.0
TVSB Tavsanli 78.58 308 eP P 14 25 42.9 -0.2
TESR Tescani 78.61 315 ⇓ *i*P **P 14 25 43.3 +0.3**
ARMT Armutlu 78.72 309 eP P 14 25 43.2 -0.6
VRI Vrincioaia 78.74 315 ⇓ *i*P **P 14 25 44.2 +0.4**
VRI Vrincioaia 78.74 315 eP P 14 25 44.5 +0.7
VRI Vrincioaia 78.74 315 P P 14 25 44.9 +1.1
PLOR Plostina 78.79 315 ⇑ *i*P **P 14 25 44.8 +0.6**
HYT Haines Junctio 78.81 29 P P 14 25 44.7 +0.7
HYT IAmb IAmb 14 25 55.6
comp=Z,28nm,0.9s
BISRR Bisoca 78.84 314 ⇑ *i*P **P 14 25 44.4 0.0**
BIZ Bicaz 78.84 316 ⇓ *i*P **P 14 25 45.0 +0.6**
ELL Elmali 78.98 305 P P 14 25 44.3 -1.1
ELL pmax pmax
comp=Z,127nm,0.9s
ELL Elmali 78.98 305 P P 14 25 44.3 -1.1
NEHR Nehoiu 79.15 314 ⇑ *i*P **P 14 25 46.6 +0.5**
BURAR Bucovina Array 79.23 317 ⇓ *i*P **P 14 25 46.8 +0.3**
BURAR Bucovina Array 79.23 317 P P 14 25 47.1 +0.6
BURAR Bucovina Array 79.23 317 P P 14 25 46.4 -0.1
BUR08 Bucovina Ar. S 79.23 317 P P 14 25 46.2 -0.4
OZUR 79.30 315 ⇓ *i*P **P 14 25 47.3 +0.4**
LVV L'vov 79.32 319 eP P 14 25 46.5 -0.4
MLR Muntele Rosu 79.37 314 P P 14 25 47.4 +0.1
comp=Z,11nm,0.7s,baz=324,slow=2.2,SNR=16
MLR Muntele Rosu 79.37 314 ⇑ *i*P **P 14 25 48.1 +0.7**
MLR Muntele Rosu 79.37 314 P P 14 25 47.3 -0.1
MANT Manisa 79.52 307 P P 14 25 48.4 -0.1
EUNU Eureka 79.53 5 P P 14 25 48.1 +0.6
EUNU IAmb IAmb 14 26 03.5
comp=Z,68nm,1.4s
DOPR Dopca 79.60 315 ⇑ *i*P **P 14 25 49.0 +0.5**
FETY Fethiye 79.65 305 eP P 14 25 47.9 -1.1
VOIR 79.99 315 ⇓ *i*P **P 14 25 51.3 +0.7**
MTUR Matau 80.04 314 ⇑ *i*P **P 14 25 51.3 +0.3**
WHY Whitehorse 80.08 29 P P 14 25 51.9 +1.0
WHY IAmb IAmb 14 26 02.3
comp=Z,23nm,0.8s
KWP Kalwaria Pacla 80.19 319 eP P 14 25 51.9 +0.3
ARR Arges 80.29 315 ⇓ *i*P **P 14 25 52.8 +0.5**
LPK Lapseki 80.31 309 eP P 14 25 52.4 0.0
HUMR Humele 80.31 314 ⇓ *i*P **P 14 25 52.5 +0.2**
SKAG Skagway 80.32 30 P P 14 25 53.6 +1.6
C36M Paulatuk 80.36 19 P P 14 25 51.7 -0.4
baz=300
C36M Paulatuk 80.36 19 P P 14 25 51.9 -0.1
C36M IAmb IAmb 14 26 02.1
comp=Z,64nm,1.4s
GELI Tayfur-Gelibol 80.51 309 eP P 14 25 52.3 -1.2
ALN Alexandroupoli 80.67 310 eP P 14 25 53.8 -0.5
ALN Alexandroupoli 80.67 310 P P 14 25 52.6 -1.7
ALN Alexandroupoli 80.67 310 P P 14 25 52.6 -1.7
DIM Dimitrovgrad 80.68 311 P P 14 25 55.6 +1.2
KOLS Kolonicke sedl 80.69 319 eP P 14 25 54.6 +0.3
KOLS pmax pmax
comp=Z,8.0nm,0.8s
KOLS Kolonicke sedl 80.69 319 eP P 14 25 54.6 +0.3
UZH Uzhgorod 80.78 318 eP P 14 25 51.7 -3.0
UZH *i* 14 26 04.2
DAG Danmarks Havn 80.80 351 *i* P **P 14 25 54.0 -0.3**
DAG *i* 14 26 02.7
DAG pmax pmax
comp=Z,12nm,0.9s
DAG Danmarks Havn 80.80 351 *i* P **P 14 25 54.0 -0.3**
comp=Z,12nm,0.9s
DAG *i* 14 26 02.7
DAG Danmarks Havn 80.80 351 *i* P **P 14 25 54.0 -0.3**
DAG IAmb IAmb 14 25 55.0
comp=Z,12nm,0.9s
DAG *i* 14 26 02.7
LOT Lotru 80.84 315 ⇑ *i*P **P 14 25 55.3 0.0**
CRVS Cervenica-Dubn 81.20 319 eP P 14 25 57.8 +0.7
CRVS pmax pmax
comp=Z,84nm,1.2s
CRVS Cervenica-Dubn 81.20 319 eP P 14 25 57.8 +0.7
HFS Hagfors 81.25 331 P P 14 25 56.9 -0.1
comp=Z,9.6nm,0.7s,baz=98,slow=4.5,SNR=14
RZN Rozhen 81.38 311 *i* P **P 14 25 58.6 +0.3**
ABPO Ambohimpanom 81.41 246 P P 14 25 58.4 -0.4
ABPO pmax pmax
comp=Z,43nm,1.0s
ABPO Ambohimpanom 81.41 246 P P 14 25 58.4 -0.4
ABPO IAmb IAmb 14 26 08.9
comp=Z,43nm,0.9s
KARP Karpathos 81.46 305 P P 14 25 58.6 -0.1
GZR Gura Zlata 81.52 315 ⇑ *i*P **P 14 25 59.0 +0.2**
MPEP Malo Peshtene 81.53 313 *i* P **P 14 25 59.1 +0.2**
NC405 NORSAR Array S 81.72 332 P P 14 25 59.4 -0.2
NIE Niedzica 81.75 319 eP P 14 26 00.6 +0.6
OJC Ojcow 81.77 320 eP P 14 25 59.6 -0.4
OJC Ojcow 81.77 320 P P 14 26 00.0 0.0
OJC Ojcow 81.77 320 P P 14 25 60.0 0.0
NC303 NORSAR Array S 81.82 332 P P 14 25 60.0 -0.1
HERR Herculane 81.93 315 ⇓ *i*P **P 14 26 01.3 +0.4**
NB201 NORSAR Array S 81.93 332 P P 14 26 00.4 -0.3
KECS Kecovo 81.96 319 eP P 14 26 01.2 +0.2
KECS pmax pmax
comp=Z,9.0nm,0.9s
KECS Kecovo 81.96 319 eP P 14 26 01.2 +0.2
SIRR Siria 81.97 316 ⇑ *i*P **P 14 26 01.5 +0.4**
NB2 NORSAR Subarra 81.97 332 P P 14 26 00.4 -0.5
comp=Z,26nm,0.9s,baz=65,slow=5.3
NB2 NORSAR Subarra 81.97 332 P P 14 26 00.4 -0.5
baz=65,slow=5.3
NOA NORSAR Array B 81.97 332 P P 14 26 00.7 -0.2
comp=Z,8.6nm,0.8s,baz=64,slow=5.4,SNR=26
NC204 NORSAR Array S 82.06 333 P P 14 26 01.1 -0.4
VTS Vitosha 82.12 312 *i* P **P 14 26 02.9 +0.7**
NAO01 NORSAR Array S 82.20 332 P P 14 26 01.6 -0.5
NAO01 IAmb IAmb 14 26 11.4
comp=Z,42nm,1.0s
BZS Buzias 82.22 316 ⇑ *i*P **P 14 26 02.4 0.0**
BZS Buzias 82.22 316 P P 14 26 04.2 +1.8
MDVR Moldovita 82.44 315 ⇑ *i*P **P 14 26 03.8 +0.1**
KKB Krupnik 82.47 312 *i* P **P 14 26 03.4 -0.5**
PSZ Piszkesteto 82.52 318 P P 14 26 03.1 -1.0
PSZ Piszkesteto 82.52 318 P P 14 26 03.1 -1.0
VYHS Vyhne 82.98 319 eP P 14 26 06.8 +0.4
VYHS pmax pmax
comp=Z,43nm,1.7s
VYHS Vyhne 82.98 319 eP P 14 26 06.8 +0.4
DBG Daneborg 83.00 350 *i* P **P 14 26 06.4 +0.5**
DBG IAmb IAmb 14 26 09.1
comp=Z,7.8nm,0.7s
DBG *i* 14 26 14.4
DLBC Dease Lake 83.25 30 P P 14 26 09.1 +1.5
MORC Moravsky Berou 83.29 320 ⇑ *i*P **P 14 26 07.9 -0.1**
MORC Moravsky Berou 83.29 320 eP P 14 26 08.2 +0.2
MORC Moravsky Berou 83.29 320 P P 14 26 07.6 -0.4
MORC Moravsky Berou 83.29 320 P P 14 26 07.6 -0.4
RES Resolute Bay 83.30 9 P P 14 26 07.7 +0.2
RES pmax pmax
comp=Z,26nm,0.8s
RES Resolute Bay 83.30 9 P P 14 26 07.7 +0.2
RES IAmb IAmb 14 26 18.1
comp=Z,26nm,0.8s
IDI Anoyia 83.30 305 P P 14 26 08.3 -0.1
comp=Z,3.7nm,0.6s,baz=32,slow=9.3,SNR=3.8
JAVC Velka Javorina 83.56 320 eP P 14 26 11.0 +1.6
KSP Ksiaz 83.61 322 eP P 14 26 09.8 +0.2
KIBK Kibwezi 83.64 265 P P 14 26 11.8 +1.3
SNR=5.1
OSTC Ostas 83.77 322 eP P 14 26 09.1 -1.3
OSTC *ex* x 14 26 21.3
DPC Dobruska-Polom 83.79 321 eP P 14 26 10.7 +0.1
DPC *e* 14 26 20.3
DPC Dobruska-Polom 83.79 321 eP P 14 26 10.7 +0.1
DPC *ex* x 14 26 20.3
DPC *ex* x 14 26 28.3
DIVS Divibare 83.83 315 P P 14 26 10.6 -0.4
SMOL Smolenice 83.84 319 eP P 14 26 11.4 +0.6
SMOL Smolenice 83.84 319 eP P 14 26 11.4 +0.6
CHVC Chvalec 83.85 322 eP P 14 26 10.9 0.0
UPC Upice 83.91 322 eP P 14 26 11.8 +0.7
UPC *e* 14 26 20.8
UPC Upice 83.91 322 eP P 14 26 11.8 +0.7
UPC *ex* x 14 26 20.8
UPC *ex* x 14 26 29.8
TULEG Thule 83.93 2 *i* P **P 14 26 11.1 +0.4**
TULEG *i* 14 26 20.5
KMBO Kilima Mbogo 83.98 267 P P 14 26 12.8 +0.4
comp=Z,1.4nm,0.4s,baz=58,slow=6.2,SNR=13
KMBO Kilima Mbogo 83.98 267 P P 14 26 13.6 +1.2
KMBO Kilima Mbogo 83.98 267 *i* P **P 14 26 14.8 +2.4**
KMBO pmax pmax
comp=Z,1.0nm,0.4s
KMBO Kilima Mbogo 83.98 267 P P 14 26 11.4 -1.0
KMBO IAmb IAmb 14 26 23.8
comp=Z,37nm,1.5s
AGG Agios Georgios 83.98 309 P P 14 26 09.7 -2.0
AGG Agios Georgios 83.98 309 P P 14 26 09.7 -2.0
MODS Modra-Piesok 83.98 319 eP P 14 26 11.2 -0.4
MODS pmax pmax
comp=Z,19nm,1.3s
MODS Modra-Piesok 83.98 319 eP P 14 26 11.2 -0.4
VRAC Vranov 84.04 320 P P 14 26 12.5 +0.7
comp=Z,12nm,0.9s,baz=67,slow=4.8,SNR=17
VRAC Vranov 84.04 320 ⇑ *i*P **P 14 26 12.2 +0.4**
VRAC Vranov 84.04 320 eP P 14 26 12.3 +0.5
FNA Florina 84.05 311 P P 14 26 10.6 -1.5
FNA pmax pmax
comp=Z,17nm,0.8s
FNA Florina 84.05 311 P P 14 26 10.5 -1.6
LODK Lodwar 84.25 272 P P 14 26 15.3 +1.6
SNR=7.4
KRUC Moravsky 84.25 320 eP P 14 26 12.8 -0.1
TREC Trest 84.71 321 eP P 14 26 13.5 -1.7
TREC *e* 14 26 24.6
TREC Trest 84.71 321 eP P 14 26 13.5 -1.7
TREC *ex* x 14 26 24.6
PVCC Panska Ves 84.75 322 eP P 14 26 25.0 +10
PVCC *e* 14 26 35.4
ITM Ithomi 84.92 308 P P 14 26 15.4 -1.1
TIR Tirane 84.92 312 P P 14 26 20.6 +4.2
BRG Berggiesshubel 84.96 322 eP P 14 26 16.7 +0.3
comp=Z,21nm,1.2s
BRG *i* 14 26 26.1
comp=Z,37nm,1.1s
BRG Berggiesshubel 84.96 322 eP P 14 26 16.7 +0.3
BRG *i* 14 26 26.0
BRG pmax pmax
comp=Z,21nm,1.2s
BRG pmax pmax
comp=Z,37nm,1.1s
BRG Berggiesshubel 84.96 322 eP P 14 26 16.8 +0.3
comp=Z,37nm,1.1s,baz=64,slow=5.0
PRU Pruhonice 84.98 321 eP P 14 26 16.2 -0.3
PRU *e* 14 26 24.3
PRU Pruhonice 84.98 321 eP P 14 26 16.2 -0.3
PRU *ex* x 14 26 24.3
PRU *ex* x 14 26 35.7
MUD Monsted U'grnd 85.01 329 *i* P P 14 26 25.6 +9.1
MUD pmax pmax
comp=Z,48nm,1.3s
MUD Monsted U'grnd 85.01 329 *i* P P 14 26 25.6 +9.1
comp=Z,48nm,1.3s
MUD Monsted U'grnd 85.01 329 *i* P P 14 26 25.6 +9.1
MUD IAmb IAmb 14 26 27.0
comp=Z,48nm,1.3s
CONA Conrad Observa 85.03 319 eP P 14 26 17.9 +0.9
comp=Z,28nm,1.6s
FBE Freiberg 85.28 323 eP P 14 26 18.4 +0.4
comp=Z,49nm,1.2s,baz=64,slow=5.0
CLL Collm 85.31 323 ⇓ *i*P **P 14 26 17.9 -0.3**
comp=Z,19nm,1.1s
CLL *i* 14 26 25.6
comp=Z,43nm,1.4s
CLL *i* 14 26 35.7
CLL *e*PP **PP 14 29 36.0 +0.3**
CLL Collm 85.31 323 ⇓ *i*P **P 14 26 17.9 -0.3**
CLL *i* 14 26 25.6
CLL pmax pmax
comp=Z,19nm,1.1s
CLL Collm 85.31 323 eP P 14 26 18.0 -0.3
comp=Z,18nm,1.1s,baz=64,slow=5.0
CLL Collm 85.31 323 P P 14 26 17.8 -0.3
CLL IAmb IAmb 14 26 38.8
comp=Z,38nm,1.2s
PBCC Pribram 85.43 321 eP P 14 26 18.8 0.0
PBCC *ex* x 14 26 27.6
PBCC *ex* x 14 26 38.2
ARSA Arzberg 85.52 319 eP P 14 26 19.8 +0.5
comp=Z,12nm,1.1s
BSEG Bad Segeberg 85.61 326 eP P 14 26 20.1 +0.6
comp=Z,84nm,2.0s,baz=64,slow=5.0
KHC Kasperske Hory 85.92 321 eP P 14 26 21.4 +0.1
KHC *e* 14 26 30.6
KHC *e* 14 29 40.5
KHC Kasperske Hory 85.92 321 eP P 14 26 21.4 +0.1
KHC *ex* x 14 26 30.6
KHC *ex* x 14 26 40.5
KHC *e*PP **PP 14 29 40.5 -0.2**
KHC Kasperske Hory 85.92 321 P P 14 26 21.0 -0.3
GEC2 GERESS Array S 85.96 321 eP P 14 26 21.7 +0.1
comp=Z,16nm,1.0s,baz=64,slow=5.0
GEC2 GERESS Array S 85.96 321 P P 14 26 21.8 +0.2
GEC2B GERESS ARRAY S85.96 321 P P 14 26 21.4 -0.2
GERES GERESS Array B 85.96 321 P P 14 26 21.6 +0.1
comp=Z,5.1nm,0.8s,baz=57,slow=4.9,SNR=25
MOA Molln 86.04 320 eP P 14 26 22.8 +0.9
comp=Z,28nm,1.2s
SOKA Soboth 86.06 318 eP P 14 26 22.4 +0.4
comp=Z,14nm,0.9s
GUNZ Gunzen 86.11 322 eP P 14 26 22.3 +0.1
comp=Z,25nm,1.7s,baz=64,slow=5.0
WERN Wernitzgruen 86.12 322 eP P 14 26 22.0 -0.2
comp=Z,32nm,1.7s,baz=64,slow=5.0
PLN Plauen 86.16 323 eP P 14 26 22.5 +0.1
comp=Z,56nm,2.2s,baz=64,slow=5.0
NRDL Niedersach Rie 86.39 325 eP P 14 26 23.9 +0.5
baz=64,slow=5.0
ROTZ Rotzenmuhle 86.44 322 eP P 14 26 24.1 +0.3
comp=Z,69nm,2.1s,baz=64,slow=5.0
KBA Koelnbreinsper 86.94 319 eP P 14 26 26.3 -0.2
comp=Z,6.5nm,1.1s
SUMG Summit 86.99 354 *i* P **P 14 26 26.8 +0.3**
SUMG pmax pmax
comp=Z,77nm,1.3s
SUMG Summit 86.99 354 P P 14 26 26.7 +0.3
SUMG Summit 86.99 354 *i* P **P 14 26 26.8 +0.3**
comp=Z,77nm,1.3s
SUMG Summit 86.99 354 *i* P **P 14 26 26.9 +0.3**
SUMG IAmb IAmb 14 26 29.1
comp=Z,77nm,1.3s
GRF Grafenberg Arr 87.05 322 eP P 14 26 27.0 +0.2
comp=Z,65nm,2.5s,baz=64,slow=5.0
YKA Yellowknife Ar 87.46 22 P P 14 26 29.1 +0.6
comp=Z,6.2nm,0.8s,baz=318,slow=4.1,SNR=9.3
ABTA Abfaltersbach 87.59 319 eP P 14 26 28.7 -0.8
comp=Z,15nm,1.3s
WTTA Wattenberg 87.90 320 eP P 14 26 31.1 -0.1
comp=Z,28nm,1.5s
SQTA Sankt Quirin 88.18 320 eP P 14 26 32.3 -0.1
comp=Z,11nm,0.7s
MOTA Moosalm 88.19 320 eP P 14 26 32.3 -0.2
comp=Z,17nm,1.4s
FETA Feichten 88.56 320 *i* P **P 14 26 34.3 +0.1**
comp=Z,18nm,1.6s
DAVOX Davos/Dischmat 89.19 320 P P 14 26 37.1 -0.2
comp=Z,3.4nm,0.7s,baz=37,slow=8.4,SNR=5.0
B06A Marblemount 92.64 36 P P 14 26 53.3 +0.3
B06A IAmb IAmb 14 27 04.3
comp=Z,13nm,1.1s
B08A Colville Reser 93.91 35 P P 14 26 59.3 +0.3
K02D Willamette Mer 94.49 42 P P 14 27 01.6 -0.2
baz=302
I04A Tendick Farm, 94.68 40 P P 14 27 02.6 +0.1
baz=303
HUMO Hull Mountain 94.98 42 P P 14 27 04.7 +0.8
NEW Newport 95.16 34 P P 14 27 04.7 0.0
baz=307
J04D Umpqua Nationa 95.17 41 P P 14 27 05.9 +0.9
baz=303
PINE Pine Mountain 95.58 40 P P 14 27 07.8 +1.0
PINE IAmb IAmb 14 27 18.6
comp=Z,18nm,1.1s
L04D Klamath Falls 95.60 42 P P 14 27 07.4 +0.5
baz=303
YBH Yreka Blue Hor 95.60 42 P P 14 27 07.2 +0.3
YBH pmax pmax
comp=Z,9.0nm,1.1s
YBH Yreka Blue Hor 95.60 42 P P 14 27 07.2 +0.3
J05D Fort Rock, OR 95.68 40 P P 14 27 07.8 +0.6
baz=304
M02C Callahan 95.69 43 P P 14 27 07.3 0.0
baz=302
K04D Chiloquin, OR 95.72 41 P P 14 27 06.8 -0.7
baz=303
M04C Macdoel 96.12 42 P P 14 27 09.6 +0.2
baz=303
K05A Summer Lake 96.19 41 P P 14 27 09.4 -0.3
K05A IAmb IAmb 14 27 21.1
comp=Z,19nm,1.2s
O02D Mt. Diablo Mer 96.38 44 P P 14 27 11.0 +0.5
baz=302
MOD Modoc Plateau 97.02 41 P Pdif 14 27 13.6 +0.1
MOD IAmb IAmb 14 27 24.5
comp=Z,12nm,1.1s
ORV Oroville 97.55 44 P Pdif 14 27 15.7 -0.1
ORV pmax pmax
comp=Z,7.0nm,1.0s
ORV Oroville 97.55 44 P Pdif 14 27 15.7 -0.1

ORV					IAmb	IAmb	14 27 25.8		
	comp=Z,7.0nm,0.9s								
WVOR	**Wild Horse Val**	**97.73**	**40**		P	Pdif	14 27 16.5	-0.1	
WVOR					pmax	pmax			
	comp=Z,11nm,1.4s								
WVOR	**Wild Horse Val**	**97.73**	**40**		P	Pdif	14 27 16.5	-0.1	
WVOR					IAmb	IAmb	14 27 27.9		
	comp=Z,11nm,1.4s								
BEKR	**Beckworth**	**98.11**	**43**		P	**P**	**14 27 17.8**	**-0.7**	
BEKR					IAmb	IAmb	14 27 28.9		
	comp=Z,9.1nm,1.1s								
PAHR	**Pah Rah Range**	**98.83**	**42**		P	**P**	**14 27 21.2**	**-0.4**	
PAHR					IAmb	IAmb	14 27 32.3		
	comp=Z,8.7nm,1.1s								
WAKR	**Walker**	**99.47**	**43**		P	**Pdif**	**14 27 24.1**	**-0.4**	
WAKR					IAmb	IAmb	14 27 35.7		
	comp=Z,8.2nm,1.2s								
VNDA	**Vanda**	**99.86**	**172**		P	**Pdif**	**14 27 24.9**	**-0.1**	
	comp=Z,1.4nm,1.1s,baz=306,slow=5.9,SNR=5.9								
NVAR	**Mina Array Bea**	**100.24**	**43**		P	**Pdif**	**14 27 28.8**	**+0.8**	
	comp=Z,1.1nm,0.8s,baz=287,slow=5.2,SNR=7.7								
NVAR	**Mina Array Bea**	**100.24**	**43**		Pdif	**Pdif**	**14 27 25.9**	**-2.1**	
TORD	**Torodi Ar. Bea**	**111.52**	**293**		PKiKP	**PKiKP**	**14 32 15.6**	**-0.8**	
	comp=Z,1.3nm,0.7s,baz=35,slow=1.4,SNR=5.2								
TORD	**Torodi Ar. Bea**	**111.52**	**293**			**PKiKP**	**14 32 15.1**	**-1.4**	
F64A	**Sherman**	**114.39**	**7**		P	**PKiKP**	**14 32 20.7**	**-0.4**	
	baz=351								
G65A	**Princeton**	**115.12**	**6**		P	**PKPdf**	**14 32 22.5**	**0.0**	
	baz=352								
TXAR	**Lajitas Array**	**115.38**	**42**		PKP	**PKPdf**	**14 32 24.1**	**+0.5**	
	comp=Z,1.4nm,0.9s,baz=242,slow=1.7,SNR=7.0								
TXAR	**Lajitas Array**	**115.38**	**42**			**PKiKP**	**14 32 22.5**	**-1.1**	
CCM	**Cathedral Cave**	**115.39**	**27**		P	**PKiKP**	**14 32 22.6**	**-0.6**	
	baz=327								
H66A	**Whiting**	**115.56**	**6**		P	**PKiKP**	**14 32 23.0**	**-0.4**	
	baz=352								
K56A	**Middlesex**	**115.90**	**14**		P	**PKiKP**	**14 32 23.0**	**-1.2**	
	baz=341								
U40A	**Yellville**	**116.07**	**30**		P	**PKiKP**	**14 32 24.1**	**-0.6**	
	baz=325								
U40A	**Yellville**	**116.07**	**30**			**PKiKP**	**14 32 24.0**	**-0.6**	
M54A	**Oil Creek Stat**	**116.43**	**17**		P	**PKiKP**	**14 32 24.3**	**-0.9**	
	baz=339								
L57A	**Andrews Acres**	**116.68**	**14**		P	**PKPdf**	**14 32 24.7**	**-1.0**	
	baz=342								
O51A	**Pataskala**	**116.81**	**20**		P	**PKPdf**	**14 32 25.1**	**-0.9**	
	baz=336								
N54A	**Moraine State**	**116.84**	**17**		P	**PKPdf**	**14 32 25.0**	**-1.0**	
	baz=338								
L59A	**Walton**	**116.90**	**13**		P	**PKPdf**	**14 32 25.1**	**-1.0**	
	baz=344								
O53A	**New Philadelph**	**117.15**	**19**		P	**PKPdf**	**14 32 25.6**	**-1.0**	
	baz=337								
MIAR	**Mount Ida**	**117.19**	**31**		P	**PKPdf**	**14 32 25.8**	**-1.0**	
	baz=324								
HRV	**Adam Dziewonsk**	**117.24**	**10**		P	**PKPdf**	**14 32 26.2**	**-0.5**	
	baz=347								
P52A	**Corning**	**117.43**	**20**		P	**PKPdf**	**14 32 26.2**	**-1.0**	
	baz=336								
M59A	**Waymart**	**117.43**	**13**		P	**PKPdf**	**14 32 26.0**	**-1.1**	
	baz=343								
L65A	**Cape Cod Natio**	**117.94**	**9**		P	**PKPdf**	**14 32 27.0**	**-1.1**	
	baz=349								
WVT	**Waverly**	**118.47**	**26**		PKIKP	**PKPdf**	**14 32 28.9**	**-0.3**	
WVT	**Waverly**	**118.47**	**26**		P	**PKPdf**	**14 32 28.9**	**-0.3**	
	baz=330								
WVT	**Waverly**	**118.47**	**26**			**PKPdf**	**14 32 28.9**	**-0.3**	
N63A	**Mattituck**	**118.55**	**11**		P	**PKiKP**	**14 32 29.1**	**-0.2**	
	baz=346								
P60A	**Greenville**	**119.04**	**14**		P	**PKPdf**	**14 32 29.7**	**-0.6**	
	baz=343								
Q57A	**Strasburg**	**119.08**	**17**		P	**PKiKP**	**14 32 30.1**	**-0.3**	
	baz=340								
R55A	**Marlinton**	**119.29**	**18**		P	**PKPdf**	**14 32 30.2**	**-0.7**	
	baz=338								
Q58A	**Fox Den Farm,**	**119.36**	**16**		P	**PKPdf**	**14 32 30.5**	**-0.4**	
	baz=340								
R56A	**Bull Pasture M**	**119.38**	**18**		P	**PKPdf**	**14 32 30.6**	**-0.5**	
	baz=338								
R57A	**Stanardsville**	**119.74**	**17**		P	**PKPdf**	**14 32 31.2**	**-0.4**	
	baz=339								
TZTN	**Tazewell**	**119.75**	**22**		P	**PKPdf**	**14 32 31.2**	**-0.5**	
	baz=334								
T54A	**Tazewell**	**119.95**	**20**		P	**PKPdf**	**14 32 31.8**	**-0.4**	
	baz=336								
T55A	**Pulaski**	**120.16**	**20**		P	**PKPdf**	**14 32 31.8**	**-0.7**	
	baz=337								
T57A	**Hurt**	**120.73**	**18**		P	**PKiKP**	**14 32 33.4**	**-0.3**	
	baz=338								
V54A	**Nebo**	**121.00**	**21**		P	**PKPdf**	**14 32 33.8**	**-0.4**	
	baz=335								
V55A	**Taylorsville**	**121.17**	**21**		P	**PKPdf**	**14 32 34.1**	**-0.3**	
	baz=336								
U57A	**Blanch**	**121.23**	**19**		P	**PKPdf**	**14 32 34.2**	**-0.3**	
	baz=338								
T59A	**Double "B" Far**	**121.24**	**17**		P	**PKiKP**	**14 32 34.3**	**-0.3**	
	baz=340								
T60A	**Surry**	**121.30**	**16**		P	**PKPdf**	**14 32 34.1**	**-0.5**	
	baz=341								
V57A	**Coltrane Farms**	**121.60**	**19**		P	**PKPdf**	**14 32 34.7**	**-0.6**	
	baz=338								
X54A	**Belton**	**121.96**	**22**		P	**PKPdf**	**14 32 35.6**	**-0.4**	
	baz=335								
V59A	**Middlesex**	**122.18**	**18**		P	**PKPdf**	**14 32 35.9**	**-0.4**	
	baz=339								
W57A	**Gilead**	**122.21**	**20**		P	**PKPdf**	**14 32 36.0**	**-0.5**	
	baz=337								
X55A	**Gracelyn & Ava**	**122.29**	**22**		P	**PKPdf**	**14 32 36.1**	**-0.5**	
	baz=335								
CMIG	**Matias Romero**	**129.66**	**46**		PKP	**PKiKP**	**14 32 51.9**	**0.0**	
	comp=Z,2.7nm,0.9s,baz=336,slow=2.7,SNR=4.8								
BCIP	**Isla Barro Col**	**145.13**	**37**	*eP*		**PKPbc**	**14 33 17.6**	**-1.5**	
BCIP	**Isla Barro Col**	**145.13**	**37**		PKIKP	**PKPdf**	**14 33 19.2**	**-0.4**	
BCIP	**Isla Barro Col**	**145.13**	**37**			**PKPdf**	**14 33 19.2**	**-0.4**	
FDF	**Fort de France**	**145.87**	**3**		PKP2	**PKPdf**	**14 33 20.8**	**-0.1**	
FDF	**Fort de France**	**145.87**	**3**			**PKPdf**	**14 33 20.8**	**-0.1**	
SJCC	**San Jacinto, C**	**146.91**	**29**	*eP*		**PKPbc**	**14 33 24.1**	**-0.5**	
CAPC	**Capurgana**	**146.93**	**34**	*eP*		PKPdf	14 33 10.2	-12	
LCBC	**Los crdobas,**	**147.24**	**32**	*eP*		**PKPdf**	**14 33 20.9**	**-2.4**	
ARGC	**Ariguani, Magd**	**147.36**	**28**	*eP*		**PKiKP**	**14 33 35.4**	**+7.3**	
MOTC	**Monteria, Cord**	**147.65**	**31**	*eP*		**PKPdf**	**14 33 23.6**	**-0.3**	
DBBC	**Dabeiba**	**148.89**	**33**	*eP*		**PKPdf**	**14 33 27.2**	**+1.1**	
OCAC	**Ocana**	**149.21**	**27**	*eP*		**PKPbc**	**14 33 29.3**	**-1.5**	
SDV	**Santo Domingo**	**149.68**	**22**	*eP*		**PKPdf**	**14 33 28.1**	**+0.7**	
SDV	**Santo Domingo**	**149.68**	**22**			**PKPdf**	**14 33 27.7**	**+0.2**	
SDV	**Santo Domingo**	**149.68**	**22**	*eP*		**PKPdf**	**14 33 27.5**	**+0.1**	
HELC	**Santa Helena**	**149.94**	**33**	*eP*		**PKPdf**	**14 33 27.5**	**-0.6**	
PIZC	**Pizarro, Choco**	**149.96**	**38**	*eP*		**PKiKP**	**14 33 35.0**	**+1.6**	
BRRC	**Barranca, Sant**	**150.03**	**29**	*eP*		**PKPbc**	**14 33 31.8**	**-0.9**	
PTBC	**PUERTO BERRIO**	**150.18**	**31**	*eP*		**PKPdf**	**14 33 27.6**	**-0.4**	
PAMC	**Pamplona, Colo**	**150.28**	**27**	*eP*		**PKPdf**	**14 33 30.6**	**+1.8**	
PLMC	**San Jos del P**	**150.62**	**36**	*eP*		**PKPdf**	**14 33 28.7**	**-0.1**	
BARC	**Barichara**	**150.73**	**29**	*eP*		**PKPbc**	**14 33 34.6**	**-0.1**	
NORC	**Norcasia**	**150.81**	**33**	*eP*		**PKPbc**	**14 33 32.8**	**-1.8**	
SPBC	**San Pablo de B**	**151.14**	**31**	*eP*		**PKPbc**	**14 33 35.0**	**-0.4**	
YOTC	**Yotoco, Valle**	**151.34**	**37**	*eP*		**PKPdf**	**14 33 30.0**	**+0.1**	
RUSC	**La Rusia**	**151.39**	**29**	*eP*		**PKPbc**	**14 33 36.3**	**-0.3**	
TOLC	**Tolima**	**151.41**	**35**	*eP*		**PKPbc**	**14 33 36.1**	**-0.3**	
ANIL	**Santa Ana**	**151.44**	**35**	*eP*		**PKiKP**	**14 33 38.4**	**+1.5**	
ROSC	**El Rosal**	**151.71**	**32**	PKP		**PKPdf**	**14 33 32.8**	**+1.9**	
	comp=Z,15nm,0.4s,baz=31,slow=23,SNR=3.6								
ROSC	**El Rosal**	**151.71**	**32**	PKPdf		**PKPdf**	**14 33 30.0**	**-0.9**	
ORTC	**Ortega, Tolima**	**152.01**	**35**	*eP*		**PKPbc**	**14 33 34.4**	**-3.0**	
CHIC	**Chingaza**	**152.19**	**32**	*eP*		**PKPdf**	**14 33 31.8**	**+0.2**	
POPC	**Popayan, Colom**	**152.31**	**39**	*eP*		**PKPdf**	**14 33 34.4**	**+2.8**	
PRAC	**Prado**	**152.37**	**35**	*eP*		**PKPbc**	**14 33 36.6**	**-1.6**	
MARP	**Paez Belalcaza**	**152.49**	**38**	*eP*		**PKPbc**	**14 33 37.9**	**-0.9**	
PCON	**Cinco Dias**	**152.65**	**39**	*eP*		**PKPbc**	**14 33 37.6**	**-1.9**	
BETC	**Betania**	**152.92**	**37**	*eP*		**PKiKP**	**14 33 39.6**	**0.0**	
GCUF	**Volcan Galeras**	**152.93**	**42**	*eP*		**PKPdf**	**14 33 34.9**	**+2.1**	
GARC	**Garzon, Huila**	**153.29**	**38**	*eP*		**PKPdf**	**14 33 34.6**	**+1.5**	
FLOC	**Florencia**	**153.69**	**39**	*eP*		**PKPdf**	**14 33 29.5**	**-3.8**	
PLCA	**Paso Flores**	**156.90**	**158**	PKP		**PKPdf**	**14 33 37.9**	**+1.0**	
	comp=Z,3.0nm,1.0s,baz=139,slow=4.5,SNR=3.5								
LC01	**Cunco**	**157.98**	**154**			**PKPdf**	**14 33 39.3**	**+1.0**	
BI02	**San Fabin de**	**160.11**	**151**			**PKPdf**	**14 33 41.3**	**+0.4**	
BO02	**Sierra Bellavi**	**161.86**	**149**			**PKPdf**	**14 33 42.8**	**-0.1**	
CO02	**Combarbal**	**164.48**	**140**			**PKPdf**	**14 33 46.3**	**+0.8**	
CO01	**Juntas del Tor**	**165.90**	**139**			**PKPdf**	**14 33 47.5**	**+0.6**	
BSCB	**Bom Sucesso**	**166.07**	**262**	*eP*		**PKPdf**	**14 33 45.4**	**-1.7**	
SPB	**Sao Paulo**	**168.05**	**248**	*eP*		**PKPdf**	**14 33 48.0**	**-0.3**	
BDFB	**Brasilia**	**168.34**	**288**	PKP		**PKPdf**	**14 33 49.3**	**+0.4**	
	comp=Z,10nm,1.1s,baz=122,slow=5.6,SNR=4.4								
TIJ01	**Guaruva-PR**	**168.71**	**238**	*eP*		**PKPdf**	**14 33 48.2**	**-0.7**	
SAML	**Samuel**	**168.86**	**19**	PKIKP		**PKPdf**	**14 33 47.7**	**-1.4**	
SAML	**Samuel**	**168.86**	**19**			**PKPdf**	**14 33 47.7**	**-1.4**	
PB16	**IPOC Station P**	**170.48**	**84**			**PKPdf**	**14 33 50.3**	**-0.4**	
MNMC	**Minye Minye**	**170.49**	**89**			**PKPdf**	**14 33 50.5**	**+0.2**	
LPAZ	**La Paz**	**171.19**	**70**	PKP		**PKPdf**	**14 33 51.9**	**+0.7**	
	comp=Z,4.5nm,1.1s,baz=12,slow=3.8,SNR=9.8								
LPAZ	**La Paz**	**171.19**	**70**			**PKPdf**	**14 33 49.6**	**-1.5**	
LPAZ	**La Paz**	**171.19**	**70**	*eP*		**PKPdf**	**14 33 50.6**	**-0.5**	
CPUP	**Villa Florida**	**172.97**	**196**	PKP		**PKPdf**	**14 33 51.2**	**+0.3**	
	comp=Z,2.6nm,0.9s,baz=20,slow=1.8,SNR=5.1								
CPUP	**Villa Florida**	**172.97**	**196**			**PKPdf**	**14 33 50.6**	**-0.3**	
PTLB	**Pontes e Lacer**	**175.88**	**355**	*eP*		**PKPdf**	**14 33 52.3**	**+0.1**	

IDC ***17*** *14:14:40.2±1.6, 19°.42N×120°.22E, h0km, mb4.8/6, mb1 4.9/6, mb1mx4.2/67, mbtmp4.9/6, MS4.6/1, Ms1 4.6/1, ms1mx3.6/38, Error ellipse: s-maj=210.1km s-min=22.4km az=62.0*

NEIC ***17*** *14:14:40.0±2.2, 19°.49N±0°.10×119°.9E±0°.2, h10km±1km, mb4.8/10, Error ellipse: s-maj=32.7km s-min=9.1km az=64.0*

ISC 17 14:14:43.2±0.7, 19°.47N±0°.09×120°.1E±0°.2, h24km, n19, σ1°15/17, mb4.8/10, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YHNB	**Yeheng**	**5.31**	**12**	Pn	**Pn**	**14 15 59.5**	**-1.5**
YOJ	**Yonaguni jima**	**5.64**	**28**	Pn	**Pn**	**14 16 06.0**	**+0.4**
SIJI	**Sorong**	**22.97**	**150**	P	**P**	**14 19 45.9**	**-0.3**
	22nm,0.8s,baz=35,slow=5.1,SNR=1.9						
COEN	**Coen**	**40.22**	**144**	P	**P**	**14 22 19.3**	**+1.2**
PSA00	**Pilbara Seismi**	**40.79**	**180**	P	**P**	**14 22 22.5**	**-0.2**
MKAR	**Makanchi Array**	**41.18**	**320**	LR	LR	14 39 19.1	
	comp=Z,774nm,21.3s,baz=106,slow=36						
WB0	**Warramunga Arr**	**41.42**	**159**	P	**P**	**14 22 27.8**	**-0.2**
WB0				IAmb	IAmb	14 22 31.2	
	comp=Z,12nm,0.7s						
WRA	**Warramunga Arr**	**41.56**	**160**	P	**P**	**14 22 29.1**	**-0.1**
	comp=Z,10.0nm,0.6s,baz=339,slow=8.2,SNR=2.2						
WRA	**Warramunga Arr**	**41.56**	**160**	P	**P**	**14 22 28.1**	**-1.1**
WB2	**Warramunga Arr**	**41.57**	**160**	P	**P**	**14 22 27.6**	**-1.6**
WB2				IAmb	IAmb	14 22 33.0	
	comp=Z,43nm,1.4s						
WR0	**Warramunga Arr**	**41.65**	**159**	P	**P**	**14 22 28.4**	**-1.5**
WR0				IAmb	IAmb	14 22 33.2	
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**44.92**	**162**	P	**P**	**14 22 56.8**	**+0.5**
	comp=Z,9.3nm,0.8s,baz=339,slow=7.0,SNR=1.9						
KURBB	**Kurchatov Arra**	**45.19**	**323**	P	**P**	**14 23 00.1**	**+1.9**
	comp=Z,31nm,0.9s,baz=121,slow=7.7,SNR=1.9						
EIDS	**Eidsvold**	**53.77**	**145**	P	**P**	**14 24 03.3**	**-0.6**
BBOO	**Buckleboo**	**54.16**	**163**	P	**P**	**14 24 07.2**	**+0.6**
STKA	**Stephens Creek**	**55.04**	**158**	P	**P**	**14 24 12.7**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=333,slow=19,SNR=1.2						
STKA	**Stephens Creek**	**55.04**	**158**	IAmb	IAmb	14 24 19.9	
	comp=Z,4.5nm,1.0s						
ABKAR	**Akbulak array**	**56.12**	**317**	P	**P**	**14 24 18.9**	**-1.7**
ABKAR				IAmb	IAmb	14 24 28.5	
	comp=Z,13nm,1.0s						
FINES	**FINESS Array B**	**75.03**	**330**	P	**P**	**14 26 23.4**	**+0.9**
	comp=Z,14nm,1.0s,baz=50,slow=4.3,SNR=1.8						

IDC ***17*** *14:15:21.6±0.8, 19°.53N×120°.52E, h0km, mb4.5/11, mb1 4.5/12, mb1mx4.1/67, mbtmp4.4/12, Error ellipse: s-maj=45.2km s-min=15.6km az=71.0*

NEIC ***17*** *14:15:22.7±1.7, 19°.4N±0°.1×120°.42E±0°.10, h10km±1km, mb4.8/13, Error ellipse: s-maj=20.0km s-min=14.8km az=161.0*

ISC 17 14:15:24.5±0.7, 19°.50N±0°.09×120°.5E±0°.1, h23km, n27, σ1°05/25, mb4.7/14, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QIZ	**Qiongzhong**	**10.04**	**269**	Pn	**Pn**	**14 17 47.0**	**-0.4**
KSRS	**Korea Array**	**19.04**	**18**	P	**P**	**14 19 43.1**	**-1.9**
	baz=106,slow=19,SNR=0.5						
JHS	**Saijyo**	**19.07**	**33**	P	**Pn**	**14 19 45.8**	**-0.6**
JHS				IAmb	IAmb	14 19 53.6	
	comp=Z,47nm,1.2s						
SIJI	**Sorong**	**22.85**	**151**	P	**P**	**14 20 27.0**	**+0.6**
	comp=Z,16nm,0.8s,baz=312,slow=22,SNR=2.0						
MJAR	**Matsushiro Arr**	**23.04**	**39**	P	**P**	**14 20 26.5**	**-1.7**
CISI	**Cisompet, Garu**	**29.63**	**206**	P	**P**	**14 21 26.9**	**-1.6**
FITZ	**Fitzroy Crossi**	**37.71**	**172**	P	**P**	**14 22 38.6**	**+0.1**
	comp=Z,11nm,1.0s,baz=356,slow=9.5,SNR=2.2						
FITZ	**Fitzroy Crossi**	**37.71**	**172**	IAmb	IAmb	14 22 47.6	
	comp=Z,19nm,1.1s						
MKAR	**Makanchi Array**	**41.35**	**320**	P	**P**	**14 23 09.4**	**+0.7**
	comp=Z,5.5nm,0.8s,baz=111,slow=7.9,SNR=9.7						
WRA	**Warramunga Arr**	**41.49**	**160**	P	**P**	**14 23 10.0**	**-0.1**
	comp=Z,5.1nm,0.6s,baz=341,slow=9.0,SNR=1.6						
WB2	**Warramunga Arr**	**41.50**	**160**	P	**P**	**14 23 09.6**	**-0.5**
WB2				IAmb	IAmb	14 23 36.4	
	comp=Z,22nm,1.1s						
WR0	**Warramunga Arr**	**41.57**	**160**	P	**P**	**14 23 10.4**	**-0.3**
WR0				IAmb	IAmb	14 23 36.6	
	comp=Z,20nm,1.0s						
KDJ	**Kajisay**	**42.89**	**311**	P	**P**	**14 23 20.4**	**-1.2**
KDJ				IAmb	IAmb	14 23 39.2	
	comp=Z,33nm,1.4s						
ZALV	**Zalesovo Beam**	**43.88**	**330**	P	**P**	**14 23 29.9**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=147,slow=6.2,SNR=0.7						
AS31	**Alice Springs**	**44.86**	**162**	P	**P**	**14 23 36.0**	**-1.3**
ASAR	**Alice Springs**	**44.86**	**162**	P	**P**	**14 23 38.3**	**+1.0**
	comp=Z,7.2nm,0.7s,baz=342,slow=6.7,SNR=3.3						
ASAR	**Alice Springs**	**44.86**	**162**	P	**P**	**14 23 36.9**	**-0.4**
KURK	**Kurchatov**	**45.34**	**323**	P	**P**	**14 23 41.6**	**+0.8**
KURBB	**Kurchatov Arra**	**45.34**	**323**	P	**P**	**14 23 41.6**	**+0.8**
	comp=Z,8.9nm,0.8s,baz=122,slow=7.9,SNR=1.2						
NWAO	**Narrogin (SRO)**	**52.22**	**183**	P	**P**	**14 24 35.0**	**+1.2**
	comp=Z,8.5nm,0.7s,baz=354,slow=10,SNR=2.0						
NWAO	**Narrogin (SRO)**	**52.22**	**183**	IAmb	IAmb	14 24 43.1	
	comp=Z,17nm,0.8s						
IL31		**73.68**	**26**	P	**P**	**14 26 56.8**	**+0.7**
ILAR	**Eielson Array**	**73.68**	**26**	P	**P**	**14 26 57.7**	**+1.6**
	comp=Z,1.2nm,0.9s,baz=305,slow=3.8,SNR=1.2						
ILAR	**Eielson Array**	**73.68**	**26**	P	**P**	**14 26 57.3**	**+1.2**
FIA1	**FINESS Array S**	**75.14**	**330**	P	**P**	**14 27 05.8**	**+1.1**
FINES	**FINESS Array B**	**75.14**	**330**	P	**P**	**14 27 05.1**	**+0.4**
	comp=Z,2.5nm,0.8s,baz=93,slow=6.9,SNR=1.1						
HFS	**Hagfors**	**81.31**	**331**	P	**P**	**14 27 39.3**	**+0.4**
	comp=Z,3.9nm,0.7s,baz=99,slow=7.7,SNR=1.9						

IDC ***17*** *14:16:30.7±0.4, 19°.47N×120°.48E, h0km, mb4.7/37, mb1 4.8/38, mb1mx4.6/68, mbtmp4.7/38, ML4.2/1, Error ellipse: s-maj=17.7km s-min=9.5km az=74.0*

NEIC ***17*** *14:16:31.6±1.6, 19°.47N±0°.07×120°.26E±0°.08, h10km±1km, mb5.0/105, Error ellipse: s-maj=12.3km s-min=11.5km az=99.0*

BJI ***17*** *14:16:33.2±0.0, 19°.50N×120°.25E, h10km, mb4.8/40*

GCMT ***17*** *14:16:35.6±0.3, 19°.56N±0°.04×120°.37E±0°.04, h12km, MW5.0/92, Moment Tensor Solution. s7,c9; s92,c132; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=-3.34±. 14; Mθθ 1.26±. 13; Mϕϕ 2.08±.14; Mrθ 0.14±.63; Mrϕ 1.60±. 10; Mθϕ -0.99±. 63; Best double couple: M≈3.47500×10^16 NP1:ϕ229.00000°, δ40.00000°, λ-73.00000°. NP2: ϕ27.00000°, δ52.00000°, λ-104.00000°. Principal axes: T 3.3950, Plg6.0000°, Azm127.0000°; N 0.1590, Plg11.0000°, Azm35.0000°; P -3.5540, Plg77.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 17 14:16:33.7±0.3, 19°.46N±0°.05×120°.26E±0°.06, h23km, n214, σ1°13/214, mb4.9/87, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.43**	**13**	Pn	**Pn**	**14 17 23.8**	**-2.0**
TPUB	**Ta-pu**	**3.83**	**5**	Pn	**Pn**	**14 17 29.4**	**-2.0**
YULB	**Yu-li**	**4.03**	**14**	Pn	**Pn**	**14 17 34.1**	**+0.1**
SSLB	**Suanglung**	**4.35**	**8**	Pn	**Pn**	**14 17 37.5**	**-1.0**
NACB	**Ninganchiao**	**4.85**	**15**	Pn	**Pn**	**14 17 44.2**	**-1.1**
KNMB	**Chin-men Tao**	**5.27**	**341**	Pn	**Pn**	**14 17 49.5**	**-1.6**
YHNB	**Yeheng**	**5.29**	**11**	Pn	**Pn**	**14 17 51.0**	**-0.4**
YOJ	**Yonaguni jima**	**5.59**	**27**	Pn	**Pn**	**14 17 55.4**	**-0.2**
TATO	**Taipei**	**5.60**	**12**	Pn	**Pn**	**14 17 55.2**	**-0.4**
QZH	**Quanzhou**	**5.67**	**345**	*e*Pn	**Pn**	**14 17 54.8**	**-1.7**
QZH				Sn	**Sn**	**14 18 55.1**	**-5.8**
HKPS	**Hong Kong Po S**	**6.37**	**297**	Pn	**Pn**	**14 18 05.5**	**-0.7**
QIZ	**Qiongzhong**	**9.85**	**269**	P	**Pn**	**14 18 54.1**	**+0.1**
QIZ				S	**Sn**	**14 20 43.0**	**-0.9**
QIZ				pmax	pmax		
	comp=Z,75nm,1.0s						
QIZ	**Qiongzhong**	**9.85**	**269**	Pn	**Pn**	**14 18 53.7**	**-0.3**
NJ2	**Nanjing**	**12.60**	**355**	*eP*	**Pn**	**14 19 29.8**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
MYLDM	**Lahad Datu**	**14.30**	**187**	Pn	**Pn**	**14 19 54.1**	**-0.8**
JSU	**Suzuyama**	**15.11**	**35**		P	**14 20 10.6**	**-0.2**
JSU				IAmb	IAmb	14 20 14.5	
	comp=Z,85nm,1.5s						
SLVN	**Son La**	**15.44**	**280**	P	**P**	**14 20 14.5**	**-0.1**
JNU	**Nakatsue**	**16.59**	**33**		P	**14 20 27.2**	**0.0**
KMI	**Kunming**	**17.16**	**292⇑**	*eP*	**Pn**	**14 20 32.6**	**+0.3**
KMI				pP	P	14 20 34.8	+1.0
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN	**Xi'an**	**17.68**	**327**	Pn	**Pn**	**14 20 37.0**	**-1.5**
JMN	**Monobe**	**18.69**	**38**	P	**Pn**	**14 20 50.9**	**0.0**
KSAR	**Wonju Array Be**	**19.11**	**19**	P	P	**14 20 54.8**	**-0.2**
KSRS	**Korea Array**	**19.14**	**19**	P	**P**	**14 20 54.9**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=198,slow=11,SNR=4.7						
KS19	**Wonju Array Si**	**19.16**	**19**	P	**P**	**14 20 54.1**	**-1.4**
JHS	**Saijyo**	**19.21**	**34**	P	**P**	**14 20 54.8**	**-1.4**
DL2	**Dalian**	**19.41**	**3**	P	**Pn**	**14 21 00.3**	**+0.8**
DL2				pmax	pmax		
	comp=Z,48nm,1.2s						
CMAR	**Chiang Mai Arr**	**20.18**	**271**	P	Pn	14 21 10.4	+1.6
	comp=Z,6.7nm,0.8s,baz=76,slow=8.0,SNR=4.4						
CMAR				PcP	**PcP**	**14 25 22.6**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=29,slow=0.6,SNR=6.6						
LUWI	**Luwuk**	**20.53**	**173**	P	**P**	**14 21 09.5**	**-1.1**
LUWI				IAmb	IAmb	14 21 28.1	
	comp=Z,94nm,1.2s						
JWT	**Wachi**	**20.68**	**37**	P	**P**	**14 21 12.2**	**+0.1**
JWT				IAmb	IAmb	14 21 18.8	
	comp=Z,130nm,1.5s						
BJT	**Baijiatuau**	**20.79**	**351**		P	**14 21 14.7**	**+1.5**
BJT				IAmb	IAmb	14 21 16.1	
	comp=Z,75nm,1.0s						
BJI	**Beijing**	**20.81**	**351**	P	**P**	**14 21 15.0**	**+1.6**
BJI				pmax	pmax		
	comp=Z,77nm,1.0s						
INU	**Inuyama**	**21.67**	**40**	P	**P**	**14 21 22.6**	**-0.1**
INU				IAmb	IAmb	14 21 24.1	
	comp=Z,47nm,1.0s						
LZH	**Lanzhou**	**21.97**	**322**	⇑P	**P**	**14 21 29.1**	**+2.9**
LZH				pP	pP	14 21 32.8

KKAR	**Karatay Array**	**47.77**	**311**	P		**P**	**14 25 09.2**	**0.0**
KKAR	**Karatay Array**	**47.77**	**311**	P		**P**	**14 25 09.1**	**-0.2**
KKAR				IAmb		IAmb	14 25 12.9	
	comp=Z,21nm,1.2s							
MORW	**Morawa**	**48.42**	**185**	P		**P**	**14 25 14.7**	**+0.5**
MORW				IAmb		IAmb	14 25 18.2	
	comp=Z,13nm,0.8s							
FORT	**Forrest**	**50.51**	**171**	P		**P**	**14 25 30.7**	**+0.5**
BVAR	**Borovoye Array**	**50.85**	**323**	P		**P**	**14 25 34.4**	**+1.8**
	comp=Z,4.0nm,0.8s,baz=205,slow=27,SNR=3.7							
BRVK	**Borovoye**	**50.92**	**323**	P		**P**	**14 25 34.6**	**+1.5**
BRVK				IAmb		IAmb	14 25 35.7	
	comp=Z,13nm,0.9s							
NWAO	**Narrogin (SRO)**	**52.17**	**183**	P		**P**	**14 25 43.3**	**+0.7**
	comp=Z,13nm,0.8s,baz=14,slow=7.6,SNR=3.5							
NWAO	**Narrogin (SRO)**	**52.17**	**183**	P		**P**	**14 25 41.7**	**-0.9**
NWAO				IAmb		IAmb	14 25 52.7	
	comp=Z,23nm,1.1s							
NRIK	**Noril'sk**	**53.74**	**346**	P		**P**	**14 25 54.8**	**+1.1**
	comp=Z,14nm,0.8s,baz=135,slow=6.3,SNR=4.8							
BBOO	**Buckleboo**	**54.13**	**164**	P		**P**	**14 25 56.8**	**-0.2**
STKA	**Stephens Creek**	**54.99**	**158**	P		**P**	**14 26 03.7**	**+0.4**
	comp=Z,12nm,0.8s,baz=335,slow=5.9,SNR=4.6							
STKA	**Stephens Creek**	**54.99**	**158**	P		**P**	**14 26 03.5**	**+0.2**
AMKA	**Amchitka**	**55.79**	**41**	P		**P**	**14 26 08.6**	**-0.2**
ABKAR	**Akbulak array**	**56.19**	**317**	P		**P**	**14 26 12.4**	**+0.6**
AKTO	**Aktyubinsk**	**57.61**	**318**	P		**P**	**14 26 23.5**	**+1.6**
	comp=Z,4.6nm,0.8s,baz=113,slow=6.5,SNR=2.9							
ARU	**Arti**	**58.40**	**325**	P		**P**	**14 26 28.6**	**+1.3**
	comp=Z,4.8nm,0.5s,baz=110,slow=5.6,SNR=7.3							
DZM	**Mont Dzumac**	**61.17**	**130**	P		**P**	**14 26 47.7**	**+0.7**
TOO	**Toolangi**	**61.51**	**157**	P		**P**	**14 26 49.9**	**+1.0**
KIRV	**Kirov**	**63.62**	**326**	P		**P**	**14 27 03.8**	**+1.1**
	comp=Z,24nm,0.7s,baz=81,slow=3.9,SNR=4.7							
SOCY	**Socotra**	**63.85**	**274**	P		**P**	**14 27 04.9**	**-0.1**
KBZ	**Khabaz**	**67.80**	**310**	P		**P**	**14 27 31.7**	**+1.8**
	comp=Z,12nm,0.8s,baz=225,slow=5.7							
KVAR	**Kislovodsk Arr**	**67.92**	**310**	P		**P**	**14 27 33.3**	**+2.4**
	comp=Z,11nm,0.7s,baz=258,slow=19,SNR=2.4							
KIV	**Kislovodsk**	**67.93**	**310**	P		**P**	**14 27 30.2**	**-0.7**
GEVA	**Gevas**	**68.35**	**304**	P		**P**	**14 27 33.0**	**-0.8**
A21K	**Barrow** baz=270	**69.52**	**20**	P		**P**	**14 27 41.5**	**+1.4**
A21K	**Barrow**	**69.52**	**20**	P		**P**	**14 27 40.6**	**+0.5**
TTA	**Tatalina**	**70.02**	**29**	P		**P**	**14 27 43.7**	**+0.2**
TTA				IAmb		IAmb	14 27 45.4	
	comp=Z,8.5nm,1.0s							
CAST	**Castle Rocks**	**71.75**	**28**	P		**P**	**14 27 54.0**	**+0.1**
PPLA	**Purkeypile**	**71.77**	**29**	P		**P**	**14 27 54.4**	**+0.2**
PPLA				IAmb		IAmb	14 28 08.3	
	comp=Z,15nm,1.1s							
RSO	**Redoubt South**	**71.81**	**31**	P		**P**	**14 27 54.6**	**0.0**
COLD	**Coldfoot**	**72.06**	**24**	P		**P**	**14 27 55.4**	**-0.3**
TOLK	**Toolik Lake Re** baz=278	**72.11**	**23**	P		**P**	**14 27 57.6**	**+1.5**
TOLK	**Toolik Lake Re**	**72.11**	**23**	P		**P**	**14 27 56.6**	**+0.6**
TOLK				IAmb		IAmb	14 27 58.7	
	comp=Z,12nm,0.8s							
MLY	**Manley** baz=278	**72.13**	**26**	P		**P**	**14 27 57.6**	**+1.3**
BPAW	**Bear Paw Mtn.**	**72.15**	**27**	P		**P**	**14 27 56.2**	**-0.2**
BPAW				IAmb		IAmb	14 27 57.7	
	comp=Z,18nm,1.1s							
SKT	**Skwentna**	**72.19**	**30**	P		**P**	**14 27 56.1**	**-0.4**
SKT				IAmb		IAmb	14 27 57.5	
	comp=Z,26nm,1.5s							
KTH	**Kantishna Hill**	**72.25**	**28**	P		**P**	**14 27 56.5**	**-0.5**
KTH				IAmb		IAmb	14 28 08.5	
	comp=Z,16nm,1.0s							
KDAK	**Kodiak Island**	**72.26**	**34**	P		**P**	**14 27 55.9**	**-1.1**
SUA	**Susitna One**	**72.64**	**30**	P		**P**	**14 27 58.9**	**-0.4**
SUA				IAmb		IAmb	14 28 01.0	
	comp=Z,21nm,0.9s							
I23K	**Minto, Yukon-K** baz=279	**72.69**	**26**	P		**P**	**14 28 00.8**	**+1.4**
I23K	**Minto, Yukon-K**	**72.69**	**26**	P		**P**	**14 28 00.2**	**+0.8**
I23K				IAmb		IAmb	14 28 03.1	
	comp=Z,8.6nm,0.9s							
CNPM	**China Poot**	**72.69**	**32**	P		**P**	**14 27 59.4**	**-0.2**
CNPM				IAmb		IAmb	14 28 19.7	
	comp=Z,9.0nm,0.9s							
NEA2	**Nenana** baz=279	**72.90**	**27**	P		**P**	**14 28 01.8**	**+1.0**
MCK	**McKinley** baz=280	**73.10**	**28**	P		**P**	**14 28 02.8**	**+0.8**
RND	**Reindeer**	**73.19**	**28**	P		**P**	**14 28 02.2**	**-0.4**
MDM	**Murphy Dome**	**73.19**	**26**	P		**P**	**14 28 02.7**	**+0.1**
MDM				IAmb		IAmb	14 28 04.4	
	comp=Z,22nm,1.0s							
WRH	**Wood River Hil**	**73.34**	**27**	P		**P**	**14 28 03.9**	**+0.5**
WRH				IAmb		IAmb	14 28 05.5	
	comp=Z,11nm,0.9s							
TCOL	**CIGO, UAF Yank** baz=280	**73.36**	**26**	P		**P**	**14 28 05.4**	**+1.9**
PMR	**Palmer**	**73.38**	**30**	P		**P**	**14 28 02.7**	**-0.9**
PMR				IAmb		IAmb	14 28 03.4	
	comp=Z,25nm,1.3s							
CCB	**Clear Creek Bu**	**73.43**	**27**	P		**P**	**14 28 03.5**	**-0.3**
POKR	**Poker Plat Res** baz=280	**73.50**	**26**	P		**P**	**14 28 05.9**	**+1.6**
ARD3	**ARCESS Array S**	**73.57**	**339**	P		**P**	**14 28 04.5**	**-0.2**
ARC2	**ARCESS Array S**	**73.58**	**339**	P		**P**	**14 28 04.2**	**-0.5**
ARC2				IAmb		IAmb	14 28 16.1	
	comp=Z,9.3nm,0.9s							
ARCES	**ARCESS Array B**	**73.59**	**339**	P		**P**	**14 28 04.4**	**-0.3**
	comp=Z,4.5nm,0.8s,baz=68,slow=9.7,SNR=4.1							
ARD6	**ARCESS Array S**	**73.59**	**339**	P		**P**	**14 28 05.4**	**+0.6**
ARD8	**ARCESS Array S**	**73.60**	**339**	P		**P**	**14 28 05.9**	**+1.1**
ARD8				IAmb		IAmb	14 28 18.7	
	comp=Z,14nm,1.1s							
ARD7	**ARCESS Array S**	**73.60**	**339**	P		**P**	**14 28 05.5**	**+0.6**
SML	**Sawmill**	**73.71**	**30**	P		**P**	**14 28 04.7**	**-1.0**
SML				IAmb		IAmb	14 28 19.6	
	comp=Z,32nm,1.3s							
KNK	**Knik Glacier**	**73.73**	**30**	P		**P**	**14 28 04.8**	**-0.9**
IL31		**73.79**	**26**	P		**P**	**14 28 04.3**	**-1.7**
ILAR	**Eielson Array**	**73.79**	**26**	P		**P**	**14 28 05.0**	**-1.0**
	comp=Z,3.9nm,0.8s,baz=284,slow=5.8,SNR=7.4							
ILAR	**Eielson Array**	**73.79**	**26**	P		**P**	**14 28 04.1**	**-1.9**
HDA	**Harding Lake**	**73.84**	**27**	P		**P**	**14 28 04.9**	**-1.4**
HDA				IAmb		IAmb	14 28 06.5	
	comp=Z,9.6nm,1.0s							
SPA0	**Spitsbergen Ar**	**73.89**	**348**	P		**P**	**14 28 07.0**	**+0.5**
SPITS	**Spitsbergen Ar**	**73.89**	**348**	P		**P**	**14 28 07.9**	**+1.4**
	comp=Z,14nm,0.8s,baz=85,slow=10,SNR=9.9							
DHY	**Denali Highway**	**73.91**	**28**	P		**P**	**14 28 07.0**	**0.0**
SCM	**Sheep Creek Mo**	**74.18**	**30**	P		**P**	**14 28 08.6**	**+0.2**
PRP	**Porcupine Dome**	**74.21**	**26**	P		**P**	**14 28 08.7**	**+0.1**
M24K	**Tolsona, Glenn** baz=282	**74.65**	**29**	P		**P**	**14 28 12.6**	**+1.4**
M24K	**Tolsona, Glenn**	**74.65**	**29**	P		**P**	**14 28 11.5**	**+0.4**
KLU	**Klutina**	**74.90**	**30**	P		**P**	**14 28 13.0**	**+0.3**
KLU				IAmb		IAmb	14 28 25.1	
	comp=Z,37nm,1.4s							
FIA1	**FINESS Array S**	**75.08**	**330**	P		**P**	**14 28 14.0**	**+0.5**
FIA1				IAmb		IAmb	14 28 15.1	
	comp=Z,21nm,0.9s							
FINES	**FINESS Array B**	**75.08**	**330**	P		**P**	**14 28 14.6**	**+1.1**
	comp=Z,6.8nm,0.5s,baz=63,slow=6.6,SNR=11							
FINES	**FINESS Array B**	**75.08**	**330**	P		**P**	**14 28 14.2**	**+0.7**
SCRK	**Sand Creek** baz=284	**75.20**	**27**	P		**P**	**14 28 14.8**	**+0.4**
DOT	**Dot Lake**	**75.24**	**27**	P		**P**	**14 28 14.3**	**-0.2**
N25K	**Chitina, Valde** baz=284	**75.50**	**29**	P		**P**	**14 28 16.6**	**+0.5**
MENT	**Mentasta**	**75.57**	**28**	P		**P**	**14 28 17.2**	**+0.8**
MENT				IAmb		IAmb	14 28 21.9	
	comp=Z,9.3nm,0.9s							
L26K	**Log Cabin Wild** baz=285	**75.71**	**28**	P		**P**	**14 28 18.5**	**+1.3**
AKASG	**Malin Array Be**	**75.83**	**319**	P		**P**	**14 28 18.6**	**+0.5**
	comp=Z,7.5nm,0.7s,baz=62,slow=6.0,SNR=7.2							
AKASG	**Malin Array Be**	**75.83**	**319**	IAmb		IAmb	14 28 19.4	
	comp=Z,6.4nm,0.9s							
AKBB	**Malin Array Si**	**75.83**	**319**	P		**P**	**14 28 17.6**	**-0.4**
AKBB				IAmb		IAmb	14 28 19.7	
	comp=Z,14nm,0.9s							
GLB	**Gilahina Butte**	**75.90**	**30**	P		**P**	**14 28 18.6**	**+0.3**
GLB				IAmb		IAmb	14 28 31.3	
	comp=Z,22nm,1.1s							
K27K	**Chicken** baz=286	**76.00**	**27**	P		**P**	**14 28 20.2**	**+1.5**
NACGM	**Naroch**	**76.27**	**324**	*e*		**P**	**14 28 21.0**	**+0.6**
MCARA	**McCarthy VSAT**	**76.28**	**29**	P		**P**	**14 28 21.0**	**+0.6**
MCARA				IAmb		IAmb	14 28 35.6	
	comp=Z,13nm,0.9s							
TGL	**Tana Glacier**	**76.54**	**30**	P		**P**	**14 28 22.1**	**0.0**
TGL				IAmb		IAmb	14 28 34.8	
	comp=Z,13nm,1.0s							
BARN	**Barnard Glacie**	**77.00**	**30**	P		**P**	**14 28 24.9**	**+0.2**
BARN				IAmb		IAmb	14 28 26.3	
	comp=Z,13nm,0.8s							
DAWY	**Dawson**	**77.12**	**26**	P		**P**	**14 28 24.0**	**-1.2**
CTGM	**Chitina Glacie**	**77.19**	**30**	P		**P**	**14 28 24.4**	**-1.4**
MLZ	**Mavora Lakes**	**77.80**	**148**	P		**P**	**14 28 27.0**	**-2.1**
INK	**Inuvik**	**77.91**	**21**	P		**P**	**14 28 28.6**	**-0.8**
	comp=Z,8.6nm,1.2s,baz=263,slow=7.0,SNR=4.4							
INK	**Inuvik**	**77.91**	**21**	P		**P**	**14 28 28.8**	**-0.6**
INK				IAmb		IAmb	14 28 40.0	
	comp=Z,17nm,1.4s							
LBZ	**Lake Benmore**	**78.19**	**146**	P		**P**	**14 28 30.9**	**-0.4**
RPZ	**Rata Peaks**	**78.21**	**145**	P		**P**	**14 28 31.4**	**0.0**
BCPM	**Bancas Point**	**78.30**	**30**	P		**P**	**14 28 30.5**	**-1.3**
BURAR	**Bucovina Array**	**79.17**	**317**	P		**P**	**14 28 36.9**	**-0.1**
BUR08	**Bucovina Ar. S**	**79.18**	**317**	P		**P**	**14 28 36.2**	**-0.8**
MLR	**Muntele Rosu**	**79.31**	**314**	P		**P**	**14 28 39.5**	**+1.7**
	comp=Z,4.4nm,0.7s,baz=24,slow=6.3,SNR=3.3							
MLR	**Muntele Rosu**	**79.31**	**314**	P		**P**	**14 28 37.8**	**0.0**
C36M	**Paulatuk** baz=300	**80.52**	**19**	P		**P**	**14 28 43.9**	**+0.2**
HFS	**Hagfors**	**81.25**	**331**	P		**P**	**14 28 48.4**	**+0.6**
	comp=Z,2.2nm,0.4s,baz=101,slow=3.2,SNR=7.6							
NOA	**NORSAR Array B**	**81.98**	**332**	P		**P**	**14 28 52.0**	**+0.4**
	comp=Z,4.9nm,0.9s,baz=64,slow=5.3,SNR=4.6							
MORC	**Moravsky Berou**	**83.25**	**320**	*eP*		**P**	**14 28 57.9**	**-0.6**
RES	**Resolute Bay**	**83.44**	**9**	P		**P**	**14 28 59.3**	**+0.4**
RES				IAmb		IAmb	14 29 00.6	
	comp=Z,9.9nm,0.8s							
JAVC	**Velka Javorina**	**83.52**	**320**	*eP*		**P**	**14 29 01.6**	**+1.7**
KRLC	**Kraliky**	**83.59**	**321**	*eP*		**P**	**14 28 59.9**	**-0.4**
DPC	**Dobruska-Polom**	**83.76**	**321**	*eP*		**P**	**14 29 02.5**	**+1.4**
VRAC	**Vranov**	**84.00**	**320**	P		**P**	**14 29 03.7**	**+1.4**
	comp=Z,7.5nm,0.8s,baz=61,slow=4.4,SNR=4.4							
VRAC	**Vranov**	**84.00**	**320**	*eP*		**P**	**14 29 03.5**	**+1.2**
KRUC	**Moravsky**	**84.22**	**320**	*eP*		**P**	**14 29 03.4**	**0.0**
BRG	**Berggiesshubel**	**84.93**	**322**	*eP*		**P**	**14 29 07.9**	**+0.9**
	comp=Z,15nm,1.2s							
	comp=Z,1μm,14.2s							
	comp=N,1μm,14.2s							
	comp=E,740nm,14.2s							
PRU	**Pruhonice**	**84.95**	**321**	*e*P		**P**	**14 29 08.6**	**+1.5**
CLL	**Collm**	**85.29**	**323**	*i* P		**P**	**14 29 09.8**	**+1.1**
	comp=Z,7.0nm,1.0s							
CLL				*i*			14 29 18.4	
KHC	**Kasperske Hory**	**85.88**	**321**	*eP*		**P**	**14 29 12.8**	**+1.0**
GERES	**GERESS Array B**	**85.93**	**321**	P		**P**	**14 29 13.5**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=64,slow=6.1,SNR=4.9							
GERES	**GERESS Array B**	**85.93**	**321**	P		**P**	**14 29 12.3**	**+0.2**
YKA	**Yellowknife Ar**	**87.64**	**22**	P		**P**	**14 29 20.4**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=317,slow=5.3,SNR=4.6							
NVAR	**Mina Array Bea**	**100.46**	**43**	P		**Pdif**	**14 30 18.8**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=322,slow=5.7,SNR=2.3							
LAO	**LASA Array** baz=316	**101.95**	**31**	P		**Pdif**	**14 30 22.6**	**-3.4**
TORD	**Torodi Ar. Bea**	**111.38**	**293**	PKiKP		**PKiKP**	**14 35 06.8**	**0.0**
	comp=Z,1.2nm,0.9s,baz=22,slow=0.4,SNR=4.0							
TXAR	**Lajitas Array**	**115.59**	**42**	PKP		**PKiKP**	**14 35 14.3**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=242,slow=1.9,SNR=3.1							
SDV	**Santo Domingo**	**149.86**	**22**			**PKPbc**	**14 36 23.3**	**+0.1**

*IDC **17** 14:22:12.7±1.0, 19°.47N×120°.55E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.6/59, mbtmp3.8/8, Error ellipse: s-maj=41.6km s-min=18.3km az=64.0*
*NEIC **17** 14:22:14.1±1.4, 19°.49N±0°.07×120°.5E±0°.1, h10km±1km, mb4.2/21, Error ellipse: s-maj=19.1km s-min=12.1km az=101.0*

ISC 17 14:22:15.8±0.6,**19°.45N**±0°.07×**120°.39E**±0°.08,**h23**km,**n42,**
σ1§**12**/39,**mb4.1**/14,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPUB	**Ta-pu**	**3.84**	**3**	Pn	**Pn**	**14 23 11.5**	**-2.0**
YULB	**Yu-li**	**4.02**	**12**	Pn	**Pn**	**14 23 14.0**	**-2.0**
SSLB	**Suanglung**	**4.35**	**7**	Pn	**Pn**	**14 23 19.0**	**-1.6**
NACB	**Ninganchiao**	**4.83**	**13**	Pn	**Pn**	**14 23 25.2**	**-2.0**
YHNB	**Yeheng**	**5.28**	**10**	Pn	**Pn**	**14 23 32.5**	**-0.9**
HKPS	**Hong Kong Po S**	**6.48**	**297**	Pn	**Pn**	**14 23 47.5**	**-2.4**
QIZ	**Qiongzhong**	**9.97**	**269**	Pn	Pn	14 24 33.7	-4.0
DLV	**T Lat**	**13.67**	**239**	Pn	**Pn**	**14 25 26.4**	**-2.1**
ENH	**Enshi**	**14.62**	**320**	P	**P**	**14 25 47.9**	**+0.4**
SLVN	**Son La**	**15.57**	**280**	Pn	**Pn**	**14 25 54.6**	**+0.7**
SLVN				IAmb	IAmb	14 26 08.1	
	comp=Z,16nm,1.4s						
CMAR	**Chiang Mai Arr**	**20.30**	**271**	P	**P**	**14 26 51.9**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=81,slow=8.4,SNR=4.8						
KSM	**Kuching**	**20.41**	**210**	P	**P**	**14 26 52.6**	**+1.2**
SONM	**Songino Array**	**30.52**	**341**	P	**P**	**14 28 27.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=160,slow=8.8,SNR=2.4						
SONM	**Songino Array**	**30.52**	**341**	P	**P**	**14 28 28.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**37.67**	**172**	P	**P**	**14 29 28.8**	**-0.7**
COEN	**Coen**	**40.07**	**144**	P	**P**	**14 29 49.9**	**+0.2**
COEN				IAmb	IAmb	14 30 16.3	
	comp=Z,8.2nm,1.3s						
WB0	**Warramunga Arr**	**41.32**	**160**	P	**P**	**14 29 59.2**	**-0.7**
WB0				IAmb	IAmb	14 30 28.7	
	comp=Z,5.7nm,1.1s						
MK31	**Makanchi Array**	**41.35**	**320**	P	**P**	**14 30 01.2**	**+1.2**
MKAR	**Makanchi Array**	**41.35**	**320**	P	**P**	**14 30 01.2**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=114,slow=8.9,SNR=4.2						
WRA	**Warramunga Arr**	**41.47**	**160**	P	**P**	**14 30 00.4**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=342,slow=8.9,SNR=7.3						
WRA	**Warramunga Arr**	**41.47**	**160**	IAmb	IAmb	14 30 08.3	
	comp=Z,0.3nm,1.4s						
WB2	**Warramunga Arr**	**41.47**	**160**	P	**P**	**14 30 00.5**	**-0.7**
WB2				IAmb	IAmb	14 30 01.1	
	comp=Z,3.3nm,0.9s						
MAKZ	**Makanchi**	**41.54**	**320**	P	**P**	**14 30 01.9**	**+0.3**
MAKZ				IAmb	IAmb	14 30 18.2	
	comp=Z,10.0nm,1.4s						
WR0	**Warramunga Arr**	**41.55**	**160**	P	**P**	**14 30 01.3**	**-0.5**
ZALV	**Zalesovo Beam**	**43.89**	**330**	P	**P**	**14 30 20.8**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=123,slow=9.5,SNR=3.4						
AS31	**Alice Springs**	**44.84**	**162**	P	**P**	**14 30 28.9**	**+0.5**
ASAR	**Alice Springs**	**44.84**	**162**	P	**P**	**14 30 29.1**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=341,slow=6.9,SNR=15						
KURK	**Kurchatov**	**45.34**	**323**	P	**P**	**14 30 33.2**	**+1.1**
KURK	**Kurchatov**	**45.34**	**323**	IAmb	IAmb	14 30 43.6	
	comp=Z,3.4nm,1.1s						
KURBB	**Kurchatov Arra**	**45.34**	**323**	P	**P**	**14 30 33.2**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=123,slow=7.7,SNR=8.9						
BRVK	**Borovoye**	**51.01**	**323**	P	**P**	**14 31 16.8**	**+1.0**
BRVK				IAmb	IAmb	14 31 39.6	
	comp=Z,6.2nm,1.5s						
NWAO	**Narrogin (SRO)**	**52.17**	**183**	P	**P**	**14 31 25.3**	**+0.6**
BBOO	**Buckleboo**	**54.08**	**164**	P	**P**	**14 31 39.3**	**+0.5**
TNA	**Tin City**	**64.89**	**26**	P	**P**	**14 32 53.1**	**+0.1**
KNTN	**Kanton**	**70.20**	**100**	P	**P**	**14 33 26.0**	**-1.4**
IMAR	**Indian Mountai**	**70.74**	**26**	P	**P**	**14 33 29.8**	**0.0**
TOLK	**Toolik Lake Re**	**72.08**	**23**	P	**P**	**14 33 38.0**	**+0.1**
TOLK				IAmb	IAmb	14 33 48.9	
	comp=Z,2.8nm,0.9s						
RND	**Reindeer**	**73.15**	**28**	P	**P**	**14 33 44.0**	**-0.4**
ARA2	**ARCESS Array S**	**73.64**	**339**	P	**P**	**14 33 47.8**	**+0.6**
ILAR	**Eielson Array**	**73.75**	**26**	P	**P**	**14 33 48.0**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=293,slow=5.8,SNR=2.7						
BMAR	**Burnt Mountain**	**74.14**	**24**	P	**P**	**14 33 51.5**	**+1.4**
FINES	**FINESS Array B**	**75.16**	**330**	P	**P**	**14 33 56.4**	**+0.3**

TAP 17 14:27:24.0,24°.19N×121°.94E,h63km,ML2.1,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao** baz=259	**0.32**	**267**	P	Pn	14 27 34.6	+0.1
NACB				S	Sn	14 27 42.3	+0.2
	baz=259						
TWD	**Chiawan** baz=243	**0.33**	**251**	*e*P	Pn	14 27 34.5	-0.1
TWD				*e*S	Sn	14 27 42.8	+0.5
	baz=243						
ETLH	**Xiulin Townshi** baz=264	**0.42**	**273**	P	Pn	14 27 35.5	0.0
ETLH				S	Sn	14 27 43.9	+0.1
	baz=264						
TWC	**Suao** baz=356	**0.43**	**349**	*e*P	Pn	14 27 36.0	+0.6
TWC				S	Sn	14 27 44.2	+0.4
	baz=356						
NNSB	**Datong** baz=295	**0.56**	**295**	P	Pn	14 27 37.5	+0.6
NNSB				S	Sn	14 27 46.9	+0.5
	baz=295						
NNSH	**Datong** baz=290	**0.56**	**295**	P	Pn	14 27 37.2	+0.2
NNSH				S	Sn	14 27 46.8	+0.3
	baz=290						
NDT	**Datong Townshi** baz=317	**0.57**	**317**	P	Pn	14 27 37.2	+0.2
NDT				*i* S	Sn	14 27 46.9	+0.5
	baz=317						
NNS	**Nan Shan** baz=296	**0.57**	**296**	*i* P	Pn	14 27 37.6	+0.5
NNS				*i* S	Sn	14 27 47.4	+0.7
	baz=296						
TWE	**Neicheng** baz=339	**0.59**	**335**	*i* P	Pn	14 27 37.8	+0.7
TWE				*i* S	Sn	14 27 47.5	+0.9
	baz=339						
ESL	**Shilin** baz=240	**0.60**	**231**	*i* P	Pn	14 27 36.9	-0.3
ESL				S	Sn	14 27 46.6	-0.2
	baz=240						
WHF	**Hehuan Shan** baz=259	**0.62**	**266**	*i* P	Pn	14 27 38.1	+0.2
WHF				S	Sn	14 27 48.0	0.0
	baz=259						
FUSS	**Fushou** baz=275	**0.64**	**275**	P	Pn	14 27 38.7	+0.7
FUSS				S	Sn	14 27 48.6	+0.4
	baz=275						
EGFH	**Guangfu** baz=229	**0.70**	**222**	P	Pn	14 27 37.9	-0.5
EGFH				*i* S	Sn	14 27 48.7	-0.3
	baz=229						
TWT	**Tachien** baz=269	**0.70**	**275**	P	Pn	14 27 39.5	+0.9
TWT				S	Sn	14 27 50.4	+1.1
	baz=269						
YHNB	**Yeheng** baz=306	**0.70**	**313**	P	Pn	14 27 38.5	-0.1
YHNB				S	Sn	14 27 49.5	+0.3
	baz=306						
NWLT	**Wulai** baz=326	**0.71**	**326**	S	Sn	14 27 49.6	+0.4
CHGB	**Renai** baz=254	**0.71**	**260**	P	Pn	14 27 38.9	+0.1
CHGB				S	Sn	14 27 50.3	+0.7
	baz=254						
TDCB	**Techi** baz=269	**0.72**	**275**	P	Pn	14 27 39.7	+0.9
TDCB				S	Sn	14 27 49.9	+0.3
	baz=269						
NSK	**Sanguang** baz=306	**0.72**	**312**	*e*P	Pn	14 27 39.0	+0.3
NSK				S	Sn	14 27 49.6	+0.1
	baz=306						
TIPB	**Shuangxi** baz=357	**0.79**	**352**	P	Pn	14 27 40.4	+0.9
TIPB				S	Sn	14 27 51.5	+0.6
	baz=357						
HGSD	**Ruisui** baz=206	**0.84**	**214**	P	Pn	14 27 41.0	+0.8
HGSD				S	Sn	14 27 53.2	+1.2
	baz=206						
TWA	**Mucha** baz=326	**0.85**	**338**	*e*P	Pn	14 27 41.3	+1.0
TWA				*e*S	Sn	14 27 53.9	+1.6
	baz=326						
EHY	**Hungye** baz=217	**0.89**	**220**	P	Pn	14 27 39.8	-0.9
EHY				S	Sn	14 27 52.7	-0.4
	baz=217						
WHP	**Taichung City** baz=273	**0.91**	**276**	*e*P	Pn	14 27 42.9	+1.7
WHP				S	Sn	14 27 55.2	+1.4
	baz=273						
DPDB	**Guoxing** baz=259	**0.94**	**261**	*e*S	Sn	14 27 55.6	+1.3
SSLB	**Suanglung** baz=244	**0.99**	**246**	*e*P	Pn	14 27 42.7	+0.7
SSLB				S	Sn	14 27 55.5	+0.1
	baz=244						
YULB	**Yu-li** baz=223	**0.99**	**217**	*e*P	Pn	14 27 41.6	-0.5
YULB				*e*S	Sn	14 27 54.3	-1.1
	baz=223						
SMLT	**Sun Moon Lake** baz=247	**1.00**	**252**	*e*P	Pn	14 27 43.4	+1.2
SMLT				*e*S	Sn	14 27 56.5	+0.8
	baz=247						
EYUL	**Yuli** baz=220	**1.01**	**214**	*e*P	Pn	14 27 42.4	+0.1
EYUL				*e*S	Sn	14 27 55.8	-0.1
	baz=220						
TWF1	**Yuli** baz=221	**1.02**	**215**	*e*P	Pn

KNMB	Chin-men Tao	5.23	339	Pn	Pn	14 28 58.4	-2.0	
YOJ	Yonaguni jima	5.39	25	Pn	Pn	14 29 04.3	+1.6	
TGY	Tagaytay City	5.47	175	LR	LR	14 31 31.0		
	comp=Z,768nm,21.1s,baz=106,slow=42							
LQP	Lukban	5.54	169‖	*eP*	Pn	14 29 05.5	+0.6	
QZH	Quanzhou	5.61	342	*e*Pn	Pn	14 29 03.8	-1.9	
QZH				Sn	Sn	14 30 06.3	-3.2	
QZH				LR	LR			
	comp=N,3μm,9.3s							
QZH				LR	LR			
	comp=E,2μm,10.4s							
QZH				LR	LR			
	comp=Z,4μm,10.8s							
HKPS	Hong Kong Po S	6.50	295	Pn	Pn	14 29 15.0	-3.0	
QIZ	Qiongzhong	10.06	269	P	Pn	14 30 06.6	-0.2	
QIZ				S	Sn	14 32 00.1	+1.1	
QIZ	Qiongzhong	10.06	269	Pn	Pn	14 30 03.3	-3.5	
SSE	Sheshan	11.48	3	Pn	Pn	14 30 26.5	+0.3	
NJ2	Nanjing	12.50	354	*eP*	Pn	14 30 41.3	+1.1	
NJ2				pmax	pmax			
	comp=Z,12nm,0.5s							
NJ2				LR	LR			
	comp=N,2μm,10.0s							
NJ2				LR	LR			
	comp=E,2μm,8.5s							
NJ2				LR	LR			
	comp=Z,2μm,8.5s							
DAV	Davao City (W)	13.39	158	LR	LR	14 35 36.9		
	comp=Z,853nm,18.8s,baz=308,slow=35							
MYLDM	Lahad Datu	14.45	188	Pn	Pn	14 31 03.7	-3.1	
ENH	Enshi	14.57	319	Pn	Pn	14 31 07.0	-1.6	
JNU	Nakatsue	16.37	33	P	P	14 31 34.6	-0.2	
	0.2nm,0.3s,baz=233,slow=17,SNR=2.3							
JNU	Nakatsue	16.37	33		P	14 31 34.4	-0.4	
NONG	Nongkai	16.48	268	P	P	14 31 40.5	+4.4	
KMI	Kunming	17.30	292	Pn	Pn	14 31 43.4	-0.7	
XAN	Xi'an	17.69	327	P	Pn	14 31 48.8	+0.2	
XAN				pmax	pmax			
	comp=Z,26nm,2.0s							
XAN	Xi'an	17.69	327	P	Pn	14 31 47.8	-0.8	
CHAI	Chaiyaphum	17.99	261	P	P	14 32 02.0	+9.2	
	13nm,1.1s							
CD2	Chengdu	18.84	310	P	P	14 32 01.9	-0.2	
CD2				pmax	pmax			
	comp=Z,30nm,0.9s							
SBUM	Sibu	18.85	206	P	P	14 32 00.6	-1.6	
KSRS	Korea Array	18.95	19	P	P	14 32 03.4	+0.2	
	0.2nm,0.3s,baz=203,slow=10,SNR=6.5							
GTOI	Gorontalo	19.00	172	P	P	14 32 02.8	-1.0	
	8.0nm,1.1s							
MRSI	Marisa	19.04	176	P	Pn	14 32 06.2	+1.0	
	25nm,0.9s							
MPSI	Mapaga	19.14	182	P	Pn	14 32 06.9	+0.6	
	6.5nm,1.5s							
SUKH	Sukhothai	19.88	267	P	Pn	14 32 19.7	+4.6	
	16nm,1.0s							
CM34	Chiang Mai Arr	20.16	271	P	P	14 32 17.0	+0.5	
CM35	Chiang Mai Arr	20.17	271	P	Pn	14 32 18.0	-0.6	
CM36	Chiang Mai Arr	20.24	271	P	Pn	14 32 20.0	+0.5	
CM09	Chiang Mai Arr	20.35	270	P	Pn	14 32 20.0	-0.7	
	13nm,1.1s							
CM33	Chiang Mai Arr	20.35	271	P	P	14 32 19.0	+0.4	
CHTO	Chiang Mai	20.35	271		P	14 32 18.7	0.0	
CM04	Chiang Mai Arr	20.36	270	P	Pn	14 32 20.6	-0.4	
	95nm13nm,1.2s							
CM01	Chiang Mai Arr	20.38	270	P	Pn	14 32 21.1	-0.1	
	105nm13nm,1.1s							
CM02	Chiang Mai Arr	20.39	270	P	Pn	14 32 21.1	-0.1	
	93nm8.5nm,0.9s							
CM31	Chiang Mai Arr	20.39	270	P	Pn	14 32 30.8	+10	
CMAR	Chiang Mai Arr	20.39	270	P	P	14 32 19.8	+0.7	
	5.4nm,1.0s,baz=76,slow=8.9,SNR=24							
CMAR				PcP	PcP	14 36 32.2	+0.8	
	0.9nm,0.4s,baz=60,slow=0.7,SNR=6.5							
CMAR	Chiang Mai Arr	20.39	270	P	P	14 32 18.9	-0.2	
CM05	Chiang Mai Arr	20.40	270	P	Pn	14 32 20.8	-0.5	
	82nm9.1nm,1.1s							
APSI	Ampana	20.40	177	P	Pn	14 32 20.5	-0.8	
	19nm,1.1s							
CM15	Chiang Mai Arr	20.41	270	P	Pn	14 32 22.2	+0.7	
	99nm11nm,1.1s							
CM13	Chiang Mai Arr	20.43	270	P	Pn	14 32 21.5	-0.2	
	75nm9.1nm,1.1s							
UTHA	Uthaitani	20.44	262	P	Pn	14 32 22.3	+0.4	
	26nm,0.9s							
CM32	Chiang Mai Arr	20.46	271	P	Pn	14 32 21.0	-1.1	
KSM	Kuching	20.57	210	P	P	14 32 20.4	-0.5	
BJT	Baijiatuau	20.70	351	P	Pn	14 32 23.4	-1.2	
BJT				IAmb	IAmb	14 32 24.8		
	comp=Z,79nm,1.3s							
BJI	Beijing	20.72	351	P	P	14 32 23.5	+1.1	
BJI				pmax	pmax			
	comp=Z,42nm,1.1s							
BJI				LR	LR			
	comp=Z,1μm,9.8s							
BJI				LR	LR			
	comp=Z,690nm,9.8s							
BJI				LR	LR			
	comp=Z,310nm,11.8s							
MTKI	Muara Teweh, K	21.12	196	P	P	14 32 27.5	+0.5	
	comp=Z,11μmcomp=Z,22nm,0.8s							
MHMT	Maesarieng	21.38	270	P	P	14 32 35.2	+5.5	
INU	Inuyama	21.44	40	P	P	14 32 31.2	+0.9	
INU				IAmb	IAmb	14 32 54.7		
	comp=Z,56nm,1.3s							
JGF	Kuroka	21.82	40	P	P	14 32 35.1	+0.8	
JGF				IAmb	IAmb	14 32 55.0		
	comp=Z,44nm,1.2s							
LZH	Lanzhou	22.00	322	⇑P	P	14 32 38.3	+1.8	
LZH				pP	sP	14 32 43.4	-1.2	
LZH				sP	pwP	14 32 45.8	-1.1	
LZH				PP	PnPn	14 33 04.8	+6.2	
LZH				pmax	pmax			
	comp=Z,28nm,1.2s							
LZH				LR	LR			
	comp=Z,2μm,10.8s							
LZH				LR	LR			
	comp=Z,1μm,10.3s							
LZH				LR	LR			
	comp=Z,2μm,11.4s							
SANI	Sanana	22.17	165	P	P	14 32 37.6	-0.6	
	comp=Z,16nm,0.9s							
HHC	Hu-ho-hao-te	22.52	342	*eP*	P	14 32 43.1	+1.1	
HHC				pmax	pmax			
	comp=Z,11nm,0.7s							
SIJI	Sorong	22.92	151	P	P	14 32 45.5	-0.7	
	comp=Z,7.5nm,0.7s,baz=358,slow=11,SNR=7.9							
MAT	Matsushiro	22.96	39	P	P	14 32 45.6	-0.9	
MJAR	Matsushiro Arr	22.96	39	P	P	14 32 47.8	+1.3	
	comp=Z,5.2nm,1.0s,baz=239,slow=9.4,SNR=4.6							
SPSI	Sidrap Palu	23.41	182	P	P	14 32 50.5	-0.6	
	comp=Z,19nm,1.1s							
BBKI	Banjar Baru	23.56	194	P	P	14 32 53.9	+1.2	
	comp=Z,22nm,0.7s							
NLAI	Namlea	23.60	163	P	P	14 32 55.2	+2.2	
	comp=Z,2μmcomp=Z,29nm,1.1s							
GUMO	Guam	24.11	101	LR	LR	14 41 04.7		
	comp=Z,196nm,18.8s,baz=260,slow=33							
MSAI	Masohi	24.25	159	P	P	14 33 11.5	+12	
KAPI	Kappang	24.45	182	P	P	14 33 01.3	+0.3	
	comp=Z,2.2nm,0.3s,baz=354,slow=6.5,SNR=5.4							
KAPI				LR	LR	14 43 26.4		
	comp=Z,160nm,18.3s,baz=54,slow=39							
KAPI	Kappang	24.45	182	P	P	14 33 00.9	-0.1	
KAPI				IAmb	IAmb	14 33 10.5		
	comp=Z,45nm,1.3s							
CN2	Changchun	24.50	9	*eP*	P	14 33 01.4	+0.2	
FAKI	Fak Fak	25.18	151	P	P	14 33 06.2	-1.3	
FAKI				IAmb	IAmb	14 33 14.5		
	comp=Z,48nm,1.4s							
MDJ	Mudanjiang	26.09	15	P	P	14 33 16.3	+0.7	
MDJ				pmax	pmax			
	comp=Z,27nm,1.1s							
MDJ	Mudanjiang	26.09	15	P	P	14 33 15.9	+0.3	
USRK	Ussuriysk Ar.	26.36	19	P	P	14 33 20.3	+2.3	
	comp=Z,4.4nm,0.9s,baz=204,slow=8.4,SNR=8.5							
GTA	Gaotai	26.60	322	*eP*	P	14 33 20.8	+0.3	
GTA				pP	pP	14 33 24.8	-1.3	
GTA				sP	sP	14 33 28.1	-0.7	
GTA				pmax	pmax			
	comp=Z,6.0nm,1.8s							
GTA				LR	LR			
	comp=Z,1μm,9.1s							
GTA				LR	LR			
	comp=Z,2μm,10.5s							
GTA				LR	LR			
	comp=Z,2μm,10.5s							
EDFI	Ende, Flores	28.18	177	P	P	14 33 35.4	+0.7	
	comp=Z,8.0nm,1.8s							
LSA	Lhasa	28.42	296	P	P	14 33 37.0	-0.3	
LSA				IAmb	IAmb	14 33 49.5		
	comp=Z,14nm,1.0s							
KRJI	Kerinci	28.51	223	P	P	14 33 37.3	-0.4	
	comp=Z,6μmcomp=Z,148nm,0.7s							
BATI	Baunata	29.77	174	P	P	14 33 47.4	-1.4	
	comp=Z,36nm,0.9s,baz=139,slow=0.2,SNR=6.4							
ULN	Ulaanbaatar	30.25	342	P	P	14 33 53.0	+0.1	
SONM	Songino Array	30.41	341	P	P	14 33 55.2	+0.8	
	comp=Z,2.2nm,0.6s,baz=162,slow=9.4,SNR=13							
SONM	Songino Array	30.41	341	P	P	14 33 54.0	-0.3	
KLR	Kul'dur	30.93	14	P	P	14 34 00.1	+1.4	
	comp=Z,6.5nm,0.9s,baz=225,slow=7.9,SNR=12							
TAPN	Taplejung	30.97	291	*eP*	P	14 34 00.2	+0.5	
ODAN	Odare	31.19	290	*eP*	P	14 34 01.8	+0.2	
	comp=Z,32nm,0.9s							
RAMN	Ramite	31.90	290	*eP*	P	14 34 08.5	+0.6	
	comp=Z,45nm,0.9s							
GUN	Gumba	32.65	291	*eP*	P	14 34 14.9	+0.4	
	comp=Z,44nm,0.9s							
PKI	Pulchoki	33.02	291	*eP*	P	14 34 17.4	-0.4	
	comp=Z,24nm,1.1s							
PKIN	Phulchoki	33.04	291	*eP*	P	14 34 17.4	-0.4	
	comp=Z,32nm,1.3s							
KKN	Kakani	33.16	291	*eP*	P	14 34 18.8	0.0	
	comp=Z,22nm,1.0s							
DMN	Daman	33.30	291	*eP*	P	14 34 20.0	-0.1	
	comp=Z,26nm,0.9s							
GKN	Gorkha	33.75	291	*eP*	P	14 34 23.5	-0.4	
	comp=Z,32nm,1.0s							
DANN	Dangsing	34.56	292	*eP*	P	14 34 30.0	-1.1	
	comp=Z,17nm,0.8s							
KOLN	Koldanda	34.64	291	*eP*	P	14 34 31.6	-0.1	
	comp=Z,22nm,0.9s							
TLY	Talaya	34.65	342	P	P	14 34 32.5	+1.3	
	comp=Z,2.0nm,0.5s,baz=141,slow=12,SNR=3.7							
TLY	Talaya	34.65	342	P	P	14 34 31.9	+0.6	
PYUN	Piuthan	35.21	291	*eP*	P	14 34 36.7	+0.1	
	comp=Z,24nm,0.8s							
KNRA	Kununurra	35.98	166	P	P	14 34 40.9	-2.0	
KNRA				IAmb	IAmb	14 34 50.7		
	comp=Z,18nm,1.4s							
WMQ	Urumqi	36.52	319	*eP*	P	14 34 49.0	+1.6	
WMQ				pP	pP	14 34 52.4	-0.9	
WMQ				pmax	pmax			
	comp=Z,20nm,0.9s							
FITZ	Fitzroy Crossi	37.79	172	P	P	14 34 56.4	-1.9	
ZSN	Zaisan	40.10	322	*eP*	P	14 35 17.1	-0.3	
	comp=Z,2.8nm,1.2s,baz=322							
COEN	Coen	40.13	144	P	P	14 35 15.9	-2.1	
PSA00	Pilbara Seismi	40.91	181	P	P	14 35 23.1	-1.2	
MK31	Makanchi Array	41.30	320	P	P	14 35 27.1	-0.3	
MK31				IAmb	IAmb	14 35 38.7		
	comp=Z,16nm,1.1s							
MKAR	Makanchi Array	41.30	320	P	P	14 35 28.4	+0.9	
	comp=Z,9.3nm,1.0s,baz=119,slow=8.9,SNR=29							
MKAR	Makanchi Array	41.30	320	P	P	14 35 28.2	+0.8	
WB0	Warramunga Arr	41.42	160	P	P	14 35 26.6	-2.0	
MAKZ	Makanchi	41.50	320	P	P	14 35 29.9	+0.8	
MAKZ				IAmb	IAmb	14 35 39.8		
	comp=Z,13nm,1.0s							
WRA	Warramunga Arr	41.56	160	P	P	14 35 28.1	-1.7	
	comp=Z,6.2nm,0.6s,baz=342,slow=9.0,SNR=59							
WRA				PcP	PcP	14 37 26.9	-0.1	
	comp=Z,1.4nm,0.9s,baz=338,slow=3.5,SNR=5.0							
WRA	Warramunga Arr	41.56	160	IAmb	IAmb	14 35 34.0		
	comp=Z,0.4nm,0.7s							
WB2	Warramunga Arr	41.57	160	P	P	14 35 28.0	-1.8	
WB2				IAmb	IAmb	14 35 33.5		
	comp=Z,9.1nm,0.7s							
SHLS	Shalkode	41.61	314	*eP*	P	14 35 27.6	-2.5	
	comp=Z,5.5nm,1.6s,baz=313							
WR0	Warramunga Arr	41.65	160	P	P	14 35 28.7	-1.7	
KPKS	Kokpek	42.25	314	*eP*	P	14 35 35.4	+0.1	
	comp=Z,4.2nm,1.2s,baz=313							
SATY	Saty	42.30	313	*eP*	P	14 35 35.9	+0.1	
	comp=Z,5.6nm,2.6s,baz=313							
YAK	Yakutsk	42.89	6	P	P	14 35 40.1	0.0	
	comp=Z,2.0nm,0.4s,baz=273,slow=1.1,SNR=4.4							
YAK	Yakutsk	42.89	6	P	P	14 35 39.1	-0.9	
YAK				IAmb	IAmb	14 35 49.9		
	comp=Z,16nm,0.7s							
TDK	Taldyqorghan	43.00	316	*eP*	P	14 35 41.7	+0.4	
	baz=315							
KSH	Kashi	43.00	307	*eP*	P	14 35 45.3	+3.8	
MDOK	Medeo	43.27	313	*eP*	P	14 35 44.3	+0.6	
	baz=312							
TNSS	Tian-Shan	43.30	313	*eP*	P	14 35 45.5	+1.2	
	baz=312							
CHKK	Chushkaly	43.54	314	*eP*	P	14 35 45.2	-0.5	
	baz=313							
ZAA0	Zalesovo Array	43.81	330	P	P	14 35 47.6	-0.1	
ZAA0				IAmb	IAmb	14 35 57.6		
	comp=Z,11nm,0.8s							
ZALV	Zalesovo Beam	43.81	330	P	P	14 35 47.9	+0.2	
	comp=Z,5.0nm,0.7s,baz=118,slow=8.0,SNR=25							
ZALV	Zalesovo Beam	43.81	330	P	P	14 35 47.2	-0.5	
KUU	Kurty	44.00	314	*eP*	P	14 35 49.4	0.0	
	comp=Z,6.6nm,1.2s,baz=313							
PETK	Petropavlovsk-	44.07	32	P	P	14 35 50.8	+1.0	
	comp=Z,11nm,1.1s,baz=266,slow=5.8,SNR=2.8							
NIL	Nilore	44.12	298	P	P	14 35 50.4	-0.1	
NIL				IAmb	IAmb	14 36 00.8		
	comp=Z,20nm,0.9s							
SEM	Semipalatinsk	44.22	324	*eP*	P	14 35 50.0	-1.2	
	comp=Z,6.2nm,1.1s,baz=323							
AS31	Alice Springs	44.94	162	P	P	14 35 56.4	-0.6	
ASAR	Alice Springs	44.94	162	P	P	14 35 56.4	-0.6	
	comp=Z,4.0nm,0.7s,baz=341,slow=6.9,SNR=114							
ASAR	Alice Springs	44.94	162	P	P	14 35 55.9	-1.1	
SGDS	Sogindy	45.04	312	*eP*	P	14 35 58.4	+0.6	
	comp=Z,2.9nm,1.6s,baz=312							
KURK	Kurchatov	45.28	323	P	P	14 35 59.6	+0.2	
KURBB	Kurchatov Arra	45.29	323	P	P	14 36 00.3	+0.8	
	comp=Z,14nm,0.8s,baz=122,slow=7.8,SNR=64							
GAR	Garm	47.20	305	P	P	14 36 13.7	-1.2	
DZA	Taraz	47.22	311	*eP*	P	14 36 15.7	+0.8	
	baz=310							
KBL	Kabul	47.68	299	P	P	14 36 18.1	-0.8	
KBL				IAmb	IAmb	14 36 32.1		
	comp=Z,8.5nm,0.9s							
KK31	Karatay Array	47.85	311	P	P	14 36 19.9	+0.1	
KK31				IAmb	IAmb	14 36 31.1		
	comp=Z,8.2nm,1.1s							
KKAR	Karatay Array	47.85	311	P	P	14 36 20.1	+0.3	
KKAR				IAmb	IAmb	14 36 31.1		
	comp=Z,8.2nm,1.1s							
KKAR	Karatay Array	47.85	311	P	P	14 36 20.1	+0.3	
IUG	luzhnay	47.99	309	*eP*	P	14 36 20.9	-0.1	
	comp=Z,5.2nm,1.4s,baz=309							
IUG				*e*S	S	14 43 18.9	+1.2	
	baz=309							
CHGR	Chuyangaron	48.04	305	P	P	14 36 21.4	0.0	
BRZS	Berezniki	48.45	320	*eP*	P	14 36 23.9	-0.3	
	comp=Z,1.4nm,0.8s,baz=320							
FORT	Forrest	50.60	172	P	P	14 36 40.0	-0.8	
BVAR	Borovoye Array	50.88	323	P	P	14 36 43.1	+0.3	
	comp=Z,0.6nm,0.6s,baz=129,slow=14,SNR=2.7							
BRVK	Borovoye	50.95	323	P	P	14 36 43.5	+0.3	
BRVK				IAmb	IAmb	14 36 53.8		
	comp=Z,9.7nm,0.8s							
TIXI	Tiksi	52.30	3	P	P	14 36 52.5	-0.5	
TIXI				IAmb	IAmb	14 37 04.0		
	comp=Z,11nm,1.1s							
NWAO	Narrogin (SRO)	52.31	183	P	P	14 36 53.6	+0.1	
NWAO				IAmb	IAmb	14 37 14.4		
	comp=Z,11nm,1.1s							
NWAO	Narrogin (SRO)	52.31	183	P	P	14 36 53.6	+0.1	
NWAO				IAmb	IAmb	14 37 14.4		
	comp=Z,14nm,1.1s							
NRIK	Noril'sk	53.67	346	P	P	14 37 03.8	+0.6	
	comp=Z,3.5nm,0.6s,baz=119,slow=7.2,SNR=8.9							
BBOO	Buckleboo	54.19	164	P	P	14 37 07.1	-0.3	
STKA	Stephens Creek	55.03	158	P	P	14 37 12.9	-0.6	
	comp=Z,2.8nm,0.5s,baz=330,slow=8.0,SNR=14							
STKA	Stephens Creek	55.03	158	P	P	14 37 12.8	-0.7	
ABKAR	Akbulak array	56.25	317	P	P	14 37 22.4	+0.2	
ABKAR	Akbulak array	56.25	317	P	P	14 37 22.1	0.0	
GEYT	Alibeck	56.64	303	P	P	14 37 24.2	-1.0	
SANVU	Saraoutou	57.65	124	P	P	14 37 32.6	+0.1	
ARU	Arti	58.42	325	P	P	14 37 37.0	-0.4	
ARU				IAmb	IAmb	14 37 47.9		
	comp=Z,11nm,1.0s							
TOO	Toolangi	61.54	158	P	P	14 37 59.3	+0.3	
TOO				IAmb	IAmb	14 38 16.7		
	comp=Z,16nm,1.3s							
GNI	Garni	66.92	306	P	P	14 38 35.8	+1.2	
	comp=Z,2.6nm,0.4s,baz=326,slow=3.6,SNR=5.5							
KBZ	Khabaz	67.88	310	P	P	14 38 41.4	+1.0	
	comp=Z,8.2nm,1.0s,baz=146,slow=3.8							
KIV	Kislovodsk	68.01	310	P	P	14 38 41.8	+0.4	
GEVA	Gevas	68.45	304	P	P	14 38 43.7	-0.6	
KLMR	Klimovskoe	68.71	329	*eP*	P	14 38 43.5	-1.7	
KLMR				AMP		14 38 54.7		
	comp=Z,19nm,1.2s							
RAYN	Ar Rayn	69.11	288	P	P	14 38 47.7	-0.8	
RAYN				IAmb	IAmb	14 38 58.0		
	comp=Z,6.0nm,0.9s							
A21K	Barrow	69.33	20	P	P	14 38 49.6	+0.7	
TTA	Tatalina	69.82	29	P	P	14 38 53.1	+0.9	
TTA				IAmb	IAmb	14 39 03.7		
	comp=Z,5.7nm,1.1s							
CAST	Castle Rocks	71.55	28	P	P	14 39 03.4	+0.8	
CAST				IAmb	IAmb	14 39 13.2		
	comp=Z,10nm,0.9s							
TOLK	Toolik Lake Re	71.92	23		P	14 39 05.7	+0.9	
TOLK				IAmb	IAmb	14 39 16.4		
	comp=Z,6.4nm,0.8s							
BPAW	Bear Paw Mtn.	71.94	28	P	P	14 39 05.9	+0.9	
BPAW				IAmb	IAmb	14 39 07.2		
	comp=Z,15nm,1.3s							
KTH	Kantishna Hill	72.05	28	P	P	14 39 06.6	+0.9	
TRF	Thorofare Moun	72.34	28	P	P	14 39 08.2	+0.6	
TRF				IAmb	IAmb	14 39 19.3		
	comp=Z,8.9nm,1.3s							
SUA	Susitna One	72.42	30	P	P	14 39 08.0	0.0	
I23K	Minto, Yukon-K	72.49	26	P	P	14 39 09.0	+0.8	
RND	Reindeer	72.99	28	P	P	14 39 11.3	0.0	
RND				IAmb	IAmb	14 39 20.8		
	comp=Z,10nm,0.8s							
MDM	Murphy Dome	72.99	26	P	P	14 39 12.1	+0.8	
MDM				IAmb	IAmb	14 39 21.8		
	comp=Z,6.9nm,0.8s							
WRH	Wood River Hil	73.14	27	P	P	14 39 13.0	+0.9	
WRH				IAmb	IAmb	14 39 13.9		
	comp=Z,5.1nm,0.8s							
PMR	Palmer	73.17	30	P	P	14 39 12.2	-0.1	
KNK	Knik Glacier	73.52	30	P	P	14 39 14.5	0.0	
ARC6	ARCESS Array S	73.56	339	P	P	14 39 14.6	+0.1	
ILAR	Eielson Array	73.59	27	P	P	14 39 13.4	-1.4	
	comp=Z,0.8nm,0.6s,baz=264,slow=5.2,SNR=4.5							
FYU	Fort Yukon	73.91	25	P	P	14 39 17.3	+0.7	
FYU				IAmb	IAmb	14 39 27.4		
	comp=Z,6.7nm,1.0s							
SCM	Sheep Creek Mo	73.97	30	P	P	14 39 17.6	+0.5	
PRP	Porcupine Dome	74.01	26	P	P	14 39 17.2	-0.2	
M24K	Tolsona, Glenn	74.44	29	P	P	14 39 21.0	+1.1	
KLU	Klutina	74.69	30	P	P	14 39 22.2	+0.8	
FINES	FINESS Array B	75.08	330	P	P	14 39 23.1	-0.3	
	comp=Z,2.3nm,0.6s,baz=66,slow=6.5,SNR=7.5							
BRTR	Keskin Array B	75.39	307	P	P	14 39 26.2	+0.3	
	comp=Z,1.2nm,0.9s,baz=172,slow=3.7,SNR=4.1							
AKASG	Malin Array Be	75.88	319	P	P	14 39 28.2	0.0	
	comp=Z,0.9nm,0.3s,baz=60,slow=7.8,SNR=6.8							
NACGM	Naroch	76.30	324	*e*	P	14 39 30.0	-0.5	
BARN	Barnard Glacie	76.80	30	P	P	14 39 34.5	+1.0	
DAWY	Dawson	76.92	26	P	P	14 39 33.5	-0.5	
DAWY				IAmb	IAmb	14 39 44.6		
	comp=Z,5.0nm,0.8s							
CTGM	Chitina Glacie	76.98	30	P	P	14 39 34.7	+0.2	
HIZ	Hauiti	77.05	139	P	P	14 39 35.1	+0.2	
BURAR	Bucovina Array	79.23	317	P	P	14 39 47.2	0.0	
BUR08	Bucovina Ar. S	79.23	317	P	P	14 39 47.5	+0.3	
BUR08				IAmb	IAmb	14 40 00.9		
	comp=Z,7.8nm,1.1s							
EUNU	Eureka	79.52	5	P	P	14 39 48.5	+0.4	
EUNU				IAmb	IAmb	14 40 12.5		
	comp=Z,10nm,1.3s							
NB2	NORSAR Subarra	81.97	332	P	P	14 40 00.5	-1.0	
	comp=Z,3.9nm,0.8s,baz=64,slow=5.3							
NOA	NORSAR Array B	81.97	332	P	P	14 40 00.8	-0.7	
	comp=Z,2.5nm,0.9s,baz=66,slow=5.1,SNR=5.7							
CLL	Collm	85.32	323	*eP*	P	14 40 19.0	+0.2	
CLL				*i*		14 40 38.0		
GERES	GERESS Array B	85.97	321	P	P	14 40 22.1	-0.1	
	comp=Z,1.4nm,0.9s,baz=44,slow=5.9,SNR=6.3							
YKA	Yellowknife Ar	87.45	22	P	P	14 40 29.6	+0.5	
	comp=Z,5.1nm,1.0s,baz=313,slow=5.4,SNR=4.5							

IDC ***17*** *14:34:42.0±1.6, 18°.26N×106°.50W, h0km, mb3.6/5, mb1 4.0/9, mb1mx3.9/36, mbtmp3.8/9, ML3.8/4, MS4.5/8, Ms1 4.5/8, ms1mx4.3/29, Error ellipse: s-maj=39.1km s-min=28.1km az=70.0*

MEX ***17*** *14:34:43.2±0.3, 18°.65N×106°.54W, h10km, MD4.7*

NEIC ***17*** *14:34:44.3±1.7, 18°.46N±0°.10×106°.44W±0°.08, h10km±1km, mb4.7/188, Md4.7/24(MEX), Error ellipse: s-maj=17.5km s-min=11.1km az=208.0*

GCMT ***17*** *14:34:45.3±0.2, 18°.70N±0°.01×106°.49W±0°.01, h16km, MW5.2/125, Moment Tensor Solution. s57,c76; s125

MNTX Cornudas Mount 13.06 4 Pn Pn 14 37 52.8 +1.8
JCT Junction City 13.23 26 P Pn 14 37 56.6 +3.2
baz=209,SNR=12
JCT Junction City 13.23 26 Pn Pn 14 37 55.8 +2.3
GDL2 Guadalupe Moun 13.65 7 Pn Pn 14 38 00.9 +1.7
CCIG Comitan 13.78 98 Pn Pn 14 38 01.4 +0.3
121A Cookes Peak, D 13.91 355 P Pn 14 38 05.5 +2.6
baz=175
121A Cookes Peak, D 13.91 355 Pn Pn 14 38 04.2 +1.3
TUC Tucson 14.20 345 P Pn 14 38 08.1 +1.4
baz=163
TUC Tucson 14.20 345 Pn Pn 14 38 06.4 -0.3
214A Organ Pipe Nat 14.49 338 P Pn 14 38 12.3 +1.6
baz=155
214A Organ Pipe Nat 14.49 338 Pn Pn 14 38 12.5 +1.8
435B Jarrell 14.50 32 P Pn 14 38 13.6 +2.8
baz=216
HKT Hockley 14.81 38 P P 14 38 21.5 +0.7
SPX San Pedro Mart 14.86 328 Pn Pn 14 38 16.3 +0.4
ABTX Abilene, Hawle 15.20 22 P Pn 14 38 22.0 +1.7
baz=206
ABTX Abilene, Hawle 15.20 22 Pn Pn 14 38 21.4 +1.2
ABTX IAmb IAmb 14 38 36.0
comp=Z,52nm,1.2s
BNM Barren Site 15.47 359 Pn Pn 14 38 25.5 +1.5
LENM Lemitar 15.49 358 Pn 14 38 24.1 -0.1
WHTX Lake Whitney, 15.56 29 P Pn 14 38 26.9 +2.1
baz=214
WHTX Lake Whitney, 15.56 29 Pn Pn 14 38 26.3 +1.5
WHTX IAmb IAmb 14 38 53.1
comp=Z,68nm,1.4s
113A Mohawk Valley, 15.58 336 Pn Pn 14 38 25.2 +0.1
113A IAmb IAmb 14 38 52.8
comp=Z,49nm,1.4s
MSTX Muleshoe 15.62 11 P Pn 14 38 26.8 +0.9
baz=193,SNR=9.5
MSTX Muleshoe 15.62 11 Pn Pn 14 38 26.6 +0.8
MSTX IAmb IAmb 14 38 42.6
comp=Z,88nm,1.1s
X18A Snowflake 16.16 349 Pn Pn 14 38 34.4 +1.4
GLA Glamis 16.25 334 P Pn 14 38 35.0 +1.1
baz=150
GLA Glamis 16.25 334 Pn Pn 14 38 34.9 +1.0
GLA IAmb IAmb 14 38 51.5
comp=Z,56nm,1.4s
ANMO Albuquerque 16.26 360 Pn P 14 38 36.4 -0.8
comp=Z,0.1nm,0.3s,baz=179,slow=13,SNR=8.1
ANMO LR LR 14 44 31.0
comp=Z,2µm,20.0s,baz=186,slow=35
ANMO Albuquerque 16.26 360 P Pn 14 38 35.9 +1.8
baz=180
ANMO Albuquerque 16.26 360 Pn Pn 14 38 35.7 +1.6
Y14A Wickenburg 16.37 340 Pn Pn 14 38 36.5 +1.2
X16A Lo Mia Camp, P 16.37 345 Pn Pn 14 38 35.9 +0.4
RMX La Rumorosa 16.43 330 Pn Pn 14 38 36.1 -0.2
IKP In-Ko-Pah, Jac 16.49 330 P Pn 14 38 38.2 +1.2
baz=146
SWSC Sam W. Stewart 16.59 331 P Pn 14 38 38.8 +0.7
baz=147
W18A Petrified Fore 16.70 350 P P 14 38 41.5 -0.6
baz=169
W18A Petrified Fore 16.70 350 P P 14 38 43.0 +0.8
AMTX Amarillo 16.73 14 P Pn 14 38 41.6 +1.6
baz=196
AMTX Amarillo 16.73 14 Pn Pn 14 38 41.3 +1.3
AMTX IAmb IAmb 14 38 56.3
comp=Z,68nm,1.1s
Z35A Perchaven, San 16.78 27 Pn Pn 14 38 41.1 +0.6
Z35A IAmb IAmb 14 38 50.4
comp=Z,78nm,1.1s
NATX Nacogdoches 16.82 37 P Pn 14 38 42.9 +1.8
baz=222
NATX Nacogdoches 16.82 37 P 14 38 44.0 +0.8
MONP2 Monument Peak 16.84 330 P Pn 14 38 42.2 +0.8
baz=145
BC3 Big Chuckawall 17.04 333 P Pn 14 38 44.0 +0.2
baz=150
PDMCI Parker Dam,Lak 17.09 338 P Pn 14 38 44.9 +0.5
baz=154
109C Camp Elliot, M 17.17 328 P Pn 14 38 45.9 +0.5
baz=144
IRM Iron Mountain 17.34 335 P Pn 14 38 48.1 +0.5
baz=151,SNR=6.7
WUAZ Wupatki 17.41 346 P P 14 38 49.7 -0.2
baz=164,SNR=7.1
WUAZ Wupatki 17.41 346 Pn Pn 14 38 47.8 -0.7
WMOK Wichita Mounta 17.42 21 P P 14 38 50.9 +1.1
baz=205
WMOK Wichita Mounta 17.42 21 Pn Pn 14 38 48.9 +0.3
TPFO Pinon Flats 17.44 331 P P 14 38 50.1 -0.1
baz=147
PFO Pinyon Flats O 17.45 331 P P 14 38 50.7 +0.4
comp=Z,0.1nm,0.3s,baz=151,slow=12,SNR=5.5
PFO Pinyon Flats O 17.45 331 P P 14 38 50.2 -0.1
baz=147
PFO Pinyon Flats O 17.45 331 Pn Pn 14 38 47.9 -1.2
BELC Belle Mtn. Jos 17.57 333 P P 14 38 51.7 +0.1
baz=149
NEE2 Needles Airpor 17.68 337 P P 14 38 53.0 +0.3
baz=154
MURC Murrieta 17.79 329 P P 14 38 53.7 -0.3
baz=145
Z38A Mt. Pleasant 17.80 33 Pn 14 38 54.1 +0.9
Z38A IAmb IAmb 14 39 06.9
comp=Z,84nm,1.2s
SCI2 San Clemente I 18.00 325 P P 14 38 56.3 +0.1
baz=140
GMRC Granite Mounta 18.10 335 P P 14 38 58.4 +0.9
baz=151,SNR=5.1
BBRC Big Bear Solar 18.20 331 P P 14 39 00.0 +1.3
baz=146
CIS Catalina Islan 18.25 326 P P 14 38 59.7 +0.6
baz=141
HEC Hector,Ludlow 18.42 333 P P 14 39 00.8 -0.1
baz=149
FMP Fort Macarthur 18.43 327 P Pn 14 39 01.2 +0.2
baz=142
U15A North Rim 18.49 345 P P 14 39 01.1 -0.9
W35A Tecumseh 18.50 25 P Pn 14 39 03.1 +1.2
BFSC Mount Baldy Ra 18.53 329 P Pn 14 39 02.9 +0.5
baz=144
MVCO Mesa Verde 18.62 355 P Pn 14 39 04.3 +0.7
baz=174
MVCO Mesa Verde 18.62 355 Pn 14 39 04.5 +1.0
MVCO IAmb IAmb 14 39 33.0
comp=Z,49nm,1.5s
X37A Clayton 18.68 29 P Pn 14 39 04.9 +0.8
X37A IAmb IAmb 14 39 17.9
comp=Z,84nm,1.4s
OK025 Westminster Rd 18.70 24 P Pn 14 39 04.9 +0.6
OK025 IAmb IAmb 14 39 17.4
comp=Z,62nm,1.3s
SNCC San Nicolas Is 18.74 324 P Pn 14 39 04.8 0.0
baz=138
TUQ Turquoise Moun 18.77 335 P Pn 14 39 05.8 +0.6
baz=151
U32A Winter Ranch, 18.85 19 P P 14 39 06.4 +0.7
U32A IAmb IAmb 14 39 17.4
comp=Z,71nm,1.1s
DECC Green Verdugo 18.87 328 P Pn 14 39 06.5 0.0
baz=143
Z41A Richland Creek 18.98 37 P Pn 14 39 09.6 +1.9
baz=223
Z41A Richland Creek 18.98 37 P P 14 39 08.0 +0.9
Z41A IAmb IAmb 14 39 09.5
comp=Z,67nm,1.1s
GSC Goldstone, Bar 19.02 333 P P 14 39 07.9 +0.3
baz=148
GSC Goldstone, Bar 19.02 333 P P 14 39 07.5 -0.1
344A Westbrook Farm 19.05 45 P Pn 14 39 09.9 +1.3
S22A 4UR Ranch, Cre 19.06 359 P Pn 14 39 10.0 +1.0
baz=179
S22A 4UR Ranch, Cre 19.06 359 P 14 39 08.8 +0.5
SDCO Great Sand Dun 19.07 2 P Pn 14 39 10.1 +1.0
baz=183,SNR=14
SDCO Great Sand Dun 19.07 2 P Pn 14 39 09.7 +0.6
KNB Kanab 19.19 344 P P 14 39 09.9 +0.5
EDW2 Edwards Air Fo 19.21 330 P P 14 39 10.0 +0.4
baz=145
OK031 S. Brethren Rd 19.21 24 P P 14 39 10.4 +0.8
OK031 IAmb IAmb 14 39 24.9
comp=Z,79nm,1.5s
LCMT Little Creek M 19.29 343 P P 14 39 09.6 -1.0
SHPR Sheep Range 19.43 338 P P 14 39 11.8 -0.3
PKCU Pink Cliffs 19.47 346 P P 14 39 12.0 -0.7
MIAR Mount Ida 19.53 33 P P 14 39 14.3 +1.2
baz=219
MIAR Mount Ida 19.53 33 P P 14 39 14.0 +1.0
MIAR IAmb IAmb 14 39 35.6
comp=Z,46nm,1.5s
PV05 Paradox Valley 19.54 354 P Pn 14 39 14.8 +0.2
PV01 Paradox Valley 19.54 355 P P 14 39 14.1 +0.7
PV13 Radium Mtn., P 19.59 354 P P 14 39 14.7 +0.7
TUL1 Leonard 19.60 26 P P 14 39 14.9 +1.1
baz=212
TUL1 Leonard 19.60 26 P P 14 39 14.6 +0.7
TUL1 IAmb IAmb 14 39 34.3
comp=Z,72nm,1.2s
PV02 Paradox Valley 19.63 354 P Pn 14 39 15.8 +0.1
VBMS Vicksburg 19.68 43 P Pn 14 39 16.8 +0.8
baz=231
VBMS Vicksburg 19.68 43 P Pn 14 39 16.9 +0.8
VBMS IAmb IAmb 14 39 29.5
comp=Z,62nm,1.1s
PV18 Skein Mesa, Pa 19.68 354 P P 14 39 15.8 +0.8
PV18 IAmb IAmb 14 39 27.1
comp=Z,34nm,1.4s
PV03 Paradox Valley 19.68 354 P P 14 39 15.9 +0.9
PV03 IAmb IAmb 14 39 43.8
comp=Z,33nm,1.3s
KAN14 Manchester OK 19.71 20 P Pn 14 39 16.7 +0.3
PV17 East Wray Mesa 19.72 354 P P 14 39 16.0 +0.6
PV17 IAmb IAmb 14 39 43.3
comp=Z,39nm,1.3s
SBC Santa Barbara 19.74 326 P P 14 39 15.3 0.0
baz=140
PV15 Paradox Valley 19.74 355 P P 14 39 15.3 -0.3
PV15 IAmb IAmb 14 39 37.8
comp=Z,50nm,1.5s
PV12 Saucer Basin, 19.74 354 P P 14 39 15.6 0.0
PV12 IAmb IAmb 14 39 43.1
comp=Z,27nm,1.1s
PV16 Nyswonger Mesa 19.75 354 P P 14 39 15.7 +0.1
PV19 Morning Glory 19.75 354 P P 14 39 15.9 +0.2
PV19 IAmb IAmb 14 39 44.5
comp=Z,44nm,1.4s
PV20 West Nyswonger 19.78 354 P P 14 39 16.8 +0.8
ARVC Arvin 19.81 329 P P 14 39 16.6 +0.4
baz=143
KAN10 Anthony SW Sta 19.82 20 P P 14 39 16.8 +0.5
PV14 Lion Creek, Pa 19.82 354 P P 14 39 17.6 +1.2
PV14 IAmb IAmb 14 39 46.9
comp=Z,38nm,1.3s
PV10 Paradox Valley 19.82 354 P P 14 39 15.8 -0.7
PV10 IAmb IAmb 14 39 28.7
comp=Z,45nm,1.4s
PV04 Paradox Valley 19.83 354 P P 14 39 17.8 +1.3
PV04 IAmb IAmb 14 39 44.6
comp=Z,43nm,1.4s
PV07 Paradox Valley 19.85 355 P P 14 39 17.9 +1.2
X40A Basin Creek Fa 19.88 35 P Pn 14 39 18.6 +0.1
baz=221
X40A Basin Creek Fa 19.88 35 P P 14 39 17.8 +0.9
PV23 Carpenter Ridg 19.90 354 P P 14 39 17.1 -0.2
KAN13 South Haven SW 19.92 21 P P 14 39 18.6 +1.3
W39A Magazine 19.94 32 P P 14 39 18.1 +0.7
baz=218,SNR=6.9
W39A Magazine 19.94 32 P P 14 39 18.6 +1.1
W39A IAmb IAmb 14 39 30.0
comp=Z,59nm,1.2s
MPMC Manual Prospec 19.95 333 P P 14 39 18.3 +0.4
baz=148
PV22 Blue Mesa, Par 19.96 354 P P 14 39 18.9 +1.0
MTPU Mount Pierson 20.01 346 P P 14 39 18.3 -0.3
FURC Furnace Creek, 20.04 335 P P 14 39 18.6 0.0
baz=150
ISA Isabella, Lake 20.07 330 P P 14 39 19.5 +0.4
baz=145
ISA Isabella, Lake 20.07 330 P P 14 39 19.6 +0.6
KS20 Mayfield South 20.09 21 P P 14 39 20.2 +1.0
KS20 IAmb IAmb 14 39 30.2
comp=Z,52nm,1.2s
PKM Mcpherson Peak 20.13 326 P P 14 39 19.9 +0.1
baz=140
T35A Sooner Cattle 20.19 23 P P 14 39 20.5 +0.3
PRN Pahroc Range 20.21 340 P P 14 39 21.6 +1.0
TPNV Topopah Spring 20.22 337 P P 14 39 21.5 +0.8
baz=152
TPNV Topopah Spring 20.22 337 P Pn 14 39 22.0 -0.7
TPNV IAmb IAmb 14 39 50.4
comp=Z,39nm,1.4s
Q24A Divide 20.30 3 P P 14 39 23.2 +1.4
baz=184
MSU Marysvale 20.46 347 P P 14 39 24.7 +1.3
MVU Marysvale 20.46 347 P P 14 39 24.7 +1.3
SMCO Snowmass 20.50 359 P P 14 39 25.2 +1.2
SMCO IAmb IAmb 14 39 49.9
comp=Z,37nm,1.4s
CWC Cottonwood Cre 20.53 332 P P 14 39 24.2 +0.1
baz=147
SMMC Simmler 20.55 327 P P 14 39 23.9 -0.4
baz=141
KSCO Kaye Shedlock' 20.58 8 P P 14 39 25.5 +0.9
baz=190
KSCO Kaye Shedlock' 20.58 8 P P 14 39 26.2 +1.6
KSCO IAmb IAmb 14 39 50.5
comp=Z,27nm,1.1s
TCRU Three Creeks R 20.61 346 P P 14 39 26.1 +1.0
U38A Gravette 20.66 28 P P 14 39 25.7 +0.3
U38A IAmb IAmb 14 39 39.8
comp=Z,48nm,1.1s
GRAC Grapevine Rang 20.70 334 P P 14 39 25.3 -0.5
baz=150
W41B Gary Mavity, V 20.71 34 P P 14 39 27.7 +1.8
baz=221
W41B Gary Mavity, V 20.71 34 P P 14 39 26.9 +1.0
W41B IAmb IAmb 14 39 41.1
comp=Z,57nm,1.2s
SRU San Rafael Swe 20.74 351 P P 14 39 27.1 +0.8
WHAR Wooly Hollow 20.78 34 P P 14 39 26.8 +0.2
WHAR IAmb IAmb 14 39 37.3
comp=Z,58nm,1.2s
R32A Long Quarter, 20.83 17 P P 14 39 27.9 +0.6
PSUT Pine Spring 20.89 343 P P 14 39 27.8 -0.2
CBKS Cedar Bluff 20.94 15 P P 14 39 28.5 +0.1
baz=198
CBKS Cedar Bluff 20.94 15 P P 14 39 29.1 +0.7
PAGB Antelope Grade 21.00 327 P P 14 39 29.6 +0.5
TMUT Trail Mountain 21.03 350 P P 14 39 29.5 -0.2
ISCO Idaho Springs 21.12 2 P P 14 39 29.6 -1.0
baz=182
ISCO Idaho Springs 21.12 2 P P 14 39 31.4 +0.8
P17A Butcher Ranch, 21.12 351 P P 14 39 30.1 -0.4
R11A Troy Canyon, C 21.24 340 P P 14 39 31.6 -0.2
baz=156,SNR=9.3
R11A Troy Canyon, C 21.24 340 P P 14 39 31.6 -0.2
U40A Yellville 21.32 31 P P 14 39 33.6 +1.1
baz=218
U40A Yellville 21.32 31 P P 14 39 33.5 +1.1
U40A IAmb IAmb 14 39 42.5
comp=Z,47nm,1.2s
FCAR Ozark Folk Cen 21.32 33 P P 14 39 33.0 +0.5
FCAR IAmb IAmb 14 39 47.3
comp=Z,57nm,1.1s
SPR3 Spring Creek 3 21.45 343 P P 14 39 33.9 -0.4
SPR3 IAmb IAmb 14 39 57.3
comp=Z,32nm,1.4s
ACON Acoyapa 21.48 105 P P 14 39 38.2 +3.9
ACON IAmb IAmb 14 39 51.9
comp=Z,49nm,1.4s
BRAL Brewton 21.48 51 P P 14 39 35.4 +1.1
baz=239
O20A White River Ci 21.50 356 P P 14 39 35.8 +1.1
baz=175,SNR=11
O20A White River Ci 21.50 356 P P 14 39 34.5 -0.2
O20A IAmb IAmb 14 39 52.7
comp=Z,43nm,1.1s
TPH Tonopah 21.58 336 P P 14 39 35.5 +0.1
MPU Maple Canyon 21.80 349 P P 14 39 38.7 +0.8
MLAC Mammoth, Mammo 21.86 333 P P 14 39 39.0 +0.4
baz=147
HBAR Harrisburg 21.87 36 P P 14 39 39.6 +1.3
OXF Oxford 21.88 40 P P 14 39 39.5 +1.0
baz=228
OXF Oxford 21.88 40 P P 14 39 39.1 +0.6
Z47A Carrollton 21.90 45 P P 14 39 39.8 +1.1
Z47A IAmb IAmb 14 39 57.9
comp=Z,27nm,0.8s
MDPB Devils Postpil 21.97 332 P P 14 39 40.2 +0.5
MDPB IAmb IAmb 14 40 06.3
comp=Z,24nm,1.3s
LCAR Lake Charles 21.97 35 P P 14 39 39.7 +0.2
LCAR IAmb IAmb 14 39 52.9
comp=Z,39nm,1.2s
KSU1 Kansas State U 22.10 21 P P 14 39 42.2 +1.3
baz=206
S39A Bolivar 22.17 28 P P 14 39 41.2 -0.4
S39A IAmb IAmb 14 39 59.7
comp=Z,39nm,1.4s
N23A Red Feather La 22.21 1 P P 14 39 42.6 +0.4
baz=181
N23A Red Feather La 22.21 1 P P 14 39 42.9 +0.6
N23A IAmb IAmb 14 40 01.4
comp=Z,23nm,1.2s
DUG Dugway, Tooele 22.21 347 P P 14 39 42.8 +0.7
baz=164,SNR=7.3
DUG Dugway, Tooele 22.21 347 P P 14 39 42.6 +0.5
DUG IAmb IAmb 14 40 08.5
comp=Z,36nm,1.3s
MGMO Mountain Grove 22.23 31 P P 14 39 42.2 -0.1
MGMO IAmb IAmb 14 40 04.9
comp=Z,35nm,1.3s
LHV Little Huntoon 22.24 334 P P 14 39 42.2 -0.1
NV11 Mina Array Sit 22.25 335 P P 14 39 43.7 +1.1
NV11 IAmb IAmb 14 40 06.1
comp=Z,28nm,1.4s
NVAR Mina Array Bea 22.31 335 P P 14 39 45.8 +2.5
comp=Z,1.9nm,0.9s,baz=152,slow=10.0,SNR=13
NVAR Mina Array Bea 22.31 335 P P 14 39 43.5 +0.1
JLU Jordanelle 22.34 350 P P 14 39 43.9 +0.2
W45A Hickory Valley 22.45 39 P P 14 39 45.9 +1.3
250A Grady 22.48 50 P P 14 39 46.6 +1.7
LRAL Lakeview Retre 22.54 47 P P 14 39 47.7 +2.1
baz=235,SNR=8.3
LRAL Lakeview Retre 22.54 47 P P 14 39 47.0 +1.5
LRAL IAmb IAmb 14 40 03.1
comp=Z,45nm,1.2s
PHWY Pilot Hill 22.62 2 P P 14 39 46.9 +0.2
PHWY IAmb IAmb 14 40 03.0
comp=Z,21nm,1.4s
T42A Van Buren 22.73 33 P P 14 39 47.1 -0.5
T42A IAmb IAmb 14 40 03.8
comp=Z,52nm,1.4s
KVN Kaiserville 22.76 336 P P 14 39 47.8 -0.3
KVN IAmb IAmb 14 40 16.2
comp=Z,22nm,1.3s
TCUT Toone Canyon 22.84 350 P P 14 39 49.4 +0.5
WAKR Walker 22.85 333 P P 14 39 49.2 +0.1
WAKR IAmb IAmb 14 40 17.0
comp=Z,31nm,1.3s
CMB Columbia Colle 22.89 331 P P 14 39 48.6 -0.7
LNXT Lenox 22.92 37 P P 14 39 51.7 +2.2
BGU Big Grassy Mou 22.96 347 P P 14 39 48.8 -1.3
PLAL Pickwick Lake 23.01 41 P P 14 39 51.1 +0.6
PLAL IAmb IAmb 14 40 08.6
comp=Z,14nm,0.9s
R40A Maddies Statio 23.14 29 P P 14 39 51.2 -0.6
R40A IAmb IAmb 14 40 06.9
comp=Z,33nm,1.1s
PARMO Parma 23.17 36 P P 14 39 53.4 +1.2
SPUT South Promonto 23.21 348 P P 14 39 51.8 -0.9
ELK Elko 23.33 343 P P 14 39 55.2 +1.2
comp=Z,1.3nm,0.9s,baz=160,slow=8.8,SNR=12
ELK Elko 23.33 343 P P 14 39 54.5 +0.4
X48A Hartselle 23.34 44 P P 14 39 54.1 +0.2
X48A IAmb IAmb 14 39 55.8
comp=Z,19nm,1.1s
PNTR Pine Nut 23.41 333 P P 14 39 53.7 -1.1
PNTR IAmb IAmb 14 40 05.3
comp=Z,26nm,1.5s
Y49A Blount Mountai 23.41 46 P P 14 39 54.9 +0.3
Y49A IAmb IAmb 14 40 09.8
comp=Z,41nm,1.2s
CCM Cathedral Cave 23.44 31 P P 14 39 56.9 +2.0
baz=219
CCM Cathedral Cave 23.44 31 P P 14 39 54.4 -0.4
HVU Hansel Valley 23.73 348 P P 14 39 58.3 +0.5
BGNE Belgrade 23.78 15 P P 14 39 58.9 +0.7
baz=200
FVM French Village 23.80 33 P P 14 39 58.6 +0.3
PAHR Pah Rah Range 23.84 335 P P 14 39 59.0 +0.1
PAHR IAmb IAmb 14 40 17.6
comp=Z,39nm,1.5s
AFDM Forest Hills D 23.90 331 P P 14 39 58.6 -0.7
WVT Waverly 23.92 39 P P 14 40 00.9 +1.4
baz=228
152A Waverly Hall 23.95 50 P P 14 40 00.0 +0.1
K22A Casper 23.96 360 P P 14 39 59.8 -0.2
baz=180
K22A Casper 23.96 360 P P 14 39 59.1 -1.0
T45A Paducah 24.05 37 P P 14 40 01.9 +1.1
TIGA Tifton 24.21 54 P P 14 40 03.5 +1.1
baz=244
TIGA Tifton 24.21 54 P P 14 40 03.5 +1.1
BW06 Boulder Array 24.23 354 P P 14 40 02.2 -0.4
baz=173
BW06 Boulder Array 24.23 354 P P 14 40 00.1 -2.5
PD31 Pinedale Array 24.23 354 P P 14 40 00.2 -2.4
PDAR Pinedale Array 24.23 354 P P 14 40 03.2 +0.5
comp=Z,0.9nm,0.6s,baz=170,slow=9.0,SNR=5.5
PDAR LR LR 14 49 23.4
comp=Z,1µm,20.7s,baz=180,slow=36
PDAR Pinedale Array 24.23 354 P P 14 40 00.3 -2.4
P40A Paris 24.25 28 P P 14 40 03.4 +0.8
P40A IAmb IAmb 14 40 31.1
comp=Z,22nm,1.0s
V48A Smith Brothers 24.28 41 P P 14 40 03.1 +0.1
FPAL Fort Paine 24.34 45 P P 14 40 03.8 +0.2
BEKR Beckworth 24.38 333 P P 14 40 01.6 -2.4
AHID Auburn Hatcher 24.40 352 P P 14 40 03.7 -0.5
SWET Sewanee 24.53 44 P P 14 40 06.2 +1.0
SWET IAmb IAmb 14 40 24.2
comp=Z,35nm,1.3s
ORV Oroville 24.63 331 P P 14 40 06.1 0.0
ORV IAmb IAmb 14 40 24.9
comp=Z,26nm,1.5s
GDXM Geysers 24.66 328 P P 14 40 04.8 -1.7
CLTN Cedars of Leba 24.81 41 P P 14 40 07.5 -0.2
CLTN IAmb IAmb 14 40 09.9
comp=Z,19nm,1.0s
X51A Calhoun 24.87 46 P P 14 40 10.7 +2.4
T47A Sharon Grove 24.92 39 P P 14 40 08.7 0.0
W50A Signal Mountai 24.93 44 P P 14 40 09.4 +0.6
REDW Red Top Meadow 24.96 352 P P 14 40 08.7 -0.5
SNOW Snow King Moun 25.04 352 P P 14 40 11.0 +1.0
TPAW Teton Pass 25.10 352 P P 14 40 10.7 +0.1
Q44A Meyer Farm, Va 25.21 33 P P 14 40 10.6 -0.7
GOGA Godfrey 25.23 50 P P 14 40 13.1 +1.5
baz=240
GOGA Godfrey 25.23 50 P P 14 40 13.5 +1.9
GOGA IAmb IAmb 14 40 14.3
comp=Z,22nm,1.1s
O03E Paynes Creek 25.36 332 P P 14 40 12.4 -0.4
baz=144
IMW Indian Meadow 25.50 352 P P 14 40 14.9 +0.7
IMW IAmb IAmb 14 40 28.5
comp=Z,9.3nm,0.9s
HLID Hailey 25.78 346 P P 14 40 16.9 +0.3
baz=162
HLID Hailey 25.78 346 P P 14 40 16.8 +0.2
HLID IAmb IAmb 14 40 40.4
comp=Z,12nm,1.1s
W52A Murphy 25.80 46 P P 14 40 16.9 +0.2
YPP Pitchstone Pla 25.85 353 P P 14 40 18.6 +1.2
WVOR Wild Horse Val 25.93 339 P P 14 40 16.9 -1.0
WVOR IAmb IAmb 14 40 29.9
comp=Z,14nm,1.3s
WDC Whiskeytown Da 25.93 331 P P 14 40 17.4 -0.4
KMRM Mail Ridge 26.20 329 P P 14 40 19.6 -0.8
KMRM IAmb IAmb 14 40 45.2
comp=Z,28nm,1.4s
TKL Tuckaleechee C 26.22 45 LR LR 14 52 40.1
comp=Z,1µm,18.8s,baz=247,slow=41
WCI Wyandotte Cave 26.23 38 P P 14 40 22.1 +1.5
baz=228
WCI Wyandotte Cave 26.23 38 P P 14 40 22.0 +1.4
WCI IAmb IAmb 14 40 38.9
comp=Z,14nm,0.8s
YMR Madison River 26.26 353 P P 14 40 21.0 0.0
BCYI Bear Canyon 26.29 349 P P 14 40 21.5 +0.2
N02D Trinity Center 26.32 331 P P 14 40 21.3 -0.2
baz=143
T50A Nancy 26.33 41 P P 14 40 22.6 +1.1
T50A IAmb IAmb 14 40 41.0
comp=Z,18nm,1.2s

ECSD	EROS Data Cent	26.36	16	P		P	14 40 23.0	+1.3	
	baz=201								
YHH	Holmes Hill	26.36	353	P		P	14 40 21.6	-0.4	
YHB	Horse Butte	26.37	352	P		P	14 40 21.3	-0.7	
BG3	Lake Jocassee	26.43	47	P		P	14 40 23.7	+1.3	
YHL	Hebgen Lake	26.46	352	P		P	14 40 24.4	+1.4	
YNE	Yellowstone No	26.49	354	P		P	14 40 23.9	+0.8	
X54A	Belton	26.59	49	P		P	14 40 24.7	+0.8	
	baz=240								
M04C	Macdoel	26.59	334	P		P	14 40 24.0	+0.1	
	baz=146								
MCMT	McKenzie Canyo	26.69	350	P		P	14 40 24.6	-0.4	
J08A	Circle Bar Ran	26.70	340	P		P	14 40 23.4	-1.5	
M02C	Callahan	26.72	332	P		P	14 40 25.0	0.0	
	baz=144								
157A	Early Branch	26.73	53	P		P	14 40 25.0	-0.1	
	baz=245								
TZTN	Tazewell	26.87	44	P		P	14 40 28.4	+2.0	
TZTN				IAmb		IAmb	14 40 50.1		
	comp=Z,19nm,1.1s								
W54A	Cherokee Point	27.00	48	P		P	14 40 27.6	0.0	
	baz=239								
X55A	Gracelyn & Ava	27.08	49	P		P	14 40 28.6	+0.3	
	baz=241								
PAULI	Pauline	27.13	49	P		P	14 40 29.6	+0.9	
PAULI				IAmb		IAmb	14 40 40.6		
	comp=Z,21nm,1.1s								
L04D	Klamath Falls	27.15	333	P		P	14 40 29.0	0.0	
	baz=145								
DLMT	Dillon	27.17	350	P		P	14 40 28.9	-0.3	
DLMT				IAmb		IAmb	14 40 55.9		
	comp=Z,26nm,1.4s								
Z57A	Bowman	27.22	52	P		P	14 40 29.6	0.0	
	baz=244								
BOZ	Bozeman (W)	27.26	352	P		P	14 40 30.9	+1.0	
	baz=169								
BOZ	Bozeman (W)	27.26	352	P		P	14 40 29.9	0.0	
BOZ				IAmb		IAmb	14 40 43.2		
	comp=Z,15nm,1.4s								
JSC	Jenkinsville	27.26	50	P		P	14 40 30.9	+1.0	
JSC				IAmb		IAmb	14 40 46.0		
	comp=Z,15nm,1.1s								
SFIN	Lafayette	27.30	33	P		P	14 40 31.3	+1.1	
	baz=223								
158A	Hollywood	27.37	54	P		P	14 40 31.7	+0.8	
	baz=246								
V54A	Nebo	27.52	47	P		P	14 40 33.7	+1.4	
	baz=238								
X56A	White Oak	27.53	50	P		P	14 40 33.7	+1.4	
	baz=242								
NHSC	New Hope	27.54	53	P		P	14 40 33.5	+1.1	
	baz=245								
LRM	Limekiln Ridge	27.59	351	P		P	14 40 31.4	-1.7	
J05D	Fort Rock, OR	27.61	336	P		P	14 40 33.4	+0.3	
	baz=149								
KMSC	Kings Mountain	27.63	48	P		P	14 40 33.8	+0.6	
	baz=240								
BMO	Blue Mountains	27.71	343	P		P	14 40 33.9	0.0	
JFWS	Jewell Farm	27.80	26	P		P	14 40 35.0	+0.3	
	baz=215								
JFWS	Jewell Farm	27.80	26	P		P	14 40 35.5	+0.9	
JFWS				IAmb		IAmb	14 40 52.1		
	comp=Z,23nm,1.1s								
Z58A	St. Stephen	27.91	53	P		P	14 40 35.8	+0.1	
	baz=245								
J04D	Umpqua Nationa	27.91	335	P		P	14 40 35.9	0.0	
	baz=147								
LAO	LASA Array	28.00	0	P		P	14 40 36.6	+0.2	
	baz=180								
LAO	LASA Array	28.00	0	P		P	14 40 35.6	-0.8	
LAO				IAmb		IAmb	14 40 46.0		
	comp=Z,14nm,1.2s								
U54A	Nelsons Funny	28.01	45	P		P	14 40 37.0	+0.3	
	baz=237								
P49A	Miami Univ. Ec	28.02	37	P		P	14 40 37.2	+0.6	
	baz=228								
V55A	Taylorsville	28.07	47	P		P	14 40 37.0	-0.2	
	baz=239								
K02D	Willamette Mer	28.12	332	P		P	14 40 37.3	-0.4	
	baz=144								
HRY	Holter Researc	28.38	352	P		P	14 40 39.9	0.0	
T54A	Tazewell	28.47	45	P		P	14 40 41.2	+0.4	
	baz=237								
Q51A	Peebles	28.50	40	P		P	14 40 43.4	+2.4	
Q51A				IAmb		IAmb	14 41 09.3		
	comp=Z,17nm,1.2s								
V56A	Mocksville	28.55	48	P		P	14 40 41.2	-0.2	
	baz=240								
W57A	Gilead	28.59	50	P		P	14 40 42.4	+0.6	
	baz=242								
O49A	Covington	28.68	37	P		P	14 40 42.9	+0.4	
MSO	Missoula	28.82	349	P		P	14 40 44.3	+0.5	
	baz=165,SNR=6.5								
MSO	Missoula	28.82	349			P	14 40 43.2	-0.6	
S54A	Dingess, Beckl	29.06	44	P		P	14 40 45.3	-0.6	
	baz=236								
V57A	Coltrane Farms	29.10	48	P		P	14 40 46.7	+0.3	
	baz=241								
Q52A	Bidwell	29.12	41	P		P	14 40 46.6	+0.1	
	baz=233								
ACSO	Alum Creek Sta	29.48	38	P		P	14 40 49.9	+0.2	
	baz=230								
MDND	Maddock	29.68	9	P		P	14 40 51.7	+0.4	
	baz=193								
MDND	Maddock	29.68	9	P		P	14 40 51.0	-0.3	
MDND				IAmb		IAmb	14 41 19.7		
	comp=Z,17nm,0.9s								
U57A	Blanch	29.68	48	P		P	14 40 50.2	-1.2	
	baz=241								
F05D	White Salmon	29.93	339	P		P	14 40 54.3	+0.8	
	baz=151								
P53A	Whipple	29.98	41	P		P	14 40 53.3	-0.8	
	baz=233								
T57A	Hurt	30.02	47	P		P	14 40 53.7	-0.8	
	baz=240								
Q54A	Coxs Mills	30.04	42	P		P	14 40 54.8	+0.2	
	baz=235								
R55A	Marlinton	30.11	44	P		P	14 40 55.2	-0.1	
	baz=237								
S56A	Natural Bridge	30.15	45	P		P	14 40 55.3	-0.3	
	baz=238								
I45A	Fountain	30.46	29	P		P	14 40 60.0	+1.7	
Q55A	Buckhannon	30.53	43	P		P	14 40 58.5	-0.5	
	baz=236								
U59A	Littleton	30.73	49	P		P	14 41 00.8	+0.1	
	baz=243								
AGMN	Agassiz Nation	30.82	14	P		P	14 41 01.3	-0.1	
	baz=200								
P55A	Reedsville	30.98	42	P		P	14 41 03.8	+0.9	
	baz=236								
T59A	Double "B" Far	31.19	48	P		P	14 41 05.3	+0.5	
	baz=242								
B08A	Colville Reser	31.48	343			P	14 41 07.2	0.0	
P56A	Dayton Farm, R	31.61	43	P		P	14 41 08.5	0.0	
	baz=237								
V62A	Hyde County Ai	31.73	52	P		P	14 41 09.0	-0.5	
T60A	Surry	31.85	48	P		P	14 41 10.4	-0.1	
L53A	Girard	32.17	38	P		P	14 41 14.1	+0.8	
	baz=232								
P58A	Pank, Wackersv	32.61	44	P		P	14 41 17.1	-0.1	
	baz=239								
ULM	Lac du Bonnet	32.66	13	P		P	14 41 18.5	+1.0	
	comp=Z,3.2nm,0.8s,baz=187,slow=7.5,SNR=3.0								
ULM	Lac du Bonnet	32.66	13	IAmb		IAmb	14 41 38.3		
	comp=Z,17nm,1.2s								
O57A	Amberson	32.77	43	P		P	14 41 19.3	+0.6	
	baz=238								
A04D	Lummi Island	32.81	340	P		P	14 41 19.4	+0.6	
	baz=151								
Q61A	Milford	33.64	47	P		P	14 41 27.0	+0.7	
	baz=242								
L56A	Greenwood	33.89	40	P		P	14 41 28.8	+0.4	
	baz=235								
M58A	Price's Panora	34.15	42	P		P	14 41 31.7	+1.0	
	baz=238								
L57A	Andrews Acres	34.25	41	P		P	14 41 32.1	+0.6	
	baz=236								
O60A	Telford	34.29	44	P		P	14 41 32.6	+0.8	
	baz=240								
K56A	Middlesex	34.35	39	P		P	14 41 32.4	-0.1	
	baz=235								
BINY	Binghamton	34.89	41	P		P	14 41 37.7	+0.5	
	baz=237								
L58A	Harry Jones Me	34.90	41	P		P	14 41 37.2	+0.1	
	baz=238								
N61A	South Mountain	35.23	44	P		P	14 41 40.0	0.0	
	baz=241								
M60A	Port Jervis	35.30	43	P		P	14 41 40.9	+0.2	
	baz=240								
K58A	Earlville	35.41	40	P		P	14 41 42.1	+0.5	
	baz=237								
G54A	Lake Saint Pet	35.55	35	P		P	14 41 43.7	+0.9	
	baz=231								
J57A	Williamstown	35.56	39	P		P	14 41 42.3	-0.5	
	baz=236								
K59A	Cooperstown	35.91	41	P		P	14 41 45.9	0.0	
	baz=238								
ALGO	Algonquin Park	35.93	34	P		P	14 41 47.1	+1.2	
	baz=230								
I58A	Old Forge	36.33	40	P		P	14 41 48.6	-0.9	
	baz=237								
L61A	Hillsdale 1, H	36.43	43	P		P	14 41 50.5	+0.2	
	baz=240								
J59A	Piesco	36.50	40	P		P	14 41 50.7	-0.2	
	baz=238								
G57A	Newington	37.12	38	P		P	14 41 56.7	+0.6	
	baz=235								
H59A	Cadyville	37.63	39	P		P	14 42 01.2	+0.7	
	baz=237								
D55A	Sainte-Anne-du	37.99	35	P		P	14 42 04.1	+0.6	
	baz=232								
LSQQ	Lebel-sur-Quev	38.51	31	P		P	14 42 07.6	-0.2	
	baz=228								
H61A	Lyndonville	38.64	40	P		P	14 42 09.2	+0.2	
	baz=239								
E61A	Lac Etchemin	40.48	39	P		P	14 42 24.7	+0.4	
	baz=239								
TAOE	Nuku Hiva Isla	43.07	234	*e*LR		LR	14 54 25.2		
	comp=Z,2µm,27.3s								
TAOE	Nuku Hiva Isla	43.07	234	*e*T		T	15 28 16.6		
	comp=Z,49nm,0.2s								
AIN	Ainahou	46.29	279	P		P	14 43 11.5	-0.3	
LPAZ	La Paz	51.18	130	LR		LR	15 03 01.3		
	comp=Z,583nm,20.9s,baz=318,slow=33								
INK	Inuvik	52.53	348	P		P	14 43 58.0	-0.5	
INK				IAmb		IAmb	14 44 13.6		
	comp=Z,14nm,1.2s								
SUA	Susitna One	52.85	335	P		P	14 44 02.0	+0.9	
ILAR	Eielson Array	53.44	340	P		P	14 44 05.8	+0.5	
	comp=Z,1.0nm,1.0s,baz=143,slow=6.5,SNR=5.2								
ILAR				LR		LR	15 07 30.4		
	comp=Z,294nm,18.4s,baz=146,slow=37								
ILAR	Eielson Array	53.44	340	P		P	14 44 04.9	-0.4	
MCK	McKinley	53.49	338	P		P	14 44 04.6	-1.1	
	baz=127								
POKR	Poker Plat Res	53.84	340	P		P	14 44 08.3	+0.1	
	baz=130								
I23K	Minto, Yukon-K	54.50	339	P		P	14 44 12.6	-0.4	
	baz=128								
MEH	Mehetia	54.72	231	*e*T		T	15 42 50.2		
	comp=Z,9.4nm,0.3s								
PPT2	Papeete2	55.66	232	*e*LR		LR	15 00 18.9		
	comp=Z,2µm,26.0s,baz=48								
TOLK	Toolik Lake Re	56.73	343	P		P	14 44 28.7	-0.4	
	baz=129								
H03N2	Juan Fernandez	58.02	153	T		T	15 47 20.8		
	baz=330,slow=78								
H03N1	Juan Fernandez	58.03	153	T		T	15 47 21.7		
	baz=330,slow=78								
H03N3	Juan Fernandez	58.03	153	T		T	15 47 21.2		
	baz=330,slow=78								
TBI	Tubuai	59.24	227	*e*LR		LR	15 01 51.7		
	comp=Z,2µm,27.8s,baz=46								
EUNU	Eureka	62.13	4	P		P	14 45 06.6	+0.4	
TIXI	Tiksi	82.55	345	P		P	14 47 06.6	-1.5	
NOA	NORSAR Array B	86.36	26	LR		LR	15 27 37.9		
	comp=Z,207nm,18.0s,baz=75,slow=37								
DZM	Mont Dzumac	94.32	248	*e*LR		LR	15 18 06.2		
	comp=Z,1µm,24.1s								
MJAR	Matsushiro Arr	98.03	313	LR		LR	15 22 35.8		
	comp=Z,230nm,22.0s,baz=70,slow=29								
LZH	Lanzhou	118.53	332	*e*PKP		PKPdf	14 53 33.0	-1.2	
LZH				pPKP		sPKPdf	14 53 42.8	+5.4	
LZH				sPKP			14 53 46.9		
WRA	Warramunga Arr	122.96	258	PKP		PKPdf	14 53 40.5	-2.2	
	comp=Z,0.6nm,1.0s,baz=99,slow=0.8,SNR=4.6								
ASAR	Alice Springs	123.90	254	PKP		PKPdf	14 53 41.4	-3.1	
	comp=Z,0.3nm,0.8s,baz=95,slow=2.1,SNR=1.8								

NEIC ***17*** *14:46:10.8±1.6, 19°.54N±0°.06×120°.29E±0°.07, h10km±1km, mb4.8/76, Error ellipse: s-maj=12.1km s-min=10.3km az=111.0*

BJI ***17*** *14:46:11.3±0.0, 19°.65N×120°.30E, h10km, mB5.2/28, mb4.6/58, Ms4.8/28, Ms7 4.6/27*

KLM ***17*** *14:46:11.0, 19°.49N×120°.47E, h12km, mb4.8*

GCMT ***17*** *14:46:12.8±0.4, 19°.50N±0°.04×120°.33E±0°.04, h13km±1km, MW4.8/78, Moment Tensor Solution. s13,c17; s78,c110; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.87±.18; Mθθ=0.65±.10; Mφφ=1.21±.13; Mrθ=-0.29±.29; Mθφ=0.73±.07; Mφr=0.39±.31; Best double couple: M=1.85800×10^16 NP1:φs=214.00000°, δ37.00000°, λ=-91.00000°. NP2: φs=35.00000°, δ53.00000°, λ=-89.00000°. Principal axes: T 1.7790, Plg8.0000°, Azm125.0000°; N 0.1490, Plg0.0000°, Azm215.0000°; P -1.9360, Plg82.0000°, Azm308.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MAN ***17*** *14:46:13.1, 19°.55N×120°.57E, h32km, mb5.3, ML4.3, MS4.5*

IDC ***17*** *14:46:15.5±2.6, 19°.43N×120°.43E, h43km±25km, mb4.2/34, mb1 4.3/37, mb1mx4.2/57, mbtmp4.5/37, ML4.4/3, Error ellipse: s-maj=16.1km s-min=9.2km az=75.0*

ISC 17 14:46:12.9±0.3, 19°.54N±0°.03×120°.38E±0°.04, h23km, n250, σ1§44/236, mb4.7/93, MS4.6/4, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	1.61	177	‖	*e*P	Pn	14 46 39.4	-0.5
SIPP					*e*S	Sb	14 47 15.4	+14
BBP	Basco	1.75	59		*e*P	Pn	14 46 40.4	-1.4
BBP					*e*S	Sn	14 46 58.0	-5.3
APYP	Conner	1.86	154		*e*P	Pn	14 46 41.3	-2.0
APYP					*e*S	Sn	14 47 04.3	-1.7
SGCP	Mt. Cagua	2.04	129		*e*P	Pn	14 46 43.8	-2.0
SGCP					*e*S	Sn	14 47 07.5	-3.0
TWG	Pinlang	3.33	11			Pn	14 47 02.2	-1.3
SMPP	San Manuel, Pa	3.38	175		*e*P	Pn	14 47 02.2	-2.1
SMPP					*e*S	Sn	14 47 30.1	-14
TPUB	Ta-pu	3.75	4			Pn	14 47 07.4	-2.0
YULB	Yu-li	3.93	12			Pn	14 47 09.8	-2.1
BALP	Baler	3.94	163		*e*P	Pn	14 47 12.9	+0.9
BALP					*e*S	Sn	14 47 53.4	-4.2
SSLB	Suanglung	4.26	7	Pn		Pn	14 47 15.0	-1.4
NACB	Ninganchiao	4.75	14			Pn	14 47 21.3	-1.8
YHNB	Yeheng	5.19	10	Pn		Pn	14 47 28.4	-0.9
KNMB	Chin-men Tao	5.24	340	Pn		Pn	14 47 27.2	-2.6
TGY	Tagaytay City	5.43	174	P		Pn	14 47 32.9	+0.4
	48nm,0.3s,baz=122,slow=19,SNR=2.1							
LQP	Lukban	5.51	168	‖	*e*P	Pn	14 47 33.1	-0.7
QZH	Quanzhou	5.63	343		*e*Pn	Pn	14 47 32.8	-2.3
QZH					Sn	Sn	14 48 34.6	-4.5
QZH					LR	LR		
	comp=N,4µm,11.8s							
QZH					LR	LR		
	comp=E,5µm,11.4s							
QZH					LR	LR		
	comp=Z,4µm,10.5s							
HKPS	Hong Kong Po S	6.43	296			Pn	14 47 43.7	-2.5
QIZ	Qiongzhong	9.96	269	P		Pn	14 48 32.6	-2.1
QIZ				S		Sn	14 50 21.3	-4.5
QIZ				pmax		pmax		
	comp=Z,18nm,0.6s							
QIZ				LR		LR		
	comp=N,1µm,17.7s							
QIZ				LR		LR		
	comp=E,960nm,15.3s							
QIZ				LR		LR		
	comp=Z,990nm,17.7s							
QIZ	Qiongzhong	9.96	269	Pn		Pn	14 48 32.5	-2.1
NJ2	Nanjing	12.54	354	*e*P		Pn	14 49 10.0	+0.1
NJ2				S		Sn	14 51 30.3	+1.5
NJ2				pmax		pmax		
	comp=Z,12nm,0.5s							
NJ2				LR		LR		
	comp=N,1µm,4.3s							
NJ2				LR		LR		
	comp=E,1µm,6.6s							
NJ2				LR		LR		
	comp=Z,600nm,4.3s							
MYLDM	Lahad Datu	14.39	188			Pn	14 49 35.4	+0.1
ENH	Enshi	14.54	319	Pn		Pn	14 49 36.0	-1.3
JNU	Nakatsue	16.47	33	P		P	14 50 05.5	+0.5
	0.8nm,0.3s,baz=332,slow=4.7,SNR=5.9							
JNU	Nakatsue	16.47	33			Pn	14 50 01.3	-1.2
JNU				IAmb		IAmb	14 50 19.4	
	comp=Z,120nm,1.5s							
TIA	Tai'an	16.86	351	P		P	14 50 09.8	+0.5
TIA				pmax		pmax		
	comp=Z,12nm,1.8s							
XAN	Xi'an	17.68	327	P		P	14 50 18.0	-0.4
XAN				pmax		pmax		
	comp=Z,29nm,2.1s							
XAN	Xi'an	17.68	327	P		Pn	14 50 16.4	-1.2
SBUM	Sibu	18.76	206			Pn	14 50 30.9	-0.1
SBUM	Sibu	18.76	206	P		Pn	14 50 32.0	+1.0
CD2	Chengdu	18.80	310	*e*P		Pn	14 50 31.3	-0.1
CD2				pmax		pmax		
	comp=Z,30nm,1.5s							
GTOI	Gorontalo	18.96	172	P		P	14 50 32.2	-0.4
	comp=Z,10nm,1.0s							
MRSI	Marisa	19.00	175	P		Pn	14 50 35.4	+1.5
	comp=Z,38nm,0.9s							
KSAR	Wonju Array Be	19.01	19	P		P	14 50 32.5	-0.5
KSRS	Korea Array	19.03	19	P		Pn	14 50 33.4	-0.7
	comp=Z,0.6nm,0.3s,baz=200,slow=11,SNR=16							
MPSI	Mapaga	19.09	181	P		Pn	14 50 35.7	+0.8
	comp=Z,509nmcomp=Z,18nm,1.8s							
KMSI	Cibinong	19.17	169	P		Pn	14 50 36.9	+1.0
	comp=Z,55nm,1.0s							
DL2	Dalian	19.33	3	P		Pn	14 50 39.0	+1.3
DL2				pmax		pmax		
	comp=Z,34nm,1.2s							
PAYA	Payao	19.34	273	P		Pn	14 50 41.0	+3.0
	comp=Z,2µmcomp=Z,205nm,1.3s							
TNTI	Ternate	19.87	159	P		P	14 50 41.3	-1.3
	comp=Z,664nmcomp=Z,16nm,1.0s							
CM34	Chiang Mai Arr	20.06	272	P		Pn	14 50 46.0	-0.5
CM35	Chiang Mai Arr	20.07	271	P		Pn	14 50 46.0	-0.7
CM36	Chiang Mai Arr	20.14	271	P		Pn	14 50 55.0	+7.5
CM09	Chiang Mai Arr	20.25	270	P		Pn	14 50 50.0	+1.2
	comp=Z,93nmcomp=Z,8.3nm,1.1s							
CM33	Chiang Mai Arr	20.25	272	P		Pn	14 50 48.0	-0.8
CMMT	Chiang Mai	20.25	272	P		Pn	14 50 48.0	-0.8
	comp=Z,6.8nm,2.1s							
CHTO	Chiang Mai	20.26	272	Pn		P	14 50 47.1	+0.3
CM04	Chiang Mai Arr	20.27	270	P		Pn	14 50 49.0	0.0
	comp=Z,106nmcomp=Z,7.6nm,0.8s							
CM01	Chiang Mai Arr	20.28	270	P		Pn	14 50 50.2	+1.0
	comp=Z,137nmcomp=Z,8.3nm,1.1s							
CM02	Chiang Mai Arr	20.29	270	P		Pn	14 50 50.0	+0.7
	comp=Z,84nmcomp=Z,8.9nm,1.2s							
CM31	Chiang Mai Arr	20.29	271	P		Pn	14 50 53.1	+3.8
CM31	Chiang Mai Arr	20.29	271	P		P	14 50 46.2	-1.0
CMAR	Chiang Mai Arr	20.29	271	P		Pn	14 50 49.0	-0.3
	comp=Z,2.3nm,0.6s,baz=77,slow=8.8,SNR=23							
CMAR	Chiang Mai Arr	20.29	271	P		P	14 50 47.3	0.0
CM05	Chiang Mai Arr	20.30	270	P		Pn	14 50 50.0	+0.6
	comp=Z,82nmcomp=Z,4.4nm,1.2s							
CM15	Chiang Mai Arr	20.31	271	P		Pn	14 50 50.2	+0.7
CM13	Chiang Mai Arr	20.33	270	P		Pn	14 50 50.0	+0.2
	comp=Z,81nmcomp=Z,7.2nm,1.1s							
UTHA	Uthaitani	20.34	262	P		Pn	14 50 53.6	+3.8
	comp=Z,312nmcomp=Z,22nm,1.3s							
APSI	Ampana	20.36	176	P		P	14 50 48.0	+0.1
	comp=Z,21nm,0.9s							
CM32	Chiang Mai Arr	20.36	271	P		Pn	14 50 53.0	+2.9
KSM	Kuching	20.48	210	P		P	14 50 49.5	+0.3
KSM	Kuching	20.48	210	P		Pn	14 50 50.0	-1.4
LUWI	Luwuk	20.59	173	P		Pn	14 50 52.3	-0.4
	comp=Z,1µmcomp=Z,52nm,1.0s							
LUWI	Luwuk	20.59	173			P	14 50 49.6	-0.8
BJT	Baijiatuan	20.73	351			Pn	14 50 53.1	-1.1
BJT				IAmb		IAmb	14 50 58.0	
	comp=Z,84nm,1.1s							
BJI	Beijing	20.75	351	P		Pn	14 50 53.8	-0.6
BJI				S		Sn	14 54 48.4	+0.4
BJI				pmax		pmax		
	comp=Z,54nm,1.5s							
BJI				LR		LR		
	comp=Z,650nm,9.2s							
BJI				LR		LR		
	comp=Z,980nm,9.8s							
BJI				LR		LR		
	comp=Z,350nm,12.7s							
BKB	Balikpapan	20.95	190	Pn		P	14 50 54.4	+0.2
MTKI	Muara Teweh, K	21.05	195	P		P	14 50 56.4	+1.0
	comp=Z,14nm,0.8s							
MHMT	Maesarieng	21.28	270	P		P	14 51 03.0	+5.1
INU	Inuyama	21.54	40	P		P	14 51 01.4	+0.9
INU				IAmb		IAmb	14 51 12.1	
	comp=Z,82nm,1.3s							
JGF	Kuroka	21.92	40	P		P	14 51 04.7	+0.1
JGF				IAmb		IAmb	14 51 31.3	
	comp=Z,42nm,1.1s							
LZH	Lanzhou	21.98	322	⇑P		P	14 51 07.8	+2.3
LZH				pP		sP	14 51 12.4	-0.8
LZH				sP		pwP	14 51 15.8	0.0
LZH				pmax		pmax		
	comp=Z,54nm,1.2s							
LZH				pmax		pmax		
	comp=Z,180nm,5.4s							
LZH				LR		LR		
	comp=Z,1µm,11.9s							
LZH				LR		LR		
	comp=Z,1µm,10.8s							
LZH				LR		LR		
	comp=Z,2µm,11.9s							
SANI	Sanana	22.15	165	P		P	14 51 01.0	-6.2
	comp=Z,21nm,0.9s							
TTSI	Tana Toraja	22.45	181	P		P	14 51 11.9	+1.5
	comp=Z,18nm,0.8s							
HHC	Hu-ho-hao-te	22.54	342	*e*P		P	14 51 09.8	-1.6
HHC				S		S	14 55 10.4	-7.0
HHC				pmax		pmax		
	comp=Z,51nm,1.3s							
HHC				pmax		pmax		
	comp=Z,660nm,6.3s							
HHC				LR		LR		
	comp=Z,2µm,10.7s							
HHC				LR		LR		
	comp=Z,540nm,8.3s							
HHC				LR		LR		
	comp=Z,900nm,10.2s							
SIJI	Sorong	22.92	151	P		P	14 51 14.2	-1.2
	comp=Z,19nm,0.8s,baz=338,slow=10,SNR=10							
MAT	Matsushiro	23.06	39	P		P	14 51 16.4	-0.3
MJAR	Matsushiro Arr	23.06	39	P		P	14 51 18.2	+1.5
	comp=Z,4.0nm,1.0s,baz=214,slow=10.0,SNR=6.4							
SPSI	Sidrap Palu	23.36	182	P		P	14 51 20.5	+0.7
	comp=Z,46nm,1.2s		

comp=Z,4.3nm,0.8s,baz=212,slow=6.8,SNR=9.9
USRK Ussuriysk Ar. 26.44 19 P P 14 51 48.1 +0.2
GTA Gaotai 26.58 323 P P 14 51 50.9 +1.4
GTA pP pP 14 51 55.6 +0.4
GTA sP sP 14 51 58.0 +0.5
GTA pmax pmax
comp=Z,6.0nm,1.7s
GTA LR LR
comp=Z,800nm,11.3s
GTA LR LR
comp=Z,960nm,12.4s
GTA LR LR
comp=Z,920nm,10.9s
SHL Shillong 26.96 288 P P 14 51 51.8 -1.3
SHL IAmb IAmb 14 52 04.5
comp=Z,17nm,1.2s
EDFI Ende, Flores 28.14 177 P P 14 52 03.3 -0.2
comp=Z,8.7nm,0.9s
LSA Lhasa 28.36 297 P P 14 52 05.7 -0.2
LSA IAmb IAmb 14 52 17.6
comp=Z,12nm,1.0s
PWJI Pagerwojo 28.66 198 P P 14 52 18.3 +10
WSI Waingapu 29.02 180 P P 14 52 08.0 -3.3
SOEI Soe 29.36 172 P P 14 52 22.2 +7.8
SOEI Soe 29.36 172 P P 14 52 15.2 +0.8
SOEI IAmb IAmb 14 52 31.4
comp=Z,25nm,1.0s
HIA Hailar 29.66 359 P P 14 52 16.5 -0.3
HIA IAmb IAmb 14 52 21.7
comp=Z,17nm,1.2s
BATI Baumata 29.73 173 P P 14 52 16.1 -1.5
comp=Z,47nm,0.8s,baz=281,slow=0.3,SNR=10
ULN Ulaanbaatar 30.26 342 P P 14 52 21.8 -0.5
SONM Songino Array 30.43 341 P P 14 52 24.7 +1.0
comp=Z,3.0nm,0.6s,baz=162,slow=9.7,SNR=17
SONM Songino Array 30.43 341 P P 14 52 24.2 +0.5
TAPN Taplejung 30.89 291 eP P 14 52 29.4 +1.2
KLR Kul'dur 31.00 15 P P 14 52 29.7 +1.1
comp=Z,33nm,1.3s,baz=206,slow=8.2,SNR=21
ODAN Odare 31.12 290 eP P 14 52 31.1 +1.0
comp=Z,34nm,0.9s
RAMN Ramite 31.83 290 eP P 14 52 37.2 +0.8
comp=Z,24nm,0.7s
GUN Gumba 32.58 291 eP P 14 52 43.9 +0.8
comp=Z,29nm,0.7s
PKI Pulchoki 32.95 291 eP P 14 52 46.3 0.0
comp=Z,68nm,1.6s
PKIN Phulchoki 32.96 291 eP P 14 52 46.3 -0.1
comp=Z,14nm,0.8s
KKN Kakani 33.09 291 eP P 14 52 47.7 +0.3
comp=Z,15nm,0.7s
DMN Daman 33.22 291 eP P 14 52 49.2 +0.6
comp=Z,20nm,0.9s
GKN Gorkha 33.68 291 eP P 14 52 52.7 +0.2
comp=Z,31nm,1.0s
DANN Dangsing 34.49 292 eP P 14 53 00.0 +0.3
comp=Z,28nm,0.9s
KOLN Koldanda 34.57 291 eP P 14 53 00.7 +0.5
comp=Z,41nm,1.2s
PYUN Piuthan 35.14 291 eP P 14 53 05.7 +0.5
comp=Z,11nm,0.5s
WMQ Urumqi 36.49 319 eP P 14 53 29.8 +13
WMQ pmax pmax
comp=Z,180nm,4.7s
WMQ Urumqi 36.49 319 eP P 14 53 18.8 +2.4
WMQ sP sP 14 53 24.4 -0.1
WMQ pmax pmax
comp=Z,21nm,1.5s
WMQ pmax pmax
comp=Z,420nm,7.7s
FITZ Fitzroy Crossi 37.76 172 P P 14 53 25.7 -1.6
FITZ IAmb IAmb 14 53 27.0
comp=Z,26nm,1.2s
ZSN Zaisan 40.08 322 eP P 14 53 46.7 +0.2
comp=Z,3.6nm,1.3s,baz=322
COEN Coen 40.14 144 P P 14 53 45.7 -1.6
PSA00 Pilbara Seismi 40.86 181 P P 14 53 52.7 -0.5
PSA00 IAmb IAmb 14 53 53.8
comp=Z,19nm,1.2s
PSAA3 Pilbara Seismi 40.87 181 P P 14 53 52.6 -0.6
PSAA3 IAmb IAmb 14 53 53.8
comp=Z,19nm,1.2s
PSAB3 Pilbara Seismi 40.88 181 P P 14 53 52.9 -0.4
PSAB3 IAmb IAmb 14 53 54.0
comp=Z,18nm,1.2s
MK31 Makanchi Array 41.27 320 P P 14 53 56.4 0.0
MK31 IAmb IAmb 14 53 58.6
comp=Z,19nm,1.4s
MKAR Makanchi Array 41.27 320 P P 14 53 57.7 +1.3
comp=Z,4.4nm,0.6s,baz=119,slow=9.1,SNR=31
MKAR PcP **PcP 14 55 55.9 +1.0**
comp=Z,0.6nm,0.7s,baz=104,slow=5.8,SNR=1.0
MKAR Makanchi Array 41.27 320 P P 14 53 56.2 -0.2
WB0 Warramunga Arr 41.41 160 P P 14 53 55.8 -1.9
MAKZ Makanchi 41.47 320 P P 14 53 57.5 -0.5
WRA Warramunga Arr 41.55 160 P P 14 53 57.2 -1.7
comp=Z,3.2nm,0.7s,baz=334,slow=11,SNR=54
WRA PcP **PcP 14 55 56.4 +0.3**
comp=Z,1.4nm,0.6s,baz=339,slow=3.5,SNR=5.1
WRA Warramunga Arr 41.55 160 IAmb IAmb 14 53 58.3
comp=Z,0.3nm,0.8s
WB2 Warramunga Arr 41.56 160 P P 14 53 57.4 -1.5
SHLS Shalkode 41.57 314 eP P 14 53 57.3 -1.7
comp=Z,6.2nm,1.7s,baz=314
WC3 Warramunga Arr 41.58 160 P P 14 53 57.9 -1.2
WR0 Warramunga Arr 41.63 160 P P 14 53 58.1 -1.5
PRZ Przheval'sk 42.07 312 P P 14 54 02.6 -0.6
PRZ IAmb IAmb 14 54 31.6
comp=Z,19nm,1.1s
KPKS Kokpek 42.21 314 eP P 14 54 04.5 +0.3
comp=Z,7.3nm,1.5s,baz=314
SATY Saty 42.26 313 eP P 14 54 05.6 +0.9
comp=Z,5.2nm,1.7s,baz=313
KDJ Kajisay 42.81 311 P P 14 54 08.7 -0.5
YAK Yakutsk 42.95 6 P P 14 54 11.5 +1.7
comp=Z,1.8nm,0.3s,baz=191,slow=16,SNR=1.7
KSH Kashi 42.95 307 eP P 14 54 14.5 +4.2
KSH pmax pmax
comp=Z,1μm,10.3s
TDK Taldyqorghan 42.97 316 eP P 14 54 11.3 +1.1
baz=316
MDOK Medeo 43.23 313 eP P 14 54 12.1 -0.5
baz=312
TNSS Tian-Shan 43.26 313 eP P 14 54 14.3 +1.2
baz=312
AAA Alma-Ata 43.34 313 eP P 14 54 14.6 +1.2
baz=312
CHKK Chushkaly 43.50 314 eP P 14 54 15.8 +1.2
baz=313
ZAA0 Zalesovo Array 43.81 330 P P 14 54 16.3 -0.6
ZAA0 IAmb IAmb 14 54 27.8
comp=Z,9.1nm,0.8s
ZALV Zalesovo Beam 43.81 330 P P 14 54 17.9 +1.1
comp=Z,5.2nm,0.6s,baz=115,slow=8.5,SNR=26
ZALV Zalesovo Beam 43.81 330 P P 14 54 16.2 -0.6
KUU Kurty 43.96 314 eP P 14 54 19.0 +0.7
comp=Z,17nm,1.6s,baz=313
NIL Nilore 44.06 298 P P 14 54 18.5 -0.7
NIL IAmb IAmb 14 54 21.0
comp=Z,34nm,1.4s
PETK Petropavlovsk- 44.16 32 P P 14 54 20.9 +1.1
comp=Z,4.6nm,0.9s,baz=222,slow=13,SNR=5.3
SEM Semipalatinsk 44.20 324 eP P 14 54 19.7 -0.7
baz=323
AS31 Alice Springs 44.92 162 P P 14 54 25.4 -0.7
ASAR Alice Springs 44.92 162 P P 14 54 25.5 -0.6
comp=Z,4.9nm,0.5s,baz=339,slow=6.9,SNR=170
ASAR Alice Springs 44.92 162 P P 14 54 25.3 -0.8
KURK Kurchatov 45.26 323 P P 14 54 27.5 -0.9
KURBB Kurchatov Arra 45.27 323 P P 14 54 29.6 +1.0
comp=Z,9.1nm,0.6s,baz=122,slow=7.7,SNR=49
BTLS Baital 45.88 314 eP P 14 54 34.0 +0.5
comp=Z,2.1nm,1.5s,baz=314
CTAO Charters Tower 46.84 146 P P 14 54 42.1 +0.9
CTAO IAmb IAmb 14 54 42.6
comp=Z,17nm,1.4s
BTK Batken 46.95 307 P P 14 54 41.6 -0.5
BTK IAmb IAmb 14 54 45.0
comp=Z,19nm,1.4s
GAR Garm 47.14 305 P P 14 54 43.8 +0.1
DZA Taraz 47.17 311 eP P 14 54 45.3 +1.5
baz=310
KBL Kabul 47.62 299 P P 14 54 46.9 -0.6
KBL IAmb IAmb 14 54 50.0
comp=Z,20nm,1.4s
KK31 Karatay Array 47.81 311 P P 14 54 48.2 -0.5
KK31 IAmb IAmb 14 54 51.5
comp=Z,9.5nm,1.1s
KKAR Karatay Array 47.81 311 P P 14 54 48.8 +0.1
KKAR IAmb IAmb 14 54 51.5
comp=Z,9.5nm,1.1s
KKAR Karatay Array 47.81 311 P P 14 54 48.3 -0.4
IUG Iuzhnay 47.95 310 eP P 14 54 50.5 +0.7
comp=Z,11nm,1.6s,baz=309
CHGR Chuyangaron 47.98 305 P P 14 54 50.1 0.0
CHGR IAmb IAmb 14 55 04.0
comp=Z,9.9nm,0.8s
BRZS Berezniki 48.42 320 eP P 14 54 53.7 +0.4
comp=Z,4.7nm,2.0s,baz=320
BVAR Borovoye Array 50.86 323 P P 14 55 13.2 +1.4
comp=Z,0.5nm,0.4s,baz=100,slow=12,SNR=5.0
BRVK Borovoye 50.93 323 P P 14 55 12.5 +0.2
NWAO Narrogin (SRO) 52.25 183 P P 14 55 22.1 -0.3
TIXI Tiksi 52.36 3 P P 14 55 22.5 -0.1
TIXI IAmb IAmb 14 55 34.6
comp=Z,14nm,1.1s
NRIK Noril'sk 53.70 346 P P 14 55 33.6 +1.0
comp=Z,5.4nm,0.7s,baz=134,slow=7.7,SNR=15
BBOO Buckleboo 54.17 164 P P 14 55 36.4 -0.1
STKA Stephens Creek 55.02 158 P P 14 55 42.3 -0.3
comp=Z,7.5nm,0.9s,baz=348,slow=8.0,SNR=12
STKA Stephens Creek 55.02 158 P P 14 55 42.7 +0.1
ABKAR Akbulak array 56.22 317 P P 14 55 52.6 +1.5
ABKAR Akbulak array 56.22 317 P P 14 55 51.7 +0.6
AKTO Aktyubinsk 57.63 318 P P 14 56 02.2 +1.1
comp=Z,1.6nm,0.6s,baz=96,slow=7.4,SNR=5.8
ARU Arti 58.41 325 P P 14 56 06.8 +0.3
comp=Z,2.3nm,0.4s,baz=87,slow=11,SNR=8.7
ARU Arti 58.41 325 P P 14 56 06.6 +0.1
ARU IAmb IAmb 14 56 16.9
comp=Z,9.2nm,0.9s
DZM Mont Dzumac 61.13 130 P P 14 56 27.7 +1.9
KIRV Kirov 63.62 326 P P 14 56 42.5 +0.7
comp=Z,9.1nm,0.6s,baz=90,slow=13,SNR=5.6
GNI Garni 66.87 306 P P 14 57 04.5 +1.0
comp=Z,1.9nm,0.4s,baz=14,slow=19,SNR=5.0
GNI Garni 66.87 306 P P 14 57 03.1 -0.3
KBZ Khabaz 67.84 310 P P 14 57 10.2 +0.9
comp=Z,5.3nm,0.8s
KVAR Kislovodsk Arr 67.96 310 P P 14 57 12.5 +2.3
comp=Z,4.7nm,0.6s,baz=90,slow=20,SNR=3.0
KIV Kislovodsk 67.97 310 P P 14 57 10.3 +0.1
GEVA Gevas 68.40 304 P P 14 57 13.5 +0.3
GEVA IAmb IAmb 14 57 15.1
comp=Z,9.8nm,1.0s
KLMR Klimovskoe 68.70 329 eP P 14 57 12.9 -1.5
KLMR AMP 14 57 16.4
comp=Z,36nm,1.5s
RAYN Ar Rayn 69.03 288 P P 14 57 17.7 +0.5
RAYN IAmb IAmb 14 57 27.8
comp=Z,4.7nm,0.9s
TTA Tatalina 69.91 29 P P 14 57 22.9 +1.0
TTA IAmb IAmb 14 57 33.6
comp=Z,7.4nm,1.1s
MARD Mardin 70.34 304 P P 14 57 24.5 -0.6
MARD IAmb IAmb 14 57 36.6
comp=Z,7.4nm,0.7s
CAST Castle Rocks 71.63 28 P P 14 57 33.1 +0.7
TOLK Toolik Lake Re 72.00 23 P P 14 57 35.1 +0.6
TOLK IAmb IAmb 14 57 47.0
comp=Z,11nm,1.0s
BPAW Bear Paw Mtn. 72.03 27 P P 14 57 35.0 +0.3
BPAW IAmb IAmb 14 57 46.1
comp=Z,16nm,1.1s
RND Reindeer 73.08 28 P P 14 57 41.1 +0.1
MDM Murphy Dome 73.08 26 P P 14 57 41.6 +0.6
WRH Wood River Hil 73.22 27 P P 14 57 41.2 -0.6
WRH IAmb IAmb 14 57 53.2
comp=Z,9.0nm,0.9s
GHO Glory Hole Cre 73.32 30 P P 14 57 42.9 +0.3
ARCES ARCESS Array B 73.56 339 P P 14 57 44.1 +0.4
comp=Z,4.1nm,0.9s,baz=70,slow=7.9,SNR=8.1
ILAR Eielson Array 73.68 26 P P 14 57 44.0 -0.5
comp=Z,1.1nm,0.8s,baz=280,slow=5.7,SNR=14
SPA0 Spitsbergen Ar 73.85 348 P P 14 57 46.0 +0.7
SCM Sheep Creek Mo 74.06 30 P P 14 57 46.5 -0.3
FINES FINESS Array B 75.07 330 P P 14 57 53.5 +0.9
comp=Z,2.9nm,0.5s,baz=69,slow=5.8,SNR=26
AKASG Malin Array Be 75.85 319 P P 14 57 57.1 -0.2
comp=Z,2.8nm,0.7s,baz=62,slow=5.8,SNR=15
AKASG Malin Array Be 75.85 319 P P 14 57 57.2 -0.1
AKBB Malin Array Si 75.85 319 P P 14 57 57.1 -0.2
AKBB IAmb IAmb 14 57 57.7
comp=Z,22nm,1.4s
NACGM Naroch 76.28 324 *e* **P 14 58 01.0 +1.4**
EIL Elat 76.75 297 P P 14 58 02.9 +0.1
comp=Z,1.9nm,0.4s,baz=326,slow=3.6,SNR=3.6
BARN Barnard Glacie 76.89 30 P P 14 58 03.3 +0.1
DAWY Dawson 77.00 26 P P 14 58 04.8 +1.1
DAWY IAmb IAmb 14 58 19.4
comp=Z,7.8nm,0.9s
CTGM Chitina Glacie 77.07 30 P P 14 58 05.2 +1.0
INK Inuvik 77.80 21 P P 14 58 08.3 +0.3
INK IAmb IAmb 14 58 23.5
comp=Z,16nm,1.4s
BURAR Bucovina Array 79.20 317 P P 14 58 16.3 0.0
BFZ Birch Farm 79.25 140 P P 14 58 17.6 +1.2
MLR Muntele Rosu 79.34 314 P P 14 58 17.0 -0.1
comp=Z,2.6nm,0.7s,baz=136,slow=1.7,SNR=4.4
MLR Muntele Rosu 79.34 314 P P 14 58 16.4 -0.7
KWP Kalwaria Pacla 80.17 319 P P 14 58 21.9 +0.6
C36M Paulatuk 80.42 19 P P 14 58 22.6 +0.3
C36M IAmb IAmb 14 58 33.4
comp=Z,8.7nm,1.1s
HFS Hagfors 81.24 331 P P 14 58 26.8 0.0
comp=Z,2.5nm,0.6s,baz=111,slow=3.3,SNR=9.9
NB2 NORSAR Subarra 81.97 332 P P 14 58 30.4 -0.3
comp=Z,15nm,1.4s,baz=65,slow=5.6
NOA NORSAR Array B 81.97 332 P P 14 58 30.6 -0.1
comp=Z,2.6nm,0.9s,baz=65,slow=5.2,SNR=4.7
VYHS Vyhne 82.95 319 eP P 14 58 38.8 +2.7
MORC Moravsky Berou 83.26 320 eP P 14 58 38.5 +0.8
JAVC Velka Javorina 83.53 320 eP P 14 58 41.4 +2.3
VRAC Vranov 84.01 320 P P 14 58 42.3 +0.8
comp=Z,2.8nm,0.8s,baz=42,slow=7.8,SNR=5.1
VRAC Vranov 84.01 320 eP P 14 58 42.4 +0.8
KRUC Moravsky 84.23 320 eP P 14 58 43.6 +1.0
CLL Collm 85.30 323 eP P 14 58 48.0 +0.1
CLL *e* 14 58 58.0
GERES GERESS Array B 85.94 321 P P 14 58 52.2 +0.9
comp=Z,1.0nm,0.7s,baz=64,slow=3.1,SNR=6.8
YKA Yellowknife Ar 87.53 22 P P 14 58 58.8 +0.2
comp=Z,2.3nm,0.9s,baz=309,slow=3.9,SNR=2.2
SJCC San Jacinto, C 146.98 29 *eP* **PKPbc 15 05 53.4 -1.2**
PTBC PUERTO BERRIO 150.26 31 *eP* **PKPbc 15 06 02.6 -0.6**
SPBC San Pablo de B 151.21 31 *eP* **PKPbc 15 06 04.5 -1.0**
YOTC Yotoco, Valle 151.42 37 *eP* **PKPdf 15 06 00.6 +0.7**
RUSC La Rusia 151.47 29 *eP* **PKiKP 15 06 06.5 -0.5**
TOLC Tolima 151.49 34 *eP* **PKiKP 15 06 07.0 +0.1**
ROSC El Rosal 151.79 32 PKPbc **PKiKP 15 06 07.3 -0.2**
comp=Z,5.2nm,0.3s,baz=352,slow=2.3,SNR=7.1
LPAZ La Paz 171.28 70 PKP **PKPdf 15 06 22.2 +1.1**
comp=Z,0.8nm,0.7s,baz=45,slow=1.8,SNR=4.9
LPAZ La Paz 171.28 70 PKPdf 15 06 19.6 -1.5

*IDC **17** 14:50:00.7±0.4, 19.°45N×120.°39E, h0km, mb4.6/37, mb1 4.7/39, mb1mx4.6/55, mbtmp4.6/39, ML4.0/2, MS4.1/13, Ms1 4.1/13, ms1mx3.8/44, Error ellipse: s-maj=15.6km s-min=9.9km az=72.0*
*KLM **17** 14:50:01.0, 19.°49N×120.°54E, h4km, mb4.8*
*MAN **17** 14:50:01.4, 19.°64N×120.°44E, h86km, mb5.4, ML4.3, MS4.5*
*NEIC **17** 14:50:02.5±1.7, 19.°61N±0.°06×120.°33E±0.°07, h10km±1km, mb4.9/78, Error ellipse: s-maj=11.8km s-min=8.4km az=235.0*
*GCMT **17** 14:50:03.5±0.3, 19.°42N±0.°03×120.°29E±0.°03, h12km±1km, MW4.9/76, Moment Tensor Solution. s15,c18; s76,c115; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-1.97±.22; Mθθ0.16±.11; Mϕϕ1.81±.15; Mrθ-1.74±.46; Mrϕ0.97±.07; Mθϕ0.85±.34; Best double couple: M0 2.75 10×10^16^ NP1: ϕs 176.00000°, δ55.00000°, λ-132.00000°. Principal axes: T 2.2590, Plg1.0000°, Azm294.0000°; N 0.9820, Plg33.0000°, Azm203.0000°; P -3.2430, Plg57.0000°, Azm26.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **17** 14:50:04.1±0.0, 19.°94N×120.°27E, h4km, mB5.2/32, mb4.7/55, Ms5.1/40, Ms7 4.9/40*

ISC 17 14:50:04.6±0.3, 19.°59N±0.°03×120.°41E±0.°04, h23km, n284, σ1.1 s 57/281, mb4.7/110, MS4.2/16, 3C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
SIPP	**Brgy, Tapao**	**1.66**	**178**	⇓*i*P	**Pn**	**14 50 30.9**	**-1.4**
SIPP				*e*S	Sb	14 51 06.6	+12
BBP	**Basco**	**1.69**	**60**	*e*P	**Pn**	**14 50 30.4**	**-2.2**
BBP				*e*S	**Sn**	**14 50 52.9**	**-0.7**
APYP	**Conner**	**1.89**	**155**	*e*P	**Pn**	**14 50 32.1**	**-3.4**
APYP				*e*S	**Sn**	**14 50 55.0**	**-3.6**
SGCP	**Mt. Cagua**	**2.05**	**131**	*e*P	**Pn**	**14 50 35.6**	**-2.1**
CAUP	**Cauayan**	**2.95**	**153**	*e*P	**Pn**	**14 50 50.9**	**+0.8**
BOLP	**Bolinao**	**3.23**	**189**	*e*P	**Pn**	**14 50 53.8**	**0.0**
BOLP				*e*S	**Sn**	**14 51 30.1**	**-1.5**
TWG	**Pinlang**	**3.27**	**11**		**Pn**	**14 50 53.0**	**-1.5**
SMPP	**San Manuel, Pa**	**3.43**	**176**	*e*P	**Pn**	**14 50 53.6**	**-3.1**
SMPP				*e*S	**Sn**	**14 51 38.7**	**+2.0**
TPUB	**Ta-pu**	**3.70**	**3**	Pn	**Pn**	**14 50 57.9**	**-2.5**
YULB	**Yu-li**	**3.87**	**12**		**Pn**	**14 51 00.7**	**-2.1**
SSLB	**Suanglung**	**4.21**	**7**	Pn	**Pn**	**14 51 05.0**	**-2.4**
NACB	**Ninganchiao**	**4.69**	**13**		**Pn**	**14 51 12.1**	**-1.9**
YHNB	**Yeheng**	**5.13**	**10**		**Pn**	**14 51 19.1**	**-1.1**
KNMB	**Chin-men Tao**	**5.20**	**339**	Pn	**Pn**	**14 51 19.1**	**-1.9**
YOJ	**Yonaguni jima**	**5.41**	**26**	Pn	**Pn**	**14 51 23.4**	**-0.5**
TGY	**Tagaytay City**	**5.48**	**175**	LR	LR	14 53 56.9	
	comp=Z,3μm,18.5s,baz=39,slow=44						
LQP	**Lukban**	**5.55**	**169**	⇓*e*P	**Pn**	**14 51 25.5**	**-0.6**
QZH	**Quanzhou**	**5.59**	**343**	*e*Pn	**Pn**	**14 51 23.6**	**-2.7**
QZH				Sn	**Sn**	**14 52 24.3**	**-5.5**
QZH				LR	LR		
	comp=N,4μm,7.6s						
QZH				LR	LR		
	comp=E,11μm,8.5s						
QZH				LR	LR		
	comp=Z,9μm,10.5s						
HKPS	**Hong Kong Po S**	**6.44**	**296**	Pn	**Pn**	**14 51 34.5**	**-3.6**
QIZ	**Qiongzhong**	**10.00**	**269**	P	**Pn**	**14 52 23.3**	**-3.6**
QIZ				S	**Sn**	**14 54 17.4**	**-1.0**
QIZ				pmax	pmax		
	comp=Z,21nm,1.2s						
QIZ				LR	LR		
	comp=N,5μm,14.3s						
QIZ				LR	LR		
	comp=E,4μm,10.4s						
QIZ				LR	LR		
	comp=Z,4μm,11.0s						
QIZ	**Qiongzhong**	**10.00**	**269**	Pn	**Pn**	**14 52 23.2**	**-3.6**
NJ2	**Nanjing**	**12.49**	**354**	*e*P	**Pn**	**14 53 00.4**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,4μm,9.0s						
NJ2				LR	LR		
	comp=Z,4μm,11.4s						
NJ2				LR	LR		
	comp=Z,4μm,10.9s						
DAV	**Davao City (W)**	**13.42**	**157**	LR	LR	14 59 14.1	
	comp=Z,1μm,21.9s,baz=346,slow=42						
GYA	**Guiyang**	**14.38**	**301**	⇓P	**Pn**	**14 53 26.0**	**-0.9**
GYA				pmax	pmax		
	comp=Z,12nm,0.9s						
GYA				LR	LR		
	comp=Z,3μm,9.5s						
GYA				LR	LR		
	comp=Z,3μm,11.5s						
GYA				LR	LR		
	comp=Z,4μm,11.6s						
MYLDM	**Lahad Datu**	**14.44**	**188**		**Pn**	**14 53 29.2**	**+1.5**
ENH	**Enshi**	**14.53**	**319**	Pn	**Pn**	**14 53 27.3**	**-1.5**
JSU	**Suzuyama**	**14.92**	**35**	Pn	**Pn**	**14 53 34.5**	**+0.4**
SPMM	**Sapulut**	**15.29**	**195**	P	**Pn**	**14 53 41.0**	**+1.9**
JNU	**Nakatsue**	**16.40**	**33**	Pn	**P**	**14 53 55.3**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=249,slow=3.6,SNR=5.0						
JNU	**Nakatsue**	**16.40**	**33**	IAmb	IAmb	14 53 59.9	
	comp=Z,61nm,1.2s						
NONG	**Nongkai**	**16.42**	**268**	P	**P**	**14 53 58.8**	**+2.5**
	comp=Z,8μmcomp=Z,44nm,1.5s						
TIA	**Tai'an**	**16.81**	**351**	P	**P**	**14 54 00.9**	**+0.4**
TIA				pmax	pmax		
	comp=Z,16nm,1.1s						
KMI	**Kunming**	**17.24**	**292**	⇑*i*P	**P**	**14 54 08.5**	**+2.9**
KMI				pmax	pmax		
	comp=Z,24nm,1.3s						
KMI				pmax	pmax		
	comp=Z,510nm,5.4s						
KMI				LR	LR		
	comp=Z,6μm,11.1s						
KMI				LR	LR		
	comp=Z,3μm,12.0s						
KMI				LR	LR		
	comp=Z,3μm,11.3s						
XAN	**Xi'an**	**17.65**	**327**	P	**Pn**	**14 54 08.6**	**-0.5**
XAN				S	**S**	**14 57 28.8**	**-3.4**
XAN				pmax	pmax		
	comp=Z,40nm,1.8s						
XAN				pmax	pmax		
	comp=Z,2μm,11.2s						
XAN				LR	LR		
	comp=Z,4μm,10.8s						
XAN				LR	LR		
	comp=Z,2μm,12.4s						
XAN				LR	LR		
	comp=Z,5μm,10.4s						
XAN	**Xi'an**	**17.65**	**327**		**Pn**	**14 54 07.0**	**-2.0**
CD2	**Chengdu**	**18.79**	**310**	P	**P**	**14 54 22.5**	**+0.1**
CD2				pmax	pmax		
	comp=Z,40nm,1.0s						
CD2				LR	LR		
	comp=Z,5μm,9.3s						
CD2				LR	LR		
	comp=Z,4μm,10.0s						
CD2				LR	LR		
	comp=Z,7μm,11.7s						
SBUM	**Sibu**	**18.82**	**206**	P	**Pn**	**14 54 23.3**	**-0.2**
SBUM	**Sibu**	**18.82**	**206**	P	**Pn**	**14 54 24.0**	**+0.5**
UTTA	**Uttaradit**	**18.91**	**268**	P	**Pn**	**14 54 27.5**	**+3.0**
	comp=Z,9.1nm,1.0s						
KSRS	**Korea Array**	**18.97**	**19**	P	**Pn**	**14 54 24.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=198,slow=11,SNR=5.8						
GTOI	**Gorontalo**	**19.01**	**172**	P	Pn	14 54 38.1	+12
MRSI	**Marisa**	**19.05**	**175**	P	**Pn**	**14 54 26.1**	**-0.1**
	comp=Z,598nmcomp=Z,41nm,0.9s						
PHIT	**Phitsanulok**	**19.12**	**266**	P	**Pn**	**14 54 34.2**	**+7.0**
	comp=Z,102nm,1.2s						
MPSI	**Mapaga**	**19.14**	**182**	P	**P**	**14 54 26.2**	**-0.1**
	comp=Z,590nmcomp=Z,17nm,1.6s						
DL2	**Dalian**	**19.28**	**3**	P	**Pn**	**14 54 30.1**	**+1.3**
DL2				pmax	pmax		
	comp=Z,27nm,1.2s						
DL2				LR	LR		
	comp=Z,2μm,11.2s						
DL2				LR	LR		
	comp=Z,1μm,13.1s						
DL2				LR	LR		
	comp=Z,2μm,11.4s						
PAYA	**Payao**	**19.37**	**273**	P	**Pn**	**14 54 31.8**	**+1.7**
	comp=Z,3μmcomp=Z,207nm,1.1s						
SUKH	**Sukhothai**	**19.82**	**267**	P	**Pn**	**14 54 38.0**	**+2.7**
	comp=Z,20nm,1.0s						
TNTI	**Ternate**	**19.91**	**159**	P	**P**	**14 54 35.2**	**+0.5**
	comp=Z,641nmcomp=Z,14nm,1.1s						
TNTI	**Ternate**	**19.91**	**159**	P	**Pn**	**14 54 35.8**	**-0.6**
SMKI	**Samarinda**	**20.16**	**189**	P	**P**	**14 54 36.9**	**-0.6**
	comp=Z,96nm,0.6s						
CM09	**Chiang Mai Arr**	**20.29**	**270**	P	Pn	14 54 40.0	-0.9
	comp=Z,118nmcomp=Z,13nm,1.1s						
CHTO	**Chiang Mai**	**20.29**	**271**		**P**	**14 54 37.9**	**-1.0**
CM04	**Chiang Mai Arr**	**20.30**	**270**	P	Pn	14 54 41.0	-0.1
	comp=Z,122nmcomp=Z,18nm,1.1s						
CM01	**Chiang Mai Arr**	**20.32**	**270**	P	Pn	14 54 41.4	+0.1
	comp=Z,191nmcomp=Z,18nm,1.1s						
CM02	**Chiang Mai Arr**	**20.33**	**270**	P	Pn	14 54 41.4	0.0
	comp=Z,151nmcomp=Z,15nm,1.1s						
CM31	**Chiang Mai Arr**	**20.33**	**270**	P	Pn	14 54 41.4	-0.1
	comp=Z,3μmcomp=Z,318nm,1.0s						
CM31	**Chiang Mai Arr**	**20.33**	**270**		**P**	**14 54 37.8**	**-1.5**
CMAR	**Chiang Mai Arr**	**20.33**	**270**	P	**P**	**14 54 39.8**	**+0.4**
	comp=Z,14nm,1.1s,baz=78,slow=9.0,SNR=37						
CMAR				PcP	**PcP**	**14 58 52.9**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=63,slow=0.8,SNR=13						
CMAR				LR	LR	15 01 23.7	

comp=Z,352nm,21.9s,baz=134,slow=34
CMAR Chiang Mai Arr 20.33 270 P 14 54 38.3 -1.1
CM13 Chiang Mai Arr 20.37 270 P Pn 14 54 41.7 -0.2
comp=Z,98nmcomp=Z,13nm,1.1s
UTHA Uthaitani 20.38 262 P Pn 14 54 42.1 0.0
comp=Z,416nmcomp=Z,37nm,1.2s
APSI Ampana 20.41 176 P Pn 14 54 41.6 -0.7
comp=Z,500nmcomp=Z,32nm,0.9s
KSM Kuching 20.54 210 P P 14 54 41.5 -0.2
KSM Kuching 20.54 210 P P 14 54 42.0 +0.4
LUWI Luwuk 20.63 173 P P 14 54 41.4 -1.2
comp=Z,88nm,1.0s
LUWI Luwuk 20.63 173 P 14 54 43.6 +1.0
BJT Baijiatuau 20.68 351 P 14 54 44.0 +1.0
BJT IAmb IAmb 14 54 45.9
comp=Z,67nm,1.1s
BJI Beijing 20.70 351 P P 14 54 43.9 +0.7
BJI pmax pmax
comp=Z,60nm,1.1s
BJI pmax pmax
comp=Z,280nm,3.7s
BJI LR LR
comp=Z,3μm,10.6s
BJI LR LR
comp=Z,2μm,9.6s
BJI LR LR
comp=Z,390nm,10.8s
BKB Balikpapan 21.01 190 P P 14 54 46.4 -0.2
PHET Kaeng Krachan 21.02 255 P P 14 54 51.0 +4.2
comp=Z,26nm,1.1s
MTKI Muara Teweh, K 21.11 195 P P 14 54 48.2 +0.4
comp=Z,27nm,1.3s
MHMT Maesarieng 21.32 270 P P 14 54 53.9 +3.9
INU Inuyama 21.48 40 P P 14 54 50.7 -0.9
INU IAmb IAmb 14 55 08.0
comp=Z,50nm,1.2s
JGF Kuroka 21.85 40 P P 14 54 54.7 -1.0
JGF IAmb IAmb 14 55 15.7
comp=Z,48nm,1.2s
JHJ Hachijo jima 2 21.92 48 LR LR 15 01 22.2
comp=Z,152nm,22.0s,baz=337,slow=31
LZH Lanzhou 21.96 322 ⇑P **P 14 54 59.1 +2.1**
LZH pP sP 14 55 03.8 -1.2
LZH sP pwP 14 55 06.5 -1.1
LZH PP **PnPn 14 55 26.5 +7.6**
LZH pmax pmax
comp=Z,81nm,1.2s
LZH pmax pmax
comp=Z,320nm,5.3s
LZH LR LR
comp=Z,4μm,10.8s
LZH LR LR
comp=Z,4μm,11.4s
LZH LR LR
comp=Z,4μm,11.4s
SANI Sanana 22.19 165 P P **14 54 55.0 -4.4**
comp=Z,451nmcomp=Z,26nm,0.8s
HHC Hu-ho-hao-te 22.50 342 *eP* **P 14 55 01.3 -1.3**
HHC pmax pmax
comp=Z,57nm,1.0s
HHC pmax pmax
comp=Z,890nm,7.1s
HHC LR LR
comp=Z,2μm,11.2s
HHC LR LR
comp=Z,1μm,11.2s
HHC LR LR
comp=Z,2μm,10.6s
TTSI Tana Toraja 22.50 182 P P 14 55 02.0 -0.7
comp=Z,37nm,2.4s
SIJI Sorong 22.95 151 P P **14 55 05.2 -2.3**
comp=Z,12nm,0.7s,baz=347,slow=12,SNR=10
MAT Matsushiro 23.00 39 P P 14 55 08.0 +0.2
MJAR Matsushiro Arr 23.00 39 P P 14 55 10.3 +2.5
comp=Z,8.9nm,1.0s,baz=240,slow=12,SNR=8.0
MJAR Matsushiro Arr 23.00 39 P P 14 55 07.3 -0.5
MJB9 Matsu-Tunnel 23.00 39 P P 14 55 07.8 0.0
MJB9 IAmb IAmb 14 55 17.5
comp=Z,55nm,1.3s
KBKI Kotabaru 23.13 191 P P 14 55 09.2 0.0
comp=Z,689nmcomp=Z,11nm,0.9s
SPSI Sidrap Palu 23.42 182 P P 14 55 12.6 +0.5
comp=Z,848nmcomp=Z,45nm,1.2s
BBKI Banjar Baru 23.55 194 P P 14 55 13.6 +0.1
comp=Z,5μmcomp=Z,23nm,1.0s
NLAI Namlea 23.62 163 P P 14 55 12.6 -1.5
comp=Z,943nmcomp=Z,68nm,1.3s
BNSI Bone 23.84 181 P P 14 55 16.5 +0.3
comp=Z,1μmcomp=Z,48nm,1.9s
KULM Kulim 23.92 236 P P 14 55 16.0 -1.1
MYKOM Kota Tinggi 23.99 224 P P 14 55 18.0 +0.3
IPM Ipoh 24.14 234 P P 14 55 18.0 -1.1
IPM IAmb IAmb 14 55 19.0
comp=Z,26nm,1.1s
IPM Ipoh 24.14 234 P P 14 55 19.0 -0.1
GUMO Guam 24.17 101 LR LR 15 04 55.0
comp=Z,331nm,18.5s,baz=288,slow=37
MSAI Masohi 24.28 159 P P 14 55 19.3 -1.1
comp=Z,9.4nm,1.1s
KAPI Kappang 24.46 182 P P 14 55 21.9 0.0
comp=Z,7.1nm,0.4s,baz=7.9,slow=5.0,SNR=19
KAPI LR LR 15 05 46.7
comp=Z,316nm,19.1s,baz=52,slow=39
KAPI Kappang 24.46 182 P P 14 55 22.3 +0.4
KAPI IAmb IAmb 14 55 50.1
comp=Z,63nm,1.4s
BKSI Bulukumba 24.76 181 P P 14 55 24.7 +0.1
comp=Z,600nmcomp=Z,23nm,1.0s
TPI Tanjungpandan 25.50 211 P P 14 55 31.5 +0.1
comp=Z,20nm,1.5s
BNDI Bandanaira 25.72 158 P P 14 55 32.7 -0.7
comp=Z,68nm,1.1s
PPBI Pangkal Pinang 25.77 215 P P 14 55 34.4 +0.6
MDJ Mudanjiang 26.10 15 P P 14 55 37.0 +0.4
MDJ pP pP 14 55 42.3 -0.2
MDJ sP pwP 14 55 50.1 +3.3
MDJ S **S 15 00 05.0 -1.7**
MDJ ScP **ScP 15 02 46.9 +4.6**
MDJ PcS **PcS 15 02 49.5 +4.9**
MDJ ScS **ScS 15 06 35.1 +3.2**
MDJ pmax pmax
comp=Z,43nm,0.7s
MDJ pmax pmax
comp=Z,230nm,4.4s
MDJ LR LR
comp=Z,1μm,11.4s
MDJ LR LR
comp=Z,1μm,10.4s
MDJ LR LR
comp=Z,800nm,14.2s
MDJ Mudanjiang 26.10 15 P P 14 55 36.2 -0.4
MDJ IAmb IAmb 14 55 39.2
comp=Z,43nm,1.1s
USRK Ussuriysk Ar. 26.38 19 P P 14 55 40.0 +0.9
comp=Z,3.0nm,0.8s,baz=223,slow=7.0,SNR=5.1
USRK LR LR 15 06 52.9
comp=Z,286nm,19.4s,baz=189,slow=38
USRK Ussuriysk Ar. 26.38 19 P **P 14 55 38.8 -0.3**
GTA Gaotai 26.56 322 ⇑P **P 14 55 42.1 +1.1**
GTA pP pP 14 55 45.9 -0.8
GTA sP sP 14 55 48.6 -0.6
GTA pmax pmax
comp=Z,8.0nm,1.7s
GTA LR LR
comp=Z,2μm,10.5s
GTA LR LR
comp=Z,2μm,11.3s
GTA LR LR
comp=Z,2μm,10.9s
SHL Shillong 26.97 288 P P 14 55 43.3 -1.6
SHL IAmb IAmb 14 55 53.6
comp=Z,29nm,1.4s
PMBI Palembang 27.15 216 P P 14 55 45.3 -1.0
comp=Z,6μmcomp=Z,190nm,0.4s
KCSI Kotacane, Aceh 27.27 237 P P 14 55 46.6 -0.8
comp=Z,10nm,1.1s
SDSI Sungai Dareh 27.62 225 P P 14 55 49.5 -1.1
comp=Z,4.6nm,1.1s
MNSI Mandailing Nat 27.66 230 P P 14 55 49.7 -1.2
comp=Z,16nm,0.7s
MMRI Maumere 28.11 176 P P 14 55 53.7 -1.2
comp=Z,966nmcomp=Z,25nm,2.0s
EDFI Ende, Flores 28.19 177 P P 14 55 54.7 -1.0
comp=Z,432nmcomp=Z,26nm,1.7s
PLAI Plampang 28.36 185 P P 14 55 57.1 0.0
comp=Z,699nmcomp=Z,21nm,1.6s

TWSI Taliwang, Sumb 28.36 187 P P 14 55 57.5 +0.3
comp=Z,9.6nm,1.2s
LSA Lhasa 28.37 296 P P 14 55 56.8 -0.9
LSA IAmb IAmb 14 56 00.7
comp=Z,34nm,1.4s
KLSI 28.64 214 P P 14 55 59.1 -0.5
comp=Z,5.4nm,1.8s
PWJI Pagerwojo 28.72 198 P P 14 56 00.9 +0.6
comp=Z,30nm,1.1s
WOJI Wonogiri, Jawa 28.81 200 P P 14 56 00.2 -0.9
comp=Z,33nm,1.8s
SOEI Soe 29.41 172 P P 14 56 14.2 +7.6
HIA Hailar 29.61 359 P P 14 56 07.5 -0.5
BATI Baumata 29.78 174 P P 14 56 07.7 -2.1
comp=Z,45nm,0.9s,baz=312,slow=12,SNR=9.2
BATI Baumata 29.78 174 P P 14 56 09.2 -0.6
ULN Ulaanbaatar 30.22 342 P P 14 56 13.4 -0.2
SONM Songino Array 30.39 341 P P 14 56 15.5 +0.4
comp=Z,4.2nm,0.7s,baz=162,slow=10,SNR=14
SONM Songino Array 30.39 341 P P 14 56 14.4 -0.6
TAPN Taplejung 30.91 291 *eP* **P 14 56 20.3 +0.2**
comp=Z,31nm,1.1s
KLR Kul'dur 30.94 15 P P 14 56 20.8 +1.0
comp=Z,11nm,1.0s,baz=223,slow=6.6,SNR=12
ODAN Odare 31.13 290 *eP* **P 14 56 22.9 +0.9**
comp=Z,36nm,0.9s
RAMN Ramite 31.84 290 *eP* **P 14 56 29.0 +0.8**
comp=Z,87nm,1.1s
GUN Gumba 32.59 291 *eP* **P 14 56 35.3 +0.4**
comp=Z,76nm,1.0s
PKI Pulchoki 32.96 291 *eP* **P 14 56 38.3 +0.1**
comp=Z,85nm,1.5s
PKIN Phulchoki 32.98 291 *eP* **P 14 56 38.3 +0.1**
comp=Z,78nm,1.5s
KKN Kakani 33.10 291 *eP* **P 14 56 39.4 +0.2**
comp=Z,47nm,1.1s
DMN Daman 33.23 291 *eP* **P 14 56 40.8 +0.3**
comp=Z,67nm,1.2s
GKN Gorkha 33.69 291 *eP* **P 14 56 44.3 0.0**
comp=Z,79nm,1.2s
DANN Dangsing 34.50 292 *eP* **P 14 56 51.4 -0.1**
comp=Z,42nm,1.1s
KOLN Koldanda 34.58 291 *eP* **P 14 56 52.4 +0.3**
comp=Z,148nm,1.6s
PYUN Piuthan 35.15 291 *eP* **P 14 56 56.7 -0.3**
comp=Z,41nm,0.9s
KNRA Kununurra 36.00 166 P P 14 57 02.5 -1.5
WMQ Urumqi 36.47 319 *eP* **P 14 57 10.6 +2.6**
WMQ pP pP 14 57 12.8 -1.0
WMQ sP sP 14 57 14.8 -1.5
WMQ pmax pmax
comp=Z,24nm,0.7s
WMQ pmax pmax
comp=Z,530nm,8.1s
FITZ Fitzroy Crossi 37.80 172 P P 14 57 17.4 -1.9
FITZ IAmb IAmb 14 57 18.9
comp=Z,25nm,1.1s
ZSN Zaisan 40.05 322 *eP* **P 14 57 38.1 +0.1**
comp=Z,4.6nm,1.1s,baz=322
PSA00 Pilbara Seismi 40.91 181 P P 14 57 44.9 -0.4
PSA00 IAmb IAmb 14 57 52.8
comp=Z,24nm,1.4s
MK31 Makanchi Array 41.26 320 P P 14 57 47.0 -0.9
MK31 IAmb IAmb 14 57 50.6
comp=Z,23nm,1.1s
MKAR Makanchi Array 41.26 320 P P 14 57 48.5 +0.5
comp=Z,14nm,0.9s,baz=113,slow=9.3,SNR=31
MKAR LR LR 15 17 31.7
comp=Z,267nm,18.2s,baz=114,slow=40
MKAR Makanchi Array 41.26 320 P P 14 57 47.9 -0.1
WB0 Warramunga Arr 41.45 160 P P 14 57 46.7 -3.0
MAKZ Makanchi 41.45 320 P P 14 57 49.1 -0.5
MAKZ IAmb IAmb 14 57 52.2
comp=Z,32nm,1.2s
SHLS Shalkode 41.56 314 *eP* **P 14 57 48.8 -1.8**
comp=Z,6.4nm,1.1s,baz=314
WRAB Tennant Creek 41.59 160 P P 14 57 48.5 -2.4
WRA Warramunga Arr 41.59 160 P P 14 57 48.4 -2.5
comp=Z,9.8nm,0.6s,baz=342,slow=9.0,SNR=25
WRA PcP **PcP 14 59 46.9 -1.1**
comp=Z,2.5nm,0.7s,baz=340,slow=3.5,SNR=8.1
WRA Warramunga Arr 41.59 160 P P 14 57 48.4 -2.5
WB2 Warramunga Arr 41.60 160 P P 14 57 48.2 -2.8
WB2 IAmb IAmb 14 57 53.9
comp=Z,12nm,0.7s
WR0 Warramunga Arr 41.67 160 P P 14 57 48.7 -2.9
WR0 IAmb IAmb 14 57 54.5
comp=Z,14nm,0.7s
KPKS Kokpek 42.20 314 *eP* **P 14 57 56.5 +0.7**
comp=Z,7.2nm,1.0s,baz=314
SATY Saty 42.25 313 *eP* **P 14 57 57.1 +0.8**
comp=Z,4.6nm,1.3s,baz=313
KDJ Kajisay 42.80 311 P P 14 58 00.9 +0.1
KSH Kashi 42.95 307 *eP* **P 14 58 05.8 +3.8**
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,720nm,7.0s
TDK Taldyqorghan 42.95 316 *eP* **P 14 58 03.2 +1.4**
comp=Z,13nm,0.9s,baz=316
MDOK Medeo 43.22 313 *eP* **P 14 58 05.6 +1.4**
baz=313
TNSS Tian-Shan 43.25 313 *eP* **P 14 58 05.7 +0.9**
baz=312
AAA Alma-Ata 43.33 313 *eP* **P 14 58 05.9 +1.0**
baz=313
CHKK Chushkaly 43.49 314 *eP* **P 14 58 07.3 +1.1**
comp=Z,45nm,1.1s,baz=314
ZAA0 Zalesovo Array 43.78 330 P P 14 58 08.2 -0.1
ZAA0 IAmb IAmb 14 58 10.0
comp=Z,15nm,0.8s
ZALV Zalesovo Beam 43.78 330 P P 14 58 09.3 +1.0
comp=Z,9.3nm,0.7s,baz=117,slow=7.8,SNR=30
ZALV Zalesovo Beam 43.78 330 P P 14 58 07.8 -0.5
KUU Kurty 43.95 314 *eP* **P 14 58 10.4 +0.6**
comp=Z,18nm,1.4s,baz=314
NIL Nilore 44.06 298 P P 14 58 10.9 -0.1
PETK Petropavlovsk- 44.10 32 P P 14 58 12.7 +1.7
comp=Z,2.2nm,0.8s,baz=214,slow=4.5,SNR=7.9
AS31 Alice Springs 44.96 162 P P 14 58 16.4 -1.8
ASAR Alice Springs 44.96 162 P P 14 58 16.4 -1.7
comp=Z,4.8nm,0.4s,baz=340,slow=6.9,SNR=56
ASAR Alice Springs 44.96 162 P P 14 58 15.8 -2.4
KURK Kurchatov 45.24 323 P P 14 58 19.6 -0.4
KURBB Kurchatov Arra 45.25 323 P P 14 58 20.7 +0.6
comp=Z,25nm,0.8s,baz=122,slow=7.9,SNR=65
BTLS Baital 45.87 314 *eP* **P 14 58 25.3 +0.1**
comp=Z,2.6nm,1.7s,baz=314
CTAO Charters Tower 46.86 146 P P 14 58 33.9 +0.7
CTAO IAmb IAmb 14 58 45.7
comp=Z,7.7nm,0.9s
BTK Batken 46.94 307 P P 14 58 32.3 -1.5
BTK IAmb IAmb 14 58 36.5
comp=Z,16nm,1.3s
GAR Garm 47.14 305 P P 14 58 35.8 +0.4
DZA Taraz 47.17 311 *eP* **P 14 58 37.1 +1.7**
baz=311
KBL Kabul 47.62 299 P P 14 58 37.9 -1.4
KBL IAmb IAmb 14 58 41.6
comp=Z,14nm,0.9s
KK31 Karatay Array 47.80 311 P P 14 58 40.6 +0.3
KK31 IAmb IAmb 14 58 43.6
comp=Z,18nm,1.2s
KKAR Karatay Array 47.80 311 P P 14 58 40.9 +0.6
KKAR IAmb IAmb 14 58 43.6
comp=Z,18nm,1.2s
KKAR Karatay Array 47.80 311 P P 14 58 40.7 +0.4
IUG Iuzhnay 47.94 310 *eP* **P 14 58 41.9 +0.4**
comp=Z,12nm,1.5s,baz=309
CHGR Chuyangaron 47.98 305 P P 14 58 42.4 +0.5
BRZS Berezniki 48.40 320 *eP* **P 14 58 45.2 +0.4**
comp=Z,2.7nm,1.2s,baz=320
SEY Seymchan 48.53 19 P P 14 58 46.3 +0.8
comp=Z,8.9nm,0.8s,baz=247,slow=5.3,SNR=10
MORW Morawa 48.56 185 P P 14 58 45.6 -0.5
MORW IAmb IAmb 14 58 46.6
comp=Z,20nm,1.1s
FORT Forrest 50.62 171 P P 14 59 01.5 -0.3
BVAR Borovoye Array 50.84 323 P P 14 59 04.4 +1.1
comp=Z,3.1nm,0.8s,baz=206,slow=30,SNR=11
BRVK Borovoye 50.91 323 P P 14 59 03.6 -0.3
BRVK IAmb IAmb 14 59 06.2
comp=Z,13nm,0.9s
TIXI Tiksi 52.30 3 P P 14 59 13.1 -0.8
TIXI IAmb IAmb 14 59 16.8
comp=Z,19nm,1.5s

NRIK Noril'sk 53.65 346 P P 14 59 24.1 +0.1
comp=Z,9.8nm,0.9s,baz=131,slow=6.7,SNR=11
BBOO Buckleboo 54.21 164 P P 14 59 27.9 -0.6
STKA Stephens Creek 55.06 158 P P 14 59 33.2 -1.4
comp=Z,13nm,1.1s,baz=339,slow=10,SNR=11
STKA Stephens Creek 55.06 158 P P 14 59 34.1 -0.5
ABKAR Akbulak array 56.20 317 P P 14 59 41.7 -1.0
ABKAR Akbulak array 56.20 317 P P 14 59 41.7 -1.0
GEYT Alibeck 56.59 303 P P 14 59 44.5 -1.2
comp=Z,4.0nm,0.8s,baz=186,slow=4.3,SNR=6.2
GEYT LR LR 15 27 26.5
comp=Z,259nm,19.3s,baz=90,slow=40
GYA0B ALIBECK ARRAY 56.59 303 P P 14 59 44.8 -0.9
WSAR Wadi Sarin 57.26 286 P P 14 59 51.2 +0.5
comp=Z,3.5nm,0.8s,baz=133,slow=4.3,SNR=3.5
ARU Arti 58.38 325 P P 14 59 57.6 -0.4
comp=Z,2.7nm,0.5s,baz=114,slow=5.8,SNR=10
ARU Arti 58.38 325 P P 14 59 57.3 -0.7
DZM Mont Dzumac 61.14 130 P P 15 00 18.5 +0.9
KIRV Kirov 63.59 326 P P 15 00 33.6 +0.3
comp=Z,19nm,0.8s,baz=105,slow=0.9,SNR=7.1
GNI Garni 66.86 306 P P 15 00 55.1 0.0
comp=Z,9.5nm,1.0s,baz=136,slow=4.4,SNR=6.0
GNI Garni 66.86 306 P P 15 00 54.0 -1.1
KBZ Khabaz 67.83 310 P P 15 01 02.0 +1.0
comp=Z,15nm,0.9s
KVAR Kislovodsk Arr 67.95 310 P P 15 01 04.0 +2.0
comp=Z,8.4nm,0.7s,baz=270,slow=20,SNR=5.2
KIV Kislovodsk 67.96 310 P P 15 01 00.5 -1.4
GEVA Gevas 68.40 304 P P 15 01 05.6 +0.7
KLMR Klimovskoe 68.67 329 *eP* **P 15 01 04.3 -1.6**
KLMR AMP 15 01 07.2
comp=Z,20nm,1.1s
RAYN Ar Rayn 69.05 288 P P 15 01 08.6 -0.4
RAYN IAmb IAmb 15 01 10.3
comp=Z,8.1nm,0.9s
TTA Tatalina 69.84 29 P P 15 01 13.6 +0.3
TTA IAmb IAmb 15 01 16.0
comp=Z,7.6nm,1.2s
MARD Mardin 70.34 304 P P 15 01 17.6 +0.7
OBN Obninsk 70.68 323 P P 15 01 17.1 -1.2
CAST Castle Rocks 71.57 28 P P 15 01 24.3 +0.6
CAST IAmb IAmb 15 01 25.8
comp=Z,15nm,1.1s
TOLK Toolik Lake Re 71.94 23 P P 15 01 26.5 +0.6
TOLK IAmb IAmb 15 01 37.6
comp=Z,6.1nm,0.8s
BPAW Bear Paw Mtn. 71.97 27 P P 15 01 26.4 +0.4
BPAW IAmb IAmb 15 01 31.2
comp=Z,20nm,1.4s
RND Reindeer 73.01 28 P P 15 01 31.9 -0.5
RND IAmb IAmb 15 01 33.4
comp=Z,12nm,1.0s
MDM Murphy Dome 73.02 26 P P 15 01 32.7 +0.3
MDM IAmb IAmb 15 01 49.4
comp=Z,19nm,1.4s
POKR Poker Plat Res 73.32 26 P P 15 01 35.2 +1.1
POKR IAmb IAmb 15 01 47.8
comp=Z,8.2nm,1.1s
ARCES ARCESS Array B 73.52 339 P P 15 01 36.8 +1.6
comp=Z,3.2nm,1.0s,baz=35,slow=4.4,SNR=4.0
IL31 73.61 27 P P 15 01 35.4 -0.3
ILAR Eielson Array 73.61 27 P P 15 01 34.8 -1.0
comp=Z,1.7nm,0.8s,baz=279,slow=3.9,SNR=13
ILAR Eielson Array 73.61 27 P P 15 01 35.2 -0.6
HDA Harding Lake 73.66 27 P P 15 01 34.9 -1.2
AFI Afiamalu 74.56 111 LR LR 15 28 56.8
comp=Z,129nm,19.3s,baz=311,slow=31
FINES FINESS Array B 75.05 330 P P 15 01 43.6 -0.6
comp=Z,7.1nm,0.8s,baz=101,slow=8.0,SNR=16
BRTR Keskin Array B 75.34 307 P P 15 01 46.0 -0.5
comp=Z,2.3nm,1.0s,baz=104,slow=5.2,SNR=6.8
BRTR LR LR 15 39 58.3
comp=Z,62nm,18.6s,baz=330,slow=40
VSU Vasula 75.42 327 *eP* **P 15 01 45.9 -0.5**
AKASG Malin Array Be 75.83 319 P P 15 01 48.7 -0.2
comp=Z,8.8nm,0.7s,baz=62,slow=5.7,SNR=14
AKASG Malin Array Be 75.83 319 P P 15 01 48.0 -0.9
AKBB Malin Array Si 75.83 319 P P 15 01 48.4 -0.5
AKBB IAmb IAmb 15 01 49.7
comp=Z,12nm,0.9s
IDID Didziasalis 76.18 324 *eP* **P 15 01 50.9 +0.1**
NACGM Naroch 76.25 324 *e* **P 15 01 51.0 -0.2**
ISAL Salakas 76.45 324 *eP* **P 15 01 52.5 +0.2**
IIGN Ignalina 76.45 324 *eP* **P 15 01 52.1 -0.2**
PABE Paberze 77.65 325 *eP* **P 15 01 59.1 0.0**
SUW Suwalki 78.52 323 P P 15 02 03.2 -0.8
BURAR Bucovina Array 79.18 317 P P 15 02 07.6 -0.3
BUR08 Bucovina Ar. S 79.19 317 P P 15 02 07.4 -0.5
MLR Muntele Rosu 79.32 314 P P 15 02 09.4 +0.7
comp=Z,5.1nm,0.7s,baz=302,slow=2.3,SNR=8.0
MLR Muntele Rosu 79.32 314 P P 15 02 08.0 -0.7
KWP Kalwaria Pacla 80.15 319 P P 15 02 13.1 +0.1
C36M Paulatuk 80.36 19 P P 15 02 13.7 0.0
KOLS Kolonicke sedl 80.65 319 *eP* **P 15 02 16.4 +0.8**
CRVS Cervenica-Dubn 81.16 319 *eP* **P 15 02 18.5 +0.1**
HFS Hagfors 81.21 331 P P 15 02 18.5 +0.1
comp=Z,3.6nm,0.7s,baz=97,slow=3.4,SNR=6.0
NC405 NORSAR Array S 81.69 332 P P 15 02 20.9 0.0
OJC Ojcow 81.73 320 P P 15 02 19.7 -1.6
NB2 NORSAR Subarra 81.94 332 P P 15 02 22.0 -0.3
comp=Z,13nm,1.1s,baz=65,slow=5.6
NOA NORSAR Array B 81.94 332 P P 15 02 22.4 +0.1
comp=Z,5.0nm,0.9s,baz=65,slow=5.3,SNR=11
NOA LR LR 15 44 51.7
comp=Z,226nm,18.1s,baz=65,slow=40
MORC Moravsky Berou 83.24 320 *eP* **P 15 02 31.9 +2.6**
IDI Anoyia 83.25 305 P P 15 02 29.7 -0.1
comp=Z,1.5nm,0.5s,baz=59,slow=17,SNR=1.6
RES Resolute Bay 83.29 9 P P 15 02 29.6 +0.6
RES IAmb IAmb 15 02 30.0
comp=Z,16nm,1.5s
JAVC Velka Javorina 83.52 320 *eP* **P 15 02 32.8 +2.0**
DPC Dobruska-Polom 83.75 321 *eP* **P 15 02 33.0 +1.1**
VRAC Vranov 84.00 320 P P 15 02 33.4 +0.3
comp=Z,2.1nm,0.4s,baz=66,slow=3.1,SNR=6.6
VRAC Vranov 84.00 320 *eP* **P 15 02 34.4 +1.2**
FNA Florina 84.00 311 P P 15 02 32.5 -0.9
FNA IAmb IAmb 15 02 37.6
comp=Z,4.3nm,0.8s
KRUC Moravsky 84.21 320 *eP* **P 15 02 35.0 +0.8**
BRG Berggiesshubel 84.92 322 *eP* **P 15 02 38.2 +0.4**
comp=Z,11nm,1.1s
PRU Pruhonice 84.94 321 *eP* **P 15 02 38.8 +0.9**
CLL Collm 85.27 323 *i* P **P 15 02 39.8 +0.3**
comp=Z,14nm,1.3s
CLL LmV 15 28 00.0
comp=Z,400nm,20.1s
CLL Collm 85.27 323 P P 15 02 39.1 -0.4
CLL IAmb IAmb 15 02 40.6
comp=Z,6.9nm,1.0s
KHC Kasperske Hory 85.87 321 *eP* **P 15 02 42.7 +0.1**
GEC2 GERESS Array S 85.92 321 P P 15 02 43.1 +0.1
GEC2 IAmb IAmb 15 02 44.4
comp=Z,5.7nm,1.0s
GERES GERESS Array B 85.92 321 P P 15 02 43.1 +0.1
comp=Z,2.7nm,0.8s,baz=46,slow=3.9,SNR=12
YKA Yellowknife Ar 87.47 22 P P 15 02 50.6 +0.5
comp=Z,3.0nm,0.9s,baz=315,slow=4.9,SNR=2.6
PPT Papeete 95.75 107 LR LR 15 36 46.7
comp=Z,67nm,20.7s,baz=307,slow=29
NVAR Mina Array Bea 100.27 43 P Pdif 15 03 50.3 +0.6
comp=Z,0.1nm,0.5s,baz=308,slow=7.3,SNR=3.7
SJCC San Jacinto, C 146.92 29 *eP* **PKPdf 15 09 44.5 +0.2**
MOTC Monteria, Cord 147.66 31 *eP* **PKPdf 15 09 44.7 -0.8**
PIZC Pizarro, Choco 149.98 37 *eP* **PKiKP 15 09 55.2 +0.2**
PTBC PUERTO BERRIO 150.19 31 *eP* **PKPdf 15 09 50.0 +0.4**
PLMC San Jos del P 150.63 36 *eP* **PKPbc 15 09 54.5 -1.3**
YOTC Yotoco, Valle 151.36 37 *eP* **PKPdf 15 09 51.9 +0.4**
RUSC La Rusia 151.40 29 *eP* **PKPbc 15 09 55.8 -2.3**
TOLC Tolima 151.42 34 *eP* **PKPbc 15 09 56.9 -1.1**
ORTC Ortega, Tolima 152.03 35 *eP* **PKPbc 15 09 57.0 -2.0**
PRAC Prado 152.38 35 *eP* **PKPbc 15 09 57.6 -2.3**
LPAZ La Paz 171.23 69 PKP **PKPdf 15 10 13.8 +1.0**
comp=Z,0.7nm,0.5s,baz=15,slow=5.3,SNR=4.3

MEX ***17*** *14:57:50.2±0.8, 32.41N×114.77W, h10km, MD3.6*
ECX ***17*** *14:57:53.7±0.9, 32.23N×115.27W, h10km±5km, MD2.7, ML2.9*
ISC 17 14:57:52.7±0.9, 32.19N±0.03×115.34W±0.03, h12km±10km, n21, σ1s02/32, 3C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	**0.23**	**6**	*eP*	**Pg**	**14 57 56.7**	**-1.0**
CPBX				⇓*e*		14 58 05.0	
CPBX				IAML		14 58 05.0	
	comp=E,6μm,0.2s						
GUVIX	**Guadalupe Vict**	**0.25**	**62**	⇑*iP*	**Pg**	**14 57 57.6**	**-0.3**
MBIG	**Mexicali**	**0.25**	**28**	*eP*	**Pg**	**14 57 57.6**	**-0.3**
MBIG				*eS*	**Sg**	**14 58 02.5**	**+1.0**
MBIG	**Mexicali**	**0.25**	**28**	*eP*	**Pg**	**14 57 57.8**	**-0.1**
SGL	**Mount Signal**	**0.57**	**325**	⇓*iP*	**Pg**	**14 58 04.1**	**+0.3**
SGL				*eS*	**Sg**	**14 58 12.0**	**+0.7**
EMSC	**East Mesa**	**0.63**	**28**	*eP*	**Pg**	**14 58 03.9**	**-1.0**
SJX	**San Joaquin**	**0.68**	**232**	⇑*iP*	**Pg**	**14 58 04.4**	**-1.4**
SJX				*iS*	**Sg**	**14 58 13.0**	**-1.7**
COA	**Coachella**	**0.70**	**15**	*eP*	**Pg**	**14 58 05.0**	**-1.3**
COK2	**Cook Ranch 2**	**0.74**	**333**	*eP*	**Pg**	**14 58 06.7**	**-0.4**
ECBX	**El Chinero**	**0.75**	**161**	*eP*	**Pg**	**14 58 07.1**	**-0.1**
ECBX				*eS*	**Sg**	**14 58 18.0**	**+1.0**
RMX	**La Rumorosa**	**0.76**	**304**	*eP*	**Pg**	**14 58 06.7**	**-0.6**
RMX				*eS*	**Sg**	**14 58 16.5**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**0.80**	**305**	*eP*	**Pg**	**14 58 08.6**	**+0.3**
CBX	**Cerro Bola**	**1.13**	**277**	*eP*	**Pb**	**14 58 14.7**	**+0.4**
CBX				*eS*	**Sb**	**14 58 30.9**	**+1.9**
CBX				⇑*e*		14 58 31.8	
CBX				IAML		14 58 31.8	
	comp=E,404nm,0.3s						
SPIG	**San Pedro Mart**	**1.14**	**186**	*eP*	**Pb**	**14 58 14.0**	**-0.5**
SPIG				*eS*	**Sg**	**14 58 31.6**	**+2.0**
SPIG	**San Pedro Mart**	**1.14**	**186**	*eP*	**Pb**	**14 58 14.0**	**-0.5**
SPIG				*eS*	**Sg**	**14 58 31.1**	**+1.6**
SPX	**San Pedro Mart**	**1.15**	**186**	*eP*	**Pb**	**14 58 14.1**	**-0.6**
SPX				*eS*	**Sg**	**14 58 31.1**	**+1.3**
MONP2	**Monument Peak**	**1.16**	**308**	*eP*	**Pb**	**14 58 14.8**	**0.0**
TJIG	**Tijuana**	**1.16**	**283**	*eP*	**Pn**	**14 58 14.2**	**-0.5**
TJIG				*eS*	**Sb**	**14 58 31.0**	**+1.3**
SFX	**San Felipe**	**1.22**	**160**	*eP*	**Pn**	**14 58 14.7**	**-0.8**
SFX				*eS*	**Sb**	**14 58 31.6**	**+0.4**
BAR	**Barrett**	**1.23**	**294**	*eP*	**Pn**	**14 58 15.2**	**-0.6**
BAR				*eS*	**Sb**	**14 58 32.7**	**+0.9**
214A	**Organ Pipe Nat**	**2.15**	**95**	*iP*	Pn	14 58 17.0	-11
214A				*iS*	Sn	14 58 37.8	-17

BUL ***17*** *14:58:23.8±1.1, 26°.56S×29°.23E, h10km, MD3.6*
EAF ***17*** *14:58:24.8±0.8, 26°.55S×29°.26E, h10km, MD3.6*

ISC 17 14:58:23.3±1.2, 26°.52S±0°.05×29°.22E±0°.04, h10km, n8, σ0s83/16, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POGA	**Pongola**	**2.37**	**111**	*iP*	**Pn**	**14 59 02.4**	**+0.1**
POGA				*iS*	**Sn**	**14 59 31.0**	**-0.4**
POGA	**Pongola**	**2.37**	**111**	*iP*	**Pn**	**14 59 02.4**	**+0.1**
POGA				*iS*	**Sn**	**14 59 31.0**	**-0.4**
LBTB	**Lobatse**	**3.59**	**294**	*iP*	**Pn**	**14 59 18.8**	**-0.4**
LBTB				*iS*	**Sn**	**15 00 01.8**	**+0.1**
LBTB	**Lobatse**	**3.59**	**294**	*iP*	**Pn**	**14 59 18.8**	**-0.4**
LBTB				*iS*	**Sn**	**15 00 01.8**	**+0.1**
BOSA	**Boshof**	**4.09**	**238**	*iP*	**Pn**	**14 59 27.1**	**+1.1**
BOSA				*iS*	**Sn**	**15 00 13.1**	**-1.0**
BOSA	**Boshof**	**4.09**	**238**	*iP*	**Pn**	**14 59 27.1**	**+1.1**
BOSA				*iS*	**Sn**	**15 00 13.1**	**-1.0**
BLWY	**Bulawayo**	**6.37**	**355**	*iP*	**Pn**	**14 59 58.5**	**+1.1**
BLWY				*iS*	**Sn**	**15 01 09.4**	**-1.0**
BLWY	**Bulawayo**	**6.37**	**355**	*iP*	**Pn**	**14 59 58.5**	**+1.1**
BLWY				*iS*	**Sn**	**15 01 09.4**	**-1.0**

IDC ***17*** *15:01:18.9±0.7, 19°.46N×120°.45E, h0km, mb3.9/13, mb1 4.0/13, mb1mx3.8/40, mbtmp3.9/13, MS3.7/2, Ms1 3.7/2, ms1mx2.9/41, Error ellipse: s-maj=29.3km s-min=15.1km az=70.0*
NEIC ***17*** *15:01:19.6±2.7, 19°.47N±0°.08×120°.40E±0°.09, h10km±1km, mb4.5/29, Error ellipse: s-maj=15.2km s-min=13.1km az=126.0*

ISC 17 15:01:21.4±0.5, 19°.40N±0°.06×120°.40E±0°.09, h23km, n62, σ1s46/57, mb4.2/25, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.46**	**10**	Pn	**Pn**	**15 02 11.5**	**-2.5**
TPUB	**Ta-pu**	**3.89**	**3**	Pn	**Pn**	**15 02 17.5**	**-2.3**
YULB	**Yu-li**	**4.06**	**12**	Pn	**Pn**	**15 02 19.8**	**-2.4**
SSLB	**Suanglung**	**4.40**	**7**	Pn	**Pn**	**15 02 24.7**	**-2.1**
NACB	**Ninganchiao**	**4.88**	**13**	Pn	**Pn**	**15 02 32.2**	**-1.2**
TGY	**Tagaytay City**	**5.29**	**174**	LR	LR	15 04 35.4	
	comp=Z,436nm,20.5s,baz=76,slow=37						
YHNB	**Yeheng**	**5.32**	**10**	Pn	**Pn**	**15 02 37.8**	**-1.8**
LQP	**Lukban**	**5.37**	**168**	⇓*eP*	**Pb**	**15 02 50.8**	**-3.9**
HKPS	**Hong Kong Po S**	**6.52**	**297**	Pn	**Pn**	**15 02 53.6**	**-2.4**
QIZ	**Qiongzhong**	**9.98**	**270**	Pn	**Pn**	**15 03 41.8**	**-1.7**
CMAR	**Chiang Mai Arr**	**20.32**	**271**	P	Pn	15 05 58.2	+0.1
CMAR	0.3nm,0.5s,baz=76,slow=9.6,SNR=5.5			PcP	**PcP**	**15 10 11.2**	**+2.1**
	0.4nm,0.5s,baz=54,slow=1.5,SNR=5.1						
CMAR	**Chiang Mai Arr**	**20.32**	**271**	P	Pn	15 05 58.0	-0.2
JWT	**Wachi**	**20.64**	**37**	P	Pn	15 06 00.3	-1.5
JWT				IAmb	IAmb	15 06 09.7	
	comp=Z,70nm,1.5s						
SONM	**Songino Array**	**30.57**	**341**	P	**P**	**15 07 32.9**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=161,slow=11,SNR=4.1						
KLR	**Kul'dur**	**31.13**	**14**	P	**P**	**15 07 38.6**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=196,slow=5.3,SNR=4.7						
FITZ	**Fitzroy Crossi**	**37.62**	**172**	P	**P**	**15 08 35.3**	**+0.7**
FITZ				IAmb	IAmb	15 08 36.7	
	comp=Z,8.9nm,1.3s						
COEN	**Coen**	**40.02**	**144**	P	**P**	**15 08 55.7**	**+0.8**
COEN				IAmb	IAmb	15 09 12.3	
	comp=Z,7.4nm,1.3s						
WB0	**Warramunga Arr**	**41.27**	**160**	P	**P**	**15 09 05.7**	**+0.6**
MK31	**Makanchi Array**	**41.39**	**320**	P	**P**	**15 09 05.1**	**-0.9**
MKAR	**Makanchi Array**	**41.39**	**320**	P	**P**	**15 09 07.0**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=112,slow=11,SNR=8.0						
MKAR	**Makanchi Array**	**41.39**	**320**	P	**P**	**15 09 04.3**	**-1.6**
WRA	**Warramunga Arr**	**41.42**	**160**	P	**P**	**15 09 06.6**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=342,slow=9.1,SNR=16						
WRA	**Warramunga Arr**	**41.42**	**160**	IAmb	IAmb	15 09 07.7	
	comp=Z,0.1nm,0.9s						
WB2	**Warramunga Arr**	**41.42**	**160**	P	**P**	**15 09 06.6**	**+0.2**
WR0	**Warramunga Arr**	**41.50**	**160**	P	**P**	**15 09 07.7**	**+0.7**
MAKZ	**Makanchi**	**41.59**	**320**	P	**P**	**15 09 08.1**	**+0.5**
YAK	**Yakutsk**	**43.08**	**6**	P	**P**	**15 09 19.9**	**+0.5**
YAK				IAmb	IAmb	15 09 27.1	
	comp=Z,8.7nm,0.5s						
ZAA0	**Zalesovo Array**	**43.94**	**330**	P	**P**	**15 09 27.0**	**+0.6**
ZALV	**Zalesovo Beam**	**43.94**	**330**	P	**P**	**15 09 27.3**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=113,slow=10.0,SNR=7.5						
ZALV	**Zalesovo Beam**	**43.94**	**330**	P	**P**	**15 09 26.8**	**+0.3**
ASAR	**Alice Springs**	**44.78**	**162**	P	**P**	**15 09 35.0**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=340,slow=6.9,SNR=29						
ASAR	**Alice Springs**	**44.78**	**162**	P	**P**	**15 09 34.8**	**+1.2**
KURK	**Kurchatov**	**45.39**	**323**	P	**P**	**15 09 38.9**	**+0.9**
KURK	**Kurchatov**	**45.39**	**323**	IAmb	IAmb	15 09 40.2	
	comp=Z,4.5nm,1.0s						
KURBB	**Kurchatov Arra**	**45.39**	**323**	P	**P**	**15 09 38.9**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=124,slow=7.8,SNR=6.0						
KKAR	**Karatay Array**	**47.92**	**311**	P	**P**	**15 09 59.1**	**+1.1**
SEY	**Seymchan**	**48.71**	**19**	P	**P**	**15 10 05.1**	**+1.3**
	comp=Z,2.7nm,0.7s,baz=232,slow=5.2,SNR=7.5						
SEY				LR	LR	15 31 41.9	
	comp=Z,124nm,18.7s,baz=22,slow=38						
FORT	**Forrest**	**50.43**	**171**	P	**P**	**15 10 18.9**	**+1.6**
BRVK	**Borovoye**	**51.06**	**323**	P	**P**	**15 10 20.0**	**-1.8**
BRVK				IAmb	IAmb	15 10 23.6	
	comp=Z,3.0nm,0.8s						
NWAO	**Narrogin (SRO)**	**52.12**	**183**	P	**P**	**15 10 30.9**	**+1.0**
NWAO				IAmb	IAmb	15 10 49.0	
	comp=Z,20nm,1.4s						
BBOO	**Buckleboo**	**54.03**	**164**	P	**P**	**15 10 45.7**	**+1.7**
BBOO				IAmb	IAmb	15 11 05.8	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**54.88**	**158**	P	**P**	**15 10 52.2**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=27,slow=4.1,SNR=3.3						
STKA	**Stephens Creek**	**54.88**	**158**	P	**P**	**15 10 50.6**	**+0.3**
FUNA	**Funafuti**	**64.21**	**110**	P	**P**	**15 11 55.0**	**0.0**
KIV	**Kislovodsk**	**68.07**	**310**	P	**P**	**15 12 21.6**	**+2.1**
KIV				IAmb	IAmb	15 12 22.3	
	comp=Z,6.5nm,0.6s						
KNTN	**Kanton**	**70.17**	**100**	P	**P**	**15 12 32.4**	**-0.5**
IMAR	**Indian Mountai**	**70.78**	**26**	P	**P**	**15 12 36.5**	**+0.8**
CAST	**Castle Rocks**	**71.74**	**28**	P	**P**	**15 12 42.9**	**+1.3**
CAST				IAmb	IAmb	15 12 43.8	
	comp=Z,3.9nm,0.9s						
TOLK	**Toolik Lake Re**	**72.12**	**23**	P	**P**	**15 12 45.5**	**+1.6**
TOLK				IAmb	IAmb	15 12 56.4	
	comp=Z,3.2nm,1.2s						
RND	**Reindeer**	**73.18**	**28**	P	**P**	**15 12 49.6**	**-0.6**
RND				IAmb	IAmb	15 13 06.3	
	comp=Z,8.4nm,1.2s						
WRH	**Wood River Hil**	**73.33**	**27**	P	**P**	**15 12 50.5**	**-0.5**
WRH				IAmb	IAmb	15 12 53.4	
	comp=Z,1.9nm,0.8s						
ARC2	**ARCESS Array S**	**73.69**	**339**	P	**P**	**15 12 52.6**	**-0.5**
ILAR	**Eielson Array**	**73.79**	**26**	P	**P**	**15 12 54.5**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=298,slow=6.0,SNR=6.2						
BMAR	**Burnt Mountain**	**74.17**	**24**	P	**P**	**15 12 57.4**	**+1.4**
RIDG	**Independent Ri**	**74.88**	**27**	P	**P**	**15 12 57.1**	**-3.1**
FINES	**FINESS Array B**	**75.21**	**330**	P	**P**	**15 13 02.5**	**+0.6**
	comp=Z,3.5nm,0.9s,baz=72,slow=6.2,SNR=5.7						
FINES	**FINESS Array B**	**75.21**	**330**	P	**P**	**15 13 00.4**	**-1.5**
AKASG	**Malin Array Be**	**75.97**	**319**	P	**P**	**15 13 06.2**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=65,slow=4.9,SNR=2.4						
BCAR	**Beaver Creek A**	**76.38**	**28**	P	**P**	**15 13 09.3**	**+0.6**
BALM	**Baldy**	**76.68**	**30**	P	**P**	**15 13 11.2**	**+0.6**
MWH	**Moku'aweowe**	**78.31**	**73**	P	**P**	**15 13 19.3**	**-1.7**
EUNU	**Eureka**	**79.71**	**5**	P	**P**	**15 13 25.6**	**-1.3**
EUNU				IAmb	IAmb	15 13 38.8	
	comp=Z,4.0nm,1.3s						

IDC 17 15:02:31.8±1.2, 19°.45N×120°.51E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/39, mbtmp3.6/7, MS3.7/2, Ms1 3.7/2, ms1mx3.0/36, Error ellipse: s-maj=56.9km s-min=19.4km az=63.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.42**	**271**	P	P	15 07 10.7	-0.2
	0.3nm,0.4s,baz=78,slow=7.5,SNR=4.2						
SONM	**Songino Array**	**30.56**	**341**	P	P	15 08 47.1	-0.1
	0.5nm,0.6s,baz=159,slow=8.8,SNR=2.3						
KRVT	**Keravat (AS076**	**38.97**	**124**	LR	LR	15 24 46.4	
	comp=Z,81nm,20.0s,baz=55,slow=34						
MKAR	**Makanchi Array**	**41.42**	**320**	P	P	15 10 20.1	-0.1
	0.9nm,0.8s,baz=108,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**41.42**	**160**	P	P	15 10 19.6	-0.8
	0.6nm,0.6s,baz=342,slow=9.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**43.95**	**330**	P	P	15 10 40.2	-0.3
	0.9nm,0.6s,baz=119,slow=8.0,SNR=3.8						
ASAR	**Alice Springs**	**44.80**	**162**	P	P	15 10 48.2	+0.6
	0.6nm,0.6s,baz=339,slow=6.7,SNR=6.1						
KURBB	**Kurchatov Arra**	**45.42**	**323**	P	P	15 10 52.5	+0.2
	1.0nm,0.5s,baz=121,slow=7.8,SNR=2.0						
KMBO	**Kilima Mbogo**	**84.01**	**267**	LR	LR	15 53 50.4	
	comp=Z,60nm,19.2s,baz=281,slow=37						

IDC ***17*** *15:07:05.4±1.6, 19°.66N×120°.98E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/43, mbtmp3.5/4, MS4.0/1, Ms1 4.0/1, ms1mx2.8/34, Error ellipse: s-maj=160.2km s-min=22.8km az=66.0*
NEIC ***17*** *15:07:06.7±2.8, 19°.51N±0°.09×120°.69E±0°.09, h10km±1km, mb4.4/10, Error ellipse: s-maj=19.4km s-min=6.4km az=41.0*

ISC 17 15:07:09.8±0.8, 19°.53N±0°.09×120°.8E±0°.1, h32km, n18, σ1s22/16, mb4.1/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.28**	**4**	Pn	**Pn**	**15 08 00.1**	**+1.1**
TPUB	**Ta-pu**	**3.75**	**357**	Pn	**Pn**	**15 08 04.5**	**-1.1**
YULB	**Yu-li**	**3.87**	**7**	Pn	**Pn**	**15 08 06.8**	**-0.2**
JOW	**Kunigami**	**9.99**	**42**	Pn	**Pn**	**15 09 29.6**	**-1.6**
JCJ	**Chichijima**	**21.00**	**65**	P	**P**	**15 11 52.3**	**+1.6**
SONM	**Songino Array**	**30.57**	**341**	P	**P**	**15 13 20.5**	**-0.2**
	0.3nm,0.5s,baz=116,slow=6.6,SNR=2.1						
SONM	**Songino Array**	**30.57**	**341**	IAmb	IAmb	15 13 23.9	
	comp=Z,1.4nm,1.2s						
FITZ	**Fitzroy Crossi**	**37.70**	**172**	P	**P**	**15 14 22.7**	**+0.3**
FITZ				IAmb	IAmb	15 14 23.6	
	comp=Z,5.9nm,1.2s						
PMG	**Port Moresby**	**38.74**	**136**	LR	LR	15 30 57.3	
WRAB	**Tennant Creek**	**41.40**	**161**	P	**P**	**15 14 52.3**	**-1.1**
WRAB				IAmb	IAmb	15 14 54.6	
	comp=Z,14nm,0.6s						
WRA	**Warramunga Arr**	**41.41**	**161**	P	**P**	**15 14 53.7**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=342,slow=9.1,SNR=6.4						
WB2	**Warramunga Arr**	**41.41**	**161**	P	**P**	**15 14 51.7**	**-1.7**
WB2				IAmb	IAmb	15 15 05.3	
	comp=Z,5.5nm,1.4s						
MKAR	**Makanchi Array**	**41.55**	**320**	P	**P**	**15 14 54.4**	**0.0**
	comp=Z,0.5nm,0.7s,baz=136,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**44.79**	**163**	P	**P**	**15 15 22.1**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=339,slow=6.9,SNR=12						
KURK	**Kurchatov**	**45.51**	**323**	P	**P**	**15 15 26.0**	**-0.2**
KURK				IAmb	IAmb	15 15 26.9	
	comp=Z,2.8nm,1.1s						
NWAO	**Narrogin (SRO)**	**52.28**	**184**	P	**P**	**15 16 16.9**	**-1.3**
BBOO	**Buckleboo**	**54.05**	**164**	P	**P**	**15 16 33.1**	**+1.9**
BBOO				IAmb	IAmb	15 16 40.7	
	comp=Z,22nm,1.4s						

IDC ***17*** *15:11:04.9±1.4, 19°.50N×120°.60E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/43, mbtmp3.7/6, MS4.1/1, Ms1 4.1/1, ms1mx2.9/39, Error ellipse: s-maj=63.7km s-min=20.0km az=57.0*
NEIC ***17*** *15:11:05.8±1.1, 19°.54N±0°.09×120°.7E±0°.2, h11km±5km, mb4.0/10, Error ellipse: s-maj=24.8km s-min=13.5km az=88.0*

ISC 17 15:11:07.8±0.8, 19°.55N±0°.10×120°.6E±0°.2, h23km, n25, σ0s69/24, mb3.8/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.28**	**7**	Pn	**Pn**	**15 11 57.6**	**-0.1**
TPUB	**Ta-pu**	**3.73**	**360**	Pn	**Pn**	**15 12 02.6**	**-1.5**
YULB	**Yu-li**	**3.87**	**9**	Pn	**Pn**	**15 12 05.1**	**-0.9**
SSLB	**Suanglung**	**4.22**	**4**	Pn	**Pn**	**15 12 11.2**	**+0.3**
YHNB	**Yeheng**	**5.14**	**8**	Pn	**Pn**	**15 12 23.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**20.54**	**271**	P	**P**	**15 15 44.9**	**0.0**
	0.4nm,0.3s,baz=89,slow=9.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	**20.54**	**271**	P	**P**	**15 15 44.7**	**-0.2**
SONM	**Songino Array**	**30.50**	**341**	P	**P**	**15 17 18.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**37.74**	**172**	P	**P**	**15 18 21.5**	**-0.5**
WB0	**Warramunga Arr**	**41.34**	**160**	P	**P**	**15 18 50.9**	**-1.1**
WB0				IAmb	IAmb	15 18 59.2	
	comp=Z,5.2nm,1.4s						
MK31	**Makanchi Array**	**41.42**	**320**	P	**P**	**15 18 52.3**	**-0.3**
MK31				IAmb	IAmb	15 18 52.5	
	comp=Z,3.1nm,1.4s						
MKAR	**Makanchi Array**	**41.42**	**320**	P	**P**	**15 18 53.2**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=119,slow=13,SNR=3.8						
MKAR	**Makanchi Array**	**41.42**	**320**	P	**P**	**15 18 52.6**	**0.0**
WRA	**Warramunga Arr**	**41.48**	**160**	P	**P**	**15 18 52.8**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=334,slow=10,SNR=10.0						
WRA	**Warramunga Arr**	**41.48**	**160**	P	**P**	**15 18 53.0**	**-0.2**
WB2	**Warramunga Arr**	**41.49**	**160**	P	**P**	**15 18 52.6**	**-0.7**
WR0	**Warramunga Arr**	**41.56**	**160**	P	**P**	**15 18 53.5**	**-0.4**
WR0				IAmb	IAmb	15 19 13.3	
	comp=Z,2.9nm,1.1s						
ZALV	**Zalesovo Beam**	**43.92**	**330**	P	**P**	**15 19 13.2**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=92,slow=8.9,SNR=4.2						
AS31	**Alice Springs**	**44.86**	**163**	P	**P**	**15 19 20.4**	**-0.2**
ASAR	**Alice Springs**	**44.86**	**163**	P	**P**	**15 19 20.9**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=339,slow=6.9,SNR=27						
ASAR				LR	LR	15 40 25.7	
	comp=Z,196nm,18.8s,baz=77,slow=39						
BBOO	**Buckleboo**	**54.12**	**164**	P	**P**	**15 20 30.5**	**-0.5**
STKA	**Stephens Creek**	**54.94**	**158**	P	**P**	**15 20 38.3**	**+1.3**
	comp=Z,0.3nm,0.2s,baz=9.6,slow=5.9,SNR=2.9						
STKA	**Stephens Creek**	**54.94**	**158**	IAmb	IAmb	15 21 04.0	
	comp=Z,2.7nm,1.5s						
BR131	**Keskin Array S**	**75.53**	**307**	P	**P**	**15 22 51.6**	**+0.8**
BRTR	**Keskin Array B**	**75.53**	**307**	P	**P**	**15 22 51.4**	**+0.5**

IDC 17 15:13:23.3±8.2, 8°.46S×155°.82E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/34, mbtmp3.5/3, Error ellipse: s-maj=135.8km s-min=92.4km az=20.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.71**	**239**	P	P	15 18 37.0	-0.2
	0.4nm,0.7s,baz=65,slow=9.8,SNR=3.5						
ASAR	**Alice Springs**	**25.86**	**232**	P	P	15 18 56.2	-0.7
	1.0nm,1.0s,baz=62,slow=10,SNR=9.8						
STKA	**Stephens Creek**	**26.79**	**208**	P	P	15 19 06.2	+1.1
	1.4nm,0.6s,baz=45,slow=8.6,SNR=3.9						

KRSC 17 15:15:09.7±1.3, 50°.32N×156°.51E, h156km±11km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.44**	**325**	*eP*	Pn	15 15 32.3	+0.9
SKR				*eS*	Sn	15 15 48.3	+0.2
PAU	**Pauzhetka**	**1.16**	**9**	*eP*	Pn	15 15 37.4	+1.0
PAU				*eS*	Sn	15 15 57.5	+0.6
KDTR	**Khodutka, Kamc**	**1.79**	**33**	*eP*	Pn	15 15 44.6	+1.9
KDTR				*eS*	Sn	15 16 08.9	+0.7
ASAK	**Asacha**	**2.24**	**22**	*eP*	Pn	15 15 49.9	+1.9
ASAK				*eS*	Sn	15 16 19.5	+1.9
GRL	**Gorelyy**	**2.44**	**23**	*eP*	Pn	15 15 52.6	+2.2
GRL				*eS*	Sn	15 16 24.1	+2.2
RUS	**Russkaya**	**2.46**	**30**	*eP*	Pn	15 15 52.2	+1.7
RUS				*eS*	Sn	15 16 23.4	+1.3
APC	**Apacha**	**2.64**	**9**	*eP*	Pn	15 15 53.2	+0.5
KRMR	**Karymshinskiy**	**2.71**	**21**	*eP*	Pn	15 15 55.7	+2.2
KRMR				*eS*	Sn	15 16 28.9	+1.4
PET	**Petropavlovsk**	**3.02**	**25**	*eP*	Pn	15 15 58.8	+1.4
PET				*eS*	Sn	15 16 35.2	+0.8
DALK	**Dalny**	**3.05**	**26**	*eP*	Pn	15 15 59.4	+1.6
DALK				*eS*	Sn	15 16 36.5	+1.3
UGLR	**Uglovaya**	**3.23**	**26**	*eP*	Pn	15 16 02.8	+2.6
KOK	**Koryaka**	**3.25**	**23**	*eP*	Pn	15 16 03.0	+2.5
AVH	**Avacha**	**3.25**	**24**	*eP*	Pn	15 16 03.1	+2.6
SMAR	**Somma**	**3.27**	**25**	*eP*	Pn	15 16 03.1	+2.3
KRER	**Koryakskii**	**3.29**	**24**	*eP*	Pn	15 16 03.4	+2.3
SDLR	**Sedlovina**	**3.31**	**26**	*eP*	Pn	15 16 03.2	+2.0
KRX	**Arik**	**3.32**	**23**	*eP*	Pn	15 16 03.4	+2.0
NLC	**Nalytchevo**	**3.35**	**31**	*eP*	Pn	15 16 02.7	+1.1
NLC				*eS*	Sn	15 16 41.2	-0.8
GNL	**Ganaly**	**3.49**	**14**	*eP*	Pn	15 16 05.1	+1.6
SPN	**Mys Shipunski**	**3.54**	**37**	*eP*	Pn	15 16 05.9	+1.9
SPN				*eS*	Sn	15 16 47.5	+1.3
KII	**Karymskiy**	**4.13**	**25**	P	Pn	15 16 13.9	+2.1
MKZ	**Mys Kozlova**	**5.31**	**35**	*eP*	Pn	15 16 27.9	+0.8
KZV	**Kizimen**	**5.32**	**24**	*eP*	Pn	15 16 29.5	+2.1
TUMD	**Tumrok D**	**5.43**	**24**	*eP*	Pn	15 16 31.3	+2.6
TUMR	**Tumrok**	**5.44**	**23**	*eP*	Pn	15 16 30.9	+2.0
KMNR	**Kamenistaya**	**5.89**	**21**	*eP*	Pn	15 16 35.6	+0.7
KBTR	**Krutoberegovo**	**7.00**	**30**	*eP*	Pn	15 16 49.8	+0.2
KBG	**Krutoberegovo**	**7.00**	**30**	*eP*	Pn	15 16 50.6	+1.0

IDC 17 15:22:20.4±1.6, 19°.78N×121°.12E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/49, mbtmp3.4/3, Error ellipse: s-maj=288.1km s-min=28.5km az=71.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**30.43**	**340**	P	P	15 28 34.6	-0.1
	0.2nm,0.4s,baz=167,slow=7.2,SNR=2.1						
WRA	**Warramunga Arr**	**41.55**	**161**	P	P	15 30 09.3	-0.6
	0.3nm,0.5s,baz=342,slow=9.1,SNR=6.3						
ASAR	**Alice Springs**	**44.95**	**163**	P	P	15 30 37.6	+0.3
	0.5nm,0.6s,baz=343,slow=7.0,SNR=12						

IDC ***17*** *15:30:06.0±0.8, 56°.23N×164°.17E, h0km, mb3.7/16, mb1 3.9/19, mb1mx3.8/55, mbtmp3.8/19, ML4.2/2, MS2.5/1,

NLC	**Nalytchevo**	**4.08**	**227**	PN	**Pn**	**15 31 10.7**	**+0.9**
SDLR	**Sedlovina**	**4.21**	**231**	*e*P	**Pn**	**15 31 12.7**	**+1.1**
SDLR				*e*S	**Sn**	**15 32 00.8**	**+0.8**
SDLR	**Sedlovina**	**4.21**	**231**	PN	**Pn**	**15 31 12.7**	**+1.1**
SDLR				S	**Sn**	**15 32 00.8**	**+0.8**
KRER	**Koryakskii**	**4.25**	**232**	*e*P	**Pn**	**15 31 13.3**	**+1.0**
KRER	**Koryakskii**	**4.25**	**232**	PN	**Pn**	**15 31 13.3**	**+1.0**
SMAR	**Somma**	**4.25**	**231**	*e*P	**Pn**	**15 31 13.2**	**+0.8**
SMAR	**Somma**	**4.25**	**231**	PN	**Pn**	**15 31 13.2**	**+0.8**
KRX	**Arik**	**4.25**	**233**	*e*P	**Pn**	**15 31 13.7**	**+1.3**
KRX				*e*S	**Sn**	**15 32 03.2**	**+2.0**
KRX	**Arik**	**4.25**	**233**	PN	**Pn**	**15 31 13.7**	**+1.3**
KRX				S	**Sn**	**15 32 03.2**	**+2.0**
AVH	**Avacha**	**4.28**	**232**	*e*P	**Pn**	**15 31 13.9**	**+1.3**
AVH				*e*S	**Sn**	**15 32 03.6**	**+1.9**
AVH	**Avacha**	**4.28**	**232**	PN	**Pn**	**15 31 13.9**	**+1.3**
AVH				S	**Sn**	**15 32 03.6**	**+1.9**
UGLR	**Uglovaya**	**4.28**	**231**	*e*P	**Pn**	**15 31 13.8**	**+1.1**
UGLR	**Uglovaya**	**4.28**	**231**	PN	**Pn**	**15 31 13.8**	**+1.1**
KOK	**Koryaka**	**4.30**	**233**	*e*P	**Pn**	**15 31 13.5**	**+0.5**
KOK	**Koryaka**	**4.30**	**233**	PN	**Pn**	**15 31 13.5**	**+0.5**
GNL	**Ganaly**	**4.38**	**240**	*e*P	**Pn**	**15 31 15.4**	**+1.4**
GNL	**Ganaly**	**4.38**	**240**	PN	**Pn**	**15 31 15.4**	**+1.4**
DALK	**Dalny**	**4.43**	**230**	*e*P	**Pn**	**15 31 15.0**	**+0.4**
DALK				*e*S	**Sn**	**15 32 05.6**	**+0.2**
DALK	**Dalny**	**4.43**	**230**	PN	**Pn**	**15 31 15.0**	**+0.4**
PET	**Petropavlovsk**	**4.48**	**230**	*e*P	**Pn**	**15 31 16.0**	**+0.7**
PET				*e*S	**Sn**	**15 32 06.5**	**-0.1**
PET	**Petropavlovsk**	**4.48**	**230**	*e*PN	**Pn**	**15 31 16.3**	**+1.0**
PET				pmax	pmax		
	comp=Z,33nm,0.5s						
PET	**Petropavlovsk**	**4.48**	**230**	Pn	**Pn**	**15 31 15.9**	**+0.6**
PET				Sn	**Sn**	**15 32 04.3**	**-2.3**
TILK	**Tilichiki**	**4.52**	**11**	*e*P	**Pn**	**15 31 16.9**	**+1.0**
TILK	**Tilichiki**	**4.52**	**11**	PN	**Pn**	**15 31 16.9**	**+1.0**
KRMR	**Karymshinskiy**	**4.84**	**231**	*e*P	**Pn**	**15 31 22.9**	**+2.6**
KRMR				*e*S	**Sn**	**15 32 16.5**	**+1.0**
KRMR	**Karymshinskiy**	**4.84**	**231**	PN	**Pn**	**15 31 22.9**	**+2.6**
KRMR				S	**Sn**	**15 32 16.5**	**+1.0**
PEA0B	**Petropavlovsk-**	**4.85**	**236**	*i* PN	**Pn**	**15 31 19.5**	**-0.9**
PEA0B	**Petropavlovsk-**	**4.85**	**236**	Pn	**Pn**	**15 31 21.3**	**+0.8**
PETK	**Petropavlovsk-**	**4.85**	**236**	Pn	**Pn**	**15 31 21.8**	**+1.4**
	comp=Z,1.5nm,0.3s,baz=69,slow=17,SNR=26						
PETK				Sn	**Sn**	**15 32 20.5**	**+4.8**
	comp=Z,1.0nm,0.3s,baz=61,slow=19,SNR=2.4						
PETK				LR	LR	15 32 51.2	
	comp=Z,57nm,20.1s,baz=51,slow=34						
PETK	**Petropavlovsk-**	**4.85**	**236**	Pn	**Pn**	**15 31 20.6**	**+0.2**
RUS	**Russkaya**	**4.97**	**226**	*e*P	**Pn**	**15 31 22.7**	**+0.7**
RUS				*e*S	**Sn**	**15 32 17.6**	**-1.0**
RUS	**Russkaya**	**4.97**	**226**	PN	**Pn**	**15 31 22.7**	**+0.7**
GRL	**Gorelyy**	**5.07**	**229**	*e*P	**Pn**	**15 31 25.1**	**+1.6**
GRL	**Gorelyy**	**5.07**	**229**	PN	**Pn**	**15 31 25.1**	**+1.6**
APC	**Apacha**	**5.22**	**236**	*e*P	**Pn**	**15 31 28.5**	**+3.0**
APC	**Apacha**	**5.22**	**236**	PN	**Pn**	**15 31 28.5**	**+3.0**
ASAK	**Asacha**	**5.26**	**229**	*e*P	**Pn**	**15 31 27.9**	**+1.8**
ASAK	**Asacha**	**5.26**	**229**	PN	**Pn**	**15 31 27.9**	**+1.8**
KDTR	**Khodutka, Kamc**	**5.62**	**224**	*e*P	**Pn**	**15 31 30.9**	**-0.1**
KDTR				*e*S	**Sn**	**15 32 32.1**	**-2.6**
KDTR	**Khodutka, Kamc**	**5.62**	**224**	PN	**Pn**	**15 31 30.9**	**-0.1**
PAU	**Pauzhetka**	**6.39**	**227**	*e*P	**Pn**	**15 31 42.9**	**+1.3**
PAU	**Pauzhetka**	**6.39**	**227**	PN	**Pn**	**15 31 42.9**	**+1.3**
SKR	**Severo-Kuril's**	**7.28**	**226**	*e*PN	**Pn**	**15 31 55.6**	**+2.0**
SKR				pmax	pmax		
	comp=Z,27nm,0.7s						
SKR				MLR	MLR		
	comp=Z,200nm,13.0s						
SEY	**Seymchan**	**9.20**	**324**	*i* PN	**Pn**	**15 32 21.2**	**+1.3**
YSS	**Yuzh-Sakhalins**	**16.17**	**245**	*i* P	**Pn**	**15 33 53.8**	**-0.5**
YSS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ASAJ	**Asahikawa**	**18.27**	**238**	P	**P**	**15 34 21.1**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=54,slow=11,SNR=15						
YAK	**Yakutsk**	**18.64**	**303**	P	**P**	**15 34 23.2**	**-1.4**
	comp=Z,0.0nm,0.3s,baz=45,slow=19,SNR=4.8						
YAK	**Yakutsk**	**18.64**	**303**	*i* P	**P**	**15 34 24.1**	**-0.5**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK	**Yakutsk**	**18.64**	**303**	P	**P**	**15 34 21.7**	**-2.8**
ERM	**Erimo**	**19.63**	**233**	*i* P	**P**	**15 34 35.6**	**+0.1**
ERM				pmax	pmax		
	comp=Z,21nm,1.3s						
ERM	**Erimo**	**19.63**	**233**	P	**P**	**15 34 35.5**	**-0.1**
ERM				IAmb	IAmb	15 34 40.8	
	comp=Z,14nm,0.7s						
KLR	**Kul'dur**	**20.77**	**265**	P	**P**	**15 34 47.5**	**-0.4**
	comp=Z,1.0nm,0.5s,baz=31,slow=7.7,SNR=4.7						
TIXI	**Tiksi**	**21.60**	**330**	*ce*P	**P**	**15 34 58.6**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TIXI	**Tiksi**	**21.60**	**330**	P	**P**	**15 34 57.7**	**+1.1**
I23K	**Minto, Yukon-K**	**23.94**	**49**	P	**P**	**15 35 22.2**	**+1.5**
WRH	**Wood River Hil**	**24.49**	**50**	P	**P**	**15 35 26.9**	**+1.0**
CCB	**Clear Creek Bu**	**24.61**	**50**	P	**P**	**15 35 26.3**	**-0.5**
SML	**Sawmill**	**24.63**	**57**	P	**P**	**15 35 27.4**	**+0.2**
SML				IAmb	IAmb	15 35 45.9	
	comp=Z,18nm,1.2s						
ILAR	**Eielson Array**	**25.00**	**50**	P	**P**	**15 35 30.4**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=278,slow=11,SNR=6.7						
SCM	**Sheep Creek Mo**	**25.10**	**57**	P	**P**	**15 35 31.5**	**+0.1**
SCM				pmax	pmax		
	comp=Z,23nm,1.1s						
SCM	**Sheep Creek Mo**	**25.10**	**57**	P	**P**	**15 35 31.4**	**+0.1**
FYU	**Fort Yukon**	**25.63**	**45**	P	**P**	**15 35 36.3**	**+0.1**
FYU				IAmb	IAmb	15 35 46.7	
	comp=Z,5.7nm,1.2s						
MJA0	**Matsu Arr-Jizo**	**26.29**	**233**	*e*P	**P**	**15 35 43.7**	**+1.3**
MJA0				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MAT	**Matsushiro**	**26.31**	**233**	P	**P**	**15 35 41.2**	**-1.3**
MJAR	**Matsushiro Arr**	**26.31**	**233**	P	**P**	**15 35 43.8**	**+1.3**
	comp=Z,4.0nm,0.7s,baz=36,slow=8.1,SNR=6.0						
BCAR	**Beaver Creek A**	**27.43**	**53**	P	**P**	**15 35 55.7**	**+3.2**
INK	**Inuvik**	**30.02**	**41**	P	**P**	**15 36 15.6**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=305,slow=6.5,SNR=3.9						
INK	**Inuvik**	**30.02**	**41**	IAmb	IAmb	15 36 27.0	
	comp=Z,9.2nm,1.4s						
KSRS	**Korea Array**	**30.62**	**248**	P	**P**	**15 36 22.1**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=42,slow=8.0,SNR=5.9						
NRIK	**Noril'sk**	**34.99**	**323**	*i* P	**P**	**15 36 59.4**	**+0.7**
NRIK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ULN	**Ulaanbaatar**	**35.30**	**281**	*i* P	**P**	**15 37 00.6**	**-1.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	**Songino Array**	**35.68**	**282**	P	**P**	**15 37 04.9**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=58,slow=8.3,SNR=11						
SONM	**Songino Array**	**35.68**	**282**	P	**P**	**15 37 04.2**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**36.30**	**176**	T	T	16 16 01.4	
	baz=357,slow=76,SNR=7.0						
H11N3	**WAKE ISLAND Hy**	**36.31**	**176**	T	T	16 16 04.4	
	baz=357,slow=76,SNR=8.3						
H11N1	**WAKE ISLAND Hy**	**36.32**	**176**	T	T	16 16 06.4	
	baz=357,slow=76,SNR=8.4						
H11S1	**WAKE ISLAND Hy**	**37.51**	**176**	T	T	16 16 47.9	
	baz=353,slow=74						
H11S3	**WAKE ISLAND Hy**	**37.52**	**176**	T	T	16 17 47.3	
	baz=353,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	**37.52**	**176**	T	T	16 16 40.7	
	baz=353,slow=74						
NJ2	**Nanjing**	**39.54**	**252**	*e*P	**P**	**15 37 35.9**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GTA	**Gaotai**	**44.74**	**276**	*e*P	**P**	**15 38 20.4**	**+0.2**
GTA				pP	pwP	15 38 29.9	-2.1
GTA				sP	sP	15 38 34.0	+4.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,110nm,7.6s						
GTA				LR	LR		
	comp=N,130nm,15.3s						
GTA				LR	LR		
	comp=E,150nm,15.6s						
GTA				LR	LR		
	comp=Z,210nm,16.7s						
LZH	**Lanzhou**	**44.83**	**270**	*e*P	**P**	**15 38 20.8**	**-0.2**
LZH				pP	pwP	15 38 32.4	-0.3
LZH				sP	sP	15 38 37.1	+7.1
LZH				PP	PP	15 40 15.4	+10
LZH				pmax	pmax		
	comp=Z,12nm,1.1s						
LZH				pmax	pmax		
	comp=Z,69nm,4.3s						
LZH				LR	LR		
	comp=N,300nm,10.8s						
LZH				LR	LR		
	comp=E,310nm,11.4s						
LZH				LR	LR		
	comp=Z,350nm,12.5s						
KURK	**Kurchatov**	**48.28**	**302**	*ce*P	**P**	**15 38 48.4**	**+0.8**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KURK	**Kurchatov**	**48.28**	**302**	P	**P**	**15 38 46.4**	**-1.2**
WMQ	**Urumqi**	**48.33**	**289**	*e*P	**P**	**15 38 49.8**	**+1.6**
KURBB	**Kurchatov Arra**	**48.38**	**302**	P	**P**	**15 38 46.4**	**-2.0**
	comp=Z,1.1nm,0.6s,baz=52,slow=8.0,SNR=5.8						
MKAR	**Makanchi Array**	**49.10**	**296**	P	**P**	**15 38 52.8**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=53,slow=5.3,SNR=6.6						
MKAR	**Makanchi Array**	**49.10**	**296**	*e*P	**P**	**15 38 53.3**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**50.51**	**309**	*ce*P	**P**	**15 39 05.4**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**50.51**	**309**	P	**P**	**15 39 04.9**	**+0.2**
BRVK				IAmb	IAmb	15 39 05.8	
	comp=Z,4.9nm,0.7s						
ARU	**Arti**	**52.89**	**318**	*c i* P	**P**	**15 39 21.7**	**-0.6**
ARU				*PP	**pwP**	**15 39 35.1**	**+1.1**
ARU						15 41 20.1	
ARU				S	**S**	**15 46 47.6**	**-1.7**
ARU				SS	**SS**	**15 50 22.9**	**-4.6**
ARU				pmax	pmax		
	comp=Z,12nm,1.8s						
ARU	**Arti**	**52.89**	**318**	P	**P**	**15 39 22.7**	**+0.4**
ARU				IAmb	IAmb	15 39 23.5	
	comp=Z,4.9nm,0.8s						
PDAR	**Pinedale Array**	**53.98**	**65**	P	**P**	**15 39 30.9**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=341,slow=7.6,SNR=2.1						
KK31	**Karatay Array**	**57.59**	**300**	P	**P**	**15 39 56.0**	**-0.4**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KK31	**Karatay Array**	**57.59**	**300**	P	**P**	**15 39 56.0**	**-0.4**
KK31				IAmb	IAmb	15 39 57.5	
	comp=Z,3.7nm,0.9s						
KKAR	**Karatay Array**	**57.59**	**300**	P	**P**	**15 39 56.1**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KKAR	**Karatay Array**	**57.59**	**300**	P	**P**	**15 39 56.1**	**-0.3**
KKAR				IAmb	IAmb	15 39 57.5	
	comp=Z,3.7nm,0.9s						
KKAR	**Karatay Array**	**57.59**	**300**	P	**P**	**15 39 55.9**	**-0.5**
ABKAR	**Akbulak array**	**57.74**	**311**	P	**P**	**15 39 57.5**	**+0.1**
ABKAR	**Akbulak array**	**57.74**	**311**	P	**P**	**15 39 57.2**	**-0.1**
ABKAR				IAmb	IAmb	15 40 07.5	
	comp=Z,3.7nm,1.2s						
BTK	**Batken**	**59.73**	**298**	P	**P**	**15 40 10.6**	**-0.9**
BTK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BTK	**Batken**	**59.73**	**298**	P	**P**	**15 40 10.6**	**-0.9**
GAR	**Garm**	**60.79**	**297**	P	**P**	**15 40 18.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**61.17**	**260**	P	**P**	**15 40 22.4**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=21,slow=6.3,SNR=12						
NOA	**NORSAR Array B**	**61.36**	**345**	P	**P**	**15 40 21.6**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=18,slow=6.9,SNR=3.6						
NOA	**NORSAR Array B**	**61.36**	**345**	*e*P	**P**	**15 40 22.8**	**+0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CHGR	**Chuyangaron**	**61.63**	**298**	P	**P**	**15 40 23.9**	**-0.5**
KBL	**Kabul**	**64.89**	**295**	P	**P**	**15 40 45.6**	**-0.6**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBL	**Kabul**	**64.89**	**295**	P	**P**	**15 40 45.6**	**-0.6**
KBL				IAmb	IAmb	15 40 45.9	
	comp=Z,3.2nm,0.7s						
TXAR	**Lajitas Array**	**67.27**	**71**	P	**P**	**15 41 04.2**	**+2.8**
	comp=Z,0.3nm,0.7s,baz=316,slow=5.0,SNR=2.5						
AKASG	**Malin Array Be**	**67.30**	**331**	P	**P**	**15 40 59.9**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=27,slow=6.6,SNR=2.6						
AKASG	**Malin Array Be**	**67.30**	**331**	IAmb	IAmb	15 41 01.7	
	comp=Z,2.2nm,1.5s						
KIV	**Kislovodsk**	**68.92**	**319**	*e*P	**P**	**15 41 13.1**	**+1.5**
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
GERES	**GERESS Array B**	**72.65**	**340**	P	**P**	**15 41 34.8**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=51,slow=3.9,SNR=2.0						
WRA	**Warramunga Arr**	**79.83**	**209**	P	**P**	**15 42 15.2**	**+0.2**
	comp=Z,0.6nm,1.0s,baz=25,slow=6.2,SNR=3.2						
ASAR	**Alice Springs**	**83.49**	**208**	P	**P**	**15 42 34.8**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=357,slow=3.9,SNR=2.6						

*IDC **17** 15:30:44.0±2.1, 1.°71N×126.°33E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.7/22, Error ellipse: s-maj=174.0km s-min=25.7km az=65.0*
*DJA **17** 15:30:47.8±0.4, 2.°N×12.°7E±.°, h10km, M3.1/5, MLv3.1/5*
ISC 17 15:30:44.3±2.0, 2.°1N±0.°2×127.°1E±0.°4, h10km, n6, σ0s80/6, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**169**	P	**Pg**	**15 31 09.8**	**0.0**
TNTI				S	**Sb**	**15 31 26.5**	**+0.1**
SGSI	**Sangihe**	**2.25**	**315**	P	**Pb**	**15 31 24.8**	**-0.1**
WRA	**Warramunga Arr**	**23.01**	**162**	P	**P**	**15 35 48.5**	**-1.1**
	0.7nm,0.4s,baz=338,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.43**	**166**	P	**P**	**15 36 22.4**	**+0.8**
	0.3nm,0.3s,baz=347,slow=13,SNR=13						
PETK	**Petropavlovsk-**	**56.80**	**22**	LR	LR	16 01 59.1	
	comp=Z,23nm,20.5s,baz=4.6,slow=33						
MKAR	**Makanchi Array**	**59.12**	**326**	P	**P**	**15 40 45.3**	**+0.2**
	0.2nm,0.4s,baz=115,slow=7.4,SNR=4.9						

*IDC **17** 15:42:06.9±1.4, 9.°43S×155.°28E, h0km, mb3.5/6, mb1 3.8/8, mb1mx3.6/28, mbtmp3.7/8, ML3.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/23, Error ellipse: s-maj=38.9km s-min=24.0km az=104.0*
ISC 17 15:42:10.8±1.0, 9.°5S±0.°1×155.°3E±0.°2, h29km, n9, σ1s00/8, mb3.6/6, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.56**	**90**	LR	LR	15 44 48.0	
	comp=Z,108nm,18.4s,baz=86,slow=35						
KRVT	**Keravat (AS076**	**6.07**	**327**	Pn	**Pn**	**15 43 38.0**	**-0.7**
	1.8nm,0.3s,baz=9.1,slow=1.9,SNR=3.9						
DZM	**Mont Dzumac**	**16.48**	**141**	Pn	**P**	**15 46 02.3**	**-0.2**
	0.1nm,0.3s,baz=327,slow=14,SNR=3.9						
WRA	**Warramunga Arr**	**22.79**	**240**	P	**P**	**15 47 11.7**	**+0.3**
	0.5nm,0.7s,baz=65,slow=10.0,SNR=6.9						
ASAR	**Alice Springs**	**24.87**	**233**	P	**P**	**15 47 31.0**	**-0.2**
	0.7nm,0.9s,baz=66,slow=9.7,SNR=8.0						
STKA	**Stephens Creek**	**25.69**	**208**	P	**P**	**15 47 38.4**	**-0.2**
	0.4nm,0.3s,baz=48,slow=14,SNR=2.8						
SONM	**Songino Array**	**71.57**	**328**	P	**P**	**15 53 31.3**	**+1.9**
	0.5nm,0.7s,baz=126,slow=5.1,SNR=3.9						
ILAR	**Eielson Array**	**85.53**	**21**	P	**P**	**15 54 45.8**	**-0.1**
	0.3nm,0.8s,baz=256,slow=3.6,SNR=2.1						
ZALV	**Zalesovo Beam**	**86.39**	**326**	P	**P**	**15 54 49.5**	**-0.8**
	0.4nm,0.5s,baz=111,slow=8.0,SNR=1.9						

*DSN **17** 15:45:17.1±0.8, 27.°01N×56.°36E, h10km, ML3.4/9, Error ellipse: s-maj=23.2km s-min=5.8km az=97.0*
*TEH **17** 15:45:17.0, 26.°95N×55.°83E, h8km, ML3.1*
*OMAN **17** 15:45:19.1±1.3, 26.°97N×56.°12E, h102km, mb4.8/1, ml3.2/8, Error ellipse: s-maj=35.6km s-min=28.7km az=249.0*
ISC 17 15:45:18.3±1.3, 26.°93N±0.°03×55.°91E±0.°06, h10km±11km, n41, σ0s94/47, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	**Geno**	**0.53**	**26**	*e*Pg	**Pg**	**15 45 28.0**	**-0.7**
GENO				*e*		15 45 40.8	
SHME	**Shamm**	**0.90**	**166**	*e*P	**Pg**	**15 45 34.3**	**-1.3**
	SNR=42						
SHME				S	**Sn**	**15 45 50.2**	**+0.1**
SHME	**Shamm**	**0.90**	**166**	*e*Pn	**Pg**	**15 45 35.2**	**-0.4**
BANOM	**Banah**	**1.06**	**160**	P	**Pb**	**15 45 37.8**	**-1.0**
BANOM				S	**Sg**	**15 45 53.1**	**+0.6**
BANOM	**Banah**	**1.06**	**160**	P	**Pb**	**15 45 38.1**	**-0.7**
	SNR=23						
BANOM				S	**Sg**	**15 45 53.3**	**+0.9**
UMQ	**Umm Al-Quwin**	**1.41**	**189**	P	**Pb**	**15 45 46.2**	**+1.4**
UMQ				S	**Sg**	**15 46 06.1**	**+2.4**
UMQ	**Umm Al-Quwin**	**1.41**	**189**	*e*Pn	**Pn**	**15 45 44.0**	**-0.1**
LAR1	**LAR**	**1.55**	**299**	*e*Pg	**Pn**	**15 45 44.9**	**-1.2**
LAR1				*e*		15 46 28.4	
MSFE	**Esma-Masafi**	**1.57**	**172**	*e*P	**Pn**	**15 45 46.6**	**+0.2**
	SNR=23						
MSFE	**Esma-Masafi**	**1.57**	**172**	*e*Pn	**Pn**	**15 45 46.4**	**0.0**
MDH	**Madha**	**1.66**	**168**	P	**Pn**	**15 45 47.9**	**+0.4**
MDH	**Madha**	**1.66**	**168**	P	**Pn**	**15 45 47.6**	**+0.1**
	SNR=11						
MDH				S	**Sb**	**15 46 09.6**	**-0.3**
MDH	**Madha**	**1.66**	**168**	*e*Pn	**Pn**	**15 45 48.5**	**+1.0**
KHNJ	**Kahnooj**	**1.90**	**57**	*e*Pn	**Pb**	**15 45 52.0**	**-1.1**
NAZ	**Nazwa, Dubai**	**1.94**	**187**	P	**Pn**	**15 45 52.1**	**+0.7**
NAZ	**Nazwa, Dubai**	**1.94**	**187**	*e*Pn	**Pn**	**15 45 50.4**	**-1.0**
UOSS	**Minazif**	**1.99**	**172**	*e*P	**Pn**	**15 45 52.3**	**+0.2**
	SNR=6.8						
UOSS	**Minazif**	**1.99**	**172**	*e*Pn	**Pn**	**15 45 52.7**	**+0.6**
HATD	**Hatta, Dubai**	**2.10**	**174**	P	**Pn**	**15 45 54.3**	**+0.7**
HATD	**Hatta, Dubai**	**2.10**	**174**	*e*Pn	**Pn**	**15 45 54.0**	**+0.4**
FAQ	**Al Faqa, Dubai**	**2.19**	**188**	*e*Pn	**Pn**	**15 45 54.0**	**-0.8**
ASHO	**Ashiyiah**	**2.24**	**176**	P	**Pn**	**15 45 55.9**	**+0.4**
ASHO	**Ashiyiah**	**2.24**	**176**	P	**Pn**	**15 45 55.9**	**+0.4**
	SNR=17						
ASHO				S	**Sn**	**15 46 23.3**	**+0.1**
ASHO	**Ashiyiah**	**2.24**	**176**	*e*Pn	**Pn**	**15 45 55.7**	**+0.2**
ASUD	**Al Ashush, Dub**	**2.35**	**193**	*e*P	**Pn**	**15 45 58.3**	**+1.3**
	SNR=7.5						
ASUD	**Al Ashush, Dub**	**2.35**	**193**	P	**Pn**	**15 45 58.2**	**+1.3**
	SNR=7.6						
ASUD	**Al Ashush, Dub**	**2.35**	**193**	*e*Pn	**Pn**	**15 45 56.7**	**-0.3**
NGRK	**Negar Kerman**	**2.81**	**15**	*e*Pn	**Pn**	**15 46 04.3**	**+0.7**
NGRK				*e*		15 46 48.2	
SOHO	**SOHO**	**2.84**	**168**	P	**Pn**	**15 46 02.0**	**-1.6**
SOHO	**SOHO**	**2.84**	**168**	*e*Pn	**Pn**	**15 46 02.8**	**-0.9**
ALNE	**Al Ain**	**2.86**	**183**	*e*Pn	**Pn**	**15 46 03.1**	**-1.0**
TVBK	**TV Kerman**	**3.14**	**14**	*e*		15 46 59.4	
TVBK				*e*Pn	**Pn**	**15 46 09.0**	**+0.8**
KBAM	**BAM**	**3.15**	**45**	*e*Pn	**Pn**	**15 46 09.5**	**+1.4**
KBAM				*e*		15 47 13.7	
KHGB	**Koh Gabri**	**3.47**	**8**	*e*Pn	**Pn**	**15 46 14.1**	**+1.4**
KHGB				*e*		15 46 51.7	
ARQ	**Araqi**	**3.62**	**171**	P	**Pn**	**15 46 14.6**	**+0.1**
	SNR=20						
UMZA	**Um Al Zommool**	**4.25**	**189**	*e*Pn	**Pn**	**15 46 21.9**	**-1.2**
IBAF	**Bafgh**	**4.66**	**356**	*e*Pn	**Pn**	**15 46 29.9**	**+1.0**
ISAD	**Sadrabad**	**5.34**	**339**	*e*Pn	**Pn**	**15 46 39.6**	**+1.3**
ISAD				*e*		15 46 41.9	
KLNJ	**Kolanjah**	**5.55**	**318**	*e*Pn	**Pn**	**15 46 41.6**	**+0.2**
IRAM	**Ramesheh**	**5.76**	**329**	*e*Pn	**Pn**	**15 46 44.5**	**+0.4**
WHFO	**Wadi Hawf**	**9.18**	**193**	P	**Pn**	**15 47 30.2**	**-0.7**
	SNR=23						

IDC 17 15:47:48.4±6.2, 8.°16S×156.°09E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/27, mbtmp3.6/3, Error ellipse: s-maj=106.9km s-min=84.4km az=5.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.10**	**239**	P	P	15 53 06.1	+0.1
	0.6nm,0.7s,baz=65,slow=9.4,SNR=5.3						
ASAR	**Alice Springs**	**26.26**	**231**	P	P	15 53 25.2	-0.4
	0.5nm,0.6s,baz=63,slow=9.9,SNR=12						
STKA	**Stephens Creek**	**27.18**	**208**	P	P	15 53 34.2	+0.5
	0.6nm,0.3s,baz=27,slow=17,SNR=3.2						

IDC 17 15:49:54.2±7.4, 0.°68S×135.°90E, h0km, mb3.6/2, mb1 3.6/4, mb1mx3.4/30, mbtmp3.5/4, ML3.2/2, Error ellipse: s-maj=121.0km s-min=32.2km az=28.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.64**	**268**	Pn	Pn	15 51 06.5	+0.8
	0.8nm,0.3s,baz=94,slow=14,SNR=11						
SIJI				Sn	Sn	15 51 58.5	-1.8

ASAR	**Alice Springs**	**26.33**	**165**	P	**P**	16 20 11.9	**-0.2**
PATS	**Pohnpei**	**32.00**	**80**	P	**P**	16 21 02.6	**0.0**
JMN	**Monobe**	**32.45**	**11**	P	**P**	16 21 06.0	**-0.3**
FORT	**Forrest**	**32.47**	**178**	P	**P**	16 21 06.0	**-0.4**
BBOO	**Buckleboo**	**35.61**	**166**	P	**P**	16 21 33.7	**0.0**
SONM	**Songino Array**	**49.04**	**342**	P	**P**	16 23 23.3	**+0.4**
	comp=Z,0.5nm,0.8s,baz=148,slow=8.4,SNR=3.0						
MK31	**Makanchi Array**	**59.03**	**326**	P	**P**	16 24 35.5	**-0.2**
MK31				IAmb	IAmb	16 24 57.7	
	comp=Z,2.6nm,1.2s						
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	16 24 35.6	**0.0**
	comp=Z,1.1nm,0.5s,baz=121,slow=8.3,SNR=19						
MKAR	**Makanchi Array**	**59.03**	**326**	P	**P**	16 24 35.2	**-0.4**
KURK	**Kurchatov**	**63.26**	**328**	P	**P**	16 25 04.2	**+0.1**
KURK				IAmb	IAmb	16 25 05.9	
	comp=Z,2.3nm,0.5s						
NRIK	**Noril'sk**	**72.22**	**346**	P	**P**	16 26 01.5	**+1.2**
	comp=Z,1.0nm,0.4s,baz=145,slow=6.3,SNR=4.5						
ABKAR	**Akbulak array**	**73.52**	**321**	P	**P**	16 26 08.0	**-0.3**
VNDA	**Vanda**	**81.58**	**173**	P	**P**	16 26 53.2	**+0.5**
	comp=Z,0.4nm,0.5s,baz=311,slow=7.5,SNR=5.8						

TAP ***17*** *16:28:07.6,24.91N×122.66E,h40km,ML3.7,D*
JMA ***17*** *16:28:08.2±0.2,24.67N×122.53E,h0km,M3.3*
ISC 17 16:28:08.0±1.1,24.80N±0.04×122.65E±0.03,h17km±9km**, n80,σ0=81/129,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.44**	**142**	P	**Pb**	**16 28 16.8**	**-0.6**
JYNG				S	**Sb**	**16 28 23.4**	**-0.3**
YOJ	**Yonaguni jima**	**0.47**	**136**	P	**Pn**	**16 28 18.9**	**-1.2**
	baz=139						
YOJ				S	**Sn**	**16 28 27.5**	**-0.5**
	baz=139						
YOJ	**Yonaguni jima**	**0.47**	**136**	P	**Pb**	**16 28 18.4**	**+0.5**
YOJ				S	**Sb**	**16 28 25.0**	**+0.4**
TWB1	**Santiao Chiao**	**0.63**	**289**	*e*P	**Pg**	**16 28 19.9**	**-0.6**
	baz=279						
TWB1				*e*S	**Sg**	**16 28 28.8**	**-0.2**
	baz=279						
EGS		**0.65**	**274**	*e*S	**Sb**	**16 28 30.4**	**+0.6**
	baz=260						
NTC	**Toucheng**	**0.75**	**274**	P	**Pb**	**16 28 22.3**	**-0.3**
	baz=273						
NTC				S	**Sb**	**16 28 32.7**	**+0.2**
	baz=273						
TWC	**Suao**	**0.75**	**255**	*i* P	**Pb**	**16 28 21.9**	**-0.8**
	baz=248						
TWC				S	**Sb**	**16 28 32.9**	**+0.2**
	baz=248						
TIPB	**Shuangxi**	**0.77**	**283**	P	**Pb**	**16 28 22.3**	**-0.7**
	baz=275						
TIPB				*e*S	**Sb**	**16 28 32.1**	**-1.0**
	baz=275						
ILA	**Ilan**	**0.82**	**268**	*e*P	**Pb**	**16 28 23.9**	**+0.1**
	baz=260						
ILA				*e*S	**Sb**	**16 28 34.5**	**-0.1**
	baz=260						
NWF	**Wu-fen Shan**	**0.83**	**289**	*e*P	**Pb**	**16 28 23.9**	**-0.2**
	baz=282						
NWF				*e*S	**Sb**	**16 28 35.3**	**+0.3**
	baz=282						
WFSB	**Wu-fen Shan**	**0.83**	**289**	*e*P	**Pb**	**16 28 23.7**	**-0.3**
	baz=282						
WFSB				*e*S	**Sb**	**16 28 35.3**	**+0.4**
	baz=282						
ENAH	**Nanao**	**0.84**	**245**	*e*P	**Pb**	**16 28 23.9**	**-0.3**
	baz=240						
ENAH				*e*S	**Sg**	**16 28 36.4**	**+0.9**
	baz=240						
TWE	**Neicheng**	**0.90**	**265**	*i* P	**Pb**	**16 28 24.0**	**-1.1**
	baz=258						
TWE				S	**Sb**	**16 28 37.0**	**+0.2**
	baz=258						
NHDH	**Xindian Distri**	**1.03**	**279**	*e*P	**Pb**	**16 28 27.0**	**-0.5**
	baz=264						
NHDH				*e*S	**Sb**	**16 28 40.5**	**-0.3**
	baz=264						
YM08	**YM08**	**1.03**	**292**	*e*P	**Pb**	**16 28 27.0**	**-0.5**
	baz=296						
YM08				*e*S	**Sb**	**16 28 40.9**	**0.0**
	baz=296						
YM01	**YM01**	**1.04**	**289**	*e*P	**Pb**	**16 28 28.0**	**+0.4**
	baz=293						
YM01				*e*S	**Sb**	**16 28 40.9**	**-0.1**
	baz=293						
YM11	**YM11**	**1.04**	**290**	*e*P	**Pb**	**16 28 26.6**	**-1.1**
	baz=294						
YM11				*e*S	**Sb**	**16 28 41.3**	**+0.2**
	baz=294						
NWLT	**Wulai**	**1.04**	**269**	*e*P	**Pb**	**16 28 27.6**	**-0.1**
	baz=263						
NWLT				S	**Sb**	**16 28 41.9**	**+0.8**
	baz=263						
YM10	**YM10**	**1.05**	**290**	*e*P	**Pb**	**16 28 26.8**	**-1.0**
	baz=293						
NDT	**Datong Townshi**	**1.05**	**259**	*e*P	**Pb**	**16 28 27.8**	**0.0**
	baz=254						
NDT				*e*S	**Sg**	**16 28 42.5**	**+0.3**
	baz=254						
TATO	**Taipei**	**1.07**	**279**	*e*P	**Pb**	**16 28 27.6**	**-0.5**
	baz=263						
TATO				*e*S	**Sb**	**16 28 41.9**	**+0.1**
	baz=263						
YM04	**YM04**	**1.07**	**289**	*e*P	**Pb**	**16 28 27.4**	**-0.7**
	baz=293						
YM03	**YM03**	**1.07**	**291**	*e*P	**Pb**	**16 28 28.4**	**+0.2**
	baz=285						
IRIF	**Iriomote-Funau**	**1.09**	**115**	P	**Pg**	**16 28 29.9**	**+0.8**
ANP	**Anpu**	**1.09**	**291**	*e*P	**Pb**	**16 28 28.4**	**-0.1**
	baz=285						
NTST	**Danshui**	**1.15**	**288**	*e*P	**Pn**	**16 28 28.4**	**-0.9**
	baz=283						
NACB	**Ninganchiao**	**1.15**	**237**	P	**Pn**	**16 28 28.6**	**-0.7**
	baz=233						
YHNB	**Yeheng**	**1.17**	**264**	*e*P	**Pn**	**16 28 29.6**	**0.0**
	baz=259						
NSK	**Sanguang**	**1.18**	**264**	P	**Pn**	**16 28 28.8**	**-1.0**
	baz=259						
TWD	**Chiawan**	**1.20**	**233**	*e*P	**Pb**	**16 28 30.6**	**+0.3**
	baz=229						
NNSB	**Datong**	**1.21**	**252**	*e*P	**Pn**	**16 28 29.7**	**-0.6**
	baz=241						
NNSH	**Datong**	**1.21**	**252**	*e*P	**Pn**	**16 28 29.6**	**-0.7**
	baz=241						
NNS	**Nan Shan**	**1.22**	**253**	*e*P	**Pn**	**16 28 30.4**	**0.0**
	baz=241						
ETLH	**Xiulin Townshi**	**1.22**	**241**	*e*P	**Pb**	**16 28 30.6**	**0.0**
	baz=224						
HWA	**Hwalien**	**1.26**	**229**	*e*P	**Pb**	**16 28 31.1**	**-0.2**
	baz=226						
HATJ	**Hateruma jima**	**1.29**	**125**	P	**Pg**	**16 28 33.2**	**+0.3**
NCU	**National Centr**	**1.34**	**277**	*e*P	**Pn**	**16 28 31.5**	**-0.5**
	baz=273						
NCU				*e*S	**Sn**	**16 28 49.6**	**+0.3**
	baz=273						
NCUH	**Zhongli**	**1.34**	**277**	*e*P	**Pn**	**16 28 31.5**	**-0.5**
	baz=273						
NCUH				*e*S	**Sn**	**16 28 49.0**	**-0.4**
	baz=273						
JKRS	**Kuro-shima**	**1.36**	**114**	P	**Pg**	**16 28 35.2**	**+1.0**
FUSS	**Fushou**	**1.40**	**247**	*e*P	**Pb**	**16 28 34.1**	**+0.4**
	baz=230						
FUSS				*e*S	**Sn**	**16 28 51.3**	**+0.1**
	baz=230						
WHF	**Hehuan Shan**	**1.42**	**243**	*e*P	**Pn**	**16 28 33.7**	**+0.2**
	baz=226						
WHF				*e*S	**Sb**	**16 28 52.9**	**+0.6**
	baz=226						
JIJ	**Ishigaki jima**	**1.43**	**108**	P	**Pg**	**16 28 34.7**	**-0.8**
TWT	**Tachien**	**1.45**	**248**	*e*P	**Pb**	**16 28 34.5**	**-0.1**
	baz=233						
TWT				*e*S	**Sb**	**16 28 53.3**	**+0.4**
	baz=233						
TDCB	**Techi**	**1.47**	**248**	*e*P	**Pb**	**16 28 34.5**	**-0.4**
	baz=234						
TDCB				*e*S	**Sg**	**16 28 55.0**	**-0.4**
	baz=234						
ESL	**Shilin**	**1.48**	**229**	*e*P	**Pn**	**16 28 33.7**	**-0.2**
	baz=226						
LIOB	**Emei**	**1.49**	**264**	*e*P	**Pb**	**16 28 35.1**	**-0.2**
	baz=261						
LIOB				*e*S	**Sb**	**16 28 54.1**	**+0.1**
	baz=261						
NSTT	**Nanjuang**	**1.51**	**264**	*e*P	**Pb**	**16 28 35.8**	**+0.2**
	baz=260						
NSTT				*e*S	**Sn**	**16 28 53.3**	**-0.3**
	baz=260						
SBCB	**Hsinchu**	**1.51**	**270**	*e*P	**Pn**	**16 28 34.3**	**0.0**
	baz=278						
SBCB				*e*S	**Sn**	**16 28 52.5**	**-1.2**
	baz=278						
JISG	**Ishigakijimahi**	**1.53**	**98**	P	**Pg**	**16 28 38.6**	**+1.2**
CHGB	**Renai**	**1.54**	**241**	*e*P	**Pn**	**16 28 35.5**	**+0.7**
	baz=225						
CHGB				S	**Sb**	**16 28 55.6**	**+0.1**
	baz=225						
EGFH	**Guangfu**	**1.59**	**225**	*e*P	**Pn**	**16 28 34.7**	**-0.6**
	baz=211						
WHP	**Taichung City**	**1.64**	**252**	*e*P	**Pb**	**16 28 38.4**	**+0.6**
	baz=239						
NMLH	**Miaoli**	**1.71**	**261**	*e*P	**Pn**	**16 28 37.4**	**+0.3**
	baz=258						
HGSD	**Ruisui**	**1.72**	**221**	*e*P	**Pn**	**16 28 37.0**	**-0.2**
	baz=210						
DPDB	**Guoxing**	**1.75**	**244**	*e*P	**Pn**	**16 28 38.2**	**+0.6**
	baz=230						
DPDB				*e*S	**Sn**	**16 28 59.9**	**+0.3**
	baz=230						
EHY	**Hungye**	**1.77**	**223**	*e*P	**Pn**	**16 28 37.2**	**-0.8**
	baz=221						
EHY				*e*S	**Sn**	**16 28 59.2**	**-0.9**
	baz=221						
SMLT	**Sun Moon Lake**	**1.84**	**240**	*e*P	**Pn**	**16 28 40.0**	**+1.1**
	baz=226						
SMLT				*e*S	**Sb**	**16 29 03.1**	**-1.0**
	baz=226						
SSLB	**Suanglung**	**1.85**	**237**	*e*P	**Pn**	**16 28 39.4**	**+0.4**
	baz=224						
SSLB				*e*S	**Sn**	**16 29 01.1**	**-1.0**
	baz=224						
YULB	**Yu-li**	**1.87**	**222**	*e*P	**Pn**	**16 28 38.6**	**-0.7**
	baz=220						
YULB				*e*S	**Sn**	**16 29 01.1**	**-1.5**
	baz=220						
JTJ	**Tarama**	**1.87**	**95**	P	**Pg**	**16 28 44.1**	**+0.1**
WDJ	**Dajia District**	**1.89**	**256**	*e*P	**Pn**	**16 28 40.0**	**+0.6**
	baz=265						
WDJ				*e*S	**Sn**	**16 29 04.3**	**+1.5**
	baz=265						
EYUL	**Yuli**	**1.89**	**220**	*e*P	**Pn**	**16 28 40.0**	**+0.5**
	baz=231						
TWF1	**Yuli**	**1.90**	**221**	*e*P	**Pn**	**16 28 39.8**	**+0.1**
	baz=231						
TCU	**Taichung**	**1.91**	**250**	*e*P	**Pb**	**16 28 42.3**	**-0.2**
	baz=248						
TCU				*e*S	**Sn**	**16 29 03.5**	**0.0**
	baz=248						
WHYT	**Xinyi Township**	**1.98**	**236**	*e*P	**Pb**	**16 28 43.3**	**-0.3**
	baz=224						
WHYT				*e*S	**Sb**	**16 29 07.2**	**-0.7**
	baz=224						
WJS	**Zhushan**	**2.01**	**241**	*e*P	**Pb**	**16 28 43.5**	**-0.6**
	baz=227						
WJS				*e*S	**Sb**	**16 29 08.2**	**-0.6**
	baz=227						
WNT	**Mingjian**	**2.02**	**243**	*e*P	**Pb**	**16 28 43.3**	**-0.9**
	baz=228						
WNT				*e*S	**Sn**	**16 29 07.2**	**+1.1**
	baz=228						
FULB	**Fuli**	**2.02**	**218**	*e*P	**Pn**	**16 28 40.0**	**-1.3**
	baz=206						
FULB				*e*S	**Sb**	**16 29 08.4**	**-0.8**
	baz=206						
WCHH	**Zhanghua**	**2.04**	**250**	*e*P	**Pn**	**16 28 41.9**	**+0.3**
	baz=247						
WCHH				*e*S	**Sn**	**16 29 08.0**	**+1.4**
	baz=247						
ALS	**Alishan**	**2.12**	**233**	*e*P	**Pb**	**16 28 45.4**	**-0.8**
	baz=221						
ALS				*e*S	**Sn**	**16 29 10.5**	**+1.4**
	baz=221						
CHN5	**Tsauling**	**2.16**	**237**	*e*P	**Pn**	**16 28 44.5**	**+1.1**
	baz=223						
CHN5				*e*S	**Sn**	**16 29 11.7**	**+1.8**
	baz=223						
ELDTW	**Lidau**	**2.19**	**223**	*e*P	**Pn**	**16 28 44.3**	**+0.5**
	baz=221						
EDH	**Donghe**	**2.20**	**214**	*e*P	**Pn**	**16 28 42.9**	**-0.9**
	baz=204						
EDH				*e*S	**Sn**	**16 29 08.8**	**-1.8**
	baz=204						
WTK	**Tuku**	**2.34**	**242**	*e*P	**Pn**	**16 28 46.8**	**+1.0**
	baz=240						
LONT	**Longtian**	**2.35**	**217**	*e*P	**Pn**	**16 28 45.5**	**-0.3**
	baz=215						
CHY	**Chiayi**	**2.41**	**238**	*e*P	**Pn**	**16 28 48.0**	**+1.3**
	baz=250						
CHY				*e*S	**Sb**	**16 29 19.1**	**-1.4**
	baz=250						
TWK	**Hsinying**	**2.50**	**233**	*e*P	**Pn**	**16 28 49.4**	**+1.5**
	baz=220						
TWK				*e*S	**Sn**	**16 29 19.1**	**+0.9**
	baz=220						
CHN1	**Nanshi**	**2.52**	**231**	*e*P	**Pn**	**16 28 49.9**	**+1.6**
	baz=219						
CHN1				*e*S	**Sn**	**16 29 20.5**	**+1.8**
	baz=219						
SGST	**Jiashian**	**2.55**	**228**	*e*P	**Pn**	**16 28 50.0**	**+1.4**
	baz=217						
SGST				*e*S	**Sn**	**16 29 21.5**	**+2.1**
	baz=217						
SLGT	**Liugui**	**2.57**	**226**	*e*P	**Pb**	**16 28 51.3**	**-2.4**
	baz=216						
SLGT				*e*S	**Sn**	**16 29 21.3**	**+1.5**
	baz=216						

IDC ***17*** *16:32:24.1±0.7,9.24N×126.32E,h0km,mb3.9/14,*
mb1 4.0/14,mb1mx3.8/42,mbtmp3.9/14,MS2.9/1,
Ms1 3.1/1,ms1mx2.4/58,Error ellipse: s-maj=43.7km
s-min=13.5km az=83.0
MAN ***17*** *16:32:27.1,9.37N×126.63E,h16km,mb4.8,ML3.7,MS3.7*
NEIC ***17*** *16:32:31.9±1.4,9.25N±0.08×126.2E±0.1,h61km±7km,*
mb4.3/25,Error ellipse: s-maj=16.7km s-min=11.4km
az=77.0
ISC 17 16:32:30.3±0.5,9.30N±0.05×126.52E±0.07,h43km**,n60,**
σ1=23/58,mb4.2/24,3C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIP	**Bislig**	**1.10**	**194**	*e*P	**Pn**	**16 32 48.6**	**-0.7**
BIP				*e*S	**Sn**	**16 33 03.1**	**-0.1**
CGP	**Cagayan de Oro**	**1.99**	**245**	*i*P	**Pn**	**16 33 01.4**	**-0.1**
CGP				*i* S	**Sn**	**16 33 27.7**	**+2.4**
DAV	**Davao City (W)**	**2.40**	**203**	Pn	**Pn**	**16 33 08.1**	**+1.0**
	52nm,0.3s,baz=118,slow=3.6,SNR=1.2						
DAV				Lg	Lg	16 33 44.8	
	60nm,0.3s,baz=204,slow=20,SNR=3.9						
DAV	**Davao City (W)**	**2.40**	**203**	Pn	**Pn**	**16 33 07.6**	**+0.4**
TBP	**Tagbilaran**	**2.65**	**279**	*i*P	**Pn**	**16 33 11.1**	**+0.5**
TBP				*i* S	**Pn**	**16 33 13.4**	**+2.8**
LLP	**Lapu-Lapu**	**2.72**	**292**	*i*P	**Pn**	**16 33 12.8**	**+1.4**
LLP				*i* S	**Sn**	**16 33 46.2**	**+3.1**
LQP	**Lukban**	**6.83**	**315**	*e*P	**Pn**	**16 34 09.2**	**+0.9**
TNTI	**Ternate**	**8.51**	**174**	Pn	**Pn**	**16 34 32.8**	**+1.7**
MYLDM	**Lahad Datu**	**8.95**	**243**	Pn	**Pn**	**16 34 36.4**	**-0.6**
FAKI	**Fak Fak**	**13.41**	**155**	Pn	**Pn**	**16 35 40.0**	**+1.8**
SSLB	**Suanglung**	**15.36**	**340**	Pn	**Pn**	**16 36 04.0**	**-0.2**
SSLB				IAmb	IAmb	16 36 08.8	
	comp=Z,30nm,1.1s						
KNRA	**Kununurra**	**24.91**	**175**	P	**P**	**16 37 49.0**	**-0.4**
KNRA				IAmb	IAmb	16 37 57.1	
	comp=Z,21nm,1.2s						
FITZ	**Fitzroy Crossi**	**27.23**	**182**	P	**P**	**16 38 10.7**	**+0.2**
	comp=Z,4.7nm,0.8s,baz=352,slow=8.6,SNR=9.4						
FITZ	**Fitzroy Crossi**	**27.23**	**182**	P	**P**	**16 38 10.5**	**0.0**
FITZ				IAmb	IAmb	16 38 14.3	
	comp=Z,5.9nm,0.8s						
KMI	**Kunming**	**27.56**	**308**	P	**P**	**16 38 10.8**	**-2.9**
KSAR	**Wonju Array Be**	**28.05**	**2**	P	**P**	**16 38 17.3**	**-0.3**
KSRS	**Korea Array**	**28.06**	**2**	P	**P**	**16 38 18.2**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=190,slow=9.7,SNR=3.6						
CMAR	**Chiang Mai Arr**	**28.25**	**292**	LR	LR	16 49 57.6	
	comp=Z,21nm,18.1s,baz=195,slow=38						
WB0	**Warramunga Arr**	**29.90**	**165**	P	**P**	**16 38 33.2**	**-1.0**
WRAB	**Tennant Creek**	**30.05**	**165**	P	**P**	**16 38 34.1**	**-1.5**
WRA	**Warramunga Arr**	**30.06**	**165**	P	**P**	**16 38 34.6**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=347,slow=9.2,SNR=5.7						
WB2	**Warramunga Arr**	**30.06**	**165**	P	**P**	**16 38 34.8**	**-0.9**
AS31	**Alice Springs**	**33.55**	**168**	P	**P**	**16 39 05.4**	**-0.8**
ASAR	**Alice Springs**	**33.55**	**168**	P	**P**	**16 39 05.8**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=350,slow=6.8,SNR=14						
ASAR				PcP	**PcP**	**16 41 46.4**	**0.0**
	comp=Z,0.3nm,0.7s,baz=357,slow=1.9,SNR=3.5						
ASAR	**Alice Springs**	**33.55**	**168**	P	**P**	**16 39 05.1**	**-1.1**
USRK	**Ussuriysk Ar.**	**35.09**	**7**	P	**P**	**16 39 20.3**	**+0.9**
	comp=Z,5.3nm,1.1s,baz=211,slow=9.8,SNR=3.0						
USRK	**Ussuriysk Ar.**	**35.09**	**7**	P	**P**	**16 39 19.6**	**+0.2**
FORT	**Forrest**	**39.87**	**178**	P	**P**	**16 40 00.5**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**39.97**	**72**	T	T	17 22 56.5	
	baz=262,slow=75,SNR=85						
H11S1	**WAKE ISLAND Hy**	**39.98**	**72**	T	T	17 23 00.6	
	baz=262,slow=75,SNR=72						
H11S2	**WAKE ISLAND Hy**	**39.98**	**72**	T	T	17 22 59.7	
	baz=262,slow=75,SNR=86						
KLR	**Kul'dur**	**40.04**	**5**	P	**P**	**16 40 01.7**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=158,slow=8.5,SNR=4.9						
H11N1	**WAKE ISLAND Hy**	**40.33**	**71**	T	T	17 23 35.7	
	baz=265,slow=74,SNR=20						
H11N2	**WAKE ISLAND Hy**	**40.34**	**71**	T	T	17 23 31.0	
	baz=265,slow=74,SNR=15						
H11N3	**WAKE ISLAND Hy**	**40.35**	**71**	T	T	17 23 34.7	
	baz=265,slow=74,SNR=18						
BBOO	**Buckleboo**	**42.85**	**168**	P	**P**	**16 40 24.5**	**+0.2**
STKA	**Stephens Creek**	**43.41**	**161**	P	**P**	**16 40 28.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=327,slow=17,SNR=3.0						
DZM	**Mont Dzumac**	**50.04**	**129**	P	**P**	**16 41 22.3**	**+1.2**
DZM				IAmb	IAmb	16 41 41.0	
	comp=Z,7.6nm,1.2s						
PEA0B	**Petropavlovsk-**	**50.42**	**24**	P	**P**	**16 41 24.9**	**+1.6**
PETK	**Petropavlovsk-**	**50.42**	**24**	P	**P**	**16 41 24.8**	**+1.4**
	comp=Z,2.1nm,0.5s,baz=203,slow=2.7,SNR=12						
PET	**Petropavlovsk**	**50.74**	**25**	P	**P**	**16 41 27.2**	**+1.4**
MKAR	**Makanchi Array**	**52.95**	**323**	P	**P**	**16 41 41.4**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=118,slow=7.4,SNR=7.9						
MAKZ	**Makanchi**	**53.14**	**323**	P	**P**	**16 41 42.1**	**-1.7**
MAKZ				IAmb	IAmb	16 42 04.3	
	comp=Z,5.8nm,1.2s						
NIL	**Nilore**	**54.49**	**305**	P	**P**	**16 41 52.0**	**-2.0**
ZALV	**Zalesovo Beam**	**55.59**	**332**	P	**P**	**16 42 02.7**	**+1.2**
	comp=Z,2.0nm,0.3s,baz=144,slow=12,SNR=1.9						
KURK	**Kurchatov**	**57.01**	**326**	P	**P**	**16 42 10.5**	**-1.1**
KURK				IAmb	IAmb	16 42 11.2	
	comp=Z,2.0nm,1.0s						
KKAR	**Karatay Array**	**59.11**	**315**	P	**P**	**16 42 24.6**	**-1.9**
TIXI	**Tiksi**	**62.31**	**1**	P	**P**	**16 42 47.9**	**+0.2**
TIXI				IAmb	IAmb	16 42 48.6	
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	**62.67**	**326**	P	**P**	**16 42 49.3**	**-1.3**
BRVK				IAmb	IAmb	16 42 50.5	
	comp=Z,1.4nm,0.6s						
NRIK	**Noril'sk**	**65.01**	**346**	P	**P**	**16 43 05.2**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=184,slow=13,SNR=2.5						
IMAR	**Indian Mountai**	**77.38**	**24**	P	**P**	**16 44 21.9**	**+1.4**
RAYN	**Ar Rayn**	**78.16**	**292**	P	**P**	**16 44 24.3**	**-1.5**
RAYN				IAmb	IAmb	16 44 44.6	
	comp=Z,2.4nm,1.0s						
COLD	**Coldfoot**	**78.88**	**23**	P	**P**	**16 44 29.7**	**+0.9**
COLD				IAmb	IAmb	16 44 30.6	
	comp=Z,3.5nm,1.3s						
I23K	**Minto, Yukon-K**	**79.15**	**25**	P	**P**	**16 44 31.1**	**+0.8**
TOLK	**Toolik Lake Re**	**79.18**	**22**	P	**P**	**16 44 31.1**	**+0.7**
TOLK				IAmb	IAmb	16 44 47.1	
	comp=Z,8.4nm,1.4s						
CCB	**Clear Creek Bu**	**79.81**	**26**	P	**P**	**16 44 34.3**	**+0.4**
CCB				IAmb	IAmb	16 44 54.3	
	comp=Z,5.7nm,1.4s						
ILAR	**Eielson Array**	**80.20**	**26**	P	**P**	**16 44 36.4**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=243,slow=5.7,SNR=7.2						
ILAR	**Eielson Array**	**80.20**	**26**	P	**P**	**16 44 36.0**	**0.0**
ARCES	**ARCESS Array B**	**85.19**	**340**	P	**P**	**16 45 00.9**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=80,slow=6.5,SNR=8.8						
VNDA	**Vanda**	**88.94**	**173**	P	**P**	**16 45 19.7**	**0.0**
	comp=Z,0.6nm,0.9s,baz=295,slow=6.2,SNR=5.0						

IDC 17 16:37:28.2±7.9,7.90S×156.10E,h0km,mb3.6/3,
mb1 3.8/3,mb1mx3.4/36,mbtmp3.6/3,Error ellipse:
s-maj=129.9km s-min=95.4km az=26.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.24**	**238**	P	P	16 42 47.5	+0.4
	0.6nm,0.8s,baz=64,slow=9.3,SNR=4.4						
ASAR	**Alice Springs**	**26.43**	**231**	P	P	16 43 06.5	-0.5
	0.6nm,0.9s,baz=66,slow=9.6,SNR=6.1						
STKA	**Stephens Creek**	**27.42**	**208**	P	P	16 43 15.8	+0.2
	1.3nm,0.6s,baz=40,slow=15,SNR=2.8						

NEIC ***17*** *16:42:45.0±1.7,9.3S±0.1×156.6E±0.1,h10km±2km,*
mb4.2/5,Error ellipse: s-maj=30.0km s-min=4.6km
az=47.0
IDC ***17*** *16:42:44.3±5.2,9.25S×156.53E,h0km,mb3.7/3,*
mb1 3.9/4,mb1mx3.5/32,mbtmp3.7/4,ML3.7/1,MS2.8/2,
Ms1 2.8/2,ms1mx2.6/30,Error ellipse: s-maj=89.4km
s-min=33.0km az=74.0
ISC 17 16:42:48.2±1.5,9.4S±0.1×156.3E±0.2,h24km**,n12,**
σ2=08/12,mb3.6/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**6.61**	**319**	Pn	**Pn**	**16 44 24.7**	**+0.7**
	1.4nm,0.3s,baz=146,slow=15,SNR=2.5						
KRVT				Sn	**Sn**	**16 45 40.2**	**+1.5**
	0.8nm,0.3s,baz=191,slow=21,SNR=3.7						
KRVT				LR	LR	16 46 19.3	
	comp=Z,43nm,21.2s,baz=201,slow=32						
PMG	**Port Moresby**	**9.05**	**269**	LR	LR	16 47 51.2	
	comp=Z,110nm,20.4s,baz=178,slow=33						
COEN	**Coen**	**13.66**	**249**	Pn	**Pn**	**16 45 57.6**	**-3.1**
WB2	**Warramunga Arr**	**23.68**	**241**	P	**P**	**16 47 56.6**	**-1.8**
WB2				IAmb	IAmb	16 48 04.6	
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**23.70**	**241**	P	**P**	**16 48 00.3**	**+1.8**
	comp=Z,1.7

Moment Tensor Solution. s158,c345; s161,c598; Duration: 3ˢ1 Moment tensor: Scale 10¹⁸Nm; M_{rr}=0.26±.01; $M_{\theta\theta}$ 1.35±.01; $M_{\phi\phi}$ -1.08±.01; $M_{r\theta}$ 0.79±.03; $M_{\theta\phi}$ 2.23±.01; $M_{\phi r}$ -0.12±.03; Best double couple: M_o2.66100×10¹⁸ NP1:ϕ_s14.00000°,δ72.00000°, λ-179.00000°. NP2:ϕ_s284.00000°,δ89.00000°, λ-18.00000°. Principal axes: T 2.8010, Plg12.0000°, Azm330.0000°; N -0.2740, Plg72.0000°, Azm101.0000°; P -2.5210, Plg13.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function

NEIC **17** *16:52:50.6*±*0.6*, **46°41S**±*0.0*×**33°70E**±*0.0*, *04*, **h12**km±*3*km, **n1710**,σ1°**75**/1527,**mb5.7**/188,**MS5.9**/425,**36C-18D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CRZF	**Crozet Islands**	**12.54**	**97**		**Pn**		**16 55 41.4**	**-4.3**
SUR	**Sutherland**	**17.16**	**320**	P	**Pn**		**16 56 43.6**	**-3.7**
	62nm,0.3s,baz=156,slow=14,SNR=199							
SUR				S	Sn		16 59 43.7	-14
	23nm,0.3s,baz=167,slow=22,SNR=3.8							
SUR				LR	LR		17 02 11.1	
	comp=Z,52μm,20.3s,baz=149,slow=33							
SUR	**Sutherland**	**17.16**	**320**	P	**Pn**		**16 56 45.2**	**-2.1**
SUR				P	**Pn**		**16 56 45.2**	**-2.1**
SUR	**Sutherland**	**17.16**	**320**	Pn	**Pn**		**16 56 43.4**	**-4.0**
BOSA	**Boshof**	**18.96**	**337**	P	**P**		**16 57 05.3**	**-3.5**
	20nm,0.3s,baz=161,slow=13,SNR=146							
BOSA				LR	LR		17 03 06.4	
	comp=Z,34μm,21.5s,baz=160,slow=33							
BOSA	**Boshof**	**18.96**	**337**	P	**P**		**16 57 05.3**	**-3.5**
BOSA				pmax	pmax			
	comp=Z,580nm,1.0s							
BOSA	**Boshof**	**18.96**	**337**	P	**P**		**16 57 05.3**	**-3.5**
BOSA				IAmb	IAmb		16 57 15.2	
	comp=Z,580nm,0.9s							
LBTB	**Lobatse**	**22.31**	**340**	P	**P**		**16 57 42.8**	**-2.3**
	comp=Z,464nm,0.8s,baz=166,slow=9.3,SNR=275							
LBTB				PcP	**PcP**		**17 01 38.7**	**-1.8**
	comp=Z,118nm,0.8s,baz=230,slow=2.3,SNR=2.6							
LBTB				LR	LR		17 05 07.9	
	comp=Z,22μm,21.9s,baz=163,slow=33							
LBTB	**Lobatse**	**22.31**	**340**	P	**P**		**16 57 42.6**	**-2.5**
LBTB				pmax	pmax			
	comp=Z,1μm,1.1s							
LBTB	**Lobatse**	**22.31**	**340**	P	**P**		**16 57 42.6**	**-2.5**
SYO	**Syowa Base**	**22.86**	**175**	*i*P	**P**		**16 57 49.4**	**-1.0**
SYO	**Syowa Base**	**22.86**	**175**	*i*P	**P**		**16 57 51.0**	**+0.6**
SYO	**Syowa Base**	**22.86**	**175**	*i*pP	pP		16 57 54.4	+1.9
FOMA	**Nahampoana Res**	**23.89**	**31**	P	**P**		**16 58 00.3**	**-0.7**
	SNR=12							
FOMA	**Nahampoana Res**	**23.89**	**31**	P	**P**		**16 57 59.3**	**-1.7**
FOMA				IAmb	IAmb		16 58 23.0	
	comp=Z,238nm,1.0s							
FOMA				IAMs_20	IAMs_20		17 04 43.2	
	comp=Z,29μm,18.0s							
PAF	**Port-aux-Franc**	**24.51**	**110**	IAMs_20	IAMs_20		17 04 47.6	
	comp=Z,44μm,21.0s							
MAW	**Mawson**	**26.06**	**155**	P	**P**		**16 58 21.2**	**+0.8**
	comp=Z,174nm,1.0s,baz=304,slow=9.0,SNR=144							
MAW				S	S		17 02 38.4	-12
	comp=Z,5.9nm,0.8s,baz=280,slow=16,SNR=0.9							
MAW				LR	LR		17 06 00.3	
	comp=Z,17μm,20.5s,baz=321,slow=30							
MAW	**Mawson**	**26.06**	**155**	P	**P**		**16 58 21.2**	**+0.8**
	baz=26							
MAW				S	S		17 03 13.3	+22
	baz=26							
MAW	**Mawson**	**26.06**	**155**	P	**P**		**16 58 21.0**	**+0.5**
MATP	**Matopo**	**26.26**	**349**	P	**P**		**16 58 21.3**	**-1.5**
	comp=Z,144nm,0.7s,baz=172,slow=9.4,SNR=285							
MATP				S	**S**		**17 02 46.9**	**-8.3**
	comp=Z,24nm,0.8s,baz=223,slow=22,SNR=1.0							
MATP				LR	LR		17 07 17.4	
	comp=Z,14μm,21.3s,baz=179,slow=33							
NVL	**N'lazarevskaya**	**26.63**	**196**	*e*P	**P**		**16 58 25.5**	**0.0**
NVL				*e*S	**S**		**17 02 55.6**	**-4.2**
NVL				pmax	pmax			
	comp=Z,331nm,1.1s							
VOI	**Vohitsoka**	**26.66**	**28**	P	**P**		**16 58 25.6**	**-0.8**
	SNR=15							
ABPO	**Ambohimpanom**	**29.50**	**27**	P	**P**		**16 58 51.9**	**0.0**
ABPO				pmax	pmax			
	comp=Z,107nm,1.0s							
ABPO				MLR	MLR			
	comp=Z,14μm,19.0s							
ABPO	**Ambohimpanom**	**29.50**	**27**	P	**P**		**16 58 51.9**	**0.0**
OPO	**Ambohidratompo**	**29.91**	**26**	P	**P**		**16 58 55.5**	**0.0**
	comp=Z,32nm,0.8s,baz=202,slow=8.9,SNR=39							
TSUM	**Tsumeb**	**30.20**	**329**	P	**P**		**16 58 57.2**	**-0.8**
	comp=Z,157nm,0.9s,baz=159,slow=9.4,SNR=130							
TSUM				LR	LR		17 10 09.8	
	comp=Z,35μm,19.5s,baz=159,slow=34							
TSUM	**Tsumeb**	**30.20**	**329**	P	**P**		**16 58 56.6**	**-1.4**
SNAA	**Sanae**	**30.60**	**202**	P	**P**		**16 59 01.9**	**+0.9**
SNAA	**Sanae**	**30.60**	**202**	P	**P**		**16 59 02.2**	**+1.2**
	comp=Z,63nm,0.9s,baz=68,slow=7.0,SNR=146							
SNAA				LR	LR		17 08 09.8	
	comp=Z,15μm,21.1s,baz=47,slow=30							
SNAA	**Sanae**	**30.60**	**202**	*ce*P	**P**		**16 59 02.2**	**+1.2**
SNAA				pmax	pmax			
	comp=Z,122nm,1.3s							
SNAA	**Sanae**	**30.60**	**202**	P	**P**		**16 59 01.3**	**+0.3**
SNAA				IAmb	IAmb		16 59 15.9	
	comp=Z,154nm,1.1s							
RER	**Riviere de l'E**	**30.94**	**43**	P	**P**		**16 59 04.4**	**-0.1**
RER				IAmb	IAmb		16 59 16.0	
	comp=Z,116nm,1.0s							
LSZ	**Lusaka**	**31.38**	**350**	P	**P**		**16 59 07.4**	**-1.0**
	comp=Z,303nm,0.8s,baz=173,slow=9.5,SNR=330							
LSZ				S	S		17 04 04.2	-11
	comp=Z,27nm,0.8s,baz=71,slow=18,SNR=2.0							
LSZ				LR	LR		17 09 59.7	
	comp=Z,13μm,21.4s,baz=176,slow=33							
LSZ	**Lusaka**	**31.38**	**350**	P	**P**		**16 59 07.7**	**-0.7**
LSZ	**Lusaka**	**31.38**	**350**	P	**P**		**16 59 06.2**	**-2.2**
VNA2	**Neumayer--Watz**	**31.43**	**204**	P	**P**		**16 59 09.8**	**+1.5**
	baz=65,slow=10							
VNA1	**Neumayer--Stat**	**31.55**	**205**	P	**P**		**16 59 11.4**	**+2.1**
VNA3	**Neumayer Olymp**	**32.24**	**205**	P	**P**		**16 59 16.2**	**+0.8**
H09W1	**TRISTAN DA CUN**	**35.15**	**269**	T	T		17 37 33.7	
	SNR=7.3							
SBV	**Sambava**	**35.57**	**28**	P	**P**		**16 59 44.5**	**-0.3**
	SNR=12							
BELA	**Belgrano 2**	**40.57**	**198**	P	**P**		**17 00 25.6**	**-0.7**
CASY	**Casey**	**43.62**	**145**	P	**P**		**17 00 50.9**	**-0.4**
CASY				IAmb	IAmb		17 01 04.2	
	comp=Z,122nm,0.9s							
HOPE	**Hope Point**	**43.75**	**233**	P	**P**		**17 00 52.7**	**+0.2**
HOPE				pmax	pmax			
	comp=Z,287nm,1.1s							
HOPE				MLR	MLR			
	comp=Z,12μm,19.0s							
HOPE	**Hope Point**	**43.75**	**233**	P	**P**		**17 00 52.7**	**+0.2**
HOPE				IAmb	IAmb		17 01 10.3	
	comp=Z,287nm,1.1s							
HOPE	**Hope Point**	**43.75**	**233**	IAMs_20	IAMs_20		17 14 14.5	
	comp=Z,12μm,19.0s							
QSPA	**South Pole Qui**	**43.81**	**180**	P	**P**		**17 00 52.8**	**-0.3**
	comp=Z,82nm,0.9s,baz=251,slow=3.7,SNR=235							
QSPA				PcP	**PcP**		**17 02 37.3**	**-2.0**
	comp=Z,74nm,1.2s,baz=116,slow=2.3,SNR=3.9							
QSPA				S	S		17 07 08.0	-15
	comp=Z,8.0nm,1.1s,baz=303,slow=2.2,SNR=20							
QSPA	**South Pole Qui**	**43.81**	**180**	P	**P**		**17 00 52.4**	**-0.7**
QSPA				IAmb	IAmb		17 01 04.1	
	comp=Z,274nm,1.2s							
KIBK	**Kibwezi**	**44.05**	**6**	P	**P**		**17 00 56.2**	**+0.7**
	SNR=37							
SHEL	**Horse Pasture**	**44.66**	**300**	P	**P**		**17 01 00.8**	**+0.5**
SHEL				pmax	pmax			
	comp=Z,253nm,0.9s							
SHEL	**Horse Pasture**	**44.66**	**300**	P	**P**		**17 01 00.8**	**+0.5**
KMBO	**Kilima Mbogo**	**45.20**	**5**	P	**P**		**17 01 07.1**	**+2.3**
	comp=Z,33nm,0.9s,baz=179,slow=5.9,SNR=73							
KMBO				S	**S**		**17 07 42.5**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=266,slow=16,SNR=1.9							
KMBO				LR	LR		17 18 38.2	
	comp=Z,6μm,18.5s,baz=166,slow=34							
KMBO	**Kilima Mbogo**	**45.20**	**5**	*i* P	**P**		**17 01 05.2**	**+0.4**
	SNR=48							
KMBO	**Kilima Mbogo**	**45.20**	**5**	P	**P**		**17 01 05.8**	**+1.1**
KMBO	**Kilima Mbogo**	**45.20**	**5**	*i* P	**P**		**17 01 07.0**	**+2.2**
KMBO				pmax	pmax			
	comp=Z,33nm,0.9s							
KMBO	**Kilima Mbogo**	**45.20**	**5**	P	**P**		**17 01 04.8**	**+0.1**
KMBO				IAmb	IAmb		17 01 11.3	
	comp=Z,110nm,1.2s							
MBAR	**Mbarara**	**45.69**	**356**	P	**P**		**17 01 09.5**	**+0.9**
	comp=Z,22nm,0.9s,baz=141,slow=8.2,SNR=42							
MBAR				S	**S**		**17 07 48.2**	**-3.3**
	comp=Z,2.0nm,0.2s,baz=214,slow=3.9,SNR=1.3							
MBAR	**Mbarara**	**45.69**	**356**	P	**P**		**17 01 09.5**	**+0.9**
MBAR				P	**P**		**17 01 09.5**	**+0.9**
MBAR	**Mbarara**	**45.69**	**356**	*c* iP	**P**		**17 01 09.4**	**+0.9**
MBAR				pmax	pmax			
	comp=Z,55nm,1.0s							
MBAR	**Mbarara**	**45.69**	**356**	P	**P**		**17 01 08.9**	**+0.3**
MBAR				IAmb	IAmb		17 01 15.0	
	comp=Z,106nm,1.1s							
MBAR	**Mbarara**	**45.69**	**356**	IAMs_20	IAMs_20		17 19 47.9	
	comp=Z,14μm,20.0s							
LODK	**Lodwar**	**49.64**	**2**	P	**P**		**17 01 39.7**	**+0.6**
	SNR=37							
H08S1	**Diego Carcia H**	**50.94**	**53**	T	T		17 56 16.7	
	baz=212,slow=75,SNR=20							
H08S2	**Diego Garcia H**	**50.95**	**53**	T	T		17 56 17.4	
	baz=212,slow=75,SNR=13							
H08S3	**Diego Garcia H**	**50.96**	**53**	T	T		17 56 18.2	
	baz=212,slow=75,SNR=42							
VNDA	**Vanda**	**52.29**	**168**	P	**P**		**17 01 58.5**	**+0.3**
	comp=Z,106nm,1.0s,baz=245,slow=9.7							
VNDA				S	**S**		**17 09 19.5**	**-3.2**
	comp=Z,0.8nm,0.9s,baz=204,slow=4.9,SNR=1.0							
VNDA				LR	LR		17 22 22.2	
	comp=Z,14μm,21.7s,baz=218,slow=34							
VNDA	**Vanda**	**52.29**	**168**	P	**P**		**17 01 58.6**	**+0.3**
VNDA				IAmb	IAmb		17 02 10.8	
	comp=Z,196nm,1.1s							
FURI	**Furi**	**55.23**	**6**	IAMs_20	IAMs_20		17 24 05.0	
	comp=Z,11μm,20.0s							
H10S2	**ASCENSION HYDR**	**55.53**	**296**	T	T		18 02 40.7	
	baz=140,slow=74							
H10S3	**ASCENSION HYDR**	**55.54**	**296**	T	T		18 02 41.9	
	baz=80,slow=74							
ANKE	**Ethiopia-Afar**	**56.01**	**7**	*e*P	**P**		**17 02 27.1**	**+0.6**
ANKE				*e*S	**S**		**17 10 21.1**	**+6.3**
ASCN	**Ascension**	**56.15**	**297**	P	**P**		**17 02 27.2**	**0.0**
ASCN				IAMs_20	IAMs_20		17 19 38.6	
	comp=Z,11μm,21.0s							
H10N1	**ASCENSION HYDR**	**56.29**	**297**	T	T		18 03 40.9	
	baz=41,slow=75,SNR=32							
H10N3	**ASCENSION HYDR**	**56.30**	**297**	T	T		18 03 36.3	
	baz=41,slow=75,SNR=33							
H10N2	**ASCENSION HYDR**	**56.31**	**297**	T	T		18 03 45.6	
	baz=41,slow=75,SNR=21							
ATD	**Arta Tunnel**	**58.25**	**11**	P	**P**		**17 02 42.6**	**+0.6**
	comp=Z,23nm,0.9s,baz=156,slow=2.0,SNR=7.1							
ATD				S	**S**		**17 10 47.1**	**+3.4**
	comp=Z,4.0nm,0.6s,baz=264,slow=21,SNR=1.5							
ATD	**Arta Tunnel**	**58.25**	**11**	P	**P**		**17 02 41.9**	**-0.1**
TEND	**Ethiopian Broa**	**58.30**	**8**	*e*P	**P**		**17 02 44.0**	**+1.7**
TEND				*e*S	**S**		**17 10 39.0**	**-5.3**
MG01	**Puerto William**	**59.26**	**221**	P	**P**		**17 02 49.2**	**+0.7**
MG01				IAmb	IAmb		17 03 00.5	
	comp=Z,144nm,1.1s							
H01W2	**Cape Leeuwin H**	**59.62**	**110**	T	T		18 07 50.1	
	baz=228,slow=75,SNR=20							
H01W3	**Cape Leeuwin H**	**59.63**	**110**	T	T		18 07 50.8	
	baz=228,slow=75,SNR=18							
H01W1	**Cape Leeuwin H**	**59.64**	**110**	T	T		18 07 56.0	
	baz=228,slow=75,SNR=17							
USHA	**Ushuaia**	**59.69**	**221**	P	**P**		**17 02 52.3**	**+0.8**
	comp=Z,8.4nm,0.4s,baz=42,slow=1.9,SNR=3.2							
SOCY	**Socotra**	**61.11**	**23**	P	**P**		**17 03 03.3**	**+1.6**
	SNR=5.9							
SOCY	**Socotra**	**61.11**	**23**	P	**P**		**17 03 02.8**	**+1.1**
SOCY				IAmb	IAmb		17 03 07.5	
	comp=Z,98nm,1.0s							
RKGY	**Rocky Gully**	**61.64**	**111**	P	**P**		**17 03 06.6**	**+1.5**
	baz=62,SNR=5.4							
KIC	**Kosan Boka**	**62.66**	**316**	*e*P	**P**		**17 03 11.8**	**-0.3**
	comp=Z,225nm,1.4s							
LIC	**Lamto**	**62.68**	**316**	*e*P	**P**		**17 03 12.1**	**-0.2**
	comp=Z,846nm,1.9s							
MUN	**Mundaring**	**62.79**	**109**	P	**P**		**17 03 13.8**	**+0.8**
	baz=63,SNR=18							
NWAO	**Narrogin (SRO)**	**62.86**	**110**	P	**P**		**17 03 13.2**	**-0.1**
	comp=Z,54nm,0.8s,baz=237,slow=6.0,SNR=26							
NWAO				LR	LR		17 25 30.7	
	comp=Z,5μm,19.1s,baz=238,slow=31							
NWAO	**Narrogin (SRO)**	**62.86**	**110**	P	**P**		**17 03 13.9**	**+0.6**
	baz=63,SNR=18							
NWAO	**Narrogin (SRO)**	**62.86**	**110**	P	**P**		**17 03 12.4**	**-1.0**
NWAO	**Narrogin (SRO)**	**62.86**	**110**	P	**P**		**17 03 12.7**	**-0.7**
NWAO				IAmb	IAmb		17 03 25.3	
	comp=Z,103nm,0.9s							
NWAO				IAMs_20	IAMs_20		17 25 19.7	
	comp=Z,5μm,19.0s							
DBIC	**Dimbokro**	**62.99**	**316**	P	**P**		**17 03 13.7**	**-0.6**
	comp=Z,59nm,0.8s,baz=132,slow=8.0,SNR=47							
DBIC				S	S		17 11 33.5	-11
	comp=Z,4.8nm,1.0s,baz=64,slow=6.9,SNR=1.7							
DBIC				LR	LR		17 25 48.6	
	comp=Z,4μm,21.8s,baz=137,slow=31							
DBIC	**Dimbokro**	**62.99**	**316**	P	**P**		**17 03 13.3**	**-0.9**
TIC	**Toumodi**	**63.05**	**316**	*e*P	**P**		**17 03 14.6**	**-0.1**
BLDU	**Ballidu**	**63.99**	**108**	P	**P**		**17 03 20.3**	**-0.6**
	baz=64,SNR=7.8							
KLBR	**Kellerberrin**	**64.05**	**109**	P	**P**		**17 03 21.7**	**+0.4**
	baz=64,SNR=10.0							
MORW	**Morawa**	**64.55**	**106**	P	**P**		**17 03 25.1**	**+0.6**
	baz=64,SNR=25							
MORW	**Morawa**	**64.55**	**106**	P	**P**		**17 03 23.8**	**-0.8**
RIB01	**Linhares ES**	**65.39**	**267**	*e*P	**P**		**17 03 31.7**	**+1.6**
MAN01	**Angra dos Reis**	**65.47**	**262**	*e*P	**P**		**17 03 32.8**	**+2.1**
VAS01	**Vassouras-RJ**	**65.50**	**263**	*e*P	**P**		**17 03 32.1**	**+1.3**
ESAR	**Angra dos Reis**	**65.69**	**262**	*e*P	**P**		**17 03 33.7**	**+1.7**
CNLB	**Canela**	**65.86**	**252**	*e*P	**P**		**17 03 35.1**	**+2.0**
TOC4	**Torodi Ar. Sit**	**65.87**	**326**	IAMs_20	IAMs_20		17 28 41.9	
	comp=Z,6μm,22.0s							
TOC3	**Torodi Ar. Sit**	**65.88**	**326**	IAMs_20	IAMs_20		17 28 42.0	
	comp=Z,7μm,21.0s							
TOB3	**Torodi Ar. Sit**	**65.88**	**326**	IAMs_20	IAMs_20		17 28 41.2	
	comp=Z,6μm,21.0s							
TOC5	**Torodi Ar. Sit**	**65.89**	**326**	IAMs_20	IAMs_20		17 28 41.3	
	comp=Z,7μm,22.0s							
ABTO	**Aybut**	**65.89**	**21**	P	**P**		**17 03 33.6**	**+0.4**
	SNR=17							
ABTO				P	**P**		**17 03 33.6**	**+0.4**
	SNR=17							
TOA2	**Torodi Ar. Sit**	**65.89**	**326**	IAMs_20	IAMs_20		17 28 41.5	
	comp=Z,6μm,21.0s							
TOC2	**Torodi Ar. Sit**	**65.89**	**326**	IAMs_20	IAMs_20		17 28 41.5	
	comp=Z,7μm,21.0s							
TOA0	**Torodi Ar. Sit**	**65.89**	**326**	P	**P**		**17 03 32.9**	**-0.3**
TOA0				IAMs_20	IAMs_20		17 28 41.5	
	comp=Z,7μm,22.0s							
TORD	**Torodi Ar. Bea**	**65.89**	**326**	P	**P**		**17 03 33.3**	**+0.1**
	comp=Z,90nm,0.9s,baz=160,slow=5.4,SNR=127							
TORD				S	**S**		**17 12 15.2**	**-5.0**
	comp=Z,0.4nm,0.8s,baz=198,slow=4.2,SNR=1.6							
TORD				LR	LR		17 30 17.7	
	comp=Z,5μm,21.8s,baz=155,slow=34							
TORD				PKPPKP	P'P'df		17 32 15.6	+12
	comp=Z,2.3nm,1.2s,baz=297,slow=4.4,SNR=3.9							
TORD	**Torodi Ar. Bea**	**65.89**	**326**	P	**P**		**17 03 32.7**	**-0.6**
TOB5	**Torodi Ar. Sit**	**65.91**	**326**	IAMs_20	IAMs_20		17 28 42.8	
	comp=Z,7μm,21.0s							
TOB1	**Torodi Ar. Sit**	**65.91**	**326**	IAMs_20	IAMs_20		17 28 42.9	
	comp=Z,6μm,21.0s							
TOC1	**Torodi Ar. Sit**	**65.92**	**326**	IAMs_20	IAMs_20		17 28 42.0	
	comp=Z,7μm,21.0s							
PLTB	**Pedras Altas**	**66.05**	**249**	*e*P	**P**		**17 03 35.3**	**+1.0**
RBK	**Rabkut**	**66.25**	**21**	P	**P**		**17 03 35.9**	**+0.4**
	SNR=6.8							
RBK				P	**P**		**17 03 35.9**	**+0.4**
	SNR=6.8							
PARB	**Paraibuna**	**66.28**	**261**	*e*P	**P**		**17 03 37.8**	**+1.9**
SJMB	**Sao Joao De Ma**	**66.35**	**267**	*e*P	**P**		**17 03 37.3**	**+0.9**
WHFO	**Wadi Hawf**	**66.55**	**21**	P	**P**		**17 03 38.0**	**+0.6**
	SNR=14							
WHFO				P	**P**		**17 03 38.0**	**+0.6**
	SNR=14							
DMTO	**DMTO**	**66.65**	**22**	P	**P**		**17 03 38.5**	**+0.5**
DMTO				P	**P**		**17 03 38.5**	**+0.5**
LPA	**La Plata**	**66.73**	**243**	*d* iP	**P**		**17 03 35.6**	**-2.9**
LPA				PCP	**PcP**		**17 04 14.5**	**+7.0**
LPA				S	**S**		**17 12 30.4**	**+0.3**
LPA				SKS	**SKSac**		**17 13 27.9**	**-7.2**
LPA				SKIKS			17 17 12.1	
LPA				SSS	SSS		17 20 33.2	
CPSB	**Cacapava Do Su**	**66.83**	**250**	*e*P	**P**		**17 03 41.0**	**+1.8**
KMBL	**Kambalda**	**66.88**	**112**	P	**P**		**17 03 39.5**	**0.0**
	baz=67,SNR=7.1							
TRD	**Trivandrum**	**66.90**	**47**	*e*P	**P**		**17 03 38.9**	**-0.8**
SHAO	**Shalim**	**67.12**	**23**	P	**P**		**17 03 41.2**	**+0.2**
SHAO	**Shalim**	**67.12**	**23**	P	**P**		**17 03 41.2**	**+0.2**
SHAO				P	**P**		**17 03 41.2**	**+0.2**
TIJ01	**Guaruva-PR**	**67.26**	**257**	*e*P	**P**		**17 03 41.9**	**-0.2**
SPB	**Sao Paulo**	**67.35**	**259**	P	**P**		**17 03 43.1**	**+0.5**
SPB				IAmb	IAmb		17 03 49.7	
	comp=Z,172nm,1.9s							
SPB	**Sao Paulo**	**67.35**	**259**	*e*P	**P**		**17 03 43.5**	**+1.0**
VAO	**Valinhos**	**67.42**	**260**	*e*P	**P**		**17 03 45.3**	**+2.1**
PALK	**Pallekele**	**67.83**	**52**	P	**P**		**17 03 45.1**	**-0.6**
PALK				pmax	pmax			
	comp=Z,92nm,1.3s							
PALK				MLR	MLR			
	comp=Z,7μm,19.0s							
PALK	**Pallekele**	**67.83**	**52**	P	**P**		**17 03 45.1**	**-0.6**
PALK				IAmb	IAmb		17 03 57.3	
	comp=Z,92nm,1.2s							
PALK	**Pallekele**	**67.83**	**52**	IAMs_20	IAMs_20		17 27 47.1	
	comp=Z,7μm,19.0s							
MEEK	**Meekatharra**	**67.86**	**106**	P	**P**		**17 03 46.1**	**+0.2**
	baz=68,SNR=12							
ITAB	**Concordia**	**68.07**	**253**	*e*P	**P**		**17 03 49.5**	**+2.3**
GDU01	**Guandu, BA**	**68.68**	**272**	*e*P	**P**		**17 03 49.6**	**-1.4**
MCQ	**Macquarie Isla**	**69.30**	**149**	IAMs_20	IAMs_20		17 29 21.6	
	comp=Z,7μm,20.0s							
ITQB	**Itaqui**	**69.38**	**248**	*e*P	**P**		**17 03 56.6**	**+1.4**
DQM	**DQM**	**69.46**	**24**	P	**P**		**17 03 56.0**	**+0.4**
DQM				P	**P**		**17 03 56.0**	**+0.4**
KOWA	**Kowa**	**69.48**	**321**	P	**P**		**17 03 56.1**	**+0.2**
PTGB	**Pitanga**	**69.72**	**255**	*e*P	**P**		**17 03 59.3**	**+1.8**
BB19B	**Bebedouro**	**69.80**	**260**	*e*P	**P**		**17 03 59.9**	**+1.9**
XMIS	**Christmas Isla**	**70.04**	**84**	P	**P**		**17 03 58.9**	**-0.7**
XMIS				IAmb	IAmb		17 04 15.4	
	comp=Z,155nm,1.3s							
PLCA	**Paso Flores**	**70.14**	**232**	P	**P**		**17 04 00.3**	**+0.5**
	comp=Z,22nm,1.0s,baz=121,slow=4.1,SNR=44							
PLCA				S	**S**		**17 13 09.2**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=46,slow=23,SNR=1.6							
PLCA	**Paso Flores**	**70.14**	**232**	P	**P**		**17 03 59.8**	**-0.1**
PLCA	**Paso Flores**	**70.14**	**232**	*e*P	**P**		**17 04 00.8**	**+0.9**
RAYN	**Ar Rayn**	**70.42**	**11**	*i* P	**P**		**17 04 01.8**	**+0.3**
	SNR=31							
RAYN	**Ar Rayn**	**70.42**	**11**	P	**P**		**17 04 01.1**	**-0.4**
RAYN				pmax	pmax			
	comp=Z,191nm,1.8s							
RAYN				MLR	MLR			
	comp=Z,10μm,19.0s							
RAYN	**Ar Rayn**	**70.42**	**11**	P	**P**		**17 04 01.1**	**-0.4**
RAYN				IAmb	IAmb		17 04 07.7	
	comp=Z,191nm,1.8s							
MHTO	**MHTO**	**70.58**	**24**	P	**P**		**17 04 02.2**	**-0.3**
	SNR=44							
MHTO				P	**P**		**17 04 02.2**	**-0.3**
	SNR=44							
JANB	**Januaria**	**71.02**	**268**	*e*P	**P**		**17 04 06.3**	**+0.8**
FORT	**Forrest**	**71.19**	**115**	P	**P**		**17 04 07.2**	**+0.9**
	baz=71,SNR=7.0							
FORT	**Forrest**	**71.19**	**115**	P	**P**		**17 04 06.2**	**-0.2**
FORT				IAmb	IAmb		17 04 19.4	
	comp=Z,81nm,0.8s							
PCMB	**Pacaembu**	**71.29**	**258**	*e*P	**P**		**17 04 09.2**	**+2.1**
TRCB	**Terra Rica**	**71.40**	**256**	*e*P	**P**		**17 04 09.7**	**+2.0**
GOA	**Goa**	**71.43**	**41**	*e*P	**P**		**17 04 08.0**	**+0.2**
GOA				IAmb	IAmb		17 04 12.1	
	comp=Z,377nm,2.2s							
IPMB	**Ipameri, GO**	**71.69**	**263**	*e*P	**P**		**17 04 11.0**	**+1.4**
RCBR	**Riachuelo**	**71.78**	**281**	P	**P**		**17 04 09.9**	**-0.2**
RCBR				pmax	pmax			
	comp=Z,70nm,1.0s							
RCBR	**Riachuelo**	**71.78**	**281**	P	**P**		**17 04 09.9**	**-0.2**

BIDO Bidbid 73.03 23 P P 17 04 17.5 +0.3
SNR=17
BIDO P P 17 04 17.5 +0.3
SNR=17
SKJI Sukabumi 73.14 82 P P 17 04 32.1 +14
RFA San Rafael 73.16 237 *i* P P 17 04 17.9 -0.2
BDFB Brasilia 73.17 265 P P 17 04 20.4 +1.9
comp=Z,26nm,1.0s,baz=123,slow=5.0,SNR=12
BDFB S S 17 13 47.3 +0.9
comp=Z,1.4nm,0.4s,baz=21,slow=6.9,SNR=1.5
BDFB LR LR 17 30 58.5
comp=Z,4µm,18.2s,baz=130,slow=31
BDFB Brasilia 73.17 265 IAMs_20 IAMs_20 17 30 38.7
comp=Z,4µm,18.0s
SOHO SOHO 73.19 22 *i* P P 17 04 17.9 -0.2
SNR=32
AJN Ajban 73.22 20 *i* P P 17 04 18.6 +0.4
SNR=21
AJN Ajban 73.22 20 P P 17 04 18.6 +0.4
SNR=14
GSI Gunungsitoli 73.24 70 IAMs_20 IAMs_20 17 32 02.3
comp=Z,5µm,18.0s
TCA Tanti 73.25 242 *i* P P 17 04 19.4 +0.6
KRJI Kerinci 73.27 75 P P 17 04 20.3 +1.3
comp=Z,6µmcomp=Z,384nm,1.2s
SDBA SAO DESIDERIO 73.28 269 *e*P P 17 04 19.8 +0.7
MDSI Maura Dua 73.34 79 P P 17 04 20.3 +0.9
comp=Z,1µmcomp=Z,71nm,0.9s
ASUD Al Ashush, Dub 73.37 20 *i* P P 17 04 20.0 +0.8
SNR=14
ASUD Al Ashush, Dub 73.37 20 P P 17 04 19.8 +0.7
SNR=20
ASUD P P 17 04 19.8 +0.7
SNR=20
LHSI Lahat 73.38 78 P P 17 04 22.4 +2.8
BI02 San Fabin de 73.41 234 P P 17 04 19.7 0.0
TAM Tamanrasset 73.45 333 P P 17 04 20.0 +0.1
TAM pmax pmax
comp=Z,39nm,1.0s
TAM MLR MLR
comp=Z,11µm,21.0s
TAM Tamanrasset 73.45 333 P P 17 04 20.0 +0.1
FAQ Al Faqa, Dubai 73.55 21 *i* P P 17 04 20.7 +0.4
SNR=9.8
FAQ Al Faqa, Dubai 73.55 21 P P 17 04 20.6 +0.4
SNR=27
FAQ P P 17 04 20.6 +0.4
SNR=27
KLSI 73.57 79 P P 17 04 23.0 +2.3
ASHO Ashiyiah 73.60 21 *i* P P 17 04 20.8 +0.2
SNR=27
ASHO Ashiyiah 73.60 21 P P 17 04 20.7 +0.2
SNR=33
ASHO P P 17 04 20.7 +0.2
SNR=33
DBJI Dramaga 73.60 82 P P 17 04 23.9 +3.0
CISI Cisompet, Garu 73.61 84 P P 17 04 24.3 +3.2
CISI Cisompet, Garu 73.61 84 P P 17 04 18.9 -2.1
CISI IAmb IAmb 17 04 36.7
comp=Z,79nm,1.0s
HATD Hatta, Dubai 73.75 21 *i* P P 17 04 21.9 +0.5
SNR=18
HATD Hatta, Dubai 73.75 21 P P 17 04 21.7 +0.2
SNR=24
HATD P P 17 04 21.7 +0.2
SNR=24
CBJI Citeko 73.77 82 P P 17 04 23.3 +1.4
NAZ Nazwa, Dubai 73.80 21 *i* P P 17 04 22.1 +0.5
SNR=20
NAZ Nazwa, Dubai 73.80 21 P P 17 04 22.0 +0.4
SNR=47
NAZ P P 17 04 22.0 +0.4
SNR=47
UOSS Minazif 73.89 21 *i* P P 17 04 21.8 -0.4
SNR=20
UOSS Minazif 73.89 21 P P 17 04 21.0 -1.2
UOSS IAmb IAmb 17 04 44.0
comp=Z,134nm,1.2s
UOSS Minazif 73.89 21 IAMs_20 IAMs_20 17 34 55.9
comp=Z,5µm,19.0s
LEM Lembang 74.00 83 P P 17 04 26.5 +3.0
comp=Z,111nm,1.0s,baz=161,slow=4.6,SNR=26
LEM LR LR 17 29 24.0
comp=Z,5µm,21.5s,baz=212,slow=30
SDSI Sungai Dareh 74.10 74 P P 17 04 25.2 +1.4
POO Poona 74.11 39 *e*P P 17 04 23.4 -0.3
MNSI Mandailing Nat 74.17 72 P P 17 04 25.9 +1.7
MDH Madha 74.25 21 *i* P P 17 04 23.3 -1.0
SNR=14
MDH Madha 74.25 21 P P 17 04 23.5 -0.8
SNR=8.1
MDH P P 17 04 23.5 -0.8
SNR=8.1
BI03 Tigo 74.26 233 P P 17 04 24.2 -0.3
MSFE Esma-Masafi 74.27 21 *i* P P 17 04 24.2 -0.3
SNR=8.2
UMQ Umm Al-Quwin 74.31 21 *i* P P 17 04 25.5 +0.9
SNR=13
UMQ Umm Al-Quwin 74.31 21 P P 17 04 25.6 +0.9
SNR=10.0
UMQ P P 17 04 25.6 +0.9
SNR=10.0
TPTI 74.47 68 P P 17 04 29.9 +4.0
BO02 Sierra Bellavi 74.48 236 P P 17 04 25.9 0.0
KPJI Karang Pucung 74.54 84 P P 17 04 29.0 +2.6
AAGR Agrelo 74.56 238 *i* P P 17 04 27.9 +1.5
BBOO Buckleboo 74.66 121 P P 17 04 26.8 -0.1
baz=75,SNR=11
BBOO Buckleboo 74.66 121 P P 17 04 26.4 -0.5
BBOO IAMs_20 IAMs_20 17 32 16.7
comp=Z,5µm,18.0s
ADKI Addanki 74.66 46 *e*P P 17 04 26.2 -0.7
ADKI IVmB_BB 17 04 30.9
comp=Z,505nm,2.6s
ADKI IVMs_BB IVMs_BB 17 29 02.2
comp=Z,1µm,26.4s
BKNI Bangkinang 74.78 73 P P 17 04 30.5 +2.7
BKNI Bangkinang 74.78 73 P P 17 04 27.2 -0.5
BANOM Banah 74.85 21 *i* P P 17 04 26.6 -1.2
SNR=7.6
ASAL Salagasta 74.92 239 *i* P P 17 04 29.0 +0.5
SHME Shamm 74.93 21 *i* P P 17 04 27.2 -1.0
SNR=23
NJS Nagarjunasagar 74.94 45 *e*P P 17 04 27.7 -0.8
NJS IVmB_BB 17 04 33.7
comp=Z,584nm,2.6s
NJS IVMs_BB IVMs_BB 17 28 54.6
comp=Z,939nm,25.6s
KLRI Killari 74.95 42 *e*P P 17 04 27.2 -1.4
KLRI IVmB_BB 17 04 32.0
comp=Z,789nm,2.5s
KLRI IVMs_BB IVMs_BB 17 28 01.0
comp=Z,1µm,27.5s
AQDB Aquidauana 75.06 256 *e*P P 17 04 31.1 +1.7
ARPS Mount Arapiles 75.09 128 P P 17 04 29.6 +0.4
baz=75,SNR=7.1
APLL PUNTA DE LOS L 75.09 242 *i* P P 17 04 30.4 +0.9
YOGI Yogyakarta 75.14 86 P P 17 04 43.3 +13
RPSI Rantau Prapat 75.17 70 P P 17 04 29.8 -0.2
RPSI IAmb IAmb 17 04 44.5
comp=Z,84nm,1.0s
RPSI IAMs_20 IAMs_20 17 33 50.3
comp=Z,4µm,18.0s
UGM Wanagama 75.23 86 IAMs_20 IAMs_20 17 30 56.6
comp=Z,5µm,20.0s
PSI Prapat 75.25 70 P P 17 04 29.8 -0.8
PSI pmax pmax
comp=Z,84nm,1.0s
PSI MLR MLR
comp=Z,4µm,18.0s
RTCV Cerro Valdivia 75.26 239 *i* P P 17 04 31.4 +1.0
HYB Hyderabad 75.31 44 *i* P P 17 04 29.0 -1.7
HYB *e*PcP PcP 17 04 44.0 +0.1
HYB *e*S S 17 14 10.0 +0.1
WRKA Warakurna 75.31 111 P P 17 04 30.8 0.0
baz=75,SNR=22
HYBB Hyderabad (bro 75.31 44 *e*P P 17 04 29.8 -0.9
HYBB IVmB_BB 17 04 34.3
comp=Z,575nm,2.6s
HYBB IVMs_BB IVMs_BB 17 29 21.7
comp=Z,956nm,21.4s
CUPL Choutuppal 75.38 44 *e*P P 17 04 30.7 -0.3
CUPL IVmB_BB 17 04 34.9
comp=Z,665nm,2.3s
CUPL IVMs_BB IVMs_BB 17 32 40.6
comp=Z,901nm,15.8s
MT05 Renca 75.46 237 P P 17 04 31.1 -0.4
MT05 IAmb IAmb 17 05 23.7
comp=Z,157nm,1.5s
AVFE Valle Fertil 75.47 241 *i* P P 17 04 32.4 +0.8
AUSP Uspallata 75.50 239 *i* P P 17 04 33.5 +1.4
WOJI Wonogiri, Jawa 75.56 86 P P 17 04 35.7 +3.5
ZON Zonda 75.57 239 P P 17 04 31.8 -0.5
ZON pmax pmax
comp=Z,54nm,1.2s
ZON MLR MLR
comp=Z,6µm,22.0s
ZON Zonda 75.57 239 P P 17 04 31.8 -0.5
ZON IAMs_20 IAMs_20 17 31 06.1
comp=Z,6µm,22.0s
ZON Zonda 75.57 239 *i* P P 17 04 33.1 +0.9
RTLL Cerro Villicun 75.60 240 *i* P P 17 04 33.6 +1.2
PEL Peldehue 75.61 237 P P 17 04 32.0 -0.4
PEL pmax pmax
comp=Z,165nm,1.2s
PEL MLR MLR
comp=Z,4µm,18.0s
PEL Peldehue 75.61 237 P P 17 04 32.0 -0.4
PEL IAmb IAmb 17 04 45.7
comp=Z,165nm,1.2s
PEL Peldehue 75.61 237 *i* P P 17 04 33.6 +1.2
MBO M'Bour 75.71 309 P P 17 04 32.5 -0.4
MBO IAmb IAmb 17 04 35.4
comp=Z,203nm,1.4s
EIL Elat 75.73 1 P P 17 04 34.5 +1.8
comp=Z,18nm,0.9s,baz=188,slow=2.9,SNR=13
ARAG Araguaiana, MT 75.74 262 *e*P P 17 04 35.8 +2.5
RTLS Leoncito 75.76 239 *i* P P 17 04 34.7 +1.1
MYLAV Mylavaram 75.76 46 *e*P P 17 04 32.8 -0.4
MYLAV IVmB_BB 17 04 37.7
comp=Z,581nm,2.4s
MYLAV IVMs_BB IVMs_BB 17 29 48.2
comp=Z,2µm,21.0s
MT02 Curacav 75.78 237 P P 17 04 32.9 -0.5
SMRI Semarang 75.78 85 P P 17 04 37.1 +3.5
SMRI Semarang 75.78 85 P P 17 04 32.0 -1.6
VA03 San Esteban 75.80 237 P P 17 04 32.9 -0.7
VA03 IAmb IAmb 17 04 47.1
comp=Z,83nm,1.0s
VA03 IAMs_20 IAMs_20 17 32 22.9
comp=Z,6µm,20.0s
LHMI Lhok Sumawe 75.83 67 P P 17 04 38.9 +5.2
LHMI Lhok Sumawe 75.83 67 P P 17 04 32.4 -1.4
LHMI IAMs_20 IAMs_20 17 29 17.8
comp=Z,5µm,21.0s
HTT Hallett 75.88 124 P P 17 04 33.6 -0.4
baz=76,SNR=11
ROC1 El Roble 75.92 237 P P 17 04 32.9 -1.5
ROC1 El Roble 75.92 237 *i* P P 17 04 33.6 -0.8
CYA Choya 76.03 244 *i* P P 17 04 34.7 -0.2
PWJI Pagerwojo 76.03 87 P P 17 04 36.6 +1.6
ACLC CERRO LA CRUZ 76.04 242 *i* P P 17 04 36.1 +1.0
VA01 Torpederas 76.25 237 P P 17 04 34.2 -1.7
PPBI Pangkal Pinang 76.36 79 P P 17 04 48.0 +11
TOO Toolangi 76.45 131 P P 17 04 38.1 +1.0
baz=76,SNR=7.8
TOO Toolangi 76.45 131 P P 17 04 36.8 -0.3
TOO pmax pmax
comp=Z,44nm,1.1s
TOO MLR MLR
comp=Z,6µm,22.0s
TOO Toolangi 76.45 131 P P 17 04 36.8 -0.3
TOO IAMs_20 IAMs_20 17 30 15.1
comp=Z,6µm,22.0s
GGR Gangavaram 76.46 45 *e*P P 17 04 36.5 -0.7
GGR IVmB_BB 17 04 41.1
comp=Z,540nm,2.6s
GGR IVMs_BB IVMs_BB 17 29 51.9
comp=Z,946nm,25.0s
ACCO Cerro Coronel 76.49 240 *i* P P 17 04 38.6 +0.8
BHUJ Bhuj 76.60 34 *e*P P 17 04 36.9 -0.9
BHUJ IAmb IAmb 17 04 47.0
comp=Z,126nm,1.4s
PVM Polavaram 76.68 47 *e*P P 17 04 38.0 -0.4
PVM IVmB_BB 17 04 44.5
comp=Z,528nm,2.7s
PVM IVMs_BB IVMs_BB 17 30 18.5
comp=Z,1µm,24.6s
ACDV Cuesta del Vie 76.82 240 *i* P P 17 04 40.9 +1.4
RPR Rampur 76.90 44 *e*P P 17 04 38.8 -0.9
RPR IVmB_BB 17 04 43.4
comp=Z,472nm,2.5s
RPR IVMs_BB IVMs_BB 17 36 39.8
comp=Z,803nm,14.1s
AHML Horco Molle 76.91 245 *i* P P 17 04 40.3 +0.4
TPI Tanjungpandan 76.96 80 P P 17 04 42.0 +1.8
GMJI Gumukmas 76.99 88 P P 17 04 43.1 +2.7
AROD Rodeo 77.03 240 *i* P P 17 04 42.0 +1.2
CO02 Combarbal 77.19 238 P P 17 04 41.1 -0.4
CO02 IAmb IAmb 17 05 04.1
comp=Z,67nm,1.1s
CO02 IAMs_20 IAMs_20 17 32 46.8
comp=Z,8µm,21.0s
CO03 El Pedregal 77.27 239 P P 17 04 42.0 0.0
CO03 IAMs_20 IAMs_20 17 32 15.0
comp=Z,7µm,22.0s
GRJI Gresik 77.29 87 P P 17 04 55.0 +13
BLJI Banyuglugur 77.47 88 P P 17 04 46.1 +3.0
CO01 Juntas del Tor 77.54 240 P P 17 04 44.5 +0.9
SMTB Santa Maria do 77.64 270 *e*P P 17 04 46.0 +1.9
MYKOM Kota Tinggi 77.73 74 P P 17 04 43.5 -1.0
MYKOM Kota Tinggi 77.73 74 P P 17 04 45.0 +0.5
GO04 Tololo Observa 77.82 239 P P 17 04 44.4 -0.8
GO04 Tololo Observa 77.82 239 *i* P P 17 04 37.7 -7.5
IPM Ipoh 77.88 70 P P 17 04 44.0 -1.4
IPM Ipoh 77.88 70 P P 17 04 47.0 +1.6
DNP Denpasar 77.92 90 P P 17 04 49.0 +3.4
SNDB Serra Nova Dou 78.00 265 *e*P P 17 04 46.9 +0.8
KULM Kulim 78.25 69 P P 17 04 46.4 -1.0
KULM Kulim 78.25 69 P P 17 04 48.0 +0.6
ASF Jabal al Asfar 78.27 3 P P 17 04 49.6 +2.5
comp=Z,2.2nm,0.3s,baz=132,slow=14,SNR=5.9
SRBI Singaraja 78.34 89 P P 17 04 50.9 +2.9
FITZ Fitzroy Crossi 78.42 104 P P 17 04 49.1 +0.7
baz=78,SNR=36
FITZ Fitzroy Crossi 78.42 104 P P 17 04 46.9 -1.5
FITZ IAmb IAmb 17 05 02.6
comp=Z,112nm,1.1s
AC05 El Transito 78.47 240 P P 17 04 47.2 -1.6
AC05 IAmb IAmb 17 05 10.9
comp=Z,109nm,1.3s
AC05 IAMs_20 IAMs_20 17 32 41.0
comp=Z,6µm,22.0s
SLA San Lorenzo 78.49 246 *i* P P 17 04 49.8 +1.0
STKA Stephens Creek 78.55 124 P P 17 04 48.6 -0.3
comp=Z,25nm,0.8s,baz=196,slow=2.9,SNR=43
STKA LR LR 17 34 04.0
comp=Z,3µm,18.6s,baz=216,slow=32
STKA Stephens Creek 78.55 124 P P 17 04 48.4 -0.6
baz=78,SNR=28
STKA Stephens Creek 78.55 124 P P 17 04 47.9 -1.0
LCO Las Campanas 78.61 240 P P 17 04 48.5 -1.1
LCO pmax pmax
comp=Z,398nm,2.0s
LCO MLR MLR
comp=Z,5µm,20.0s
LCO Las Campanas 78.61 240 P P 17 04 48.5 -1.1
LCO IAMs_20 IAMs_20 17 34 12.4
comp=Z,5µm,20.0s
CHLP Challavanipeta 78.98 48 *e*P P 17 04 51.4 +0.2
CHLP IVmB_BB 17 04 56.0
comp=Z,469nm,2.7s
CHLP IVMs_BB IVMs_BB 17 31 03.5
comp=Z,833nm,28.3s
TWSI Taliwang, Sumb 79.04 91 P P 17 04 54.1 +2.3
MMAI Mount Meron Ar 79.07 1 P P 17 04 52.6 +1.2
comp=Z,11nm,0.7s,baz=170,slow=5.1,SNR=21
AC02 Maricunga 79.23 242 P P 17 04 52.1 -1.2
AC02 IAmb IAmb 17 05 15.4
comp=Z,122nm,1.2s
GO03 Copiap 79.36 241 P P 17 04 53.1 -0.4
GO03 IAmb IAmb 17 05 16.1
comp=Z,154nm,1.8s
GO03 Copiap 79.36 241 *i* P P 17 04 53.5 +0.1
AC04 Llanos de Chal 79.42 240 P P 17 04 53.1 -0.6
AC04 IAmb IAmb 17 05 14.2
comp=Z,189nm,1.5s
HJA Humahuaca 79.51 247 *i* P P 17 04 56.4 +1.7
ROSB Rosrio 79.52 277 *e*P P 17 04 55.1 +0.7
DGPR DIGLIPUR 79.56 58 *e*P P 17 04 54.6 +0.2
DGPR IAmb IAmb 17 05 06.1
comp=Z,141nm,1.1s
PLAI Plampang 79.59 92 P P 17 04 56.2 +1.4
WHZ Wether Hill Ro 79.66 149 P P 17 04 53.9 -0.8
WHZ IAmb IAmb 17 05 08.9
comp=Z,110nm,1.1s
WHZ IAMs_20 IAMs_20 17 33 51.6
comp=Z,6µm,21.0s
PBKI Pangkalan Bun 79.75 83 P P 17 04 59.1 +3.4
BHPL Bhopal 79.82 40 *e*P P 17 04 54.8 -1.0
BHPL IAmb IAmb 17 04 56.9
comp=Z,100nm,0.7s
ASAR Alice Springs 79.88 114 P P 17 04 55.0 -1.3
comp=Z,17nm,0.7s,baz=221,slow=4.9,SNR=242
ASAR LR LR 17 33 21.4
comp=Z,5µm,21.0s,baz=221,slow=30
ASAR Alice Springs 79.88 114 P P 17 04 54.9 -1.4
AS31 Alice Springs 79.88 114 P P 17 04 54.6 -1.7
MLZ Mavora Lakes 80.17 149 IAMs_20 IAMs_20 17 34 06.4
comp=Z,7µm,21.0s
YJA Yavi 80.32 248 *i* P P 17 05 01.0 +1.8
AC01 Pan de Azucar 80.63 242 P P 17 04 59.6 -0.8
GO02 Mina Guanaco 80.73 243 P P 17 05 00.5 -0.7
GO02 IAmb IAmb 17 05 22.6
comp=Z,96nm,1.1s
PTLB Pontes e Lacer 80.91 257 *e*P P 17 05 03.0 +1.2
WKZ Wanaka 80.96 150 P P 17 05 00.6 -1.2
CSS Mathiatis 81.00 360 P P 17 05 00.9 -0.9
CSS IAMs_20 IAMs_20 17 43 49.9
comp=Z,6µm,19.0s
PRPB Parauapebas 81.09 270 *e*P P 17 05 04.3 +1.3
CMSA Cobar Meteorol 81.11 127 P P 17 05 03.3 +0.6
baz=81,SNR=9.3
LEF Lefka 81.16 359 *e*P P 17 05 01.9 -0.7
ODZ Otahua Downs 81.33 151 IAMs_20 IAMs_20 17 38 26.0
comp=Z,5µm,19.0s
GVD Gavdhos 81.34 352 P P 17 05 02.5 -1.1
GVDS Gavdos 81.34 352 P P 17 05 03.8 +0.2
BBKI Banjar Baru 81.39 86 P P 17 05 06.2 +1.7
ZKR Zakros 81.43 354 P P 17 05 08.3 +4.2
SIVA Sivas 81.45 353 P P 17 05 05.2 +1.1
STIA Sitia Lasithi 81.53 354 P P 17 05 04.8 +0.3
LAST Lasithi 81.53 353 P P 17 05 05.1 +0.4
NPS Neapolis 81.62 353 P P 17 05 06.0 +0.9
IDI Anoyia 81.71 353 P P 17 05 07.0 +1.4
comp=Z,9.8nm,0.8s,baz=93,slow=9.0,SNR=7.8
IDI Anoyia 81.71 353 ⇑P P 17 05 08.2 +2.6
IDI Anoyia 81.71 353 P P 17 05 04.4 -1.2
IDI IAmb IAmb 17 05 26.0
comp=Z,125nm,1.6s
IDI IAMs_20 IAMs_20 17 48 10.1
comp=Z,5µm,19.0s
IDI Anoyia 81.71 353 P P 17 05 06.4 +0.8
LBZ Lake Benmore 81.75 150 P P 17 05 05.4 -0.6
LBZ IAmb IAmb 17 05 26.2
comp=Z,77nm,0.9s
LBZ IAMs_20 IAMs_20 17 35 19.1
comp=Z,6µm,20.0s
KARP Karpathos 81.79 355 P P 17 05 05.8 -0.2
KARP Karpathos 81.79 355 P P 17 05 06.5 +0.5
SIV San Ignacio 81.82 256 P P 17 05 07.2 +0.4
comp=Z,15nm,0.8s,baz=141,slow=5.8,SNR=77
KSM Kuching 81.85 79 P P 17 05 05.4 -1.5
KSM IAmb IAmb 17 05 19.4
comp=Z,90nm,1.3s
KSM Kuching 81.85 79 P P 17 05 09.0 +2.1
CLDB Colider 81.88 263 *e*P P 17 05 07.3 +0.2
VAM Vamos 81.89 352 P P 17 05 07.3 +0.8
IMMV Iera Moni Meta 81.96 352 P P 17 05 07.4 +0.5
PB15 IPOC Station P 82.08 245 P P 17 05 07.4 -0.9
PB15 IAmb IAmb 17 05 30.0
comp=Z,120nm,0.9s
PB15 IPOC Station P 82.08 245 *i* P P 17 05 10.1 +1.8
LVC Limon Verde 82.16 246 P P 17 05 10.9 +1.9
comp=Z,38nm,0.7s,baz=129,slow=3.6,SNR=50
LVC Limon Verde 82.16 246 P P 17 05 08.8 -0.1
LVC IAmb IAmb 17 05 16.7
comp=Z,80nm,1.0s
LVC Limon Verde 82.16 246 *i* P P 17 05 10.8 +1.9
LVC Limon Verde 82.16 246 *e*P P 17 05 10.4 +1.4
TEKE Tekeli-Mersin 82.18 360 *e*P P 17 05 07.1 -0.8
AKKU Akkuyu-Mersin 82.19 360 *e*P P 17 05 06.5 -1.5
KNRA Kununurra 82.24 104 P P 17 05 09.9 +0.9
baz=82,SNR=7.1
KNRA Kununurra 82.24 104 P P 17 05 08.7 -0.2
KSL Kastellorizon 82.27 357 P P 17 05 09.6 +1.2
IKL Isikli 82.27 360 *e*P P 17 05 07.5 -0.9
GAZI Gazipasa 82.28 359 *e*P P 17 05 06.8 -1.7
AKAS Kas 82.35 357 *e*P P 17 05 09.2 +0.2
AKAS Kas 82.35 357 P P 17 05 08.9 -0.1
AKAS IAMs_20 IAMs_20 17 45 04.8
comp=Z,4µm,18.0s
EDFI Ende, Flores 82.35 95 P P 17 05 11.1 +1.4
BERE Bereket-Mersin 82.38 360 *e*P P 17 05 09.4 +0.2
SILI Silifke-Mersin 82.40 0 *e*P P 17 05 08.7 -0.4
ARG Arkhangelos 82.40 355 P P 17 05 09.3 +0.2
KBKI Kotabaru 82.42 87 P P 17 05 15.1 +5.2
TAHT Tahtakopru-Hat 82.44 2 *e*P P 17 05 08.9 -0.4
TEVE Tevekalti-Mers 82.47 360 *e*P P 17 05 09.2 -0.4
KEBE Keben-Mersin 82.48 0 *e*P P 17 05 09.7 +0.1
PB06 IPOC Station P 82.51 245 P P 17 05 11.3 +0.8
PB06 IPOC Station P 82.51 245 *i* P P 17 05 11.9 +1.4
PB10 IPOC Station P 82.53 244 P P 17 05 09.9 -0.5
PB10 IPOC Station P 82.53 244 *i* P P 17 05 10.7 +0.3
KRTS Karatas 82.62 1 *e*P P 17 05 11.6 +1.4
TMAB Tom-Au,PA,Br 82.63 274 *e*P P 17 05 12.5 +1.6
RPZ Rata Peaks 82.64 150 LR LR 17 39 06.7
comp=Z,2µm,19.0s,baz=218,slow=34
RPZ Rata Peaks 82.64 150 IAMs_20 IAMs_20 17 39 55.6
comp=Z,5µm,19.0s
BATI Baumata 82.67 97 P P 17 05 11.4 +0.2
comp=Z,19nm,0.8s,baz=113,slow=4.5,SNR=10
BATI S S 17 15 32.4 +3.6
comp=Z,2.8nm,0.4s,baz=91,slow=12,SNR=1.0
BATI LR LR 17 38 44.0
comp=Z,3µm,18.5s,baz=243,slow=33
BATI Baumata 82.67 97 P P 17 05 15.7 +4.5
ANAF Anafi Island 82.70 354 P P 17 05 11.3 +0.6
FETY Fethiye 82.77 356 *e*P P 17 05 11.9 +0.8
FETY Fethiye 82.77 356 P P 17 05 11.6 +0.5
PB05 IPOC Station P 82.80 244 *i* P P 17 05 13.2 +1.3
MMRI Maumere 82.81 95 P P 17 05 14.6 +2.7
MMRI Maumere 82.81 95 P P 17 05 10.6 -1.4
WRA Warramunga Arr 82.84 111 P P 17 05 11.8 -0.2
comp=Z,15nm,0.9s,baz=220,slow=4.4,SNR=53
WRA S S 17 15 23.5 -6.9
comp=Z,0.3nm,0.9s,baz=22,slow=26,SNR=1.4
WRA LR LR 17 36 13.6
comp=Z,7µm,21.1s,baz=220,slow=32
WRA Warramunga Arr 82.84 111 P P 17 05 10.7 -1.3
NIS1 Nisyros Isl. 82.84 355 P P 17 05 12.1 +0.7
WR1 Warramunga Arr 82.84 111 IAMs_20 IAMs_20 17 35 51.7
comp=Z,6µm,20.0s
KTHA Kythira Island 82.84 351 P P 17 05 12.1 +0.6
ELL Elmali 82.85 357 *e*P P 17 05 12.9 +1.3
ELL Elmali 82.85 357 P P 17 05 11.1 -0.5
ELL pmax pmax
comp=Z,300nm,1.3s
ELL MLR MLR
comp=Z,19µm,18.0s
ELL Elmali 82.85 357 P P 17 05 11.1 -0.5
WB2 Warramunga Arr 82.85 111 P P 17 05 12.1 0.0
baz=83
WB2 Warramunga Arr 82.85 111 P P 17 05 10.7 -1.4
WB2 IAmb IAmb 17 05 19.9
comp=Z,86nm,1.1s
WR2 Warramunga Arr 82.85 111 IAMs_20 IAMs_20 17 35 53.0
comp=Z,7µm,22.0s
WRAB Tennant Creek 82.86 111 *c*eP P 17 05 12.2 +0.1
WRAB pmax pmax
comp=Z,71nm,1.7s
WRAB Tennant Creek 82.86 111 P P 17 05 10.6 -1.5
WRAB IAmb IAmb 17 05 19.9
comp=Z,68nm,1.1s
WR3 Warramunga Arr 82.87 111 IAMs_20 IAMs_20 17 35 52.4
comp=Z,7µm,21.0s
WR4 Warramunga Arr 82.88 111 IAMs_20 IAMs_20 17 35 53.7
comp=Z,7µm,21.0s
WR5 Warramunga Arr 82.89 111 IAMs_20 IAMs_20 17 36 26.1
comp=Z,6µm,20.0s
MERS Mersin 82.90 1 *e*P P 17 05 12.1 +0.3
WB5 Warramunga Arr 82.91 111 IAMs_20 IAMs_20 17 35 53.4
comp=Z,6µm,21.0s
WR6 Warramunga Arr 82.91 111 IAMs_20 IAMs_20 17 35 54.5

comp=Z,6µm,21.0s
WR7 Warramunga Arr 82.92 111 IAMs_20 IAMs_20 17 36 25.8
comp=Z,7µm,22.0s
WR8 Warramunga Arr 82.94 111 IAMs_20 IAMs_20 17 35 54.2
comp=Z,6µm,21.0s
WB7 Warramunga Arr 82.94 111 IAMs_20 IAMs_20 17 35 54.8
comp=Z,7µm,21.0s
WR9 Warramunga Arr 82.94 111 IAMs_20 IAMs_20 17 36 36.4
comp=Z,6µm,20.0s
TURN Turunc 82.95 356 eP **P 17 05 07.5 -4.4**
WR0 Warramunga Arr 82.96 111 P **P 17 05 11.0 -1.7**
WR0 IAmb IAmb 17 05 20.4
comp=Z,50nm,1.1s
PB09 IPOC Station P 82.97 246 P **P 17 05 11.4 -1.5**
PB09 IAMs_20 IAMs_20 17 36 44.2
comp=Z,5µm,21.0s
PB09 IPOC Station P 82.97 246 *i* P **P 17 05 15.0 +2.1**
DALY Dalyan (Mula) 82.97 356 eP **P 17 05 12.8 +0.7**
KOSK Kos Island 83.00 355 P **P 17 05 11.5 -0.7**
WB0 Warramunga Arr 83.00 111 P **P 17 05 11.2 -1.7**
WB0 IAmb IAmb 17 05 20.5
comp=Z,84nm,1.2s
CEYT Ceyhan 83.06 2 eP **P 17 05 12.4 -0.1**
KORT Korkueli 83.09 357 eP **P 17 05 14.2 +1.4**
PB03 IPOC Station P 83.10 245 *i* P **P 17 05 14.9 +1.3**
PB04 IPOC Station P 83.14 245 P **P 17 05 13.4 -0.4**
PB04 IPOC Station P 83.14 245 *i* P **P 17 05 15.1 +1.3**
AMGA Amorgos Island 83.16 354 P **P 17 05 12.8 -0.3**
MQZ McQueen's Vall 83.19 151 IAMs_20 IAMs_20 17 37 00.1
comp=Z,5µm,20.0s
MTKI Muara Teweh, K 83.24 84 P **P 17 05 16.3 +2.1**
GAZ Gaziantep 83.26 3 eP **P 17 05 14.1 +0.4**
GAZ Gaziantep 83.26 3 P **P 17 05 13.2 -0.5**
GAZ IAmb IAmb 17 05 56.2
comp=Z,128nm,1.8s
GAZ IAMs_20 IAMs_20 17 40 15.8
comp=Z,6µm,20.0s
BODT Bodrum 83.29 355 eP **P 17 05 13.7 -0.1**
BODT Bodrum 83.29 355 P **P 17 05 13.7 -0.1**
KARA Karaisali 83.30 1 eP **P 17 05 13.4 -0.4**
YER Yerkesik 83.31 356 eP **P 17 05 13.9 0.0**
YER Yerkesik 83.31 356 P **P 17 05 16.7 +2.8**
YER Yerkesik 83.31 356 P **P 17 05 14.6 +0.7**
OXZ Oxford 83.32 151 IAMs_20 IAMs_20 17 40 03.6
comp=Z,6µm,19.0s
VILB Vilhena 83.40 258 eP **P 17 05 15.9 +0.9**
SOEI Soe 83.41 97 P **P 17 05 19.3 +4.1**
SOEI Soe 83.41 97 P **P 17 05 13.0 -2.2**
SOEI IAmb IAmb 17 05 51.4
comp=Z,107nm,1.2s
SOEI IAMs_20 IAMs_20 17 36 53.3
comp=Z,5µm,20.0s
APE Apeiranthos 83.42 353 *i* P **P 17 05 16.5 +2.0**
APE pmax pmax
comp=Z,56nm,1.2s
APE Apeiranthos 83.42 353 P **P 17 05 14.9 +0.4**
PB07 IPOC Station P 83.42 245 P **P 17 05 15.1 -0.1**
PB07 IPOC Station P 83.42 245 *i* P **P 17 05 16.8 +1.5**
MLSB Milas 83.50 355 eP **P 17 05 16.8 +2.0**
KOZT Kozan 83.53 2 eP **P 17 05 14.9 -0.1**
BCK Bucak 83.54 358 eP **P 17 05 15.6 +0.5**
URFA Urfa 83.60 4 eP **P 17 05 16.2 +0.8**
PYL PYLOS 83.62 350 P **P 17 05 16.3 +0.9**
PB01 IPOC Station P 83.67 246 P **P 17 05 15.9 -0.5**
PB01 IAmb IAmb 17 05 24.0
comp=Z,91nm,1.1s
PB01 IPOC Station P 83.67 246 *i* P **P 17 05 17.9 +1.5**
KAPI Kappang 83.67 91 P **P 17 05 16.0 -0.4**
comp=Z,16nm,0.6s,baz=245,slow=6.4,SNR=9.8
KAPI S **S 17 15 33.6 -5.3**
comp=Z,3.8nm,0.3s,baz=225,slow=21,SNR=1.7
KAPI LR LR 17 35 16.1
comp=Z,6µm,21.8s,baz=212,slow=30
MAZI Mazidag 83.71 5 eP **P 17 05 16.7 +0.7**
BKSI Bulukumba 83.71 91 P **P 17 05 18.1 +1.5**
PB02 IPOC Station P 83.73 246 *i* P **P 17 05 18.1 +1.4**
CUKT Cukurca 83.75 8 eP **P 17 05 17.0 +0.7**
YESY Yesilyurt 83.81 0 eP **P 17 05 16.4 -0.1**
SBUM Sibu 83.86 80 P **P 17 05 15.4 -1.8**
SBUM IAmb IAmb 17 05 29.8
comp=Z,84nm,1.3s
SBUM IAMs_20 IAMs_20 17 36 58.5
comp=Z,5µm,20.0s
SBUM Sibu 83.86 80 P **P 17 05 19.0 +1.7**
LTZ Lake Taylor 83.88 151 P **P 17 05 17.1 0.0**
LTZ IAMs_20 IAMs_20 17 36 11.5
comp=Z,6µm,21.0s
ITM Ithomi 83.88 351 P **P 17 05 15.3 -1.5**
ITM IAmb IAmb 17 05 50.0
comp=Z,102nm,1.2s
ITM Ithomi 83.88 351 P **P 17 05 17.7 +0.9**
SIRT Sirnak 83.90 7 eP **P 17 05 17.5 +0.5**
ISP Isparta 83.90 357 P **P 17 05 15.8 -1.2**
ISP Isparta 83.90 357 IAMs_20 IAMs_20 17 49 55.5
comp=Z,4µm,19.0s
GCAM G?zelcaml? 83.93 355 eP **P 17 05 16.2 -0.8**
KRND KRANIDI 83.95 352 P **P 17 05 17.2 +0.1**
SMG Samos 83.96 355 P **P 17 05 17.2 0.0**
VLX Vlachokerasia 84.02 351 P **P 17 05 18.9 +1.3**
QLP Quilpie 84.03 123 P **P 17 05 18.4 +0.3**
baz=84,SNR=5.4
PB08 IPOC Station P 84.12 247 P **P 17 05 18.6 -0.5**
PB08 IAmb IAmb 17 05 27.0
comp=Z,96nm,1.4s
PB08 IPOC Station P 84.12 247 *i* P **P 17 05 20.7 +1.6**
AYDB Zeytinkoy-Aydi 84.14 355 eP **P 17 05 19.0 +0.8**
DYBB Diyarbakir 84.18 5 eP **P 17 05 17.6 -0.8**
TRIP Tripoli 84.19 351 P **P 17 05 18.8 +0.4**
SULT Sultanhani-AKS 84.23 360 eP **P 17 05 19.3 +0.7**
LADK Ladik-KONYA 84.24 359 eP **P 17 05 18.2 -0.5**
PATCX Punta Patache 84.25 246 P **P 17 05 19.2 -0.2**
PATCX IAmb IAmb 17 05 27.0
comp=Z,74nm,1.0s
NPGB Novo Progresso 84.31 266 eP **P 17 05 19.7 +0.1**
BOK Bokaro 84.32 47 eP **P 17 05 18.7 -0.6**
BOK IAmb IAmb 17 05 35.1
comp=Z,52nm,1.5s
VLY Voula,Athens 84.35 352 P **P 17 05 19.2 +0.1**
BNSI Bone 84.36 90 P **P 17 05 23.8 +3.9**
SPSI Sidrap Palu 84.44 90 P **P 17 05 23.0 +2.7**
HRA Herat 84.44 23 P **P 17 05 18.9 -1.1**
MALT Malatya 84.45 4 eP **P 17 05 20.1 +0.3**
MALT Malatya 84.45 4 P **P 17 05 21.0 +1.2**
SVAN Silvan-Diyarba 84.45 6 eP **P 17 05 20.5 +0.8**
TA01 Diego Aracena 84.46 246 P **P 17 05 19.8 -0.5**
TA01 IAmb IAmb 17 05 27.8
comp=Z,77nm,1.0s
ATHU Athens Univers 84.47 352 P **P 17 05 19.6 -0.1**
SARI SarD1z-Kayseri 84.47 2 eP **P 17 05 20.5 +0.5**
ATH Athens Observa 84.48 352 P **P 17 05 20.7 +0.9**
NDI New Delhi 84.48 37 eP **P 17 05 19.0 -1.0**
SVRC Sivrice-ELAZID 84.56 4 eP **P 17 05 21.2 +0.8**
DION Dionisos Attik 84.56 352 P **P 17 05 20.3 +0.1**
LOUT Loutraki 84.57 352 P **P 17 05 20.4 +0.2**
GUR Goura 84.58 351 P **P 17 05 20.9 +0.5**
LTK Loutraki 84.60 352 P **P 17 05 20.3 -0.1**
CHBY Cihanbeyli 84.61 359 eP **P 17 05 20.3 -0.3**
BLCB Balcova 84.62 355 eP **P 17 05 20.8 +0.3**
BLCB Balcova 84.62 355 P **P 17 05 21.4 +0.9**
SHUT Suhut-Afyon 84.63 358 eP **P 17 05 19.4 -1.3**
URLA Izmir 84.63 354 eP **P 17 05 21.2 +0.6**
THAL Thalero 84.65 351 P **P 17 05 20.8 +0.2**
KEST Kesra 84.66 340 P **P 17 05 24.1 +3.3**
comp=Z,28nm,1.0s,baz=234,slow=1.6,SNR=20
KEST PP **PP 17 08 34.9 -2.3**
comp=Z,27nm,1.0s,baz=120,slow=6.5,SNR=4.0
KEST S **S 17 15 54.3 +6.5**
comp=Z,1.9nm,0.9s,baz=244,slow=18,SNR=1.8
KEST LR LR 17 44 13.8
comp=Z,14µm,18.4s,baz=110,slow=36
KEST Kesra 84.66 340 P **P 17 05 19.8 -1.1**
KEST IAmb IAmb 17 05 38.1
comp=Z,55nm,1.0s
KULA Kula-Manisa 84.66 356 eP **P 17 05 21.9 +1.1**
DRO Drossia 84.67 351 P **P 17 05 22.8 +2.0**
VILL Villia 84.71 352 P **P 17 05 21.1 +0.1**
KLV Kalavryta, Ach 84.71 351 P **P 17 05 20.5 -0.5**
PB11 IPOC Station P 84.72 247 P **P 17 05 21.6 -0.3**
PB11 IPOC Station P 84.72 247 *i* P **P 17 05 23.1 +1.2**
GEVA Gevas 84.76 7 P **P 17 05 21.2 -0.2**
GEVA IAMs_20 IAMs_20 17 43 51.2
comp=Z,5µm,19.0s
AKDM Akdamar-Van 84.77 7 eP **P 17 05 22.8 +1.3**

RLS Riolos of Patr 84.80 350 P **P 17 05 21.8 +0.4**
BNN Bunyan 84.90 2 eP **P 17 05 22.4 +0.3**
GURO Guroymak-BITLI 84.91 7 eP **P 17 05 23.1 +1.0**
KIZT Kizilcal 84.92 359 eP **P 17 05 22.4 +0.2**
SERE Sereflikochisa 84.97 360 eP **P 17 05 21.7 -0.7**
THZ Tophouse 85.00 151 P **P 17 05 22.3 -0.5**
THZ IAmb IAmb 17 05 42.5
comp=Z,83nm,0.8s
DSF Desfina 85.03 351 P **P 17 05 23.4 +0.8**
TRIZ Trizonia 85.04 351 P **P 17 05 23.3 +0.8**
KALE Kalithea 85.05 351 P **P 17 05 23.5 +0.7**
VANB Van 85.07 8 eP **P 17 05 23.8 +0.9**
PTK Pertek 85.07 4 eP **P 17 05 23.7 +0.7**
KYMI Kymi, Euboea I 85.10 352 P **P 17 05 22.9 0.0**
EFP Efpalio 85.11 351 P **P 17 05 23.9 +0.9**
TTSI Tana Toraja 85.13 89 P **P** 17 05 33.4 +10
PSGCX Pisagua 85.13 247 P **P 17 05 23.9 0.0**
PSGCX Pisagua 85.13 247 *i* P **P 17 05 24.9 +1.0**
MNMC Minye Minye 85.14 247 P **P 17 05 23.8 -0.3**
MNMC IAmb IAmb 17 05 31.8
comp=Z,112nm,1.1s
MNMCX Minye Minye 85.14 247 *i* P **P 17 05 25.5 +1.4**
GEDZ Gediz 85.16 357 eP **P 17 05 25.5 +2.2**
SMKI Samarinda 85.19 86 P **P** 17 05 30.5 +6.4
ARMA Armidale 85.20 130 P **P 17 05 24.7 +0.6**
baz=85,SNR=4.1
ARMA Armidale 85.20 130 P **P 17 05 23.7 -0.3**
ARMA IAMs_20 IAMs_20 17 35 29.6
comp=Z,5µm,21.0s
SIMA Simav-Kutahya 85.22 356 eP **P 17 05 25.3 +1.7**
LKR Lokris 85.22 352 P **P 17 05 23.4 -0.1**
BNGB Bingl 85.25 5 eP **P 17 05 23.2 -0.6**
ATAL Atalanti 85.26 352 P **P 17 05 23.5 -0.2**
ANX Ano Chora 85.28 351 P **P 17 05 25.4 +1.5**
DKL Dikili 85.32 355 eP **P 17 05 23.8 -0.1**
BSWZ Blackbirch Sta 85.37 151 P **P 17 05 24.1 -0.5**
AXAR Agios Charalam 85.37 351 P **P 17 05 24.3 0.0**
CIFT Ciftеler, Eski 85.42 358 eP **P 17 05 24.9 +0.3**
VRTB Varto-Mus 85.47 6 eP **P 17 05 26.5 +1.6**
AFSR Afar-Bala (An 85.47 360 eP **P 17 05 25.5 +0.6**
SVRH Sivrihisar-ESK 85.50 358 eP **P 17 05 25.5 +0.5**
SIGR SIGRI 85.53 354 P **P 17 05 26.2 +1.2**
PRK Paraskevi 85.53 354 P **P 17 05 27.0 +2.0**
TVSB Tavsanli 85.56 357 eP **P 17 05 26.5 +1.2**
ILIC ilic-Erzincan 85.59 4 eP **P 17 05 25.9 +0.4**
EVR Evrytania 85.61 351 P **P 17 05 25.7 +0.1**
NNZ Nelson 85.65 151 IAMs_20 IAMs_20 17 37 43.2
comp=Z,6µm,21.0s
TUWZ Tuamarina 85.65 151 P **P 17 05 25.1 -0.8**
AOS Alonnisos 85.65 352 P **P 17 05 25.6 0.0**
AGG Agios Georgios 85.66 351 P **P 17 05 25.3 -0.4**
AGG pmax pmax
comp=Z,49nm,1.0s
AGG Agios Georgios 85.66 351 P **P 17 05 25.3 -0.4**
AGG Agios Georgios 85.66 351 P **P 17 05 26.1 +0.4**
CLDR Caldiran 85.66 8 eP **P 17 05 27.3 +1.3**
PB16 IPOC Station P 85.67 248 P **P 17 05 23.3 +0.2**
PB16 IAmb IAmb 17 05 51.7
comp=Z,87nm,1.0s
PB16 IAMs_20 IAMs_20 17 41 33.0
comp=Z,3µm,18.0s
PB16 IPOC Station P 85.67 248 *i* P **P 17 05 28.4 +1.3**
MAKR Makrakomi, Fth 85.67 351 P **P 17 05 26.6 +0.8**
QRZ Quartz Range 85.70 150 IAMs_20 IAMs_20 17 42 34.8
comp=Z,4µm,19.0s
QIS Mount Isa 85.74 115 P **P 17 05 27.1 +0.4**
baz=86,SNR=28
BR131 Keskin Array S 85.75 360 P **P 17 05 25.8 -0.5**
BR131 Keskin Array S 85.75 360 P **P 17 05 25.8 -0.5**
BRTR Keskin Array B 85.75 360 P **P 17 05 26.1 -0.1**
comp=Z,8.3nm,0.8s,baz=183,slow=7.4,SNR=29
BRTR Keskin Array B 85.75 360 *i* P **P 17 05 26.2 -0.1**
BRTR pmax pmax
comp=Z,9.0nm,0.8s
BRTR Keskin Array B 85.75 360 P **P 17 05 25.4 -1.0**
ERZN Erzincan 85.78 5 eP **P 17 05 27.9 +1.5**
CEL Celeste 85.79 346 P **P 17 05 26.0 -0.4**
CEL IAMs_20 IAMs_20 17 42 12.0
comp=Z,6µm,21.0s
NEO Neokhori 85.85 352 P **P 17 05 26.3 -0.3**
CASM Ain Smara 85.86 338 P **P 17 05 31.0 +4.2**
MTN Manton Dam 85.86 104 P **P 17 05 28.6 +1.2**
baz=86,SNR=5.2
MTN Manton Dam 85.86 104 IAMs_20 IAMs_20 17 36 59.9
comp=Z,6µm,22.0s
CKHR Kef el Ahmar 85.88 337 P **P** 17 05 39.0 +12
XOR Xorichti 85.91 352 P **P 17 05 26.5 -0.5**
LOD Lodumlu 85.92 359 eP **P 17 05 26.9 -0.1**
CKFL Kef-Lekhel 85.93 338 P **P 17 05 29.5 +2.2**
CMAH Djebel Manchou 85.97 339 P **P 17 05 29.5 +2.1**
SVSK Karacayir 85.99 3 eP **P 17 05 27.7 +0.4**
AGRB Hanur-Agry 86.00 eP **P 17 05 23.3 +0.7**
EZN Ezine 86.11 354 eP **P 17 05 28.5 +0.7**
EZN Ezine 86.11 354 P **P 17 05 29.5 +1.7**
EZN Ezine 86.11 354 P **P 17 05 28.3 +0.5**
SRCK Saricakaya, Es 86.11 358 eP **P 17 05 28.7 +0.8**
BOZC Bozcaada 86.14 354 eP **P 17 05 28.4 +0.4**
CORM Corum 86.21 1 eP **P 17 05 28.4 -0.1**
THL Klokotos Trika 86.23 351 P **P 17 05 29.0 +0.5**
KOPT Kop Dagi 86.26 5 P **P 17 05 28.7 -0.2**
DDI Dehra Dun 86.26 37 eP **P 17 05 29.5 +0.5**
DDI AMP 17 05 34.2
comp=Z,875nm,2.4s
LPAZ La Paz 86.28 250 P **P 17 05 31.1 +0.9**
comp=Z,16nm,0.8s,baz=135,slow=3.5,SNR=71
LPAZ S **S 17 16 00.5 -5.4**
comp=Z,0.3nm,0.4s,baz=314,slow=17,SNR=1.1
LPAZ LR LR 17 41 12.4
comp=Z,4µm,18.2s,baz=120,slow=34
LPAZ La Paz 86.28 250 P **P 17 05 30.2 0.0**
LPAZ La Paz 86.28 250 *i* P **P 17 05 31.2 +0.9**
DFRA Djebel Bou Aff 86.29 338 P **P 17 05 33.1 +4.1**
KOPR Koprukoy-ERZUR 86.33 6 eP **P 17 05 30.3 +1.1**
TOKT Tokat 86.38 2 eP **P 17 05 28.9 -0.4**
IGT Igoumenitsa 86.39 350 P **P** 17 05 23.1 -6.2
JAN Janina 86.45 350 P **P 17 05 31.2 +1.6**
ITTB Itaituba 86.48 267 eP **P 17 05 31.0 +0.5**
RSDY Resadiye-TOKAT 86.48 3 eP **P 17 05 30.3 +0.5**
GADA Gvkgeada 86.50 354 eP **P 17 05 30.3 +0.5**
GADA Gvkgeada 86.50 354 P **P 17 05 30.2 +0.5**
MDNY Mudurnu-Bursa 86.50 356 eP **P 17 05 30.5 +0.7**
GULT Gulveren 86.50 358 eP **P 17 05 30.4 +0.5**
TASB TASBURUN-IGDIR 86.52 8 eP **P 17 05 30.4 +0.4**
MDUB Mudurnu 86.53 358 eP **P 17 05 30.7 +0.6**
MDUB Mudurnu 86.53 358 P **P 17 05 30.1 +0.1**
EDC Edincik 86.53 356 eP **P 17 05 29.8 -0.1**
PYUN Piuthan 86.53 42 eP **P 17 05 29.0 -1.6**
comp=Z,188nm,1.0s
KOLN Koldanda 86.54 43 eP **P 17 05 29.0 -1.6**
comp=Z,361nm,1.6s
TIP Timpagrande 86.55 347 ⇑P **P 17 05 32.4 +2.3**
TIP Timpagrande 86.55 347 P **P 17 05 30.9 +0.7**
TIP IAmb IAmb 17 05 48.8
comp=Z,175nm,1.9s
BHK Bhakra 86.55 36 *ex* P **P 17 05 29.0 -1.3**
GEMT Gemlik 86.55 357 eP **P 17 05 31.2 +1.1**
SMLA Simla 86.60 36 eP **P 17 05 30.2 -0.3**
SMLA IAmb IAmb 17 05 34.9
comp=Z,90nm,1.2s
LPK Lapseki 86.62 355 eP **P 17 05 30.5 +0.1**
CANT Cankiri 86.63 360 eP **P 17 05 31.2 +0.7**
KBL Kabul 86.65 29 P **P 17 05 31.1 +0.1**
SNR=21
KBL Kabul 86.65 29 P **P 17 05 30.4 -0.5**
KBL pmax pmax
comp=Z,37nm,1.1s
KBL Kabul 86.65 29 P **P 17 05 30.4 -0.5**
GELI Tayfur-Gelibol 86.66 354 eP **P 17 05 30.6 0.0**
KPRO Kipourio 86.69 351 P **P 17 05 31.7 +0.9**
RMQ Roma 86.70 126 P **P 17 05 32.3 +0.8**
baz=87,SNR=8.4
ARMT Armutlu 86.70 356 eP **P 17 05 31.2 +0.4**
LIT Litokhoron 86.71 351 P **P 17 05 30.8 -0.1**
GNI Garni 86.74 8 P **P 17 05 32.3 +1.1**
comp=Z,38nm,1.2s,baz=264,slow=1.3,SNR=26
GNI S **S 17 16 06.4 -1.8**
comp=Z,1.5nm,0.4s,baz=354,slow=17,SNR=1.4
GNI Garni 86.74 8 P **P 17 05 32.7 +1.5**
GNI Garni 86.74 8 *ce*P **P 17 05 32.1 +0.9**
GNI pmax pmax
comp=Z,115nm,1.7s
GNI Garni 86.74 8 P **P 17 05 29.3 -1.9**

GNI IAmb IAmb 17 05 56.2
comp=Z,76nm,1.1s
GNI Garni 86.74 8 IAMs_20 IAMs_20 17 43 17.6
comp=Z,5µm,20.0s
SPNC Sapanca-Adapaz 86.76 357 eP **P 17 05 32.1 +1.0**
GEYT Alibeck 86.77 19 P **P 17 05 30.8 -0.5**
comp=Z,19nm,1.0s,baz=260,slow=4.4,SNR=18
GEYT LR LR 17 44 01.1
comp=Z,3µm,19.0s,baz=235,slow=36
GEYT Alibeck 86.77 19 P **P 17 05 29.9 -1.4**
GYA0B ALIBECK ARRAY 86.77 19 P **P 17 05 29.9 -1.4**
GYA0B IAMs_20 IAMs_20 17 43 21.1
comp=Z,4µm,20.0s
BELO BELONIA 86.77 51 eP **P 17 05 31.8 +0.3**
SRN Sarande 86.78 349 P **P 17 05 32.0 +0.9**
OUR Ouranopolis 86.80 353 P **P 17 05 30.9 -0.3**
MRMT Marmara Adasi 86.80 355 eP **P 17 05 31.6 +0.3**
SMTH Samothraki Isl 86.80 354 P **P 17 05 31.1 -0.2**
MCPB Macapa, AP 86.81 273 eP **P 17 05 32.8 +0.7**
SAUV Serdivan-Sakar 86.82 357 eP **P 17 05 31.5 +0.2**
KDU Kakadu 86.87 105 P **P 17 05 32.7 +0.4**
baz=87,SNR=8.8
PLG Polygyros 86.88 352 P **P 17 05 31.5 -0.2**
RKY Sarkoy-Tekirda 86.91 355 eP **P 17 05 32.1 +0.2**
IFR Ifrane 86.93 328 eP **P 17 05 31.9 -0.4**
IFR *e*S S 17 16 28.9 +18
SENK Senkaya-Erzuru 86.93 7 eP **P 17 05 32.8 +0.6**
ERIK Erikli-Kesan 86.93 355 eP **P 17 05 32.1 +0.2**
SAIH SAIHA 87.00 53 eP **P 17 05 32.5 -0.3**
SAIH IAmb IAmb 17 05 44.5
comp=Z,102nm,1.1s
THAS Thassos island 87.00 353 P **P 17 05 32.1 -0.1**
ENEZ Enez 87.02 354 eP **P 17 05 32.7 +0.4**
KARS Kars 87.06 7 eP **P 17 05 32.2 -0.5**
ESPY Espiye-Giresun 87.06 4 eP **P 17 05 32.6 +0.1**
ILGA Ilgaz 87.08 0 P **P 17 05 32.0 -0.9**
ILGA IAmb IAmb 17 05 57.1
comp=Z,114nm,1.5s
ILGA IAMs_20 IAMs_20 17 50 58.9
comp=Z,4µm,19.0s
DANN Dangsing 87.11 43 eP **P 17 05 32.6 -0.8**
comp=Z,72nm,0.9s
DMN Daman 87.12 44 eP **P 17 05 32.8 -0.7**
comp=Z,49nm,0.9s
KVT Kavak 87.13 2 eP **P 17 05 28.3 -4.6**
HORT Hortiatis 87.14 352 P **P 17 05 33.3 +0.3**
AGT Agartala 87.18 51 eP **P 17 05 32.8 -0.7**
AGT AMP 17 05 53.9
comp=Z,2µm,3.0s
KTUT Trabzon 87.18 5 eP **P 17 05 31.7 -1.4**
THE Thessaloniki 87.19 352 P **P 17 05 33.6 +0.5**
KAVV Kandilli-Istan 87.19 356 eP **P 17 05 33.6 +0.5**
ISK Istanbul-Kandi 87.19 356 eP **P 17 05 33.3 +0.2**
ISK Istanbul-Kandi 87.19 356 P **P 17 05 33.1 0.0**
ALN Alexandroupoli 87.19 354 P **P 17 05 32.8 -0.3**
ALN pmax pmax
comp=Z,92nm,1.6s
ALN Alexandroupoli 87.19 354 P **P 17 05 32.8 -0.3**
ALN IAmb IAmb 17 05 50.2
comp=Z,92nm,1.6s
ALN Alexandroupoli 87.19 354 P **P 17 05 33.3 +0.2**
GKN Gorkha 87.23 43 eP **P 17 05 33.0 -0.9**
comp=Z,212nm,1.5s
PKIN Phulchoki 87.23 44 eP **P 17 05 32.9 -1.2**
comp=Z,298nm,2.0s
PKI Pulchoki 87.23 44 eP **P 17 05 32.8 -1.3**
comp=Z,250nm,1.8s
DHRM DHARAMSHALA 87.24 35 eP **P 17 05 33.3 -0.6**
DHRM IAmb IAmb 17 05 45.2
comp=Z,162nm,1.4s
CMAR Chiang Mai Arr 87.26 60 P **P 17 05 33.0 -1.1**
comp=Z,2.5nm,0.3s,baz=230,slow=4.9,SNR=8.4
CMAR PP **PP 17 08 56.1 -2.2**
comp=Z,2.4nm,1.0s,baz=233,slow=7.4,SNR=4.2
CMAR LR LR 17 40 11.6
comp=Z,2µm,18.0s,baz=262,slow=33
CMAR Chiang Mai Arr 87.26 60 P **P 17 05 33.0 -1.1**
CMAR Chiang Mai Arr 87.26 60 P **P 17 05 32.3 -1.7**
MALB Monte Alegre 87.27 270 eP **P 17 05 34.8 +0.5**
RAMN Ramite 87.30 45 eP **P 17 05 34.0 -0.4**
comp=Z,183nm,1.5s
NIL Nilore 87.31 32 P **P 17 05 32.4 -1.6**
NIL pmax pmax
comp=Z,41nm,1.0s
NIL Nilore 87.31 32 P **P 17 05 32.4 -1.6**
NIL IAmb IAmb 17 05 54.3
comp=Z,40nm,0.9s
BGKT Bogazkoy 87.32 356 eP **P 17 05 32.6 -1.1**
SOH Sokhos 87.34 352 P **P 17 05 33.9 0.0**
CHOM Cayeli-Rize 87.35 5 eP **P 17 05 35.1 +1.2**
KKN Kakani 87.36 44 eP **P 17 05 33.7 -0.9**
comp=Z,209nm,1.7s
KLYT Kilyos 87.38 356 eP **P 17 05 33.6 -0.4**
CTKS Kestanelik-??a 87.38 356 eP **P 17 05 34.1 +0.1**
SLVT Silivri 87.39 356 eP **P 17 05 34.4 +0.3**
KAVA Kavala 87.41 353 P **P 17 05 34.2 0.0**
RDO Rodhopi 87.47 354 P **P 17 05 34.9 +0.4**
FNA Florina 87.50 351 P **P 17 05 34.2 -0.6**
FNA pmax pmax
comp=Z,31nm,0.9s
FNA Florina 87.50 351 P **P 17 05 34.2 -0.6**
CHTO Chiang Mai 87.53 59 P **P 17 05 34.1 -1.3**
CHTO pmax pmax
comp=Z,31nm,1.1s
CHTO MLR MLR
comp=Z,2µm,20.0s
CHTO Chiang Mai 87.53 59 P **P 17 05 34.1 -1.3**
GRG Griva 87.56 351 P **P 17 05 35.1 +0.1**
AVE Averroes 87.59 327 *i* P **P** 17 05 27.3 -8.0
AVE *e*S **S 17 16 15.1 -1.2**
SRS Serrai 87.61 352 P **P 17 05 30.5 -4.7**
MPSI Mapaga 87.61 87 P **P** 17 05 44.7 +8.8
ODAN Odare 87.61 46 eP **P 17 05 35.3 -0.6**
comp=Z,176nm,1.5s
CTYL Yalikoy Yolu 87.63 356 eP **P 17 05 35.8 +0.6**
GUN Gumba 87.75 44 eP **P 17 05 36.1 -0.5**
comp=Z,285nm,1.4s
MELI Melilla 87.77 331 eP **P 17 05 35.8 -0.3**
MELI *e*S **S 17 16 18.4 +0.5**
NVR Nevrokopi 87.81 353 P **P 17 05 35.7 -0.5**
PHSR Pinarhisar 87.83 355 eP **P 17 05 36.9 +0.7**
KURC Kurucasile-Bar 87.87 359 eP **P** 17 05 31.5 -4.9
BATM Batumi 87.92 6 ⇑P **P 17 05 37.0 +0.4**
BATM Batumi 87.92 6 ⇑P **P 17 05 37.0 +0.4**
MMB Musomiste 88.06 353 eP **P 17 05 37.1 -0.3**
LHI Lord Howe Isla 88.08 136 IAMs_20 IAMs_20 17 38 24.7
comp=Z,3µm,19.0s
RZN Rozhen 88.08 353 eP **P 17 05 38.1 +0.5**
RZN Rozhen 88.08 353 eP **S 17 16 26.0 +5.0**
EDRB Edirne 88.09 355 P **P 17 05 37.5 +0.1**
PVLZ Peæn de 88.13 330 *i* P **P 17 05 36.7 -1.0**
PVLZ *e*S **S 17 16 14.6 -6.8**
TAPN Taplejung 88.18 46 eP **P 17 05 38.1 -0.5**
TIR Tirana 88.24 350 IAMs_20 IAMs_20 17 45 36.7
comp=Z,5µm,20.0s
DHUB DHUBRI 88.25 48 eP **P 17 05 36.7 -1.9**
DHUB IAmb IAmb 17 05 51.7
comp=Z,14nm,0.9s
KKB Krupnik 88.40 352 eP **P 17 05 38.1 -0.8**
PLD Plovdiv 88.49 353 eP **P 17 05 39.0 -0.3**
PLD Plovdiv 88.49 353 eP **S 17 16 29.8 +5.3**
BKZ Black Stump Fm 88.53 152 P **P 17 05 39.0 -1.1**
BKZ IAmb IAmb 17 05 48.2
comp=Z,60nm,1.0s
HIZ Hauiti 88.57 151 IAMs_20 IAMs_20 17 42 35.7
comp=Z,4µm,21.0s
JMB Yambol 88.72 355 eP **P 17 05 40.4 0.0**
JMB Yambol 88.72 355 eP **S 17 16 31.9 +5.3**
SILR SILCHAR 88.74 51 eP **P 17 05 40.8 -0.2**
EIDS Eidsvold 88.87 127 P **P 17 05 41.8 0.0**
baz=89,SNR=5.9
EIDS Eidsvold 88.87 127 P **P 17 05 40.7 -1.1**
EIDS IAmb IAmb 17 05 54.7
comp=Z,51nm,1.1s
EIDS IAMs_20 IAMs_20 17 37 42.0
comp=Z,4µm,21.0s
SHL Shillong 88.87 50⇑ eP **P 17 05 38.9 -2.9**
SHL Shillong 88.87 50 P **P 17 05 41.7 -0.1**
SNR=16
SHL Shillong 88.87 50 P **P 17 05 39.7 -2.1**
SHL pmax pmax
comp=Z,78nm,1.6s
SHL MLR MLR
comp=Z,4µm,19.0s

SHL Shillong 88.87 50 P **P** 17 05 39.7 -2.1
SHL IAmb IAmb 17 05 54.0
comp=Z,78nm,1.6s
SHL IAMs_20 IAMs_20 17 44 35.5
comp=Z,4µm,19.0s
PGB Panagyurishte 88.98 353 *e*P **P** **17 05 41.7 0.0**
ONI Oni 89.04 7 P **P** **17 05 43.8 +1.8**
MRSI Marisa 89.12 88 P P 17 05 54.4 +11
VTS Vitosha 89.13 352 *e*P **P** **17 05 42.7 +0.2**
CEU Ceuta 89.16 329 *e*P **P** **17 05 39.4 -3.2**
CEU *e*S **S** **17 16 24.6 -6.5**
CART Cartagena 89.23 333 *e*P **P** **17 05 39.0 -3.9**
CART *e*S S 17 16 20.2 -12
CART Cartagena 89.23 333 P **P** **17 05 41.7 -1.2**
CART IAmb IAmb 17 05 55.6
comp=Z,176nm,1.9s
ZEI Tsey 89.27 7 *e*P **P** **17 05 43.9 +0.6**
ZEI pmax pmax
comp=Z,20nm,1.2s
GUWA GUWAHATI 89.28 50 *e*P **P** **17 05 41.8 -1.6**
GUWA AMP 17 05 45.4
comp=Z,286nm,0.6s
PDG Podgorica 89.38 349 IAMs_20 IAMs_20 17 48 35.0
comp=Z,4µm,19.0s
URZ Urewera 89.55 152 P **P** **17 05 44.4 -0.4**
comp=Z,44nm,0.9s,baz=299,slow=2.2,SNR=7.4
URZ PP **PP** **17 09 17.7 +2.3**
comp=Z,41nm,1.2s,baz=154,slow=5.2,SNR=3.8
SZH Strazhica 89.56 354 *e*P **P** **17 05 45.9 +1.6**
SZH Strazhica 89.56 354 *e*P **S** **17 16 39.0 +4.5**
EMAL Malaga-Limoner 89.61 330 *e*P P 17 05 38.5 -6.2
EMAL *e*S S 17 16 21.7 -14
ETMB Extrema 89.72 256 *e*P **P** **17 05 46.1 +0.1**
SOC Sochi 89.77 4 *d i*P **P** **17 05 46.3 +1.0**
SOC *e* 17 09 19.4
SOC *e*S **SKSac** **17 16 16.4 +1.3**
SOC *e*SS **SS** **17 22 28.7 -5.8**
SOC *e*SSS SSS 17 26 13.0
SOC pmax pmax
comp=Z,49nm,1.1s
SOC MLR MLR
comp=Z,2µm,17.0s
MAK Makhachkala 89.83 10 *e*P P 17 05 40.6 -4.9
MAK *e*SS SS 17 22 31.0 -4.4
MAK *e*SSS SSS 17 26 05.8
MAK MLR MLR
comp=Z,5µm,19.0s
MAHO Mahon 89.86 338 *e*P **P** **17 05 47.4 +1.6**
MAHO *e*S S 17 16 26.2 -11
GROC Groznyy 89.87 9 *e*P **P** **17 05 46.0 +0.2**
GROC *e* 17 09 19.2
GROC pmax pmax
comp=Z,23nm,0.6s
SFS San Fernando 89.96 329 *e*P **P** **17 05 47.4 +1.0**
SFS *e*S **S** **17 16 30.5 -8.0**
SANI Sanana 90.11 93 P **P** **17 05 49.5 +1.8**
KBZ Khabaz 90.12 7 P **P** **17 05 46.5 -0.4**
comp=Z,18nm,1.1s,baz=146,slow=0.4
KBZ LR LR 17 44 35.5
comp=Z,3µm,20.8s,baz=86,slow=34
KBZ Khabaz 90.12 7 *ce*P **P** **17 05 47.0 +0.1**
KBZ pmax pmax
comp=Z,65nm,1.8s
KBZ MLR MLR
comp=Z,3µm,17.0s
CTA Charters Tower 90.17 120 P **P** **17 05 47.1 -0.9**
comp=Z,3.3nm,1.0s,baz=235,slow=2.9,SNR=5.6
CTA LR LR 17 41 12.0
comp=Z,5µm,18.9s,baz=212,slow=32
CTAO Charters Tower 90.17 120 P **P** **17 05 46.6 -1.4**
CTAO pmax pmax
comp=Z,14nm,0.9s
CTAO MLR MLR
comp=Z,6µm,18.0s
CTAO Charters Tower 90.17 120 P **P** **17 05 46.6 -1.4**
KOHI KOHIMA 90.19 52 *e*P **P** **17 05 47.6 -0.4**
KOHI IAmb IAmb 17 05 58.8
comp=Z,24nm,0.9s
TEZP TEZPUR 90.20 50 *e*P **P** **17 05 45.9 -1.9**
KIV Kislovodsk 90.33 6 *i*P **P** **17 05 48.9 +0.9**
SNR=11
KIV Kislovodsk 90.33 6 *e*P **P** **17 05 50.1 +2.1**
KIV *e* 17 09 24.1
KIV *e* 17 16 20.8
KIV *e*SS SS 17 22 46.2 +3.3
KIV *e*SSS SSS 17 26 23.0
KIV pmax pmax
comp=Z,113nm,1.0s
KIV pmax pmax
comp=Z,292nm,4.3s
KIV MLR MLR
comp=Z,7µm,20.0s
KIV Kislovodsk 90.33 6 P **P** **17 05 47.5 -0.5**
KIV IAmb IAmb 17 05 53.5
comp=Z,103nm,1.5s
KVAR Kislovodsk Arr 90.33 6 P **P** **17 05 48.3 +0.3**
comp=Z,4.4nm,0.7s,baz=271,slow=20,SNR=3.1
CHGR Chuyangaron 90.45 27 P **P** **17 05 47.8 -0.9**
CHGR IAmb IAmb 17 06 11.2
comp=Z,47nm,1.0s
TIRR Tirgusor 90.60 356 ⇓P **P** **17 05 50.3 +1.2**
TIRR Tirgusor 90.60 356 ⇓P **P** **17 05 50.3 +1.2**
KMSI Cibinong 90.61 90 P P 17 06 02.5 +12
HARR Harsova 90.86 356 ⇑P **P** **17 05 51.8 +1.5**
HARR Harsova 90.86 356 ⇑P **P** **17 05 51.8 +1.5**
ANN Anapa 90.88 3 *e*P **P** **17 05 51.3 +0.9**
ANN *e**PP **sP** **17 05 54.7 +0.9**
ANN *e* 17 09 29.9
ANN *e* 17 16 23.2
ANN pmax pmax
comp=Z,129nm,1.4s
ANN MLR MLR
comp=N,6µm,19.0s
ANN MLR MLR
comp=E,3µm,19.0s
ANN MLR MLR
comp=Z,2µm,20.0s
MOKO MOKOCHONG 90.89 52 *e*P **P** **17 05 50.0 -1.2**
MOKO IAmb IAmb 17 06 02.3
comp=Z,96nm,1.6s
DIVS Divibare 90.94 350 P **P** **17 05 51.0 +0.1**
TPGR Topolog 91.00 356 ⇓P **P** **17 05 51.8 +0.7**
BNDI Bandanaira 91.03 98 P P 17 05 56.9 +4.9
GAR Garm 91.13 28 P **P** **17 05 51.5 -0.4**
GAR IAmb IAmb 17 06 17.6
comp=Z,74nm,1.3s
MSAI Masohi 91.21 96 P P 17 06 05.3 +12
PMOZ Porto Moniz, M 91.26 319 *e*SS SS 17 23 02.0 +5.3
PMOZ Porto Moniz, M 91.26 319 *e*LR LR 17 35 21.8
comp=Z,3µm,20.0s
PBDV Barranco-do-Ve 91.28 328 *e*P **P** **17 05 55.8 +3.2**
PBDV Barranco-do-Ve 91.28 328 *e*PP PP 17 09 30.3 -0.1
PBDV *e*SKSac SKSac 17 16 36.3 +12
PBDV *e*SS **SS** **17 22 59.9 +3.2**
CFR Carcaliu 91.33 356 ⇑P **P** **17 05 53.6 +1.1**
CFR Carcaliu 91.33 356 ⇑P **P** **17 05 53.6 +1.1**
PVAQ Vaqueiros 91.34 328 *e*P **P** **17 05 53.7 +0.9**
PVAQ Vaqueiros 91.34 328 *e*PP PP 17 09 30.9 +0.1
PVAQ *e*SKSac SKSac 17 16 36.7 +12
PVAQ *e*SS **SS** **17 23 02.3 +4.7**
PVAQ Vaqueiros 91.34 328 *e*LR LR 17 35 51.0
comp=Z,5µm,22.0s
PVAQ Vaqueiros 91.34 328 P **P** **17 05 52.2 -0.6**
PVAQ IAmb IAmb 17 06 07.0
comp=Z,57nm,1.2s
HERR Herculane 91.45 352 ⇓P **P** **17 05 54.0 +0.9**
GOF Gofitskoye 91.45 7 ⇑*e*P **P** **17 05 56.3 +3.2**
GOF pmax pmax
comp=Z,93nm,1.3s
PFVI Vila Bisbo 91.51 327 *e*PP PP 17 09 41.6 +9.4
PFVI *e*SKSac SKSac 17 16 38.6 +13
PFVI *e*SS **SS** **17 23 02.3 +2.3**
PFVI Vila Bisbo 91.51 327 IAMs_20 IAMs_20 17 44 07.1
comp=Z,5µm,19.0s
MORF Marmelete 91.60 327 *e*P **P** **17 05 53.5 -0.6**
MORF *e*PP **PP** **17 09 31.9 -1.1**
MORF *e*SS SS 17 23 02.2 +0.8
MORF AMS AMS 17 44 48.9
comp=Z,5µm,17.5s
MORF Marmelete 91.60 327 *e*P **P** **17 05 53.5 -0.6**
MORF *e* 17 09 31.9
MORF *e*SS SS 17 23 02.2 +0.8
MORF Marmelete 91.60 327 *e*P **P** **17 05 56.8 +2.7**
comp=Z,83nm,1.6s
MORF Marmelete 91.60 327 *e*PP PP 17 09 39.1 +6.1
MORF *e*SKSac **SKSac** **17 16 36.8 +11**
MORF *e*SS **SS** **17 23 05.3 +3.9**
PCVE Castro Verde 91.66 328 *e*P **P** **17 05 57.3 +3.0**
comp=Z,112nm,1.6s
PCVE Castro Verde 91.66 328 *e*PP PP 17 09 40.1 +6.7
PCVE *e*SKSac S 17 16 42.9 -11
PCVE *e*SS **SS** **17 23 08.8 +6.6**
NEHR Nehoiu 91.68 355 ⇑P **P** **17 05 55.4 +1.1**
ARR Arges 91.74 354 ⇑P **P** **17 05 54.5 0.0**
MLR Muntele Rosu 91.77 355 P **P** **17 05 55.5 +0.8**
comp=Z,12nm,0.8s,baz=251,slow=2.9,SNR=12
MLR Muntele Rosu 91.77 355 ⇓P **P** **17 05 55.7 +0.9**
MLR Muntele Rosu 91.77 355 ⇓P **P** **17 05 55.7 +0.9**
MLR Muntele Rosu 91.77 355 P **P** **17 05 54.2 -0.5**
MLR IAmb IAmb 17 06 13.4
comp=Z,47nm,1.1s
BISRR Bisoca 91.78 355 ⇑P **P** **17 05 55.9 +1.2**
VOIR 91.78 354 ⇑P **P** **17 05 55.2 +0.5**
VOIR 91.78 354 ⇑P **P** **17 05 55.2 +0.5**
LSA Lhasa 91.83 47 P **P** **17 05 55.8 -0.1**
LSA pmax pmax
comp=Z,85nm,1.0s
LSA LR LR
comp=Z,18µm,34.9s
LSA LR LR
comp=Z,11µm,25.6s
LSA LR LR
comp=Z,26µm,32.7s
LSA Lhasa 91.83 47 P **P** **17 05 55.7 -0.2**
LSA Lhasa 91.83 47 P **P** **17 05 54.1 -1.8**
LSA pmax pmax
comp=Z,106nm,1.9s
LSA MLR MLR
comp=Z,4µm,22.0s
LSA Lhasa 91.83 47 P **P** **17 05 54.1 -1.8**
LSA IAmb IAmb 17 06 07.5
comp=Z,106nm,1.9s
LSA IAMs_20 IAMs_20 17 39 34.1
comp=Z,4µm,22.0s
LOT Lotru 91.89 353 ⇑P **P** **17 05 56.6 +1.3**
GZR Gura Zlata 91.92 352 ⇑P **P** **17 05 56.3 +0.9**
GZR Gura Zlata 91.92 352 ⇑P **P** **17 05 56.3 +0.9**
PBEJ Beja 91.95 328 *e*P **P** **17 05 58.3 +2.7**
comp=Z,81nm,1.8s
ES02 SONSECA Array 92.08 332 IAMs_20 IAMs_20 17 47 31.9
comp=Z,5µm,19.0s
ESBB Sonseca Array 92.08 332 P **P** **17 05 55.5 -0.7**
ESBB IAmb IAmb 17 06 10.0
comp=Z,46nm,1.1s
ESBB IAMs_20 IAMs_20 17 47 32.1
comp=Z,5µm,19.0s
ESDC Sonseca Array 92.08 332 P **P** **17 05 58.1 +1.9**
comp=Z,23nm,0.9s,baz=158,slow=4.0,SNR=73
ESDC PP **PP** **17 09 37.1 +0.4**
comp=Z,4.9nm,1.1s,baz=146,slow=6.3,SNR=4.4
ESDC LR LR 17 47 44.1
comp=Z,5µm,19.1s,baz=165,slow=36
ESDC Sonseca Array 92.08 332 P **P** **17 05 55.9 -0.3**
PLOR Plostina 92.08 355 ⇓P **P** **17 05 56.7 +0.6**
PLOR Plostina 92.08 355 ⇓P **P** **17 05 56.7 +0.6**
ES08 SONSECA Array 92.08 332 IAMs_20 IAMs_20 17 47 31.7
comp=Z,5µm,20.0s
ES19 SONSECA Array 92.08 332 IAMs_20 IAMs_20 17 47 22.6
comp=Z,5µm,20.0s
ES07 SONSECA Array 92.09 332 IAMs_20 IAMs_20 17 47 30.8
comp=Z,5µm,19.0s
PAB San Pablo 92.09 332 P **P** **17 05 56.3 0.0**
PAB pmax pmax
comp=Z,40nm,1.2s
PAB MLR MLR
comp=Z,4µm,21.0s
PAB San Pablo 92.09 332 P **P** **17 05 56.3 0.0**
PAB IAmb IAmb 17 05 59.1
comp=Z,40nm,1.1s
PAB San Pablo 92.09 332 IAMs_20 IAMs_20 17 49 12.4
comp=Z,4µm,21.0s
VRI Vrincioaia 92.09 355 ⇑P **P** **17 05 56.6 +0.5**
VRI Vrincioaia 92.09 355 ⇑P **P** **17 05 56.6 +0.5**
ES16 SONSECA Array 92.10 332 IAMs_20 IAMs_20 17 47 30.7
comp=Z,5µm,20.0s
ES18 SONSECA Array 92.11 332 IAMs_20 IAMs_20 17 47 22.3
comp=Z,5µm,19.0s
BZS Buzias 92.26 352 ⇑P **P** **17 05 57.7 +0.9**
BZS Buzias 92.26 352 ⇑P **P** **17 05 57.7 +0.9**
PNCL Nicolau / Gran 92.27 328 *e*P **P** **17 05 59.9 +2.9**
comp=Z,118nm,1.5s
PNCL Nicolau / Gran 92.27 328 *e*PP PP 17 09 38.4 +0.3
PNCL *e*SKSac S 17 16 44.5 -15
PNCL *e*SS **SS** **17 23 19.9 +9.1**
DOPR Dopca 92.28 354 ⇑P **P** **17 05 57.1 +0.1**
LKP Lekhapani 92.41 52 *e*P **P** **17 05 57.9 -0.1**
UCM Universidad Co 92.42 333 *e*P **P** **17 05 56.8 -1.0**
UCM *e*S **SKSac** **17 16 35.0 +4.4**
SLVN Son La 92.44 61 IAMs_20 IAMs_20 17 44 53.1
comp=Z,3µm,19.0s
EVO Evora 92.45 329 *e*P P 17 06 03.1 +5.2
EVO *e*S **SKSac** **17 16 40.6 +10**
EVO Evora 92.45 329 *e*P **P** **17 06 00.7 +2.8**
comp=Z,73nm,1.3s
PMTG Montargil 93.00 329 *e*P **P** **17 05 59.7 -0.7**
PMTG Montargil 93.00 329 *e*PP PP 17 09 46.9 +3.0
PMTG *e*SKSac SKSac 17 16 47.7 +14
PMTG *e*SS **SS** **17 23 27.1 +5.7**
GUD Guadarrama 93.02 332 P **P** **17 06 02.3 +1.6**
GUD pmax pmax
comp=Z,30nm,2.1s
PMRV Marv??o 93.03 329 *e*P **P** **17 06 02.8 +2.2**
PMRV Marv??o 93.03 329 *e*PP PP 17 09 44.9 +0.8
PMRV *e*SKSac **SKSac** **17 16 43.9 +10**
PMRV *e*SS **SS** **17 23 27.1 +5.4**
PMRV Marv??o 93.03 329 *e*LR LR 17 36 57.1
comp=Z,4µm,18.0s
LIS Lisbon 93.03 328 *e*PP PP 17 09 43.1 -1.0
LIS *e*SS SS 17 23 22.4 +0.7
LIS AMS AMS 17 50 37.5
comp=N,5µm,17.0s
BIZ Bicaz 93.20 355 ⇓P **P** **17 06 02.4 +1.3**
CRES Cresnjev 93.24 347 *i*P **P** **17 06 03.3 +1.9**
CRES *e* 17 16 45.4
CRES *e*S **S** **17 17 12.3 +4.4**
CRES *e*SP SP 17 18 23.8 +3.0
CRES *e*SS **SS** **17 23 17.2 -7.4**
PMAFR Mafra 93.29 328 *e*PP **PP** **17 09 48.7 +2.5**
PMAFR *e*SKSac **SKSac** **17 16 43.3 +7.9**
PMAFR *e*SS **SS** **17 23 29.9 +4.4**
PCBR Castelo Branco 93.42 329 *e*P **P** **17 06 04.4 +2.1**
comp=N,45nm,1.4s
KSH Kashi 93.52 31 P **P** **17 06 00.8 -2.2**
KSH SKS **SKSac** **17 16 38.5 +1.6**
KSH S **S** **17 17 05.1 -5.8**
KSH pmax pmax
comp=N,84nm,1.6s
KSH pmax pmax
comp=N,220nm,4.5s
KSH LR LR
comp=N,3µm,14.4s
KSH LR LR
comp=N,2µm,11.7s
KSH LR LR
comp=N,2µm,14.2s
PDKS Podkum 93.54 347 *i*P **P** **17 06 04.9 +2.1**
PDKS *e*PP **PP** **17 09 50.3 +2.2**
PSBE So Bento 93.60 328 *e*PP **PP** **17 09 55.9 +7.2**
PSBE *e*SKSac SKSac 17 16 52.9 +16
PSBE *e*SS **SS** **17 23 30.8 +0.8**
MOZS Mozjanca 93.86 347 *e*P **P** **17 06 05.6 +1.4**
MOZS *e*PP **PP** **17 09 53.3 +2.8**
MOZS *e*SS SS 17 23 29.9 -3.6
MOZS *e* 17 30 23.2
IUG Iuzhnay 93.91 26 *e*P **P** **17 06 03.2 -1.5**
baz=26
IUG *e*PP **PP** **17 09 50.4 -0.7**
baz=26
IUG Iuzhnay 93.91 26 *e*P **P** **17 06 03.1 -1.6**
IUG *e* 17 09 50.3
BURAR Bucovina Array 93.93 354 ⇑P **P** **17 06 07.2 +2.6**
BURAR Bucovina Array 93.93 354 ⇑P **P** **17 06 07.2 +2.6**
BURAR Bucovina Array 93.93 354 P **P** **17 06 04.1 -0.6**
MTE Manteigas 93.94 330 *e*P **P** **17 06 07.0 +2.2**
MTE Manteigas 93.94 330 *e*PP **PP** **17 09 53.4 +2.1**
MTE *e*S **SKSac** **17 16 45.8 +6.8**
MTE *e*SS **SS** **17 23 38.7 +3.8**
MTE Manteigas 93.94 330 *e*LR LR 17 37 34.0
comp=N,4µm,18.0s
BUR08 Bucovina Ar. S 93.96 354 P **P** **17 06 04.4 -0.3**
BUR08 IAmb IAmb 17 06 23.0
comp=Z,45nm,1.3s
PCAS Casmilo, Conde 93.97 329 *e*PP **PP** **17 09 55.6 +4.1**
PCAS *e*SKSac **SKSac** **17 16 47.1 +8.0**
PCAS *e*SS **SS** **17 23 38.4 +3.1**
OBKA Obir 94.05 347 *i*P **P** **17 06 07.3 +2.1**
comp=Z,38nm,1.6s,SNR=7.0
COI Coimbra 94.08 329 *e*PP **PP** **17 09 52.1 -0.2**
COI *e*SKSac SKSac 17 16 55.3 +16
COI *e*SS **SS** **17 23 39.0 +2.3**
PERS Pernice 94.09 347 *i*P **P** **17 06 06.6 +1.3**
CTI Castel Tesino 94.09 345 P **P** **17 06 04.8 -0.6**
CTI pmax pmax
comp=Z,42nm,1.6s
CTI MLR MLR
comp=Z,7µm,20.0s
CTI Castel Tesino 94.09 345 P **P** **17 06 04.8 -0.6**
SOKA Soboth 94.14 347 *i*P **P** **17 06 07.4 +1.8**
comp=Z,25nm,1.2s,SNR=8.0
PRED Cave del Predi 94.14 346 P **P** **17 06 05.4 -0.2**
BNI Bardonecchia 94.15 341 P **P** **17 06 06.1 +0.4**
BNI pmax pmax
comp=Z,36nm,1.2s
BNI MLR MLR
comp=Z,8µm,20.0s
BNI Bardonecchia 94.15 341 P **P** **17 06 06.1 +0.4**
CIMO Cimolais 94.21 345 P **P** **17 06 07.0 +1.2**
MYKA Terra Mystica 94.31 346 *e*P **P** **17 06 08.2 +1.9**
comp=Z,7.0nm,1.0s
PVIS Viseu 94.34 330 *e*P **P** **17 06 09.0 +2.3**
ZOU Zoufplan 94.35 346 P **P** **17 06 08.1 +1.4**
QIZ Qiongzhong 94.43 67 P **P** **17 06 07.3 -0.2**
QIZ SKS **SKSac** **17 16 46.4 +3.9**
QIZ S **ScS** **17 17 20.8 +0.1**
QIZ SS **SS** **17 23 44.0 +1.9**
QIZ LR LR
comp=Z,1µm,28.7s
QIZ LR LR
comp=Z,2µm,22.6s
QIZ LR LR
comp=Z,4µm,32.4s
MVO Moncorvo 94.44 330 *e*P **P** **17 06 09.5 +2.4**
comp=Z,68nm,1.6s
MVO Moncorvo 94.44 330 *e*PP **PP** **17 09 54.8 -0.5**
MVO *e*SKSac SKSac 17 16 54.1 +12
MVO *e*SS **SS** **17 23 46.0 +3.9**
MVO Moncorvo 94.44 330 *e*LR LR 17 37 52.0
comp=Z,4µm,18.0s
SIJI Sorong 94.60 96 LR LR 17 42 30.0
comp=Z,2µm,21.9s,baz=237,slow=32
KMI Kunming 94.61 58 ⇓*e*P **P** **17 06 12.6 +4.1**
KMI pP pwP 17 06 15.4 -1.6
KMI SKS **SKSac** **17 16 48.9 +5.2**
KMI S **ScS** **17 17 23.5 +1.0**
KMI SS **SS** **17 23 44.8 -0.4**
KMI pmax pmax
comp=Z,9.0nm,0.5s
KMI pmax pmax
comp=Z,220nm,4.0s
KMI LR LR
comp=Z,2µm,18.6s
KMI LR LR
comp=Z,2µm,17.1s
KMI LR LR
comp=Z,5µm,34.7s
KMI Kunming 94.61 58 IAMs_20 IAMs_20 17 45 53.8
comp=Z,3µm,18.0s
ABTA Abfaltersbach 94.62 346 *e*P **P** **17 06 09.7 +1.9**
comp=Z,28nm,1.4s
ABTA *e*P **PP** **17 09 58.1 +1.6**
comp=Z,21nm,1.7s
ARSA Arzberg 94.62 348 *e*P **P** **17 06 09.6 +1.9**
comp=Z,22nm,1.0s,SNR=9.4
ARSA *e*P **PP** **17 10 00.0 +3.5**
comp=Z,16nm,1.1s
PSZ Piszkesteto 94.72 351 ⇓P **P** **17 06 08.8 +0.6**
PSZ Piszkesteto 94.72 351 ⇓P **P** **17 06 08.8 +0.6**
PSZ Piszkesteto 94.72 351 P **P** **17 06 07.2 -1.0**
KBA Koelnbreinsper 94.80 346 *e*P **P** **17 06 10.2 +1.4**
comp=Z,12nm,1.0s
SSB Saint Sauveur 94.86 340 P **P** **17 06 08.4 -0.4**
SSB pmax pmax
comp=Z,23nm,1.1s
SSB MLR MLR
comp=Z,10µm,20.0s
SSB Saint Sauveur 94.86 340 P **P** **17 06 08.4 -0.4**
POLO Lamas de Olo 94.89 330 *e*P **P** **17 06 11.6 +2.4**
POLO Lamas de Olo 94.89 330 *e*PP **PP** **17 10 01.4 +2.6**
POLO *e*SKSac SKSac 17 16 56.8 +13
POLO *e*SS **SS** **17 23 55.5 +6.9**
SOP Sopron 94.90 348 P **P** **17 06 11.2 +2.3**
SOP pmax pmax
comp=Z,26nm,1.0s
PBRG Braganca 94.92 331 *e*P **P** **17 06 11.5 +2.3**
comp=Z,63nm,1.8s
PBRG Braganca 94.92 331 *e*PP **PP** **17 09 59.9 +1.0**
PBRG *e*SKSac SKSac 17 16 58.4 +14
PBRG *e*SS **SS** **17 23 52.9 +4.1**
KK31 Karatay Array 94.92 26 P **P** **17 06 08.5 -0.7**
KK31 pmax pmax
comp=Z,42nm,1.4s
KK31 Karatay Array 94.92 26 P **P** **17 06 08.5 -0.7**
KK31 IAmb IAmb 17 06 15.3
comp=Z,42nm,1.4s
KKAR Karatay Array 94.92 26 P **P** **17 06 08.3 -0.9**
KKAR pmax pmax
comp=Z,42nm,1.4s
KKAR Karatay Array 94.92 26 P **P** **17 06 08.5 -0.7**
KKAR IAmb IAmb 17 06 15.3
comp=Z,42nm,1.4s
KKAR Karatay Array 94.92 26 P **P** **17 06 08.3 -0.9**
TUE Stuetta 94.94 343 P **P** **17 06 09.0 -0.4**
DZA Taraz 94.98 27 *e*P **P** **17 06 09.3 -0.2**
baz=27
DZA *e*PP **PP** **17 09 59.1 -0.3**
baz=27
DZA LR LR 17 46 30.2
comp=Z,314nm,15.2s,baz=27
DZA Taraz 94.98 27 *e*P **P** **17 06 09.3 -0.2**
DZA *e* 17 09 59.0
DZA MLR MLR
comp=Z,314nm,15.0s
NNA Nana 95.08 247 P **P** **17 06 11.3 +0.5**
comp=Z,13nm,0.5s,baz=154,slow=5.2,SNR=4.6
NNA LR LR 17 45 20.4
comp=Z,3µm,21.9s,baz=130,slow=33
NNA Nana 95.08 247 *ce*P **P** **17 06 11.5 +0.7**
NNA pmax pmax
comp=Z,42nm,1.3s
NNA Nana 95.08 247 IAMs_20 IAMs_20 17 45 07.4
comp=Z,3µm,22.0s
DAVOX Davos/Dischmat 95.13 344 P **P** **17 06 11.4 +1.1**
comp=Z,4.4nm,0.9s,baz=180,slow=7.1,SNR=6.1
DAVOX PP **PP** **17 09 59.2 -1.5**
comp=Z,6.5nm,0.9s,baz=121,slow=10.0,SNR=6.4
UZH Uzhgorod 95.18 352 *e*P **P** **17 06 10.2 +0.1**
UZH *i* 17 09 59.0
UZH *e*S **S** **17 17 21.9 -2.7**
FETA Feichten 95.20 344 *e*P **P** **17 06 11.9 +1.3**
comp=Z,32nm,1.6s
FETA *e*P **PP** **17 10 02.3 +1.2**
comp=Z,16nm,1.0s
CONA Conrad Observa 95.24 348 *e*P **P** **17 06 12.0 +1.4**
comp=Z,20nm,1.4s,SNR=8.5
SENIN Lac Senin/Sane 95.26 342 P **P** **17 06 11.1 +0.2**
WTTA Wattenberg 95.27 345 *i*P **P** **17 06 12.1 +1.3**
comp=Z,15nm,0.8s,SNR=5.6
WTTA *e*P **PP** **17 10 02.4 +0.7**
comp=Z,28nm,1.2s
WTTA Wattenberg 95.27 345 P **P** **17 06 12.5 +1.6**
PCAB Cabril 95.27 330 *e*P **P** **17 06 12.1 +1.2**
comp=Z,67nm,1.5s
SQTA Sankt Quirin 95.31 345 *i*P **P** **17 06 12.1 +1.1**
comp=Z,12nm,0.8s,SNR=5.5
SQTA *e*P **PP** **17 10 01.5 -0.4**
comp=Z,24nm,1.6s
WATA Walderalm 95.35 345 *e*P **P** **17 06 12.2 +1.0**
comp=Z,16nm,1.2s
WATA P **PP** **17 10 01.8 -0.4**
comp=Z,24nm,1.3s
MOA Molln 95.40 347 P **P** **17 06 12.7 +1.5**
comp=Z,18nm,0.9s,SNR=6.9
MOTA Moosalm 95.44 345 *e*P **P** **17 06 12.5 +0.8**

	comp=Z,34nm,1.5s									
MOTA					*e*P		**PP**	**17 10 03.4**	**+0.4**	
	comp=Z,16nm,1.0s									
MODS	**Modra-Piesok**	**95.48**	**349**		*e*P		**P**	**17 06 11.9**	**+0.3**	
MODS	**Modra-Piesok**	**95.48**	**349**		*e*P		**P**	**17 06 11.9**	**+0.3**	
CRVS	**Cervenica-Dubn**	**95.52**	**352**		*e*P		**P**	**17 06 12.9**	**+1.1**	
CRVS	**Cervenica-Dubn**	**95.52**	**352**		*e*P		**P**	**17 06 12.9**	**+1.1**	
CZSB	**Cruzeiro do Su**	**95.58**	**253**		*e*P		**P**	**17 06 14.9**	**+1.9**	
PGAV	**Gavieira, Arco**	**95.58**	**330**		*e*PP		**PP**	**17 10 07.4**	**+3.3**	
PGAV					*e*SKSac		**SKSac**	**17 16 56.9**	**+9.1**	
PGAV					*e*SS		**SS**	**17 24 01.8**	**+3.5**	
PGAV	**Gavieira, Arco**	**95.58**	**330**		*e*LR		LR	17 38 17.8		
	comp=Z,5µm,18.0s									
DAVA	**Damuels**	**95.62**	**344**		*e*P		**PP**	**17 10 04.4**	**0.0**	
	comp=Z,52nm,1.2s									
RETA	**Reutte**	**95.64**	**345**		*e*P		**P**	**17 06 13.8**	**+1.3**	
	comp=Z,13nm,1.1s									
RETA					P		**PP**	**17 10 04.2**	**-0.2**	
	comp=Z,22nm,1.2s									
AAK	**Ala-Archa**	**95.78**	**29**	*i*	P		**P**	**17 06 13.6**	**+0.3**	
	SNR=8.5									
AAK	**Ala-Archa**	**95.78**	**29**	*c*	*e*P		**P**	**17 06 12.9**	**-0.4**	
AAK					pmax		pmax			
	comp=Z,82nm,2.1s									
JAVC	**Velka Javorina**	**95.91**	**349**		*e*P		**P**	**17 06 15.5**	**+1.9**	
JAVC					*e*PP		**PP**	**17 10 08.8**	**+2.3**	
JAVC					*e*			17 18 58.3		
LANS	**Liptovska Anna**	**95.98**	**351**		*e*P		**P**	**17 06 15.8**	**+1.9**	
LANS	**Liptovska Anna**	**95.98**	**351**		*e*P		**P**	**17 06 15.8**	**+1.9**	
KWP	**Kalwaria Pacla**	**96.13**	**353**		P		**P**	**17 06 13.6**	**-0.9**	
KWP					pmax		pmax			
	comp=Z,36nm,1.5s									
KWP					MLR		MLR			
	comp=Z,5µm,18.0s									
KWP	**Kalwaria Pacla**	**96.13**	**353**		P		**P**	**17 06 13.6**	**-0.9**	
KWP					IAmb		IAmb	17 06 48.5		
	comp=Z,36nm,1.5s									
LVV	**L'vov**	**96.21**	**354**		*e*P		**P**	**17 06 14.3**	**-0.6**	
LVV					*e*S		**S**	**17 17 30.4**	**-3.1**	
DAV	**Davao City (W)**	**96.36**	**86**		LR		LR	17 43 14.7		
	comp=Z,2µm,21.7s,baz=203,slow=32									
GERES	**GERESS Array B**	**96.46**	**347**		P		**P**	**17 06 18.0**	**+1.9**	
	comp=Z,0.9nm,0.8s,baz=116,slow=3.1,SNR=6.1									
GERES					PP		**PP**	**17 10 07.9**	**-2.8**	
	comp=Z,1.1nm,0.9s,baz=166,slow=8.7,SNR=1.8									
GERES					LR		LR	17 54 00.5		
	comp=Z,5µm,18.1s,baz=178,slow=38									
GERES	**GERESS Array B**	**96.46**	**347**		P		**P**	**17 06 16.3**	**+0.2**	
GERES	**GERESS Array B**	**96.46**	**347**		P		**P**	**17 06 16.3**	**+0.2**	
VRAC	**Vranov**	**96.49**	**349**		P		**P**	**17 06 16.5**	**+0.4**	
	comp=Z,3.4nm,0.8s,baz=128,slow=3.2,SNR=5.1									
VRAC					PP		**PP**	**17 10 08.4**	**-2.4**	
	comp=Z,2.3nm,0.9s,baz=154,slow=4.9,SNR=3.5									
VRAC	**Vranov**	**96.49**	**349**		*e*P		**P**	**17 06 17.3**	**+1.1**	
VRAC					*e*PP		**PP**	**17 10 08.5**	**-2.4**	
VRAC					*e*			17 17 01.9		
VRAC					*e*			17 18 59.8		
SGDS	**Sogindy**	**96.55**	**29**		*e*P		**P**	**17 06 16.0**	**-0.7**	
	baz=29									
SGDS					*e*PP		**PP**	**17 10 11.2**	**-0.3**	
	baz=29									
SGDS	**Sogindy**	**96.55**	**29**		*e*P		**P**	**17 06 15.9**	**-0.7**	
SGDS					*e*			17 10 11.2		
TREC	**Trest**	**96.63**	**348**		AMS		AMS	17 51 10.0		
	comp=Z,5µm,18.2s									
KHC	**Kasperske Hory**	**96.75**	**347**	*i*	P		**P**	**17 06 19.6**	**+2.2**	
KHC					pmax		pmax			
	comp=Z,7.0nm,1.4s									
KHC	**Kasperske Hory**	**96.75**	**347**		*e*P		**P**	**17 06 17.5**	**+0.1**	
KHC					*ex*		x	17 06 31.9		
KHC					*e*PP		**PP**	**17 10 10.8**	**-2.2**	
KHC					*e*SS		SS	17 24 14.0	-0.6	
KHC					AMS		AMS	17 49 30.0		
	comp=Z,7µm,18.5s									
AKASG	**Malin Array Be**	**96.81**	**357**		P		**P**	**17 06 17.1**	**-0.4**	
	comp=Z,1.4nm,0.8s,baz=180,slow=3.8,SNR=5.0									
AKASG					PP		**PP**	**17 10 17.4**	**+4.1**	
	comp=Z,3.5nm,0.9s,baz=185,slow=6.4,SNR=4.6									
AKASG					LR		LR	17 55 21.2		
	comp=Z,3µm,18.1s,baz=205,slow=39									
AKASG	**Malin Array Be**	**96.81**	**357**	*i*	P		**P**	**17 06 19.5**	**+2.0**	
AKASG					pmax		pmax			
	comp=Z,1.0nm,0.8s									
AKBB	**Malin Array Si**	**96.81**	**357**	*c*	*e*P		**P**	**17 06 18.9**	**+1.4**	
AKBB	**Malin Array Si**	**96.81**	**357**		IAMs_20		IAMs_20	17 55 09.4		
	comp=Z,4µm,18.0s									
OKC	**Ostrava-Krasne**	**96.81**	**350**		*e*SS		SS	17 24 19.8	+4.6	
OKC					AMS		AMS	17 51 00.0		
	comp=Z,3µm,17.0s									
MORC	**Moravsky Berou**	**96.82**	**350**		P		**P**	**17 06 15.5**	**-2.2**	
MORC					pmax		pmax			
	comp=Z,9.0nm,1.1s									
MORC					MLR		MLR			
	comp=Z,3µm,18.0s									
MORC	**Moravsky Berou**	**96.82**	**350**		P		**P**	**17 06 15.5**	**-2.2**	
MORC					IAMs_20		IAMs_20	17 51 08.9		
	comp=Z,3µm,18.0s									
BFO	**Black Forest**	**96.92**	**343**		IAMs_20		IAMs_20	17 49 13.6		
	comp=Z,4µm,20.0s									
TNSS	**Tian-Shan**	**96.97**	**30**		*e*P		**P**	**17 06 19.1**	**0.0**	
	baz=30									
TNSS	**Tian-Shan**	**96.97**	**30**		*e*P		**P**	**17 06 19.0**	**0.0**	
OJC	**Ojcow**	**97.00**	**351**		P		**P**	**17 06 17.4**	**-1.0**	
OJC					pmax		pmax			
	comp=Z,13nm,1.1s									
OJC	**Ojcow**	**97.00**	**351**		P		**P**	**17 06 17.4**	**-1.0**	
AAA	**Alma-Ata**	**97.11**	**30**		*e*P		Pdif	17 06 19.7	+0.4	
	baz=30									
AAA					*e*PP		**PP**	**17 10 17.3**	**+1.4**	
	baz=30									
AAA					LR		LR	17 44 40.0		
	comp=Z,649nm,18.0s,baz=30									
AAA	**Alma-Ata**	**97.11**	**30**		*e*P		Pdif	17 06 19.7	+0.4	
AAA					*e*			17 10 17.2		
AAA					MLR		MLR			
	comp=Z,649nm,18.0s									
MDOK	**Medeo**	**97.12**	**30**		*e*P		**P**	**17 06 17.8**	**-1.6**	
	baz=30									
MDOK					LR		LR	17 45 14.9		
	comp=Z,649nm,21.0s,baz=30									
MDOK	**Medeo**	**97.12**	**30**		*e*P		**P**	**17 06 17.8**	**-1.6**	
MDOK					MLR		MLR			
	comp=Z,649nm,21.0s									
STU	**Stuttgart**	**97.17**	**344**		P		Pdif	17 06 21.1	+1.8	
STU					pmax		pmax			
	comp=Z,17nm,1.1s									
STU	**Stuttgart**	**97.17**	**344**		IAMs_20		IAMs_20	17 49 41.3		
	comp=Z,5µm,20.0s									
KRLC	**Kraliky**	**97.21**	**349**		*e*P		Pdif	17 06 20.5	+0.9	
KRLC					*e*			17 10 18.6		
KRLC					MLR		MLR			
	comp=Z,3µm,17.7s									
KRLC	**Kraliky**	**97.21**	**349**		*e*P		Pdif	17 06 20.5	+0.9	
KRLC					*ex*		x	17 06 30.7		
KRLC					*e*PP		**PP**	**17 10 18.6**	**+2.1**	
KRLC					AMS		AMS	17 50 20.0		
	comp=Z,3µm,17.7s									
PBCC	**Pribram**	**97.23**	**347**		*e*P		Pdif	17 06 25.2	+5.6	
PBCC					*ex*		x	17 06 31.0		
PRU	**Pruhonice**	**97.44**	**348**		*e*P		Pdif	17 06 23.4	+2.9	
PRU					*e*			17 10 18.0		
PRU					*e*SS		SS	17 24 23.6	-0.5	
PRU					MLR		MLR			
	comp=Z,5µm,19.5s									
PRU	**Pruhonice**	**97.44**	**348**		*e*P		Pdif	17 06 23.4	+2.9	
PRU					*e*PP		**PP**	**17 10 18.0**	**-0.2**	
PRU					*e*SS		SS	17 24 23.6	-0.5	
PRU					AMS		AMS	17 49 00.0		
	comp=Z,5µm,19.5s									
SATY	**Saty**	**97.51**	**31**		*e*P		**P**	**17 06 20.6**	**-0.6**	
	baz=31									
SATY	**Saty**	**97.51**	**31**		*e*P		**P**	**17 06 20.5**	**-0.6**	
KUU	**Kurty**	**97.51**	**30**		*e*P		**P**	**17 06 20.1**	**-0.9**	
	baz=30									
KUU	**Kurty**	**97.51**	**30**		*e*P		**P**	**17 06 20.0**	**-0.9**	
PRA	**Prague**	**97.54**	**348**		*e*SS		SS	17 24 25.9	+0.4	
PRA					AMS		AMS	17 51 00.0		
	comp=Z,2µm,17.6s									
DPC	**Dobruska-Polom**	**97.54**	**349**		*e*P		**P**	**17 06 20.6**	**-0.4**	
DPC					*e*			17 06 29.2		
DPC					*e*			17 10 21.2		
DPC					*e*SS		SS	17 24 19.9	-5.8	
DPC					MLR		MLR			
	comp=Z,4µm,16.6s									
DPC	**Dobruska-Polom**	**97.54**	**349**		*e*P		**P**	**17 06 20.6**	**-0.4**	
DPC					*ex*		x	17 06 29.2		
DPC					*e*PP		**PP**	**17 10 21.2**	**+2.1**	
DPC					*e*SS		SS	17 24 19.9	-5.8	
DPC					AMS		AMS	17 54 50.0		
	comp=Z,4µm,16.6s									
GRF	**Grafenberg Arr**	**97.69**	**345**		*e*P		Pdif	17 06 23.4	+1.8	
	comp=Z,10nm,1.0s									
GRF					*e*PP		**PP**	**17 10 16.9**	**-3.3**	
	baz=169,slow=7.2									
GRF					*e*L		L	17 48 01.9		
	comp=Z,7µm,21.6s									
CHKK	**Chushkaly**	**97.70**	**30**		*e*P		**P**	**17 06 21.6**	**-0.3**	
	baz=30									
CHKK	**Chushkaly**	**97.70**	**30**		*e*P		**P**	**17 06 21.5**	**-0.3**	
UPC	**Upice**	**97.74**	**349**		*e*P		Pdif	17 06 26.1	+4.3	
UPC					*e*			17 10 21.6		
UPC					*e*SS		SS	17 24 28.9	+0.5	
UPC					MLR		MLR			
	comp=Z,5µm,16.9s									
UPC	**Upice**	**97.74**	**349**		*e*P		Pdif	17 06 26.1	+4.3	
UPC					*e*PP		**PP**	**17 10 21.6**	**+1.1**	
UPC					*e*SS		SS	17 24 28.9	+0.5	
UPC					AMS		AMS	17 54 20.0		
	comp=Z,5µm,16.9s									
OSTC	**Ostas**	**97.76**	**349**		*e*P		Pdif	17 06 23.7	+1.8	
OSTC					*e*PP		**PP**	**17 10 23.3**	**+2.6**	
OSTC					*e*SS		SS	17 24 26.9	-1.8	
OSTC					AMS		AMS	17 54 00.0		
	comp=Z,3µm,18.9s									
BTLS	**Baital**	**97.77**	**28**		*e*P		**P**	**17 06 21.0**	**-1.1**	
	baz=28									
BTLS	**Baital**	**97.77**	**28**		*e*P		**P**	**17 06 21.0**	**-1.1**	
CHVC	**Chvalec**	**97.81**	**349**		*e*P		Pdif	17 06 35.1	+13	
CHVC					*ex*		x	17 06 46.8		
CHVC					*e*PP		**PP**	**17 10 23.0**	**+1.9**	
CHVC					*e*SS		SS	17 24 27.0	-2.4	
CHVC					AMS		AMS	17 54 20.0		
	comp=Z,4µm,17.4s									
GYA	**Guiyang**	**97.94**	**60**	‖	P		Pdif	17 06 25.5	+2.0	
GYA					SKS		**SKSac**	**17 17 04.9**	**+4.0**	
GYA					S		**ScS**	**17 17 51.5**	**+1.5**	
GYA					SS		**SS**	**17 24 36.1**	**+4.0**	
GYA					pmax		pmax			
	comp=Z,7.0nm,0.9s									
GYA					pmax		pmax			
	comp=Z,200nm,3.5s									
GYA					LR		LR			
	comp=Z,2µm,19.1s									
GYA					LR		LR			
	comp=Z,2µm,18.9s									
GYA					LR		LR			
	comp=Z,3µm,20.7s									
KPKS	**Kokpek**	**97.96**	**31**		*e*P		Pdif	17 06 24.0	+0.9	
	baz=31									
KPKS	**Kokpek**	**97.96**	**31**		*e*P		Pdif	17 06 24.0	+0.9	
PVCC	**Panska Ves**	**97.96**	**348**		*e*SS		SS	17 24 33.5	+2.0	
PVCC					AMS		AMS	17 49 20.0		
	comp=Z,5µm,19.1s									
ABKAR	**Akbulak array**	**97.98**	**17**		P		**P**	**17 06 21.4**	**-1.4**	
SHLS	**Shalkode**	**97.98**	**32**		*e*P		Pdif	17 06 23.9	+0.7	
	baz=32									
SHLS	**Shalkode**	**97.98**	**32**		*e*P		Pdif	17 06 23.9	+0.6	
NKC	**Novy Kostel**	**98.00**	**346**		AMS		AMS	17 48 50.0		
	comp=Z,7µm,19.6s									
MOX	**Moxa**	**98.54**	**346**		*e*L		L	17 51 28.7		
	comp=Z,8µm,21.2s									
PMG	**Port Moresby**	**98.89**	**114**		P		Pdif	17 06 28.5	+0.5	
	comp=Z,7.3nm,0.8s,baz=314,slow=1.1,SNR=3.4									
PMG					PP		**PP**	**17 10 32.5**	**+3.3**	
	comp=Z,5.4nm,0.7s,baz=191,slow=11,SNR=3.3									
PMG					LR		LR	17 46 23.1		
	comp=Z,5µm,19.8s,baz=220,slow=33									
PMG	**Port Moresby**	**98.89**	**114**	*i*	P		Pdif	17 06 29.8	+1.8	
PMG					pmax		pmax			
	comp=Z,18nm,1.0s									
PMG	**Port Moresby**	**98.89**	**114**		IAmb		IAmb	17 06 36.7		
	comp=Z,17nm,1.0s									
CLL	**Collm**	**98.96**	**347**		*e*Pdif		**P**	**17 06 27.0**	**-0.2**	
CLL					*e*			17 06 38.0		
	comp=Z,12nm,1.3s									
CLL					*e*PP		**PP**	**17 10 26.0**	**-3.8**	
CLL					*e*PPPP			17 14 18.0		
CLL					*e*SKSac		**SKSac**	**17 17 09.0**	**+4.5**	
CLL					*e*Sdif		**ScS**	**17 17 58.0**	**+1.1**	
CLL					*e*PS		**PS**	**17 19 25.0**	**+0.2**	
CLL					*e*SS		**SS**	**17 24 40.0**	**-5.4**	
CLL					*e*SSSS			17 31 53.0		
CLL					LmH			17 50 00.0		
	comp=N,5µm,21.5s									
CLL					LmH			17 50 00.0		
	comp=E,3µm,20.6s									
CLL					LmH			17 50 00.0		
	comp=Z,5µm,21.8s									
CLL					LmV			17 54 00.0		
	comp=Z,5µm,19.0s									
CLL					Lmax			17 55 00.0		
CLL	**Collm**	**98.96**	**347**		*e*P		**P**	**17 06 27.0**	**-0.2**	
CLL					*e*			17 10 26.0		
CLL					*e*			17 17 09.0		
CLL					*e*S		**ScS**	**17 17 58.0**	**+1.1**	
CLL					MLR		MLR			
	comp=Z,5µm,19.0s									
TDK	**Taldyqorghan**	**99.20**	**30**		*e*P		**Pdif**	**17 06 28.8**	**+0.2**	
	baz=30									
TDK					*e*PP		**PP**	**17 10 31.7**	**-0.1**	
	baz=30									
TDK	**Taldyqorghan**	**99.20**	**30**		*e*P		**Pdif**	**17 06 28.7**	**+0.2**	
TDK					*e*			17 10 31.6		
RAO	**Raoul Island**	**99.44**	**152**		LR		LR	17 46 03.5		
	comp=Z,2µm,21.9s,baz=188,slow=32									
DZM	**Mont Dzumac**	**99.55**	**136**		P		**Pdif**	**17 06 31.6**	**+0.6**	
	comp=Z,4.6nm,0.8s,baz=190,slow=0.9,SNR=5.9									
DZM					LR		LR	17 42 27.9		
	comp=Z,3µm,21.3s,baz=222,slow=30									
DZM	**Mont Dzumac**	**99.55**	**136**		*e*PP		PP	17 10 25.9	-7.9	
	comp=Z,497nm,26.3s									
DZM					*e*SKSac		**SKSac**	**17 17 06.4**	**-3.2**	
	comp=Z,759nm,25.3s									
DZM	**Mont Dzumac**	**99.55**	**136**		*e*PS		PS	17 19 32.0	+0.6	
	comp=Z,3µm,27.0s									
DZM					*e*SS		SS	17 24 55.8	+3.0	
	comp=Z,4µm,24.9s									
DZM	**Mont Dzumac**	**99.55**	**136**		*e*LR		LR	17 38 56.9		
	comp=Z,13µm,34.9s									
DZM	**Mont Dzumac**	**99.55**	**136**		IAMs_20		IAMs_20	17 42 27.6		
	comp=Z,4µm,20.0s									
CD2	**Chengdu**	**99.56**	**55**		*e*P		**Pdif**	**17 06 31.6**	**+1.1**	
CD2					PP		**PP**	**17 10 38.9**	**+4.0**	
CD2					SKS		**SKSac**	**17 17 09.3**	**+0.6**	
CD2					S		**ScS**	**17 18 01.6**	**-1.6**	
CD2					SS		**SS**	**17 24 57.4**	**+2.7**	
CD2					pmax		pmax			
	comp=Z,10.0nm,1.0s									
CD2					pmax		pmax			
	comp=Z,200nm,4.8s									
CD2					LR		LR			
	comp=Z,2µm,21.1s									
CD2					LR		LR			
	comp=Z,2µm,22.1s									
CD2					LR		LR			
	comp=Z,2µm,21.2s									
ATAH	**Atahualpa**	**99.74**	**249**		LR		LR	17 49 17.2		
	comp=Z,2µm,19.6s,baz=135,slow=34									
TOSP	**Speyside**	**100.99**	**275**		IAMs_20		IAMs_20	17 48 45.6		
	comp=Z,3µm,22.0s									
OBN	**Obninsk**	**101.18**	**2**	*i*	P		**Pdif**	**17 06 38.3**	**+1.4**	
OBN				*i*				17 10 50.7		
OBN				*i*	S		**SKSac**	**17 17 16.8**	**+1.7**	
OBN				*i*	PS		PS	17 19 45.3	-3.1	
OBN					pmax		pmax			
	comp=Z,19nm,1.4s									
OBN					MLR		MLR			
	comp=Z,1µm,19.0s									
WMQ	**Urumqi**	**101.75**	**37**		*e*P		**Pdif**	**17 06 41.1**	**+1.1**	
WMQ					SKS		**SKSac**	**17 17 19.5**	**+0.8**	
WMQ					S		**Sdif**	**17 18 18.9**	**-1.9**	
WMQ					SS		**SS**	**17 25 25.5**	**+0.7**	
WMQ					pmax		pmax			
	comp=Z,15nm,0.9s									
WMQ					pmax		pmax			
	comp=Z,220nm,4.3s									
WMQ					LR		LR			
	comp=Z,2µm,18.7s									
WMQ					LR		LR			
	comp=Z,2µm,18.1s									
WMQ					LR		LR			
	comp=Z,5µm,22.7s									
BRZS	**Berezniki**	**101.78**	**25**		*e*P		**Pdif**	**17 06 39.5**	**-0.4**	
	baz=24									
BRZS	**Berezniki**	**101.78**	**25**		*e*P		**Pdif**	**17 06 39.4**	**-0.4**	
MKAR	**Makanchi Array**	**102.13**	**32**		P		**Pdif**	**17 06 41.0**	**-0.4**	
	comp=Z,0.6nm,0.8s,baz=229,slow=7.1,SNR=5.4									
MKAR					PP		**PP**	**17 10 52.5**	**-1.4**	
	comp=Z,2.5nm,1.1s,baz=222,slow=7.8,SNR=2.5									
MKAR	**Makanchi Array**	**102.13**	**32**		Pdif		**Pdif**	**17 06 40.1**	**-1.4**	
ENH	**Enshi**	**102.42**	**59**		IAMs_20		IAMs_20	17 49 37.7		
	comp=Z,4µm,19.0s									
BVAR	**Borovoye Array**	**103.90**	**22**		Pdiff		**Pdif**	**17 06 50.4**	**+1.3**	
	comp=Z,1.7nm,1.0s,baz=244,slow=32,SNR=7.4									
BVAR					PKiKP		**PP**	**17 11 08.3**	**+1.2**	
	comp=Z,1.0nm,0.8s,baz=210,slow=2.3,SNR=2.9									
KURBB	**Kurchatov Arra**	**104.12**	**28**		PP		PKiKP	17 10 58.7	-8.4	
	comp=Z,0.5nm,0.3s,baz=226,slow=6.7,SNR=4.7									
KURK	**Kurchatov**	**104.23**	**28**				PKiKP	17 10 58.7	-8.6	
SEM	**Semipalatinsk**	**104.50**	**29**		*e*Pdif		**Pdif**	**17 06 51.7**	**-0.5**	
	baz=29									
SEM	**Semipalatinsk**	**104.50**	**29**		*e*P		**Pdif**	**17 06 51.7**	**-0.5**	
ARU	**Arti**	**104.57**	**14**		PP		**PP**	**17 11 12.8**	**+0.9**	
	comp=Z,0.5nm,0.3s,baz=194,slow=8.7,SNR=5.6									
ARU	**Arti**	**104.57**	**14**		IAMs_20		IAMs_20	17 55 06.0		
	comp=Z,3µm,19.0s									
MANU	**Manus Island**	**104.60**	**109**		IAMs_20		IAMs_20	17 51 57.3		
	comp=Z,3µm,19.0s									
XAN	**Xi'an**	**104.81**	**56**		Pdif		**Pdif**	**17 07 01.5**	**+7.7**	
XAN					PP		**PP**	**17 11 21.3**	**+7.0**	
XAN	**Xi'an**	**104.81**	**56**		SS		SS	17 26 15.1	+7.8	
XAN					LR		LR			
	comp=N,1µm,21.7s									
XAN					LR		LR			
	comp=E,4µm,21.6s									
XAN					LR		LR			
	comp=Z,2µm,18.4s									
XAN	**Xi'an**	**104.81**	**56**		P		**PKiKP**	**17 11 10.0**	**+1.0**	
XAN					pP		PP	17 11 21.4	+7.1	
XAN					pmax		pmax			
	comp=Z,16nm,2.1s									
DSB	**Dublin**	**105.00**	**336**		IAMs_20		IAMs_20	17 55 27.2		
	comp=Z,5µm,21.0s									
KIRV	**Kirov**	**105.43**	**8**		PP		**PP**	**17 11 19.9**	**+1.6**	
	comp=Z,6.9nm,0.5s,baz=237,slow=4.2,SNR=4.8									
SANVU	**Saraoutou**	**105.56**	**133**		IAMs_20		IAMs_20	17 47 42.0		
	comp=Z,3µm,20.0s									
ROSC	**El Rosal**	**105.89**	**260**		PP		**PP**	**17 11 21.4**	**-1.2**	
	comp=Z,6.4nm,0.4s,baz=131,slow=8.8,SNR=6.6									
EKA	**Eskdalemuir Ar**	**106.03**	**339**		PP		**PP**	**17 11 20.0**	**-2.8**	
	comp=Z,7.9nm,0.9s,baz=139,slow=5.5,SNR=4.6									
SDV	**Santo Domingo**	**106.27**	**266**		IAMs_20		IAMs_20	17 52 47.0		
	comp=Z,4µm,19.0s									
HNR	**Honiara**	**106.63**	**124**		IAMs_20		IAMs_20	17 48 38.4		
	comp=Z,3µm,22.0s									
KLMR	**Klimovskoe**	**107.01**	**3**		*e*PP		**PP**	**17 11 26.4**	**-3.5**	
KLMR					AMP			17 11 40.2		
	comp=Z,27nm,1.5s									
KLMR					*e*SKSac		**SKSac**	**17 17 42.8**	**+1.1**	
KLMR					*e*SKSac		**SKSac**	**17 17 42.8**	**+1.1**	
KLMR					*e*PS		**PS**	**17 20 39.1**	**-10**	
KLMR					*e*PS		**PS**	**17 20 39.1**	**-10**	
KLMR					*e*SS		**SS**	**17 26 34.3**	**-1.8**	
KLMR					*e*SS		**SS**	**17 26 34.3**	**-1.8**	
KLMR					LR		LR	17 54 17.6		
HFS	**Hagfors**	**107.43**	**350**		PP		**PP**	**17 11 32.2**	**-0.8**	
	comp=Z,5.0nm,1.0s,baz=154,slow=27,SNR=2.6									
FINES	**FINESS Array B**	**107.67**	**356**		PKiKP		**PKiKP**	**17 11 16.6**	**+3.2**	
	comp=Z,3.0nm,0.8s,baz=141,slow=1.2,SNR=4.1									
MSVF	**Nonsavu**	**108.50**	**144**		IAMs_20		IAMs_20	17 47 06.3		
	comp=Z,4µm,22.0s									
NOA	**NORSAR Array B**	**108.63**	**349**		PP		**PP**	**17 11 42.0**	**+0.1**	
	comp=Z,5.6nm,1.1s,baz=171,slow=6.5,SNR=3.8									
ZALV	**Zalesovo Beam**	**109.00**	**29**		Pdiff		**Pdif**	**17 07 10.5**	**-1.3**	
	comp=Z,0.4nm,0.4s,baz=292,slow=7.6,SNR=1.8									
ZALV					PP		**PP**	**17 11 41.3**	**-3.3**	
	comp=Z,3.9nm,1.1s,baz=224,slow=14,SNR=2.3									
ZALV					PKKPbc		**PKKPbc**	**17 22 24.3**	**+0.5**	
	comp=Z,0.9nm,0.7s,baz=79,slow=3.2,SNR=3.9									
ZALV	**Zalesovo Beam**	**109.00**	**29**				PKKPbc	17 22 23.9	+0.1	
SSE	**Sheshan**	**110.18**	**66**		P

JNU	Nakatsue	117.72	70		IAMs_20	IAMs_20	17 59 55.9			
	comp=Z,3µm,18.0s									
INCN	Inchon	117.75	64		IAMs_20	IAMs_20	17 58 11.3			
	comp=Z,2µm,19.0s									
KSRS	Korea Array	118.54	65		PKP	PKiKP	17 11 37.0	+2.2		
	comp=Z,3.2nm,1.2s,baz=264,slow=2.4,SNR=2.7									
CN2	Changchun	120.88	57	*e*	PKP	PKiKP	17 11 48.3	+9.1		
CN2				*e*	PP	PP	17 13 20.9	+12		
CN2	Changchun	120.88	57	*e*	SS	SS	17 29 43.6	+3.6		
CN2					LR	LR				
	comp=N,880nm,16.0s									
CN2					LR	LR				
	comp=E,800nm,16.0s									
CN2					LR	LR				
	comp=Z,2µm,20.0s									
NRIK	Noril'sk	122.01	20		PKP	PKPdf	17 11 40.5	0.0		
	comp=Z,5.1nm,0.9s,baz=106,slow=1.8,SNR=12									
NRIK	Noril'sk	122.01	20	*c i*	PKIKP	PKiKP	17 11 41.0	+0.3		
NRIK					pmax	pmax				
	comp=Z,20nm,1.1s									
SNET	Serv Nac Est T	122.37	255		IAMs_20	IAMs_20	18 01 50.6			
	comp=Z,2µm,20.0s									
TARA	Tarawa	122.74	129		IAMs_20	IAMs_20	17 56 51.4			
	comp=Z,3µm,20.0s									
BOD	Bodaibo	123.19	39	*e*	PKIKP	PKPdf	17 11 41.8	-1.3		
BOD					pmax	pmax				
	comp=Z,36nm,1.2s									
DRLN	Deer Lake	123.71	308		IAMs_20	IAMs_20	18 01 37.1			
	comp=Z,2µm,19.0s									
VLA	Vladivostok	124.32	61	*i*	PKIKP	PKiKP	17 11 47.7	+1.7		
VLA					pmax	pmax				
	comp=Z,21nm,1.1s									
MAJO	Matsushiro	124.58	71		IAMs_20	IAMs_20	17 59 19.5			
	comp=Z,2µm,22.0s									
MJAR	Matsushiro Arr	124.58	71		PKP	PKiKP	17 11 47.5	+0.7		
	comp=Z,3.1nm,0.9s,baz=277,slow=4.3,SNR=4.6									
HAL	Halifax	124.63	301		IAMs_20	IAMs_20	17 54 01.0			
	comp=Z,3µm,22.0s									
TAOE	Nuku Hiva Isla	124.71	187	*e*	LR	LR	17 50 36.3			
	comp=Z,2µm,25.3s									
SPITS	Spitsbergen Ar	124.77	356		PKP	PKPdf	17 11 45.8	+0.1		
	comp=Z,11nm,0.9s,baz=139,slow=5.3,SNR=6.8									
USRK	Ussuriysk Ar.	124.98	60		PKP	PKiKP	17 11 47.7	+0.4		
	comp=Z,1.1nm,0.6s,baz=199,slow=4.0,SNR=2.4									
DBG	Daneborg	125.72	344	*i*	P	PKPdf	17 11 47.4	-0.1		
DBG					IAmb	IAmb	17 11 49.9			
	comp=Z,9.7nm,1.2s									
KWAJ	Kwajalein Atol	125.74	119		IAMs_20	IAMs_20	17 56 48.3			
	comp=Z,3µm,22.0s									
LMN	Caledonia Moun	126.01	301		IAMs_20	IAMs_20	17 56 28.4			
	comp=Z,3µm,21.0s									
CCIG	Comitan	126.17	255		IAMs_20	IAMs_20	18 02 08.0			
	comp=Z,2µm,20.0s									
ICESG	Greenland Ices	127.06	334	*i*	P	PKiKP	17 11 51.5	+0.4		
ICESG					IAmb	IAmb	17 11 52.7			
	comp=Z,37nm,0.9s									
DAG	Danmarks Havn	127.24	347	*i*	PKIKP	PKPdf	17 11 49.0	-1.3		
DAG					pmax	pmax				
	comp=Z,13nm,1.1s									
DAG	Danmarks Havn	127.24	347	*i*	P	PKPdf	17 11 49.0	-1.3		
	comp=Z,13nm,1.1s									
DAG	Danmarks Havn	127.24	347	*i*	P	PKPdf	17 11 49.0	-1.3		
DAG					IAmb	IAmb	17 11 52.9			
	comp=Z,13nm,1.1s									
M65A	Busby, Falmout	127.29	294		IAMs_20	IAMs_20	17 53 13.1			
	comp=Z,3µm,22.0s									
G65A	Princeton	127.31	299		P	PKPdf	17 11 51.0	-0.4		
	baz=121									
ZEA	Zeya	127.31	48	*e*	PKIKP	PKiKP	17 11 54.2	+2.6		
ZEA				*e*			17 35 43.0			
ZEA					pmax	pmax				
	comp=N,10.0nm,1.2s									
ZEA					pmax	pmax				
	comp=Z,20nm,1.3s									
ZEA					pmax	pmax				
	comp=E,100nm,3.7s									
ZEA					pmax	pmax				
	comp=N,100nm,4.0s									
ZEA					pmax	pmax				
	comp=Z,200nm,5.0s									
ZEA					MLR	MLR				
	comp=Z,900nm,15.0s									
H65A	Eastbrook	127.46	298		P	PKPdf	17 11 51.3	-0.4		
	baz=122									
KLR	Kul'dur	127.50	55	*c i*	PKIKP	PKiKP	17 11 53.6	+1.4		
KLR					pmax	pmax				
	comp=Z,8.0nm,1.0s									
BRYW	Bryant College	128.04	294		IAMs_20	IAMs_20	17 53 35.0			
	comp=Z,3µm,22.0s									
G64A	Maxfield	128.06	299		P	PKPdf	17 11 52.8	0.0		
	baz=121									
Y60A	Bolivia	128.06	282		IAMs_20	IAMs_20	18 14 55.7			
	comp=Z,2µm,19.0s									
E64A	Bridgewater	128.10	301		P	PKiKP	17 11 53.4	-0.1		
	baz=120									
F64A	Sherman	128.13	300		P	PKiKP	17 11 53.3	-0.2		
	baz=121									
WES	Weston	128.15	294		IAMs_20	IAMs_20	17 57 52.9			
	comp=Z,3µm,21.0s									
N63A	Mattituck	128.17	292		P	PKPdf	17 11 53.1	0.0		
	baz=122									
U61A	Possum Corner	128.19	285		IAMs_20	IAMs_20	17 55 48.2			
	comp=Z,2µm,22.0s									
PQI	Presque Isle	128.34	301		IAMs_20	IAMs_20	17 56 33.5			
	comp=Z,3µm,21.0s									
HRV	Adam Dziewonsk	128.37	295		IAMs_20	IAMs_20	17 58 00.5			
	comp=Z,2µm,20.0s									
PKME	Peaks-Kenny Pk	128.39	299		P	PKiKP	17 11 53.9	-0.1		
	baz=121									
E63A	Oxbow	128.45	300		P	PKPdf	17 11 53.7	+0.2		
	baz=120									
E63A	Oxbow	128.45	300			PKPdf	17 11 53.2	-0.3		
D63A	Stockholm	128.57	301		P	PKPdf	17 11 53.8	+0.1		
	baz=120									
YLE	Yale	128.61	293		IAMs_20	IAMs_20	17 57 47.2			
	comp=Z,3µm,21.0s									
SUMG	Summit	128.65	338		PKIKP	PKPdf	17 11 53.1	-0.6		
SUMG					MLR	MLR				
	comp=Z,4µm,20.0s									
SUMG	Summit	128.65	338			PKPdf	17 11 53.1	-0.6		
SUMG	Summit	128.65	338	*i*	P	PKiKP	17 11 54.0	-0.3		
	comp=Z,44nm,1.1s									
	comp=Z,16µm,27.0s									
SUMG	Summit	128.65	338	*i*	P	PKiKP	17 11 54.0	-0.3		
SUMG					IAmb	IAmb	17 11 57.5			
	comp=Z,44nm,1.1s									
SUMG					IAMs_20	IAMs_20	18 01 39.5			
	comp=Z,16µm,26.6s									
QUA2	Belchertown	128.75	294		IAMs_20	IAMs_20	17 54 18.7			
	comp=Z,3µm,21.0s									
WSPT	Westport, CT	128.79	292		IAMs_20	IAMs_20	17 58 03.8			
	comp=Z,2µm,20.0s									
T60A	Surry	128.84	286		IAMs_20	IAMs_20	18 09 06.2			
	comp=Z,2µm,20.0s									
K62A	Royalston	128.88	294		IAMs_20	IAMs_20	17 58 16.0			
	comp=Z,3µm,20.0s									
FFD	Franklin Falls	128.93	296		IAMs_20	IAMs_20	17 54 40.0			
	comp=Z,3µm,22.0s									
I62A	Tamworth	128.94	296		IAMs_20	IAMs_20	17 56 29.2			
	comp=Z,2µm,20.0s									
P61A	Hammonton	128.94	290		IAMs_20	IAMs_20	17 55 49.8			
	comp=Z,3µm,21.0s									
L61B	Northampton	129.04	294		P	PKPdf	17 11 54.8	0.0		
	baz=121									
PAL	Palisades	129.07	292		IAMs_20	IAMs_20	17 56 12.3			
	comp=Z,3µm,21.0s									
V59A	Middlesex	129.08	284		P	PKPdf	17 11 55.0	0.0		
	baz=124									
G62A	West of Eustis	129.12	298		P	PKiKP	17 11 55.2	-0.4		
	baz=120									
G62A	West of Eustis	129.12	298		IAMs_20	IAMs_20	17 57 46.0			
	comp=Z,3µm,21.0s									
H62A	Milan	129.18	297		IAMs_20	IAMs_20	17 57 17.6			
	comp=Z,3µm,20.0s									
E62A	Clayton Lake	129.21	300		P	PKPdf	17 11 54.6	-0.4		
	baz=120									
Q60A	Greensboro	129.26	288		IAMs_20	IAMs_20	17 55 19.5			
	comp=Z,3µm,22.0s									
BRNJ	Basking Ridge	129.33	291		IAMs_20	IAMs_20	17 56 10.1			
	comp=Z,2µm,22.0s									
R60A	Leonardtown, M	129.35	287		P	PKPdf	17 11 54.4	-1.1		
	baz=123									
HNH	Hanover	129.44	295		IAMs_20	IAMs_20	17 54 54.6			
	comp=Z,3µm,22.0s									
L61A	Hillsdale 1, H	129.47	293		P	PKPdf	17 11 55.6	0.0		
	baz=121									
LBNH	Lisbon	129.49	296		IAMs_20	IAMs_20	17 57 22.9			
	comp=Z,2µm,20.0s									
PSUB	Penn St. - Bra	129.50	290		IAMs_20	IAMs_20	17 55 43.8			
	comp=Z,3µm,22.0s									
P60A	Greenville	129.56	289		IAMs_20	IAMs_20	17 55 58.3			
	comp=Z,3µm,22.0s									
ODNJ	Ogdensburg	129.56	291		IAMs_20	IAMs_20	17 56 03.3			
	comp=Z,3µm,22.0s									
SFJD	Kangerlussuaq	129.56	330		IAMs_20	IAMs_20	18 04 49.0			
	comp=Z,3µm,22.0s									
U58A	Oxford	129.64	284		P	PKPdf	17 11 55.6	-0.5		
	baz=124									
O60A	Telford	129.68	290		P	PKPdf	17 11 55.2	-0.9		
	baz=122									
V58A	Windy Hill, Pi	129.68	283		P	PKPdf	17 11 55.7	-0.5		
	baz=124									
V58A	Windy Hill, Pi	129.68	283		IAMs_20	IAMs_20	18 03 48.7			
	comp=Z,2µm,20.0s									
E61A	Lac Etchemin	129.70	299		P	PKPdf	17 11 55.5	-0.5		
	baz=119									
M60A	Port Jervis	129.70	292		P	PKPdf	17 11 55.5	-0.6		
	baz=121									
255A	Hazlehurst	129.75	277		IAMs_20	IAMs_20	18 08 31.6			
	comp=Z,2µm,20.0s									
G61A	St-Isidore-de-	129.76	298		P	PKPdf	17 11 54.4	-1.7		
	baz=120									
N60A	Cedar Hill Far	129.77	291		P	PKPdf	17 11 56.0	-0.2		
	baz=122									
LUPA	Lehigh Univers	129.80	290		IAMs_20	IAMs_20	17 56 25.7			
	comp=Z,3µm,21.0s									
TRY	Troy	129.81	294		IAMs_20	IAMs_20	17 58 44.9			
	comp=Z,2µm,20.0s									
D61A	St Aubert, Com	129.89	300		P	PKPdf	17 11 55.9	-0.4		
	baz=119									
W57A	Gilead	129.92	282		P	PKPdf	17 11 56.3	-0.4		
	baz=124									
W57A	Gilead	129.92	282		IAMs_20	IAMs_20	18 06 25.9			
	comp=Z,2µm,21.0s									
J60A	Lant Hill Farm	129.92	294		P	PKPdf	17 11 55.1	-1.4		
	baz=120									
S58A	Poland Farm, P	129.97	286		P	PKPdf	17 11 55.5	-1.1		
	baz=123									
S58A	Poland Farm, P	129.97	286		IAMs_20	IAMs_20	17 57 17.3			
	comp=Z,2µm,21.0s									
P59A	Jarrettsville	129.97	289		P	PKPdf	17 11 56.4	-0.3		
	baz=122									
R58B	Mineral	130.05	286		P	PKPdf	17 11 55.7	-1.1		
	baz=123									
R58B	Mineral	130.05	286		IAMs_20	IAMs_20	18 10 08.3			
	comp=Z,2µm,19.0s									
VT1	Waterbury	130.05	296		IAMs_20	IAMs_20	17 55 24.8			
	comp=Z,3µm,21.0s									
H60A	Morristown	130.13	296		P	PKPdf	17 11 55.9	-0.9		
	baz=120									
I60A	Shoreham	130.14	295		P	PKPdf	17 11 56.3	-0.5		
	baz=119									
ACCN	Adirondack Com	130.15	294		IAMs_20	IAMs_20	18 03 06.6			
	comp=Z,2µm,21.0s									
G60A	Masonville	130.17	297		P	PKPdf	17 11 56.9	+0.1		
	baz=120									
O59A	Robesonia	130.18	290		P	PKPdf	17 11 56.7	-0.4		
	baz=122									
D60A	Saint Jean D'O	130.19	300		P	PKiKP	17 11 57.6	0.0		
	baz=119									
N59A	State Game Lan	130.23	291		P	PKiKP	17 11 58.5	+0.5		
	baz=121									
N59A	State Game Lan	130.23	291		IAMs_20	IAMs_20	17 56 38.0			
	comp=Z,3µm,22.0s									
TIGA	Tifton	130.23	276		P	PKPdf	17 11 57.2	-0.2		
	baz=126									
TIGA	Tifton	130.23	276		IAMs_20	IAMs_20	17 58 02.3			
	comp=Z,3µm,21.0s									
E60A	Ste Agathe de	130.25	299		P	PKiKP	17 11 57.3	-0.4		
	baz=119									
X56A	White Oak	130.25	281		P	PKPdf	17 11 56.9	-0.4		
	baz=125									
W56A	Indian Trail	130.31	282		P	PKiKP	17 11 58.1	-0.1		
	baz=124									
F60A	Warwick	130.36	298		P	PKiKP	17 11 58.1	+0.1		
	baz=119									
T57A	Hurt	130.44	284		P	PKPdf	17 11 57.2	-0.5		
	baz=123									
Q58A	Fox Den Farm,	130.44	287		P	PKPdf	17 11 57.2	-0.3		
	baz=122									
P58A	Pank, Wackersv	130.48	288		P	PKPdf	17 11 56.1	-1.5		
	baz=122									
PAGS	Pennsylvania G	130.49	289		IAMs_20	IAMs_20	17 56 37.9			
	comp=Z,2µm,21.0s									
154A	Montrose	130.59	277		IAMs_20	IAMs_20	17 57 46.7			
	comp=Z,2µm,22.0s									
V56A	Mocksville	130.62	282		P	PKPdf	17 11 57.8	-0.2		
	baz=124									
X55A	Gracelyn & Ava	130.65	280		P	PKPdf	17 11 58.0	-0.1		
	baz=124									
S57A	Dark Hollow, R	130.65	285		P	PKPdf	17 11 57.6	-0.4		
	baz=123									
R57A	Stanardsville	130.66	286		P	PKPdf	17 11 58.0	0.0		
	baz=122									
J59A	Piesco	130.71	294		P	PKiKP	17 11 58.6	-0.2		
	baz=120									
J59A	Piesco	130.71	294		IAMs_20	IAMs_20	17 55 28.7			
	comp=Z,2µm,21.0s									
ERM	Erimo	130.78	68		IAMs_20	IAMs_20	18 08 56.5			
	comp=Z,2µm,18.0s									
JEM	Erimo	130.78	68		IAMs_20	IAMs_20	18 08 48.6			
	comp=Z,2µm,19.0s									
H59A	Cadyville	130.79	296		P	PKiKP	17 11 59.2	+0.3		
	baz=119									
N58A	Sunbury	130.80	290		IAMs_20	IAMs_20	17 56 33.1			
	comp=Z,2µm,21.0s									
F59A	Saint Guillaume	130.81	298		P	PKiKP	17 11 58.6	-0.3		
	baz=119									
FRNY	Flat Rock	130.81	296		IAMs_20	IAMs_20	17 57 34.9			
	comp=Z,2µm,20.0s									
KMSC	Kings Mountain	130.82	281		P	PKPdf	17 11 58.3	-0.1		
	baz=124									
KMSC	Kings Mountain	130.82	281		IAMs_20	IAMs_20	18 20 29.8			
	comp=Z,2µm,20.0s									
U56A	King	130.84	283		IAMs_20	IAMs_20	18 02 21.4			
	comp=Z,2µm,20.0s									
L58A	Harry Jones Me	130.86	292		P	PKiKP	17 11 58.9	-0.3		
	baz=120									
GRNR	Gornyy	130.88	55	*e*	PKIKP	PKPdf	17 11 56.6	-1.4		
M58A	Price's Panora	130.91	291		P	PKPdf	17 11 58.5	+0.1		
	baz=121									
P57A	Homestead Farm	130.94	288		P	PKPdf	17 11 58.6	+0.1		
	baz=122									
P57A	Homestead Farm	130.94	288		IAMs_20	IAMs_20	18 10 34.0			
	comp=Z,2µm,20.0s									
PAULI	Pauline	130.97	280		IAMs_20	IAMs_20	18 10 00.7			
	comp=Z,2µm,19.0s									
Q57A	Strasburg	130.97	287		P	PKPdf	17 11 58.6	+0.1		
	baz=122									
H58A	Gabriels	130.98	295		P	PKPdf	17 11 58.3	-0.2		
	baz=119									
BINY	Binghamton	131.02	292		P	PKPdf	17 11 59.0	+0.4		
	baz=120									
K58A	Earlville	131.09	293		P	PKPdf	17 11 59.0	+0.3		
	baz=120									
I58A	Old Forge	131.12	294		P	PKPdf	17 11 58.5	-0.2		
	baz=120									
V55A	Taylorsville	131.13	282		P	PKPdf	17 11 58.9	-0.1		
	baz=124									
J58A	Remsen	131.16	294		P	PKPdf	17 11 58.9	+0.1		
	baz=120									
J58A	Remsen	131.16	294		IAMs_20	IAMs_20	17 59 27.4			
	comp=Z,2µm,20.0s									
352A	Blakely	131.18	275		IAMs_20	IAMs_20	18 08 51.3			
	comp=Z,2µm,20.0s									
X54A	Belton	131.19	280		P	PKPdf	17 11 59.0	-0.1		
	baz=124									
G58A	Ormstown	131.26	296		P	PKPdf	17 11 59.3	+0.4		
	baz=119									
GOGA	Godfrey	131.30	278		P	PKPdf	17 11 59.2	-0.1		
	baz=125									
R56A	Bull Pasture M	131.30	286		P	PKPdf	17 11 59.3	-0.1		
	baz=122									
N57A	Milroy	131.30	290		P	PKPdf	17 11 59.3	+0.1		
	baz=121									
M57A	Sunshine Farm,	131.32	290		P	PKPdf	17 11 59.3	+0.1		
	baz=121									
M57A	Sunshine Farm,	131.32	290		IAMs_20	IAMs_20	17 57 23.0			
	comp=Z,3µm,21.0s									
LONY	Lake Ozonia	131.33	295		P	PKiKP	17 11 59.8	-0.3		
	baz=119									
LONY	Lake Ozonia	131.33	295			PKPdf	17 11 58.2	-0.9		
LONY					IAMs_20	IAMs_20	17 55 25.7			
	comp=Z,3µm,21.0s									
BLA	Blacksburg	131.34	284		P	PKPdf	17 11 59.3	-0.1		
	baz=123									
W54A	Cherokee Point	131.37	281		P	PKPdf	17 11 59.8	+0.3		
	baz=124									
SCHQ	Schefferville	131.46	311		PKP	PKiKP	17 12 00.6	+0.6		
	comp=Z,6.4nm,0.9s,baz=101,slow=5.2,SNR=2.2									
D58A	Chemin du LacG	131.46	299		P	PKPdf	17 11 59.6	+0.4		
	baz=118									
SSPA	Standing Stone	131.46	289		IAMs_20	IAMs_20	17 56 45.5			
	comp=Z,2µm,22.0s									
L57A	Andrews Acres	131.48	291		P	PKPdf	17 11 59.2	-0.3		
	baz=120									
Q56A	Snyder Ridge,	131.49	287		P	PKPdf	17 11 59.2	-0.4		
	baz=122									
Q56A	Snyder Ridge,	131.49	287		IAMs_20	IAMs_20	17 56 31.4			
	comp=Z,2µm,22.0s									
P56A	Dayton Farm, R	131.50	287		P	PKPdf	17 11 59.7	+0.2		
	baz=121									
T55A	Pulaski	131.53	284		P	PKPdf	17 11 60.0	+0.2		
	baz=123									
LATQ	La Tuque	131.53	299		P	PKPdf	17 11 59.3	-0.1		
	baz=118									
V54A	Nebo	131.59	281		P	PKPdf	17 11 58.9	-0.9		
	baz=124									
K57A	Scipio Center	131.63	292		P	PKPdf	17 11 59.1	-0.6		
	baz=120									
J57A	Williamstown	131.63	293		IAMs_20	IAMs_20	17 59 42.0			
	comp=Z,3µm,21.0s									
R55A	Marlinton	131.71	285		P	PKPdf	17 11 59.6	-0.5		
	baz=122									
O56A	Blue Knob Stat	131.72	288		P	PKPdf	17 11 59.6	-0.5		
	baz=121									
O56A	Blue Knob Stat	131.72	288		IAMs_20	IAMs_20	17 57 06.4			
	comp=Z,3µm,22.0s									
H57A	Richville	131.76	295		P	PKPdf	17 11 59.8	-0.1		
	baz=119									
G57A	Newington	131.81	296		P	PKPdf	17 11 59.9	-0.1		
	baz=118									
N56A	West Decatur	131.87	289		P	PKPdf	17 12 00.3	+0.1		
	baz=120									
U54A	Nelsons Funny	131.91	282		P	PKiKP	17 12 01.2	-0.4		
	baz=123									
L56A	Greenwood	132.00	291		P	PKPdf	17 12 00.8	+0.3		
	baz=120									
L56A	Greenwood	132.00	291		IAMs_20	IAMs_20	17 59 45.9			
	comp=Z,2µm,20.0s									
T54A	Tazewell	132.03	283		P	PKPdf	17 12 01.0	+0.3		
	baz=123									
Q55A	Buckhannon	132.06	286		P	PKPdf	17 12 00.7	0.0		
	baz=122									
M56A	Emporium	132.08	290		P	PKiKP	17 12 01.1	-0.5		
	baz=120									
M56A	Emporium	132.08	290		IAMs_20	IAMs_20	17 57 46.0			
	comp=Z,3µm,22.0s									
J56A	Wolcott	132.12	293		P	PKPdf	17 12 00.8	+0.2		
	baz=119									
J56A	Wolcott	132.12	293		IAMs_20	IAMs_20	18 00 04.8			
	comp=Z,2µm,22.0s									
V53A	Saluda	132.12	281		IAMs_20	IAMs_20	18 06 39.1			
	comp=Z,2µm,21.0s									
YAK	Yakutsk	132.12	39	*e*	PKIKP	PKiKP	17 12 00.7	-0.3		
YAK				*e*			17 14 22.6			
YAK					pmax	pmax				
	comp=Z,23nm,0.9s									
YAK					pmax	pmax				
	comp=N,3.0nm,1.0s									
YAK					pmax	pmax				
	comp=E,4.0nm,1.2s									
YAK					pmax	pmax				
	comp=Z,183nm,3.3s									
YAK					pmax	pmax				
	comp=N,84nm,2.6s									
YAK					pmax	pmax				
	comp=E,88nm,2.6s									
YAK	Yakutsk	132.12	39			PKPdf	17 12 00.1	+0.1		
MCWV	Mont Chateau	132.25	287		P	PKiKP	17 12 02.2	+0.2		
	baz=121									
S54A	Dingess, Beckl	132.25	284		P	PKiKP	17 12 02.2	+0.1		
	baz=122									
Z51A	Franklin	132.41	277		IAMs_20	IAMs_20	17 59 14.0			
	comp=Z,2µm,22.0s									
M55A	Ridgway	132.45	290		IAMs_20	IAMs_20	18 03 30.9			
	comp=Z,2µm,20.0s									
BRAL	Brewton	132.46	273		P	PKPdf	17 11 59.7	-1.9		
	baz=126									
E56A	St. Veronique	132.52	298		P	PKPdf	17 12 01.8	+0.5		
	baz=117									
PECO	Prince Edward	132.52	294		IAMs_20	IAMs_20	18 00 19.3			
	comp=Z,3µm,21.0s									
Q54A	Coxs Mills	132.55	286		P	PKiKP	17 12 02.4	-0.3		
	baz=121									
W52A	Murphy	132.56	279		IAMs_20	IAMs_20	18 15 50.8			
	comp=Z,2µm,19.0s									
T53A	Wise	132.64	282		P	PKPdf	17 12 01.9	0.0		
	baz=122									
J55A	Hilton	132.72	292		IAMs_20	IAMs_20	18 03 13.9			
	comp=Z,2µm,22.0s									
S53A	Williamson	132.74	284		P	PKiKP	17 12 02.7	-0.4		
	baz=122									
WVNY	West Valley, N	132.81	291		IAMs_20	IAMs_20	18 00 20.3			
	comp=Z,2µm,20.0s									
O54A	Avella	132.87	287		P

SADO Sadowa 134.27 294 IAMs_20 IAMs_20 18 01 21.8
comp=Z,3µm,21.0s
P51A Williamsport 134.29 285 P PKPdf 17 12 05.2 +0.4
baz=120
P51A Williamsport 134.29 285 IAMs_20 IAMs_20 17 58 13.7
comp=Z,2µm,22.0s
O51A Pataskala 134.32 286 P PKPdf 17 12 05.3 +0.4
baz=120
Z47A Carrollton 134.34 275 IAMs_20 IAMs_20 18 07 16.0
comp=Z,2µm,20.0s
R50A Paris 134.53 283 IAMs_20 IAMs_20 18 14 27.1
comp=Z,2µm,20.0s
N51A Ashland 134.55 287 IAMs_20 IAMs_20 17 58 37.5
comp=Z,3µm,22.0s
U49A Red Boiling Sp 134.59 280 PKPdf 17 12 05.6 +0.1
ACSO Alum Creek Sta 134.62 286 P PKiKP 17 12 06.2 -0.6
baz=120
ACSO Alum Creek Sta 134.62 286 IAMs_20 IAMs_20 17 58 31.2
comp=Z,2µm,22.0s
M51A Elyria 134.63 288 P PKiKP 17 12 06.3 -0.5
baz=119
VLDQ Val d'Or 134.68 298 IAMs_20 IAMs_20 18 01 02.3
comp=Z,3µm,20.0s
LSQQ Lebel-sur-Quev 134.79 300 P PKiKP 17 12 06.6 -0.3
baz=114
R49A Shelbyville 135.11 282 IAMs_20 IAMs_20 18 13 17.3
comp=Z,2µm,20.0s
M50A Fremont 135.23 287 IAMs_20 IAMs_20 17 59 06.4
comp=Z,2µm,22.0s
KUR Kuril'sk 135.32 66 *i* PKiKP PKiKP 17 12 07.6 -0.4
KUR SS SS 17 33 12.9 +34
KUR MLR MLR
comp=Z,596nm,13.0s
KUR MLR MLR
comp=N,473nm,15.0s
P49A Miami Univ. Ec 135.43 284 P PKPdf 17 12 06.8 -0.2
baz=120
K50A Casco 135.60 289 IAMs_20 IAMs_20 17 59 23.1
comp=Z,3µm,22.0s
N49A Columbus Grove 135.75 286 IAMs_20 IAMs_20 17 59 16.2
comp=Z,3µm,22.0s
WVT Waverly 135.79 278 PKIKP PKPdf 17 12 07.8 +0.1
WVT MLR MLR
comp=Z,2µm,20.0s
WVT Waverly 135.79 278 P PKPdf 17 12 07.8 +0.1
baz=122
WVT Waverly 135.79 278 PKPdf 17 12 07.8 +0.1
WCI Wyandotte Cave 135.84 282 PKIKP PKPdf 17 12 06.8 -0.9
WCI Wyandotte Cave 135.84 282 P PKPdf 17 12 07.3 -0.5
baz=121
WCI Wyandotte Cave 135.84 282 PKPdf 17 12 06.8 -0.9
AAM Ann Arbor 136.06 288 IAMs_20 IAMs_20 17 59 30.2
comp=Z,2µm,20.0s
I49A Point Hope 136.26 291 IAMs_20 IAMs_20 18 00 35.2
comp=Z,3µm,22.0s
L48A N Adams 136.40 287 IAMs_20 IAMs_20 18 05 12.4
comp=Z,2µm,22.0s
BLO Bloomington 136.46 283 IAMs_20 IAMs_20 18 14 31.2
comp=Z,2µm,20.0s
ALE Alert 136.49 349 IAMs_20 IAMs_20 18 09 51.7
comp=Z,3µm,20.0s
USIN University of 136.63 281 IAMs_20 IAMs_20 18 14 49.7
comp=Z,2µm,18.0s
MET Memphis--Engin 136.69 276 IAMs_20 IAMs_20 18 01 45.3
comp=Z,2µm,22.0s
N47A Urbana 136.74 285 IAMs_20 IAMs_20 18 01 07.3
comp=Z,2µm,20.0s
T45A Paducah 136.81 279 IAMs_20 IAMs_20 18 10 15.5
comp=Z,2µm,22.0s
PENMO Penman 137.19 278 IAMs_20 IAMs_20 18 17 18.5
comp=Z,2µm,20.0s
J47A Sunmer 137.25 289 IAMs_20 IAMs_20 18 00 38.5
comp=Z,3µm,22.0s
S44A Carbondale 137.58 279 IAMs_20 IAMs_20 18 13 17.7
comp=Z,2µm,19.0s
L46A Eue Claire 137.66 287 IAMs_20 IAMs_20 18 17 09.7
comp=Z,2µm,20.0s
GLMI Grayling 137.80 291 IAMs_20 IAMs_20 18 19 06.1
comp=Z,2µm,19.0s
PBMO Poplar Bluff 137.91 277 IAMs_20 IAMs_20 18 10 31.6
comp=Z,2µm,20.0s
Q44A Meyer Farm, Va 138.02 281 IAMs_20 IAMs_20 18 00 49.4
comp=Z,2µm,22.0s
E46A Sault Ste Mari 138.23 293 IAMs_20 IAMs_20 17 59 23.5
comp=Z,2µm,22.0s
W41B Gary Mavity, V 138.31 274 P PKPdf 17 12 12.6 +0.2
baz=123
W41B Gary Mavity, V 138.31 274 PKPdf 17 12 11.1 -1.3
WHAR Wooly Hollow 138.41 274 PKPdf 17 12 11.6 -1.0
I45A Fountain 138.52 289 IAMs_20 IAMs_20 18 01 36.1
comp=Z,3µm,22.0s
M44A Midewin, Midew 138.54 285 IAMs_20 IAMs_20 18 02 13.0
comp=Z,2µm,22.0s
G45A Suttons Bay 138.56 291 IAMs_20 IAMs_20 18 03 59.2
comp=Z,3µm,21.0s
HQIL Hanson Quary C 138.60 286 IAMs_20 IAMs_20 18 12 47.6
comp=Z,2µm,20.0s
SLM Saint Louis 138.72 280 IAMs_20 IAMs_20 18 14 01.9
comp=Z,2µm,19.0s
P43A Skaggs, Pawnee 138.72 282 IAMs_20 IAMs_20 18 01 06.9
comp=Z,3µm,22.0s
L44A Lake County Fo 138.81 286 IAMs_20 IAMs_20 18 00 59.1
comp=Z,3µm,22.0s
MIAR Mount Ida 138.89 273 P PKPdf 17 12 13.9 +0.3
baz=123
HDIL Hopedale 139.00 283 IAMs_20 IAMs_20 18 18 42.2
comp=Z,2µm,21.0s
CCM Cathedral Cave 139.12 279 PKIKP PKPdf 17 12 14.6 +0.8
CCM MLR MLR
comp=Z,2µm,19.0s
CCM Cathedral Cave 139.12 279 P PKPdf 17 12 14.6 +0.8
baz=120
CCM Cathedral Cave 139.12 279 PKPdf PKPdf 17 12 14.6 +0.8
CCM Cathedral Cave 139.12 279 IAMs_20 IAMs_20 18 21 09.6
comp=Z,2µm,19.0s
Z38A Mt. Pleasant 139.15 270 IAMs_20 IAMs_20 18 27 41.7
comp=Z,2µm,19.0s
833A Chaparral WMA, 139.25 260 P PKPdf 17 12 14.8 +0.4
baz=129
K43A Burlington 139.32 287 IAMs_20 IAMs_20 18 01 23.6
comp=Z,2µm,22.0s
U40A Yellville 139.36 275 P PKPdf 17 12 13.9 -0.5
baz=121
U40A Yellville 139.36 275 PKPdf 17 12 13.8 -0.5
W39A Magazine 139.39 273 PKPdf 17 12 13.7 -0.7
H43A Windswept, Lux 139.70 289 IAMs_20 IAMs_20 18 02 22.4
comp=Z,2µm,22.0s
L42A Oliver, Polo 139.91 285 IAMs_20 IAMs_20 18 01 46.1
comp=Z,2µm,22.0s
R40A Maddies Statio 139.94 278 IAMs_20 IAMs_20 18 12 28.2
comp=Z,2µm,21.0s
E43A Lone Tree Farm 139.95 292 IAMs_20 IAMs_20 18 04 55.9
comp=Z,2µm,22.0s
N41A Harden Midland 140.12 282 IAMs_20 IAMs_20 18 14 23.0
comp=Z,2µm,22.0s
WHTX Lake Whitney, 140.14 267 P PKPdf 17 12 14.8 -1.1
baz=126
I42A Draeger Farm, 140.21 288 IAMs_20 IAMs_20 18 01 55.0
comp=Z,3µm,22.0s
S39A Bolivar 140.36 277 IAMs_20 IAMs_20 18 17 38.5
comp=Z,2µm,19.0s
P40A Paris 140.38 280 IAMs_20 IAMs_20 18 16 33.0
comp=Z,2µm,20.0s
F42A Maple Grove Fa 140.45 291 IAMs_20 IAMs_20 18 04 53.3
comp=Z,3µm,22.0s
U38A Gravette 140.46 275 PKPdf PKPdf 17 12 16.8 +0.5
EUNU Eureka 140.47 346 PKPpre 17 12 08.5
JFWS Jewell Farm 140.69 286 PKIKP PKPdf 17 12 16.6 +0.1
JFWS MLR MLR
comp=Z,2µm,22.0s
JFWS Jewell Farm 140.69 286 P PKPdf 17 12 16.9 +0.4
baz=115
JFWS Jewell Farm 140.69 286 PKPdf PKPdf 17 12 16.6 +0.1
JFWS Jewell Farm 140.69 286 IAMs_20 IAMs_20 18 03 45.8
comp=Z,2µm,22.0s
JCT Junction City 140.86 263 PKIKP PKPdf 17 12 16.6 -0.7
JCT Junction City 140.86 263 P PKPdf 17 12 15.9 -1.4
baz=127
JCT Junction City 140.86 263 PKPdf PKPdf 17 12 16.6 -0.7
D41A Chassel 141.21 293 IAMs_20 IAMs_20 18 19 01.3
comp=Z,2µm,21.0s
I40A Norwalk 141.34 287 IAMs_20 IAMs_20 18 02 53.8
comp=Z,2µm,20.0s
MA2 Magadan 141.42 47 IAMs_20 IAMs_20 18 23 58.0
comp=Z,2µm,19.0s
P38A Dawn 141.44 279 PKPdf PKPdf 17 12 18.1 +0.1
P38A IAMs_20 IAMs_20 18 04 18.0
comp=Z,2µm,21.0s
G40A Rib Lake 141.60 289 IAMs_20 IAMs_20 18 03 28.8
comp=Z,3µm,22.0s
N38A Joes South For 141.77 281 IAMs_20 IAMs_20 18 17 30.7
comp=Z,2µm,21.0s
FNO Franklin 141.92 271 PKPdf 17 12 18.9 -0.1
ABTX Abilene, Hawle 142.01 266 P PKPdf 17 12 15.9 -3.4
ABTX Abilene, Hawle 142.01 266 PKPpre PKPpre 17 12 14.0
SCIA State Center 142.25 283 IAMs_20 IAMs_20 18 15 04.3
comp=Z,2µm,19.0s
BCOK Bluff Creek, N 142.28 271 PKPdf PKPdf 17 12 20.0 +0.4
WMOK Wichita Mounta 142.60 269 PKHKP PKPpre 17 12 14.9
WMOK MLR MLR
comp=Z,2µm,22.0s
WMOK Wichita Mounta 142.60 269 P PKPdf 17 12 17.3 -2.9
baz=123
WMOK Wichita Mounta 142.60 269 PKPpre 17 12 14.9
WMOK Wichita Mounta 142.60 269 IAMs_20 IAMs_20 18 06 02.8
comp=Z,2µm,22.0s
TX32 Lajitas Array 142.79 258 PKPpre PKPpre 17 12 17.9
TXAR Lajitas Array 142.79 258 PKhKP PKPpre 17 12 18.1
comp=Z,8.8nm,0.8s,baz=140,slow=6.1,SNR=73
TX31 Lajitas Ar. Si 142.79 258 PKPpre PKPpre 17 12 17.3
SLBS Sierra La Lagu 143.06 245 IAMs_20 IAMs_20 18 03 51.3
comp=Z,2µm,22.0s
I37A Lemond, Waseca 143.23 286 IAMs_20 IAMs_20 18 03 46.0
comp=Z,3µm,22.0s
SPMN Marine on St. 143.29 288 IAMs_20 IAMs_20 18 04 34.7
comp=Z,3µm,22.0s
KSU1 Kansas State U 143.30 277 P PKPbc 17 12 18.2 -0.2
baz=118
EYMN Ely 143.38 293 P PKPdf 17 12 20.8 -0.4
baz=108
EYMN Ely 143.38 293 IAMs_20 IAMs_20 18 18 16.6
comp=Z,2µm,19.0s
N35A Tabor 143.44 280 PKPpre PKPpre 17 12 19.0
N35A IAMs_20 IAMs_20 18 20 03.8
comp=Z,2µm,20.0s
F36A Milaca 143.99 289 PKPbc 17 12 20.2 0.0
F36A IAMs_20 IAMs_20 18 05 05.1
comp=Z,3µm,21.0s
PETK Petropavlovsk- 144.02 58 PKP PKPdf 17 12 21.3 -0.8
comp=Z,12nm,1.0s,baz=151,slow=3.4,SNR=5.9
RES Resolute Bay 144.16 339 PKIKP PKPdf 17 12 21.0 -0.7
RES MLR MLR
comp=Z,4µm,20.0s
RES Resolute Bay 144.16 339 PKPdf 17 12 21.0 -0.7
L34A Svendsen Farm, 144.41 281 PKPbc 17 12 22.2 +0.5
L34A IAMs_20 IAMs_20 18 15 10.4
comp=Z,3µm,21.0s
R32A Long Quarter, 144.43 275 PKPbc 17 12 22.2 +0.3
R32A IAMs_20 IAMs_20 18 14 40.1
comp=Z,2µm,22.0s
PET Petropavlovsk 144.57 59 *i* PKIKP PKiKP 17 12 25.2 -1.5
PET *e*PPS PPS 17 28 16.3
PET MLR MLR
comp=Z,2µm,19.0s
PET Petropavlovsk 144.57 59 PKPab 17 12 21.3 -0.3
N33A J Bar K, Exete 144.62 279 PKPab 17 12 22.3 0.0
N33A IAMs_20 IAMs_20 18 17 31.1
comp=Z,2µm,20.0s
AMTX Amarillo 144.68 267 P PKPbc 17 12 23.4 +0.5
baz=123
AMTX Amarillo 144.68 267 PKPdf PKPbc 17 12 23.0 +0.1
AMTX IAMs_20 IAMs_20 18 28 35.9
comp=Z,2µm,21.0s
CLNB Carlsbad 144.72 262 PKPbc 17 12 23.6 +0.5
B35A Bob, Littlefor 144.93 293 PKPab 17 12 23.0 0.0
B35A IAMs_20 IAMs_20 18 20 20.5
comp=Z,2µm,21.0s
MSTX Muleshoe 144.93 265 PKPab 17 12 23.5 -0.3
GDL2 Guadalupe Moun 145.01 261 PKPbc 17 12 23.7 -0.3
CPRX Cap Rock 145.16 263 PKPbc 17 12 24.3 -0.2
ECSD EROS Data Cent 145.27 284 P PKPdf 17 12 25.2 +0.6
baz=112,SNR=69
ECSD EROS Data Cent 145.27 284 PKPbc 17 12 24.4 0.0
ECSD EROS Data Cent 145.27 284 IAMs_20 IAMs_20 18 24 00.1
comp=Z,2µm,19.0s
CBKS Cedar Bluff 145.32 274 PKIKP PKPbc 17 12 24.6 -0.1
CBKS MLR MLR
comp=Z,2µm,22.0s
CBKS Cedar Bluff 145.32 274 P PKPab 17 12 25.3 +0.4
baz=118
CBKS Cedar Bluff 145.32 274 PKPbc 17 12 24.6 -0.1
CBKS IAMs_20 IAMs_20 18 31 13.8
comp=Z,2µm,22.0s
BGNE Belgrade 145.38 279 P PKPab 17 12 26.1 +1.1
baz=115
BGNE Belgrade 145.38 279 PKPbc 17 12 24.6 -0.3
BGNE IAMs_20 IAMs_20 18 05 06.3
comp=Z,3µm,22.0s
MNTX Cornudas Mount 145.41 260 P PKPbc 17 12 24.9 -0.3
baz=127
MNTX Cornudas Mount 145.41 260 PKPdf PKPbc 17 12 24.1 -1.1
MNTX IAMs_20 IAMs_20 18 09 59.1
comp=Z,2µm,22.0s
F33A 5 Mile Ranch, 145.80 288 PKPdf PKPdf 17 12 24.3 -1.1
F33A IAMs_20 IAMs_20 18 08 18.1
comp=Z,2µm,21.0s
EPT El Paso 146.22 259 IAMs_20 IAMs_20 18 26 22.6
comp=Z,2µm,22.0s
AGMN Agassiz Nation 146.27 292 P PKPab 17 12 27.7 -0.4
baz=106
AGMN Agassiz Nation 146.27 292 PKPdf PKPdf 17 12 26.2 0.0
AGMN IAMs_20 IAMs_20 18 08 32.2
comp=Z,2µm,20.0s
K31A O'Neill 146.29 281 PKPdf PKPdf 17 12 27.0 +0.6
K31A IAMs_20 IAMs_20 18 32 39.2
comp=Z,2µm,19.0s
D32A Dogwood Acres, 146.69 290 IAMs_20 IAMs_20 18 20 41.3
comp=Z,2µm,20.0s
ULM Lac du Bonnet 146.78 295 PKPbc PKPbc 17 12 28.7 0.0
comp=Z,60nm,1.1s,baz=105,slow=3.1,SNR=30
ULM Lac du Bonnet 146.78 295 PKPbc 17 12 28.4 -0.3
ULM IAMs_20 IAMs_20 18 20 13.3
comp=Z,2µm,20.0s
SUSD Miller 147.10 284 P PKPbc 17 12 29.4 -0.5
baz=110,SNR=7.2
SUSD Miller 147.10 284 PKPbc 17 12 29.4 -0.5
SUSD IAMs_20 IAMs_20 18 06 18.5
comp=Z,2µm,22.0s
KSCO Kaye Shedlock' 147.41 273 P PKPbc 17 12 30.9 -0.2
baz=118
KSCO Kaye Shedlock' 147.41 273 PKPbc 17 12 29.9 -1.2
KSCO IAMs_20 IAMs_20 18 29 36.0
comp=Z,2µm,20.0s
HSIG 147.43 250 PKPbc 17 12 30.9 -0.3
HSIG IAMs_20 IAMs_20 18 25 43.4
comp=Z,2µm,20.0s
121A Cookes Peak, D 147.54 259 P PKPbc 17 12 32.3 +0.6
baz=127
121A Cookes Peak, D 147.54 259 PKPbc 17 12 31.0 -0.7
121A IAMs_20 IAMs_20 18 31 01.5
comp=Z,2µm,20.0s
BNM Barren Site 147.68 262 PKPbc 17 12 31.1 -1.0
T25A Trinidad 147.74 269 P PKPbc 17 12 31.3 -0.8
baz=120
T25A Trinidad 147.74 269 PKPdf 17 12 29.5 +0.2
T25A IAMs_20 IAMs_20 18 23 04.0
comp=Z,2µm,22.0s
Y22D IRIS PASSCAL I 147.84 262 P PKPbc 17 12 31.3 -1.1
baz=124
319A Douglas 147.84 255 PKPbc 17 12 32.6 +0.2
LENM Lemitar 147.93 262 PKPbc 17 12 32.9 +0.2
ANMO Albuquerque 148.01 263 PKIKP PKPdf 17 12 29.5 -0.3
ANMO 17 12 33.0
ANMO MLR MLR
comp=Z,2µm,21.0s
ANMO Albuquerque 148.01 263 P PKPbc 17 12 31.6 -1.3
baz=123
ANMO Albuquerque 148.01 263 PKPdf 17 12 29.5 -0.3
ANMO PKPbc PKPbc 17 12 33.0 +0.1
ANMO Albuquerque 148.01 263 IAMs_20 IAMs_20 18 29 23.0
comp=Z,2µm,21.0s
MDND Maddock 148.57 290 P PKPbc 17 12 32.8 -0.9
baz=105
MDND Maddock 148.57 290 PKPbc 17 12 33.6 -0.1
MDND IAMs_20 IAMs_20 18 17 13.1
comp=Z,2µm,20.0s
SDCO Great Sand Dun 148.80 269 P PKPbc 17 12 33.2 -1.7
baz=119
SDCO Great Sand Dun 148.80 269 PKPdf 17 12 30.8 -0.3
SDCO IAMs_20 IAMs_20 18 15 06.9
comp=Z,2µm,21.0s
E28A Huff 148.94 287 PKPdf PKPdf 17 12 30.9 +0.2
E28A PKPbc PKPbc 17 12 35.0 +0.3
E28A IAMs_20 IAMs_20 18 07 38.0
comp=Z,2µm,22.0s
Q24A Divide 149.13 271 P PKPdf 17 12 33.7 +2.0
baz=117
Q24A Divide 149.13 271 PKPdf PKPdf 17 12 30.9 -0.7
Q24A PKPbc 17 12 35.9 +0.1
Q24A IAMs_20 IAMs_20 18 28 58.7
comp=Z,2µm,19.0s
TUC Tucson 149.43 255 PKIKP PKPdf 17 12 31.1 -0.9
TUC 17 12 41.6
TUC MLR MLR
comp=Z,2µm,20.0s
TUC Tucson 149.43 255 P PKPdf 17 12 34.2 +2.2
baz=128
TUC Tucson 149.43 255 PKPdf 17 12 31.1 -0.9
TUC PKPab PKPab 17 12 41.6 +0.4
TUC Tucson 149.43 255 IAMs_20 IAMs_20 18 27 41.4
comp=Z,2µm,20.0s
S22A 4UR Ranch, Cre 149.72 268 P PKPdf 17 12 34.5 +1.9
baz=119
S22A 4UR Ranch, Cre 149.72 268 PKPdf PKPdf 17 12 33.0 +0.5
ISCO Idaho Springs 149.83 272 PKHKP PKPpre 17 12 33.1
ISCO MLR MLR
comp=Z,2µm,21.0s
ISCO Idaho Springs 149.83 272 P PKPdf 17 12 34.8 +2.1
baz=116
ISCO Idaho Springs 149.83 272 PKPdf PKPdf 17 12 33.1 +0.4
ISCO IAMs_20 IAMs_20 18 16 26.2
comp=Z,2µm,21.0s
X18A Snowflake 150.17 260 PKPdf PKPdf 17 12 33.3 0.0
X18A IAMs_20 IAMs_20 18 30 13.3
comp=Z,2µm,19.0s
W18A Petrified Fore 150.35 261 P PKPdf 17 12 36.1 +2.6
baz=124
W18A Petrified Fore 150.35 261 PKPbc 17 12 38.4 -0.4
W18A IAMs_20 IAMs_20 18 26 10.0
comp=Z,2µm,21.0s
PHWY Pilot Hill 150.35 275 IAMs_20 IAMs_20 18 08 30.2
comp=Z,2µm,22.0s
RSSD Black Hills 150.42 281 PKIKP PKPdf 17 12 32.9 -0.5
RSSD 17 12 38.8
RSSD MLR MLR
comp=Z,2µm,21.0s
RSSD Black Hills 150.42 281 P PKPdf 17 12 35.7 +2.3
baz=109
RSSD Black Hills 150.42 281 PKPdf 17 12 32.9 -0.5
RSSD PKPbc PKPbc 17 12 38.8 +0.2
RSSD Black Hills 150.42 281 IAMs_20 IAMs_20 18 08 20.5
comp=Z,2µm,21.0s
SMCO Snowmass 150.49 270 PKPdf PKPdf 17 12 33.0 -0.8
SMCO IAMs_20 IAMs_20 18 29 27.9
comp=Z,2µm,20.0s
N23A Red Feather La 150.52 274 P PKPdf 17 12 35.6 +1.9
baz=114
N23A Red Feather La 150.52 274 PKPdf PKPdf 17 12 34.1 +0.4
N23A IAMs_20 IAMs_20 18 24 54.5
comp=Z,2µm,21.0s
214A Organ Pipe Nat 150.55 253 P PKPdf 17 12 35.6 +1.9
baz=129
214A Organ Pipe Nat 150.55 253 PKPdf PKPdf 17 12 33.7 0.0
MVCO Mesa Verde 150.60 265 P PKPdf 17 12 35.3 +1.4
baz=120
MVCO Mesa Verde 150.60 265 PKPdf PKPdf 17 12 34.2 +0.3
MVCO IAMs_20 IAMs_20 18 32 12.7
comp=Z,2µm,20.0s
PIX Pinacate 150.73 251 PKPbc 17 12 39.4 0.0
FFC Flin Flon 151.07 303 PKIKP PKPbc 17 12 39.2 -0.4
FFC MLR MLR
comp=Z,3µm,21.0s
FFC Flin Flon 151.07 303 PKPbc 17 12 39.2 -0.4
PV01 Paradox Valley 151.11 267 PKPbc 17 12 39.4 -1.2
X16A Lo Mia Camp, P 151.12 258 PKPdf 17 12 34.7 0.0
PV15 Paradox Valley 151.15 268 PKPdf 17 12 34.8 0.0
PV15 IAMs_20 IAMs_20 18 33 07.0
comp=Z,2µm,19.0s
PV13 Radium Mtn., P 151.29 267 PKPdf PKPdf 17 12 35.1 +0.2
PV07 Paradox Valley 151.31 268 PKPdf PKPdf 17 12 35.0 +0.1
PV07 PKPbc PKiKP 17 12 41.2 -0.3
PV12 Saucer Basin, 151.35 267 PKPdf PKPdf 17 12 34.9 -0.1
PV03 Paradox Valley 151.36 267 PKPdf PKPdf 17 12 35.2 +0.2
PV03 IAMs_20 IAMs_20 18 35 22.6
comp=Z,2µm,20.0s
PV11 David Mesa, Pa 151.40 267 PKPbc 17 12 40.3 -0.8
PV18 Skein Mesa, Pa 151.40 267 PKPdf PKPdf 17 12 35.0 0.0
PV18 IAMs_20 IAMs_20 18 35 21.6
comp=Z,2µm,20.0s
PV17 East Wray Mesa 151.45 267 PKPdf 17 12 34.9 -0.3
PV22 Blue Mesa, Par 151.45 268 PKPdf PKPdf 17 12 35.1 0.0
PV22 PKiKP 17 12 41.5 -0.1
PV04 Paradox Valley 151.46 267 PKPdf 17 12 34.8 -0.3
PV19 Morning Glory 151.48 267 PKPdf PKPdf 17 12 35.0 -0.2
PV19 PKiKP 17 12 41.5 -0.2
PV19 IAMs_20 IAMs_20 18 35 20.8
comp=Z,2µm,20.0s
PV20 West Nyswonger 151.48 267 PKPdf PKPdf 17 12 34.6 -0.5
PV20 PKPbc 17 12 41.1 -0.2
PV20 IAMs_20 IAMs_20 18 35 21.9
comp=Z,3µm,21.0s
PV14 Lion Creek, Pa 151.53 267 PKPdf 17 12 35.7 +0.4
PV14 IAMs_20 IAMs_20 18 17 12.3
comp=Z,3µm,22.0s
PV10 Paradox Valley 151.55 267 PKPdf PKPdf 17 12 34.6 -0.7
PV10 PKPbc 17 12 41.6 +0.1
PV23 Carpenter Ridg 151.56 267 PKPdf PKPdf 17 12 35.0 -0.4
PV23 PKPbc 17 12 41.5 -0.1
K22A Casper 151.61 277 P PKPdf 17 12 36.5 +1.3
baz=111,SNR=6.9
K22A Casper 151.61 277 PKPdf PKPdf 17 12 35.3 +0.1
K22A PKPbc PKPbc 17 12 41.2 -0.2
K22A IAMs_20 IAMs_20 18 30 25.1
comp=Z,2µm,21.0s
WUAZ Wupatki 151.69 260 P PKPdf 17 12 37.5 +1.9
baz=123
WUAZ Wupatki 151.69 260 PKPdf PKPdf 17 12 35.4 -0.2
WUAZ IAMs_20 IAMs_20 18 33 29.3
comp=Z,2µm,21.0s
SPX San Pedro Mart 151.69 248 PKPbc PKPbc 17 12 40.2 -1.9
113A Mohawk Valley, 151.69 253 PKPdf PKPdf 17 12 35.0 -0.3
113A PKiKP 17 12 41.9 -0.2
113A IAMs_20 IAMs_20 18 28 35.5
comp=Z,2µm,20.0s
DGMT Dagmar 151.71 290 IAMs_20 IAMs_20 18 20 44.2
comp=Z,2µm,20.0s
RWWY Rawlins 151.72 275 PKPdf PKPdf 17 12 34.9 -0.6
O20A White River Ci 151.79 271 P PKPdf 17 12 36.8 +1.3
baz=116
O20A White River Ci 151.79 271 PKPbc 17 12 41.6 -0.3
O20A IAMs_20 IAMs_20 18 35 05.1
comp=Z,2µm,20.0s
Y14A Wickenburg 151.89 256 PKPdf 17 12 35.7 0.0
Y14A PKPbc PKiKP 17 12 42.5 0.0
Y14A IAMs_20 IAMs_20 18 27 57.0
comp=Z,2µm,20.0s
GLA Glamis 152.56 252 PKIKP PKPdf 17 12 36.5 -0.2
GLA 17 12 44.3
GLA MLR MLR
comp=Z,2µm,20.0s
GLA Glamis 152.56 252 P PKPdf 17 12 37.6 +0.9
baz=128
GLA Glamis 152.56 252 PKPdf PKPdf 17 12 36.5 -0.2
GLA PKiKP 17 12 44.3 +0.3
GLA IAMs_20 IAMs_20 18 29 53.4
comp=Z,2µm,20.0s
ESJX Sierra Juarez 152.63 249 IAMs_20 IAMs_20 18 30 46.2
comp=Z,2µm,21.0s
LAO LASA Array 152.64 285 P PKPdf 17 12 38.0 +1.6
baz=104
LAO LASA Array 152.64 285 IAMs_20 IAMs_20 18 09 15.1
comp=Z,2µm,22.0s
UABX UABC, Campus M 152.71 251 IAMs_20 IAMs_20 18 20 20.2
comp=Z,2µm,20.0s
U15A North Rim 152.81 261 IAMs_20 IAMs_20 18 27 33.1
comp=Z,2µm,22.0s
PDMCI Parker Dam,Lak 152.87 255 P PKPdf 17 12 38.8 +1.8
baz=126
RDMU Red Mountain 152.90 271 PKPbc 17 12 43.9 -0.5
IKP In-Ko-Pah, Jac 153.15 250 P PKPdf 17 12 39.7 +2.0
baz=130
W13A Hualapai Mount 153.16 257 PKPdf PKPdf 17 12 36.9 -0.9
W13A PKPbc PKPbc 17 12 45.1 -0.1
W13A IAMs_20 IAMs_20 18 33 31.5
comp=Z,2µm,21.0s
P17A Butcher Ranch, 153.23 268 PKPbc 17 12 44.3 -0.9
Q16A Castle Valley 153.28 266 PKPdf PKPdf 17 12 37.6 -0.2

Q16A					PKPbc	17 12 44.5	-0.8	
CBX	Cerro Bola	153.30	249		PKPbc	17 12 44.3	-1.1	
PKCU	Pink Cliffs	153.34	263	PKPdf	PKPdf	17 12 38.0	-0.1	
BC3	Big Chuckawall baz=128	153.35	252	P	PKPdf	17 12 40.3	+2.4	
IRM	Iron Mountain baz=127	153.45	254	P	PKPdf	17 12 40.2	+2.3	
TMUT	Trail Mountain	153.47	267		PKPdf	17 12 38.0	-0.2	
KNB	Kanab	153.48	261	PKIKP	PKPdf	17 12 38.0	-0.1	
KNB	Kanab	153.48	261		PKPdf	17 12 38.0	-0.1	
MONP2	Monument Peak baz=130	153.51	250	P	PKPdf	17 12 40.4	+2.1	
BAR	Barrett comp=Z,2μm,20.0s	153.54	249	IAMs_20	IAMs_20	18 22 41.1		
MTPU	Mount Pierson	153.56	264		PKPdf	17 12 37.6	-0.8	
BW06	Boulder Array baz=111,SNR=9.5	153.74	275	P	PKPdf	17 12 40.0	+1.6	
PDAR	Pinedale Array comp=Z,1.1nm,0.6s,baz=109,slow=4.9,SNR=5.9	153.74	275	PKP	PKPdf	17 12 37.7	-0.7	
PDAR	comp=Z,5.1nm,0.8s,baz=116,slow=3.4,SNR=7.6			PKPbc	PKPbc	17 12 45.5	-0.7	
PDAR	comp=Z,20nm,0.9s,baz=104,slow=4.9,SNR=9.9			PKPab	pPKPab	17 13 01.5	-0.1	
LCMT	Little Creek M	153.76	261		PKPdf	17 12 38.0	-0.5	
MSU	Marysvale	153.78	265	PKIKP	PKPdf	17 12 38.7	+0.1	
MSU	Marysvale	153.78	265	PKPdf	PKPdf	17 12 38.7	+0.1	
MVU	Marysvale	153.80	265	PKPbc	PKiKP	17 12 47.3	+0.7	
BELC	Belle Mtn. Jos baz=128	153.92	252	P	PKPdf	17 12 40.9	+2.1	
109C	Camp Elliot, M comp=Z,2μm,21.0s	153.95	249	IAMs_20	IAMs_20	18 32 27.3		
SZCU	Shurtz Canyon	153.95	262		PKPdf	17 12 39.4	+0.6	
CCUT	Cedar City	154.12	262	PKPdf	PKPdf	17 12 39.7	+0.6	
GMRC	Granite Mounta baz=126	154.16	254	P	PKPdf	17 12 41.0	+1.9	
RLMT	Red Lodge baz=106	154.28	281	P	PKPdf	17 12 41.0	+2.0	
RLMT	Red Lodge comp=Z,2μm,22.0s	154.28	281	IAMs_20	IAMs_20	18 21 39.1		
TCUT	Toone Canyon	154.39	271	PKPdf	PKPdf	17 12 38.9	-0.5	
C36M	Paulatuk baz=37	154.45	342	P	PKPdf	17 12 41.6	+3.4	
C36M	Paulatuk	154.45	342	PKPdf	PKPdf	17 12 39.2	+1.0	
A21K	Barrow baz=343	154.53	8	P	PKPdf	17 12 41.2	+3.0	
A21K	Barrow	154.53	8		PKiKP	17 12 47.5	+0.8	
A21K	comp=Z,2μm,21.0s			IAMs_20	IAMs_20	18 19 20.7		
HEC	Hector,Ludlow baz=126	154.64	254	P	PKPdf	17 12 40.4	+0.7	
GCMT	Greycliff	154.73	282		PKiKP	17 12 48.5	+0.3	
SHPR	Sheep Range comp=Z,2μm,21.0s	154.80	258	IAMs_20	IAMs_20	18 31 52.9		
AHID	Auburn Hatcher	154.80	275		PKPbc	17 12 48.0	-0.4	
AHID	comp=Z,3μm,22.0s			IAMs_20	IAMs_20	18 11 31.0		
TPAW	Teton Pass	154.94	276		PKPdf	17 12 39.5	-0.6	
TPAW	comp=Z,2μm,20.0s			IAMs_20	IAMs_20	18 12 41.5		
PSUT	Pine Spring	154.94	263	PKPdf	PKPdf	17 12 40.4	+0.2	
H17A	Grant Village baz=107	154.97	278	P	PKPdf	17 12 41.0	+0.9	
H17A	Grant Village	154.97	278		PKPdf	17 12 40.0	-0.1	
DUG	Dugway, Tooele	154.98	268	PKIKP	PKPdf	17 12 40.2	+0.1	
DUG	comp=Z,2μm,21.0s			MLR	MLR			
DUG	Dugway, Tooele baz=116	154.98	268	P	PKPdf	17 12 40.6	+0.5	
DUG	Dugway, Tooele	154.98	268	PKPdf	PKPdf	17 12 40.2	+0.1	
DUG	comp=Z,2μm,21.0s			IAMs_20	IAMs_20	18 29 03.9		
IMW	Indian Meadow	155.06	277	PKPdf	PKPdf	17 12 40.1	-0.2	
YNR	Norris Junctio	155.13	279	PKPdf	PKPdf	17 12 40.1	-0.1	
BFSC	Mount Baldy Ra baz=128	155.16	251	P	PKPdf	17 12 40.8	+0.3	
PRN	Pahroc Range	155.20	260	PKPdf	PKPdf	17 12 40.9	+0.4	
GSC	Goldstone, Bar comp=Z,2μm,20.0s	155.23	254	IAMs_20	IAMs_20	18 33 37.3		
YHH	Holmes Hill	155.27	279	PKPdf	PKPdf	17 12 40.5	-0.1	
EGMT	Eagleton baz=100	155.27	287	P	PKPdf	17 12 41.8	+1.7	
EGMT	Eagleton comp=Z,2μm,20.0s	155.27	287	IAMs_20	IAMs_20	18 13 50.9		
YMR	Madison River	155.31	279		PKPdf	17 12 40.4	-0.1	
BGU	Big Grassy Mou	155.44	269	PKPdf	PKPdf	17 12 40.6	-0.1	
PASC	Pasadena Art C comp=Z,2μm,21.0s	155.46	250	IAMs_20	IAMs_20	18 38 39.1		
SPR3	Spring Creek 3 comp=Z,2μm,20.0s	155.49	264	IAMs_20	IAMs_20	18 30 11.4		
YHB	Horse Butte	155.49	279		PKPdf	17 12 40.6	-0.1	
YHL	Hebgen Lake	155.51	279		PKPdf	17 12 40.9	0.0	
SNCC	San Nicolas Is baz=131	155.73	247	P	PKPdf	17 12 42.4	+1.2	
EDW2	Edwards Air Fo baz=127	155.76	252	P	PKPdf	17 12 42.4	+1.2	
TPNV	Topopah Spring	155.77	258	PKIKP	PKPdf	17 12 41.6	+0.3	
TPNV	comp=Z,2μm,22.0s			MLR	MLR			
TPNV	Topopah Spring baz=122	155.77	258	P	PKPdf	17 12 42.5	+1.2	
TPNV	Topopah Spring comp=Z,2μm,22.0s	155.77	258	PKPdf	PKPdf	17 12 41.6	+0.3	
				IAMs_20	IAMs_20	18 32 44.8		
YKA	Yellowknife Ar comp=Z,7.1nm,1.1s,baz=35,slow=1.5,SNR=3.1	155.89	323	PKP	PKPdf	17 12 38.7	-1.6	
YKA	comp=Z,22nm,0.9s,baz=64,slow=4.2,SNR=16			PKPab	PKPab	17 13 08.2	+0.8	
LRMC	Laurel Mtn Rad baz=126	155.91	253	P	PKPdf	17 12 43.4	+2.0	
FURC	Furnace Creek, baz=124	155.93	256	P	PKPdf	17 12 42.3	+1.0	
BOZ	Bozeman (W) baz=104	156.01	281	P	PKPdf	17 12 42.0	+0.7	
R11A	Troy Canyon, C baz=120,SNR=8.1	156.04	261	P	PKPdf	17 12 42.6	+1.0	
R11A	Troy Canyon, C	156.04	261	PKPdf	PKPdf	17 12 41.7	+0.1	
R11A	comp=Z,2μm,20.0s			IAMs_20	IAMs_20	18 30 00.8		
OSI	Osito Audit: C comp=Z,2μm,19.0s	156.08	250	IAMs_20	IAMs_20	18 33 29.7		
MPMC	Manual Prospec baz=125,SNR=11	156.12	255	P	PKPdf	17 12 42.6	+0.7	
HRY	Holter Researc	156.41	283		PKPdf	17 12 41.5	-0.2	
ISA	Isabella, Lake baz=126,SNR=9.1	156.54	253	P	PKPdf	17 12 43.8	+1.6	
DLMT	Dillon comp=Z,2μm,20.0s	156.61	280	IAMs_20	IAMs_20	18 25 54.6		
SBC	Santa Barbara baz=129	156.62	249	P	PKPdf	17 12 43.5	+1.3	
RDOG	Red Dog Mine comp=Z,2μm,20.0s	156.67	16	IAMs_20	IAMs_20	18 37 34.5		
CWC	Cottonwood Cre baz=124	156.72	255	P	PKPdf	17 12 43.7	+1.1	
BCYI	Bear Canyon	156.88	277		PKPdf	17 12 42.7	+0.1	
ELK	Elko	156.89	267	PKIKP	PKPdf	17 12 42.1	-0.6	
ELK	comp=Z,2μm,19.0s			MLR	MLR			
ELK	Elko	156.89	267	PKPdf	PKPdf	17 12 42.1	-0.6	
PKM	Mcpherson Peak baz=128,SNR=7.1	156.96	249	P	PKPdf	17 12 43.3	+0.4	
INK	Inuvik comp=Z,2.2nm,0.9s,baz=323,slow=5.3,SNR=4.2	157.09	348	PKP	PKPdf	17 12 41.6	-0.2	
INK	comp=Z,24nm,0.9s,baz=356,slow=7.1,SNR=17			PKPab	PKPab	17 13 12.8	+0.4	
INK	Inuvik	157.09	348		PKPdf	17 12 41.8	+0.1	
HLID	Hailey baz=108	157.35	274	P	PKPdf	17 12 45.3	+2.2	
TNA	Tin City baz=318	157.53	24	P	PKPdf	17 12 43.9	+1.6	
TOLK	Toolik Lake Re baz=354	157.64	3	P	PKPdf	17 12 44.0	+1.4	
MSO	Missoula baz=101	157.85	283	P	PKPdf	17 12 44.7	+1.2	
MSO	Missoula	157.85	283	PKPab	PKPab	17 13 17.1	+0.5	
NVAR	Mina Array Bea comp=Z,2.3nm,1.0s,baz=162,slow=1.9,SNR=7.8	157.93	259	PKP	PKPdf	17 12 45.7	+1.6	
NVAR	comp=Z,9.8nm,0.9s,baz=136,slow=4.8,SNR=11			PKPab	PKPab	17 13 17.7	+0.4	
NVAR	Mina Array Bea	157.93	259		PKPab	17 13 16.8	-0.5	
RYN	Ryan comp=Z,2μm,21.0s	158.18	259	IAMs_20	IAMs_20	18 24 07.4		
JTMT	Jette	158.23	285		PKPdf	17 12 43.0	-1.0	
MFID	Camas Ranch	158.28	273	PKPdf	PKPdf	17 12 43.1	-1.1	
PLID	Pearl Lake	158.87	277	PKPdf	PKPdf	17 12 44.1	-0.9	
COLD	Coldfoot baz=352	159.03	4	P	PKPdf	17 12 46.1	+1.9	
CMB	Columbia Colle comp=Z,2μm,19.0s	159.14	256	IAMs_20	IAMs_20	18 33 43.7		
PNTR	Pine Nut	159.14	259	PKPab	PKPab	17 13 23.1	+0.6	
VCNR	Virginia City comp=Z,2μm,21.0s	159.27	260	IAMs_20	IAMs_20	18 27 44.4		
RUBR	Rubicon Trail comp=Z,2μm,20.0s	159.50	258	IAMs_20	IAMs_20	18 27 24.3		
BMO	Blue Mountains	159.71	276	PKIKP	PKPdf	17 12 45.0	-0.8	
BMO	comp=Z,2μm,20.0s			MLR	MLR			
BMO	Blue Mountains	159.71	276		PKPdf	17 12 45.0	-0.8	
WVOR	Wild Horse Val	159.89	269	PKIKP	PKPdf	17 12 45.8	-0.4	
WVOR	comp=Z,2μm,20.0s			MLR	MLR			
WVOR	Wild Horse Val	159.89	269		PKPdf	17 12 45.8	-0.4	
BEKR	Beckworth	160.03	260		PKPdf	17 12 45.6	-0.9	
J08A	Circle Bar Ran	160.09	271		PKPdf	17 12 45.7	-0.6	
NEW	Newport	160.19	286	PKP2	PKPab	17 13 26.5	-0.1	
NEW	Newport baz=95	160.19	286	P	PKPdf	17 12 48.1	+2.0	
NEW	Newport	160.19	286	PKPab	PKPab	17 13 26.4	-0.1	
E09A	Wood Farm, Sta	160.64	281		PKPdf	17 12 45.4	-1.3	
MOD	Modoc Plateau	160.85	266	PKPdf	PKPdf	17 12 46.8	-0.5	
G08A	Pilot Rock	160.95	277	PKPdf	PKPdf	17 12 46.7	-0.5	
I07A	Izee	161.02	273		PKPdf	17 12 47.0	-0.3	
I23K	Minto, Yukon-K baz=353	161.14	4	P	PKPdf	17 12 48.5	+1.9	
I23K	Minto, Yukon-K	161.14	4		PKPab	17 13 31.1	+1.0	
MLY	Manley baz=350	161.18	6	P	PKPdf	17 12 47.7	+0.9	
POKR	Poker Plat Res baz=357	161.24	1	P	PKPdf	17 12 47.7	+1.0	
D08A	Wollman Farm,	161.25	282	PKPab	PKPab	17 13 31.3	+0.1	
MDM	Murphy Dome	161.37	3		PKPab	17 13 31.2	0.0	
K05A	Summer Lake	161.56	268	PKPdf	PKPdf	17 12 48.1	0.0	
HAWA	Hanford	161.57	280	PKPab	PKPab	17 13 33.6	+1.0	
IL31		161.59	1		PKPab	17 13 31.6	-0.4	
ILAR	Eielson Array comp=Z,2.4nm,1.1s,baz=6.9,slow=1.2,SNR=6.2	161.59	1	PKP	PKPdf	17 12 47.3	+0.2	
ILAR	comp=Z,6.2nm,0.7s,baz=340,slow=3.4,SNR=19			PKPab	PKPab	17 13 31.9	-0.1	
B08A	Colville Reser	161.67	286	PKPdf	PKPdf	17 12 47.0	-0.8	
CCB	Clear Creek Bu	161.70	2		PKPab	17 13 32.4	-0.1	
E07A	Sunnyside	161.81	280		PKPdf	17 12 47.0	-0.9	
O02D	Mt. Diablo Mer baz=118	161.82	258	P	PKPdf	17 12 48.4	+0.2	
WDC	Whiskeytown Da	161.84	260	PKIKP	PKPdf	17 12 47.4	-0.7	
WDC	Whiskeytown Da	161.84	260		PKPdf	17 12 47.4	-0.7	
M04C	Macdoel baz=113	161.86	264	P	PKPdf	17 12 49.2	+0.9	
DAWY	Dawson	161.89	350	PKPdf	PKPdf	17 12 46.5	-1.0	
PNT	Penticton	161.90	289	PKP2	PKPab	17 13 23.1	-11	
PNT	comp=Z,2μm,20.0s			MLR	MLR			
PINE	Pine Mountain	161.93	271		PKPdf	17 12 47.7	-0.7	
HDA	Harding Lake baz=358	161.95	1	P	PKPdf	17 12 49.3	+1.8	
HDA	Haring Lake	161.95	1		PKPab	17 13 33.4	-0.2	
J05D	Fort Rock, OR baz=109	161.98	269	P	PKPdf	17 12 49.5	+1.1	
BPAW	Bear Paw Mtn.	162.08	7		PKPab	17 13 33.8	-0.5	
N02D	Trinity Center baz=116	162.12	261	P	PKPdf	17 12 49.3	+0.8	
SCRK	Sand Creek baz=5.1	162.34	357	P	PKPdf	17 12 49.0	+0.9	
L04D	Klamath Falls baz=112	162.35	265	P	PKPdf	17 12 49.0	+0.2	
M02C	Callahan baz=114	162.40	262	P	PKPdf	17 12 49.0	+0.3	
G05D	Wamic, OR baz=103	162.56	275	P	PKPdf	17 12 49.2	+0.5	
J04D	Umpqua Nationa baz=109	162.57	268	P	PKPdf	17 12 49.2	+0.1	
MCK	McKinley baz=354	162.57	4	P	PKPdf	17 12 48.7	+0.5	
TRF	Thorofare Moun	162.77	6		PKPab	17 13 37.1	-0.4	
HUMO	Hull Mountain	162.94	266		PKPdf	17 12 48.3	-0.9	
I04A	Tendick Farm, baz=107	162.95	270	P	PKPdf	17 12 49.2	0.0	
L02E	Cave Junction baz=112	163.22	264	P	PKPdf	17 12 49.8	+0.4	
L26K	Log Cabin Wild baz=6.9	163.26	355	P	PKPdf	17 12 49.3	+0.4	
H04D	Lebanon baz=105	163.38	272	P	PKPdf	17 12 50.8	+1.3	
K02D	Willamette Mer baz=111	163.46	265	P	PKPdf	17 12 50.9	+1.1	
B05A	Bryant baz=92	163.50	285	P	PKPdf	17 12 50.1	+0.6	
I03D	Drain, OR baz=107	163.57	269	P	PKPdf	17 12 50.2	+0.5	
E04D	Cinebar baz=98	163.66	279	P	PKPdf	17 12 50.6	+0.9	
J01E	Myrtle Point baz=109	163.80	267	P	PKPdf	17 12 50.8	+0.9	
A04D	Lummi Island baz=90	163.92	287	P	PKPdf	17 12 51.7	+1.9	
I02D	Swisshome baz=106	164.03	270	P	PKPdf	17 12 51.7	+1.6	
D03D	Eldon baz=94	164.12	283	P	PKPdf	17 12 50.7	+0.6	
M24K	Tolsona, Glenn baz=0.1	164.27	360	P	PKPdf	17 12 50.3	+0.5	
HYT	Haines Junctio	164.66	344		PKPab	17 13 47.3	+1.5	
RC01	Rabbit Creek A baz=350	165.15	7	P	PKPdf	17 12 52.1	+1.6	

IDC ***17*** *16:56:38.8±1.9, 10°.97S×164°.94E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.6/40, mbtmp3.8/5, ML3.9/1, MS2.8/2, Ms1 2.8/2, ms1mx2.8/37, Error ellipse: s-maj=50.0km s-min=33.1km az=123.0*

NEIC ***17*** *16:56:42.0±0.6, 10°.9S±0°.2×165°.31E±0°.09, h50km±6km, mb4.0/6, Error ellipse: s-maj=23.4km s-min=11.3km az=160.0*

ISC 17 16:56:43.5±1.4, 11°.2S±0°.1×165°.1E±0°.2, h31km, n19, σ1§15/12, mb3.8/7, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	4.71	154	Pn	Pn	16 57 53.2	+0.8
HNR	Honiara	5.33	289	LR	LR	17 00 07.7	
	comp=Z,83nm,18.3s,baz=131,slow=40						
DZM	Mont Dzumac	10.89	173	Pn	Pn	16 59 19.0	+1.6
	0.8nm,0.3s,baz=336,slow=16,SNR=18						
DZM				Sn	Sn	17 01 16.1	-2.3
	0.1nm,0.3s,baz=218,slow=22,SNR=1.3						
KRVT	Keravat (AS076	14.61	297	LR	LR	17 05 14.4	
	comp=Z,40nm,21.3s,baz=147,slow=36						
H11S2	WAKE ISLAND Hy	29.55	3	T	T	17 33 53.7	
	baz=185						
H11S3	WAKE ISLAND Hy	29.55	3	T	T	17 33 55.6	
	baz=185						
H11S1	WAKE ISLAND Hy	29.56	3	T	T	17 33 46.7	
	baz=185						
STKA	Stephens Creek	29.87	223	P	P	17 02 49.2	+0.9
	1.2nm,0.9s,baz=82,slow=7.1,SNR=1.7						
STKA	Stephens Creek	29.87	223	P	P	17 02 49.2	+0.9
WB0	Warramunga Arr	30.72	250	P	P	17 02 55.6	-0.3
WB0				IAmb	IAmb	17 03 24.1	
	comp=Z,8.4nm,1.4s						
H11N1	WAKE ISLAND Hy	30.77	3	T	T	17 35 07.0	
	baz=186						
H11N3	WAKE ISLAND Hy	30.77	3	T	T	17 35 14.8	
	baz=186						
H11N2	WAKE ISLAND Hy	30.79	3	T	T	17 35 18.0	
	baz=186						
WB2	Warramunga Arr	30.79	250	P	P	17 02 56.0	-0.7
WB2				IAmb	IAmb	17 02 57.9	
	comp=Z,3.6nm,1.1s						
WRA	Warramunga Arr	30.80	250	P	P	17 02 56.5	-0.3
	comp=Z,0.6nm,0.8s,baz=80,slow=9.1,SNR=8.2						
AS31	Alice Springs	32.12	243	P	P	17 03 08.1	-0.3
AS31				IAmb	IAmb	17 03 36.9	
	comp=Z,1.3nm,1.4s						
ASAR	Alice Springs	32.13	243	P	P	17 03 08.1	-0.4
	comp=Z,0.6nm,0.5s,baz=64,slow=10,SNR=27						
KNRA	Kununurra	35.56	259	P	P	17 03 37.2	-1.1
ILAR	Eielson Array	83.87	19	P	P	17 09 09.3	-0.5
	comp=Z,0.8nm,1.1s,baz=233,slow=4.4,SNR=2.7						

NAO ***17*** *17:16:56.7±1.4, 72°.41N×1°.75E, ML4.0*

IDC ***17*** *17:16:57.9±0.5, 72°.41N×1°.66E, h0km, mb4.2/23,*

mb1 4.3/27, mb1mx4.2/46, mbtmp4.2/27, ML3.6/3, MS4.4/5, Ms1 4.4/5, ms1mx3.8/61, Error ellipse: s-maj=14.1km s-min=10.8km az=41.0

MOS ***17*** *17:16:57.9±0.9, 72°.46N×1°.81E, h10km, mb4.7/42, Error ellipse: s-maj=16.4km s-min=3.5km az=96.8*

NEIC ***17*** *17:16:59.3±2.1, 72°.42N±0°.05×1°.9E±0°.2, h10km±1km, mb4.7/87, Error ellipse: s-maj=11.6km s-min=7.1km az=308.0*

BER ***17*** *17:17:00.4±3.5, 72°.43N×1°.72E, h11km±17km, ML3.0, ML4.0(NAO), Confirmed Earthquake*

DNK ***17*** *17:17:02.1±1.5, 72°.72N×0°.73E, h6km±40km, ML3.0*

HEL ***17*** *17:17:06.8±0.4, 72°.39N×3°.78E, h10km, ML2.8, Confirmed Earthquake*

BGR ***17*** *17:17:08.4±0.0, 71°.79N×3°.79E, h10km, mb4.6*

ISC 17 17:16:59.7±0.7, 72°.45N±0°.04×1°.74E±0°.05, h11km±4km, n497, σ1§58/513, mb4.6/138, 29C-16D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	Jan Mayen East	3.48	250	eP	Pn	17 17 52.7	-0.9
JNW	Jan Mayen West	3.50	251	eP	Pn	17 17 53.0	-0.9
JMIC	Jan Mayen	3.54	250	Pn	Pn	17 17 53.4	-1.1
	baz=90,slow=7.2,SNR=7.3						
JMIC	Jan Mayen	3.54	250	Pn	Pn	17 17 53.5	-1.0
JMIC	Jan Mayen	3.54	250	eP	Pn	17 17 53.1	-1.4
JMI	Jan Mayen	3.64	250	eP	Pn	17 17 54.9	-0.8
BJO1	Bjornoya	5.33	59	Pn	Pn	17 18 17.9	-1.1
BJO1				Sn	Sn	17 19 16.0	-4.3
BJO1	Bjornoya	5.33	59	eP	Pn	17 18 18.2	-0.8
BJO1				eS	Sn	17 19 16.0	-4.3
BJO1				IAML		17 19 52.7	
	comp=Z,88nm,0.7s						
HSPB	Hornsund (broa	5.83	32	Pn	Pn	17 18 24.3	-1.6
HSPB				Sn	Sn	17 19 27.0	-5.6
HSPB	Hornsund (broa	5.83	32	eP	Pn	17 18 24.0	-1.8
HSPB				eS	Sn	17 19 24.6	-8.0
LOF	Lofoten	5.88	132	Pn	Pn	17 18 24.8	-1.8
LOF				Sn	Sn	17 19 24.4	-9.5
LOF	Lofoten	5.88	132	eP	Pn	17 18 24.7	-1.8
LOF				eS	Sn	17 19 23.4	-10
LOF				IAML		17 19 30.5	
	comp=Z,36nm,0.5s						
N2SV	S_rv¥gen	5.96	135	eP	Pn	17 18 25.1	-2.6
N2VA	Vr_y	6.08	137	eP	Pn	17 18 26.5	-2.8
N2RO	R_st	6.09	139	eP	Pn	17 18 27.6	-1.9
TRO	Tromso	6.26	108	eP	Pn	17 18 30.1	-1.6
TRO				eS	Sn	17 19 32.2	-11
TRO	Tromso	6.26	108	i/P	Pn	17 18 30.1	-1.6
TRO				eS	Sn	17 19 32.8	-10
TRO				IAML		17 19 37.3	
	comp=Z,53nm,0.6s						
STEI	Steigen	6.44	128	eP	Pn	17 18 31.7	-2.5
STEI				eS	Sn	17 19 37.8	-10
STEI				IAML		17 19 44.1	
	comp=Z,27nm,0.5s						
BRBB	Barentsburg B	6.48	23	Pn	Pn	17 18 33.3	-1.5
BRBB	Barentsburg B	6.48	23	eP	Pn	17 18 33.5	-1.2
BRBB				eS	Sn	17 19 46.2	-2.3
DBG	Daneborg	6.55	297	Pn	Pn	17 18 32.1	-3.6
DBG	Daneborg	6.55	297	e	Pn	17 18 31.4	-4.2
	baz=99,slow=12						
DBG				eP	Pn	17 18 32.9	-2.8
DBG				eS	Sn	17 19 39.8	-10
DBG	Daneborg	6.55	297	e	Pn	17 18 31.4	-4.2
	baz=99,slow=12						
DBG				i P	Pn	17 18 32.3	-3.4
DBG				i S	Sn	17 19 39.1	-11
N2IH	Innhavet	6.58	126	eP	Pn	17 18 34.6	-1.5
N2TV	TYrnvik	6.70	130	eP	Pn	17 18 35.6	-2.2
NBB08	Skaug oppvekst	6.73	133	eP	Pn	17 18 35.8	-2.5
SPB3	Spitsbergen Ar	6.82	26	Pn	Pn	17 18 38.7	-0.7
SPA3	Spitsbergen Ar	6.82	26	Pn	Pn	17 18 38.7	-0.8
SPB4	Spitsbergen Ar	6.82	26	Pn	Pn	17 18 37.8	-1.7
SPB2	Spitsbergen Ar	6.82	26	Pn	Pn	17 18 38.5	-0.9
SPA0	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 38.6	-0.9
	baz=220,slow=12						
SPA0				Sn	Sn	17 19 52.8	-4.2
	baz=212,slow=18						
SPA0	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 38.6	-0.9
SPA0	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 38.6	-0.9
	baz=220,slow=12						
SPA0				Sn	Sn	17 19 52.8	-4.2
	baz=212,slow=18						
SPA2	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 38.7	-0.8
SPITS	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 38.9	-0.6
	baz=210,slow=16,SNR=175						
SPITS				Sn	Sn	17 19 51.3	-5.7
	baz=212,slow=27,SNR=0.7						
SPA1	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 38.6	-0.9
SPB1	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 37.6	-1.9
SPB5	Spitsbergen Ar	6.83	26	Pn	Pn	17 18 37.6	-2.0
NBB28	Valnes	6.86	134	eP	Pn	17 18 37.6	-2.3
FAUS	Fauske	6.89	131	eP	Pn	17 18 38.4	-1.9
FAUS				eS	Sn	17 19 46.3	-12
FAUS				IAML		17 19 51.8	
	comp=Z,23nm,0.5s						
NBB30	Finnes	6.89	137	eP	Pn	17 18 38.1	-2.2
NBB05	Inndyr	6.89	136	eP	Pn	17 18 38.1	-2.3
DAG	Danmarks Havn	6.91	318	eP	Pn	17 18 38.0	-2.6
DAG				eS	Sn	17 19 47.4	-12
DAG				IAML		17 19 54.1	
	comp=Z,7.6nm,0.4s						
DAG	Danmarks Havn	6.91	318	e	Pn	17 18 35.2	-5.4
	baz=119,slow=16						
DAG				i P	Pn	17 18 38.0	-2.6
DAG				i S	Sn	17 19 48.1	-11
DAG				IAML		17 19 54.1	
	comp=Z,7.6nm,0.4s						
KBS	Kingsbay	6.97	16	ceP	Pn	17 18 40.3	-1.2
KBS				pmax	pmax		
	comp=Z,37nm,0.7s						
KBS	Kingsbay	6.97	16	Pn	Pn	17 18 40.3	-1.2
KBS	Kingsbay	6.97	16		Pn	17 18 40.1	-1.3
KBS	Kingsbay	6.97	16	eP	Pn	17 18 40.2	-1.2
KBS	Kingsbay	6.97	16	i P	Pn	17 18 41.4	-0.1
N2ST	Straumen	6.98	130	eP	Pn	17 18 40.5	-1.2
NBB17	Glomfjord BVr	7.07	137	eP	Pn	17 18 40.4	-2.4
NBB40	Tonnes	7.14	141	eP	Pn	17 18 42.2	-1.6
KIF	Kilpisjarvi	7.17	109	Pn	Pn	17 18 42.1	-2.2
KIF				Sn	Sn	17

baz=309,slow=22
ARA0 ARCESS Array S 8.25 99 *e*P **Pn** **17 18 57.2 -1.9**
ARA0 eS Sn 17 20 20.7 -11
ARA0 ARCESS Array S 8.25 99 Pn **Pn** **17 18 57.1 -1.9**
ARA0 ARCESS Array S 8.25 99 Pn **Pn** **17 18 56.7 -2.4**
baz=293,slow=11
ARA0 Sn Sn 17 20 23.4 -8.8
baz=309,slow=22
ARC5 ARCESS Array S 8.25 99 Pn **Pn** **17 18 57.5 -1.5**
ARCES ARCESS Array B 8.25 99 Pn **Pn** **17 18 56.8 -2.3**
baz=308,slow=13,SNR=55
ARCES Sn Sn 17 20 23.3 -8.8
baz=305,slow=21,SNR=7.0
ARA2 ARCESS Array S 8.26 99 **Pn** **17 18 57.0 -2.1**
ARD6 ARCESS Array S 8.26 99 **Pn** **17 18 57.0 -2.1**
ARB2 ARCESS Array S 8.26 99 **Pn** **17 18 56.8 -2.3**
ARB3 ARCESS Array S 8.26 99 **Pn** **17 18 56.8 -2.3**
ARD2 ARCESS Array S 8.26 99 **Pn** **17 18 57.2 -2.0**
ARC2 ARCESS Array S 8.26 99 **Pn** **17 18 57.2 -2.0**
ARC4 ARCESS Array S 8.26 99 **Pn** **17 18 57.5 -1.7**
ARC3 ARCESS Array S 8.26 99 **Pn** **17 18 57.4 -1.7**
ARD5 ARCESS Array S 8.26 99 Pn **Pn** **17 18 57.0 -2.2**
ARD3 ARCESS Array S 8.27 99 Pn **Pn** **17 18 57.8 -1.4**
ARD4 ARCESS Array S 8.27 99 **Pn** **17 18 57.6 -1.7**
KEV Kevo 8.59 96 P **Pn** **17 19 02.0 -1.7**
KEV Kevo 8.59 96 *e*P **Pn** **17 19 00.5 -3.2**
KEV eS Sn 17 20 28.9 -12
KEV Kevo 8.59 96 Pn **Pn** **17 19 02.0 -1.7**
KEV Kevo 8.59 96 *e*P **Pn** **17 19 00.5 -3.2**
KEV eS Sn 17 20 28.9 -12
NSS Namsos 8.78 150 *e*P **Pn** **17 19 04.1 -2.1**
SGF Sodankyl 9.82 108 *e*P **Pn** **17 19 17.9 -2.6**
SGF eS Sn 17 20 57.5 -13
SGF MSN 17 21 05.1
comp=Z,0.9nm,0.1s
SGF Sodankyl 9.82 108 *e*P **Pn** **17 19 17.9 -2.6**
SGF eS Sn 17 20 57.5 -13
SGF MSN 17 21 05.1
comp=Z,0.9nm,0.1s
TOF Tornio 10.17 118 *e*P **Pn** **17 19 22.2 -3.1**
TOF eS Sn 17 21 06.1 -13
TOF MSN 17 21 15.8
comp=Z,1.2nm,0.2s
TOF Tornio 10.17 118 *e*P **Pn** **17 19 22.2 -3.1**
TOF eS Sn 17 21 06.1 -13
TOF MSN 17 21 15.8
comp=Z,1.2nm,0.2s
RNF Rovaniemi 10.25 113 *e*P **Pn** **17 19 23.7 -2.7**
RNF eS Sn 17 21 07.2 -14
RNF MSN 17 21 15.4
comp=Z,1.5nm,0.2s
RNF Rovaniemi 10.25 113 *e*P **Pn** **17 19 23.7 -2.7**
RNF eS Sn 17 21 07.2 -14
RNF MSN 17 21 15.4
comp=Z,1.5nm,0.2s
AKN Aaknes 10.51 166 Pn **Pn** **17 19 28.5 -1.4**
AKN Sn Sn 17 21 16.1 -11
AKN Aaknes 10.51 166 Pn **Pn** **17 19 28.5 -1.4**
AKN Sn Sn 17 21 16.1 -11
VRF Varrio 10.52 103 *e*P **Pn** **17 19 27.3 -2.8**
VRF eS Sn 17 21 14.4 -13
VRF Varrio 10.52 103 *e*P **Pn** **17 19 27.3 -2.8**
VRF eS Sn 17 21 14.4 -13
BUU Burvik 10.62 128 *e*P **Pn** **17 19 29.8 -1.6**
BURU eS Sn 17 21 18.5 -11
BURU Burvik 10.62 128 *e*P **Pn** **17 19 29.8 -1.6**
BURU eS Sn 17 21 18.5 -11
DOMB Dombas 10.82 161 *e*P **Pn** **17 19 32.5 -1.7**
BORG Borgarnes 11.34 239 Pn **Pn** **17 19 41.5 +0.2**
comp=Z,0.1nm,0.3s,baz=49,slow=11,SNR=1.1
BORG Sn Sn 17 21 39.0 -8.7
comp=Z,0.2nm,0.3s,baz=68,slow=5.4,SNR=2.6
BORG Borgarnes 11.34 239 **Pn** **17 19 41.4 +0.1**
OUL Oulu 11.36 118 *e*P **Pn** **17 19 37.7 -3.8**
OUL eS Sn 17 21 35.0 -13
OUL Oulu 11.36 118 *e*P **Pn** **17 19 37.7 -3.8**
OUL eS Sn 17 21 35.0 -13
OBF4 Vikkela, Lumij 11.36 121 eS Sn 17 21 35.0 -13
OBF4 Vikkela, Lumij 11.36 121 eS Sn 17 21 35.0 -13
MSF Maaselka 11.60 111 P **Pn** **17 19 43.7 -1.2**
MSF pmax pmax
comp=Z,16nm,0.7s
APA0 Apatity Array 11.62 99 Pn **Pn** **17 19 41.8 -3.3**
baz=331,slow=9.3
APA0 Apatity Array 11.62 99 Pn **Pn** **17 19 41.8 -3.3**
baz=331,slow=9.3
NC204 NORSAR Array S 11.74 158 Pn **Pn** **17 19 45.0 -1.9**
APA Apatity 11.76 99 ⇓*i*P Pn 17 19 52.9 +5.8
APA *i* 17 22 07.0
APA pmax pmax
comp=Z,5.0nm,0.7s
KU6 Riekki 11.77 109 *e*P **Pn** **17 19 43.4 -3.7**
KU6 eS Sn 17 21 42.2 -16
KU6 Riekki 11.77 109 *e*P **Pn** **17 19 43.4 -3.7**
KU6 eS Sn 17 21 42.2 -16
NC303 NORSAR Array S 11.87 157 **Pn** **17 19 46.8 -1.7**
SUMG Summit 11.93 290 *i*P **Pn** **17 19 51.6 +2.0**
SUMG Summit 11.93 290 Pn **Pn** **17 19 48.4 -1.2**
SUMG Summit 11.93 290 *i*P **Pn** **17 19 51.6 +2.0**
SUMG Summit 11.93 290 *i*P **Pn** **17 19 51.6 +2.0**
SUMG Summit 11.93 290 *i*P **Pn** **17 19 51.6 +2.0**
LVZ Lovozero 11.94 96 *i*P **Pn** **17 19 48.9 -0.6**
LVZ pmax pmax
comp=Z,98nm,2.1s
LVZ Lovozero 11.94 96 Pn **Pn** **17 19 46.1 -3.3**
NBO00 NORSAR Array S 11.99 158 Pn **Pn** **17 19 48.9 -1.3**
NC405 NORSAR Array S 12.02 156 Pn **Pn** **17 19 48.9 -1.7**
NB2 NORSAR Subarra 12.03 157 Pn **Pn** **17 19 49.3 -1.4**
baz=341,slow=14
NB2 NORSAR Subarra 12.03 157 Pn **Pn** **17 19 49.3 -1.4**
baz=341,slow=14
NB201 NORSAR Array S 12.03 157 Pn **Pn** **17 19 49.3 -1.5**
NOA NORSAR Array B 12.03 157 Pn **Pn** **17 19 48.3 -2.5**
comp=Z,0.1nm,0.3s,baz=343,slow=13,SNR=5.7
NOA Sn Sn 17 21 50.5 -14
comp=Z,0.1nm,0.3s,baz=284,slow=6.0,SNR=2.1
NOA LR LR 17 24 11.9
comp=Z,723nm,20.9s,baz=160,slow=36
NRA0 NORESS Array S 12.36 157 Pn **Pn** **17 19 54.0 -1.3**
baz=346,slow=18
NRA0 NORESS Array S 12.36 157 Pn **Pn** **17 19 54.0 -1.3**
baz=346,slow=18
HFS Hagfors 13.22 153 Pn Pn 17 20 02.1 -4.9
comp=Z,0.8nm,0.3s,baz=353,slow=11,SNR=18
HFS Sn Sn 17 22 20.5 -13
comp=Z,1.1nm,0.3s,baz=359,slow=24,SNR=9.8
HFS LR LR 17 24 38.5
comp=Z,863nm,21.7s,baz=279,slow=35
KONO Kongsberg 13.22 162 *i*P **Pn** **17 20 08.4 +1.4**
SUF Sumiainen 13.35 124 P **Pn** **17 20 06.7 -2.0**
SUF pmax pmax
comp=Z,31nm,1.7s
FIA0 FINESS Array S 14.42 127 Pn **Pn** **17 20 20.2 -3.2**
baz=337,slow=10
FIA0 FINESS Array S 14.42 127 Pn **Pn** **17 20 20.2 -3.2**
baz=337,slow=10
FIA1 FINESS Array S 14.42 127 Pn **Pn** **17 20 20.1 -3.2**
FINES FINESS Array B 14.42 127 Pn **Pn** **17 20 19.6 -3.8**
comp=Z,0.2nm,0.3s,baz=350,slow=10,SNR=12
FINES Sn Sn 17 22 49.6 -13
comp=Z,0.4nm,0.3s,baz=334,slow=21,SNR=3.7
FINES FINESS Array B 14.42 127 P **Pn** **17 20 19.7 -3.7**
TMCR Tamitsa 15.49 104 *e*P **Pn** **17 20 38.6 +0.9**
TMCR *e* 17 23 34.8
TMCR pmax pmax
comp=Z,39nm,1.4s
PUL Pulkovo 16.92 124 *i*P **Pn** **17 20 56.7 +0.7**
PUL pmax pmax
comp=Z,168nm,0.3s
VSU Vasula 17.22 131 *e*P **Pn** **17 20 59.5 -0.3**
VSU Vasula 17.22 131 *i*P **Pn** **17 21 00.2 +0.4**
VSU pmax pmax
comp=Z,83nm,0.9s
EKA Eskdalemuir Ar 17.30 189 P **Pn** **17 20 55.4 -5.4**
baz=3.9,slow=11,SNR=3.4
EKR7 Eskdalemuir Ar 17.32 189 Pn **Pn** **17 20 58.1 -2.9**
EKR7 IAmb IAmb 17 21 02.8
comp=Z,125nm,1.6s
EKR8 Eskdalemuir Ar 17.32 189 Pn **Pn** **17 20 58.3 -2.7**
EKR8 IAmb IAmb 17 21 02.7
comp=Z,97nm,1.4s
KLMR Klimovskoe 18.51 109 *e*P **P** **17 21 13.4 -2.1**
KLMR pmax pmax
comp=Z,43nm,1.3s
KLMR Klimovskoe 18.51 109 *e*Pn **P** **17 21 13.4 -2.1**
KLMR AMP 17 21 18.5
comp=Z,43nm,1.3s
PABE Paberze 19.37 140 *e*P **P** **17 21 25.2 +0.3**
IZAR Zarasai 19.60 136 *e*P **P** **17 21 26.1 -1.3**
ISAL Salakas 19.75 136 *e*P **P** **17 21 27.8 -1.2**
ISAL IAmb IAmb 17 21 41.8
comp=Z,42nm,1.8s
EUNU Eureka 19.94 329 P **P** **17 21 31.1 +0.1**
IIGN Ignalina 19.97 136 *e*P **P** **17 21 30.5 -1.0**
IIGN IAmb IAmb 17 21 42.1
comp=Z,6.5nm,0.8s
IDID Didziasalis 20.11 135 *e*P **P** **17 21 32.0 -1.0**
NACGM Naroch 20.50 136 *e* Pn 17 21 40.0 +0.5
NACGM *e*LQ LQ 17 45 06.0
NACGM *e*LR LR 17 53 18.0
SUW Suwalki 20.63 142 *e*P **P** **17 21 38.4 -0.2**
SUW Suwalki 20.63 142 P **P** **17 21 38.6 0.0**
SUW Suwalki 20.63 142 P **P** **17 21 38.6 0.0**
CLZ Clausthal 21.02 165 *e*P **P** **17 21 43.7 +0.7**
comp=Z,32nm,1.1s,baz=354,slow=11
NEUB Neuenburg 21.77 163 *e*P **P** **17 21 51.4 +0.4**
comp=Z,79nm,1.0s,baz=354,slow=11
CLL Collm 21.79 161 *e*P **P** **17 21 51.0 -0.1**
comp=Z,9.0nm,1.2s
CLL *es*P **pP** **17 21 54.0 +0.5**
comp=Z,30nm,1.5s
CLL *e* 17 21 59.0
CLL *i* PP **PnPn** **17 22 13.2 +1.2**
CLL Collm 21.79 161 *e*P **P** **17 21 51.0 -0.1**
CLL *e* 17 21 54.0
CLL pmax pmax
comp=Z,9.0nm,1.2s
CLL Collm 21.79 161 *e*P **P** **17 21 50.9 -0.3**
baz=354,slow=11
CLL Collm 21.79 161 P **P** **17 21 50.1 -1.1**
CLL IAmb IAmb 17 22 00.1
comp=Z,30nm,1.4s
MEM Membach 22.00 173 P **P** **17 21 53.1 -0.3**
MEM PnPn **PnPn** **17 22 14.2 -0.6**
MEM Membach 22.00 173 P **P** **17 21 53.4 0.0**
MEM pmax pmax
comp=Z,19nm,1.0s
UBBA Unterbreizbach 22.01 166 *e*P **P** **17 21 54.1 +0.7**
comp=Z,41nm,1.6s,baz=354,slow=11
BGES Gesves 22.19 174 P **P** **17 21 54.6 -0.8**
FBE Freiberg 22.21 160 *e*P **P** **17 21 55.6 0.0**
comp=Z,35nm,1.6s,baz=354,slow=11
BMRD Maredsous 22.26 175 P **P** **17 21 57.8 +1.6**
comp=Z,25nm,2.0s
BMRD PnPn **PnPn** **17 22 18.1 -0.4**
BRG Berggiesshubel 22.32 159 *e*P **P** **17 21 56.0 -0.8**
comp=Z,22nm,1.2s
BRG Berggiesshubel 22.32 159 *e*P **P** **17 21 56.0 -0.8**
BRG pmax pmax
comp=Z,22nm,1.2s
BRG Berggiesshubel 22.32 159 *e*P **P** **17 21 56.3 -0.5**
baz=354,slow=11
MOX Moxa 22.32 163 P **P** **17 21 56.8 0.0**
MOX pmax pmax
comp=Z,20nm,1.6s
MOX Moxa 22.32 163 *e*P **P** **17 21 57.0 +0.2**
comp=Z,53nm,1.5s,baz=354,slow=11
MOS Moscow 22.35 119 *e*P **P** **17 21 56.4 -0.7**
MOS *e* 17 22 20.7
MOS pmax pmax
comp=Z,38nm,0.7s
DOU Dourbes 22.47 175 P **P** **17 21 59.0 +0.6**
DOU pmax pmax
comp=Z,16nm,1.8s
GIVF Givet 22.47 175 *e*P **P** **17 21 58.9 +0.5**
GIVF pmax pmax
comp=Z,103nm,2.0s
BAIF Baives 22.49 176 *e*P **P** **17 21 59.6 +0.9**
BAIF pmax pmax
comp=Z,29nm,1.2s
TNS Taunus Mts 22.50 169 P **P** **17 21 59.4 +0.5**
TNS pmax pmax
comp=Z,21nm,1.1s
TNS Taunus Mts 22.50 169 *e*P **P** **17 21 59.3 +0.5**
comp=Z,30nm,1.4s,baz=354,slow=11
PLN Plauen 22.52 162 *e*P **P** **17 21 59.1 +0.1**
comp=Z,26nm,1.2s,baz=354,slow=11
KSP Ksiaz 22.62 156 *e*P **P** **17 21 59.4 -0.7**
KSP Ksiaz 22.62 156 P **P** **17 21 59.6 -0.4**
KSP pmax pmax
comp=Z,9.0nm,1.2s
TANN Tannenbergstha 22.62 162 *e*P **P** **17 22 00.0 -0.1**
comp=Z,70nm,1.6s,baz=354,slow=11
OBN Obninsk 22.63 121 *i*P **P** **17 21 59.2 -0.9**
OBN *i* 17 22 05.6
OBN *i* 17 22 22.6
OBN *i* 17 25 52.9
OBN pmax pmax
comp=Z,38nm,1.2s
OBN Obninsk 22.63 121 P **P** **17 21 58.3 -1.8**
GUNZ Gunzen 22.66 162 *e*P **P** **17 22 00.7 +0.1**
comp=Z,43nm,1.7s,baz=354,slow=11
PVCC Panska Ves 22.73 158 *e*P **P** **17 22 02.3 +1.1**
PVCC Panska Ves 22.73 158 *e*P **P** **17 22 02.3 +1.1**
WERN Wernitzgruen 22.74 162 *e*P **P** **17 22 01.6 +0.2**
comp=Z,53nm,1.5s,baz=354,slow=11
NKC Novy Kostel 22.80 162 *e*P **P** **17 22 02.2 +0.2**
NKC *e* 17 22 06.4
NKC Novy Kostel 22.80 162 *e*P **P** **17 22 02.2 +0.2**
NKC *ep*P **sP** **17 22 06.4 +1.0**
CHVC Chvalec 22.84 156 *e*P **P** **17 22 01.7 -0.7**
CHVC *ex* x 17 22 07.8
OSTC Ostas 22.89 156 *e*P **P** **17 22 03.2 +0.3**
UPC Upice 22.91 156 *e*P **P** **17 22 02.7 -0.5**
UPC Upice 22.91 156 *e*P **P** **17 22 02.7 -0.5**
MANZ Manzenberg 23.01 163 *e*P **P** **17 22 04.4 +0.2**
comp=Z,25nm,1.6s,baz=354,slow=11
DPC Dobruska-Polom 23.11 156 *e*P **P** **17 22 05.4 +0.2**
DPC *e* 17 22 10.8
DPC Dobruska-Polom 23.11 156 *e*P **P** **17 22 05.4 +0.2**
DPC *ep*P **pwP** **17 22 10.8 -0.6**
GRF Grafenberg Arr 23.23 164 *e*P **P** **17 22 06.7 +0.3**
comp=Z,41nm,1.6s,baz=354,slow=11
ROTZ Rotzenmuhle 23.24 163 *e*P **P** **17 22 06.6 +0.1**
comp=Z,18nm,0.9s,baz=354,slow=11
PRU Pruhonice 23.25 159 *e*P **P** **17 22 06.2 -0.4**
PRU *e* 17 22 14.0
PRU Pruhonice 23.25 159 *e*P **P** **17 22 06.2 -0.4**
PRU *ex* x 17 22 14.0
KIRV Kirov 23.26 101 P **P** **17 22 06.3 -0.3**
comp=Z,6.5nm,0.6s,baz=11,slow=5.2,SNR=2.9
KIRV Kirov 23.26 101 *ce*P **P** **17 22 07.7 +1.1**
PBCC Pribram 23.50 160 *e*P **P** **17 22 08.5 -0.5**
OJC Ojcow 23.71 150 P **P** **17 22 10.7 -0.5**
OJC Ojcow 23.71 150 P **P** **17 22 10.7 -0.5**
FLN La Foliniere 23.79 184 *e*P **P** **17 22 11.1 -0.8**
FLN pmax pmax
comp=Z,285nm,2.7s
MORC Moravsky Berou 23.83 154 ⇓P **P** **17 22 12.5 +0.2**
MORC Moravsky Berou 23.83 154 *e*P **P** **17 22 12.0 -0.3**
MORC Moravsky Berou 23.83 154 ⇓P **P** **17 22 12.5 +0.2**
MORC Moravsky Berou 23.83 154 P **P** **17 22 11.9 -0.5**
WET Wettzell 23.92 162 P **P** **17 22 13.8 +0.6**
WET Wettzell 23.92 162 *e*P **P** **17 22 14.1 +0.9**
comp=Z,14nm,1.1s,baz=354,slow=11
STU Stuttgart 24.00 168 P **P** **17 22 12.5 -1.4**
STU pmax pmax
comp=Z,12nm,0.9s
STU Stuttgart 24.00 168 P **P** **17 22 12.5 -1.4**
KHC Kasperske Hory 24.00 161 *ce*P **P** **17 22 14.1 +0.1**
KHC pmax pmax
comp=Z,40nm,2.5s
KHC Kasperske Hory 24.00 161 *e*P **P** **17 22 14.1 +0.1**
KHC *ex* x 17 22 20.9
KHC Kasperske Hory 24.00 161 P **P** **17 22 13.6 -0.4**
VRAC Vranov 24.16 156 P **P** **17 22 15.7 +0.2**
comp=Z,7.7nm,0.7s,baz=354,slow=9.2,SNR=14
VRAC Vranov 24.16 156 ⇑P **P** **17 22 16.0 +0.5**
VRAC Vranov 24.16 156 *e*P **P** **17 22 15.2 -0.3**
GRR Gorron 24.17 184 *e*P **P** **17 22 14.8 -0.7**
GRR pmax pmax
comp=Z,34nm,1.2s
CDF Champ du Feu 24.25 171 *e*P **P** **17 22 15.9 -0.4**
CDF pmax pmax
comp=Z,13nm,1.4s
GEC2 GERESS Array S 24.30 161 *e*P **P** **17 22 17.9 +1.2**
comp=Z,8.0nm,0.7s,baz=354,slow=11
GEC2 GERESS Array S 24.30 161 P **P** **17 22 16.7 0.0**
GEC2B GERESS ARRAY S 24.30 161 P **P** **17 22 16.0 -0.7**
GERES GERESS Array B 24.30 161 P **P** **17 22 17.4 +0.6**
comp=Z,3.6nm,0.6s,baz=357,slow=9.3,SNR=37
GERES GERESS Array B 24.30 161 P **P** **17 22 16.9 +0.1**
GERES GERESS Array B 24.30 161 P **P** **17 22 16.9 +0.1**
ROSF Rostrenen 24.30 188 *e*P **P** **17 22 15.9 -0.8**
ROSF pmax pmax
comp=Z,55nm,1.3s
SGMF Saint Gilles 24.35 187 *e*P **P** **17 22 15.9 -1.2**
SGMF pmax pmax
comp=Z,170nm,1.9s
BFO Black Forest 24.38 169 P **P** **17 22 17.7 +0.2**
BFO pmax pmax
comp=Z,10.0nm,1.0s
BFO Black Forest 24.38 169 *e*P **P** **17 22 18.8 +1.3**
comp=Z,69nm,2.2s,baz=354,slow=11
BFO Black Forest 24.38 169 P **P** **17 22 17.7 +0.2**
KRUC Moravsky 24.38 156 *e*P **P** **17 22 16.7 -0.7**
ECH Echery 24.44 171 P **P** **17 22 18.4 +0.4**
ECH pmax pmax
comp=Z,9.0nm,1.0s
ECH Echery 24.44 171 P **P** **17 22 18.4 +0.4**
CLF Chambon-Foret 24.50 179 P **P** **17 22 16.9 -1.6**
NIE Niedzica 24.57 150 P **P** **17 22 20.0 +0.8**
RES Resolute Bay 24.59 321 LR LR 17 31 55.6
comp=Z,712nm,19.0s,baz=288,slow=36
HAU Haudompre 24.61 173 *e*P **P** **17 22 20.3 +0.7**
LANS Liptovska Anna 24.71 151 *e*P **P** **17 22 21.6 +1.1**
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna 24.71 151 *e*P **P** **17 22 21.5 +1.1**
JAVC Velka Javorina 24.74 154 *e*P **P** **17 22 20.4 -0.4**
KWP Kalwaria Pacla 24.75 146 *e*P **P** **17 22 21.6 +0.9**
KWP Kalwaria Pacla 24.75 146 P **P** **17 22 20.8 0.0**
KWP pmax pmax
comp=Z,35nm,1.3s
KWP Kalwaria Pacla 24.75 146 P **P** **17 22 20.8 0.0**
KWP IAmb IAmb 17 23 02.8
comp=Z,35nm,1.3s
AKASG Malin Array Be 24.97 136 P **P** **17 22 21.5 -1.2**
comp=Z,5.9nm,0.6s,baz=342,slow=9.9,SNR=12
AKASG PcP **PcP** **17 25 56.4 -0.9**
comp=Z,1.2nm,0.7s,baz=0.7,slow=2.5,SNR=6.1
AKASG Malin Array Be 24.97 136 P **P** **17 22 21.2 -1.5**
AKASG **PcP** **17 25 56.9 -0.4**
AKBB Malin Array Si 24.97 136 *ce*P **P** **17 22 21.8 -0.9**
AKBB Malin Array Si 24.97 136 P **P** **17 22 20.7 -2.0**
AKBB IAmb IAmb 17 22 38.4
comp=Z,14nm,1.1s
KIEV Kiev 24.97 136 P **P** **17 22 19.0 -3.7**
SMOL Smolenice 25.05 155 *e*P **P** **17 22 23.7 +0.2**
SMOL pmax pmax
comp=Z,4.0nm,0.9s
SMOL Smolenice 25.05 155 *e*P **P** **17 22 23.7 +0.2**
MODS Modra-Piesok 25.17 155 *e*P **P** **17 22 24.0 -0.6**
MODS pmax pmax
comp=Z,30nm,1.6s
MODS Modra-Piesok 25.17 155 *e*P **P** **17 22 24.0 -0.6**
VYHS Vyhne 25.26 153 *e*P **P** **17 22 24.7 -0.7**
VYHS pmax pmax
comp=Z,11nm,1.3s
VYHS Vyhne 25.26 153 *e*P **P** **17 22 24.7 -0.7**
LOR Lormes 25.28 177 P **P** **17 22 22.3 -3.3**
RJOB Jochberg 25.30 162 *e*P **P** **17 22 27.4 +1.6**
comp=Z,15nm,1.0s,baz=354,slow=11
MOA Molln 25.34 160 P **P** **17 22 27.5 +1.4**
comp=Z,14nm,1.3s
KOLS Kolonicke sedl 25.35 147 *e*P **P** **17 22 25.7 -0.5**
KOLS pmax pmax
comp=Z,7.0nm,1.1s
KOLS Kolonicke sedl 25.35 147 *e*P **P** **17 22 25.7 -0.5**
CONA Conrad Observa 25.43 158 *e*P **P** **17 22 27.6 +0.6**
comp=Z,13nm,0.7s
SSF Saint Saulge 25.48 177 *e*P **P** **17 22 27.5 +0.1**
SSF pmax pmax
comp=Z,23nm,1.2s
LPSR Galich'ya Gora 25.51 121 *e*P **P** **17 22 27.2 -0.3**
LPSR pmax pmax
comp=Z,30nm,0.8s
DAVA Damuels 25.52 167 *e*P **P** **17 22 29.0 +1.1**
comp=Z,24nm,1.0s
MOTA Moosalm 25.55 165 *e*P **P** **17 22 28.9 +0.7**
comp=Z,18nm,1.9s
WATA Walderalm 25.60 164 P **P** **17 22 29.5 +0.9**
comp=Z,21nm,1.0s
UZH Uzhgorod 25.65 147 *e*P **P** **17 22 29.0 +0.1**
UZH *e* 17 22 35.5
WTTA Wattenberg 25.67 164 *e*P **P** **17 22 30.2 +0.8**
comp=Z,32nm,1.1s
WTTA Wattenberg 25.67 164 P **P** **17 22 31.1 +1.8**
SQTA Sankt Quirin 25.68 165 *e*P **P** **17 22 30.3 +0.9**
comp=Z,11nm,1.1s
FETA Feichten 25.84 166 *e*P **P** **17 22 32.9 +2.0**
comp=Z,8.9nm,1.2s
SMF Signal de Mont 25.90 177 *e*P **P** **17 22 32.8 +1.6**
SMF pmax pmax
comp=Z,23nm,1.3s
PSZ Piszkesteto 25.97 151 P **P** **17 22 32.2 +0.3**
PSZ pmax pmax
comp=Z,19nm,1.5s
PSZ Piszkesteto 25.97 151 P **P** **17 22 32.1 +0.3**
PSZ IAmb IAmb 17 23 16.6
comp=Z,19nm,1.5s
BGF Bois d'Agland 25.98 178 *e*P **P** **17 22 35.5 +3.6**
BGF pmax pmax
comp=Z,52nm,1.6s
KBA Koelnbreinsper 26.01 162 P **P** **17 22 33.6 +1.2**
NRIK Noril'sk 26.02 54 *ce*P **P** **17 22 34.1 +2.1**
NRIK pmax pmax
comp=Z,11nm,1.3s
ARSA Arzberg 26.07 158 *e*P **P** **17 22 33.5 +0.7**
comp=Z,4.6nm,0.9s
ABTA Abfaltersbach 26.26 163 *e*P **P** **17 22 35.5 +1.0**
comp=Z,14nm,1.4s
SENIN Lac Senin/Sane 26.29 171 P **P** **17 22 33.9 -1.1**
SENIN IAmb IAmb 17 22 45.0
comp=Z,11nm,1.1s
KMPD K-Podol'skiy 26.45 141 P **P** **17 22 36.0 -0.1**
ZOU Zoufplan 26.49 162 P **P** **17 22 37.0 +0.2**
ZOU IAmb IAmb 17 22 46.7
comp=Z,21nm,1.3s
SOKA Soboth 26.58 159 *e*P **P** **17 22 39.2 +1.8**
comp=Z,8.6nm,1.3s
VSR Storozhevoye 26.83 122 *e*P **P** **17 22 38.2 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.6s
CTI Castel Tesino 26.88 165 P **P** **17 22 41.0 +0.8**
CTI pmax pmax
comp=Z,16nm,1.2s
CTI Castel Tesino 26.88 165 P **P** **17 22 41.0 +0.8**
CTI IAmb IAmb 17 22 51.3
comp=Z,16nm,1.2s
VORD Divnogorie 27.09 122 *e*P **P** **17 22 40.9 -1.0**
VORD pmax pmax
comp=Z,20nm,1.5s
BUR08 Bucovina Ar. S 27.10 144 P **P** **17 22 41.9 -0.3**
LPL La Plagne 27.11 172 *e*P **P** **17 22 45.9 +3.5**
LPL pmax pmax
comp=Z,11nm,1.3s
BURAR Bucovina Array 27.13 144 ⇓P **P** **17 22 41.5 -0.9**
BURAR Bucovina Array 27.13 144 ⇓P **P** **17 22 41.5 -0.9**
BURAR Bucovina Array 27.13 144 P **P** **17 22 41.5 -0.9**
RJF Les Rejaudoux 27.22 180 *e*P **P** **17 22 47.8 +4.7**
RJF pmax pmax
comp=Z,33nm,1.4s
SORM Soroca 27.23 139 ⇑P **P** **17 22 42.1 -1.0**
SORM Soroca 27.23 139 ⇑P **P** **17 22 42.1 -1.0**
VRH Novokhopyorsk 27.51 119 *e*P **P** **17 22 51.0 +5.4**
VRH pmax pmax
comp=Z,20nm,1.4s
ARU Arti 27.81 95 P **P** **17 22 49.4 +1.2**
comp=Z,1.1nm,0.6s,baz=352,slow=8.0,SNR=3.8
ARU Arti 27.81 95 *d*⇓P **P** **17 22 49.2 +0.9**
ARU 17 23 33.9
ARU S **S** **17 27 33.7 +3.1**
ARU SS **SnSn** **17 28 46.7 +3.7**
ARU pmax pmax
comp=Z,10.0nm,1.5s
ARU Arti 27.81 95 P **P** **17 22 48.2 0.0**
ARU IAmb IAmb 17 23 44.1
comp=Z,28nm,1.5s
MBDF Montbardon 27.90 172 *e*P **P** **17 22 49.9 +0.5**
MBDF pmax pmax
comp=Z,27nm,1.6s
BIZ Bicaz 27.95 143 ⇓P **P** **17 22 49.7 +0.1**

BZS Buzias 28.48 150 ⇓P P 17 22 55.3 +1.0
BZS Buzias 28.48 150 ⇓P P 17 22 55.3 +1.0
DOPR Dopca 28.75 144 ⇓P P 17 22 56.9 +0.1
VRI Vrincioaia 29.09 143 ⇑P P 17 22 59.3 -0.5
VRI Vrincioaia 29.09 143 ⇑P P 17 22 59.3 -0.5
PLOR Plostina 29.09 143 ⇓P P 17 23 00.7 +0.8
PLOR Plostina 29.09 143 ⇓P P 17 23 00.7 +0.8
MLR Muntele Rosu 29.32 144 P **P** 17 23 01.9 -0.1
comp=Z,7.7nm,1.2s,baz=319,slow=13,SNR=5.0
MLR Muntele Rosu 29.32 144 ⇓P P 17 23 02.9 +1.0
MLR Muntele Rosu 29.32 144 ⇓P P 17 23 02.9 +1.0
MLR Muntele Rosu 29.32 144 P **P** 17 23 00.8 -1.1
NEHR Nehoiu 29.44 143 ⇓P P 17 23 04.9 +2.0
CFR Carcaliu 30.02 141 ⇓P P 17 23 07.2 -0.8
CFR Carcaliu 30.02 141 ⇓P P 17 23 07.2 -0.8
TPGR Topolog 30.39 141 ⇑P P 17 23 10.7 -0.6
HARR Harsova 30.45 142 ⇑P P 17 23 11.4 -0.4
HARR Harsova 30.45 142 ⇑P P 17 23 11.4 -0.4
TIXI Tiksi 32.24 28 *i* P **P** 17 23 29.3 +2.0
AKTO Aktyubinsk 32.83 101 P **P** 17 23 33.0 +0.3
comp=Z,2.5nm,0.8s,baz=350,slow=9.4,SNR=6.3
ESDC Sonseca Array 32.97 188 P **P** 17 23 33.1 -1.0
comp=Z,3.9nm,1.0s,baz=0.5,slow=9.2,SNR=10.0
ESDC Sonseca Array 32.97 188 IAmb IAmb 17 23 34.9
comp=Z,9.3nm,1.2s
PAB San Pablo 33.12 189 P **P** 17 23 35.3 -0.1
PAB pmax pmax
comp=Z,12nm,1.2s
PAB San Pablo 33.12 189 P **P** 17 23 35.3 -0.1
PAB IAmb IAmb 17 23 37.2
comp=Z,12nm,1.2s
GRG Griva 33.15 151 P **P** 17 23 36.4 +0.8
FNA Florina 33.17 152 P **P** 17 23 35.5 -0.3
FNA pmax pmax
comp=Z,11nm,0.7s
FNA Florina 33.17 152 P **P** 17 23 35.5 -0.3
SRS Serrai 33.18 149 P **P** 17 23 36.0 +0.2
SOH Sokhos 33.43 150 P **P** 17 23 36.7 -1.3
GOF Gofitskoye 33.52 122⇑ *e*P **P** 17 23 39.3 +0.6
BRVK Borovoye 34.24 87 *i* P **P** 17 23 46.0 +1.1
BRVK pmax pmax
comp=Z,1.0nm,1.0s
AB05 Akbulak array 34.44 100 P **P** 17 23 46.8 +0.1
AB09 Akbulak array 34.44 100 P **P** 17 23 46.4 -0.3
AB04 Akbulak array 34.45 100 P **P** 17 23 45.0 -1.8
AB02 Akbulak array 34.45 100 P **P** 17 23 46.5 -0.3
AB01 Akbulak array 34.45 100 P **P** 17 23 45.7 -1.1
AB31 Akbulak array 34.45 100 P **P** 17 23 46.2 -0.6
AB31 IAmb IAmb 17 23 53.9
comp=Z,9.2nm,1.1s
ABKAR Akbulak array 34.45 100 P **P** 17 23 46.9 +0.1
ABKAR IAmb IAmb 17 23 53.9
comp=Z,9.2nm,1.1s
ABKAR Akbulak array 34.45 100 P **P** 17 23 46.8 0.0
ABKAR **PcP** 17 26 22.1 +0.4
KIV Kislovodsk 34.45 123 *e*P **P** 17 23 46.7 -0.3
KIV pmax pmax
comp=Z,21nm,1.1s
KIV Kislovodsk 34.45 123 P **P** 17 23 46.0 -1.0
KIV IAmb IAmb 17 24 23.2
comp=Z,6.3nm,0.8s
AB06 Akbulak array 34.46 100 P **P** 17 23 46.4 -0.4
KBZ Khabaz 34.72 123 P **P** 17 23 50.5 +1.4
comp=Z,5.8nm,0.8s,baz=326,slow=7.7
KBZ Khabaz 34.72 123 *ce*P **P** 17 23 50.8 +1.7
KBZ pmax pmax
comp=Z,8.0nm,0.9s
AGG Agios Georgios 35.04 151 P **P** 17 23 52.2 +0.2
AGG Agios Georgios 35.04 151 P **P** 17 23 52.2 +0.2
ILGA Ilgaz 35.11 136 P **P** 17 23 53.4 +0.6
ILGA IAmb IAmb 17 23 55.3
comp=Z,20nm,1.2s
ZEI Tsey 35.86 122 *e*P **P** 17 23 59.5 +0.3
ZEI pmax pmax
comp=Z,4.0nm,0.8s
GROC Groznyy 35.96 120 *e*P **P** 17 24 00.6 +0.8
GROC *e* 17 25 19.4
GROC *e*S **S** 17 29 40.5 +2.8
GROC pmax pmax
comp=Z,30nm,0.7s
BR131 Keskin Array S 36.37 137 P **P** 17 24 04.8 +1.3
BR131 pmax pmax
comp=Z,5.0nm,1.1s
BR131 Keskin Array S 36.37 137 P **P** 17 24 04.8 +1.3
BRTR Keskin Array B 36.37 137 P **P** 17 24 03.6 +0.1
comp=Z,2.9nm,0.7s,baz=350,slow=6.3,SNR=12
BRTR Keskin Array B 36.37 137 *ce*P **P** 17 24 04.8 +1.3
BRTR pmax pmax
comp=Z,3.0nm,0.7s
INK Inuvik 36.45 334 P **P** 17 24 03.9 +0.2
comp=Z,5.8nm,1.1s,baz=1.3,slow=12,SNR=4.4
INK Inuvik 36.45 334 P **P** 17 24 04.1 +0.4
INK pmax pmax
comp=Z,16nm,1.4s
INK Inuvik 36.45 334 P **P** 17 24 04.1 +0.4
INK IAmb IAmb 17 24 05.2
comp=Z,16nm,1.4s
MANT Manisa 36.57 144 P **P** 17 24 05.8 +0.5
ZAA0 Zalesovo Array 37.80 73 P **P** 17 24 15.7 +0.4
ZALV Zalesovo Beam 37.80 73 P **P** 17 24 14.8 -0.5
comp=Z,1.2nm,0.6s,baz=328,slow=10,SNR=5.0
ZALV **PcP** **PcP** 17 26 31.3 -0.3
comp=Z,1.0nm,0.7s,baz=306,slow=3.4,SNR=2.6
ZALV Zalesovo Beam 37.80 73 P **P** 17 24 15.6 +0.3
ZALV 17 26 31.0
ZALV Zalesovo Beam 37.80 73 P **P** 17 24 15.6 +0.3
ZALV **PcP** 17 26 31.0 -0.5
ELL Elmali 38.51 142 P **P** 17 24 22.3 +0.6
ELL pmax pmax
comp=Z,46nm,1.3s
ELL Elmali 38.51 142 P **P** 17 24 22.3 +0.6
GNI Garni 38.55 123 *ce*P **P** 17 24 22.4 +0.4
GNI pmax pmax
comp=Z,16nm,1.7s
YKA Yellowknife Ar 38.61 318 P **P** 17 24 22.0 -0.1
comp=Z,2.1nm,0.7s,baz=195,slow=34,SNR=3.5
YKA Yellowknife Ar 38.61 318 P **P** 17 24 22.0 -0.1
KURK Kurchatov 38.80 81 *ce*P **P** 17 24 25.1 +1.3
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURK Kurchatov 38.80 81 P **P** 17 24 24.0 +0.2
GAZ Gaziantep 39.59 133 P **P** 17 24 31.4 +0.8
GEVA Gevas 39.87 126 P **P** 17 24 32.7 -0.3
PRP Porcupine Dome 40.55 340 P **P** 17 24 39.9 +1.5
IL31 41.42 340 P **P** 17 24 46.5 +1.2
ILAR Eielson Array 41.42 340 P **P** 17 24 46.4 +1.0
comp=Z,2.4nm,0.8s,baz=6.8,slow=7.1,SNR=20
ILAR **PcP** **PcP** 17 26 42.2 -0.8
comp=Z,0.7nm,1.0s,baz=355,slow=4.5,SNR=3.0
CCB Clear Creek Bu 41.63 341 P **P** 17 24 48.5 +1.4
CCB IAmb IAmb 17 25 07.1
comp=Z,24nm,2.0s
HDA Harding Lake 41.78 340 P **P** 17 24 49.5 +1.2
HDA IAmb IAmb 17 24 59.1
comp=Z,44nm,2.0s
KK31 Karatay Array 43.18 94 P **P** 17 24 59.6 -0.4
KK31 pmax pmax
comp=Z,6.0nm,1.0s
KK31 Karatay Array 43.18 94 P **P** 17 24 59.6 -0.4
KKAR Karatay Array 43.18 94 P **P** 17 24 58.8 -1.2
KKAR 17 25 00.4
KKAR pmax pmax
comp=Z,6.0nm,1.0s
KKAR Karatay Array 43.18 94 P **P** 17 25 00.4 +0.4
KKAR Karatay Array 43.18 94 P **P** 17 24 58.8 -1.2
MK31 Makanchi Array 43.40 81 *ce*P **P** 17 25 01.7 0.0
MK31 Makanchi Array 43.40 81 P **P** 17 25 01.3 -0.4
MKAR Makanchi Array 43.40 81 P **P** 17 25 01.6 -0.1
comp=Z,2.8nm,1.0s,baz=328,slow=6.3,SNR=9.1
MKAR **PcP** **PcP** 17 26 48.2 -1.7
comp=Z,1.3nm,0.9s,baz=2.5,slow=3.3,SNR=3.3
MKAR Makanchi Array 43.40 81 *ce*P **P** 17 25 01.9 +0.2
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 43.40 81 P **P** 17 25 01.0 -0.7
SEY Seymchan 43.42 19 *i* P **P** 17 25 03.1 +1.5
GEYT Alibeck 44.27 109 P **P** 17 25 09.0 +0.2
comp=Z,5.4nm,0.7s,baz=316,slow=10,SNR=6.9
AAK Ala-Archa 44.81 90 *i* P **P** 17 25 14.0 +0.8
AAK pmax pmax
comp=Z,18nm,1.9s
CHGR Chuyangaron 46.84 98 P **P** 17 25 29.6 +0.3
WMQ Urumqi 47.71 77 *e*P **P** 17 25 37.4 +1.5
WMQ pP pwP 17 25 43.1 +1.1
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,160nm,5.3s
SONM Songino Array 49.28 59 P **P** 17 25 49.6 +1.6
comp=Z,0.8nm,0.9s,baz=343,slow=4.5,SNR=3.3
ULN Ulaanbaatar 49.42 59 *ce*P **P** 17 25 49.8 +0.7
ULN pmax pmax
comp=Z,6.0nm,1.4s
TAM Tamanrasset 49.73 175 P **P** 17 25 52.3 +0.6
TAM pmax pmax
comp=Z,10.0nm,1.4s
TAM Tamanrasset 49.73 175 P **P** 17 25 52.3 +0.6
TAM IAmb IAmb 17 25 54.0
comp=Z,9.7nm,1.4s
EGMT Eagleton 50.83 306 P **P** 17 26 00.5 +0.8
EGMT IAmb IAmb 17 26 09.0
comp=Z,11nm,1.0s
NIL Nilore 52.72 96 P **P** 17 26 11.9 -2.0
NIL pmax pmax
comp=Z,7.0nm,1.0s
NIL Nilore 52.72 96 P **P** 17 26 11.9 -2.0
NIL IAmb IAmb 17 26 21.9
comp=Z,7.4nm,1.0s
MSO Missoula 52.95 309 P **P** 17 26 15.7 +0.1
MSO IAmb IAmb 17 26 19.4
comp=Z,25nm,1.7s
LRM Limekiln Ridge 53.55 308 P **P** 17 26 19.8 -0.4
YNE Yellowstone No 53.71 305 P **P** 17 26 21.2 -0.1
KLR Kul'dur 53.73 39 *ce*P **P** 17 26 21.0 -0.1
KLR pmax pmax
comp=Z,4.0nm,1.3s
YHL Hebgen Lake 54.15 306 P **P** 17 26 25.1 +0.5
P38A Dawn 54.28 289 P **P** 17 26 25.6 +0.3
P38A IAmb IAmb 17 27 16.1
comp=Z,13nm,0.9s
H17A Grant Village 54.43 305 P **P** 17 26 28.5 +1.9
H17A IAmb IAmb 17 26 29.7
comp=Z,5.7nm,1.1s
MCMT McKenzie Canyo 54.58 307 P **P** 17 26 28.0 +0.3
RAYN Ar Rayn 54.60 129 P **P** 17 26 28.0 +0.2
RAYN pmax pmax
comp=Z,3.0nm,0.9s
RAYN Ar Rayn 54.60 129 P **P** 17 26 28.0 +0.2
YPP Pitchstone Pla 54.60 306 P **P** 17 26 29.5 +1.6
IMW Indian Meadow 54.98 305 P **P** 17 26 30.8 +0.1
IMW IAmb IAmb 17 26 33.7
comp=Z,13nm,1.4s
GTA Gaotai 55.29 69 ⇑P **P** 17 26 33.5 +0.8
GTA pP sP 17 26 38.1 +1.5
GTA sP pwP 17 26 40.5 +1.6
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,1μm,7.8s
GTA LR LR
comp=N,2μm,18.2s
GTA LR LR
comp=E,1μm,17.5s
GTA LR LR
comp=Z,2μm,17.8s
SNOW Snow King Moun 55.35 305 P **P** 17 26 33.3 0.0
REDW Red Top Meadow 55.47 305 P **P** 17 26 34.4 +0.3
G08A Pilot Rock 55.56 313 P **P** 17 26 35.4 +0.8
G08A IAmb IAmb 17 26 36.9
comp=Z,12nm,1.4s
BMO Blue Mountains 55.60 311 P **P** 17 26 34.4 -0.4
BMO pmax pmax
comp=Z,14nm,1.7s
BMO Blue Mountains 55.60 311 P **P** 17 26 34.4 -0.4
BMO IAmb IAmb 17 26 38.5
comp=Z,14nm,1.6s
BW06 Boulder Array 55.70 304 P **P** 17 26 35.4 -0.4
BW06 IAmb IAmb 17 27 20.1
comp=Z,11nm,1.7s
PD31 Pinedale Array 55.70 304 P **P** 17 26 34.4 -1.4
PD31 IAmb IAmb 17 26 37.6
comp=Z,18nm,2.0s
PDAR Pinedale Array 55.70 304 P **P** 17 26 35.2 -0.5
comp=Z,1.6nm,1.0s,baz=39,slow=5.8,SNR=7.2
PDAR Pinedale Array 55.70 304 P **P** 17 26 35.0 -0.8
T42A Van Buren 55.99 285 P **P** 17 26 35.3 -2.3
AHID Auburn Hatcher 56.09 305 P **P** 17 26 39.8 +1.3
HLID Hailey 56.14 308 P **P** 17 26 38.9 0.0
N23A Red Feather La 56.53 300 P **P** 17 26 42.8 +1.0
I07A Izee 56.83 313 P **P** 17 26 45.5 +1.9
I07A IAmb IAmb 17 26 46.2
comp=Z,14nm,1.6s
HHC Hu-ho-hao-te 57.13 58 *e*P **P** 17 26 48.1 +2.3
HHC pmax pmax
comp=Z,19nm,0.7s
HHC pmax pmax
comp=Z,310nm,4.2s
HHC pmax pmax
comp=Z,18nm,0.7s
HHC pmax pmax
comp=Z,120nm,5.6s
RDMU Red Mountain 57.77 303 P **P** 17 26 51.9 +1.4
YSS Yuzh-Sakhalins 57.82 31 *i* P **P** 17 26 50.3 -0.1
YSS pmax pmax
comp=Z,46nm,2.0s
BGU Big Grassy Mou 58.30 306 P **P** 17 26 55.4 +1.2
DUG Dugway, Tooele 58.94 306 P **P** 17 26 58.9 +0.4
DUG pmax pmax
comp=Z,4.0nm,1.0s
DUG Dugway, Tooele 58.94 306 P **P** 17 26 58.9 +0.4
DUG IAmb IAmb 17 27 09.1
comp=Z,3.7nm,0.9s
ELK Elko 59.01 308 P **P** 17 26 59.8 +0.7
ELK pmax pmax
comp=Z,3.0nm,1.1s
ELK Elko 59.01 308 P **P** 17 26 59.8 +0.7
MIAR Mount Ida 59.02 287 P **P** 17 26 58.4 -0.6
MIAR pmax pmax
comp=Z,38nm,1.9s
MIAR Mount Ida 59.02 287 P **P** 17 26 58.4 -0.6
TOA0 Torodi Ar. Sit 59.27 180 P **P** 17 27 00.3 -0.6
TORD Torodi Ar. Bea 59.27 180 P **P** 17 27 00.4 -0.5
comp=Z,8.5nm,0.7s,baz=357,slow=6.9,SNR=46
LZH Lanzhou 59.52 67 *e*P **P** 17 27 03.9 +1.2
LZH sP sP 17 27 06.8 +0.3
LZH pP pwP 17 27 08.8 -0.1
LZH sP pP 17 27 12.3 +6.9
LZH PP PcP 17 28 21.0 +31
LZH PP **PP** **17 29 16.6 +3.0**
LZH pmax pmax
comp=Z,13nm,1.2s
LZH pmax pmax
comp=Z,73nm,5.3s
LZH pmax pmax
comp=Z,12nm,1.2s
LZH pmax pmax
comp=Z,62nm,5.0s
LZH LR LR
comp=N,1μm,16.3s
LZH LR LR
comp=E,930nm,16.3s
LZH LR LR
comp=Z,1μm,17.8s
PV02 Paradox Valley 59.78 301 P **P** 17 27 05.3 +0.8
PV05 Paradox Valley 60.00 302 P **P** 17 27 06.1 +0.1
WMOK Wichita Mounta 60.34 291 P **P** 17 27 08.8 +0.7
WMOK pmax pmax
comp=Z,13nm,1.4s
WMOK Wichita Mounta 60.34 291 P **P** 17 27 08.8 +0.7
WMOK IAmb IAmb 17 27 10.3
comp=Z,13nm,1.4s
MSU Marysvale 60.37 304 P **P** 17 27 10.2 +1.7
MSU Marysvale 60.37 304 P **P** 17 27 10.2 +1.7
MVCO Mesa Verde 60.66 301 P **P** 17 27 10.4 -0.2
PSUT Pine Spring 60.77 306 P **P** 17 27 11.9 +0.7
MTPU Mount Pierson 60.82 304 P **P** 17 27 13.5 +1.7
BEKR Beckworth 61.03 312 P **P** 17 27 13.2 +0.2
BEKR IAmb IAmb 17 27 15.8
comp=Z,11nm,1.6s
KVN Kaiserville 61.29 310 P **P** 17 27 16.1 +1.3
KVN pmax pmax
comp=Z,7.0nm,1.3s
KVN Kaiserville 61.29 310 P **P** 17 27 16.1 +1.3
KVN IAmb IAmb 17 27 16.7
comp=Z,7.4nm,1.3s
R11A Troy Canyon, C 61.36 307 P **P** 17 27 15.3 +0.1
R11A IAmb IAmb 17 27 18.8
comp=Z,6.3nm,1.4s
LSA Lhasa 61.81 81 P **P** 17 27 18.2 -0.5
LSA pmax pmax
comp=Z,7.0nm,1.2s
LSA Lhasa 61.81 81 P **P** 17 27 18.2 -0.5
LSA IAmb IAmb 17 27 20.6
comp=Z,6.8nm,1.2s
NVAR Mina Array Bea 61.93 310 P **P** 17 27 19.5 +0.4
comp=Z,0.5nm,0.8s,baz=40,slow=7.1,SNR=3.1
PRN Pahroc Range 62.13 306 P **P** 17 27 21.4 +1.1
ANMO Albuquerque 62.26 298 *ce*P **P** 17 27 22.3 +1.0
ANMO pmax pmax
comp=Z,7.0nm,1.7s
XAN Xi'an 62.84 63 P P 17 27 30.0 +5.0
XAN pP PcP 17 27 51.9 -11
XAN pmax pmax
comp=Z,7.0nm,1.2s
TPNV Topopah Spring 62.86 307 P **P** 17 27 25.2 -0.1
TPNV pmax pmax
comp=Z,6.0nm,1.1s
TPNV Topopah Spring 62.86 307 P **P** 17 27 25.2 -0.1
TPNV IAmb IAmb 17 27 26.6
comp=Z,6.3nm,1.1s
MDPB Devils Postpil 62.87 310 P **P** 17 27 25.7 +0.2
MDPB IAmb IAmb 17 27 36.1
comp=Z,12nm,1.6s
KSRS Korea Array 64.25 45 LR LR 17 57 08.0
comp=Z,437nm,21.1s,baz=250,slow=38
CD2 Chengdu 64.36 69 *e*P **P** 17 27 35.1 0.0
TX31 Lajitas Ar. Si 66.79 294 P **P** 17 27 51.3 +0.4
TX32 Lajitas Array 66.79 294 P **P** 17 27 51.6 +0.7
TXAR Lajitas Array 66.79 294 P **P** 17 27 50.8 -0.1
comp=Z,0.4nm,0.6s,baz=52,slow=5.8,SNR=4.1
MJAR Matsushiro Arr 67.19 37 P **P** 17 27 53.4 +0.2
comp=Z,1.9nm,0.9s,baz=297,slow=40,SNR=3.0
MJAR LR LR 17 59 31.1
comp=Z,1μm,21.2s,baz=260,slow=38
NJ2 Nanjing 67.31 55 *e*P **P** 17 27 53.4 -0.6
NJ2 sP **pwP** 17 28 01.6 +1.4
NJ2 S **S** 17 36 51.6 +2.9
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 LR LR
comp=N,1μm,11.8s
NJ2 LR LR
comp=E,1μm,17.5s
NJ2 LR LR
comp=Z,2μm,19.6s
GYA Guiyang 69.38 68 ⇑P P 17 28 13.1 +5.9
GYA pmax pmax
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 74.71 77 P **P** 17 28 39.0 -0.1
comp=Z,0.9nm,0.7s,baz=317,slow=6.4,SNR=10
CMAR Chiang Mai Arr 74.71 77 *ce*P **P** 17 28 39.2 +0.1
CMAR pmax pmax
comp=Z,2.0nm,1.1s
MBAR Mbarara 75.20 150 *ce*P **P** 17 28 43.2 +1.1
MBAR pmax pmax
comp=Z,5.0nm,1.3s
MBAR Mbarara 75.20 150 P **P** 17 28 42.0 -0.1
MBAR IAmb IAmb 17 28 43.6
comp=Z,7.5nm,1.1s
WRA Warramunga Arr 121.08 54 PKP **PKPdf** 17 35 50.6 -1.1
comp=Z,0.3nm,0.8s,baz=314,slow=2.7,SNR=4.9
ASAR Alice Springs 124.55 56 PKP **PKPdf** 17 35 57.4 -1.0
comp=Z,1.0nm,0.7s,baz=346,slow=1.8,SNR=16
ASAR Alice Springs 124.55 56 PKP **PKPdf** 17 35 57.2 -1.1
MAW Mawson 145.49 144 PKPbc **PKPdf** 17 36 36.0 +0.4
comp=Z,6.0nm,0.9s,baz=302,slow=4.5,SNR=9.3
MAW Mawson 145.49 144 PKIKP **PKPdf** 17 36 36.0 +0.4

DJA ***17*** *17:17:51.1±1.3,6°S±2°×13°1E±°, h10km±10km, M4.9/15, mb4.7/15, mB5.7/6, MLv4.8/12, Mw(mB)5.2/6*
IDC ***17*** *17:17:53.7±2.3,5.°86S×130.°64E, h89km±21km, mb3.8/14, mb1 4.0/17, mb1mx3.9/33, mbtmp4.3/17, Error ellipse: s-maj=19.3km s-min=12.4km az=71.0*
NEIC ***17*** *17:17:54.1±1.6,5.°88S±0.°06×130.°7E±0.°1, h95km±7km, mb4.4/21, Error ellipse: s-maj=14.7km s-min=9.0km az=85.0*

ISC 17 17:17:54.2±0.4,**5°92S**±0°04×**130°72E**±0°06,**h100km**,**n94**, σ1**s90**/97,**mb4.2**/23,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.61**	**330**	P	**Pn**	**17 18 22.4**	**+0.6**
BNDI				S	**Sn**	**17 18 44.4**	**+1.7**
SAUI	**Saumlaki**	**2.13**	**164**	P	**Pn**	**17 18 31.5**	**+3.0**
SAUI				S	**Sn**	**17 18 55.8**	**+1.1**
SAUI	**Saumlaki**	**2.13**	**164**	Pn	**Pn**	**17 18 29.2**	**+0.6**
SAUI				Sn	**Sn**	**17 18 55.2**	**+0.4**
MSAI	**Masohi**	**3.12**	**325**	P	**Pn**	**17 18 42.1**	**+0.6**
FAKI	**Fak Fak**	**3.34**	**27**	P	**Pn**	**17 18 44.1**	**-0.5**
FAKI	**Fak Fak**	**3.34**	**27**	Pn	**Pn**	**17 18 43.6**	**-1.0**
NLAI	**Namlea**	**4.49**	**306**	P	**Pn**	**17 19 00.0**	**0.0**
SIJI	**Sorong**	**5.04**	**6**	P	**Pn**	**17 19 05.8**	**-1.7**
	89nm,0.3s,baz=47,slow=10,SNR=518						
SIJI				S	**Sn**	**17 19 57.9**	**-6.8**
	28nm,0.3s,baz=258,slow=24,SNR=9.7						
SANI	**Sanana**	**6.09**	**309**	P	**Pn**	**17 19 21.4**	**-0.3**
	0.2nm50nm,0.5s						
MTN	**Manton Dam**	**6.89**	**177**	Pn	**Pn**	**17 19 32.5**	**-0.3**
BAKI	**Biak**	**7.13**	**49**	P	**Pn**	**17 19 37.1**	**+1.1**
	0.4nm141nm,1.0s						
TNTI	**Ternate**	**7.44**	**333**	Pn	**Pn**	**17 19 39.5**	**-0.6**
SOEI	**Soe**	**7.45**	**239**	P	**Pn**	**17 19 41.8**	**+1.5**
	0.4nm51nm,0.7s						
SOEI	**Soe**	**7.45**	**239**	Pn	**Pn**	**17 19 41.6**	**+1.3**
BATI	**Baumata**	**8.19**	**238**	P	**Pn**	**17 19 50.8**	**+0.4**
	9.8nm,0.3s,baz=74,slow=3.7,SNR=16						
BATI				S	**Sn**	**17 21 18.9**	**-2.3**
	4.5nm,0.3s,baz=78,slow=20,SNR=2.5						
BATI	**Baumata**	**8.19**	**238**	P	**Pn**	**17 19 51.2**	**+0.9**
	23nm,0.6s						
EDFI	**Ende, Flores**	**9.39**	**252**	P	**Pn**	**17 20 10.7**	**+3.9**
	2.8nm,1.0s						
KNRA	**Kununurra**	**9.89**	**191**	Pn	**Pn**	**17 20 11.4**	**-2.1**
BSSI	**Bau Bau, Buton**	**10.18**	**268**	P	Pn	17 20 10.2	-7.2
MRSI	**Marisa**	**10.83**	**306**	P	**Pn**	**17 20 27.0**	**+0.8**
	8.2nm,0.9s						
WBSI	**Waikabubak, Su**	**11.82**	**251**	P	**Pn**	**17 20 41.6**	**+2.0**
	14nm,0.8s						
FITZ	**Fitzroy Crossi**	**13.09**	**202**	P	**Pn**	**17 20 52.9**	**-3.4**
	4.5nm,0.3s,baz=28,slow=10.0,SNR=79						
FITZ				S	Sn	17 23 09.1	-11
	1.8nm,0.3s,baz=220,slow=20,SNR=5.1						
FITZ	**Fitzroy Crossi**	**13.09**	**202**	Pn	**Pn**	**17 20 53.0**	**-3.3**
WB0	**Warramunga Arr**	**14.22**	**166**	Pn	**Pn**	**17 21 07.0**	**-4.1**
WRAB	**Tennant Creek**	**14.37**	**166**		**Pn**	**17 21 09.0**	**-4.0**
WRA	**Warramunga Arr**	**14.38**	**166**	P	**Pn**	**17 21 09.4**	**-3.7**
	9.3nm,0.3s,baz=352,slow=13,SNR=109						
WRA				S	Sn	17 23 42.1	-10
	4.7nm,0.3s,baz=336,slow=23,SNR=10						
WRA	**Warramunga Arr**	**14.38**	**166**		**Pn**	**17 21 08.7**	**-4.4**
WB2	**Warramunga Arr**	**14.38**	**166**		**Pn**	**17 21 09.4**	**-3.8**
WR0	**Warramunga Arr**	**14.45**	**165**		**Pn**	**17 21 10.4**	**-3.5**
COEN	**Coen**	**14.63**	**124**	P	**Pn**	**17 21 16.8**	**+0.5**
BBKI	**Banjar Baru**	**16.01**	**278**	P	**P**	**17 21 37.9**	**+2.6**
AS31	**Alice Springs**	**17.91**	**170**		**P**	**17 21 55.9**	**-0.4**
AS31				IAmb	IAmb	17 21 59.2	
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**17.91**	**170**	P	**P**	**17 21 56.3**	**+0.1**
	comp=Z,4.8nm,0.3s,baz=352,slow=9.0,SNR=288						
ASAR				S	**Sn**	**17 25 08.2**	**-8.7**
	comp=Z,1.2nm,0.3s,baz=2.2,slow=25,SNR=6.5						
ASAR	**Alice Springs**	**17.91**	**170**	P	**P**	**17 21 56.1**	**-0.1**
KKM	**Kota Kinabalu**	**18.73**	**309**		**P**	**17 22 05.5**	**+0.2**
KKM				IAmb	IAmb	17 22 10.9	
	comp=Z,17nm,1.1s						
PSA00	**Pilbara Seismi**	**18.79**	**213**		**P**	**17 22 04.8**	**-1.1**
PSA00				IAmb	IAmb	17 22 07.3	
	comp=Z,13nm,0.6s						
PSA00	**Pilbara Seismi**	**18.79**	**213**		**P**	**17 22 05.9**	**+0.1**
PSA00				IAmb	IAmb	17 22 17.6	
	comp=Z,9.5nm,0.7s						
SBUM	**Sibu**	**20.26**	**294**	P	**P**	**17 22 22.3**	**+0.5**
CTA	**Charters Tower**	**20.64**	**134**	P	**P**	**17 22 27.1**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=347,slow=18,SNR=1.6						
CTAO	**Charters Tower**	**20.64**	**134**	P	**P**	**17 22 25.8**	**-0.2**
FORT	**Forrest**	**24.86**	**185**	P	**P**	**17 23 07.1**	**-0.4**
FORT				IAmb	IAmb	17 23 25.7	
	comp=Z,19nm,0.8s						
MORW	**Morawa**	**26.89**	**209**	P	**P**	**17 23 26.2**	**+0.3**
BBOO	**Buckleboo**	**27.22**	**170**	P	**P**	**17 23 27.6**	**-1.2**
BBOO				IAmb	IAmb	17 23 38.8	
	comp=Z,18nm,1.3s						

STKA	Stephens Creek	27.76	160	P	P	17 23 34.7	+1.1
	comp=Z,1.5nm,0.3s,baz=331,slow=8.3,SNR=16						
STKA	Stephens Creek	27.76	160	P	P	17 23 35.0	+1.5
DZM	Mont Dzumac	38.06	119	P	P	17 25 05.3	+1.8
	comp=Z,1.8nm,1.1s,baz=294,slow=20,SNR=1.0						
DZM	Mont Dzumac	38.06	119	IAmb	IAmb	17 25 22.7	
	comp=Z,5.5nm,1.2s						
CMAR	Chiang Mai Arr	39.61	308	P	P	17 25 16.0	-0.3
	comp=Z,1.4nm,0.5s,baz=134,slow=6.8,SNR=16						
CMAR	Chiang Mai Arr	39.61	308	P	P	17 25 15.3	-0.9
ENH	Enshi	41.34	332	P	P	17 25 29.7	-0.7
ENH				IAmb	IAmb	17 25 30.3	
	comp=Z,7.8nm,0.8s						
KSRS	Korea Array	43.23	357	P	P	17 25 45.6	+0.1
	comp=Z,0.7nm,0.6s,baz=171,slow=8.1,SNR=2.6						
XAN	Xi'an	44.77	334	P	P	17 25 57.0	-1.0
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LZH	Lanzhou	48.80	331	*eP*	P	17 26 30.4	+0.9
LZH				pP	pwP	17 26 55.9	+0.1
HHC	Hu-ho-hao-te	49.75	341	*eP*	P	17 26 38.0	+1.4
USRK	Ussuriysk Ar.	49.90	1	P	P	17 26 37.2	-0.3
	comp=Z,1.6nm,0.5s,baz=190,slow=5.5,SNR=2.9						
TAPN	Taplejung	53.12	311	*eP*	P	17 27 01.6	-0.6
	comp=Z,24nm,0.4s						
GTA	Gaotai	53.38	330	*eP*	P	17 27 04.3	+0.6
GTA				pP	pP	17 27 25.0	-2.1
GTA				sP	sP	17 27 36.5	-1.4
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,370nm,6.5s						
GTA				LR	LR		
	comp=N,1μm,19.6s						
GTA				LR	LR		
	comp=E,1μm,20.7s						
GTA				LR	LR		
	comp=Z,2μm,20.4s						
RAMN	Ramite	53.75	310	*eP*	P	17 27 06.3	-0.5
	comp=Z,32nm,0.4s						
GUN	Gumba	54.80	310	*eP*	P	17 27 13.6	-0.9
	comp=Z,17nm,0.4s						
PKI	Pulchoki	54.98	310	*eP*	P	17 27 14.8	-1.0
	comp=Z,2.1nm,0.2s						
PKIN	Phulchoki	54.99	310	*eP*	P	17 27 14.6	-1.2
	comp=Z,3.9nm,0.3s						
KKN	Kakani	55.19	310	*eP*	P	17 27 16.3	-0.9
	comp=Z,8.0nm,0.4s						
DMN	Daman	55.23	309	*eP*	P	17 27 16.9	-0.6
	comp=Z,7.0nm,0.3s						
GKN	Gorkha	55.79	310	*eP*	P	17 27 20.6	-0.8
	comp=Z,16nm,0.3s						
KOLN	Koldanda	56.47	309	*eP*	P	17 27 25.6	-0.7
	comp=Z,6.2nm,0.3s						
DANN	Dangsing	56.63	310	*eP*	P	17 27 26.5	-1.1
	comp=Z,6.3nm,0.3s						
PYUN	Piuthan	57.10	309	*eP*	P	17 27 30.5	-0.3
	comp=Z,7.1nm,0.3s						
SONM	Songino Array	57.65	341	P	P	17 27 34.8	+0.6
	comp=Z,1.5nm,0.5s,baz=160,slow=6.6,SNR=17						
SONM	Songino Array	57.65	341	P	P	17 27 34.6	+0.4
WMQ	Urumqi	62.89	326	*eP*	P	17 28 12.0	+2.1
PEA0B	Petropavlovsk-	63.08	18	P	P	17 28 12.1	+1.3
PETK	Petropavlovsk-	63.08	18	P	P	17 28 11.7	+0.8
	comp=Z,2.8nm,0.8s,baz=177,slow=3.0,SNR=7.0						
KSH	Kashi	67.72	317	*eP*	P	17 28 42.5	+1.3
KSH				pmax	pmax		
	comp=Z,21nm,0.7s						
KSH				pmax	pmax		
	comp=Z,240nm,4.6s						
MK31	Makanchi Array	67.72	326	P	P	17 28 41.4	+0.4
MK31				IAmb	IAmb	17 28 42.2	
	comp=Z,6.2nm,0.9s						
MKAR	Makanchi Array	67.72	326	P	P	17 28 41.4	+0.4
	comp=Z,7.2nm,0.4s,baz=114,slow=7.8,SNR=152						
MKAR	Makanchi Array	67.72	326	P	P	17 28 41.2	+0.3
MAKZ	Makanchi	67.91	326	P	P	17 28 42.5	+0.4
ZALV	Zalesovo Beam	70.94	333	P	P	17 29 00.1	-0.5
	comp=Z,1.1nm,0.3s,baz=110,slow=6.5,SNR=8.4						
KURK	Kurchatov	71.98	328	P	P	17 29 06.9	0.0
KURK				IAmb	IAmb	17 29 07.3	
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	73.01	318	P	P	17 29 13.2	-0.1
VNDA	Vanda	73.43	173	P	P	17 29 16.2	+1.1
	comp=Z,0.6nm,0.8s,baz=307,slow=7.8,SNR=4.4						
BRVK	Borovoye	77.61	327	P	P	17 29 39.1	-0.2
BRVK				IAmb	IAmb	17 29 39.7	
	comp=Z,2.1nm,0.6s						
GEYT	Alibeck	80.07	310	P	P	17 29 53.5	+0.3
	comp=Z,1.3nm,0.4s,baz=87,slow=6.3,SNR=2.0						
GEYT	Alibeck	80.07	310	IAmb	IAmb	17 29 54.4	
	comp=Z,2.4nm,1.1s						
NRIK	Noril'sk	80.69	346	P	P	17 29 56.2	+0.4
	comp=Z,2.2nm,0.6s,baz=133,slow=6.4,SNR=4.7						
ABKAR	Akbulak array	82.11	321	P	P	17 30 03.1	-0.7
QSPA	South Pole Qui	84.05	180	P	P	17 30 14.0	+0.4
QSPA				IAmb	IAmb	17 30 15.4	
	comp=Z,2.6nm,1.0s						
OHAK	Old Harbor	87.42	32	P	P	17 30 30.8	+0.7
TTA	Tatalina	87.71	26	P	P	17 30 32.8	+1.2
ILAR	Eielson Array	92.07	25	P	P	17 30 50.5	-1.3
	comp=Z,0.3nm,0.6s,baz=273,slow=3.9,SNR=5.0						
ILAR	Eielson Array	92.07	25	P	P	17 30 52.2	+0.4
TORD	Torodi Ar. Bea	129.29	282	PKP	PKPdf	17 36 51.8	-0.2
	comp=Z,0.2nm,0.5s,baz=110,slow=2.6,SNR=4.1						
LPAZ	La Paz	151.11	140	PKPbc	PKiKP	17 37 39.1	+1.1
	comp=Z,0.9nm,0.5s,baz=88,slow=2.8,SNR=4.9						
LPAZ	La Paz	151.11	140		PKiKP	17 37 38.8	+0.7

*NEIC **17** 17:21:39.5±0.6, 18°.73N±0°.07×67°.17W±0°.04, h85km±7km, Error ellipse: s-maj=11.1km s-min=5.8km az=190.0*
*RSPR **17** 17:21:40.2, 18°.74N×67°.16W, h84km, MD3.5/14*
ISC 17 17:21:36.6±2.1, 18°.8N±0°.1×67°.27W±0°.08, h100km, n56, σ0§91/71, 12C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	Aguadilla, PR	0.36	156	⇑*eP*		Pn	17 21 52.4	+0.9
AGPR	Aguadilla, PR	0.36	156	*eS*		Sn	17 22 01.6	-1.0
AGPR	Aguadilla, PR	0.36	156			Pn	17 21 52.2	+0.7
AGPR	Aguadilla, PR	0.36	156			Sn	17 22 01.6	-1.0
MPR	Mayaguez	0.59	168	Pn		Pn	17 21 53.4	+0.3
LSP	Las Mesas	0.64	164	⇑*eP*		Pn	17 21 54.6	+1.0
LSP	Las Mesas	0.64	164	*eS*		Sn	17 22 05.7	-0.5
LSP	Las Mesas	0.64	164			Pn	17 21 54.6	+1.0
LSP						Sn	17 22 05.7	-0.5
AOPR	Arecibo Observ	0.66	132	⇑*eP*		Pn	17 21 54.1	+0.4
AOPR	Arecibo Observ	0.66	132	*eS*		Sn	17 22 05.0	-1.4
AOPR	Arecibo Observ	0.66	132			Pn	17 21 53.8	+0.1
AOPR						Sn	17 22 04.9	-1.6
UUPR	Utuado, UPR, P	0.75	136			Pn	17 21 55.0	+0.6
UUPR						Sn	17 22 06.7	-1.2
EMPR	Esperanza - Ma	0.77	114	⇑*eP*		Pn	17 21 55.6	+1.0
EMPR	Esperanza - Ma	0.77	114	*eS*		Sn	17 22 07.1	-1.0
EMPR	Esperanza - Ma	0.77	114			Sn	17 22 07.1	-1.0
EMPR	Esperanza - Ma	0.77	114			Pn	17 21 55.3	+0.7
CRPR	Cabo Rojo, PR	0.80	169	⇑*eP*		Pn	17 21 55.7	+0.7
CRPR	Cabo Rojo, PR	0.80	169	*eS*		Sn	17 22 07.4	-1.3
CRPR	Cabo Rojo, PR	0.80	169			Pn	17 21 55.7	+0.7
CRPR						Sn	17 22 07.4	-1.3
MLPR	Magueyes Islan	0.85	166	⇑*eP*		Pn	17 21 56.2	+0.7
MLPR	Magueyes Islan	0.85	166	*eS*		Sn	17 22 08.7	-0.9
MLPR	Magueyes Islan	0.85	166			Pn	17 21 56.2	+0.7
MLPR						Sn	17 22 08.7	-0.9
GBPR	Guanica, Bosqu	0.90	156	⇑*eP*		Pn	17 21 56.8	+0.8
GBPR	Guanica, Bosqu	0.90	156	*eS*		Sn	17 22 10.0	-0.4
GBPR	Guanica, Bosqu	0.90	156			Pn	17 21 56.8	+0.8
GBPR						Sn	17 22 10.0	-0.4
CELP	Cerrillos	0.97	138	⇑*eP*		Pn	17 21 57.3	+0.6
CELP	Cerrillos	0.97	138	*eS*		Sn	17 22 11.0	-0.8
CELP	Cerrillos	0.97	138			Pn	17 21 57.3	+0.6
CELP						Sn	17 22 11.0	-0.8
OBIP	Obispado Ponce	0.98	140	⇑*eP*		Pn	17 21 57.4	+0.6
OBIP	Obispado Ponce	0.98	140	*eS*		Sn	17 22 11.1	-0.8
OBIP	Obispado Ponce	0.98	140			Pn	17 21 57.4	+0.6
OBIP						Sn	17 22 11.1	-0.8
ICMP	Isla Caja de M	1.15	142	⇓*eP*		Pn	17 22 00.0	+1.4
ICMP	Isla Caja de M	1.15	142	*eS*		Sn	17 22 14.6	-0.6
ICMP	Isla Caja de M	1.15	142			Pn	17 22 00.0	+1.4
ICMP						Sn	17 22 14.6	-0.6
GCPR	Guaynabo City	1.22	113	⇑*eP*		Pn	17 22 00.1	+0.6
GCPR	Guaynabo City	1.22	113	*eS*		Sn	17 22 15.4	-1.5
GCPR	Guaynabo City	1.22	113			Pn	17 22 00.1	+0.6
GCPR						Sn	17 22 15.4	-1.5
SJG	San Juan	1.26	123			Pn	17 22 00.5	+0.5
IGPR	InterUniversit	1.38	127	⇓*eP*		Pn	17 22 02.0	+0.6
IGPR	InterUniversit	1.38	127	*eS*		Sn	17 22 19.0	-1.0
IGPR	InterUniversit	1.38	127			Pn	17 22 02.3	+1.0
PDPR	Patillas Dam,	1.41	123	⇑*eP*		Pn	17 22 02.6	+0.8
PDPR	Patillas Dam,	1.41	123	*eS*		Sn	17 22 19.9	-0.9
PDPR	Patillas Dam,	1.41	123			Pn	17 22 02.6	+0.8
PDPR						Sn	17 22 19.9	-0.9
CBYP	Canovanas	1.44	111	⇓*eP*		Pn	17 22 02.9	+0.8
CBYP	Canovanas	1.44	111	*eS*		Sn	17 22 20.7	-0.8
CBYP	Canovanas	1.44	111			Pn	17 22 02.9	+0.8
CBYP						Sn	17 22 20.7	-0.8
HUMP	Col San Antoni	1.49	116	⇑*eP*		Pn	17 22 03.9	+1.2
HUMP	Col San Antoni	1.49	116	*eS*		Sn	17 22 21.8	-0.8
HUMP	Col San Antoni	1.49	116			Pn	17 22 03.9	+1.2
HUMP						Sn	17 22 21.8	-0.8
MTP	Monte Pirata	1.77	113	⇓*eP*		Pn	17 22 07.4	+1.2
MTP	Monte Pirata	1.77	113	*eS*		Sn	17 22 28.6	-0.2
MTP	Monte Pirata	1.77	113			Pn	17 22 07.4	+1.2
MTP						Sn	17 22 28.6	-0.2
CUPR	Culebra, Puert	1.94	104	⇓*eP*		Pn	17 22 09.3	+0.9
CUPR	Culebra, Puert	1.94	104	*eS*		Sn	17 22 31.9	-0.8
CUPR	Culebra, Puert	1.94	104			Pn	17 22 09.3	+0.9
CUPR						Sn	17 22 31.9	-0.8

*NEIC **17** 17:33:11.4±2.6, 37°.6S±0°.1×179°.9W±0°.1, h10km±2km, mb4.3/6, Error ellipse: s-maj=22.5km s-min=18.8km az=174.0*
*WEL **17** 17:33:15.7, 38°S±6°×18°0E±°, h32km±19km, M3.8/15, ML4.1/15, MLv3.8/15, Error ellipse: s-maj=0.0km s-min=0.0km az=9.6*
*IDC **17** 17:33:20.6±6.6, 37°.47S×179°.48E, h50km±42km, mb3.8/5, mb1 3.9/7, mb1mx3.6/42, mbtmp4.0/7, ML3.6/2, Error ellipse: s-maj=81.8km s-min=39.8km az=136.0*
ISC 17 17:33:12.1±2.4, 37°.70S±0°.06×179°.92E±0°.09, h5km±12km, n83, σ1§38/89, mb4.1/8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WMGZ	Waiomatatini S	1.20	264	P		Pn	17 33 36.3	+0.8
MXZ	Matakaoa Point	1.29	276	P		Pg	17 33 37.1	+0.3
MXZ				S		Sg	17 33 52.9	-0.7
MXZ	Matakaoa Point	1.29	276	Pn		Pg	17 33 37.0	+0.1
PUZ	Puketiti	1.37	254	P		Pn	17 33 38.7	+0.9
PUZ				S		Sg	17 33 55.4	-0.7
CNGZ	Carnagh Statio	1.56	239	P		Pn	17 33 42.5	+2.0
TWGZ	Tauwhareparae	1.61	252	P		Pn	17 33 42.5	+1.4
TWGZ				S		Sn	17 34 02.4	+0.1
HAZ	Te Kaha	1.70	267	P		Pn	17 33 43.3	+1.0
HAZ				S		Sn	17 34 03.6	-0.8
TKGZ	Te Karaka	1.80	245	P		Pn	17 33 45.3	+1.6
TKGZ				S		Sn	17 34 06.7	-0.1
RUGZ	Raukumara Rang	1.80	261	P		Pn	17 33 44.4	+0.7
RIGZ	Rimuhau	1.98	239	P		Pn	17 33 47.9	+1.8
RIGZ				S		Sn	17 34 11.5	+0.2
MWZ	Matawai	2.00	251	P		Pn	17 33 47.1	+0.7
MWZ				S		Sn	17 34 10.6	-1.2
PRGZ	Paritu Road	2.02	232	P		Pn	17 33 48.6	+1.9
PRGZ				S		Sn	17 34 13.7	+1.4
RAGZ	Rawiri	2.13	247	P		Pn	17 33 50.1	+1.8
MHGZ	Mahia Peninsul	2.15	227	P		Pn	17 33 50.6	+2.2
KNZ	Kokohu	2.21	233	P		Pn	17 33 50.3	+1.0
URZ	Urewera	2.29	255	P		Pn	17 33 52.1	+1.6
	31nm,0.3s,baz=260,slow=2.1,SNR=128							
URZ				S		Sn	17 34 17.2	-1.8
	47nm,0.3s,baz=213,slow=20,SNR=18							
URZ	Urewera	2.29	255	P		Pn	17 33 52.1	+1.6
URZ				S		Sn	17 34 17.9	-1.1
URZ	Urewera	2.29	255			Pn	17 33 52.0	+1.5
WHRZ	Whale Island	2.34	265	P		Pn	17 33 52.9	+1.8
RTZ	Ruatahuna	2.49	248	P		Pn	17 33 55.1	+1.8
RTZ				S		Sn	17 34 24.4	+0.3
WHHZ	Waihua	2.52	236	P		Pn	17 33 55.5	+1.9
WHHZ				S		Sn	17 34 25.6	+0.9
RAHZ	Arahi	2.54	241	P		Pn	17 33 55.6	+1.7
MUGZ	Murupara	2.61	252	P		Pn	17 33 56.0	+1.2
OPRZ	Ohinepanea	2.67	266	P		Pn	17 33 56.4	+0.7
MTHZ	Maungataniwha	2.69	244	P		Pn	17 33 57.4	+1.4
RRRZ	Republican Roa	2.77	256	P		Pn	17 33 58.5	+1.5
ARHZ	Aropaoanui	2.78	235	P		Pn	17 33 59.0	+1.8
NMHZ	Naumai	2.82	239	P		Pn	17 33 59.4	+1.7
OMRZ	Omania	2.84	261	P		Pn	17 34 01.3	+3.3
TGRZ	Tauranga	2.91	268	P		Pn	17 33 59.7	+0.8
KARZ	Kaharoa	2.93	263	P		Pn	17 34 00.2	+0.9
CKHZ	Cape Kidnapper	2.96	228	P		Pn	17 34 00.8	+1.1
BKZ	Black Stump Fm	3.07	240	P		Pn	17 34 02.4	+1.3
BKZ	Black Stump Fm	3.07	240	Pn		Pn	17 34 02.5	+1.3
MCHZ	McNeill Hill	3.07	234	P		Pn	17 34 03.2	+1.0
KUZ	Kuaotunu	3.49	285	P		Pn	17 34 07.1	+0.2
TOZ	Tahuroa Road	3.51	268	P		Pn	17 34 07.8	+0.7
BHHZ	Black Hill Sta	3.51	238	P		Pn	17 34 08.3	+1.0
MOVZ	Moawhango	3.69	241	P		Pn	17 34 11.1	+1.4
NGZ	Ngauruhoe	3.70	245	P		Pn	17 34 12.0	+2.0
WNVZ	Wahianoa	3.76	243	P		Pn	17 34 12.8	+2.0
MKAZ	Moumakai	3.84	277	P		Pn	17 34 12.4	+0.7
GRZ	Great Barrier	3.86	291	P		Pn	17 34 12.5	+0.6
ETAZ	East Tamaki Re	4.05	279	P		Pn	17 34 15.7	+1.1
MBAZ	Motutapu North	4.12	282	P		Pn	17 34 16.7	+1.1
PRWZ	Pori Road	4.19	226	P		Pn	17 34 16.9	+0.4
EPAZ	Eden Park BICE	4.21	280	P		Pn	17 34 18.7	+1.8
AWAZ	Awhitu Peninsu	4.25	277	P		Pn	17 34 18.9	+1.5
VRZ	Vera Road	4.30	249	P		Pn	17 34 19.3	+1.3
WTAZ	Waiatarua	4.33	279	P		Pn	17 34 20.1	+1.6
RVAZ	Riverhead Bore	4.37	281	P		Pn	17 34 20.8	+1.8
MRZ	Mangatainoka R	4.49	227	P		Pn	17 34 20.4	-0.3
TMWZ	Te Maipa	4.62	221	P		Pn	17 34 22.4	0.0
WCZ	Waipu Caves	4.81	290	P		Pn	17 34 26.5	+1.4
OGWZ	Otaki Gorge	4.83	228	P		Pn	17 34 25.3	0.0
MSWZ	Moikau Station	5.18	223	Pn		Pn	17 34 28.4	-1.7
PLWZ	Palliser	5.28	222	Pn		Pn	17 34 30.2	-1.4
OUZ	Omahuta	5.67	294	P		Pn	17 34 38.4	+1.5
OUZ	Omahuta	5.67	294	Pn		Pn	17 34 38.0	+1.1
QRZ	Quartz Range	6.53	239	Pn		Pn	17 34 48.5	-0.2
CTZ	Chatham Island	6.58	158	P		Pn	17 34 53.4	+4.2
THZ	Tophouse	6.76	231	Pn		Pn	17 34 51.3	-0.6
KHZ	Kahutara	6.79	224	Pn		Pn	17 34 51.0	-1.3
LTZ	Lake Taylor	7.75	227	Pn		Pn	17 35 04.2	-1.2
DZM	Mont Dzumac	19.44	319	P		P	17 37 39.6	+0.2
	0.1nm,0.3s,baz=127,slow=20,SNR=2.3							
CTA	Charters Tower	34.07	292	P		P	17 39 57.2	-0.2
	3.2nm,1.0s,baz=135,slow=5.7,SNR=2.8							
COEN	Coen	40.27	296	P		P	17 40 50.7	+0.6
COEN				IAmb		IAmb	17 41 37.4	
	comp=Z,9.6nm,1.2s							
AS31	Alice Springs	41.58	276	P		P	17 40 59.5	-1.4
ASAR	Alice Springs	41.58	276	P		P	17 41 00.3	-0.5
	comp=Z,1.9nm,0.7s,baz=122,slow=8.1,SNR=37							
ASAR	Alice Springs	41.58	276	P		P	17 40 58.4	-2.4
WB2	Warramunga Arr	43.21	281	P		P	17 41 13.3	-0.9
WB2				IAmb		IAmb	17 42 00.5	
	comp=Z,13nm,1.6s							
WRA	Warramunga Arr	43.22	281	P		P	17 41 13.6	-0.7
	comp=Z,1.4nm,0.5s,baz=121,slow=7.8,SNR=27							
WRA	Warramunga Arr	43.28	281	P		P	17 41 13.7	-0.6
WB0	Warramunga Arr	43.28	281	P		P	17 41 14.3	-0.4
WB0				IAmb		IAmb	17 41 15.0	
	comp=Z,2.7nm,0.8s							
FITZ	Fitzroy Crossi	51.06	277	P		P	17 42 15.2	-0.3
	comp=Z,2.3nm,0.8s,baz=159,slow=9.0,SNR=7.0							
FITZ	Fitzroy Crossi	51.06	277	P		P	17 42 16.0	+0.5
H03S2	Juan Fernandez	77.89	123	T		T	19 11 05.0	
	baz=230,slow=74							
H03S1	Juan Fernandez	77.89	123	T		T	19 11 00.0	
	baz=230,slow=74							
H03S3	Juan Fernandez	77.90	123	T		T	19 11 13.3	
	baz=230,slow=74							
H03N3	Juan Fernandez	78.12	123	T		T	19 11 18.8	
	baz=234,slow=72							
H03N2	Juan Fernandez	78.12	123	T		T	19 11 24.3	
	baz=234,slow=72							
H03N1	Juan Fernandez	78.14	123	T		T	19 11 23.3	
	baz=234,slow=72							
KSRS	Korea Array	88.86	321	P		P	17 46 07.1	+0.2
	comp=Z,0.2nm,0.3s,baz=136,slow=5.8,SNR=1.6							

*IDC **17** 17:37:21.6±1.4, 0°.77S×127°.27E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/46, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=37.5km s-min=23.2km az=53.0*
*DJA **17** 17:37:24.9±0.3, 1°.S±2°×12°.7E±°, h10km, M3.6/11, MLv3.6/11*
ISC 17 17:37:27.7±1.0, 0°.70S±0°.05×127°.34E±0°.05, h41km, n12, σ1§80/15, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	Ternate	1.46	1	P		Pn	17 37 49.9	-1.7
TNTI				S		Sn	17 38 10.3	+0.8
SANI	Sanana	1.90	225	P		Pn	17 37 55.6	-2.1
NLAI	Namlea	2.54	185	P		Pn	17 38 06.6	+0.2
NLAI				S		Sn	17 38 36.8	+0.8
MSAI	Masohi	3.07	149	P		Pn	17 38 13.8	0.0
KMSI	Cibinong	3.59	291	P		Pn	17 38 21.5	+0.7
SIJI	Sorong	3.93	93	Pn		Pn	17 38 24.3	-1.3
	1.9nm,0.3s,baz=221,slow=22,SNR=12							
SIJI				Sn		Sn	17 39 13.4	+2.9
	baz=127,slow=20,SNR=1.1							
GTOI	Gorontalo	4.53	287	P		Pn	17 38 37.2	+3.5
LUWI	Luwuk	4.58	266	P		Pn	17 38 32.9	-1.5
BNDI	Bandanaira	4.58	146	P		Pn	17 38 35.8	+1.3
WRA	Warramunga Arr	20.32	161	P		P	17 41 58.9	-1.6
	0.9nm,0.5s,baz=340,slow=12,SNR=15							
ASAR	Alice Springs	23.70	165	P		P	17 42 34.9	-1.1
	1.4nm,0.6s,baz=346,slow=12,SNR=25							
MKAR	Makanchi Array	61.54	326	P		P	17 47 40.6	0.0
	1.0nm,0.5s,baz=118,slow=8.2,SNR=12							

*NSSP **17** 17:37:43.1, 38°.75N×43°.32E, h8km, Ms3.2*
*DDA **17** 17:37:44.7, 38°.70N×43°.49E, h19km±1km, ML3.2*
*ISK **17** 17:37:44.2, 38°.72N×43°.48E, h2km, ML3.3/15*
ISC 17 17:37:45.5±1.0, 38°.72N±0°.02×43°.47E±0°.02, h19km±2km, n48, σ1§19/70, 8C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VANB	Van	0.14	209	PG		Pg	17 37 49.9	+0.1
VANB				SG		Sg	17 37 53.4	+0.7
TVAN	Van	0.20	196	*i* P		Pg	17 37 49.9	-0.7
TVAN				*i* S		Sg	17 37 53.7	-0.5
TVAN				IAML			17 37 58.0	
	comp=N,7μm,0.6s							
TVAN				IAML			17 38 00.0	
	comp=E,12μm,0.5s							
VMUR	Van-Muradiye	0.28	16	*i* P		Pb	17 37 51.0	-1.0
VMUR				*i* S		Sb	17 37 56.2	-0.2
VMUR				IAML			17 37 57.0	
	comp=N,5μm,0.3s							
VMUR				IAML			17 37 57.0	
	comp=E,6μm,0.4s							
ERCV	ERCIS-VAN	0.32	341	PG		Pg	17 37 51.4	-1.2
ERCV				SG		Sb	17 37 56.9	-0.7
GEVA	Gevas	0.52	219	*i* P		Pb	17 37 55.2	-0.9
AKDM	Akdamar-Van	0.55	225	PG		Pb	17 37 55.7	-0.9
AKDM				SG		Sb	17 37 56.4	+0.2
CLDR	Caldiran	0.55	39	PG		Pb	17 37 55.6	-1.0
CLDR				SG		Sb	17 38 04.1	-0.1
CLDR	Caldiran	0.55	39	*i* P		Pb	17 37 55.6	-1.0
CLDR				*i* S		Sb	17 38 04.4	+0.3
CLDR				IAML			17 38 05.0	
	comp=N,3μm,0.3s							
CLDR				IAML			17 38 05.0	
	comp=E,4μm,0.5s							
ADCV	BITLIS_Adilcev	0.59	279	*i* P		Pb	17 37 57.4	+0.1
ADCV				*i* S		Sb	17 38 06.2	+0.8
BASK	Baskale_VAN	0.78	148	*i* P		Pb	17 37 59.8	-0.8
BASK				*i* S		Sg	17 38 09.3	-2.0
MLAZ	Malazgirt-MUS	0.84	301	PG		Pb	17 38 01.4	-0.2
DYDN	Diyadin	0.84	11	*i* P		Pb	17 38 01.1	-0.6
DYDN				*i* S		Sb	17 38 13.0	+0.2
AGRB	Hanur-Agry	0.94	337	PG		Pb	17 38 02.7	-0.6
BLIS	Bitlis-Merkez	1.11	255	*i* P		Pb	17 38 05.7	-0.5
BLIS				*i* S		Sg	17 38 20.0	-1.6
BLIS				IAML		

Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.71**	**268**	P	**Pb**	**17 46 15.4**	**+0.9**
JIKH				S	**Sb**	**17 46 23.3**	**-1.2**
JIO	**Ouri**	**0.81**	**279**	P	**Pb**	**17 46 16.8**	**+0.6**
JIO				S	**Sg**	**17 46 25.8**	**+0.1**
JKMT	**Kesennumamotoy**	**0.84**	**305**	P	**Pb**	**17 46 17.1**	**+0.3**
JKMT				S	**Sb**	**17 46 26.5**	**-2.0**
OFUJ	**Ofunato**	**0.92**	**324**	P	**Pb**	**17 46 18.3**	**+0.1**
OFUJ				S	**Sg**	**17 46 28.6**	**-0.8**
JMK	**Ichinoseki**	**1.09**	**305**	P	**Pb**	**17 46 20.7**	**-0.3**
JMK				*eS*	**Sg**	**17 46 32.9**	**-1.8**
JMM	**Marumori**	**1.32**	**250**	P	**Pn**	**17 46 24.2**	**-0.6**
JMM				*eS*	**Sb**	**17 46 40.1**	**-2.1**
JMM	**Marumori**	**1.32**	**250**	Pn	**Pn**	**17 46 24.3**	**-0.5**
JOU	**Okura**	**1.34**	**272**	P	**Pn**	**17 46 24.9**	**-0.1**
JOU				S	**Sb**	**17 46 40.5**	**-2.2**
JOM	**Ohasama**	**1.41**	**324**	P	**Pn**	**17 46 25.7**	**-0.3**
JOM				S	**Sb**	**17 46 42.0**	**-2.8**
JFK	**Kawauchi**	**1.52**	**231**	P	**Pn**	**17 46 27.5**	**-0.1**
JFK				S	**Sn**	**17 46 44.9**	**-2.9**
JYK	**Kaneyama**	**1.68**	**291**	P	**Pn**	**17 46 29.6**	**0.0**
JYK				*eS*	**Sn**	**17 46 49.0**	**-2.5**
JRG	**Rokugo**	**1.72**	**309**	P	**Pn**	**17 46 30.4**	**+0.2**
JFT	**Otama**	**1.80**	**244**	P	**Pn**	**17 46 32.2**	**+0.9**
JFT				*eS*	**Sn**	**17 46 53.3**	**-1.2**
JTM	**Tenmabayashi**	**2.65**	**338**	Pn	**Pn**	**17 46 44.1**	**+1.1**
JYT	**Yasato**	**2.72**	**220**	Pn	**Pn**	**17 46 44.9**	**+0.9**
JSD	**Sado**	**3.25**	**266**	Pn	**Pn**	**17 46 52.8**	**+1.6**
ERM	**Erimo**	**3.73**	**9**	Pn	**Pn**	**17 46 58.6**	**+0.8**
MJAR	**Matsushiro Arr**	**3.76**	**243**	Pn	**Pn**	**17 47 00.8**	**+2.5**
	0.5nm,0.3s,baz=59,slow=9.6,SNR=25						
MJAR				Sn	**Sn**	**17 47 47.2**	**+4.3**
	0.3nm,0.3s,baz=302,slow=37,SNR=4.3						
MAJO	**Matsushiro**	**3.76**	**243**	Pn	**Pn**	**17 47 01.4**	**+3.0**
MAT	**Matsushiro**	**3.76**	**243**	P	**Pn**	**17 47 01.7**	**+3.4**
MAT				*eS*	**Sb**	**17 47 48.1**	**-4.3**
MJB9	**Matsu-Tunnel**	**3.76**	**243**	Pn	**Pn**	**17 47 00.2**	**+1.9**
JEW	**Eniwo**	**4.56**	**352**	Pn	**Pn**	**17 47 09.6**	**+0.3**
JGF	**Kuroka**	**4.85**	**237**		**Pn**	**17 47 15.6**	**+2.3**
INU	**Inuyama**	**5.22**	**237**	Pn	**Pn**	**17 47 20.6**	**+2.2**
JHJ	**Hachijo jima 2**	**5.61**	**203**	Pn	**Pn**	**17 47 24.0**	**+0.3**
	7.8nm,0.3s,baz=55,slow=19,SNR=6.1						
JHJ				Sn	**Sn**	**17 48 24.2**	**-4.3**
	4.2nm,0.3s,baz=202,slow=19,SNR=2.0						
ASAJ	**Asahikawa**	**5.78**	**2**	Pn	**Pn**	**17 47 27.6**	**+1.5**
	0.5nm,0.3s,baz=198,slow=13,SNR=1.4						
ASAJ				Sn	**Sn**	**17 48 33.0**	**+0.3**
	0.3nm,0.3s,baz=278,slow=18,SNR=1.6						
JKA	**Kamikawa-asahi**	**5.78**	**2**		**Pn**	**17 47 27.9**	**+1.8**
JWT	**Wachi**	**6.36**	**244**		**Pn**	**17 47 38.3**	**+4.3**
JHS	**Saijyo**	**8.14**	**249**	Pn	**Pn**	**17 48 01.2**	**+2.7**
USRK	**Ussuriysk Ar.**	**9.76**	**310**	Pn	**Pn**	**17 48 25.0**	**+4.3**
	baz=125,slow=13,SNR=7.5						
KSRS	**Korea Array**	**11.45**	**270**	Pn	Pn	17 48 49.2	+5.4
	0.1nm,0.3s,baz=77,slow=14,SNR=3.4						
YOJ	**Yonaguni jima**	**21.48**	**236**	P	**P**	**17 50 50.5**	**+1.4**
SONM	**Songino Array**	**27.71**	**302**	P	**P**	**17 51 50.8**	**+1.8**
	0.3nm,0.5s,baz=98,slow=8.9,SNR=2.2						
H11N2	**WAKE ISLAND Hy**	**28.21**	**124**	T	T	18 21 31.2	
	baz=317,slow=74						
ENH	**Enshi**	**28.21**	**263**	P	**P**	**17 51 54.0**	**+0.6**
ENH				IAmb	IAmb	17 51 59.6	
	comp=Z,8.0nm,0.6s						
H11N1	**WAKE ISLAND Hy**	**28.22**	**124**	T	T	18 21 30.5	
	baz=317,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.23**	**124**	T	T	18 21 29.2	
	baz=317						
H11S1	**WAKE ISLAND Hy**	**28.97**	**126**	T	T	18 23 04.6	
	baz=318,slow=76						
H11S3	**WAKE ISLAND Hy**	**28.98**	**126**	T	T	18 23 10.2	
	baz=318,slow=76						
H11S2	**WAKE ISLAND Hy**	**28.99**	**126**	T	T	18 23 11.9	
	baz=318,slow=76						
KIWB	**Kanaga Island**	**31.18**	**51**		**PcP**	**17 55 14.8**	**+0.6**
ZALV	**Zalesovo Beam**	**41.61**	**311**	P	**P**	**17 53 48.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=95,slow=7.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**41.61**	**311**	P	**P**	**17 53 48.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**42.56**	**255**	P	**P**	**17 53 56.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=30,slow=9.4,SNR=0.8						
MKAR	**Makanchi Array**	**44.08**	**301**	P	**P**	**17 54 09.3**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=84,slow=9.4,SNR=2.0						
MAKZ	**Makanchi**	**44.29**	**301**	P	**P**	**17 54 10.0**	**-0.2**
KURK	**Kurchatov**	**45.74**	**307**	P	**P**	**17 54 20.9**	**-0.8**
KURK				IAmb	IAmb	17 54 31.9	
	comp=Z,2.5nm,0.7s						
ILAR	**Eielson Array**	**48.00**	**33**	P	**P**	**17 54 37.5**	**-1.6**
	comp=Z,0.4nm,0.9s,baz=242,slow=7.7,SNR=4.1						
LEM	**Lembang**	**55.34**	**223**	LR	LR	18 18 12.5	
	comp=Z,226nm,21.5s,baz=170,slow=35						
ABKAR	**Akbulak array**	**57.68**	**310**	P	**P**	**17 55 50.2**	**-0.7**
WB0	**Warramunga Arr**	**58.27**	**189**	P	**P**	**17 55 55.3**	**+0.1**
WB0				IAmb	IAmb	17 56 14.2	
	comp=Z,6.5nm,1.5s						
WRAB	**Tennant Creek**	**58.44**	**189**	P	**P**	**17 55 55.8**	**-0.6**
WRAB				IAmb	IAmb	17 55 57.3	
	comp=Z,6.3nm,0.9s						
WR0	**Warramunga Arr**	**58.45**	**189**	P	**P**	**17 55 56.5**	**+0.1**
WR0				IAmb	IAmb	17 56 22.1	
	comp=Z,3.3nm,1.1s						
WRA	**Warramunga Arr**	**58.45**	**189**	P	**P**	**17 55 56.4**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=6.5,slow=7.3,SNR=14						
WRA	**Warramunga Arr**	**58.45**	**189**	P	**P**	**17 55 56.2**	**-0.4**
ASAR	**Alice Springs**	**62.18**	**189**	P	**P**	**17 56 22.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=4.9,slow=4.7,SNR=14						
ASAR	**Alice Springs**	**62.18**	**189**	P	**P**	**17 56 22.2**	**+0.2**
PDAR	**Pinedale Array**	**76.22**	**46**	P	**P**	**17 57 49.8**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=318,slow=1.2,SNR=3.6						
TXAR	**Lajitas Array**	**88.73**	**53**	P	**P**	**17 58 55.1**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=319,slow=3.6,SNR=2.4						

*REY **17** 17:52:29.8, 64.6°68N× 17.5°45W, h8km*
*IDC **17** 17:52:29.6±0.9, 64.5°50N× 17.5°57W, h0km, mb3.6/8, mb1 3.8/10, mb1mx3.6/57, mbtmp3.7/10, ML3.6/2, Error ellipse: s-maj=28.9km s-min=11.8km az=11.0*
ISC 17 17:52:30.2±0.5, **64.68N**±0.02×**17.46W**±0.02, **h10**km, **n53**, σ1**s53**/71, **mb3.7/8**, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**20**	P	**Pg**	**17 52 32.6**	**-0.5**
	baz=18						
IDYN				S	**Sg**	**17 52 34.7**	**-0.5**
	baz=18						
IVON	**Vonarskard**	**0.13**	**266**	P	**Pg**	**17 52 32.6**	**-0.6**
	baz=268						
IHAM	**Hamarinn**	**0.26**	**218**	P	**Pg**	**17 52 34.9**	**-0.6**
	baz=219						
IHAM				S	**Sg**	**17 52 38.4**	**-0.6**
	baz=219						
IGRF	**Grimsfjall**	**0.29**	**163**	P	**Pg**	**17 52 35.3**	**-0.7**
	baz=164						
IGRF				S	**Sg**	**17 52 39.8**	**-0.2**
	baz=164						
IKVE	**Kverkfjoll**	**0.34**	**90**	P	**Pg**	**17 52 36.5**	**-0.5**
	baz=90						
IHUS	**Husbondi**	**0.40**	**192**	P	**Pg**	**17 52 37.5**	**-0.6**
	baz=193						
IHUS				S	**Sg**	**17 52 42.9**	**-0.4**
	baz=193						
ISKR	**Skrokkalda**	**0.42**	**253**	P	**Pg**	**17 52 37.5**	**-0.8**
	baz=254						
IVOT	**Vottur**	**0.43**	**164**	P	**Pg**	**17 52 37.7**	**-0.9**
	baz=164						
IKRE	**Kreppuhraun**	**0.47**	**77**	P	**Pg**	**17 52 38.4**	**-1.1**
	baz=76						
IKRE				S	**Sg**	**17 52 45.5**	**-0.2**
	baz=76						
IJOK	**Jokulheimar**	**0.50**	**222**	P	**Pg**	**17 52 38.9**	**-0.9**
	baz=223						
IMKO	**Mokollar**	**0.56**	**58**	P	**Pg**	**17 52 40.1**	**-1.0**
	baz=57						
IMKO				S	**Sg**	**17 52 48.0**	**-0.5**
	baz=57						
IIEY	**Innrieyrar**	**0.66**	**206**	P	**Pg**	**17 52 41.5**	**-1.4**
	baz=207						
IIEY				S	**Sg**	**17 52 50.4**	**-1.1**
	baz=207						
ISVA	**Svartarkot**	**0.66**	**7**	P	**Pg**	**17 52 41.8**	**-1.2**
	baz=7.1						
IKSK	**Karasker**	**0.68**	**140**	P	**Pg**	**17 52 41.1**	**-2.1**
	baz=140						
IKAL	**Kalfafell**	**0.74**	**188**	P	**Pg**	**17 52 43.0**	**-1.5**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.75**	**80**	P	**Pg**	**17 52 43.0**	**-1.7**
	baz=79						
IVSH				S	**Sg**	**17 52 53.5**	**-1.0**
	baz=79						
IVAT	**Vatnsfell**	**0.81**	**232**	P	**Pg**	**17 52 44.7**	**-0.9**
	baz=233						
IADA	**Aoalbol**	**0.87**	**66**	P	**Pg**	**17 52 45.0**	**-2.0**
	baz=66						
IADA				S	**Sg**	**17 52 57.7**	**-0.6**
	baz=66						
IFAG	**Fagurholsmyri**	**0.88**	**156**	P	**Pg**	**17 52 45.3**	**-1.9**
	baz=156						
IHVE	**Hveravellir**	**0.92**	**283**	P	**Pg**	**17 52 45.9**	**-2.0**
	baz=283						
IHVE				S	**Sb**	**17 52 59.1**	**-1.5**
	baz=283						
IMEL	**Melhnausar**	**0.95**	**21**	P	**Pg**	**17 52 46.6**	**-1.9**
	baz=20						
IREN	**Reynihlio**	**1.00**	**13**	P	**Pg**	**17 52 47.4**	**-1.9**
	baz=13						
IKVO	**Krokottuvotn**	**1.06**	**13**	P	**Pg**	**17 52 48.5**	**-2.1**
	baz=13						
ISNB	**Snabyli**	**1.08**	**209**	P	**Pg**	**17 52 48.6**	**-2.3**
	baz=209						
ISNB				S	**Sg**	**17 53 03.9**	**-1.0**
	baz=209						
IGRS	**Grimsstaoir**	**1.11**	**30**	P	**Pb**	**17 52 49.4**	**-2.1**
	baz=30						
IGRS				S	**Sb**	**17 53 05.3**	**-0.8**
	baz=30						
ISLY	**Slysaalda**	**1.13**	**221**	P	**Pb**	**17 52 49.6**	**-2.1**
	baz=221						
IFED	**Fedgar**	**1.17**	**237**	P	**Pb**	**17 52 50.7**	**-1.8**
	baz=237						
IRJU	**Rjupnafell**	**1.19**	**207**	P	**Pb**	**17 52 50.8**	**-2.0**
	baz=207						
ISKI	**Skildingahlsh**	**1.21**	**9**	P	**Pb**	**17 52 50.8**	**-2.3**
	baz=8.3						
ISKI				S	**Sb**	**17 53 07.6**	**-1.1**
	baz=8.3						
IGHA	**Grjothals**	**1.21**	**16**	P	**Pb**	**17 52 51.0**	**-2.2**
	baz=16						
IMJO	**Mjoaskard**	**1.22**	**233**	P	**Pn**	**17 52 51.6**	**-1.8**
	baz=233						
IGRA	**Granastaoir**	**1.24**	**358**	P	**Pn**	**17 52 51.3**	**-2.2**
	baz=358						
IGRA				S	**Sb**	**17 53 08.5**	**-1.2**
	baz=358						
IGYG	**Gygjarholskot**	**1.26**	**253**	P	**Pn**	**17 52 51.9**	**-1.8**
	baz=253						
IDIM	**Dimmadalss**	**1.30**	**10**	P	**Pn**	**17 52 52.4**	**-2.1**
	baz=9.4						
IHAU	**Haukadalur**	**1.30**	**238**	P	**Pn**	**17 52 52.7**	**-1.7**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.31**	**208**	P	**Pn**	**17 52 52.9**	**-1.6**
	baz=209						
IHLA	**Hella**	**1.32**	**343**	P	**Pn**	**17 52 52.8**	**-1.8**
	baz=343						
IHLA				S	**Sb**	**17 53 10.4**	**-1.6**
	baz=343						
IHED	**Heoinshofoi**	**1.41**	**3**	P	**Pn**	**17 52 54.1**	**-1.7**
	baz=2.4						
IHED				S	**Sb**	**17 53 13.4**	**-1.0**
	baz=2.4						
IESK	**Eystri-Skogar**	**1.45**	**218**	P	**Pn**	**17 52 55.1**	**-1.4**
	baz=218						
IBRE	**Brettingsstaoi**	**1.46**	**353**	P	**Pn**	**17 52 54.7**	**-1.8**
	baz=353						
BORG	**Borgarnes**	**1.66**	**274**	Pg	**Pn**	**17 52 58.0**	**-1.3**
	37nm,0.3s,baz=88,slow=7.2,SNR=70						
BORG				Lg	Lg	17 53 21.9	
	19nm,0.3s,baz=217,slow=20,SNR=3.1						
SCO	**Scoresbysund**	**6.07**	**346**	*e*	**Pn**	**17 53 59.1**	**-0.7**
	baz=170,slow=6.9						
SCO				*i* P	**Pn**	**17 54 01.0**	**+1.2**
SCO				*eS*	**Sn**	**17 55 10.8**	**+1.6**
SCO				IAML		17 55 12.4	
	comp=Z,2.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**17 55 17.7**	**0.0**
	baz=320,slow=13,SNR=6.3						
HFS	**Hagfors**	**15.03**	**93**	Pn	**Pn**	**17 56 00.6**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=180,slow=40,SNR=3.1						
KHC	**Kasperske Hory**	**22.67**	**118**	*eP*	**P**	**17 57 34.0**	**+2.7**
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**17 57 34.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=301,slow=7.9,SNR=1.1						
SCHQ	**Schefferville**	**26.05**	**271**	P	**P**	**17 58 02.9**	**-0.4**
	comp=Z,6.3nm,1.0s,baz=23,slow=7.7,SNR=2.9						
ILAR	**Eielson Array**	**45.68**	**332**	P	**P**	**18 00 53.4**	**+3.0**
	comp=Z,1.8nm,1.1s,baz=30,slow=5.5,SNR=7.8						
MKAR	**Makanchi Array**	**52.70**	**58**	P	**P**	**18 01 46.2**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=325,slow=7.2,SNR=4.5						
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P	**P**	**18 01 48.7**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=342,slow=8.4,SNR=3.3						
PDAR	**Pinedale Array**	**53.19**	**293**	P	**P**	**18 01 50.0**	**+1.7**
	comp=Z,1.1nm,0.8s,baz=57,slow=5.5,SNR=8.1						
SONM	**Songino Array**	**59.62**	**40**	P	**P**	**18 02 35.9**	**+2.0**
	comp=Z,0.7nm,1.0s,baz=356,slow=4.5,SNR=3.5						
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P	**P**	**18 05 02.1**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=310,slow=7.0,SNR=4.2						

*IDC **17** 17:53:30.3±1.2, 9.5°55S× 155.4°49E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.9/37, mbtmp3.9/9, ML4.2/1, MS4.4/2, Ms1 4.3/2, ms1mx3.7/39, Error ellipse: s-maj=32.9km s-min=20.3km az=112.0*
*NEIC **17** 17:53:34.2±1.7, 9.5°55S±0.1× 155.4°E±0.2, h25km±5km, mb4.0/8, Error ellipse: s-maj=28.3km s-min=12.0km az=66.0*
ISC 17 17:53:34.6±0.7, **9.56S**±0.09×**155.5E**±0.1, **h29**km, **n21**, σ0**s84**/22, **mb4.0**/11, **D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**6.22**	**327**	Pn	**Pn**	**17 55 04.1**	**-0.4**
	5.7nm,0.3s,baz=166,slow=2.0,SNR=17						
KRVT				Sn	**Sn**	**17 56 14.5**	**-0.2**
	2.1nm,0.3s,baz=208,slow=23,SNR=1.0						
EIDS	**Eidsvold**	**16.26**	**194**		**P**	**17 57 22.6**	**-1.2**
EIDS				IAmb	IAmb	17 57 26.7	
	comp=Z,11nm,1.1s						
DZM	**Mont Dzumac**	**16.32**	**141**	Pn	**P**	**17 57 24.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=320,slow=13,SNR=4.3						
DZM	**Mont Dzumac**	**16.32**	**141**		**Pn**	**17 57 22.4**	**+0.5**
DZM				IAmb	IAmb	17 57 28.5	
	comp=Z,17nm,1.2s						
WR0	**Warramunga Arr**	**22.68**	**241**	P	**P**	**17 58 33.8**	**-0.1**
WR0				IAmb	IAmb	17 58 43.6	
	comp=Z,10nm,1.4s						
WB0	**Warramunga Arr**	**22.73**	**241**	P	**P**	**17 58 35.5**	**+1.0**
WB0				IAmb	IAmb	17 58 52.1	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**22.84**	**241**	P	**P**	**17 58 35.1**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=65,slow=9.0,SNR=9.6						
AS31	**Alice Springs**	**24.90**	**233**	P	**P**	**17 58 54.6**	**-0.7**
AS31				IAmb	IAmb	17 59 03.7	
	comp=Z,2.5nm,1.4s						
ASAR	**Alice Springs**	**24.91**	**233**	P	**P**	**17 58 55.0**	**-0.4**
	comp=Z,2.8nm,1.0s,baz=64,slow=9.5,SNR=17						
ASAR				LR	LR	18 07 28.5	
	comp=Z,769nm,18.4s,baz=240,slow=34						
ASAR	**Alice Springs**	**24.91**	**233**	P	**P**	**17 58 54.3**	**-1.0**
STKA	**Stephens Creek**	**25.66**	**208**	P	**P**	**17 59 03.0**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=12,slow=17,SNR=6.0						
STKA				LR	LR	18 08 31.0	
	comp=Z,730nm,18.6s,baz=318,slow=35						
STKA	**Stephens Creek**	**25.66**	**208**	P	**P**	**17 59 02.7**	**+0.7**
USRK	**Ussuriysk Ar.**	**57.58**	**340**	P	**P**	**18 03 22.4**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=127,slow=9.2,SNR=2.3						
CMAR	**Chiang Mai Arr**	**62.30**	**297**	P	**P**	**18 03 56.1**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=120,slow=3.2,SNR=5.6						
CMAR	**Chiang Mai Arr**	**62.30**	**297**	P	**P**	**18 03 54.8**	**+0.2**
SONM	**Songino Array**	**71.72**	**328**	P	**P**	**18 04 54.8**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=153,slow=6.3,SNR=4.8						
SONM	**Songino Array**	**71.72**	**328**	P	**P**	**18 04 53.5**	**-0.6**
QSPA	**South Pole Qui**	**80.43**	**180**	P	**P**	**18 05 43.0**	**-0.4**
ILAR	**Eielson Array**	**85.58**	**21**	P	**P**	**18 06 08.3**	**-1.5**
	comp=Z,0.9nm,0.9s,baz=282,slow=4.5,SNR=6.3						
NVAR	**Mina Array Bea**	**92.95**	**52**	P	**P**	**18 06 46.7**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=238,slow=6.3,SNR=8.0						
NVAR	**Mina Array Bea**	**92.95**	**52**	P	**P**	**18 06 45.9**	**+0.3**

*UPA **17** 17:56:30.6±2.5, 6.9°6N× 82.3°37W, h14km±63km, MW4.5*
*IDC **17** 17:56:30.7±24.0, 7.3°2N× 81.7°0W, h0km, mb3.5/3, mb1 4.0/4, mb1mx3.6/40, mbtmp3.6/4, Error ellipse: s-maj=798.3km s-min=95.5km az=18.0*
*UCR **17** 17:56:32.6±1.9, 7.0°6N× 82.3°39W, h13km, MW4.1*
ISC 17 17:56:32.5±1.2, **7.18N**±0.08×**82.24W**±0.04, **h10**km, **n40**, σ1**s27**/45, **mb3.5/3**, **6C-1D**, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMAL	**Guarumal, Vera**	**1.16**	**60**	*eP*	**Pg**	**17 56 54.9**	**+0.1**
GMAL				*eS*	**Sn**	**17 57 12.1**	**+1.4**
BAGA3	**Bagala, Chiriq**	**1.31**	**348**	*eP*	**Pb**	**17 56 56.4**	**-0.9**
CACAO	**El Cacao, Vera**	**1.38**	**83**	*eP*	**Pn**	**17 56 56.5**	**-1.4**
CACAO				*eS*	**Sb**	**17 57 16.1**	**0.0**
CDITO	**Canoas**	**1.52**	**336**	↑*iP*	**Pn**	**17 56 59.0**	**-0.8**
CDITO				*eS*	**Sb**	**17 57 20.4**	**+0.3**
BCO2	**Palmira**	**1.55**	**350**	*eP*	**Pb**	**17 57 00.4**	**-1.1**
BCO2				*eS*	**Sb**	**17 57 21.1**	**-0.3**
BRU2	**Volcan**	**1.66**	**345**	↑*iP*	**Pn**	**17 57 01.7**	**-0.2**
BRU2				*eS*	**Sg**	**17 57 27.2**	**+1.1**
BC3P	**Paso Ancho**	**1.67**	**347**	*eP*	**Pn**	**17 57 00.8**	**-1.2**
PTJ1	**Puerto Jimnez**	**1.71**	**322**	‖*eP*	**Pn**	**17 57 01.3**	**-1.1**
EDSV	**San Vito**	**1.78**	**336**	*eP*	**Pb**	**17 57 03.5**	**-1.9**
RIOS	**Rincon, Osa**	**1.97**	**320**	*eP*	**Pn**	**17 57 04.0**	**-1.9**
AZU	**Azuero**	**2.04**	**73**	*eP*	**Pn**	**17 57 07.3**	**+0.2**
AZU				*eS*	**Sn**	**17 57 29.8**	**-2.8**
EDPN	**Palmar Norte**	**2.14**	**326**	*eP*	**Pn**	**17 57 07.3**	**-1.1**
EDBA	**Buenos Aires**	**2.22**	**333**	*eP*	**Pn**	**17 57 09.7**	**+0.3**
DRK0	**Durika**	**2.29**	**334**	*eP*	**Pn**	**17 57 10.7**	**0.0**
RGM0	**Gandoca**	**2.42**	**351**	*eP*	**Pb**	**17 57 15.5**	**-0.7**
PEZE	**Perez Zeledon,**	**2.61**	**327**	*eP*	**Pn**	**17 57 14.8**	**-0.1**
PEZE				*eS*	**Sb**	**17 57 49.1**	**-2.5**
EDDO	**Dominical**	**2.61**	**322**	*eP*	**Pn**	**17 57 13.6**	**-1.2**
CDM	**Cerro de Muert**	**2.80**	**328**	↑*iP*	**Pn**	**17 57 17.5**	**-0.3**
RIMA	**Rio Macho**	**3.03**	**328**	*eP*	**Pn**	**17 57 20.2**	**-0.6**
LCR2	**La Lucha 2**	**3.08**	**326**	*eP*	**Pn**	**17 57 21.2**	**-0.3**
BCIP	**Isla Barro Col**	**3.09**	**50**	*eP*	**Pn**	**17 57 22.5**	**+1.0**
BCIP				*eS*	**Sb**	**17 58 02.6**	**-2.9**
CVTR	**Volcan Turrial**	**3.19**	**332**	↑*iP*	**Pn**	**17 57 23.8**	**+0.6**
HDC	**Heredia**	**3.36**	**327**	*eP*	**Pn**	**17 57 25.9**	**+0.7**
JACO	**JACO, Garabito**	**3.44**	**316**	‖*eP*	**Pn**	**17 57 24.5**	**-1.7**
LAFE	**Finca La Fe, P**	**3.71**	**315**	*eP*	**Pn**	**17 57 28.1**	**-1.5**
ARE1	**Arenal 1**	**4.08**	**323**	*eP*	**Pn**	**17 57 36.4**	**+1.4**
CEDE	**Laguna Cedeo**	**4.09**	**324**	*eP*	**Pn**	**17 57 36.1**	**+0.9**
JTS	**Las Juntas de**	**4.09**	**319**	*eP*	**Pn**	**17 57 34.8**	**-0.4**
ORTG	**Ortega, Santa**	**4.48**	**315**	*eP*	**Pn**	**17 57 40.0**	**-0.6**
CUI	**Cuipilapa**	**4.50**	**320**	*eP*	**Pn**	**17 57 41.4**	**+0.5**
GPS2	**Hotel Rincn d**	**4.69**	**319**	*eP*	**Pn**	**17 57 43.8**	**+0.2**
GB1A	**Borinquen Arri**	**4.77**	**319**	*eP*	**Pn**	**17 57 45.1**	**+0.4**
HZTE	**Horizontes, Gu**	**4.83**	**317**	‖*iP*	**Pn**	**17 57 46.1**	**+0.8**
CMIG	**Matias Romero**	**15.79**	**310**	Pn	**P**	**18 00 17.6**	**-1.5**
	baz=90,slow=9.1,SNR=1.8						
TXAR	**Lajitas Array**	**29.88**	**320**	P	**P**	**18 02 42.8**	**+2.2**
	0.3nm,0.8s,baz=154,slow=9.0,SNR=3.4						
H03N2	**Juan Fernandez**	**40.52**	**176**	T	T	18 47 00.9	
	baz=354,slow=76						
H03N1	**Juan Fernandez**	**40.52**	**176**	T	T	18 47 01.9	
	baz=354,slow=76						
H03N3	**Juan Fernandez**	**40.53**	**176**	T	T	18 47 00.7	
	baz=354,slow=76						
NVAR	**Mina Array Bea**	**45.02**	**319**	P	**P**	**18 04 51.1**	**+2.3**
	0.6nm,0.7s,baz=129,slow=7.1,SNR=6.0						
ILAR	**Eielson Array**	**72.88**	**336**	P	**P**	**18 08 01.5**	**-0.1**
	0.4nm,0.8s,baz=119,slow=5.6,SNR=4.3						

IDC 17 17:57:21.0±3.0, **9.46S**×**155.11E**, **h0**km, **mb3.6**/3, **mb1 3.9**/5, **mb1mx3.6**/41, **mbtmp3.8**/5, **ML3.6**/2, **Error ellipse: s-maj=51.8km s-min=33.7km az=65.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**5.97**	**329**	Pn	Pn	17 58 52.3	+1.7
	1.7nm,0.3s,baz=43,slow=8.2,SNR=4.8						
DZM	**Mont Dzumac**	**16.60**	**140**	Pn	P	18

0.2nm,0.3s,baz=268,slow=18,SNR=2.3
USA0B Ussuriysk Arra 14.96 336 Pn **Pn** **18 31 16.9 -0.1**
USRK Ussuriysk Ar. 14.96 336 P **Pn** **18 31 15.9 -1.1**
baz=151,slow=8.8,SNR=13
USRK Ussuriysk Ar. 14.96 336 P **P** **18 31 19.4 +0.5**
MDJ Mudanjiang 16.22 332 **Pn** **18 31 31.7 -0.8**
MDJ IAmb IAmb 18 31 58.2
comp=Z,19nm,1.5s
YHNB Yeheng 17.75 255 Pn **P** **18 31 49.8 -0.1**
NACB Ninganchiao 17.77 253 **P** **18 31 48.9 -1.2**
NACB IAmb IAmb 18 32 09.1
comp=Z,34nm,1.0s
YULB Yu-li 18.37 251 P **P** **18 31 55.5 -1.0**
YULB IAmb IAmb 18 32 17.3
comp=Z,90nm,1.5s
SSLB Suanglung 18.47 253 P **Pn** **18 31 59.1 -0.5**
SSLB IAmb IAmb 18 32 01.0
comp=Z,58nm,1.2s
TPUB Ta-pu 18.95 252 Pn **Pn** **18 32 04.5 -0.9**
TPUB IAmb IAmb 18 32 30.9
comp=Z,50nm,1.2s
KLR Kul'dur 19.58 343 P **P** **18 32 09.5 0.0**
comp=Z,1.4nm,0.3s,baz=153,slow=8.8,SNR=24
ULN Ulaanbaatar 30.57 314 P **P** **18 33 52.8 0.0**
SONM Songino Array 30.97 313 P **P** **18 33 55.5 -0.8**
comp=Z,0.5nm,0.4s,baz=120,slow=8.9,SNR=5.1
SONM PcP **PcP** **18 36 49.9 +1.1**
comp=Z,0.3nm,0.4s,baz=139,slow=5.1,SNR=2.4
SONM Songino Array 30.97 313 P **P** **18 33 55.7 -0.5**
YAK Yakutsk 32.08 351 P **P** **18 34 05.5 -0.1**
comp=Z,3.5nm,0.4s,baz=110,slow=1.9,SNR=5.1
SEY Seymchan 33.17 10 P **P** **18 34 15.5 +0.4**
comp=Z,6.2nm,1.1s,baz=119,slow=13,SNR=3.3
SBUM Sibu 38.63 229 P **P** **18 35 02.3 +0.2**
SBUM IAmb IAmb 18 35 05.6
comp=Z,5.6nm,1.2s
CHTO Chiang Mai 39.12 262 P **P** **18 35 05.7 -0.5**
CM31 Chiang Mai Arr 39.28 262 P **P** **18 35 06.5 -1.0**
CM31 IAmb IAmb 18 35 31.3
comp=Z,5.9nm,1.3s
CMAR Chiang Mai Arr 39.28 262 P **P** **18 35 06.8 -0.8**
comp=Z,1.1nm,0.6s,baz=58,slow=7.2,SNR=11
CMAR Chiang Mai Arr 39.28 262 P **P** **18 35 07.0 -0.6**
KSM Kuching 40.61 230 P **P** **18 35 19.2 +0.6**
KSM IAmb IAmb 18 35 20.1
comp=Z,11nm,1.2s
TIXI Tiksi 41.46 355 P **P** **18 35 25.8 +1.0**
TIXI IAmb IAmb 18 35 26.4
comp=Z,3.5nm,0.5s
ZAA0 Zalesovo Array 45.67 317 P **P** **18 35 57.6 -1.1**
ZALV Zalesovo Beam 45.67 317 P **P** **18 35 57.6 -1.0**
comp=Z,2.4nm,0.3s,baz=91,slow=7.7,SNR=17
ZALV PcP **PcP** **18 37 34.3 +0.1**
comp=Z,1.0nm,0.5s,baz=95,slow=3.1,SNR=4.8
ZALV ScP **ScP** **18 41 12.1 -0.9**
comp=Z,0.6nm,0.6s,baz=94,slow=5.9,SNR=2.1
ZALV Zalesovo Beam 45.67 317 P **P** **18 35 58.0 -0.6**
MKAR Makanchi Array 46.90 307 P **P** **18 36 07.3 -1.2**
comp=Z,0.6nm,0.4s,baz=89,slow=7.7,SNR=11
MKAR PcP **PcP** **18 37 39.3 +0.6**
comp=Z,0.7nm,0.5s,baz=96,slow=5.9,SNR=5.4
MKAR ScP **ScP** **18 41 17.8 -0.6**
comp=Z,0.4nm,0.5s,baz=76,slow=6.1,SNR=3.5
NRIK Noril'sk 48.67 338 P **P** **18 36 22.1 +0.5**
comp=Z,3.5nm,0.4s,baz=104,slow=8.6,SNR=7.0
KURK Kurchatov 49.27 312 P **P** **18 36 25.3 -1.2**
WB0 Warramunga Arr 50.50 187 P **P** **18 36 35.4 -0.7**
WB0 IAmb IAmb 18 36 37.5
comp=Z,5.2nm,1.0s
FITZ Fitzroy Crossi 50.52 198 P **P** **18 36 35.8 -0.5**
comp=Z,0.6nm,0.4s,baz=33,slow=14,SNR=6.2
WRAB Tennant Creek 50.67 187 P **P** **18 36 36.7 -0.6**
WRAB IAmb IAmb 18 36 37.5
comp=Z,7.0nm,0.6s
WR0 Warramunga Arr 50.68 187 P **P** **18 36 37.2 -0.2**
WR0 IAmb IAmb 18 36 38.4
comp=Z,3.8nm,0.5s
WB2 Warramunga Arr 50.68 187 P **P** **18 36 37.0 -0.5**
WB2 IAmb IAmb 18 36 37.6
comp=Z,11nm,1.4s
WRA Warramunga Arr 50.68 187 P **P** **18 36 37.0 -0.5**
comp=Z,2.4nm,0.3s,baz=5.3,slow=7.6,SNR=109
WRA ScP **ScP** **18 41 34.4 -0.2**
comp=Z,0.8nm,1.1s,baz=4.0,slow=4.8,SNR=5.8
WRA Warramunga Arr 50.68 187 P **P** **18 36 36.3 -1.1**
SANVU Saraoutou 52.72 147 P **P** **18 36 54.8 +2.2**
BRVK Borovoye 54.31 316 P **P** **18 37 03.8 0.0**
AS31 Alice Springs 54.41 187 P **P** **18 37 04.1 -0.8**
ASAR Alice Springs 54.41 187 P **P** **18 37 04.2 -0.7**
comp=Z,0.8nm,0.4s,baz=22,slow=9.6,SNR=28
ILAR Eielson Array 55.40 30 P **P** **18 37 12.8 +1.3**
comp=Z,0.2nm,0.6s,baz=270,slow=5.7,SNR=2.0
KK31 Karatay Array 55.63 304 P **P** **18 37 12.8 -0.7**
KK31 IAmb IAmb 18 37 13.9
comp=Z,4.4nm,1.3s
KKAR Karatay Array 55.63 304 P **P** **18 37 12.9 -0.6**
KKAR Karatay Array 55.63 304 P **P** **18 37 13.0 -0.6**
KKAR IAmb IAmb 18 37 13.9
comp=Z,4.4nm,1.3s
CHGR Chuyangaron 57.67 299 P **P** **18 37 27.6 -0.5**
DZM Mont Dzumac 58.20 151 P **P** **18 37 33.2 +1.4**
comp=Z,1.5nm,0.4s,baz=325,slow=3.8,SNR=11
ARU Arti 60.54 321 P **P** **18 37 47.1 -0.3**
ARU IAmb IAmb 18 37 47.7
comp=Z,16nm,1.3s
ABKAR Akbulak array 61.38 313 P **P** **18 37 52.6 -0.7**
ABKAR IAmb IAmb 18 37 53.7
comp=Z,4.0nm,0.4s
ABKAR Akbulak array 61.38 313 P **P** **18 37 52.5 -0.7**
EUNU Eureka 66.57 8 P **P** **18 38 28.8 +2.1**
EUNU IAmb IAmb 18 38 53.6
comp=Z,8.4nm,1.4s
KLMR Klimovskoe 68.61 329 *eP* **P** **18 38 38.9 -0.8**
KLMR AMP 18 38 41.4
comp=Z,7.0nm,0.9s
RES Resolute Bay 68.96 14 P **P** **18 38 43.8 +2.2**
comp=Z,0.8nm,0.6s,baz=358,slow=5.6,SNR=4.2
RES Resolute Bay 68.96 14 P **P** **18 38 43.7 +2.2**
ARCES ARCESS Array B 69.58 340 P **P** **18 38 46.3 +0.8**
comp=Z,2.4nm,0.7s,baz=58,slow=7.5,SNR=10
ARC4 ARCESS Array S 69.58 340 P **P** **18 38 47.1 +1.6**
ARB4 ARCESS Array S 69.58 340 P **P** **18 38 46.7 +1.1**
ARC5 ARCESS Array S 69.58 340 P **P** **18 38 47.1 +1.6**
FINES FINESS Array B 73.96 333 P **P** **18 39 12.3 +0.5**
comp=Z,4.0nm,0.4s,baz=63,slow=5.4,SNR=72
KBZ Khabaz 74.32 312 P **P** **18 39 14.6 +0.4**
comp=Z,4.8nm,0.7s,baz=145,slow=2.2
AKASG Malin Array Be 78.71 323 P **P** **18 39 38.9 +0.1**
comp=Z,3.9nm,0.4s,baz=51,slow=5.5,SNR=27
AKASG Malin Array Be 78.71 323 P **P** **18 39 38.8 +0.1**
AKBB Malin Array Si 78.71 323 P **P** **18 39 38.6 -0.1**
AKBB IAmb IAmb 18 39 39.5
comp=Z,8.2nm,0.6s
NC405 NORSAR Array S 79.41 337 P **P** **18 39 43.2 +0.8**
NB201 NORSAR Array S 79.60 337 P **P** **18 39 43.9 +0.5**
NC204 NORSAR Array S 79.60 338 P **P** **18 39 44.5 +0.9**
NC204 IAmb IAmb 18 39 47.0
comp=Z,25nm,1.2s
NVAR Mina Array Bea 79.62 51 P **P** **18 39 47.5 +3.3**
comp=Z,0.5nm,0.6s,baz=289,slow=5.6,SNR=4.9
NB2 NORSAR Subarra 79.63 337 P **P** **18 39 44.2 +0.6**
comp=Z,1.7nm,0.5s,baz=43,slow=5.3
NOA NORSAR Array B 79.63 337 P **P** **18 39 44.1 +0.4**
comp=Z,0.5nm,0.5s,baz=60,slow=6.2,SNR=16
NC602 NORSAR Array S 79.74 337 P **P** **18 39 44.7 +0.5**
NBO00 NORSAR Array S 79.78 338 P **P** **18 39 44.2 -0.2**
SORM Soroca 80.66 321 ⇑P **P** **18 39 49.4 +0.1**
BRTR Keskin Array B 82.31 312 P **P** **18 39 58.4 0.0**
comp=Z,1.4nm,0.6s,baz=101,slow=3.7,SNR=5.8
TPGR Topolog 82.56 318 ⇓P **P** **18 40 00.2 +0.8**
TESR Tescani 82.56 320 ⇑P **P** **18 40 00.2 +0.9**
BUR08 Bucovina Ar. S 82.65 322 P **P** **18 40 00.4 +0.4**
BURAR Bucovina Array 82.66 322 ⇓P **P** **18 40 00.7 +0.7**
BURAR Bucovina Array 82.66 322 P **P** **18 40 00.8 +0.8**
KWP Kalwaria Pacla 82.69 324 P **P** **18 40 01.0 +1.0**
KWP IAmb IAmb 18 40 01.9
comp=Z,15nm,1.0s
VRI Vrincioaia 82.91 320 ⇓P **P** **18 40 01.3 +0.1**
BISRR Bisoca 83.11 320 ⇑P **P** **18 40 02.3 0.0**
OZUR 83.29 320 ⇑P **P** **18 40 02.9 -0.3**
KOLS Kolonicke sedl 83.36 324 *eP* **P** **18 40 04.0 +0.6**
MLR Muntele Rosu 83.57 320 ⇓P **P** **18 40 02.6 -2.2**
MLR Muntele Rosu 83.57 320 P **P** **18 40 04.8 0.0**
MLR IAmb IAmb 18 40 07.1
comp=Z,3.6nm,0.6s
DOPR Dopca 83.58 320 ⇑P **P** **18 40 06.3 +1.7**
CRVS Cervenica-Dubn 83.78 324 *eP* **P** **18 40 06.3 +0.7**
VOIR 84.10 320 ⇑P **P** **18 40 07.9 +0.5**
ARR Arges 84.37 320 ⇓P **P** **18 40 10.1 +1.4**
LANS Liptovska Anna 84.61 325 *eP* **P** **18 40 11.2 +1.4**
MORC Moravsky Berou 85.11 327 ⇑P **P** **18 40 13.1 +0.8**
MORC Moravsky Berou 85.11 327 P **P** **18 40 12.9 +0.7**
CHVC Chvalec 85.23 328 *eP* **P** **18 40 13.8 +0.9**
KRLC Kraliky 85.26 327 *eP* **P** **18 40 13.6 +0.6**
DPC Dobruska-Polom 85.28 328 *eP* **P** **18 40 13.7 +0.6**
VRAC Vranov 85.88 327 ⇑P **P** **18 40 16.6 +0.6**
CLL Colm 86.07 330 *i* P **P** **18 40 17.1 +0.2**
comp=Z,4.0nm,0.8s
CLL *e* 18 40 57.0
KHC Kasperske Hory 87.40 328 *eP* **P** **18 40 23.5 0.0**
GERES GERESS Array B 87.55 328 P **P** **18 40 24.2 -0.1**
comp=Z,1.2nm,0.7s,baz=46,slow=5.8,SNR=9.4

MAN 17 18:27:55.1, 8.90N×121.40E, h35km, mb4.7, ML3.4, MS3.4, Mindanao

*SOME **17** 18:46:25.7, 42.15N×81.13E, h15km*
*NNC **17** 18:46:26.0±0.9, 42.10N×81.03E, h0km, mb3.7, mpv3.4,*
Error ellipse: s-maj=6.2km s-min=4.7km az=160.0
ISC 17 18:46:29.0±2.4, 42.23N±0.08×80.87E±0.07, h4km±12km,
n47, σ1.80/74, 5C-7D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.27**	**343**	*eP*	**Pb**	**18 46 52.3**	**-1.4**
	11nm,0.2s						
KTMS				*eS*	**Sg**	**18 47 11.4**	**+1.4**
	87nm,0.1s						
KTMS	**Ketmen**	**1.27**	**343**	P	**Pn**	**18 46 51.5**	**-2.3**
	7.0nm,0.1s						
KTMS				S	**Sg**	**18 47 11.4**	**+1.4**
	123nm,0.3s						
SHLS	**Shalkode**	**1.39**	**312**	⇑*eP*	**Pn**	**18 46 51.9**	**-3.5**
	64nm,0.2s						
SHLS				*eS*	**Sn**	**18 47 11.0**	**-3.4**
	188nm,0.3s						
SHLS	**Shalkode**	**1.39**	**312**	P	**Pn**	**18 46 50.9**	**-4.5**
	64nm,0.2s						
SHLS				S	**Sn**	**18 47 10.7**	**-3.6**
	188nm,0.3s						
PDGK	**Podgornoye**	**1.50**	**318**	P	**Pb**	**18 46 56.0**	**-1.5**
	11nm,0.3s						
PDGK				S	**Sg**	**18 47 19.5**	**+2.4**
	19nm,0.2s						
PDGK	**Podgornoye**	**1.50**	**318**	⇓P	**Pb**	**18 46 57.1**	**-0.4**
	8.5nm,0.3s						
PDGK				⇓S	**Sg**	**18 47 19.5**	**+2.4**
	24nm,0.5s						
UZB	**Uzynbulak**	**1.64**	**305**	*eP*	**Pb**	**18 46 60.0**	**0.0**
	21nm,0.2s						
UZB				*eS*	**Sg**	**18 47 24.5**	**+2.7**
	31nm,0.2s						
UZB	**Uzynbulak**	**1.64**	**305**	Pg	**Pb**	**18 46 59.8**	**-0.2**
	21nm,0.2s						
UZB				Lg	Lg	18 47 25.4	
	74nm,0.2s						
SATY	**Saty**	**2.00**	**295**	*eP*	**Pg**	**18 47 07.1**	**-0.2**
	12nm,0.3s						
SATY				*eS*	**Sg**	**18 47 37.0**	**+3.7**
	104nm,0.1s						
SATY	**Saty**	**2.00**	**295**	Pg	**Pb**	**18 47 06.3**	**+0.2**
	12nm,0.3s						
SATY				Lg	Lg	18 47 37.4	
	104nm,0.1s						
KPKS	**Kokpek**	**2.03**	**308**	*eP*	**Pb**	**18 47 06.6**	**+0.1**
	61nm,0.2s						
KPKS				*eS*	**Sg**	**18 47 35.9**	**+1.8**
	186nm,0.2s						
DJR	**Jarkent**	**2.25**	**340**	*eP*	**Pb**	**18 47 09.6**	**-0.6**
	6.5nm,0.3s						
DJR				*eS*	**Sg**	**18 47 41.1**	**0.0**
	46nm,0.4s						
DJR	**Jarkent**	**2.25**	**340**	Pg	**Pb**	**18 47 08.6**	**-1.6**
	6.5nm,0.3s						
DJR				Lg	Lg	18 47 41.0	
	34nm,0.3s						
KURS	**Kuram**	**2.35**	**303**	*eP*	**Pb**	**18 47 12.3**	**+0.4**
	20nm,0.4s						
KURS				*eS*	**Sg**	**18 47 46.0**	**+1.5**
	19nm,0.6s						
KURS	**Kuram**	**2.35**	**303**	Pg	**Pb**	**18 47 11.7**	**-0.3**
	20nm,0.4s						
KURS				Lg	Lg	18 47 46.0	
	18nm,0.3s						
MNBS	**Baschi**	**2.58**	**316**	*eP*	**Pb**	**18 47 15.3**	**-0.7**
	14nm,0.2s						
MNBS				*eS*	**Sb**	**18 47 51.1**	**+2.9**
	53nm,0.2s						
MNBS	**Baschi**	**2.58**	**316**	Pg	**Pb**	**18 47 14.7**	**-1.3**
	14nm,0.2s						
MNBS				Lg	Lg	18 47 51.1	
	53nm,0.2s						
KOTS	**Kotyrbulak**	**2.95**	**291**	*eP*	**Pb**	**18 47 23.4**	**+1.2**
	7.0nm,0.2s						
KOTS				*eS*	**Sg**	**18 48 04.8**	**+1.2**
	26nm,0.5s						
KOTS	**Kotyrbulak**	**2.95**	**291**	Pg	**Pb**	**18 47 22.6**	**+0.4**
	4.5nm,0.2s						
KOTS				Lg	Lg	18 48 04.8	
	26nm,0.5s						
MDOK	**Medeo**	**2.97**	**290**	*eP*	**Pb**	**18 47 23.0**	**+0.4**
	2.7nm,0.3s						
MDOK				*eS*	**Sg**	**18 48 04.3**	**-0.1**
	11nm,0.5s						
MDOK	**Medeo**	**2.97**	**290**	Pg	**Pb**	**18 47 22.4**	**-0.2**
	2.7nm,0.3s						
MDOK				Lg	Lg	18 48 04.3	
	11nm,0.5s						
ARXS	**Arharly**	**2.98**	**313**	*eP*	**Pb**	**18 47 22.6**	**-0.1**
	4.1nm,0.2s						
ARXS				*eS*	**Sb**	**18 48 03.8**	**+4.2**
	40nm,0.6s						
ARXS	**Arharly**	**2.98**	**313**	Pg	**Pb**	**18 47 21.9**	**-0.8**
	4.1nm,0.2s						
ARXS				Lg	Lg	18 48 03.8	
	40nm,0.6s						
TNSS	**Tian-Shan**	**3.01**	**287**	*eP*	**Pb**	**18 47 24.3**	**+0.9**
	3.7nm,0.2s						
TNSS				*eS*	**Sg**	**18 48 06.6**	**+1.0**
	9.7nm,0.4s						
TNSS	**Tian-Shan**	**3.01**	**287**	Pg	**Pb**	**18 47 23.8**	**+0.5**
	2.0nm,0.2s						
TNSS				Lg	Lg	18 48 06.6	
	9.7nm,0.4s						
IZV	**Izvestkoviy**	**3.24**	**286**	*eP*	**Pb**	**18 47 28.1**	**+0.8**
	4.2nm,0.2s						
IZV				*eS*	**Sg**	**18 48 12.9**	**-0.3**
	27nm,0.2s						
IZV	**Izvestkoviy**	**3.24**	**286**	Pg	**Pb**	**18 47 27.3**	**0.0**
	4.2nm,0.2s						
IZV				Lg	Lg	18 48 12.9	
	27nm,0.2s						
CHKK	**Chushkaly**	**3.28**	**301**	*eP*	**Pb**	**18 47 28.1**	**+0.4**
	1.1nm,0.1s						
CHKK				*eS*	**Sb**	**18 48 13.2**	**+5.2**
	26nm,0.2s						
CHKK	**Chushkaly**	**3.28**	**301**	Pg	**Pb**	**18 47 27.4**	**-0.3**
	1.0nm,0.0s						
CHKK				Lg	Lg	18 48 13.2	
	26nm,0.2s						
TDK	**Taldyqorghan**	**3.30**	**328**	*eP*	**Pb**	**18 47 28.4**	**+0.2**
	12nm,0.2s						
TDK				*eS*	**Sg**	**18 48 13.3**	**-1.7**
	34nm,0.4s						
TDK	**Taldyqorghan**	**3.30**	**328**	Pg	**Pb**	**18 47 27.7**	**-0.4**
	7.0nm,0.3s						
TDK				Lg	Lg	18 48 13.3	
	34nm,0.4s						
MTBS	**Maitube**	**3.40**	**287**	*eP*	**Pb**	**18 47 31.7**	**+1.9**
	2.9nm,0.1s						
MTBS				*eS*	**Sg**	**18 48 19.2**	**+1.1**
	15nm,0.3s						
MTBS	**Maitube**	**3.40**	**287**	Pg	**Pb**	**18 47 31.1**	**+1.3**
	3.3nm,0.2s						
MTBS				Lg	Lg	18 48 19.2	
	15nm,0.3s						
KTBS	**Karatobe**	**3.41**	**297**	*eP*	**Pb**	**18 47 30.9**	**+0.9**
	2.7nm,0.3s						
KTBS				*eS*	**Sg**	**18 48 17.6**	**-1.0**
	27nm,0.4s						
KTBS	**Karatobe**	**3.41**	**297**	Pg	**Pb**	**18 47 30.1**	**0.0**
	1.0nm,0.3s						
KTBS				Lg	Lg	18 48 17.6	
	27nm,0.4s						
KST	**Kastek**	**3.71**	**284**	*eP*	**Pb**	**18 47 37.0**	**+1.8**
	3.9nm,0.3s						
KST				*eS*	**Sg**	**18 48 28.6**	**+0.4**
	15nm,0.7s						
KST	**Kastek**	**3.71**	**284**	Pg	**Pb**	**18 47 36.5**	**+1.3**
	3.9nm,0.3s						
KST				Lg	Lg	18 48 28.6	
	15nm,0.7s						
KUU	**Kurty**	**3.71**	**298**	*eP*	**Pb**	**18 47 36.4**	**+1.2**
	0.9nm,0.2s						
KUU				*eS*	**Sg**	**18 48 27.0**	**-1.2**
	11nm,0.5s						
KUU	**Kurty**	**3.71**	**298**	Pg	**Pb**	**18 47 35.4**	**+0.2**
	0.9nm,0.2s						
KUU				Lg	Lg	18 48 26.7	
	11nm,0.5s						
DGS	**Degeres**	**3.89**	**287**	*eP*	**Pb**	**18 47 40.1**	**+1.9**
	2.8nm,0.4s						
DGS				*eS*	**Sg**	**18 48 33.7**	**-0.2**
	10nm,0.6s						
DGS	**Degeres**	**3.89**	**287**	Pg	**Pb**	**18 47 39.4**	**+1.2**
	2.8nm,0.4s						
DGS				Lg	Lg	18 48 33.7	
	10nm,0.6s						
TKM2	**Tokmak 2**	**3.96**	**282**	⇑Pg	**Pg**	**18 47 42.2**	**-2.6**
	1.1nm,0.5s						
TKM2				⇓Lg	Lg	18 48 34.6	
	3.4nm,0.4s						
KRBS	**Karabastau**	**4.08**	**293**	*eP*	**Pb**	**18 47 42.9**	**+1.3**
	0.6nm,0.2s						
KRBS				*eS*	**Sg**	**18 48 38.5**	**-1.7**
	6.6nm,0.4s						
KRBS	**Karabastau**	**4.08**	**293**	Pg	**Pb**	**18 47 42.3**	**+0.7**
	0.6nm,0.2s						
KRBS				Lg	Lg	18 48 38.5	
	6.6nm,0.4s						
MAKZ	**Makanchi**	**4.65**	**9**	⇑Pn	**Pn**	**18 47 39.5**	**-0.5**
	3.3nm,1.1s						
MAKZ				⇓Sn	**Sn**	**18 48 36.8**	**+2.5**
	2.1nm,0.6s						
MAKZ				⇓Lg	Lg	18 48 58.2	
	5.5nm,0.8s						
MK31	**Makanchi Array**	**4.67**	**12**	⇓Pn	**Pn**	**18 47 40.6**	**+0.2**
	0.2nm,0.3s,baz=170,slow=13,SNR=19						
MK31				⇑Pg	Pg	18 47 53.2	-5.4
	0.6nm,0.5s,baz=199,slow=14,SNR=5.0						
MK31				⇓Sn	**Sn**	**18 48 37.1**	**+2.0**
	1.0nm,0.5s,baz=187,slow=23,SNR=3.6						
MK31				⇑Lg	Lg	18 48 54.0	
	2.0nm,0.5s,baz=191,slow=29,SNR=5.0						
SGDS	**Sogindy**	**4.75**	**287**	Pg	**Pb**	**18 47 55.4**	**+2.6**
	2.5nm,0.7s						
SGDS				Lg	Lg	18 49 00.8	
	3.8nm,0.6s						

*INET **17** 18:49:14.1, 12.49N×88.15W, h50km, ML3.8*
*UCR **17** 18:49:14.4±1.6, 12.57N×88.15W, h33km±5km, ML3.8, MW4.3*
*SNET **17** 18:49:15.1±0.7, 12.60N×88.20W, h32km±3km, ML3.8*
ISC 17 18:49:14.4±1.4, 12.56N±0.06×88.16W±0.04, h31km±13km,
n46, σ0.68/60, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
JUCU	**Jucuarın**	**0.70**	**353**	*eP*	**Pb**	**18 49 28.1**	**-0.1**
JUCU				*eS*	**Sb**	**18 49 38.0**	**+0.4**
JUCU	**Jucuarın**	**0.70**	**353**	*eP*	**Pb**	**18 49 28.1**	**-0.1**
JUCU				*eS*	**Sb**	**18 49 38.0**	**+0.4**
CSGN	**Cosiguina Volc**	**0.72**	**55**	*eP*	**Pb**	**18 49 28.0**	**-0.5**
LCND	**La Caada**	**0.79**	**19**	*eP*	**Pb**	**18 49 29.2**	**-0.5**
LCND				*eS*	**Sb**	**18 49 40.8**	**+0.7**
LCND				IAML		18 49 43.0	
	comp=Z,4μm,0.3s						
LCND	**La Caada**	**0.79**	**19**	*eP*	**Pb**	**18 49 29.2**	**-0.5**
LCND				*eS*	**Sb**	**18 49 40.8**	**+0.7**
LCND				IAML		18 49 43.0	
	comp=Z,4μm,0.3s						
ALJI	**Alcalda de J**	**0.86**	**332**	*eP*	**Pb**	**18 49 30.3**	**-0.6**
ALJI				*eS*	**Sb**	**18 49 42.2**	**+0.1**
ALJI				IAML		18 49 45.2	
	comp=Z,3μm,0.2s						
ALJI	**Alcalda de J**	**0.86**	**332**	*eP*	**Pb**	**18 49 30.3**	**-0.6**
ALJI				*eS*	**Sb**	**18 49 42.2**	**+0.1**
ALJI				IAML		18 49 45.2	
	comp=Z,3μm,0.2s						
LCY	**Lacayo**	**0.87**	**351**	*eP*	**Pb**	**18 49 30.6**	**-0.5**
LCY	**Lacayo**	**0.87**	**351**	*eP*	**Pb**	**18 49 30.6**	**-0.5**
VSM	**San Miguel**	**0.87**	**353**	*eP*	**Pb**	**18 49 30.9**	**-0.4**
VSM	**San Miguel**	**0.87**	**353**	*eP*	**Pb**	**18 49 30.9**	**-0.4**
PACA	**Pacayal**	**0.92**	**350**	*eP*	**Pb**	**18 49 32.1**	**+0.1**
PACA				*eS*	**Sb**	**18 49 44.6**	**+0.7**
PACA	**Pacayal**	**0.92**	**350**	*eP*	**Pb**	**18 49 32.1**	**+0.1**
PACA				*eS*	**Sb**	**18 49 44.6**	**+0.7**
TECA	**Tecapa**	**0.99**	**340**	*eP*	**Pn**	**18 49 32.3**	**0.0**
TECA	**Tecapa**	**0.99**	**340**	*eP*	**Pn**	**18 49 32.3**	**0.0**
COEB	**Comit de Eme**	**1.00**	**339**	*eP*	**Pn**	**18 49 32.2**	**-0.2**
COEB				*eS*	**Sb**	**18 49 46.0**	**-0.3**
COEB				IAML		18 49 50.6	
	comp=Z,3μm,0.3s						
COEB	**Comit de Eme**	**1.00**	**339**	*eP*	**Pn**	**18 49 32.2**	**-0.2**
COEB				*eS*	**Sb**	**18 49 46.0**	**-0.3**
COEB				IAML		18 49 50.6	
	comp=Z,3μm,0.3s						
CRIN	**San Cristobal**	**1.09**	**82**	*eP*	**Pn**	**18 49 33.2**	**-0.3**
CRIN				*eS*	**Sn**	**18 49 48.9**	**+1.2**
COEG	**Centro de Oper**	**1.27**	**326**	*eP*	**Pn**	**18 49 36.0**	**0.0**
COEG				*eS*	**Sn**	**18 49 51.9**	**-0.2**
COEG				IAML		18 49 56.0	
	comp=Z,1μm,0.3s						
COEG	**Centro de Oper**	**1.27**	**326**	*eP*	**Pn**	**18 49 36.0**	**0.0**
COEG				*eS*	**Sn**	**18 49 51.9**	**-0.2**
COEG				IAML		18 49 56.0	
	comp=Z,1μm,0.3s						
PAVA	**Las Pavas**	**1.38**	**327**	*eP*	**Pn**	**18 49 37.9**	**+0.3**
PAVA	**Las Pavas**	**1.38**	**327**	*eP*	**Pn**	**18 49 37.9**	**+0.3**
LFRS	**El Faro**	**1.38**	**320**	*eP*	**Pn**	**18 49 37.4**	**-0.1**
LFRS	**El Faro**	**1.38**	**320**	*eP*	**Pn**	**18 49 37.4**	**-0.1**
CNGN	**Cerro Negro**	**1.43**	**92**	*eP*	**Pn**	**18 49 37.4**	**-0.8**
CNGN				*eS*	**Sn**	**18 49 54.6**	**-1.3**
LBRS	**Las Brisas**	**1.46**	**324**	*eP*	**Pn**	**18 49 38.9**	**+0.3**
LBRS	**Las Brisas**	**1.46**	**324**	*eP*	**Pn**	**18 49 38.9**	**+0.3**
BOQS	**Boqueron**	**1.60**	**317**	*eP*	**Pn**	**18 49 41.3**	**+0.6**
BOQS	**Boqueron**	**1.60**	**317**	*eP*	**Pn**	**18 49 41.3**	**+0.6**
TGUH	**Tegucigalpa,Un**	**1.72**	**30**	*eP*	**Pn**	**18 49 42.6**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.72**	**30**	*eP*	**Pn**	**18 49 42.6**	**+0.3**
LLGN	**La Laguna**	**1.77**	**334**	*eP*	**Pn**	**18 49 43.1**	**+0.2**
LLGN	**La Laguna**	**1.77**	**334**	*eP*	**Pn**	**18 49 43.1**	**+0.2**
TACO	**Tacachico**	**1.82**	**320**	*eP*	**Pn**	**18 49 43.7**	**+0.1**
TACO	**Tacachico**	**1.82**	**320**	*eP*	**Pn**	**18 49 43.7**	**+0.1**
NUBE	**Las Nubes**	**2.07**	**310**	*eP*	**Pn**	**18 49 47.0**	**-0.1**
NUBE	**Las Nubes**	**2.07**	**310**	*eP*	**Pn**	**18 49 47.0**	**-0.1**
ACON	**Acoyapa**	**2.98**	**101**	*eP*	**Pn**	**18 50 01.0**	**+1.6**
GB1A	**Borinquen Arri**	**3.21**	**122**	*eP*	**Pn**	**18 50 03.3**	**+0.5**
CUI	**Cuipilapa**	**3.49**	**122**	*eP*	**Pn**	**18 50 05.3**	**-1.3**
ESPN	**Las Esperanzas**	**3.79**	**95**	*eP*	**Pn**	**18 50 08.6**	**-2.0**
JTS	**Las Juntas de**	**3.87**	**125**	*eP*	**Pn**	**18 50 11.8**

IDC ***17*** *19:06:31.9±0.3,7′.04S×120′.49E,h594km±3km,mb4.3/37, mb1 4.4/42,mb1mx4.3/48,mbtmp5.3/42,Error ellipse: s-maj=7.8km s-min=4.5km az=67.0*

DJA ***17*** *19:06:31.4±0.1,7°.5±2′×12°.0E±′,h579km±2km,M4.9/78, mB5.4/60,mb5.1/78,MLv5.6/36,Mw(mB)4.8/60,Mwp7.0/1*

KLM ***17*** *19:06:31.0,7′.15S×120.38E,h573km,mb5.3*

NEIC ***17*** *19:06:31.2±1.7,7′.06S±0′.08×120′.36E±0′.08,h589km±4km, mb5.1/156,Error ellipse: s-maj=12.4km s-min=10.6km az=65.0*

ISC 17 19:06:31.2±0.3,7′.09S±0′.03×120′.41E±0′.04,h591km±3km, h592km:pP-P,n938,σ1°52/996,mb5.0/140,5C-12D,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**0.94**	**5**	P	**P**	**19 07 41.9**	**+0.5**
BSSI				S	**S**	**19 08 37.8**	**-0.6**
BKSI	**Bulukumba**	**1.78**	**351**	P	**P**	**19 07 44.4**	**+0.6**
EDFI	**Ende, Flores**	**2.08**	**143**	P	**P**	**19 07 42.8**	**-2.3**
EDFI				S	**S**	**19 08 40.7**	**-4.5**
KAPI	**Kappang**	**2.16**	**342**	P	**P**	**19 07 47.2**	**+1.9**
KAPI	783nm,0.3s,baz=154,slow=2.5,SNR=3873			S	**S**	**19 08 47.4**	**+1.9**
KAPI	**Kappang**	**2.16**	**342**	P	**P**	**19 07 47.2**	**+1.9**
KAPI	baz=354,slow=23,SNR=17			S	**S**	**19 08 47.9**	**+2.3**
MMRI	**Maumere**	**2.38**	**130**	P	**P**	**19 07 44.7**	**-1.6**
MMRI	**Maumere**	**2.38**	**130**	P	**P**	**19 07 44.9**	**-1.4**
MMRI				S	**S**	**19 08 45.1**	**-2.3**
WSI	**Waingapu**	**2.57**	**182**	P	**P**	**19 07 46.4**	**-0.8**
BNSI	**Bone**	**2.69**	**354**	P	**P**	**19 07 49.3**	**+1.4**
WBSI	**Waikabubak, Su**	**2.73**	**202**	P	**P**	**19 07 46.6**	**-1.5**
BASI	**Baing, Sumba**	**3.12**	**177**	P	**P**	**19 07 50.1**	**-0.1**
PLAI	**Plampang**	**3.13**	**236**	P	**P**	**19 07 49.4**	**-0.9**
SPSI	**Sidrap Palu**	**3.17**	**348**	P	**P**	**19 07 51.7**	**+1.1**
TWSI	**Taliwang, Sumb**	**3.86**	**245**	P	**P**	**19 07 54.0**	**-1.0**
TTSI	**Tana Toraja**	**4.06**	**352**	P	**P**	**19 07 57.3**	**+0.9**
BATI	**Baumata**	**4.47**	**134**	P	**P**	**19 07 59.4**	**0.0**
BATI	334nm,0.3s,baz=31,slow=0.9,SNR=500			S	**S**	**19 09 08.9**	**-2.4**
BATI	**Baumata**	**4.47**	**134**	P	**P**	**19 07 58.9**	**-0.5**
SOEI	**Soe**	**4.65**	**125**	P	**P**	**19 08 00.2**	**-0.7**
SOEI	**Soe**	**4.65**	**125**	P	**P**	**19 08 00.3**	**-0.5**
SRBI	**Singaraja**	**5.25**	**259**	P	**P**	**19 08 04.7**	**-0.8**
DNP	1.8nm2µm128nm,0.4s **Denpasar**	**5.39**	**253**	P	**P**	**19 08 06.1**	**-0.5**
KBKI	19nm22µm1µm,0.4s **Kotabaru**	**5.66**	**311**	P	**P**	**19 08 10.2**	**+1.3**
ABJI	0.4nm703nm65nm,1.1s **Asem Bagus**	**6.16**	**263**	P	**P**	**19 08 13.6**	**+0.3**
APSI	1.1nm2µm211nm,1.0s **Ampana**	**6.26**	**11**	P	**P**	**19 08 15.1**	**+0.9**
JAGI	3.6nm12µm993nm,1.1s **Jajag, Banyuwa**	**6.35**	**257**	P	**P**	**19 08 13.1**	**-1.8**
JAGI	2.5nm7µm207nm,0.4s **Jajag, Banyuwa**	**6.35**	**257**	P	**P**	**19 08 12.9**	**-2.0**
LUWI	**Luwuk**	**6.45**	**22**	P	**P**	**19 08 16.7**	**+0.8**
LUWI	8.1nm22µm2µm,1.0s **Luwuk**	**6.45**	**22**		**P**	**19 08 17.0**	**+1.1**
BBKI	**Banjar Baru**	**6.61**	**303**	P	**P**	**19 08 19.0**	**+1.7**
BKB	1.9nm3µm166nm,1.1s **Balikpapan**	**6.76**	**329**	P	**P**	**19 08 22.1**	**+3.4**
BKB	2.1nm8µm695nm,1.4s **Balikpapan**	**6.76**	**329**	P	**P**	**19 08 22.6**	**+3.9**
BLJI	**Banyuglugur**	**6.79**	**264**	P	**P**	**19 08 18.4**	**-0.5**
GMJI	1.7nm6µm504nm,1.0s **Gumukmas**	**7.00**	**260**	P	**P**	**19 08 20.0**	**-0.8**
MPSI	1.3nm5µm221nm,1.0s **Mapaga**	**7.39**	**356**	P	**P**	**19 08 25.4**	**+0.9**
SANI	9.2nm22µm3µm,0.9s **Sanana**	**7.48**	**48**	P	**P**	**19 08 25.4**	**+0.1**
MRSI	10nm32µm3µm,0.8s **Marisa**	**7.67**	**12**	P	**P**	**19 08 27.4**	**+0.3**
NLAI	17nm43µm5µm,1.1s **Namlea**	**7.68**	**60**	P	**P**	**19 08 28.1**	**+0.9**
GRJI	16nm43µm4µm,0.8s **Gresik**	**7.87**	**271**	P	**P**	**19 08 29.0**	**0.0**
GTOI	1.0nm3µm232nm,1.0s **Gorontalo**	**8.10**	**19**	P	**P**	**19 08 31.9**	**+0.7**
MTKI	4.2nm13µm1µm,1.0s **Muara Teweh, K**	**8.21**	**318**	P	**P**	**19 08 33.0**	**+0.7**
KMSI	1.5nm4µm384nm,1.1s **Cibinong**	**8.40**	**25**	P	**P**	**19 08 35.1**	**+1.0**
PWJI	5.6nm14µm2µm,0.8s **Pagerwojo**	**8.58**	**263**	P	**P**	**19 08 34.3**	**-1.5**
MSAI	1.2nm2µm78nm,0.7s **Masohi**	**9.26**	**67**	P	**P**	**19 08 41.6**	**-0.9**
WOJI	738nm46nm,0.7s **Wonogiri, Jawa**	**9.44**	**265**	P	**P**	**19 08 43.3**	**-0.9**
PBKI	1µm76nm,0.9s **Pangkalan Bun**	**9.73**	**296**	P	**P**	**19 08 48.5**	**+1.3**
BNDI	6µm565nm,0.9s **Bandanaira**	**9.79**	**75**	P	**P**	**19 08 47.2**	**-0.5**
UGM	8µm969nm,1.0s **Wanagama**	**9.84**	**265**	P	**P**	**19 08 47.9**	**-0.3**
UGM	207nm,1.1s **Wanagama**	**9.84**	**265**	P	**P**	**19 08 47.1**	**-1.2**
SMRI	**Semarang**	**9.89**	**270**	P	**P**	**19 08 49.3**	**+0.5**
SMRI	73nm,0.5s **Semarang**	**9.89**	**270**	P	**P**	**19 08 48.2**	**-0.6**
YOGI	**Yogyakarta**	**10.05**	**265**	P	**P**	**19 08 51.4**	**+1.0**
TNTI	170nm,1.1s **Ternate**	**10.45**	**42**	P	**P**	**19 08 53.6**	**-0.7**
TNTI	4µm252nm,0.8s **Ternate**	**10.45**	**42**	P	**P**	**19 08 53.8**	**-0.6**
SAUI	**Saumlaki**	**10.84**	**95**	P	**P**	**19 08 57.8**	**-0.4**
SAUI	7µm834nm,1.1s **Saumlaki**	**10.84**	**95**	P	**P**	**19 08 57.4**	**-0.8**
KPJI	**Karang Pucung**	**11.39**	**268**	P	**P**	**19 09 03.1**	**-0.7**
STKI	5µm380nm,1.1s **Sintang**	**11.39**	**308**	P	**P**	**19 09 05.6**	**+1.7**
KNRA	1µm45nm,1.0s **Kununurra**	**11.83**	**137**	P	**P**	**19 09 07.8**	**-0.4**
KNRA	baz=12,SNR=56 **Kununurra**	**11.83**	**137**	P	**P**	**19 09 07.7**	**-0.4**
SGSI	**Sangihe**	**11.86**	**26**	P	**P**	**19 09 07.5**	**-1.1**
MTN	6µm642nm,0.7s **Manton Dam**	**12.01**	**119**	P	**P**	**19 09 09.8**	**-0.2**
MTN	baz=12,SNR=4.2 **Manton Dam**	**12.01**	**119**	P	**P**	**19 09 08.9**	**-1.1**
JCJI	**Jatiwangi**	**12.07**	**272**	P	**P**	**19 09 10.6**	**-0.1**
FITZ	3µm269nm,1.1s **Fitzroy Crossi**	**12.07**	**156**	P	**P**	**19 09 10.2**	**-0.4**
FITZ	9.9nm,0.3s,baz=348,slow=7.2,SNR=420			S	**S**	**19 11 19.4**	**-2.4**
FITZ	1.6nm,0.3s,baz=305,slow=17,SNR=14 **Fitzroy Crossi**	**12.07**	**156**	P	**P**	**19 09 10.6**	**0.0**
FITZ	baz=12,SNR=302 **Fitzroy Crossi**	**12.07**	**156**	P	**P**	**19 09 10.6**	**0.0**
MYLDM	**Lahad Datu**	**12.33**	**351**	P	**P**	**19 09 15.2**	**+1.8**
SPMM	**Sapulut**	**12.36**	**341**	P	**P**	**19 09 15.0**	**+1.3**
SIJI	**Sorong**	**12.46**	**61**	P	**P**	**19 09 13.6**	**-1.1**
SIJI	19nm,0.3s,baz=288,slow=7.6,SNR=230			S	**S**	**19 11 25.1**	**-4.1**
FAKI	baz=100,slow=21,SNR=14 **Fak Fak**	**12.50**	**71**	P	**P**	**19 09 13.1**	**-2.0**
FAKI	4µm368nm,0.7s **Fak Fak**	**12.50**	**71**	P	**P**	**19 09 12.8**	**-2.3**
CISI	**Cisompet, Garu**	**12.50**	**267**	P	**P**	**19 09 13.3**	**-1.8**
CISI	5µm178nm,1.2s **Cisompet, Garu**	**12.50**	**267**	P	**P**	**19 09 12.8**	**-2.4**
SBUM	**Sibu**	**12.51**	**319**	P	**P**	**19 09 16.4**	**+1.2**
SBUM	**Sibu**	**12.51**	**319**	P	**P**	**19 09 17.0**	**+1.8**
LEM	**Lembang**	**12.70**	**270**	P	**P**	**19 09 16.1**	**-1.2**
LEM	5.5nm,0.3s,baz=311,slow=19,SNR=24			S	**S**	**19 11 30.8**	**-3.1**
KDU	2.8nm,0.3s,baz=324,slow=22,SNR=5.6 **Kakadu**	**13.12**	**116**	P	**P**	**19 09 20.3**	**-1.0**
KSM	baz=13,SNR=52 **Kuching**	**13.19**	**310**	P	**P**	**19 09 22.8**	**+0.7**
KSM	**Kuching**	**13.19**	**310**	P	**P**	**19 09 23.0**	**+0.9**
TPI	**Tanjungpandan**	**13.41**	**288**	P	**P**	**19 09 24.9**	**+0.5**
CBJI	1µm102nm,1.5s **Citeko**	**13.48**	**272**	P	**P**	**19 09 22.4**	**-2.7**
DBJI	3µm201nm,0.9s **Dramaga**	**13.57**	**271**	P	**P**	**19 09 24.8**	**-1.2**
KKM	3µm70nm,1.1s **Kota Kinabalu**	**13.70**	**342**	P	**P**	**19 09 27.0**	**-0.4**
SKJI	**Sukabumi**	**13.75**	**269**	P	**P**	**19 09 27.3**	**-0.5**
PSA00	5µm228nm,0.7s **Pilbara Seismi**	**14.41**	**182**	P	**P**	**19 09 33.7**	**-0.4**
PSA00	**Pilbara Seismi**	**14.41**	**182**	P	**P**	**19 09 30.6**	**-3.6**
XMIS	**Christmas Isla**	**14.97**	**256**	P	**P**	**19 09 37.9**	**-1.6**
DAV	**Davao City (W)**	**14.98**	**20**	P	**P**	**19 09 37.9**	**-1.7**
	58nm,0.3s,baz=140,slow=2.4,SNR=12						
DAV	**Davao City (W)**	**14.98**	**20**	P	**P**	**19 09 38.2**	**-1.4**
PPBI	**Pangkal Pinang**	**15.04**	**288**	P	**P**	**19 09 41.3**	**+1.2**
KASI	1µm109nm,1.4s **Kota Agung**	**15.89**	**275**	P	**P**	**19 09 46.1**	**-2.0**
PMBI	73nm,0.9s **Palembang**	**16.11**	**284**	P	**P**	**19 09 51.5**	**+1.4**
PMBI	176nm,0.9s **Palembang**	**16.11**	**284**	P	**P**	**19 09 51.8**	**+1.7**
MDSI	**Maura Dua**	**16.35**	**278**	P	**P**	**19 09 53.4**	**+1.1**
LWLI	16nm,1.3s **Liwa**	**16.39**	**276**	P	P	19 10 06.9	+14
GIRL	**Giralia**	**16.57**	**200**	P	**P**	**19 09 55.4**	**+1.2**
GIRL	baz=17,SNR=54 **Giralia**	**16.57**	**200**	P	**P**	**19 09 55.4**	**+1.2**
SRPI	**Serui, Papua**	**16.61**	**73**	P	**P**	**19 09 55.5**	**+0.8**
BAKI	11µm1µm,0.9s **Biak**	**16.71**	**70**	P	**P**	**19 09 57.0**	**+1.4**
LHSI	4µm419nm,0.9s **Lahat**	**17.12**	**280**	P	**P**	**19 10 00.1**	**+0.8**
WB0	1µm69nm,1.4s **Warramunga Arr**	**18.52**	**134**	P	**P**	**19 10 12.4**	**+0.4**
WB0	comp=Z,49nm,0.7s			IAmb	IAmb	19 10 14.8	
WRA	**Warramunga Arr**	**18.60**	**135**	P	**P**	**19 10 12.0**	**-0.8**
WRA	comp=Z,6.2nm,0.3s,baz=314,slow=10,SNR=462			S	**S**	**19 13 10.1**	**-2.4**
WRA	comp=Z,1.5nm,0.3s,baz=311,slow=17,SNR=10 **Warramunga Arr**	**18.60**	**135**	P	**P**	**19 10 12.5**	**-0.3**
WRAB	**Tennant Creek**	**18.60**	**135**	P	**P**	**19 10 13.3**	**+0.5**
WRAB	comp=Z,103nm,0.9s			IAmb	IAmb	19 10 16.2	
WB2	**Warramunga Arr** baz=19	**18.61**	**135**	P	**P**	**19 10 13.4**	**+0.6**
WB2	baz=19			S	**S**	**19 13 11.1**	**-1.6**
WB2	**Warramunga Arr**	**18.61**	**135**	P	**P**	**19 10 13.2**	**+0.4**
WC3	**Warramunga Arr**	**18.63**	**135**	P	**P**	**19 10 13.4**	**+0.3**
MYKOM	**Kota Tinggi**	**18.73**	**297**	P	**P**	**19 10 15.0**	**+1.0**
WR0	**Warramunga Arr**	**18.75**	**134**	P	**P**	**19 10 14.7**	**+0.5**
SMPI	**Sanri**	**18.93**	**75**	P	**P**	**19 10 17.5**	**+1.7**
WRKA	comp=Z,1µmcomp=Z,127nm,1.2s **Warakurna**	**19.38**	**158**	P	**P**	**19 10 20.3**	**+0.6**
MEEK	baz=20,SNR=142 **Meekatharra**	**19.52**	**185**	P	**P**	**19 10 21.2**	**+0.2**
KRJI	baz=20,SNR=168 **Kerinci**	**19.52**	**284**	P	**P**	**19 10 22.5**	**+1.2**
SDSI	comp=Z,126nm,0.8s **Sungai Dareh**	**19.89**	**287**	P	**P**	**19 10 25.7**	**+1.2**
GENI	comp=Z,21nm,0.9s **Genyem**	**20.18**	**78**	P	**P**	**19 10 27.9**	**+0.7**
AS31	comp=Z,104nm,0.9s **Alice Springs**	**20.97**	**143**	P	**P**	**19 10 34.4**	**+0.2**
ASAR	**Alice Springs**	**20.97**	**143**	P	**P**	**19 10 34.6**	**+0.4**
ASAR	comp=Z,11nm,0.3s,baz=321,slow=8.3,SNR=530			S	**S**	**19 13 50.1**	**-0.1**
ASAR	comp=Z,15nm,0.8s,baz=343,slow=26,SNR=5.7			PcP	**PcP**	**19 14 15.9**	**+0.2**
ASAR	comp=Z,22nm,0.8s,baz=350,slow=2.7,SNR=11			ScP	**ScP**	**19 16 57.3**	**-0.1**
ASAR	comp=Z,17nm,0.9s,baz=341,slow=2.2,SNR=11 **Alice Springs**	**20.97**	**143**	P	**P**	**19 10 34.4**	**+0.3**
TGY	**Tagaytay City**	**21.06**	**1**	P	**P**	**19 10 34.1**	**-0.9**
MNSI	comp=Z,140nm,0.5s,baz=167,slow=5.4,SNR=5.8 **Mandailing Nat**	**22.21**	**290**	P	**P**	**19 10 45.7**	**+0.4**
MORW	**Morawa**	**22.25**	**190**	P	**P**	**19 10 45.8**	**+0.3**
MORW	baz=22,SNR=48 **Morawa**	**22.25**	**190**	P	**P**	**19 10 45.8**	**+0.3**
IPM	**Ipoh**	**22.50**	**300**	P	**P**	**19 10 49.0**	**+1.1**
QIS	**Mount Isa**	**22.91**	**128**	P	**P**	**19 10 52.1**	**+0.6**
KULM	baz=23,SNR=18 **Kulim**	**23.24**	**301**	P	**P**	**19 10 54.1**	**-0.3**
KULM	**Kulim**	**23.24**	**301**	P	**P**	**19 10 55.0**	**+0.6**
COEN	**Coen**	**23.39**	**109**	P	**P**	**19 10 56.3**	**+0.6**
COEN	baz=24,SNR=30 **Coen**	**23.39**	**109**	P	**P**	**19 10 56.5**	**+0.7**
RPSI	**Rantau Prapat**	**23.54**	**294**	P	**P**	**19 10 57.2**	**+0.1**
RPSI	comp=Z,35nm,1.0s			IAmb	IAmb	19 10 59.6	
BLDU	**Ballidu**	**23.66**	**188**	P	**P**	**19 10 58.1**	**+0.1**
KMBL	baz=24,SNR=121 **Kambalda**	**24.20**	**177**	P	**P**	**19 11 02.7**	**0.0**
GSI	baz=24,SNR=22 **Gunungsitoli**	**24.26**	**289**	P	**P**	**19 11 02.9**	**-0.6**
GSI	comp=Z,34nm,0.9s			IAmb	IAmb	19 11 03.9	
KLBR	**Kellerberrin**	**24.50**	**185**	P	**P**	**19 11 05.6**	**+0.2**
FORT	baz=25,SNR=83 **Forrest**	**24.64**	**164**	P	**P**	**19 11 07.2**	**+0.6**
FORT	baz=25,SNR=71 **Forrest**	**24.64**	**164**	P	**P**	**19 11 07.1**	**+0.5**
MUN	**Mundaring**	**25.07**	**188**	P	**P**	**19 11 10.5**	**+0.1**
MTSU	baz=25,SNR=16 **Mount Surprise**	**25.75**	**117**	P	**P**	**19 11 17.7**	**+1.1**
NWAO	baz=26,SNR=49 **Narrogin (SRO)**	**25.88**	**186**	P	**P**	**19 11 18.1**	**+0.5**
NWAO	comp=Z,129nm,0.7s,baz=15,slow=8.8,SNR=84			S	**S**	**19 15 06.6**	**-0.4**
NWAO	comp=Z,32nm,0.9s,baz=195,slow=23,SNR=6.4 **Narrogin (SRO)**	**25.88**	**186**	P	**P**	**19 11 18.1**	**+0.5**
NWAO	baz=26,SNR=62 **Narrogin (SRO)**	**25.88**	**186**	P	**P**	**19 11 18.0**	**+0.5**
NWAO	**Narrogin (SRO)**	**25.88**	**186**	P	**P**	**19 11 18.1**	**+0.5**
NWAO				IAmb	IAmb	19 11 19.1	
PMG	comp=Z,135nm,0.8s **Port Moresby**	**26.57**	**97**	P	**P**	**19 11 23.9**	**0.0**
PMG	comp=Z,34nm,0.7s,baz=160,slow=1.5,SNR=22			ScP	**ScP**	**19 17 14.1**	**+1.1**
PMG	comp=Z,8.4nm,0.8s,baz=192,slow=5.5,SNR=3.4 **Port Moresby**	**26.57**	**97**	P	**P**	**19 11 24.4**	**+0.5**
PMG	comp=Z,30nm,0.8s			IAmb	IAmb	19 11 25.8	
UBPT	**Khong Chiam**	**26.70**	**326**	P	**P**	**19 11 26.1**	**+1.2**
UBPT	comp=Z,49nm,1.4s			IAmb	IAmb	19 11 27.5	
RKGY	**Rocky Gully** baz=28,SNR=174	**27.57**	**186**	P	**P**	**19 11 34.0**	**+1.7**
SRAK	**Srakaew**	**27.78**	**319**	P	**P**	**19 11 31.8**	**-2.5**
CTA	comp=Z,3µmcomp=Z,279nm,0.6s **Charters Tower**	**28.19**	**120**	P	**P**	**19 11 38.5**	**+0.5**
CTA	comp=Z,8.9nm,0.7s,baz=298,slow=12,SNR=15			PcP	**PcP**	**19 14 32.8**	**+0.8**
CTA	comp=Z,20nm,0.6s,baz=303,slow=3.9,SNR=19			S	**S**	**19 15 42.8**	**-0.7**
CTA	comp=Z,9.9nm,1.0s,baz=73,slow=19,SNR=7.5			ScP	**ScP**	**19 17 18.1**	**+0.2**
CTAO	comp=Z,31nm,1.2s,baz=254,slow=6.6,SNR=7.5 **Charters Tower**	**28.19**	**120**	P	**P**	**19 11 39.0**	**+1.0**
CTAO					**PcP**	**19 14 33.0**	**+0.9**
KHON	**Khomkaen**	**29.06**	**323**	P	**P**	**19 11 46.4**	**+1.0**
CHAI	comp=Z,5µmcomp=Z,79nm,0.5s **Chyayaum**	**29.23**	**321**	P	**P**	**19 11 48.3**	**+1.3**
BBOO	comp=Z,811nmcomp=Z,55nm,0.6s **Buckleboo**	**29.44**	**152**	P	**P**	**19 11 49.0**	**+0.4**
BBOO	baz=30,SNR=103 **Buckleboo**	**29.44**	**152**	P	**P**	**19 11 48.7**	**+0.1**
QLP	**Quilpie**	**29.82**	**133**	P	**P**	**19 11 53.6**	**+1.7**
PHIT	baz=30,SNR=6.0 **Phitsanulok**	**31.18**	**321**	P	**P**	**19 12 05.3**	**+1.7**
HTT	comp=Z,144nm,0.6s **Hallett**	**31.33**	**149**	P	**P**	**19 12 06.0**	**+1.2**
UTTA	baz=32,SNR=111 **Uttaradit**	**31.52**	**322**	P	**P**	**19 12 07.7**	**+1.2**
YHNB	comp=Z,250nmcomp=Z,28nm,1.0s **Yeheng**	**31.58**	**2**	P	**P**	**19 12 07.0**	**0.0**
YHNB	comp=Z,78nm,1.2s			IAmb	IAmb	19 12 10.1	
STKA	**Stephens Creek**	**31.60**	**144**	P	**P**	**19 12 08.1**	**+1.0**
STKA	comp=Z,20nm,0.3s,baz=324,slow=8.6,SNR=164			PcP	**PcP**	**19 14 41.0**	**+0.1**
STKA	comp=Z,21nm,0.7s,baz=323,slow=4.2,SNR=5.4			S	**S**	**19 16 35.2**	**-0.3**
STKA	comp=Z,20nm,1.0s,baz=156,slow=17,SNR=6.8			ScP	**ScP**	**19 17 28.0**	**-0.9**
STKA	comp=Z,14nm,0.9s,baz=264,slow=13,SNR=3.5 **Stephens Creek**	**31.60**	**144**	P	**P**	**19 12 08.1**	**+1.0**
STKA	baz=32,SNR=27 **Stephens Creek**	**31.60**	**144**	P	**P**	**19 12 07.8**	**+0.7**
STKA					**PcP**	**19 14 41.1**	**+0.2**
GUMO	**Guam**	**31.81**	**50**	P	**P**	**19 12 08.8**	**-0.2**
GUMO	comp=Z,86nm,0.3s,baz=214,slow=0.3,SNR=24 **Guam**	**31.81**	**50**	P	**P**	**19 12 09.0**	**0.0**
SUKH	**Sukhothai**	**31.90**	**320**	P	**P**	**19 12 11.0**	**+1.3**
SLVN	comp=Z,28nm,1.1s **Son La**	**32.56**	**331**	P	**P**	**19 12 16.7**	**+1.3**
LAMP	**Lampang**	**32.67**	**321**	P	**P**	**19 12 18.2**	**+1.8**
	comp=Z,478nmcomp=Z,39nm,0.9s						
CM31	**Chiang Mai Arr**	**33.06**	**320**	P	**P**	**19 12 20.0**	**+0.5**
CM31	comp=Z,43nm,1.4s			IAmb	IAmb	19 12 21.7	
CM31					**PcP**	**19 14 46.1**	**+0.9**
CMAR	**Chiang Mai Arr**	**33.06**	**320**	P	**P**	**19 12 20.6**	**+1.0**
CMAR	comp=Z,7.3nm,0.7s,baz=146,slow=6.5,SNR=55			PcP	**PcP**	**19 14 46.9**	**+1.6**
CMAR	comp=Z,16nm,0.8s,baz=180,slow=2.9,SNR=25			ScP	**ScP**	**19 17 34.4**	**+0.2**
CMAR	comp=Z,2.9nm,0.9s,baz=166,slow=3.0,SNR=6.5 **Chiang Mai Arr**	**33.06**	**320**	P	**P**	**19 12 19.8**	**+0.2**
CMAR					**PcP**	**19 14 46.3**	**+1.1**
RMQ	**Roma** baz=33,SNR=8.4	**33.16**	**129**	P	**P**	**19 12 22.3**	**+2.0**
PAYA	**Payao**	**33.17**	**323**	P	**P**	**19 12 21.4**	**+0.9**
CMMT	comp=Z,5µmcomp=Z,543nm,0.7s **Chiang Mai**	**33.32**	**321**	P	**P**	**19 12 22.0**	**+0.3**
CHTO	comp=Z,15nm,1.4s **Chiang Mai**	**33.32**	**321**	P	**P**	**19 12 21.2**	**-0.5**
CHTO	**Chiang Mai**	**33.32**	**321**	P	**P**	**19 12 22.2**	**+0.5**
CHTO	comp=Z,65nm,1.4s			IAmb	IAmb	19 12 23.9	
CHTO					**PcP**	**19 14 46.9**	**+1.0**
CMSA	**Cobar Meteorol** baz=34,SNR=24	**33.90**	**139**	P	**P**	**19 12 27.9**	**+1.5**
ARPS	**Mount Arapiles** baz=36,SNR=66	**35.42**	**150**	P	**P**	**19 12 40.1**	**+1.1**
GYA	**Guiyang**	**35.91**	**339**	⇓P	**P**	**19 12 44.0**	**+0.7**
GYA				PcP	**PcP**	**19 14 55.0**	**+1.3**
GYA				S	**S**	**19 17 39.9**	**-0.9**
GYA				ScS	**ScS**	**19 21 54.3**	**+2.1**
GYA	comp=Z,28nm,1.0s			pmax	pmax		
GYA	comp=Z,220nm,4.6s			pmax	pmax		
KMI	**Kunming**	**36.34**	**332**	⇑*i*P	**P**	**19 12 49.4**	**+2.4**
KMI				pP	PP	19 14 30.9	-1.4
KMI	comp=Z,40nm,1.0s			pmax	pmax		
KMI	comp=Z,150nm,4.2s			pmax	pmax		
ARMA	**Armidale** baz=38,SNR=7.4	**37.35**	**132**	P	**P**	**19 12 56.7**	**+1.6**
YNG	**Young** baz=38,SNR=16	**37.41**	**140**	P	**P**	**19 12 57.1**	**+1.7**
TOO	**Toolangi** baz=38,SNR=5.8	**37.94**	**147**	P	**P**	**19 13 01.6**	**+1.9**
MGCD	**Mangrove Creek** baz=39,SNR=6.7	**38.53**	**137**	P	**P**	**19 13 05.6**	**+1.1**
ENH	**Enshi**	**38.60**	**345**	P	**P**	**19 13 04.9**	**-0.1**
NJ2	**Nanjing**	**38.95**	**358**	⇓P	**P**	**19 13 09.8**	**+2.1**
NJ2	comp=Z,26nm,0.5s			pmax	pmax		
HNR	**Honiara**	**39.18**	**96**	P	**P**	**19 13 10.4**	**+0.4**
JCJ	**Chichijima**	**40.00**	**31**	P	**P**	**19 13 16.3**	**+0.1**
PATS	**Pohnpei**	**40.26**	**71**	P	**P**	**19 13 19.4**	**+0.8**
PATS	comp=Z,82nm,1.1s			IAmb	IAmb	19 13 20.5	
CD2	**Chengdu**	**41.01**	**338**	P	**P**	**19 13 24.8**	**+0.5**
CD2				S	**S**	**19 18 53.9**	**-1.3**
CD2	comp=Z,110nm,0.9s			pmax	pmax		
CD2	comp=Z,310nm,4.5s			pmax	pmax		
JNU	**Nakatsue**	**41.21**	**13**	P	**P**	**19 13 25.0**	**-0.8**
JTU	comp=Z,10nm,0.9s,baz=280,slow=7.8,SNR=4.8 **Tsushima**	**42.25**	**11**	P	**P**	**19 13 33.9**	**0.0**
XAN	**Xi'an**	**42.33**	**346**	P	**P**	**19 13 34.3**	**-0.3**
XAN				PcP	**PcP**	**19 15 15.1**	**+1.0**
XAN				pP	pwP	19 15 21.6	+2.3
XAN				sP	sP	19 16 28.1	+4.8
XAN				S	**S**	**19 19 10.0**	**-3.9**
XAN	comp=Z,53nm,0.9s			pmax	pmax		
XAN	comp=Z,360nm,5.1s			pmax	pmax		
XAN	**Xi'an**	**42.33**	**346**	P	**P**	**19 13 34.1**	**-0.5**
XAN	comp=Z,61nm,1.2s			IAmb	IAmb	19 13 35.4	
SHL	**Shillong** SNR=12	**42.70**	**320**	P	**P**	**19 13 37.6**	**-0.1**
SHL	**Shillong**	**42.70**	**320**	P	**P**	**19 13 37.2**	**-0.6**
SHL	comp=Z,60nm,1.2s			IAmb	IAmb	19 13 38.5	
JHS	**Saijyo**	**43.55**	**15**	P	**P**	**19 13 45.1**	**+1.1**
JHS	comp=Z,52nm,1.0s			IAmb	IAmb	19 13 45.8	
JHJ	**Hachijo jima 2**	**44.02**	**24**	P	**P**	**19 13 46.5**	**-1.1**
JWT	comp=Z,97nm,0.8s,baz=69,slow=21,SNR=6.1 **Wachi**	**44.45**	**18**	P	**P**	**19 13 51.4**	**+0.4**
KSRS	**Korea Array**	**44.86**	**8**	P	**P**	**19 13 54.3**	**+0.3**
KSRS	comp=Z,15nm,0.8s,baz=187,slow=8.0,SNR=30			PcP	**PcP**	**19 15 23.2**	**+0.5**
KS19	comp=Z,15nm,0.8s,baz=190,slow=3.1,SNR=26 **Wonju Array Si**	**44.90**	**8**	P	**P**	**19 13 54.5**	**+0.2**
KS19					**PcP**	**19 15 23.8**	**+0.9**
INU	**Inuyama**	**45.02**	**19**	P	**P**	**19 13 55.2**	**-0.1**
JGF	**Kuroka**	**45.36**	**20**	P	**P**	**19 13 57.6**	**-0.4**
LZH	**Lanzhou**	**45.68**	**341**	⇑P	**P**	**19 14 02.3**	**+1.8**
LZH				PP	**PP**	**19 15 59.3**	**+1.9**
LZH	comp=Z,23nm,1.4s			pmax	pmax		
LZH	comp=Z,120nm,5.5s			pmax	pmax		
DL2	**Dalian**	**45.77**	**1**	P	**P**	**19 14 00.5**	**-0.4**
DL2				PcP	**PcP**	**19 15 26.8**	**+0.9**
DL2				S	**S**	**19 19 59.0**	**-3.2**
DL2	comp=Z,32nm,0.7s			pmax	pmax		
LSA	**Lhasa**	**46.14**	**324**	P	**P**	**19 14 05.3**	**+0.9**
LSA	comp=Z,310nm,0.7s			pmax	pmax		
LSA	**Lhasa**	**46.14**	**324**	P	**P**	**19 14 05.4**	**+0.9**
LSA	**Lhasa**	**46.14**	**324**	P	**P**	**19 14 05.4**	**+1.0**
LSA				IAmb	IAmb	19 14 06.5	
MAJO	comp=Z,60nm,0.7s **Matsushiro**	**46.50**	**20**	P	**P**	**19 14 05.6**	**-0.9**
MAJO					**PcP**	**19 15 28.1**	**-0.5**
MAT	**Matsushiro**	**46.50**

comp=Z,34nm,0.9s
HHC pmax pmax
comp=Z,190nm,6.0s
BTO Baotou 48.41 349 *e*P P 19 14 21.5 +0.7
KKN Kakani 48.53 317 *e*P P 19 14 22.0 -0.1
comp=Z,127nm,1.1s
DMN Daman 48.53 317 *e*P P 19 14 22.2 +0.1
comp=Z,133nm,1.1s
JMM Marumori 48.60 22 P P 19 14 22.0 -0.1
JMM IAmb IAmb 19 14 23.5
comp=Z,60nm,1.0s
GKN Gorkha 49.10 317 *e*P P 19 14 26.2 0.0
KOLN Koldanda 49.66 316 *e*P P 19 14 30.3 -0.1
comp=Z,111nm,0.8s
DANN Dangsing 49.91 317 *e*P P 19 14 32.3 -0.1
comp=Z,206nm,0.5s
GTA Gaotai 50.04 339 ⇓P P 19 14 34.3 +1.4
GTA PcP **PcP 19 15 43.0 +1.3**
GTA pP pwP 19 16 25.3 +2.1
GTA sP sP 19 17 30.5 +5.4
GTA PcS **PcS 19 19 38.5 -1.4**
GTA S **S 19 21 03.1 +2.0**
GTA ScS **ScS 19 23 21.8 +0.5**
GTA sS sS 19 24 22.4 +6.6
GTA SS **SS 19 24 49.0 +3.7**
GTA pmax pmax
comp=Z,53nm,1.1s
GTA pmax pmax
comp=Z,170nm,8.0s
PYUN Piuthan 50.29 316 *e*P P 19 14 34.9 -0.1
comp=Z,104nm,0.5s
CN2 Changchun 50.85 5 *e*P P 19 14 37.3 -1.2
CN2 pmax pmax
comp=Z,20nm,0.7s
USA0B Ussuriysk Arra 52.11 11 P P 19 14 47.3 -0.2
USRK Ussuriysk Ar. 52.11 11 P P 19 14 47.5 -0.1
comp=Z,18nm,0.4s,baz=202,slow=6.5,SNR=107
USRK Ussuriysk Ar. 52.11 11 P P 19 14 47.3 -0.2
MDJ Mudanjiang 52.13 8 P P 19 14 48.0 +0.4
MDJ pP pP 19 16 33.9 -3.8
MDJ ScP **ScP 19 18 51.3 +0.9**
MDJ S **S 19 21 29.8 +1.3**
MDJ ScS **ScS 19 23 33.0 -2.4**
MDJ SS **SS 19 25 20.8 +3.2**
MDJ pmax pmax
comp=Z,68nm,1.0s
MDJ pmax pmax
comp=Z,110nm,3.0s
MDJ Mudanjiang 52.13 8 P P 19 14 47.5 -0.1
MDJ IAmb IAmb 19 14 48.7
comp=Z,52nm,0.9s
JEW Eniwo 53.25 19 P P 19 14 56.0 +0.3
JEW IAmb IAmb 19 14 57.2
comp=Z,91nm,1.0s
JKA Kamikawa-asahi 54.77 19 P P 19 15 06.7 +0.4
JKA IAmb IAmb 19 15 07.8
comp=Z,56nm,0.8s
ULN Ulaanbaatar 55.97 349 P P 19 15 15.4 +0.6
ULN IAmb IAmb 19 15 16.5
comp=Z,93nm,1.4s
SONM Songino Array 56.07 349 P P 19 15 15.9 +0.5
comp=Z,50nm,0.8s,baz=165,slow=8.4,SNR=243
SONM PcP **PcP 19 16 04.8 +0.1**
comp=Z,11nm,0.9s,baz=169,slow=3.8,SNR=7.0
SONM S **S 19 22 14.5 -5.7**
comp=Z,1.2nm,1.1s,baz=168,slow=15,SNR=3.6
SONM PKPPKP **P'P'df 19 45 06.6 +4.7**
comp=Z,0.9nm,1.0s,baz=333,slow=1.7,SNR=4.0
SONM Songino Array 56.07 349 P P 19 15 15.5 +0.1
SONM **PcP 19 16 05.0 +0.3**
MLZ Mavora Lakes 56.10 141 P P 19 15 16.6 +1.0
HIA Hailar 56.12 359 P P 19 15 15.2 -0.4
HIA PcP **PcP 19 16 05.6 +0.9**
KLR Kul'dur 56.95 9 P P 19 15 20.8 -0.4
comp=Z,4.7nm,0.4s,baz=194,slow=6.8,SNR=27
KLR PcP **PcP 19 16 08.1 +0.1**
comp=Z,7.0nm,0.7s,baz=182,slow=5.2,SNR=6.5
MSVF Nonsavu 57.09 106 P P 19 15 24.7 +1.8
RPZ Rata Peaks 57.27 138 P P 19 15 24.7 +1.1
RPZ IAmb IAmb 19 15 25.3
comp=Z,90nm,0.7s
YSS Yuzh-Sakhalins 57.35 18 P P 19 15 24.5 +0.6
YSS IAmb IAmb 19 15 25.4
comp=Z,64nm,0.9s
OXZ Oxford 57.77 137 P P 19 15 27.2 +0.2
THZ Tophouse 57.77 135 P P 19 15 28.1 +1.0
TUWZ Tuamarina 58.38 135 P P 19 15 31.2 +0.1
BSWZ Blackbirch Sta 58.43 135 P P 19 15 32.3 +0.9
KHZ Kahutara 58.44 136 P P 19 15 31.9 +0.4
WMQ Urumqi 58.68 333 P P 19 15 34.8 +1.7
WMQ S **S 19 22 55.3 +1.9**
WMQ pmax pmax
comp=Z,120nm,1.3s
WMQ pmax pmax
comp=Z,410nm,4.5s
WMQ Urumqi 58.68 333 P P 19 15 34.4 +1.2
WMQ IAmb IAmb 19 15 35.4
comp=Z,107nm,1.2s
BHW Baring Head 59.02 134 P P 19 15 34.4 -1.0
MSWZ Moikau Station 59.30 134 P P 19 15 36.5 -0.7
PLWZ Palliser 59.35 135 P P 19 15 37.4 -0.3
CASY Casey 59.49 185 P P 19 15 38.4 +0.3
BKZ Black Stump Fm 59.50 132 P P 19 15 39.1 +0.4
URZ Urewera 59.70 130 P P 19 15 40.4 +0.4
TLY Talaya 60.28 348 P P 19 15 44.0 +0.5
comp=Z,21nm,0.8s,baz=196,slow=4.3,SNR=22
TLY PcP **PcP 19 16 22.1 +0.8**
comp=Z,3.6nm,0.5s,baz=210,slow=10,SNR=1.9
TLY Talaya 60.28 348 P P 19 15 43.1 -0.4
NIL Nilore 60.31 315 P P 19 15 43.4 -0.7
NIL Nilore 60.31 315 P P 19 15 43.2 -0.9
NIL IAmb IAmb 19 15 44.5
comp=Z,66nm,0.5s
KSH Kashi 61.93 322 P P 19 15 55.3 +0.6
KSH pmax pmax
comp=Z,190nm,1.0s
KSH pmax pmax
comp=Z,280nm,4.5s
SHLS Shalkode 62.29 327 ⇓*i*P P 19 15 56.6 -0.3
comp=Z,82nm,1.0s,baz=327
SHLS *e*S **S 19 23 37.0 -1.3**
baz=327
PRZ Przheval'sk 62.42 326 P P 19 15 59.0 +1.2
PRZ IAmb IAmb 19 16 00.7
comp=Z,113nm,1.2s
ZSN Zaisan 62.74 334 ⇓*i*P P 19 16 00.3 +0.7
comp=Z,41nm,1.1s,baz=334
ZSN *e*S **S 19 23 44.5 +1.1**
baz=334
SATY Saty 62.80 327 ⇓*i*P P 19 16 01.2 +1.0
comp=Z,47nm,0.9s,baz=326
SATY *e*S **S 19 23 45.6 +1.1**
baz=326
KDJ Kajisay 62.87 325 P P 19 16 00.8 0.0
KDJ IAmb IAmb 19 16 02.9
comp=Z,71nm,1.3s
KPKS Kokpek 62.92 327 ⇓*i*P P 19 16 01.7 +0.8
comp=Z,97nm,0.9s,baz=327
MK31 Makanchi Array 63.42 332 P P 19 16 04.6 +0.6
MK31 IAmb IAmb 19 16 05.8
comp=Z,111nm,0.9s
MKAR Makanchi Array 63.42 332 P P 19 16 04.8 +0.7
comp=Z,102nm,0.8s,baz=139,slow=7.8,SNR=508
MKAR S **S 19 23 49.2 -2.5**
comp=Z,1.3nm,0.9s,baz=192,slow=28,SNR=2.2
MKAR PKPPKP **P'P'df 19 44 55.7 +4.6**
comp=Z,0.7nm,0.8s,baz=328,slow=1.6,SNR=4.7
MKAR Makanchi Array 63.42 332 P P 19 16 03.9 -0.1
MAKZ Makanchi 63.58 332 P P 19 16 04.5 -0.5
MAKZ IAmb IAmb 19 16 06.6
comp=Z,84nm,1.1s
TNSS Tian-Shan 63.59 326 ⇓*i*P P 19 16 06.5 +0.9
baz=326
MDOK Medeo 63.61 326 *i*P P 19 16 06.2 +0.7
baz=326
MDOK *e*S **S 19 23 55.4 +1.0**
baz=326
AAA Alma-Ata 63.72 326 *e*P P 19 16 06.9 +0.8
comp=Z,25nm,0.7s,baz=326
AAA *e*S **S 19 23 56.8 +1.2**
baz=326
KBL Kabul 63.75 314 P P 19 16 06.7 +0.1
SNR=29
KBL Kabul 63.75 314 P P 19 16 06.2 -0.4
KBL IAmb IAmb 19 16 07.0
comp=Z,47nm,0.6s
BOOM Boomskoye usch 63.81 325 P P 19 16 07.2 +0.4
BOOM IAmb IAmb 19 16 08.5
comp=Z,73nm,1.0s
CHKK Chushkaly 64.10 326 *e*P P 19 16 08.7 +0.4
baz=326
TDK Taldyqorghan 64.10 328 *i*P P 19 16 09.2 +0.8
comp=Z,159nm,1.1s,baz=328
TDK *e*S **S 19 24 00.9 +0.9**
baz=328
TKM2 Tokmak 2 64.28 325 P P 19 16 10.3 +0.5
SNR=55
UCH Uchtor 64.47 324 P P 19 16 12.0 +0.7
SNR=11
KUU Kurty 64.48 326 ⇓*i*P P 19 16 11.3 +0.6
comp=Z,122nm,0.8s,baz=326
KUU *e*S **S 19 24 05.4 +0.9**
baz=326
KBK Karagaybulak 64.48 324 P P 19 16 11.7 +0.7
SNR=42
AAK Ala-Archa 64.73 324 *i*P P 19 16 13.5 +0.9
SNR=82
AAK Ala-Archa 64.73 324 P P 19 16 13.1 +0.5
FRU1 Bishkek 64.76 324 P P 19 16 12.2 -0.4
CHMS Chumysh 64.81 325 P P 19 16 13.1 +0.2
SNR=9.8
AML Almayashu 64.90 323 P P 19 16 14.7 +0.8
SNR=47
USP Ospenovka 65.12 325 P P 19 16 15.3 +0.5
SNR=74
SGDS Sogindy 65.16 325 ⇓*i*P P 19 16 15.4 +0.3
comp=Z,51nm,1.3s,baz=325
EKS2 Erkin-Say 65.17 324 P P 19 16 16.1 +0.8
SNR=74
GAR Garm 65.21 319 P P 19 16 15.4 -0.1
BTK Batken 65.47 320 P P 19 16 16.9 -0.2
BTK IAmb IAmb 19 16 19.7
comp=Z,77nm,1.1s
CHGR Chuyangaron 65.79 318 P P 19 16 18.9 -0.3
JLN Jalan Bani Buh 66.41 298 P P 19 16 24.1 +0.9
WBK Wadi Bani Khal 66.94 298 P P 19 16 28.0 +1.5
SNR=5.9
SEM Semipalatinsk 66.97 333 *e*P P 19 16 26.1 -0.3
comp=Z,37nm,0.9s,baz=333
IUG Iuzhnay 67.12 322 ⇓*i*P P 19 16 27.9 +0.5
comp=Z,45nm,0.8s,baz=322
IUG *e*S **S 19 24 36.9 +0.9**
baz=322
MHTO MHTO 67.33 296 P P 19 16 28.5 -0.4
KK31 Karatay Array 67.37 323 P P 19 16 28.1 -0.6
KK31 IAmb IAmb 19 16 30.7
comp=Z,50nm,1.3s
KKAR Karatay Array 67.37 323 P P 19 16 28.1 -0.6
KKAR IAmb IAmb 19 16 30.7
comp=Z,50nm,1.3s
KKAR Karatay Array 67.37 323 P P 19 16 27.8 -0.9
DQM DQM 67.40 295 P P 19 16 29.7 +0.4
WSAR Wadi Sarin 67.44 299 P P 19 16 29.8 +0.2
comp=Z,33nm,1.0s,baz=141,slow=7.2,SNR=24
JMDO Jabal Madar 67.63 298 P P 19 16 32.0 +1.3
SNR=6.7
KNTN Kanton 67.71 90 P P 19 16 32.8 +1.5
KNTN IAmb IAmb 19 16 34.2
comp=Z,164nm,1.4s
PEA0B Petropavlovsk- 67.78 23 P P 19 16 31.9 +1.0
PEA0B IAmb IAmb 19 16 33.1
comp=Z,71nm,0.8s
PETK Petropavlovsk- 67.78 23 P P 19 16 31.8 +0.9
comp=Z,47nm,0.7s,baz=102,slow=0.7,SNR=60
PETK PcP **PcP 19 16 52.6 +0.2**
comp=Z,13nm,0.8s,baz=184,slow=4.0,SNR=4.8
PETK Petropavlovsk- 67.78 23 P P 19 16 31.5 +0.6
ZAA0 Zalesovo Array 67.78 338 P P 19 16 30.0 -0.9
ZAA0 IAmb IAmb 19 16 31.4
comp=Z,115nm,0.9s
ZALV Zalesovo Beam 67.78 338 P P 19 16 30.4 -0.4
comp=Z,109nm,0.7s,baz=137,slow=4.4,SNR=374
ZALV S **S 19 24 39.1 -3.8**
comp=Z,5.8nm,0.9s,baz=113,slow=11,SNR=3.8
ZALV PKPPKP **P'P'df 19 44 42.1 -1.3**
comp=Z,0.7nm,0.7s,baz=270,slow=3.0,SNR=4.3
ZALV Zalesovo Beam 67.78 338 P P 19 16 30.0 -0.9
ZALV **P'P'df 19 44 40.8 -2.6**
SMDO Samad 67.89 298 P P 19 16 33.0 +0.6
SNR=6.0
KURBB Kurchatov Arra 67.90 333 P P 19 16 31.9 +0.1
comp=Z,47nm,0.8s,baz=147,slow=5.1,SNR=387
KURBB PcP **PcP 19 16 53.0 +0.1**
comp=Z,13nm,0.9s,baz=135,slow=4.3,SNR=9.0
KURBB PKPPKP **P'P'df 19 44 46.1 +2.6**
comp=Z,0.8nm,0.8s,baz=306,slow=3.8,SNR=5.0
KURK Kurchatov 67.92 333 P P 19 16 32.3 +0.4
KURK Kurchatov 67.92 333 P P 19 16 31.9 +0.1
BIDO Bidbid 67.97 299 P P 19 16 34.0 +1.2
SNR=13
PET Petropavlovsk 68.09 24 P P 19 16 32.1 -0.6
PET IAmb IAmb 19 16 34.9
comp=Z,89nm,1.2s
BSY Bisya 68.54 298 P P 19 16 36.9 +0.7
SHAO Shalim 68.61 292 P P 19 16 36.7 0.0
SHAO Shalim 68.61 292 P P 19 16 37.4 +0.7
HRA Hara 68.65 311 P P 19 16 35.7 -1.2
HOQ Hoqain 68.70 299 P P 19 16 38.1 +0.9
SNR=11
SOCY Socotra 68.75 286 P P 19 16 37.2 -0.5
DMTO DMTO 69.16 292 P P 19 16 40.3 +0.3
YAK Yakutsk 69.29 5 P P 19 16 39.7 -0.1
comp=Z,43nm,0.7s,baz=179,slow=0.2,SNR=60
YAK Yakutsk 69.29 5 P P 19 16 39.3 -0.5
ARQ Araqi 69.31 298 P P 19 16 41.5 +0.7
SOHO SOHO 69.55 299 *i*P P 19 16 42.0 -0.1
SNR=10
SOHO SOHO 69.55 299 P P 19 16 42.5 +0.3
RBK Rabkut 69.79 291 P P 19 16 44.1 +0.3
UOSS Minazif 70.08 300 *i*P P 19 16 45.1 -0.3
SNR=5.5
UOSS Minazif 70.08 300 P P 19 16 45.8 +0.4
UOSS Minazif 70.08 300 P P 19 16 44.2 -1.2
UOSS IAmb IAmb 19 16 46.2
comp=Z,56nm,1.2s
HATD Hatta, Dubai 70.11 299 *i*P P 19 16 45.8 +0.2
SNR=7.7
HATD Hatta, Dubai 70.11 299 P P 19 16 47.0 +1.4
SNR=8.5
ASHO Ashiyiah 70.13 299 *i*P P 19 16 45.8 +0.1
SNR=16
ASHO Ashiyiah 70.13 299 P P 19 16 47.0 +1.3
SNR=11
MSFE Esma-Masafi 70.25 300 *i*P P 19 16 46.7 +0.3
SNR=6.3
BRZS Berezniki 70.28 330 ⇓*i*P P 19 16 46.5 +0.4
comp=Z,58nm,1.3s,baz=330
BRZS *e*S **S 19 25 12.8 +0.9**
baz=330
WHFO Wadi Hawf 70.29 292 P P 19 16 46.6 -0.2
BANOM Banah 70.31 301 *i*P P 19 16 47.1 +0.4
SNR=10
BANOM Banah 70.31 301 P P 19 16 48.0 +1.3
SNR=6.6
SHME Shamm 70.48 301 *i*P P 19 16 48.2 +0.5
SNR=17
FAQ Al Faqa, Dubai 70.55 299 *i*P P 19 16 48.4 +0.2
SNR=23
FAQ Al Faqa, Dubai 70.55 299 P P 19 16 49.0 +0.8
SNR=19
NAZ Nazwa, Dubai 70.56 300 *i*P P 19 16 48.3 +0.1
SNR=6.2
NAZ Nazwa, Dubai 70.56 300 P P 19 16 49.0 +0.8
SNR=15
ABTO Aybut 70.59 291 P P 19 16 49.0 +0.4
SNR=6.9
MA2 Magadan 70.71 16 P P 19 16 48.7 +0.4
MA2 IAmb IAmb 19 16 50.6
comp=Z,114nm,0.9s
UMQ Umm Al-Quwin 70.73 300 P P 19 16 49.7 +0.6
ASUD Al Ashush, Dub 70.74 299 *i*P P 19 16 49.8 +0.5
SNR=13
ASUD Al Ashush, Dub 70.74 299 P P 19 16 50.1 +0.9
SNR=12
AJN Ajban 71.02 299 *i*P P 19 16 50.8 -0.1
SNR=6.7
AJN Ajban 71.02 299 P P 19 16 52.0 +1.2
SNR=6.9
MAW Mawson 71.50 200 P P 19 16 53.9 +1.2
comp=Z,11nm,0.9s,baz=69,slow=7.7,SNR=15
MAW pP **pwP 19 18 55.2 -1.0**
comp=Z,3.3nm,0.7s,baz=50,slow=8.0,SNR=4.4
MAW Mawson 71.50 200 P P 19 16 54.0 +1.2
baz=72,SNR=11
MAW Mawson 71.50 200 P P 19 16 53.0 +0.2
OPO Ambohidratompo 71.91 253 P P 19 16 57.0 +0.7
comp=Z,9.9nm,0.8s,baz=56,slow=5.7,SNR=8.7
OPO pP **pP 19 19 00.3 +3.7**
comp=Z,5.2nm,0.9s,baz=30,slow=9.6,SNR=3.8
GEYT Alibeck 73.15 313 P P 19 17 03.2 +0.3
comp=Z,47nm,0.9s,baz=158,slow=4.8,SNR=59
GYA0B ALIBECK ARRAY 73.15 313 P P 19 17 03.0 +0.1
GYA0B IAmb IAmb 19 17 05.0
comp=Z,68nm,1.1s
BRVK Borovoye 73.36 331 P P 19 17 03.9 +0.2
BRVK Borovoye 73.36 331 P P 19 17 03.2 -0.6
BRVK IAmb IAmb 19 17 04.9
comp=Z,126nm,1.5s
VNDA Vanda 73.65 171 P P 19 17 06.0 +1.0
comp=Z,7.7nm,0.4s,baz=317,slow=6.4,SNR=82
VNDA pP **pP 19 19 08.6 +2.5**
comp=Z,1.8nm,0.8s,baz=316,slow=5.8,SNR=2.9
VNDA Vanda 73.65 171 P P 19 17 05.7 +0.7
SEY Seymchan 73.97 15 P P 19 17 08.0 +1.0
comp=Z,65nm,0.8s,baz=219,slow=4.9,SNR=121
SMY Shemya 74.92 30 P P 19 17 12.2 -0.4
SMY IAmb IAmb 19 17 14.6
comp=Z,114nm,0.9s
ABKAR Akbulak array 76.82 324 P P 19 17 22.5 -0.6
ABKAR **pP 19 19 24.4 -1.2**
ABKAR Akbulak array 76.82 324 P P 19 17 22.5 -0.6
ABKAR pP **pP 19 19 25.6 0.0**
AB08 Akbulak array 76.83 324 P P 19 17 22.2 -0.9
AB04 Akbulak array 76.83 324 P P 19 17 22.5 -0.6
AMKA Amchitka 76.95 33 P P 19 17 23.4 -0.3
TIXI Tiksi 78.77 3 P P 19 17 32.1 -1.0
TIXI IAmb IAmb 19 17 33.8
comp=Z,89nm,1.0s
RAYN Ar Rayn 79.13 296 *i*P P 19 17 36.8 +0.7
SNR=59
RAYN Ar Rayn 79.13 296 P P 19 17 36.0 -0.1
RAYN IAmb IAmb 19 17 37.9
comp=Z,72nm,1.1s
ATD Arta Tunnel 79.33 283 P P 19 17 37.0 -0.3
NRIK Noril'sk 79.55 349 P P 19 17 37.4 +0.2
comp=Z,18nm,0.9s,baz=134,slow=5.2,SNR=21
SYO Syowa Base 80.13 201 ⇑*i*P P 19 17 39.8 -0.5
SYO Syowa Base 80.13 201 ⇑*e*PcP PcP 19 17 45.0 -0.4
SYO Syowa Base 80.13 201 ⇑*e*PP PP 19 20 55.2 +1.7
ARU Arti 80.90 330 P P 19 17 43.0 -1.5
ARU IAmb IAmb 19 17 44.9
comp=Z,74nm,1.4s
KIBK Kibwezi 82.14 269 P P 19 17 52.9 +1.0
QSPA South Pole Qui 82.89 180 P P 19 17 54.4 -0.2
KMBO Kilima Mbogo 83.07 270 P P 19 17 58.1 +1.4
comp=Z,10nm,1.0s,baz=72,slow=4.6,SNR=18
KMBO pP **pP 19 20 05.3 +3.1**
comp=Z,9.7nm,1.3s,baz=40,slow=7.8,SNR=3.7
KMBO Kilima Mbogo 83.07 270 *i*P P 19 17 57.8 +1.0
SNR=12
KMBO Kilima Mbogo 83.07 270 P P 19 17 57.6 +0.9
KMBO Kilima Mbogo 83.07 270 P P 19 17 55.5 -1.3
KMBO **pP 19 20 00.8 -1.3**
GNI Garni 83.71 312 P P 19 18 00.5 +1.3
GNI Garni 83.71 312 P P 19 18 00.8 +1.6
GNI Garni 83.71 312 P P 19 18 00.1 +0.8
GNI IAmb IAmb 19 18 01.7
comp=Z,58nm,1.3s
GEVA Gevas 84.53 310 P P 19 18 04.2 +0.8
GEVA IAmb IAmb 19 18 05.6
comp=Z,98nm,1.0s
GEVA **pP 19 20 09.8 +0.5**
KBZ Khabaz 85.92 315 P P 19 18 10.0 +0.4
comp=Z,20nm,0.9s
MARD Mardin 86.08 308 P P 19 18 11.2 +0.4
KIV Kislovodsk 86.12 315 P P 19 18 10.7 -0.1
KIV Kislovodsk 86.12 315 P P 19 18 10.4 -0.3
KIV IAmb IAmb 19 18 12.2
comp=Z,37nm,1.5s
KOPT Kop Dagi 86.85 311 P P 19 18 15.9 +1.4
KOPT IAmb IAmb 19 18 17.9
comp=Z,40nm,1.0s
PPT2 Papeete2 87.91 107 *e*P P 19 18 22.5 +2.8
comp=Z,62nm,1.3s
TVO Taravao 88.19 108 *e*P P 19 18 23.4 +2.4
comp=Z,29nm,1.3s
GAZ Gaziantep 88.84 308 P P 19 18 22.7 -0.9
TNA Tin City 88.94 23 P P 19 18 22.4 -0.9
baz=250
MBAR Mbarara 89.60 269 P P 19 18 26.8 -0.9
MBAR **pP 19 20 35.9 +0.3**
PMOR Pomariorio Ree 89.82 105 *e*P P 19 18 30.5 +2.0
comp=Z,108nm,1.1s
TOKA Tokat 89.93 311 P P 19 18 27.4 -1.2
TOKA IAmb IAmb 19 18 30.1
comp=Z,39nm,1.0s
VAH Vaihoa 90.05 105 *e*P P 19 18 31.8 +2.3
comp=Z,56nm,1.1s
LSZ Lusaka 90.29 255 P P 19 18 30.6 -0.3
LSZ IAmb IAmb 19 18 32.3
comp=Z,27nm,1.1s
BOSA Boshof 91.14 241 P P 19 18 35.0 +0.4
comp=Z,11nm,1.0s,baz=108,slow=4.7,SNR=7.5
RDOG Red Dog Mine 91.58 21 P P 19 18 36.0 +0.5
RDOG IAmb IAmb 19 18 37.3
comp=Z,37nm,1.1s
CSS Mathiatis 91.62 305 P P 19 18 36.0 -0.5
KLMR Klimovskoe 91.72 331 *e*P P 19 18 33.9 -2.3
KLMR AMP 19 18 36.8
comp=Z,36nm,1.2s
BR131 Keskin Array S 92.00 310 P P 19 18 36.8 -1.5
BR131 IAmb IAmb 19 18 38.5
comp=Z,12nm,1.0s
BRTR Keskin Array B 92.00 310 P P 19 18 37.5 -0.8
comp=Z,9.6nm,0.9s,baz=126,slow=5.3,SNR=36
BRTR pP **pP 19 20 47.1 +0.8**
comp=Z,0.9nm,0.8s,baz=189,slow=2.4,SNR=2.7
BRTR Keskin Array B 92.00 310 pP pP 19 20 45.4 -0.9
ILGA Ilgaz 92.11 311 P P 19 18 37.8 -1.0
OBN Obninsk 92.24 325 P P 19 18 38.0 -0.7
OBN IAmb IAmb 19 18 39.0
comp=Z,27nm,0.8s
SNAA Sanae 93.20 195 P P 19 18 43.8 +0.8
SNAA Sanae 93.20 195 P P 19 18 43.5 +0.4
SNAA IAmb IAmb 19 18 44.8
comp=Z,10.0nm,0.9s
SVW2 Sparrevohn 93.26 29 P P 19 18 42.8 -0.5
SVW2 IAmb IAmb 19 18 44.8
comp=Z,18nm,1.0s
TTA Tatalina 93.34 27 P P 19 18 43.6 -0.1
TTA IAmb IAmb 19 18 45.0
comp=Z,18nm,1.1s
BELA Belgrano 2 94.04 185 P P 19 18 45.9 -0.7
BELA pP **pP 19 20 54.5 -0.3**
A21K Barrow 94.41 19 P P 19 18 49.1 +0.8
baz=261
A21K Barrow 94.41 19 P P 19 18 47.7 -0.6
VNA2 Neumayer--Watz 94.83 195 P P 19 18 51.2 +0.8
HOM Homer 95.02 31 P P 19 18 51.1 -0.3
baz=265
PPLA Purkeypile 95.07 27 P P 19 18 50.8 -0.9
PPLA IAmb IAmb 19 18 53.1
comp=Z,20nm,1.0s
CAST Castle Rocks 95.17 27 P P 19 18 51.4 -0.6
CAST IAmb IAmb 19 18 53.1
comp=Z,12nm,0.6s
VNA3 Neumayer Olymp 95.20 194 P P 19 18 52.5 +0.4
SKT Skwentna 95.29 28 P P 19 18 51.4 -1.2
SKT IAmb IAmb 19 18 52.2
comp=Z,17nm,0.9s
BRLK Bradley Lake 95.42 31 P P 19 18 52.9 -0.3
SUA Susitna One 95.62 29 P P 19 18 53.3 -0.9
KTH Kantishna Hill 95.70 27 P P 19 18 54.0 -0.4
KTH IAmb IAmb 19 18 55.6
comp=Z,25nm,1.1s
BPAW Bear Paw Mtn. 95.71 26 P P 19 18 54.0 -0.4
BPAW IAmb IAmb 19 18 55.2
comp=Z,10nm,1.0s
MANT Manisa 95.80 308 P P 19 18 53.8 -1.9
MLY Manley 95.89 25 P P 19 18 55.4 +0.2
baz=266,SNR=8.8
CUT Chulitna 95.91 28 P P 19 18 54.1 -1.2
baz=266
TRF Thorofare Moun 95.97 27 P P 19 18 55.1 -0.6
TRF IAmb IAmb 19 18 56.1
comp=Z,19nm,0.9s

RC01 Rabbit Creek A 96.08 29 P P 19 18 55.4 -0.7
baz=266
SEW Seward 96.16 30 P P 19 18 56.3 -0.2
AKASG Malin Array Be 96.18 320 P P 19 18 55.3 -1.5
comp=Z,5.1nm,0.9s,baz=76,slow=4.6,SNR=16
AKASG pP pP 19 21 04.5 -0.8
comp=Z,0.3nm,0.4s,baz=85,slow=4.3,SNR=2.3
AKASG PP PP 19 22 59.7 -0.5
comp=Z,0.2nm,0.3s,baz=83,slow=6.4,SNR=5.7
AKASG Malin Array Be 96.18 320 P P 19 18 55.2 -1.5
AKASG PP PP 19 22 59.0 -1.2
AKBB Malin Array Si 96.18 320 P P 19 18 54.9 -1.8
AKBB IAmb IAmb 19 18 56.4
comp=Z,6.9nm,0.9s
COLD Coldfoot 96.25 23 P P 19 18 56.6 -0.2
baz=267
COLD Coldfoot 96.25 23 P P 19 18 56.5 -0.2
COLD IAmb IAmb 19 18 58.7
comp=Z,23nm,1.0s
BWN Browne 96.38 26 P P 19 18 57.3 -0.1
PMR Palmer 96.40 29 P P 19 18 56.9 -0.5
I23K Minto, Yukon-K 96.48 25 P P 19 18 57.5 -0.2
baz=267,SNR=17
I23K Minto, Yukon-K 96.48 25 P P 19 18 57.5 -0.2
TOLK Toolik Lake Re 96.56 22 P P 19 18 58.4 +0.3
baz=268
TOLK Toolik Lake Re 96.56 22 P P 19 18 58.6 +0.4
TOLK IAmb IAmb 19 19 00.2
comp=Z,15nm,0.8s
NEA2 Nenana 96.57 26 P P 19 18 58.2 0.0
baz=267
MCK McKinley 96.59 27 P P 19 18 57.5 -0.8
baz=268
RND Reindeer 96.62 27 P P 19 18 57.7 -0.8
KARP Karpathos 96.71 305 P P 19 18 58.8 -0.8
KNK Knik Glacier 96.71 29 P P 19 18 59.3 +0.3
SML Sawmill 96.79 29 P P 19 18 59.2 -0.1
MDM Murphy Dome 96.95 25 P P 19 18 59.0 -1.0
MDM IAmb IAmb 19 19 00.2
comp=Z,7.4nm,1.1s
WRH Wood River Hil 96.99 26 P P 19 18 59.3 -0.8
CCB Clear Creek Bu 97.12 26 P Pdif 19 18 59.7 -0.9
CCB IAmb IAmb 19 19 00.8
comp=Z,11nm,0.8s
DHY Denali Highway 97.27 27 P Pdif 19 19 01.2 -0.4
HDA Harding Lake 97.49 26 P Pdif 19 19 01.2 -1.1
baz=269,SNR=8.4
HDA Harding Lake 97.49 26 Pdif Pdif 19 19 01.4 -0.9
HDA IAmb IAmb 19 19 02.6
comp=Z,11nm,0.9s
IL31 97.52 26 Pdif 19 19 00.9 -1.4
IL31 IAmb IAmb 19 19 02.5
comp=Z,7.4nm,1.2s
ILAR Eielson Array 97.52 26 P Pdif 19 19 01.1 -1.4
comp=Z,2.3nm,1.0s,baz=269,slow=3.9,SNR=20
ILAR PKKPbc PKKPbc 19 35 31.7 -7.6
comp=Z,0.5nm,0.8s,baz=131,slow=2.2,SNR=4.3
M24K Tolsona, Glenn 97.82 28 P Pdif 19 19 03.9 0.0
baz=270
M24K Tolsona, Glenn 97.82 28 Pdif P 19 19 04.9 +1.0
ALN Alexandroupoli 97.88 310 Pdif Pdif 19 19 03.7 -0.9
ALN IAmb IAmb 19 19 04.7
comp=Z,22nm,1.5s
PAX Paxson 98.14 27 Pdif P 19 19 06.1 +0.7
FYU Fort Yukon 98.19 24 Pdif P 19 19 06.3 +0.9
FYU IAmb IAmb 19 19 07.0
comp=Z,16nm,1.0s
FINES FINESS Array B 98.25 331 P Pdif 19 19 04.6 -1.1
comp=Z,3.4nm,0.8s,baz=64,slow=8.7,SNR=8.6
FINES PKKPbc PKKPbc 19 35 33.8 -3.3
comp=Z,2.6nm,1.0s,baz=228,slow=2.3,SNR=3.9
ARCES ARCESS Array B 98.31 339 P Pdif 19 19 04.6 -1.3
comp=Z,11nm,1.0s,baz=60,slow=8.5,SNR=6.7
RIDG Independent Ri 98.41 27 Pdif Pdif 19 19 06.3 -0.2
N25K Chitina, Valde 98.57 29 P P 19 19 07.6 +0.2
baz=271
N25K Chitina, Valde 98.57 29 Pdif P 19 19 07.9 +0.5
N25K IAmb IAmb 19 19 08.9
comp=Z,18nm,1.1s
BURAR Bucovina Array 98.69 317 Pdif Pdif 19 19 07.5 -0.7
BUR08 Bucovina Ar. S 98.70 317 Pdif Pdif 19 19 08.1 -0.2
DOT Dot Lake 98.76 27 Pdif P 19 19 08.3 +0.1
DOT IAmb IAmb 19 19 09.2
comp=Z,11nm,1.0s
SCRK Sand Creek 98.79 26 P Pdif 19 19 08.2 0.0
baz=272,SNR=5.6
MENT Mentasta 98.94 27 Pdif P 19 19 09.3 +0.4
MENT IAmb IAmb 19 19 16.1
comp=Z,5.8nm,0.8s
GLB Gilahina Butte 98.95 29 Pdif Pdif 19 19 08.9 0.0
L26K Log Cabin Wild 99.11 27 P Pdif 19 19 10.0 +0.4
baz=272
SUW Suwalki 99.94 324 Pdif Pdif 19 19 13.2 -0.2
KOLS Kolonicke sedl 100.65 318 *e*PDIFF Pdif 19 19 17.7 +1.0
DAWY Dawson 100.80 26 Pdif Pdif 19 19 18.1 +1.0
INK Inuvik 102.47 21 P Pdif 19 19 24.1 -0.3
comp=Z,3.5nm,1.0s,baz=279,slow=6.3,SNR=8.2
INK PKiKP PKiKP 19 23 42.6 +0.8
comp=Z,2.0nm,0.9s,baz=37,slow=5.3,SNR=4.3
NB2 NORSAR Subarra 105.42 332 P Pdif 19 19 36.6 -1.1
comp=Z,5.3nm,1.2s,baz=75,slow=4.6
NOA NORSAR Array B 105.42 332 Pdiff Pdif 19 19 37.0 -0.7
comp=Z,1.8nm,0.9s,baz=73,slow=4.5,SNR=5.2
NOA PKKPbc PKKPdf 19 35 22.2 -3.5
comp=Z,0.8nm,0.9s,baz=3.7,slow=4.1,SNR=3.3
C36M Paulatuk 105.44 19 P PKiKP 19 23 47.7 +0.5
baz=292
GERES GERESS Array B 106.29 319 PKiKP PKiKP 19 23 49.0 -0.5
comp=Z,1.6nm,0.7s,baz=62,slow=3.6,SNR=9.1
GERES PP PP 19 24 11.5 -3.5
comp=Z,0.6nm,0.8s,baz=192,slow=3.8,SNR=3.7
GERES PKKPbc PKKPbc 19 35 11.6 -2.0
comp=Z,0.7nm,0.8s,baz=233,slow=4.2,SNR=4.8
GERES GERESS Array B 106.29 319 PKiKP 19 23 48.9 -0.7
CLL Collm 106.37 321 *e*PKiKP PKiKP 19 23 50.0 +0.5
CLL *e* 19 24 09.0
CLL *e*PKKPbc PKKPbc 19 35 11.0 -2.3
YKA Yellowknife Ar 111.89 24 PKiKP PKiKP 19 23 59.1 -0.4
comp=Z,5.3nm,0.7s,baz=316,slow=1.4,SNR=12
D03D Eldon 112.97 41 P PKiKP 19 24 03.2 +1.1
baz=285
B05A Bryant 113.41 40 P PKiKP 19 24 03.5 +0.6
baz=286
G03D McMinnville, O 113.44 44 P PKiKP 19 24 03.5 +0.5
baz=284
I03D Drain, OR 113.75 45 P PKiKP 19 24 04.3 +0.7
baz=284
K02D Willamette Mer 113.75 46 P PKiKP 19 24 04.0 +0.2
baz=283
L02E Cave Junction 113.91 47 P PKiKP 19 24 04.6 +0.6
baz=283
H04D Lebanon 113.97 44 P PKiKP 19 24 04.8 +0.7
baz=284
M02C Callahan 114.63 48 P PKiKP 19 24 06.4 +0.8
baz=283
J04D Umpqua Nationa 114.73 46 P PKiKP 19 24 06.7 +0.8
baz=284,SNR=6.9
G05D Wamic, OR 114.77 43 P PKiKP 19 24 06.2 +0.5
baz=286
N02D Trinity Center 114.83 48 P PKiKP 19 24 06.4 +0.4
baz=283
L04D Klamath Falls 114.84 47 P PKiKP 19 24 06.5 +0.5
baz=284
O02D Mt. Diablo Mer 114.94 49 P PKiKP 19 24 06.7 +0.5
baz=282
I05D Terrebonne, OR 114.99 44 P PKiKP 19 24 07.1 +0.9
baz=285
B08A Colville Reser 115.14 40 PKPdf PKPdf 19 24 06.3 0.0
M04C Macdoel 115.28 47 P PKiKP 19 24 07.5 +0.6
baz=284
J05D Fort Rock, OR 115.34 45 P PKiKP 19 24 07.9 +1.0
baz=285,SNR=11
PINE Pine Mountain 115.41 45 PKPdf PKiKP 19 24 08.5 +1.3
HAWA Hanford 115.63 42 PKPdf PKiKP 19 24 08.3 +1.1
O03E Paynes Creek 115.65 49 P PKiKP 19 24 08.0 +0.4
baz=283
K05A Summer Lake 115.72 46 PKPdf PKiKP 19 24 08.9 +1.1
D08A Wollman Farm, 115.82 41 PKPdf PKiKP 19 24 08.3 +0.7
ORV Oroville 116.04 49 PKPdf PKiKP 19 24 08.6 +0.3
G08A Pilot Rock 116.34 43 PKPdf PKiKP 19 24 09.8 +1.0
MOD Modoc Plateau 116.36 47 PKPdf PKiKP 19 24 09.3 +0.3
NEW Newport 116.56 39 P PKiKP 19 24 09.9 +0.9
baz=291
NEW Newport 116.56 39 PKPdf PKiKP 19 24 09.6 +0.5
PNTR Pine Nut 117.58 50 PKPdf PKiKP 19 24 12.2 +0.7
SMMC Simmler 118.12 54 P PKiKP 19 24 13.4 +0.9
baz=282
PKM Mcpherson Peak 118.36 54 P PKiKP 19 24 14.5 +1.4
baz=282,SNR=6.2
PLID Pearl Lake 118.39 42 PKPdf PKiKP 19 24 13.2 +0.3
SBC Santa Barbara 118.53 55 P PKiKP 19 24 13.8 +0.6
baz=282
KVN Kaiserville 118.72 49 PKPdf PKiKP 19 24 14.6 +0.8
NVAR Mina Array Bea 118.73 50 PKP PKiKP 19 24 14.6 +0.8
comp=Z,3.9nm,0.7s,baz=248,slow=1.6,SNR=39
NVAR PP PP 19 25 40.9 -1.6
comp=Z,1.4nm,0.9s,baz=276,slow=6.5,SNR=6.2
NVAR PKKPbc PKKPbc 19 34 32.4 -0.2
comp=Z,1.0nm,0.9s,baz=132,slow=4.9,SNR=6.1
MFID Camas Ranch 119.07 44 PKPdf PKiKP 19 24 14.9 +0.7
MSO Missoula 119.10 40 P PKPdf 19 24 13.9 -0.1
baz=293
MSO Missoula 119.10 40 PKPdf PKPdf 19 24 14.0 -0.1
ISA Isabella, Lake 119.26 53 P PKiKP 19 24 14.9 +0.1
baz=283
CWC Cottonwood Cre 119.39 52 P PKiKP 19 24 15.9 +0.8
baz=284
TOA0 Torodi Ar. Sit 119.48 281 PKPdf PKPdf 19 24 15.2 -0.3
TORD Torodi Ar. Bea 119.48 281 PKP PKPdf 19 24 15.3 -0.2
comp=Z,10.0nm,0.7s,baz=58,slow=1.9,SNR=47
TORD PKKPbc PKKPab 19 34 31.9 -0.7
comp=Z,1.2nm,0.8s,baz=285,slow=6.3,SNR=4.9
TORD Torodi Ar. Bea 119.48 281 PKPdf 19 24 15.1 -0.4
CIS Catalina Islan 119.80 56 P PKiKP 19 24 15.9 +0.1
baz=282
GRAC Grapevine Rang 119.81 51 P PKiKP 19 24 16.3 +0.5
baz=285
EDW2 Edwards Air Fo 119.82 54 P PKiKP 19 24 17.0 +1.1
baz=283,SNR=20
LRMC Laurel Mtn Rad 119.93 53 P PKiKP 19 24 17.2 +1.1
baz=284,SNR=8.8
MPMC Manual Prospec 119.95 52 P PKiKP 19 24 17.3 +1.1
baz=284,SNR=13
HLID Hailey 119.99 43 P PKiKP 19 24 17.0 +1.0
baz=291
HLID Hailey 119.99 43 PKPdf PKiKP 19 24 16.7 +0.6
BFSC Mount Baldy Ra 120.23 54 P PKiKP 19 24 17.2 +0.4
baz=283
FURC Furnace Creek, 120.34 52 P PKiKP 19 24 17.8 +1.2
baz=285,SNR=5.3
ELK Elko 120.34 47 PKPdf PKiKP 19 24 17.4 +0.4
GSC Goldstone, Bar 120.67 53 P PKiKP 19 24 18.7 +1.2
baz=284,SNR=9.4
GSC Goldstone, Bar 120.67 53 PKPdf PKiKP 19 24 18.7 +1.2
TPNV Topopah Spring 120.69 51 P PKiKP 19 24 18.4 +0.8
baz=286,SNR=5.2
ESDC Sonseca Array 120.69 312 PKP PKPdf 19 24 17.3 +0.1
comp=Z,3.4nm,1.1s,baz=14,slow=2.6,SNR=15
MURC Murrieta 120.75 55 P PKiKP 19 24 18.6 +1.0
baz=283
R11A Troy Canyon, C 120.81 49 P PKiKP 19 24 18.9 +1.0
baz=287,SNR=18
R11A Troy Canyon, C 120.81 49 PKPdf PKiKP 19 24 18.8 +1.0
SHOC Shoshone, Teco 120.94 52 P PKiKP 19 24 19.0 +1.0
baz=285
BOZ Bozeman (W) 121.06 40 P PKiKP 19 24 18.7 +0.6
baz=294
HEC Hector,Ludlow 121.16 54 P PKiKP 19 24 19.0 +0.5
baz=284,SNR=9.9
EGMT Eagleton 121.17 37 P PKiKP 19 24 18.3 +0.2
baz=297
TUQ Turquoise Moun 121.33 53 P PKiKP 19 24 20.0 +1.1
baz=285
PFO Pinyon Flats O 121.35 55 P PKiKP 19 24 19.8 +0.8
baz=283,SNR=9.4
PFO Pinyon Flats O 121.35 55 PKPdf PKiKP 19 24 20.0 +1.0
TPFO Pinon Flats 121.35 55 P PKiKP 19 24 19.9 +0.9
baz=283,SNR=8.7
PRN Pahroc Range 121.48 50 PKPdf PKiKP 19 24 20.6 +1.5
MONP2 Monument Peak 121.54 56 P PKiKP 19 24 20.3 +0.8
baz=283,SNR=8.3
SPR3 Spring Creek 3 121.55 48 PKPdf PKiKP 19 24 20.1 +0.6
BELC Belle Mtn. Jos 121.63 54 P PKiKP 19 24 20.7 +1.1
baz=284,SNR=14
SHPR Sheep Range 121.65 51 PKPdf PKiKP 19 24 20.6 +1.0
FFC Flin Flon 121.67 27 PKPdf PKiKP 19 24 18.8 0.0
GMRC Granite Mounta 121.71 53 P PKiKP 19 24 20.9 +1.3
baz=285,SNR=16
IKP In-Ko-Pah, Jac 121.85 56 P PKiKP 19 24 21.3 +1.4
baz=283,SNR=6.3
BGU Big Grassy Mou 121.87 46 PKPdf PKiKP 19 24 20.3 +0.5
SWSC Sam W. Stewart 122.04 56 P PKiKP 19 24 21.0 +0.8
baz=283
BC3 Big Chuckawall 122.15 55 P PKiKP 19 24 21.8 +1.2
baz=284,SNR=6.1
IMW Indian Meadow 122.20 42 PKPdf PKiKP 19 24 21.0 +0.5
H17A Grant Village 122.23 41 P PKiKP 19 24 21.9 +1.3
baz=294
DUG Dugway, Tooele 122.27 47 P PKiKP 19 24 21.3 +0.7
baz=290
DUG Dugway, Tooele 122.27 47 PKPdf PKiKP 19 24 21.3 +0.7
IRM Iron Mountain 122.28 54 P PKiKP 19 24 21.8 +1.1
baz=285,SNR=10
MVO Moncorvo 122.40 315 *e*PKPdf PKPdf 19 24 20.3 -0.2
RLMT Red Lodge 122.77 40 P PKiKP 19 24 22.3 +0.7
baz=296
GLA Glamis 122.81 55 P PKiKP 19 24 22.6 +0.8
baz=284
PVRL Vila Real 122.85 315 *e*PKPdf PKiKP 19 24 22.7 +1.1
POLO Lamas de Olo 122.86 315 *e*PKPdf PKiKP 19 24 22.1 +0.4
PDMCI Parker Dam,Lak 123.04 54 P PKiKP 19 24 22.9 +0.8
baz=285
PVIS Viseu 123.18 315 *e*PKPdf PKiKP 19 24 22.9 +0.6
PCBR Castelo Branco 123.19 313 *e*PKPdf PKiKP 19 24 23.1 +0.9
MVU Marysvale 123.28 48 PKPdf PKiKP 19 24 24.2 +1.4
PKCU Pink Cliffs 123.55 49 PKPdf PKiKP 19 24 25.0 +1.5
BW06 Boulder Array 123.58 43 P PKiKP 19 24 23.5 +0.3
baz=294
PDAR Pinedale Array 123.58 43 PKP PKPdf 19 24 21.6 -1.4
comp=Z,2.2nm,0.8s,baz=241,slow=1.5,SNR=19
PDAR PKKPbc PKKPab 19 34 14.4 -0.2
comp=Z,2.0nm,0.8s,baz=124,slow=5.3,SNR=12
PDAR Pinedale Array 123.58 43 PKPdf PKPdf 19 24 23.0 +0.1
U15A North Rim 123.88 51 PKPdf PKiKP 19 24 24.8 +0.7
LAO LASA Array 123.92 37 P PKiKP 19 24 24.6 +1.0
baz=300
EVO Evora 124.04 312 *e*PKPdf PKiKP 19 24 24.2 +0.2
PBDV Barranco-do-Ve 124.41 311 *e*PKPdf PKiKP 19 24 25.6 +0.8
RDMU Red Mountain 124.44 45 PKPdf PKiKP 19 24 24.9 -0.1
PNCL Nicolau / Gran 124.56 312 *e*PKPdf PKiKP 19 24 25.7 +0.7
214A Organ Pipe Nat 124.73 56 P PKiKP 19 24 26.2 +0.6
baz=285
WUAZ Wupatki 124.87 51 P PKiKP 19 24 26.6 +0.6
baz=288,SNR=12
WUAZ Wupatki 124.87 51 PKPdf PKiKP 19 24 26.4 +0.5
MORF Marmelete 124.93 311 *e*PKPdf PKiKP 19 24 26.9 +1.0
KOWA Kowa 125.02 283 PKPdf PKPdf 19 24 26.2 +0.1
KIC Kosan Boka 125.55 273 *e*PKIKP PKiKP 19 24 27.5 -0.2
comp=Z,24nm,1.0s
O20A White River Ci 125.55 45 P PKiKP 19 24 27.4 +0.2
baz=294
K22A Casper 125.64 42 P PKiKP 19 24 27.7 +0.4
baz=297
DBIC Dimbokro 125.68 273 PKP PKPdf 19 24 27.7 +0.2
comp=Z,16nm,1.0s,baz=94,slow=3.3,SNR=6.4
PV20 West Nyswonger 125.72 47 PKPdf PKiKP 19 24 28.4 +0.7
LIC Lamto 125.82 273 *e*PKIKP PKPdf 19 24 27.9 +0.2
comp=Z,11nm,0.4s
TIC Toumodi 125.84 273 *e*PKIKP PKPdf 19 24 27.7 -0.1
W18A Petrified Fore 126.27 51 P PKiKP 19 24 29.7 +0.9
baz=289
TUC Tucson 126.29 55 P PKiKP 19 24 29.3 +0.5
baz=286
TUC Tucson 126.29 55 PKPdf PKiKP 19 24 29.6 +0.8
MVCO Mesa Verde 126.48 48 P PKiKP 19 24 30.1 +0.9
baz=292,SNR=8.7
MVCO Mesa Verde 126.48 48 PKPdf PKiKP 19 24 30.1 +0.9
RSSD Black Hills 126.54 39 P PKPdf 19 24 28.4 -0.1
baz=300
RSSD Black Hills 126.54 39 PKPdf PKPdf 19 24 28.5 0.0
N23A Red Feather La 126.81 43 P PKiKP 19 24 29.8 -0.1
baz=296
N23A Red Feather La 126.81 43 PKPdf PKiKP 19 24 29.8 -0.1
MDND Maddock 127.06 33 P PKiKP 19 24 30.1 +0.3
baz=307
ULM Lac du Bonnet 127.42 29 PKP PKPdf 19 24 29.4 -0.3
comp=Z,8.9nm,0.9s,baz=13,slow=2.1,SNR=6.3
S22A 4UR Ranch, Cre 127.51 47 P PKiKP 19 24 32.2 +0.9
baz=293,SNR=7.8
S22A 4UR Ranch, Cre 127.51 47 PKPdf PKiKP 19 24 32.4 +1.1
ISCO Idaho Springs 127.52 44 P PKiKP 19 24 31.8 +0.5
baz=296
ISCO Idaho Springs 127.52 44 PKPdf PKiKP 19 24 31.6 +0.3
319A Douglas 127.78 56 PKPdf PKiKP 19 24 33.0 +1.1
SDCO Great Sand Dun 128.47 47 P PKiKP 19 24 33.8 +0.6
baz=295
SDCO Great Sand Dun 128.47 47 PKPdf PKiKP 19 24 33.9 +0.6
121A Cookes Peak, D 128.64 54 P PKiKP 19 24 34.2 +0.6
baz=289,SNR=5.6
AGMN Agassiz Nation 128.72 30 P PKiKP 19 24 33.0 0.0
baz=311
ANMO Albuquerque 128.85 50 P PKiKP 19 24 34.2 +0.2
baz=292
ANMO Albuquerque 128.85 50 PKPdf PKiKP 19 24 34.3 +0.3
BNM Barren Site 129.01 51 PKPdf PKiKP 19 24 34.1 -0.3
T25A Trinidad 129.51 47 P PKiKP 19 24 35.2 -0.1
baz=295,SNR=6.7
KSCO Kaye Shedlock' 129.94 44 P PKiKP 19 24 36.5 +0.5
baz=298
MNTX Cornudas Mount 130.84 54 P PKiKP 19 24 37.7 -0.1
baz=290,SNR=21
MNTX Cornudas Mount 130.84 54 PKPdf PKiKP 19 24 37.7 -0.1
MNTX SKPbc SKPab 19 27 07.4 -0.1
ECSD EROS Data Cent 131.21 35 P PKPdf 19 24 37.1 -0.1
baz=308
ECSD EROS Data Cent 131.21 35 PKPdf PKPdf 19 24 36.5 -0.7
ECSD SKPab 19 27 08.4 -0.3
PLCA Paso Flores 131.36 169 PKP PKPdf 19 24 38.1 +0.5
comp=Z,4.7nm,0.7s,baz=329,slow=1.2,SNR=11
PLCA SKPbc SKPab 19 27 09.5 0.0
comp=Z,10nm,1.0s,baz=190,slow=6.7,SNR=10
PLCA Paso Flores 131.36 169 PKPdf PKiKP 19 24 38.7 -0.1
PLCA SKPbc SKPab 19 27 09.8 +0.3
PLCA Paso Flores 131.36 169 *e*P PKPdf 19 24 38.2 +0.5
SCHQ Schefferville 132.04 6 PKP PKPdf 19 24 38.8 +0.4
comp=Z,10.0nm,0.7s,baz=42,slow=5.2,SNR=9.5
SCHQ Schefferville 132.04 6 PKPdf 19 24 38.4 0.0
MSTX Muleshoe 132.04 50 P PKPdf 19 24 39.4 +0.2
baz=294
MSTX Muleshoe 132.04 50 PKPdf PKiKP 19 24 39.8 -0.5
I37A Lemond, Waseca 132.83 33 PKPdf PKPdf 19 24 40.6 +0.4
LC01 Cunco 132.85 167 PKPdf PKiKP 19 24 41.2 -0.5
LC01 SKPbc SKPbc 19 27 13.7 +0.2
TXAR Lajitas Array 133.03 56 PKhKP PKPpre 19 24 25.0
comp=Z,0.2nm,0.5s,baz=224,slow=3.5,SNR=3.5
TXAR PKP PKiKP 19 24 41.9 -0.6
comp=Z,4.6nm,0.8s,baz=259,slow=0.9,SNR=19
TXAR SKPbc SKPbc 19 27 15.3 +0.8
comp=Z,1.1nm,0.8s,baz=284,slow=1.7,SNR=3.7
TXAR Lajitas Array 133.03 56 PKPpre PKPpre 19 24 29.3
TXAR PKPdf PKiKP 19 24 42.1 -0.4
KSU1 Kansas State U 133.91 41 P PKPdf 19 24 42.1 -0.3
baz=304
WMOK Wichita Mounta 134.67 47 P PKiKP 19 24 45.1 -0.4
baz=298,SNR=5.2
MATQ Matagami 134.85 16 P PKPdf 19 24 44.2 +0.4
baz=334
ABTX Abilene, Hawle 134.98 50 P PKPdf 19 24 45.2 +0.6
baz=296
BI02 San Fabin de 135.12 167 PKPdf PKPdf 19 24 45.6 +0.7
BI02 SKPbc SKPbc 19 27 22.1 +1.1
JFWS Jewell Farm 135.26 32 P PKPdf 19 24 45.4 +0.6
baz=314
CHGQ Chibougamau 135.55 14 P PKiKP 19 24 46.2 -0.6
baz=339
LSQQ Lebel-sur-Quev 135.67 16 P PKiKP 19 24 46.6 -0.4
baz=335
JCT Junction City 135.74 53 P PKPdf 19 24 46.5 +0.4
baz=294,SNR=6.1
TUL1 Leonard 136.20 44 P PKiKP 19 24 47.8 -0.7
baz=302
GLMI Grayling 136.56 26 P PKiKP 19 24 48.8 -0.2
baz=322
833A Chaparral WMA, 136.89 56 P PKiKP 19 24 50.3 +0.1
baz=292
L44A Lake County Fo 137.00 31 P PKiKP 19 24 49.9 -0.1
baz=316
BO02 Sierra Bellavi 137.03 166 PKPdf PKPdf 19 24 46.6 -1.8
BO02 SKPbc SKPbc 19 27 27.5 +0.7
RFA San Rafael 137.53 169 *i* P PKPdf 19 24 50.4 +1.0
CCM Cathedral Cave 137.92 38 P PKPdf 19 24 50.8 +1.0
baz=309
CCM Cathedral Cave 137.92 38 PKPpre 19 24 39.6
U40A Yellville 137.92 41 P PKiKP 19 24 51.2 -0.9
baz=306
D55A Sainte-Anne-du 137.95 16 P PKPdf 19 24 50.6 +1.0
baz=336
W39A Magazine 137.96 43 P PKiKP 19 24 51.7 -0.4
baz=304
D56A ZEC Mazanza, M 138.11 16 P PKiKP 19 24 51.5 -0.6
baz=337
ALGO Algonquin Park 138.12 19 P PKiKP 19 24 51.2 -1.0
baz=332
LATQ La Tuque 138.29 13 P PKiKP 19 24 51.5 -1.0
baz=340
E55A Monte-Lytto 138.29 17 P PKiKP 19 24 51.5 -1.0
baz=335
MT02 Curacav 138.40 165 PKPpre 19 24 42.6
MT02 SKPbc 19 27 30.9 +0.3
MIAR Mount Ida 138.46 44 P PKiKP 19 24 53.0 -0.2
baz=303
MIAR Mount Ida 138.46 44 PKPpre 19 24 42.4
E56A St. Veronique 138.50 16 P PKiKP 19 24 51.9 -1.1
baz=337
D58A Chemin du LacG 138.54 14 P PKiKP 19 24 52.2 -0.8
baz=340
G54A Lake Saint Pet 138.60 20 P PKPdf 19 24 51.7 +0.8
baz=332
T42A Van Buren 138.65 39 PKPpre 19 24 42.3
T42A SKPbc 19 27 31.2 +0.1
E57A Chemin Saint G 138.86 15 P PKiKP 19 24 52.6 -1.1
baz=338
E58A La Victoria 139.12 14 P PKiKP 19 24 53.3 -0.9
baz=339
ASAL Salagasta 139.57 168 *i* P PKPdf 19 24 46.2 -7.0
E61A Lac Etchemin 139.69 12 P PKPdf 19 24 54.1 +1.3
baz=343
E62A Clayton Lake 139.70 11 P PKiKP 19 24 54.9 -0.5
baz=345
AUSP Uspallata 139.81 167 *i* P PKPdf 19 24 47.6 -6.3
F60A Warwick 139.82 13 P PKiKP 19 24 55.6 0.0
baz=341
G57A Newington 139.83 17 P PKiKP 19 24 55.2 -0.5
baz=336
G58A Ormstown 140.06 16 P PKiKP 19 24 56.2 +0.1
baz=337
E63A Farbow 140.08 10 P PKiKP 19 24 55.4 -0.8
baz=346
E64A Bridgewater 140.18 9 P PKiKP 19 24 56.1 -0.2
baz=347
RTLS Leoncito 140.24 167 *i* P PKPdf 19 24 49.9 -4.7
H57A Richville 140.30 18 P PKiKP 19 24 56.0 -0.6
baz=335
RTCV Cerro Valdivia 140.34 168 *i* P PKPdf 19 24 49.1 -5.4
CO02 Combarbal 140.39 165 PKPpre 19 24 48.9
G60A Masonville 140.55 14 P PKiKP 19 24 56.3 -0.9
baz=340
G61A St-Isidore-de- 140.56 13 P PKiKP 19 24 56.9 -0.3
baz=341
P49A Miami Univ. Ec 140.59 31 P PKiKP 19 24 57.2 -0.2
baz=319
ZON Zonda 140.62 168 PKPdf PKPdf 19 24 54.6 -0.5
ZON SKPbc SKPbc 19 27 36.0 -0.6
H59A Cadyville 140.62 16 P PKiKP 19 24 57.1 -0.2
baz=338
F64A Sherman 140.63 10 P PKiKP 19 24 57.2 -0.1
baz=346
I57A Carthage 140.69 18 P PKiKP 19 24 56.2 -1.2
baz=334
H58A Gabriels 140.69 17 P PKPdf 19 24 56.0 +1.3
baz=337
WCI Wyandotte Cave 140.70 34 P PKPdf 19 24 49.4 -5.5
baz=315
WCI Wyandotte Cave 140.70 34 PKPpre 19 24 49.0
ERPA Erie 140.71 24 P PKPdf 19 24 56.1 +1.3
baz=327
L53A Girard 140.74 25 P PKPdf 19 24 50.0 -4.8
baz=327
G62A West of Eustis 140.84 12 P PKPdf 19 24 49.9 -5.0
baz=343
J56A Wolcott 140.89 20 P PKPdf 19 24 49.1 -5.9
baz=332
ACSO Alum Creek Sta 140.91 29 P PKPdf 19 24 49.9 -5.3
baz=322,SNR=6.6
H60A Morristown 140.96 15 P PKPdf 19 24 50.0 -5.2
baz=339
M53A WI Miller and 140.99 25 P PKPdf 19 24 50.7 -4.6
baz=326

PKME	Peaks-Kenny Pk	141.05	11	P		PKPdf	19 24 50.7	-4.5
	baz=345							
J57A	Williamstown	141.06	19	P		PKPdf	19 24 50.4	-4.9
	baz=334							
I58A	Old Forge	141.12	18	P		PKPdf	19 24 51.2	-4.3
	baz=335							
G63A	Kingsbury	141.13	11	P		PKPdf	19 24 49.9	-5.5
	baz=344							
G64A	Maxfield	141.16	10	P		PKPdf	19 24 51.4	-4.1
	baz=346							
O51A	Pataskala	141.16	29	P		PKPdf	19 24 51.3	-4.3
	baz=322,SNR=7.2							
H61A	Lyndonville	141.18	14	P		PKPdf	19 24 51.4	-4.1
	baz=340							
K56A	Middlesex	141.23	21	P		PKPdf	19 24 51.4	-4.3
	baz=331							
WVT	Waverly	141.24	38	P		PKPdf	19 24 51.0	-4.9
	baz=312							
WVT	Waverly	141.24	38			PKPpre	19 24 51.3	
OXF	Oxford	141.28	41	P		PKPdf	19 24 50.9	-5.1
	baz=308							
H62A	Milan	141.32	13	P		PKPdf	19 24 51.2	-4.6
	baz=342							
J58A	Remsen	141.33	18	P		PKPdf	19 24 51.1	-4.7
	baz=335							
J58A	Remsen	141.33	18	PKPdf		PKPdf	19 24 55.5	-0.3
I59A	Olmsteadville	141.35	17	P		PKPdf	19 24 51.4	-4.5
	baz=337							
M54A	Oil Creek Stat	141.36	24	P		PKPdf	19 24 51.2	-4.8
	baz=327							
LBNH	Lisbon	141.45	14	P		PKPdf	19 24 51.8	-4.3
	baz=340							
ACCO	Cerro Coronel	141.45	167	*i* P		PKPdf	19 24 53.4	-3.6
P51A	Williamsport	141.46	30	P		PKPdf	19 24 51.6	-4.5
	baz=321							
I60A	Shoreham	141.47	16	P		PKPdf	19 24 51.6	-4.4
	baz=338							
J59A	Piesco	141.47	18	P		PKPdf	19 24 51.0	-5.1
	baz=336							
H63A	New Sharon	141.48	12	P		PKPdf	19 24 51.5	-4.5
	baz=343							
K57A	Scipio Center	141.49	20	P		PKPdf	19 24 50.9	-5.2
	baz=332,SNR=5.4							
TCA	Tanti	141.49	173	*i* P		PKPdf	19 24 53.4	-3.3
O52A	Adamsville	141.55	28	P		PKPdf	19 24 52.5	-3.8
	baz=323							
L56A	Greenwood	141.64	22	P		PKPdf	19 24 52.0	-4.5
	baz=331,SNR=5.9							
L56A	Greenwood	141.64	22			PKPpre	19 24 52.4	
N54A	Moraine State	141.68	25	P		PKPdf	19 24 52.4	-4.1
	baz=326							
AVFE	Valle Fertil	141.72	169	*i* P		PKPdf	19 24 53.9	-3.2
O53A	New Philadelph	141.72	27	P		PKPdf	19 24 53.0	-3.6
	baz=324							
K58A	Earlville	141.75	19	P		PKPdf	19 24 52.4	-4.2
	baz=334							
AROD	Rodeo	141.76	166	*i* P		PKPdf	19 24 54.8	-2.7
H65A	Eastbrook	141.78	10	P		PKPdf	19 24 52.3	-4.2
	baz=346							
GBN	Guysborough	141.79	2	PKPdf		PKPdf	19 24 54.8	-1.7
P52A	Corning	141.79	29	P		PKPdf	19 24 51.9	-4.9
	baz=322							
PLAL	Pickwick Lake	141.84	39			PKPpre	19 24 52.3	
H66A	Whiting	141.85	9	P		PKPdf	19 24 52.2	-4.4
	baz=348							
VBMS	Vicksburg	141.88	45	P		PKPdf	19 24 54.3	-2.8
	baz=304,SNR=5.5							
I62A	Tamworth	141.94	14	P		PKPdf	19 24 53.2	-3.7
	baz=341							
I63A	Otisfield	141.94	13	P		PKPdf	19 24 52.5	-4.4
	baz=342							
M56A	Emporium	141.97	23	P		PKPdf	19 24 53.4	-3.7
	baz=329,SNR=7.0							
J60A	Lant Hill Farm	141.99	16	P		PKPdf	19 24 53.7	-3.3
	baz=338							
K59A	Cooperstown	141.99	18	P		PKPdf	19 24 54.0	-3.1
	baz=335							
L57A	Andrews Acres	142.01	21	P		PKPdf	19 24 54.4	-2.7
	baz=332							
BINY	Binghamton	142.14	20	P		PKPdf	19 24 54.4	-2.9
	baz=333							
O54A	Avella	142.15	26	P		PKPdf	19 24 54.4	-3.0
	baz=325,SNR=6.0							
Q52A	Bidwell	142.25	29	P		PKPdf	19 24 54.0	-3.6
	baz=322							
P53A	Whipple	142.25	28	P		PKPdf	19 24 54.5	-3.1
	baz=323							
P53A	Whipple	142.25	28			PKPpre	19 24 54.9	
L58A	Harry Jones Me	142.32	20	P		PKPdf	19 24 55.3	-2.4
	baz=333							
N56A	West Decatur	142.41	23	P		PKPdf	19 24 54.6	-3.2
	baz=329							
K60A	Five Rivers En	142.43	17	P		PKPdf	19 24 55.2	-2.6
	baz=336							
J62A	Henniker	142.43	15	P		PKPdf	19 24 55.0	-2.8
	baz=340							
L59A	Walton	142.46	19	P		PKPdf	19 24 55.0	-2.9
	baz=334,SNR=5.2							
M57A	Sunshine Farm,	142.49	22	P		PKPdf	19 24 55.0	-3.0
	baz=331							
K61A	Williamstown	142.56	17	P		PKPdf	19 24 55.7	-2.4
	baz=337							
J63A	Strafford	142.56	14	P		PKPdf	19 24 55.7	-2.3
	baz=341							
AGUA	GUANDACOL	142.64	167	*i* P		PKPdf	19 24 57.7	-1.0
Q53A	Leroy	142.69	29	P		PKPdf	19 24 56.1	-2.3
	baz=322							
M58A	Price's Panora	142.71	21	P		PKPdf	19 24 55.8	-2.6
	baz=332,SNR=11							
KSPA	Keystone Colle	142.78	20			PKPpre	19 24 56.2	
MCWV	Mont Chateau	142.81	26	P		PKPdf	19 24 56.8	-1.8
	baz=326							
X48A	Hartselle	142.83	39			PKPpre	19 24 55.9	
AC05	El Transito	142.83	164	PKPdf		PKPdf	19 24 57.5	-1.6
AC05				SKPbc		SKiKP	19 27 43.1	-0.2
N57A	Milroy	142.84	23	P		PKPdf	19 24 56.0	-2.5
	baz=330							
K62A	Royalston	142.85	16	P		PKPdf	19 24 56.8	-1.8
	baz=339							
O56A	Blue Knob Stat	142.85	24	P		PKPdf	19 24 56.4	-2.3
	baz=328							
O56A	Blue Knob Stat	142.85	24	PKPdf		PKPdf	19 24 57.0	-1.7
R53A	Hurricane	142.90	30	P		PKPdf	19 24 56.8	-2.0
	baz=321							
L60A	Shokan	142.90	18	P		PKPdf	19 24 56.6	-2.1
	baz=336							
M59A	Waymart	142.91	20	P		PKPdf	19 24 56.7	-2.0
	baz=333,SNR=6.1							
L61A	Hillsdale 1, H	142.92	17	P		PKPdf	19 24 56.7	-1.9
	baz=337,SNR=8.5							
Q54A	Coxs Mills	142.92	28	P		PKPdf	19 24 56.8	-2.0
	baz=324							
L61B	Northampton	142.93	16	P		PKPdf	19 24 56.4	-2.3
	baz=338,SNR=7.4							
P55A	Reedsville	142.95	26	P		PKPdf	19 24 57.1	-1.8
	baz=325,SNR=26							
K63A	Dunstable	143.01	15	P		PKPbc	19 24 57.5	+0.5
	baz=340,SNR=10							
ACLC	CERRO LA CRUZ	143.01	169	*i* P		PKPbc	19 24 58.0	+0.3
N58A	Sunbury	143.08	22	P		PKPab	19 24 57.0	+0.2
	baz=331,SNR=21							
346A	Big Creek Wild	143.08	45	PKPdf		PKPdf	19 24 58.9	-0.4
HRV	Adam Dziewonsk	143.17	15	P		PKPbc	19 24 57.9	+0.4
	baz=340							
QUA2	Belchertown	143.18	16	PKPdf		PKPbc	19 24 58.1	+0.6
AC04	Llanos de Chal	143.20	163	PKPdf		PKPdf	19 24 58.9	-0.8
Q55A	Buckhannon	143.25	27	P		PKPbc	19 24 58.0	0.0
	baz=325,SNR=43							
O57A	Amberson	143.27	23	P		PKPab	19 24 57.7	+0.1
	baz=329,SNR=13							
S53A	Williamson	143.31	31	P		PKPab	19 24 57.6	-0.2
	baz=321,SNR=13							
L62A	Suffield	143.32	16	P		PKPbc	19 24 58.1	+0.2
	baz=338							
N59A	State Game Lan	143.35	21	P		PKPbc	19 24 58.3	+0.2
	baz=333,SNR=45							
M60A	Port Jervis	143.37	19	P		PKPab	19 24 57.8	-0.1
	baz=335,SNR=17							
P56A	Dayton Farm, R	143.38	25	P		PKPbc	19 24 58.2	0.0
	baz=327,SNR=60							
TZTN	Tazewell	143.42	33	P		PKPbc	19 24 58.6	+0.1
	baz=318,SNR=45							
VCA	Vinchina	143.43	167	*i* P		PKPdf	19 24 59.9	-0.3
R54A	Victor	143.48	29	P		PKPab	19 24 58.3	-0.2
	baz=323,SNR=30							
AANI	Anillaco	143.61	169	*i* P		PKPdf	19 25 00.6	+0.1
N60A	Cedar Hill Far	143.62	20	P		PKPbc	19 24 59.0	+0.1
	baz=334,SNR=25							
O58A	Lewisberry	143.62	23	P		PKPab	19 24 58.9	0.0
	baz=330,SNR=31							
S54A	Dingess, Beckl	143.63	30	P		PKPbc	19 24 59.2	+0.1
	baz=322,SNR=41							
T53A	Wise	143.64	32	P		PKPbc	19 24 59.5	+0.3
	baz=319,SNR=28							
M61A	Granite Spring	143.66	18	P		PKPbc	19 24 59.1	+0.1
	baz=336,SNR=28							
P57A	Homestead Farm	143.74	24	P		PKPab	19 24 59.4	+0.1
	baz=328,SNR=27							
L63A	North Scituate	143.76	15	P		PKPdf	19 24 59.9	-0.2
	baz=340,SNR=7.4							
LRAL	Lakeview Retre	143.77	41	P		PKPab	19 24 59.9	+0.2
	baz=310,SNR=54							
LRAL	Lakeview Retre	143.77	41			PKPab	19 24 59.9	+0.2
M62A	Hamden	143.80	17	P		PKPbc	19 24 59.0	-0.4
	baz=337							
R55A	Marlinton	143.81	28	P		PKPbc	19 24 59.7	0.0
	baz=324,SNR=42							
SACV	Santiago Islan	143.87	286			PKPab	19 25 00.7	+0.1
L64A	Middleborough	143.89	14	P		PKPdf	19 25 00.2	-0.2
	baz=341,SNR=9.0							
PAL	Palisades	143.89	19	P		PKPab	19 25 00.1	+0.2
	baz=336,SNR=38							
TKL	Tuckaleechee C	143.94	35			PKPab	19 25 00.3	0.0
Q57A	Strasburg	143.95	25	P		PKPbc	19 25 00.1	+0.1
	baz=327,SNR=20							
N61A	South Mountain	144.00	19	P		PKPdf	19 25 00.7	+0.1
	baz=335,SNR=18							
O60A	Telford	144.01	21	P		PKPbc	19 25 00.3	+0.1
	baz=333,SNR=13							
GO03	Copiap	144.02	164	*i* P		PKPdf	19 25 01.5	+0.3
P58A	Pank, Wackersv	144.02	24	P		PKPbc	19 25 00.3	+0.1
	baz=329,SNR=37							
R56A	Bull Pasture M	144.04	27	P		PKPbc	19 25 00.1	-0.3
	baz=328,SNR=12							
S55A	Lewisburg	144.04	29	P		PKPbc	19 24 60.0	-0.4
	baz=323,SNR=11							
T54A	Tazewell	144.07	31	P		PKPbc	19 25 00.5	0.0
	baz=321,SNR=42							
M63A	Gales Ferry	144.07	16	P		PKPbc	19 25 00.2	-0.1
	baz=339,SNR=5.2							
M64A	Tiverton	144.16	15	P		PKPdf	19 25 00.9	0.0
	baz=340							
CYA	Choya	144.17	171	*i* P		PKPab	19 25 01.4	0.0
P59A	Jarrettsville	144.25	23	P		PKPbc	19 25 00.9	0.0
	baz=331,SNR=21							
Q58A	Fox Den Farm,	144.34	25	P		PKPdf	19 25 01.3	+0.1
	baz=328,SNR=23							
U54A	Nelsons Funny	144.36	32	P		PKPdf	19 25 01.5	0.0
	baz=320,SNR=19							
P60A	Greenville	144.38	21	P		PKPbc	19 25 01.3	0.0
	baz=332,SNR=28							
T55A	Pulaski	144.42	30	P		PKPbc	19 25 01.8	+0.2
	baz=322,SNR=14							
R57A	Stanardsville	144.52	26	P		PKPbc	19 25 02.0	+0.2
	baz=326,SNR=13							
BLA	Blacksburg	144.53	29	P		PKPbc	19 25 01.9	0.0
	baz=323,SNR=6.2							
S56A	Natural Bridge	144.56	28	P		PKPdf	19 25 01.6	-0.1
	baz=324,SNR=8.1							
R58A	Rapidan	144.74	25	P		PKPbc	19 25 02.7	+0.2
	baz=327,SNR=9.5							
S57A	Dark Hollow, R	144.77	27	P		PKPbc	19 25 02.5	-0.1
	baz=325,SNR=7.1							
Q59A	Harwood	144.81	23	P		PKPbc	19 25 02.6	0.0
	baz=330							
V54A	Nebo	144.86	32	P		PKPbc	19 25 03.1	+0.2
	baz=319,SNR=19							
T56A	Rocky Mt	144.86	29	P		PKPbc	19 25 02.7	-0.2
	baz=323,SNR=11							
BRAL	Brewton	144.88	43	P		PKPab	19 25 03.7	-0.4
	baz=308,SNR=8.4							
Q60A	Greensboro	145.01	22	P		PKPab	19 25 04.0	-0.2
	baz=331							
R58B	Mineral	145.08	26	P		PKPbc	19 25 03.3	-0.1
	baz=327,SNR=8.9							
CBN	Corbin Frederi	145.09	25	P		PKPbc	19 25 03.8	+0.3
	baz=328							
V55A	Taylorsville	145.19	32	P		PKPbc	19 25 03.9	0.0
	baz=320,SNR=22							
R59A	King George, V	145.20	25	P		PKPbc	19 25 04.0	+0.2
	baz=329							
U56A	King	145.22	30	P		PKPbc	19 25 03.9	0.0
	baz=322,SNR=6.0							
W54A	Cherokee Point	145.24	34	P		PKPbc	19 25 04.7	+0.6
	baz=318,SNR=18							
T57A	Hurt	145.25	28	P		PKPbc	19 25 04.1	+0.1
	baz=324,SNR=13							
AC01	Pan de Azucar	145.28	162			PKPbc	19 25 04.3	-0.1
S58A	Poland Farm, P	145.29	26	P		PKPbc	19 25 03.9	-0.2
	baz=325,SNR=7.6							
152A	Waverly Hall	145.46	39	PKPdf		PKPbc	19 25 04.4	-0.4
S59A	Mechanicsville	145.49	25	P		PKPbc	19 25 04.9	+0.3
	baz=328,SNR=7.3							
X54A	Belton	145.54	34	P		PKPbc	19 25 05.4	+0.5
	baz=317,SNR=34							
V56A	Mocksville	145.59	31	P		PKPbc	19 25 05.1	+0.1
	baz=321,SNR=14							
T58A	Grand View Acr	145.63	27	P		PKPbc	19 25 04.9	-0.2
	baz=325,SNR=13							
PAULI	Paulins	145.64	33			PKPbc	19 25 05.3	+0.1
KMSC	Kings Mountain	145.66	33	P		PKPbc	19 25 05.5	+0.2
	baz=320,SNR=22							
U57A	Blanch	145.67	29	P		PKPbc	19 25 05.0	-0.2
	baz=324,SNR=15							
GOGA	Godfrey	145.72	37	P		PKPbc	19 25 06.1	+0.6
	baz=315,SNR=17							
GOGA	Godfrey	145.72	37	PKPdf		PKPdf	19 25 04.4	+0.6
S60A	Water View	145.81	24	P		PKPbc	19 25 06.0	+0.5
	baz=329							
AHML	Hocico Molle	145.87	171	*i* P		PKPbc	19 25 05.7	-0.5
V57A	Coltrane Farms	145.89	30	P		PKPbc	19 25 05.8	0.0
	baz=323,SNR=16							
X55A	Gracelyn & Ava	146.00	34	P		PKPbc	19 25 06.6	+0.4
	baz=318,SNR=18							
T59A	Double "B" Far	146.05	26	P		PKPbc	19 25 06.6	+0.3
	baz=327,SNR=20							
T59A	Double "B" Far	146.05	26	PKPdf		PKPdf	19 25 04.9	+0.7
W56A	Indian Trail	146.06	32	P		PKPbc	19 25 06.0	-0.4
	baz=321,SNR=15							
U58A	Oxford	146.07	28	P		PKPbc	19 25 06.0	-0.3
	baz=325,SNR=22							
T60A	Surry	146.26	25	P		PKPbc	19 25 06.9	+0.1
	baz=328,SNR=6.5							
V58A	Windy Hill, Pi	146.29	29	P		PKPbc	19 25 07.0	0.0
	baz=324,SNR=14							
X56A	White Oak	146.32	33	P		PKPbc	19 25 07.4	+0.3
	baz=319,SNR=9.7							
W57A	Gilead	146.36	31	P		PKPbc	19 25 07.3	+0.1
	baz=322,SNR=12							
W57A	Gilead	146.36	31	PKPdf		PKPbc	19 25 06.8	-0.3
U59A	Littleton	146.45	27	P		PKPbc	19 25 07.5	+0.1
	baz=326,SNR=6.3							
GO02	Mina Guanaco	146.50	163	PKPdf		PKPdf	19 25 06.7	+0.9
U60A	Pendleton	146.64	26	P		PKPbc	19 25 08.1	+0.2
	baz=327							
Y56A	Pelion	146.69	34	P		PKPbc	19 25 08.2	+0.1
	baz=318							
CPUP	Villa Florida	146.71	184	PKP		PKPdf	19 25 06.4	+0.7
	comp=Z,53nm,0.9s,baz=163,slow=1.6,SNR=59							
CPUP				PKPbc		PKPbc	19 25 09.3	+0.9
	comp=Z,53nm,0.9s,baz=161,slow=1.5,SNR=56							
CPUP				pPKPbc	pPKPbc		19 27 23.4	+0.3
	comp=Z,7.7nm,1.1s,baz=195,slow=6.1,SNR=3.6							
V59A	Middlesex	146.73	28	P		PKPbc	19 25 08.1	0.0
	baz=325,SNR=8.6							
PB14	IPOC Station P	146.76	162			PKPdf	19 25 07.2	+1.0
X57A	Johnson Farm,	146.84	32	P		PKPbc	19 25 08.7	+0.2
	baz=321							
W58A	Raeford	146.84	30	P		PKPbc	19 25 08.6	+0.1
	baz=323,SNR=6.4							
TIGA	Tifton	146.99	40	P		PKPbc	19 25 09.4	+0.4
	baz=312,SNR=6.5							
Z56A	Williston	147.00	35	P		PKPbc	19 25 09.6	+0.7
	baz=318,SNR=6.2							
Y57A	Sumter	147.02	33	P		PKPbc	19 25 09.3	+0.3
	baz=320							
U61A	Possum Corner	147.06	26	P		PKPbc	19 25 09.6	+0.6
	baz=328							
X58A	Rowland	147.16	31	P		PKPbc	19 25 09.7	+0.3
	baz=322,SNR=5.3							
V60A	Jim Taylor Roa	147.18	27	P		PKPbc	19 25 09.6	+0.2
	baz=326,SNR=5.8							
SPB	Sao Paulo	147.28	201			PKPbc	19 25 10.4	+0.4
SPB	Sao Paulo	147.28	201	*e*P		PKPdf	19 25 07.9	+1.3
Z57A	Bowman	147.39	34	P		PKPbc	19 25 10.7	+0.8
	baz=319,SNR=10							
V61A	Roper	147.46	26	P		PKPbc	19 25 10.8	+0.8
	baz=328							
Y58A	Scranton	147.49	32	P		PKPbc	19 25 10.1	-0.1
	baz=321							
X59A	McDuffie Farm,	147.51	30	P		PKPbc	19 25 10.3	+0.1
	baz=323							
W60A	Pink Hill	147.56	28	P		PKPbc	19 25 10.9	+0.5
	baz=325							
157A	Early Branch	147.69	35	P		PKiKP	19 25 11.5	-0.6
	baz=318							
PB10	IPOC Station P	147.75	161			PKiKP	19 25 12.3	-0.3
X60A	Albert Glenn T	147.82	29	P		PKPbc	19 25 11.0	0.0
	baz=324							
NHSC	New Hope	147.83	34	P		PKPbc	19 25 11.7	+0.6
	baz=319							
Y59A	Loris	147.84	31	P		PKPbc	19 25 11.3	+0.2
	baz=322							
Z58A	St. Stephen	147.85	33	P		PKPbc	19 25 11.7	+0.6
	baz=320,SNR=7.0							
SLA	San Lorenzo	147.86	170	*i* P		PKiKP	19 25 12.6	-0.4
V62A	Hyde County Ai	147.93	26	P		PKPbc	19 25 11.2	0.0
	baz=328							
158A	Hollywood	148.10	34	P		PKPbc	19 25 12.2	+0.4
	baz=319							
Y60A	Bolivia	148.16	30	P		PKPbc	19 25 12.3	+0.4
	baz=323							
LVC	Limon Verde	149.11	163	PKP		PKPdf	19 25 11.1	+0.9
	comp=Z,4.5nm,0.7s,baz=3.7,slow=1.4,SNR=4.3							
LVC				PKPbc		PKiKP	19 25 15.7	-0.2
	comp=Z,34nm,0.7s,baz=232,slow=1.1,SNR=13							
LVC	Limon Verde	149.11	163			PKPdf	19 25 12.3	+2.2
PB07	IPOC Station P	149.64	161	PKPdf		PKPdf	19 25 12.0	+1.3
PB07				PKPbc		PKiKP	19 25 17.4	+0.6
PSGCX	Pisagua	151.53	159			PKiKP	19 25 20.9	+0.3
PB16	IPOC Station P	152.91	159	PKPdf		PKPdf	19 25 17.7	+1.5
NNA	Nana	154.44	138	PKP		PKPdf	19 25 18.2	+0.4
	comp=Z,4.6nm,0.3s,baz=216,slow=11,SNR=2.0							
NNA				PKPbc		PKPbc	19 25 27.3	+0.6
	comp=Z,6.6nm,0.3s,baz=278,slow=2.5,SNR=6.3							
BDFB	Brasilia	154.67	207	PKP		PKPdf	19 25 18.0	-0.1
	comp=Z,13nm,0.9s,baz=248,slow=1.0,SNR=13							
BDFB				PKPab		PKPab	19 25 45.1	0.0
	comp=Z,12nm,0.9s,baz=164,slow=2.4,SNR=7.1							
BDFB	Brasilia	154.67	207	PKPdf		PKPdf	19 25 18.8	+0.7
BDFB				PKPab		PKPab	19 25 46.2	+1.2
LPAZ	La Paz	155.28	160	PKP		PKPdf	19 25 20.3	+0.7
	comp=Z,6.3nm,0.9s,baz=79,slow=1.0,SNR=20							
LPAZ				PKPab		PKPab	19 25 48.5	+0.2
	comp=Z,22nm,0.8s,baz=187,slow=3.5,SNR=20							
LPAZ	La Paz	155.28	160	PKPdf		PKPdf	19 25 20.6	+1.0
LPAZ				PKPab		PKPab	19 25 49.5	+1.3
ATAH	Atahualpa	156.52	127	PKPbc		PKPdf	19 25 22.7	+1.7
	comp=Z,12nm,0.9s,baz=207,slow=2.3,SNR=8.8							
SIV	San Ignacio	157.02	176	PKP		PKPdf	19 25 21.3	+0.2
	comp=Z,7.4nm,1.0s,baz=216,slow=2.1,SNR=17							
SIV				PKPab		PKPab	19 25 55.8	+0.8
	comp=Z,14nm,0.8s,baz=189,slow=3.6,SNR=21							
SIV				SKP			19 28 02.5	
	comp=Z,1.3nm,0.5s,baz=244,slow=8.4,SNR=3.3							
YOTC	Yotoco, Valle	163.04	100	*e*P		PKPdf	19 25 24.2	-3.7
MARP	Paez Belalcaza	163.16	104	*e*P		PKPdf	19 25 28.7	+0.5
PLMC	San Jos del P	163.26	97	*e*P		PKPdf	19 25 27.8	-0.2
MOTC	Monteria, Cord	163.99	83	*e*P		PKPdf	19 25 28.4	-0.2
TOLC	Tolima	164.16	98	*e*P		PKPdf	19 25 28.1	-1.1
ROSC	El Rosal	165.18	98	PKP		PKPdf	19 25 30.4	+0.3
	comp=Z,6.2nm,0.3s,baz=278,slow=2.8,SNR=7.5							
ROSC				PKPab		PKPab	19 26 33.0	+1.3
	comp=Z,9.4nm,0.6s,baz=175,slow=20,SNR=3.6							
PTBC	PUERTO BERRIO	165.23	91	*e*P		PKPdf	19 25 27.9	-1.8
SPBC	San Pablo de B	165.54	95	*e*P		PKPdf	19 25 29.0	-1.0
OCAC	Ocana	166.35	84	*e*P		PKPdf	19 25 27.2	-3.5
RUSC	La Rusia	166.54	94	*e*P		PKPdf	19 25 29.1	-2.2
PAMC	Pamplona, Colo	166.99	88	*e*P		PKPdf	19 25 29.0	-2.6
MTP	Monte Pirata	167.61	27	PKPab		PKPab	19 26 41.1	-0.3
SDV	Santo Domingo	168.92	80	PKP		PKPdf	19 25 32.0	-0.5
	comp=Z,6.9nm,0.7s,baz=284,slow=1.4,SNR=7.8							
SDV				PKPab		PKPab	19 26 49.0	+1.0
	comp=Z,5.8nm,0.4s,baz=291,slow=4.1,SNR=9.1							
MDP	Montagnes des	172.81	254	PKP		PKPdf	19 25 33.9	-0.4
	comp=Z,23nm,1.2s,baz=351,slow=1.7,SNR=4.5							

UCR ***17*** *19:28:58.7±1.9,8°.65N×83°.08W,h44km±5km,MW4.5*
UPA ***17*** *19:28:59.5±1.8,8°.73N×83°.05W,h36km±4km,MW4.7*
ISC 17 19:28:59.2±1.1,8°.69N±0°.04×83°.07W±0°.03,h44km±7km,
n94,σ1°07/121,9C-25D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EDSV	San Vito	0.16	36	*e*P		Pn	19 29 06.4	-0.4
EDSV				*e*S		Sn	19 29 13.6	+1.4
CDITO	Canoas	0.23	121	||*i*P		Pn	19 29 06.3	-0.9
MLIR3	Monte Lirio, C	0.26	67	||*i*P		Pn	19 29 07.2	-0.4
MLIR3				*e*S		Sn	19 29 13.3	-0.2
PTJ1	Puerto Jimnez	0.28	237	||*i*P		Pn	19 29 06.8

PNME	**Penonome**	**2.72**	**94**	*eP*	**Pn**	**19 29 42.2**	**+1.8**
CHIT3	**Chitre**	**2.72**	**105**	*iP*	**Pn**	**19 29 41.2**	**+0.7**
CUI	**Cuipilapa**	**2.84**	**314**	*eP*	**Pn**	**19 29 42.9**	**+0.7**
GUAI	**GUAI**	**2.88**	**303**	*i* P	**Pn**	**19 29 42.2**	**-0.4**
ORTG	**Ortega, Santa**	**2.88**	**305**	*eP*	**Pn**	**19 29 43.2**	**+0.5**
HORNC	**Hornillas**	**2.89**	**314**	*i* P	**Pn**	**19 29 43.4**	**+0.5**
TOSI3	**Tonosi**	**2.90**	**116**	*eP*	**Pn**	**19 29 44.8**	**+1.9**
AZU	**Azuero**	**2.91**	**108**	*eP*	**Pn**	**19 29 43.2**	**+0.2**
AZU				*eS*	**Sn**	**19 30 17.5**	**+0.8**
VTON	**El Valle, Cocl**	**2.92**	**91**	*eP*	**Pn**	**19 29 44.3**	**+1.1**
VTON				*eS*	**Sn**	**19 30 18.2**	**+1.0**
LIM1	**Limonal**	**2.94**	**313**	*i* P	**Pn**	**19 29 45.0**	**+1.5**
PCRI3	**Pocri, Los San**	**3.10**	**109**	*eP*	**Pn**	**19 29 46.4**	**+0.8**
LAPC	**Finca la Perla**	**3.11**	**312**	*i* P	**Pn**	**19 29 46.9**	**+1.0**
BUEV	**Buena Vista**	**3.12**	**312**	*eP*	**Pn**	**19 29 47.5**	**+1.6**
GB1A	**Boringuen Arri**	**3.12**	**313**	*i* P	**Pn**	**19 29 47.3**	**+1.2**
ZANG	**Zanguenga, Cho**	**3.18**	**85**	*eP*	**Pn**	**19 29 47.2**	**+0.5**
MLIR	**Monte Lirio**	**3.22**	**80**	*eP*	**Pn**	**19 29 46.9**	**-0.4**
PEDA3	**Pedasi**	**3.23**	**111**	*eP*	**Pn**	**19 29 48.6**	**+1.2**
BCIP	**Isla Barro Col**	**3.23**	**81**	*eP*	**Pn**	**19 29 45.9**	**-1.5**
BCIP	**Isla Barro Col**	**3.23**	**81**	*eP*	**Pn**	**19 29 47.2**	**-0.2**
BCIP				*eS*	**Sn**	**19 30 23.9**	**-0.8**
FRIJ	**El Hiral**	**3.34**	**81**	*eP*	**Pn**	**19 29 49.0**	**0.0**
ARRA3	**Arraijan, Pana**	**3.38**	**85**	*eP*	**Pn**	**19 29 50.1**	**+0.6**
UPA	**Univ. de Panam**	**3.50**	**85**	*eP*	**Pn**	**19 29 50.1**	**-1.1**
UPD2	**Meteti**	**5.00**	**91**	*eP*	**Pn**	**19 30 12.6**	**+0.8**
CAPC	**Capurgana**	**5.65**	**90**	*eP*	**Pn**	**19 30 18.4**	**-2.3**
DBBC	**Dabeiba**	**7.00**	**103**	*eP*	**Pn**	**19 30 35.1**	**-4.1**
MOTC	**Monteria, Cord**	**7.32**	**89**	*eP*	**Pn**	**19 30 44.5**	**+0.9**
PLMC	**San Jos del P**	**7.72**	**119**	*eP*	**Pn**	**19 30 47.2**	**-2.0**
HELC	**Santa Helena**	**7.88**	**108**	*eP*	**Pn**	**19 30 51.0**	**-0.6**
SJCC	**San Jacinto, C**	**7.88**	**81**	*eP*	**Pn**	**19 30 50.1**	**-1.3**
YOTC	**Yotoco, Valle**	**8.15**	**125**	*eP*	**Pn**	**19 30 53.5**	**-1.7**
ANIL	**Santa Ana**	**8.68**	**118**	*eP*	**Pn**	**19 31 01.8**	**-0.8**
NORC	**Norcasia**	**8.71**	**110**	*eP*	**Pn**	**19 31 04.3**	**+1.6**
TOLC	**Tolima**	**8.71**	**117**	*eP*	**Pn**	**19 31 03.6**	**+0.6**
PTBC	**PUERTO BERRIO,**	**8.80**	**103**	*eP*	**Pn**	**19 31 03.7**	**-0.3**
POPC	**Popayan, Colom**	**8.82**	**133**	*eP*	**Pn**	**19 31 04.8**	**+0.4**
ORTC	**Ortega, Tolima**	**9.11**	**121**	*eP*	**Pn**	**19 31 10.0**	**+1.8**
SOTA	**Rioblanco**	**9.15**	**135**	*eP*	**Pn**	**19 31 11.7**	**+2.5**
PCON	**Cinco Dias**	**9.16**	**133**	*eP*	**Pn**	**19 31 11.8**	**+2.3**
SPBC	**San Pablo de B**	**9.42**	**108**	*eP*	**Pn**	**19 31 14.0**	**+1.5**
PRAC	**Prado**	**9.52**	**121**	*eP*	**Pn**	**19 31 14.9**	**+1.1**
GARC	**Garzon, Huila**	**9.93**	**130**	*eP*	**Pn**	**19 31 22.0**	**+2.4**
CHIC	**Chingaza**	**10.11**	**113**	*eP*	**Pn**	**19 31 20.8**	**-1.5**
RUSC	**La Rusia**	**10.29**	**105**	*eP*	**Pn**	**19 31 24.4**	**-0.3**
PAMC	**Pamplona, Colo**	**10.36**	**97**	*eP*	**Pn**	**19 31 26.3**	**+0.6**
MACC	**Macarena, Meta**	**11.24**	**125**	*eP*	**Pn**	**19 31 37.9**	**+0.5**

IDC ***17*** *19:33:10.7±1.6, 17°.43S×172°.71W, h0km, mb3.5/6, mb1 3.9/7, mb1mx3.7/52, mbtmp3.6/7, ML4.6/1, Error ellipse: s-maj=72.8km s-min=21.9km az=141.0*

ISC 17 19:33:15.2±1.3, 17°.4S±0.3×172°.8W±0.3, h28km, n7, σ1§16/7, mb3.5/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.57**	**17**	Pn	**Pn**	**19 34 09.0**	**+0.2**
	56nm,0.3s,baz=186,slow=1.9,SNR=41						
AFI				Sn	Sn	19 34 38.5	-12
	146nm,0.3s,baz=225,slow=13,SNR=16						
STKA	**Stephens Creek**	**43.57**	**242**	P	**P**	**19 41 16.3**	**-0.7**
	0.5nm,0.5s,baz=57,slow=5.9,SNR=3.0						
WRA	**Warramunga Arr**	**49.96**	**258**	P	**P**	**19 42 07.2**	**+0.1**
	0.4nm,0.8s,baz=96,slow=6.4,SNR=5.9						
ASAR	**Alice Springs**	**50.05**	**253**	P	**P**	**19 42 09.2**	**+1.3**
	0.4nm,0.4s,baz=90,slow=7.5,SNR=18						
TXAR	**Lajitas Array**	**81.25**	**56**	P	**P**	**19 45 28.8**	**-0.4**
	0.3nm,0.8s,baz=225,slow=3.7,SNR=1.9						
PDAR	**Pinedale Array**	**83.35**	**41**	P	**P**	**19 45 41.1**	**+1.1**
	0.3nm,0.6s,baz=197,slow=4.6,SNR=3.6						
ILAR	**Eielson Array**	**84.24**	**11**	P	**P**	**19 45 42.5**	**-1.3**
	0.2nm,0.8s,baz=218,slow=5.7,SNR=4.0						

IDC 17 19:42:22.8±4.3, 19°.56N×120°.56E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.2/50, mbtmp3.5/3, Error ellipse: s-maj=383.0km s-min=29.5km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**41.37**	**320**	P	P	19 50 10.5	-0.1
	0.6nm,0.8s,baz=111,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**41.52**	**160**	P	P	19 50 11.6	-0.4
	0.4nm,0.6s,baz=341,slow=8.8,SNR=4.5						
ASAR	**Alice Springs**	**44.89**	**163**	P	P	19 50 39.4	+0.1
	0.2nm,0.4s,baz=342,slow=6.9,SNR=7.7						

PRE ***17*** *19:42:23.9±1.1, 28°.19S×26°.89E, h2km, ML2.9*
EAF ***17*** *19:42:24.9±1.9, 28°.34S×27°.09E, h3km±27km, MD4.1*
BUL ***17*** *19:42:25.2±1.6, 28°.32S×27°.10E, h11km±23km, MD4.1*

ISC 17 19:42:24.8±1.6, 28°.26S±0°.04×26°.99E±0°.05, h16km±11km, n20, σ1§87/38, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**1.56**	**257**	*i* P	**Pg**	**19 42 54.7**	**-0.3**
BOSA				*i* S	**Sg**	**19 43 14.6**	**-0.8**
BOSA	**Boshof**	**1.56**	**257**	*eP*	**Pn**	**19 42 53.0**	**+0.9**
BOSA				*eS*	**Sn**	**19 43 13.1**	**+1.0**
BOSA				AML	AML	19 43 16.9	
	comp=Z,101nm,0.3s						
BOSA	**Boshof**	**1.56**	**257**	*i* P	**Pg**	**19 42 54.7**	**-0.3**
BOSA				*i* S	**Sg**	**19 43 14.6**	**-0.8**
WDLM	**Western Deep L**	**1.87**	**12**	*eP*	**Pn**	**19 42 57.6**	**+1.3**
WDLM				*eS*	**Sn**	**19 43 20.5**	**+0.8**
WDLM				AML	AML	19 43 25.6	
	comp=Z,246nm,0.3s						
KLOF	**Kloof**	**1.98**	**16**	*eP*	**Pn**	**19 42 58.5**	**+0.7**
KLOF				*eS*	**Sn**	**19 43 23.9**	**+1.5**
KLOF				AML	AML	19 43 32.4	
	comp=Z,194nm,0.1s						
ERPM	**east rand prop**	**2.21**	**31**	*eP*	**Pn**	**19 43 02.8**	**+1.8**
ERPM				*eS*	**Sb**	**19 43 31.4**	**-0.4**
ERPM				AML	AML	19 43 44.0	
	comp=Z,127nm,0.6s						
HVD	**Gariep Dam**	**2.67**	**209**	*eP*	**Pn**	**19 43 09.7**	**+2.3**
HVD				*eS*	**Sn**	**19 43 42.3**	**+2.8**
HVD				AML	AML	19 44 06.2	
	comp=Z,36nm,0.4s						
LBTB	**Lobatse**	**3.46**	**339**	*i* P	**Pn**	**19 43 19.2**	**+1.0**
LBTB				*i* S	**Sn**	**19 44 02.2**	**+3.3**
LBTB	**Lobatse**	**3.46**	**339**	*i* P	**Pn**	**19 43 19.2**	**+1.0**
LBTB				*i* S	**Sn**	**19 44 02.2**	**+3.3**
POGA	**Pongola**	**4.28**	**79**	*i* P	**Pn**	**19 43 29.4**	**+0.1**
POGA				*i* S	**Sn**	**19 44 16.6**	**-2.3**
POGA	**Pongola**	**4.28**	**79**	*i* P	**Pn**	**19 43 29.4**	**+0.1**
POGA				*i* S	**Sn**	**19 44 16.6**	**-2.3**
SOE	**Somerset East**	**4.60**	**195**	*eP*	**Pn**	**19 43 35.5**	**+1.6**
SOE				*eS*	**Sn**	**19 44 28.4**	**+1.4**
SOE				AML	AML	19 44 39.9	
	comp=Z,12nm,0.4s						
UPI	**Upington**	**5.06**	**267**	*eP*	**Pn**	**19 43 40.6**	**+0.5**
UPI				*eS*	**Sn**	**19 44 35.6**	**-2.6**
UPI				AML	AML	19 45 06.5	
	comp=Z,14nm,0.5s						
KEIM	**Keimoes**	**5.32**	**264**	*eP*	**Pn**	**19 43 43.4**	**-0.2**
KEIM				*eS*	**Sn**	**19 44 43.5**	**-1.1**
KEIM				AML	AML	19 45 00.8	
	comp=Z,8.9nm,0.6s						
GRAN	**Grantham**	**5.79**	**225**	*eP*	**Pn**	**19 43 51.8**	**+1.6**
GRAN				*eS*	**Sn**	**19 44 55.0**	**-1.4**
GRAN				AML	AML	19 45 26.2	
	comp=Z,14nm,0.4s						
ROSN	**Rosenhof**	**6.19**	**199**	*eP*	**Pn**	**19 43 58.1**	**+2.5**
ROSN				*eS*	**Sn**	**19 45 06.0**	**0.0**
ROSN				AML	AML	19 45 24.8	
	comp=Z,41nm,0.6s						
CVNA	**Calvinia**	**7.05**	**241**	*eP*	**Pn**	**19 44 08.5**	**+1.1**
CVNA				*eS*	**Sn**	**19 45 24.3**	**-2.9**
CVNA				AML	AML	19 46 10.4	
	comp=Z,20nm,0.5s						
BLWY	**Bulawayo**	**8.22**	**11**	*i* P	**Pn**	**19 44 25.4**	**+1.8**
BLWY	**Bulawayo**	**8.22**	**11**	*i* P	**Pn**	**19 44 25.4**	**+1.8**
KOMG	**Komaggas**	**8.46**	**257**	*eP*	**Pn**	**19 44 27.5**	**+0.8**
KOMG				*eS*	**Sn**	**19 45 57.6**	**-4.3**
KOMG				AML	AML	19 46 46.1	
	comp=Z,19nm,0.5s						

WEL 17 19:42:34.9±1.1, 38°S±10°×18°0E±°, h33km, M3.5/17, ML3.8/17, MLv3.5/17, Error ellipse: s-maj=0.0km s-min=0.0km az=1.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.13**	**260**	P	Pn	19 42 54.2	-0.2
WMGZ				S	Sb	19 43 10.1	-0.3
MXZ	**Matakaoa Point**	**1.21**	**273**	P	Pn	19 42 55.1	-0.4
MXZ				S	Sn	19 43 11.3	+0.6
PUZ	**Puketiti**	**1.31**	**250**	P	Pn	19 42 56.7	-0.3
PUZ				S	Sn	19 43 13.7	+0.3
CNGZ	**Carnagh Statio**	**1.53**	**236**	P	Pn	19 43 00.4	+0.5
TWGZ	**Tauwhareparae**	**1.56**	**249**	P	Pn	19 43 00.5	+0.2
TWGZ				S	Sn	19 43 20.4	+1.1
HAZ	**Te Kaha**	**1.63**	**265**	P	Pn	19 43 01.4	+0.2
HAZ				S	Sn	19 43 21.7	+0.8
RUGZ	**Raukumara Rang**	**1.73**	**259**	P	Pn	19 43 02.7	-0.1
TKGZ	**Te Karaka**	**1.75**	**242**	P	Pn	19 43 02.9	0.0
TKGZ				S	Sn	19 43 24.8	+0.6
MWZ	**Matawai**	**1.94**	**248**	P	Pn	19 43 05.0	-0.7
PRGZ	**Paritu Road**	**2.00**	**229**	P	Pn	19 43 06.8	+0.5
MHGZ	**Mahia Peninsul**	**2.13**	**224**	P	Pn	19 43 08.4	+0.1
KNZ	**Kokohu**	**2.19**	**230**	P	Pn	19 43 08.7	-0.2
URZ	**Urewera**	**2.23**	**253**	P	Pn	19 43 10.2	+0.6
URZ				S	Sn	19 43 36.4	+0.4
WHRZ	**Whale Island**	**2.27**	**264**	P	Pn	19 43 10.5	+0.4
WHRZ				S	Sn	19 43 38.0	+1.1
RTZ	**Ruatahuna**	**2.45**	**246**	P	Pn	19 43 12.9	+0.4
RTZ				S	Sn	19 43 42.3	+0.9
MUGZ	**Murupara**	**2.55**	**250**	P	Pn	19 43 13.8	-0.1
OPRZ	**Ohinepanea**	**2.60**	**264**	P	Pn	19 43 14.4	-0.2
MTHZ	**Maungataniwha**	**2.64**	**242**	P	Pn	19 43 15.2	0.0
MTHZ				S	Sn	19 43 45.8	-0.4
ARHZ	**Aropaoanui**	**2.75**	**233**	P	Pn	19 43 16.8	+0.2
BKZ	**Black Stump Fm**	**3.03**	**239**	P	Pn	19 43 20.4	-0.2
MCHZ	**McNeill Hill**	**3.04**	**233**	P	Pn	19 43 21.0	+0.3
KUZ	**Kuaotunu**	**3.40**	**284**	P	Pn	19 43 25.0	-0.5
TOZ	**Tahuroa Road**	**3.43**	**267**	P	Pn	19 43 25.8	-0.2
BHHZ	**Black Hill Sta**	**3.48**	**237**	P	Pn	19 43 26.2	-0.5
ETVZ	**East Tongariro**	**3.56**	**244**	P	Pn	19 43 29.6	+1.6
PNHZ	**Pukenui**	**3.63**	**230**	P	Pn	19 43 27.8	-1.1
MKAZ	**Moumakai**	**3.75**	**277**	P	Pn	19 43 30.3	-0.2
ETAZ	**East Tamaki Re**	**3.97**	**278**	P	Pn	19 43 33.7	+0.4
MBAZ	**Motutapu North**	**4.03**	**281**	P	Pn	19 43 34.4	+0.2
MRZ	**Mangatainoka R**	**4.47**	**226**	P	Pn	19 43 38.5	-1.9
WCZ	**Waipu Caves**	**4.71**	**289**	P	Pn	19 43 44.3	+0.7
OUZ	**Omahuta**	**5.57**	**294**	P	Pn	19 43 56.3	+0.8
CTZ	**Chatham Island**	**6.66**	**157**	P	Pn	19 44 12.9	+2.5

TAP 17 19:43:05.1, 23°.62N×120°.83E, h10km, ML1.5, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHYT	**Xinyi Township**	**0.08**	**18**	*eP*	Pg	19 43 08.3	+0.9
	baz=17						
WHYT				*i* S	Sg	19 43 10.1	+1.0
	baz=17						
ALS	**Alishan**	**0.11**	**190**	*iP*	Pg	19 43 08.6	+0.5
	baz=186						
ALS				*i* S	Sg	19 43 10.9	+0.8
	baz=186						
CHN5	**Tsauling**	**0.14**	**260**	P	Pg	19 43 08.9	+0.7
	baz=260						
CHN5				S	Sg	19 43 11.7	+1.1
	baz=260						
SSLB	**Suanglung**	**0.20**	**35**	P	Pg	19 43 10.0	+0.6
	baz=35						
SSLB				S	Sg	19 43 13.3	+1.1
	baz=35						
WJS	**Zhushan**	**0.22**	**336**	*eP*	Pg	19 43 10.4	+0.7
	baz=335						
WGK	**Gukeng**	**0.25**	**285**	*eS*	Sb	19 43 16.8	+0.6
	baz=285						
WDLH	**Douliu**	**0.27**	**284**	*eS*	Sb	19 43 17.3	+0.5
	baz=284						
TYC	**Yuchr**	**0.28**	**6**	*eS*	Sb	19 43 17.7	+0.6
	baz=7.0						
WNT	**Mingjian**	**0.29**	**333**	*eP*	Pb	19 43 11.7	-0.7
	baz=334						
WNT				*eS*	Sb	19 43 17.9	+0.6
	baz=334						
CHN4	**Tsaushan**	**0.34**	**219**	*eP*	Pb	19 43 12.9	-0.4
	baz=218						
CHN4				*eS*	Sb	19 43 18.6	-0.2
	baz=218						
DPDB	**Guoxing**	**0.42**	**12**	*eP*	Pb	19 43 14.8	+0.1
	baz=12						
DPDB				*eS*	Sb	19 43 21.4	+0.2
	baz=12						
ELDTW	**Lidau**	**0.46**	**158**	*eP*	Pg	19 43 14.6	+0.4
	baz=157						

NEIC ***17*** *19:50:33.2±2.2, 19°.48N±0°.08×120°.31E±0°.05, h17km±5km, mb4.5/32, Error ellipse: s-maj=13.3km s-min=3.1km az=152.0*
IDC ***17*** *19:50:39.4±2.2, 19°.41N×120°.47E, h67km±20km, mb3.9/21, mb1 4.1/24, mb1mx4.0/41, mbtmp4.3/24, MS3.3/4, Ms1 3.4/4, ms1mx2.9/35, Error ellipse: s-maj=18.2km s-min=8.8km az=74.0*

ISC 17 19:50:34.4±0.4, 19°.45N±0°.05×120°.33E±0°.06, h23km, n93, σ1§39/92, mb4.4/42, MS3.4/7, 2C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPUB	**Ta-pu**	**3.84**	**4**	Pn	**Pn**	**19 51 29.4**	**-2.8**
YULB	**Yu-li**	**4.03**	**13**		**Pn**	**19 51 31.7**	**-3.0**
SSLB	**Suanglung**	**4.36**	**8**	Pn	**Pn**	**19 51 37.2**	**-2.1**
NACB	**Ninganchiao**	**4.85**	**14**		**Pn**	**19 51 44.7**	**-1.3**
YHNB	**Yeheng**	**5.29**	**10**	Pn	**Pn**	**19 51 50.5**	**-1.5**
KNMB	**Chin-men Tao**	**5.31**	**341**	Pn	**Pn**	**19 51 49.3**	**-2.9**
TGY	**Tagaytay City**	**5.35**	**174**	P	Pn	19 51 57.6	+4.8
	35nm,0.3s,baz=175,slow=18,SNR=1.5						
LQP	**Lukban**	**5.43**	**167**	*eP*	**Pn**	**19 51 55.1**	**+0.9**
HKPS	**Hong Kong Po S**	**6.43**	**297**	Pn	**Pn**	**19 52 06.3**	**-1.4**
QIZ	**Qiongzhong**	**9.91**	**269**	P	Pn	19 52 50.4	-5.1
QIZ				S	**Sn**	**19 54 45.0**	**-1.1**
QIZ				LR	LR		
	comp=N,450nm,15.7s						
QIZ				LR	LR		
	comp=Z,310nm,16.7s						
QIZ	**Qiongzhong**	**9.91**	**269**	Pn	**Pn**	**19 52 53.9**	**-1.7**
NJ2	**Nanjing**	**12.62**	**354**	*eP*	**Pn**	**19 53 31.4**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
JNU	**Nakatsue**	**16.57**	**33**	P	**P**	**19 54 27.0**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=46,slow=3.8,SNR=5.3						
XAN	**Xi'an**	**17.73**	**327**	P	**P**	**19 54 41.4**	**+0.9**
XAN				pmax	pmax		
	comp=Z,14nm,1.6s						
XAN				pmax	pmax		
	comp=Z,300nm,5.5s						
XAN				LR	LR		
	comp=Z,580nm,10.8s						
XAN				LR	LR		
	comp=Z,440nm,10.8s						
CD2	**Chengdu**	**18.82**	**311**	*eP*	**Pn**	**19 54 54.4**	**+1.2**
MPSI	**Mapaga**	**19.00**	**181**	P	**Pn**	**19 54 56.7**	**+1.4**
	comp=Z,4.1nm,1.4s						
KSRS	**Korea Array**	**19.13**	**19**	P	**P**	**19 54 55.0**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=198,slow=11,SNR=5.4						
KSRS				LR	LR	20 02 38.5	
	comp=Z,64nm,20.0s,baz=200,slow=38						
CHTO	**Chiang Mai**	**20.21**	**272**	P	**P**	**19 55 08.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**20.25**	**271**	P	**P**	**19 55 09.9**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=78,slow=8.8,SNR=13						
CMAR				PcP	**PcP**	**19 59 22.7**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=70,slow=0.5,SNR=6.0						
CMAR				LR	LR	20 02 04.8	
	comp=Z,104nm,19.6s,baz=126,slow=34						
CMAR	**Chiang Mai Arr**	**20.25**	**271**	P	**P**	**19 55 09.1**	**+0.9**
BJT	**Baijiatuan**	**20.81**	**351**	P	**P**	**19 55 13.3**	**-0.8**
BJT				lAmb	lAmb	19 55 16.4	
	comp=Z,28nm,1.0s						
BJI	**Beijing**	**20.83**	**351**	P	**P**	**19 55 15.4**	**+1.0**
BJI				pmax	pmax		
	comp=Z,27nm,1.0s						
BJI				LR	LR		
	comp=Z,150nm,9.2s						
BJI				LR	LR		
	comp=Z,150nm,10.2s						
BJI				LR	LR		
	comp=Z,190nm,34.1s						
MTKI	**Muara Teweh, K**	**20.95**	**195**	P	Pn	19 55 29.3	+11
LZH	**Lanzhou**	**22.02**	**322**	P	**P**	**19 55 29.6**	**+2.2**
LZH				pP	pP	19 55 34.0	+1.3
LZH				sP	sP	19 55 35.8	+0.5
LZH				pmax	pmax		
	comp=Z,38nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH				LR	LR		
	comp=Z,360nm,11.9s						
LZH				LR	LR		
	comp=Z,430nm,10.8s						
LZH				LR	LR		
	comp=Z,340nm,11.9s						
SANI	**Sanana**	**22.07**	**165**	P	**P**	**19 55 27.3**	**-0.6**
	comp=Z,5.8nm,0.7s						
HHC	**Hu-ho-hao-te**	**22.61**	**343**	*eP*	**P**	**19 55 34.4**	**+0.8**
HHC				pmax	pmax		
	comp=Z,15nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.3s						
HHC				LR	LR		
	comp=Z,310nm,10.2s						
HHC				LR	LR		
	comp=Z,220nm,11.9s						
HHC				LR	LR		
	comp=Z,250nm,11.1s						
SIJI	**Sorong**	**22.87**	**151**	P	**P**	**19 55 35.6**	**-0.7**
	comp=Z,4.7nm,0.6s,baz=339,slow=16,SNR=6.0						
MAT	**Matsushiro**	**23.16**	**39**	P	**P**	**19 55 39.3**	**+0.1**
MJAR	**Matsushiro Arr**	**23.16**	**39**	P	**P**	**19 55 40.0**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=303,slow=39,SNR=6.1						
MJAR	**Matsushiro Arr**	**23.16**	**39**	P	**P**	**19 55 39.8**	**+0.5**
SPSI	**Sidrap Palu**	**23.27**	**181**	P	**P**	**19 55 42.5**	**+2.0**
	comp=Z,17nm,1.3s						
BBKI	**Banjar Baru**	**23.40**	**194**	P	**P**	**19 55 42.0**	**+0.3**
	comp=Z,1µmcomp=Z,11nm,1.4s						
NLAI	**Namlea**	**23.51**	**163**	P	**P**	**19 55 46.6**	**+3.8**
	comp=Z,27nm,1.2s						
GUMO	**Guam**	**24.23**	**100**	LR	LR	20 05 17.6	
	comp=Z,70nm,18.8s,baz=326,slow=36						
KAPI	**Kappang**	**24.31**	**181**	P	**P**	**19 55 49.5**	**-0.9**
	comp=Z,4.3nm,0.5s,baz=7.2,slow=6.0,SNR=8.2						
KAPI	**Kappang**	**24.31**	**181**		**P**	**19 55 49.9**	**-0.5**
MDJ	**Mudanjiang**	**26.26**	**15**	P	**P**	**19 56 08.3**	**+0.5**
MDJ				lAmb	lAmb	19 56 09.1	
	comp=Z,16nm,0.8s						
USRK	**Ussuriysk Ar.**	**26.54**	**19**	P	**P**	**19 56 10.6**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=225,slow=10,SNR=4.6						
GTA	**Gaotai**	**26.62**	**323**	P	**P**	**19 56 12.5**	**+1.1**
GTA				pP	pP	19 56 17.1	0.0
GTA				sP	sP	19 56 20.3	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,100nm,7.3s						
GTA				LR	LR		
	comp=Z,180nm,12.0s						
GTA				LR	LR		
	comp=Z,140nm,12.7s						
GTA				LR	LR		
	comp=Z,170nm,11.6s						
EDFI	**Ende, Flores**	**28.05**	**177**	P	**P**	**19 56 29.0**	**+4.7**
LSA	**Lhasa**	**28.36**	**297**	P	**P**	**19 56 28.9**	**+1.5**
BATI	**Baumata**	**29.65**	**173**	P	**P**	**19 56 37.8**	**-0.6**
	comp=Z,12nm,0.6s,baz=324,slow=3.3,SNR=3.7						
SONM	**Songino Array**	**30.50**	**341**	P	**P**	**19 56 46.6**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=161,slow=10.0,SNR=16						
SONM	**Songino Array**	**30.50**	**341**	P	**P**	**19 56 46.0**	**+0.2**
WMQ	**Urumqi**	**36.53**	**319**	*eP*	**P**	**19 57 39.3**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.9s						
FITZ	**Fitzroy Crossi**	**37.67**	**172**	P	**P**	**19 57 47.3**	**-0.8**
MK31	**Makanchi Array**	**41.31**	**320**	P	**P**	**19 58 19.0**	**+0.8**
MK31				lAmb	lAmb	19 58 20.8	
	comp=Z,5.9nm,1.0s						
MKAR	**Makanchi Array**	**41.31**	**320**	P	**P**	**19 58 19.4**	**+1.2**
	comp=Z,4.4nm,0.8s,baz=116,slow=9.8,SNR=23						
MKAR				LR	LR	20 17 23.7	
	comp=Z,49nm,19.5s,baz=29,slow=39						
MKAR	**Makanchi Array**	**41.31**	**320**	P	**P**	**19 58 19.0**	**+0.8**
WRA	**Warramunga Arr**	**41.49**	**160**	P	**P**	**19 58 19.1**	**-0.8**
	comp=Z,2.2nm,0.6s,baz=342,slow=9.0,SNR=46						
WRA				S	**S**	**20 04 29.5**	**-4.7**
	comp=Z,0.8nm,0.9s,baz=341,slow=17,SNR=5.5						
WRA	**Warramunga Arr**	**41.49**	**160**	P	**P**	**19 58 18.2**	**-1.6**
WB2	**Warramunga Arr**	**41.49**	**160**	P	**P**	**19 58 18.9**	**-0.9**
WR0	**Warramunga Arr**	**41.57**	**160**	P	**P**	**19 58 19.7**	**-0.8**
WR0				lAmb	lAmb	19 58 21.0	
	comp=Z,3.6nm,0.7s						
ZAA0	**Zalesovo

BURAR	Bucovina Array	79.23	317	P	P	20 02 38.1	+0.2
NB2	NORSAR Subarra	82.03	332	P	P	20 02 51.8	-0.7
	comp=Z,0.6nm,0.7s,baz=61,slow=5.3						
NOA	NORSAR Array B	82.03	332	P	P	20 02 52.4	-0.1
	comp=Z,1.7nm,0.9s,baz=64,slow=5.4,SNR=4.9						
CLL	Collm	85.34	323	*i* P	P	20 03 09.7	+0.1
GERES	GERESS Array B	85.98	321	P	P	20 03 13.2	+0.1
	comp=Z,0.6nm,0.8s,baz=46,slow=5.8,SNR=5.4						
TXAR	Lajitas Array	115.56	42	PKP	PKPdf	20 09 15.6	+0.3
	comp=Z,0.2nm,0.7s,baz=142,slow=6.3,SNR=3.5						

IDC ***17*** *20:01:36.8±0.8, 19°.49N×120°.62E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/37, mbtmp3.7/10, ML3.3/1, Error ellipse: s-maj=35.9km s-min=16.6km az=69.0*
NEIC ***17*** *20:01:37.5±1.0, 19°.4N±0°.1×120°.4E±0°.1, h10km±2km, mb4.0/4, Error ellipse: s-maj=21.0km s-min=15.8km az=132.0*

ISC 17 20:01:40.0±0.8, **19°.47N**±0°.09×**120°.4E**±0°.1, **h23**km, **n24,** σ1§**19/23, mb3.9**/11, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	Pinlang	3.39	11	Pn	Pn	20 02 29.7	-1.8
TPUB	Ta-pu	3.81	3	Pn	Pn	20 02 35.3	-2.1
YULB	Yu-li	3.95	12		Pn	20 02 39.4	-0.4
SSLB	Suanglung	4.33	7	Pn	Pn	20 02 43.9	-0.5
NACB	Ninganchiao	4.81	13	Pn	Pn	20 02 51.0	0.0
YHNB	Yeheng	5.25	10	Pn	Pn	20 02 57.4	+0.2
HKPS	Hong Kong Po S	6.47	297	Pn	Pn	20 03 12.7	-1.2
QIZ	Qiongzhong	9.97	269	Pn	Pn	20 04 01.0	-0.9
KSRS	Korea Array	19.09	19	P	Pn	20 06 01.7	-0.2
	0.1nm,0.3s,baz=122,slow=37,SNR=3.7						
CMAR	Chiang Mai Arr	20.30	271	P	Pn	20 06 17.4	+0.8
	0.4nm,0.7s,baz=70,slow=8.6,SNR=4.6						
SONM	Songino Array	30.49	341	P	P	20 07 51.6	+0.2
	0.2nm,0.5s,baz=112,slow=43,SNR=2.9						
MKAR	Makanchi Array	41.33	320	P	P	20 09 25.6	+1.7
	0.9nm,0.8s,baz=119,slow=9.8,SNR=5.1						
MKAR	Makanchi Array	41.33	320	P	P	20 09 25.9	+1.9
WB0	Warramunga Arr	41.35	160	P	P	20 09 23.3	-1.0
WB0				IAmb	IAmb	20 09 41.3	
	comp=Z,2.7nm,1.0s						
WRA	Warramunga Arr	41.49	160	P	P	20 09 24.2	-1.3
	comp=Z,0.6nm,0.5s,baz=343,slow=9.0,SNR=14						
WRA	Warramunga Arr	41.49	160	P	P	20 09 23.9	-1.7
WB2	Warramunga Arr	41.50	160	P	P	20 09 24.4	-1.1
WB2				IAmb	IAmb	20 09 46.7	
	comp=Z,3.8nm,1.1s						
WR0	Warramunga Arr	41.57	160	P	P	20 09 25.2	-1.0
WR0				IAmb	IAmb	20 09 36.9	
	comp=Z,6.0nm,1.5s						
ZALV	Zalesovo Beam	43.87	330	P	P	20 09 44.9	+0.5
	comp=Z,0.8nm,0.6s,baz=124,slow=8.5,SNR=4.4						
ZALV	Zalesovo Beam	43.87	330	P	P	20 09 44.5	+0.1
ASAR	Alice Springs	44.86	162	P	P	20 09 52.8	+0.1
	comp=Z,0.8nm,0.4s,baz=339,slow=7.1,SNR=21						
STKA	Stephens Creek	54.96	158	P	P	20 11 10.4	+1.1
	comp=Z,1.0nm,0.6s,baz=317,slow=23,SNR=1.8						
ILAR	Eielson Array	73.73	26	P	P	20 13 11.2	-0.7
	comp=Z,0.1nm,0.4s,baz=321,slow=33,SNR=2.0						
FINES	FINESS Array B	75.13	330	P	P	20 13 21.3	+1.2
	comp=Z,1.5nm,0.8s,baz=125,slow=17,SNR=1.7						

IDC ***17*** *20:07:25.5±1.2, 19°.50N×120°.59E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/42, mbtmp3.6/7, Error ellipse: s-maj=55.4km s-min=18.4km az=63.0*

ISC 17 20:07:28.9±1.3, **19°.5N**±0°.2×**120°.6E**±0°.3, **h23**km, **n7,** σ0§**56/7, mb3.6**/6, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	20.48	271	P	P	20 12 05.3	0.0
	0.6nm,0.9s,baz=82,slow=8.9,SNR=4.9						
SONM	Songino Array	30.54	341	P	P	20 13 40.4	-0.2
	0.4nm,0.6s,baz=164,slow=9.6,SNR=3.8						
MKAR	Makanchi Array	41.43	320	P	P	20 15 14.0	+0.3
	0.8nm,0.7s,baz=123,slow=9.0,SNR=5.1						
WRA	Warramunga Arr	41.44	160	P	P	20 15 14.6	+0.6
	0.7nm,0.6s,baz=342,slow=8.9,SNR=12						
ZALV	Zalesovo Beam	43.95	330	P	P	20 15 34.4	+0.4
	0.9nm,0.6s,baz=108,slow=9.5,SNR=5.4						
ASAR	Alice Springs	44.82	163	P	P	20 15 40.6	-0.7
	0.5nm,0.6s,baz=346,slow=7.6,SNR=6.2						
KURBB	Kurchatov Arra	45.42	323	P	P	20 15 45.5	-0.3
	0.8nm,0.4s,baz=122,slow=8.0,SNR=6.9						

IDC ***17*** *20:10:40.3±1.2, 19°.52N×120°.69E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/42, mbtmp3.6/7, Error ellipse: s-maj=54.6km s-min=19.1km az=63.0*
NEIC ***17*** *20:10:41.6±0.8, 19°.4N±0°.1×120°.6E±0°.2, h10km±2km, mb4.1/4, Error ellipse: s-maj=24.9km s-min=18.7km az=66.0*

ISC 17 20:10:43.4±1.1, **19°.5N**±0°.1×**120°.7E**±0°.2, **h23**km, **n18,** σ0§**78/17, mb3.8/9**, **1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	Pinlang	3.36	6	Pn	Pn	20 11 35.0	+0.5
TPUB	Ta-pu	3.81	359	Pn	Pn	20 11 41.0	+0.2
YULB	Yu-li	3.95	8	Pn	Pn	20 11 43.2	+0.6
NACB	Ninganchiao	4.76	10	Pn	Pn	20 11 52.9	-0.9
LQP	Lukban	5.39	171	⇓*e*P	Pb	20 12 31.9	+15
CMAR	Chiang Mai Arr	20.59	271	P	P	20 15 21.1	+0.1
	0.9nm,1.0s,baz=79,slow=9.1,SNR=6.4						
CMAR	Chiang Mai Arr	20.59	271	P	P	20 15 20.6	-0.4
SONM	Songino Array	30.59	341	P	P	20 16 55.7	+0.1
	0.4nm,0.7s,baz=166,slow=10,SNR=2.7						
WRAB	Tennant Creek	41.38	160	P	P	20 18 25.9	-2.1
WRA	Warramunga Arr	41.39	160	P	P	20 18 28.3	+0.2
	0.5nm,0.6s,baz=342,slow=9.1,SNR=6.1						
WB2	Warramunga Arr	41.39	160	P	P	20 18 28.0	-0.1
WB2				IAmb	IAmb	20 18 34.2	
	comp=Z,2.9nm,1.1s						
WR0	Warramunga Arr	41.47	160	P	P	20 18 29.2	+0.4
WR0				IAmb	IAmb	20 18 56.3	
	comp=Z,6.0nm,1.3s						
MKAR	Makanchi Array	41.51	320	P	P	20 18 29.2	+0.3
	comp=Z,0.7nm,0.6s,baz=114,slow=11,SNR=4.9						
ZALV	Zalesovo Beam	44.01	330	P	P	20 18 48.6	-0.5
	comp=Z,1.0nm,0.7s,baz=118,slow=7.7,SNR=4.9						
ZALV	Zalesovo Beam	44.01	330	P	P	20 18 49.1	+0.1
ASAR	Alice Springs	44.77	163	P	P	20 18 56.6	+1.2
	comp=Z,0.6nm,0.6s,baz=344,slow=7.8,SNR=6.7						
KURK	Kurchatov	45.49	323	P	P	20 19 00.3	-0.5
KURK				IAmb	IAmb	20 19 02.2	
	comp=Z,4.6nm,1.2s						
KURBB	Kurchatov Arra	45.50	323	P	P	20 19 01.0	0.0
	comp=Z,0.9nm,0.5s,baz=123,slow=7.9,SNR=6.3						

IDC ***17*** *20:11:24.6±0.6, 19°.48N×120°.45E, h0km, mb4.2/19, mb1 4.3/20, mb1mx4.1/43, mbtmp4.2/20, ML3.2/1, Error ellipse: s-maj=24.3km s-min=12.0km az=67.0*
NEIC ***17*** *20:11:26.1±1.8, 19°.52N±0°.06×120°.56E±0°.08, h10km±1km, mb4.6/35, Error ellipse: s-maj=16.9km s-min=2.9km az=128.0*

ISC 17 20:11:28.4±0.5, **19°.55N**±0°.07×**120°.53E**±0°.09, **h23**km, **n89,** σ1§**30/89, mb4.4/37**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	Pinlang	3.30	9	Pn	Pn	20 12 17.2	-1.4
TPUB	Ta-pu	3.74	1	Pn	Pn	20 12 22.4	-2.2
YULB	Yu-li	3.89	10	Pn	Pn	20 12 26.4	-0.4
SSLB	Suanglung	4.24	5	Pn	Pn	20 12 30.2	-1.4
HKPS	Hong Kong Po S	6.56	296		Pn	20 12 59.9	-3.7
SBUM	Sibu	18.84	207	P	P	20 15 42.5	-4.3
KSRS	Korea Array	18.97	18	P	P	20 15 47.2	-1.0
	0.1nm,0.3s,baz=199,slow=10,SNR=2.6						
PAYA	Payao	19.49	273	P	Pn	20 15 56.0	+0.7
CM34	Chiang Mai Arr	20.21	272	P	P	20 16 02.0	+0.2
CM35	Chiang Mai Arr	20.22	271	P	P	20 16 02.0	0.0
CM36	Chiang Mai Arr	20.29	271	P	P	20 16 03.0	+0.3
CM09	Chiang Mai Arr	20.40	270	P	P	20 16 05.0	+1.1
CMMT	Chiang Mai	20.40	272	P	P	20 16 04.2	+0.3
CM33	Chiang Mai Arr	20.40	272	P	P	20 16 03.0	-0.9
CHTO	Chiang Mai	20.41	272	P	P	20 16 03.7	-0.3
CM04	Chiang Mai Arr	20.42	270	P	P	20 16 05.5	+1.5
CM01	Chiang Mai Arr	20.43	270	P	P	20 16 05.0	+0.7
CM02	Chiang Mai Arr	20.44	270	P	P	20 16 05.0	+0.6
CM31	Chiang Mai Arr	20.44	271	P	P	20 16 05.3	+0.9
CM31	Chiang Mai Arr	20.44	271	P	P	20 16 03.7	-0.7
CMAR	Chiang Mai Arr	20.44	271	P	P	20 16 02.3	-2.1
	4.7nm,1.0s,baz=78,slow=8.8,SNR=21						
CMAR				PcP	PcP	20 20 16.4	+0.1
	0.8nm,0.6s,baz=59,slow=0.6,SNR=9.0						
CMAR	Chiang Mai Arr	20.44	271		P	20 16 03.4	-1.0
CM05	Chiang Mai Arr	20.45	270	P	P	20 16 05.9	+1.5
CM15	Chiang Mai Arr	20.46	271	P	P	20 16 05.4	+0.8
CM13	Chiang Mai Arr	20.48	270	P	P	20 16 06.0	+1.2
CM32	Chiang Mai Arr	20.51	271	P	P	20 16 06.0	+0.9
MTKI	Muara Teweh, K	21.10	196	P	P	20 16 14.1	+2.6
	6µm16nm,0.4s						
SANI	Sanana	22.12	165	P	P	20 16 21.1	-1.3
	7.4nm,0.8s						
SIJI	Sorong	22.86	151	P	P	20 16 28.8	-1.6
	6.5nm,0.7s,baz=331,slow=4.6,SNR=4.5						
MJAR	Matsushiro Arr	22.96	39	P	P	20 16 33.6	+2.4
	2.2nm,0.8s,baz=242,slow=12,SNR=3.0						
SPSI	Sidrap Palu	23.38	182	P	P	20 16 38.6	+3.1
BBKI	Banjar Baru	23.54	194	P	P	20 16 41.5	+4.3
NLAI	Namlea	23.55	163	P	P	20 16 41.5	+4.3
MDJ	Mudanjiang	26.11	15		P	20 17 01.7	+1.1
MDJ				IAmb	IAmb	20 17 03.8	
	comp=Z,22nm,1.3s						
LSA	Lhasa	28.49	296	P	P	20 17 22.6	0.0
LSA				IAmb	IAmb	20 17 24.6	
	comp=Z,13nm,1.5s						
BATI	Baumata	29.73	174	P	P	20 17 31.8	-1.3
	comp=Z,19nm,0.8s,baz=312,slow=1.5,SNR=4.5						
SONM	Songino Array	30.47	341	P	P	20 17 39.9	+0.4
	comp=Z,1.5nm,0.6s,baz=162,slow=9.9,SNR=12						
SONM	Songino Array	30.47	341	P	P	20 17 40.0	+0.5
FITZ	Fitzroy Crossi	37.75	172	P	P	20 18 41.5	-1.1
MK31	Makanchi Array	41.36	320	P	P	20 19 13.4	+0.8
MK31				IAmb	IAmb	20 19 14.5	
	comp=Z,12nm,1.3s						
MKAR	Makanchi Array	41.36	320	P	P	20 19 13.1	+0.4
	comp=Z,7.2nm,1.0s,baz=113,slow=9.5,SNR=19						
MKAR	Makanchi Array	41.36	320	P	P	20 19 12.8	+0.1
WB0	Warramunga Arr	41.37	160	P	P	20 19 11.8	-1.1
WB0				IAmb	IAmb	20 19 22.1	
	comp=Z,17nm,1.6s						
WRA	Warramunga Arr	41.51	160	P	P	20 19 13.1	-1.0
	comp=Z,2.4nm,0.6s,baz=342,slow=8.9,SNR=22						
WRA				PcP	PcP	20 21 11.4	-0.1
	comp=Z,0.9nm,0.7s,baz=340,slow=3.4,SNR=5.6						
WRA	Warramunga Arr	41.51	160	P	P	20 19 13.7	-0.4
WB2	Warramunga Arr	41.52	160	P	P	20 19 12.2	-1.9
WB2				IAmb	IAmb	20 19 23.9	
	comp=Z,27nm,1.8s						
WR0	Warramunga Arr	41.59	160	P	P	20 19 13.5	-1.2
WR0				IAmb	IAmb	20 19 25.0	
	comp=Z,33nm,1.8s						
ZAA0	Zalesovo Array	43.87	330	P	P	20 19 33.0	+0.2
ZAA0				IAmb	IAmb	20 19 34.0	
	comp=Z,4.2nm,0.8s						
ZALV	Zalesovo Beam	43.87	330	P	P	20 19 32.7	-0.2
	comp=Z,3.8nm,0.7s,baz=114,slow=7.8,SNR=18						
NIL	Nilore	44.18	298	P	P	20 19 35.4	-0.3
NIL				IAmb	IAmb	20 19 36.5	
	comp=Z,8.3nm,0.9s						
AS31	Alice Springs	44.89	163	P	P	20 19 40.6	-0.7
ASAR	Alice Springs	44.89	163	P	P	20 19 41.2	-0.2
	comp=Z,1.5nm,0.5s,baz=344,slow=6.9,SNR=13						
ASAR	Alice Springs	44.89	163	P	P	20 19 40.7	-0.6
KURK	Kurchatov	45.34	323	P	P	20 19 45.2	+0.5
KURBB	Kurchatov Arra	45.35	323	P	P	20 19 45.0	+0.3
	comp=Z,8.4nm,0.7s,baz=123,slow=7.9,SNR=22						
BTK	Batken	47.06	307	P	P	20 19 59.1	+0.6
BTK				IAmb	IAmb	20 19 59.7	
	comp=Z,12nm,1.6s						
GAR	Garm	47.26	305	P	P	20 20 00.8	+0.7
KBL	Kabul	47.74	299	P	P	20 20 04.2	+0.2
KBL				IAmb	IAmb	20 20 05.5	
	comp=Z,6.2nm,0.9s						
KKAR	Karatay Array	47.91	311	P	P	20 20 05.8	+0.8
KKAR				IAmb	IAmb	20 20 06.8	
	comp=Z,6.4nm,1.4s						
CHGR	Chuyangaron	48.10	305	P	P	20 20 07.0	+0.4
BRVK	Borovoye	51.01	323	P	P	20 20 29.0	+0.5
BRVK				IAmb	IAmb	20 20 30.1	
	comp=Z,4.1nm,0.8s						
NRIK	Noril'sk	53.72	346	P	P	20 20 48.9	+0.7
	comp=Z,1.3nm,0.3s,baz=130,slow=7.5,SNR=5.5						
BBOO	Buckleboo	54.14	164	P	P	20 20 52.6	+0.8
STKA	Stephens Creek	54.97	158	P	P	20 20 57.8	-0.1
	comp=Z,3.6nm,0.9s,baz=334,slow=16,SNR=5.6						
STKA	Stephens Creek	54.97	158	P	P	20 20 58.0	+0.1
ABKAR	Akbulak array	56.31	317	P	P	20 21 07.5	+0.1
ABKAR				IAmb	IAmb	20 21 08.8	
	comp=Z,5.2nm,1.4s						
ABKAR	Akbulak array	56.31	317	P	P	20 21 07.4	+0.1
GEYT	Alibeck	56.71	303	P	P	20 21 09.9	-0.5
	comp=Z,3.1nm,0.8s,baz=227,slow=17,SNR=5.5						
GEYT	Alibeck	56.71	303	P	P	20 21 11.6	+1.2
GYA0B	ALIBECK ARRAY	56.71	303	P	P	20 21 12.0	+1.6
GYA0B				IAmb	IAmb	20 21 28.6	
	comp=Z,5.6nm,0.9s						
ARU	Arti	58.48	325	P	P	20 21 22.6	0.0
KIV	Kislovodsk	68.07	310	P	P	20 22 27.5	+1.1
GEVA	Gevas	68.52	304	P	P	20 22 28.2	-1.2
GEVA				IAmb	IAmb	20 22 31.2	
	comp=Z,6.2nm,0.9s						
KLMR	Klimovskoe	68.77	329	*e*P	P	20 22 24.2	-6.1
KLMR				AMP		20 22 30.5	
	comp=Z,13nm,1.2s						
RAYN	Ar Rayn	69.17	288	P	P	20 22 32.3	-1.2
RAYN				IAmb	IAmb	20 22 33.7	
	comp=Z,2.8nm,0.9s						
MARD	Mardin	70.46	304	P	P	20 22 39.8	-1.6
MARD				IAmb	IAmb	20 22 42.8	
	comp=Z,7.1nm,0.9s						
ILAR	Eielson Array	73.60	27	P	P	20 22 59.5	-0.1
	comp=Z,0.3nm,0.5s,baz=295,slow=5.2,SNR=4.8						
ILAR	Eielson Array	73.60	27	P	P	20 23 00.5	+1.0
FINES	FINESS Array B	75.14	330	P	P	20 23 07.8	-0.7
	comp=Z,4.0nm,0.8s,baz=72,slow=6.8,SNR=7.0						
MENT	Mentasta	75.37	28	P	P	20 23 08.3	-1.6
AKASG	Malin Array Be	75.94	319	P	P	20 23 12.1	-1.3
	comp=Z,2.0nm,0.6s,baz=64,slow=5.6,SNR=9.3						
AKASG	Malin Array Be	75.94	319	P	P	20 23 13.2	-0.1
NACGM	Naroch	76.36	324	*e*	P	20 23 16.0	+0.4
BURAR	Bucovina Array	79.29	317	P	P	20 23 32.2	-0.1
NB2	NORSAR Subarra	82.03	332	P	P	20 23 45.7	-0.9
	comp=Z,3.8nm,1.1s,baz=63,slow=5.6						
NOA	NORSAR Array B	82.03	332	P	P	20 23 45.9	-0.7
	comp=Z,1.8nm,0.9s,baz=63,slow=5.2,SNR=4.2						
KMBO	Kilima Mbogo	84.04	267	P	P	20 23 59.2	+1.1
	comp=Z,0.4nm,0.3s,baz=246,slow=2.6,SNR=4.4						
CLL	Collm	85.38	323	*i* P	P	20 24 03.7	-0.1
GERES	GERESS Array B	86.03	321	P	P	20 24 07.3	0.0
	comp=Z,1.1nm,0.9s,baz=72,slow=4.3,SNR=5.5						

IDC ***17*** *20:53:18.8±0.6, 42°.18N×144°.47E, h0km, mb4.2/25, mb1 4.4/31, mb1mx4.3/43, mbtmp4.2/31, ML3.5/5, MS3.8/22, Ms1 3.8/22, ms1mx3.5/47, Error ellipse: s-maj=14.0km s-min=12.7km az=144.0*
BJI ***17*** *20:53:20.5±0.0, 42°.26N×144°.56E, h29km, mB4.9/33, mb4.4/41, Ms4.3/28, Ms7 4.0/28*
MOS ***17*** *20:53:21.7±0.9, 42°.10N×144°.42E, h33km, mb4.8/25, Error ellipse: s-maj=7.3km s-min=4.9km az=96.6*
SKHL ***17*** *20:53:21.6±0.4, 42°.04N×144°.58E, h38km±1km, mb4.7/13*
NIED ***17*** *20:53:22.6, 42°.21N×144°.47E, h28km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr=0.94; Mθθ2.96; Mϕϕ=-2.02; Mrθ2.73; Mθϕ 0.05; Mϕr2.28; Fault plane solution: Mo4.41000×10¹⁵ NP1: ϕs232.00000°, δ82.00000°, λ-123.00000°. NP2: ϕs130.00000°, δ34.00000°, λ-14.00000°.*
JMA ***17*** *20:53:22.6, 42°.21N×144°.47E, h28km±1km, M4.5*
JMA Felt II J1.
NEIC ***17*** *20:53:22.6±1.9, 42°.10N±0°.06×144°.37E±0°.10, h26km±5km, mb4.7/70, Error ellipse: s-maj=11.3km s-min=8.9km az=118.0*

ISC 17 20:53:22.9±0.6, **42°.22N**±0°.04×**144°.41E**±0°.04, **h25**km±3km, **h25**km:**pP-P, n307,** σ1§**29**/302, **mb4.6**/108, **MS3.9**/27, **20C-10D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAK	Akkeshi	0.80	15	⇑P	Pb	20 53 37.6	-0.6
JAK				*e*S	Sn	20 53 49.5	-0.2
JOB	Onbets	0.80	328	⇑P	Pn	20 53 38.4	-0.2
JOB				*e*S	Sn	20 53 51.7	+2.0
JTHR	Tokachihiroo	0.83	275	⇓P	Pn	20 53 38.7	-0.3
JTHR				*e*S	Sn	20 53 51.0	+0.6
JCH	Churui	0.87	297	⇓P	Pn	20 53 39.2	-0.3
JCH				*e*S	Sn	20 53 51.8	+0.4
JEM	Erimo	0.95	258	⇓P	Pn	20 53 40.1	-0.6
JEM				*e*S	Sb	20 53 54.2	+1.2
ERM	Erimo	0.95	258	*d* iPN	Pn	20 53 40.0	-0.7
ERM	Erimo	0.95	258	Pn	Pn	20 53 39.6	-1.1
JKHN	Kushirohamanak	1.02	33	⇑P	Pn	20 53 41.1	-0.6
JKHN				*e*S	Sb	20 53 55.5	+0.6
JAR	Ashorobuto	1.17	336	⇑P	Pn	20 53 43.2	-0.5
JAR				*e*S	Sn	20 53 59.1	+0.2
JNBK	Urakawa-nobuka	1.23	273	P	Pn	20 53 44.0	-0.5
JNK	Nakash	1.38	9	⇑P	Pn	20 53 45.4	-1.2
NMR	Nemuro--Hokkai	1.50	40	*i* P	Pn	20 53 47.0	-1.2
NMR				*i* S	Sb	20 54 08.0	-0.7
NMR	Nemuro--Hokkai	1.50	40	⇓*i* PN	Pn	20 53 47.4	-0.8
NMR				*i* S	Sb	20 54 08.4	-0.3
GLVR	Golovnino	1.72	28	*i* P	Pn	20 53 50.0	-1.2
GLVR				AMB	AMB	20 53 56.0	
	2µm,0.4s						
GLVR				*i* S	Sn	20 54 12.0	-0.4
GLVR				A	A	20 54 15.0	
	600nm,0.4s						
GLVR				A	A	20 54 15.0	
	2µm,0.4s						
GLVR	Golovnino	1.72	28	*d* iPN	Pn	20 53 50.9	-0.3
GLVR				*i* S	Sn	20 54 12.5	+0.1
GLVR				pmax	pmax		
	comp=Z,2µm,0.4s						
GLVR				pmax	pmax		
	comp=N,937nm,0.3s						
GLVR				pmax	pmax		
	comp=E,204nm,0.3s						
GLVR				smax	smax		
	comp=N,6.0nm,0.4s						
GLVR				smax	smax		
	comp=E,16µm,0.4s						
GRPR	Tuman	2.03	29	*i* P	Pn	20 53 55.0	-0.5
GRPR				AMB	AMB	20 53 56.0	
	comp=E,84nm,0.3s						
GRPR				*i* S	Sn	20 54 21.0	+0.9
GRPR				A	A	20 54 22.0	
	comp=E,1µm,0.5s						
GRPR				A	A	20 54 22.0	
	comp=E,8µm,0.5s						
GRPR	Tuman	2.03	29	⇑*i* PN	Pn	20 53 55.4	-0.1
GRPR				*i* S	Sb	20 54 21.9	-2.0
GRPR				pmax	pmax		
	comp=Z,841nm,0.3s						
GRPR				pmax	pmax		
	comp=E,123nm,0.2s						
GRPR				pmax	pmax		
	comp=N,258nm,0.4s						
GRPR				smax	smax		
	comp=N,1µm,0.3s						
GRPR				smax	smax		
	comp=E,8µm,0.5s						
YUK	Yuzh-Kuril'sk	2.10	30	*i* P	Pn	20 53 56.2	-0.3
YUK				AMB	AMB	20 53 59.0	
	comp=E,276nm,0.4s						
YUK				*i* S	Sn	20 54 22.3	+0.5
YUK				A	A	20 54 27.0	
	comp=E,3µm,0.6s						
YUK				A	A	20 54 27.0	
	comp=E,7µm,0.6s						
YUK	Yuzh-Kuril'sk	2.10	30	*d* iPN	Pn	20 53 55.5	-1.0
JEW	Eniwo	2.27	287		Pn	20 53 59.2	+0.3
JKA	Kamikawa-asahi	2.31	326	Pn	Pn	20 54 00.4	+1.0
ASAJ	Asahikawa	2.31	326	Pn	Pn	20 54 00.5	+1.1
	comp=E,21nm,0.3s,baz=186,slow=14,SNR=135						
ASAJ				Sn	Sb	20 54 31.7	-0.3
	comp=E,69nm,0.3s,baz=113,slow=23,SNR=6.7						
ASAJ				LR	LR	20 55 18.9	
	comp=E,2µm,19.3s,baz=106,slow=51						
JTM	Tenmabayashi	2.89	241	Pn	Pn	20 54 07.9	+0.5
KUR	Kuril'sk	3.92	39	*i* P	Pn	20 54 22.8	+1.4
KUR				AMB	AMB	20 54 24.5	
	comp=E,255nm,0.5s						
KUR				*i* S	Sn	20 55 07.6	+1.1
KUR				A	A	20 55 14.0	
	comp=E,357nm,0.5s						
KUR				A	A	20 55 14.0	
	comp=E,701nm,0.5s						
KUR	Kuril'sk	3.92	39	*d* iPN	Pn	20 54 22.9	+1.5
KUR				*e*S	Sn	20 55 08.9	+2.4
KUR				pmax	pmax		
	comp=E,61nm,0.5s						
KUR				pmax	pmax		
	comp=Z,221nm,0.5s						
KUR				pmax	pmax		
	comp=N,74nm,0.3s						
KUR				smax	smax		
	comp=N,36nm,0.5s						
KUR				smax	smax		
	comp=E,593nm,0.5s						
YSS	Yuzh-Sakhalins	4.88	347	*e*P	Pn	20 54 36.2	+1.6
YSS				AMB	AMB	20 54 37.3	
	comp=E,30nm,0.6s						
YSS	Yuzh-Sakhalins	4.88	347	*e*PN	Pn	20 54 35.5	+0.9
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS				MLR	MLR

CN2	**Changchun**	**13.97**	**283**	*e*P		**P**		**20 56 43.8**	**-3.1**
CN2				LR		LR			
	comp=Z,450nm,14.0s								
CN2				LR		LR			
	comp=Z,450nm,14.0s								
CN2				LR		LR			
	comp=Z,500nm,15.0s								
PEA0B	**Petropavlovsk-**	**14.07**	**35**	*i* P		**Pn**		**20 56 42.1**	**+1.6**
PETK	**Petropavlovsk-**	**14.07**	**35**	Pn		**Pn**		**20 56 39.4**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=175,slow=8.5,SNR=7.7								
PETK	**Petropavlovsk-**	**14.07**	**35**	P		**Pn**		**20 56 40.2**	**-0.3**
PETK	**Petropavlovsk-**	**14.07**	**35**	Pn		**Pn**		**20 56 40.2**	**-0.3**
BMKR	**Bomnak**	**16.16**	**326**	*e*P		**Pn**		**20 57 07.5**	**-0.6**
BMKR				AMB		AMB		20 57 19.8	
	comp=Z,7.0nm,0.4s								
ZEA	**Zeya**	**16.22**	**321**	*e*P		**Pn**		**20 57 08.0**	**-0.9**
ZEA				AMB		AMB		20 57 12.2	
	comp=Z,10.0nm,0.7s								
ZEA				AMB		AMB		20 57 12.2	
	comp=Z,20nm,0.7s								
ZEA	**Zeya**	**16.22**	**321**	*e*P		**P**		**20 57 11.6**	**-0.2**
ZEA				*e*S		**Sn**		**21 00 02.3**	**-5.6**
ZEA				pmax		pmax			
	comp=N,10.0nm,0.6s								
ZEA				pmax		pmax			
	comp=Z,20nm,0.9s								
ZEA				smax		smax			
	comp=N,100nm,5.1s								
KROS	**Kirovskiy**	**16.78**	**323**	*e*P		**Pn**		**20 57 15.0**	**-1.1**
KROS				AMB		AMB		20 57 23.0	
	comp=N,3.0nm,0.4s								
MA2	**Magadan**	**17.82**	**11**	*e*P		**P**		**20 57 29.3**	**-0.2**
MA2	**Magadan**	**17.82**	**11**	*ce*P		**P**		**20 57 29.3**	**-0.2**
MA2				pmax		pmax			
	comp=Z,71nm,2.5s								
SEY	**Seymchan**	**21.27**	**10**	P		**P**		**20 58 04.8**	**-2.3**
	comp=Z,6.1nm,0.8s,baz=194,slow=10.0,SNR=8.8								
SEY	**Seymchan**	**21.27**	**10**	*i* P		**P**		**20 58 05.5**	**-1.6**
BJI	**Beijing**	**21.34**	**274**	P		**P**		**20 58 06.0**	**-2.0**
BJI				S		Sn		21 02 08.3	-3.5
BJI				pmax		pmax			
	comp=Z,3.0nm,0.6s								
BJI				LR		LR			
	comp=Z,200nm,9.8s								
BJI				LR		LR			
	comp=Z,240nm,15.6s								
BJI				LR		LR			
	comp=Z,240nm,18.1s								
BJT	**Baijiatuan**	**21.35**	**274**	P		**P**		**20 58 06.6**	**-1.6**
BJT				pmax		pmax			
	comp=Z,13nm,1.0s								
BJT	**Baijiatuan**	**21.35**	**274**			**P**		**20 58 06.5**	**-1.6**
YAK	**Yakutsk**	**21.70**	**341**	*i* P		**P**		**20 58 09.8**	**-1.9**
YAK				pmax		pmax			
	comp=Z,28nm,0.7s								
YAK	**Yakutsk**	**21.70**	**341**	P		**P**		**20 58 08.1**	**-3.5**
NJ2	**Nanjing**	**22.69**	**252**	*e*P		**P**		**20 58 22.3**	**-0.2**
NJ2				pmax		pmax			
	comp=Z,4.0nm,0.5s								
CIT	**Chita**	**23.01**	**306**	*e*P		**P**		**20 58 26.2**	**+0.4**
CIT	**Chita**	**23.01**	**306**	*e*P		**P**		**20 58 26.2**	**+0.4**
CIT				*e*				20 58 32.0	
CIT				*e*				20 58 44.2	
CIT				pmax		pmax			
	comp=Z,28nm,1.3s								
HHC	**Hu-ho-hao-te**	**24.55**	**278**	*e*P		**P**		**20 58 38.6**	**-2.1**
HHC				pmax		pmax			
	comp=Z,13nm,0.7s								
HHC				pmax		pmax			
	comp=Z,160nm,6.0s								
HHC				LR		LR			
	comp=Z,220nm,12.8s								
HHC				LR		LR			
	comp=Z,220nm,12.8s								
HHC				LR		LR			
	comp=Z,210nm,13.2s								
BOD	**Bodaibo**	**24.71**	**320**	*e*P		**P**		**20 58 38.4**	**-3.4**
BOD				pmax		pmax			
	comp=Z,9.0nm,1.2s								
WHN	**Wuhan**	**26.72**	**254**	⇑P		P		20 59 08.9	+8.6
ULN	**Ulaanbaatar**	**26.80**	**295**	*ce*P		**P**		**20 58 59.1**	**-2.0**
ULN				pmax		pmax			
	comp=Z,9.0nm,1.3s								
ULN	**Ulaanbaatar**	**26.80**	**295**	P		**P**		**20 59 01.7**	**+0.6**
SONM	**Songino Array**	**27.25**	**295**	P		**P**		**20 59 05.3**	**+0.3**
	comp=Z,5.0nm,0.7s,baz=85,slow=8.1,SNR=18								
SONM				LR		LR		21 10 44.5	
	comp=Z,158nm,18.9s,baz=44,slow=38								
SONM	**Songino Array**	**27.25**	**295**	P		**P**		**20 59 04.8**	**-0.2**
GUMO	**Guam**	**28.53**	**179**	LR		LR		21 08 55.0	
	comp=Z,74nm,21.6s,baz=24,slow=33								
XAN	**Xi'an**	**28.92**	**265**	P		P		20 59 29.9	+10
XAN				pmax		pmax			
	comp=Z,11nm,1.3s								
XAN				pmax		pmax			
	comp=Z,280nm,6.7s								
TLY	**Talaya**	**29.05**	**303**	P		**P**		**20 59 21.6**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=122,slow=7.9,SNR=4.7								
TLY	**Talaya**	**29.05**	**303**	*e*P		**P**		**20 59 21.9**	**+1.0**
TLY	**Talaya**	**29.05**	**303**	*e*P		**P**		**20 59 21.9**	**+1.0**
TLY				pmax		pmax			
	comp=Z,19nm,1.1s								
TLY				MLR		MLR			
	comp=Z,501nm,14.0s								
TLY	**Talaya**	**29.05**	**303**	P		**P**		**20 59 21.7**	**+0.8**
ZAK	**Zakamensk**	**29.25**	**300**	*e*P		**P**		**20 59 22.2**	**-0.6**
ZAK				pmax		pmax			
	comp=Z,9.0nm,1.3s								
H11N2	**WAKE ISLAND Hy**	**29.40**	**133**	T		T		21 30 44.3	
	baz=327,slow=75,SNR=1332								
H11N1	**WAKE ISLAND Hy**	**29.41**	**133**	T		T		21 30 45.9	
	baz=327,slow=75,SNR=1187								
H11N3	**WAKE ISLAND Hy**	**29.42**	**133**	T		T		21 30 49.1	
	baz=327,slow=75,SNR=972								
H11S1	**WAKE ISLAND Hy**	**30.30**	**134**	T		T		21 31 57.8	
	baz=328,slow=76,SNR=1263								
H11S3	**WAKE ISLAND Hy**	**30.30**	**135**	T		T		21 31 54.3	
	baz=328,slow=76,SNR=709								
H11S2	**WAKE ISLAND Hy**	**30.32**	**134**	T		T		21 31 54.6	
	baz=328,slow=76,SNR=724								
TIK	**Tiksi**	**30.47**	**350**	*e*P		**P**		**20 59 35.0**	**+1.8**
TIXI	**Tiksi**	**30.49**	**350**	*i* P		**P**		**20 59 35.0**	**+1.6**
MOY	**Mondy**	**30.70**	**303**	*e*P		**P**		**20 59 35.6**	**0.0**
MOY				pmax		pmax			
	comp=Z,34nm,2.3s								
LZH	**Lanzhou**	**31.82**	**273**	*e*P		**P**		**20 59 46.5**	**+0.7**
LZH				pP		pP		20 59 53.1	+0.3
LZH				sP		sP		20 59 56.1	+0.4
LZH				pmax		pmax			
	comp=Z,12nm,1.3s								
LZH				pmax		pmax			
	comp=Z,67nm,4.9s								
LZH				LR		LR			
	comp=Z,220nm,11.4s								
LZH				LR		LR			
	comp=Z,320nm,11.9s								
LZH				LR		LR			
	comp=Z,180nm,13.0s								
GTA	**Gaotai**	**33.58**	**280**	⇑P		**P**		**21 00 01.8**	**+0.7**
GTA				pP		pP		21 00 10.1	+2.0
GTA				sP		sP		21 00 14.1	+3.2
GTA				PcP		**PcP**		**21 02 45.8**	**+4.7**
GTA				S		**S**		**21 05 21.9**	**-0.1**
GTA				sS		sS		21 05 39.4	+5.6
GTA				pmax		pmax			
	comp=Z,4.0nm,1.0s								
GTA				pmax		pmax			
	comp=Z,120nm,6.6s								
GTA				LR		LR			
	comp=Z,110nm,13.8s								
GTA				LR		LR			
	comp=Z,140nm,13.8s								
GTA				LR		LR			
	comp=Z,180nm,17.1s								
GYA	**Guiyang**	**34.59**	**255**	⇓P		P		21 00 18.6	+8.7
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
QIZ	**Qiongzhong**	**37.28**	**242**	P		**P**		**21 00 31.4**	**-1.5**
QIZ				S		**S**		**21 06 19.8**	**+0.9**
QIZ				LR		LR			
	comp=Z,320nm,11.8s								
QIZ				LR		LR			
	comp=Z,320nm,12.8s								
KMI	**Kunming**	**38.22**	**257**	⇑*e*P		P		21 00 50.1	+9.1
KMI				pP		sP		21 00 58.3	+7.3
KMI				pmax		pmax			
	comp=Z,16nm,0.9s								
KMI				pmax		pmax			
	comp=Z,120nm,5.1s								
NRIK	**Noril'sk**	**39.64**	**332**	P		**P**		**21 00 50.7**	**-1.4**
	comp=Z,1.2nm,0.4s,baz=89,slow=18,SNR=4.3								
NRIK				LR		LR		21 18 41.0	
	comp=Z,248nm,18.6s,baz=24,slow=38								
NRIK	**Noril'sk**	**39.64**	**332**	*ce*P		**P**		**21 00 50.0**	**-2.1**
NRIK				pmax		pmax			
	comp=Z,3.0nm,1.0s								
ZAA0	**Zalesovo Array**	**40.33**	**308**	P		**P**		**21 00 57.3**	**-0.8**
ZAA0				IAmb		IAmb		21 01 07.7	
	comp=Z,15nm,0.8s								
ZALV	**Zalesovo Beam**	**40.33**	**308**	P		**P**		**21 00 58.2**	**+0.1**
	comp=Z,8.1nm,0.8s,baz=85,slow=8.1,SNR=30								
ZALV				PcP		**PcP**		**21 03 02.4**	**+1.3**
	comp=Z,2.5nm,0.6s,baz=96,slow=2.6,SNR=5.2								
ZALV				LR		LR		21 18 07.8	
	comp=Z,64nm,20.1s,baz=96,slow=37								
ZALV	**Zalesovo Beam**	**40.33**	**308**	P		**P**		**21 00 57.6**	**-0.5**
WMQ	**Urumqi**	**40.80**	**292**	*e*P		**P**		**21 01 03.0**	**+0.8**
WMQ				pP		pP		21 01 10.3	+1.0
WMQ				pmax		pmax			
	comp=Z,19nm,0.9s								
WMQ				pmax		pmax			
	comp=Z,210nm,4.7s								
WMQ				LR		LR			
	comp=Z,450nm,15.3s								
WMQ				LR		LR			
	comp=Z,620nm,19.9s								
WMQ				LR		LR			
	comp=Z,460nm,16.7s								
CAST	**Castle Rocks**	**41.67**	**37**	P		**P**		**21 01 10.6**	**+1.6**
KTH	**Kantishna Hill**	**42.19**	**37**	P		**P**		**21 01 14.5**	**+1.3**
KTH				IAmb		IAmb		21 01 29.1	
	comp=Z,14nm,1.0s								
I23K	**Minto, Yukon-K**	**42.83**	**35**	P		**P**		**21 01 19.5**	**+1.1**
MDM	**Murphy Dome**	**43.32**	**35**	P		**P**		**21 01 23.6**	**+1.2**
MDM				IAmb		IAmb		21 01 32.7	
	comp=Z,7.9nm,0.7s								
WRH	**Wood River Hil**	**43.40**	**36**	P		**P**		**21 01 24.7**	**+1.7**
COLA	**College**	**43.48**	**35**	*i* P		**P**		**21 01 24.5**	**+0.9**
COLA				pmax		pmax			
	comp=Z,9.0nm,1.0s								
CCB	**Clear Creek Bu**	**43.51**	**35**	P		**P**		**21 01 25.7**	**+1.8**
MK31	**Makanchi Array**	**43.52**	**298**	*ce*P		**P**		**21 01 24.9**	**+0.6**
MK31	**Makanchi Array**	**43.52**	**298**	P		**P**		**21 01 23.2**	**-1.1**
MK31				IAmb		IAmb		21 01 34.4	
	comp=Z,8.6nm,1.0s								
MKAR	**Makanchi Array**	**43.52**	**298**	P		**P**		**21 01 24.2**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=81,slow=9.6,SNR=13								
MKAR				LR		LR		21 18 57.7	
	comp=Z,48nm,19.1s,baz=66,slow=35								
MKAR	**Makanchi Array**	**43.52**	**298**	P		**P**		**21 01 22.7**	**-1.5**
POKR	**Poker Plat Res**	**43.65**	**35**	P		**P**		**21 01 26.4**	**+1.4**
POKR				IAmb		IAmb		21 01 35.8	
	comp=Z,10nm,0.8s								
MAKZ	**Makanchi**	**43.72**	**298**	P		**P**		**21 01 26.4**	**+0.5**
MAKZ				pmax		pmax			
	comp=Z,14nm,1.1s								
MAKZ	**Makanchi**	**43.72**	**298**	P		**P**		**21 01 26.4**	**+0.5**
MAKZ				IAmb		IAmb		21 01 36.1	
	comp=Z,14nm,1.1s								
DHY	**Denali Highway**	**43.81**	**38**	P		**P**		**21 01 27.0**	**+0.5**
DHY				IAmb		IAmb		21 01 37.6	
	comp=Z,7.8nm,0.9s								
HDA	**Harding Lake**	**43.90**	**36**	P		**P**		**21 01 26.7**	**-0.3**
IL31		**43.90**	**35**	P		**P**		**21 01 27.3**	**+0.3**
ILAR	**Eielson Array**	**43.90**	**35**	P		**P**		**21 01 27.2**	**+0.2**
	comp=Z,3.2nm,0.5s,baz=254,slow=6.4,SNR=28								
ILAR	**Eielson Array**	**43.90**	**35**	P		**P**		**21 01 26.9**	**-0.2**
ILAR	**Eielson Array**	**43.90**	**35**	P		**P**		**21 01 26.9**	**-0.2**
LSA	**Lhasa**	**44.22**	**271**	P		P		21 01 40.6	+10
LSA	**Lhasa**	**44.22**	**271**	P		**P**		**21 01 30.6**	**0.0**
LSA				pmax		pmax			
	comp=Z,9.0nm,1.0s								
LSA	**Lhasa**	**44.22**	**271**	P		**P**		**21 01 30.6**	**0.0**
LSA				IAmb		IAmb		21 01 42.2	
	comp=Z,8.7nm,1.0s								
PRP	**Porcupine Dome**	**44.42**	**34**	P		**P**		**21 01 32.6**	**+1.2**
PRP				IAmb		IAmb		21 01 42.0	
	comp=Z,13nm,0.7s								
FYU	**Fort Yukon**	**44.48**	**33**	P		**P**		**21 01 32.8**	**+1.1**
FYU				IAmb		IAmb		21 01 47.9	
	comp=Z,8.0nm,0.7s								
UTTA	**Uttaradit**	**44.50**	**250**	P		P		21 01 43.3	+11
	comp=Z,13nm,0.8s								
KURK	**Kurchatov**	**44.73**	**305**	*e*P		**P**		**21 01 33.9**	**+0.1**
KURK	**Kurchatov**	**44.73**	**305**	*ce*P		**P**		**21 01 33.9**	**+0.1**
KURK				pmax		pmax			
	comp=Z,6.0nm,1.0s								
KURK	**Kurchatov**	**44.73**	**305**	P		**P**		**21 01 33.4**	**-0.4**
KURK				IAmb		IAmb		21 01 43.2	
	comp=Z,14nm,0.8s								
CM34	**Chiang Mai Arr**	**44.75**	**253**	P		P		21 01 45.0	+11
CHAI	**Chaiyaphum**	**44.77**	**247**	P		P		21 01 44.0	+9.4
	comp=Z,22nm,1.0s								
KURBB	**Kurchatov Arra**	**44.81**	**304**	P		**P**		**21 01 34.1**	**-0.4**
	comp=Z,4.2nm,0.8s,baz=72,slow=8.8,SNR=18								
CM33	**Chiang Mai Arr**	**44.92**	**253**	P		**P**		**21 01 40.0**	**+4.3**
CMMT	**Chiang Mai**	**44.92**	**253**	P		P		21 01 44.6	+8.9
	comp=Z,3.8nm,0.9s								
CHTO	**Chiang Mai**	**44.92**	**253**	P		**P**		**21 01 34.2**	**-1.5**
CHTO				pmax		pmax			
	comp=Z,6.0nm,0.9s								
CHTO	**Chiang Mai**	**44.92**	**253**	P		**P**		**21 01 34.2**	**-1.5**
CHTO				IAmb		IAmb		21 01 46.7	
	comp=Z,5.6nm,0.8s								
CM36	**Chiang Mai Arr**	**45.01**	**253**	P		P		21 01 47.0	+11
CMAR	**Chiang Mai Arr**	**45.16**	**253**	P		**P**		**21 01 38.1**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=45,slow=7.5,SNR=5.6								
CMAR				LR		LR		21 21 18.5	
	comp=Z,96nm,19.5s,baz=104,slow=37								
CMAR	**Chiang Mai Arr**	**45.16**	**253**	P		**P**		**21 01 36.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**45.16**	**253**	P		**P**		**21 01 36.9**	**-0.8**
CM02	**Chiang Mai Arr**	**45.17**	**253**	P		P		21 01 49.2	+12
	comp=Z,4.5nm,0.8s								
CM04	**Chiang Mai Arr**	**45.17**	**253**	P		P		21 01 48.9	+11
	comp=Z,4.9nm,0.9s								
CM05	**Chiang Mai Arr**	**45.19**	**253**	P		P		21 01 49.0	+11
	comp=Z,2.9nm,0.8s								
CM13	**Chiang Mai Arr**	**45.21**	**253**	P		P		21 01 49.0	+11
	comp=Z,3.6nm,0.9s								
DOT	**Dot Lake**	**45.23**	**37**	P		**P**		**21 01 38.3**	**+0.5**
DOT				IAmb		IAmb		21 01 48.6	
	comp=Z,7.2nm,0.8s								
SUKH	**Sukhothai**	**45.32**	**251**	P		P		21 01 50.2	+11
CRQM	**Cirque**	**46.11**	**41**	P		**P**		**21 01 46.6**	**+1.7**
INK	**Inuvik**	**48.73**	**29**	P		**P**		**21 02 05.2**	**+0.4**
	comp=Z,3.7nm,0.5s,baz=306,slow=7.4,SNR=21								
INK	**Inuvik**	**48.73**	**29**	P		**P**		**21 02 05.1**	**+0.3**
INK				pmax		pmax			
	comp=Z,7.0nm,0.6s								
INK	**Inuvik**	**48.73**	**29**	P		**P**		**21 02 05.1**	**+0.3**
INK				IAmb		IAmb		21 02 15.4	
	comp=Z,6.5nm,0.6s								
HYT	**Haines Junctio**	**48.79**	**40**	P		**P**		**21 02 08.0**	**+2.4**
BRVK	**Borovoye**	**48.97**	**310**	*e*P		**P**		**21 02 07.0**	**0.0**
BRVK	**Borovoye**	**48.97**	**310**	*ce*P		**P**		**21 02 07.0**	**0.0**
BRVK				pmax		pmax			
	comp=Z,9.0nm,1.3s								
BRVK	**Borovoye**	**48.97**	**310**	P		**P**		**21 02 07.0**	**0.0**
GUN	**Gumba**	**49.09**	**273**	*e*P		**P**		**21 02 09.3**	**+0.7**
	comp=Z,32nm,0.5s								
BOOM	**Boomskoye usch**	**49.29**	**295**	P		**P**		**21 02 10.0**	**+0.2**
BOOM				pmax		pmax			
	comp=Z,21nm,1.2s								
BOOM	**Boomskoye usch**	**49.29**	**295**	P		**P**		**21 02 10.0**	**+0.2**
KKN	**Kakani**	**49.60**	**273**	*e*P		**P**		**21 02 13.4**	**+1.0**
	comp=Z,15nm,0.7s								
PKIN	**Phulchoki**	**49.63**	**273**	*e*P		**P**		**21 02 14.4**	**+1.7**
	comp=Z,8.2nm,0.5s								
GKN	**Gorkha**	**49.96**	**274**	*e*P		**P**		**21 02 17.0**	**+2.0**
	comp=Z,9.4nm,0.5s								
DANN	**Dangsing**	**50.42**	**275**	*e*P		**P**		**21 02 19.4**	**+0.7**
	comp=Z,45nm,0.6s								
KSH	**Kashi**	**50.54**	**291**	*e*P		P		21 02 31.6	+12
KSH				pmax		pmax			
	comp=Z,11nm,0.6s								
KSH				pmax		pmax			
	comp=Z,190nm,4.3s								
KOLN	**Koldanda**	**50.85**	**274**	*e*P		**P**		**21 02 24.6**	**+2.7**
	comp=Z,16nm,0.7s								
PYUN	**Piuthan**	**51.12**	**275**	*e*P		**P**		**21 02 26.8**	**+2.9**
	comp=Z,54nm,0.9s								
KK31	**Karatay Array**	**52.65**	**298**	P		**P**		**21 02 34.6**	**-0.2**
KK31				pmax		pmax			
	comp=Z,4.0nm,0.7s								
KK31	**Karatay Array**	**52.65**	**298**	P		**P**		**21 02 34.6**	**-0.2**
KKAR	**Karatay Array**	**52.65**	**298**	P		**P**		**21 02 34.2**	**-0.6**
KKAR	**Karatay Array**	**52.65**	**298**	P		**P**		**21 02 34.2**	**-0.6**
SVE	**Sverdlovsk**	**52.87**	**317**	*e*P		P		21 02 44.3	+8.0
SVE				pmax		pmax			
	comp=Z,33nm,0.8s								
ARU	**Arti**	**54.08**	**317**	LR		LR		21 28 41.0	
	comp=Z,172nm,18.8s,baz=85,slow=39								
ARU	**Arti**	**54.08**	**317**	*e*P		**P**		**21 02 45.3**	**+0.1**
ARU	**Arti**	**54.08**	**317**	*d i*P		**P**		**21 02 45.3**	**+0.1**
ARU				*PP		**pP**		**21 02 53.2**	**+0.7**
ARU								21 04 47.5	
ARU				S		**S**		**21 10 21.3**	**+1.5**
ARU				SS		**SS**		**21 14 03.7**	**+2.9**
ARU				pmax		pmax			
	comp=Z,12nm,0.8s								
ARU				MLR		MLR			
	comp=Z,186nm,15.0s								
ARU	**Arti**	**54.08**	**317**	P		**P**		**21 02 44.7**	**-0.5**
GAR	**Garm**	**54.67**	**293**	P		**P**		**21 02 48.9**	**-1.0**
EUNU	**Eureka**	**54.71**	**10**	P		**P**		**21 02 50.0**	**+0.5**
CHGR	**Chuyangaron**	**55.63**	**293**	P		**P**		**21 02 55.4**	**-1.4**
ABKAR	**Akbulak array**	**56.45**	**309**	P		**P**		**21 03 01.9**	**-0.4**
ABKAR				IAmb		IAmb		21 03 11.9	
	comp=Z,13nm,1.1s								
ABKAR	**Akbulak array**	**56.45**	**309**	P		**P**		**21 03 01.8**	**-0.4**
RES	**Resolute Bay**	**56.99**	**16**	P		**P**		**21 03 05.0**	**-0.8**
	comp=Z,4.5nm,0.7s,baz=348,slow=2.5,SNR=11								
RES	**Resolute Bay**	**56.99**	**16**	P		**P**		**21 03 05.9**	**+0.1**
RES				pmax		pmax			
	comp=Z,12nm,0.8s								
RES	**Resolute Bay**	**56.99**	**16**	P		**P**		**21 03 05.9**	**+0.1**
AKTO	**Aktyubinsk**	**57.00**	**310**	LR		LR		21 30 04.9	
	comp=Z,74nm,19.0s,baz=52,slow=39								
KIRV	**Kirov**	**57.55**	**322**	*ce*P		**P**		**21 03 10.1**	**+0.2**
KBL	**Kabul**	**57.80**	**289**	P		**P**		**21 03 11.3**	**-1.1**
KBL				pmax		pmax			
	comp=Z,11nm,1.1s								
KBL	**Kabul**	**57.80**	**289**	P		**P**		**21 03 11.3**	**-1.1**
KBL				IAmb		IAmb		21 03 24.5	
	comp=Z,11nm,1.1s								
YKA	**Yellowknife Ar**	**58.18**	**32**	P		**P**		**21 03 14.9**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=304,slow=6.8,SNR=3.3								
TMCR	**Tamitsa**	**59.33**	**331**	*e*P		**P**		**21 03 21.2**	**-1.0**
TMCR				pmax		pmax			
	comp=Z,15nm,0.8s								
ARCES	**ARCESS Array B**	**59.97**	**339**	P		**P**		**21 03 27.9**	**+1.2**
	comp=Z,3.6nm,0.9s,baz=35,slow=4.4,SNR=4.4								
KLMR	**Klimovskoe**	**60.63**	**327**	*e*P		**P**		**21 03 29.5**	**-1.8**
KLMR				pmax		pmax			
	comp=Z,15nm,1.0s								
KLMR	**Klimovskoe**	**60.63**	**327**	*e*P		**P**		**21 03 29.5**	**-1.8**
KLMR				AMP				21 03 40.6	
	comp=Z,15nm,1.0s								
DAG	**Danmarks Havn**	**60.80**	**356**	*i* P		**P**		**21 03 32.9**	**+0.8**
DAG				pmax		pmax			
	comp=Z,7.0nm,1.0s								
DAG	**Danmarks Havn**	**60.80**	**356**	*i* P		**P**		**21 03 32.9**	**+0.8**
	comp=Z,7.1nm,1.0s								
DAG	**Danmarks Havn**	**60.80**	**356**	*i* P		**P**		**21 03 33.0**	**+0.8**
DAG				IAmb		IAmb		21 03 35.1	
	comp=Z,7.1nm,1.0s								
WB2	**Warramunga Arr**	**62.55**	**191**	P		**P**		**21 03 43.6**	**-1.0**
WB2				IAmb		IAmb		21 03 53.1	
	comp=Z,15nm,1.5s								
WRA	**Warramunga Arr**	**62.55**	**191**	P		**P**		**21 03 43.4**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=8.1,slow=6.7,SNR=10								
WRA	**Warramunga Arr**	**62.55**	**191**	P		**P**		**21 03 43.3**	**-1.3**
HRA	**Herat**	**62.60**	**293**	P		**P**		**21 03 45.4**	**+0.1**
HRA				IAmb		IAmb		21 03 55.2	
	comp=Z,4.7nm,0.7s								
GEYT	**Alibeck**	**63.40**	**298**	P		**P**		**21 03 50.1**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=42,slow=16,SNR=4.2								
GEYT				LR		LR		21 32 59.7	
	comp=Z,78nm,20.0s,baz=70,slow=38								
SUF	**Sumiainen**	**64.39**	**333**	P		**P**		**21 03 57.3**	**+1.0**
SUF				pmax		pmax			
	comp=Z,27nm,1.0s								
MOS	**Moscow**	**64.48**	**323**	*e*P		P		21 04 05.9	+8.9
PINE	**Pine Mountain**	**65.28**	**53**	P		**P**		**21 04 04.4**	**+1.6**
PINE				IAmb		IAmb		21 04 14.6	
	comp=Z,8.1nm,1.0s								
FINES	**FINESS Array B**	**65.30**	**332**	P		**P**		**21 04 01.9**	**-0.4**
	comp=Z,4.6nm,0.5s,baz=49,slow=6.8,SNR=46								
FINES				LR		LR		21 35 41.4	
	comp=Z,233nm,18.4s,baz=57,slow=39								
VRH	**Novokhopyorsk**	**65.30**	**318**	*e*P		**P**		**21 04 03.3**	**+0.9**
VRH				*e*SP		**pP**		**21 04 11.1**	**+1.3**
VRH				pmax		pmax			
	comp=Z,4.0nm,0.5s								
E09A	**Wood Farm, Sta**	**65.31**	**49**	P		**P**		**21 04 03.7**	**+1

NC405	NORSAR Array S	70.08	338	P		P	21 04 32.2	-0.2
LHV	Little Huntoon	70.08	56	P		P	21 04 33.1	+0.3
LHV				IAmb		IAmb	21 04 48.7	
	comp=Z,10nm,1.2s							
NVAR	Mina Array Bea	70.10	56	P		P	21 04 33.5	+0.2
	comp=Z,1.7nm,0.7s,baz=298,slow=6.0,SNR=12							
NVAR	Mina Array Bea	70.10	56	P		P	21 04 33.7	+0.5
YHL	Hebgen Lake	70.17	47	P		P	21 04 33.7	0.0
NC204	NORSAR Array S	70.21	338	P		P	21 04 32.5	-0.7
NB201	NORSAR Array S	70.25	338	P		P	21 04 33.0	-0.5
NB2	NORSAR Subarra	70.28	338	P		P	21 04 33.4	-0.3
	comp=Z,0.9nm,0.4s,baz=34,slow=6.5							
NOA	NORSAR Array B	70.28	338	P		P	21 04 33.2	-0.5
	comp=Z,0.3nm,0.5s,baz=34,slow=4.6,SNR=6.3							
NOA				LR		LR	21 39 36.8	
	comp=Z,60nm,19.0s,baz=40,slow=40							
YHH	Holmes Hill	70.40	47	P		P	21 04 34.6	-0.4
IMW	Indian Meadow	70.92	48	P		P	21 04 39.2	+1.0
IMW				IAmb		IAmb	21 04 50.2	
	comp=Z,7.9nm,1.1s							
AKASG	Malin Array Be	71.59	323	P		P	21 04 41.2	-0.6
	comp=Z,1.1nm,0.4s,baz=42,slow=6.2,SNR=8.0							
AKASG				LR		LR	21 38 59.7	
	comp=Z,75nm,18.5s,baz=50,slow=38							
AKASG	Malin Array Be	71.59	323	P		P	21 04 40.8	-1.0
AKBB	Malin Array Si	71.59	323	P		P	21 04 41.0	-0.8
AKBB				pmax		pmax		
	comp=Z,12nm,1.2s							
AKBB	Malin Array Si	71.59	323	P		P	21 04 41.0	-0.8
AKBB				IAmb		IAmb	21 04 51.7	
	comp=Z,12nm,1.1s							
R11A	Troy Canyon, C	71.81	55	P		P	21 04 43.8	+0.2
TPNV	Topopah Spring	72.29	56	P		P	21 04 47.0	+0.5
TPNV				pmax		pmax		
	comp=Z,6.0nm,1.0s							
TPNV	Topopah Spring	72.29	56	P		P	21 04 47.0	+0.5
TPNV				IAmb		IAmb	21 05 02.8	
	comp=Z,5.5nm,1.0s							
PD31	Pinedale Array	72.43	48	P		P	21 04 46.5	-0.8
PDAR	Pinedale Array	72.43	48	P		P	21 04 47.8	+0.5
	comp=Z,0.5nm,0.5s,baz=268,slow=1.1,SNR=6.5							
PDAR	Pinedale Array	72.43	48	P		P	21 04 48.2	+1.0
STKA	Stephens Creek	73.78	182	LR		LR	21 37 51.1	
	comp=Z,1nm,20.9s,baz=26,slow=36							
KWP	Kalwaria Pacla	75.23	325	P		P	21 05 03.8	+0.5
KWP				pmax		pmax		
	comp=Z,17nm,1.1s							
KWP	Kalwaria Pacla	75.23	325	P		P	21 05 03.8	+0.5
BUR08	Bucovina Ar. S	75.63	322	P		P	21 05 03.4	-2.4
BUR08				IAmb		IAmb	21 05 17.6	
	comp=Z,6.5nm,1.3s							
PV14	Lion Creek, Pa	75.67	51	P		P	21 05 05.5	-0.8
PV14				IAmb		IAmb	21 05 18.0	
	comp=Z,13nm,1.3s							
PV22	Blue Mesa, Par	75.70	51	P		P	21 05 04.6	-1.8
PV22				IAmb		IAmb	21 05 17.6	
	comp=Z,5.6nm,1.0s							
KOLS	Kolonicke sedl	75.95	325	*e*P		P	21 05 08.0	+0.6
KOLS	Kolonicke sedl	75.95	325	*e*P		P	21 05 08.0	+0.6
OJC	Ojcow	75.99	327	P		P	21 05 06.4	-1.2
OJC	Ojcow	75.99	327	P		P	21 05 06.4	-1.2
X16A	Lo Mia Camp, P	76.90	55	P		P	21 05 12.3	-1.0
BRTR	Keskin Array B	77.11	312	P		P	21 05 13.5	-0.8
	comp=Z,0.4nm,0.4s,baz=302,slow=37,SNR=1.1							
BRTR				LR		LR	21 44 09.8	
	comp=Z,38nm,19.0s,baz=10.0,slow=40							
MORC	Moravsky Berou	77.24	328	*e*P		P	21 05 17.9	+3.2
MORC	Moravsky Berou	77.24	328	P		P	21 05 15.2	+0.5
MORC	Moravsky Berou	77.24	328	P		P	21 05 15.2	+0.5
DPC	Dobruska-Polom	77.26	329	*e*P		P	21 05 15.0	+0.2
DPC	Dobruska-Polom	77.26	329	*e*P		P	21 05 15.0	+0.2
VOIR		77.35	321	P		P	21 05 16.8	+1.4
VOIR				pmax		pmax		
	comp=Z,3.0nm,1.0s							
CLL	Collm	77.71	331	*e*P		P	21 05 17.0	-0.2
	comp=Z,4.0nm,1.1s							
CLL				*i* Pmax			21 05 19.3	
	comp=Z,9.0nm,1.1s							
CLL				*i* pP		pP	21 05 22.8	-2.0
CLL				*i* sP		PcP	21 05 25.4	-1.9
CLL				*e*PP		PP	21 08 12.0	+0.1
CLL				Lm		MLR	21 43 00.0	
	comp=Z,200nm,18.4s							
CLL	Collm	77.71	331	P		P	21 05 17.1	-0.2
CLL				pmax		pmax		
	comp=Z,9.0nm,1.0s							
CLL	Collm	77.71	331	P		P	21 05 17.1	-0.1
CLL				IAmb		IAmb	21 05 20.6	
	comp=Z,9.3nm,1.0s							
PSZ	Piszkesteto	77.74	325	P		P	21 05 20.9	+3.3
PSZ				pmax		pmax		
	comp=Z,6.0nm,1.4s							
VRAC	Vranov	77.99	328	*e*P		P	21 05 22.5	+3.6
PRU	Pruhonice	78.23	330	*e*P		P	21 05 21.1	+1.0
PRU				*e*			21 05 31.2	
PRU	Pruhonice	78.23	330	*e*P		P	21 05 21.1	+1.0
PRU				*ep*P		sP	21 05 31.2	+0.8
KRUC	Moravsky	78.26	328	*e*P		P	21 05 20.2	-0.2
KHC	Kasperske Hory	79.29	330	*ce*P		P	21 05 26.3	+0.2
KHC				pmax		pmax		
	comp=Z,11nm,1.0s							
KHC	Kasperske Hory	79.29	330	*e*P		P	21 05 26.4	+0.3
KHC				*ex*		x	21 05 43.5	
KHC	Kasperske Hory	79.29	330	P		P	21 05 26.4	+0.3
CONA	Conrad Observa	79.39	328	*e*P		P	21 05 31.5	+4.8
	comp=Z,10nm,1.7s							
GERES	GERESS Array B	79.48	329	P		P	21 05 27.0	-0.2
	comp=Z,0.5nm,0.5s,baz=44,slow=4.6,SNR=4.8							
ANMO	Albuquerque	79.53	52	*ce*P		P	21 05 28.6	+0.8
ANMO				pmax		pmax		
	comp=Z,1.0nm,1.0s							
WET	Wettzell	79.54	330	P		P	21 05 28.4	+1.0
SOKA	Soboth	80.73	327	*e*P		P	21 05 37.1	+3.2
	comp=Z,11nm,1.3s							
OBKA	Obir	81.06	328	*e*P		P	21 05 40.2	+4.4
	comp=Z,17nm,1.6s							
WATA	Walderalm	81.53	330	*e*P		P	21 05 39.1	+0.8
	comp=Z,10nm,1.2s							
MOTA	Moosalm	81.69	330	*e*P		P	21 05 40.2	+1.0
	comp=Z,11nm,1.0s							
FETA	Feichten	82.11	330	*e*P		P	21 05 42.2	+0.9
	comp=Z,5.6nm,1.2s							
DAVA	Damuels	82.19	331	*e*P		P	21 05 43.5	+1.7
	comp=Z,11nm,1.6s							
PPT	Papeete	85.00	119	LR		LR	21 35 21.2	
	comp=Z,36nm,21.7s,baz=356,slow=30							
TXAR	Lajitas Array	85.17	54	P		P	21 05 56.6	-0.7
	comp=Z,0.5nm,0.6s,baz=301,slow=3.6,SNR=6.3							
TXAR	Lajitas Array	85.17	54	P		P	21 05 57.8	+0.5
KEST	Kesra	92.21	325	LR		LR	21 53 18.3	
	comp=Z,120nm,18.2s,baz=317,slow=39							
ESDC	Sonseca Array	93.58	336	LR		LR	21 54 45.8	
	comp=Z,50nm,18.4s,baz=220,slow=39							
H03N2	Juan Fernandez	144.98	90	T		T	23 54 49.2	
	baz=301,slow=77,SNR=18							
H03N3	Juan Fernandez	144.99	90	T		T	23 54 51.7	
	baz=301,slow=77,SNR=16							
H03N1	Juan Fernandez	144.99	90	T		T	23 54 52.8	
	baz=301,slow=77,SNR=25							
BDFB	Brasilia	151.43	26	PKPbc		PKiKP	21 13 14.6	-0.9
	comp=Z,1.8nm,0.6s,baz=330,slow=4.2,SNR=3.3							
PLCA	Paso Flores	153.87	99	PKPab		PKPab	21 13 32.6	-0.4
	comp=Z,2.0nm,0.9s,baz=305,slow=5.1,SNR=4.0							

JMA ***17*** *21:05:06.3±0.1, 33°.44N×137°.03E, h434km, M3.4*
IDC ***17*** *21:05:13.4±0.8, 33°.64N×136°.97E, h369km±8km, mb3.0/12, mb1 3.1/19, mb1mx2.9/73, mbtmpg3.7/19, Error ellipse: s-maj=15.9km s-min=14.1km az=3.0*

ISC 17 21:05:13.6±0.8, 33°.73N±0°.08×137°.08E±0°.07, h370km±7km, n41, σ1s20/45, mb3.2/13, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO2	TONANKAI O.B.S	0.05	282	P	Pn	21 06 00.1	+0.9
TTO1	TONANKAI O.B.S	0.27	248	P	Pn	21 06 00.0	+0.6
TTO3	TONANKAI O.B.S	0.30	62	P	Pn	21 06 00.7	+1.2
JIE	Ise	0.73	335	P	Pn	21 06 01.1	+0.6
JKN2	Miekihoku	0.84	308	P	Pn	21 06 01.1	+0.2
JTNC	Tanabenakahech	1.23	275	P	Pn	21 06 02.1	-0.3
JWY	Kouya	1.33	292	P	Pn	21 06 03.1	+0.2
JNY	Yasuok	1.75	21	P	Pn	21 06 05.9	+0.7
JWT	Wachi	2.08	319	P	Pn	21 06 07.4	+0.2
JAI	Aioi	2.19	272	P	Pn	21 06 07.6	-0.4
JOD2	Odawara 2	2.26	47	P	Pn	21 06 09.2	+0.7
JHJ	Hachijo jima 2	2.34	104	P	Pn	21 06 07.7	-1.5
	3.0nm,0.3s,baz=240,slow=22,SNR=1.8						
JHJ				S	S	21 06 55.5	+1.6
	6.4nm,0.3s,baz=174,slow=19,SNR=0.9						
JRY	Ryogami san	2.73	33	P	Pn	21 06 13.0	+0.8
JHU	Hanno	2.79	40	P	Pn	21 06 13.1	+0.5
JHU				S	S	21 06 59.4	-0.8
MAT	Matsushiro	2.96	18	P	Pn	21 06 14.3	+0.3
MAT				S	S	21 07 02.3	-0.5
MAT	Matsushiro	2.96	18	P	Pn	21 06 14.8	+0.8
MJAR	Matsushiro Arr	2.96	18	P	Pn	21 06 14.7	+0.7
	0.4nm,0.3s,baz=194,slow=8.5,SNR=21						
BSO4	Boso 4	2.97	64	S	S	21 07 03.5	+0.6
BSO3	Boso 3	3.04	68	P	Pn	21 06 13.8	-0.6
JAG	Ashikaga	3.32	35	P	Pn	21 06 16.7	-0.5
BSO1	Boso 1	3.36	73	P	Pn	21 06 15.9	-1.1
JHO	Hitachi	4.05	44	P	Pn	21 06 23.5	-0.8
JHO				S	S	21 07 18.0	-3.4
JFK	Kawauchi	4.77	39	S	S	21 07 31.7	-3.2
JNU	Nakatsue	5.22	265	P	Pn	21 06 36.2	-0.4
	1.5nm,0.3s,baz=116,slow=1.3,SNR=12						
KSRS	Korea Array	8.34	299	P	Pn	21 07 12.5	+0.6
	0.5nm,0.3s,baz=118,slow=12,SNR=11						
USRK	Ussuriysk Ar.	11.18	341	P	P	21 07 45.3	+0.2
	baz=152,slow=11,SNR=9.9						
ASAJ	Asahikawa	11.23	21	P	P	21 07 45.3	-0.3
	0.4nm,0.3s,baz=198,slow=9.6,SNR=2.1						
KLR	Kul'dur	15.99	347	P	P	21 08 37.3	-0.5
	0.2nm,0.3s,baz=157,slow=7.7,SNR=2.7						
SONM	Songino Array	26.97	311	P	P	21 10 26.1	+3.3
	0.2nm,0.4s,baz=115,slow=9.7,SNR=2.2						
CMAR	Chiang Mai Arr	37.24	256	P	P	21 11 49.4	-2.1
	0.9nm,0.3s,baz=45,slow=9.1,SNR=5.2						
MKAR	Makanchi Array	42.97	305	P	P	21 12 37.7	0.0
	0.2nm,0.5s,baz=85,slow=11,SNR=1.7						
KURBB	Kurchatov Arra	45.33	310	P	P	21 12 55.9	-0.2
	0.3nm,0.4s,baz=87,slow=7.2,SNR=3.5						
BVAR	Borovoye Array	50.24	314	P	P	21 13 32.6	-0.6
	0.1nm,0.3s,baz=119,slow=5.3,SNR=2.8						
WRA	Warramunga Arr	53.43	183	P	P	21 13 56.3	-0.6
	0.1nm,0.3s,baz=360,slow=7.6,SNR=5.2						
ILAR	Eielson Array	54.16	31	P	P	21 14 02.4	+0.8
	0.5nm,1.0s,baz=277,slow=6.4,SNR=4.7						
INK	Inuvik	58.92	26	P	P	21 14 36.2	+1.6
	0.9nm,0.8s,baz=272,slow=4.7,SNR=2.3						
ARCES	ARCESS Array B	65.82	339	P	P	21 15 19.9	0.0
	3.2nm,0.9s,baz=54,slow=6.2,SNR=6.9						
FINES	FINESS Array B	70.06	331	P	P	21 15 45.9	-0.1
	2.2nm,0.9s,baz=62,slow=5.4,SNR=12						
HFS	Hagfors	75.59	334	P	P	21 16 18.4	+0.1
	2.0nm,0.9s,baz=49,slow=6.5,SNR=1.7						
NVAR	Mina Array Bea	79.81	51	P	P	21 16 43.3	+1.2
	0.3nm,0.6s,baz=302,slow=6.0,SNR=2.6						
PDAR	Pinedale Array	82.50	43	P	P	21 16 56.0	0.0
	0.4nm,0.8s,baz=343,slow=2.8,SNR=2.7						

IDC ***17*** *21:07:12.1±1.1, 34°.47N×135°.07E, h0km, mb3.4/4, mb1 3.5/7, mb1mx3.3/71, mbtmpg3.4/7, ML2.9/3, MS4.4/1, Ms1 4.4/1, ms1mx2.6/28, Error ellipse: s-maj=23.1km s-min=15.4km az=149.0*
JMA ***17*** *21:07:14.8, 34°.61N×135°.04E, h15km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs328.00000°, δ64.00000°, λ20.00000°. NP2: φs229.00000°, δ72.00000°, λ153.00000°. Principal axes: T Plg32.0000°, Azm187.0000°; N Plg58.0000°, Azm18.0000°; P Plg5.0000°, Azm280.0000°;*
JMA Felt II J1.
NEIC ***17*** *21:07:14.3±0.9, 34°.59N±0°.04×135°.07E±0°.06, h15km±4km, mb4.3/5 Error ellipse: s-maj=7.4km s-min=4.4km az=122.0*
NIED ***17*** *21:07:14.8, 34°.61N×135°.04E, h15km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr1.40; Mθθ2.09; Mφφ -3.49; Mrθ -1.15; Mrφ-1.16; Mθφ0.15; Fault plane solution: M0 3.42000×10^14 NP1: φs231.00000°, δ67.00000°, λ154.00000°. NP2: φs332.00000°, δ66.00000°, λ25.00000°.*

ISC 17 21:07:14.1±1.0, 34°.58N±0°.03×135°.06E±0°.03, h15km±6km, n37, σ0s87/49, mb3.4/6, 6C-5D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAWN	Awajishima-nag	0.16	234	⇓P	Pb	21 07 18.9	+0.2
JAWN				S	Sb	21 07 21.8	0.0
JMIK	Miki	0.23	359	⇑P	Pb	21 07 19.5	-0.5
JKS	Kasai	0.44	337	⇑P	Pb	21 07 23.0	-0.6
JKS				S	Sg	21 07 28.6	-0.3
JHE	Heguri	0.52	81	⇓P	Pb	21 07 24.9	-0.1
JHE				S	Sb	21 07 32.4	0.0
JWY	Kouya	0.57	129	⇓P	Pb	21 07 26.0	+0.2
JWY				S	Sb	21 07 34.4	+0.6
JWT	Wachi	0.76	22	⇑P	Pb	21 07 28.7	-0.3
JWT	Wachi	0.76	22		Pb	21 07 28.6	-0.5
JWT					Sb	21 07 38.3	-0.9
JWM	Minabe	0.77	161	⇑P	Pn	21 07 30.3	-0.1
JWM				S	Sn	21 07 41.0	-0.7
JAD	Aida	0.82	297	⇓P	Pg	21 07 29.3	-0.7
JAD				S	Sg	21 07 39.9	-0.8
JTNC	Tanabenakahech	0.89	149	⇑P	Pn	21 07 32.0	0.0
JTNC				S	Sn	21 07 44.7	+0.1
JAI	Aioi	0.93	213	⇑P	Pn	21 07 32.6	0.0
JAI				S	Sn	21 07 45.3	-0.4
JJS	Sakaide	0.95	258	⇓P	Pb	21 07 31.6	-0.7
JJS				S	Sb	21 07 44.1	-0.6
JMN	Monobe	1.29	229		Pb	21 07 38.0	-0.2
JMN					Sn	21 07 55.3	+0.6
JHS	Saijyo	1.65	285	Pn	Pn	21 07 43.1	+0.5
JHS					Sn	21 08 04.0	+0.4
INU	Inuyama	1.79	64	Pn	Pn	21 07 45.5	-1.1
JGF	Kuroka	2.15	61	Pn	Pn	21 07 49.5	0.0
MAT	Matsushiro	3.23	52	P	Pn	21 08 05.7	+1.4
MAT				*e*S	Sn	21 08 45.4	+2.8
MJAR	Matsushiro Arr	3.23	52	Pn	Pn	21 08 06.1	+1.8
	0.3nm,0.3s,baz=242,slow=13,SNR=7.9						
MJAR				Lg	Lg	21 08 56.7	
	0.4nm,0.3s,baz=226,slow=31,SNR=6.7						
MJAR	Matsushiro Arr	3.23	52	Pn	Pn	21 08 04.5	+0.1
JNU	Nakatsue	3.77	249	Pn	Pn	21 08 12.7	+0.9
	1.4nm,0.3s,baz=9.5,slow=19,SNR=18						
JNU				Lg	Lg	21 09 10.2	
	3.5nm,0.3s,baz=183,slow=17,SNR=5.3						
JNU	Nakatsue	3.77	249	Pn	Pn	21 08 13.7	+2.0
JTU	Tsushima	4.67	271	Pn	Pn	21 08 24.5	+0.5
KSRS	Korea Array	6.45	298	Pn	Pn	21 08 50.1	+1.6
	0.9nm,0.3s,baz=119,slow=14,SNR=6.2						
KSAR	Wonju Array Be	6.48	298	Pn	Pn	21 08 50.0	+1.1
KS19	Wonju Array Si	6.51	299	Pn	Pn	21 08 50.3	+0.8
JEW	Eniwo	9.64	29	Pn	Pn	21 09 32.3	0.0
SONM	Songino Array	25.14	310	P	P	21 12 39.5	+0.8
	0.4nm,0.8s,baz=120,slow=8.5,SNR=2.2						
MKAR	Makanchi Array	41.10	304	P	P	21 14 57.5	+0.1
	0.4nm,0.8s,baz=66,slow=10.0,SNR=2.3						
KAPI	Kappang	41.94	203	LR	LR	21 32 05.3	
	comp=Z,548nm,21.8s,baz=162,slow=36						
KK31	Karatay Array	49.88	300	P	P	21 16 06.0	-0.9
KK31				IAmb	IAmb	21 16 08.8	
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	49.88	300		P	21 16 06.8	0.0
WB0	Warramunga Arr	54.05	181	P	P	21 16 38.4	+0.4
WB2	Warramunga Arr	54.22	181	P	P	21 16 40.1	+0.8
WRA	Warramunga Arr	54.22	181	P	P	21 16 39.5	+0.2
	comp=Z,0.2nm,0.7s,baz=356,slow=7.9,SNR=8.7						
WRA	Warramunga Arr	54.22	181	P	P	21 16 39.1	-0.2
WR0	Warramunga Arr	54.24	181	P	P	21 16 39.1	-0.3
WR0				IAmb	IAmb	21 16 52.2	
	comp=Z,5.0nm,1.4s						
ASAR	Alice Springs	57.93	181	P	P	21 17 04.4	-1.4
	comp=Z,0.4nm,0.7s,baz=11,slow=11,SNR=5.6						

IDC ***17*** *21:10:56.6±1.2, 19°.54N×120°.68E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.4/60, mbtmpg3.6/7, Error ellipse: s-maj=55.0km s-min=19.7km az=62.0*

ISC 17 21:11:00.1±1.2, 19°.5N±0°.2×120°.7E±0°.3, h23km, n7, σ0s70/7, mb3.6/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	20.57	271	P	P	21 15 37.4	0.0
	0.6nm,0.8s,baz=79,slow=9.7,SNR=6.2						
SONM	Songino Array	30.52	341	P	P	21 17 11.9	+0.3
	0.4nm,0.6s,baz=164,slow=8.6,SNR=2.9						
MKAR	Makanchi Array	41.45	320	P	P	21 18 45.5	+0.5
	1.1nm,0.8s,baz=120,slow=9.0,SNR=6.3						
WRA	Warramunga Arr	41.46	160	P	P	21 18 44.6	-0.7
	0.7nm,0.6s,baz=343,slow=9.1,SNR=6.3						
ZALV	Zalesovo Beam	43.94	330	P	P	21 19 05.0	-0.1
	0.6nm,0.5s,baz=116,slow=9.8,SNR=4.1						
ASAR	Alice Springs	44.84	163	P	P	21 19 13.5	+0.8
	0.5nm,0.7s,baz=335,slow=6.4,SNR=4.9						
AKTO	Aktyubinsk	57.81	318	P	P	21 20 49.0	-0.7
	0.7nm,0.5s,baz=111,slow=8.6,SNR=2.2						

MEX 17 21:12:36.1±0.3, 14°.68N×92°.89W, h55km±33km, MD3.5, Near coast of Chiapas

IDC 17 21:22:10.4±3.4, 5°.34S×132°.74E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/29, mbtmpg3.5/4, ML3.4/3, Error ellipse: s-maj=199.9km s-min=28.2km az=77.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.67	342	Pn	Pn	21 23 22.2	-0.2
	1.0nm,0.3s,baz=167,slow=19,SNR=4.5						
SIJI				Sn	Sn	21 24 11.6	-5.7
	0.9nm,0.3s,baz=161,slow=24,SNR=2.0						
WRA	Warramunga Arr	14.60	174	Pn	Pn	21 25 39.4	+0.9
	0.2nm,0.3s,baz=356,slow=13,SNR=9.5						
WRA				Sn	Sn	21 28 19.3	-2.0
	0.2nm,0.3s,baz=350,slow=24,SNR=3.3						
ASAR	Alice Springs	18.26	177	P	Pn	21 26 24.9	-0.6
	0.1nm,0.3s,baz=0.4,slow=12,SNR=4.4						
MKAR	Makanchi Array	68.38	325	P	P	21 33 14.1	+0.1
	0.3nm,0.6s,baz=132,slow=7.3,SNR=2.9						

IDC ***17*** *21:32:00.6±1.3, 19°.56N×120°.84E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/36, mbtmpg3.6/6, MS3.2/2, Ms1 3.2/2, ms1mx2.5/37, Error ellipse: s-maj=61.5km s-min=20.6km az=61.0*
NEIC ***17*** *21:32:02.4±2.9, 19°.54N±0°.09×120°.5E±0°.2, h10km±2km, mb4.1/6, Error ellipse: s-maj=39.3km s-min=14.6km az=262.0*

ISC 17 21:32:04.7±0.9, 19°.56N±0°.07×120°.6E±0°.2, h23km, n20, σ1s06/22, mb4.0/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	Pinlang	3.27	7	Pn	Pn	21 32 54.8	+0.2
TWG				Sn	Sn	21 33 31.7	-1.1
TPUB	Ta-pu	3.72	0	Pn	Pn	21 33 00.2	-0.6
TPUB					Sn	21 33 42.1	-1.9
YULB	Yu-li	3.86	9	Pn	Pn	21 33 03.9	+1.2
YULB				Sn	Sn	21 33 47.6	+0.2
SSLB	Suanglung	4.22	4	Pn	Pn	21 33 08.9	+1.3
SSLB				Sn	Sn	21 33 55.7	-0.5
NACB	Ninganchiao	4.68	11	Pn	Pn	21 33 15.4	+1.5
YHNB	Yeheng	5.13	8	Pn	Pn	21 33 20.1	-0.2
DAV	Davao City (W)	13.32	158	LR	LR	21 41 05.9	
	comp=Z,106nm,22.0s,baz=10.0,slow=41						
CMAR	Chiang Mai Arr	20.53	271	P	Pn	21 36 43.0	-0.9
	0.5nm,0.9s,baz=91,slow=9.0,SNR=3.3						
WB0	Warramunga Arr	41.35	160	P	P	21 39 47.8	-1.3
WB0				IAmb	IAmb	21 39 49.5	
	comp=Z,4.9nm,1.2s						
MKAR	Makanchi Array	41.41	320	P	P	21 39 49.6	+0.3
	comp=Z,0.5nm,0.6s,baz=123,slow=10,SNR=3.2						
MKAR	Makanchi Array	41.41	320	P	P	21 39 50.2	+0.9
WRA	Warramunga Arr	41.50	160	P	P	21 39 48.7	-1.6
	comp=Z,0.6nm,0.6s,baz=343,slow=9.5,SNR=6.0						
WRA	Warramunga Arr	41.50	160	P	P	21 39 49.2	-1.0
WB2	Warramunga Arr	41.50	160	P	P	21 39 49.0	-1.3
WB2				IAmb	IAmb	21 40 00.5	
	comp=Z,7.5nm,1.5s						
WR0	Warramunga Arr	41.58	160	P	P	21 39 49.6	-1.3
WR0				IAmb	IAmb	21 39 52.1	
	comp=Z,3.5nm,1.0s						
ZALV	Zalesovo Beam	43.91	330	P	P	21 40 09.8	+0.4
	comp=Z,0.8nm,0.7s,baz=119,slow=8.6,SNR=4.2						
AS31	Alice Springs	44.87	163	P	P	21 40 18.2	+0.6
ASAR	Alice Springs	44.87	163	P	P	21 40 16.8	-0.8
	comp=Z,0.7nm,0.4s,baz=340,slow=7.0,SNR=14						
ASAR				LR	LR	22 01 00.7	
	comp=Z,24nm,18.2s,baz=315,slow=39						
BBOO	Buckleboo	54.13	164	P	P	21 41 28.5	+0.6
FINES	FINESS Array B	75.17	330	P	P	21 43 45.1	+0.1
	comp=Z,2.0nm,0.9s,baz=72,slow=4.5,SNR=1.8						

BUL ***17*** *21:34:27.8±1.5, 28°.47S×27°.13E, h10km, MD4.2*
EAF ***17*** *21:34:27.9±1.2, 28°.53S×27°.14E, h10km, MD4.2*
PRE ***17*** *21:34:27.7±1.0, 28°.11S×26°.81E, h2km, ML2.8*

ISC 17 21:34:28.4±1.5, 28°.13S±0°.03×26°.83E±0°.04, h9km±11km, n24, σ1s54/46, South Africa

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KEIM eS Sn 21 36 44.9 -1.5
KEIM AML AML 21 37 16.5
comp=Z,17nm,0.4s
GRAN Grantham 5.79 223 eP Pn 21 35 55.6 +1.0
GRAN eS Sn 21 36 59.0 -2.1
GRAN AML AML 21 37 32.2
comp=Z,12nm,0.4s
ROSN Rosenhof 6.27 198 eP Pn 21 36 02.2 +1.2
ROSN eS Sn 21 37 10.9 -2.0
ROSN AML AML 21 37 17.4
comp=Z,22nm,0.4s
CVNA Calvinia 6.99 240 eP Pn 21 36 11.6 +0.6
CVNA eS Sn 21 37 27.8 -2.9
CVNA AML AML 21 38 09.9
comp=Z,7.6nm,0.4s
BLWY Bulawayo 8.12 12 iP Pn 21 36 28.3 +1.8
BLWY Bulawayo 8.12 12 iP Pn 21 36 28.3 +1.8
KOMG Komaggas 8.35 256 eP Pn 21 36 30.6 +1.0
KOMG eS Sn 21 38 00.2 -4.0
KOMG AML AML 21 38 48.8
comp=Z,12nm,0.5s

IDC ***17*** *21:51:25.8±1.0, 1°.86N×126°.80E, h0km, mb3.9/7, mb1 4.0/9, mb1mx3.8/37, mbtmp3.9/9, ML3.8/2, Error ellipse: s-maj=54.1km s-min=16.7km az=72.0*
NEIC ***17*** *21:51:30.4±0.9, 1°.9N±0°.1×126°.9E±0°.2, h35km±2km, mb4.2/12, Error ellipse: s-maj=27.3km s-min=18.0km az=67.0*
DJA ***17*** *21:51:32.4±0.3,2°.N±.3°×12°.7E±°, h42km±.7km, M4.3/12, mB5.0/2, mb4.6/7, MLv4.2/12, Mw(mB)4.3/2*
ISC 17 21:51:32.0±0.8, 1°.80N±0°.09×126°.7E±0°.1, h47km, n37, σ1§04/37, mb4.2/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.21	147	P	Pn	21 51 52.9	+0.4
SGSI	Sangihe	2.22	328	P	Pn	21 52 05.5	-0.8
KMSI	Cibinong	2.99	246	P	Pn	21 52 15.6	-1.3
GTOI	Gorontalo	3.88	253	P	Pn	21 52 28.3	-0.8
SANI	Sanana	3.89	191	P	Pn	21 52 27.5	-1.8
LUWI	Luwuk	4.84	234	P	Pn	21 52 42.6	+0.2
MRSI	Marisa	4.95	255	P	Pn	21 52 44.3	+0.5
APSI	Ampana	5.73	242	P	Pn	21 52 55.1	+0.5
	0.3nm793nm64nm,0.8s						
MPSI	Mapaga	6.96	258	P	Pn	21 53 12.0	+0.5
	0.1nm19nm,0.6s						
TTSI	Tana Toraja	8.40	235	P	Pn	21 53 30.2	-1.0
	18nm,0.6s						
MYLDM	Lahad Datu	8.86	293	Pn	Pn	21 53 38.7	+1.2
BNSI	Bone	9.03	227	P	Pn	21 53 41.1	+1.3
	0.1nm1μm20nm,0.6s						
KAPI	Kappang	9.70	226	Pn	Pn	21 53 48.6	-0.5
	2.0nm,0.3s,baz=58,slow=3.7,SNR=7.9						
KAPI	Kappang	9.70	226	Pn	Pn	21 53 49.2	+0.2
KNRA	Kununurra	17.48	173	P	P	21 55 32.7	-0.5
KNRA				IAmb	IAmb	21 55 43.8	
	comp=Z,18nm,1.1s						
FITZ	Fitzroy Crossi	19.80	183	P	P	21 55 58.8	+0.2
	comp=Z,0.1nm,0.3s,baz=9.3,slow=7.8,SNR=2.5						
FITZ	Fitzroy Crossi	19.80	183	P	Pn	21 55 59.2	-1.3
WB0	Warramunga Arr	22.72	161	P	Pn	21 56 29.9	-0.2
WB0				IAmb	IAmb	21 56 38.0	
	comp=Z,10nm,1.1s						
WRA	Warramunga Arr	22.87	161	P	P	21 56 31.1	-0.5
	comp=Z,4.3nm,0.4s,baz=339,slow=11,SNR=30						
WRA	Warramunga Arr	22.87	161	P	P	21 56 31.3	-0.3
WB2	Warramunga Arr	22.87	161	P	P	21 56 31.3	-0.3
WB2				IAmb	IAmb	21 56 40.0	
	comp=Z,10.0nm,0.9s						
WR0	Warramunga Arr	22.95	161	P	P	21 56 31.8	-0.6
WR0				IAmb	IAmb	21 56 40.4	
	comp=Z,7.4nm,0.9s						
AS31	Alice Springs	26.26	165	P	P	21 57 04.3	+1.3
AS31				IAmb	IAmb	21 57 10.2	
	comp=Z,1.8nm,0.5s						
ASAR	Alice Springs	26.26	165	P	P	21 57 03.8	+0.8
	comp=Z,1.1nm,0.4s,baz=349,slow=13,SNR=22						
ASAR	Alice Springs	26.26	165	P	P	21 57 00.4	-2.7
GSI	Gunungsitoli	29.13	269	P	P	21 57 26.9	-1.9
	comp=Z,42nm,0.6s						
FORT	Forrest	32.42	178	P	P	21 57 59.8	+2.2
STKA	Stephens Creek	36.35	158	P	P	21 58 31.2	-0.3
	comp=Z,1.4nm,0.6s,baz=339,slow=8.9,SNR=3.2						
STKA	Stephens Creek	36.35	158	P	P	21 58 31.7	+0.1
SONM	Songino Array	49.11	342	P	P	22 00 15.3	+0.3
	comp=Z,0.6nm,0.9s,baz=165,slow=6.0,SNR=2.9						
MK31	Makanchi Array	59.13	326	P	P	22 01 27.6	-0.2
MK31				IAmb	IAmb	22 01 34.8	
	comp=Z,3.4nm,1.3s						
MKAR	Makanchi Array	59.13	326	P	P	22 01 27.4	-0.4
	comp=Z,1.1nm,0.5s,baz=121,slow=8.0,SNR=28						
MAKZ	Makanchi	59.31	326	P	P	22 01 28.6	-0.5
MAKZ				IAmb	IAmb	22 01 37.3	
	comp=Z,4.9nm,1.1s						
ZALV	Zalesovo Beam	62.29	334	P	P	22 01 50.7	+1.5
	comp=Z,0.4nm,0.4s,baz=163,slow=5.6,SNR=2.7						
KURK	Kurchatov	63.35	328	P	P	22 01 55.9	-0.4
ABKAR	Akbulak array	73.63	321	P	P	22 03 00.8	+0.3
VNDA	Vanda	81.53	173	P	P	22 03 45.3	+1.3
	comp=Z,0.3nm,0.6s,baz=288,slow=6.4,SNR=2.5						

MEX 17 22:12:34.0±0.3, 30°.37N×106°.03W, h5km, MD3.6, Chihuahua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CGIG		1.69	270	iP	Pn	22 13 00.7	-3.6
CGIG				eP	Pn	22 13 00.7	-3.6
	baz=89,slow=6.9						
CGIG				iS	Sn	22 13 21.5	-4.9
121A	Cookes Peak, D	2.62	326	iP	Pn	22 13 18.5	+1.3
121A				eS	Sg	22 13 56.9	-1.5

SKHL ***17*** *22:15:19.5±0.5, 44°.58N×149°.78E, h49km±8km, mb4.7/3*
JMA ***17*** *22:15:20.9±0.6, 44°.73N×149°.60E, h30km, M4.2*
NIED ***17*** *22:15:20.9, 44°.73N×149°.60E, h30km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr5.36; Mθθ0.06; Mϕϕ-5.42; Mrθ3.89; Mθϕ-2.05; Mϕr5.31; Fault plane solution: M₀8.75000×10¹⁴ NP1:ϕs32.00000°, δ70.00000°, λ.101.00000°. NP2:ϕs183.00000°, δ23.00000°, λ63.00000°.*
MOS ***17*** *22:15:21.5±0.8, 44°.74N×149°.46E, h48km, mb4.5/7 Error ellipse: s-maj=12.1km s-min=10.1km az=147.9*
NEIC ***17*** *22:15:23.1.7, 44°.8N±0°.1×149°.3E±0°.1, h35km±2km, mb4.2/19, Error ellipse: s-maj=24.4km s-min=13.2km az=147.0*
IDC ***17*** *22:15:24.2±0.9, 46°.01N×149°.02E, h0km, mb4.0/11, mb1 4.1/13, mb1mx3.9/49, mbtmp4.0/13, ML5.3/1, MS3.1/3, Ms1 3.1/3, ms1mx2.5/56, Error ellipse: s-maj=26.2km s-min=20.1km az=101.0*
ISC 17 22:15:22.2±1.5, 44°.54N±0°.08×149°.59E±0°.09, h47km±12km, n92, σ1§33/96, mb4.1/22, 2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	1.41	300	iP	Pn	22 15 43.5	-1.9
KUR				AMB	AMB	22 15 45.1	
	280nm,0.4s						
KUR				iS	Sn	22 16 01.9	-0.9
KUR				A	A	22 16 05.4	
	583nm,0.4s						
KUR				A	A	22 16 05.4	
	52nm,0.4s						
KUR	Kuril'sk	1.41	300	diP	Pn	22 15 43.5	-1.9
KUR				iS	Sn	22 16 02.0	-0.9
KUR				pmax	pmax		
	comp=Z,241nm,0.4s						
KUR				pmax	pmax		
	comp=N,106nm,0.3s						
KUR				pmax	pmax		
	comp=E,81nm,0.3s						
KUR				smax	smax		
	comp=N,602nm,0.4s						
KUR				smax	smax		
	comp=E,347nm,0.3s						
YUK	Yuzh-Kuril'sk	2.73	261	iP	Pn	22 16 02.0	-1.4
YUK				AMB	AMB	22 16 10.0	
	comp=E,132nm,0.3s						
YUK				iS	Sn	22 16 35.0	-0.1
YUK				A	A	22 16 45.0	
	comp=E,435nm,0.5s						
YUK				A	A	22 16 45.0	
	comp=E,235nm,0.5s						
GRPR	Tuman	2.80	260	eP	Pn	22 16 05.0	+0.6
GRPR				AMB	AMB	22 16 10.0	
	comp=E,80nm,0.4s						
GRPR				iS	Sn	22 16 39.0	+2.1
GRPR				A	A	22 16 49.0	
	comp=E,293nm,0.4s						
GRPR				A	A	22 16 49.0	
	comp=E,371nm,0.4s						
GRPR	Tuman	2.80	260	ePN	Pn	22 16 05.8	+1.4
GRPR				iS	Sn	22 16 39.5	+2.6
GRPR				pmax	pmax		
	comp=E,85nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,80nm,0.4s						
GRPR				pmax	pmax		
	comp=N,43nm,0.2s						
GRPR				smax	smax		
	comp=N,293nm,0.3s						
GRPR				smax	smax		
	comp=E,371nm,0.4s						
NEM2	Nemuro 2	3.02	249	P	Pn	22 16 06.8	-0.6
NEM2				eS	Sn	22 16 41.0	-1.2
NMR	Nemuro--Hokkai	3.02	249	iP	Pn	22 16 06.0	-1.5
NMR				iS	Sn	22 16 44.0	+1.6
NMR	Nemuro--Hokkai	3.02	249	⇓iPN	Pn	22 16 06.8	-0.7
NMR				iS	Sn	22 16 44.0	+1.6
GLVR	Golovnino	3.04	256	eP	Pn	22 16 08.0	+0.3
GLVR				iS	Sn	22 16 44.0	+1.3
GLVR				A	A	22 16 51.0	
	comp=E,53nm,0.4s						
GLVR				A	A	22 16 51.0	
	comp=E,388nm,0.4s						
GLVR	Golovnino	3.04	256	ePN	Pn	22 16 08.0	+0.3
GLVR				iS	Sn	22 16 44.1	+1.3
GLVR				smax	smax		
	comp=E,388nm,0.3s						
GLVR				smax	smax		
	comp=N,527nm,0.4s						
JRA	Rausu	3.27	261	P	Pn	22 16 12.3	+1.5
JRA				eS	Sn	22 16 51.2	+2.8
JAK	Akkeshi	3.87	248	P	Pn	22 16 18.5	-0.6
JTKR	Abashiri--Toko	4.12	264	P	Pn	22 16 24.5	+1.9
JAR	Ashorobuto	4.38	256	P	Pn	22 16 27.5	+1.3
JAR				eS	Sn	22 17 16.3	+0.3
JOB	Onbets	4.48	251	P	Pn	22 16 28.1	+0.6
JCH	Churui	4.92	249	P	Pn	22 16 34.1	+0.6
JCH				eS	Sn	22 17 29.2	+0.2
JKK2	Kamakawa 2	4.96	265	P	Pn	22 16 36.1	+1.9
JKA	Kamikawa-asahi	5.03	268	eP	Pn	22 16 33.8	-1.3
JKA	Kamikawa-asahi	5.03	268		Pn	22 16 33.8	-1.3
ASAJ	Asahikawa	5.04	268	Pn	Pn	22 16 35.2	+0.1
	comp=N,1.5nm,0.3s,baz=53,slow=17,SNR=6.1						
ASAJ				Sn	Sn	22 17 46.7	+15
	baz=28,slow=33,SNR=1.7						
ASAJ				LR	LR	22 18 44.7	
	comp=N,124nm,19.9s,baz=172,slow=41						
ASAJ	Asahikawa	5.04	268	PN	Pn	22 16 33.8	-1.3
JFR	Furan	5.24	257	P	Pn	22 16 40.1	+2.1
ERM	Erimo	5.33	244	PN	Pn	22 16 40.7	+1.6
ERM	Erimo	5.33	244	Pn	Pn	22 16 40.7	+1.6
JEM	Erimo	5.33	244	P	Pn	22 16 40.4	+1.3
JNBK	Urakawa-nobuka	5.47	248	P	Pn	22 16 41.1	0.0
JBT2	Biratori 2	5.53	254	P	Pn	22 16 42.5	+0.6
JKB	Kayabe	6.79	250	P	Pn	22 16 59.1	-0.1
JKB				eS	Sn	22 18 12.1	-3.0
JANG	Nango	7.28	238	P	Pn	22 17 03.8	-2.1
JANG				eS	Sn	22 18 20.6	-6.5
OFUJ	Ofunato	8.04	230	eS	Sn	22 18 38.7	-7.2
PEA0B	Petropavlovsk-	10.10	29	PN	Pn	22 17 44.9	+0.4
PEA0B	Petropavlovsk-	10.10	29	Pn	Pn	22 17 44.9	+0.4
PETK	Petropavlovsk-	10.10	29	PN	Pn	22 17 44.8	+0.3
PETK	Petropavlovsk-	10.10	29	Pn	Pn	22 17 44.8	+0.3
USRK	Ussuriysk Ar.	12.61	275	Pn	Pn	22 18 19.3	+0.6
	baz=90,slow=14,SNR=6.4						
USRK	Ussuriysk Ar.	12.61	275	Pn	Pn	22 18 18.2	-0.5
KLR	Kul'dur	13.07	297	LR	LR	22 23 55.4	
	comp=N,60nm,19.5s,baz=82,slow=42						
YAK	Yakutsk	21.03	333	P	P	22 19 53.1	-8.5
	comp=N,0.3nm,0.3s,baz=137,slow=1.2,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.62	144	T	T	22 52 05.9	
	baz=334,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	28.64	144	T	T	22 52 10.1	
	baz=334,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	28.64	144	T	T	22 52 10.4	
	baz=334,slow=75,SNR=33						
ULN	Ulaanbaatar	29.36	292	eP	P	22 21 18.8	-1.9
ULN	Ulaanbaatar	29.36	292	P	P	22 21 18.8	-1.9
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ULN	Ulaanbaatar	29.36	292		P	22 21 18.8	-1.9
H11S1	WAKE ISLAND Hy	29.64	146	T	T	22 53 20.7	
	baz=335,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	29.65	146	T	T	22 53 20.0	
	baz=335,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	29.66	146	T	T	22 53 23.6	
	baz=335,slow=76,SNR=27						
SONM	Songino Array	29.80	292	P	P	22 21 25.0	+0.4
	comp=Z,0.4nm,0.6s,baz=94,slow=6.9,SNR=2.6						
SONM	Songino Array	29.80	292	P	P	22 21 24.9	+0.4
TTA	Tatalina	35.71	40	P	P	22 22 16.5	+0.6
TTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TTA	Tatalina	35.71	40	P	P	22 22 16.5	+0.6
TTA				IAmb	IAmb	22 22 24.8	
	comp=Z,3.8nm,1.2s						
IMAR	Indian Mountai	37.00	35	P	P	22 22 26.9	+0.1
PPLA	Purkeypile	37.45	40	P	P	22 22 32.1	+1.3
MDM	Murphy Dome	39.24	37	P	P	22 22 46.7	+1.1
WRH	Wood River Hil	39.30	37	P	P	22 22 46.5	+0.4
WRH				IAmb	IAmb	22 23 05.0	
	comp=Z,5.8nm,1.3s						
HDA	Harding Lake	39.79	37	P	P	22 22 50.2	-0.1
ILAR	Eielson Array	39.81	37	P	P	22 22 50.4	0.0
	comp=Z,0.9nm,0.8s,baz=267,slow=8.5,SNR=10						
ILAR	Eielson Array	39.81	37	P	P	22 22 50.7	+0.3
PRP	Porcupine Dome	40.37	36	P	P	22 22 55.6	+0.5
PRP				IAmb	IAmb	22 23 07.6	
	comp=Z,5.1nm,1.3s						
FYU	Fort Yukon	40.48	34	P	P	22 22 57.2	+1.4
BMAR	Burnt Mountain	40.73	33	P	P	22 22 58.9	+0.9
K27K	Chicken	41.94	38	P	P	22 23 08.6	+0.7
K27K				IAmb	IAmb	22 23 19.9	
	comp=Z,8.1nm,1.4s						
MK31	Makanchi Array	45.78	298	P	P	22 23 38.4	-0.5
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	45.78	298	P	P	22 23 38.4	-0.5
MK31				IAmb	IAmb	22 23 39.2	
	comp=Z,2.3nm,0.7s						
MKAR	Makanchi Array	45.78	298	P	P	22 23 38.6	-0.4
	comp=Z,1.7nm,0.6s,baz=74,slow=9.0,SNR=13						
MKAR				PcP	PcP	22 25 16.7	+0.9
	comp=Z,0.2nm,0.5s,baz=66,slow=3.6,SNR=1.8						
MKAR	Makanchi Array	45.78	298	P	P	22 23 37.3	-1.6
MAKZ	Makanchi	45.97	298	P	P	22 23 40.3	-0.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	45.97	298	P	P	22 23 40.2	-0.2
MAKZ				IAmb	IAmb	22 23 40.6	
	comp=Z,3.2nm,0.8s						
KDJ	Kajisay	51.11	294	P	P	22 24 20.5	+0.3
KDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KDJ	Kajisay	51.11	294	P	P	22 24 20.5	+0.3
KDJ				IAmb	IAmb	22 24 21.6	
	comp=Z,3.4nm,0.8s						
BOOM	Boomskoye usch	51.74	295	P	P	22 24 25.4	+0.5
BOOM				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BOOM	Boomskoye usch	51.74	295	P	P	22 24 25.4	+0.5
BOOM				IAmb	IAmb	22 24 26.1	
	comp=Z,3.1nm,1.1s						
EUNU	Eureka	51.77	11	P	P	22 24 24.9	+0.4
RES	Resolute Bay	53.70	17	P	P	22 24 38.4	-0.3
	comp=Z,3.3nm,0.8s,baz=301,slow=7.2,SNR=5.2						
RES	Resolute Bay	53.70	17	P	P	22 24 38.8	+0.1
RES				pmax	pmax		
	comp=Z,5.0nm,1.2s						
RES	Resolute Bay	53.70	17	P	P	22 24 38.8	+0.1
RES				IAmb	IAmb	22 24 50.6	
	comp=Z,5.0nm,1.2s						
ABKAR	Akbulak array	57.93	309	P	P	22 25 09.1	-0.2
ABKAR				IAmb	IAmb	22 25 09.2	
	comp=Z,1.4nm,0.7s						
CHGR	Chuyangaron	58.14	295	P	P	22 25 10.6	-0.5
NEW	Newport	60.49	50	LR	LR	22 51 01.4	
	comp=Z,27nm,18.0s,baz=72,slow=36						
FINES	FINESS Array B	64.96	334	P	P	22 25 55.3	-1.2
	comp=Z,0.9nm,0.7s,baz=26,slow=11,SNR=1.4						
FINES	FINESS Array B	64.96	334	P	P	22 25 54.6	-1.9
WRA	Warramunga Arr	65.66	196	P	P	22 26 17.9	+16
	comp=Z,1.4nm,0.8s,baz=17,slow=6.6,SNR=6.8						
ASAR	Alice Springs	69.37	195	P	P	22 26 42.6	+18
	comp=Z,0.9nm,0.7s,baz=15,slow=5.1,SNR=7.3						
NB2	NORSAR Subarra	69.49	340	P	P	22 26 24.3	-1.0
	comp=Z,0.5nm,0.6s,baz=31,slow=6.5						
NOA	NORSAR Array B	69.49	340	P	P	22 26 25.0	-0.3
	comp=Z,0.3nm,0.5s,baz=30,slow=6.6,SNR=4.2						
NOA	NORSAR Array B	69.49	340	P	P	22 26 25.0	-0.3
KBZ	Khabaz	70.58	313	P	P	22 26 33.5	+1.3
	comp=Z,3.1nm,0.8s,baz=53,slow=20,SNR=6.9						
AKASG	Malin Array Be	71.97	325	P	P	22 26 40.0	-0.5
	comp=Z,0.8nm,0.4s,baz=40,slow=5.8,SNR=3.1						
BUR08	Bucovina Ar. S	76.01	325	P	P	22 27 05.0	+0.7
BURAR	Bucovina Array	76.03	325	P	P	22 27 04.3	-0.1
GERES	GERESS Array B	79.31	332	P	P	22 27 23.0	+0.4
	comp=Z,0.5nm,0.6s,baz=15,slow=5.5,SNR=4.3						
GERES	GERESS Array B	79.31	332	P	P	22 27 22.7	+0.1

IDC ***17*** *22:16:11.1±1.0, 18°.41S×167°.68E, h0km, mb4.2/8, mb1 4.5/9, mb1mx4.1/36, mbtmp4.2/9, ML4.0/1, MS3.9/14, Ms1 3.9/14, ms1mx3.7/29, Error ellipse: s-maj=42.4km s-min=20.5km az=143.0*
NEIC ***17*** *22:16:12.9±1.4, 18°.30S±0°.07×167°.7E±0°.2, h10km±1km, mb4.8/23, Error ellipse: s-maj=24.9km s-min=11.3km az=95.0*
GCMT ***17*** *22:16:17.9±0.4, 18°.31S±0°.03×167°.36E±0°.03, h20km±1km, MW4.9/67, Moment Tensor Solution. s19,c20; s67,c87; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.20±.19; Mθθ-0.22±.10; Mϕϕ-1.98±. 13; Mrθ1.50±.25; Mθϕ0.12±.06; Mϕr-1.57±.20; Best double couple: M₀2.97500×10¹⁶ NP1:ϕs9.00000°, δ27.00000°, λ125.00000°. NP2: ϕs151.00000°, δ68.00000°, λ74.00000°. Principal axes: T 3.2820, Plg63.0000°, Azm35.0000°; N -0.6150, Plg15.0000°, Azm157.0000°; P -2.6680, Plg22.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 17 22:16:14.8±0.6, 18°.37S±0°.06×167°.7E±0°.1, h25km, n61, σ1§19/47, mb4.7/18, MS4.0/14, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	2.95	350		Pn	22 16 57.2	-2.9
DZM	Mont Dzumac	3.87	198	Pn	Pn	22 17 11.7	-1.2
	11nm,0.3s,baz=341,slow=1.9,SNR=54						
DZM				Sn	Sn	22 17 54.7	-2.9
	46nm,0.3s,baz=318,slow=23,SNR=18						
DZM				LR	LR	22 18 00.9	
	comp=Z,540nm,19.2s,baz=51,slow=29						
DZM	Mont Dzumac	3.87	198	ePn	Pn	22 17 12.5	-0.4
	130nm,1.6s						
DZM				eSn	Sn	22 17 56.0	-1.6
	342nm,0.8s						
HNR	Honiara	11.65	319	LR	LR	22 22 19.0	
	comp=Z,602nm,21.5s,baz=161,slow=32						
RAO	Raoul Island	17.01	132	LR	LR	22 25 19.2	
	comp=Z,602nm,19.0s,baz=272,slow=32						
CTA	Charters Tower	20.34	262	P	Pn	22 20 51.5	-0.1
	14nm,0.5s,baz=87,slow=12,SNR=31						
CTAO	Charters Tower	20.34	262	P	Pn	22 20 51.4	-0.2
PMG	Port Moresby	21.84	291	LR	LR	22 28 45.5	
	comp=Z,539nm,18.2s,baz=120,slow=35						
STKA	Stephens Creek	27.12	235	P	P	22 21 55.2	-0.8
	4.0nm,0.8s,baz=54,slow=11,SNR=5.2						
STKA				LR	LR	22 32 02.1	
	comp=Z,393nm,20.0s,baz=47,slow=35						
STKA	Stephens Creek	27.12	235	P	P	22 21 57.8	+1.8
WB0	Warramunga Arr	31.50	262	P	P	22 22 32.9	-2.1
WB0				IAmb	IAmb	22 22 46.8	
	comp=Z,14nm,1.4s						
WB2	Warramunga Arr	31.53	262	P	P	22 22 35.0	-0.3
WB2				IAmb	IAmb	22 22 38.3	
	comp=Z,13nm,1.3s						
WRA	Warramunga Arr	31.54	262	P	P	22 22 33.9	-1.5
	comp=Z,1.8nm,0.7s,baz=85,slow=5.9,SNR=16						
WRA				LR	LR	22 34 37.5	
	comp=Z,307nm,18.2s,baz=70,slow=35						
WRA	Warramunga Arr	31.54	262	P	P	22 22 34.4	-1.0
AS31	Alice Springs	31.95	255	P	P	22 22 38.0	-1.0
ASAR	Alice Springs	31.95	255	P	P	22 22 38.5	-0.5
	comp=Z,6.2nm,0.5s,baz=82,slow=8.7,SNR=97						
ASAR				LR	LR	22 35 18.6	
	comp=Z,495nm,18.7s,baz=88,slow=36						
ASAR	Alice Springs	31.95	255	P	P	22 22 38.2	-0.8
KNRA	Kununurra	37.30	268	P	P	22 23 25.0	-0.2
KNRA				IAmb	IAmb	22 23 40.1	
	comp=Z,26nm,1.0s						
GUMO	Guam	38.94	323	LR	LR	22 38 31.6	
	comp=Z,208nm,18.4s,baz=185,slow=34						
FITZ	Fitzroy Crossi	39.90	264	LR	LR	22 39 24.5	
	comp=Z,478nm,21.2s,baz=96,slow=35						
FITZ	Fitzroy Crossi	39.90	264	P	P	22 23 47.5	+0.4
TBI	Tubuai	40.22	105	eLQ	LQ	22 33 10.0	
	comp=Z,367nm,25.5s						
TBI				eLR	LR	22 34 58.9	
	comp=Z,267nm,30.0s						
PPT2	Papeete2	40.56	96	eS	S	22 29 58.2	-2.7
	comp=Z,131nm,23.8s						
PPT2				eLQ	LQ	22 33 17.9	
	comp=Z,293nm,26.5s						
PPT2				eLR	LR	22 35 06.9	
	comp=Z,446nm,31.8s						
BATI	Baumata	43.36	275	LR	LR	22 41 19.4	
	comp=Z,239nm,21.5s,baz=132,slow=35						
NWAO	Narrogin (SRO)	47.34	242	P	P	22 24 47.2	+0.3
MORW	Morawa	48.17	247	P	P	22 24 53.0	-0.3
KAPI	Kappang	48.65	280	LR	LR	22 47 50.5	
	comp=Z,71nm,18.0s,baz=84,slow=39						
KAPI	Kappang	48.65	280	P	P	22 24 57.0	-0.2
TOLI2	Tolitoli	50.04	288	P	P	22 25 06.8	-1.0
TOLI2				IAmb	IAmb	22 25 11.4	
	comp=Z,20nm,1.4s						
TAOE	Nuku Hiva Isla	51.40	87	eLR	LR	22 40 04.0	
	comp=Z,294nm,29.0s						
VNDA	Vanda	59.25	181	LR	LR	22 49 06.3	
	comp=Z,47nm,18.2s,baz=360,slow=33						
VNDA	Vanda	59.25	181	P	P	22 26 14.9	+1.2
LEM	Lembang	59.53	273	LR	LR	22 52 48.2	
	comp=Z,67nm,19.4s,baz=144,slow=37						
PETK	Petropavlovsk-	71.71

I07A					IAmb	IAmb	22 29 18.3		
	comp=Z,2.8nm,0.7s								
G08A	**Pilot Rock**	**91.69**	**43**	P	**P**	**P**	**22 29 20.7**	**+0.4**	
G08A					IAmb	IAmb	22 29 22.0		
	comp=Z,4.7nm,1.0s								
TXAR	**Lajitas Array**	**97.62**	**62**	P	Pdif		22 29 48.8	+1.0	
	comp=Z,0.1nm,0.5s,baz=216,slow=4.5,SNR=2.1								
TXAR	**Lajitas Array**	**97.62**	**62**	P	Pdif		22 29 48.0	+0.1	
YKA	**Yellowknife Ar**	**100.56**	**27**	P	**Pdif**		**22 30 00.8**	**+0.8**	
	comp=Z,1.0nm,0.6s,baz=250,slow=3.7,SNR=4.0								
ARCES	**ARCESS Array B**	**123.86**	**345**	PKP	**PKiKP**		**22 35 11.0**	**+0.6**	
	comp=Z,2.4nm,0.8s,baz=29,slow=2.8,SNR=4.9								
ABTA	**Abfaltersbach**	**145.11**	**330**	*eP*	**PKPdf**		**22 35 50.9**	**+0.6**	
	comp=Z,4.0nm,0.8s								
MOTA	**Moosalm**	**145.33**	**332**	*i* P	**PKPdf**		**22 35 52.1**	**+1.4**	
	comp=Z,4.3nm,1.0s								
RETA	**Reutte**	**145.37**	**332**	*eP*	**PKPdf**		**22 35 51.8**	**+1.1**	
	comp=Z,1.2nm,0.5s								
SQTA	**Sankt Quirin**	**145.37**	**331**	*i* P	**PKPdf**		**22 35 52.0**	**+1.2**	
	comp=Z,3.0nm,0.5s								
BFO	**Black Forest**	**145.74**	**335**		**PKPab**		**22 35 52.0**	**0.0**	
FETA	**Feichten**	**145.74**	**332**	*eP*	**PKPab**		**22 35 52.8**	**+0.6**	
	comp=Z,7.6nm,1.3s								
DAVA	**Damuels**	**145.91**	**333**	*i* P	**PKPdf**		**22 35 51.5**	**-0.3**	
	comp=Z,9.7nm,1.3s								

IDC 17 22:23:44.6±3.0, 13°.81S×176°.96W, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.7/38, mbtmp3.7/5, MS3.9/2, Ms1 3.9/2, ms1mx3.2/27, Error ellipse: s-maj=297.2km s-min=24.7km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.88**	**256**	P	P	22 32 15.2	-1.8
	0.7nm,0.9s,baz=82,slow=6.8,SNR=3.3						
ASAR	**Alice Springs**	**47.36**	**251**	P	P	22 32 21.8	+1.0
	1.5nm,0.7s,baz=84,slow=8.2,SNR=14						
ASAR				LR	LR	22 50 30.5	
	comp=Z,137nm,21.5s,baz=9.0,slow=34						
NVAR	**Mina Array Bea**	**75.52**	**44**	P	P	22 35 32.5	+1.2
	0.2nm,0.4s,baz=229,slow=9.1,SNR=4.4						
NVAR				LR	LR	23 02 04.7	
	comp=Z,62nm,19.6s,baz=236,slow=30						
TXAR	**Lajitas Array**	**82.63**	**57**	P	P	22 36 09.7	-0.6
	0.5nm,0.9s,baz=224,slow=5.0,SNR=3.9						
PDAR	**Pinedale Array**	**83.43**	**43**	P	P	22 36 13.7	-0.7
	0.6nm,0.8s,baz=197,slow=3.1,SNR=5.3						
BRTR	**Keskin Array B**	**142.73**	**320**	PKP	PKPdf	22 43 20.1	-0.4
	0.6nm,0.4s,baz=29,slow=3.3,SNR=4.6						

DJA 17 22:37:07.0±0.3, 3°.5S×136°.78E±0°.09, h87km±12km, M4.6/9, mB5.0/3, mb4.8/9, MLv4.6/7, Mw(mB)4.4/3
NEIC 17 22:37:08.2±1.2, 3°.10S×136°.78E±0°.09, h59km±6km, mb4.5/19, Error ellipse: s-maj=16.5km s-min=10.8km az=222.0
IDC 17 22:37:09.0±2.4, 3°.19S×136°.62E, h69km±21km, mb3.9/13, mb1 4.1/18, mb1mx4.0/40, mbtmp4.3/18, MS3.5/6, Ms1 3.5/6, ms1mx3.1/35, Error ellipse: s-maj=18.9km s-min=9.8km az=76.0

ISC 17 22:37:05.3±0.4, 3°.14S±0°.04×136°.86E±0°.05, h32km, n79, σ1°.84/83, mb4.3/22, MS3.9/4, 1C-1D, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.41**	**334**	P	**Pn**	**22 37 28.5**	**-0.2**
SRPI				S	**Sb**	**22 37 48.1**	**-0.4**
BAKI	**Biak**	**2.08**	**339**	P	**Pn**	**22 37 37.9**	**0.0**
SMPI	**Sarmi**	**2.17**	**58**	P	**Pn**	**22 37 39.1**	**-0.1**
GENI	**Genyem**	**3.35**	**81**	P	**Pn**	**22 37 57.0**	**+1.6**
FAKI	**Fak Fak**	**4.61**	**273**	P	**Pn**	**22 38 14.4**	**+1.6**
FAKI				S	**Sn**	**22 39 06.8**	**+1.5**
FAKI	**Fak Fak**	**4.61**	**273**	Pn	**Pn**	**22 38 13.9**	**+1.1**
SIJI	**Sorong**	**6.03**	**292**	P	**Pn**	**22 38 33.9**	**+1.6**
	12nm,0.3s,baz=212,slow=23,SNR=35						
SIJI				S	**Sn**	**22 39 38.0**	**-2.4**
	7.1nm,0.3s,baz=205,slow=22,SNR=5.9						
MMPI	**Merauke**	**6.35**	**147**	P	Pn	22 38 42.3	+5.6
SANI	**Sanana**	**10.92**	**275**	P	**Pn**	**22 39 39.8**	**+0.4**
	27nm,0.8s						
MTN	**Manton Dam**	**11.19**	**210**	Pn	**Pn**	**22 39 45.5**	**+2.5**
PMG	**Port Moresby**	**11.98**	**122**	P	**Pn**	**22 39 58.5**	**+4.6**
	2.3nm,0.3s,baz=341,slow=7.5,SNR=9.9						
PMG				S	**Sn**	**22 42 05.7**	**-0.8**
	2.5nm,0.3s,baz=87,slow=22,SNR=1.8						
PMG				LR	LR	22 45 06.0	
	comp=Z,188nm,20.0s,baz=260,slow=39						
PMG	**Port Moresby**	**11.98**	**122**	Pn	**Pn**	**22 39 57.6**	**+3.7**
COEN	**Coen**	**12.43**	**150**	Pn	**Pn**	**22 40 00.8**	**+0.7**
SOEI	**Soe**	**14.13**	**242**	P	**Pn**	**22 40 24.9**	**+1.4**
	53nm,0.9s						
SOEI	**Soe**	**14.13**	**242**	Pn	**Pn**	**22 40 24.6**	**+1.1**
LUWI	**Luwuk**	**14.23**	**278**	Pn	**Pn**	**22 40 22.4**	**-2.4**
KNRA	**Kununurra**	**14.79**	**212**	Pn	**Pn**	**22 40 33.2**	**+0.9**
BATI	**Baumata**	**14.87**	**241**	P	**Pn**	**22 40 32.6**	**-0.7**
	8.0nm,0.3s,baz=74,slow=8.5,SNR=3.0						
BATI				S	**Sn**	**22 43 16.1**	**-1.0**
	2.9nm,0.3s,baz=88,slow=22,SNR=1.7						
DAV	**Davao City (W)**	**15.15**	**312**	LR	LR	22 46 16.4	
	comp=Z,137nm,19.9s,baz=126,slow=36						
MRSI	**Marisa**	**15.34**	**283**	P	**P**	**22 40 48.6**	**+4.6**
WB0	**Warramunga Arr**	**16.70**	**188**	P	**P**	**22 40 59.3**	**+0.2**
WB0					IAmb	IAmb	22 41 15.5		
	comp=Z,18nm,0.7s								
WRAB	**Tennant Creek**	**16.87**	**188**	P	**P**	**22 41 03.0**	**+2.0**
WRAB					IAmb	IAmb	22 41 19.3		
	comp=Z,32nm,0.8s								
WB2	**Warramunga Arr**	**16.88**	**188**	P	**P**	**22 41 02.5**	**+1.5**
WB2					IAmb	IAmb	22 41 19.9		
	comp=Z,32nm,0.8s								
WRA	**Warramunga Arr**	**16.88**	**188**	P	**Pn**	**22 40 56.8**	**-2.5**
	comp=Z,0.8nm,0.3s,baz=4.3,slow=13,SNR=19								
WRA				S	**Sn**	**22 43 57.9**	**-8.2**
	comp=Z,1.3nm,0.3s,baz=13,slow=22,SNR=6.6								
MPSI	**Mapaga**	**17.30**	**281**	P	**P**	**22 41 11.0**	**+5.2**
GUMO	**Guam**	**18.42**	**25**	LR	LR	22 49 26.4	
	comp=Z,53nm,18.3s,baz=203,slow=40								
FITZ	**Fitzroy Crossi**	**18.49**	**216**	P	**P**	**22 41 18.5**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=38,slow=11,SNR=36								
FITZ				S	Sn	22 44 33.9	-11		
	comp=Z,1.7nm,0.3s,baz=187,slow=13,SNR=8.2								
FITZ				LR	LR	22 48 59.2			
	comp=Z,178nm,20.6s,baz=44,slow=39								
FITZ	**Fitzroy Crossi**	**18.49**	**216**	P	**Pn**	**22 41 20.8**	**+1.6**
CTA	**Charters Tower**	**19.18**	**152**	P	**P**	**22 41 27.9**	**+1.4**
	comp=Z,1.8nm,0.3s,baz=330,slow=12,SNR=16								
CTAO	**Charters Tower**	**19.18**	**152**	P	**P**	**22 41 27.8**	**+1.4**
CTAO					IAmb	IAmb	22 41 35.1		
	comp=Z,11nm,0.7s								
AS31	**Alice Springs**	**20.61**	**188**	P	**P**	**22 41 43.2**	**+1.2**
AS31					IAmb	IAmb	22 41 48.8		
	comp=Z,13nm,0.8s								
ASAR	**Alice Springs**	**20.61**	**188**	P	**P**	**22 41 42.8**	**+0.8**
	comp=Z,30nm,0.6s,baz=9.8,slow=10,SNR=164								
ASAR				S	**S**	**22 45 26.3**	**-4.5**
	comp=Z,5.0nm,1.0s,baz=5.8,slow=28,SNR=3.6								
ASAR	**Alice Springs**	**20.61**	**188**	P	**P**	**22 41 43.3**	**+1.3**
PSA00	**Pilbara Seismi**	**24.69**	**221**	P	**P**	**22 42 23.6**	**+0.1**
EIDS	**Eidsvold**	**26.00**	**150**	P	**P**	**22 42 37.2**	**+1.8**
EIDS					IAmb	IAmb	22 42 39.4		
	comp=Z,18nm,1.1s								
FORT	**Forrest**	**28.72**	**196**	P	**P**	**22 42 59.5**	**-0.4**
STKA	**Stephens Creek**	**28.93**	**172**	P	**P**	**22 43 01.6**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=336,slow=11,SNR=6.4								
STKA	**Stephens Creek**	**28.93**	**172**	P	**P**	**22 43 02.2**	**+0.6**
JNU	**Nakatsue**	**36.51**	**352**	P	**P**	**22 44 08.0**	**+0.2**
JWT	**Wachi**	**38.24**	**358**	P	**P**	**22 44 22.4**	**-0.1**
MJAR	**Matsushiro Arr**	**39.49**	**2**	LR	LR	22 58 13.5	
	comp=Z,77nm,20.9s,baz=130,slow=32								
KSRS	**Korea Array**	**41.23**	**349**	P	**P**	**22 44 46.6**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=171,slow=11,SNR=5.2								
GYA	**Guiyang**	**41.45**	**317**	↓P	**P**	**22 44 49.0**	**-0.4**
GYA				pmax	pmax				
	comp=Z,8.0nm,1.3s								
ENH	**Enshi**	**42.28**	**324**	P	**P**	**22 44 56.1**	**0.0**
ENH					IAmb	IAmb	22 44 56.5		
	comp=Z,8.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**43.06**	**301**	P	**P**	**22 45 02.4**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=124,slow=7.4,SNR=6.4								
CMAR	**Chiang Mai Arr**	**43.06**	**301**		**P**	**22 45 02.5**	**-0.1**
KMI	**Kunming**	**43.42**	**312**	*eP*	**P**	**22 45 06.6**	**+1.0**
KMI				pP	pP	22 45 09.3	-6.0
KMI				pmax	pmax				
	comp=Z,12nm,0.6s								
KMI				pmax	pmax				
	comp=Z,100nm,4.4s								
KMI	**Kunming**	**43.42**	**312**	P	**P**	**22 45 06.4**	**+0.8**
KMI				IAmb	IAmb	22 45 07.0			
	comp=Z,9.1nm,0.7s								
XAN	**Xi'an**	**45.40**	**327**	P	**P**	**22 45 20.3**	**-0.8**
XAN				pP	pP	22 45 31.3	+0.5		
XAN				pmax	pmax				
	comp=Z,10.0nm,1.1s								
USRK	**Ussuriysk Ar.**	**47.33**	**355**	P	**P**	**22 45 35.7**	**-0.2**
	comp=Z,5.1nm,0.7s,baz=173,slow=6.6,SNR=13								
USA0B	**Ussuriysk Arra**	**47.33**	**355**	P	**P**	**22 45 36.3**	**+0.3**
USA0B					IAmb	IAmb	22 45 36.7		
	comp=Z,7.1nm,0.8s								
HHC	**Hu-ho-hao-te**	**49.50**	**335**	*eP*	**P**	**22 45 54.5**	**+1.5**
HHC				pmax	pmax				
	comp=Z,9.0nm,0.7s								
HHC				pmax	pmax				
	comp=Z,96nm,4.0s								
LZH	**Lanzhou**	**49.74**	**325**	*eP*	**P**	**22 45 55.8**	**+0.9**
LZH				pP	sP	22 46 10.3	+1.8		
LZH				sP	pP	22 46 17.1	+12		
LZH				PP	PP	22 47 57.5	+7.7		
LZH				pmax	pmax				
	comp=Z,14nm,1.1s								
LZH				pmax	pmax				
	comp=Z,59nm,5.0s								
LZH				LR	LR				
	comp=N,130nm,15.0s								
LZH				LR	LR				
	comp=E,120nm,15.7s								
LZH				LR	LR				
	comp=Z,190nm,16.7s								
URZ	**Urewera**	**50.69**	**139**	LR	LR	23 05 52.5			
	comp=Z,85nm,19.9s,baz=31,slow=34								
GTA	**Gaotai**	**54.34**	**325**	*eP*	**P**	**22 46 29.0**	**-0.1**
GTA				pP	sP	22 46 42.9	+0.1		
GTA				sP	pP	22 46 48.0	+9.1		
GTA				PcP	**PcP**	**22 47 35.0**	**+2.2**
GTA				S	**S**	**22 54 05.9**	**+0.7**
GTA				pmax	pmax				
	comp=Z,3.0nm,1.0s								
GTA				pmax	pmax				
	comp=Z,120nm,7.6s								
GTA				LR	LR				
	comp=N,120nm,16.4s								
GTA				LR	LR				
	comp=E,110nm,19.3s								
GTA				LR	LR				
	comp=Z,120nm,20.0s								
SONM	**Songino Array**	**57.34**	**336**	P	**P**	**22 46 50.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=152,slow=8.9,SNR=5.4								
SONM	**Songino Array**	**57.34**	**336**	P	**P**	**22 46 48.4**	**-2.0**
PETK	**Petropavlovsk-**	**58.72**	**15**	P	**P**	**22 47 00.2**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=170,slow=9.0,SNR=2.1								
PETK	**Petropavlovsk-**	**58.72**	**15**	P	**P**	**22 46 59.5**	**-0.3**
WMQ	**Urumqi**	**64.21**	**323**	*eP*	**P**	**22 47 38.3**	**+1.1**
SEY	**Seymchan**	**66.94**	**8**	P	**P**	**22 47 55.0**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=163,slow=23,SNR=1.9								
MKAR	**Makanchi Array**	**69.01**	**323**	P	**P**	**22 48 06.8**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=101,slow=8.7,SNR=13								
MKAR	**Makanchi Array**	**69.01**	**323**	P	**P**	**22 48 07.1**	**-0.7**
ZAA0	**Zalesovo Array**	**71.39**	**331**	P	**P**	**22 48 20.8**	**-1.3**
ZALV	**Zalesovo Beam**	**71.39**	**331**	P	**P**	**22 48 20.5**	**-1.6**
	comp=Z,2.0nm,0.6s,baz=111,slow=6.9,SNR=12								
ZALV	**Zalesovo Beam**	**71.39**	**331**	P	**P**	**22 48 20.7**	**-1.4**
GAR	**Garm**	**74.00**	**312**	P	**P**	**22 48 37.5**	**-0.6**
GAR					IAmb	IAmb	22 48 38.3		
	comp=Z,5.0nm,0.8s								
KKAR	**Karatay Array**	**75.15**	**316**	P	**P**	**22 48 44.0**	**-0.6**
VNDA	**Vanda**	**75.53**	**175**	P	**P**	**22 48 46.1**	**0.0**
	comp=Z,1.2nm,0.8s,baz=316,slow=7.6,SNR=10								
VNDA	**Vanda**	**75.53**	**175**	P	**P**	**22 48 46.3**	**+0.2**
NRIK	**Noril'sk**	**79.62**	**344**	P	**P**	**22 49 08.2**	**-0.8**
	comp=Z,1.7nm,0.6s,baz=140,slow=8.9,SNR=4.9								
ILAR	**Eielson Array**	**86.99**	**25**	P	**P**	**22 49 45.2**	**-1.9**
	comp=Z,1.0nm,0.9s,baz=246,slow=4.3,SNR=5.3								
ARCES	**ARCESS Array B**	**100.30**	**341**	P	**Pdif**	**22 50 46.9**	**-1.4**
	comp=Z,3.2nm,0.9s,baz=102,slow=7.5,SNR=1.6								
TORD	**Torodi Ar. Bea**	**134.59**	**285**	PKP	**PKPdf**	**22 56 21.0**	**-0.6**
	comp=Z,1.0nm,1.1s,baz=104,slow=1.8,SNR=5.8								
TORD	**Torodi Ar. Bea**	**134.59**	**285**		**PKPdf**	**22 56 19.4**	**-2.1**
CPUP	**Villa Florida**	**147.65**	**156**	PKPbc	**PKPbc**	**22 56 46.7**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=181,slow=0.5,SNR=8.1								
CPUP	**Villa Florida**	**147.65**	**156**		**PKPdf**	**22 56 45.9**	**+1.2**
LPAZ	**La Paz**	**148.65**	**129**	PKPbc	**PKPbc**	**22 56 51.8**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=335,slow=3.7,SNR=6.2								
LPAZ	**La Paz**	**148.65**	**129**	PKPbc	**PKPbc**	**22 56 51.2**	**+0.2**

IDC 17 22:43:19.6±2.6, 17°.28S×177°.62W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/36, mbtmp3.9/3, Error ellipse: s-maj=298.5km s-min=33.2km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.49**	**259**	P	P	22 51 40.7	-0.4
	0.3nm,0.4s,baz=94,slow=7.9,SNR=4.7						
ASAR	**Alice Springs**	**45.69**	**254**	P	P	22 51 42.8	+0.1
	1.8nm,0.4s,baz=89,slow=8.6,SNR=19						
TXAR	**Lajitas Array**	**85.03**	**57**	P	P	22 55 57.6	-0.1
	0.5nm,0.8s,baz=218,slow=5.9,SNR=4.8						

DJA 17 22:51:55.3±0.3, 8°.S±3°×10°.7E±°, h10km, M4.3/19, mB5.3/2, mb4.7/4, MLv4.2/19, Mw(mB)4.7/2, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.76**	**39**	P	Pb	22 52 10.9	+0.3
CISI				S	Sg	22 52 19.8	0.0
LEM	**Lembang**	**1.34**	**12**	P	Pn	22 52 20.1	-0.2
LEM				S	Sb	22 52 37.7	-0.3
SKJI	**Sukabumi**	**1.38**	**326**	P	Pn	22 52 19.9	-0.7
DBJI	**Dramaga**	**1.69**	**340**	P	Pn	22 52 25.0	+0.1
KPJI	**Karang Pucung**	**1.77**	**63**	P	Pn	22 52 26.0	0.0
SBJI	**Serang**	**2.35**	**329**	P	Pn	22 52 34.3	+0.3
UGM	**Wanagama**	**3.16**	**86**	P	Pn	22 52 44.8	-0.4
SMRI	**Semarang**	**3.26**	**71**	P	Pn	22 52 47.4	+0.8
WOJI	**Wonogiri, Jawa**	**3.56**	**85**	P	Pn	22 52 49.2	-1.5
KASI	**Kota Agung**	**3.84**	**313**	P	Pn	22 52 54.6	0.0
KLSI		**4.31**	**323**	P	Pn	22 53 02.2	+1.3
PWJI	**Pagerwojo**	**4.42**	**89**	P	Pn	22 53 02.4	-0.1
MDSI	**Maura Dua**	**4.81**	**319**	P	Pn	22 53 08.0	+0.2
MNAI	**Manna**	**5.76**	**311**	P	Pn	22 53 20.3	-0.6
	0.9nm234nm,1.1s						
GMJI	**Gumukmas**	**6.04**	**92**	P	Pn	22 53 26.0	+1.2
	0.1nm26nm,0.7s						
JAGI	**Jajag, Banyuwa**	**6.75**	**93**	P	Pn	22 53 35.3	+0.8

ANF 17 23:04:56.7±0.2, 41°.84N×119°.66W, h0km, ML3.3/19, Error ellipse: s-maj=2.0km s-min=1.7km az=36.0
SEA 17 23:04:57.8±3.8, 41°.86N±0°.04×119°.60W±0°.04, h0km±7km, Error ellipse: s-maj=5.8km s-min=4.5km az=166.0
REN 17 23:04:58.2±3.5, 41°.92N±0°.04×119°.63W±0°.05, h0km±7km, ML3.5/7, ML3.2/39(SEA), Mwr3.4/11(SLM), Error ellipse: s-maj=6.3km s-min=4.9km az=156.0
NEIC 17 23:04:58.2, 41°.92N×119°.63W, h9km, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr-0.98; Mθθ-0.01; Mθφ 0.99; Mrθ-0.61; Mθφ 0.85; Mφr 0.34; Fault plane solution: M0 1.48000×10^14 NP1:φs180.00000°, δ55.00000°, λ-135.00000°. NP2:φs60.00000°, δ55.00000°, λ-45.00000°. Principal axes: T 1.4794, Plg0.0000°, Azm120.0000°; N 0.0003, Plg35.0000°, Azm210.0000°; P -1.4796, Plg55.0000°, Azm30.0000°;
NEIC 17 23:05:00.8±4.5, 42°.10N±0°.05×119°.84W±0°.06, h21km±8km Error ellipse: s-maj=7.1km s-min=5.8km az=144.0

ISC 17 23:05:02.2±1.5, 42°.02N±0°.02×119°.78W±0°.02, h21km±4km, n64, σ2°.24/78, Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.41**	**254**		**Pb**	**23 05 07.9**	**-2.8**
MOD					**Sb**	**23 05 15.0**	**-1.6**
WVOR	**Wild Horse Val**	**0.94**	**63**		**Pb**	**23 05 15.7**	**-4.3**
K05A	**Summer Lake**	**1.09**	**311**		**Pn**	**23 05 21.6**	**-0.8**
M04C	**Macdoel**	**1.56**	**262**	P	**Pn**	**23 05 26.9**	**-1.9**
	baz=84,SNR=136						
M04C				Sb	**Sb**	**23 05 50.6**	**+0.9**
	baz=84						
K04D	**Chiloquin, OR**	**1.59**	**293**	P	**Pb**	**23 05 28.2**	**-2.7**
	baz=113,SNR=109						
K04D				Sb	**Sb**	**23 05 53.6**	**+3.0**
	baz=113						
J08A	**Circle Bar Ran**	**1.65**	**35**		**Pn**	**23 05 27.8**	**-2.2**
J05D	**Fort Rock, OR**	**1.66**	**320**	P	**Pb**	**23 05 29.7**	**-2.5**
	baz=138						
J05D				Pb	**Pn**	**23 05 31.6**	**+1.3**
	baz=138,SNR=278						
J05D				Sb	**Sb**	**23 05 56.5**	**+3.7**
	baz=138						
L04D	**Klamath Falls**	**1.89**	**277**	P	**Pn**	**23 05 31.7**	**-1.6**
	baz=98,SNR=109						
L04D				Sb	**Sb**	**23 06 01.3**	**+2.0**
	baz=98						
PINE	**Pine Mountain**	**1.97**	**335**		**Pb**	**23 05 36.9**	**-0.6**
WVA	**Winnemucca Val**	**2.07**	**181**		**Pn**	**23 05 34.0**	**-1.8**
I07A	**Izee**	**2.08**	**5**		**Pb**	**23 05 37.2**	**-2.0**
J04D	**Umpqua Nationa**	**2.11**	**306**	Pb	**Pb**	**23 05 39.0**	**-0.9**
	baz=125,SNR=63						
J04D				Sb	**Sb**	**23 06 10.1**	**+4.3**
	baz=125						
BEKR	**Beckworth**	**2.19**	**192**		**Pn**	**23 05 35.8**	**-1.7**
YBH	**Yreka Blue Hor**	**2.21**	**264**		**Pn**	**23 05 35.4**	**-2.3**
O03E	**Paynes Creek**	**2.30**	**222**	Pb	**Pn**	**23 05 38.5**	**-0.5**
	baz=44,SNR=86						
O03E				Sb	**Sb**	**23 06 08.6**	**-2.5**
	baz=44						
PAHR	**Pah Rah Range**	**2.33**	**173**		**Pn**	**23 05 38.1**	**-1.2**
LOY	**Loyalton**	**2.38**	**189**		**Pn**	**23 05 39.6**	**-0.5**
M02C	**Callahan**	**2.39**	**256**	P	**Pn**	**23 05 37.4**	**-2.8**
	baz=76,SNR=9.3						
M02C				Sb	**Sb**	**23 06 13.9**	**+0.4**
	baz=76						
PEAR	**Peavine Mounta**	**2.41**	**183**		**Pn**	**23 05 40.4**	**-0.1**
HUMO	**Hull Mountain**	**2.43**	**285**		**Pn**	**23 05 39.0**	**-1.7**
N02D	**Trinity Center**	**2.43**	**246**	P	**Pn**	**23 05 37.8**	**-3.0**
	baz=67,SNR=21						
N02D				Sb	**Sb**	**23 06 14.5**	**-0.4**
	baz=67						
KBF	**Kyburz Flat**	**2.53**	**188**		**Pn**	**23 05 42.1**	**-0.1**
WDC	**Whiskeytown Da**	**2.53**	**236**		**Pn**	**23 05 39.8**	**-2.2**
VPK	**Verdi Peak**	**2.55**	**185**		**Pn**	**23 05 42.7**	**+0.2**
I05D	**Terrebonne, OR**	**2.59**	**334**	Pb	**Pb**	**23 05 47.4**	**-0.5**
	baz=152,SNR=9.4						
I05D				Sb	**Sb**	**23 06 23.8**	**+4.5**
	baz=152						
VCNR	**Virginia City**	**2.72**	**178**		**Pn**	**23 05 46.7**	**+1.9**
ORV	**Oroville**	**2.79**	**209**		**Pn**	**23 05 43.9**	**-1.6**
L02E	**Cave Junction**	**2.85**	**274**	P	**Pn**	**23 05 45.5**	**-0.9**
	baz=93						
L02E				Sb	**Sb**	**23 06 29.2**	**+2.4**
	baz=93						
O02D	**Mt. Diablo Mer**	**2.92**	**232**	Pb	**Pb**	**23 05 49.7**	**-4.0**
	baz=53						
O02D				Sb	**Sb**	**23 06 26.9**	**-2.1**
	baz=53						
PNTR	**Pine Nut**	**2.93**	**177**		**Pn**	**23 05 49.2**	**+1.5**
K02D	**Willamette Mer**	**2.96**	**285**	P	**Pn**	**23 05 47.1**	**-0.9**
	baz=103,SNR=209						
K02D				Sb	**Sb**	**23 06 33.3**	**+3.3**
	baz=103						
RUBR	**Rubicon Trail**	**2.98**	**186**		**Pn**	**23 05 50.5**	**+2.2**
I03D	**Drain, OR**	**3.12**	**304**	P	**Pn**	**23 05 50.5**	**+0.5**
	baz=122						
KRMB	**Red Mountain**	**3.13**	**262**		**Pb**	**23 05 59.0**	**+1.8**
KHMM	**Horse Mountain**	**3.18**	**250**		**Pb**	**23 05 58.0**	**-0.1**
H04A	**Detroit Lake**	**3.19**	**327**		**Pb**	**23 05 58.2**	**0.0**
AFDM	**Forest Hills D**	**3.20**	**197**		**Pn**	**23 05 53.8**	**+2.6**
KVN	**Kaiserville**	**3.23**	**156**		**Pn**	**23 05 53.0**	**+1.2**
MFID	**Camas Ranch**	**3.23**	**63**	Pn	**Pn**	**23 05 48.9**	**-2.8**
J01E	**Myrtle Point**	**3.27**	**292**	P	**Pn**	**23 05 52.4**	**+0.2**
	baz=110						
H04D	**Lebanon**	**3.31**	**320**	Pb	**Pb**	**23 05 60.0**	**-0.2**
	baz=138						
KBO	**Bosley Butte**	**3.32**	**275**	Pg	**Pb**	**23 06 00.6**	**+0.3**
G08A	**Pilot Rock**	**3.33**	**10**		**Pb**	**23 05 59.6**	**-1.0**
BMO	**Blue Mountains**	**3.36**	**32**		**Pb**	**23 05 58.7**	**-2.4**
G05D	**Wamic, OR**	**3.41**	**341**	Sb	Sb	23 06 48.7	+5.7
	baz=159						
KMRM	**Mail Ridge**	**3.47**	**240**	Pg	**Pb**	**23 06 04.2**	**+1.3**
KEBM	**Edson Butte**	**3.48**	**286**		Pb	23 06 06.5	+3.4
RYN	**Ryan**	**3.52**	**164**		**Pb**	**23 06 02.4**	**-1.4**
**WA

λ-44.00000°. Principal axes: T 1.3270, Plg5.0000°, Azm346.0000°; N -0.1620, Plg40.0000°, Azm80.0000°; P -1.1640, Plg50.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC **17** 23:06:00, 38.60N, 23.67E, h18km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.74; $M_{\theta\theta}$=1.21; $M_{\phi\phi}$=-0.47; $M_{r\theta}$=-0.46; $M_{r\phi}$=0.73; Fault plane solution: M_0=1.43000×10^{17} NP1:ϕ_s290.00000°, δ41.00000°, λ-31.00000°. NP2:ϕ_s45.00000°, δ70.00000°, λ-126.00000°. Principal axes: T 1.5014, Plg17.0000°, Azm161.0000°; N -0.1468, Plg34.0000°, Azm60.0000°; P -1.3545, Plg51.0000°, Azm273.0000°;

ISC 17 23:05:55.9±0.6, **38.65N**±0.01×**23.41E**±0.01, **h9**km±3km, **n1963**, σ1**s45**/1954, **mb5.4**/367, **MS5.0**/240, **79C-37D, Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.30**	**279**	P		**Pg**		**23 06 02.2**	**+0.3**
ATAL				S		**Sg**		**23 06 07.2**	**+1.2**
ATAL					AML	AML		23 06 08.8	
ATAL					AML	AML		23 06 10.2	
ATAL	**Atalanti**	**0.30**	**279**	P		**Pg**		**23 06 02.3**	**+0.3**
ATAL				S		**Sg**		**23 06 07.0**	**+0.9**
LKR	**Lokris**	**0.32**	**271**	P		**Pg**		**23 06 02.2**	**0.0**
LKR				S		**Sg**		**23 06 07.0**	**+0.5**
LKR					AML	AML		23 06 08.4	
LKR					AML	AML		23 06 08.8	
LKR	**Lokris**	**0.32**	**271**	P		**Pg**		**23 06 02.4**	**+0.1**
VIL2	**Platees**	**0.45**	**194**	P		**Pg**		**23 06 05.4**	**+0.8**
VIL2				S		**Sb**		**23 06 12.8**	**-0.1**
VIL2					AML	AML		23 06 15.4	
VIL2					AML	AML		23 06 16.1	
VILL	**Villia**	**0.49**	**189**	P		**Pg**		**23 06 05.5**	**+0.1**
VILL				S		**Sg**		**23 06 13.1**	**+1.3**
KYMI	**Kymi, Euboea I**	**0.54**	**91**	P		**Pg**		**23 06 06.5**	**0.0**
KYMI				S		**Sb**		**23 06 15.1**	**-0.4**
KYMI					AML	AML		23 06 19.6	
KYMI					AML	AML		23 06 23.7	
KYMI	**Kymi, Euboea I**	**0.54**	**91**	P		**Pg**		**23 06 06.4**	**0.0**
AXAR	**Agios Charalam**	**0.60**	**282**	P		**Pg**		**23 06 07.1**	**-0.4**
AXAR				S		**Sg**		**23 06 16.1**	**+0.8**
AXAR	**Agios Charalam**	**0.60**	**282**	P		**Pg**		**23 06 07.6**	**+0.1**
AXAR				S		**Sb**		**23 06 17.1**	**0.0**
ALNA	**Alonissos**	**0.61**	**36**	P		**Pg**		**23 06 07.9**	**+0.1**
ALNA					AML	AML		23 06 18.6	
ALNA					AML	AML		23 06 20.9	
AOS	**Alonnisos**	**0.64**	**35**	P		**Pg**		**23 06 08.1**	**-0.1**
AOS				S		**Sg**		**23 06 17.2**	**+0.6**
AOS					AML	AML		23 06 21.1	
AOS					AML	AML		23 06 21.5	
AOS	**Alonnisos**	**0.64**	**35**	PG		**Pg**		**23 06 08.2**	**-0.1**
AOS				SG		**Sg**		**23 06 16.5**	**-0.2**
AOS	**Alonnisos**	**0.64**	**35**	P		**Pg**		**23 06 08.4**	**+0.1**
NEO	**Neokhori**	**0.67**	**348**	P		**Pb**		**23 06 09.4**	**-0.6**
NEO				S		**Sb**		**23 06 19.5**	**+0.1**
NEO					AML	AML		23 06 22.2	
NEO					AML	AML		23 06 23.1	
NEO	**Neokhori**	**0.67**	**348**	P		**Pb**		**23 06 09.3**	**-0.6**
PTL	**Penteli**	**0.70**	**149**	P		**Pg**		**23 06 09.2**	**-0.2**
PTL				S		**Sb**		**23 06 19.9**	**-0.1**
PTL					AML	AML		23 06 23.5	
PTL					AML	AML		23 06 25.0	
PTL	**Penteli**	**0.70**	**149**	P		**Pg**		**23 06 09.3**	**-0.1**
DION	**Dionisos Attik**	**0.70**	**144**	P		**Pg**		**23 06 09.5**	**0.0**
DION				S		**Sg**		**23 06 19.6**	**+0.9**
DION					AML	AML		23 06 23.1	
DION					AML	AML		23 06 23.8	
DION	**Dionisos Attik**	**0.70**	**144**	P		**Pg**		**23 06 09.6**	**+0.1**
LTK	**Loutraki**	**0.71**	**209**	P		**Pg**		**23 06 09.2**	**-0.4**
LTK				S		**Sg**		**23 06 18.7**	**-0.2**
LTK					AML	AML		23 06 24.5	
LTK					AML	AML		23 06 27.5	
LTK	**Loutraki**	**0.71**	**209**	P		**Pg**		**23 06 09.4**	**-0.3**
LTK				S		**Sb**		**23 06 20.1**	**-0.4**
ATH	**Athens Observa**	**0.72**	**160**	P		**Pg**		**23 06 09.7**	**0.0**
ATH					AML	AML		23 06 25.1	
ATH					AML	AML		23 06 25.2	
ATH	**Athens Observa**	**0.72**	**160**	P		**Pg**		**23 06 10.2**	**+0.5**
DSF	**Desfina**	**0.73**	**251**	P		**Pg**		**23 06 09.1**	**-0.9**
DSF				S		**Sg**		**23 06 19.8**	**+0.3**
DSF					AML	AML		23 06 24.3	
DSF					AML	AML		23 06 24.8	
DSF	**Desfina**	**0.73**	**251**	P		**Pg**		**23 06 09.2**	**-0.8**
DSF				S		**Sb**		**23 06 20.9**	**-0.1**
	344μm,0.6s								
DLFA	**Delphi**	**0.73**	**257**	P		**Pg**		**23 06 09.0**	**-1.1**
DLFA				S		**Sg**		**23 06 19.6**	**0.0**
DLFA					AML	AML		23 06 24.2	
DLFA					AML	AML		23 06 25.7	
XOR	**Xorichti**	**0.74**	**347**	P		**Pg**		**23 06 10.0**	**-0.1**
XOR					AML	AML		23 06 24.4	
XOR					AML	AML		23 06 24.4	
XOR	**Xorichti**	**0.74**	**347**	P		**Pb**		**23 06 10.5**	**-0.5**
ATHU	**Athens Univers**	**0.74**	**156**	P		**Pg**		**23 06 10.2**	**-0.2**
ATHU					AML	AML		23 06 25.0	
ATHU					AML	AML		23 06 26.3	
	comp=E,47720μm,0.3s								
ATHU	**Athens Univers**	**0.74**	**156**	P		**Pg**		**23 06 10.3**	**+0.1**
ATHU				S		**Sb**		**23 06 22.7**	**+1.4**
	comp=E,63μm,0.5s								
LOUT	**Loutraki**	**0.74**	**207**	P		**Pg**		**23 06 09.8**	**-0.3**
LOUT					AML	AML		23 06 25.6	
	comp=N,93797μm,0.5s								
LOUT					AML	AML		23 06 27.8	
	comp=E,90232μm,0.5s								
LOUT	**Loutraki**	**0.74**	**207**	P		**Pg**		**23 06 09.9**	**-0.3**
LOUT				S		**Sb**		**23 06 21.2**	**-0.1**
	comp=E,242μm,0.5s								
VOL2	**Volos**	**0.80**	**334**	P		**Pn**		**23 06 14.3**	**+0.9**
VOL2				S		**Sn**		**23 06 27.4**	**+1.9**
THAL	**Thalero**	**0.84**	**224**	P		**Pg**		**23 06 11.8**	**-0.4**
THAL					AML	AML		23 06 28.8	
THAL					AML	AML		23 06 30.6	
THAL	**Thalero**	**0.84**	**224**	P		**Pg**		**23 06 12.1**	**-0.1**
THAL				S		**Sn**		**23 06 26.6**	**+0.1**
	comp=E,45μm,0.8s								
VLY	**Voula,Athens**	**0.85**	**159**	P		**Pg**		**23 06 12.0**	**-0.3**
VLY				S		**Sg**		**23 06 23.9**	**+0.5**
VLY					AML	AML		23 06 27.4	
VLY					AML	AML		23 06 29.9	
VLY	**Voula,Athens**	**0.85**	**159**	P		**Pg**		**23 06 12.4**	**+0.1**
AGG	**Agios Georgios**	**0.92**	**294**	P		**Pg**		**23 06 13.3**	**-0.3**
AGG					AML	AML		23 06 30.8	
AGG					AML	AML		23 06 32.5	
AGG	**Agios Georgios**	**0.92**	**294**	PG		**Pg**		**23 06 13.6**	**-0.1**
AGG				SG		**Sb**		**23 06 27.1**	**+0.6**
AGG	**Agios Georgios**	**0.92**	**294**	*i* P		**Pg**		**23 06 13.3**	**-0.3**
AGG				*i* S		**Sb**		**23 06 26.1**	**-0.4**
AGG				IAML				23 06 32.0	
	comp=N,94μm,0.9s								
AGG				IAML				23 06 33.0	
	comp=E,65μm,1.2s								
AGG	**Agios Georgios**	**0.92**	**294**	P		**Pg**		**23 06 13.5**	**-0.1**
AGG								23 06 27.1	
AGG	**Agios Georgios**	**0.92**	**294**			**Pg**		**23 06 13.5**	**-0.2**
AGG						**Sb**		**23 06 27.1**	**+0.6**
AGG	**Agios Georgios**	**0.92**	**294**	P		**Pb**		**23 06 14.3**	**+0.2**
AGG				S		**Sg**		**23 06 25.4**	**-0.2**
SKY	**Skiros Island**	**0.92**	**75**	P		**Pg**		**23 06 13.4**	**-0.2**
SKY					AML	AML		23 06 29.1	
SKY					AML	AML		23 06 31.3	
SKY	**Skiros Island**	**0.92**	**75**	P		**Pg**		**23 06 13.3**	**-0.4**
KARY	**Karystos**	**1.02**	**127**	P		**Pg**		**23 06 15.0**	**-0.5**
KARY					AML	AML		23 06 33.2	
	comp=E,93504μm,0.6s								
KARY					AML	AML		23 06 35.8	
	comp=N,76075μm,0.6s								
KARY	**Karystos**	**1.02**	**127**	P		**Pg**		**23 06 15.2**	**-0.3**
KARY				S		**Sn**		**23 06 30.2**	**-0.6**
	comp=N,51μm,0.7s								
KALE	**Kalithea**	**1.03**	**256**	P		**Pg**		**23 06 14.0**	**-1.6**
KALE					AML	AML		23 06 36.0	
KALE					AML	AML		23 06 40.7	
KALE	**Kalithea**	**1.03**	**256**	P		**Pg**		**23 06 14.6**	**-1.1**
KALE				S		**Sn**		**23 06 30.9**	**-0.3**
EPID	**Epidavros**	**1.06**	**193**	P		**Pg**		**23 06 15.3**	**-0.9**
EPID	**Epidavros**	**1.06**	**193**	P		**Pg**		**23 06 16.1**	**-0.1**
EPID				S		**Sn**		**23 06 32.9**	**+1.1**
MAKR	**Makrakomi, Fth**	**1.06**	**291**	P		**Pg**		**23 06 16.1**	**-0.2**
MAKR					AML	AML		23 06 32.7	
MAKR					AML	AML		23 06 44.3	
MAKR	**Makrakomi, Fth**	**1.06**	**291**	P		**Pb**		**23 06 16.6**	**+0.1**
MAKR				S		**Sn**		**23 06 31.4**	**-0.6**
TRIZ	**Trizonia**	**1.08**	**255**	P		**Pb**		**23 06 14.9**	**-2.0**
TRIZ	**Trizonia**	**1.08**	**255**	P		**Pb**		**23 06 15.5**	**-1.4**
TRIZ				S		**Sn**		**23 06 32.2**	**-0.2**
	comp=N,158μm,0.6s								
SERG	**Sergoula**	**1.08**	**258**	P		**Pb**		**23 06 15.0**	**-1.9**
SERG					AML	AML		23 06 36.5	
SERG					AML	AML		23 06 37.5	
SERG	**Sergoula**	**1.08**	**258**	P		**Pb**		**23 06 15.5**	**-1.4**
SERG				S		**Sg**		**23 06 30.5**	**-0.4**
	comp=N,134μm,0.8s								
ALIK	**Aliki, Aigiali**	**1.09**	**250**	P		**Pg**		**23 06 17.1**	**+0.3**
ALIK				S		**Sn**		**23 06 33.8**	**+1.3**
GUR	**Goura**	**1.10**	**230**	P		**Pb**		**23 06 15.8**	**-1.3**
GUR					AML	AML		23 06 34.6	
GUR					AML	AML		23 06 35.9	
GUR	**Goura**	**1.10**	**230**	P		**Pb**		**23 06 16.4**	**-0.8**
GUR				S		**Sb**		**23 06 31.7**	**+0.1**
	comp=N,217μm,0.6s								
KLV	**Kalavryta, Ach**	**1.16**	**239**	P		**Pb**		**23 06 18.2**	**0.0**
KLV					AML	AML		23 06 37.0	
	comp=E,65592μm,1.0s								
KLV					AML	AML		23 06 42.9	
	comp=N,83640μm,0.9s								
KLV	**Kalavryta, Ach**	**1.16**	**239**	P		**Pb**		**23 06 18.1**	**0.0**
ANX	**Ano Chora**	**1.17**	**268**	P		**Pb**		**23 06 16.9**	**-1.4**
ANX					AML	AML		23 06 37.3	
ANX					AML	AML		23 06 41.5	
ANX	**Ano Chora**	**1.17**	**268**	P		**Pb**		**23 06 17.1**	**-1.2**
ANX				S		**Sb**		**23 06 33.5**	**-0.1**
	comp=N,216μm,0.6s								
EFP	**Efpalio**	**1.20**	**260**	P		**Pb**		**23 06 17.2**	**-1.6**
EFP	**Efpalio**	**1.20**	**260**	P		**Pb**		**23 06 17.5**	**-1.3**
EFP				S		**Sn**		**23 06 36.5**	**+1.2**
	comp=N,141μm,1.1s								
EVR	**Evrytania**	**1.28**	**283**	P		**Pb**		**23 06 20.2**	**-0.1**
EVR					AML	AML		23 06 44.0	
EVR					AML	AML		23 06 45.1	
EVR	**Evrytania**	**1.28**	**283**	P		**Pg**		**23 06 20.8**	**+0.3**
KRND	**KRANIDI**	**1.28**	**189**	P		**Pn**		**23 06 19.4**	**-0.6**
KRND					AML	AML		23 06 40.5	
KRND					AML	AML		23 06 42.0	
KRND	**KRANIDI**	**1.28**	**189**	P		**Pn**		**23 06 19.6**	**-0.4**
LRSO	**Larissa Observ**	**1.29**	**323**	P		**Pn**		**23 06 19.9**	**-0.3**
LRSO	**Larissa Observ**	**1.29**	**323**	P		**Pg**		**23 06 20.8**	**+0.1**
PAIG	**Paliouri**	**1.29**	**9**	P		**Pn**		**23 06 19.7**	**-0.6**
PAIG					AML	AML		23 06 43.7	
	comp=E,59319μm,0.6s								
PAIG					AML	AML		23 06 46.1	
	comp=N,47496μm,0.8s								
PAIG	**Paliouri**	**1.29**	**9**	P		**Pn**		**23 06 19.6**	**-0.6**
PAIG	**Paliouri**	**1.29**	**9**	P		**Pn**		**23 06 19.6**	**-0.6**
YDRA	**Hydra**	**1.30**	**178**	P		**Pn**		**23 06 19.4**	**-0.8**
THL	**Klokotos Trika**	**1.42**	**311**	P		**Pn**		**23 06 21.8**	**-0.1**
THL					AML	AML		23 06 41.9	
	comp=N,74780μm,0.7s								
THL					AML	AML		23 06 47.3	
THL	**Klokotos Trika**	**1.42**	**311**	P		**Pb**		**23 06 22.2**	**-0.4**
TRIP	**Tripoli**	**1.43**	**219**	P		**Pn**		**23 06 21.9**	**-0.2**
TRIP					AML	AML		23 06 47.4	
	comp=E,87106μm,0.7s								
TRIP					AML	AML		23 06 49.1	
	comp=N,78488μm,0.6s								
TRIP	**Tripoli**	**1.43**	**219**	P		**Pb**		**23 06 22.7**	**-0.2**
TRIP				S		**Sb**		**23 06 41.4**	**+0.1**
	comp=N,46μm,1.4s								
DRO	**Drossia**	**1.50**	**243**	P		**Pn**		**23 06 23.2**	**+0.1**
DRO	**Drossia**	**1.50**	**243**	P		**Pn**		**23 06 23.5**	**+0.4**
DRO				S		**Sg**		**23 06 46.9**	**+2.6**
	comp=N,89μm,0.8s								
VLX	**Vlachokerasia**	**1.51**	**213**	P		**Pn**		**23 06 23.5**	**+0.2**
VLX	**Vlachokerasia**	**1.51**	**213**	P		**Pn**		**23 06 23.5**	**+0.2**
VLX				S		**Sg**		**23 06 45.3**	**+0.8**
	comp=N,56μm,0.8s								
EFSA	**Agios Efstrati**	**1.52**	**54**	P		**Pn**		**23 06 22.7**	**-0.6**
LIT	**Litokhoron**	**1.62**	**334**	P		**Pn**		**23 06 24.5**	**-0.2**
LIT					AML	AML		23 06 58.1	
	comp=E,78515μm,0.9s								
LIT					AML	AML		23 07 03.0	
	comp=N,90745μm,1.2s								
LIT	**Litokhoron**	**1.62**	**334**	*i* P		**Pn**		**23 06 24.5**	**-0.2**
LIT	**Litokhoron**	**1.62**	**334**	P		**Pn**		**23 06 24.2**	**-0.5**
LIT	**Litokhoron**	**1.62**	**334**	Pn		**Pn**		**23 06 24.2**	**-0.5**
LIT	**Litokhoron**	**1.62**	**334**	P		**Pn**		**23 06 24.6**	**-0.1**
RLS	**Riolos of Patr**	**1.64**	**249**	P		**Pn**		**23 06 25.3**	**+0.4**
RLS	**Riolos of Patr**	**1.64**	**249**	P		**Pn**		**23 06 25.1**	**+0.2**
PLG	**Polygyros**	**1.72**	**1**	P		**Pn**		**23 06 25.7**	**-0.5**
PLG					AML	AML		23 06 48.2	
	comp=N,61934μm,0.9s								
PLG					AML	AML		23 06 48.4	
	comp=E,60186μm,0.5s								
PLG	**Polygyros**	**1.72**	**1**	P		**Pn**		**23 06 25.5**	**-0.7**
AMT	**Artemida-Makis**	**1.74**	**231**	P		**Pn**		**23 06 27.0**	**+0.6**
AMT	**Artemida-Makis**	**1.74**	**231**	P		**Pb**		**23 06 27.5**	**-0.6**
AMT				S		**Sg**		**23 06 52.3**	**+0.4**
	comp=E,40μm,1.2s								
OUR	**Ouranopolis**	**1.74**	**15**	P		**Pn**		**23 06 26.1**	**-0.3**
OUR	**Ouranopolis**	**1.74**	**15**	PN		**Pn**		**23 06 26.2**	**-0.2**
OUR				SN		**Sn**		**23 06 47.8**	**-0.9**
OUR	**Ouranopolis**	**1.74**	**15**	P		**Pn**		**23 06 26.0**	**-0.3**
OUR	**Ouranopolis**	**1.74**	**15**	P		**Pn**		**23 06 26.0**	**-0.3**
PDO	**Prodromos**	**1.74**	**269**	P		**Pb**		**23 06 27.7**	**-0.4**
TNSA	**Tinos**	**1.77**	**128**	P		**Pn**		**23 06 26.5**	**-0.2**
AST1	**Astakos**	**1.82**	**267**	P		**Pg**		**23 06 30.7**	**-0.1**
LIA	**Limnos Island**	**1.86**	**47**	P		**Pn**		**23 06 27.3**	**-0.7**
LIA					AML	AML		23 06 59.1	
	comp=N,38239μm,0.5s								
LIA					AML	AML		23 06 59.8	
	comp=E,49808μm,0.8s								
LIA	**Limnos Island**	**1.86**	**47**	P		**Pn**		**23 06 27.6**	**-0.4**
ITM	**Ithomi**	**1.88**	**219**	P		**Pn**		**23 06 29.3**	**+1.1**
ITM	**Ithomi**	**1.88**	**219**	PN		**Pn**		**23 06 28.8**	**+0.6**
ITM	**Ithomi**	**1.88**	**219**			**Pn**		**23 06 29.3**	**+1.1**
ITM	**Ithomi**	**1.88**	**219**	P		**Pb**		**23 06 29.5**	**-0.9**
HORT	**Hortiatis**	**1.96**	**353**	P		**Pn**		**23 06 29.1**	**-0.3**
HORT					AML	AML		23 06 55.6	
	comp=N,60660μm,0.5s								
HORT					AML	AML		23 06 56.0	
	comp=E,98807μm,0.5s								
HORT	**Hortiatis**	**1.96**	**353**	PN		**Pn**		**23 06 29.3**	**-0.2**
HORT				SN		**Sn**		**23 06 53.7**	**-0.6**
HORT	**Hortiatis**	**1.96**	**353**	P		**Pn**		**23 06 29.2**	**-0.3**
VLI	**Veliai**	**1.96**	**191**	P		**Pn**		**23 06 29.1**	**-0.3**
VLI	**Veliai**	**1.96**	**191**	P		**Pn**		**23 06 29.4**	**0.0**
MNVA	**Monemvasia**	**1.98**	**199**	P		**Pn**		**23 06 29.6**	**0.0**
SIGR	**SIGRI**	**1.99**	**73**	P		**Pn**		**23 06 29.2**	**-0.6**
SIGR	**SIGRI**	**1.99**	**73**	PN		**Pn**		**23 06 29.6**	**-0.2**
SIGR	**SIGRI**	**1.99**	**73**	P		**Pn**		**23 06 29.6**	**-0.2**
THE	**Thessaloniki**	**2.01**	**350**	P		**Pn**		**23 06 29.7**	**-0.4**
THE	**Thessaloniki**	**2.01**	**350**	P		**Pn**		**23 06 29.7**	**-0.4**
THE				S		**Sn**		**23 06 54.3**	**-1.0**
THE	**Thessaloniki**	**2.01**	**350**	P		**Pn**		**23 06 29.7**	**-0.4**
KPRO	**Kipourio**	**2.05**	**310**	P		**Pn**		**23 06 31.0**	**+0.3**
KPRO	**Kipourio**	**2.05**	**310**	P		**Pn**		**23 06 31.4**	**+0.7**
MHLA	**Plaka, Milos I**	**2.06**	**157**	P		**Pn**		**23 06 30.3**	**-0.5**
KZN	**Kozani**	**2.08**	**323**	P		**Pn**		**23 06 31.8**	**+0.7**
KZN					AML	AML		23 07 13.7	
	comp=E,78048μm,0.8s								
KZN					AML	AML		23 07 13.9	
	comp=N,76738μm,1.6s								
KZN	**Kozani**	**2.08**	**323**	P		**Pn**		**23 06 31.7**	**+0.5**
KZN	**Kozani**	**2.08**	**323**	P		**Pn**		**23 06 31.7**	**+0.5**
MHLO	**Agia Marina, M**	**2.11**	**158**	P		**Pn**		**23 06 31.5**	**+0.1**
NYDR	**Nydri-Lefkada**	**2.12**	**273**	P		**Pb**		**23 06 34.3**	**-0.2**
EVGl	**Lefkada island**	**2.15**	**270**	P		**Pb**		**23 06 34.8**	**-0.3**
LKD2	**Lefkada island**	**2.15**	**275**	P		**Pb**		**23 06 34.6**	**-0.6**
TSLK	**Tsoukalades, L**	**2.16**	**276**	P		**Pb**		**23 06 34.7**	**-0.5**
SOH	**Sokhos**	**2.17**	**359**	P		**Pn**		**23 06 32.3**	**0.0**
SOH	**Sokhos**	**2.17**	**359**	P		**Pn**		**23 06 32.7**	**+0.4**
PYL	**PYLOS**	**2.19**	**218**	P		**Pb**		**23 06 34.7**	**-1.0**
PYL				S		**Sb**		**23 07 04.4**	**+1.4**
	comp=N,14μm,1.4s								
THAS	**Thassos island**	**2.20**	**27**	P		**Pn**		**23 06 31.5**	**-1.2**
JAN	**Janina**	**2.23**	**298**	P		**Pn**		**23 06 34.3**	**+1.2**
JAN					AML	AML		23 07 12.5	
JAN					AML	AML		23 07 13.1	
	comp=E,97572μm,1.0s								
JAN	**Janina**	**2.23**	**298**	P		**Pb**		**23 06 36.0**	**-0.4**
JAN	**Janina**	**2.23**	**298**	P		**Pb**		**23 06 36.0**	**-0.4**
FSK	**Fiskardo**	**2.24**	**266**	P		**Pn**		**23 06 34.6**	**+1.4**
FSK	**Fiskardo**	**2.24**	**266**	P		**Pb**		**23 06 35.0**	**-1.5**
FSK				S		**Sb**		**23 07 05.7**	**+1.4**
VLS	**Valsamata**	**2.26**	**259**	P		**Pn**		**23 06 35.1**	**+1.5**
VLS	**Valsamata**	**2.26**	**259**	P		**Pb**		**23 06 35.4**	**-1.6**
VLS	**Valsamata**	**2.26**	**259**	P		**Pb**		**23 06 35.4**	**-1.6**
PSDA	**Pessada-Kefalo**	**2.28**	**257**	P		**Pb**		**23 06 35.7**	**-1.6**
VLMS	**Volimes, Zakyn**	**2.29**	**251**	P		**Pb**		**23 06 36.0**	**-1.5**
APE	**Apeiranthos**	**2.30**	**133**	P		**Pn**		**23 06 34.0**	**-0.2**
APE	**Apeiranthos**	**2.30**	**133**	⇑P		**Pn**		**23 06 34.0**	**-0.2**
APE	**Apeiranthos**	**2.30**	**133**	PN		**Pn**		**23 06 34.0**	**-0.2**
APE	**Apeiranthos**	**2.30**	**133**	*i* P		**Pn**		**23 06 34.0**	**-0.2**
APE				*i* S		**Sn**		**23 06 60.0**	**-2.7**
APE	**Apeiranthos**	**2.30**	**133**	*c i* P		**Pn**		**23 06 33.9**	**-0.2**
APE	**Apeiranthos**	**2.30**	**133**	P		**Pn**		**23 06 33.9**	**-0.2**
PRK	**Paraskevi**	**2.31**	**74**	P		**Pn**		**23 06 34.4**	**+0.2**
PRK	**Paraskevi**	**2.31**	**74**	P		**Pn**		**23 06 34.4**	**+0.2**
KEF5	**Kardakata, Kep**	**2.34**	**262**	P		**Pn**		**23 06 36.2**	**+1.6**
PENT	**Pentalofos**	**2.34**	**312**	P		**Pn**		**23 06 35.8**	**+1.1**
PENT	**Pentalofos**	**2.34**	**312**	P		**Pn**		**23 06 35.8**	**+1.1**
KEF4	**Livadi, Kephal**	**2.37**	**261**	P		**Pn**		**23 06 36.6**	**+1.6**
BOZC	**Bozcaada**	**2.38**	**59**	PN		**Pn**		**23 06 34.8**	**-0.3**
BOZC	**Bozcaada**	**2.38**	**59**	*i* P		**Pn**		**23 06 34.9**	**-0.3**
BOZC				*i* S		**Sn**		**23 07 02.4**	**-2.0**
KTHA	**Kythira Island**	**2.40**	**187**	P		**Pn**		**23 06 35.3**	**-0.2**
KTHA	**Kythira Island**	**2.40**	**187**	PN		**Pn**		**23 06 35.7**	**+0.2**
KTHA	**Kythira Island**	**2.40**	**187**	P		**Pn**		**23 06 35.6**	**+0.1**
KVLA	**Kavala**	**2.41**	**18**	P		**Pn**		**23 06 34.7**	**-0.9**
DMLN	**Damoulianata-K**	**2.42**	**261**	P		**Pb**		**23 06 38.1**	**-1.5**
DMLN				S		**Sb**		**23 07 08.0**	**-1.5**
	comp=E,34μm,1.2s								
GRG	**Griva**	**2.43**	**342**	PN		**Pn**		**23 06 35.9**	**0.0**
GRG	**Griva**	**2.43**	**342**	P		**Pn**		**23 06 35.8**	**-0.1**
GRG	**Griva**	**2.43**	**342**	P		**Pn**		**23 06 35.8**	**-0.1**
SMTH	**Samothraki Isl**	**2.45**	**41**	P		**Pn**		**23 06 35.3**	**-0.8**
GADA	**Gvkgeada**	**2.47**	**51**	PN		**Pn**		**23 06 35.9**	**-0.5**
GADA	**Gvkgeada**	**2.47**	**51**	P		**Pn**		**23 06 36.9**	**+0.5**
SRS	**Serrai**	**2.47**	**3**	P		**Pn**		**23 06 36.2**	**-0.2**
SRS	**Serrai**	**2.47**	**3**	P		**Pn**		**23 06 36.4**	**0.0**
SRS	**Serrai**	**2.47**	**3**	P		**Pn**		**23 06 36.4**	**0.0**
GOKA	**anakkale-Gk**	**2.48**	**51**	*i* P		**Pn**		**23 06 36.8**	**+0.4**
GOKA				*i* S		**Sg**		**23 07 16.7**	**+1.3**
GOKA				IAML				23 07 24.0	
	comp=N,11μm,0.6s								
KAVA	**Kavala**	**2.50**	**20**	P		**Pn**		**23 06 35.6**	**-1.1**
URLA	**Izmir**	**2.52**	**96**	PN		**Pn**		**23 06 37.4**	**+0.3**
URLA	**Izmir**	**2.52**	**96**	*i* P		**Pn**		**23 06 38.0**	**+0.9**
NEST	**Nestorio**	**2.54**	**315**	P		**Pn**		**23 06 38.7**	**+1.3**
NEST	**Nestorio**	**2.54**	**315**	P		**Pn**		**23 06 39.3**	**+1.9**
IGT	**Igoumenitsa**	**2.55**	**291**	P		**Pn**		**23 06 39.5**	**+2.0**
IGT				S		**Sb**		**23 07 12.0**	**-1.4**
IGT	**Igoumenitsa**	**2.55**	**291**	P		**Pn**		**23 06 39.5**	**+2.0**
EZN	**Ezine**	**2.55**	**62**	PN		**Pn**		**23 06 37.5**	**0.0**
EZN	**Ezine**	**2.55**	**62**	P		**Pn**		**23 06 37.3**	**-0.2**
EZN	**Ezine**	**2.55**	**62**	P		**Pn**		**23 06 37.3**	**-0.2**
LSK	**Leskovik**	**2.64**	**305**	P		**Pb**		**23 06 41.3**	**-2.2**

TIR eSn Sn 23 07 42.6 +2.4
TIR Tirane 3.83 316 ⇑P Pn 23 06 57.5 +2.4
TIR Tirane 3.83 316 P Pn 23 06 57.6 +2.5
TIR Tirane 3.83 316 Pn Pn 23 06 57.6 +2.5
GVDS Gavdos 3.84 172 P Pn 23 06 56.4 +1.2
GVD Gavdhos 3.84 172 P Pn 23 06 56.6 +1.4
LAST Lasithi 3.86 154 P Pn 23 06 55.5 0.0
LAST Lasithi 3.86 154 P Pn 23 06 55.8 +0.3
VTS Vitosha 3.97 358 P Pn 23 06 57.9 +0.8
PRVS Prvonek 3.99 346 ePn Pn 23 06 58.7 +1.4
SOF Sofiya 4.03 359 P Pn 23 06 58.8 +0.9
MANT Manisa 4.04 91 Pn Pn 23 07 00.3 +2.1
STIA Sitia Lasithi 4.06 147 P Pn 23 06 59.6 +1.4
FRMA Ierapetra Chan 4.08 152 P Pn 23 07 00.1 +1.6
SCTE Santa Cesarea 4.08 292 Pn Pn 23 07 00.1 +1.5
EDRB Edirne 4.09 38 P Pn 23 07 00.3 +1.7
KULA Kula-Manisa 4.12 90 P Pn 23 07 00.1 +1.0
YER Yerkesik 4.14 110 P Pn 23 07 00.9 +1.5
YER Yerkesik 4.14 110 P Pn 23 07 00.9 +1.5
ZKR Zakros 4.18 147 P Pn 23 07 01.0 +1.0
TURN Turunc 4.27 114 *i* P Pn 23 07 02.5 +1.4
KARP Karpathos 4.31 135 Pn Pn 23 07 02.5 +0.8
KARP Karpathos 4.31 135 P Pn 23 07 02.9 +1.2
USAK Uak-Merkez 4.39 87 *i* P Pn 23 07 05.3 +2.5
ARG Arkhangelos 4.47 121 P Pn 23 07 05.5 +1.6
TAVA DENIZLI_Tavas 4.50 103 *i* P Pn 23 07 06.6 +2.2
JMB Yambol 4.52 31 P Pn 23 07 03.5 -1.0
ULC Ulcinj 4.59 317 *e*Pn Pn 23 07 06.2 +0.6
ULC *i* Sn Sn 23 07 59.4 +0.3
ELBA Catalca 4.60 56 *i* P Pn 23 07 07.4 +1.7
ZAPS Zavoj 4.66 353 *e*Pn Pn 23 07 08.7 +2.2
ZAPS eSn Sn 23 08 00.0 -0.7
PVY Plav 4.74 327 *e*Pn Pn 23 07 09.1 +1.5
PVY eSn Sn 23 08 02.4 -0.3
GDZ Gediz 4.76 83 *i* P Pn 23 07 09.8 +1.8
IGD Bursa 4.77 68 *i* P Pn 23 07 08.2 +0.3
DRME Dracevica, Mon 4.78 319 *e*Pn Pn 23 07 09.0 +0.8
DRME eSn Sn 23 08 04.1 +0.4
DRME Dracevica, Mon 4.78 319 ⇑*i*Pn Pn 23 07 10.1 +1.9
SELS Selova 4.88 340 *e*Pn Pn 23 07 09.8 +0.2
PDG Podgorica 4.93 321 *e*Pn Pn 23 07 12.8 +2.7
PDG eSn Sn 23 08 07.2 0.0
PDG Podgorica 4.93 321 ⇓P Pn 23 07 11.4 +1.3
PDG Podgorica 4.93 321 ⇑*i*Pn Pn 23 07 11.9 +1.8
PDG Podgorica 4.93 321 Pn Pn 23 07 11.5 +1.3
TTG Podgorica 4.93 321 *e*Pn Pn 23 07 11.3 +1.2
TTG eSn Sn 23 08 07.6 +0.4
ISK Istanbul-Kandi 4.97 59 P Pn 23 07 12.4 +1.6
IVA Berane 4.99 329 *e*Pn Pn 23 07 12.1 +1.0
IVA *i* Sn Sn 23 08 08.9 -0.1
BUM Brajici-Budva 5.01 318 *e*Pn Pn 23 07 12.5 +1.1
BUM *i* Sn Sn 23 08 09.9 +0.3
TAR1 Taranto 5.09 294 ⇓*i*Pn Pn 23 07 13.0 +0.7
KOME Kolasin 5.13 326 *e*Pn Pn 23 07 14.0 +0.9
KOME *i* Sn Sn 23 08 12.5 0.0
BOVS Bovan 5.14 346 *e*Pn Pn 23 07 13.4 +0.3
CEME Cevo 5.18 320 *e*Pn Pn 23 07 14.4 +0.7
CEME *i* Sn Sn 23 08 13.7 +0.1
TIP Timpagrande 5.21 278 ⇓P Pn 23 07 14.9 +0.8
TIP Timpagrande 5.21 278 Pn Pn 23 07 15.0 +0.8
ZIMR 5.22 16 ⇑P Pn 23 07 14.6 +0.5
ZAGS Zajecar 5.24 351 *e*Pn Pn 23 07 14.7 +0.3
SJES Sjenica 5.29 332 *e*Pn Pn 23 07 17.2 +1.9
AUBOZ BOZOYUK 5.29 74 *i* P Pn 23 07 16.4 +1.1
KZIL AFYON_Kizioren 5.30 92 *i* P Pn 23 07 18.0 +2.6
NKME Niksic 5.33 322 *e*Pn Pn 23 07 16.4 +0.7
NKME *i* Sn Sn 23 08 17.2 0.0
BRDR BURDUR-Merkez 5.33 98 *i* P Pn 23 07 20.5 +4.7
HCY Herceg Novi 5.33 317 *e*Pn Pn 23 07 16.4 +0.8
HCY *i* Sn Sn 23 08 16.9 -0.3
HCY Herceg Novi 5.33 317 *e*Pn Pn 23 07 16.5 +0.8
NKY Niksic 5.34 323 *e*Pn Pn 23 07 16.5 +0.5
NKY *i* Sn Sn 23 08 17.7 0.0
BAIL Bailesti 5.37 360 ⇓P Pn 23 07 16.8 +0.6
AFYO Afyonkarahisar 5.39 86 *i* P Pn 23 07 17.2 +0.6
VLAD Vladila 5.40 8 ⇑P Pn 23 07 17.0 +0.4
AKAS Kas 5.49 114 *i* P Pn 23 07 22.1 +4.1
AKAS Kas 5.49 114 Pn 23 07 22.1 +4.1
ELL Elmali 5.49 108 P Pn 23 07 22.1 +4.1
ELL Elmali 5.49 108 Pn 23 07 22.1 +4.1
IVAS Ivanjica 5.50 335 *e*Pn Pn 23 07 19.3 +1.2
MATE Matera 5.55 293 ⇑P Pn 23 07 19.6 +1.0
PLE Pljevlja 5.58 328 *e*Pn Pn 23 07 19.7 +0.5
PLE *i* Sn Sn 23 08 23.1 -0.4
BAI Bari 5.59 298 ⇑*i*Pn Pn 23 07 20.7 +1.1
BORA Eskisehir 5.61 75 *i* P Pn 23 07 21.3 +1.8
GRUS Gruza 5.62 340 *e*Pn Pn 23 07 20.8 +1.2
SG1 Sgolgore (BA) 5.63 295 ⇑*i*Pn Pn 23 07 21.1 +1.3
GEYV SAKARYA_Geyve 5.63 69 *i* P Pn 23 07 21.3 +1.5
BRY Bratogost 5.63 321 *e*Pn Pn 23 07 21.0 +1.0
BRY *i* Sn Sn 23 08 24.3 -0.5
BRY Bratogost 5.63 321 *e*Pn Pn 23 07 20.7 +0.7
PUNG Punghina 5.64 357 ⇑P Pn 23 07 20.1 +0.3
ISP Isparta 5.66 96 P Pn 23 07 22.8 +2.4
ISP Isparta 5.66 96 Pn Pn 23 07 22.8 +2.4
UPM Unac-Piva 5.69 325 *e*Pn Pn 23 07 21.2 +0.5
UPM *i* Sn Sn 23 08 25.6 -0.6
UPM Unac-Piva 5.69 325 *e*Pn Pn 23 07 24.3 +3.6
KORT Korkueli 5.74 105 *i* P Pn 23 07 26.2 +4.8
RUDO Rudo 5.83 330 *e*Pn Pn 23 07 24.0 +1.5
BAGO Egridir - ISPA 5.84 94 *i* P Pn 23 07 26.2 +3.4
SVIS Svilajnac 5.85 344 *e*Pn Pn 23 07 24.4 +1.6
SGRR Singureni 5.89 18 ⇓P Pn 23 07 24.6 +0.5
CEL Celeste 5.91 269 Pn Pn 23 07 24.6 +0.8
HUMR Humele 5.99 11 ⇑P Pn 23 07 25.5 +0.8
TRUS Trudelj 6.01 339 *e*Pn Pn 23 07 26.5 +1.5
SRE Strehaia 6.01 359 ⇑P Pn 23 07 25.2 +0.1
SRE Strehaia 6.01 359 P Pn 23 07 25.1 +0.1
DIVS Divibare 6.02 336 *e*Pn Pn 23 07 26.1 +0.8
DIVS Divibare 6.02 336 ⇑*i*Pn Pn 23 07 26.0 +0.8
BBLS Lazići 6.02 331 *e*Pn Pn 23 07 26.8 +1.5
BBLS Lazići 6.02 331 ⇑*i*Pn Pn 23 07 26.6 +1.3
RMGR Halanga-Turnu 6.03 355 ⇑P Pn 23 07 25.9 +0.6
STON Ston 6.05 316 *e*Pn Pn 23 07 26.4 +0.9
STON Ston 6.05 316 ⇑*i*Pn Pn 23 07 26.4 +0.9
STON Ston 6.05 316 *e*Pn Pn 23 07 26.2 +0.7
DJES Djerdap 6.05 354 *e*Pn Pn 23 07 25.7 +0.2
DJES Djerdap 6.05 354 *e*Pn Pn 23 07 25.8 +0.2
SAHE Sakarya_HENDEK 6.15 67 *i* P Pn 23 07 26.2 -0.7
PSN Preselentsi 6.19 27 P Pn 23 07 27.3 -0.1
MDVR Moldovita 6.26 349 ⇑P Pn 23 07 29.2 +0.8
HERR Herculane 6.27 354 ⇑P Pn 23 07 28.6 0.0
MDUB Mudurnu 6.29 71 Pn 23 07 30.6 +1.6
STFAR Stefanesti-Arg 6.32 10 ⇑P Pn 23 07 30.6 +1.3
HAPS Han Pijesak,Bl 6.38 330 *e*Pn Pn 23 07 31.6 +1.3
HAPS Han Pijesak,Bl 6.38 330 ⇑*i*Pn Pn 23 07 31.2 +0.9
LSTV Lastovo 6.44 312 *e*Pn Pn 23 07 31.0 +0.1
MANR Mangalia 6.47 35 ⇓P Pn 23 07 31.8 +0.5
BEO Beograd 6.54 341 P Pn 23 07 36.5 +4.3
TEKS Tekeris 6.57 335 *e*Pn Pn 23 07 34.3 +1.5
TEKS Tekeris 6.57 335 *e*Pn Pn 23 07 33.4 +0.6
SGRT San Giovanni R 6.64 300 Pn Pn 23 07 33.8 +0.1
CVDA Cernavoda 6.66 30 ⇑P Pn 23 07 35.0 +1.1
MAKA Makarska 6.70 316 *e*Pn Pn 23 07 35.2 +0.8
GZR Gura Zlata 6.76 356 ⇑P Pn 23 07 35.2 -0.1
RICI Ricice 6.78 318 *i* Pn Pn 23 07 36.1 +0.6
ARR Arges 6.78 7 ⇑P Pn 23 07 36.0 +0.4
LOT Lotru 6.80 2 ⇓P Pn 23 07 36.2 +0.2
ISR Istrita 6.88 19 ⇓P Pn 23 07 38.7 +1.8
ISR Istrita 6.88 19 P Pn 23 07 38.3 +1.3
ISR pmax pmax
comp=Z,302nm,0.8s
VOIR 6.89 10 ⇑P Pn 23 07 37.5 +0.3
VOIR 6.89 10 P Pn 23 07 37.7 +0.5
VOIR pmax pmax
comp=Z,444nm,1.0s
TIRR Tirgusor 6.91 31 ⇑P Pn 23 07 38.3 +0.9
TIRR Tirgusor 6.91 31 ⇑P Pn 23 07 38.3 +0.9
TIRR Tirgusor 6.91 31 P Pn 23 07 38.2 +0.8
TIRR Tirgusor 6.91 31 Pn Pn 23 07 38.2 +0.8
HARR Harsova 6.92 28 ⇑P Pn 23 07 38.2 +0.7
HARR Harsova 6.92 28 P Pn 23 07 38.2 +0.7
FRGS Fruska Gora 7.04 339 *e*Pn Pn 23 07 41.0 +1.9
FRGS Fruska Gora 7.04 339 ⇑*i*Pn Pn 23 07 40.7 +1.6
BZS Buzias 7.09 350 *e*Pn Pn 23 07 39.8 0.0
BZS Buzias 7.09 350 ⇑P Pn 23 07 40.2 +0.3
BZS Buzias 7.09 350 P Pn 23 07 39.9 +0.1
BZS pmax pmax
comp=Z,192nm,0.8s

MLR Muntele Rosu 7.09 15 Pn Pn 23 07 41.0 +1.0
comp=Z,6.3nm,0.3s,baz=224,slow=4.5,SNR=127
MLR Sn Sn 23 09 01.3 +0.5
comp=Z,16nm,0.3s,baz=276,slow=18,SNR=1.1
MLR Lg Lg 23 09 44.9
comp=Z,0.9nm,0.3s,baz=324,slow=18,SNR=3.6
MLR LR LR 23 10 43.4
comp=Z,10µm,18.4s,baz=260,slow=40
MLR Muntele Rosu 7.09 15 ⇓P Pn 23 07 41.8 +1.7
MLR Muntele Rosu 7.09 15 Pn Pn 23 07 41.0 +1.0
NEHR Nehoiu 7.11 17 ⇓P Pn 23 07 41.6 +1.5
VAE Valguarnera 7.19 263 Pn Pn 23 07 41.9 +0.6
comp=Z,7.6nm,0.3s,baz=260,slow=4.3,SNR=21
VAE Sn Sn 23 09 01.2 -1.9
comp=Z,32nm,0.3s,baz=44,slow=5.3,SNR=2.0
VAE LR LR 23 10 47.1
comp=Z,2µm,19.3s,baz=50,slow=40
GRER 7.23 20 ⇑P Pn 23 07 44.1 +2.4
DEV Deva 7.24 357 ⇓P Pn 23 07 42.5 +0.6
DEV Deva 7.24 357 P Pn 23 07 42.5 +0.6
DEV pmax pmax
comp=Z,227nm,1.0s
TPGR Topolog 7.25 30 ⇓P Pn 23 07 42.3 +0.3
BR231 Keskin MP Arra 7.37 78 Pn 23 07 45.8 +2.0
CFR Carcaliu 7.42 27 ⇑P Pn 23 07 45.0 +0.7
CFR Carcaliu 7.42 27 P Pn 23 07 44.8 +0.5
CFR pmax pmax
comp=Z,44nm,1.1s
DOPR Dopca 7.46 11 ⇓P Pn 23 07 46.1 +1.2
MGRS Mrkonjic Grad 7.46 323 ⇑*i*Pn Pb 23 07 59.9 -5.7
KIJV Kijevo 7.51 318 *e*Pn Pn 23 07 46.3 +0.7
MDB Medias 7.52 5 ⇑P Pn 23 07 48.0 +2.2
PLOR Plostina 7.59 17 ⇓P Pn 23 07 48.8 +2.1
PLOR Plostina 7.59 17 P Pn 23 07 48.8 +2.1
ODBI Odobesti 7.61 20 ⇑P Pn 23 07 49.1 +2.2
PETR Petresti 7.62 21 ⇑P Pn 23 07 48.9 +1.8
VRI Vrincioaia 7.62 18 ⇓P Pn 23 07 48.1 +1.0
VRI Vrincioaia 7.62 18 P Pn 23 07 48.9 +1.7
VRI pmax pmax
comp=Z,287nm,0.8s
TUDR 7.63 23 ⇑P Pn 23 07 47.8 +0.6
OZUR 7.65 13 ⇓P Pn 23 07 49.0 +1.4
BLY Banja Luka 7.67 325 *e*Pn Pn 23 07 48.7 +0.9
BLY Banja Luka 7.67 325 ⇑*i*Pn Pn 23 07 48.5 +0.7
TLCR 7.67 30 ⇑P Pn 23 07 48.4 +0.5
TLCR 7.67 30 P Pn 23 07 48.3 +0.5
ZIRJ Zirje 7.70 313 *e*Pn Pn 23 07 47.9 -0.3
SIRR Siria 7.72 351 ⇓P Pn 23 07 48.9 +0.4
MORI Morici 7.80 314 *i* Pn Pn 23 07 50.5 +1.0
VARL Varlezi 7.96 23 ⇑P Pn 23 07 53.4 +1.7
GHRR 7.98 20 ⇑P Pn 23 07 53.4 +1.4
CORL Corleone 7.98 268 Pn 23 07 52.4 +0.2
BR131 Keskin Array S 8.02 79 P Pn 23 07 55.1 +2.4
BR131 Keskin Array S 8.02 79 Pn Pn 23 07 55.1 +2.4
BRTR Keskin Array B 8.02 79 Pn Pn 23 07 55.1 +2.4
comp=Z,1.8nm,0.3s,baz=253,slow=11,SNR=31
BRTR Sn Sn 23 09 20.9 -2.7
baz=263,slow=12,SNR=1.6
BRTR Lg Lg 23 10 18.1
baz=262,slow=13,SNR=3.1
BRTR LR LR 23 11 22.7
comp=Z,3µm,19.0s,baz=266,slow=40
BRTR Keskin Array B 8.02 79*ce*P Pn 23 07 55.2 +2.4
BRTR pmax pmax
comp=Z,4.0nm,0.4s
BRTR Keskin Array B 8.02 79 Pn Pn 23 07 54.5 +1.7
PRIJ Prijedor 8.06 324 *e*Pn Pn 23 07 53.2 +0.1
TESR Tescani 8.21 16 ⇑P Pn 23 07 56.7 +1.5
DUGI Dugi Otok 8.24 313 *e*Pn Pn 23 07 56.7 +1.0
ILGA Ilgaz 8.29 70 Pn Pn 23 07 58.1 +1.7
MORH Mrgy, Hungar 8.34 337 ⇑*i*Pn Pn 23 07 57.4 +0.4
ARCR ARCALIA 8.46 4 ⇓P Pn 23 07 59.5 +0.8
AQU L'Aquila 8.47 299 P Pn 23 08 00.4 +1.5
AQU L'Aquila 8.47 299 *e*Pn Pn 23 08 01.2 +2.3
AQU L'Aquila 8.47 299 Pn Pn 23 08 00.3 +1.5
BIZ Bicaz 8.52 13 ⇓P Pn 23 08 00.9 +1.4
MOSL Moslavina 8.53 327 *e*Pn Pn 23 08 00.2 +0.5
VASR Vaslui 8.62 21 ⇑P Pn 23 08 02.2 +1.4
NVLJ Novalja 8.70 315 *e*Pn Pn 23 08 02.0 +0.1
CSS Mathiatis 8.77 112 Pn Pn 23 08 03.5 +0.6
CSS Mathiatis 8.77 112 Pn Pn 23 08 04.2 +1.3
PRAR RASCA 8.95 12 ⇑P Pn 23 08 07.3 +1.9
BMR Baia Mare 9.02 0 ⇓P Pn 23 08 08.8 +2.4
ZAG Zagreb 9.04 325 P Pn 23 08 07.3 +0.8
ZAG pmax pmax
comp=Z,481nm,1.1s
ZAG Zagreb 9.04 325 ⇑*i*Pn Pn 23 08 06.7 +0.2
BURAR Bucovina Array 9.06 8 ⇑P Pn 23 08 08.9 +1.9
BURAR Bucovina Array 9.06 8 P Pn 23 08 08.8 +1.9
BURAR Bucovina Array 9.06 8 Pn Pn 23 08 07.0 0.0
IAS Iasi 9.07 18 P Pn 23 08 08.9 +2.0
IAS pmax pmax
comp=Z,26nm,1.2s
KALN Kalnik 9.07 328 *e*Pn Pn 23 08 07.3 +0.2
BUR08 Bucovina Ar. S 9.09 8 Pn 23 08 07.7 +0.3
PTJ Puntijarka 9.11 325 *i* Pn Pn 23 08 07.5 -0.1
OZLJ Ozalj 9.12 322 *e*Pn Pn 23 08 08.3 +0.7
BEHE Becsehely 9.22 330 ⇑*i*Pn Pn 23 08 11.5 +2.5
KIS Kishinev 9.24 24 *e*P Pn 23 08 07.0 -2.3
KIS *e*S Sn 23 09 48.0 -5.4
KIS LQM 23 11 25.0
comp=Z,600nm,13.0s
KIS LRM MLR 23 12 09.0
comp=Z,5µm,12.0s
KIS Kishinev 9.24 24 *e*P Pn 23 08 07.0 -2.3
KIS *e*S Sn 23 09 48.0 -5.4
KIS MLR MLR
comp=Z,4µm,10.0s
KIS MLR MLR
comp=N,5µm,12.0s
CRES Cresnjev 9.28 323 *e*Pn Pn 23 08 10.1 +0.2
GBRS Gornja Briga 9.38 320 *i* Pn Pn 23 08 11.4 +0.1
GBRS *e*Sn Sn 23 09 53.6 -3.3
GBRS *e* 23 10 13.8
comp=Z,12µm,4.1s
BUD Budapest 9.39 341 P Pn 23 08 13.1 +1.7
BUD pmax pmax
comp=Z,171nm,0.7s
RIY Rijeka 9.41 318 ⇑*i*Pn Pn 23 08 11.9 +0.2
RIY Rijeka 9.41 318 *e*Pn Pn 23 08 12.1 +0.4
PSZ Piszkesteto 9.61 346 ⇓P Pn 23 08 15.3 +0.8
PSZ Piszkesteto 9.61 346 P Pn 23 08 14.5 0.0
PSZ Piszkesteto 9.61 346 Pn Pn 23 08 14.5 0.0
LATE Laterza 9.67 298 Pn 23 08 16.8 +1.5
CEY Cerknica 9.72 320 ⇑*i*Pn Pn 23 08 16.3 +0.3
SRO Srobarova 9.88 340 P Pn 23 08 21.8 +3.7
SRO pmax pmax
comp=Z,3.0nm,0.8s
SRO Srobarova 9.88 340 *e*SN Sn 23 10 13.2 +4.1
LJU Ljubljana 9.88 321 ⇑*i*Pn Pn 23 08 17.1 -1.1
UZH Uzhgorod 10.01 356 *e*P Pn 23 08 22.3 +2.4
UZH *e*S Sn 23 10 16.3 +4.0
UZH MLR MLR
comp=Z,2µm,11.5s
KECS Kecovo 10.06 349 *e*P Pn 23 08 22.2 +1.7
KECS Kecovo 10.06 349 *e*PN Pn 23 08 22.2 +1.7
SOKA Soboth 10.12 325 *e*Pn Pn 23 08 21.4 0.0
comp=Z,41nm,0.7s,SNR=8.7
SOKA *e*Sn Sn 23 10 10.9 -4.1
comp=Z,52nm,0.7s
SORM Soroca 10.14 19 ⇓P Pn 23 08 20.8 -0.8
SORM Soroca 10.14 19 P Pn 23 08 20.8 -0.8
OBKA Obir 10.21 323 *e*Pn Pn 23 08 23.1 +0.4
comp=Z,33nm,0.7s
OBKA Sn Sn 23 10 15.8 -1.6
comp=Z,212nm,0.7s
TOKA Tokat 10.24 76 Pn Pn 23 08 24.6 +1.5
KOLS Kolonicke sedl 10.31 356 *e*P Pn 23 08 24.8 +0.7
KOLS Kolonicke sedl 10.31 356 *e*PN Pn 23 08 24.8 +0.7
SOP Sopron 10.32 333 P Pn 23 08 25.6 +1.5
SOP pmax pmax
comp=Z,88nm,1.0s
CRVS Cervenica-Dubn 10.35 353 *e*P Pn 23 08 25.6 +1.1
CRVS Cervenica-Dubn 10.35 353 *e*PN Pn 23 08 25.5 +1.1
ARSA Arzberg 10.35 329 *e*Pn Pn 23 08 24.7 +0.1
comp=Z,26nm,0.5s,SNR=9.7
ARSA *e*Sn Sn 23 10 19.1 -1.6
comp=Z,43nm,0.6s
VYHS Vyhne 10.38 343 *e*P Pn 23 08 27.2 +2.2
VYHS *e* 23 10 19.4
VYHS Vyhne 10.38 343 *e*PN Pn 23 08 27.2 +2.2
VYHS *e*SN Sn 23 10 19.4 -2.1
OSSC Osservatorio P 10.39 302 Pn Pn 23 08 25.8 +0.7

ZST Bratislava 10.58 336 *e*P Pn 23 08 29.1 +1.4
ZST *e* 23 10 19.5
ZST Bratislava 10.58 336 *e*PN Pn 23 08 29.1 +1.4
ZST *e*SN Sn 23 10 19.5 -6.8
PRED Cave del Predi 10.64 320 Pn 23 08 28.3 -0.3
MODS Modra-Piesok 10.69 337 *e*P Pn 23 08 29.8 +0.6
MODS *e* 23 10 21.5
MODS Modra-Piesok 10.69 337 *e*PN Pn 23 08 29.8 +0.6
MODS *e*SN Sn 23 10 21.5 -7.4
MYKA Terra Mystica 10.73 321 *e*Pn Pn 23 08 31.4 +1.6
comp=Z,12nm,0.7s
MYKA *e*Sn Sn 23 10 25.2 -5.0
comp=Z,62nm,0.7s
SMOL Smolenice 10.77 338 *e*P Pn 23 08 31.4 +1.1
SMOL *e* 23 10 24.6
SMOL Smolenice 10.77 338 *e*PN Pn 23 08 31.4 +1.1
SMOL *e*SN Sn 23 10 24.6 -6.3
CONA Conrad Observa 10.78 332 *e*Pn Pn 23 08 30.1 -0.3
comp=Z,20nm,1.0s
CONA *e*Sn Sn 23 10 28.0 -3.2
comp=Z,42nm,0.8s
LANS Liptovska Anna 10.88 346 *e*P Pn 23 08 34.9 +3.1
LANS Liptovska Anna 10.88 346 *e*PN Pn 23 08 34.9 +3.1
VSL Villasalto 10.94 279 Pn 23 08 31.2 -1.4
KWP Kalwaria Pacla 10.99 358 *e*P Pn 23 08 37.4 +4.1
KWP Kalwaria Pacla 10.99 358 P Pn 23 08 37.4 +4.1
KWP pmax pmax
comp=Z,44nm,1.2s
NIE Niedzica 11.00 349 *e*P Pn 23 08 35.7 +2.3
NIE Niedzica 11.00 349 P Pn 23 08 35.3 +1.9
NIE pmax pmax
comp=Z,43nm,1.6s
GAZ Gaziantep 11.01 93 Pn Pn 23 08 36.5 +2.9
JAVC Velka Javorina 11.01 340 *e*PN Pn 23 08 35.0 +1.3
ZOU Zoufplan 11.02 319 Pn 23 08 33.6 -0.2
CIMO Cimolais 11.14 317 Pn 23 08 36.4 +1.0
LVV L'vov 11.18 2 *e*P Pn 23 08 37.8 +2.0
LVV *e*S Sn 23 10 43.4 +2.5
LVV MLR MLR
comp=N,7µm,10.0s
LVV MLR MLR
comp=Z,11µm,10.0s
KBA Koelnbreinsper 11.20 322 *e*Pn Pn 23 08 36.5 +0.2
comp=Z,32nm,0.6s,SNR=8.4
KBA Sn Sn 23 10 39.0 -2.6
comp=Z,66nm,0.7s
KBA Koelnbreinsper 11.20 322 P Pn 23 08 36.2 -0.1
KBA pmax pmax
comp=Z,52nm,0.8s
MMA0B Mount Meron ar 11.24 116 Pn Pn 23 08 36.5 -0.3
MMAI Mount Meron Ar 11.24 116 Pn Pn 23 08 36.5 -0.3
comp=Z,2.6nm,0.3s,baz=298,slow=12,SNR=16
MMAI Sn Sn 23 10 36.8 -5.9
comp=Z,0.3nm,0.3s,baz=294,slow=18,SNR=1.3
NATI Neve Ativ 11.34 115 Pn Pn 23 08 41.0 +2.9
MOA Molln 11.35 327 *e*Pn Pn 23 08 38.6 +0.4
comp=Z,34nm,0.8s,SNR=16
MOA *e*Sn Sn 23 10 45.5 +0.4
comp=Z,48nm,0.6s
ABTA Abfaltersbach 11.38 319 *i* Pn Pn 23 08 38.2 -0.6
comp=Z,20nm,0.6s
ABTA *e*Sn Sn 23 10 43.4 -2.6
comp=Z,253nm,0.8s
CTI Castel Tesino 11.41 314 P Pn 23 08 38.0 -1.1
CTI Castel Tesino 11.41 314 Pn 23 08 38.0 -1.1
SLTI Sal'it 11.44 120 Pn Pn 23 08 40.9 +1.5
KRUC Moravsky 11.57 336 *e*PN Pn 23 08 41.5 +0.3
KRUC Moravsky 11.57 336 P Pn 23 08 42.1 +0.9
KEST Kesra 11.59 260 Pn Pn 23 08 41.5 0.0
comp=Z,1.1nm,0.3s,baz=325,slow=1.9,SNR=38
KEST Sn Sn 23 10 45.6 -5.5
comp=Z,0.2nm,0.3s,baz=338,slow=17,SNR=0.8
KEST LR LR 23 14 11.7
comp=Z,2µm,18.3s,baz=28,slow=43
KEST Kesra 11.59 260 Pn 23 08 43.0 +1.4
VRAC Vranov 11.73 338 Pn Pn 23 08 43.3 -0.1
comp=Z,0.5nm,0.3s,baz=160,slow=13,SNR=26
VRAC Sn Sn 23 10 46.3 -8.1
comp=Z,0.3nm,0.3s,baz=103,slow=3.0,SNR=1.8
VRAC LR LR 23 13 10.4
comp=Z,1µm,19.2s,baz=182,slow=37
VRAC Vranov 11.73 338 ⇓P Pn 23 08 44.1 +0.8
VRAC Vranov 11.73 338 *e*PN Pn 23 08 43.7 +0.3
AMAZ Amatzia 11.79 124 Pn Pn 23 08 43.6 -0.8
OKC Ostrava-Krasne 11.80 343 *e*P Pn 23 08 45.8 +1.4
OKC MLR MLR
comp=Z,12µm,11.6s
OKC Ostrava-Krasne 11.80 343 *e*PN Pn 23 08 45.8 +1.4
OKC AMS AMS 23 14 10.0
comp=Z,12µm,11.6s
SALO Salr 11.82 310 Pn 23 08 42.5 -2.2
MSSA Maissana 11.85 303 Pn 23 08 43.1 -2.1
OJC Ojcow 11.85 349 *e*P Pn 23 08 46.6 +1.6
OJC Ojcow 11.85 349 P Pn 23 08 46.7 +1.6
OJC Ojcow 11.85 349 Pn 23 08 46.6 +1.6
KZIT Kziot 11.88 127 Pn Pn 23 08 44.6 -0.9
MORC Moravsky Berou 11.89 341 ⇑P Pn 23 08 46.6 +0.9
MORC Moravsky Berou 11.89 341 *e*PN Pn 23 08 46.5 +0.9
MORC Moravsky Berou 11.89 341 P Pn 23 08 45.8 +0.2
MORC Moravsky Berou 11.89 341 Pn Pn 23 08 45.8 +0.2
TREC Trest 12.07 334 P Pn 23 08 49.1 +1.1
TREC pmax pmax
comp=Z,14nm,1.6s
TREC Trest 12.07 334 AMS AMS 23 14 00.0
comp=Z,16µm,8.3s
DSI Dead Sea 12.07 122 Pn Pn 23 08 47.7 -0.5
ANN Anapa 12.14 55 *e*P Pn 23 08 46.1 -2.9
ANN *e*S Sn 23 11 02.0 -2.5
ANN pmax pmax
comp=Z,51nm,1.2s
WTTA Wattenberg 12.17 319 *e*Pn Pn 23 08 49.7 +0.1
comp=Z,12nm,0.4s,SNR=9.1
WTTA *e*Sn Sn 23 11 00.1 -5.4
comp=Z,225nm,0.8s
WTTA Wattenberg 12.17 319 P Pn 23 08 50.8 +1.1
WTTA pmax pmax
comp=Z,87nm,1.0s
WATA Walderalm 12.25 319 *e*Pn Pn 23 08 51.4 +0.7
comp=Z,38nm,0.5s,SNR=18
WATA *e*Sn Sn 23 11 03.5 -3.9
comp=Z,230nm,0.8s
KRLC Kraliky 12.36 340 *e*P Pn 23 08 52.5 +0.4
KRLC *e* 23 11 12.1
KRLC MLR MLR
comp=Z,9µm,8.5s
KRLC Kraliky 12.36 340 *e*PN Pn 23 08 52.5 +0.4
KRLC *e*SN Sn 23 11 12.1 +2.2
KRLC AMS AMS 23 14 20.0
comp=Z,9µm,8.5s
GEC2 GERESS Array S 12.36 329 *e*Pn Pn 23 08 52.9 +0.7
baz=138,slow=14
GERES GERESS Array B 12.36 329 Pn Pn 23 08 53.1 +0.9
comp=Z,0.8nm,0.3s,baz=148,slow=13,SNR=28
GERES Sn Sn 23 11 07.5 -2.6
comp=Z,0.8nm,0.3s,baz=146,slow=25,SNR=2.8
GERES GERESS Array B 12.36 329 Pn 23 08 52.1 0.0
GHAJ Ghor Haditha 12.37 123 Pn Pn 23 08 52.5 +0.3
SQTA Sankt Quirin 12.37 318 *e*Pn Pn 23 08 52.9 +0.6
comp=Z,36nm,0.6s,SNR=20
SQTA *e*Sn Sn 23 11 05.9 -4.4
comp=Z,149nm,0.9s
FETA Feichten 12.50 316 *e*Pn Pn 23 08 54.5 +0.3
comp=Z,38nm,0.9s,SNR=11
FETA *e*Sn Sn 23 11 09.9 -3.6
comp=Z,108nm,0.8s
MOTA Moosalm 12.50 318 *e*Pn Pn 23 08 55.3 +1.2
comp=Z,54nm,0.9s,SNR=16
MOTA *e*Sn Sn 23 11 09.2 -4.3
comp=Z,312nm,0.8s
ZFRI Zfri 12.61 126 Pn Pn 23 08 54.9 -0.6
KHC Kasperske Hory 12.64 329*ce*P Pn 23 08 56.5 +0.6
KHC pmax pmax
comp=Z,77nm,1.0s
KHC Kasperske Hory 12.64 329 *e*Pn Pn 23 08 55.4 -0.5
KHC *e*SN Sn 23 11 17.3 +0.6
KHC AMS AMS 23 14 20.0
comp=Z,13µm,11.2s
PRNI Paran 12.64 127 Pn Pn 23 08 54.1 -1.8
AKASG Malin Array Be 12.74 17 Pn Pn 23 08 55.8 -1.4
comp=Z,2.5nm,0.3s,baz=208,slow=12,SNR=17
AKASG Sn Sn 23 11 08.5 -10
comp=Z,1.2nm,0.3s,baz=201,slow=21,SNR=2.4
AKASG LR LR 23 13 51.6
comp=Z,2µm,18.0s,baz=205,slow=37
AKASG Malin Array Be 12.74 17 P Pn 23 08 59.0 +1.9

AKASG **Malin Array Be** 12.74 17 Pn **Pn** 23 08 59.0 +1.9
AKBB **Malin Array Si** 12.74 17 *ce*P **Pn** 23 08 58.0 +0.9
AKBB **Malin Array Si** 12.74 17 Pn **Pn** 23 08 58.2 +1.1
DPC **Dobruska-Polom** 12.74 339 *e*P **Pn** 23 08 57.5 +0.3
DPC *e* 23 11 20.6
DPC MLR MLR
comp=Z,9µm,11.6s
DPC **Dobruska-Polom** 12.74 339 *e*PN **Pn** 23 08 57.5 +0.3
DPC *e*SN **Sn** 23 11 20.6 +1.5
DPC AMS AMS 23 14 50.0
comp=Z,9µm,11.6s
RETA **Reutte** 12.77 318 *e*Pn **Pn** 23 08 57.5 -0.2
comp=Z,28nm,1.1s
RETA *e*Sn **Sn** 23 11 17.3 -2.8
comp=Z,135nm,0.7s
DAVOX **Davos/Dischmat** 12.83 314 Pn **Pn** 23 08 57.8 -0.9
comp=Z,1.9nm,0.3s,baz=280,slow=20,SNR=18
DAVOX Sn Sn 23 11 12.2 -9.4
comp=Z,1.4nm,0.3s,baz=116,slow=14,SNR=3.6
DAVOX LR LR 23 14 35.7
comp=Z,6µm,20.6s,baz=125,slow=40
CMAH **Djebel Manchou** 12.84 266 P Pn 23 09 04.0 +5.4
HRFI **Mount Harif** 12.88 128 Pn **Pn** 23 08 59.3 +0.1
WET **Wettzell** 12.94 328 P **Pn** 23 09 00.5 +0.6
WET pmax pmax
comp=Z,30nm,1.2s
WET **Wettzell** 12.94 328 *e*Pn **Pn** 23 08 59.6 -0.3
baz=138,slow=14
OSTC **Ostas** 12.95 339 *e*PN **Pn** 23 09 00.4 +0.3
OSTC AMS AMS 23 14 50.0
comp=Z,8µm,12.9s
UPC **Upice** 12.97 339 *e*P **Pn** 23 09 00.6 +0.3
UPC MLR MLR
comp=Z,8µm,13.5s
UPC **Upice** 12.97 339 *e*PN **Pn** 23 09 00.6 +0.3
UPC AMS AMS 23 14 40.0
comp=Z,8µm,13.5s
MBRI **Mt Berech** 12.98 129 Pn **Pn** 23 08 59.6 -1.0
PRU **Pruhonice** 12.98 334 *e*P **Pn** 23 09 01.0 +0.5
PRU MLR MLR
comp=Z,14µm,8.2s
PRU **Pruhonice** 12.98 334 *e*PN **Pn** 23 09 01.0 +0.5
PRU AMS AMS 23 14 20.0
comp=Z,14µm,8.2s
CHVC **Chvalec** 13.03 339 *e*PN **Pn** 23 09 01.4 +0.3
CHVC AMS AMS 23 15 00.0
comp=Z,7µm,11.6s
SAOF **Saorge** 13.05 299 P **Pn** 23 09 03.5 +2.0
SAOF pmax pmax
comp=Z,106nm,1.4s
EIL **Elat** 13.09 130 Pn **Pn** 23 09 02.0 0.0
comp=Z,0.9nm,0.3s,baz=343,slow=4.8,SNR=13
EIL Sn **Sn** 23 11 29.5 +1.7
comp=Z,0.6nm,0.3s,baz=41,slow=19,SNR=0.9
EIL LR LR 23 15 44.5
comp=Z,2µm,20.7s,baz=318,slow=45
PRA **Prague** 13.09 334 AMS AMS 23 14 20.0
comp=Z,7µm,8.2s
SBF **Sospel** 13.09 299 *e*P **Pn** 23 09 04.8 +2.7
SBF pmax pmax
comp=Z,118nm,1.0s
DAVA **Damuels** 13.12 315 *e*Pn **Pn** 23 09 04.0 +1.4
comp=Z,20nm,0.8s,SNR=11
DAVA Sn **Sn** 23 11 25.1 -3.6
comp=Z,163nm,1.1s
KSP **Ksiaz** 13.19 340 *e*P **Pn** 23 09 05.7 +2.4
KSP **Ksiaz** 13.19 340 P **Pn** 23 09 05.8 +2.4
KSP pmax pmax
comp=Z,34nm,1.3s
UBR **Ueberruh** 13.24 317 *e*Pn **Pn** 23 09 04.2 +0.1
baz=138,slow=14
SOC **Sochi** 13.24 63 *c i*P **Pn** 23 09 05.9 +1.8
SOC *e* 23 11 35.7
SOC pmax pmax
comp=Z,10.0nm,1.0s
SOC MLR MLR
comp=Z,999nm,13.0s
KOPT **Kop Dagi** 13.30 79 Pn **Pn** 23 09 09.6 +4.4
PVCC **Panska Ves** 13.43 335 *e*P **Pn** 23 09 06.6 0.0
PVCC MLR MLR
comp=Z,11µm,7.7s
PVCC **Panska Ves** 13.43 335 *e*PN **Pn** 23 09 06.6 0.0
PVCC AMS AMS 23 14 50.0
comp=Z,11µm,7.7s
CKFL **Kef-Lekhel** 13.44 266 P **P** 23 09 14.0 -2.4
ISO **Isola** 13.46 299 P **Pn** 23 09 09.8 +2.7
ISO pmax pmax
comp=Z,62nm,1.4s
FRF **La Foret Royal** 13.55 297 *e*P **Pn** 23 09 10.5 +2.2
FRF pmax pmax
comp=Z,70nm,1.2s
CASM **Ain Smara** 13.65 265 P **P** 23 09 21.0 +2.3
ROTZ **Rotzenmuhle** 13.70 328 *e*Pn **Pn** 23 09 11.5 +1.2
baz=138,slow=14
MARD **Mardin** 13.77 90 Pn **Pn** 23 09 15.7 +4.2
MBDF **Montbardon** 13.83 301 *e*P **Pn** 23 09 15.8 +3.6
MBDF pmax pmax
comp=Z,38nm,1.0s
MANZ **Manzenberg** 13.90 328 *e*Pn **Pn** 23 09 10.9 -2.2
baz=138,slow=14
BRG **Berggiesshubel** 13.93 334 *e*P **Pn** 23 09 14.2 +0.7
comp=Z,36nm,1.3s
BRG S **Sn** 23 11 42.0 -6.2
BRG **Berggiesshubel** 13.93 334 *e*P **Pn** 23 09 14.2 +0.7
BRG S **Sn** 23 11 42.0 -6.2
BRG pmax pmax
comp=Z,36nm,1.3s
BRG **Berggiesshubel** 13.93 334 *e*Pn **Pn** 23 09 13.7 +0.3
baz=138,slow=14
NKC **Novy Kostel** 13.96 330 *e*P **Pn** 23 09 13.5 -0.4
NKC MLR MLR
comp=Z,13µm,11.4s
NKC **Novy Kostel** 13.96 330 *e*PN **Pn** 23 09 13.5 -0.4
NKC AMS AMS 23 15 10.0
comp=Z,13µm,11.4s
BNI **Bardonecchia** 14.00 303 P **Pn** 23 09 15.8 +1.2
BNI **Bardonecchia** 14.00 303 **Pn** 23 09 15.8 +1.2
WERN **Wernitzgruen** 14.03 330 *e*Pn **Pn** 23 09 17.0 +2.1
baz=138,slow=14
DFRA **Djebel Bou Aff** 14.06 267 P **P** 23 09 25.8 +2.5
GRF **Grafenberg Arr** 14.06 326 *e*Pn **Pn** 23 09 16.1 +0.8
baz=138,slow=14
TANN **Tannenbergstha** 14.10 330 *e*Pn **Pn** 23 09 16.9 +1.0
baz=138,slow=14
GUNZ **Gunzen** 14.11 330 *e*Pn **Pn** 23 09 18.9 +3.0
baz=138,slow=14
LPG **La Plagne** 14.12 304 *e*P **Pn** 23 09 18.2 +1.8
LPG pmax pmax
comp=Z,46nm,0.8s
LPL **La Plagne** 14.14 304 *e*P **Pn** 23 09 18.4 +1.8
LPL pmax pmax
comp=Z,45nm,0.9s
SLE **Schleitheim** 14.17 315 P **Pn** 23 09 17.3 +0.5
SLE pmax pmax
comp=Z,57nm,1.3s
STU **Stuttgart** 14.40 319 P **P** 23 09 23.8 -3.1
SET **Setif** 14.52 266 P **P** 23 09 26.0 -2.4
BFO **Black Forest** 14.59 316 P **Pn** 23 09 21.5 -0.9
BFO **Black Forest** 14.59 316 *e*Pn **Pn** 23 09 21.6 -0.8
baz=138,slow=14
BFO **Black Forest** 14.59 316 **Pn** 23 09 21.5 -0.9
MOX **Moxa** 14.62 329 P **Pn** 23 09 23.5 +0.7
MOX **Moxa** 14.62 329 *e*Pn **Pn** 23 09 23.6 +0.7
baz=138,slow=14
CLL **Collm** 14.62 333 *e*P **P** 23 09 26.0 -3.3
CLL *i* 23 09 30.8
comp=Z,36nm,1.1s
CLL *i* PP **PnPn** 23 09 32.8 +2.0
comp=Z,80nm,1.1s
CLL *i* 23 09 41.9
CLL *e* 23 10 31.0
CLL eS **S** 23 12 24.0 -0.3
CLL Lmax 23 15 00.0
CLL **Collm** 14.62 333 *e*P **P** 23 09 26.0 -3.3
CLL **Collm** 14.62 333 *e*Pn **Pn** 23 09 20.8 -2.1
baz=138,slow=14
CLL **Collm** 14.62 333 Pn **Pn** 23 09 22.1 -0.8
MAHO **Mahon** 14.88 281 *e*P **Pn** 23 09 25.3 -1.2
NEUB **Neuenburg** 14.99 331 *e*Pn **P** 23 09 33.1 -0.3
baz=138,slow=14
CABF **La Chapelle** 15.01 308 *e*P **Pn** 23 09 28.3 +0.1
CABF pmax pmax
comp=Z,50nm,1.0s
GKP **Gorka Klasztor** 15.23 346 *e*P **P** 23 09 37.8 +1.8
RUE **Ruedersdorf** 15.37 337 *e*P **P** 23 09 37.9 +0.3

SUW **Suwalki** 15.37 359 *e*P **P** 23 09 38.6 +1.0
SUW **Suwalki** 15.37 359 IAmb IAmb 23 10 00.4
comp=Z,279nm,0.9s
GEVA **Gevas** 15.40 85 P **P** 23 09 37.7 -0.5
KIV **Kislovodsk** 15.42 64 *i* P **Pn** 23 09 34.8 +1.1
SNR=12
KIV **Kislovodsk** 15.42 64 P **P** 23 09 36.0 -2.3
KIV **Kislovodsk** 15.42 64 *e*P **Pn** 23 09 35.3 +1.6
KIV *e*S **Sn** 23 12 27.0 +2.4
KIV pmax pmax
comp=Z,69nm,1.0s
KIV MLR MLR
comp=Z,2µm,12.0s
KIV **Kislovodsk** 15.42 64 Pn **Pn** 23 09 35.9 +2.2
UBBA **Unterbreizbach** 15.42 326 *e*Pn **P** 23 09 37.1 -1.0
baz=138,slow=14
KVAR **Kislovodsk Arr** 15.43 64 Pn **P** 23 09 36.8 -1.6
baz=263,slow=16,SNR=2.5
HAU **Haudompre** 15.51 313 *e*P **Pn** 23 09 33.8 -1.1
HAU pmax pmax
comp=Z,50nm,0.9s
KBZ **Khabaz** 15.52 65 Pn **P** 23 09 37.5 -1.8
comp=Z,0.1nm,0.3s,baz=236,slow=24,SNR=16
KBZ **Khabaz** 15.52 65 *d i*P **Pn** 23 09 35.4 +0.5
KBZ pmax pmax
comp=Z,74nm,1.5s
AKH **Akhalkalaki** 15.63 73 P **Pn** 23 09 37.1 +0.5
AKH pmax pmax
comp=Z,294nm,1.8s
AKH **Akhalkalaki** 15.63 73 P **Pn** 23 09 37.0 +0.5
TNS **Taunus Mts** 15.71 322 *e*Pn **Pn** 23 09 38.1 +0.7
baz=138,slow=14
GOF **Gofitskoye** 15.95 60⇑ *e*P **P** 23 09 46.3 +2.1
GOF pmax pmax
comp=Z,97nm,1.1s
CLZ **Clausthal** 16.04 330 *e*Pn **P** 23 09 46.5 +1.4
baz=138,slow=14
ZEI **Tsey** 16.07 69 *e*P **P** 23 09 44.7 -1.0
ZEI pmax pmax
comp=Z,49nm,1.4s
ASSE **Asse, Remlinge** 16.14 331 *e*Pn **P** 23 09 47.3 +1.2
baz=138,slow=14
MICGM **Minsk** 16.15 9⇓ *e*P **Pn** 23 09 39.0 -4.0
MICGM *e*PP **pP** 23 09 48.0 -0.8
MICGM *e*S **Sn** 23 12 36.0 -6.1
MICGM *e*SS **SnSn** 23 12 52.0 -3.0
MICGM *e*LQ LQ 23 14 18.0
MICGM *e*LR LR 23 15 20.0
MICGM LRM MLR 23 16 10.0
comp=E,8.3nm,10.0s
MICGM LRM MLR 23 16 12.0
comp=E,11nm,8.0s
MICGM LRM MLR 23 16 36.0
comp=Z,14nm,12.0s
MICGM LRM MLR 23 16 40.0
comp=Z,12nm,12.0s
MICGM LRM MLR 23 16 46.0
comp=N,6.1nm,12.0s
MNK **Minsk** 16.15 9 *e*P **Pn** 23 09 39.0 -4.0
MNK *e*S **Sn** 23 12 36.0 -6.1
MNK MLR MLR
comp=Z,12µm,12.0s
NACGM **Naroch** 16.42 7 *e*P **Pn** 23 09 42.0 -4.5
NACGM *e*PP PnPn 23 10 10.0 +15
NACGM *e*S **Sn** 23 12 46.0 -2.7
NACGM *e*SS **SnSn** 23 13 04.0 +2.3
NACGM *e*LQ LQ 23 14 48.0
NACGM *e*LR LR 23 15 30.0
NACGM LRM MLR 23 16 54.0
comp=N,13nm,12.0s
WLF **Walferdange** 16.53 317 Pn **Pn** 23 09 48.1 +0.2
WLF SbSb S 23 13 47.1 +44
WLF **Walferdange** 16.53 317 *e*Pn **P** 23 09 49.6 -0.9
baz=138,slow=14
GNI **Garni** 16.56 78 Pn **P** 23 09 51.5 +0.4
comp=N,0.1nm,0.3s,baz=21,slow=1.1,SNR=17
GNI LR LR 23 16 18.1
comp=N,2µm,21.9s,baz=264,slow=37
GNI **Garni** 16.56 78 P **P** 23 09 50.5 -0.6
GNI **Garni** 16.56 78 P **P** 23 09 51.7 +0.6
GNI **Garni** 16.56 78 *d i*P **P** 23 09 51.2 +0.1
GNI pmax pmax
comp=Z,20nm,1.2s
GNI **Garni** 16.56 78 P **P** 23 09 51.5 +0.4
AHRW **Bad Neuenahr-A** 16.59 321 *e*Pn **P** 23 09 52.1 +0.9
baz=138,slow=14
NRDL **Niedersach Rie** 16.65 331 *e*Pn **P** 23 09 53.3 +1.6
baz=138,slow=14
VORD **Divnogorie** 16.65 37 *e*P **Pn** 23 09 49.6 +0.2
VORD pmax pmax
comp=Z,40nm,1.4s
VORD MLR MLR
comp=Z,4µm,11.0s
LOR **Lormes** 16.67 307 *e*P **Pn** 23 09 48.6 -1.1
LOR pmax pmax
comp=Z,64nm,1.2s
VSR **Storozhevoye** 16.76 36 *e*P **Pn** 23 09 48.1 -2.7
VSR pmax pmax
comp=Z,60nm,1.2s
VSR MLR MLR
comp=Z,6µm,11.0s
AVF **Avril sur Loir** 16.80 305 *e*P **P** 23 09 53.9 +0.4
AVF pmax pmax
comp=Z,124nm,1.3s
IIGN **Ignalina** 16.82 6 *e*P **P** 23 09 53.8 +0.2
IDID **Didziasalis** 16.82 7 *e*P **P** 23 09 54.0 +0.2
IDID IAmb IAmb 23 10 05.0
comp=Z,17nm,0.8s
PABE **Paberze** 16.87 1 *e*P **P** 23 09 53.5 -0.6
PABE IAmb IAmb 23 10 05.5
comp=Z,210nm,1.0s
BHOU **Houvegnez** 17.01 319 Pn **Pn** 23 09 52.1 -1.9
ISAL **Salakas** 17.03 5 *e*P **P** 23 09 55.1 -0.8
ISAL IAmb IAmb 23 10 12.9
comp=Z,20nm,0.9s
BGF **Bois d'Agland** 17.05 304 *e*P **Pn** 23 09 52.5 -1.9
BGF pmax pmax
comp=Z,94nm,1.0s
BUG **Bochum--Univer** 17.09 324 P **P** 23 09 58.3 +1.7
BUG pmax pmax
comp=Z,57nm,1.1s
BUG **Bochum--Univer** 17.09 324 *e*Pn **P** 23 09 58.0 +1.3
baz=138,slow=14
BTNL **Ternell** 17.09 320 Pn **P** 23 09 56.4 -0.4
VORR **Voronezh** 17.09 35 *e*P **Pn** 23 09 55.0 +0.1
VORR pmax pmax
comp=Z,250nm,2.0s
MEM **Membach** 17.16 320 Pn **P** 23 09 58.5 +1.0
MEM **Membach** 17.16 320 P **P** 23 09 59.0 +1.5
MEM pmax pmax
comp=Z,50nm,1.0s
IZAR **Zarasai** 17.22 5 *e*P **Pn** 23 09 56.8 +0.3
RGN **Rugen** 17.32 340 **P** 23 09 59.1 0.0
BCLA **Clavier** 17.41 318 Pn **Pn** 23 09 59.3 +0.3
BCLA PnPn **PnPn** 23 10 11.5 +2.5
PBUR **Paburge** 17.41 357 *e*P **Pn** 23 09 57.5 -1.4
BSD **Bornholm Skovb** 17.44 344 *i* P **Pn** 23 09 59.5 +0.2
BSD pmax pmax
comp=Z,140nm,1.2s
BSD **Bornholm Skovb** 17.44 344 *i* P **Pn** 23 09 59.5 +0.2
comp=Z,141nm,1.2s
BSD **Bornholm Skovb** 17.44 344 *i* P **Pn** 23 09 59.5 +0.2
BSD IAmb IAmb 23 10 01.6
comp=Z,142nm,1.2s
BEBN **Eben Emael** 17.45 320 Pn **P** 23 10 00.8 +0.2
BGES **Gesves** 17.50 318 P **P** 23 10 02.5 +1.3
BGES PnPn **PnPn** 23 10 13.3 +3.0
RJF **Les Rejaudoux** 17.56 299 *e*P **Pn** 23 10 00.8 0.0
RJF pmax pmax
comp=Z,43nm,1.2s
DOU **Dourbes** 17.60 317 Pn **P** 23 10 02.3 -0.1
DOU PnPn **PnPn** 23 10 12.2 +0.6
DOU **Dourbes** 17.60 317 P **P** 23 10 04.3 +1.9
DOU pmax pmax
comp=Z,41nm,0.9s
LPSR **Galich'ya Gora** 17.62 33 *e*P **Pn** 23 10 01.7 +0.1
LPSR pmax pmax
comp=Z,140nm,1.5s
LPSR MLR MLR
comp=Z,4µm,11.0s
BMRD **Maredsous** 17.63 317 Pn **P** 23 10 04.1 +1.5
BMRD PnPn **PnPn** 23 10 12.3 +0.3
BSEG **Bad Segeberg** 17.72 334 *e*Pn **P** 23 10 04.1 +0.6
baz=138,slow=14
VRH **Novokhopyorsk** 17.98 40 *e*P **P** 23 10 06.9 +0.3

VRH pmax pmax
comp=Z,70nm,1.2s
VRH MLR MLR
comp=Z,27µm,14.0s
SNF **Seneffe** 18.00 317 P P 23 10 15.3 +8.5
LFF **La Frestale** 18.00 298 *e*P **P** 23 10 07.1 +0.3
LFF pmax pmax
comp=Z,35nm,1.0s
UCC **Uccle** 18.12 318 P **P** 23 10 08.0 -0.1
UCC pmax pmax
comp=Z,53nm,1.1s
UCC **Uccle** 18.12 318 P **P** 23 10 08.0 -0.1
ETSF **Etsaut** 18.62 291 *e*P **Pn** 23 10 13.8 -0.2
ETSF pmax pmax
comp=Z,62nm,1.0s
OBN **Obninsk** 18.71 24 *de*P **P** 23 10 12.4 -2.1
OBN pmax pmax
comp=Z,269nm,2.5s
OBN **Obninsk** 18.71 24 **Pn** 23 10 14.6 -0.3
MAK **Makhachkala** 18.72 69 *e*P **P** 23 10 10.8 -4.0
MAK *e*S **Sn** 23 13 40.6 -4.0
MAK pmax pmax
comp=Z,264nm,1.1s
MAK MLR MLR
comp=Z,2µm,11.0s
SLIT **Slitere, Latvi** 19.01 358 *e*P **Pn** 23 10 18.3 -0.2
SJPF **Ste Jean** 19.13 291 *e*P **Pn** 23 10 20.5 +0.4
SJPF pmax pmax
comp=Z,166nm,1.4s
CART **Cartagena** 19.23 274 *e*P **P** 23 10 17.3 -3.0
CART *e*S **Sn** 23 13 53.9 -2.9
CART **Cartagena** 19.23 274 P **P** 23 10 19.2 -1.1
MOS **Moscow** 19.57 24 *e*P **P** 23 10 22.8 -1.1
MOS *e*S **S** 23 14 03.7 -1.1
MOS pmax pmax
comp=Z,83nm,0.9s
MOS MLR MLR
comp=Z,3µm,11.0s
LDF **La Druitiere** 19.65 308 *e*P **P** 23 10 24.6 -0.3
LDF pmax pmax
comp=Z,61nm,1.0s
FLN **La Foliniere** 19.93 308 *e*P **P** 23 10 27.6 -0.4
FLN pmax pmax
comp=Z,216nm,1.4s
VSU **Vasula** 19.95 5 *e*P **Pn** 23 10 29.7 0.0
VSU **Vasula** 19.95 5 *c i*P **Pn** 23 10 29.5 -0.2
GRR **Gorron** 20.04 307 *e*P **P** 23 10 28.6 -0.5
GRR pmax pmax
comp=Z,50nm,0.8s
MUD **Monsted U'grnd** 20.17 337 *i* P Pn 23 10 31.3 -1.0
MUD pmax pmax
comp=Z,27nm,0.8s
MUD **Monsted U'grnd** 20.17 337 *i* P Pn 23 10 31.3 -1.0
comp=Z,27nm,0.8s
MUD **Monsted U'grnd** 20.17 337 *i* P Pn 23 10 31.4 -0.9
MUD IAmb IAmb 23 10 32.7
comp=Z,27nm,0.8s
UCM **Universidad Co** 20.62 283 *e*P **P** 23 10 34.8 -0.7
UCM *e*S **S** 23 14 22.6 -3.4
GOET **G??ttrup** 20.64 338 *i* P Pn 23 10 37.3 -0.5
comp=Z,622nm,1.1s
GOET **G??ttrup** 20.64 338 *i* P Pn 23 10 37.3 -0.5
GOET IAmb IAmb 23 10 39.1
comp=Z,623nm,1.1s
SGMF **Saint Gilles** 21.07 306 *e*P **P** 23 10 39.7 -0.5
SGMF pmax pmax
comp=Z,162nm,1.3s
JSA **Saint Aubin** 21.13 308 *e*P **P** 23 10 40.0 -0.8
JSA IAmb IAmb 23 10 45.2
comp=Z,134nm,1.2s
ESBB **Sonseca Array** 21.22 281 P **P** 23 10 42.0 -0.1
ESBB IAmb IAmb 23 10 43.9
comp=Z,145nm,0.9s
ESDC **Sonseca Array** 21.22 281 P **P** 23 10 41.7 -0.4
comp=Z,125nm,0.9s,baz=74,slow=11,SNR=300
ESDC **Sonseca Array** 21.22 281 P **P** 23 10 41.4 -0.7
GUD **Guadarrama** 21.29 284 P **P** 23 10 42.8 -0.1
MELI **Melilla** 21.29 269 *e*P **P** 23 10 42.9 +0.2
MELI eS Sn 23 14 47.9 +1.5
QUIF **Quistinic** 21.36 304 *e*P **P** 23 10 43.1 -0.3
QUIF pmax pmax
comp=Z,365nm,1.2s
PAB **San Pablo** 21.53 281 P **P** 23 10 44.7 -0.7
PAB pmax pmax
comp=Z,250nm,1.1s
PAB MLR MLR
comp=Z,2µm,19.0s
PAB **San Pablo** 21.53 281 P **P** 23 10 44.7 -0.7
PAB IAmb IAmb 23 10 47.9
comp=Z,250nm,1.1s
ROSF **Rostrenen** 21.55 305 *e*P **P** 23 10 44.9 -0.5
ROSF pmax pmax
comp=Z,261nm,1.3s
PUL **Pulkovo** 21.60 10 *i* P **P** 23 10 47.6 +1.8
PUL pmax pmax
comp=Z,92nm,1.0s
SWN1 **Swindon** 21.83 314 *e*P **P** 23 10 47.9 -0.5
SWN1 IAmb IAmb 23 10 52.5
comp=Z,314nm,1.4s
HOMB **Homborsund** 21.89 339 *e*P **P** 23 10 49.6 +0.7
HOMB **Homborsund** 21.89 339 *i* P **P** 23 10 50.0 +1.1
TAM **Tamanrasset** 21.99 229 P **P** 23 10 51.5 +1.0
TAM pmax pmax
comp=Z,69nm,1.1s
TAM MLR MLR
comp=Z,1µm,21.0s
TAM **Tamanrasset** 21.99 229 P **P** 23 10 51.5 +1.0
EMAL **Malaga-Limoner** 22.07 274 *e*P **P** 23 10 48.4 -2.8
EMAL *e*S **S** 23 14 53.6 -1.1
BATH **Bath** 22.10 314 *e*P **P** 23 10 50.2 -1.1
CWF **Charnwood Fore** 22.14 318 *e*P **P** 23 10 51.0 -0.7
STRD **Stroud** 22.15 315 *e*P **P** 23 10 51.3 -0.6
STRD IAmb IAmb 23 10 52.2
comp=Z,515nm,1.7s
SNART **Snartemo** 22.33 337 *e*P **P** 23 10 55.3 +1.7
SNART **Snartemo** 22.33 337 *i* P **P** 23 10 54.0 +0.3
SNART IAmb IAmb 23 10 57.3
comp=Z,444nm,1.3s
HFS **Hagfors** 22.37 347 P **P** 23 10 53.5 -0.6
comp=Z,20nm,0.6s,baz=162,slow=10,SNR=54
HFS LR LR 23 20 55.8
comp=Z,3µm,18.3s,baz=172,slow=40
PVLZ **Peæn de** 22.39 270 *e*P **P** 23 10 51.3 -3.3
PVLZ eS **S** 23 14 56.5 -4.2
MONM **Monmouth** 22.54 314 *e*P **P** 23 10 55.3 -0.7
MONM IAmb IAmb 23 11 00.8
comp=Z,92nm,0.9s
DYA **Yadsworthy** 22.63 310 *e*P **P** 23 10 52.1 -4.9
LBWR **Ladybower, Pea** 22.69 319 *e*P **P** 23 10 56.5 -1.1
MCH1 **Michaelchurch** 22.71 315 *e*P **P** 23 10 57.0 -0.8
MCH1 IAmb IAmb 23 10 57.7
comp=Z,532nm,2.0s
REAL **Reales** 22.75 273 *e*P **P** 23 10 59.8 +1.2
OSL **Oslo** 22.78 343 *e*P **P** 23 10 58.8 +0.3
STNC **Stoke** 22.78 318 *e*P **P** 23 10 58.5 -0.1
STNC IAmb IAmb 23 11 04.5
comp=Z,575nm,1.6s
KONO **Kongsberg** 22.79 342 *ce*P **P** 23 10 57.3 -1.3
KONO pmax pmax
comp=Z,73nm,1.3s
KONO **Kongsberg** 22.79 342 P **P** 23 10 56.4 -2.2
KONO IAmb IAmb 23 11 07.4
comp=Z,113nm,1.1s
KONO **Kongsberg** 22.79 342 *e*P **P** 23 10 58.6 +0.1
LIJA **Lijar** 22.80 275 *e*P **P** 23 10 59.0 -0.1
HLM1 **Long Mynd** 22.88 316 *e*P **P** 23 10 58.2 -1.4
FINES **FINESS Array B** 22.88 3 P **P** 23 10 58.7 -0.8
comp=Z,20nm,0.9s,baz=165,slow=11,SNR=31
FINES LR LR 23 21 08.5
comp=Z,4µm,18.6s,baz=188,slow=40
FINES **FINESS Array B** 22.88 3 P **P** 23 10 58.8 -0.7
FIA1 **FINESS Array S** 22.88 3 P **P** 23 10 59.3 -0.2
CEU **Ceuta** 23.03 272 *e*P **P** 23 10 57.2 -4.1
CEU *e*S **S** 23 15 02.5 -10
HTL **Hartland** 23.16 311 *e*P **P** 23 11 01.6 -0.9
PBRG **Braganca** 23.18 287 *e*P **P** 23 11 02.1 -0.8
comp=Z,300nm,1.6s
PBRG *e*S **S** 23 15 09.1 -5.6
FOEL **Foel Wylfa** 23.22 316 *e*P **P** 23 11 02.4 -0.8
NC602 **NORSAR Array S** 23.33 345 *e*P **P** 23 11 02.8 -1.4
NORES **NORESS Array B** 23.33 345 P **P** 23 11 03.3 -0.9
NORES pmax pmax
comp=Z,12nm,0.5s
MDT **Midelt** 23.43 264 P **P** 23 11 05.3 -0.2

comp=Z,96nm,1.0s,baz=85,slow=6.7,SNR=124
MVO Moncorvo 23.43 286 *e*P **P 23 11 04.0 -1.4**
comp=Z,191nm,1.1s
MVO *e*S **S 23 15 10.7 -8.1**
MVO *e*LR LR 23 20 22.7
comp=Z,2µm,16.0s
CNIL Conil 23.44 274 *e*P **P 23 11 05.0 -0.5**
BLS5 Blasjo 23.44 338 *e*P **P 23 11 05.6 +0.3**
LLW Llanuwychllyn 23.45 316 *e*P **P 23 11 03.5 -1.9**
SFS San Fernando 23.53 274 P **P 23 11 04.8 -1.6**
SFS MLR MLR
comp=Z,1µm,18.0s
SFS San Fernando 23.53 274 *e*P **P 23 11 03.7 -2.7**
SFS *e*S **S 23 15 15.8 -4.7**
SFS San Fernando 23.53 274 P **P 23 11 04.8 -1.6**
EDMD Edmundbyers 23.56 322 *e*P **P 23 11 05.0 -1.5**
EDMD IAmb IAmb 23 11 11.2
comp=Z,283nm,1.8s
NAO01 NORSAR Array S 23.56 345 P **P 23 11 06.1 -0.4**
NAO01 NORSAR Array S 23.56 345 *e*P **P 23 11 05.8 -0.7**
IFR Ifrane 23.57 266 *e*P **P 23 11 06.2 -0.9**
IFR *e*S **S 23 15 29.3 +7.7**
NC405 NORSAR Array S 23.64 346 P **P 23 11 06.8 -0.5**
NB2 NORSAR Subarra 23.67 345 P **P 23 11 06.4 -1.2**
comp=Z,215nm,1.7s,baz=153,slow=10
NB2 NORSAR Subarra 23.67 345 P **P 23 11 06.4 -1.2**
baz=153,slow=10
NOA NORSAR Array B 23.67 345 P **P 23 11 06.8 -0.8**
comp=Z,19nm,0.8s,baz=150,slow=9.6,SNR=48
ODD1 Odda 23.80 339 *e*P **P 23 11 08.8 0.0**
NC303 NORSAR Array S 23.81 346 IAmb IAmb 23 11 19.1
comp=Z,232nm,1.1s
MTE Manteigas 23.88 284 *e*P **P 23 11 08.7 -1.2**
comp=Z,282nm,1.3s
MTE *e*S **S 23 15 28.0 +1.9**
MTE *e*LR LR 23 20 28.3
comp=Z,2µm,16.0s
MTE Manteigas 23.88 284 P **P 23 11 09.0 -0.9**
MTE IAmb IAmb 23 11 11.1
comp=Z,237nm,1.2s
PMRV Marv??o 23.88 282 *e*P **P 23 11 08.9 -0.9**
comp=Z,143nm,1.8s
PMRV *e*S **S 23 15 29.2 +3.2**
PMRV *e*LR LR 23 20 25.0
comp=Z,2µm,16.0s
PCBR Castelo Branco 23.89 283 *e*P **P 23 11 09.2 -0.7**
comp=Z,241nm,1.2s
PVRL Vila Real 23.94 286 *e*P **P 23 11 09.9 -0.5**
comp=Z,106nm,1.4s
POLO Lamas de Olo 23.99 286 *e*P **P 23 11 09.9 -1.0**
comp=Z,57nm,1.2s
POLO *e*S **S 23 15 33.0 +5.1**
SKAR Skarslia 24.01 342 *e*P **P 23 11 10.6 -0.2**
WLF1 Llynfaes 24.04 317 *e*P **P 23 11 11.1 -0.1**
RAYN Ar Rayn 24.11 122 *i*P **P 23 11 12.9 +0.8**
SNR=5.7
RAYN Ar Rayn 24.11 122 P **P 23 11 14.0 +1.9**
RAYN pmax pmax
comp=Z,20nm,1.1s
RAYN Ar Rayn 24.11 122 P **P 23 11 14.0 +1.9**
PVIS Viseu 24.12 285 *e*P **P 23 11 10.9 -1.2**
comp=Z,211nm,1.3s
PCAB Cabril 24.14 287 *e*P **P 23 11 11.7 -0.6**
comp=Z,253nm,1.4s
WPS Cemaes, Angles 24.15 317 *e*P **P 23 11 11.1 -1.0**
PGAV Gavieira, Arco 24.31 288 *e*P **P 23 11 14.0 +0.1**
comp=Z,248nm,1.9s
PGAV *e*S **S 23 15 28.2 -4.8**
PGAV *e*LR LR 23 21 13.7
comp=Z,1µm,28.0s
EKA Eskdalemuir Ar 24.41 322 P **P 23 11 14.4 -0.1**
comp=Z,40nm,0.9s,baz=119,slow=9.5,SNR=43
EKA LR LR 23 21 33.1
comp=Z,2µm,19.3s,baz=135,slow=38
KLMR Klimovskoe 24.41 19 *e*P **P 23 11 14.3 -0.1**
KLMR *e*S **S 23 15 35.7 +1.7**
KLMR pmax pmax
comp=Z,146nm,1.5s
KLMR MLR MLR
comp=Z,2µm,9.0s
KLMR Klimovskoe 24.41 19 *e*P **P 23 11 14.3 -0.1**
KLMR AMP 23 11 25.3
comp=Z,146nm,1.5s
KLMR *e*S **S 23 15 35.7 +1.7**
KLMR *e*S **S 23 15 35.7 +1.7**
KLMR LQ LQ 23 18 42.3
KLMR LQ LQ 23 18 42.3
KLMR LR LR 23 19 45.6
KLMR AMP 23 22 16.5
comp=Z,2µm,9.4s
ESK Eskdalemuir 24.42 322 *e*P **P 23 11 14.1 -0.5**
ESK IAmb IAmb 23 11 16.3
comp=Z,548nm,1.9s
PBEJ Beja 24.48 278 *e*P **P 23 11 14.8 -0.6**
comp=Z,88nm,2.0s
PVAQ Vaqueiros 24.50 277 *e*P **P 23 11 14.6 -0.9**
comp=Z,249nm,1.3s
PVAQ *e*S **S 23 15 35.7 -0.2**
PVAQ *e*LR LR 23 24 51.2
comp=Z,783nm,16.0s
PVAQ Vaqueiros 24.50 277 P **P 23 11 14.3 -1.1**
PVAQ IAmb IAmb 23 11 16.3
comp=Z,177nm,1.0s
EVO Evora 24.50 280 *e*P **P 23 11 10.2 -5.3**
EVO *e*S **S 23 15 42.5 +6.5**
EVO Evora 24.50 280 *e*P **P 23 11 14.8 -0.7**
comp=Z,86nm,1.4s
BER Bergen 24.55 338 P **P 23 11 15.8 0.0**
BER Bergen 24.55 338 *e*P **P 23 11 15.7 0.0**
COI Coimbra 24.56 284 *e*P **P 23 11 16.8 +0.7**
comp=Z,226nm,1.3s
COI Coimbra 24.56 284 IAmb IAmb 23 11 17.5
comp=Z,153nm,0.9s
PMTG Montargil 24.58 281 *e*P **P 23 11 15.6 -0.6**
comp=Z,167nm,1.3s
PMTG *e*S **S 23 15 41.9 +4.8**
IOMK Kirk Michael 24.58 319 *e*P **P 23 11 14.5 -1.6**
IOMK IAmb IAmb 23 11 16.9
comp=Z,278nm,1.4s
WIM Isle of Man 24.58 318 *e*P **P 23 11 14.3 -1.8**
PCAS Casmilo, Conde 24.65 283 *e*P **P 23 11 16.1 -0.8**
comp=Z,175nm,1.2s
PCAS *e*S **S 23 15 43.7 +5.4**
ASK Askoy 24.68 338 *e*P **P 23 11 17.6 +0.7**
PBDV Barranco-do-Ve 24.70 277 *e*P **P 23 11 17.6 +0.3**
comp=Z,438nm,1.4s
PBDV *e*S **S 23 15 42.4 +3.2**
PCVE Castro Verde 24.70 278 *e*P **P 23 11 16.3 -1.0**
comp=Z,200nm,1.7s
PCVE *e*S **S 23 15 42.4 +3.3**
EDI Edinburgh 24.74 323 *e*P **P 23 11 16.7 -0.8**
NEWG New Galloway 24.82 321 *e*P **P 23 11 17.8 -0.4**
NEWG IAmb IAmb 23 11 19.4
comp=Z,342nm,2.2s
GAL1 Galloway 24.94 320 *e*P **P 23 11 17.8 -1.5**
GAL1 IAmb IAmb 23 11 25.2
comp=Z,111nm,1.4s
PSBE So Bento 24.95 282 *e*P **P 23 11 19.8 +0.2**
comp=Z,137nm,1.9s
PSBE *e*S **S 23 15 50.0 +6.8**
HYA Hoyanger 24.96 340 *e*P **P 23 11 19.9 +0.5**
PNCL Nicolau / Gran 24.98 279 *e*P **P 23 11 19.7 -0.1**
comp=Z,269nm,1.8s
PNCL *e*S **S 23 15 49.8 +6.2**
DOMB Dombas 25.03 344 *e*P **P 23 11 20.9 +0.8**
DSB Dublin 25.10 315 P **P 23 11 20.0 -0.8**
MORF Marmelete 25.24 277 *e*P **P 23 11 21.6 -0.7**
MORF AMb AMB 23 11 25.1
comp=Z,195nm,1.9s
MORF *e*S **S 23 15 49.4 +1.4**
MORF Marmelete 25.24 277 *e*P **P 23 11 21.6 -0.7**
MORF *e*S **S 23 15 49.4 +1.4**
MORF Marmelete 25.24 277 *e*P **P 23 11 21.6 -0.7**
comp=Z,197nm,1.7s
MORF *e*S **S 23 15 52.3 +4.3**
PTEO Sao Teotonio 25.25 278 *e*P **P 23 11 22.0 -0.2**
comp=Z,451nm,1.7s
SUE Sulen 25.27 339 *e*P **P 23 11 22.2 0.0**
PGBU Glenifferbraes 25.30 322 *e*P **P 23 11 22.2 -0.4**
PGBU IAmb IAmb 23 11 25.4
comp=Z,85nm,1.2s
LIS Lisbon 25.35 280 *e*P **P 23 11 22.5 -0.6**
LIS AMb AMB 23 11 25.5
comp=Z,380nm,1.5s
LIS Lisbon 25.35 280 *e*P **P 23 11 22.5 -0.6**
LIS Lisbon 25.35 280 *e*P **P 23 11 24.0 +0.9**
comp=Z,381nm,1.4s
PMAFR Mafra 25.41 281 *e*P **P 23 11 23.2 -0.5**
comp=Z,249nm,1.5s
PMAFR *e*S **S 23 15 57.4 +6.9**
INVG Invergeldie, C 25.42 323 *e*P **P 23 11 22.7 -0.9**
INVG IAmb IAmb 23 11 25.2
comp=Z,178nm,1.3s
PFVI Vila Bisbo 25.42 277 *e*P **P 23 11 23.4 -0.5**
comp=Z,213nm,1.4s
PFVI *e*S **S 23 15 54.8 +4.1**
PFVI Vila Bisbo 25.42 277 P **P 23 11 23.3 -0.5**
PFVI IAmb IAmb 23 11 25.0
comp=Z,150nm,1.1s
EAB Aberfoyle 25.43 323 *e*P **P 23 11 23.6 -0.1**
AVE Averroes 25.44 267 *e*P **P 23 11 24.2 +0.2**
AVE *e*S **S 23 15 57.5 +6.4**
AKN Aaknes 25.62 342 *e*P **P 23 11 25.8 +0.4**
MOL Molde 25.83 343 *e*P **P 23 11 28.0 +0.8**
TBLU Trondheim 25.88 346 *e*P **P 23 11 28.8 +1.0**
LAWE Loch Awe, Argy 25.97 322 *e*P **P 23 11 27.8 -0.9**
LAWE IAmb IAmb 23 11 31.2
comp=Z,37nm,1.0s
KIRV Kirov 26.05 32 P **P 23 11 28.4 -0.9**
comp=Z,37nm,0.8s,baz=239,slow=5.5,SNR=20
KIRV LR LR 23 21 48.5
comp=Z,1µm,19.8s,baz=232,slow=36
KIRV Kirov 26.05 32*ce*P **P 23 11 29.2 -0.1**
LRW Lerwick 26.51 332 *e*P **P 23 11 31.1 -2.3**
KAC Achnashellach 26.58 325 *e*P **P 23 11 33.1 -1.0**
KPL Plockton 26.65 324 *e*P **P 23 11 33.6 -1.2**
NSS Namsos 26.79 349 *e*P **P 23 11 35.5 -0.4**
TMCR Tamitsa 26.99 14 *e*P **P 23 11 37.2 -0.5**
TMCR pmax pmax
comp=Z,66nm,1.3s
AKTO Aktyubinsk 27.09 53 P **P 23 11 39.4 +0.6**
comp=Z,2.9nm,0.9s,baz=258,slow=10,SNR=17
AKTO LR LR 23 26 41.6
comp=Z,950nm,19.0s,baz=262,slow=46
GEYT Alibeck 27.16 81 P **P 23 11 40.1 +0.5**
comp=Z,6.3nm,0.5s,baz=269,slow=12,SNR=12
GEYT Alibeck 27.16 81 IAmb IAmb 23 11 49.1
comp=Z,26nm,1.4s
GYA0B ALIBECK ARRAY 27.16 81 P **P 23 11 40.1 +0.5**
MOR8 Moi Rana 28.05 352 *e*P **P 23 11 48.9 +1.7**
ABKAR Akbulak array 28.10 56 P **P 23 11 48.4 +0.5**
ABKAR Akbulak array 28.10 56 P **P 23 11 48.6 +0.7**
ABKAR IAmb IAmb 23 12 40.5
comp=Z,24nm,1.4s
KONS Konsvik 28.51 351 *e*P **P 23 11 52.2 +0.9**
FAUS Fauske 29.14 354 *e*P **P 23 11 58.0 +1.1**
ARU Arti 29.21 41 P **P 23 11 58.4 +0.8**
comp=Z,3.9nm,0.6s,baz=261,slow=4.8,SNR=23
ARU LR LR 23 25 31.4
comp=Z,1µm,18.6s,baz=242,slow=40
ARU Arti 29.21 41*d i*P **P 23 11 57.9 +0.2**
ARU 23 12 51.4
ARU S **S 23 16 52.1 +2.0**
ARU SS **SnSn 23 18 20.8 +6.1**
ARU pmax pmax
comp=Z,39nm,1.2s
ARU MLR MLR
comp=Z,2µm,12.0s
ARU Arti 29.21 41 P **P 23 11 57.1 -0.6**
APA Apatity 29.51 8‖*i*P P 23 12 14.7 +15
APA pmax pmax
comp=Z,8.0nm,0.8s
APA MLR MLR
comp=Z,7µm,12.0s
STEI Steigen 29.68 354 *e*P **P 23 12 02.7 +1.0**
UMQ Umm Al-Quwin 30.13 106 P **P 23 12 07.3 +1.2**
AJN Ajban 30.17 108 P **P 23 12 07.1 +0.6**
SHME Shamm 30.21 105 P **P 23 12 07.0 +0.2**
ASUD Al Ashush, Dub 30.39 108 P **P 23 12 10.5 +2.1**
ASUD S **S 23 17 11.9 +2.7**
BANOM Banah 30.40 105 *i*P **P 23 12 07.8 -0.7**
SNR=5.3
BANOM Banah 30.40 105 P **P 23 12 10.0 +1.5**
BANOM S **S 23 17 10.0 +0.7**
KTK1 Kautokeino 30.42 360 *e*P **P 23 12 09.3 +1.1**
SVE Sverdlovsk 30.42 41*ce*P **P 23 12 09.3 +0.9**
SVE *e*S **S 23 17 08.3 -0.8**
SVE pmax pmax
comp=Z,63nm,1.3s
SVE MLR MLR
comp=Z,3µm,11.0s
NAZ Nazwa, Dubai 30.43 107 P **P 23 12 09.7 +0.9**
NAZ Nazwa, Dubai 30.43 107 P **P 23 12 10.6 +1.8**
SNR=6.2
NAZ S **S 23 17 11.0 +1.2**
FAQ Al Faqa, Dubai 30.52 107 P **P 23 12 09.9 +0.3**
MSFE Esma-Masafi 30.60 106 P **P 23 12 10.9 +0.6**
MDH Madha 30.74 106 P **P 23 12 11.8 +0.3**
UOSS Minazif 30.86 107 P **P 23 12 12.5 0.0**
UOSS Minazif 30.86 107 P **P 23 12 13.8 +1.2**
UOSS S **S 23 17 17.5 +0.9**
UOSS Minazif 30.86 107 P **P 23 12 12.6 0.0**
HATD Hatta, Dubai 30.88 107 P **P 23 12 13.2 +0.5**
HATD Hatta, Dubai 30.88 107 P **P 23 12 14.1 +1.3**
HATD P **P 23 12 14.1 +1.3**
HATD S **S 23 17 17.0 +0.1**
HATD S **S 23 17 17.0 +0.1**
ARCES ARCESS Array B 30.97 1 P **P 23 12 13.0 -0.1**
comp=Z,2.3nm,0.6s,baz=189,slow=8.6,SNR=9.7
ARCES PcP **PcP 23 15 08.4 -0.6**
comp=Z,2.0nm,0.8s,baz=192,slow=1.6,SNR=5.3
ARCES LR LR 23 26 07.8
comp=Z,2µm,20.5s,baz=180,slow=39
ARC1 ARCESS Array S 30.98 1 P **P 23 12 12.7 -0.4**
ARC1 IAmb IAmb 23 12 14.0
comp=Z,129nm,1.9s
ARD1 ARCESS Array S 30.98 1 P **P 23 12 12.6 -0.6**
ARD1 IAmb IAmb 23 12 38.6
comp=Z,138nm,1.9s
ALNE Al Ain 31.03 108 *i*P **P 23 12 14.9 +0.7**
SNR=5.7
TRO Tromso 31.14 357 *e*P **P 23 12 15.5 +1.0**
HRA Herat 31.34 86 P **P 23 12 17.9 +0.9**
SOHO SOHO 31.57 108 *i*P **P 23 12 18.8 0.0**
SNR=7.5
SOHO SOHO 31.57 108 P **P 23 12 19.9 +1.0**
SOHO S **S 23 17 27.9 +0.2**
TOC1 Torodi Ar. Sit 31.85 223 IAMs_20 IAMs_20 23 26 37.7
comp=Z,2µm,18.0s
TOA0 Torodi Ar. Sit 31.87 223 P **P 23 12 21.6 0.0**
TOA0 IAmb IAmb 23 12 22.7
comp=Z,51nm,0.8s
TORD Torodi Ar. Bea 31.87 223 P **P 23 12 21.5 0.0**
comp=Z,42nm,0.8s,baz=30,slow=9.3,SNR=231
TORD ScP **ScP 23 18 54.1 -1.7**
comp=Z,3.4nm,0.9s,baz=34,slow=3.6,SNR=3.8
TORD LR LR 23 26 59.4
comp=Z,2µm,18.1s,baz=15,slow=40
TORD Torodi Ar. Bea 31.87 223 P **P 23 12 21.2 -0.3**
TOC5 Torodi Ar. Sit 31.90 223 IAMs_20 IAMs_20 23 26 49.0
comp=Z,3µm,18.0s
ARQ Araqi 32.02 109 P **P 23 12 24.3 +1.4**
SNR=5.3
ARQ S **S 23 17 35.7 +0.9**
ATD Arta Tunnel 32.09 142 LR LR 23 25 56.8
comp=Z,330nm,20.9s,baz=335,slow=37
ATD Arta Tunnel 32.09 142 P **P 23 12 22.1 -1.4**
ATD IAmb IAmb 23 12 31.0
comp=Z,63nm,1.7s
HOQ Hoqain 32.47 108 P **P 23 12 27.6 +0.8**
HOQ S **S 23 17 42.3 +0.6**
BSY Bisya 32.88 109 P **P 23 12 31.7 +1.3**
BSY P **P 23 12 31.7 +1.3**
BSY S **S 23 17 49.3 +1.1**
BSY S **S 23 17 49.3 +1.1**
PMOZ Porto Moniz, M 33.27 273 P **P 23 12 33.4 -0.4**
SMDO Samad 33.32 108 P **P 23 12 35.1 +0.8**
WSAR Wadi Sarin 33.65 107 P **P 23 12 38.0 +0.9**
comp=Z,2.6nm,0.7s,baz=283,slow=5.2,SNR=2.3
JMDO Jabal Madar 33.77 109 P **P 23 12 39.3 +1.1**
KOWA Kowa 34.12 233 P **P 23 12 41.3 +0.1**
comp=Z,29nm,1.1s,baz=31,slow=7.8,SNR=22
KOWA PcP **PcP 23 15 18.1 -0.4**
comp=Z,5.4nm,0.7s,baz=53,slow=5.2,SNR=2.6
KOWA Kowa 34.12 233 P **P 23 12 40.4 -0.8**
KOWA IAmb IAmb 23 12 42.8
comp=Z,77nm,1.3s
JLN Jalan Bani Buh 34.87 108 P **P 23 12 50.0 +2.3**
SNR=5.9
BRVK Borovoye 35.02 50 P **P 23 12 49.8 +1.2**
BRVK Borovoye 35.02 50*ce*P **P 23 12 49.2 +0.6**
BRVK pmax pmax
comp=Z,38nm,1.7s
BRVK Borovoye 35.02 50 P **P 23 12 49.5 +0.8**
BVAR Borovoye Array 35.08 50 P **P 23 12 49.9 +0.7**
comp=Z,1.6nm,0.8s,baz=268,slow=7.1,SNR=13
IUG Iuzhnay 35.34 69 *e*P **P 23 12 52.0 +0.4**
comp=Z,7.7nm,1.2s,baz=70
IUG Iuzhnay 35.34 69 *e*P **P 23 12 52.0 +0.4**
IUG pmax pmax
comp=Z,8.0nm,1.2s
CHGR Chuyangaron 35.44 75 P **P 23 12 53.3 +0.7**
CHGR IAmb IAmb 23 12 58.6
comp=Z,34nm,0.8s
KK08 Karatay Array 35.51 67 P **P 23 12 53.5 +0.5**
KK09 Karatay Array 35.52 67 P **P 23 12 54.6 +1.5**
KK03 Karatay Array 35.52 67 P **P 23 12 54.5 +1.4**
KK07 Karatay Array 35.52 67 P **P 23 12 54.2 +1.1**
KK04 Karatay Array 35.52 67 P **P 23 12 54.4 +1.2**
KK01 Karatay Array 35.52 67 P **P 23 12 54.1 +1.0**
KK02 Karatay Array 35.53 67 P **P 23 12 54.5 +1.4**
KKAR Karatay Array 35.53 67 P **P 23 12 54.1 +0.9**
KKAR Karatay Array 35.53 67 P **P 23 12 54.1 +0.9**
KKAR Karatay Array 35.53 67 IAmb IAmb 23 12 58.5
comp=Z,64nm,1.9s
KK05 Karatay Array 35.53 67 P **P 23 12 54.8 +1.5**
KK06 Karatay Array 35.54 67 P **P 23 12 54.9 +1.7**
DZA Taraz 36.16 68 *e*P **P 23 12 59.2 +0.6**
baz=68
DZA Taraz 36.16 68 *e*P **P 23 12 59.2 +0.6**
GAR Garm 36.23 74 IAmb IAmb 23 13 15.7
comp=Z,41nm,0.9s
BRZS Berezniki 36.41 56 *e*P **P 23 13 01.1 +0.5**
comp=Z,6.2nm,1.9s,baz=56
BRZS *e*S **S 23 18 43.3 +1.3**
baz=56
BRZS Berezniki 36.41 56 *e*P **P 23 13 01.1 +0.5**
BRZS *e*S **S 23 18 43.3 +1.3**
BRZS pmax pmax
comp=Z,6.0nm,1.9s
KBL Kabul 36.58 82 P **P 23 13 04.5 +2.0**
SNR=6.4
KBL P **P 23 13 04.5 +2.0**
SNR=6.4
KBL Kabul 36.58 82 P **P 23 13 03.6 +1.1**
KBL pmax pmax
comp=Z,8.0nm,0.9s
KBL MLR MLR
comp=Z,1µm,18.0s
KBL Kabul 36.58 82 P **P 23 13 03.6 +1.1**
LODK Lodwar 36.72 160 P **P 23 13 05.7 +2.1**
SNR=9.4
BORG Borgarnes 36.83 330 P **P 23 13 04.9 +1.0**
BORG pmax pmax
comp=Z,287nm,1.9s
BORG Borgarnes 36.83 330 P **P 23 13 04.9 +1.0**
BTLS Baital 37.75 64‖*i*P **P 23 13 13.1 +1.0**
comp=Z,5.0nm,1.0s,baz=64
BTLS Baital 37.75 64*d i*P **P 23 13 13.0 +1.0**
BTLS pmax pmax
comp=Z,5.0nm,1.0s
SGDS Sogindy 38.43 66 *e*P **P 23 13 18.2 +0.2**
comp=Z,6.7nm,1.9s,baz=66
SGDS Sogindy 38.43 66 *e*P **P 23 13 18.1 +0.2**
SGDS pmax pmax
comp=Z,7.0nm,1.9s
AAK Ala-Archa 38.49 67 *i*P **P 23 13 20.1 +1.5**
SNR=24
AAK Ala-Archa 38.49 67 P **P 23 13 20.8 +2.3**
AAK Ala-Archa 38.49 67*ce*P **P 23 13 19.8 +1.3**
AAK pmax pmax
comp=Z,128nm,1.7s
FRU1 Bishkek 38.55 67 P **P 23 13 20.7 +1.7**
FRU1 pmax pmax
comp=Z,106nm,1.6s
FRU1 MLR MLR
comp=Z,600nm,22.0s
FRU1 Bishkek 38.55 67 P **P 23 13 20.7 +1.7**
FRU1 IAmb IAmb 23 13 22.1
comp=Z,106nm,1.6s
KUU Kurty 39.56 65‖*i*P **P 23 13 28.5 +1.1**
comp=Z,28nm,1.4s,baz=65
KUU Kurty 39.56 65*d i*P **P 23 13 28.4 +1.1**
KUU pmax pmax
comp=Z,28nm,1.4s
BOOM Boomskoye usch 39.56 67 P **P 23 13 28.9 +1.3**
BOOM pmax pmax
comp=Z,62nm,1.8s
BOOM MLR MLR
comp=Z,500nm,18.0s
BOOM Boomskoye usch 39.56 67 P **P 23 13 28.9 +1.3**
SCO Scoresbysund 39.58 338 *i*P **P 23 13 28.0 +0.9**
SCO pmax pmax
comp=Z,65nm,1.1s
SCO Scoresbysund 39.58 338 P **P 23 13 27.8 +0.8**
SCO IAmb IAmb 23 13 29.6
comp=Z,65nm,1.1s
SCO Scoresbysund 39.58 338 *i*P **P 23 13 28.0 +0.9**
comp=Z,65nm,1.1s
SCO Scoresbysund 39.58 338 *i*P **P 23 13 28.0 +0.9**
SCO IAmb IAmb 23 13 29.4
comp=Z,65nm,1.1s
MBAR Mbarara 39.64 168 P **P 23 13 28.9 +0.6**
comp=Z,3.0nm,0.2s,baz=339,slow=6.1,SNR=12
MBAR Mbarara 39.64 168 P **P 23 13 29.3 +1.0**
MBAR P **P 23 13 29.3 +1.0**
MBAR Mbarara 39.64 168*c i*P **P 23 13 29.1 +0.8**
MBAR pmax pmax
comp=Z,8.0nm,1.1s
MBAR Mbarara 39.64 168 P **P 23 13 29.0 +0.8**
SPB2 Spitsbergen Ar 39.74 358 P **P 23 13 27.8 -0.6**
SPA2 Spitsbergen Ar 39.75 358 P **P 23 13 28.8 +0.4**
SPA0 Spitsbergen Ar 39.75 358 *e*P **P 23 13 29.3 +0.9**
SPA3 Spitsbergen Ar 39.75 358 P **P 23 13 29.1 +0.7**
SPITS Spitsbergen Ar 39.75 358 P **P 23 13 29.1 +0.7**
comp=Z,9.6nm,0.9s,baz=151,slow=12,SNR=8.2
CHKK Chushkaly 40.03 65 *e*P **P 23 13 31.8 +0.6**
baz=65
CHKK Chushkaly 40.03 65 *e*P **P 23 13 31.8 +0.6**
AAA Alma-Ata 40.11 66 *e*P **P 23 13 33.3 +1.3**
comp=Z,15nm,1.0s,baz=66
AAA Alma-Ata 40.11 66 *e*P **P 23 13 33.3 +1.3**
AAA pmax pmax
comp=Z,15nm,1.0s
KURBB Kurchatov Arra 40.12 54 P **P 23 13 32.6 +0.8**
comp=Z,16nm,0.8s,baz=282,slow=8.6,SNR=83
NIL Nilore 40.16 81 P **P 23 13 34.1 +1.6**
NIL Nilore 40.16 81 P **P 23 13 34.1 +1.6**
NIL pmax pmax
comp=Z,53nm,1.1s
NIL Nilore 40.16 81 P **P 23 13 34.1 +1.6**
TNSS Tian-Shan 40.17 66 *e*P **P 23 13 33.9 +1.1**
baz=66
TNSS Tian-Shan 40.17 66 *e*P **P 23 13 33.9 +1.1**
KURK Kurchatov 40.17 54*ce*P **P 23 13 32.7 +0.5**
KURK pmax pmax
comp=Z,54nm,1.7s
KURK Kurchatov 40.17 54 P **P 23 13 33.0 +0.7**
MDOK Medeo 40.22 66 *i*P **P 23 13 34.1 +1.2**
baz=66
MDOK *e*S **S 23 19 42.1 +2.0**
baz=66
MDOK Medeo 40.22 66 *i*P **P 23 13 34.1 +1.2**
MDOK *e*S **S 23 19 42.1 +2.0**
KSH Kashi 40.33 72 P **P 23 13 34.3 +0.4**
KSH S **S 23 19 40.0 -1.8**
KSH SS **SS 23 22 34.4 -5.7**
KSH pmax pmax
comp=Z,100nm,1.6s
KSH pmax pmax
comp=Z,890nm,4.9s
KSH LR LR
comp=Z,830nm,8.8s
KSH LR LR
comp=Z,410nm,6.5s
KDJ Kajisay 40.54 67 P **P 23 13 37.7 +2.0**
KDJ pmax pmax
comp=Z,55nm,1.8s
KDJ Kajisay 40.54 67 P **P 23 13 37.7 +2.0**
TDK Taldyqorghan 40.80 63 *e*P **P 23 13 38.5 +0.8**
comp=Z,21nm,1.8s,baz=63
TDK Taldyqorghan 40.80 63 *e*P **P 23 13 38.4 +0.8**
TDK pmax pmax
comp=Z,21nm,1.8s

DBIC Dimbokro 40.81 226 P **P** **23 13 37.9 0.0**
comp=Z,53nm,0.8s,baz=20,slow=8.7,SNR=78
DBIC Dimbokro 40.81 226 P **P** **23 13 38.1 +0.2**
DBIC pmax pmax
comp=Z,56nm,0.8s
DBIC Dimbokro 40.81 226 P **P** **23 13 38.1 +0.2**
DBIC IAmb IAmb 23 13 39.0
comp=Z,56nm,0.8s
TIC Toumodi 40.93 226 *e*P **P** **23 13 38.7 -0.2**
KIC Kosan Boka 41.00 226 *e*P **P** **23 13 39.4 -0.1**
comp=Z,123nm,0.8s
DBG Daneborg 41.17 343 *i* P **P** **23 13 41.3 +1.1**
DBG IAmb IAmb 23 13 44.9
comp=Z,7.1nm,0.9s
SATY Saty 41.21 66⇓ *i* P **P** **23 13 42.6 +1.5**
comp=Z,11nm,1.3s,baz=66
SATY Saty 41.21 66 *d i* P **P** **23 13 42.6 +1.5**
SATY pmax pmax
comp=Z,11nm,1.3s
SEM Semipalatinsk 41.23 54 *e*P **P** **23 13 41.8 +0.5**
comp=Z,9.8nm,1.2s,baz=55
SEM Semipalatinsk 41.23 54 *e*P **P** **23 13 41.8 +0.5**
SEM pmax pmax
comp=Z,10.0nm,1.2s
LIC Lamto 41.27 226 *e*P **P** **23 13 41.7 0.0**
comp=Z,42nm,0.3s
KPKS Kokpek 41.31 65 *e*P **P** **23 13 42.9 +0.9**
comp=Z,4.7nm,1.1s,baz=65
KPKS Kokpek 41.31 65 *e*P **P** **23 13 42.8 +0.9**
KPKS pmax pmax
comp=Z,5.0nm,1.1s
PRZ Przheval'sk 41.34 67 P **P** **23 13 42.9 +0.6**
PRZ pmax pmax
comp=Z,20nm,1.1s
PRZ MLR MLR
comp=Z,500nm,19.0s
PRZ Przheval'sk 41.34 67 P **P** **23 13 42.9 +0.6**
KMBO Kilima Mbogo 41.58 159 P **P** **23 13 45.5 +1.0**
comp=Z,1.5nm,0.7s,baz=16,slow=5.1,SNR=7.6
KMBO Kilima Mbogo 41.58 159 *i* P **P** **23 13 46.1 +1.6**
SNR=5.6
KMBO Kilima Mbogo 41.58 159 P **P** **23 13 47.4 +2.9**
KMBO P **P** **23 13 47.4 +2.9**
KMBO Kilima Mbogo 41.58 159 P **P** **23 13 45.9 +1.4**
SHLS Shalkode 41.94 65 *e*P **P** **23 13 50.5 +3.4**
comp=Z,7.2nm,1.4s,baz=65
SHLS Shalkode 41.94 65 *e*P **P** **23 13 50.4 +3.4**
SHLS pmax pmax
comp=Z,7.0nm,1.4s
DAG Danmarks Havn 42.34 347 *i* P **P** **23 13 49.9 +0.2**
DAG pmax pmax
comp=Z,12nm,1.1s
DAG Danmarks Havn 42.34 347 *i* P **P** **23 13 49.9 +0.2**
comp=Z,12nm,1.1s
DAG Danmarks Havn 42.34 347 *i* P **P** **23 13 49.9 +0.2**
DAG IAmb IAmb 23 13 52.2
comp=Z,12nm,1.1s
MAKZ Makanchi 42.90 59 P **P** **23 13 56.0 +1.2**
MAKZ pmax pmax
comp=Z,11nm,0.9s
MAKZ MLR MLR
comp=Z,1μm,20.0s
MAKZ Makanchi 42.90 59 P **P** **23 13 56.0 +1.2**
DHRM DHARAMSHALA 43.06 82 *e*P **P** **23 13 56.9 +0.5**
DHRM IAmb IAmb 23 13 58.9
comp=Z,42nm,1.1s
MK31 Makanchi Array 43.12 59 *ce*P **P** **23 13 57.0 +0.5**
MKAR Makanchi Array 43.12 59 P **P** **23 13 57.3 +0.8**
comp=Z,15nm,0.6s,baz=272,slow=7.5,SNR=155
MKAR LR LR 23 34 52.7
comp=Z,909nm,20.1s,baz=278,slow=40
MKAR Makanchi Array 43.12 59 P **P** **23 13 56.9 +0.4**
ZALV Zalesovo Beam 43.68 49 P **P** **23 14 01.1 +0.2**
comp=Z,35nm,0.8s,baz=276,slow=8.9,SNR=132
ZALV LR LR 23 36 14.3
comp=Z,599nm,18.9s,baz=272,slow=42
ZALV Zalesovo Beam 43.68 49 *i* P **P** **23 14 01.5 +0.6**
ZALV pmax pmax
comp=Z,35nm,0.8s
ZALV Zalesovo Beam 43.68 49 P **P** **23 14 00.5 -0.5**
SMLA Simla 44.20 83 *e*P **P** **23 14 06.1 +0.8**
SMLA IAmb IAmb 23 14 09.2
comp=Z,42nm,1.4s
ZSN Zaisan 44.71 58 *e*P **P** **23 14 10.2 +0.9**
comp=Z,8.6nm,1.4s,baz=58
ZSN Zaisan 44.71 58 *e*P **P** **23 14 10.1 +0.9**
ZSN pmax pmax
comp=Z,9.0nm,1.4s
ICESG Greenland Ice 44.94 333 *i* P **P** **23 14 11.1 -0.1**
ICESG IAmb IAmb 23 14 12.9
comp=Z,29nm,1.0s
SUMG Summit 45.23 338 *i* P **P** **23 14 13.7 +0.2**
SUMG pmax pmax
comp=Z,89nm,1.1s
SUMG Summit 45.23 338 P **P** **23 14 14.3 +0.8**
SUMG Summit 45.23 338 *i* P **P** **23 14 13.7 +0.2**
comp=Z,89nm,1.1s
SUMG Summit 45.23 338 *i* P **P** **23 14 13.7 +0.2**
SUMG IAmb IAmb 23 14 15.0
comp=Z,89nm,1.1s
DDI Dehra Dun 45.24 83 *e*P **P** **23 14 13.8 +0.1**
DDI AMP 23 14 18.3
comp=Z,259nm,3.5s
NDI New Delhi 45.31 86 *e*P **P** **23 14 12.0 -2.3**
NDI *ex* x 23 17 24.0
NRIK Noril'sk 45.36 27 P **P** **23 14 14.1 0.0**
comp=Z,3.7nm,0.5s,baz=237,slow=4.1,SNR=9.7
NRIK LR LR 23 34 33.6
comp=Z,2μm,18.9s,baz=257,slow=38
NRIK Noril'sk 45.36 27 *ce*P **P** **23 14 15.3 +1.2**
NRIK pmax pmax
comp=Z,6.0nm,1.0s
SACV Santiago Islan 47.50 254 P **P** **23 14 32.6 +1.1**
WMQ Urumqi 47.54 62 P **P** **23 14 33.4 +1.7**
WMQ pP sP 23 14 36.4 +0.9
WMQ sP pP 23 14 40.3 +5.8
WMQ PP **PP** **23 16 24.4 +1.5**
WMQ pmax pmax
comp=Z,37nm,1.3s
WMQ pmax pmax
comp=Z,610nm,4.3s
WMQ LR LR
comp=Z,1μm,14.1s
WMQ LR LR
comp=Z,2μm,15.3s
WMQ LR LR
comp=Z,2μm,22.5s
WMQ Urumqi 47.54 62 IAmb IAmb 23 14 34.3
comp=Z,47nm,1.3s
KLRI Killari 50.35 98 *e*P **P** **23 14 52.3 -1.2**
UPNV Upernavik 50.50 338 *i* P **P** **23 14 54.1 +0.3**
RPR Rampur 52.00 96 *e*P **P** **23 15 05.4 -0.4**
HYBB Hyderabad (bro 52.24 98 *e*P **P** **23 15 05.1 -2.6**
CUPL Choutuppal 52.60 98 *e*P **P** **23 15 09.6 -0.7**
URV Uravakonda 52.71 101 *e*P **P** **23 15 09.9 -1.2**
GGR Gangavaram 53.29 96 *e*P **P** **23 15 15.0 -0.5**
TULEG Thule 53.31 343 P **P** **23 15 14.8 0.0**
TULEG Thule 53.31 343 *i* P **P** **23 15 15.2 +0.5**
TULEG IAmb IAmb 23 15 15.5
comp=Z,138nm,1.3s
NJS Nagarjunasagar 53.33 98 *e*P **P** **23 15 13.9 -1.8**
LSZ Lusaka 53.83 174 P **P** **23 15 19.5 +0.2**
LSZ Lusaka 53.83 174 P **P** **23 15 19.5 +0.2**
MYLAV Mylavaram 54.25 97 *e*P **P** **23 15 21.2 -1.2**
ADKI Addanki 54.26 98 *e*P **P** **23 15 20.7 -1.8**
BOK Bokaro 54.48 86 *e*P **P** **23 15 23.0 -1.1**
BOK IAmb IAmb 23 15 25.4
comp=Z,39nm,2.0s
PVM Polavaram 54.73 96 *e*P **P** **23 15 25.0 -0.9**
GTK Tadong 54.81 81⇑ *e*P **P** **23 15 26.0 -0.7**
GTK IAmb IAmb 23 15 30.5
comp=Z,107nm,1.8s
TLY Talaya 55.29 48 LR LR 23 42 57.3
comp=Z,781nm,18.2s,baz=300,slow=40
TLY Talaya 55.29 48 *e*P **P** **23 15 31.1 +1.5**
TLY *e*S **S** **23 23 20.4 +7.0**
TLY *e*SSS SSS 23 28 57.5
TLY pmax pmax
comp=Z,52nm,1.3s
TLY MLR MLR
comp=Z,2μm,13.0s
TLY Talaya 55.29 48 P **P** **23 15 30.4 +0.9**
TLY IAMs_20 IAMs_20 23 41 43.0
comp=Z,1μm,19.0s
SKHT Srikalahasti 55.32 101 *e*P **P** **23 15 28.6 -1.6**

IRK Irkutsk 55.46 47 *e*P **P** **23 15 30.7 -0.1**
IRK pmax pmax
comp=Z,41nm,2.5s
EUNU Eureka 55.51 349 P **P** **23 15 31.7 +1.0**
ZAK Zakamensk 55.53 50 *e*P **P** **23 15 31.3 -0.1**
ZAK pmax pmax
comp=Z,12nm,1.3s
LSA Lhasa 55.62 77 *i* P **P** **23 15 33.4 +0.6**
SNR=7.6
CHLP Challavanipeta 55.91 93 *e*P **P** **23 15 33.9 -0.5**
DRLN Deer Lake 56.57 309 P **P** **23 15 38.8 +0.1**
DRLN IAmb IAmb 23 15 39.5
comp=Z,65nm,1.2s
GTA Gaotai 57.60 63 *e*P **P** **23 15 46.4 +0.1**
GTA pP sP 23 15 52.1 +1.9
GTA sP pP 23 15 54.5 +5.3
GTA S **S** **23 23 43.3 -1.3**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,240nm,6.5s
GTA LR LR
comp=Z,580nm,20.4s
GTA LR LR
comp=Z,380nm,19.6s
GTA LR LR
comp=Z,790nm,20.0s
GUWA GUWAHATI 57.77 81 *e*P P 23 15 42.2 -5.3
TSUM Tsumeb 57.80 187 P **P** **23 15 47.5 -0.3**
SHL Shillong 58.23 81 *e*P **P** **23 15 50.2 -0.9**
SHL IAmb IAmb 23 16 00.7
comp=Z,25nm,1.3s
SHL Shillong 58.23 81 P **P** **23 15 49.8 -1.3**
SHL pmax pmax
comp=Z,92nm,1.9s
SHL MLR MLR
comp=Z,600nm,18.0s
SHL Shillong 58.23 81 P **P** **23 15 49.8 -1.3**
SHL IAmb IAmb 23 15 51.2
comp=Z,92nm,1.9s
SONM Songino Array 58.40 52 P **P** **23 15 52.4 +0.6**
comp=Z,12nm,1.1s,baz=284,slow=7.1,SNR=48
SONM LR LR 23 46 56.5
comp=Z,831nm,18.5s,baz=299,slow=42
SONM Songino Array 58.40 52 P **P** **23 15 51.4 -0.4**
TEZP TEZPUR 58.41 80⇑ *e*P **P** **23 15 51.4 -0.6**
TEZP IAmb IAmb 23 15 53.5
comp=Z,55nm,2.0s
TIXI Tiksi 58.41 21 *ce*P **P** **23 15 51.0 -0.4**
TIXI pmax pmax
comp=Z,51nm,1.3s
TIXI Tiksi 58.41 21 P **P** **23 15 50.9 -0.4**
TIXI IAmb IAmb 23 16 20.1
comp=Z,40nm,1.1s
BOD Bodaibo 58.60 39 *e*P **P** **23 15 51.7 -1.2**
BOD pmax pmax
comp=Z,11nm,1.5s
ULN Ulaanbaatar 58.79 51 P **P** **23 15 55.5 +0.9**
ULN Ulaanbaatar 58.79 51 *ce*P **P** **23 15 54.8 +0.2**
ULN pmax pmax
comp=Z,16nm,1.3s
ULN Ulaanbaatar 58.79 51 P **P** **23 15 54.5 0.0**
JORH JORHAT 59.46 79 *e*P **P** **23 15 59.4 +0.1**
SCHQ Schefferville 59.64 318 P **P** **23 15 59.8 -0.4**
comp=Z,23nm,0.8s,baz=60,slow=5.0,SNR=30
SCHQ LR LR 23 43 22.9
comp=Z,355nm,19.5s,baz=48,slow=38
SCHQ Schefferville 59.64 318 P **P** **23 16 00.3 +0.1**
SCHQ IAmb IAmb 23 16 01.0
comp=Z,58nm,1.2s
KOHI KOHIMA 59.87 80 *e*P **P** **23 15 57.6 -4.8**
MOKO MOKOCHONG 59.88 79 *e*P **P** **23 16 02.4 0.0**
MOKO IAmb IAmb 23 16 15.6
comp=Z,44nm,1.3s
RES Resolute Bay 59.94 344 P **P** **23 16 02.3 +0.5**
RES IAmb IAmb 23 16 18.4
comp=Z,40nm,1.5s
PALK Pallekele 60.14 106 P **P** **23 16 04.4 +0.3**
PALK pmax pmax
comp=Z,68nm,1.6s
PALK Pallekele 60.14 106 P **P** **23 16 04.4 +0.3**
PALK IAmb IAmb 23 16 21.4
comp=Z,68nm,1.6s
LKP Lekhapani 60.38 77 *e*P **P** **23 16 04.8 -0.8**
LKP IAmb IAmb 23 16 11.0
comp=Z,38nm,1.0s
SAIH SAIHA 60.71 84 *e*P **P** **23 16 08.8 +0.7**
SAIH IAmb IAmb 23 16 19.5
comp=Z,28nm,1.3s
LZH Lanzhou 61.96 65⇑ P **P** **23 16 17.3 +0.9**
LZH pP sP 23 16 20.6 +0.2
LZH sP pP 23 16 23.8 +4.5
LZH PP **PP** **23 18 35.5 +3.0**
LZH pmax pmax
comp=Z,15nm,1.4s
LZH pmax pmax
comp=Z,69nm,4.9s
LZH LR LR
comp=Z,760nm,16.5s
LZH LR LR
comp=Z,580nm,16.0s
LZH LR LR
comp=Z,610nm,17.8s
HAL Halifax 62.30 306 P **P** **23 16 16.8 -1.6**
HAL pmax pmax
comp=Z,66nm,1.0s
HAL MLR MLR
comp=Z,600nm,21.0s
HAL Halifax 62.30 306 P **P** **23 16 16.8 -1.6**
LMN Caledonia Moun 62.49 308 IAmb IAmb 23 16 20.7
comp=Z,59nm,1.2s
BATG Bathurst New B 62.58 310 P **P** **23 16 19.6 -0.6**
BATG IAmb IAmb 23 16 21.7
comp=Z,33nm,1.1s
LBTB Lobatse 63.36 178 P **P** **23 16 25.4 -0.2**
LBTB pmax pmax
comp=Z,19nm,0.9s
LBTB Lobatse 63.36 178 P **P** **23 16 25.4 -0.2**
LBTB IAmb IAmb 23 16 27.9
comp=Z,20nm,0.8s
YAK Yakutsk 63.57 30 LR LR 23 46 37.9
comp=Z,520nm,18.0s,baz=295,slow=38
YAK Yakutsk 63.57 30 *i* P **P** **23 16 27.4 +0.9**
D63A Stockholm 63.92 310 P **P** **23 16 28.5 -0.6**
baz=60
BTO Baotou 63.99 58 *e*P **P** **23 16 29.3 -0.5**
E64A Bridgewater 64.06 310 P **P** **23 16 29.9 -0.1**
baz=60
E63A Oxbow 64.42 310 P **P** **23 16 32.4 +0.1**
baz=60
E63A Oxbow 64.42 310 IAMs_20 IAMs_20 23 45 19.3
comp=Z,909nm,20.0s
D62A Allapoint, All 64.46 311 P **P** **23 16 33.0 +0.4**
baz=60,SNR=5.1
D62A Allapoint, All 64.46 311 IAmb IAmb 23 16 34.3
comp=Z,41nm,1.1s
CD2 Chengdu 64.49 70 P **P** **23 16 33.1 0.0**
CD2 pmax pmax
comp=Z,30nm,1.3s
G65A Princeton 64.50 308 P **P** **23 16 32.8 -0.1**
baz=60
F64A Sherman 64.65 309 P **P** **23 16 34.0 +0.1**
baz=60
F64A Sherman 64.65 309 IAMs_20 IAMs_20 23 45 44.6
comp=Z,1μm,18.0s
HHC Hu-ho-hao-te 64.89 57 *e*P **P** **23 16 36.3 +0.6**
HHC S **S** **23 25 13.6 -3.6**
HHC SS **SS** **23 29 27.6 -0.6**
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,300nm,4.5s
HHC LR LR
comp=Z,990nm,16.2s
HHC LR LR
comp=Z,800nm,15.3s
HHC LR LR
comp=Z,960nm,17.0s
E62A Clayton Lake 64.97 311 P **P** **23 16 36.5 +0.5**
baz=60,SNR=5.4
E62A Clayton Lake 64.97 311 P **P** **23 16 35.4 -0.6**
E62A IAmb IAmb 23 16 37.5
comp=Z,28nm,0.9s
D61A St Aubert, Com 65.07 311 P **P** **23 16 36.4 -0.2**
baz=59
H65A Eastbrook 65.17 308 P **P** **23 16 37.3 0.0**
baz=60
F63A Nahmakanta, Br 65.19 310 IAMs_20 IAMs_20 23 45 52.7
comp=Z,1μm,18.0s
G64A Maxfield 65.20 309 P **P** **23 16 37.9 +0.3**
baz=59
HIA Hailar 65.58 46 *i* P **P** **23 16 39.3 -0.7**
HIA pmax pmax
comp=Z,13nm,1.1s
HIA Hailar 65.58 46 P **P** **23 16 39.6 -0.3**
E61A Lac Etchemin 65.64 311 P **P** **23 16 40.6 +0.2**
baz=59
D60A Saint Jean D'O 65.65 311 P **P** **23 16 39.6 -0.8**
baz=59
G63A Kingsbury 65.80 309 P **P** **23 16 40.8 -0.6**
baz=59
H64A Troy 65.80 309 P **P** **23 16 41.0 -0.3**
baz=59
CHGQ Chibougamau 66.05 316 P **P** **23 16 42.3 -0.6**
baz=58
D59A Saint-Raymond 66.14 312 P **P** **23 16 43.7 +0.2**
baz=58
F61A St Evariste 66.18 311 P **P** **23 16 44.0 +0.2**
baz=58
E60A Ste Agathe de 66.24 311 P **P** **23 16 44.2 0.0**
baz=58
H63A New Sharon 66.29 309 P **P** **23 16 44.6 +0.1**
baz=58
G62A West of Eustis 66.30 310 P **P** **23 16 44.9 +0.3**
baz=58
G62A West of Eustis 66.30 310 IAMs_20 IAMs_20 23 46 23.1
comp=Z,827nm,19.0s
I64A Boothbay 66.43 308 P **P** **23 16 44.9 -0.5**
baz=58
LATQ La Tuque 66.49 313 P **P** **23 16 45.6 -0.1**
baz=58
LATQ La Tuque 66.49 313 P **P** **23 16 44.8 -1.0**
XAN Xi'an 66.58 64 P **P** **23 16 46.5 -0.2**
XAN pmax pmax
comp=Z,19nm,1.4s
XAN pmax pmax
comp=Z,270nm,4.9s
XAN LR LR
comp=Z,560nm,11.9s
XAN LR LR
comp=Z,600nm,15.7s
XAN LR LR
comp=Z,940nm,22.8s
XAN Xi'an 66.58 64 P **P** **23 16 46.4 -0.2**
XAN pmax pmax
comp=Z,43nm,1.5s
XAN Xi'an 66.58 64 P **P** **23 16 46.4 -0.2**
XAN IAmb IAmb 23 16 48.0
comp=Z,43nm,1.5s
D58A Chemin du LacG 66.70 312 P **P** **23 16 46.9 -0.3**
baz=58
F60A Warwick 66.75 311 P **P** **23 16 47.3 -0.1**
baz=58
KMI Kunming 66.80 76⇓ *e*P **P** **23 16 51.4 +3.0**
KMI pP sP 23 16 59.9 +7.6
KMI PP **PP** **23 19 20.0 +4.7**
KMI S **S** **23 25 32.9 -8.3**
KMI pmax pmax
comp=Z,5.0nm,0.6s
KMI pmax pmax
comp=Z,130nm,4.2s
KMI LR LR
comp=Z,380nm,17.0s
KMI LR LR
comp=Z,330nm,21.4s
KMI LR LR
comp=Z,500nm,20.4s
KMI Kunming 66.80 76 P **P** **23 16 47.8 -0.6**
KMI pmax pmax
comp=Z,33nm,1.6s
KMI MLR MLR
comp=Z,300nm,20.0s
KMI Kunming 66.80 76 P **P** **23 16 47.8 -0.6**
G61A St-Isidore-de- 66.86 310 P **P** **23 16 48.3 +0.1**
baz=58
BOSA Boshof 66.94 178 P **P** **23 16 48.9 +0.1**
comp=Z,16nm,0.8s,baz=4.7,slow=7.0,SNR=16
BOSA LR LR 23 49 40.3
comp=Z,1μm,19.4s,baz=1.0,slow=39
BOSA Boshof 66.94 178 P **P** **23 16 49.2 +0.4**
BOSA pmax pmax
comp=Z,30nm,1.0s
BOSA Boshof 66.94 178 P **P** **23 16 49.2 +0.4**
BOSA IAmb IAmb 23 16 50.6
comp=Z,30nm,1.0s
I63A Otisfield 66.94 309 P **P** **23 16 48.2 -0.4**
baz=58
H62A Milan 67.01 309 P **P** **23 16 49.2 0.0**
baz=58
H62A Milan 67.01 309 P **P** **23 16 49.7 +0.5**
H62A IAmb IAmb 23 19 04.5
comp=Z,80nm,1.6s
ZEA Zeya 67.11 39 *e*P **P** **23 16 50.1 +0.5**
ZEA *e*S **S** **23 25 50.2 +6.6**
ZEA *e*SS **SS** **23 30 02.0 +0.3**
ZEA *e* 23 32 58.3
ZEA pmax pmax
comp=Z,100nm,4.4s
ZEA pmax pmax
comp=Z,100nm,0.9s
ZEA smax smax
comp=E,200nm,7.1s
MOQ Mont Orford 67.28 310 P **P** **23 16 50.7 -0.3**
F59A Saint Guilaume 67.31 311 P **P** **23 16 51.0 0.0**
baz=57
E58A La Victoria 67.32 312 P **P** **23 16 51.5 +0.4**
baz=57,SNR=7.6
CHTO Chiang Mai 67.38 84 P **P** **23 16 50.7 -1.2**
CHTO pmax pmax
comp=Z,11nm,1.2s
CHTO Chiang Mai 67.38 84 P **P** **23 16 50.7 -1.2**
G60A Masonville 67.44 310 P **P** **23 16 51.9 0.0**
baz=57
H61A Lyndonville 67.50 310 P **P** **23 16 51.6 -0.7**
baz=57
CMAR Chiang Mai Arr 67.58 84 P **P** **23 16 52.3 -0.9**
comp=Z,1.1nm,0.6s,baz=306,slow=8.2,SNR=8.2
CMAR Chiang Mai Arr 67.58 84 *ce*P **P** **23 16 52.5 -0.6**
CMAR pmax pmax
comp=Z,1.0nm,0.7s
CMAR Chiang Mai Arr 67.58 84 P **P** **23 16 52.1 -1.1**
J63A Strafford 67.66 308 P **P** **23 16 53.0 -0.2**
baz=57
LBNH Lisbon 67.66 309 P **P** **23 16 53.0 -0.3**
baz=57
LBNH Lisbon 67.66 309 IAMs_20 IAMs_20 23 47 57.2
comp=Z,786nm,19.0s
MATQ Matagami 67.91 317 P **P** **23 16 54.8 +0.1**
baz=56
LSQQ Lebel-sur-Quev 67.94 316 P **P** **23 16 55.2 +0.3**
baz=56
H60A Morristown 67.95 310 P **P** **23 16 55.5 +0.4**
baz=57
D55A Sainte-Anne-du 68.23 313 P **P** **23 16 57.4 +0.6**
baz=56
L64A Middleborough 68.23 307 P **P** **23 16 57.4 +0.5**
baz=57
E56A St. Veronique 68.24 313 P **P** **23 16 57.5 +0.6**
baz=56
K63A Dunstable 68.25 308 P **P** **23 16 57.5 +0.5**
baz=57
BJI Beijing 68.31 56 P **P** **23 16 57.0 -0.4**
BJI S **S** **23 25 59.1 +0.7**
BJI pmax pmax
comp=Z,9.0nm,1.9s
BJI LR LR
comp=Z,620nm,13.7s
BJI LR LR
comp=Z,500nm,11.9s
BJI LR LR
comp=Z,380nm,34.1s
BJT Baijiatuau 68.32 56 P **P** **23 16 55.9 -1.6**
BJT pmax pmax
comp=Z,7.0nm,0.9s
BJT MLR MLR
comp=Z,800nm,21.0s
BJT Baijiatuau 68.32 56 P **P** **23 16 55.9 -1.6**
BJT Baijiatuau 68.32 56 IAMs_20 IAMs_20 23 50 17.1
comp=Z,811nm,21.0s
FRNY Flat Rock 68.33 311 P **P** **23 16 57.9 +0.4**
FRNY IAmb IAmb 23 16 59.2
comp=Z,23nm,1.1s
G58A Ormstown 68.44 311 P **P** **23 16 58.7 +0.6**

baz=56
H59A Cadyville 68.50 310 P P 23 16 59.4 +0.9
baz=56,SNR=6.2
J61A Chester 68.53 309 P P 23 16 59.3 +0.6
baz=57
M64A Tiverton 68.67 307 P P 23 16 59.2 -0.4
baz=57
I60A Shoreham 68.70 310 P P 23 17 00.6 +0.8
baz=56
VLDQ Val d'Or 68.73 315 P P 23 17 00.7 +0.8
VLDQ IAmb IAmb 23 17 02.2
comp=Z,24nm,1.0s
L63A North Scituate 68.75 307 P P 23 16 59.7 -0.4
baz=57
E55A Montcerf-Lytto 68.88 313 P P 23 17 01.4 +0.5
baz=56
H58A Gabriels 68.92 310 P P 23 17 02.0 +0.8
baz=56,SNR=7.9
ENH Enshi 69.00 68 P P 23 17 03.0 +1.0
G57A Newington 69.01 311 P P 23 17 02.3 +0.6
baz=56
GYA Guiyang 69.02 72 ⇓P P 23 17 05.3 +3.1
GYA pmax pmax
comp=Z,3.0nm,0.7s
LONY Lake Ozonia 69.04 311 P P 23 17 02.7 +0.8
baz=56,SNR=5.3
LONY Lake Ozonia 69.04 311 P P 23 17 02.3 +0.3
LONY IAmb IAmb 23 17 04.0
comp=Z,36nm,1.1s
I59A Olmsteadville 69.08 310 P P 23 17 03.2 +1.1
baz=56,SNR=5.2
L61B Northampton 69.10 308 P P 23 17 03.2 +0.9
baz=56
J60A Lant Hill Farm 69.11 309 P P 23 17 03.4 +1.0
baz=56
ACCN Adirondack Com 69.18 309 P P 23 17 03.4 +0.6
ACCN IAmb IAmb 23 17 05.3
comp=Z,49nm,1.0s
NCB Newcomb 69.19 310 P P 23 17 02.2 -0.7
M63A Gales Ferry 69.28 307 P P 23 17 04.5 +1.1
baz=56
L62A Suffield 69.31 308 P P 23 17 04.3 +0.7
baz=56
K61A Williamstown 69.34 308 P P 23 17 04.8 +1.0
baz=56
H57A Richville 69.61 311 P P 23 17 06.3 +0.9
baz=56
J59A Piesco 69.64 310 P P 23 17 06.8 +1.1
baz=56,SNR=5.9
J59A Piesco 69.64 310 P P 23 17 04.5 -1.2
J59A IAmb IAmb 23 17 08.2
comp=Z,50nm,1.2s
C36M Paulatuk 69.68 348 IAmb IAmb 23 17 06.9
comp=Z,69nm,1.7s
C36M IAMs_20 IAMs_20 23 49 47.3
comp=Z,1μm,21.0s
K60A Five Rivers En 69.75 309 P P 23 17 07.2 +0.9
baz=56
L61A Hillsdale 1, H 69.78 308 P P 23 17 07.5 +1.0
baz=56
M62A Hamden 69.79 307 P P 23 17 07.4 +0.8
baz=56
SLVN Son La 69.79 78 P P 23 17 06.6 -0.4
I58A Old Forge 69.80 310 P P 23 17 07.9 +1.3
baz=56
N63A Mattituck 69.81 307 P P 23 17 07.1 +0.4
baz=56
FCC Fort Churchill 69.97 331 P P 23 17 07.5 +0.1
FCC pmax pmax
comp=Z,77nm,1.5s
FCC Fort Churchill 69.97 331 P P 23 17 07.5 +0.1
FCC IAmb IAmb 23 17 08.2
comp=Z,77nm,1.5s
KSCT Kent School, K 70.00 308 P P 23 17 08.9 +1.1
KSCT IAmb IAmb 23 17 10.2
comp=Z,75nm,1.4s
I57A Carthage 70.07 311 P P 23 17 09.2 +1.0
baz=55,SNR=5.7
J58A Remsen 70.17 310 P P 23 17 09.8 +0.9
baz=55,SNR=5.4
J58A Remsen 70.17 310 P P 23 17 09.5 +0.5
J58A IAmb IAmb 23 17 11.4
comp=Z,42nm,1.1s
J58A IAMs_20 IAMs_20 23 49 14.6
comp=Z,793nm,18.0s
K59A Cooperstown 70.24 309 P P 23 17 10.5 +1.1
baz=55
ALGO Algonquin Park 70.30 313 P P 23 17 10.3 +0.6
baz=54
L60A Shokan 70.30 308 P P 23 17 10.6 +0.9
baz=55
A21K Barrow 70.33 0 P P 23 17 10.3 +0.9
baz=360
A21K Barrow 70.33 0 P P 23 17 09.4 0.0
A21K IAmb IAmb 23 18 59.7
comp=Z,22nm,0.8s
A21K IAMs_20 IAMs_20 23 53 59.7
comp=Z,643nm,18.0s
M61A Granite Spring 70.41 307 P P 23 17 11.2 +0.8
baz=55
RCBR Riachuelo 70.43 245 P P 23 17 12.0 +1.1
RCBR pmax pmax
comp=Z,40nm,1.1s
RCBR MLR MLR
comp=Z,900nm,19.0s
RCBR Riachuelo 70.43 245 P P 23 17 12.0 +1.1
RCBR IAmb IAmb 23 17 13.4
comp=Z,40nm,1.1s
RCBR Riachuelo 70.43 245 IAMs_20 IAMs_20 23 48 21.8
comp=Z,950nm,19.0s
RCBR Riachuelo 70.43 245 eP P 23 17 12.1 +1.2
J57A Williamstown 70.57 310 P P 23 17 12.0 +0.7
baz=55
J57A Williamstown 70.57 310 P P 23 17 11.8 +0.4
J57A IAmb IAmb 23 17 13.6
comp=Z,42nm,1.1s
G54A Lake Saint Pet 70.65 313 P P 23 17 12.7 +0.9
baz=54
PAL Palisades 70.67 307 P P 23 17 12.8 +0.8
baz=55
PAL Palisades 70.67 307 IAMs_20 IAMs_20 23 47 08.9
comp=Z,885nm,22.0s
L59A Walton 70.69 309 P P 23 17 13.5 +1.3
baz=55
L59A Walton 70.69 309 P P 23 17 12.9 +0.8
L59A IAmb IAmb 23 17 14.7
comp=Z,55nm,1.1s
K58A Earlville 70.73 310 P P 23 17 13.4 +1.1
baz=55,SNR=5.3
K58A Earlville 70.73 310 P P 23 17 13.3 +0.9
K58A IAmb IAmb 23 17 14.7
comp=Z,56nm,1.2s
PECO Prince Edward 70.86 311 P P 23 17 11.8 -1.2
PECO IAmb IAmb 23 17 14.7
comp=Z,82nm,1.6s
PECO IAMs_20 IAMs_20 23 49 17.7
comp=Z,826nm,20.0s
SEY Seymchan 70.87 22 LR LR 23 51 11.6
comp=Z,616nm,20.1s,baz=321,slow=38
SEY Seymchan 70.87 22 *i* P P 23 17 13.3 +0.5
DELO Deloro Mine 70.89 312 P P 23 17 13.7 +0.4
DELO IAmb IAmb 23 17 15.5
comp=Z,56nm,1.3s
M60A Port Jervis 70.93 308 P P 23 17 13.6 0.0
baz=55
J56A Wolcott 71.16 311 P P 23 17 16.2 +1.3
baz=54
J56A Wolcott 71.16 311 P P 23 17 14.8 -0.1
J56A IAMs_20 IAMs_20 23 49 34.7
comp=Z,853nm,19.0s
BINY Binghamton 71.26 309 P P 23 17 16.9 +1.3
baz=54
BINY Binghamton 71.26 309 P P 23 17 16.2 +0.6
BINY IAmb IAmb 23 17 17.9
comp=Z,67nm,1.3s
L58A Harry Jones Me 71.27 309 P P 23 17 16.4 +0.8
baz=54
K57A Scipio Center 71.27 310 P P 23 17 17.0 +1.3
baz=54
M59A Waymart 71.30 308 P P 23 17 17.0 +1.1
baz=55
H53A Bobcaygeon 71.41 312 P P 23 17 17.4 +1.0
baz=54
N60A Cedar Hill Far 71.48 308 P P 23 17 18.1 +1.2
baz=55
KSPA Keystone Colle 71.50 309 P P 23 17 17.0 -0.1
KSPA IAmb IAmb 23 17 19.3
comp=Z,80nm,1.3s
O61A Allentown 71.59 307 P P 23 17 17.5 -0.1
baz=55
SADO Sadowa 71.62 313 IAMs_20 IAMs_20 23 50 38.7
comp=Z,911nm,19.0s
J55A Hilton 71.73 311 P P 23 17 18.7 +0.3
J55A IAmb IAmb 23 17 20.6
comp=Z,76nm,1.4s
K56A Middlesex 71.77 310 P P 23 17 19.8 +1.0
baz=54,SNR=6.0
LUPA Lehigh Univers 71.81 308 P P 23 17 19.4 +0.5
LUPA IAmb IAmb 23 17 21.1
comp=Z,41nm,1.2s
N59A State Game Lan 71.87 308 P P 23 17 20.5 +1.2
baz=54,SNR=7.2
N59A State Game Lan 71.87 308 P P 23 17 19.6 +0.3
N59A IAmb IAmb 23 17 21.8
comp=Z,73nm,1.2s
N59A IAMs_20 IAMs_20 23 52 02.7
comp=Z,747nm,18.0s
CN2 Changchun 71.90 48 eP P 23 17 19.4 0.0
CN2 *e*pP sP 23 17 23.8 +0.5
CN2 *e*S **S 23 26 34.3 -6.1**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,330nm,5.0s
CN2 LR LR
comp=Z,790nm,15.0s
CN2 LR LR
comp=Z,610nm,15.0s
CN2 LR LR
comp=Z,620nm,16.0s
L57A Andrews Acres 71.90 309 P P 23 17 20.5 +1.1
baz=54,SNR=8.9
INK Inuvik 71.97 351 P P 23 17 18.3 -1.0
INK pmax pmax
comp=Z,15nm,1.4s
INK MLR MLR
comp=Z,600nm,21.0s
INK Inuvik 71.97 351 P P 23 17 18.3 -1.0
O60A Telford 71.99 307 P P 23 17 21.0 +1.1
baz=54
M58A Price's Panora 72.03 309 P P 23 17 21.1 +0.9
baz=54
KLR Kul'dur 72.05 41 LR LR 23 52 23.6
comp=Z,796nm,18.3s,baz=312,slow=39
KLR Kul'dur 72.05 41 *e*P P 23 17 19.7 -0.5
KLR pmax pmax
comp=Z,4.0nm,0.9s
MMNY Mt. Morris Dam 72.10 311 P P 23 17 20.6 0.0
MMNY IAmb IAmb 23 17 22.6
comp=Z,50nm,1.0s
MEDO Medina 72.17 311 P P 23 17 20.4 -0.6
MEDO IAmb IAmb 23 18 58.6
comp=Z,26nm,0.8s
MEDO IAMs_20 IAMs_20 23 50 16.4
comp=Z,782nm,20.0s
J54A Appleton 72.21 311 P P 23 17 21.4 +0.2
J54A IAmb IAmb 23 17 23.3
comp=Z,33nm,0.8s
J54A IAMs_20 IAMs_20 23 50 06.6
comp=Z,786nm,18.0s
L56A Greenwood 72.25 310 P P 23 17 22.5 +0.9
baz=54,SNR=6.8
L56A Greenwood 72.25 310 P P 23 17 22.2 +0.6
L56A IAmb IAmb 23 17 23.8
comp=Z,56nm,1.0s
PSUB Penn St. - Bra 72.25 307 P P 23 17 20.3 -1.2
PSUB IAmb IAmb 23 17 23.2
comp=Z,86nm,1.5s
P60A Greenville 72.43 307 P P 23 17 23.6 +0.9
baz=54
M57A Sunshine Farm, 72.46 309 P P 23 17 24.0 +1.2
baz=54,SNR=6.5
M57A Sunshine Farm, 72.46 309 IAmb IAmb 23 17 25.2
comp=Z,66nm,1.1s
M57A IAMs_20 IAMs_20 23 45 52.1
comp=Z,717nm,21.0s
N58A Sunbury 72.50 308 P P 23 17 23.9 +0.9
baz=54,SNR=6.2
N58A Sunbury 72.50 308 IAMs_20 IAMs_20 23 50 17.3
comp=Z,835nm,21.0s
WVNY West Valley, N 72.71 311 P P 23 17 24.8 +0.5
WVNY IAmb IAmb 23 17 26.4
comp=Z,51nm,1.1s
WVNY IAMs_20 IAMs_20 23 47 29.8
comp=Z,851nm,20.0s
MVL Millersville 72.77 308 P P 23 17 24.8 +0.2
MVL IAmb IAmb 23 17 26.9
comp=Z,46nm,1.1s
PAGS Pennsylvania G 72.86 308 IAMs_20 IAMs_20 23 49 04.9
comp=Z,697nm,20.0s
TOLK Toolik Lake Re 72.90 357 P P 23 17 25.3 +0.3
baz=5.7
MA2 Magadan 72.93 25 IAMs_20 IAMs_20 23 52 19.1
comp=Z,999nm,19.0s
M56A Emporium 73.01 310 P P 23 17 27.0 +0.9
baz=53,SNR=7.7
M56A Emporium 73.01 310 P P 23 17 26.6 +0.5
Q60A Greensboro 73.04 306 P P 23 17 27.1 +0.9
baz=54
P59A Jarrettsville 73.05 307 P P 23 17 27.3 +1.1
baz=54
O58A Lewisberry 73.05 308 P P 23 17 27.3 +1.0
baz=54
N57A Milroy 73.06 309 P P 23 17 27.3 +0.9
baz=53,SNR=7.6
R61A Willards 73.11 306 P P 23 17 27.5 +0.9
baz=54
I51A Listowel 73.28 313 P P 23 17 28.6 +1.0
baz=52
SSPA Standing Stone 73.33 309 P P 23 17 28.4 +0.4
SSPA IAmb IAmb 23 17 30.2
comp=Z,70nm,1.2s
SSPA Standing Stone 73.33 309 IAMs_20 IAMs_20 23 50 32.4
comp=Z,760nm,19.0s
M55A Ridgway 73.37 310 P P 23 17 27.4 -0.8
M55A IAmb IAmb 23 17 30.4
comp=Z,61nm,1.1s
M55A IAMs_20 IAMs_20 23 51 19.2
comp=Z,948nm,18.0s
N56A West Decatur 73.42 309 P P 23 17 29.2 +0.7
baz=53,SNR=8.0
SDMD Soldier's Deli 73.42 307 P P 23 17 28.7 +0.2
O57A Amberson 73.44 308 P P 23 17 29.7 +1.1
baz=53
E46A Sault Ste Mari 73.52 317 IAMs_20 IAMs_20 23 50 46.8
comp=Z,995nm,20.0s
Q59A Harwood 73.63 307 P P 23 17 30.4 +0.7
baz=53
P58A Pank, Wackersv 73.66 308 P P 23 17 30.6 +0.8
baz=53,SNR=6.4
YKA Yellowknife Ar 73.70 341 P P 23 17 29.7 0.0
comp=Z,24nm,1.1s,baz=31,slow=6.1,SNR=19
YKA LR LR 23 51 23.4
comp=Z,522nm,18.1s,baz=0.0,slow=37
YKA Yellowknife Ar 73.70 341 *ce*P P 23 17 30.1 +0.4
YKA pmax pmax
comp=Z,38nm,1.2s
ERPA Erie 73.70 311 P P 23 17 31.2 +1.1
baz=52
ERPA Erie 73.70 311 P P 23 17 29.4 -0.7
ERPA IAMs_20 IAMs_20 23 51 03.0
comp=Z,755nm,19.0s
MDJ Mudanjiang 73.77 46 IAMs_20 IAMs_20 23 55 11.6
comp=Z,793nm,20.0s
BMAR Burnt Mountain 73.85 355 P P 23 17 31.5 +0.9
M54A Oil Creek Stat 73.88 310 P P 23 17 32.1 +0.9
baz=52,SNR=6.4
M54A Oil Creek Stat 73.88 310 P P 23 17 32.0 +0.8
M54A IAmb IAmb 23 17 33.4
comp=Z,85nm,1.2s
R60A Leonardtown, M 73.94 306 P P 23 17 32.3 +0.7
baz=53
L53A Girard 73.96 311 P P 23 17 32.2 +0.5
baz=52
O56A Blue Knob Stat 73.97 309 P P 23 17 32.7 +0.9
baz=53,SNR=5.2
O56A Blue Knob Stat 73.97 309 P P 23 17 31.9 +0.1
O56A IAmb IAmb 23 17 33.9
comp=Z,64nm,1.2s
I49A Point Hope 74.22 314 IAMs_20 IAMs_20 23 49 36.5
comp=Z,941nm,21.0s
Q58A Fox Den Farm, 74.22 307 P P 23 17 34.1 +0.9
baz=53,SNR=5.3
R59A King George, V 74.31 306 P P 23 17 34.6 +0.9
baz=53
COLD Coldfoot 74.34 357 P P 23 17 33.8 +0.4
baz=5.1
COLD Coldfoot 74.34 357 P P 23 17 33.8 +0.4
N54A Moraine State 74.41 310 P P 23 17 35.3 +1.0
baz=52,SNR=9.5
N54A Moraine State 74.41 310 P P 23 17 34.5 +0.2
N54A IAmb IAmb 23 17 36.5
comp=Z,74nm,1.1s
CBN Corbin Frederi 74.47 307 P P 23 17 35.5 +0.8
baz=53
CBN Corbin Frederi 74.47 307 P P 23 17 35.2 +0.5
ROSB Rosrio 74.47 253 eP P 23 17 35.5 +0.5
M53A WI Miller and 74.52 311 P P 23 17 35.1 +0.2
baz=52
M53A WI Miller and 74.52 311 P P 23 17 35.0 +0.1
M53A IAmb IAmb 23 17 36.8
comp=Z,68nm,1.1s
P56A Dayton Farm, R 74.60 308 P P 23 17 36.0 +0.6
baz=52
NJ2 Nanjing 74.61 61 eP P 23 17 34.9 -0.7
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
Q57A Strasburg 74.62 308 P P 23 17 36.3 +0.8
baz=52
GLMI Grayling 74.66 315 P P 23 17 35.8 +0.1
baz=50
S59A Mechanicsville 74.69 306 P P 23 17 36.7 +0.7
baz=53
T60A Surry 74.71 305 P P 23 17 36.8 +0.8
baz=53
T60A Surry 74.71 305 P P 23 17 36.5 +0.5
R58A Rapidan 74.81 307 P P 23 17 37.4 +0.7
baz=52
K50A Casco 74.83 313 P P 23 17 36.7 0.0
K50A IAmb IAmb 23 17 38.6
comp=Z,63nm,1.1s
K50A IAMs_20 IAMs_20 23 51 39.8
comp=Z,880nm,19.0s
R58B Mineral 74.94 307 P P 23 17 38.0 +0.6
baz=52
R58B Mineral 74.94 307 P P 23 17 37.4 +0.1
R58B IAmb IAmb 23 17 39.3
comp=Z,63nm,1.2s
R58B IAMs_20 IAMs_20 23 50 12.9
comp=Z,715nm,21.0s
U61A Possum Corner 75.01 305 P P 23 17 38.6 +0.8
baz=53
N53A Lisbon 75.01 310 P P 23 17 37.7 -0.1
N53A IAmb IAmb 23 17 39.8
comp=Z,72nm,1.1s
N53A IAMs_20 IAMs_20 23 51 54.7
comp=Z,982nm,19.0s
G45A Suttons Bay 75.09 316 IAMs_20 IAMs_20 23 51 42.4
comp=Z,932nm,20.0s
Q56A Snyder Ridge, 75.09 308 P P 23 17 39.0 +0.7
Q56A IAMs_20 IAMs_20 23 50 22.0
comp=Z,789nm,19.0s
MCWV Mont Chateau 75.12 309 P P 23 17 39.5 +1.1
baz=52,SNR=5.8
MCWV Mont Chateau 75.12 309 P P 23 17 38.8 +0.3
MCWV IAmb IAmb 23 17 40.7
comp=Z,34nm,1.1s
O54A Avella 75.12 310 P P 23 17 39.2 +0.8
baz=52
O54A Avella 75.12 310 P P 23 17 38.6 +0.2
R57A Stanardsville 75.14 307 P P 23 17 39.3 +0.8
baz=52,SNR=5.1
V62A Hyde County Ai 75.15 304 P P 23 17 39.9 +1.2
baz=53
V62A Hyde County Ai 75.15 304 P P 23 17 38.5 -0.1
P55A Reedsville 75.20 309 P P 23 17 39.8 +0.9
baz=52
S58A Poland Farm, P 75.26 306 P P 23 17 40.0 +0.7
baz=52
S58A Poland Farm, P 75.26 306 P P 23 17 39.8 +0.6
S58A IAmb IAmb 23 17 41.2
comp=Z,53nm,1.1s
D41A Chassel 75.31 319 IAMs_20 IAMs_20 23 50 57.1
comp=Z,904nm,19.0s
T59A Double "B" Far 75.33 306 P P 23 17 40.2 +0.5
baz=52
T59A Double "B" Far 75.33 306 P P 23 17 39.0 -0.7
T59A IAmb IAmb 23 17 41.6
comp=Z,61nm,1.2s
USA0B Ussuriysk Arra 75.37 45 *i* P P 23 17 39.1 -0.6
USA0B Ussuriysk Arra 75.37 45 P P 23 17 39.0 -0.7
USRK Ussuriysk Ar. 75.37 45 P P 23 17 39.3 -0.4
comp=Z,7.9nm,0.7s,baz=291,slow=4.9,SNR=19
USRK Ussuriysk Ar. 75.37 45 P P 23 17 39.0 -0.8
U60A Pendleton 75.38 305 P P 23 17 40.5 +0.5
baz=52
O53A New Philadelph 75.58 310 P P 23 17 42.1 +1.0
baz=51
O53A New Philadelph 75.58 310 P P 23 17 41.3 +0.2
O53A IAmb IAmb 23 17 43.1
comp=Z,46nm,1.1s
O53A IAMs_20 IAMs_20 23 50 23.8
comp=Z,869nm,22.0s
R56A Bull Pasture M 75.62 308 P P 23 17 42.3 +0.9
baz=52,SNR=5.2
QIZ Qiongzhong 75.66 77 P P 23 17 40.4 -1.4
QIZ S **S 23 27 24.3 +0.8**
QIZ pmax pmax
comp=Z,22nm,1.4s
QIZ LR LR
comp=Z,380nm,22.6s
QIZ LR LR
comp=Z,500nm,16.7s
Q55A Buckhannon 75.67 309 P P 23 17 42.7 +1.1
baz=52
AAM Ann Arbor 75.72 313 P P 23 17 41.7 -0.1
AAM pmax pmax
comp=Z,56nm,1.4s
AAM MLR MLR
comp=Z,800nm,18.0s
AAM Ann Arbor 75.72 313 P P 23 17 42.6 +0.8
baz=50
AAM Ann Arbor 75.72 313 P P 23 17 41.7 -0.1
AAM IAmb IAmb 23 17 44.5
comp=Z,56nm,1.4s
AAM IAMs_20 IAMs_20 23 52 16.4
comp=Z,790nm,18.0s
S57A Dark Hollow, R 75.73 307 P P 23 17 43.0 +1.0
baz=52
S57A Dark Hollow, R 75.73 307 P P 23 17 41.6 -0.4
TNA Tin City 75.75 5 P P 23 17 42.2 +0.6
baz=351
J47A Sunmer 75.79 314 P P 23 17 42.0 -0.1
J47A IAmb IAmb 23 17 43.9
comp=Z,56nm,1.1s
N51A Ashland 75.85 311 P P 23 17 42.7 +0.1
N51A IAmb IAmb 23 17 56.1
comp=Z,36nm,0.9s
U59A Littleton 75.86 305 P P 23 17 43.5 +0.8
baz=52
U59A Littleton 75.86 305 P P 23 17 43.3 +0.6
U59A IAmb IAmb 23 17 44.7
comp=Z,46nm,1.1s
V60A Jim Taylor Roa 75.88 304 P P 23 17 43.6 +0.8
baz=52
V60A Jim Taylor Roa 75.88 304 P P 23 17 42.5 -0.3
FFC Flin Flon 75.90 331 P P 23 17 43.1 +0.5
FFC pmax pmax
comp=Z,30nm,1.3s
FFC MLR MLR
comp=Z,800nm,19.0s
FFC Flin Flon 75.90 331 P P 23 17 43.1 +0.5
FFC Flin Flon 75.90 331 IAMs_20 IAMs_20 23 54 12.2
comp=Z,822nm,19.0s
M50A Fremont 75.94 312 P P 23 17 41.0 -2.0
M50A IAmb IAmb 23 18 10.6
comp=Z,82nm,1.4s
M50A IAMs_20 IAMs_20 23 52 14.1
comp=Z,834nm,18.0s
T58A Grand View Acr 75.97 306 P P 23 17 44.2 +0.8
baz=52
O52A Adamsville 76.04 310 P P 23 17 44.4 +0.7
baz=51,SNR=6.6
O52A Adamsville 76.04 310 IAmb IAmb 23 17 45.3
comp=Z,54nm,1.0s
O52A IAMs_20 IAMs_20 23 49 31.8
comp=Z,801nm,19.0s
I45A Fountain 76.05 316 IAMs_20 IAMs_20 23 52 23.0
comp=Z,943nm,19.0s
W61A Ground Anchor 76.06 304 P P 23 17 44.3 +0.4
baz=52

RCRC **Randolf Colleg** 76.14 307 P P 23 17 43.9 -0.4
R55A **Marlinton** 76.14 308 P P 23 17 45.2 +0.8
baz=52,SNR=6.7
Q54A **Coxs Mills** 76.14 309 P P 23 17 44.9 +0.7
baz=51,SNR=5.7
Q54A **Coxs Mills** 76.14 309 P P 23 17 44.5 +0.2
Q54A IAmb IAmb 23 17 46.0
comp=Z,52nm,1.2s
P53A **Whipple** 76.16 310 P P 23 17 45.2 +0.8
baz=51,SNR=7.7
P53A **Whipple** 76.16 310 P P 23 17 44.6 +0.2
S56A **Natural Bridge** 76.17 307 P P 23 17 45.0 +0.6
baz=52
EYMN **Ely** 76.19 321 P P 23 17 44.7 +0.3
baz=47
U58A **Oxford** 76.32 306 P P 23 17 46.1 +0.7
baz=52
POKR **Poker Plat Res** 76.32 356 P P 23 17 45.3 +0.5
baz=7.3
POKR **Poker Plat Res** 76.32 356 P P 23 17 45.1 +0.2
I23K **Minto, Yukon-K** 76.38 357 P P 23 17 45.8 +0.6
baz=5.8
T57A **Hurt** 76.39 307 P P 23 17 46.5 +0.7
baz=52
T57A **Hurt** 76.39 307 IAmb IAmb 23 17 48.5
comp=Z,44nm,1.2s
L48A **N Adams** 76.40 313 IAMs_20 IAMs_20 23 52 29.2
comp=Z,804nm,18.0s
O51A **Pataskala** 76.47 311 P P 23 17 46.4 +0.2
baz=51,SNR=8.0
V59A **Middlesex** 76.51 305 P P 23 17 47.0 +0.7
baz=52
P52A **Corning** 76.52 310 P P 23 17 47.2 +0.8
baz=51
P52A **Corning** 76.52 310 P P 23 17 46.6 +0.2
P52A IAmb IAmb 23 17 47.9
comp=Z,46nm,1.1s
MLY **Manley** 76.56 357 P P 23 17 46.7 +0.5
baz=4.7
TCOL **CIGO, UAF Yank** 76.59 356 P P 23 17 47.7 +1.4
W60A **Pink Hill** 76.60 304 P P 23 17 48.3 +1.4
baz=52
H43A **Windswept, Lux** 76.60 317 P P 23 17 45.8 -1.0
H43A IAmb IAmb 23 19 12.5
comp=Z,37nm,0.9s
H43A IAMs_20 IAMs_20 23 52 40.5
comp=Z,791nm,19.0s
IL31 76.63 356 P P 23 17 46.6 0.0
ILAR **Eielson Array** 76.63 356 P P 23 17 46.6 0.0
comp=Z,0.8nm,0.8s,baz=1.1,slow=4.2,SNR=7.4
ILAR LR LR 23 52 31.0
comp=Z,341nm,21.3s,baz=355,slow=36
ILAR **Eielson Array** 76.63 356 P P 23 17 46.2 -0.4
Q53A **Leroy** 76.64 309 P P 23 17 47.8 +0.7
baz=51,SNR=5.2
IL18 **Eielson Array** 76.64 356 P P 23 17 47.0 +0.4
ACSO **Alum Creek Sta** 76.64 311 P P 23 17 47.7 +0.5
baz=50
ACSO **Alum Creek Sta** 76.64 311 P P 23 17 47.3 +0.2
ACSO IAmb IAmb 23 17 48.7
comp=Z,48nm,1.2s
ULM **Lac du Bonnet** 76.64 325 P P 23 17 46.5 -0.4
comp=Z,18nm,0.9s,baz=25,slow=5.8,SNR=11
ULM LR LR 23 50 36.6
comp=Z,851nm,21.5s,baz=52,slow=35
ULM **Lac du Bonnet** 76.64 325 *i* P P 23 17 46.9 0.0
ULM **Lac du Bonnet** 76.64 325 IAmb IAmb 23 17 47.9
comp=Z,47nm,1.2s
ULM IAMs_20 IAMs_20 23 50 48.1
comp=Z,1µm,22.0s
S55A **Lewisburg** 76.69 308 P P 23 17 48.3 +0.9
baz=51
DAWY **Dawson** 76.72 352 P P 23 17 47.0 -0.1
DAWY IAMs_20 IAMs_20 23 56 46.4
comp=Z,574nm,18.0s
R54A **Victor** 76.74 308 P P 23 17 48.3 +0.6
baz=51
U57A **Blanch** 76.79 306 P P 23 17 48.8 +0.8
baz=52,SNR=6.2
T56A **Rocky Mt** 76.86 307 P P 23 17 49.4 +0.9
baz=51,SNR=5.3
N49A **Columbus Grove** 76.91 312 P P 23 17 48.0 -0.6
N49A IAmb IAmb 23 17 50.0
comp=Z,60nm,1.3s
N49A IAMs_20 IAMs_20 23 52 45.8
comp=Z,747nm,18.0s
NEA2 **Nenana** 76.92 357 P P 23 17 48.4 +0.1
baz=6.0
PSI **Prapat** 76.95 97 P P 23 17 48.8 -0.5
PSI pmax pmax
comp=Z,9.0nm,0.4s
B35A **Bob, Littlefor** 76.98 322 IAMs_20 IAMs_20 23 51 43.1
comp=Z,921nm,21.0s
BLA **Blacksburg** 76.99 307 P P 23 17 49.6 +0.4
baz=51
HDA **Harding Lake** 77.00 356 P P 23 17 48.7 0.0
baz=7.7
RPSI **Rantau Prapat** 77.02 97 P P 23 17 48.8 -0.7
Q52A **Bidwell** 77.02 310 P P 23 17 49.6 +0.3
baz=50,SNR=5.2
V58A **Windy Hill, Pi** 77.05 305 P P 23 17 50.8 +1.3
baz=52
X60A **Albert Glenn T** 77.06 304 P P 23 17 49.9 +0.3
baz=52
TMAB **Tom-Au,PA,Br** 77.13 256 *e*P P 23 17 51.6 +1.4
P51A **Williamsport** 77.17 310 P P 23 17 50.3 +0.2
baz=50
S54A **Dingess, Beckl** 77.17 308 P P 23 17 50.6 +0.4
baz=51
S54A **Dingess, Beckl** 77.17 308 P P 23 17 49.6 -0.6
S54A IAmb IAmb 23 17 51.5
comp=Z,29nm,1.1s
KS19 **Wonju Array Si** 77.20 52 P P 23 17 49.2 -1.1
GAMB **Gambell** 77.21 7 IAMs_20 IAMs_20 23 55 26.5
comp=Z,763nm,20.0s
SCRK **Sand Creek** 77.23 354 P P 23 17 50.5 +0.4
baz=10.0
R53A **Hurricane** 77.23 309 P P 23 17 51.1 +0.7
baz=51
R53A **Hurricane** 77.23 309 IAmb IAmb 23 17 52.3
comp=Z,54nm,1.1s
KSAR **Wonju Array Be** 77.25 52 P P 23 17 49.6 -0.9
KSAR **Wonju Array Be** 77.25 52 P P 23 17 49.6 -0.9
KSRS **Korea Array** 77.27 52 P P 23 17 50.4 -0.2
comp=Z,6.4nm,0.7s,baz=305,slow=4.9,SNR=16
T55A **Pulaski** 77.28 307 P P 23 17 51.5 +0.8
baz=51
G40A **Rib Lake** 77.35 318 P P 23 17 50.5 -0.5
G40A IAmb IAmb 23 17 52.4
comp=Z,57nm,1.4s
G40A IAMs_20 IAMs_20 23 51 13.2
comp=Z,936nm,21.0s
V57A **Coltrane Farms** 77.41 306 P P 23 17 52.3 +0.8
baz=51
O49A **Covington** 77.47 312 P P 23 17 51.4 -0.4
O49A IAmb IAmb 23 17 53.0
comp=Z,36nm,0.9s
X59A **McDuffie Farm,** 77.47 304 P P 23 17 52.5 +0.7
baz=52
U56A **King** 77.51 307 P P 23 17 52.9 +0.8
baz=51,SNR=5.1
U56A **King** 77.51 307 P P 23 17 51.9 -0.2
U56A IAmb IAmb 23 17 54.1
comp=Z,81nm,1.2s
DOT **Dot Lake** 77.56 354 P P 23 17 50.8 -1.1
I42A **Draeger Farm,** 77.60 317 IAMs_20 IAMs_20 23 51 10.9
comp=Z,786nm,19.0s
W58A **Raeford** 77.60 305 P P 23 17 53.6 +1.0
baz=51
Q51A **Peebles** 77.63 310 P P 23 17 52.9 +0.2
Q51A IAmb IAmb 23 17 54.1
comp=Z,60nm,1.1s
SVB **Belmont** 77.71 277 P P 23 17 53.3 -0.2
CDVI **St. Croix** 77.75 283 P P 23 17 53.9 +0.3
S53A **Williamson** 77.75 309 P P 23 17 53.7 +0.3
baz=50
MCK **McKinley** 77.78 357 P P 23 17 53.1 0.0
baz=6.1
T54A **Tazewell** 77.80 308 P P 23 17 54.0 +0.2
baz=50,SNR=5.3
CUPR **Culebra, Puert** 77.81 284 P P 23 17 53.0 -0.9
N47A **Urbana** 77.81 313 P P 23 17 53.4 -0.2
N47A IAmb IAmb 23 17 54.5
comp=Z,44nm,1.1s
N47A IAMs_20 IAMs_20 23 52 10.5
comp=Z,934nm,20.0s
V56A **Mocksville** 77.92 306 P P 23 17 55.0 +0.7
baz=51
BCAR **Beaver Creek A** 77.94 353 P P 23 17 54.5 +0.5
X58A **Rowland** 77.96 305 P P 23 17 54.0 -0.6
baz=51
X58A **Rowland** 77.96 305 P P 23 17 54.0 -0.6
W57A **Gilead** 78.01 305 P P 23 17 55.0 +0.2
baz=51
W57A **Gilead** 78.01 305 P P 23 17 55.0 +0.2
W57A IAmb IAmb 23 17 56.5
comp=Z,61nm,1.2s
AGMN **Agassiz Nation** 78.03 323 P P 23 17 54.4 -0.3
baz=44
AGMN **Agassiz Nation** 78.03 323 IAMs_20 IAMs_20 23 52 29.9
comp=Z,903nm,20.0s
K43A **Burlington** 78.08 316 P P 23 17 54.7 -0.4
K43A IAmb IAmb 23 17 56.3
comp=Z,93nm,1.4s
K43A IAMs_20 IAMs_20 23 53 33.6
comp=Z,892nm,19.0s
P49A **Miami Univ. Ec** 78.11 311 P P 23 17 54.9 -0.4
baz=49
P49A **Miami Univ. Ec** 78.11 311 IAMs_20 IAMs_20 23 51 25.8
comp=Z,764nm,22.0s
L26K **Log Cabin Wild** 78.11 354 P P 23 17 55.5 +0.5
baz=10
MTP **Monte Pirata** 78.14 284 P P 23 17 55.4 -0.4
L44A **Lake County Fo** 78.20 315 P P 23 17 55.8 0.0
baz=48
L44A **Lake County Fo** 78.20 315 P P 23 17 55.6 -0.2
L44A IAMs_20 IAMs_20 23 51 23.9
comp=Z,962nm,20.0s
U54A **Nelsons Funny** 78.30 307 P P 23 17 56.9 +0.4
baz=50,SNR=6.0
U54A **Nelsons Funny** 78.30 307 P P 23 17 54.7 -1.8
U54A IAmb IAmb 23 17 58.8
comp=Z,83nm,1.3s
U54A IAMs_20 IAMs_20 23 56 53.8
comp=Z,668nm,18.0s
HUMP **Col San Antoni** 78.34 284 P P 23 17 57.9 +1.0
V55A **Taylorsville** 78.34 307 P P 23 17 57.2 +0.5
baz=50,SNR=6.0
V55A **Taylorsville** 78.34 307 IAmb IAmb 23 17 58.8
comp=Z,67nm,1.2s
W56A **Indian Trail** 78.39 306 P P 23 17 57.3 +0.3
baz=51
GCPR **Guaynabo City** 78.42 284 P P 23 17 57.8 +0.5
GCPR IAmb IAmb 23 17 59.1
comp=Z,53nm,1.0s
HQIL **Hanson Quary C** 78.42 315 P P 23 17 56.4 -0.6
HQIL IAMs_20 IAMs_20 23 54 27.7
comp=Z,750nm,19.0s
T53A **Wise** 78.44 308 P P 23 17 58.0 +0.7
baz=50
X57A **Johnson Farm,** 78.50 305 P P 23 17 58.0 +0.5
baz=51
I40A **Norwalk** 78.51 318 IAMs_20 IAMs_20 23 52 15.8
comp=Z,923nm,21.0s
PDPR **Patillas Dam,** 78.54 284 P P 23 17 58.5 +0.5
Y58A **Scranton** 78.58 304 P P 23 17 58.6 +0.6
baz=51
P48A **Milroy** 78.58 312 P P 23 17 57.1 -0.8
SJG **San Juan** 78.58 284 P P 23 17 58.3 +0.1
SJG pmax pmax
comp=Z,40nm,1.2s
SJG **San Juan** 78.58 284 P P 23 17 58.3 +0.1
SJG IAmb IAmb 23 18 00.6
comp=Z,40nm,1.1s
BIRD **Birdtown, Kers** 78.62 305 P P 23 17 59.0 +0.7
BIRD IAmb IAmb 23 18 00.2
comp=Z,68nm,1.3s
R50A **Paris** 78.70 310 P P 23 17 58.9 +0.3
R50A IAMs_20 IAMs_20 23 53 51.2
comp=Z,832nm,19.0s
GRGR **Grenville** 78.71 277 P P 23 17 59.4 +0.4
SPMN **Marine on St.** 78.72 320 P P 23 17 58.9 +0.3
SPMN IAMs_20 IAMs_20 23 53 02.3
comp=Z,857nm,18.0s
Z59A **Georgetown, SC** 78.74 304 P P 23 17 59.4 +0.5
baz=51
M44A **Midwin, Midew** 78.80 314 IAMs_20 IAMs_20 23 52 05.8
comp=Z,896nm,21.0s
V54A **Nebo** 78.85 307 P P 23 18 00.2 +0.7
baz=50,SNR=6.4
KMSC **Kings Mountain** 78.86 306 P P 23 18 00.1 +0.5
baz=50
KMSC **Kings Mountain** 78.86 306 P P 23 18 00.3 +0.7
KMSC IAmb IAmb 23 18 01.5
comp=Z,36nm,1.1s
MCPB **Macapa, AP** 78.89 261 *e*P P 23 18 00.5 +0.5
SFIN **Lafayette** 78.94 313 P P 23 17 59.7 -0.2
baz=48
SFIN **Lafayette** 78.94 313 P P 23 17 59.2 -0.6
SFIN IAmb IAmb 23 18 00.9
comp=Z,39nm,1.1s
OBIP **Obispado Ponce** 78.97 284 P P 23 18 00.8 +0.4
Y57A **Sumter** 78.98 305 P P 23 18 00.6 +0.4
baz=51
Y57A **Sumter** 78.98 305 P P 23 18 00.6 +0.4
Y57A IAmb IAmb 23 18 02.2
comp=Z,66nm,1.1s
JFWS **Jewell Farm** 78.98 317 P P 23 17 59.9 -0.2
baz=47
JFWS **Jewell Farm** 78.98 317 IAMs_20 IAMs_20 23 54 15.3
comp=Z,764nm,20.0s
Z58A **St. Stephen** 79.03 304 P P 23 18 00.8 +0.3
baz=51
YSS **Yuzh-Sakhalins** 79.03 37 *e*P P 23 17 59.5 -0.8
YSS *e*S S 23 28 00.4 +1.1
YSS *e*PS PnS 23 28 14.4 -27
YSS *e*SS SS 23 33 06.4 +2.7
YSS pmax pmax
comp=Z,30nm,1.2s
YSS pmax pmax
comp=Z,400nm,3.8s
YSS **Yuzh-Sakhalins** 79.03 37 P P 23 17 59.9 -0.4
YSS IAmb IAmb 23 18 01.9
comp=Z,83nm,1.5s
X56A **White Oak** 79.09 305 P P 23 18 01.4 +0.6
baz=50
CUT **Chulitna** 79.16 357 P P 23 17 59.7 -1.0
baz=5.0
R49A **Shelbyville** 79.19 311 IAmb IAmb 23 18 02.8
comp=Z,49nm,1.2s
M24K **Tolsona, Glenn** 79.24 355 P P 23 17 60.0 -1.2
baz=8.2
L42A **Oliver, Polo** 79.28 316 P P 23 18 01.0 -0.8
L42A IAmb IAmb 23 18 02.9
comp=Z,36nm,1.1s
MLPR **Magueyes Islan** 79.35 284 P P 23 18 01.6 -0.9
TZTN **Tazewell** 79.35 308 P P 23 18 02.6 +0.4
baz=50
TZTN **Tazewell** 79.35 308 P P 23 18 02.6 +0.4
TZTN IAmb IAmb 23 18 04.2
comp=Z,68nm,1.4s
TZTN IAMs_20 IAMs_20 23 52 28.6
comp=Z,772nm,20.0s
JSC **Jenkinsville** 79.36 305 P P 23 18 02.2 -0.1
JSC pmax pmax
comp=Z,35nm,1.1s
JSC **Jenkinsville** 79.36 305 P P 23 18 02.2 -0.1
JSC IAmb IAmb 23 18 09.6
comp=Z,35nm,1.1s
PAULI **Pauline** 79.37 306 IAmb IAmb 23 18 04.3
comp=Z,76nm,1.2s
CRPR **Cabo Rojo, PR** 79.38 284 P P 23 18 03.0 +0.4
BLO **Bloomington** 79.41 312 IAmb IAmb 23 18 03.8
comp=Z,43nm,0.9s
BLO IAMs_20 IAMs_20 23 54 23.0
comp=Z,874nm,19.0s
D32A **Dogwood Acres,** 79.41 323 P P 23 18 01.9 -0.4
D32A IAMs_20 IAMs_20 23 53 19.4
comp=Z,795nm,19.0s
NHSC **New Hope** 79.41 304 P P 23 18 03.6 +1.1
baz=51
W54A **Cherokee Point** 79.44 307 P P 23 18 03.1 +0.4
baz=50
WHY **Whitehorse** 79.45 349 P P 23 18 03.0 +0.5
V53A **Saluda** 79.46 307 P P 23 18 02.8 -0.1
V53A IAmb IAmb 23 18 04.6
comp=Z,77nm,1.6s
X55A **Gracelyn & Ava** 79.48 306 P P 23 18 03.5 +0.5
baz=50,SNR=5.1
P46A **Rosedale** 79.51 313 P P 23 18 02.5 -0.5
P46A IAmb IAmb 23 18 03.5
comp=Z,40nm,1.2s
P46A IAMs_20 IAMs_20 23 53 11.6
comp=Z,900nm,20.0s
N25K **Chitina, Valde** 79.62 354 P P 23 18 02.1 -1.3
baz=9.5
Z57A **Bowman** 79.63 304 P P 23 18 04.5 +0.8
baz=50
SKT **Skwentna** 79.64 358 IAmb IAmb 23 18 24.6
comp=Z,62nm,1.8s
HYT **Haines Junctio** 79.65 351 P P 23 18 04.2 +0.6
Y56A **Pelion** 79.70 305 P P 23 18 05.1 +0.9
baz=50
T50A **Nancy** 79.82 309 P P 23 18 05.1 +0.3
T50A IAmb IAmb 23 18 06.6
comp=Z,57nm,1.2s
T50A IAMs_20 IAMs_20 23 53 04.1
comp=Z,944nm,20.0s
V52A **Sevierville** 79.83 308 IAMs_20 IAMs_20 23 56 38.4
comp=Z,635nm,18.0s
I37A **Lemond, Waseca** 79.87 319 IAmb IAmb 23 18 06.2
comp=Z,58nm,1.1s
O44A **Mansfield** 79.87 314 IAmb IAmb 23 18 06.3
comp=Z,39nm,1.1s
WCI **Wyandotte Cave** 79.90 311 P P 23 18 05.9 +0.7
WCI pmax pmax
comp=Z,52nm,1.2s
WCI MLR MLR
comp=Z,800nm,18.0s
WCI **Wyandotte Cave** 79.90 311 P P 23 18 05.5 +0.3
baz=48
WCI **Wyandotte Cave** 79.90 311 P P 23 18 05.9 +0.7
WCI IAmb IAmb 23 18 06.7
comp=Z,52nm,1.1s
WCI IAMs_20 IAMs_20 23 55 56.0
comp=Z,828nm,18.0s
X54A **Belton** 79.90 306 P P 23 18 05.6 +0.4
baz=50
PMR **Palmer** 79.92 356 P P 23 18 04.1 -0.7
PMR pmax pmax
comp=Z,90nm,2.0s
PMR **Palmer** 79.92 356 P P 23 18 04.1 -0.7
PMR IAmb IAmb 23 20 37.2
comp=Z,90nm,2.0s
BG3 **Lake Jocassee** 79.97 307 IAmb IAmb 23 18 07.5
comp=Z,39nm,1.4s
BALM **Baldy** 79.99 353 P P 23 18 06.0 +0.6
F33A **5 Mile Ranch,** 80.01 322 IAmb IAmb 23 18 06.5
comp=Z,51nm,1.6s
F33A IAMs_20 IAMs_20 23 53 33.2
comp=Z,749nm,20.0s
HODGE **Hodges** 80.03 306 P P 23 18 06.1 +0.1
HODGE IAmb IAmb 23 18 11.4
comp=Z,106nm,1.9s
Z56A **Williston** 80.04 305 P P 23 18 06.5 +0.5
baz=50
Z56A **Williston** 80.04 305 P P 23 18 06.7 +0.7
Z56A IAmb IAmb 23 18 08.1
comp=Z,84nm,1.1s
TKL **Tuckaleechee C** 80.06 308 P P 23 18 06.5 +0.4
TKL pmax pmax
comp=Z,36nm,1.3s
TKL **Tuckaleechee C** 80.06 308 P P 23 18 06.5 +0.4
HDIL **Hopedale** 80.06 314 P P 23 18 05.9 -0.1
baz=47
HDIL **Hopedale** 80.06 314 P P 23 18 05.9 -0.1
HDIL IAmb IAmb 23 18 07.3
comp=Z,53nm,1.1s
KNK **Knik Glacier** 80.07 356 P P 23 18 05.3 -0.4
KNK IAmb IAmb 23 20 01.3
comp=Z,29nm,0.6s
KNK IAMs_20 IAMs_20 23 53 52.9
comp=Z,649nm,19.0s
MDND **Maddock** 80.07 325 P P 23 18 05.4 -0.5
baz=42
MDND **Maddock** 80.07 325 P P 23 18 05.1 -0.9
MDND IAmb IAmb 23 18 07.7
comp=Z,88nm,1.6s
MDND IAMs_20 IAMs_20 23 55 04.8
comp=Z,733nm,19.0s
L40A **Anamosa** 80.09 317 IAmb IAmb 23 18 07.0
comp=Z,61nm,1.2s
157A **Early Branch** 80.22 304 P P 23 18 07.4 +0.4
baz=50
V51A **Loudon** 80.32 308 P P 23 18 07.8 +0.3
V51A IAmb IAmb 23 18 09.6
comp=Z,68nm,1.4s
PEA0B **Petropavlovsk-** 80.41 26 *e*P P 23 18 08.3 +0.6
PETK **Petropavlovsk-** 80.41 26 P P 23 18 07.8 +0.2
comp=Z,1.9nm,0.7s,baz=353,slow=10,SNR=3.7
PETK LR LR 00 00 17.7
comp=Z,488nm,18.2s,baz=318,slow=40
W52A **Murphy** 80.52 307 P P 23 18 08.4 -0.2
W52A IAmb IAmb 23 18 10.4
comp=Z,87nm,1.6s
OLIL **Olney** 80.61 312 P P 23 18 08.5 -0.5
OLIL IAmb IAmb 23 18 10.2
comp=Z,70nm,1.3s
DR12 **Loma Pena Alta** 80.62 286 P P 23 18 09.3 -0.1
CPCT **Cooper Cave** 80.66 308 P P 23 18 09.6 +0.3
CPCT IAmb IAmb 23 18 11.4
comp=Z,64nm,1.2s
SKAG **Skagway** 80.67 349 P P 23 18 08.5 -0.4
U49A **Red Boiling Sp** 80.73 310 P P 23 18 10.1 +0.4
U49A IAmb IAmb 23 18 11.4
comp=Z,57nm,1.1s
U49A IAMs_20 IAMs_20 23 53 31.0
comp=Z,957nm,21.0s
DLBC **Dease Lake** 80.76 346 P P 23 18 10.0 +0.5
DLBC IAmb IAmb 23 18 12.5
comp=Z,55nm,1.9s
PET **Petropavlovsk** 80.81 26 *e*P P 23 18 11.9 +2.2
PET *e*S S 23 28 15.0 -2.7
PET *e*PS PnS 23 29 01.4 -1.5
P43A **Skaggs, Pawnee** 80.81 314 P P 23 18 10.1 +0.1
P43A IAmb IAmb 23 18 11.3
comp=Z,37nm,0.8s
N41A **Harden Midland** 80.82 315 IAmb IAmb 23 18 11.0
comp=Z,65nm,1.2s
USIN **University of** 80.88 312 P P 23 18 09.8 -0.7
USIN IAmb IAmb 23 18 11.5
comp=Z,88nm,1.4s
USIN IAMs_20 IAMs_20 23 53 59.0
comp=Z,738nm,18.0s
PRPB **Parauapebas** 80.89 255 *e*P P 23 18 11.9 +1.1
SMTB **Santa Maria do** 80.98 251 *e*P P 23 18 12.2 +0.9
Q44A **Meyer Farm, Va** 81.03 313 IAmb IAmb 23 18 12.6
comp=Z,54nm,1.1s
Q44A IAMs_20 IAMs_20 23 53 58.8
comp=Z,780nm,20.0s
T47A **Sharon Grove** 81.20 311 IAmb IAmb 23 18 13.5
comp=Z,54nm,1.0s
T47A IAMs_20 IAMs_20 23 52 12.6
comp=Z,710nm,21.0s
SCIA **State Center** 81.26 318 IAMs_20 IAMs_20 23 55 27.6
comp=Z,813nm,18.0s
GOGA **Godfrey** 81.33 306 P P 23 18 13.7 +0.8
GOGA pmax pmax
comp=Z,56nm,1.4s
GOGA **Godfrey** 81.33 306 P P 23 18 13.2 +0.3
baz=49,SNR=6.4
GOGA **Godfrey** 81.33 306 P P 23 18 13.7 +0.8
GOGA IAmb IAmb 23 18 14.9
comp=Z,56nm,1.4s
JEW **Eniwo** 81.34 41 IAMs_20 IAMs_20 23 52 43.4
comp=Z,756nm,19.0s
CLTN **Cedars of Leba** 81.34 310 P P 23 18 13.2 +0.3
CLTN IAmb IAmb 23 18 14.6
comp=Z,48nm,1.3s
CLTN IAMs_20 IAMs_20 23 53 12.2
comp=Z,930nm,22.0s
Y52A **Lilburn** 81.41 307 P P 23 18 14.0 +0.7
Y52A IAmb IAmb 23 18 15.4
comp=Z,70nm,1.2s
X51A **Calhoun** 81.45 308 P P 23 18 13.6 +0.1
X51A IAmb IAmb 23 18 15.5
comp=Z,93nm,1.6s
E28A **Huff** 81.52 325 P P 23 18 14.0 +0.2
E28A IAMs_20 IAMs_20 23 54 28.1
comp=Z,909nm,21.0s
MALB **Monte Alegre** 81.54 261 *e*P P 23 18 15.3 +1.0
DGMT **Dagmar** 81.59 328 P P 23 18 14.5 +0.4
DGMT IAmb IAmb 23 18 15.3
comp=Z,45nm,1.5s
DGMT **Dagmar** 81.59 328 IAMs_20 IAMs_20 23 53 11.8
comp=Z,794nm,21.0s
154A **Montrose** 81.62 305 P P 23 18 15.3 +0.8
SWET **Sewanee** 81.68 309 P P 23 18 14.6 -0.2
SWET IAmb IAmb 23 18 37.2

comp=Z,45nm,1.6s
ECSD EROS Data Cent 81.69 321 P **P** **23 18 14.9 +0.2**
baz=43
V48A Smith Brothers 81.87 310 IAmb IAmb 23 18 16.5
comp=Z,41nm,1.2s
JNU Nakatsue 81.90 54 IAMs_20 IAMs_20 00 00 52.3
comp=Z,763nm,18.0s
SLM Saint Louis 81.91 314 P **P** **23 18 15.9 0.0**
SLM pmax pmax
comp=Z,106nm,1.4s
SLM MLR MLR
comp=Z,1μm,19.0s
SLM Saint Louis 81.91 314 P **P** **23 18 15.9 0.0**
Q23K Middleton Isla 81.91 355 P **P** **23 18 15.2 -0.2**
baz=8.0
FPAL Fort Paine 81.93 308 IAmb IAmb 23 18 17.9
comp=Z,70nm,1.4s
HOM Homer 81.96 357 P **P** **23 18 15.9 +0.1**
baz=3.9
S44A Carbondale 81.99 312 IAmb IAmb 23 18 17.6
comp=Z,50nm,0.9s
N38A Joes South For 82.06 317 P **P** **23 18 16.7 0.0**
N38A IAmb IAmb 23 18 17.8
comp=Z,84nm,1.3s
T45A Paducah 82.09 312 IAMs_20 IAMs_20 23 54 35.1
comp=Z,675nm,21.0s
WVT Waverly 82.21 310 P **P** **23 18 17.5 0.0**
WVT pmax pmax
comp=Z,26nm,1.1s
WVT MLR MLR
comp=Z,800nm,21.0s
WVT Waverly 82.21 310 P **P** **23 18 17.2 -0.3**
baz=47
WVT Waverly 82.21 310 P **P** **23 18 17.5 0.0**
WVT Waverly 82.21 310 IAMs_20 IAMs_20 23 52 54.3
comp=Z,806nm,21.0s
P40A Paris 82.30 315 IAMs_20 IAMs_20 23 54 24.3
comp=Z,742nm,21.0s
SUSD Miller 82.31 322 P **P** **23 18 17.7 -0.2**
baz=42
SUSD Miller 82.31 322 P **P** **23 18 17.6 -0.4**
SUSD IAMs_20 IAMs_20 23 52 09.2
comp=Z,777nm,22.0s
FVM French Village 82.46 313 IAmb IAmb 23 18 20.3
comp=Z,39nm,1.1s
Z51A Franklin 82.47 307 P **P** **23 18 19.0 +0.1**
HICK Hickman 82.76 311 **P** **23 18 20.1 -0.3**
HICK IAMs_20 IAMs_20 23 55 06.8
comp=Z,730nm,22.0s
HENM Henderson Moun 82.78 312 IAMs_20 IAMs_20 23 56 34.3
comp=Z,617nm,18.0s
ERM Erimo 82.81 41 IAMs_20 IAMs_20 23 52 54.4
comp=Z,540nm,18.0s
L34A Svendsen Farm, 82.86 319 P **P** **23 18 20.2 -0.6**
X48A Hartselle 82.87 309 IAmb IAmb 23 18 22.4
comp=Z,52nm,1.1s
Y49A Blount Mountai 82.88 308 P **P** **23 18 20.8 -0.3**
CCM Cathedral Cave 82.88 314 P **P** **23 18 21.5 +0.5**
CCM pmax pmax
comp=Z,20nm,0.8s
CCM MLR MLR
comp=Z,800nm,20.0s
CCM Cathedral Cave 82.88 314 P **P** **23 18 21.0 0.0**
baz=46
CCM Cathedral Cave 82.88 314 P **P** **23 18 21.5 +0.5**
CCM IAmb IAmb 23 21 29.6
comp=Z,20nm,0.8s
CCM Cathedral Cave 82.88 314 IAMs_20 IAMs_20 23 54 11.7
comp=Z,813nm,20.0s
GLAT Glass 82.98 311 IAMs_20 IAMs_20 23 55 13.6
comp=Z,804nm,22.0s
PARMO Parma 82.98 312 P **P** **23 18 21.9 +0.4**
P38A Dawn 83.05 316 P **P** **23 18 21.9 +0.1**
P38A IAmb IAmb 23 21 30.6
comp=Z,25nm,0.8s
P38A IAMs_20 IAMs_20 23 56 38.0
comp=Z,816nm,19.0s
SJMB Sao Joao De Ma 83.10 240 *e* **P** **P** **23 18 23.2 +1.0**
PLAL Pickwick Lake 83.14 310 IAmb IAmb 23 18 23.2
comp=Z,42nm,1.1s
PLAL IAMs_20 IAMs_20 23 56 26.8
comp=Z,849nm,20.0s
LNXT Lenox 83.22 311 P **P** **23 18 22.5 -0.2**
HALT Halls 83.26 311 IAMs_20 IAMs_20 23 55 32.9
comp=Z,767nm,21.0s
N35A Tabor 83.28 318 P **P** **23 18 23.4 +0.4**
N35A IAMs_20 IAMs_20 23 54 54.1
comp=Z,726nm,20.0s
R40A Maddies Statio 83.29 314 P **P** **23 18 23.5 +0.4**
R40A IAmb IAmb 23 18 24.7
comp=Z,48nm,1.1s
R40A IAMs_20 IAMs_20 23 54 45.6
comp=Z,896nm,21.0s
PBMO Poplar Bluff 83.30 312 IAmb IAmb 23 18 24.6
comp=Z,21nm,0.9s
PEBM Pemiscott Bayo 83.43 312 P **P** **23 18 23.5 -0.4**
T42A Van Buren 83.50 313 P **P** **23 18 24.7 +0.5**
T42A IAmb IAmb 23 18 25.8
comp=Z,38nm,0.9s
K31A O'Neill 83.57 321 IAMs_20 IAMs_20 23 55 46.6
comp=Z,852nm,22.0s
GNAR Gosnell 83.62 311 P **P** **23 18 24.4 -0.4**
W45A Hickory Valley 83.68 310 P **P** **23 18 24.1 -1.1**
W45A IAMs_20 IAMs_20 23 55 13.2
comp=Z,903nm,22.0s
LRAL Lakeview Retre 83.79 308 P **P** **23 18 26.0 +0.3**
baz=47
LRAL Lakeview Retre 83.79 308 P **P** **23 18 25.9 +0.1**
LAO LASA Array 83.84 328 P **P** **23 18 26.7 +0.8**
baz=37
LAO LASA Array 83.84 328 P **P** **23 18 26.4 +0.6**
MAJO Matsushiro 84.02 47 P **P** **23 18 26.1 -0.8**
MAJO pmax pmax
comp=Z,32nm,1.4s
MAJO Matsushiro 84.02 47 P **P** **23 18 26.1 -0.8**
MAJO IAmb IAmb 23 18 26.7
comp=Z,32nm,1.4s
MJAR Matsushiro Arr 84.02 47 P **P** **23 18 26.6 -0.3**
comp=Z,4.0nm,0.8s,baz=320,slow=4.8,SNR=7.1
MJAR Matsushiro Arr 84.02 47 P **P** **23 18 26.8 -0.1**
LPAR Lepanto 84.04 311 IAMs_20 IAMs_20 23 55 54.5
comp=Z,845nm,20.0s
MGMO Mountain Grove 84.09 314 P **P** **23 18 28.0 +0.7**
MET Memphis--Engin 84.15 311 IAMs_20 IAMs_20 23 58 33.6
comp=Z,703nm,19.0s
BGNE Belgrade 84.17 320 P **P** **23 18 27.8 +0.1**
baz=42
BGNE Belgrade 84.17 320 IAMs_20 IAMs_20 23 58 13.5
comp=Z,632nm,20.0s
EGMT Eagleton 84.18 331 P **P** **23 18 28.0 +0.4**
baz=35
LCAR Lake Charles 84.21 312 P **P** **23 18 28.0 +0.2**
LCAR IAmb IAmb 23 18 28.9
comp=Z,21nm,1.0s
LCAR IAMs_20 IAMs_20 23 57 28.1
comp=Z,684nm,19.0s
OXF Oxford 84.26 310 P **P** **23 18 28.0 -0.1**
baz=46
OXF Oxford 84.26 310 IAMs_20 IAMs_20 23 57 11.5
comp=Z,752nm,19.0s
S39A Bolivar 84.30 315 IAMs_20 IAMs_20 23 55 15.4
comp=Z,864nm,21.0s
N33A J Bar K, Exete 84.31 319 IAmb IAmb 23 21 36.7
comp=Z,53nm,0.9s
N33A IAMs_20 IAMs_20 23 55 40.3
comp=Z,1μm,20.0s
JMM Marumori 84.54 45 IAMs_20 IAMs_20 23 59 16.6
comp=Z,842nm,21.0s
Y45A Yeager Farm, C 84.78 310 IAMs_20 IAMs_20 23 58 33.4
comp=Z,794nm,19.0s
WALA Waterton Lakes 84.85 333 IAmb IAmb 23 18 31.9
comp=Z,47nm,1.6s
FCAR Ozark Folk Cen 84.90 313 IAmb IAmb 23 18 32.9
comp=Z,49nm,1.1s
RSSD Black Hills 84.92 325 P **P** **23 18 32.3 +0.7**
RSSD pmax pmax
comp=Z,19nm,1.2s
RSSD MLR MLR
comp=Z,900nm,22.0s
RSSD Black Hills 84.92 325 P **P** **23 18 30.9 -0.7**
baz=38
RSSD Black Hills 84.92 325 P **P** **23 18 32.3 +0.7**
RSSD Black Hills 84.92 325 IAMs_20 IAMs_20 23 56 35.9
comp=Z,864nm,22.0s
U40A Yellville 84.98 313 P **P** **23 18 31.9 +0.1**
baz=45
U40A Yellville 84.98 313 IAmb IAmb 23 18 33.2
comp=Z,41nm,1.1s
KSU1 Kansas State U 85.07 317 P **P** **23 18 31.9 -0.3**
baz=43
X43A Marvell 85.13 311 P **P** **23 18 33.1 +0.6**
baz=46
146A Union 85.33 309 P **P** **23 18 34.0 +0.4**
JYT Yasato 85.38 46 IAMs_20 IAMs_20 00 02 56.7
comp=Z,569nm,18.0s
CHGN Chignik 85.40 1 P **P** **23 18 34.7 +1.3**
WHAR Wooly Hollow 85.41 312 IAMs_20 IAMs_20 23 57 55.9
comp=Z,780nm,19.0s
W41B Gary Mavity, V 85.47 312 P **P** **23 18 34.6 +0.4**
baz=45
W41B Gary Mavity, V 85.47 312 IAMs_20 IAMs_20 23 58 06.5
comp=Z,709nm,19.0s
HHAR Hobbs 85.65 314 IAmb IAmb 23 18 36.4
comp=Z,46nm,1.1s
BDFB Brasilia 85.77 246 P **P** **23 18 36.2 +0.2**
comp=Z,16nm,0.9s,baz=49,slow=6.4,SNR=22
BDFB Brasilia 85.77 246 IAmb IAmb 23 18 38.8
comp=Z,41nm,1.1s
U38A Gravette 85.79 314 IAMs_20 IAMs_20 23 56 11.8
comp=Z,885nm,21.0s
JTMT Jette 86.09 333 IAMs_20 IAMs_20 23 59 16.6
comp=Z,822nm,20.0s
X40A Basin Creek Fa 86.30 312 P **P** **23 18 38.3 -0.1**
baz=45
X40A Basin Creek Fa 86.30 312 IAmb IAmb 23 18 39.8
comp=Z,29nm,1.1s
X40A IAMs_20 IAMs_20 23 57 15.3
comp=Z,785nm,20.0s
W39A Magazine 86.34 313 P **P** **23 18 38.7 +0.2**
baz=44
W39A Magazine 86.34 313 IAmb IAmb 23 18 42.9
comp=Z,53nm,1.5s
RLMT Red Lodge 86.36 329 P **P** **23 18 39.0 +0.3**
baz=35
RLMT Red Lodge 86.36 329 IAmb IAmb 23 18 40.9
comp=Z,7nm,1.8s
RLMT IAMs_20 IAMs_20 23 56 14.0
comp=Z,751nm,20.0s
VBMS Vicksburg 86.51 309 P **P** **23 18 40.2 +0.8**
baz=46
VBMS Vicksburg 86.51 309 P **P** **23 18 39.4 0.0**
T35A Sooner Cattle 86.62 316 IAMs_20 IAMs_20 23 58 39.6
comp=Z,563nm,21.0s
NEW Newport 86.63 335 P **P** **23 18 39.8 0.0**
baz=30
NEW Newport 86.63 335 IAmb IAmb 23 18 41.4
comp=Z,42nm,1.2s
NEW Newport 86.63 335 IAMs_20 IAMs_20 00 00 34.7
comp=Z,552nm,20.0s
R32A Long Quarter, 86.68 318 IAMs_20 IAMs_20 00 00 31.0
comp=Z,682nm,20.0s
FALS False Pass 86.68 4 P **P** **23 18 37.0 -2.8**
MIAR Mount Ida 86.69 313 P **P** **23 18 40.7 +0.5**
baz=44
143A Socs Landing, 86.71 310 IAMs_20 IAMs_20 23 58 37.4
comp=Z,683nm,20.0s
MSO Missoula 86.75 332 P **P** **23 18 40.3 -0.2**
baz=32
MSO Missoula 86.75 332 IAmb IAmb 23 18 41.7
comp=Z,42nm,1.6s
BOZ Bozeman (W) 86.91 330 P **P** **23 18 41.6 +0.2**
baz=34
BOZ Bozeman (W) 86.91 330 IAmb IAmb 23 18 43.3
comp=Z,24nm,1.3s
CBKS Cedar Bluff 86.92 319 P **P** **23 18 40.7 -0.7**
CBKS pmax pmax
comp=Z,55nm,1.5s
CBKS MLR MLR
comp=Z,1μm,21.0s
CBKS Cedar Bluff 86.92 319 P **P** **23 18 40.8 -0.5**
baz=41
CBKS Cedar Bluff 86.92 319 P **P** **23 18 40.7 -0.7**
CBKS IAmb IAmb 23 18 42.6
comp=Z,54nm,1.4s
TUL1 Leonard 86.96 315 P **P** **23 18 41.9 +0.4**
baz=43
TUL1 Leonard 86.96 315 IAMs_20 IAMs_20 23 56 58.6
comp=Z,861nm,22.0s
WLAR White Oak Lake 87.03 312 P **P** **23 18 43.0 +1.2**
YMP Mirror Lake Pl 87.03 329 P **P** **23 18 43.0 +0.8**
KAN09 Caldwell North 87.06 317 P **P** **23 18 42.9 +0.9**
KAN01 Argonia South 87.12 317 P **P** **23 18 41.9 -0.4**
KAN12 Argonia NE Stat 87.14 317 P **P** **23 18 42.5 0.0**
Z41A Richland Creek 87.15 311 P **P** **23 18 43.3 +0.8**
baz=44
Z41A Richland Creek 87.15 311 P **P** **23 18 42.7 +0.2**
Z41A IAmb IAmb 23 18 44.7
comp=Z,42nm,1.0s
344A Westbrook Farm 87.17 309 P **P** **23 18 42.8 +0.1**
KAN08 Anthony NE Sta 87.18 317 P **P** **23 18 42.4 -0.3**
K22A Casper 87.19 326 P **P** **23 18 41.9 -0.9**
baz=37
K22A Casper 87.19 326 IAmb IAmb 23 18 43.2
comp=Z,27nm,1.0s
KAN05 Bluff City Nor 87.21 317 P **P** **23 18 42.0 -0.8**
QUOK Quay 87.27 316 P **P** **23 18 43.4 +0.3**
YHH Holmes Hill 87.27 329 P **P** **23 18 43.8 +0.5**
KAN10 Anthony SW Sta 87.32 317 P **P** **23 18 42.6 -0.7**
KAN14 Manchester OK 87.37 317 P **P** **23 18 43.3 -0.3**
C09A Chrisman Ranch 87.41 335 IAmb IAmb 23 18 45.2
comp=Z,39nm,1.1s
C09A IAMs_20 IAMs_20 00 01 36.5
comp=Z,599nm,18.0s
YHB Horse Butte 87.44 329 P **P** **23 18 44.8 +0.8**
DLMT Dillon 87.48 331 IAmb IAmb 23 18 46.0
comp=Z,23nm,1.2s
H17A Grant Village 87.49 329 P **P** **23 18 45.3 +1.0**
baz=34
H17A Grant Village 87.49 329 P **P** **23 18 45.9 +1.6**
OK030 Cody Creek RV 87.49 315 IAMs_20 IAMs_20 23 59 11.8
comp=Z,677nm,19.0s
OK031 S. Brethren Rd 87.50 315 P **P** **23 18 44.9 +0.7**
SDV Santo Domingo 87.65 279 P **P** **23 18 46.3 +0.9**
YPP Pitchstone Pla 87.68 329 P **P** **23 18 46.8 +1.5**
PHWY Pilot Hill 87.78 324 P **P** **23 18 45.4 -0.4**
PHWY IAmb IAmb 23 18 47.0
comp=Z,34nm,1.1s
B06A Marblemount 87.78 338 P **P** **23 18 43.9 -1.4**
B06A IAmb IAmb 23 22 09.9
comp=Z,29nm,1.5s
B06A IAMs_20 IAMs_20 23 59 00.2
comp=Z,625nm,20.0s
FLWY Flagg Ranch 87.80 329 P **P** **23 18 46.6 +0.9**
FLWY IAmb IAmb 23 18 48.7
comp=Z,66nm,1.9s
FLWY IAMs_20 IAMs_20 23 56 39.0
comp=Z,783nm,22.0s
OK029 Liberty Lake 87.96 316 IAMs_20 IAMs_20 23 59 28.0
comp=Z,597nm,19.0s
IMW Indian Meadow 88.05 329 P **P** **23 18 47.7 +0.6**
IMW IAMs_20 IAMs_20 23 56 57.6
comp=Z,681nm,21.0s
OK025 Westminster Rd 88.05 315 P **P** **23 18 47.0 +0.2**
BCOK Bluff Creek, N 88.14 316 P **P** **23 18 47.1 -0.1**
B05A Bryant 88.19 338 P **P** **23 18 47.5 +0.3**
baz=26
KSCO Kaye Shedlock' 88.22 321 P **P** **23 18 47.8 +0.1**
baz=39
KSCO Kaye Shedlock' 88.22 321 IAmb IAmb 23 18 49.1
comp=Z,26nm,1.0s
KSCO IAMs_20 IAMs_20 23 55 47.7
comp=Z,630nm,22.0s
OKCFA Oklahoma City 88.24 315 P **P** **23 18 47.0 -0.7**
RWWY Rawlins 88.26 325 P **P** **23 18 47.4 -0.6**
RWWY IAmb IAmb 23 18 48.9
comp=Z,18nm,1.1s
D08A Wollman Farm, 88.27 335 IAmb IAmb 23 18 54.2
comp=Z,30nm,1.7s
D08A IAMs_20 IAMs_20 00 00 33.3
comp=Z,601nm,18.0s
N23A Red Feather La 88.33 324 P **P** **23 18 48.5 +0.1**
baz=37
N23A Red Feather La 88.33 324 IAmb IAmb 23 18 49.7
comp=Z,40nm,1.1s
FNO Franklin 88.33 315 P **P** **23 18 48.4 +0.3**
SNOW Snow King Moun 88.33 328 IAMs_20 IAMs_20 23 57 16.2
comp=Z,790nm,21.0s
U32A Winter Ranch, 88.36 317 P **P** **23 18 47.7 -0.6**
U32A IAmb IAmb 23 21 57.2
comp=Z,27nm,1.0s
TPAW Teton Pass 88.39 329 P **P** **23 18 48.6 0.0**
TPAW IAMs_20 IAMs_20 23 57 17.7
comp=Z,627nm,20.0s
BW06 Boulder Array 88.41 327 P **P** **23 18 47.8 -0.9**
baz=35
PDAR Pinedale Array 88.41 327 P **P** **23 18 47.0 -1.7**
comp=Z,2.4nm,0.8s,baz=73,slow=5.0,SNR=15
PDAR LR LR 00 01 00.6
comp=Z,894nm,19.1s,baz=30,slow=37
PDAR Pinedale Array 88.41 327 P **P** **23 18 47.1 -1.5**
Z38A Mt. Pleasant 88.42 312 P **P** **23 18 49.9 +1.3**
REDW Red Top Meadow 88.45 328 P **P** **23 18 48.8 -0.1**
REDW IAMs_20 IAMs_20 00 00 40.4
comp=Z,740nm,21.0s
E09A Wood Farm, Sta 88.49 335 IAMs_20 IAMs_20 00 01 51.1
comp=Z,715nm,18.0s
F10A Beach Ranch, E 88.65 334 IAmb IAmb 23 18 50.5
comp=Z,30nm,1.4s
F10A IAMs_20 IAMs_20 00 01 08.3
comp=Z,695nm,19.0s
E08A Dider Farm, El 88.82 335 P **P** **23 18 50.2 0.0**
E08A IAMs_20 IAMs_20 23 59 35.7
comp=Z,596nm,19.0s
FSCY Frank Sound, G 88.96 294 P **P** **23 18 51.1 -0.2**
E07A Sunnyside 89.02 336 P **P** **23 18 51.4 +0.2**
E07A IAmb IAmb 23 20 55.3
comp=Z,43nm,2.0s
E07A IAMs_20 IAMs_20 00 01 06.9
comp=Z,658nm,18.0s
ISCO Idaho Springs 89.04 323 P **P** **23 18 51.5 -0.3**
baz=37
ISCO Idaho Springs 89.04 323 IAmb IAmb 23 18 53.0
comp=Z,21nm,1.2s
HAWA Hanford 89.06 335 IAmb IAmb 23 18 53.1
comp=Z,19nm,1.0s
HAWA IAMs_20 IAMs_20 00 01 08.1
comp=Z,638nm,20.0s
D03D Eldon 89.14 338 P **P** **23 18 52.0 +0.3**
baz=26
NATX Nacogdoches 89.32 311 P **P** **23 18 53.4 +0.6**
baz=44
NATX Nacogdoches 89.32 311 P **P** **23 18 53.4 +0.6**
D04E Lakebay 89.37 338 P **P** **23 18 53.0 +0.2**
baz=26
LON Longmire 89.46 337 IAMs_20 IAMs_20 00 05 06.7
comp=Z,664nm,19.0s
WMOK Wichita Mounta 89.47 316 P **P** **23 18 53.9 +0.4**
baz=41
WMOK Wichita Mounta 89.47 316 IAmb IAmb 23 18 55.1
comp=Z,23nm,0.9s
WMOK Wichita Mounta 89.47 316 IAMs_20 IAMs_20 23 59 44.0
comp=Z,605nm,20.0s
Q24A Divide 89.48 322 P **P** **23 18 53.3 -0.6**
baz=38
Q24A Divide 89.48 322 IAmb IAmb 23 18 54.9
comp=Z,54nm,1.9s
Q24A IAMs_20 IAMs_20 23 59 28.0
comp=Z,632nm,21.0s
F07A Phinny Hill Vi 89.63 335 P **P** **23 18 54.7 +0.7**
F07A IAmb IAmb 23 18 56.2
comp=Z,25nm,1.4s
BMO Blue Mountains 89.65 333 IAmb IAmb 23 18 54.7
comp=Z,38nm,1.8s
BMO IAMs_20 IAMs_20 00 00 38.8
comp=Z,728nm,21.0s
Z35A Perchaven, San 89.67 314 IAmb IAmb 23 22 03.3
comp=Z,31nm,0.8s
Z35A IAMs_20 IAMs_20 23 58 34.4
comp=Z,548nm,19.0s
HLID Hailey 89.70 331 P **P** **23 18 54.3 -0.3**
baz=32
HLID Hailey 89.70 331 P **P** **23 18 54.7 +0.1**
237A Washetta, Mont 89.81 312 P **P** **23 18 55.6 +0.4**
G08A Pilot Rock 89.84 334 P **P** **23 18 55.0 -0.2**
G08A IAMs_20 IAMs_20 23 58 53.7
comp=Z,576nm,22.0s
E04D Cinebar 89.87 337 P **P** **23 18 55.1 -0.1**
baz=26
O20A White River Ci 89.98 325 P **P** **23 18 56.5 +0.4**
baz=36
O20A White River Ci 89.98 325 P **P** **23 18 56.1 0.0**
O20A IAmb IAmb 23 18 56.7
comp=Z,68nm,1.6s
O20A IAMs_20 IAMs_20 00 00 58.9
comp=Z,736nm,20.0s
F05D White Salmon 90.13 336 P **P** **23 18 56.3 -0.1**
baz=27
SMCO Snowmass 90.17 324 P **P** **23 18 56.5 -0.7**
SMCO IAMs_20 IAMs_20 00 01 02.1
comp=Z,765nm,20.0s
HWUT Hardware Ranch 90.20 328 IAmb IAmb 23 18 57.9
comp=Z,30nm,1.3s
HWUT IAMs_20 IAMs_20 00 00 33.8
comp=Z,594nm,20.0s
CISI Cisompet, Garu 90.32 99 P **P** **23 18 57.3 -0.5**
MFID Camas Ranch 90.36 332 IAmb IAmb 23 22 15.9
comp=Z,14nm,0.8s
MFID IAMs_20 IAMs_20 00 00 24.6
comp=Z,730nm,21.0s
F04A Amboy 90.38 337 IAMs_20 IAMs_20 23 59 19.0
comp=Z,673nm,22.0s
T25A Trinidad 90.56 321 P **P** **23 18 58.7 -0.1**
baz=38
T25A Trinidad 90.56 321 IAMs_20 IAMs_20 23 59 14.6
comp=Z,668nm,20.0s
SDCO Great Sand Dun 90.61 322 P **P** **23 18 59.0 -0.1**
baz=37
SDCO Great Sand Dun 90.61 322 IAMs_20 IAMs_20 00 01 30.0
comp=Z,519nm,19.0s
G05D Wamic, OR 90.66 336 P **P** **23 18 58.2 -0.7**
baz=27
SPB Sao Paulo 90.67 240 IAmb IAmb 23 19 01.8
comp=Z,61nm,1.6s
SPB IAMs_20 IAMs_20 23 59 17.1
comp=Z,583nm,20.0s
WHTX Lake Whitney, 90.77 313 P **P** **23 18 59.8 +0.2**
baz=42
WHTX Lake Whitney, 90.77 313 P **P** **23 18 59.3 -0.3**
WHTX IAmb IAmb 23 19 01.4
comp=Z,42nm,1.3s
SPUT South Promonto 90.82 328 P **P** **23 18 60.0 0.0**
AMTX Amarillo 90.91 318 P **P** **23 19 00.9 +0.5**
baz=40
AMTX Amarillo 90.91 318 IAMs_20 IAMs_20 23 57 21.2
comp=Z,710nm,22.0s
CTU Camp Tracy 91.04 328 P **P** **23 19 00.1 -0.8**
I07A Izee 91.09 334 IAmb IAmb 23 19 03.2
comp=Z,24nm,1.5s
I07A IAMs_20 IAMs_20 23 59 30.8
comp=Z,610nm,19.0s
S22A 4UR Ranch, Cre 91.25 323 P **P** **23 19 01.9 -0.3**
baz=37
S22A 4UR Ranch, Cre 91.25 323 IAmb IAmb 23 19 03.3
comp=Z,20nm,1.1s
S22A IAMs_20 IAMs_20 00 05 42.7
comp=Z,596nm,18.0s
G03D McMinnville, O 91.29 337 P **P** **23 19 01.6 -0.2**
baz=25
HKT Hockley 91.32 311 *i* P **P** **23 19 03.5 +1.4**
HKT pmax pmax
comp=Z,30nm,1.4s
HKT Hockley 91.32 311 P **P** **23 19 02.5 +0.4**
HKT IAmb IAmb 23 19 04.6
comp=Z,28nm,1.2s
J08A Circle Bar Ran 91.36 333 IAMs_20 IAMs_20 00 02 34.2
comp=Z,518nm,20.0s
H04A Detroit Lake 91.43 336 P **P** **23 19 01.7 -0.8**
H04A IAmb IAmb 23 19 03.6
comp=Z,34nm,1.9s
H04A IAMs_20 IAMs_20 00 01 37.8
comp=Z,663nm,22.0s
I05D Terrebonne, OR 91.47 336 P **P** **23 19 03.3 +0.6**
baz=27
PV22 Blue Mesa, Par 91.52 324 IAmb IAmb 23 19 04.2
comp=Z,32nm,1.1s
ABTX Abilene, Hawle 91.53 315 P **P** **23 19 03.5 +0.3**
baz=41
MPU Maple Canyon 91.56 327 P **P** **23 19 03.5 +0.1**
P17A Butcher Ranch, 91.62 326 P **P** **23 19 02.5 -1.1**
PV23 Carpenter Ridg 91.69 325 IAmb IAmb 23 22 12.6
comp=Z,32nm,0.8s
435B Jarrell 91.73 312 P **P** **23 19 04.4 +0.3**
baz=42
435B Jarrell 91.73 312 IAmb IAmb 23 19 06.1
comp=Z,32nm,1.1s
H04D Lebanon 91.75 337 P **P** **23 19 03.8 -0.1**
baz=26
PV01 Paradox Valley 91.75 324 IAmb IAmb 23 19 05.3
comp=Z,27nm,1.0s
PV02 Paradox Valley 91.77 324 P **P** **23 19 04.1 -0.4**

PV02				IAmb	IAmb	23 19 05.5	
	comp=Z,18nm,1.0s						
PV03	**Paradox Valley**	**91.78**	**324**	IAmb	IAmb	23 19 05.5	
	comp=Z,33nm,1.2s						
PV03				IAMs_20	IAMs_20	00 00 54.6	
	comp=Z,731nm,22.0s						
NLU	**North Lily Min**	**91.80**	**327**	P	**P**	**23 19 03.5**	**-1.0**
PV19	**Morning Glory**	**91.80**	**324**	IAmb	IAmb	23 19 05.6	
	comp=Z,31nm,1.2s						
PINE	**Pine Mountain**	**91.83**	**335**	IAmb	IAmb	23 19 07.1	
	comp=Z,35nm,1.4s						
PINE				IAMs_20	IAMs_20	00 02 36.3	
	comp=Z,631nm,20.0s						
PV13	**Radium Mtn., P**	**91.84**	**324**	IAmb	IAmb	23 19 05.8	
	comp=Z,25nm,1.1s						
DUG	**Dugway, Tooele**	**91.90**	**328**	P	**P**	**23 19 05.0**	**+0.1**
	baz=33						
DUG	**Dugway, Tooele**	**91.90**	**328**	IAmb	IAmb	23 22 39.3	
	comp=Z,9.1nm,0.7s						
DUG				IAMs_20	IAMs_20	00 02 37.7	
	comp=Z,511nm,20.0s						
TMUT	**Trail Mountain**	**91.97**	**326**	IAmb	IAmb	23 22 13.4	
	comp=Z,6.2nm,0.9s						
MSTX	**Muleshoe**	**92.19**	**318**	P	**P**	**23 19 05.8**	**-0.6**
	baz=39						
MSTX	**Muleshoe**	**92.19**	**318**	P	**P**	**23 19 06.2**	**-0.2**
MSTX				IAmb	IAmb	23 19 06.9	
	comp=Z,23nm,1.5s						
WVOR	**Wild Horse Val**	**92.23**	**333**	IAMs_20	IAMs_20	00 02 52.1	
	comp=Z,752nm,21.0s						
I04A	**Tendick Farm,**	**92.30**	**336**	P	**P**	**23 19 06.1**	**-0.5**
	baz=26						
J05D	**Fort Rock, OR**	**92.37**	**335**	P	**P**	**23 19 07.1**	**0.0**
	baz=27						
MVCO	**Mesa Verde**	**92.47**	**324**	P	**P**	**23 19 07.5**	**-0.2**
	baz=36						
MVCO	**Mesa Verde**	**92.47**	**324**	IAmb	IAmb	23 19 08.7	
	comp=Z,14nm,1.1s						
I02D	**Swisshome**	**92.47**	**337**	P	**P**	**23 19 07.4**	**+0.1**
	baz=25						
I03D	**Drain, OR**	**92.68**	**337**	P	**P**	**23 19 08.3**	**0.0**
	baz=25						
J04D	**Umpqua Nationa**	**92.70**	**336**	P	**P**	**23 19 08.6**	**0.0**
	baz=26						
K05A	**Summer Lake**	**92.76**	**335**	IAmb	IAmb	23 21 50.5	
	comp=Z,16nm,0.9s						
SAML	**Samuel**	**92.87**	**261**	P	**P**	**23 19 09.6**	**+0.1**
SAML				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SAML				MLR	MLR		
	comp=Z,400nm,22.0s						
SAML	**Samuel**	**92.87**	**261**	P	**P**	**23 19 09.6**	**+0.1**
ROSC	**El Rosal**	**93.03**	**279**	P	**P**	**23 19 09.2**	**-1.7**
	comp=Z,15nm,0.9s,baz=330,slow=22,SNR=8.7						
ROSC	**El Rosal**	**93.03**	**279**	P	**P**	**23 19 09.1**	**-1.7**
ROSC				IAmb	IAmb	23 19 13.3	
	comp=Z,27nm,1.1s						
MSU	**Marysvale**	**93.04**	**327**	P	**P**	**23 19 10.3**	**-0.1**
MSU	**Marysvale**	**93.04**	**327**	P	**P**	**23 19 10.2**	**-0.1**
TCRU	**Three Creeks R**	**93.08**	**327**	P	**P**	**23 19 10.8**	**+0.3**
K04D	**Chiloquin, OR**	**93.14**	**335**	P	**P**	**23 19 10.6**	**0.0**
	baz=26						
JCT	**Junction City**	**93.23**	**314**	P	**P**	**23 19 10.8**	**-0.3**
JCT				pmax	pmax		
	comp=Z,20nm,1.3s						
JCT				MLR	MLR		
	comp=Z,700nm,21.0s						
JCT	**Junction City**	**93.23**	**314**	P	**P**	**23 19 11.0**	**-0.1**
	baz=41						
JCT	**Junction City**	**93.23**	**314**	P	**P**	**23 19 10.8**	**-0.3**
JCT				IAmb	IAmb	23 19 12.7	
	comp=Z,20nm,1.2s						
JCT				IAMs_20	IAMs_20	00 00 46.8	
	comp=Z,688nm,21.0s						
MOD	**Modoc Plateau**	**93.29**	**334**	P	**P**	**23 19 11.8**	**+0.5**
MOD				IAMs_20	IAMs_20	00 01 55.0	
	comp=Z,662nm,19.0s						
ANMO	**Albuquerque**	**93.31**	**321**	*ce*P	**P**	**23 19 10.4**	**-1.2**
ANMO				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ANMO	**Albuquerque**	**93.31**	**321**	P	**P**	**23 19 11.3**	**-0.3**
	baz=37						
ANMO	**Albuquerque**	**93.31**	**321**	P	**P**	**23 19 10.6**	**-1.0**
ANMO	**Albuquerque**	**93.31**	**321**	IAMs_20	IAMs_20	00 01 23.3	
	comp=Z,477nm,20.0s						
TEIG	**Tepich**	**93.32**	**299**	P	**P**	**23 19 11.0**	**-0.6**
J01E	**Myrtle Point**	**93.35**	**337**	P	**P**	**23 19 11.7**	**+0.4**
	baz=25						
MTPU	**Mount Pierson**	**93.44**	**326**	P	**P**	**23 19 12.1**	**-0.3**
SPR3	**Spring Creek 3**	**93.54**	**328**	P	**P**	**23 19 13.0**	**+0.2**
SPR3				IAmb	IAmb	23 19 15.0	
	comp=Z,20nm,1.5s						
L04D	**Klamath Falls**	**93.68**	**335**	P	**P**	**23 19 13.0**	**-0.1**
	baz=26						
K02D	**Willamette Mer**	**93.69**	**336**	P	**P**	**23 19 13.0**	**0.0**
	baz=25						
PSUT	**Pine Spring**	**93.74**	**328**	P	**P**	**23 19 12.9**	**-0.6**
M04C	**Macdoel**	**93.92**	**335**	P	**P**	**23 19 14.2**	**0.0**
	baz=26						
PKCU	**Pink Cliffs**	**93.99**	**326**	P	**P**	**23 19 14.9**	**0.0**
BNM	**Barren Site**	**94.02**	**320**	P	**P**	**23 19 14.3**	**-0.6**
L02E	**Cave Junction**	**94.15**	**336**	P	**P**	**23 19 15.1**	**+0.1**
	baz=25						
SZCU	**Shurtz Canyon**	**94.20**	**327**	P	**P**	**23 19 15.9**	**+0.2**
Y22D	**IRIS PASSCAL I**	**94.23**	**321**	IAMs_20	IAMs_20	00 01 48.8	
	comp=Z,668nm,21.0s						
CCUT	**Cedar City**	**94.36**	**327**	P	**P**	**23 19 16.3**	**-0.1**
M02C	**Callahan**	**94.60**	**335**	P	**P**	**23 19 17.2**	**-0.1**
	baz=26						
R11A	**Troy Canyon, C**	**94.61**	**329**	P	**P**	**23 19 17.0**	**-0.4**
	baz=31						
R11A	**Troy Canyon, C**	**94.61**	**329**	IAMs_20	IAMs_20	00 05 07.2	
	comp=Z,497nm,19.0s						
833A	**Chaparral WMA,**	**94.61**	**312**	P	**P**	**23 19 17.6**	**+0.2**
	baz=41						
W18A	**Petrified Fore**	**94.75**	**323**	P	**P**	**23 19 18.0**	**-0.2**
	baz=35						
W18A	**Petrified Fore**	**94.75**	**323**	IAMs_20	IAMs_20	00 03 32.3	
	comp=Z,656nm,20.0s						
KRMB	**Red Mountain**	**94.83**	**336**	IAMs_20	IAMs_20	00 05 34.6	
	comp=Z,533nm,20.0s						
U15A	**North Rim**	**94.83**	**326**	IAMs_20	IAMs_20	00 03 18.4	
	comp=Z,577nm,19.0s						
PAHR	**Pah Rah Range**	**94.89**	**332**	IAmb	IAmb	23 22 05.6	
	comp=Z,14nm,0.8s						
N02D	**Trinity Center**	**94.93**	**335**	P	**P**	**23 19 18.7**	**-0.1**
	baz=26						
KVN	**Kaiserville**	**94.99**	**331**	P	**P**	**23 19 19.1**	**-0.1**
KVN				pmax	pmax		
	comp=Z,14nm,0.6s						
KVN				MLR	MLR		
	comp=Z,600nm,20.0s						
KVN	**Kaiserville**	**94.99**	**331**	P	**P**	**23 19 19.1**	**-0.1**
KVN				IAmb	IAmb	23 21 32.1	
	comp=Z,14nm,0.6s						
KVN				IAMs_20	IAMs_20	00 05 19.3	
	comp=Z,557nm,20.0s						
BEKR	**Beckworth**	**95.11**	**333**	IAmb	IAmb	23 22 23.3	
	comp=Z,9.8nm,0.7s						
WUAZ	**Wupatki**	**95.18**	**324**	P	**P**	**23 19 20.4**	**+0.3**
	baz=34						
WUAZ	**Wupatki**	**95.18**	**324**	IAMs_20	IAMs_20	00 02 33.6	
	comp=Z,423nm,19.0s						
PRN	**Pahroc Range**	**95.19**	**328**	P	**P**	**23 19 18.4**	**-1.7**
PRN				IAmb	IAmb	23 22 10.7	
	comp=Z,12nm,0.9s						
PRN				IAMs_20	IAMs_20	00 04 45.7	
	comp=Z,506nm,20.0s						
O03E	**Paynes Creek**	**95.23**	**334**	P	**P**	**23 19 19.4**	**-0.7**
	baz=26						
X18A	**Snowflake**	**95.33**	**323**	IAMs_20	IAMs_20	00 03 09.7	
	comp=Z,628nm,20.0s						
MNTX	**Cornudas Mount**	**95.33**	**318**	P	**P**	**23 19 20.1**	**-0.6**
	baz=38						
MNTX	**Cornudas Mount**	**95.33**	**318**	P	**P**	**23 19 19.9**	**-0.8**
KHMM	**Horse Mountain**	**95.35**	**336**	P	**P**	**23 19 20.9**	**+0.1**
KHMM				IAmb	IAmb	23 19 23.0	
	comp=Z,25nm,1.3s						
VCNR	**Virginia City**	**95.35**	**332**	IAMs_20	IAMs_20	00 03 37.8	
	comp=Z,637nm,21.0s						
JCC	**Jacoby Creek,**	**95.50**	**336**	IAMs_20	IAMs_20	23 54 20.6	
	comp=Z,445nm,21.0s						
PNTR	**Pine Nut**	**95.52**	**332**	IAMs_20	IAMs_20	00 03 31.1	
	comp=Z,652nm,21.0s						
RYN	**Ryan**	**95.52**	**331**	IAMs_20	IAMs_20	00 04 29.2	
	comp=Z,554nm,19.0s						
NVAR	**Mina Array Bea**	**95.61**	**331**	P	**P**	**23 19 20.7**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=44,slow=6.6,SNR=4.7						
O02D	**Mt. Diablo Mer**	**95.67**	**335**	P	**P**	**23 19 22.2**	**0.0**
	baz=26						
RUBR	**Rubicon Trail**	**95.75**	**332**	IAMs_20	IAMs_20	00 03 49.4	
	comp=Z,659nm,20.0s						
ORV	**Oroville**	**95.79**	**333**	P	**P**	**23 19 22.0**	**-0.6**
ORV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ORV				MLR	MLR		
	comp=Z,700nm,20.0s						
ORV	**Oroville**	**95.79**	**333**	P	**P**	**23 19 22.0**	**-0.6**
LHV	**Little Huntoon**	**95.84**	**331**	P	**P**	**23 19 22.8**	**0.0**
LHV				IAmb	IAmb	23 22 43.4	
	comp=Z,18nm,0.8s						
EPT	**El Paso**	**95.86**	**319**	IAMs_20	IAMs_20	00 02 53.9	
	comp=Z,731nm,22.0s						
121A	**Cookes Peak, D**	**95.90**	**320**	P	**P**	**23 19 23.7**	**+0.2**
	baz=36						
WAKR	**Walker**	**95.97**	**332**	P	**P**	**23 19 22.7**	**-1.0**
WAKR				IAMs_20	IAMs_20	00 03 45.2	
	comp=Z,656nm,22.0s						
SHPR	**Sheep Range**	**96.00**	**328**	P	**P**	**23 19 22.7**	**-1.2**
TPNV	**Topopah Spring**	**96.08**	**329**	P	**P**	**23 19 24.3**	**+0.1**
	baz=30						
TX32	**Lajitas Array**	**96.26**	**316**	IAmb	IAmb	23 19 26.6	
	comp=Z,18nm,1.4s						
TXAR	**Lajitas Array**	**96.26**	**316**	P	**P**	**23 19 25.3**	**+0.2**
	comp=Z,4.7nm,1.0s,baz=61,slow=3.8,SNR=26						
TXAR	**Lajitas Array**	**96.26**	**316**	P	**P**	**23 19 25.1**	**0.0**
TXAR	**Lajitas Array**	**96.26**	**316**	P	**P**	**23 19 25.1**	**0.0**
CMB	**Columbia Colle**	**96.74**	**332**	IAMs_20	IAMs_20	00 04 09.4	
	comp=Z,700nm,21.0s						
HOPS	**Hopland Field**	**96.83**	**334**	IAmb	IAmb	23 19 30.3	
	comp=Z,22nm,1.4s						
Y14A	**Wickenburg**	**97.23**	**325**	IAMs_20	IAMs_20	00 05 18.0	
	comp=Z,527nm,21.0s						
CWC	**Cottonwood Cre**	**97.25**	**330**	P	**P**	**23 19 29.3**	**-0.2**
	baz=29						
MPMC	**Manual Prospec**	**97.35**	**329**	P	**P**	**23 19 29.7**	**-0.3**
	baz=30						
PDMCI	**Parker Dam,Lak**	**97.43**	**326**	P	Pdif	23 19 30.2	0.0
	baz=32						
TUC	**Tucson**	**97.55**	**322**	P	Pdif	23 19 30.9	0.0
	baz=34						
319A	**Douglas**	**97.58**	**321**	IAMs_20	IAMs_20	00 07 20.4	
	comp=Z,608nm,20.0s						
GMRC	**Granite Mounta**	**97.68**	**327**	P	Pdif	23 19 31.3	-0.2
	baz=31						
LRMC	**Laurel Mtn Rad**	**97.93**	**329**	P	Pdif	23 19 32.6	+0.1
	baz=30						
HEC	**Hector,Ludlow**	**97.93**	**328**	P	**P**	**23 19 32.3**	**-0.2**
	baz=31						
IRM	**Iron Mountain**	**98.00**	**326**	P	**P**	**23 19 32.5**	**-0.2**
	baz=31						
ISA	**Isabella, Lake**	**98.08**	**329**	P	Pdif	23 19 33.1	-0.1
	baz=29						
EDW2	**Edwards Air Fo**	**98.57**	**329**	P	Pdif	23 19 35.3	0.0
	baz=29						
GLA	**Glamis**	**98.80**	**326**	P	**P**	**23 19 35.9**	**-0.4**
	baz=32						
214A	**Organ Pipe Nat**	**98.80**	**323**	IAMs_20	IAMs_20	00 05 08.5	
	comp=Z,663nm,20.0s						
PFO	**Pinyon Flats O**	**99.03**	**327**	P	**Pdif**	**23 19 36.8**	**-0.7**
	baz=31						
ESJX	**Sierra Juarez**	**100.18**	**326**	IAMs_20	IAMs_20	00 08 38.9	
	comp=Z,480nm,20.0s						
SNCC	**San Nicolas Is**	**100.61**	**329**	P	**Pdif**	**23 19 44.2**	**-0.2**
	baz=28						
SPX	**San Pedro Mart**	**100.79**	**325**	IAMs_20	IAMs_20	00 09 23.9	
	comp=Z,480nm,20.0s						
WSI	**Waingapu**	**101.33**	**93**	P	**Pdif**	**23 19 57.8**	**+10**
AC05	**El Transito**	**110.03**	**249**	IAMs_20	IAMs_20	00 12 10.9	
	comp=Z,501nm,19.0s						
SNAA	**Sanae**	**111.58**	**189**	IAMs_20	IAMs_20	00 08 49.1	
	comp=Z,423nm,19.0s						
GENI	**Cyprem**	**112.34**	**75**	P	**Pdif**	**23 20 34.8**	**-2.0**
WB4	**Warramunga Arr**	**118.29**	**94**	IAMs_20	IAMs_20	00 16 34.7	
	comp=Z,372nm,18.0s						
WRA	**Warramunga Arr**	**118.30**	**94**	PKP	**PKPdf**	**23 24 42.4**	**-1.6**
	comp=Z,2.9nm,0.8s,baz=296,slow=2.2,SNR=19						
WRA	**Warramunga Arr**	**118.30**	**94**		**PKPdf**	**23 24 42.1**	**-2.0**
WRAB	**Tennant Creek**	**118.30**	**94**	*c i*PKIKP	**PKPdf**	**23 24 43.6**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,9.0nm,2.5s						
LL01	**San Ignacio de**	**118.46**	**237**	IAMs_20	IAMs_20	00 17 41.9	
	comp=Z,383nm,19.0s						
ASAR	**Alice Springs**	**119.98**	**97**	PKP	**PKPdf**	**23 24 46.0**	**-1.2**
	comp=Z,4.4nm,0.9s,baz=323,slow=1.8,SNR=27						
ASAR	**Alice Springs**	**119.98**	**97**	PKPdf	**PKPdf**	**23 24 45.4**	**-1.8**
PMG	**Port Moresby**	**122.02**	**75**	IAMs_20	IAMs_20	00 07 51.6	
	comp=Z,335nm,20.0s						
QSPA	**South Pole Qui**	**128.50**	**180**		**PKiKP**	**23 25 02.5**	**-0.4**
STKA	**Stephens Creek**	**129.91**	**102**	PKP	**PKPdf**	**23 25 04.7**	**-1.2**
	comp=Z,4.1nm,0.9s,baz=305,slow=3.3,SNR=6.0						
STKA	**Stephens Creek**	**129.91**	**102**	PKPdf	**PKPdf**	**23 25 05.9**	**0.0**
DZM	**Mont Dzumac**	**144.36**	**73**	*e*PKIKP	**PKPdf**	**23 25 32.5**	**-0.4**
	comp=Z,37nm,1.5s						
DZM	**Mont Dzumac**	**144.36**	**73**	eLR	LR	00 12 52.0	
	comp=Z,1µm,30.4s						
DZM	**Mont Dzumac**	**144.36**	**73**	PKPdf	**PKPdf**	**23 25 33.2**	**+0.3**
TAOE	**Nuku Hiva Isla**	**146.85**	**329**	eLR	LR	00 13 59.7	
	comp=Z,333nm,26.9s						
PPT2	**Papeete2**	**158.14**	**342**	*e*SS	SS	23 50 05.5	+0.2
	comp=Z,970nm,35.0s						
PPT2	**Papeete2**	**158.14**	**342**	*e*LR	LR	00 19 06.8	
	comp=Z,403nm,24.0s						
TBI	**Tubuai**	**163.58**	**336**	*e*SS	SS	23 51 06.9	+4.6
	comp=Z,142nm,29.0s						
TBI	**Tubuai**	**163.58**	**336**	eLR	LR	00 21 29.7	
	comp=Z,283nm,26.0s						

MED_RC ***17*** *23:09:03.0±0.2,38.6°.65N×23.7°.43E,h21km±1km,MW5.2/27, Moment Tensor Solution. Body waves: s1,c1;Mantle waves: s27,c46; Duration: 1ŝ7 Moment tensor: Scale 10¹⁷Nm; Mrr-0.29±.06; Mθθ0.85±.04; Mθφ-0.56±.03; Mrθ-0.06±.05; Mrφ0.26±.03; Mφφ0.16±.05; Best double couple: M₀0.79000×10¹⁷ NP1:φs217.00000°,δ73.00000°, λ-164.00000°. NP2:φs122.00000°,δ75.00000°, λ-18.00000°. Principal axes: T 0.9000, Plg1.0000°, Azm170.0000°; N -0.2200, Plg67.0000°, Azm263.0000°; P -0.6800, Plg23.0000°, Azm79.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

ATH ***17*** *23:09:03.3,38.6°.64N×23.7°.41E,h23km±1km,ML5.2/29 Error ellipse: s-maj=1.0km s-min=0.5km az=237.0*

PDG ***17*** *23:09:03.3±0.6,38.6°.65N×23.7°.45E,h12km,MD5.2/5, ML5.0/9,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

GCMT ***17*** *23:09:03.7±0.2,38.6°.56N±0.1°×23.7°.47E±0.2°,h23km±1km, MW5.2/119,Moment Tensor Solution. s50,c58; s119,c181; Duration: 1ŝ0 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.32±.04; Mθθ0.90±.03; Mθφ-0.57±.03; Mrθ0.18±.04; Mθφ0.37±.03; Mrφ0.19±.05; Best double couple: M₀0.86800×10¹⁷ NP1:φs121.00000°,δ68.00000°, λ-9.00000°. NP2:φs214.00000°,δ82.00000°, λ-158.00000°. Principal axes: T 1.0180, Plg9.0000°, Azm346.0000°; N -0.2980, Plg67.0000°, Azm233.0000°; P -0.7190, Plg21.0000°, Azm80.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISK ***17*** *23:09:03.3,38.6°.68N×23.7°.46E,h12km,ML5.3/20*

THE ***17*** *23:09:03.4,38.6°.65N×23.7°.43E,h1km±1km,ML5.3/17,Error ellipse: s-maj=1.2km s-min=0.4km az=50.0*

BJI ***17*** *23:09:03.0±0.0,38.6°.60N×23.7°.40E,h11km,mB5.2/34, mb4.9/54,Ms5.2/32,Ms7 4.8/32*

DDA ***17*** *23:09:04.9,38.6°.58N×23.7°.25E,h51km±3km,MW5.3*

NEIC ***17*** *23:09:04.7,38.6°.69N×23.7°.24E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-2.23; Mθθ4.64; Mθφ-2.41; Mrθ-4.01; Mrφ 1.92; Mφφ5.40; Fault plane solution: M₀8.07000×10¹⁶ NP1:φs226.01000°, δ35.34000°,λ-163.13000°. NP2:φs122.12000°, δ80.33000°,λ-55.84000°. Principal axes: T 6.5290, Plg27.0000°, Azm186.0000°; N 2.4901, Plg34.0000°, Azm296.0000°; P -9.0191, Plg44.0000°, Azm66.0000°;*

NEIC ***17*** *23:09:04.5±2.0,38.6°.68N±0.0°×23.7°.31E±0.0°.06,h10km±1km, mb5.3/259,Mwr5.2/38,Mww5.1,ML5.3(THE) Error ellipse: s-maj=8.1km s-min=7.3km az=103.0*

MOS ***17*** *23:09:04.3±1.0,38.6°.65N×23.7°.42E,h21km,mb5.1/31,Error ellipse: s-maj=5.1km s-min=2.8km az=90.7*

BEO ***17*** *23:09:05.4±3.8,38.7°.49N×23.7°.80E,h45km±5km,ML5.3/6*

IDC ***17*** *23:09:05.0±1.9,38.6°.68N×23.7°.35E,h18km±11km,mb4.8/34, mb1 4.9/47,mb1mx4.8/61,mbtmp4.9/47,ML4.5/11,MS4.5/2, Ms1 4.7/2,ms1mx3.9/50,Error ellipse: s-maj=9.3km s-min=8.4km az=121.0*

NEIC ***17*** *23:09:07,38.7°.70N×23.7°.28E,h18km,Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr-1.50; Mθθ5.76; Mφφ-4.27; Mrθ2.47; Mrφ 1.85; Mθφ1.70; Fault plane solution: M₀6.27000×10¹⁶ NP1:φs126.00000°, δ60.00000°,λ-3.00000°. NP2:φs217.00000°,δ87.00000°, λ-150.00000°. Principal axes: T 6.9870, Plg18.0000°, Azm348.0000°; N -1.8678, Plg60.0000°, Azm223.0000°; P -5.1192, Plg23.0000°, Azm86.0000°;*

ISC 17 23:09:04.5±0.7,38°.64N±0.01×23°.39E±0.01,h10km±4km, n1005,σ1ŝ53/1023,mb5.3/237,22C-12D,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.30**	**280**	P	**Pg**	**23 09 10.2**		**-0.3**
ATAL				S	**Sg**	**23 09 15.0**		**+0.5**
ATAL					AML	AML	23 09 16.2	
ATAL					AML	AML	23 09 16.2	
ATAL	**Atalanti**	**0.30**	**280**	P	**Pg**	**23 09 09.2**		**-1.3**
ATAL				S	**Sg**	**23 09 14.3**		**-0.2**
LKR	**Lokris**	**0.31**	**272**	P	**Pg**	**23 09 10.2**		**-0.5**
LKR				S	**Sg**	**23 09 15.2**		**+0.3**
LKR					AML	AML	23 09 16.0	
LKR					AML	AML	23 09 20.0	
LKR	**Lokris**	**0.31**	**272**	P	**Pg**	**23 09 09.2**		**-1.5**
VIL2	**Platees**	**0.44**	**193**	P	**Pg**	**23 09 12.9**		**-0.2**
VIL2				S	**Sb**	**23 09 20.6**		**-0.3**
VIL2					AML	AML	23 09 21.5	
VIL2					AML	AML	23 09 24.9	
VILL	**Villia**	**0.48**	**188**	P	**Pg**	**23 09 12.4**		**-1.5**
VILL				S	**Sg**	**23 09 19.9**		**-0.3**
	272µm,1.0s							
KYMI	**Kymi, Euboea I**	**0.55**	**91**	P	**Pg**	**23 09 13.9**		**-1.3**
KYMI				S	**Sg**	**23 09 22.3**		**-0.2**
KYMI					AML	AML	23 09 23.6	
KYMI					AML	AML	23 09 25.1	
KYMI	**Kymi, Euboea I**	**0.55**	**91**	P	**Pg**	**23 09 13.1**		**-1.7**
AXAR	**Agios Charalam**	**0.59**	**282**	P	**Pg**	**23 09 15.1**		**-0.8**
AXAR				S	**Sg**	**23 09 23.8**		**+0.1**
AXAR	**Agios Charalam**	**0.59**	**282**	P	**Pg**	**23 09 14.6**		**-1.3**
AXAR				S	**Sg**	**23 09 23.6**		**-0.1**
	494µm,0.6s							
AOS	**Alonnisos**	**0.65**	**36**	P	**Pg**	**23 09 16.3**		**-0.7**
AOS				S	**Sg**	**23 09 24.9**		**-0.7**
AOS					AML	AML	23 09 28.9	
AOS					AML	AML	23 09 29.3	
AOS	**Alonnisos**	**0.65**	**36**	PG	**Pg**	**23 09 16.2**		**-0.9**
AOS				SG	**Sg**	**23 09 23.8**		**-1.8**
AOS	**Alonnisos**	**0.65**	**36**	P	**Pg**	**23 09 15.3**		**-1.8**
NEO	**Neokhori**	**0.68**	**349**	P	**Pg**	**23 09 17.1**		**-0.5**
NEO				S	**Sg**	**23 09 26.1**		**-0.4**
NEO	**Neokhori**	**0.68**	**349**	P	**Pg**	**23 09 16.7**		**-0.9**
PTL	**Penteli**	**0.70**	**148**	P	**Pg**	**23 09 17.0**		**-0.9**
PTL					AML	AML	23 09 30.1	
PTL					AML	AML	23 09 31.7	
PTL	**Penteli**	**0.70**	**148**	P	**Pg**	**23 09 16.4**		**-1.6**
LTK	**Loutraki**	**0.70**	**209**	P	**Pg**	**23 09 17.0**		**-1.1**
LTK				S	**Sb**	**23 09 28.1**		**-0.4**
LTK					AML	AML	23 09 32.2	
LTK					AML	AML	23 09 33.5	
LTK	**Loutraki**	**0.70**	**209**	P	**Pg**	**23 09 16.7**		**-1.4**
LTK				S	**Sg**	**23 09 27.3**		**0.0**
	367µm,0.8s							
DION	**Dionisos Attik**	**0.70**	**143**	P	**Pg**	**23 09 17.2**		**-0.9**
DION				S	**Sg**	**23 09 27.3**		**0.0**
DION					AML	AML	23 09 30.5	
DION					AML	AML	23 09 31.3	
DION	**Dionisos Attik**	**0.70**	**143**	P	**Pg**	**23 09 16.4**		**-1.7**
ATH	**Athens Observa**	**0.71**	**159**	P	**Pg**	**23 09 17.3**		**-0.9**
ATH					AML	AML	23 09 31.8	
ATH					AML	AML	23 09 32.2	
ATH	**Athens Observa**	**0.71**	**159**	P	**Pg**	**23 09 16.7**		**-1.6**
ATH	**Athens Observa**	**0.71**	**159**	P	**Pg**	**23 09 16.7**		**-1.6**
DSF	**Desfina**	**0.72**	**252**	P	**Pg**	**23 09 16.9**		**-1.5**
DSF					AML	AML	23 09 32.8	
DSF					AML	AML	23 09 33.4	
DSF	**Desfina**	**0.72**	**252**	P	**Pg**	**23 09 16.7**		**-1.7**
DSF				S	**Sb**	**23 09 28.4**		**-0.6**
	301µm,0.5s							
LOUT	**Loutraki**	**0.73**	**207**	P	**Pg**	**23 09 17.6**		**-1.1**
LOUT					AML	AML	23 09 32.8	
LOUT					AML	AML	23 09 35.6	
	comp=N,46871µm,0.7s							
XOR	**Xorichti**	**0.74**	**348**	P	**Pg**	**23 09 18.0**		**-0.8**
XOR				S	**Sg**	**23 09 28.7**		**+0.2**
XOR					AML	AML	23 09 31.8	
XOR					AML	AML	23 09 32.6	
XOR	**Xorichti**	**0.74**	**348**	P	**Pg**	**23 09 17.4**		**-1.4**
ATHU	**Athens Univers**	**0.74**	**155**	P	**Pg**	**23 09 17.7**		**-1.0**
ATHU					AML	AML	23 09 31.3	
	comp=E,95526µm,0.4s							
ATHU					AML	AML	23 09 31.6	
ATHU	**Athens Univers**	**0.74**	**155**	P	**Pg**	**23 09 17.4**		**-1.4**
ATHU				S	**Sg**	**23 09 28.3**		**-0.2**
VOL2	**Volos**	**0.80**	**335**	P	**Pn**	**23 09 22.1**		**+0.3**
VOL2				S	**Sn**	**23 09 35.6**		**+1.8**
THAL	**Thalero**	**0.83**	**224**	P	**Pg**	**23 09 20.0**		**-0.5**
THAL				S	**Sg**	**23 09 31.3**		**-0.1**
THAL					AML	AML	23 09 34.7	
THA

SERG				AML	AML	23 09 46.0		
SERG	**Sergoula**	**1.07**	**258**	P	**Pg**	**23 09 23.2**	**-1.9**	
SERG				S	**Sn**	**23 09 40.3**	**-0.2**	
	comp=E,97µm,0.8s							
ALIK	**Aliki, Aigiali**	**1.08**	**250**	P	**Pb**	**23 09 24.6**	**-0.5**	
GUR	**Goura**	**1.09**	**230**	P	**Pg**	**23 09 25.0**	**-0.4**	
GUR				S	**Sg**	**23 09 39.5**	**0.0**	
GUR				AML	AML	23 09 43.3		
GUR				AML	AML	23 09 44.2		
GUR	**Goura**	**1.09**	**230**	P	**Pg**	**23 09 24.3**	**-1.1**	
GUR				S	**Sn**	**23 09 40.6**	**-0.3**	
	comp=E,303µm,0.7s							
KLV	**Kalavryta, Ach**	**1.15**	**239**	P	**Pb**	**23 09 25.4**	**-1.0**	
KLV				S	**Sb**	**23 09 41.1**	**-0.2**	
KLV				AML	AML	23 09 43.8		
KLV				AML	AML	23 09 43.8		
KLV	**Kalavryta, Ach**	**1.15**	**239**	P	**Pb**	**23 09 25.3**	**-1.1**	
ANX	**Ano Chora**	**1.16**	**268**	P	**Pb**	**23 09 25.0**	**-1.5**	
ANX				S	**Sb**	**23 09 41.3**	**-0.3**	
ANX				AML	AML	23 09 45.8		
ANX				AML	AML	23 09 49.3		
ANX	**Ano Chora**	**1.16**	**268**	P	**Pb**	**23 09 25.3**	**-1.3**	
ANX				S	**Sn**	**23 09 42.4**	**-0.2**	
	comp=E,155µm,0.7s							
EFP	**Efpalio**	**1.19**	**260**	P	**Pb**	**23 09 25.8**	**-1.3**	
EFP	**Efpalio**	**1.19**	**260**	P	**Pb**	**23 09 25.3**	**-1.7**	
EFP				S	**Sn**	**23 09 43.9**	**+0.7**	
	comp=E,92µm,0.9s							
EVR	**Evrytania**	**1.27**	**283**	P	**Pn**	**23 09 28.1**	**-0.2**	
EVR				AML	AML	23 09 53.0		
EVR				AML	AML	23 09 56.6		
	comp=N,79558µm,1.1s							
EVR	**Evrytania**	**1.27**	**283**	P	**Pn**	**23 09 27.9**	**-0.4**	
KRND	**KRANIDI**	**1.27**	**189**	P	**Pn**	**23 09 27.1**	**-1.1**	
KRND				S	**Sn**	**23 09 45.2**	**-0.1**	
KRND				AML	AML	23 09 47.0		
KRND				AML	AML	23 09 47.0		
KRND	**KRANIDI**	**1.27**	**189**	P	**Pn**	**23 09 27.1**	**-1.1**	
LRSO	**Larissa Observ**	**1.29**	**323**	P	**Pn**	**23 09 28.5**	**0.0**	
LRSO	**Larissa Observ**	**1.29**	**323**	P	**Pn**	**23 09 27.6**	**+0.1**	
LRSO				S	**Sg**	**23 09 46.2**	**+0.2**	
PAIG	**Paliouri**	**1.30**	**10**	P	**Pn**	**23 09 27.2**	**-1.5**	
PAIG	**Paliouri**	**1.30**	**10**	P	**Pn**	**23 09 26.4**	**-2.3**	
PAIG	**Paliouri**	**1.30**	**10**	P	**Pn**	**23 09 26.4**	**-2.3**	
THL	**Klokotos Trika**	**1.42**	**311**	P	**Pn**	**23 09 30.0**	**-0.2**	
THL				AML	AML	23 09 56.0		
	comp=E,65790µm,0.8s							
THL				AML	AML	23 09 56.7		
	comp=N,55625µm,0.7s							
THL	**Klokotos Trika**	**1.42**	**311**	P	**Pn**	**23 09 30.4**	**+0.2**	
TRIP	**Tripoli**	**1.42**	**219**	P	**Pn**	**23 09 29.8**	**-0.5**	
TRIP				S	**Sb**	**23 09 49.4**	**+0.1**	
TRIP	**Tripoli**	**1.42**	**219**	P	**Pn**	**23 09 28.9**	**-1.5**	
TRIP				S	**Sn**	**23 09 49.2**	**0.0**	
	comp=N,60µm,0.8s							
DRO	**Drossia**	**1.49**	**243**	P	**Pn**	**23 09 30.2**	**-1.1**	
DRO				S	**Sb**	**23 09 51.4**	**+0.1**	
DRO				AML	AML	23 09 58.6		
DRO				AML	AML	23 09 59.2		
DRO	**Drossia**	**1.49**	**243**	P	**Pn**	**23 09 30.7**	**-0.6**	
DRO				S	**Sg**	**23 09 52.4**	**-0.1**	
	comp=N,102µm,0.8s							
VLX	**Vlachokerasia**	**1.50**	**213**	P	**Pn**	**23 09 31.0**	**-0.4**	
VLX	**Vlachokerasia**	**1.50**	**213**	P	**Pn**	**23 09 31.1**	**-0.4**	
VLX				S	**Sn**	**23 09 51.0**	**-0.1**	
	comp=N,86µm,0.9s							
LIT	**Litokhoron**	**1.62**	**335**	P	**Pn**	**23 09 32.5**	**-0.5**	
LIT	**Litokhoron**	**1.62**	**335**	*i* P	**Pn**	**23 09 32.6**	**-0.4**	
LIT	**Litokhoron**	**1.62**	**335**	P	**Pn**	**23 09 32.2**	**-0.8**	
LIT	**Litokhoron**	**1.62**	**335**	Pn	**Pn**	**23 09 32.2**	**-0.8**	
LIT	**Litokhoron**	**1.62**	**335**	P	**Pn**	**23 09 31.8**	**-1.2**	
RLS	**Riolos of Patr**	**1.62**	**250**	P	**Pn**	**23 09 33.0**	**0.0**	
RLS	**Riolos of Patr**	**1.62**	**250**	P	**Pn**	**23 09 33.2**	**+0.1**	
PLG	**Polygyros**	**1.73**	**1**	P	**Pn**	**23 09 33.2**	**-1.4**	
PLG	**Polygyros**	**1.73**	**1**	P	**Pn**	**23 09 32.9**	**-1.7**	
PLG	**Polygyros**	**1.73**	**1**	P	**Pn**	**23 09 32.9**	**-1.7**	
AMT	**Artemida-Makis**	**1.73**	**231**	P	**Pn**	**23 09 34.7**	**+0.1**	
AMT				S	**Sb**	**23 09 57.8**	**-0.3**	
	comp=N,74µm,0.9s							
PDO	**Prodromos**	**1.73**	**269**	P	**Pn**	**23 09 35.1**	**+0.5**	
PDO	**Prodromos**	**1.73**	**269**	P	**Pn**	**23 09 35.4**	**+0.8**	
OUR	**Ouranopolis**	**1.75**	**15**	P	**Pn**	**23 09 33.7**	**-1.0**	
OUR	**Ouranopolis**	**1.75**	**15**	PN	**Pn**	**23 09 33.8**	**-1.0**	
OUR				SN	**Sn**	**23 09 55.3**	**-1.8**	
OUR	**Ouranopolis**	**1.75**	**15**	P	**Pn**	**23 09 33.2**	**-1.6**	
OUR	**Ouranopolis**	**1.75**	**15**	P	**Pn**	**23 09 33.2**	**-1.6**	
ITM	**Ithomi**	**1.86**	**219**	P	**Pn**	**23 09 37.1**	**+0.7**	
ITM	**Ithomi**	**1.86**	**219**	PN	**Pb**	**23 09 37.7**	**-0.9**	
ITM				SN	**Sb**	**23 10 01.4**	**-0.6**	
ITM	**Ithomi**	**1.86**	**219**	Pn	**Pn**	**23 09 37.2**	**+0.7**	
ITM				Sn	**Sn**	**23 09 59.2**	**-0.8**	
ITM	**Ithomi**	**1.86**	**219**	P	**Pn**	**23 09 37.1**	**+0.7**	
LIA	**Limnos Island**	**1.87**	**47**	P	**Pn**	**23 09 35.0**	**-1.5**	
LIA				AML	AML	23 10 05.6		
	comp=N,85922µm,0.9s							
LIA				AML	AML	23 10 07.6		
LIA	**Limnos Island**	**1.87**	**47**	P	**Pn**	**23 09 34.7**	**-1.8**	
VLI	**Veliai**	**1.95**	**191**	P	**Pn**	**23 09 37.0**	**-0.7**	
VLI	**Veliai**	**1.95**	**191**	P	**Pn**	**23 09 36.9**	**-0.7**	
HORT	**Hortiatis**	**1.97**	**353**	P	**Pn**	**23 09 36.7**	**-1.1**	
HORT	**Hortiatis**	**1.97**	**353**	PN	**Pn**	**23 09 36.8**	**-1.1**	
HORT				SN	**Sn**	**23 10 01.4**	**-1.2**	
HORT	**Hortiatis**	**1.97**	**353**	P	**Pn**	**23 09 36.8**	**-1.1**	
SIGR	**SIGRI**	**2.00**	**73**	PN	**Pn**	**23 09 37.2**	**-1.1**	
SIGR	**SIGRI**	**2.00**	**73**	P	**Pn**	**23 09 36.9**	**-1.4**	
THE	**Thessaloniki**	**2.02**	**351**	P	**Pn**	**23 09 37.1**	**-1.4**	
THE	**Thessaloniki**	**2.02**	**351**	P	**Pn**	**23 09 37.1**	**-1.4**	
KPRO	**Kipourio**	**2.05**	**310**	P	**Pn**	**23 09 39.0**	**0.0**	
MHLA	**Plaka, Milos I**	**2.06**	**156**	P	**Pn**	**23 09 38.0**	**-1.1**	
KZN	**Kozani**	**2.08**	**323**	P	**Pn**	**23 09 39.6**	**+0.1**	
KZN	**Kozani**	**2.08**	**323**	P	**Pn**	**23 09 40.0**	**+0.5**	
MHLO	**Agia Marina, M**	**2.11**	**157**	P	**Pn**	**23 09 38.9**	**-0.7**	
MHLO	**Agia Marina, M**	**2.11**	**157**	P	**Pn**	**23 09 39.0**	**-0.7**	
NYDR	**Nydri-Lefkada**	**2.11**	**273**	P	**Pb**	**23 09 42.0**	**-0.8**	
EVGI	**Lefkada island**	**2.15**	**275**	P	**Pb**	**23 09 42.5**	**-0.9**	
LKD2	**Lefkada island**	**2.15**	**275**	P	**Pb**	**23 09 42.5**	**-0.9**	
TSLK	**Tsoukalades, L**	**2.15**	**276**	P	**Pb**	**23 09 43.2**	**-0.2**	
SOH	**Sokhos**	**2.18**	**359**	P	**Pn**	**23 09 40.2**	**-0.6**	
SOH	**Sokhos**	**2.18**	**359**	P	**Pn**	**23 09 40.2**	**-0.6**	
PYL	**PYLOS**	**2.18**	**217**	P	**Pn**	**23 09 42.3**	**+1.6**	
PYL				S	**Sn**	**23 10 07.8**	**0.0**	
	comp=N,22µm,1.0s							
THAS	**Thassos island**	**2.21**	**27**	P	**Pn**	**23 09 39.5**	**-1.7**	
JAN	**Janina**	**2.22**	**298**	P	**Pn**	**23 09 42.1**	**+0.7**	
JAN	**Janina**	**2.22**	**298**	P	**Pn**	**23 09 42.5**	**+1.1**	
JAN	**Janina**	**2.22**	**298**	P	**Pn**	**23 09 42.5**	**+1.1**	
FSK	**Fiskardo**	**2.23**	**266**	P	**Pn**	**23 09 42.8**	**+1.4**	
VLS	**Valsamata**	**2.25**	**259**	P	**Pn**	**23 09 42.7**	**+1.0**	
VLS	**Valsamata**	**2.25**	**259**	P	**Pn**	**23 09 43.2**	**+1.5**	
PSDA	**Pessada-Kefalo**	**2.27**	**257**	P	**Pn**	**23 09 42.3**	**+0.3**	
VLMS	**Volimes, Zakyn**	**2.28**	**251**	P	**Pn**	**23 09 43.9**	**+1.7**	
APE	**Apeiranthos**	**2.31**	**132**	P	**Pn**	**23 09 41.4**	**-1.1**	
APE	**Apeiranthos**	**2.31**	**132**	PN	**Pn**	**23 09 41.8**	**-0.8**	
APE	**Apeiranthos**	**2.31**	**132**	*i* P	**Pn**	**23 09 41.7**	**-0.8**	
APE				*i* S	**Sn**	**23 10 07.8**	**-3.2**	
APE	**Apeiranthos**	**2.31**	**132**	*i* P	**Pn**	**23 09 41.5**	**-1.0**	
APE	**Apeiranthos**	**2.31**	**132**	P	**Pn**	**23 09 41.1**	**-1.4**	
PRK	**Paraskevi**	**2.32**	**74**	P	**Pn**	**23 09 42.3**	**-0.4**	
KEF5	**Kardakata, Kep**	**2.33**	**262**	P	**Pn**	**23 09 44.2**	**+1.5**	
PENT	**Pentalofos**	**2.34**	**312**	P	**Pn**	**23 09 43.5**	**+0.5**	
KEF4	**Livadi, Kephal**	**2.36**	**262**	P	**Pn**	**23 09 44.4**	**+1.2**	
BOZC	**Bozcaada**	**2.39**	**59**	PN	**Pn**	**23 09 42.6**	**-1.0**	
BOZC	**Bozcaada**	**2.39**	**59**	*i* P	**Pn**	**23 09 43.0**	**-0.6**	
BOZC				*i* S	**Sb**	**23 10 17.5**	**+0.6**	
BOZC				IAML		23 10 22.0		
	comp=N,7µm,1.0s							
KTHA	**Kythira Island**	**2.40**	**186**	P	**Pn**	**23 09 43.1**	**-0.6**	
KTHA	**Kythira Island**	**2.40**	**186**	PN	**Pn**	**23 09 43.8**	**+0.1**	
KTHA	**Kythira Island**	**2.40**	**186**	P	**Pn**	**23 09 43.2**	**-0.6**	
DMLN	**Damoulianata-K**	**2.41**	**261**	P	**Pn**	**23 09 44.9**	**+1.0**	
GRG	**Griva**	**2.44**	**342**	PN	**Pn**	**23 09 43.7**	**-0.6**	
GRG	**Griva**	**2.44**	**342**	P	**Pn**	**23 09 43.7**	**-0.6**	
GRG	**Griva**	**2.44**	**342**	P	**Pn**	**23 09 43.7**	**-0.6**	
SMTH	**Samothraki Isl**	**2.46**	**41**	P	**Pn**	**23 09 42.3**	**-2.3**	
SRS	**Serrai**	**2.48**	**3**	P	**Pn**	**23 09 44.2**	**-0.6**	
SRS	**Serrai**	**2.48**	**3**	P	**Pn**	**23 09 44.2**	**-0.6**	
GADA	**Gvkgeada**	**2.48**	**51**	PN	**Pn**	**23 09 43.8**	**-1.1**	
GADA	**Gvkgeada**	**2.48**	**51**	P	**Pn**	**23 09 43.2**	**-1.7**	
GADA				S	**Sn**	**23 10 17.3**	**+2.1**	
GOKA	**anakkale-Gk**	**2.49**	**51**	*i* P	**Pn**	**23 09 44.2**	**-0.7**	
KAVA	**Kavala**	**2.50**	**20**	P	**Pn**	**23 09 43.2**	**-2.0**	
URLA	**Izmir**	**2.53**	**95**	PN	**Pn**	**23 09 44.9**	**-0.6**	
URLA	**Izmir**	**2.53**	**95**	*i* P	**Pg**	**23 09 51.8**	**-1.1**	
URLA				*i* S	**Sg**	**23 10 23.6**	**-2.1**	
URLA				IAML		23 10 32.0		
	comp=N,4µm,1.3s							
NEST	**Nestorio**	**2.54**	**315**	P	**Pn**	**23 09 47.2**	**+1.5**	
IGT	**Igoumenitsa**	**2.54**	**291**	P	**Pn**	**23 09 47.7**	**+2.0**	
IGT				S	**Sb**	**23 10 20.3**	**-1.2**	
IGT	**Igoumenitsa**	**2.54**	**291**	P	**Pn**	**23 09 47.7**	**+2.0**	
EZN	**Ezine**	**2.56**	**62**	PN	**Pn**	**23 09 44.9**	**-1.1**	
EZN	**Ezine**	**2.56**	**62**	P	**Pn**	**23 09 44.8**	**-1.2**	
EZN	**Ezine**	**2.56**	**62**	P	**Pn**	**23 09 44.4**	**-1.6**	
LSK	**Leskovik**	**2.64**	**306**	P	**Pb**	**23 09 49.8**	**-2.0**	
FNA	**Florina**	**2.65**	**325**	PN	**Pn**	**23 09 46.9**	**-0.3**	
FNA	**Florina**	**2.65**	**325**	*i* P	**Pn**	**23 09 47.2**	**0.0**	
FNA	**Florina**	**2.65**	**325**	P	**Pn**	**23 09 47.6**	**+0.4**	
FNA	**Florina**	**2.65**	**325**	Pn	**Pn**	**23 09 47.6**	**+0.4**	
FNA	**Florina**	**2.65**	**325**	P	**Pn**	**23 09 47.7**	**+0.5**	
AYVA	**Ayvalik**	**2.65**	**74**	*i* P	**Pn**	**23 09 45.2**	**-2.0**	
SAP4	**Santorini-Oia**	**2.67**	**143**	P	**Pn**	**23 09 46.8**	**-0.7**	
AMGA	**Amorgos Island**	**2.68**	**132**	P	**Pn**	**23 09 47.0**	**-0.7**	
AMGA	**Amorgos Island**	**2.68**	**132**	P	**Pn**	**23 09 46.5**	**-1.1**	
BAYC	**CANAKKALE_Bayr**	**2.68**	**65**	*i* P	**Pn**	**23 09 45.2**	**-2.5**	
CMBO	**Columbo, Santo**	**2.69**	**143**	P	**Pn**	**23 09 47.0**	**-0.8**	
SAP3	**Santorini-Thir**	**2.69**	**144**	P	**Pn**	**23 09 47.5**	**-0.3**	
THR5	**Thira Island,**	**2.71**	**144**	P	**Pn**	**23 09 47.0**	**-1.0**	
NVR	**Nevrokopi**	**2.73**	**7**	P	**Pn**	**23 09 47.2**	**-1.1**	
THT2	**Imerovigli**	**2.73**	**143**	PN	**Pn**	**23 09 47.9**	**-0.4**	
THT2	**Imerovigli**	**2.73**	**143**	P	**Pn**	**23 09 47.5**	**-0.8**	
THR3	**Thira Island,**	**2.74**	**144**	P	**Pn**	**23 09 48.0**	**-0.4**	
SFIR	**Fira Santorin**	**2.74**	**143**	P	**Pn**	**23 09 47.5**	**-1.0**	
THR7	**Fira-Santorini**	**2.74**	**143**	P	**Pn**	**23 09 48.0**	**-0.5**	
THR9	**Santorini-Faro**	**2.76**	**145**	P	**Pn**	**23 09 47.7**	**-1.0**	
ANKY	**Antikythira Is**	**2.77**	**182**	P	**Pn**	**23 09 48.5**	**-0.4**	
ANKY	**Antikythira Is**	**2.77**	**182**	P	**Pn**	**23 09 48.2**	**-0.6**	
DKL	**Dikili**	**2.77**	**80**	PN	**Pn**	**23 09 48.2**	**-0.7**	
THR8	**Santorini-Mono**	**2.78**	**143**	P	**Pn**	**23 09 48.0**	**-0.9**	
THR6	**Thira Island,**	**2.78**	**144**	P	**Pn**	**23 09 47.2**	**-1.8**	
DGB	**zmir**	**2.81**	**101**	*i* P	**Pn**	**23 09 48.7**	**-0.6**	
DGB				*i* S	**Sn**	**23 10 19.3**	**-3.8**	
DGB				IAML		23 10 36.0		
	comp=N,3µm,1.4s							
DGB				IAML		23 10 44.0		
	comp=E,3µm,2.1s							
SMG	**Samos**	**2.87**	**108**	P	**Pn**	**23 09 49.4**	**-0.8**	
BLCB	**Balcova**	**2.87**	**94**	PN	**Pn**	**23 09 49.8**	**-0.4**	
BLCB	**Balcova**	**2.87**	**94**	P	**Pn**	**23 09 49.4**	**-0.8**	
ZEDA	**zmir-Bergama**	**2.90**	**82**	*i* P	**Pn**	**23 09 50.0**	**-0.6**	
SRN	**Sarande**	**2.91**	**296**	P	**Pn**	**23 09 52.9**	**+2.1**	
MMB	**Musomiste**	**2.96**	**5**	P	**Pn**	**23 09 50.4**	**-1.0**	
GELI	**Tayfur-Gelibol**	**2.96**	**53**	PN	**Pn**	**23 09 50.6**	**-0.8**	
ANAF	**Anafi Island**	**2.96**	**140**	P	**Pn**	**23 09 51.0**	**-0.5**	
ANAF	**Anafi Island**	**2.96**	**140**	P	**Pn**	**23 09 50.5**	**-1.0**	
ENEZ	**Enez**	**2.98**	**45**	PN	**Pn**	**23 09 51.3**	**-0.5**	
ENEZ	**Enez**	**2.98**	**45**	P	**Pn**	**23 09 50.1**	**-1.7**	
KEK	**Kerkira**	**2.99**	**292**	P	**Pn**	**23 09 53.6**	**+1.7**	
RDO	**Rodhopi**	**3.00**	**33**	PN	**Pn**	**23 09 50.6**	**-1.3**	
RDO	**Rodhopi**	**3.00**	**33**	P	**Pn**	**23 09 49.8**	**-2.1**	
ALN	**Alexandroupoli**	**3.04**	**41**	PN	**Pn**	**23 09 51.9**	**-0.7**	
ALN	**Alexandroupoli**	**3.04**	**41**	*i* P	**Pb**	**23 09 59.0**	**+0.3**	
ALN	**Alexandroupoli**	**3.04**	**41**	P	**Pn**	**23 09 51.0**	**-1.6**	
ALN	**Alexandroupoli**	**3.04**	**41**	Pn	**Pn**	**23 09 50.8**	**-1.8**	
ALN	**Alexandroupoli**	**3.04**	**41**	P	**Pn**	**23 09 50.8**	**-1.8**	
RODP	**Rodopos**	**3.09**	**174**	P	**Pn**	**23 09 52.7**	**-0.5**	
LPK	**Lapseki**	**3.12**	**55**	PN	**Pn**	**23 09 53.0**	**-0.7**	
ERIK	**Erikli-Kesan**	**3.15**	**49**	PN	**Pn**	**23 09 53.3**	**-0.7**	
GCAM	**G?zlcaml?**	**3.17**	**106**	PN	**Pn**	**23 09 54.6**	**+0.3**	
GCAM	**G?zlcaml?**	**3.17**	**106**	*i* P	**Pn**	**23 09 55.0**	**+0.7**	
OHR	**Ohrid**	**3.17**	**322**	*e*P	**Pn**	**23 09 56.2**	**+1.7**	
OHR				*e*S	**Sn**	**23 10 34.0**	**+1.6**	
STIP	**Stip**	**3.19**	**343**	*i* Pn	**Pn**	**23 09 54.9**	**+0.3**	
KESN	**Edirne-Kesan**	**3.34**	**48**	*i* P	**Pn**	**23 09 56.1**	**-1.0**	
KDZ	**Kurdzhali**	**3.38**	**27**	PN	**Pn**	**23 09 55.8**	**-1.5**	
KDZ	**Kurdzhali**	**3.38**	**27**	P	**Pn**	**23 09 59.9**	**+2.6**	
KOSK	**Kos Island**	**3.41**	**122**	P	**Pn**	**23 09 56.9**	**-0.7**	
STEP	**BALIKESIR_Sava**	**3.45**	**76**	*i* P	**Pg**	**23 10 08.8**	**-1.7**	
BALY	**Balya**	**3.46**	**70**	*i* P	**Pb**	**23 10 06.7**	**+0.8**	
AKHS	**Akhisar**	**3.46**	**85**	*i* P	**Pg**	**23 10 08.7**	**-2.2**	
BODT	**Bodrum**	**3.48**	**116**	P	**Pn**	**23 09 58.1**	**-0.5**	
UKOP	**Uzunkopru-Edir**	**3.52**	**44**	PN	**Pn**	**23 09 58.6**	**-0.5**	
IDI	**Anoyia**	**3.56**	**160**	Pn	**Pn**	**23 09 59.9**	**+0.2**	
	comp=E,97nm,0.3s,baz=282,slow=6.5,SNR=6.5							
IDI				Sn	**Sn**	**23 10 40.5**	**-1.3**	
	comp=E,56nm,0.3s,baz=78,slow=21,SNR=1.8							
IDI				LR	LR	23 11 28.5		
	comp=E,8µm,20.1s,baz=281,slow=40							
IDI	**Anoyia**	**3.56**	**160**	Pn	**Pn**	**23 10 01.1**	**+1.4**	
RKY	**Sarkoy-Tekirda**	**3.56**	**54**	PN	**Pn**	**23 09 59.3**	**-0.5**	
BDRM	**Kayabasi**	**3.57**	**115**	*i* P	**Pn**	**23 09 59.2**	**-0.6**	
KNL	**Balikesir**	**3.59**	**62**	*i* P	**Pb**	**23 10 08.8**	**+0.9**	
NISR	**Nisiros**	**3.59**	**123**	P	**Pn**	**23 10 00.0**	**-0.1**	
PLD	**Plovdiv**	**3.60**	**16**	PN	**Pn**	**23 10 00.0**	**+0.3**	
PLD	**Plovdiv**	**3.60**	**16**	P	**Pn**	**23 10 00.6**	**+0.3**	
GONE	**Gonen-Balikesi**	**3.61**	**66**	PN	**Pn**	**23 09 59.9**	**-0.5**	
BALB	**Balikesir**	**3.63**	**73**	PN	**Pn**	**23 10 00.6**	**0.0**	
NIS1	**Nisyros Isl.**	**3.63**	**123**	P	**Pn**	**23 09 58.8**	**-1.9**	
SKO	**Skopje**	**3.65**	**336**	*e*Pn	**Pn**	**23 10 01.7**	**+0.8**	
SKO	**Skopje**	**3.65**	**336**	P	**Pn**	**23 10 01.6**	**+0.7**	
AYDN	**Tasoluk**	**3.67**	**104**	*i* P	**Pg**	**23 10 13.8**	**-0.9**	
PHP	**Peshkopia**	**3.79**	**324**	P	**Pn**	**23 10 04.0**	**+1.1**	
PHP				S	**Sn**	**23 10 46.3**	**-1.2**	
TIR	**Tirane**	**3.83**	**316**	*e*Pn	**Pn**	**23 10 06.5**	**+3.1**	
TIR				*e*Sn	**Sn**	**23 10 51.6**	**+3.2**	
TIR	**Tirane**	**3.83**	**316**	⇑P	**Pn**	**23 10 03.2**	**-0.2**	
TIR	**Tirane**	**3.83**	**316**	P	**Pn**	**23 10 04.6**	**+1.2**	
TIR	**Tirane**	**3.83**	**316**	Pn	**Pn**	**23 10 04.5**	**+1.2**	
LAST	**Lasithi**	**3.85**	**154**	P	**Pn**	**23 10 03.1**	**-0.7**	
VTS	**Vitosha**	**3.97**	**358**	P	**Pn**	**23 10 06.0**	**+0.5**	
VTS				S	**Sn**	**23 10 52.0**	**-0.2**	
PRVS	**Prvonek**	**3.99**	**346**	*e*Pn	**Pn**	**23 10 06.3**	**+0.6**	
SOF	**Sofiya**	**4.04**	**359**	P	**Pn**	**23 10 07.5**	**+1.2**	
MANT	**Manisa**	**4.05**	**91**	*i* P	**Pb**	**23 10 17.9**	**+1.9**	
MANT	**Manisa**	**4.05**	**91**		**Pg**	**23 10 20.7**	**-1.3**	
ZKR	**Zakros**	**4.18**	**146**	P	**Pn**	**23 10 07.8**	**-0.5**	
TURN	**Turunc**	**4.27**	**114**	*i* P	**Pn**	**23 10 08.2**	**-1.3**	
ARG	**Arkhangelos**	**4.48**	**121**	P	**Pn**	**23 10 13.0**	**+0.7**	
TAVA	**DENIZLI_Tavas**	**4.51**	**103**	*i* P	**Pn**	**23 10 12.1**	**-0.8**	
JMB	**Yambol**	**4.53**	**31**	P	**Pn**	**23 10 11.8**	**-1.2**	
ULC	**Ulcinj**	**4.59**	**318**	*e*Pn	**Pn**	**23 10 14.6**	**+0.7**	
ULC				*i* Sn	**Sn**	**23 11 08.1**	**+0.9**	
ZAPS	**Zavoj**	**4.66**	**353**	*e*Pn	**Pn**	**23 10 16.6**	**+1.7**	
PVY	**Plav**	**4.74**	**328**	*e*Pn	**Pn**	**23 10 16.0**	**0.0**	
PVY				*i* Sn	**Sn**	**23 11 11.4**	**+0.4**	
IGD	**Bursa**	**4.78**	**68**	*i* P	**Pn**	**23 10 15.9**	**-0.5**	
DRME	**Dracevica, Mon**	**4.78**	**319**	*e*Pn	**Pn**	**23 10 17.0**	**+0.5**	
DRME				*e*Sn	**Sn**	**23 11 12.8**	**+0.9**	
PVL	**Pavlikeni**	**4.80**	**17**	P	**Pn**	**23 10 14.9**	**-1.8**	
SELS	**Selova**	**4.89**	**340**	*e*Pn	**Pn**	**23 10 18.0**	**+0.3**	
PDG	**Podgorica**	**4.92**	**322**	*e*Pn	**Pn**	**23 10 20.6**	**+2.2**	
PDG				*e*Sn	**Sn**	**23 11 17.9**	**+2.5**	
TTG	**Podgorica**	**4.92**	**322**	*e*Pn	**Pn**	**23 10 19.2**	**+0.8**	
TTG				*e*Sn	**Sn**	**23 11 16.5**	**+1.1**	
IVA	**Berane**	**4.99**	**329**	*e*Pn	**Pn**	**23 10 19.6**	**+0.1**	
IVA				*i* Sn	**Sn**	**23 11 17.4**	**+0.2**	
SZH	**Strazhica**	**5.00**	**22**	P	**Pn**	**23 10 20.9**	**+1.4**	
BUM	**Brajici-Budva**	**5.01**	**318**	*e*Pn	**Pn**	**23 10 20.2**	**+0.5**	
BUM				*i* Sn	**Sn**	**23 11 18.5**	**+0.8**	
KOME	**Kolasin**	**5.13**	**326**	*e*Pn	**Pn**	**23 10 21.7**	**+0.3**	
KOME				*e*Sn	**Sn**	**23 11 21.3**	**+0.6**	
BOVS	**Bovan**	**5.15**	**346**	*e*Pn	**Pn**	**23 10 21.7**	**+0.2**	
CEME	**Cevo**	**5.18**	**320**	*e*Pn	**Pn**	**23 10 22.8**	**+0.8**	
CEME				*e*Sn	**Sn**	**23 11 22.1**	**+0.3**	
TIP	**Timpagrande**	**5.20**	**278**	⇑P	**Pn**	**23 10 23.3**	**+1.0**	
ZAGS	**Zajecar**	**5.24**	**351**	*e*Pn	**Pn**	**23 10 24.1**	**+0.3**	
SJES	**Sjenica**	**5.29**	**332**	*e*Pn	**Pn**	**23 10 25.6**	**+2.0**	
NKME	**Niksic**	**5.33**	**322**	*e*Pn	**Pn**	**23 10 24.3**	**+0.3**	
NKME				*e*Sn	**Sn**	**23 11 25.7**	**+0.3**	
HCY	**Herceg Novi**	**5.33**	**317**	*e*Pn	**Pn**	**23 10 24.7**	**+0.7**	
HCY				*i* Sn	**Sn**	**23 11 26.5**	**+1.1**	
NKY	**Niksic**	**5.34**	**323**	*e*Pn	**Pn**	**23 10 25.0**	**+0.7**	
NKY				*e*Sn	**Sn**	**23 11 26.4**	**+0.5**	
IVAS	**Ivanjica**	**5.50**	**335**	*e*Pn	**Pn**	**23 10 28.0**	**+1.5**	
PLE	**Pljevlja**	**5.58**	**328**	*e*Pn	**Pn**	**23 10 27.6**	**+0.1**	
PLE				*i* Sn	**Sn**	**23 11 31.6**	**-0.1**	
BAI	**Bari**	**5.58**	**298**	⇑*i*Pn	**Pn**	**23 10 28.0**	**+0.5**	
GRUS	**Gruza**	**5.62**	**340**	*e*Pn	**Pn**	**23 10 30.6**	**+2.6**	
SG1	**Sgolgore (BA)**	**5.62**	**295**	*e*Pn	**Pn**	**23 10 29.1**	**+1.0**	
BRY	**Bratogost**	**5.63**	**321**	*e*Pn	**Pn**	**23 10 28.8**	**+0.5**	
BRY				*i* Sn	**Sn**	**23 11 32.9**	**-0.1**	
UPM	**Unac-Piva**	**5.69**	**325**	*e*Pn	**Pn**	**23 10 29.7**	**+0.6**	
UPM				*i* Sn	**Sn**	**23 11 34.2**	**-0.2**	
KUBS	**Kucevo**	**5.91**	**348**	*e*Pn	**Pn**	**23 10 32.2**	**+0.2**	
TRUS	**Trudelj**	**6.01**	**339**	*e*Pn	**Pn**	**23 10 36.3**	**+2.9**	
BBLS	**Lazići**	**6.02**	**331**	*e*Pn	**Pn**	**23 10 34.2**	**+0.6**	
DIVS	**Divibare**	**6.02**	**336**	*e*Pn	**Pn**	**23 10 34.5**	**+0.9**	
RMGR	**Halanga-Turnu**	**6.04**	**355**	⇑P	**Pn**	**23 10 33.5**	**-0.3**	
STON	**Ston**	**6.04**	**316**	*e*Pn	**Pn**	**23 10 34.2**	**+0.4**	
DJES	**Djerdap**	**6.05**	**354**	*e

comp=Z,2.0nm,0.3s,baz=140,slow=17,SNR=1.0
DAVOX Sn **Sn** **23 14 25.1 -4.8**
comp=Z,1.9nm,0.3s,baz=323,slow=16,SNR=4.1
EIL Elat **13.09 130** Pn **Pn** **23 12 09.6 -0.8**
comp=Z,2.4nm,0.3s,baz=324,slow=13,SNR=4.1
EIL Sn Sn 23 14 24.9 -11
comp=Z,0.6nm,0.3s,baz=50,slow=22,SNR=1.6
DAVA Damuels **13.12 316** *e*Sn **Sn** **23 14 32.9 -4.0**
comp=Z,54nm,0.9s
SOC Sochi **13.26 63** *e*P **Pn** **23 12 13.2 +0.6**
SOC *e* 23 14 44.5
SOC pmax pmax
comp=Z,17nm,1.0s
SOC MLR MLR
comp=Z,2µm,10.0s
CKFL Kef-Lekhel **13.43 266** P **Pn** **23 12 16.9 +1.8**
CASM Ain Smara **13.64 265** P **Pn** **23 12 19.8 +1.9**
CTEI Djebel Teioual **13.76 264** P **Pn** **23 12 23.5 +3.9**
BRG Berggiesshubel **13.94 334** *i* P **P** **23 12 31.4 +1.4**
comp=Z,23nm,0.8s
comp=Z,13µm,8.8s
comp=N,7µm,9.3s
comp=E,11µm,9.3s
BRG Berggiesshubel **13.94 334** *i* P **P** **23 12 31.4 +1.4**
BRG pmax pmax
comp=Z,23nm,0.8s
BRG MLR MLR
comp=Z,13µm,8.8s
BRG MLR MLR
comp=E,7µm,9.3s
DFRA Djebel Bou Aff **14.05 267** P **Pn** **23 12 27.4 +3.8**
SET Setif **14.51 266** P **Pn** **23 12 33.0 +3.1**
CLL Collm **14.62 333** *i* PP **P** **23 12 37.3 -0.3**
CLL *i* 23 12 41.8
CLL Lmax 23 18 00.0
CLL Collm **14.62 333** *i* P **P** **23 12 37.3 -0.3**
MAHO Mahon **14.87 281** *e*S **P** **23 12 41.6 +1.1**
GKP Gorka Klasztor **15.23 346** P **P** **23 12 47.0 +2.6**
SUW Suwalki **15.38 360** P **P** **23 12 46.0 0.0**
SUW pmax pmax
comp=Z,159nm,1.0s
SUW Suwalki **15.38 360** P **P** **23 12 46.0 0.0**
SUW IAmb IAmb 23 12 50.3
comp=Z,159nm,1.0s
GEVA Gevas **15.41 85** P **P** **23 12 48.7 +2.0**
KIV Kislovodsk **15.43 64** *e*P **Pn** **23 12 44.2 +2.0**
KIV pmax pmax
comp=Z,311nm,1.1s
KBZ Khabaz **15.53 65** Pn **Pn** **23 12 44.2 +0.9**
comp=Z,0.1nm,0.3s,baz=236,slow=24,SNR=1.3
KBZ Khabaz **15.53 65** *i* P **P** **23 12 45.7 -2.0**
KBZ pmax pmax
comp=Z,129nm,1.3s
AKH Akhalkalaki **15.64 73** P **P** **23 12 51.6 +2.4**
AKH pmax pmax
comp=Z,36nm,1.1s
AKH Akhalkalaki **15.64 73** **P** **23 12 51.6 +2.4**
GOF Gofitskoye **15.96 60**⇑ *e*P **P** **23 12 53.9 +1.3**
GOF pmax pmax
comp=Z,124nm,1.0s
ZEI Tsey **16.08 69** *e*P **P** **23 12 54.1 0.0**
ZEI pmax pmax
comp=Z,67nm,1.2s
WLF Walferdange **16.53 317** Pn **Pn** **23 12 51.2 -5.0**
GNI Garni **16.57 78** Pn **P** **23 13 00.2 +0.7**
comp=Z,0.3nm,0.3s,baz=354,slow=3.4,SNR=8.4
GNI Garni **16.57 78** *i* P **P** **23 12 58.7 -0.8**
GNI pmax pmax
comp=Z,35nm,1.3s
VORD Divnogorie **16.66 37** *e*P **Pn** **23 12 58.7 +0.9**
VORD pmax pmax
comp=Z,80nm,1.3s
VSR Storozhevoye **16.77 36** *e*P **Pn** **23 12 58.7 -0.5**
VSR pmax pmax
comp=Z,60nm,1.0s
BHOU Houvegnez **17.01 319** Pn Pn 23 12 53.4 -8.9
BTNL Ternell **17.09 320** Pn Pn 23 12 54.0 -9.3
VORR Voronezh **17.10 35** *e*P **Pn** **23 13 03.0 -0.4**
VORR pmax pmax
comp=Z,300nm,1.6s
MEM Membach **17.16 320** Pn **Pn** **23 12 59.6 -4.5**
BSTI Sart Tilman **17.37 319** Pn **Pn** **23 13 05.0 -1.8**
BSTI Sart Tilman **17.37 319** P **P** **23 13 08.9 +0.8**
BCLA Clavier **17.41 318** Pn **Pn** **23 13 02.0 -5.2**
BEBN Eben Emael **17.44 320** Pn **Pn** **23 13 03.5 -4.1**
BSD Bornholm Skovb **17.45 344**⇑ *i*P **P** **23 13 08.6 -0.2**
BSD Bornholm Skovb **17.45 344**⇑ *i*P **P** **23 13 08.6 -0.2**
BSD Bornholm Skovb **17.45 344**⇑ *i*P **P** **23 13 08.6 -0.2**
BGES Gesves **17.50 318** Pn **Pn** **23 13 03.6 -4.8**
GROC Groznyy **17.52 68** *e*P **Pn** **23 13 06.5 -2.1**
DOU Dourbes **17.60 317** Pn **Pn** **23 13 02.5 -7.2**
BMRD Maredsous **17.62 317** Pn **Pn** **23 13 07.9 -2.1**
LPSR Galich'ya Gora **17.63 33** *e*P **P** **23 13 12.9 +1.9**
LPSR pmax pmax
comp=Z,220nm,1.5s
BSEG Bad Segeberg **17.72 334** P **P** **23 13 11.7 -0.2**
BSEG pmax pmax
comp=Z,31nm,0.8s
CLF Chambon-Foret **17.96 308** P **P** **23 13 18.4 +3.8**
VRH Novokhopyorsk **18.00 40** *e*P **P** **23 13 16.4 +1.4**
VRH pmax pmax
comp=Z,140nm,1.2s
SNF Seneffe **18.00 317** Pn **P** **23 13 17.5 +2.5**
UCC Uccle **18.12 318** P **P** **23 13 17.1 +0.8**
UCC pmax pmax
comp=Z,31nm,0.8s
UCC Uccle **18.12 318** P **P** **23 13 17.1 +0.8**
COP Copenhagen **18.57 340** *e*P **Pn** **23 13 21.7 +0.3**
COP Copenhagen **18.57 340** *i* P **Pn** **23 13 21.7 +0.3**
COP Copenhagen **18.57 340** *e*P **Pn** **23 13 21.7 +0.3**
OBN Obninsk **18.72 24** *d i*P **P** **23 13 20.8 -2.1**
OBN pmax pmax
comp=Z,49nm,1.1s
OBN Obninsk **18.72 24** P **Pn** **23 13 23.8 +0.5**
MAK Makhachkala **18.73 69** *e*P **P** **23 13 19.2 -4.0**
MAK *e*S **Sn** **23 16 51.1 -2.0**
MAK pmax pmax
comp=Z,323nm,1.1s
MAK MLR MLR
comp=Z,2µm,10.0s
MFF Saint Martin d **19.01 302** P **Pn** **23 13 26.7 -0.2**
CART Cartagena **19.22 274** P **P** **23 13 27.0 -1.5**
CART IAmb IAmb 23 13 28.7
comp=Z,107nm,0.9s
MOS Moscow **19.58 25** *e*P **Pn** **23 13 37.1 +3.5**
MOS pmax pmax
comp=Z,117nm,0.8s
MOS MLR MLR
comp=Z,600nm,11.0s
VSU Vasula **19.95 5** *i* P **P** **23 13 36.6 +0.2**
MUD Monsted U'grnd **20.17 337**⇑ *i*P **P** **23 13 39.4 +0.7**
MUD pmax pmax
comp=Z,52nm,0.7s
MUD Monsted U'grnd **20.17 337**⇑ *i*P **P** **23 13 39.4 +0.7**
comp=Z,52nm,0.7s
MUD Monsted U'grnd **20.17 337**⇑ *i*P **P** **23 13 39.5 +0.7**
MUD IAmb IAmb 23 13 39.9
comp=Z,52nm,0.7s
GOET G??ttrup **20.64 338** *i* P **P** **23 13 44.5 +0.7**
comp=Z,435nm,0.9s
GOET G??ttrup **20.64 338** *i* P **P** **23 13 44.6 +0.7**
GOET IAmb IAmb 23 13 46.1
comp=Z,436nm,0.9s
WACR West Acre **21.12 319** *e*P **P** **23 13 47.8 -1.2**
WACR IAmb IAmb 23 13 53.2
comp=Z,281nm,0.9s
JSA Saint Aubin **21.12 308** *e*P **P** **23 13 48.1 -1.0**
JSA IAmb IAmb 23 13 59.1
comp=Z,136nm,0.9s
ESBB Sonseca Array **21.21 281** P **P** **23 13 49.5 -0.7**
ESBB IAmb IAmb 23 13 51.5
comp=Z,161nm,0.9s
ESDC Sonseca Array **21.21 281** P **P** **23 13 49.4 -0.9**
comp=Z,135nm,0.9s,baz=74,slow=11,SNR=60
ESDC ScP **ScP** **23 21 30.0 -2.1**
comp=Z,1.4nm,1.1s,baz=106,slow=2.8,SNR=4.6
ESDC Sonseca Array **21.21 281** P **P** **23 13 49.2 -1.1**
ESDC **ScP** **23 21 30.3 -1.9**
GUD Guadarrama **21.28 284** P **P** **23 13 52.4 +1.3**
PAB San Pablo **21.52 281** P **P** **23 13 52.8 -0.9**
PAB pmax pmax
comp=Z,234nm,1.0s
PAB San Pablo **21.52 281** P **P** **23 13 52.8 -0.9**
PUL Pulkovo **21.61 10** *i* P **P** **23 13 54.5 +0.3**
PUL pmax pmax
comp=Z,152nm,1.1s
SWN1 Swindon **21.83 314** *e*P **P** **23 13 55.4 -1.3**
SWN1 IAmb IAmb 23 13 57.0
comp=Z,77nm,0.9s
HOMB Homborsund **21.89 339** *e*P **P** **23 13 57.4 +0.1**
TAM Tamanrasset **21.98 229** P **P** **23 13 59.7 +1.0**
TAM pmax pmax
comp=Z,50nm,1.1s
CWF Charnwood Fore **22.13 318** *e*P **P** **23 13 57.2 -2.7**
STRD Stroud **22.15 315** *e*P **P** **23 13 59.0 -1.1**
STRD IAmb IAmb 23 14 04.8
comp=Z,615nm,1.7s
SNART Snartemo **22.33 337** *e*P **P** **23 14 01.7 -0.2**
SNART Snartemo **22.33 337** *i* P **P** **23 14 00.0 -2.0**
HFS Hagfors **22.37 347** P **P** **23 14 01.4 -1.0**
comp=Z,22nm,0.6s,baz=146,slow=11,SNR=11
MONM Monmouth **22.53 314** *e*P **P** **23 14 02.8 -1.5**
MONM IAmb IAmb 23 14 10.0
comp=Z,98nm,0.7s
DYA Yadsworthy **22.63 310** *e*P **P** **23 14 03.7 -1.6**
MCH1 Michaelchurch **22.71 315** *e*P **P** **23 14 04.6 -1.5**
MCH1 IAmb IAmb 23 14 11.2
comp=Z,91nm,0.8s
REAL Reales **22.74 273** *e*S **P** **23 14 07.0 +0.2**
OSL Oslo **22.78 343** *e*P **P** **23 14 05.6 -1.1**
KONO Kongsberg **22.79 342** *i* P **P** **23 14 05.0 -1.9**
KONO pmax pmax
comp=Z,45nm,0.9s
KONO Kongsberg **22.79 342** P **P** **23 14 05.9 -1.0**
KONO IAmb IAmb 23 14 21.3
comp=Z,68nm,0.9s
KONO Kongsberg **22.79 342** *e*P **P** **23 14 05.5 -1.4**
LIJA Lijar **22.79 275** *e*S **P** **23 14 05.0 -2.3**
HLM1 Long Mynd **22.87 316** *e*P **P** **23 14 05.9 -2.0**
HLM1 IAmb IAmb 23 14 13.3
comp=Z,72nm,1.0s
FINES FINESS Array B **22.89 3** P **P** **23 14 07.6 -0.3**
comp=Z,22nm,0.9s,baz=165,slow=7.9,SNR=6.7
FINES PcP **PcP** **23 17 57.0 -1.2**
comp=Z,4.4nm,0.8s,baz=186,slow=1.9,SNR=4.0
FINES ScP **ScP** **23 21 33.8 -2.1**
comp=Z,2.4nm,0.8s,baz=183,slow=5.0,SNR=2.4
FINES FINESS Array B **22.89 3** *e*P **P** **23 14 10.6 +2.7**
FINES pmax pmax
comp=Z,16nm,0.7s
FIA1 FINESS Array S **22.89 3** P **P** **23 14 08.4 +0.5**
PBRG Braganca **23.17 287** *e*P **P** **23 14 09.8 -1.3**
comp=Z,256nm,1.5s
PBRG *e*S **S** **23 18 23.4 +0.7**
FOEL Foel Wylfa **23.22 317** *e*P **P** **23 14 10.0 -1.4**
CCA1 Carnmenellis **23.33 309** *e*P **P** **23 14 11.4 -1.1**
CCA1 IAmb IAmb 23 14 13.3
comp=Z,76nm,0.8s
NC602 NORSAR Array S **23.33 345** IAmb IAmb 23 14 19.0
comp=Z,129nm,0.9s
NORES NORESS Array B **23.33 345** P **P** **23 14 11.3 -1.2**
NORES pmax pmax
comp=Z,55nm,0.7s
MDT Midelt **23.41 264** P **P** **23 14 13.1 -0.6**
comp=Z,103nm,1.0s,baz=87,slow=11,SNR=23
MVO Moncorvo **23.42 286** *e*P **P** **23 14 11.7 -1.9**
comp=Z,157nm,1.1s
MVO *e*S **S** **23 18 29.9 +3.1**
MVO *e*LR LR 23 20 28.4
comp=Z,2µm,16.0s
CNIL Conil **23.43 274** *e*S **P** **23 14 12.5 -1.2**
BLS5 Blasjo **23.44 338** *e*P **P** **23 14 13.1 -0.5**
NAO01 NORSAR Array S **23.57 345** P **P** **23 14 14.8 0.0**
NAO01 IAmb IAmb 23 14 23.7
comp=Z,106nm,0.9s
NAO01 NORSAR Array S **23.57 345** *e*P **P** **23 14 14.7 -0.1**
NC405 NORSAR Array S **23.65 346** P **P** **23 14 14.4 -1.2**
NC405 IAmb IAmb 23 14 25.9
comp=Z,106nm,0.9s
NB2 NORSAR Subarra **23.68 345** P **P** **23 14 14.3 -1.6**
comp=Z,164nm,1.7s,baz=153,slow=10
NB2 NORSAR Subarra **23.68 345** P **P** **23 14 14.3 -1.6**
baz=153,slow=10
NOA NORSAR Array B **23.68 345** P **P** **23 14 14.7 -1.3**
comp=Z,19nm,0.8s,baz=172,slow=12,SNR=14
NOA PcP **PcP** **23 17 59.0 -1.0**
comp=Z,3.9nm,0.7s,baz=124,slow=3.1,SNR=5.7
NOA ScP **ScP** **23 21 36.0 -2.0**
comp=Z,1.2nm,0.8s,baz=173,slow=6.4,SNR=3.5
ODD1 Odda **23.80 339** *e*P **P** **23 14 16.4 -0.7**
NC303 NORSAR Array S **23.82 346** IAmb IAmb 23 14 35.2
comp=Z,114nm,1.0s
MTE Manteigas **23.87 284** *e*P **P** **23 14 16.6 -1.5**
comp=Z,241nm,1.2s
MTE *e*S **S** **23 18 37.6 +3.5**
MTE *e*LR LR 23 20 34.3
comp=Z,2µm,16.0s
MTE Manteigas **23.87 284** P **P** **23 14 16.5 -1.5**
PMRV Marv??o **23.87 282** *e*P **P** **23 14 16.4 -1.6**
comp=Z,143nm,1.9s
PMRV *e*S **S** **23 18 36.8 +2.8**
PMRV *e*LR LR 23 20 23.7
comp=Z,2µm,16.0s
PCBR Castelo Branco **23.89 283** *e*P **P** **23 14 16.4 -1.7**
comp=Z,184nm,1.3s
PVRL Vila Real **23.93 286** *e*P **P** **23 14 18.2 -0.4**
comp=Z,62nm,1.5s
POLO Lamas de Olo **23.98 286** *e*P **P** **23 14 18.8 -0.3**
comp=Z,58nm,1.3s
POLO *e*S **S** **23 18 40.8 +5.0**
NC204 NORSAR Array S **23.98 345** P **P** **23 14 18.4 -0.5**
NC204 IAmb IAmb 23 14 19.2
comp=Z,115nm,1.0s
NC204 NORSAR Array S **23.98 345** *e*P **P** **23 14 18.0 -0.9**
KESW Keswick, Cumbr **23.99 320** *e*P **P** **23 14 18.2 -0.7**
KESW IAmb IAmb 23 14 23.9
comp=Z,85nm,0.9s
SKAR Skarslia **24.01 342** *e*P **P** **23 14 18.8 -0.3**
PVIS Viseu **24.11 285** *e*P **P** **23 14 19.0 -1.3**
comp=Z,195nm,1.3s
RAYN Ar Rayn **24.11 122** P **P** **23 14 23.3 +2.9**
RAYN pmax pmax
comp=Z,19nm,1.0s
RAYN Ar Rayn **24.11 122** P **P** **23 14 23.3 +2.9**
YRC Rhoscolyn **24.12 316** *e*P **P** **23 14 18.9 -1.2**
PCAB Cabril **24.14 287** *e*P **P** **23 14 17.8 -2.7**
comp=Z,181nm,1.4s
WPS Cemaes, Angles **24.14 317** *e*P **P** **23 14 19.6 -0.7**
WPS IAmb IAmb 23 14 24.4
comp=Z,88nm,1.4s
PGAV Gavieira, Arco **24.30 288** *e*P **P** **23 14 22.3 +0.2**
comp=Z,154nm,1.8s
PGAV *e*LR LR 23 21 18.2
comp=Z,1µm,18.0s
EKA Eskdalemuir Ar **24.41 322** P **P** **23 14 22.0 -0.8**
comp=Z,58nm,0.8s,baz=120,slow=10,SNR=18
EKA PcP **PcP** **23 18 00.6 -0.9**
comp=Z,2.2nm,0.7s,baz=96,slow=2.6,SNR=3.6
KLMR Klimovskoe **24.42 19** *e*P **P** **23 14 21.8 -1.0**
KLMR pmax pmax
comp=Z,133nm,1.2s
KLMR Klimovskoe **24.42 19** *e*P **P** **23 14 21.8 -1.0**
KLMR AMP 23 14 32.8
comp=Z,133nm,1.2s
ESK Eskdalemuir **24.42 322** *e*P **P** **23 14 21.8 -1.1**
ESK IAmb IAmb 23 14 26.0
comp=Z,90nm,0.9s
VAF Ylistaro **24.44 359** P **P** **23 14 25.4 +2.5**
VAF pmax pmax
comp=Z,80nm,1.1s
PBEJ Beja **24.47 278** *e*P **P** **23 14 22.3 -1.3**
comp=Z,77nm,1.4s
PVAQ Vaqueiros **24.48 277** *e*P **P** **23 14 22.7 -1.0**
comp=Z,242nm,1.3s
PVAQ *e*S **S** **23 18 45.6 +1.8**
PVAQ *e*LR LR 23 24 50.5
comp=Z,783nm,16.0s
PVAQ Vaqueiros **24.48 277** P **P** **23 14 22.3 -1.4**
EVO Evora **24.49 280** *e*P **P** **23 14 22.0 -1.7**
comp=Z,90nm,1.4s
COI Coimbra **24.55 284** P **P** **23 14 24.0 -0.3**
COI pmax pmax
comp=Z,142nm,1.1s
COI Coimbra **24.55 284** *e*P **P** **23 14 24.3 0.0**
comp=Z,164nm,1.1s
COI Coimbra **24.55 284** P **P** **23 14 24.0 -0.3**
BER Bergen **24.56 338** P **P** **23 14 23.5 -0.5**
BER Bergen **24.56 338** *e*P **P** **23 14 23.8 -0.2**
PMTG Montargil **24.57 281** *e*P **P** **23 14 22.8 -1.6**
comp=Z,137nm,1.2s
PMTG *e*S **S** **23 18 47.4 +2.3**
IOMK Kirk Michael **24.57 319** *e*P **P** **23 14 22.4 -1.9**
WIM Isle of Man **24.58 318** *e*P **P** **23 14 23.4 -0.9**
PCAS Casmilo, Conde **24.64 283** *e*P **P** **23 14 24.7 -0.4**
comp=Z,145nm,1.2s
PCAS *e*S **S** **23 18 55.1 +8.8**
ASK Askoy **24.68 338** *e*P **P** **23 14 25.2 +0.1**
PBDV Barranco-do-Ve **24.69 277** *e*P **P** **23 14 24.8 -0.7**
comp=Z,373nm,1.3s
PCVE Castro Verde **24.69 278** *e*P **P** **23 14 24.9 -0.6**
comp=Z,162nm,1.6s
PCVE *e*S **S** **23 18 50.8 +3.7**
EDI Edinburgh **24.74 323** *e*P **P** **23 14 24.0 -1.7**
EDI IAmb IAmb 23 14 25.1
comp=Z,64nm,0.9s
JOF Joensuu **24.78 9** P **P** **23 14 29.3 +3.3**
NEWG New Galloway **24.82 321** *e*P **P** **23 14 25.2 -1.3**
NEWG IAmb IAmb 23 14 27.6
comp=Z,38nm,0.8s
GAL1 Galloway **24.94 320** *e*P **P** **23 14 26.3 -1.2**
GAL1 IAmb IAmb 23 14 32.2
comp=Z,68nm,1.0s
PSBE So Bento **24.94 282** *e*P **P** **23 14 27.5 -0.3**
comp=Z,184nm,1.4s
PSBE *e*S **S** **23 18 53.3 +2.1**
HYA Hoyanger **24.97 340** *e*P **P** **23 14 26.4 -1.3**
PNCL Nicolau / Gran **24.97 279** *e*P **P** **23 14 27.5 -0.5**
comp=Z,219nm,1.6s
PNCL *e*S **S** **23 18 55.3 +3.7**
DOMB Dombas **25.03 344** *e*P **P** **23 14 27.8 -0.6**
MORF Marmelete **25.23 277** *e*P **P** **23 14 29.1 -1.4**
MORF AMb AMB 23 14 32.5
comp=Z,126nm,1.4s
MORF *e*S **S** **23 18 57.0 +1.1**
MORF Marmelete **25.23 277** *e*P **P** **23 14 29.0 -1.5**
MORF pmax pmax
comp=Z,128nm,1.6s
MORF Marmelete **25.23 277** *e*P **P** **23 14 29.3 -1.2**
comp=Z,128nm,1.6s
MORF *e*S **S** **23 19 01.8 +5.9**
PTEO Sao Teotonio **25.24 278** *e*P **P** **23 14 29.7 -0.7**
comp=Z,384nm,1.6s
SUE Sulen **25.27 339** *e*P **P** **23 14 29.5 -1.0**
LIS Lisbon **25.34 280** *e*P **P** **23 14 30.1 -1.2**
LIS AMb AMB 23 14 33.2
comp=Z,378nm,1.4s
LIS Lisbon **25.34 280** *e*P **P** **23 14 30.1 -1.2**
LIS Lisbon **25.34 280** *e*P **P** **23 14 31.5 +0.2**
comp=Z,377nm,1.4s
PMAFR Mafra **25.40 281** *e*P **P** **23 14 31.2 -0.7**
comp=Z,220nm,1.4s
PFVI Vila Bisbo **25.41 277** *e*P **P** **23 14 31.0 -1.0**
comp=Z,189nm,1.6s
PFVI *e*S **S** **23 19 02.0 +3.4**
PFVI Vila Bisbo **25.41 277** P **P** **23 14 31.3 -0.7**
INVG Invergeldie, C **25.42 323** *e*P **P** **23 14 29.6 -2.3**
INVG IAmb IAmb 23 14 35.5
comp=Z,47nm,1.0s
EAB Aberfoyle **25.43 323** *e*P **P** **23 14 30.2 -1.8**
AKN Aaknes **25.62 342** *e*P **P** **23 14 33.5 -0.2**
CLGH Cloghs, Cushen **25.75 319** *e*P **P** **23 14 32.9 -2.1**
CLGH IAmb IAmb 23 14 34.9
comp=Z,51nm,0.8s
MOL Molde **25.83 343** *e*P **P** **23 14 35.1 -0.5**
LAWE Loch Awe, Argy **25.97 322** *e*P **P** **23 14 35.3 -1.6**
LAWE IAmb IAmb 23 14 44.2
comp=Z,38nm,1.1s
KIRV Kirov **26.06 32** P **P** **23 14 37.0 -0.6**
comp=Z,62nm,0.8s,baz=219,slow=0.3,SNR=8.6
KIRV Kirov **26.06 32** *i* P **P** **23 14 37.6 0.0**
KAC Achnashellach **26.58 325** *e*P **P** **23 14 40.6 -1.8**
KPL Plockton **26.65 324** *e*P **P** **23 14 41.0 -2.1**
TMCR Tamitsa **27.00 14** *e*P **P** **23 14 50.1 +4.0**
TMCR pmax pmax
comp=Z,66nm,1.0s
AKTO Aktyubinsk **27.10 53** P **P** **23 14 47.1 0.0**
comp=Z,4.1nm,0.8s,baz=241,slow=7.9,SNR=4.1
GEYT Alibeck **27.17 81** P **P** **23 14 47.6 -0.4**
comp=Z,3.1nm,0.6s,baz=269,slow=9.5,SNR=2.3
GEYT Alibeck **27.17 81** IAmb IAmb 23 14 55.5
comp=Z,15nm,1.1s
GYA0B ALIBECK ARRAY **27.17 81** P **P** **23 14 52.2 +4.2**
ARU Arti **29.22 41** P **P** **23 15 05.2 -0.8**
comp=Z,11nm,0.8s,baz=223,slow=11,SNR=5.2
ARU Arti **29.22 41** *d i*P **P** **23 15 06.7 +0.7**
ARU 23 16 01.2
ARU 23 18 11.5
ARU S **S** **23 20 02.3 +3.9**
ARU SS **SnSn** **23 21 25.1 +2.0**
ARU pmax pmax
comp=Z,46nm,1.0s
APA Apatity **29.52 8**⇓ *i*P **P** **23 15 06.6 -1.9**
APA pmax pmax
comp=Z,14nm,0.8s
APA MLR MLR
comp=Z,3µm,11.0s
SVE Sverdlovsk **30.43 41** *e*P **P** **23 15 16.5 -0.3**
SVE pmax pmax
comp=Z,86nm,1.1s
ARCES ARCESS Array B **30.98 1** P **P** **23 15 21.1 -0.4**
comp=Z,5.1nm,0.8s,baz=178,slow=5.6,SNR=3.7
ARCES PcP **PcP** **23 18 16.0 -1.2**
comp=Z,4.1nm,0.9s,baz=197,slow=2.8,SNR=1.6
HRA Herat **31.35 86** P **P** **23 15 26.6 +1.2**
TOA0 Torodi Ar. Sit **31.86 223** P **P** **23 15 29.4 -0.3**
TOA0 IAmb IAmb 23 15 30.1
comp=Z,37nm,0.7s
TORD Torodi Ar. Bea **31.86 223** P **P** **23 15 29.0 -0.7**
comp=Z,32nm,0.7s,baz=32,slow=9.1,SNR=30
TORD ScP **ScP** **23 22 01.9 -1.9**
comp=Z,5.1nm,1.0s,baz=38,slow=3.3,SNR=9.1
TORD Torodi Ar. Bea **31.86 223** P **P** **23 15 29.1 -0.7**
TORD **ScP** **23 22 02.2 -1.6**
WSAR Wadi Sarin **33.66 107** P **P** **23 15 46.0 +0.6**
comp=Z,4.0nm,0.8s,baz=307,slow=12,SNR=2.1
KOWA Kowa **34.10 233** P **P** **23 15 48.4 -1.0**
comp=Z,19nm,0.9s,baz=33,slow=5.7,SNR=6.4
KOWA PcP **PcP** **23 18 26.5 -0.2**
comp=Z,6.9nm,0.8s,baz=250,slow=14,SNR=3.0
KOWA Kowa **34.10 233** P **P** **23 15 48.9 -0.4**
BRVK Borovoye **35.03 50** *i* P **P** **23 15 57.0 0.0**
BRVK pmax pmax
comp=Z,16nm,1.0s
CHGR Chuyangaron **35.45 75** P **P** **23 16 02.1 +1.1**
KKAR Karatay Array **35.54 67** P **P** **23 16 02.0 +0.5**
KKAR Karatay Array **35.54 67** P **P** **23 16 02.0 +0.5**
BTK Batken **36.36 72** P **P** **23 16 12.2 +3.5**
BTK pmax pmax
comp=Z,21nm,1.1s
BTK Batken **36.36 72** P **P** **23 16 12.2 +3.5**
KBL Kabul **36.59 82** P **P** **23 16 14.5 +3.6**
KBL pmax pmax
comp=Z,14nm,0.9s
KBL Kabul **36.59 82** P **P** **23 16 14.5 +3.6**
AAK Ala-Archa **38.50 67** *i* P **P** **23 16 29.4 +2.5**
AAK pmax pmax
comp=Z,33nm,1.0s
SCO Scoresbysund **39.58 338** *i* P **P** **23 16 36.0 +0.7**
SCO pmax pmax
comp=Z,37nm,0.8s
SCO Scoresbysund **39.58 338** IAmb IAmb 23 16 41.2
comp=Z,45nm,0.9s
SCO Scoresbysund **39.58 338** *i* P **P** **23 16 36.0 +0.7**
comp=Z,37nm,0.8s
SCO Scoresbysund **39.58 338** *i* P **P** **23 16 36.1 +0.7**
SCO IAmb IAmb 23 16 36.9
comp=Z,37nm,0.8s
MBAR Mbarara **39.63 168** P **P** **23 16 36.7 +0.2**
comp=Z,2.7nm,0.2s,baz=310,slow=9.9,SNR=4.8
MBAR Mbarara **39.63 168** P **P** **23 16 38.7 +2.1**
MBAR pmax pmax
comp=Z,20nm,1.2s
MBAR Mbarara **39.63 168** P **P** **23 16 38.7 +2.1**
KURBB Kurchatov Arra **40.13 54** P **P** **23 16 40.0 -0.2**
comp=Z,12nm,0.8s,baz=282,slow=8.5,SNR=10
NIL Nilore **40.17 81** P **P** **23 16 41.8 +1.0**
NIL pmax pmax
comp=Z,66nm,0.9s
NIL Nilore **40.17 81** P **P** **23 16 41.8 +1.0**
NIL IAmb IAmb 23 16 46.6
comp=Z,66nm,0.9s
KURK Kurchatov **40.18 54** *i* P **P** **23 16 40.1 -0.5**
KURK pmax pmax
comp=Z,16nm,1.1s

KURK **Kurchatov** 40.18 54 P **P** **23 16 40.7 +0.1**
KSH **Kashi** 40.34 72 *e*P **P** **23 16 42.1 -0.1**
KSH S S 23 22 38.6 -11
KSH sS pS 23 22 53.9 +0.1
KSH pmax pmax
comp=Z,23nm,0.9s
KSH pmax pmax
comp=Z,360nm,4.9s
KSH LR LR
comp=Z,850nm,10.8s
KSH LR LR
comp=Z,1μm,11.7s
KSH LR LR
comp=Z,1μm,17.5s
DBIC Dimbokro 40.80 226 P **P** **23 16 45.4 -0.7**
comp=Z,32nm,0.7s,baz=17,slow=9.7,SNR=19
DBIC Dimbokro 40.80 226 P **P** **23 16 45.4 -0.7**
DBIC IAmb IAmb 23 16 46.3
comp=Z,39nm,0.8s
TIC Toumodi 40.91 226 *e*P **P** **23 16 46.1 -0.9**
KIC Kosan Boka 40.99 226 *e*P **P** **23 16 46.8 -0.9**
comp=Z,75nm,0.8s
DBG Daneborg 41.17 343 IAmb IAmb 23 18 48.3
comp=Z,6.0nm,0.8s
DBG *i* P **PcP** **23 18 47.4 0.0**
LIC Lamto 41.26 226 *e*P **P** **23 16 49.2 -0.7**
comp=Z,155nm,0.7s
KMBO Kilima Mbogo 41.58 159 P **P** **23 16 52.5 -0.2**
comp=Z,0.7nm,0.4s,baz=30,slow=7.3,SNR=2.3
DAG Danmarks Havn 42.35 347 *e*P **P**
DAG pmax pmax
comp=Z,9.0nm,1.0s
DAG Danmarks Havn 42.35 347 *i* P **P** **23 16 58.8 +0.8**
comp=Z,8.7nm,1.0s
DAG Danmarks Havn 42.35 347 *i* P **PcP** **23 18 50.0 -1.2**
comp=Z,8.4nm,0.8s
DAG Danmarks Havn 42.35 347 *e*P **P** **23 16 58.8 +0.8**
DAG IAmb IAmb 23 17 00.0
comp=Z,8.7nm,1.0s
DAG Danmarks Havn 42.35 347 IAmb IAmb 23 18 50.9
comp=Z,8.4nm,0.8s
DAG *i* P **PcP** **23 18 50.0 -1.2**
MAKZ Makanchi 42.91 59 P **P** **23 17 03.5 +0.4**
MAKZ pmax pmax
comp=Z,15nm,1.1s
MAKZ Makanchi 42.91 59 P **P** **23 17 03.5 +0.4**
MK31 Makanchi Array 43.13 59 *i* P **P** **23 17 04.3 -0.6**
MKAR Makanchi Array 43.13 59 P **P** **23 17 05.0 +0.1**
comp=Z,10nm,0.6s,baz=273,slow=7.6,SNR=11
ZAA0 Zalesovo Array 43.70 49 IAmb IAmb 23 17 10.3
comp=Z,33nm,0.9s
ZALV Zalesovo Beam 43.70 49 P **P** **23 17 08.8 -0.4**
comp=Z,32nm,0.8s,baz=275,slow=8.4,SNR=16
ZALV Zalesovo Beam 43.70 49 *e*P **P** **23 17 09.1 -0.2**
ZALV pmax pmax
comp=Z,32nm,0.8s
ICESG Greenland Ices 44.94 333 *i* P **P** **23 17 19.4 -0.1**
ICESG IAmb IAmb 23 17 21.3
comp=Z,37nm,1.0s
ICESG Greenland Ices 44.94 333 IAmb IAmb 23 19 00.8
comp=Z,8.5nm,0.8s
ICESG *i* P **PcP** **23 18 59.5 -1.1**
SUMG Summit 45.23 338 *i* P **P** **23 17 21.7 0.0**
SUMG pmax pmax
comp=Z,82nm,1.0s
SUMG Summit 45.23 338 P **P** **23 17 21.6 -0.2**
SUMG IAmb IAmb 23 17 27.2
comp=Z,26nm,0.9s
SUMG **PcP** **23 19 01.3 -0.3**
SUMG Summit 45.23 338 *i* P **P** **23 17 21.7 0.0**
comp=Z,82nm,1.0s
SUMG Summit 45.23 338 *i* P **PcP** **23 19 01.1 -0.5**
comp=Z,53nm,1.1s
SUMG Summit 45.23 338 *i* P **P** **23 17 21.8 0.0**
SUMG IAmb IAmb 23 17 27.0
comp=Z,82nm,1.0s
SUMG Summit 45.23 338 IAmb IAmb 23 19 02.3
comp=Z,53nm,1.1s
SUMG *i* P **PcP** **23 19 01.1 -0.5**
NRIK Noril'sk 45.37 27 P **P** **23 17 21.8 -0.7**
comp=Z,3.1nm,0.6s,baz=191,slow=4.2,SNR=2.6
NRIK Noril'sk 45.37 27 *i* P **P** **23 17 23.1 +0.7**
NRIK pmax pmax
comp=Z,8.0nm,1.0s
WMQ Urumqi 47.55 62 P **P** **23 17 40.8 +0.8**
WMQ pP sP 23 17 47.9 +3.2
WMQ sP pP 23 17 51.0 +7.6
WMQ pmax pmax
comp=Z,34nm,1.5s
WMQ pmax pmax
comp=Z,380nm,3.7s
WMQ LR LR
comp=Z,1μm,17.1s
WMQ LR LR
comp=Z,1μm,17.3s
WMQ LR LR
comp=Z,1μm,24.7s
UPNV Upernavik 50.50 338 *i* P **P** **23 18 01.8 -0.3**
UPNV IAmb IAmb 23 18 06.6
comp=Z,36nm,0.9s
TULEG Thule 53.31 343 *i* P **P** **23 18 22.1 -0.9**
TULEG IAmb IAmb 23 18 23.6
comp=Z,92nm,1.2s
LSZ Lusaka 53.82 174 P **P** **23 18 29.3 +1.8**
LSZ pmax pmax
comp=Z,6.0nm,1.0s
LSZ Lusaka 53.82 174 P **P** **23 18 29.3 +1.8**
TLY Talaya 55.30 48 *i* P **P** **23 18 39.8 +1.9**
TLY pmax pmax
comp=Z,38nm,1.7s
IRK Irkutsk 55.47 47 *e*P **P** **23 18 40.8 +1.7**
IRK pmax pmax
comp=Z,48nm,1.7s
ZAK Zakamensk 55.54 50 *e*P **P** **23 18 38.3 -1.5**
ZAK pmax pmax
comp=Z,16nm,1.3s
LSA Lhasa 55.63 77 P **P** **23 18 41.0 -0.2**
LSA pmax pmax
comp=Z,30nm,0.9s
LSA Lhasa 55.63 77 IAmb IAmb 23 18 53.3
comp=Z,22nm,1.0s
DRLN Deer Lake 56.57 309 P **P** **23 18 46.3 -0.7**
DRLN IAmb IAmb 23 18 46.6
comp=Z,35nm,0.8s
GTA Gaotai 57.61 63 ⇓P **P** **23 18 53.8 -0.9**
GTA pP pP 23 18 57.9 -0.2
GTA sP sP 23 19 01.0 +1.7
GTA S **S** **23 26 53.1 +0.3**
GTA sS sS 23 26 59.1 +0.7
GTA SS **SS** **23 30 43.6 +1.1**
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,130nm,7.5s
GTA LR LR
comp=Z,510nm,17.8s
GTA LR LR
comp=Z,620nm,15.6s
GTA LR LR
comp=Z,790nm,19.6s
SHL Shillong 58.25 81 P **P** **23 19 01.1 +1.7**
SHL pmax pmax
comp=Z,13nm,1.0s
SHL Shillong 58.25 81 P **P** **23 19 01.1 +1.7**
SONM Songino Array 58.41 52 P **P** **23 18 59.8 -0.3**
comp=Z,12nm,1.0s,baz=290,slow=7.5,SNR=12
SONM Songino Array 58.41 52 *e*P **P** **23 19 00.1 -0.1**
SONM pmax pmax
comp=Z,12nm,1.0s
SONM Songino Array 58.41 52 P **P** **23 18 59.6 -0.5**
TIXI Tiksi 58.42 21 *i* P **P** **23 19 00.6 +1.0**
TIXI Tiksi 58.42 21 P **P** **23 18 59.4 -0.3**
TIXI IAmb IAmb 23 19 03.2
comp=Z,41nm,1.1s
BOD Bodaibo 58.61 39 *e*P **P** **23 18 59.8 -1.4**
BOD pmax pmax
comp=Z,14nm,1.6s
ULN Ulaanbaatar 58.80 51 *i* P **P** **23 19 02.2 -0.7**
ULN pmax pmax
comp=Z,12nm,1.0s
ULN Ulaanbaatar 58.80 51 P **P** **23 19 02.9 -0.1**
SCHQ Schefferville 59.64 318 P **P** **23 19 07.4 -1.0**
comp=Z,39nm,0.9s,baz=57,slow=5.5,SNR=19
SCHQ Schefferville 59.64 318 P **P** **23 19 07.5 -1.0**
RES Resolute Bay 59.94 344 P **P** **23 19 10.6 +0.4**
RES pmax pmax
comp=Z,10.0nm,1.0s
RES Resolute Bay 59.94 344 P **P** **23 19 10.6 +0.4**
LZH Lanzhou 61.97 65 *e*P **P** **23 19 24.9 +0.1**
LZH pP pP 23 19 28.0 -0.2
LZH sP sP 23 19 31.8 +2.3
LZH PP **PP** **23 21 47.0 +6.1**
LZH pmax pmax
comp=Z,18nm,1.2s
LZH pmax pmax
comp=Z,56nm,4.3s
LZH LR LR
comp=Z,730nm,15.7s
LZH LR LR
comp=Z,640nm,14.6s
LZH LR LR
comp=Z,620nm,16.8s
BATG Bathurst New B 62.58 310 IAmb IAmb 23 19 29.5
comp=Z,23nm,0.9s
LBTB Lobatse 63.35 178 P **P** **23 19 35.0 +1.2**
LBTB pmax pmax
comp=Z,16nm,0.9s
LBTB Lobatse 63.35 178 P **P** **23 19 35.0 +1.2**
LBTB IAmb IAmb 23 19 39.5
comp=Z,16nm,0.9s
YAK Yakutsk 63.58 30 *i* P **P** **23 19 34.8 0.0**
YAK pmax pmax
comp=Z,10.0nm,0.6s
BTO Baotou 64.01 58 *e*P **P** **23 19 36.3 -1.9**
E64A Bridgewater 64.06 310 P **P** **23 19 37.8 -0.4**
baz=60
D62A Allapoint, All 64.46 311 P **P** **23 19 41.2 +0.3**
baz=60
CD2 Chengdu 64.50 70 *e*P **P** **23 19 42.8 +1.3**
CD2 pmax pmax
comp=Z,40nm,1.3s
CD2 LR LR
comp=Z,400nm,10.8s
CD2 LR LR
comp=Z,720nm,12.4s
CD2 LR LR
comp=Z,460nm,15.5s
F64A Sherman 64.65 309 P **P** **23 19 42.2 0.0**
baz=60
HHC Hu-ho-hao-te 64.90 57 *e*P **P** **23 19 44.9 +0.9**
HHC S **S** **23 28 28.1 +2.6**
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,160nm,4.8s
HHC LR LR
comp=Z,990nm,15.3s
HHC LR LR
comp=Z,790nm,15.3s
HHC LR LR
comp=Z,960nm,16.2s
E62A Clayton Lake 64.97 311 P **P** **23 19 44.0 -0.2**
baz=60
E62A Clayton Lake 64.97 311 IAmb IAmb 23 19 45.0
comp=Z,27nm,0.9s
HIA Hailar 65.60 46 *i* P **P** **23 19 47.9 -0.4**
HIA pmax pmax
comp=Z,12nm,1.1s
CHGQ Chibougamau 66.05 315 P **P** **23 19 51.2 0.0**
baz=58
LATQ La Tuque 66.48 313 P **P** **23 19 54.0 0.0**
baz=58
XAN Xi'an 66.59 64 P **P** **23 19 54.3 -0.7**
XAN pP sP 23 20 07.5 +7.8
XAN pmax pmax
comp=Z,17nm,1.6s
XAN pmax pmax
comp=Z,220nm,4.7s
XAN LR LR
comp=Z,860nm,17.3s
XAN LR LR
comp=Z,610nm,18.4s
XAN LR LR
comp=Z,620nm,19.5s
XAN Xi'an 66.59 64 IAmb IAmb 23 20 08.1
comp=Z,14nm,0.9s
D58A Chemin du LacG 66.70 312 P **P** **23 19 55.1 -0.3**
baz=58
F60A Warwick 66.75 311 P **P** **23 19 56.0 +0.3**
baz=58
KMI Kunming 66.81 76⇓*e*P **P** **23 19 58.1 +1.4**
KMI pP sP 23 20 01.0 -0.4
KMI sP pP 23 20 05.3 +5.2
KMI pmax pmax
comp=Z,10.0nm,0.7s
KMI pmax pmax
comp=Z,160nm,5.9s
KMI LR LR
comp=Z,380nm,17.0s
KMI LR LR
comp=Z,330nm,21.4s
KMI LR LR
comp=Z,500nm,20.4s
G61A St-Isidore-de- 66.86 310 P **P** **23 19 57.2 +0.7**
baz=58
BOSA Boshof 66.93 178 P **P** **23 19 57.2 +0.2**
comp=Z,11nm,0.9s,baz=358,slow=7.7,SNR=6.4
BOSA Boshof 66.93 178 P **P** **23 19 57.7 +0.7**
BOSA IAmb IAmb 23 20 01.9
comp=Z,14nm,0.9s
MHMT Maesarieng 66.96 85 P P 23 20 04.0 +6.5
H62A Milan 67.01 309 P **P** **23 19 57.8 +0.3**
baz=58
F59A Saint Guilaume 67.30 311 P **P** **23 19 59.3 +0.1**
baz=58
E58A La Victoria 67.31 312 P **P** **23 19 59.7 +0.4**
baz=57
CHTO Chiang Mai 67.39 84 P **P** **23 20 02.9 +2.7**
CHTO pmax pmax
comp=Z,14nm,1.2s
CHTO Chiang Mai 67.39 84 P **P** **23 20 02.9 +2.7**
CM33 Chiang Mai Arr 67.39 84 P P 23 20 05.7 +5.5
CMMT Chiang Mai 67.39 84 P P 23 20 05.5 +5.3
H61A Lyndonville 67.50 310 P **P** **23 20 01.2 +0.7**
baz=58
CM34 Chiang Mai Arr 67.53 83 P **P** **23 20 04.0 +2.9**
CM15 Chiang Mai Arr 67.58 84 P P 23 20 07.7 +6.3
CM13 Chiang Mai Arr 67.58 84 P P 23 20 08.3 +6.9
CMAR Chiang Mai Arr 67.59 84 P **P** **23 20 02.1 +0.6**
comp=Z,5.8nm,1.0s,baz=305,slow=7.8,SNR=9.9
CMAR LR LR 23 54 19.2
comp=Z,354nm,19.6s,baz=322,slow=40
CMAR Chiang Mai Arr 67.59 84 *e*P **P** **23 20 03.8 +2.3**
CMAR pmax pmax
comp=Z,6.0nm,1.0s
CMAR Chiang Mai Arr 67.59 84 P **P** **23 20 03.8 +2.3**
CM02 Chiang Mai Arr 67.61 84 P **P** **23 20 06.0 +4.4**
CM01 Chiang Mai Arr 67.62 84 P P 23 20 06.6 +4.9
CM05 Chiang Mai Arr 67.62 84 P **P** **23 20 05.7 +4.0**
CM35 Chiang Mai Arr 67.63 84 P P 23 20 07.0 +5.3
CM09 Chiang Mai Arr 67.64 84 P P 23 20 08.3 +6.5
CM04 Chiang Mai Arr 67.65 84 P P 23 20 07.0 +5.1
LBNH Lisbon 67.66 309 P **P** **23 20 02.7 +1.2**
baz=57
CM36 Chiang Mai Arr 67.68 84 P **P** **23 20 06.0 +4.0**
E57A Chemin Saint G 67.80 312 P **P** **23 20 02.8 +0.4**
baz=57
PAYA Payao 67.80 83 P P 23 20 07.9 +5.1
D56A ZEC Mazanza, M 67.80 313 P **P** **23 20 02.7 +0.3**
baz=57
MATQ Matagami 67.90 317 P **P** **23 20 03.0 0.0**
baz=56
LSQQ Lebel-sur-Quev 67.94 316 P **P** **23 20 03.4 +0.2**
baz=56
LAMP Lampang 68.09 83 P P 23 20 11.8 +7.2
D55A Sainte-Anne-du 68.23 313 P **P** **23 20 05.4 +0.3**
baz=56
E56A St. Veronique 68.24 313 P **P** **23 20 05.4 +0.3**
baz=56
BJI Beijing 68.33 56 P **P** **23 20 07.8 +2.1**
BJI pmax pmax
comp=Z,9.0nm,1.4s
BJI LR LR
comp=Z,1μm,12.9s
BJI LR LR
comp=Z,700nm,12.7s
BJI LR LR
comp=Z,450nm,20.8s
FRNY Flat Rock 68.33 311 IAmb IAmb 23 20 06.6
comp=Z,14nm,0.8s
G58A Ormstown 68.43 311 P **P** **23 20 06.7 +0.4**
baz=57
H59A Cadyville 68.50 310 P **P** **23 20 07.4 +0.6**
baz=57
SUKH Sukhothai 68.69 84 P P 23 20 16.1 +7.8
VLDQ Val d'Or 68.73 315 P **P** **23 20 09.0 +0.9**
VLDQ IAmb IAmb 23 20 09.6
comp=Z,26nm,0.9s
E55A Montcerf-Lytto 68.88 313 P **P** **23 20 09.9 +0.8**
baz=56
H58A Gabriels 68.91 310 P **P** **23 20 10.0 +0.6**
baz=56
G57A Newington 69.01 311 P **P** **23 20 10.5 +0.6**
baz=56
ENH Enshi 69.02 68 IAmb IAmb 23 20 21.7
comp=Z,22nm,1.1s
GYA Guiyang 69.03 72 ⇓P **P** **23 20 15.1 +4.6**
GYA pmax pmax
comp=Z,8.0nm,1.2s
LONY Lake Ozonia 69.04 311 P **P** **23 20 10.8 +0.6**
baz=56
LONY Lake Ozonia 69.04 311 IAmb IAmb 23 20 11.4
comp=Z,17nm,0.9s
I59A Olmsteadville 69.08 310 P **P** **23 20 11.4 +1.0**
baz=56
H57A Richville 69.61 311 P **P** **23 20 14.3 +0.6**
baz=56
J59A Piesco 69.64 310 P **P** **23 20 15.0 +1.0**
baz=56
J59A Piesco 69.64 310 IAmb IAmb 23 20 15.6
comp=Z,31nm,1.0s
C36M Paulatuk 69.68 348 P **P** **23 20 13.5 -0.2**
baz=27
C36M Paulatuk 69.68 348 IAmb IAmb 23 20 33.2
comp=Z,19nm,1.1s
K60A Five Rivers En 69.74 309 P **P** **23 20 15.2 +0.7**
baz=56
L61A Hillsdale 1, H 69.77 308 P **P** **23 20 16.0 +1.3**
baz=56
I58A Old Forge 69.79 310 P **P** **23 20 15.2 +0.3**
baz=56
I57A Carthage 70.06 311 P **P** **23 20 17.3 +0.8**
baz=55
J58A Remsen 70.17 310 P **P** **23 20 18.1 +1.0**
baz=55
J58A Remsen 70.17 310 IAmb IAmb 23 20 18.7
comp=Z,31nm,0.8s
ALGO Algonquin Park 70.30 313 P **P** **23 20 17.8 -0.1**
baz=55
G54A Lake Saint Pet 70.64 313 P **P** **23 20 20.8 +0.7**
baz=54
L59A Walton 70.69 309 P **P** **23 20 21.5 +1.1**
baz=55
K58A Earlville 70.73 310 P **P** **23 20 21.3 +0.7**
baz=55
K58A Earlville 70.73 310 IAmb IAmb 23 20 22.1
comp=Z,28nm,0.9s
SEY Seymchan 70.88 22 *i* P **P** **23 20 23.4 +2.3**
BINY Binghamton 71.26 309 P **P** **23 20 24.8 +1.0**
baz=55
BINY Binghamton 71.26 309 IAmb IAmb 23 20 25.2
comp=Z,29nm,0.8s
L58A Harry Jones Me 71.26 309 P **P** **23 20 24.8 +0.9**
baz=55
M59A Waymart 71.30 308 P **P** **23 20 24.7 +0.6**
baz=55
H53A Bobcaygeon 71.41 312 P **P** **23 20 25.3 +0.6**
baz=54
N60A Cedar Hill Far 71.48 308 P **P** **23 20 25.8 +0.7**
baz=55
KSPA Keystone Colle 71.49 309 IAmb IAmb 23 20 26.6
comp=Z,28nm,0.7s
SADO Sadowa 71.61 313 IAmb IAmb 23 20 27.0
comp=Z,22nm,0.8s
K56A Middlesex 71.77 310 P **P** **23 20 27.8 +0.9**
baz=54
N59A State Game Lan 71.87 308 P **P** **23 20 28.3 +0.8**
baz=54
N59A State Game Lan 71.87 308 IAmb IAmb 23 20 29.6
comp=Z,30nm,0.9s
L57A Andrews Acres 71.89 309 P **P** **23 20 27.8 +0.1**
baz=54
CN2 Changchun 71.91 48 *e*P **P** **23 20 27.0 -0.7**
CN2 epP sP 23 20 33.3 +0.9
CN2 eS **S** **23 29 46.4 -2.2**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 LR LR
comp=Z,790nm,15.0s
CN2 LR LR
comp=Z,940nm,15.0s
CN2 LR LR
comp=Z,1μm,14.0s
M58A Price's Panora 72.03 309 P **P** **23 20 29.1 +0.6**
baz=54
KLR Kul'dur 72.06 41 *i* P **P** **23 20 27.2 -1.3**
KLR pmax pmax
comp=Z,5.0nm,0.8s
MMNY Mt. Morris Dam 72.10 311 IAmb IAmb 23 20 30.5
comp=Z,26nm,0.9s
L56A Greenwood 72.24 310 P **P** **23 20 30.4 +0.6**
baz=54
M57A Sunshine Farm, 72.45 309 P **P** **23 20 31.9 +0.9**
baz=54
N58A Sunbury 72.49 308 P **P** **23 20 32.0 +0.8**
baz=54
N58A Sunbury 72.49 308 IAmb IAmb 23 20 32.5
comp=Z,40nm,0.9s
MVL Millersville 72.76 308 IAmb IAmb 23 20 34.4
comp=Z,21nm,1.0s
M56A Emporium 73.00 310 P **P** **23 20 34.8 +0.5**
baz=53
Q60A Greensboro 73.03 306 P **P** **23 20 35.3 +0.9**
baz=54
N57A Milroy 73.05 309 P **P** **23 20 35.4 +0.8**
baz=53
I51A Listowel 73.28 313 P **P** **23 20 36.9 +1.1**
baz=52
M55A Ridgway 73.36 310 IAmb IAmb 23 20 37.3
comp=Z,36nm,0.9s
N56A West Decatur 73.41 309 P **P** **23 20 37.5 +0.7**
baz=53
SDMD Soldier's Deli 73.42 307 IAmb IAmb 23 20 37.9
comp=Z,16nm,0.9s
O57A Amberson 73.43 308 P **P** **23 20 37.6 +0.8**
baz=53
P58A Pank, Wackersv 73.65 308 P **P** **23 20 38.7 +0.5**
baz=53
ERPA Erie 73.70 311 P **P** **23 20 39.0 +0.6**
baz=52
YKA Yellowknife Ar 73.70 341 P **P** **23 20 37.1 -0.8**
comp=Z,10nm,0.8s,baz=37,slow=5.1,SNR=16
BMAR Burnt Mountain 73.86 355 P **P** **23 20 39.0 +0.1**
M54A Oil Creek Stat 73.88 310 P **P** **23 20 39.8 +0.4**
baz=52
M54A Oil Creek Stat 73.88 310 IAmb IAmb 23 20 40.8
comp=Z,29nm,0.9s
O56A Blue Knob Stat 73.97 309 P **P** **23 20 40.2 +0.2**
baz=53
O56A Blue Knob Stat 73.97 309 IAmb IAmb 23 20 41.4
comp=Z,24nm,0.8s
P57A Homestead Farm 74.10 308 P **P** **23 20 41.4 +0.7**
baz=53
Q58A Fox Den Farm, 74.22 307 P **P** **23 20 41.6 +0.1**
baz=53
COLD Coldfoot 74.34 357 P **P** **23 20 41.9 +0.2**
baz=5.3
N54A Moraine State 74.41 310 P **P** **23 20 42.8 +0.2**
baz=52
ROSB Rosrio 74.46 253 *e*P **P** **23 20 43.3 +0.1**
CBN Corbin Frederi 74.47 307 P **P** **23 20 43.5 +0.6**
baz=53
P56A Dayton Farm, R 74.59 308 P **P** **23 20 44.0 +0.4**
baz=52
NJ2 Nanjing 74.62 61 *e*P **P** **23 20 43.3 -0.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
S59A Mechanicsville 74.69 306 P **P** **23 20 44.4 +0.2**
baz=53
R58B Mineral 74.93 307 P **P** **23 20 45.6 0.0**
baz=53
Q56A Snyder Ridge, 75.09 308 P **P** **23 20 46.5 -0.1**
baz=52
MCWV Mont Chateau 75.12 309 P **P** **23 20 47.1 +0.4**
baz=52
O54A Avella 75.12 310 P **P** **23 20 46.7 +0.1**
baz=52
O54A Avella 75.12 310 IAmb IAmb 23 20 47.9
comp=Z,21nm,0.8s

R57A	Stanardsville	75.13 307	P	P	23 20 47.2	+0.4	
	baz=52						
P55A	Reedsville	75.20 309	P	P	23 20 47.8	+0.7	
	baz=52						
S58A	Poland Farm, P	75.25 306	P	P	23 20 47.5	+0.1	
	baz=52						
S58A	Poland Farm, P	75.25 306	IAmb	IAmb	23 20 48.5		
	comp=Z,33nm,0.9s						
T59A	Double "B" Far	75.33 306	P	P	23 20 48.2	+0.3	
	baz=52						
T59A	Double "B" Far	75.33 306	IAmb	IAmb	23 20 48.9		
	comp=Z,26nm,0.9s						
USA0B	Ussuriysk Arra	75.38 45	*i* P	P	23 20 46.8	-1.3	
USA0B	Ussuriysk Arra	75.38 45	P	P	23 20 47.3	-0.8	
USRK	Ussuriysk Ar.	75.38 45	P	P	23 20 46.9	-1.1	
	comp=Z,7.7nm,0.8s,baz=301,slow=5.4,SNR=14						
USRK	Ussuriysk Ar.	75.38 45	P	P	23 20 46.8	-1.3	
O53A	New Philadelph	75.58 310	IAmb	IAmb	23 20 50.5		
	comp=Z,27nm,0.9s						
R56A	Bull Pasture M	75.61 308	P	P	23 20 50.2	+0.6	
	baz=52						
Q55A	Buckhannon	75.67 309	P	P	23 20 50.2	+0.3	
	baz=52						
IMAR	Indian Mountai	75.68 359	P	P	23 20 49.4	0.0	
U59A	Littleton	75.86 305	P	P	23 20 51.4	+0.4	
	baz=52						
FFC	Flin Flon	75.90 331	P	P	23 20 50.6	-0.3	
FFC			pmax	pmax			
	comp=Z,10.0nm,0.9s						
FFC	Flin Flon	75.90 331	P	P	23 20 50.6	-0.3	
T58A	Grand View Acr	75.97 306	P	P	23 20 51.9	+0.3	
	baz=52						
O52A	Adamsville	76.03 310	P	P	23 20 52.3	+0.4	
	baz=51						
R55A	Marlinton	76.13 308	P	P	23 20 53.1	+0.5	
	baz=52						
R55A	Marlinton	76.13 308	IAmb	IAmb	23 20 53.9		
	comp=Z,38nm,0.9s						
Q54A	Coxs Mills	76.14 309	P	P	23 20 52.8	+0.3	
	baz=51						
P53A	Whipple	76.16 310	P	P	23 20 53.3	+0.7	
	baz=51						
P53A	Whipple	76.16 310	IAmb	IAmb	23 20 54.0		
	comp=Z,36nm,0.8s						
S56A	Natural Bridge	76.16 307	P	P	23 20 53.4	+0.6	
	baz=52						
U58A	Oxford	76.31 306	P	P	23 20 53.7	+0.1	
	baz=52						
T57A	Hurt	76.39 307	P	P	23 20 54.6	+0.7	
	baz=52						
I23K	Minto, Yukon-K	76.39 357	P	P	23 20 54.0	+0.6	
	baz=5.9						
O51A	Pataskala	76.47 311	P	P	23 20 54.4	0.0	
	baz=51						
V59A	Middlesex	76.50 305	P	P	23 20 55.0	+0.4	
	baz=52						
P52A	Corning	76.51 310	P	P	23 20 54.7	+0.1	
	baz=51						
MLY	Manley	76.56 357	P	P	23 20 55.0	+0.5	
	baz=4.8						
Q53A	Leroy	76.63 309	P	P	23 20 55.3	-0.1	
	baz=51						
ILAR	Eielson Array	76.64 356	P	P	23 20 53.6	-1.3	
	comp=Z,1.2nm,0.8s,baz=355,slow=3.9,SNR=5.2						
ILAR	Eielson Array	76.64 356	P	P	23 20 54.6	-0.3	
ULM	Lac du Bonnet	76.64 325	P	P	23 20 54.3	-0.9	
	comp=Z,18nm,0.9s,baz=51,slow=5.4,SNR=10						
ULM	Lac du Bonnet	76.64 325	IAmb	IAmb	23 20 55.3		
	comp=Z,28nm,1.1s						
S55A	Lewisburg	76.69 308	P	P	23 20 56.6	+0.9	
	baz=51						
U57A	Blanch	76.79 306	P	P	23 20 56.7	+0.5	
	baz=52						
T56A	Rocky Mt	76.86 307	P	P	23 20 57.0	+0.4	
	baz=51						
N49A	Columbus Grove	76.90 312	IAmb	IAmb	23 20 57.4		
	comp=Z,32nm,1.1s						
NEA2	Nenana	76.93 357	P	P	23 20 56.2	-0.4	
	baz=6.2						
HDA	Harding Lake	77.00 356	P	P	23 20 56.3	-0.6	
	baz=7.9						
Q52A	Bidwell	77.02 310	P	P	23 20 57.5	0.0	
	baz=51						
K27K	Chicken	77.02 353	P	P	23 20 57.1	+0.1	
	baz=12						
K27K	Chicken	77.02 353	IAmb	IAmb	23 21 15.5		
	comp=Z,26nm,1.1s						
P51A	Williamsport	77.16 310	P	P	23 20 57.9	-0.4	
	baz=50						
R53A	Hurricane	77.23 309	P	P	23 20 59.1	+0.4	
	baz=51						
SCRK	Sand Creek	77.23 354	P	P	23 20 58.5	+0.1	
	baz=10						
KSAR	Wonju Array Be	77.26 52	P	P	23 20 57.6	-1.3	
KSAR	Wonju Array Be	77.26 52	P	P	23 20 57.6	-1.3	
T55A	Pulaski	77.27 307	P	P	23 20 59.4	+0.3	
	baz=51						
KSRS	Korea Array	77.28 52	P	P	23 20 57.9	-1.1	
	comp=Z,3.6nm,0.8s,baz=304,slow=5.0,SNR=6.9						
V57A	Coltrane Farms	77.41 306	P	P	23 20 59.9	+0.1	
	baz=51						
O49A	Covington	77.47 312	IAmb	IAmb	23 21 00.3		
	comp=Z,26nm,0.8s						
U56A	King	77.50 307	P	P	23 21 00.9	+0.7	
	baz=51						
W58A	Raeford	77.60 305	P	P	23 21 01.6	+0.8	
	baz=51						
MCK	McKinley	77.78 357	P	P	23 21 01.3	-0.1	
	baz=6.2						
T54A	Tazewell	77.80 308	P	P	23 21 01.9	-0.1	
	baz=51						
N47A	Urbana	77.80 313	IAmb	IAmb	23 21 02.0		
	comp=Z,26nm,0.9s						
V56A	Mocksville	77.91 306	P	P	23 21 02.7	+0.1	
	baz=51						
BCAR	Beaver Creek A	77.94 353	P	P	23 21 02.0	-0.3	
W57A	Gilead	78.00 305	P	P	23 21 03.2	+0.2	
	baz=51						
AGMN	Agassiz Nation	78.03 323	P	P	23 21 02.5	-0.5	
	baz=44						
P49A	Miami Univ. Ec	78.11 311	P	P	23 21 03.1	-0.5	
	baz=50						
L26K	Log Cabin Wild	78.12 354	P	P	23 21 03.3	+0.1	
	baz=11						
U54A	Nelsons Funny	78.29 307	P	P	23 21 04.9	+0.1	
	baz=50						
V55A	Taylorsville	78.34 307	P	P	23 21 05.3	+0.4	
	baz=51						
V55A	Taylorsville	78.34 307	IAmb	IAmb	23 21 06.1		
	comp=Z,22nm,0.9s						
W56A	Indian Trail	78.39 306	P	P	23 21 05.2	0.0	
	baz=51						
GCPR	Guaynabo City	78.41 284	IAmb	IAmb	23 21 06.5		
	comp=Z,16nm,0.8s						
BIRD	Birdtown, Kers	78.62 305	IAmb	IAmb	23 21 07.1		
	comp=Z,34nm,1.1s						
F36A	Milaca	78.63 321	IAmb	IAmb	23 21 06.4		
	comp=Z,19nm,1.1s						
V54A	Nebo	78.84 307	P	P	23 21 08.3	+0.5	
	baz=50						
KMSC	Kings Mountain	78.86 306	P	P	23 21 08.0	+0.1	
	baz=50						
KMSC	Kings Mountain	78.86 306	IAmb	IAmb	23 21 08.4		
	comp=Z,26nm,1.0s						
OBIP	Obispado Ponce	78.96 284	IAmb	IAmb	23 21 10.0		
	comp=Z,36nm,0.8s						
Y57A	Sumter	78.97 305	P	P	23 21 09.2	+0.7	
	baz=51						
YSS	Yuzh-Sakhalins	79.05 37	*e*P	P	23 21 08.1	-0.5	
YSS			pmax	pmax			
	comp=Z,20nm,1.1s						
X56A	White Oak	79.08 305	P	P	23 21 09.1	+0.1	
	baz=50						
R49A	Shelbyville	79.19 311	IAmb	IAmb	23 21 10.2		
	comp=Z,23nm,0.9s						
PAULI	Pauline	79.37 306	IAmb	IAmb	23 21 11.6		
	comp=Z,28nm,0.9s						
BLO	Bloomington	79.41 312	IAmb	IAmb	23 21 11.3		
	comp=Z,45nm,0.9s						
NHSC	New Hope	79.41 304	P	P	23 21 12.2	+1.4	
	baz=51						
X55A	Gracelyn & Ava	79.48 306	P	P	23 21 11.5	+0.3	
	baz=50						
T50A	Nancy	79.82 309	IAmb	IAmb	23 21 13.9		
	comp=Z,21nm,0.9s						
I37A	Lemond, Waseca	79.87 319	IAmb	IAmb	23 21 13.6		
	comp=Z,32nm,0.9s						
WCI	Wyandotte Cave	79.89 311	P	P	23 21 13.5	+0.1	
WCI			pmax	pmax			
	comp=Z,33nm,0.9s						
WCI	Wyandotte Cave	79.89 311	P	P	23 21 13.5	+0.1	
	baz=48						
WCI	Wyandotte Cave	79.89 311	P	P	23 21 13.5	+0.1	
WCI			IAmb	IAmb	23 21 14.1		
	comp=Z,33nm,0.9s						
HDIL	Hopedale	80.06 314	P	P	23 21 14.3	+0.1	
	baz=47						
L40A	Anamosa	80.08 317	IAmb	IAmb	23 21 14.4		
	comp=Z,34nm,1.0s						
V51A	Loudon	80.32 308	IAmb	IAmb	23 21 17.8		
	comp=Z,27nm,1.1s						
OLIL	Olney	80.61 312	IAmb	IAmb	23 21 17.5		
	comp=Z,35nm,1.0s						
CPCT	Cooper Cave	80.65 308	IAmb	IAmb	23 21 18.8		
	comp=Z,32nm,1.0s						
U49A	Red Boiling Sp	80.72 310	IAmb	IAmb	23 21 18.8		
	comp=Z,36nm,0.9s						
P43A	Skaggs, Pawnee	80.81 314	IAmb	IAmb	23 21 18.8		
	comp=Z,28nm,0.8s						
N41A	Harden Midland	80.82 315	IAmb	IAmb	23 21 18.0		
	comp=Z,21nm,0.8s						
GOGA	Godfrey	81.32 306	P	P	23 21 21.5	+0.3	
	baz=49						
CLTN	Cedars of Leba	81.34 310	IAmb	IAmb	23 21 21.9		
	comp=Z,27nm,1.1s						
Y52A	Lilburn	81.41 307	IAmb	IAmb	23 21 22.8		
	comp=Z,44nm,1.0s						
ECSD	EROS Data Cent	81.69 321	P	P	23 21 22.2	-0.8	
	baz=43						
ECSD	EROS Data Cent	81.69 321	IAmb	IAmb	23 21 23.2		
	comp=Z,13nm,0.7s						
V48A	Smith Brothers	81.87 310	IAmb	IAmb	23 21 24.4		
	comp=Z,26nm,1.0s						
S44A	Carbondale	81.99 312	IAmb	IAmb	23 21 25.0		
	comp=Z,28nm,0.9s						
WVT	Waverly	82.21 310	P	P	23 21 25.0	-0.8	
WVT			pmax	pmax			
	comp=Z,17nm,1.0s						
WVT	Waverly	82.21 310	P	P	23 21 25.0	-0.8	
	baz=47						
WVT	Waverly	82.21 310	P	P	23 21 25.0	-0.8	
WVT			IAmb	IAmb	23 21 25.7		
	comp=Z,17nm,0.9s						
P40A	Paris	82.30 315	IAmb	IAmb	23 21 26.3		
	comp=Z,16nm,0.8s						
FVM	French Village	82.46 313	IAmb	IAmb	23 21 27.7		
	comp=Z,26nm,0.9s						
152A	Waverly Hall	82.60 306	IAmb	IAmb	23 21 28.4		
	comp=Z,19nm,0.8s						
X48A	Hartselle	82.86 309	IAmb	IAmb	23 21 29.8		
	comp=Z,30nm,0.9s						
Y49A	Blount Mountai	82.87 308	IAmb	IAmb	23 21 30.1		
	comp=Z,28nm,0.9s						
CCM	Cathedral Cave	82.88 314	P	P	23 21 29.0	-0.2	
CCM			pmax	pmax			
	comp=Z,20nm,0.8s						
CCM	Cathedral Cave	82.88 314	P	P	23 21 28.6	-0.6	
	baz=46						
CCM	Cathedral Cave	82.88 314		P	23 21 29.0	-0.2	
PLAL	Pickwick Lake	83.13 310	IAmb	IAmb	23 21 30.6		
	comp=Z,28nm,1.0s						
PBMO	Poplar Bluff	83.29 312	IAmb	IAmb	23 21 32.0		
	comp=Z,17nm,0.9s						
LRAL	Lakeview Retre	83.79 308	P	P	23 21 33.9	-0.1	
	baz=48						
LAO	LASA Array	83.84 328	P	P	23 21 34.1	0.0	
	baz=37						
MJAR	Matsushiro Arr	84.03 47	P	P	23 21 35.0	-0.2	
	comp=Z,3.9nm,0.8s,baz=320,slow=5.0,SNR=5.9						
MJAR	Matsushiro Arr	84.03 47	P	P	23 21 35.4	+0.2	
MJAR			pmax	pmax			
	comp=Z,6.0nm,1.1s						
MJAR	Matsushiro Arr	84.03 47	P	P	23 21 35.4	+0.2	
MJA0	Matsu Arr-Jizo	84.05 47	*e*P	P	23 21 34.9	-0.5	
MJA0			pmax	pmax			
	comp=Z,3.0nm,0.7s						
MGMO	Mountain Grove	84.09 314	IAmb	IAmb	23 21 37.3		
	comp=Z,26nm,0.8s						
EGMT	Eagleton	84.18 331	P	P	23 21 35.8	0.0	
	baz=35						
LCAR	Lake Charles	84.21 312	IAmb	IAmb	23 21 36.5		
	comp=Z,17nm,1.0s						
S39A	Bolivar	84.30 315	IAmb	IAmb	23 21 37.4		
	comp=Z,27nm,1.1s						
WALA	Waterton Lakes	84.85 333	IAmb	IAmb	23 21 39.2		
	comp=Z,13nm,0.8s						
RSSD	Black Hills	84.91 325	P	P	23 21 39.8	0.0	
RSSD			pmax	pmax			
	comp=Z,10.0nm,0.8s						
RSSD	Black Hills	84.91 325	P	P	23 21 39.0	-0.8	
	baz=39						
RSSD	Black Hills	84.91 325	P	P	23 21 39.8	0.0	
RSSD			IAmb	IAmb	23 21 40.3		
	comp=Z,10nm,0.8s						
U40A	Yellville	84.98 313	P	P	23 21 39.7	-0.4	
	baz=45						
U40A	Yellville	84.98 313	IAmb	IAmb	23 21 40.7		
	comp=Z,20nm,0.9s						
KSU1	Kansas State U	85.07 317	P	P	23 21 40.0	-0.4	
	baz=43						
W41B	Gary Mavity, V	85.47 312	P	P	23 21 42.3	-0.1	
	baz=45						
HHAR	Hobbs	85.65 314	IAmb	IAmb	23 21 43.8		
	comp=Z,26nm,0.9s						
BDFB	Brasilia	85.76 246	P	P	23 21 42.8	-1.4	
	comp=Z,14nm,0.8s,baz=71,slow=4.2,SNR=14						
BDFB	Brasilia	85.76 246	P	P	23 21 45.4	+1.2	
BDFB			IAmb	IAmb	23 21 46.1		
	comp=Z,20nm,0.9s						
JTMT	Jette	86.09 333	IAmb	IAmb	23 21 46.4		
	comp=Z,26nm,0.9s						
X40A	Basin Creek Fa	86.29 312	P	P	23 21 46.7	+0.1	
	baz=45						
X40A	Basin Creek Fa	86.29 312	IAmb	IAmb	23 21 47.2		
	comp=Z,20nm,0.9s						
W39A	Magazine	86.34 313	P	P	23 21 46.0	-0.7	
	baz=44						
RLMT	Red Lodge	86.36 329	P	P	23 21 47.1	+0.1	
	baz=35						
VBMS	Vicksburg	86.51 309	P	P	23 21 48.1	+0.5	
	baz=46						
NEW	Newport	86.63 335	P	P	23 21 48.3	+0.2	
	baz=30						
NEW	Newport	86.63 335	IAmb	IAmb	23 21 48.7		
	comp=Z,20nm,0.9s						
R32A	Long Quarter,	86.68 318	IAmb	IAmb	23 21 48.1		
	comp=Z,19nm,0.8s						
MIAR	Mount Ida	86.68 313	P	P	23 21 49.1	+0.6	
	baz=44						
MSO	Missoula	86.75 332	P	P	23 21 48.1	-0.6	
	baz=32						
BOZ	Bozeman (W)	86.91 330	P	P	23 21 49.8	+0.2	
	baz=34						
KS20	Mayfield South	86.95 317	IAmb	IAmb	23 21 50.9		
	comp=Z,17nm,0.9s						
TUL1	Leonard	86.95 315	P	P	23 21 49.6	-0.1	
	baz=43						
TUL1	Leonard	86.95 315	IAmb	IAmb	23 21 50.4		
	comp=Z,38nm,0.8s						
K22A	Casper	87.19 325	P	P	23 21 49.9	-1.1	
	baz=37						
K22A	Casper	87.19 325	IAmb	IAmb	23 21 50.6		
	comp=Z,20nm,0.7s						
JHJ	Hachijo jima 2	87.36 49	P	P	23 21 50.2	-1.5	
	comp=Z,212nm,0.8s,baz=228,slow=16,SNR=3.8						
SDV	Santo Domingo	87.65 279	P	P	23 21 53.8	+0.1	
KSCO	Kaye Shedlock'	88.22 321	P	P	23 21 56.0	+0.1	
	baz=39						
N23A	Red Feather La	88.32 324	P	P	23 21 56.6	-0.1	
	baz=37						
N23A	Red Feather La	88.32 324	IAmb	IAmb	23 21 57.1		
	comp=Z,24nm,0.9s						
BW06	Boulder Array	88.41 327	P	P	23 21 55.7	-1.3	
	baz=35						
PDAR	Pinedale Array	88.41 327	P	P	23 21 55.3	-1.6	
	comp=Z,2.7nm,0.7s,baz=57,slow=4.4,SNR=13						
PDAR			PP	PP	23 25 22.1	-1.7	
	comp=Z,0.8nm,0.8s,baz=41,slow=8.4,SNR=2.8						
ISCO	Idaho Springs	89.04 323	P	P	23 21 59.5	-0.6	
	baz=38						
HAWA	Hanford	89.06 335	IAmb	IAmb	23 22 00.5		
	comp=Z,11nm,0.8s						
D03D	Eldon	89.14 338	P	P	23 22 00.3	+0.3	
	baz=26						
WMOK	Wichita Mounta	89.47 316	P	P	23 22 01.9	+0.1	
	baz=42						
WMOK	Wichita Mounta	89.47 316	IAmb	IAmb	23 22 02.9		
	comp=Z,19nm,0.9s						
Q24A	Divide	89.48 322	P	P	23 22 01.6	-0.6	
	baz=38						
E04D	Cinebar	89.87 337	P	P	23 22 03.2	-0.2	
	baz=26						
HWUT	Hardware Ranch	90.20 328	IAmb	IAmb	23 22 05.3		
	comp=Z,12nm,0.8s						
T25A	Trinidad	90.56 321	P	P	23 22 06.6	-0.5	
	baz=38						
T25A	Trinidad	90.56 321	IAmb	IAmb	23 22 08.5		
	comp=Z,8.1nm,0.8s						
SDCO	Great Sand Dun	90.61 322	P	P	23 22 06.7	-0.8	
	baz=38						
WHTX	Lake Whitney,	90.77 313	P	P	23 22 08.6	+0.8	
	baz=42						
WHTX	Lake Whitney,	90.77 313	IAmb	IAmb	23 22 09.3		
	comp=Z,18nm,0.8s						
S22A	4UR Ranch, Cre	91.25 323	P	P	23 22 10.1	-0.3	
	baz=37						
S22A	4UR Ranch, Cre	91.25 323	IAmb	IAmb	23 22 10.7		
	comp=Z,12nm,0.9s						
HKT	Hockley	91.31 311	P	P	23 22 11.2	+0.9	
HKT			pmax	pmax			
	comp=Z,15nm,1.1s						
HKT	Hockley	91.31 311	P	P	23 22 11.2	+0.9	
HKT			IAmb	IAmb	23 22 12.0		
	comp=Z,15nm,1.1s						
ABTX	Abilene, Hawle	91.53 315	P	P	23 22 11.6	+0.2	
	baz=41						
PV04	Paradox Valley	91.69 324	IAmb	IAmb	23 22 12.6		
	comp=Z,20nm,0.9s						
PV01	Paradox Valley	91.75 324	IAmb	IAmb	23 22 12.8		
	comp=Z,19nm,0.9s						
PV20	West Nyswonger	91.76 324	IAmb	IAmb	23 22 12.8		
	comp=Z,18nm,0.9s						
PV02	Paradox Valley	91.77 324	IAmb	IAmb	23 22 12.9		
	comp=Z,12nm,0.9s						
PV03	Paradox Valley	91.78 324	IAmb	IAmb	23 22 12.9		
	comp=Z,16nm,1.0s						
PV19	Morning Glory	91.79 324	IAmb	IAmb	23 22 13.0		
	comp=Z,19nm,1.0s						
PV18	Skein Mesa, Pa	91.81 324	IAmb	IAmb	23 22 13.1		
	comp=Z,16nm,0.9s						
MVCO	Mesa Verde	92.46 323	P	P	23 22 15.3	-0.7	
	baz=36						
MVCO	Mesa Verde	92.46 323	IAmb	IAmb	23 22 16.2		
	comp=Z,7.5nm,0.9s						
I02D	Swisshome	92.47 337	P	P	23 22 15.0	-0.5	
	baz=25						
ROSC	El Rosal	93.02 279	P	P	23 22 18.3	-0.7	
	comp=Z,12nm,0.2s,baz=348,slow=20,SNR=4.2						
ROSC	El Rosal	93.02 279	IAmb	IAmb	23 22 28.8		
	comp=Z,13nm,0.7s						
JCT	Junction City	93.23 314	P	P	23 22 19.4	+0.1	
	baz=41						
JCT	Junction City	93.23 314	IAmb	IAmb	23 22 19.6		
	comp=Z,7.5nm,0.9s						
U15A	North Rim	94.83 326	IAmb	IAmb	23 22 44.3		
	comp=Z,6.2nm,0.9s						
MNTX	Cornudas Mount	95.33 318	P	P	23 22 28.0	-0.9	
	baz=38						
121A	Cookes Peak, D	95.89 320	P	P	23 22 31.4	-0.3	
	baz=36						
121A	Cookes Peak, D	95.89 320	IAmb	IAmb	23 22 32.0		
	comp=Z,7.6nm,0.9s						
KMRM	Mail Ridge	95.94 335	IAmb	IAmb	23 22 32.7		
	comp=Z,13nm,0.9s						
TXAR	Lajitas Array	96.26 315	P	P	23 22 33.0	-0.3	
	comp=Z,3.3nm,0.8s,baz=72,slow=4.1,SNR=12						
TXAR			PP	PP	23 26 30.1	+4.3	
	comp=Z,0.9nm,1.0s,baz=56,slow=4.9,SNR=1.8						
TXAR	Lajitas Array	96.26 315	P	P	23 22 32.8	-0.6	
WRA	Warramunga Arr	118.31 94	PKP	PKPdf	23 27 49.4	-2.9	
	comp=Z,1.9nm,0.8s,baz=300,slow=2.1,SNR=9.4						
WRA	Warramunga Arr	118.31 94		PKPdf	23 27 50.5	-1.9	
ASAR	Alice Springs	119.99 97	PKP	PKPdf	23 27 52.5	-3.0	
	comp=Z,2.8nm,0.9s,baz=336,slow=1.7,SNR=9.9						
CTAO	Charters Tower	127.71 86	PKIKP	PKPdf	23 28 09.3	-1.0	
CTAO	Charters Tower	127.71 86		PKPdf	23 28 09.3	-1.0	
STKA	Stephens Creek	129.92 102	PKP	PKPdf	23 28 13.2	-1.0	
	comp=Z,1.8nm,0.7s,baz=350,slow=19,SNR=3.4						

IDC ***17*** *23:13:28.0±1.2, 38°.58N×23°.39E, h0km, mb3.7/6, mb1 3.7/8, mb1mx3.5/53, mbtmp3.7/8, ML4.2/2, Error ellipse: s-maj=28.0km s-min=16.4km az=93.0*
DDA ***17*** *23:13:29.2, 38°.67N×23°.55E, h20km±2km, ML3.6*
ISK ***17*** *23:13:29.7, 38°.69N×23°.45E, h21km, ML3.8/14*
ATH ***17*** *23:13:29.2, 38°.65N×23°.45E, h24km, ML3.8/17, Error ellipse: s-maj=1.0km s-min=0.6km az=216.0*
THE ***17*** *23:13:30.1, 38°.63N×23°.42E, h7km±1km, ML3.8/15, Error ellipse: s-maj=1.1km s-min=0.3km az=150.0*
NEIC ***17*** *23:13:33.5±2.1, 38°.72N±0°.04×23°.39E±0°.07, h49km±13km, Error ellipse: s-maj=8.3km s-min=5.1km az=68.0*

ISC 17 23:13:29.7±0.9, 38°.65N±0°.02×23°.44E±0°.02, h16km±6km, n215, d0°97/253, mb3.9/12, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAL	**Atalanti**	**0.33**	**277**	P	**Pg**	**23 13 36.8**	**+0.3**
ATAL				S	**Sg**	**23 13 41.6**	**+0.3**
ATAL				AML	AML	23 13 42.0	
	comp=E,18101μm,0.2s						
ATAL				AML	AML	23 13 44.7	
	comp=N,18021μm,0.3s						
ATAL	**Atalanti**	**0.33**	**277**	P	**Pg**	**23 13 36.4**	**-0.2**
ATAL				S	**Sg**	**23 13 41.3**	**0.0**
	comp=N,9μm,0.2s						
LKR	**Lokris**	**0.34**	**270**	P	**Pg**	**23 13 36.1**	**-0.7**
LKR	**Lokris**	**0.34**	**270**	P	**Pg**	**23 13 36.8**	**0.0**
LKR				S	**Sg**	**23 13 41.2**	**-0.5**
	comp=N,24μm,0.1s						
VIL2	**Platees**	**0.46**	**197**	P	**Pg**	**23 13 38.7**	**-0.2**
VIL2				S	**Sg**	**23 13 45.9**	**+0.7**
VIL2				AML	AML	23 13 48.1	
	comp=N,19592μm,0.3s						
VIL2				AML	AML	23 13 48.7	
	comp=E,18194μm,0.4s						
VILL	**Villia**	**0.49**	**191**	P	**Pg**	**23 13 38.8**	**-0.8**
VILL				S	**Sg**	**23 13 46.1**	**-0.2**
	comp=E,11μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.52**	**92**	P	**Pb**	**23 13 39.9**	**-0.6**
KYMI				S	**Sb**	**23 13 47.7**	**-0.1**
KYMI				AML	AML	23 13 49.6	
	comp=E,18488μm,0.3s						
KYMI				AML	AML	23 13 51.6	
	comp=N,15723μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.52**	**92**	P	**Pb**	**23 13 39.8**	**-0.6**
KYMI				S	**Sb**	**23 13 48.6**	**+0.8**
	comp=N,9μm,0.3s						
ALNA	**Alonissos**	**0.60**	**34**	P	**Pb**	**23 13 41.5**	**-0.4**
ALNA				S	**Sb**	**23 13 50.5**	**+0.4**
ALNA				AML	AML	23 13 53.8	
	comp=E,13033μm,0.2s						
ALNA				AML	AML	23 13 54.3	
	comp=N,20159μm,0.3s						
AXAR	**Agios Charalam**	**0.62**	**281**	P	**Pb**	**23 13 42.2**	**0.0**
AXAR				AML	AML	23 13 55.3	
	comp=E,22225μm,0.3s						
AXAR				AML	AML	23 13 55.7	
	comp=N,25514μm,0.4s						
AXAR	**Agios Charalam**	**0.62**	**281**	P	**Pg**	**23 13 41.4**	**-0.5**
AXAR				S	**Sb**	**23 13 51.2**	**+0.5**
	comp=N,12μm,0.3s						
AOS	**Alonnisos**	**0.62**	**33**	P	**Pb**	**23 13 41.7**	**-0.5**
AOS				S	**Sb**	**23 13 50.9**	**+0.1**
AOS				AML	AML	23 13 54.5	
	comp=E,26540μm,0.3s						
AOS				AML	AML	23 13 54.9	
	comp=N,19174μm,0.2s						
AOS	**Alonnisos**	**0.62**	**33**	PG	**Pb**	**23 13 41.8**	**-0.5**

PTL	**Penteli**	**0.69**	**151**	P	**Pg**	**23 13 43.0**	**-0.3**
PTL				S	**Sg**	**23 13 52.6**	**+0.3**
PTL				AML	AML	23 13 55.3	
	comp=E,17679µm,0.4s						
PTL				AML	AML	23 13 56.9	
	comp=N,11646µm,0.4s						
PTL	**Penteli**	**0.69**	**151**	P	**Pg**	**23 13 42.9**	**-0.3**
PTL				S	**Sg**	**23 13 52.5**	**+0.2**
	comp=N,7µm,0.4s						
DION	**Dionisos Attik**	**0.69**	**146**	P	**Pg**	**23 13 42.9**	**-0.4**
DION				S	**Sg**	**23 13 52.1**	**-0.3**
DION				AML	AML	23 13 55.3	
	comp=N,83751µm,0.4s						
DION				AML	AML	23 13 55.4	
	comp=E,70862µm,0.3s						
DION	**Dionisos Attik**	**0.69**	**146**	P	**Pg**	**23 13 42.9**	**-0.4**
DION				S	**Sb**	**23 13 52.8**	**+0.1**
	comp=E,38µm,0.4s						
ATH	**Athens Observa**	**0.71**	**162**	P	**Pg**	**23 13 43.5**	**-0.1**
ATH				AML	AML	23 13 56.2	
	comp=E,24242µm,0.2s						
ATH				AML	AML	23 13 56.8	
	comp=N,27916µm,0.3s						
ATH	**Athens Observa**	**0.71**	**162**	P	**Pg**	**23 13 43.5**	**-0.1**
ATH				S	**Sb**	**23 13 53.9**	**+0.6**
	comp=N,13µm,0.3s						
LTK	**Loutraki**	**0.73**	**211**	P	**Pg**	**23 13 43.1**	**-0.8**
LTK	**Loutraki**	**0.73**	**211**	P	**Pg**	**23 13 43.2**	**-0.7**
LTK				S	**Sg**	**23 13 53.0**	**-0.6**
	comp=N,9µm,0.3s						
ATHU	**Athens Univers**	**0.74**	**158**	P	**Pg**	**23 13 43.7**	**-0.4**
ATHU				S	**Sg**	**23 13 53.9**	**+0.1**
ATHU				AML	AML	23 13 57.1	
	comp=E,6017µm,0.3s						
ATHU				AML	AML	23 13 57.3	
	comp=N,7770µm,0.3s						
ATHU	**Athens Univers**	**0.74**	**158**	P	**Pg**	**23 13 43.7**	**-0.4**
ATHU				S	**Sg**	**23 13 53.5**	**-0.3**
	comp=N,3µm,0.3s						
XOR	**Xorichti**	**0.74**	**345**	P	**Pb**	**23 13 44.2**	**-0.1**
XOR				S	**Sb**	**23 13 54.1**	**0.0**
XOR				AML	AML	23 13 57.5	
	comp=N,16506µm,0.3s						
XOR				AML	AML	23 13 58.3	
	comp=E,9512µm,0.8s						
XOR	**Xorichti**	**0.74**	**345**	P	**Pb**	**23 13 44.2**	**-0.1**
XOR				S	**Sn**	**23 13 55.4**	**-1.1**
	comp=E,6µm,0.5s						
DSF	**Desfina**	**0.75**	**252**	P	**Pg**	**23 13 42.9**	**-1.5**
DSF				S	**Sg**	**23 13 54.5**	**+0.1**
DSF				AML	AML	23 13 57.4	
	comp=N,45781µm,0.3s						
DSF				AML	AML	23 13 58.4	
	comp=E,19903µm,0.3s						
DSF	**Desfina**	**0.75**	**252**	P	**Pg**	**23 13 43.3**	**-1.1**
LOUT	**Loutraki**	**0.76**	**209**	P	**Pg**	**23 13 43.4**	**-1.0**
LOUT	**Loutraki**	**0.76**	**209**	P	**Pg**	**23 13 43.4**	**-1.0**
DLFA	**Delphi**	**0.76**	**257**	P	**Pg**	**23 13 43.2**	**-1.3**
VOL2	**Volos**	**0.81**	**332**	P	**Pn**	**23 13 48.1**	**+1.7**
VLY	**Voula,Athens**	**0.84**	**160**	P	**Pg**	**23 13 45.7**	**-0.4**
VLY				S	**Sg**	**23 13 57.5**	**+0.2**
VLY				AML	AML	23 13 59.4	
	comp=N,12320µm,0.2s						
VLY				AML	AML	23 14 00.1	
	comp=E,29348µm,0.3s						
VLY	**Voula,Athens**	**0.84**	**160**	P	**Pg**	**23 13 46.0**	**-0.1**
VLY				S	**Sg**	**23 13 57.5**	**+0.2**
	comp=E,11µm,0.4s						
THAL	**Thalero**	**0.86**	**225**	P	**Pb**	**23 13 45.4**	**-0.9**
THAL	**Thalero**	**0.86**	**225**	P	**Pb**	**23 13 45.6**	**-0.7**
SKY	**Skiros Island**	**0.90**	**75**	P	**Pg**	**23 13 46.9**	**-0.2**
SKY				AML	AML	23 14 03.7	
	comp=N,26534µm,0.4s						
SKY				AML	AML	23 14 03.7	
	comp=E,30209µm,0.2s						
SKY	**Skiros Island**	**0.90**	**75**	P	**Pg**	**23 13 47.0**	**-0.2**
SKY				S	**Sn**	**23 14 00.7**	**+0.3**
	comp=E,13µm,0.3s						
AGG	**Agios Georgios**	**0.94**	**294**	P	**Pb**	**23 13 47.6**	**-0.1**
AGG	**Agios Georgios**	**0.94**	**294**	PG	**Pn**	**23 13 48.2**	**-0.1**
AGG				SG	**Sn**	**23 14 01.2**	**-0.3**
AGG	**Agios Georgios**	**0.94**	**294**	*i* P	**Pb**	**23 13 47.2**	**-0.4**
AGG				*i* S	**Sg**	**23 14 00.2**	**-0.1**
AGG	**Agios Georgios**	**0.94**	**294**		**Pg**	**23 13 47.9**	**-0.1**
AGG	**Agios Georgios**	**0.94**	**294**	P	**Pb**	**23 13 47.6**	**-0.1**
KARY	**Karystos**	**1.00**	**128**	P	**Pb**	**23 13 48.5**	**-0.1**
KARY				S	**Sb**	**23 14 01.7**	**+0.1**
KARY				AML	AML	23 14 04.0	
	comp=E,5410µm,0.3s						
KARY				AML	AML	23 14 04.9	
	comp=N,6164µm,0.5s						
KARY	**Karystos**	**1.00**	**128**	P	**Pn**	**23 13 49.1**	**0.0**
KALE	**Kalithea**	**1.05**	**256**	P	**Pb**	**23 13 48.6**	**-1.0**
KALE	**Kalithea**	**1.05**	**256**	P	**Pb**	**23 13 48.8**	**-0.8**
EPID	**Epidavros**	**1.06**	**194**	P	**Pb**	**23 13 49.9**	**+0.1**
EPID	**Epidavros**	**1.06**	**194**	P	**Pb**	**23 13 49.9**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.08**	**290**	P	**Pg**	**23 13 50.5**	**-0.1**
MAKR				S	**Sg**	**23 14 04.6**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.08**	**290**	P	**Pg**	**23 13 50.5**	**-0.1**
TRIZ	**Trizonia**	**1.11**	**256**	P	**Pb**	**23 13 50.7**	**+0.2**
TRIZ				S	**Sn**	**23 14 06.1**	**+0.6**
TRIZ	**Trizonia**	**1.11**	**256**	P	**Pn**	**23 13 50.8**	**+0.2**
SERG	**Sergoula**	**1.11**	**258**	P	**Pb**	**23 13 50.5**	**0.0**
SERG				S	**Sg**	**23 14 05.8**	**+0.1**
SERG	**Sergoula**	**1.11**	**258**	P	**Pb**	**23 13 50.6**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.11**	**250**	P	**Pn**	**23 13 51.1**	**+0.5**
GUR	**Goura**	**1.12**	**231**	P	**Pb**	**23 13 51.0**	**+0.3**
GUR				S	**Sg**	**23 13 06.4**	**+0.4**
GUR				AML	AML	23 14 08.2	
	comp=N,19158µm,0.4s						
GUR				AML	AML	23 14 09.5	
	comp=E,12091µm,0.3s						
GUR	**Goura**	**1.12**	**231**	P	**Pb**	**23 13 51.0**	**+0.3**
KLV	**Kalavryta, Ach**	**1.18**	**239**	P	**Pn**	**23 13 51.7**	**+0.1**
KLV				S	**Sg**	**23 14 08.8**	**+0.9**
KLV	**Kalavryta, Ach**	**1.18**	**239**	P	**Pn**	**23 13 51.5**	**-0.1**
ANX	**Ano Chora**	**1.19**	**268**	P	**Pn**	**23 13 51.9**	**+0.1**
ANX	**Ano Chora**	**1.19**	**268**	P	**Pb**	**23 13 52.1**	**+0.1**
EFP	**Efpalio**	**1.22**	**260**	P	**Pb**	**23 13 52.7**	**+0.3**
KRND	**KRANIDI**	**1.29**	**190**	P	**Pn**	**23 13 53.4**	**+0.4**
PAIG	**Paliouri**	**1.29**	**8**	P	**Pb**	**23 13 53.2**	**-0.3**
PAIG	**Paliouri**	**1.29**	**8**	P	**Pb**	**23 13 53.4**	**-0.2**
YDRA	**Hydra**	**1.30**	**179**	P	**Pn**	**23 13 53.2**	**+0.1**
EVR	**Evrytania**	**1.30**	**282**	P	**Pg**	**23 13 54.6**	**-0.2**
EVR	**Evrytania**	**1.30**	**282**	P	**Pn**	**23 13 53.3**	**0.0**
LRSO	**Larissa Observ**	**1.30**	**322**	P	**Pb**	**23 13 53.8**	**-0.1**
LRSO	**Larissa Observ**	**1.30**	**322**	P	**Pg**	**23 13 54.4**	**-0.4**
THL	**Klokotos Trika**	**1.44**	**310**	P	**Pb**	**23 13 55.7**	**-0.4**
THL	**Klokotos Trika**	**1.44**	**310**	P	**Pb**	**23 13 55.5**	**-0.6**
TRIP	**Tripoli**	**1.45**	**220**	P	**Pn**	**23 13 55.6**	**+0.2**
TRIP	**Tripoli**	**1.45**	**220**	P	**Pn**	**23 13 55.8**	**+0.4**
EFSA	**Agios Efstrati**	**1.50**	**53**	P	**Pn**	**23 13 55.9**	**0.0**
DRO	**Drossia**	**1.53**	**243**	P	**Pn**	**23 13 56.8**	**+0.4**
DRO	**Drossia**	**1.53**	**243**	P	**Pn**	**23 13 56.9**	**+0.5**
VLX	**Vlachokerasia**	**1.53**	**214**	P	**Pn**	**23 13 57.2**	**+0.8**
VLX	**Vlachokerasia**	**1.53**	**214**	P	**Pn**	**23 13 56.9**	**+0.5**
LIT	**Litokhoron**	**1.62**	**333**	P	**Pn**	**23 13 57.9**	**+0.1**
LIT	**Litokhoron**	**1.62**	**333**	*i* P	**Pn**	**23 13 57.2**	**-0.5**
LIT	**Litokhoron**	**1.62**	**333**	Pn	**Pn**	**23 13 57.7**	**0.0**
LIT	**Litokhoron**	**1.62**	**333**	P	**Pn**	**23 13 58.2**	**+0.5**
RLS	**Riolos of Patr**	**1.66**	**250**	P	**Pn**	**23 13 57.9**	**-0.2**
PSRA	**Psara**	**1.67**	**93**	P	**Pb**	**23 14 00.1**	**+0.1**
PLG	**Polygyros**	**1.72**	**0**	P	**Pb**	**23 13 59.6**	**-1.4**
PLG	**Polygyros**	**1.72**	**0**	P	**Pn**	**23 13 59.5**	**+0.4**
OUR	**Ouranopolis**	**1.73**	**14**	P	**Pb**	**23 13 59.7**	**-1.4**
OUR	**Ouranopolis**	**1.73**	**14**	PN	**Pn**	**23 13 59.2**	**0.0**
TNSA	**Tinos**	**1.76**	**129**	P	**Pn**	**23 13 59.8**	**+0.4**
AMT	**Artemida-Makis**	**1.76**	**231**	P	**Pb**	**23 14 01.3**	**-0.4**
LIA	**Limnos Island**	**1.84**	**47**	P	**Pn**	**23 14 00.8**	**+0.1**
ITM	**Ithomi**	**1.89**	**220**	P	**Pb**	**23 14 03.2**	**-0.8**
ITM	**Ithomi**	**1.89**	**220**	PN	**Pn**	**23 14 02.3**	**+0.9**
ITM	**Ithomi**	**1.89**	**220**	Pn	**Pn**	**23 14 02.4**	**+0.9**
HORT	**Hortiatis**	**1.96**	**352**	P	**Pn**	**23 14 03.2**	**+0.8**
HORT	**Hortiatis**	**1.96**	**352**	PN	**Pn**	**23 14 02.5**	**+0.1**
SIGR	**SIGRI**	**1.97**	**73**	PN	**Pn**	**23 14 02.8**	**+0.4**
VLI	**Veliai**	**1.97**	**192**	P	**Pn**	**23 14 02.5**	**0.0**
MNVA	**Monemvasia**	**1.99**	**189**	P	**Pn**	**23 14 03.7**	**+1.0**
THE	**Thessaloniki**	**2.01**	**350**	P	**Pn**	**23 14 03.0**	**0.0**
KPRO	**Kipourio**	**2.07**	**310**	P	**Pn**	**23 14 04.8**	**+0.9**
KZN	**Kozani**	**2.10**	**323**	P	**Pn**	**23 14 05.5**	**+1.2**
MHLO	**Agia Marina, M**	**2.10**	**158**	P	**Pn**	**23 14 05.1**	**+0.8**
SOH	**Sokhos**	**2.17**	**358**	P	**Pn**	**23 14 06.4**	**+1.1**
THAS	**Thassos island**	**2.19**	**26**	P	**Pn**	**23 14 05.2**	**-0.3**
PYL	**PYLOS**	**2.21**	**218**	P	**Pb**	**23 14 07.9**	**-1.4**
JAN	**Janina**	**2.25**	**297**	P	**Pb**	**23 14 08.6**	**-1.4**
VLS	**Valsamata**	**2.29**	**259**	P	**Pn**	**23 14 08.9**	**+2.1**
APE	**Apeiranthos**	**2.29**	**133**	P	**Pn**	**23 14 07.2**	**+0.3**
APE	**Apeiranthos**	**2.29**	**133**	PN	**Pn**	**23 14 07.2**	**+0.3**
APE	**Apeiranthos**	**2.29**	**133**	*i* P	**Pn**	**23 14 05.8**	**-1.1**
APE				*i* S	**Sn**	**23 14 32.2**	**-2.6**
PRK	**Paraskevi**	**2.29**	**74**	P	**Pb**	**23 14 08.4**	**-2.2**
PSDA	**Pessada-Kefalo**	**2.31**	**257**	P	**Pb**	**23 14 09.2**	**-1.7**
VLMS	**Volimes, Zakyn**	**2.32**	**251**	P	**Pn**	**23 14 09.4**	**+2.2**
BOZC	**Bozcaada**	**2.35**	**59**	PN	**Pn**	**23 14 07.5**	**-0.2**
BOZC	**Bozcaada**	**2.35**	**59**	*i* P	**Pn**	**23 14 05.0**	**-2.7**
KEF5	**Kardakata, Kep**	**2.36**	**262**	P	**Pn**	**23 14 09.8**	**+2.0**
KEF4	**Livadi, Kephal**	**2.40**	**262**	P	**Pb**	**23 14 10.8**	**-1.7**
KTHA	**Kythira Island**	**2.41**	**187**	PN	**Pn**	**23 14 09.3**	**+0.8**
SMTH	**Samothraki Isl**	**2.43**	**41**	P	**Pn**	**23 14 08.4**	**-0.5**
GRG	**Griva**	**2.44**	**341**	PN	**Pn**	**23 14 09.1**	**+0.2**
GADA	**Gvkgeada**	**2.45**	**50**	PN	**Pn**	**23 14 08.9**	**-0.1**
GOKA	**anakkale-Gk**	**2.46**	**50**	*i* P	**Pn**	**23 14 07.5**	**-1.6**
SRS	**Serrai**	**2.47**	**3**	P	**Pn**	**23 14 09.9**	**+0.6**
KAVA	**Kavala**	**2.49**	**19**	P	**Pn**	**23 14 09.4**	**-0.1**
URLA	**Izmir**	**2.50**	**96**	PN	**Pn**	**23 14 10.8**	**+1.1**
URLA	**Izmir**	**2.50**	**96**	*i* P	**Pn**	**23 14 08.3**	**-1.4**
EZN	**Ezine**	**2.53**	**61**	PN	**Pn**	**23 14 11.1**	**+1.0**
NEST	**Nestorio**	**2.55**	**314**	P	**Pn**	**23 14 11.9**	**+1.3**
AYVA	**Ayvalik**	**2.62**	**74**	*i* P	**Pn**	**23 14 12.0**	**+0.7**
BAYC	**ÇANAKKALE_Bayr**	**2.65**	**65**	*i* P	**Pn**	**23 14 10.6**	**-1.3**
FNA	**Florina**	**2.66**	**324**	P	**Pn**	**23 14 13.1**	**+1.2**
FNA	**Florina**	**2.66**	**324**	PN	**Pn**	**23 14 12.2**	**+0.2**
FNA	**Florina**	**2.66**	**324**	*i* P	**Pn**	**23 14 13.4**	**+1.5**
FNA	**Florina**	**2.66**	**324**	Pn	**Pn**	**23 14 13.9**	**+1.9**
SAP3	**Santorini-Thir**	**2.68**	**145**	P	**Pn**	**23 14 13.0**	**+0.8**
NVR	**Nevrokopi**	**2.72**	**7**	P	**Pn**	**23 14 13.4**	**+0.7**
THT2	**Imerovigli**	**2.72**	**144**	PN	**Pn**	**23 14 13.9**	**+1.2**
THR3	**Thira Island,**	**2.73**	**144**	P	**Pn**	**23 14 13.8**	**+1.0**
THR7	**Fira-Santorini**	**2.73**	**144**	P	**Pn**	**23 14 13.7**	**+0.8**
DKL	**Dikili**	**2.74**	**80**	PN	**Pn**	**23 14 14.1**	**+1.1**
THR8	**Santorini-Mono**	**2.77**	**143**	P	**Pn**	**23 14 13.8**	**+0.5**
THR6	**Thira Island,**	**2.77**	**145**	P	**Pn**	**23 14 14.3**	**+0.8**
DGB	**zmir**	**2.77**	**101**	*i* P	**Pn**	**23 14 13.2**	**-0.3**
SMG	**Samos**	**2.84**	**108**	P	**Pn**	**23 14 14.9**	**+0.4**
BLCB	**Balcova**	**2.84**	**94**	PN	**Pn**	**23 14 15.2**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.93**	**52**	PN	**Pn**	**23 14 16.3**	**+0.7**
ENEZ	**Enez**	**2.95**	**44**	PN	**Pn**	**23 14 16.3**	**+0.3**
RDO	**Rodhopi**	**2.97**	**32**	PN	**Pn**	**23 14 16.6**	**+0.4**
ALN	**Alexandroupoli**	**3.01**	**41**	PN	**Pn**	**23 14 16.7**	**0.0**
ALN	**Alexandroupoli**	**3.01**	**41**	*i* P	**Pn**	**23 14 14.0**	**-2.8**
ALN	**Alexandroupoli**	**3.01**	**41**	Pn	**Pn**	**23 14 16.7**	**0.0**
IMMV	**Iera Moni Meta**	**3.21**	**172**	P	**Pn**	**23 14 20.4**	**+0.8**
KDZ	**Kurdzhali**	**3.36**	**26**	PN	**Pn**	**23 14 21.2**	**-0.3**
UKOP	**Uzunkopru-Edir**	**3.49**	**44**	PN	**Pn**	**23 14 23.6**	**+0.3**
IDI	**Anoyia**	**3.55**	**160**	Pn	**Pn**	**23 14 25.1**	**+0.8**
	comp=E,11nm,0.3s,baz=310,slow=14,SNR=11						
IDI				Sn	**Sn**	**23 15 05.4**	**-0.6**
	comp=E,9.5nm,0.3s,baz=107,slow=22,SNR=2.1						
IDI	**Anoyia**	**3.55**	**160**	P	**Pn**	**23 14 24.7**	**+0.4**
PLD	**Plovdiv**	**3.58**	**15**	PN	**Pn**	**23 14 25.4**	**+0.8**
TIR	**Tirane**	**3.84**	**316**	Pn	**Pn**	**23 14 31.2**	**+3.0**
SCTE	**Santa Cesarea**	**4.11**	**292**	Pn	**Pn**	**23 14 33.1**	**+1.3**
KARP	**Karpathos**	**4.30**	**135**	Pn	**Pn**	**23 14 36.4**	**+1.9**
PDG	**Podgorica**	**4.94**	**321**	Pn	**Pn**	**23 14 44.9**	**+1.7**
TIP	**Timpagrande**	**5.24**	**270**	Pn	**Pn**	**23 14 48.7**	**+1.3**
AKAS	**Kas**	**5.47**	**114**	Pn	**Pn**	**23 14 56.9**	**+5.3**
ELL	**Elmali**	**5.47**	**108**	Pn	**Pn**	**23 14 56.8**	**+6.1**
CEL	**Celeste**	**5.93**	**269**	Pn	**Pn**	**23 14 57.3**	**+0.3**
DIVS	**Divibare**	**6.03**	**336**	Pn	**Pn**	**23 15 00.1**	**+1.8**
STON	**Ston**	**6.06**	**316**	*e*Pn	**Pn**	**23 14 59.9**	**+1.3**
STON				Sn	**Sn**	**23 16 07.2**	**-0.5**
MDUB	**Mudurnu**	**6.27**	**71**	Pn	**Pn**	**23 15 04.0**	**+2.4**
SGRT	**San Giovanni R**	**6.66**	**300**	Pn	**Pn**	**23 15 07.5**	**+0.6**
MAKA	**Makarska**	**6.71**	**316**	*e*Pn	**Pn**	**23 15 08.5**	**+0.9**
RICI	**Ricice**	**6.79**	**317**	*e*Pn	**Pn**	**23 15 10.0**	**+1.3**
RICI				Sn	**Sn**	**23 16 26.0**	**+0.4**
TIRR	**Tirgusor**	**6.90**	**31**	Pn	**Pn**	**23 15 10.7**	**+0.6**
MLR	**Muntele Rosu**	**7.08**	**14**	Pn	**Pn**	**23 15 15.7**	**+2.9**
	comp=E,2.1nm,0.3s,baz=137,slow=9.8,SNR=6.4						
MLR				Sn	**Sn**	**23 16 35.6**	**+2.5**
	comp=E,0.5nm,0.3s,baz=172,slow=22,SNR=0.8						
PAOL	**Paolisi**	**7.23**	**292**	Pn	**Pn**	**23 15 16.4**	**+1.7**
KIJV	**Kijevo**	**7.52**	**318**	*e*Pn	**Pn**	**23 15 19.9**	**+1.1**
MORI	**Morici**	**7.81**	**314**	*e*Pn	**Pn**	**23 15 23.8**	**+1.1**
BR131	**Keskin Array S**	**8.00**	**79**	Pn	**Pn**	**23 15 28.2**	**+2.8**
BRTR	**Keskin Array B**	**8.00**	**79**	Pn	**Pn**	**23 15 27.5**	**+2.2**
	comp=E,0.2nm,0.3s,baz=257,slow=12,SNR=0.6						
INTR	**Introdacqua**	**8.02**	**298**	Pn	**Pn**	**23 15 27.4**	**+1.8**
CLTB	**Caltabellotta**	**8.13**	**266**	Pn	**Pn**	**23 15 28.5**	**+1.4**
AQU	**L'Aquila**	**8.49**	**299**	Pn	**Pn**	**23 15 33.6**	**+1.5**
CSS	**Mathiatis**	**8.74**	**112**	Pn	**Pn**	**23 15 39.0**	**+3.4**
NRCA	**Norcia**	**8.88**	**301**	Pn	**Pn**	**23 15 38.0**	**+0.6**
BUR08	**Bucovina Ar. S**	**9.08**	**8**	Pn	**Pn**	**23 15 39.7**	**-0.5**
GNI	**Garni**	**16.54**	**78**	Pn	**Pn**	**23 17 20.1**	**-0.9**
WLF	**Walferdange**	**16.54**	**317**	Pn	**Pn**	**23 17 20.1**	**0.0**
WLF				IAmb	IAmb	23 17 35.8	
	comp=Z,9.6nm,1.0s						
CART	**Cartagena**	**19.25**	**274**	P	**P**	**23 17 52.0**	**-1.3**
CART				IAmb	IAmb	23 18 08.2	
	comp=Z,20nm,1.1s						
ESBB	**Sonseca Array**	**21.24**	**281**	P	**P**	**23 18 15.1**	**0.0**
ESBB				IAmb	IAmb	23 18 17.9	
	comp=Z,6.6nm,1.1s						
ESDC	**Sonseca Array**	**21.24**	**281**	P	**P**	**23 18 14.5**	**-0.6**
PAB	**San Pablo**	**21.55**	**281**	P	**P**	**23 18 18.9**	**+0.4**
HFS	**Hagfors**	**22.37**	**347**	P	**P**	**23 18 28.0**	**+1.0**
	comp=Z,2nm,0.7s,baz=150,slow=12,SNR=1.5						
FINES	**FINESS Array B**	**22.88**	**3**	P	**P**	**23 18 34.2**	**+1.9**
	comp=Z,3.8nm,0.9s,baz=188,slow=8.4,SNR=1.8						
FIA1	**FINESS Array S**	**22.88**	**3**	P	**P**	**23 18 32.0**	**-0.3**
FIA1				IAmb	IAmb	23 18 40.2	
	comp=Z,6.7nm,0.9s						
NC602	**NORSAR Array S**	**23.33**	**345**	P	**P**	**23 18 36.2**	**-0.8**
NC605	**NORSAR Array S**	**23.40**	**345**	P	**P**	**23 18 34.8**	**-2.7**
NC405	**NORSAR Array S**	**23.65**	**346**	P	**P**	**23 18 39.7**	**-0.4**
NC405				IAmb	IAmb	23 18 52.4	
	comp=Z,8.1nm,1.1s						
NB201	**NORSAR Array S**	**23.67**	**345**	P	**P**	**23 18 40.0**	**-0.3**
NOA	**NORSAR Array B**	**23.68**	**345**	P	**P**	**23 18 40.5**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=210,slow=11,SNR=2.0						
NC303	**NORSAR Array S**	**23.82**	**345**	P	**P**	**23 18 40.8**	**-0.9**
NC303				IAmb	IAmb	23 18 56.7	
	comp=Z,3.5nm,0.8s						
EKR10	**Eskdalemuir Ar**	**24.36**	**322**	P	**P**	**23 18 45.2**	**-1.7**
EKR9	**Eskdalemuir Ar**	**24.37**	**322**	P	**P**	**23 18 47.1**	**+0.2**
EKR7	**Eskdalemuir Ar**	**24.39**	**322**	P	**P**	**23 18 46.8**	**-0.2**
EKR7				IAmb	IAmb	23 19 01.9	
	comp=Z,5.8nm,0.9s						
EKR3	**Eskdalemuir Ar**	**24.42**	**322**	P	**P**	**23 18 46.1**	**-1.2**
GYA3	**ALIBECK ARRAY**	**27.13**	**81**	P	**P**	**23 19 12.2**	**+0.1**
GYA3				IAmb	IAmb	23 19 20.9	
	comp=Z,3.9nm,0.8s						
ARCES	**ARCESS Array B**	**30.97**	**1**	PcP	**PcP**	**23 22 41.1**	**-0.4**
	comp=Z,5.0nm,1.1s,baz=192,slow=3.3,SNR=1.4						
TORD	**Torodi Ar. Bea**	**31.89**	**223**	P	**P**	**23 19 54.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=34,slow=8.8,SNR=1.0						
TORD	**Torodi Ar. Bea**	**31.89**	**223**	IAmb	IAmb	23 20 00.1	
	comp=Z,0.9nm,1.0s						
MK31	**Makanchi Array**	**43.10**	**59**	P	**P**	**23 21 28.4**	**-0.6**
MKAR	**Makanchi Array**	**43.10**	**59**	P	**P**	**23 21 30.0**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=274,slow=7.7,SNR=9.2						
ZALV	**Zalesovo Beam**	**43.66**	**49**	P	**P**	**23 21 34.5**	**+1.0**
	comp=Z,0.6nm,0.4s,baz=254,slow=9.3,SNR=2.2						
SSLB				Sn	**Sn**	**23 16 56.7**	**-2.0**
NACB	**Ninganchiao**	**4.70**	**11**	Pn	**Pn**	**23 16 17.3**	**+1.1**
YHNB	**Yeheng**	**5.15**	**8**	Pn	**Pn**	**23 16 24.3**	**+1.8**
KNMB	**Chin-men Tao**	**5.32**	**338**	Pn	**Pn**	**23 16 27.3**	**+2.6**
SBUM	**Sibu**	**18.87**	**207**	P	**P**	**23 19 24.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**20.52**	**271**	P	**P**	**23 19 42.5**	**-1.1**
	1.1nm,0.9s,baz=90,slow=6.7,SNR=6.5						
INU	**Inuyama**	**21.39**	**39**	P	**P**	**23 19 54.5**	**+1.6**
INU				IAmb	IAmb	23 20 03.4	
	comp=Z,5.9nm,0.8s						
SONM	**Songino Array**	**30.50**	**341**	P	**P**	**23 21 18.6**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=168,slow=10.0,SNR=1.3						
SONM	**Songino Array**	**30.50**	**341**	P	**P**	**23 21 18.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**37.73**	**172**	P	**P**	**23 22 20.7**	**-0.2**
COEN	**Coen**	**40.02**	**145**	P	**P**	**23 22 39.0**	**-1.2**
COEN				IAmb	IAmb	23 22 39.8	
	comp=Z,3.6nm,1.0s						
MKAR	**Makanchi Array**	**41.41**	**320**	P	**P**	**23 22 51.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=114,slow=7.4,SNR=7.1						
MKAR	**Makanchi Array**	**41.41**	**320**	P	**P**	**23 22 52.1**	**+0.7**
WRA	**Warramunga Arr**	**41.48**	**160**	P	**P**	**23 22 51.9**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=343,slow=9.1,SNR=7.9						
WRA	**Warramunga Arr**	**41.48**	**160**	P	**P**	**23 22 52.5**	**+0.3**
WB2	**Warramunga Arr**	**41.49**	**160**	P	**P**	**23 22 51.5**	**-0.7**
WB2				IAmb	IAmb	23 22 56.3	
	comp=Z,1.7nm,0.7s						
ZALV	**Zalesovo Beam**	**43.91**	**330**	P	**P**	**23 23 11.1**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=119,slow=9.9,SNR=4.4						
ASAR	**Alice Springs**	**44.86**	**163**	P	**P**	**23 23 20.1**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=338,slow=7.0,SNR=11						
KURK	**Kurchatov**	**45.39**	**323**	P	**P**	**23 23 23.8**	**+0.4**
KURK	**Kurchatov**	**45.39**	**323**	IAmb	IAmb	23 23 24.8	
	comp=Z,7.7nm,1.1s						
KURBB	**Kurchatov Arra**	**45.40**	**323**	P	**P**	**23 23 23.8**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=123,slow=8.0,SNR=12						
MA2	**Magadan**	**45.47**	**21**	P	**P**	**23 23 23.3**	**-0.7**
GEYT	**Alibeck**	**56.77**	**303**	P	**P**	**23 24 50.0**	**+0.7**
PAX	**Paxson**	**74.55**	**28**	P	**P**	**23 26 45.8**	**+2.2**
FINES	**FINESS Array B**	**75.18**	**330**	P	**P**	**23 26 46.9**	**-0.2**
	comp=Z,3.0nm,1.0s,baz=91,slow=5.6,SNR=5.6						

IDC ***17*** *23:15:03.4±1.1, 19°.52N×120°.53E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.7/48, mbtmp3.9/8, Error ellipse: s-maj=53.6km s-min=17.9km az=63.0*
NEIC ***17*** *23:15:05.0±2.1, 19°.49N±0°.08×120°.6E±0°.1, h10km±1km, mb4.1/11, Error ellipse: s-maj=19.7km s-min=13.8km az=99.0*

ISC 17 23:15:06.8±0.7, **19°.54N**±0°.07×**120°.6E**±0°.1, **h23**km, **n28,**
σ1§**49**/31, **mb3.9**/11, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.29**	**7**	Pn	**Pn**	**23 15 57.6**	**+0.7**
TWG				Sn	**Sn**	**23 16 33.2**	**-2.1

ATAL					AML	AML	23 18 58.1	
	comp=N,10720µm,0.2s							
ATAL					AML	AML	23 18 59.3	
	comp=E,15502µm,0.3s							
ATAL	**Atalanti**	**0.30**	**278**	P	**Pg**	**Pg**	**23 18 52.6**	**-0.3**
ATAL				S	**Sg**	**Sg**	**23 18 56.9**	**-0.2**
	comp=E,7µm,0.2s							
LKR	**Lokris**	**0.31**	**270**	P	**Pg**	**Pg**	**23 18 52.7**	**-0.5**
LKR				S	**Sg**	**Sg**	**23 18 57.4**	**-0.1**
LKR				AML	AML	AML	23 18 58.7	
	comp=N,14835µm,0.2s							
LKR				AML	AML	AML	23 18 59.1	
	comp=E,18654µm,0.1s							
LKR	**Lokris**	**0.31**	**270**	P	**Pg**	**Pg**	**23 18 52.8**	**-0.4**
LKR				S	**Sg**	**Sg**	**23 18 57.2**	**-0.3**
	comp=E,8µm,0.1s							
VIL2	**Platees**	**0.45**	**193**	P	**Pg**	**Pg**	**23 18 55.9**	**+0.2**
VIL2				S	**Sb**	**Pg**	**23 19 03.8**	**+0.6**
VIL2				AML	AML	AML	23 19 04.7	
	comp=N,8984µm,0.3s							
VIL2				AML	AML	AML	23 19 05.8	
	comp=E,19596µm,0.6s							
KYMI	**Kymi, Euboea I**	**0.55**	**92**	P	**Pg**	**Pg**	**23 18 56.9**	**-0.5**
KYMI				S	**Sg**	**Sg**	**23 19 05.1**	**+0.3**
KYMI				AML	AML	AML	23 19 06.2	
	comp=N,9208µm,0.3s							
KYMI				AML	AML	AML	23 19 07.1	
	comp=E,10898µm,0.3s							
KYMI	**Kymi, Euboea I**	**0.55**	**92**	P	**Pg**	**Pg**	**23 18 57.0**	**-0.5**
KYMI				S	**Sb**	**Sb**	**23 19 05.4**	**-0.5**
	comp=E,5µm,0.2s							
AXAR	**Agios Charalam**	**0.59**	**281**	P	**Pg**	**Pg**	**23 18 57.7**	**-0.6**
AXAR				S	**Sg**	**Sg**	**23 19 06.3**	**+0.1**
AXAR				AML	AML	AML	23 19 10.7	
	comp=N,20097µm,0.4s							
AXAR				AML	AML	AML	23 19 11.9	
	comp=E,12383µm,0.3s							
AXAR	**Agios Charalam**	**0.59**	**281**	P	**Pg**	**Pg**	**23 18 57.9**	**-0.4**
AXAR				S	**Sb**	**Sb**	**23 19 06.8**	**-0.3**
	comp=E,8µm,0.3s							
ALNA	**Alonissos**	**0.61**	**36**	P	**Pg**	**Pg**	**23 18 58.5**	**-0.2**
ALNA				S	**Sb**	**Sb**	**23 19 07.5**	**-0.2**
ALNA				AML	AML	AML	23 19 07.7	
	comp=E,9484µm,0.5s							
ALNA				AML	AML	AML	23 19 11.7	
	comp=N,9212µm,0.5s							
AOS	**Alonnisos**	**0.64**	**36**	P	**Pg**	**Pg**	**23 18 58.6**	**-0.5**
AOS				S	**Sg**	**Sg**	**23 19 07.6**	**0.0**
AOS				AML	AML	AML	23 19 10.7	
	comp=E,14030µm,0.4s							
AOS				AML	AML	AML	23 19 11.2	
	comp=N,15482µm,0.5s							
AOS	**Alonnisos**	**0.64**	**36**	PG	**Pg**	**Pg**	**23 18 58.6**	**-0.5**
AOS				SG	**Sg**	**Sg**	**23 19 07.3**	**-0.3**
AOS	**Alonnisos**	**0.64**	**36**	P	**Pg**	**Pg**	**23 18 58.7**	**-0.5**
AOS				S	**Sg**	**Sg**	**23 19 07.6**	**0.0**
	comp=N,7µm,0.4s							
NEO	**Neokhori**	**0.67**	**348**	P	**Pg**	**Pg**	**23 18 59.5**	**-0.2**
NEO				S	**Sb**	**Sb**	**23 19 09.2**	**-0.1**
NEO				AML	AML	AML	23 19 11.8	
	comp=N,41316µm,0.3s							
NEO				AML	AML	AML	23 19 12.0	
	comp=E,48714µm,0.3s							
NEO	**Neokhori**	**0.67**	**348**	P	**Pg**	**Pg**	**23 18 59.5**	**-0.2**
NEO				S	**Sb**	**Sb**	**23 19 09.7**	**+0.4**
	comp=E,23µm,0.3s							
PTL	**Penteli**	**0.71**	**149**	P	**Pg**	**Pg**	**23 19 00.0**	**-0.4**
PTL				S	**Sb**	**Sb**	**23 19 10.6**	**+0.2**
PTL				AML	AML	AML	23 19 13.0	
	comp=N,10397µm,0.4s							
PTL				AML	AML	AML	23 19 13.3	
	comp=E,11410µm,0.4s							
PTL	**Penteli**	**0.71**	**149**	P	**Pg**	**Pg**	**23 19 00.1**	**-0.4**
PTL				S	**Sb**	**Sb**	**23 19 10.6**	**+0.2**
	comp=E,5µm,0.4s							
DION	**Dionisos Attik**	**0.71**	**144**	P	**Pg**	**Pg**	**23 19 00.2**	**-0.3**
DION				S	**Sb**	**Sb**	**23 19 11.0**	**+0.4**
DION				AML	AML	AML	23 19 13.0	
	comp=N,45375µm,0.3s							
DION				AML	AML	AML	23 19 13.4	
	comp=E,34049µm,0.4s							
DION	**Dionisos Attik**	**0.71**	**144**	P	**Pg**	**Pg**	**23 19 00.2**	**-0.3**
LTK	**Loutraki**	**0.72**	**209**	P	**Pg**	**Pg**	**23 18 59.9**	**-0.7**
LTK				S	**Sg**	**Sg**	**23 19 09.8**	**-0.3**
LTK				AML	AML	AML	23 19 13.0	
	comp=E,8346µm,0.6s							
LTK				AML	AML	AML	23 19 13.6	
	comp=N,6601µm,0.6s							
ATH	**Athens Observa**	**0.72**	**160**	P	**Pg**	**Pg**	**23 19 00.4**	**-0.3**
ATH				S	**Sg**	**Sg**	**23 19 10.6**	**+0.3**
ATH				AML	AML	AML	23 19 13.2	
	comp=E,9909µm,0.3s							
ATH				AML	AML	AML	23 19 14.1	
	comp=N,8596µm,0.5s							
ATH	**Athens Observa**	**0.72**	**160**	P	**Pg**	**Pg**	**23 19 00.5**	**-0.3**
DSF	**Desfina**	**0.73**	**251**	P	**Pg**	**Pg**	**23 18 59.7**	**-1.2**
DSF				S	**Sg**	**Sg**	**23 19 10.3**	**-0.1**
DSF				AML	AML	AML	23 19 13.0	
	comp=N,8411µm,0.2s							
DSF				AML	AML	AML	23 19 14.9	
	comp=E,6890µm,0.2s							
DLFA	**Delphi**	**0.73**	**256**	P	**Pg**	**Pg**	**23 18 59.7**	**-1.3**
XOR	**Xorichti**	**0.73**	**347**	P	**Pg**	**Pg**	**23 19 00.5**	**-0.4**
XOR				S	**Sg**	**Sg**	**23 19 10.0**	**-0.5**
XOR				AML	AML	AML	23 19 13.4	
	comp=E,11215µm,0.5s							
XOR				AML	AML	AML	23 19 13.4	
	comp=N,13617µm,0.7s							
XOR	**Xorichti**	**0.73**	**347**	P	**Pg**	**Pg**	**23 19 00.7**	**-0.2**
LOUT	**Loutraki**	**0.74**	**207**	P	**Pg**	**Pg**	**23 19 00.4**	**-0.8**
LOUT				S	**Sb**	**Sb**	**23 19 11.8**	**+0.3**
LOUT				AML	AML	AML	23 19 14.6	
	comp=N,1597µm,0.5s							
LOUT				AML	AML	AML	23 19 17.1	
	comp=E,1696µm,0.5s							
LOUT	**Loutraki**	**0.74**	**207**	P	**Pg**	**Pg**	**23 19 00.4**	**-0.8**
LOUT				S	**Sb**	**Sb**	**23 19 11.6**	**+0.1**
	comp=E,5µm,0.5s							
ATHU	**Athens Univers**	**0.75**	**156**	P	**Pg**	**Pg**	**23 19 00.9**	**-0.3**
ATHU				S	**Sb**	**Sb**	**23 19 12.0**	**+0.3**
ATHU				AML	AML	AML	23 19 13.3	
	comp=E,3270µm,0.4s							
ATHU				AML	AML	AML	23 19 14.4	
	comp=N,5887µm,0.4s							
ATHU	**Athens Univers**	**0.75**	**156**	P	**Pg**	**Pg**	**23 19 00.8**	**-0.5**
ATHU				S	**Sb**	**Sb**	**23 19 12.0**	**+0.3**
	comp=N,2µm,0.4s							
VOL2	**Volos**	**0.79**	**334**	P	**Pn**	**Pn**	**23 19 04.4**	**+0.9**
VOL2				S	**Sn**	**Sn**	**23 19 16.3**	**+1.2**
THAL	**Thalero**	**0.84**	**223**	P	**Pg**	**Pg**	**23 19 02.4**	**-0.7**
THAL				S	**Sb**	**Sb**	**23 19 15.0**	**+0.6**
THAL				AML	AML	AML	23 19 17.0	
	comp=N,13992µm,0.3s							
THAL				AML	AML	AML	23 19 17.6	
	comp=E,13828µm,0.7s							
THAL	**Thalero**	**0.84**	**223**	P	**Pg**	**Pg**	**23 19 02.9**	**-0.2**
VLY	**Voula,Athens**	**0.86**	**159**	P	**Pg**	**Pg**	**23 19 02.8**	**-0.5**
VLY				S	**Sg**	**Sg**	**23 19 14.5**	**-0.1**
VLY				AML	AML	AML	23 19 16.5	
	comp=E,8788µm,0.6s							
VLY				AML	AML	AML	23 19 18.1	
	comp=N,6102µm,0.5s							
VLY	**Voula,Athens**	**0.86**	**159**	P	**Pg**	**Pg**	**23 19 02.8**	**-0.5**
VLY				S	**Sb**	**Sb**	**23 19 15.6**	**+0.8**
	comp=N,4µm,0.4s							
AGG	**Agios Georgios**	**0.91**	**294**	P	**Pg**	**Pg**	**23 19 03.8**	**-0.6**
AGG				AML	AML	AML	23 19 21.8	
	comp=E,2748µm,0.5s							
AGG				AML	AML	AML	23 19 22.1	
	comp=N,2511µm,0.8s							
AGG	**Agios Georgios**	**0.91**	**294**	PG	**Pg**	**Pg**	**23 19 04.0**	**-0.4**
AGG				SG	**Sb**	**Sb**	**23 19 16.7**	**+0.3**
AGG	**Agios Georgios**	**0.91**	**294**	P	**Pg**	**Pg**	**23 19 04.0**	**-0.4**
AGG				S	**Sb**	**Sb**	**23 19 16.8**	**+0.3**
	comp=N,1µm,0.6s							
SKY	**Skiros Island**	**0.93**	**76**	P	**Pg**	**Pg**	**23 19 03.9**	**-0.7**
SKY				S	**Sb**	**Sb**	**23 19 17.2**	**+0.4**
SKY				AML	AML	AML	23 19 19.6	
	comp=E,20742µm,0.2s							
SKY				AML	AML	AML	23 19 20.1	
	comp=N,16420µm,0.2s							
SKY	**Skiros Island**	**0.93**	**76**	P	**Pg**	**Pg**	**23 19 03.9**	**-0.7**
SKY				S	**Sb**	**Sb**	**23 19 17.4**	**+0.6**
	comp=N,9µm,0.3s							
KALE	**Kalithea**	**1.02**	**256**	P	**Pg**	**Pg**	**23 19 04.6**	**-1.8**
KARY	**Karystos**	**1.02**	**127**	P	**Pg**	**Pg**	**23 19 05.8**	**-0.8**
KARY				AML	AML	AML	23 19 21.6	
	comp=E,5370µm,0.4s							
KARY				AML	AML	AML	23 19 22.1	
	comp=N,5033µm,0.3s							
KARY	**Karystos**	**1.02**	**127**	P	**Pg**	**Pg**	**23 19 05.7**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.05**	**290**	P	**Pg**	**Pg**	**23 19 06.6**	**-0.4**
MAKR				S	**Sb**	**Sb**	**23 19 21.0**	**+0.6**
MAKR				AML	AML	AML	23 19 25.4	
	comp=N,6094µm,0.6s							
MAKR				AML	AML	AML	23 19 26.6	
	comp=E,2768µm,0.5s							
EPID	**Epidavros**	**1.06**	**192**	P	**Pg**	**Pg**	**23 19 06.4**	**-0.8**
EPID	**Epidavros**	**1.06**	**192**	P	**Pg**	**Pg**	**23 19 06.6**	**-0.6**
TRIZ	**Trizonia**	**1.08**	**255**	P	**Pg**	**Pg**	**23 19 05.6**	**-1.9**
SERG	**Sergoula**	**1.08**	**258**	P	**Pg**	**Pg**	**23 19 05.6**	**-2.0**
ALIK	**Aliki, Aigiali**	**1.08**	**249**	P	**Pg**	**Pg**	**23 19 07.1**	**-0.5**
GUR	**Goura**	**1.10**	**230**	P	**Pg**	**Pg**	**23 19 06.8**	**-1.1**
GUR				AML	AML	AML	23 19 26.3	
	comp=E,8885µm,0.5s							
GUR				AML	AML	AML	23 19 27.7	
	comp=N,6997µm,0.7s							
KLV	**Kalavryta, Ach**	**1.16**	**239**	P	**Pg**	**Pg**	**23 19 08.0**	**-1.0**
KLV				AML	AML	AML	23 19 26.0	
	comp=N,1271µm,0.7s							
KLV				AML	AML	AML	23 19 26.3	
	comp=E,988µm,0.6s							
KLV	**Kalavryta, Ach**	**1.16**	**239**	P	**Pg**	**Pg**	**23 19 08.2**	**-0.8**
ANX	**Ano Chora**	**1.16**	**267**	P	**Pg**	**Pg**	**23 19 07.5**	**-1.6**
ANX	**Ano Chora**	**1.16**	**267**	P	**Pg**	**Pg**	**23 19 08.3**	**-0.8**
EFP	**Efpalio**	**1.19**	**260**	P	**Pg**	**Pg**	**23 19 07.4**	**-2.3**
EVR	**Evrytania**	**1.27**	**282**	P	**Pn**	**Pn**	**23 19 10.6**	**+0.4**
EVR	**Evrytania**	**1.27**	**282**	P	**Pn**	**Pn**	**23 19 10.2**	**0.0**
LRSO	**Larissa Observ**	**1.28**	**323**	P	**Pn**	**Pn**	**23 19 10.4**	**+0.2**
KRND	**KRANIDI**	**1.28**	**189**	P	**Pn**	**Pn**	**23 19 09.9**	**-0.4**
KRND				S	**Sn**	**Sn**	**23 19 28.5**	**+1.2**
KRND				AML	AML	AML	23 19 29.5	
	comp=E,3227µm,0.7s							
KRND				AML	AML	AML	23 19 29.6	
	comp=N,2453µm,0.5s							
KRND	**KRANIDI**	**1.28**	**189**	P	**Pn**	**Pn**	**23 19 10.0**	**-0.3**
PAIG	**Paliouri**	**1.29**	**10**	P	**Pn**	**Pn**	**23 19 09.7**	**-0.6**
PAIG	**Paliouri**	**1.29**	**10**	P	**Pn**	**Pn**	**23 19 09.8**	**-0.6**
YDRA	**Hydra**	**1.30**	**178**	P	**Pn**	**Pn**	**23 19 10.2**	**-0.3**
THL	**Klokotos Trika**	**1.41**	**311**	P	**Pn**	**Pn**	**23 19 12.2**	**+0.2**
THL	**Klokotos Trika**	**1.41**	**311**	P	**Pn**	**Pn**	**23 19 12.2**	**+0.2**
TRIP	**Tripoli**	**1.43**	**219**	P	**Pn**	**Pn**	**23 19 12.6**	**+0.2**
TRIP				AML	AML	AML	23 19 35.1	
	comp=E,1271µm,0.6s							
TRIP				AML	AML	AML	23 19 39.5	
	comp=N,1431µm,0.5s							
TRIP	**Tripoli**	**1.43**	**219**	P	**Pn**	**Pn**	**23 19 12.6**	**+0.2**
DRO	**Drossia**	**1.50**	**243**	P	**Pn**	**Pn**	**23 19 13.5**	**+0.2**
DRO	**Drossia**	**1.50**	**243**	P	**Pn**	**Pn**	**23 19 13.3**	**0.0**
VLX	**Vlachokerasia**	**1.51**	**212**	P	**Pn**	**Pn**	**23 19 14.2**	**+0.6**
LIT	**Litokhoron**	**1.61**	**334**	P	**Pn**	**Pn**	**23 19 14.5**	**-0.2**
RLS	**Riolos of Patr**	**1.63**	**249**	P	**Pb**	**Pb**	**23 19 16.2**	**-0.4**
PLG	**Polygyros**	**1.72**	**1**	P	**Pn**	**Pn**	**23 19 15.6**	**-0.7**
OUR	**Ouranopolis**	**1.74**	**15**	P	**Pn**	**Pn**	**23 19 16.1**	**-0.4**
OUR	**Ouranopolis**	**1.74**	**15**	PN	**Pn**	**Pn**	**23 19 16.3**	**-0.2**
AMT	**Artemida-Makis**	**1.74**	**231**	P	**Pn**	**Pn**	**23 19 17.7**	**+1.1**
TNSA	**Tinos**	**1.78**	**128**	P	**Pn**	**Pn**	**23 19 17.0**	**-0.1**
ITM	**Ithomi**	**1.88**	**219**	P	**Pn**	**Pn**	**23 19 18.6**	**+1.6**
ITM	**Ithomi**	**1.88**	**219**	PN	**Pn**	**Pn**	**23 19 18.6**	**+0.2**
HORT	**Hortiatis**	**1.96**	**353**	PN	**Pn**	**Pn**	**23 19 19.4**	**-0.2**
VLI	**Veliai**	**1.97**	**191**	P	**Pn**	**Pn**	**23 19 19.3**	**-0.4**
SIGR	**SIGRI**	**1.99**	**73**	PN	**Pn**	**Pn**	**23 19 20.3**	**+0.3**
THE	**Thessaloniki**	**2.00**	**350**	P	**Pn**	**Pn**	**23 19 20.2**	**+0.1**
KZN	**Kozani**	**2.08**	**323**	P	**Pn**	**Pn**	**23 19 21.9**	**+0.6**
SOH	**Sokhos**	**2.17**	**359**	P	**Pn**	**Pn**	**23 19 22.6**	**+0.1**
THAS	**Thassos island**	**2.20**	**27**	P	**Pn**	**Pn**	**23 19 21.7**	**-1.1**
VLS	**Valsamata**	**2.26**	**259**	P	**Pn**	**Pn**	**23 19 25.4**	**+1.7**
VLMS	**Volimes, Zakyn**	**2.29**	**251**	P	**Pn**	**Pn**	**23 19 26.1**	**+2.0**
APE	**Apeiranthos**	**2.31**	**133**	PN	**Pn**	**Pn**	**23 19 25.2**	**+0.7**
KEF5	**Kardakata, Kep**	**2.33**	**262**	P	**Pn**	**Pn**	**23 19 26.4**	**+1.7**
KEF4	**Livadi, Kephal**	**2.37**	**261**	P	**Pn**	**Pn**	**23 19 27.1**	**+1.9**
BOZC	**Bozcaada**	**2.38**	**59**	PN	**Pn**	**Pn**	**23 19 25.7**	**+0.4**
BOZC	**Bozcaada**	**2.38**	**59**	*i* P	**Pn**	**Pn**	**23 19 26.1**	**+0.8**
KTHA	**Kythira Island**	**2.41**	**187**	P	**Pn**	**Pn**	**23 19 25.5**	**-0.3**
KTHA	**Kythira Island**	**2.41**	**187**	PN	**Pn**	**Pn**	**23 19 25.9**	**+0.2**
GRG	**Griva**	**2.42**	**342**	PN	**Pn**	**Pn**	**23 19 26.0**	**0.0**
SRS	**Serrai**	**2.46**	**3**	P	**Pn**	**Pn**	**23 19 26.3**	**-0.3**
GADA	**Gvkgeada**	**2.47**	**51**	PN	**Pn**	**Pn**	**23 19 26.8**	**+0.2**
GOKA	**anakkale-Gk**	**2.48**	**51**	*i* P	**Pb**	**Pb**	**23 19 31.4**	**+0.4**
URLA	**Izmir**	**2.52**	**96**	PN	**Pn**	**Pn**	**23 19 28.3**	**+0.9**
URLA	**Izmir**	**2.52**	**96**	*i* P	**Pg**	**Pg**	**23 19 34.3**	**-0.8**
URLA				*i* S	**Sn**	**Sn**	**23 19 58.5**	**+0.5**
FNA	**Florina**	**2.64**	**324**	PN	**Pn**	**Pn**	**23 19 29.5**	**+0.5**
AYVA	**Ayvalik**	**2.65**	**75**	*i* P	**Pb**	**Pb**	**23 19 32.1**	**-1.8**
BAYC	**ÇANAKKALE_Bayr**	**2.67**	**65**	*i* P	**Pn**	**Pn**	**23 19 28.0**	**-1.4**
THT2	**Imerovigli**	**2.74**	**143**	PN	**Pn**	**Pn**	**23 19 30.7**	**+0.4**
DKL	**Dikili**	**2.77**	**80**	PN	**Pn**	**Pn**	**23 19 30.9**	**+0.2**
DGB	**zmir**	**2.80**	**101**	*i* P	**Pn**	**Pn**	**23 19 31.0**	**-0.1**
BLCB	**Balcova**	**2.87**	**94**	PN	**Pn**	**Pn**	**23 19 33.1**	**+1.0**
ZEDA	**zmir-Bergama**	**2.89**	**83**	*i* P	**Pn**	**Pn**	**23 19 33.1**	**+0.8**
ZEDA				*i* S	**Sn**	**Sn**	**23 20 08.2**	**+1.3**
MMB	**Musomiste**	**2.94**	**5**	*e*P	**Pn**	**Pn**	**23 19 32.4**	**-0.7**
MMB				*e*S	**Sn**	**Sn**	**23 20 06.0**	**-2.3**
GELI	**Tayfur-Gelibol**	**2.95**	**53**	PN	**Pn**	**Pn**	**23 19 33.8**	**+0.7**
ENEZ	**Enez**	**2.97**	**45**	PN	**Pn**	**Pn**	**23 19 34.3**	**+0.8**
RDO	**Rodhopi**	**2.98**	**33**	PN	**Pn**	**Pn**	**23 19 33.5**	**-0.1**
ALN	**Alexandroupoli**	**3.03**	**41**	PN	**Pn**	**Pn**	**23 19 34.9**	**+0.6**
GCAM	**G?zelcaml?**	**3.17**	**106**	PN	**Pn**	**Pn**	**23 19 37.4**	**+1.3**
GCAM	**G?zelcaml?**	**3.17**	**106**	*i* P	**Pn**	**Pn**	**23 19 37.2**	**+1.0**
KKB	**Krupnik**	**3.22**	**356**	*e*P	**Pn**	**Pn**	**23 19 36.9**	**0.0**
KKB				*e*S	**Sn**	**Sn**	**23 20 13.9**	**-1.2**
KDZ	**Kurdzhali**	**3.37**	**27**	PN	**Pn**	**Pn**	**23 19 38.3**	**-0.6**
STEP	**BALIKESIR_Sava**	**3.44**	**77**	*i* P	**Pg**	**Pg**	**23 19 50.3**	**-2.4**
IDI	**Anoyia**	**3.56**	**160**	Pn	**Pn**	**Pn**	**23 19 41.9**	**+0.2**
	comp=N,7.2nm,0.3s,baz=344,slow=12,SNR=16							
IDI				Sn	**Sn**	**Sn**	**23 20 24.4**	**+0.7**
	comp=N,3.0nm,0.3s,baz=326,slow=12,SNR=1.9							
PLD	**Plovdiv**	**3.59**	**16**	PN	**Pn**	**Pn**	**23 19 43.1**	**+1.2**
AYDN	**Tasoluk**	**3.67**	**104**	*i* P	**Pn**	**Pn**	**23 19 43.6**	**+0.5**
TIR	**Tirane**	**3.82**	**316**	*e*Pn	**Pn**	**Pn**	**23 19 48.7**	**+3.5**
PRVS	**Prvonek**	**3.98**	**346**	*e*Pn	**Pn**	**Pn**	**23 19 49.4**	**+2.0**
PRVS				*e*Sn	**Sn**	**Sn**	**23 20 30.5**	**-3.4**
TURN	**Turunc**	**4.27**	**115**	*i* P	**Pn**	**Pn**	**23 19 52.7**	**+1.3**
TAVA	**DENIZLI_Tavas**	**4.51**	**104**	*i* P	**Pn**	**Pn**	**23 19 55.9**	**+1.2**
ZAPS	**Zavoj**	**4.65**	**353**	*e*Pn	**Pn**	**Pn**	**23 19 59.6**	**+3.0**
ZAPS				*e*Sn	**Sn**	**Sn**	**23 20 46.8**	**-3.6**
SELS	**Selova**	**4.88**	**340**	*e*Pn	**Pn**	**Pn**	**23 20 01.3**	**+1.6**
PDG	**Podgorica**	**4.92**	**321**	*e*Pn	**Pn**	**Pn**	**23 20 02.2**	**+2.0**
PDG				*e*Sn	**Sn**	**Sn**	**23 20 58.4**	**+1.5**
FETY	**Fethiye**	**4.94**	**112**	*i* P	**Pn**	**Pn**	**23 20 03.4**	**+2.9**
BOVS	**Bovan**	**5.14**	**346**	*e*Pn	**Pn**	**Pn**	**23 20 06.9**	**+3.7**
ZAGS	**Zajecar**	**5.23**	**351**	*e*Pn	**Pn**	**Pn**	**23 20 05.1**	**+0.6**
SJES	**Sjenica**	**5.28**	**332**	*e*Pn	**Pn**	**Pn**	**23 20 07.6**	**+2.3**
IVAS	**Ivanjica**	**5.50**	**335**	*e*Pn	**Pn**	**Pn**	**23 20 09.5**	**+1.3**
GRUS	**Gruza**	**5.61**	**340**	*e*Pn	**Pn**	**Pn**	**23 20 13.3**	**+3.6**
DIVS	**Divibare**	**6.01**	**336**	*e*Pn	**Pn**	**Pn**	**23 20 17.4**	**+2.1**
BBLS	**Lazići**	**6.01**	**331**	*e*Pn	**Pn**	**Pn**	**23 20 16.9**	**+1.6**
STON	**Ston**	**6.04**	**316**	*e*Pn	**Pn**	**Pn**	**23 20 15.8**	**+0.2**
PLAR	**PLOIESTI**	**6.56**	**17**	⇑P	**Pb**	**Pb**	**23 20 42.6**	**+2.1**
RICI	**Ricice**	**6.77**	**318**	*e*Pn	**Pn**	**Pn**	**23 20 25.7**	**+0.1**
RICI				Sn	**Sn**	**Sn**	**23 21 39.0**	**-3.5**
ARR	**Arges**	**6.77**	**7**	⇑P	**Pn**	**Pn**	**23 20 25.8**	**+0.1**
VOIR		**6.89**	**10**	⇓P	**Pn**	**Pn**	**23 20 26.8**	**-0.5**
BZS	**Buzias**	**7.08**	**350**	*e*Pn	**Pn**	**Pn**	**23 20 30.9**	**+1.0**
MLR	**Muntele Rosu**	**7.09**	**15**	Pn	**Pn**	**Pn**	**23 20 32.0**	**+1.8**
	comp=N,0.6nm,0.3s,baz=193,slow=19,SNR=9.5							
MLR				Sn	**Sn**	**Sn**	**23 21 52.5**	**+1.9**
	comp=N,0.3nm,0.3s,baz=268,slow=22,SNR=1.7							
MLR	**Muntele Rosu**	**7.09**	**15**	⇑P	Pn	Pn	23 20 36.0	+5.8
KIJV	**Kijevo**	**7.50**	**318**	*e*Pn	**Pn**	**Pn**	**23 20 36.0**	**+0.3**
PLOR	**Plostina**	**7.58**	**17**	⇓P	Pn	Pn	23 20 41.8	+5.0
VRI	**Vrincioaia**	**7.62**	**18**	⇓P	**Pn**	**Pn**	**23 20 41.7**	**+4.4**
MORI	**Morici**	**7.79**	**314**	*e*Pn	**Pn**	**Pn**	**23 20 40.1**	**+0.5**
BMR	**Baia Mare**	**9.02**	**0**	⇑P	**Pn**	**Pn**	**23 20 59.3**	**+2.9**
ESDC	**Sonseca Array**	**21.21**	**281**	P	**P**	**P**	**23 23 31.6**	**-0.4**
	comp=N,0.8nm,0.7s,baz=80,slow=10,SNR=6.3							
TORD	**Torodi Ar. Bea**	**31.87**	**223**	P	**P**		**23 25 10.9**	**-0.6**
	comp=N,0.3nm,0.5s,baz=31,slow=9.1,SNR=5.6							
MKAR	**Makanchi Array**	**43.12**	**59**	P	**P**		**23 26 46.9**	**+0.3**
	comp=N,0.9nm,0.9s,baz=264,slow=8.1,SNR=2.7							

*NEIC **17** 23:27:04.8±1.5, 60°.06N±0°.04×153°.4W±0°.1, h140km±3.4km,*
Error ellipse: s-maj=9.1km s-min=5.5km az=108.0
*IDC **17** 23:27:05.6±8.4, 60°.29N×153°.34W, h140km, 74km, mb3.3/1,*
mb1 3.6/3, mb1mx3.0/50, mbtmp3.9/3, Error ellipse:

s-maj=72.6km s-min=36.4km az=17.0
*ANF **17** 23:27:05.8±1.1, 60°.11N×153°.06W, h156km, 7km, ML4.1/12,*
Error ellipse: s-maj=10.9km s-min=8.2km az=86.0
*AEIC **17** 23:27:05±1.5, 60°.03N±0°.04×153°.4W±0°.1, h142km±4km,*
ML3.6, Error ellipse: s-maj=8.7km s-min=5.9km az=103.0
ISC 17 23:27:04.9±0.8, 60.05N±0.03×153.32W±0.04,
h146km±5km, n175, s19/29, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
IVE	**Iliamna Volcan**	**0.16**	**102**				**Pn 23 27 23.6**	**-1.2**	
IVE							**Sn 23 27 39.3**	**-0.5**	
ILS	**Iliamna Low So**	**0.16**	**126**				**Pn 23 27 23.4**	**-1.3**	
ILIM	**Iliamna**	**0.18**	**81**				**Pn 23 27 23.7**	**-1.0**	
OPT	**Oil Point**	**0.40**	**173**				**Pn 23 27 24.7**	**-0.7**	
OPT							**Sn 23 27 39.6**	**-1.3**	
RED	**Redoubt Volcan**	**0.46**	**36**				**Pn 23 27 24.7**	**-1.0**	
RED							**Sn 23 27 39.8**	**-1.8**	
RDSO	**Redoubt South**	**0.50**	**35**				**Pn 23 27 25.0**	**-0.9**	
RDWB	**Redoubt West**	**0.50**	**29**				**Pn 23 27 25.1**	**-0.9**	
RDWB							**Sn 23 27 40.4**	**-1.6**	
RSO	**Redoubt South**	**0.50**	**34**				**Pn 23 27 25.3**	**-0.8**	
REF	**Redoubt East F**	**0.54**	**35**				**Pn 23 27 25.4**	**-0.8**	
RDN	**Redoubt North**	**0.54**	**31**				**Pn 23 27 25.5**	**-0.6**	
NCT	**North Crescent**	**0.55**	**21**				**Pn 23 27 25.4**	**-0.7**	
RDJH	**Redoubt Jeurge**	**0.60**	**25**				**Pn 23 27 25.7**	**-0.8**	
RDJH							**Sn 23 27 41.7**	**-1.3**	
DFR	**Drift River**	**0.63**	**30**				**Pn 23 27 25.8**	**-0.8**	
DFR	**Drift River**	**0.63**	**30**				**Pn 23 27 25.7**	**-0.8**	
DFR							**Sn 23 27 41.9**	**-1.3**	
AUL	**Augustine Lava**	**0.67**	**185**				**Pn 23 27 26.1**	**-0.7**	
AUL							**Sn 23 27 42.3**	**-1.1**	
AU22	**Augustine Moun**	**0.68**	**181**				**Pn 23 27 26.0**	**-0.8**	
AU22							**Sn 23 27 42.2**	**-1.3**	
AUW	**Augustine West**	**0.69**	**186**

	baz=254							
N25K					S	**Sn**	**23 29 03.8**	**-0.7**
	baz=254							
N25K	**Chitina, Valde**	**4.55**	**66**			**Pn**	**23 28 12.8**	**+0.6**
SUCK	**Suckling Hills**	**4.78**	**86**	Pn		**Pn**	**23 28 15.8**	**+0.5**
GLB	**Gilahina Butte**	**4.87**	**69**			**Pn**	**23 28 16.0**	**-0.5**
NEA2	**Nenana**	**4.97**	**22**	P		**Pn**	**23 28 16.8**	**-0.8**
	baz=206,SNR=38							
NEA2					S	**Sn**	**23 29 10.9**	**-3.6**
	baz=206							
NEA2	**Nenana**	**4.97**	**22**			**Pn**	**23 28 16.9**	**-0.8**
KHIT	**Khitrov Hills**	**5.04**	**81**			**Pn**	**23 28 17.9**	**-0.7**
WRH	**Wood River Hil**	**5.06**	**27**			**Pn**	**23 28 17.8**	**-1.1**
CRQM	**Cirque**	**5.10**	**78**			**Pn**	**23 28 19.8**	**+0.2**
MLY	**Manley**	**5.14**	**12**	P		**Pn**	**23 28 18.8**	**-1.2**
	baz=195,SNR=36							
MLY	**Manley**	**5.14**	**12**			**Pn**	**23 28 18.9**	**-1.2**
MCARA	**McCarthy VSAT**	**5.23**	**71**			**Pn**	**23 28 21.5**	**+0.3**
TGL	**Tana Glacier**	**5.25**	**78**			**Pn**	**23 28 21.7**	**+0.2**
CCB	**Clear Creek Bu**	**5.28**	**27**			**Pn**	**23 28 20.7**	**-1.1**
HDA	**Harding Lake**	**5.29**	**32**	P		**Pn**	**23 28 21.0**	**-0.9**
	baz=217,SNR=37							
HDA					S	**Sn**	**23 29 19.9**	**-2.2**
	baz=217							
HDA					S	**Sn**	**23 29 19.9**	**-2.2**
	baz=217							
HDA	**Harding Lake**	**5.29**	**32**			**Pn**	**23 28 21.3**	**-0.6**
KULT	**Kultieth River**	**5.30**	**83**			**Pn**	**23 28 21.9**	**-0.3**
PS08	**TAPS Pump Stn8**	**5.43**	**31**			**Pn**	**23 28 23.0**	**-0.8**
I23K	**Minto, Yukon-K**	**5.43**	**18**	P		**Pn**	**23 28 23.6**	**-0.2**
	baz=202,SNR=180							
I23K	**Minto, Yukon-K**	**5.43**	**18**			**Pn**	**23 28 23.9**	**+0.1**
MDM	**Murphy Dome**	**5.46**	**23**			**Pn**	**23 28 23.5**	**-0.7**
TCOL	**CIGO, UAF Yank**	**5.46**	**25**	P		**Pn**	**23 28 23.4**	**-0.8**
	baz=210,SNR=16							
TCOL	**CIGO, UAF Yank**	**5.46**	**25**			**Pn**	**23 28 23.4**	**-0.8**
COLA	**College**	**5.46**	**25**			**Pn**	**23 28 23.7**	**-0.5**
PTPK	**Patty Peak**	**5.47**	**73**			**Pn**	**23 28 24.5**	**0.0**
ISLE	**Juniper Island**	**5.49**	**79**	Pn		**Pn**	**23 28 25.0**	**+0.3**
IL31		**5.60**	**29**			**Pn**	**23 28 25.3**	**-0.7**
ILAR	**Eielson Array**	**5.60**	**29**	P		**Pn**	**23 28 25.1**	**-1.0**
	12nm,0.3s,baz=215,slow=13,SNR=516							
ILAR					S	**Sn**	**23 29 24.7**	**-4.8**
	4.7nm,0.3s,baz=208,slow=15,SNR=9.4							
L26K	**Log Cabin Wild**	**5.63**	**54**			**Pn**	**23 28 26.2**	**-0.3**
MESA	**MESA**	**5.69**	**84**			**Pn**	**23 28 28.0**	**+0.5**
POKR	**Poker Plat Res**	**5.76**	**26**	P		**Pn**	**23 28 27.6**	**-0.7**
	baz=211,SNR=19							
POKR					S	**Sn**	**23 29 30.8**	**-2.6**
	baz=211							
POKR	**Poker Plat Res**	**5.76**	**26**			**Pn**	**23 28 27.8**	**-0.5**
GRNC	**Granite Creek**	**5.78**	**78**			**Pn**	**23 28 28.5**	**-0.2**
YAH	**Yahtse**	**5.78**	**82**			**Pn**	**23 28 29.5**	**+0.7**
BARN	**Barnard Glacie**	**5.84**	**75**			**Pn**	**23 28 30.5**	**+1.0**
SCRK	**Sand Creek**	**5.90**	**44**	P		**Pn**	**23 28 28.8**	**-1.4**
	baz=232,SNR=8.6							
SCRK					S	**Sn**	**23 29 32.3**	**-4.5**
	baz=232							
SCRK	**Sand Creek**	**5.90**	**44**			**Pn**	**23 28 29.1**	**-1.0**
IM03		**5.96**	**358**			**Pn**	**23 28 30.7**	**-0.1**
IMAR	**Indian Mountai**	**5.96**	**358**			**Pn**	**23 28 30.3**	**-0.5**
RKAV	**Rock Avalanche**	**5.98**	**82**			**Pn**	**23 28 32.1**	**+0.7**
CTGM	**Chitina Glacie**	**6.00**	**76**			**Pn**	**23 28 32.2**	**+0.8**
SDPT	**Sand Point**	**6.07**	**222**	Pn		**Pn**	**23 28 29.2**	**-3.2**
TABL	**Table Mountain**	**6.08**	**81**			**Pn**	**23 28 33.3**	**+0.6**
CHX	**Chaix Hills**	**6.11**	**85**			**Pn**	**23 28 33.8**	**+0.7**
LOGN	**Logan Glacier**	**6.15**	**77**			**Pn**	**23 28 34.1**	**+0.6**
SAMH	**Samovar Hills**	**6.28**	**84**			**Pn**	**23 28 35.4**	**+0.2**
BC03		**6.29**	**56**			**Pn**	**23 28 35.0**	**-0.2**
PCA	**Pinnacle**	**6.54**	**84**			**Pn**	**23 28 39.3**	**+0.6**
PRP	**Porcupine Dome**	**6.54**	**30**			**Pn**	**23 28 38.3**	**-0.5**
BCPM	**Bancas Point**	**6.87**	**85**	Pn		**Pn**	**23 28 44.2**	**+1.2**
PNL	**Peninsula**	**7.03**	**87**			**Pn**	**23 28 45.6**	**+0.5**
YUK4	**Talbot Arm**	**7.32**	**73**			**Pn**	**23 28 50.6**	**+1.4**
COLD	**Coldfoot**	**7.34**	**10**	P		**Pn**	**23 28 48.8**	**-0.4**
	baz=193,SNR=24							
COLD	**Coldfoot**	**7.34**	**10**			**Pn**	**23 28 49.1**	**-0.1**
YUK6	**Outpost Mounta**	**7.44**	**77**			**Pn**	**23 28 51.6**	**+0.7**
HYT	**Haines Junctio**	**7.86**	**77**	Pn		**Pn**	**23 28 57.5**	**+1.0**
BMAR	**Burnt Mountain**	**8.35**	**24**	Pn		**Pn**	**23 29 01.4**	**-1.4**
TOLK	**Toolik Lake Re**	**8.78**	**9**	P		**Pn**	**23 29 08.6**	**+0.2**
	baz=193,SNR=11							
SKAG	**Skagway**	**9.10**	**86**	Pn		**Pn**	**23 29 14.7**	**+1.9**
WHY	**Whitehorse**	**9.16**	**78**	Pn		**Pn**	**23 29 14.9**	**+1.2**
BESE	**Bessie Mountai**	**9.55**	**91**	Pn		**Pn**	**23 29 22.1**	**+3.2**
SIT	**Sitka**	**9.87**	**100**	Pn		**Pn**	**23 29 25.1**	**+2.1**
JIS	**Juneau Island**	**9.88**	**92**	Pn		**Pn**	**23 29 26.0**	**+2.9**
NIKH	**Nikolski High**	**11.11**	**237**	Pn		**Pn**	**23 29 42.4**	**+2.9**
WRAK	**Wrangell Islan**	**11.62**	**99**	Pn		**Pn**	**23 29 50.1**	**+4.0**
CRAG	**Craig**	**11.70**	**104**	Pn		**Pn**	**23 29 50.6**	**+3.4**
INK	**Inuvik**	**11.90**	**38**	Pn		**Pn**	**23 29 49.9**	**+0.3**
DLBC	**Dease Lake**	**12.02**	**88**	Pn		**P**	**23 29 56.2**	**-1.9**
DIB	**Dawson Inlet,**	**13.33**	**112**			**P**	**23 30 13.9**	**+1.4**
YKA	**Yellowknife Ar**	**18.58**	**66**	P		**P**	**23 31 11.6**	**+1.3**
	0.3nm,0.3s,baz=277,slow=8.7,SNR=6.1							
SONM	**Songino Array**	**54.63**	**306**	P		**P**	**23 36 17.9**	**-0.2**
	0.5nm,0.5s,baz=32,slow=6.8,SNR=4.4							

IDC 17 23:27:39.2±2.5, 13°.95N×126°.29E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/45, mbtmp3.7/4, Error ellipse: s-maj=190.5km s-min=28.2km az=69.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SONM	**Songino Array**	**37.62**	**338**	P		P	23 34 56.6	+0.7
	0.9nm,0.8s,baz=158,slow=9.3,SNR=6.3							
ASAR	**Alice Springs**	**38.12**	**169**	P		P	23 35 00.2	0.0
	0.4nm,0.7s,baz=358,slow=7.4,SNR=2.6							
MKAR	**Makanchi Array**	**49.16**	**321**	P		P	23 36 28.4	-0.6
	0.6nm,0.6s,baz=120,slow=8.7,SNR=4.9							
KURBB	**Kurchatov Arra**	**53.10**	**324**	P		P	23 36 57.9	-0.6
	1.7nm,0.8s,baz=122,slow=7.8,SNR=4.1							

IDC 17 23:34:01.2±1.5, 19°.64N×121°.03E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.4/60, mbtmp3.7/6, Error ellipse: s-maj=151.4km s-min=19.0km az=65.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SONM	**Songino Array**	**30.54**	**340**	P		P	23 40 16.4	0.0
	0.4nm,0.7s,baz=164,slow=9.4,SNR=2.8							
WRA	**Warramunga Arr**	**41.44**	**161**	P		P	23 41 49.4	-0.4
	0.5nm,0.5s,baz=342,slow=9.0,SNR=6.1							
MKAR	**Makanchi Array**	**41.60**	**320**	P		P	23 41 50.6	-0.3
	0.5nm,0.6s,baz=121,slow=6.8,SNR=5.7							
ZALV	**Zalesovo Beam**	**44.03**	**237**	P		P	23 42 10.3	-0.1
	0.5nm,0.6s,baz=108,slow=9.3,SNR=4.8							
ASAR	**Alice Springs**	**44.84**	**163**	P		P	23 42 17.4	+0.2
	0.6nm,0.7s,baz=342,slow=7.1,SNR=8.0							
KURBB	**Kurchatov Arra**	**45.56**	**323**	P		P	23 42 22.7	0.0
	0.7nm,0.2s,baz=120,slow=8.0,SNR=5.4							

*DDA **17** 23:40:34.5, 38°.68N×23°.47E, h7km±2km, MW4.0*
*IDC **17** 23:40:35.4±0.9, 38°.65N×23°.34E, h0km, mb3.6/9, mb1 3.8/16, mb1mx3.6/52, mbtmp3.7/16, ML3.5/7, Error ellipse: s-maj=17.1km s-min=13.8km az=127.0*
*ISK **17** 23:40:36.6, 38°.69N×23°.39E, h16km, ML3.7/16*
*BEO **17** 23:40:36.0±1.3, 38°.64N×23°.74E, h0km, ML3.6/4*
*THE **17** 23:40:36.8, 38°.65N×23°.39E, h0km±1km, ML3.7/39, Error ellipse: s-maj=1.1km s-min=0.4km az=61.0*
*ATH **17** 23:40:36.5, 38°.65N×23°.37E, h21km±1km, ML3.8/27, Error ellipse: s-maj=1.4km s-min=0.5km az=294.0*

ISC 17 23:40:37.0±0.9, 38°.65N±0°.01×23°.38E±0°.01, h12km±6km, n253, σ1s05/338, mb3.6/9, 11C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATAL	**Atalanti**	**0.28**	**278**	P		**Pg**	**23 40 42.8**	**-0.1**
ATAL				S		**Sg**	**23 40 47.2**	**+0.4**
ATAL				AML		AML	23 40 47.8	
	comp=E,94661μm,0.2s							
ATAL				AML		AML	23 40 48.3	
	comp=N,75601μm,0.2s							
ATAL	**Atalanti**	**0.28**	**278**	P		**Pg**	**23 40 42.7**	**-0.1**
ATAL				S		**Sg**	**23 40 47.3**	**+0.5**
LKR	**Lokris**	**0.30**	**270**	P		**Pg**	**23 40 42.9**	**-0.2**
LKR				S		**Sg**	**23 40 47.4**	**+0.4**
LKR				AML		AML	23 40 48.8	
	comp=N,72783μm,0.2s							
LKR				AML		AML	23 40 48.8	
	comp=E,88144μm,0.2s							
LKR	**Lokris**	**0.30**	**270**	P		**Pg**	**23 40 42.9**	**-0.2**
LKR				S		**Sg**	**23 40 47.6**	**+0.4**
	comp=E,41μm,0.2s							
VIL2	**Platees**	**0.45**	**191**	P		**Pb**	**23 40 46.4**	**-0.4**
VIL2				S		**Sb**	**23 40 53.5**	**+0.1**
VIL2				AML		AML	23 40 56.2	
	comp=E,54297μm,0.5s							
VIL2				AML		AML	23 40 57.2	
	comp=N,23524μm,0.4s							
VILL	**Villia**	**0.49**	**186**	P		**Pg**	**23 40 46.4**	**-0.2**
VILL				S		**Sg**	**23 40 53.8**	**+0.6**
	comp=N,22μm,0.5s							
KYMI	**Kymi, Euboea I**	**0.56**	**92**	P		**Pg**	**23 40 47.6**	**-0.4**
KYMI				S		**Sb**	**23 40 56.4**	**-0.3**
KYMI				AML		AML	23 40 58.9	
	comp=N,9680μm,0.4s							
KYMI				AML		AML	23 41 00.4	
	comp=E,10224μm,0.5s							
KYMI	**Kymi, Euboea I**	**0.56**	**92**	P		**Pg**	**23 40 47.6**	**-0.4**
KYMI				S		**Sb**	**23 40 56.5**	**-0.3**
	comp=E,5μm,0.4s							
AXAR	**Agios Charalam**	**0.58**	**282**	P		**Pg**	**23 40 47.7**	**-0.5**
AXAR				S		**Sg**	**23 40 56.2**	**+0.3**
AXAR				AML		AML	23 40 57.8	
AXAR				AML		AML	23 41 00.5	
AXAR	**Agios Charalam**	**0.58**	**282**	P		**Pg**	**23 40 47.8**	**-0.5**
AXAR				S		**Sb**	**23 40 57.2**	**+0.1**
AOS	**Alonnisos**	**0.65**	**37**	P		**Pg**	**23 40 49.3**	**-0.2**
AOS				S		**Sg**	**23 40 58.2**	**+0.1**
AOS				AML		AML	23 40 59.2	
	comp=E,16605μm,0.6s							
AOS				AML		AML	23 40 59.6	
	comp=N,14198μm,0.3s							
AOS	**Alonnisos**	**0.65**	**37**	PG		**Pg**	**23 40 49.2**	**-0.4**
AOS				SG		**Sg**	**23 40 57.8**	**-0.3**
AOS	**Alonnisos**	**0.65**	**37**	P		**Pg**	**23 40 49.4**	**-0.2**
AOS				S		**Sg**	**23 40 58.2**	**+0.1**
	comp=N,8μm,0.5s							
NEO	**Neokhori**	**0.66**	**349**	P		**Pb**	**23 40 50.1**	**-0.4**
NEO				S		**Sb**	**23 40 59.3**	**-0.4**
NEO				AML		AML	23 41 02.8	
	comp=E,37246μm,0.2s							
NEO				AML		AML	23 41 04.4	
	comp=N,49426μm,0.3s							
NEO	**Neokhori**	**0.66**	**349**	P		**Pb**	**23 40 50.1**	**-0.4**
NEO				S		**Sb**	**23 41 00.2**	**+0.5**
	comp=N,22μm,0.3s							
LTK	**Loutraki**	**0.71**	**207**	P		**Pg**	**23 40 50.1**	**-0.5**
LTK				S		**Sg**	**23 41 00.1**	**+0.1**
LTK				AML		AML	23 41 04.8	
	comp=E,30114μm,0.9s							
LTK				AML		AML	23 41 06.3	
	comp=N,25593μm,0.5s							
LTK	**Loutraki**	**0.71**	**207**	P		**Pg**	**23 40 50.2**	**-0.5**
LTK				S		**Sb**	**23 41 01.0**	**+0.1**
	comp=N,14μm,0.7s							
DSF	**Desfina**	**0.71**	**250**	P		**Pg**	**23 40 49.6**	**-1.2**
DSF				S		**Sb**	**23 41 00.9**	**-0.1**
DSF				AML		AML	23 41 04.2	
	comp=N,29914μm,0.3s							
DSF				AML		AML	23 41 04.2	
	comp=E,32604μm,0.3s							
DSF	**Desfina**	**0.71**	**250**	P		**Pg**	**23 40 49.5**	**-1.2**
DSF				S		**Sb**	**23 41 01.5**	**+0.5**
	comp=E,17μm,0.3s							
PTL	**Penteli**	**0.71**	**148**	P		**Pg**	**23 40 50.3**	**-0.4**
PTL				S		**Sg**	**23 40 59.7**	**-0.4**
PTL				AML		AML	23 41 03.5	
	comp=N,11141μm,0.7s							
PTL				AML		AML	23 41 03.6	
	comp=E,8478μm,0.8s							
PTL	**Penteli**	**0.71**	**148**	P		**Pg**	**23 40 50.4**	**-0.4**
PTL				S		**Sb**	**23 41 01.6**	**+0.5**
	comp=E,5μm,0.7s							
DION	**Dionisos Attik**	**0.72**	**143**	P		**Pg**	**23 40 50.5**	**-0.4**
DION				S		**Sg**	**23 41 00.5**	**+0.1**
DION				AML		AML	23 41 04.3	
	comp=N,39502μm,0.5s							
DION				AML		AML	23 41 05.7	
	comp=E,36765μm,0.3s							
DION	**Dionisos Attik**	**0.72**	**143**	P		**Pg**	**23 40 50.6**	**-0.4**
DION				S		**Sb**	**23 41 01.1**	**-0.1**
XOR	**Xorichti**	**0.73**	**348**	P		**Pg**	**23 40 51.2**	**+0.1**
XOR				S		**Sg**	**23 41 00.7**	**+0.1**
XOR	**Xorichti**	**0.73**	**348**	P		**Pg**	**23 40 51.2**	**+0.1**
XOR				S		**Sb**	**23 41 01.2**	**-0.3**
	comp=E,10μm,0.3s							
ATH	**Athens Observa**	**0.73**	**159**	P		**Pg**	**23 40 50.8**	**-0.3**
ATH				S		**Sb**	**23 41 01.2**	**-0.2**
ATH				AML		AML	23 41 05.1	
	comp=E,18952μm,0.2s							
ATH				AML		AML	23 41 05.7	
	comp=N,14070μm,0.5s							
ATH	**Athens Observa**	**0.73**	**159**	P		**Pg**	**23 40 50.8**	**-0.3**
ATH				S		**Sb**	**23 41 02.0**	**+0.5**
	comp=N,8μm,0.3s							
LOUT	**Loutraki**	**0.74**	**206**	P		**Pg**	**23 40 50.7**	**-0.5**
LOUT				S		**Sb**	**23 41 01.6**	**-0.1**
LOUT				AML		AML	23 41 05.9	
	comp=N,5027μm,0.5s							
LOUT				AML		AML	23 41 08.7	
	comp=E,3158μm,0.6s							
LOUT	**Loutraki**	**0.74**	**206**	P		**Pg**	**23 40 50.7**	**-0.5**
LOUT				S		**Sb**	**23 41 02.4**	**+0.7**
	comp=E,11μm,0.5s							
ATHU	**Athens Univers**	**0.76**	**155**	P		**Pg**	**23 40 51.1**	**-0.5**
ATHU				S		**Sg**	**23 41 01.0**	**-0.5**
ATHU				AML		AML	23 41 03.8	
	comp=E,3832μm,0.5s							
ATHU				AML		AML	23 41 05.2	
	comp=N,4918μm,0.4s							
ATHU	**Athens Univers**	**0.76**	**155**	P		**Pg**	**23 40 51.1**	**-0.5**
ATHU				S		**Sg**	**23 41 01.0**	**-0.5**
VOL2	**Volos**	**0.79**	**335**	P		**Pn**	**23 40 54.8**	**+1.0**
VOL2				S		**Sn**	**23 41 07.0**	**+1.6**
THAL	**Thalero**	**0.83**	**223**	P		**Pg**	**23 40 52.5**	**-0.6**
THAL				S		**Sg**	**23 41 03.6**	**-0.4**
THAL				AML		AML	23 41 09.1	
	comp=E,31280μm,0.4s							
THAL				AML		AML	23 41 10.4	
	comp=N,29595μm,0.3s							
THAL	**Thalero**	**0.83**	**223**	P		**Pg**	**23 40 52.5**	**-0.6**
THAL				S		**Sn**	**23 41 05.9**	**-0.7**
	comp=N,17μm,0.4s							
VLY	**Voula,Athens**	**0.86**	**158**	P		**Pg**	**23 40 52.7**	**-0.9**
VLY				AML		AML	23 41 08.4	
	comp=N,9305μm,0.3s							
VLY				AML		AML	23 41 08.5	
	comp=E,10659μm,0.4s							
VLY	**Voula,Athens**	**0.86**	**158**	P		**Pg**	**23 40 53.1**	**-0.5**
VLY				S		**Sg**	**23 41 04.8**	**-0.1**
AGG	**Agios Georgios**	**0.90**	**295**	P		**Pg**	**23 40 53.6**	**-0.7**
AGG				S		**Sg**	**23 41 06.3**	**+0.2**
AGG	**Agios Georgios**	**0.90**	**295**	PG		**Pg**	**23 40 53.9**	**-0.4**
AGG				SG		**Sb**	**23 41 07.2**	**+0.8**
AGG	**Agios Georgios**	**0.90**	**295**	*i* P		**Pg**	**23 40 52.9**	**-1.4**
AGG				*i* S		**Sg**	**23 41 06.1**	**0.0**
AGG				IAML			23 41 10.0	
	comp=N,2μm,0.9s							
AGG				IAML			23 41 11.0	
	comp=E,2μm,0.4s							
AGG	**Agios Georgios**	**0.90**	**295**	P		**Pg**	**23 40 53.7**	**-0.7**
AGG				S		**Sb**	**23 41 06.7**	**+0.3**
	comp=E,5μm,0.6s							
SKY	**Skiros Island**	**0.94**	**76**	P		**Pg**	**23 40 54.6**	**-0.6**
SKY				S		**Sb**	**23 41 08.3**	**+0.7**
SKY				AML		AML	23 41 09.8	
	comp=N,26355μm,0.4s							
SKY				AML		AML	23 41 10.4	
	comp=E,16197μm,0.4s							
SKY	**Skiros Island**	**0.94**	**76**	P		**Pg**	**23 40 54.5**	**-0.6**
SKY				S		**Sn**	**23 41 08.8**	**-0.5**
	comp=E,11μm,0.4s							
KALE	**Kalithea**	**1.01**	**255**	P		**Pg**	**23 40 54.7**	**-1.7**
KALE				S		**Sg**	**23 41 09.7**	**+0.1**
KALE				AML		AML	23 41 15.9	
	comp=E,7684μm,0.4s							
KALE				AML		AML	23 41 15.9	
	comp=N,13433μm,0.4s							
KALE	**Kalithea**	**1.01**	**255**	P		**Pg**	**23 40 54.7**	**-1.7**
KALE				S		**Sn**	**23 41 11.8**	**+0.8**
	comp=N,5μm,0.4s							
KARY	**Karystos**	**1.04**	**126**	P		**Pb**	**23 40 56.3**	**-0.5**
KARY				S		**Sb**	**23 41 10.6**	**+0.2**
KARY	**Karystos**	**1.04**	**126**	P		**Pb**	**23 40 56.2**	**-0.6**
KARY				S		**Sb**	**23 41 10.7**	**+0.4**
	comp=N,3μm,0.6s							
MAKR	**Makrakomi, Fth**	**1.04**	**291**	P		**Pb**	**23 40 56.8**	**-0.1**
MAKR				S		**Sg**	**23 41 10.5**	**-0.1**
MAKR				AML		AML	23 41 11.9	
	comp=N,14794μm,0.4s							
MAKR				AML		AML	23 41 15.6	
	comp=E,12476μm,0.4s							
MAKR	**Makrakomi, Fth**	**1.04**	**291**	P		**Pb**	**23 40 56.2**	**-0.7**
MAKR				S		**Sn**	**23 41 11.6**	**-0.2**
	comp=E,7μm,0.3s							
EPID	**Epidavros**	**1.06**	**191**	P		**Pb**	**23 40 56.8**	**-0.4**
EPID				S		**Sg**	**23 41 11.2**	**+0.1**
EPID	**Epidavros**	**1.06**	**191**	P		**Pb**	**23 40 56.6**	**-0.6**
EPID				S		**Sn**	**23 41 11.9**	**-0.3**
	comp=E,5μm,0.4s							
SERG	**Sergoula**	**1.06**	**257**	P		**Pb**	**23 40 55.4**	**-1.9**
SERG				AML		AML	23 41 16.1	
	comp=N,12007μm,0.5s							
SERG				AML		AML	23 41 18.4	
	comp=E,7144μm,0.5s							
SERG	**Sergoula**	**1.06**	**257**	P		**Pb**	**23 40 55.5**	**-1.9**
SERG				S		**Sn**	**23 41 13.5**	**+1.1**
	comp=E,5μm,0.5s							
TRIZ	**Trizonia**	**1.06**	**255**	P		**Pb**	**23 40 55.5**	**-1.8**
TRIZ	**Trizonia**	**1.06**	**255**	P		**Pb**	**23 40 55.6**	**-1.7**
TRIZ				S		**Sn**	**23 41 13.2**	**+0.9**
	comp=E,5μm,0.4s							
ALIK	**Aliki, Aigiali**	**1.07**	**249**	P		**Pb**	**23 40 56.7**	**-0.7**
ALIK				S		**Sg**	**23 41 12.1**	**+0.6**
GUR	**Goura**	**1.09**	**229**	P		**Pb**	**23 40 57.8**	**+0.1**
GUR				S		**Sg**	**23 41 12.6**	**+0.5**
GUR	**Goura**	**1.09**	**229**	P		**Pg**	**23 40 58.0**	**+0.1**
GUR				S		**Sg**	**23 41 12.6**	**+0.5**
KLV	**Kalavryta, Ach**	**1.14**	**238**	P		**Pb**	**23 40 57.6**	**-1.0**
KLV				S		**Sg**	**23 41 14.2**	**+0.4**
KLV				AML		AML	23 41 18.2	
	comp=E,4005μm,0.8s							
KLV				AML		AML	23 41 21.6	
	comp=N,4987μm,0.7s							
KLV	**Kalavryta, Ach**	**1.14**	**238**	P		**Pb**	**23 40 58.5**	**-0.1**
KLV				S		**Sn**	**23 41 14.4**	**0.0**
	comp=N,2μm,0.7s							
ANX	**Ano Chora**	**1.15**	**267**	P		**Pb**	**23 40 57.4**	**-1.3**
ANX				S		**Sg**	**23 41 14.2**	**+0.3**
ANX				AML		AML	23 41 19.3	
	comp=N,12864μm,0.4s							
ANX				AML		AML	23 41 20.4	
	comp=E,7600μm,0.4s							
ANX	**Ano Chora**	**1.15**	**267**	P		**Pb**	**23 40 57.7**	**-1.0**
ANX				S		**Sn**	**23 41 15.0**	**+0.5**
	comp=E,6μm,0.6s							
EFP	**Efpalio**	**1.18**	**259**	P		**Pn**	**23 40 57.5**	**-1.7**
EFP	**Efpalio**	**1.18**	**259**	P		**Pn**	**23 40 57.8**	**-1.4**
EFP				S		**Sn**	**23 41 16.1**	**+1.0**
	comp=E,3μm,0.4s							
EVR	**Evrytania**	**1.26**	**283**	P		**Pn**	**23 40 59.6**	**-0.8**
EVR				AML		AML	23 41 24.9	
	comp=N,2400μm,0.8s							
EVR				AML		AML	23 41 26.5	
	comp=E,2374μm,0.7s							
EVR	**Evrytania**	**1.26**	**283**	P		**Pn**	**23 41 00.5**	**+0.1**
EVR				S		**Sg**	**23 41 18.5**	**+1.0**
	comp=E,1μm,0.8s							
LRSO	**Larissa Observ**	**1.27**	**323**	P		**Pb**	**23 41 00.8**	**-0.1**
LRSO	**Larissa Observ**	**1.27**	**323**	P		**Pb**	**23 41 00.8**	**-0.1**
LRSO				S		**Sg**	**23 41 19.7**	**+1.6**
	comp=E,3μm,0.7s							
KRND	**KRANIDI**	**1.28**	**188**	P		**Pn**	**23 41 00.6**	**-0.1**
KRND				AML		AML	23 41 20.1	
	comp=E,5685μm,0.6s							
KRND				AML		AML	23 41 22.9	
	comp=N,4780μm,0.6s							
KRND	**KRANIDI**	**1.28**	**188**	P		**Pn**	**23 41 00.7**	**+0.1**
KRND				S		**Sg**	**23 41 18.9**	**+0.7**
	comp=N,3μm,0.7s							
PAIG	**Paliouri**	**1.29**	**10**	P		**Pn**	**23 41 00.5**	**-0.3**
PAIG	**Paliouri**	**1.29**	**10**	P		**Pn**	**23 41 00.5**	**-0.3**
THL	**Klokotos Trika**	**1.40**	**311**	P		**Pn**	**23 41 02.4**	**+0.1**
THL				AML		AML	23 41 27.9	
	comp=E,1861μm,0.6s							
THL				AML		AML	23 41 28.9	
	comp=N,1809μm,0.8s							
THL	**Klokotos Trika**	**1.40**	**311**	P		**Pn**	**23 41 02.5**	**+0.3**
TRIP	**Tripoli**	**1.42**	**218**	P		**Pb**	**23 41 03.2**	**-0.3**
TRIP				AML		AML	23 41 27.1	
	comp=E,4704μm,0.6s							
TRIP				AML		AML	23 41 30.3	
	comp=N,5615μm,0.6s							
TRIP	**Tripoli**	**1.42**	**218**	P		**Pb**	**23 41 03.2**	**-0.3**
TRIP				S		**Sg**	**23

BOZC	**Bozcaada**	**2.39**	**59**	PN	**Pn**	**23 41 15.9**	**0.0**
BOZC	**Bozcaada**	**2.39**	**59**	*i* P	**Pn**	**23 41 15.4**	**-0.5**
BOZC				*i* S	**Sn**	**23 41 41.1**	**-3.9**
BOZC				IAML		23 41 43.0	
	comp=N,124nm,0.5s						
BOZC				IAML		23 42 01.0	
	comp=E,146nm,1.5s						
DMLN	**Damoulianata-K**	**2.40**	**261**	P	**Pb**	**23 41 18.1**	**-1.9**
KTHA	**Kythira Island**	**2.41**	**186**	PN	**Pn**	**23 41 16.8**	**+0.7**
KTHA	**Kythira Island**	**2.41**	**186**	P	**Pn**	**23 41 16.4**	**+0.3**
GRG	**Griva**	**2.42**	**342**	PN	**Pn**	**23 41 16.4**	**+0.1**
GRG	**Griva**	**2.42**	**342**	P	**Pn**	**23 41 16.2**	**-0.1**
SMTH	**Samothraki Isl**	**2.46**	**42**	P	**Pn**	**23 41 15.5**	**-1.4**
SRS	**Serrai**	**2.47**	**4**	P	**Pn**	**23 41 17.1**	**+0.1**
GADA	**Gvkgeada**	**2.48**	**51**	PN	**Pn**	**23 41 17.0**	**-0.1**
GADA	**Gvkgeada**	**2.48**	**51**	P	**Pn**	**23 41 16.7**	**-0.4**
GOKA	**anakkale-Gk**	**2.49**	**51**	*i* P	**Pn**	**23 41 16.5**	**-0.7**
KAVA	**Kavala**	**2.50**	**20**	P	**Pn**	**23 41 16.9**	**-0.5**
NEST	**Nestorio**	**2.52**	**315**	P	**Pn**	**23 41 19.5**	**+1.7**
IGT	**Igoumenitsa**	**2.53**	**291**	P	**Pb**	**23 41 20.6**	**-1.7**
IGT				S	**Sb**	**23 41 52.0**	**-1.3**
	comp=E,328nm,0.9s						
URLA	**Izmir**	**2.54**	**96**	PN	**Pn**	**23 41 18.2**	**+0.2**
URLA	**Izmir**	**2.54**	**96**	*i* P	**Pn**	**23 41 18.7**	**+0.7**
EZN	**Ezine**	**2.57**	**62**	PN	**Pn**	**23 41 18.4**	**+0.1**
LSK	**Leskovik**	**2.62**	**306**	P	**Pn**	**23 41 20.8**	**+1.6**
FNA	**Florina**	**2.63**	**325**	PN	**Pn**	**23 41 19.8**	**+0.6**
FNA	**Florina**	**2.63**	**325**	*i* P	**Pn**	**23 41 20.2**	**+1.0**
FNA	**Florina**	**2.63**	**325**	P	**Pn**	**23 41 20.7**	**+1.5**
AYVA	**Ayvalik**	**2.66**	**75**	*i* P	**Pn**	**23 41 19.4**	**-0.2**
BAYC	**ÇANAKKALE_Bayr**	**2.69**	**65**	*i* P	**Pn**	**23 41 20.1**	**0.0**
AMGA	**Amorgos Island**	**2.70**	**132**	P	**Pn**	**23 41 20.5**	**+0.4**
CMBO	**Columbo, Santo**	**2.71**	**143**	P	**Pn**	**23 41 20.6**	**+0.4**
SAP3	**Santorini-Thir**	**2.71**	**144**	P	**Pn**	**23 41 21.5**	**+1.2**
NVR	**Nevrokopi**	**2.72**	**8**	P	**Pn**	**23 41 20.4**	**0.0**
THT2	**Imerovigli**	**2.75**	**143**	PN	**Pn**	**23 41 21.3**	**+0.5**
THR3	**Thira Island,**	**2.76**	**144**	P	**Pn**	**23 41 21.7**	**+0.8**
ANKY	**Antikythira Is**	**2.78**	**181**	P	**Pn**	**23 41 21.6**	**+0.3**
DKL	**Dikili**	**2.78**	**80**	PN	**Pn**	**23 41 21.8**	**+0.5**
THR8	**Santorini-Mono**	**2.79**	**143**	P	**Pn**	**23 41 21.5**	**+0.1**
THR6	**Thira Island,**	**2.80**	**144**	P	**Pn**	**23 41 22.4**	**+0.9**
DGB	**zmir**	**2.82**	**101**	*i* P	**Pn**	**23 41 22.1**	**+0.4**
SMG	**Samos**	**2.88**	**108**	P	**Pn**	**23 41 23.2**	**+0.5**
BLCB	**Balcova**	**2.88**	**94**	PN	**Pn**	**23 41 23.3**	**+0.6**
SRN	**Sarande**	**2.90**	**296**	P	**Pn**	**23 41 25.1**	**+2.9**
SRN				S	**Sb**	**23 42 00.9**	**-2.9**
	comp=E,222nm,0.7s						
ZEDA	**zmir-Bergama**	**2.91**	**83**	*i* P	**Pn**	**23 41 22.5**	**-0.4**
GELI	**Tayfur-Gelibol**	**2.96**	**53**	PN	**Pn**	**23 41 23.8**	**+0.1**
KEK	**Kerkira**	**2.98**	**292**	P	**Pn**	**23 41 26.6**	**+2.6**
ANAF	**Anafi Island**	**2.98**	**140**	P	**Pn**	**23 41 24.4**	**+0.4**
ENEZ	**Enez**	**2.98**	**45**	PN	**Pn**	**23 41 23.6**	**-0.4**
ENEZ	**Enez**	**2.98**	**45**	P	**Pn**	**23 41 23.9**	**-0.1**
RDO	**Rodhopi**	**2.99**	**33**	PN	**Pn**	**23 41 23.7**	**-0.4**
RDO	**Rodhopi**	**2.99**	**33**	P	**Pn**	**23 41 23.6**	**-0.5**
ALN	**Alexandroupoli**	**3.04**	**42**	PN	**Pn**	**23 41 25.0**	**+0.2**
ALN	**Alexandroupoli**	**3.04**	**42**	*i* P	**Pn**	**23 41 25.1**	**+0.2**
ALN				*i* S	Sn	23 41 36.1	-25
ALN				IAML		23 41 42.0	
	comp=E,18nm,0.7s						
ALN	**Alexandroupoli**	**3.04**	**42**	P	**Pn**	**23 41 24.4**	**-0.4**
RODP	**Rodopos**	**3.10**	**174**	P	**Pn**	**23 41 26.4**	**+0.7**
LPK	**Lapseki**	**3.13**	**56**	PN	**Pn**	**23 41 26.4**	**+0.4**
STIP	**Stip**	**3.17**	**344**	*i* Pn	**Pn**	**23 41 27.5**	**+0.9**
GCAM	**G?zelcaml?**	**3.18**	**106**	PN	**Pn**	**23 41 27.8**	**+1.1**
GCAM	**G?zelcaml?**	**3.18**	**106**	*i* P	**Pn**	**23 41 26.8**	**0.0**
IMMV	**Iera Moni Meta**	**3.22**	**171**	P	**Pn**	**23 41 27.7**	**+0.4**
VAM	**Vamos**	**3.31**	**168**	P	**Pn**	**23 41 29.1**	**+0.6**
KDZ	**Kurdzhali**	**3.38**	**27**	PN	**Pn**	**23 41 28.9**	**-0.5**
KNDR	**Palaiochora Ch**	**3.42**	**176**	P	**Pn**	**23 41 31.7**	**+1.7**
BODT	**Bodrum**	**3.49**	**116**	PN	**Pn**	**23 41 32.3**	**+1.2**
BODT	**Bodrum**	**3.49**	**116**	P	**Pn**	**23 41 32.1**	**+1.0**
UKOP	**Uzunkopru-Edir**	**3.52**	**44**	PN	**Pn**	**23 41 31.8**	**+0.4**
IDI	**Anoyia**	**3.57**	**160**	Pn	**Pn**	**23 41 33.0**	**+0.9**
	comp=E,4.1nm,0.3s,baz=352,slow=8.6,SNR=23						
IDI				Sn	**Sn**	**23 42 13.2**	**-1.1**
	comp=E,2.0nm,0.3s,baz=324,slow=20,SNR=1.9						
IDI	**Anoyia**	**3.57**	**160**	⇑P	**Pn**	**23 41 34.2**	**+2.0**
IDI	**Anoyia**	**3.57**	**160**	P	**Pn**	**23 41 32.9**	**+0.7**
PLD	**Plovdiv**	**3.59**	**16**	PN	**Pn**	**23 41 33.3**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**3.62**	**100**	PN	**Pn**	**23 41 33.6**	**+0.7**
BALB	**Balikesir**	**3.63**	**73**	PN	**Pn**	**23 41 33.6**	**+0.6**
AYDN	**Tasoluk**	**3.68**	**104**	*i* P	**Pn**	**23 41 34.0**	**+0.3**
MLSB	**Milas**	**3.73**	**110**	PN	**Pn**	**23 41 35.5**	**+1.2**
MRMT	**Marmara Adasi**	**3.79**	**58**	PN	**Pn**	**23 41 36.0**	**+0.8**
TIR	**Tirane**	**3.81**	**316**	*e*Pn	**Pn**	**23 41 39.6**	**+4.2**
TIR				*e*Sn	**Sb**	**23 42 25.8**	**-4.4**
NPS	**Neapolis**	**3.83**	**151**	P	**Pn**	**23 41 36.0**	**+0.3**
GVD	**Gavdhos**	**3.85**	**171**	P	**Pn**	**23 41 38.0**	**+2.1**
LAST	**Lasithi**	**3.87**	**154**	P	**Pn**	**23 41 37.2**	**+0.9**
PRVS	**Prvonek**	**3.98**	**346**	*e*Pn	**Pn**	**23 41 38.5**	**+0.8**
TURN	**Turunc**	**4.29**	**114**	*i* P	**Pn**	**23 41 43.2**	**+1.2**
USAK	**Uak-Merkez**	**4.41**	**87**	*i* P	**Pn**	**23 41 44.8**	**+1.0**
TAVA	**DENIZLI_Tavas**	**4.53**	**103**	*i* P	**Pn**	**23 41 46.7**	**+1.4**
ZAPS	**Zavoj**	**4.65**	**353**	*e*Pn	**Pn**	**23 41 48.9**	**+1.9**
IGD	**Bursa**	**4.78**	**69**	*i* P	**Pn**	**23 41 50.2**	**+1.4**
SELS	**Selova**	**4.87**	**340**	*e*Pn	**Pn**	**23 41 50.1**	**+0.1**
PDG	**Podgorica**	**4.91**	**322**	*e*Pn	**Pn**	**23 41 52.2**	**+1.7**
PDG	**Podgorica**	**4.91**	**322**	*e*Pn	**Pn**	**23 41 53.1**	**+2.6**
PDG				*e*Sn	**Sn**	**23 42 51.2**	**+4.0**
PDG	**Podgorica**	**4.91**	**322**	⇓P	**Pn**	**23 41 51.0**	**+0.6**
FETY	**Fethiye**	**4.95**	**112**	P	**Pn**	**23 41 54.2**	**+3.0**
TAR1	**Taranto**	**5.07**	**294**	*e*Pn	**Pn**	**23 41 54.5**	**+1.9**
BOVS	**Bovan**	**5.13**	**346**	*e*Pn	**Pn**	**23 41 53.7**	**+0.1**
TIP	**Timpagrande**	**5.19**	**278**	⇑P	**Pn**	**23 41 55.9**	**+1.5**
ZAGS	**Zajecar**	**5.23**	**351**	*e*Pn	**Pn**	**23 41 55.9**	**+1.0**
SJES	**Sjenica**	**5.28**	**332**	*e*Pn	**Pn**	**23 41 57.7**	**+2.0**
KZIL	**AFYON_Kizioren**	**5.32**	**92**	*i* P	**Pn**	**23 41 57.0**	**+0.7**
IVAS	**Ivanjica**	**5.49**	**335**	*e*Pn	**Pn**	**23 41 59.9**	**+1.4**
BAI	**Bari**	**5.57**	**298**	⇓*i*Pn	**Pn**	**23 42 01.0**	**+1.5**
BAI				(Sn)	**Sn**	**23 43 01.5**	**-1.9**
GRUS	**Gruza**	**5.60**	**340**	*e*Pn	**Pn**	**23 42 02.2**	**+2.2**
SG1	**Sgolgore (BA)**	**5.61**	**295**	*e*Pn	**Pn**	**23 42 01.9**	**+1.8**
BBLS	**Lazići**	**6.01**	**331**	*e*Pn	**Pn**	**23 42 07.8**	**+2.1**
DIVS	**Divibare**	**6.01**	**336**	*e*Pn	**Pn**	**23 42 06.9**	**+1.2**
STON	**Ston**	**6.03**	**316**	*e*Pn	**Pn**	**23 42 07.0**	**+1.2**
HERR	**Herculane**	**6.26**	**354**	⇓P	**Pn**	**23 42 09.1**	**0.0**
ICOR	**Ion Corvin**	**6.39**	**30**	⇑P	**Pn**	**23 42 11.8**	**+0.9**
MAKA	**Makarska**	**6.68**	**316**	*e*Pn	**Pn**	**23 42 15.3**	**+0.6**
GZR	**Gura Zlata**	**6.75**	**356**	⇑P	**Pn**	**23 42 16.8**	**+0.9**
RICI	**Ricice**	**6.76**	**318**	*e*Pn	**Pn**	**23 42 17.0**	**+1.2**
ARR	**Arges**	**6.77**	**8**	⇑P	**Pn**	**23 42 16.6**	**+0.5**
LOT	**Lotru**	**6.80**	**2**	⇓P	**Pn**	**23 42 17.1**	**+0.6**
VOIR		**6.89**	**10**	⇓P	**Pn**	**23 42 18.7**	**+0.9**
FRUS	**Fruska Gora**	**7.02**	**339**	*e*Pn	**Pn**	**23 42 21.5**	**+2.0**
BZS	**Buzias**	**7.08**	**350**	*e*Pn	**Pn**	**23 42 20.5**	**+0.2**
MLR	**Muntele Rosu**	**7.09**	**15**	Pn	**Pn**	**23 42 21.9**	**+1.3**
	comp=E,2.0nm,0.3s,baz=334,slow=9.1,SNR=18						
MLR				Sn	**Sn**	**23 43 40.9**	**-0.2**
	comp=E,0.7nm,0.3s,baz=129,slow=21,SNR=1.3						
MLR	**Muntele Rosu**	**7.09**	**15**	⇑P	**Pn**	**23 42 21.8**	**+1.3**
VAE	**Valguarnera**	**7.17**	**263**	Pn	**Pn**	**23 42 21.2**	**-0.4**
	comp=E,0.8nm,0.3s,baz=212,slow=22,SNR=2.3						
VAE				Sn	**Sn**	**23 43 39.0**	**-4.0**
	comp=E,1.0nm,0.3s,baz=209,slow=9.1,SNR=1.5						
DOPR	**Dopca**	**7.46**	**11**	⇑P	**Pn**	**23 42 26.8**	**+1.2**
KIJV	**Kijevo**	**7.49**	**318**	*e*Pn	**Pn**	**23 42 26.8**	**+0.9**
KIJV				Sn	**Sn**	**23 43 49.0**	**-1.8**
PLOR	**Plostina**	**7.59**	**18**	⇑P	**Pn**	**23 42 28.9**	**+1.6**
VRI	**Vrincioaia**	**7.62**	**18**	⇑P	**Pn**	**23 42 28.1**	**+0.4**
OZUR		**7.65**	**13**	⇑P	**Pn**	**23 42 30.0**	**+1.9**
MORI	**Morici**	**7.78**	**314**	*e*Pn	**Pn**	**23 42 31.7**	**+1.8**
MORI				Sn	**Sn**	**23 43 55.6**	**-2.2**
BRTR	**Keskin Array B**	**8.04**	**79**	Pn	**Pn**	**23 42 35.5**	**+1.9**
	comp=E,0.3nm,0.3s,baz=264,slow=14,SNR=2.3						
BIZ	**Bicaz**	**8.52**	**13**	⇓P	**Pn**	**23 42 42.2**	**+2.1**
PRAR	**RASCA**	**8.95**	**13**	⇓P	**Pn**	**23 42 47.2**	**+1.2**
KOLS	**Kolonicke sedl**	**10.31**	**356**	*e*Pn	**Pn**	**23 43 05.9**	**+1.3**
MMAI	**Mount Meron Ar**	**11.26**	**116**	Pn	**Pn**	**23 43 17.8**	**+0.1**
	comp=E,0.2nm,0.3s,baz=303,slow=13,SNR=2.0						
KEST	**Kesra**	**11.57**	**260**	Pn	**Pn**	**23 43 20.7**	**-1.2**
	comp=E,0.1nm,0.3s,baz=11,slow=10,SNR=1.9						
GERES	**GERESS Array B**	**12.35**	**329**	Pn	**Pn**	**23 43 33.0**	**+0.5**
	comp=E,0.1nm,0.3s,baz=147,slow=7.9,SNR=2.3						
ESDC	**Sonseca Array**	**21.20**	**281**	P	**P**	**23 45 22.6**	**+0.2**
	comp=E,2.1nm,0.7s,baz=76,slow=11,SNR=21						
HFS	**Hagfors**	**22.36**	**347**	P	**P**	**23 45 35.3**	**+0.7**
	comp=E,1.6nm,0.7s,baz=149,slow=11,SNR=1.6						
FINES	**FINESS Array B**	**22.88**	**3**	P	**P**	**23 45 40.6**	**+0.6**
	comp=E,3.9nm,1.1s,baz=197,slow=14,SNR=2.4						
MDT	**Midelt**	**23.40**	**264**	P	**P**	**23 45 45.8**	**0.0**
	comp=E,1.6nm,0.9s,baz=348,slow=15,SNR=3.6						
NB2	**NORSAR Subarra**	**23.66**	**345**	P	**P**	**23 45 47.4**	**-0.6**
	comp=E,2.1nm,0.9s,baz=157,slow=10						
NOA	**NORSAR Array B**	**23.66**	**345**	P	**P**	**23 45 47.9**	**-0.1**
	comp=E,1.1nm,0.8s,baz=148,slow=9.8,SNR=4.5						
EKA	**Eskdalemuir Ar**	**24.39**	**322**	P	**P**	**23 45 54.5**	**-0.4**
	comp=E,1.8nm,0.9s,baz=122,slow=9.5,SNR=1.7						
TORD	**Torodi Ar. Bea**	**31.86**	**223**	P	**P**	**23 47 02.2**	**+0.3**
	comp=E,1.1nm,0.5s,baz=34,slow=9.3,SNR=10						
MKAR	**Makanchi Array**	**43.13**	**59**	P	**P**	**23 48 37.2**	**+0.1**
	comp=E,0.6nm,0.5s,baz=295,slow=6.6,SNR=5.9						
ZALV	**Zalesovo Beam**	**43.70**	**49**	P	**P**	**23 48 42.0**	**+0.5**
	comp=E,0.4nm,0.4s,baz=264,slow=9.8,SNR=2.2						

*IDC **17** 23:40:34.9±1.3, 37.84N×144.36E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.5/51, mbtmp3.7/7, ML3.3/2, Error ellipse: s-maj=34.0km s-min=25.1km az=95.0*
*JMA **17** 23:40:39.6±0.2, 37.97N×144.10E, h46km, M3.9*
ISC 17 23:40:39.5±1.1, 37.95N±0.05×144.22E±0.08, h35km, n28, σ1s76/39, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.20**	**280**	P	**Pn**	**Pn**	**23 41 13.3**	**-0.2**
JIKH				S	**Sn**	**Sn**	**23 41 38.0**	**-1.5**
OFUJ	**Ofunato**	**2.30**	**300**	P	**Pn**	**Pn**	**23 41 14.6**	**-0.3**
OFUJ				*e*S	**Sn**	**Sn**	**23 41 41.0**	**-0.9**
JIO	**Ouri**	**2.32**	**283**	P	**Pn**	**Pn**	**23 41 15.3**	**+0.2**
JIO				S	**Sn**	**Sn**	**23 41 41.1**	**-1.3**
JKMT	**Kesennumamotoy**	**2.32**	**293**	P	**Pn**	**Pn**	**23 41 15.1**	**-0.1**
JKMT				S	**Sn**	**Sn**	**23 41 41.2**	**-1.3**
JMK	**Ichinoseki**	**2.56**	**294**	*e*S	**Sn**	**Sn**	**23 41 48.1**	**-0.3**
JOM	**Ohasama**	**2.75**	**304**	P	**Pn**	**Pn**	**23 41 21.3**	**+0.2**
JOM				*e*S	**Sn**	**Sn**	**23 41 53.2**	**+0.1**
JFT	**Otama**	**3.11**	**263**	P	**Pn**	**Pn**	**23 41 27.2**	**+1.1**
JFT				S	**Sn**	**Sn**	**23 42 01.9**	**-0.1**
JYK	**Kaneyama**	**3.18**	**289**	P	**Pn**	**Pn**	**23 41 28.1**	**+1.1**
JYK				*e*S	**Sn**	**Sn**	**23 42 04.3**	**+0.5**
JANG	**Nango**	**3.21**	**320**	P	**Pn**	**Pn**	**23 41 27.9**	**+0.5**
BSO1	**Boso 1**	**4.21**	**219**	P	**Pn**	**Pn**	**23 41 40.0**	**-0.6**
BSO1				*e*S	**Sn**	**Sn**	**23 42 27.6**	**-0.6**
JOT	**Ohata**	**4.21**	**325**	P	**Pn**	**Pn**	**23 41 42.4**	**+1.2**
JKB	**Kayabe**	**4.63**	**329**	P	**Pn**	**Pn**	**23 41 48.4**	**+1.5**
JRY	**Ryogami san**	**4.67**	**247**	P	**Pn**	**Pn**	**23 41 47.9**	**+0.3**
JRY				*e*S	**Sn**	**Sn**	**23 42 37.4**	**-3.2**
JCH	**Churui**	**4.70**	**352**	P	**Pn**	**Pn**	**23 41 47.4**	**-0.5**
JCH				*e*S	**Sn**	**Sn**	**23 42 37.2**	**-4.0**
JOD2	**Odawara 2**	**4.92**	**239**	P	**Pn**	**Pn**	**23 41 50.7**	**-0.3**
JOD2				S	**Sn**	**Sn**	**23 42 43.3**	**-3.4**
MJAR	**Matsushiro Arr**	**5.00**	**255**	Pn	**Pn**	**Pn**	**23 41 52.5**	**+0.4**
	0.2nm,0.3s,baz=76,slow=14,SNR=5.4							
MJAR				Sn	**Sn**	**Sn**	**23 42 49.1**	**+0.5**
	0.2nm,0.3s,baz=85,slow=26,SNR=4.5							
NEM2	**Nemuro 2**	**5.53**	**12**	P	**Pn**	**Pn**	**23 41 56.4**	**-2.9**
JHJ2	**Mitsune**	**6.02**	**218**	P	**Pn**	**Pn**	**23 42 05.5**	**-0.5**
JTKR	**Abashiri--Toko**	**6.02**	**358**	P	**Pn**	**Pn**	**23 42 05.1**	**-0.9**
JTKR				*e*S	**Sn**	**Sn**	**23 43 09.8**	**-3.8**
JHJ	**Hachijo jima 2**	**6.03**	**218**	Pn	**Pn**	**Pn**	**23 42 04.7**	**-1.5**
	13nm,0.3s,baz=62,slow=23,SNR=1.3							
JHJ				Sn	**Sn**	**Sn**	**23 43 08.9**	**-5.0**
	11nm,0.3s,baz=164,slow=13,SNR=1.2							
H11N2	**WAKE ISLAND Hy**	**26.79**	**126**	T	T		00 14 22.0	
	baz=317							
H11N1	**WAKE ISLAND Hy**	**26.80**	**126**	T	T		00 14 21.8	
	baz=317							
H11N3	**WAKE ISLAND Hy**	**26.81**	**126**	T	T		00 14 10.0	
	baz=317							
MKAR	**Makanchi Array**	**45.53**	**302**	P	**P**	**P**	**23 48 57.4**	**+1.8**
	0.5nm,0.6s,baz=86,slow=8.8,SNR=4.7							
KURBB	**Kurchatov Arra**	**47.20**	**308**	P	**P**	**P**	**23 49 10.2**	**+1.6**
	0.8nm,0.2s,baz=82,slow=7.8,SNR=4.9							
ILAR	**Eielson Array**	**47.52**	**33**	P	**P**	**P**	**23 49 11.5**	**+0.6**
	0.3nm,0.7s,baz=278,slow=6.3,SNR=2.2							
WRA	**Warramunga Arr**	**58.33**	**191**	P	**P**	**P**	**23 50 31.0**	**0.0**
	0.7nm,0.7s,baz=12,slow=7.5,SNR=6.2							
ASAR	**Alice Springs**	**62.05**	**191**	P	**P**	**P**	**23 50 56.7**	**+0.3**
	0.2nm,0.6s,baz=9.3,slow=8.1,SNR=2.1							

IDC 17 23:53:17.7±7.4, 8.53S×155.70E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/32, mbtmp3.7/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/37, Error ellipse: s-maj=123.5km s-min=88.2km az=15.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.48**	**263**	LR	LR		23 58 22.6	
	comp=Z,123nm,18.7s,baz=321,slow=36							
WRA	**Warramunga Arr**	**23.58**	**239**	P	P		23 58 29.9	-0.4
	0.9nm,0.8s,baz=66,slow=10.0,SNR=5.3							
ASAR	**Alice Springs**	**25.73**	**232**	P	P		23 58 50.2	0.0
	1.2nm,0.9s,baz=64,slow=9.5,SNR=7.5							
STKA	**Stephens Creek**	**26.68**	**208**	P	P		23 58 58.9	+0.3
	1.3nm,0.6s,baz=29,slow=10,SNR=2.8							

*IDC **17** 23:55:20.7±1.2, 18.21S×167.79E, h0km, mb4.2/9, mb1 4.5/10, mb1mx4.1/40, mbtmp4.2/10, ML4.0/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/28, Error ellipse: s-maj=37.5km s-min=23.1km az=144.0*
*NEIC **17** 23:55:25.9±2.0, 18.26S±0.07×167.5E±0.1, h23km±6km, mb4.6/26, Error ellipse: s-maj=14.5km s-min=9.6km az=91.0*
ISC 17 23:55:25.9±0.5, 18.32S±0.06×167.50E±0.09, h25km, n54, σ1s34/51, mb4.6/19, MS3.8/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.87**	**354**	P	**Pn**	**Pn**	**23 56 08.5**	**-1.6**
DZM	**Mont Dzumac**	**3.87**	**195**	Pn	**Pn**	**Pn**	**23 56 22.5**	**-1.4**
	9.7nm,0.3s,baz=2.0,slow=3.8,SNR=18							
DZM				Sn	**Sn**	**Sn**	**23 57 05.6**	**-3.0**
	23nm,0.3s,baz=38,slow=14,SNR=7.4							
DZM				LR	LR		23 57 30.9	
	comp=Z,426nm,18.9s,baz=20,slow=33							
DZM	**Mont Dzumac**	**3.87**	**195**			**Pn**	**23 56 23.1**	**-0.8**
MSVF	**Nonsavu**	**10.05**	**88**	Pn		**Pn**	**23 57 49.5**	**+0.6**
HNR	**Honiara**	**11.48**	**319**	LR	LR		00 01 28.2	
	comp=Z,230nm,20.4s,baz=143,slow=32							
OUZ	**Omahuta**	**17.68**	**163**	P		**P**	**23 59 31.4**	**+0.1**
ARMA	**Armidale**	**18.80**	**227**	P		**P**	**23 59 44.0**	**+0.3**
CTA	**Charters Tower**	**20.15**	**262**	P		**P**	**23 59 59.4**	**+1.0**
	10nm,0.8s,baz=82,slow=13,SNR=16							
CTAO	**Charters Tower**	**20.15**	**262**	P	Pn		00 00 00.1	-0.4
CTAO				IAmb	IAmb		00 00 08.6	
	comp=Z,26nm,1.1s							
URZ	**Urewera**	**21.57**	**159**	P	**P**	**P**	**00 00 14.7**	**+1.1**
URZ				IAmb	IAmb		00 00 29.2	
	comp=Z,32nm,1.0s							
BKZ	**Black Stump Fm**	**22.19**	**161**	P	**P**	**P**	**00 00 21.6**	**+1.2**
BKZ				IAmb	IAmb		00 00 28.6	
	comp=Z,30nm,1.1s							
QRZ	**Quartz Range**	**22.84**	**170**	P	**P**	**P**	**00 00 24.7**	**-2.5**
QRZ				IAmb	IAmb		00 00 42.9	
	comp=Z,31nm,1.1s							
THZ	**Tophouse**	**23.82**	**170**	P	**P**	**P**	**00 00 37.4**	**+0.4**
THZ				IAmb	IAmb		00 00 52.2	
	comp=Z,28nm,1.0s							
FOZ	**Fox Glacier**	**25.21**	**176**	P	**P**	**P**	**00 00 46.6**	**-3.0**
RPZ	**Rata Peaks**	**25.50**	**174**	P	**P**	**P**	**00 00 53.7**	**+1.4**
MQZ	**McQueen's Vall**	**25.68**	**171**	P	**P**	**P**	**00 00 54.5**	**+0.6**
LBZ	**Lake Benmore**	**26.09**	**176**	P	**P**	**P**	**00 00 58.6**	**+1.0**
LBZ				IAmb	IAmb		00 01 08.4	
	comp=Z,22nm,1.0s							
ODZ	**Otahua Downs**	**26.78**	**175**	P	**P**	**P**	**00 01 05.5**	**+1.7**
ODZ				IAmb	IAmb		00 01 10.2	
	comp=Z,24nm,1.2s							
STKA	**Stephens Creek**	**26.98**	**235**	LR	LR		00 11 10.9	
	comp=Z,225nm,19.1s,baz=295,slow=35							
STKA	**Stephens Creek**	**26.98**	**235**	P	**P**	**P**	**00 01 07.6**	**+1.8**
RAR	**Rarotonga**	**30.90**	**101**	LR	LR		00 11 38.6	
	comp=Z,41nm,21.2s,baz=274,slow=32							
WB0	**Warramunga Arr**	**31.31**	**262**	P		**P**	**00 01 44.7**	**+0.3**
WB0				IAmb	IAmb		00 02 04.1	
	comp=Z,7.9nm,1.1s							
WC3	**Warramunga Arr**	**31.32**	**262**	P		**P**	**00 01 44.9**	**+0.4**
WB2	**Warramunga Arr**	**31.34**	**262**	P		**P**	**00 01 45.2**	**+0.5**
WRA	**Warramunga Arr**	**31.35**	**262**	P		**P**	**00 01 45.4**	**+0.6**
	comp=Z,2.8nm,1.0s,baz=91,slow=9.1,SNR=9.2							
WRA				LR	LR		00 13 14.5	
	comp=Z,184nm,20.3s,baz=280,slow=34							
WRA	**Warramunga Arr**	**31.35**	**262**	P		**P**	**00 01 44.3**	**-0.5**
BBOO	**Buckleboo**	**31.68**	**237**	P		**P**	**00 01 48.5**	**+0.9**
BBOO				IAmb	IAmb		00 01 56.1	
	comp=Z,6.5nm,0.9s							
AS31	**Alice Springs**	**31.77**	**255**	P		**P**	**00 01 48.5**	**+0.1**
ASAR	**Alice Springs**	**31.77**	**255**	P		**P**	**00 01 48.6**	**+0.2**
	comp=Z,8.9nm,1.0s,baz=82,slow=8.8,SNR=22							
ASAR				LR	LR		00 15 21.2	
	comp=Z,181nm,18.4s,baz=7.0,slow=38							
ASAR	**Alice Springs**	**31.77**	**255**	P		**P**	**00 01 49.2**	**+0.7**
KNRA	**Kununurra**	**37.10**	**268**	P		**P**	**00 02 32.2**	**-2.4**
FORT	**Forrest**	**37.77**	**243**	P		**P**	**00 02 42.7**	**+2.5**
FITZ	**Fitzroy Crossi**	**39.70**	**264**	P		**P**	**00 02 57.4**	**+0.9**
	comp=Z,12nm,0.9s,baz=141,slow=7.0,SNR=15							
FITZ	**Fitzroy Crossi**	**39.70**	**264**	P		**P**	**00 02 57.6**	**+1.0**
MORW	**Morawa**	**48.00**	**247**	P		**P**	**00 04 01.9**	**-1.3**
MORW				IAmb	IAmb		00 04 16.6	
	comp=Z,5.0nm,0.8s							
PEA0B	**Petropavlovsk-**	**71.63**	**354**	P		**P**	**00 06 45.8**	**+0.7**
PETK	**Petropavlovsk-**	**71.63**	**354**	P		**P**	**00 06 45.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**76.63**	**295**	P		**P**	**00 07 15.7**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=121,slow=3.5,SNR=1.4							
MAW	**Mawson**	**78.66**	**202**	P		**P**	**00

CTGM	**Chitina Glacie**	**23.70**	**52**	P		**P**	**00 06 09.3**	**+1.0**	
BCAR	**Beaver Creek A**	**23.75**	**46**	P		**P**	**00 06 10.3**	**+1.7**	
K27K	**Chicken**	**23.80**	**44**	P		**P**	**00 06 09.4**	**+0.4**	
ASAJ	**Asahikawa**	**24.97**	**266**	LR		LR	00 17 00.2		
	comp=Z,90nm,18.9s,baz=284,slow=38								
HYT	**Haines Junctio**	**25.57**	**52**	P		**P**	**00 06 28.0**	**+2.8**	
H11N2	**WAKE ISLAND Hy**	**33.32**	**200**	T		T	00 43 12.8		
	baz=11,slow=74								
H11N3	**WAKE ISLAND Hy**	**33.33**	**200**	T		T	00 43 13.9		
	baz=11,slow=74								
H11N1	**WAKE ISLAND Hy**	**33.34**	**200**	T		T	00 43 02.6		
	baz=11								
SONM	**Songino Array**	**44.85**	**295**	P		**P**	**00 09 10.5**	**+0.8**	
	comp=Z,0.8nm,0.6s,baz=58,slow=9.1,SNR=2.3								
SONM	**Songino Array**	**44.85**	**295**	IAmb		IAmb	00 09 16.8		
	comp=Z,0.6nm,0.8s								
NVAR	**Mina Array Bea**	**45.23**	**81**	P		**P**	**00 09 13.6**	**+0.6**	
	comp=Z,0.3nm,0.5s,baz=297,slow=7.0,SNR=2.3								
PDAR	**Pinedale Array**	**47.82**	**71**	P		**P**	**00 09 32.6**	**-0.6**	
	comp=Z,0.4nm,0.3s,baz=316,slow=3.8,SNR=1.1								
ARCES	**ARCESS Array B**	**57.29**	**349**	P		**P**	**00 10 42.2**	**0.0**	
	comp=Z,1.1nm,0.7s,baz=27,slow=8.1,SNR=1.0								
KURK	**Kurchatov**	**57.39**	**312**	P		**P**	**00 10 44.0**	**+0.8**	
KURK	**Kurchatov**	**57.39**	**312**	IAmb		IAmb	00 11 01.8		
	comp=Z,0.8nm,0.7s								
KURBB	**Kurchatov Arra**	**57.50**	**312**	P		**P**	**00 10 44.0**	**0.0**	
	comp=Z,0.8nm,0.5s,baz=42,slow=6.7,SNR=11								
MK31	**Makanchi Array**	**58.34**	**307**	P		**P**	**00 10 49.0**	**-1.0**	
MK31				IAmb		IAmb	00 11 03.7		
	comp=Z,1.5nm,1.1s								
MKAR	**Makanchi Array**	**58.34**	**307**	P		**P**	**00 10 49.7**	**-0.2**	
	comp=Z,0.3nm,0.4s,baz=38,slow=5.0,SNR=5.5								
TXAR	**Lajitas Array**	**60.30**	**79**	P		**P**	**00 11 03.9**	**+0.1**	
	comp=Z,0.2nm,0.5s,baz=294,slow=6.2,SNR=2.6								
WRA	**Warramunga Arr**	**81.19**	**221**	P		**P**	**00 13 10.5**	**+0.4**	
	comp=Z,0.7nm,0.7s,baz=36,slow=6.0,SNR=3.8								
ASAR	**Alice Springs**	**84.70**	**220**	P		**P**	**00 13 29.0**	**+0.9**	
	comp=Z,0.3nm,0.6s,baz=27,slow=6.3,SNR=1.9								
TORD	**Torodi Ar. Bea**	**115.14**	**356**	PKP		**PKiKP**	**00 19 34.2**	**-1.0**	
	comp=Z,0.7nm,1.0s,baz=15,slow=2.2,SNR=4.2								

*IDC **18** 00:03:54.2±0.8, 19.˚55N×120.˚59E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.8/51, mbtmp3.9/11, Error ellipse: s-maj=39.9km s-min=15.5km az=65.0*
*NEIC **18** 00:03:55.3±2.1, 19.˚49N±0.˚08×120.˚38E±0.˚10, h10km±1km, mb4.2/17, Error ellipse: s-maj=16.1km s-min=13.3km az=122.0*

ISC 18 00:03:57.4±0.5, **19.˚53N**±0.˚05×**120.˚42E**±0.˚08, **h23**km, **n46**, σ1f**98**/46, **mb4.0**/19, **1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
APYP	**Conner**	**1.83**	**155**	*e*P			**Pn**	**00 04 27.4**	**-0.2**
APYP				*e*S			**Sn**	**00 04 49.7**	**-0.3**
SGCP	**Mt. Cagua**	**2.00**	**129**	*e*P			**Pn**	**00 04 29.4**	**-0.4**
SGCP				*e*S			**Sb**	**00 04 54.3**	**-3.5**
CVP	**Callao Caves**	**2.25**	**143**	⇓*i*P			**Pb**	**00 04 35.3**	**-2.1**
CVP				*i* S			**Sb**	**00 05 04.0**	**-0.8**
TWG	**Pinlang**	**3.33**	**10**	Pn			**Pn**	**00 04 47.6**	**-0.5**
TPUB	**Ta-pu**	**3.76**	**3**	Pn			**Pn**	**00 04 53.4**	**-0.6**
YULB	**Yu-li**	**3.93**	**12**	Pn			**Pn**	**00 04 57.1**	**+0.7**
SSLB	**Suanglung**	**4.27**	**7**	Pn			**Pn**	**00 05 02.3**	**+1.3**
NACB	**Ninganchiao**	**4.75**	**13**	Pn			**Pn**	**00 05 08.3**	**+0.7**
YHNB	**Yeheng**	**5.19**	**10**	Pn			**Pn**	**00 05 14.5**	**+0.7**
YOJ	**Yonaguni jima**	**5.47**	**26**	Pn			**Pn**	**00 05 16.9**	**-0.6**
HKPS	**Hong Kong Po S**	**6.47**	**296**	Pn			**Pn**	**00 05 29.5**	**-1.8**
QIZ	**Qiongzhong**	**10.00**	**269**	Pn			**Pn**	**00 06 18.7**	**-1.0**
TNTI	**Ternate**	**19.85**	**159**				**Sn**	**00 12 20.3**	**+9.2**
CMAR	**Chiang Mai Arr**	**20.33**	**271**	P			Pn	00 08 34.8	+0.5
	1.0nm,0.3s,baz=74,slow=9.0,SNR=7.2								
MJB9	**Matsu-Tunnel**	**23.04**	**39**				**S**	**00 13 12.8**	**+2.1**
JEM	**Erimo**	**29.57**	**36**	P			P	00 10 09.6	+9.1
SONM	**Songino Array**	**30.45**	**341**	P			**P**	**00 10 08.4**	**0.0**
	0.4nm,0.6s,baz=163,slow=11,SNR=2.5								
SONM	**Songino Array**	**30.45**	**341**	IAmb			IAmb	00 10 12.4	
	comp=Z,0.6nm,0.8s								
MTN	**Manton Dam**	**33.86**	**161**				**S**	**00 16 06.7**	**+5.3**
FITZ	**Fitzroy Crossi**	**37.74**	**172**	P			**P**	**00 11 10.9**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=5.7,slow=10,SNR=2.1								
FITZ	**Fitzroy Crossi**	**37.74**	**172**	IAmb			IAmb	00 11 12.4	
	comp=Z,2.1nm,0.9s								
COEN	**Coen**	**40.12**	**144**	P			**P**	**00 11 30.8**	**-0.9**
COEN				IAmb			IAmb	00 11 31.2	
	comp=Z,3.9nm,1.1s								
MK31	**Makanchi Array**	**41.30**	**320**	P			**P**	**00 11 42.1**	**+0.9**
MK31				IAmb			IAmb	00 11 44.0	
	comp=Z,4.7nm,1.1s								
MKAR	**Makanchi Array**	**41.30**	**320**	P			**P**	**00 11 42.3**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=119,slow=9.9,SNR=10								
MKAR	**Makanchi Array**	**41.30**	**320**	P			**P**	**00 11 42.6**	**+1.4**
WB0	**Warramunga Arr**	**41.39**	**160**	P			**P**	**00 11 42.7**	**+0.6**
WB0				IAmb			IAmb	00 11 45.2	
	comp=Z,1.8nm,0.7s								
MAKZ	**Makanchi**	**41.50**	**320**	P			**P**	**00 11 43.5**	**+0.7**
MAKZ				IAmb			IAmb	00 11 54.2	
	comp=Z,4.4nm,1.1s								
WRA	**Warramunga Arr**	**41.53**	**160**	P			**P**	**00 11 42.7**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=342,slow=8.9,SNR=9.4								
WRA				PcP			**PcP**	**00 13 42.1**	**+1.5**
	comp=Z,0.2nm,0.8s,baz=338,slow=3.4,SNR=1.4								
WB2	**Warramunga Arr**	**41.54**	**160**	P			**P**	**00 11 42.9**	**-0.4**
WB2				IAmb			IAmb	00 11 53.7	
	comp=Z,3.9nm,0.9s								
WR0	**Warramunga Arr**	**41.61**	**160**	P			**P**	**00 11 43.0**	**-0.9**
WR0				IAmb			IAmb	00 11 55.7	
	comp=Z,3.4nm,0.9s								
ZALV	**Zalesovo Beam**	**43.83**	**330**	P			**P**	**00 12 02.0**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=126,slow=7.3,SNR=4.7								
ZALV	**Zalesovo Beam**	**43.83**	**330**	P			**P**	**00 12 01.4**	**-0.2**
ASAR	**Alice Springs**	**44.90**	**162**	P			**P**	**00 12 11.1**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=341,slow=7.0,SNR=12								
KURK	**Kurchatov**	**45.29**	**323**	P			**P**	**00 12 13.4**	**+0.2**
KURK				IAmb			IAmb	00 12 15.0	
	comp=Z,5.8nm,1.1s								
KURBB	**Kurchatov Arra**	**45.30**	**323**	P			**P**	**00 12 14.2**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=124,slow=7.8,SNR=18								
BRVK	**Borovoye**	**50.96**	**323**	P			**P**	**00 12 55.9**	**-1.2**
NWAO	**Narrogin (SRO)**	**52.25**	**183**	P			**P**	**00 13 05.2**	**-1.7**
BBOO	**Buckleboo**	**54.15**	**164**	P			**P**	**00 13 21.3**	**+0.4**
AMKA	**Amchitka**	**55.64**	**41**	P			**P**	**00 13 30.5**	**-1.0**
ABKAR	**Akbulak array**	**56.25**	**317**	P			**P**	**00 13 33.2**	**-2.7**
ABKAR	**Akbulak array**	**56.25**	**317**	P			**P**	**00 13 35.5**	**-0.4**
ABKAR				IAmb			IAmb	00 13 48.1	
	comp=Z,0.9nm,0.8s								
ARMA	**Armidale**	**58.03**	**148**	P			**P**	**00 13 47.9**	**-1.0**
ARMA				IAmb			IAmb	00 13 51.4	
	comp=Z,4.5nm,1.1s								
ARU	**Arti**	**58.44**	**325**	P			**P**	**00 13 51.4**	**+0.2**
ARU				IAmb			IAmb	00 14 01.6	
	comp=Z,3.2nm,1.0s								
ILAR	**Eielson Array**	**73.67**	**26**	P			**P**	**00 15 29.6**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=259,slow=7.0,SNR=2.2								
FINES	**FINESS Array B**	**75.10**	**330**	P			**P**	**00 15 37.6**	**+0.3**
	comp=Z,4.1nm,1.0s,baz=64,slow=9.4,SNR=3.3								
AKASG	**Malin Array Be**	**75.88**	**319**	P			**P**	**00 15 42.4**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=64,slow=5.3,SNR=2.0								

IDC 18 00:06:31.0±1.5, **21.˚89S×63.˚74W**, **h0**km, **mb3.7**/2, **mb1 3.9**/6, **mb1mx3.7**/32, **mbtmp3.7**/6, **ML3.6**/4, **MS3.7**/5, **Ms1 3.7**/5, **ms1mx3.2**/39, **Error ellipse: s-maj=24.8km s-min=19.8km az=47.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**4.84**	**260**	Pn			Pn	00 07 47.2	+1.7
	0.3nm,0.3s,baz=122,slow=9.5,SNR=1.8								
SIV	**San Ignacio**	**6.39**	**24**	Pn			Pn	00 08 07.7	+1.2
	2.6nm,0.3s,baz=203,slow=8.0,SNR=24								
SIV				Sn			Sn	00 09 19.3	-0.9
	0.6nm,0.3s,baz=200,slow=19,SNR=3.1								
SIV				Lg			Lg	00 09 55.5	
	2.0nm,0.3s,baz=246,slow=20,SNR=5.0								
LPAZ	**La Paz**	**6.94**	**323**	Pn			Pn	00 08 13.2	-1.5
	0.2nm,0.3s,baz=120,slow=8.1,SNR=4.8								
LPAZ				Pg			Pb	00 08 37.3	+4.3
	1.0nm,0.3s,baz=180,slow=9.1,SNR=7.0								
LPAZ				Sn			Sn	00 09 35.4	+0.7
	1.0nm,0.3s,baz=242,slow=21,SNR=2.4								
LPAZ				Lg			Lg	00 10 14.2	
	0.3nm,0.3s,baz=58,slow=14,SNR=1.3								
LPAZ				LR			LR	00 11 22.9	
	comp=Z,406nm,19.5s,baz=57,slow=42								
CPUP	**Villa Florida**	**7.34**	**128**	Pn			Pn	00 08 20.1	+0.5
	1.6nm,0.3s,baz=304,slow=15,SNR=17								
CPUP				Lg			Lg	00 10 34.1	
	1.0nm,0.3s,baz=25,slow=18,SNR=2.0								
BDFB	**Brasilia**	**16.13**	**70**	Lg			Lg	00 15 00.6	
	0.3nm,0.3s,baz=316,slow=12,SNR=3.3								
BDFB				LR			LR	00 16 22.5	
	comp=Z,230nm,18.1s,baz=124,slow=37								
MDP	**Montagnes des**	**28.94**	**23**	LR			LR	00 23 27.0	
	comp=Z,106nm,19.0s,baz=152,slow=35								
RCBR	**Riachuelo**	**31.30**	**63**	LR			LR	00 26 27.4	
	comp=Z,112nm,19.5s,baz=104,slow=38								
TORD	**Torodi Ar. Bea**	**73.00**	**68**	P			P	00 18 03.1	-0.1
	1.1nm,0.9s,baz=257,slow=5.3,SNR=4.8								
PDAR	**Pinedale Array**	**76.94**	**327**	P			P	00 18 25.0	-0.6
	0.2nm,0.5s,baz=132,slow=6.7,SNR=1.7								
KMBO	**Kilima Mbogo**	**99.78**	**95**	LR			LR	01 02 28.3	
	comp=Z,43nm,18.5s,baz=98,slow=34								

*IDC **18** 00:18:25.8±1.3, 38.˚62N×23.˚37E, h0km, mb3.3/3, mb1 3.5/5, mb1mx3.3/48, mbtmp3.4/5, ML3.7/2, Error ellipse: s-maj=29.4km s-min=16.5km az=106.0*
*ISK **18** 00:18:26.9, 38.˚66N×23.˚42E, h15km, ML3.4/18*
*ATH **18** 00:18:27.1, 38.˚65N×23.˚41E, h22km±1km, ML3.5/32, Error ellipse: s-maj=1.0km s-min=0.6km az=210.0*
*THE **18** 00:18:28.0, 38.˚64N×23.˚40E, h10km, ML3.5/15, Error ellipse: s-maj=0.7km s-min=0.2km az=143.0*
*DDA **18** 00:18:28.2, 38.˚65N×23.˚39E, h31km±2km, MW3.7*
*BEO **18** 00:18:30.4±0.9, 38.˚83N×23.˚48E, h0km, ML3.3/8*

ISC 18 00:18:26.6±1.3, **38.˚65N**±0.˚01×**23.˚39E**±0.˚01, **h9**km±10km, **n178**, σ1$**22**/227, **mb3.1**/3, **3C-5D, Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.29**	**279**	P			**Pb**	**00 18 33.9**	**-0.1**
ATAL				S			**Sb**	**00 18 38.4**	**-0.6**
ATAL				AML		AML		00 18 39.1	
	comp=N,12083μm,0.2s								
ATAL				AML		AML		00 18 40.6	
	comp=E,12247μm,0.3s								
ATAL	**Atalanti**	**0.29**	**279**	P			**Pb**	**00 18 33.9**	**-0.1**
ATAL				S			**Sb**	**00 18 38.4**	**-0.6**
	comp=E,5μm,0.1s								
LKR	**Lokris**	**0.30**	**270**	P			**Pb**	**00 18 33.9**	**-0.3**
LKR				S			**Sb**	**00 18 38.2**	**-1.2**
LKR				AML		AML		00 18 39.7	
	comp=E,28628μm,0.2s								
LKR				AML		AML		00 18 39.8	
	comp=N,19895μm,0.2s								
LKR	**Lokris**	**0.30**	**270**	P			**Pb**	**00 18 34.0**	**-0.3**
LKR				S			**Sb**	**00 18 39.2**	**-0.1**
VIL2	**Platees**	**0.45**	**192**	P			**Pn**	**00 18 37.3**	**-2.0**
VIL2				S			**Sb**	**00 18 44.7**	**+1.3**
VIL2				AML		AML		00 18 46.4	
	comp=N,7526μm,0.3s								
VIL2				AML		AML		00 18 47.0	
	comp=E,12033μm,0.6s								
VILL	**Villia**	**0.49**	**187**	P			**Pb**	**00 18 37.2**	**-0.2**
VILL				S			**Sb**	**00 18 44.6**	**-0.1**
	comp=E,5μm,0.5s								
KYMI	**Kymi, Euboea I**	**0.56**	**91**	P			**Pb**	**00 18 38.2**	**-0.4**
KYMI				S			**Sb**	**00 18 45.9**	**-0.8**
KYMI				AML		AML		00 18 49.5	
	comp=E,7906μm,0.3s								
KYMI				AML		AML		00 18 49.6	
	comp=N,7165μm,0.3s								
KYMI	**Kymi, Euboea I**	**0.56**	**91**	P			**Pb**	**00 18 38.2**	**-0.4**
KYMI				S			**Sb**	**00 18 47.1**	**+0.4**
	comp=N,4μm,0.2s								
AXAR	**Agios Charalam**	**0.58**	**282**	P			**Pb**	**00 18 39.0**	**0.0**
AXAR				S			**Sb**	**00 18 47.6**	**+0.2**
AXAR				AML		AML		00 18 50.4	
	comp=E,12910μm,0.4s								
AXAR				AML		AML		00 18 52.0	
	comp=N,21290μm,0.4s								
AXAR	**Agios Charalam**	**0.58**	**282**	P			**Pb**	**00 18 39.0**	**0.0**
AXAR				S			**Sb**	**00 18 48.0**	**+0.6**
	comp=N,9μm,0.4s								
ALNA	**Alonissos**	**0.62**	**37**	P			**Pb**	**00 18 39.6**	**-0.1**
ALNA				S			**Sb**	**00 18 47.6**	**-0.9**
ALNA				AML		AML		00 18 52.0	
	comp=E,10227μm,0.7s								
ALNA				AML		AML		00 18 52.5	
	comp=N,8706μm,0.5s								
AOS	**Alonnisos**	**0.65**	**36**	P			**Pb**	**00 18 39.7**	**-0.4**
AOS				S			**Sb**	**00 18 48.8**	**-0.5**
AOS				AML		AML		00 18 51.9	
	comp=E,15376μm,0.4s								
AOS				AML		AML		00 18 52.4	
	comp=N,13717μm,0.4s								
AOS	**Alonnisos**	**0.65**	**36**	PG			**Pb**	**00 18 39.4**	**-0.7**
AOS				SG			**Sb**	**00 18 48.6**	**-0.7**
AOS	**Alonnisos**	**0.65**	**36**	P			**Pn**	**00 18 40.2**	**-1.8**
AOS				S			**Sb**	**00 18 49.1**	**-0.2**
	comp=N,7μm,0.4s								
NEO	**Neokhori**	**0.67**	**349**	P			**Pn**	**00 18 40.9**	**-1.5**
NEO				AML		AML		00 18 53.1	
	comp=N,46669μm,0.3s								
NEO				AML		AML		00 18 53.3	
	comp=E,55690μm,0.2s								
NEO	**Neokhori**	**0.67**	**349**	P			**Pn**	**00 18 40.9**	**-1.5**
NEO				S			**Sb**	**00 18 51.0**	**+1.1**
	comp=E,26μm,0.2s								
LTK	**Loutraki**	**0.71**	**208**	P			**Pb**	**00 18 41.1**	**0.0**
LTK				S			**Sb**	**00 18 51.7**	**+0.7**
LTK				AML		AML		00 18 56.7	
	comp=E,9072μm,0.4s								
LTK				AML		AML		00 18 58.6	
	comp=N,9178μm,0.4s								
LTK	**Loutraki**	**0.71**	**208**	P			**Pb**	**00 18 41.1**	**0.0**
LTK				S			**Sn**	**00 18 52.2**	**-1.7**
	comp=N,4μm,0.4s								
PTL	**Penteli**	**0.71**	**148**	P			**Pn**	**00 18 41.2**	**-1.6**
PTL				S			**Sb**	**00 18 50.5**	**-0.5**
PTL				AML		AML		00 18 53.4	
	comp=E,12749μm,0.4s								
PTL				AML		AML		00 18 54.1	
	comp=N,13571μm,0.3s								
PTL	**Penteli**	**0.71**	**148**	P			**Pn**	**00 18 41.4**	**-1.4**
PTL				S			**Sb**	**00 18 51.5**	**+0.5**
	comp=N,7μm,0.4s								
DION	**Dionisos Attik**	**0.71**	**143**	P			**Pn**	**00 18 41.3**	**-1.6**
DION				S			**Sb**	**00 18 50.5**	**-0.6**
DION				AML		AML		00 18 54.1	
	comp=N,50238μm,0.3s								
DION				AML		AML		00 18 54.6	
	comp=E,37643μm,0.2s								
DION	**Dionisos Attik**	**0.71**	**143**	P			**Pn**	**00 18 41.5**	**-1.4**
DION				S			**Sb**	**00 18 51.8**	**+0.6**
	comp=E,22μm,0.3s								
DSF	**Desfina**	**0.71**	**251**	P			**Pb**	**00 18 40.7**	**-0.6**
DSF				S			**Sb**	**00 18 51.1**	**-0.1**
DSF				AML		AML		00 18 53.9	
	comp=N,12084μm,0.3s								
DSF				AML		AML		00 18 56.1	
	comp=E,11443μm,0.3s								
DLFA	**Delphi**	**0.72**	**257**	P			**Pb**	**00 18 40.9**	**-0.4**
DLFA				S			**Sb**	**00 18 50.8**	**-0.6**
ATH	**Athens Observa**	**0.72**	**159**	P			**Pn**	**00 18 41.6**	**-1.4**
ATH				S			**Sb**	**00 18 51.6**	**+0.2**
ATH				AML		AML		00 18 54.3	
	comp=E,21054μm,0.2s								
ATH				AML		AML		00 18 54.6	
	comp=N,14937μm,0.4s								
ATH	**Athens Observa**	**0.72**	**159**	P			**Pn**	**00 18 41.7**	**-1.3**
ATH				S			**Sb**	**00 18 51.8**	**+0.4**
	comp=N,9μm,0.3s								
XOR	**Xorichti**	**0.73**	**348**	P			**Pn**	**00 18 41.9**	**-1.2**
XOR				S			**Sb**	**00 18 51.2**	**-0.6**
XOR				AML		AML		00 18 54.7	
	comp=E,11205μm,0.4s								
XOR				AML		AML		00 18 54.7	
	comp=N,14727μm,0.7s								
XOR	**Xorichti**	**0.73**	**348**	P			**Pn**	**00 18 42.0**	**-1.2**
XOR				S			**Sn**	**00 18 53.3**	**-1.3**
	comp=N,6μm,0.5s								
LOUT	**Loutraki**	**0.74**	**206**	P			**Pb**	**00 18 41.6**	**0.0**
LOUT	**Loutraki**	**0.74**	**206**	P			**Pn**	**00 18 41.7**	**-1.5**
LOUT				S			**Sb**	**00 18 52.5**	**+0.7**
	comp=N,5μm,0.5s								
ATHU	**Athens Univers**	**0.75**	**155**	P			**Pn**	**00 18 41.9**	**-1.5**
ATHU				S			**Sb**	**00 18 51.3**	**-0.9**
ATHU	**Athens Univers**	**0.75**	**155**	P			**Pn**	**00 18 42.1**	**-1.3**
ATHU				S			**Sb**	**00 18 53.0**	**+0.8**
	comp=N,3μm,0.3s								
VOL2	**Volos**	**0.79**	**335**	P			**Pn**	**00 18 45.7**	**+1.7**
THAL	**Thalero**	**0.83**	**223**	P			**Pn**	**00 18 43.6**	**-0.9**
THAL				S			**Sn**	**00 18 56.2**	**-0.8**
THAL				AML		AML		00 18 58.2	
	comp=E,13887μm,0.4s								
THAL				AML		AML		00 18 58.3	
	comp=N,15585μm,0.3s								
THAL	**Thalero**	**0.83**	**223**	P			**Pn**	**00 18 43.7**	**-0.9**
VLY	**Voula,Athens**	**0.86**	**158**	P			**Pn**	**00 18 43.8**	**-1.0**
VLY				S			**Sb**	**00 18 54.5**	**-0.8**
VLY				AML		AML		00 18 57.6	
	comp=N,8095μm,0.5s								
VLY				AML		AML		00 18 57.8	
	comp=E,10194μm,0.3s								
VLY	**Voula,Athens**	**0.86**	**158**	P			**Pn**	**00 18 44.1**	**-0.8**
VLY				S			**Sn**	**00 18 56.8**	**-0.8**
	comp=E,4μm,0.2s								
AGG	**Agios Georgios**	**0.91**	**295**	P			**Pn**	**00 18 45.1**	**-0.4**
AGG				S			**Sn**	**00 18 58.1**	**-0.8**
AGG				AML		AML		00 19 02.5	
	comp=E,2499μm,0.4s								
AGG				AML		AML		00 19 03.4	
	comp=N,2046μm,0.7s								
AGG	**Agios Georgios**	**0.91**	**295**	PG			**Pn**	**00 18 44.9**	**-0.7**
AGG				SG			**Sn**	**00 18 58.5**	**-0.3**
AGG	**Agios Georgios**	**0.91**	**295**	*i* P			**Pn**	**00 18 44.8**	**-0.7**
AGG				*i* S			**Sb**	**00 18 56.4**	**-0.3**
AGG				IAML				00 19 02.0	
	comp=E,535nm,0.4s								
AGG				IAML				00 19 03.0	
	comp=N,425nm,0.7s								
AGG	**Agios Georgios**	**0.91**	**295**	P			**Pn**	**00 18 45.2**	**-0.4**
SKY	**Skiros Island**	**0.94**	**76**	P			**Pn**	**00 18 45.1**	**-0.9**
SKY				S			**Sn**	**00 18 58.3**	**-1.2**
SKY				AML		AML		00 19 00.8	
	comp=E,14515μm,0.3s								
SKY				AML		AML		00 19 01.3	
	comp=N,18056μm,0.2s								
SKY	**Skiros Island**	**0.94**	**76**	P			**Pn**	**00 18 45.1**	**-0.9**
KALE	**Kalithea**	**1.01**	**256**	P			**Pb**	**00 18 45.9**	**-0.4**
KALE				AML		AML		00 19 04.7	
	comp=N,2511μm,0.3s								
KALE				AML		AML		00 19 07.8	
	comp=E,2537μm,0.5s								
KALE	**Kalithea**	**1.01**	**256**	P			**Pn**	**00 18 46.8**	**-0.3**
KALE				S			**Sn**	**00 19 01.7**	**+0.2**
	comp=E,1μm,0.4s								
KARY	**Karystos**	**1.03**	**126**	P			**Pn**	**00 18 46.8**	**-0.5**
KARY				S			**Sb**	**00 19 00.3**	**+0.1**
KARY				AML		AML		00 19 03.3	
	comp=N,3809μm,0.4s								
KARY				AML		AML		00 19 03.5	
	comp=E,5103μm,0.5s								
KARY	**Karystos**	**1.03**	**126**	P			**Pn**	**00 18 46.9**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.05**	**291**	P			**Pn**	**00 18 47.8**	**+0.3**
MAKR				S			**Sn**	**00 19 02.1**	**-0.2**
MAKR				AML		AML		00 19 06.7	
	comp=N,4890μm,0.6s								
MAKR				AML		AML		00 19 08.2	
	comp=E,3716μm,0.2s								
MAKR	**Makrakomi, Fth**	**1.05**	**291**	P			**Pn**	**00 18 47.9**	**+0.3**
EPID	**Epidavros**	**1.05**	**192**	P			**Pn**	**00 18 47.3**	**-0.3**
EPID	**Epidavros**	**1.05**	**192**	P			**Pn**	**00 18 47.5**	**-0.1**
SERG	**Sergoula**	**1.07**	**258**	P			**Pn**	**00 18 46.9**	**-1.0**
SERG				AML		AML		00 19 08.1	
	comp=N,3393μm,0.4s								
SERG				AML		AML		00 19 09.9	
	comp=E,2783μm,0.5s								
TRIZ	**Trizonia**	**1.07**	**255**	P			**Pn**	**00 18 46.9**	**-0.9**
TRIZ	**Trizonia**	**1.07**	**255**	P			**Pn**	**00 18 47.9**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.07**	**249**	P			**Pn**	**00 18 48.0**	**+0.2**
GUR	**Goura**	**1.09**	**229**	P			**Pn**	**00 18 47.6**	**-0.5**
GUR				S			**Sn**	**00 19 03.1**	**-0.3**
GUR				AML		AML		00 19 06.2	
	comp=N,7472μm,0.4s								
GUR				AML		AML		00 19 07.6	
	comp=

PYL	PYLOS	2.18	217	P	Pb	00 19 06.0	-0.2
FSK	Fiskardo	2.22	266	P	Pb	00 19 06.0	-1.0
VLS	Valsamata	2.25	259	P	Pb	00 19 06.7	-0.6
VLMS	Volimes, Zakyn	2.28	251	P	Pb	00 19 07.2	-0.8
APE	Apeiranthos	2.32	132	P	Pn	00 19 05.6	+0.6
APE	Apeiranthos	2.32	132	PN	Pn	00 19 05.0	0.0
APE	Apeiranthos	2.32	132	*i* P	Pn	00 19 04.7	-0.3
APE				*i* S	Sn	00 19 31.2	-2.5
KEF5	Kardakata, Kep	2.32	262	P	Pb	00 19 07.5	-1.2
KEF4	Livadi, Kephal	2.36	261	P	Pb	00 19 07.8	-1.5
BOZC	Bozcaada	2.39	59	PN	Pn	00 19 06.2	+0.3
DMLN	Damoulianata-K	2.40	261	P	Pb	00 19 08.4	-1.6
KTHA	Kythira Island	2.40	186	P	Pn	00 19 06.7	+0.6
KTHA	Kythira Island	2.40	186	PN	Pn	00 19 06.7	+0.6
GRG	Griva	2.43	342	PN	Pn	00 19 07.3	+0.8
SRS	Serrai	2.47	4	P	Pn	00 19 07.5	+0.4
GADA	Gvkgeada	2.48	51	PN	Pn	00 19 07.6	+0.4
GOKA	anakkale-Gk	2.49	51	*i* P	Pn	00 19 06.2	-1.0
GOKA				*i* S	Sg	00 19 48.7	+2.2
GOKA				IAML		00 19 55.0	
	comp=N,215nm,0.7s						
NEST	Nestorio	2.53	315	P	Pb	00 19 09.7	-2.5
URLA	Izmir	2.53	96	PN	Pn	00 19 08.7	+0.7
URLA	Izmir	2.53	96	*i* P	Pg	00 19 16.4	+1.3
IGT	Igoumenitsa	2.54	291	P	Pb	00 19 10.9	-1.4
EZN	Ezine	2.57	62	PN	Pn	00 19 08.7	+0.3
FNA	Florina	2.64	325	P	Pb	00 19 11.0	-3.0
FNA	Florina	2.64	325	PN	Pn	00 19 10.6	+1.2
FNA	Florina	2.64	325	*i* P	Pn	00 19 10.2	+0.7
FNA				*i* S	Sn	00 19 39.5	-2.0
FNA				IAML		00 19 59.0	
	comp=N,44nm,0.9s						
BAYC	CANAKKALE_Bayr	2.69	65	*i* P	Pn	00 19 05.0	-5.1
NVR	Nevrokopi	2.72	8	P	Pn	00 19 10.9	+0.4
ANKY	Antikythira Is	2.78	181	P	Pn	00 19 11.9	+0.7
DKL	Dikili	2.78	80	PN	Pn	00 19 11.4	+0.1
DGB	zmir	2.81	101	*i* P	Pn	00 19 13.4	+1.6
ZEDA	zmir-Bergama	2.90	83	*i* P	Pn	00 19 13.4	+0.4
GELI	Tayfur-Gelibol	2.96	53	PN	Pn	00 19 14.2	+0.4
ENEZ	Enez	2.98	45	PN	Pn	00 19 14.8	+0.7
KEK	Kerkira	2.98	292	P	Pb	00 19 17.0	-3.0
RDO	Rodhopi	2.99	33	PN	Pn	00 19 13.9	-0.3
ALN	Alexandroupoli	3.04	42	PN	Pn	00 19 15.3	+0.4
ALN	Alexandroupoli	3.04	42	*i* P	Pn	00 19 13.2	-1.7
LPK	Lapseki	3.12	56	PN	Pn	00 19 16.4	+0.3
STIP	Stip	3.13	344	*i* Pn	Pn	00 19 08.4	+1.5
VAM	Vamos	3.30	168	P	Pn	00 19 19.2	+0.7
KESN	Edirne-Kesan	3.34	48	*i* P	Pn	00 19 18.5	-0.9
STEP	BALIKESIR_Sava	3.45	76	*i* P	Pg	00 19 37.6	+4.9
BODT	Bodrum	3.48	116	PN	Pn	00 19 21.6	+0.6
IDI	Anoyia	3.56	160	Pn	Pn	00 19 23.1	+1.0
	comp=N,6.0nm,0.3s,baz=345,slow=11,SNR=52						
IDI				Sn	Sn	00 20 05.1	+0.7
	comp=N,1.9nm,0.3s,baz=314,slow=21,SNR=1.8						
IDI	Anoyia	3.56	160	⇑P	Pn	00 19 23.9	+1.8
RKY	Sarkoy-Tekirda	3.56	54	PN	Pn	00 19 22.7	+0.6
KNL	Balıkesir	3.59	62	*i* P	Pg	00 19 37.2	+1.9
PLD	Plovdiv	3.59	16	PN	Pn	00 19 23.6	+1.1
AYDB	Zeytinkoy-Aydi	3.61	100	PN	Pn	00 19 24.1	+1.2
BAL	Balikesir	3.63	73	PN	Pn	00 19 24.5	+1.1
MLSB	Milas	3.72	110	PN	Pn	00 19 25.2	+0.9
MRMT	Marmara Adasi	3.79	58	PN	Pn	00 19 26.6	+1.3
TIR	Tirane	3.82	316	*e*Pn	Pb	00 19 30.0	-4.2
TIR				*e*Sn	Sn	00 20 14.6	+4.0
EDC	Edincik	3.85	63	PN	Pn	00 19 27.2	+1.1
LAST	Lasithi	3.86	154	P	Pn	00 19 27.2	+0.9
PRVS	Prvonek	3.98	346	*e*Pn	Pn	00 19 29.9	+2.0
EDRB	Edirne	4.10	38	PN	Pn	00 19 30.5	+1.1
ZAPS	Zavoj	4.66	353	*e*Pn	Pn	00 19 40.4	+3.3
ZAPS				*e*Sn	Sn	00 20 31.8	+0.5
SELS	Selova	4.88	340	*e*Pn	Pn	00 19 41.6	+1.4
PDG	Podgorica	4.92	322	*e*Pn	Pn	00 19 43.2	+2.5
PDG				*e*Sn	Sn	00 20 38.4	+0.7
PDG	Podgorica	4.92	322	⇑P	Pn	00 19 45.1	+4.4
TIP	Timpagrande	5.20	278	⇑P	Pn	00 19 47.5	+2.9
ZAGS	Zajecar	5.23	351	*e*Pn	Pn	00 19 45.9	+0.9
SJES	Sjenica	5.28	332	*e*Pn	Pn	00 19 48.4	+2.6
IVAS	Ivanjica	5.30	335	*e*Pn	Pn	00 19 50.4	+1.7
GRUS	Gruza	5.61	340	*e*Pn	Pn	00 19 52.5	+2.3
BBLS	Lazići	6.01	331	*e*Pn	Pn	00 19 58.2	+2.4
BBLS				*e*Sn	Sn	00 21 02.9	-1.9
HERR	Herculane	6.27	354	⇓P	Pn	00 20 01.9	+2.6
HAPS	Han Pijesak,BI	6.38	330	*e*Pn	Pn	00 20 02.3	+1.5
ARR	Arges	6.78	7	⇓P	Pn	00 20 07.0	+0.7
VOIR		6.89	10	⇓P	Pn	00 20 09.1	+1.1
BZS	Buzias	7.09	350	*e*Pn	Pn	00 20 12.7	+2.2
MLR	Muntele Rosu	7.10	15	Pn	Pn	00 20 12.7	+2.0
	comp=N,0.5nm,0.3s,baz=103,slow=19,SNR=11						
MLR				Sn	Sn	00 21 32.8	+1.2
	comp=N,0.3nm,0.3s,baz=162,slow=20,SNR=1.6						
MLR	Muntele Rosu	7.10	15	⇓P	Pn	00 20 14.0	+3.3
PLOR	Plostina	7.59	18	⇓P	Pn	00 20 20.5	+3.1
ESDC	Sonseca Array	21.21	281	P	P	00 23 12.5	-0.1
	comp=N,0.7nm,0.7s,baz=71,slow=9.1,SNR=5.6						
TORD	Torodi Ar. Bea	31.86	223	P	P	00 24 52.3	+0.2
	comp=N,0.5nm,0.7s,baz=34,slow=9.2,SNR=4.8						
MKAR	Makanchi Array	43.13	59	P	P	00 26 27.2	-0.1
	comp=N,0.3nm,0.8s,baz=269,slow=8.6,SNR=1.3						

*IDC **18** 00:19:42.5±0.8,52°.81N×27°.89E,h0km,mb1 3.5/5, mb1mx3.2/47,mbtmp3.5/5,ML2.9/5,Error ellipse: s-maj=23.0km s-min=6.7km az=68.0*

ISC 18 00:19:39.5±1.0,52°.85N±0°.05×27°.88E±0°.09,h10km,n15, σ1s93/22,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACGM	Naroch	2.15	343	*e*	Pb	00 20 19.0	+0.5
AKASG	Malin Array Be	2.31	158	Pn	Pb	00 20 21.8	+0.5
	12nm,0.3s,baz=337,slow=16,SNR=25						
AKASG				Pg	Pg	00 20 23.1	-0.7
	13nm,0.3s,baz=337,slow=17,SNR=22						
AKASG				Lg	Lg	00 20 52.0	
	25nm,0.3s,baz=336,slow=29,SNR=23						
IDID	Didziasalis	2.56	345	*e*P	Pb	00 20 25.6	+0.2
IDID				*e*S	Sg	00 21 01.5	0.0
IDID				IAML		00 21 12.4	
	comp=Z,10nm,0.4s						
IIGN	Ignalina	2.68	339	*e*P	Pg	00 20 29.4	-1.5
IIGN				*e*S	Sg	00 21 05.0	-0.6
IIGN				IAML		00 21 09.2	
	comp=Z,15nm,0.3s						
ISAL	Salakas	2.91	340	*e*P	Pb	00 20 30.7	-0.7
ISAL				*e*S	Sg	00 21 12.2	-0.7
SUW	Suwalki	3.04	294	*e*P	Pb	00 20 32.5	-1.1
IZAR	Zarasai	3.06	342	*e*P	Pb	00 20 35.5	+1.6
IZAR				IAML		00 21 12.4	
	comp=Z,6.4nm,0.5s						
PABE	Paberze	3.51	321	*e*P	Pn	00 20 37.4	+3.4
PABE				*e*S	Sb	00 21 28.0	+3.7
PABE				IAML		00 21 40.2	
	comp=Z,22nm,0.3s						
PBUR	Paburge	4.70	315	*e*P	Pb	00 21 04.2	+2.2
VSU	Vasula	5.66	354	*e*P	Pn	00 21 04.3	+0.8
SLIT	Slitere, Latvi	5.75	328	*e*P	Pn	00 21 08.5	+3.7
FINES	FINESS Array B	8.67	354	Pn	Pn	00 21 45.5	+0.7
	comp=Z,0.7nm,0.3s,baz=167,slow=13,SNR=27						
FINES				Sn	Sn	00 23 21.5	-0.9
	comp=Z,0.2nm,0.3s,baz=177,slow=23,SNR=1.7						
HFS	Hagfors	10.69	319	Pn	Pn	00 22 12.1	-0.4
	comp=Z,0.2nm,0.3s,baz=134,slow=17,SNR=5.6						
HFS				Sn	Sn	00 24 08.5	-3.5
	comp=Z,0.1nm,0.3s,baz=126,slow=22,SNR=2.1						
HFS				Lg	Lg	00 25 14.3	
	comp=Z,0.2nm,0.3s,baz=123,slow=26,SNR=1.8						
NOA	NORSAR Array B	12.21	319	Pn	Pn	00 22 32.5	-0.8
	comp=Z,0.0nm,0.3s,baz=118,slow=20,SNR=1.2						
ARCES	ARCESS Array B	16.78	357	Pn	Pn	00 23 32.2	-2.0
	baz=182,slow=14,SNR=1.8						

*NEIC **18** 00:28:13.7±1.0,9°.6S±0°.1×155°.42E±0°.02,h10km±1km, mb4.0/13,Error ellipse: s-maj=17.0km s-min=4.1km az=1.0*

*IDC **18** 00:28:18.6±3.6,9°.50S×155°.32E,h45km±34km,mb3.7/8, mb1 3.9/10,mb1mx3.7/33,mbtmp4.0/10,ML3.6/2,MS3.0/2, Ms1 3.0/2,ms1mx2.6/36,Error ellipse: s-maj=30.5km s-min=19.7km az=104.0*

ISC 18 00:28:16.1±0.7,9°.59S±0°.09×155°.42E±0°.09,h29km,n29, σ0s92/25,mb3.8/14,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	Keravat (AS076	6.24	327	P	Pn	00 29 46.1	-0.1
	3.3nm,0.3s,baz=162,slow=3.1,SNR=4.8						
COEN	Coen	12.75	249	Pn	Pn	00 31 14.8	-0.8
SANVU	Saraoutou	12.88	118	Pn	Pn	00 31 16.6	-0.8
EIDS	Eidsvold	16.23	194	Pn	Pn	00 32 02.5	+0.5
DZM	Mont Dzumac	16.31	141	P	P	00 32 06.2	+0.3
	0.1nm,0.3s,baz=336,slow=5.7,SNR=5.3						
LHI	Lord Howe Isla	22.08	172	P	P	00 33 07.1	-1.8
WR0	Warramunga Arr	22.64	241	P	P	00 33 15.1	+0.1
WR0				IAmb	IAmb	00 33 17.7	
	comp=Z,2.6nm,0.9s						
WB0	Warramunga Arr	22.69	241	P	P	00 33 15.1	-0.5
WB0				IAmb	IAmb	00 33 17.6	
	comp=Z,2.8nm,0.8s						
WB2	Warramunga Arr	22.80	241	P	P	00 33 16.8	+0.1
WB2				IAmb	IAmb	00 33 25.9	
	comp=Z,2.9nm,0.9s						
WRA	Warramunga Arr	22.81	241	P	P	00 33 17.2	+0.4
	comp=Z,1.3nm,0.7s,baz=63,slow=9.5,SNR=13						
WRA	Warramunga Arr	22.81	241	P	P	00 33 16.7	-0.1
ASAR	Alice Springs	24.87	233	P	P	00 33 35.9	-0.6
	comp=Z,1.8nm,0.8s,baz=68,slow=9.3,SNR=15						
ASAR	Alice Springs	24.87	233	P	P	00 33 35.2	-1.3
GUMO	Guam	25.30	335	LR	LR	00 43 29.1	
	comp=Z,28nm,18.0s,baz=148,slow=36						
STKA	Stephens Creek	25.62	208	P	P	00 33 45.5	+2.4
	comp=Z,2.3nm,0.9s,baz=30,slow=14,SNR=5.3						
STKA	Stephens Creek	25.62	208	P	P	00 33 43.5	+0.5
KNRA	Kununurra	26.69	254	P	P	00 33 53.5	+0.6
KNRA				IAmb	IAmb	00 34 01.0	
	comp=Z,12nm,1.1s						
BBOO	Buckleboo	29.21	215	P	P	00 34 15.2	-0.2
BBOO				IAmb	IAmb	00 34 31.3	
	comp=Z,5.2nm,1.1s						
FITZ	Fitzroy Crossi	30.09	250	P	P	00 34 22.9	-0.4
FITZ				IAmb	IAmb	00 34 30.4	
	comp=Z,1.1nm,0.8s						
OUZ	Omahuta	30.43	150	P	P	00 34 26.6	+0.5
KLR	Kul'dur	62.16	343	LR	LR	01 03 58.1	
	comp=Z,16nm,21.1s,baz=187,slow=34						
SONM	Songino Array	71.74	328	P	P	00 39 36.5	+0.8
	comp=Z,1.8nm,0.8s,baz=145,slow=6.5,SNR=10						
SONM	Songino Array	71.74	328	IAmb	IAmb	00 39 37.5	
	comp=Z,1.7nm,0.8s						
MAW	Mawson	82.18	203	P	P	00 40 34.6	+0.6
	comp=Z,4.9nm,1.2s,baz=101,slow=13,SNR=3.9						
MAW	Mawson	82.18	203	IAmb	IAmb	00 40 37.1	
	comp=Z,2.8nm,1.4s						
ILAR	Eielson Array	85.62	21	P	P	00 40 50.4	-1.2
	comp=Z,0.6nm,0.8s,baz=260,slow=5.7,SNR=6.4						
ZALV	Zalesovo Beam	86.56	326	P	P	00 40 55.5	-0.8
	comp=Z,0.2nm,0.3s,baz=67,slow=3.7,SNR=3.5						
NVAR	Mina Array Bea	92.99	52	P	P	00 41 28.7	+1.4
	comp=Z,0.5nm,0.7s,baz=246,slow=6.8,SNR=5.1						
BDFB	Brasilia	145.83	137	PKPbc	PKPdf	00 47 53.3	+0.1
	comp=Z,2.0nm,0.7s,baz=160,slow=3.7,SNR=3.8						

*HEL **18** 00:33:31.4,67°.82N×20°.51E,h0km,ML1.9,Explosion*

UPP 18 00:33:30.4±0.0,67°.83N×20°.20E,h1km,ML2.1, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.13	23	P	Pg	00 33 33.0	+0.1
KUA				S	Sg	00 33 34.8	+0.1
KUA	Kurravaara	0.13	23	*i* P	Pg	00 33 33.0	+0.1
KUA				*i* S	Sg	00 33 34.8	+0.1
RATU	Laukkuluspa	0.23	268	P	Pg	00 33 34.8	0.0
RATU	Laukkuluspa	0.23	268	*i* P	Pg	00 33 34.8	0.0
KOVU	Salmi	0.39	358	P	Pg	00 33 37.8	-0.1
KOVU	Salmi	0.39	358	*i* P	Pg	00 33 37.8	-0.1
LANU	Lannavaara	0.71	71	P	Pg	00 33 43.6	-0.4
LANU	Lannavaara	0.71	71	*i* P	Pg	00 33 43.6	-0.4
DUNU	Dundret	0.73	169	P	Pg	00 33 43.9	-0.4
DUNU	Dundret	0.73	169	*i* P	Pg	00 33 43.9	-0.4
SALU	Saltoluokta	0.79	236	P	Pg	00 33 45.2	-0.3
SALU	Saltoluokta	0.79	236	*i* P	Pg	00 33 45.2	-0.3
KIF	Kilpisjarvi	1.20	10	*e*PB	Pb	00 33 53.6	-0.2
KIF				MSG		00 34 08.7	
	comp=Z,10.0nm,0.2s						
KIF				*e*S	Sg	00 34 09.1	+0.3
KIF	Kilpisjarvi	1.20	10	*e*P	Pg	00 33 52.8	-0.6
PAJU	Pajala	1.39	124	P	Pn	00 33 55.7	-1.2
PAJU	Pajala	1.39	124	*e*PG	Pn	00 33 55.5	-1.4
PAJU				*e*SB	Sg	00 34 14.1	-0.7
ERTU	Ertsjaerv	1.50	148	*e*P	Pn	00 33 57.2	-1.1
ERTU				*e*SN	Sb	00 34 18.3	-0.1
KALU	Kalix	2.34	146	*e*PB	Pn	00 34 11.0	+1.1
KALU				*e*SG	Sb	00 34 42.2	-0.4
TOF	Tornio	2.39	135	*e*PB	Pn	00 34 12.1	+1.5
	baz=322						
TOF				MSG		00 34 39.5	
	comp=Z,6.1nm,0.2s						
TOF				*e*SB	Sb	00 34 43.1	-1.0
SGF	Sodankyl	2.45	96	*e*PG	Pb	00 34 14.2	-0.9
SGF				*e*SG	Sb	00 34 46.3	+0.5
RNF	Rovaniemi	2.57	116	*e*PB	Pn	00 34 15.1	+2.0
RNF				*e*SB	Sb	00 34 48.4	-0.9
ARA0	ARCESS Array S	2.58	46	*e*P	Pn	00 34 13.0	-0.3

UPP 18 00:33:41.4±0.1,67°.84N×20°.20E,h0km,ML2.4, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.13	24	P	Pg	00 33 44.2	+0.3
KUA				S	Sg	00 33 46.0	+0.4
RATU	Laukkuluspa	0.23	267	P	Pg	00 33 46.0	+0.2
KOVU	Salmi	0.39	358	P	Pg	00 33 49.0	+0.1
SALU	Saltoluokta	0.79	236	P	Pg	00 33 56.4	-0.2
PAJU	Pajala	1.39	125	P	Pg	00 34 06.9	-1.0

*IDC **18** 00:34:16.2±1.5,24°.27S×179°.01W,h0km,mb4.1/3, mb1 4.5/3,mb1mx3.8/25,mbtmp4.1/3,ML5.4/1,Error ellipse: s-maj=44.9km s-min=31.8km az=176.0*

*NEIC **18** 00:34:40.2±2.4,26°.68S±0°.07×178°.3W±0°.1,h281km±7km, mb4.0/15,Error ellipse: s-maj=15.0km s-min=10.9km az=87.0*

ISC 18 00:34:40.6±0.7,26°.76S±0°.08×178°.3W±0°.1,h300km,n30, σ1s74/26,mb3.9/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.50	173	Pn	Pn	00 35 32.2	+0.7
	127nm,0.3s,baz=335,slow=19,SNR=7.5						
RAO	Raoul Island	2.50	173	P	Pn	00 35 30.4	-1.2
MSVF	Nonsavu	9.61	338	Pn	Pn	00 36 51.8	-2.3
NIUE	Niue	10.82	47	Pn	Pn	00 37 07.5	-1.3
OUZ	Omahuta	10.96	218	Pn	Pn	00 37 10.4	+0.2
MXZ	Matakaoa Point	11.16	194	Pn	Pn	00 37 12.4	-0.3
AFI	Afiamalu	14.14	27	P	Pn	00 37 48.9	-0.2
BFZ	Birch Farm	14.62	197	P	P	00 37 50.7	-2.6
DZM	Mont Dzumac	14.70	285	P	Pn	00 37 55.3	-0.3
PLWZ	Palliser	15.72	198	P	Pn	00 38 07.4	+0.2
EIDS	Eidsvold	27.55	266	P	P	00 40 02.6	+2.0
EIDS				IAmb	IAmb	00 40 16.2	
	comp=Z,2.8nm,1.0s						
CTAO	Charters Tower	33.16	274	P	P	00 40 50.9	+1.2
COEN	Coen	38.19	282	P	P	00 41 29.0	-3.2
ASAR	Alice Springs	43.20	263	P	P	00 42 17.0	+4.1
	comp=Z,1.4nm,0.6s,baz=100,slow=7.4,SNR=17						
ASAR	Alice Springs	43.20	263	P	P	00 42 16.8	+3.9
WR0	Warramunga Arr	43.67	269	P	P	00 42 17.8	+1.1
WB2	Warramunga Arr	43.85	269	P	P	00 42 19.2	+1.2
WRA	Warramunga Arr	43.86	269	P	P	00 42 19.3	+1.2
	comp=Z,2.6nm,0.5s,baz=95,slow=8.4,SNR=34						
WRA	Warramunga Arr	43.86	269	P	P	00 42 19.5	+1.4
WB0	Warramunga Arr	43.86	269	P	P	00 42 19.4	+1.2
WB0				IAmb	IAmb	00 42 19.8	
	comp=Z,3.8nm,0.7s						
FORT	Forrest	46.87	252	P	P	00 42 42.3	+0.9
FORT				IAmb	IAmb	00 43 00.3	
	comp=Z,13nm,0.9s						
MTN	Manton Dam	49.29	276	P	P	00 42 57.3	-2.7
MTN				IAmb	IAmb	00 43 00.8	
	comp=Z,4.8nm,1.1s						
KNRA	Kununurra	50.30	271	P	P	00 43 07.3	-0.3
KNRA				IAmb	IAmb	00 43 15.8	
	comp=Z,10nm,1.1s						
MAW	Mawson	75.63	200	P	P	00 45 53.6	+1.2
JWT	Wachi	75.67	322	P	P	00 45 55.9	+2.7
JWT				IAmb	IAmb	00 45 59.9	
	comp=Z,3.1nm,0.6s						
JTM	Tenmabayashi	77.09	329	P	P	00 46 04.1	+3.2
VCNR	Virginia City	85.47	42	P	P	00 46 46.4	+1.4
LHV	Little Huntoon	85.49	43	P	P	00 46 46.0	+1.2
LHV				IAmb	IAmb	00 46 49.4	
	comp=Z,2.0nm,1.0s						
CO02	Combarbal	89.79	125	P	P	00 47 10.9	+5.1
CO02				IAmb	IAmb	00 47 12.9	
	comp=Z,4.6nm,0.8s						
TXAR	Lajitas Array	90.61	57	P	P	00 47 17.5	+8.0
	comp=Z,0.5nm,0.7s,baz=222,slow=5.0,SNR=6.9						

*BGR **18** 00:37:02.6±0.0,36°.20N×74°.18E,h33km,mb5.2*

*MOS **18** 00:37:24.3±0.9,38°.18N×73°.10E,h138km,mb4.8/68,Error ellipse: s-maj=4.2km s-min=3.0km az=114.1*

*NEIC **18** 00:37:26.0±2.4,38°.19N±0°.05×72°.97E±0°.08,h138km±7km, mb5.0/128,Error ellipse: s-maj=9.4km s-min=7.4km az=97.0*

*IDC **18** 00:37:25.0±2.3,38°.13N×73°.13E,h134km±20km,mb4.2/32, mb1 4.3/36,mb1mx4.2/49,mbtmp4.7/36,MS3.4/11, Ms1 3.4/11,ms1mx3.0/72,Error ellipse: s-maj=11.9km s-min=8.8km az=170.0*

*NNC **18** 00:37:27.9±2.5,38°.43N×72°.98E,h178km±29km,mb4.4, mpv5.4,Error ellipse: s-maj=25.9km s-min=14.6km az=0.0*

*BJI **18** 00:37:27.0±0.0,38°.07N×73°.25E,h172km,mB4.7/26, mb4.6/35*

*GCMT **18** 00:37:29.0±0.3,38°.18N±0°.02×72°.97E±0°.02,h143km±3km, MW4.9/96,Moment Tensor Solution. s19,c20; s96,c140; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.46±.09; Mθθ 1.73±.11; Mϕϕ-1.27±.10; Mrθ-1.17±.07; Mrϕ-1.98±.10; Mθϕ-1.02±.06; Best double couple: M◎2.94900×10^16 NP1:ϕs338.00000°,δ61.00000°,λ-14.00000°. NP2: ϕs74.00000°,δ78.00000°,λ-150.00000°. Principal axes: T 2.8360, Plg12.0000°, Azm203.0000°; N 0.2280, Plg58.0000°, Azm94.0000°; P -3.0630, Plg29.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 00:37:23.7±0.4,38°.10N±0°.03×73°.09E±0°.03,h123km±3km, h123km:pP-P,n720,σ1s56/749,mb4.9/201,50C-35D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	Garm	2.35	293	Pn	Pn	00 38 02.6	+0.8
GAR				Sn	Sn	00 38 31.1	0.0
BTK	Batken	2.64	319	PN	Pn	00 38 07.5	+2.1
BTK						00 38 38.4	
BTK	Batken	2.64	319	Pn	Pn	00 38 07.5	+2.1
BTK				Sn	Sn	00 38 38.4	+0.9
KSH	Kashi	2.66	57	P	Pn	00 38 03.6	-2.2
KSH				S	Sn	00 38 32.5	-5.6
KSH				smax	smax		
	comp=N,23μm,0.4s						
KSH				smax	smax		
	comp=E,14μm,0.6s						
CHGR	Chuyangaron	3.14	281	Pn	Pn	00 38 12.4	+0.4
CHGR				Sn	Sn	00 38 47.5	-1.8
AML	Almayashu	4.05	6	P	Pn	00 38 25.4	+1.1
	SNR=3372						
UCH	Uchtor	4.26	14	P	Pn	00 38 28.5	+1.3
	SNR=382						
TAS	Tashkent	4.35	319	PN	Pn	00 38 28.4	+0.4
TAS	Tashkent	4.35	319	Pn	Pn	00 38 28.4	+0.4
CEP	Cherat	4.37	193	⇑P	Pn	00 38 30.5	+2.0
CEP				S	Sn	00 39 21.0	+2.3
NIL	Nilore	4.44	178	P	Pn	00 38 32.7	+3.4
NIL	Nilore	4.44	178	PN	Pn	00 38 33.1	+3.8
NIL	Nilore	4.44	178	Pn	Pn	00 38 33.1	+3.8
EKS2	Erkin-Say	4.59	6	P	Pn	00 38 32.7	+1.5
	SNR=1033						
AAK	Ala-Archa	4.66	13	P	Pn	00 38 33.7	+1.5
	SNR=1359						
AAK	Ala-Archa	4.66	13	*i* P	Pn	00 38 33.8	+1.5
	SNR=1838						
AAK	Ala-Archa	4.66	13	⇓P	Pn	00 38 34.3	+2.1
	463nm,0.6s						
AAK				⇓S	Sn	00 39 25.9	+0.4
	352nm,0.4s						
AAK	Ala-Archa	4.66	13	P	Pn	00 38 33.7	+1.5
AAK				S	Sn	00 39 26.0	+0.6
AAK	Ala-Archa	4.66	13	*ce*PN	Pn	00 38 33.5	+1.3
AAK				pmax	pmax		
	comp=Z,1μm,0.5s						
IUG	Iuzhnay	4.67	331	*e*P	Pn	00 38 33.6	+1.2
	baz=331						
IUG	Iuzhnay	4.67	331	*e*PN	Pn	00 38 33.6	+1.2
KBK	Karagaybulak	4.77	17	P	Pn	00 38 34.8	+1.1
	SNR=256						
ULHL	Ulahol	4.79	29	P	Pn	00 38 35.1	+1.0
	SNR=282			

DHRM eS Sn 00 40 04.6 -3.1
DHRM IAML 00 40 11.1
comp=N,4μm,0.2s
DHRM IAML 00 40 11.4
comp=E,6μm,0.4s
CHKK Chushkaly 6.46 26 eP Pn **00 38 57.0 +0.6**
baz=27
CHKK Chushkaly 6.46 26 ePN Pn **00 38 56.9 +0.6**
KPKS Kolpek 6.83 37 eP Pn **00 39 02.2 +0.7**
baz=37
KPKS Kolpek 6.83 37 ePN Pn **00 39 02.2 +0.7**
BTLS Baital 6.97 6 eP Pn **00 39 03.6 +0.4**
comp=E,19nm,0.3s,baz=6.0
BTLS Baital 6.97 6 ePN Pn **00 39 03.6 +0.4**
BTLS pmax pmax
comp=Z,19nm,0.3s
SHLS Shalkode 7.00 42 eP Pn **00 39 07.4 +3.7**
baz=44
SHLS Shalkode 7.00 42 ePN Pn **00 39 07.4 +3.7**
PDGK Podgornoye 7.13 41 ⇓P Pn **00 39 06.2 +0.6**
comp=Z,196nm,0.6s
PDGK Podgornoye 7.13 41 PN Pn **00 39 06.1 +0.6**
BHK Bhakra 7.21 157 eP Pn **00 39 08.0 +1.5**
BHK eS Sn **00 40 22.2 -4.7**
SMLA Simla 7.72 153 eP Pn **00 39 13.2 -0.3**
SMLA IAmb IAmb 00 39 19.1
comp=Z,400nm,0.3s
SMLA eS Sn **00 40 33.1 -6.2**
SMLA eS 00 40 33.2
SMLA IAML 00 40 36.8
comp=N,3μm,0.3s
SMLA IAML 00 40 37.9
comp=E,3μm,0.3s
TDK Taldyqorghan 7.96 28 eP Pn **00 39 16.6 -0.1**
baz=29
TDK Taldyqorghan 7.96 28 ePN Pn **00 39 16.5 -0.1**
DDI Dehra Dun 8.78 151 eP Pn **00 39 27.8 +0.1**
DDI IAmb IAmb 00 39 31.2
comp=Z,516nm,0.3s
DDI eS Sn **00 40 58.7 -6.3**
HRA Herat 9.51 250 Pn Pn **00 39 37.3 -0.4**
PTH Pithoragarh 10.38 143 eS Sn 00 41 19.5 -25
MAKZ Makanchi 10.89 34 P Pn **00 39 55.8 -0.3**
MAKZ Makanchi 10.89 34 Pn **00 39 55.8 -0.3**
MK31 Makanchi Array 11.02 35 ⇑P Pn **00 39 58.0 +0.2**
comp=Z,38nm,0.6s,baz=212,slow=11,SNR=226
MK31 Makanchi Array 11.02 35 ceP Pn **00 39 58.1 +0.3**
MK31 Makanchi Array 11.02 35 Pn Pn **00 39 57.7 -0.1**
MKAR Makanchi Array 11.02 35 P Pn **00 39 57.2 -0.6**
comp=Z,5.2nm,0.3s,baz=217,slow=16,SNR=238
MKAR Makanchi Array 11.02 35 eP Pn **00 39 57.6 -0.2**
MKAR pmax pmax
comp=Z,5.0nm,0.3s
MKAR Makanchi Array 11.02 35 Pn Pn **00 39 57.4 -0.4**
ASHT Ashkhabad 11.60 274 P Pn **00 40 02.7 -2.9**
ASHT Ashkhabad 11.60 274 Pn Pn **00 40 02.7 -2.9**
AJM Ajmer 11.66 173 ⇓iP Pn **00 40 02.0 -4.4**
AJM iS Sn 00 42 04.0 -11
GEYT Alibeck 11.82 274 P Pn **00 40 04.8 -3.6**
comp=Z,36nm,0.3s,baz=107,slow=10,SNR=233
GEYT S Sn 00 42 07.7 -11
comp=Z,19nm,0.3s,baz=144,slow=18,SNR=7.0
GEYT LR LR 00 46 07.8
comp=Z,72nm,21.2s,baz=110,slow=44
GEYT Alibeck 11.82 274 Pn Pn **00 40 05.1 -3.3**
GYA0B ALIBECK ARRAY 11.82 274 Pn Pn **00 40 04.9 -3.5**
BRZS Berezniki 11.88 359 eP Pn **00 40 08.9 -0.2**
baz=359
BRZS Berezniki 11.88 359 eP Pn **00 40 08.9 -0.2**
WMQ Urumqi 12.42 58 P Pn **00 40 16.3 -0.1**
WMQ S Sn **00 42 32.1 -1.0**
WMQ pmax pmax
comp=Z,69nm,0.9s
WMQ pmax pmax
comp=Z,130nm,4.5s
WMQ Urumqi 12.42 58 P Pn **00 40 15.9 -0.5**
WMQ Urumqi 12.42 58 Pn Pn **00 40 15.9 -0.5**
ZSN Zaisan 12.72 39 eP Pn **00 40 22.4 +2.2**
comp=Z,50nm,2.2s,baz=39
ZSN Zaisan 12.72 39 eP Pn **00 40 22.3 +2.2**
ZSN pmax pmax
comp=Z,50nm,2.2s
PYUN Piuthan 12.96 137 eP Pn **00 40 20.6 -3.0**
comp=Z,1μm,0.5s
PYUN eS Sn 00 42 35.0 -12
KURBB Kurchatov Arra 13.11 15 P Pn **00 40 21.6 -3.5**
comp=Z,0.8nm,0.3s,baz=205,slow=12,SNR=105
KURBB Kurchatov Arra 13.11 15 ⇑P Pn **00 40 22.4 -2.7**
comp=Z,85nm,0.8s
KURBB Kurchatov Arra 13.11 15 P Pn **00 40 22.3 -2.7**
DANN Dangsing 13.19 134 eP Pn **00 40 23.8 -2.8**
comp=Z,948nm,0.5s
DANN eS Sn 00 42 41.1 -11
KURK Kurchatov 13.21 16 P Pn **00 40 23.3 -3.1**
KURK Kurchatov 13.21 16 P Pn **00 40 23.8 -2.6**
KURK Kurchatov 13.21 16 Pn Pn **00 40 23.8 -2.6**
KOLN Koldanda 13.55 136 eP Pn **00 40 28.7 -2.5**
comp=Z,257nm,0.3s
GKN Gorkha 13.96 133 eP Pn **00 40 33.6 -2.8**
comp=Z,266nm,0.3s
KKN Kakani 14.49 132 eP Pn **00 40 40.3 -2.9**
comp=Z,444nm,0.6s
DMN Daman 14.53 133 eP Pn **00 40 41.2 -2.5**
comp=Z,203nm,0.4s
AB31 Akbulak array 14.63 324 ⇓P Pn **00 40 42.2 -2.5**
comp=Z,11nm,0.3s,baz=134,slow=12,SNR=699
AB31 Akbulak array 14.63 324 P Pn **00 40 42.1 -2.5**
ABKAR Akbulak array 14.63 324 Pn Pn **00 40 42.4 -2.2**
ABKAR Akbulak array 14.63 324 Pn Pn **00 40 41.2 -3.4**
PKIN Phulchoki 14.72 132 eP Pn **00 40 43.9 -2.3**
comp=Z,369nm,0.4s
PKI Pulchoki 14.73 132 eP Pn **00 40 43.6 -2.8**
comp=Z,301nm,0.4s
GUN Gumba 14.76 130 eP Pn **00 40 43.9 -2.9**
comp=Z,501nm,0.5s
BVAR Borovoye Array 15.04 354 P Pn **00 40 47.5 -2.3**
comp=Z,2.1nm,0.3s,baz=108,slow=9.5,SNR=28
BVAR S Sn **00 43 27.7 -8.4**
comp=Z,5.0nm,0.3s,baz=157,slow=24,SNR=7.4
BRVK Borovoye 15.09 353 ⇑P Pn **00 40 48.5 -1.8**
comp=Z,40nm,1.0s
BRVK Borovoye 15.09 353 P Pn **00 40 49.2 -1.1**
BRVK Borovoye 15.09 353 ceP Pn **00 40 49.2 -1.1**
BRVK pmax pmax
comp=Z,61nm,1.3s
BRVK Borovoye 15.09 353 Pn **00 40 49.1 -1.2**
BHUJ Bhuj 15.09 192 eP Pn **00 40 50.5 0.0**
BHUJ IAmb IAmb 00 40 51.9
comp=Z,279nm,0.7s
BHUJ ⇑eS Sn 00 43 25.1 -12
BHUJ IAML 00 43 29.6
comp=E,215nm,1.4s
BHPL Bhopal 15.27 165 eP Pn **00 40 51.2 -1.7**
BHPL IAmb IAmb 00 40 54.4
comp=Z,67nm,0.2s
BHPL eS Sn 00 43 29.4 -13
BHPL IAML 00 43 33.1
comp=E,148nm,0.7s
BHPL IAML 00 43 33.9
comp=N,106nm,0.5s
RAMN Ramite 15.90 130 eP Pn **00 40 58.0 -2.9**
comp=N,609nm,0.5s
TAPN Taplejung 16.30 127 eP Pn **00 41 03.8 -2.0**
comp=N,491nm,0.4s
AKTO Aktyubinsk 16.35 324 P Pn **00 41 05.0 -1.0**
comp=N,14nm,0.3s,baz=124,slow=11,SNR=141
AKTO S Sn 00 43 55.1 -12
comp=N,1.6nm,0.3s,baz=198,slow=20,SNR=7.1
AKTO LR LR 00 48 04.0
comp=N,60nm,18.8s,baz=145,slow=39
AKTO Aktyubinsk 16.35 324 ⇓P Pn **00 41 05.1 -0.9**
comp=N,69nm,0.4s
AKTO Aktyubinsk 16.35 324 P Pn **00 41 05.4 -0.6**
ODAN Odare 16.44 129 eP Pn **00 41 05.4 -2.2**
comp=N,288nm,0.5s
GTK Tadong 16.89 125 eP Pn **00 41 11.2 -1.6**
LSA Lhasa 17.15 114 P Pn **00 41 17.5 +1.1**
LSA pmax pmax
comp=N,310nm,1.3s
LSA Lhasa 17.15 114 P Pn **00 41 17.1 +0.7**
LSA Lhasa 17.15 114 P Pn **00 41 18.5 +2.1**
LSA pmax pmax
comp=Z,88nm,1.0s
LSA Lhasa 17.15 114 P Pn **00 41 18.5 +2.1**
LSA IAmb IAmb 00 41 19.8
comp=Z,88nm,1.0s
ZALV Zalesovo Beam 17.78 23 P P **00 41 21.8 -0.5**
comp=Z,16nm,0.3s,baz=212,slow=11,SNR=328
ZALV Zalesovo Beam 17.78 23 P P **00 41 21.6 -0.7**
BOK Bokaro 17.96 139 eP P **00 41 23.5 -1.1**
BOK IAmb IAmb 00 41 27.4
comp=Z,39nm,0.6s
BOK eS S 00 44 30.6 -14
BOK IAML 00 44 36.5
comp=N,41nm,0.4s
BOK IAML 00 44 37.8
comp=E,44nm,0.5s
BANOM Banah 18.68 234 iP P **00 41 32.1 -0.3**
SNR=37
BANOM Banah 18.68 234 P P **00 41 32.0 -0.4**
SNR=15
BANOM S S **00 44 52.7 -6.1**
SHME Shamm 18.69 235 iP P **00 41 31.9 -0.6**
SNR=25
MDH Madha 19.12 233 P P **00 41 36.1 -1.0**
MDH S S **00 45 02.6 -4.9**
MSFE Esma-Masafi 19.16 233 iP P **00 41 37.7 0.0**
SNR=29
WSAR Wadi Sarin 19.30 224 P P **00 41 40.3 +1.1**
comp=E,3.8nm,0.3s,baz=67,slow=8.1,SNR=46
UMQ Umm Al-Quwin 19.36 235 iP P **00 41 39.9 +0.1**
SNR=7.0
UOSS Minazif 19.43 232 iP P **00 41 40.3 -0.3**
SNR=12
UOSS Minazif 19.43 232 P P **00 41 39.3 -1.3**
UOSS Minazif 19.43 232 P P **00 41 38.9 -1.7**
UOSS IAmb IAmb 00 41 41.2
comp=Z,27nm,0.7s
HATD Hatta, Dubai 19.56 232 iP P **00 41 41.7 -0.3**
SNR=13
HATD Hatta, Dubai 19.56 232 P P **00 41 42.4 +0.3**
SNR=6.8
HATD S S **00 45 12.7 -3.6**
WBK Wadi Bani Khal 19.63 222 P Pn **00 41 44.6 -0.7**
SNR=6.1
WBK S S **00 45 16.1 -1.6**
ASHO Ashiyiah 19.71 232 iP P **00 41 44.1 +0.4**
SNR=47
ASHO Ashiyiah 19.71 232 P P **00 41 44.5 +0.8**
SNR=18
ASHO S S **00 45 15.2 -4.1**
NAZ Nazwa, Dubai 19.74 234 iP P **00 41 43.5 -0.4**
SNR=6.9
NAZ Nazwa, Dubai 19.74 234 P P **00 41 44.8 +0.9**
SNR=16
SMDO Samad 19.77 225 P Pn **00 41 45.9 -1.1**
SMDO S S **00 45 22.4 +1.9**
JLN Jalan Bani Buh 19.78 220 P Pn **00 41 46.3 -0.8**
SNR=7.9
JLN S S **00 45 20.2 -0.4**
HOQ Hoqain 19.78 227 P P **00 41 44.5 +0.1**
HOQ S S **00 45 16.2 -4.5**
SOHO SOHO 19.82 230 P P **00 41 43.4 -1.4**
SOHO SOHO 19.82 230 P P **00 41 43.6 -1.2**
SOHO S S **00 45 15.9 -5.5**
FAQ Al Faqa, Dubai 19.96 233 iP P **00 41 46.1 -0.2**
SNR=10
FAQ Al Faqa, Dubai 19.96 233 P P **00 41 46.4 +0.1**
SNR=7.4
FAQ S S **00 45 18.1 -6.0**
MAK Makhachkala 20.01 292 eP P **00 41 46.2 -0.5**
MAK eS S **00 45 23.7 -1.2**
MAK pmax pmax
comp=Z,425nm,1.4s
MAK MLR MLR
comp=Z,365nm,13.0s
ASUD Al Ashush, Dub 20.21 233 iP P **00 41 49.2 +0.2**
SNR=9.4
ASUD Al Ashush, Dub 20.21 233 P P **00 41 49.7 +0.7**
SNR=7.6
SHL Shillong 20.23 123 P P **00 41 50.3 +0.8**
SNR=21
SHL Shillong 20.23 123 P P **00 41 50.2 +0.8**
SHL pmax pmax
comp=Z,52nm,0.8s
SHL Shillong 20.23 123 P P **00 41 50.2 +0.8**
SHL IAmb IAmb 00 41 53.1
comp=Z,52nm,0.8s
JMDO Jabal Madar 20.29 224 P Pn 00 41 51.6 -1.4
SNR=8.4
ALNE Al Ain 20.36 232 iP P **00 41 50.8 +0.2**
SNR=12
ARQ Araqi 20.43 229 P Pn 00 41 54.8 +0.1
SNR=5.5
AJN Ajban 20.48 234 P P **00 41 52.7 +0.9**
SNR=8.6
SVE Sverdlovsk 20.48 340 eP P **00 41 51.6 0.0**
SVE eS S **00 45 32.5 -1.4**
SVE pmax pmax
comp=Z,52nm,1.0s
BSY Bisya 20.50 226 P P **00 41 53.8 +1.7**
SNR=5.6
KAD Karad 20.74 177 ⇓iP P **00 41 55.7 +1.0**
KAD iS S **00 45 34.1 -5.5**
ARU Arti 20.74 337 P P **00 41 54.3 -0.1**
comp=Z,4.2nm,0.3s,baz=159,slow=12,SNR=47
ARU S S **00 45 37.1 -1.8**
comp=Z,1.5nm,0.5s,baz=108,slow=20,SNR=2.9
ARU LR LR 00 50 50.9
comp=Z,129nm,19.8s,baz=139,slow=39
ARU Arti 20.74 337 diP P **00 41 54.4 0.0**
ARU 00 42 22.6
ARU S S **00 45 40.1 +1.1**
ARU SS Sn 00 46 22.8 +30
ARU pmax pmax
comp=Z,73nm,1.1s
ARU Arti 20.74 337 P P **00 41 54.1 -0.3**
ARU IAmb IAmb 00 41 55.7
comp=Z,59nm,1.0s
GTA Gaotai 20.86 78 ⇑P Pn 00 41 58.4 -1.3
GTA pP pP 00 42 27.0 +7.3
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,85nm,6.6s
GTA LR LR
comp=Z,140nm,11.6s
GTA LR LR
comp=Z,130nm,13.1s
GTA LR LR
comp=Z,120nm,14.5s
LGD Lagodekhi 20.88 289 P P **00 41 56.5 +0.4**
HYB Hyderabad 21.16 165 iP P **00 41 59.0 -0.2**
HYB esP sP **00 42 44.0 +5.3**
HYB eS S **00 45 50.0 +2.4**
MHTO MHTO 21.49 222 P P **00 42 05.1 +2.4**
SNR=6.3
SEAG Tbilisi Sea 21.96 289 P P **00 42 11.1 +3.6**
GNI Garni 22.05 284 P P **00 42 10.2 +1.5**
comp=Z,42nm,0.9s,baz=84,slow=2.9,SNR=24
GNI Garni 22.05 284 P P **00 42 11.6 +2.9**
GNI Garni 22.05 284 ceP P **00 42 10.1 +1.4**
GNI pmax pmax
comp=Z,155nm,1.0s
GNI Garni 22.05 284 P P **00 42 10.7 +2.0**
GUDG Gudauri 22.21 290 P P **00 42 10.2 -0.1**
KZRT Kazreti 22.26 288 P P **00 42 11.0 +0.3**
TASB TASBURUN-IGDIR 22.45 284 eP P **00 42 14.6 +2.0**
ZEI Tsey 22.64 291 eP P **00 42 15.8 +1.1**
ZEI pmax pmax
comp=Z,26nm,0.7s
CLDR Caldiran 22.78 282 eP P **00 42 18.1 +2.1**
BGD Bogdanovka 22.87 287 P P **00 42 18.9 +2.0**
AKH Akhalkalaki 22.94 288 P P **00 42 19.2 +1.7**
ONI Oni 22.97 291 P P **00 42 19.0 +1.4**
KARS Kars 23.29 286 eP P **00 42 22.9 +2.2**
KBZ Khabaz 23.42 293 P P **00 42 21.5 -0.2**
comp=Z,14nm,0.8s,baz=52,slow=20,SNR=21
KBZ Khabaz 23.42 293 ceP P **00 42 20.7 -1.0**
KBZ pmax pmax
comp=Z,23nm,1.1s
GOF Gofitskoye 23.44 297 ⇓iP P **00 42 23.1 +1.2**
GOF pmax pmax
comp=Z,89nm,0.8s
AGRB Hanur-Agry 23.45 283 eP P **00 42 25.0 +2.8**
GEVA Gevas 23.56 280 P P **00 42 25.5 +2.2**
KVAR Kislovodsk Arr 23.58 294 P P **00 42 24.5 +1.1**
comp=Z,7.1nm,0.6s,baz=104,slow=19,SNR=4.7
KVAR S S **00 46 37.2 +8.8**
comp=Z,8.9nm,1.1s,baz=45,slow=11,SNR=2.5
KIV Kislovodsk 23.59 294 iP P **00 42 24.1 +0.8**
SNR=7.1
KIV Kislovodsk 23.59 294 P P **00 42 24.7 +1.4**
KIV Kislovodsk 23.59 294 eP P **00 42 23.0 -0.4**
KIV eS S **00 46 27.9 -0.6**
KIV pmax pmax
comp=Z,43nm,1.0s
KIV MLR MLR
comp=Z,152nm,14.0s
KIV Kislovodsk 23.59 294 P P **00 42 24.1 +0.8**
KIV IAmb IAmb 00 42 44.3
comp=Z,103nm,1.2s
AKDM Akdamar-Van 23.61 280 eP P **00 42 26.8 +3.1**
MOY Mondy 23.80 46 eP P **00 42 27.6 +2.4**
MLAZ Malazgirt-MUS 23.84 282 eP P **00 42 29.8 +4.1**
SENK Senkaya-Erzuru 23.85 286 eP P **00 42 28.3 +2.4**
SIRT Sirnak 24.18 278 eP P **00 42 30.6 +1.9**
KOPR Koprukoy-ERZUR 24.27 284 eP P **00 42 32.9 +3.2**
GURO Guroymak-BITLI 24.32 281 eP P **00 42 31.7 +1.7**
LZH Lanzhou 24.56 85 eP P **00 42 35.9 +3.6**
LZH PP PnPn **00 43 10.4 -1.2**
LZH pmax pmax
comp=Z,19nm,1.1s
LZH pmax pmax
comp=Z,69nm,4.3s
LZH LR LR
comp=Z,440nm,11.1s
LZH LR LR
comp=Z,560nm,11.7s
LZH LR LR
comp=Z,500nm,13.0s
VRTB Varto-Mus 24.68 282 eP P **00 42 36.6 +3.3**
ZAK Zakamensk 24.68 50 eP P **00 42 34.0 +0.8**
ZAK pmax pmax
comp=Z,13nm,1.1s
CHOM Cayeli-Rize 25.02 287 eP P **00 42 38.4 +2.2**
KOPT Kop Dagi 25.31 285 P P **00 42 41.4 +2.2**
KOPT IAmb IAmb 00 42 48.8
comp=Z,24nm,1.0s
TLY Talaya 25.33 48 iP P **00 42 39.5 +0.5**
TLY pmax pmax
comp=Z,11nm,1.6s
TLY Talaya 25.33 48 P P **00 42 40.5 +1.6**
MARD Mardin 25.51 278 P P **00 42 42.4 +1.5**
MARD IAmb IAmb 00 42 46.4
comp=Z,25nm,1.0s
KIRV Kirov 25.59 331 P P **00 42 42.2 +1.0**
comp=Z,12nm,0.4s,baz=140,slow=13,SNR=8.0
VRH Novokhopyorsk 25.66 311 eP P **00 42 41.7 -0.1**
VRH pmax pmax
comp=Z,40nm,0.6s
SOC Sochi 25.73 293 eP P **00 42 42.7 +0.1**
SOC e*PP pP **00 43 09.4 -0.7**
SOC e*SP sP **00 43 24.1 -0.7**
SOC e 00 43 26.4
SOC eS S **00 47 03.9 +1.6**
SOC pmax pmax
comp=Z,20nm,0.9s
DYBB Diyarbakir 25.89 280 eP P **00 42 45.3 +1.1**
SONM Songino Array 26.06 57 P P **00 42 46.9 +1.1**
comp=Z,2.9nm,0.7s,baz=261,slow=9.8,SNR=20
SONM Songino Array 26.06 57 eP P **00 42 47.3 +1.6**
SONM pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 26.06 57 P P **00 42 47.0 +1.3**
CD2 Chengdu 26.19 97 P P **00 42 47.9 +1.0**
CD2 PP PnPn **00 43 35.1 +1.7**
CD2 S S **00 47 09.5 -0.4**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,210nm,7.5s
WHFO Wadi Hawf 26.27 225 P P **00 42 47.7 0.0**
PTK Pertek 26.31 282 eP P **00 42 49.5 +1.4**
ULN Ulaanbaatar 26.50 57 ⇑eP P **00 42 50.6 +0.8**
ULN pmax pmax
comp=Z,8.0nm,1.7s
ULN Ulaanbaatar 26.50 57 P P **00 42 50.5 +0.8**
ABTO Aybut 26.99 225 P P **00 42 54.0 -0.2**
VORD Divnogorie 27.05 309 eP P **00 42 54.2 -0.2**
VORD pmax pmax
comp=Z,20nm,0.8s
MALT Malatya 27.15 281 eP P **00 42 57.9 +2.4**
VSR Storozhevoye 27.20 310 eP P **00 42 55.5 -0.2**
VSR pmax pmax
comp=Z,30nm,0.8s
RAYN Ar Rayn 27.67 246 iP P **00 43 00.1 -0.1**
SNR=6.9
RAYN Ar Rayn 27.67 246 P P **00 43 00.3 +0.1**
RAYN pmax pmax
comp=Z,5.0nm,0.7s
RAYN Ar Rayn 27.67 246 P P **00 43 00.3 +0.1**
LPSR Galich'ya Gora 27.74 313 eP P **00 43 00.7 +0.2**
LPSR pmax pmax
comp=Z,50nm,0.7s
SVSK Karacayir 27.99 285 eP P **00 43 04.7 +1.8**
TOKT Tokat 28.28 286 eP P **00 43 06.9 +1.4**
GAZ Gaziantep 28.32 279 P P **00 43 08.1 +2.1**
TOKA Tokat 28.33 286 P P **00 43 07.6 +1.6**
TOKA IAmb IAmb 00 43 08.9
comp=Z,18nm,0.8s
KOZT Kozan 29.33 280 eP P **00 43 16.7 +1.9**
CEYT Ceyhan 29.50 280 eP P **00 43 18.7 +2.4**
MOS Moscow 29.52 318 eP P **00 43 15.5 -0.8**
MOS e*PP pP **00 43 41.3 -3.1**
MOS e 00 44 13.9
MOS eSS SS 00 49 45.7 -26
MOS pmax pmax
comp=Z,57nm,0.9s
HHC Hu-ho-hao-te 29.67 72 eP P **00 43 20.1 +2.2**
HHC LR LR
comp=Z,260nm,11.9s
HHC LR LR
comp=Z,310nm,11.9s
HHC LR LR
comp=Z,150nm,11.9s
SIM Simferopol' 29.75 296 diP P **00 43 18.4 -0.1**
CMAR Chiang Mai Arr 29.86 124 P P **00 43 20.6 +0.9**
comp=Z,0.6nm,0.3s,baz=310,slow=8.2,SNR=4.1
CMAR ScP ScP **00 49 50.1 -0.4**
comp=Z,0.9nm,0.5s,baz=302,slow=4.1,SNR=6.6
OBN Obninsk 29.87 317 ⇓P P **00 43 19.6 +0.3**
OBN Obninsk 29.87 317 ⇓eP P **00 43 18.7 -0.6**
OBN i *PP pP **00 43 49.4 +2.0**
OBN e 00 44 21.2
OBN eS S **00 48 04.2 -2.9**
OBN pmax pmax
comp=Z,78nm,1.3s
OBN Obninsk 29.87 317 P P **00 43 18.5 -0.8**
ILGA Ilgaz 30.32 288 P P **00 43 25.4 +1.7**
GYA Guiyang 30.51 102 eP P **00 43 29.8 +4.4**
GYA pmax pmax
comp=Z,10.0nm,1.7s
BR131 Keskin Array S 30.57 286 iP P **00 43 25.5 -0.4**
BR131 Keskin Array S 30.57 286 IAmb IAmb 00 43 28.2
comp=Z,23nm,1.1s
BRTR Keskin Array B 30.57 286 P P **00 43 26.9 +0.9**
comp=Z,7.3nm,0.4s,baz=94,slow=7.4,SNR=45
BRTR Keskin Array B 30.57 286 eP P **00 43 27.4 +1.4**
BRTR pmax pmax
comp=Z,7.0nm,0.4s
BRTR Keskin Array B 30.57 286 P P **00 43 27.2 +1.3**
MMAI Mount Meron Ar 30.93 272 P P **00 43 30.2 +1.2**
comp=Z,1.1nm,0.5s,baz=52,slow=9.6,SNR=4.7
MMAI PcP PcP **00 46 23.9 +1.3**
comp=Z,1.4nm,0.5s,baz=73,slow=5.0,SNR=6.5
KLMR Klimovskoe 30.95 328 eP P **00 43 26.3 -2.5**
KLMR pmax pmax
comp=Z,33nm,1.4s
KLMR Klimovskoe 30.95 328 eP P **00 43 26.3 -2.5**
KLMR AMP 00 43 30.6
comp=Z,33nm,1.4s
ANTO Ankara 31.19 286 P P **00 43 31.3 0.0**
ANTO Ankara 31.19 286 P P **00 43 31.3 0.0**
BR231 Keskin MP Arra 31.21 286 P P **00 43 32.3 +0.8**
BR231 IAmb IAmb 00 43 34.2
comp=Z,43nm,1.2s
KEBE Keben-Mersin 31.22 279 eP P **00 43 31.9 +0.3**
NRIK Noril'sk 32.26 10 P P **00 43 41.3 +1.1**
comp=Z,7.6nm,0.7s,baz=196,slow=5.8,SNR=23
NRIK Noril'sk 32.26 10 iP P **00 43 40.9 +0.7**
NRIK pmax pmax
comp=Z,7.0nm,0.9s

MDUB Mudurnu 32.30 288 P **P** **00 43 41.7 +0.7**
EIL Elat 32.58 267 P **P** **00 43 44.9 +1.4**
comp=Z,10nm,1.0s,baz=44,slow=4.1,SNR=6.1
EIL LR LR 00 59 01.1
comp=Z,70nm,18.5s,baz=96,slow=40
PURM Purcari 32.71 299 ⇓P **P** **00 43 45.9 +1.6**
GULT Gulveren 32.82 288 *eP* **P** **00 43 47.2 +1.7**
BOD Bodaibo 33.05 40 *eP* **P** **00 43 46.5 -0.7**
BOD pmax pmax
comp=Z,11nm,1.6s
SHUT Suhut-Afyon 33.16 284 *eP* **P** **00 43 49.4 +0.8**
AKASG Malin Array Be 33.29 307 P **P** **00 43 49.0 -0.3**
comp=Z,7.0nm,0.4s,baz=78,slow=6.8,SNR=43
AKASG PcP **PcP** **00 46 28.7 +0.1**
comp=Z,0.6nm,0.3s,baz=66,slow=4.2,SNR=2.0
AKASG LR LR 01 00 11.0
comp=Z,44nm,18.9s,baz=65,slow=41
AKASG Malin Array Be 33.29 307 *eP* **P** **00 43 49.6 +0.2**
AKASG pmax pmax
comp=Z,7.0nm,0.4s
AKASG Malin Array Be 33.29 307 P **P** **00 43 49.0 -0.3**
AKBB Malin Array Si 33.29 307 *ceP* **P** **00 43 48.3 -1.1**
AKBB Malin Array Si 33.29 307 lAmb lAmb 00 43 50.5
comp=Z,35nm,1.0s
KIEV Kiev 33.30 307 P **P** **00 43 48.0 -1.4**
TMCR Tamitsa 33.35 333 *eP* **P** **00 43 49.3 -0.4**
TMCR pmax pmax
comp=Z,29nm,0.9s
ADVT Abdulvahap 33.40 288 *eP* **P** **00 43 51.2 +0.7**
KIS Kishinev 33.42 300 *eP* **P** **00 43 50.3 -0.3**
comp=Z,900nm,1.0s
KIS Kishinev 33.42 300 *eP* **P** **00 43 50.0 -0.6**
KIS *e* 00 45 27.0
MILM Milestii Mici 33.43 300 ⇑P **P** **00 43 51.4 +0.8**
TLCR 33.50 297 ⇑P **P** **00 43 52.3 +1.0**
TLCR 33.50 297 P **P** **00 43 52.2 +1.0**
SORM Soroca 33.73 302 ⇑P **P** **00 43 53.7 +0.5**
TPGR Topolog 33.80 296 ⇓P **P** **00 43 55.0 +1.1**
TIRR Tirgusor 33.84 295 P **P** **00 43 54.5 +0.3**
TIRR Tirgusor 33.84 295 P **P** **00 43 54.5 +0.3**
MFTR Murfatlar 33.86 295 ⇓P **P** **00 43 55.1 +0.7**
CFR Carcaliu 33.98 297 ⇓P **P** **00 43 56.0 +0.6**
CFR Carcaliu 33.98 297 P **P** **00 43 55.9 +0.6**
TLBR Topalu 34.09 295 ⇑P **P** **00 43 57.3 +0.9**
VARL Varlezi 34.13 298 ⇑P **P** **00 43 57.9 +1.2**
HARR Harsova 34.16 296 ⇑P **P** **00 43 58.3 +1.3**
HARR Harsova 34.16 296 P **P** **00 43 58.2 +1.3**
TUDR 34.28 297 ⇑P **P** **00 43 59.5 +1.5**
ICOR Ion Corvin 34.31 295 ⇓P **P** **00 43 59.9 +1.7**
GHRR 34.43 298 ⇓P **P** **00 44 01.0 +1.7**
AKAS Kas 34.47 281 P **P** **00 43 59.8 -0.1**
AKAS lAmb lAmb 00 44 00.7
comp=Z,15nm,0.9s
PUL Pulkovo 34.61 323 *ceP* **P** **00 44 01.2 +0.6**
PUL pmax pmax
comp=Z,90nm,0.5s
MANT Manisa 34.70 285 P **P** **00 44 03.2 +1.3**
ODBI Odobesti 34.70 298 ⇓P **P** **00 44 03.6 +2.1**
GRER 34.78 297 ⇑P **P** **00 44 04.6 +2.3**
VRI Vrincioaia 34.92 298 ⇑P **P** **00 44 05.2 +1.6**
VRI Vrincioaia 34.92 298 P **P** **00 44 05.1 +1.6**
TESR Tescani 34.93 299 ⇑P **P** **00 44 04.5 +0.9**
PLOR Plostina 34.97 295 ⇑P **P** **00 44 05.8 +1.8**
PLOR Plostina 34.97 298 P **P** **00 44 05.8 +1.8**
KMPD K-Podol'skiy 35.00 303 P **P** **00 44 04.0 -0.1**
HIA Hailar 35.01 56 *iP* **P** **00 44 04.9 +0.6**
HIA pmax pmax
comp=Z,7.0nm,0.8s
HIA Hailar 35.01 56 P **P** **00 44 05.4 +1.1**
HORU Horodok 35.02 304 P **P** **00 44 04.5 +0.2**
ISR Istrita 35.11 297 ⇑P **P** **00 44 06.7 +1.4**
ISR Istrita 35.11 297 P **P** **00 44 06.6 +1.4**
PRAR RASCA 35.18 301 ⇑P **P** **00 44 06.7 +1.0**
NEHR Nehoiu 35.25 297 ⇓P **P** **00 44 08.1 +1.7**
NACGM Naroch 35.28 314 *e* **P** **00 44 07.0 +0.6**
BIZ Bicaz 35.28 300 ⇑P **P** **00 44 07.8 +1.2**
RAZG Razgrad 35.30 294 ⇑P **P** **00 44 08.3 +1.4**
IDID Didziasalis 35.37 314 *eP* **P** **00 44 08.0 +0.8**
IDID lAmb lAmb 00 44 09.2
comp=Z,22nm,1.0s
JMB Yambol 35.40 292 *eP* **P** **00 44 09.6 +1.9**
MLR Muntele Rosu 35.49 297 ⇑P **P** **00 44 10.8 +2.2**
MLR Muntele Rosu 35.49 297 P **P** **00 44 10.9 +2.3**
MLR pmax pmax
comp=Z,84nm,1.2s
IIGN Ignalina 35.66 314 *eP* **P** **00 44 10.6 +0.9**
IZAR Zarasai 35.72 315 *eP* **P** **00 44 11.1 +0.9**
ISAL Salakas 35.75 315 *eP* **P** **00 44 11.4 +0.9**
ISAL lAmb lAmb 00 44 12.7
comp=Z,20nm,1.1s
SZH Strazhica 35.76 294 *eP* **P** **00 44 11.8 +1.1**
DOPR Dopca 35.84 298 ⇓P **P** **00 44 12.6 +1.2**
BURAR Bucovina Array 35.85 301 P **P** **00 44 12.6 +1.0**
BURAR Bucovina Array 35.85 301 P **P** **00 44 12.8 +1.2**
KSV Kosov 35.93 302 P **P** **00 44 12.9 +0.8**
VSU Vasula 36.01 320 *eP* **P** **00 44 12.6 -0.1**
VSU Vasula 36.01 320 *iP* **P** **00 44 11.6 -1.0**
VSU pmax pmax
comp=Z,99nm,0.9s
ALN Alexandroupoli 36.07 290 P **P** **00 44 15.1 +1.7**
ALN Alexandroupoli 36.07 290 lAmb lAmb 00 44 15.6
comp=Z,18nm,1.0s
VOIR 36.12 297 ⇓P **P** **00 44 14.8 +0.9**
VOIR 36.12 297 P **P** **00 44 14.8 +0.9**
MTUR Matau 36.14 297 ⇑P **P** **00 44 14.8 +0.7**
MTUR Matau 36.14 297 P **P** **00 44 14.7 +0.7**
STFAR Stefanesti-Arg 36.25 296 ⇓P **P** **00 44 17.0 +2.1**
HUMR Humele 36.27 296 ⇑P **P** **00 44 16.1 +1.0**
ARR Arges 36.42 297 ⇑P **P** **00 44 17.7 +1.2**
ARCR ARCALIA 36.47 300 ⇑P **P** **00 44 18.8 +2.0**
LVV L'vov 36.58 305 *eP* **P** **00 44 18.3 +0.6**
MORS Morshin 36.68 304 P **P** **00 44 19.7 +1.2**
VLAD Vladila 36.75 295 ⇓P **P** **00 44 19.9 +0.7**
APA Apatity 36.83 336 ⇓*iP* **P** **00 44 20.0 +0.5**
APA *i* *PP **pP** **00 44 48.0 0.0**
APA pmax pmax
comp=Z,7.0nm,0.8s
APA MLR MLR
comp=Z,400nm,14.0s
PLD Plovdiv 36.84 292 P **P** **00 44 21.3 +1.4**
PLD pmax pmax
comp=Z,45nm,1.1s
PLD Plovdiv 36.84 292 *eP* **P** **00 44 20.7 +0.8**
RZN Rozhen 36.90 291 *eP* **P** **00 44 21.6 +0.9**
PABE Paberze 36.96 314 *eP* **P** **00 44 21.4 +0.7**
PABE lAmb lAmb 00 44 22.6
comp=Z,61nm,0.9s
CJR Cluj-Napoca 37.02 300 ⇑P **P** **00 44 23.2 +1.7**
CJR Cluj-Napoca 37.02 300 P **P** **00 44 23.1 +1.7**
LOT Lotru 37.02 298 ⇑P **P** **00 44 23.4 +1.8**
FIA1 FINESS Array S 37.12 324 P **P** **00 44 21.7 -0.3**
FIA1 lAmb lAmb 00 44 23.5
comp=Z,17nm,0.9s
FINES FINESS Array B 37.12 324 P **P** **00 44 22.0 0.0**
comp=Z,9.1nm,0.3s,baz=118,slow=9.0,SNR=168
FINES LR LR 00 59 59.3
comp=Z,76nm,20.8s,baz=96,slow=36
FINES FINESS Array B 37.12 324 P **P** **00 44 22.1 0.0**
PGB Panagyurishte 37.15 293 *eP* **P** **00 44 24.2 +1.6**
SUW Suwalki 37.26 312 *eP* **P** **00 44 23.6 +0.3**
TRSU Trosnyk 37.35 302 P **P** **00 44 26.3 +2.2**
APE Apeiranthos 37.38 284 ⇑P **P** **00 44 24.9 +0.3**
APE ⇑P **P** **00 44 25.1 +0.5**
APE Apeiranthos 37.38 284 *iP* **P** **00 44 24.2 -0.4**
APE pmax pmax
comp=Z,34nm,0.7s
KWP Kalwaria Pacla 37.45 305 *eP* **P** **00 44 26.5 +1.5**
KWP Kalwaria Pacla 37.45 305 P **P** **00 44 25.5 +0.5**
KWP Kalwaria Pacla 37.45 305 P **P** **00 44 25.5 +0.5**
BAIL Bailesti 37.51 295 ⇓P **P** **00 44 27.1 +1.6**
DEV Deva 37.58 298 ⇓P **P** **00 44 28.0 +1.9**
DEV Deva 37.58 298 P **P** **00 44 27.9 +1.9**
NJ2 Nanjing 37.64 85 *eP* **P** **00 44 27.6 +0.8**
NJ2 pmax pmax
comp=Z,15nm,0.5s
MMB Musomiste 37.65 291 *eP* **P** **00 44 27.7 +0.9**
GZR Gura Zlata 37.72 298 ⇑P **P** **00 44 28.2 +0.8**
KOLS Kolonicke sedl 37.76 303 *eP* **P** **00 44 28.7 +1.1**
KOLS pmax pmax
comp=Z,14nm,1.0s
KOLS Kolonicke sedl 37.76 303 *eP* **P** **00 44 28.7 +1.1**
KOLS *e*PP **PP** **00 45 55.6 -0.5**
KOLS *e* 01 19 02.3
UZH Uzhgorod 37.76 303 *eP* **P** **00 44 27.9 +0.3**
VTS Vitosha 37.81 293 *eP* **P** **00 44 29.7 +1.3**
SRS Serrai 37.85 291 P **P** **00 44 29.2 +0.7**
SRS pmax pmax
comp=Z,26nm,1.0s
HERR Herculane 38.04 297 ⇓P **P** **00 44 30.4 +0.4**
PAIG Paliouri 38.05 289 P **P** **00 44 31.3 +1.2**
KKB Krupnik 38.07 292 *eP* **P** **00 44 31.1 +0.8**
PBUR Paburge 38.16 315 *eP* **P** **00 44 31.6 +0.7**
CRVS Cervenica-Dubn 38.29 303 *eP* **P** **00 44 31.8 -0.3**
CRVS *e* 00 46 02.7
CRVS Cervenica-Dubn 38.29 303 *eP* **P** **00 44 31.8 -0.3**
CRVS *e*PP **PP** **00 46 02.7 +0.7**
IDI Anoyia 38.41 281 P **P** **00 44 33.3 -0.1**
comp=Z,4.2nm,0.4s,baz=101,slow=9.3,SNR=22
IDI Anoyia 38.41 281 ⇓P **P** **00 44 33.9 +0.6**
BZS Buzias 38.50 298 ⇑P **P** **00 44 35.2 +1.4**
BZS Buzias 38.50 298 P **P** **00 44 35.1 +1.2**
BZS pmax pmax
comp=Z,33nm,1.3s
MDVR Moldovita 38.55 297 ⇑P **P** **00 44 35.4 +1.1**
BEL Belsk 38.63 308 *eP* **P** **00 44 36.0 +1.1**
GRG Griva 38.76 291 P **P** **00 44 36.9 +0.8**
LIT Litokhoron 38.89 289 P **P** **00 44 37.7 +0.5**
LIT Litokhoron 38.89 289 P **P** **00 44 37.7 +0.5**
KECS Kecovo 38.97 303 *eP* **P** **00 44 38.8 +1.1**
KECS Kecovo 38.97 303 *eP* **P** **00 44 38.8 +1.1**
NIE Niedzica 39.02 304 *eP* **P** **00 44 39.6 +1.5**
NIE *e*S **PP** **00 46 11.2 +1.3**
NIE Niedzica 39.02 304 P **P** **00 44 39.7 +1.5**
AGG Agios Georgios 39.28 288 lAmb lAmb 00 44 41.9
comp=Z,20nm,0.9s
OJC Ojcow 39.30 306 *eP* **P** **00 44 41.1 +0.7**
OJC Ojcow 39.30 306 lAmb lAmb 00 44 42.1
comp=Z,31nm,0.7s
PSZ Piszkesteto 39.41 302 ⇓P **P** **00 44 42.7 +1.2**
PSZ Piszkesteto 39.41 302 P **P** **00 44 41.8 +0.3**
PSZ Piszkesteto 39.41 302 P **P** **00 44 41.8 +0.3**
FNA Florina 39.56 291 P **P** **00 44 42.9 +0.1**
FNA pmax pmax
comp=Z,36nm,0.7s
FNA Florina 39.56 291 lAmb lAmb 00 44 44.0
comp=Z,22nm,0.7s
LANS Liptovska Anna 39.59 304 *eP* **P** **00 44 44.4 +1.5**
LANS Liptovska Anna 39.59 304 *eP* **P** **00 44 44.4 +1.5**
DIVS Divibare 39.88 296 lAmb lAmb 00 44 47.7
comp=Z,37nm,1.0s
BUD Budapest 40.05 301 P **P** **00 44 48.3 +1.7**
BUD pmax pmax
comp=Z,35nm,0.9s
VYHS Vyhne 40.06 303 *eP* **P** **00 44 48.3 +1.5**
VYHS pmax pmax
comp=Z,21nm,1.3s
VYHS Vyhne 40.06 303 *eP* **P** **00 44 48.3 +1.5**
VYHS *e*PP **PP** **00 46 21.4 +0.2**
ITM Ithomi 40.10 285 P **P** **00 44 45.9 -1.4**
ITM lAmb lAmb 00 44 47.4
comp=Z,17nm,0.6s
ARD3 ARCESS Array S 40.31 336 P **P** **00 44 48.5 -0.1**
ARD3 lAmb lAmb 00 44 50.3
comp=Z,50nm,1.1s
ARD4 ARCESS Array S 40.31 336 P **P** **00 44 48.3 -0.3**
ARD4 lAmb lAmb 00 44 50.2
comp=Z,37nm,0.9s
ARD5 ARCESS Array S 40.32 336 lAmb lAmb 00 44 50.3
comp=Z,42nm,1.1s
ARC4 ARCESS Array S 40.32 336 lAmb lAmb 00 44 50.3
comp=Z,46nm,1.0s
ARB3 ARCESS Array S 40.32 336 lAmb lAmb 00 44 50.3
comp=Z,48nm,1.0s
ARA0 ARCESS Array S 40.33 336 *eP* **P** **00 44 49.5 +0.8**
ARC5 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,42nm,0.9s
ARCES ARCESS Array B 40.33 336 P **P** **00 44 48.8 +0.1**
comp=Z,8.9nm,0.4s,baz=112,slow=9.7,SNR=205
ARCES LR LR 01 00 38.6
comp=Z,75nm,18.4s,baz=60,slow=35
ARD6 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,41nm,0.9s
ARA3 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,44nm,0.9s
ARB1 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,46nm,0.9s
ARB4 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,42nm,0.9s
ARC1 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,44nm,0.9s
ARB5 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,43nm,0.9s
ARC6 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,41nm,0.9s
ARD1 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.9
comp=Z,44nm,1.0s
ARC7 ARCESS Array S 40.33 336 lAmb lAmb 00 44 50.3
comp=Z,36nm,0.9s
ARD7 ARCESS Array S 40.34 336 P **P** **00 44 49.6 +0.8**
ARD9 ARCESS Array S 40.34 336 lAmb lAmb 00 44 50.9
comp=Z,52nm,1.1s
SRO Srobarova 40.48 302 *eP* **P** **00 44 51.7 +1.5**
SRO Srobarova 40.48 302 *eP* **P** **00 44 51.7 +1.5**
IGT Igoumenitsa 40.64 289 P **P** **00 44 51.4 -0.3**
IGT pmax pmax
comp=Z,22nm,0.8s
PDG Podgorica 40.74 294 ⇓P **P** **00 44 53.0 +0.6**
PDG Podgorica 40.74 294 P **P** **00 44 53.2 +0.8**
PDG lAmb lAmb 00 44 53.9
comp=Z,26nm,1.0s
GKP Gorka Klasztor 40.78 310 *eP* **P** **00 44 53.7 +1.2**
GKP *e*S **PP** **00 46 33.8 +5.0**
MORC Moravsky Berou 40.78 305 ⇓P **P** **00 44 53.4 +0.7**
MORC Moravsky Berou 40.78 305 *eP* **P** **00 44 53.7 +0.9**
MORC Moravsky Berou 40.78 305 P **P** **00 44 52.9 +0.1**
MORC Moravsky Berou 40.78 305 P **P** **00 44 52.9 +0.1**
JAVC Velka Javorina 40.79 304 *eP* **P** **00 44 55.1 +2.2**
KTK1 Kautokeino 40.85 335 *eP* **P** **00 44 52.8 -0.2**
MODS Modra-Piesok 41.10 303 *eP* **P** **00 44 55.8 +0.4**
MODS pmax pmax
comp=Z,14nm,1.1s
MODS Modra-Piesok 41.10 303 *eP* **P** **00 44 55.8 +0.4**
KRLC Kraliky 41.25 306 *eP* **P** **00 44 57.7 +1.1**
KRLC Kraliky 41.25 306 *eP* **P** **00 44 57.7 +1.1**
HAMF Hammerfest 41.37 337 *eP* **P** **00 44 58.2 +1.1**
VRAC Vranov 41.45 304 ⇓P **P** **00 44 59.6 +1.4**
VRAC Vranov 41.45 304 *eP* **P** **00 44 59.2 +1.0**
VRAC Vranov 41.45 304 P **P** **00 44 59.5 +1.4**
KSP Ksiaz 41.49 307 *eP* **P** **00 44 59.0 +0.6**
KSP *e*S **PP** **00 46 37.5 +1.0**
KSP Ksiaz 41.49 307 P **P** **00 44 59.5 +1.0**
DPC Dobruska-Polom 41.51 306 *eP* **P** **00 44 59.7 +1.0**
DPC Dobruska-Polom 41.51 306 *eP* **P** **00 44 59.7 +1.0**
OSTC Ostas 41.56 306 *eP* **P** **00 45 00.3 +1.2**
KRUC Moravsky 41.60 304 *eP* **P** **00 45 00.5 +1.1**
CHVC Chvalec 41.66 306 *eP* **P** **00 45 00.9 +1.0**
CHVC *ex* x 00 46 41.1
SOP Sopron 41.67 302 P **P** **00 45 01.7 +1.7**
SOP pmax pmax
comp=Z,23nm,1.0s
YAK Yakutsk 41.69 36 LR LR 01 02 39.4
comp=Z,52nm,19.5s,baz=267,slow=36
YAK Yakutsk 41.69 36 *iP* **P** **00 45 01.8 +1.9**
YAK pmax pmax
comp=Z,11nm,0.8s
BSD Bornholm Skovb 42.10 313 *e* **P** **00 45 01.9 -1.4**
baz=95,slow=6.9
BSD *iP* **P** **00 45 02.8 -0.6**
CONA Conrad Observa 42.10 302 *eP* **P** **00 45 04.8 +1.2**
comp=Z,48nm,1.6s,SNR=7.9
ARSA Arzberg 42.43 302 *iP* **P** **00 45 06.8 +0.5**
comp=Z,7.6nm,0.7s
TRO Tromso 42.50 335 *eP* **P** **00 45 06.5 +0.1**
GOLS Golise 42.58 300 *iP* **P** **00 45 08.5 +1.1**
PVCC Panska Ves 42.61 306 *eP* **P** **00 45 08.9 +1.3**
PVCC Panska Ves 42.61 306 *eP* **P** **00 45 08.9 +1.3**
PRU Pruhonice 42.69 306 *eP* **P** **00 45 09.0 +0.8**
PRU Pruhonice 42.69 306 *eP* **P** **00 45 09.0 +0.8**
PRA Prague 42.75 306 *eP* **P** **00 45 10.0 +1.3**
PRA Prague 42.75 306 *eP* **P** **00 45 10.0 +1.3**
PERS Pernice 42.81 301 *iP* **P** **00 45 10.3 +1.0**
KLR Kul'dur 42.86 55 *ceP* **P** **00 45 10.7 +1.1**
KLR pmax pmax
comp=Z,15nm,2.0s
SOKA Soboth 42.86 301 *eP* **P** **00 45 10.9 +1.2**
comp=Z,23nm,0.9s
HFS Hagfors 42.86 321 LR LR 01 02 21.0
comp=Z,31nm,19.7s,baz=73,slow=35
BRG Berggiesshubel 42.97 307 *eP* **P** **00 45 11.2 +0.7**
comp=Z,36nm,1.1s
BRG Berggiesshubel 42.97 307 *eP* **P** **00 45 11.2 +0.7**
BRG pmax pmax
comp=Z,11nm,1.1s
BRG Berggiesshubel 42.97 307 *eP* **P** **00 45 11.6 +1.2**
comp=Z,36nm,1.1s,baz=82,slow=7.8
RGN Rugen 43.04 312 *eP* **P** **00 45 12.2 +1.3**
comp=Z,85nm,0.9s,baz=82,slow=7.8
N2ST Straumen 43.05 331 *eP* **P** **00 45 10.8 -0.1**
N2IH Innhavet 43.07 332 *eP* **P** **00 45 11.2 +0.2**
MOA Molln 43.18 303 *eP* **P** **00 45 12.9 +0.7**
comp=Z,17nm,0.9s,SNR=6.5
FAUS Fauske 43.18 331 *eP* **P** **00 45 12.6 +0.7**
OBKA Obir 43.22 301 *eP* **P** **00 45 13.5 +0.9**
comp=Z,34nm,1.1s
MOR8 Moi Rana 43.26 330 *eP* **P** **00 45 12.3 -0.3**
N2TV TVmvik 43.28 332 *eP* **P** **00 45 13.1 +0.5**
STEI Steigen 43.32 332 *eP* **P** **00 45 13.0 +0.1**
FBE Freiberg 43.33 307 *eP* **P** **00 45 14.8 +1.4**
comp=Z,44nm,1.1s,baz=82,slow=7.8
GEC2 GERESS Array S 43.39 304 *eP* **P** **00 45 14.9 +0.9**
comp=Z,19nm,1.1s,baz=82,slow=7.8
GEC2 GERESS Array S 43.39 304 P **P** **00 45 14.6 +0.6**
GERES GERESS Array B 43.39 304 P **P** **00 45 14.3 +0.3**
comp=Z,4.6nm,0.8s,baz=69,slow=7.3,SNR=26
GERES PP **PP** **00 46 58.3 +1.2**
comp=Z,1.5nm,0.8s,baz=82,slow=9.6,SNR=3.5
GERES GERESS Array B 43.39 304 *eP* **P** **00 45 14.8 +0.8**
GERES pmax pmax
comp=Z,5.0nm,0.8s
GERES GERESS Array B 43.39 304 P **P** **00 45 14.7 +0.6**
TIP Timpagrande 43.40 290 lAmb lAmb 00 45 16.2
comp=Z,28nm,1.1s
KHC Kasperske Hory 43.43 305 *ceP* **P** **00 45 15.5 +1.3**
KHC pmax pmax
comp=Z,79nm,1.7s
KHC Kasperske Hory 43.43 305 *eP* **P** **00 45 15.1 +0.9**
KHC *e*PP **PP** **00 46 54.7 -2.7**
CLL Collm 43.51 308 ⇓*iP* **P** **00 45 15.3 +0.6**
comp=Z,23nm,0.9s
CLL *e*PP **PP** **00 46 59.0 +0.9**
CLL *i* 00 47 07.6
CLL Collm 43.51 308 ⇓*iP* **P** **00 45 15.3 +0.6**
CLL pmax pmax
comp=Z,23nm,0.9s
CLL Collm 43.51 308 *eP* **P** **00 45 15.4 +0.6**
comp=Z,23nm,0.9s,baz=82,slow=7.8
CLL Collm 43.51 308 lAmb lAmb 00 45 16.2
comp=Z,20nm,0.7s
TIXI Tiksi 43.66 22 *ceP* **P** **00 45 15.0 -0.7**
TIXI pmax pmax
comp=Z,29nm,0.7s
TIXI Tiksi 43.66 22 P **P** **00 45 15.9 +0.2**
TIXI lAmb lAmb 00 45 17.2
comp=Z,8.9nm,0.5s
N2VI Vinje 43.79 333 *eP* **P** **00 45 17.1 +0.4**
MYKA Terra Mystica 43.81 301 *eP* **P** **00 45 18.0 +0.6**
comp=Z,12nm,1.0s
KONS Konsvik 43.84 330 *eP* **P** **00 45 17.7 +0.4**
STOK Stokkvaagen 43.86 330 *eP* **P** **00 45 17.9 +0.6**
WET Wettzell 43.88 305 *eP* **P** **00 45 18.8 +1.0**
comp=Z,15nm,1.2s,baz=82,slow=7.8
USRK Ussuriysk Ar. 43.94 63 P **P** **00 45 18.0 -0.4**
comp=Z,1.2nm,0.6s,baz=268,slow=3.1,SNR=2.6
USRK Ussuriysk Ar. 43.94 63 P **P** **00 45 18.0 -0.4**
NORES NORESS Array B 43.96 322 P **P** **00 45 18.3 +0.1**
NORES pmax pmax
comp=Z,4.0nm,0.2s
TANN Tannenbergstha 43.96 307 *eP* **P** **00 45 19.5 +1.0**
comp=Z,25nm,1.0s,baz=82,slow=7.8
LOF Lofoten 43.99 332 *eP* **P** **00 45 18.6 +0.3**
WERN Wernitzgruen 44.03 306 *eP* **P** **00 45 20.1 +1.1**
comp=Z,9.6nm,1.1s,baz=82,slow=7.8
NSS Namsos 44.05 327 *eP* **P** **00 45 19.1 +0.3**
GUNZ Gunzen 44.05 307 *eP* **P** **00 45 20.3 +1.1**
comp=Z,16nm,1.1s,baz=82,slow=7.8
NB2 NORSAR Subarra 44.13 322 P **P** **00 45 19.1 -0.6**
comp=Z,40nm,0.9s,baz=91,slow=7.9
NB2 NORSAR Subarra 44.13 322 P **P** **00 45 19.1 -0.6**
baz=91,slow=7.9
NOA NORSAR Array B 44.13 322 P **P** **00 45 18.8 -0.9**
comp=Z,16nm,0.6s,baz=92,slow=7.7,SNR=81
NOA PP **PcP** **00 47 03.0 +0.5**
comp=Z,1.9nm,0.9s,baz=102,slow=8.0,SNR=2.3
NOA LR LR 01 04 16.9
comp=Z,56nm,18.3s,baz=70,slow=36
PLN Plauen 44.14 307 *eP* **P** **00 45 20.9 +1.0**
comp=Z,9.7nm,0.8s,baz=82,slow=7.8
ROTZ Rotzenmuhle 44.22 306 *eP* **P** **00 45 21.9 +1.4**
comp=Z,24nm,1.3s,baz=82,slow=7.8
MANZ Manzenberg 44.25 306 *eP* **P** **00 45 22.0 +1.3**
comp=Z,12nm,1.1s,baz=82,slow=7.8
NAO01 NORSAR Array S 44.28 322 *eP* **P** **00 45 20.8 0.0**
NEUB Neuenburg 44.29 308 *eP* **P** **00 45 21.9 +0.9**
comp=Z,31nm,0.9s,baz=82,slow=7.8
CEL Celeste 44.33 289 P **P** **00 45 21.3 -0.2**
NBO00 NORSAR Array S 44.34 322 lAmb lAmb 00 45 21.7
comp=Z,41nm,0.8s
OSL Oslo 44.35 320 *eP* **P** **00 45 21.3 0.0**
NC204 NORSAR Array S 44.36 322 lAmb lAmb 00 45 21.9
comp=Z,37nm,0.8s
MOX Moxa 44.46 307 *eP* **P** **00 45 23.4 +1.0**
comp=Z,19nm,1.0s,baz=82,slow=7.8
TBLU Trondheim 44.69 325 *eP* **P** **00 45 23.5 -0.5**
CIMO Cimolais 44.69 301 lAmb lAmb 00 45 25.4
comp=Z,20nm,0.9s
BSEG Bad Segeberg 44.85 312 *eP* **P** **00 45 26.7 +1.3**
comp=Z,36nm,0.9s,baz=82,slow=7.8
GRA1 Grafenberg Arr 44.86 306 lAmb lAmb 00 45 28.3
comp=Z,42nm,1.1s
GRF Grafenberg Arr 44.86 306 *eP* **P** **00 45 27.4 +1.8**
comp=Z,50nm,1.2s,baz=82,slow=7.8
KONO Kongsberg 44.92 320 P **P** **00 45 25.2 -0.6**
KONO pmax pmax
comp=Z,18nm,0.8s
KONO Kongsberg 44.92 320 P **P** **00 45 25.2 -0.6**
KONO lAmb lAmb 00 45 26.8
comp=Z,18nm,0.8s
KONO Kongsberg 44.92 320 *eP* **P** **00 45 25.9 +0.1**
WTTA Wattenberg 45.03 302 *eP* **P** **00 45 27.6 +0.4**
comp=Z,26nm,1.0s
WATA Waldcraim 45.06 302 *eP* **P** **00 45 27.4 0.0**
comp=Z,9.7nm,0.7s
CLZ Clausthal 45.07 309 *eP* **P** **00 45 28.2 +1.0**
comp=Z,39nm,1.4s,baz=82,slow=7.8
NRDL Niedersach Rie 45.14 310 *eP* **P** **00 45 29.1 +1.5**
comp=Z,62nm,1.2s,baz=82,slow=7.8
DOMB Dombas 45.19 323 *eP* **P** **00 45 28.3 +0.3**
DGAR Diego Garcia 45.28 181 P **P** **00 45 30.6 +1.4**
DGAR pmax pmax
comp=Z,287nm,1.4s
DGAR Diego Garcia 45.28 181 P **P** **00 45 30.6 +1.4**
CTI Castel Tesino 45.28 301 P **P** **00 45 29.0 -0.1**
CTI pmax pmax
comp=Z,14nm,0.9s
CTI Castel Tesino 45.28 301 P **P** **00 45 29.0 -0.1**
SQTA Sankt Quirin 45.33 302 *eP* **P** **00 45 29.3 -0.2**
comp=Z,22nm,1.1s
MOTA Moosalm 45.37 302 *eP* **P** **00 45 29.9 +0.1**
comp=Z,18nm,0.9s
TEOL Teolo 45.42 300 P **P** **00 45 30.1 0.0**
TEOL lAmb lAmb 00 45 32.2
comp=Z,39nm,0.8s
SKAR Skarslia 45.55 321 *eP* **P** **00 45 31.8 +0.9**
RETA Reutte 45.57 303 *iP* **P** **00 45 31.6 +0.3**
comp=Z,9.0nm,1.0s
FETA Feichten 45.69 302 *eP* **P** **00 45 32.4 +0.1**
comp=Z,14nm,1.0s
MOL Molde 45.90 324 *eP* **P** **00 45 34.7 +1.2**
UBR Ueberruh 45.96 303 *eP* **P** **00 45 35.1 +0.7**
comp=Z,35nm,1.2s,baz=82,slow=7.8
LATE Laterza 46.03 296 P **P** **00 45 34.6 -0.4**
LATE lAmb lAmb 00 45 38.9
comp=Z,25nm,1.2s
SALO Salr 46.15 300 P **P** **00 45 35.2 -0.6**
AKN Aaknes 46.16 324 *eP* **P** **00 45 36.4 +0.8**
OSSC Osservatorio P 46.18 297 P **P** **00 45 36.6 +0.5**
OSSC lAmb lAmb 00 45 38.8
comp=Z,44nm,1.1s
DAVA Damuels 46.20 303 *eP* **P** **00 45 36.7 +0.3**
comp=Z,45nm,0.9s,SNR=7.3
SNART Snartemo 46.20 318 *eP* **P** **00 45 37.0 +1.1**
SPA0 Spitsbergen Ar 46.33 346 *eP* **P** **00 45 38.2 +1.4**

SPITS Spitsbergen Ar 46.33 346 LR LR 01 08 07.0
comp=Z,61nm,18.3s,baz=90,slow=40
SPITS Spitsbergen Ar 46.33 346 P **P** **00 45 38.1 +1.4**
SPITS pmax pmax
comp=Z,2.0nm,0.3s
STU Stuttgart 46.34 305 P **P** **00 45 37.7 +0.5**
STU Stuttgart 46.34 305 P **P** **00 45 37.6 +0.5**
ODD1 Odda 46.41 320 *eP* **P** **00 45 38.9 +1.2**
BLS5 Blasjo 46.52 320 *eP* **P** **00 45 39.7 +1.1**
TNS Taunus Mts 46.53 307 *eP* **P** **00 45 39.6 +0.9**
comp=Z,8.5nm,0.9s,baz=82,slow=7.8
IBBN Ibbenburen 46.59 310 *eP* **P** **00 45 40.0 +0.9**
comp=Z,30nm,0.9s,baz=82,slow=7.8
TUE Stuetta 46.74 302 P **P** **00 45 40.0 -0.7**
BFO Black Forest 46.99 304 P **P** **00 45 42.2 -0.1**
BFO pmax pmax
comp=Z,12nm,1.0s
BFO Black Forest 46.99 304 *eP* **P** **00 45 42.9 +0.5**
comp=Z,17nm,1.1s,baz=82,slow=7.8
BFO Black Forest 46.99 304 P **P** **00 45 42.2 -0.1**
BER Bergen 47.03 321 *eP* **P** **00 45 43.2 +0.8**
BUG Bochum--Univer 47.04 309 *eP* **P** **00 45 43.7 +1.1**
comp=Z,28nm,1.2s,baz=82,slow=7.8
ASK Askoy 47.09 321 *eP* **P** **00 45 43.4 +0.5**
FOO Floro 47.10 323 *eP* **P** **00 45 43.7 +0.8**
AHRW Bad Neuenahr-A 47.33 308 *eP* **P** **00 45 46.0 +1.1**
comp=Z,29nm,1.0s,baz=82,slow=7.8
CDF Champ du Feu 47.66 305 *eP* **P** **00 45 47.2 -0.4**
CDF pmax pmax
comp=Z,10.0nm,0.9s
BTNL Ternell 47.91 308 P **P** **00 45 49.3 -0.2**
MEM Membach 47.99 308 P **P** **00 45 50.8 +0.9**
MEM pP **pP** **00 46 17.4 -2.5**
MEM PcP **PcP** **00 47 11.2 -4.9**
BHOU Houvegnez 48.04 307 P **P** **00 45 50.9 +0.5**
BHOU pP **pP** **00 46 20.7 +0.3**
BHOU sP **sP** **00 46 33.1 -1.7**
HINF Hinteralfeld 48.07 304 *eP* **P** **00 45 50.2 -0.5**
HINF pmax pmax
comp=Z,13nm,0.7s
WLF Walferdange 48.10 307 P **P** **00 45 51.9 +1.1**
comp=Z,22nm,1.0s
WLF Walferdange 48.10 307 P **P** **00 45 51.4 +0.6**
WLF pmax pmax
comp=Z,27nm,0.9s
WLF Walferdange 48.10 307 *eP* **P** **00 45 52.2 +1.4**
comp=Z,30nm,0.9s,baz=82,slow=7.8
WLF Walferdange 48.10 307 P **P** **00 45 51.4 +0.6**
WLF lAmb lAmb 00 45 53.0
comp=Z,27nm,0.9s
SENIN Lac Senin/Sane 48.14 302 lAmb lAmb 00 45 52.5
comp=Z,18nm,0.8s
HAU Haudompre 48.36 304 *eP* **P** **00 45 52.5 -0.4**
HAU pmax pmax
comp=Z,21nm,1.0s
BGES Gesves 48.61 308 P **P** **00 45 54.8 +0.1**
VSL Villasalto 48.73 293 P **P** **00 45 55.0 -0.9**
LPG La Plagne 48.74 301 *eP* **P** **00 45 56.3 +0.1**
LPG pmax pmax
comp=Z,36nm,1.2s
LPL La Plagne 48.75 301 *eP* **P** **00 45 56.3 +0.1**
LPL pmax pmax
comp=Z,30nm,0.8s
LODK Lodwar 48.75 234 P **P** **00 45 57.2 +0.9**
BMRD Maredsous 48.83 308 P **P** **00 45 57.4 +1.0**
BMRD pP **pP** **00 46 25.8 -0.7**
BMRD PcP PcP 00 47 10.4 -8.7
GIVF Givet 48.84 307 *eP* **P** **00 45 56.8 +0.3**
GIVF pmax pmax
comp=Z,11nm,0.6s
CABF La Chapelle 48.88 303 *eP* **P** **00 45 58.0 +1.0**
CABF pmax pmax
comp=Z,22nm,1.0s
BNI Bardonecchia 48.91 300 P **P** **00 45 58.2 +0.9**
BNI Bardonecchia 48.91 300 lAmb lAmb 00 45 58.9
comp=Z,41nm,1.3s
MBDF Montbardon 48.94 300 *eP* **P** **00 45 56.9 -0.7**
MBDF pmax pmax
comp=Z,18nm,1.0s
DOU Dourbes 48.98 307 ⇑P **P** **00 45 57.3 -0.2**
DOU pP **pP** **00 46 28.1 +0.4**
DOU sP **sP** **00 46 43.0 +0.9**
KEST Kesra 50.12 288 P **P** **00 46 07.6 +1.1**
comp=Z,15nm,0.7s,baz=0.1,slow=0.9,SNR=22
KEST Kesra 50.12 288 lAmb lAmb 00 46 08.5
comp=Z,19nm,0.8s
LOR Lormes 50.17 304 *eP* **P** **00 46 05.8 -0.9**
LOR pmax pmax
comp=Z,14nm,1.0s
SSB Saint Sauveur 50.29 301 P **P** **00 46 07.0 -0.6**
SSB pmax pmax
comp=Z,18nm,1.1s
SSB Saint Sauveur 50.29 301 P **P** **00 46 07.0 -0.6**
SSB lAmb lAmb 00 46 09.2
comp=Z,18nm,1.1s
SSF Saint Saulge 50.46 304 *eP* **P** **00 46 08.2 -0.7**
SSF pmax pmax
comp=Z,17nm,1.1s
AVF Avril sur Loir 50.64 304 *eP* **P** **00 46 09.6 -0.6**
AVF pmax pmax
comp=Z,20nm,0.6s
MJAR Matsushiro Arr 50.83 70 P **P** **00 46 11.0 -0.8**
comp=Z,1.2nm,0.4s,baz=319,slow=13,SNR=2.4
BGF Bois d'Agland 51.04 303 *eP* **P** **00 46 12.6 -0.6**
BGF pmax pmax
comp=Z,19nm,1.0s
KMBO Kilima Mbogo 51.14 229 P **P** **00 46 15.7 +1.1**
comp=Z,1.9nm,0.8s,baz=24,slow=9.7,SNR=6.4
ASAJ Asahikawa 51.30 60 P **P** **00 46 15.2 +0.1**
comp=Z,8.2nm,1.0s,baz=288,slow=20,SNR=2.4
TCF Toulx Ste Croi 51.54 303 *eP* **P** **00 46 16.9 -0.1**
TCF pmax pmax
comp=Z,23nm,1.0s
CAF Calviac 52.07 302 *eP* **P** **00 46 21.0 +0.1**
CAF pmax pmax
comp=Z,21nm,1.1s
EKA Eskdalemuir Ar 52.31 315 P **P** **00 46 22.3 -0.1**
RJF Les Rejaudoux 52.31 302 *eP* **P** **00 46 23.6 +0.9**
RJF pmax pmax
comp=Z,55nm,1.6s
FLN La Foliniere 52.53 307 *eP* **P** **00 46 23.4 -0.8**
FLN pmax pmax
comp=Z,10.0nm,0.6s
GRR Gorron 52.88 307 *eP* **P** **00 46 25.9 -0.9**
GRR pmax pmax
comp=Z,25nm,0.6s
DAG Danmarks Havn 53.67 343 *i* P **P** **00 46 32.0 -0.1**
DAG pmax pmax
comp=Z,11nm,0.8s
DAG Danmarks Havn 53.67 343 *i* P **P** **00 46 32.0 -0.1**
comp=Z,10nm,0.8s
DAG Danmarks Havn 53.67 343 *i* P **P** **00 46 32.0 -0.1**
DAG lAmb lAmb 00 46 33.2
comp=Z,10nm,0.8s
SGMF Saint Gilles 54.00 307 *eP* **P** **00 46 34.4 -0.5**
SGMF pmax pmax
comp=Z,14nm,0.6s
QUIF Quistinic 54.50 307 *eP* **P** **00 46 37.9 -0.6**
QUIF pmax pmax
comp=Z,11nm,0.5s
ETSF Etsaut 54.55 300 *eP* **P** **00 46 39.3 +0.2**
ETSF pmax pmax
comp=Z,8.0nm,0.7s
DBG Daneborg 54.63 341 *i* P **P** **00 46 39.6 +0.6**
DBG lAmb lAmb 00 46 40.8
comp=Z,2.4nm,0.7s
MBAR Mbarara 54.79 236 P **P** **00 46 41.0 -0.3**
SJPF Ste Jean 54.93 301 *eP* **P** **00 46 44.4 +2.6**
SJPF pmax pmax
comp=Z,39nm,1.3s
MPSI Mapaga 57.07 120 P **P** **00 46 59.0 +1.7**
ESBB Sonseca Array 58.19 298 P **P** **00 47 04.4 -0.5**
ESBB lAmb lAmb 00 47 06.1
comp=Z,32nm,1.5s
ESDC Sonseca Array 58.19 298 P **P** **00 47 04.6 -0.3**
comp=Z,8.0nm,0.6s,baz=55,slow=7.2,SNR=123
ESDC Sonseca Array 58.19 298 P **P** **00 47 04.3 -0.6**
PAB San Pablo 58.51 298 P **P** **00 47 06.1 -1.1**
PAB pmax pmax
comp=Z,28nm,1.7s
PAB San Pablo 58.51 298 P **P** **00 47 06.1 -1.1**
PAB lAmb lAmb 00 48 41.3
comp=Z,28nm,1.7s
TAM Tamanrasset 59.04 276 P **P** **00 47 11.6 +0.4**
TAM pmax pmax
comp=Z,4.0nm,0.6s
TAM Tamanrasset 59.04 276 P **P** **00 47 11.6 +0.4**
PBRG Braganca 59.19 301 *eP* **P** **00 47 12.2 +0.4**
comp=Z,28nm,1.7s
MVO Moncorvo 59.66 300 *eP* **P** **00 47 15.5 +0.4**
comp=Z,31nm,1.9s
SUMG Summit 60.09 341 *i* P **P** **00 47 18.8 +0.9**
SUMG pmax pmax
comp=Z,57nm,1.0s
SUMG Summit 60.09 341 P **P** **00 47 18.7 +0.9**
SUMG lAmb lAmb 00 47 20.0
comp=Z,26nm,1.0s
SUMG Summit 60.09 341 *i* P **P** **00 47 18.8 +0.9**
comp=Z,57nm,1.0s
SUMG Summit 60.09 341 *i* P **P** **00 47 18.8 +0.9**
SUMG lAmb lAmb 00 47 20.1
comp=Z,57nm,1.0s
PGAV Gavieira, Arco 60.15 302 *eP* **P** **00 47 19.2 +0.7**
MTE Manteigas 60.35 300 *eP* **P** **00 47 20.3 +0.5**
comp=Z,30nm,1.5s
MTE Manteigas 60.35 300 P **P** **00 47 20.4 +0.6**
PVIS Viseu 60.45 300 *eP* **P** **00 47 20.9 +0.4**
PMRV Marv??o 60.68 299 *eP* **P** **00 47 23.1 +1.1**
COI Coimbra 61.03 300 P **P** **00 47 24.7 +0.4**
COI pmax pmax
comp=Z,25nm,0.8s
COI Coimbra 61.03 300 *e*LQ LQ 00 47 25.2
COI Coimbra 61.03 300 *eP* **P** **00 47 25.4 +1.1**
COI Coimbra 61.03 300 P **P** **00 47 24.7 +0.4**
PCAS Casmilo, Conde 61.16 300 *eP* **P** **00 47 25.9 +0.7**
comp=Z,47nm,1.9s
EVO Evora 61.52 298 *eP* **P** **00 47 28.1 +0.4**
PSBE So Bento 61.61 299 *eP* **P** **00 47 29.3 +1.0**
comp=Z,61nm,1.9s
PBEJ Beja 61.65 298 *eP* **P** **00 47 29.2 +0.7**
PVAQ Vaqueiros 61.84 297 *eP* **P** **00 47 30.2 +0.4**
comp=Z,20nm,1.4s
PVAQ Vaqueiros 61.84 297 P **P** **00 47 29.7 -0.1**
PVAQ lAmb lAmb 00 47 31.2
comp=Z,16nm,1.0s
PBDV Barranco-do-Ve 62.06 297 *eP* **P** **00 47 32.2 +0.8**
comp=Z,39nm,1.2s
PNCL Nicolau / Gran 62.07 298 *eP* **P** **00 47 32.4 +1.0**
comp=Z,21nm,1.7s
ICESG Greenland Ices 62.35 338 *i* P **P** **00 47 34.4 +1.2**
ICESG lAmb lAmb 00 47 35.3
comp=Z,15nm,0.9s
TOA0 Torodi Ar. Sit 67.42 269 P **P** **00 48 05.3 -1.0**
TOA0 lAmb lAmb 00 48 06.4
comp=Z,18nm,0.7s
TORD Torodi Ar. Bea 67.42 269 P **P** **00 48 05.0 -1.3**
comp=Z,16nm,0.5s,baz=47,slow=5.3,SNR=274
TORD Torodi Ar. Bea 67.42 269 P **P** **00 48 04.8 -1.5**
TOLK Toolik Lake Re 68.95 15 P **P** **00 48 15.4 +0.3**
baz=325
TOLK Toolik Lake Re 68.95 15 lAmb lAmb 00 48 16.8
comp=Z,14nm,1.0s
COLD Coldfoot 69.97 17 P **P** **00 48 21.7 +0.4**
baz=325
IMAR Indian Mountai 70.14 19 P **P** **00 48 21.7 -0.7**
BMAR Burnt Mountain 70.99 14 P **P** **00 48 28.1 +0.5**
KOWA Kowa 71.14 274 P **P** **00 48 28.6 -0.6**
KOWA lAmb lAmb 00 48 30.1
comp=Z,23nm,1.3s
I23K Minto, Yukon-K 71.89 17 P **P** **00 48 33.9 +0.9**
baz=326
INK Inuvik 72.05 10 P **P** **00 48 33.8 -0.1**
comp=Z,3.6nm,0.4s,baz=352,slow=4.3,SNR=28
C36M Paulatuk 72.12 6 P **P** **00 48 33.7 -0.5**
baz=346
C36M Paulatuk 72.12 6 lAmb lAmb 00 48 35.0
comp=Z,17nm,0.9s
NEA2 Nenana 72.42 18 P **P** **00 48 36.2 0.0**
baz=326
PRP Porcupine Dome 72.44 16 P **P** **00 48 37.2 +0.8**
TCOL CIGO, UAF Yank 72.47 17 P **P** **00 48 36.7 +0.3**
COLA College 72.47 17 P **P** **00 48 36.5 +0.1**
COLA pmax pmax
comp=Z,20nm,0.3s
COLA College 72.47 17 P **P** **00 48 36.5 +0.1**
CAST Castle Rocks 72.63 20 P **P** **00 48 37.9 +0.5**
CAST lAmb lAmb 00 49 40.4
comp=Z,33nm,1.8s
ILAR Eielson Array 72.78 17 P **P** **00 48 37.5 -0.8**
comp=Z,2.6nm,0.9s,baz=323,slow=4.8,SNR=22
ILAR Eielson Array 72.78 17 *eP* **P** **00 48 37.8 -0.5**
ILAR pmax pmax
comp=Z,3.0nm,0.9s
ILAR Eielson Array 72.78 17 P **P** **00 48 37.3 -1.0**
MCK McKinley 73.17 18 P **P** **00 48 40.9 +0.3**
baz=327
RND Reindeer 73.46 18 lAmb lAmb 00 50 08.8
comp=Z,26nm,1.7s
SCRK Sand Creek 74.11 16 P **P** **00 48 46.3 +0.1**
baz=330
K27K Chicken 74.47 15 P **P** **00 48 48.7 +0.6**
baz=332
DAWY Dawson 74.97 14 P **P** **00 48 50.0 -1.2**
M24K Tolsona, Glenn 75.22 18 P **P** **00 48 53.3 +0.6**
baz=329
BCAR Beaver Creek A 75.39 16 P **P** **00 48 52.6 -0.9**
DBIC Dimbokro 76.44 268 P **P** **00 48 59.6 -0.6**
comp=Z,10nm,0.9s,baz=0.7,slow=7.5,SNR=8.0
KIC Kosan Jeoka 76.53 268 *eP* **P** **00 49 00.7 -0.1**
comp=Z,18nm,0.7s
TIC Toumodi 76.58 268 *eP* **P** **00 49 00.9 -0.1**
LIC Lamto 76.84 268 *eP* **P** **00 49 02.3 -0.2**
comp=Z,16nm,0.5s
YKA Yellowknife Ar 79.56 4 P **P** **00 49 16.1 -0.5**
comp=Z,3.9nm,0.4s,baz=358,slow=5.2,SNR=29
YKA Yellowknife Ar 79.56 4 *eP* **P** **00 49 17.0 +0.4**
YKA pmax pmax
comp=Z,4.0nm,0.4s
BOSA Boshof 80.05 221 P **P** **00 49 18.3 -1.5**
comp=Z,4.1nm,1.0s,baz=11,slow=5.2,SNR=2.1
SCHQ Schefferville 81.26 338 P **P** **00 49 25.0 -1.0**
comp=Z,5.4nm,0.9s,baz=0.9,slow=6.3,SNR=7.4
WRA Warramunga Arr 81.45 123 P **P** **00 49 26.6 -0.7**
comp=Z,3.3nm,0.6s,baz=324,slow=4.8,SNR=35
WRA Warramunga Arr 81.45 123 *eP* **P** **00 49 27.1 -0.3**
WRA pmax pmax
comp=Z,3.0nm,0.6s
WRA Warramunga Arr 81.45 123 P **P** **00 49 27.4 +0.1**
WB2 Warramunga Arr 81.46 123 P **P** **00 49 26.0 -1.4**
WR0 Warramunga Arr 81.59 123 P **P** **00 49 26.9 -1.2**
ASAR Alice Springs 83.83 126 P **P** **00 49 39.1 -0.5**
comp=Z,0.7nm,0.6s,baz=326,slow=5.4,SNR=10
ASAR Alice Springs 83.83 126 *eP* **P** **00 49 39.3 -0.3**
ASAR pmax pmax
comp=Z,1.0nm,0.6s
ASAR Alice Springs 83.83 126 P **P** **00 49 39.4 -0.3**
FFC Flin Flon 87.45 357 P **P** **00 49 56.9 -0.2**
FFC pmax pmax
comp=Z,12nm,1.0s
FFC Flin Flon 87.45 357 P **P** **00 49 56.9 -0.2**
FFC lAmb lAmb 00 49 58.3
comp=Z,12nm,1.0s
CHGQ Chibougamau 87.78 340 P **P** **00 49 59.1 +0.3**
baz=25
MATQ Matagami 88.77 342 P **P** **00 50 04.1 +0.7**
baz=23
NEW Newport 93.53 7 P **P** **00 50 25.6 -0.1**
NEW pmax pmax
comp=Z,4.0nm,1.1s
NEW Newport 93.53 7 P **P** **00 50 25.6 -0.1**
VNA3 Neumayer Olymp 123.32 203 PKPdf **PKiKP** **00 56 05.2 -0.1**
QSPA South Pole Qui 127.89 180 PKP **PKPdf** **00 56 13.6 -0.3**
comp=Z,12nm,0.7s,baz=266,slow=3.6,SNR=5.0
CPUP Villa Florida 136.90 271 PKP **PKPdf** **00 56 31.2 -0.8**
comp=Z,1.7nm,0.7s,baz=75,slow=5.8,SNR=5.1
PLCA Paso Flores 151.91 253 PKPbc **PKiKP** **00 57 04.6 +0.2**
comp=Z,3.8nm,0.7s,baz=121,slow=6.4,SNR=7.6

WEL ***18*** *00:47:18.0,38˚S±9˚×18˚0W±˚, h33km, M4.0/15, ML4.3/15, MLv4.0/15, Error ellipse: s-maj=0.0km s-min=0.0km az=179.4*
NEIC ***18*** *00:47:21.3±2.0, 37.81S±0.08×179.8E±0.1, h44km±10km, Error ellipse: s-maj=16.2km s-min=11.3km az=73.0*
IDC ***18*** *00:47:24.3±5.0, 38.22S×179.81E, h71km±36km, mb4.0/2, mb1 4.2/4, mb1mx3.7/25, mbtmp4.2/4, ML3.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/36, Error ellipse: s-maj=40.0km s-min=30.6km az=57.0*
ISC 18 00:47:22.2±2.6, 37.80S±0.07×179.9E±0.1, h58km±18km,

n95,σ1$55/114, mb4.2/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.16**	**268**	P	**Pn**	**00 47 40.6**	**-1.7**
WMGZ				S	**Sn**	**00 47 57.0**	**-0.2**
MXZ	**Matakaoa Point**	**1.27**	**280**	P	**Pn**	**00 47 41.4**	**-2.3**
MXZ				S	**Sn**	**00 47 58.7**	**-1.1**
MXZ	**Matakaoa Point**	**1.27**	**280**	Pn	**Pn**	**00 47 41.4**	**-2.3**
PUZ	**Puketiti**	**1.31**	**257**	P	**Pn**	**00 47 43.0**	**-1.3**
PUZ				S	**Sn**	**00 48 01.0**	**+0.2**
CNGZ	**Carnagh Statio**	**1.49**	**242**	P	**Pn**	**00 47 46.8**	**+0.1**
CNGZ				S	**Sn**	**00 48 09.5**	**+4.4**
TWGZ	**Tauwhareparae**	**1.55**	**255**	P	**Pn**	**00 47 46.8**	**-0.7**
TWGZ				S	**Sn**	**00 48 07.6**	**+1.0**
HAZ	**Te Kaha**	**1.66**	**271**	P	**Pn**	**00 47 47.7**	**-1.3**
HAZ				S	**Sn**	**00 48 08.8**	**-0.5**
TKGZ	**Te Karaka**	**1.73**	**248**	P	**Pn**	**00 47 49.5**	**-0.4**
TKGZ				S	**Sn**	**00 48 11.7**	**+0.9**
RUGZ	**Raukumara Rang**	**1.75**	**264**	P	**Pn**	**00 47 48.7**	**-1.6**
RUGZ				S	**Sn**	**00 48 12.5**	**+0.9**
RIGZ	**Rimuhau**	**1.90**	**241**	P	**Pn**	**00 47 52.0**	**-0.3**
RIGZ				S	**Sn**	**00 48 16.6**	**+1.4**
PRGZ	**Paritu Road**	**1.93**	**234**	P	**Pn**	**00 47 52.4**	**-0.2**
MWZ	**Matawai**	**1.93**	**253**	P	**Pn**	**00 47 51.6**	**-1.1**
MWZ				S	**Sn**	**00 48 15.6**	**-0.3**
MHGZ	**Mahia Peninsul**	**2.06**	**228**	P	**Pn**	**00 47 54.5**	**+0.1**
MHGZ				S	**Sn**	**00 48 21.2**	**+2.3**
KNZ	**Kokohu**	**2.12**	**234**	P	**Pn**	**00 47 54.4**	**-0.8**
KNZ				S	**Sn**	**00 48 21.7**	**+1.2**
URZ	**Urewera**	**2.23**	**257**	P	**Pn**	**00 47 56.1**	**-0.7**
	30nm,0.3s,baz=89,slow=5.8,SNR=93						
URZ				S	**Sn**	**00 48 24.0**	**+0.7**
	71nm,0.3s,baz=165,slow=22,SNR=28						
URZ	**Urewera**	**2.23**	**257**	P	**Pn**	**00 47 56.3**	**-0.4**
URZ				S	**Sn**	**00 48 23.6**	**+0.4**
URZ	**Urewera**	**2.23**	**257**		**Pn**	**00 47 56.4**	**-0.4**
WHRZ	**Whale Island**	**2.30**	**268**	P	**Pn**	**00 47 56.9**	**-0.8**
RTZ	**Ruatahuna**	**2.43**	**249**	P	**Pn**	**00 47 59.3**	**-0.1**
RTZ				S	**Sn**	**00 48 29.3**	**+1.3**
WHHZ	**Waihua**	**2.44**	**238**	P	**Pn**	**00 47 59.9**	**+0.3**
WHHZ				S	**Sn**	**00 48 30.5**	**+2.3**
RAHZ	**Arahi**	**2.46**	**242**	P	**Pn**	**00 47 59.8**	**-0.1**
RAHZ				S	**Sn**	**00 48 31.2**	**+2.3**
EDRZ	**Edgecumbe**	**2.50**	**262**	P	**Pn**	**00 47 59.7**	**-0.8**
MUGZ	**Murupara**	**2.54**	**254**	P	**Pn**	**00 48 00.2**	**-0.8**
MTHZ	**Maungataniwha**	**2.61**	**245**	P	**Pn**	**00 48 02.0**	**0.0**
MTHZ				S	**Sn**	**00 48 34.1**	**+1.6**
OPRZ	**Ohinepanea**	**2.63**	**268**	P	**Pn**	**00 48 00.8**	**-1.4**
ARHZ	**Aropaoanui**	**2.69**	**236**	P	**Pn**	**00 48 03.3**	**-0.2**
TARZ	**Mount Tarawera**	**2.70**	**260**	P	**Pn**	**00 48 02.7**	**-0.6**
RRRZ	**Republican Roa**	**2.71**	**257**	P	**Pn**	**00 48 02.8**	**-0.5**
NMHZ	**Naumai**	**2.74**	**241**	P	**Pn**	**00 48 03.7**	**-0.1**
TGRZ	**Tauranga**	**2.87**	**270**	P	**Pn**	**00 48 03.8**	**-1.6**
CKHZ	**Cape Kidnapper**	**2.88**	**229**	P	**Pn**	**00 48 05.0**	**-0.5**
MCHZ	**McNeill Hill**	**2.99**	**236**	P	**Pn**	**00 48 07.6**	**+0.5**
BKZ	**Black Stump Fm**	**2.99**	**242**	P	**Pn**	**00 48 06.8**	**-0.4**
BKZ	**Black Stump Fm**	**2.99**	**242**			**00 48 06.9**	**-0.2**
KRHZ	**Kereru**	**3.31**	**235**	P	**Pn**	**00 48 09.2**	**-2.2**
BHHZ	**Black Hill Sta**	**3.43**	**239**	P	**Pn**	**00 48 12.7**	**-0.5**
TOZ	**Tahuroa Road**	**3.47**	**270**	P	**Pn**	**00 48 12.1**	**-1.5**
KUZ	**Kuaotunu**	**3.48**	**286**	P	**Pn**	**00 48 10.9**	**-2.8**
TMVZ	**Te Maari**	**3.53**	**247**	P	**Pn**	**00 48 15.3**	**+0.7**
PNHZ	**Pukenui**	**3.57**	**233**	P	**Pn**	**00 48 13.6**	**-1.4**
MOVZ	**Moawhango**	**3.61**	**242**	P	**Pn**	**00 48 15.9**	**+0.2**
WNVZ	**Wahianoa**	**3.69**	**244**	P	**Pn**	**00 48 17.1**	**+0.3**
MKAZ	**Moumahaki**	**3.82**	**279**	P	**Pn**	**00 48 16.6**	**-1.8**
DVHZ	**Dannevirke**	**3.82**	**228**	P	**Pn**	**00 48 16.7**	**-1.8**
GRZ	**Great Barrier**	**3.86**	**292**	P	**Pn**	**00 48 16.6**	**-2.3**
HIZ	**Hauiti**	**4.03**	**258**	P	**Pn**	**00 48 21.9**	**+0.7**
HIZ	**Hauiti**	**4.03**	**258**	Pn	**Pn**	**00 48 20.7**	**-0.6**
BFZ	**Birch Farm**	**4.03**	**223**	P	**Pn**	**00 48 19.3**	**-2.1**
BFZ	**Birch Farm**	**4.03**	**223**	Pn	**Pn**	**00 48 20.1**	**-1.3**
BFZ				Sn	**Sn**	**00 49 05.4**	**-1.9**
PRWZ	**Pori Road**	**4.10**	**227**	P	**Pn**	**00 48 21.2**	**-1.1**
MBAZ	**Motutapu North**	**4.10**	**283**	P	**Pn**	**00 48 21.1**	**-1.3**
AWAZ	**Awhitu Peninsu**	**4.23**	**278**	P	**Pn**	**00 48 23.1**	**-1.0**
VRZ	**Vera Road**	**4.23**	**250**	P	**Pn**	**00 48 25.8**	**+1.7**
MRZ	**Mangatainoka R**	**4.40**	**228**	P	**Pn**	**00 48 24.6**	**-1.8**
TMWZ	**Te Maipa**	**4.52**	**222**	P	**Pn**	**00 48 26.0**	**-2.1**
HOWZ	**Holdsworth Sta**	**4.59**	**226**	P	**Pn**	**00 48 26.9**	**-2.1**
WCZ	**Waipu Caves**	**4.81**	**291**	P	**Pn**	**00 48 30.2**	**-1.8**
MSWZ	**Moikau Station**	**5.08**	**223**	Pn	**Pn**	**00 48 32.6**	**-3.1**
PLWZ	**Palliser**	**5.19**	**222**	Pn	**Pn**	**00 48 36.5**	**-0.7**
BHW	**Baring Head**	**5.29**	**225**	Pn	**Pn**	**00 48 38.1**	**-0.5**
TCW	**Tory Channel**	**5.51**	**230**	P	**Pn**	**00 48 39.2**	**-2.5**
OUZ	**Omahuta**	**5.68**	**295**	P	**Pn**	**00 48 42.4**	**-1.4**
OUZ	**Omahuta**	**5.68**	**295**		**Pn**	**00 48 42.6**	**-1.2**
BSWZ	**Blackbirch Sta**	**6.06**	**228**	Pn	**Pn**	**00 48 48.2**	**-0.9**
NNZ	**Nelson**	**6.08**	**234**	Pn	**Pn**	**00 48 48.7**	**-0.6**
QRZ	**Quartz Range**	**6.45**	**240**	P	**Pn**	**00 48 51.7**	**-2.7**
QRZ	**Quartz Range**	**6.45**	**240**	Pn	**Pn**	**00 48 51.8**	**-2.7**
CTZ	**Chatham Island**	**6.50**	**157**	P	**Pn**	**00 48 56.3**	**+1.2**
THZ	**Tophouse**	**6.67**	**231**	P	**Pn**	**00 48 56.1**	**-1.4**
THZ	**Tophouse**	**6.67**	**231**	Pn	**Pn**	**00 48 56.0**	**-1.6**
KHZ	**Kahutara**	**6.70**	**224**	P	**Pn**	**00 48 56.3**	**-1.6**
KHZ	**Kahutara**	**6.70**	**224**	Pn	**Pn**	**00 48 56.2**	**-1.6**
LTZ	**Lake Taylor**	**7.66**	**227**	Pn	**Pn**	**00 49 10.3**	**-0.7**
MQZ	**McQueen's Vall**	**8.06**	**221**	Pn	**Pn**	**00 49 16.1**	**-0.4**
RPZ	**Rata Peaks**	**8.93**	**226**	P	**Pn**	**00 49 27.0**	**-1.5**
	0.6nm,0.3s,baz=94,slow=11,SNR=1.6						
RPZ				S	**Sn**	**00 51 00.7**	**-6.8**
	2.9nm,0.3s,baz=142,slow=21,SNR=9.3						
RPZ	**Rata Peaks**	**8.93**	**226**		**Pn**	**00 49 26.1**	**-2.3**
FOZ	**Fox Glacier**	**9.55**	**230**	Pn	**Pn**	**00 49 35.2**	**-1.7**
LBZ	**Lake Benmore**	**9.84**	**225**	Pn	**Pn**	**00 49 39.5**	**-1.3**
ODZ	**Otahua Downs**	**10.02**	**221**	Pn	**Pn**	**00 49 41.2**	**-2.1**
MLZ	**Mavora Lakes**	**11.60**	**226**	Pn	**Pn**	**00 50 05.4**	**+0.5**
HNR	**Honiara**	**33.47**	**322**	LR	LR	01 07 08.1	
	comp=Z,69nm,18.6s,baz=144,slow=35						
COEN	**Coen**	**40.28**	**296**	P	**P**	**00 54 54.2**	**+0.5**
COEN				lAmb	lAmb	00 54 54.8	
	comp=Z,6.2nm,0.6s						
AS31	**Alice Springs**	**41.55**	**276**	P	**P**	**00 55 03.8**	**-0.3**
ASAR	**Alice Springs**	**41.55**	**276**	P	**P**	**00 55 04.4**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=118,slow=7.4,SNR=33						
ASAR	**Alice Springs**	**41.55**	**276**	P	**P**	**00 55 04.7**	**+0.5**
FORT	**Forrest**	**42.93**	**263**	P	**P**	**00 55 14.7**	**-0.5**
WR0	**Warramunga Arr**	**43.04**	**281**	P	**P**	**00 55 16.4**	**+0.1**
WR0				lAmb	lAmb	00 55 16.9	
	comp=Z,2.8nm,0.8s						
WB2	**Warramunga Arr**	**43.20**	**281**	P	**P**	**00 55 17.9**	**+0.4**
WB2				lAmb	lAmb	00 55 18.4	
	comp=Z,3.9nm,0.8s						
WRA	**Warramunga Arr**	**43.21**	**281**	P	**P**	**00 55 17.8**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=121,slow=7.8,SNR=23						
WRA				PcP	**PcP**	**00 57 07.0**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=114,slow=2.7,SNR=2.5						
WRA	**Warramunga Arr**	**43.21**	**281**	lAmb	lAmb	00 55 26.0	
	comp=Z,0.2nm,0.8s						
WB0	**Warramunga Arr**	**43.26**	**281**	P	**P**	**00 55 18.0**	**0.0**
WB0				lAmb	lAmb	00 55 18.6	
	comp=Z,3.3nm,0.5s						
FITZ	**Fitzroy Crossi**	**51.04**	**277**	P	**P**	**00 56 19.3**	**+0.7**
FITZ				lAmb	lAmb	00 56 20.6	
	comp=Z,3.7nm,0.8s						
ARCES	**ARCESS Array B**	**145.34**	**344**	PKPbc	**PKPab**	**01 06 54.5**	**+2.1**
	comp=Z,3.7nm,0.9s,baz=23,slow=6.6,SNR=5.0						
FINES	**FINESS Array B**	**151.25**	**334**	PKPbc	**PKiKP**	**01 07 09.8**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=84,slow=4.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**155.40**	**184**	PKPab	**PKPab**	**01 07 32.7**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=154,slow=2.6,SNR=3.3						

IDC ***18*** *00:53:58.2±0.8, 38.62N×23.40E, h0km, mb3.8/11, mb1 3.8/17, mb1mx3.7/58, mbtmp3.7/17, ML3.3/5, MS3.1/3, Ms1 3.1/3, ms1mx2.5/60, Error ellipse: s-maj=16.4km s-min=12.9km az=128.0*
ISK ***18*** *00:53:59.5, 38.65N×23.45E, h14km, ML3.8/20*
ATH ***18*** *00:53:59.4, 38.63N×23.43E, h23km±1km, ML3.7/34, Error ellipse: s-maj=1.1km s-min=0.6km az=200.0*
THE ***18*** *00:54:00

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.33**	**281**	**P**	**Pg**	**00 54 06.5**	**-0.4**
ATAL				S	Sg	**00 54 11.5**	**+0.1**
ATAL				AML	AML	00 54 15.4	
	comp=N,12511μm,0.3s						
ATAL				AML	AML	00 54 17.6	
	comp=E,13588μm,0.2s						
ATAL	**Atalanti**	**0.33**	**281**	P	**Pg**	**00 54 06.5**	**-0.4**
ATAL				S	**Sg**	**00 54 12.0**	**+0.6**
	comp=E,8μm,0.6s						
LKR	**Lokris**	**0.34**	**273**	P	**Pg**	**00 54 06.5**	**-0.6**
LKR				S	**Sg**	**00 54 11.8**	**0.0**
LKR				AML	AML	00 54 13.6	
	comp=E,19460μm,0.2s						
LKR				AML	AML	00 54 17.8	
	comp=N,15873μm,0.2s						
LKR	**Lokris**	**0.34**	**273**	P	**Pg**	**00 54 06.5**	**-0.6**
LKR				S	**Sg**	**00 54 11.8**	**0.0**
	comp=N,10μm,0.1s						
VIL2	**Platees**	**0.44**	**197**	P	**Pg**	**00 54 09.1**	**+0.2**
VIL2				S	**Sb**	**00 54 16.2**	**-0.1**
VIL2				AML	AML	00 54 18.8	
	comp=N,32628μm,0.7s						
VIL2				AML	AML	00 54 21.0	
	comp=E,33875μm,0.6s						
VILL	**Villia**	**0.48**	**192**	P	**Pg**	**00 54 09.3**	**-0.3**
VILL				S	**Sg**	**00 54 16.7**	**+0.7**
	comp=E,19μm,0.6s						
KYMI	**Kymi, Euboea I**	**0.52**	**90**	P	**Pg**	**00 54 10.1**	**-0.3**
KYMI				S	**Sg**	**00 54 18.0**	**+0.6**
KYMI				AML	AML	00 54 20.1	
	comp=E,30549μm,0.2s						
KYMI				AML	AML	00 54 20.6	
	comp=N,26877μm,0.3s						
KYMI	**Kymi, Euboea I**	**0.52**	**90**	P	**Pg**	**00 54 10.2**	**-0.3**
KYMI				S	**Sg**	**00 54 18.1**	**+0.7**
	comp=N,14μm,0.3s						
AXAR	**Agios Charalam**	**0.62**	**283**	P	**Pg**	**00 54 11.6**	**-0.7**
AXAR				AML	AML	00 54 26.4	
	comp=E,21025μm,0.4s						
AXAR				AML	AML	00 54 29.1	
	comp=N,20624μm,0.5s						
AXAR	**Agios Charalam**	**0.62**	**283**	P	**Pg**	**00 54 11.6**	**-0.7**
AXAR				S	**Sg**	**00 54 21.1**	**+0.5**
	comp=N,11μm,0.4s						
AOS	**Alonnisos**	**0.64**	**33**	P	**Pg**	**00 54 12.0**	**-0.6**
AOS				AML	AML	00 54 25.1	
	comp=N,43245μm,0.3s						
AOS				AML	AML	00 54 25.2	
	comp=E,60313μm,0.3s						
AOS	**Alonnisos**	**0.64**	**33**	PG	**Pg**	**00 54 12.2**	**-0.5**
AOS				SG	**Sg**	**00 54 20.4**	**-0.7**
AOS	**Alonnisos**	**0.64**	**33**	P	**Pg**	**00 54 12.1**	**-0.6**
AOS				S	**Sb**	**00 54 22.1**	**+0.1**
	comp=E,26μm,0.3s						
PTL	**Penteli**	**0.67**	**150**	P	**Pg**	**00 54 13.0**	**-0.3**
PTL				S	**Sb**	**00 54 23.1**	**0.0**
PTL				AML	AML	00 54 25.8	
	comp=E,23309μm,0.3s						
PTL				AML	AML	00 54 26.3	
	comp=N,23346μm,0.3s						
PTL	**Penteli**	**0.67**	**150**	P	**Pg**	**00 54 12.8**	**-0.5**
PTL				S	**Sb**	**00 54 23.0**	**0.0**
	comp=N,13μm,0.5s						
DION	**Dionisos Attik**	**0.68**	**145**	P	**Pg**	**00 54 13.1**	**-0.2**
DION				S	**Sg**	**00 54 22.6**	**+0.2**
DION				AML	AML	00 54 25.7	
DION				AML	AML	00 54 25.9	
DION	**Dionisos Attik**	**0.68**	**145**	P	**Pg**	**00 54 13.2**	**-0.2**
DION				S	**Sg**	**00 54 23.0**	**+0.6**
NEO	**Neokhori**	**0.69**	**346**	P	**Pg**	**00 54 13.6**	**-0.2**
NEO				AML	AML	00 54 27.1	
	comp=N,81896μm,0.3s						
NEO				AML	AML	00 54 27.3	
	comp=E,56913μm,0.3s						
NEO	**Neokhori**	**0.69**	**346**	P	**Pg**	**00 54 13.5**	**-0.2**
ATH	**Athens Observa**	**0.70**	**161**	P	**Pg**	**00 54 13.4**	**-0.3**
ATH				AML	AML	00 54 26.9	
	comp=N,50497μm,0.4s						
ATH				AML	AML	00 54 27.4	
	comp=E,58834μm,0.2s						
ATH	**Athens Observa**	**0.70**	**161**	P	**Pg**	**00 54 13.4**	**-0.3**
ATH				S	**Sb**	**00 54 24.3**	**+0.7**
	comp=E,27μm,0.3s						
LTK	**Loutraki**	**0.71**	**211**	P	**Pg**	**00 54 13.2**	**-0.8**
LTK				AML	AML	00 54 27.9	
	comp=N,22575μm,0.6s						
LTK				AML	AML	00 54 27.9	
	comp=E,16513μm,0.8s						
LTK	**Loutraki**	**0.71**	**211**	P	**Pg**	**00 54 13.3**	**-0.7**
LTK				S	**Sb**	**00 54 24.0**	**-0.1**
	comp=E,11μm,0.8s						
ATHU	**Athens Univers**	**0.72**	**157**	P	**Pg**	**00 54 13.8**	**-0.4**
ATHU				S	**Sb**	**00 54 24.3**	**0.0**
ATHU				AML	AML	00 54 26.2	
	comp=N,13656μm,0.5s						
ATHU				AML	AML	00 54 27.6	
	comp=E,8403μm,0.3s						
ATHU	**Athens Univers**	**0.72**	**157**	P	**Pg**	**00 54 13.8**	**-0.4**
ATHU				S	**Sb**	**00 54 24.6**	**+0.3**
	comp=E,5μm,0.4s						
LOUT	**Loutraki**	**0.74**	**209**	P	**Pg**	**00 54 13.7**	**-0.8**
LOUT				AML	AML	00 54 28.5	
	comp=E,4254μm,0.6s						
LOUT				AML	AML	00 54 29.6	
	comp=N,3677μm,0.3s						
LOUT	**Loutraki**	**0.74**	**209**	P	**Pg**	**00 54 13.8**	**-0.7**
LOUT				S	**Sb**	**00 54 25.4**	**+0.5**
	comp=N,11μm,0.4s						
DSF	**Desfina**	**0.74**	**253**	P	**Pg**	**00 54 13.1**	**-1.6**
DSF				AML	AML	00 54 27.9	
	comp=N,23326μm,0.2s						
DSF				AML	AML	00 54 29.0	
	comp=E,14237μm,0.3s						
DSF	**Desfina**	**0.74**	**253**	P	**Pg**	**00 54 13.2**	**-1.5**
DSF				S	**Sb**	**00 54 25.1**	**0.0**
	comp=E,10μm,0.2s						
XOR	**Xorichti**	**0.76**	**346**	P	**Pg**	**00 54 14.5**	**-0.3**
XOR				S	**Sg**	**00 54 25.2**	**+0.3**
XOR				AML	AML	00 54 27.9	
	comp=E,22280μm,0.4s						
XOR				AML	AML	00 54 28.0	
	comp=N,40506μm,0.7s						
XOR	**Xorichti**	**0.76**	**346**	P	**Pg**	**00 54 14.6**	**-0.3**
XOR				S	**Sb**	**00 54 26.4**	**+1.0**
	comp=N,16μm,0.6s						
VOL2	**Volos**	**0.82**	**333**	P	**Pn**	**00 54 18.4**	**+1.0**
VLY	**Voula,Athens**	**0.83**	**160**	P	**Pg**	**00 54 15.7**	**-0.6**
VLY				S	**Sg**	**00 54 26.4**	**-0.7**
VLY				AML	AML	00 54 29.9	
	comp=N,16650μm,0.2s						
VLY				AML	AML	00 54 30.2	
	comp=E,44473μm,0.4s						
VLY	**Voula,Athens**	**0.83**	**160**	P	**Pg**	**00 54 15.8**	**-0.5**
VLY				S	**Sg**	**00 54 27.5**	**+0.4**
	comp=E,16μm,0.4s						
THAL	**Thalero**	**0.85**	**226**	P	**Pg**	**00 54 15.7**	**-0.9**
THAL				AML	AML	00 54 33.6	
	comp=E,32172μm,0.9s						
THAL				AML	AML	00 54 38.2	
	comp=N,19560μm,0.5s						
THAL	**Thalero**	**0.85**	**226**	P	**Pg**	**00 54 15.8**	**-0.9**
THAL				S	**Sn**	**00 54 29.4**	**-0.7**
	comp=N,15μm,0.6s						
SKY	**Skiros Island**	**0.91**	**74**	P	**Pg**	**00 54 17.3**	**-0.4**
SKY				S	**Sg**	**00 54 30.0**	**+0.4**
SKY				AML	AML	00 54 33.2	
	comp=E,53728μm,0.2s						
SKY				AML	AML	00 54 33.8	
	comp=N,49238μm,0.3s						
SKY	**Skiros Island**	**0.91**	**74**	P	**Pg**	**00 54 17.2**	**-0.5**
SKY				S	**Sb**	**00 54 30.9**	**+1.2**
AGG	**Agios Georgios**	**0.95**	**295**	P	**Pg**	**00 54 17.6**	**-0.9**
AGG				S	**Sg**	**00 54 30.7**	**-0.1**
AGG				AML	AML	00 54 34.9	
	comp=N,4766μm,0.7s						
AGG				AML	AML	00 54 37.5	
	comp=E,3667μm,0.6s						
AGG	**Agios Georgios**	**0.95**	**295**	PG	**Pg**	**00 54 17.8**	**-0.7**
AGG	**Agios Georgios**	**0.95**	**295**	Pg	**Pg**	**00 54 18.1**	**-0.4**
AGG	**Agios Georgios**	**0.95**	**295**	P	**Pg**	**00 54 17.7**	**-0.7**
AGG				S	**Sn**	**00 54 32.6**	**+0.1**
	comp=E,2μm,0.7s						
KARY	**Karystos**	**0.99**	**127**	P	**Pb**	**00 54 18.6**	**-0.6**
KARY				S	**Sg**	**00 54 32.2**	**-0.1**
KARY				AML	AML	00 54 34.4	
	comp=E,11604μm,0.3s						
KARY				AML	AML	00 54 35.8	
	comp=N,8922μm,0.4s						
KARY	**Karystos**	**0.99**	**127**	P	**Pb**	**00 54 18.8**	**-0.4**
KARY				S	**Sb**	**00 54 32.7**	**+0.6**
	comp=N,6μm,0.4s						
KALE	**Kalithea**	**1.04**	**257**	P	**Pb**	**00 54 18.5**	**-1.7**
KALE				S	**Sg**	**00 54 34.5**	**+0.5**
KALE				AML	AML	00 54 39.0	
	comp=N,5587μm,0.4s						
KALE				AML	AML	00 54 40.7	
	comp=E,5876μm,0.4s						
KALE	**Kalithea**	**1.04**	**257**	P	**Pb**	**00 54 18.3**	**-1.8**
KALE				S	**Sn**	**00 54 35.5**	**+0.5**
	comp=E,3μm,0.5s						
EPID	**Epidavros**	**1.05**	**194**	P	**Pb**	**00 54 19.2**	**-1.0**
EPID				S	**Sg**	**00 54 34.5**	**+0.5**
EPID	**Epidavros**	**1.05**	**194**	P	**Pb**	**00 54 19.3**	**-0.9**
EPID				S	**Sn**	**00 54 36.1**	**+1.1**
	comp=E,7μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.09**	**291**	P	**Pb**	**00 54 20.7**	**-0.1**
MAKR				AML	AML	00 54 40.1	
	comp=N,5456μm,0.9s						
MAKR				AML	AML	00 54 44.7	
	comp=E,2926μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.09**	**291**	P	**Pb**	**00 54 20.8**	**-0.1**
TRIZ	**Trizonia**	**1.10**	**256**	P	**Pb**	**00 54 21.0**	**0.0**
TRIZ				S	**Sb**	**00 54 34.6**	**-0.7**
TRIZ	**Trizonia**	**1.10**	**256**	P	**Pb**	**00 54 19.7**	**-1.3**
TRIZ				S	**Sg**	**00 54 35.9**	**+0.1**
	comp=E,3μm,0.6s						
SERG	**Sergoula**	**1.10**	**259**	P	**Pb**	**00 54 19.3**	**-1.8**
SERG				AML	AML	00 54 42.2	
	comp=E,3263μm,0.6s						
SERG				AML	AML	00 54 42.4	
	comp=N,7452μm,0.6s						
SERG	**Sergoula**	**1.10**	**259**	P	**Pb**	**00 54 19.3**	**-1.8**
SERG				S	**Sg**	**00 54 36.4**	**+0.6**
	comp=N,3μm,0.6s						
ALIK	**Aliki, Aigiali**	**1.10**	**251**	P	**Pb**	**00 54 20.4**	**-0.7**
ALIK				S	**Sn**	**00 54 38.1**	**+1.8**
GUR	**Goura**	**1.10**	**231**	P	**Pb**	**00 54 20.0**	**-1.3**
GUR				S	**Sb**	**00 54 35.8**	**+0.3**
GUR	**Goura**	**1.10**	**231**	P	**Pb**	**00 54 19.9**	**-1.3**
GUR				S	**Sb**	**00 54 35.8**	**+0.3**
	comp=N,11μm,0.7s						
KLV	**Kalavryta, Ach**	**1.17**	**240**	P	**Pb**	**00 54 21.2**	**-1.1**
KLV				AML	AML	00 54 42.0	
	comp=E,2620μm,0.6s						
KLV				AML	AML	00 54 42.4	
	comp=N,3486μm,0.6s						
KLV	**Kalavryta, Ach**	**1.17**	**240**	P	**Pb**	**00 54 21.2**	**-1.1**
KLV				S	**Sn**	**00 54 38.3**	**+0.2**
	comp=N,2μm,0.7s						
ANX	**Ano Chora**	**1.19**	**269**	P	**Pn**	**00 54 21.2**	**-1.4**
ANX				AML	AML	00 54 47.5	
	comp=E,6023μm,0.6s						
ANX				AML	AML	00 54 48.9	
	comp=N,5238μm,0.7s						
ANX	**Ano Chora**	**1.19**	**269**	P	**Pn**	**00 54 21.5**	**-1.0**
ANX				S	**Sn**	**00 54 39.0**	**+0.4**
	comp=N,3μm,0.6s						
EFP	**Efpalio**	**1.22**	**261**	P	**Pn**	**00 54 21.8**	**-1.1**
EFP				AML	AML	00 54 43.1	
	comp=N,4206μm,0.8s						
EFP				AML	AML	00 54 49.2	
	comp=E,3424μm,0.8s						
EFP	**Efpalio**	**1.22**	**261**	P	**Pn**	**00 54 21.7**	**-1.1**
EFP				S	**Sb**	**00 54 39.0**	**+0.4**
	comp=E,2μm,0.8s						
KRND	**KRANIDI**	**1.27**	**190**	P	**Pn**	**00 54 23.3**	**-0.2**
KRND				AML	AML	00 54 47.1	
	comp=E,8248μm,0.5s						
KRND				AML	AML	00 54 48.6	
	comp=N,8650μm,0.6s						
KRND	**KRANIDI**	**1.27**	**190**	P	**Pn**	**00 54 23.4**	**-0.2**
KRND				S	**Sb**	**00 54 40.5**	**+0.4**
	comp=N,4μm,0.6s						
EVR	**Evrytania**	**1.30**	**283**	P	**Pn**	**00 54 24.5**	**+0.4**
EVR				AML	AML	00 54 52.0	
	comp=N,1321μm,0.6s						
EVR				AML	AML	00 54 56.3	
	comp=E,1273μm,0.7s						
EVR	**Evrytania**	**1.30**	**283**	P	**Pn**	**00 54 24.5**	**+0.4**
PAIG	**Paliouri**	**1.31**	**8**	P	**Pn**	**00 54 23.6**	**-0.5**
PAIG	**Paliouri**	**1.31**	**8**	P	**Pn**	**00 54 23.6**	**-0.5**
LRSO	**Larissa Observ**	**1.32**	**322**	P	**Pn**	**00 54 24.3**	**0.0**
LRSO	**Larissa Observ**	**1.32**	**322**	P	**Pn**	**00 54 24.2**	**0.0**
LRSO				S	**Sn**	**00 54 42.1**	**+0.5**
	comp=E,2μm,0.9s						
TRIP	**Tripoli**	**1.44**	**220**	P	**Pn**	**00 54 26.1**	**+0.2**
TRIP				AML	AML	00 54 49.6	
	comp=E,3197μm,0.8s						
TRIP				AML	AML	00 54 52.4	
	comp=N,3325μm,0.5s						
TRIP	**Tripoli**	**1.44**	**220**	P	**Pn**	**00 54 26.3**	**+0.4**
TRIP				S	**Sb**	**00 54 45.5**	**+0.5**
	comp=N,2μm,0.7s						
THL	**Klokotos Trika**	**1.44**	**311**	P	**Pn**	**00 54 25.8**	**-0.1**
THL				AML	AML	00 54 53.7	
	comp=E,991μm,0.6s						
THL				AML	AML	00 54 55.2	
	comp=N,938μm,0.7s						
THL	**Klokotos Trika**	**1.44**	**311**	P	**Pn**	**00 54 25.9**	**-0.1**
THL				S	**Sn**	**00 54 42.5**	**-2.3**
VLX	**Vlachokerasia**	**1.51**	**214**	P	**Pn**	**00 54 27.4**	**+0.4**
VLX				AML	AML	00 54 51.8	
	comp=E,6321μm,0.5s						
VLX				AML	AML	00 54 55.6	
	comp=N,4157μm,0.7s						
VLX	**Vlachokerasia**	**1.51**	**214**	P	**Pn**	**00 54 27.4**	**+0.4**
VLX				S	**Sb**	**00 54 48.2**	**+1.0**
	comp=N,3μm,0.6s						
DRO	**Drossia**	**1.52**	**244**	P	**Pn**	**00 54 27.5**	**+0.5**
DRO				AML	AML	00 54 54.5	
	comp=N,5627μm,1.1s						
DRO				AML	AML	00 54 55.2	
	comp=E,3032μm,0.7s						
DRO	**Drossia**	**1.52**	**244**	P	**Pn**	**00 54 27.4**	**+0.4**
LIT	**Litokhoron**	**1.64**	**334**	P	**Pn**	**00 54 28.5**	**-0.2**
LIT	**Litokhoron**	**1.64**	**334**	Pn	**Pn**	**00 54 28.7**	**0.0**
LIT	**Litokhoron**	**1.64**	**334**	P	**Pn**	**00 54 28.5**	**-0.2**
RLS	**Riolos of Patr**	**1.65**	**250**	P	**Pb**	**00 54 30.2**	**-0.2**
RLS	**Riolos of Patr**	**1.65**	**250**	P	**Pn**	**00 54 29.6**	**+0.8**
PLG	**Polygyros**	**1.74**	**0**	P	**Pn**	**00 54 29.8**	**-0.3**
PLG	**Polygyros**	**1.74**	**0**	P	**Pn**	**00 54 29.8**	**-0.3**
AMT	**Artemida-Makis**	**1.75**	**232**	P	**Pn**	**00 54 31.2**	**+1.0**
AMT				AML	AML	00 55 03.7	
	comp=E,3225μm,0.6s						
AMT				AML	AML	00 55 05.3	
	comp=N,3379μm,1.2s						
AMT	**Artemida-Makis**	**1.75**	**232**	P	**Pn**	**00 54 31.2**	**+1.0**
OUR	**Ouranopolis**	**1.75**	**14**	P	**Pn**	**00 54 30.1**	**-0.1**
OUR	**Ouranopolis**	**1.75**	**14**	PN	**Pn**	**00 54 30.2**	**0.0**
OUR	**Ouranopolis**	**1.75**	**14**	P	**Pn**	**00 54 30.1**	**-0.1**
LIA	**Limnos Island**	**1.85**	**47**	P	**Pn**	**00 54 31.0**	**-0.6**
LIA	**Limnos Island**	**1.85**	**47**	P	**Pn**	**00 54 31.2**	**-0.4**
ITM	**Ithomi**	**1.88**	**220**	P	**Pn**	**00 54 33.3**	**+1.3**
ITM	**Ithomi**	**1.88**	**220**	PN	**Pn**	**00 54 32.5**	**+0.5**
ITM	**Ithomi**	**1.88**	**220**	Pn	**Pb**	**00 54 33.6**	**-0.7**
ITM	**Ithomi**	**1.88**	**220**	P	**Pn**	**00 54 33.2**	**+1.3**
VLI	**Veliai**	**1.95**	**192**	P	**Pn**	**00 54 32.8**	**-0.1**
VLI				AML	AML	00 55 09.1	
	comp=E,1956μm,0.8s						
VLI				AML	AML	00 55 11.2	
	comp=N,2721μm,0.5s						
VLI	**Veliai**	**1.95**	**192**	P	**Pn**	**00 54 32.9**	**-0.1**
SIGR	**SIGRI**	**1.98**	**72**	PN	**Pn**	**00 54 33.2**	**-0.1**
SIGR	**SIGRI**	**1.98**	**72**	P	**Pn**	**00 54 33.5**	**+0.2**
HORT	**Hortiatis**	**1.98**	**353**	PN	**Pn**	**00 54 33.3**	**-0.1**
HORT	**Hortiatis**	**1.98**	**353**	P	**Pn**	**00 54 33.4**	**0.0**
THE	**Thessaloniki**	**2.03**	**350**	P	**Pn**	**00 54 33.6**	**-0.4**
KTI	**Kastanea**	**2.03**	**330**	P	**Pn**	**00 54 34.5**	**+0.3**
KPRO	**Kipourio**	**2.08**	**310**	P	**Pn**	**00 54 35.1**	**+0.3**
KPRO	**Kipourio**	**2.08**	**310**	P	**Pn**	**00 54 34.9**	**+0.1**
MHLO	**Agia Marina, M**	**2.09**	**158**	P	**Pn**	**00 54 35.1**	**+0.3**
KZN	**Kozani**	**2.11**	**323**	P	**Pn**	**00 54 35.8**	**+0.6**
KZN	**Kozani**	**2.11**	**323**	P	**Pn**	**00 54 35.8**	**+0.6**
NYDR	**Nydri-Lefkada**	**2.14**	**273**	P	**Pb**	**00 54 38.0**	**-0.8**
EVGI	**Lefkada island**	**2.18**	**271**	P	**Pb**	**00 54 38.4**	**-1.0**
LKD2	**Lefkada island**	**2.18**	**275**	P	**Pb**	**00 54 38.4**	**-1.0**
LKD2	**Lefkada island**	**2.18**	**275**	P	**Pb**	**00 54 39.1**	**-0.3**
TSLK	**Tsoukalades, L**	**2.18**	**276**	P	**Pb**	**00 54 39.4**	**-0.1**
SOH	**Sokhos**	**2.19**	**358**	P	**Pn**	**00 54 36.6**	**+0.3**
SOH	**Sokhos**	**2.19**	**358**	P	**Pn**	**00 54 36.4**	**+0.1**
PYL	**PYLOS**	**2.19**	**218**	P	**Pn**	**00 54 38.1**	**+1.8**
THAS	**Thassos island**	**2.21**	**26**	P	**Pn**	**00 54 38.1**	**+1.8**
THAS	**Thassos island**	**2.21**	**26**	P	**Pn**	**00 54 35.3**	**-1.1**
JAN	**Janina**	**2.25**	**298**	P	**Pn**	**00 54 35.5**	**-1.0**
FSK	**Fiskardo**	**2.26**	**266**	P	**Pn**	**00 54 38.7**	**+1.5**
APE	**Apeiranthos**	**2.28**	**133**	P	**Pn**	**00 54 39.0**	**+1.8**
APE	**Apeiranthos**	**2.28**	**133**	P	**Pn**	**00 54 37.6**	**+0.1**
APE	**Apeiranthos**	**2.28**	**133**	PN	**Pn**	**00 54 37.8**	**+0.3**
APE	**Apeiranthos**	**2.28**	**133**	*i* P	**Pn**	**00 54 37.4**	**-0.1**
APE	**Apeiranthos**	**2.28**	**133**	P	**Pn**	**00 54 37.7**	**+0.1**
PRK	**Paraskevi**	**2.30**	**74**	P	**Pn**	**00 54 38.6**	**+1.0**
PRK	**Paraskevi**	**2.30**	**74**	P	**Pn**	**00 54 38.7**	**+1.0**
PSDA	**Pessada-Kefalo**	**2.30**	**258**	P	**Pb**	**00 54 40.0**	**-1.5**
VLMS	**Volimes, Zakyn**	**2.31**	**252**	P	**Pn**	**00 54 39.9**	**+2.0**
VLMS	**Volimes, Zakyn**	**2.31**	**252**	P	**Pn**	**00 54 38.2**	**+0.3**
KEF5	**Kardakata, Kep**	**2.35**	**262**	P	**Pn**	**00 54 38.3**	**-0.2**
BOZC	**Bozcaada**	**2.37**	**58**	PN	**Pn**	**00 54 38.4**	**-0.2**
BOZC	**Bozcaada**	**2.37**	**58**	*i* P	**Pn**	**00 54 38.1**	**-0.5**
BOZC				*i* S	**Sn**	**00 55 03.1**	**-4.4**
BOZC				IAML		00 55 16.0	
	comp=N,132nm,0.8s						
BOZC				IAML		00 55 17.0	
	comp=E,130nm,0.9s						
PENT	**Pentalofos**	**2.37**	**312**	P	**Pn**	**00 54 39.5**	**+0.7**
KTHA	**Kythira Island**	**2.39**	**187**	PN	**Pn**	**00 54 39.6**	**+0.6**
KTHA	**Kythira Island**	**2.39**	**187**	P	**Pn**	**00 54 39.1**	**+0.1**
KEF4	**Livadi, Kephal**	**2.39**	**262**	P	**Pn**	**00 54 40.9**	**+1.9**
DMLN	**Damoulianata-K**	**2.44**	**262**	P	**Pn**	**00 54 41.6**	**+2.0**
SMTH	**Samothraki Isl**	**2.45**	**41**	P	**Pn**	**00 54 38.7**	**-1.1**
SMTH	**Samothraki Isl**	**2.45**	**41**	P	**Pn**	**00 54 38.8**	**-1.1**
GRG	**Griva**	**2.45**	**341**	PN	**Pn**	**00 54 40.0**	**+0.1**
GRG	**Griva**	**2.45**	**341**	P	**Pn**	**00 54 39.8**	**-0.1**
GADA	**Gvkgeada**	**2.46**	**50**	PN	**Pn**	**00 54 39.8**	**-0.2**
GADA	**Gvkgeada**	**2.46**	**50**	P	**Pn**	**00 54 39.5**	**-0.5**
GOKA	**anakkale-Gk**	**2.47**	**50**	*i* P	**Pn**	**00 54 40.5**	**+0.4**
SRS	**Serrai**	**2.48**	**3**	P	**Pn**	**00 54 40.1**	**-0.2**
SRS	**Serrai**	**2.48**	**3**	P	**Pn**	**00 54 40.2**	**-0.2**
URLA	**Izmir**	**2.50**	**95**	PN	**Pn**	**00 54 40.7**	**+0.3**
URLA	**Izmir**	**2.50**	**95**	*i* P	**Pn**	**00 54 40.8**	**+0.3**
KAVA	**Kavala**	**2.50**	**19**	P	**Pn**	**00 54 39.8**	**-0.7**
EZN	**Ezine**	**2.54**	**61**	PN	**Pn**	**00 54 41.3**	**+0.2**
EZN	**Ezine**	**2.54**	**61**	P	**Pn**	**00 54 40.4**	**-0.7**
NEST	**Nestorio**	**2.56**	**315**	P	**Pn**	**00 54 42.6**	**+1.1**
IGT	**Igoumenitsa**	**2.58**	**291**	P	**Pn**	**00 54 44.2**	**+2.4**
AYVA	**Ayvalik**	**2.63**	**74**	*i* P	**Pn**	**00 54 43.4**	**+1.2**
AYVA				*i* S	**Sn**	**00 55 10.3**	**-3.6**
AYVA				IAML		00 55 27.0	
	comp=N,169nm,0.6s						
AMGA	**Amorgos Island**	**2.65**	**132**	P	**Pn**	**00 54 42.9**	**+0.3**
BAYC	**CANAKKALE_Bayr**	**2.66**	**64**	*i* P	**Pn**	**00 54 42.1**	**-0.6**
BAYC				*i* S	**Sn**	**00 55 11.0**	**-3.8**
CMBO	**Columbo, Santo**	**2.67**	**143**	P	**Pn**	**00 54 43.2**	**+0.5**
CMBO	**Columbo, Santo**	**2.67**	**143**	P	**Pn**	**00 54 43.3**	**+0.5**
LSK	**Leskovik**	**2.67**	**305**	P	**Pn**	**00 54 45.0**	**+2.1**
SAP3	**Santorini-Thir**	**2.67**	**145**	P	**Pn**	**00 54 43.3**	**+0.5**
FNA	**Florina**	**2.67**	**324**	PN	**Pn**	**00 54 43.9**	**+1.0**
FNA	**Florina**	**2.67**	**324**		**Pn**	**00 54 44.1**	**+1.2**
FNA	**Florina**	**2.67**	**324**	P	**Pn**	**00 54 43.9**	**+1.0**
THT2	**Imerovigli**	**2.70**	**144**	PN	**Pn**	**00 54 43.9**	**+0.6**
THT2	**Imerovigli**	**2.70**	**144**	P	**Pn**	**00 54 43.9**	**+0.6**
THR3	**Thira Island,**	**2.71**	**144**	P	**Pn**	**00 54 44.1**	**+0.6**
THR7	**Fira-Santorini**	**2.72**	**144**	P	**Pn**	**00 54 44.0**	**+0.5**
NVR	**Nevrokopi**	**2.73**	**7**	P	**Pn**	**00 54 43.7**	**-0.1**
NVR				S	**Sn**	**00 55 18.6**	**+1.9**
DKL	**Dikili**	**2.75**	**80**	PN	**Pn**	**00 54 44.1**	**+0.2**
THR8	**Santorini-Mono**	**2.75**	**143**	P	**Pn**	**00 54 44.1**	**+0.1**
ANKY	**Antikythira Is**	**2.76**	**182**	P	**Pn**	**00 54 44.6**	**+0.5**
DGB	**zmir**	**2.77**	**101**	*i* P	**Pn**	**00 54 44.9**	**+0.7**
SMG	**Samos**	**2.84**	**108**	P	**Pn**	**00 54 45.9**	**+0.8**
BLCB	**Balcova**	**2.84**	**94**	PN	**Pn**	**00 54 45.8**	**+0.6**
ZEDA	**zmir-Bergama**	**2.87**	**82**	*i* P	**Pn**	**00 54 48.3**	**+2.8**
ANAF	**Anafi Island**	**2.94**	**140**	P	**Pn**	**00 54 47.0**	**+0.5**
GELI	**Tayfur-Gelibol**	**2.94**	**52**	PN	**Pn**	**00 54 46.6**	**+0.1**
SRN	**Sarande**	**2.94**	**296**	P	**Pn**	**00 54 49.2**	**+2.6**
ENEZ	**Enez**	**2.97**	**44**	PN	**Pn**	**00 54 47.3**	**+0.4**
ENEZ	**Enez**	**2.97**	**44**	P	**Pn**	**00 54 46.2**	**-0.7**
RDO	**Rodhopi**	**2.99**	**32**	P	**Pn**	**00 54 46.4**	**-0.8**
RDO	**Rodhopi**	**2.99**	**32**	PN	**Pn**	**00 54 46.8**	**-0.4**
RDO	**Rodhopi**	**2.99**	**32**	P	**Pn**	**00 54 46.4**	**-0.8**
KEK	**Kerkira**	**3.02**	**292**	P	**Pn**	**00 54 49.8**	**+2.1**
ALN	**Alexandroupoli**	**3.03**	**41**	PN	**Pn**	**00 54

IVAS	**Ivanjica**	**5.53**	**334**	*e*Pn	**Pn**	**00 55 22.8**	**+0.7**
MATE	**Matera**	**5.57**	**293**	⇓P	**Pn**	**00 55 24.0**	**+1.3**
BORA	**Eskisehir**	**5.59**	**75**	*i* P	**Pn**	**00 55 24.2**	**+1.2**
GEYV	**SAKARYA_Geyve**	**5.62**	**69**	*i* P	**Pn**	**00 55 24.2**	**+0.9**
GRUS	**Gruza**	**5.64**	**340**	*e*Pn	**Pn**	**00 55 25.5**	**+1.9**
CEL	**Celeste**	**5.93**	**269**	Pn	**Pn**	**00 55 27.3**	**-0.5**
TRUS	**Trudelj**	**6.03**	**339**	*e*Pn	**Pn**	**00 55 31.8**	**+2.8**
DIVS	**Divibare**	**6.04**	**336**	*e*Pn	**Pn**	**00 55 31.7**	**+2.4**
DIVS	**Divibare**	**6.04**	**336**	*e*Pn	**Pn**	**00 55 30.0**	**+0.7**
DIVS	**Divibare**	**6.04**	**336**	Pn	**Pn**	**00 55 31.4**	**+2.1**
BBLS	**Lazići**	**6.04**	**331**	*e*Pn	**Pn**	**00 55 30.8**	**+1.5**
BBLS	**Lazići**	**6.04**	**331**	*e*Pn	**Pn**	**00 55 30.2**	**+0.9**
STON	**Ston**	**6.07**	**316**	*e*Pn	**Pn**	**00 55 27.0**	**-2.6**
SAHE	**Sakarya_HENDEK**	**6.13**	**66**	*i* P	**Pn**	**00 55 27.8**	**-2.7**
HERR	**Herculane**	**6.29**	**353**	⇓P	**Pn**	**00 55 32.8**	**+0.2**
HAPS	**Han Pijesak,BI**	**6.41**	**330**	*e*Pn	**Pn**	**00 55 35.4**	**+1.1**
HAPS	**Han Pijesak,BI**	**6.41**	**330**	*e*Pn	**Pn**	**00 55 34.1**	**-0.2**
SGRT	**San Giovanni R**	**6.66**	**300**	Pn	**Pn**	**00 55 38.1**	**+0.3**
GZR	**Gura Zlata**	**6.77**	**356**	⇓P	**Pn**	**00 55 39.1**	**-0.2**
ARR	**Arges**	**6.79**	**7**	⇓P	**Pn**	**00 55 40.2**	**+0.7**
KDHN	**Kadinhani**	**6.80**	**88**	*i* P	**Pn**	**00 55 41.9**	**+2.1**
VOIR		**6.90**	**10**	⇑P	**Pn**	**00 55 42.4**	**+1.3**
FRGS	**Fruska Gora**	**7.06**	**339**	*e*Pn	**Pn**	**00 55 44.7**	**+1.6**
FRGS	**Fruska Gora**	**7.06**	**339**	*e*Pn	**Pn**	**00 55 43.5**	**+0.4**
MLR	**Muntele Rosu** baz=147,slow=3.8	**7.10**	**14**	Pn	**Pn**	**00 55 44.2**	**+0.4**
MLR	comp=N,0.7nm,0.3s,baz=243,slow=18,SNR=1.5			Sn	**Sn**	**00 57 06.1**	**+1.7**
MLR	**Muntele Rosu**	**7.10**	**14**	⇑P	**Pn**	**00 55 45.7**	**+1.8**
BZS	**Buzias**	**7.11**	**350**	*e*Pn	**Pn**	**00 55 44.5**	**+0.7**
BZS	**Buzias**	**7.11**	**350**	⇑P	**Pn**	**00 55 44.2**	**+0.4**
NEHR	**Nehoiu**	**7.12**	**16**	⇑P	**Pn**	**00 55 45.6**	**+1.7**
VAE	**Valguarnera**	**7.21**	**264**	Pn	**Pn**	**00 55 45.3**	**0.0**
VAE	comp=N,1.3nm,0.3s,baz=161,slow=15,SNR=1.9			Sn	**Sn**	**00 57 10.2**	**+3.2**
DOPR	**Dopca**	**7.47**	**11**	⇑P	**Pn**	**00 55 50.5**	**+1.6**
PLOR	**Plostina**	**7.60**	**17**	⇑P	**Pn**	**00 55 53.5**	**+2.9**
VRI	**Vrincioaia**	**7.63**	**18**	⇓P	**Pn**	**00 55 53.4**	**+2.5**
OZUR		**7.66**	**12**	⇓P	**Pn**	**00 55 53.8**	**+2.4**
TLCR		**7.68**	**30**	⇑P	**Pn**	**00 55 54.9**	**+3.3**
BLY	**Banja Luka**	**7.69**	**325**	*e*Pn	**Pn**	**00 55 53.1**	**+1.3**
BLY	**Banja Luka**	**7.69**	**325**	*e*Pn	**Pn**	**00 55 52.4**	**+0.6**
BR131	**Keskin Array S**	**8.00**	**79**		**Pn**	**00 55 57.1**	**+0.8**
BRTR	**Keskin Array B** comp=N,0.2nm,0.3s,baz=259,slow=12,SNR=1.9	**8.00**	**79**	Pn	**Pn**	**00 55 57.7**	**+1.4**
INTR	**Introdacqua**	**8.02**	**298**	Pn	**Pn**	**00 55 57.4**	**+0.9**
CLTB	**Caltabellotta**	**8.12**	**266**	Pn	**Pn**	**00 55 59.7**	**+1.8**
TESR	**Tescani**	**8.22**	**16**	⇑P	**Pn**	**00 56 00.2**	**+1.1**
MORH	**Mrgy, Hungar**	**8.36**	**336**	*e*Pn	**Pn**	**00 56 00.6**	**-0.4**
BIZ	**Bicaz**	**8.53**	**12**	⇓P	**Pn**	**00 56 05.0**	**+1.7**
NRCA	**Norcia**	**8.88**	**301**	Pn	**Pn**	**00 56 08.9**	**+0.6**
BURAR	**Bucovina Array**	**9.07**	**8**	⇑P	**Pn**	**00 56 13.1**	**+2.3**
BURAR	**Bucovina Array**	**9.07**	**8**	Pn	**Pn**	**00 56 12.5**	**+1.7**
BUR08	**Bucovina Ar. S**	**9.10**	**8**	Pn	**Pn**	**00 56 12.4**	**+1.2**
CRES	**Cresnjev**	**9.30**	**323**	*e*Pn	**Pn**	**00 56 13.5**	**-0.4**
PSZ	**Piszkesteto**	**9.63**	**346**	Pn	**Pn**	**00 56 19.9**	**+1.5**
CEY	**Cerknica**	**9.75**	**320**	*e*Pn	**Pn**	**00 56 19.3**	**-0.7**
TEOL	**Teolo**	**11.03**	**311**	Pn	**Pn**	**00 56 36.4**	**-1.2**
ZOU	**Zoufplan**	**11.04**	**319**	Pn	**Pn**	**00 56 38.0**	**+0.1**
MMAI	**Mount Meron Ar** comp=N,0.2nm,0.3s,baz=307,slow=11,SNR=1.4	**11.21**	**116**	Pn	**Pn**	**00 56 41.1**	**+0.9**
GERES	**GERESS Array B** comp=N,0.1nm,0.3s,baz=141,slow=14,SNR=2.5	**12.39**	**329**	Pn	**Pn**	**00 56 57.4**	**+1.2**
KHC	**Kasperske Hory**	**12.66**	**329**	*e*P	**Pn**	**00 57 00.0**	**+0.1**
TUE	**Stuetta**	**12.99**	**312**	Pn	**Pn**	**00 57 04.3**	**-0.3**
SENIN	**Lac Senin/Sane**	**14.17**	**308**	Pn	**Pn**	**00 57 22.7**	**+2.0**
CLL	**Collm**	**14.65**	**333**	*e*PP	**P**	**00 57 34.0**	**+0.8**
CLF	**Chambon-Foret**	**17.99**	**308**	P	**P**	**00 58 11.3**	**+1.0**
ESBB	**Sonseca Array**	**21.24**	**281**	P	**P**	**00 58 45.3**	**-0.6**
ESBB	comp=Z,7.6nm,1.1s			IAmb	IAmb	00 58 47.3	
ESDC	**Sonseca Array** comp=Z,2.7nm,0.9s,baz=74,slow=11,SNR=16	**21.25**	**281**	P	**P**	**00 58 45.6**	**-0.3**
ESDC	**Sonseca Array**	**21.25**	**281**	P	**P**	**00 58 45.6**	**-0.3**
PAB	**San Pablo**	**21.55**	**281**	P	**P**	**00 58 48.8**	**-0.5**
HFS	**Hagfors** comp=Z,1.7nm,0.7s,baz=153,slow=10.0,SNR=4.9	**22.39**	**347**	P	**P**	**00 58 56.8**	**-1.2**
FINES	**FINESS Array B** comp=Z,1.1nm,0.8s,baz=141,slow=12,SNR=4.0	**22.89**	**3**	P	**P**	**00 59 03.3**	**0.0**
FINES	comp=Z,38nm,18.6s,baz=295,slow=40			LR	LR	01 09 17.0	
NC602	**NORSAR Array S**	**23.35**	**345**	P	**P**	**00 59 07.2**	**-0.7**
NC602	comp=Z,9.3nm,1.1s			IAmb	IAmb	00 59 26.2	
MDT	**Midelt** comp=Z,1.0nm,0.8s,baz=78,slow=9.3,SNR=3.9	**23.44**	**264**	P	**P**	**00 59 09.7**	**+0.4**
NC405	**NORSAR Array S**	**23.66**	**346**	P	**P**	**00 59 10.8**	**-0.2**
NC405	comp=Z,12nm,1.1s			IAmb	IAmb	00 59 25.2	
NB201	**NORSAR Array S**	**23.69**	**345**	P	**P**	**00 59 11.3**	**0.0**
NB2	**NORSAR Subarra** comp=Z,8nm,0.6s,baz=153,slow=10	**23.69**	**345**	P	**P**	**00 59 10.6**	**-0.8**
NOA	**NORSAR Array B** comp=Z,0.7nm,0.6s,baz=160,slow=9.7,SNR=6.2	**23.69**	**345**	P	**P**	**00 59 10.7**	**-0.7**
NBO00	**NORSAR Array S**	**23.77**	**345**	P	**P**	**00 59 12.2**	**+0.1**
NC303	**NORSAR Array S**	**23.83**	**346**	P	**P**	**00 59 12.4**	**-0.3**
NC303	comp=Z,5.0nm,0.8s			IAmb	IAmb	00 59 14.0	
NC204	**NORSAR Array S**	**24.00**	**345**	P	**P**	**00 59 13.9**	**-0.5**
EKA	**Eskdalemuir Ar** comp=Z,2.9nm,0.8s,baz=116,slow=9.4,SNR=4.1	**24.43**	**322**	P	**P**	**00 59 17.7**	**-0.6**
PVAQ	**Vaqueiros**	**24.52**	**277**	P	**P**	**00 59 18.1**	**-1.1**
PVAQ	comp=Z,8.5nm,1.1s			IAmb	IAmb	00 59 35.8	
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.5s,baz=33,slow=9.3,SNR=13	**31.88**	**223**	P	**P**	**01 00 24.9**	**-0.2**
TORD	**Torodi Ar. Bea** comp=Z,0.7nm,0.8s	**31.88**	**223**	IAmb	IAmb	01 00 31.4	
GAR	**Garm**	**36.21**	**74**	P	**P**	**01 01 03.6**	**+0.8**
DBIC	**Dimbokro** comp=Z,2.6nm,0.7s,baz=27,slow=11,SNR=1.6	**40.82**	**226**	P	**P**	**01 01 41.6**	**+0.2**
MKAR	**Makanchi Array** comp=Z,1.3nm,0.5s,baz=273,slow=7.4,SNR=22	**43.11**	**59**	P	**P**	**01 02 00.7**	**+0.7**
ZAA0	**Zalesovo Array**	**43.68**	**49**	P	**P**	**01 02 05.2**	**+0.8**
ZAA0	comp=Z,2.9nm,1.0s			IAmb	IAmb	01 02 06.1	
ZALV	**Zalesovo Beam** comp=Z,1.6nm,0.5s,baz=275,slow=9.0,SNR=9.0	**43.68**	**49**	P	**P**	**01 02 04.7**	**+0.3**
ZALV	**Zalesovo Beam**	**43.68**	**49**	P	**P**	**01 02 04.8**	**+0.4**
RES	**Resolute Bay** comp=Z,38nm,18.7s,baz=58,slow=36	**59.96**	**344**	LR	LR	01 29 30.5	
TXAR	**Lajitas Array** comp=Z,0.2nm,0.6s,baz=60,slow=5.3,SNR=2.1	**96.28**	**316**	P	**P**	**01 07 27.2**	**-1.5**

*IDC **18** 01:05:20.5±2.2,2°.04N×126°.22E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.2/64, mbtmp3.5/3, Error ellipse: s-maj=180.9km s-min=27.3km az=65.0*
*DJA **18** 01:05:27.0±0.9,2°.5×12°.6E±°, h10km, M3.6/5, MLv3.6/5*
ISC 18 01:05:28.5±1.1,1°.93N±0°.08×126°.3E±0°.1, h47km, n6, σ2§21/7, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TNTI	**Ternate**	**1.59**	**136**	P		**Pn**	**01 05 56.1**	**+1.8**
SGSI	**Sangihe**	**1.90**	**337**	P		**Pn**	**01 05 59.5**	**+1.0**
SGSI				S		**Sn**	**01 06 23.4**	**+2.2**
GTOI	**Gorontalo**	**3.50**	**249**	P		**Pn**	**01 06 21.9**	**+1.5**
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=338,slow=11,SNR=8.8	**23.13**	**160**	P		**P**	**01 10 29.6**	**-1.3**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=357,slow=14,SNR=2.5	**26.50**	**164**	P		**P**	**01 11 01.4**	**-0.4**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=120,slow=8.1,SNR=4.2	**58.77**	**326**	P		**P**	**01 15 19.5**	**-2.5**

*THR **18** 01:07:49.3±0.6,28°.40N×57°.36E, h15km±999km, ML3.0*
*TEH **18** 01:07:49.4,28°.53N×57°.33E, h8km, ML3.3*
*DSN **18** 01:07:50.5±1.4,28°.15N×57°.96E, h10km, ML3.4/8, Error ellipse: s-maj=36.9km s-min=9.2km az=135.0*
*OMAN **18** 01:07:55.6±0.7,28°.07N×57°.75E, h15km, ml3.2/9, Error ellipse: s-maj=22.6km s-min=2.5km az=35.0*
ISC 18 01:07:50.0±1.0,28°.45N±0°.03×57°.34E±0°.04, h10km, n49, σ1§73/55, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KHNJ	**Kahnooj**	**0.60**	**147**	*e*Pg		**Pb**	**01 08 03.6**	**+1.0**
KBAM	**BAM**	**1.19**	**55**	*e*Pg		**Pb**	**01 08 11.5**	**-1.3**
KBAM				*e*			01 08 27.7	
NGRK	**Negar Kerman**	**1.30**	**336**	*e*Pg		**Pb**	**01 08 12.8**	**-2.0**
NGRK				*e*			01 08 32.8	
GENO	**Geno**	**1.47**	**225**	*e*Pg		**Pb**	**01 08 17.9**	**+0.3**
GENO				*e*			01 08 41.3	
BNDS	**Bandar-Abbas**	**1.47**	**225**	*e*Pn		**Pn**	**01 08 17.2**	**+0.4**
BNDS	comp=N,221nm,0.4s			IAML			01 08 41.8	
BNDS	**Bandar-Abbas**	**1.47**	**225**	*e*Pn		**Pn**	**01 08 17.2**	**+0.4**
KRBR	**Kerman** comp=N,157nm,0.3s	**1.60**	**342**	IAML			01 08 40.2	
TVBK	**TV Kerman**	**1.61**	**342**	*e*Pn		**Pb**	**01 08 18.3**	**-1.7**
TVBK				*e*			01 08 24.0	
KHGB	**Koh Gabri**	**2.06**	**339**	*e*Pn		**Pb**	**01 08 25.7**	**-1.9**
KHGB				*e*			01 08 29.7	
SHME	**Shamm** SNR=10.0	**2.62**	**204**	*e*P		**Pn**	**01 08 32.9**	**+0.4**
SHME				S		**Sn**	**01 09 05.8**	**+1.5**
SHME	**Shamm**	**2.62**	**204**	*e*Pn		**Pn**	**01 08 33.5**	**+1.1**
BANOM	**Banah** SNR=11	**2.69**	**200**	*e*P		**Pn**	**01 08 33.9**	**+0.6**
BANOM				S		**Sn**	**01 09 07.5**	**+1.5**
BANOM	**Banah** SNR=13	**2.69**	**200**	P		**Pn**	**01 08 34.2**	**+0.8**
BANOM				S		**Sn**	**01 09 07.6**	**+1.7**
BANOM	**Banah**	**2.69**	**200**	*e*Pn		**Pn**	**01 08 36.3**	**-1.9**
ZHSF	**Zahedan**	**3.22**	**68**	*e*Pn		**Pn**	**01 08 41.5**	**+0.6**
ZHSF	**Zahedan**	**3.22**	**68**	*e*Pn		**Pn**	**01 08 41.5**	**+0.6**
MSFE	**Esma-Masafi**	**3.26**	**199**	P		**Pn**	**01 08 41.8**	**+0.6**
MSFE	**Esma-Masafi**	**3.26**	**199**	*e*Pn		**Pn**	**01 08 43.8**	**+2.6**
MDH	**Madha**	**3.28**	**197**	P		**Pn**	**01 08 40.4**	**-1.1**
MDH	**Madha**	**3.28**	**197**	*e*Pn		**Pb**	**01 08 45.5**	**-2.8**
UOSS	**Minazif**	**3.64**	**196**	P		**Pn**	**01 08 44.8**	**-1.7**
UOSS	**Minazif**	**3.64**	**196**	P		**Pn**	**01 08 50.2**	**+3.7**
NHDN	**Nehbandan**	**3.76**	**38**	*e*Pn		**Pn**	**01 08 49.5**	**+1.3**
NHDN				*e*			01 09 46.3	
IMEH	**Mehriz**	**3.76**	**322**	*e*Pn		**Pn**	**01 08 49.5**	**+1.1**
HATD	**Hatta, Dubai**	**3.77**	**197**	P		**Pn**	**01 08 52.3**	**+4.0**
BSRN	**Basiran**	**3.83**	**23**	*e*Pn		**Pn**	**01 08 50.9**	**+1.7**
BSRN	**Basiran**	**3.83**	**23**	*e*Pn		**Pn**	**01 08 50.9**	**+1.7**
GHIR	**Ghir-Karzin**	**3.84**	**269**	*e*Pn		**Pn**	**01 08 50.1**	**+0.8**
GHIR	**Ghir-Karzin**	**3.84**	**269**	*e*Pn		**Pn**	**01 08 50.1**	**+0.8**
ASHO	**Ashiyiah** SNR=8.3	**3.93**	**197**	*i* P		**Pn**	**01 08 51.1**	**+0.7**
ASHO	**Ashiyiah** SNR=8.3	**3.93**	**197**	P		**Pn**	**01 08 52.8**	**+2.4**
ASHO	**Ashiyiah**	**3.93**	**197**	*e*Pn		**Pn**	**01 08 52.7**	**+2.3**
FAQ	**Al Faqa, Dubai**	**4.01**	**203**	P		**Pn**	**01 08 52.3**	**+0.7**
FAQ	**Al Faqa, Dubai**	**4.01**	**203**	P		**Pn**	**01 08 53.2**	**+1.7**
FAQ				S		**Sn**	**01 09 39.8**	**+1.1**
FAQ	**Al Faqa, Dubai**	**4.01**	**203**	*e*Pn		**Pn**	**01 08 51.7**	**+0.1**
IKOO	**Kooshah**	**4.21**	**20**	*e*Pn		**Pn**	**01 08 56.3**	**+1.8**
IKOO				*e*			01 10 15.4	
ASUD	**Al Ashush, Dub** SNR=8.5	**4.22**	**206**	*i* P		**Pn**	**01 08 55.1**	**+0.7**
ASUD	**Al Ashush, Dub** SNR=8.5	**4.22**	**206**	P		**Pn**	**01 08 56.8**	**+2.4**
ASUD				S		**Sn**	**01 09 44.7**	**+1.0**
SOHO	**SOHO**	**4.36**	**190**	P		**Pn**	**01 08 54.6**	**-1.8**
SOHO	**SOHO**	**4.36**	**190**	P		**Pn**	**01 08 55.3**	**-1.1**
SOHO				S		**Sn**	**01 09 46.2**	**-1.1**
YZKH	**Yazd**	**4.58**	**330**	*e*Pn		**Pn**	**01 09 01.1**	**+1.7**
YZKH	**Yazd**	**4.58**	**330**	*e*Pn		**Pn**	**01 09 01.2**	**+1.7**
ITEG	**Tejag**	**4.59**	**15**	*e*Pn		**Pn**	**01 09 00.6**	**+0.9**
TPRV	**Parvadeh(Tabas**	**4.59**	**353**	*e*Pn		**Pn**	**01 09 01.8**	**+2.1**
HOQ	**Hoqain**	**4.85**	**180**	P		**Pn**	**01 09 03.2**	**+0.1**
HOQ	SNR=8.8			P		Pb	01 09 03.3	-12
HOQ				S		**Sn**	**01 09 55.3**	**-4.1**
IMON	**Monand**	**5.13**	**22**	*e*Pn		**Pn**	**01 09 08.6**	**+1.4**
TKDS	**Koohdasht(Taba**	**5.15**	**358**	*e*Pn		**Pn**	**01 09 09.1**	**+1.8**
TNSJ	**Nastanj**	**5.53**	**354**	*e*Pn		**Pn**	**01 09 13.6**	**+1.1**
KLNJ	**Kolanjah**	**5.61**	**298**	*e*Pn		**Pn**	**01 09 15.4**	**+1.6**

*IDC **18** 01:09:58.6±0.8,64°.49N×17°.48W, h0km, mb3.6/10, mb1 3.8/11, mb1mx3.5/65, mbtmp3.6/11, ML3.8/1, Error ellipse: s-maj=22.4km s-min=11.1km az=13.0*
*REY **18** 01:09:59.6,64°.68N×17°.44W, h10km*
ISC 18 01:09:59.3±0.9,64°.67N±0°.02×17°.43W±0°.02, h6km±6km, n56, σ1§40/63, mb3.7/11, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
IDYN	**Dyngjuhals** baz=16	**0.12**	**13**	P		**Pg**	**01 10 02.5**	**+0.6**
IDYN	baz=16			S		**Sg**	**01 10 04.6**	**+0.9**
IVON	**Vonarskard** baz=268	**0.14**	**270**	P		**Pg**	**01 10 02.5**	**+0.3**
IVON	baz=268			S		**Sg**	**01 10 05.1**	**+0.9**
IHAM	**Hamarinn** baz=220	**0.26**	**221**	P		**Pg**	**01 10 04.7**	**+0.3**
IGRF	**Grimsfjall** baz=164	**0.28**	**165**	P		**Pg**	**01 10 05.3**	**+0.6**
IKVE	**Kverkfjoll** baz=90	**0.32**	**89**	P		**Pg**	**01 10 06.0**	**+0.4**
IHUS	**Husbondi** baz=194	**0.39**	**195**	P		**Pg**	**01 10 07.3**	**+0.4**
THOR	**Thorvaldshraun** baz=51	**0.41**	**51**	P		**Pg**	**01 10 07.5**	**+0.2**
IVOT	**Vottur** baz=165	**0.42**	**165**	P		**Pg**	**01 10 07.3**	**-0.1**
ISKR	**Skrokkalda** baz=254	**0.43**	**255**	P		**Pg**	**01 10 07.4**	**-0.2**
IKRE	**Kreppuhraun** baz=76	**0.46**	**76**	P		**Pg**	**01 10 08.1**	**-0.1**
IJOK	**Jokulheimar** baz=224	**0.50**	**224**	P		**Pg**	**01 10 08.6**	**-0.3**
IMKO	**Mokollar** baz=57	**0.56**	**56**	P		**Pg**	**01 10 09.9**	**0.0**
IMKO	baz=57			S		**Sg**	**01 10 17.9**	**+0.7**
IIEY	**Innrieyrar** baz=207	**0.66**	**208**	P		**Pg**	**01 10 11.3**	**-0.5**
IKSK	**Karasker** baz=141	**0.66**	**141**	P		**Pg**	**01 10 10.8**	**-1.2**
IKAL	**Kalfafell** baz=188	**0.74**	**189**	P		**Pg**	**01 10 12.8**	**-0.6**
IVSH	**V-Sauoahnukur** baz=79	**0.74**	**79**	P		**Pg**	**01 10 12.8**	**-0.7**
IVSH	baz=79			S		**Sg**	**01 10 23.3**	**+0.1**
IVAT	**Vatnsfell** baz=233	**0.81**	**234**	P		**Pg**	**01 10 14.2**	**-0.7**
IADA	**Aoalbol** baz=66	**0.86**	**66**	P		**Pg**	**01 10 14.7**	**-1.2**
IFAG	**Fagurholsmyri** baz=157	**0.87**	**157**	P		**Pg**	**01 10 15.3**	**-0.6**
IHVE	**Hveravellir** baz=283	**0.94**	**283**	P		**Pg**	**01 10 15.7**	**-1.5**
IMEL	**Melhnausar** baz=20	**0.96**	**20**	P		**Pg**	**01 10 16.4**	**-1.2**
IREN	**Reynihlio** baz=13	**1.00**	**12**	P		**Pg**	**01 10 17.1**	**-1.3**
IKVO	**Krokottuvotn** baz=12	**1.07**	**12**	P		**Pg**	**01 10 18.2**	**-1.5**
ISNB	**Snabyli** baz=209	**1.08**	**210**	P		**Pg**	**01 10 18.8**	**-1.2**
IGRS	**Grimsstaoir** baz=29	**1.11**	**29**	P		**Pb**	**01 10 19.1**	**-1.8**
ISLY	**Slysaalda** baz=221	**1.13**	**222**	P		**Pb**	**01 10 19.4**	**-1.8**
IFED	**Fedgar** baz=237	**1.18**	**238**	P		**Pb**	**01 10 20.4**	**-1.6**
IRJU	**Rjupnafell** baz=208	**1.19**	**208**	P		**Pb**	**01 10 20.6**	**-1.7**
ISKI	**Skildingahlsh** baz=8.1	**1.21**	**8**	P		**Pb**	**01 10 20.6**	**-2.0**
IGHA	**Grjothals** baz=15	**1.22**	**15**	P		**Pn**	**01 10 20.6**	**-2.3**
IMJO	**Mjoaskard** baz=234	**1.23**	**234**	P		**Pn**	**01 10 21.2**	**-1.8**
IGRA	**Granastaoir** baz=357	**1.25**	**357**	P		**Pn**	**01 10 21.1**	**-2.2**
IGYG	**Gygjarholskot** baz=253	**1.27**	**253**	P		**Pn**	**01 10 21.7**	**-1.9**
IDIM	**Dimmadalss** baz=9.2	**1.31**	**9**	P		**Pn**	**01 10 22.1**	**-2.0**
IHLA	**Hella** baz=343	**1.34**	**343**	P		**Pn**	**01 10 22.7**	**-1.7**
IALF	**Alftagrof** baz=214	**1.42**	**214**	P		**Pn**	**01 10 24.3**	**-1.2**
IESK	**Eystri-Skogar** baz=218	**1.46**	**219**	P		**Pn**	**01 10 24.9**	**-1.2**
IBRE	**Brettingsstaoi** baz=352	**1.47**	**352**	P		**Pn**	**01 10 24.6**	**-1.7**
IGIL	**Gilhagi** baz=18	**1.48**	**17**	P		**Pn**	**01 10 24.5**	**-1.9**
ISIG	**Siglufjorour** baz=338	**1.59**	**338**	P		**Pn**	**01 10 26.3**	**-1.6**
ISIG	baz=338			S		**Sn**	**01 10 47.6**	**-1.2**
IASM	**Asmuli** baz=240	**1.63**	**240**	P		**Pn**	**01 10 27.5**	**-1.0**
BORG	**Borgarnes** 10nm,0.3s,baz=87,slow=8.1,SNR=39	**1.68**	**274**	Pg		**Pn**	**01 10 27.6**	**-1.5**
BORG	17nm,0.3s,baz=59,slow=23,SNR=11			Lg		Lg	01 10 52.0	
SCO	**Scoresbysund** baz=159,slow=8.6	**6.08**	**346**	*e*		**Pn**	**01 11 29.6**	**0.0**
SCO				*i* P		**Pn**	**01 11 31.0**	**+1.4**
SCO				*e*S		**Sn**	**01 12 41.9**	**+2.5**
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn		**Pn**	**01 12 45.6**	**-1.5**
BRG	**Berggiesshubel** 16nm,1.4s	**21.39**	**115**	*e*P		**P**	**01 14 48.4**	**+1.1**
KHC	**Kasperske Hory**	**22.65**	**119**	*e*P		**P**	**01 15 04.5**	**+3.6**
GERES	**GERESS Array B** 0.2nm,0.3s,baz=346,slow=14,SNR=1.8	**22.93**	**119**	P		**P**	**01 15 01.4**	**-2.4**
ESDC	**Sonseca Array** 1.0nm,0.9s,baz=352,slow=10,SNR=6.0	**26.25**	**156**	P		**P**	**01 15 33.9**	**-1.0**
ILAR	**Eielson Array** 0.9nm,1.0s,baz=11,slow=4.9,SNR=6.4	**45.69**	**332**	P		**P**	**01 18 21.6**	**+1.3**
ZALV	**Zalesovo Beam** 0.4nm,0.5s,baz=335,slow=9.7,SNR=2.0	**47.60**	**51**	P		**P**	**01 18 36.7**	**+1.3**
KURBB	**Kurchatov Arra** 1.4nm,0.8s,baz=324,slow=7.9,SNR=12	**48.12**	**58**	P		**P**	**01 18 40.3**	**+0.8**
MKAR	**Makanchi Array** 0.6nm,0.8s,baz=32,slow=8.5,SNR=2.7	**52.69**	**58**	P		**P**	**01 19 15.3**	**+1.2**
TORD	**Torodi Ar. Bea** 1.5nm,1.0s,baz=350,slow=6.8,SNR=4.9	**53.14**	**156**	P		**P**	**01 19 17.2**	**-0.4**
PDAR	**Pinedale Array** 1.5nm,0.9s,baz=60,slow=8.8,SNR=7.1	**53.20**	**293**	P		**P**	**01 19 19.2**	**+1.1**
SONM	**Songino Array** 0.3nm,0.4s,baz=330,slow=5.0,SNR=2.5	**59.61**	**40**	P		**P**	**01 20 05.2**	**+1.5**
TXAR	**Lajitas Array** 0.5nm,0.9s,baz=17,slow=3.8,SNR=3.7	**62.31**	**280**	P		**P**	**01 20 23.0**	**+0.9**

*IDC **18** 01:13:23.2±0.9,64°.50N×17°.42W, h0km, mb3.6/8, mb1 3.9/13, mb1mx3.6/64, mbtmp3.7/13, ML2.6/4, MS3.1/6, Ms1 3.1/6, ms1mx2.8/44, Error ellipse: s-maj=27.3km s-min=10.6km az=9.0*
ISC 18 01:13:24.5±0.7,64°.57N±0°.08×17°.30W±0°.08, h9km, n22, σ1§47/22, mb3.8/9, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BORG	**Borgarnes** 18nm,0.3s,baz=102,slow=12,SNR=15	**1.74**	**278**	Pg		**Pn**	**01 13 52.8**	**-2.1**
BORG	11nm,0.3s,baz=50,slow=18,SNR=5.8			Lg		Lg	01 14 16.4	
SCO	**Scoresbysund** baz=164,slow=12	**6.20**	**345**	*e*		**Pn**	**01 14 52.0**	**-4.0**
SCO				*i* P		**Pn**	**01 14 56.0**	**0.0**
SCO				*i* S		**Sn**	**01 16 07.9**	**+1.0**
JMIC	**Jan Mayen** comp=Z,94nm,18.9s,baz=272,slow=34	**7.24**	**23**	LR		LR	01 17 28.9	
EKA	**Eskdalemuir Ar** baz=322,slow=13,SNR=11	**11.63**	**136**	Pn		**Pn**	**01 16 09.7**	**-0.8**
NOA	**NORSAR Array B** 0.0nm,0.3s,baz=78,slow=15,SNR=2.3	**13.44**	**92**	Pn		**Pn**	**01 16 33.6**	**-1.6**
NOA	comp=Z,30nm,18.1s,baz=295,slow=41			LR		LR	01 22 40.5	
HFS	**Hagfors** 0.1nm,0.3s,baz=286,slow=12,SNR=3.0	**14.95**	**93**	Pn		**Pn**	**01 16 55.3**	**-0.4**
HFS	comp=Z,74nm,19.2s,baz=288,slow=36			LR		LR	01 22 21.3	
ARCES	**ARCESS Array B** baz=321,slow=11,SNR=2.1	**17.10**	**54**	P		**P**	**01 17 24.3**	**-0.9**
ARCES	comp=Z,88nm,20.6s,baz=245,slow=33			LR		LR	01 22 46.0	
FINES	**FINESS Array B** 0.1nm,0.3s,baz=314,slow=15,SNR=2.8	**19.64**	**79**	P		**P**	**01 17 53.4**	**+0.3**
BRG	**Berggiesshubel** 7.4nm,1.3s	**21.29**	**115**	*e*P		**P**	**01 18 13.3**	**+2.2**
BRG	26nm,1.7s			*e*			01 18 24.2	
FRB	**Frobisher Bay** comp=Z,83nm,18.3s,baz=78,slow=37	**21.86**	**291**	LR		L

AXAR S Sb 01 14 08.4 -0.6
comp=E,29µm,0.3s
AOS Alonnisos 0.64 34 P Pg 01 13 59.9 -0.3
AOS AML AML 01 14 13.2
comp=N,45900µm,0.4s
AOS AML AML 01 14 13.3
comp=E,56626µm,0.3s
AOS Alonnisos 0.64 34 PG Pg 01 13 59.9 -0.3
AOS SG Sb 01 14 08.9 -1.0
AOS Alonnisos 0.64 34 P Pg 01 13 59.9 -0.3
AOS S Sb 01 14 09.4 -0.5
comp=E,26µm,0.3s
NEO Neokhori 0.68 347 P Pb 01 14 01.2 -0.5
NEO AML AML 01 14 14.2
comp=E,79632µm,0.3s
NEO AML AML 01 14 15.2
comp=N,96711µm,0.3s
NEO Neokhori 0.68 347 P Pb 01 14 01.2 -0.5
NEO S Sb 01 14 12.1 +1.0
PTL Penteli 0.69 149 P Pg 01 14 00.8 -0.3
PTL AML AML 01 14 14.1
comp=N,34415µm,0.4s
PTL AML AML 01 14 14.7
comp=E,27222µm,0.4s
PTL Penteli 0.69 149 P Pg 01 14 00.8 -0.3
PTL S Sb 01 14 11.8 +0.4
comp=E,16µm,0.4s
DION Dionisos Attik 0.69 144 P Pg 01 14 00.9 -0.3
DION S Sb 01 14 10.6 -0.9
DION AML AML 01 14 13.9
comp=E,90096µm,0.3s
DION AML AML 01 14 15.3
comp=N,86860µm,0.3s
DION Dionisos Attik 0.69 144 P Pb 01 14 01.1 -0.8
DION S Sb 01 14 11.3 -0.2
ATH Athens Observa 0.71 161 P Pg 01 14 01.1 -0.3
ATH AML AML 01 14 15.0
comp=N,52308µm,0.4s
ATH AML AML 01 14 15.4
comp=E,39316µm,0.3s
ATH Athens Observa 0.71 161 P Pg 01 14 01.2 -0.3
ATH S Sb 01 14 12.9 +1.0
comp=E,23µm,0.4s
LTK Loutraki 0.71 210 P Pg 01 14 00.9 -0.7
LTK S Sg 01 14 11.1 +0.2
LTK AML AML 01 14 15.5
comp=E,36977µm,0.5s
LTK AML AML 01 14 15.5
comp=N,21770µm,0.6s
ATHU Athens Univers 0.73 157 P Pg 01 14 01.6 -0.4
ATHU S Sg 01 14 11.6 0.0
ATHU AML AML 01 14 14.7
comp=E,11341µm,0.4s
ATHU AML AML 01 14 15.5
comp=N,23426µm,0.4s
ATHU Athens Univers 0.73 157 P Pg 01 14 01.6 -0.4
ATHU S Sn 01 14 13.9 -1.4
comp=N,9µm,0.4s
DSF Desfina 0.74 252 P Pg 01 14 00.6 -1.4
DSF AML AML 01 14 15.9
comp=E,39920µm,0.3s
DSF AML AML 01 14 17.0
comp=N,33413µm,0.4s
LOUT Loutraki 0.74 208 P Pg 01 14 01.4 -0.7
LOUT AML AML 01 14 16.2
comp=E,6657µm,0.4s
LOUT AML AML 01 14 16.8
comp=N,4560µm,0.5s
XOR Xorichti 0.74 346 P Pb 01 14 02.2 -0.6
XOR AML AML 01 14 15.7
comp=E,26892µm,0.5s
XOR AML AML 01 14 15.7
comp=N,39880µm,0.4s
XOR Xorichti 0.74 346 P Pb 01 14 02.3 -0.5
XOR S Sb 01 14 12.2 -0.8
comp=N,17µm,0.4s
VOL2 Volos 0.81 333 P Pn 01 14 06.0 +0.9
VOL2 S Sn 01 14 17.9 +0.8
VLY Voula,Athens 0.84 159 P Pg 01 14 03.5 -0.6
VLY S Sb 01 14 15.2 -0.5
VLY AML AML 01 14 17.7
comp=E,37476µm,0.8s
VLY AML AML 01 14 19.2
comp=N,23281µm,0.7s
VLY Voula,Athens 0.84 159 P Pg 01 14 03.6 -0.4
VLY S Sb 01 14 15.6 -0.2
comp=N,16µm,0.9s
THAL Thalero 0.85 225 P Pg 01 14 03.4 -0.7
THAL S Sb 01 14 15.9 0.0
THAL AML AML 01 14 19.0
comp=N,55646µm,0.4s
THAL AML AML 01 14 21.2
comp=E,48996µm,0.7s
SKY Skiros Island 0.92 75 P Pb 01 14 05.1 -0.5
SKY AML AML 01 14 21.7
comp=N,56398µm,0.3s
SKY AML AML 01 14 22.8
comp=E,44032µm,0.4s
SKY Skiros Island 0.92 75 P Pb 01 14 05.2 -0.5
SKY S Sn 01 14 18.9 -0.9
AGG Agios Georgios 0.93 294 P Pg 01 14 05.1 -0.6
AGG S Sb 01 14 17.9 -0.5
AGG AML AML 01 14 23.2
comp=E,5809µm,0.7s
AGG AML AML 01 14 24.3
comp=N,9736µm,0.5s
AGG Agios Georgios 0.93 294 PG Pg 01 14 05.3 -0.4
AGG SG Sb 01 14 18.9 +0.5
AGG Agios Georgios 0.93 294 *i* P Pg 01 14 04.5 -1.2
AGG *i* S Sb 01 14 18.8 +0.5
AGG IAML 01 14 22.0
comp=E,1µm,0.7s
AGG Agios Georgios 0.93 294 P Pg 01 14 05.2 -0.6
AGG S Sb 01 14 18.4 +0.1
comp=E,4µm,0.6s
KARY Karystos 1.01 127 P Pg 01 14 06.5 -0.7
KARY S Sb 01 14 20.1 -0.4
KARY AML AML 01 14 22.8
comp=E,8238µm,0.3s
KARY AML AML 01 14 23.0
comp=N,13071µm,0.5s
KALE Kalithea 1.03 256 P Pg 01 14 05.9 -1.8
KALE S Sb 01 14 21.9 +0.6
KALE AML AML 01 14 25.9
comp=E,7246µm,0.4s
KALE AML AML 01 14 27.7
comp=N,12021µm,0.6s
KALE Kalithea 1.03 256 P Pg 01 14 05.8 -1.9
KALE S Sn 01 14 22.6 -0.2
comp=N,5µm,0.5s
EPID Epidavros 1.05 193 P Pg 01 14 07.3 -0.8
EPID S Sb 01 14 22.2 +0.4
MAKR Makrakomi, Fth 1.07 291 P Pn 01 14 08.4 -0.3
MAKR S Sb 01 14 23.0 +0.6
MAKR AML AML 01 14 26.9
comp=E,5947µm,0.3s
MAKR AML AML 01 14 28.3
comp=N,13084µm,0.7s
TRIZ Trizonia 1.09 256 P Pg 01 14 06.6 -2.2
SERG Sergoula 1.09 258 P Pg 01 14 06.8 -2.1
SERG AML AML 01 14 29.4
comp=N,9111µm,0.4s
SERG AML AML 01 14 29.6
comp=E,11489µm,0.4s
GUR Goura 1.10 231 P Pg 01 14 07.5 -1.5
GUR S Sb 01 14 23.6 +0.3
GUR AML AML 01 14 25.6
comp=E,34890µm,0.7s
GUR AML AML 01 14 27.0
comp=N,29303µm,0.6s
KLV Kalavryta, Ach 1.16 239 P Pg 01 14 08.6 -1.6
KLV S Sb 01 14 25.4 +0.4
KLV AML AML 01 14 31.4
comp=E,4467µm,0.5s
KLV AML AML 01 14 32.5
comp=N,3639µm,0.7s
KLV Kalavryta, Ach 1.16 239 P Pg 01 14 08.8 -1.4
KLV S Sn 01 14 26.4 +0.4
comp=N,2µm,0.6s
ANX Ano Chora 1.18 268 P Pb 01 14 09.1 -1.1
ANX S Sn 01 14 26.2 -0.1
ANX AML AML 01 14 31.9
comp=N,10390µm,0.4s
ANX AML AML 01 14 33.6
comp=E,9144µm,0.6s
ANX Ano Chora 1.18 268 P Pb 01 14 09.3 -0.9
ANX S Sn 01 14 27.1 +0.8
comp=E,5µm,0.4s
EFP Efpalio 1.21 260 P Pb 01 14 09.1 -1.6
EFP AML AML 01 14 37.1
comp=N,5208µm,0.6s
EFP AML AML 01 14 37.6
comp=E,6752µm,1.0s
EFP Efpalio 1.21 260 P Pb 01 14 09.3 -1.3
EFP S Sn 01 14 28.0 +1.1
comp=E,3µm,0.8s
KRND KRANIDI 1.28 190 P Pn 01 14 10.8 -0.7
KRND AML AML 01 14 30.5
comp=E,15655µm,0.9s
KRND AML AML 01 14 31.3
comp=N,11654µm,0.6s
KRND KRANIDI 1.28 190 P Pn 01 14 11.1 -0.4
KRND S Sn 01 14 29.1 +0.5
comp=N,7µm,0.8s
EVR Evrytania 1.29 283 P Pg 01 14 12.3 -0.3
EVR Evrytania 1.29 283 P Pg 01 14 12.4 -0.1
EVR S Sn 01 14 29.2 +0.1
comp=N,1µm,0.6s
PAIG Paliouri 1.30 9 P Pn 01 14 11.5 -0.3
PAIG AML AML 01 14 34.4
comp=E,4347µm,0.5s
PAIG AML AML 01 14 35.0
comp=N,3006µm,0.5s
PAIG Paliouri 1.30 9 P Pn 01 14 11.5 -0.3
PAIG S Sn 01 14 29.8 +0.6
comp=N,2µm,0.5s
LRSO Larissa Observ 1.30 322 P Pb 01 14 12.1 -0.2
LRSO AML AML 01 14 37.3
comp=N,8796µm,0.7s
LRSO AML AML 01 14 38.5
comp=E,6671µm,0.9s
THL Klokotos Trika 1.43 311 P Pn 01 14 13.6 0.0
THL AML AML 01 14 38.0
comp=E,1660µm,0.5s
THL AML AML 01 14 42.7
comp=N,1574µm,0.6s
THL Klokotos Trika 1.43 311 P Pn 01 14 13.7 0.0
THL S Sn 01 14 32.3 -0.1
TRIP Tripoli 1.44 219 P Pn 01 14 13.3 -0.5
TRIP AML AML 01 14 40.0
comp=N,6401µm,0.6s
TRIP AML AML 01 14 40.2
comp=E,5013µm,0.5s
DRO Drossia 1.51 243 P Pb 01 14 15.2 -0.6
DRO AML AML 01 14 42.2
comp=N,9194µm,0.7s
DRO AML AML 01 14 42.8
comp=E,5222µm,0.7s
VLX Vlachokerasia 1.51 213 P Pn 01 14 15.0 +0.1
VLX S Sn 01 14 34.6 -0.1
VLX AML AML 01 14 37.3
comp=N,6521µm,0.6s
VLX AML AML 01 14 39.6
comp=E,9219µm,0.7s
LIT Litokhoron 1.62 334 P Pn 01 14 16.3 0.0
LIT AML AML 01 14 44.8
comp=N,3354µm,0.4s
LIT AML AML 01 14 46.1
comp=E,2966µm,0.4s
LIT Litokhoron 1.62 334 *i* P Pn 01 14 15.8 -0.6
LIT Litokhoron 1.62 334 P Pn 01 14 16.4 0.0
RLS Riolos of Patr 1.64 250 P Pn 01 14 17.1 +0.5
RLS AML AML 01 14 49.0
comp=E,2102µm,0.4s
RLS AML AML 01 14 49.8
comp=N,1961µm,0.5s
RLS Riolos of Patr 1.64 250 P Pn 01 14 17.1 +0.5
PLG Polygyros 1.73 1 P Pn 01 14 17.6 -0.3
PLG AML AML 01 14 40.0
comp=E,2736µm,0.5s
PLG AML AML 01 14 40.5
comp=N,3014µm,0.4s
PLG Polygyros 1.73 1 P Pn 01 14 17.1 -0.7
OUR Ouranopolis 1.74 14 P Pn 01 14 18.0 0.0
OUR Ouranopolis 1.74 14 PN Pn 01 14 18.0 0.0
OUR Ouranopolis 1.74 14 P Pn 01 14 18.0 0.0
OUR S Sn 01 14 39.9 -0.3
comp=N,1µm,0.8s
AMT Artemida-Makis 1.75 231 P Pb 01 14 19.3 -0.6
LIA Limnos Island 1.86 47 P Pn 01 14 19.0 -0.5
LIA Limnos Island 1.86 47 P Pn 01 14 19.1 -0.4
LIA S Sn 01 14 41.3 -1.6
comp=N,1µm,0.5s
ITM Ithomi 1.88 219 P Pb 01 14 20.9 -1.2
ITM Ithomi 1.88 219 PN Pn 01 14 20.2 +0.3
ITM Ithomi 1.88 219 P Pb 01 14 21.2 -0.9
ITM S Sb 01 14 45.3 -0.3
comp=N,908nm,0.6s
VLI Veliai 1.96 191 P Pn 01 14 20.7 -0.2
VLI Veliai 1.96 191 P Pn 01 14 20.7 -0.2
VLI S Sn 01 14 45.3 -0.2
comp=N,1µm,0.7s
HORT Hortiatis 1.97 353 PN Pn 01 14 21.0 -0.1
HORT Hortiatis 1.97 353 P Pn 01 14 21.1 -0.1
SIGR SIGRI 1.98 73 P Pn 01 14 21.1 -0.2
SIGR SIGRI 1.98 73 PN Pn 01 14 20.9 -0.4
SIGR SIGRI 1.98 73 P Pn 01 14 21.1 -0.2
KTI Kastanea 2.02 330 P Pn 01 14 22.9 +1.0
THE Thessaloniki 2.02 350 P Pn 01 14 21.4 -0.3
KPRO Kipourio 2.06 310 P Pn 01 14 22.4 -0.1
KPRO Kipourio 2.06 310 P Pn 01 14 23.6 +1.1
KZN Kozani 2.10 323 P Pn 01 14 23.7 +0.8
KZN AML AML 01 14 50.4
comp=N,1991µm,0.5s
KZN AML AML 01 14 50.9
comp=E,1612µm,0.5s
KZN Kozani 2.10 323 P Pn 01 14 23.7 +0.8
MHLO Agia Marina, M 2.10 158 P Pn 01 14 23.2 +0.3
LKD2 Lefkada island 2.17 275 P Pb 01 14 26.0 -1.0
LKD2 Lefkada island 2.17 275 P Pb 01 14 26.9 -0.1
SOH Sokhos 2.18 359 P Pn 01 14 24.3 +0.4
SOH AML AML 01 14 52.4
comp=E,2804µm,0.6s
SOH AML AML 01 14 52.6
comp=N,2411µm,0.5s
SOH Sokhos 2.18 359 P Pn 01 14 24.4 +0.4
PYL PYLOS 2.19 218 P Pb 01 14 25.9 -1.6
THAS Thassos island 2.20 27 P Pn 01 14 23.4 -0.9
THAS Thassos island 2.20 27 P Pn 01 14 23.4 -0.9
JAN Janina 2.24 298 P Pb 01 14 26.6 -1.7
JAN Janina 2.24 298 P Pb 01 14 26.7 -1.6
JAN S Sb 01 14 56.0 0.0
comp=N,675nm,0.4s
APE Apeiranthos 2.29 133 PN Pn 01 14 25.2 -0.4
APE Apeiranthos 2.29 133 *i* P Pn 01 14 25.0 -0.6
APE *i* S Sn 01 14 49.6 -4.3
APE Apeiranthos 2.29 133 P Pn 01 14 25.6 0.0
VLMS Volimes, Zakyn 2.30 251 P Pb 01 14 27.4 -1.9
VLMS Volimes, Zakyn 2.30 251 P Pb 01 14 27.6 -1.7
KEF5 Kardakata, Kep 2.34 262 P Pb 01 14 28.0 -2.0
PENT Pentalofos 2.35 312 P Pn 01 14 27.5 +1.1
BOZC Bozcaada 2.37 59 *i* P Pg 01 14 32.5 -0.7
KTHA Kythira Island 2.40 187 P Pn 01 14 26.8 -0.2
KTHA Kythira Island 2.40 187 PN Pn 01 14 27.2 +0.2
KTHA Kythira Island 2.40 187 P Pn 01 14 27.1 +0.1
GRG Griva 2.44 342 PN Pn 01 14 27.7 +0.2
GRG Griva 2.44 342 P Pn 01 14 27.8 +0.2
SMTH Samothraki Isl 2.45 41 P Pn 01 14 26.8 -0.9
GADA Gvkgeada 2.46 50 PN Pn 01 14 27.5 -0.4
GOKA anakkale-Gk 2.47 50 *i* P Pn 01 14 27.3 -0.6
SRS Serrai 2.48 3 P Pn 01 14 28.1 0.0
KAVA Kavala 2.50 19 P Pn 01 14 27.8 -0.5
KAVA S Sn 01 14 58.1 -0.7
comp=N,268nm,0.5s
URLA Izmir 2.51 95 PN Pn 01 14 28.6 +0.1
URLA Izmir 2.51 95 *i* P Pn 01 14 29.0 +0.5
NEST Nestorio 2.55 315 P Pn 01 14 30.7 +1.6
IGT Igoumenitsa 2.56 291 P Pb 01 14 31.4 -2.3
AYVA Ayvalik 2.63 74 *i* P Pb 01 14 30.8 +0.5
LSK Leskovik 2.65 305 P Pb 01 14 32.9 -2.4
LSK S Sb 01 15 05.7 -2.2
comp=N,1µm,0.6s
FNA Florina 2.66 324 PN Pn 01 14 30.9 +0.3
FNA Florina 2.66 324 P Pn 01 14 32.0 +1.4
BAYC CANAKKALE_Bayr 2.67 65 *i* P Pn 01 14 30.2 -0.5
CMBO Columbo, Santo 2.68 143 P Pn 01 14 31.2 +0.3
SAP3 Santorini-Thir 2.68 145 P Pn 01 14 31.4 +0.5
THR5 Thira Island, 2.70 145 P Pn 01 14 31.4 +0.3
THT2 Imerovigli 2.72 144 PN Pn 01 14 31.5 +0.1
NVR Nevrokopi 2.73 7 P Pn 01 14 31.5 0.0
THR3 Thira Island, 2.73 144 P Pn 01 14 32.0 +0.5
DKL Dikili 2.75 80 PN Pn 01 14 31.9 0.0
THR8 Santorini-Mono 2.77 143 P Pn 01 14 32.1 +0.1
ANKY Antikythira Is 2.77 182 P Pn 01 14 32.4 +0.3
THR6 Thira Island, 2.77 145 P Pn 01 14 32.7 +0.6
DGB zmir 2.79 101 *i* P Pn 01 14 32.0 -0.3
SMG Samos 2.85 108 P Pn 01 14 33.7 +0.5
BLCB Balcova 2.85 94 PN Pn 01 14 33.8 +0.6
ZEDA zmir-Bergama 2.88 82 *i* P Pn 01 14 32.0 -1.5
SRN Sarande 2.93 296 P Pb 01 14 36.9 -3.1
SRN S Sn 01 15 11.1 +1.7
comp=N,288nm,0.8s
GELI Tayfur-Gelibol 2.94 52 PN Pn 01 14 34.5 +0.1
ANAF Anafi Island 2.95 140 P Pn 01 14 35.0 +0.4
ENEZ Enez 2.97 44 PN Pn 01 14 34.8 0.0
RDO Rodhopi 2.98 32 P Pn 01 14 34.4 -0.6
KEK Kerkira 3.01 292 P Pn 01 14 37.2 +1.8
ALN Alexandroupoli 3.03 41 PN Pn 01 14 34.9 -0.7
ALN Alexandroupoli 3.03 41 *i* P Pn 01 14 34.7 -0.9
ALN Alexandroupoli 3.03 41 P Pn 01 14 34.7 -0.9
LPK Lapseki 3.11 55 PN Pn 01 14 36.9 +0.2
ERIK Erikli-Kesan 3.13 49 PN Pn 01 14 37.3 +0.3
GCAM G?zlcaml? 3.15 106 PN Pn 01 14 38.1 +0.8
GCAM G?zlcaml? 3.15 106 *i* P Pn 01 14 36.7 -0.6
CHAN Chania 3.16 171 P Pn 01 14 37.4 0.0
STIP Stip 3.19 343 *i* Pn Pn 01 14 38.7 +0.9
IMMV Iera Moni Meta 3.21 172 P Pn 01 14 37.9 -0.2
IMMV Iera Moni Meta 3.21 172 P Pn 01 14 38.2 +0.1
IMMV S Sn 01 15 16.4 +0.1
comp=N,672nm,0.7s
VAM Vamos 3.29 169 P Pn 01 14 39.5 +0.3
VAM S Sn 01 15 18.1 -0.3
comp=N,420nm,0.5s
KDZ Kurdzhali 3.37 26 PN Pn 01 14 39.6 -0.8
STEP BALIKESIR_Sava 3.43 76 *i* P Pn 01 14 43.6 +2.5
UKOP Uzunkopru-Edir 3.50 44 PN Pn 01 14 42.1 -0.1
RKY Sarkoy-Tekirda 3.55 54 PN Pn 01 14 43.1 +0.3
SART Tekirdag 3.55 54 *i* P Pn 01 14 42.3 -0.6
IDI Anoyia 3.55 160 Pn Pn 01 14 43.5 +0.6
comp=N,3.8nm,0.3s,baz=315,slow=11,SNR=28
IDI Sn Sn 01 15 24.8 -0.1
comp=N,12nm,0.3s,baz=290,slow=22,SNR=7.4
IDI LR LR 01 16 11.5
comp=N,121nm,19.8s,baz=338,slow=41
IDI Anoyia 3.55 160 P Pn 01 14 43.1 +0.2
KNL Balıkesir 3.57 62 *i* P Pb 01 14 49.6 -1.3
HRKL Herakleio 3.59 157 P Pn 01 14 44.0 +0.7
PLD Plovdiv 3.59 15 PN Pn 01 14 44.4 +1.0
AYDN Tasoluk 3.65 104 *i* P Pn 01 14 44.6 +0.4
SKO Skopje 3.65 336 *e*Pn Pn 01 14 45.2 +1.0
NPS Neapolis 3.80 152 P Pn 01 14 46.6 +0.3
GVD Gavdhos 3.83 172 P Pn 01 14 48.6 +1.9
TIR Tirane 3.84 316 *e*Pn Pn 01 14 50.6 +3.8
TIR *e*Sn Sn 01 15 34.5 +2.6
LAST Lasithi 3.85 154 P Pn 01 14 47.6 +0.6
BOSS Bosilegrad 3.92 350 *e*Pn Pn 01 14 49.3 +1.5
PRVS Prvonek 3.99 346 *e*Pn Pn 01 14 50.4 +1.4
PRVS *e*Sn Sn 01 15 35.2 -0.6
ZKR Zakros 4.17 147 P Pn 01 14 52.5 +1.1
KARP Karpathos 4.30 135 P Pn 01 14 54.0 +0.8
USAK Uak-Merkez 4.38 87 *i* P Pn 01 14 56.9 +2.6
ARG Arkhangelos 4.46 121 P Pn 01 14 56.5 +1.2
ZAPS Zavoj 4.66 353 *e*Pn Pn 01 14 58.9 +0.7
ZAPS *e*Sn Sn 01 15 48.2 -4.1
IGD Bursa 4.76 68 *i* P Pn 01 14 58.9 -0.5
DRME Dracevica, Mon 4.79 319 *e*Pn Pn 01 15 01.8 +1.9
SELS Selova 4.89 340 *e*Pn Pn 01 15 02.5 +1.2
PDG Podgorica 4.94 321 *e*Pn Pn 01 15 04.4 +2.6
PDG *e*Sn Sn 01 16 00.2 +1.3
PDG Podgorica 4.94 321 ⇑P Pn 01 15 01.5 -0.4
PDG Podgorica 4.94 321 *e*Pn Pn 01 15 03.3 +1.5
BOVS Bovan 5.15 346 *e*Pn Pn 01 15 06.5 +1.7
TIP Timpagrande 5.22 278 ⇓P Pn 01 15 07.9 +2.0
ZAGS Zajecar 5.24 351 *e*Pn Pn 01 15 05.9 -0.1
ZAGS *e*Sn Sn 01 16 02.8 -3.6
KZIL AFYON_Kizioren 5.29 92 *i* P Pn 01 15 07.6 +0.7
SJES Sjenica 5.30 332 *e*Pn Pn 01 15 09.2 +2.2
HCY Herceg Novi 5.34 317 *e*Pn Pn 01 15 09.0 +1.6
IVAS Ivanjica 5.51 334 *e*Pn Pn 01 15 11.5 +1.7
IVAS *e*Sn Sn 01 16 11.2 -2.0
BORA Eskisehir 5.60 75 *i* P Pn 01 15 13.2 +2.2
GRUS Gruza 5.62 340 *e*Pn Pn 01 15 13.2 +1.9
BRY Bratogost 5.64 321 *e*Pn Pn 01 15 13.0 +1.3
HUMR Humele 6.00 11 ⇑P Pn 01 15 17.2 +0.8
TRUS Trudelj 6.02 339 *e*Pn Pn 01 15 18.1 +1.4
DIVS Divibare 6.03 336 *e*Pn Pn 01 15 19.0 +2.1
DIVS Divibare 6.03 336 *e*Pn Pn 01 15 17.9 +1.0
BBLS Lazići 6.03 331 *e*Pn Pn 01 15 19.0 +2.0
BBLS *e*Sn Sn 01 16 23.0 -2.7
BBLS Lazići 6.03 331 *e*Pn Pn 01 15 18.5 +1.5
STON Ston 6.06 316 *e*Pn Pn 01 15 16.6 -0.6
STON Ston 6.06 316 *e*Pn Pn 01 15 17.2 0.0
HERR Herculane 6.28 353 ⇓P Pn 01 15 20.1 -0.2
HAPS Han Pijesak,Bl 6.39 330 *e*Pn Pn 01 15 24.4 +2.4
HAPS *e*Sn Sn 01 16 31.6 -3.4
HAPS Han Pijesak,Bl 6.39 330 *e*Pn Pn 01 15 22.3 +0.3
YIGI Dzce 6.60 67 *i* P Pn 01 15 25.5 +0.8
MAKA Makarska 6.71 316 *e*Pn Pn 01 15 27.0 +0.9
GZR Gura Zlata 6.76 356 ⇓P Pn 01 15 26.7 -0.3
ARR Arges 6.78 7 ⇓P Pn 01 15 28.0 +0.8
RICI Ricice 6.78 318 *e*Pn Pn 01 15 28.1 +0.9
LOT Lotru 6.80 2 ⇓P Pn 01 15 28.0 +0.4
VOIR 6.90 10 ⇓P Pn 01 15 29.8 +0.9
HARR Harsova 6.92 28 ⇓P Pn 01 15 31.8 +2.7
FRGS Fruska Gora 7.04 339 *e*Pn Pn 01 15 31.9 +1.1
FRGS *e*Sn Sn 01 16 46.7 -4.2
FRGS Fruska Gora 7.04 339 *e*Pn Pn 01 15 33.5 +2.7
BZS Buzias 7.10 350 *e*Pn Pn 01 15 33.0 +1.5
BZS Buzias 7.10 350 ⇓P Pn 01 15 31.2 -0.3
MLR Muntele Rosu 7.10 15 Pn Pn 01 15 32.7 +1.1
comp=N,0.6nm,0.3s,baz=156,slow=5.4,SNR=30
MLR Sn Sn 01 16 54.7 +2.4
comp=N,0.6nm,0.3s,baz=143,slow=22,SNR=1.5
MLR LR LR 01 19 07.1
comp=N,92nm,18.9s,baz=228,slow=45
MLR Muntele Rosu 7.10 15 ⇑P Pn 01 15 33.0 +1.4
NEHR Nehoiu 7.11 17 ⇓P Pn 01 15 33.3 +1.6
VAE Valguarnera 7.20 263 Sn Sn 01 16 56.2 +1.4
comp=N,1.3nm,0.3s,baz=333,slow=17,SNR=1.8
TPGR Topolog 7.25 29 ⇑P Pn 01 15 35.8 +2.2
CFR Carcaliu 7.42 27 ⇑P Pn 01 15 38.4 +2.5
DOPR Dopca 7.46 11 ⇓P Pn 01 15 37.4 +0.8
KIJV Kijevo 7.52 318 *e*Pn Pn 01 15 38.0 +0.7
MDB Medias 7.53 5 ⇓P Pn 01 15 38.3 +0.9
PLOR Plostina 7.59 17 ⇑P Pn 01 15 40.4 +2.0
VRI Vrincioaia 7.62 18 ⇑P Pn 01 15 40.6 +1.9
OZUR 7.65 12 ⇑P Pn 01 15 41.1 +1.9
BLY Banja Luka 7.68 325 *e*Pn Pn 01 15 41.1 +1.6
BLY Banja Luka 7.68 325 *e*Pn Pn 01 15 39.6 +0.1
MORI Morici 7.81 314 *e*Pn Pn 01 15 42.0 +0.8
MORI Sn Sn 01 17 04.9 -4.7
BRTR Keskin Array B 8.01 79 Pn Pn 01 15 47.1 +2.9
comp=N,0.3nm,0.3s,baz=263,slow=13,SNR=2.4
BRTR LR LR 01 19 03.2
comp=N,21nm,20.4s,baz=246,slow=39
TESR Tescani 8.22 16 ⇑P Pn 01 15 49.2 +2.4
MORH Mrgy, Hungar 8.35 337 *e*Pn Pn 01 15 49.9 +1.2
BIZ Bicaz 8.52 13 ⇑P Pn 01 15 52.6 +1.5
BURAR Bucovina Array 9.06 8 ⇓P Pn 01 16 00.3 +1.8
CRES Cresnjev 9.29 323 *e*Pn Pn 01 16 01.8 +0.2
CEY Cerknica 9.73 320 *e*Pn Pn 01 16 05.9 -1.8
VYHS Vyhne 10.39 343 *e*Pn Pn 01 16 24.9 +8.2
VYHS *e*SN Sn 01 18 11.5 -1.6
MMAI Mount Meron Ar 11.23 116 Pn Pn 01 16 28.6 +0.3
comp=N,0.3nm,0.3s,baz=293,slow=14,SNR=2.2
GERES GERESS Array B 12.37 329 Pn Pn 01 16 44.6 +0.8
comp=N,0.1nm,0.3s,baz=144,slow=17,SNR=2.5
AKASG Malin Array Be 12.74 17 Pn Pn 01 16 49.7 +0.9
comp=N,0.5nm,0.3s,baz=203,slow=12,SNR=2.0
DAVOX Davos/Dischmat 12.84 314 LR LR 01 23 01.8
comp=N,40nm,21.9s,baz=64,slow=43
CLL Collm 14.63 333 *e*(PP) 01 17 21.0
KVAR Kislovodsk Arr 15.42 64 Pn Pn 01 17 26.8 +1.5
baz=281,slow=10,SNR=2.0
KBZ Khabaz 15.51 65 Pn P 01 17 30.4 -0.4
comp=N,0.1nm,0.3s,baz=236,slow=23,SNR=4.7
ESDC Sonseca Array 21.23 281 P P 01 18 33.2 -0.5
comp=N,3.8nm,0.9s,baz=74,slow=11,SNR=22
HFS Hagfors 22.38 347 P P 01 18 46.4 +0.7

comp=N,1.9nm,0.6s,baz=145,slow=10,SNR=7.0
FINES FINESS Array B 22.89 3 P **P** **01 18 51.5 +0.4**
comp=N,1.2nm,0.7s,baz=170,slow=12,SNR=4.0
MDT Midelt 23.43 264 P **P** **01 18 55.5 -1.6**
comp=N,1.4nm,0.8s,baz=43,slow=11,SNR=3.9
NB2 NORSAR Subarra 23.68 345 P **P** **01 18 58.8 -0.4**
comp=Z,2.4nm,0.9s,baz=153,slow=10
NOA NORSAR Array B 23.68 345 P **P** **01 18 59.1 -0.1**
comp=Z,1.3nm,0.8s,baz=149,slow=9.6,SNR=6.6
EKA Eskdalemuir Ar 24.42 322 P **P** **01 19 06.2 +0.1**
comp=Z,1.3nm,0.6s,baz=120,slow=8.8,SNR=5.9
TORD Torodi Ar. Bea 31.87 223 P **P** **01 20 13.1 0.0**
comp=Z,2.8nm,0.7s,baz=34,slow=9.2,SNR=26
SPITS Spitsbergen Ar 39.75 358 P **P** **01 21 21.4 +1.4**
comp=Z,16nm,1.2s,baz=152,slow=9.4,SNR=1.9
KURBB Kurchatov Arra 40.12 54 P **P** **01 21 23.9 +0.6**
comp=Z,1.5nm,0.7s,baz=281,slow=8.7,SNR=10
DBIC Dimbokro 40.82 226 P **P** **01 21 28.9 -0.5**
comp=Z,5.0nm,0.7s,baz=22,slow=8.3,SNR=8.7
MKAR Makanchi Array 43.11 59 P **P** **01 21 48.8 +0.8**
comp=Z,2.2nm,0.6s,baz=275,slow=7.4,SNR=26
ZALV Zalesovo Beam 43.68 49 P **P** **01 21 52.8 +0.4**
comp=Z,2.8nm,0.6s,baz=273,slow=8.4,SNR=14
SONM Songino Array 58.39 52 P **P** **01 23 43.9 +0.7**
comp=Z,0.4nm,0.4s,baz=260,slow=8.6,SNR=1.5
SCHQ Schefferville P **P** **01 23 51.6 -0.1**
comp=Z,4.2nm,0.8s,baz=42,slow=12,SNR=2.4
BOSA Boshof 66.93 178 P **P** **01 24 40.3 +0.1**
comp=Z,4.5nm,1.1s,baz=332,slow=6.7,SNR=3.5
KLR Kul'dur 72.05 41 LR LR 01 59 03.5
comp=Z,34nm,18.9s,baz=226,slow=38

*DDA **18** 01:16:18.5, 38.79N×23.50E, h7km±4km, ML2.9*
*IDC **18** 01:16:18.5±1.3, 38.57N×23.28E, h0km, mb3.5/8, mb1 3.6/10, mb1mx3.4/59, mbtmp3.6/10, ML3.8/2, Error ellipse: s-maj=24.6km s-min=18.9km az=77.0*
*ATH **18** 01:16:20.0, 38.63N×23.40E, h19km±2km, ML3.4/20, Error ellipse: s-maj=2.9km s-min=0.8km az=309.0*
*ISK **18** 01:16:19.8, 38.66N×23.46E, h15km, ML3.2/12*
*THE **18** 01:16:20.4, 38.64N×23.43E, h7km, ML3.4/20, Error ellipse: s-maj=0.9km s-min=0.4km az=160.0*
ISC 18 01:16:20.1±1.0, 38.64N±0.01×23.43E±0.01, h9km±7km, n136, σ0.67/185, mb3.6/8, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATAL	**Atalanti**	**0.32**	**280**	P		**Pg**	**01 16 26.5**	**+0.1**
ATAL				AML		AML	01 16 32.6	
	comp=N,9471μm,0.4s							
ATAL				AML		AML	01 16 37.8	
	comp=E,7689μm,0.3s							
ATAL	**Atalanti**	**0.32**	**280**	P		**Pg**	**01 16 26.5**	**+0.1**
ATAL				S		**Sg**	**01 16 31.5**	**+0.8**
LKR	**Lokris**	**0.34**	**272**	P		**Pg**	**01 16 26.7**	**0.0**
LKR				S		**Sg**	**01 16 31.6**	**+0.5**
LKR	**Lokris**	**0.34**	**272**	P		**Pg**	**01 16 26.7**	**0.0**
VIL2	**Platees**	**0.45**	**196**	P		**Pb**	**01 16 29.4**	**-0.6**
VIL2				S		**Sb**	**01 16 37.0**	**+0.2**
VIL2				AML		AML	01 16 37.8	
	comp=N,13359μm,0.3s							
VIL2				AML		AML	01 16 37.9	
	comp=E,11832μm,0.6s							
VILL	**Villia**	**0.48**	**191**	P		**Pg**	**01 16 29.4**	**-0.1**
VILL				S		**Sb**	**01 16 37.2**	**-0.7**
	comp=E,7μm,0.7s							
KYMI	**Kymi, Euboea I**	**0.53**	**90**	P		**Pg**	**01 16 30.5**	**+0.2**
KYMI				S		**Sb**	**01 16 38.3**	**-0.9**
KYMI				AML		AML	01 16 41.6	
	comp=N,4620μm,0.4s							
KYMI				AML		AML	01 16 42.5	
	comp=E,5361μm,0.3s							
KYMI	**Kymi, Euboea I**	**0.53**	**90**	P		**Pg**	**01 16 30.5**	**+0.2**
KYMI				S		**Sb**	**01 16 38.7**	**-0.5**
AXAR	**Agios Charalam**	**0.61**	**282**	P		**Pg**	**01 16 31.8**	**-0.1**
AXAR				AML		AML	01 16 46.3	
	comp=N,10705μm,0.3s							
AXAR				AML		AML	01 16 48.4	
	comp=E,9002μm,0.6s							
AXAR	**Agios Charalam**	**0.61**	**282**	P		**Pg**	**01 16 31.9**	**-0.1**
AXAR				S		**Sb**	**01 16 41.5**	**-0.2**
AOS	**Alonnisos**	**0.64**	**34**	P		**Pg**	**01 16 32.4**	**0.0**
AOS				AML		AML	01 16 45.5	
	comp=N,11802μm,0.4s							
AOS				AML		AML	01 16 45.7	
	comp=E,17186μm,0.3s							
AOS	**Alonnisos**	**0.64**	**34**	PG		**Pg**	**01 16 32.2**	**-0.2**
AOS				SG		**Sg**	**01 16 40.8**	**+0.1**
AOS	**Alonnisos**	**0.64**	**34**	P		**Pg**	**01 16 32.4**	**0.0**
AOS				S		**Sb**	**01 16 41.6**	**-0.8**
	comp=E,7μm,0.3s							
PTL	**Penteli**	**0.68**	**150**	P		**Pg**	**01 16 33.4**	**+0.1**
PTL				S		**Sg**	**01 16 42.5**	**+0.3**
PTL				AML		AML	01 16 46.2	
	comp=E,8394μm,0.4s							
PTL				AML		AML	01 16 46.5	
	comp=N,6235μm,0.4s							
PTL	**Penteli**	**0.68**	**150**	P		**Pg**	**01 16 33.3**	**+0.1**
PTL				S		**Sb**	**01 16 43.6**	**-0.1**
NEO	**Neokhori**	**0.69**	**347**	P		**Pb**	**01 16 33.8**	**-0.4**
NEO				AML		AML	01 16 46.6	
	comp=N,26588μm,0.3s							
NEO				AML		AML	01 16 46.7	
	comp=E,27595μm,0.3s							
NEO	**Neokhori**	**0.69**	**347**	P		**Pb**	**01 16 33.8**	**-0.4**
NEO				S		**Sb**	**01 16 43.5**	**-0.3**
DION	**Dionisos Attik**	**0.69**	**144**	P		**Pg**	**01 16 33.4**	**+0.1**
DION				AML		AML	01 16 46.2	
	comp=N,28382μm,0.4s							
DION				AML		AML	01 16 46.3	
	comp=E,34460μm,0.2s							
DION	**Dionisos Attik**	**0.69**	**144**	P		**Pg**	**01 16 33.5**	**+0.1**
DION				S		**Sb**	**01 16 43.9**	**+0.1**
ATH	**Athens Observa**	**0.70**	**161**	P		**Pb**	**01 16 34.2**	**-0.3**
ATH				AML		AML	01 16 47.4	
	comp=N,13928μm,0.4s							
ATH				AML		AML	01 16 47.6	
	comp=E,11831μm,0.3s							
ATH	**Athens Observa**	**0.70**	**161**	P		**Pg**	**01 16 33.8**	**+0.2**
ATH				S		**Sb**	**01 16 43.5**	**-0.7**
	comp=E,7μm,0.4s							
LTK	**Loutraki**	**0.71**	**211**	P		**Pg**	**01 16 33.3**	**-0.5**
LTK				AML		AML	01 16 48.8	
	comp=E,5832μm,0.3s							
LTK				AML		AML	01 16 48.8	
	comp=N,5559μm,0.4s							
LTK	**Loutraki**	**0.71**	**211**	P		**Pg**	**01 16 33.4**	**-0.5**
LTK				S		**Sb**	**01 16 44.7**	**+0.2**
	comp=N,3μm,0.4s							
ATHU	**Athens Univers**	**0.73**	**157**	P		**Pb**	**01 16 34.4**	**-0.6**
ATHU				AML		AML	01 16 46.6	
	comp=N,2804μm,0.3s							
ATHU				AML		AML	01 16 47.1	
	comp=E,1945μm,0.4s							
ATHU	**Athens Univers**	**0.73**	**157**	P		**Pb**	**01 16 34.3**	**-0.6**
ATHU				S		**Sg**	**01 16 44.1**	**+0.5**
DSF	**Desfina**	**0.74**	**252**	P		**Pg**	**01 16 33.4**	**-0.9**
DSF				AML		AML	01 16 47.7	
	comp=N,12806μm,0.2s							
DSF				AML		AML	01 16 48.5	
	comp=E,8800μm,0.3s							
DSF	**Desfina**	**0.74**	**252**	P		**Pg**	**01 16 33.5**	**-0.9**
DSF				S		**Sb**	**01 16 45.6**	**+0.2**
	comp=E,6μm,0.3s							
LOUT	**Loutraki**	**0.74**	**209**	P		**Pg**	**01 16 33.8**	**-0.6**
LOUT				AML		AML	01 16 50.3	
	comp=N,995μm,0.2s							
LOUT				AML		AML	01 16 51.4	
	comp=E,964μm,0.4s							
LOUT	**Loutraki**	**0.74**	**209**	P		**Pg**	**01 16 33.9**	**-0.4**
LOUT				S		**Sb**	**01 16 46.1**	**+0.8**
	comp=E,3μm,0.4s							
XOR	**Xorichti**	**0.75**	**346**	P		**Pb**	**01 16 34.8**	**-0.5**
XOR				AML		AML	01 16 48.2	
	comp=E,8424μm,0.4s							
XOR				AML		AML	01 16 48.2	
	comp=N,13009μm,0.4s							
XOR	**Xorichti**	**0.75**	**346**	P		**Pb**	**01 16 34.8**	**-0.5**
XOR				S		**Sb**	**01 16 45.1**	**-0.5**
	comp=N,6μm,0.6s							
VOL2	**Volos**	**0.81**	**333**	P		**Pn**	**01 16 38.6**	**+0.9**
VOL2				S		**Sn**	**01 16 52.1**	**+2.2**
VLY	**Voula,Athens**	**0.84**	**160**	P		**Pg**	**01 16 36.0**	**-0.1**
VLY	**Voula,Athens**	**0.84**	**160**	P		**Pg**	**01 16 36.1**	**-0.1**
VLY				S		**Sg**	**01 16 47.1**	**0.0**
	comp=N,4μm,0.3s							
THAL	**Thalero**	**0.85**	**225**	P		**Pg**	**01 16 36.0**	**-0.3**
THAL	**Thalero**	**0.85**	**225**	P		**Pg**	**01 16 36.1**	**-0.3**
THAL				S		**Sb**	**01 16 49.7**	**+1.3**
	comp=N,7μm,0.4s							
SKY	**Skiros Island**	**0.91**	**74**	P		**Pb**	**01 16 37.7**	**-0.3**
SKY	**Skiros Island**	**0.91**	**74**	P		**Pb**	**01 16 37.7**	**-0.3**
SKY				S		**Sb**	**01 16 51.0**	**+0.8**
	comp=N,7μm,0.2s							
AGG	**Agios Georgios**	**0.94**	**294**	P		**Pg**	**01 16 38.0**	**-0.1**
AGG				AML		AML	01 16 54.5	
	comp=E,1043μm,0.5s							
AGG				AML		AML	01 16 56.7	
	comp=N,1664μm,0.6s							
AGG	**Agios Georgios**	**0.94**	**294**	PG		**Pg**	**01 16 38.1**	**0.0**
AGG	**Agios Georgios**	**0.94**	**294**	*i* P		**Pg**	**01 16 37.3**	**-0.8**
AGG				*i* S		**Sg**	**01 16 49.4**	**-0.9**
AGG				IAML			01 16 57.0	
	comp=N,341nm,0.6s							
AGG	**Agios Georgios**	**0.94**	**294**	P		**Pg**	**01 16 38.0**	**-0.1**
AGG				S		**Sb**	**01 16 52.0**	**+1.0**
KARY	**Karystos**	**1.00**	**127**	P		**Pg**	**01 16 39.0**	**-0.3**
KARY				S		**Sb**	**01 16 53.2**	**+0.4**
KARY				AML		AML	01 16 55.2	
	comp=E,2527μm,0.2s							
KARY				AML		AML	01 16 55.4	
	comp=N,3644μm,0.5s							
KARY	**Karystos**	**1.00**	**127**	P		**Pg**	**01 16 39.1**	**-0.2**
KARY				S		**Sb**	**01 16 52.8**	**0.0**
	comp=N,2μm,0.3s							
KALE	**Kalithea**	**1.04**	**257**	P		**Pg**	**01 16 38.9**	**-1.1**
KALE				AML		AML	01 16 56.9	
	comp=N,2381μm,0.6s							
KALE				AML		AML	01 16 58.5	
	comp=E,1604μm,0.4s							
KALE	**Kalithea**	**1.04**	**257**	P		**Pg**	**01 16 38.9**	**-1.1**
KALE				S		**Sn**	**01 16 55.0**	**-0.5**
	comp=E,1μm,0.6s							
EPID	**Epidavros**	**1.05**	**193**	P		**Pb**	**01 16 40.4**	**-0.1**
EPID	**Epidavros**	**1.05**	**193**	P		**Pb**	**01 16 40.3**	**-0.1**
EPID				S		**Sn**	**01 16 56.1**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.08**	**291**	P		**Pb**	**01 16 40.8**	**0.0**
MAKR	**Makrakomi, Fth**	**1.08**	**291**	P		**Pb**	**01 16 41.0**	**+0.1**
MAKR				S		**Sn**	**01 16 56.1**	**-0.3**
TRIZ	**Trizonia**	**1.10**	**256**	P		**Pg**	**01 16 39.6**	**-1.5**
TRIZ	**Trizonia**	**1.10**	**256**	P		**Pg**	**01 16 39.8**	**-1.3**
TRIZ				S		**Sn**	**01 16 56.8**	**0.0**
SERG	**Sergoula**	**1.10**	**259**	P		**Pg**	**01 16 39.6**	**-1.5**
SERG				S		**Sg**	**01 16 55.5**	**+0.1**
SERG				AML		AML	01 16 58.0	
	comp=E,1365μm,0.6s							
SERG				AML		AML	01 16 58.2	
	comp=N,2190μm,0.3s							
SERG	**Sergoula**	**1.10**	**259**	P		**Pg**	**01 16 39.9**	**-1.2**
SERG				S		**Sn**	**01 16 57.4**	**+0.5**
ALIK	**Aliki, Aigiali**	**1.10**	**250**	P		**Pn**	**01 16 41.6**	**0.0**
ALIK				S		**Sn**	**01 16 57.8**	**+0.9**
GUR	**Goura**	**1.10**	**231**	P		**Pb**	**01 16 41.3**	**-0.1**
GUR				S		**Sb**	**01 16 55.9**	**0.0**
GUR				AML		AML	01 16 58.6	
	comp=E,7698μm,0.5s							
GUR				AML		AML	01 16 58.9	
	comp=N,7373μm,0.4s							
GUR	**Goura**	**1.10**	**231**	P		**Pb**	**01 16 41.3**	**-0.1**
GUR				S		**Sb**	**01 16 56.6**	**+0.7**
	comp=N,4μm,0.4s							
KLV	**Kalavryta, Ach**	**1.17**	**240**	P		**Pg**	**01 16 41.8**	**-0.7**
KLV				S		**Sg**	**01 16 57.0**	**-0.6**
KLV	**Kalavryta, Ach**	**1.17**	**240**	P		**Pg**	**01 16 42.3**	**-0.2**
KLV				S		**Sn**	**01 16 58.7**	**+0.1**
	comp=N,490nm,0.4s							
ANX	**Ano Chora**	**1.18**	**268**	P		**Pg**	**01 16 42.0**	**-0.7**
ANX				S		**Sn**	**01 16 59.1**	**+0.1**
	comp=N,1μm,0.4s							
EFP	**Efpalio**	**1.21**	**260**	P		**Pb**	**01 16 42.3**	**-0.9**
EFP	**Efpalio**	**1.21**	**260**	P		**Pb**	**01 16 42.2**	**-0.9**
EFP				S		**Sn**	**01 17 00.7**	**+1.1**
	comp=N,675nm,0.7s							
KRND	**KRANIDI**	**1.27**	**190**	P		**Pn**	**01 16 43.7**	**-0.3**
KRND	**KRANIDI**	**1.27**	**190**	P		**Pn**	**01 16 43.6**	**-0.3**
KRND				S		**Sn**	**01 17 02.1**	**+0.9**
	comp=N,2μm,0.6s							
EVR	**Evrytania**	**1.29**	**283**	P		**Pn**	**01 16 44.4**	**0.0**
EVR				S		**Sn**	**01 17 03.2**	**+1.3**
PAIG	**Paliouri**	**1.30**	**9**	P		**Pn**	**01 16 44.0**	**-0.4**
PAIG				S		**Sb**	**01 17 00.9**	**-0.6**
	comp=N,452nm,0.6s							
LRSO	**Larissa Observ**	**1.31**	**322**	P		**Pn**	**01 16 44.5**	**0.0**
THL	**Klokotos Trika**	**1.44**	**311**	P		**Pn**	**01 16 46.3**	**+0.1**
TRIP	**Tripoli**	**1.44**	**220**	P		**Pn**	**01 16 46.5**	**+0.2**
TRIP	**Tripoli**	**1.44**	**220**	P		**Pn**	**01 16 46.5**	**+0.2**
VLX	**Vlachokerasia**	**1.51**	**213**	P		**Pn**	**01 16 47.8**	**+0.4**
VLX				AML		AML	01 17 12.7	
	comp=N,1077μm,0.5s							
VLX				AML		AML	01 17 13.3	
	comp=E,2020μm,0.5s							
VLX	**Vlachokerasia**	**1.51**	**213**	P		**Pn**	**01 16 47.6**	**+0.2**
DRO	**Drossia**	**1.52**	**244**	P		**Pn**	**01 16 47.6**	**+0.3**
LIT	**Litokhoron**	**1.63**	**334**	*i* P		**Pn**	**01 16 47.7**	**-1.3**
LIT	**Litokhoron**	**1.63**	**334**	P		**Pn**	**01 16 48.6**	**-0.3**
RLS	**Riolos of Patr**	**1.65**	**250**	P		**Pb**	**01 16 50.3**	**-0.2**
PLG	**Polygyros**	**1.73**	**0**	P		**Pn**	**01 16 50.1**	**-0.3**
PLG				S		**Sn**	**01 17 11.7**	**-0.9**
	comp=E,358nm,0.4s							
OUR	**Ouranopolis**	**1.75**	**14**	PN		**Pn**	**01 16 50.5**	**0.0**
OUR	**Ouranopolis**	**1.75**	**14**	P		**Pn**	**01 16 50.5**	**0.0**
LIA	**Limnos Island**	**1.85**	**47**	P		**Pn**	**01 16 51.6**	**-0.4**
ITM	**Ithomi**	**1.88**	**220**	PN		**Pn**	**01 16 53.3**	**+1.0**
ITM	**Ithomi**	**1.88**	**220**	P		**Pb**	**01 16 53.9**	**-0.6**
VLI	**Veliai**	**1.96**	**192**	P		**Pn**	**01 16 53.3**	**-0.1**
HORT	**Hortiatis**	**1.97**	**353**	PN		**Pn**	**01 16 53.6**	**-0.1**
HORT				SN		**Sn**	**01 17 17.9**	**-0.7**
SIGR	**SIGRI**	**1.98**	**72**	PN		**Pn**	**01 16 53.4**	**-0.3**
SIGR	**SIGRI**	**1.98**	**72**	P		**Pn**	**01 16 53.6**	**-0.1**
MHLO	**Agia Marina, M**	**2.09**	**158**	P		**Pn**	**01 16 55.5**	**+0.2**
KZN	**Kozani**	**2.10**	**323**	P		**Pn**	**01 16 56.1**	**+0.6**
SOH	**Sokhos**	**2.18**	**359**	P		**Pn**	**01 16 56.7**	**+0.2**
PYL	**PYLOS**	**2.19**	**218**	P		**Pb**	**01 16 58.6**	**-1.3**
THAS	**Thassos island**	**2.20**	**27**	P		**Pn**	**01 16 56.0**	**-0.8**
APE	**Apeiranthos**	**2.29**	**133**	PN		**Pn**	**01 16 58.2**	**+0.2**
APE	**Apeiranthos**	**2.29**	**133**	*i* P		**Pn**	**01 16 57.5**	**-0.4**
APE				*i* S		Sn	01 17 06.0	-20
APE	**Apeiranthos**	**2.29**	**133**	P		**Pn**	**01 16 58.0**	**0.0**
APE				S		**Sn**	**01 17 24.5**	**-1.8**
	comp=E,385nm,0.5s							
VLMS	**Volimes, Zakyn**	**2.31**	**252**	P		**Pb**	**01 17 00.5**	**-1.3**
BOZC	**Bozcaada**	**2.37**	**59**	PN		**Pn**	**01 16 58.8**	**-0.2**
BOZC	**Bozcaada**	**2.37**	**59**	*i* P		**Pn**	**01 16 58.0**	**-1.0**
KTHA	**Kythira Island**	**2.40**	**187**	PN		**Pn**	**01 16 59.8**	**+0.3**
KTHA	**Kythira Island**	**2.40**	**187**	P		**Pn**	**01 16 59.5**	**0.0**
KTHA				S		**Sn**	**01 17 29.3**	**+0.4**
GRG	**Griva**	**2.44**	**341**	PN		**Pn**	**01 17 00.3**	**+0.1**
GADA	**Gvkgeada**	**2.46**	**50**	PN		**Pn**	**01 17 00.1**	**-0.2**
GOKA	**anakkale-Gk**	**2.47**	**50**	*i* P		**Pn**	**01 16 60.0**	**-0.5**
SRS	**Serrai**	**2.48**	**3**	P		**Pn**	**01 17 00.7**	**+0.1**
KAVA	**Kavala**	**2.50**	**19**	P		**Pn**	**01 17 00.2**	**-0.6**
URLA	**Izmir**	**2.50**	**95**	PN		**Pn**	**01 17 01.0**	**+0.1**
URLA	**Izmir**	**2.50**	**95**	*i* P		**Pg**	**01 17 07.8**	**-0.2**
AYVA	**Ayvalik**	**2.63**	**74**	*i* P		**Pn**	**01 17 04.1**	**+1.5**
FNA	**Florina**	**2.66**	**324**	PN		**Pn**	**01 17 04.3**	**+1.1**
FNA	**Florina**	**2.66**	**324**	*i* P		**Pn**	**01 17 04.0**	**+0.8**
BAYC	**CANAKKALE_Bayr**	**2.66**	**65**	*i* P		**Pn**	**01 17 01.9**	**-1.2**
CMBO	**Columbo, Santo**	**2.68**	**143**	P		**Pn**	**01 17 03.5**	**+0.2**
SAP3	**Santorini-Thir**	**2.68**	**145**	P		**Pn**	**01 17 03.9**	**+0.6**
THT2	**Imerovigli**	**2.71**	**144**	PN		**Pn**	**01 17 04.2**	**+0.4**
THR3	**Thira Island,**	**2.72**	**144**	P		**Pn**	**01 17 04.5**	**+0.6**
DKL	**Dikili**	**2.75**	**80**	PN		**Pn**	**01 17 04.4**	**+0.1**
GELI	**Tayfur-Gelibol**	**2.94**	**52**	PN		**Pn**	**01 17 06.9**	**0.0**
ANAF	**Anafi Island**	**2.94**	**140**	P		**Pn**	**01 17 07.4**	**+0.4**
ENEZ	**Enez**	**2.97**	**44**	PN		**Pn**	**01 17 07.2**	**-0.1**
RDO	**Rodhopi**	**2.98**	**32**	PN		**Pn**	**01 17 07.1**	**-0.4**
ALN	**Alexandroupoli**	**3.03**	**41**	PN		**Pn**	**01 17 08.3**	**+0.2**
ALN	**Alexandroupoli**	**3.03**	**41**	*i* P		**Pn**	**01 17 07.8**	**-0.3**
ALN	**Alexandroupoli**	**3.03**	**41**	P		**Pn**	**01 17 07.4**	**-0.7**
RODP	**Rodopos**	**3.08**	**175**	P		**Pn**	**01 17 09.0**	**+0.1**
LPK	**Lapseki**	**3.11**	**55**	PN		**Pn**	**01 17 09.9**	**+0.7**
KDZ	**Kurdzhali**	**3.37**	**26**	PN		**Pn**	**01 17 12.2**	**-0.7**
IDI	**Anoyia**	**3.54**	**160**	Pn		**Pn**	**01 17 15.4**	**+0.1**
	comp=E,4.2nm,0.3s,baz=318,slow=11,SNR=6.6							
IDI				Sn		**Sn**	**01 17 57.2**	**-0.2**
	comp=E,2.2nm,0.3s,baz=285,slow=20,SNR=1.6							
PLD	**Plovdiv**	**3.60**	**15**	PN		**Pn**	**01 17 16.9**	**+1.0**
MLR	**Muntele Rosu**	**7.10**	**14**	Pn		**Pn**	**01 18 06.5**	**+2.4**
	comp=E,0.9nm,0.3s,baz=213,slow=18,SNR=2.1							
MLR				Sn		**Sn**	**01 19 27.0**	**+2.0**
	comp=E,0.2nm,0.3s,baz=233,slow=20,SNR=1.4							
ESDC	**Sonseca Array**	**21.24**	**281**	P		**P**	**01 21 05.6**	**-0.7**
	comp=E,0.6nm,0.7s,baz=83,slow=12,SNR=3.3							
HFS	**Hagfors**	**22.38**	**347**	P		**P**	**01 21 19.5**	**+1.2**
	comp=E,1.8nm,0.8s,baz=157,slow=12,SNR=1.1							
FINES	**FINESS Array B**	**22.89**	**3**	P		**P**	**01 21 24.7**	**+1.0**
	comp=E,1.8nm,0.9s,baz=218,slow=8.8,SNR=1.9							
NOA	**NORSAR Array B**	**23.69**	**345**	P		**P**	**01 21 31.4**	**-0.4**
	comp=E,0.1nm,0.5s,baz=139,slow=12,SNR=2.0							
EKA	**Eskdalemuir Ar**	**24.43**	**322**	P		**P**	**01 21 37.4**	**-1.3**
	comp=E,1.2nm,0.9s,baz=131,slow=9.7,SNR=1.6							
KURBB	**Kurchatov Arra**	**40.11**	**54**	P		**P**	**01 23 56.6**	**+0.8**
	comp=E,0.6nm,0.7s,baz=281,slow=8.5,SNR=4.3							
MKAR	**Makanchi Array**	**43.11**	**59**	P		**P**	**01 24 21.4**	**+0.9**
	comp=E,0.9nm,0.6s,baz=276,slow=7.9,SNR=6.3							
ZALV	**Zalesovo Beam**	**43.68**	**49**	P		**P**	**01 24 25.4**	**+0.5**
	comp=E,0.9nm,0.6s,baz=268,slow=8.1,SNR=3.6							

*IDC **18** 01:22:40.7±0.8, 19.46N×120.50E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.8/43, mbtmp3.9/11, Error ellipse: s-maj=34.7km s-min=14.6km az=68.0*
*NEIC **18** 01:22:41.7±0.9, 19.5N±0.1×120.5E±0.2, h10km±2km, mb3.9/8, Error ellipse: s-maj=31.5km s-min=17.3km az=256.0*
ISC 18 01:22:43.8±0.8, 19.5N±0.1×120.5E±0.2, h23km, n31, σ0.78/28, mb3.9/15, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWG	**Pinlang**	**3.38**	**10**	Pn		**Pn**	**01 23 34.8**	**-0.5**
TPUB	**Ta-pu**	**3.82**	**2**	Pn		**Pn**	**01 23 38.8**	**-2.5**
YULB	**Yu-li**	**3.98**	**11**	Pn		**Pn**	**01 23 43.6**	**+0.1**
SSLB	**Suanglung**	**4.32**	**6**	Pn		**Pn**	**01 23 47.2**	**-1.0**
YHNB	**Yeheng**	**5.24**	**9**	Pn		**Pn**	**01 24 00.6**	**-0.4**
ENH	**Enshi**	**14.65**	**319**	Pn		**Pn**	**01 26 10.3**	**+0.5**
ULN	**Ulaanbaatar**	**30.35**	**342**	P		**P**	**01 28 53.0**	**-1.0**
SONM	**Songino Array**	**30.52**	**341**	P		**P**	**01 28 56.0**	**+0.5**
	0.4nm,0.5s,baz=162,slow=8.4,SNR=2.5							
SONM	**Songino Array**	**30.52**	**341**	P		**P**	**01 28 54.8**	**-0.7**
ASAJ	**Asahikawa**	**30.76**	**32**	P		**P**	**01 28 58.4**	**+1.0**
	1.8nm,0.2s,baz=223,slow=19,SNR=1.6							
KLR	**Kul'dur**	**31.05**	**14**	P		**P**	**01 28 59.8**	**-0.2**
	1.0nm,0.7s,baz=203,slow=7.7,SNR=2.3							
FITZ	**Fitzroy Crossi**	**37.68**	**172**	P		**P**	**01 29 57.6**	**+0.1**
	1.3nm,0.7s,baz=332,slow=8.5,SNR=2.4							
FITZ	**Fitzroy Crossi**	**37.68**	**172**	P		**P**	**01 29 57.2**	**-0.3**
FITZ				IAmb		IAmb	01 30 08.5	
	comp=Z,2.9nm,1.1s							
KRVT	**Keravat (AS076**	**39.01**	**124**	P		**P**	**01 30 08.7**	**-0.3**
	comp=Z,49nm,0.4s,baz=265,slow=11,SNR=3.6							
WB0	**Warramunga Arr**	**41.31**	**160**	P		**P**	**01 30 27.2**	**-0.7**
MK31	**Makanchi Array**	**41.38**	**320**	P		**P**	**01 30 29.0**	**+0.7**
MK31				IAmb		IAmb	01 30 30.2	
	comp=Z,3.1nm,1.1s							
MKAR	**Makanchi Array**	**41.38**	**320**	P		**P**	**01 30 29.2**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=111,slow=9.3,SNR=5.1							
MKAR	**Makanchi Array**	**41.38**	**320**	P		**P**	**01 30 28.5**	**+0.2**
WRA	**Warramunga Arr**	**41.46**	**160**	P		**P**	**01 30 28.9**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=342,slow=9.0,SNR=12							
WRA	**Warramunga Arr**	**41.46**	**160**	P		**P**	**01 30 28.6**	**-0.5**
WB2	**Warramunga Arr**	**41.47**	**160**	P		**P**	**01 30 28.6**	**-0.5**
WB2				IAmb		IAmb	01 30 38.7	
	comp=Z,3.2nm,1.1s							
WR0	**Warramunga Arr**	**41.54**	**160**	P		**P**	**01 30 29.6**	**-0.2**
WR0				IAmb		IAmb	01 30 32.1	
	comp=Z,1.3nm,0.6s							
H11S3	**WAKE ISLAND Hy**	**43.62**	**83**	T		T	02 16 56.3	
	baz=273,slow=74							
H11S1	**WAKE ISLAND H

WEL ***18*** *02:31:19.8, 38°S ±10″ × 18°0W ±°, h33km, M3.5/13, ML3.8/13, MLv3.5/13, Error ellipse: s-maj=0.0km s-min=0.0km az=171.5*

IDC ***18*** *02:31:29.2 ±3.1, 36°90S × 178°18E, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.7/30, mbtmp3.7/2, Error ellipse: s-maj=65.0km s-min=37.0km az=101.0*

ISC 18 02:31:23.1 ±3.2, **37°69S** ±0°09 × **179°9E** ±0°2, **h41**km ±27km, **n37**, σ0**°93**/55, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.19**	**263**	P		**Pn**		**02 31 42.3**	**-1.0**
WMGZ				S		**Sn**		**02 31 59.6**	**+1.4**
MXZ	**Matakaoa Point**	**1.27**	**275**	P		**Pn**		**02 31 43.1**	**-1.3**
MXZ				S		**Sn**		**02 32 00.7**	**+0.4**
PUZ	**Puketiti**	**1.36**	**253**	P		**Pn**		**02 31 44.6**	**-1.0**
PUZ				S		**Sn**		**02 32 03.5**	**+1.1**
CNGZ	**Carnagh Statio**	**1.56**	**239**	P		**Pn**		**02 31 48.4**	**+0.1**
TWGZ	**Tauwhareparae**	**1.60**	**252**	P		**Pn**		**02 31 48.4**	**-0.5**
TWGZ				S		**Sn**		**02 32 09.3**	**+0.9**
HAZ	**Te Kaha**	**1.68**	**267**	P		**Pn**		**02 31 49.3**	**-0.7**
HAZ				S		**Sn**		**02 32 10.9**	**+0.5**
RUGZ	**Raukumara Rang**	**1.79**	**260**	P		**Pn**		**02 31 50.7**	**-0.8**
TKGZ	**Te Karaka**	**1.79**	**245**	P		**Pn**		**02 31 51.1**	**-0.3**
TKGZ				S		**Sn**		**02 32 14.1**	**+1.1**
RIGZ	**Rimuhau**	**1.97**	**238**	P		**Pn**		**02 31 53.7**	**-0.3**
RIGZ				S		**Sn**		**02 32 19.0**	**+1.5**
MWZ	**Matawai**	**1.98**	**250**	P		**Pn**		**02 31 53.2**	**-1.1**
MWZ				S		**Sn**		**02 32 17.5**	**-0.4**
PRGZ	**Paritu Road**	**2.01**	**232**	P		**Pn**		**02 31 54.0**	**-0.6**
MHGZ	**Mahia Peninsul**	**2.15**	**226**	P		**Pn**		**02 31 56.3**	**-0.1**
KNZ	**Kokohu**	**2.20**	**232**	P		**Pn**		**02 31 56.1**	**-1.0**
KNZ				S		**Sn**		**02 32 23.8**	**+0.7**
URZ	**Urewera**	**2.28**	**255**	Pn		**Pn**		**02 31 58.3**	**0.0**
	baz=96,slow=19								
URZ				Sn		**Sn**		**02 32 25.7**	**+0.6**
	baz=15,slow=20								
URZ	**Urewera**	**2.28**	**255**	P		**Pn**		**02 31 58.2**	**0.0**
URZ				S		**Sn**		**02 32 25.9**	**+0.8**
WHRZ	**Whale Island**	**2.33**	**265**	P		**Pn**		**02 31 59.4**	**+0.5**
MUGZ	**Murupara**	**2.60**	**251**	P		**Pn**		**02 32 01.9**	**-0.7**
MUGZ				S		**Sn**		**02 32 33.7**	**+0.8**
MTHZ	**Maungataniwha**	**2.68**	**243**	P		**Pn**		**02 32 03.3**	**-0.4**
MTHZ				S		**Sn**		**02 32 35.1**	**+0.9**
ARHZ	**Aropaoanui**	**2.77**	**235**	P		**Pn**		**02 32 04.9**	**-0.1**
NMHZ	**Naumai**	**2.81**	**239**	P		**Pn**		**02 32 05.2**	**-0.4**
NMHZ				S		**Sn**		**02 32 40.1**	**+1.7**
BKZ	**Black Stump Fm**	**3.06**	**240**	P		**Pn**		**02 32 08.4**	**-0.6**
BKZ				S		**Sn**		**02 32 44.3**	**-0.1**
MCHZ	**McNeill Hill**	**3.07**	**234**	P		**Pn**		**02 32 09.0**	**-0.1**
MCHZ				S		**Sn**		**02 32 44.5**	**+0.1**
KAHZ	**Kahuranaki**	**3.17**	**227**	P		**Pn**		**02 32 10.0**	**-0.4**
KAHZ				S		**Sn**		**02 32 48.8**	**+1.8**
KUZ	**Kuaotunu**	**3.47**	**284**	P		**Pn**		**02 32 13.2**	**-1.4**
BHHZ	**Black Hill Sta**	**3.51**	**238**	P		**Pn**		**02 32 14.5**	**-0.6**
MOVZ	**Moawhango**	**3.68**	**241**	P		**Pn**		**02 32 17.6**	**0.0**
MKAZ	**Moumakai**	**3.82**	**277**	P		**Pn**		**02 32 18.3**	**-1.1**
HIZ	**Hauiti**	**4.07**	**257**	P		**Pn**		**02 32 22.7**	**-0.1**
MBAZ	**Motutapu North**	**4.10**	**281**	P		**Pn**		**02 32 22.7**	**-0.5**
MRZ	**Mangatainoka R**	**4.49**	**227**	P		**Pn**		**02 32 26.9**	**-1.6**
MRZ				S		**Sn**		**02 33 17.0**	**-2.4**
WCZ	**Waipu Caves**	**4.79**	**290**	P		**Pn**		**02 32 31.9**	**-0.8**
OUZ	**Omahuta**	**5.65**	**294**	P		**Pn**		**02 32 44.4**	**-0.1**
CTZ	**Chatham Island**	**6.59**	**157**	P		**Pn**		**02 32 58.1**	**+0.7**
JCZ	**Jackson Bay**	**10.56**	**229**	P		**Pn**		**02 33 50.4**	**-1.5**
ASAR	**Alice Springs**	**41.56**	**276**	P		**P**		**02 39 06.8**	**-0.2**
	0.8nm,0.6s,baz=122,slow=8.0,SNR=9.6								
WRA	**Warramunga Arr**	**43.20**	**281**	P		**P**		**02 39 19.6**	**-0.7**
	0.5nm,0.4s,baz=121,slow=7.7,SNR=8.7								
FINES	**FINESS Array B**	**151.16**	**334**	PKPbc		**PKPab**		**02 51 20.0**	**+1.1**
	1.0nm,0.8s,baz=18,slow=5.8,SNR=3.7								

WEL ***18*** *02:37:01.8, 38°S ±9°× 18°0W ±°, h33km, M4.2/26, ML4.5/26, MLv4.2/26, Error ellipse: s-maj=0.0km s-min=0.0km az=178.9*

IDC ***18*** *02:37:02.2 ±1.2, 37°37S × 179°54E, h0km, mb4.4/6, mb1 4.4/8, mb1mx4.1/27, mbtmp4.3/8, ML3.7/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/31, Error ellipse: s-maj=28.6km s-min=25.3km az=15.0*

NEIC ***18*** *02:37:05.5 ±1.4, 37°68S ±0°08 × 179°54E ±0°10, h28km ±8km, mb4.4/12, Error ellipse: s-maj=13.3km s-min=9.6km az=140.0*

ISC 18 02:37:02.3 ±1.8, **37°78S** ±0°04 × **179°77E** ±0°06, **h13**km ±9km, **n115**, σ1**°73**/129, **mb4.3**/12, **MS3.3**/5, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.08**	**267**	P		**Pn**		**02 37 24.4**	**+1.4**
WMGZ				S		**Sn**		**02 37 41.6**	**+3.8**
MXZ	**Matakaoa Point**	**1.18**	**280**	P		**Pg**		**02 37 25.2**	**+0.1**
MXZ				S		**Sn**		**02 37 42.6**	**+2.1**
MXZ	**Matakaoa Point**	**1.18**	**280**	Pn		**Pg**		**02 37 25.0**	**-0.1**
PUZ	**Puketiti**	**1.23**	**256**	P		**Pg**		**02 37 26.8**	**+0.8**
PUZ				S		**Sn**		**02 37 45.0**	**+3.2**
CNGZ	**Carnagh Statio**	**1.42**	**240**	P		**Pg**		**02 37 30.5**	**+0.9**
TWGZ	**Tauwhareparae**	**1.47**	**254**	P		**Pg**		**02 37 30.3**	**-0.2**
TWGZ				S		**Sg**		**02 37 52.8**	**+3.1**
HAZ	**Te Kaha**	**1.58**	**270**	P		**Pg**		**02 37 31.5**	**-1.0**
HAZ				S		**Sg**		**02 37 53.7**	**+0.6**
TKGZ	**Te Karaka**	**1.66**	**246**	P		**Pg**		**02 37 33.3**	**-0.8**
TKGZ				S		**Sg**		**02 37 56.1**	**+0.5**
RUGZ	**Raukumara Rang**	**1.67**	**263**	P		**Pb**		**02 37 32.8**	**-0.1**
RIGZ	**Rimuhau**	**1.83**	**239**	P		**Pb**		**02 37 35.9**	**+0.2**
MWZ	**Matawai**	**1.86**	**252**	P		**Pb**		**02 37 35.2**	**-0.9**
MWZ				S		**Sb**		**02 38 00.1**	**+0.9**
PRGZ	**Paritu Road**	**1.88**	**232**	P		**Pb**		**02 37 36.3**	**-0.1**
RAGZ	**Rawiri**	**1.99**	**248**	P		**Pb**		**02 37 38.3**	**-0.2**
MHGZ	**Mahia Peninsul**	**2.01**	**226**	P		**Pb**		**02 37 38.1**	**-0.5**
KNZ	**Kokohu**	**2.07**	**232**	P		**Pb**		**02 37 38.3**	**-1.3**
URZ	**Urewera**	**2.16**	**256**	Pn		**Pb**		**02 37 39.9**	**-1.3**
	58nm,0.3s,baz=112,slow=1.1,SNR=102								
URZ				Sn		**Sb**		**02 38 06.8**	**-1.0**
	99nm,0.3s,baz=176,slow=21,SNR=30								
URZ	**Urewera**	**2.16**	**256**	P		**Pb**		**02 37 40.2**	**-1.0**
URZ	**Urewera**	**2.16**	**256**	Pn		**Pb**		**02 37 39.6**	**-1.6**
URZ				Sn		**Sn**		**02 38 01.7**	**-2.7**
WHRZ	**Whale Island**	**2.22**	**267**	P		**Pb**		**02 37 40.9**	**-1.3**
RTZ	**Ruatahuna**	**2.35**	**248**	P		**Pb**		**02 37 43.3**	**-1.3**
WHHZ	**Waihua**	**2.38**	**236**	P		**Pb**		**02 37 43.6**	**-1.4**
WHHZ				S		**Sb**		**02 38 15.2**	**+0.9**
RAHZ	**Arahi**	**2.40**	**241**	P		**Pb**		**02 37 43.7**	**-1.7**
EDRZ	**Edgecumbe**	**2.42**	**261**	P		**Pb**		**02 37 43.5**	**-2.2**
MUGZ	**Murupara**	**2.47**	**253**	P		**Pb**		**02 37 44.2**	**-2.3**
MUGZ				S		**Sb**		**02 38 15.0**	**-1.8**
MTHZ	**Maungataniwha**	**2.54**	**244**	P		**Pb**		**02 37 45.5**	**-2.3**
MTHZ				S		**Sb**		**02 38 18.2**	**-0.8**
OPRZ	**Ohinepanea**	**2.55**	**267**	P		**Pn**		**02 37 44.5**	**+1.2**
TARZ	**Mount Tarawera**	**2.62**	**259**	P		**Pb**		**02 37 47.5**	**-1.7**
RRRZ	**Republican Roa**	**2.63**	**257**	P		**Pb**		**02 37 46.6**	**-2.7**
ARHZ	**Aropaoanui**	**2.64**	**235**	P		**Pb**		**02 37 47.2**	**-2.1**
ARHZ				S		**Sb**		**02 38 21.5**	**-0.1**
NMHZ	**Naumai**	**2.68**	**240**	P		**Pb**		**02 37 47.9**	**-2.2**
NMHZ				S		**Sb**		**02 38 22.3**	**-0.6**
KARZ	**Kaharoa**	**2.80**	**264**	P		**Pb**		**02 37 49.3**	**-2.9**
HRRZ	**Handcock Road**	**2.82**	**256**	P		**Pn**		**02 37 48.8**	**+1.8**
CKHZ	**Cape Kidnapper**	**2.82**	**227**	P		**Pn**		**02 37 49.1**	**+2.0**
CKHZ				S		**Sb**		**02 38 25.1**	**-1.9**
MRHZ	**Matea Rd**	**2.84**	**247**	P		**Pn**		**02 37 49.5**	**+2.1**
BKZ	**Black Stump Fm**	**2.92**	**241**	P		**Pn**		**02 37 50.5**	**+2.0**
BKZ				S		**Sb**		**02 38 27.0**	**-3.0**
BKZ	**Black Stump Fm**	**2.92**	**241**	Pn		**Pn**		**02 37 48.6**	**+0.1**
BKZ				Sn		**Sn**		**02 38 22.3**	**-1.3**
MCHZ	**McNeill Hill**	**2.93**	**234**	P		**Pn**		**02 37 50.8**	**+2.3**
MCHZ				S		**Sb**		**02 38 28.0**	**-2.1**
KAHZ	**Kahuranaki**	**3.03**	**227**	P		**Pn**		**02 37 51.8**	**+1.9**
KRHZ	**Kereru**	**3.25**	**234**	P		**Pn**		**02 37 54.6**	**+1.6**
RITZ	**Rihia Road**	**3.30**	**248**	P		**Pb**		**02 37 57.3**	**-3.4**
RITZ				S		**Sn**		**02 38 35.8**	**+3.0**
BHHZ	**Black Hill Sta**	**3.37**	**238**	P		**Pn**		**02 37 56.7**	**+2.1**
TOZ	**Tahuroa Road**	**3.39**	**269**	P		**Pn**		**02 37 56.0**	**+1.3**
KUZ	**Kuaotunu**	**3.39**	**286**	P		**Pn**		**02 37 54.8**	**-0.1**
WPHZ	**Waipukurau**	**3.46**	**228**	P		**Pn**		**02 37 57.8**	**+2.0**
TMVZ	**Te Maari**	**3.46**	**246**	P		**Pn**		**02 37 57.9**	**+1.9**
ETVZ	**East Tongariro**	**3.47**	**246**	P		**Pn**		**02 37 58.3**	**+2.2**
OTVZ	**Oturere**	**3.51**	**246**	P		**Pn**		**02 37 59.2**	**+2.6**
MOVZ	**Moawhango**	**3.55**	**241**	P		**Pn**		**02 37 59.6**	**+2.6**
WTVZ	**West Tongariro**	**3.55**	**247**	P		**Pb**		**02 38 00.9**	**-4.0**
NGZ	**Ngauruhoe**	**3.56**	**246**	P		**Pn**		**02 38 00.8**	**+3.5**
WHVZ	**Whangaehu Hut**	**3.61**	**244**	P		**Pn**		**02 38 00.8**	**+2.7**
WNVZ	**Wahianoa**	**3.62**	**243**	P		**Pn**		**02 38 00.8**	**+2.6**
FWVZ	**Far West T-bar**	**3.62**	**245**	P		**Pn**		**02 38 01.5**	**+3.2**
MKAZ	**Moumakai**	**3.73**	**279**	P		**Pn**		**02 38 00.4**	**+0.9**
TSZ	**Takapari Road**	**3.75**	**231**	P		**Pn**		**02 38 00.8**	**+1.0**
DVHZ	**Dannevirke**	**3.77**	**227**	P		**Pn**		**02 38 01.4**	**+1.3**
GRZ	**Great Barrier**	**3.77**	**292**	P		**Pn**		**02 38 00.5**	**+0.4**
HIZ	**Hauiti**	**3.95**	**258**	P		**Pn**		**02 38 05.1**	**+2.6**
HIZ	**Hauiti**	**3.95**	**258**	Pn		**Pn**		**02 38 03.7**	**+1.2**
ETAZ	**East Tamaki Re**	**3.95**	**281**	P		**Pn**		**02 38 03.0**	**+0.5**
BFZ	**Birch Farm**	**3.99**	**222**	P		**Pn**		**02 38 03.3**	**+0.2**
BFZ	**Birch Farm**	**3.99**	**222**	Pn		**Pn**		**02 38 03.6**	**+0.5**
BFZ				Sn		**Sn**		**02 38 48.9**	**-0.8**
MBAZ	**Motutapu North**	**4.02**	**283**	P		**Pn**		**02 38 04.9**	**+1.5**
AWAZ	**Awhitu Peninsu**	**4.15**	**278**	P		**Pn**		**02 38 07.2**	**+2.0**
VRZ	**Vera Road**	**4.16**	**250**	P		**Pn**		**02 38 07.5**	**+2.0**
WAZ	**Wanganui**	**4.23**	**241**	P		**Pn**		**02 38 10.0**	**+3.6**
MRZ	**Mangatainoka R**	**4.35**	**227**	P		**Pn**		**02 38 09.0**	**+1.0**
TMWZ	**Te Maipa**	**4.48**	**221**	P		**Pn**		**02 38 10.5**	**+0.6**
HOWZ	**Holdsworth Sta**	**4.54**	**225**	P		**Pn**		**02 38 10.5**	**-0.1**
WCZ	**Waipu Caves**	**4.72**	**291**	P		**Pn**		**02 38 14.2**	**+1.0**
KHEZ	**Kahui Hut**	**4.76**	**250**	P		Pn		02 38 18.6	+4.8
KIW	**Kapiti Island**	**4.87**	**229**	P		**Pn**		**02 38 16.0**	**+0.8**
MSWZ	**Moikau Station**	**5.04**	**222**	Pn		**Pn**		**02 38 16.1**	**-1.5**
MSWZ						**Sn**		**02 39 14.4**	**-1.2**
DUWZ	**D'Urville Isla**	**5.45**	**235**	P		**Pn**		**02 38 24.1**	**+0.9**
OUZ	**Omahuta**	**5.59**	**295**	P		**Pn**		**02 38 26.3**	**+1.2**
OUZ	**Omahuta**	**5.59**	**295**	Pn		**Pn**		**02 38 23.8**	**-1.3**
TUWZ	**Tuamarina**	**5.79**	**229**	Pn		**Pn**		**02 38 30.3**	**+2.4**
TUWZ						**Sn**		**02 39 33.2**	**-1.0**
NNZ	**Nelson**	**6.02**	**233**	P		**Pn**		**02 38 31.9**	**+0.9**
CTZ	**Chatham Island**	**6.55**	**156**	P		**Pn**		**02 38 40.2**	**+1.9**
THZ	**Tophouse**	**6.62**	**231**	P		**Pn**		**02 38 40.1**	**+0.8**
THZ	**Tophouse**	**6.62**	**231**	Pn		**Pn**		**02 38 39.9**	**+0.7**
THZ						**Sn**		**02 39 54.2**	**-0.4**
KHZ	**Kahutara**	**6.66**	**224**	Pn		**Pn**		**02 38 39.0**	**-0.7**
KHZ						**Sn**		**02 39 53.5**	**-1.8**
DZM	**Mont Dzumac**	**19.42**	**320**	P		**P**		**02 41 26.4**	**-1.9**
	0.1nm,0.3s,baz=126,slow=15,SNR=4.2								
DZM	**Mont Dzumac**	**19.42**	**320**	P		**P**		**02 41 26.7**	**-1.7**
STKA	**Stephens Creek**	**31.73**	**269**	P		**P**		**02 43 27.1**	**+1.2**
	2.5nm,0.8s,baz=102,slow=10.0,SNR=3.7								
STKA				LR		LR		02 55 37.3	
	comp=Z,42nm,18.7s,baz=217,slow=35								
STKA	**Stephens Creek**	**31.73**	**269**	P		**P**		**02 43 25.5**	**-0.4**
CTA	**Charters Tower**	**33.98**	**292**	P		**P**		**02 43 44.3**	**-1.4**
	3.0nm,0.8s,baz=121,slow=5.9,SNR=3.4								
BBOO	**Buckleboo**	**35.78**	**265**	P		**P**		**02 44 00.8**	**-0.3**
BBOO				IAmb		IAmb		02 44 19.2	
	comp=Z,5.1nm,1.1s								
COEN	**Coen**	**40.20**	**296**	P		**P**		**02 44 38.0**	**-0.6**
PMG	**Port Moresby**	**40.74**	**305**	LR		LR		03 00 24.8	
	comp=Z,58nm,18.3s,baz=132,slow=35								
AS31	**Alice Springs**	**41.46**	**276**	P		**P**		**02 44 48.6**	**-0.4**
AS31				IAmb		IAmb		02 44 57.1	
	comp=Z,3.3nm,0.7s								
ASAR	**Alice Springs**	**41.46**	**276**	P		**P**		**02 44 48.4**	**-0.6**
	comp=Z,6.2nm,0.8s,baz=123,slow=8.1,SNR=27								
ASAR	**Alice Springs**	**41.46**	**276**	P		**P**		**02 44 47.6**	**-1.4**
KRVT	**Keravat (AS076**	**41.86**	**316**	LR		LR		02 58 38.3	
	comp=Z,42nm,19.5s,baz=132,slow=31								
WR0	**Warramunga Arr**	**42.95**	**281**	P		**P**		**02 45 00.3**	**-0.8**
WR0				IAmb		IAmb		02 45 04.9	
	comp=Z,7.0nm,1.1s								
WC3	**Warramunga Arr**	**43.08**	**281**	P		**P**		**02 45 01.4**	**-0.8**
WC3				IAmb		IAmb		02 45 10.4	
	comp=Z,6.9nm,0.9s								
WB2	**Warramunga Arr**	**43.11**	**281**	P		**P**		**02 45 01.5**	**-0.9**
WB2				IAmb		IAmb		02 45 03.2	
	comp=Z,10nm,1.1s								
WRA	**Warramunga Arr**	**43.12**	**281**	P		**P**		**02 45 01.6**	**-0.8**
	comp=Z,2.7nm,0.4s,baz=122,slow=7.8,SNR=17								
WRA				LR		LR		03 04 21.7	
	comp=Z,42nm,18.7s,baz=125,slow=38								
WRA	**Warramunga Arr**	**43.12**	**281**	P		**P**		**02 45 02.0**	**-0.5**
WB0	**Warramunga Arr**	**43.18**	**282**	P		**P**		**02 45 02.2**	**-0.7**
WB0				IAmb		IAmb		02 45 11.4	
	comp=Z,6.8nm,0.8s								
FITZ	**Fitzroy Crossi**	**50.95**	**277**	P		**P**		**02 46 03.4**	**-0.3**
	comp=Z,5.8nm,0.8s,baz=160,slow=6.1,SNR=9.2								
FITZ				LR		LR		03 07 50.3	
	comp=Z,29nm,19.4s,baz=126,slow=36								
FITZ	**Fitzroy Crossi**	**50.95**	**277**	P		**P**		**02 46 03.4**	**-0.3**
QSPA	**South Pole Qui**	**52.35**	**180**	P		P		02 46 18.5	+4.8
	comp=Z,4.0nm,0.9s,baz=16,slow=2.9,SNR=11								
QSPA	**South Pole Qui**	**52.35**	**180**	P		**P**		**02 46 17.8**	**+4.2**
QSPA				IAmb		IAmb		02 46 19.5	
	comp=Z,5.2nm,0.9s								
H03S2	**Juan Fernandez**	**77.94**	**123**	T		T		04 14 42.6	
	baz=231,slow=74,SNR=6.6								
H03S1	**Juan Fernandez**	**77.95**	**123**	T		T		04 14 42.8	
	baz=231,slow=74,SNR=5.8								
H03S3	**Juan Fernandez**	**77.96**	**123**	T		T		04 14 41.7	
	baz=231,slow=74,SNR=6.2								
H03N3	**Juan Fernandez**	**78.18**	**123**	T		T		04 15 09.7	
	baz=234,slow=72,SNR=44								
H03N2	**Juan Fernandez**	**78.18**	**123**	T		T		04 15 06.8	
	baz=234,slow=72,SNR=20								
H03N1	**Juan Fernandez**	**78.19**	**123**	T		T		04 15 05.8	
	baz=234,slow=72,SNR=55								
ARCES	**ARCESS Array B**	**145.29**	**344**	PKP		**PKPdf**		**02 56 39.8**	**+1.2**
	comp=Z,4.0nm,0.9s,baz=35,slow=3.0,SNR=6.5								
KBZ	**Khabaz**	**147.08**	**294**	PKPbc		**PKPab**		**02 56 46.2**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=233,slow=20,SNR=4.1								
FINES	**FINESS Array B**	**151.20**	**334**	PKPbc		**PKiKP**		**02 56 55.8**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=36,slow=3.8,SNR=11								
FINES	**FINESS Array B**	**151.20**	**334**			**PKiKP**		**02 56 55.6**	**+0.7**
AKASG	**Malin Array Be**	**155.44**	**311**	PKP		**PKPdf**		**02 56 53.3**	**-1.6**
	comp=Z,0.2nm,0.2s,baz=48,slow=2.6,SNR=5.3								

ATH ***18*** *02:42:08.8, 35°48N × 27°79E, h21km ±1km, ML2.6/4, Error ellipse: s-maj=3.7km s-min=1.3km az=315.0*

NIC ***18*** *02:42:08.5 ±0.0, 35°52N × 27°75E, h0km ±4km, Ml3.1/3*

ISK ***18*** *02:42:09.7, 35°50N × 27°72E, h6km, ML2.6/17*

DDA ***18*** *02:42:09.8, 35°41N × 27°68E, h10km ±2km, ML2.6*

THE ***18*** *02:42:10.9, 35°58N × 27°71E, h0km ±2km, mL2.5/5, Error ellipse: s-maj=4.8km s-min=1.4km az=133.0*

ISC 18 02:42:09.8 ±1.3, **35°51N** ±0°04 × **27°71E** ±0°02, **h4**km ±10km, **n73**, σ0**°87**/94, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.45**	**275**	P		**Pg**		**02 42 18.8**	**+0.4**
KARP				S		**Sb**		**02 42 26.8**	**-0.6**
KARP				AML		AML		02 42 28.7	
	comp=N,1437μm,0.1s								
KARP				AML		AML		02 42 28.8	
	comp=E,2179μm,0.3s								
KARP	**Karpathos**	**0.45**	**275**	PG		**Pg**		**02 42 19.1**	**+0.6**
KARP				SG		**Sb**		**02 42 26.3**	**-1.1**
KARP	**Karpathos**	**0.45**	**275**	P		**Pg**		**02 42 18.9**	**+0.4**
KARP				S		**Sb**		**02 42 27.3**	**-0.1**
KARP				AML		AML		02 42 28.3	
	comp=E,2.2nm,0.3s								
KARP				AML		AML		02 42 28.3	
	comp=E,2.2nm,0.3s								
KARP				AML		AML		02 42 29.8	
	comp=E,1.6nm,0.1s								
KARP				AML		AML		02 42 29.8	
	comp=E,1.6nm,0.1s								
KARP	**Karpathos**	**0.45**	**275**	P		**Pg**		**02 42 19.0**	**+0.6**
KARP				S		**Sb**		**02 42 27.3**	**-0.1**
	comp=E,765nm,0.2s								
ARG	**Arkhangelos**	**0.78**	**25**	P		**Pg**		**02 42 24.0**	**-0.7**
ARG				S		**Sg**		**02 42 35.5**	**+0.6**
ARG				AML		AML		02 42 39.2	
	comp=E,556μm,0.3s								
ARG				AML		AML		02 42 42.5	
	comp=N,416μm,0.4s								
ARG	**Arkhangelos**	**0.78**	**25**	PG		**Pg**		**02 42 25.2**	**+0.5**
ARG				SG		**Sb**		**02 42 36.9**	**0.0**
ARG	**Arkhangelos**	**0.78**	**25**	P		**Pg**		**02 42 24.1**	**-0.7**
ARG				S		**Sb**		**02 42 36.0**	**-0.9**
ARG	**Arkhangelos**	**0.78**	**25**	P		**Pg**		**02 42 24.0**	**-0.7**
NIS1	**Nisyros Isl.**	**1.17**	**339**	P		**Pg**		**02 42 31.2**	**-1.0**
NIS1				S		**Sn**		**02 42 49.7**	**+0.2**
NIS1				AML		AML		02 42 58.2	
	comp=E,512μm,0.4s								
NIS1				AML		AML		02 43 00.6	
	comp=N,544μm,0.6s								
NIS1	**Nisyros Isl.**	**1.17**	**339**	PN		**Pn**		**02 42 32.8**	**-0.2**
NIS1				S		**Sn**		**02 42 49.5**	**0.0**
	comp=N,278nm,0.4s								
MRSB	**Marmaris-Mugla**	**1.27**	**18**	PN		**Pn**		**02 42 34.0**	**-0.3**
ZKR	**Zakros**	**1.28**	**253**	P		**Pn**		**02 42 34.2**	**-0.3**
ZKR				S		**Sn**		**02 42 53.1**	**+0.9**
ZKR				AML		AML		02 43 00.7	
	comp=N,230μm,0.6s								
ZKR				AML		AML		02 43 01.5	
	comp=E,741μm,0.8s								
ZKR	**Zakros**	**1.28**	**253**	PN		**Pg**		**02 42 34.7**	**+0.3**
ZKR				SN		**Sn**		**02 42 52.9**	**+0.7**
ZKR	**Zakros**	**1.28**	**253**	P		**Pn**		**02 42 34.2**	**-0.3**
TURN	**Turunc**	**1.33**	**19**	PN		**Pg**		**02 42 35.5**	**+0.2**
TURN	**Turunc**	**1.33**	**19**	*i* P		**Pn**		**02 42 34.1**	**-1.1**
TURN				*i* S		**Sn**		**02 42 57.1**	**+3.7**
TURN				IAML				02 42 59.0	
	comp=E,244nm,0.9s								
TURN				IAML				02 43 00.0	
	comp=N,156nm,0.7s								
STIA	**Sitia Lasithi**	**1.36**	**257**	P		**Pn**		**02 42 35.3**	**-0.2**
STIA				S		**Sn**		**02 42 56.6**	**+2.6**
KOSK	**Kos Island**	**1.37**	**335**	PN		**Pg**		**02 42 36.4**	**+0.3**
DALY	**Dalyan (Mula)**	**1.51**	**30**	PN		**Pb**		**02 42 38.2**	**-0.2**
DALY	**Dalyan (Mula)**	**1.51**	**30**	*i* P		**Pb**		**02 42 37.8**	**-0.5**
DALY				*i* S		**Sg**		**02 43 00.7**	**+2.4**
DALY				IAML				02 43 07.0	
	comp=N,63nm,0.5s								
FETY	**Fethiye**	**1.58**	**44**	PN		**Pb**		**02 42 38.9**	**-0.7**
FETY	**Fethiye**	**1.58**	**44**	*i* P		**Pn**		**02 42 38.6**	**0.0**
FETY	**Fethiye**	**1.58**	**44**	P		**Pn**		**02 42 38.5**	**-0.1**
BODT	**Bodrum**	**1.58**	**348**	PN		**Pn**		**02 42 38.7**	**+0.1**
BODT	**Bodrum**	**1.58**	**348**	P		**Pn**		**02 42 37.9**	**-0.7**
KSL	**Kastellorizon**	**1.65**	**67**	P		**Pn**		**02 42 39.1**	**-0.4**
YER	**Yerkesik**	**1.69**	**16**	PN		**Pn**		**02 42 40.4**	**+0.3**
YER	**Yerkesik**	**1.69**	**16**	P		**Pn**		**02 42 40.2**	**+0.1**
AKAS	**Kas**	**1.70**	**64**	PN		**Pn**		**02 42 39.6**	**-0.7**
AKAS	**Kas**	**1.70**	**64**	*i* P		**Pn**		**02 42 39.9**	**-0.

TDJR				Sg	Sg	02 50 37.7	-1.5
SALR	**Pechorkino, Sa**	**4.56**	**328**	Pg	Pg	02 49 47.5	-0.8
SALR				Sg	Sg	02 50 45.8	-1.5
KNGR	**Kungurtug, Tuv**	**4.90**	**87**	P	Pn	02 49 39.9	+4.5
KNGR				Pg	Pg	02 49 54.6	-0.2
KNGR				Sg	Sg	02 51 02.1	+3.8
KTRR	**Kuturchin**	**5.08**	**30**	P	Pn	02 49 42.9	+5.2
KTRR				Sg	Sg	02 51 07.8	+3.8
KEM	**Kemerovo**	**5.24**	**336**	Sg	Sg	02 51 07.2	-1.9
ORY	**Orie**	**5.43**	**34**	Sg	Sg	02 51 13.9	-1.4
NVSII	**Novosibirsk**	**5.82**	**319**	Pg	Pg	02 50 09.0	-3.4
NVSII				Sg	Sg	02 51 26.2	-1.5
NVS	**Novosibirsk**	**5.82**	**319**	Sg	Sg	02 51 27.1	-0.6
BSTK	**Bystrovka, Nov**	**5.89**	**315**	Pg	Pg	02 50 14.2	+0.5
BSTK				Sg	Sg	02 51 34.3	+4.6
NHES	**Novosibirsk, N**	**5.93**	**318**	Sg	Sg	02 51 31.4	0.0
ALXA	**Alekseevka, NS**	**6.16**	**317**	Sg	Sg	02 51 39.8	+1.2
MK31	**Makanchi Array**	**6.29**	**235**	Pn	Pn	02 49 59.2	+4.8
	0.3nm,0.2s,baz=56,slow=15,SNR=23						
MK31				⇓Pg	Pg	02 50 22.3	+1.0
	2.2nm,0.6s,baz=64,slow=14,SNR=3.6						
MK31				⇑Lg	Lg	02 51 40.9	
	4.6nm,0.6s,baz=52,slow=30,SNR=3.6						
MKAR	**Makanchi Array**	**6.29**	**235**	P	Pn	02 49 58.8	+4.4
MKAR				Pg	Pg	02 50 21.2	-0.2
MKAR				S	Sn	02 51 07.7	+1.2
MKAR				Sg	Sg	02 51 43.2	+0.4
MAKZ	**Makanchi**	**6.44**	**237**	P	Pn	02 50 01.1	+4.6
MAKZ				Pg	Pg	02 50 25.0	+0.6
MAKZ				Sg	Sg	02 51 46.1	-1.6
KURK	**Kurchatov**	**7.12**	**275**	Sg	Sg	02 52 06.3	-3.2
KURK	**Kurchatov**	**7.12**	**275**	⇑Pn	Pn	02 50 12.8	+7.0
	0.3nm,0.2s						
KURK				⇑Sn	Sn	02 51 30.2	+3.2
	4.0nm,0.8s						
KURK				⇓Lg	Lg	02 52 02.9	
	16nm,0.8s						

*BEO **18** 02:49:15.4±0.4, 44°.34N×17°.33E, h12km±4km, ML2.3/10*
*RHSSO **18** 02:49:15.7±0.3, 44°.32N×17°.40E, h5km±2km, ML2.5/13*

ISC 18 02:49:15.4±1.1, 44°.31N±0°.02×17°.40E±0°.02, h5km±9km, n46, σ0°78/80, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.46**	**341**	*e*Pg	**Pg**	**02 49 24.6**	**+0.3**
BLY				*e*Sg	**Sg**	**02 49 31.0**	**+0.7**
BLY	**Banja Luka**	**0.46**	**341**	⇑*i*Pg	**Pg**	**02 49 24.5**	**+0.3**
BLY				*e*Sg	**Sg**	**02 49 31.0**	**+0.7**
KUV	**Kijevo**	**0.78**	**247**	*e*Pg	**Pg**	**02 49 30.6**	**+0.3**
KUV				Sg	**Sg**	**02 49 40.4**	**+0.1**
PRIJ	**Prijedor**	**0.82**	**324**	*e*Pg	**Pg**	**02 49 30.4**	**-0.8**
PRIJ				*e*Sg	**Sg**	**02 49 41.8**	**0.0**
RICI	**Ricice**	**0.84**	**193**	*e*Pg	**Pg**	**02 49 30.7**	**-0.7**
RICI				Sg	**Sg**	**02 49 42.4**	**+0.1**
MAKA	**Makarska**	**1.06**	**195**	*e*Pg	**Pg**	**02 49 35.0**	**-0.7**
MAKA				Sg	**Sg**	**02 49 49.9**	**+0.5**
HAPS	**Han Pijesak,Bl**	**1.14**	**101**	*e*Pg	**Pg**	**02 49 35.8**	**-1.5**
HAPS				*e*Sg	**Sg**	**02 49 52.6**	**+0.5**
HAPS	**Han Pijesak,Bl**	**1.14**	**101**	⇑*i*Pg	**Pg**	**02 49 35.7**	**-1.5**
HAPS				*e*Sg	**Sg**	**02 49 51.8**	**-0.3**
MORI	**Morici**	**1.30**	**250**	*e*Pg	**Pn**	**02 49 39.5**	**-0.6**
MORI				Sg	**Sn**	**02 49 57.1**	**-0.8**
MOSL	**Moslavina**	**1.38**	**341**	*e*Pg	**Pg**	**02 49 41.6**	**-0.1**
MOSL				Sg	**Sg**	**02 49 59.1**	**-0.5**
ZIRJ	**Zirje**	**1.43**	**243**	Sg	**Sg**	**02 50 02.6**	**+1.5**
STON	**Ston**	**1.46**	**171**	*e*Pg	**Pn**	**02 49 42.0**	**-0.4**
STON				*e*Sg	**Sg**	**02 50 03.4**	**+1.2**
STON	**Ston**	**1.46**	**171**	*e*Pg	**Pn**	**02 49 41.7**	**-0.7**
STON				*e*Sg	**Sb**	**02 50 02.4**	**+0.6**
STON	**Ston**	**1.46**	**171**	*e*Pg	**Pb**	**02 49 42.9**	**-0.1**
STON				Sg	**Sn**	**02 50 01.4**	**-0.4**
BBLS	**Lazići**	**1.52**	**106**	*e*Pg	**Pb**	**02 49 44.0**	**0.0**
BBLS				*e*Sg	**Sg**	**02 50 06.2**	**+2.1**
BBLS	**Lazići**	**1.52**	**106**	*e*Pn	**Pn**	**02 49 42.9**	**-0.4**
BBLS				*e*Sn	**Sn**	**02 50 03.7**	**+0.3**
TEKS	**Tekeris**	**1.55**	**80**	*e*Pg	**Pn**	**02 49 43.4**	**-0.2**
TEKS				*e*Sg	**Sg**	**02 50 05.5**	**+0.4**
TEKS	**Tekeris**	**1.55**	**80**	*e*Pn	**Pn**	**02 49 43.2**	**-0.4**
TEKS				*e*Sn	**Sb**	**02 50 04.5**	**+0.1**
LSTV	**Lastovo**	**1.59**	**194**	*e*Pn	**Pb**	**02 49 45.2**	**0.0**
LSTV				Sn	**Sg**	**02 50 07.7**	**+1.3**
BRY	**Bratogost**	**1.64**	**149**	*e*Pn	**Pn**	**02 49 45.6**	**+0.6**
ZAG	**Zagreb**	**1.81**	**327**	*e*Sn	**Sb**	**02 50 10.6**	**-1.5**
NVLJ	**Novalja**	**1.82**	**279**	Sn	**Sg**	**02 50 13.2**	**-0.8**
DIVS	**Divibare**	**1.88**	**96**	*e*Pg	**Pb**	**02 49 50.6**	**+0.3**
DIVS				*e*Sg	**Sg**	**02 50 16.8**	**+1.1**
DIVS	**Divibare**	**1.88**	**96**	⇑*i*Pn	**Pn**	**02 49 49.0**	**+0.7**
DIVS				*e*Sn	**Sn**	**02 50 13.1**	**+0.7**
PTJ	**Puntijarka**	**1.89**	**328**	*e*Pn	**Pn**	**02 49 48.6**	**+0.2**
OZLJ	**Ozalj**	**1.89**	**314**	*e*Pg	**Pg**	**02 49 51.0**	**-0.6**
FRGS	**Fruska Gora**	**1.92**	**63**	*e*Pg	**Pb**	**02 49 50.8**	**-0.1**
FRGS				*e*Sg	**Sg**	**02 50 17.3**	**+0.3**
FRGS	**Fruska Gora**	**1.92**	**63**	*e*Pn	**Pn**	**02 49 48.7**	**0.0**
FRGS				*e*Sn	**Sn**	**02 50 13.9**	**+0.6**
KALN	**Kalnik**	**1.94**	**340**	*e*Pn	**Pn**	**02 49 48.9**	**-0.1**
KALN				Sn	**Sb**	**02 50 14.2**	**-1.4**
CRES	**Cresnjev**	**2.04**	**318**	*e*Pn	**Pn**	**02 49 50.4**	**-0.1**
CRES				*e*Sn	**Sn**	**02 50 16.2**	**-0.2**
MORH	**Mrgy, Hungar**	**2.10**	**24**	*e*Pn	**Pn**	**02 49 51.2**	**0.0**
MORH				*e*Sn	**Sn**	**02 50 17.7**	**+0.1**
IVAS	**Ivanjica**	**2.12**	**109**	*e*Pg	**Pb**	**02 49 54.5**	**+0.1**
IVAS				*e*Sg	**Sg**	**02 50 25.4**	**+1.8**
SJES	**Sjenica**	**2.14**	**118**	*e*Pg	**Pb**	**02 49 55.7**	**+0.9**
SJES				*e*Sg	**Sg**	**02 50 24.3**	**+0.1**
RIY	**Rijeka**	**2.31**	**297**	*e*Pn	**Pn**	**02 49 54.8**	**+0.7**
RIY				*e*Sn	**Sn**	**02 50 23.4**	**+0.6**
PDG	**Podgorica**	**2.32**	**144**	*e*Pg	**Pb**	**02 49 57.9**	**+0.2**
PDG				*e*Sg	**Sg**	**02 50 29.8**	**-0.1**
PDG	**Podgorica**	**2.32**	**144**	*e*Pn	**Pn**	**02 49 55.0**	**+0.8**
PDG				*e*Sn	**Sn**	**02 50 23.1**	**0.0**
GRUS	**Gruza**	**2.43**	**99**	*e*Pn	**Pn**	**02 49 56.0**	**+0.2**
DRME	**Dracevica, Mon**	**2.50**	**148**	*e*Pn	**Pn**	**02 49 56.5**	**-0.2**
DRME				*e*Sn	**Sn**	**02 50 28.0**	**+0.5**
CEY	**Cerknica**	**2.54**	**305**	*e*Pn	**Pn**	**02 49 58.4**	**+1.1**
CEY				*e*Sn	**Sn**	**02 50 29.0**	**+0.3**
SOKA	**Soboth**	**2.89**	**326**	Pn	**Pn**	**02 50 02.6**	**+0.4**
	0.3nm,0.1s						
SELS	**Selova**	**2.91**	**111**	*e*Pn	**Pn**	**02 50 01.6**	**-0.8**
OBKA	**Obir**	**2.97**	**319**	Pn	**Pg**	**02 50 10.8**	**-1.5**
	2.8nm,0.3s						
OBKA				Sn	**Sn**	**02 50 41.2**	**+1.7**
	9.0nm,0.5s						
ARSA	**Arzberg**	**3.22**	**337**	*i* Pn	**Pn**	**02 50 06.9**	**+0.3**
	0.9nm,0.1s						
CONA	**Conrad Observa**	**3.77**	**344**	*e*Pn	**Pn**	**02 50 15.4**	**+1.1**
	0.4nm,0.2s						
ZAPS	**Zavoj**	**3.93**	**104**	*e*Pn	**Pn**	**02 50 15.7**	**-0.8**
MOA	**Molln**	**4.15**	**329**	*i* Pn	**Pn**	**02 50 20.8**	**+1.3**
	2.3nm,0.3s						
MOA				*e*Sn	**Sn**	**02 51 08.3**	**-0.1**
	2.4nm,0.4s						

IDC 18 02:57:17.7±2.1, 27°.64N×98°.14E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.4/55, mbtmp3.8/4, Error ellipse: s-maj=291.7km s-min=26.4km az=56.0, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**22.83**	**331**	P	P	03 02 21.7	-0.6
	1.3nm,1.0s,baz=144,slow=12,SNR=3.2						
FINES	**FINESS Array B**	**57.59**	**327**	P	P	03 07 09.5	+0.4
	3.0nm,1.1s,baz=100,slow=4.9,SNR=3.8						
ARCES	**ARCESS Array B**	**58.33**	**337**	P	P	03 07 14.1	0.0
	2.1nm,0.8s,baz=91,slow=7.2,SNR=2.5						
WRA	**Warramunga Arr**	**58.86**	**140**	P	P	03 07 18.4	-0.1
	0.4nm,0.4s,baz=328,slow=7.7,SNR=5.0						

*IDC **18** 02:57:10.0±1.2, 2°.58N×128°.52E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.7/42, mbtmp4.0/6, MS3.3/1, Ms1 3.3/1, ms1mx2.4/30, Error ellipse: s-maj=84.0km s-min=17.4km az=72.0*
*NEIC **18** 02:57:37.0±0.9, 2°.2N±0°.1×128°.1E±0°.2, h258km±8km, mb4.1/15, Error ellipse: s-maj=28.0km s-min=16.6km az=90.0*

ISC 18 02:57:36.2±0.9, 2°.21N±0°.08×128°.2E±0°.2, h250km, n26, σ0°64/26, mb3.9/12, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.65**	**209**		**Pn**	**02 58 16.6**	**+1.0**
TNTI				S	**S**	**02 58 48.2**	**+1.4**
KCP	**Kidapawan**	**5.67**	**327**	⇓*i*P	**Pn**	**02 59 00.9**	**+0.6**
MTN	**Manton Dam**	**15.24**	**169**		**P**	**03 00 58.7**	**-0.1**
JAGI	**Jajag, Banyuwa**	**17.55**	**233**	P	**P**	**03 01 22.9**	**-1.2**
KNRA	**Kununurra**	**17.79**	**178**	P	**Pn**	**03 01 28.3**	**-1.0**
KNRA				IAmb	IAmb	03 01 29.2	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.34**	**187**	P	**P**	**03 01 54.3**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=16,slow=9.8,SNR=6.7						
FITZ	**Fitzroy Crossi**	**20.34**	**187**	P	**P**	**03 01 53.0**	**-0.9**
YULB	**Yu-li**	**22.08**	**343**	P	**P**	**03 02 11.0**	**0.0**
WB0	**Warramunga Arr**	**22.68**	**165**	P	**P**	**03 02 16.5**	**0.0**
WB0				IAmb	IAmb	03 02 18.5	
	comp=Z,6.9nm,1.0s						
WRA	**Warramunga Arr**	**22.84**	**165**	P	**P**	**03 02 17.8**	**-0.2**
	comp=Z,1.6nm,0.3s,baz=344,slow=11,SNR=44						
WRA	**Warramunga Arr**	**22.84**	**165**	P	**P**	**03 02 17.5**	**-0.4**
WB2	**Warramunga Arr**	**22.84**	**165**	P	**P**	**03 02 17.7**	**-0.2**
WB2				IAmb	IAmb	03 02 33.4	
	comp=Z,3.8nm,1.1s						
WR0	**Warramunga Arr**	**22.90**	**164**	P	**P**	**03 02 18.2**	**-0.3**
WR0				IAmb	IAmb	03 02 20.3	
	comp=Z,3.3nm,0.8s						
KRVT	**Keravat (AS076**	**24.70**	**105**	LR	LR	03 11 10.5	
	comp=Z,60nm,18.3s,baz=116,slow=34						
AS31	**Alice Springs**	**26.32**	**168**	P	**P**	**03 02 49.7**	**+0.3**
ASAR	**Alice Springs**	**26.32**	**168**	P	**P**	**03 02 49.9**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=354,slow=8.0,SNR=37						
ASAR	**Alice Springs**	**26.32**	**168**	P	**P**	**03 02 49.6**	**+0.2**
RPSI	**Rantau Prapat**	**29.23**	**272**	P	**P**	**03 03 14.7**	**-0.6**
RPSI				IAmb	IAmb	03 03 16.8	
	comp=Z,6.3nm,1.0s						
BBOO	**Buckleboo**	**35.62**	**169**	P	**P**	**03 04 10.3**	**-0.1**
BBOO				IAmb	IAmb	03 04 11.7	
	comp=Z,4.5nm,0.5s						
STKA	**Stephens Creek**	**36.22**	**160**	P	**P**	**03 04 15.7**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=332,slow=11,SNR=5.3						
STKA	**Stephens Creek**	**36.22**	**160**	P	**P**	**03 04 15.4**	**-0.1**
NWAO	**Narrogin (SRO)**	**36.45**	**196**	P	**P**	**03 04 17.3**	**-0.2**
NWAO				IAmb	IAmb	03 04 26.3	
	comp=Z,7.3nm,1.1s						
SONM	**Songino Array**	**49.19**	**341**	P	**P**	**03 05 58.9**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=146,slow=5.0,SNR=3.3						
MK31	**Makanchi Array**	**59.62**	**325**	P	**P**	**03 07 14.8**	**+0.8**
MK31				IAmb	IAmb	03 07 16.8	
	comp=Z,1.9nm,1.0s						
MKAR	**Makanchi Array**	**59.62**	**325**	P	**P**	**03 07 14.9**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=115,slow=8.4,SNR=20						
MKAR	**Makanchi Array**	**59.62**	**325**	P	**P**	**03 07 14.0**	**-0.1**

*REY **18** 03:09:48.6, 64°.66N×17°.38W, h5km*
*IDC **18** 03:09:50.0±0.9, 64°.51N×17°.78W, h0km, mb3.5/5, mb1 3.9/7, mb1mx3.6/37, mbtmp3.6/7, ML2.9/2, MS2.8/2, Ms1 2.9/2, ms1mx2.5/41, Error ellipse: s-maj=35.0km s-min=15.2km az=24.0*

ISC 18 03:09:49.5±0.6, 64°.67N±0°.02×17°.39W±0°.02, h10km, n43, σ2s12/60, mb3.7/6, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.16**	**273**	P	**Pg**	**03 09 52.0**	**-1.0**
	baz=276						
IVON				S	**Sg**	**03 09 54.6**	**-0.8**
	baz=276						
IHAM	**Hamarinn**	**0.26**	**225**	P	**Pg**	**03 09 53.5**	**-1.4**
	baz=228						
IHAM				S	**Sg**	**03 09 56.3**	**-2.2**
	baz=228						
IGRF	**Grimsfjall**	**0.27**	**168**	P	**Pg**	**03 09 53.7**	**-1.3**
	baz=169						
IKVE	**Kverkfjoll**	**0.31**	**88**	P	**Pg**	**03 09 54.8**	**-0.9**
	baz=85						
IHUS	**Husbondi**	**0.39**	**197**	P	**Pg**	**03 09 56.0**	**-1.2**
	baz=198						
IHUS				S	**Sg**	**03 09 59.5**	**-2.9**
	baz=198						
IVOT	**Vottur**	**0.41**	**167**	P	**Pg**	**03 09 55.7**	**-1.8**
	baz=167						
ISKR	**Skrokkalda**	**0.44**	**256**	P	**Pg**	**03 09 56.9**	**-1.2**
	baz=258						
IKRE	**Kreppuhraun**	**0.45**	**74**	P	**Pg**	**03 09 56.6**	**-1.6**
	baz=73						
IKRE				S	**Sg**	**03 10 02.5**	**-1.7**
	baz=73						
IJOK	**Jokulheimar**	**0.51**	**226**	P	**Pg**	**03 09 57.7**	**-1.6**
	baz=227						
IJOK				S	**Sg**	**03 10 05.2**	**-0.8**
	baz=227						
IMKO	**Mokollar**	**0.55**	**55**	P	**Pg**	**03 09 58.4**	**-1.8**
	baz=54						
IKSK	**Karasker**	**0.65**	**141**	P	**Pg**	**03 09 59.4**	**-2.6**
	baz=141						
IIEY	**Innrieyrar**	**0.66**	**209**	P	**Pg**	**03 10 00.3**	**-1.9**
	baz=210						
IIEY				S	**Sg**	**03 10 09.0**	**-1.7**
	baz=210						
ISVA	**Svartarkot**	**0.68**	**5**	P	**Pg**	**03 10 00.7**	**-1.8**
	baz=4.4						
ISVA				S	**Sg**	**03 10 10.2**	**-1.2**
	baz=4.4						
IVSH	**V-Sauoahnukur**	**0.73**	**78**	P	**Pg**	**03 10 01.4**	**-2.1**
	baz=77						
IVSH				S	**Sg**	**03 10 11.6**	**-1.4**
	baz=77						
IKAL	**Kalfafell**	**0.73**	**190**	P	**Pg**	**03 10 01.7**	**-1.9**
	baz=191						
IKAL				S	**Sg**	**03 10 11.5**	**-1.7**
	baz=191						
IVAT	**Vatnsfell**	**0.82**	**235**	P	**Pg**	**03 10 03.3**	**-1.9**
	baz=236						
IADA	**Aoalbol**	**0.85**	**65**	P	**Pg**	**03 10 03.4**	**-2.5**
	baz=64						
IADA				S	**Sg**	**03 10 15.5**	**-1.5**
	baz=64						
IFAG	**Fagurholsmyri**	**0.86**	**158**	P	**Pg**	**03 10 03.3**	**-2.6**
	baz=158						
IHVE	**Hveravellir**	**0.95**	**283**	P	**Pg**	**03 10 05.1**	**-2.7**
	baz=284						
IHVE				S	**Sg**	**03 10 18.0**	**-2.3**
	baz=284						
IMEL	**Melhnausar**	**0.96**	**19**	P	**Pg**	**03 10 05.3**	**-2.6**
	baz=18						
IMEL				S	**Sg**	**03 10 19.2**	**-1.1**
	baz=18						
IREN	**Reynihlio**	**1.01**	**12**	P	**Pg**	**03 10 06.2**	**-2.6**
	baz=11						
IREN				S	**Sg**	**03 10 20.3**	**-1.5**
	baz=11						
IKVO	**Krokottuvotn**	**1.07**	**11**	P	**Pg**	**03 10 07.3**	**-2.8**
	baz=11						
IKVO				S	**Sg**	**03 10 21.9**	**-2.2**
	baz=11						
ISNB	**Snabyli**	**1.08**	**211**	P	**Pg**	**03 10 07.7**	**-2.5**
	baz=211						
IGRS	**Grimsstaoir**	**1.11**	**28**	P	**Pb**	**03 10 08.0**	**-2.8**
	baz=28						
ISLY	**Slysaalda**	**1.13**	**222**	P	**Pb**	**03 10 08.6**	**-2.5**
	baz=223						
IFED	**Fedgar**	**1.19**	**238**	P	**Pb**	**03 10 09.7**	**-2.4**
	baz=239						
IRJU	**Rjupnafell**	**1.19**	**209**	P	**Pb**	**03 10 09.5**	**-2.6**
	baz=209						
ISKI	**Skildingahlsh**	**1.22**	**7**	P	**Pn**	**03 10 09.6**	**-3.0**
	baz=6.8						
IGRA	**Granastaoir**	**1.26**	**357**	P	**Pn**	**03 10 10.2**	**-2.9**
	baz=356						
IGRA				S	**Sb**	**03 10 27.4**	**-2.1**
	baz=356						
IGYG	**Gygjarholskot**	**1.28**	**254**	P	**Pn**	**03 10 10.7**	**-2.7**
	baz=254						
IDIM	**Dimmadalss**	**1.31**	**8**	P	**Pn**	**03 10 11.1**	**-2.8**
	baz=8.0						
BORG	**Borgarnes**	**1.69**	**275**	Pn	**Pn**	**03 10 17.0**	**-2.0**
	8.9nm,0.3s,baz=96,slow=10,SNR=24						
BORG				Sn	**Sb**	**03 10 41.4**	**-0.6**
	13nm,0.3s,baz=24,slow=20,SNR=10						
SCO	**Scoresbysund**	**6.10**	**345**	*e*	**Pn**	**03 11 19.0**	**-0.4**
	baz=156,slow=7.4						
SCO				*i* P	**Pn**	**03 11 21.1**	**+1.7**
SCO				*i* S	**Sn**	**03 12 32.5**	**+3.3**
SCO				IAML		03 12 47.5	

	comp=Z,2.4nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn	**Pn**	**03 12 36.5**	**-0.1**
	baz=322,slow=13,SNR=5.7						
NOA	**NORSAR Array B**	**13.49**	**92**	LR	LR	03 17 59.9	
	comp=Z,40nm,21.4s,baz=305,slow=36						
HFS	**Hagfors**	**15.00**	**93**	LR	LR	03 18 45.8	
	comp=Z,46nm,20.4s,baz=274,slow=35						
FINES	**FINESS Array B**	**19.66**	**79**	P	**Pn**	**03 14 21.3**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=288,slow=10,SNR=2.8						
BRG	**Berggiesshubel**	**21.37**	**115**	*e*(P)	**P**	**03 14 38.8**	**+2.1**
	comp=Z,33nm,2.0s						
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**03 14 56.5**	**+3.2**
	comp=Z,0.2nm,0.3s,baz=312,slow=12,SNR=3.5						
ESDC	**Sonseca Array**	**26.23**	**156**	P	**P**	**03 15 26.2**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=339,slow=9.6,SNR=4.8						
ILAR	**Eielson Array**	**45.71**	**332**	P	**P**	**03 18 12.6**	**+2.6**
	comp=Z,1.4nm,1.1s,baz=20,slow=5.8,SNR=8.1						
ILAR				PcP	**PcP**	**03 19 49.6**	**+2.1**
	comp=Z,0.7nm,1.0s,baz=4.2,slow=3.5,SNR=4.3						
PDAR	**Pinedale Array**	**53.22**	**293**	P	**P**	**03 19 09.5**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=60,slow=8.8,SNR=10						
TXAR	**Lajitas Array**	**62.33**	**280**	P	**P**	**03 20 13.3**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=46,slow=6.4,SNR=3.3						

*BGR **18** 03:18:35.5±0.0, 65°.17N×19°.99W, h33km, mb4.2*
*BGS **18** 03:18:41.3±2.4, 64°.51N×17°.82W, h5km, mb4.6(NEIC)*
*REY **18** 03:18:41.8, 64°.61N×17°.35W, h11km*
*IDC **18** 03:18:43.1±0.8, 64°.51N×17°.63W, h0km, mb3.8/7, mb1 4.0/10, mb1mx3.7/43, mbtmp3.8/10, ML2.5/2, MS3.2/11, Ms1 3.2/11, ms1mx3.1/48, Error ellipse: s-maj=26.2km s-min=13.6km az=24.0*
*NEIC **18** 03:18:45.3±0.4, 64°.5N±0°.1×17°.8W±0°.2, h8km±4km, mb4.6/22, Error ellipse: s-maj=14.7km s-min=11.3km az=184.0*

ISC 18 03:18:44.5±0.4, 64°.57N±0°.02×17°.43W±0°.02, h10km, n106, σ2s16/100, mb4.3/19, MS3.2/4, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.17**	**305**	P	**Pg**	**03 18 45.4**	**-2.8**
	baz=291						
IVON				S	**Sg**	**03 18 48.6**	**-2.3**
	baz=291						
IDYN	**Dyngjuhals**	**0.22**	**7**	P	**Pg**	**03 18 45.8**	**-3.3**
	baz=358						
IHUS	**Husbondi**	**0.30**	**200**	P	**Pg**	**03 18 48.3**	**-2.1**
	baz=203						
IVOT	**Vottur**	**0.32**	**161**	P	**Pg**	**03 18 48.5**	**-2.4**
	baz=168						
IKVE	**Kverkfjoll**	**0.34**	**72**	P	**Pg**	**03 18 47.8**	**-3.4**
	baz=76						
ISKR	**Skrokkalda**	**0.41**	**268**	P	**Pg**	**03 18 50.5**	**-2.0**
	baz=264						
IJOK	**Jokulheimar**	**0.43**	**233**	P	**Pg**	**03 18 50.3**	**-2.6**
	baz=233						
IJOK				S	**Sg**	**03 18 57.9**	**-0.7**
	baz=233						
IKRE	**Kreppuhraun**	**0.50**	**64**	P	**Pg**	**03 18 50.0**	**-4.1**
	baz=67						
IKRE				S	**Sg**	**03 18 57.3**	**-3.4**
	baz=67						
IIEY	**Innrieyrar**	**0.57**	**213**	P	**Pg**	**03 18 52.8**	**-2.7**
	baz=214						
IIEY				S	**Sg**	**03 19 01.6**	**-1.3**
	baz=214						
IKSK	**Karasker**	**0.59**	**134**	P	**Pg**	**03 18 52.0**	**-3.8**
	baz=139						
IMKO	**Mokollar**	**0.62**	**49**	P	Pg	03 18 52.0	-4.4
	baz=49						
IKAL	**Kalfafell**	**0.64**	**190**	P	**Pg**	**03 18 54.0**	**-2.8**
	baz=193						
IKAL				S	**Sg**	**03 19 04.1**	**-1.0**
	baz=193						
IVAT	**Vatnsfell**	**0.76**	**240**	P	**Pg**	**03 18 56.1**	**-2.9**
	baz=239						
IVAT				S	**Sg**	**03 19 06.5**	**-2.3**
	baz=239						
IVSH	**V-Sauoahnukur**	**0.77**	**71**	P	Pg	03 18 54.7	-4.6
	baz=73						
IFAG	**Fagurholsmyri**	**0.78**	**154**	P	**Pg**	**03 18 56.0**	**-3.5**
	baz=157						
IFAG				S	**Sg**	**03 19 08.0**	**-1.6**
	baz=157						
IADA	**Aoalbol**	**0.91**	**60**	P	Pg	03 18 56.8	-5.2
	baz=61						
IHVE	**Hveravellir**	**0.96**	**289**	P	**Pg**	**03 18 58.9**	**-4.1**
	baz=286						
ISNB	**Snabyli**	**0.99**	**213**	P	**Pg**	**03 19 00.3**	**-3.2**
	baz=213						
ISNB				S	**Sg**	**03 19 14.8**	**-1.6**
	baz=213						
IMEL	**Melhnausar**	**1.05**	**18**	P	Pg	03 18 59.2	-5.5
	baz=17						
ISLY	**Slysaalda**	**1.05**	**225**	P	**Pg**	**03 19 01.5**	**-3.2**
	baz=225						
ISLY				S	**Sg**	**03 19 16.4**	**-1.9**
	baz=225						
IREN	**Reynihlio**	**1.10**	**11**	P	Pb	03 19 00.0	-5.5
	baz=10.0						
IRJU	**Rjupnafell**	**1.10**	**210**

GRF	**Grafenberg Arr**	**21.26**	**121**	*e*P	**P**	**03 23 31.8**	**+1.3**
	comp=Z,9.3nm,1.2s,baz=324,slow=10							
BRG	**Berggiesshubel**	**21.35**	**115**	*e*P	**P**	**03 23 31.5**	**+0.1**
	comp=Z,21nm,1.4s							
BFO	**Black Forest**	**21.37**	**127**	P	**P**	**03 23 34.0**	**+2.3**
FRB	**Frobisher Bay**	**21.81**	**291**	LR	LR	03 31 18.2		
	comp=Z,112nm,21.9s,baz=19,slow=35							
CHVC	**Chvalec**	**22.40**	**113**	*e*P	**P**	**03 23 44.9**	**+2.1**
KHC	**Kasperske Hory**	**22.60**	**118**	*e*P	**P**	**03 23 45.8**	**+0.9**
KHC	**Kasperske Hory**	**22.60**	**118**	P	**P**	**03 23 46.8**	**+1.8**
KHC				IAmb	IAmb	03 24 00.1		
	comp=Z,32nm,1.7s							
DPC	**Dobruska-Polom**	**22.70**	**113**	*e*P	**P**	**03 23 47.2**	**+1.3**
GEC2	**GERESS Array S**	**22.88**	**119**	P	**P**	**03 23 50.4**	**+2.4**
GEC2				IAmb	IAmb	03 24 08.0		
	comp=Z,30nm,1.6s							
GERES	**GERESS Array B**	**22.88**	**119**	P	**P**	**03 23 48.9**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=334,slow=8.9,SNR=7.9							
GERES	**GERESS Array B**	**22.88**	**119**	P	**P**	**03 23 50.3**	**+2.4**
DAVOX	**Davos/Dischmat**	**23.24**	**127**	P	**P**	**03 23 54.2**	**+2.5**
	comp=Z,2.3nm,0.8s,baz=310,slow=9.5,SNR=3.8							
DAVOX				LR	LR	03 34 07.3		
	comp=Z,66nm,18.2s,baz=318,slow=40							
VRAC	**Vranov**	**23.63**	**114**	LR	LR	03 35 01.6		
	comp=Z,72nm,18.0s,baz=328,slow=41							
VRAC	**Vranov**	**23.63**	**114**	*e*P	**P**	**03 23 56.0**	**+0.6**
MORC	**Moravsky Berou**	**23.63**	**112**	*e*P	**P**	**03 23 55.9**	**+0.4**
MORC	**Moravsky Berou**	**23.63**	**112**	P	**P**	**03 23 56.8**	**+1.3**
MORC				IAmb	IAmb	03 23 57.4		
	comp=Z,32nm,1.9s							
KRUC	**Moravsky**	**23.75**	**115**	*e*P	**P**	**03 23 56.7**	**+0.2**
EUNU	**Eureka**	**23.77**	**336**	P	**P**	**03 23 57.7**	**+1.1**
KWP	**Kalwaria Pacla**	**25.86**	**106**	P	**P**	**03 24 18.3**	**+2.5**
KWP				IAmb	IAmb	03 24 34.2		
	comp=Z,21nm,1.2s							
PSZ	**Piszkesteto**	**26.05**	**112**	P	**P**	**03 24 20.1**	**+2.4**
PSZ				IAmb	IAmb	03 24 30.7		
	comp=Z,15nm,1.3s							
SCHQ	**Schefferville**	**26.07**	**272**	P	**P**	**03 24 18.5**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=35,slow=4.2,SNR=4.8							
SCHQ	**Schefferville**	**26.07**	**272**	P	**P**	**03 24 17.7**	**0.0**
ESDC	**Sonseca Array**	**26.16**	**156**	P	**P**	**03 24 19.1**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=349,slow=8.3,SNR=11							
ESDC	**Sonseca Array**	**26.16**	**156**	P	**P**	**03 24 20.2**	**+1.6**
AGG	**Agios Georgios**	**34.50**	**118**	P	**P**	**03 25 34.6**	**+2.2**
BRTR	**Keskin Array B**	**38.43**	**105**	P	**P**	**03 26 07.4**	**+1.3**
TIXI	**Tiksi**	**42.11**	**15**	P	**P**	**03 26 38.2**	**+2.3**
TIXI				IAmb	IAmb	03 26 42.8		
	comp=Z,11nm,1.4s							
BMAR	**Burnt Mountain**	**42.99**	**333**	P	**P**	**03 26 44.5**	**+1.2**
ILAR	**Eielson Array**	**45.78**	**333**	P	**P**	**03 27 05.5**	**0.0**
	comp=Z,1.7nm,1.2s,baz=25,slow=6.5,SNR=4.4							
ILAR				PcP	**PcP**	**03 28 42.9**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=349,slow=3.7,SNR=3.4							
ILAR	**Eielson Array**	**45.78**	**333**	P	**P**	**03 27 06.4**	**+0.9**
ILAR				PcP	**PcP**	**03 28 44.2**	**+1.4**
MDM	**Murphy Dome**	**45.88**	**333**	P	**P**	**03 27 07.6**	**+1.2**
MDM				IAmb	IAmb	03 27 14.8		
	comp=Z,9.8nm,1.4s							
IMAR	**Indian Mountai**	**45.95**	**337**	P	**P**	**03 27 08.2**	**+1.3**
BCAR	**Beaver Creek A**	**46.20**	**329**	P	**P**	**03 27 09.9**	**+1.0**
KURK	**Kurchatov**	**48.14**	**58**	P	**P**	**03 27 26.4**	**+2.3**
EGMT	**Eagleton**	**48.94**	**297**	P	**P**	**03 27 30.9**	**+0.4**
KKAR	**Karatay Array**	**51.28**	**70**	P	**P**	**03 27 50.5**	**+2.4**
BOZ	**Bozeman (W)**	**51.68**	**297**	P	**P**	**03 27 51.5**	**+0.3**
BOZ				IAmb	IAmb	03 27 55.4		
	comp=Z,12nm,1.7s							
MKAR	**Makanchi Array**	**52.75**	**58**	P	**P**	**03 28 00.8**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=337,slow=9.4,SNR=3.6							
MKAR	**Makanchi Array**	**52.75**	**58**	P	**P**	**03 28 01.4**	**+2.3**
TORD	**Torodi Ar. Bea**	**53.05**	**156**	P	**P**	**03 28 00.9**	**-0.5**
	comp=Z,1.7nm,1.0s,baz=336,slow=7.8,SNR=6.3							
TORD	**Torodi Ar. Bea**	**53.05**	**156**	P	**P**	**03 28 02.6**	**+1.1**
BW06	**Boulder Array**	**53.24**	**293**	P	**P**	**03 28 03.1**	**+0.1**
PD31	**Pinedale Array**	**53.24**	**293**	P	**P**	**03 28 03.1**	**+0.1**
PDAR	**Pinedale Array**	**53.24**	**293**	P	**P**	**03 28 02.8**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=51,slow=6.2,SNR=15							
PDAR	**Pinedale Array**	**53.24**	**293**	P	**P**	**03 28 03.0**	**0.0**
GAR	**Garm**	**54.65**	**73**	P	**P**	**03 28 15.4**	**+2.2**
SJG	**San Juan**	**56.66**	**239**	LR	LR	03 46 40.6		
	comp=Z,52nm,21.7s,baz=100,slow=30							
PV13	**Radium Mtn., P**	**56.86**	**290**	P	**P**	**03 28 29.2**	**+0.1**
PV13				IAmb	IAmb	03 28 33.7		
	comp=Z,7.1nm,1.0s							
R11A	**Troy Canyon, C**	**59.39**	**295**	P	**P**	**03 28 47.1**	**+0.2**
R11A				IAmb	IAmb	03 28 50.7		
	comp=Z,7.6nm,1.9s							

*ISK **18** 03:18:49.3, 38.66N×23.46E, h12km, ML3.4/17*
*ATH **18** 03:18:49.5, 38.64N×23.41E, h23km±1km, ML3.4/22, Error ellipse: s-maj=1.7km s-min=0.7km az=188.0*
*THE **18** 03:18:50.2, 38.64N×23.42E, h10km, ML3.4/29, Error ellipse: s-maj=0.9km s-min=0.4km az=89.0*
*DDA **18** 03:18:51.1, 38.55N×23.33E, h40km±5km, MW3.5*

ISC 18 03:18:49.5±1.0, 38.65N±0.01×23.46E±0.02, h12km±8km, n127, σ079/177, 5C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.35**	**277**	P	**Pg**	**03 18 56.5**	**0.0**
ATAL				S	**Sg**	**03 19 01.1**	**0.0**
ATAL				AML	AML	03 19 03.6	
	comp=N,8532μm,0.3s						
ATAL				AML	AML	03 19 03.6	
	comp=E,8099μm,0.2s						
ATAL	**Atalanti**	**0.35**	**277**	P	**Pg**	**03 18 56.5**	**0.0**
ATAL				S	**Sg**	**03 19 00.6**	**-0.5**
	comp=E,4μm,0.2s						
LKR	**Lokris**	**0.36**	**270**	P	**Pg**	**03 18 56.6**	**-0.1**
LKR				AML	AML	03 19 02.6	
	comp=E,19991μm,0.1s						
LKR				AML	AML	03 19 03.3	
	comp=N,13373μm,0.2s						
LKR	**Lokris**	**0.36**	**270**	P	**Pg**	**03 18 56.6**	**-0.1**
LKR				S	**Sg**	**03 19 01.7**	**+0.1**
	comp=N,9μm,0.1s						
VIL2	**Platees**	**0.46**	**199**	P	**Pb**	**03 18 59.4**	**-0.2**
VIL2				S	**Sb**	**03 19 06.7**	**+0.3**
VIL2				AML	AML	03 19 07.6	
	comp=E,27445μm,0.5s						
VIL2				AML	AML	03 19 07.6	
	comp=N,9818μm,0.4s						
VILL	**Villia**	**0.50**	**194**	P	**Pg**	**03 18 59.4**	**+0.2**
VILL				S	**Sb**	**03 19 06.9**	**-0.6**
	comp=N,10μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.50**	**92**	P	**Pb**	**03 19 00.2**	**-0.1**
KYMI				S	**Sb**	**03 19 08.0**	**+0.4**
KYMI				AML	AML	03 19 09.3	
	comp=E,9830μm,0.3s						
KYMI				AML	AML	03 19 09.6	
	comp=N,15075μm,0.3s						
KYMI	**Kymi, Euboea I**	**0.50**	**92**	P	**Pb**	**03 19 00.2**	**-0.1**
KYMI				S	**Sb**	**03 19 08.3**	**+0.7**
	comp=N,6μm,0.3s						
AOS	**Alonnisos**	**0.61**	**32**	P	**Pb**	**03 19 02.2**	**0.0**
AOS				S	**Sb**	**03 19 10.8**	**-0.1**
AOS				AML	AML	03 19 14.4	
	comp=E,7915μm,0.2s						
AOS				AML	AML	03 19 14.9	
	comp=N,6752μm,0.3s						
AOS	**Alonnisos**	**0.61**	**32**	PG	**Pb**	**03 19 02.3**	**+0.1**
AOS				SG	**Sb**	**03 19 10.3**	**-0.6**
AOS	**Alonnisos**	**0.61**	**32**	P	**Pb**	**03 19 02.3**	**+0.1**
AOS				S	**Sb**	**03 19 11.1**	**+0.2**
	comp=N,4μm,0.3s						
AXAR	**Agios Charalam**	**0.64**	**281**	P	**Pg**	**03 19 01.5**	**-0.4**
AXAR				S	**Sg**	**03 19 10.8**	**+0.5**
AXAR				AML	AML	03 19 15.5	
	comp=E,11785μm,0.4s						
AXAR				AML	AML	03 19 17.4	
	comp=N,13200μm,0.4s						
AXAR	**Agios Charalam**	**0.64**	**281**	P	**Pg**	**03 19 01.6**	**-0.3**
AXAR				S	**Sg**	**03 19 10.9**	**+0.5**
	comp=N,6μm,0.4s						
PTL	**Penteli**	**0.68**	**152**	P	**Pb**	**03 19 03.1**	**-0.1**
PTL				AML	AML	03 19 16.0	
	comp=N,8736μm,0.4s						
PTL				AML	AML	03 19 18.1	
	comp=E,4767μm,0.4s						
PTL	**Penteli**	**0.68**	**152**	P	**Pb**	**03 19 03.2**	**-0.1**
PTL				S	**Sb**	**03 19 13.9**	**+1.2**
	comp=E,3μm,0.4s						
DION	**Dionisos Attik**	**0.68**	**147**	P	**Pb**	**03 19 03.2**	**-0.2**
DION				AML	AML	03 19 15.9	
	comp=E,27371μm,0.4s						
DION				AML	AML	03 19 16.4	
	comp=N,23721μm,0.3s						
DION	**Dionisos Attik**	**0.68**	**147**	P	**Pb**	**03 19 03.3**	**0.0**
DION				S	**Sb**	**03 19 13.8**	**+1.1**
	comp=N,13μm,0.3s						
NEO	**Neokhori**	**0.68**	**344**	P	**Pb**	**03 19 03.5**	**+0.1**
NEO				AML	AML	03 19 16.1	
	comp=N,16367μm,0.3s						
NEO				AML	AML	03 19 16.3	
	comp=E,13634μm,0.2s						
NEO	**Neokhori**	**0.68**	**344**	P	**Pb**	**03 19 03.5**	**+0.1**
NEO				S	**Sb**	**03 19 13.8**	**+0.9**
	comp=E,8μm,0.2s						
ATH	**Athens Observa**	**0.70**	**163**	P	**Pb**	**03 19 03.6**	**-0.1**
ATH				AML	AML	03 19 16.8	
	comp=E,16042μm,0.3s						
ATH				AML	AML	03 19 16.9	
	comp=N,11997μm,0.3s						
ATH	**Athens Observa**	**0.70**	**163**	P	**Pb**	**03 19 03.6**	**-0.1**
ATH				S	**Sb**	**03 19 14.4**	**+1.0**
	comp=N,7μm,0.3s						
ATHU	**Athens Univers**	**0.73**	**159**	P	**Pb**	**03 19 04.0**	**-0.1**
ATHU				S	**Sb**	**03 19 14.9**	**+0.8**
ATHU				AML	AML	03 19 16.7	
	comp=E,2951μm,0.4s						
ATHU				AML	AML	03 19 17.5	
	comp=N,4791μm,0.6s						
ATHU	**Athens Univers**	**0.73**	**159**	P	**Pb**	**03 19 04.0**	**-0.1**
ATHU				S	**Sb**	**03 19 15.3**	**+1.2**
	comp=N,2μm,0.5s						
LTK	**Loutraki**	**0.74**	**212**	P	**Pg**	**03 19 03.5**	**-0.2**
LTK				S	**Sg**	**03 19 13.9**	**+0.5**
LTK				AML	AML	03 19 17.4	
	comp=E,6607μm,0.4s						
LTK				AML	AML	03 19 19.4	
	comp=N,5131μm,0.8s						
LTK	**Loutraki**	**0.74**	**212**	P	**Pg**	**03 19 03.5**	**-0.2**
LTK				S	**Sb**	**03 19 15.1**	**+0.8**
	comp=N,3μm,0.5s						
XOR	**Xorichti**	**0.75**	**344**	P	**Pb**	**03 19 04.5**	**0.0**
XOR				AML	AML	03 19 17.7	
XOR				AML	AML	03 19 17.8	
	comp=N,7566μm,0.6s						
XOR	**Xorichti**	**0.75**	**344**	P	**Pb**	**03 19 04.5**	**0.0**
XOR				S	**Sb**	**03 19 14.4**	**-0.3**
	comp=N,3μm,0.6s						
LOUT	**Loutraki**	**0.76**	**210**	P	**Pg**	**03 19 04.0**	**-0.2**
LOUT				S	**Sb**	**03 19 15.1**	**0.0**
LOUT				AML	AML	03 19 19.1	
	comp=N,1268μm,0.4s						
LOUT				AML	AML	03 19 19.6	
	comp=E,1629μm,0.2s						
LOUT	**Loutraki**	**0.76**	**210**	P	**Pg**	**03 19 04.0**	**-0.2**
LOUT				S	**Sb**	**03 19 15.5**	**+0.4**
	comp=E,4μm,0.4s						
DSF	**Desfina**	**0.77**	**252**	P	**Pg**	**03 19 03.2**	**-1.2**
DSF	**Desfina**	**0.77**	**252**	P	**Pg**	**03 19 03.4**	**-1.0**
VOL2	**Volos**	**0.82**	**331**	P	**Pn**	**03 19 08.4**	**+1.5**
VLY	**Voula,Athens**	**0.84**	**162**	P	**Pb**	**03 19 05.9**	**-0.1**
VLY				AML	AML	03 19 19.8	
	comp=E,14536μm,0.4s						
VLY				AML	AML	03 19 20.5	
	comp=N,7518μm,0.3s						
VLY	**Voula,Athens**	**0.84**	**162**	P	**Pb**	**03 19 05.9**	**-0.1**
VLY				S	**Sb**	**03 19 17.6**	**+0.4**
	comp=N,5μm,0.3s						
THAL	**Thalero**	**0.88**	**226**	P	**Pg**	**03 19 06.0**	**-0.3**
THAL				S	**Sb**	**03 19 18.4**	**+0.1**
THAL				AML	AML	03 19 20.8	
	comp=E,11080μm,0.5s						
THAL				AML	AML	03 19 20.9	
	comp=N,8526μm,0.5s						
THAL	**Thalero**	**0.88**	**226**	P	**Pg**	**03 19 06.1**	**-0.3**
THAL				S	**Sb**	**03 19 19.4**	**+1.1**
	comp=N,5μm,0.5s						
SKY	**Skiros Island**	**0.88**	**75**	P	**Pn**	**03 19 07.3**	**-0.5**
SKY				S	**Sn**	**03 19 20.8**	**+0.2**
SKY				AML	AML	03 19 23.6	
	comp=N,10879μm,0.3s						
SKY				AML	AML	03 19 24.2	
	comp=E,12851μm,0.3s						
SKY	**Skiros Island**	**0.88**	**75**	P	**Pn**	**03 19 07.3**	**-0.5**
SKY				S	**Sn**	**03 19 21.6**	**+1.0**
	comp=E,6μm,0.3s						
AGG	**Agios Georgios**	**0.96**	**293**	P	**Pg**	**03 19 07.7**	**-0.2**
AGG				S	**Sg**	**03 19 20.6**	**+0.1**
AGG				AML	AML	03 19 24.8	
	comp=N,2072μm,0.7s						
AGG				AML	AML	03 19 26.1	
	comp=E,2029μm,0.6s						
AGG	**Agios Georgios**	**0.96**	**293**	PG	**Pg**	**03 19 07.9**	**-0.1**
AGG	**Agios Georgios**	**0.96**	**293**	*i*P	**Pb**	**03 19 08.1**	**0.0**
AGG				*i*S	**Sg**	**03 19 18.9**	**-1.6**
AGG				IAML		03 19 25.0	
	comp=N,428nm,0.7s						
AGG				IAML		03 19 25.0	
	comp=E,422nm,0.6s						
AGG	**Agios Georgios**	**0.96**	**293**	P	**Pg**	**03 19 07.8**	**-0.2**
AGG				S	**Sb**	**03 19 20.9**	**+0.1**
	comp=E,1μm,0.7s						
KARY	**Karystos**	**0.98**	**128**	P	**Pn**	**03 19 08.9**	**-0.3**
KARY				S	**Sn**	**03 19 22.2**	**-0.8**
KARY				AML	AML	03 19 24.0	
	comp=N,3932μm,0.3s						
KARY				AML	AML	03 19 24.6	
	comp=E,3900μm,0.3s						
KARY	**Karystos**	**0.98**	**128**	P	**Pn**	**03 19 08.9**	**-0.3**
KARY				S	**Sn**	**03 19 22.7**	**-0.4**
	comp=E,2μm,0.3s						
EPID	**Epidavros**	**1.07**	**195**	P	**Pn**	**03 19 10.7**	**+0.3**
EPID	**Epidavros**	**1.07**	**195**	P	**Pb**	**03 19 10.1**	**+0.2**
EPID				S	**Sb**	**03 19 24.9**	**+1.0**
	comp=E,3μm,0.2s						
KALE	**Kalithea**	**1.07**	**256**	P	**Pg**	**03 19 08.4**	**-1.6**
KALE				AML	AML	03 19 30.3	
	comp=N,1554μm,0.7s						
KALE				AML	AML	03 19 31.5	
	comp=E,1593μm,0.6s						
KALE	**Kalithea**	**1.07**	**256**	P	**Pg**	**03 19 08.4**	**-1.6**
KALE				S	**Sb**	**03 19 25.3**	**+1.3**
	comp=E,785nm,0.4s						
MAKR	**Makrakomi, Fth**	**1.10**	**290**	P	**Pb**	**03 19 10.5**	**0.0**
MAKR				S	**Sg**	**03 19 24.4**	**-0.6**
MAKR				AML	AML	03 19 28.6	
	comp=N,4482μm,0.6s						
MAKR				AML	AML	03 19 30.9	
	comp=E,2453μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.10**	**290**	P	**Pb**	**03 19 10.7**	**+0.2**
MAKR				S	**Sb**	**03 19 26.2**	**+1.3**
	comp=E,2μm,0.5s						
TRIZ	**Trizonia**	**1.12**	**256**	P	**Pg**	**03 19 09.4**	**-1.8**
TRIZ	**Trizonia**	**1.12**	**256**	P	**Pg**	**03 19 09.5**	**-1.6**
SERG	**Sergoula**	**1.13**	**258**	P	**Pg**	**03 19 09.4**	**-1.8**
SERG				AML	AML	03 19 30.5	
	comp=N,2067μm,0.5s						
SERG				AML	AML	03 19 33.0	
	comp=E,1346μm,0.5s						
SERG	**Sergoula**	**1.13**	**258**	P	**Pg**	**03 19 09.3**	**-1.8**
GUR	**Goura**	**1.13**	**231**	P	**Pb**	**03 19 11.3**	**+0.2**
GUR	**Goura**	**1.13**	**231**	P	**Pg**	**03 19 10.2**	**-1.1**
GUR				S	**Sg**	**03 19 26.2**	**+0.2**
	comp=E,3μm,0.5s						
KLV	**Kalavryta, Ach**	**1.19**	**240**	P	**Pg**	**03 19 11.5**	**-1.0**
KLV				S	**Sg**	**03 19 28.1**	**+0.1**
	comp=E,352nm,0.6s						
ANX	**Ano Chora**	**1.21**	**268**	P	**Pg**	**03 19 11.4**	**-1.3**
ANX	**Ano Chora**	**1.21**	**268**	P	**Pg**	**03 19 11.5**	**-1.3**
ANX				S	**Sb**	**03 19 29.0**	**+1.0**
	comp=E,905nm,0.6s						
EFP	**Efpalio**	**1.24**	**260**	P	**Pn**	**03 19 11.6**	**-1.1**
EFP	**Efpalio**	**1.24**	**260**	P	**Pn**	**03 19 11.4**	**-1.3**
KRND	**KRANIDI**	**1.29**	**191**	P	**Pn**	**03 19 13.5**	**+0.2**
KRND				S	**Sn**	**03 19 31.1**	**+0.6**
KRND	**KRANIDI**	**1.29**	**191**	P	**Pg**	**03 19 13.8**	**-0.4**
KRND				S	**Sb**	**03 19 30.8**	**+0.6**
	comp=E,2μm,0.6s						
PAIG	**Paliouri**	**1.29**	**7**	P	**Pg**	**03 19 13.5**	**-0.7**
PAIG	**Paliouri**	**1.29**	**7**	P	**Pg**	**03 19 13.6**	**-0.7**
EVR	**Evrytania**	**1.32**	**282**	P	**Pg**	**03 19 14.7**	**-0.2**
EVR	**Evrytania**	**1.32**	**282**	P	**Pb**	**03 19 14.4**	**+0.1**
EVR				S	**Sb**	**03 19 30.8**	**-0.4**
	comp=E,308nm,0.8s						
THL	**Klokotos Trika**	**1.45**	**310**	P	**Pn**	**03 19 16.1**	**+0.5**
THL	**Klokotos Trika**	**1.45**	**310**	P	**Pn**	**03 19 16.1**	**+0.5**
THL				S	**Sn**	**03 19 34.3**	**-0.3**
	comp=E,158nm,0.8s						
TRIP	**Tripoli**	**1.46**	**220**	P	**Pn**	**03 19 16.3**	**+0.5**
TRIP	**Tripoli**	**1.46**	**220**	P	**Pn**	**03 19 16.1**	**+0.3**
VLX	**Vlachokerasia**	**1.54**	**214**	P	**Pn**	**03 19 17.3**	**+0.4**
VLX				S	**Sn**	**03 19 37.3**	**+0.5**
	comp=E,1μm,0.6s						
DRO	**Drossia**	**1.54**	**244**	P	**Pn**	**03 19 17.3**	**+0.4**
DRO	**Drossia**	**1.54**	**244**	P	**Pn**	**03 19 17.3**	**+0.4**
LIT	**Litokhoron**	**1.63**	**333**	P	**Pn**	**03 19 18.4**	**+0.2**
LIT	**Litokhoron**	**1.63**	**333**	*i*P	**Pn**	**03 19 18.2**	**+0.1**
LIT	**Litokhoron**	**1.63**	**333**	P	**Pn**	**03 19 18.4**	**+0.2**
PLG	**Polygyros**	**1.72**	**360**	P	**Pn**	**03 19 19.7**	**+0.3**
OUR	**Ouranopolis**	**1.73**	**13**	PN	**Pn**	**03 19 19.8**	**+0.3**
OUR	**Ouranopolis**	**1.73**	**13**	P	**Pn**	**03 19 20.0**	**+0.5**
LIA	**Limnos Island**	**1.83**	**46**	P	**Pn**	**03 19 21.2**	**+0.4**
ITM	**Ithomi**	**1.90**	**220**	PN	**Pn**	**03 19 22.9**	**+1.1**
SIGR	**SIGRI**	**1.95**	**73**	PN	**Pn**	**03 19 23.1**	**+0.6**
HORT	**Hortiatis**	**1.97**	**352**	PN	**Pn**	**03 19 23.4**	**+0.6**
HORT	**Hortiatis**	**1.97**	**352**	P	**Pn**	**03 19 23.0**	**+0.2**
VLI	**Veliai**	**1.97**	**192**	P	**Pn**	**03 19 23.2**	**+0.4**
KZN	**Kozani**	**2.11**	**322**	P	**Pn**	**03 19 25.8**	**+1.0**
THAS	**Thassos island**	**2.18**	**26**	P	**Pn**	**03 19 25.4**	**-0.3**
APE	**Apeiranthos**	**2.27**	**133**	⇑P	**Pn**	**03 19 27.5**	**+0.5**
APE				⇑S	**Sn**	**03 19 53.5**	**-1.5**
APE	**Apeiranthos**	**2.27**	**133**	PN	**Pn**	**03 19 27.9**	**+0.9**
APE	**Apeiranthos**	**2.27**	**133**	*i*P	**Pn**	**03 19 27.0**	**0.0**
APE				*i*S	**Sn**	**03 19 51.6**	**-3.4**
APE	**Apeiranthos**	**2.27**	**133**	P	**Pn**	**03 19 27.7**	**+0.7**
BOZC	**Bozcaada**	**2.34**	**59**	PN	**Pn**	**03 19 28.3**	**+0.5**
BOZC	**Bozcaada**	**2.34**	**59**	*i*P	**Pb**	**03 19 31.9**	**+0.3**
BOZC				*i*S	**Sn**	**03 19 54.9**	**-1.6**
BOZC				IAML		03 20 08.0	
	comp=N,64nm,1.1s						
KTHA	**Kythira Island**	**2.41**	**188**	PN	**Pn**	**03 19 29.7**	**+0.9**
SMTH	**Samothraki Isl**	**2.42**	**41**	P	**Pn**	**03 19 29.3**	**+0.3**
GADA	**Gvkgeada**	**2.44**	**50**	PN	**Pn**	**03 19 30.1**	**+0.9**
GOKA	**anakkale-Gk**	**2.44**	**50**	*i*P	**Pn**	**03 19 29.6**	**+0.4**
GRG	**Griva**	**2.45**	**341**	PN	**Pn**	**03 19 30.3**	**+1.0**
SRS	**Serrai**	**2.47**	**2**	P	**Pn**	**03 19 30.2**	**+0.6**
URLA	**Izmir**	**2.48**	**96**	PN	**Pn**	**03 19 30.6**	**+0.9**
URLA	**Izmir**	**2.48**	**96**	*i*P	**Pb**	**03 19 33.5**	**+0.5**
EZN	**Ezine**	**2.52**	**61**	PN	**Pn**	**03 19 31.1**	**+0.9**
BAYC	**CANAKKALE_Bayr**	**2.63**	**65**	*i*P	**Pn**	**03 19 32.1**	**+0.2**
FNA	**Florina**	**2.67**	**324**	PN	**Pn**	**03 19 33.3**	**+0.9**
FNA	**Florina**	**2.67**	**324**	*i*P	**Pn**	**03 19 34.0**	**+1.6**
THT2	**Imerovigli**	**2.70**	**144**	PN	**Pn**	**03 19 34.0**	**+1.1**
DKL	**Dikili**	**2.72**	**80**	PN	**Pn**	**03 19 33.8**	**+0.7**
ZEDA	**zmir-Bergama**	**2.84**	**82**	*i*P	**Pn**	**03 19 35.5**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.91**	**52**	PN	**Pn**	**03 19 36.6**	**+0.9**
ANAF	**Anafi Island**	**2.94**	**141**	P	**Pn**	**03 19 37.1**	**+1.1**
ENEZ	**Enez**	**2.94**	**44**	PN	**Pn**	**03 19 37.1**	**+1.0**
RDO	**Rodhopi**	**2.96**	**32**	PN	**Pn**	**03 19 37.4**	**+1.0**
ALN	**Alexandroupoli**	**3.00**	**41**	PN	**Pn**	**03 19 37.9**	**+1.0**
ALN	**Alexandroupoli**	**3.00**	**41**	*i*P	**Pg**	**03 19 46.4**	**-0.7**
LPK	**Lapseki**	**3.08**	**55**	PN	**Pn**	**03 19 39.2**	**+1.2**
GCAM	**G?zlecaml?**	**3.12**	**106**	PN	**Pn**	**03 19 39.8**	**+1.3**
STIP	**Stip**	**3.19**	**343**	*i*Pn	**Pn**	**03 19 40.7**	**+1.1**
KDZ	**Kurdzhali**	**3.35**	**26**	PN	**Pn**	**03 19 42.3**	**+0.5**
UKOP	**Uzunkopru-Edir**	**3.48**	**44**	PN	**Pn**	**03 19 44.9**	**+1.5**
RKY	**Sarkoy-Tekirda**	**3.52**	**53**	PN	**Pn**	**03 19 45.5**	**+1.4**
IDI	**Anoyia**	**3.54**	**161**	⇓P	**Pn**	**03 19 44.9**	**+0.4**
IDI				⇓S	**Sn**	**03 20 25.8**	**-0.5**
PDG	**Podgorica**	**4.95**	**321**	⇓P	**Pn**	**03 20 03.4**	**-0.3**
PDG				S	**Sn**	**03 21 01.5**	**+0.6**
TIP	**Timpagrande**	**5.25**	**278**	⇑P	**Pn**	**03 20 07.4**	**-0.6**
VOIR		**6.89**	**9**	⇓P	**Pn**	**03 20 31.6**	**+1.3**
MLR	**Muntele Rosu**	**7.08**	**14**	⇑P	**Pn**	**03 20 32.9**	**-0.2**
VRI	**Vrincioaia**	**7.61**	**18**	⇑P	**Pn**	**03 20 40.8**	**+0.6**

*NEIC **18** 03:25:37.5±0.9, 7.48N±0.07×94.36E±0.07, h7km±2km, mb5.5/203, Ms_20 5.6/742, Mwb5.6/35, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=11.0km s-min=9.3km az=48.0*
*NEIC **18** 03:25:37.5, 7.48N×94.36E, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.05; $M_{\theta\theta}$=-2.60; $M_{\phi\phi}$=2.55; $M_{r\theta}$=-0.01; $M_{r\phi}$=0.59; $M_{\theta\phi}$=-1.02; Fault plane solution: M_o=2.83000×$10^{17

DGPR **DIGLIPUR** 5.83 347 *e*P **Pn** **03 27 08.4 +2.4**
DGPR *e*P **Pn** **03 27 08.4 +2.4**
PSI Prapat 6.55 135 P **Pn** **03 27 15.8 -0.3**
RPSI Rantau Prapat 6.63 135 Pn **Pn** **03 27 15.8 -1.2**
KULM Kulim 6.70 108 Pn **Pn** **03 27 15.8 -2.2**
KULM Kulim 6.70 108 P **Pn** **03 27 16.0 -2.0**
GSI Gunungsitoli 6.95 151 P **Pn** **03 27 20.2 -1.2**
comp=N,2.3nmcomp=N,35µmcomp=N,5µmcomp=N,306nm,1.2s
GSI Gunungsitoli 6.95 151 Pn **Pn** **03 27 19.7 -1.7**
IPM Ipoh 7.35 113 Pn **Pn** **03 27 23.9 -3.0**
IPM Ipoh 7.35 113 P **Pn** **03 27 24.0 -3.0**
PATY Pattaya 8.47 50 P **Pn** **03 27 43.0 +0.8**
comp=N,3µmcomp=N,147nm,0.8s
MNSI Mandailing Nat 8.48 141 P **Pn** **03 27 43.5 +1.1**
comp=N,4µmcomp=N,301nm,0.6s
UTHA Uthaitani 9.52 32 P **Pn** **03 27 57.3 +0.7**
comp=N,2µmcomp=N,160nm,0.8s
BKNI Bangkinang 9.79 136 P **Pn** **03 28 02.2 +1.8**
comp=N,11µmcomp=N,9µmcomp=N,604nm,1.5s
BKNI Bangkinang 9.79 136 **Pn** **03 27 58.2 -2.2**
SISI Saibi 9.97 151 P Pn 03 28 08.9 +6.1
SRAK Srakaew 10.04 49 P Pn 03 28 11.0 +7.2
comp=N,14µmcomp=N,1µm,0.9s
SDSI Sungai Dareh 10.98 139 P **Pn** **03 28 17.0 +0.3**
comp=N,2µmcomp=N,87nm,1.4s
MYKOM **Kota Tinggi** 11.09 120 Pn **Pn** **03 28 16.0 -2.2**
MYKOM **Kota Tinggi** 11.09 120 P **Pn** **03 28 20.0 +1.8**
RGRI Rengat 11.18 134 P **Pn** **03 28 22.1 +2.7**
MHMT Maesarieng 11.24 18 P **Pn** **03 28 23.3 +3.1**
comp=N,3µmcomp=N,223nm,1.1s
SUKH Sukhothai 11.26 27 P **Pn** **03 28 21.7 +1.2**
comp=N,104nm,0.9s
CHAI Chaiyaphum 11.29 41 P **Pn** **03 28 23.0 +2.0**
comp=N,5µmcomp=N,188nm,1.0s
PHIT Phitsanulok 11.38 31 P **Pn** **03 28 23.0 +0.8**
comp=N,5µmcomp=N,530nm,1.1s
CM05 Chiang Mai Arr 11.79 22 P **Pn** **03 28 29.7 +1.8**
comp=N,753nmcomp=N,81nm,1.1s
CM13 Chiang Mai Arr 11.80 22 P **Pn** **03 28 29.6 +1.8**
comp=N,748nmcomp=N,93nm,1.0s
CM04 Chiang Mai Arr 11.80 22 P **Pn** **03 28 29.6 +1.5**
comp=N,884nmcomp=N,122nm,1.0s
CM01 Chiang Mai Arr 11.82 22 P **Pn** **03 28 30.0 +1.8**
comp=N,1µmcomp=N,142nm,1.0s
CM02 Chiang Mai Arr 11.82 22 P **Pn** **03 28 30.1 +1.9**
comp=N,981nmcomp=N,105nm,1.0s
CM15 Chiang Mai Arr 11.83 22 P **Pn** **03 28 30.2 +1.9**
comp=N,843nmcomp=N,80nm,1.2s
CM31 Chiang Mai Arr 11.84 22 P **Pn** **03 28 30.8 +2.2**
comp=N,24µmcomp=N,3µm,1.1s
CM31 Chiang Mai Arr 11.84 22 Pn **Pn** **03 28 27.9 -0.7**
CMAR Chiang Mai Arr 11.84 22 Pn **Pn** **03 28 29.1 +0.6**
comp=N,3.8nm,0.3s,baz=212,slow=14,SNR=57
CMAR LR LR 03 33 13.8
comp=N,19µm,18.1s,baz=254,slow=38
CMAR Chiang Mai Arr 11.84 22 *i*P **Pn** **03 28 29.7 +1.2**
CMAR pmax pmax
comp=Z,17nm,0.4s
CMAR Chiang Mai Arr 11.84 22 **Pn** **03 28 27.5 -1.1**
CM09 Chiang Mai Arr 11.85 22 P **Pn** **03 28 30.7 +2.1**
comp=Z,929nmcomp=Z,139nm,1.1s
KRJI Kerinci 11.90 143 P **Pn** **03 28 30.2 +0.8**
comp=Z,12µmcomp=Z,574nm,1.0s
CM36 Chiang Mai Arr 11.96 23 P **Pn** **03 28 31.0 +0.9**
CM32 Chiang Mai Arr 11.99 21 P **Pn** **03 28 33.0 +2.5**
CM35 Chiang Mai Arr 12.12 23 P **Pn** **03 28 34.0 +1.6**
KHON Khomkaen 12.16 43 P **Pn** **03 28 36.0 +3.1**
comp=Z,132nm,0.9s
CHTO Chiang Mai 12.17 22 P **Pn** **03 28 34.8 +1.8**
CHTO P **Pn** **03 28 34.8 +1.8**
CHTO P **Pn** **03 28 34.8 +1.8**
CHTO Chiang Mai 12.17 22 P **Pn** **03 28 32.3 -0.7**
CHTO Chiang Mai 12.17 22 Pn **Pn** **03 28 32.3 -0.7**
CM33 Chiang Mai Arr 12.18 22 P **Pn** **03 28 34.0 +0.9**
LAMP Lampang 12.18 25 P **Pn** **03 28 35.9 +2.8**
comp=Z,1µmcomp=Z,99nm,0.9s
CM34 Chiang Mai Arr 12.28 22 P **Pn** **03 28 36.0 +1.5**
PAYA Payao 13.02 24 P **Pn** **03 28 47.3 +2.6**
comp=Z,23µmcomp=Z,3µm,1.1s
PALK Pallekele 13.45 270 P **Pn** **03 28 50.8 +0.2**
PALK P **Pn** **03 28 50.8 +0.2**
PALK P **Pn** **03 28 50.8 +0.2**
PALK Pallekele 13.45 270 P **Pn** **03 28 51.7 +1.1**
PALK Pallekele 13.45 270 Pn **Pn** **03 28 51.7 +1.1**
UBPT Khong Chiam 13.45 54 P **P** **03 28 55.4 -4.2**
comp=Z,36nm,1.0s
NONG Nongkai 13.64 39 P **Pn** **03 28 55.8 +2.8**
comp=Z,8µmcomp=Z,157nm,1.2s
KSI Kapahiang 13.82 143 P **Pn** **03 28 54.5 -1.1**
comp=Z,8µmcomp=Z,408nm,0.9s
LHSI Lahat 14.53 140 P **Pn** **03 29 04.1 -1.1**
comp=Z,4µmcomp=Z,358nm,1.1s
MNAI Manna 14.60 143 P **P** **03 29 16.6 +4.2**
MNAI Manna 14.60 143 **Pn** **03 29 03.3 -2.9**
DLV T Lat 14.71 71 P **P** **03 29 11.5 -2.3**
CHLP Challavanipeta 14.80 319 *e*P **Pn** **03 29 07.9 -1.1**
CHLP IVmB_BB 03 29 21.6
comp=Z,1µm,1.4s
CHLP IVMs_BB IVMs_BB 03 36 13.1
comp=Z,3µm,16.7s
MDRS Chennai 14.87 293 *e*P **Pn** **03 29 09.2 -0.7**
MDRS *e*P **Pn** **03 29 09.2 -0.7**
SAIH SAIHA 14.99 355 *e*P **Pn** **03 29 09.1 -2.5**
SAIH *e*P **Pn** **03 29 09.1 -2.5**
PPBI Pangkal Pinang 15.22 128 P **Pn** **03 29 15.2 +0.6**
comp=Z,8µmcomp=Z,14µmcomp=Z,237nm,1.2s
SKHT Srikalahasti 15.60 295 *e*P **Pn** **03 29 19.3 -0.3**
SKHT IVmB_BB 03 29 33.6
comp=Z,1µm,1.1s
SKHT IVMs_BB IVMs_BB 03 34 58.2
comp=Z,3µm,21.3s
PVM Polavaram 15.71 309 *e*P **Pn** **03 29 20.4 -0.5**
PVM IVmB_BB 03 29 49.5
comp=Z,963nm,2.6s
PVM IVMs_BB IVMs_BB 03 34 01.7
comp=Z,2µm,33.2s
LWLI Liwa 15.78 141 P **Pn** **03 29 22.8 +0.8**
comp=Z,8µmcomp=Z,255nm,0.8s
BELO BELONIA 15.93 351 *e*P **Pn** **03 29 22.0 -1.7**
BELO *e*P **Pn** **03 29 22.0 -1.7**
KLSI 15.96 139 P **Pn** **03 29 22.1 -2.1**
comp=Z,672nmcomp=Z,68nm,1.0s
MYLAV **Mylavaram** 16.20 306 *e*P **Pn** **03 29 26.2 -1.0**
MYLAV IVmB_BB 03 29 36.2
comp=Z,931nm,1.9s
MYLAV IVMs_BB IVMs_BB 03 34 14.8
comp=Z,2µm,32.2s
ADKI Addanki 16.28 302 *e*P **Pn** **03 29 28.8 +0.5**
ADKI IVmB_BB 03 29 33.8
comp=Z,1µm,1.3s
ADKI IVMs_BB IVMs_BB 03 35 09.7
comp=Z,2µm,24.4s
KASI Kota Agung 16.45 141 P **Pn** **03 29 30.2 -0.2**
comp=Z,2µmcomp=Z,176nm,1.1s
AGT Agartala 16.59 350 *e*P **Pn** **03 29 31.8 -0.3**
AGT *e*P **Pn** **03 29 31.8 -0.3**
SLVN Son La 16.64 33 Pn **Pn** **03 29 31.3 -1.6**
TPI Tanjungpandan 16.78 127 P **Pn** **03 29 35.2 +0.6**
comp=Z,4µmcomp=Z,110nm,1.2s
KSM Kuching 17.06 110 **Pn** **03 29 36.7 -1.4**
KSM IAmb IAmb 03 29 51.4
comp=Z,452nm,1.1s
KSM Kuching 17.06 110 P **P** **03 29 40.0 +0.3**
GGR Gangavaram 17.14 308 *e*P **Pn** **03 29 39.1 -0.1**
GGR IVmBBB 03 29 46.5
comp=Z,1µm,2.1s
GGR IVMs_BB IVMs_BB 03 34 42.9
comp=Z,1µm,29.8s
TRD Trivandrum 17.17 275 *e*P **Pn** **03 29 39.2 -0.3**
TRD *e*P **Pn** **03 29 39.2 -0.3**
NJS Nagarjunasagar 17.18 303 *e*P **Pn** **03 29 38.5 -1.1**
NJS IVmBBB 03 29 46.9
comp=Z,992nm,2.5s
NJS IVMs_BB IVMs_BB 03 34 45.1
comp=Z,2µm,22.0s
IMP Imphal 17.28 359 *e*P **Pn** **03 29 40.2 -0.7**
IMP *e*P **Pn** **03 29 40.2 -0.7**
CUPL Choutuppal 17.88 305 *e*P **Pn** **03 29 47.6 -0.6**
CUPL IVmBBB 03 29 58.3
comp=Z,917nm,2.0s
CUPL IVMs_BB IVMs_BB 03 35 00.5
comp=Z,1µm,29.7s
BOK Bokaro 18.12 335 *e*S **Sn** **03 33 14.6 +1.7**
BOK *e*S **S** **03 33 14.9 -3.2**
SHL Shillong 18.15 353 *e*P **Pn** **03 29 48.8 -2.9**
SHL *e*P **Pn** **03 29 48.8 -2.9**
SHL AMP 03 30 05.0
comp=Z,1µm,1.8s
SHL AMP 03 30 05.0
comp=Z,1µm,1.8s
SHL Shillong 18.15 353 P **Pn** **03 29 48.6 -3.1**
SHL Shillong 18.15 353 P **Pn** **03 29 48.9 -2.9**
SHL pmax pmax
comp=Z,180nm,1.1s
SHL Shillong 18.15 353 P **Pn** **03 29 48.9 -2.9**
KOHI KOHIMA 18.16 360 *e*P **Pn** **03 29 50.2 -1.6**
KOHI *e*P **Pn** **03 29 50.2 -1.6**
HYB Hyderabad 18.24 304 *i*P **Pn** **03 29 52.0 -0.8**
HYBB Hyderabad (bro 18.24 304 *e*P **Pn** **03 29 52.0 -0.8**
HYBB IVmBBB 03 30 02.7
comp=Z,832nm,1.7s
HYBB IVMs_BB IVMs_BB 03 35 13.0
comp=Z,1µm,35.8s
URV Uravakonda 18.25 296 *e*P **Pn** **03 29 52.8 -0.2**
URV IVmB_BB 03 30 07.1
comp=Z,767nm,2.0s
URV IVMs_BB IVMs_BB 03 37 31.9
comp=Z,3µm,17.8s
RPR Rampur 18.44 309 *e*P **P** **03 29 54.6 -0.4**
RPR IVMsBB 03 36 29.1
comp=Z,1µm,25.6s
SBUM Sibu 18.56 105 P **P** **03 29 54.7 -1.6**
SBUM Sibu 18.56 105 P **Pn** **03 29 58.0 +1.3**
STKI Sintang 18.67 112 P **Pn** **03 29 58.3 +0.3**
DBJI Dramaga 18.68 138 P **P** **03 29 56.4 -1.2**
comp=Z,13µmcomp=Z,152nm,1.0s
MOKO MOKOCHONG 18.76 1 *e*P **P** **03 29 57.5 -1.1**
MOKO *e*P **P** **03 29 57.5 -1.1**
GUWA GUWAHATI 18.79 353 *e*P **P** **03 29 56.0 -2.7**
GUWA *e*P **P** **03 29 56.0 -2.7**
GUWA AMP 03 30 06.5
comp=Z,549nm,0.6s
GUWA AMP 03 30 06.5
comp=Z,549nm,0.6s
QIZ Qiongzhong 19.01 51 P **Pn** **03 30 04.4 +2.3**
QIZ sP **pwP** **03 30 12.6 +2.3**
QIZ S **Sn** **03 33 33.1 -1.4**
QIZ pmax pmax
comp=Z,53nm,1.4s
QIZ pmax pmax
comp=Z,2µm,5.7s
QIZ LR LR
comp=Z,57µm,12.8s
QIZ LR LR
comp=Z,21µm,12.2s
QIZ LR LR
comp=Z,11µm,11.6s
TEZP TEZPUR 19.10 356 *e*P **P** **03 29 59.3 -2.9**
TEZP *e*P **P** **03 29 59.3 -2.9**
JORH JORHAT 19.18 360 *e*P **Pn** **03 30 03.5 -0.5**
JORH *e*P **Pn** **03 30 03.5 -0.5**
KMI Kunming 19.34 24⇓ *i*P **Pn** **03 30 08.1 +1.9**
KMI pP sP 03 30 15.6 +1.5
KMI sP pwP 03 30 21.5 +7.5
KMI S **Sn** **03 33 39.6 -3.1**
KMI sS sS 03 33 55.0 +2.2
KMI pmax pmax
comp=Z,98nm,1.1s
KMI pmax pmax
comp=Z,850nm,5.5s
KMI LR LR
comp=Z,11µm,13.4s
KMI LR LR
comp=Z,9µm,14.0s
KMI LR LR
comp=Z,15µm,16.0s
LEM Lembang 19.46 136 Pn **P** **03 30 05.4 -1.0**
comp=Z,6.3nm,0.3s,baz=64,slow=1.5,SNR=7.4
LEM LR LR 03 38 44.9
comp=Z,18µm,18.1s,baz=299,slow=40
COCO West Island 19.69 173 P **P** **03 30 08.6 0.0**
COCO pmax pmax
comp=Z,495nm,1.1s
COCO West Island 19.69 173 P **P** **03 30 08.6 0.0**
LKP Lekhapani 19.82 4 *e*P **P** **03 30 09.4 -0.6**
LKP *e*P **P** **03 30 09.4 -0.6**
DIBR DIBRUGARH 19.91 2 *e*P **P** **03 30 10.7 -0.3**
DIBR *e*P **P** **03 30 10.7 -0.3**
ZIRO ZIRO 19.96 359 *e*P **P** **03 30 09.8 -2.0**
ZIRO *e*P **P** **03 30 09.8 -2.0**
NGP Nagpur 20.04 314 *e*P Pn 03 30 13.9 -0.4
NGP *e*S Sn 03 34 00.5 +1.3
PBKI Pangkalan Bun 20.09 120 P Pn 03 30 17.0 +2.0
CISI Cisompet, Garu 20.13 138 P **P** **03 30 14.5 +1.0**
comp=Z,4µmcomp=Z,119nm,1.4s
CISI Cisompet, Garu 20.13 138 P **P** **03 30 12.4 -1.1**
KLRI Killari 20.18 303 *e*P **P** **03 30 15.0 +0.9**
KLRI IVmBBB 03 30 26.9
comp=Z,1µm,2.0s
KLRI IVMs_BB IVMs_BB 03 39 26.8
comp=Z,2µm,15.5s
ODAN Odare 20.37 342 *e*P **P** **03 30 16.4 +0.1**
comp=Z,1µm,1.4s
GTK Tadong 20.47 345 *e*P **P** **03 30 16.1 -1.1**
GTK *e*P **P** **03 30 16.1 -1.1**
GTK AMP 03 30 25.6
comp=Z,4µm,1.7s
GTK AMP 03 30 25.6
comp=Z,4µm,1.7s
RAMN Ramite 20.71 340 *e*P **P** **03 30 20.9 +1.0**
comp=Z,1µm,1.1s
KPJI Karang Pucung 20.73 135 P Pn 03 30 23.0 +0.5
comp=Z,2µmcomp=Z,120nm,1.3s
TAPN Taplejung 20.74 343 *e*P **P** **03 30 19.8 -0.5**
comp=Z,1µm,1.0s
XMIS Christmas Isla 21.12 147 P **P** **03 30 23.6 -0.7**
SMRI Semarang 21.63 131 P **P** **03 30 32.3 +2.5**
comp=Z,7µmcomp=Z,6µmcomp=Z,438nm,1.0s
SMRI Semarang 21.63 131 P **P** **03 30 28.6 -1.1**
SMRI IAmb IAmb 03 30 36.0
comp=Z,228nm,0.8s
PKI Pulchoki 21.69 338 *e*P **P** **03 30 31.0 +0.4**
comp=Z,1µm,1.1s
PKIN Phulchoki 21.70 338 *e*P **P** **03 30 30.9 +0.2**
comp=Z,508nm,0.9s
GUN Gumba 21.84 340 *e*P **P** **03 30 31.2 -1.0**
comp=Z,2µm,1.2s
DMN Daman 21.84 338 *e*P **P** **03 30 32.6 +0.5**
comp=Z,1µm,1.2s
KKM Kota Kinabalu 21.84 92 P **P** **03 30 30.4 -1.8**
KKN Kakani 21.94 338 *e*P **P** **03 30 33.1 -0.1**
comp=Z,390nm,0.8s
MTKI Muara Teweh, K 22.21 111 P **P** **03 30 37.1 +1.1**
comp=Z,4µmcomp=Z,5µmcomp=Z,245nm,1.4s
SPMM Sapulut 22.24 96 P **P** **03 30 39.0 +2.6**
UGM Wanagama 22.27 133 P **P** **03 30 40.6 +4.0**
UGM Wanagama 22.27 133 P **P** **03 30 34.8 -1.8**
UGM IAmb IAmb 03 30 42.0
comp=Z,167nm,1.0s
UGM IAMs_20 IAMs_20 03 39 26.3
comp=Z,17µm,20.0s
GYA Guiyang 22.28 31 P **P** **03 30 38.3 +1.6**
GYA pP sP 03 30 46.3 +0.5
GYA sP pwP 03 30 49.4 +3.8
GYA S **S** **03 34 42.5 +1.8**
GYA pmax pmax
comp=Z,51nm,0.9s
GYA pmax pmax
comp=Z,2µm,4.7s
GYA LR LR
comp=Z,16µm,13.9s
GYA LR LR
comp=Z,32µm,14.6s
GYA LR LR
comp=Z,14µm,17.5s
LSA Lhasa 22.32 353 P **P** **03 30 36.3 -1.2**
LSA S **S** **03 34 36.0 -6.1**
LSA pmax pmax
comp=Z,130nm,1.3s
LSA LR LR
comp=Z,23µm,24.2s
LSA LR LR
comp=Z,13µm,24.2s
LSA LR LR
comp=Z,35µm,23.5s
LSA Lhasa 22.32 353 P **P** **03 30 36.1 -1.4**
LSA Lhasa 22.32 353 P **P** **03 30 38.3 +0.8**
LSA P **P** **03 30 38.3 +0.8**
LSA Lhasa 22.32 353 IAmb IAmb 03 30 48.4
comp=Z,262nm,0.9s
GKN Gorkha 22.37 337 *e*P **P** **03 30 37.2 -0.6**
comp=Z,625nm,0.9s
WOJI Wonogiri, Jawa 22.51 132 P **P** **03 30 39.6 +0.4**
comp=Z,117nm,1.2s
BHPL Bhopal 22.54 316 *e*P **P** **03 30 40.3 +0.9**
BHPL *e*P **P** **03 30 40.3 +0.9**
BHPL IAmb IAmb 03 30 53.5
comp=N,132nm,0.5s
BHPL IAmb IAmb 03 30 53.5
comp=N,132nm,0.5s
BHPL IAmb IAmb 03 30 54.0
comp=E,228nm,1.3s
BHPL IAmb IAmb 03 30 54.0
comp=E,228nm,1.3s
BHPL *e*S **S** **03 34 48.0 +2.5**
TBJI Tambak Boyo 22.56 129 P **P** **03 30 42.7 +3.1**
comp=E,4µmcomp=E,10µmcomp=E,502nm,1.2s
KOLN Koldanda 22.59 335 *e*P **P** **03 30 39.8 -0.3**
comp=E,1µm,1.1s
DANN Dangsing 23.03 336 *e*P **P** **03 30 44.0 -0.8**
comp=E,650nm,1.0s
GRJI Gresik 23.11 128 P P 03 30 53.4 +8.0
PYUN Piuthan 23.14 334 *e*P **P** **03 30 45.5 -0.3**
comp=E,1µm,1.1s
BBKI Banjar Baru 23.22 117 P **P** **03 30 47.3 +0.7**
comp=E,178nm,1.3s
PWJI Pagerwojo 23.29 131 P **P** **03 30 49.0 +1.8**
comp=E,2µmcomp=E,149nm,1.3s
BKB Balikpapan 24.18 110 P **P** **03 31 00.0 +4.2**
BKB Balikpapan 24.18 110 P **P** **03 30 53.9 -1.9**
BKB IAMs_20 IAMs_20 03 40 33.0
comp=Z,14µm,18.0s
MYLDM **Lahad Datu** 24.19 94 P **P** **03 30 54.3 -1.7**
KBKI Kotabaru 24.33 115 P **P** **03 31 01.2 +4.0**
BLJI Banyuglugur 24.49 128 P **P** **03 31 00.0 +1.4**
comp=Z,8µmcomp=Z,690nm,1.1s
GMJI Gumukmas 24.70 129 P **P** **03 31 00.6 +0.2**
comp=Z,3µmcomp=Z,136nm,1.1s
CD2 Chengdu 24.97 20⇓ *i*P **P** **03 31 03.0 +0.2**
CD2 pP sP 03 31 11.3 -0.8
CD2 PP **PnPn** **03 31 41.9 +5.5**
CD2 S **S** **03 35 25.9 +0.6**
CD2 sS sS 03 35 39.6 +3.6
CD2 SS **SnSn** **03 36 23.6 +8.9**
CD2 pmax pmax
comp=Z,60nm,0.7s
CD2 pmax pmax
comp=Z,2µm,5.5s
CD2 LR LR
comp=Z,9µm,20.0s
CD2 LR LR
comp=Z,22µm,14.9s
CD2 LR LR
comp=Z,15µm,16.3s
ABJI Asem Bagus 25.02 127 P **P** **03 31 07.3 +3.9**
JAGI Jajag, Banyuwa 25.36 128 P **P** **03 31 08.5 +2.0**
comp=Z,4µmcomp=Z,2µmcomp=Z,189nm,1.4s
JAGI Jajag, Banyuwa 25.36 128 P **P** **03 31 05.3 -1.2**
JAGI IAmb IAmb 03 31 23.8
comp=Z,147nm,1.0s
SRBI Singaraja 25.97 126 P **P** **03 31 14.0 +2.0**
comp=Z,6µmcomp=Z,462nm,1.1s
H08S3 Diego Garcia H 26.39 236 T T 03 57 55.9
baz=54,slow=76,SNR=6593
H08S2 Diego Garcia H 26.39 236 T T 03 57 58.2
baz=54,slow=76,SNR=4305
H08S1 Diego Carcia H 26.40 236 T T 03 58 01.1
baz=54,slow=76,SNR=1407
MPSI Mapaga 26.52 104 P **P** **03 31 18.3 +1.3**
comp=Z,5µmcomp=Z,367nm,1.4s
ENH Enshi 26.82 30 P **P** **03 31 18.3 -1.2**
ENH IAmb IAmb 03 31 35.1
comp=Z,108nm,1.1s
ENH IAMs_20 IAMs_20 03 42 20.3
comp=Z,13µm,20.0s
TGY Tagaytay City 27.00 74 LR LR 03 40 47.4
comp=Z,6µm,21.5s,baz=254,slow=34
DDI Dehra Dun 27.36 328 *e*P **P** **03 31 25.0 +0.5**
DDI *e*P **P** **03 31 25.0 +0.5**
TTSI Tana Toraja 27.55 111 P **P** **03 31 30.5 +4.2**
TWSI Taliwang, Sumb 27.70 125 P **P** **03 31 28.7 +1.1**
comp=Z,485nmcomp=Z,27nm,1.4s
SPSI Sidrap Palu 27.87 113 P **P** **03 31 30.2 +1.1**
comp=Z,1µmcomp=Z,40nm,1.3s
KAPI Kappang 28.29 115 P **P** **03 31 32.1 -0.8**
comp=Z,23nm,1.0s,baz=267,slow=5.9,SNR=11
KAPI LR LR 03 42 56.2
comp=Z,5µm,21.6s,baz=288,slow=37
KAPI Kappang 28.29 115 P **P** **03 31 32.2 -0.7**
KAPI P **P** **03 31 32.2 -0.7**
KAPI Kappang 28.29 115 P **P** **03 31 30.7 -2.2**
KAPI pmax pmax
comp=Z,46nm,1.2s
KAPI MLR MLR
comp=Z,8µm,18.0s
KAPI Kappang 28.29 115 P **P** **03 31 30.7 -2.2**
BNSI Bone 28.35 114 P P 03 31 40.9 +7.4
MRSI Marisa 28.45 103 P **P** **03 31 35.4 +1.0**
comp=Z,3µmcomp=Z,201nm,1.0s
SMLA Simla 28.46 328 *e*P **P** **03 31 34.6 +0.4**
SMLA *e*P **P** **03 31 34.6 +0.4**
PLAI Plampang 28.48 124 P **P** **03 31 35.7 +1.1**
comp=Z,2µmcomp=Z,858nmcomp=Z,42nm,1.3s
APSI Ampana 28.55 106 P **P** **03 31 38.1 +2.8**
comp=Z,2µmcomp=Z,213nm,1.4s
BKSI Bulukumba 28.76 115 P **P** **03 31 37.6 +0.6**
comp=Z,1µmcomp=Z,155nm,1.5s
QZH Quanzhou 29.03 50 S **S** **03 36 33.8 +4.3**
QZH Quanzhou 29.03 50 LR LR
comp=Z,12µm,13.7s
QZH Quanzhou 29.03 50 LR LR
comp=E,13µm,14.7s
QZH Quanzhou 29.03 50 LR LR
comp=N,27µm,14.2s
QZH Quanzhou 29.03 50 *e*P P 03 31 49.5 +10
LUWI Luwuk 29.66 105 P **P** **03 31 48.1 +3.0**
comp=N,4µmcomp=N,8µmcomp=N,518nm,1.0s
WHN Wuhan 29.69 37 ⇑P **P** **03 31 46.6 +1.4**
WHN S **S** **03 36 42.0 +2.3**
WHN pmax pmax
comp=N,80nm,0.9s
WHN LR LR
comp=N,14µm,9.4s
WHN LR LR
comp=N,30µm,12.3s
WHN LR LR
comp=N,28µm,12.1s
XAN Xi'an 29.71 25 ⇑P **P** **03 31 45.8 +0.4**
XAN pP pP 03 31 50.8 -1.2
XAN sP sP 03 31 54.0 -0.7
XAN S **S** **03 36 38.6 -1.5**
XAN pmax pmax
comp=N,140nm,1.0s
XAN pmax pmax
comp=N,830nm,5.3s
XAN LR LR
comp=N,22µm,14.7s
XAN LR LR
comp=N,24µm,15.2s
XAN LR LR
comp=N,23µm,16.7s
XAN Xi'an 29.71 25 P **P** **03 31 44.1 -1.3**
XAN pmax pmax
comp=Z,98nm,0.9s
XAN MLR MLR
comp=Z,16µm,19.0s
XAN Xi'an 29.71 25 P **P** **03 31 44.1 -1.3**
XAN IAmb IAmb 03 31 52.9
comp=Z,98nm,0.9s
LZH Lanzhou 29.81 16 ⇑P **P** **03 31 47.9 +1.5**
LZH pP pP 03 31 54.3 +1.3
LZH sP pwP 03 32 01.6 +5.6
LZH PP **PnPn** **03 32 45.8 +3.2**
LZH S **S** **03 36 42.8 +0.9**
LZH sS sS 03 36 57.3 +4.7
LZH SS **ScP** **03 38 22.6 -7.7**
LZH pmax pmax
comp=Z,86nm,1.4s
LZH pmax pmax
comp=Z,390nm,4.3s
LZH LR LR
comp=Z,8µm,13.0s
LZH LR LR
comp=Z,12µm,13.0s
LZH LR LR
comp=Z,10µm,13.6s

TPUB	Ta-pu	29.82	55	IAMs_20	IAMs_20	03 42 54.2					
	comp=Z,10µm,20.0s										
WBSI	Waikabubak, Su	30.25	124	P	P	03 31 47.5	-2.9				
	comp=Z,54nm,1.4s										
KMSI	Cibinong	30.41	102	P	P	03 31 55.0	+3.3				
	comp=Z,478nm,1.1s										
NACB	Ninganchiao	31.01	54	IAMs_20	IAMs_20	03 43 54.6					
	comp=Z,12µm,20.0s										
EDFI	Ende, Flores	31.72	120	P	P	03 32 01.1	-2.3				
	comp=Z,504nmcomp=Z,31nm,1.5s										
MMRI	Maumere	32.14	119	P	P	03 32 08.8	+1.8				
	comp=Z,116nm,0.5s										
MMRI	Maumere	32.14	119	IAMs_20	IAMs_20	03 45 51.4					
	comp=Z,9µm,19.0s										
GTA	Gaotai	32.20	8 ⇑	P	P	03 32 08.0	+0.6				
GTA				pP	pP	03 32 15.3	+1.3				
GTA				sP	pwP	03 32 18.8	+1.8				
GTA				PcP	PcP	03 34 57.0	+1.2				
GTA				S	S	03 37 21.4	+2.3				
GTA				sS	sS	03 37 37.9	+7.8				
GTA				pmax	pmax						
	comp=Z,15nm,0.8s										
GTA				pmax	pmax						
	comp=Z,180nm,7.8s										
GTA				LR	LR						
	comp=Z,4µm,18.5s										
GTA				LR	LR						
	comp=Z,6µm,13.8s										
GTA				LR	LR						
	comp=Z,5µm,16.7s										
YOJ	Yonaguni jima	32.29	55	IAMs_20	IAMs_20	03 44 50.6					
	comp=Z,9µm,18.0s										
NIL	Nilore	32.51	326	P	P	03 32 10.2	+0.1				
NIL				P	P	03 32 10.2	+0.1				
NIL	Nilore	32.51	326	P	P	03 32 09.8	-0.2				
NIL				pmax	pmax						
	comp=Z,254nm,1.1s										
NIL				MLR	MLR						
	comp=Z,6µm,18.0s										
NIL	Nilore	32.51	326	P	P	03 32 09.8	-0.2				
NJ2	Nanjing	33.51	40	eP	P	03 32 20.3	+1.6				
NJ2				pP	sP	03 32 27.6	-0.5				
NJ2				sP	pwP	03 32 30.9	+2.5				
NJ2				S	S	03 37 39.4	+0.1				
NJ2				sS	sS	03 37 53.0	+2.9				
NJ2				pmax	pmax						
	comp=Z,35nm,0.5s										
NJ2				pmax	pmax						
	comp=Z,670nm,3.5s										
NJ2				LR	LR						
	comp=Z,16µm,15.9s										
NJ2				LR	LR						
	comp=Z,11µm,14.9s										
NJ2				LR	LR						
	comp=Z,12µm,16.6s										
TNTI	Ternate	33.66	100	P	P	03 32 20.1	-0.2				
	comp=Z,60nm,1.5s										
TNTI	Ternate	33.66	100	IAmb	IAmb	03 32 20.8					
	comp=Z,44nm,1.0s										
LBMI	Labuha	34.11	102	P	P	03 32 25.3	+1.1				
	comp=Z,4µmcomp=Z,154nm,1.6s										
BATI	Baumata	34.13	121	P	P	03 32 33.1	+8.7				
TIY	Taiyuan	34.33	26	eP	P	03 32 32.9	+7.0				
TIY				pP	pwP	03 32 38.8	+3.2				
TIY				S	S	03 37 57.5	+5.4				
TIY				sS	sS	03 38 06.8	+3.5				
TIY				pmax	pmax						
	comp=Z,560nm,5.3s										
TIY				LR	LR						
	comp=N,10µm,15.9s										
TIY				LR	LR						
	comp=E,16µm,15.0s										
TIY				LR	LR						
	comp=Z,15µm,17.0s										
SOEI	Soe	34.43	119	P	P	03 32 24.6	-2.5				
	comp=Z,98nm,1.1s										
SOEI	Soe	34.43	119	P	P	03 32 23.5	-3.6				
SOEI				IAmb	IAmb	03 32 32.9					
	comp=Z,66nm,1.1s										
SOEI				IAMs_20	IAMs_20	03 48 25.2					
	comp=Z,12µm,19.0s										
SSE	Sheshan	34.44	43	P	P	03 32 24.9	-1.9				
SSE				S	S	03 37 51.8	-1.9				
SSE				pmax	pmax						
	comp=Z,22nm,0.8s										
SSE				LR	LR						
	comp=Z,8µm,16.0s										
SSE				LR	LR						
	comp=Z,6µm,16.7s										
SSE				LR	LR						
	comp=Z,4µm,17.8s										
SSE	Sheshan	34.44	43	IAMs_20	IAMs_20	03 47 45.7					
	comp=Z,9µm,18.0s										
NLAI	Namlea	34.45	107	P	P	03 32 28.2	+1.1				
	comp=Z,1µmcomp=Z,60nm,0.8s										
KBL	Kabul	35.58	323	P	P	03 32 36.5	-0.4				
	SNR=28										
KBL				P	P	03 32 36.5	-0.4				
	SNR=28										
KBL				P	P	03 32 36.5	-0.4				
	SNR=28										
KBL	Kabul	35.58	323	P	P	03 32 36.5	-0.4				
KBL				pmax	pmax						
	comp=Z,55nm,1.0s										
KBL				MLR	MLR						
	comp=Z,4µm,20.0s										
KBL	Kabul	35.58	323	P	P	03 32 36.5	-0.4				
KBL				IAmb	IAmb	03 32 44.0					
	comp=Z,55nm,1.0s										
AAI	Ambon	35.62	107	P	P	03 32 38.3	+1.0				
	comp=Z,138nm,1.0s										
GIRL	Giralia	35.74	147	P	P	03 32 39.9	+1.8				
	baz=36,SNR=8.4										
BTO	Baotou	35.88	21	eP	P	03 32 40.0	+0.7				
KSH	Kashi	35.90	336	P	P	03 32 38.8	-0.7				
KSH				sP	sP	03 32 52.0	+3.0				
KSH				S	S	03 38 11.4	-4.9				
KSH				pmax	pmax						
	comp=Z,48nm,0.7s										
KSH				pmax	pmax						
	comp=Z,460nm,6.0s										
KSH				LR	LR						
	comp=Z,9µm,16.0s										
KSH				LR	LR						
	comp=Z,3µm,12.1s										
KSH				LR	LR						
	comp=Z,6µm,15.5s										
MSAI	Masohi	36.22	106	P	P	03 32 43.4	+1.0				
	comp=Z,646nmcomp=Z,31nm,1.3s										
JLN	Jalan Bani Buh	36.60	297	P	P	03 32 48.3	+2.7				
	SNR=30										
JLN				P	P	03 32 48.3	+2.7				
	SNR=30										
HHC	Hu-ho-hao-te	36.65	22	eP	P	03 32 45.5	-0.4				
HHC				pP	sP	03 32 55.3	0.0				
HHC				PP	PP	03 34 16.9	+7.3				
HHC				S	S	03 38 26.1	-1.7				
HHC				SS	SnSn	03 40 53.3	-5.6				
HHC				pmax	pmax						
	comp=Z,300nm,4.0s										
HHC				LR	LR						
	comp=Z,7µm,16.2s										
HHC				LR	LR						
	comp=Z,16µm,11.9s										
HHC				LR	LR						
	comp=Z,9µm,19.6s										
WMQ	Urumqi	36.67	352	eP	P	03 32 46.9	+0.9				
WMQ				pP	pP	03 32 52.8	0.0				
WMQ				sP	sP	03 33 01.8	+6.2				
WMQ				S	S	03 38 26.1	-1.8				
WMQ				ScS	ScS	03 42 56.8	-3.7				
WMQ				pmax	pmax						
	comp=Z,79nm,0.9s										
WMQ				pmax	pmax						
	comp=Z,700nm,3.9s										
WMQ				LR	LR						
	comp=Z,3µm,28.1s										
WMQ				LR	LR						
	comp=Z,7µm,18.7s										
WMQ				LR	LR						
	comp=Z,7µm,26.9s										
WMQ	Urumqi	36.67	352	IAmb	IAmb	03 32 53.5					
	comp=Z,63nm,1.1s										
WBK	Wadi Bani Khal	37.13	298	P	P	03 32 49.0	-1.1				
	SNR=29										
WBK				P	P	03 32 49.0	-1.1				
	SNR=29										
MHTO	MHTO	37.55	295	P	P	03 32 55.2	+1.5				
	SNR=14										
MHTO				P	P	03 32 55.2	+1.5				
	SNR=14										
MHTO				P	P	03 32 55.2	+1.5				
	SNR=14										
MHTO				S	S	03 38 41.9	+0.1				
MHTO				S	S	03 38 41.9	+0.1				
MHTO				S	S	03 38 41.9	+0.1				
PRZ	Przheval'sk	37.59	341	P	P	03 32 53.2	-0.7				
PRZ				pmax	pmax						
	comp=Z,117nm,1.1s										
PRZ	Przheval'sk	37.59	341	P	P	03 32 53.2	-0.7				
PRZ				IAmb	IAmb	03 33 02.3					
	comp=Z,117nm,1.1s										
DQM	DQM	37.67	293	P	P	03 32 56.9	+2.2				
DQM				P	P	03 32 56.9	+2.2				
DQM				S	S	03 38 48.5	+4.9				
DQM				S	S	03 38 48.5	+4.9				
KDJ	Kajisay	37.69	339	IAmb	IAmb	03 33 02.9					
	comp=Z,87nm,1.1s										
JMDO	Jabal Madar	37.82	297	P	P	03 32 58.4	+2.4				
	SNR=21										
JMDO				P	P	03 32 58.4	+2.4				
	SNR=21										
SHLS	Shalkode	37.86	342	eP	P	03 32 55.4	-0.8				
	comp=Z,20nm,1.4s,baz=343										
SHLS				eS	S	03 38 44.0	-2.1				
	baz=343										
SHLS				i LR	LR	03 49 12.6					
	comp=Z,577nm,14.3s,baz=343										
SHLS	Shalkode	37.86	342	eP	P	03 32 55.3	-0.8				
SHLS				eS	S	03 38 44.0	-2.1				
SHLS				pmax	pmax						
	comp=Z,20nm,1.4s										
SHLS				MLR	MLR						
	comp=Z,577nm,14.0s										
MBWA	Marble Bar	37.87	139	P	P	03 32 54.9	-1.4				
MBWA				P	P	03 32 54.9	-1.4				
MBWA				S	S	03 38 48.3	+1.8				
MBWA				S	S	03 38 48.3	+1.8				
BJT	Baijiatuau	37.89	28	P	P	03 32 55.1	-1.2				
BJT				pmax	pmax						
	comp=Z,58nm,1.1s										
BJT				MLR	MLR						
	comp=Z,4µm,21.0s										
BJT	Baijiatuau	37.89	28	P	P	03 32 55.1	-1.2				
BJI	Beijing	37.91	28	P	P	03 32 57.8	+1.4				
BJI				S	S	03 38 50.0	+3.3				
BJI				pmax	pmax						
	comp=Z,22nm,2.2s										
BJI				pmax	pmax						
	comp=Z,220nm,3.8s										
BJI				LR	LR						
	comp=Z,5µm,16.1s										
BJI				LR	LR						
	comp=Z,5µm,16.1s										
BJI				LR	LR						
	comp=Z,3µm,24.3s										
PDGK	Podgornoye	38.01	342	i P	P	03 32 57.0	-0.4				
PDGK				pmax	pmax						
	comp=Z,90nm,1.3s										
SMDO	Samad	38.08	298	P	P	03 33 00.9	+2.7				
	SNR=28										
SMDO				P	P	03 33 00.9	+2.7				
	SNR=28										
GAR	Garm	38.09	329	P	P	03 32 57.7	-0.4				
GAR				IAMs_20	IAMs_20	03 49 12.7					
	comp=Z,8µm,20.0s										
SATY	Saty	38.10	341	eP	P	03 32 58.2	-0.1				
	comp=Z,8.7nm,0.7s,baz=341										
SATY				eS	S	03 38 49.4	-0.4				
	baz=341										
SATY	Saty	38.10	341	eP	P	03 32 58.1	-0.1				
SATY				eS	S	03 38 49.4	-0.4				
SATY				pmax	pmax						
	comp=Z,9.0nm,0.7s										
ULHL	Ulahol	38.13	338	P	P	03 32 59.7	+1.1				
	SNR=11										
BIDO	Bidbid	38.16	299	P	P	03 33 01.7	+3.0				
	SNR=54										
BIDO				P	P	03 33 01.7	+3.0				
	SNR=54										
PSAC1	Pilbara Seismi	38.19	140	IAMs_20	IAMs_20	03 49 50.5					
	comp=Z,6µm,19.0s										
PSA00	Pilbara Seismi	38.24	140	P	P	03 32 58.5	-1.0				
KPKS	Kokpek	38.38	342	eP	P	03 33 00.4	-0.1				
	baz=342										
KPKS				ePP	PP	03 34 28.6	+0.1				
	baz=342										
KPKS				LR	LR	03 49 24.0					
	comp=Z,841nm,15.7s,baz=342										
KPKS	Kokpek	38.38	342	eP	P	03 33 00.3	-0.2				
KPKS				e		03 34 28.6					
CHGR	Chuyangaron	38.44	328	P	P	03 33 00.0	-1.0				
CHGR				IAMs_20	IAMs_20	03 50 34.4					
	comp=Z,9µm,18.0s										
BOOM	Boomskoye usch	38.46	338	P	P	03 33 00.6	-0.6				
BOOM				pmax	pmax						
	comp=Z,63nm,1.1s										
BOOM				MLR	MLR						
	comp=Z,5µm,21.0s										
BOOM	Boomskoye usch	38.46	338	P	P	03 33 00.6	-0.6				
TNSS	Tian-Shan	38.57	340	eP	P	03 33 02.1	-0.3				
	baz=340										
TNSS	Tian-Shan	38.57	340	eP	P	03 33 02.1	-0.3				
MDOK	Medeo	38.65	340	eP	P	03 33 03.0	+0.1				
	baz=340										
MDOK				ePP	PP	03 34 32.1	+0.6				
	baz=340										
MDOK				eS	S	03 38 57.9	-0.3				
	baz=340										
MDOK				LR	LR	03 49 26.9					
	comp=Z,2µm,17.0s,baz=340										
MDOK	Medeo	38.65	340	eP	P	03 33 02.9	+0.1				
MDOK				e		03 34 32.1					
MDOK				eS	S	03 38 57.8	-0.3				
MDOK				MLR	MLR						
	comp=Z,2µm,17.0s										
BTK	Batken	38.65	331	P	P	03 33 02.5	-0.3				
BTK				pmax	pmax						
	comp=Z,205nm,1.1s										
BTK				MLR	MLR						
	comp=Z,5µm,21.0s										
BTK	Batken	38.65	331	P	P	03 33 02.5	-0.3				
BSY	Bisya	38.73	297	P	P	03 33 06.7	+3.0				
	SNR=46										
BSY				P	P	03 33 06.7	+3.0				
	SNR=46										
AAA	Alma-Ata	38.74	340	eP	P	03 33 03.8	+0.4				
	comp=Z,22nm,0.6s,baz=340										
AAA				ePP	PP	03 34 33.0	+0.6				
	baz=340										
AAA				eS	S	03 38 59.3	0.0				
	baz=340										
AAA				LR	LR	03 49 29.9					
	comp=Z,2µm,15.7s,baz=340										
AAA	Alma-Ata	38.74	340	eP	P	03 33 03.8	+0.4				
AAA				e		03 34 33.0					
AAA				eS	S	03 38 59.2	0.0				
AAA				pmax	pmax						
	comp=Z,22nm,0.6s										
AAA				MLR	MLR						
	comp=Z,2µm,16.0s										
UCH	Uchtor	38.78	336	P	P	03 33 05.4	+1.2				
	SNR=9.2										
HOQ	Hoqain	38.89	299	P	P	03 33 07.7	+2.8				
	SNR=41										
HOQ				P	P	03 33 07.7	+2.8				
	SNR=41										
TKM2	Tokmak 2	38.96	338	P	P	03 33 06.3	+0.9				
	SNR=12										
TKM2	Tokmak 2	38.96	338	i P	P	03 33 04.7	-0.8				
TKM2				pmax	pmax						
	comp=Z,61nm,1.2s										
KBK	Karagaybulak	38.98	337	P	P	03 33 07.2	+1.7				
	SNR=28										
AML	Almayashu	39.03	335	P	P	03 33 06.4	+0.1				
	SNR=67										
SHAO	Shalim	39.04	289	i P	P	03 33 06.4	+0.1				
	SNR=9.0										
SHAO	Shalim	39.04	289	P	P	03 33 09.4	+3.1				
	SNR=5.1										
SHAO				P	P	03 33 09.4	+3.1				
	SNR=5.1										
AAK	Ala-Archa	39.13	337	P	P	03 33 07.5	+0.6				
	SNR=15										
AAK	Ala-Archa	39.13	337	i P	P	03 33 06.1	-0.8				
	SNR=58										
AAK	Ala-Archa	39.13	337	P	P	03 33 08.1	+1.2				
AAK				P	P	03 33 08.1	+1.2				
AAK	Ala-Archa	39.13	337	ceP	P	03 33 06.9	0.0				
AAK				pmax	pmax						
	comp=Z,129nm,1.7s										
AAK	Ala-Archa	39.13	337	IAMs_20	IAMs_20	03 51 30.4					
	comp=Z,6µm,19.0s										
FRU1	Bishkek	39.23	337	IAMs_20	IAMs_20	03 50 49.9					
	comp=Z,7µm,21.0s										
CHKK	Chushkaly	39.28	340	eP	P	03 33 07.3	-0.6				
	baz=340										
CHKK	Chushkaly	39.28	340	eP	P	03 33 07.3	-0.6				
FAKI	Fak Fak	39.28	104	P	P	03 33 09.6	+1.3				
	comp=Z,2µmcomp=Z,80nm,1.1s										
FAKI	Fak Fak	39.28	104	P	P	03 33 06.6	-1.7				
CHMS	Chumysh	39.34	337	P	P	03 33 09.6	+1.2				
	SNR=12										
ARQ	Araqi	39.50	298	P	P	03 33 12.8	+2.7				
	SNR=30										
ARQ				P	P	03 33 12.8	+2.7				
	SNR=30										
ARQ				P	P	03 33 12.8	+2.7				
	SNR=30										
KUU	Kurty	39.54	340	eP	P	03 33 09.1	-0.9				
	comp=Z,30nm,1.8s,baz=340										
KUU				eS	S	03 39 10.1	-1.2				
	baz=340										
KUU				LR	LR	03 51 23.2					
	comp=Z,2µm,15.7s,baz=340										
KUU	Kurty	39.54	340	eP	P	03 33 09.1	-0.9				
KUU				eS	S	03 39 10.0	-1.2				
KUU				pmax	pmax						
	comp=Z,30nm,1.8s										
KUU				MLR	MLR						
	comp=Z,2µm,16.0s										
DMTO	DMTO	39.62	289	P	P	03 33 13.8	+2.7				
DMTO				P	P	03 33 13.8	+2.7				
USP	Ospenovka	39.67	337	P	P	03 33 11.5	+0.3				
	SNR=11										
SOHO	SOHO	39.74	299	i P	P	03 33 12.8	+0.8				
	SNR=22										
SOHO	SOHO	39.74	299	P	P	03 33 14.2	+2.2				
SGDS	Sogindy	39.77	338	eP	P	03 33 12.1	-0.1				
	baz=338										
SGDS				eS	S	03 39 14.5	-0.4				
	baz=338										
SGDS				LR	LR	03 50 46.8					
	comp=Z,842nm,14.3s,baz=338										
SGDS	Sogindy	39.77	338	eP	P	03 33 12.0	-0.1				
SGDS				eS	S	03 39 14.5	-0.4				
SGDS				MLR	MLR						
	comp=Z,842nm,14.0s										
HRA	Herat	39.84	317	P	P	03 33 12.6	-0.4				
DL2	Dalian	39.84	34	P	P	03 33 13.6	+1.0				
DL2				S	S	03 39 19.5	+3.7				
DL2				SS	SS	03 42 05.1	-7.5				
DL2				pmax	pmax						
	comp=Z,94nm,1.2s										
DL2				pmax	pmax						
	comp=Z,470nm,5.1s										
DL2				LR	LR						
	comp=Z,5µm,15.2s										
DL2				LR	LR						
	comp=Z,4µm,16.8s										
DL2				LR	LR						
	comp=Z,6µm,17.3s										
TDK	Taldyqorghan	39.86	342	eP	P	03 33 13.1	+0.4				
	baz=342										
TDK				LR	LR	03 49 46.0					
	comp=Z,2µm,18.2s,baz=342										
TDK	Taldyqorghan	39.86	342	eP	P	03 33 13.1	+0.4				
TDK				MLR	MLR						
	comp=Z,2µm,18.0s										
SOCY	Socotra	39.93	280	P	P	03 33 14.0	+0.2				
FITZ	Fitzroy Crossi	40.05	130	PcP	PcP	03 35 19.8	+0.5				
	baz=334,slow=3.7										
FITZ				LR	LR	03 51 26.7					
	comp=Z,4µm,20.5s,baz=300,slow=39										
FITZ	Fitzroy Crossi	40.05	130	P	P	03 33 13.2	-1.4				
	baz=40,SNR=15										
UOSS	Minazif	40.28	300	i P	P	03 33 16.2	-0.3				
	SNR=6.5										
UOSS	Minazif	40.28	300	P	P	03 33 13.4	-3.1				
UOSS				P	P	03 33 13.4	-3.1				
UOSS	Minazif	40.28	300	P	P	03 33 16.4	-0.1				
RBK	Rabkut	40.28	288	P	P	03 33 19.1	+2.4				
	SNR=6.7										
RBK				P	P	03 33 19.1	+2.4				
	SNR=6.7										
HATD	Hatta, Dubai	40.30	300	i P	P	03 33 17.9	+1.2				
	SNR=8.2										
HATD	Hatta, Dubai	40.30	300	P	P	03 33 19.5	+2.8				
	SNR=25										
HATD				P	P	03 33 19.5	+2.8				
	SNR=25										
HATD				P	P	03 33 19.5	+2.8				
	SNR=25										
MDH	Madha	40.31	301	P	P	03 33 19.6	+2.8				
	SNR=8.9										
MDH				P	P	03 33 19.6	+2.8				
	SNR=8.9										
ASHO	Ashiyiah	40.32	300	i P	P	03 33 17.9	+1.0				
	SNR=13										
ASHO	Ashiyiah	40.32	300	P	P	03 33 19.2	+2.3				
	SNR=29										
ASHO				P	P	03 33 19.2	+2.3				
	SNR=29										
ALNE	Al Ain	40.39	299	i P	P	03 33 18.7	+1.2				
	SNR=23										
MSFE	Esma-Masafi	40.45	301	i P	P	03 33 19.0	+1.0				
	SNR=10.0										
MK31	Makanchi Array	40.52	347	ceP	P	03 33 17.5	-0.7				
MK31	Makanchi Array	40.52	347	IAmb	IAmb	03 33 26.6					
	comp=Z,124nm,1.1s										
MKAR	Makanchi Array	40.52	347	P	P	03 33 17.9	-0.2				
	comp=Z,30nm,0.6s,baz=168,slow=8.1,SNR=166										
MKAR				LR	LR	03 53 25.7					
	comp=Z,2µm,20.1s,baz=164,slow=41										
MKAR	Makanchi Array	40.52	347	ceP	P	03 33 17.6	-0.6				
MKAR				pmax	pmax						
	comp=Z,30nm,0.6s										
MKAR	Makanchi Array	40.52	347	P	P	03 33 17.7	-0.5				
BANOM	Banah	40.52	302	i P	P	03 33 14.8	-3.7				
	SNR=7.2										
BANOM	Banah	40.52	302	P	P	03 33 22.1	+3.5				
	SNR=7.4										
BANOM				P	P	03 33 22.1	+3.5				
	SNR=7.4										
MAKZ	Makanchi	40.60	347	P	P	03 33 17.8	-1.0				
MAKZ	Makanchi	40.60	347	P	P	03 33 18.4	-0.4				
MAKZ				IAmb	IAmb	03 33 25.9					
	comp=Z,57nm,0.7s										
ZSN	Zaisan	40.65	350	eP	P	03 33 20.1	+0.9				
	comp=Z,16nm,1.0s,baz=350										
ZSN	Zaisan	40.65	350	eP	P	03 33 20.1	+0.9				
ZSN				pmax	pmax						
	comp=Z,16nm,1.0s										
IUG	luzhnay	40.65	332	eP	P	03 33 19.6	+0.2				
	comp=Z,13nm,0.7s,baz=332										
IUG				eS	S	03 39 27.6	-0.5				
	baz=332										
IUG				LR	LR	03 50 31.9					
	comp=Z,984nm,15.6s,baz=332										
IUG	luzhnay	40.65	332	eP	P	03 33 19.6	+0.2				
IUG				eS	S	03 39 27

FAQ Al Faqa, Dubai 40.74 299 *i* P **P** **03 33 21.4 +1.0**
SNR=15
FAQ Al Faqa, Dubai 40.74 299 P **P** **03 33 22.9 +2.6**
SNR=20
FAQ P **P** **03 33 22.9 +2.6**
SNR=20
FAQ P **P** **03 33 22.9 +2.6**
SNR=20
NAZ Nazwa, Dubai 40.76 300 P **P** **03 33 24.3 +3.8**
SNR=21
NAZ P **P** **03 33 24.3 +3.8**
SNR=21
WHFO Wadi Hawf 40.76 289 P **P** **03 33 22.7 +2.1**
SNR=27
WHFO P **P** **03 33 22.7 +2.1**
SNR=27
ASUD Al Ashush, Dub 40.93 299 *i* P **P** **03 33 24.5 +2.6**
SNR=22
ASUD Al Ashush, Dub 40.93 299 P **P** **03 33 24.2 +2.3**
SNR=56
ASUD P **P** **03 33 24.2 +2.3**
SNR=56
ASUD P **P** **03 33 24.2 +2.3**
SNR=56
ABTO Aybut 41.12 288 P **P** **03 33 25.6 +2.0**
SNR=13
ABTO P **P** **03 33 25.6 +2.0**
SNR=13
KNRA Kununurra 41.18 124 P **P** **03 33 22.2 -1.8**
baz=41,SNR=4.5
KNRA Kununurra 41.18 124 IAMs_20 IAMs_20 03 51 53.2
comp=Z,8µm,20.0s
KK31 Karatay Array 41.19 333 P **P** **03 33 23.5 -0.2**
KK31 pmax pmax
comp=Z,67nm,1.0s
KK31 Karatay Array 41.19 333 P **P** **03 33 23.4 -0.2**
KKAR Karatay Array 41.19 333 P **P** **03 33 23.5 -0.2**
KKAR Karatay Array 41.19 333 P **P** **03 33 23.4 -0.2**
AJN Ajban 41.21 299 *i* P **P** **03 33 26.4 +2.2**
SNR=27
AJN Ajban 41.21 299 P **P** **03 33 25.9 +1.7**
SNR=29
AJN P **P** **03 33 25.9 +1.7**
SNR=29
MEEK Meekatharra 41.31 146 P **P** **03 33 25.3 +0.3**
baz=41,SNR=6.0
BTLS Baital 41.35 338 *e*P **P** **03 33 25.1 +0.1**
baz=338
BTLS LR LR 03 50 57.6
comp=Z,651nm,15.1s,baz=338
BTLS Baital 41.35 338 *e*P **P** **03 33 25.1 +0.1**
BTLS MLR MLR
comp=Z,651nm,15.0s
JSU Suzuyama 41.35 50 IAMs_20 IAMs_20 03 52 18.7
comp=Z,7µm,18.0s
SONM Songino Array 41.54 12 P **P** **03 33 26.8 +0.1**
comp=Z,7.9nm,0.9s,baz=198,slow=6.7,SNR=34
SONM PcP **PcP** **03 35 25.5 +1.6**
comp=Z,6.9nm,0.9s,baz=187,slow=4.6,SNR=4.4
SONM LR LR 03 52 33.3
comp=Z,4µm,18.5s,baz=184,slow=39
SONM Songino Array 41.54 12 P **P** **03 33 25.7 -1.0**
SONM pmax pmax
comp=Z,44nm,1.2s
SONM Songino Array 41.54 12 P **P** **03 33 25.7 -1.0**
TJN Taejon 41.71 41 *i* P **P** **03 33 26.9 -1.1**
ULN Ulaanbaatar 41.71 13 *ce*P **P** **03 33 25.7 -2.4**
ULN pmax pmax
comp=Z,12nm,1.3s
ULN Ulaanbaatar 41.71 13 P **P** **03 33 27.2 -1.0**
MORW Morawa 41.94 151 P **P** **03 33 30.8 +0.7**
baz=42,SNR=3.5
MORW Morawa 41.94 151 P **P** **03 33 29.3 -0.8**
JTU Tsushima 42.07 45 IAMs_20 IAMs_20 03 52 36.7
comp=Z,5µm,19.0s
JNU Nakatsue 42.43 48 P **P** **03 33 35.3 +1.2**
comp=Z,26nm,0.9s,baz=210,slow=4.5,SNR=8.2
JNU Nakatsue 42.43 48 P **P** **03 33 32.6 -1.5**
JNU IAMs_20 IAMs_20 03 51 20.3
comp=Z,8µm,19.0s
BAKI Biak 42.62 100 P **P** **03 33 39.5 +3.7**
KSAR Wonju Array Be 42.67 41 P **P** **03 33 34.5 -1.4**
KSAR Wonju Array Be 42.67 41 P **P** **03 33 34.5 -1.4**
KSRS Korea Array 42.70 41 P **P** **03 33 36.3 +0.2**
comp=Z,7.0nm,0.9s,baz=229,slow=8.9,SNR=16
KSRS LR LR 03 53 24.4
comp=Z,5µm,18.7s,baz=230,slow=39
SNY Shenyang 42.95 32 ⇑P **P** **03 33 42.6 +4.5**
SNY S **S** **03 40 04.5 +2.6**
SNY pmax pmax
comp=Z,50nm,1.6s
SNY pmax pmax
comp=Z,560nm,4.7s
SNY LR LR
comp=Z,6µm,13.9s
SNY LR LR
comp=Z,7µm,15.1s
SNY LR LR
comp=Z,7µm,14.5s
ZAK Zakamensk 43.44 8 *e*P **P** **03 33 42.0 -0.1**
ZAK *e* 03 35 29.1
ZAK pmax pmax
comp=Z,17nm,1.1s
ZAK pmax pmax
comp=Z,11nm,1.5s
BLDU Ballidu 43.55 151 P **P** **03 33 43.6 +0.5**
baz=44,SNR=5.7
SEM Semipalatinsk 44.38 347 *e*P **P** **03 33 48.8 -0.9**
comp=Z,11nm,0.6s,baz=347
SEM Semipalatinsk 44.38 347 *e*P **P** **03 33 48.8 -0.9**
SEM pmax pmax
comp=Z,11nm,0.6s
MUN Mundaring 44.46 153 P **P** **03 33 51.8 +1.5**
baz=45,SNR=7.1
GEYT Alibeck 44.59 318 P **P** **03 33 51.7 +0.2**
comp=Z,47nm,0.6s,baz=140,slow=7.7,SNR=37
GEYT Alibeck 44.59 318 P **P** **03 33 51.3 -0.1**
GYA0B ALIBECK ARRAY 44.59 318 IAmb IAmb 03 34 05.3
comp=Z,81nm,0.8s
GYA0B IAMs_20 IAMs_20 03 55 27.8
comp=Z,5µm,20.0s
TLY Talaya 44.76 8 *e*P **P** **03 33 53.4 +0.9**
TLY *e*PPP PPP 03 36 16.2
TLY *e*S **S** **03 40 30.6 +2.5**
TLY pmax pmax
comp=Z,30nm,0.9s
TLY MLR MLR
comp=Z,8µm,19.0s
KLBR Kellerberrin 44.86 151 P **P** **03 33 54.1 +0.5**
baz=45,SNR=11
JHS Saijyo 44.96 47 IAMs_20 IAMs_20 03 53 02.2
comp=Z,4µm,18.0s
KURBB Kurchatov Arra 44.98 346 P **P** **03 33 52.7 -1.5**
KURK Kurchatov 45.04 346 P **P** **03 33 54.4 -0.3**
KURK P **P** **03 33 54.4 -0.3**
KURK S **S** **03 40 31.6 -0.5**
KURK S **S** **03 40 31.6 -0.5**
KURK Kurchatov 45.04 346 *de*P **P** **03 33 54.6 -0.1**
KURK pmax pmax
comp=Z,139nm,1.7s
KURK Kurchatov 45.04 346 P **P** **03 33 54.3 -0.4**
CN2 Changchun 45.31 32 *e*P **P** **03 33 57.9 +0.9**
CN2 *e*pP pwP 03 34 08.8 +1.9
CN2 *e*S **S** **03 40 37.3 +1.0**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,690nm,5.0s
CN2 LR LR
comp=Z,5µm,14.0s
CN2 LR LR
comp=Z,7µm,14.0s
CN2 LR LR
comp=Z,7µm,14.0s
SMPI Sarmi 45.33 100 P **P** **03 33 58.6 +1.0**
comp=Z,2µmcomp=Z,97nm,1.4s
NWAO Narrogin (SRO) 45.73 153 P **P** **03 34 01.0 +0.6**
baz=46,SNR=9.2
NWAO Narrogin (SRO) 45.73 153 P **P** **03 33 59.8 -0.6**
NWAO pmax pmax
comp=Z,148nm,1.1s
NWAO Narrogin (SRO) 45.73 153 P **P** **03 33 59.8 -0.6**
NWAO Narrogin (SRO) 45.73 153 IAmb IAmb 03 34 08.9
comp=Z,118nm,1.1s
NWAO IAMs_20 IAMs_20 03 51 54.5
comp=Z,4µm,21.0s

BRZS Berezniki 46.07 341 *e*P **P** **03 34 02.7 -0.2**
comp=Z,6.6nm,0.9s,baz=341
BRZS Berezniki 46.07 341 *e*P **P** **03 34 02.7 -0.2**
BRZS pmax pmax
comp=Z,7.0nm,0.9s
WRKA Warakurna 46.28 135 P **P** **03 34 04.3 -0.6**
baz=46,SNR=40
JWT Wachi 46.75 48 IAMs_20 IAMs_20 03 52 47.6
comp=Z,5µm,19.0s
KMBL Kambalda 46.78 147 P **P** **03 34 10.3 +1.5**
baz=47,SNR=5.4
HIA Hailar 46.85 23 *i* P **P** **03 34 08.4 -0.7**
HIA pmax pmax
comp=Z,34nm,1.0s
HIA Hailar 46.85 23 P **P** **03 34 08.2 -1.0**
HIA IAmb IAmb 03 34 26.2
comp=Z,37nm,0.9s
HIA Hailar 46.85 23 IAMs_20 IAMs_20 03 55 41.8
comp=Z,7µm,19.0s
GENI Genyem 46.88 101 P P 03 34 17.5 +7.7
ZALV Zalesovo Beam 46.98 352 P **P** **03 34 09.8 -0.2**
comp=Z,41nm,0.8s,baz=175,slow=8.0,SNR=105
ZALV LR LR 03 58 36.5
comp=Z,3µm,18.9s,baz=181,slow=42
ZALV Zalesovo Beam 46.98 352 P **P** **03 34 09.6 -0.4**
RKGY Rocky Gully 47.03 154 P **P** **03 34 12.0 +1.4**
baz=47,SNR=5.3
CIT Chita 47.17 16 *e*P **P** **03 34 12.3 +0.7**
CIT *e* 03 34 26.7
CIT *e* 03 35 49.3
CIT pmax pmax
comp=Z,156nm,2.3s
WB0 Warramunga Arr 47.88 125 IAmb IAmb 03 34 33.6
comp=Z,24nm,0.7s
WB0 IAMs_20 IAMs_20 03 57 16.6
comp=Z,5µm,19.0s
WB9 Warramunga Arr 47.88 125 IAMs_20 IAMs_20 03 55 39.8
comp=Z,6µm,21.0s
WB8 Warramunga Arr 47.89 125 IAMs_20 IAMs_20 03 55 40.0
comp=Z,6µm,21.0s
WB6 Warramunga Arr 47.90 125 IAMs_20 IAMs_20 03 55 39.3
comp=Z,6µm,21.0s
WB7 Warramunga Arr 47.90 125 IAMs_20 IAMs_20 03 55 40.9
comp=Z,5µm,21.0s
WB5 Warramunga Arr 47.91 125 IAMs_20 IAMs_20 03 55 40.5
comp=Z,5µm,21.0s
WC1 Warramunga Arr 47.91 125 IAMs_20 IAMs_20 03 55 40.6
comp=Z,5µm,21.0s
WB4 Warramunga Arr 47.92 125 IAMs_20 IAMs_20 03 55 39.7
comp=Z,5µm,21.0s
WR1 Warramunga Arr 47.92 125 IAMs_20 IAMs_20 03 55 50.8
comp=Z,4µm,20.0s
WRA Warramunga Arr 47.92 125 P **P** **03 34 16.2 -1.7**
comp=Z,32nm,1.1s,baz=304,slow=8.8,SNR=83
WRA PcP **PcP** **03 35 46.7 +0.5**
comp=Z,8.2nm,0.9s,baz=316,slow=2.8,SNR=3.3
WRA LR LR 03 56 02.4
comp=Z,5µm,21.1s,baz=295,slow=38
WRA Warramunga Arr 47.92 125 P **P** **03 34 15.9 -2.0**
WRA Warramunga Arr 47.92 125 P **P** **03 34 15.9 -2.0**
WB3 Warramunga Arr 47.93 125 IAMs_20 IAMs_20 03 55 40.9
comp=Z,6µm,21.0s
WRAB Tennant Creek 47.93 125 *c* *i*P **P** **03 34 16.1 -1.8**
WRAB pmax pmax
comp=Z,34nm,1.0s
WRAB Tennant Creek 47.93 125 P **P** **03 34 16.6 -1.3**
WRAB IAmb IAmb 03 34 34.2
comp=Z,39nm,0.8s
WRAB Tennant Creek 47.93 125 IAMs_20 IAMs_20 03 55 41.2
comp=Z,6µm,21.0s
WB2 Warramunga Arr 47.93 125 P **P** **03 34 16.6 -1.3**
WB2 IAmb IAmb 03 34 34.2
comp=Z,37nm,0.8s
WB2 IAMs_20 IAMs_20 03 55 41.1
comp=Z,6µm,20.0s
WC4 Warramunga Arr 47.93 125 IAMs_20 IAMs_20 03 55 42.1
comp=Z,7µm,22.0s
WC2 Warramunga Arr 47.94 125 IAMs_20 IAMs_20 03 55 41.2
comp=Z,6µm,21.0s
WB1 Warramunga Ar. 47.94 125 IAMs_20 IAMs_20 03 55 40.2
comp=Z,6µm,21.0s
WR2 Warramunga Arr 47.94 125 IAMs_20 IAMs_20 03 57 18.4
comp=Z,5µm,20.0s
WC3 Warramunga Arr 47.96 125 P **P** **03 34 16.5 -1.6**
baz=48
WC3 Warramunga Arr 47.96 125 IAMs_20 IAMs_20 03 55 51.8
comp=Z,5µm,20.0s
WR3 Warramunga Arr 47.97 125 IAMs_20 IAMs_20 03 55 41.9
comp=Z,6µm,21.0s
INU Inuyama 47.97 48 P **P** **03 34 16.6 -1.4**
INU IAmb IAmb 03 34 29.7
comp=Z,53nm,1.0s
WR4 Warramunga Arr 47.98 125 IAMs_20 IAMs_20 03 55 42.4
comp=Z,6µm,21.0s
WR5 Warramunga Arr 48.00 125 IAMs_20 IAMs_20 03 55 43.9
comp=Z,6µm,21.0s
WR6 Warramunga Arr 48.02 125 IAMs_20 IAMs_20 03 55 43.4
comp=Z,5µm,21.0s
WR7 Warramunga Arr 48.04 125 IAMs_20 IAMs_20 03 55 44.9
comp=Z,5µm,21.0s
WR8 Warramunga Arr 48.06 125 IAMs_20 IAMs_20 03 55 44.5
comp=Z,5µm,21.0s
WR9 Warramunga Arr 48.07 125 IAMs_20 IAMs_20 03 55 56.8
comp=Z,5µm,21.0s
MDJ Mudanjiang 48.08 34 P **P** **03 34 19.8 +1.1**
MDJ pP pwP 03 34 30.3 +1.7
MDJ sP sP 03 34 34.6 +6.4
MDJ PP **PP** **03 36 12.0 +1.0**
MDJ S **S** **03 41 15.4 -0.5**
MDJ sS sS 03 41 33.4 +6.2
MDJ SS **SS** **03 44 46.3 +1.2**
MDJ pmax pmax
comp=Z,69nm,1.2s
MDJ pmax pmax
comp=Z,730nm,4.3s
MDJ LR LR
comp=Z,5µm,17.3s
MDJ LR LR
comp=Z,7µm,12.0s
MDJ LR LR
comp=Z,9µm,14.1s
MDJ Mudanjiang 48.08 34 IAmb IAmb 03 34 28.2
comp=Z,34nm,1.0s
MDJ IAMs_20 IAMs_20 03 55 20.0
comp=Z,6µm,19.0s
WR0 Warramunga Arr 48.09 125 P **P** **03 34 17.7 -1.4**
WR0 IAmb IAmb 03 34 36.0
comp=Z,48nm,0.9s
WR0 IAMs_20 IAMs_20 03 57 23.4
comp=Z,5µm,20.0s
JGF Kuroka 48.33 48 P **P** **03 34 19.3 -1.5**
JGF IAmb IAmb 03 34 32.0
comp=Z,64nm,1.1s
JSG Sagara 48.57 50 IAMs_20 IAMs_20 03 54 12.8
comp=Z,5µm,18.0s
USA0B Ussuriysk Arra 49.18 36 IAMs_20 IAMs_20 03 56 01.9
comp=Z,5µm,18.0s
USRK Ussuriysk Ar. 49.18 36 P **P** **03 34 26.6 -0.5**
comp=Z,1.6nm,0.7s,baz=270,slow=3.8,SNR=4.6
USRK LR LR 03 56 03.0
comp=Z,3µm,18.9s,baz=211,slow=37
JHJ2 Mitsune 49.24 52 IAMs_20 IAMs_20 03 54 32.5
comp=Z,5µm,20.0s
MJB9 Matsu-Tunnel 49.35 47 IAMs_20 IAMs_20 03 57 35.4
comp=Z,5µm,18.0s
MAJO Matsushiro 49.35 47 *i* P **P** **03 34 30.0 +1.4**
MAJO pmax pmax
comp=Z,6.0nm,0.7s
MAJO Matsushiro 49.35 47 IAMs_20 IAMs_20 03 57 26.4
comp=Z,4µm,19.0s
MAT Matsushiro 49.35 47 P **P** **03 34 29.9 +1.3**
MAT S **S** **03 41 34.0 0.0**
MJAR Matsushiro Arr 49.35 47 P **P** **03 34 29.1 +0.4**
comp=Z,7.3nm,0.9s,baz=244,slow=8.9,SNR=10.0
MJAR PcP **PcP** **03 35 52.8 +1.7**
comp=Z,10nm,0.9s,baz=273,slow=1.0,SNR=3.0
MJAR LR LR 03 57 56.1
comp=Z,3µm,18.0s,baz=230,slow=39
RAYN Ar Rayn 49.37 295 *i* P **P** **03 34 30.0 +1.0**
SNR=52
RAYN Ar Rayn 49.37 295 P **P** **03 34 28.8 -0.2**
RAYN pmax pmax
comp=Z,190nm,0.8s
RAYN MLR MLR
comp=Z,3µm,20.0s
RAYN Ar Rayn 49.37 295 P **P** **03 34 28.8 -0.2**
BRVK Borovoye 49.48 341 P **P** **03 34 29.8 +0.5**

BRVK P **P** **03 34 29.8 +0.5**
BRVK Borovoye 49.48 341 *ce*P **P** **03 34 29.0 -0.3**
BRVK pmax pmax
comp=Z,17nm,0.6s
BRVK Borovoye 49.48 341 P **P** **03 34 29.0 -0.3**
BRVK IAmb IAmb 03 34 37.1
comp=Z,69nm,0.8s
ASAR Alice Springs 49.56 130 P **P** **03 34 28.5 -1.9**
comp=Z,16nm,0.9s,baz=305,slow=7.1,SNR=91
ASAR PcP **PcP** **03 35 52.1 +0.1**
comp=Z,10nm,0.9s,baz=315,slow=3.4,SNR=4.3
ASAR LR LR 03 57 33.4
comp=Z,4µm,20.4s,baz=298,slow=39
ASAR Alice Springs 49.56 130 P **P** **03 34 29.0 -1.4**
AS31 Alice Springs 49.56 130 P **P** **03 34 29.0 -1.4**
FORT Forrest 49.94 141 P **P** **03 34 33.6 +0.5**
baz=50,SNR=17
FORT Forrest 49.94 141 P **P** **03 34 32.2 -0.9**
GUMO Guam 50.05 79 LR LR 03 55 14.6
comp=Z,1µm,20.4s,baz=274,slow=36
AB31 Akbulak array 50.65 331 *i* P **P** **03 34 38.5 +0.2**
ATD Arta Tunnel 50.82 279 P **P** **03 34 40.0 -0.2**
KLR Kul'dur 52.18 30 P **P** **03 34 50.9 +1.2**
comp=Z,2.8nm,0.8s,baz=298,slow=16,SNR=4.4
KLR Kul'dur 52.18 30 *ce*P **P** **03 34 48.7 -1.0**
KLR pmax pmax
comp=Z,25nm,1.5s
AKTO Aktyubinsk 52.37 331 P **P** **03 34 51.9 +0.8**
BOD Bodaibo 52.52 13 *e*P **P** **03 34 51.9 -0.2**
BOD pmax pmax
comp=Z,76nm,1.2s
QIS Mount Isa 52.55 123 P **P** **03 34 51.9 -1.0**
baz=52,SNR=6.9
JTM Tenmabayashi 53.18 44 P **P** **03 34 53.8 -3.4**
ZEA Zeya 53.28 24 *e*P **P** **03 34 58.4 +0.6**
ZEA *e*S **S** **03 42 26.9 -0.8**
ZEA *e* 03 46 07.6
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=Z,20nm,1.2s
ZEA pmax pmax
comp=N,10.0nm,0.8s
ZEA pmax pmax
comp=N,100nm,5.6s
ZEA pmax pmax
comp=Z,200nm,5.3s
ZEA smax smax
comp=Z,300nm,13.8s
ZEA MLR MLR
comp=E,2µm,14.0s
ABPO Ambohimpanom 53.30 240 P **P** **03 34 58.3 -0.3**
ABPO pmax pmax
comp=Z,46nm,1.1s
ABPO Ambohimpanom 53.30 240 P **P** **03 34 58.3 -0.3**
ABPO IAmb IAmb 03 35 09.2
comp=Z,46nm,1.1s
MAK Makhachkala 54.11 319 *e*P **P** **03 35 01.5 -2.5**
MAK *e* 03 37 04.4
MAK *e*PPP PPP 03 38 11.0
MAK *e*S **S** **03 42 35.9 -3.3**
MAK *e*SS **SKiKP** **03 46 17.8 +2.9**
MAK *e*SSS SSS 03 48 15.4
MAK pmax pmax
comp=Z,435nm,1.4s
JEW Eniwo 54.33 42 P **P** **03 35 04.3 -1.4**
JEW IAMs_20 IAMs_20 03 58 17.3
comp=Z,4µm,18.0s
CUKT Cukurca 54.59 311 *e*P **P** **03 35 05.9 -1.9**
GNI Garni 54.81 314 P **P** **03 35 09.9 +0.5**
GNI Garni 54.81 314 *ce*P **P** **03 35 09.8 +0.4**
GNI pmax pmax
comp=Z,53nm,1.3s
GNI Garni 54.81 314 P **P** **03 35 09.0 -0.4**
GNI IAmb IAmb 03 35 21.8
comp=Z,83nm,1.1s
CLDR Calderan 55.03 313 *e*P **P** **03 35 10.0 -1.1**
TASB TASBURUN-IGDIR 55.11 314 *e*P **P** **03 35 10.8 -0.6**
ERM Erimo 55.12 43 IAMs_20 IAMs_20 04 00 41.2
comp=Z,4µm,19.0s
JEM Erimo 55.12 43 IAMs_20 IAMs_20 04 00 44.1
comp=Z,4µm,19.0s
PMG Port Moresby 55.30 107 P **P** **03 35 13.4 +0.3**
comp=Z,13nm,0.2s,baz=282,slow=5.6,SNR=5.4
PMG Port Moresby 55.30 107 P **P** **03 35 11.5 -1.6**
PMG pmax pmax
comp=Z,37nm,0.9s
PMG MLR MLR
comp=Z,2µm,21.0s
PMG Port Moresby 55.30 107 P **P** **03 35 11.5 -1.6**
PMG IAmb IAmb 03 35 27.0
comp=Z,37nm,0.9s
GROC Groznyy 55.34 318 *e*P **P** **03 35 13.0 +0.1**
GROC *e* 03 37 18.8
GROC S **S** **03 42 58.0 +2.2**
GROC pmax pmax
comp=Z,96nm,1.2s
GEVA Gevas 55.36 312 IAMs_20 IAMs_20 04 01 15.3
comp=Z,4µm,21.0s
AKDM Akdamar-Van 55.43 312 *e*P **P** **03 35 17.4 +3.5**
GRNR Gornyy 55.50 31 ⇑*i*P **P** **03 35 14.9 +0.9**
GRNR *e*S **S** **03 43 01.5 +3.7**
GRNR pmax pmax
comp=Z,3.0nm,1.1s
GRNR smax smax
comp=N,4.0nm,0.7s
GRNR MLR MLR
comp=N,3µm,14.0s
GRNR MLR MLR
comp=E,3µm,14.0s
GRNR MLR MLR
comp=Z,4µm,14.0s
SIRT Sirnak 55.55 311 *e*P **P** **03 35 12.9 -1.8**
MTSU Mount Surprise 55.56 118 P **P** **03 35 14.3 -0.6**
baz=56,SNR=3.9
ASAJ Asahikawa 55.65 41 P **P** **03 35 16.6 +1.4**
comp=Z,6.6nm,1.0s,baz=270,slow=5.9,SNR=2.7
SVE Sverdlovsk 55.83 338 *ce*P **P** **03 35 17.0 +0.8**
SVE *e*S **S** **03 43 05.7 +3.8**
SVE pmax pmax
comp=Z,325nm,1.2s
SVE MLR MLR
comp=Z,5µm,21.0s
AGRB Hanur-Agry 55.85 313 *e*P **P** **03 35 16.5 -0.5**
MLAZ Malazgirt-MUS 56.02 313 *e*P **P** **03 35 15.1 -3.1**
KARS Kars 56.17 314 *e*P **P** **03 35 22.3 +3.1**
AKH Akhalkalaki 56.17 315 P **P** **03 35 18.8 -0.4**
AKH pmax pmax
comp=Z,70nm,1.0s
AKH MLR MLR
comp=Z,5µm,20.0s
AKH Akhalkalaki 56.17 315 P **P** **03 35 18.8 -0.4**
AKH IAmb IAmb 03 35 29.4
comp=Z,70nm,1.0s
AKH IAMs_20 IAMs_20 04 03 12.5
comp=Z,5µm,20.0s
GURO Guroymak-BITLI 56.20 312 *e*P **P** **03 35 18.6 -0.8**
ARU Arti 56.32 337 *c* *i*P **P** **03 35 20.4 +0.7**
ARU 03 36 17.4
ARU 03 37 26.4
ARU PPP PPP 03 38 43.5
ARU S **S** **03 43 10.5 +2.1**
ARU SS **SS** **03 46 57.2 +1.8**
ARU pmax pmax
comp=Z,91nm,1.3s
ARU MLR MLR
comp=Z,5µm,20.0s
ARU Arti 56.32 337 P **P** **03 35 19.6 -0.1**
ARU IAMs_20 IAMs_20 04 01 12.9
comp=Z,5µm,21.0s
BBOO Buckleboo 56.42 138 P **P** **03 35 19.9 -0.9**
baz=56,SNR=9.9
BBOO Buckleboo 56.42 138 P **P** **03 35 20.1 -0.8**
BBOO IAmb IAmb 03 35 37.8
comp=Z,37nm,1.1s
BBOO IAMs_20 IAMs_20 04 04 04.3
comp=Z,3µm,18.0s
ZEI Tsey 56.43 317 *e*P **P** **03 35 19.5 -1.5**
ZEI pmax pmax
comp=Z,43nm,1.5s
SENK Senkaya-Erzuru 56.66 314 *e*P **P** **03 35 22.1 -0.7**
SVAN Silvan-Diyarba 56.69 311 *e*P **P** **03 35 21.6 -1.2**
MARD Mardin 56.75 310 P **P** **03 35 22.4 -1.0**
MARD IAmb IAmb 03 35 30.1
comp=Z,42nm,0.8s

KOPR	Koprukoy-ERZUR	56.82	313	*e*	P		P	03 35 24.1	+0.3
VRTB	Varto-Mus	56.83	312	*e*	P		P	03 35 22.9	-1.0
KIBK	Kibwezi	56.93	262		P		P	03 35 26.8	+1.9
	SNR=22								
YSS	Yuzh-Sakhalins	57.03	38	*e*	P		P	03 35 25.5	+0.5
YSS				*e*	S		S	03 43 18.9	+0.7
YSS				*e*	PS		PnS	03 43 28.9	-1.8
YSS					pmax	pmax			
	comp=Z,40nm,1.0s								
YSS					pmax	pmax			
	comp=Z,400nm,5.2s								
YSS					MLR	MLR			
	comp=Z,3μm,15.0s								
YSS					MLR	MLR			
	comp=N,3μm,14.0s								
YSS					MLR	MLR			
	comp=E,2μm,14.0s								
YSS	Yuzh-Sakhalins	57.03	38		P		P	03 35 23.8	-1.1
YSS					IAmb	IAmb		03 35 38.0	
	comp=Z,38nm,0.9s								
YSS					IAMs_20	IAMs_20		04 02 32.0	
	comp=Z,3μm,18.0s								
MAZI	Mazidag	57.05	310	*e*	P		P	03 35 24.0	-1.4
BNGB	Bingl	57.34	312	*e*	P		P	03 35 26.2	-1.3
KBZ	Khabaz	57.48	318		P		P	03 35 27.2	-0.9
	comp=Z,9.8nm,0.9s,baz=52,slow=20								
KBZ					LR	LR		04 03 27.9	
	comp=Z,841nm,20.0s,baz=82,slow=40								
KBZ	Khabaz	57.48	318	*ce*	P		P	03 35 27.3	-0.9
KBZ					pmax	pmax			
	comp=Z,18nm,0.9s								
KMBO	Kilima Mbogo	57.50	264		P		P	03 35 32.5	+3.4
	comp=Z,31nm,0.8s,baz=60,slow=9.5,SNR=72								
KMBO					LR	LR		03 57 04.4	
	comp=Z,4μm,19.4s,baz=88,slow=33								
KMBO	Kilima Mbogo	57.50	264	*i*	P		P	03 35 31.5	+2.4
	SNR=40								
KMBO	Kilima Mbogo	57.50	264		P		P	03 35 30.9	+1.7
KMBO					P		P	03 35 30.9	+1.7
KMBO					S		S	03 43 32.2	+6.3
KMBO					S		S	03 43 32.2	+6.3
KMBO	Kilima Mbogo	57.50	264		P		P	03 35 28.8	-0.3
KMBO					pmax	pmax			
	comp=Z,107nm,1.0s								
KMBO	Kilima Mbogo	57.50	264		P		P	03 35 28.8	-0.3
KMBO	Kilima Mbogo	57.50	264		IAMs_20	IAMs_20		03 56 41.0	
	comp=Z,4μm,20.0s								
YEDI	Yedisu-Bingol	57.59	312	*e*	P		P	03 35 28.1	-1.2
KIV	Kislovodsk	57.70	318	*i*	P		P	03 35 29.4	-0.5
	SNR=12								
KIV	Kislovodsk	57.70	318		P		P	03 35 28.9	-1.1
KIV					P		P	03 35 28.9	-1.1
KIV					S		S	03 43 26.6	-0.8
KIV					S		S	03 43 26.6	-0.8
KIV	Kislovodsk	57.70	318	*e*	P		P	03 35 29.2	-0.7
KIV				*e*	S		S	03 43 25.2	-2.2
KIV					pmax	pmax			
	comp=Z,58nm,3.5s								
KIV					pmax	pmax			
	comp=Z,153nm,1.0s								
KIV					MLR	MLR			
	comp=Z,3μm,17.0s								
KIV	Kislovodsk	57.70	318		P		P	03 35 29.4	-0.5
KIV					IAmb	IAmb		03 35 37.2	
	comp=Z,40nm,0.8s								
KOPT	Kop Dagi	57.81	313		P		P	03 35 30.4	-0.5
GOF	Gofitskoye	57.91	319	⇑*e*	P		P	03 35 31.1	-0.1
GOF					pmax	pmax			
	comp=Z,28nm,1.0s								
CHOM	Cayeli-Rize	57.98	314	*e*	P		P	03 35 31.8	0.0
CTA	Charters Tower	58.00	119		P		P	03 35 29.5	-2.8
	comp=Z,6.2nm,1.0s,baz=284,slow=10,SNR=5.1								
CTAO	Charters Tower	58.00	119		P		P	03 35 29.9	-2.3
CTAO					pmax	pmax			
	comp=Z,15nm,1.1s								
CTAO	Charters Tower	58.00	119		P		P	03 35 29.9	-2.3
PTK	Pertek	58.27	311	*e*	P		P	03 35 32.6	-1.5
URFA	Urfa	58.28	310	*e*	P		P	03 35 33.1	-1.0
HTT	Hallett	58.73	137		P		P	03 35 37.1	0.0
	baz=59,SNR=8.7								
LODK	Lodwar	58.74	269		P		P	03 35 39.1	+1.5
MALT	Malatya	58.82	310	*e*	P		P	03 35 37.0	-0.9
MALT	Malatya	58.82	310		P		P	03 35 37.5	-0.4
TYV	Tymovskoe	58.87	34	*e*	P		P	03 35 37.1	-0.6
TYV				*e*				03 43 43.6	
TYV					pmax	pmax			
	comp=Z,200nm,2.4s								
TYV					pmax	pmax			
	comp=Z,23nm,1.4s								
NKL	Nikolayevsk	59.02	31	*e*	P		P	03 35 38.7	-0.1
NKL				*e*				03 36 22.0	
NKL				*e*				03 37 54.3	
NKL				*e*	S		S	03 43 44.7	+0.8
NKL					pmax	pmax			
	comp=E,21nm,1.0s								
NKL					pmax	pmax			
	comp=N,8.0nm,0.8s								
NKL					pmax	pmax			
	comp=Z,22nm,1.4s								
NKL					pmax	pmax			
	comp=Z,120nm,2.5s								
NKL					smax	smax			
	comp=E,108nm,4.5s								
NKL					smax	smax			
	comp=N,26nm,5.3s								
NKL					MLR	MLR			
	comp=E,2μm,13.0s								
NKL					MLR	MLR			
	comp=N,41nm,10.0s								
NKL					MLR	MLR			
	comp=Z,3μm,14.0s								
ILIC	ilic-Erzincan	59.05	312	*e*	P		P	03 35 38.6	-0.8
ESPY	Espiye-Giresun	59.38	313	*e*	P		P	03 35 40.1	-1.4
GAZ	Gaziantep	59.44	309	*e*	P		P	03 35 41.6	-0.5
GAZ	Gaziantep	59.44	309		P		P	03 35 41.8	-0.4
GAZ					IAmb	IAmb		03 35 56.3	
	comp=Z,33nm,1.0s								
KUR	Kuril'sk	59.53	41		P		P	03 35 40.9	-1.6
KUR				*e*				03 36 27.3	
KUR					MLR	MLR			
	comp=Z,3μm,15.0s								
SOC	Sochi	59.56	317	*e*	P		P	03 35 40.6	-2.1
SOC				*e*	*PP		pP	03 35 47.6	-2.1
SOC				*e*	*SP		pwP	03 35 54.4	+1.8
SOC				*e*	PPP	PPP		03 39 15.6	
SOC				*e*	S		S	03 43 49.1	-2.2
SOC				*e*	SS		SS	03 47 45.2	-1.8
SOC					pmax	pmax			
	comp=Z,20nm,0.9s								
SOC					MLR	MLR			
	comp=Z,1μm,19.0s								
STKA	Stephens Creek	59.73	134		P		P	03 35 43.2	-0.9
	comp=Z,13nm,1.1s,baz=304,slow=5.7,SNR=12								
STKA					LR	LR		04 06 22.1	
	comp=Z,3μm,18.3s,baz=295,slow=41								
STKA	Stephens Creek	59.73	134		P		P	03 35 43.3	-0.8
	baz=60,SNR=7.4								
STKA	Stephens Creek	59.73	134		P		P	03 35 43.0	-1.1
STKA					pmax	pmax			
	comp=Z,4.0nm,1.1s								
STKA					MLR	MLR			
	comp=Z,700nm,19.0s								
STKA	Stephens Creek	59.73	134		P		P	03 35 43.0	-1.1
TAHT	Tahtakopru-Hat	60.05	308	*e*	P		P	03 35 45.7	-0.5
RSDY	Resadiye-TOKAT	60.24	312	*e*	P		P	03 35 46.2	-1.3
YAK	Yakutsk	60.35	18	*e*	P		P	03 35 47.5	-0.2
YAK				*e*	*PP		pP	03 35 54.1	-0.6
YAK				*e*				03 36 25.4	
YAK				*e*				03 38 01.1	
YAK				*e*	PPP	PPP		03 39 24.5	
YAK				*e*	S		S	03 43 59.6	-1.2
YAK				*e*	*SS		sS	03 44 20.8	+8.6
YAK				*e*				03 45 36.1	
YAK				*e*	SS		SS	03 48 00.8	+2.3
YAK					pmax	pmax			
	comp=Z,37nm,0.8s								
YAK					pmax	pmax			
	comp=N,9.0nm,1.0s								
YAK					pmax	pmax			
	comp=E,9.0nm,1.0s								
YAK					pmax	pmax			
	comp=Z,77nm,2.0s								
YAK					pmax	pmax			
	comp=N,52nm,2.0s								
YAK					pmax	pmax			
	comp=E,46nm,2.2s								
YAK					smax	smax			
	comp=N,41nm,1.8s								
YAK					smax	smax			
	comp=E,51nm,2.0s								
YAK					MLR	MLR			
	comp=Z,4μm,18.0s								
YAK					MLR	MLR			
	comp=N,2μm,19.0s								
YAK					MLR	MLR			
	comp=E,4μm,18.0s								
YAK	Yakutsk	60.35	18		P		P	03 35 47.1	-0.7
YAK					IAMs_20	IAMs_20		04 03 43.6	
	comp=Z,4μm,20.0s								
SARI	SarD1z-Kayseri	60.37	310	*e*	P		P	03 35 47.4	-1.2
CEYT	Ceyhan	60.54	308	*e*	P		P	03 35 49.0	-0.5
KOZT	Kozan	60.59	309	*e*	P		P	03 35 47.5	-2.4
TOKT	Tokat	60.79	312	*e*	P		P	03 35 50.7	-0.6
BNN	Bunyan	60.92	310	*e*	P		P	03 35 50.9	-1.4
KARA	Karaisali	61.13	308	*e*	P		P	03 35 52.7	-0.9
VRH	Novokhopyorsk	61.34	325	*e*	P		P	03 35 53.4	-1.3
VRH				*e*	*PP		pP	03 35 59.7	-2.0
VRH					pmax	pmax			
	comp=Z,40nm,1.0s								
VRH					MLR	MLR			
	comp=Z,2μm,16.0s								
KIRV	Kirov	61.44	335	*ce*	P		P	03 35 55.6	+0.4
MERS	Mersin	61.46	308	*e*	P		P	03 35 54.9	-1.0
ANN	Anapa	61.52	317	*e*	P		P	03 35 57.4	+1.3
ANN				*e*	S		S	03 44 17.0	+0.7
ANN					pmax	pmax			
	comp=Z,102nm,1.1s								
ANN					MLR	MLR			
	comp=Z,2μm,23.0s								
ANN					MLR	MLR			
	comp=E,1μm,19.0s								
ANN					MLR	MLR			
	comp=N,535nm,14.0s								
NRIK	Noril'sk	61.96	357		P		P	03 35 57.3	-1.2
	comp=N,16nm,0.7s,baz=158,slow=6.3,SNR=16								
NRIK					LR	LR		04 06 55.7	
	comp=N,3μm,20.7s,baz=188,slow=40								
NRIK	Noril'sk	61.96	357	*ce*	P		P	03 35 58.4	-0.2
NRIK					pmax	pmax			
	comp=Z,14nm,0.9s								
KEBE	Keben-Mersin	62.01	307	*e*	P		P	03 35 58.6	-1.0
CSS	Mathiatis	62.01	306		P		P	03 35 58.4	-1.2
CSS					IAmb	IAmb		03 36 14.3	
	comp=Z,30nm,1.0s								
CSS					IAMs_20	IAMs_20		04 05 04.8	
	comp=Z,3μm,20.0s								
CORM	Corum	62.16	312	*e*	P		P	03 36 00.5	-0.2
BERE	Bereket-Mersin	62.37	307	*e*	P		P	03 36 01.3	-0.9
LEF	Lefka	62.40	306	*e*	P		P	03 36 02.0	-0.2
TEKE	Tekeli-Mersin	62.42	307	*e*	P		P	03 36 01.1	-1.2
SULT	Sultanhani-AKS	62.53	309	*e*	P		P	03 36 02.3	-0.9
CMSA	Cobar Meteorol	62.56	131		P		P	03 36 03.6	+0.3
	baz=63,SNR=5.4								
VORD	Divnogorie	62.62	324	*e*	P		P	03 36 01.1	-2.2
VORD				*e*	*PP		pP	03 36 07.5	-2.9
VORD					pmax	pmax			
	comp=Z,40nm,0.3s								
RMQ	Roma	62.68	125		P		P	03 36 04.8	+0.6
	baz=63,SNR=14								
BRTR	Keskin Array B	62.79	311		P		P	03 36 02.9	-2.0
	comp=Z,6.7nm,0.6s,baz=126,slow=7.3,SNR=24								
BRTR					LR	LR		04 06 08.8	
	comp=Z,841nm,21.5s,baz=117,slow=39								
BRTR	Keskin Array B	62.79	311	*ce*	P		P	03 36 03.2	-1.7
BRTR					pmax	pmax			
	comp=Z,7.0nm,0.6s								
BRTR	Keskin Array B	62.79	311		P		P	03 36 03.3	-1.6
BR131	Keskin Array S	62.79	311	*i*	P		P	03 36 02.7	-2.2
BR131	Keskin Array S	62.79	311		P		P	03 36 03.0	-2.0
BR131					IAmb	IAmb		03 36 11.1	
	comp=Z,32nm,0.8s								
VSR	Storozhevoye	62.80	325	*e*	P		P	03 36 03.2	-1.3
VSR				*e*	*PP		pP	03 36 09.1	-2.5
VSR					pmax	pmax			
	comp=Z,30nm,1.2s								
VSR					MLR	MLR			
	comp=Z,1μm,19.0s								
VORR	Voronezh	62.96	325	*e*	P		P	03 36 05.0	-0.6
VORR					pmax	pmax			
	comp=Z,250nm,1.2s								
CANT	Cankiri	63.02	312	*e*	P		P	03 36 04.8	-1.5
GAZI	Gazipasa	63.07	307	*e*	P		P	03 36 05.2	-1.4
CHBY	Cihanbeyli	63.10	310	*e*	P		P	03 36 05.7	-1.2
AFSR	Afar-Bala (An	63.15	310	*e*	P		P	03 36 05.6	-1.7
LOD	Lodumlu	63.48	311	*e*	P		P	03 36 07.7	-1.7
LPSR	Galich'ya Gora	63.50	326	*e*	P		P	03 36 07.8	-1.3
LPSR				*e*	*PP		pP	03 36 14.2	-2.0
LPSR					pmax	pmax			
	comp=Z,30nm,1.1s								
LPSR					MLR	MLR			
	comp=Z,2μm,24.0s								
MBAR	Mbarara	63.85	266		P		P	03 36 14.4	+2.0
MBAR					P		P	03 36 14.4	+2.0
MBAR					S		S	03 44 50.9	+3.9
MBAR					S		S	03 44 50.9	+3.9
MBAR	Mbarara	63.85	266	*i*	P		P	03 36 11.9	-0.5
MBAR					pmax	pmax			
	comp=Z,18nm,1.3s								
MBAR	Mbarara	63.85	266		P		P	03 36 11.9	-0.5
MBAR	Mbarara	63.85	266		IAMs_20	IAMs_20		04 00 20.3	
	comp=Z,5μm,21.0s								
EIDS	Eidsvold	64.15	123		P		P	03 36 12.5	-1.4
EIDS					IAMs_20	IAMs_20		04 08 46.6	
	comp=Z,2μm,19.0s								
CIFT	Ciftеler, Eski	64.66	310	*e*	P		P	03 36 15.5	-1.6
KORT	Korkueli	64.76	307	*e*	P		P	03 36 16.6	-1.3
MDUB	Mudurnu	64.78	311	*e*	P		P	03 36 15.5	-2.5
MDUB	Mudurnu	64.78	311		P		P	03 36 16.6	-1.4
MDUB					IAMs_20	IAMs_20		04 06 54.7	
	comp=Z,4μm,20.0s								
SHUT	Suhut-Afyon	64.89	309	*e*	P		P	03 36 17.1	-1.6
ELL	Elmali	65.07	307	*e*	P		P	03 36 18.4	-1.5
ELL	Elmali	65.07	307		P		P	03 36 19.5	-0.4
ELL					pmax	pmax			
	comp=Z,310nm,0.9s								
ELL					MLR	MLR			
	comp=Z,7μm,21.0s								
ELL	Elmali	65.07	307		P		P	03 36 19.4	-0.4
SRCK	Saricakaya, Es	65.12	311	*e*	P		P	03 36 17.9	-2.2
AKAS	Kas	65.22	306	*e*	P		P	03 36 17.6	-3.4
AKAS	Kas	65.22	306		IAmb	IAmb		03 36 32.9	
	comp=Z,19nm,0.8s								
TOO	Toolangi	65.47	137		P		P	03 36 23.6	+1.3
	baz=66,SNR=6.3								
TOO	Toolangi	65.47	137		P		P	03 36 21.5	-0.9
TOO					pmax	pmax			
	comp=Z,71nm,1.0s								
TOO					MLR	MLR			
	comp=Z,4μm,20.0s								
TOO	Toolangi	65.47	137		P		P	03 36 21.5	-0.9
TOO					IAMs_20	IAMs_20		04 07 25.9	
	comp=Z,4μm,20.0s								
MOS	Moscow	65.50	329	*e*	P		P	03 36 20.7	-1.4
MOS				*e*				03 36 52.3	
MOS				*e*				03 38 46.4	
MOS				*e*	S		S	03 45 07.8	+2.3
MOS					pmax	pmax			
	comp=Z,121nm,1.3s								
MOS					MLR	MLR			
	comp=Z,3μm,18.0s								
FETY	Fethiye	65.70	307	*e*	P		P	03 36 21.7	-2.2
FETY	Fethiye	65.70	307		P		P	03 36 30.0	+6.1
OBN	Obninsk	65.79	328	⇑	P		P	03 36 23.6	-0.4
OBN	Obninsk	65.79	328	⇓*i*	P		P	03 36 23.3	-0.7
OBN				*i*				03 36 29.8	
OBN				*e*				03 36 55.4	
OBN				*e*				03 38 47.4	
OBN				*i*	S		S	03 45 07.6	-1.5
OBN				*e*	SS		SS	03 49 31.3	+7.5
OBN					pmax	pmax			
	comp=Z,142nm,1.7s								
OBN					MLR	MLR			
	comp=Z,2μm,19.0s								
OBN	Obninsk	65.79	328		P		P	03 36 23.4	-0.6
ADVT	Abdulvahap	65.86	311	*e*	P		P	03 36 20.1	-4.7
DALY	Dalyan (Mula)	66.07	307	*e*	P		P	03 36 24.6	-1.6
KULA	Kula-Manisa	66.34	309		P		P	03 36 34.7	+6.7
ARG	Arkhangelos	66.40	306		P		P	03 36 26.2	-2.2
MANT	Manisa	66.42	309		P		P	03 36 27.9	-0.8
MANT					IAMs_20	IAMs_20		04 06 34.1	
	comp=Z,4μm,22.0s								
KAVV	Kandilli-Istan	66.49	312	*e*	P		P	03 36 27.0	-1.8
ISK	Istanbul-Kandi	66.49	312	*e*	P		P	03 36 25.9	-2.9
KLYT	Kilyos	66.54	312	*e*	P		P	03 36 26.8	-2.3
ARMT	Armutlu	66.55	311	*e*	P		P	03 36 26.1	-3.1
SKR	Severo-Kuril's	66.60	38	*e*	P		P	03 36 36.0	+6.7
SKR				*e*	S		S	03 45 22.2	+3.1
SKR					pmax	pmax			
	comp=Z,200nm,7.3s								
SKR					MLR	MLR			
	comp=Z,1μm,16.0s								
ARMA	Armidale	66.61	128		P		P	03 36 28.0	-1.9
	baz=67,SNR=3.9								
ARMA	Armidale	66.61	128		P		P	03 36 28.6	-1.3
ARMA					IAmb	IAmb		03 36 39.5	
	comp=Z,43nm,1.1s								
ARMA					IAMs_20	IAMs_20		04 08 22.9	
	comp=Z,3μm,20.0s								
AYDB	Zeytinkoy-Aydi	66.85	308	*e*	P		P	03 36 30.3	-1.1
KLMR	Klimovskoe	66.88	334	*e*	P		P	03 36 30.4	-0.5
KLMR				*e*	PPP	PPP		03 40 30.7	
KLMR					S		S	03 45 18.9	-3.2
KLMR					pmax	pmax			
	comp=Z,188nm,1.4s								
KLMR					MLR	MLR			
	comp=Z,398nm,18.0s								
KLMR	Klimovskoe	66.88	334	*e*	P		P	03 36 30.4	-0.5
KLMR				*e*	P		P	03 36 30.4	-0.5
KLMR				*e*	P		P	03 36 30.4	-0.5
KLMR					AMP			03 36 45.3	
	comp=Z,188nm,1.4s								
KLMR				*e*	PPP	PPP		03 40 30.8	
KLMR					S		S	03 45 18.9	-3.2
KLMR					S		S	03 45 18.9	-3.2
KLMR					SSS	SSS		03 52 56.2	
KLMR					SSS	SSS		03 52 56.2	
KLMR					LQ	LQ		03 57 08.4	
KLMR					LQ	LQ		03 57 08.4	
KLMR					LR	LR		04 00 52.6	
KLMR					AMP			04 10 58.0	
	comp=Z,398nm,18.0s								
MA2	Magadan	67.08	27		LR	LR		04 08 26.4	
	comp=Z,2μm,20.3s,baz=243,slow=38								
MA2	Magadan	67.08	27		IAMs_20	IAMs_20		04 08 51.4	
	comp=Z,3μm,18.0s								
KARP	Karpathos	67.09	305		P		P	03 36 31.1	-1.7
PURM	Purcari	67.09	317	⇓	P		P	03 36 30.7	-1.8
BALB	Balikesir	67.13	310	*e*	P		P	03 36 31.8	-1.1
BODT	Bodrum	67.17	307	*e*	P		P	03 36 29.4	-3.9
NIS1	Nisyros Isl.	67.22	306		P		P	03 36 31.3	-2.3
EDC	Edincik	67.26	311	*e*	P		P	03 36 32.4	-1.4
CRLT	Corlu	67.49	311	*e*	P		P	03 36 34.8	-0.4
MRMT	Marmara Adasi	67.50	311	*e*	P		P	03 36 33.3	-2.1
TLCR		67.51	316	⇓	P		P	03 36 34.6	-0.6
TLCR		67.51	316		P		P	03 36 34.6	-0.6
BLCB	Balcova	67.58	308	*e*	P		P	03 36 34.9	-0.9
TIXI	Tiksi	67.61	11	*i*	P		P	03 36 34.1	-1.3
TIXI	Tiksi	67.61	11		P		P	03 36 34.3	-1.1
TIXI					IAMs_20	IAMs_20		04 08 53.5	
	comp=Z,3μm,18.0s								
TIRR	Tirgusor	67.63	315	⇓	P		P	03 36 34.9	-1.1
TIRR	Tirgusor	67.63	315		IAMs_20	IAMs_20		04 09 53.8	
	comp=Z,3μm,22.0s								
TPGR	Topolog	67.71	315	⇑	P		P	03 36 35.1	-1.4
ZKR	Zakros	67.80	305		P		P	03 36 34.9	-2.4
MILM	Milestii Mici	67.89	318	⇓	P		P	03 36 36.4	-1.2
CFR	Carcaliu	67.97	316	⇑	P		P	03 36 37.3	-0.8
CFR	Carcaliu	67.97	316		P		P	03 36 37.3	-0.8
HARR	Harsova	68.02	315	⇑	P		P	03 36 37.9	-0.5
HARR	Harsova	68.02	315		P		P	03 36 37.9	-0.5
LPK	Lapseki	68.09	310	*e*	P		P	03 36 38.5	-0.5
PETK	Petropavlovsk-	68.27	35		LR	LR		04 07 41.0	
	comp=Z,2μm,21.0s,baz=237,slow=37								
PRK	Paraskevi	68.30	309		P		P	03 36 41.0	+0.7
ANAF	Anafi Island	68.31	306		P		P	03 36 38.7	-1.8
GELI	Tayfur-Gelibol	68.31	310	*e*	P		P	03 36 39.3	-1.1
ERIK	Erikli-Kesan	68.33	311	*e*	P		P	03 36 39.9	-0.5
LAST	Lasithi	68.41	305		P		P	03 36 40.1	-1.1
SORM	Soroca	68.48	319	⇑	P		P	03 36 40.1	-1.1
SORM	Soroca	68.48	319		P		P	03 36 40.1	-1.1
AKASG	Malin Array Be	68.55	322		P		P	03 36 40.3	-1.3
	comp=Z,1.5nm,0.5s,baz=88,slow=4.9,SNR=30								
AKASG					PP		PP	03 39 09.5	-3.6
	comp=Z,0.7nm,0.4s,baz=93,slow=5.9,SNR=3.6								
AKASG					LR	LR		04 11 27.4	
	comp=Z,1μm,18.6s,baz=110,slow=40								
AKASG	Malin Array Be	68.55	322	*ce*	P		P	03 36 40.0	-1.7
AKASG					pmax	pmax			
	comp=Z,8.0nm,0.9s								
AKASG	Malin Array Be	68.55	322		P		P	03 36 40.0	-1.7
AKBB	Malin Array Si	68.55	322	*ce*	P		P	03 36 39.5	-2.2
AKBB	Malin Array Si	68.55	322		P		P	03 36 40.0	-1.7
AKBB					IAmb	IAmb		03 36 51.6	
	comp=Z,22nm,0.8s								
JMB	Yambol	68.57	313	*e*	P		P	03 36 41.7	-0.2
ALN	Alexandroupoli	68.71	311		P		P	03 36 42.2	-0.7
ALN					pmax	pmax			
	comp=Z,25nm,0.8s								
ALN	Alexandroupoli	68.71	311		P		P	03 36 42.2	-0.7
ALN					IAmb	IAmb		03 36 49.5	
	comp=Z,24nm,0.8s								
ALN	Alexandroupoli	68.71	311		P		P	03 36 40.0	-2.9
PET	Petropavlovsk	68.80	36	*e*	P		P	03 36 42.8	-0.3
RAZG	Razgrad	68.81	314	⇑	P		P	03 36 43.3	-0.1
ODBI	Odobesti	68.84	316	⇓	P		P	03 36 42.3	-1.2
IDI	Anoyia	68.90	305	⇑	P		P	03 36 44.1	-0.2
IDI	Anoyia	68.90	305		P		P	03 36 43.8	-0.5
IDI	Anoyia	68.90	305		P		P	03 36 43.4	-0.9
BISRR	Bisoca	69.03	316	⇓	P		P	03 36 44.4	-0.5
SMTH	Samothraki Isl	69.04	310		P		P	03 36 41.9	-3.0
TMCR	Tamitsa	69.06	337	*e*	P		P	03 36 44.5	0.0
TMCR					pmax	pmax			
	comp=Z,117nm,1.1s								
ISR	Istrita	69.07	315	⇓	P		P	03 36 45.4	+0.2
ISR	Istrita	69.07	315		P		P	03 36 45.3	+0.2
VRI	Vrincioaia	69.08	316		P		P	03 36 44.8	-0.3
RDO	Rodhopi	69.13	311		P		P	03 36

BURAR	**Bucovina Array**	**70.43 318**	P		**P**	**03 36 53.0**	**-0.5**
BURAR	**Bucovina Array**	**70.43 318**	P		**P**	**03 36 53.0**	**-0.5**
ARR	**Arges**	**70.44 315**	⇓P		**P**	**03 36 52.6**	**-1.0**
BUR08	**Bucovina Ar. S**	**70.45 318**	P		**P**	**03 36 53.2**	**-0.4**
KTHA	**Kythira Island**	**70.47 306**	P		**P**	**03 36 52.5**	**-1.4**
KRND	**KRANIDI**	**70.51 307**	P		**P**	**03 36 50.5**	**-3.5**
MMB	**Musomiste**	**70.54 311**	*e*P		**P**	**03 36 52.8**	**-1.4**
SRS	**Serrai**	**70.58 311**	P		**P**	**03 36 53.2**	**-1.2**
SRS			pmax	pmax			
	comp=Z,29nm,1.0s						
SRS	**Serrai**	**70.58 311**	P		**P**	**03 36 52.4**	**-2.0**
PLG	**Polygyros**	**70.60 310**	P		**P**	**03 36 53.8**	**-0.8**
VLI	**Veliai**	**70.62 306**	P		**P**	**03 36 57.2**	**+2.5**
HORT	**Hortiatis**	**70.89 310**	P		**P**	**03 36 53.2**	**-3.2**
VTS	**Vitosha**	**71.04 312**	*e*P		**P**	**03 36 56.2**	**-1.1**
KKB	**Krupnik**	**71.05 312**	*e*P		**P**	**03 36 55.6**	**-1.7**
NACGM	**Naroch**	**71.06 326**	*e*		P	03 37 03.0	+6.0
NACGM			*e*LQ		LQ	04 04 14.0	
NACGM			*e*LR		LR	04 10 10.0	
IDID	**Didziasalis**	**71.18 326**	*e*P		**P**	**03 36 57.9**	**+0.1**
TRIP	**Tripoli**	**71.22 307**	P		P	03 37 05.4	+6.9
LIT	**Litokhoron**	**71.30 310**	P		**P**	**03 36 57.3**	**-1.5**
LIT			pmax	pmax			
	comp=Z,65nm,0.7s						
LIT	**Litokhoron**	**71.30 310**	P		**P**	**03 36 57.3**	**-1.5**
LIT	**Litokhoron**	**71.30 310**	P		**P**	**03 36 56.3**	**-2.5**
AGG	**Agios Georgios**	**71.31 309**	P		**P**	**03 36 57.1**	**-1.8**
AGG			pmax	pmax			
	comp=Z,23nm,0.8s						
AGG			MLR	MLR			
	comp=Z,1µm,20.0s						
AGG	**Agios Georgios**	**71.31 309**	P		**P**	**03 36 57.1**	**-1.8**
AGG			IAmb	IAmb		03 37 04.3	
	comp=Z,23nm,0.8s						
KLV	**Kalavryta, Ach**	**71.36 308**	P		**P**	**03 36 56.1**	**-3.2**
CJR	**Cluj-Napoca**	**71.37 317**	⇓P		**P**	**03 36 58.4**	**-0.7**
CJR	**Cluj-Napoca**	**71.37 317**	P		**P**	**03 36 58.4**	**-0.7**
GRG	**Griva**	**71.46 311**	P		**P**	**03 36 56.1**	**-3.7**
ITM	**Ithomi**	**71.46 307**	P		**P**	**03 36 59.5**	**-0.4**
IIGN	**Ignalina**	**71.48 326**	*e*P		**P**	**03 36 59.8**	**+0.2**
IZAR	**Zarasai**	**71.56 326**	*e*P		**P**	**03 37 00.1**	**+0.1**
ISAL	**Salakas**	**71.59 326**	*e*P		**P**	**03 37 00.4**	**+0.2**
THL	**Klokotos Trika**	**71.61 309**	P		**P**	**03 36 56.5**	**-4.1**
LVV	**L'vov**	**71.61 320**	*e*P		**P**	**03 36 59.7**	**-0.8**
LVV			*e*			03 39 39.3	
LVV			*e*PPP		PPP	03 41 21.7	
LVV			*e*S		**S**	**03 46 19.2**	**+0.8**
LVV			*e*PS		**PnS**	**03 47 00.2**	**+11**
LVV			*e*SSS		SSS	03 54 07.4	
LVV			pmax	pmax			
	comp=Z,80nm,1.6s						
STIP	**Stip**	**71.70 311**	*i* P		**P**	**03 36 58.8**	**-2.4**
DEV	**Deva**	**71.72 316**	⇓P		**P**	**03 37 01.0**	**-0.2**
DEV	**Deva**	**71.72 316**	P		**P**	**03 37 01.0**	**-0.2**
RLS	**Riolos of Patr**	**71.90 308**	P		**P**	**03 36 59.0**	**-3.4**
HERR	**Herculane**	**71.92 315**	⇓P		**P**	**03 37 01.8**	**-0.7**
VSU	**Vasula**	**72.00 329**	*e*P		**P**	**03 37 02.7**	**+0.1**
KPRO	**Kipourio**	**72.14 309**	P		P	03 36 56.8	-7.2
FNA	**Florina**	**72.21 310**	P		**P**	**03 37 02.9**	**-1.5**
FNA			pmax	pmax			
	comp=Z,19nm,0.8s						
FNA			MLR	MLR			
	comp=Z,900nm,18.0s						
FNA	**Florina**	**72.21 310**	P		**P**	**03 37 02.9**	**-1.5**
FNA	**Florina**	**72.21 310**	P		**P**	**03 37 02.5**	**-1.9**
APA	**Apatity**	**72.28 339**	⇑*i*P		**P**	**03 37 05.5**	**+1.4**
APA			pmax	pmax			
	comp=Z,49nm,0.9s						
SKO	**Skopje**	**72.28 312**	*i* P		**P**	**03 37 02.8**	**-1.9**
KWP	**Kalwaria Pacla**	**72.42 320**	*e*P		**P**	**03 37 05.1**	**-0.3**
KWP			*e*L		L	04 05 36.1	
	comp=Z,1µm,30.9s						
KWP	**Kalwaria Pacla**	**72.42 320**	P		**P**	**03 37 05.1**	**-0.3**
KWP			pmax	pmax			
	comp=Z,48nm,0.8s						
KWP			MLR	MLR			
	comp=Z,1µm,21.0s						
KWP	**Kalwaria Pacla**	**72.42 320**	P		**P**	**03 37 05.0**	**-0.3**
KWP			IAmb	IAmb		03 37 13.9	
	comp=Z,48nm,0.8s						
JAN	**Janina**	**72.51 309**	P		**P**	**03 37 03.0**	**-3.1**
UZH	**Uzhgorod**	**72.54 319**	*e*P		**P**	**03 37 04.5**	**-1.5**
UZH			*e*			03 37 14.9	
UZH			*e*			03 37 22.1	
UZH			*e*S		**S**	**03 46 25.5**	**-3.6**
BZS	**Buzias**	**72.58 315**	⇓P		**P**	**03 37 05.6**	**-0.7**
BZS	**Buzias**	**72.58 315**	P		**P**	**03 37 07.2**	**+0.9**
BZS			pmax	pmax			
	comp=Z,21nm,1.5s						
KOLS	**Kolonicke sedl**	**72.59 319**	*e*P		**P**	**03 37 06.8**	**+0.4**
KOLS			*e*			03 37 14.5	
KOLS			pmax	pmax			
	comp=Z,24nm,1.1s						
KOLS	**Kolonicke sedl**	**72.59 319**	*e*P		**P**	**03 37 06.8**	**+0.4**
KOLS			*e*			03 37 14.5	
SIRR	**Siria**	**72.63 316**	⇑P		**P**	**03 37 06.9**	**+0.2**
PABE	**Paberze**	**72.77 326**	*e*P		**P**	**03 37 06.6**	**-0.6**
IGT	**Igoumenitsa**	**72.90 309**	P		**P**	**03 37 13.2**	**+4.8**
IGT			pmax	pmax			
	comp=Z,33nm,1.0s						
SUW	**Suwalki**	**72.91 324**	*e*P		**P**	**03 37 07.1**	**-1.0**
SUW			*e*L		L	04 10 02.4	
	comp=Z,1µm,26.9s						
SUW	**Suwalki**	**72.91 324**	P		**P**	**03 37 07.1**	**-1.0**
SUW			pmax	pmax			
	comp=Z,113nm,0.8s						
SUW	**Suwalki**	**72.91 324**	P		**P**	**03 37 07.1**	**-1.0**
SUW			IAMs_20	IAMs_20		04 14 46.7	
	comp=Z,2µm,18.0s						
LHI	**Lord Howe Isla**	**72.93 126**	IAMs_20	IAMs_20		04 12 48.3	
	comp=Z,3µm,20.0s						
CRVS	**Cervenica-Dubn**	**73.12 319**	*e*P		**P**	**03 37 10.2**	**+0.7**
CRVS			*e*			03 37 17.0	
CRVS			pmax	pmax			
	comp=Z,120nm,1.2s						
CRVS	**Cervenica-Dubn**	**73.12 319**	*e*P		**P**	**03 37 10.2**	**+0.7**
CRVS			*e*			03 37 17.0	
FIA1	**FINESS Array S**	**73.13 332**	P		**P**	**03 37 09.1**	**-0.2**
FINES	**FINESS Array B**	**73.13 332**	P		**P**	**03 37 08.6**	**-0.7**
	comp=Z,20nm,0.6s,baz=100,slow=5.4,SNR=55						
FINES			LR	LR		04 13 39.5	
	comp=Z,2µm,19.6s,baz=114,slow=39						
FINES	**FINESS Array B**	**73.13 332**	P		**P**	**03 37 09.1**	**-0.2**
DIVS	**Divibare**	**73.55 314**	*e*P		**P**	**03 37 10.8**	**-1.5**
KECS	**Kecovo**	**73.70 318**	*e*P		P	03 37 19.5	+6.5
KECS	**Kecovo**	**73.70 318**	*e*		P	03 37 19.5	+6.5
FRGS	**Fruska Gora**	**73.79 315**	*e*P		**P**	**03 37 14.4**	**+0.8**
PDG	**Podgorica**	**73.94 312**	*e*P		P	03 37 20.1	+5.6
NIE	**Niedzica**	**73.94 319**	*e*P		**P**	**03 37 14.5**	**+0.1**
NIE			*e*L		L	04 14 13.7	
	comp=Z,909nm,20.5s						
NIE	**Niedzica**	**73.94 319**	P		**P**	**03 37 15.1**	**+0.7**
BBLS	**Lazići**	**73.95 313**	*e*P		**P**	**03 37 13.6**	**-1.0**
BEL	**Belsk**	**73.97 322**	*e*P		**P**	**03 37 14.8**	**+0.3**
BEL			*e*L		L	04 10 32.2	
	comp=Z,1µm,25.5s						
DRME	**Dracevica, Mon**	**73.97 312**	*e*P		**P**	**03 37 11.0**	**-3.7**
PBUR	**Paburge**	**74.00 326**	*e*P		**P**	**03 37 14.5**	**0.0**
PSZ	**Piszkesteto**	**74.03 318**	⇓P		**P**	**03 37 14.1**	**-0.9**
PSZ	**Piszkesteto**	**74.03 318**	P		**P**	**03 37 14.6**	**-0.4**
PSZ			pmax	pmax			
	comp=Z,44nm,1.1s						
PSZ			MLR	MLR			
	comp=Z,1µm,22.0s						
PSZ	**Piszkesteto**	**74.03 318**	P		**P**	**03 37 14.6**	**-0.4**
PSZ			IAmb	IAmb		03 37 26.9	
	comp=Z,44nm,1.1s						
SLIT	**Slitere, Latvi**	**74.11 328**	*e*P		**P**	**03 37 14.4**	**-0.7**
LBTB	**Lobatse**	**74.15 241**	P		**P**	**03 37 15.8**	**-0.3**
LBTB			pmax	pmax			
	comp=Z,53nm,0.9s						
LBTB	**Lobatse**	**74.15 241**	P		**P**	**03 37 15.8**	**-0.3**
LBTB			IAmb	IAmb		03 37 25.8	
	comp=Z,53nm,0.9s						
HAPS	**Han Pijesak,BI**	**74.30 314**	*e*P		**P**	**03 37 21.3**	**+4.6**
OJC	**Ojcow**	**74.37 320**	*e*P		**P**	**03 37 16.5**	**-0.3**
OJC			*e*L		L	04 06 34.6	
	comp=Z,1µm,34.3s						
OJC	**Ojcow**	**74.37 320**	P		**P**	**03 37 16.5**	**-0.3**
OJC			pmax	pmax			
	comp=Z,57nm,0.7s						
OJC	**Ojcow**	**74.37 320**	P		**P**	**03 37 16.5**	**-0.3**
OJC			IAmb	IAmb		03 37 24.4	
	comp=Z,57nm,0.7s						
LANS	**Liptovska Anna**	**74.45 319**	*e*P		**P**	**03 37 17.5**	**+0.1**
LANS			*e*			03 37 24.3	
LANS			pmax	pmax			
	comp=Z,5.0nm,0.8s						
LANS	**Liptovska Anna**	**74.45 319**	*e*P		**P**	**03 37 17.5**	**+0.1**
LANS			*e*			03 37 24.3	
CASY	**Casey**	**74.50 173**	P		**P**	**03 37 17.2**	**+0.1**
BRY	**Bratogost**	**74.50 312**	*e*P		**P**	**03 37 19.7**	**+1.8**
MORH	**Mrgy, Hungar**	**74.70 316**	*e*P		**P**	**03 37 17.7**	**-1.1**
VYHS	**Vyhne**	**74.80 318**	*e*P		**P**	**03 37 19.3**	**0.0**
VYHS			*e*			03 37 25.9	
VYHS			pmax	pmax			
	comp=Z,31nm,1.4s						
VYHS	**Vyhne**	**74.80 318**	*e*P		**P**	**03 37 19.3**	**0.0**
VYHS			*e*			03 37 25.9	
SRO	**Srobarova**	**75.08 317**	*e*P		**P**	**03 37 21.1**	**+0.2**
SRO			*e*			03 37 28.2	
SRO	**Srobarova**	**75.08 317**	*e*P		**P**	**03 37 21.1**	**+0.2**
SRO			*e*			03 37 28.2	
STON	**Ston**	**75.12 312**	*e*P		**P**	**03 37 18.4**	**-2.9**
KEV	**Kevo**	**75.27 341**	P		**P**	**03 37 21.4**	**-0.2**
KEV			pmax	pmax			
	comp=Z,79nm,1.1s						
KEV			MLR	MLR			
	comp=Z,4µm,21.0s						
KEV	**Kevo**	**75.27 341**	P		**P**	**03 37 21.4**	**-0.2**
KEV			IAmb	IAmb		03 37 29.1	
	comp=Z,79nm,1.1s						
OKC	**Ostrava-Krasne**	**75.38 319**	*e*P		**P**	**03 37 22.4**	**-0.3**
OKC			*e*			03 37 29.3	
OKC			MLR	MLR			
	comp=Z,800nm,19.3s						
OKC	**Ostrava-Krasne**	**75.38 319**	*e*P		**P**	**03 37 22.4**	**-0.3**
OKC			*ex*	x		03 37 29.3	
OKC			AMS	AMS		04 16 30.0	
	comp=Z,800nm,19.3s						
BOSA	**Boshof**	**75.47 238**	P		**P**	**03 37 24.3**	**+0.6**
	comp=Z,17nm,0.7s,baz=80,slow=5.4,SNR=31						
BOSA			LR	LR		04 06 30.9	
	comp=Z,1µm,19.9s,baz=74,slow=32						
BOSA	**Boshof**	**75.47 238**	P		**P**	**03 37 23.4**	**-0.3**
BOSA			pmax	pmax			
	comp=Z,39nm,0.8s						
BOSA	**Boshof**	**75.47 238**	P		**P**	**03 37 23.4**	**-0.3**
BOSA			IAmb	IAmb		03 37 33.0	
	comp=Z,39nm,0.8s						
JAVC	**Velka Javorina**	**75.60 318**	*e*P		**P**	**03 37 24.3**	**+0.3**
BLY	**Banja Luka**	**75.61 314**	*e*P		**P**	**03 37 22.7**	**-1.4**
TIP	**Timpagrande**	**75.65 308**	⇑P		**P**	**03 37 24.4**	**-0.1**
ARD3	**ARCESS Array S**	**75.68 340**	P		**P**	**03 37 23.8**	**-0.2**
ARD3			IAmb	IAmb		03 37 31.2	
	comp=Z,35nm,0.9s						
ARD4	**ARCESS Array S**	**75.68 340**	P		**P**	**03 37 23.8**	**-0.2**
ARD4			IAmb	IAmb		03 37 31.8	
	comp=Z,64nm,1.1s						
ARC3	**ARCESS Array S**	**75.69 340**	IAmb	IAmb		03 37 31.8	
	comp=Z,58nm,1.1s						
ARD5	**ARCESS Array S**	**75.69 340**	IAmb	IAmb		03 37 32.5	
	comp=Z,51nm,1.0s						
ARC2	**ARCESS Array S**	**75.69 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,66nm,1.1s						
ARC4	**ARCESS Array S**	**75.69 340**	P		**P**	**03 37 23.9**	**-0.1**
ARC4			IAmb	IAmb		03 37 31.3	
	comp=Z,37nm,0.9s						
ARB2	**ARCESS Array S**	**75.69 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,70nm,1.1s						
ARB3	**ARCESS Array S**	**75.69 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,66nm,1.1s						
ARA2	**ARCESS Array S**	**75.69 340**	P		**P**	**03 37 23.8**	**-0.3**
ARA2			IAmb	IAmb		03 37 31.9	
	comp=Z,63nm,1.1s						
ARA0	**ARCESS Array S**	**75.69 340**	P		**P**	**03 37 23.8**	**-0.3**
ARA0			IAmb	IAmb		03 37 31.9	
	comp=Z,64nm,1.1s						
ARA0	**ARCESS Array S**	**75.69 340**	*e*P		**P**	**03 37 25.0**	**+0.9**
ARA1	**ARCESS Array S**	**75.69 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,61nm,1.1s						
ARB1	**ARCESS Array S**	**75.69 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,68nm,1.1s						
ARCES	**ARCESS Array B**	**75.69 340**	P		**P**	**03 37 23.9**	**-0.1**
	comp=Z,7.8nm,0.7s,baz=90,slow=4.9,SNR=18						
ARCES			LR	LR		04 13 23.9	
	comp=Z,4µm,20.9s,baz=115,slow=38						
ARCES	**ARCESS Array B**	**75.69 340**	P		**P**	**03 37 24.0**	**-0.1**
ARA3	**ARCESS Array S**	**75.70 340**	P		**P**	**03 37 24.0**	**-0.1**
ARA3			IAmb	IAmb		03 37 31.9	
	comp=Z,65nm,1.1s						
ARB4	**ARCESS Array S**	**75.70 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,64nm,1.1s						
ARC1	**ARCESS Array S**	**75.70 340**	IAmb	IAmb		03 37 44.9	
	comp=Z,43nm,1.0s						
ARC5	**ARCESS Array S**	**75.70 340**	P		**P**	**03 37 24.3**	**+0.2**
ARC5			IAmb	IAmb		03 37 31.9	
	comp=Z,70nm,1.1s						
ARB5	**ARCESS Array S**	**75.70 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,66nm,1.1s						
ARD1	**ARCESS Array S**	**75.70 340**	IAmb	IAmb		03 37 32.6	
	comp=Z,44nm,1.1s						
ARC6	**ARCESS Array S**	**75.70 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,74nm,1.1s						
ARC7	**ARCESS Array S**	**75.70 340**	IAmb	IAmb		03 37 31.9	
	comp=Z,67nm,1.1s						
ARD9	**ARCESS Array S**	**75.70 340**	IAmb	IAmb		03 37 39.5	
	comp=Z,64nm,1.1s						
ARD8	**ARCESS Array S**	**75.71 340**	P		**P**	**03 37 24.1**	**-0.1**
MORC	**Moravsky Berou**	**75.77 319**	⇓P		**P**	**03 37 25.1**	**+0.1**
MORC	**Moravsky Berou**	**75.77 319**	*e*P		**P**	**03 37 24.4**	**-0.6**
MORC			*e*			03 37 31.4	
MORC	**Moravsky Berou**	**75.77 319**	P		**P**	**03 37 25.0**	**+0.1**
MORC	**Moravsky Berou**	**75.77 319**	IAmb	IAmb		03 37 37.5	
	comp=Z,38nm,1.0s						
MODS	**Modra-Piesok**	**75.82 318**	*e*P		**P**	**03 37 24.5**	**-0.7**
MODS			*e*			03 37 31.0	
MODS			pmax	pmax			
	comp=Z,24nm,0.9s						
MODS	**Modra-Piesok**	**75.82 318**	*e*P		**P**	**03 37 24.5**	**-0.7**
MODS			*e*			03 37 31.0	
ZST	**Bratislava**	**75.92 318**	*e*P		**P**	**03 37 25.7**	**-0.1**
ZST			*e*			03 37 32.8	
ZST			pmax	pmax			
	comp=Z,123nm,0.8s						
ZST	**Bratislava**	**75.92 318**	*e*P		**P**	**03 37 25.7**	**-0.1**
ZST			*e*			03 37 32.8	
BEHE	**Becsehely**	**76.01 316**	*e*P		**P**	**03 37 28.5**	**+2.1**
SOP	**Sopron**	**76.25 317**	P		**P**	**03 37 28.5**	**+0.9**
SOP			pmax	pmax			
	comp=Z,45nm,1.1s						
KRLC	**Kraliky**	**76.28 320**	*e*P		**P**	**03 37 27.9**	**0.0**
KRLC			*e*			03 37 34.9	
KRLC			*e*S		**S**	**03 47 13.7**	**+2.5**
KRLC			MLR	MLR			
	comp=Z,800nm,15.6s						
KRLC	**Kraliky**	**76.28 320**	*e*P		**P**	**03 37 27.9**	**0.0**
KRLC			*ex*	x		03 37 34.9	
KRLC			*e*S		**S**	**03 47 13.7**	**+2.5**
KRLC			AMS	AMS		04 17 00.0	
	comp=Z,800nm,15.6s						
CEL	**Celeste**	**76.30 307**	P		**P**	**03 37 27.9**	**-0.4**
CEL			IAmb	IAmb		03 37 37.4	
	comp=Z,56nm,1.0s						
GKP	**Gorka Klasztor**	**76.30 323**	*e*P		P	03 37 33.0	+5.2
GKP			*e*L		L	04 11 47.5	
	comp=Z,2µm,24.9s						
KTK1	**Kautokeino**	**76.32 339**	*e*P		**P**	**03 37 28.1**	**+0.4**
VRAC	**Vranov**	**76.34 319**	⇑P		**P**	**03 37 28.3**	**+0.1**
VRAC	**Vranov**	**76.34 319**	*e*P		**P**	**03 37 27.8**	**-0.4**
VRAC			*e*			03 37 34.5	
VRAC	**Vranov**	**76.34 319**	P		**P**	**03 37 28.3**	**+0.1**
KOGS	**Kog**	**76.38 316**	*e*P		**P**	**03 37 28.5**	**+0.1**
KOGS			*i*			03 37 35.1	
KRUC	**Moravsky**	**76.45 319**	*e*P		**P**	**03 37 28.8**	**0.0**
KRUC			*e*			03 37 35.1	
DZM	**Mont Dzumac**	**76.51 115**	P		**P**	**03 37 29.5**	**-0.2**
	comp=Z,8.5nm,1.0s,baz=277,slow=15,SNR=5.7						
DZM			LR	LR		04 13 52.1	
	comp=Z,817nm,20.2s,baz=298,slow=38						
DZM	**Mont Dzumac**	**76.51 115**	*e*P		**P**	**03 37 30.1**	**+0.4**
	comp=Z,59nm,1.4s						
DZM	**Mont Dzumac**	**76.51 115**	*e*LR		LR	04 00 47.3	
	comp=Z,4µm,28.5s						
DZM	**Mont Dzumac**	**76.51 115**	P		**P**	**03 37 28.2**	**-1.6**
DPC	**Dobruska-Polom**	**76.60 320**	*e*P		**P**	**03 37 30.4**	**+0.7**
DPC			*e*			03 37 36.8	
DPC			*e*				
DPC			*e*S		**S**	**03 47 08.5**	**-6.1**
DPC	**Dobruska-Polom**	**76.60 320**	*e*P		**P**	**03 37 30.4**	**+0.7**
DPC			*ex*	x		03 37 36.8	
DPC			*e*S		**S**	**03 47 08.5**	**-6.1**
HAMF	**Hammerfest**	**76.61 341**	*e*P		**P**	**03 37 29.3**	**+0.1**
KSP	**Ksiaz**	**76.66 320**	*e*P		**P**	**03 37 30.2**	**+0.3**
KSP			*e*L		L	04 08 16.2	
	comp=Z,2µm,31.3s						
KSP	**Ksiaz**	**76.66 320**	P		**P**	**03 37 30.2**	**+0.3**
OSTC	**Ostas**	**76.68 320**	*e*P		**P**	**03 37 30.1**	**0.0**
OSTC			*ex*	x		03 37 37.1	
OSTC			*e*S		**S**	**03 47 13.4**	**-2.1**
OSTC			AMS	AMS		04 17 00.0	
	comp=Z,1µm,16.8s						
CONA	**Conrad Observa**	**76.73 317**	*e*P		**P**	**03 37 29.9**	**-0.7**
	comp=Z,7.9nm,1.1s						
CONA			*e*P		**pP**	**03 37 37.0**	**-0.7**
	comp=Z,13nm,0.8s						
CHVC	**Chvalec**	**76.79 320**	*e*P		**P**	**03 37 30.9**	**+0.2**
CHVC			*ex*	x		03 37 37.4	
CHVC			AMS	AMS		04 17 00.0	
	comp=Z,2µm,17.4s						
UPC	**Upice**	**76.81 320**	*e*P		**P**	**03 37 30.9**	**+0.1**
UPC			*e*S		**S**	**03 47 09.2**	**-7.6**
UPC			MLR	MLR			
	comp=Z,2µm,17.4s						
UPC	**Upice**	**76.81 320**	*e*P		**P**	**03 37 30.9**	**+0.1**
UPC			*e*S		**S**	**03 47 09.2**	**-7.6**
UPC			AMS	AMS		04 17 10.0	
	comp=Z,2µm,17.4s						
CRES	**Cresnjev**	**76.89 315**	*e*P		**P**	**03 37 34.6**	**+3.2**
ARSA	**Arzberg**	**76.92 317**	*e*P		**P**	**03 37 31.4**	**-0.1**
	comp=Z,25nm,1.4s						
ARSA			*e*P		**pP**	**03 37 38.5**	**-0.3**
	comp=Z,56nm,1.2s						
TREC	**Trest**	**77.06 319**	AMS	AMS		04 17 50.0	
	comp=Z,900nm,17.7s						
PDKS	**Podkum**	**77.22 315**	*e*P		**P**	**03 37 33.5**	**+0.3**
SOKA	**Soboth**	**77.23 316**	*e*P		**P**	**03 37 33.5**	**+0.1**
	comp=Z,37nm,1.4s						
SOKA			*e*P		**pP**	**03 37 40.1**	**-0.4**
	comp=Z,40nm,0.9s						
LJU	**Ljubljana**	**77.55 315**	*e*P		**P**	**03 37 35.5**	**+0.4**
LJU			*i*			03 37 41.9	
LJU	**Ljubljana**	**77.55 315**	*e*P		**P**	**03 37 34.8**	**-0.3**
OBKA	**Obir**	**77.55 316**	*e*P		**P**	**03 37 35.2**	**0.0**
	comp=Z,22nm,1.0s						
OBKA			*i* P		**pP**	**03 37 42.1**	**-0.3**
	comp=Z,65nm,1.3s						
CEY	**Cerknica**	**77.61 315**	*e*P		**P**	**03 37 34.3**	**-1.1**
PRU	**Pruhonice**	**77.72 319**	*e*P		**P**	**03 37 36.2**	**+0.3**
PRU			*e*			03 37 42.3	
PRU			*e*S		**S**	**03 47 19.5**	**-7.2**
PRU			MLR	MLR			
	comp=Z,1µm,20.9s						
PRU	**Pruhonice**	**77.72 319**	*e*P		**P**	**03 37 36.2**	**+0.3**
PRU			*ex*	x		03 37 42.3	
PRU			*e*S		**S**	**03 47 19.5**	**-7.2**
PRU			AMS	AMS		04 16 50.0	
	comp=Z,1µm,20.9s						
PVCC	**Panska Ves**	**77.73 320**	*e*P		**P**	**03 37 36.6**	**+0.6**
PVCC			*e*			03 37 42.4	
PVCC			MLR	MLR			
	comp=Z,2µm,18.2s						
PVCC	**Panska Ves**	**77.73 320**	*e*P		**P**	**03 37 36.6**	**+0.6**
PVCC			*ex*	x		03 37 42.4	
PVCC			AMS	AMS		04 17 40.0	
	comp=Z,2µm,18.2s						
PRA	**Prague**	**77.79 320**	AMS	AMS		04 17 00.0	
	comp=Z,500nm,17.9s						
MOA	**Molln**	**77.80 317**	*e*P		**P**	**03 37 36.6**	**+0.1**
	comp=Z,12nm,1.2s						
MOA			*e*P		**pP**	**03 37 42.9**	**-0.7**
	comp=Z,32nm,1.1s						
BSD	**Bornholm Skovb**	**77.83 325**	*e*P		**P**	**03 37 38.0**	**+1.7**
BSD			pmax	pmax			
	comp=Z,3.0nm,0.5s						
BSD	**Bornholm Skovb**	**77.83 325**	*i* P		**P**	**03 37 38.0**	**+1.7**
	comp=Z,2.9nm,0.5s						
BSD	**Bornholm Skovb**	**77.83 325**	*e*P		**P**	**03 37 38.0**	**+1.7**
BSD			IAmb	IAmb		03 37 43.8	
	comp=Z,2.9nm,0.5s						
TRO	**Tromso**	**77.95 340**	*e*P		**P**	**03 37 37.1**	**+0.4**
PBCC	**Pribram**	**78.06 319**	*e*P		**P**	**03 37 38.0**	**+0.2**
PBCC			*ex*	x		03 37 44.5	
BRG	**Berggiesshubel**	**78.15 320**	*i* P		**P**	**03 37 38.5**	**+0.2**
	comp=Z,77nm,2.0s						
BRG			*e*			03 37 44.8	
	comp=Z,26nm,0.9s						
BRG			S		**S**	**03 47 30.0**	**-1.3**
	comp=Z,2µm,17.5s						
	comp=N,860nm,17.8s						
	comp=E,2µm,17.8s						
BRG	**Berggiesshubel**	**78.15 320**	*i* P		**P**	**03 37 38.5**	**+0.2**
BRG			*e*			03 37 44.8	
BRG			S		**S**	**03 47 30.0**	**-1.3**
BRG			pmax	pmax			
	comp=Z,21nm,2.0s						
BRG			MLR	MLR			
	comp=Z,26µm,17.5s						
BRG			MLR	MLR			
	comp=N,2µm,17.8s						
BRG			MLR	MLR			
	comp=E,860nm,17.8s						
BRG	**Berggiesshubel**	**78.15 320**	*e*P		**P**	**03 37 37.9**	**-0.4**
	comp=E,90nm,1.8s,baz=92,slow=5.4						
MAW	**Mawson**	**78.16 192**	P		**P**	**03 37 39.7**	**+1.9**
	comp=E,8.6nm,0.8s,baz=3.2,slow=5.0,SNR=17						
MAW			LR	LR		04 07 40.2	
	comp=E,2µm,18.6s,baz=31,slow=32						
MAW	**Mawson**	**78.16 192**	P		**P**	**03 37 40.3**	**+2.5**
	baz=78,SNR=12						
MAW	**Mawson**	**78.16 192**	P		**P**	**03 37 38.1**	**+0.3**
MAW			pmax	pmax			
	comp=Z,10.0nm,0.9s						
MAW	**Mawson**	**78.16 192**	P		**P**	**03 37

CLL	**Collm**	**78.76**	**321**	*i* P		**P**	**03 37 41.0**	**-0.6**
CLL				*i*			03 37 47.6	
CLL				*e*S		**S**	**03 47 36.0**	**-1.8**
CLL				pmax		pmax		
	comp=Z,24nm,1.4s							
CLL	**Collm**	**78.76**	**321**	*e*P		**P**	**03 37 40.9**	**-0.7**
	comp=Z,23nm,1.2s,baz=92,slow=5.4							
CLL	**Collm**	**78.76**	**321**	P		**P**	**03 37 41.4**	**-0.2**
WET	**Wettzell**	**78.77**	**319**	*e*P		**P**	**03 37 41.4**	**-0.3**
	comp=Z,23nm,0.8s,baz=92,slow=5.4							
N2ST	**Straumen**	**78.79**	**337**	*e*P		**P**	**03 37 43.1**	**+1.7**
FAUS	**Fauske**	**78.92**	**337**	*e*P		**P**	**03 37 42.6**	**+0.5**
ABTA	**Abfaltersbach**	**78.96**	**316**	*e*P		**P**	**03 37 42.0**	**-1.0**
	comp=Z,15nm,1.1s							
ABTA				*e*P		**pP**	**03 37 48.9**	**-1.3**
	comp=Z,20nm,0.8s							
N2TV	**TVrnvik**	**79.00**	**337**	*e*P		**P**	**03 37 44.1**	**+1.5**
STEI	**Steigen**	**79.00**	**338**	*e*P		**P**	**03 37 42.9**	**+0.3**
TANN	**Tannenbergstha**	**79.07**	**320**	*e*P		**P**	**03 37 42.4**	**-1.0**
	comp=Z,34nm,1.2s,baz=92,slow=5.4							
NKC	**Novy Kostel**	**79.08**	**320**	*e*P		**P**	**03 37 43.7**	**+0.3**
NKC				*e*			03 37 50.2	
NKC	**Novy Kostel**	**79.08**	**320**	*e*P		**P**	**03 37 43.7**	**+0.3**
NKC				*ex*		x	03 37 50.2	
MOR8	**Moi Rana**	**79.10**	**336**	*e*P		**P**	**03 37 43.4**	**+0.2**
WERN	**Wernitzgruen**	**79.12**	**320**	*e*P		**P**	**03 37 43.4**	**-0.3**
	comp=Z,17nm,1.0s,baz=92,slow=5.4							
GUNZ	**Gunzen**	**79.15**	**320**	*e*P		**P**	**03 37 43.3**	**-0.6**
	comp=Z,14nm,0.8s,baz=92,slow=5.4							
ROTZ	**Rotzenmuhle**	**79.22**	**319**	*e*P		**P**	**03 37 44.3**	**+0.1**
	comp=Z,28nm,0.8s,baz=92,slow=5.4							
PLN	**Plauen**	**79.27**	**320**	*e*P		**P**	**03 37 43.6**	**-0.8**
	comp=Z,16nm,1.0s,baz=92,slow=5.4							
MANZ	**Manzenberg**	**79.29**	**319**	*e*P		**P**	**03 37 44.4**	**-0.2**
	comp=Z,57nm,1.4s,baz=92,slow=5.4							
CTI	**Castel Tesino**	**79.55**	**315**	P		**P**	**03 37 45.8**	**-0.4**
CTI				pmax		pmax		
	comp=Z,85nm,1.1s							
CTI				MLR		MLR		
	comp=Z,700nm,22.0s							
CTI	**Castel Tesino**	**79.55**	**315**	P		**P**	**03 37 45.8**	**-0.4**
CTI				IAmb		IAmb	03 37 56.6	
	comp=Z,84nm,1.1s							
WTTA	**Wattenberg**	**79.57**	**317**	*e*P		**P**	**03 37 45.6**	**-0.8**
	comp=Z,25nm,1.0s,SNR=7.3							
WTTA				*e*P		**pP**	**03 37 52.3**	**-1.3**
	comp=Z,57nm,0.7s							
WTTA	**Wattenberg**	**79.57**	**317**	P		**P**	**03 37 45.6**	**-0.8**
WATA	**Walderalm**	**79.61**	**317**	*e*P		**P**	**03 37 45.5**	**-1.0**
	comp=Z,18nm,1.1s,SNR=8.7							
WATA				*e*P		**pP**	**03 37 52.3**	**-1.4**
	comp=Z,30nm,1.0s,SNR=4.8							
MOX	**Moxa**	**79.62**	**320**	*e*P		**P**	**03 37 45.6**	**-0.7**
	comp=Z,23nm,1.5s,baz=92,slow=5.4							
MOX				*e*L		L	04 19 18.0	
	comp=Z,2µm,18.3s							
LOF	**Lofoten**	**79.66**	**338**	*e*P		**P**	**03 37 46.6**	**+0.4**
KONS	**Konsvik**	**79.67**	**336**	*e*P		**P**	**03 37 48.4**	**+2.2**
SQTA	**Sankt Quirin**	**79.86**	**317**	*e*P		**P**	**03 37 47.5**	**-0.4**
	comp=Z,15nm,0.9s							
SQTA				*e*P		**pP**	**03 37 54.0**	**-1.1**
	comp=Z,52nm,0.7s							
GRA1	**Grafenberg Arr**	**79.86**	**319**	P		**P**	**03 37 47.4**	**-0.3**
GRF	**Grafenberg Arr**	**79.86**	**319**	P		**P**	**03 37 47.4**	**-0.3**
GRF				pmax		pmax		
	comp=Z,25nm,0.8s							
GRF	**Grafenberg Arr**	**79.86**	**319**	*e*P		**P**	**03 37 47.3**	**-0.3**
	comp=Z,71nm,1.5s,baz=92,slow=5.4							
GRF				*e*L		L	04 19 34.1	
	comp=Z,1µm,18.8s							
NC405	**NORSAR Array S**	**79.91**	**331**	P		**P**	**03 37 47.5**	**-0.3**
NC405				IAmb		IAmb	03 37 54.9	
	comp=Z,80nm,0.9s							
MOTA	**Moosalm**	**79.93**	**317**	*e*P		**P**	**03 37 47.3**	**-1.0**
	comp=Z,26nm,1.0s,SNR=7.5							
MOTA				*i* P		**pP**	**03 37 54.3**	**-1.2**
	comp=Z,67nm,1.0s							
NC602	**NORSAR Array S**	**79.98**	**330**	IAmb		IAmb	03 37 55.4	
	comp=Z,72nm,0.8s							
NORES	**NORESS Array B**	**79.98**	**330**	P		**P**	**03 37 47.7**	**-0.4**
NORES				pmax		pmax		
	comp=Z,19nm,0.6s							
TSUM	**Tsumeb**	**79.99**	**249**	P		**P**	**03 37 48.5**	**-0.6**
TSUM	**Tsumeb**	**79.99**	**249**	IAMs_20		IAMs_20	04 09 45.0	
	comp=Z,3µm,19.0s							
NSS	**Namsos**	**79.99**	**334**	*e*P		**P**	**03 37 48.4**	**+0.3**
ZCCA	**Zocca**	**80.04**	**314**	P		**P**	**03 37 48.4**	**-0.4**
ZCCA				IAmb		IAmb	03 37 59.4	
	comp=Z,79nm,0.9s							
NC303	**NORSAR Array S**	**80.08**	**331**	IAmb		IAmb	03 38 03.0	
	comp=Z,77nm,1.0s							
NB201	**NORSAR Array S**	**80.11**	**331**	P		**P**	**03 37 48.6**	**-0.2**
NB201				IAmb		IAmb	03 38 04.2	
	comp=Z,77nm,1.1s							
NB2	**NORSAR Subarra**	**80.15**	**331**	P		**P**	**03 37 48.0**	**-1.1**
	comp=Z,57nm,1.1s,baz=92,slow=5.3							
NB2	**NORSAR Subarra**	**80.15**	**331**	P		**P**	**03 37 48.0**	**-1.1**
	baz=92,slow=5.3							
NOA	**NORSAR Array B**	**80.15**	**331**	P		**P**	**03 37 48.2**	**-0.8**
	comp=Z,8.3nm,0.7s,baz=95,slow=5.1,SNR=35							
NOA				LR		LR	04 17 07.1	
	comp=Z,1µm,19.3s,baz=115,slow=39							
RETA	**Reutte**	**80.16**	**317**	*e*P		**P**	**03 37 49.4**	**-0.1**
	comp=Z,48nm,1.5s,SNR=7.6							
RETA				*e*P		**pP**	**03 37 55.8**	**-0.9**
	comp=Z,49nm,0.7s							
FETA	**Feichten**	**80.19**	**316**	*e*P		**P**	**03 37 49.7**	**0.0**
	comp=Z,20nm,1.1s							
FETA				*e*P		**pP**	**03 37 56.1**	**-0.8**
	comp=Z,25nm,0.8s							
SUR	**Sutherland**	**80.20**	**235**	P		**P**	**03 37 49.6**	**-0.5**
SUR				IAmb		IAmb	03 38 00.3	
	comp=Z,33nm,0.8s							
SPA0	**Spitsbergen Ar**	**80.27**	**348**	IAmb		IAmb	03 37 56.7	
	comp=Z,45nm,0.8s							
SPA0	**Spitsbergen Ar**	**80.27**	**348**	*e*P		**P**	**03 37 48.8**	**-0.5**
SPITS	**Spitsbergen Ar**	**80.27**	**348**	P		**P**	**03 37 49.6**	**+0.2**
SPITS				pmax		pmax		
	comp=Z,12nm,0.6s							
NAO01	**NORSAR Array S**	**80.30**	**330**	P		**P**	**03 37 49.7**	**-0.2**
NAO01				IAmb		IAmb	03 37 56.8	
	comp=Z,76nm,0.9s							
NAO01	**NORSAR Array S**	**80.30**	**330**	*e*P		**P**	**03 37 49.8**	**0.0**
SALO	**Salr**	**80.34**	**315**	P		**P**	**03 37 49.9**	**-0.6**
OSL	**Oslo**	**80.35**	**330**	*e*P		**P**	**03 37 50.4**	**+0.3**
NBO00	**NORSAR Array S**	**80.36**	**331**	P		**P**	**03 37 49.8**	**-0.3**
NBO00				IAmb		IAmb	03 37 57.4	
	comp=Z,68nm,0.9s							
NC204	**NORSAR Array S**	**80.38**	**331**	P		**P**	**03 37 50.0**	**-0.3**
NC204				IAmb		IAmb	03 37 57.5	
	comp=Z,66nm,0.9s							
CLZ	**Clausthal**	**80.41**	**321**	*e*P		**P**	**03 37 50.1**	**-0.5**
	comp=Z,44nm,1.3s,baz=92,slow=5.4							
BSEG	**Bad Segeberg**	**80.45**	**323**	*e*P		**P**	**03 37 50.5**	**-0.2**
	comp=Z,79nm,1.1s,baz=92,slow=5.4							
NRDL	**Niedersach Rie**	**80.57**	**322**	*e*P		**P**	**03 37 51.4**	**+0.1**
	comp=Z,82nm,1.4s,baz=92,slow=5.4							
UBR	**Ueberruh**	**80.60**	**317**	*e*P		**P**	**03 37 50.0**	**-1.8**
	comp=Z,34nm,1.1s,baz=92,slow=5.4							
TBLU	**Trondheim**	**80.68**	**333**	*e*P		**P**	**03 37 51.5**	**-0.3**
DAVA	**Damuels**	**80.76**	**317**	*e*P		**P**	**03 37 52.6**	**-0.2**
	comp=Z,34nm,1.5s							
DAVA				*e*P		**PcP**	**03 37 58.8**	**-0.7**
	comp=Z,42nm,1.1s							
KONO	**Kongsberg**	**80.91**	**329**	*ce*P		**P**	**03 37 54.1**	**+1.0**
KONO				pmax		pmax		
	comp=Z,80nm,2.5s							
KONO	**Kongsberg**	**80.91**	**329**	IAMs_20		IAMs_20	04 18 02.8	
	comp=Z,3µm,19.0s							
KONO	**Kongsberg**	**80.91**	**329**	*e*P		**P**	**03 37 53.0**	**-0.1**
MUD	**Monsted U'grnd**	**81.12**	**326**	*e*P		**P**	**03 37 56.7**	**+2.5**
MUD				pmax		pmax		
	comp=Z,34nm,0.9s							
MUD	**Monsted U'grnd**	**81.12**	**326**	*i* P		**P**	**03 37 56.7**	**+2.5**
	comp=Z,34nm,0.9s							
MUD	**Monsted U'grnd**	**81.12**	**326**	*e*P		**P**	**03 37 56.8**	**+2.5**
MUD				IAmb		IAmb	03 38 02.6	
	comp=Z,34nm,0.9s							
TUE	**Stuetta**	**81.14**	**316**	IAmb		IAmb	03 38 06.9	
	comp=Z,35nm,0.7s							
DOMB	**Dombas**	**81.21**	**332**	*e*P		**P**	**03 37 55.3**	**+0.6**
KBS	**Kingsbay**	**81.25**	**349**	IAMs_20		IAMs_20	04 16 59.0	
	comp=Z,3µm,21.0s							
SKAR	**Skarslia**	**81.57**	**330**	*e*P		**P**	**03 37 58.2**	**+1.5**
KEST	**Kesra**	**81.58**	**305**	P		**P**	**03 37 58.2**	**+0.9**
	comp=Z,9.5nm,0.7s,baz=65,slow=3.1,SNR=10							
KEST				LR		LR	04 19 38.0	
	comp=Z,803nm,18.9s,baz=35,slow=40							
KEST	**Kesra**	**81.58**	**305**	P		**P**	**03 37 56.8**	**-0.5**
KEST				IAMs_20		IAMs_20	04 19 44.8	
	comp=Z,2µm,18.0s							
TNS	**Taunus Mts**	**81.64**	**320**	*e*P		**P**	**03 37 56.7**	**-0.6**
	comp=Z,18nm,1.0s,baz=92,slow=5.4							
BFO	**Black Forest**	**81.78**	**318**	P		**P**	**03 37 57.6**	**-0.4**
BFO				pmax		pmax		
	comp=Z,17nm,0.8s							
BFO	**Black Forest**	**81.78**	**318**	*e*P		**P**	**03 37 57.0**	**-1.1**
	comp=Z,19nm,0.8s,baz=92,slow=5.4							
BFO	**Black Forest**	**81.78**	**318**	P		**P**	**03 37 57.6**	**-0.4**
MOL	**Molde**	**81.92**	**332**	*e*P		**P**	**03 37 59.2**	**+0.8**
IBBN	**Ibbenburen**	**82.02**	**322**	*e*P		**P**	**03 37 58.9**	**-0.2**
	comp=Z,43nm,1.0s,baz=92,slow=5.4							
AKN	**Aaknes**	**82.18**	**332**	*e*P		**P**	**03 37 59.7**	**-0.1**
BUG	**Bochum--Univer**	**82.35**	**321**	*e*P		**P**	**03 38 00.4**	**-0.5**
	comp=Z,38nm,1.1s,baz=92,slow=5.4							
ODD1	**Odda**	**82.41**	**329**	*e*P		**P**	**03 38 01.9**	**+0.8**
CDF	**Champ du Feu**	**82.48**	**318**	*e*P		**P**	**03 38 00.8**	**-1.0**
CDF				pmax		pmax		
	comp=Z,25nm,1.1s							
AHRW	**Bad Neuenahr-A**	**82.51**	**320**	*e*P		**P**	**03 38 01.7**	**-0.1**
	comp=Z,23nm,1.1s,baz=92,slow=5.4							
BLS5	**Blasjo**	**82.52**	**329**	*e*P		**P**	**03 38 01.2**	**-0.4**
SENIN	**Lac Senin/Sane**	**82.56**	**316**	P		**P**	**03 38 01.7**	**-0.7**
SENIN				IAmb		IAmb	03 38 11.4	
	comp=Z,21nm,0.8s							
ECH	**Echery**	**82.57**	**318**	P		**P**	**03 38 01.7**	**-0.4**
ECH				pmax		pmax		
	comp=Z,15nm,1.0s							
ECH	**Echery**	**82.57**	**318**	P		**P**	**03 38 01.7**	**-0.4**
HYA	**Hoyanger**	**82.59**	**331**	*e*P		**P**	**03 38 02.5**	**+0.6**
BER	**Bergen**	**83.04**	**330**	*e*P		**P**	**03 38 04.2**	**0.0**
BNI	**Bardonecchia**	**83.07**	**314**	P		**P**	**03 38 04.4**	**-0.6**
BNI				pmax		pmax		
	comp=Z,44nm,1.0s							
BNI	**Bardonecchia**	**83.07**	**314**	P		**P**	**03 38 04.4**	**-0.6**
BNI				IAmb		IAmb	03 38 19.9	
	comp=Z,44nm,1.0s							
ASK	**Askoy**	**83.11**	**330**	*e*P		**P**	**03 38 04.5**	**-0.1**
BTNL	**Ternell**	**83.11**	**320**	P		**P**	**03 38 04.6**	**-0.3**
BTNL				x		x	03 38 11.0	
HAU	**Haudompre**	**83.12**	**317**	*e*P		**P**	**03 38 04.2**	**-0.8**
HAU				pmax		pmax		
	comp=Z,36nm,0.8s							
WLF	**Walferdange**	**83.15**	**319**	P		**P**	**03 38 05.2**	**+0.1**
WLF				PcP		**PcP**	**03 38 09.4**	**-0.2**
WLF	**Walferdange**	**83.15**	**319**	*e*P		**P**	**03 38 05.1**	**0.0**
	comp=Z,31nm,1.3s,baz=92,slow=5.4							
MEM	**Membach**	**83.19**	**320**	P		**P**	**03 38 05.1**	**-0.1**
MEM				PcP		**pP**	**03 38 11.5**	**-1.0**
SUE	**Sulen**	**83.29**	**331**	*e*P		**P**	**03 38 05.1**	**-0.4**
BGES	**Gesves**	**83.79**	**320**	P		**P**	**03 38 08.4**	**0.0**
BGES				PcP		**PcP**	**03 38 12.0**	**-0.4**
BMRD	**Maredsous**	**84.00**	**320**	P		**P**	**03 38 10.7**	**+0.3**
BMRD				PcP		**PcP**	**03 38 12.7**	**-0.6**
BMRD				x		x	03 38 16.0	
DOU	**Dourbes**	**84.12**	**320**	P		**P**	**03 38 09.5**	**-0.6**
DOU				PcP		**PcP**	**03 38 13.4**	**-0.5**
BAIF	**Baives**	**84.38**	**320**	*e*P		**P**	**03 38 11.1**	**-0.2**
BAIF				pmax		pmax		
	comp=Z,16nm,0.9s							
VIVF	**Saint-Julien-l**	**84.51**	**314**	*e*P		**P**	**03 38 15.6**	**+3.4**
VIVF				pmax		pmax		
	comp=Z,14nm,0.8s							
SSB	**Saint Sauveur**	**84.56**	**315**	P		**P**	**03 38 11.9**	**-0.6**
SSB				pmax		pmax		
	comp=Z,18nm,0.8s							
SSB	**Saint Sauveur**	**84.56**	**315**	P		**P**	**03 38 11.9**	**-0.6**
SSB				IAmb		IAmb	03 38 20.2	
	comp=Z,18nm,0.8s							
LOR	**Lormes**	**84.86**	**317**	*e*P		**P**	**03 38 13.1**	**-0.8**
LOR				pmax		pmax		
	comp=Z,22nm,0.8s							
SMF	**Signal de Mont**	**84.93**	**316**	*e*P		**P**	**03 38 13.4**	**-0.8**
SMF				pmax		pmax		
	comp=Z,24nm,0.8s							
SYO	**Syowa Base**	**85.05**	**197**	*i*P		**P**	**03 38 14.5**	**+0.3**
SYO	**Syowa Base**	**85.05**	**197**	*e*pP		**P**	**03 38 16.6**	**+2.4**
SYO	**Syowa Base**	**85.05**	**197**	*i*X		P	**03 38 21.6**	**+7.4**
GAMB	**Gambell**	**85.15**	**26**	IAMs_20		IAMs_20	04 20 02.2	
	comp=Z,2µm,18.0s							
AVF	**Avril sur Loir**	**85.25**	**316**	*e*P		**P**	**03 38 18.9**	**+3.1**
AVF				pmax		pmax		
	comp=Z,36nm,1.4s							
RPZ	**Rata Peaks**	**85.67**	**135**	LR		LR	04 18 29.7	
	comp=Z,1µm,19.5s,baz=271,slow=37							
TAM	**Tamanrasset**	**86.00**	**292**	IAMs_20		IAMs_20	04 17 49.9	
	comp=Z,2µm,20.0s							
QRZ	**Quartz Range**	**86.04**	**132**	IAMs_20		IAMs_20	04 15 29.3	
	comp=Z,2µm,20.0s							
TCF	**Toulx Ste Croi**	**86.08**	**316**	*e*P		**P**	**03 38 22.3**	**+2.3**
TCF				pmax		pmax		
	comp=Z,41nm,1.6s							
MTLF	**Montolieu**	**86.42**	**313**	*e*P		**P**	**03 38 23.0**	**+1.2**
MTLF				pmax		pmax		
	comp=Z,20nm,0.8s							
TNA	**Tin City**	**86.49**	**24**	IAMs_20		IAMs_20	04 15 53.6	
	comp=Z,2µm,20.0s							
THZ	**Tophouse**	**86.53**	**133**	IAMs_20		IAMs_20	04 17 25.2	
	comp=Z,2µm,20.0s							
HIZ	**Hauiti**	**87.30**	**129**	IAMs_20		IAMs_20	04 21 54.5	
	comp=Z,2µm,19.0s							
ANM	**Nome**	**87.75**	**25**	IAmb		IAmb	03 38 37.2	
	comp=Z,32nm,1.1s							
ANM				IAMs_20		IAMs_20	04 17 37.9	
	comp=Z,2µm,18.0s							
SNZO	**South Karori**	**87.75**	**132**	IAMs_20		IAMs_20	04 18 27.5	
	comp=Z,2µm,22.0s							
DAG	**Danmarks Havn**	**87.91**	**348**	*i* P		**P**	**03 38 27.8**	**-0.4**
DAG				pmax		pmax		
	comp=Z,11nm,0.7s							
DAG	**Danmarks Havn**	**87.91**	**348**	*i* P		**P**	**03 38 27.8**	**-0.4**
	comp=Z,11nm,0.7s							
DAG	**Danmarks Havn**	**87.91**	**348**	*i* P		**P**	**03 38 27.9**	**-0.4**
DAG				IAmb		IAmb	03 38 34.9	
	comp=Z,11nm,0.7s							
EKA	**Eskdalemuir Ar**	**88.13**	**325**	P		**P**	**03 38 29.3**	**-0.4**
EKA				pmax		pmax		
	comp=Z,1.0nm,0.6s							
ETSF	**Etsaut**	**88.50**	**313**	*e*P		**P**	**03 38 34.3**	**+2.5**
ETSF				pmax		pmax		
	comp=Z,12nm,0.6s							
BKZ	**Black Stump Fm**	**88.68**	**130**	IAmb		IAmb	03 38 39.8	
	comp=Z,34nm,0.9s							
BFZ	**Birch Farm**	**88.77**	**131**	IAMs_20		IAMs_20	04 19 14.6	
	comp=Z,2µm,21.0s							
SJPF	**Ste Jean**	**88.95**	**313**	*e*P		**P**	**03 38 37.2**	**+3.3**
SJPF				pmax		pmax		
	comp=Z,22nm,0.9s							
URZ	**Urewera**	**88.99**	**129**	P		**P**	**03 38 37.5**	**+3.4**
	comp=Z,25nm,0.9s,baz=358,slow=5.0,SNR=5.5							
URZ				LR		LR	04 20 08.5	
	comp=Z,984nm,19.8s,baz=222,slow=37							
URZ	**Urewera**	**88.99**	**129**	IAmb		IAmb	03 38 40.6	
	comp=Z,35nm,1.0s							
URZ				IAMs_20		IAMs_20	04 16 02.3	
	comp=Z,2µm,20.0s							
A21K	**Barrow**	**89.00**	**18**	P		**P**	**03 38 35.4**	**+2.0**
	baz=290							
A21K	**Barrow**	**89.00**	**18**	IAMs_20		IAMs_20	04 24 41.8	
	comp=Z,2µm,18.0s							
DBG	**Daneborg**	**89.30**	**346**	*e*P		**P**	**03 38 37.0**	**+2.2**
QUIF	**Quistinic**	**89.47**	**318**	*e*P		**P**	**03 38 38.6**	**+2.4**
QUIF				pmax		pmax		
	comp=Z,77nm,1.4s							
ALE	**Alert**	**89.52**	**357**	IAMs_20		IAMs_20	04 26 07.2	
	comp=Z,2µm,20.0s							
MXZ	**Matakaoa Point**	**89.80**	**128**	IAMs_20		IAMs_20	04 19 07.9	
	comp=Z,3µm,22.0s							
TOC2	**Torodi Ar. Sit**	**90.78**	**283**	IAMs_20		IAMs_20	04 20 04.5	
	comp=Z,2µm,18.0s							
TOC3	**Torodi Ar. Sit**	**90.79**	**283**	IAMs_20		IAMs_20	04 20 04.6	
	comp=Z,2µm,19.0s							
TOB3	**Torodi Ar. Sit**	**90.80**	**283**	IAMs_20		IAMs_20	04 20 14.0	
	comp=Z,2µm,18.0s							
TOA2	**Torodi Ar. Sit**	**90.81**	**283**	IAMs_20		IAMs_20	04 20 14.1	
	comp=Z,2µm,18.0s							
TOC4	**Torodi Ar. Sit**	**90.81**	**283**	IAMs_20		IAMs_20	04 20 14.2	
	comp=Z,2µm,18.0s							
TOA0	**Torodi Ar. Sit**	**90.81**	**283**	IAmb		IAmb	03 38 51.7	
	comp=Z,16nm,0.9s							
TOA0				IAMs_20		IAMs_20	04 20 05.2	
	comp=Z,2µm,19.0s							
TOB1	**Torodi Ar. Sit**	**90.81**	**283**	IAMs_20		IAMs_20	04 20 05.2	
	comp=Z,2µm,19.0s							
TORD	**Torodi Ar. Bea**	**90.81**	**283**	P		**P**	**03 38 43.8**	**+0.7**
	comp=Z,5.9nm,0.9s,baz=91,slow=4.2,SNR=24							
TORD				PP		**PP**	**03 42 17.4**	**-1.6**
	comp=Z,2.1nm,1.1s,baz=87,slow=8.2,SNR=4.0							
TORD				PKKPbc		**PKKPbc**	**03 56 07.5**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=298,slow=3.0,SNR=2.5							
TORD				LR		LR	04 20 15.9	
	comp=Z,2µm,18.0s,baz=80,slow=36							
TORD	**Torodi Ar. Bea**	**90.81**	**283**	P		**P**	**03 38 41.7**	**-1.4**
TOA3	**Torodi Ar. Sit**	**90.81**	**283**	IAMs_20		IAMs_20	04 20 13.3	
	comp=Z,2µm,18.0s							
TOB4	**Torodi Ar. Sit**	**90.82**	**283**	IAMs_20		IAMs_20	04 20 05.5	
	comp=Z,2µm,19.0s							
TOB5	**Torodi Ar. Sit**	**90.82**	**283**	IAMs_20		IAMs_20	04 20 14.5	
	comp=Z,2µm,18.0s							
TOC7	**Torodi Ar. Sit**	**90.82**	**283**	IAMs_20		IAMs_20	04 20 14.6	
	comp=Z,2µm,18.0s							
TOC5	**Torodi Ar. Sit**	**90.83**	**283**	IAMs_20		IAMs_20	04 19 36.8	
	comp=Z,2µm,20.0s							
ESDC	**Sonseca Array**	**91.58**	**310**	P		**P**	**03 38 46.5**	**+0.2**
	comp=Z,5.9nm,0.8s,baz=62,slow=4.2,SNR=31							
ESDC				LR		LR	04 23 29.6	
	comp=Z,706nm,20.9s,baz=80,slow=38							
ESDC	**Sonseca Array**	**91.58**	**310**	P		**P**	**03 38 45.1**	**-1.2**
PAB	**San Pablo**	**91.89**	**310**	P		**P**	**03 38 46.5**	**-1.3**
PAB				pmax		pmax		
	comp=Z,10.0nm,0.9s							
PAB				MLR		MLR		
	comp=Z,900nm,20.0s							
PAB	**San Pablo**	**91.89**	**310**	P		**P**	**03 38 46.5**	**-1.3**
IMAR	**Indian Mountai**	**91.97**	**22**	P		**P**	**03 38 46.3**	**-1.1**
TTA	**Tatalina**	**92.20**	**26**	P		**P**	**03 38 47.3**	**-1.4**
TTA				pmax		pmax		
	comp=Z,31nm,1.2s							
TTA	**Tatalina**	**92.20**	**26**	P		**P**	**03 38 47.3**	**-1.4**
TTA				IAmb		IAmb	03 39 01.4	
	comp=Z,31nm,1.2s							
TTA				IAMs_20		IAMs_20	04 25 00.6	
	comp=Z,2µm,18.0s							
TOLK	**Toolik Lake Re**	**92.30**	**19**	P		**P**	**03 38 50.7**	**+1.7**
	baz=297							
TOLK	**Toolik Lake Re**	**92.30**	**19**	P		**P**	**03 38 47.8**	**-1.2**
TOLK				IAmb		IAmb	03 39 00.7	
	comp=Z,18nm,0.9s							
VNDA	**Vanda**	**92.50**	**168**	P		**P**	**03 38 50.2**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=285,slow=7.9,SNR=10							
VNDA				LR		LR	04 17 52.0	
	comp=Z,1µm,18.2s,baz=308,slow=34							
VNDA	**Vanda**	**92.50**	**168**	P		**P**	**03 38 49.0**	**-0.6**
VNDA				pmax		pmax		
	comp=Z,13nm,1.2s							
VNDA	**Vanda**	**92.50**	**168**	P		**P**	**03 38 49.0**	**-0.6**
EUNU	**Eureka**	**92.60**	**0**	P		**P**	**03 38 49.6**	**-0.6**
EUNU				IAMs_20		IAMs_20	04 25 13.3	
	comp=Z,2µm,19.0s							
COLD	**Coldfoot**	**92.73**	**21**	P		**P**	**03 38 52.7**	**+1.7**
	baz=296							
MLY	**Manley**	**93.50**	**23**	P		**P**	**03 38 56.2**	**+1.6**
	baz=296							
CAST	**Castle Rocks**	**93.66**	**24**	P		**P**	**03 38 54.1**	**-1.2**
BPAW	**Bear Paw Mtn.**	**93.81**	**24**	P		**P**	**03 38 54.9**	**-1.1**
BPAW				IAMs_20		IAMs_20	04 25 20.1	
	comp=Z,2µm,18.0s							
PPLA	**Purkeypile**	**93.83**	**25**	IAMs_20		IAMs_20	04 28 23.6	
	comp=Z,2µm,18.0s							
I23K	**Minto, Yukon-K**	**93.97**	**22**	P		**P**	**03 38 58.3**	**+1.7**
	baz=297							
I23K	**Minto, Yukon-K**	**93.97**	**22**	P		**P**	**03 38 55.7**	**-1.0**
I23K				IAMs_20		IAMs_20	04 23 22.3	
	comp=Z,2µm,19.0s							
KTH	**Kantishna Hill**	**94.07**	**24**	IAMs_20		IAMs_20

INK	**Inuvik**	**97.35**	**16**	P	**P**	**03 39 11.1**	**-0.9**			
INK	comp=Z,14nm,1.1s			IAmb	IAmb	03 39 22.3				
N25K	**Chitina, Valde**	**97.58**	**24**	P	Pdif	03 39 15.0	+1.7			
N25K	baz=301 **Chitina, Valde**	**97.58**	**24**	IAmb	IAmb	03 39 22.5				
EYAK	comp=Z,6.2nm,0.7s **Cordova Ski Ar**	**97.63**	**26**	IAMs_20	IAMs_20	04 29 16.1				
BCAR	comp=Z,µm,21.0s **Beaver Creek A**	**97.90**	**22**	P	**P**	**03 39 13.4**	**-1.2**			
GLB	**Gilahina Butte** comp=Z,2µm,18.0s	**97.98**	**24**	IAMs_20	IAMs_20	04 27 44.4				
KIC	**Kosan Boka**	**98.05**	**277**	*e*P	Pdif	03 39 24.2	+7.8			
DBIC	comp=Z,14nm,0.7s **Dimbokro**	**98.12**	**278**	P	Pdif	03 39 16.9	+0.3			
DBIC	comp=Z,2.1nm,0.7s,baz=114,slow=9.2,SNR=1.4			LR	LR	04 23 37.3				
DBIC	comp=Z,2µm,18.9s,baz=65,slow=36 **Dimbokro**	**98.12**	**278**	P	Pdif	03 39 17.0	+0.3			
DAWY	**Dawson**	**98.20**	**21**	P	**P**	**03 39 14.8**	**-1.2**			
TIC	**Toumodi**	**98.28**	**278**	*e*P	Pdif	03 39 26.1	+8.7			
MCARA	**McCarthy VSAT** comp=Z,2µm,20.0s	**98.34**	**24**	IAMs_20	IAMs_20	04 29 06.7				
LIC	**Lamto**	**98.35**	**277**	*e*P	Pdif	03 39 24.2	+6.5			
HMT	comp=Z,4.2nm,0.2s **Hamilton**	**98.38**	**25**	IAMs_20	IAMs_20	04 30 10.8				
CRQM	comp=Z,2µm,20.0s **Cirque**	**98.63**	**25**	IAMs_20	IAMs_20	04 26 33.9				
TGL	comp=Z,1µm,21.0s **Tana Glacier**	**98.75**	**25**	IAMs_20	IAMs_20	04 26 59.8				
BALM	comp=Z,2µm,22.0s **Baldy**	**98.80**	**24**	IAMs_20	IAMs_20	04 28 27.0				
C36M	comp=Z,1µm,18.0s **Paulatuk**	**98.94**	**13**	P	Pdif	03 39 19.9	+0.8			
C36M	baz=321 **Paulatuk**	**98.94**	**13**	IAmb	IAmb	03 39 28.1				
ISLE	comp=Z,14nm,1.1s **Juniper Island**	**99.04**	**25**	IAMs_20	IAMs_20	04 21 50.3				
BARN	comp=Z,2µm,22.0s **Barnard Glacie**	**99.07**	**24**	IAMs_20	IAMs_20	04 29 50.0				
CTGM	comp=Z,1µm,20.0s **Chitina Glacie**	**99.25**	**24**	IAMs_20	IAMs_20	04 29 46.8				
YAH	comp=Z,2µm,20.0s **Yahtse**	**99.42**	**25**	IAMs_20	IAMs_20	04 30 46.3				
PCA	comp=Z,2µm,19.0s **Pinnacle**	**100.18**	**24**	IAMs_20	IAMs_20	04 28 29.6				
BCPM	comp=Z,1µm,20.0s **Bancas Point**	**100.52**	**24**	IAMs_20	IAMs_20	04 28 15.4				
HYT	comp=Z,2µm,21.0s **Haines Junctio**	**100.85**	**23**	IAMs_20	IAMs_20	04 28 58.2				
SKAG	comp=Z,2µm,20.0s **Skagway**	**102.56**	**23**	IAMs_20	IAMs_20	04 32 53.2				
SIT	comp=Z,2µm,18.0s **Sitka**	**104.08**	**25**	IAMs_20	IAMs_20	04 31 30.5				
DLBC	comp=Z,1µm,19.0s **Dease Lake**	**105.29**	**22**	IAMs_20	IAMs_20	04 28 21.5				
WRAK	comp=Z,1µm,20.0s **Wrangell Islan**	**105.74**	**25**	IAMs_20	IAMs_20	04 32 56.6				
FCC	comp=Z,1µm,18.0s **Fort Churchill**	**113.66**	**5**	IAMs_20	IAMs_20	04 41 30.6				
SCHQ	comp=Z,2µm,20.0s **Schefferville**	**115.95**	**348**	PKP	**PKiKP**	**03 44 21.7**	**-0.1**			
SCHQ	comp=Z,2.9nm,0.8s,baz=333,slow=4.5,SNR=1.7 **Schefferville**	**115.95**	**348**	IAMs_20	IAMs_20	04 35 38.2				
B06A	comp=Z,1µm,22.0s **Marblemount**	**116.03**	**26**	IAMs_20	IAMs_20	04 41 56.6				
FFC	comp=Z,1µm,20.0s **Flin Flon**	**116.57**	**10**	IAMs_20	IAMs_20	04 42 58.5				
D05A	comp=Z,1µm,20.0s **Enumclaw**	**116.82**	**27**	IAMs_20	IAMs_20	04 42 32.5				
TBI	comp=Z,1µm,21.0s **Tubuai**	**117.02**	**112**	*e*LR	LR	04 19 28.3				
PPT2	comp=Z,1µm,24.8s **Papeete2**	**117.11**	**106**	*e*LR	LR	04 19 38.5				
LTY	comp=Z,1µm,25.8s **Liberty**	**117.34**	**26**	IAMs_20	IAMs_20	04 44 32.6				
C09A	comp=Z,1µm,20.0s **Chrisman Ranch**	**117.93**	**24**	IAMs_20	IAMs_20	04 36 09.8				
NEW	comp=Z,1µm,19.0s **Newport**	**118.02**	**23**	IAMs_20	IAMs_20	04 46 01.1				
COR	comp=Z,1µm,19.0s **Corvallis**	**118.13**	**30**	IAMs_20	IAMs_20	04 40 21.4				
D08A	comp=Z,955nm,18.0s **Wollman Farm,**	**118.25**	**25**	IAMs_20	IAMs_20	04 37 33.4				
DRLN	comp=Z,1µm,22.0s **Deer Lake**	**118.36**	**339**	IAMs_20	IAMs_20	04 46 36.8				
WALA	comp=Z,1µm,22.0s **Waterton Lakes**	**118.55**	**21**	IAMs_20	IAMs_20	04 46 20.0				
F07A	comp=Z,1µm,19.0s **Phinny Hill Vi**	**118.72**	**27**	IAMs_20	IAMs_20	04 37 02.9				
JTMT	comp=Z,1µm,20.0s **Jette**	**119.52**	**22**	IAMs_20	IAMs_20	04 40 00.8				
J05D	comp=Z,1µm,19.0s **Fort Rock, OR**	**120.10**	**29**	P	**PKiKP**	**03 44 31.1**	**+0.7**			
I07A	baz=318 **Izee**	**120.31**	**28**	IAMs_20	IAMs_20	04 39 11.0				
L04D	comp=Z,943nm,19.0s **Klamath Falls**	**120.35**	**31**	P	**PKiKP**	**03 44 31.2**	**+0.3**			
MSO	baz=317 **Missoula**	**120.42**	**22**	P	**PKPdf**	**03 44 30.6**	**-0.2**			
MSO	baz=327 **Missoula**	**120.42**	**22**	IAMs_20	IAMs_20	04 40 38.6				
M02C	comp=Z,1µm,20.0s **Callahan**	**120.67**	**32**	P	**PKiKP**	**03 44 31.8**	**+0.3**			
BMO	baz=316 **Blue Mountains**	**120.69**	**26**	IAMs_20	IAMs_20	04 38 59.8				
EGMT	comp=Z,1µm,21.0s **Eagleton**	**120.83**	**19**	P	**PKiKP**	**03 44 31.7**	**0.0**			
EGMT	baz=332 **Eagleton**	**120.83**	**19**	IAMs_20	IAMs_20	04 41 43.3				
M04C	comp=Z,1µm,19.0s **Macdoel**	**120.91**	**31**	P	**PKiKP**	**03 44 32.1**	**+0.1**			
O02D	baz=317 **Mt. Diablo Mer**	**121.57**	**33**	P	**PKiKP**	**03 44 34.0**	**+0.7**			
ULM	baz=316 **Lac du Bonnet**	**121.86**	**8**	PKP	**PKPdf**	**03 44 32.7**	**-0.6**			
ULM	comp=Z,4.0nm,0.6s,baz=33,slow=3.7,SNR=12			PKKPab	**PKKPab**	**03 54 35.9**	**+2.6**			
WVOR	comp=Z,2.5nm,0.8s,baz=153,slow=4.5,SNR=3.6 **Wild Horse Val**	**121.98**	**28**	IAMs_20	IAMs_20	04 39 54.4				
O03E	comp=Z,1µm,22.0s **Paynes Creek**	**122.01**	**32**	P	**PKPdf**	**03 44 34.0**	**-0.1**			
BOZ	baz=316 **Bozeman (W)**	**122.31**	**21**	P	**PKPdf**	**03 44 33.9**	**-0.6**			
BOZ	baz=329 **Bozeman (W)**	**122.31**	**21**	IAMs_20	IAMs_20	04 38 46.6				
MATQ	comp=Z,1µm,19.0s **Matagami**	**122.58**	**354**	P	**PKiKP**	**03 44 35.6**	**+0.7**			
HLID	baz=9.4 **Hailey**	**122.95**	**25**	P	**PKiKP**	**03 44 36.7**	**+0.7**			
HLID	baz=325 **Hailey**	**122.95**	**25**	IAMs_20	IAMs_20	04 43 30.7				
LAO	comp=Z,1µm,21.0s **LASA Array**	**123.09**	**17**	IAMs_20	IAMs_20	04 42 56.1				
LSQQ	comp=Z,2µm,20.0s **Lebel-sur-Quev**	**123.20**	**353**	P	**PKPdf**	**03 44 36.0**	**+0.1**			
RLMT	baz=10 **Red Lodge**	**123.55**	**20**	IAMs_20	IAMs_20	04 48 15.3				
D62A	comp=Z,1µm,20.0s **Allapoint, All**	**123.71**	**346**	IAMs_20	IAMs_20	04 47 58.6				
H17A	comp=Z,1µm,20.0s **Grant Village**	**123.73**	**21**	IAMs_20	IAMs_20	04 37 22.1				
PQI	comp=Z,1µm,21.0s **Presque Isle**	**123.85**	**345**	IAMs_20	IAMs_20	04 47 03.3				
FLWY	comp=Z,1µm,19.0s **Flagg Ranch**	**123.95**	**22**	IAMs_20	IAMs_20	04 43 24.0				
IMW	comp=Z,987nm,22.0s **Indian Meadow**	**124.02**	**22**	IAMs_20	IAMs_20	04 47 58.0				
E63A	comp=Z,940nm,20.0s **Oxbow**	**124.18**	**346**	IAMs_20	IAMs_20	04 46 23.1				
VLDQ	comp=Z,1µm,21.0s **Val d'Or**	**124.19**	**353**	IAMs_20	IAMs_20	04 46 56.5				
LATQ	comp=Z,1µm,19.0s **La Tuque**	**124.20**	**349**	P	**PKiKP**	**03 44 38.2**	**0.0**			
E62A	baz=15 **Clayton Lake**	**124.26**	**347**	IAMs_20	IAMs_20	04 44 52.0				
TPAW	comp=Z,1µm,21.0s **Teton Pass**	**124.37**	**22**	IAMs_20	IAMs_20	04 47 15.1				
SNOW	comp=Z,1µm,20.0s **Snow King Moun**	**124.47**	**22**	IAMs_20	IAMs_20	04 47 26.7				
REDW	comp=Z,1µm,20.0s **Red Top Meadow**	**124.52**	**22**	IAMs_20	IAMs_20	04 47 18.0				
E28A	comp=Z,1µm,20.0s **Huff**	**124.58**	**12**	IAMs_20	IAMs_20	04 44 52.4				
EYMN	comp=Z,1µm,18.0s **Ely**	**124.60**	**5**	IAMs_20	IAMs_20	04 43 38.0				
F64A	comp=Z,1µm,22.0s **Sherman**	**124.68**	**345**	IAMs_20	IAMs_20	04 50 49.8				
	comp=Z,1µm,19.0s									
AHID	**Auburn Hatcher**	**124.93**	**23**	IAMs_20	IAMs_20	04 47 26.1				
D55A	comp=Z,1µm,18.0s **Sainte-Anne-du**	**125.00**	**351**	P	**PKiKP**	**03 44 39.9**	**+0.2**			
F63A	baz=12 **Nahmakanta, Br**	**125.02**	**346**	IAMs_20	IAMs_20	04 50 14.3				
G65A	comp=Z,1µm,19.0s **Princeton**	**125.09**	**344**	IAMs_20	IAMs_20	04 42 11.4				
NVAR	comp=Z,1µm,19.0s **Mina Array Bea**	**125.21**	**31**	PKP	**PKPdf**	**03 44 40.3**	**-0.1**			
NVAR	comp=Z,2.0nm,0.8s,baz=286,slow=1.7,SNR=12 **Mina Array Bea**	**125.21**	**31**	PKPdf	**PKPdf**	**03 44 38.4**	**-2.0**			
LHV	**Little Huntoon** comp=Z,912nm,21.0s	**125.24**	**31**	IAMs_20	IAMs_20	04 47 50.7				
E58A	**La Victoria** baz=15	**125.27**	**349**	P	**PKPdf**	**03 44 39.7**	**-0.2**			
E57A	**Chemin Saint G** baz=14	**125.38**	**350**	P	**PKPdf**	**03 44 40.4**	**+0.2**			
E56A	**St. Veronique** baz=13	**125.40**	**351**	P	**PKPdf**	**03 44 40.4**	**+0.2**			
PKME	**Peaks-Kenny Pk** comp=Z,1µm,19.0s	**125.48**	**346**	IAMs_20	IAMs_20	04 49 15.4				
BW06	**Boulder Array** comp=Z,1µm,21.0s	**125.51**	**21**	IAMs_20	IAMs_20	04 49 15.2				
PDAR	**Pinedale Array** comp=Z,3.4nm,1.0s,baz=22,slow=1.6,SNR=9.1	**125.51**	**21**	PKP	**PKiKP**	**03 44 41.1**	**-0.1**			
PDAR	**Pinedale Array**	**125.51**	**21**	PKPdf	**PKPdf**	**03 44 38.9**	**-1.9**			
EMMW	**East Machias** comp=Z,1µm,22.0s	**125.52**	**344**	IAMs_20	IAMs_20	04 41 34.8				
D41A	**Chassel** comp=Z,1µm,20.0s	**125.66**	**2**	IAMs_20	IAMs_20	04 47 12.2				
HWUT	**Hardware Ranch** comp=Z,959nm,20.0s	**125.74**	**24**	IAMs_20	IAMs_20	04 45 20.4				
G62A	**West of Eustis** comp=Z,1µm,19.0s	**125.81**	**347**	IAMs_20	IAMs_20	04 49 17.2				
RSSD	**Black Hills**	**126.06**	**16**	PKIKP	**PKPdf**	**03 44 40.0**	**-1.9**			
RSSD	**Black Hills** baz=337	**126.06**	**16**	P	**PKPdf**	**03 44 41.9**	**0.0**			
RSSD	**Black Hills**	**126.06**	**16**	PKPdf	**PKPdf**	**03 44 40.0**	**-1.9**			
RSSD	**Black Hills** comp=Z,1µm,20.0s	**126.06**	**16**	IAMs_20	IAMs_20	04 47 15.6				
F33A	**5 Mile Ranch,** comp=Z,2µm,21.0s	**126.11**	**9**	IAMs_20	IAMs_20	04 45 21.8				
WVL	**Waterville** comp=Z,1µm,20.0s	**126.22**	**346**	IAMs_20	IAMs_20	04 49 37.2				
E43A	**Lone Tree Farm** comp=Z,1µm,20.0s	**126.39**	**1**	IAMs_20	IAMs_20	04 48 03.6				
DUG	**Dugway, Tooele** baz=326	**126.40**	**26**	P	**PKiKP**	**03 44 43.6**	**+0.7**			
H62A	**Milan** comp=Z,2µm,21.0s	**126.56**	**347**	IAMs_20	IAMs_20	04 48 03.0				
R11A	**Troy Canyon, C** baz=322	**126.63**	**29**	P	**PKiKP**	**03 44 44.1**	**+0.5**			
R11A	**Troy Canyon, C** comp=Z,747nm,18.0s	**126.63**	**29**	IAMs_20	IAMs_20	04 46 18.3				
K22A	**Casper** comp=Z,981nm,20.0s	**126.65**	**19**	IAMs_20	IAMs_20	04 51 10.4				
CWC	**Cottonwood Cre** baz=318	**126.82**	**33**	P	**PKiKP**	**03 44 44.1**	**+0.2**			
I63A	**Otisfield** comp=Z,1µm,20.0s	**126.93**	**346**	IAMs_20	IAMs_20	04 48 06.8				
F42A	**Maple Grove Fa** comp=Z,1µm,20.0s	**126.98**	**2**	IAMs_20	IAMs_20	04 47 43.1				
VT1	**Waterbury** comp=Z,1µm,21.0s	**127.13**	**348**	IAMs_20	IAMs_20	04 42 44.2				
LONY	**Lake Ozonia** comp=Z,1µm,19.0s	**127.19**	**350**	IAMs_20	IAMs_20	04 51 42.5				
G40A	**Rib Lake** comp=Z,1µm,20.0s	**127.36**	**4**	IAMs_20	IAMs_20	04 48 42.1				
MPMC	**Manual Prospec** baz=319	**127.42**	**32**	P	**PKiKP**	**03 44 46.1**	**+0.9**			
PRN	**Pahroc Range** comp=Z,882nm,21.0s	**127.63**	**29**	IAMs_20	IAMs_20	04 47 09.8				
HNH	**Hanover** comp=Z,1µm,22.0s	**127.64**	**348**	IAMs_20	IAMs_20	04 42 46.4				
SADO	**Sadowa** comp=Z,1µm,20.0s	**127.67**	**354**	IAMs_20	IAMs_20	04 43 56.8				
NCB	**Newcomb** comp=Z,826nm,20.0s	**127.76**	**349**	IAMs_20	IAMs_20	04 47 21.4				
EDW2	**Edwards Air Fo** baz=318	**128.03**	**34**	P	**PKPdf**	**03 44 45.4**	**-0.3**			
ECSD	**EROS Data Cent** baz=346	**128.10**	**10**	P	**PKPdf**	**03 44 45.8**	**+0.3**			
ECSD	**EROS Data Cent** comp=Z,1µm,19.0s	**128.10**	**10**	IAMs_20	IAMs_20	04 47 59.6				
PECO	**Prince Edward** comp=Z,1µm,20.0s	**128.24**	**352**	IAMs_20	IAMs_20	04 48 43.9				
O20A	**White River Ci** baz=331	**128.28**	**22**	P	**PKiKP**	**03 44 46.5**	**-0.3**			
O20A	**White River Ci** comp=Z,856nm,20.0s	**128.28**	**22**	IAMs_20	IAMs_20	04 49 17.7				
J59A	**Pesco** comp=Z,1µm,20.0s	**128.30**	**350**	IAMs_20	IAMs_20	04 48 07.8				
GSC	**Goldstone, Bar** baz=319	**128.36**	**33**	P	**PKiKP**	**03 44 47.6**	**+0.7**			
N23A	**Red Feather La** comp=Z,986nm,19.0s	**128.42**	**20**	IAMs_20	IAMs_20	04 48 34.2				
J58A	**Remsen** comp=Z,1µm,18.0s	**128.54**	**350**	IAMs_20	IAMs_20	04 52 31.0				
J57A	**Williamstown** comp=Z,2µm,21.0s	**128.60**	**351**	IAMs_20	IAMs_20	04 42 54.7				
K62A	**Holston** comp=Z,1µm,19.0s	**128.62**	**347**	IAMs_20	IAMs_20	04 44 19.4				
BCX	**Boston College** comp=Z,1µm,19.0s	**128.69**	**346**	IAMs_20	IAMs_20	04 49 06.4				
I40A	**Norwalk** comp=Z,2µm,22.0s	**128.70**	**5**	IAMs_20	IAMs_20	04 48 14.5				
I49A	**Point Hope** comp=Z,1µm,20.0s	**128.78**	**357**	IAMs_20	IAMs_20	04 45 24.8				
J56A	**Wolcott** comp=Z,1µm,20.0s	**128.87**	**352**	IAMs_20	IAMs_20	04 43 39.5				
GMRC	**Granite Mounta** baz=320	**129.36**	**32**	P	**PKiKP**	**03 44 50.5**	**+1.5**			
PV22	**Blue Mesa, Par** comp=Z,1µm,18.0s	**129.47**	**23**	IAMs_20	IAMs_20	04 49 50.1				
ISCO	**Idaho Springs** comp=Z,1µm,20.0s	**129.51**	**20**	IAMs_20	IAMs_20	04 46 42.1				
PV14	**Lion Creek, Pa** comp=Z,1µm,19.0s	**129.51**	**24**	IAMs_20	IAMs_20	04 43 25.3				
MMNY	**Mt. Morris Dam** comp=Z,1µm,20.0s	**129.54**	**353**	IAMs_20	IAMs_20	04 44 34.4				
SMCO	**Snowmass** comp=Z,1µm,20.0s	**129.59**	**21**	IAMs_20	IAMs_20	04 54 14.3				
PV16	**Nyswonger Mesa** comp=Z,1µm,21.0s	**129.61**	**24**	IAMs_20	IAMs_20	04 43 27.9				
PV17	**East Wray Mesa** comp=Z,1µm,20.0s	**129.62**	**24**	IAMs_20	IAMs_20	04 38 01.1				
PV03	**Paradox Valley** comp=Z,1µm,22.0s	**129.68**	**24**	IAMs_20	IAMs_20	04 43 29.9				
JFWS	**Jewell Farm** comp=Z,1µm,22.0s	**129.70**	**4**	IAMs_20	IAMs_20	04 45 17.0				
BINY	**Binghamton** comp=Z,1µm,22.0s	**129.78**	**351**	IAMs_20	IAMs_20	04 45 25.9				
L34A	**Svendsen Farm,** comp=Z,1µm,19.0s	**129.86**	**10**	IAMs_20	IAMs_20	04 48 51.1				
K43A	**Burlington** comp=Z,978nm,19.0s	**130.02**	**2**	IAMs_20	IAMs_20	04 49 35.5				
KSPA	**Kenyon Colle** comp=Z,1µm,21.0s	**130.37**	**350**	IAMs_20	IAMs_20	04 46 34.6				
ERPA	**Erie** comp=Z,1µm,20.0s	**130.38**	**354**	IAMs_20	IAMs_20	04 49 39.5				
Q24A	**Divide** comp=Z,931nm,21.0s	**130.42**	**20**	IAMs_20	IAMs_20	04 47 30.2				
AAM	**Ann Arbor** comp=Z,1µm,20.0s	**130.44**	**358**	IAMs_20	IAMs_20	04 50 38.9				
L40A	**Anamosa** comp=Z,1µm,22.0s	**130.46**	**5**	IAMs_20	IAMs_20	04 47 06.2				
RCBR	**Riachuelo** comp=Z,1µm,20.0s	**130.49**	**269**	IAMs_20	IAMs_20	04 37 36.5				
PAL	**Palisades** comp=Z,1µm,21.0s	**130.56**	**348**	IAMs_20	IAMs_20	04 44 03.7				
ODNJ	**Ogdensburg** comp=Z,1µm,20.0s	**130.62**	**349**	IAMs_20	IAMs_20	04 50 55.3				
L42A	**Oliver, Polo** comp=Z,1µm,20.0s	**130.65**	**4**	IAMs_20	IAMs_20	04 49 48.0				
MVCO	**Mesa Verde** baz=330	**130.72**	**24**	P	**PKiKP**	**03 44 52.0**	**+0.2**			
MVCO	**Mesa Verde** comp=Z,1µm,22.0s	**130.72**	**24**	IAMs_20	IAMs_20	04 48 40.4				
ALLY	**Alegheny Colle** comp=Z,1µm,21.0s	**130.86**	**354**	IAMs_20	IAMs_20	04 52 18.2				
WUAZ	**Wupatki** comp=Z,759nm,19.0s	**130.90**	**28**	IAMs_20	IAMs_20	04 51 58.3				
S22A	**4UR Ranch, Cre** comp=Z,1µm,22.0s	**130.91**	**22**	IAMs_20	IAMs_20	04 46 02.1				
HQIL	**Hanson Quary C** comp=Z,1µm,20.0s	**130.94**	**2**	IAMs_20	IAMs_20	04 49 30.9				
M54A	**Oil Creek Stat**	**130.96**	**354**	P	**PKiKP**	**03 44 51.8**	**-0.1**			
	baz=7.8									
M54A	**Oil Creek Stat**	**130.96**	**354**	IAMs_20	IAMs_20	04 47 27.7				
N59A	comp=Z,1µm,20.0s **State Game Lan**	**131.00**	**350**	IAMs_20	IAMs_20	04 49 15.1				
BRNJ	comp=Z,1µm,21.0s **Basking Ridge**	**131.00**	**349**	IAMs_20	IAMs_20	04 47 24.4				
N35A	comp=Z,1µm,20.0s **Tabor**	**131.06**	**10**	IAMs_20	IAMs_20	04 48 53.0				
M52A	comp=Z,1µm,21.0s **Chesterland**	**131.08**	**356**	IAMs_20	IAMs_20	04 49 21.7				
KSCO	comp=Z,1µm,20.0s **Kaye Shedlock'**	**131.18**	**18**	IAMs_20	IAMs_20	04 49 37.2				
LUPA	comp=Z,1µm,20.0s **Lehigh Univers**	**131.24**	**350**	IAMs_20	IAMs_20	04 46 33.5				
M50A	comp=Z,1µm,20.0s **Fremont**	**131.31**	**357**	IAMs_20	IAMs_20	04 46 19.0				
N38A	comp=Z,1µm,21.0s **Joes South For**	**131.49**	**8**	IAMs_20	IAMs_20	04 50 24.4				
SSPA	comp=Z,2µm,22.0s **Standing Stone**	**131.60**	**352**	IAMs_20	IAMs_20	04 44 37.9				
N51A	comp=Z,1µm,21.0s **Ashland**	**131.76**	**357**	IAMs_20	IAMs_20	04 48 20.9				
X16A	comp=Z,1µm,20.0s **Lo Mia Camp, P**	**131.77**	**29**	IAMs_20	IAMs_20	04 46 28.4				
N49A	comp=Z,925nm,22.0s **Columbus Grove**	**131.84**	**358**	IAMs_20	IAMs_20	04 49 41.1				
N41A	comp=Z,1µm,20.0s **Harden Midland**	**131.84**	**5**	IAMs_20	IAMs_20	04 47 10.6				
N47A	comp=Z,1µm,20.0s **Urbana**	**131.90**	**360**	IAMs_20	IAMs_20	04 47 29.4				
PSUB	comp=Z,1µm,21.0s **Penn St. - Bra**	**131.90**	**349**	IAMs_20	IAMs_20	04 47 51.1				
WUPA	comp=Z,1µm,18.0s **West Chester U**	**131.93**	**350**	IAMs_20	IAMs_20	04 48 50.7				
MVL	comp=Z,859nm,21.0s **Millersville**	**131.99**	**350**	IAMs_20	IAMs_20	04 52 28.3				
P60A	comp=Z,1µm,18.0s **Greenville**	**132.05**	**350**	IAMs_20	IAMs_20	04 48 54.0				
O56A	comp=Z,1µm,21.0s **Blue Knob Stat**	**132.05**	**353**	IAMs_20	IAMs_20	04 46 00.8				
HDIL	comp=Z,1µm,20.0s **Hopedale**	**132.11**	**4**	IAMs_20	IAMs_20	04 48 07.8				
T25A	comp=Z,1µm,19.0s **Trinidad**	**132.31**	**20**	IAMs_20	IAMs_20	04 55 23.4				
X18A	comp=Z,1µm,18.0s **Snowflake**	**132.37**	**27**	IAMs_20	IAMs_20	04 53 53.2				
SFIN	comp=Z,983nm,22.0s **Lafayette**	**132.38**	**1**	IAMs_20	IAMs_20	04 55 13.1				
O52A	comp=Z,1µm,19.0s **Adamsville**	**132.53**	**356**	IAMs_20	IAMs_20	04 53 34.1				
O44A	comp=Z,1µm,20.0s **Mansfield**	**132.56**	**3**	IAMs_20	IAMs_20	04 51 05.7				
O49A	comp=Z,1µm,20.0s **Covington**	**132.57**	**359**	IAMs_20	IAMs_20	04 49 53.3				
P57A	comp=Z,1µm,20.0s **Homestead Farm**	**132.75**	**352**	IAMs_20	IAMs_20	04 50 32.3				
MCWV	comp=Z,1µm,20.0s **Mont Chateau**	**132.81**	**354**	IAMs_20	IAMs_20	04 46 19.6				
P43A	comp=Z,986nm,21.0s **Skaggs, Pawnee**	**133.01**	**4**	IAMs_20	IAMs_20	04 54 17.5				
P46A	comp=Z,1µm,19.0s **Rosedale**	**133.14**	**2**	IAMs_20	IAMs_20	04 50 48.1				
P51A	comp=Z,1µm,20.0s **Williamsport**	**133.23**	**357**	IAMs_20	IAMs_20	04 52 36.7				
Q56A	comp=Z,1µm,19.0s **Snyder Ridge,**	**133.34**	**353**	IAMs_20	IAMs_20	04 47 25.8				
ANMO	comp=Z,1µm,22.0s **Albuquerque**	**133.50**	**24***c*	*i*PKIKP pmax	**PKiKP** pmax	**03 44 57.4**	**-0.1**			
ANMO	comp=Z,4.0nm,1.0s									
ANMO	**Albuquerque** comp=Z,1µm,21.0s	**133.50**	**24**	IAMs_20	IAMs_20	04 52 26.0				
BLO	**Bloomington** comp=Z,1µm,19.0s	**133.60**	**1**	IAMs_20	IAMs_20	04 54 07.3				
Q51A	**Peebles** comp=Z,1µm,20.0s	**133.70**	**357**	IAMs_20	IAMs_20	04 52 50.1				
TUC	**Tucson** comp=Z,938nm,20.0s	**133.80**	**30**	IAMs_20	IAMs_20	04 55 13.3				
CBN	**Corbin Frederi** comp=Z,1µm,21.0s	**133.91**	**351**	IAMs_20	IAMs_20	04 48 37.1				
OLIL	**Olney** comp=Z,1µm,20.0s	**133.99**	**3**	IAMs_20	IAMs_20	04 49 20.6				
Y22D	**IRIS PASSCAL I** comp=Z,1µm,20.0s	**134.07**	**25**	IAMs_20	IAMs_20	04 52 22.2				
R40A	**Maddies Statio** comp=Z,1µm,22.0s	**134.08**	**7**	IAMs_20	IAMs_20	04 46 43.9				
R55A	**Marlinton** comp=Z,1µm,21.0s	**134.19**	**354**	IAMs_20	IAMs_20	04 47 12.4				
R58B	**Mineral** comp=Z,1µm,21.0s	**134.22**	**351**	IAMs_20	IAMs_20	04 46 53.3				
S57A	**Dark Hollow, R** comp=Z,1µm,21.0s	**134.57**	**352**	IAMs_20	IAMs_20	04 52 39.5				
FVM	**French Village** comp=Z,1µm,19.0s	**134.58**	**5**	IAMs_20	IAMs_20	04 51 51.2				
S58A	**Poland Farm, P** comp=Z,1µm,22.0s	**134.59**	**351**	IAMs_20	IAMs_20	04 46 54.1				
U32A	**Winter Ranch,** comp=Z,1µm,20.0s	**134.65**	**15**	IAMs_20	IAMs_20	04 49 55.0				
USIN	**University of** comp=Z,938nm,19.0s	**134.78**	**2**	IAMs_20	IAMs_20	04 50 03.4				
121A	**Cookes Peak, D** comp=Z,1µm,19.0s	**135.02**	**27**	IAMs_20	IAMs_20	04 57 57.4				
T59A	**Double "B" Far** comp=Z,1µm,19.0s	**135.14**	**351**

Z47A	**Carrollton**	**139.51**	**3**	IAMs_20	IAMs_20	04 54 46.6		
	comp=Z,1μm,21.0s							
TXAR	**Lajitas Array**	**139.55**	**24**	PKhKP	PKPpre	03 45 01.9		
	comp=Z,0.6nm,0.5s,baz=281,slow=1.2,SNR=8.1							
TXAR	**Lajitas Array**	**139.55**	**24**	PKIKP	**PKPdf**	**03 45 05.3**	**-2.1**	
TXAR	**Lajitas Array**	**139.55**	**24**	PKPdf	**PKPdf**	**03 45 05.3**	**-2.1**	
LRAL	**Lakeview Retre**	**139.71**	**2**	IAMs_20	IAMs_20	04 50 15.1		
	comp=Z,1μm,22.0s							
SPB	**Sao Paulo**	**139.93**	**242**	IAMs_20	IAMs_20	04 38 56.0		
	comp=Z,949nm,21.0s							
JCT	**Junction City**	**139.94**	**19**	P	**PKPdf**	**03 45 06.9**	**-1.1**	
	baz=338							
JCT	**Junction City**	**139.94**	**19**	IAMs_20	IAMs_20	04 54 08.1		
	comp=Z,1μm,21.0s							
HPIG		**140.73**	**29**	IAMs_20	IAMs_20	04 56 59.7		
	comp=Z,1μm,21.0s							
342A	**Flagon Creek P**	**140.88**	**9**	IAMs_20	IAMs_20	04 56 36.8		
	comp=Z,1μm,19.0s							
BB19B	**Bebedouro**	**141.60**	**245**	*eP*	**PKiKP**	**03 45 18.6**	**+4.5**	
FRTB	**Fartura**	**141.86**	**241**	*eP*	**PKiKP**	**03 45 13.6**	**-0.9**	
IPMB	**Ipameri, GO**	**142.01**	**250**	*eP*	**PKiKP**	**03 45 14.6**	**-0.4**	
CPSB	**Cacapava Do Su**	**142.10**	**229**	*eP*	**PKiKP**	**03 45 16.7**	**+1.9**	
CPSB	**Cacapava Do Su**	**142.10**	**229**	*eP*	**PKiKP**	**03 45 14.4**	**-0.5**	
BDFB	**Brasilia**	**142.21**	**254**	PKhKP	PKPpre	03 45 08.7		
	comp=Z,5.4nm,0.7s,baz=106,slow=6.0,SNR=7.3							
ITAB	**Concordia**	**142.57**	**234**	*eP*	**PKiKP**	**03 45 15.5**	**-0.3**	
PLCA	**Paso Flores**	**144.20**	**200**	PKP	PKPbc	03 45 14.2	+0.8	
	comp=Z,14nm,0.9s,baz=201,slow=2.6,SNR=22							
PLCA	**Paso Flores**	**144.20**	**200**	PKIKP	PKPbc	03 45 13.8	+0.3	
PLCA	**Paso Flores**	**144.20**	**200**	PKPdf	PKPbc	03 45 13.8	+0.3	
PLCA	**Paso Flores**	**144.20**	**200**	*eP*	**PKiKP**	**03 45 17.8**	**-1.1**	
PRPB	**Parauapebas**	**144.31**	**270**	*eP*	PKPbc	03 45 15.2	+0.6	
MDP	**Montagnes des**	**144.70**	**290**	PKPbc	**PKPdf**	**03 45 18.4**	**+1.5**	
	comp=Z,4.9nm,0.5s,baz=97,slow=1.8,SNR=7.7							
MCPB	**Macapa, AP**	**145.69**	**280**	*eP*	**PKPab**	**03 45 19.5**	**+0.2**	
ZAIG	**Zacatecas**	**145.74**	**28**	IAMs_20	IAMs_20	05 01 58.3		
	comp=Z,866nm,21.0s							
SKI	**Saint Kitts**	**146.48**	**317**	IAMs_20	IAMs_20	04 59 53.7		
	comp=Z,1μm,19.0s							
CPUP	**Villa Florida**	**147.10**	**232**	PKPbc	**PKPbc**	**03 45 22.7**	**-0.1**	
	comp=Z,12nm,0.8s,baz=109,slow=2.5,SNR=36							
CPUP	**Villa Florida**	**147.10**	**232**		**PKPbc**	**03 45 22.9**	**+0.1**	
MTP	**Monte Pirata**	**147.72**	**322**		**PKPbc**	**03 45 24.9**	**+0.3**	
SJG	**San Juan**	**148.07**	**323**	PKPbc	**PKiKP**	**03 45 27.2**	**-0.2**	
	comp=Z,8.1nm,0.6s,baz=330,slow=8.1,SNR=2.2							
SJG	**San Juan**	**148.07**	**323**	*eP*	**PKPbc**	**03 45 24.8**	**-0.7**	
SJG	**San Juan**	**148.07**	**323**	IAMs_20	IAMs_20	04 59 39.0		
	comp=Z,787nm,20.0s							
BI02	**San Fabin de**	**148.08**	**202**	IAMs_20	IAMs_20	04 48 33.3		
	comp=Z,858nm,21.0s							
BI03	**Tigo**	**148.54**	**200**	IAMs_20	IAMs_20	04 54 54.2		
	comp=Z,836nm,20.0s							
MLPR	**Magueyes Islan**	**148.71**	**324**	PKPdf	**PKPdf**	**03 45 21.3**	**-2.2**	
CRPR	**Cabo Rojo, PR**	**148.72**	**324**		**PKiKP**	**03 45 29.1**	**+0.3**	
BO02	**Sierra Bellavi**	**149.51**	**205**	IAMs_20	IAMs_20	04 55 27.6		
	comp=Z,925nm,20.0s							
UNM	**Universidad Na**	**150.27**	**26**	IAMs_20	IAMs_20	04 48 20.2		
	comp=Z,1μm,22.0s							
MT05	**Renca**	**150.69**	**206**	IAMs_20	IAMs_20	04 49 05.1		
	comp=Z,758nm,19.0s							
PEL	**Peldehue**	**150.88**	**207**	PKIKP	**PKPbc**	**03 45 30.6**	**-1.6**	
PEL	**Peldehue**	**150.88**	**207**		**PKPbc**	**03 45 30.6**	**-1.6**	
PEL				IAMs_20	IAMs_20	04 51 28.9		
	comp=Z,760nm,20.0s							
MT02	**Curacav**	**150.98**	**206**	IAMs_20	IAMs_20	04 48 20.5		
	comp=Z,844nm,21.0s							
VA03	**San Esteban**	**151.14**	**207**	IAMs_20	IAMs_20	04 45 28.0		
	comp=Z,785nm,20.0s							
VA01	**Torpederas**	**151.40**	**205**	IAMs_20	IAMs_20	04 52 25.6		
	comp=Z,839nm,20.0s							
TLIG	**Tlapa**	**152.09**	**27**		**PKPbc**	**03 45 33.1**	**-2.4**	
TEIG	**Tepich**	**152.38**	**5**	IAMs_20	IAMs_20	05 05 04.4		
	comp=Z,1μm,22.0s							
PCRV	**Puerto La Cruz**	**152.64**	**310**	PKPbc	**PKPbc**	**03 45 36.5**	**-0.2**	
	comp=Z,7.4nm,0.6s,baz=168,slow=4.1,SNR=1.9							
CO02	**Combarbal**	**152.65**	**208**	IAMs_20	IAMs_20	04 48 14.3		
	comp=Z,868nm,21.0s							
CO03	**El Pedregal**	**152.81**	**209**	IAMs_20	IAMs_20	04 54 56.5		
	comp=Z,924nm,19.0s							
MTDJ	**Mount Denham**	**153.22**	**342**	IAMs_20	IAMs_20	04 58 37.5		
	comp=Z,781nm,20.0s							
GO04	**Tololo Observa**	**153.41**	**210**	IAMs_20	IAMs_20	04 48 09.5		
	comp=Z,902nm,21.0s							
LCO	**Las Campanas**	**154.30**	**212**	PKIKP	**PKPbc**	**03 45 38.3**	**-2.0**	
LCO	**Las Campanas**	**154.30**	**212**		**PKPbc**	**03 45 38.3**	**-2.0**	
LCO				IAMs_20	IAMs_20	04 58 23.3		
	comp=Z,870nm,22.0s							
SIV	**San Ignacio**	**154.43**	**248**	PKP	**PKPdf**	**03 45 32.9**	**+0.7**	
	comp=Z,1.1nm,0.8s,baz=192,slow=1.8,SNR=4.4							
SIV				PKPbc	**pPKPdf**	**03 45 38.9**	**-0.8**	
	comp=Z,4.5nm,1.0s,baz=118,slow=2.2,SNR=15							
AC04	**Llanos de Chal**	**155.14**	**212**	IAMs_20	IAMs_20	04 53 39.1		
	comp=Z,903nm,20.0s							
CCIG	**Comitan**	**155.58**	**15**	IAMs_20	IAMs_20	05 03 18.3		
	comp=Z,961nm,20.0s							
GO02	**Mina Guanaco**	**156.59**	**219**	IAMs_20	IAMs_20	04 57 21.3		
	comp=Z,653nm,20.0s							
PB14	**IPOC Station P**	**157.49**	**219**	IAMs_20	IAMs_20	05 04 09.0		
	comp=Z,826nm,21.0s							
SAML	**Samuel**	**157.63**	**265**	PKIKP	**PKPdf**	**03 45 34.4**	**-2.1**	
SAML	**Samuel**	**157.63**	**265**		**PKPdf**	**03 45 34.4**	**-2.1**	
SDV	**Santo Domingo**	**157.86**	**317**	PKP	**PKPdf**	**03 45 35.9**	**-1.1**	
	comp=Z,2.5nm,0.2s,baz=314,slow=7.2,SNR=3.2							
SDV				PKPab	**PKPab**	**03 46 09.7**	**0.0**	
	comp=Z,11nm,0.7s,baz=77,slow=4.1,SNR=4.0							
SDV	**Santo Domingo**	**157.86**	**317**	*eP*	**PKPdf**	**03 45 35.2**	**-1.8**	
SDV	**Santo Domingo**	**157.86**	**317**	IAMs_20	IAMs_20	05 02 46.4		
	comp=Z,674nm,19.0s							
PB15	**IPOC Station P**	**157.87**	**223**	IAMs_20	IAMs_20	04 54 55.8		
	comp=Z,958nm,20.0s							
LVC	**Limon Verde**	**157.88**	**225**	PKPab	**PKPab**	**03 46 09.8**	**0.0**	
	comp=Z,7.6nm,0.9s,baz=118,slow=1.3,SNR=4.5							
LVC	**Limon Verde**	**157.88**	**225**	IAMs_20	IAMs_20	04 53 41.3		
	comp=Z,761nm,20.0s							
MTO3	**Montecristo**	**157.99**	**9**	IAMs_20	IAMs_20	05 06 58.1		
	comp=Z,938nm,20.0s							
PB10	**IPOC Station P**	**158.38**	**221**	IAMs_20	IAMs_20	04 53 32.9		
	comp=Z,879nm,21.0s							
TGUH	**Tegucigalpa,Un**	**158.57**	**4**	IAMs_20	IAMs_20	05 11 41.6		
	comp=Z,868nm,20.0s							
PB09	**IPOC Station P**	**158.63**	**226**	IAMs_20	IAMs_20	04 58 57.5		
	comp=Z,955nm,22.0s							
SNET	**Serv Nac Est T**	**158.71**	**9**	IAMs_20	IAMs_20	05 06 34.1		
	comp=Z,887nm,21.0s							
PB07	**IPOC Station P**	**159.14**	**225**	IAMs_20	IAMs_20	05 07 28.7		
	comp=Z,870nm,20.0s							
PB08	**IPOC Station P**	**159.57**	**230**	IAMs_20	IAMs_20	05 01 36.0		
	comp=Z,841nm,21.0s							
PATCX	**Punta Patache**	**159.91**	**227**	IAMs_20	IAMs_20	04 56 24.3		
	comp=Z,803nm,20.0s							
CRIN	**San Cristobal**	**159.93**	**4**	IAMs_20	IAMs_20	05 10 52.6		
	comp=Z,806nm,20.0s							
PAMC	**Pamplona, Colo**	**160.38**	**318**	*eP*	**PKPab**	**03 46 18.3**	**-2.7**	
LPAZ	**La Paz**	**160.68**	**241**	PKP	**PKPdf**	**03 45 41.1**	**+0.4**	
	comp=Z,1.4nm,0.6s,baz=219,slow=2.2,SNR=9.9							
LPAZ	**La Paz**	**160.68**	**241**	PKIKP	**PKPdf**	**03 45 37.9**	**-2.8**	
LPAZ	**La Paz**	**160.68**	**241**	PKPdf	**PKPdf**	**03 45 37.9**	**-2.8**	
MOTC	**Monteria, Cord**	**161.00**	**328**	*eP*	**PKPdf**	**03 45 36.3**	**-4.1**	
RUSC	**La Rusia**	**161.69**	**316**	*eP*	**PKPdf**	**03 45 42.4**	**+0.6**	
PTBC	**PUERTO BERRIO**	**162.11**	**321**	*eP*	**PKPdf**	**03 45 39.2**	**-2.4**	
SPBC	**San Pablo de B**	**162.53**	**318**	*eP*	**PKPdf**	**03 45 46.3**	**+4.2**	
CHIC	**Chingaza**	**163.04**	**315**	*eP*	**PKPdf**	**03 45 48.0**	**+5.0**	
NORC	**Norcasia**	**163.12**	**320**	*eP*	**PKPdf**	**03 45 47.6**	**+4.9**	
CBOC	**Ciudad Bolivar**	**163.59**	**323**	*eP*	**PKPab**	**03 46 35.9**	**+1.3**	
TOLC	**Tolima**	**164.15**	**319**	*eP*	**PKPdf**	**03 45 48.6**	**+4.7**	
PRAC	**Prado**	**164.50**	**315**	*eP*	**PKPdf**	**03 45 44.7**	**+0.8**	
YOTC	**Yotoco, Valle**	**165.27**	**320**	*eP*	PKPdf	03 45 33.7	-11	
PCON	**Cinco Dias**	**166.53**	**316**	*eP*	**PKPdf**	**03 45 53.0**	**+6.7**	
POPC	**Popayan, Colom**	**166.57**	**317**	*eP*	**PKPdf**	**03 45 49.0**	**+3.2**	

*IDC **18** 03:26:44.8±7.7, 22.2°86N×144.2°07E, h94km±74km, mb3.6/8, mb1 3.8/9, mb1mx3.5/46, mbtmp4.0/9, ML3.0/1, Error ellipse: s-maj=37.4km s-min=21.7km az=84.0*

ISC 18 03:26:39.7±3.0, 23.1°N±0.4°×144.2°E±0.3°, h35km, n15, σ1°09/8, mb3.9/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**14.39**	**340**	P	**P**	**03 30 06.5**	**-0.9**
	0.1nm,0.3s,baz=146,slow=13,SNR=3.4						
KSRS	**Korea Array**	**20.02**	**319**	P	**Pn**	**03 31 12.6**	**+1.1**
	3.6nm,0.7s,baz=146,slow=8.4,SNR=9.7						
H11N1	**WAKE ISLAND Hy**	**21.41**	**95**	T	T	03 53 37.4	
	baz=283,slow=74,SNR=27						
H11N2	**WAKE ISLAND Hy**	**21.41**	**95**	T	T	03 53 37.9	
	baz=283,slow=74,SNR=29						
H11N3	**WAKE ISLAND Hy**	**21.43**	**95**	T	T	03 53 38.8	
	baz=283,slow=74,SNR=29						
H11S3	**WAKE ISLAND Hy**	**21.53**	**98**	T	T	03 53 50.0	
	baz=284						
H11S1	**WAKE ISLAND Hy**	**21.54**	**98**	T	T	03 53 48.9	
	baz=284,SNR=3.9						
H11S2	**WAKE ISLAND Hy**	**21.55**	**98**	T	T	03 53 52.3	
	baz=284						
USRK	**Ussuriysk Ar.**	**23.34**	**337**	P	**P**	**03 31 46.0**	**+1.2**
	2.1nm,0.8s,baz=148,slow=8.5,SNR=4.4						
KLR	**Kul'dur**	**27.90**	**342**	P	**P**	**03 32 26.3**	**0.0**
	3.0nm,0.7s,baz=155,slow=8.2,SNR=7.9						
CTA	**Charters Tower**	**42.94**	**177**	P	P	03 34 32.6	-2.8
	3.8nm,0.6s,baz=346,slow=8.7,SNR=6.8						
MKAR	**Makanchi Array**	**54.46**	**312**	P	**P**	**03 36 02.9**	**-0.9**
	2.6nm,0.7s,baz=106,slow=5.7,SNR=4.1						
ILAR	**Eielson Array**	**60.41**	**27**	P	**P**	**03 36 44.4**	**-0.9**
	0.4nm,0.7s,baz=253,slow=5.7,SNR=6.8						
INK	**Inuvik**	**65.95**	**24**	P	**P**	**03 37 22.7**	**+0.7**
	0.5nm,0.5s,baz=268,slow=3.7,SNR=3.1						
NVAR	**Mina Array Bea**	**81.58**	**52**	P	**P**	**03 38 55.0**	**+0.5**
	0.5nm,0.7s,baz=263,slow=6.4,SNR=4.1						

*THE **18** 03:30:47.0, 38.6°64N×23.7°41E, h5km±1km, ML2.4/18, Error ellipse: s-maj=1.6km s-min=0.4km az=202.0*

ATH 18 03:30:46.4, 38.6°65N×23.7°41E, h24km±1km, ML2.4/26, Error ellipse: s-maj=1.3km s-min=0.6km az=128.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.31**	**279**	P	Pb	03 30 53.2	-0.3
ATAL				S	Sb	03 30 57.7	-0.6
ATAL				AML	AML	03 30 58.9	
	comp=N,1190μm,0.1s						
ATAL				AML	AML	03 30 58.9	
	comp=E,1133μm,0.2s						
ATAL	**Atalanti**	**0.31**	**279**	P	Pb	03 30 53.2	-0.3
ATAL				S	Sb	03 30 57.7	-0.6
	comp=E,622nm,0.2s						
LKR	**Lokris**	**0.32**	**271**	P	Pb	03 30 52.9	-0.7
LKR				S	Sb	03 30 58.5	-0.1
LKR				AML	AML	03 30 59.8	
	comp=E,2368μm,0.1s						
LKR				AML	AML	03 31 01.5	
	comp=N,1892μm,0.2s						
LKR	**Lokris**	**0.32**	**271**	P	Pb	03 30 52.9	-0.8
LKR				S	Sb	03 30 58.5	-0.1
	comp=N,1μm,0.1s						
VIL2	**Platees**	**0.45**	**194**	P	Pb	03 30 56.3	+0.5
VIL2				S	Sn	03 31 03.8	-0.7
VIL2				AML	AML	03 31 04.3	
	comp=E,1171μm,0.6s						
VIL2				AML	AML	03 31 04.3	
	comp=N,699μm,0.3s						
VILL	**Villia**	**0.49**	**189**	P	Pb	03 30 56.2	-0.2
VILL				S	Sb	03 31 03.8	+0.6
	comp=N,522nm,0.4s						
KYMI	**Kymi, Euboea I**	**0.54**	**91**	P	Pb	03 30 57.1	-0.2
KYMI				S	Sn	03 31 05.9	-1.0
KYMI				AML	AML	03 31 06.4	
	comp=N,729μm,0.3s						
KYMI				AML	AML	03 31 09.1	
	comp=E,742μm,0.2s						
KYMI	**Kymi, Euboea I**	**0.54**	**91**	P	Pb	03 30 57.1	-0.2
KYMI				S	Sn	03 31 05.9	-1.0
	comp=E,325nm,0.2s						
AXAR	**Agios Charalam**	**0.60**	**282**	P	Pb	03 30 58.5	+0.2
AXAR				S	Sn	03 31 07.6	-0.7
AXAR				AML	AML	03 31 10.9	
	comp=E,1239μm,0.2s						
AXAR				AML	AML	03 31 11.1	
	comp=N,1220μm,0.3s						
AXAR	**Agios Charalam**	**0.60**	**282**	P	Pb	03 30 58.5	+0.2
AXAR				S	Sn	03 31 07.6	-0.7
	comp=N,620nm,0.2s						
ALNA	**Alonissos**	**0.61**	**35**	P	Pb	03 30 58.8	+0.3
ALNA				S	Sn	03 31 07.9	-0.8
AOS	**Alonnisos**	**0.64**	**35**	P	Pb	03 30 58.9	0.0
AOS				S	Sb	03 31 08.1	+0.6
AOS				AML	AML	03 31 09.9	
	comp=E,721μm,0.2s						
AOS				AML	AML	03 31 11.6	
	comp=N,854μm,0.4s						
AOS	**Alonnisos**	**0.64**	**35**	P	Pb	03 30 58.9	-0.1
AOS				S	Sb	03 31 08.1	+0.6
	comp=N,388nm,0.3s						
NEO	**Neokhori**	**0.68**	**348**	P	Pn	03 31 00.2	-0.3
NEO				AML	AML	03 31 12.6	
	comp=N,2330μm,0.3s						
NEO				AML	AML	03 31 12.7	
	comp=E,2866μm,0.3s						
NEO	**Neokhori**	**0.68**	**348**	P	Pn	03 31 00.2	-0.3
PTL	**Penteli**	**0.70**	**149**	P	Pn	03 31 00.4	-0.3
PTL				S	Sn	03 31 10.9	+0.2
PTL				AML	AML	03 31 12.5	
	comp=N,771μm,0.3s						
PTL				AML	AML	03 31 13.2	
	comp=E,653μm,0.2s						
PTL	**Penteli**	**0.70**	**149**	P	Pn	03 31 00.4	-0.3
PTL				S	Sn	03 31 10.9	+0.2
	comp=E,362nm,0.2s						
DION	**Dionisos Attik**	**0.70**	**144**	P	Pb	03 31 00.3	+0.3
DION				S	Sn	03 31 10.2	-0.6
DION				AML	AML	03 31 12.4	
	comp=E,3114μm,0.3s						
DION				AML	AML	03 31 13.2	
	comp=N,3093μm,0.4s						
DION	**Dionisos Attik**	**0.70**	**144**	P	Pb	03 31 00.3	+0.3
DION				S	Sn	03 31 10.2	-0.7
	comp=N,2μm,0.3s						
LTK	**Loutraki**	**0.71**	**209**	P	Pb	03 30 59.8	-0.3
LTK				S	Sb	03 31 10.1	+0.6
LTK				AML	AML	03 31 14.0	
	comp=E,682μm,0.5s						
LTK				AML	AML	03 31 15.3	
	comp=N,530μm,0.5s						
LTK	**Loutraki**	**0.71**	**209**	P	Pb	03 30 59.8	-0.4
LTK				S	Sb	03 31 10.2	+0.6
	comp=N,308nm,0.5s						
ATH	**Athens Observa**	**0.71**	**160**	P	Pn	03 31 00.7	-0.2
ATH				S	Sb	03 31 10.1	+0.5
ATH				AML	AML	03 31 13.6	
	comp=E,1251μm,0.2s						
ATH				AML	AML	03 31 14.2	
	comp=N,974μm,0.2s						
ATH	**Athens Observa**	**0.71**	**160**	P	Pn	03 31 00.7	-0.2
ATH				S	Sb	03 31 10.1	+0.5
	comp=N,558nm,0.2s						
DSF	**Desfina**	**0.73**	**252**	P	Pb	03 31 00.6	+0.1
DSF				AML	AML	03 31 14.4	
	comp=N,682μm,0.2s						
DSF				AML	AML	03 31 15.0	
	comp=E,570μm,0.3s						
DSF	**Desfina**	**0.73**	**252**	P	Pb	03 31 00.6	+0.1
DSF				S	Sn	03 31 11.6	0.0
	comp=E,328nm,0.2s						
DLFA	**Delphi**	**0.73**	**257**	P	Pb	03 31 00.2	-0.4
XOR	**Xorichti**	**0.74**	**347**	P	Pn	03 31 01.1	-0.3
XOR				S	Sn	03 31 11.1	-0.7
XOR				AML	AML	03 31 14.2	
	comp=E,768μm,0.5s						
XOR				AML	AML	03 31 14.2	
	comp=N,857μm,0.6s						
XOR	**Xorichti**	**0.74**	**347**	P	Pn	03 31 01.1	-0.2
XOR				S	Sn	03 31 11.1	-0.7
	comp=N,408nm,0.6s						
ATHU	**Athens Univers**	**0.74**	**156**	P	Pn	03 31 01.1	-0.3
ATHU				AML	AML	03 31 13.6	
	comp=E,201μm,0.3s						
ATHU				AML	AML	03 31 14.3	
	comp=N,420μm,0.4s						
ATHU	**Athens Univers**	**0.74**	**156**	P	Pn	03 31 01.1	-0.2
LOUT	**Loutraki**	**0.74**	**208**	P	Pb	03 31 00.7	+0.1
LOUT				S	Sn	03 31 11.9	+0.1
LOUT				AML	AML	03 31 16.3	
	comp=E,177μm,0.2s						
LOUT				AML	AML	03 31 18.0	
	comp=N,114μm,0.2s						
LOUT	**Loutraki**	**0.74**	**208**	P	Pb	03 31 00.7	+0.1
LOUT				S	Sn	03 31 11.9	+0.1
	comp=N,355nm,0.2s						
VOL2	**Volos**	**0.80**	**334**	P	Pn	03 31 05.1	+2.9
THAL	**Thalero**	**0.84**	**224**	P	Pn	03 31 02.6	-0.1
THAL				S	Sn	03 31 14.5	+0.2
THAL				AML	AML	03 31 17.5	
	comp=N,860μm,0.4s						
THAL				AML	AML	03 31 17.8	
	comp=E,792μm,0.2s						
THAL	**Thalero**	**0.84**	**224**	P	Pn	03 31 02.6	-0.1
THAL				S	Sn	03 31 14.5	+0.2
	comp=E,420nm,0.2s						
VLY	**Voula,Athens**	**0.85**	**159**	P	Pn	03 31 03.1	+0.3
VLY				AML	AML	03 31 16.6	
	comp=E,1019μm,0.2s						
VLY				AML	AML	03 31 17.3	
	comp=N,553μm,0.4s						
VLY	**Voula,Athens**	**0.85**	**159**	P	Pn	03 31 03.1	+0.3
AGG	**Agios Georgios**	**0.92**	**294**	P	Pn	03 31 04.3	+0.5
AGG				S	Sn	03 31 17.3	+1.0
AGG				AML	AML	03 31 21.8	
	comp=N,180μm,0.5s						
AGG				AML	AML	03 31 22.0	
	comp=E,167μm,0.4s						
AGG	**Agios Georgios**	**0.92**	**294**	P	Pn	03 31 04.3	+0.5
AGG				S	Sn	03 31 17.4	+1.1
	comp=E,85nm,0.4s						
AGG	**Agios Georgios**	**0.92**	**294**		P	03 31 04.1	
SKY	**Skiros Island**	**0.92**	**75**	P	Pn	03 31 04.1	+0.3
SKY				AML	AML	03 31 20.3	
	comp=E,1018μm,0.3s						
SKY				AML	AML	03 31 23.5	
	comp=N,837μm,0.2s						
SKY	**Skiros Island**	**0.92**	**75**	P	Pn	03 31 04.1	+0.3
KARY	**Karystos**	**1.01**	**127**	P	Pb	03 31 05.9	+0.6
KARY				S	Sn	03 31 19.5	+1.0
KARY				AML	AML	03 31 20.8	
	comp=N,338μm,0.4s						
KARY				AML	AML	03 31 21.4	
	comp=E,347μm,0.2s						
KARY	**Karystos**	**1.01**	**127**	P	Pb	03 31 05.9	+0.6
KARY				S	Sn	03 31 19.5	+0.9
	comp=E,172nm,0.2s						
KALE	**Kalithea**	**1.03**	**256**	P	Pb	03 31 05.7	+0.2
KALE				AML	AML	03 31 27.9	
	comp=E,217μm,0.5s						
KALE				AML	AML	03 31 29.3	
	comp=N,213μm,0.3s						
KALE	**Kalithea**	**1.03**	**256**	P	Pb	03 31 05.7	+0.2
EPID	**Epidavros**	**1.05**	**193**	P	Pb	03 31 07.1	+1.1
EPID	**Epidavros**	**1.05**	**193**	P	Pb	03 31 07.1	+1.1
MAKR	**Makrakomi, Fth**	**1.06**	**291**	P	Pb	03 31 07.7	+1.5
MAKR				S	Sn	03 31 21.7	+1.9
MAKR				AML	AML	03 31 26.3	
	comp=N,323μm,0.7s						
MAKR				AML	AML	03 31 27.4	
	comp=E,288μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.06**	**291**	P	Pb	03 31 07.7	+1.6
MAKR				S	Sn	03 31 21.7	+1.9
	comp=E,152nm,0.4s						
TRIZ	**Trizonia**	**1.08**	**255**	P	Pb	03 31 06.7	+0.2
TRIZ				S	Sn	03 31 23.1	+2.8
TRIZ	**Trizonia**	**1.08**	**255**	P	Pb	03 31 06.7	+0.2
TRIZ				S	Sn	03 31 23.1	+2.8
	comp=E,98nm,0.4s						
SERG	**Sergoula**	**1.09**	**258**	P	Pn	03 31 06.3	+0.2
SERG				AML	AML	03 31 27.0	
	comp=E,138μm,0.2s						
SERG				AML	AML	03 31 27.5	
	comp=N,173μm,0.4s						
SERG	**Sergoula**	**1.09**	**258**	P	Pn	03 31 06.2	+0.1
GUR	**Goura**	**1.10**	**230**	P	Pb	03 31 08.1	+1.3
GUR				S	Sn	03 31 22.5	+1.8
GUR				AML	AML	03 31 26.7	
	comp=E,415μm,0.4s						
GUR				AML	AML	03 31 28.0	
	comp=N,459μm,0.4s						
GUR	**Goura**	**1.10**	**230**	P	Pb	03 31 08.1	+1.3
GUR				S	Sn	03 31 22.6	+1.8
KLV	**Kalavryta, Ach**	**1.16**	**239**	P	Pb	03 31 08.7	+0.9
KLV				AML	AML	03 31 27.8	
	comp=E,65μm,0.3s						
KLV				AML	AML	03 31 28.5	
	comp=N,73μm,0.5s						
KLV	**Kalavryta, Ach**	**1.16**	**239**	P	Pb	03 31 08.7	+0.9
ANX	**Ano Chora**	**1.17**	**268**	P	Pb	03 31 08.9	+0.9
ANX	**Ano Chora**	**1.17**	**268**	P	Pb	03 31 08.9	+1.0
EFP	**Efpalio**	**1.20**	**260**	P	Pb	03 31 08.2	-0.2
EFP	**Efpalio**	**1.20**	**260**	P	Pb	03 31 08.2	-0.2
KRND	**KRANIDI**	**1.28**	**189**	P	Pb	03 31 10.4	+0.7
KRND				AML	AML	03 31 33.1	
	comp=N,177μm,0.6s						
KRND				AML	AML	03

*ISN **18** 03:33:57.6±1.9, 32°.37N×47°.42E, h15km±11km, ML3.3*
ISC 18 03:33:58.1±0.9, **32°.40N**±0°.04×**47°.30E**±0°.04, **h10**km, **n18,** σ1§**18**/22, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.21**	**22**	*e*Pg	**Pb**	**03 34 19.4**	**-1.7**
IKFM				*e*		03 34 46.2	
IBDR	**Badra**	**1.35**	**302**	*e*Pg	**Pn**	**03 34 23.0**	**0.0**
IBDR				*e*Sg	**Sg**	**03 34 44.0**	**+2.5**
IBDR				AML	AML	03 34 46.5	
	comp=E,362nm,0.6s						
IBDR				AML	AML	03 34 47.5	
	comp=N,390nm,0.4s						
IKMR	**Kamar-syah**	**1.44**	**39**	*e*Pg	**Pn**	**03 34 23.8**	**-0.4**
IKMR				*e*		03 34 48.0	
AHWZ	**Ahwaz**	**1.57**	**133**	*e*Pg	**Pb**	**03 34 27.0**	**-0.1**
AHWZ				*e*Sg	**Sg**	**03 34 48.8**	**+0.3**
IDOB	**Doab**	**1.57**	**28**	*e*Pn	**Pb**	**03 34 26.6**	**-0.7**
NSR	**Nassriya**	**1.70**	**216**	*e*Pn	**Pb**	**03 34 29.0**	**-0.4**
NSR				*e*Sn	**Sn**	**03 34 50.0**	**+0.4**
NSR				AML	AML	03 34 52.7	
	comp=E,882nm,0.4s						
IKOM	**Komasi**	**1.78**	**6**	*e*Pg	**Pb**	**03 34 30.0**	**-0.9**
IKOM				*e*		03 34 59.3	
KCHF	**Cheshme Sefid,**	**1.88**	**354**	*e*Pn	**Pn**	**03 34 30.1**	**-0.4**
KCHF				*e*		03 35 01.0	
IGHG	**Ghaleghazi**	**2.02**	**343**	*e*Pn	**Pn**	**03 34 33.4**	**+1.0**
IGHG				*e*		03 35 13.0	
HSAM	**Samen**	**2.11**	**31**	*e*	**Sg**	**03 35 08.7**	**+2.6**
IBZA	**Bozab**	**2.12**	**13**	*e*Pn	**Pn**	**03 34 34.5**	**+0.7**
IBZA				*e*		03 34 39.1	
IVIS	**Veis**	**2.15**	**350**	*e*Pn	**Pn**	**03 34 35.2**	**+1.1**
IVIS				*e*		03 35 17.0	
IDHR	**Dehrash**	**2.42**	**342**	*e*Pn	**Pn**	**03 34 38.4**	**+0.6**
IDHR				*e*		03 35 20.4	
ILIN	**Lien**	**2.53**	**354**	*e*Pn	**Pn**	**03 34 40.3**	**+0.9**
ILIN				*e*		03 35 28.7	
BHD	**Baghdad**	**2.60**	**290**	*e*Pn	**Pb**	**03 34 43.0**	**-1.8**
BHD				*e*Sn	**Sb**	**03 35 16.0**	**-0.8**
HSRG	**Sareghieh**	**2.95**	**16**	*e*	**Pg**	**03 34 54.0**	**-0.6**
IKLH	**Kolahrood**	**3.72**	**75**	*e*Pn	**Pn**	**03 34 56.2**	**+0.4**
IKLH				*e*		03 36 04.0	
IZEF	**Zefreh**	**4.28**	**82**	*e*Pn	**Pn**	**03 35 03.4**	**-0.1**

IDC 18 03:34:43.7±7.3, **7°.92S×156°.11E, h0**km, **mb4.4**/3, **mb1 4.6**/3, **mb1mx3.7**/35, **mbtmp4.4**/3, **Error ellipse: s-maj=119.3km s-min=86.5km az=29.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.23**	**238**	P	P	03 40 02.3	-0.3
	4.1nm,0.8s,baz=64,slow=9.3,SNR=7.7						
ASAR	**Alice Springs**	**26.42**	**231**	P	P	03 40 22.8	+0.3
	7.2nm,0.9s,baz=64,slow=9.5,SNR=23						
STKA	**Stephens Creek**	**27.40**	**208**	P	P	03 40 30.9	-0.2
	5.7nm,0.8s,baz=40,slow=12,SNR=5.0						

*DDA **18** 03:39:03.2, 38°.36N×26°.79E, h7km±1km, ML2.0*
*ISK **18** 03:39:03.4, 38°.38N×26°.80E, h5km, ML2.0/10*
*ATH **18** 03:39:04.0, 38°.26N×26°.64E, h36km±3km, ML2.5/1, Error ellipse: s-maj=7.5km s-min=1.1km az=77.0*
ISC 18 03:39:03.5±0.9, **38°.37N**±0°.03×**26°.79E**±0°.03, **h12**km±6km, **n23,** σ0§**77**/37, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.15**	**265**	PG	**Pg**	**03 39 07.1**	**0.0**
URLA				SG	**Sg**	**03 39 09.9**	**+0.2**
URLA	**Izmir**	**0.15**	**265**	*i* P	**Pg**	**03 39 06.7**	**-0.4**
URLA				*i* S	**Sg**	**03 39 09.8**	**+0.2**
BLCB	**Balcova**	**0.20**	**86**	PG	**Pg**	**03 39 07.9**	**+0.1**
BLCB				SG	**Sg**	**03 39 10.9**	**+0.1**
DGB	**zmir**	**0.33**	**167**	*i* P	**Pg**	**03 39 09.7**	**-0.5**
DGB				*i* S	**Sg**	**03 39 14.5**	**-0.1**
DGB				IAML		03 39 15.0	
	comp=N,271nm,0.2s						
ZEDA	**zmir-Bergama**	**0.63**	**21**	*i* P	**Pg**	**03 39 14.8**	**-1.1**
ZEDA				*i* S	**Sg**	**03 39 24.6**	**+0.4**
SMG	**Samos**	**0.67**	**177**	P	**Pg**	**03 39 16.3**	**-0.2**
SMG				S	**Sg**	**03 39 25.1**	**-0.1**
DKL	**Dikili**	**0.70**	**7**	PG	**Pg**	**03 39 17.4**	**+0.2**
GCAM	**G?zlcami?**	**0.76**	**152**	PG	**Pg**	**03 39 18.2**	**0.0**
GCAM	**G?zlcami?**	**0.76**	**152**	*i* P	**Pg**	**03 39 18.1**	**-0.1**
GCAM				*i* S	**Sg**	**03 39 27.6**	**-0.5**
GCAM				IAML		03 39 30.0	
	comp=N,60nm,0.9s						
GCAM				IAML		03 39 30.0	
	comp=E,80nm,0.4s						
AYVA	**Ayvalik**	**0.94**	**355**	*i* P	**Pg**	**03 39 21.0**	**-0.6**
AYVA				*i* S	**Sb**	**03 39 34.9**	**+0.8**
PRK	**Paraskevi**	**0.96**	**335**	P	**Pn**	**03 39 23.5**	**+0.6**
PRK				S	**Sn**	**03 39 37.8**	**+1.3**
PRK				AML	AML	03 39 38.9	
	comp=N,354μm,0.6s						
PRK				AML	AML	03 39 39.1	
	comp=E,741μm,0.6s						
AYDB	**Zeytinkoy-Aydi**	**0.97**	**116**	PG	**Pb**	**03 39 22.2**	**-0.2**
PSRA	**Psara**	**0.98**	**280**	P	**Pg**	**03 39 21.3**	**-1.0**
SIGR	**SIGRI**	**1.11**	**319**	P	**Pb**	**03 39 25.2**	**+0.5**
SIGR				S	**Sn**	**03 39 40.6**	**+0.4**
SIGR	**SIGRI**	**1.11**	**319**	PN	**Pn**	**03 39 25.4**	**+0.4**
SIGR				SN	**Sn**	**03 39 40.9**	**+0.7**
AYDN	**Tasoluk**	**1.12**	**129**	*i* P	**Pg**	**03 39 24.1**	**-1.0**
AYDN				*i* S	**Sg**	**03 39 38.5**	**-1.0**
AYDN				IAML		03 39 42.0	
	comp=N,28nm,0.5s						
AYDN				IAML		03 39 43.0	
	comp=E,25nm,0.3s						
MLSB	**Milas**	**1.33**	**144**	PN	**Pg**	**03 39 29.4**	**+0.3**
BODT	**Bodrum**	**1.37**	**162**	PN	**Pg**	**03 39 29.9**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.38**	**352**	*i* P	**Pn**	**03 39 25.9**	**-2.8**
BAYC				*i* S	**Sb**	**03 39 45.9**	**-1.0**
MANT	**Manisa**	**1.39**	**85**	*i* P	**Pn**	**03 39 29.5**	**+0.4**
MANT				*i* S	**Sn**	**03 39 48.4**	**+0.8**
KULA	**Kula-Manisa**	**1.48**	**84**	PN	**Pg**	**03 39 31.8**	**-0.1**
BALY	**Balya**	**1.51**	**25**	*i* P	**Pb**	**03 39 31.8**	**+0.2**
BALB	**Balikesir**	**1.52**	**34**	PN	**Pb**	**03 39 32.5**	**+0.7**

IDC 18 03:39:59.3±5.2, **8°.20S×156°.01E, h0**km, **mb4.2**/3, **mb1 4.4**/3, **mb1mx3.7**/32, **mbtmp4.2**/3, **Error ellipse: s-maj=90.6km s-min=70.7km az=180.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.01**	**239**	P	P	03 45 15.8	-0.3
	3.3nm,0.7s,baz=65,slow=9.5,SNR=17						
ASAR	**Alice Springs**	**26.17**	**231**	P	P	03 45 35.8	0.0
	4.9nm,0.9s,baz=64,slow=9.6,SNR=31						
STKA	**Stephens Creek**	**27.11**	**208**	P	P	03 45 44.3	+0.2
	3.5nm,0.8s,baz=20,slow=14,SNR=8.2						

IDC 18 03:40:00.6±2.7, **7°.56N×93°.90E, h0**km, **mb3.7**/3, **mb1 3.7**/3, **mb1mx3.4**/38, **mbtmp3.7**/3, **Error ellipse: s-maj=185.5km s-min=28.8km az=55.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.14**	**235**	T	T	04 12 23.7	
	baz=55,slow=75,SNR=7.5						
H08S2	**Diego Garcia H**	**26.15**	**235**	T	T	04 12 23.6	
	baz=55,slow=75,SNR=11						
H08S1	**Diego Carcia H**	**26.16**	**235**	T	T	04 12 24.7	
	baz=55,slow=75,SNR=4.1						
MKAR	**Makanchi Array**	**40.34**	**348**	P	P	03 47 40.0	0.0
	0.7nm,0.5s,baz=166,slow=7.6,SNR=5.7						
ASAR	**Alice Springs**	**49.90**	**130**	P	P	03 48 56.2	-0.1
	0.2nm,0.5s,baz=313,slow=7.5,SNR=4.2						
FINES	**FINESS Array B**	**72.88**	**332**	P	P	03 51 31.2	0.0
	1.3nm,0.8s,baz=98,slow=5.9,SNR=2.8						

IDC 18 03:45:51.9±10.0, **7°.66N×94°.30E, h0**km, **mb3.5**/3, **mb1 3.6**/3, **mb1mx3.3**/34, **mbtmp3.5**/3, **Error ellipse: s-maj=514.3km s-min=28.2km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.33**	**347**	P	P	03 53 30.4	-0.7
	0.3nm,0.6s,baz=177,slow=7.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**46.79**	**352**	P	P	03 54 23.6	+0.6
	0.6nm,0.4s,baz=166,slow=7.3,SNR=2.6						
WRA	**Warramunga Arr**	**48.01**	**125**	P	P	03 54 33.0	-0.2
	0.2nm,0.5s,baz=307,slow=8.3,SNR=2.3						

IDC 18 03:46:32.5±1.4, **7°.25N×94°.05E, h0**km, **mb3.7**/7, **mb1 3.8**/7, **mb1mx3.6**/32, **mbtmp3.7**/7, **Error ellipse: s-maj=61.6km s-min=21.1km az=56.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S3	**Diego Garcia H**	**26.09**	**236**	T	T	04 18 50.2	
	baz=55,slow=75,SNR=8.4						
H08S2	**Diego Garcia H**	**26.09**	**236**	T	T	04 18 53.1	
	baz=55,slow=75,SNR=7.3						
H08S1	**Diego Carcia H**	**26.11**	**236**	T	T	04 18 52.5	
	baz=55,slow=75,SNR=3.1						
MKAR	**Makanchi Array**	**40.68**	**348**	P	P	03 54 14.1	-0.6
	0.6nm,0.5s,baz=163,slow=8.0,SNR=5.5						
SONM	**Songino Array**	**41.79**	**12**	P	P	03 54 23.9	0.0
	1.0nm,1.0s,baz=198,slow=9.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**47.16**	**353**	P	P	03 55 07.2	+0.6
	1.0nm,0.5s,baz=180,slow=8.5,SNR=4.0						
WRA	**Warramunga Arr**	**47.97**	**125**	P	P	03 55 12.9	-0.5
	0.2nm,0.5s,baz=307,slow=8.4,SNR=5.8						
ASAR	**Alice Springs**	**49.59**	**129**	P	P	03 55 26.1	+0.2
	0.2nm,0.4s,baz=306,slow=7.9,SNR=4.0						
FINES	**FINESS Array B**	**73.22**	**332**	P	P	03 58 04.2	-1.0
	1.1nm,0.8s,baz=90,slow=3.8,SNR=3.9						
GERES	**GERESS Array B**	**78.23**	**318**	P	P	03 58 35.0	+0.6
	0.5nm,0.8s,baz=38,slow=5.0,SNR=3.0						

*IDC **18** 04:04:53.8±0.8, 11°.85N×122°.55E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/55, mbtmp3.8/9, ML4.2/1, Error ellipse: s-maj=33.9km s-min=16.8km az=69.0*
*MAN **18** 04:04:56.3, 11°.89N×122°.18E, h6km, mb4.2, ML3.0, MS2.7*
MAN Intensity III - Ibajay & Nabas, Aklan.
ISC 18 04:04:55.3±1.3, **11°.90N**±0°.03×**122°.33E**±0°.04, **h10**km±9km, **n23,** σ1§**57**/31, **mb3.7**/8, **2C-1D, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTRP	**Odiongan**	**0.55**	**327**	*e*P	**Pg**	**04 05 06.4**	**+0.3**
GUIM	**Jordan**	**1.29**	**168**	*e*P	**Pg**	**04 05 20.2**	**+0.2**
GUIM				*e*S	**Sn**	**04 05 41.2**	**+4.5**
SJMP	**San Jose**	**1.31**	**296**	*e*P	**Pn**	**04 05 20.3**	**+0.6**
SJMP				*e*S	**Sg**	**04 05 38.7**	**+1.2**
BOAC	**Boac**	**1.62**	**343**	*e*P	**Pn**	**04 05 24.1**	**+0.1**
BOAC				*e*S	**Sn**	**04 05 46.6**	**+1.6**
CUYO	**Cuyo Island**	**1.65**	**231**	*e*P	**Pn**	**04 05 24.3**	**-0.1**
CUYO				*e*S	**Sn**	**04 05 44.7**	**-1.1**
BUSP	**Coron**	**2.08**	**273**	*e*P	**Pn**	**04 05 30.8**	**+0.4**
PGP	**Puerto Galera**	**2.08**	**320**	*e*P	**Pn**	**04 05 31.9**	**+1.4**
PGP				*e*S	**Sn**	**04 05 56.9**	**+0.4**
LLP	**Lapu-Lapu**	**2.25**	**134**	*e*P	**Pb**	**04 05 35.5**	**-0.6**
LLP				*e*S	**Sb**	**04 06 02.2**	**-1.8**
LQP	**Lukban**	**2.33**	**341**	*e*P	**Pn**	**04 05 34.6**	**+0.6**
CNP	**Catarman**	**2.37**	**75**	*e*P	**Pb**	**04 05 38.5**	**+0.4**
CNP				*e*S	**Sg**	**04 06 10.0**	**-1.3**
TGY	**Tagaytay City**	**2.58**	**328**	Pn	**Pb**	**04 05 40.8**	**-0.9**
	38nm,0.3s,baz=68,slow=5.4,SNR=2.4						
LUBP	**Lubang**	**2.73**	**312**	*e*P	**Pn**	**04 05 40.3**	**+1.0**
LUBP				*e*S	**Sn**	**04 06 07.8**	**-4.7**
ENPP	**El Nido**	**2.92**	**257**	*e*P	**Pn**	**04 05 42.1**	**+0.1**
ENPP				*e*S	Sn	04 06 07.2	-10
KCP	**Kidapawan**	**5.57**	**150**	*e*P	**Pb**	**04 06 32.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**23.48**	**289**	P	**P**	**04 10 07.0**	**+1.5**
	1.0nm,0.4s,baz=109,slow=7.8,SNR=7.4						
WRA	**Warramunga Arr**	**33.78**	**159**	P	**P**	**04 11 35.7**	**-1.9**
	0.7nm,0.8s,baz=332,slow=10,SNR=4.0						
ASAR	**Alice Springs**	**37.11**	**162**	P	**P**	**04 12 05.5**	**-0.8**
	0.7nm,0.8s,baz=344,slow=7.0,SNR=5.9						
KLR	**Kul'dur**	**38.03**	**10**	P	**P**	**04 12 13.9**	**+0.1**
	1.2nm,0.6s,baz=225,slow=8.6,SNR=4.5						
NWAO	**Narrogin (SRO)**	**44.83**	**186**	P	**P**	**04 13 10.3**	**+0.6**
	6.1nm,0.7s,baz=19,slow=7.0,SNR=3.6						
MKAR	**Makanchi Array**	**48.42**	**324**	P	**P**	**04 13 38.6**	**+0.7**
	0.5nm,0.7s,baz=134,slow=10,SNR=2.9						
KURBB	**Kurchatov Arra**	**52.56**	**326**	P	**P**	**04 14 09.5**	**+0.5**
	0.3nm,0.3s,baz=132,slow=6.5,SNR=4.1						
ILAR	**Eielson Array**	**79.67**	**26**	P	**P**	**04 17 02.6**	**-0.3**
	0.5nm,0.8s,baz=229,slow=4.3,SNR=8.7						
TXAR	**Lajitas Array**	**119.60**	**46**	PKP	**PKPdf**	**04 23 46.5**	**+0.1**
	0.4nm,0.8s,baz=267,slow=2.5,SNR=3.7						

*DJA **18** 04:05:40.3±0.5, 10°.S×6°×12°.0E±°, h10km, M3.8/9, mb3.9/1, MLv3.7/9*
*IDC **18** 04:05:44.3±4.3, 10°.02S×120°.20E, h70km±44km, mb3.3/1, mb1 3.3/6, mb1mx3.1/47, mbtmp3.4/6, ML3.3/4, Error ellipse: s-maj=78.4km s-min=22.7km az=61.0*
ISC 18 04:05:40.1±1.0, **10°.21S**±0°.08×**119°.83E**±0°.05, **h35**km, **n14,** σ2§**62**/18, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**0.70**	**41**	P	**Pn**	**04 05 53.5**	**-0.1**
WBSI	**Waikabubak, Su**	**0.71**	**322**	P	**Pn**	**04 05 52.5**	**-1.2**
WBSI				S	**Sn**	**04 06 01.1**	**-2.3**
BASI	**Baing, Sumba**	**0.73**	**91**	P	**Pn**	**04 05 55.6**	**+1.6**
BASI				S	**Sn**	**04 06 05.5**	**+1.5**
EDFI	**Ende, Flores**	**2.34**	**52**	P	**Pn**	**04 06 17.1**	**+1.0**
PLAI	**Plampang**	**2.45**	**304**	P	**Pn**	**04 06 19.6**	**+2.0**
TWSI	**Taliwang, Sumb**	**3.25**	**296**	P	**Pn**	**04 06 31.3**	**+2.6**
BATI	**Baumata**	**3.77**	**90**	P	**Pn**	**04 06 34.2**	**-1.6**
	3.9nm,0.3s,baz=236,slow=7.3,SNR=4.7						
SOEI	**Soe**	**4.39**	**85**	P	**Pn**	**04 06 47.1**	**+2.7**
BKSI	**Bulukumba**	**4.86**	**3**	P	**Pn**	**04 06 52.2**	**+1.4**
KAPI	**Kappang**	**5.16**	**359**	P	**Pn**	**04 06 57.8**	**+2.9**
	2.0nm,0.3s,baz=117,slow=7.6,SNR=5.4						
FITZ	**Fitzroy Crossi**	**9.66**	**145**	P	**Pn**	**04 07 59.0**	**+2.4**
	0.2nm,0.3s,baz=332,slow=7.5,SNR=11						
FITZ				S	**Sn**	**04 09 41.8**	**-2.1**
	0.4nm,0.3s,baz=174,slow=22,SNR=7.5						
WRA	**Warramunga Arr**	**17.01**	**126**	P	**Pn**	**04 09 36.1**	**+0.6**
	0.1nm,0.3s,baz=301,slow=13,SNR=4.6						
WRA				S	**Sn**	**04 12 36.8**	**-6.9**
	0.1nm,0.3s,baz=296,slow=25,SNR=3.8						
ASAR	**Alice Springs**	**18.96**	**137**	P	**Pn**	**04 10 00.3**	**+1.0**
	baz=314,slow=13,SNR=2.3						
MKAR	**Makanchi Array**	**65.90**	**333**	P	**P**	**04 16 22.3**	**-0.1**
	0.4nm,0.6s,baz=126,slow=7.4,SNR=1.8						

*TIF **18** 04:09:41.4, 41°.19N×43°.88E, h17km*
*DDA **18** 04:09:41.1, 41°.21N×43°.90E, h18km±1km, ML2.4*
*ISK **18** 04:09:41.5, 41°.19N×43°.88E, h6km, ML2.3/7*
*NORS **18** 04:09:42.9±0.0, 41°.26N×43°.92E, h1km, MPVA3.2*
ISC 18 04:09:42.0±0.9, **41°.17N**±0°.02×**43°.89E**±0°.02, **h10**km±8km, **n34,** σ0§**85**/63, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BGD	**Bogdanovka**	**0.24**	**294**	P	**Pg**	**04 09 47.2**	**+0.2**
BGD				S	**Sg**	**04 09 51.1**	**+0.7**
DMNI	**Dmanisi**	**0.28**	**55**	P	**Pg**	**04 09 47.7**	**+0.1**
DMNI				S	**Sg**	**04 09 51.7**	**+0.2**
AKH	**Akhalkalaki**	**0.38**	**309**	P	**Pg**	**04 09 49.4**	**-0.2**
AKH				S	**Sg**	**04 09 54.6**	**-0.2**
AKH	**Akhalkalaki**	**0.38**	**309**	PG	**Pg**	**04 09 49.4**	**-0.2**
AKH				SG	**Sg**	**04 09 54.6**	**-0.2**
KZRT	**Kazreti**	**0.44**	**60**	P	**Pg**	**04 09 50.4**	**-0.3**
KZRT				S	**Sg**	**04 09 56.4**	**-0.1**
KZRT	**Kazreti**	**0.44**	**60**	*i* P	**Pg**	**04 09 49.4**	**-1.3**
KZRT				*i* S	**Sg**	**04 09 55.7**	**-0.8**
EAK	**Akyaka**	**0.53**	**204**	*i* P	**Pg**	**04 09 51.9**	**-0.4**
EAK				*i* S	**Sg**	**04 09 59.7**	**+0.4**
EAK				IAML		04 10 00.0	
	comp=N,240nm,0.1s						
EAK				IAML		04 10 00.0	
	comp=E,656nm,0.2s						
BKRG	**Bakuriani**	**0.65**	**335**	P	**Pg**	**04 09 54.4**	**-0.3**
BKRG				S	**Sg**	**04 10 03.5**	**+0.3**
KARS	**Kars**	**0.82**	**229**	PG	**Pb**	**04 09 57.8**	**-0.6**
KARS				SG	**Sb**	**04 10 09.7**	**+0.2**
DIGO	**Kars**	**0.85**	**208**	*i* P	**Pb**	**04 09 57.8**	**-1.2**
DIGO				*i* S	**Sb**	**04 10 09.6**	**-0.9**
DIGO				IAML		04 10 10.0	
	comp=E,118nm,0.3s						
DIGO				IAML		04 10 14.0	
	comp=N,151nm,0.3s						
BTNK	**Botanikuri**	**0.85**	**53**	P	**Pb**	**04 09 58.4**	**-0.5**
BTNK				S	**Sb**	**04 10 10.1**	**-0.3**
SEAG	**Tbilisi Sea**	**0.91**	**49**	P	**Pb**	**04 09 58.8**	**-1.0**
SEAG				S	**Sb**	**04 10 11.0**	**-1.0**
EPOS	**Posof**	**0.94**	**291**	*i* P	**Pb**	**04 09 59.3**	**-1.1**
EPOS				*i* S	**Sb**	**04 10 10.1**	**-2.8**
EPOS				IAML		04 10 14.0	
	comp=N,67nm,0.4s						
GNI	**Garni**	**1.21**	**147**	PN	**Pn**	**04 10 05.3**	**+0.3**
GNI				SN	**Sb**	**04 10 22.7**	**+2.0**
TASB	**TASBURUN-IGDIR**	**1.21**	**167**	PN	**Pn**	**04 10 04.8**	**-0.2**
SENK	**Senkaya-Erzuru**	**1.32**	**243**	PN	**Pn**	**04 10 06.9**	**+0.3**
TKB	**Tkibuli**	**1.36**	**331**	P	**Pn**	**04 10 06.8**	**-0.2**
TKB				S	**Sn**	**04 10 24.8**	**-0.3**
GUDG	**Gudauri**	**1.37**	**19**	P	**Pn**	**04 10 06.9**	**-0.4**
GUDG				S	**Sn**	**04 10 25.0**	**-0.6**
GUDG	**Gudauri**	**1.37**	**19**	*e*Pg	**Pn**	**04 10 06.9**	**-0.4**
GUDG				*e*Sg	**Sn**	**04 10 25.4**	**-0.2**
ONI	**Oni**	**1.46**	**347**	P	**Pn**	**04 10 08.4**	**0.0**
ONI				S	**Sb**	**04 10 28.0**	**+0.1**
ONI	**Oni**	**1.46**	**347**	*e*Pg	**Pn**	**04 10 08.5**	**0.0**
ONI				*e*Sg	**Sb**	**04 10 28.2**	**+0.3**
DAGI	**Agillar**	**1.50**	**267**	*i* P	**Pn**	**04 10 07.9**	**+1.0**
DAGI				*i* S	**Sn**	**04 10 27.8**	**-0.8**
PNSH	**Pansheti**	**1.56**	**20**	P	**Pn**	**04 10 09.2**	**-0.8**
PNSH				S	**Sn**	**04 10 30.6**	**+0.3**
ZEI	**Tsey**	**1.62**	**0**	*e*Pg	**Pn**	**04 10 11.7**	**+1.0**
ZEI				*e*Sg	**Sb**	**04 10 33.6**	**+1.0**
DDEM	**Demirkent**	**1.64**	**261**	*i* P	**Pn**	**04 10 10.7**	**-0.3**
DDEM				*i* S	**Sn**	**04 10 33.7**	**+1.5**
DDEM				IAML		04 10 37.0	
	comp=N,43nm,0.4s						
DDEM				IAML		04 10 38.0	
	comp=E,35nm,0.3s						
DBAD	**Bademkaya**	**1.67**	**266**	*i* P	**Pn**	**04 10 12.2**	**+0.9**
DBOC	**Borcka**	**1.69**	**277**	*i* P	**Pn**	**04 10 13.0**	**+1.4**
DBOC				*i* S	**Sn**	**04 10 34.0**	**+0.8**
LACR	**Lac**	**1.69**	**10**	*e*Pg	**Pn**	**04 10 12.3**	**+0.7**
LACR				*e*Sg	**Sb**	**04 10 34.5**	**+0.1**
AGRB	**Hanur-Agry**	**1.73**	**204**	PN	**Pn**	**04 10 13.1**	**+0.8**
DIGR	**Digorskoe uzhe**	**1.75**	**353**	*e*Pg	**Pb**	**04 10 15.1**	**+0.9**
DIGR				*e*Sg	**Sg**	**04 10 38.3**	**+0.2**
LGD	**Lagodekhi**	**1.89**	**69**	P	**Pn**	**04 10 15.6**	**+1.3**
LGD				S	**Sb**	**04 10 40.8**	**+0.6**
KORR	**Kora**	**1.92**	**4**	*e*Pg	**Pb**	**04 10 18.3**	**+1.2**
KORR				*e*Sg	**Sg**	**04 10 44.0**	**+0.3**
KOPR	**Koprukoy-ERZUR**	**1.95**	**233**	PN	**Pn**	**04 10 16.9**	**+1.7**
LSNR	**Lesken**	**2.11**	**359**	*e*Pg	**Pb**	**04 10 21.0**	**+0.7**
LSNR				*e*Sg	**Sg**	**04 10 49.0**	**-0.8**

*IDC **18** 04:10:35.5±1.3, 7°.34N×94°.45E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.6/55, mbtmp3.8/8, ML4.5/1, Error ellipse: s-maj=64.1km s-min=19.2km az=59.0*
ISC 18 04:10:39.3±1.3, **7°.3N**±0°.2×**94°.5E**±0°.3, **h24**km, **n11,** σ1§**10**/9, **mb3.8**/7, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.88**	**21**	Pn	**Pn**	**04 13 27.4**	**+0.2**
	0.9nm,0.3s,baz=207,slow=14,SNR=6.4						
H08S3	**Diego Garcia H**	**26.49**	**236**	T	T	04 42 55.8	
	baz=56						
H08S2	**Diego Garcia H**	**26.49**	**236**	T	T	04 42 57.0	
	baz=56,slow=74,SNR=14						
H08S1	**Diego Carcia H**	**26.50**	**236**	T	T	04 42 58.2	
	baz=56,slow=74,SNR=5.3						
MKAR	**Makanchi Array**	**40.67**	**347**	P	**P**	**04 18 16.4**	**-1.4**
	1.2nm,0.6s,baz=168,slow=8.3,SNR=7.7						
KURBB	**Kurchatov Arra**	**45.13**	**346**	P	**P**	**04 18 53.2**	**-0.6**
	2.5nm,0.7s,baz=170,slow=7.1,SNR=11						
ZALV	**Zalesovo Beam**	**47.12**	**352**	P	**P**	**04 19 09.6**	**+0.2**
	1.0nm,0.4s,baz=178,slow=7.5,SNR=6.0						
WRA	**Warramunga Arr**	**47.70**	**125**	P	**P**	**04 19 14.7**	**+0.3**
	0.2nm,0.6s,baz=304,slow=8.9,SNR=4.9						
ASAR	**Alice Springs**	**49.33**	**130**	P	**P**	**04 19 25.8**	**-1.2**
	0.2nm,0.4s,baz=306,slow=8.2,SNR=3.5						
ASAR				PcP	**PcP**	**04 20 50.2**	**+0.7**
	0.5nm,0.6s,baz=312,slow=3.2,SNR=5.2						
FINES	**FINESS Array B**	**73.32**	**332**	P	**P**	**04 22 08.2**	**-0.5**
	2.0nm,0.7s,baz=130,slow=7.7,SNR=6.5						
NOA	**NORSAR Array B**	**80.34**	**331**	P	**P**	**04 22

*JMA **18** 04:15:37.0±0.1,25°.00N×123°.58E,h12km,M3.2*
*IDC **18** 04:15:39.1±1.2,24°.71N×124°.07E,h0km,mb3.7/5, mb1 3.8/5,mb1mx3.4/49,mbtmp3.7/5,Error ellipse: s-maj=58.9km s-min=21.1km az=75.0*
ISC 18 04:15:37.9±2.1,24°.93N±0°.10×123°.59E±0°.04,h5km±15km, n13,σ1§12/19,mb3.7/5,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.61**	**168**	**P**	**Pg**	**04 15 49.9**	**+0.3**
IRIF				S	**Sg**	**04 15 59.1**	**+1.6**
YOJ	**Yonaguni jima**	**0.71**	**229**	**P**	**Pg**	**04 15 51.1**	**-0.4**
YOJ				S	**Sg**	**04 16 00.5**	**-0.2**
JISG	**Ishigakijimahi**	**0.74**	**118**	**P**	**Pg**	**04 15 51.9**	**-0.2**
JISG				S	**Sb**	**04 16 02.9**	**-0.7**
JIJ	**Ishigaki jima**	**0.76**	**138**	**P**	**Pg**	**04 15 52.0**	**-0.4**
JIJ				S	**Sg**	**04 16 02.5**	**+0.3**
JYNG	**Yonagunijimaku**	**0.76**	**231**	**P**	**Pg**	**04 15 52.1**	**-0.4**
JYNG				S	**Sg**	**04 16 02.7**	**+0.3**
JKRS	**Kuro-shima**	**0.79**	**151**	**P**	**Pg**	**04 15 53.2**	**+0.1**
JKRS				S	**Sg**	**04 16 04.3**	**+1.0**
HATJ	**Hateruma jima**	**0.89**	**167**	**P**	**Pg**	**04 15 54.9**	**-0.2**
HATJ				S	**Sg**	**04 16 07.7**	**+1.1**
JTJ	**Tarama**	**1.05**	**106**	**P**	**Pb**	**04 15 57.3**	**-1.3**
JTJ				S	**Sb**	**04 16 11.6**	**-1.0**
KLR	**Kul'dur** 1.2nm,0.7s,baz=250,slow=12,SNR=3.6	**25.08**	**13**	**P**	**P**	**04 21 06.3**	**+3.0**
SONM	**Songino Array** 0.4nm,0.4s,baz=134,slow=8.3,SNR=3.6	**26.61**	**334**	P	P	04 21 23.4	+6.1
MKAR	**Makanchi Array** 6.3nm,1.3s,baz=98,slow=10,SNR=4.7	**39.36**	**314**	P	P	04 23 13.6	+5.3
WRA	**Warramunga Arr** 0.9nm,0.7s,baz=348,slow=8.7,SNR=7.0	**45.81**	**166**	**P**	**P**	**04 23 59.9**	**-1.0**
ASAR	**Alice Springs** 0.4nm,0.7s,baz=352,slow=12,SNR=4.2	**49.33**	**168**	**P**	**P**	**04 24 28.2**	**0.0**

*GII **18** 04:21:33.4±0.0,34°.63N×33°.34E,h2km,Mm1.9/6*
*NIC **18** 04:21:34.1±0.0,34°.71N×33°.11E,h17km,Ml2.6/4*
ISC 18 04:21:34.0±1.0,34°.69N±0°.05×33°.14E±0°.03,h19km±2km, n21,σ0§50/33,Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASGA	**Asgata**	**0.13**	**43**	P	**Pg**	**04 21 38.3**	**+0.1**
ASGA				S	**Sg**	**04 21 41.8**	**+0.8**
ASGA	10nm,0.3s			AML	AML	04 21 42.4	
ASGA	10nm,0.3s			AML	AML	04 21 42.4	
ASGA	9.0nm,0.2s			AML	AML	04 21 42.4	
ASGA	9.0nm,0.2s			AML	AML	04 21 42.4	
SZAC	**Souni**	**0.22**	**287**	P	**Pb**	**04 21 38.6**	**-0.4**
SZAC	14nm,0.3s			AML	AML	04 21 42.4	
SZAC	14nm,0.3s			AML	AML	04 21 42.4	
SZAC	6.1nm,0.2s			AML	AML	04 21 42.4	
SZAC	6.1nm,0.2s			AML	AML	04 21 42.4	
SZAC				S	**Sb**	**04 21 42.7**	**+0.4**
CSS	**Mathiatis**	**0.32**	**30**	Pg	**Pg**	**04 21 40.4**	**-0.5**
CSS				Sg	**Sg**	**04 21 45.2**	**-0.4**
CSS	**Mathiatis**	**0.32**	**30**	P	**Pg**	**04 21 40.9**	**0.0**
CSS				S	**Sg**	**04 21 45.9**	**+0.3**
NATA	**Nata**	**0.48**	**281**	P	**Pg**	**04 21 43.4**	**-0.3**
NATA				S	**Sg**	**04 21 49.8**	**-0.4**
NATA	1.2nm,0.7s			AML	AML	04 21 56.5	
NATA	1.2nm,0.7s			AML	AML	04 21 56.5	
NATA	1.4nm,0.4s			AML	AML	04 21 57.8	
NATA	1.4nm,0.4s			AML	AML	04 21 57.8	
MVOU	**Mavrovouni**	**0.52**	**51**	P	**Pg**	**04 21 44.7**	**+0.2**
MVOU				S	**Sb**	**04 21 52.8**	**+1.2**
ALFC	**Alefka**	**0.64**	**317**	P	**Pb**	**04 21 46.2**	**-0.4**
ALFC				S	**Sb**	**04 21 55.0**	**-0.1**
ALFC	0.7nm,0.5s			AML	AML	04 21 59.1	
ALFC	0.7nm,0.5s			AML	AML	04 21 59.1	
ALFC	0.7nm,0.4s			AML	AML	04 21 59.4	
ALFC	0.7nm,0.4s			AML	AML	04 21 59.4	
AKMS	**Akamas**	**0.74**	**297**	P	**Pb**	**04 21 48.1**	**-0.1**
AKMS				S	**Sg**	**04 21 58.8**	**+0.5**
OSC2	**CSNet OBS 4**	**1.77**	**204**	P	**Pn**	**04 22 03.9**	**+0.4**
OSC1	**CSNet OBS 1**	**1.95**	**233**	S	**Sn**	**04 22 30.2**	**+0.3**
MMA0B	**Mount Meron ar**	**2.52**	**131**	Sn	**Sn**	**04 22 43.4**	**-0.7**
GEM	**Giv'at Ha'Em**	**2.56**	**124**	Sn	**Sn**	**04 22 44.7**	**-0.5**
OFRI	**`Ofer**	**2.57**	**143**	Sn	**Sn**	**04 22 44.7**	**-0.8**
NATI	**Neve Ativ**	**2.59**	**123**	Pn	**Pn**	**04 22 13.8**	**-1.0**
NATI				Sn	**Sn**	**04 22 45.1**	**-0.6**
HMDT	**Nahal Hemdat**	**3.14**	**140**	Pn	**Pn**	**04 22 22.2**	**-0.3**
HMDT				Sn	**Sn**	**04 22 59.7**	**+0.2**
DSI	**Dead Sea**	**3.63**	**148**	Pn	**Pn**	**04 22 29.3**	**+0.1**
DSI				Sn	**Sn**	**04 23 11.1**	**-0.5**
YTIR	**Yattir**	**3.71**	**153**	Sn	**Sn**	**04 23 13.9**	**+0.3**
MDBI	**Mazsada**	**3.85**	**150**	Pn	**Pn**	**04 22 31.9**	**-0.2**
MDBI				Sn	**Sn**	**04 23 16.7**	**-0.1**
PRNI	**Paran**	**4.60**	**159**	Pn	**Pn**	**04 22 42.8**	**+0.2**
MBRI	**Mt Berech**	**5.11**	**162**	Pn	**Pn**	**04 22 49.9**	**+0.4**
EIL	**Elat**	**5.24**	**162**	Pn	**Pn**	**04 22 51.5**	**+0.3**

*IDC **18** 04:23:47.9±1.4,7°.16N×93°.99E,h0km,mb3.7/7,mb1 3.8/7, mb1mx3.6/44,mbtmp3.7/7,Error ellipse: s-maj=61.3km s-min=21.3km az=56.0*
ISC 18 04:23:51.0±1.4,7°.1N±0°.2×93°.8E±0°.2,h21km,n11,σ0§87/8, mb3.5/7,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRTT	**Trang**	**5.85**	**82**	P	**Pn**	**04 25 17.2**	**+0.6**
H08S3	**Diego Garcia H** baz=55,slow=75,SNR=27	**25.83**	**236**	T	T	04 56 03.4	
H08S2	**Diego Garcia H** baz=55,slow=75,SNR=9.7	**25.84**	**236**	T	T	04 56 04.6	
H08S1	**Diego Carcia H** baz=55,slow=75,SNR=5.4	**25.85**	**236**	T	T	04 56 04.2	
MKAR	**Makanchi Array** 1.3nm,0.7s,baz=159,slow=7.8,SNR=9.3	**40.78**	**348**	P	**P**	**04 31 30.2**	**-0.6**
SONM	**Songino Array** 0.2nm,0.4s,baz=185,slow=8.7,SNR=2.4	**41.98**	**13**	P	**P**	**04 31 40.2**	**-0.5**
ZALV	**Zalesovo Beam** 0.8nm,0.4s,baz=182,slow=11,SNR=3.9	**47.29**	**353**	P	**P**	**04 32 22.8**	**0.0**
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=307,slow=8.6,SNR=6.7	**48.06**	**125**	P	**P**	**04 32 28.1**	**-1.3**
ASAR	**Alice Springs** 0.2nm,0.5s,baz=302,slow=7.2,SNR=4.9	**49.65**	**129**	P	**P**	**04 32 41.9**	**+0.3**
FINES	**FINESS Array B** 2.3nm,0.8s,baz=95,slow=9.9,SNR=4.6	**73.26**	**332**	P	**P**	**04 35 20.6**	**+0.1**
GERES	**GERESS Array B** 0.3nm,0.6s,baz=97,slow=8.0,SNR=3.0	**78.20**	**318**	P	**P**	**04 35 50.2**	**+0.9**

*WEL **18** 04:28:22.7,38°.5±9°.×18°.0E±°,h33km,M3.4/11,ML3.6/11, MLv3.4/11,Error ellipse: s-maj=0.0km s-min=0.0km az=126.1*
*IDC **18** 04:28:29.1±3.1,36°.80S×178°.49E,h0km,mb3.6/2, mb1 3.8/2,mb1mx3.6/25,mbtmp3.6/2,Error ellipse: s-maj=67.9km s-min=29.6km az=111.0*
ISC 18 04:28:23.1±3.7,37°.5S±0°.1×180°.0E±0°.1,h28km±21km,n17, σ0§51/28,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.26**	**256**	P	**Pn**	**04 28 44.7**	**0.0**
WMGZ				S	**Sb**	**04 29 01.0**	**-0.9**
MXZ	**Matakaoa Point**	**1.31**	**268**	P	**Pn**	**04 28 45.2**	**-0.2**
MXZ				S	**Sn**	**04 29 02.0**	**0.0**
PUZ	**Puketiti**	**1.45**	**248**	P	**Pn**	**04 28 47.2**	**-0.3**
PUZ				S	**Sn**	**04 29 05.4**	**-0.1**
CNGZ	**Carnagh Statio**	**1.68**	**235**	P	**Pn**	**04 28 50.9**	**+0.4**
CNGZ				S	**Sb**	**04 29 14.9**	**+0.9**
TWGZ	**Tauwhareparae**	**1.69**	**247**	P	**Pn**	**04 28 51.5**	**+0.7**
TWGZ				S	**Sn**	**04 29 11.8**	**+0.3**
HAZ	**Te Kaha**	**1.74**	**262**	P	**Pn**	**04 28 51.8**	**+0.4**
RUGZ	**Raukumara Rang**	**1.86**	**256**	P	**Pn**	**04 28 53.5**	**+0.4**
TKGZ	**Te Karaka**	**1.90**	**241**	P	**Pn**	**04 28 53.8**	**+0.3**
TKGZ				S	**Sn**	**04 29 16.4**	**0.0**
MWZ	**Matawai**	**2.08**	**247**	P	**Pn**	**04 28 56.3**	**+0.1**
MWZ				S	**Sn**	**04 29 20.2**	**-0.9**
RIGZ	**Rimuhau**	**2.09**	**235**	P	**Pn**	**04 28 56.1**	**-0.2**
RIGZ				S	**Sn**	**04 29 20.9**	**-0.5**
PRGZ	**Paritu Road**	**2.14**	**229**	P	**Pn**	**04 28 56.7**	**-0.3**
PRGZ				S	**Sn**	**04 29 22.6**	**-0.1**
RAGZ	**Rawiri**	**2.23**	**244**	P	**Pn**	**04 28 59.3**	**+1.2**
RAGZ				S	**Sn**	**04 29 24.9**	**+0.1**
MHGZ	**Mahia Peninsul**	**2.29**	**224**	P	**Pn**	**04 28 58.5**	**-0.4**
URZ	**Urewera** 9.3nm,0.3s,baz=39,slow=2.2,SNR=31	**2.37**	**251**	Pn	**Pn**	**04 29 00.5**	**+0.6**
URZ				Sn	**Sn**	**04 29 28.0**	**0.0**
ASAR	**Alice Springs** 0.4nm,0.4s,baz=123,slow=6.8,SNR=5.9	**41.58**	**276**	P	**P**	**04 36 08.8**	**+0.3**
WRA	**Warramunga Arr** 0.3nm,0.4s,baz=120,slow=7.8,SNR=9.1	**43.22**	**281**	P	**P**	**04 36 21.3**	**-0.5**
FINES	**FINESS Array B** 2.4nm,1.0s,baz=58,slow=3.4,SNR=3.8	**151.04**	**334**	PKPbc	**PKPab**	**04 48 20.2**	**+0.2**

*RSNC **18** 04:30:54.2±0.7,9°.06N×77°.91W,h43km±9km,ML2.3*
*UPA **18** 04:30:54.1±0.6,9°.07N×77°.90W,h40km±7km,MW3.0*
ISC 18 04:30:53.9±1.3,9°.06N±0°.07×77°.89W±0°.03,h42km±24km, n17,σ0§64/28,1D,Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPD2	**Meteti**	**0.52**	**193**	*i*P	**Pn**	**04 31 04.8**	**-0.2**
UPD2				*e*S	**Sn**	**04 31 13.3**	**+0.1**
UPD2	comp=Z,208nm,0.2s			*i*		04 31 15.2	
UPD2	**Meteti**	**0.52**	**193**	*e*P	**Pn**	**04 31 04.8**	**-0.2**
UPD2				*e*S	**Sn**	**04 31 13.2**	**+0.3**
CAP2	**Capurgana**	**0.67**	**127**	*i* P	**Pn**	**04 31 06.9**	**-0.1**
CAP2				*e*S	**Sn**	**04 31 16.9**	**+0.6**
CAPC	**Capurgana**	**0.68**	**128**	*e*P	**Pn**	**04 31 06.8**	**-0.3**
CAPC				*e*S	**Sn**	**04 31 16.9**	**+0.2**
CAPC	comp=Z,172nm,0.1s			*i*		04 31 19.8	
CNTA3	**Canitas, Panam**	**0.99**	**279**	*e*P	**Pn**	**04 31 09.5**	**-1.9**
CNTA3				*e*S	**Sn**	**04 31 25.6**	**+1.3**
CHPO	**Chepo, Panama**	**1.21**	**275**	*e*P	**Pn**	**04 31 14.5**	**+0.1**
CHPO				*i* S	**Sn**	**04 31 29.4**	**-0.2**
CHPO				*e*S		04 31 30.7	
LCBC	**Los crdobas,**	**1.52**	**97**	*e*P	**Pn**	**04 31 18.8**	**+0.1**
LCBC				*e*S	**Sn**	**04 31 38.1**	**+0.9**
LCBC	comp=Z,34nm,0.8s			*i*		04 31 43.4	
UPA	**Univ. de Panam**	**1.62**	**267**	*e*P	**Pn**	**04 31 19.5**	**-0.5**
ARRA3	**Arraijan, Pana**	**1.74**	**267**	*e*P	**Pn**	**04 31 22.3**	**+0.6**
CHOR3	**La Chorrera**	**1.85**	**265**	*e*P	**Pn**	**04 31 23.6**	**+0.4**
PTAC	**Punta Ardita,**	**1.90**	**177**	*e*P	**Pn**	**04 31 23.8**	**-0.1**
PTAC				*e*S	**Sn**	**04 31 46.2**	**-0.4**
ZANG	**Zanguenga, Cho**	**1.95**	**267**	*e*P	**Pn**	**04 31 25.5**	**+0.9**
MOTC	**Monteria, Cord**	**2.22**	**97**	*e*P	**Pn**	**04 31 27.8**	**-0.4**
MOTC				*e*S	**Sn**	**04 31 54.3**	**-0.2**
MONA	**Monteria**	**2.23**	**97**	*e*P	**Pn**	**04 31 27.8**	**-0.6**
AZU	**Azuero**	**2.67**	**242**	*e*P	**Pn**	**04 31 34.5**	**0.0**
AZU				*e*S	**Sn**	**04 32 05.3**	**-0.2**
SJCC	**San Jacinto, C**	**2.81**	**72**	*e*P	**Pn**	**04 31 36.6**	**+0.3**
SJCC				*e*S	**Sn**	**04 32 08.4**	**-0.6**
SJCC	comp=Z,2.2nm,0.5s			*i*		04 32 08.6	
GMAL	**Guarumal, Vera**	**3.54**	**249**	*e*P	**Pn**	**04 31 46.3**	**-0.2**

*IDC **18** 04:47:13.5±0.3,1°.88N×126°.24E,h0km,mb5.6/49, mb1 5.6/52,mb1mx5.6/53,mbtmp5.6/52,ML4.8/3,MS5.1/22, Ms1 5.1/22,ms1mx5.0/36,Error ellipse: s-maj=12.4km s-min=8.2km az=71.0*
*NEIC **18** 04:47:16.6±1.8,1°.87N±0°.05×126°.48E±0°.05,h30km±1km, mb5.9/229,Ms_20 5.4/465,Mww5.8,Mwc5.8(GCMT),Error ellipse: s-maj=9.2km s-min=7.4km az=209.0*
*MOS **18** 04:47:17.8±1.1,1°.89N×126°.34E,h45km,mb6.1/77, MS5.3/32,Error ellipse: s-maj=6.6km s-min=3.7km az=112.9*
*BJI **18** 04:47:18.3±0.0,1°.82N×126°.27E,h59km,mB5.9/74, mb5.6/87,Ms5.6/92,Ms7 5.5/87*
*KLM **18** 04:47:20.0,1°.95N×126°.65E,h43km,mb6.0*
*GCMT **18** 04:47:20.6±0.1,1°.79N±0°.01×126°.37E±0°.01,h31km, MW5.8/150,Moment Tensor Solution. s144,c270; s150,c397; Duration: 1§9 Moment tensor: Scale 10^17 Nm; Mrr4.93±.06; Mθθ-3.44±.04; Mϕϕ-1.49±.04; Mrθ3.10±.07; Mθϕ-1.87±.03; Mϕr0.28±.07; Best double couple: Mo5.66500×10^17 NP1:ϕs228.00000°,δ31.00000°, λ70.00000°. NP2:ϕs72.00000°,δ61.00000°,λ102.00000°. Principal axes: T 5.9680, Plg71.0000°, Azm8.0000°; N -0.6060, Plg10.0000°, Azm246.0000°; P -5.3610, Plg16.0000°, Azm153.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*DJA **18** 04:47:20.9±0.2,2°.N±2°.×12°.6E±°,h51km±2km,M5.7/109, mb5.6/109,mB6.1/100,MLv5.9/18,Mw(mB)5.8/100, Mwp5.7/53*
*NEIC **18** 04:47:21,1°.89N×126°.40E,h30km,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr3.86; Mθθ-2.50; Mϕϕ-1.36; Mrθ6.30; Mθϕ-0.72; Mϕr1.06; Fault plane solution: Mo7.27000×10^17 NP1:ϕs243.00000°, δ14.00000°,λ75.00000°. NP2:ϕs78.00000°,δ76.00000°, λ94.00000°. Principal axes: T 7.7680, Plg59.0000°, Azm354.0000°; N -1.1282, Plg4.0000°, Azm258.0000°; P -6.6398, Plg31.0000°, Azm165.0000°;*
*NEIC **18** 04:47:22, 1°.76N×126°.38E,h30km,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr4.24; Mθθ-3.34; Mϕϕ-0.90; Mrθ4.18; Mθϕ-1.84; Mϕr0.20; Fault plane solution: Mo5.99000×10^17 NP1:ϕs227.00000°, δ26.00000°,λ61.00000°. NP2:ϕs79.00000°,δ68.00000°, λ103.00000°. Principal axes: T 6.1387, Plg65.0000°, Azm11.0000°; N -0.3116, Plg12.0000°, Azm254.0000°; P -5.8270, Plg22.0000°, Azm159.0000°;*
ISC 18 04:47:19.7±0.3,1°.88N±0°.02×126°.39E±0°.03,h49km±2km, h49km:pP-P,n1655,σ1§72/1514,mb5.9/259,MS5.3/312, 120C-44D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.47**	**139**	P	**Pn**	**04 47 42.4**	**-1.3**
TNTI				S	**Sn**	**04 48 02.5**	**+0.7**
TNTI	**Ternate**	**1.47**	**139**	Pn	**Pn**	**04 47 42.3**	**-1.4**
TNTI				Sn	**Sn**	**04 47 58.5**	**-3.3**
MNI	**Manado**	**1.61**	**254**	P	**Pn**	**04 47 46.0**	**+0.3**
SGSI	**Sangihe**	**1.99**	**334**	P	**Pn**	**04 47 50.7**	**-0.2**
SGSI				S	**Sn**	**04 48 14.7**	**0.0**
LBMI	**Labuha**	**2.73**	**156**	P	**Pn**	**04 48 01.3**	**+0.2**
KMSI	**Cibinong**	**2.74**	**242**	P	**Pn**	**04 48 02.9**	**+1.8**
GTOI	**Gorontalo**	**3.60**	**250**	P	**Pn**	**04 48 14.4**	**+1.4**
DDMP	**Don Marcelino,**	**4.25**	**351**	*e*P	**Pn**	**04 48 21.3**	**-0.6**
LUWI	**Luwuk**	**4.64**	**231**	P	**Pn**	**04 48 28.9**	**+1.6**
LUWI	**Luwuk**	**4.64**	**231**	Pn	**Pn**	**04 48 28.8**	**+1.5**
LUWI				Sn	**Sn**	**04 49 21.2**	**+1.3**
MRSI	**Marisa**	**4.67**	**253**	P	**Pn**	**04 48 29.2**	**+1.6**
SKMP	**Bagumbayan, Su**	**4.96**	**338**	*e*P	**Pn**	**04 48 31.0**	**-0.7**
MATI	**Mati**	**5.04**	**358**	*e*P	**Pn**	**04 48 31.2**	**-1.5**
NLAI	**Namlea** 4.2nm10µm699nm,1.4s	**5.13**	**172**	P	**Pn**	**04 48 34.6**	**+0.6**
DAV	**Davao City (W)** 43nm,0.3s,baz=62,slow=4.6,SNR=19	**5.22**	**351**	Pn	**Pn**	**04 48 33.8**	**-1.4**
DAV	72nm,0.3s,baz=217,slow=9.5,SNR=5.6			Sn	**Sn**	**04 49 40.5**	**+6.3**
DAV	**Davao City (W)**	**5.22**	**351**		**Pn**	**04 48 36.4**	**+1.1**
DAV	**Davao City (W)**	**5.22**	**351**	*e*P	**Pn**	**04 48 38.2**	**+2.9**
KCP	**Kidapawan**	**5.26**	**346**	*i*P	**Pn**	**04 48 37.2**	**+1.4**
KCP				*i* S	Sn	04 49 46.6	+11
APSI	**Ampana** 19nm21µm69µm6µm,1.1s	**5.50**	**240**	P	**Pn**	**04 48 42.2**	**+3.2**
SIJI	**Sorong** 540nm,0.3s,baz=270,slow=16,SNR=1.3	**5.58**	**119**	Pn	**Pn**	**04 48 39.9**	**-0.4**
MSAI	**Masohi** 2.1nm9µm628nm,1.6s	**5.78**	**154**	P	**Pn**	**04 48 44.7**	**+1.8**
AAI	**Ambon** 5.1nm53µm15µm1µm,1.0s	**5.81**	**162**	P	**Pn**	**04 48 44.8**	**+1.4**
AAI	**Ambon** comp=Z,1µm,1.0s	**5.81**	**162**	P pmax	**Pn** pmax	**04 48 45.6**	**+2.2**
BUKP	**Musuan**	**6.11**	**347**	*e*P	**Pn**	**04 48 50.0**	**+2.5**
BIP	**Bislig**	**6.30**	**359**	*e*P	**Pn**	**04 48 52.2**	**+2.1**
BIP				*e*S	**Sn**	**04 50 03.5**	**+2.6**
ZCP	**Zamboanga City**	**6.61**	**320**	*e*P	**Pn**	**04 48 54.9**	**+0.5**
PAGZ	**Pagadian**	**6.64**	**333**	*e*P	**Pn**	**04 48 53.6**	**-1.1**
MPSI	**Mapaga** comp=Z,3.3nmcomp=Z,56µmcomp=Z,13µmcomp=Z,985nm,0.9s	**6.67**	**257**	P	**Pn**	**04 48 58.2**	**+3.0**
CGP	**Cagayan de Oro**	**6.75**	**346**	*e*P	**Pn**	**04 48 59.3**	**+3.1**
BNDI	**Bandanaira** comp=Z,9.8nmcomp=Z,48µmcomp=Z,34µmcomp=Z,2µm,1.8s	**7.26**	**151**	P	**Pn**	**04 49 04.4**	**+1.1**
FAKI	**Fak Fak** comp=Z,4.4nmcomp=Z,45µmcomp=Z,26µmcomp=Z,1µm,1.6s	**7.55**	**129**	P	**Pn**	**04 49 10.4**	**+3.2**
FAKI	**Fak Fak**	**7.55**	**129**	Pn	**Pn**	**04 49 06.8**	**-0.4**
GLSP	**General Luna,**	**7.86**	**358**	*e*P	**Pn**	**04 49 12.2**	**+0.8**
TBP	**Tagbilaran**	**8.16**	**342**	*e*P	Pn	04 49 06.2	-9.4
TTSI	**Tana Toraja** comp=Z,19µmcomp=Z,13µmcomp=Z,1µm,1.5s	**8.19**	**233**	P	**Pn**	**04 49 18.0**	**+2.0**
MSLP	**Maasin**	**8.34**	**350**	*e*P	**Pn**	**04 49 19.7**	**+1.7**
RKPI	**Ransiki, Papua** comp=Z,22µmcomp=Z,1µm,1.4s	**8.48**	**113**	P	**Pn**	**04 49 24.0**	**+4.0**
LLP	**Lapu-Lapu**	**8.72**	**344**	*e*P	**Pn**	**04 49 25.1**	**+1.8**
CNOP	**Candoni, Negro**	**8.73**	**335**	*e*P	**Pn**	**04 49 26.4**	**+3.0**
SPSI	**Sidrap Palu** comp=Z,22µmcomp=Z,8µmcomp=Z,598nm,1.0s	**8.81**	**229**	P	**Pn**	**04 49 24.4**	**0.0**
BNSI	**Bone** comp=Z,7µmcomp=Z,670nm,1.1s	**8.85**	**225**	P	**Pn**	**04 49 26.5**	**+1.4**
BKSI	**Bulukumba** comp=Z,14µmcomp=Z,7µmcomp=Z,479nm,1.4s	**9.51**	**221**	P	**Pn**	**04 49 35.5**	**+1.4**
KAPI	**Kappang** comp=Z,9.2nm,0.3s,baz=37,slow=12,SNR=23	**9.54**	**224**	Pn	**Pn**	**04 49 32.6**	**-1.9**
KAPI	**Kappang**	**9.54**	**224**	P	**Pn**	**04 49 35.4**	**+1.0**
KAPI				P	**Pn**	**04 49 35.7**	**+1.3**
KAPI	**Kappang**	**9.54**	**224**	P	**Pn**	**04 49 35.4**	**+1.0**
KAPI	**Kappang**	**9.54**	**224**	Pn	**Pn**	**04 49 35.4**	**+1.0**
I39PW	**PALAU INFRASON** baz=228,slow=312,SNR=1.2	**9.88**	**55**	*i*		05 41 50.0	
BSSI	**Bau Bau, Buton** comp=Z,8µmcomp=Z,6µmcomp=Z,415nm,0.6s	**9.91**	**216**	P	**Pn**	**04 49 40.6**	**+1.0**
BKB	**Balikpapan** comp=Z,30µmcomp=Z,10µmcomp=Z,639nm,1.4s	**10.00**	**252**	P	**Pn**	**04 49 42.1**	**+1.4**
BKB	**Balikpapan**	**10.00**	**252**		**Pn**	**04 49 41.8**	**+1.0**
BAKI	**Biak** comp=Z,31µmcomp=Z,57µmcomp=Z,3µm,1.7s	**10.18**	**107**	P	**Pn**	**04 49 47.3**	**+4.0**
SPMM	**Sapulut**	**10.30**	**286**	P	**Pn**	**04 49 48.0**	**+3.0**
CUYO	**Cuyo Island**	**10.39**	**329**	*e*P	**Pn**	**04 49 47.4**	**+1.3**
SRPI	**Serui, Papua**	**10.53**	**111**	P	Pn	04 49 56.1	+8.1
CNP	**Catarman**	**10.70**	**351**	*e*P	**Pn**	**04 49 52.7**	**+2.3**
SAUI	**Saumlaki**	**10.95**	**154**	P	Pn	04 50 08.2	+14
KKM	**Kota Kinabalu**	**10.96**	**292**	Pn	**Pn**	**04 49 56.1**	**+2.0**
BATP	**Bataraza**	**10.97**	**309**	*e*P	**Pn**	**04 49 53.5**	**-0.6**
MMRI	**Maumere** comp=Z,15µmcomp=Z,10µmcomp=Z,541nm,2.0s	**11.24**	**202**	P	**Pn**	**04 49 59.2**	**+1.5**
MMRI	**Maumere**	**11.24**	**202**	Pn	**Pn**	**04 49 58.7**	**+0.9**
KBKI	**Kotabaru** comp=Z,2µmcomp=Z,138nm,0.9s	**11.44**	**243**	P	**Pn**	**04 50 04.5**	**+4.0**
EDFI	**Ende, Flores** comp=Z,8µmcomp=Z,3µmcomp=Z,146nm,1.3s	**11.55**	**204**	P	**Pn**	**04 50 03.3**	**+1.2**
ENPP	**El Nido**	**11.56**	**324**	*e*P	**Pn**	**04 50 03.0**	**+0.8**
SOEI	**Soe** comp=Z,26µmcomp=Z,21µmcomp=Z,1µm,0.9s	**11.75**	**190**	P	**Pn**	**04 50 08.9**	**+4.1**
SOEI	**Soe**	**11.75**	**190**	Pn	**Pn**	**04 50 05.0**	**+0.2**
MTKI	**Muara Teweh, K** comp=Z,13µmcomp=Z,188nm,0.5s	**11.83**	**256**	P	**Pn**	**04 50 08.8**	**+2.9**
PVCP	**Virac**	**11.85**	**349**	*e*P	**Pn**	**04 50 06.4**	**+0.3**
SCSP	**San Jose Seism**	**12.04**	**346**	*e*P	**Pn**	**04 50 10.7**	**+2.0**
BATI	**Baumata** comp=Z,1.8nm,0.3s,baz=60,slow=20,SNR=1.2	**12.31**	**193**	Pn	**Pn**	**04 50 12.5**	**+0.1**
BATI	**Baumata** comp=Z,10µmcomp=Z,5µmcomp=Z,341nm,1.0s	**12.31**	**193**	P	**Pn**	**04 50 15.5**	**+3.1**
BBKI	**Banjar Baru** comp=Z,9µmcomp=Z,255nm,1.5s	**12.71**	**245**	P	**Pn**	**04 50 20.8**	**+3.0**
PGP	**Puerto Galera**	**12.74**	**335**	*e*P	**Pn**	**04 50 20.8**	**+2.5**
JCNP	**Jose Panganiba**	**12.86**	**344**	*e*P	**Pn**	**04 50 21.2**	**+1.3**
SMPI	**Sarmi** comp=Z,10µmcomp=Z,13µmcomp=Z,560nm,1.9s	**12.90**	**107**	P	**Pn**	**04 50 24.5**	**+4.1**
WSI	**Waingapu** comp=Z,32µmcomp=Z,1µm,1.5s	**12.98**	**208**	P	**Pn**	**04 50 24.4**	**+2.9**
LQP	**Lukban**	**13.07**	**339**	*e*P	**Pn**	**04 50 24.3**	**+1.4**
LUBP	**Lubang**	**13.26**	**333**	*e*P	**Pn**	**04 50 26.2**	**+0.9**
TGY	**Tagaytay City** comp=Z,125nm,0.3s,baz=250,slow=10,SNR=4.7	**13.29**	**336**	Pn	**Pn**	**04 50 25.9**	**+0.1**
TGY	comp=Z,5µm,19.3s,baz=160,slow=42			LR	LR	04 56 35.1	
BASI	**Baing, Sumba** comp=Z,8µmcomp=Z,8µmcomp=Z,488nm,1.5s	**13.34**	**206**	P	**Pn**	**04 50 27.8**	**+1.3**
WBSI	**Waikabak, Su** comp=Z,9µmcomp=Z,465nm,1.5s	**13.40**	**211**	P	**Pn**	**04 50 26.9**	**-0.5**
PLAI	**Plampang** comp=Z,9µmcomp=Z,13µmcomp=Z,1µm,0.9s	**13.67**	**219**	P	**Pn**	**04 50 33.4**	**+2.4**
SBUM	**Sibu**	**14.18**	**273**		**Pn**	**04 50 39.0**	**+1.2**
SBUM	**Sibu**	**14.18**	**273**	P	**Pn**	**04 50 41.0**	**+3.2**
TWSI	**Taliwang, Sumb**	**14.18**	**222**	P

GUMO **Guam** 21.66 57 P **P** 04 52 05.4 -0.9
comp=Z,417nm,0.9s,baz=131,slow=4.9,SNR=8.0
GUMO **Guam** 21.66 57 P **P** 04 52 05.1 -1.2
GUMO IAmb IAmb 04 52 10.8
comp=Z,559nm,1.0s
SBJI **Serang** 21.74 248 P **P** 04 52 13.4 +6.3
YULB **Yu-li** 21.95 347 P **P** 04 52 06.3 -3.1
YULB IAMs_20 IAMs_20 05 01 32.0
comp=Z,17μm,22.0s
TPUB **Ta-pu** 22.02 346 IAmb IAmb 04 52 26.1
comp=Z,720nm,1.1s
PMBI **Palembang** 22.14 258 P P 04 52 22.2 +11
SSLB **Suanglung** 22.41 347 P **P** 04 52 12.8 -1.4
MYKOM **Kota Tinggi** 22.53 270 P **P** 04 52 18.0 +2.3
KLSI 22.61 253 P **P** 04 52 15.9 -0.6
comp=Z,2μmcomp=Z,98nm,1.1s
COEN **Coen** 22.90 134 P **P** 04 52 18.0 -1.5
baz=23,SNR=40
COEN **Coen** 22.90 134 P **P** 04 52 16.6 -2.9
WB0 **Warramunga Arr** 22.90 160 IAmb IAmb 04 52 31.6
comp=Z,596nm,1.0s
WRAB **Tennant Creek** 23.04 161 *d* iP **P** 04 52 19.6 -1.3
WRAB pmax pmax
comp=Z,580nm,1.0s
WRAB **Tennant Creek** 23.04 161 P **P** 04 52 19.6 -1.3
WRAB IAmb IAmb 04 52 30.1
comp=Z,870nm,1.1s
WRA **Warramunga Arr** 23.05 161 P **P** 04 52 19.5 -1.4
comp=Z,466nm,1.0s,baz=338,slow=10,SNR=448
WRA S **S** 04 56 26.6 -1.8
comp=Z,62nm,1.0s,baz=333,slow=18,SNR=6.5
WRA P3KPbc 05 25 51.5
comp=Z,3.1nm,1.0s,baz=163,slow=4.4,SNR=12
WRA **Warramunga Arr** 23.05 161 P **P** 04 52 18.8 -2.1
WB2 **Warramunga Arr** 23.05 161 P **P** 04 52 20.0 -1.0
baz=23
WB2 **Warramunga Arr** 23.05 161 P **P** 04 52 19.8 -1.2
KASI **Kota Agung** 23.07 251 P **P** 04 52 21.9 +0.6
comp=Z,8μmcomp=Z,3μmcomp=Z,234nm,1.2s
WR0 **Warramunga Arr** 23.13 160 P **P** 04 52 20.8 -1.0
WR0 IAmb IAmb 04 52 31.0
comp=Z,606nm,1.0s
LWLI **Liwa** 23.34 253 P **P** 04 52 27.0 +2.9
comp=Z,10μmcomp=Z,640nm,0.7s
TATO **Taipei** 23.45 349 P **P** 04 52 24.4 -0.3
TATO P **P** 04 52 24.4 -0.3
TATO **Taipei** 23.45 349 IAMs_20 IAMs_20 05 02 22.5
comp=Z,12μm,22.0s
HKPS **Hong Kong Po S** 23.52 330 P **P** 04 52 25.4 -0.1
HKPS IAMs_20 IAMs_20 05 00 19.0
comp=Z,10μm,22.0s
HKC **Hong Kong Obse** 23.52 331 ⇑P **P** 04 52 24.0 -1.5
QIZ **Qiongzhong** 23.52 318 P **P** 04 52 24.3 -1.3
QIZ pP **sP** 04 52 41.0 -2.1
QIZ pmax pmax
comp=Z,190nm,1.9s
QIZ pmax pmax
comp=Z,3μm,4.7s
QIZ LR LR
comp=Z,7μm,17.7s
QIZ LR LR
comp=Z,7μm,27.5s
QIZ LR LR
comp=Z,16μm,23.0s
QIZ **Qiongzhong** 23.52 318 IAmb IAmb 04 52 32.0
comp=Z,285nm,1.2s
PMG **Port Moresby** 23.53 119 P **P** 04 52 26.0 +0.3
comp=Z,61nm,0.9s,baz=330,slow=8.6,SNR=20
PMG LR LR 05 02 54.5
comp=Z,6μm,21.3s,baz=319,slow=40
PMG **Port Moresby** 23.53 119 *d* iP **P** 04 52 24.7 -1.0
PMG pmax pmax
comp=Z,511nm,2.0s
PMG **Port Moresby** 23.53 119 P **P** 04 52 24.1 -1.6
LHSI **Lahat** 23.55 256 P **P** 04 52 27.4 +1.5
comp=Z,8μmcomp=Z,252nm,2.5s
KNMB **Chin-men Tao** 23.75 342 P **P** 04 52 27.6 -0.1
MBWA **Marble Bar** 23.81 196 P **P** 04 52 28.1 -0.1
MBWA P **P** 04 52 28.1 -0.1
MBWA S **S** 04 56 38.5 -2.1
MBWA S **S** 04 56 38.5 -2.1
XMIS **Christmas Isla** 24.02 239 P **P** 04 52 29.9 -0.4
XMIS IAmb IAmb 04 52 36.9
comp=Z,455nm,1.1s
QZH **Quanzhou** 24.14 342 ⇑iP **P** 04 52 29.3 -1.9
QZH S **S** 04 56 38.4 -7.4
QZH sS **sS** 04 57 04.5 -1.6
QZH pmax pmax
comp=Z,120nm,1.4s
QZH pmax pmax
comp=Z,2μm,4.4s
QZH LR LR
comp=Z,7μm,21.3s
QZH LR LR
comp=Z,4μm,19.4s
QZH LR LR
comp=Z,10μm,22.7s
PSA00 **Pilbara Seismi** 24.17 195 P **P** 04 52 30.6 -0.9
PSA00 IAmb IAmb 04 52 39.8
comp=Z,266nm,0.9s
MNAI **Manna** 24.23 255 P **P** 04 52 36.5 +4.3
comp=Z,9μmcomp=Z,13μmcomp=Z,585nm,1.4s
MNAI **Manna** 24.23 255 P **P** 04 52 31.9 -0.3
MNAI IAmb IAmb 04 52 50.8
comp=Z,274nm,0.9s
MNAI IAMs_20 IAMs_20 05 02 40.6
comp=Z,11μm,21.0s
JMZ **Minamidaito 2** 24.25 11 P **P** 04 52 31.5 -0.7
JMZ IAmb IAmb 04 52 46.0
comp=Z,408nm,1.1s
KSI **Kapahiang** 24.41 257 P **P** 04 52 36.1 +2.1
comp=Z,328nm,1.0s
KSI **Kapahiang** 24.41 257 P **P** 04 52 36.2 +2.2
KSI pmax pmax
comp=Z,327nm,1.0s
UBPT **Khong Chiam** 24.56 304 P **P** 04 52 35.7 +0.6
comp=Z,5μmcomp=Z,126nm,1.9s
UBPT **Khong Chiam** 24.56 304 P **P** 04 52 35.1 -0.1
SDSI **Sungai Dareh** 25.12 264 P **P** 04 52 41.1 +0.8
comp=Z,4μmcomp=Z,313nm,1.3s
KRJI **Kerinci** 25.24 261 P **P** 04 52 46.8 +5.3
BKNI **Bangkinang** 25.40 267 P **P** 04 52 44.5 +1.7
comp=Z,7μmcomp=Z,6μmcomp=Z,380nm,1.5s
BKNI **Bangkinang** 25.40 267 IAmb IAmb 04 53 01.6
comp=Z,368nm,1.1s
IPM **Ipoh** 25.46 276 P **P** 04 52 44.0 +0.6
QIS **Mount Isa** 25.79 151 P **P** 04 52 46.6 +0.4
baz=26,SNR=63
KULM **Kulim** 25.91 278 P **P** 04 52 47.4 -0.1
KULM PcP **PcP** 04 56 12.0 -3.6
KULM **Kulim** 25.91 278 P **P** 04 52 48.0 +0.5
KRVT **Keravat (AS076** 26.34 104 P **P** 04 52 51.4 +0.1
comp=Z,157nm,0.8s,baz=117,slow=4.9,SNR=24
KRVT LR LR 05 02 13.7
comp=Z,6μm,21.7s,baz=275,slow=34
ASAR **Alice Springs** 26.42 164 P **P** 04 52 51.6 -0.4
comp=Z,148nm,1.0s,baz=332,slow=5.8,SNR=131
ASAR PcP **PcP** 04 56 18.4 +1.8
comp=Z,13nm,0.6s,baz=350,slow=1.8,SNR=4.6
ASAR S **S** 04 57 23.1 +0.8
comp=Z,30nm,1.1s,baz=346,slow=16,SNR=5.0
ASAR P3KPbc 05 25 33.5
comp=Z,1.8nm,0.9s,baz=155,slow=4.8,SNR=10
ASAR **Alice Springs** 26.42 164 P **P** 04 52 50.0 -2.0
ASAR PcP **PcP** 04 56 13.8 -2.8
MTSU **Mount Surprise** 26.59 139 P **P** 04 52 53.8 +0.3
baz=27,SNR=89
WRKA **Warakurna** 26.82 176 P **P** 04 52 55.8 +0.2
baz=27,SNR=207
MNSI **Mandailing Nat** 26.83 268 P **P** 04 52 55.5 -0.3
comp=Z,13μmcomp=Z,102nm,1.2s
SRAK **Srakaew** 26.92 298 P **P** 04 52 52.0 -4.5
comp=Z,13μmcomp=Z,949nm,1.0s
GIRL **Giralia** 27.11 205 P **P** 04 52 59.9 +1.8
baz=27,SNR=84
GIRL **Giralia** 27.11 205 P **P** 04 52 57.5 -0.6
RPSI **Rantau Prapat** 27.46 272 IAmb IAmb 04 53 05.9
comp=Z,223nm,1.1s
SISI **Saibi** 27.49 264 P **P** 04 53 01.5 -0.2
comp=Z,2μmcomp=Z,109nm,1.0s
CHAI **Chaiyaphum** 27.80 301 P **P** 04 53 03.8 -0.6
KCSI **Kotacane, Aceh** 28.64 274 P **P** 04 53 11.7 -0.3
comp=Z,117nm,1.4s
PHET **Kaeng Krachan** 28.68 294 P **P** 04 53 13.6 +1.4
GSI **Gunungsitoli** 28.81 269 P **P** 04 53 12.2 -1.3
comp=Z,4μmcomp=Z,272nm,1.1s

GSI **Gunungsitoli** 28.81 269 IAmb IAmb 04 53 16.7
comp=Z,301nm,1.1s
TPTI 29.22 273 P **P** 04 53 16.9 -0.2
comp=Z,928nmcomp=Z,49nm,1.3s
SLVN **Son La** 29.22 313 P **P** 04 53 16.9 -0.2
CTA **Charters Tower** 29.26 139 P **P** 04 53 17.9 +0.5
comp=Z,26nm,0.9s,baz=319,slow=12,SNR=21
CTAO **Charters Tower** 29.26 139 P **P** 04 53 15.7 -1.7
CTAO pmax pmax
comp=Z,88nm,0.9s
CTAO **Charters Tower** 29.26 139 P **P** 04 53 15.7 -1.7
JCJ **Chichijima** 29.29 30 P **P** 04 53 16.6 -1.0
MEEK **Meekatharra** 29.33 194 P **P** 04 53 18.4 +0.5
baz=29,SNR=53
SSE **Sheshan** 29.47 351 P **P** 04 53 20.6 +1.5
SSE S **S** 04 58 13.3 +3.1
SSE pmax pmax
comp=Z,59nm,0.9s
SSE pmax pmax
comp=Z,780nm,4.2s
SSE LR LR
comp=Z,2μm,22.0s
SSE LR LR
comp=Z,950nm,14.8s
SSE **Sheshan** 29.47 351 IAMs_20 IAMs_20 05 06 15.1
comp=Z,9μm,21.0s
LHMI **Lhok Sumawe** 29.57 277 P **P** 04 53 21.9 +1.7
comp=Z,5μmcomp=Z,4μmcomp=Z,169nm,1.1s
JSU **Suzuyama** 29.72 7 P **P** 04 53 20.7 -0.6
WHN **Wuhan** 30.71 339 ⇓P **P** 04 53 29.6 -0.5
WHN S **S** 04 58 24.9 -4.7
WHN pmax pmax
comp=Z,1μm,2.5s
WHN pmax pmax
comp=Z,2μm,3.3s
WHN LR LR
comp=Z,13μm,20.0s
WHN LR LR
comp=Z,16μm,23.7s
WHN LR LR
comp=Z,17μm,22.7s
NJ2 **Nanjing** 30.84 347 *e*P **P** 04 53 31.6 +0.4
NJ2 pP **pP** 04 53 41.9 -1.6
NJ2 sP **sP** 04 53 51.0 +1.8
NJ2 PcP **PcP** 04 56 30.1 +2.7
NJ2 S **S** 04 58 33.6 +2.0
NJ2 sS **sS** 04 58 49.8 -2.4
NJ2 pmax pmax
comp=Z,67nm,1.0s
NJ2 pmax pmax
comp=Z,650nm,5.2s
NJ2 LR LR
comp=Z,5μm,19.9s
NJ2 LR LR
comp=Z,3μm,18.9s
NJ2 LR LR
comp=Z,9μm,20.8s
GYA **Guiyang** 30.93 324 ⇑P **P** 04 53 31.9 -0.3
GYA pP pP 04 53 47.4 +2.9
GYA PcP **PcP** 04 56 29.4 +1.4
GYA S **S** 04 58 25.4 -8.0
GYA pmax pmax
comp=Z,73nm,1.8s
GYA pmax pmax
comp=Z,760nm,3.5s
GYA LR LR
comp=Z,3μm,24.2s
GYA LR LR
comp=Z,4μm,19.7s
GYA LR LR
comp=Z,6μm,21.4s
JNU **Nakatsue** 31.36 7 P **P** 04 53 36.5 +0.6
comp=Z,188nm,1.0s,baz=198,slow=5.2,SNR=28
JNU **Nakatsue** 31.36 7 IAmb IAmb 04 53 42.6
comp=Z,274nm,1.0s
CMAR **Chiang Mai Arr** 31.56 303 P **P** 04 53 38.3 +0.6
comp=Z,34nm,0.9s,baz=117,slow=7.2,SNR=1.3
CMAR PcP **PcP** 04 56 32.4 +2.8
comp=Z,18nm,0.9s,baz=156,slow=1.1,SNR=8.2
CMAR LR LR 05 05 33.0
comp=Z,6μm,21.6s,baz=164,slow=35
CMAR **Chiang Mai Arr** 31.56 303 P **P** 04 53 37.0 -0.7
CMAR PcP **PcP** 04 56 26.7 -3.0
CHTO **Chiang Mai** 31.73 304 P **P** 04 53 39.0 -0.2
CHTO P **P** 04 53 39.0 -0.2
CHTO **Chiang Mai** 31.73 304 IAMs_20 IAMs_20 05 05 26.0
comp=Z,9μm,22.0s
PATS **Pohnpei** 32.19 80 P **P** 04 53 44.2 +0.8
baz=32,SNR=6.8
PATS **Pohnpei** 32.19 80 P **P** 04 53 41.6 -1.7
MORW **Morawa** 32.33 197 P **P** 04 53 45.2 +0.8
baz=32,SNR=27
MORW **Morawa** 32.33 197 IAmb IAmb 04 53 51.5
comp=Z,236nm,1.1s
JMN **Monobe** 32.45 12 P **P** 04 53 44.3 -1.1
JMN IAmb IAmb 04 53 48.5
comp=Z,304nm,1.1s
KMI **Kunming** 32.47 317 ⇑*e*P **P** 04 53 46.3 +0.4
KMI pP sP 04 54 03.9 0.0
KMI sP pP 04 54 08.8 +11
KMI PP **PnPn** 04 54 53.0 -1.5
KMI PcP **PcP** 04 56 34.5 +2.2
KMI S **S** 04 58 56.9 -0.9
KMI pmax pmax
comp=Z,150nm,1.8s
KMI pmax pmax
comp=Z,1μm,3.5s
KMI LR LR
comp=Z,7μm,20.3s
KMI LR LR
comp=Z,4μm,20.3s
KMI LR LR
comp=Z,9μm,21.5s
ENH **Enshi** 32.48 332 IAmb IAmb 04 53 49.0
comp=Z,138nm,0.8s
ENH IAMs_20 IAMs_20 05 07 15.4
comp=Z,10μm,22.0s
FORT **Forrest** 32.52 177 P **P** 04 53 46.5 +0.6
baz=33,SNR=61
COCO **West Island** 32.52 244 IAMs_20 IAMs_20 05 08 14.1
comp=Z,6μm,22.0s
JTU **Tsushima** 32.60 5 P **P** 04 53 45.7 -0.9
JTU IAmb IAmb 04 53 51.6
comp=Z,155nm,1.1s
QLP **Quilpie** 33.12 150 P **P** 04 53 51.4 0.0
baz=33,SNR=9.6
KMBL **Kambalda** 33.34 187 P **P** 04 53 53.6 +0.4
baz=34,SNR=72
JHJ **Hachijo jima 2** 33.52 21 P **P** 04 53 56.1 +1.4
comp=Z,308nm,0.9s,baz=210,slow=23,SNR=4.4
JHJ LR LR 05 07 22.3
comp=Z,2μm,21.1s,baz=221,slow=36
JHS **Saijyo** 33.54 10 IAmb IAmb 04 54 01.0
comp=Z,130nm,0.9s
BLDU **Ballidu** 33.61 195 P **P** 04 53 56.2 +0.7
baz=34,SNR=29
JWT **Wachi** 34.27 13 IAMs_20 IAMs_20 05 06 22.6
comp=Z,7μm,22.0s
KLBR **Kellerberrin** 34.28 193 P **P** 04 54 01.8 +0.5
baz=34,SNR=40
TJN **Taejon** 34.34 1 *ce*P **P** 04 54 02.5 +0.8
JSG **Sagara** 34.43 17 IAMs_20 IAMs_20 05 06 02.6
comp=Z,6μm,22.0s
MUN **Mundaring** 35.03 195 P **P** 04 54 08.7 +0.9
baz=35,SNR=19
JGF **Kuroka** 35.06 16 IAmb IAmb 04 54 11.2
comp=Z,127nm,0.9s
JGF IAMs_20 IAMs_20 05 06 23.4
comp=Z,6μm,22.0s
TIA **Tai'an** 35.22 347 P **P** 04 54 08.8 -0.6
TIA S **S** 04 59 37.5 -2.1
TIA pmax pmax
comp=Z,49nm,1.2s
TIA pmax pmax
comp=Z,1μm,4.5s
TIA LR LR
comp=Z,3μm,23.5s
TIA LR LR
comp=Z,2μm,23.5s
TIA LR LR
comp=Z,6μm,26.5s
KSAR **Wonju Array Be** 35.42 2 P **P** 04 54 10.6 -0.4
KSAR **Wonju Array Be** 35.42 2 P **P** 04 54 10.6 -0.4
KSRS **Korea Array** 35.43 2 P **P** 04 54 12.4 +1.3
comp=Z,71nm,0.9s,baz=179,slow=9.6,SNR=65
KSRS PcP **PcP** 04 56 42.9 +2.7
comp=Z,10.0nm,0.9s,baz=178,slow=3.2,SNR=4.9
INCN **Inchon** 35.43 0 P **P** 04 54 12.3 +1.1
INCN P **P** 04 54 12.3 +1.1
INCN **Inchon** 35.43 0 P **P** 04 54 10.8 -0.4
INCN pmax pmax
comp=Z,94nm,1.1s
INCN MLR MLR
comp=Z,7μm,22.0s
INCN **Inchon** 35.43 0 P **P** 04 54 10.8 -0.4
INCN **Inchon** 35.43 0 IAMs_20 IAMs_20 05 10 20.6
comp=Z,7μm,22.0s
KS19 **Wonju Array Si** 35.48 2 IAmb IAmb 04 54 27.7
comp=Z,130nm,1.1s
RMQ **Roma** 35.52 144 P **P** 04 54 12.1 0.0
baz=36,SNR=22
NWAO **Narrogin (SRO)** 35.69 193 P **P** 04 54 14.2 +0.8
baz=36,SNR=17
NWAO **Narrogin (SRO)** 35.69 193 P **P** 04 54 14.2 +0.8
NWAO **Narrogin (SRO)** 35.69 193 P **P** 04 54 12.7 -0.7
NWAO pmax pmax
comp=Z,165nm,1.1s
NWAO **Narrogin (SRO)** 35.69 193 P **P** 04 54 12.7 -0.7
NWAO IAmb IAmb 04 54 18.6
comp=Z,165nm,1.1s
NWAO **Narrogin (SRO)** 35.69 193 IAmb IAmb 04 54 18.6
comp=Z,120nm,1.0s
BBOO **Buckleboo** 35.69 166 P **P** 04 54 13.6 +0.1
baz=36,SNR=68
BBOO **Buckleboo** 35.69 166 IAmb IAmb 04 54 20.8
comp=Z,298nm,1.1s
XAN **Xi'an** 35.92 335 P **P** 04 54 13.3 -2.2
XAN pP pP 04 54 30.1 +2.2
XAN sP sP 04 54 38.9 +5.4
XAN PcP **PcP** 04 56 43.0 +1.2
XAN S **S** 04 59 47.8 -2.7
XAN sS sS 05 00 16.9 +5.6
XAN PcS **PcS** 05 00 29.3 0.0
XAN SS **SnSn** 05 02 12.9 -4.9
XAN ScS **ScS** 05 04 25.3 -4.3
XAN pmax pmax
comp=Z,190nm,1.9s
XAN pmax pmax
comp=Z,1μm,4.3s
XAN LR LR
comp=Z,7μm,20.6s
XAN LR LR
comp=Z,2μm,18.4s
XAN LR LR
comp=Z,10μm,20.6s
XAN **Xi'an** 35.92 335 IAmb IAmb 04 54 24.8
comp=Z,150nm,1.2s
XAN **Xi'an** 35.92 335 IAMs_20 IAMs_20 05 11 09.3
comp=Z,5μm,22.0s
CD2 **Chengdu** 35.95 326 ⇑*i*P **P** 04 54 15.1 -0.7
CD2 pP sP 04 54 31.6 -2.2
CD2 PP **PP** 04 55 39.6 +1.3
CD2 S **S** 04 59 51.9 +0.9
CD2 pmax pmax
comp=Z,290nm,1.4s
CD2 pmax pmax
comp=Z,1μm,3.5s
CD2 LR LR
comp=Z,8μm,21.2s
CD2 LR LR
comp=Z,10μm,24.9s
CD2 LR LR
comp=Z,9μm,21.4s
EIDS **Eidsvold** 36.13 140 P **P** 04 54 17.4 +0.1
baz=36,SNR=15
EIDS **Eidsvold** 36.13 140 IAmb IAmb 04 54 28.6
comp=Z,97nm,1.0s
MJAR **Matsushiro Arr** 36.18 16 P **P** 04 54 17.5 -0.1
comp=Z,175nm,0.9s,baz=186,slow=9.3,SNR=158
MJAR LR LR 05 12 24.3
comp=Z,1μm,18.5s,baz=190,slow=42
MJAR **Matsushiro Arr** 36.18 16 P **P** 04 54 16.6 -1.1
MAJO **Matsushiro** 36.18 16 *c* iP **P** 04 54 17.6 0.0
MAJO pmax pmax
comp=Z,180nm,0.9s
MAJO **Matsushiro** 36.18 16 P **P** 04 54 16.9 -0.8
MAJO **Matsushiro** 36.18 16 IAMs_20 IAMs_20 05 07 20.9
comp=Z,5μm,22.0s
MAT **Matsushiro** 36.18 16 P **P** 04 54 17.2 -0.4
MAT S **S** 04 59 53.7 -0.6
MJB9 **Matsu-Tunnel** 36.18 16 IAMs_20 IAMs_20 05 07 19.9
comp=Z,5μm,22.0s
JYT **Yasato** 36.49 19 IAmb IAmb 04 54 21.8
comp=Z,229nm,0.9s
STKA **Stephens Creek** 36.54 158 P **P** 04 54 20.7 0.0
comp=Z,63nm,0.8s,baz=328,slow=9.9,SNR=53
STKA PcP **PcP** 04 56 45.2 +1.6
comp=Z,36nm,0.9s,baz=293,slow=7.7,SNR=2.4
STKA **Stephens Creek** 36.54 158 P **P** 04 54 20.7 0.0
baz=37,SNR=88
STKA **Stephens Creek** 36.54 158 P **P** 04 54 19.1 -1.6
HTT **Hallett** 37.06 162 P **P** 04 54 25.8 +0.6
baz=37,SNR=37
DL2 **Dalian** 37.11 354 P **P** 04 54 26.3 +0.9
DL2 pP **pwP** 04 54 40.4 +0.3
DL2 S **S** 05 00 09.0 +0.7
DL2 sS **sS** 05 00 34.4 +5.3
DL2 pmax pmax
comp=Z,380nm,1.0s
DL2 pmax pmax
comp=Z,980nm,4.9s
DL2 LR LR
comp=Z,4μm,20.6s
DL2 LR LR
comp=Z,4μm,19.0s
DL2 LR LR
comp=Z,7μm,22.2s
PYS **Pyongsong** 37.20 359 P **P** 04 54 28.2 +2.0
RKGY **Rocky Gully** 37.36 193 P **P** 04 54 29.5 +1.9
baz=38,SNR=30
JSD **Sado** 37.60 15 IAmb IAmb 04 54 31.1
comp=Z,382nm,1.1s
JSD IAMs_20 IAMs_20 05 09 08.4
comp=Z,5μm,22.0s
HHU **Hamhung** 37.88 1 P **P** 04 54 32.7 +0.7
HHU S **S** 05 00 25.8 +5.7
TIY **Taiyuan** 37.90 342 *e*P **P** 04 54 32.3 0.0
TIY pP **pP** 04 54 44.0 -0.8
TIY sP **sP** 04 54 48.3 -2.1
TIY S **S** 05 00 22.4 +1.8
TIY pmax pmax
comp=Z,45nm,0.8s
TIY pmax pmax
comp=Z,800nm,4.0s
TIY LR LR
comp=Z,4μm,21.1s
TIY LR LR
comp=Z,2μm,17.5s
TIY LR LR
comp=Z,9μm,25.2s
CMSA **Cobar Meteorol** 37.95 153 P **P** 04 54 33.3 +0.6
baz=38,SNR=22
SUJ **Sinuiju** 38.09 358 P **P** 04 54 35.0 +1.3
SUJ S **S** 05 00 25.3 +2.2
H01W3 **Cape Leeuwin H** 38.34 196 P **P** 04 54 37.0 +1.4
baz=31,slow=9.3,SNR=6.9
H01W1 **Cape Leeuwin H** 38.34 196 P **P** 04 54 36.8 +1.2
baz=31,slow=9.3,SNR=8.2
H01W2 **Cape Leeuwin H** 38.35 196 P **P** 04 54 37.6 +1.9
baz=31,slow=9.3,SNR=6.9
SAIH **SAIHA** 38.37 305 *e*P **P** 04 54 35.1 -1.4
SAIH IAmb IAmb 04 54 45.5
comp=Z,182nm,1.1s
LKP **Lekhapani** 38.68 314 *e*P **P** 04 54 38.2 -0.7
LKP IAmb IAmb 04 54 45.9
comp=Z,405nm,0.8s
IMP **Imphal** 38.74 309 *e*P **P** 04 54 38.4 -1.1
IMP IAmb IAmb 04 54 47.4
comp=Z,164nm,0.9s
KOHI **KOHIMA** 39.08 310 *e*P **P** 04 54 40.3 -2.2
KOHI IAmb IAmb 04 54 49.5
comp=Z,289nm,0.9s
BJT **Baijiatuau** 39.08 348 IAmb IAmb 04 54 44.2
comp=Z,145nm,1.0s
MOKO **MOKOCHONG** 39.10 311 *e*P **P** 04 54 41.3 -1.3
MOKO IAmb IAmb 04 54 49.0
comp=Z,145nm,0.6s
BJI **Beijing** 39.10 348 P **P** 04 54 41.6 -0.6
BJI PcP **PcP** 04 56 51.5 +0.2
BJI S **S** 05 00 37.3 -1.1
BJI pmax pmax
comp=Z,140nm,1.0s

BJI pmax pmax
comp=Z,1μm,3.5s
BJI LR LR
comp=Z,2μm,22.2s
BJI LR LR
comp=Z,2μm,19.1s
BJI LR LR
comp=Z,3μm,28.8s
DIBR DIBRUGARH 39.44 313 *e*P **P** **04 54 43.9 -1.3**
DIBR AMP 04 54 45.1
comp=Z,5μm,0.3s
JORH JORHAT 39.52 312 *e*P **P** **04 54 45.6 -0.4**
JORH IAmb IAmb 04 54 52.3
comp=Z,538nm,1.0s
SILR SILCHAR 39.61 308 *e*P **P** **04 54 46.9 +0.1**
SILR AMP 04 54 52.8
comp=Z,10μm,1.8s
SNY Shenyang 39.85 357 ⇑P **P** **04 54 49.1 +0.7**
SNY S **S** **05 00 42.1 -7.5**
SNY pmax pmax
comp=Z,230nm,1.8s
SNY pmax pmax
comp=Z,3μm,2.8s
SNY LR LR
comp=Z,4μm,21.2s
SNY LR LR
comp=Z,4μm,22.9s
SNY LR LR
comp=Z,8μm,23.5s
LZH Lanzhou 39.93 331 ⇑P **P** **04 54 49.8 +0.3**
LZH pP sP 04 55 08.6 +1.1
LZH PP **PP** **04 56 22.6 +0.6**
LZH S **S** **05 00 47.0 -4.4**
LZH sS sS 05 01 18.5 +6.1
LZH pmax pmax
comp=Z,370nm,1.5s
LZH pmax pmax
comp=Z,1μm,4.3s
LZH LR LR
comp=Z,4μm,17.5s
LZH LR LR
comp=Z,8μm,17.4s
LZH LR LR
comp=Z,7μm,17.9s
BELO BELONIA 39.98 305 *e*P **P** **04 54 49.5 -0.3**
ARMA Armidale 40.13 145 P **P** **04 54 52.3 +1.2**
baz=40,SNR=15
ARMA Armidale 40.13 145 P **P** **04 54 49.3 -1.8**
ARMA IAmb IAmb 04 54 57.4
comp=Z,138nm,0.8s
ZIRO ZIRO 40.25 312 *e*P **P** **04 54 51.5 -0.7**
ZIRO IAmb IAmb 04 54 59.1
comp=Z,286nm,0.6s
AGT Agartala 40.43 306 *e*P **P** **04 54 53.8 +0.3**
TEZP TEZPUR 40.55 310 *e*P **P** **04 54 53.2 -1.3**
TEZP AMP 04 55 00.3
comp=Z,437nm,0.5s
SHL Shillong 40.73 308 *ex* x 04 56 06.5
JTM Tenmabayashi 40.94 17 IAmb IAmb 04 54 60.0
comp=Z,488nm,1.1s
HHC Hu-ho-hao-te 41.05 343 *e*P **P** **04 54 58.6 +0.1**
HHC PP **PP** **04 56 31.4 -2.6**
HHC S **S** **05 01 08.6 +0.8**
HHC sS sS 05 01 34.1 +5.3
HHC pmax pmax
comp=Z,76nm,1.1s
HHC pmax pmax
comp=Z,1μm,4.1s
HHC LR LR
comp=Z,7μm,22.1s
HHC LR LR
comp=Z,3μm,21.3s
HHC LR LR
comp=Z,10μm,21.3s
ARPS Mount Arapiles 41.05 161 P **P** **04 54 59.6 +1.2**
baz=41,SNR=60
GUWA GUWAHATI 41.19 309 *e*P **P** **04 54 58.7 -1.0**
GUWA AMP 04 55 00.2
comp=Z,3μm,1.8s
GUWA IAmb IAmb 04 55 08.9
comp=Z,86nm,0.7s
BTO Baotou 41.30 341 *e*P **P** **04 55 00.9 +0.3**
VLA Vladivostok 41.35 6*c i*P **P** **04 55 01.9 +1.1**
VLA pmax pmax
comp=Z,285nm,1.1s
YNG Young 41.51 152 P **P** **04 55 03.6 +1.4**
baz=42,SNR=12
CN2 Changchun 41.75 359 *e*P **P** **04 55 04.3 +0.2**
CN2 *ep*P pwP 04 55 19.3 +0.5
CN2 *e*S **S** **05 01 18.4 +0.5**
CN2 pmax pmax
comp=Z,40nm,1.8s
CN2 pmax pmax
comp=Z,1μm,4.5s
CN2 LR LR
comp=Z,3μm,22.0s
CN2 LR LR
comp=Z,3μm,22.0s
CN2 LR LR
comp=Z,5μm,22.0s
MGCD Mangrove Creek 41.98 148 P **P** **04 55 07.8 +1.7**
baz=42,SNR=11
USA0B Ussuriysk Arra 42.43 6*c i*P **P** **04 55 10.6 +1.0**
USA0B Ussuriysk Arra 42.43 6 IAmb IAmb 04 55 13.2
comp=Z,207nm,1.0s
USRK Ussuriysk Ar. 42.43 6 P **P** **04 55 10.9 +1.3**
comp=Z,167nm,1.0s,baz=188,slow=7.7,SNR=124
USRK PcP **PcP** **04 57 02.9 +0.9**
comp=Z,42nm,1.1s,baz=187,slow=5.9,SNR=2.1
USRK PKP2ab 05 28 27.1
comp=Z,1.0nm,0.6s,baz=20,slow=6.1,SNR=4.2
USRK Ussuriysk Ar. 42.43 6 P **P** **04 55 09.1 -0.5**
USRK Ussuriysk Ar. 42.43 6 P **P** **04 55 09.1 -0.5**
MDJ Mudanjiang 42.65 3 P **P** **04 55 12.5 +1.1**
MDJ pP sP 04 55 28.8 -0.7
MDJ sP pwP 04 55 36.6 +10
MDJ PP **PP** **04 56 49.1 -2.0**
MDJ PcS **PcS** **05 00 56.8 +2.1**
MDJ S **S** **05 01 33.0 +1.9**
MDJ sS sS 05 01 59.4 +7.2
MDJ ScS **ScS** **05 05 07.4 -1.0**
MDJ pmax pmax
comp=Z,140nm,1.7s
MDJ pmax pmax
comp=Z,2μm,3.6s
MDJ LR LR
comp=Z,4μm,19.9s
MDJ LR LR
comp=Z,3μm,21.4s
MDJ LR LR
comp=Z,6μm,21.4s
MDJ Mudanjiang 42.65 3 IAmb IAmb 04 55 20.3
comp=Z,193nm,1.0s
MDJ IAMs_20 IAMs_20 05 15 06.6
comp=Z,5μm,21.0s
ERM Erimo 42.70 18*c i*P **P** **04 55 12.3 +0.5**
ERM pmax pmax
comp=Z,68nm,0.7s
ERM Erimo 42.70 18 P **P** **04 55 11.8 -0.1**
ERM IAmb IAmb 04 55 18.0
comp=Z,137nm,0.8s
CNB Canberra Magne 42.79 152 P **P** **04 55 14.4 +1.6**
baz=43,SNR=8.5
H11S3 WAKE ISLAND Hy 42.80 65 T T 05 42 14.2
baz=253,SNR=99
H11S2 WAKE ISLAND Hy 42.81 65 T T 05 42 01.2
baz=253,slow=74,SNR=70
H11S1 WAKE ISLAND Hy 42.82 65 T T 05 42 04.1
baz=253,slow=74,SNR=48
JEW Eniwo 42.95 16 IAmb IAmb 04 55 27.6
comp=Z,401nm,1.0s
TOO Toolangi 43.06 158 P **P** **04 55 16.8 +1.9**
baz=43,SNR=11
TOO Toolangi 43.06 158 P **P** **04 55 14.7 -0.2**
TOO pmax pmax
comp=Z,44nm,0.8s
TOO Toolangi 43.06 158 P **P** **04 55 14.7 -0.2**
H11N1 WAKE ISLAND Hy 43.37 63 T T 05 42 29.9
baz=251,slow=75,SNR=24
H11N2 WAKE ISLAND Hy 43.38 63 T T 05 42 29.9
baz=251,SNR=10
H11N3 WAKE ISLAND Hy 43.39 63 T T 05 42 27.0
baz=251,slow=75,SNR=16
LSA Lhasa 43.43 313 P **P** **04 55 18.8 +0.3**
LSA pmax pmax
comp=Z,850nm,1.4s
LSA Lhasa 43.43 313 P **P** **04 55 18.6 +0.1**
LSA P **P** **04 55 18.6 +0.1**
LSA Lhasa 43.43 313 IAmb IAmb 04 55 33.6
comp=Z,154nm,0.9s
SANVU Saraoutou 43.87 115 P **P** **04 55 19.9 -1.7**
SANVU IAmb IAmb 04 55 27.0
comp=Z,393nm,1.1s
TEY Ternei 43.91 10⇑*i*P **P** **04 55 22.7 +1.2**
TEY *e*S **S** **05 01 54.7 +5.2**
TEY pmax pmax
comp=N,2μm,3.6s
TEY pmax pmax
comp=Z,2μm,3.8s
TEY pmax pmax
comp=N,210nm,1.1s
TEY pmax pmax
comp=Z,360nm,1.1s
TEY pmax pmax
comp=E,20nm,0.8s
GTK Tadong 44.15 308 *e*P **P** **04 55 23.3 -0.6**
GTK IAmb IAmb 04 55 26.1
comp=Z,339nm,1.2s
ASAJ Asahikawa 44.45 17 P **P** **04 55 27.5 +1.6**
comp=Z,210nm,1.0s,baz=236,slow=12,SNR=59
GTA Gaotai 44.52 330 ⇑P **P** **04 55 26.3 -0.4**
GTA pP pwP 04 55 41.8 +0.4
GTA sP sP 04 55 48.5 +3.6
GTA PcP **PP** **04 57 11.4 +0.1**
GTA PcS **PcS** **05 01 02.8 -0.1**
GTA S **S** **05 01 57.3 -1.5**
GTA sS sS 05 02 24.6 +4.6
GTA SS **SS** **05 05 13.0 -7.0**
GTA pmax pmax
comp=Z,80nm,1.4s
GTA pmax pmax
comp=Z,1μm,7.6s
GTA LR LR
comp=Z,4μm,21.4s
GTA LR LR
comp=Z,4μm,21.1s
GTA LR LR
comp=Z,8μm,23.6s
CHLP Challavanipeta 44.66 295 *e*P **P** **04 55 27.8 -0.2**
CHLP IVmB_BB 04 55 28.5
comp=Z,1μm,1.9s
CHLP IVMs_BB IVMs_BB 05 13 36.4
comp=Z,1μm,22.7s
BOK Bokaro 44.84 302⇓*e*P **P** **04 55 28.5 -0.8**
BOK IAmb IAmb 04 55 30.2
comp=Z,106nm,1.0s
TAPN Taplejung 44.86 308 *e*P **P** **04 55 28.9 -0.9**
comp=Z,795nm,1.3s
ODAN Odare 44.89 307 *e*P **P** **04 55 29.1 -0.9**
comp=Z,455nm,1.0s
YUK Yuzh-Kuril'sk 45.40 20 *e*P **P** **04 55 33.0 -0.4**
YUK *e* 04 57 18.6
YUK *e*PPP PPP 04 57 58.9
YUK *e*S **S** **05 02 12.0 +0.9**
YUK *e*SSS SSS 05 06 24.8
YUK pmax pmax
comp=Z,841nm,1.4s
YUK pmax pmax
comp=N,181nm,0.7s
YUK pmax pmax
comp=Z,268nm,0.7s
YUK pmax pmax
comp=E,166nm,0.8s
YUK MLR MLR
comp=N,2μm,20.0s
YUK MLR MLR
comp=Z,2μm,20.0s
YUK MLR MLR
comp=E,675nm,16.0s
RAMN Ramite 45.56 307 *e*P **P** **04 55 34.7 -0.6**
comp=E,1μm,1.4s
DZM Mont Dzumac 45.77 124 *e*P **P** **04 55 37.8 +0.9**
comp=E,483nm,1.6s
DZM *e*S **S** **05 02 14.4 -3.0**
comp=E,3μm,35.5s
DZM *e*LR LR 05 08 33.1
comp=E,8μm,25.9s
DZM Mont Dzumac 45.77 124 P **P** **04 55 34.8 -2.1**
DZM IAmb IAmb 04 55 43.6
comp=Z,167nm,1.1s
PALK Pallekele 45.84 278 P **P** **04 55 35.9 -1.5**
PALK P **P** **04 55 35.9 -1.5**
PALK Pallekele 45.84 278 P **P** **04 55 36.9 -0.6**
PALK pmax pmax
comp=Z,68nm,0.9s
PALK MLR MLR
comp=Z,3μm,21.0s
PALK Pallekele 45.84 278 P **P** **04 55 36.9 -0.6**
TARA Tarawa 46.51 90 IAMs_20 IAMs_20 05 11 15.3
comp=Z,4μm,22.0s
PVM Polavaram 46.56 292 *e*P **P** **04 55 42.4 -0.5**
PVM IVmB_BB 04 55 43.3
comp=Z,1μm,1.8s
PVM IVMs_BB IVMs_BB 05 14 35.6
comp=Z,1μm,22.2s
GUN Gumba 46.56 308 *e*P **P** **04 55 42.2 -1.1**
comp=Z,783nm,1.0s
PKI Pulchoki 46.78 307 *e*P **P** **04 55 43.7 -1.3**
comp=Z,793nm,1.4s
PKIN Phulchoki 46.80 307 *e*P **P** **04 55 43.8 -1.3**
comp=Z,781nm,1.5s
KKN Kakani 46.98 307 *e*P **P** **04 55 45.3 -1.2**
comp=Z,945nm,1.4s
MDRS Chennai 47.00 286 *e*P **P** **04 55 46.3 -0.1**
MDRS IAmb IAmb 04 55 48.9
comp=Z,425nm,1.6s
DMN Daman 47.04 307 *e*P **P** **04 55 45.8 -1.2**
comp=Z,889nm,1.4s
YSS Yuzh-Sakhalins 47.10 15*ce*P **P** **04 55 47.8 +1.0**
YSS pmax pmax
comp=Z,446nm,1.3s
YSS Yuzh-Sakhalins 47.10 15 P **P** **04 55 46.1 -0.6**
YSS IAmb IAmb 04 56 04.4
comp=Z,123nm,0.9s
YSS IAMs_20 IAMs_20 05 12 54.1
comp=Z,3μm,22.0s
KUR Kuril'sk 47.14 21 *e*P **P** **04 55 48.1 +1.1**
KUR *e* 04 57 36.5
KUR pmax pmax
comp=Z,795nm,1.4s
KUR pmax pmax
comp=Z,2μm,2.8s
KUR MLR MLR
comp=Z,2μm,21.0s
MYLAV Mylavaram 47.36 291 *e*P **P** **04 55 48.4 -0.9**
MYLAV IVmB_BB 04 55 49.5
comp=Z,1μm,2.1s
MYLAV IVMs_BB IVMs_BB 05 14 36.5
comp=Z,893nm,22.9s
KLR Kul'dur 47.40 5 P **P** **04 55 49.7 +0.7**
comp=Z,92nm,1.1s,baz=198,slow=5.9,SNR=86
KLR Kul'dur 47.40 5*ce*P **P** **04 55 49.6 +0.6**
KLR pmax pmax
comp=Z,243nm,1.4s
HIA Hailar 47.55 354*c i*P **P** **04 55 51.4 +1.1**
HIA pmax pmax
comp=Z,134nm,1.2s
HIA Hailar 47.55 354 IAmb IAmb 04 55 59.4
comp=Z,179nm,1.2s
HIA Hailar 47.55 354 IAMs_20 IAMs_20 05 17 27.7
comp=Z,3μm,21.0s
GKN Gorkha 47.59 307 *e*P **P** **04 55 49.5 -1.6**
comp=Z,966nm,1.4s
SKHT Srikalahasti 47.63 287 *e*P **P** **04 55 50.4 -0.9**
SKHT IVmB_BB 04 55 52.2
comp=Z,1μm,2.1s
SKHT IVMs_BB IVMs_BB 05 15 26.8
comp=Z,722nm,22.0s
ADKI Addanki 47.78 290 *e*P **P** **04 55 51.9 -0.7**
ADKI IVmB_BB 04 55 52.7
comp=Z,1μm,1.9s
ADKI IVMs_BB IVMs_BB 05 16 35.6
comp=Z,566nm,21.0s
GGR Gangavaram 48.01 292 *e*P **P** **04 55 53.4 -1.0**
GGR IVmB_BB 04 55 54.2
comp=Z,2μm,1.9s
GGR IVMs_BB IVMs_BB 05 15 29.3
comp=Z,1μm,23.2s
KOLN Koldanda 48.32 306 *e*P **P** **04 55 56.0 -0.8**
comp=Z,836nm,1.0s
DANN Dangsing 48.43 307 *e*P **P** **04 55 56.5 -1.3**
comp=Z,713nm,1.0s
NJS Nagarjunasagar 48.56 290 *e*P **P** **04 55 57.3 -1.3**
NJS IVmB_BB 04 55 58.1
comp=Z,1μm,2.1s
NJS IVMs_BB IVMs_BB 05 16 00.0
comp=Z,573nm,18.0s
ULN Ulaanbaatar 48.77 343 P **P** **04 55 60.0 +0.1**
ULN P **P** **04 55 60.0 +0.1**
ULN Ulaanbaatar 48.77 343*ce*P **P** **04 55 59.9 +0.1**
ULN pmax pmax
comp=Z,116nm,1.0s
ULN Ulaanbaatar 48.77 343 P **P** **04 55 59.4 -0.5**
ULN IAmb IAmb 04 56 04.8
comp=Z,101nm,1.0s
SONM Songino Array 48.94 342 P **P** **04 56 01.0 -0.2**
comp=Z,58nm,0.9s,baz=159,slow=6.8,SNR=173
SONM PcP **PcP** **04 57 26.9 +2.1**
comp=Z,42nm,1.0s,baz=160,slow=3.5,SNR=5.6
SONM LR LR 05 20 06.1
comp=Z,3μm,21.2s,baz=158,slow=40
SONM PKP2ab 05 27 57.0
comp=Z.2.1nm,1.1s,baz=340,slow=2.1,SNR=3.4
SONM Songino Array 48.94 342 P **P** **04 56 00.8 -0.4**
PYUN Piuthan 48.95 306 *e*P **P** **04 56 00.8 -0.8**
comp=Z,2μm,1.4s
CUPL Choutuppal 49.08 291 *e*P **P** **04 56 01.6 -1.0**
CUPL IVmB_BB 04 56 03.1
comp=Z,1μm,1.9s
CUPL IVMs_BB IVMs_BB 05 16 13.8
comp=Z,1μm,23.1s
RPR Rampur 49.10 293 *e*P **P** **04 56 01.5 -1.1**
RPR IVmB_BB 04 56 02.4
comp=Z,1μm,1.9s
RPR IVMs_BB IVMs_BB 05 15 59.7
comp=Z,720nm,24.2s
HYB Hyderabad 49.45 291 *i* P **P** **04 56 04.0 -1.4**
HYB *ep*P **pP** **04 56 15.0 -3.3**
HYB *e*S S 05 03 20.0 +10
HYBB Hyderabad (bro 49.45 291 *e*P **P** **04 56 04.0 -1.4**
HYBB IVmB_BB 04 56 05.9
comp=Z,2μm,1.5s
HYBB IVMs_BB IVMs_BB 05 16 24.3
comp=Z,1μm,23.5s
GRNR Gornyy 49.45 8⇑*i*P **P** **04 56 06.5 +1.7**
GRNR *e* 04 57 55.3
GRNR *e*S **S** **05 03 14.5 +5.9**
GRNR pmax pmax
comp=N,50nm,0.8s
GRNR pmax pmax
comp=Z,90nm,0.8s
GRNR smax smax
comp=N,7.0nm,0.6s
TRD Trivandrum 49.63 280 *e*P **P** **04 56 07.2 +0.4**
NGP Nagpur 49.92 296 *e*P **P** **04 56 07.5 -1.4**
NGP IAmb IAmb 04 56 10.7
comp=Z,671nm,1.9s
NGP Nagpur 49.92 296 *e*P **P** **04 56 07.5 -1.4**
NGP IAmb IAmb 04 56 10.7
comp=Z,671nm,1.9s
URV Uravakonda 50.17 288 *e*P **P** **04 56 08.9 -2.1**
URV IVmB_BB 04 56 10.9
comp=Z,833nm,1.5s
URV IVMs_BB IVMs_BB 05 16 50.9
comp=Z,603nm,27.5s
TYV Tymovskoe 50.71 13 *e*P **P** **04 56 16.0 +1.7**
TYV *e*S **S** **05 03 30.0 +3.9**
TYV pmax pmax
comp=Z,103nm,1.4s
TYV pmax pmax
comp=Z,2μm,3.7s
TYV smax smax
comp=E,1μm,5.7s
CIT Chita 51.11 350 *e*P **P** **04 56 18.7 +1.3**
CIT *e* 04 56 32.0
CIT *e* 04 57 33.8
CIT pmax pmax
comp=Z,1μm,1.9s
KLRI Killari 51.41 292 *e*P **P** **04 56 18.5 -1.7**
KLRI IVmB_BB 04 56 20.3
comp=Z,2μm,1.4s
KLRI IVMs_BB IVMs_BB 05 17 31.0
comp=Z,1μm,26.2s
ZEA Zeya 51.69 1 *e*P **P** **04 56 22.0 +0.3**
ZEA *e* 04 57 36.8
ZEA *e* 04 58 25.7
ZEA *e*S **S** **05 03 40.4 +0.8**
ZEA pmax pmax
comp=N,300nm,3.0s
ZEA pmax pmax
comp=Z,500nm,3.5s
ZEA smax smax
comp=N,500nm,13.8s
BHPL Bhopal 51.95 298 *e*P **P** **04 56 22.7 -1.5**
ZAK Zakamensk 52.16 341 *e*P **P** **04 56 24.5 -0.8**
ZAK pmax pmax
comp=Z,34nm,1.3s
NKL Nikolayevsk 52.46 11 *e*P **P** **04 56 27.5 +0.2**
NKL *e* 04 57 36.2
NKL *e*S **S** **05 03 44.0 -6.0**
NKL pmax pmax
comp=E,43nm,0.8s
NKL pmax pmax
comp=N,9.0nm,0.9s
NKL pmax pmax
comp=Z,301nm,1.4s
NKL pmax pmax
comp=Z,386nm,2.1s
NKL smax smax
comp=E,61nm,2.8s
NKL smax smax
comp=N,14nm,3.0s
NKL MLR MLR
comp=E,867nm,18.0s
NKL MLR MLR
comp=N,382nm,19.0s
NKL MLR MLR
comp=Z,2μm,23.0s
TLY Talaya 53.18 342 P **P** **04 56 33.5 +0.7**
comp=Z,29nm,0.8s,baz=164,slow=7.1,SNR=19
TLY LR LR 05 23 03.8
comp=Z,2μm,19.6s,baz=140,slow=40
TLY Talaya 53.18 342 P **P** **04 56 33.6 +0.8**
TLY P **P** **04 56 33.6 +0.8**
TLY Talaya 53.18 342 *e*P **P** **04 56 33.6 +0.8**
TLY *e*S **S** **05 04 01.9 +1.9**
TLY *e*SS **SS** **05 07 38.4 -1.8**
TLY pmax pmax
comp=Z,181nm,1.3s
TLY MLR MLR
comp=Z,12μm,19.0s
TLY Talaya 53.18 342 P **P** **04 56 32.1 -0.6**
IRK Irkutsk 53.49 343 *e*P **P** **04 56 34.6 -0.4**
IRK pmax pmax
comp=Z,374nm,4.0s
GOA Goa 53.53 288 *e*P **P** **04 56 33.5 -2.4**
GOA IAmb IAmb 04 56 37.1
comp=Z,198nm,1.0s
FUNA Funafuti 53.64 102 P **P** **04 56 34.8 -1.9**
DDI Dehra Dun 53.78 307⇓*e*P **P** **04 56 36.4 -1.2**
DDI IAmb IAmb 04 56 51.0
comp=Z,361nm,1.1s
MOY Mondy 54.00 341 *e*P **P** **04 56 39.5 +0.6**
MOY pmax pmax
comp=Z,383nm,1.8s
WMQ Urumqi 54.05 326 *e*P **P** **04 56 39.1 -0.3**
WMQ sP sP 04 57 01.1 +3.3
WMQ PcP **PcP** **04 57 42.6 -1.3**
WMQ S **S** **05 04 14.4 +2.2**
WMQ pmax pmax
comp=Z,180nm,1.9s
WMQ pmax pmax
comp=Z,2μm,3.7s
WMQ LR LR
comp=Z,5μm,21.1s
WMQ LR LR
comp=Z,7μm,22.7s
WMQ LR LR
comp=Z,7μm,26.3s
WMQ Urumqi 54.05 326 IAmb IAmb 04 56 47.2
comp=Z,181nm,1.1s
POO Poona 54.06 292 *e*P **P** **04 56 37.9 -1.9**
POO IAmb IAmb 04 56 45.4
comp=Z,207nm,1.3s
MSVF Nonsavu 54.47 113*d i*P **P** **04 56 44.7 +1.8**
MSVF pmax pmax
comp=Z,93nm,1.0s

MSVF **Nonsavu** 54.47 113 P **P** 04 56 41.1 -1.7
MSVF IAmb IAmb 04 56 54.0
comp=Z,145nm,1.1s
MSVF Nonsavu 54.47 113 IAMs_20 IAMs_20 05 18 09.3
comp=Z,3µm,21.0s
DGAR Diego Garcia 54.60 260 *i* P **P** 04 56 43.0 -0.8
DGAR pmax pmax
comp=Z,206nm,1.0s
SKR Severo-Kuril's 54.74 23 *e*P P 04 56 36.7 -7.4
SKR *e*S S 05 04 44.5 +23
SKR pmax pmax
comp=Z,400nm,3.7s
SKR pmax pmax
comp=Z,1µm,3.5s
SKR pmax pmax
comp=Z,123nm,1.2s
SKR MLR MLR
comp=Z,1µm,20.0s
SMLA Simla 54.80 307 *e*P **P** 04 56 44.0 -0.9
SMLA IAmb IAmb 04 56 48.6
comp=Z,297nm,1.0s
DHRM DHARAMSHALA 55.90 308 *e*P **P** 04 56 51.5 -1.7
DHRM IAmb IAmb 04 57 05.2
comp=Z,368nm,1.0s
BOD Bodaibo 56.64 352⇓ *i*P **P** 04 56 58.2 +0.6
BOD pmax pmax
comp=Z,492nm,1.7s
PEA0B Petropavlovsk- 57.26 22 *ce*P **P** 04 57 03.7 +1.6
PEA0B Petropavlovsk- 57.26 22 IAmb IAmb 04 57 12.5
comp=Z,124nm,1.1s
PETK Petropavlovsk- 57.26 22 P **P** 04 57 03.0 +0.9
comp=Z,43nm,0.7s,baz=197,slow=4.9,SNR=61
PETK Petropavlovsk- 57.26 22 P **P** 04 57 03.0 +0.9
PETK Petropavlovsk- 57.26 22 P **P** 04 57 03.3 +1.2
OUZ Omahuta 57.50 135 IAMs_20 IAMs_20 05 20 59.1
comp=Z,2µm,21.0s
PET Petropavlovsk 57.55 22 *α i*P **P** 04 57 05.6 +1.5
PET *e*S **S** 05 04 56.9 -1.4
PET *e*SS **SS** 05 08 56.9 +7.9
PET pmax pmax
comp=Z,2µm,2.5s
PET pmax pmax
comp=Z,244nm,1.5s
PET pmax pmax
comp=Z,900nm,15.6s
PET MLR MLR
comp=Z,2µm,22.0s
PET Petropavlovsk 57.55 22 P **P** 04 57 03.3 -0.8
PET IAmb IAmb 04 57 13.5
comp=Z,78nm,0.9s
ZSN Zaisan 57.88 328⇑ *i*P **P** 04 57 05.9 -0.7
comp=Z,305nm,3.8s,baz=328
ZSN *e*S **S** 05 05 03.0 +0.1
baz=328
ZSN LR LR 05 20 59.7
comp=Z,322nm,15.2s,baz=328
ZSN Zaisan 57.88 328 *c i*P **P** 04 57 05.9 -0.7
ZSN *e*S **S** 05 05 03.0 +0.1
ZSN pmax pmax
comp=Z,305nm,3.8s
ZSN MLR MLR
comp=Z,322nm,15.0s
SHLS Shalkode 58.56 321⇑ *i*P **P** 04 57 09.6 -2.0
comp=Z,78nm,1.1s,baz=321
SHLS LR LR 05 22 28.6
comp=Z,295nm,14.8s,baz=321
SHLS Shalkode 58.56 321 *c i*P **P** 04 57 09.6 -2.0
SHLS pmax pmax
comp=Z,78nm,1.1s
SHLS MLR MLR
comp=Z,295nm,15.0s
PDGK Podgornoye 58.63 321 P **P** 04 57 11.1 -1.0
NIL Nilore 58.80 309 P **P** 04 57 12.5 -0.8
NIL P **P** 04 57 12.5 -0.8
NIL Nilore 58.80 309 P **P** 04 57 12.5 -0.8
NIL pmax pmax
comp=Z,98nm,0.9s
NIL MLR MLR
comp=Z,2µm,21.0s
NIL Nilore 58.80 309 P **P** 04 57 12.5 -0.8
NIL IAmb IAmb 04 57 29.1
comp=Z,98nm,0.8s
BHUJ Bhuj 58.87 296⇓ *e*P **P** 04 57 11.7 -2.2
BHUJ IAmb IAmb 04 57 15.4
comp=Z,82nm,0.9s
MK31 Makanchi Array 58.88 326 *ce*P **P** 04 57 13.2 -0.5
MK31 Makanchi Array 58.88 326 P **P** 04 57 13.3 -0.3
MK31 IAmb IAmb 04 57 22.3
comp=Z,104nm,1.1s
MKAR Makanchi Array 58.88 326 P **P** 04 57 13.2 -0.4
comp=Z,61nm,0.5s,baz=121,slow=8.0,SNR=184
MKAR LR LR 05 23 17.1
comp=Z,5µm,21.4s,baz=113,slow=37
MKAR PKPPKP P'P'df 05 26 40.1 -8.8
comp=Z,2.0nm,0.9s,baz=297,slow=4.7,SNR=7.5
MKAR PKP2bc 05 27 02.0
comp=Z,2.9nm,0.9s,baz=318,slow=1.6,SNR=6.1
MKAR Makanchi Array 58.88 326 *ce*P **P** 04 57 13.1 -0.6
MKAR pmax pmax
comp=Z,61nm,0.5s
MKAR Makanchi Array 58.88 326 P **P** 04 57 13.0 -0.6
PRZ Przheval'sk 58.89 320 P **P** 04 57 14.1 +0.1
PRZ pmax pmax
comp=Z,152nm,0.8s
PRZ Przheval'sk 58.89 320 P **P** 04 57 14.1 +0.1
PRZ IAmb IAmb 04 57 21.7
comp=Z,152nm,0.8s
MAKZ Makanchi 59.07 326 P **P** 04 57 14.5 -0.4
MAKZ pmax pmax
comp=Z,215nm,1.2s
MAKZ MLR MLR
comp=Z,8µm,22.0s
MAKZ Makanchi 59.07 326 P **P** 04 57 14.5 -0.4
MAKZ IAmb IAmb 04 57 23.5
comp=Z,215nm,1.1s
KSH Kashi 59.12 316⇑ *i*P **P** 04 57 16.1 +0.5
KSH S **S** 05 05 19.9 +0.3
KSH ScS **ScS** 05 06 59.4 -2.4
KSH pmax pmax
comp=Z,150nm,1.0s
KSH pmax pmax
comp=Z,1µm,3.7s
KSH LR LR
comp=Z,4µm,18.8s
KSH LR LR
comp=Z,5µm,18.4s
KSH LR LR
comp=Z,5µm,24.2s
SATY Saty 59.17 321⇑ *i*P **P** 04 57 15.5 -0.4
comp=Z,75nm,1.0s,baz=320
SATY *e*S **S** 05 05 20.2 +0.1
baz=320
SATY Saty 59.17 321 *c i*P **P** 04 57 15.4 -0.4
SATY *e*S **S** 05 05 20.2 +0.1
SATY pmax pmax
comp=Z,75nm,1.0s
KPKS Kokpek 59.20 321⇑ *i*P **P** 04 57 15.6 -0.4
comp=Z,85nm,1.1s,baz=321
KPKS LR LR 05 22 01.6
comp=Z,576nm,15.7s,baz=321
KPKS Kokpek 59.20 321 *c i*P **P** 04 57 15.6 -0.4
KPKS pmax pmax
comp=Z,85nm,1.1s
KPKS MLR MLR
comp=Z,576nm,16.0s
WIAZ Waiheke Island 59.36 135 P P 04 57 41.4 +24
KDJ Kajisay 59.51 319 P **P** 04 57 18.1 -0.2
KDJ pmax pmax
comp=Z,124nm,1.0s
KDJ Kajisay 59.51 319 P **P** 04 57 18.1 -0.2
KDJ IAmb IAmb 04 57 33.0
comp=Z,124nm,1.0s
YAK Yakutsk 60.06 2 P **P** 04 57 22.1 +0.7
comp=Z,85nm,0.7s,baz=189,slow=3.7,SNR=53
YAK LR LR 05 25 29.9
comp=Z,1µm,20.8s,baz=196,slow=38
YAK Yakutsk 60.06 2⇑ *i*P **P** 04 57 22.2 +0.9
YAK *e**PP **pP** 04 57 33.8 -0.7
YAK *e* 04 58 05.1
YAK *e* 04 59 32.6
YAK *e*S **S** 05 05 32.0 +1.5
YAK *e**SS **sS** 05 05 50.1 -2.4
YAK *e* 05 07 05.7
YAK *i* SS **SS** 05 09 26.4 -1.6
YAK pmax pmax
comp=Z,483nm,1.3s
YAK pmax pmax
comp=N,255nm,1.4s
YAK pmax pmax
comp=E,59nm,1.3s
YAK pmax pmax
comp=Z,351nm,2.2s
YAK pmax pmax
comp=N,306nm,2.2s
YAK pmax pmax
comp=E,146nm,2.0s
YAK smax smax
comp=N,288nm,2.2s
YAK smax smax
comp=E,225nm,2.3s
YAK Yakutsk 60.06 2 P **P** 04 57 21.6 +0.3
MDOK Medeo 60.09 320 *i*P **P** 04 57 22.1 -0.1
baz=320
MDOK *i* S **S** 05 05 32.4 +0.4
baz=320
MDOK LR LR 05 21 35.7
baz=320
MDOK Medeo 60.09 320 *i*P **P** 04 57 22.1 -0.1
MDOK *i* S **S** 05 05 32.4 +0.4
TNSS Tian-Shan 60.09 320⇑ *i*P **P** 04 57 22.6 0.0
baz=320
TNSS Tian-Shan 60.09 320 *c i*P **P** 04 57 22.5 0.0
TDK Taldyqorghan 60.16 323 *i*P **P** 04 57 22.5 -0.1
comp=E,98nm,0.8s,baz=322
TDK *e*S **S** 05 05 33.2 +0.6
baz=322
TDK Taldyqorghan 60.16 323 *i*P **P** 04 57 22.4 -0.1
TDK *e*S **S** 05 05 33.1 +0.6
TDK pmax pmax
comp=Z,98nm,0.8s
ULHL Ulahol 60.18 319 P **P** 04 57 23.5 +0.6
SNR=13
AAA Alma-Ata 60.20 320⇑ *i*P **P** 04 57 22.9 0.0
comp=Z,1µm,20.3s,baz=320
AAA *e*S **S** 05 05 33.9 +0.7
baz=320
AAA LR LR 05 21 43.6
baz=320
AAA Alma-Ata 60.20 320 *c i*P **P** 04 57 22.8 0.0
AAA *e*S **S** 05 05 33.9 +0.7
LBZ Lake Benmore 60.36 145 P **P** 04 57 24.0 +0.2
LBZ IAmb IAmb 04 57 33.7
comp=Z,72nm,0.7s
RPZ Rata Peaks 60.46 144 LR LR 05 25 20.1
comp=Z,2µm,20.2s,baz=308,slow=38
RPZ Rata Peaks 60.46 144 P **P** 04 57 22.9 -1.6
RPZ IAmb IAmb 04 57 34.4
comp=Z,127nm,1.0s
NNZ Nelson 60.46 141 IAMs_20 IAMs_20 05 27 03.4
comp=Z,2µm,20.0s
THZ Tophouse 60.46 141 P **P** 04 57 23.7 -0.9
THZ IAmb IAmb 04 57 32.0
comp=Z,61nm,0.7s
CHKK Chushkaly 60.46 321 *i*P **P** 04 57 23.9 -0.7
baz=321
CHKK Chushkaly 60.46 321 *i*P **P** 04 57 23.9 -0.7
BOOM Boomskoye usch 60.49 319 IAmb IAmb 04 57 33.9
comp=Z,75nm,0.9s
MA2 Magadan 60.57 14 *ce*P **P** 04 57 26.9 +2.0
MA2 pmax pmax
comp=Z,860nm,2.5s
MA2 Magadan 60.57 14 P **P** 04 57 24.3 -0.6
LTZ Lake Taylor 60.64 143 IAmb IAmb 04 57 43.4
comp=Z,77nm,1.1s
KUU Kurty 60.89 321⇑ *i*P **P** 04 57 27.1 -0.4
comp=Z,318nm,1.1s,baz=320
KUU *e*S **S** 05 05 42.2 +0.2
baz=320
KUU Kurty 60.89 321 *c i*P **P** 04 57 27.1 -0.4
KUU *e*S **S** 05 05 42.1 +0.2
KUU pmax pmax
comp=Z,318nm,1.1s
ETVZ East Tongariro 60.91 138 P **P** 04 57 31.0 +3.2
TKM2 Tokmak 2 60.91 319 P **P** 04 57 27.6 -0.3
SNR=103
TKM2 Tokmak 2 60.91 319 P **P** 04 57 27.2 -0.7
WNVZ Wahianoa 60.93 138 P **P** 04 57 30.3 +2.3
KBK Karagaybulak 61.22 319 P **P** 04 57 29.9 0.0
SNR=49
UCH Uchtor 61.31 318 P **P** 04 57 31.8 +0.9
SNR=42
BHHZ Black Hill Sta 61.32 138 P **P** 04 57 32.9 +2.4
SNZO South Karori 61.36 140 IAMs_20 IAMs_20 05 27 12.1
comp=Z,3µm,21.0s
MQZ McQueen's Vall 61.40 143 IAMs_20 IAMs_20 05 27 43.2
comp=Z,2µm,19.0s
URZ Urewera 61.44 136 LR LR 05 25 28.1
comp=Z,866nm,20.3s,baz=322,slow=37
URZ Urewera 61.44 136 P **P** 04 57 32.2 +1.0
URZ Urewera 61.44 136 IAmb IAmb 04 57 37.9
comp=Z,105nm,1.1s
URZ IAMs_20 IAMs_20 05 22 20.3
comp=Z,3µm,22.0s
BKZ Black Stump Fm 61.45 137 P **P** 04 57 32.6 +1.2
BKZ Black Stump Fm 61.45 137 IAmb IAmb 04 57 38.4
comp=Z,81nm,0.9s
BKZ IAMs_20 IAMs_20 05 23 59.6
comp=Z,2µm,20.0s
CHMS Chumysh 61.50 319 P **P** 04 57 31.7 +0.1
SNR=17
AAK Ala-Archa 61.51 319 P **P** 04 57 31.9 0.0
SNR=58
AAK Ala-Archa 61.51 319 *i*P **P** 04 57 31.6 -0.2
SNR=79
AAK Ala-Archa 61.51 319 P **P** 04 57 31.9 0.0
AAK P **P** 04 57 31.9 0.0
AAK Ala-Archa 61.51 319 *ce*P **P** 04 57 31.8 -0.1
AAK pmax pmax
comp=Z,769nm,2.5s
MTHZ Maungataniwha 61.54 137 P **P** 04 57 33.5 +1.6
RAO Raoul Island 61.54 125 LR LR 05 25 03.2
comp=Z,491nm,19.1s,baz=310,slow=37
KRHZ Kereru 61.60 138 P **P** 04 57 34.1 +1.7
NMHZ Naumai 61.63 137 P **P** 04 57 35.6 +2.9
HAZ Te Kaha 61.67 135 P **P** 04 57 35.0 +2.2
RAGZ Rawiri 61.76 136 P P 04 57 38.8 +5.3
SGDS Sogindy 61.78 320⇑ *i*P **P** 04 57 32.7 -0.9
comp=Z,162nm,2.6s,baz=319
SGDS Sogindy 61.78 320 *c i*P **P** 04 57 32.7 -0.9
SGDS pmax pmax
comp=Z,162nm,2.6s
USP Ospenovka 61.78 319 P **P** 04 57 33.2 -0.4
SNR=111
AML Almayashu 61.82 318 P **P** 04 57 34.2 -0.1
SNR=128
ARHZ Aropaoanui 61.84 137 P **P** 04 57 35.2 +1.3
MXZ Matakaoa Point 61.95 135 IAMs_20 IAMs_20 05 25 57.0
comp=Z,2µm,22.0s
EKS2 Erkin-Say 61.99 318 P **P** 04 57 35.2 +0.1
SNR=77
KNTN Kanton 62.04 94 IAMs_20 IAMs_20 05 26 47.0
comp=Z,2µm,20.0s
ZAA0 Zalesovo Array 62.08 334 P **P** 04 57 34.1 -1.1
ZAA0 IAmb IAmb 04 57 38.5
comp=Z,64nm,1.0s
ZALV Zalesovo Beam 62.08 334 P **P** 04 57 34.2 -1.1
comp=Z,54nm,0.9s,baz=115,slow=6.7,SNR=78
ZALV LR LR 05 25 58.1
comp=Z,2µm,21.1s,baz=132,slow=38
ZALV PKPPKP **P'P'df** **05 26 43.5 +0.2**
comp=Z,1.1nm,0.6s,baz=318,slow=2.0,SNR=5.1
ZALV Zalesovo Beam 62.08 334 P **P** 04 57 34.8 -0.4
ZALV Zalesovo Beam 62.08 334 P **P** 04 57 34.8 -0.4
SEM Semipalatinsk 62.09 329 *e*P **P** 04 57 34.6 -1.1
comp=Z,195nm,2.9s,baz=328
SEM Semipalatinsk 62.09 329 *e*P **P** 04 57 34.5 -1.1
SEM pmax pmax
comp=Z,195nm,2.9s
RIGZ Rimuhau 62.10 136 P **P** 04 57 38.6 +2.9
WMGZ Waiomatatini S 62.15 135 P **P** 04 57 37.3 +1.3
KBL Kabul 62.39 308 P **P** 04 57 36.9 -1.1
KBL Kabul 62.39 308 P **P** 04 57 36.9 -1.1
KBL pmax pmax
comp=Z,106nm,1.0s
KBL Kabul 62.39 308 P **P** 04 57 36.9 -1.1
KBL IAmb IAmb 04 57 42.2
comp=Z,106nm,0.9s
BTLS Baital 62.88 321⇑ *i*P **P** 04 57 39.9 -1.0
comp=Z,76nm,1.3s,baz=321
BTLS *e*S **S** 05 06 06.8 -0.2
baz=321
BTLS LR LR 05 25 05.0
comp=Z,411nm,19.7s,baz=321
BTLS Baital 62.88 321 *c i*P **P** 04 57 39.8 -1.0
BTLS *e*S **S** 05 06 06.8 -0.2
BTLS pmax pmax
comp=Z,76nm,1.3s
BTLS MLR MLR
comp=Z,411nm,20.0s
BTK Batken 62.97 315 IAmb IAmb 04 57 49.7
comp=Z,107nm,0.9s
KURBB Kurchatov Arra 63.11 328 P **P** 04 57 41.4 -0.8
comp=Z,111nm,0.7s,baz=126,slow=6.0,SNR=4.2
KURBB Kurchatov Arra 63.11 328 P **P** 04 57 41.7 -0.5
KURK Kurchatov 63.12 328 P **P** 04 57 41.8 -0.5
KURK P **P** 04 57 41.8 -0.5
KURK Kurchatov 63.12 328 *ce*P **P** 04 57 41.7 -0.5
KURK pmax pmax
comp=Z,250nm,1.0s
KURK Kurchatov 63.12 328 P **P** 04 57 42.1 -0.2
DZA Taraz 63.72 318 *i*P **P** 04 57 45.8 -0.6
comp=Z,42nm,1.2s,baz=318
DZA *i* S **S** 05 06 17.6 -0.1
baz=318
DZA Taraz 63.72 318 *i*P **P** 04 57 45.8 -0.6
DZA *i* S **S** 05 06 17.5 -0.1
DZA pmax pmax
comp=Z,42nm,1.2s
SEY Seymchan 63.90 13 P **P** 04 57 49.4 +2.2
comp=Z,149nm,1.1s,baz=213,slow=5.9,SNR=83
SEY Seymchan 63.90 13 *c i*P **P** 04 57 49.3 +2.1
SMY Shemya 64.22 30 P **P** 04 57 48.4 -1.1
SMY pmax pmax
comp=Z,401nm,1.1s
SMY Shemya 64.22 30 P **P** 04 57 48.4 -1.1
IUG Iuzhnay 64.31 317⇑ *i*P **P** 04 57 50.0 -0.4
comp=Z,62nm,0.9s,baz=316
IUG *e*S **S** 05 06 25.3 +0.1
baz=316
IUG Iuzhnay 64.31 317 *c i*P **P** 04 57 50.0 -0.4
IUG *e*S **S** 05 06 25.2 +0.1
IUG pmax pmax
comp=Z,62nm,0.9s
KK31 Karatay Array 64.36 318 IAmb IAmb 04 57 52.9
comp=Z,137nm,1.1s
KKAR Karatay Array 64.36 318 P **P** 04 57 50.2 -0.4
KKAR Karatay Array 64.36 318 P **P** 04 57 50.2 -0.4
BRZS Berezniki 66.00 325⇑ *i*P **P** 04 58 00.8 -0.3
comp=Z,174nm,2.5s,baz=325
BRZS LR LR 05 26 17.0
comp=Z,416nm,15.5s,baz=325
BRZS Berezniki 66.00 325 *c i*P **P** 04 58 00.8 -0.3
BRZS pmax pmax
comp=Z,174nm,2.5s
BRZS MLR MLR
comp=Z,416nm,15.0s
JLN Jalan Bani Buh 68.01 293 P **P** 04 58 12.1 -2.3
JLN P **P** 04 58 12.1 -2.3
JLN P **P** 04 58 12.1 -2.3
WBK Wadi Bani Khal 68.47 293 P **P** 04 58 15.8 -1.6
WBK P **P** 04 58 15.8 -1.6
ADK Adak 68.67 34 P **P** 04 58 17.1 -0.8
ADK pmax pmax
comp=Z,133nm,1.0s
ADK Adak 68.67 34 P **P** 04 58 17.1 -0.8
ADK IAmb IAmb 04 58 23.2
comp=Z,133nm,0.9s
BVAR Borovoye Array 68.68 327 P **P** 04 58 16.8 -1.2
comp=Z,14nm,0.4s,baz=116,slow=9.8,SNR=31
BRVK Borovoye 68.76 327 P **P** 04 58 18.5 +0.1
BRVK Borovoye 68.76 327 *ce*P **P** 04 58 17.9 -0.6
BRVK pmax pmax
comp=Z,176nm,1.3s
BRVK Borovoye 68.76 327 P **P** 04 58 18.0 -0.4
BRVK IAmb IAmb 04 58 22.3
comp=Z,82nm,0.9s
CASY Casey 68.95 187 P **P** 04 58 19.1 -0.2
CASY IAmb IAmb 04 58 28.8
comp=Z,66nm,0.8s
MHTO MHTO 69.20 292 P **P** 04 58 19.8 -2.0
MHTO P **P** 04 58 19.8 -2.0
JMDO Jabal Madar 69.23 293 P **P** 04 58 20.4 -1.7
JMDO P **P** 04 58 20.4 -1.7
BIDO Bidbid 69.35 294 P **P** 04 58 21.3 -1.5
BIDO P **P** 04 58 21.3 -1.5
SMDO Samad 69.37 294 P **P** 04 58 21.1 -1.9
SMDO P **P** 04 58 21.1 -1.9
DQM DQM 69.50 290 P **P** 04 58 22.4 -1.3
DQM P **P** 04 58 22.4 -1.3
DQM P **P** 04 58 22.4 -1.3
TIXI Tiksi 69.69 1 *ce*P **P** 04 58 23.5 -0.4
TIXI pmax pmax
comp=Z,1µm,1.7s
TIXI Tiksi 69.69 1 P **P** 04 58 23.4 -0.4
TIXI IAmb IAmb 04 58 36.1
comp=Z,53nm,0.8s
TIXI IAMs_20 IAMs_20 05 27 34.0
comp=Z,3µm,22.0s
HOQ Hoqain 70.10 294 P **P** 04 58 25.9 -1.5
HOQ P **P** 04 58 25.9 -1.5
BSY Bisya 70.11 293 P **P** 04 58 26.1 -1.4
BSY P **P** 04 58 26.1 -1.4
ARQ Araqi 70.79 294 P **P** 04 58 30.2 -1.4
ARQ P **P** 04 58 30.2 -1.4
ARQ P **P** 04 58 30.2 -1.4
SOHO SOHO 70.87 295 *i*P **P** 04 58 31.6 -0.5
SNR=9.7
SOHO SOHO 70.87 295 P **P** 04 58 30.3 -1.8
SOHO P **P** 04 58 30.3 -1.8
SOHO P **P** 04 58 30.3 -1.8
SHAO Shalim 71.14 288 P **P** 04 58 32.7 -1.1
MDH Madha 71.22 296 P **P** 04 58 30.8 -3.4
MDH Madha 71.22 296 P **P** 04 58 32.4 -1.8
MDH P **P** 04 58 32.4 -1.8
UOSS Minazif 71.27 296 *i*P **P** 04 58 31.1 -3.4
SNR=9.3
UOSS Minazif 71.27 296 ⇑P **P** 04 58 32.1 -2.4
UOSS ⇑P **P** 04 58 32.1 -2.4
UOSS Minazif 71.27 296 P **P** 04 58 33.1 -1.4
BANOM Banah 71.30 297 *i*P **P** 04 58 32.7 -2.0
SNR=7.2
BANOM Banah 71.30 297 P **P** 04 58 33.2 -1.5
BANOM P **P** 04 58 33.2 -1.5
HATD Hatta, Dubai 71.32 295 *i*P **P** 04 58 33.2 -1.6
SNR=14
HATD Hatta, Dubai 71.32 295 P **P** 04 58 33.0 -1.8
MSFE Esma-Masafi 71.36 296 *i*P **P** 04 58 33.3 -1.7
SNR=8.6
ASHO Ashiyiah 71.37 295 *i*P **P** 04 58 33.1 -2.0
SNR=10
ASHO Ashiyiah 71.37 295 P **P** 04 58 34.3 -0.9
SHME Shamm 71.46 297 *i*P **P** 04 58 34.4 -1.1
SNR=9.3
ALNE Al Ain 71.58 295 *i*P **P** 04 58 34.7 -1.6
SNR=20
NAZ Nazwa, Dubai 71.76 296 *i*P **P** 04 58 35.8 -1.6
SNR=7.9
NAZ Nazwa, Dubai 71.76 296 P **P** 04 58 35.8 -1.6
NAZ P **P** 04 58 35.8 -1.6
GEYT Alibeck 71.79 309 P **P** 04 58 37.4 -0.1
comp=Z,76nm,1.0s,baz=134,slow=4.3,SNR=46
GEYT Alibeck 71.79 309 P **P** 04 58 36.7 -0.7
GYA0B ALIBECK ARRAY 71.79 309 IAmb IAmb 04 58 45.9
comp=Z,82nm,0.9s
FAQ Al Faqa, Dubai 71.80 295 *i*P **P** 04 58 36.0 -1.6
SNR=8.0
FAQ Al Faqa, Dubai 71.80 295 P **P** 04 58 36.2 -1.5
UMQ Umm Al-Quwin 71.82 296 *i*P **P** 04 58 37.0 -0.8
SNR=6.4
UMQ Umm Al-Quwin 71.82 296 P **P** 04 58 37.2 -0.6
UMQ P **P** 04 58 37.2 -0.6
ASUD Al Ashush, Dub 72.02 295 *i*P **P** 04 58 37.8 -1.2
SNR=14
ASUD Al Ashush, Dub 72.02 295 P **P** 04 58 37.9 -1.0
NRIK Noril'sk 72.14 346 P **P** 04 58 39.6 +0.8
comp=Z,118nm,0.8s,baz=135,slow=6.0,SNR=194
NRIK LR LR 05 33 46.9
comp=Z,2µm,21.6s,baz=149,slow=39
NRIK Noril'sk 72.14 346 *ce*P **P** 04 58 39.3 +0.5
NRIK pmax pmax
comp=Z,178nm,1.0s
AJN Ajban 72.32 295 *i*P **P** 04 58 38.8 -1.9
SNR=16
AJN Ajban 72.32 295 P **P** 04 58 39.4 -1.3
AJN P **P** 04 58 39.4 -1.3
SOCY Socotra 72.41 282 IAmb IAmb 04 58 47.5

comp=Z,136nm,0.9s
RBK Rabkut 72.45 288 P **P** **04 58 40.0 -1.7**
RBK P **P** **04 58 40.0 -1.7**
RER Riviere de l'E 72.70 247 P **P** **04 58 42.0 -1.1**
RER IAmb IAmb 04 59 00.8
comp=Z,174nm,1.0s
WHFO Wadi Hawf 72.89 288 P **P** **04 58 42.0 -2.3**
WHFO P **P** **04 58 42.0 -2.3**
ABTO Aybut 73.31 287 P **P** **04 58 45.1 -1.7**
ABTO P **P** **04 58 45.1 -1.7**
AB31 Akbulak array 73.37 321 P **P** **04 58 46.6 +0.1**
ABKAR Akbulak array 73.37 321 P **P** **04 58 45.9 -0.5**
MZR Muzera 73.55 293 *i* P **P** **04 58 46.9 -1.2**
SNR=9.6
AKTO Aktyubinsk 74.90 322 P **P** **04 58 55.3 -0.1**
comp=Z,54nm,0.8s,baz=100,slow=6.8,SNR=130
SVE Sverdlovsk 75.36 329*d i*P **P** **04 58 58.2 +0.3**
SVE *e*S **S** **05 08 33.7 -0.1**
SVE pmax pmax
comp=Z,618nm,1.3s
SVE MLR MLR
comp=Z,3µm,25.0s
RAR Rarotonga 75.64 112 LR LR 05 31 13.6
comp=Z,466nm,21.7s,baz=282,slow=35
KIP Kipapa 75.90 69 *i* P **P** **04 59 04.5 +2.8**
KIP pmax pmax
comp=Z,86nm,1.2s
XMAS Kiritimati 76.11 88 P **P** **04 59 00.6 -2.4**
XMAS IAmb IAmb 04 59 11.8
comp=Z,96nm,1.1s
ARU Arti 76.31 328 P **P** **04 59 03.0 -0.3**
comp=Z,74nm,0.9s,baz=106,slow=3.4,SNR=224
ARU Arti 76.31 328*ce*P **P** **04 59 02.9 -0.4**
ARU pmax pmax
comp=Z,388nm,1.0s
ARU MLR MLR
comp=Z,3µm,18.0s
ARU Arti 76.31 328 P **P** **04 59 02.9 -0.4**
SBV Sambava 77.30 256 P **P** **04 59 11.1 +1.4**
SNR=12
MLOA Mauna Loa Obse 78.09 71 P **P** **04 59 11.6 -3.1**
MLOA IAmb IAmb 04 59 24.7
comp=Z,191nm,1.1s
HMH Humu'ula Sheep 78.18 70 P **P** **04 59 10.8 -4.1**
HMH IAmb IAmb 04 59 22.2
comp=Z,159nm,0.8s
AIN Ainahou 78.20 71 P **P** **04 59 11.3 -3.6**
TNA Tin City 78.41 23 P **P** **04 59 16.9 +2.0**
baz=248
PUH Pauahi 78.43 71 P **P** **04 59 13.7 -2.4**
PUH IAmb IAmb 04 59 23.4
comp=Z,224nm,1.1s
ABPO Ambohimpanom 80.38 250 P **P** **04 59 25.1 -1.7**
ABPO pmax pmax
comp=Z,83nm,1.1s
ABPO Ambohimpanom 80.38 250 P **P** **04 59 25.1 -1.7**
MAK Makhachkala 80.59 313 *e*P **P** **04 59 25.4 -1.8**
MAK *e* 05 02 28.1
MAK *e*PPP PPP 05 04 19.1
MAK *e*S **S** **05 09 27.1 -3.6**
MAK *e*SS **SS** **05 14 44.7 +0.6**
MAK *e*SSS SSS 05 18 11.9
MAK pmax pmax
comp=Z,504nm,1.9s
MAK MLR MLR
comp=Z,2µm,20.0s
RAYN Ar Rayn 80.90 293 *i* P **P** **04 59 28.7 -0.6**
SNR=14
RAYN Ar Rayn 80.90 293 P **P** **04 59 28.1 -1.3**
RAYN pmax pmax
comp=Z,87nm,1.0s
RAYN MLR MLR
comp=Z,2µm,20.0s
RAYN Ar Rayn 80.90 293 P **P** **04 59 28.1 -1.3**
RAYN IAmb IAmb 04 59 34.4
comp=Z,87nm,0.9s
VOI Vohitsoka 81.06 248 P **P** **04 59 31.7 +1.4**
SNR=8.0
RDOG Red Dog Mine 81.12 21 IAmb IAmb 04 59 36.7
comp=Z,90nm,0.9s
LGD Lagodekhi 81.41 312 P **P** **04 59 32.5 +0.9**
KIRV Kirov 81.62 329 P **P** **04 59 32.4 0.0**
comp=Z,181nm,0.9s,baz=120,slow=4.7,SNR=118
KIRV Kirov 81.62 329*ce*P **P** **04 59 32.5 +0.2**
VNDA Vanda 81.64 173 P **P** **04 59 33.5 +1.4**
comp=Z,46nm,0.9s,baz=318,slow=6.1,SNR=168
VNDA PKPPKP **P'P'df** **05 26 14.6 +6.4**
comp=Z,0.4nm,0.4s,baz=110,slow=2.5,SNR=3.6
VNDA LR LR 05 33 47.2
comp=Z,866nm,21.5s,baz=346,slow=34
VNDA Vanda 81.64 173 P **P** **04 59 31.3 -0.8**
GROC Groznyy 81.86 313 *e*P **P** **04 59 34.5 +0.5**
GROC *e* 05 02 43.2
GROC *e*S **S** **05 09 44.4 +0.5**
GROC pmax pmax
comp=Z,241nm,1.2s
MAW Mawson 81.91 200 P **P** **04 59 34.1 +0.5**
comp=Z,39nm,0.8s,baz=58,slow=6.3,SNR=36
MAW PKPPKP **P'P'df** **05 26 10.7 +2.6**
comp=Z,4.1nm,0.9s,baz=112,slow=3.8,SNR=4.4
MAW Mawson 81.91 200 P **P** **04 59 35.6 +2.0**
baz=82,SNR=24
MAW Mawson 81.91 200 P **P** **04 59 33.2 -0.4**
GNI Garni 82.41 310 P **P** **04 59 38.0 +0.9**
comp=Z,20nm,0.6s,baz=178,slow=1.4,SNR=36
GNI Garni 82.41 310 P **P** **04 59 38.2 +1.1**
GNI P **P** **04 59 38.2 +1.1**
GNI Garni 82.41 310*ce*P **P** **04 59 37.9 +0.8**
GNI pmax pmax
comp=Z,85nm,1.3s
GNI MLR MLR
comp=Z,652nm,24.0s
GNI Garni 82.41 310 P **P** **04 59 36.1 -1.1**
GNI IAmb IAmb 04 59 53.6
comp=Z,86nm,1.0s
SEAG Tbilisi Sea 82.47 312 P **P** **04 59 39.5 +2.2**
KZRT Kazreti 82.75 311 P **P** **04 59 39.4 +0.7**
GUDG Gudauri 82.77 312 P **P** **04 59 40.3 +1.3**
CLDR Caldiran 82.98 309 *e*P **P** **04 59 41.1 +0.9**
CUKT Cukurca 83.12 307 *e*P **P** **04 59 40.6 -0.3**
ZEI Tsey 83.21 313 *e*P **P** **04 59 37.8 -3.5**
ZEI pmax pmax
comp=Z,419nm,1.4s
ATD Arta Tunnel 83.31 281 IAmb IAmb 04 59 49.2
comp=Z,93nm,1.0s
ATD IAMs_20 IAMs_20 05 33 18.8
comp=Z,1µm,22.0s
BGD Bogdanovka 83.34 311 P **P** **04 59 43.5 +1.5**
VANB Van 83.36 308 *e*P **P** **04 59 42.3 +0.3**
AKH Akhalkalaki 83.43 311 ⇓P **P** **04 59 44.3 +1.8**
ONI Oni 83.53 312 P **P** **04 59 43.9 +1.1**
KDAK Kodiak Island 83.62 32 P **P** **04 59 41.8 -1.0**
KDAK pmax pmax
comp=Z,163nm,1.1s
KDAK Kodiak Island 83.62 32 P **P** **04 59 41.8 -1.0**
KDAK IAmb IAmb 04 59 48.8
comp=Z,163nm,1.1s
AKDM Akdamar-Van 83.67 308 *e*P **P** **04 59 44.5 +0.8**
KARS Kars 83.70 310 *e*P **P** **04 59 44.9 +1.1**
KARS Kars 83.70 310 P **P** **04 59 45.2 +1.4**
AGRB Hanur-Agry 83.72 309 *e*P **P** **04 59 45.2 +1.2**
GOF Gofitskoye 83.97 315⇑*e*P **P** **04 59 45.0 +0.1**
GOF pmax pmax
comp=Z,810nm,2.7s
KBZ Khabaz 84.00 314 P **P** **04 59 45.4 +0.4**
comp=Z,73nm,1.1s,baz=60,slow=20
KBZ Khabaz 84.00 314*ce*P **P** **04 59 45.3 +0.3**
KBZ pmax pmax
comp=Z,138nm,1.2s
MLAZ Malazgirt-MUS 84.04 309 *e*P **P** **04 59 46.8 +1.2**
SIRT Sirnak 84.06 307 *e*P **P** **04 59 45.8 +0.2**
A21K Barrow 84.07 18 P **P** **04 59 47.3 +2.6**
baz=258,SNR=32
A21K Barrow 84.07 18 IAMs_20 IAMs_20 05 41 58.1
comp=Z,1µm,21.0s
IMAR Indian Mountai 84.16 24 P **P** **04 59 44.5 -0.9**
KVAR Kislovodsk Arr 84.16 314 P **P** **04 59 47.0 +1.0**
comp=Z,6.3nm,0.6s,baz=270,slow=20,SNR=5.1
KVAR S **S** **05 10 03.7 -3.8**
comp=Z,6.6nm,0.9s,baz=302,slow=9.0,SNR=2.0
KIV Kislovodsk 84.17 314 ⇓P **P** **04 59 47.1 +1.0**
KIV Kislovodsk 84.17 314 *i* P **P** **04 59 45.9 -0.2**
SNR=40
KIV Kislovodsk 84.17 314 P **P** **04 59 46.3 +0.3**
KIV P **P** **04 59 46.3 +0.3**
KIV Kislovodsk 84.17 314 *e*P **P** **04 59 45.8 -0.2**
KIV *e* 05 03 00.2
KIV *e* 05 10 05.3
KIV pmax pmax
comp=Z,904nm,4.0s
KIV pmax pmax
comp=Z,318nm,1.0s
KIV MLR MLR
comp=Z,4µm,20.0s
KIV Kislovodsk 84.17 314 P **P** **04 59 45.0 -1.1**
KIV IAmb IAmb 04 59 51.4
comp=Z,128nm,1.1s
KIV IAMs_20 IAMs_20 05 43 38.9
comp=Z,1µm,21.0s
HOM Homer 84.32 30 P **P** **04 59 47.4 +1.1**
baz=264
GURO Guroymak-BITLI 84.42 308 *e*P **P** **04 59 48.5 +1.0**
KOPR Koprukoy-ERZUR 84.61 310 *e*P **P** **04 59 49.6 +1.1**
SKT Skwentna 84.62 28 IAmb IAmb 04 59 49.9
comp=Z,163nm,1.1s
PPT Papeete 84.87 108 P **P** **04 59 53.3 +3.3**
comp=Z,16nm,0.9s,baz=75,slow=20,SNR=1.5
PPT LR LR 05 35 06.7
comp=Z,623nm,21.8s,baz=272,slow=34
PPT2 Papeete2 84.87 108 *e*S **S** **05 10 11.5 -4.0**
comp=Z,2µm,26.0s
PPT2 Papeete2 84.87 108 *e*LR LR 05 26 36.6
comp=Z,3µm,27.0s
VRTB Varto-Mus 84.89 309 *e*P **P** **04 59 51.6 +1.7**
SVAN Silvan-Diyarba 85.06 308 *e*P **P** **04 59 51.3 +0.7**
BPAW Bear Paw Mtn. 85.09 26 IAmb IAmb 04 59 54.5
comp=Z,64nm,1.2s
VRH Novokhopyorsk 85.20 321 *e*P **P** **04 59 50.6 -0.3**
VRH *e*S **S** **05 10 12.5 -4.8**
VRH pmax pmax
comp=Z,930nm,1.0s
VRH smax smax
comp=N,310nm,1.8s
VRH MLR MLR
comp=Z,1µm,18.0s
KARO Karliva-Bingo 85.21 309 *e*P **P** **04 59 52.8 +1.3**
CUT Chulitna 85.25 28 P **P** **04 59 51.7 +0.8**
baz=265
MLY Manley 85.29 25 P **P** **04 59 52.8 +1.6**
baz=264,SNR=22
TRF Thorofare Moun 85.33 27 IAmb IAmb 04 59 57.3
comp=Z,64nm,1.2s
TBI Tubuai 85.36 113 *e*S **S** **05 10 16.1 -3.8**
comp=Z,727nm,25.5s
TBI Tubuai 85.36 113 *e*LQ LQ 05 23 14.5
comp=Z,1µm,31.0s
TBI *e*LR LR 05 26 49.3
comp=Z,2µm,37.2s
MARD Mardin 85.38 307 IAmb IAmb 04 59 54.3
comp=Z,139nm,1.0s
RC01 Rabbit Creek A 85.39 29 P **P** **04 59 52.5 +0.8**
baz=265,SNR=15
CHOM Cayeli-Rize 85.48 311 *e*P **P** **04 59 53.1 +0.5**
BNGB Bingl 85.49 309 *e*P **P** **04 59 53.9 +1.1**
YEDI Yedisu-Bingol 85.61 309 *e*P **P** **04 59 54.5 +1.1**
MAZI Mazidag 85.64 307 *e*P **P** **04 59 53.9 +0.3**
KOPT Kop Dagi 85.65 310 IAMs_20 IAMs_20 05 40 46.6
comp=Z,1µm,22.0s
COLD Coldfoot 85.72 23 P **P** **04 59 55.2 +2.0**
baz=264,SNR=58
PMR Palmer 85.72 29 IAmb IAmb 04 59 55.8
comp=Z,170nm,1.1s
BWN Browne 85.76 26 IAmb IAmb 04 59 57.7
comp=Z,81nm,1.0s
I23K Minto, Yukon-K 85.88 25 P **P** **04 59 55.5 +1.5**
baz=265,SNR=49
I23K Minto, Yukon-K 85.88 25 IAMs_20 IAMs_20 05 34 58.0
comp=Z,1µm,22.0s
DYBB Diyarbakir 85.90 308 *e*P **P** **04 59 55.7 +0.9**
BAYT Aydıntepe-Bayb 85.93 310 *e*P **P** **04 59 56.4 +1.3**
MCK McKinley 85.96 26 P **P** **04 59 55.0 +0.5**
baz=266,SNR=24
NEA2 Nenana 85.96 26 P **P** **04 59 55.3 +0.9**
baz=266,SNR=16
RND Reindeer 85.97 27 IAmb IAmb 04 59 58.9
comp=Z,50nm,0.9s
TOLK Toolik Lake Re 86.08 21 P **P** **04 59 56.8 +1.8**
baz=265,SNR=55
KTUT Trabzon 86.23 311 ⇓P **P** **04 59 57.2 +0.9**
KTUT Trabzon 86.23 311 *e*P **P** **04 59 56.8 +0.6**
ERZN Erzincan 86.24 309 *e*P **P** **04 59 57.8 +1.2**
SOC Sochi 86.30 313 *e*P **P** **04 59 55.0 -1.6**
SOC *e*PPP PPP 05 05 09.1
SOC *e*S S 05 10 16.6 -12
SOC *e*SS **SS** **05 16 07.1 -1.5**
SOC *e*SSS SSS 05 19 42.2
SOC pmax pmax
comp=Z,347nm,1.0s
SOC MLR MLR
comp=Z,1µm,22.0s
ANKE Ethiopia-Afar 86.40 279 *e*P **P** **04 59 54.1 -4.0**
ANKE *e*S **S** **05 10 35.1 +3.8**
PTK Pertek 86.49 309 *e*P **P** **04 59 59.0 +1.1**
COLA College 86.50 25 *i* P **P** **04 59 58.3 +1.3**
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 86.50 25 P **P** **04 59 56.4 -0.7**
SVRC Sivrice-ELAZID 86.56 308 *e*P **P** **04 59 59.2 +1.0**
SCM Sheep Creek Mo 86.59 28 IAMs_20 IAMs_20 05 39 00.9
comp=Z,1µm,21.0s
VAH Vaihoa 86.61 105 *e*P **P** **05 00 00.4 +1.8**
comp=Z,61nm,1.1s
POKR Poker Plat Res 86.69 25 P **P** **04 59 58.4 +0.4**
baz=267,SNR=8.3
VORD Divnogorie 86.72 321 *e*P **P** **04 59 58.3 -0.1**
VORD pmax pmax
comp=Z,620nm,1.1s
VORR Voronezh 86.79 321⇑*i*P **P** **04 59 57.0 -1.7**
VORR pmax pmax
comp=Z,2µm,1.4s
VSR Storozhevoye 86.81 321 *e*P **P** **04 59 58.5 -0.3**
VSR *e*S **S** **05 10 30.1 -2.9**
VSR pmax pmax
comp=Z,710nm,1.2s
VSR smax smax
comp=E,210nm,2.4s
VSR MLR MLR
comp=Z,880nm,22.0s
KLMR Klimovskoe 86.84 331*c i*P **P** **04 59 58.3 -0.5**
KLMR S **SKSac** **05 10 21.6 0.0**
KLMR pmax pmax
comp=Z,627nm,1.5s
KLMR MLR MLR
comp=Z,552nm,17.0s
KLMR Klimovskoe 86.84 331⇑*i*P **P** **04 59 58.4 -0.4**
KLMR *e*P **P** **04 59 58.4 -0.4**
KLMR *e*P **P** **04 59 58.4 -0.4**
KLMR AMP 05 00 01.7
comp=Z,627nm,1.5s
KLMR S **SKSac** **05 10 21.6 0.0**
KLMR S **SKSac** **05 10 21.6 0.0**
KLMR LQ LQ 05 31 24.3
KLMR LQ LQ 05 31 24.3
KLMR LR LR 05 34 08.2
KLMR AMP 05 39 39.3
comp=Z,552nm,17.2s
HDA Harding Lake 86.87 26 P **P** **04 59 58.6 -0.3**
baz=268,SNR=26
HDA Harding Lake 86.87 26 IAmb IAmb 05 00 00.8
comp=Z,41nm,0.9s
ILAR Eielson Array 86.91 25 P **P** **04 59 58.8 -0.3**
comp=Z,17nm,1.1s,baz=290,slow=4.2,SNR=54
ILAR PP **PP** **05 03 20.0 -2.3**
comp=Z,6.8nm,1.2s,baz=255,slow=6.6,SNR=4.4
ILAR PKPPKP **P'P'df** **05 26 02.5 +2.7**
comp=Z,0.5nm,0.9s,baz=85,slow=3.0,SNR=3.8
ILAR Eielson Array 86.91 25 P **P** **04 59 58.2 -0.9**
URFA Urfa 86.94 307 *e*P **P** **05 00 00.9 +1.0**
HIN Hinchinbrook I 86.94 30 IAMs_20 IAMs_20 05 34 53.2
comp=Z,2µm,22.0s
LPSR Galich'ya Gora 86.97 322 *e*P **P** **04 59 59.5 -0.1**
LPSR *e*S **SKSac** **05 10 22.5 -0.3**
LPSR pmax pmax
comp=Z,760nm,1.0s
LPSR smax smax
comp=N,70nm,1.7s
LPSR MLR MLR
comp=Z,640nm,13.0s
Q23K Middleton Isla 86.99 31 P **P** **05 00 00.3 +0.8**
baz=268
ESPY Espiye-Giresun 87.01 311 *e*P **P** **05 00 00.0 -0.1**
ILIC ilic-Erzincan 87.14 309 *e*P **P** **05 00 02.1 +1.2**
M24K Tolsona, Glenn 87.14 28 P **P** **05 00 01.6 +1.2**
baz=268,SNR=14
MALT Malatya 87.25 308 *e*P **P** **05 00 02.5 +1.0**
MALT Malatya 87.25 308 P **P** **05 00 02.2 +0.7**
KLU Klutina 87.25 29 IAmb IAmb 05 00 08.9
comp=Z,49nm,1.0s
PAX Paxson 87.49 27 IAmb IAmb 05 00 04.6
comp=Z,45nm,1.0s
PRP Porcupine Dome 87.50 25 IAMs_20 IAMs_20 05 35 46.0
comp=Z,1µm,22.0s
TMCR Tamitsa 87.60 334 *e*P **P** **05 00 00.7 -1.7**
TMCR pmax pmax
comp=Z,133nm,1.0s
MOS Moscow 87.76 326 *e*P **P** **05 00 00.6 -2.8**
MOS *e* 05 03 24.1
MOS *e*S **SKSac** **05 10 25.3 -2.1**
MOS pmax pmax
comp=Z,466nm,1.2s
MOS MLR MLR
comp=Z,2µm,23.0s
RIDG Independent Ri 87.78 26 IAmb IAmb 05 00 09.1
comp=Z,101nm,1.0s
RAGM Ragged Mountai 87.85 30 IAMs_20 IAMs_20 05 44 20.2
comp=Z,2µm,19.0s
N25K Chitina, Valde 87.89 29 P **P** **05 00 05.1 +1.2**
baz=270,SNR=13
ANN Anapa 87.95 315 *e*P **P** **05 00 03.4 -1.1**
ANN *e*S **SKSac** **05 10 29.1 +0.1**
ANN *e* 05 10 43.6
ANN pmax pmax
comp=Z,591nm,1.1s
ANN pmax pmax
comp=N,167nm,1.0s
ANN pmax pmax
comp=E,108nm,1.2s
ANN MLR MLR
comp=E,4µm,22.0s
ANN MLR MLR
comp=N,974nm,19.0s
ANN MLR MLR
comp=Z,3µm,22.0s
RSDY Resadiye-TOKAT 88.08 310 *e*P **P** **05 00 06.0 +0.7**
SCRK Sand Creek 88.16 26 P **P** **05 00 05.9 +0.6**
baz=270,SNR=17
GAZ Gaziantep 88.22 307 *e*P **P** **05 00 06.8 +0.7**
GLB Gilahina Butte 88.27 29 IAmb IAmb 05 00 15.0
comp=Z,60nm,1.1s
SVSK Karacayir 88.34 310 *e*P **P** **05 00 07.5 +1.0**
OBN Obninsk 88.37 325⇑P **P** **05 00 06.9 +0.6**
OBN Obninsk 88.37 325*ce*P **P** **05 00 05.8 -0.4**
OBN *i* *PP **pP** **05 00 18.3 -1.8**
OBN *i* 05 03 32.6
OBN *e*S **S** **05 10 42.4 -5.4**
OBN pmax pmax
comp=Z,216nm,1.1s
OBN MLR MLR
comp=Z,4µm,23.0s
OBN Obninsk 88.37 325 P **P** **05 00 05.5 -0.7**
KIBK Kibwezi 88.43 268 P **P** **05 00 09.1 +1.6**
SNR=86
L26K Log Cabin Wild 88.46 27 P **P** **05 00 07.7 +1.1**
baz=271,SNR=27
ASF Jabal al Asfar 88.58 302 P **P** **05 00 09.8 +1.9**
comp=Z,32nm,1.0s,baz=54,slow=9.1,SNR=37
MCARA McCarthy VSAT 88.64 29 IAMs_20 IAMs_20 05 43 30.2
comp=Z,1µm,22.0s
TOKT Tokat 88.68 310 *e*P **P** **05 00 08.6 +0.4**
TOKA Tokat 88.73 310 IAMs_20 IAMs_20 05 44 54.0
comp=Z,1µm,22.0s
SARI SarD1z-Kayseri 88.83 308 *e*P **P** **05 00 09.7 +0.7**
LVZ Lovozero 88.93 338*ce*P **P** **05 00 07.7 -1.0**
LVZ pmax pmax
comp=Z,105nm,1.1s
LVZ Lovozero 88.93 338 P **P** **05 00 08.2 -0.5**
LVZ IAmb IAmb 05 00 11.6
comp=Z,98nm,1.1s
K27K Chicken 89.00 26 P **P** **05 00 11.3 +2.3**
baz=272
K27K Chicken 89.00 26 IAmb IAmb 05 00 12.6
comp=Z,104nm,1.0s
KVT Kavak 89.04 311 *e*P **P** **05 00 10.6 +0.8**
TAHT Tahtakopru-Hat 89.07 306 *e*P **P** **05 00 10.6 +0.6**
BCAR Beaver Creek A 89.17 27 P **P** **05 00 08.6 -1.3**
KMBO Kilima Mbogo 89.18 269 P **P** **05 00 14.2 +2.9**
comp=Z,136nm,1.3s,baz=79,slow=5.9,SNR=135
KMBO LR LR 05 38 01.5
comp=Z,896nm,20.7s,baz=90,slow=34
KMBO Kilima Mbogo 89.18 269 *i* P **P** **05 00 12.6 +1.3**
SNR=87
KMBO Kilima Mbogo 89.18 269 P **P** **05 00 12.8 +1.5**
KMBO P **P** **05 00 12.8 +1.5**
KMBO Kilima Mbogo 89.18 269 P **P** **05 00 09.4 -1.9**
KMBO pmax pmax
comp=Z,58nm,1.1s
KMBO Kilima Mbogo 89.18 269 P **P** **05 00 09.4 -1.9**
KMBO IAmb IAmb 05 00 26.8
comp=Z,58nm,1.1s
KMBO Kilima Mbogo 89.18 269 IAMs_20 IAMs_20 05 37 47.4
comp=Z,1µm,22.0s
BNN Bunyan 89.26 309 *e*P **P** **05 00 11.3 +0.3**
YAH Yahtse 89.31 30 IAMs_20 IAMs_20 05 37 58.6
comp=Z,1µm,21.0s
KOZT Kozan 89.32 307 *e*P **P** **05 00 11.5 +0.3**
HWQ Hawqa 89.32 304 *e*P **P** **05 00 11.7 +0.3**
EGAK Eagle 89.36 25 P **P** **05 00 09.4 -1.3**
CEYT Ceyhan 89.40 307 *e*P **P** **05 00 12.2 +0.7**
APA Apatity 89.42 337⇓*i*P **P** **05 00 09.5 -1.4**
APA *i* 05 10 35.0
APA *i*S **S** **05 10 54.0 -3.2**
APA *i* 05 12 39.0
APA pmax pmax
comp=Z,28nm,1.0s
RCY Rachaya 89.44 303 *e*P **P** **05 00 12.8 +0.8**
BHL Bhannes 89.58 304 *e*P **P** **05 00 12.9 +0.3**
TABL Table Mountain 89.60 30 IAMs_20 IAMs_20 05 38 31.4
comp=Z,2µm,22.0s
DIKM Dikmen 89.61 311⇑P **P** **05 00 13.4 +0.9**
DIKM Dikmen 89.61 311 *e*P **P** **05 00 12.3 -0.1**
SNOP Sinop 89.64 312 *e*P **P** **05 00 12.4 -0.1**
KRS Karatas 89.71 306 *e*P **P** **05 00 13.9 +0.9**
MMAI Mount Meron Ar 89.82 303 P **P** **05 00 14.8 +1.1**
comp=Z,165nm,1.1s,baz=80,slow=6.1,SNR=117
KARA Karaisali 89.94 307 *e*P **P** **05 00 14.3 +0.2**
CORM Corum 90.15 310 *e*P **P** **05 00 15.6 +0.5**
DAWY Dawson 90.17 26 IAmb IAmb 05 00 17.4
comp=Z,50nm,1.1s
SIM Simferopol' 90.30 315*c i*P **P** **05 00 14.5 -1.1**
EIL Elat 90.34 300 P **P** **05 00 16.6 +0.5**
comp=Z,67nm,1.0s,baz=11,slow=3.7,SNR=9.1
MERS Mersin 90.39 307 *e*P **P** **05 00 16.1 -0.1**
BZK Bozkurt 90.54 312 ⇓P **P** **05 00 17.3 +0.6**
BZK Bozkurt 90.54 312 *e*P **P** **05 00 16.8 +0.1**
SYO Syowa Base 90.59 201⇑*i*P **P** **05 00 16.5 +0.2**
SYO Syowa Base 90.59 201⇑*i*PcP **PcP** **05 00 18.3 +0.9**
SYO Syowa Base 90.59 201⇑*i*pP pP 05 00 24.4 -5.8
ILGA Ilgaz 90.80 311 IAmb IAmb 05 00 19.9
comp=Z,140nm,1.1s
SILI Silifke-Mersin 90.89 306 *e*P **P** **05 00 18.6 +0.1**
CANT Cankiri 90.90 310 *e*P **P** **05 00 18.3 -0.2**
LODK Lodwar 90.92 273 P **P** **05 00 20.1 +0.9**
BR131 Keskin Array S 90.94 310*c i*P **P** **05 00 18.0 -0.8**
BR131 Keskin Array S 90.94 310 IAmb IAmb 05 00 21.1
comp=Z,35nm,1.0s
BRTR Keskin Array B 90.94 310 P **P** **05 00 18.2 -0.6**
comp=Z,36nm,1.0s,baz=123,slow=4.6,SNR=93
BRTR PP **PP** **05 04 00.2 +4.8**
comp=Z,3.4nm,0.9s,baz=96,slow=8.8,SNR=4.2
BRTR Keskin Array B 90.94 310*ce*P **P** **05 00 18.2 -0.6**
BRTR pmax pmax
comp=Z,37nm,1.0s
BRTR Keskin Array B 90.94 310 P **P** **05 00 17.5 -1.4**
YESY Yesilyurt 90.96 308 *e*P **P** **05 00 18.9 -0.1**
SERE Sereflikochisa 91.04 309 *e*P **P** **05 00 18.7 -0.6**
IKL Isikli 91.09 306 *e*P **P** **05 00 19.2 -0.2**
AKKU Akkuyu-Mersin 91.20 306 *e*P **P** **05 00 19.8 -0.1**
TEVE Tevekalti-Mers 91.27 306 *e*P **P** **05 00 20.5 +0.1**
AFSR Afar-Bala (An 91.39 309 *e*P **P** **05 00 20.8 -0.1**
CSS Mathiatis 91.45 305 IAMs_20 IAMs_20 05 44 48.4
comp=Z,1µm,22.0s
PUL Pulkovo 91.45 330*ce*P **P** **05 00 20.6 +0.1**
PUL pmax pmax
comp=Z,110nm,0.8s
BERE Bereket-Mersin 91.46 306 *e*P **P** **05 00 21.3 0.0**

KURC	Kurucasile-Bar	91.48	312	eP		P	05 00 20.4	-0.7
TEKE	Tekeli-Mersin	91.56	306	eP		P	05 00 21.1	-0.5
ANTO	Ankara	91.58	310	IAMs_20	IAMs_20		05 49 57.3	
	comp=Z,997nm,21.0s							
CHBY	Cihanbeyli	91.58	309	eP		P	05 00 20.9	-0.9
QSPA	South Pole Qui	91.80	180	PKKPbc	PKKPbc		05 17 44.7	+0.8
	comp=Z,2.6nm,1.0s,baz=212,slow=3.6,SNR=3.1							
QSPA	South Pole Qui	91.80	180	P		P	05 00 21.3	-0.9
QSPA				IAmb	IAmb		05 00 39.7	
	comp=Z,36nm,1.1s							
LEF	Lefka	91.80	305	⇑P		P	05 00 23.5	+0.8
LEF	Lefka	91.80	305	eP		P	05 00 22.3	-0.4
INK	Inuvik	91.99	21	P		P	05 00 23.5	+0.7
	comp=Z,49nm,1.1s,baz=278,slow=5.2,SNR=59							
INK				PKKP		PKKPbc	05 17 42.0	-0.5
	comp=Z,0.7nm,0.5s,baz=81,slow=2.7,SNR=4.8							
INK	Inuvik	91.99	21	IAmb	IAmb		05 00 27.8	
	comp=Z,53nm,1.1s							
ARD4	ARCESS Array S	92.05	340	IAmb	IAmb		05 00 24.2	
	comp=Z,110nm,1.1s							
ARA0	ARCESS Array S	92.06	340	⇑iP		P	05 00 22.6	-0.6
ARCES	ARCESS Array B	92.06	340	P		P	05 00 22.7	-0.5
	comp=Z,60nm,0.9s,baz=78,slow=6.3,SNR=44							
ARCES				PKKP		PKKPdf	05 17 40.4	+1.0
	comp=Z,3.0nm,0.8s,baz=251,slow=3.5,SNR=5.3							
ARCES				LR		LR	05 48 01.6	
	comp=Z,814nm,20.5s,baz=85,slow=40							
ARD5	ARCESS Array S	92.06	340	IAmb	IAmb		05 00 24.3	
	comp=Z,97nm,1.1s							
ARD6	ARCESS Array S	92.06	340	IAmb	IAmb		05 00 24.4	
	comp=Z,114nm,1.1s							
GAZI	Gazipasa	92.19	306	eP		P	05 00 23.8	-0.8
SPA0	Spitsbergen Ar	92.22	349	⇑iP		P	05 00 23.6	-0.2
SPITS	Spitsbergen Ar	92.22	349	P		P	05 00 23.2	-0.6
	comp=Z,53nm,0.9s,baz=119,slow=14,SNR=16							
KIZT	Kizilcal	92.35	309	eP		P	05 00 24.7	-0.7
HAMF	Hammerfest	92.44	341	eP		P	05 00 24.4	-0.5
SVRH	Sivrihisar-ESK	92.58	309	eP		P	05 00 25.9	-0.5
WHY	Whitehorse	92.66	29	IAmb	IAmb		05 00 29.6	
	comp=Z,104nm,1.1s							
MDUB	Mudurnu	92.75	310	eP		P	05 00 26.6	-0.6
KBS	Kingsbay	92.75	350	IAMs_20	IAMs_20		05 48 02.5	
	comp=Z,1µm,20.0s							
KBS	Kingsbay	92.75	350	eP		P	05 00 26.3	0.0
HSPB	Hornsund (broa	92.80	348	⇑iP		P	05 00 26.3	-0.1
CIFT	Cifteler, Eski	92.95	309	eP		P	05 00 27.4	-0.7
KTK1	Kautokeino	92.96	339	eP		P	05 00 27.0	-0.3
AKASG	Malin Array Be	93.11	321	P		P	05 00 27.6	-0.7
	comp=Z,24nm,1.0s,baz=69,slow=4.6,SNR=85							
AKASG				PKKP		PKKPdf	05 17 37.9	+0.8
	comp=Z,0.4nm,0.3s,baz=293,slow=1.8,SNR=4.1							
AKASG				LR		LR	05 46 28.1	
	comp=Z,2µm,21.9s,baz=75,slow=38							
AKASG	Malin Array Be	93.11	321	ceP		P	05 00 27.7	-0.7
AKASG				pmax	pmax			
	comp=Z,19nm,0.9s							
AKASG	Malin Array Be	93.11	321	P		P	05 00 27.2	-1.2
AKBB	Malin Array Si	93.11	321	ceP		P	05 00 27.5	-0.9
AKBB	Malin Array Si	93.11	321	IAmb	IAmb		05 00 37.8	
	comp=Z,42nm,1.1s							
PURM	Purcari	93.14	317	⇓P		P	05 00 30.1	+1.5
SRCK	Saricakaya, Es	93.22	310	eP		P	05 00 28.4	-0.8
JIS	Juneau Island	93.27	31	IAMs_20	IAMs_20		05 39 20.5	
	comp=Z,1µm,22.0s							
GULT	Gulveren	93.27	310	eP		P	05 00 28.8	-0.7
FINES	FINESS Array B	93.29	332	P		P	05 00 28.2	-0.8
	comp=Z,10nm,0.6s,baz=69,slow=4.4,SNR=27							
FINES	FINESS Array B	93.29	332	ceP		P	05 00 28.6	-0.4
FINES				pmax	pmax			
	comp=Z,10.0nm,0.6s							
FINES	FINESS Array B	93.29	332	P		P	05 00 28.4	-0.6
SAUV	Serdivan-Sakar	93.39	311	eP		P	05 00 26.9	-3.0
SPNC	Sapanca-Adapaz	93.41	311	eP		P	05 00 29.5	-0.5
SHUT	Suhut-Afyon	93.41	309	eP		P	05 00 29.7	-0.6
MICGM	Minsk	93.43	325	eP		P	05 00 29.0	-0.8
MICGM				ePP		PP	05 04 14.0	-0.3
MICGM				ePPP		PPP	05 06 19.0	
MICGM				eSKS		SKSac	05 11 06.0	+5.9
MICGM				eS		SKKSac	05 11 26.0	+6.3
MICGM				ePS		PS	05 12 22.0	-31
MICGM				eLR		LR	05 54 00.0	
MNK	Minsk	93.43	325	eP		P	05 00 29.0	-0.8
MNK				e			05 04 14.0	
MNK				eS		S	05 11 26.0	-8.0
VSU	Vasula	93.47	329	eP		P	05 00 30.7	+0.8
VSU	Vasula	93.47	329	iP		P	05 00 30.2	+0.3
VSU				pmax	pmax			
	comp=Z,76nm,0.9s							
VSU				MLR	MLR			
	comp=Z,4µm,21.0s							
BCK	Bucak	93.48	308	eP		P	05 00 28.8	-1.8
ISP	Isparta	93.50	308	P		P	05 00 30.7	0.0
ISP	Isparta	93.50	308	IAmb	IAmb		05 00 30.9	
	comp=Z,82nm,1.0s							
KORT	Korkueli	93.71	307	eP		P	05 00 30.8	-0.9
CAVI	Cavuskoy	93.81	310	eP		P	05 00 31.4	-0.5
SILT	Sile	93.86	311	eP		P	05 00 31.6	-0.5
IDID	Didziasalis	93.96	326	eP		P	05 00 31.6	-0.7
SORM	Soroca	93.98	318	⇓P		P	05 00 32.3	-0.3
SORM	Soroca	93.98	318	P		P	05 00 32.2	-0.3
NACGM	Naroch	94.00	325	eP		P	05 00 31.0	-1.4
NACGM				eS		S	05 11 28.0	-11
NACGM				eLQ		LQ	05 36 44.0	
NACGM				eLR		LR	05 42 15.0	
NACGM				LRM		MLR	05 43 34.0	
	comp=Z,3.9nm,24.0s							
TLCR		94.03	315	⇑P		P	05 00 33.4	+0.6
TLCR		94.03	315	P		P	05 00 33.3	+0.6
JURR	Jurilovca	94.03	315	⇑P		P	05 00 32.3	-0.5
ELL	Elmali	94.09	307	eP		P	05 00 32.6	-0.8
IZAR	Zarasai	94.17	326	eP		P	05 00 32.5	-0.7
TVSB	Tavsanli	94.17	310	eP		P	05 00 33.2	-0.5
IIGN	Ignalina	94.25	326	eP		P	05 00 32.3	-1.3
GEDZ	Gediz	94.25	309	eP		P	05 00 33.3	-0.8
ISAL	Salakas	94.27	326	eP		P	05 00 33.2	-0.5
TRO	Tromso	94.27	340	⇑iP		P	05 00 32.3	-1.0
GEMT	Gemlik	94.28	311	eP		P	05 00 33.1	-1.0
KLYT	Kilyos	94.30	311	eP		P	05 00 33.2	-0.9
KAVV	Kandilli-Istan	94.31	311	eP		P	05 00 33.4	-0.8
ISK	Istanbul-Kandi	94.31	311	eP		P	05 00 33.5	-0.7
TPGR	Topolog	94.34	315	⇑P		P	05 00 34.4	+0.1
AKAS	Kas	94.38	306	eP		P	05 00 33.1	-1.7
TIRR	Tirgusor	94.39	315	⇓P		P	05 00 34.4	0.0
TIRR	Tirgusor	94.39	315	P		P	05 00 34.6	+0.1
TIRR	Tirgusor	94.39	315	IAmb	IAmb		05 00 51.2	
	comp=Z,64nm,1.1s							
TIRR	Tirgusor	94.39	315	iP		P	05 00 34.0	-0.5
KSL	Kastellorizon	94.41	306	P		P	05 00 32.7	-2.0
CFR	Carcaliu	94.50	315	⇓P		P	05 00 35.0	+0.1
CFR	Carcaliu	94.50	315	P		P	05 00 35.0	+0.1
BGKT	Bogazkoy	94.51	311	eP		P	05 00 34.3	-0.8
ARMT	Armutlu	94.51	311	eP		P	05 00 34.2	-1.0
MDNY	Mudanya-Bursa	94.52	311	eP		P	05 00 33.7	-1.4
SIMA	Simav-Kutahya	94.58	309	eP		P	05 00 34.4	-1.2
IAS	Iasi	94.64	317	P		P	05 00 38.6	+3.1
PSN	Preselentsi	94.65	314	iP		P	05 00 35.7	0.0
HARR	Harsova	94.71	315	⇑P		P	05 00 35.8	-0.2
HARR	Harsova	94.71	315	P		P	05 00 35.7	-0.2
FETY	Fethiye	94.76	307	eP		P	05 00 35.3	-1.1
KULA	Kula-Manisa	94.89	309	eP		P	05 00 36.5	-0.5
SLVT	Silivri	94.93	311	eP		P	05 00 36.6	-0.4
C36M	Paulatuk	95.06	20	P		P	05 00 37.8	+0.9
	baz=289							
C36M	Paulatuk	95.06	20	IAmb	IAmb		05 00 41.7	
	comp=Z,46nm,0.9s							
DALY	Dalyan (Mula)	95.08	307	eP		P	05 00 36.7	-1.1
ODBI	Odobesti	95.18	316	⇑P		P	05 00 39.6	+1.5
GRER		95.29	316	⇑P		P	05 00 40.3	+1.7
EDC	Edincik	95.30	311	eP		P	05 00 37.9	-0.8
YER	Yerkesik	95.34	307	eP		P	05 00 38.6	-0.5
TESR	Tescani	95.35	317	⇓P		P	05 00 39.4	+0.6
BALB	Balikesir	95.37	310	eP		P	05 00 38.3	-0.7
VRI	Vrincioaia	95.39	316	⇓P		P	05 00 39.7	+0.6
VRI	Vrincioaia	95.39	316	P		P	05 00 39.6	+0.6
TURN	Turunc	95.41	307	eP		P	05 00 38.9	-0.4
PLOR	Plostina	95.45	316	⇑P		P	05 00 39.7	+0.3
PLOR	Plostina	95.45	316	P		P	05 00 39.6	+0.3
BISRR	Bisoca	95.45	316	⇑P		P	05 00 40.9	+1.5
MRMT	Marmara Adasi	95.47	311	eP		P	05 00 38.5	-1.1
PABE	Paberze	95.48	326	eP		P	05 00 39.0	-0.2
AYDB	Zeytinkoy-Aydi	95.56	308	eP		P	05 00 39.9	-0.3
ALE	Alert	95.59	1	IAMs_20	IAMs_20		05 45 01.8	
	comp=Z,1µm,20.0s							
BIZ	Bicaz	95.66	317	⇓P		P	05 00 40.5	+0.3
MBAR	Mbarara	95.67	270	iP		P	05 00 41.4	+0.2
MBAR				pmax	pmax			
	comp=Z,8.0nm,0.9s							
MBAR	Mbarara	95.67	270	P		P	05 00 39.4	-1.9
MBAR	Mbarara	95.67	270	IAMs_20	IAMs_20		05 42 39.6	
	comp=Z,1µm,22.0s							
MLSB	Milas	95.73	308	eP		P	05 00 41.8	+1.0
NEHR	Nehoiu	95.76	316	⇓P		P	05 00 41.9	+1.1
RKY	Sarkoy-Tekirda	95.77	311	eP		P	05 00 40.2	-0.8
RAZG	Razgrad	95.88	314	⇑P		P	05 00 42.0	+0.7
SULR		95.89	315	⇓P		P	05 00 42.2	+0.9
EDRB	Edirne	95.94	312	eP		P	05 00 41.1	-0.5
JMB	Yambol	95.97	313	iP		P	05 00 41.7	-0.1
MLR	Muntele Rosu	95.99	316	P		P	05 00 41.8	-0.1
	comp=Z,34nm,0.8s,baz=8.5,slow=3.0,SNR=33							
MLR	Muntele Rosu	95.99	316	⇑P		P	05 00 42.0	+0.1
MLR	Muntele Rosu	95.99	316	IAMs_20	IAMs_20		05 52 09.6	
	comp=Z,2µm,22.0s							
OZUR		96.01	317	⇑P		P	05 00 42.1	+0.3
STEI	Steigen	96.09	339	⇑iP		P	05 00 40.9	-0.8
GCAM	G?zelcaml?	96.11	308	eP		P	05 00 42.4	0.0
BODT	Bodrum	96.12	307	eP		P	05 00 41.7	-0.9
LPK	Lapseki	96.13	311	eP		P	05 00 42.1	-0.4
BURAR	Bucovina Array	96.15	318	⇓P		P	05 00 43.5	+0.9
BUR08	Bucovina Ar. S	96.15	318	IAmb	IAmb		05 00 53.5	
	comp=Z,54nm,0.9s							
BLCB	Balcova	96.17	309	eP		P	05 00 42.3	-0.4
BLCB	Balcova	96.17	309	P		P	05 00 41.9	-0.8
DKL	Dikili	96.19	309	eP		P	05 00 42.0	-0.8
SUW	Suwalki	96.23	325	eP		P	05 00 41.9	-0.7
FAUS	Fauske	96.27	339	⇑iP		P	05 00 41.2	-1.3
ERIK	Erikli-Kesan	96.28	311	eP		P	05 00 42.4	-0.7
NIS1	Nisyros Isl.	96.28	307	P		P	05 00 42.0	-1.3
DOPR	Dopca	96.30	316	⇓P		P	05 00 44.2	+1.0
NISR	Nisiros	96.32	307	P		P	05 00 41.9	-1.6
SZH	Strazhica	96.33	314	iP		P	05 00 42.9	-0.5
KARP	Karpathos	96.43	306	IAmb	IAmb		05 00 47.5	
	comp=Z,44nm,0.9s							
URLA	Izmir	96.52	309	eP		P	05 00 43.7	-0.7
EZN	Ezine	96.53	310	eP		P	05 00 43.7	-0.6
LVV	L'vov	96.53	320	eP		P	05 00 43.1	-1.0
LVV				e			05 04 43.1	
LVV				ePPP		PPP	05 06 41.8	
LVV				eS		S	05 12 01.2	-0.1
LVV				ePS		PS	05 13 29.8	+2.2
LVV				eSS		SS	05 18 45.2	+10
ENEZ	Enez	96.54	311	eP		P	05 00 43.2	-1.1
ALN	Alexandroupoli	96.59	311	P		P	05 00 44.0	-0.6
LOF	Lofoten	96.62	340	eP		P	05 00 42.9	-1.2
VOIR		96.62	316	⇑P		P	05 00 45.5	+0.8
VOIR		96.62	316	P		P	05 00 45.5	+0.8
BOZC	Bozcaada	96.74	310	eP		P	05 00 44.5	-0.8
DIM	Dimitrovgrad	96.81	313	iP		P	05 00 45.0	-0.5
GADA	Gvkgeada	96.81	311	eP		P	05 00 43.8	-1.8
ARCR	ARCALIA	96.82	318	⇓P		P	05 00 46.7	+1.2
ARR	Arges	96.92	316	⇑P		P	05 00 45.9	-0.2
RDO	Rodhopi	96.94	312	P		P	05 00 43.1	-3.0
MOR8	Moi Rana	97.01	338	⇑iP		P	05 00 44.0	-1.9
ZKR	Zakros	97.25	306	P		P	05 00 47.1	-0.6
AMGA	Amorgos Island	97.28	307	P		P	05 00 39.6	-8.2
BMR	Baia Mare	97.28	318	⇓P		Pdif	05 00 48.2	+0.6
KONS	Konsvik	97.39	338	eP		Pdif	05 00 47.8	+0.1
CJR	Cluj-Napoca	97.39	317	⇓P		Pdif	05 00 49.5	+1.3
PLD	Plovdiv	97.41	313	P		P	05 00 48.0	-0.3
PLD				pmax	pmax			
	comp=Z,191nm,1.5s							
PLD	Plovdiv	97.41	313	iP		P	05 00 47.6	-0.7
KWP	Kalwaria Pacla	97.41	320	eP		Pdif	05 00 48.3	+0.1
KWP	Kalwaria Pacla	97.41	320	IAMs_20	IAMs_20		05 49 53.8	
	comp=Z,1µm,22.0s							
RZN	Rozhen	97.47	312	iP		P	05 00 48.1	-0.7
LOT	Lotru	97.51	316	⇓P		Pdif	05 00 49.4	+0.5
PGB	Panagyurishte	97.73	313	iP		P	05 00 49.1	-0.7
KOLS	Kolonicke sedl	97.83	320	iP		Pdif	05 00 50.3	+0.2
KOLS	Kolonicke sedl	97.83	320	ePDIFF		Pdif	05 00 50.3	+0.2
UZH	Uzhgorod	97.88	319	eP		P	05 00 49.6	-0.6
UZH				e			05 01 03.0	
UZH				e			05 04 52.2	
UZH				eS		S	05 12 08.6	-4.2
DEV	Deva	98.02	317	⇑P		Pdif	05 00 52.4	+1.4
DEV	Deva	98.02	317	P		Pdif	05 00 52.3	+1.3
SKY	Skiros Island	98.03	310	P		P	05 00 50.0	-1.2
BEL	Belsk	98.12	323	eP		Pdif	05 00 51.9	+0.6
GZR	Gura Zlata	98.20	316	⇓P		Pdif	05 00 52.1	+0.2
MMB	Musomiste	98.21	312	iP		P	05 00 50.9	-1.1
IDI	Anoyia	98.30	306	P		P	05 00 51.3	-1.2
	comp=Z,17nm,0.8s,baz=85,slow=6.5,SNR=12							
IDI	Anoyia	98.30	306	⇑P		P	05 00 51.6	-0.9
IDI	Anoyia	98.30	306	IAmb	IAmb		05 00 53.6	
	comp=Z,44nm,1.1s							
CRVS	Cervenica-Dubn	98.36	320	iP		Pdif	05 00 53.5	+1.0
CRVS	Cervenica-Dubn	98.36	320	ePDIFF		Pdif	05 00 53.5	+1.0
SRS	Serrai	98.39	312	P		P	05 00 52.3	-0.4
SRS				pmax	pmax			
	comp=Z,40nm,1.5s							
VTS	Vitosha	98.39	313	iP		P	05 00 52.2	-0.7
SIVA	Sivas	98.40	306	P		P	05 00 52.8	-0.1
LSZ	Lusaka	98.41	255	P		P	05 00 51.6	-1.8
LSZ				pmax	pmax			
	comp=Z,16nm,1.0s							
LSZ	Lusaka	98.41	255	P		P	05 00 51.6	-1.8
HERR	Herculane	98.55	316	⇓P		Pdif	05 00 53.8	+0.5
NSS	Namsos	98.59	337	⇑iP		P	05 00 51.9	-1.1
DION	Dionisos Attik	98.64	309	P		P	05 00 46.0	-7.9
KKB	Krupnik	98.64	313	iP		P	05 00 53.0	-0.8
PTL	Penteli	98.70	309	P		P	05 00 43.4	-11
ATHU	Athens Univers	98.77	309	P		Pdif	05 00 59.5	+5.0
VLY	Voula,Athens	98.78	309	P		P	05 00 46.4	-8.1
SIRR	Siria	98.79	317	⇓P		Pdif	05 00 54.9	+0.5
HORT	Hortiatis	98.85	311	P		P	05 00 52.7	-2.2
THE	Thessaloniki	98.95	311	P		P	05 00 53.6	-1.6
BZS	Buzias	98.96	317	⇓P		Pdif	05 00 55.2	0.0
BZS	Buzias	98.96	317	P		Pdif	05 00 55.8	+0.7
BZS				pmax	pmax			
	comp=Z,35nm,2.0s							
NEO	Neokhori	98.98	310	P		P	05 00 43.6	-12
NIE	Niedzica	98.99	321	eP		Pdif	05 00 56.0	+0.7
XOR	Xorichti	99.00	310	P		Pdif	05 00 44.2	-11
GVD	Gavdhos	99.02	306	P		P	05 00 55.0	
DAG	Danmarks Havn	99.03	352	⇑iP		P	05 00 54.6	
DAG				pmax	pmax			
	comp=Z,100nm,1.2s							
DAG	Danmarks Havn	99.03	352	⇑iP		P	05 00 54.6	
	comp=Z,101nm,1.2s							
DAG	Danmarks Havn	99.03	352	⇑iP		P	05 00 54.6	
DAG				IAmb	IAmb		05 00 55.7	
	comp=Z,102nm,1.2s							
MDVR	Moldovita	99.06	316	⇓P		Pdif	05 00 56.2	+0.5
OJC	Ojcow	99.11	321	eP		Pdif	05 00 55.8	0.0
STIP	Stip	99.33	313	iP		Pdif	05 00 55.6	-1.3
KRND	KRANIDI	99.36	308	P		Pdif	05 00 50.7	-6.4
HFS	Hagfors	99.49	332	P		Pdif	05 00 55.8	-1.4
	comp=Z,9.0nm,0.9s,baz=113,slow=3.4,SNR=17							
LANS	Liptovska Anna	99.58	320	iP		Pdif	05 01 00.4	+2.5
LANS	Liptovska Anna	99.58	320	ePDIFF		Pdif	05 01 00.4	+2.5
PSZ	Piszkesteto	99.60	319	⇓P		Pdif	05 00 59.1	+1.0
PSZ	Piszkesteto	99.60	319	P		Pdif	05 00 58.8	+0.7
PSZ				pmax	pmax			
	comp=Z,50nm,2.0s							
PSZ	Piszkesteto	99.60	319	IAMs_20	IAMs_20		05 50 32.9	
	comp=Z,1µm,22.0s							
AGG	Agios Georgios	99.72	310	P		Pdif	05 00 46.2	-13
TBLU	Trondheim	99.80	336	⇑iP		Pdif	05 00 57.3	-1.1
SKO	Skopje	99.82	313	iP		Pdif	05 00 58.4	-0.7
GKP	Gorka Klasztor	99.84	325	eP		Pdif	05 00 58.9	0.0
THL	Klokotos Trika	99.86	311	P		Pdif	05 01 00.9	+1.6
GUR	Goura	99.90	309	P		Pdif	05 00 57.9	-1.8
KZN	Kozani	99.90	311	P		Pdif	05 00 57.2	-2.4
NC405	NORSAR Array S	100.03	333	Pdif		Pdif	05 00 57.8	-1.7
TRIZ	Trizonia	100.03	309	P		Pdif	05 00 57.5	-2.6
FNA	Florina	100.11	312	P		Pdif	05 00 59.7	-0.8
FNA				pmax	pmax			
	comp=Z,27nm,1.7s							
EVR	Evrytania	100.14	310	P		Pdif	05 00 58.9	-1.8
EFP	Efpalio	100.15	309	P		Pdif	05 00 59.1	-1.5
VYHS	Vyhne	100.15	320	iP		Pdif	05 01 01.2	+0.8
VYHS	Vyhne	100.15	320	ePDIFF		Pdif	05 01 01.2	+0.8
OKC	Ostrava-Krasne	100.24	321	AMS	AMS		05 48 40.0	
	comp=Z,1µm,21.4s							
NC602	NORSAR Array S	100.25	333	ePdif		Pdif	05 01 00.1	-0.4
NORES	NORESS Array B	100.25	333	P		Pdif	05 01 00.9	+0.3
NORES				pmax	pmax			
	comp=Z,22nm,1.3s							
BUD	Budapest	100.28	319	P		Pdif	05 01 02.8	+1.8
BUD				pmax	pmax			
	comp=Z,38nm,2.0s							
NB2	NORSAR Subarra	100.28	333	P		Pdif	05 00 59.9	-0.8
	comp=Z,62nm,1.4s,baz=66,slow=4.6							
NB2	NORSAR Subarra	100.28	333	P		Pdif	05 00 59.0	-1.7
NB2				pmax	pmax			
	comp=Z,164nm,1.7s							
NB2	NORSAR Subarra	100.28	333	P		Pdif	05 00 59.9	-0.8
	baz=66,slow=4.6							
NOA	NORSAR Array B	100.28	333	P		Pdif	05 00 59.6	-1.1
	comp=Z,8.7nm,1.0s,baz=68,slow=4.5,SNR=16							
NOA				PKKPbc		PKKPbc	05 17 18.6	-1.4
	comp=Z,2.0nm,1.0s,baz=68,slow=2.6,SNR=5.2							
DIVS	Divibare	100.41	315	IAMs_20	IAMs_20		05 50 11.7	
	comp=Z,1µm,22.0s							
AMT	Artemida-Makis	100.47	309	P		Pdif	05 01 00.5	-1.6
MORC	Moravsky Berou	100.64	321	⇓P		Pdif	05 01 03.2	+0.5
MORC	Moravsky Berou	100.64	321	ePDIFF		Pdif	05 01 02.9	+0.3
MORC	Moravsky Berou	100.64	321	P		Pdif	05 01 03.1	+0.5
MORC	Moravsky Berou	100.64	321	IAMs_20	IAMs_20		05 50 07.0	
	comp=Z,1µm,22.0s							
BOSA	Boshof	100.68	241	P		Pdif	05 01 04.3	+1.0
	comp=Z,5.4nm,1.1s,baz=59,slow=9.4,SNR=2.5							
BOSA	Boshof	100.68	241			Pdif	05 01 00.5	-2.8
JAN	Janina	100.72	311	P		Pdif	05 01 02.6	-0.6
JAVC	Velka Javorina	100.80	320	ePDIFF		Pdif	05 01 04.6	+1.2
DOMB	Dombas	100.81	335	ePdif		Pdif	05 01 02.8	-0.3
KRLC	Kraliky	101.03	322	AMS	AMS		05 50 20.0	
	comp=Z,2µm,21.9s							
KSP	Ksiaz	101.10	323	eP		Pdif	05 01 05.1	+0.5
TIR	Tirane	101.11	313	IAMs_20	IAMs_20		05 51 04.4	
	comp=Z,1µm,22.0s							
IGT	Igoumenitsa	101.14	311	P		Pdif	05 01 04.6	-0.4
IGT				pmax	pmax			
	comp=Z,58nm,1.4s							
MODS	Modra-Piesok	101.18	320	iP		Pdif	05 01 05.6	+0.6
MODS	Modra-Piesok	101.18	320	ePDIFF		Pdif	05 01 05.6	+0.6
MOL	Molde	101.21	336	ePdif		Pdif	05 01 05.0	+0.2
DPC	Dobruska-Polom	101.23	322	iP		Pdif	05 01 06.7	+1.5
DPC	Dobruska-Polom	101.23	322	ePDIFF		Pdif	05 01 06.7	+1.5
OSTC	Ostas	101.23	322	ePDIFF		Pdif	05 01 06.0	+0.8
OSTC				eSKS			05 11 43.2	
OSTC				AMS	AMS		05 48 20.0	
	comp=Z,2µm,20.5s							
DBG	Daneborg	101.29	351	⇑iP		Pdif	05 01 05.3	+0.5
DBG				IAmb	IAmb		05 01 06.3	
	comp=Z,28nm,1.0s							
YKA	Yellowknife Ar	101.31	24	P		Pdif	05 01 05.9	+0.7
	comp=Z,8.5nm,1.0s,baz=301,slow=4.7,SNR=10.0							
PDG	Podgorica	101.31	314	IAMs_20	IAMs_20		05 49 50.5	
	comp=Z,841nm,21.0s							
CHVC	Chvalec	101.32	322	ePDIFF		Pdif	05 01 06.4	+0.8
CHVC				AMS	AMS		05 48 30.0	
	comp=Z,2µm,21.9s							
VRAC	Vranov	101.36	321	P		Pdif	05 01 06.5	+0.7
	comp=Z,7.9nm,0.8s,baz=76,slow=5.1,SNR=23							
VRAC	Vranov

GEC2	GERESS Array S	103.31	321	*e*Pdiff	Pdiff		05 01 14.9	+0.3			
	baz=68,slow=4.7										
GEC2	GERESS Array S	103.31	321	IAMs_20	IAMs_20		05 53 14.8				
	comp=Z,1μm,19.0s										
GERES	GERESS Array B	103.31	321	Pdiff	Pdiff		05 01 15.3	+0.7			
	comp=Z,4.1nm,1.0s,baz=33,slow=3.2,SNR=19										
GERES				PP	PP		05 05 30.8	+0.7			
	comp=Z,3.7nm,0.9s,baz=54,slow=5.3,SNR=4.6										
GERES				PKKPbc	PKKPbc		05 17 09.4	-1.4			
	comp=Z,0.6nm,0.8s,baz=19,slow=28,SNR=3.5										
GERES	GERESS Array B	103.31	321	P	Pdif		05 01 12.5	-2.1			
GERES	GERESS Array B	103.31	321	Pdif	Pdif		05 01 12.5	-2.1			
SNAA	Sanae	103.35	195	P	Pdif		05 01 16.5	+2.3			
SNAA	Sanae	103.35	195	IAMs_20	IAMs_20		05 57 51.9				
	comp=Z,1μm,21.0s										
KRMB	Red Mountain	103.38	47	IAMs_20	IAMs_20		05 45 52.5				
	comp=Z,938nm,22.0s										
L02E	Cave Junction	103.44	46	P	Pdif		05 01 15.7	+0.5			
	baz=285										
OBKA	Obir	103.49	319	P	Pdif		05 01 16.6	+1.2			
	comp=Z,22nm,1.4s										
OBKA				*e*P	PP		05 05 32.4	+0.9			
	comp=Z,38nm,1.7s										
BSEG	Bad Segeberg	103.50	327	*e*Pdiff	Pdif		05 01 15.8	+0.7			
	baz=68,slow=4.7										
TANN	Tannenbergstha	103.55	323	*e*Pdiff	Pdif		05 01 15.9	+0.4			
	baz=68,slow=4.7										
NKC	Novy Kostel	103.62	323	AMS	AMS		05 51 10.0				
	comp=Z,3μm,22.6s										
GUNZ	Gunzen	103.65	323	*e*Pdiff	Pdif		05 01 15.8	-0.2			
	baz=68,slow=4.7										
WERN	Wernitzgruen	103.65	323	*e*Pdiff	Pdif		05 01 16.5	+0.6			
	baz=68,slow=4.7										
SKMB	Sankelmark Bun	103.67	328	*e*Pdiff	Pdif		05 01 15.2	-0.6			
	baz=68,slow=4.7										
KHMM	Horse Mountain	103.68	47	IAMs_20	IAMs_20		05 39 28.3				
	comp=Z,1μm,20.0s										
NEUB	Neuenburg	103.69	324	*e*Pdiff	Pdif		05 01 16.5	+0.5			
	baz=68,slow=4.7										
PLN	Plauen	103.71	323	*e*Pdiff	Pdif		05 01 16.2	+0.1			
	baz=68,slow=4.7										
WET	Wettzell	103.73	322	*e*Pdiff	Pdif		05 01 16.9	+0.6			
	baz=68,slow=4.7										
MANZ	Manzenberg	103.91	323	*e*Pdiff	Pdif		05 01 17.8	+0.7			
	baz=68,slow=4.7										
ROTZ	Rotzenmuhle	103.93	322	*e*Pdiff	Pdif		05 01 17.9	+0.7			
	baz=68,slow=4.7										
MOX	Moxa	103.98	323	*e*Pdiff	Pdif		05 01 17.9	+0.5			
	baz=68,slow=4.7										
MOX				*e*L	L		05 53 21.7				
	comp=Z,2μm,21.6s										
ASSE	Asse, Remlinge	103.99	325	*e*Pdiff	Pdif		05 01 18.2	+0.9			
	baz=68,slow=4.7										
SGRT	San Giovanni R	104.01	314	IAMs_20	IAMs_20		05 51 00.1				
	comp=Z,902nm,19.0s										
KCPM	Cahto Peak	104.08	48	IAMs_20	IAMs_20		05 39 33.2				
	comp=Z,1μm,22.0s										
KBA	Koelnbreinsper	104.10	320	*e*P	Pdif		05 01 16.8	-1.4			
	comp=Z,13nm,1.6s										
NRDL	Niedersach Rie	104.17	326	*e*Pdiff	Pdif		05 01 19.2	+1.1			
	baz=68,slow=4.7										
YBH	Yreka Blue Hor	104.19	46	IAMs_20	IAMs_20		05 48 58.0				
	comp=Z,896nm,22.0s										
CLZ	Clausthal	104.27	325	*e*Pdiff	Pdif		05 01 19.7	+1.0			
	baz=68,slow=4.7										
L04D	Klamath Falls	104.35	46	P	Pdif		05 01 20.2	+0.8			
	baz=286										
N02D	Trinity Center	104.40	47	P	Pdif		05 01 19.2	-0.4			
	baz=285										
I05D	Terrebonne, OR	104.42	43	P	Pdif		05 01 19.3	-0.2			
	baz=287										
ZOU	Zoufplan	104.51	319	IAMs_20	IAMs_20		05 55 41.7				
	comp=Z,1μm,21.0s										
O02D	Mt. Diablo Mer	104.55	48	P	Pdif		05 01 20.5	+0.2			
	baz=285										
GRF	Grafenberg Arr	104.56	323	*e*Pdiff	Pdif		05 01 20.8	+0.8			
	baz=68,slow=4.7										
GRF				*e*PP	PP		05 05 39.5	+0.3			
	baz=79,slow=6.9										
GRF				*e*L	L		05 50 46.1				
	comp=Z,2μm,22.0s										
WDC	Whiskeytown Da	104.63	47	IAMs_20	IAMs_20		05 50 17.4				
	comp=Z,1μm,21.0s										
HOPS	Hopland Field	104.64	49	IAMs_20	IAMs_20		05 41 28.0				
	comp=Z,1μm,21.0s										
HLG	Helgoland	104.72	328	*e*Pdiff	Pdif		05 01 20.8	+0.3			
	baz=68,slow=4.7										
ABTA	Abfaltersbach	104.75	319	*e*P	Pdif		05 01 18.6	-2.4			
	comp=Z,21nm,1.6s										
SCO	Scoresbysund	104.79	349	IAMs_20	IAMs_20		05 50 55.4				
	comp=Z,1μm,22.0s										
J05D	Fort Rock, OR	104.81	44	P	Pdif		05 01 21.4	0.0			
	baz=287										
M04C	Macdoel	104.81	46	P	Pdif		05 01 22.1	+0.6			
	baz=286										
UBBA	Unterbreizbach	104.87	324	*e*Pdiff	Pdif		05 01 21.7	+0.6			
	baz=68,slow=4.7										
GDXM	Geysers	104.90	49	IAMs_20	IAMs_20		05 43 46.8				
	comp=Z,1μm,22.0s										
HAWA	Hanford	104.99	41	IAMs_20	IAMs_20		05 43 07.0				
	comp=Z,971nm,22.0s										
SUMG	Summit	105.05	355	*i* P	Pdif		05 01 25.6	+3.5			
SUMG				pmax	pmax						
	comp=Z,33nm,1.2s										
SUMG	Summit	105.05	355	*i* P	Pdif		05 01 25.6	+3.5			
	comp=Z,33nm,1.2s										
SUMG	Summit	105.05	355	*i* P	Pdif		05 01 25.7	+3.5			
SUMG				IAmb	IAmb		05 01 28.4				
	comp=Z,33nm,1.2s										
PAOL	Paolisi	105.06	313	IAMs_20	IAMs_20		05 54 10.9				
	comp=Z,1μm,22.0s										
WTTA	Wattenberg	105.14	320	*e*P	Pdif		05 01 23.9	+1.0			
	comp=Z,25nm,1.3s										
WTTA				*e*P	PKiKP		05 05 38.8	+1.6			
	comp=Z,56nm,1.5s										
WATA	Walderalm	105.16	320	*e*P	Pdif		05 01 21.9	-1.0			
	comp=Z,24nm,1.5s										
WATA				*e*P	PKiKP		05 05 40.1	+2.9			
	comp=Z,36nm,1.5s										
SQTA	Sankt Quirin	105.43	320	*e*P	Pdif		05 01 25.1	+1.0			
	comp=Z,30nm,1.4s,SNR=5.4										
SQTA				P	PKiKP		05 05 40.9	+3.3			
	comp=Z,28nm,1.3s										
MOTA	Moosalm	105.45	320	*e*P	Pdif		05 01 22.2	-2.0			
	comp=Z,23nm,1.5s										
MOTA				P	PKiKP		05 05 41.2	+3.5			
	comp=Z,26nm,1.0s										
CTI	Castel Tesino	105.55	319	IAMs_20	IAMs_20		05 56 33.1				
	comp=Z,1μm,21.0s										
IBBN	Ibbenburen	105.57	326	*e*Pdiff	Pdif		05 01 25.5	+1.1			
	baz=68,slow=4.7										
RETA	Reutte	105.62	321	*e*P	PKiKP		05 05 40.5	+2.6			
	comp=Z,31nm,1.2s										
ORV	Oroville	105.67	48	IAMs_20	IAMs_20		05 40 38.2				
	comp=Z,864nm,22.0s										
TEOL	Teolo	105.76	318	IAMs_20	IAMs_20		05 54 48.8				
	comp=Z,1μm,20.0s										
FETA	Feichten	105.81	320	*e*P	Pdif		05 01 24.4	-1.4			
	comp=Z,13nm,1.3s										
FETA				*e*P	PKiKP		05 05 41.5	+3.2			
	comp=Z,23nm,1.3s										
UBR	Ueberruh	105.97	321	*e*Pdiff	Pdif		05 01 26.4	0.0			
	baz=68,slow=4.7										
TNS	Taunus Mts	106.02	324	*e*Pdiff	Pdif		05 01 27.3	+0.8			
	baz=68,slow=4.7										
AFDM	Forest Hills D	106.23	49	IAMs_20	IAMs_20		05 41 56.1				
	comp=Z,896nm,22.0s										
DAVA	Damuels	106.25	321	*e*P	Pdif		05 01 28.1	+0.3			
	comp=Z,19nm,1.7s										
DAVA				*e*P	PKiKP		05 05 41.0	+1.8			
	comp=Z,30nm,1.2s										
DAVOX	Davos/Dischmat	106.44	320	Pdiff	Pdif		05 01 29.9	+1.3			
	comp=Z,8.3nm,1.2s,baz=72,slow=6.8,SNR=7.2										
OSSC	Osservatorio P	106.65	317	IAMs_20	IAMs_20		05 57 34.7				
	comp=Z,1μm,22.0s										
WVOR	Wild Horse Val	106.88	45	IAMs_20	IAMs_20		05 41 14.4				
	comp=Z,821nm,22.0s										
CMB	Columbia Colle	106.93	49	IAMs_20	IAMs_20		05 49 17.5				
	comp=Z,862nm,20.0s										
BMO	Blue Mountains	106.98	42	IAMs_20	IAMs_20		05 43 23.8				
	comp=Z,932nm,21.0s										
PMPB	Monarch Peak	107.10	51	IAMs_20	IAMs_20		05 44 20.3				
	comp=Z,999nm,21.0s										
PAHR	Pah Rah Range	107.19	47	IAMs_20	IAMs_20		05 51 25.4				
	comp=Z,1μm,21.0s										
PNTR	Pine Nut	107.22	48	IAMs_20	IAMs_20		05 48 22.1				
	comp=Z,762nm,21.0s										
WAKR	Walker	107.51	49	IAMs_20	IAMs_20		05 43 08.8				
	comp=Z,939nm,22.0s										
ECH	Echery	107.59	322	IAMs_20	IAMs_20		05 52 27.9				
	comp=Z,1μm,22.0s										
RYN	Ryan	108.16	48	IAMs_20	IAMs_20		05 43 33.0				
	comp=Z,918nm,22.0s										
LHV	Little Huntoon	108.28	49	IAMs_20	IAMs_20		05 50 14.4				
	comp=Z,919nm,20.0s										
NVAR	Mina Array Bea	108.38	48	Pdiff	Pdif		05 01 40.0	+2.5			
	comp=Z,1.3nm,0.9s,baz=268,slow=5.8,SNR=8.9										
NVAR				PKiKP	PKiKP		05 05 47.0	+3.5			
	comp=Z,1.4nm,0.9s,baz=276,slow=2.7,SNR=4.4										
NVAR				PKKP	PKKPab		05 17 08.6	+0.6			
	comp=Z,2.7nm,0.8s,baz=115,slow=4.8,SNR=3.9										
MSO	Missoula	108.42	39	IAMs_20	IAMs_20		05 42 16.6				
	comp=Z,860nm,22.0s										
NV11	Mina Array Sit	108.49	48	IAMs_20	IAMs_20		05 43 39.8				
	comp=Z,882nm,22.0s										
OSI	Osito Audit: C	109.17	52	IAMs_20	IAMs_20		05 45 31.1				
	comp=Z,1μm,21.0s										
HLID	Hailey	109.39	42	IAMs_20	IAMs_20		05 41 36.5				
	comp=Z,871nm,22.0s										
PASC	Pasadena Art C	109.72	53	IAMs_20	IAMs_20		05 52 03.8				
	comp=Z,997nm,20.0s										
MWC	Mount Wilson	109.81	53	IAMs_20	IAMs_20		05 54 18.0				
	comp=Z,1μm,20.0s										
DLMT	Dillon	109.87	40	IAMs_20	IAMs_20		05 44 02.1				
	comp=Z,1μm,22.0s										
EGMT	Eagleton	110.46	37	P	PKiKP		05 05 47.7	+0.7			
	baz=298										
GSC	Goldstone, Bar	110.48	51	P	PKiKP		05 05 48.7	+1.4			
	baz=288										
GSC	Goldstone, Bar	110.48	51	IAMs_20	IAMs_20		05 51 35.6				
	comp=Z,978nm,21.0s										
109C	Camp Elliot, M	110.95	54	IAMs_20	IAMs_20		05 52 42.4				
	comp=Z,958nm,20.0s										
FFC	Flin Flon	111.02	28	IAMs_20	IAMs_20		05 53 25.6				
	comp=Z,870nm,22.0s										
TJX	Tijuana	111.10	54	IAMs_20	IAMs_20		05 51 41.4				
	comp=Z,1μm,20.0s										
SPR3	Spring Creek 3	111.13	47	IAMs_20	IAMs_20		05 43 43.5				
	comp=Z,1μm,22.0s										
PRN	Pahroc Range	111.14	49	IAMs_20	IAMs_20		05 54 21.1				
	comp=Z,708nm,20.0s										
PFO	Pinyon Flats O	111.26	53	IAMs_20	IAMs_20		05 52 58.5				
	comp=Z,922nm,21.0s										
XPFO	Pion Flat	111.26	53	IAMs_20	IAMs_20		05 52 58.5				
	comp=Z,892nm,21.0s										
TPFO	Pinon Flats	111.27	53	P	PKiKP		05 05 49.7	+0.8			
	baz=287										
SHPR	Sheep Range	111.36	50	IAMs_20	IAMs_20		05 51 43.0				
	comp=Z,954nm,21.0s										
BAR	Barrett	111.36	54	IAMs_20	IAMs_20		05 50 14.2				
	comp=Z,1μm,21.0s										
MONP2	Monument Peak	111.50	54	P	PKiKP		05 05 50.1	+0.5			
	baz=287										
GMRC	Granite Mounta	111.53	51	P	PKiKP		05 05 50.3	+0.9			
	baz=288										
CCX	Cicese	111.60	55	IAMs_20	IAMs_20		05 51 55.6				
	comp=Z,849nm,22.0s										
FLWY	Flagg Ranch	111.64	41	IAMs_20	IAMs_20		05 47 20.9				
	comp=Z,942nm,21.0s										
DUG	Dugway, Tooele	111.78	45	P	PKiKP		05 05 50.5	+0.8			
	baz=292										
REDW	Red Top Meadow	111.84	41	IAMs_20	IAMs_20		05 47 05.4				
	comp=Z,763nm,21.0s										
SNOW	Snow King Moun	111.87	41	IAMs_20	IAMs_20		05 52 11.0				
	comp=Z,740nm,22.0s										
SWSC	Sam W. Stewart	111.99	53	P	PKiKP		05 05 50.9	+0.7			
	baz=288										
HWUT	Hardware Ranch	112.09	43	IAMs_20	IAMs_20		05 47 37.1				
	comp=Z,849nm,22.0s										
IRM	Iron Mountain	112.13	52	P	PKiKP		05 05 51.1	+0.7			
	baz=288										
ESJX	Sierra Juarez	112.15	54	IAMs_20	IAMs_20		05 51 58.0				
	comp=Z,1μm,22.0s										
UABX	UABC, Campus M	112.37	54	IAMs_20	IAMs_20		05 41 16.8				
	comp=Z,908nm,19.0s										
GLA	Glamis	112.73	53	IAMs_20	IAMs_20		05 53 58.4				
	comp=Z,769nm,20.0s										
SPX	San Pedro Mart	112.82	55	IAMs_20	IAMs_20		05 54 13.9				
	comp=Z,730nm,20.0s										
BW06	Boulder Array	112.96	42	P	PKiKP		05 05 52.3	+0.3			
	baz=296										
BW06	Boulder Array	112.96	42	IAMs_20	IAMs_20		05 57 49.9				
	comp=Z,739nm,20.0s										
PDAR	Pinedale Array	112.96	42	PKiKP	PKiKP		05 05 53.5	+1.4			
	comp=Z,0.8nm,0.7s,baz=22,slow=1.6,SNR=6.2										
PDAR				PKKPbc	PKKPbc		05 16 40.8	+0.4			
	comp=Z,1.5nm,0.7s,baz=112,slow=5.0,SNR=8.1										
LAO	LASA Array	113.21	37	P	PKiKP		05 05 53.6	+1.4			
	baz=300										
SFX	San Felipe	113.33	55	IAMs_20	IAMs_20		05 48 53.3				
	comp=Z,1μm,22.0s										
DGMT	Dagmar	113.45	34	IAMs_20	IAMs_20		05 55 57.4				
	comp=Z,949nm,22.0s										
U15A	North Rim	113.56	49	IAMs_20	IAMs_20		05 51 41.0				
	comp=Z,860nm,21.0s										
113A	Mohawk Valley,	113.67	53	IAMs_20	IAMs_20		05 50 10.2				
	comp=Z,790nm,21.0s										
PIX	Pinecatt Peak	114.30	54	IAMs_20	IAMs_20		05 50 52.0				
	comp=Z,697nm,21.0s										
WUAZ	Wupatki	114.58	49	P	PKiKP		05 05 56.1	+0.9			
	baz=292										
214A	Organ Pipe Nat	114.70	53	P	PKiKP		05 05 56.1	+0.7			
	baz=289										
214A	Organ Pipe Nat	114.70	53	IAMs_20	IAMs_20		05 53 29.4				
	comp=Z,926nm,20.0s										
X16A	Lo Mia Camp, P	114.93	51	IAMs_20	IAMs_20		05 49 29.5				
	comp=Z,972nm,22.0s										
O20A	White River Ci	115.00	44	P	PKPdf		05 05 56.2	+0.2			
	baz=296										
PV23	Carpenter Ridg	115.17	46	IAMs_20	IAMs_20		05 49 59.5				
	comp=Z,1μm,21.0s										
PV22	Blue Mesa, Par	115.30	45	IAMs_20	IAMs_20		06 00 01.8				
	comp=Z,710nm,18.0s										
PV18	Skein Mesa, Pa	115.33	46	IAMs_20	IAMs_20		05 49 34.8				
	comp=Z,677nm,19.0s										
PV03	Paradox Valley	115.37	46	IAMs_20	IAMs_20		05 46 48.8				
	comp=Z,789nm,21.0s										
PV07	Paradox Valley	115.44	45	IAMs_20	IAMs_20		05 46 29.6				
	comp=Z,1μm,22.0s										
RSSD	Black Hills	115.84	38	PKiKP	PKiKP		05 05 55.5	-2.0			
RSSD	Black Hills	115.84	38	P	PKPdf		05 05 57.8	+0.3			
	baz=301										
RSSD	Black Hills	115.84	38		PKiKP		05 05 55.5	-2.0			
RSSD	Black Hills	115.84	38	IAMs_20	IAMs_20		05 47 33.0				
	comp=Z,900nm,22.0s										
W18A	Petrified Fore	115.97	49	IAMs_20	IAMs_20		05 55 30.0				
	comp=Z,868nm,22.0s										
X18A	Snowflake	116.04	50	IAMs_20	IAMs_20		05 50 07.7				
	comp=Z,1μm,22.0s										
MVCO	Mesa Verde	116.06	47	P	PKiKP		05 05 58.1	0.0			
	baz=294										
TUC	Tucson	116.19	52	P	PKiKP		05 05 58.4	+0.1			
	baz=291										
TUC	Tucson	116.19	52	IAMs_20	IAMs_20		05 54 33.0				
	comp=Z,878nm,20.0s										
SMCO	Snowmass	116.30	44	IAMs_20	IAMs_20		05 57 18.5				
	comp=Z,772nm,21.0s										
MDND	Maddock	116.33	33	P	PKiKP		05 05 58.6	+0.6			
	baz=307										
SRIG	Santa Rosalia	116.61	58	IAMs_20	IAMs_20		05 49 09.5				
	comp=Z,1μm,20.0s										
ULM	Lac du Bonnet	116.73	29	PKP	PKPdf		05 05 57.7	-1.0			
	comp=Z,6.0nm,0.8s,baz=330,slow=4.2,SNR=6.8										
ULM				PKKPab	PKKPab		05 16 31.9	+1.3			
	comp=Z,2.0nm,0.8s,baz=110,slow=3.4,SNR=3.5										
ISCO	Idaho Springs	116.95	43	P	PKiKP		05 05 60.0	+0.1			
	baz=298										
S22A	4UR Ranch, Cre	117.03	45	P	PKPdf		05 05 59.9	-0.2			
	baz=296										
S22A	4UR Ranch, Cre	117.03	45	IAMs_20	IAMs_20		05 58 24.7				
	comp=Z,983nm,22.0s										
HSIG		117.17	56	IAMs_20	IAMs_20		05 46 17.1				
	comp=Z,815nm,21.0s										
TAM	Tamanrasset	117.43	297	PKiKP	PKiKP		05 06 03.7	+2.6			
TAM	Tamanrasset	117.43	297	IAMs_20	IAMs_20		06 02 45.1				
	comp=Z,770nm,20.0s										
319A	Douglas	117.72	53	IAMs_20	IAMs_20		05 54 01.5				
	comp=Z,800nm,20.0s										
SDCO	Great Sand Dun	117.97	45	P	PKiKP		05 06 02.3	+0.3			
	baz=297										
SDCO	Great Sand Dun	117.97	45	IAMs_20	IAMs_20		05 50 51.9				
	comp=Z,786nm,21.0s										
AGMN	Agassiz Nation	118.02	31	IAMs_20	IAMs_20		06 04 38.0				
	comp=Z,807nm,22.0s										
121A	Cookes Peak, D	118.47	51	P	PKiKP		05 06 02.9	0.0			
	baz=293										
121A	Cookes Peak, D	118.47	51	IAMs_20	IAMs_20		05 56 02.2				
	comp=Z,948nm,19.0s										
ANMO	Albuquerque	118.51	48	P	PKiKP		05 06 03.3	+0.4			
	baz=295										
Y22D	IRIS PASSCAL I	118.52	49	IAMs_20	IAMs_20		05 55 51.4				
	comp=Z,1μm,20.0s										
ES08	SONSECA Array	118.57	318	IAMs_20	IAMs_20		06 05 10.0				
	comp=Z,935nm,21.0s										
ES18	SONSECA Array	118.58	318	IAMs_20	IAMs_20		06 05 10.1				
	comp=Z,998nm,22.0s										
ES02	SONSECA Array	118.59	318	IAMs_20	IAMs_20		06 05 22.3				
	comp=Z,812nm,20.0s										
ES11	SONSECA Array	118.59	318	IAMs_20	IAMs_20		06 05 08.4				
	comp=Z,753nm,21.0s										
ES03	SONSECA Array	118.59	318	IAMs_20	IAMs_20		06 05 06.5				
	comp=Z,883nm,22.0s										
ES07	SONSECA Array	118.59	318	IAMs_20	IAMs_20		06 05 06.5				
	comp=Z,901nm,21.0s										
ES01	SONSECA Array	118.60	318	IAMs_20	IAMs_20		05 58 27.6				
	comp=Z,834nm,19.0s										
ES06	SONSECA Array	118.60	318	IAMs_20	IAMs_20		05 58 27.7				
	comp=Z,856nm,19.0s										
ES04	SONSECA Array	118.60	318	IAMs_20	IAMs_20		06 05 08.7				
	comp=Z,858nm,22.0s										
ESBB	Sonseca Array	118.61	318	IAMs_20	IAMs_20		06 05 08.8				
	comp=Z,827nm,22.0s										
ESDC	Sonseca Array	118.61	318	PKP	PKiKP		05 06 04.0	+1.2			
	comp=Z,3.9nm,1.1s,baz=8.4,slow=3.3,SNR=14										
ES12	SONSECA Array	118.61	318	IAMs_20	IAMs_20		05 57 33.0				
	comp=Z,648nm,21.0s										
ES13	SONSECA Array	118.62	318	IAMs_20	IAMs_20		06 07 10.2				
	comp=Z,818nm,21.0s										
ES14	SONSECA Array	118.64	318	IAMs_20	IAMs_20		06 07 10.6				
	comp=Z,758nm,21.0s										
PAB	San Pablo	118.93	318	IAMs_20	IAMs_20		06 06 05.4				
	comp=Z,1μm,22.0s										
T25A	Trinidad	119.02	45	P	PKiKP		05 06 04.2	+0.3			
	baz=298										
EPT	El Paso	119.76	51	IAMs_20	IAMs_20		05 57 00.5				
	comp=Z,778nm,20.0s										
MVO	Moncorvo	119.82	321	*e*PKPdf	PKiKP		05 06 07.3	+2.2			
MVO	Moncorvo	119.82	321	*e*LR	LR		05 52 44.9				
	comp=Z,991nm,20.0s										
PGAV	Gavieira, Arco	120.15	322	*e*PKPdf	PKiKP		05 06 09.1	+3.3			
PGAV	Gavieira, Arco	120.15	322	*e*LR	LR		05 52 22.1				
	comp=Z,1μm,22.0s										
POLO	Lamas de Olo	120.19	321	*e*PKPdf	PKiKP		05 06 08.2	+2.3			
PVRL	Vila Real	120.19	321	*e*PKPdf	PKiKP		05 06 08.8	+3.0			
EYMN	Ely	120.41	29	P	PKiKP		05 06 06.6	+0.6			
	baz=315										
EYMN	Ely	120.41	29	IAMs_20	IAMs_20		06 04 25.2				
	comp=Z,1μm,22.0s										
ECSD	EROS Data Cent	120.49	35

ABTX	Abilene, Hawle	124.61	48	IAMs_20	IAMs_20	05 59 50.6		
	comp=Z,789nm,21.0s							
OK025	Westminster Rd	124.74	43	IAMs_20	IAMs_20	05 52 37.8		
	comp=Z,974nm,22.0s							
OKCFA	Oklahoma City	124.75	44	IAMs_20	IAMs_20	06 01 36.1		
	comp=Z,1µm,21.0s							
OK031	S. Brethren Rd	124.88	43	IAMs_20	IAMs_20	06 11 27.4		
	comp=Z,703nm,19.0s							
OK030	Cody Creek RV	124.93	43	IAMs_20	IAMs_20	06 01 59.8		
	comp=Z,713nm,21.0s							
LSQQ	Lebel-sur-Quev	125.38	19	P	PKiKP	05 06 16.3	+0.6	
	baz=331							
CHGQ	Chibougamau	125.40	16	P	PKiKP	05 06 15.9	+0.1	
	baz=334							
JCT	Junction City	125.51	50	PKIKP	PKPdf	05 06 13.6	-2.7	
JCT				MLR	MLR			
	comp=Z,1µm,22.0s							
JCT	Junction City	125.51	50	P	PKiKP	05 06 16.6	0.0	
	baz=298							
JCT	Junction City	125.51	50	PKPdf	PKPdf	05 06 13.6	-2.7	
TUL1	Leonard	125.60	42	P	PKiKP	05 06 16.7	+0.1	
	baz=304							
Z35A	Perchaven, San	125.99	46	IAMs_20	IAMs_20	05 56 14.9		
	comp=Z,792nm,20.0s							
ZAIG	Zacatecas	126.38	60	IAMs_20	IAMs_20	05 52 45.4		
	comp=Z,560nm,19.0s							
WHTX	Lake Whitney,	126.53	47	P	PKiKP	05 06 18.9	+0.4	
	baz=300							
WHTX	Lake Whitney,	126.53	47	IAMs_20	IAMs_20	06 01 30.4		
	comp=Z,760nm,21.0s							
X37A	Clayton	126.63	43	IAMs_20	IAMs_20	06 01 09.9		
	comp=Z,755nm,21.0s							
HDIL	Hopedale	126.69	34	P	PKiKP	05 06 19.0	+0.4	
	baz=313							
833A	Chaparral WMA,	126.80	52	P	PKiKP	05 06 19.2	0.0	
	baz=296							
435B	Jarrell	127.04	48	P	PKiKP	05 06 19.5	-0.1	
	baz=300							
CCM	Cathedral Cave	127.21	37	PKIKP	PKPdf	05 06 16.1	-3.1	
CCM				MLR	MLR			
	comp=Z,800nm,22.0s							
CCM	Cathedral Cave	127.21	37	P	PKiKP	05 06 19.8	+0.1	
	baz=310							
CCM	Cathedral Cave	127.21	37	PKPdf	PKPdf	05 06 16.1	-3.1	
CCM	Cathedral Cave	127.21	37	IAMs_20	IAMs_20	06 03 13.9		
	comp=Z,828nm,22.0s							
U40A	Yellville	127.27	40	P	PKiKP	05 06 19.7	-0.2	
	baz=307							
U40A	Yellville	127.27	40	IAMs_20	IAMs_20	06 05 19.6		
	comp=Z,952nm,21.0s							
W39A	Magazine	127.35	42	P	PKPdf	05 06 19.7	+0.1	
	baz=306							
W39A	Magazine	127.35	42	IAMs_20	IAMs_20	05 51 36.9		
	comp=Z,863nm,22.0s							
D55A	Sainte-Anne-du	127.65	19	P	PKiKP	05 06 20.3	-0.1	
	baz=332							
ALGO	Algonquin Park	127.69	21	P	PKPdf	05 06 20.1	+0.2	
	baz=328							
237A	Washetta, Mont	127.72	46	IAMs_20	IAMs_20	06 01 53.9		
	comp=Z,1µm,22.0s							
D56A	ZEC Mazanza, M	127.85	18	P	PKPdf	05 06 20.3	+0.1	
	baz=333							
MIAR	Mount Ida	127.87	42	P	PKiKP	05 06 21.0	-0.2	
	baz=306							
MIAR	Mount Ida	127.87	42	IAMs_20	IAMs_20	06 03 47.7		
	comp=Z,842nm,20.0s							
E55A	Montcerf-Lytto	127.96	20	P	PKPdf	05 06 20.6	+0.3	
	baz=331							
SFIN	Lafayette	128.00	32	P	PKPdf	05 06 20.9	+0.2	
	baz=316							
LATQ	La Tuque	128.14	16	P	PKPdf	05 06 21.0	+0.3	
	baz=335							
G54A	Lake Saint Pet	128.15	22	P	PKPdf	05 06 21.1	+0.3	
	baz=328							
E56A	St. Veronique	128.22	19	P	PKiKP	05 06 21.4	0.0	
	baz=332							
KOWA	Kowa	128.28	290	PKPdf	PKPdf	05 06 18.5	-3.3	
AAM	Ann Arbor	128.31	28	P	PKiKP	05 06 21.7	-0.1	
	baz=320							
AAM	Ann Arbor	128.31	28	IAMs_20	IAMs_20	06 12 47.3		
	comp=Z,845nm,21.0s							
D58A	Chemin du LacG	128.37	17	P	PKiKP	05 06 21.9	+0.1	
	baz=335							
W41B	Gary Mavity, V	128.38	41	P	PKiKP	05 06 21.9	-0.2	
	baz=307							
E57A	Chemin Saint G	128.61	18	P	PKiKP	05 06 22.2	-0.1	
	baz=333							
NATX	Nacogdoches	128.68	46	IAMs_20	IAMs_20	06 03 02.1		
	comp=Z,940nm,21.0s							
HKT	Hockley	128.77	48	IAMs_20	IAMs_20	05 59 25.4		
	comp=Z,796nm,21.0s							
E58A	La Victoria	128.91	17	P	PKiKP	05 06 22.8	-0.1	
	baz=334							
Z41A	Richland Creek	129.14	43	P	PKiKP	05 06 23.5	-0.2	
	baz=305							
E61A	Lac Etchemin	129.64	15	P	PKPdf	05 06 23.8	+0.1	
	baz=338							
F60A	Warwick	129.67	17	P	PKiKP	05 06 24.3	-0.1	
	baz=336							
P49A	Miami Univ. Ec	129.87	31	P	PKPdf	05 06 24.2	-0.1	
	baz=318							
F61A	St Evariste	129.93	16	P	PKiKP	05 06 25.6	+0.6	
	baz=337							
WCI	Wyandotte Cave	129.97	34	P	PKPdf	05 06 24.6	+0.1	
	baz=315							
E63A	Oxbow	130.16	13	P	PKPdf	05 06 24.7	+0.1	
	baz=340							
ACSO	Alum Creek Sta	130.23	29	P	PKPdf	05 06 24.7	-0.2	
	baz=320							
E64A	Bridgewater	130.29	13	P	PKiKP	05 06 25.3	-0.4	
	baz=341							
G60A	Masonville	130.35	17	P	PKiKP	05 06 26.2	+0.3	
	baz=335							
M53A	WI Miller and	130.37	27	P	PKPdf	05 06 25.3	+0.2	
	baz=323							
M53A	WI Miller and	130.37	27	IAMs_20	IAMs_20	06 02 33.5		
	comp=Z,997nm,22.0s							
O51A	Pataskala	130.48	29	P	PKPdf	05 06 25.6	+0.2	
	baz=320							
WVT	Waverly	130.53	37	P	PKiKP	05 06 26.1	-0.4	
	baz=312							
KIC	Kosan Boka	130.53	280	eP	PKPdf	05 06 26.1	-0.1	
	comp=Z,266nm,1.6s							
UNM	Universidad Na	130.54	63	IAMs_20	IAMs_20	05 57 39.7		
	comp=Z,924nm,22.0s							
DBIC	Dimbokro	130.60	280	PKP	PKiKP	05 06 27.1	0.0	
	comp=Z,48nm,1.2s,baz=47,slow=3.0,SNR=16							
DBIC				SKPbc	SKPab	05 09 50.3	+4.0	
	comp=Z,26nm,1.0s,baz=146,slow=3.6,SNR=6.1							
OXF	Oxford	130.62	40	P	PKPdf	05 06 26.1	+0.4	
	baz=310							
OXF	Oxford	130.62	40	IAMs_20	IAMs_20	06 02 41.2		
	comp=Z,810nm,22.0s							
M54A	Oil Creek Stat	130.76	26	P	PKiKP	05 06 26.5	-0.3	
	baz=324							
P51A	Williamsport	130.76	30	P	PKiKP	05 06 26.4	-0.4	
	baz=320							
P51A	Williamsport	130.76	30	IAMs_20	IAMs_20	06 10 59.2		
	comp=Z,949nm,21.0s							
TIC	Toumodi	130.77	280	eP	PKiKP	05 06 27.6	+0.1	
LIC	Lamto	130.84	280	eP	PKiKP	05 06 27.6	-0.1	
	comp=Z,207nm,1.4s							
O52A	Adamsville	130.87	29	P	PKPdf	05 06 26.5	+0.3	
	baz=321							
J58A	Remsen	130.93	21	P	PKiKP	05 06 27.4	+0.3	
	baz=331							
H61A	Lyndonville	130.98	17	P	PKiKP	05 06 27.0	-0.1	
	baz=335							
K57A	Scipio Center	131.02	22	P	PKiKP	05 06 27.4	+0.1	
	baz=329							
I59A	Olmsteadville	131.03	19	P	PKiKP	05 06 27.0	-0.3	
	baz=333							
N54A	Moraine State	131.06	27	P	PKiKP	05 06 27.0	-0.3	
	baz=324							
O53A	New Philadelph	131.06	28	P	PKiKP	05 06 27.1	-0.4	
	baz=322							
O53A	New Philadelph	131.06	28	IAMs_20	IAMs_20	06 09 46.1		
	comp=Z,917nm,20.0s							
G63A	Kingsbury	131.09	15	P	PKiKP	05 06 27.0	-0.3	
	baz=338							
P52A	Corning	131.10	29	P	PKPdf	05 06 26.8	+0.2	
	baz=321							
P52A	Corning	131.10	29	IAMs_20	IAMs_20	06 14 23.2		
	comp=Z,781nm,21.0s							
J59A	Piesco	131.11	20	P	PKPdf	05 06 26.8	+0.3	
	baz=332							
I60A	Shoreham	131.18	19	P	PKiKP	05 06 27.7	+0.2	
	baz=333							
PMOZ	Porto Moniz, M	131.28	318	A	A	06 05 41.5		
	comp=Z,723nm,24.0s							
K58A	Earlville	131.32	22	P	PKiKP	05 06 27.6	-0.3	
	baz=330							
M56A	Emporium	131.41	25	P	PKiKP	05 06 27.7	-0.4	
	baz=326							
O54A	Avella	131.51	27	P	PKiKP	05 06 28.0	-0.3	
	baz=323							
G65A	Princeton	131.51	13	P	PKiKP	05 06 27.9	-0.2	
	baz=341							
Q52A	Bidwell	131.55	30	P	PKiKP	05 06 28.1	-0.3	
	baz=320							
P53A	Whipple	131.58	29	P	PKPdf	05 06 27.9	+0.4	
	baz=321							
K59A	Cooperstown	131.59	21	P	PKiKP	05 06 28.4	-0.1	
	baz=331							
BINY	Binghamton	131.68	22	P	PKiKP	05 06 28.9	+0.3	
	baz=329							
I63A	Otisfield	131.81	16	P	PKiKP	05 06 28.9	+0.1	
	baz=337							
N56A	West Decatur	131.83	25	P	PKPdf	05 06 28.4	+0.4	
	baz=326							
L58A	Harry Jones Me	131.86	22	P	PKiKP	05 06 28.7	-0.3	
	baz=329							
H66A	Whiting	131.96	13	P	PKiKP	05 06 28.6	-0.4	
	baz=341							
M57A	Sunshine Farm,	131.96	24	P	PKiKP	05 06 28.9	-0.3	
	baz=328							
Q53A	Leroy	132.00	29	P	PKiKP	05 06 29.1	-0.3	
	baz=321							
L59A	Walton	132.03	21	P	PKiKP	05 06 29.7	+0.3	
	baz=330							
MCWV	Mont Chateau	132.17	27	P	PKiKP	05 06 29.9	+0.2	
	baz=323							
R53A	Hurricane	132.20	30	P	PKiKP	05 06 29.5	-0.2	
	baz=320							
SSPA	Standing Stone	132.24	25	IAMs_20	IAMs_20	06 08 19.9		
	comp=Z,911nm,21.0s							
Q54A	Coxs Mills	132.24	29	P	PKiKP	05 06 30.3	+0.5	
	baz=322							
O56A	Blue Knob Stat	132.25	26	P	PKiKP	05 06 29.6	-0.3	
	baz=325							
N57A	Milroy	132.28	25	P	PKiKP	05 06 29.7	-0.2	
	baz=327							
P55A	Reedsville	132.30	28	P	PKiKP	05 06 29.6	-0.4	
	baz=323							
N58A	Sunbury	132.55	24	P	PKiKP	05 06 30.1	-0.3	
	baz=328							
Q55A	Buckhannon	132.59	28	P	PKiKP	05 06 31.0	+0.4	
	baz=323							
L61B	Northampton	132.63	19	P	PKiKP	05 06 30.4	-0.1	
	baz=334							
O57A	Amberson	132.70	25	P	PKiKP	05 06 31.1	+0.4	
	baz=326							
TZTN	Tazewell	132.70	33	P	PKPdf	05 06 30.3	+0.5	
	baz=317							
P56A	Dayton Farm, R	132.75	27	P	PKiKP	05 06 30.3	-0.5	
	baz=324							
N59A	State Game Lan	132.86	23	P	PKPdf	05 06 29.8	-0.1	
	baz=329							
T53A	Wise	132.92	32	P	PKPdf	05 06 30.6	+0.4	
	baz=319							
S54A	Dingess, Beckl	132.93	30	P	PKPdf	05 06 30.7	+0.5	
	baz=321							
Q56A	Snyder Ridge,	132.97	27	P	PKPdf	05 06 30.5	+0.4	
	baz=324							
O58A	Lewisberry	133.07	25	P	PKiKP	05 06 31.3	-0.2	
	baz=327							
LRAL	Lakeview Retre	133.10	39	P	PKiKP	05 06 31.5	-0.2	
	baz=311							
LRAL	Lakeview Retre	133.10	39	IAMs_20	IAMs_20	06 14 09.9		
	comp=Z,916nm,21.0s							
Q57A	Strasburg	133.33	27	P	PKPdf	05 06 31.0	+0.2	
	baz=325							
T54A	Tazewell	133.36	31	P	PKPdf	05 06 31.4	+0.3	
	baz=320							
R56A	Bull Pasture M	133.38	28	P	PKiKP	05 06 31.8	-0.5	
	baz=323							
P58A	Pank, Wackersv	133.44	25	P	PKiKP	05 06 32.2	0.0	
	baz=326							
U54A	Nelsons Funny	133.64	32	IAMs_20	IAMs_20	06 00 10.6		
	comp=Z,879nm,22.0s							
L64A	Middleborough	133.67	18	P	PKPdf	05 06 31.0	-0.3	
	baz=336							
T55A	Pulaski	133.72	30	P	PKPdf	05 06 31.8	+0.1	
	baz=321							
Q58A	Fox Den Farm,	133.73	26	P	PKPdf	05 06 32.1	+0.6	
	baz=326							
BLA	Blacksburg	133.83	30	P	PKPdf	05 06 32.3	+0.4	
	baz=321							
R57A	Stanardsville	133.88	27	P	PKiKP	05 06 33.0	-0.1	
	baz=324							
S56A	Natural Bridge	133.88	29	P	PKPdf	05 06 32.5	+0.5	
	baz=323							
O61A	Allentown	134.04	22	P	PKiKP	05 06 33.3	-0.1	
	baz=330							
S57A	Dark Hollow, R	134.11	28	IAMs_20	IAMs_20	06 06 55.7		
	comp=Z,908nm,22.0s							
R58A	Rapidan	134.11	27	P	PKiKP	05 06 33.1	-0.5	
	baz=325							
V54A	Nebo	134.13	33	P	PKiKP	05 06 33.3	-0.5	
	baz=319							
T56A	Rocky Mt	134.17	30	P	PKiKP	05 06 33.6	-0.2	
	baz=322							
R58B	Mineral	134.44	27	P	PKiKP	05 06 33.8	-0.5	
	baz=325							
R58B	Mineral	134.44	27	IAMs_20	IAMs_20	06 17 03.4		
	comp=Z,917nm,21.0s							
CBN	Corbin Frederi	134.47	26	P	PKiKP	05 06 33.8	-0.6	
	baz=326							
W54A	Cherokee Point	134.52	33	P	PKiKP	05 06 33.9	-0.6	
	baz=318							
T57A	Hurt	134.57	29	P	PKPdf	05 06 33.7	+0.5	
	baz=323							
S58A	Poland Farm, P	134.65	28	P	PKiKP	05 06 34.1	-0.6	
	baz=324							
X54A	Belton	134.81	34	P	PKPdf	05 06 34.2	+0.5	
	baz=317							
V56A	Mocksville	134.88	31	P	PKiKP	05 06 34.5	-0.7	
	baz=320							
KMSC	Kings Mountain	134.94	33	P	PKPdf	05 06 34.5	+0.6	
	baz=319							
T58A	Grand View Acr	134.96	29	P	PKiKP	05 06 34.7	-0.7	
	baz=323							
U57A	Blanch	134.98	30	P	PKPdf	05 06 34.6	+0.6	
	baz=322							
GOGA	Godfrey	135.00	36	P	PKiKP	05 06 34.8	-0.7	
	baz=325							
V57A	Coltrane Farms	135.19	31	P	PKiKP	05 06 35.5	-0.4	
	baz=321							
S60A	Water View	135.20	26	P	PKPdf	05 06 34.9	+0.6	
	baz=326							
X55A	Gracelyn & Ava	135.28	33	P	PKiKP	05 06 35.7	-0.4	
	baz=318							
W56A	Indian Trail	135.35	32	P	PKiKP	05 06 35.8	-0.4	
	baz=320							
U58A	Buford	135.39	29	P	PKiKP	05 06 35.9	-0.3	
	baz=323							
T59A	Double "B" Far	135.40	28	P	PKiKP	05 06 35.6	-0.6	
	baz=325							
W57A	Gilead	135.64	31	P	PKiKP	05 06 36.3	-0.5	
	baz=320							
V59A	Middlesex	136.05	29	P	PKiKP	05 06 37.4	-0.2	
	baz=323							
Z56A	Williston	136.28	34	P	PKiKP	05 06 37.5	-0.7	
	baz=318							
LL01	San Ignacio de	136.29	160	IAMs_20	IAMs_20	05 55 13.2		
	comp=Z,598nm,20.0s							
Y57A	Sumter	136.30	33	P	PKPdf	05 06 37.3	+0.8	
	baz=319							
PLCA	Paso Flores	138.39	161	PKhKP	PKPpre	05 06 32.1		
	comp=Z,4.7nm,0.8s,baz=205,slow=3.8,SNR=4.9							
PLCA				PKP	PKiKP	05 06 42.6	+0.2	
	comp=Z,13nm,0.9s,baz=212,slow=6.5,SNR=9.5							
PLCA				SKPbc	SKPab	05 10 17.5	-1.9	
	comp=Z,3.9nm,1.0s,baz=212,slow=7.0,SNR=3.2							
PLCA	Paso Flores	138.39	161	eP	PKPdf	05 06 31.3	-9.0	
LC01	Cunco	139.55	158	IAMs_20	IAMs_20	06 02 43.2		
	comp=Z,645nm,20.0s							
PETF	Flores	139.65	61	IAMs_20	IAMs_20	06 00 36.9		
	comp=Z,788nm,22.0s							
MTO3	Montecristo	141.07	64	IAMs_20	IAMs_20	06 02 11.8		
	comp=Z,566nm,21.0s							
SNET	Serv Nac Est T	141.44	65	IAMs_20	IAMs_20	06 01 34.8		
	comp=Z,670nm,21.0s							
BI02	San Fabin de	141.73	157	eP	PKPdf	05 06 41.1	-5.4	
TGUH	Tegucigalpa,Un	143.07	64	IAMs_20	IAMs_20	06 07 12.9		
	comp=Z,668nm,21.0s							
CRIN	San Cristobal	143.78	66	eP	PKPbc	05 06 48.8	+0.6	
MT09	Talagante	144.34	155	eP	PKPbc	05 06 50.2	+0.6	
LMEL	Las Melosas	144.61	156	eP	PKPdf	05 06 52.7	+0.9	
VA01	Torpederas	144.69	153	iP	PKPbc	05 06 50.4	-0.1	
VA01	Torpederas	144.69	153	IAMs_20	IAMs_20	05 59 25.1		
	comp=Z,474nm,21.0s							
MATN	Matagalpa	144.71	64	eP	PKPdf	05 06 52.5	+0.2	
MT02	Curacav	144.72	154	eP	PKPdf	05 06 52.0	+0.3	
MT02	Curacav	144.72	154	IAMs_20	IAMs_20	06 07 05.6		
	comp=Z,554nm,21.0s							
MT05	Renca	144.78	155	iP	PKPdf	05 06 52.0	+0.1	
MT05	Renca	144.78	155	IAMs_20	IAMs_20	06 07 14.1		
	comp=Z,507nm,21.0s							
MT03	Universidad Ad	144.79	155	iP	PKPab	05 06 50.1	-0.7	
PEL	Peldehue	145.01	155	iP	PKPdf	05 06 52.8	+0.5	
ROCH	El Roble	145.02	154	iP	PKPdf	05 06 53.6	+1.1	
VA03	San Esteban	145.40	154	⇑iP	PKPab	05 06 54.4	+1.2	
ACON	Acoyapa	145.75	66	eP	PKPab	05 06 55.9	+1.1	
BUEV	Buena Vista	145.95	68	eP	PKPab	05 06 56.5	+0.8	
GB1A	Borinquen Arri	145.95	68	eP	PKPbc	05 06 55.3	+0.1	
ORTG	Ortega, Santa	146.04	68	⇑iP	PKPab	05 06 57.1	+1.0	
DUNO	Dulce Nombre,	146.10	69	⇑iP	PKPab	05 06 57.2	+1.0	
CUI	Cuipilapa	146.22	68	eP	PKPdf	05 06 54.8	0.0	
ESPN	Las Esperanzas	146.46	65	eP	PKPdf	05 06 55.1	-0.1	
CO02	Combarbal	146.52	152	eP	PKPdf	05 06 53.7	-1.3	
JTS	Las Juntas de	146.54	68	PKPbc	PKPab	05 06 58.4	+0.6	
	comp=Z,48nm,0.8s,baz=33,slow=7.1,SNR=15							
JTS	Las Juntas de	146.54	68	PKIKP	PKPdf	05 06 53.7	-1.7	
JTS	Las Juntas de	146.54	68	eP	PKPbc	05 06 57.0	+0.1	
JTS	Las Juntas de	146.54	68		PKPdf	05 06 53.7	-1.7	
JTS				IAMs_20	IAMs_20	06 04 13.1		
	comp=Z,628nm,20.0s							
ARE1	Arenal 1	146.70	68	eP	PKPab	05 06 58.1	-0.5	
ARE1	Arenal 1	146.70	68	⇑iP	PKPab	05 06 58.0	-0.5	
CEDE	Laguna Cedeo	146.70	68	eP	PKPbc	05 06 57.8	+0.4	
LAFE	Finca La Fe, P	146.73	69	eP	PKPbc	05 06 57.4	0.0	
COVE	Coope Vega, Sa	146.90	67	eP	PKPbc	05 06 58.1	+0.3	
CO03	El Pedregal	146.97	152	eP	PKPdf	05 06 50.1	-5.7	
JACO	JACO, Garabito	147.01	69	⇑iP	PKiKP	05 07 00.2	-0.4	
HDC	Heredia	147.41	68	eP	PKPbc	05 06 58.9	-0.5	
HDC	Heredia	147.41	68	IAMs_20	IAMs_20	05 59 45.3		
	comp=Z,761nm,22.0s							
HDC3	Heredia 3	147.41	68	eP	PKPbc	05 06 59.2	-0.3	
GO04	Tololo Observa	147.47	152	eP	PKPdf	05 06 57.3	+0.5	
LCR2	La Lucha 2	147.60	69	eP	PKPbc	05 06 59.2	-0.9	
CVTR	Volcan Turrial	147.73	68	⇑iP	PKPbc	05 06 59.4	-1.3	
CDM	Cerro de Muert	147.88	69	eP	PKPdf	05 06 59.4	+1.3	
CO01	Juntas del Tor	147.97	152	eP	PKPbc	05 06 59.6	-1.1	
CO01	Juntas del Tor	147.97	152	IAMs_20	IAMs_20	06 15 50.8		
	comp=Z,698nm,21.0s							
DRK0	Durika	148.46	69	eP	PKPdf	05 07 00.3	+1.6	
LCO	Las Campanas	148.48	150	PKIKP	PKPdf	05 06 59.4	+0.9	
LCO				MLR	MLR			
	comp=Z,27µm,22.0s							
LCO	Las Campanas	148.48	150		PKPdf	05 06 59.4	+0.9	
PRVC	Isla de Provid	148.57	60	eP	PKPbc	05 07 01.9	-0.5	
AC05	El Transito	148.84	151	eP	PKPdf	05 07 00.0	+1.1	
EDSV	San Vito	148.86	70	eP	PKPbc	05 07 02.5	-0.8	
TCA	Tanti	148.91	162	⇓iP	PKPdf	05 06 57.8	-1.1	
AC04	Llanos de Chal	148.95	149	eP	PKiKP	05 07 04.4	+0.1	
CDITO	Canoas	149.03	70	⇑iP	PKPbc	05 07 01.9	-1.7	
BRU2	Volcan	149.13	69	⇑iP	PKPdf	05 07 01.4	+1.6	
BRU2	Volcan	149.13	69	eP	PKPdf	05 07 00.6	+0.8	
GO03	Copiap	149.88	150	eP	PKiKP	05 07 06.0	-0.4	
VCA	Vinchina	149.88	154	⇓iP	PKPbc	05 07 03.2	-2.3	
AC01	Pan de Azucar	150.86	147	eP	PKPbc	05 07 07.8	+0.1	
AC02	Maricunga	151.06	150	eP	PKPdf	05 07 04.2	+1.3	
MAPC	Malpelo	151.41	78	eP	PKiKP	05 07 10.2	+0.4	
PB14	IPOC Station P	152.17	146	eP	PKiKP	05 07 12.6	+1.1	
GO02	Mina Guanaco	152.19	148	eP	PKPdf	05 07 06.6	+2.2	
AHML	Cerro Mollle	152.80	157	eP	PKPdf	05 07 07.1	+2.1	
CAPC	Capurgana	154.13	66	eP	PKPdf	05 07 08.2	+1.0	
LVC	Limon Verde	154.59	145	eP	PKPdf	05 07 10.2	+2.1	
TUMC	Tumaco	154.62	82	eP	PKiKP	05 07 16.6	+0.2	
ITAB	Concordia	154.75	183	eP	PKPdf	05 07 09.7	+2.0	
ITAB	Concordia	154.75	183	eP	PKPdf	05 07 09.3	+1.6	
LCBC	Los crdobas,	154.93	64	eP	PKPbc	05 07 14.8	-2.2	
CPUP	Villa Florida	155.43	172	PKP	PKPdf	05 07 11.0	+2.4	
	comp=Z,13nm,1.2s,baz=171,slow=1.1,SNR=6.2							
CPUP				PKPbc	pPKPdf	05 07 19.8	-3.1	
	comp=Z,14nm,0.9s,baz=157,slow=1.7,SNR=21							
CPUP				PKPab	sPKPbc	05 07 36.3	-0.9	
	comp=Z,32nm,1.0s,baz=150,slow=1.8,SNR=5.9							
CPUP	Villa Florida	155.43	172	PKIKP	PKPdf	05 07 06.3	-2.3	
CPUP	Villa Florida	155.43	172	PKPdf	PKPdf	05 07 06.3	-2.3	
CPUP	Villa Florida	155.43	172	eP	PKPdf	05 07 09.6	+1.0	
PB01	IPOC Station P	155.45	142	IAMs_20	IAMs_20	06 21 08.1		
	comp=Z,474nm,19.0s							
SJCC	San Jacinto, C	155.54	61	eP	PKPdf	05 07 09.6	+0.5	
MOTC	Monteria, Cord	155.60	64	eP	PKPdf	05 07 09.7	+0.5	
SMRC	Santa Marta, M	155.74	57	eP	PKPdf	05 07 10.4	+1.1	
DBBC	Dabeiba	155.77	68	eP	PKPdf	05 07 13.5	+4.0	
GCUF	Volcan Galeras	156.06	83	eP	PKPdf	05 07 18.1	+7.7	
UREC	San Jos de Ur	156.13	66

SNDB	Serra Nova Dou	169.71 193	*e*P		PKPdf	05 07 24.3 +1.4
ROSB	Rosrio	170.47 264	*e*P		PKPdf	05 07 24.0 +0.5
PRPB	Parauapebas	174.30 221	*e*P		PKPdf	05 07 25.9 +0.7
TMAB	Tom-Au,PA,Br	174.47 265	*e*P		PKPdf	05 07 26.0 +0.8
NPGB	Novo Progresso	174.58 161	*e*P		PKPdf	05 07 25.8 +0.5
MCPB	Macapa, AP	177.84 314	*e*P		PKPdf	05 07 26.6 +0.7

IDC ***18*** *04:54:51.8±0.8, 19˚.68N× 120˚.64E, h0km, mb4.2/13, mb1 4.3/13, mb1mx3.9/64, mbtmp4.2/13, MS4.7/2, Ms1 4.7/2, ms1mx3.9/38, Error ellipse: s-maj=39.3km s-min=17.3km az=65.0*

ISC 18 04:54:55.1±0.7, 19˚.6N±0˚.1× 120˚.5E±0˚.2, h23km, n17, σ1§16/17, mb4.2/12, 1C, Philippine Islands region

Code	Station Name	Δ° AZ°	Phase	ID	ISC	Time h m s	Res ISC
APYP	Conner	1.82 158	*e*P		Pn	04 55 22.2	-2.8
APYP			*e*S		Sn	04 55 48.0	+0.8
CVP	Callao Caves	2.21 146	⇑*i*P		Pn	04 55 32.0	+1.6
CVP			*i* S		Sn	04 55 56.0	-1.0
CMAR	Chiang Mai Arr	20.45 270	P		P	04 59 31.9	+0.8
	1.1nm,0.3s,baz=76,slow=8.3,SNR=4.2						
SONM	Songino Array	30.46 341	P		P	05 01 05.9	-0.3
	1.7nm,0.6s,baz=170,slow=9.8,SNR=4.8						
MKAR	Makanchi Array	41.35 320	P		P	05 02 39.9	+0.6
	1.8nm,0.7s,baz=115,slow=9.1,SNR=3.1						
WRA	Warramunga Arr	41.52 160	P		P	05 02 42.5	+1.6
	4.2nm,0.5s,baz=339,slow=11,SNR=3.3						
ZALV	Zalesovo Beam	43.86 330	P		P	05 02 59.7	+0.2
	2.6nm,0.6s,baz=118,slow=8.6,SNR=3.9						
ASAR	Alice Springs	44.90 163	P		P	05 03 08.7	+0.6
	1.6nm,0.7s,baz=345,slow=6.7,SNR=1.7						
KURBB	Kurchatov Arra	45.34 323	P		P	05 03 11.7	+0.3
	4.9nm,0.6s,baz=122,slow=7.8,SNR=9.3						
MA2	Magadan	45.48 21	LR		LR	05 24 48.1	
	comp=Z,501nm,19.4s,baz=215,slow=40						
NRIK	Noril'sk	53.71 346	P		P	05 04 15.3	+0.4
	3.5nm,0.6s,baz=97,slow=7.1,SNR=3.4						
AKTO	Aktyubinsk	57.72 318	P		P	05 04 44.5	+0.6
	2.5nm,0.6s,baz=90,slow=11,SNR=1.9						
ILAR	Eielson Array	73.59 27	P		P	05 06 25.4	-0.8
	0.5nm,0.7s,baz=274,slow=4.8,SNR=1.5						
FINES	FINESS Array B	75.13 330	P		P	05 06 34.3	-0.9
	2.8nm,0.9s,baz=72,slow=6.2,SNR=3.2						
AKASG	Malin Array Be	75.93 319	P		P	05 06 39.0	-0.9
	1.0nm,0.6s,baz=62,slow=4.7,SNR=3.8						
HFS	Hagfors	81.30 331	P		P	05 07 09.1	-0.2
	2.2nm,0.8s,baz=115,slow=6.5,SNR=2.5						
KEST	Kesra	94.81 310	LR		LR	05 57 42.6	
	comp=Z,567nm,21.6s,baz=358,slow=40						

IDC ***18*** *04:56:05.4±0.4, 1˚.85N× 126˚.29E, h0km, mb4.6/36, mb1 4.7/37, mb1mx4.5/56, mbtmp4.6/37, ML4.2/1, Error ellipse: s-maj=20.6km s-min=9.2km az=78.0*

BJI ***18*** *04:56:06.3±0.0, 1˚.51N× 126˚.72E, h38km, mB5.4/17, mb4.8/30, Ms5.3/6, Ms7 5.2/6*

NEIC ***18*** *04:56:10.3±1.2, 1˚.95N±0˚.08× 126˚.50E±0˚.05, h35km±1km, mb4.8/41, Error ellipse: s-maj=14.8km s-min=7.4km az=200.0*

DJA ***18*** *04:56:12.1±1.3, 2˚.N±3˚× 12˚6E±˚, h35km±26km, M4.7/16, mB5.4/1, mb4.8/9, MLv4.7/16, Mw(mB)4.8/1*

ISC 18 04:56:12.2±0.3, 1˚.95N±0˚.04× 126˚.45E±0˚.06, h47km, n155, σ1§58/163, mb4.7/61, 3C-2D, Northern Molucca Sea

Code	Station Name	Δ° AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	Ternate	1.48 142	P		Pn	04 56 34.8	-1.6
TNTI	Ternate	1.48 142	Pn		Pn	04 56 34.4	-2.0
SGSI	Sangihe	1.96 332	P		Pn	04 56 42.5	-0.5
SGSI			S		Sn	04 57 06.3	-0.1
LBMI	Labuha	2.77 158	P		Pn	04 56 53.5	-0.6
KMSI	Cibinong	2.82 241	P		Pn	04 56 55.6	+0.8
GTOI	Gorontalo	3.68 249	P		Pn	04 57 07.0	+0.5
DDMP	Don Marcelino,	4.20 350	*e*P		Pn	04 57 11.7	-2.0
DDMP			*e*S		Sn	04 57 59.6	-1.9
LUWI	Luwuk	4.73 231	P		Pn	04 57 21.2	+0.2
LUWI	Luwuk	4.73 231	Pn		Pn	04 57 22.3	+1.3
MRSI	Marisa	4.74 252	P		Pn	04 57 21.8	+0.7
SKMP	Bagumbayan, Su	4.93 337	*e*P		Pn	04 57 22.8	-0.9
SKMP			*e*S		Sn	04 58 18.3	-1.2
MATI	Mati	4.97 358	*e*P		Pn	04 57 22.4	-1.9
MATI			*e*S		Sn	04 58 18.4	-2.2
NLAI	Namlea	5.19 173	P		Pn	04 57 26.6	-0.7
	0.3nm49nm,0.6s						
KCP	Kidapawan	5.21 345	⇑*i*P		Pn	04 57 32.4	+4.7
KCP			*i* S		Sn	04 58 34.8	+8.3
APSI	Ampana	5.58 239	P		Pn	04 57 34.6	+2.0
	1.3nm246nm,1.0s						
MSAI	Masohi	5.81 155	P		Pn	04 57 35.9	0.0
	0.2nm3µm18nm,1.0s						
AAI	Ambon	5.86 163	P		Pn	04 57 35.7	-0.9
	0.4nm79nm,0.8s						
BUKP	Musuan	6.05 347	*e*P		Pn	04 57 37.5	-1.8
BUKP			*e*S		Sn	04 58 45.5	-1.8
FAKI	Fak Fak	7.55 130	Pn		Pn	04 57 57.6	-2.1
SPSI	Sidrap Palu	8.89 229	P		Pn	04 58 20.3	+2.2
	34nm,0.6s						
BNSI	Bone	8.94 225	P		Pn	04 58 18.8	0.0
	39nm,0.9s						
BKSI	Bulukumba	9.60 221	P		Pn	04 58 26.4	-1.4
	41nm,0.6s						
KAPI	Kappang	9.62 224	Pn		Pn	04 58 30.2	+2.1
	4.2nm,0.3s,baz=88,slow=2.1,SNR=12						
KAPI	Kappang	9.62 224	Pn		Pn	04 58 26.0	-2.1
SBUM	Sibu	14.23 272	Pn		Pn	04 59 27.6	-3.5
MTN	Manton Dam	15.41 163	P		Pn	04 59 45.6	-1.0
	baz=16,SNR=6.1						
MTN	Manton Dam	15.41 163	Pn		Pn	04 59 44.9	-1.7
KDU	Kakadu	15.72 158	P		Pn	04 59 52.1	+1.5
	baz=16,SNR=10.0						
KNRA	Kununurra	17.66 173	P		Pn	05 00 13.9	-0.9
	baz=18,SNR=6.5						
KNRA	Kununurra	17.66 173			Pn	05 00 13.5	-1.4
KNRA			IAmb		IAmb	05 00 18.3	
	comp=Z,88nm,1.1s						
FITZ	Fitzroy Crossi	19.93 182	P		P	05 00 38.0	-2.3
	comp=Z,0.6nm,0.3s,baz=347,slow=5.3,SNR=8.9						
FITZ	Fitzroy Crossi	19.93 182	P		P	05 00 40.2	-0.1
	baz=20,SNR=6.9						
FITZ	Fitzroy Crossi	19.93 182	P		P	05 00 39.3	-0.9
TPUB	Ta-pu	21.97 346	P		P	05 01 01.3	-0.8
TPUB			IAmb		IAmb	05 01 08.7	
	comp=Z,32nm,0.8s						
SSLB	Suanglung	22.36 347	P		P	05 01 04.9	-1.4
SSLB			IAmb		IAmb	05 01 14.6	
	comp=Z,21nm,0.7s						
WB0	Warramunga Arr	22.94 160	P		P	05 01 11.0	-1.6
WB0			IAmb		IAmb	05 01 14.1	
	comp=Z,43nm,0.9s						
WRAB	Tennant Creek	23.08 161	P		P	05 01 12.6	-1.4
WRA	Warramunga Arr	23.09 161	P		P	05 01 12.0	-2.1
	comp=Z,44nm,0.6s,baz=340,slow=11,SNR=53						
WRA			S		S	05 05 25.0	+3.2
	comp=Z,4.5nm,0.9s,baz=344,slow=17,SNR=6.0						
WRA	Warramunga Arr	23.09 161	P		P	05 01 11.9	-2.2
WB2	Warramunga Arr	23.09 161	P		P	05 01 12.4	-1.7
	baz=23						
WB2	Warramunga Arr	23.09 161	P		P	05 01 12.4	-1.7
WR0	Warramunga Arr	23.17 160	P		P	05 01 13.2	-1.7
WR0			IAmb		IAmb	05 01 16.9	
	comp=Z,26nm,0.8s						
PSA00	Pilbara Seismi	24.25 195	P		P	05 01 23.9	-1.0
QIS	Mount Isa	25.82 151	P		P	05 01 40.2	+1.0
	baz=26,SNR=4.5						
AS31	Alice Springs	26.47 165	P		P	05 01 45.3	+0.2
ASAR	Alice Springs	26.47 165	P		P	05 01 44.0	-1.2
	comp=Z,8.1nm,0.6s,baz=358,slow=8.1,SNR=21						
ASAR			S		S	05 06 24.5	+8.5
	comp=Z,3.5nm,0.9s,baz=343,slow=20,SNR=7.8						
ASAR	Alice Springs	26.47 165	P		P	05 01 44.6	-0.5
WRKA	Warakurna	26.88 176	P		P	05 01 48.6	-0.2
	baz=27,SNR=10						
GIRL	Giralia	27.19 205	P		P	05 01 52.2	+0.6
	baz=27,SNR=5.0						
GIRL	Giralia	27.19 205	P		P	05 01 52.2	+0.6
RPSI	Rantau Prapat	27.51 272	P		P	05 01 56.8	+2.2
MEEK	Meekatharra	29.41 194	P		P	05 02 11.0	-0.3
	baz=30,SNR=6.0						
NJ2	Nanjing	30.79 347	*e*P		P	05 02 26.9	+3.5
NJ2			pmax		pmax		
	comp=Z,12nm,0.5s						
JNU	Nakatsue	31.29 7	P		P	05 02 28.8	+0.9
	comp=Z,4.3nm,0.4s,baz=117,slow=6.8,SNR=2.5						
CMAR	Chiang Mai Arr	31.57 303	P		P	05 02 30.2	-0.3
	comp=Z,1.5nm,0.7s,baz=146,slow=8.2,SNR=3.6						
CMAR	Chiang Mai Arr	31.57 303	P		P	05 02 30.0	-0.5
MORW	Morawa	32.41 197	P		P	05 02 37.7	-0.1
	baz=32,SNR=3.0						
MORW	Morawa	32.41 197	P		P	05 02 36.9	-0.9
MORW			IAmb		IAmb	05 02 37.8	
	comp=Z,14nm,0.8s						
KMI	Kunming	32.46 317	*e*P		P	05 02 41.3	+2.8
KMI			pmax		pmax		
	comp=Z,6.0nm,0.5s						
FORT	Forrest	32.58 177	P		P	05 02 38.8	-0.4
	baz=33,SNR=7.2						
FORT	Forrest	32.58 177	P		P	05 02 38.3	-0.8
KMBL	Kambalda	33.41 187	P		P	05 02 46.3	-0.2
	baz=34,SNR=4.8						
BLDU	Ballidu	33.69 195	P		P	05 02 47.9	-0.9
	baz=34,SNR=5.9						
JWT	Wachi	34.20 13	P		P	05 02 54.1	+0.8
JWT			IAmb		IAmb	05 02 55.2	
	comp=Z,12nm,0.7s						
KLBR	Kellerberrin	34.36 193	P		P	05 02 54.2	-0.5
	baz=34,SNR=8.0						
KSRS	Korea Array	35.36 2	P		P	05 03 04.5	+1.2
	comp=Z,2.4nm,0.5s,baz=180,slow=9.5,SNR=6.8						
BBOO	Buckleboo	35.74 166	P		P	05 03 05.6	-1.0
	baz=36,SNR=9.1						
BBOO	Buckleboo	35.74 166	P		P	05 03 05.9	-0.7
BBOO			IAmb		IAmb	05 03 12.8	
	comp=Z,13nm,0.8s						
NWAO	Narrogin (SRO)	35.76 193	P		P	05 03 06.4	-0.3
XAN	Xi'an	35.89 335	P		P	05 03 12.3	+4.4
XAN			pmax		pmax		
	comp=Z,10.0nm,0.9s						
CD2	Chengdu	35.93 326	P		P	05 03 08.5	+0.2
CD2			pmax		pmax		
	comp=Z,10.0nm,0.5s						
MAT	Matsushiro	36.10 16	P		P	05 03 09.5	-0.2
MJAR	Matsushiro Arr	36.10 16	P		P	05 03 08.8	-0.8
	comp=Z,5.4nm,0.7s,baz=186,slow=9.1,SNR=7.3						
MJAR	Matsushiro Arr	36.10 16	P		P	05 03 09.1	-0.6
STKA	Stephens Creek	36.58 158	P		P	05 03 13.1	-0.7
	comp=Z,12nm,0.8s,baz=326,slow=11,SNR=8.8						
STKA	Stephens Creek	36.58 158	P		P	05 03 13.2	-0.6
	baz=37,SNR=6.2						
STKA	Stephens Creek	36.58 158	P		P	05 03 13.0	-0.7
DL2	Dalian	37.05 354	P		P	05 03 18.6	+1.0
DL2			pmax		pmax		
	comp=Z,46nm,0.7s						
RKGY	Rocky Gully	37.44 193	P		P	05 03 21.8	+0.8
	baz=38,SNR=8.8						
LZH	Lanzhou	39.90 331	⇑P		P	05 03 42.4	+0.5
LZH			pP		pP	05 03 54.8	+0.7
LZH			sP		sP	05 03 59.5	0.0
LZH			pmax		pmax		
	comp=Z,17nm,1.3s						
LZH			pmax		pmax		
	comp=Z,81nm,4.9s						
LZH			LR		LR		
	comp=Z,2µm,17.9s						
LZH			LR		LR		
	comp=Z,2µm,17.4s						
LZH			LR		LR		
	comp=Z,3µm,17.4s						
ARMA	Armidale	40.15 145	P		P	05 03 44.4	+0.5
	baz=40,SNR=5.3						
SHL	Shillong	40.73 308	P		P	05 03 47.6	-1.3
SHL			IAmb		IAmb	05 03 49.7	
	comp=Z,15nm,0.8s						
HHC	Hu-ho-hao-te	41.00 343	*e*P		P	05 03 50.9	+0.1
ARPS	Mount Arapiles	41.09 161	P		P	05 03 51.5	+0.1
	baz=41,SNR=5.9						
USRK	Ussuriysk Ar.	42.36 6	P		P	05 04 02.7	+0.9
	comp=Z,8.0nm,0.9s,baz=197,slow=8.2,SNR=6.2						
USRK	Ussuriysk Ar.	42.36 6	P		P	05 04 01.3	-0.5
H11S3	WAKE ISLAND Hy	42.72 65	T		T	05 49 53.0	
	baz=252,SNR=14						
H11S2	WAKE ISLAND Hy	42.74 65	T		T	05 49 51.1	
	baz=252,SNR=11						
H11S1	WAKE ISLAND Hy	42.74 65	T		T	05 49 50.9	
	baz=252						
LSA	Lhasa	43.42 313	P		P	05 04 10.5	-0.7
LSA			IAmb		IAmb	05 04 12.8	
	comp=Z,11nm,0.8s						
ASAJ	Asahikawa	44.37 17	P		P	05 04 19.9	+1.9
	comp=Z,10nm,0.8s,baz=115,slow=30,SNR=3.8						
GTA	Gaotai	44.49 330	*e*P		P	05 04 18.1	-1.1
GTA			pP		pP	05 04 26.8	-4.6
GTA			sP		pwP	05 04 30.6	-3.2
GTA			PcP		PP	05 06 03.6	-0.1
GTA			pmax		pmax		
	comp=Z,4.0nm,0.9s						
GTA			pmax		pmax		
	comp=Z,200nm,6.9s						
GTA			LR		LR		
	comp=Z,840nm,20.7s						
GTA			LR		LR		
	comp=Z,2µm,20.4s						
GTA			LR		LR		
	comp=Z,2µm,20.4s						
LHI	Lord Howe Isla	45.46 140	P		P	05 04 27.3	+0.5
	baz=46,SNR=3.5						
KLR	Kul'dur	47.33 5	P		P	05 04 41.5	+0.3
	comp=Z,2.1nm,0.6s,baz=212,slow=12,SNR=4.7						
SONM	Songino Array	48.89 342	P		P	05 04 53.3	-0.2
	comp=Z,3.5nm,0.7s,baz=150,slow=8.1,SNR=8.2						
SONM			PcP		PcP	05 06 18.3	+1.0
	comp=Z,2.9nm,0.8s,baz=157,slow=4.3,SNR=5.9						
SONM	Songino Array	48.89 342	P		P	05 04 53.3	-0.2
HYB	Hyderabad	49.48 291	*i* P		P	05 04 57.0	-1.3
WMQ	Urumqi	54.03 326	*e*P		P	05 05 34.6	+2.7
WMQ			PcP		PcP	05 06 35.3	-1.2
WMQ			S		S	05 13 15.4	+11
WMQ			sS		sS	05 13 28.5	+3.0
WMQ			ScS		ScS	05 15 15.6	-1.9
WMQ			pmax		pmax		
	comp=Z,26nm,1.1s						
WMQ			pmax		pmax		
	comp=Z,230nm,11.3s						
WMQ			LR		LR		
	comp=Z,7µm,28.5s						
WMQ			LR		LR		
	comp=Z,7µm,26.3s						
WMQ			LR		LR		
	comp=Z,17µm,26.3s						
PETK	Petropavlovsk-	57.18 22	P		P	05 05 55.9	+1.7
	comp=Z,3.7nm,0.7s,baz=190,slow=7.6,SNR=5.4						
MK31	Makanchi Array	58.86 326	P		P	05 06 05.8	-0.4
MK31			IAmb		IAmb	05 06 07.2	
	comp=Z,4.1nm,0.7s						
MKAR	Makanchi Array	58.86 326	P		P	05 06 05.5	-0.7
	comp=Z,4.6nm,0.5s,baz=121,slow=8.2,SNR=33						
MKAR			PcP		PcP	05 06 55.4	+0.1
	comp=Z,2.4nm,0.7s,baz=121,slow=5.6,SNR=2.2						
MAKZ	Makanchi	59.04 326	P		P	05 06 07.0	-0.5
MAKZ			IAmb		IAmb	05 06 13.7	
	comp=Z,5.1nm,0.8s						
KDJ	Kajisay	59.49 319	P		P	05 06 10.9	0.0
KDJ			IAmb		IAmb	05 06 16.8	
	comp=Z,8.4nm,0.9s						
MA2	Magadan	60.49 14	P		P	05 06 16.4	-0.7
	comp=Z,8.0nm,0.7s,baz=260,slow=18,SNR=3.4						
ZALV	Zalesovo Beam	62.05 334	P		P	05 06 26.5	-1.2
	comp=Z,2.0nm,0.7s,baz=104,slow=4.6,SNR=3.4						
ZALV	Zalesovo Beam	62.05 334	P		P	05 06 26.7	-1.1
KURBB	Kurchatov Arra	63.09 328	P		P	05 06 34.1	-0.7
	comp=Z,5.7nm,0.5s,baz=129,slow=6.4,SNR=38						
KURK	Kurchatov	63.09 328	P		P	05 06 34.5	-0.3
SEY	Seymchan	63.82 13	P		P	05 06 41.6	+2.2
	comp=Z,1.7nm,0.2s,baz=198,slow=19,SNR=2.8						
KK31	Karatay Array	64.35 318	IAmb		IAmb	05 06 47.0	
	comp=Z,6.9nm,0.9s						
KKAR	Karatay Array	64.35 318	P		P	05 06 43.1	-0.2
BVAR	Borovoye Array	68.66 327	P		P	05 07 10.5	-0.1
	comp=Z,1.3nm,0.5s,baz=69,slow=8.1,SNR=6.4						
BRVK	Borovoye	68.73 327	P		P	05 07 11.1	+0.1
BRVK			IAmb		IAmb	05 07 27.5	
	comp=Z,11nm,1.1s						
NRIK	Noril'sk	72.09 346	P		P	05 07 31.9	+0.7
	comp=Z,4.5nm,0.6s,baz=120,slow=6.8,SNR=5.1						
ABKAR	Akbulak array	73.35 321	P		P	05 07 38.7	-0.4
ABKAR	Akbulak array	73.35 321	P		P	05 07 38.6	-0.4
AKTO	Aktyubinsk	74.88 322	P		P	05 07 47.9	-0.1
	comp=Z,4.6nm,0.6s,baz=112,slow=12,SNR=8.8						
ARU	Arti	76.29 328	P		P	05 07 55.6	-0.3
	comp=Z,1.8nm,0.2s,baz=134,slow=6.2,SNR=6.9						
RAYN	Ar Rayn	80.92 293	P		P	05 08 21.6	-0.7
RAYN			IAmb		IAmb	05 08 23.0	
	comp=Z,5.8nm,0.7s						
KIRV	Kirov	81.59 329	P		P	05 08 24.4	-0.5
	comp=Z,9.6nm,0.6s,baz=139,slow=11,SNR=3.3						
VNDA	Vanda	81.70 173	P		P	05 08 25.6	+0.4
	comp=Z,1.3nm,0.5s,baz=315,slow=7.6,SNR=7.1						
VNDA	Vanda	81.70 173	P		P	05 08 25.4	+0.3
MAW	Mawson	82.00 200	P		P	05 08 27.9	+1.1
	comp=Z,2.0nm,0.7s,baz=135,slow=1.4,SNR=3.1						
TTA	Tatalina	82.61 27	P		P	05 08 30.6	+0.3
TTA			IAmb		IAmb	05 08 33.3	
	comp=Z,9.5nm,1.0s						
GEVA	Gevas	83.61 308	P		P	05 08 35.9	-0.3
KBZ	Khabaz	84.00 314	P		P	05 08 38.2	+0.5
	comp=Z,5.1nm,0.9s,baz=233,slow=20						
IMAR	Indian Mountai	84.08 24	P		P	05 08 37.8	+0.1
KOPT	Kop Dagi	85.66 310	P		P	05 08 46.1	-0.5
KLMR	Klimovskoe	86.81 331	*e*P		P	05 08 49.7	-1.7
KLMR			AMP			05 08 53.1	
	comp=Z,9.0nm,0.7s						
ILAR	Eielson Array	86.82 25	P		P	05 08 52.1	+0.7
	comp=Z,1.0nm,1.0s,baz=272,slow=5.2,SNR=4.4						
BMAR	Burnt Mountain	87.82 23	P		P	05 08 55.9	-0.3
K27K	Chicken	88.91 26	P		P	05 09 00.9	-0.4
K27K			IAmb		IAmb	05 09 04.2	
	comp=Z,9.5nm,1.1s						
BCAR	Beaver Creek A	89.08 27	P		P	05 09 01.8	-0.5
KMBO	Kilima Mbogo	89.24 269	P		P	05 09 04.2	-0.1
	comp=Z,3.2nm,0.9s,baz=78,slow=2.9,SNR=5.8						
KMBO	Kilima Mbogo	89.24 269	P		P	05 09 03.2	-1.1
KMBO			IAmb		IAmb	05 09 06.1	
	comp=Z,8.1nm,1.1s						
MMAI	Mount Meron Ar	89.83 303	P		P	05 09 06.1	-0.4
	comp=Z,0.8nm,0.3s,baz=89,slow=8.4,SNR=5.3						
EIL	Elat	90.35 300	P		P	05 09 08.4	-0.5
	comp=Z,6.6nm,0.8s,baz=348,slow=4.9,SNR=5.2						
SYO	Syowa Base	90.67 201	*e*PcP		PcP	05 09 11.1	+0.6
SYO	Syowa Base	90.67 201	⇑*e*K		P	05 09 17.3	+7.9
BRTR	Keskin Array B	90.84 310	P		P	05 09 10.6	-1.0
	comp=Z,2.5nm,0.8s,baz=129,slow=4.9,SNR=5.7						
INK	Inuvik	91.91 21	P		P	05 09 16.0	+0.8
	comp=Z,3.0nm,1.0s,baz=289,slow=3.1,SNR=2.9						
INK	Inuvik	91.91 21	P		P	05 09 15.2	0.0
INK			IAmb		IAmb	05 09 19.6	
	comp=Z,2.7nm,0.9s						
ARCES	ARCESS Array B	92.02 340	P		P	05 09 15.2	-0.6
	comp=Z,4.8nm,0.8s,baz=40,slow=5.9,SNR=4.3						
SPITS	Spitsbergen Ar	92.16 349	P		P	05 09 16.2	-0.1
	comp=Z,8.9nm,1.0s,baz=79,slow=7.5,SNR=3.0						
AKASG	Malin Array Be	93.09 321	P		P	05 09 20.2	-0.9
	comp=Z,1.0nm,0.6s,baz=63,slow=4.7,SNR=3.6						
FINES	FINESS Array B	93.26 332	P		P	05 09 20.1	-1.5
	comp=Z,1.9nm,0.6s,baz=33,slow=5.5,SNR=5.6						
MLR	Muntele Rosu	95.98 316	P		P	05 09 34.6	0.0
	comp=Z,3.9nm,0.8s,baz=86,slow=14,SNR=4.4						
BURAR	Bucovina Array	96.14 318	P		P	05 09 34.9	-0.4
CLL	Collm	102.91 324	*e*P		Pdif	05 10 05.0	-0.3
ESDC	Sonseca Array	118.59 318	PKP		PKiKP	05 14 57.1	+1.6
	comp=Z,0.4nm,0.9s,baz=52,slow=1.6,SNR=3.3						
TORD	Torodi Ar. Bea	123.19 287	PKP		PKiKP	05 15 05.5	+0.4
	comp=Z,4.3nm,0.7s,baz=55,slow=2.2,SNR=17						
TORD	Torodi Ar. Bea	123.19 287			PKPdf	05 15 04.2	-0.7
DBIC	Dimbokro	130.65 280	PKP		PKPdf	05 15 19.4	+0.2
	comp=Z,6.1nm,0.9s,baz=95,slow=6.6,SNR=4.4						
CO02	Combarbal	146.55 152	PKPab		PKPab	05 15 50.5	+0.2
CO03	El Pedregal	147.00 152			PKPbc	05 15 51.2	+0.6

BJI ***18*** *05:03:10.8±0.0, 1˚.42N× 126˚.48E, h34km, mB5.2/10, mb4.7/44, Ms5.0/4, Ms7 4.7/5*

IDC ***18*** *05:03:10.6±0.5, 1˚.87N× 126˚.27E, h0km, mb4.5/29, mb1 4.6/30, mb1mx4.5/49, mbtmp4.5/30, ML4.3/1, Error ellipse: s-maj=23.4km s-min=10.7km az=76.0*

NEIC ***18*** *05:03:15.2±2.6, 1˚.88N±0˚.08× 126˚.51E±0˚.07, h35km±2km, mb4.9/44, Error ellipse: s-maj=15.2km s-min=9.8km az=222.0*

KLM ***18*** *05:03:17.0, 1˚.94N× 126˚.58E, h45km, mb4.8*

DJA ***18*** *05:03:17.4±0.2, 2˚.N±2˚× 12˚6E±˚, h43km±3km, M4.8/33, mB6.1/3, mb4.7/33, MLv4.7/17, Mw(mB)5.7/3, Mwp6.0/1*

ISC 18 05:03:17.5±1.0, 1˚.89N±0˚.04× 126˚.43E±0˚.07, h52km±9km, n170, σ1§58/168, mb4.7/63, MS4.8/3, 5C, Northern Molucca Sea

Code	Station Name	Δ° AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	Ternate	1.46 140	P		Pn	05 03 39.9	-1.5
TNTI	Ternate	1.46 140	Pn		Pn	05 03 39.6	-1.8
SGSI	Sangihe	2.00 333	P		Pn	05 03 47.9	-0.9
SGSI			S		Sn	05 04 12.1	-0.5
LBMI	Labuha	2.73 157	P		Pn	05 03 58.7	-0.2
KMSI	Cibinong	2.77 242	P		Pn	05 04 00.4	+1.0
GTOI	Gorontalo	3.63 250	P		Pn	05 04 11.7	+0.4
LUWI	Luwuk	4.67 231	P		Pn	05 04 26.1	+0.6
LUWI	Luwuk	4.67 231	Pn		Pn	05 04 26.9	+1.3
MRSI	Marisa	4.70 253	P		Pn	05 04 26.2	+0.3
SKMP	Bagumbayan, Su	4.96 338	*e*P		Pn	05 04 28.3	-1.3
SKMP			*e*S		Sn	05 05 21.4	-4.4
NLAI	Namlea	5.14 172	P		Pn	05 04 31.8	-0.1
	0.3nm39nm,0.9s						
KCP	Kidapawan	5.25

WRA				S	S	05 12 24.2	-1.5
	comp=Z,2.4nm,0.9s,baz=331,slow=21,SNR=4.7						
WRA	**Warramunga Arr**	**23.05**	**161**	P	**P**	**05 08 17.0**	**-1.5**
WB2	**Warramunga Arr**	**23.05**	**161**	P	**P**	**05 08 16.5**	**-2.1**
WB2				IAmb	IAmb	05 08 21.0	
	comp=Z,44nm,0.8s						
WR0	**Warramunga Arr**	**23.13**	**160**	P	**P**	**05 08 17.6**	**-1.7**
WR0				IAmb	IAmb	05 08 20.5	
	comp=Z,22nm,0.7s						
PSA00	**Pilbara Seismi**	**24.19**	**195**	P	**P**	**05 08 28.9**	**-0.3**
PSA00				IAmb	IAmb	05 08 30.0	
	comp=Z,81nm,1.9s						
PSA00	**Pilbara Seismi**	**24.19**	**195**	P	**P**	**05 08 30.0**	**+0.7**
PSA00				IAmb	IAmb	05 08 32.2	
	comp=Z,10nm,0.8s						
MNAI	**Manna**	**24.26**	**255**	P	**P**	**05 08 32.9**	**+2.9**
SDSI	**Sungai Dareh**	**25.15**	**264**	P	**P**	**05 08 40.9**	**+2.8**
IPM	**Ipoh**	**25.49**	**276**	P	**P**	**05 08 40.0**	**-1.2**
KULM	**Kulim**	**25.94**	**278**	P	**P**	**05 08 48.0**	**+2.7**
AS31	**Alice Springs**	**26.43**	**164**	P	**P**	**05 08 48.1**	**-1.5**
ASAR	**Alice Springs**	**26.43**	**164**	P	**P**	**05 08 49.3**	**-0.3**
	comp=Z,9.9nm,0.8s,baz=352,slow=7.1,SNR=41						
ASAR				S	S	05 13 21.2	+1.5
	comp=Z,2.1nm,1.1s,baz=354,slow=21,SNR=5.4						
ASAR	**Alice Springs**	**26.43**	**164**	P	**P**	**05 08 48.2**	**-1.4**
GIRL	**Giralia**	**27.13**	**205**	P	**P**	**05 08 54.5**	**-1.3**
GIRL				IAmb	IAmb	05 08 57.8	
	comp=Z,37nm,0.8s						
CTA	**Charters Tower**	**29.25**	**139**	P	**P**	**05 09 14.8**	**0.0**
	comp=Z,0.8nm,0.5s,baz=285,slow=15,SNR=0.9						
NJ2	**Nanjing**	**30.84**	**347**	*e*P	**P**	**05 09 30.3**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
GYA	**Guiyang**	**30.94**	**324**	*e*P	**P**	**05 09 34.0**	**+4.2**
GYA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
JNU	**Nakatsue**	**31.35**	**7**	P	**P**	**05 09 33.2**	**0.0**
	comp=Z,12nm,0.8s,baz=206,slow=3.0,SNR=4.6						
CMAR	**Chiang Mai Arr**	**31.58**	**303**	P	**P**	**05 09 34.2**	**-1.2**
	comp=Z,1.3nm,0.6s,baz=123,slow=7.7,SNR=7.1						
CMAR				PcP	**PcP**	**05 12 28.4**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=178,slow=1.8,SNR=5.7						
MORW	**Morawa**	**32.35**	**197**	P	**P**	**05 09 41.9**	**-0.2**
KMI	**Kunming**	**32.49**	**317⇑**	*e*P	**P**	**05 09 45.0**	**+1.4**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KSRS	**Korea Array**	**35.42**	**2**	P	**P**	**05 10 10.0**	**+1.5**
	comp=Z,5.2nm,0.9s,baz=179,slow=11,SNR=10						
NWAO	**Narrogin (SRO)**	**35.70**	**193**	P	**P**	**05 10 11.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**35.70**	**193**	P	**P**	**05 10 11.4**	**+0.3**
XAN	**Xi'an**	**35.92**	**335**	P	**P**	**05 10 12.4**	**-0.6**
XAN				PcP	**PcP**	**05 12 41.0**	**+1.8**
XAN				pmax	pmax		
	comp=Z,14nm,1.6s						
XAN				LR	LR		
	comp=Z,1μm,18.4s						
XAN				LR	LR		
	comp=Z,2μm,18.4s						
XAN				LR	LR		
	comp=Z,1μm,20.6s						
CD2	**Chengdu**	**35.96**	**326**	P	**P**	**05 10 13.5**	**+0.1**
CD2				pmax	pmax		
	comp=Z,20nm,1.0s						
MJAR	**Matsushiro Arr**	**36.16**	**16**	P	**P**	**05 10 14.9**	**0.0**
	comp=Z,9.4nm,1.0s,baz=182,slow=9.1,SNR=7.4						
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**05 10 18.3**	**0.0**
	comp=Z,8.0nm,0.7s,baz=332,slow=9.1,SNR=17						
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**05 10 17.6**	**-0.6**
LZH	**Lanzhou**	**39.94**	**331**	⇑P	**P**	**05 10 47.9**	**+0.9**
LZH				pP	pP	05 10 57.5	-2.6
LZH				sP	sP	05 11 02.3	-3.7
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,52nm,4.8s						
LZH				LR	LR		
	comp=Z,560nm,16.8s						
LZH				LR	LR		
	comp=Z,1μm,17.9s						
LZH				LR	LR		
	comp=Z,800nm,17.9s						
SHL	**Shillong**	**40.74**	**308**	P	**P**	**05 10 52.5**	**-1.4**
SHL				IAmb	IAmb	05 10 55.6	
	comp=Z,25nm,1.1s						
HHC	**Hu-ho-hao-te**	**41.05**	**343**	*e*P	P	05 10 49.1	-6.9
USRK	**Ussuriysk Ar.**	**42.42**	**6**	P	**P**	**05 11 08.1**	**+1.0**
	comp=Z,8.3nm,1.0s,baz=187,slow=8.4,SNR=8.2						
USRK	**Ussuriysk Ar.**	**42.42**	**6**	P	**P**	**05 11 06.7**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**42.77**	**65**	T	T	05 58 11.0	
	baz=253,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**42.78**	**65**	T	T	05 58 07.9	
	baz=253,slow=75,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**42.78**	**65**	T	T	05 57 59.9	
	baz=253,slow=75,SNR=6.1						
LSA	**Lhasa**	**43.44**	**313**	P	**P**	**05 11 15.1**	**-1.0**
LSA				IAmb	IAmb	05 11 18.1	
	comp=Z,15nm,0.9s						
GTA	**Gaotai**	**44.52**	**330**	*e*P	**P**	**05 11 24.0**	**-0.2**
GTA				pP	pP	05 11 33.4	-4.1
GTA				sP	sP	05 11 37.3	-6.1
GTA				PcP	**PP**	**05 13 08.8**	**-0.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TAPN	**Taplejung**	**44.88**	**308**	*e*P	**P**	**05 11 27.0**	**-0.5**
ODAN	**Odare**	**44.91**	**307**	*e*P	**P**	**05 11 26.6**	**-1.0**
RAMN	**Ramite**	**45.58**	**307**	*e*P	**P**	**05 11 32.3**	**-0.7**
GUN	**Gumba**	**46.58**	**308**	*e*P	**P**	**05 11 39.9**	**-1.0**
PKI	**Pulchoki**	**46.80**	**307**	*e*P	**P**	**05 11 41.4**	**-1.3**
DMN	**Daman**	**47.06**	**307**	*e*P	**P**	**05 11 43.3**	**-1.3**
KLR	**Kul'dur**	**47.38**	**5**	P	**P**	**05 11 47.1**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=225,slow=4.3,SNR=4.6						
GKN	**Gorkha**	**47.60**	**307**	*e*P	**P**	**05 11 47.7**	**-1.0**
KOLN	**Koldanda**	**48.34**	**306**	*e*P	**P**	**05 11 53.0**	**-1.5**
	comp=Z,50nm,0.9s						
DANN	**Dangsing**	**48.45**	**307**	*e*P	**P**	**05 11 54.0**	**-1.4**
	comp=Z,32nm,0.7s						
ULN	**Ulaanbaatar**	**48.77**	**343**	P	**P**	**05 11 56.9**	**-0.5**
SONM	**Songino Array**	**48.94**	**342**	P	**P**	**05 11 58.9**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=153,slow=8.7,SNR=12						
SONM				PcP	**PcP**	**05 13 23.4**	**+1.2**
	comp=Z,3.7nm,0.8s,baz=163,slow=3.9,SNR=10.0						
SONM	**Songino Array**	**48.94**	**342**	P	**P**	**05 11 57.6**	**-1.0**
SONM					**PcP**	**05 13 23.3**	**+1.1**
PYUN	**Piuthan**	**48.97**	**306**	*e*P	**P**	**05 11 58.3**	**-1.0**
	comp=Z,75nm,1.0s						
WMQ	**Urumqi**	**54.06**	**326**	*e*P	**P**	**05 12 37.8**	**+0.9**
WMQ				PcS	**PcS**	**05 17 36.8**	**-3.9**
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
WMQ				LR	LR		
	comp=Z,3μm,26.1s						
PETK	**Petropavlovsk-**	**57.24**	**22**	P	**P**	**05 12 59.9**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=180,slow=4.4,SNR=3.8						
SHLS	**Shalkode**	**58.57**	**321**	*e*P	**P**	**05 13 06.3**	**-2.8**
	comp=Z,3.9nm,0.8s,baz=321						
MK31	**Makanchi Array**	**58.89**	**326**	P	**P**	**05 13 10.9**	**-0.2**
MK31				IAmb	IAmb	05 13 16.7	
	comp=Z,7.0nm,1.0s						
MKAR	**Makanchi Array**	**58.89**	**326**	P	**P**	**05 13 10.8**	**-0.4**
	comp=Z,4.9nm,0.4s,baz=120,slow=7.4,SNR=51						
MKAR				PcP	**PcP**	**05 14 00.7**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=120,slow=6.4,SNR=4.0						
MAKZ	**Makanchi**	**59.08**	**326**	P	**P**	**05 13 11.9**	**-0.6**
MAKZ				IAmb	IAmb	05 13 17.9	
	comp=Z,11nm,1.1s						
KSH	**Kashi**	**59.13**	**316**	*e*P	**P**	**05 13 15.8**	**+2.7**
KSH				pmax	pmax		
	comp=Z,420nm,7.0s						
SATY	**Saty**	**59.18**	**321**	*e*P	**P**	**05 13 12.8**	**-0.7**
	comp=Z,4.0nm,0.7s,baz=321						
KDJ	**Kajisay**	**59.52**	**319**	P	**P**	**05 13 15.5**	**-0.4**
KDJ				IAmb	IAmb	05 13 21.7	
	comp=Z,8.4nm,1.1s						
MDOK	**Medeo**	**60.10**	**320**	*e*P	**P**	**05 13 18.6**	**-1.2**
	baz=320						
TDK	**Taldyqorghan**	**60.17**	**323**	*e*P	**P**	**05 13 18.7**	**-1.4**
	baz=322						
CHKK	**Chushkaly**	**60.47**	**321**	*e*P	**P**	**05 13 21.1**	**-1.1**
	baz=321						
KUU	**Kurty**	**60.90**	**321**	*e*P	**P**	**05 13 24.0**	**-1.0**
	comp=Z,11nm,0.9s,baz=321						
SGDS	**Sogindy**	**61.80**	**320**	*e*P	**P**	**05 13 30.7**	**-0.4**
	baz=320						
ZALV	**Zalesovo Beam**	**62.08**	**334**	P	**P**	**05 13 32.0**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=120,slow=5.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**62.08**	**334**	P	**P**	**05 13 31.7**	**-1.1**
SEM	**Semipalatinsk**	**62.09**	**329**	*e*P	**P**	**05 13 32.2**	**-1.0**
	baz=328						
BTLS	**Baital**	**62.89**	**321**	*e*P	**P**	**05 13 37.5**	**-0.9**
	baz=321						
KURBB	**Kurchatov Arra**	**63.12**	**328**	P	**P**	**05 13 39.3**	**-0.4**
	comp=Z,8.7nm,0.6s,baz=131,slow=6.4,SNR=71						
KURK	**Kurchatov**	**63.12**	**328**	P	**P**	**05 13 39.5**	**-0.2**
DZA	**Taraz**	**63.73**	**318**	*e*P	**P**	**05 13 42.8**	**-1.2**
	baz=318						
SEY	**Seymchan**	**63.88**	**13**	P	**P**	**05 13 44.1**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=134,slow=2.1,SNR=6.6						
IUG	**Iuzhnay**	**64.32**	**317**	*e*P	**P**	**05 13 47.2**	**-0.8**
	comp=Z,3.0nm,0.8s,baz=316						
KK31	**Karatay Array**	**64.37**	**318**	IAmb	IAmb	05 13 52.3	
	comp=Z,8.0nm,1.0s						
KKAR	**Karatay Array**	**64.37**	**318**	P	**P**	**05 13 46.8**	**-1.4**
KKAR				IAmb	IAmb	05 13 52.4	
	comp=Z,8.0nm,1.0s						
BRZS	**Berezniki**	**66.01**	**325**	*e*P	**P**	**05 13 57.9**	**-0.7**
	baz=325						
BVAR	**Borovoye Array**	**68.69**	**327**	P	**P**	**05 14 15.2**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=210,slow=29,SNR=14						
BRVK	**Borovoye**	**68.76**	**327**	P	**P**	**05 14 15.6**	**-0.3**
BRVK				IAmb	IAmb	05 14 20.4	
	comp=Z,10nm,1.1s						
TIXI	**Tiksi**	**69.67**	**1**	P	**P**	**05 14 20.5**	**-0.7**
TIXI				IAmb	IAmb	05 14 30.3	
	comp=Z,7.0nm,0.5s						
GEYT	**Alibeck**	**71.81**	**309**	P	**P**	**05 14 35.3**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=104,slow=4.7,SNR=4.9						
GEYT	**Alibeck**	**71.81**	**309**	P	**P**	**05 14 34.7**	**-0.2**
NRIK	**Noril'sk**	**72.13**	**346**	P	**P**	**05 14 36.8**	**+0.6**
	comp=Z,9.3nm,0.9s,baz=135,slow=5.5,SNR=9.1						
ABKAR	**Akbulak array**	**73.38**	**321**	P	**P**	**05 14 43.6**	**-0.3**
ABKAR	**Akbulak array**	**73.38**	**321**	P	**P**	**05 14 43.0**	**-1.0**
ARU	**Arti**	**76.32**	**328**	P	**P**	**05 14 59.3**	**-1.5**
ARU				IAmb	IAmb	05 15 01.9	
	comp=Z,16nm,0.9s						
RAYN	**Ar Rayn**	**80.92**	**293**	P	**P**	**05 15 27.6**	**+0.6**
RAYN				IAmb	IAmb	05 15 30.0	
	comp=Z,14nm,1.2s						
VNDA	**Vanda**	**81.65**	**173**	P	**P**	**05 15 30.6**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=314,slow=7.3,SNR=12						
VNDA	**Vanda**	**81.65**	**173**	P	**P**	**05 15 30.2**	**+0.6**
MAW	**Mawson**	**81.94**	**200**	P	**P**	**05 15 32.6**	**+1.4**
	comp=Z,3.4nm,0.9s,baz=95,slow=13,SNR=4.9						
GEVA	**Gevas**	**83.62**	**308**	P	**P**	**05 15 40.9**	**-0.1**
GEVA				IAmb	IAmb	05 15 44.7	
	comp=Z,10nm,0.9s						
KBZ	**Khabaz**	**84.02**	**314**	P	**P**	**05 15 41.8**	**-0.8**
	comp=Z,3.8nm,0.7s,baz=53,slow=20						
IMAR	**Indian Mountai**	**84.14**	**24**	P	**P**	**05 15 44.2**	**+1.5**
KOPT	**Kop Dagi**	**85.67**	**310**	P	**P**	**05 15 51.6**	**+0.2**
COLD	**Coldfoot**	**85.69**	**23**	P	**P**	**05 15 51.5**	**+1.0**
KLMR	**Klimovskoe**	**86.85**	**331**	*e*P	**P**	**05 15 54.4**	**-1.9**
KLMR				AMP		05 15 57.9	
	comp=Z,20nm,1.2s						
BMAR	**Burnt Mountain**	**87.88**	**23**	P	**P**	**05 16 01.8**	**+0.5**
GAZ	**Gaziantep**	**88.24**	**307**	P	**P**	**05 16 03.4**	**-0.2**
K27K	**Chicken**	**88.97**	**26**	P	**P**	**05 16 07.7**	**+1.3**
K27K				IAmb	IAmb	05 16 13.3	
	comp=Z,13nm,1.4s						
BCAR	**Beaver Creek A**	**89.14**	**27**	P	**P**	**05 16 07.5**	**+0.3**
KMBO	**Kilima Mbogo**	**89.21**	**269**	P	**P**	**05 16 11.6**	**+2.7**
	comp=Z,6.4nm,1.0s,baz=65,slow=3.4,SNR=7.8						
KMBO	**Kilima Mbogo**	**89.21**	**269**	P	**P**	**05 16 05.1**	**-3.8**
MMAI	**Mount Meron Ar**	**89.84**	**303**	P	**P**	**05 16 12.3**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=141,slow=1.7,SNR=6.5						
EIL	**Elat**	**90.36**	**300**	P	**P**	**05 16 12.7**	**-0.9**
	comp=Z,8.9nm,1.0s,baz=319,slow=17,SNR=3.6						
SYO	**Syowa Base**	**90.61**	**201⇑**	*e*P	**P**	**05 16 13.0**	**-0.9**
SYO	**Syowa Base**	**90.61**	**201**	*i*X	P	05 16 21.6	+7.7
BRTR	**Keskin Array B**	**90.95**	**310**	P	**P**	**05 16 16.1**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=116,slow=5.6,SNR=9.3						
BRTR	**Keskin Array B**	**90.95**	**310**	P	**P**	**05 16 15.8**	**-0.6**
INK	**Inuvik**	**91.97**	**21**	P	**P**	**05 16 20.9**	**+0.6**
	comp=Z,2.2nm,1.1s,baz=311,slow=8.8,SNR=3.5						
ARCES	**ARCESS Array B**	**92.06**	**340**	P	**P**	**05 16 21.1**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=43,slow=7.3,SNR=4.3						
AKASG	**Malin Array Be**	**93.12**	**321**	P	**P**	**05 16 24.5**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=67,slow=4.2,SNR=4.0						
FINES	**FINESS Array B**	**93.30**	**332**	P	**P**	**05 16 25.3**	**-1.2**
	comp=Z,2.0nm,0.8s,baz=134,slow=12,SNR=2.2						
DAG	**Danmarks Havn**	**99.02**	**352**	*i*P	**Pdif**	**05 16 51.8**	**-0.4**
	comp=Z,3.5nm,0.8s						
DAG	**Danmarks Havn**	**99.02**	**352**	*i*P	**Pdif**	**05 16 51.8**	**-0.4**
DAG				IAmb	IAmb	05 16 53.1	
	comp=Z,3.5nm,0.8s						
CLL	**Collm**	**102.94**	**324**	*e*P	**Pdif**	**05 17 09.0**	**-1.2**
PDAR	**Pinedale Array**	**112.93**	**42**	PKKPab	PKKPab	05 32 45.0	-0.3
	comp=Z,0.7nm,0.8s,baz=114,slow=4.0,SNR=5.0						
TORD	**Torodi Ar. Bea**	**123.18**	**287**	PKP	**PKiKP**	**05 22 10.8**	**+1.1**
	comp=Z,4.3nm,0.8s,baz=51,slow=1.9,SNR=17						
TORD	**Torodi Ar. Bea**	**123.18**	**287**		**PKiKP**	**05 22 10.6**	**+0.8**

KRSC 18 05:06:07.1±0.9, 51°.34N×157°.62E, h102^{km}±10^{km}, ML3.6,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.52**	**285**	*e*P	Pn	05 06 24.3	+1.1
KDTR	**Khodutka, Kamc**	**0.55**	**31**	*e*P	Pn	05 06 24.9	+1.4
KDTR				*e*S	Sn	05 06 37.1	+1.4
ASAK	**Asacha**	**1.06**	**9**	*e*P	Pn	05 06 29.5	+1.0
SKR	**Severo-Kuril's**	**1.15**	**236**	*e*P	Pn	05 06 30.7	+1.4
SKR				*e*S	Sn	05 06 47.5	+1.4
RUS	**Russkaya**	**1.23**	**26**	*e*P	Pn	05 06 31.3	+1.1
RUS				*e*S	Sn	05 06 49.2	+1.5
GRL	**Gorelyy**	**1.25**	**13**	*e*P	Pn	05 06 32.0	+1.4
GRL				*e*S	Sn	05 06 50.4	+2.1
KRMR	**Karymshinskiy**	**1.53**	**12**	*e*P	Pn	05 06 35.5	+1.7
APC	**Apacha**	**1.62**	**350**	*e*P	Pn	05 06 35.2	+0.3
APC				*e*S	Sn	05 06 55.1	-0.9
PET	**Petropavlovsk**	**1.81**	**20**	*e*S	Sn	05 07 02.2	+2.0
DALK	**Dalny**	**1.84**	**22**	*e*P	Pn	05 06 39.0	+1.4
DALK				*e*S	Sn	05 07 02.3	+1.4
UGLR	**Uglovaya**	**2.02**	**21**	*e*P	Pn	05 06 42.3	+2.2
UGLR				*e*S	Sn	05 07 08.6	+3.4
AVH	**Avacha**	**2.05**	**19**	*e*P	Pn	05 06 42.6	+2.1
KOK	**Koryaka**	**2.06**	**17**	*e*P	Pn	05 06 42.8	+2.2
SMAR	**Somma**	**2.06**	**20**	*e*P	Pn	05 06 42.6	+1.9
KRER	**Koryakskii**	**2.09**	**19**	*e*P	Pn	05 06 43.1	+2.0
KRER				*e*S	Sn	05 07 09.8	+2.8
SDLR	**Sedlovina**	**2.09**	**21**	*e*P	Pn	05 06 42.6	+1.5
SDLR				*e*S	Sn	05 07 09.2	+2.2
KRX	**Arik**	**2.12**	**17**	*e*P	Pn	05 06 43.3	+1.8
KRX				*e*S	Sn	05 07 10.1	+2.4
NLC	**Nalytchevo**	**2.12**	**29**	*e*P	Pn	05 06 42.1	+0.8
SPN	**Mys Shipunski**	**2.30**	**39**	*e*P	Pn	05 06 45.5	+1.9
SPN				*e*S	Sn	05 07 14.1	+2.5
GNL	**Ganaly**	**2.37**	**5**	*e*P	Pn	05 06 45.7	+1.0
MKZ	**Mys Kozlova**	**4.07**	**36**	*e*P	Pn	05 07 07.9	+0.7
KZV	**Kizimen**	**4.11**	**22**	*e*P	Pn	05 07 09.8	+1.9
TUMD	**Tumrok D**	**4.22**	**22**	*e*P	Pn	05 07 12.4	+3.2
TUMR	**Tumrok**	**4.23**	**20**	*e*P	Pn	05 07 12.3	+2.8
KMNR	**Kamenistaya**	**4.70**	**18**	*e*P	Pn	05 07 18.9	+3.2
BZWR	**Bezymyannyi-We**	**4.94**	**19**	*e*P	Pn	05 07 22.1	+3.0
BZGR	**Bezymyannyi-Gr**	**4.96**	**20**	*e*P	Pn	05 07 22.3	+3.0
BDR	**Baidarnaya**	**5.65**	**21**	*e*P	Pn	05 07 32.3	+3.6
KBTR	**Krutoberegovo**	**5.77**	**30**	*e*P	Pn	05 07 31.2	+1.0

*IDC **18** 05:10:20.8±1.3, 19°.50N×120°.55E, h0^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.5/48, mbtmp3.6/5, Error ellipse: s-maj=54.4km s-min=21.1km az=62.0*

ISC 18 05:10:24.1±1.1, 19°.5N±0°.1×120°.5E±0°.2, h23^{km}, n7, σ0°.77/9, mb3.5/4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**1.73**	**156**	*e*P	**Pb**	**05 10 54.5**	**-0.9**
APYP				*e*S	**Sb**	**05 11 17.3**	**+0.6**
CVP	**Callao Caves**	**2.15**	**144⇑**	*i*P	**Pb**	**05 11 01.5**	**-0.9**
CVP				*i*S	**Sb**	**05 11 29.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.41**	**271**	P	**P**	**05 14 59.5**	**-0.2**
	0.5nm,0.3s,baz=66,slow=9.0,SNR=5.1						
SONM	**Songino Array**	**30.54**	**341**	P	**P**	**05 16 35.9**	**-0.1**
	0.3nm,0.4s,baz=139,slow=6.8,SNR=3.2						
MKAR	**Makanchi Array**	**41.41**	**320**	P	**P**	**05 18 09.2**	**+0.3**
	1.0nm,0.9s,baz=111,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**41.44**	**160**	P	**P**	**05 18 09.0**	**-0.2**
	0.9nm,0.8s,baz=343,slow=9.3,SNR=6.9						
ASAR	**Alice Springs**	**44.81**	**162**	P	**P**	**05 18 37.4**	**+0.9**
	0.3nm,0.4s,baz=343,slow=6.8,SNR=8.3						

IDC 18 05:16:04.9±6.0, 8°.61S×155°.87E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/33, mbtmp3.7/3, Error ellipse: s-maj=102.1km s-min=78.1km az=9.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.68**	**239**	P	P	05 21 18.6	+0.2
	1.0nm,0.7s,baz=66,slow=9.9,SNR=10						
ASAR	**Alice Springs**	**25.81**	**232**	P	P	05 21 37.6	-0.4
	1.2nm,0.9s,baz=64,slow=9.7,SNR=8.6						
STKA	**Stephens Creek**	**26.69**	**208**	P	P	05 21 46.2	+0.3
	2.6nm,1.0s,baz=51,slow=13,SNR=3.5						

IDC 18 05:22:56.4±1.8, 2°.03N×126°.29E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.4/34, mbtmp3.5/4, Error ellipse: s-maj=175.0km s-min=21.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.22**	**160**	P	P	05 28 04.0	-1.2
	0.8nm,0.4s,baz=339,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.59**	**164**	P	P	05 28 38.0	+1.4
	0.2nm,0.4s,baz=346,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**58.70**	**326**	P	P	05 32 56.9	+1.0
	0.2nm,0.3s,baz=111,slow=8.3,SNR=4.0						
KURBB	**Kurchatov Arra**	**62.93**	**328**	P	P	05 33 23.6	-0.9
	0.2nm,0.4s,baz=131,slow=7.2,SNR=3.7						

IDC 18 05:26:27.7±4.1, 18°.76N×121°.13E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.3/35, mbtmp3.5/3, Error ellipse: s-maj=366.4km s-min=27.6km az=61.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.58**	**161**	P	P	05 34 09.6	+0.4
	0.2nm,0.5s,baz=341,slow=8.8,SNR=3.9						
MKAR	**Makanchi Array**	**42.33**	**320**	P	P	05 34 23.3	-0.1
	0.8nm,0.7s,baz=116,slow=6.6,SNR=5.0						
ASAR	**Alice Springs**	**43.97**	**163**	P	P	05 34 36.0	-0.8
	0.3nm,0.6s,baz=345,slow=6.7,SNR=4.0						

IDC 18 05:46:34.5±3.3, 9°.62S×155°.33E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.6/34, mbtmp3.6/4, Error ellipse: s-maj=85.5km s-min=33.7km az=105.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.72**	**241**	P	P	05 51 37.4	-0.9
	0.6nm,0.6s,baz=66,slow=9.8,SNR=7.9						
ASAR	**Alice Springs**	**24.78**	**233**	P	P	05 51 57.7	-0.7
	0.6nm,0.5s,baz=60,slow=11,SNR=9.8						
STKA	**Stephens Creek**	**25.55**	**208**	P	P	05 52 06.1	+0.9
	2.8nm,1.0s,baz=50,slow=15,SNR=4.0						
SONM	**Songino Array**	**71.71**	**328**	P	P	05 57 59.2	+0.6
	0.6nm,0.7s,baz=125,slow=7.2,SNR=3.9						

IDC 18 06:06:12.4±2.0, 0°.27N×126°.88E, h0^{km}, mb3.3/3, mb1 3.5/3, mb1mx3.2/35, mbtmp3.4/3, Error ellipse: s-maj=178.8km s-min=25.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.38**	**160**	P	P	06 11 02.1	+0.4
	0.4nm,0.7s,baz=339,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**24.75**	**164**	P	P	06 11 35.6	-0.3
	0.2nm,0.5s,baz=350,slow=15,SNR=2.9						
MKAR	**Makanchi Array**	**60.48**	**326**	P	P	06 16 24.1	0.0
	1.5nm,0.8s,baz=143,slow=

comp=Z,2.3nm,0.3s,baz=214,slow=14,SNR=9.0
CMAR LR LR 06 13 50.9
comp=Z,2μm,18.4s,baz=253,slow=37
CMAR Chiang Mai Arr 11.84 22 Pn **Pn 06 09 13.2 -1.7**
CM09 Chiang Mai Arr 11.84 22 P Pn 06 09 23.0 +8.1
comp=Z,0.1nmcomp=Z,330nmcomp=Z,39nm,0.9s
UTTA Uttaradit 11.90 30 P **Pn 06 09 19.3 +3.6**
comp=Z,0.1nmcomp=Z,270nmcomp=Z,38nm,0.9s
CM36 Chiang Mai Arr 11.95 22 P Pn 06 09 30.0 +14
CM32 Chiang Mai Arr 11.98 21 P Pn 06 09 22.7 +5.9
CM35 Chiang Mai Arr 12.12 22 P P 06 09 26.0 -5.2
CHTO Chiang Mai 12.16 21 Pn **Pn 06 09 18.9 -0.4**
CM33 Chiang Mai Arr 12.17 21 P Pn 06 09 24.7 +5.3
CM34 Chiang Mai Arr 12.27 22 P **P 06 09 34.0 +1.1**
PAYA Payao 13.01 24 P **P 06 09 39.0 -2.2**
comp=Z,1.0nmcomp=Z,7μmcomp=Z,328nm,1.1s
PALK Pallekele 13.53 270 Pn 06 09 37.6 -0.5
NONG Nongkai 13.61 38 P **P 06 09 47.5 -0.3**
LHSI Lahat 14.46 140 P P 06 10 07.3 +10
CHLP Challavanipeta 14.88 319 *eP* **Pn 06 09 54.7 -1.6**
MDRS Chennai 14.96 293 *eP* **Pn 06 09 58.6 +1.2**
MDRS IAmb IAmb 06 10 11.4
comp=Z,89nm,1.1s
SAIH SAIHA 15.03 355 *eP* **Pn 06 09 59.8 +1.3**
SAIH IAmb IAmb 06 10 13.2
comp=Z,33nm,1.2s
SKHT Srikalahasti 15.69 295 *eP* **Pn 06 10 06.1 -0.9**
PVM Polavaram 15.79 309 *eP* **Pn 06 10 07.5 -0.8**
KLSI 15.89 139 P **Pn 06 10 10.0 +0.3**
comp=Z,10nm,1.1s
MYLAV Mylavaram 16.28 306 *eP* **Pn 06 10 13.8 -0.9**
ADKI Addanki 16.36 302 *eP* **Pn 06 10 15.8 +0.1**
KASI Kota Agung 16.38 142 P **P 06 10 17.4 -1.2**
comp=Z,34nm,0.9s
KSM Kuching 16.98 110 P **Pn 06 10 23.8 +0.4**
GGR Gangavaram 17.22 308 *eP* **Pn 06 10 25.0 -1.6**
NJS Nagarjunasagar 17.27 303 *eP* **Pn 06 10 26.0 -1.1**
IMP Imphal 17.30 359 *eP* **P 06 10 28.9 +0.1**
IMP IAmb IAmb 06 10 35.0
comp=Z,53nm,1.3s
CUPL Choutuppal 17.96 304 *eP* **Pn 06 10 34.6 -1.1**
BOK Bokaro 18.18 334 *eP* **P 06 10 40.6 +2.1**
BOK AMP 06 10 41.7
comp=Z,299nm,0.8s
SHL Shillong 18.18 353 *eP* **P 06 10 38.7 0.0**
SHL IAmb IAmb 06 10 45.9
comp=Z,18nm,0.7s
SHL Shillong 18.18 353 Pn 06 10 36.3 -2.3
KOHI KOHIMA 18.19 359 *eP* **P 06 10 39.7 +1.0**
KOHI IAmb IAmb 06 10 45.5
comp=Z,54nm,0.7s
HYB Hyderabad 18.32 304 *i* P **P 06 10 40.0 -0.1**
HYB *eS* **S 06 14 13.0 +4.5**
HYBB Hyderabad (bro 18.32 304 *eP* **P 06 10 38.6 -1.5**
URV Uravakonda 18.34 295 *eP* **P 06 10 40.1 -0.2**
SBUM Sibu 18.48 105 P **P 06 10 39.6 -2.2**
SBUM Sibu 18.48 105 P **Pn 06 10 44.0 +1.9**
RPR Rampur 18.52 309 *eP* **P 06 10 41.2 -1.1**
QIZ Qiongzhong 18.96 51 P **P 06 10 44.4 -2.7**
QIZ S **Sn 06 14 17.3 -2.4**
QIZ LR LR
comp=Z,5μm,12.4s
QIZ LR LR
comp=Z,2μm,13.1s
QIZ LR LR
comp=Z,1μm,10.8s
KMI Kunming 19.33 24 *eP* **Pn 06 10 53.8 +1.3**
KMI pP pP 06 10 56.8 -0.7
KMI sP sP 06 10 58.3 -1.9
KMI S **Sn 06 14 25.6 -3.3**
KMI pmax pmax
comp=Z,11nm,0.5s
KMI pmax pmax
comp=Z,140nm,5.0s
KMI LR LR
comp=Z,1μm,14.3s
KMI LR LR
comp=Z,560nm,20.9s
KMI LR LR
comp=Z,1μm,15.7s
KMI Kunming 19.33 24 P **P 06 10 48.4 -3.0**
LEM Lembang 19.39 137 LR LR 06 19 29.1
comp=Z,2μm,18.1s,baz=299,slow=40
KLRI Killari 20.26 303 *eP* **P 06 11 01.7 +0.3**
ODAN Odare 20.42 342 *eP* **P 06 11 03.5 +0.3**
comp=Z,90nm,0.7s
RAMN Ramite 20.76 340 *eP* **P 06 11 07.4 +0.5**
comp=Z,141nm,0.7s
TAPN Taplejung 20.78 343 *eP* **P 06 11 07.0 -0.2**
comp=Z,161nm,0.8s
SMRI Semarang 21.56 132 P P 06 11 29.0 +14
PKI Pulchoki 21.75 338 *eP* **P 06 11 16.8 -0.8**
comp=Z,109nm,0.7s
PKIN Phulchoki 21.75 338 *eP* **P 06 11 17.3 -0.3**
comp=Z,91nm,0.6s
KKM Kota Kinabalu 21.76 92 P **P 06 11 17.6 -0.1**
GUN Gumba 21.89 340 *eP* **P 06 11 18.0 -1.1**
comp=Z,122nm,0.6s
DMN Daman 21.89 338 *eP* **P 06 11 18.6 -0.5**
comp=Z,160nm,0.8s
KKN Kakani 21.99 338 *eP* **P 06 11 19.5 -0.6**
comp=Z,136nm,0.9s
MTKI Muara Teweh, K 22.12 111 P P 06 11 33.3 +12
GYA Guiyang 22.26 30 *eP* **P 06 11 26.1 +3.2**
GYA S **S 06 15 24.6 -2.2**
GYA pmax pmax
comp=Z,13nm,1.2s
GYA pmax pmax
comp=Z,220nm,3.9s
GYA LR LR
comp=Z,1μm,11.4s
GYA LR LR
comp=Z,1μm,16.2s
GYA LR LR
comp=Z,1μm,11.9s
LSA Lhasa 22.35 353 P **P 06 11 26.9 +2.6**
LSA S **S 06 15 27.3 -1.8**
LSA LR LR
comp=Z,2μm,22.1s
LSA LR LR
comp=Z,3μm,22.8s
LSA Lhasa 22.35 353 *i* P **P 06 11 26.9 +2.6**
SNR=17
LSA Lhasa 22.35 353 P **P 06 11 26.1 +1.9**
LSA IAmb IAmb 06 11 34.2
comp=Z,78nm,0.8s
GKN Gorkha 22.43 337 *eP* **P 06 11 23.8 -0.9**
comp=Z,171nm,0.8s
BHPL Bhopal 22.61 316 *eP* **P 06 11 27.7 +1.1**
BHPL IAmb IAmb 06 11 39.3
comp=Z,50nm,0.7s
KOLN Koldanda 22.64 335 *eP* **P 06 11 26.3 -0.8**
comp=Z,172nm,1.0s
DANN Dangsing 23.08 336 *eP* **P 06 11 30.9 -0.9**
comp=Z,122nm,0.7s
BBKI Banjar Baru 23.14 117 P P 06 11 42.9 +11
PYUN Piuthan 23.19 334 *eP* **P 06 11 32.4 -0.4**
comp=Z,148nm,0.9s
MYLDM Lahad Datu 24.11 94 P **P 06 11 41.9 +0.3**
MYLDM IAmb IAmb 06 11 50.3
comp=Z,117nm,1.5s
BLJI Banyuglugur 24.41 128 P P 06 11 55.7 +11
ABJI Asem Bagus 24.94 127 P P 06 12 01.8 +13
CD2 Chengdu 24.96 19 P **P 06 11 48.8 -0.4**
CD2 PcP **PcP 06 15 22.5 -1.8**
CD2 S **S 06 16 14.6 +3.0**
CD2 ScS **ScS 06 22 50.4 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,380nm,6.5s
CD2 LR LR
comp=Z,1μm,18.0s
CD2 LR LR
comp=Z,2μm,11.2s
CD2 LR LR
comp=Z,1μm,16.1s
MPSI Mapaga 26.44 104 P **P 06 12 03.6 +0.9**
comp=Z,542nmcomp=Z,33nm,1.1s
H08S3 Diego Garcia H 26.44 236 T T 06 38 35.3
baz=55,slow=75,SNR=907
H08S2 Diego Garcia H 26.44 236 T T 06 38 38.2
baz=55,slow=75,SNR=235
H08S1 Diego Garcia H 26.46 236 T T 06 38 39.3
baz=55,slow=75,SNR=105

ENH Enshi 26.80 30 P **P 06 12 07.8 +2.0**
TGY Tagaytay City 26.93 74 LR LR 06 22 54.3
comp=Z,537nm,18.0s,baz=346,slow=36
KAPI Kappang 28.21 115 LR LR 06 24 56.8
comp=Z,367nm,18.1s,baz=286,slow=39
GTOI Gorontalo 29.36 102 P **P 06 12 29.0 +0.1**
comp=Z,216nmcomp=Z,16nm,0.9s
XAN Xi'an 29.70 25 P P 06 12 37.6 +5.9
XAN S **S 06 17 33.4 +7.0**
XAN pmax pmax
comp=Z,22nm,0.8s
XAN pmax pmax
comp=Z,220nm,4.9s
XAN LR LR
comp=Z,2μm,13.0s
XAN LR LR
comp=Z,2μm,14.1s
XAN LR LR
comp=Z,2μm,15.2s
XAN Xi'an 29.70 25 P **P 06 12 31.7 0.0**
LZH Lanzhou 29.81 16 *eP* **P 06 12 33.4 +0.6**
LZH pP pP 06 12 36.3 -3.0
LZH sP sP 06 12 40.9 -1.1
LZH PP **PnPn 06 13 28.9 -0.1**
LZH pmax pmax
comp=Z,13nm,1.3s
LZH pmax pmax
comp=Z,67nm,5.1s
LZH LR LR
comp=Z,930nm,13.0s
LZH LR LR
comp=Z,940nm,12.5s
LZH LR LR
comp=Z,1μm,13.6s
GTA Gaotai 32.21 8 P P 06 12 59.9 +6.0
GTA pP pwP 06 13 04.6 +1.2
GTA sP sP 06 13 06.9 +3.8
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,72nm,7.5s
GTA LR LR
comp=Z,460nm,17.1s
GTA LR LR
comp=Z,470nm,13.4s
GTA LR LR
comp=Z,520nm,18.9s
NIL Nilore 32.57 326 P **P 06 12 56.5 -0.5**
NJ2 Nanjing 33.48 40 *eP* **P 06 13 04.0 -0.9**
NJ2 pmax pmax
comp=Z,11nm,0.5s
SSE Sheshan 34.40 43 P **P 06 13 13.5 +0.6**
SSE S **S 06 18 43.1 +3.5**
SSE pmax pmax
comp=Z,15nm,0.7s
SSE pmax pmax
comp=Z,230nm,4.2s
SSE LR LR
comp=Z,650nm,16.3s
SSE LR LR
comp=Z,430nm,18.4s
KBL Kabul 35.64 323 P **P 06 13 22.3 -1.5**
KBL IAmb IAmb 06 13 31.8
comp=Z,14nm,0.8s
KSH Kashi 35.95 335 P **P 06 13 24.8 -1.6**
KSH S **S 06 19 01.0 -2.6**
KSH SS **SnSn 06 21 25.8 -2.7**
KSH pmax pmax
comp=Z,26nm,0.7s
KSH pmax pmax
comp=Z,170nm,4.6s
KSH LR LR
comp=Z,610nm,11.9s
KSH LR LR
comp=Z,390nm,9.3s
KSH LR LR
comp=Z,690nm,17.9s
HHC Hu-ho-hao-te 36.65 22 *eP* P 06 13 26.3 -5.9
HHC pmax pmax
comp=Z,27nm,0.7s
HHC pmax pmax
comp=Z,100nm,4.6s
HHC LR LR
comp=N,620nm,11.1s
HHC LR LR
comp=E,2μm,13.3s
HHC LR LR
comp=Z,950nm,17.0s
WMQ Urumqi 36.71 352 *eP* **P 06 13 34.4 +1.7**
WMQ sP pP 06 13 40.4 +1.2
WMQ pmax pmax
comp=Z,39nm,1.1s
WMQ pmax pmax
comp=Z,29nm,3.7s
WMQ LR LR
comp=Z,2μm,22.1s
WMQ LR LR
comp=Z,2μm,24.9s
WMQ LR LR
comp=Z,450nm,22.1s
PRZ Przheval'sk 37.64 341 P **P 06 13 41.0 +0.2**
KDJ Kajisay 37.74 339 P **P 06 13 41.2 -0.4**
BJI Beijing 37.90 28 P **P 06 13 46.5 +3.8**
BJI S S 06 19 43.3 +10
BJI pmax pmax
comp=Z,240nm,5.4s
BJI LR LR
comp=Z,500nm,14.8s
BJI LR LR
comp=Z,570nm,17.7s
BJI LR LR
comp=Z,160nm,18.6s
SHLS Shalkode 37.91 342 *eP* **P 06 13 41.6 -1.4**
comp=Z,4.3nm,0.9s,baz=343
SHLS *eS* **S 06 19 32.4 -0.9**
baz=343
SATY Saty 38.15 341 *eP* **P 06 13 44.6 -0.5**
comp=Z,3.3nm,0.6s,baz=341
GAR Garm 38.15 329 P **P 06 13 44.5 -0.6**
GAR IAmb IAmb 06 13 51.8
comp=Z,40nm,0.8s
CHGR Chuyangaron 38.50 328 P **P 06 13 47.3 -0.7**
TNSS Tian-Shan 38.62 339 *eP* **P 06 13 49.4 +0.1**
baz=340
MDOK Medeo 38.70 340 *eP* **P 06 13 49.0 -0.6**
baz=340
MDOK *eS* **S 06 19 46.1 +0.8**
baz=340
MDOK LR LR 06 31 11.9
comp=Z,182nm,15.8s,baz=340
BTK Batken 38.71 331 P **P 06 13 50.8 +1.1**
BTK IAmb IAmb 06 14 01.3
comp=Z,40nm,0.9s
TKM2 Tokmak 2 39.01 338 P **P 06 13 52.3 0.0**
SNR=9.7
KBK Karagaybulak 39.03 337 P **P 06 13 53.2 +0.8**
SNR=14
AML Almayashu 39.09 335 P **P 06 13 53.7 +0.5**
SNR=44
AAK Ala-Archa 39.19 337 P **P 06 13 54.4 +0.6**
SNR=8.0
AAK Ala-Archa 39.19 337 *i* P **P 06 13 54.4 +0.6**
SNR=14
AAK Ala-Archa 39.19 337 P **P 06 13 54.3 +0.6**
CHMS Chumysh 39.40 337 P **P 06 13 55.4 0.0**
SNR=5.6
EKS2 Erkin-Say 39.49 336 P **P 06 13 57.0 +0.7**
SNR=11
KUU Kurty 39.59 339 *eP* **P 06 13 55.4 -1.5**
comp=Z,5.8nm,1.2s,baz=340
KUU LR LR 06 32 05.2
comp=Z,141nm,14.3s,baz=340
USP Ospenovka 39.72 337 P **P 06 13 58.2 +0.2**
SNR=10
SOHO SOHO 39.82 299 P **P 06 14 01.5 +2.4**
SGDS Sogindy 39.83 337 *eP* **P 06 13 58.1 -0.9**
baz=338
FITZ Fitzroy Crossi 39.98 130 P **P 06 13 59.4 -1.0**
comp=Z,1.7nm,0.8s,baz=327,slow=3.7,SNR=4.3
FITZ Fitzroy Crossi 39.98 130 P **P 06 14 01.2 +0.8**
baz=40,SNR=4.6
FITZ Fitzroy Crossi 39.98 130 P **P 06 13 59.1 -1.3**
MDH Madha 40.40 301 P **P 06 14 05.3 +1.5**
MK31 Makanchi Array 40.56 347 P **P 06 14 04.9 0.0**
MK31 IAmb IAmb 06 14 12.3
comp=Z,24nm,0.8s

MKAR Makanchi Array 40.56 347 P **P 06 14 04.6 -0.3**
comp=Z,23nm,0.7s,baz=167,slow=8.0,SNR=148
MKAR LR LR 06 36 05.1
comp=Z,169nm,18.3s,baz=163,slow=44
MKAR Makanchi Array 40.56 347 P **P 06 14 04.9 0.0**
MAKZ Makanchi 40.64 347 P **P 06 14 05.5 -0.1**
MAKZ IAmb IAmb 06 14 06.7
comp=Z,21nm,0.7s
ZSN Zaisan 40.69 350 *eP* **P 06 14 05.9 -0.1**
comp=Z,9.1nm,0.8s,baz=350
IUG Iuzhnay 40.71 332 *eP* **P 06 14 05.7 -0.6**
comp=Z,6.7nm,0.5s,baz=332
ASUD Al Ashush, Dub 41.02 299 *i* P **P 06 14 11.7 +2.7**
SNR=7.2
KK31 Karatay Array 41.24 333 P **P 06 14 10.8 +0.2**
KKAR Karatay Array 41.24 333 P **P 06 14 10.6 0.0**
KKAR Karatay Array 41.24 333 P **P 06 14 09.4 -1.2**
BTLS Baital 41.40 338 *eP* **P 06 14 10.9 -0.9**
baz=338
SONM Songino Array 41.55 12 P **P 06 14 13.3 +0.1**
comp=Z,1.8nm,0.8s,baz=187,slow=10,SNR=17
SONM LR LR 06 33 28.8
comp=Z,252nm,19.9s,baz=161,slow=39
SONM Songino Array 41.55 12 P **P 06 14 13.1 -0.1**
ULN Ulaanbaatar 41.72 13 P **P 06 14 13.8 -0.8**
KSRS Korea Array 42.66 41 P **P 06 14 23.4 +1.1**
comp=Z,1.0nm,0.5s,baz=221,slow=9.4,SNR=4.9
KSRS LR LR 06 34 11.1
comp=Z,342nm,18.4s,baz=230,slow=39
SEM Semipalatinsk 44.42 347 *eP* **P 06 14 35.6 -0.9**
comp=Z,11nm,0.7s,baz=347
GEYT Alibeck 44.66 318 P **P 06 14 38.7 +0.3**
comp=Z,36nm,0.6s,baz=148,slow=8.6,SNR=33
GEYT Alibeck 44.66 318 P **P 06 14 39.0 +0.6**
GYA0B ALIBECK ARRAY 44.66 318 P **P 06 14 38.9 +0.4**
TLY Talaya 44.77 8 P **P 06 14 40.5 +1.4**
comp=Z,1.1nm,0.4s,baz=16,slow=18,SNR=2.2
TLY LR LR 06 34 49.5
comp=Z,399nm,18.6s,baz=194,slow=38
TLY Talaya 44.77 8 P **P 06 14 40.2 +1.1**
KURBB Kurchatov Arra 45.02 346 P **P 06 14 41.1 +0.1**
comp=Z,30nm,0.7s,baz=168,slow=7.2,SNR=200
KURK Kurchatov 45.08 346 P **P 06 14 41.4 -0.1**
CN2 Changchun 45.29 32 *eP* **P 06 14 42.5 -0.8**
CN2 *es*P pP 06 14 50.8 +0.8
CN2 *eS* **S 06 21 22.4 0.0**
CN2 LR LR
comp=Z,360nm,14.0s
CN2 LR LR
comp=Z,600nm,14.0s
CN2 LR LR
comp=Z,390nm,14.0s
NWAO Narrogin (SRO) 45.67 153 P **P 06 14 46.0 -0.3**
comp=Z,7.8nm,0.9s,baz=353,slow=12
BRZS Berezniki 46.12 341 *eP* **P 06 14 48.8 -0.9**
comp=Z,2.8nm,0.6s,baz=341
WRKA Warakurna 46.20 135 P **P 06 14 51.2 +0.4**
baz=46,SNR=11
ZALV Zalesovo Beam 47.02 352 P **P 06 14 57.0 +0.4**
comp=Z,16nm,0.8s,baz=178,slow=7.7,SNR=48
ZALV LR LR 06 39 23.3
comp=Z,351nm,18.9s,baz=186,slow=42
ZALV Zalesovo Beam 47.02 352 P **P 06 14 56.7 0.0**
WB0 Warramunga Arr 47.80 125 P **P 06 15 01.5 -1.8**
WB0 IAmb IAmb 06 15 15.7
comp=Z,35nm,1.8s
WRA Warramunga Arr 47.84 125 P **P 06 15 02.5 -1.2**
comp=Z,2.6nm,0.8s,baz=304,slow=8.9,SNR=26
WRA PcP **PcP 06 16 32.3 0.0**
comp=Z,0.8nm,0.5s,baz=310,slow=2.8,SNR=10
WRA LR LR 06 37 36.7
comp=Z,435nm,18.5s,baz=280,slow=39
WRA Warramunga Arr 47.84 125 P **P 06 15 02.2 -1.5**
WRAB Tennant Creek 47.85 125 P **P 06 15 01.9 -1.8**
WRAB IAmb IAmb 06 15 18.3
comp=Z,12nm,0.6s
WB2 Warramunga Arr 47.85 125 P **P 06 15 02.8 -1.0**
WC3 Warramunga Arr 47.88 125 P **P 06 15 02.9 -1.0**
baz=48
WR0 Warramunga Arr 48.02 125 P **P 06 15 03.8 -1.1**
USRK Ussuriysk Ar. 49.15 36 P **P 06 15 14.9 +1.6**
comp=Z,1.0nm,0.7s,baz=174,slow=15,SNR=2.8
JHJ Hachijo jima 2 49.17 52 LR LR 06 35 20.0
comp=Z,327nm,21.4s,baz=256,slow=35
MJAR Matsushiro Arr 49.31 47 P **P 06 15 15.9 +1.2**
comp=Z,0.8nm,0.3s,baz=229,slow=13,SNR=2.7
MJAR LR LR 06 36 49.1
comp=Z,189nm,19.7s,baz=215,slow=37
RAYN Ar Rayn 49.45 295 *i* P **P 06 15 17.3 +1.2**
SNR=20
RAYN Ar Rayn 49.45 295 P **P 06 15 17.5 +1.4**
RAYN IAmb IAmb 06 15 24.7
comp=Z,33nm,0.8s
BVAR Borovoye Array 49.47 341 P **P 06 15 14.8 -0.9**
comp=Z,6.8nm,0.7s,baz=209,slow=33,SNR=35
AS31 Alice Springs 49.48 130 P **P 06 15 15.0 -1.2**
ASAR Alice Springs 49.48 130 P **P 06 15 15.2 -1.0**
comp=Z,3.5nm,0.9s,baz=301,slow=7.8,SNR=29
ASAR PcP **PcP 06 16 37.9 -0.3**
comp=Z,1.9nm,0.7s,baz=310,slow=3.2,SNR=7.5
ASAR LR LR 06 38 17.4
comp=Z,374nm,20.4s,baz=302,slow=39
ASAR Alice Springs 49.48 130 P **P 06 15 14.9 -1.4**
BRVK Borovoye 49.53 341 P **P 06 15 15.1 -1.0**
BRVK IAmb IAmb 06 15 23.4
comp=Z,14nm,0.8s
FORT Forrest 49.87 141 P **P 06 15 21.1 +2.1**
baz=50
FORT Forrest 49.87 141 P **P 06 15 20.5 +1.5**
ABKAR Akbulak array 50.71 331 P **P 06 15 25.0 -0.2**
ABKAR IAmb IAmb 06 15 31.6
comp=Z,20nm,0.9s
ABKAR Akbulak array 50.71 331 P **P 06 15 24.8 -0.4**
ATD Arta Tunnel 50.91 279 P **P 06 15 26.2 -1.0**
comp=Z,3.9nm,0.4s,baz=240,slow=20
KLR Kul'dur 52.16 30 P **P 06 15 36.8 +0.9**
comp=Z,0.4nm,0.3s,baz=233,slow=10
KLR LR LR 06 39 08.8
comp=Z,257nm,18.4s,baz=220,slow=38
AKTO Aktyubinsk 52.43 331 P **P 06 15 37.4 -0.6**
comp=Z,11nm,0.7s,baz=124,slow=8.3,SNR=27
AKTO LR LR 06 39 06.6
comp=Z,109nm,21.9s,baz=126,slow=37
BBOO Buckleboo 56.35 138 P **P 06 16 06.3 -0.5**
baz=56,SNR=6.0
ARU Arti 56.37 337 P **P 06 16 06.2 -0.3**
comp=Z,3.0nm,0.2s,baz=142,slow=5.1,SNR=20
ARU LR LR 06 42 23.8
comp=Z,335nm,20.6s,baz=146,slow=38
ARU Arti 56.37 337 P **P 06 16 06.3 -0.2**
ARU IAmb IAmb 06 16 14.2
comp=Z,30nm,0.9s
MARD Mardin 56.83 310 P **P 06 16 09.1 -1.2**
MARD IAmb IAmb 06 16 10.2
comp=Z,11nm,0.5s
KBZ Khabaz 57.55 318 P **P 06 16 14.7 -0.4**
comp=Z,5.7nm,0.8s,baz=236,slow=23,SNR=7.2
KMBO Kilima Mbogo 57.58 264 P **P 06 16 19.5 +3.4**
comp=Z,11nm,0.8s,baz=52,slow=9.7,SNR=29
KMBO LR LR 06 37 49.9
comp=Z,351nm,19.6s,baz=95,slow=33
KMBO Kilima Mbogo 57.58 264 *i* P **P 06 16 18.5 +2.4**
SNR=12
KMBO Kilima Mbogo 57.58 264 P **P 06 16 17.3 +1.2**
KMBO IAmb IAmb 06 16 25.8
comp=Z,24nm,0.9s
KVAR Kislovodsk Arr 57.77 318 LR LR 06 42 30.3
comp=Z,100nm,21.5s,baz=198,slow=38
KIV Kislovodsk 57.78 318 P **P 06 16 16.6 -0.2**
KIV IAmb IAmb 06 16 23.4
comp=Z,11nm,0.7s
HTT Hallett 58.65 137 P **P 06 16 23.6 +0.5**
baz=59,SNR=4.0
STKA Stephens Creek 59.66 134 P **P 06 16 30.6 +0.7**
comp=Z,1.1nm,0.5s,baz=298,slow=10,SNR=3.9
STKA LR LR 06 47 05.6
comp=Z,236nm,18.2s,baz=294,slow=41
YAK Yakutsk 60.34 18 P **P 06 16 34.2 0.0**
comp=Z,12nm,0.6s,baz=137,slow=1.4,SNR=6.4
YAK Yakutsk 60.34 18 P **P 06 16 34.4 +0.3**
KIRV Kirov 61.49 335 P **P 06 16 42.0 0.0**
comp=Z,22nm,0.6s,baz=113,slow=4.6,SNR=6.4
NRIK Noril'sk 61.99 357 P **P 06 16 45.2 0.0**
comp=Z,3.4nm,0.7s,baz=159,slow=2.4,SNR=5.4
NRIK LR LR 06 47 51.9
comp=Z,246nm,19.7s,baz=198,slow=40
BR131 Keskin Array S 62.87 311 P **P 06 16 50.1 -1.7**

BRTR **Keskin Array B** 62.87 311 P **P** 06 16 49.5 -2.3
comp=Z,5.0nm,0.7s,baz=126,slow=7.5,SNR=20
BRTR LR LR 06 46 54.8
comp=Z,80nm,21.5s,baz=126,slow=39
BRTR Keskin Array B 62.87 311 P **P** 06 16 48.9 -3.0
MBAR Mbarara 63.93 266 P **P** 06 17 00.4 +1.1
MBAR IAmb IAmb 06 17 09.4
comp=Z,12nm,1.1s
ELL Elmali 65.15 307 P **P** 06 17 06.2 -0.7
KLMR Klimovskoe 66.94 334 *e*P **P** 06 17 16.3 -1.4
KLMR AMP 06 17 17.9
comp=Z,19nm,1.0s
KARP Karpathos 67.17 305 P **P** 06 17 19.0 -0.8
TIXI Tiksi 67.62 11 P **P** 06 17 21.0 -0.9
CFR Carcaliu 68.05 316 ⇓P **P** 06 17 24.4 -0.6
HARR Harsova 68.09 315 ⇓P **P** 06 17 24.7 -0.6
SORM Soroca 68.55 319 ⇓P **P** 06 17 26.8 -1.3
AKASG Malin Array Be 68.62 322 P **P** 06 17 26.8 -1.7
comp=Z,1.8nm,0.6s,baz=89,slow=4.9,SNR=13
AKBB Malin Array Si 68.62 322 P **P** 06 17 26.4 -2.1
ALN Alexandroupoli 68.79 311 P **P** 06 17 28.2 -1.5
ALN IAmb IAmb 06 17 44.3
comp=Z,11nm,1.1s
IDI Anoyia 68.98 305 ⇓P **P** 06 17 30.0 -1.2
IDI Anoyia 68.98 305 IAmb IAmb 06 17 32.5
comp=Z,14nm,0.7s
BISRR Bisoca 69.11 316 ⇓P **P** 06 17 32.9 +1.1
VRI Vrincioaia 69.16 316 ⇓P **P** 06 17 31.8 -0.2
PLOR Plostina 69.21 316 ⇓P **P** 06 17 32.1 -0.2
LSZ Lusaka 69.31 251 P **P** 06 17 34.3 +0.6
LSZ IAmb IAmb 06 17 41.7
comp=Z,10nm,1.1s
TESR Tescani 69.33 317 ⇓P **P** 06 17 32.1 -1.0
MLR Muntele Rosu 69.62 316 ⇓P **P** 06 17 34.9 -0.1
MLR Muntele Rosu 69.62 316 P **P** 06 17 34.4 -0.6
BIZ Bicaz 69.78 317 ⇓P **P** 06 17 34.9 -0.9
DOPR Dopca 70.09 316 ⇓P **P** 06 17 37.0 -0.7
VOIR 70.24 316 ⇓P **P** 06 17 38.1 -0.6
BURAR Bucovina Array 70.51 318 ⇓P **P** 06 17 40.2 -0.2
BURAR Bucovina Array 70.51 318 P **P** 06 17 39.0 -1.4
ARR Arges 70.51 315 ⇓P **P** 06 17 39.0 -1.4
BUR08 Bucovina Ar. S 70.52 318 IAmb IAmb 06 17 50.0
comp=Z,25nm,1.9s
LIT Litokhoron 71.38 310 IAmb IAmb 06 17 53.4
comp=Z,19nm,1.0s
HERR Herculane 72.00 315 ⇓P **P** 06 17 48.5 -0.8
KWP Kalwaria Pacla 72.49 320 IAmb IAmb 06 17 59.1
comp=Z,16nm,1.0s
KOLS Kolonicke sedl 72.67 319 *e*P **P** 06 17 53.8 +0.5
SUW Suwalki 72.98 324 P **P** 06 17 53.7 -1.3
CRVS Cervenica-Dubn 73.19 319 *e*P **P** 06 17 56.5 +0.1
FIA1 FINESS Array S 73.19 332 P **P** 06 17 55.9 -0.1
FIA1 IAmb IAmb 06 17 57.4
comp=Z,19nm,0.7s
FINES FINESS Array B 73.19 332 P **P** 06 17 56.0 -0.1
comp=Z,18nm,0.7s,baz=104,slow=8.0,SNR=44
FINES LR LR 06 54 26.9
comp=Z,156nm,19.6s,baz=130,slow=39
FINES FINESS Array B 73.19 332 P **P** 06 17 55.6 -0.5
LBTB Lobatse 74.21 241 P **P** 06 18 05.0 +2.1
LBTB IAmb IAmb 06 18 11.1
comp=Z,18nm,1.0s
OJC Ojcow 74.44 320 IAmb IAmb 06 18 11.0
comp=Z,11nm,0.8s
VYHS Vyhne 74.87 318 *e*P **P** 06 18 06.1 -0.1
BOSA Boshof 75.53 238 P **P** 06 18 08.4 -2.1
comp=Z,5.1nm,0.7s,baz=84,slow=5.6,SNR=9.1
BOSA Boshof 75.53 238 P **P** 06 18 11.6 +1.2
BOSA IAmb IAmb 06 18 18.9
comp=Z,15nm,0.9s
JAVC Velka Javorina 75.67 318 *e*P **P** 06 18 11.6 +0.7
ARCES ARCESS Array B 75.75 340 P **P** 06 18 10.7 -0.2
comp=Z,3.4nm,0.8s,baz=92,slow=5.4,SNR=11
ARCES LR LR 06 54 31.5
comp=Z,296nm,20.3s,baz=100,slow=38
MORC Moravsky Berou 75.84 319 ⇓P **P** 06 18 12.0 +0.3
MORC Moravsky Berou 75.84 319 *e*P **P** 06 18 11.8 0.0
KRLC Kraliky 76.35 320 *e*P **P** 06 18 15.1 +0.4
KRLC *e*pP **pP** 06 18 20.9 -0.8
VRAC Vranov 76.42 319 *e*P **P** 06 18 14.0 -1.0
KRUC Moravsky 76.53 319 *e*P **P** 06 18 15.6 0.0
DPC Dobruska-Polom 76.67 320 *e*P **P** 06 18 17.5 +1.0
DPC *e*pP **pP** 06 18 22.5 -1.0
OSTC Ostas 76.75 320 *e*P **P** 06 18 17.5 +0.6
CONA Conrad Observa 76.80 317 *e*P **P** 06 18 17.2 -0.1
comp=Z,4.2nm,0.9s
ARSA Arzberg 76.99 317 *e*P **P** 06 18 18.8 +0.4
comp=Z,6.6nm,1.0s
SOKA Soboth 77.30 316 *i* P **P** 06 18 20.6 +0.4
comp=Z,7.7nm,0.9s
MAW Mawson 78.15 192 P **P** 06 18 25.0 +0.8
comp=Z,1.5nm,0.7s,baz=348,slow=12,SNR=4.1
BRG Berggiesshubel 78.22 320 *e*P P 06 18 30.7 +5.7
comp=Z,14nm,1.5s
GEC2B GERESS ARRAY S 78.29 318 P **P** 06 18 23.7 -2.0
GERES GERESS Array B 78.29 318 P **P** 06 18 25.2 -0.4
comp=Z,4.6nm,0.7s,baz=90,slow=5.3,SNR=27
GERES GERESS Array B 78.29 318 P **P** 06 18 25.0 -0.6
KHC Kasperske Hory 78.38 319 *e*P **P** 06 18 25.9 -0.2
KHC *e*pP **pP** 06 18 32.6 -0.5
CLL Collm 78.83 321 *e*P **P** 06 18 28.0 -0.4
ABTA Abfaltersbach 79.03 316 *e*P **P** 06 18 29.2 -0.6
comp=Z,6.9nm,1.0s
CIMO Cimolais 79.08 316 P **P** 06 18 29.8 -0.1
CIMO IAmb IAmb 06 18 40.6
comp=Z,20nm,0.9s
WTTA Wattenberg 79.64 317 *e*P **P** 06 18 32.4 -0.8
comp=Z,7.2nm,0.6s
WATA Walderalm 79.68 317 *e*P **P** 06 18 32.4 -1.0
comp=Z,4.7nm,0.6s
GRF Grafenberg Arr 79.93 319 *e*P **P** 06 18 34.4 -0.1
comp=Z,5.5nm,0.8s,baz=102,slow=4.8
SQTA Sankt Quirin 79.93 317 *e*P **P** 06 18 34.1 -0.6
comp=Z,12nm,1.0s
MOTA Moosalm 80.00 317 *i* P **P** 06 18 34.6 -0.5
comp=Z,7.6nm,0.9s
NC602 NORSAR Array S 80.04 330 P **P** 06 18 34.4 -0.4
NC303 NORSAR Array S 80.14 331 P **P** 06 18 34.7 -0.7
NB201 NORSAR Array S 80.17 331 P **P** 06 18 34.7 -0.9
NB2 NORSAR Subarra 80.21 331 P **P** 06 18 34.8 -1.0
comp=Z,4.0nm,0.7s,baz=91,slow=5.9
NOA NORSAR Array B 80.21 331 P **P** 06 18 35.1 -0.7
comp=Z,4.8nm,0.8s,baz=93,slow=5.5,SNR=26
NOA LR LR 06 57 44.2
comp=Z,113nm,19.5s,baz=265,slow=38
RETA Reutte 80.23 317 *e*P **P** 06 18 35.7 -0.6
comp=Z,5.2nm,0.6s
SUR Sutherland 80.25 235 P **P** 06 18 39.8 +3.0
FETA Feichten 80.26 316 *e*P **P** 06 18 36.0 -0.5
comp=Z,3.7nm,0.7s
SPB1 Spitsbergen Ar 80.30 348 P **P** 06 18 35.5 -0.5
SPB1 IAmb IAmb 06 18 44.3
comp=Z,37nm,1.1s
SPB2 Spitsbergen Ar 80.30 348 P **P** 06 18 34.9 -1.1
SPB2 IAmb IAmb 06 18 44.2
comp=Z,43nm,1.2s
SPA2 Spitsbergen Ar 80.30 348 P **P** 06 18 36.7 +0.8
SPA2 IAmb IAmb 06 18 49.7
comp=Z,46nm,1.2s
SPA1 Spitsbergen Ar 80.31 348 P **P** 06 18 34.0 -2.0
SPA1 IAmb IAmb 06 18 49.7
comp=Z,44nm,1.2s
SPA0 Spitsbergen Ar 80.31 348 P **P** 06 18 36.2 +0.2
SPA0 IAmb IAmb 06 18 49.7
comp=Z,45nm,1.2s
SPB3 Spitsbergen Ar 80.31 348 P **P** 06 18 37.2 +1.2
SPB3 IAmb IAmb 06 18 49.7
comp=Z,52nm,1.4s
SPB5 Spitsbergen Ar 80.31 348 P **P** 06 18 35.5 -0.5
SPB5 IAmb IAmb 06 19 25.4
comp=Z,48nm,1.2s
SPA3 Spitsbergen Ar 80.31 348 P **P** 06 18 36.5 +0.5
SPA3 IAmb IAmb 06 18 49.8
comp=Z,50nm,1.2s
SPB4 Spitsbergen Ar 80.31 348 P **P** 06 18 36.0 -0.1
DAVA Damuels 80.83 317 *e*P **P** 06 18 38.8 -0.8
comp=Z,3.1nm,0.5s
KEST Kesra 81.66 305 P **P** 06 18 42.5 -1.6
comp=Z,3.8nm,0.8s,baz=98,slow=7.1,SNR=3.5
KEST LR LR 07 01 08.9
comp=Z,169nm,19.6s,baz=207,slow=40
SENIN Lac Senin/Sane 82.64 316 IAmb IAmb 06 18 58.2
comp=Z,33nm,1.8s
SYO Syowa Base 85.05 197⇑ *e*P **P** 06 19 00.8 +0.2
SYO Syowa Base 85.05 197⇑ *es*P sP 06 19 08.2 -2.0
comp=Z,14nm,0.8s
LZH Lanzhou 29.84 16 *e*P **P** 06 18 12.1 +0.2
LZH pP pP 06 18 17.1 -1.3
LZH sP sP 06 18 19.8 -1.3
LZH PP **PP** **06 19 16.8 -2.7**
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,92nm,4.9s
LZH LR LR
comp=N,430nm,14.6s
LZH LR LR
comp=E,520nm,14.6s
LZH LR LR
comp=Z,350nm,14.6s
GTA Gaotai 32.23 8 *e*P **P** 06 18 35.4 +2.4
GTA pP pP 06 18 40.0 +0.5
GTA sP pwP 06 18 42.4 -0.1
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,130nm,6.5s
GTA LR LR
comp=N,320nm,16.4s
GTA LR LR
comp=E,310nm,15.6s
GTA LR LR
comp=Z,300nm,14.9s
NIL Nilore 32.58 326 P **P** 06 18 35.3 -0.7
NJ2 Nanjing 33.50 40 *e*P **P** 06 18 42.9 -1.1
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
KBL Kabul 35.65 323 P **P** 06 19 02.5 -0.3
KBL IAmb IAmb 06 19 08.6
comp=Z,9.9nm,1.1s
HHC Hu-ho-hao-te 36.67 22 *e*P P 06 19 05.5 -5.8
WMQ Urumqi 36.73 352 *e*P **P** 06 19 13.0 +1.3
KDJ Kajisay 37.76 339 P **P** 06 19 19.9 -0.8
GAR Garm 38.16 329 P **P** 06 19 23.2 -0.8
CHGR Chuyangaron 38.51 328 P **P** 06 19 25.9 -1.1
BTK Batken 38.72 331 P **P** 06 19 28.5 -0.2
BTK IAmb IAmb 06 19 36.6
comp=Z,19nm,0.9s
AAK Ala-Archa 39.20 337 P **P** 06 19 32.8 0.0
FITZ Fitzroy Crossi 39.97 130 P **P** 06 19 38.4 -0.9
comp=Z,1.3nm,0.7s,baz=291,slow=15,SNR=2.3
MK31 Makanchi Array 40.57 347 P **P** 06 19 42.2 -1.8
MK31 IAmb IAmb 06 19 49.6
comp=Z,8.5nm,0.8s
MKAR Makanchi Array 40.57 347 P **P** 06 19 43.3 -0.6
comp=Z,4.0nm,0.5s,baz=166,slow=8.0,SNR=16
MKAR PcP **PcP** **06 21 49.9 +4.0**
comp=Z,1.9nm,0.9s,baz=130,slow=3.8,SNR=4.0
MKAR Makanchi Array 40.57 347 P **P** 06 19 42.9 -1.1
MAKZ Makanchi 40.66 347 P **P** 06 19 43.5 -1.1
MAKZ IAmb IAmb 06 19 49.7
comp=Z,5.9nm,0.7s
SONM Songino Array 41.57 12 P **P** 06 19 53.3 +1.1
comp=Z,4.2nm,0.8s,baz=191,slow=8.0,SNR=8.5
SONM PcP **PcP** **06 21 50.4 +1.2**
comp=Z,1.4nm,0.6s,baz=192,slow=4.0,SNR=5.2
SONM Songino Array 41.57 12 P **P** 06 19 51.2 -1.0
KSRS Korea Array 42.69 40 P **P** 06 20 02.4 +1.0
comp=Z,0.5nm,0.3s,baz=234,slow=7.6,SNR=4.2
GEYT Alibeck 44.67 318 P **P** 06 20 17.7 +0.4
comp=Z,9.7nm,0.7s,baz=147,slow=8.8,SNR=9.1
GEYT Alibeck 44.67 318 P **P** 06 20 17.0 -0.4
KURBB Kurchatov Arra 45.03 346 P **P** 06 20 19.4 -0.5
comp=Z,4.9nm,0.5s,baz=167,slow=7.1,SNR=14
KURBB PcP **PcP** **06 22 01.9 +1.2**
comp=Z,1.3nm,0.5s,baz=157,slow=2.7,SNR=2.8
KURK Kurchatov 45.10 346 P **P** 06 20 20.5 0.0
NWAO Narrogin (SRO) 45.66 153 P **P** 06 20 24.9 -0.3
comp=Z,4.1nm,0.7s,baz=347,slow=11,SNR=4.3
ZALV Zalesovo Beam 47.03 352 P **P** 06 20 35.2 -0.5
comp=Z,4.7nm,0.7s,baz=183,slow=7.8,SNR=11
ZALV Zalesovo Beam 47.03 352 P **P** 06 20 36.3 +0.6
WB0 Warramunga Arr 47.80 125 P **P** 06 20 41.0 -1.2
WB0 IAmb IAmb 06 20 47.6
comp=Z,2.6nm,0.7s
WRA Warramunga Arr 47.84 125 P **P** 06 20 41.5 -1.1
comp=Z,1.4nm,0.6s,baz=304,slow=9.0,SNR=16
WRA PcP **PcP** **06 22 10.9 -0.3**
comp=Z,1.4nm,0.7s,baz=316,slow=2.8,SNR=7.7
WRA Warramunga Arr 47.84 125 P **P** 06 20 41.6 -0.9
WB2 Warramunga Arr 47.85 125 P **P** 06 20 41.7 -1.0
WB2 IAmb IAmb 06 20 44.6
comp=Z,2.8nm,0.8s
WR0 Warramunga Arr 48.02 125 P **P** 06 20 43.8 0.0
WR0 IAmb IAmb 06 20 44.4
comp=Z,9.3nm,1.4s
RAYN Ar Rayn 49.45 295 P **P** 06 20 55.1 +0.2
RAYN IAmb IAmb 06 20 57.2
comp=Z,8.0nm,0.8s
ASAR Alice Springs 49.48 130 P **P** 06 20 54.4 -0.7
comp=Z,2.2nm,0.7s,baz=308,slow=7.5,SNR=13
ASAR PcP **PcP** **06 22 17.1 0.0**
comp=Z,1.6nm,0.7s,baz=301,slow=3.8,SNR=7.1
BVAR Borovoye Array 49.48 341 P **P** 06 20 54.1 -0.6
comp=Z,1.0nm,0.6s,baz=213,slow=32,SNR=7.1
BVAR PcP **PcP** **06 22 17.4 +1.0**
comp=Z,1.3nm,0.5s,baz=107,slow=1.5,SNR=2.0
BRVK Borovoye 49.54 341 P **P** 06 20 54.8 -0.3
BRVK IAmb IAmb 06 21 00.8
comp=Z,6.9nm,0.8s
FORT Forrest 49.87 141 P **P** 06 20 58.0 +0.2
ABKAR Akbulak array 50.72 331 P **P** 06 21 04.0 -0.1
ABKAR Akbulak array 50.72 331 P **P** 06 21 03.6 -0.5
AKTO Aktyubinsk 52.44 331 P **P** 06 21 16.9 -0.1
comp=Z,3.3nm,0.7s,baz=111,slow=15,SNR=6.9
AKTO PcP **PcP** **06 22 27.9 +0.4**
comp=Z,3.5nm,0.7s,baz=243,slow=4.5,SNR=1.5
ARU Arti 56.38 337 P **P** 06 21 45.3 -0.2
comp=Z,2.1nm,0.2s,baz=130,slow=4.0,SNR=4.5
KMBO Kilima Mbogo 57.56 264 P **P** 06 21 58.5 +3.6
comp=Z,5.0nm,0.8s,baz=59,slow=11,SNR=14
STKA Stephens Creek 59.66 134 P **P** 06 22 09.0 +0.1
comp=Z,0.6nm,0.3s,baz=304,slow=11,SNR=2.1
YAK Yakutsk 60.37 18 P **P** 06 22 12.0 -1.2
comp=Z,8.2nm,0.4s,baz=242,slow=1.4,SNR=2.6
KIRV Kirov 61.51 335 P **P** 06 22 20.3 -0.7
comp=Z,11nm,0.5s,baz=72,slow=3.0,SNR=2.4
NRIK Noril'sk 62.01 357 P **P** 06 22 22.3 -1.9
comp=Z,2.4nm,0.7s,baz=162,slow=6.4,SNR=2.9
BRTR Keskin Array B 62.87 311 P **P** 06 22 29.1 -1.6
comp=Z,1.6nm,0.7s,baz=96,slow=8.8,SNR=6.7
BRTR Keskin Array B 62.87 311 P **P** 06 22 28.9 -1.8
KARP Karpathos 67.17 305 P **P** 06 22 58.0 -0.7
TIXI Tiksi 67.64 11 P **P** 06 22 59.3 -1.5
AKASG Malin Array Be 68.63 322 P **P** 06 23 05.5 -1.9
comp=Z,0.2nm,0.3s,baz=90,slow=4.8,SNR=3.1
FIA1 FINESS Array S 73.20 332 P **P** 06 23 34.7 -0.3
FINES FINESS Array B 73.20 332 P **P** 06 23 34.4 -0.6
comp=Z,5.5nm,0.7s,baz=106,slow=6.8,SNR=13
BOSA Boshof 75.50 238 P **P** 06 23 50.4 +1.2
comp=Z,5.3nm,0.8s,baz=74,slow=4.7,SNR=6.2
BOSA Boshof 75.50 238 P **P** 06 23 49.6 +0.4
TIP Timpagrande 75.73 308 P **P** 06 23 47.0 -3.3
TIP IAmb IAmb 06 23 55.7
comp=Z,8.1nm,1.2s
ARCES ARCESS Array B 75.76 340 P **P** 06 23 50.5 +0.7
comp=Z,3.6nm,0.8s,baz=86,slow=7.4,SNR=6.7
MAW Mawson 78.13 192 P **P** 06 24 04.5 +1.5
comp=Z,4.5nm,1.0s,baz=333,slow=5.4,SNR=5.2
GERES GERESS Array B 78.29 318 P **P** 06 24 04.6 0.0
comp=Z,1.6nm,0.7s,baz=91,slow=5.3,SNR=10
NC405 NORSAR Array S 79.98 331 P **P** 06 24 13.2 -0.2
NC405 IAmb IAmb 06 24 18.2
comp=Z,7.0nm,0.7s
NB2 NORSAR Subarra 80.22 331 P **P** 06 24 13.8 -1.0
comp=Z,1.2nm,0.6s,baz=95,slow=5.3
NOA NORSAR Array B 80.22 331 P **P** 06 24 13.1 -1.6
comp=Z,1.5nm,0.7s,baz=92,slow=5.6,SNR=7.2
TORD Torodi Ar. Bea 90.89 283 P **P** 06 25 09.6 +0.8
comp=Z,1.6nm,0.7s,baz=74,slow=6.7,SNR=4.1
TORD Torodi Ar. Bea 90.89 283 IAmb IAmb 06 25 18.5
comp=Z,1.6nm,1.1s
ESDC Sonseca Array 91.66 310 P **P** 06 25 12.4 +0.4
comp=Z,1.0nm,0.8s,baz=60,slow=4.1,SNR=4.9
ESDC Sonseca Array 91.66 310 P **P** 06 25 12.3 +0.4
IMAR Indian Mountai 91.98 22 P **P** 06 25 13.6 +0.8
VNDA Vanda 92.44 168 P **P** 06 25 14.7 0.0
comp=Z,0.3nm,0.4s,baz=298,slow=2.7,SNR=4.2
ILAR Eielson Array 95.09 22 P **P** 06 25 26.2 -1.0
comp=Z,0.6nm,0.7s,baz=305,slow=5.1,SNR=3.0
NVAR Mina Array Bea 125.21 31 PKP **PKPdf** 06 31 05.2 -0.5

TORD Torodi Ar. Bea 90.89 283 P **P** 06 19 30.7 +0.8
comp=Z,1.6nm,0.7s,baz=85,slow=4.8,SNR=9.9
ESDC Sonseca Array 91.65 310 P **P** 06 19 33.6 +0.5
comp=Z,2.0nm,0.7s,baz=60,slow=4.2,SNR=18
IMAR Indian Mountai 91.96 22 P **P** 06 19 35.3 +1.5
TOLK Toolik Lake Re 92.30 19 IAmb IAmb 06 19 47.4
comp=Z,6.7nm,0.9s
VNDA Vanda 92.46 168 P **P** 06 19 37.2 +1.4
comp=Z,0.7nm,0.8s,baz=242,slow=1.4,SNR=4.4
CAST Castle Rocks 93.65 24 P **P** 06 19 43.0 +1.3
CAST IAmb IAmb 06 19 52.8
comp=Z,14nm,0.8s
BPAW Bear Paw Mtn. 93.80 24 IAmb IAmb 06 19 50.2
comp=Z,10nm,1.0s
ILAR Eielson Array 95.07 22 P **P** 06 19 48.0 -0.1
comp=Z,0.5nm,0.8s,baz=282,slow=3.6,SNR=6.8
ILAR PP **PP** 06 23 32.4 -4.9
comp=Z,0.3nm,0.7s,baz=311,slow=6.4,SNR=4.6
NVAR Mina Array Bea 125.19 31 PKP **PKiKP** 06 25 27.3 +0.2
comp=Z,0.8nm,0.8s,baz=326,slow=3.2,SNR=5.8
NVAR Mina Array Bea 125.19 31 PKPdf **PKiKP** 06 25 27.6 +0.5
PDAR Pinedale Array 125.50 22 PKP **PKPdf** 06 25 26.6 -0.6
comp=Z,0.7nm,0.8s,baz=108,slow=3.3,SNR=5.1
PDAR Pinedale Array 125.50 22 PKPdf **PKPdf** 06 25 26.5 -0.7
R11A Troy Canyon, C 126.61 29 PKPdf **PKiKP** 06 25 30.3 +0.4
TXAR Lajitas Array 139.54 25 PKP **PKiKP** 06 25 55.6 -0.6
comp=Z,0.5nm,0.7s,baz=162,slow=0.5,SNR=5.9
PLCA Paso Flores 144.21 200 PKP **PKPab** 06 25 59.4 -0.2
comp=Z,2.6nm,0.8s,baz=224,slow=4.2,SNR=6.7
LC01 Cunco 146.30 200 **PKPab** 06 26 07.0 -0.3
CPUP Villa Florida 147.15 232 **PKPbc** 06 26 09.7 +0.4
VA03 San Esteban 151.16 207 **PKPbc** 06 26 18.9 -0.5
CO02 Combarbal 152.67 208 **PKPbc** 06 26 22.9 0.0
SDV Santo Domingo 157.93 317 PKPab **PKPab** 06 26 55.6 -0.8
comp=Z,3.4nm,0.6s,baz=356,slow=2.6,SNR=4.3

IDC 18 06:10:24.0±6.6, 7°24N×94°18E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/44, mbtmp3.7/5, Error ellipse: s-maj=341.7km s-min=21.2km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.71**	**347**	P	P	06 18 06.1	-0.3
	1.1nm,0.6s,baz=166,slow=8.0,SNR=4.6						
KURBB	**Kurchatov Arra**	**45.17**	**346**	P	P	06 18 42.5	+0.1
	1.2nm,0.6s,baz=165,slow=6.9,SNR=5.2						
ZALV	**Zalesovo Beam**	**47.19**	**352**	P	P	06 18 58.1	-0.1
	0.7nm,0.5s,baz=149,slow=6.7,SNR=2.4						
WRA	**Warramunga Arr**	**47.86**	**125**	P	P	06 19 03.9	-0.1
	0.3nm,0.6s,baz=300,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**49.48**	**130**	P	P	06 19 16.4	-0.1
	0.6nm,0.9s,baz=300,slow=7.4,SNR=3.1						

*IDC **18** 06:12:02.4±0.4, 7°45N×94°34E, h0km, mb4.3/29, mb1 4.4/30, mb1mx4.3/45, mbtmp4.3/30, ML4.5/1, Error ellipse: s-maj=20.0km s-min=10.7km az=63.0*
*NEIC **18** 06:12:03.7±1.9, 7°40N±0°07×94°32E±0°10, h10km±1km, mb4.6/35, Error ellipse: s-maj=16.7km s-min=11.0km az=74.0*
*NDI **18** 06:12:04.8±1.5, 7°30N×94°43E, h10km, mb4.4, ML4.0, mb4.6(NEIC)*
*DJA **18** 06:12:05.4±0.3, 7°N±4°×9°4E±°, h10km, M4.9/13, mb4.8/13, mB5.9/2, MLv4.9/7, Mw(mB)5.5/2*

ISC 18 06:12:06.3±0.3, 7°42N±0°05×94°33E±0°05, h24km, n125, σ1§43/126, mb4.5/50, 1C-1D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.57**	**225**	*e*P	**Pb**	**06 12 16.4**	**-1.2**
CMBY				*e*S	**Sb**	**06 12 24.7**	**-0.6**
CMBY				IAML		06 12 27.6	
	comp=Z,10μm,0.4s						
LHMI	**Lhok Sumawe**	**3.39**	**130**	P	**Pn**	**06 12 56.2**	**-1.5**
LHMI	**Lhok Sumawe**	**3.39**	**130**	Pn	**Pn**	**06 12 57.2**	**-0.6**
MLSI	**Meulaboh, Aceh**	**3.75**	**146**	P	**Pn**	**06 13 05.7**	**+3.0**
PKDT	**Phuket**	**4.00**	**83**	P	**Pn**	**06 13 06.6**	**+0.5**
TPTI		**5.01**	**145**	P	**Pn**	**06 13 22.4**	**+2.4**
	comp=Z,0.4nmcomp=Z,76nm,1.1s						
TRTT	**Trang**	**5.33**	**85**	P	**Pn**	**06 13 24.8**	**+0.3**
DGPR	**DIGLIPUR**	**5.89**	**347**	*e*P	**Pn**	**06 13 35.8**	**+3.6**
DGPR				IAmb	IAmb	06 13 44.4	
	comp=Z,152nm,0.9s						
DGPR				IAML		06 18 45.5	
	comp=E,140nm,0.1s						
RPSI	**Rantau Prapat**	**6.55**	**135**	Pn	**Pn**	**06 13 40.6**	**-0.6**
KULM	**Kulim**	**6.63**	**108**	Pn	**Pn**	**06 13 40.4**	**-1.9**
IPM	**Ipoh**	**7.27**	**113**	Pn	**Pn**	**06 13 48.6**	**-2.5**
PBSI	**Pulau Batu**	**8.40**	**152**	P	**Pn**	**06 14 07.4**	**+0.8**
	comp=E,49nm,1.3s						
MNSI	**Mandailing Nat**	**8.40**	**141**	P	**Pn**	**06 14 09.2**	**+2.5**
	comp=E,0.7nmcomp=E,12μmcomp=E,45nm,0.6s						
CMAR	**Chiang Mai Arr**	**11.86**	**22**	Pn	**Pn**	**06 14 54.5**	**+0.5**
	comp=E,0.8nm,0.3s,baz=216,slow=15,SNR=4.9						
CMAR	**Chiang Mai Arr**	**11.86**	**22**		**Pn**	**06 14 54.1**	**+0.1**
CM32	**Chiang Mai Arr**	**12.00**	**21**	P	P	06 15 05.0	-3.8
CM34	**Chiang Mai Arr**	**12.29**	**22**	P	P	**06 15 14.0**	**+1.9**
PAYA	**Payao**	**13.04**	**24**	P	P	06 15 27.9	+7.5
	comp=E,27μmcomp=E,234nm,1.1s						
SLVN	**Son La**	**16.64**	**33**		**P**	**06 15 59.4**	**-1.1**
KSM	**Kuching**	**16.98**	**110**	Pn	**Pn**	**06 16 01.9**	**-0.5**
BOK	**Bokaro**	**18.19**	**334**	*e*P	**P**	**06 16 19.2**	**+1.7**
BOK				IAmb	IAmb	06 16 19.7	
	comp=Z,22nm,0.8s						
SHL	**Shillong**	**18.20**	**353**	P	**Pn**	**06 16 15.1**	**-2.6**
KOHI	**KOHIMA**	**18.20**	**359**	*e*P	**P**	**06 16 19.4**	**+1.6**
HYB	**Hyderabad**	**18.32**	**304**	*i* P	**P**	**06 16 19.0**	**0.0**
SBUM	**Sibu**	**18.49**	**105**		**P**	**06 16 20.4**	**-0.4**
GUWA	**GUWAHATI**	**18.84**	**353**	*e*P	**Pn**	**06 16 27.7**	**+2.5**
GUWA				AMP		06 16 36.6	
	comp=Z,20nm,0.6s						
KMI	**Kunming**	**19.36**	**24⇑**	*e*P	**Pn**	**06 16 36.8**	**+5.1**
KMI				pmax	pmax		
	comp=Z,29nm,1.3s						
ODAN	**Odare**	**20.43**	**342**	*e*P	**P**	**06 16 42.1**	**-0.2**
RAMN	**Ramite**	**20.77**	**340**	*e*P	**P**	**06 16 47.0**	**+1.1**
	comp=Z,98nm,0.8s						
TAPN	**Taplejung**	**20.80**	**343**	*e*P	**P**	**06 16 46.8**	**+0.5**
	comp=Z,109nm,0.8s						
PKI	**Puchoki**	**21.76**	**338**	*e*P	**P**	**06 16 57.1**	**+0.5**
	comp=Z,110nm,1.1s						
PKIN	**Phulchoki**	**21.77**	**338**	*e*P	**P**	**06 16 57.0**	**+0.3**
	comp=Z,118nm,1.1s						
GUN	**Gumba**	**21.90**	**340**	*e*P	**P**	**06 16 57.9**	**-0.3**
	comp=Z,166nm,1.0s						
DMN	**Daman**	**21.91**	**338**	*e*P	**P**	**06 16 59.4**	**+1.3**
	comp=Z,85nm,0.9s						
KKN	**Kakani**	**22.00**	**338**	*e*P	**P**	**06 16 59.4**	**+0.2**
	comp=Z,65nm,0.9s						
GYA	**Guiyang**	**22.28**	**30**	⇓P	**P**	**06 17 06.3**	**+4.3**
GYA				pmax	pmax		
	comp=Z,11nm,1.2s						
GYA				pmax	pmax		
	comp=Z,320nm,4.1s						
LSA	**Lhasa**	**22.37**	**353**	P	**P**	**06 17 06.2**	**+2.8**
LSA				IAmb	IAmb	06 17 12.2	
	comp=Z,19nm,0.8s						
GKN	**Gorkha**	**22.44**	**337**	*e*P	**P**	**06 17 03.6**	**-0.2**
	comp=Z,91nm,0.9s						
KOLN	**Koldanda**	**22.65**	**335**	*e*P	**P**	**06 17 06.9**	**+0.8**
	comp=Z,77nm,0.9s						
DANN	**Dangsing**	**23.10**	**336**	*e*P	**P**	**06 17 10.5**	**-0.3**
	comp=Z,79nm,0.8s						
PYUN	**Piuthan**	**23.20**	**334**	*e*P	**P**	**06 17 12.9**	**+1.1**
	comp=Z,84nm,0.8s						
MYLDM	**Lahad Datu**	**24.12**	**94**	P	**P**	**06 17 20.9**	**+0.3**
ABJI	**Asem Bagus**	**24.94**	**127**	P	**P**	**06 17 29.3**	**+1.3**
	comp=Z,5.5nm,0.7s						
CD2	**Chengdu**	**24.98**	**19**	P	**P**	**06 17 27.6**	**-0.7**
H08S3	**Diego Garcia H**	**26.42**	**236**	T	T	06 44 26.3	
	baz=55,slow=75,SNR=20						
H08S2	**Diego Garcia H**	**26.42**	**236**	T	T	06 44 26.8	
	baz=55,slow=75,SNR=19						
H08S1	**Diego Carcia H**	**26.43**	**236**	T	T	06 44 27.8	
	baz=55,slow=75,SNR=19						
**

comp=Z,0.2nm,0.5s,baz=286,slow=3.4,SNR=3.6
PDAR Pinedale Array 125.52 21 PKP **PKPdf 06 31 05.0 -1.2**
comp=Z,0.6nm,0.9s,baz=5.7,slow=6.0,SNR=4.0
PLCA Paso Flores 144.19 200 PKP PKPbc 06 31 39.3 +0.6
comp=Z,2.2nm,0.7s,baz=194,slow=4.2,SNR=6.7
CPUP Villa Florida 147.13 232 PKPbc **PKPbc 06 31 48.4 +0.2**
comp=Z,2.6nm,0.7s,baz=109,slow=4.5,SNR=6.0
ORTC Ortega, Tolima 164.68 137 *eP* **PKPab 06 33 04.6 0.0**
FLOC Florencia 166.59 311 *eP* **PKPdf 06 32 10.3 -0.7**

SCB ***18*** *06:22:39.2±3.5, 15.°88S×67.°58W, h45km±21km, ML3.4/1, Error ellipse: s-maj=20.0km s-min=15.9km az=2.0*
IDC ***18*** *06:22:41.5±1.8, 15.°69S×68.°17W, h0km, mb3.7/2, mb1 4.0/5, mb1mx3.7/27, mbtmp3.8/5, ML3.9/3, MS3.6/1, Ms1 3.5/1, ms1mx3.1/26, Error ellipse: s-maj=29.7km s-min=11.1km az=100.0*
NEIC ***18*** *06:22:48.1±2.9, 15.°9S±0.°1×67.°9W±0.°1, h20km±7km, mb4.3/2, Error ellipse: s-maj=19.6km s-min=10.5km az=132.0*

ISC 18 06:22:44.2±0.8**, 15.°82S**±0.°06×**68.°02W**±0.°06**, h10**km**, n50,** σ2**9**2**9/50, mb4.2/3, Central Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBOB	**La Paz, Bander**	**0.34**	**199**	P	**Pg**	**06 22 52.1**	**+0.8**
LPAZ	**La Paz**	**0.48**	**193**	Pg	**Pg**	**06 22 54.6**	**+0.8**
	1μm,0.3s,baz=353,slow=10.0,SNR=2867						
LPAZ				Lg	Lg	06 23 00.1	
	638nm,0.3s,baz=108,slow=20,SNR=9.6						
LPAZ	**La Paz**	**0.48**	**193**	P	**Pg**	**06 22 54.1**	**+0.3**
LPAZ	**La Paz**	**0.48**	**193**	*eP*	**Pg**	**06 22 54.8**	**+0.9**
BS09	**Huarina**	**0.68**	**237**	P	**Pg**	**06 22 57.6**	**+0.1**
BBOD	**La Paz, Gloria**	**0.99**	**214**	P	**Pg**	**06 23 03.0**	**-0.4**
BBOE	**La Paz, Chanca**	**0.99**	**178**	P	**Pg**	**06 23 01.5**	**-1.9**
BBOJ	**La Paz, Jacaqu**	**1.17**	**188**	P	**Pg**	**06 23 05.2**	**-1.5**
PB16	**IPOC Station P**	**2.88**	**209**	Pn	**Pn**	**06 23 34.7**	**+3.9**
AP01	**Chacalluta**	**3.38**	**221**	Pn	**Pn**	**06 23 40.0**	**+2.9**
MNMC	**Minye Minye**	**3.63**	**204**		**Pn**	**06 23 43.8**	**+3.1**
MNMC	**Minye Minye**	**3.63**	**204**	P	**Pn**	**06 23 45.3**	**+4.6**
MNMC				S	**Sb**	**06 24 34.7**	**+1.9**
MNMC				IAML		06 24 48.8	
	56nm,0.4s						
PB11	**IPOC Station P**	**4.22**	**201**		**Pn**	**06 23 52.2**	**+3.3**
PB11	**IPOC Station P**	**4.22**	**201**	P	**Pb**	**06 23 56.0**	**-2.7**
PSGCX	**Pisagua**	**4.26**	**208**		**Pn**	**06 23 52.1**	**+2.8**
PB08	**IPOC Station P**	**4.44**	**194**		**Pn**	**06 23 55.9**	**+3.9**
PB08	**IPOC Station P**	**4.44**	**194**	P	Pn	06 23 57.2	+5.2
PB08				S	**Sb**	**06 24 56.4**	**+0.2**
TA01	**Diego Aracena**	**5.15**	**203**	Pn	**Pn**	**06 24 03.9**	**+2.5**
PATCX	**Punta Patache**	**5.38**	**202**	Pn	**Pn**	**06 24 06.7**	**+2.1**
PB01	**IPOC Station P**	**5.38**	**195**		**Pn**	**06 24 07.2**	**+2.5**
MOCB	**Mochara**	**5.86**	**158**	P	Pn	06 24 17.2	+5.6
PB09	**IPOC Station P**	**6.06**	**191**		**Pn**	**06 24 17.7**	**+3.6**
PB07	**IPOC Station P**	**6.14**	**196**		**Pn**	**06 24 17.4**	**+2.1**
ETMB	**Extrema**	**6.22**	**17**	*eP*	**Pn**	**06 24 18.1**	**+2.0**
SIV	**San Ignacio**	**6.69**	**92**	Pn	**Pn**	**06 24 25.3**	**+2.7**
	1.8nm,0.3s,baz=290,slow=8.9,SNR=54						
SIV				Sn	**Sn**	**06 25 42.4**	**+3.5**
	6.5nm,0.3s,baz=250,slow=13,SNR=3.3						
SIV				Lg	Lg	06 26 14.6	
	31nm,0.3s,baz=214,slow=22,SNR=9.7						
SIV	**San Ignacio**	**6.69**	**92**	P	**Pn**	**06 24 24.7**	**+2.1**
LVC	**Limon Verde**	**6.81**	**187**	Pn	**Pn**	**06 24 26.2**	**+1.6**
	1.1nm,0.3s,baz=0.1,slow=8.6,SNR=9.2						
LVC				Lg	Lg	06 26 21.2	
	0.2nm,0.3s,baz=105,slow=20,SNR=2.0						
LVC	**Limon Verde**	**6.81**	**187**		**Pn**	**06 24 27.5**	**+2.9**
PB06	**IPOC Station P**	**7.01**	**192**	Pn	**Pn**	**06 24 28.9**	**+1.8**
PB15	**IPOC Station P**	**7.48**	**190**		**Pn**	**06 24 35.7**	**+2.0**
PB10	**IPOC Station P**	**8.02**	**197**	Pn	**Pn**	**06 24 40.7**	**-0.2**
VILB	**Vilhena**	**8.09**	**70**	*eP*	**Pn**	**06 24 45.5**	**+3.6**
SAML	**Samuel**	**8.30**	**35**		**Pn**	**06 24 46.4**	**+1.7**
PTLB	**Pontes e Lacer**	**8.56**	**89**	*eP*	**Pn**	**06 24 45.4**	**-3.0**
PB14	**IPOC Station P**	**9.05**	**194**		**Pn**	**06 24 57.4**	**+2.1**
GO02	**Mina Guanaco**	**9.42**	**189**	Pn	**Pn**	**06 25 00.6**	**+0.3**
AC02	**Maricunga**	**11.02**	**185**	Pn	**Pn**	**06 25 22.0**	**-0.4**
CLDB	**Colider**	**12.86**	**69**	*eP*	**Pn**	**06 25 46.8**	**-0.5**
AC05	**El Transito**	**13.13**	**189**	Pn	**Pn**	**06 25 51.5**	**+0.6**
LCO	**Las Campanas**	**13.37**	**190**	Pn	**Pn**	**06 25 55.2**	**+0.9**
CO01	**Juntas del Tor**	**14.22**	**187**	Pn	**Pn**	**06 26 07.7**	**+1.7**
CPUP	**Villa Florida**	**14.45**	**138**	Pn	**Pn**	**06 26 09.2**	**+0.3**
	0.2nm,0.3s,baz=323,slow=5.1,SNR=11						
MACA	**Manacapuru-AM**	**14.50**	**31**	*eP*	**Pn**	**06 26 07.7**	**-2.0**
NPGB	**Novo Progresso**	**15.15**	**56**	*eP*	**Pn**	**06 26 14.9**	**-3.6**
BDFB	**Brasilia**	**19.26**	**92**	LR	LR	06 35 49.2	
	comp=Z,185nm,19.2s,baz=2.8,slow=41						
LC01	**Cunco**	**23.24**	**188**	P	**P**	**06 27 50.1**	**-1.6**
LC01				IAmb	IAmb	06 27 58.3	
	comp=Z,13nm,1.5s						
PLCA	**Paso Flores**	**24.93**	**185**	P	**P**	**06 28 06.4**	**-1.3**
	comp=Z,3.2nm,1.0s,baz=351,slow=8.2,SNR=4.0						
PLCA	**Paso Flores**	**24.93**	**185**	P	**P**	**06 28 06.6**	**-1.0**
PLCA				IAmb	IAmb	06 28 16.7	
	comp=Z,11nm,1.4s						
TORD	**Torodi Ar. Bea**	**74.70**	**71**	P	**P**	**06 34 23.4**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=261,slow=6.3,SNR=2.6						
WRA	**Warramunga Arr**	**138.22**	**212**	PKP	**PKPdf**	**06 42 09.8**	**-0.9**
	comp=Z,0.1nm,0.6s,baz=155,slow=1.8,SNR=1.8						

IDC ***18*** *06:36:31.1±1.1, 7.°29N×94.°29E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/41, mbtmp3.9/10, ML4.5/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/42, Error ellipse: s-maj=46.2km s-min=19.2km az=54.0*
NEIC ***18*** *06:36:33.3±0.7, 7.°5N±0.°1×94.°5E±0.°2, h10km±2km, mb4.3/8, Error ellipse: s-maj=33.6km s-min=17.4km az=231.0*

ISC 18 06:36:35.0±0.8**, 7.°3N**±0.°1×**94.°4E**±0.°1**, h24**km**, n28,** σ0**8**7**6/24, mb4.1/12, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**3.29**	**129**	Pn	**Pn**	**06 37 25.8**	**+0.7**
TRTT	**Trang**	**5.28**	**84**	P	**Pn**	**06 37 53.0**	**+0.6**
RPSI	**Rantau Prapat**	**6.45**	**135**		**Pn**	**06 38 09.3**	**+0.8**
KULM	**Kulim**	**6.54**	**108**		**Pn**	**06 38 08.7**	**-1.2**
IPM	**Ipoh**	**7.18**	**113**		**Pn**	**06 38 17.7**	**-0.9**
CMAR	**Chiang Mai Arr**	**11.91**	**21**	Pn	**Pn**	**06 39 25.0**	**+1.5**
	0.9nm,0.3s,baz=211,slow=14,SNR=4.2						
H08S3	**Diego Garcia H**	**26.42**	**236**	T	T	07 08 48.0	
	baz=55,slow=75,SNR=100						
H08S2	**Diego Garcia H**	**26.42**	**236**	T	T	07 08 51.0	
	baz=55,slow=75,SNR=54						
H08S1	**Diego Garcia H**	**26.44**	**236**	T	T	07 08 53.8	
	baz=55,slow=75,SNR=10						
MK31	**Makanchi Array**	**40.67**	**347**	P	**P**	**06 44 12.5**	**-0.9**
MKAR	**Makanchi Array**	**40.67**	**347**	P	**P**	**06 44 12.8**	**-0.6**
	2.4nm,0.7s,baz=164,slow=8.2,SNR=10						
SONM	**Songino Array**	**41.64**	**12**	P	**P**	**06 44 20.8**	**-0.6**
	0.2nm,0.3s,baz=205,slow=6.4,SNR=2.0						
SONM	**Songino Array**	**41.64**	**12**	P	**P**	**06 44 20.2**	**-1.3**
GEYT	**Alibeck**	**44.77**	**318**	P	**P**	**06 44 47.6**	**+0.7**
	3.1nm,0.5s,baz=163,slow=10,SNR=4.2						
KURK	**Kurchatov**	**45.19**	**346**	P	**P**	**06 44 49.4**	**-0.5**
ZAA0	**Zalesovo Array**	**47.12**	**352**	P	**P**	**06 45 05.3**	**+0.3**
ZALV	**Zalesovo Beam**	**47.12**	**352**	P	**P**	**06 45 05.6**	**+0.5**
	1.5nm,0.7s,baz=168,slow=7.6,SNR=7.1						
ZALV	**Zalesovo Beam**	**47.12**	**352**	P	**P**	**06 45 05.2**	**+0.1**
WB0	**Warramunga Arr**	**47.70**	**125**	P	**P**	**06 45 10.2**	**+0.1**
WB0				IAmb	IAmb	06 45 21.7	
	comp=Z,1.3nm,0.7s						
WRA	**Warramunga Arr**	**47.75**	**125**	P	**P**	**06 45 11.1**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=305,slow=8.7,SNR=14						
WRA				LR	LR	07 08 11.8	
	comp=Z,79nm,18.5s,baz=240,slow=40						
WB2	**Warramunga Arr**	**47.76**	**125**	P	**P**	**06 45 10.1**	**-0.5**
WB2				IAmb	IAmb	06 45 21.5	
	comp=Z,3.3nm,0.9s						
WR0	**Warramunga Arr**	**47.92**	**125**	P	**P**	**06 45 11.9**	**+0.1**
WR0				IAmb	IAmb	06 45 29.2	
	comp=Z,2.2nm,0.9s						
ASAR	**Alice Springs**	**49.38**	**130**	P	**P**	**06 45 22.9**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=304,slow=7.6,SNR=6.0						
ABKAR	**Akbulak array**	**50.82**	**331**	P	**P**	**06 45 33.3**	**-0.2**
FINES	**FINESS Array B**	**73.30**	**332**	P	**P**	**06 48 03.9**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=117,slow=6.8,SNR=6.1						
GERES	**GERESS Array B**	**78.39**	**318**	P	**P**	**06 48 34.2**	**+0.4**
	comp=Z,0.3nm,0.2s,baz=93,slow=5.9,SNR=1.5						
NB2	**NORSAR Subarra**	**80.32**	**331**	P	P	06 48 49.4	+5.4
	comp=Z,1.5nm,0.8s,baz=93,slow=5.9						
NOA	**NORSAR Array B**	**80.32**	**331**	P	**P**	**06 48 43.0**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=95,slow=5.4,SNR=3.0						

IDC ***18*** *06:48:02.5±0.5, 1.°81N×126.°16E, h0km, mb4.4/20, mb1 4.5/21, mb1mx4.4/32, mbtmp4.4/21, ML4.3/1, MS3.3/1, Ms1 3.5/1, ms1mx2.7/36, Error ellipse: s-maj=28.7km s-min=11.3km az=76.0*
NEIC ***18*** *06:48:08.2±1.4, 1.°86N±0.°08×126.°46E±0.°04, h45km±7km, mb4.6/36, Error ellipse: s-maj=12.0km s-min=4.8km az=191.0*
DJA ***18*** *06:48:08.5±0.5, 2.°N±3.°×12.°6E±.°, h55km±23km, M4.5/9, mB5.0/1, mb4.6/1, MLv4.5/9, Mw(mB)4.3/1*
KLM ***18*** *06:48:09.0, 1.°81N×126.°48E, h55km, mb4.7*

ISC 18 06:48:08.7±0.4**, 1.°90N**±0.°05×**126.°48E**±0.°07**, h47**km**, n121,** σ1**9**2**0/117, mb4.5/41, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**142**	P	**Pn**	**06 48 31.7**	**-0.5**
TNTI	**Ternate**	**1.43**	**142**	Pn	**Pn**	**06 48 31.8**	**-0.5**
SGSI	**Sangihe**	**2.01**	**332**	P	**Pn**	**06 48 40.2**	**-0.1**
SGSI				S	**Sn**	**06 49 03.6**	**-0.6**
LBMI	**Labuha**	**2.72**	**158**	P	**Pn**	**06 48 53.0**	**+3.0**
KMSI	**Cibinong**	**2.82**	**242**	P	**Pn**	**06 48 52.2**	**+0.8**
GTOI	**Gorontalo**	**3.69**	**250**	P	**Pn**	**06 49 03.6**	**+0.3**
LUWI	**Luwuk**	**4.72**	**232**	P	**Pn**	**06 49 16.3**	**-1.2**
LUWI	**Luwuk**	**4.72**	**232**		**Pn**	**06 49 18.1**	**+0.6**
MRSI	**Marisa**	**4.75**	**253**	P	**Pn**	**06 49 17.1**	**-0.8**
NLAI	**Namlea**	**5.14**	**173**	P	**Pn**	**06 49 21.4**	**-1.9**
APSI	**Ampana**	**5.58**	**240**	P	Pn	06 49 37.5	+8.3
TOLI2	**Tolitoli**	**5.75**	**262**	Pn	**Pn**	**06 49 30.6**	**-1.0**
MPSI	**Mapaga**	**6.76**	**257**	P	**Pn**	**06 49 48.0**	**+2.5**
TTSI	**Tana Toraja**	**8.27**	**234**	P	**Pn**	**06 50 09.2**	**+3.0**
MYLDM	**Lahad Datu**	**8.60**	**292**	Pn	**Pn**	**06 50 12.8**	**+2.0**
SPSI	**Sidrap Palu**	**8.88**	**229**	P	Pn	06 50 25.5	+11
BNSI	**Bone**	**8.93**	**225**	P	Pn	06 50 27.7	+12
KAPI	**Kappang**	**9.61**	**224**	Pn	**Pn**	**06 50 22.6**	**-1.9**
	1.5nm,0.3s,baz=84,slow=15,SNR=3.3						
SPMM	**Sapulut**	**10.38**	**286**	P	**Pn**	**06 50 39.0**	**+3.9**
KKM	**Kota Kinabalu**	**11.03**	**292**	Pn	**Pn**	**06 50 45.2**	**+1.1**
SBUM	**Sibu**	**14.26**	**272**	P	P	**06 51 31.8**	**-2.4**
SBUM	**Sibu**	**14.26**	**272**	P	P	06 51 39.0	+4.8
MTN	**Manton Dam**	**15.36**	**163**	Pn	**Pn**	**06 51 42.4**	**-0.1**
KSM	**Kuching**	**16.17**	**269**	P	**P**	**06 51 56.4**	**+1.0**
KSM	**Kuching**	**16.17**	**269**	P	**Pn**	**06 51 53.0**	**+0.1**
KNRA	**Kununurra**	**17.61**	**173**		**Pn**	**06 52 10.4**	**-0.4**
KPJI	**Karang Pucung**	**19.77**	**242**	P	**Pn**	**06 52 38.0**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.89**	**182**	P	**P**	**06 52 35.1**	**-1.3**
	0.7nm,0.3s,baz=4.5,slow=11,SNR=16						
FITZ	**Fitzroy Crossi**	**19.89**	**182**	P	**P**	**06 52 37.1**	**+0.7**
MYKOM	**Kota Tinggi**	**22.62**	**270**	P	**P**	**06 53 07.0**	**+1.2**
COEN	**Coen**	**22.85**	**134**	P	**P**	**06 53 08.8**	**+0.5**
WB0	**Warramunga Arr**	**22.89**	**161**	P	**P**	**06 53 07.6**	**-1.0**
WB0				IAmb	IAmb	06 53 11.5	
	comp=Z,20nm,0.5s						
WRAB	**Tennant Creek**	**23.03**	**161**	P	**P**	**06 53 08.8**	**-1.3**
WRAB				IAmb	IAmb	06 53 15.1	
	comp=Z,37nm,1.3s						
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**	**06 53 09.1**	**-1.0**
	comp=Z,12nm,0.5s,baz=337,slow=11,SNR=71						
WRA				S	**S**	**06 57 16.4**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=343,slow=17,SNR=5.2						
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**	**06 53 08.2**	**-1.9**
WB2	**Warramunga Arr**	**23.04**	**161**	P	**P**	**06 53 09.2**	**-1.0**
WB2				IAmb	IAmb	06 53 15.2	
	comp=Z,20nm,0.8s						
WR0	**Warramunga Arr**	**23.12**	**160**	P	**P**	**06 53 09.7**	**-1.2**
WR0				IAmb	IAmb	06 53 14.0	
	comp=Z,13nm,0.7s						
PSA00	**Pilbara Seismi**	**24.21**	**195**	P	**P**	**06 53 20.6**	**-0.6**
IPM	**Ipoh**	**25.54**	**276**	P	**P**	**06 53 36.0**	**+2.6**
AS31	**Alice Springs**	**26.42**	**165**	P	**P**	**06 53 41.9**	**+0.7**
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**06 53 41.0**	**-0.3**
	comp=Z,2.5nm,0.4s,baz=349,slow=13,SNR=33						
ASAR				PcP	**PcP**	**06 57 07.0**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=359,slow=2.4,SNR=4.5						
ASAR				S	**S**	**06 58 13.2**	**+1.4**
	comp=Z,0.8nm,0.9s,baz=347,slow=22,SNR=4.9						
CTA	**Charters Tower**	**29.22**	**139**	P	**P**	**06 54 07.8**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=260,slow=12,SNR=2.1						
NJ2	**Nanjing**	**30.84**	**347**	*eP*	**P**	**06 54 20.5**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**06 54 26.5**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=118,slow=7.6,SNR=5.1						
CMAR				LR	LR	07 06 20.7	
	comp=Z,55nm,21.8s,baz=270,slow=35						
MORW	**Morawa**	**32.38**	**197**	P	**P**	**06 54 33.6**	**-0.4**
MORW				IAmb	IAmb	06 54 46.7	
	comp=Z,22nm,1.5s						
FORT	**Forrest**	**32.53**	**177**	P	**P**	**06 54 36.0**	**+0.7**
JWT	**Wachi**	**34.23**	**13**	P	**P**	**06 54 50.5**	**+0.4**
KSRS	**Korea Array**	**35.41**	**2**	P	**P**	**06 55 01.9**	**+1.8**
	comp=Z,3.4nm,0.8s,baz=176,slow=9.6,SNR=6.8						
BBOO	**Buckleboo**	**35.69**	**166**	P	**P**	**06 55 02.3**	**-0.5**
XAN	**Xi'an**	**35.94**	**335**	P	**P**	**06 55 03.4**	**-1.5**
XAN				pP	pP	06 55 14.9	-2.0
XAN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MJAR	**Matsushiro Arr**	**36.14**	**16**	P	**P**	**06 55 06.9**	**+0.4**
	comp=Z,4.7nm,0.8s,baz=188,slow=9.7,SNR=9.5						
MAT	**Matsushiro**	**36.14**	**16**	P	**P**	**06 55 04.6**	**-1.9**
STKA	**Stephens Creek**	**36.53**	**158**	P	**P**	**06 55 09.8**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=330,slow=9.7,SNR=12						
STKA	**Stephens Creek**	**36.53**	**158**	P	**P**	**06 55 09.6**	**-0.3**
LZH	**Lanzhou**	**39.96**	**331**	⇑P	**P**	**06 55 39.8**	**+0.9**
LZH				pP	pwP	06 55 53.5	+0.2
LZH				sP	sP	06 55 57.9	+1.6
LZH				PP	PP	06 57 00.3	-11
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
LZH				LR	LR		
	comp=N,430nm,15.7s						
LZH				LR	LR		
	comp=E,420nm,14.6s						
LZH				LR	LR		
	comp=Z,460nm,16.8s						
ARMA	**Armidale**	**40.10**	**145**	P	**P**	**06 55 39.3**	**-0.8**
ARMA				IAmb	IAmb	06 55 57.8	
	comp=Z,12nm,1.2s						
SHL	**Shillong**	**40.78**	**308**	P	**P**	**06 55 44.6**	**-1.3**
SHL				IAmb	IAmb	06 55 45.5	
	comp=Z,11nm,0.9s						
HHC	**Hu-ho-hao-te**	**41.05**	**343**	*eP*	**P**	**06 55 45.9**	**-1.9**
USRK	**Ussuriysk Ar.**	**42.40**	**6**	P	**P**	**06 56 00.5**	**+1.9**
	comp=Z,6.6nm,1.0s,baz=180,slow=7.6,SNR=5.6						
USRK	**Ussuriysk Ar.**	**42.40**	**6**	P	**P**	**06 55 56.6**	**-2.1**
H11S3	**WAKE ISLAND Hy**	**42.71**	**65**	T	T	07 41 48.0	
	baz=252,slow=74,SNR=20						
H11S2	**WAKE ISLAND Hy**	**42.73**	**65**	T	T	07 41 49.2	
	baz=252,slow=74,SNR=12						
H11S1	**WAKE ISLAND Hy**	**42.73**	**65**	T	T	07 41 42.9	
	baz=252,slow=74,SNR=6.2						
H11N1	**WAKE ISLAND Hy**	**43.28**	**63**	T	T	07 42 29.8	
	baz=251,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**43.29**	**63**	T	T	07 42 28.2	
	baz=251						
H11N3	**WAKE ISLAND Hy**	**43.30**	**63**	T	T	07 42 32.2	
	baz=251						
GTA	**Gaotai**	**44.54**	**330**	*eP*	**P**	**06 56 17.4**	**+1.3**
GTA				pP	pwP	06 56 30.1	-0.5
GTA				sP	sP	06 56 34.4	+0.7
GTA				PcP	**PP**	**06 58 00.8**	**0.0**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,63nm,6.0s						
GTA				LR	LR		
	comp=N,68nm,16.7s						
GTA				LR	LR		
	comp=E,82nm,17.1s						
GTA				LR	LR		
	comp=Z,130nm,19.6s						
RAMN	**Ramite**	**45.62**	**307**	*eP*	**P**	**06 56 24.5**	**-0.5**
GUN	**Gumba**	**46.61**	**308**	*eP*	**P**	**06 56 32.2**	**-0.8**
	comp=Z,27nm,0.6s						
PKI	**Pulchoki**	**46.84**	**307**	*eP*	**P**	**06 56 33.8**	**-0.9**
PKIN	**Phulchoki**	**46.85**	**307**	*eP*	**P**	**06 56 33.8**	**-1.0**
KKN	**Kakani**	**47.04**	**307**	*eP*	**P**	**06 56 35.1**	**-1.1**
DMN	**Daman**	**47.10**	**307**	*eP*	**P**	**06 56 35.8**	**-0.9**
KOLN	**Koldanda**	**48.38**	**306**	*eP*	**P**	**06 56 45.9**	**-0.6**
	comp=Z,12nm,0.3s						
DANN	**Dangsing**	**48.49**	**307**	*eP*	**P**	**06 56 46.5**	**-1.0**
	comp=Z,15nm,0.4s						
ULN	**Ulaanbaatar**	**48.77**	**343**	P	**P**	**06 56 49.0**	**-0.1**
ULN				IAmb	IAmb	06 56 51.3	
	comp=Z,6.0nm,0.9s						
SONM	**Songino Array**	**48.95**	**342**	P	**P**	**06 56 50.9**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=154,slow=9.2,SNR=20						
SONM				PcP	**PcP**	**06 58 15.6**	**+1.5**
	comp=Z,2.5nm,0.8s,baz=156,slow=3.7,SNR=8.1						
SONM	**Songino Array**	**48.95**	**342**	P	**P**	**06 56 49.8**	**-0.6**
SONM					**PcP**	**06 58 15.5**	**+1.4**
WMQ	**Urumqi**	**54.08**	**326**	*eP*	**P**	**06 57 30.0**	**+1.1**
PETK	**Petropavlovsk-**	**57.21**	**22**	P	**P**	**06 57 53.1**	**+2.1**
	comp=Z,1.2nm,0.5s,baz=186,slow=5.4,SNR=5.7						
PETK	**Petropavlovsk-**	**57.21**	**22**	P	**P**	**06 57 50.5**	**-0.5**
MK31	**Makanchi Array**	**58.91**	**326**	P	**P**	**06 58 02.7**	**-0.4**
MK31				IAmb	IAmb	06 58 05.2	
	comp=Z,7.5nm,0.9s						
MKAR	**Makanchi Array**	**58.91**	**326**	P	**P**	**06 58 03.0**	**-0.1**
	comp=Z,6.8nm,0.3s,baz=120,slow=7.6,SNR=174						
MKAR	**Makanchi Array**	**58.91**	**326**	P	**P**	**06 58 02.5**	**-0.6**
MAKZ	**Makanchi**	**59.10**	**326**	P	**P**	**06 58 03.9**	**-0.5**
KDJ	**Kajisay**	**59.55**	**319**	P	**P**	**06 58 07.9**	**+0.1**
KDJ				IAmb	IAmb	06 58 08.9	
	comp=Z,6.8nm,0.7s						
LBZ	**Lake Benmore**	**60.33**	**145**	P	**P**	**06 58 13.2**	**+0.4**
ZAA0	**Zalesovo Array**	**62.10**	**334**	P	**P**	**06 58 22.2**	**-2.4**
ZAA0				IAmb	IAmb	06 58 30.2	
	comp=Z,4.8nm,1.2s						
ZALV	**Zalesovo Beam**	**62.10**	**334**	P	**P**	**06 58 23.7**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=136,slow=7.0,SNR=10						
ZALV	**Zalesovo Beam**	**62.10**	**334**	P	**P**	**06 58 23.4**	**-1.3**
KURK	**Kurchatov**	**63.15**	**328**	P	**P**	**06 58 31.6**	**-0.1**
KK31	**Karatay Array**	**64.40**	**318**	P	**P**	**06 58 39.5**	**-0.7**
KK31				IAmb	IAmb	06 58 40.5	
	comp=Z,3.9nm,0.8s						
KKAR	**Karatay Array**	**64.40**	**318**	P	**P**	**06 58 39.3**	**-0.9**
KKAR				IAmb	IAmb	06 58 40.5	
	comp=Z,3.9nm,0.8s						
KKAR	**Karatay Array**	**64.40**	**318**	P	**P**	**06 58 39.6**	**-0.6**
BRVK	**Borovoye**	**68.78**	**327**	P	**P**	**06 59 07.5**	**-0.4**
BRVK				IAmb	IAmb	06 59 08.4	
	comp=Z,6.0nm,0.5s						
TIXI	**Tiksi**	**69.66**	**1**	P	**P**	**06 59 12.9**	**-0.1**
NRIK	**Noril'sk**	**72.14**	**346**	P	**P**	**06 59 29.1**	**+1.1**
	comp=Z,13nm,0.7s,baz=121,slow=5.3,SNR=28						
AB01	**Akbulak array**	**73.40**	**321**	P	**P**	**06 59 35.2**	**-0.8**
AB31	**Akbulak array**	**73.40**	**321**	P	**P**	**06 59 35.7**	**-0.2**
AB31				IAmb	IAmb	06 59 36.8	
	comp=Z,4.1nm,0.7s						
ABKAR	**Akbulak array**	**73.40**	**321**	P	**P**	**06 59 35.6**	**-0.4**
ABKAR	**Akbulak array**	**73.40**	**321**	IAmb	IAmb	06 59 36.8	
	comp=Z.4.1nm,0.7s						
AB04	**Akbulak array**	**73.41**	**321**	P	**P**	**06 59 34.8**	**-1.2**
AB08	**Akbulak array**	**73.41**	**321**	P	**P**	**06 59 35.5**	**-0.5**
AB05	**Akbulak array**	**73.41**	**321**	P	**P**	**06 59 35.4**	**-0.6**
AB09	**Akbulak array**	**73.42**	**321**	P	**P**	**06 59 35.3**	**-0.8**
ARU	**Arti**	**76.34**	**328**	P	**P**	**06 59 52.4**	**-0.4**
VNDA	**Vanda**	**81.66**	**173**	P	**P**	**07 00 22.4**	**+1.0**
	comp=Z,2.1nm,0.6s,baz

comp=E,85nm,0.3s,baz=186,slow=10.0,SNR=323
LVC S **Sn** **07 03 46.4 +0.1**
comp=E,356nm,0.3s,baz=55,slow=18,SNR=15
LVC LR LR 07 04 04.9
comp=E,107nm,19.0s,baz=272,slow=36
LVC Limon Verde 2.19 32 *i*P **Pn** **07 03 21.0 +0.8**
LVC eS **Sn** **07 03 47.3 +1.0**
PB03 IPOC Station P 2.44 9 *i*P **Pn** **07 03 23.2 -0.3**
PB03 eS **Sn** **07 03 52.6 +0.3**
PB03 IAML 07 04 05.5
comp=E,2μm,0.5s
AC02 Maricunga 2.54 158 *i*P **Pn** **07 03 27.2 +2.2**
AC02 eS **Sn** **07 03 57.7 +2.7**
AC02 IAML 07 04 03.9
comp=N,1μm,0.3s
AC02 Maricunga 2.54 158 Pn **07 03 23.9 -1.2**
AC02 Sn **Sn** **07 04 54.9 -0.1**
PB07 IPOC Station P 2.75 6 *e*P **Pn** **07 03 27.3 -0.4**
PB07 IAML 07 04 17.8
comp=E,1μm,0.3s
PB07 IPOC Station P 2.75 6 Pn **07 03 28.3 +0.7**
PB07 Sn **Sn** **07 04 00.1 +0.4**
PB09 IPOC Station P 2.80 18 *e*P **Pn** **07 03 29.5 +1.1**
PB09 IAML 07 04 22.4
comp=E,908nm,0.6s
PB09 IPOC Station P 2.80 18 Pn **07 03 29.7 +1.3**
PB09 Sn **Sn** **07 04 00.5 -0.6**
GO03 Copiap 3.11 181 *e*P **Pn** **07 03 32.9 +0.4**
GO03 IAML 07 04 21.9
comp=E,600nm,0.4s
GO03 Copiap 3.11 181 Pn **07 03 33.0 +0.6**
GO03 Sn **Sn** **07 04 08.9 +0.5**
PB01 IPOC Station P 3.47 11 *e*P **Pn** **07 03 37.0 -0.5**
PB01 IAML 07 04 31.9
comp=E,648nm,0.3s
PB01 IPOC Station P 3.47 11 Pn **07 03 37.2 -0.3**
PATCX Punta Patache 3.64 0 *e*P **Pn** **07 03 38.3 -1.4**
PATCX Punta Patache 3.64 0 Pn **07 03 39.2 -0.5**
AC04 Llanos de Chal 3.80 192 *e*P **Pn** **07 03 40.5 -1.4**
AC04 Llanos de Chal 3.80 192 Pn **Pn** **07 03 40.6 -1.3**
TA01 Diego Aracena 3.89 360 *e*P **Pn** **07 03 41.2 -1.9**
TA01 Diego Aracena 3.89 360 Pn **07 03 42.4 -0.7**
AC05 El Transito 4.35 181 *e*P **Pn** **07 03 50.2 +0.8**
AC05 El Transito 4.35 181 Pn **Pn** **07 03 50.7 +1.2**
PB08 IPOC Station P 4.41 13 *e*P **Pn** **07 03 49.9 -0.8**
PB08 IPOC Station P 4.41 13 Pn **07 03 50.4 -0.3**
LCO Las Campanas 4.54 186 Pn **07 03 52.5 +0.2**
PB11 IPOC Station P 4.71 6 *e*P **Pn** **07 03 52.6 -2.0**
PB11 IPOC Station P 4.71 6 Pn **07 03 54.7 +0.1**
PSGCX Pisagua 4.85 1 Pn **Pn** **07 03 57.2 +0.8**
MNMC Minye Minye 5.34 6 Pn **07 04 03.2 -0.1**
CO01 Juntas del Tor 5.48 179 Pn **07 04 06.0 +0.9**
GO04 Tololo Observa 5.70 185 Pn **Pn** **07 04 07.8 -0.4**
PB16 IPOC Station P 6.14 6 Pn **07 04 15.8 +1.3**
CO03 El Pedregal 6.36 184 Pn **07 04 16.5 -0.5**
CO02 Combarbal 6.74 186 Pn **Pn** **07 04 21.3 -1.0**
VA03 San Esteban 8.27 182 Pn **Pn** **07 04 43.3 +0.1**
LPAZ La Paz 8.37 14 P **Pn** **07 04 45.5 +0.5**
comp=E,0.3nm,0.3s,baz=189,slow=5.7,SNR=10.0
LPAZ La Paz 8.37 14 Pn Pn **07 04 46.1 +1.1**
MT02 Curacav 8.79 185 Pn **Pn** **07 04 49.1 -1.1**
SIV San Ignacio 12.00 47 P **Pn** **07 05 31.4 -2.8**
comp=E,4.7nm,0.3s,baz=245,slow=11,SNR=110
SIV S Sn 07 07 35.2 -11
comp=E,0.2nm,0.3s,baz=93,slow=19,SNR=2.3
BDFB Brasilia 22.57 71 P **P** **07 07 40.8 -0.7**
comp=E,1.1nm,0.3s,baz=192,slow=7.7,SNR=3.5
QSPA South Pole Qui 65.73 180 P **P** **07 13 24.2 0.0**
GC02 Grant County # 66.35 336 P **P** **07 13 29.6 +1.3**
TORD Torodi Ar. Bea 79.45 70 P **P** **07 14 46.0 -0.3**
comp=E,1.7nm,0.5s,baz=262,slow=5.1,SNR=20
TORD pP **pP** **07 15 02.5 -0.8**
comp=E,0.6nm,0.4s,baz=252,slow=4.5,SNR=2.6
BOSA Boshof 83.08 118 P **P** **07 15 05.4 -0.3**
comp=E,2.4nm,0.8s,baz=238,slow=6.6,SNR=3.7
ASAR Alice Springs 126.75 208 pPKP pPKPdf 07 22 00.7 -1.0
comp=E,0.3nm,0.5s,baz=124,slow=1.5,SNR=3.0
WRA Warramunga Arr 129.81 211 PKP **PKPdf** **07 21 50.0 +0.7**
comp=E,0.2nm,0.9s,baz=158,slow=1.7,SNR=6.8
WRA pPKP **pPKPdf** **07 22 07.2 -0.3**
comp=E,0.3nm,0.7s,baz=155,slow=1.7,SNR=3.7
KURBB Kurchatov Arra 144.44 35 PKP **PKPdf** **07 22 15.2 0.0**
comp=E,0.5nm,0.2s,baz=302,slow=3.3,SNR=4.1
ZALV Zalesovo Beam 145.13 26 PKPbc **PKPdf** **07 22 16.8 +0.5**
comp=E,2.2nm,0.5s,baz=320,slow=4.0,SNR=9.2
ZALV pPKPbc pPKPab 07 22 31.3 -2.3
comp=E,0.6nm,0.4s,baz=334,slow=5.3,SNR=1.9

IDC 18 07:17:06.5±1.9, 4.57N×126.01E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/42, mbtmp3.7/4, Error ellipse: s-maj=114.1km s-min=23.4km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.52**	**181**	P	P	07 22 08.7	+0.6
	0.9nm,0.3s,baz=352,slow=8.6,SNR=17						
WRA	**Warramunga Arr**	**25.70**	**162**	P	P	07 22 38.5	0.0
	0.4nm,0.4s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	**29.10**	**165**	P	P	07 23 08.8	-0.4
	0.3nm,0.5s,baz=347,slow=7.9,SNR=9.7						
MKAR	**Makanchi Array**	**56.46**	**325**	P	P	07 26 50.3	-0.1
	1.5nm,1.0s,baz=131,slow=7.4,SNR=3.6						

*IDC **18** 07:44:19.2±0.9, 19.46N×120.54E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/39, mbtmp3.8/9, Error ellipse: s-maj=49.8km s-min=17.1km az=67.0*

ISC 18 07:44:22.7±1.0, 19.5N±0.2×120.5E±0.3, h23km, n9, σ0.87/9, mb3.7/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**30.55**	**341**	P	P	**07 50 33.0**	**-1.5**
	0.3nm,0.5s,baz=152,slow=6.5,SNR=3.1						
MKAR	**Makanchi Array**	**41.42**	**320**	P	P	**07 52 07.9**	**+0.4**
	1.1nm,0.8s,baz=106,slow=8.9,SNR=3.9						
WRA	**Warramunga Arr**	**41.44**	**160**	P	P	**07 52 06.9**	**-0.9**
	0.6nm,0.5s,baz=342,slow=8.9,SNR=13						
ZALV	**Zalesovo Beam**	**43.94**	**330**	P	P	**07 52 28.1**	**+0.3**
	2.1nm,0.8s,baz=146,slow=10,SNR=1.7						
ASAR	**Alice Springs**	**44.81**	**162**	P	P	**07 52 35.5**	**+0.4**
	0.7nm,0.7s,baz=339,slow=6.5,SNR=9.6						
KURBB	**Kurchatov Arra**	**45.41**	**323**	P	P	**07 52 40.0**	**+0.4**
	2.4nm,0.8s,baz=123,slow=7.9,SNR=8.8						
NRIK	**Noril'sk**	**53.80**	**346**	P	P	**07 53 43.3**	**+0.1**
	0.7nm,0.3s,baz=67,slow=7.7,SNR=2.7						
KBZ	**Khabaz**	**68.00**	**310**	P	P	**07 55 20.6**	**+0.4**
	0.7nm,0.4s,baz=56,slow=23,SNR=3.9						
ILAR	**Eielson Array**	**73.68**	**26**	P	P	**07 55 55.1**	**+0.8**
	0.5nm,0.9s,baz=260,slow=5.3,SNR=3.3						

IDC 18 07:48:03.4±1.5, 3.04N×126.98E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/37, mbtmp3.7/5, Error ellipse: s-maj=143.0km s-min=19.1km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.96**	**163**	P	P	07 53 19.4	-0.2
	1.1nm,0.5s,baz=343,slow=11,SNR=19						
ASAR	**Alice Springs**	**27.39**	**166**	P	P	07 53 50.6	-0.2
	0.2nm,0.5s,baz=347,slow=7.6,SNR=2.9						
STKA	**Stephens Creek**	**37.40**	**159**	P	P	07 55 19.1	+0.9
	0.8nm,0.5s,baz=324,slow=14,SNR=3.3						
MKAR	**Makanchi Array**	**58.26**	**325**	P	P	07 57 59.8	-0.1
	0.4nm,0.6s,baz=131,slow=7.9,SNR=3.9						
KURBB	**Kurchatov Arra**	**62.45**	**327**	P	P	07 58 28.2	-0.2
	0.6nm,0.5s,baz=129,slow=6.1,SNR=1.7						

*BGR **18** 07:59:07.3±0.0, 29.79N×40.27W, h10km, mb5.2, Ms4.6*
*IDC **18** 07:59:12.5±0.3, 31.67N×40.74W, h0km, mb4.6/39, mb1 4.7/39, mb1mx4.6/55, mbtmp4.6/39, MS4.7/39, Ms1 4.7/39, ms1mx4.6/44, Error ellipse: s-maj=12.9km s-min=9.2km az=137.0*
*BJI **18** 07:59:12.0±0.0, 31.70N×40.70W, h10km, mB5.5/8, mb5.4/9, Ms5.4/6, Ms7 5.2/6*
*NEIC **18** 07:59:14.0±1.3, 31.7N±0.1×40.7W±0.1, h10km±1km, mb5.0/201, Mwc5.4(GCMT), Error ellipse: s-maj=17.7km s-min=13.9km az=157.0*
*GCMT **18** 07:59:16.0±0.1, 31.87N±0.01×40.71W±0.01, h12km, MW5.4/152, Moment Tensor Solution. s84,c122; s152,c298; Duration: 1⁄2 Moment tensor: Scale 10^17 Nm; Mrr-1.31±.01; Mθθ 0.51±.02; Mϕϕ 0.80±.01; Mrθ 0.24±.04; Mrϕ 0.67±.01; Mθϕ-0.21±.04; Best double couple: Ms1.36100×10^17 NP1:ϕs232.00000°, δ46.00000°, λ-71.00000°. NP2:ϕs26.00000°, δ47.00000°, λ-108.00000°. Principal axes: T 1.3360, Plg0.0000°, Azm129.0000°; N 0.0450, Plg13.0000°, Azm39.0000°; P -1.3850, Plg77.0000°, Azm220.00000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **18** 07:59:18, 31.86N×40.73W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-1.31; Mθθ 0.47; Mϕϕ 0.83; Mrθ -0.11; Mθϕ 0.68; Mϕr-0.35; Fault plane solution: Mo1.38000×10^17 NP1:ϕs223.00000°, δ38.00000°, λ-81.00000°. NP2:ϕs32.00000°, δ52.00000°, λ-97.00000°. Principal axes: T 1.4033, Plg7.0000°, Azm127.0000°; N -0.0392, Plg5.0000°, Azm36.0000°; P -1.3641, Plg81.0000°, Azm271.0000°;*

ISC 18 07:59:14.2±0.2, 31.65N±0.05×40.82W±0.05, h10km, n597, σ1.9/608, mb5.0/172, MS4.7/54, 17C-4D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H07S1	**FLORES T-PHASE**	**10.98**	**43**	*e*S	**Sn**	**08 03 51.8**	**-2.5**
ROSA	**Rosais**	**12.46**	**52**	*e*S	**Sn**	**08 04 38.4**	**+7.9**
PGRA	**Graciosa**	**12.80**	**51**	*e*S	**Sn**	**08 04 40.4**	**+1.7**
CMLA	**Cha da Macela**	**13.97**	**60**	*e*S	**Sn**	**08 05 00.7**	**-6.7**
PSMN	**Pico do Norte,**	**14.06**	**63**	*e*S	**Sn**	**08 05 16.9**	**+7.3**
PMOZ	**Porto Moniz, M**	**20.01**	**80**	*e*LR	LR	08 08 17.0	
	2μm,20.0s						
BBSR	**BB Station**	**20.26**	**278**	P	**P**	**08 03 52.9**	**+3.2**
BBSR				IAmb	IAmb	08 04 19.2	
	comp=Z,58nm,1.1s						
DRLN	**Deer Lake**	**21.61**	**329**	P	**P**	**08 04 04.7**	**+0.5**
DRLN				IAmb	IAmb	08 04 05.2	
	comp=Z,72nm,0.9s						
LMN	**Caledonia Moun**	**23.36**	**314**	P	**P**	**08 04 20.7**	**-2.0**
SKI	**Saint Kitts**	**24.45**	**239**	P	**P**	**08 04 33.3**	**-0.1**
BATG	**Bathurst New B**	**24.81**	**316**	P	**P**	**08 04 37.2**	**+0.8**
BATG				IAmb	IAmb	08 04 48.0	
	comp=Z,71nm,1.5s						
F64A	**Sherman**	**25.58**	**312**	P	**P**	**08 04 44.9**	**+1.6**
F64A				IAmb	IAmb	08 04 58.9	
	comp=Z,55nm,1.4s						
E63A	**Oxbow**	**25.86**	**313**	P	**P**	**08 04 46.6**	**+0.8**
E63A				IAmb	IAmb	08 04 48.7	
	comp=Z,54nm,1.4s						
SJG	**San Juan**	**26.56**	**246**	P	**P**	**08 04 53.1**	**+0.7**
	comp=Z,17nm,0.7s,baz=271,slow=1.9,SNR=3.7						
SJG				LR	LR	08 12 58.9	
	comp=Z,565nm,21.5s,baz=58,slow=31						
PTEO	**Sao Teotonio**	**26.98**	**69**	*e*P	**P**	**08 04 57.3**	**+1.2**
	comp=Z,102nm,1.9s						
PCAS	**Casmilo, Conde**	**27.39**	**63**	*e*P	**P**	**08 05 02.1**	**+2.4**
	comp=Z,68nm,2.0s						
PMTG	**Montargil**	**27.49**	**65**	*e*P	**P**	**08 05 00.6**	**0.0**
	comp=Z,47nm,1.7s						
PCVE	**Castro Verde**	**27.53**	**68**	P	**P**	**08 05 00.4**	**-0.6**
PBDV	**Barranco-do-Ve**	**27.60**	**69**	*e*P	**P**	**08 05 01.4**	**-0.3**
	comp=Z,71nm,1.5s						
PVAQ	**Vaqueiros**	**27.78**	**69**	*e*S	**S**	**08 09 48.1**	**+2.2**
PVAQ				*e*LR	LR	08 11 42.2	
	comp=Z,2μm,18.0s						
PGAV	**Gavieira, Arco**	**27.87**	**59**	*e*P	**P**	**08 05 03.9**	**-0.2**
PGAV				*e*LR	LR	08 12 08.6	
	comp=Z,1μm,18.0s						
PVIS	**Viseu**	**27.94**	**62**	*e*P	**P**	**08 05 05.2**	**+0.5**
	comp=Z,67nm,1.9s						
PCAB	**Cabril**	**28.00**	**60**	*e*P	**P**	**08 05 04.5**	**-0.7**
POLO	**Lamas de Olo**	**28.11**	**60**	*e*P	**P**	**08 05 06.2**	**-0.1**
	comp=Z,35nm,1.8s						
PCBR	**Castelo Branco**	**28.14**	**64**	*e*P	**P**	**08 05 04.0**	**-2.5**
	comp=Z,37nm,1.9s						
PVRL	**Vila Real**	**28.16**	**61**	*e*P	**P**	**08 05 06.5**	**-0.1**
	comp=Z,64nm,1.7s						
MTE	**Manteigas**	**28.16**	**63**	*e*P	**P**	**08 05 05.9**	**-0.8**
	comp=Z,50nm,1.5s						
MTE				*e*S	**S**	**08 09 58.8**	**+6.7**
MTE				*e*LR	LR	08 12 07.1	
	comp=Z,700nm,22.0s						
PMRV	**Marv??o**	**28.16**	**65**	*e*P	**P**	**08 05 05.9**	**-0.8**
	comp=Z,48nm,1.5s						
PMRV				*e*S	**S**	**08 09 59.5**	**+7.4**
PMRV				*e*LR	LR	08 12 03.7	
	comp=Z,658nm,22.0s						
MDP	**Montagnes des**	**28.65**	**205**	LR	LR	08 14 07.6	
	comp=Z,618nm,20.2s,baz=17,slow=31						
MVO	**Moncorvo**	**28.65**	**61**	*e*P	**P**	**08 05 10.7**	**-0.4**
	comp=Z,47nm,1.3s						
MVO				*e*S	**S**	**08 10 03.5**	**+3.7**
MVO				*e*LR	LR	08 12 29.1	
	comp=Z,677nm,20.0s						
PBRG	**Braganca**	**28.96**	**60**	*e*P	**P**	**08 05 13.5**	**-0.3**
	comp=Z,49nm,1.6s						
SCHQ	**Schefferville**	**29.62**	**329**	P	**P**	**08 05 20.1**	**+0.7**
	comp=Z,3.2nm,0.6s,baz=167,slow=7.2,SNR=3.5						
SCHQ				PcP	**PcP**	**08 08 22.9**	**-0.9**
	comp=Z,5.4nm,0.9s,baz=66,slow=4.2,SNR=3.7						
SCHQ				LR	LR	08 16 21.3	
	comp=Z,5μm,19.8s,baz=140,slow=35						
SCHQ	**Schefferville**	**29.62**	**329**	P	**P**	**08 05 20.0**	**+0.6**
SCHQ				IAmb	IAmb	08 05 37.1	
	comp=Z,26nm,1.4s						
PAB	**San Pablo**	**30.52**	**65**	P	**P**	**08 05 27.1**	**-0.6**
PAB				IAmb	IAmb	08 05 29.4	
	comp=Z,19nm,1.1s						
ESDC	**Sonseca Array**	**30.83**	**65**	P	**P**	**08 05 29.5**	**-0.9**
	comp=Z,5.5nm,1.1s,baz=263,slow=9.0,SNR=13						
ESDC				LR	LR	08 15 40.8	
	comp=Z,620nm,19.4s,baz=265,slow=32						
ESDC	**Sonseca Array**	**30.83**	**65**	P	**P**	**08 05 29.1**	**-1.3**
ESBB	**Sonseca Array**	**30.83**	**65**	P	**P**	**08 05 28.6**	**-1.8**
ESBB				IAmb	IAmb	08 05 31.5	
	comp=Z,29nm,1.4s						
SADO	**Sadowa**	**32.53**	**305**	LR	LR	08 18 14.8	
	comp=Z,1μm,18.7s,baz=160,slow=35						
MCPB	**Macapa, AP**	**33.57**	**201**	*e*P	**P**	**08 05 54.2**	**-0.3**
BORG	**Borgarnes**	**35.26**	**14**	LR	LR	08 16 06.5	
	comp=Z,880nm,18.2s,baz=225,slow=29						
EKA	**Eskdalemuir Ar**	**35.48**	**37**	P	**P**	**08 06 09.6**	**-1.1**
	comp=Z,4.4nm,0.6s,baz=239,slow=7.3,SNR=27						
MALB	**Monte Alegre**	**35.68**	**203**	*e*P	**P**	**08 06 13.4**	**+0.7**
SDV	**Santo Domingo**	**35.78**	**237**	*e*P	**P**	**08 06 14.3**	**+0.4**
SDV	**Santo Domingo**	**35.78**	**237**	P	**P**	**08 06 15.7**	**+1.8**
SDV	**Santo Domingo**	**35.78**	**237**	*e*P	**P**	**08 06 15.6**	**+1.8**
SFJD	**Kangerlussuaq**	**35.86**	**353**	LR	LR	08 17 22.7	
	comp=Z,1μm,21.9s,baz=174,slow=30						
ICESG	**Greenland Ices**	**37.49**	**1**	*i* P	**P**	**08 06 27.0**	**-1.0**
RCBR	**Riachuelo**	**37.56**	**172**	*e*P	**P**	**08 06 29.1**	**+0.3**
ARGC	**Ariguani, Magd**	**37.80**	**242**	*e*P	**P**	**08 06 29.6**	**-1.3**
OCAC	**Ocana**	**38.16**	**239**	*e*P	**P**	**08 06 31.8**	**-2.3**
PAMC	**Pamplona, Colo**	**38.32**	**238**	*e*P	**P**	**08 06 35.6**	**-0.2**
SJCC	**San Jacinto, C**	**38.48**	**243**	*e*P	**P**	**08 06 37.4**	**+0.7**
ITTB	**Itaituba**	**38.53**	**204**	*e*P	**P**	**08 06 37.1**	**+0.1**
PRPB	**Parauapebas**	**38.58**	**194**	*e*P	**P**	**08 06 38.3**	**+0.9**
BGES	**Gesves**	**38.64**	**47**	P	**P**	**08 06 37.0**	**-0.7**
WVT	**Waverly**	**38.99**	**290**	P	**P**	**08 06 42.3**	**+1.6**
	baz=82						
BNI	**Bardonecchia**	**39.03**	**56**	P	**P**	**08 06 40.4**	**-0.8**
BNI				IAmb	IAmb	08 06 55.5	
	comp=Z,56nm,1.5s						
WLF	**Walferdange**	**39.19**	**49**	P	**P**	**08 06 41.6**	**-0.6**
WLF	**Walferdange**	**39.19**	**49**	*e*P	**P**	**08 06 41.8**	**-0.4**
	comp=Z,38nm,1.3s,baz=262,slow=8.1						
WLF	**Walferdange**	**39.19**	**49**	P	**P**	**08 06 41.5**	**-0.7**
WLF				IAmb	IAmb	08 06 44.5	
	comp=Z,37nm,1.3s						
MEM	**Membach**	**39.26**	**47**	P	**P**	**08 06 42.0**	**-0.8**
BTNL	**Ternell**	**39.33**	**47**	P	**P**	**08 06 43.2**	**-0.2**
MACA	**Manacapuru-AM**	**39.44**	**212**	*e*P	**P**	**08 06 45.4**	**+0.7**
SENIN	**Lac Senin/Sane**	**39.56**	**54**	P	**P**	**08 06 44.8**	**-0.8**
MOTC	**Monteria, Cord**	**39.56**	**242**	*e*P	**P**	**08 06 46.1**	**+0.4**
RUSC	**La Rusia**	**39.59**	**236**	*e*P	**P**	**08 06 43.9**	**-2.5**
ECH	**Echery**	**39.64**	**51**	P	**P**	**08 06 45.0**	**-1.0**
AHRW	**Bad Neuenahr-A**	**39.92**	**48**	*e*P	**P**	**08 06 48.5**	**+0.2**
	comp=Z,58nm,1.5s,baz=262,slow=8.1						
PTGC	**Puerto Gaitan,**	**40.13**	**234**	*e*P	**P**	**08 06 50.2**	**-0.2**
PTBC	**PUERTO BERRIO,**	**40.13**	**239**	*e*P	**P**	**08 06 48.4**	**-2.0**
W45A	**Hickory Valley**	**40.22**	**288**	P	**P**	**08 06 51.9**	**+0.9**
BFO	**Black Forest**	**40.43**	**51**	*e*P	**P**	**08 06 52.0**	**-0.6**
	comp=Z,48nm,1.4s,baz=262,slow=8.1						
BFO	**Black Forest**	**40.43**	**51**	P	**P**	**08 06 50.8**	**-1.9**
BFO				IAmb	IAmb	08 06 54.9	
	comp=Z,40nm,1.2s						
IBBN	**Ibbenburen**	**40.66**	**45**	*e*P	**P**	**08 06 54.3**	**-0.1**
	comp=Z,71nm,1.3s,baz=262,slow=8.1						
TNS	**Taunus Mts**	**40.74**	**48**	*e*P	**P**	**08 06 54.7**	**-0.5**
	comp=Z,48nm,1.5s,baz=262,slow=8.1						
SMTB	**Santa Maria do**	**40.80**	**190**	*e*P	**P**	**08 06 56.5**	**+0.6**
NPGB	**Novo Progresso**	**40.91**	**202**	*e*P	**P**	**08 06 56.6**	**-0.1**
CHIC	**Chingaza**	**40.93**	**236**	*e*P	**P**	**08 06 56.1**	**-1.4**
TUE	**Stuetta**	**40.98**	**54**	P	**P**	**08 06 57.8**	**+0.4**
TUE				IAmb	IAmb	08 07 01.8	
	comp=Z,45nm,1.2s						
SUMG	**Summit**	**41.01**	**1**	P	**P**	**08 06 57.0**	**-0.5**
SUMG	**Summit**	**41.01**	**1**	*i* P	**P**	**08 06 57.0**	**-0.5**
	comp=Z,22nm,0.9s						
SUMG	**Summit**	**41.01**	**1**	*i* P	**P**	**08 06 57.1**	**-0.5**
SUMG				IAmb	IAmb	08 06 58.9	
	comp=Z,22nm,0.9s						
DBBC	**Dabeiba**	**41.11**	**241**	*e*P	**P**	**08 06 58.7**	**+0.1**
HELC	**Santa Helena**	**41.15**	**239**	*e*P	**P**	**08 06 59.0**	**-0.3**
ROSC	**El Rosal**	**41.20**	**237**	P	**P**	**08 07 00.7**	**+1.0**
	comp=Z,10nm,0.8s,baz=134,slow=1.1,SNR=5.5						
ROSC				LR	LR	08 22 48.9	
	comp=Z,983nm,21.7s,baz=30,slow=34						
ROSC	**El Rosal**	**41.20**	**237**	P	**P**	**08 07 00.9**	**+1.2**
DAVA	**Damuels**	**41.39**	**53**	*e*P	**P**	**08 07 00.9**	**+0.2**
	comp=Z,32nm,1.2s						
KEST	**Kesra**	**41.57**	**70**	P	**P**	**08 07 01.3**	**-1.0**
	comp=Z,6.8nm,0.9s,baz=262,slow=8.3,SNR=5.1						
KEST				LR	LR	08 21 13.0	
	comp=Z,565nm,21.4s,baz=225,slow=32						
KEST	**Kesra**	**41.57**	**70**	P	**P**	**08 07 01.9**	**-0.4**
TIC	**Toumodi**	**41.65**	**119**	*e*PKP2	**P**	**08 07 04.9**	**+1.9**
LCAR	**Lake Charles**	**41.66**	**290**	P	**P**	**08 07 03.8**	**+0.9**
GUVC	**San Jose del G**	**41.66**	**232**	*e*P	**P**	**08 07 02.0**	**-1.1**
CBOC	**Ciudad Bolivar**	**41.73**	**239**	*e*P	**P**	**08 07 04.5**	**+0.7**
DBIC	**Dimbokro**	**41.76**	**119**	P	**P**	**08 07 02.8**	**-1.1**
	comp=Z,1.7nm,0.5s,baz=279,slow=10,SNR=1.7						
DBIC				LR	LR	08 23 02.8	
	comp=Z,2μm,18.2s,baz=298,slow=34						
TAM	**Tamanrasset**	**41.88**	**90**	P	**P**	**08 07 05.3**	**+0.3**
LIC	**Lamto**	**41.92**	**120**	*e*PKP2	**P**	**08 07 03.2**	**-2.0**
	comp=Z,94nm,1.4s						
FETA	**Feichten**	**41.95**	**53**	*e*P	**P**	**08 07 05.4**	**+0.1**
	comp=Z,13nm,1.1s						
RETA	**Reutte**	**42.00**	**53**	*e*P	**P**	**08 07 05.6**	**0.0**
	comp=Z,18nm,1.0s						
KIC	**Kosan Boka**	**42.05**	**119**	*e*PKP2	**P**	**08 07 04.0**	**-2.2**
	comp=Z,49nm,1.3s						
TOLC	**Tolima**	**42.09**	**237**	*e*P	**P**	**08 07 05.8**	**-1.2**
NRDL	**Niedersach Rie**	**42.11**	**45**	*e*P	**P**	**08 07 06.3**	**+0.1**
	comp=Z,63nm,1.1s,baz=262,slow=8.1						
CLZ	**Clausthal**	**42.17**	**46**	*e*P	**P**	**08 07 06.9**	**+0.1**
	comp=Z,42nm,1.1s,baz=262,slow=8.1						
MOTA	**Moosalm**	**42.22**	**53**	*e*P	**P**	**08 07 07.5**	**0.0**
	comp=Z,30nm,1.6s						
SQTA	**Sankt Quirin**	**42.29**	**53**	*e*P	**P**	**08 07 08.1**	**+0.1**
	comp=Z,21nm,0.9s						
OSSC	**Osservatorio P**	**42.29**	**58**	P	**P**	**08 07 06.9**	**-1.1**
OSSC				IAmb	IAmb	08 07 07.5	
	comp=Z,27nm,1.0s						
PRAC	**Prado**	**42.39**	**236**	*e*P	**P**	**08 07 07.7**	**-1.3**
ASSE	**Asse, Remlinge**	**42.40**	**46**	*e*P	**P**	**08 07 08.8**	**+0.3**
	comp=Z,270nm,2.3s,baz=262,slow=8.1						
GRF	**Grafenberg Arr**	**42.46**	**49**	*e*P	**P**	**08 07 08.8**	**-0.4**
	comp=Z,45nm,1.3s,baz=262,slow=8.1						
GRF				*e*L	L	08 21 39.9	
	comp=Z,765nm,19.2s						
FCAR	**Ozark Folk Cen**	**42.47**	**290**	P	**P**	**08 07 09.9**	**+0.4**
BSEG	**Bad Segeberg**	**42.48**	**43**	*e*P	**P**	**08 07 09.1**	**-0.1**
	comp=Z,112nm,1.0s,baz=262,slow=8.1						
ORTC	**Ortega, Tolima**	**42.51**	**237**	*e*P	**P**	**08 07 08.0**	**-2.0**
WATA	**Walderalm**	**42.54**	**53**	*e*P	**P**	**08 07 09.9**	**-0.1**
	comp=Z,31nm,1.3s						
CTI	**Castel Tesino**	**42.56**	**55**	P	**P**	**08 07 09.3**	**-0.9**
WTTA	**Wattenberg**	**42.58**	**53**	*e*P	**P**	**08 07 10.4**	**0.0**
	comp=Z,13nm,0.9s						
W41B	**Gary Mavity, V**	**42.69**	**289**	P	**P**	**08 07 12.6**	**+1.4**
	baz=79						
W41B	**Gary Mavity, V**	**42.69**	**289**	P	**P**	**08 07 11.2**	**0.0**
W41B				IAmb	IAmb	08 07 19.4	
	comp=Z,36nm,1.4s						
WHAR	**Wooly Hollow**	**42.70**	**289**	P	**P**	**08 07 11.3**	**0.0**
MACC	**Macarena, Meta**	**42.78**	**233**	*e*P	**P**	**08 07 10.1**	**-2.1**
MOX	**Moxa**	**42.80**	**48**	*e*P	**P**	**08 07 11.5**	**-0.5**
	comp=Z,35nm,1.5s,baz=262,slow=8.1						
MOX				*e*L	L	08 21 42.8	
	comp=Z,911nm,21.3s						
U40A	**Yellville**	**42.97**	**291**	P	**P**	**08 07 14.7**	**+1.2**
	baz=80						
MANZ	**Manzenberg**	**43.05**	**49**	*e*P	**P**	**08 07 13.6**	**-0.5**
	baz=262,slow=8.1						
TOA0

BRG	Berggiesshubel	44.29	48	eP		P	08 07 23.4	-0.5	
	comp=E,63nm,1.7s,baz=262,slow=8.1								
MOA	Molln	44.38	52	P		P	08 07 23.9	-0.8	
	comp=E,29nm,1.4s								
PCON	Cinco Dias	44.43	236	eP		P	08 07 25.8	-0.3	
FLOC	Florencia	44.43	235	eP		P	08 07 19.2	-6.3	
ULM	Lac du Bonnet	44.44	311	P		P	08 07 24.8	-0.4	
	comp=E,3.7nm,0.6s,baz=86,slow=8.5,SNR=6.8								
ULM				LR		LR	08 26 11.2		
	comp=E,912nm,19.7s,baz=91,slow=36								
SNDB	Serra Nova Dou	44.52	195	eP		P	08 07 26.2	+0.1	
PRA	Prague	44.56	49	eS		S	08 14 02.1	+0.5	
PRA				AMS		AMS	08 22 30.0		
	comp=E,300nm,19.4s								
OBKA	Obir	44.57	54	eP		P	08 07 25.7	-0.7	
	comp=E,24nm,0.7s								
PRU	Pruhonice	44.62	49	eP		P	08 07 26.6	0.0	
PRU				eS		S	08 14 02.2	-0.4	
PRU				AMS		AMS	08 22 40.0		
	comp=E,600nm,15.0s								
NB2	NORSAR Subarra	44.64	33	P		P	08 07 26.0	-0.7	
	comp=Z,207nm,3.3s,baz=253,slow=8.6								
NB2	NORSAR Subarra	44.64	33	P		P	08 07 26.0	-0.7	
	baz=253,slow=8.6								
NOA	NORSAR Array B	44.64	33	P		P	08 07 25.9	-0.7	
	comp=Z,3.7nm,0.7s,baz=254,slow=8.1,SNR=14								
NOA				LR		LR	08 22 24.6		
	comp=Z,430nm,20.8s,baz=260,slow=31								
CLDB	Colider	44.65	201	eP		P	08 07 26.3	-0.9	
PVCC	Panska Ves	44.67	48	eP		P	08 07 27.0	0.0	
PVCC				AMS		AMS	08 23 30.0		
	comp=Z,1μm,19.2s								
SOTA	Rioblanco	44.71	236	eP		P	08 07 28.9	+0.5	
NC303	NORSAR Array S	44.77	33	P		P	08 07 26.4	-1.2	
NC303				IAmb		IAmb	08 07 35.5		
	comp=Z,37nm,1.4s								
L34A	Svendsen Farm,	44.96	299	P		P	08 07 30.2	+0.8	
ECSD	EROS Data Cent	44.99	302	P		P	08 07 30.9	+1.2	
	baz=86								
ECSD	EROS Data Cent	44.99	302	P		P	08 07 30.1	+0.4	
GDU01	Guandu, BA	45.12	178	eP		P	08 07 31.9	+1.0	
TREC	Trest	45.21	50	AMS		AMS	08 26 20.0		
	comp=Z,500nm,18.0s								
ARSA	Arzberg	45.23	53	eP		P	08 07 30.2	-1.3	
	comp=Z,12nm,1.0s								
ACON	Acoyapa	45.23	255	P		P	08 07 33.1	+1.2	
X37A	Clayton	45.32	289	P		P	08 07 33.3	+0.9	
X37A				IAmb		IAmb	08 07 40.3		
	comp=Z,17nm,0.9s								
MATN	Matagalpa	45.34	256	P		P	08 07 34.9	+2.0	
MATN				IAmb		IAmb	08 07 42.4		
	comp=Z,24nm,1.2s								
TUL1	Leonard	45.39	291	P		P	08 07 33.5	+0.6	
TUL1				IAmb		IAmb	08 07 45.8		
	comp=Z,23nm,1.0s								
CONA	Conrad Observa	45.45	52	eP		P	08 07 32.4	-0.9	
	comp=Z,8.6nm,1.0s								
UPC	Upice	45.59	48	AMS		AMS	08 24 00.0		
	comp=Z,1μm,20.5s								
CHVC	Chvalec	45.62	48	eP		P	08 07 34.4	-0.2	
CHVC				AMS		AMS	08 24 10.0		
	comp=Z,1μm,20.0s								
SAML	Samuel	45.69	212	P		P	08 07 35.4	0.0	
SAML				IAmb		IAmb	08 07 36.4		
	comp=Z,20nm,0.9s								
SAML	Samuel	45.69	212	eP		P	08 07 35.0	-0.4	
OSTC	Ostas	45.72	48	eP		P	08 07 35.1	-0.3	
OSTC				eS		S	08 14 25.5	+7.0	
OSTC				AMS		AMS	08 24 10.0		
	comp=Z,1μm,19.2s								
T35A	Sooner Cattle	45.77	292	P		P	08 07 36.7	+0.7	
KSP	Ksiaz	45.78	48	eP		P	08 07 35.8	0.0	
DPC	Dobruska-Polom	45.78	49	eP		P	08 07 35.3	-0.6	
DPC				eS		S	08 14 27.0	+7.6	
KRUC	Moravsky	45.80	50	eP		P	08 07 35.2	-0.8	
PUAC	Puerto Asis, P	45.81	235	eP		P	08 07 36.0	-0.4	
GCUF	Volcan Galeras	45.87	236	eP		P	08 07 36.8	-0.7	
TGUH	Tegucigalpa,Un	45.88	258	P		P	08 07 37.5	+0.4	
VRAC	Vranov	45.94	50	eP		P	08 07 35.9	-1.2	
KRLC	Kraliky	46.07	49	eP		P	08 07 37.8	-0.4	
KRLC				eS		S	08 14 28.2	+4.6	
KRLC				AMS		AMS	08 23 50.0		
	comp=Z,500nm,21.7s								
ZST	Bratislava	46.28	52	eP		P	08 07 39.0	-0.8	
DAG	Danmarks Havn	46.37	7	i P		P	08 07 38.7	-1.3	
	comp=Z,6.9nm,0.9s								
DAG	Danmarks Havn	46.37	7	i P		P	08 07 38.8	-1.3	
DAG				IAmb		IAmb	08 07 42.5		
	comp=Z,6.9nm,0.9s								
MODS	Modra-Piesok	46.39	51	eP		P	08 07 38.9	-1.8	
MORC	Moravsky Berou	46.56	49	eP		P	08 07 41.4	-0.6	
MORC	Moravsky Berou	46.56	49	P		P	08 07 41.0	-1.0	
MORC				IAmb		IAmb	08 07 41.9		
	comp=Z,15nm,1.3s								
JANB	Januaria	46.56	185	eP		P	08 07 42.2	-0.1	
H10N2	ASCENSION HYDR	46.63	143	T		T	08 57 05.7		
	baz=329,slow=75,SNR=354								
H10N3	ASCENSION HYDR	46.63	143	T		T	08 57 06.0		
	baz=329,slow=75,SNR=248								
JAVC	Velka Javorina	46.65	51	eP		P	08 07 42.7	0.0	
H10N1	ASCENSION HYDR	46.65	143	T		T	08 57 07.2		
	baz=329,slow=75,SNR=364								
OKC	Ostrava-Krasne	46.95	49	eS		S	08 14 40.9	+4.8	
OKC				AMS		AMS	08 24 40.0		
	comp=Z,600nm,18.0s								
VYHS	Vyhne	47.43	51	eP		P	08 07 47.9	-0.9	
H10S3	ASCENSION HYDR	47.50	144	T		T	08 58 12.1		
	baz=328,slow=74,SNR=290								
H10S2	ASCENSION HYDR	47.51	144	T		T	08 58 15.5		
	baz=252,slow=74,SNR=204								
BDFB	Brasilia	47.52	189	P		P	08 07 50.3	+0.4	
	comp=Z,5.8nm,0.7s,baz=28,slow=2.9,SNR=6.5								
BDFB				LR		LR	08 25 02.3		
	comp=Z,931nm,19.6s,baz=336,slow=33								
WHTX	Lake Whitney,	47.64	286	P		P	08 07 51.4	+0.8	
	baz=74								
WHTX	Lake Whitney,	47.64	286	P		P	08 07 51.1	+0.5	
LANS	Liptovska Anna	47.82	50	eP		P	08 07 50.8	-1.1	
ETMB	Extrema	47.87	215	eP		P	08 07 51.0	-1.4	
OJC	Ojcow	48.01	49	eP		P	08 07 53.4	+0.1	
OJC	Ojcow	48.01	49	P		P	08 07 52.4	-0.9	
OJC				IAmb		IAmb	08 07 54.9		
	comp=Z,19nm,1.1s								
WMOK	Wichita Mounta	48.03	290	P		P	08 07 54.3	+0.7	
	baz=76								
WMOK	Wichita Mounta	48.03	290	P		P	08 07 53.5	-0.2	
WMOK				IAmb		IAmb	08 08 06.0		
	comp=Z,17nm,1.2s								
VILB	Vilhena	48.09	206	eP		P	08 07 54.6	+0.5	
PSZ	Piszkesteto	48.16	52	P		P	08 07 55.6	+1.0	
PSZ				IAmb		IAmb	08 08 00.2		
	comp=Z,14nm,1.2s								
ARAG	Araguaiana, MT	48.25	194	eP		P	08 07 55.9	+0.5	
NIE	Niedzica	48.36	50	eP		P	08 07 56.5	+0.5	
FFC	Flin Flon	48.40	317	P		P	08 07 57.6	+1.4	
FFC				IAmb		IAmb	08 08 08.0		
	comp=Z,20nm,1.2s								
CRVS	Cervenica-Dubn	49.15	51	eP		P	08 08 02.4	+0.4	
NAN01	Guarapari, ES	49.22	179	eP		P	08 08 01.7	-1.0	
ABTX	Abilene, Hawle	49.26	288	P		P	08 08 03.7	+0.6	
	baz=74								
ABTX	Abilene, Hawle	49.26	288	P		P	08 08 02.5	-0.6	
ABTX				IAmb		IAmb	08 08 15.7		
	comp=Z,15nm,1.1s								
BZS	Buzias	49.54	55	⇑P		P	08 08 04.8	-0.3	
CZSB	Cruzeiro do Su	49.62	223	eP		P	08 08 05.2	-0.8	
KOLS	Kolonicke sedl	49.68	50	eP		P	08 08 06.0	-0.1	
IPMB	Ipameri, GO	49.86	189	eP		P	08 08 07.7	0.0	
KWP	Kalwaria Pacla	49.91	50	eP		P	08 08 08.1	+0.2	
JCT	Junction City	49.99	285	P		P	08 08 09.2	+0.4	
	baz=72								
JCT	Junction City	49.99	285	P		P	08 08 08.6	-0.2	
JCT				IAmb		IAmb	08 08 17.0		
	comp=Z,14nm,1.0s								
PTLB	Pontes e Lacer	50.02	203	eP		P	08 08 09.3	+0.4	
SUW	Suwalki	50.04	44	eP		P	08 08 07.6	-1.2	
HERR	Herculane	50.19	56	⇑P		P	08 08 09.7	-0.3	
AMTX	Amarillo	50.31	291	P		P	08 08 12.3	+1.1	
	baz=75								
GZR	Gura Zlata	50.37	55	⇓P		P	08 08 12.2	+0.7	
DEV	Deva	50.40	54	⇑P		P	08 08 11.8	+0.2	
RES	Resolute Bay	50.48	344	P		P	08 08 10.4	-1.3	
	comp=Z,5.5nm,1.0s,baz=106,slow=4.8,SNR=5.0								
RES	Resolute Bay	50.48	344	P		P	08 08 12.2	+0.5	
RES				IAmb		IAmb	08 08 22.2		
	comp=Z,26nm,1.3s								
PABE	Paberze	50.50	42	eP		P	08 08 11.4	-0.7	
PP1B	Ponte de Pedra	50.79	197	eP		P	08 08 14.8	0.0	
CMIG	Matias Romero	50.86	267	LR		LR	08 31 12.8		
	comp=Z,2μm,18.5s,baz=129,slow=38								
SIV	San Ignacio	51.20	205	P		P	08 08 17.9	0.0	
	comp=Z,5.3nm,0.9s,baz=45,slow=6.6,SNR=17								
MSTX	Muleshoe	51.42	290	P		P	08 08 20.2	+0.6	
	baz=74								
MSTX	Muleshoe	51.42	290	P		P	08 08 20.2	+0.6	
MSTX				IAmb		IAmb	08 08 32.6		
	comp=Z,19nm,1.1s								
LAO	LASA Array	51.46	307	P		P	08 08 20.3	+0.7	
	baz=82								
LAO	LASA Array	51.46	307	P		P	08 08 19.6	-0.1	
LAO				IAmb		IAmb	08 08 25.4		
	comp=Z,15nm,1.1s								
ARR	Arges	51.67	55	⇑P		P	08 08 21.0	-0.3	
ISAL	Salakas	51.72	42	eP		P	08 08 20.7	-0.7	
BUR08	Bucovina Ar. S	51.75	52	P		P	08 08 21.4	-0.5	
BUR08				IAmb		IAmb	08 08 25.9		
	comp=Z,25nm,1.1s								
BURAR	Bucovina Array	51.76	52	⇑P		P	08 08 21.3	-0.7	
BURAR	Bucovina Array	51.76	52	P		P	08 08 20.8	-1.2	
FINES	FINESS Array B	51.77	34	P		P	08 08 21.1	-0.6	
	comp=Z,16nm,0.8s,baz=266,slow=5.5,SNR=34								
FINES				LR		LR	08 26 48.1		
	comp=Z,424nm,20.2s,baz=264,slow=32								
FINES	FINESS Array B	51.77	34	P		P	08 08 20.1	-1.6	
FIA1	FINESS Array S	51.78	34	P		P	08 08 20.9	-0.8	
IIGN	Ignalina	51.78	42	eP		P	08 08 21.1	-0.7	
ITRB	Iturama	51.88	191	eP		P	08 08 22.8	0.0	
T25A	Trinidad	51.90	295	P		P	08 08 23.8	+0.5	
VOIR		51.95	55	⇑P		P	08 08 22.7	-0.7	
VSU	Vasula	52.02	38	eP		P	08 08 22.7	-0.9	
IDID	Didziasalis	52.08	42	eP		P	08 08 23.4	-0.6	
N23A	Red Feather La	52.23	300	P		P	08 08 28.0	+2.2	
	baz=78								
N23A	Red Feather La	52.23	300	P		P	08 08 26.1	+0.3	
N23A				IAmb		IAmb	08 08 38.4		
	comp=Z,23nm,1.4s								
BIZ	Bicaz	52.45	53	⇑P		P	08 08 26.8	-0.2	
ARCES	ARCESS Array B	52.46	24	P		P	08 08 25.9	-0.9	
	comp=Z,3.1nm,0.7s,baz=318,slow=1.6,SNR=6.9								
ARCES				LR		LR	08 26 59.5		
	comp=Z,153nm,20.7s,baz=275,slow=32								
PRAR	RASCA	52.48	52	⇓P		P	08 08 26.9	-0.3	
BSCB	Bom Sucesso	52.48	185	eP		P	08 08 28.1	+0.7	
MLR	Muntele Rosu	52.57	54	⇑P		P	08 08 27.7	-0.3	
MLR	Muntele Rosu	52.57	54	P		P	08 08 26.9	-1.1	
ATAH	Atahualpa	52.68	230	P		P	08 08 30.1	+0.7	
	comp=Z,7.7nm,0.9s,baz=152,slow=6.1,SNR=5.2								
MICGM	Minsk	52.78	43	eP		P	08 08 28.0	-1.3	
MICGM				eLR		LR	08 25 20.0		
BB19B	Bebedouro	52.93	189	eP		P	08 08 30.9	+0.1	
PLOR	Plostina	52.99	54	⇑P		P	08 08 31.2	+0.1	
VRI	Vrincioaia	53.05	54	⇑P		P	08 08 31.7	+0.3	
TXAR	Lajitas Array	53.54	285	P		P	08 08 35.4	0.0	
	comp=Z,1.6nm,0.8s,baz=90,slow=7.6,SNR=11								
TXAR				LR		LR	08 29 24.0		
	comp=Z,684nm,21.4s,baz=0.0,slow=34								
TXAR	Lajitas Array	53.54	285	P		P	08 08 34.9	-0.5	
TX31	Lajitas Ar. Si	53.54	285	P		P	08 08 34.8	-0.5	
TX31				IAmb		IAmb	08 08 48.4		
	comp=Z,19nm,1.1s								
TX32	Lajitas Array	53.54	285	P		P	08 08 35.4	0.0	
S22A	4UR Ranch, Cre	53.62	296	P		P	08 08 37.4	+1.3	
	baz=75								
EGMT	Eagleton	53.65	309	P		P	08 08 37.2	+1.3	
	baz=81								
EGMT	Eagleton	53.65	309	P		P	08 08 37.0	+1.1	
AQDB	Aquidauana	53.76	197	eP		P	08 08 37.5	+0.7	
SORM	Soroca	53.78	51	⇑P		P	08 08 34.6	-2.1	
TLIG	Tlapa	53.79	269	P		P	08 08 38.3	+1.0	
TLIG				IAmb		IAmb	08 08 51.0		
	comp=Z,23nm,1.1s								
RLMT	Red Lodge	53.80	305	P		P	08 08 37.9	+0.7	
	baz=79								
RLMT	Red Lodge	53.80	305	P		P	08 08 37.8	+0.5	
RLMT				IAmb		IAmb	08 08 53.4		
	comp=Z,19nm,1.3s								
PCMB	Pacaembu	53.89	192	eP		P	08 08 38.2	+0.5	
AKASG	Malin Array Be	53.98	48	P		P	08 08 36.7	-1.4	
	comp=Z,35nm,0.8s,baz=277,slow=6.4,SNR=29								
AKASG				LR		LR	08 29 38.7		
	comp=Z,504nm,18.2s,baz=265,slow=34								
AKASG	Malin Array Be	53.98	48	P		P	08 08 35.7	-2.4	
AKBB	Malin Array Si	53.98	48	P		P	08 08 35.7	-2.4	
IDI	Anoyia	54.03	67	⇑P		P	08 08 39.8	+0.9	
IDI	Anoyia	54.03	67	P		P	08 08 37.6	-1.2	
IDI				IAmb		IAmb	08 08 40.6		
	comp=Z,13nm,0.9s								
ANMO	Albuquerque	54.08	292	LR		LR	08 29 25.2		
	comp=Z,2μm,21.7s,baz=74,slow=34								
ANMO	Albuquerque	54.08	292	P		P	08 08 41.0	+1.6	
	baz=73								
ANMO	Albuquerque	54.08	292	P		P	08 08 40.1	+0.7	
HARR	Harsova	54.09	55	⇑P		P	08 08 37.8	-1.3	
CFR	Carcaliu	54.14	55	⇑P		P	08 08 38.2	-1.1	
MNTX	Cornudas Mount	54.18	288	P		P	08 08 40.4	+0.5	
	baz=72								
MNTX	Cornudas Mount	54.18	288	P		P	08 08 39.9	0.0	
MAN01	Angra dos Reis	54.29	184	eP		P	08 08 41.5	+0.9	
LPAZ	La Paz	54.40	213	P		P	08 08 42.1	-0.1	
	comp=Z,5.8nm,0.8s,baz=32,slow=8.6,SNR=15								
LPAZ				LR		LR	08 30 33.0		
	comp=Z,680nm,20.1s,baz=20,slow=34								
LPAZ	La Paz	54.40	213	P		P	08 08 41.8	-0.4	
LPAZ				IAmb		IAmb	08 08 47.0		
	comp=Z,12nm,1.0s								
LPAZ	La Paz	54.40	213	eP		P	08 08 41.9	-0.4	
BNM	Barren Site	54.44	292	P		P	08 08 42.5	+0.5	
TIRR	Tirgusor	54.48	55	⇑P		P	08 08 41.3	-0.6	
PD31	Pinedale Array	54.48	303	P		P	08 08 41.9	-0.3	
PD31				IAmb		IAmb	08 08 57.8		
	comp=Z,17nm,1.0s								
PDAR	Pinedale Array	54.48	303	P		P	08 08 42.2	0.0	
	comp=Z,5.0nm,0.8s,baz=83,slow=7.8,SNR=38								
PDAR				LR		LR	08 31 21.6		
	comp=Z,2μm,18.3s,baz=103,slow=35								
PDAR	Pinedale Array	54.48	303	P		P	08 08 41.9	-0.3	
BW06	Boulder Array	54.48	303	P		P	08 08 42.4	+0.1	
	baz=77								
BW06	Boulder Array	54.48	303	P		P	08 08 41.9	-0.3	
BW06				IAmb		IAmb	08 08 57.8		
	comp=Z,18nm,1.0s								
YMP	Mirror Lake Pl	54.50	305	P		P	08 08 42.5	+0.1	
VAO	Valinhos	54.66	187	eP		P	08 08 43.6	+0.2	
YHH	Holmes Hill	54.97	305	P		P	08 08 47.0	+1.1	
RDMU	Red Mountain	54.99	300	P		P	08 08 46.6	+0.7	
FLWY	Flagg Ranch	55.01	304	P		P	08 08 46.7	+0.7	
FLWY				IAmb		IAmb	08 09 00.7		
	comp=Z,14nm,1.2s								
YKA	Yellowknife Ar	55.04	327	P		P	08 08 46.0	+0.4	
	comp=Z,2.1nm,0.8s,baz=83,slow=7.5,SNR=3.8								
YKA				LR		LR	08 31 23.5		
	comp=Z,2μm,20.6s,baz=0.0,slow=35								
MVCO	Mesa Verde	55.04	296	P		P	08 08 47.8	+1.5	
	baz=74								
MVCO	Mesa Verde	55.04	296	P		P	08 08 47.4	+1.0	
YMR	Madison River	55.08	305	P		P	08 08 47.5	+1.0	
PURM	Purcari	55.08	53	⇓P		P	08 08 45.5	-0.7	
SNOW	Snow King Moun	55.19	304	P		P	08 08 47.5	+0.1	
SNOW				IAmb		IAmb	08 08 55.1		
	comp=Z,19nm,1.0s								
YHL	Hebgen Lake	55.19	305	P		P	08 08 48.0	+0.6	
IMW	Indian Meadow	55.22	304	P		P	08 08 48.0	+0.3	
IMW				IAmb		IAmb	08 09 03.7		
	comp=Z,21nm,1.2s								
HRY	Holter Researc	55.26	308	P		P	08 08 48.1	+0.4	
REDW	Red Top Meadow	55.28	303	P		P	08 08 47.9	-0.1	
REDW				IAmb		IAmb	08 09 04.0		
	comp=Z,20nm,1.1s								
TRCB	Terra Rica	55.31	193	eP		P	08 08 48.2	+0.2	
TPAW	Teton Pass	55.32	304	P		P	08 08 49.4	+1.1	
TPAW				IAmb		IAmb	08 09 04.4		
	comp=Z,21nm,1.2s								
FRTB	Fartura	55.32	190	eP		P	08 08 48.0	-0.1	
BOZ	Bozeman (W)	55.35	306	P		P	08 08 49.4	+1.0	
KARP	Karpathos	55.74	66	P		P	08 08 49.5	-1.7	
121A	Cookes Peak, D	55.85	290	P		P	08 08 52.5	+0.3	
PET01	Itanhaem-SP	55.97	187	eP		P	08 08 51.7	-0.9	
HPIG		56.02	283	P		P	08 08 53.8	+0.3	
DLMT	Dillon	56.06	306	P		P	08 08 54.7	+1.2	
DLMT				IAmb		IAmb	08 09 05.7		
	comp=Z,19nm,1.2s								
SRU	San Rafael Swe	56.07	298	P		P	08 08 54.4	+0.7	
HWUT	Hardware Ranch	56.20	302	P		P	08 08 54.8	+0.2	
HWUT				IAmb		IAmb	08 09 06.6		
	comp=Z,16nm,1.1s								
TCUT	Toone Canyon	56.21	301	P		P	08 08 56.3	+1.6	
JLU	Jordanelle	56.37	300	P		P	08 08 56.8	+0.9	
W18A	Petrified Fore	56.60	294	P		P	08 08 58.6	+1.0	
	baz=72								
W18A	Petrified Fore	56.60	294	P		P	08 08 58.3	+0.7	
Q16A	Castle Valley	56.61	298	P		P	08 08 58.6	+1.0	
MPU	Maple Canyon	56.66	300	P		P	08 08 58.8	+0.9	
BCYI	Bear Canyon	56.86	305	P		P	08 09 00.7	+1.4	
HVU	Hansel Valley	57.03	302	P		P	08 09 00.5	0.0	
PTGB	Pitanga	57.07	192	eP		P	08 09 00.6	-0.1	
BGU	Big Grassy Mou	57.44	301	P		P	08 09 03.7	+0.3	
MSU	Marysvale	57.48	298	P		P	08 09 04.2	+0.5	
DUG	Dugway, Tooele	57.48	300	P		P	08 09 04.6	+1.0	
	baz=74								
DUG	Dugway, Tooele	57.48	300	P		P	08 09 03.3	-0.4	
DUG				IAmb		IAmb	08 09 20.1		
	comp=Z,19nm,1.4s								
MVU	Marysvale	57.51	298	P		P	08 09 04.3	+0.4	
ELL	Elmali	57.51	64	P		P	08 09 03.7	-0.2	
MNMC	Minye Minye	57.55	213	P		P	08 09 03.3	-1.0	
HLID	Hailey	57.75	304	P		P	08 09 07.0	+1.5	
WUAZ	Wupatki	57.75	295	P		P	08 09 06.5	+0.8	
WUAZ				IAmb		IAmb	08 09 19.9		
	comp=Z,16nm,1.3s								
PB11	IPOC Station P	58.12	212	P		P	08 09 08.1	-0.1	
X16A	Lo Mia Camp, P	58.15	293	P		P	08 09 10.2	+1.7	
U15A	North Rim	58.18	296	P		P	08 09 10.2	+1.4	
U15A				IAmb		IAmb	08 09 23.1		
	comp=Z,17nm,1.5s								
PSGCX	Pisagua	58.19	213	P		P	08 09 07.4	-1.3	
PSGCX				IAmb		IAmb	08 09 10.3		
	comp=Z,14nm,1.0s								
PB08	IPOC Station P	58.23	212	P		P	08 09 08.4	-0.9	
PB08				IAmb		IAmb	08 09 18.5		
	comp=Z,13nm,1.1s								
KLMR	Klimovskoe	58.30	35	eP		P	08 09 04.4	-4.5	
KLMR				AMP			08 09 11.9		
	comp=Z,40nm,1.9s								
KLMR				LR		LR	08 28 55.3		
KLMR				AMP			08 30 29.1		
	comp=Z,120nm,16.2s								
KNB	Kanab	58.41	297	P		P	08 09 10.2	0.0	
C36M	Paulatuk	58.42	336	P		P	08 09 09.3	-0.2	
	baz=84								
NEW	Newport	58.44	310	P		P	08 09 10.4	+0.2	
	baz=76								
NEW	Newport	58.44	310	P		P	08 09 09.9	-0.3	
NEW				IAmb		IAmb	08 09 17.2		
	comp=Z,13nm,1.0s								
PLID	Pearl Lake	58.46	307	P		P	08 09 10.4	-0.2	
PLID				IAmb		IAmb	08 09 30.6		
	comp=Z,22nm,1.4s								
CCUT	Cedar City	58.65	297	P		P	08 09 12.5	+0.5	
PSUT	Pine Spring	58.73	299	P		P	08 09 13.1	+0.6	
MFID	Camas Ranch	58.78	305	P		P	08 09 13.0	+0.4	
MFID				IAmb		IAmb	08 09 28.9		
	comp=Z,15nm,1.1s								
SPR3	Spring Creek 3	58.95	299	P		P	08 09 15.7	+1.6	
SPR3				IAmb		IAmb	08 09 21.2		
	comp=Z,12nm,1.3s								
ELK	Elko	59.10	301	LR		LR	08 33 17.2		
	comp=Z,2μm,20.6s,baz=81,slow=35								
PB01	IPOC Station P	59.16	211	P		P	08 09 14.9	-0.5	
PB01				IAmb		IAmb	08 09 20.0		
	comp=Z,15nm,0.9s								
BR131	Keskin Array S	59.42	60	P		P	08 09 16.3	-0.9	
BR131				IAmb		IAmb	08 09 19.3		
	comp=Z,10nm,0.9s								
BRTR	Keskin Array B	59.42	60	P		P	08 09 16.4	-0.9	
	comp=Z,5.6nm,0.8s,baz=270,slow=5.8,SNR=19								
BRTR				LR		LR	08 34 04.7		
	comp=Z,107nm,19.5s,baz=290,slow=35								
BRTR	Keskin Array B	59.42	60	P		P	08 09 15.9	-1.4	
ITAB	Concordia	59.54	192

J05D	**Fort Rock, OR**	**62.59**	**306**	P		**P**	**08 09 39.2**	**+0.5**
	baz=71							
PB14	**IPOC Station P**	**62.70**	**210**	P		**P**	**08 09 38.5**	**-1.2**
PB14				IAmb		IAmb	08 09 40.2	
	comp=Z,8.1nm,0.9s							
VCNR	**Virginia City**	**62.77**	**301**	P		**P**	**08 09 39.8**	**-0.2**
ITQB	**Itaqui**	**62.81**	**195**	*eP*		**P**	**08 09 39.5**	**-0.4**
GO02	**Mina Guanaco**	**62.83**	**209**	P		**P**	**08 09 40.3**	**-0.2**
CPSB	**Cacapava Do Su**	**62.87**	**192**	*eP*		**P**	**08 09 39.6**	**-0.7**
OMMB	**Old Mammoth Mi**	**62.87**	**299**	P		**P**	**08 09 40.9**	**0.0**
MDPB	**Devils Postpil**	**62.92**	**299**	P		**P**	**08 09 41.5**	**+0.4**
NLWA	**Neilton Lookou**	**63.05**	**311**	P		**P**	**08 09 42.1**	**+0.6**
EDW2	**Edwards Air Fo**	**63.07**	**296**	P		**P**	**08 09 42.9**	**+1.0**
	baz=69							
ISA	**Isabella, Lake**	**63.16**	**297**	P		**P**	**08 09 44.1**	**+1.6**
	baz=69							
ISA	**Isabella, Lake**	**63.16**	**297**	P		**P**	**08 09 43.4**	**+0.9**
ISA				IAmb		IAmb	08 09 51.5	
	comp=Z,16nm,1.5s							
M04C	**Macdoel**	**63.50**	**304**	P		**P**	**08 09 45.3**	**+0.5**
	baz=70							
L04D	**Klamath Falls**	**63.68**	**305**	P		**P**	**08 09 45.6**	**-0.4**
	baz=70							
KIRV	**Kirov**	**63.70**	**36**	P		**P**	**08 09 44.5**	**-1.1**
	comp=Z,21nm,0.6s,baz=229,slow=19,SNR=6.8							
CMB	**Columbia Colle**	**63.75**	**300**	P		**P**	**08 09 46.1**	**-0.2**
O03E	**Paynes Creek**	**63.99**	**303**	P		**P**	**08 09 49.1**	**+1.1**
	baz=69							
HUMO	**Hull Mountain**	**64.00**	**306**	P		**P**	**08 09 46.8**	**-1.1**
ORV	**Oroville**	**64.03**	**302**	P		**P**	**08 09 48.9**	**+0.8**
AC02	**Maricunga**	**64.12**	**208**	P		**P**	**08 09 49.4**	**+0.1**
AC02				IAmb		IAmb	08 09 50.8	
	comp=Z,9.0nm,1.0s							
PLTB	**Pedras Altas**	**64.22**	**192**	*eP*		**P**	**08 09 49.8**	**+0.5**
K02D	**Willamette Mer**	**64.47**	**306**	P		**P**	**08 09 51.2**	**+0.2**
	baz=70							
KIV	**Kislovodsk**	**64.48**	**53**	P		**P**	**08 09 51.2**	**+0.2**
KIV				P		**P**	**08 09 51.2**	**+0.2**
KBZ	**Khabaz**	**64.70**	**53**	P		**P**	**08 09 53.2**	**+0.8**
	comp=Z,16nm,0.9s,baz=56,slow=24,SNR=29							
KBZ				LR		LR	08 39 06.1	
	comp=Z,101nm,18.0s,baz=71,slow=37							
GO03	**Copiap**	**65.25**	**209**	P		**P**	**08 09 55.2**	**-0.8**
DAWY	**Dawson**	**65.60**	**331**	P		**P**	**08 09 58.7**	**+0.7**
DAWY				IAmb		IAmb	08 10 04.3	
	comp=Z,9.2nm,1.1s							
AKH	**Akhalkalaki**	**65.94**	**55**	P		**P**	**08 09 59.9**	**-0.8**
AC04	**Llanos de Chal**	**66.13**	**209**	P		**P**	**08 10 01.5**	**-0.1**
BMAR	**Burnt Mountain**	**66.21**	**336**	P		**P**	**08 10 02.1**	**+0.2**
LCO	**Las Campanas**	**66.69**	**208**	P		**P**	**08 10 06.1**	**+0.6**
LCO				IAmb		IAmb	08 10 06.8	
	comp=Z,14nm,1.4s							
K27K	**Chicken**	**66.70**	**332**	P		**P**	**08 10 05.9**	**+1.0**
	baz=65							
K27K	**Chicken**	**66.70**	**332**	P		**P**	**08 10 05.3**	**+0.4**
K27K				IAmb		IAmb	08 10 21.8	
	comp=Z,12nm,1.2s							
BCAR	**Beaver Creek A**	**66.98**	**331**	P		**P**	**08 10 07.2**	**+0.3**
GNI	**Garni**	**67.29**	**56**	P		**P**	**08 10 09.4**	**0.0**
	comp=Z,16nm,0.6s,baz=360,slow=1.1,SNR=9.3							
GNI	**Garni**	**67.29**	**56**	P		**P**	**08 10 09.2**	**-0.2**
GNI				P		**P**	**08 10 09.2**	**-0.2**
GNI	**Garni**	**67.29**	**56**	P		**P**	**08 10 08.9**	**-0.5**
CO01	**Juntas del Tor**	**67.30**	**207**	P		**P**	**08 10 09.8**	**+0.3**
TOLK	**Toolik Lake Re**	**67.33**	**338**	P		**P**	**08 10 09.8**	**+0.8**
	baz=61							
TOLK	**Toolik Lake Re**	**67.33**	**338**	P		**P**	**08 10 08.8**	**-0.1**
TOLK				IAmb		IAmb	08 10 25.0	
	comp=Z,11nm,1.1s							
PRP	**Porcupine Dome**	**67.39**	**334**	P		**P**	**08 10 10.3**	**+0.8**
SCRK	**Sand Creek**	**67.49**	**332**	P		**P**	**08 10 11.0**	**+0.9**
	baz=64							
L26K	**Log Cabin Wild**	**67.65**	**331**	P		**P**	**08 10 11.5**	**+0.5**
	baz=64							
GO04	**Tololo Observa**	**67.75**	**208**	P		**P**	**08 10 12.1**	**-0.2**
ZON	**Zonda**	**68.17**	**205**	P		**P**	**08 10 15.3**	**+0.7**
ZON				IAmb		IAmb	08 10 17.4	
	comp=Z,14nm,1.2s							
COLD	**Coldfoot**	**68.24**	**337**	P		**P**	**08 10 15.0**	**+0.4**
	baz=60							
COLD	**Coldfoot**	**68.24**	**337**	P		**P**	**08 10 14.8**	**+0.1**
IL31		**68.25**	**334**	P		**P**	**08 10 14.7**	**0.0**
IL31				IAmb		IAmb	08 10 23.5	
	comp=Z,17nm,1.1s							
ILAR	**Eielson Array**	**68.25**	**334**	P		**P**	**08 10 15.0**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=52,slow=4.2,SNR=32							
ILAR				LR		LR	08 39 40.6	
	comp=Z,1μm,20.4s,baz=95,slow=36							
ILAR	**Eielson Array**	**68.25**	**334**	P		**P**	**08 10 14.7**	**-0.1**
CO03	**El Pedregal**	**68.30**	**207**	P		**P**	**08 10 15.4**	**-0.2**
CO03				IAmb		IAmb	08 10 16.5	
	comp=Z,15nm,1.1s							
HDA	**Harding Lake**	**68.44**	**333**	P		**P**	**08 10 16.7**	**+0.7**
	baz=62							
HDA	**Harding Lake**	**68.44**	**333**	P		**P**	**08 10 16.4**	**+0.4**
CCB	**Clear Creek Bu**	**68.65**	**334**	P		**P**	**08 10 17.6**	**+0.3**
CO02	**Combarbal**	**68.75**	**208**	P		**P**	**08 10 18.1**	**-0.2**
WRH	**Wood River Hil**	**68.85**	**334**	P		**P**	**08 10 18.3**	**-0.2**
I23K	**Minto, Yukon-K**	**68.98**	**335**	P		**P**	**08 10 20.0**	**+0.8**
	baz=60							
I23K	**Minto, Yukon-K**	**68.98**	**335**	P		**P**	**08 10 20.1**	**+0.8**
I23K				IAmb		IAmb	08 10 31.2	
	comp=Z,20nm,1.4s							
ARU	**Arti**	**69.08**	**36**	P		**P**	**08 10 19.4**	**-0.7**
DHY	**Denali Highway**	**69.25**	**332**	P		**P**	**08 10 20.9**	**-0.4**
KLU	**Klutina**	**69.42**	**330**	P		**P**	**08 10 20.7**	**-1.5**
BWN	**Browne**	**69.52**	**334**	P		**P**	**08 10 22.8**	**+0.2**
MCK	**McKinley**	**69.54**	**333**	P		**P**	**08 10 23.1**	**+0.3**
	baz=60							
RND	**Reindeer**	**69.67**	**333**	P		**P**	**08 10 23.4**	**-0.3**
VA03	**San Esteban**	**69.96**	**206**	P		**P**	**08 10 26.2**	**+0.4**
IMAR	**Indian Mountai**	**70.10**	**336**	P		**P**	**08 10 26.3**	**+0.1**
ROC1	**El Roble**	**70.32**	**207**	P		**P**	**08 10 27.5**	**-0.8**
KTH	**Kantishna Hill**	**70.39**	**333**	P		**P**	**08 10 28.6**	**+0.5**
MT02	**Curacav**	**70.62**	**207**	P		**P**	**08 10 29.6**	**-0.2**
CUT	**Chulitna**	**70.74**	**332**	P		**P**	**08 10 31.2**	**+1.0**
	baz=58							
AKTO	**Aktyubinsk**	**71.48**	**42**	P		**P**	**08 10 34.6**	**-0.3**
	comp=Z,33nm,0.8s,baz=302,slow=5.1,SNR=104							
BO02	**Sierra Bellavi**	**71.85**	**206**	P		**P**	**08 10 37.2**	**0.0**
BO02				IAmb		IAmb	08 10 38.5	
	comp=Z,18nm,1.1s							
NRIK	**Noril'sk**	**72.53**	**17**	P		**P**	**08 10 41.7**	**+0.9**
	comp=Z,15nm,1.0s,baz=45,slow=2.7,SNR=17							
ABKAR	**Akbulak array**	**73.13**	**42**	P		**P**	**08 10 44.0**	**-0.8**
ABKAR				IAmb		IAmb	08 10 45.6	
	comp=Z,10.0nm,0.8s							
ABKAR	**Akbulak array**	**73.13**	**42**	P		**P**	**08 10 43.4**	**-1.4**
H09N1	**TRISTAN DA CUN**	**73.38**	**157**	T		T	09 30 42.9	
	SNR=8.8							
H09W1	**TRISTAN DA CUN**	**73.40**	**157**	T		T	09 30 43.0	
	SNR=18							
MBAR	**Mbarara**	**74.67**	**100**	P		**P**	**08 10 56.0**	**+1.4**
MBAR				P		**P**	**08 10 56.0**	**+1.4**
RAYN	**Ar Rayn**	**75.08**	**71**	P		**P**	**08 10 56.3**	**-0.4**
LODK	**Lodwar**	**76.45**	**94**	P		**P**	**08 11 05.8**	**+1.2**
BRVK	**Borovoye**	**76.64**	**35**	⇑*P*		**P**	**08 11 05.0**	**-0.1**
BRVK				⇑*P*		**P**	**08 11 05.0**	**-0.1**
BRVK	**Borovoye**	**76.64**	**35**	P		**P**	**08 11 04.3**	**-0.7**
BRVK				IAmb		IAmb	08 11 06.1	
	comp=Z,12nm,0.9s							
TIXI	**Tiksi**	**76.73**	**3**	P		**P**	**08 11 04.9**	**-0.3**
TIXI				IAmb		IAmb	08 11 06.1	
	comp=Z,11nm,1.1s							
PLCA	**Paso Flores**	**77.09**	**203**	P		**P**	**08 11 08.1**	**+0.5**
	comp=Z,6.6nm,1.0s,baz=28,slow=8.7,SNR=5.9							
PLCA				LR		LR	08 44 18.1	
	comp=Z,183nm,20.1s,baz=12,slow=35							
PLCA	**Paso Flores**	**77.09**	**203**	P		**P**	**08 11 07.4**	**-0.2**
PLCA				IAmb		IAmb	08 11 08.9	
	comp=Z,11nm,1.1s							
PLCA	**Paso Flores**	**77.09**	**203**	*eP*		**P**	**08 11 08.2**	**+0.6**
GEYT	**Alibeck**	**77.59**	**53**	P		**P**	**08 11 11.5**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=345,slow=10,SNR=2.3							
GEYT				LR		LR	08 45 09.0	
	comp=Z,112nm,21.0s,baz=170,slow=36							
BILL	**Bilibino**	**78.57**	**350**	P		**P**	**08 11 14.7**	**-0.8**
BRZS	**Berezniki**	**79.67**	**37**	*eP*		**P**	**08 11 21.0**	**-0.9**
	baz=37							
BRZS				*eS*		**S**	**08 21 23.3**	**-0.8**
	baz=37							
KMBO	**Kilima Mbogo**	**80.44**	**97**	P		**P**	**08 11 30.4**	**+3.5**
	comp=Z,1.0nm,0.3s,baz=311,slow=5.2,SNR=8.3							
KMBO				LR		LR	08 46 11.3	
	comp=Z,1μm,20.9s,baz=280,slow=35							
KMBO	**Kilima Mbogo**	**80.44**	**97**	P		**P**	**08 11 27.6**	**+0.8**
LSZ	**Lusaka**	**80.90**	**114**	P		**P**	**08 11 29.8**	**+0.7**
LSZ				IAmb		IAmb	08 11 30.8	
	comp=Z,17nm,1.2s							
KURK	**Kurchatov**	**82.15**	**34**	P		**P**	**08 11 34.8**	**-0.2**
KURK				P		**P**	**08 11 34.8**	**-0.2**
KURK	**Kurchatov**	**82.15**	**34**	P		**P**	**08 11 33.0**	**-2.1**
KURK				IAmb		IAmb	08 11 35.2	
	comp=Z,11nm,0.9s							
HRA	**Herat**	**82.29**	**54**	P		**P**	**08 11 35.7**	**-0.7**
ASUD	**Al Ashush, Dub**	**82.34**	**66**	P		**P**	**08 11 36.8**	**+0.2**
ASUD	**Al Ashush, Dub**	**82.34**	**66**	P		**P**	**08 11 35.9**	**-0.7**
ASUD				P		**P**	**08 11 35.9**	**-0.7**
NAZ	**Nazwa, Dubai**	**82.41**	**65**	P		**P**	**08 11 36.7**	**-0.2**
	SNR=5.2							
NAZ				P		**P**	**08 11 36.7**	**-0.2**
	SNR=5.2							
BANOM	**Banah**	**82.42**	**64**	P		**P**	**08 11 36.5**	**-0.5**
BANOM	**Banah**	**82.42**	**64**	P		**P**	**08 11 36.4**	**-0.6**
BANOM				P		**pP**	**08 11 36.7**	**-2.8**
	SNR=5.9							
MSFE	**Esma-Masafi**	**82.61**	**65**	*i* P		**P**	**08 11 36.6**	**-1.4**
	SNR=6.1							
KKAR	**Karatay Array**	**82.63**	**43**	P		**P**	**08 11 36.4**	**-1.3**
ZAA0	**Zalesovo Array**	**82.68**	**29**	P		**P**	**08 11 37.0**	**-0.8**
ZAA0				IAmb		IAmb	08 11 38.6	
	comp=Z,11nm,0.9s							
ZALV	**Zalesovo Beam**	**82.68**	**29**	P		**P**	**08 11 37.5**	**-0.2**
	comp=Z,6.2nm,0.7s,baz=290,slow=7.0,SNR=26							
ZALV				LR		LR	08 46 44.2	
	comp=Z,162nm,20.1s,baz=310,slow=34							
ZALV	**Zalesovo Beam**	**82.68**	**29**	P		**P**	**08 11 36.4**	**-1.3**
MDH	**Madha**	**82.74**	**65**	*i* P		**P**	**08 11 37.7**	**-0.9**
	SNR=7.6							
MDH	**Madha**	**82.74**	**65**	P		**P**	**08 11 38.6**	**0.0**
	SNR=5.4							
MDH				P		**P**	**08 11 38.6**	**0.0**
	SNR=5.4							
UOSS	**Minazif**	**82.86**	**65**	*i* P		**P**	**08 11 38.5**	**-0.8**
	SNR=8.7							
UOSS	**Minazif**	**82.86**	**65**	P		**P**	**08 11 38.7**	**-0.6**
UOSS				P		**P**	**08 11 38.7**	**-0.6**
UOSS	**Minazif**	**82.86**	**65**	P		**P**	**08 11 37.6**	**-1.7**
HATD	**Hatta, Dubai**	**82.86**	**65**	*i* P		**P**	**08 11 39.0**	**-0.3**
	SNR=6.1							
HATD	**Hatta, Dubai**	**82.86**	**65**	P		**P**	**08 11 39.0**	**-0.3**
	SNR=8.4							
HATD				P		**P**	**08 11 39.0**	**-0.3**
	SNR=8.4							
ASHO	**Ashiyiah**	**82.88**	**66**	*i* P		**P**	**08 11 39.0**	**-0.4**
	SNR=13							
ASHO	**Ashiyiah**	**82.88**	**66**	P		**P**	**08 11 38.9**	**-0.6**
	SNR=8.2							
IUG	**Iuzhnay**	**82.91**	**44**	*eP*		**P**	**08 11 39.1**	**-0.3**
	comp=Z,3.6nm,1.2s,baz=44							
ALNE	**Al Ain**	**82.96**	**66**	*i* P		**P**	**08 11 39.8**	**0.0**
	SNR=5.8							
SEM	**Semipalatinsk**	**83.13**	**34**	*eP*		**P**	**08 11 39.5**	**-1.0**
	comp=Z,4.5nm,1.2s,baz=33							
DZA	**Taraz**	**83.23**	**43**	*eP*		**P**	**08 11 40.4**	**-0.6**
	baz=43							
BTLS	**Baital**	**83.45**	**40**	*eP*		**P**	**08 11 41.5**	**-0.5**
	baz=40							
SOHO	**SOHO**	**83.53**	**66**	*i* P		**P**	**08 11 41.7**	**-1.0**
	SNR=10							
SOHO	**SOHO**	**83.53**	**66**	P		**P**	**08 11 43.6**	**+0.8**
SOHO				P		**P**	**08 11 43.6**	**+0.8**
ARQ	**Araqi**	**83.94**	**66**	P		**P**	**08 11 45.5**	**+0.6**
HOQ	**Hoqain**	**84.43**	**66**	P		**P**	**08 11 47.5**	**+0.1**
	SNR=8.6							
HOQ				P		**P**	**08 11 47.5**	**+0.1**
	SNR=8.6							
ABTO	**Aybut**	**84.47**	**73**	P		**P**	**08 11 48.8**	**+1.1**
ABTO				P		**P**	**08 11 48.8**	**+1.1**
WHFO	**Wadi Hawf**	**84.56**	**72**	P		**P**	**08 11 48.2**	**+0.1**
WHFO				P		**P**	**08 11 48.2**	**+0.1**
BSY	**Bisya**	**84.78**	**67**	P		**P**	**08 11 49.0**	**-0.2**
BSY				P		**P**	**08 11 49.0**	**-0.2**
LBTB	**Lobatse**	**84.83**	**123**	P		**P**	**08 11 50.0**	**+0.7**
BIDO	**Bidbid**	**85.09**	**66**	P		**P**	**08 11 51.2**	**+0.6**
	SNR=7.3							
RBK	**Rabkut**	**85.13**	**73**	P		**P**	**08 11 51.9**	**+0.9**
AAK	**Ala-Archa**	**85.22**	**42**	*i* P		**P**	**08 11 52.6**	**+1.4**
	SNR=6.6							
SMDO	**Samad**	**85.28**	**66**	P		**P**	**08 11 52.4**	**+0.6**
	SNR=7.1							
SMDO				P		**P**	**08 11 52.4**	**+0.6**
	SNR=7.1							
KUU	**Kurty**	**85.45**	**40**	*eP*		**P**	**08 11 51.7**	**-0.5**
	comp=Z,6.3nm,0.8s,baz=40							
KUU				*eS*		**S**	**08 22 15.8**	**-7.7**
	baz=40							
JMDO	**Jabal Madar**	**85.69**	**66**	P		**P**	**08 11 53.6**	**-0.1**
TDK	**Taldyqorghan**	**85.84**	**38**	*eP*		**P**	**08 11 53.7**	**-0.3**
	baz=38							
AAA	**Alma-Ata**	**86.21**	**40**	*eP*		**P**	**08 11 56.0**	**-0.1**
	baz=40							
AAA				LR		LR	08 47 15.3	
	comp=Z,142nm,15.5s,baz=40							
WBK	**Wadi Bani Khal**	**86.24**	**66**	P		**P**	**08 11 57.1**	**+0.7**
WBK				P		**P**	**08 11 57.1**	**+0.7**
MDOK	**Medeo**	**86.31**	**40**	*eP*		**P**	**08 11 55.9**	**-0.8**
	baz=40							
MDOK				LR		LR	08 47 14.6	
	comp=Z,142nm,20.3s,baz=40							
MHTO	**MHTO**	**86.32**	**68**	P		**P**	**08 11 57.5**	**+0.7**
	SNR=6.1							
MHTO				P		**P**	**08 11 57.5**	**+0.7**
	SNR=6.1							
YAK	**Yakutsk**	**86.33**	**4**	P		**P**	**08 11 54.7**	**-1.4**
	comp=Z,4.2nm,0.3s,baz=105,slow=2.2,SNR=1.6							
MKAR	**Makanchi Array**	**86.60**	**35**	P		**P**	**08 11 57.2**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=320,slow=4.7,SNR=14							
MKAR				LR		LR	08 49 46.2	
	comp=Z,426nm,19.9s,baz=320,slow=35							
MKAR	**Makanchi Array**	**86.60**	**35**	P		**P**	**08 11 56.6**	**-1.1**
BOSA	**Boshof**	**86.83**	**126**	LR		LR	08 44 33.5	
	comp=Z,655nm,21.9s,baz=318,slow=31							
KPKS	**Kokpek**	**87.01**	**39**	*eP*		**P**	**08 11 59.2**	**-0.8**
	comp=Z,6.1nm,1.0s,baz=39							
SATY	**Saty**	**87.13**	**40**	*eP*		**P**	**08 11 59.5**	**-1.1**
	comp=Z,3.9nm,1.4s,baz=40							
SATY				*eS*		S	08 22 26.1	-14
	baz=40							
KSH	**Kashi**	**88.08**	**44**	*eP*		**P**	**08 12 06.3**	**+1.1**
KSH				S		**S**	**08 22 45.8**	**-3.5**
KSH				pmax		pmax		
	comp=Z,340nm,3.6s							
KSH				LR		LR		
	comp=Z,350nm,7.9s							
KSH				LR		LR		
	comp=Z,390nm,8.6s							
KSH				LR		LR		
	comp=Z,1μm,18.5s							
WMQ	**Urumqi**	**91.38**	**35**	*eP*		**P**	**08 12 22.3**	**+1.8**
WMQ				pmax		pmax		
	comp=Z,31nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,170nm,3.8s							
WMQ				LR		LR		
	comp=Z,470nm,22.5s							
WMQ				LR		LR		
	comp=Z,610nm,19.9s							
WMQ				LR		LR		
	comp=Z,1μm,17.1s							
PETK	**Petropavlovsk-**	**94.07**	**349**	LR		LR	08 53 14.9	
	comp=Z,431nm,21.8s,baz=27,slow=34							
SONM	**Songino Array**	**95.58**	**22**	P		**P**	**08 12 39.5**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=315,slow=5.8,SNR=4.8							
SONM	**Songino Array**	**95.58**	**22**	P		**P**	**08 12 39.2**	**-0.6**
PMSA	**Palmer Station**	**97.81**	**190**	*eP*		**P**	**08 12 49.6**	**+0.6**
TAOE	**Nuku Hiva Isla**	**102.50**	**267**	*e*LR		LR	08 46 44.2	
	comp=Z,511nm,25.3s							
CD2	**Chengdu**	**109.29**	**32**	Pdif		**Pdif**	**08 13 38.5**	**-2.8**
CMAR	**Chiang Mai Arr**	**116.97**	**43**	PKP		**PKPdf**	**08 17 59.3**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=294,slow=3.7,SNR=5.3							
CMAR				PP		**PP**	**08 19 06.2**	**-1.9**
	comp=Z,1.0nm,0.3s,baz=299,slow=7.8,SNR=5.1							
TBI	**Tubuai**	**117.15**	**258**	*e*LR		LR	08 53 30.0	
	comp=Z,363nm,27.2s							
MAW	**Mawson**	**124.03**	**153**	PKP		**PKPdf**	**08 18 11.2**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=292,slow=9.1,SNR=4.3							
VNDA	**Vanda**	**132.91**	**187**	PKP		**PKPdf**	**08 18 28.9**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=264,slow=2.2,SNR=13							
VNDA	**Vanda**	**132.91**	**187**	PKPdf		**PKPdf**	**08 18 28.1**	**-0.4**
GUMO	**Guam**	**134.69**	**352**	PKPdf		**PKPdf**	**08 18 34.0**	**+0.3**
SGSI	**Sangihe**	**142.53**	**23**	PKP		**PKPdf**	**08 18 45.8**	**-2.3**
MPSI	**Mapaga**	**143.31**	**34**	PKP		PKPab	08 18 46.5	+1.2
PWJI	**Pagerwojo**	**145.32**	**53**	PKP		**PKPbc**	**08 18 51.2**	**-1.5**
KAPI	**Kappang**	**147.84**	**39**	PKPbc		**PKPbc**	**08 18 59.9**	**-0.2**
	comp=Z,21nm,0.8s,baz=334,slow=2.9,SNR=5.1							
KAPI	**Kappang**	**147.84**	**39**			**PKPdf**	**08 18 59.1**	**+1.9**
BKZ	**Black Stump Fm**	**148.85**	**246**			**PKPbc**	**08 19 02.4**	**+0.3**
FAKI	**Fak Fak**	**150.68**	**14**			**PKPbc**	**08 19 06.6**	**-0.7**
DZM	**Mont Dzumac**	**153.94**	**285**	*e*LR		LR	09 10 42.5	
	comp=Z,688nm,22.9s							
FITZ	**Fitzroy Crossi**	**161.78**	**45**	PKPab		**PKPab**	**08 20 00.8**	**-0.7**
	comp=Z,3.6nm,1.0s,baz=303,slow=7.0,SNR=4.4							
CTA	**Charters Tower**	**166.85**	**329**	PKP		**PKPdf**	**08 19 20.6**	**0.0**
	comp=Z,4.7nm,0.9s,baz=181,slow=3.6,SNR=6.3							
CTA				PKPab		**PKPab**	**08 20 24.7**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=69,slow=8.6,SNR=1.6							
WRA	**Warramunga Arr**	**167.56**	**22**	PKP		**PKPdf**	**08 19 20.2**	**-1.0**
	comp=Z,1.8nm,1.0s,baz=315,slow=1.2,SNR=10							
WRA				PKPab		**PKPab**	**08 20 25.9**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=347,slow=5.0,SNR=8.7							
WRA				PP		**PP**	**08 24 11.6**	**-2.5**
	comp=Z,0.8nm,0.9s,baz=334,slow=5.2,SNR=5.6							
WRA	**Warramunga Arr**	**167.56**	**22**			**PKPdf**	**08 19 19.9**	**-1.2**
WR0	**Warramunga Arr**	**167.63**	**21**			**PKPdf**	**08 19 20.2**	**-1.0**
AS31	**Alice Springs**	**170.77**	**32**			**PKPdf**	**08 19 21.7**	**-1.4**
ASAR	**Alice Springs**	**170.78**	**32**	PKP		**PKPdf**	**08 19 22.4**	**-0.7**
	comp=Z,3.9nm,0.9s,baz=351,slow=0.2,SNR=34							
ASAR				PKPab		**PKPab**	**08 20 40.5**	**-0.4**
	comp=Z,8.0nm,0.8s,baz=336,slow=4.9,SNR=38							
ASAR	**Alice Springs**	**170.78**	**32**			**PKPdf**	**08 19 22.2**	**-0.9**
STKA	**Stephens Creek**	**177.93**	**263**	PKP		**PKPdf**	**08 19 24.2**	**-0.9**
	comp=Z,2.1nm,0.9s,baz=0.0,slow=6.1,SNR=3.8							

IDC ***18*** *08:03:23.2±2.0,23°.93S×67°.08W, h215km±24km, mb3.3/1, mb1 3.3/5, mb1mx3.2/28, mbtmp3.8/5, Error ellipse: s-maj=35.3km s-min=26.3km az=147.0*
GUC ***18*** *08:03:23.6±0.8, 24°.10S×67°.34W, h208km±10km, ML3.9*
ISC 18 08:03:22.4±1.1, 24°.08S±0°.06×67°.2W±0°.1, h220km±14km, n25, σ1§17/41, 10C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.16**	**312**	P		P	**Pn**	**08 04 05.3**	**+0.8**
	16nm,0.3s,baz=134,slow=6.7,SNR=380								
LVC				S		**S**	**S**	**08 04 36.5**	**-0.7**
	5.8nm,0.3s,baz=256,slow=1.0,SNR=4.0								
LVC	**Limon Verde**	**2.16**	**312**	⇓*eP*			**Pn**	**08 04 05.3**	**+0.8**
LVC				*eS*			**S**	**08 04 36.8**	**-0.4**
PB15	**IPOC Station P**	**2.28**	**292**	⇑*iP*			**Pn**	**08 04 06.4**	**+0.9**
PB15				*eS*			**S**	**08 04 38.3**	**-0.6**
GO02	**Mina Guanaco**	**2.45**	**243**	⇑*iP*			**Pn**	**08 04 07.5**	**+0.2**
GO02				*eS*			**S**	**08 04 42.0**	**-0.4**
GO02				IAML				08 04 43.5	
	comp=N,683nm,0.7s								
PB06	**IPOC Station P**	**2.59**	**301**	⇑*iP*			**Pn**	**08 04 09.9**	**+1.1**
PB06				*eS*			**S**	**08 04 44.7**	**-0.1**
PB06				IAML				08 04 47.5	
	comp=E,422nm,0.1s								
PB09	**IPOC Station P**	**2.96**	**320**	⇑*iP*			**Pn**	**08 04 14.6**	**+1.6**
PB09				*eS*			**S**	**08 04 52.7**	**+0.4**
PB09				IAML				08 04 56.5	
	comp=E,170nm,0.6s								
PB14	**IPOC Station P**	**3.00**	**259**	⇑*iP*			**Pn**	**08 04 13.9**	**+0.5**
PB14				*eS*			**S**	**08 04 52.4**	**-0.8**
PB14				IAML				08 04 56.1	
	comp=E,71nm,0.3s								
PB05	**IPOC Station P**

n374,σ1$51/383,mb4.5/62,MS3.9/7,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.18**	**329**	*i* P	**Pg**	**08 27 51.9**	**-1.0**
CAIG				*e*S	**Sg**	**08 27 55.4**	**-0.8**
CAIG	**El Cayaco**	**0.18**	**329**		**Pg**	**08 27 51.9**	**-1.0**
CAIG					**Sg**	**08 27 55.4**	**-0.8**
ACP2	**Acapulco**	**0.27**	**94**	*e*P	**Pg**	**08 27 53.0**	**-1.3**
ACP2				*e*S	**Sg**	**08 27 57.6**	**-1.0**
ACP2	**Acapulco**	**0.27**	**94**		**Pg**	**08 27 53.0**	**-1.3**
ACP2					**Sg**	**08 27 57.6**	**-1.0**
MEIG	**Mezcala**	**1.15**	**27**	*e*P	**Pg**	**08 28 08.2**	**-2.3**
MEIG				*i* S	**Sg**	**08 28 23.6**	**-2.0**
MEIG	**Mezcala**	**1.15**	**27**		**Pg**	**08 28 08.2**	**-2.3**
MEIG					**Sg**	**08 28 23.6**	**-2.0**
ARIG	**Puente Sto Nin**	**1.39**	**353**	*e*P	**Pn**	**08 28 11.8**	**-0.6**
ARIG				*i* S	**Sb**	**08 28 29.1**	**-1.6**
ARIG	**Puente Sto Nin**	**1.39**	**353**		**Pn**	**08 28 11.8**	**-0.6**
ARIG					**Sb**	**08 28 29.1**	**-1.6**
ZIIG	**Zihuatanejo**	**1.43**	**300**	*e*P	**Pn**	**08 28 11.1**	**-1.8**
ZIIG				*e*S	**Sb**	**08 28 28.7**	**-3.0**
ZIIG	**Zihuatanejo**	**1.43**	**300**		**Pn**	**08 28 11.1**	**-1.8**
ZIIG					**Sb**	**08 28 28.7**	**-3.0**
PLIG	**Platanillo**	**1.62**	**23**	*e*P	**Pn**	**08 28 15.4**	**-0.3**
PLIG				*i* S	**Sn**	**08 28 35.4**	**-0.6**
PLIG	**Platanillo**	**1.62**	**23**		**Pn**	**08 28 15.4**	**-0.3**
PLIG					**Sn**	**08 28 35.4**	**-0.6**
TLIG	**Tlapa**	**1.67**	**66**	*e*P	**Pn**	**08 28 15.4**	**-1.0**
TLIG				*i* S	**Sn**	**08 28 36.1**	**-1.3**
TLIG	**Tlapa**	**1.67**	**66**		**Pn**	**08 28 15.4**	**-1.0**
TLIG	**Tlapa**	**1.67**	**66**	Sn	**Sn**	**08 28 40.0**	**+2.7**
YAIG	**Yautepec**	**2.22**	**28**	*e*P	**Pn**	**08 28 23.6**	**-0.3**
YAIG				*i* S	**Sn**	**08 28 51.7**	**+0.8**
YAIG	**Yautepec**	**2.22**	**28**		**Pn**	**08 28 23.6**	**-0.3**
YAIG					**Sn**	**08 28 51.7**	**+0.8**
HLIG	**Huajuapan de L**	**2.44**	**67**	*e*P	**Pn**	**08 28 26.6**	**-0.5**
HLIG				*i* S	**Sn**	**08 28 56.0**	**-0.5**
UNM	**Universidad Na**	**2.60**	**21**	Pn	**Pn**	**08 28 31.1**	**+1.9**
MOIG	**Morelia**	**2.93**	**341**	*e*P	**Pn**	**08 28 37.0**	**+3.2**
MOIG	**Morelia**	**2.93**	**341**		**Pn**	**08 28 37.0**	**+3.2**
MMIG	**Aquila**	**3.33**	**295**	*e*P	**Pn**	**08 28 38.8**	**-0.2**
MMIG				*i* S	**Sn**	**08 29 16.8**	**-1.3**
MMIG	**Aquila**	**3.33**	**295**		**Pn**	**08 28 38.8**	**-0.2**
MMIG					**Sn**	**08 29 16.8**	**-1.3**
CMIG	**Matias Romero**	**5.06**	**87**	Pn	**Pn**	**08 29 01.8**	**-1.1**
	3.5nm,0.3s,baz=255,slow=13,SNR=50						
CMIG				Sn	**Sn**	**08 29 57.1**	**-3.8**
	15nm,0.3s,baz=276,slow=16,SNR=4.1						
CMIG				Lg	Lg	08 30 25.3	
	53nm,0.3s,baz=163,slow=23,SNR=14						
ZAIG	**Zacatecas**	**6.26**	**339**	Pn	**Pn**	**08 29 21.7**	**+2.0**
RTAL	**Retalhuleu**	**8.50**	**105**	Pn	**Pn**	**08 29 52.9**	**+2.8**
H06E1	**SOCORRO T-PHAS**	**10.41**	**282**	T	T	08 40 46.2	
	SNR=411						
H06S1	**SOCORRO T**	**10.44**	**282**	T	T	08 40 48.8	
	SNR=30						
H06N1	**SOCORRO T-PHAS**	**10.48**	**282**	T	T	08 40 46.1	
	SNR=2.5						
HPIG		**11.21**	**334**	Pn	**Pn**	**08 30 31.2**	**+3.7**
833A	**Chaparral WMA,**	**11.40**	**3**	Pn	**Pn**	**08 30 32.1**	**+2.2**
TEIG	**Tepich**	**11.76**	**72**	Pn	**Pn**	**08 30 34.4**	**-0.4**
TX32	**Lajitas Array**	**12.79**	**346**	Pn	**Pn**	**08 30 51.8**	**+2.8**
TXAR	**Lajitas Array**	**12.79**	**346**	Pn	**Pn**	**08 30 51.8**	**+2.8**
	0.0nm,0.3s,baz=155,slow=12,SNR=5.6						
TXAR				Lg	Lg	08 34 31.9	
	0.0nm,0.3s,baz=153,slow=28,SNR=6.0						
TXAR	**Lajitas Array**	**12.79**	**346**	Pn	**Pn**	**08 30 49.1**	**+0.2**
TX31	**Lajitas Ar. Si**	**12.79**	**346**	Pn	**Pn**	**08 30 50.0**	**+1.0**
JCT	**Junction City**	**13.53**	**1**	P	**Pn**	**08 30 59.1**	**+0.1**
	baz=180						
JCT	**Junction City**	**13.53**	**1**	Pn	**Pn**	**08 30 59.6**	**+0.6**
HKT	**Hockley**	**13.59**	**16**	Pn	**Pn**	**08 31 01.6**	**+1.9**
435B	**Jarrell**	**14.03**	**9**	P	**Pn**	**08 31 04.8**	**-0.9**
	baz=189						
435B	**Jarrell**	**14.03**	**9**	Pn	**Pn**	**08 31 06.4**	**+0.7**
441A	**DeRidder**	**15.19**	**24**	P	**Pn**	**08 31 26.1**	**+4.6**
WHTX	**Lake Whitney,**	**15.23**	**9**	P	**Pn**	**08 31 20.4**	**-1.7**
	baz=189,SNR=9.2						
WHTX	**Lake Whitney,**	**15.23**	**9**	Pn	**Pn**	**08 31 22.1**	**0.0**
MNTX	**Cornudas Mount**	**15.48**	**343**	P	**Pn**	**08 31 26.2**	**+0.9**
	baz=160,SNR=8.3						
MNTX	**Cornudas Mount**	**15.48**	**343**		**Pn**	**08 31 28.2**	**+2.8**
237A	**Washetta, Mont**	**15.55**	**14**	P	**Pn**	**08 31 29.5**	**+3.3**
237A				IAmb	IAmb	08 31 48.8	
	comp=Z,54nm,1.2s						
NATX	**Nacogdoches**	**15.62**	**18**	P	**Pn**	**08 31 25.4**	**-1.8**
	baz=199						
NATX	**Nacogdoches**	**15.62**	**18**		**Pn**	**08 31 31.4**	**+4.3**
NATX				IAmb	IAmb	08 31 39.7	
	comp=Z,57nm,1.1s						
ABTX	**Abilene, Hawle**	**15.67**	**2**	P	**Pn**	**08 31 27.4**	**-0.5**
	baz=181,SNR=8.9						
ABTX	**Abilene, Hawle**	**15.67**	**2**	Pn	**Pn**	**08 31 31.2**	**+3.4**
ABTX				IAmb	IAmb	08 31 39.2	
	comp=Z,31nm,1.0s						
GDL2	**Guadalupe Moun**	**15.71**	**347**	Pn	**Pn**	**08 31 30.3**	**+1.9**
342A	**Flagon Creek P**	**16.09**	**25**	P	**Pn**	**08 31 35.4**	**+2.2**
JTS	**Las Juntas de**	**16.18**	**112**	Pn	**Pn**	**08 31 35.5**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=16,slow=18,SNR=2.9						
JTS				LR	LR	08 36 17.5	
	comp=Z,471nm,18.7s,baz=28,slow=32						
Z35A	**Perchaven, San**	**16.58**	**9**	P	**Pn**	**08 31 39.1**	**-0.3**
Z35A				IAmb	IAmb	08 31 56.8	
	comp=Z,51nm,1.4s						
319A	**Douglas**	**16.63**	**332**		**Pn**	**08 31 42.6**	**+2.4**
319A				IAmb	IAmb	08 31 50.9	
	comp=Z,45nm,1.5s						
121A	**Cookes Peak, D**	**17.03**	**338**	P	**Pn**	**08 31 45.8**	**+0.5**
	baz=154						
121A	**Cookes Peak, D**	**17.03**	**338**		**Pn**	**08 31 48.1**	**+2.9**
MSTX	**Muleshoe**	**17.16**	**353**	P	**Pn**	**08 31 46.3**	**-0.6**
	baz=171,SNR=11						
MSTX	**Muleshoe**	**17.16**	**353**		**Pn**	**08 31 48.0**	**+1.0**
MSTX				IAmb	IAmb	08 31 56.2	
	comp=Z,38nm,0.9s						
VBMS	**Vicksburg**	**17.59**	**28**	P	**Pn**	**08 31 50.3**	**-1.7**
	baz=211						
Z41A	**Richland Creek**	**17.60**	**21**	P	**Pn**	**08 31 50.5**	**-1.6**
	baz=203						
Z41A	**Richland Creek**	**17.60**	**21**	P	**Pn**	**08 31 53.8**	**+1.6**
Z41A				IAmb	IAmb	08 32 03.7	
	comp=Z,68nm,1.4s						
WMOK	**Wichita Mounta**	**17.81**	**4**	P	**Pn**	**08 31 54.3**	**-0.6**
	baz=184						
WMOK	**Wichita Mounta**	**17.81**	**4**		**Pn**	**08 31 57.4**	**+2.5**
WLAR	**White Oak Lake**	**17.89**	**19**		**Pn**	**08 31 55.8**	**+0.1**
WLAR				IAmb	IAmb	08 32 07.0	
	comp=Z,73nm,1.3s						
AMTX	**Amarillo**	**17.97**	**356**	P	**Pn**	**08 31 56.6**	**-0.2**
	baz=175						
AMTX	**Amarillo**	**17.97**	**356**	P	**Pn**	**08 31 57.1**	**+0.3**
TUC	**Tucson**	**18.11**	**330**	P	**Pn**	**08 31 59.5**	**+0.9**
	baz=145						
TUC	**Tucson**	**18.11**	**330**	P	**Pn**	**08 32 00.8**	**+2.2**
BNM	**Barren Site**	**18.14**	**343**		**Pn**	**08 32 01.6**	**+2.5**
Y22D	**IRIS PASSCAL I**	**18.15**	**342**	P	**Pn**	**08 31 59.4**	**+0.2**
	baz=158						
LENM	**Lemitar**	**18.25**	**342**	P	**Pn**	**08 32 01.9**	**+1.5**
MIAR	**Mount Ida**	**18.55**	**17**	P	**P**	**08 32 02.0**	**-1.6**
	baz=200,SNR=5.1						
MIAR	**Mount Ida**	**18.55**	**17**	P	**Pn**	**08 32 07.6**	**+3.8**
BRAL	**Brewton**	**18.56**	**38**	P	**P**	**08 32 01.7**	**-2.1**
	baz=222						
X40A	**Basin Creek Fa**	**18.71**	**19**	P	**P**	**08 32 04.1**	**-1.3**
	baz=202						
OK025	**Westminster Rd**	**18.78**	**7**	P	**P**	**08 32 08.5**	**+2.3**
ANMO	**Albuquerque**	**18.84**	**344**	P	**P**	**08 32 08.7**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=149,slow=11,SNR=6.6						
ANMO	**Albuquerque**	**18.84**	**344**	P	**P**	**08 32 08.2**	**+1.2**
	baz=160						
ANMO	**Albuquerque**	**18.84**	**344**	P	**P**	**08 32 08.1**	**+1.1**
W39A	**Magazine**	**19.10**	**16**	P	**P**	**08 32 09.0**	**-0.6**
	baz=198						
W39A	**Magazine**	**19.10**	**16**	P	**P**	**08 32 10.6**	**+1.0**
W39A				IAmb	IAmb	08 32 20.6	
	comp=Z,32nm,1.2s						
OK030	**Cody Creek RV**	**19.20**	**8**	P	**P**	**08 32 11.6**	**+0.9**
OK030				IAmb	IAmb	08 32 14.8	
	comp=Z,33nm,1.1s						
OK031	**S. Brethren Rd**	**19.21**	**8**	P	**P**	**08 32 10.1**	**-0.8**
OK031				IAmb	IAmb	08 32 14.5	
	comp=Z,38nm,1.1s						
TUL1	**Leonard**	**19.34**	**11**	P	**P**	**08 32 12.1**	**-0.1**
	baz=192,SNR=7.8						
TUL1	**Leonard**	**19.34**	**11**	P	**P**	**08 32 13.6**	**+1.3**
TUL1				IAmb	IAmb	08 32 21.5	
	comp=Z,38nm,1.0s						
X43A	**Marvell**	**19.43**	**24**	P	**P**	**08 32 14.4**	**+1.2**
QUOK	**Quay**	**19.45**	**8**	P	**P**	**08 32 15.0**	**+1.5**
QUOK				IAmb	IAmb	08 32 22.3	
	comp=Z,46nm,1.2s						
WHAR	**Wooly Hollow**	**19.63**	**20**	P	**P**	**08 32 16.1**	**+0.7**
WHAR				IAmb	IAmb	08 32 25.5	
	comp=Z,29nm,1.1s						
X18A	**Snowflake**	**19.63**	**335**	P	**P**	**08 32 17.8**	**+2.2**
X18A				IAmb	IAmb	08 32 27.3	
	comp=Z,26nm,1.2s						
LRAL	**Lakeview Retre**	**19.99**	**34**	P	**P**	**08 32 17.7**	**-1.7**
	baz=219						
113A	**Mohawk Valley,**	**20.02**	**325**	P	**P**	**08 32 21.8**	**+2.1**
W18A	**Petrified Fore**	**20.06**	**337**	P	**P**	**08 32 21.1**	**+0.8**
	baz=152						
W18A	**Petrified Fore**	**20.06**	**337**	P	**P**	**08 32 23.4**	**+3.1**
KAN14	**Manchester OK**	**20.08**	**5**	P	**P**	**08 32 21.6**	**+1.3**
HHAR	**Hobbs**	**20.09**	**15**	P	**P**	**08 32 21.9**	**+1.4**
HHAR				IAmb	IAmb	08 32 28.5	
	comp=Z,25nm,1.3s						
U38A	**Gravette**	**20.13**	**14**	P	**P**	**08 32 24.2**	**+3.2**
U38A				IAmb	IAmb	08 32 30.8	
	comp=Z,26nm,1.1s						
X16A	**Lo Mia Camp, P**	**20.16**	**332**	P	**P**	**08 32 24.7**	**+3.2**
KAN13	**South Haven SW**	**20.18**	**6**	P	**P**	**08 32 22.8**	**+1.3**
T35A	**Sooner Cattle**	**20.20**	**9**	P	**P**	**08 32 22.9**	**+1.2**
T35A				IAmb	IAmb	08 32 31.4	
	comp=Z,27nm,1.2s						
KAN05	**Bluff City Nor**	**20.24**	**5**	P	**P**	**08 32 21.8**	**-0.3**
KAN01	**Argonia South**	**20.29**	**6**	P	**P**	**08 32 22.4**	**-0.3**
KAN08	**Anthony NE Sta**	**20.35**	**5**	P	**P**	**08 32 22.1**	**-1.2**
KS20	**Mayfield South**	**20.39**	**6**	P	**P**	**08 32 22.7**	**-1.0**
KS20				IAmb	IAmb	08 32 25.5	
	comp=Z,24nm,1.1s						
U40A	**Yellville**	**20.44**	**17**	P	**P**	**08 32 23.3**	**-1.0**
	baz=200						
U40A	**Yellville**	**20.44**	**17**	P	**P**	**08 32 26.3**	**+2.0**
U40A				IAmb	IAmb	08 32 30.2	
	comp=Z,17nm,0.9s						
T25A	**Trinidad**	**20.51**	**350**	P	**P**	**08 32 25.5**	**+0.2**
	baz=168						
T25A	**Trinidad**	**20.51**	**350**	P	**P**	**08 32 26.4**	**+1.1**
Y14A	**Wickenburg**	**20.52**	**328**	P	**P**	**08 32 27.5**	**+2.3**
ESJX	**Sierra Juarez**	**20.76**	**319**	P	**P**	**08 32 31.2**	**+3.2**
GLA	**Glamis**	**20.82**	**323**	P	**P**	**08 32 30.6**	**+2.1**
	baz=137						
GLA	**Glamis**	**20.82**	**323**	P	**P**	**08 32 30.3**	**+1.8**
GLA				IAmb	IAmb	08 32 41.4	
	comp=Z,66nm,1.4s						
Y49A	**Blount Mountai**	**20.93**	**34**	P	**P**	**08 32 33.0**	**+3.3**
Y49A				IAmb	IAmb	08 32 34.0	
	comp=Z,48nm,1.4s						
PLAL	**Pickwick Lake**	**21.01**	**29**	P	**P**	**08 32 32.3**	**+1.9**
PLAL				IAmb	IAmb	08 32 42.7	
	comp=Z,29nm,1.1s						
WUAZ	**Wupatki**	**21.06**	**334**	P	**P**	**08 32 32.7**	**+1.5**
	baz=148,SNR=15						
WUAZ	**Wupatki**	**21.06**	**334**	P	**P**	**08 32 33.5**	**+2.3**
WUAZ				IAmb	IAmb	08 32 37.0	
	comp=Z,31nm,1.1s						
SDCO	**Great Sand Dun**	**21.30**	**348**	P	**P**	**08 32 34.3**	**+0.5**
	baz=165,SNR=12						
SDCO	**Great Sand Dun**	**21.30**	**348**	P	**P**	**08 32 34.2**	**+0.5**
SWSC	**Sam W. Stewart**	**21.32**	**321**	P	**P**	**08 32 35.3**	**+1.6**
	baz=134,SNR=5.4						
PDMCI	**Parker Dam,Lak**	**21.39**	**327**	P	**P**	**08 32 35.9**	**+1.4**
	baz=140,SNR=5.8						
MVCO	**Mesa Verde**	**21.53**	**342**	P	**P**	**08 32 36.5**	**+0.2**
	baz=157						
MVCO	**Mesa Verde**	**21.53**	**342**	P	**P**	**08 32 37.6**	**+1.3**
MVCO				IAmb	IAmb	08 32 49.5	
	comp=Z,34nm,1.4s						
S39A	**Bolivar**	**21.58**	**15**	P	**P**	**08 32 38.9**	**+2.4**
S39A				IAmb	IAmb	08 32 47.2	
	comp=Z,40nm,1.0s						
S22A	**4UR Ranch, Cre**	**21.58**	**346**	P	**P**	**08 32 37.4**	**+0.5**
	baz=162						
S22A	**4UR Ranch, Cre**	**21.58**	**346**	P	**P**	**08 32 38.4**	**+1.5**
BC3	**Big Chuckawall**	**21.62**	**323**	P	**P**	**08 32 38.6**	**+1.4**
	baz=136,SNR=6.6						
MONP2	**Monument Peak**	**21.66**	**320**	P	**P**	**08 32 39.1**	**+1.4**
	baz=133						
IRM	**Iron Mountain**	**21.82**	**325**	P	**P**	**08 32 40.5**	**+1.3**
	baz=138,SNR=14						
CBKS	**Cedar Bluff**	**21.84**	**1**	P	**P**	**08 32 40.8**	**+1.4**
CBKS				IAmb	IAmb	08 32 50.9	
	comp=Z,26nm,0.9s						
W13A	**Hualapai Mount**	**21.88**	**329**	P	**P**	**08 32 42.9**	**+2.9**
FPAL	**Fort Paine**	**21.88**	**34**	P	**P**	**08 32 41.2**	**+1.3**
FPAL				IAmb	IAmb	08 32 50.4	
	comp=Z,33nm,1.1s						
154A	**Montrose**	**21.98**	**41**	P	**P**	**08 32 42.8**	**+2.0**
WVT	**Waverly**	**22.07**	**27**	P	**P**	**08 32 40.8**	**-1.1**
	baz=212						
WVT	**Waverly**	**22.07**	**27**	P	**P**	**08 32 42.4**	**+0.6**
WVT				IAmb	IAmb	08 32 45.4	
	comp=Z,33nm,1.3s						
109C	**Camp Elliot, M**	**22.07**	**319**	P	**P**	**08 32 43.6**	**+1.7**
	baz=132						
KSCO	**Kaye Shedlock'**	**22.14**	**355**	P	**P**	**08 32 43.0**	**+0.3**
	baz=173						
KSCO	**Kaye Shedlock'**	**22.14**	**355**	P	**P**	**08 32 43.9**	**+1.2**
KSCO				IAmb	IAmb	08 33 00.4	
	comp=Z,23nm,1.1s						
TPFO	**Pinon Flats**	**22.17**	**322**	P	**P**	**08 32 44.2**	**+1.1**
	baz=134						
PFO	**Pinyon Flats O**	**22.18**	**322**	P	**P**	**08 32 45.5**	**+2.4**
	comp=Z,3.1nm,0.9s,baz=127,slow=13,SNR=7.0						
PFO	**Pinyon Flats O**	**22.18**	**322**	P	**P**	**08 32 44.5**	**+1.4**
	baz=134						
PFO	**Pinyon Flats O**	**22.18**	**322**	P	**P**	**08 32 44.8**	**+1.7**
PFO				IAmb	IAmb	08 32 55.4	
	comp=Z,20nm,1.3s						
BELC	**Belle Mtn. Jos**	**22.18**	**323**	P	**P**	**08 32 44.9**	**+1.7**
	baz=136						
U15A	**North Rim**	**22.23**	**333**	P	**P**	**08 32 44.8**	**+0.9**
GOGA	**Godfrey**	**22.29**	**39**	P	**P**	**08 32 42.4**	**-1.8**
	baz=226						
KSU1	**Kansas State U**	**22.34**	**7**	P	**P**	**08 32 44.6**	**-0.1**
	baz=188						
R40A	**Maddies Statio**	**22.42**	**16**	P	**P**	**08 32 47.2**	**+1.7**
R40A				IAmb	IAmb	08 32 52.6	
	comp=Z,21nm,1.1s						
CCM	**Cathedral Cave**	**22.50**	**19**	P	**P**	**08 32 46.3**	**-0.1**
	baz=202						
GMRC	**Granite Mounta**	**22.57**	**325**	P	**P**	**08 32 48.8**	**+1.5**
	baz=138						
MURC	**Murrieta**	**22.61**	**321**	P	**P**	**08 32 49.4**	**+1.6**
	baz=133						
PV18	**Skein Mesa, Pa**	**22.61**	**342**	P	**P**	**08 32 51.3**	**+3.4**
PV12	**Saucer Basin,**	**22.65**	**342**	P	**P**	**08 32 49.7**	**+1.5**
PV12				IAmb	IAmb	08 33 00.7	
	comp=Z,14nm,0.9s						
PV07	**Paradox Valley**	**22.71**	**343**	P	**P**	**08 32 50.5**	**+1.6**
PV04	**Paradox Valley**	**22.75**	**342**	P	**P**	**08 32 51.0**	**+1.8**
PV23	**Carpenter Ridg**	**22.83**	**342**	P	**P**	**08 32 52.0**	**+1.7**
BBRC	**Big Bear Solar**	**22.91**	**322**	P	**P**	**08 32 52.2**	**+1.2**
	baz=134						
KNB	**Kanab**	**22.95**	**333**	P	**P**	**08 32 53.4**	**+2.0**
HEC	**Hector,Ludlow**	**22.98**	**324**	P	**P**	**08 32 52.3**	**+0.8**
	baz=137,SNR=12						
SMCO	**Snowmass**	**22.98**	**346**	P	**P**	**08 32 52.4**	**+0.4**
PKCU	**Pink Cliffs**	**23.10**	**335**	P	**P**	**08 32 56.0**	**+2.9**
LCMT	**Little Creek M**	**23.13**	**333**	P	**P**	**08 32 55.1**	**+1.9**
TUQ	**Turquoise Moun**	**23.20**	**326**	P	**P**	**08 32 55.2**	**+1.3**
	baz=138,SNR=6.8						
ISCO	**Idaho Springs**	**23.31**	**349**	P	**P**	**08 32 55.6**	**+0.4**
	baz=166						
ISCO	**Idaho Springs**	**23.31**	**349**	P	**P**	**08 32 58.6**	**+3.4**
ISCO				IAmb	IAmb	08 33 08.1	
	comp=Z,18nm,1.5s						
V51A	**Loudon**	**23.51**	**34**	P	**P**	**08 32 57.9**	**+1.0**
MTPU	**Mount Pierson**	**23.57**	**336**	P	**P**	**08 32 59.6**	**+1.8**
GSC	**Goldstone, Bar**	**23.58**	**324**	P	**P**	**08 32 58.7**	**+1.0**
	baz=136						
GSC	**Goldstone, Bar**	**23.58**	**324**	P	**P**	**08 32 59.4**	**+1.8**
SHPR	**Sheep Range**	**23.62**	**329**	P	**P**	**08 32 59.6**	**+1.4**
CCUT	**Cedar City**	**23.64**	**333**	P	**P**	**08 33 00.7**	**+2.4**
BG3	**Lake Jocassee**	**23.71**	**37**	P	**P**	**08 33 00.5**	**+1.7**
BG3				IAmb	IAmb	08 33 11.7	
	comp=Z,20nm,1.3s						
TKL	**Tuckaleechee C**	**23.71**	**35**	P	**P**	**08 32 57.6**	**-1.2**
	comp=Z,6.3nm,0.8s,baz=197,slow=9.7,SNR=3.9						
X54A	**Belton**	**23.73**	**39**	P	**P**	**08 32 57.3**	**-1.7**
	baz=226						
SRU	**San Rafael Swe**	**23.91**	**340**	P	**P**	**08 33 01.1**	**+0.2**
Q16A	**Castle Valley**	**23.96**	**338**	P	**P**	**08 33 02.5**	**+1.1**
EDW2	**Edwards Air Fo**	**23.97**	**322**	P	**P**	**08 33 02.5**	**+1.1**
	baz=134						
MSU	**Marysvale**	**23.97**	**336**	P	**P**	**08 33 02.6**	**+1.1**
MVU	**Marysvale**	**23.98**	**336**	P	**P**	**08 33 02.4**	**+0.8**
O20A	**White River Ci**	**24.20**	**345**	P	**P**	**08 33 03.8**	**+0.3**
	baz=160,SNR=6.1						
O20A	**White River Ci**	**24.20**	**345**	P	**P**	**08 33 04.0**	**+0.5**
O20A				IAmb	IAmb	08 33 11.7	
	comp=Z,15nm,1.1s						
NHSC	**New Hope**	**24.20**	**44**	P	**P**	**08 33 01.8**	**-1.6**
	baz=232						
NHSC	**New Hope**	**24.20**	**44**	P	**P**	**08 33 03.5**	**+0.1**
T50A	**Nancy**	**24.20**	**31**	P	**P**	**08 33 04.2**	**+0.9**
T50A				IAmb	IAmb	08 33 10.5	
	comp=Z,15nm,1.1s						
LRMC	**Laurel Mtn Rad**	**24.21**	**323**	P	**P**	**08 33 05.2**	**+1.5**
	baz=135						
W54A	**Cherokee Point**	**24.21**	**38**	P	**P**	**08 33 02.1**	**-1.4**
	baz=226						
PAULI	**Pauline**	**24.25**	**39**	P	**P**	**08 33 03.6**	**-0.2**
V53A	**Saluda**	**24.26**	**36**	P	**P**	**08 33 04.8**	**+0.8**
PRN	**Pahroc Range**	**24.29**	**330**	P	**P**	**08 33 07.1**	**+2.8**
P17A	**Butcher Ranch,**	**24.31**	**340**	P	**P**	**08 33 05.9**	**+1.4**
TMUT	**Trail Mountain**	**24.31**	**339**	P	**P**	**08 33 06.2**	**+1.4**
N23A	**Red Feather La**	**24.43**	**349**	P	**P**	**08 33 06.1**	**+0.3**
	baz=166						
N23A	**Red Feather La**	**24.43**	**349**	P	**P**	**08 33 05.9**	**+0.1**
N23A				IAmb	IAmb	08 33 16.9	
	comp=Z,16nm,1.1s						
FURC	**Furnace Creek,**	**24.47**	**326**	P	**P**	**08 33 07.5**	**+1.7**
	baz=138,SNR=5.1						
BGNE	**Belgrade**	**24.49**	**4**	P	**P**	**08 33 05.8**	**-0.2**
	baz=184						
BGNE	**Belgrade**	**24.49**	**4**	P	**P**	**08 33 05.8**	**-0.2**
TZTN	**Tazewell**	**24.50**	**34**	P	**P**	**08 33 05.1**	**-1.0**
	baz=221						
X56A	**White Oak**	**24.51**	**41**	P	**P**	**08 33 04.7**	**-1.5**
	baz=229						
MPMC	**Manual Prospec**	**24.52**	**324**	P	**P**	**08 33 07.5**	**+1.0**
	baz=136						
TPNV	**Topopah Spring**	**24.52**	**328**	P	**P**	**08 33 07.3**	**+0.9**
	baz=140,SNR=13						
TPNV	**Topopah Spring**	**24.52**	**328**	P	**P**	**08 33 08.9**	**+2.5**
TPNV				IAmb	IAmb	08 33 10.5	
	comp=Z,18nm,1.1s						
Z58A	**St. Stephen**	**24.58**	**44**	P	**P**	**08 33 04.9**	**-1.9**
	baz=233						
PSUT	**Pine Spring**	**24.67**	**334**	P	**P**	**08 33 09.7**	**+1.7**
KMSC	**Kings Mountain**	**24.76**	**39**	P	**P**	**08 33 06.5**	**-1.9**
	baz=227						
ISA	**Isabella, Lake**	**24.80**	**322**	P	**P**	**08 33 10.4**	**+1.5**
	baz=134,SNR=6.4						
ISA	**Isabella, Lake**	**24.80**	**322**	P	**P**	**08 33 10.7**	**+1.8**
ISA				IAmb	IAmb	08 33 13.0	
	comp=Z,13nm,1.3s						
V54A	**Nebo**	**24.83**	**37**	P	**P**	**08 33 08.3**	**-0.8**
	baz=225						
RDMU	**Red Mountain**	**24.96**	**343**	P	**P**	**08 33 11.8**	**+1.4**
PKM	**Mcpherson Peak**	**25.08**	**319**	P	**P**	**08 33 12.4**	**+0.7**
	baz=130						
MPU	**Maple Canyon**	**25.10**	**339**	P	**P**	**08 33 12.6**	**+0.9**
CWC	**Cottonwood Cre**	**25.12**	**324**	P	**P**	**08 33 12.9**	**+0.9**
	baz=136						
GRAC	**Grapevine Rang**	**25.14**	**326**	P	**P**	**08 33 13.3**	**+1.4**
	baz=138						
W56A	**Indian Trail**	**25.21**	**40**	P	**P**	**08 33 11.2**	**-1.4**
	baz=228						
SPR3	**Spring Creek 3**	**25.26**	**333**	P	**P**	**08 33 14.3**	**+0.9**
VES	**Vestal, Richgr**	**25.28**	**322**	P	**P**	**08 33 14.3**	**+1.2**
	baz=133						
R11A	**Troy Canyon, C**	**25.29**	**331**	P	**P**	**08 33 15.1**	**+1.6**
	baz=143,SNR=12						
R11A	**Troy Canyon, C**	**25.29**	**331**	P	**

baz=228
U58A Oxford 27.29 40 P P 08 33 30.3 -1.1
baz=230
WAKR Walker 27.36 326 P P 08 33 34.4 +2.2
WAKR IAmb IAmb 08 33 43.2
comp=Z,11nm,1.2s
CMB Columbia Colle 27.55 324 P P 08 33 34.6 +0.9
T58A Grand View Acr 27.65 40 P P 08 33 34.1 -0.5
baz=229
PNTR Pine Nut 27.87 326 P P 08 33 39.0 +2.2
PNTR IAmb IAmb 08 33 50.2
comp=Z,12nm,0.9s
SNOW Snow King Moun 27.97 343 P P 08 33 39.2 +1.6
SNOW IAmb IAmb 08 33 51.9
comp=Z,9.9nm,1.2s
VCNR Virginia City 28.05 327 P P 08 33 40.3 +2.0
VCNR IAmb IAmb 08 33 49.3
comp=Z,8.5nm,1.1s
O52A Adamsville 28.08 31 P P 08 33 37.1 -1.3
baz=219
R56A Bull Pasture M 28.12 36 P P 08 33 37.2 -1.7
baz=226
U60A Pendleton 28.21 42 P P 08 33 39.0 -0.5
baz=232
T59A Double "B" Far 28.27 41 P P 08 33 38.8 -1.3
baz=230
BEKR Beckworth 28.84 327 P P 08 33 47.1 +1.8
S59A Mechanicsville 28.93 40 P P 08 33 45.1 -0.9
baz=230
RLMT Red Lodge 29.16 347 P P 08 33 48.4 +0.2
baz=162
HLID Hailey 29.20 338 P P 08 33 49.3 +0.7
baz=151,SNR=6.3
HLID Hailey 29.20 338 P P 08 33 49.2 +0.7
ORV Oroville 29.23 325 P P 08 33 49.9 +1.2
ORV IAmb IAmb 08 33 59.0
comp=Z,13nm,1.5s
BCYI Bear Canyon 29.53 341 P P 08 33 53.3 +1.8
MFID Camas Ranch 29.59 337 P P 08 33 53.4 +1.5
MFID IAmb IAmb 08 34 01.0
comp=Z,10nm,1.1s
SDV Santo Domingo 29.84 102 LR LR 08 45 12.3
comp=Z,218nm,21.4s,baz=59,slow=35
LAO LASA Array 30.13 352 P P 08 33 57.0 +0.4
baz=168
LAO LASA Array 30.13 352 P P 08 33 56.6 0.0
BOZ Bozeman (W) 30.18 344 P P 08 33 57.7 +0.6
baz=157
DLMT Dillon 30.23 342 P P 08 33 58.9 +1.2
DLMT IAmb IAmb 08 34 01.9
comp=Z,8.2nm,1.1s
MOD Modoc Plateau 30.32 329 P P 08 34 00.3 +1.8
MOD IAmb IAmb 08 34 07.7
comp=Z,9.7nm,1.0s
J08A Circle Bar Ran 30.62 333 P P 08 34 02.0 +1.0
MDND Maddock 30.87 1 P P 08 34 03.5 +0.4
baz=181
PLID Pearl Lake 31.09 338 P P 08 34 05.7 +0.4
PLID IAmb IAmb 08 34 13.8
comp=Z,9.9nm,1.0s
BMO Blue Mountains 31.38 336 P P 08 34 07.9 +0.2
BMO IAmb IAmb 08 34 09.1
comp=Z,8.0nm,1.1s
AGMN Agassiz Nation 31.52 6 P P 08 34 08.8 +0.1
baz=187
AGMN Agassiz Nation 31.52 6 P P 08 34 08.4 -0.3
L04D Klamath Falls 31.56 328 P P 08 34 10.1 +0.8
baz=136
DGMT Dagmar 31.66 355 P P 08 34 10.7 +0.6
baz=172
DGMT Dagmar 31.66 355 P P 08 34 09.6 -0.4
J05D Fort Rock, OR 31.82 330 P P 08 34 12.6 +1.0
baz=139
ATAH Atahualpa 32.15 136 LR LR 08 44 13.6
comp=Z,230nm,21.4s,baz=340,slow=31
F10A Beach Ranch, E 32.30 337 P P 08 34 16.0 +0.3
G08A Pilot Rock 32.39 335 P P 08 34 17.4 +0.8
G08A IAmb IAmb 08 34 18.4
comp=Z,11nm,1.0s
M59A Waymart 32.48 36 P P 08 34 16.0 -1.4
baz=228
I04A Tendick Farm, 32.77 330 P P 08 34 20.9 +1.1
baz=138
J01E Myrtle Point 33.07 327 P P 08 34 23.4 +1.1
baz=135
E09A Wood Farm, Sta 33.09 337 P P 08 34 22.2 -0.3
E09A IAmb IAmb 08 34 29.9
comp=Z,7.1nm,0.9s
I03D Drain, OR 33.16 329 P P 08 34 24.2 +1.0
baz=136
ULM Lac du Bonnet 33.45 5 P P 08 34 23.5 -2.2
comp=Z,4.2nm,0.8s,baz=184,slow=14,SNR=3.9
F05D White Salmon 33.92 333 P P 08 34 31.6 +1.7
baz=141,SNR=5.5
C09A Chrisman Ranch 34.23 338 P P 08 34 33.4 +1.0
C09A IAmb IAmb 08 34 41.2
comp=Z,7.1nm,1.1s
NEW Newport 34.23 340 P P 08 34 33.6 +1.1
baz=150
LTY Liberty 34.69 335 P P 08 34 37.7 +1.2
LTY IAmb IAmb 08 34 38.9
comp=Z,12nm,1.1s
E04D Cinebar 34.93 333 P P 08 34 39.8 +1.3
baz=140
B08A Colville Reser 35.08 338 P P 08 34 40.5 +0.6
B08A IAmb IAmb 08 34 43.3
comp=Z,13nm,1.4s
E03A Lebam 35.37 332 P P 08 34 44.0 +1.8
D03D Eldon 35.91 333 P P 08 34 48.2 +1.2
baz=140
B05A Bryant 36.07 335 P P 08 34 49.0 +0.8
baz=142
A04D Lummi Island 36.68 335 P P 08 34 54.3 +0.9
baz=142
FFC Flin Flon 37.78 358 P P 08 35 02.9 +0.1
FFC IAmb IAmb 08 35 04.3
comp=Z,13nm,1.1s
CHGQ Chibougamau 38.96 27 P P 08 35 12.1 -0.6
baz=221
D62A Allapoint, All 39.56 34 P P 08 35 17.6 -0.2
baz=231
D63A Stockholm 40.04 34 P P 08 35 20.9 -0.9
baz=232
LPAZ La Paz 45.66 135 P P 08 36 12.4 +3.9
comp=Z,1.0nm,0.7s,baz=291,slow=8.6,SNR=3.1
LPAZ LR LR 08 53 10.1
comp=Z,204nm,19.0s,baz=330,slow=33
SCHQ Schefferville 45.71 26 P P 08 36 07.0 -0.7
comp=Z,9.5nm,1.0s,baz=224,slow=7.3,SNR=7.5
YKA Yellowknife Ar 46.66 351 P P 08 36 14.7 -0.3
comp=Z,6.7nm,0.9s,baz=160,slow=7.2,SNR=8.4
YKA LR LR 08 57 15.3
comp=Z,878nm,18.1s,baz=0.0,slow=38
DLBC Dease Lake 46.97 339 P P 08 36 19.1 +1.5
SIV San Ignacio 50.54 128 P P 08 36 44.8 -0.8
comp=Z,2.1nm,0.9s,baz=313,slow=6.6,SNR=7.4
H03N2 Juan Fernandez 54.00 158 T T 09 35 22.1
baz=224,slow=73,SNR=230
H03N1 Juan Fernandez 54.01 158 T T 09 35 23.3
baz=224,slow=73,SNR=278
H03N3 Juan Fernandez 54.02 158 T T 09 35 19.1
baz=224,slow=73,SNR=295
BCAR Beaver Creek A 54.33 338 P P 08 37 14.1 +1.0
C36M Paulatuk 54.51 350 P P 08 37 14.1 -0.1
baz=151
L26K Log Cabin Wild 54.87 338 P P 08 37 18.0 +1.0
baz=126
K27K Chicken 55.04 339 P P 08 37 19.6 +1.5
baz=128
K27K Chicken 55.04 339 P P 08 37 19.7 +1.6
EGAK Eagle 55.21 340 P P 08 37 20.5 +1.2
M24K Tolsona, Glenn 55.41 336 P P 08 37 22.4 +1.4
baz=123
INK Inuvik 55.57 346 P P 08 37 22.4 +0.6
INK IAmb IAmb 08 37 24.7
comp=Z,11nm,1.1s
SCRK Sand Creek 55.67 338 P P 08 37 23.8 +1.0
baz=126
HDA Harding Lake 56.98 338 P P 08 37 32.8 +0.8
baz=124
HDA Harding Lake 56.98 338 P P 08 37 33.2 +1.2
PRP Porcupine Dome 57.12 339 P P 08 37 34.1 +1.0
RND Reindeer 57.15 336 P P 08 37 34.4 +1.1
IL31 57.16 338 P P 08 37 33.4 +0.2
ILAR Eielson Array 57.16 338 P P 08 37 33.6 +0.3
comp=Z,8.3nm,1.0s,baz=147,slow=5.1,SNR=38
ILAR Eielson Array 57.16 338 P P 08 37 33.7 +0.5
CUT Chulitna 57.21 335 P P 08 37 34.5 +0.9
baz=119
MCK McKinley 57.35 337 P P 08 37 35.4 +0.7
baz=121
CCB Clear Creek Bu 57.42 338 P P 08 37 35.6 +0.5
CCB IAmb IAmb 08 37 38.0
comp=Z,5.9nm,1.2s
POKR Poker Plat Res 57.55 338 P P 08 37 36.8 +0.8
baz=123
POKR Poker Plat Res 57.55 338 P P 08 37 37.2 +1.2
TCOL CIGO, UAF Yank 57.57 338 P P 08 37 36.4 +0.3
baz=123
TRF Thorofare Moun 57.73 336 P P 08 37 38.5 +0.9
MDM Murphy Dome 57.74 338 P P 08 37 38.6 +1.2
MDM IAmb IAmb 08 37 39.6
comp=Z,5.3nm,1.1s
BWN Browne 57.78 337 P P 08 37 38.4 +0.7
BMAR Burnt Mountain 57.96 341 P P 08 37 39.6 +0.7
I23K Minto, Yukon-K 58.25 338 P P 08 37 41.0 +0.1
baz=121,SNR=6.7
I23K Minto, Yukon-K 58.25 338 P P 08 37 41.6 +0.8
MLY Manley 58.69 337 P P 08 37 44.7 +0.7
baz=120,SNR=7.7
COLD Coldfoot 59.64 340 P P 08 37 50.8 +0.3
baz=122,SNR=6.4
COLD Coldfoot 59.64 340 P P 08 37 51.5 +1.0
COLD IAmb IAmb 08 37 53.8
comp=Z,7.5nm,1.1s
CPUP Villa Florida 59.83 135 P P 08 37 52.0 -0.4
comp=Z,1.6nm,0.8s,baz=348,slow=9.3,SNR=3.0
TOLK Toolik Lake Re 60.20 341 P P 08 37 54.5 +0.1
baz=123
PLCA Paso Flores 63.59 155 LR LR 08 59 23.1
comp=Z,88nm,20.2s,baz=342,slow=30
ICESG Greenland Ices 63.98 20 *i* P P 08 38 20.1 0.0
ICESG IAmb IAmb 08 38 23.3
comp=Z,27nm,1.3s
SUMG Summit 65.67 17 P P 08 38 32.0 +0.9
SUMG Summit 65.67 17 *i* P P 08 38 31.0 -0.1
comp=Z,24nm,1.0s
SUMG Summit 65.67 17 *i* P P 08 38 31.0 -0.1
SUMG IAmb IAmb 08 38 33.1
comp=Z,24nm,1.0s
DBG Daneborg 71.13 16 *i* P P 08 39 05.3 +0.5
DBG IAmb IAmb 08 39 07.0
comp=Z,9.5nm,1.3s
DAG Danmarks Havn 71.72 14 *i* P P 08 39 07.8 -0.5
comp=Z,7.3nm,1.1s
DAG Danmarks Havn 71.72 14 *i* P P 08 39 07.8 -0.5
DAG IAmb IAmb 08 39 09.0
comp=Z,7.3nm,1.1s
ESDC Sonseca Array 84.05 50 P P 08 40 17.0 -0.7
comp=Z,1.0nm,1.0s,baz=328,slow=5.3,SNR=4.1
NOA NORSAR Array B 85.27 27 LR LR 09 19 58.3
comp=Z,44nm,19.0s,baz=265,slow=37
GTA Gaotai 120.96 342 *e*PKP PKPdf 08 46 37.1 -2.6
GTA Gaotai 120.96 342 *e*PKP PKPdf 08 46 37.1 -2.6
LZH Lanzhou 122.61 337 *e*PKP PKPdf 08 46 42.1 -1.0
LZH pPKP sPKPdf 08 46 53.3 +1.5
LZH sPKP 08 46 56.3
WRA Warramunga Arr 128.38 258 PKP PKPdf 08 46 53.8 -0.4
comp=Z,0.6nm,0.9s,baz=93,slow=1.9,SNR=5.4
ASAR Alice Springs 129.07 253 PKP PKPdf 08 46 55.1 -0.3
comp=Z,0.6nm,0.9s,baz=116,slow=1.6,SNR=4.4
CMAR Chiang Mai Arr 140.15 331 PKP PKPdf 08 47 16.8 +0.5
comp=Z,0.8nm,0.3s,baz=327,slow=2.6,SNR=4.8

IDC ***18*** *08:30:22.4±0.5, 1.°86N×126.°32E, h0km, mb4.5/23, mb1 4.6/24, mb1mx4.5/39, mbtmp4.5/24, ML4.4/1, MS3.7/6, Ms1 3.8/6, ms1mx3.4/41, Error ellipse: s-maj=25.9km s-min=11.1km az=76.0*

DJA ***18*** *08:30:27.2±1.1, 2.°N±3.°×12.°6E±.°, h17km±9km, M4.8/19, mb4.8/19, mB5.4/9, MLv4.8/15, Mw(mB)4.8/9, Mwp4.9/1*

GCMT ***18*** *08:30:29.6±0.4, 2.°10N±0.°03×126.°62E±0.°02, h31km, MW5.1/60, Moment Tensor Solution. s33,c35; s60,c78; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr5.26±.28; Mθθ-0.89±.16; Mϕϕ-4.38±.21; Mrθ0.46±.19; Mθϕ-0.78±.14; Mϕr0.22±.25; Best double couple: M*w*4.92700×10^16 NP1:*ϕs*188.00000°, δ43.00000°, λ84.00000°. NP2: ϕs16.00000°, δ47.00000°, λ95.00000°. Principal axes: T 5.2970, Plg86.0000°, Azm347.0000°; N -0.7480, Plg4.0000°, Azm192.0000°; P -4.5560, Plg2.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***18*** *08:30:29.6±1.8, 1.°7N±0.°2×126.°4E±0.°2, h35km±2km, mb4.9/36 Error ellipse: s-maj=43.5km s-min=6.0km az=50.0*

KLM ***18*** *08:30:29.0, 1.°78N×126.°31E, h30km, mb4.7*

ISC 18 08:30:29.0±0.3, 1.°91N±0.°04×126.°54E±0.°06, h47km, n145, σ1s79/144, mb4.7/48, MS4.1/12, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.40**	**144**	P			**Pn**	**08 30 51.5**	**-0.6**
TNTI	**Ternate**	**1.40**	**144**	Pn			**Pn**	**08 30 51.1**	**-1.0**
SGSI	**Sangihe**	**2.04**	**330**	P			**Pn**	**08 30 59.0**	**-1.8**
LBMI	**Labuha**	**2.70**	**159**	P			**Pn**	**08 31 10.7**	**+0.7**
KMSI	**Cibinong**	**2.88**	**243**	P			**Pn**	**08 31 11.8**	**-0.6**
GTOI	**Gorontalo**	**3.75**	**250**	P			**Pn**	**08 31 23.3**	**-1.0**
DDMP	**Don Marcelino,**	**4.25**	**349**	*e*P			**Pn**	**08 31 28.9**	**-2.3**
DDMP				*e*S			**Sn**	**08 32 17.3**	**-2.3**
LUWI	**Luwuk**	**4.77**	**232**	P			**Pn**	**08 31 38.7**	**+0.3**
LUWI	**Luwuk**	**4.77**	**232**	Pn			**Pn**	**08 31 38.2**	**-0.2**
MRSI	**Marisa**	**4.81**	**253**	P			**Pn**	**08 31 38.9**	**-0.1**
SKMP	**Bagumbayan, Su**	**5.00**	**337**	*e*P			**Pn**	**08 31 39.2**	**-2.3**
SKMP				*e*S			**Sn**	**08 32 35.4**	**-2.6**
MATI	**Mati**	**5.01**	**357**	*e*P			**Pn**	**08 31 42.3**	**+0.6**
KCP	**Kidapawan**	**5.27**	**344**	*i*P			**Pn**	**08 31 46.7**	**+1.4**
KCP				*i*S			**Sn**	**08 32 50.9**	**+6.0**
APSI	**Ampana**	**5.63**	**240**	P			**Pn**	**08 31 50.8**	**+0.5**
	1.6nm3μm358nm,1.1s								
TOLI2	**Tolitoli**	**5.81**	**262**	Pn			**Pn**	**08 31 49.6**	**-3.1**
BUKP	**Musuan**	**6.11**	**346**	*e*P			**Pn**	**08 31 55.6**	**-1.2**
PAGZ	**Pagadian**	**6.69**	**332**	*e*P			**Pn**	**08 32 02.2**	**-2.5**
PAGZ				*e*S			**Sn**	**08 33 16.3**	**-3.4**
MPSI	**Mapaga**	**6.82**	**257**	P			**Pn**	**08 32 06.4**	**-0.1**
	0.3nm2μm78nm,0.9s								
FAKI	**Fak Fak**	**7.45**	**130**	P			Pn	08 32 31.6	+16
GLSP	**General Luna,**	**7.84**	**357**	*e*P			**Pn**	**08 32 20.8**	**+0.3**
TTSI	**Tana Toraja**	**8.33**	**234**	P			**Pn**	**08 32 28.0**	**+0.8**
	0.3nm2μm58nm,0.6s								
MYLDM	**Lahad Datu**	**8.66**	**292**	Pn			**Pn**	**08 32 31.6**	**-0.1**
SPSI	**Sidrap Palu**	**8.93**	**229**	P			Pn	08 32 42.1	+6.6
KAPI	**Kappang**	**9.66**	**225**	Pn			**Pn**	**08 32 44.5**	**-0.9**
	3.5nm,0.3s,baz=69,slow=8.0,SNR=5.9								
KAPI	**Kappang**	**9.66**	**225**	Pn			**Pn**	**08 32 44.9**	**-0.5**
SPMM	**Sapulut**	**10.43**	**286**	P			**Pn**	**08 32 57.0**	**+0.9**
KKM	**Kota Kinabalu**	**11.09**	**292**	Pn			**Pn**	**08 33 05.8**	**+0.7**
SOEI	**Soe**	**11.80**	**191**	P			Pn	08 33 26.2	+11
TGY	**Tagaytay City**	**13.32**	**336**	LR			LR	08 38 42.7
	comp=Z,557nm,21.5s,baz=180,slow=38								
PLAI	**Plampang**	**13.78**	**219**	P			**P**	**08 33 53.8**	**+4.6**
TWSI	**Taliwang, Sumb**	**14.30**	**222**	P			**P**	**08 33 58.2**	**+3.3**
SBUM	**Sibu**	**14.32**	**272**	Pn			**Pn**	**08 33 48.9**	**-0.3**
SBUM	**Sibu**	**14.32**	**272**	P			**Pn**	**08 33 49.0**	**-0.1**
KSM	**Kuching**	**16.23**	**269**	P			**P**	**08 34 15.2**	**-1.2**
KSM	**Kuching**	**16.23**	**269**	P			**Pn**	**08 34 14.0**	**+0.1**
KNRA	**Kununurra**	**17.61**	**173**				**Pn**	**08 34 31.2**	**+0.1**
KNRA				IAmb			IAmb	08 34 37.3
	comp=Z,64nm,0.9s								
FITZ	**Fitzroy Crossi**	**19.90**	**183**	P			**P**	**08 34 54.8**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=16,slow=11,SNR=20								
FITZ	**Fitzroy Crossi**	**19.90**	**183**				**P**	**08 34 54.7**	**-2.0**
LEM	**Lembang**	**20.78**	**245**	LR			LR	08 44 52.1
	comp=Z,223nm,18.4s,baz=58,slow=42								
KLSI		**22.75**	**253**	P			**P**	**08 35 32.5**	**+5.0**
COEN	**Coen**	**22.81**	**134**	P			**P**	**08 35 28.3**	**+0.2**
WB0	**Warramunga Arr**	**22.88**	**161**	P			**P**	**08 35 27.2**	**-1.5**
WRAB	**Tennant Creek**	**23.02**	**161**	P			**P**	**08 35 28.6**	**-1.5**
WRA	**Warramunga Arr**	**23.02**	**161**	P			**P**	**08 35 28.2**	**-2.0**
	comp=Z,37nm,0.8s,baz=334,slow=11,SNR=97								
WRA				S			**S**	**08 39 36.6**	**-1.0**
	comp=Z,2.4nm,0.9s,baz=332,slow=20,SNR=7.0								
WRA	**Warramunga Arr**	**23.02**	**161**	P			**P**	**08 35 28.1**	**-2.1**
WB2	**Warramunga Arr**	**23.03**	**161**	P			**P**	**08 35 29.1**	**-1.2**
WB2				IAmb			IAmb	08 35 34.8
	comp=Z,63nm,0.9s								
WR0	**Warramunga Arr**	**23.11**	**161**	P			**P**	**08 35 29.7**	**-1.4**
WR0				IAmb			IAmb	08 35 35.0
	comp=Z,94nm,1.4s								
PMG	**Port Moresby**	**23.41**	**119**	LR			LR	08 46 26.8
	comp=Z,185nm,18.4s,baz=326,slow=41								
QIZ	**Qiongzhong**	**23.60**	**317**	P			**P**	**08 35 37.5**	**+1.7**
QIZ				S			**S**	**08 39 49.1**	**+2.0**
QIZ				LR			LR		
	comp=N,460nm,17.7s								
QIZ				LR			LR		
	comp=E,360nm,17.7s								
QIZ				LR			LR		
	comp=Z,610nm,21.6s								
LHSI	**Lahat**	**23.70**	**256**	P			**P**	**08 35 39.5**	**+2.7**
	comp=Z,14μmcomp=Z,81nm,0.6s								
PSA00	**Pilbara Seismi**	**24.24**	**195**	P			**P**	**08 35 40.2**	**-1.4**
PSA00				IAmb			IAmb	08 35 49.6
	comp=Z,31nm,1.5s								
SDSI	**Sungai Dareh**	**25.27**	**264**	P			**P**	**08 35 52.1**	**+1.0**
	comp=Z,15nm,1.1s								
IPM	**Ipoh**	**25.60**	**276**	P			**P**	**08 35 55.0**	**+0.8**
KULM	**Kulim**	**26.05**	**278**	P			**P**	**08 35 59.0**	**+0.7**
KRVT	**Keravat (AS076**	**26.21**	**104**	LR			LR	08 46 34.9
	comp=Z,114nm,18.2s,baz=279,slow=37								
AS31	**Alice Springs**	**26.41**	**165**	P			**P**	**08 36 00.6**	**-0.8**
ASAR	**Alice Springs**	**26.41**	**165**	P			**P**	**08 36 00.8**	**-0.6**
	comp=Z,4.9nm,0.6s,baz=345,slow=7.8,SNR=72								
ASAR				PcP			**PcP**	**08 39 26.6**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=349,slow=2.6,SNR=4.6								
ASAR				S			**S**	**08 40 32.3**	**+0.5**
	comp=Z,2.1nm,1.1s,baz=349,slow=22,SNR=5.8								
GIRL	**Giralia**	**27.19**	**206**	P			**P**	**08 36 07.6**	**-0.8**
CTA	**Charters Tower**	**29.19**	**139**	P			**P**	**08 36 28.0**	**+1.7**
	comp=Z,2.3nm,0.5s,baz=296,slow=6.4,SNR=3.5								
NJ2	**Nanjing**	**30.85**	**347**	*e*P			**P**	**08 36 42.1**	**+1.3**
NJ2				pmax			pmax		
	comp=Z,15nm,0.5s								
JNU	**Nakatsue**	**31.32**	**7**	LR			LR	08 51 51.8
	comp=Z,123nm,18.6s,baz=170,slow=41								
CMAR	**Chiang Mai Arr**	**31.66**	**303**	P			**P**	**08 36 48.3**	**+0.1**
	comp=Z,0.7nm,0.2s,baz=122,slow=8.6,SNR=4.7								
CMAR				LR			LR	08 50 20.5
	comp=Z,130nm,19.6s,baz=182,slow=38								
CMAR	**Chiang Mai Arr**	**31.66**	**303**	P			**P**	**08 36 47.0**	**-1.2**
FORT	**Forrest**	**32.54**	**178**	P			**P**	**08 36 55.5**	**-0.1**
JWT	**Wachi**	**34.22**	**13**	P			**P**	**08 37 09.9**	**-0.4**
KSRS	**Korea Array**	**35.40**	**2**	P			**P**	**08 37 21.8**	**+1.4**
	comp=Z,3.6nm,0.7s,baz=181,slow=10,SNR=9.4								
BBOO	**Buckleboo**	**35.68**	**166**	P			**P**	**08 37 21.9**	**-1.0**
BBOO				IAmb			IAmb	08 37 27.4
	comp=Z,38nm,1.5s								
XAN	**Xi'an**	**35.96**	**335**	P			**P**	**08 37 23.3**	**-2.1**
XAN				pP			pP	08 37 38.4	+1.1
XAN				pmax			pmax		
	comp=Z,12nm,1.5s								
XAN				LR			LR		
	comp=N,290nm,11.9s								
XAN				LR			LR		
	comp=Z,380nm,14.1s								
CD2	**Chengdu**	**36.01**	**326**	P			**P**	**08 37 26.4**	**+0.6**
CD2				LR			LR		
	comp=N,360nm,21.1s								
CD2				LR			LR		
	comp=E,570nm,14.7s								
CD2				LR			LR		
	comp=Z,460nm,23.0s								
MJAR	**Matsushiro Ar**	**36.11**	**16**	P			**P**	**08 37 26.4**	**-0.2**
	comp=Z,5.6nm,0.8s,baz=184,slow=9.5,SNR=8.9								
MAT	**Matsushiro**	**36.12**	**16**	P			**P**	**08 37 26.6**	**0.0**
STKA	**Stephens Creek**	**36.51**	**158**	P			**P**	**08 37 29.5**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=326,slow=9.4,SNR=19								
STKA	**Stephens Creek**	**36.51**	**158**	P			**P**	**08 37 29.8**	**-0.2**
JMM	**Marumori**	**38.11**	**18**	P			**P**	**08 37 42.4**	**-1.0**
BJI	**Beijing**	**39.11**	**347**	P			**P**	**08 37 54.6**	**+2.8**
BJI				pmax			pmax		
	comp=Z,12nm,0.7s								
LZH	**Lanzhou**	**39.98**	**331**	⇑P			**P**	**08 38 02.3**	**+2.9**
LZH				pP			pwP	08 38 13.6	-0.3
LZH				sP			sP	08 38 19.4	+2.6
LZH				PP			**PnPn**	**08 39 44.6**	**+8.9**
LZH				pmax			pmax		
	comp=Z,20nm,1.3s								
LZH				pmax			pmax		
	comp=Z,110nm,4.9s								
LZH				LR			LR		
	comp=N,280nm,17.4s								
LZH				LR			LR		
	comp=E,320nm,17.3s								
LZH				LR			LR		
	comp=Z,220nm,15.7s								
ARMA	**Armidale**	**40.07**	**145**	P			**P**	**08 37 58.2**	**-1.9**
ARMA				IAmb			IAmb	08 38 10.1
	comp=Z,24nm,1.2s								
SHL	**Shillong**	**40.82**	**308**	P			**P**	**08 38 04.2**	**-2.4**
SHL				IAmb			IAmb	08 38 07.5
	comp=Z,13nm,0.7s								
HHC	**Hu-ho-hao-te**	**41.06**	**343**	*e*P			**P**	**08 38 09.5**	**+1.3**
HHC				S			**S**	**08 44 19.3**	**+1.6**
HHC				pmax			pmax		
	comp=Z,24nm,0.9s								
HHC				pmax			pmax		
	comp=Z,73nm,4.9s								
HHC				LR			LR		
	comp=N,280nm,17.0s								
HHC				LR			LR		
	comp=E,180nm,15.3s								
HHC				LR			LR		
	comp=Z,330nm,22.1s								
USRK	**Ussuriysk Ar.**	**42.39**	**6**	P			**P**	**08 38 20.2**	**+1.4**
	comp=Z,7.9nm,1.1s,baz=193,slow=7.8,SNR=5.0								
USRK	**Ussuriysk Ar.**	**42.39**	**6**	P			**P**	**08 38 19.1**	**+0.3**
H11S3	**WAKE ISLAND Hy**	**42.66**	**65**	T			T	09 25 27.9
	baz=252,slow=74,SNR=38								
H11S2	**WAKE ISLAND Hy**	**42.67**	**65**	T			T	09 25 24.1
	baz=252,SNR=15								
H11S1	**WAKE ISLAND Hy**	**42.67**	**65**	T			T	09 25 23.6
	baz=252,slow=74,SNR=9.5								
H11N1	**WAKE ISLAND Hy**	**43.23**	**63**	T			T	09 25 00.4
	baz=251								
H11N2	**WAKE ISLAND Hy**	**43.24**	**63**	T			T	09 25 01.5
	baz=251								
H11N3	**WAKE ISLAND Hy**	**43.24**	**63**	T			T	09 24 58.7
	baz=251								
LSA	**Lhasa**	**43.51**	**313**	P			**P**	**08 38 27.4**	**-1.4**
LSA				IAmb			IAmb	08 38 28.6
	comp=Z,8.5nm,0.6s								
GTA	**Gaotai**	**44.56**	**330**	*e*P			**P**	**08 38 35.8**	**-0.8**
GTA				pP			pP	08 38 48.4	-0.4
GTA				sP			sP	08 38 53.0	-1.1
GTA				PcP			**PcP**	**08 40 20.1**	**+1.0**
GTA				SS			SS	08 48 12.3	-18
	comp=Z,5.0nm,1.0s								
GTA				pmax			pmax		
	comp=Z,64nm,6.7s								
GTA				LR			LR		
	comp=N,170nm,19.6s								
GTA				LR			LR		
	comp=E,180nm,19.6s								
GTA				LR			LR		
	comp=Z,350nm,19.6s								
TAPN	**Taplejung**	**44.96**	**308**	*e*P			**P**	**08 38 38.6**	**-1.5**
ODAN	**Odare**	**44.99**	**307**	*e*P			**P**	**08 38 38.3**	**-2.0**
RAMN	**Ramite**	**45.66**	**307**	*e*P			**P**	**08 38 43.9**	**-1.7**
GUN	**Gumba**	**46.66**	**308**	*e*P			**P**	**08 38 51.5**	**-2.1**
KOLN	**Koldanda**	**48.42**	**306**	*e*P			**P**	**08 39 05.3**	**-1.8**
DANN	**Dangsing**	**48.53**	**307**	*e*P			**P**	**08 39 05.8**	**-2.3**
	comp=Z,27nm,0.8s								
ULN	**Ulaanbaatar**	**48.79**	**343**	P			**P**	**08 39 10.4**	**+0.9**
ULN				IAmb			IAmb	08 39 13.8
	comp=Z,8.4nm,1.1s								
SONM	**Songino Array**	**48.96**	**342**	P			**P**	**08 39 10.7**	**-0.1**
	comp=Z,4.4nm,1.0s,baz=165,slow=8.0,SNR=10.0								
SONM				PcP			**PcP**	**08 40 34.1**	**-0.4**
	comp=Z,3.8nm,0.8s,baz=149,slow=2.8,SNR=4.8								
SONM	**Songino Array**	**48.96**	**342**	P			**P**	**08 39 09.9**	**-0.9**
WMQ	**Urumqi**	**54.11**	**326**	*e*P			**P**	**08 39 51.8**	**+2.5**
WMQ				pmax			pmax		
	comp=Z,20nm,0.7s								
WMQ				pmax			pmax		
	comp=Z,130nm,6.7s								
WMQ				LR			LR		
	comp=N,190nm,17.5s								
WMQ				LR			LR		
	comp=E,500nm,19.5s								
WMQ				LR			LR		

comp=Z,560nm,29.3s
PETK Petropavlovsk- 57.18 22 P **P** **08 40 12.3 +1.2**
comp=Z,1.9nm,0.5s,baz=200,slow=3.4,SNR=6.9
MK31 Makanchi Array 58.94 326 P **P** **08 40 22.4 -1.2**
MK31 IAmb IAmb 08 40 37.8
comp=Z,21nm,1.4s
MKAR Makanchi Array 58.94 326 P **P** **08 40 22.1 -1.5**
comp=Z,4.6nm,0.3s,baz=120,slow=7.6,SNR=58
MKAR PcP **PcP** **08 41 12.4 0.0**
comp=Z,2.0nm,0.6s,baz=126,slow=5.0,SNR=2.0
SATY Saty 59.24 321 *eP* **P** **08 40 24.5 -1.4**
comp=Z,2.6nm,0.7s,baz=321
KPKS Kokpek 59.27 321 *eP* **P** **08 40 24.3 -1.7**
comp=Z,3.7nm,0.7s,baz=321
ZHN Zhinishke 59.28 321 *eP* **P** **08 40 23.4 -2.7**
baz=321
KUU Kurty 60.97 321 *eP* **P** **08 40 35.0 -2.6**
baz=321
SGDS Sogindy 61.86 319 *eP* **P** **08 40 41.0 -2.6**
baz=320
ZALV Zalesovo Beam 62.12 334 P **P** **08 40 43.1 -1.9**
comp=Z,1.6nm,0.3s,baz=129,slow=4.6,SNR=5.6
KURK Kurchatov 63.17 328 P **P** **08 40 50.6 -1.5**
IUG Iuzhnay 64.39 317 *eP* **P** **08 40 58.4 -2.1**
baz=317
KK31 Karatay Array 64.44 318 P **P** **08 40 59.2 -1.5**
KKAR Karatay Array 64.44 318 P **P** **08 40 59.2 -1.5**
KKAR Karatay Array 64.44 318 P **P** **08 40 58.6 -2.0**
BRZS Berezniki 66.06 325 *eP* **P** **08 41 09.4 -1.6**
baz=325
NRIK Noril'sk 72.14 346 P **P** **08 41 48.9 +0.5**
comp=Z,11nm,0.7s,baz=127,slow=6.2,SNR=25
ABKAR Akbulak array 73.44 321 P **P** **08 41 55.2 -1.2**
ABKAR IAmb IAmb 08 41 57.9
comp=Z,4.6nm,0.8s
ABKAR Akbulak array 73.44 321 P **P** **08 41 54.9 -1.6**
AKTO Aktyubinsk 74.97 322 P **P** **08 42 04.3 -1.0**
comp=Z,5.9nm,0.7s,baz=97,slow=11,SNR=8.0
RAYN Ar Rayn 81.02 293 P **P** **08 42 38.4 -1.2**
RAYN IAmb IAmb 08 42 40.0
comp=Z,7.8nm,1.0s
VNDA Vanda 81.65 173 P **P** **08 42 42.0 +0.3**
comp=Z,1.7nm,0.5s,baz=315,slow=7.3,SNR=19
VNDA Vanda 81.65 173 P **P** **08 42 41.3 -0.4**
MAW Mawson 81.99 200 P **P** **08 42 43.4 -0.2**
comp=Z,6.1nm,1.2s,baz=71,slow=9.0,SNR=3.8
IMAR Indian Mountai 84.08 24 P **P** **08 42 55.5 +1.0**
COLD Coldfoot 85.64 23 P **P** **08 43 01.9 -0.4**
COLD IAmb IAmb 08 43 05.8
comp=Z,4.0nm,0.8s
KOPT Kop Dagi 85.75 310 P **P** **08 43 03.8 0.0**
ILAR Eielson Array 86.82 25 P **P** **08 43 08.3 +0.1**
comp=Z,0.7nm,0.8s,baz=236,slow=5.3,SNR=9.5
ILAR Eielson Array 86.82 25 P **P** **08 43 07.5 -0.7**
KLMR Klimovskoe 86.89 331 *eP* **P** **08 43 06.5 -2.1**
KLMR AMP 08 43 09.8
comp=Z,31nm,1.4s
BMAR Burnt Mountain 87.82 23 P **P** **08 43 13.2 +0.1**
K27K Chicken 88.91 26 P **P** **08 43 18.8 +0.6**
K27K IAmb IAmb 08 43 30.5
comp=Z,15nm,1.5s
BCAR Beaver Creek A 89.08 27 P **P** **08 43 19.1 0.0**
KMBO Kilima Mbogo 89.32 269 P **P** **08 43 22.3 +0.8**
comp=Z,1.3nm,0.3s,baz=71,slow=4.7,SNR=7.9
KMBO Kilima Mbogo 89.32 269 P **P** **08 43 21.0 -0.5**
KMBO IAmb IAmb 08 43 22.6
comp=Z,14nm,1.3s
BRTR Keskin Array B 91.03 310 P **P** **08 43 27.4 -1.5**
comp=Z,2.6nm,0.9s,baz=158,slow=4.0,SNR=6.7
BRTR Keskin Array B 91.03 310 P **P** **08 43 27.0 -1.8**
ARCES ARCESS Array B 92.08 340 P **P** **08 43 32.9 0.0**
comp=Z,4.0nm,0.7s,baz=82,slow=5.2,SNR=8.3
AKASG Malin Array Be 93.18 321 P **P** **08 43 38.9 +0.6**
comp=Z,1.5nm,0.4s,baz=69,slow=5.2,SNR=4.2
AKASG Malin Array Be 93.18 321 P **P** **08 43 36.4 -1.9**
FINES FINESS Array B 93.34 332 P **P** **08 43 37.3 -1.5**
comp=Z,2.1nm,0.7s,baz=30,slow=5.0,SNR=5.9
MLR Muntele Rosu 96.07 316 P **P** **08 43 50.2 -1.7**
comp=Z,3.4nm,0.7s,baz=103,slow=8.4,SNR=5.6
BURAR Bucovina Array 96.22 318 P **P** **08 43 51.6 -0.8**
BUR08 Bucovina Ar. S 96.23 318 P **P** **08 43 51.9 -0.6**
BUR08 IAmb IAmb 08 43 53.8
comp=Z,6.1nm,0.9s
TORD Torodi Ar. Bea 123.28 287 PKP **PKiKP** **08 49 22.2 +0.1**
comp=Z,3.3nm,0.8s,baz=41,slow=1.5,SNR=8.2
DBIC Dimbokro 130.74 280 PKP **PKiKP** **08 49 37.3 +0.3**
comp=Z,1.4nm,0.5s,baz=79,slow=5.2,SNR=3.8
LPAZ La Paz 159.68 136 PKP **PKPdf** **08 50 26.6 +2.1**
comp=Z,1.0nm,0.8s,baz=270,slow=5.1,SNR=3.2

*NEIC **18** 08:36:02.1±1.6, 19°.95S±0°.04×71°.14W±0°.07, h32km±6km, Error ellipse: s-maj=10.1km s-min=5.0km az=102.0*
*GUC **18** 08:36:02.7±0.8, 19°.89S×71°.09W, h36km±4km, ML4.2*
*VAO **18** 08:36:05.2±0.4, 19°.88S×70°.68W, h10km, mb4.3*
*IDC **18** 08:36:08.3±2.4, 19°.91S×70°.64W, h54km±23km, mb3.7/10, mb1 4.0/14, mb1mx3.9/26, mbtmp4.0/14, ML4.1/4, MS3.7/5, Ms1 3.7/5, ms1mx3.4/18, Error ellipse: s-maj=22.5km s-min=15.8km az=74.0*
ISC 18 08:36:02.1±2.1, 19°.95S±0°.03×71°.04W±0°.05, h16km±13km**, n114, σ1$45/128, mb4.2/9, MS3.9/4, 12C-1D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.91**	**111**	⇑*iP*		**Pb**	**08 36 19.6**	**0.0**
TA02				*eS*		**Sg**	**08 36 32.2**	**+0.4**
TA02				IAML			08 36 36.8	
	comp=N,12μm,0.4s							
PSGC	**Pisagua**	**0.93**	**68**	⇓*eP*		**Pb**	**08 36 18.8**	**-1.2**
PSGC				*eS*		**Sb**	**08 36 31.0**	**-1.2**
PSGCX	**Pisagua**	**0.93**	**68**			**Pb**	**08 36 19.1**	**-0.9**
PSGCX					Sn	**Sb**	**08 36 31.5**	**-0.7**
TA01	**Diego Aracena**	**1.01**	**127**	⇑*iP*		**Pb**	**08 36 21.2**	**0.0**
TA01				*eS*		**Sb**	**08 36 34.9**	**+0.5**
TA01				IAML			08 36 35.9	
	comp=E,7μm,0.3s							
TA01	**Diego Aracena**	**1.01**	**127**			**Pb**	**08 36 21.3**	**0.0**
TA01					Sn	**Sb**	**08 36 34.6**	**+0.3**
PATCX	**Punta Patache**	**1.20**	**136**	⇑*iP*		**Pn**	**08 36 24.0**	**-0.4**
PATCX				*eS*		**Sb**	**08 36 40.0**	**+0.1**
PATCX	**Punta Patache**	**1.20**	**136**			**Pn**	**08 36 24.0**	**-0.4**
PATCX					Sn	**Sb**	**08 36 38.5**	**-1.3**
PB11	**IPOC Station P**	**1.32**	**82**	⇑*iP*		**Pn**	**08 36 25.4**	**-0.5**
PB11				*eS*		**Sb**	**08 36 42.8**	**-0.5**
PB11				IAML			08 36 44.6	
	comp=E,14μm,0.7s							
PB11	**IPOC Station P**	**1.32**	**82**			**Pn**	**08 36 25.5**	**-0.5**
PB11					Sn	**Sb**	**08 36 42.4**	**-0.9**
MNMC	**Minye Minye**	**1.59**	**59**	⇑*iP*		**Pn**	**08 36 29.4**	**-0.4**
MNMC				*eS*		**Sn**	**08 36 50.0**	**-0.2**
MNMC				IAML			08 36 58.4	
	comp=N,8μm,0.5s							
MNMC	**Minye Minye**	**1.59**	**59**			**Pn**	**08 36 29.5**	**-0.4**
MNMC					Sn	**Sn**	**08 36 50.6**	**+0.4**
AP01	**Chacalluta**	**1.71**	**23**	⇑*iP*		**Pn**	**08 36 29.5**	**-1.7**
AP01				*eS*		**Sn**	**08 36 50.6**	**-2.1**
AP01				IAML			08 37 04.7	
	comp=N,6μm,0.7s							
AP01	**Chacalluta**	**1.71**	**23**			**Pn**	**08 36 30.3**	**-0.9**
AP01					Sn	**Sn**	**08 36 51.0**	**-1.7**
PB08	**IPOC Station P**	**1.78**	**96**	⇑*iP*		**Pn**	**08 36 32.6**	**-0.1**
PB08				*eS*		**Sn**	**08 36 55.9**	**+0.7**
PB08				IAML			08 37 01.7	
	comp=N,2μm,0.6s							
PB08	**IPOC Station P**	**1.78**	**96**			**Pn**	**08 36 32.6**	**-0.1**
PB01	**IPOC Station P**	**1.82**	**127**	⇑*iP*		**Pn**	**08 36 33.0**	**+0.1**
PB01				*eS*		**Sn**	**08 36 56.5**	**+1.0**
PB01				IAML			08 37 05.5	
	comp=E,4μm,0.4s							
PB01				IAML			08 37 07.3	
	comp=N,3μm,0.6s							
PB01	**IPOC Station P**	**1.82**	**127**			**Pn**	**08 36 33.1**	**+0.3**
PB01					Sn	**Sn**	**08 36 54.3**	**-1.3**
PB07	**IPOC Station P**	**2.07**	**149**	IAML			08 37 14.5	
	comp=N,2μm,0.5s							
PB07	**IPOC Station P**	**2.07**	**149**			**Pn**	**08 36 36.2**	**-0.2**
PB07					Sn	**Sn**	**08 37 00.1**	**-1.8**
PB16	**IPOC Station P**	**2.16**	**42**	⇑*iP*		**Pn**	**08 36 37.6**	**-0.4**
PB16				*eS*		**Sn**	**08 37 05.3**	**+0.5**
PB16				IAML			08 37 13.7	
	comp=N,2μm,0.6s							
PB16	**IPOC Station P**	**2.16**	**42**	Pn		**Pn**	**08 36 37.8**	**-0.3**
PB16				Sn		**Sn**	**08 37 03.4**	**-1.4**
PB03	**IPOC Station P**	**2.41**	**150**	⇑*iP*		**Pn**	**08 36 40.7**	**-0.4**
PB03				*eS*		**Sn**	**08 37 09.6**	**-0.7**
PB03				IAML			08 37 31.2	
	comp=E,966nm,0.6s							
PB09	**IPOC Station P**	**2.49**	**138**	⇑*iP*		**Pn**	**08 36 43.3**	**+1.0**
PB09				*eS*		**Sn**	**08 37 13.6**	**+1.3**
PB09				IAML			08 37 28.3	
	comp=N,3μm,0.3s							
PB09	**IPOC Station P**	**2.49**	**138**			**Pn**	**08 36 43.2**	**+1.0**
PB04	**IPOC Station P**	**2.51**	**161**	⇑*iP*		**Pn**	**08 36 41.8**	**-0.7**
PB04				*eS*		**Sn**	**08 37 10.3**	**-2.5**
PB04				IAML			08 37 34.8	
	comp=N,2μm,0.5s							
PB04	**IPOC Station P**	**2.51**	**161**			**Pn**	**08 36 41.9**	**-0.6**
PB05	**IPOC Station P**	**2.99**	**165**	*eP*		**Pn**	**08 36 47.9**	**-1.1**
PB05				IAML			08 37 45.3	
	comp=E,584nm,0.4s							
PB06	**IPOC Station P**	**3.06**	**154**	*eP*		**Pn**	**08 36 49.1**	**-0.9**
PB06	**IPOC Station P**	**3.06**	**154**			**Pn**	**08 36 49.5**	**-0.5**
LVC	**Limon Verde**	**3.31**	**143**	P		**Pn**	**08 36 54.9**	**+1.2**
	comp=E,21nm,0.3s,baz=342,slow=9.9,SNR=115							
LVC				S		**Sn**	**08 37 32.2**	**-0.6**
	comp=E,45nm,0.3s,baz=317,slow=14,SNR=5.0							
LVC	**Limon Verde**	**3.31**	**143**	*i* P		**Pn**	**08 36 54.8**	**+1.2**
LVC				*i* S		**Sn**	**08 37 33.1**	**+0.3**
LVC	**Limon Verde**	**3.31**	**143**			**Pn**	**08 36 53.8**	**+0.1**
LVC	**Limon Verde**	**3.31**	**143**	*eP*		**Pn**	**08 36 54.7**	**+1.2**
PB15	**IPOC Station P**	**3.56**	**156**	*eP*		**Pn**	**08 36 56.2**	**-0.7**
PB15	**IPOC Station P**	**3.56**	**156**			**Pn**	**08 36 55.9**	**-0.9**
PB10	**IPOC Station P**	**3.57**	**173**	*eP*		**Pn**	**08 36 55.6**	**-1.4**
PB10	**IPOC Station P**	**3.57**	**173**	Pn		**Pn**	**08 36 55.5**	**-1.4**
LPAZ	**La Paz**	**4.58**	**38**	P		**Pn**	**08 37 13.7**	**+2.4**
	comp=E,5.2nm,0.3s,baz=227,slow=6.9,SNR=38							
LPAZ				LR		LR	08 39 05.9	
	comp=E,457nm,18.2s,baz=240,slow=41							
LPAZ	**La Paz**	**4.58**	**38**	Pn		**Pn**	**08 37 11.0**	**-0.2**
LPAZ	**La Paz**	**4.58**	**38**	*eP*		**Pn**	**08 37 10.8**	**-0.4**
PB14	**IPOC Station P**	**4.69**	**173**	Pn		**Pn**	**08 37 11.1**	**-1.5**
GO02	**Mina Guanaco**	**5.36**	**166**	Pn		**Pn**	**08 37 21.6**	**-0.1**
AC01	**Pan de Azucar**	**6.18**	**176**			**Pn**	**08 37 30.8**	**-2.0**
AC02	**Maricunga**	**7.07**	**166**			**Pn**	**08 37 45.5**	**+0.1**
SIV	**San Ignacio**	**10.27**	**69**	P		**Pn**	**08 38 27.2**	**-1.7**
	comp=E,3.1nm,0.3s,baz=269,slow=10,SNR=34							
ETMB	**Extrema**	**11.10**	**26**	*eP*		**Pn**	**08 38 40.2**	**-0.2**
PTLB	**Pontes e Lacer**	**12.19**	**70**	*eP*		**Pn**	**08 38 54.5**	**-0.8**
CZSB	**Cruzeiro do Su**	**12.26**	**352**	*eP*		**Pn**	**08 38 59.7**	**+3.6**
VILB	**Vilhena**	**12.51**	**58**	*eP*		**Pn**	**08 38 59.0**	**-0.6**
ROC1	**El Roble**	**12.97**	**180**	Pn		**Pn**	**08 39 04.9**	**-1.1**
SAML	**Samuel**	**13.32**	**36**			**Pn**	**08 39 08.5**	**-2.1**
SAML	**Samuel**	**13.32**	**36**	*eP*		**Pn**	**08 39 11.4**	**+0.8**
CPUP	**Villa Florida**	**14.12**	**119**	P		**Pn**	**08 39 21.6**	**+0.1**
	comp=E,0.1nm,0.3s,baz=319,slow=12,SNR=4.6							
CPUP	**Villa Florida**	**14.12**	**119**			**Pn**	**08 39 20.9**	**-0.6**
CPUP	**Villa Florida**	**14.12**	**119**	*eP*		**Pn**	**08 39 21.6**	**+0.1**
AQDB	**Aquidauana**	**14.41**	**95**	*eP*		**Pn**	**08 39 25.4**	**-0.2**
BO02	**Sierra Bellavi**	**14.79**	**179**	P		**P**	**08 39 34.5**	**-2.1**
H03N1	**Juan Fernandez**	**15.16**	**206**	T		T	08 55 16.2	
	baz=34,slow=72,SNR=74							
H03N2	**Juan Fernandez**	**15.16**	**206**	T		T	08 55 17.6	
	baz=34,slow=72,SNR=66							
H03N3	**Juan Fernandez**	**15.17**	**206**	T		T	08 55 15.1	
	baz=34,slow=72,SNR=56							
PP1B	**Ponte de Pedra**	**15.48**	**84**	*eP*		**Pn**	**08 39 38.4**	**-1.5**
ITQB	**Itaqui**	**16.26**	**129**	*eP*		**Pn**	**08 39 51.7**	**+1.8**
TRCB	**Terra Rica**	**17.38**	**103**	*eP*		**P**	**08 40 05.1**	**-0.3**
PTGB	**Pitanga**	**18.18**	**109**	*eP*		**P**	**08 40 15.5**	**+1.2**
PCMB	**Pacaembu**	**18.57**	**99**	*eP*		**Pn**	**08 40 20.2**	**+1.4**
ITAB	**Concordia**	**18.77**	**116**	*eP*		**P**	**08 40 20.7**	**0.0**
ARAG	**Araguaiana, MT**	**18.78**	**80**	*eP*		**P**	**08 40 21.2**	**+0.3**
CPSB	**Cacapava Do Su**	**19.00**	**127**	*eP*		**Pn**	**08 40 25.1**	**+1.1**
ITRB	**Iturama**	**19.46**	**93**	*eP*		**P**	**08 40 29.1**	**+0.8**
PLTB	**Pedras Altas**	**19.58**	**130**	*eP*		**P**	**08 40 30.5**	**+1.0**
FRTB	**Fartura**	**20.24**	**103**	*eP*		**P**	**08 40 37.0**	**+0.2**
CNLB	**Canela**	**20.56**	**121**	*eP*		**P**	**08 40 39.9**	**-0.4**
PLCA	**Paso Flores**	**20.72**	**179**	P		Pn	08 40 46.6	+2.3
	comp=E,2.0nm,0.5s,baz=349,slow=5.3,SNR=4.4							
PLCA	**Paso Flores**	**20.72**	**179**	*eP*		Pn	08 40 46.8	+2.5
TIJ01	**Guaruva-PR**	**21.02**	**109**	*eP*		**P**	**08 40 46.0**	**+0.6**
BB19B	**Bebedouro**	**21.11**	**97**	*eP*		**P**	**08 40 45.4**	**-1.0**
IPMB	**Ipameri, GO**	**21.68**	**89**	*eP*		**P**	**08 40 50.8**	**-1.6**
FLOC	**Florencia**	**21.87**	**348**	*eP*		**P**	**08 40 53.7**	**-0.8**
GCUF	**Volcan Galeras**	**21.94**	**343**	*eP*		**P**	**08 40 59.0**	**+3.4**
SPB	**Sao Paulo**	**22.21**	**104**	*eP*		**P**	**08 40 59.0**	**+1.0**
BDFB	**Brasilia**	**22.33**	**83**	P		**P**	**08 40 58.3**	**-1.2**
	comp=E,4.4nm,0.8s,baz=246,slow=10,SNR=3.4							
BDFB				LR		LR	08 50 22.5	
	comp=E,111nm,19.6s,baz=255,slow=39							
BDFB	**Brasilia**	**22.33**	**83**	P		**P**	**08 40 57.5**	**-2.1**
BDFB				IAmb		IAmb	08 41 03.1	
	comp=Z,21nm,1.4s							
PET01	**Itanhaem-SP**	**22.43**	**105**	*eP*		**P**	**08 41 00.4**	**+0.1**
GARC	**Garzon, Huila**	**22.43**	**348**	*eP*		**P**	**08 41 00.9**	**+0.3**
VAO	**Valinhos**	**22.60**	**102**	*eP*		**P**	**08 41 02.0**	**-0.4**
SOTA	**Rioblanco**	**22.62**	**345**	*eP*		**P**	**08 41 07.7**	**+4.8**
PCON	**Cinco Dias**	**22.76**	**346**	*eP*		P	08 41 16.5	+12
POPC	**Popayan, Colom**	**23.03**	**345**	*eP*		P	08 41 18.4	+11
PRAC	**Prado**	**23.82**	**350**	*eP*		**P**	**08 41 11.0**	**-3.6**
ORTC	**Ortega, Tolima**	**24.07**	**350**	*eP*		**P**	**08 41 14.5**	**-2.4**
YOTC	**Yotoco, Valle**	**24.35**	**347**	*eP*		**P**	**08 41 18.7**	**-0.9**
CHIC	**Chingaza**	**24.57**	**354**	*eP*		**P**	**08 41 25.7**	**+3.7**
TOLC	**Tolima**	**24.74**	**350**	*eP*		**P**	**08 41 25.1**	**+1.7**
SMTB	**Santa Maria do**	**25.21**	**67**	*eP*		**P**	**08 41 27.2**	**-0.1**
RUSC	**La Rusia**	**25.76**	**355**	*eP*		**P**	**08 41 31.2**	**-1.6**
CBOC	**Ciudad Bolivar**	**26.11**	**349**	*eP*		**P**	**08 41 37.2**	**+1.5**
HELC	**Santa Helena**	**26.35**	**350**	*eP*		**P**	**08 41 32.9**	**-5.2**
MCPB	**Macapa, AP**	**26.92**	**46**	*eP*		**P**	**08 41 44.6**	**+1.8**
SJMB	**Sao Joao De Ma**	**28.18**	**93**	*eP*		**P**	**08 41 55.5**	**+1.4**
RCBR	**Riachuelo**	**36.91**	**72**	P		**P**	**08 43 09.4**	**-1.1**
	comp=Z,6.2nm,0.6s,baz=244,slow=10,SNR=5.0							
TXAR	**Lajitas Array**	**58.23**	**326**	P		**P**	**08 45 56.8**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=143,slow=12,SNR=2.5							
DBIC	**Dimbokro**	**70.23**	**75**	P		**P**	**08 47 12.9**	**-2.0**
	comp=Z,5.7nm,1.1s,baz=208,slow=14,SNR=2.2							
DBIC				LR		LR	09 16 57.6	
	comp=Z,78nm,21.9s,baz=246,slow=35							
DBIC	**Dimbokro**	**70.23**	**75**	P		**P**	**08 47 12.6**	**-2.4**
DBIC				IAmb		IAmb	08 47 25.2	
	comp=Z,18nm,1.4s							
PDAR	**Pinedale Array**	**71.79**	**331**	P		**P**	**08 47 25.0**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=105,slow=6.6,SNR=3.0							
NVAR	**Mina Array Bea**	**73.06**	**323**	P		P	08 47 35.5	+3.8
	comp=Z,0.3nm,0.5s,baz=147,slow=6.0,SNR=3.7							
ULM	**Lac du Bonnet**	**73.26**	**344**	P		**P**	**08 47 35.9**	**+3.5**
	comp=Z,1.2nm,0.6s,baz=164,slow=7.4,SNR=1.8							
TOA0	**Torodi Ar. Sit**	**78.74**	**72**	P		**P**	**08 48 03.3**	**-1.1**
TORD	**Torodi Ar. Bea**	**78.74**	**72**	P		**P**	**08 48 03.0**	**-1.4**
	comp=Z,5.2nm,0.6s,baz=252,slow=5.5,SNR=35							
TORD				LR		LR	09 24 40.6	
	comp=Z,84nm,18.4s,baz=275,slow=37							
TORD	**Torodi Ar. Bea**	**78.74**	**72**	P		**P**	**08 48 02.1**	**-2.3**
BOSA	**Boshof**	**85.93**	**119**	LR		LR	09 23 39.9	
	comp=Z,43nm,21.7s,baz=68,slow=33							
YKA	**Yellowknife Ar**	**89.08**	**341**	P		**P**	**08 48 57.8**	**+1.7**
	comp=Z,1.2nm,1.0s,baz=131,slow=5.7,SNR=4.1							
ZALV	**Zalesovo Beam**	**141.35**	**23**	PKP		**PKPdf**	**08 55 31.9**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=253,slow=3.7,SNR=5.1							
MKAR	**Makanchi Array**	**145.49**	**33**	PKPbc		**PKPdf**	**08 55 39.7**	**+0.1**
	comp=Z,2.6nm,1.0s,baz=302,slow=3.4,SNR=3.8							
SONM	**Songino Array**	**152.11**	**4**	PKPbc		**PKiKP**	**08 55 57.8**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=330,slow=1.1,SNR=6.3							

*IDC **18** 08:52:29.7±0.7, 19°.74N×121°.17E, h27km±5km, mb3.7/8, mb1 3.8/8, mb1mx3.5/48, mbtmp3.9/8, MS3.1/1, Ms1 3.1/1, ms1mx2.7/50, Error ellipse: s-maj=35.9km s-min=12.6km az=69.0*
ISC 18 08:52:30.0±0.8, 19°.7N±0°.1×121°.1E±0°.2, h32km**, n9, σ0$73/14, mb3.8/8, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**13.31**	**161**	LR		LR	09 01 50.5	
	comp=Z,86nm,20.1s,baz=302,slow=42							
USRK	**Ussuriysk Ar.**	**26.02**	**18**	P		**P**	**08 58 01.0**	**+0.9**
	0.8nm,0.7s,baz=206,slow=9.6,SNR=2.5							
SONM	**Songino Array**	**30.48**	**340**	P		**P**	**08 58 40.0**	**-0.1**
	0.5nm,0.6s,baz=160,slow=11,SNR=2.9							
WRA	**Warramunga Arr**	**41.50**	**161**	P		**P**	**09 00 13.8**	**-0.5**
	0.8nm,0.5s,baz=343,slow=8.9,SNR=18							
WRA				pP		**pP**	**09 00 21.7**	**-1.2**
	0.7nm,0.4s,baz=342,slow=9.0,SNR=5.0							
WRA				PcP		**PcP**	**09 02 12.8**	**+1.1**
	0.2nm,0.7s,baz=347,slow=3.8,SNR=4.7							
MKAR	**Makanchi Array**	**41.59**	**320**	P		**P**	**09 00 15.0**	**+0.1**
	0.6nm,0.6s,baz=118,slow=9.3,SNR=4.8							
MKAR				pP		**pP**	**09 00 23.1**	**-0.8**
	1.2nm,0.9s,baz=126,slow=7.4,SNR=3.0							
PETK	**Petropavlovsk-**	**43.61**	**31**	P		**P**	**09 00 30.6**	**-0.7**
	3.9nm,0.9s,baz=244,slow=6.3,SNR=6.3							
ZALV	**Zalesovo Beam**	**44.00**	**330**	P		**P**	**09 00 34.7**	**+0.4**
	1.3nm,0.7s,baz=114,slow=8.8,SNR=4.1							
ZALV				pP		**pP**	**09 00 43.2**	**-0.1**
	1.1nm,0.6s,baz=115,slow=9.7,SNR=2.8							
ASAR	**Alice Springs**	**44.90**	**163**	P		**P**	**09 00 42.1**	**+0.3**
	0.9nm,0.4s,baz=341,slow=6.9,SNR=25							
ASAR				pP		**pP**	**09 00 51.1**	**+0.7**
	0.9nm,0.4s,baz=341,slow=6.8,SNR=9.4							
KURBB	**Kurchatov Arra**	**45.55**	**323**	P		**P**	**09 00 46.9**	**+0.2**
	1.8nm,0.6s,baz=123,slow=7.8,SNR=10							
KURBB				pP		**pP**	**09 00 55.2**	**-0.5**
	1.5nm,0.6s,baz=119,slow=8.1,SNR=5.1							

*IDC **18** 08:57:11.9±1.3, 8°.92S×106°.68E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/43, mbtmp3.8/9, ML4.0/1, MS4.4/1, Ms1 4.4/1, ms1mx2.9/39, Error ellipse: s-maj=39.9km s-min=16.8km az=57.0*
*DJA **18** 08:57:12.8±0.4, 9°.5±5°×10°.7E±°, h10km, M3.7/7, MLv3.7/7*
ISC 18 08:57:16.2±1.2, 8°.94S±0°.1×106°.7E±0°.1, h28km**, n17, σ0$91/14, mb3.7/7, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.74**	**38**	P		**Pn**	**08 57 43.0**	**-1.7**
SKJI	**Sukabumi**	**1.93**	**355**	P		**Pn**	**08 57 47.4**	**+0.2**
LEM	**Lembang**	**2.27**	**23**	Pn		**Pn**	**08 57 50.7**	**-1.4**
	38nm,0.3s,baz=58,slow=4.4,SNR=12							
LEM				Sn		**Sn**	**08 58 20.8**	**+1.5**
	17nm,0.3s,baz=116,slow=21,SNR=4.1							
LEM	**Lembang**	**2.27**	**23**	P		**Pn**	**08 57 51.4**	**-0.7**
KPJI	**Karang Pucung**	**2.70**	**54**	P		**Pn**	**08 57 58.1**	**+0.3**
FITZ	**Fitzroy Crossi**	**20.50**	**118**	P		**P**	**09 01 53.0**	**+0.7**
	0.8nm,0.6s,baz=280,slow=6.9,SNR=1.9							
WRA	**Warramunga Arr**	**28.84**	**115**	P		**P**	**09 03 12.9**	**+0.4**
	0.2nm,0.4s,baz=286,slow=11,SNR=2.8							
ASAR	**Alice Springs**	**29.83**	**123**	P		**P**	**09 03 21.2**	**-0.1**
	0.2nm,0.5s,baz=312,slow=8.7,SNR=3.1							
H08S2	**Diego Garcia H**	**33.90**	**270**	T		T	09 39 48.4	
	baz=94,slow=74,SNR=7.3							
H08S3	**Diego Garcia H**	**33.91**	**270**	T		T	09 39 51.3	
	baz=94,slow=74,SNR=6.8							
H08S1	**Diego Carcia H**	**33.91**	**270**	T		T	09 39 46.7	
	baz=94							
STKA	**Stephens Creek**	**39.57**	**130**	P		**P**	**09 04 45.3**	**+0.1**
	0.9nm,0.6s,baz=318,slow=12,SNR=2.8							
MJAR	**Matsushiro Arr**	**54.05**	**31**	LR		LR	09 31 23.2	
	comp=Z,336nm,19.9s,baz=225,slow=38							
SONM	**Songino Array**	**56.52**	**360**	P		**P**	**09 06 56.0**	**0.0**
	0.2nm,0.4s,baz=168,slow=7.6,SNR=4.5							
MKAR	**Makanchi Array**	**59.61**	**341**	P		**P**	**09 07 17.8**	**+0.1**
	1.4nm,0.5s,baz=158,slow=8.3,SNR=14							
KURBB	**Kurchatov Arra**	**64.17**	**340**	P		**P**	**09 07 48.1**	**-0.1**
	1.1nm,0.5s,baz=149,slow=6.0,SNR=6.0							
ZALV	**Zalesovo Beam**	**65.33**	**346**	P		**P**	**09 07 54.7**	**-0.9**
	0.9nm,0.4s,baz=153,slow=4.4,SNR=4.1							

*IDC **18** 09:14:46.2±0.4, 19°.47N×

SLVN Son La 15.64 279 Pn **Pn** **09 18 26.8 -1.9**
JNU Nakatsue 16.40 32 Pn **Pn** **09 18 38.4 0.0**
comp=Z,0.2nm,0.3s,baz=174,slow=10,SNR=3.6
JNU Nakatsue 16.40 32 P **Pn** **09 18 37.7 -0.7**
JNU IAmb IAmb 09 19 00.5
comp=Z,98nm,1.1s
SGSI Sangihe 16.52 162 P **P** **09 18 46.2 +3.7**
TIA Tai'an 16.86 351 P **Pn** **09 18 44.9 +0.7**
TIA LR LR
comp=Z,5µm,11.8s
TIA LR LR
comp=Z,4µm,13.2s
TIA LR LR
comp=Z,8µm,10.6s
KMI Kunming 17.32 292↓ *e*P **Pn** **09 18 50.4 +0.2**
KMI pmax pmax
comp=Z,10.0nm,0.6s
XAN Xi'an 17.72 327 P **Pn** **09 18 54.5 -0.4**
XAN pmax pmax
comp=Z,29nm,1.5s
XAN pmax pmax
comp=Z,950nm,9.6s
XAN LR LR
comp=Z,13µm,11.2s
XAN LR LR
comp=Z,4µm,15.2s
XAN LR LR
comp=Z,13µm,12.3s
XAN Xi'an 17.72 327 P **Pn** **09 18 54.3 -0.7**
TOLI2 Tolitoli 18.33 179 P **Pn** **09 19 02.7 +0.3**
SBUM Sibu 18.82 206 P **P** **09 19 05.1 -2.7**
SBUM Sibu 18.82 206 P **Pn** **09 19 09.0 +0.6**
CD2 Chengdu 18.86 310 P **P** **09 19 06.9 -1.4**
CD2 pP pP 09 19 13.1 -0.6
CD2 sP sP 09 19 15.6 -0.5
CD2 S **Sn** **09 22 36.4 -3.1**
CD2 pmax pmax
comp=Z,40nm,1.3s
CD2 pmax pmax
comp=Z,1µm,7.8s
CD2 LR LR
comp=Z,10µm,12.7s
CD2 LR LR
comp=Z,9µm,14.1s
CD2 LR LR
comp=Z,12µm,15.3s
GTOI Gorontalo 18.96 172 P **P** **09 19 09.4 0.0**
comp=Z,297nmcomp=Z,14nm,0.7s
KSAR Wonju Array Be 18.96 18 P **P** **09 19 08.7 -0.6**
KSRS Korea Array 18.99 18 P **P** **09 19 09.3 -0.2**
comp=Z,0.5nm,0.3s,baz=204,slow=11,SNR=16
MRSI Marisa 19.01 176 P **Pn** **09 19 11.6 +0.9**
comp=Z,30nm,0.8s
KS19 Wonju Array Si 19.02 18 P **P** **09 19 07.0 -2.9**
MPSI Mapaga 19.10 182 P **Pn** **09 19 14.6 +2.8**
comp=Z,7.2nm,0.7s
DL2 Dalian 19.32 3 P **Pn** **09 19 13.8 -0.4**
DL2 S **S** **09 22 52.8 +2.5**
DL2 pmax pmax
comp=Z,29nm,1.3s
DL2 pmax pmax
comp=Z,610nm,8.3s
DL2 LR LR
comp=Z,1µm,11.2s
DL2 LR LR
comp=Z,5µm,12.8s
DL2 LR LR
comp=Z,4µm,14.3s
CHTO Chiang Mai 20.35 272 **P** **09 19 23.4 -1.2**
CMAR Chiang Mai Arr 20.39 271 P **P** **09 19 25.8 +0.7**
comp=Z,1.4nm,0.3s,baz=70,slow=8.8,SNR=18
CMAR PcP **PcP** **09 23 37.8 +0.4**
comp=Z,2.3nm,0.6s,baz=71,slow=0.5,SNR=5.6
CMAR Chiang Mai Arr 20.39 271 P **P** **09 19 25.6 +0.5**
CMAR **PcP** **09 23 38.5 +1.0**
KSM Kuching 20.54 210 P **P** **09 19 25.1 -1.5**
KSM Kuching 20.54 210 P **P** **09 19 27.0 +0.4**
LUWI Luwuk 20.59 173 P **P** **09 19 26.5 -0.6**
LUWI IAmb IAmb 09 19 50.6
comp=Z,77nm,1.0s
BJT Baijiatuan 20.73 351 P Pn 09 19 29.9 -1.1
BJT IAmb IAmb 09 19 31.8
comp=Z,73nm,1.1s
BJI Beijing 20.75 351 P **P** **09 19 29.9 +1.1**
BJI pmax pmax
comp=Z,66nm,1.5s
INU Inuyama 21.47 39 P **P** **09 19 33.8 -2.7**
INU IAmb IAmb 09 20 00.1
comp=Z,106nm,1.3s
JGF Kuroka 21.84 39 P **P** **09 19 38.7 -1.9**
LZH Lanzhou 22.03 322 ⇑P **P** **09 19 44.1 +1.3**
LZH pP pP 09 19 49.3 +1.1
LZH sP pwP 09 19 53.0 +0.2
LZH S **S** **09 23 47.0 +2.1**
LZH sS sS 09 23 53.3 -0.3
LZH SS **SnSn** **09 24 11.5 0.0**
LZH pmax pmax
comp=Z,46nm,1.4s
LZH pmax pmax
comp=Z,300nm,5.0s
LZH LR LR
comp=Z,3µm,10.8s
LZH LR LR
comp=Z,3µm,11.9s
LZH LR LR
comp=Z,3µm,11.9s
TTSI Tana Toraja 22.46 182 P P 09 19 54.9 +7.6
HHC Hu-ho-hao-te 22.56 342 *e*P **P** **09 19 49.3 +1.0**
HHC S **S** **09 23 52.5 -2.0**
HHC pmax pmax
comp=Z,48nm,1.2s
HHC LR LR
comp=Z,6µm,14.2s
HHC LR LR
comp=Z,4µm,12.8s
HHC LR LR
comp=Z,4µm,12.8s
BTO Baotou 22.82 339 *e*P **P** **09 19 53.0 +2.0**
SIJI Sorong 22.89 151 P **P** **09 19 51.1 -0.7**
comp=Z,11nm,0.5s,baz=0.0,slow=20,SNR=4.9
MAJO Matsushiro 22.99 39 P **P** **09 19 50.8 -2.0**
MAT Matsushiro 22.99 39 P **P** **09 19 52.4 -0.3**
MAT S **S** **09 24 04.6 +2.7**
MJAR Matsushiro Arr 22.99 39 P **P** **09 19 53.2 +0.4**
comp=Z,5.8nm,0.8s,baz=232,slow=10,SNR=9.1
MJAR Matsushiro Arr 22.99 39 P **P** **09 19 49.9 -2.8**
SPSI Sidrap Palu 23.38 182 P **P** **09 19 59.6 +2.8**
comp=Z,1µmcomp=Z,27nm,1.2s
BBKI Banjar Baru 23.53 194 P **P** **09 19 59.7 +1.4**
comp=Z,44nm,1.4s
NLAI Namlea 23.56 163 P **P** **09 20 01.6 +3.0**
comp=Z,60nm,0.8s
MYKOM Kota Tinggi 24.01 225 P **P** **09 20 07.0 +4.2**
KAPI Kappang 24.42 182 P **P** **09 20 07.2 +0.6**
comp=Z,13nm,0.7s,baz=341,slow=6.4,SNR=8.4
KAPI Kappang 24.42 182 P **P** **09 20 03.9 -2.8**
KAPI IAmb IAmb 09 20 07.7
comp=Z,57nm,1.2s
FAKI Fak Fak 25.15 151 P **P** **09 20 12.4 -0.8**
FAKI IAmb IAmb 09 20 22.7
comp=Z,17nm,0.8s
MDJ Mudanjiang 26.12 15 P **P** **09 20 21.5 -0.4**
USA0B Ussuriysk Arra 26.39 19 P **P** **09 20 23.6 -0.7**
USA0B IAmb IAmb 09 20 44.0
comp=Z,45nm,1.4s
USRK Ussuriysk Ar. 26.39 19 P **P** **09 20 26.0 +1.7**
comp=Z,7.3nm,0.8s,baz=207,slow=7.6,SNR=14
USRK Ussuriysk Ar. 26.39 19 P **P** **09 20 22.9 -1.4**
GTA Gaotai 26.63 322 *e*P **P** **09 20 28.3 +1.6**
GTA pP sP 09 20 34.6 -0.5
GTA sP pwP 09 20 37.4 +0.1
GTA S **S** **09 25 02.9 +2.4**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,210nm,7.3s
GTA LR LR
comp=Z,4µm,9.8s
GTA LR LR
comp=Z,4µm,10.5s
GTA LR LR
comp=Z,5µm,11.3s
SHL Shillong 27.05 288 P **P** **09 20 29.9 -0.7**
SHL IAmb IAmb 09 20 48.9
comp=Z,24nm,1.3s

EDFI Ende, Flores 28.15 177 P **P** **09 20 42.3 +1.9**
comp=Z,308nmcomp=Z,18nm,1.3s
LSA Lhasa 28.44 297 P **P** **09 20 44.5 +1.2**
HIA Hailar 29.65 359 P **P** **09 20 51.5 -1.9**
HIA IAmb IAmb 09 20 59.2
comp=Z,11nm,0.8s
BATI Baumata 29.73 174 P **P** **09 20 53.7 -0.7**
comp=Z,56nm,0.9s,baz=271,slow=13,SNR=3.8
ULN Ulaanbaatar 30.28 342 P **P** **09 20 58.5 -0.6**
SONM Songino Array 30.45 341 P **P** **09 21 01.3 +0.7**
comp=Z,3.6nm,0.6s,baz=161,slow=9.7,SNR=20
SONM Songino Array 30.45 341 P **P** **09 21 00.4 -0.2**
ASAJ Asahikawa 30.68 32 LR LR 09 34 40.5
comp=Z,825nm,18.4s,baz=234,slow=39
KLR Kul'dur 30.97 14 P **P** **09 21 06.2 +1.3**
comp=Z,9.7nm,0.7s,baz=196,slow=7.3,SNR=26
ODAN Odare 31.20 290 *e*P **P** **09 21 07.5 -0.1**
GUN Gumba 32.66 291 *e*P **P** **09 21 21.1 +0.5**
comp=Z,37nm,0.8s
PKI Pulchoki 33.04 291 *e*P **P** **09 21 23.2 -0.6**
comp=Z,18nm,0.8s
PKIN Phulchoki 33.05 291 *e*P **P** **09 21 23.9 0.0**
KKN Kakani 33.17 291 *e*P **P** **09 21 25.9 +1.0**
comp=Z,27nm,0.8s
GKN Gorkha 33.76 291 *e*P **P** **09 21 30.6 +0.6**
comp=Z,24nm,0.7s
DANN Dangsing 34.57 292 *e*P **P** **09 21 37.1 -0.1**
comp=Z,16nm,0.7s
KOLN Koldanda 34.65 291 *e*P **P** **09 21 37.7 -0.1**
comp=Z,44nm,1.0s
TLY Talaya 34.69 342 P **P** **09 21 37.8 +0.3**
comp=Z,3.0nm,0.7s,baz=146,slow=6.7,SNR=4.8
TLY Talaya 34.69 342 P **P** **09 21 36.7 -0.8**
KNRA Kununurra 35.94 166 P **P** **09 21 46.5 -2.1**
WMQ Urumqi 36.55 319 *e*P **P** **09 21 56.0 +2.4**
WMQ S **S** **09 27 39.0 +4.2**
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,190nm,3.7s
WMQ LR LR
comp=Z,3µm,14.3s
WMQ LR LR
comp=Z,3µm,9.3s
WMQ LR LR
comp=Z,2µm,12.9s
FITZ Fitzroy Crossi 37.76 172 P **P** **09 22 02.8 -1.2**
comp=Z,12nm,0.7s,baz=354,slow=7.4,SNR=26
FITZ Fitzroy Crossi 37.76 172 P **P** **09 22 01.4 -2.5**
FITZ IAmb IAmb 09 22 05.0
comp=Z,13nm,0.8s
PMG Port Moresby 38.97 135 P **P** **09 22 12.8 -1.6**
comp=Z,18nm,0.9s,baz=327,slow=4.5,SNR=4.2
COEN Coen 40.10 144 P **P** **09 22 22.4 -1.3**
MK31 Makanchi Array 41.33 320 P **P** **09 22 32.3 -1.3**
MK31 IAmb IAmb 09 22 44.3
comp=Z,25nm,1.2s
MKAR Makanchi Array 41.33 320 P **P** **09 22 34.5 +0.9**
comp=Z,8.8nm,0.9s,baz=114,slow=10.0,SNR=18
MKAR Makanchi Array 41.33 320 P **P** **09 22 31.6 -2.0**
WB0 Warramunga Arr 41.39 160 P **P** **09 22 31.6 -2.6**
WRAB Tennant Creek 41.53 160 P **P** **09 22 32.9 -2.5**
WRA Warramunga Arr 41.53 160 P **P** **09 22 33.5 -2.0**
comp=Z,9.5nm,0.6s,baz=342,slow=9.0,SNR=68
WRA Warramunga Arr 41.53 160 P **P** **09 22 33.0 -2.5**
WB2 Warramunga Arr 41.54 160 P **P** **09 22 32.0 -3.5**
WB2 IAmb IAmb 09 22 37.4
comp=Z,12nm,0.6s
WR0 Warramunga Arr 41.61 160 P **P** **09 22 33.4 -2.7**
WR0 IAmb IAmb 09 22 37.6
comp=Z,13nm,0.6s
SHLS Shalkode 41.63 314 *e*P **P** **09 22 34.3 -2.0**
baz=313
KPKS Kokpek 42.27 314 *e*P **P** **09 22 41.6 +0.1**
baz=313
SATY Saty 42.32 313 *e*P **P** **09 22 42.3 +0.4**
baz=313
SATY *e*S **S** **09 29 02.1 +0.3**
baz=313
KSH Kashi 43.02 307 *e*P **P** **09 22 51.5 +3.8**
KSH pmax pmax
comp=Z,22nm,0.7s
KSH pmax pmax
comp=Z,250nm,4.2s
TDK Taldyqorghan 43.02 316 *e*P **P** **09 22 47.7 +0.2**
baz=315
MDOK Medeo 43.30 313 *e*P **P** **09 22 50.0 +0.1**
baz=312
MDOK *e*S **S** **09 29 16.4 +0.2**
baz=312
TNSS Tian-Shan 43.32 313 *e*P **P** **09 22 50.8 +0.4**
baz=312
AAA Alma-Ata 43.40 313 *e*P **P** **09 22 51.1 +0.5**
baz=312
CHKK Chushkaly 43.56 314 *e*P **P** **09 22 52.4 +0.5**
baz=313
ZAA0 Zalesovo Array 43.84 330 P **P** **09 22 52.4 -1.5**
ZAA0 IAmb IAmb 09 22 56.0
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 43.84 330 P **P** **09 22 54.3 +0.4**
comp=Z,10nm,0.8s,baz=114,slow=8.3,SNR=31
ZALV Zalesovo Beam 43.84 330 P **P** **09 22 53.7 -0.2**
KUU Kurty 44.02 314 *e*P **P** **09 22 56.0 +0.5**
comp=Z,15nm,1.4s,baz=313
PETK Petropavlovsk- 44.10 32 P **P** **09 22 57.0 +1.0**
comp=Z,4.8nm,0.9s,baz=222,slow=7.8,SNR=3.6
NIL Nilore 44.14 298 P **P** **09 22 55.4 -1.2**
NIL IAmb IAmb 09 23 06.3
comp=Z,18nm,0.9s
SEM Semipalatinsk 44.25 324 *e*P **P** **09 22 56.6 -0.9**
comp=Z,8.4nm,1.0s,baz=323
PET Petropavlovsk 44.53 32 P **P** **09 22 58.7 -0.6**
PET IAmb IAmb 09 23 00.8
comp=Z,25nm,1.2s
AS31 Alice Springs 44.90 162 P **P** **09 23 00.6 -2.2**
AS31 IAmb IAmb 09 23 04.7
comp=Z,5.9nm,0.3s
ASAR Alice Springs 44.91 162 P **P** **09 23 01.4 -1.3**
comp=Z,5.7nm,0.4s,baz=340,slow=6.9,SNR=99
ASAR Alice Springs 44.91 162 P **P** **09 23 00.6 -2.2**
KURK Kurchatov 45.31 323 P **P** **09 23 04.8 -0.9**
KURBB Kurchatov Arra 45.32 323 P **P** **09 23 06.3 +0.6**
comp=Z,18nm,0.8s,baz=122,slow=8.0,SNR=49
BTLS Baital 45.94 314 *e*P **P** **09 23 10.9 +0.1**
baz=314
CTA Charters Tower 46.79 146 P **P** **09 23 18.2 +0.6**
comp=Z,5.0nm,0.6s,baz=327,slow=11,SNR=8.7
CTAO Charters Tower 46.79 146 P **P** **09 23 16.1 -1.6**
BTK Batken 47.02 307 P **P** **09 23 19.8 +0.4**
BTK IAmb IAmb 09 23 22.4
comp=Z,15nm,1.4s
GAR Garm 47.22 305 P **P** **09 23 21.6 +0.6**
DZA Taraz 47.24 311 *e*P **P** **09 23 21.6 +0.5**
baz=310
KBL Kabul 47.70 299 P **P** **09 23 23.7 -1.2**
KBL IAmb IAmb 09 23 38.7
comp=Z,14nm,1.0s
KK31 Karatay Array 47.88 311 P **P** **09 23 26.2 +0.2**
KK31 IAmb IAmb 09 23 29.4
comp=Z,13nm,1.4s
KKAR Karatay Array 47.88 311 P **P** **09 23 26.0 +0.1**
KKAR IAmb IAmb 09 23 29.4
comp=Z,13nm,1.4s
KKAR Karatay Array 47.88 311 P **P** **09 23 25.9 0.0**
IUG Iuzhnay 48.01 310 *e*P **P** **09 23 27.4 +0.3**
comp=Z,10.0nm,1.4s,baz=309
BRZS Berezniki 48.47 320 *e*P **P** **09 23 30.8 +0.3**
baz=320
MORW Morawa 48.52 185 P **P** **09 23 28.3 -2.6**
MORW IAmb IAmb 09 23 31.2
comp=Z,18nm,1.1s
SEY Seymchan 48.55 19 P **P** **09 23 31.9 +1.2**
comp=Z,8.1nm,0.8s,baz=224,slow=6.2,SNR=17
FORT Forrest 50.57 172 P **P** **09 23 45.2 -1.3**
BVAR Borovoye Array 50.91 323 P **P** **09 23 49.9 +1.0**
comp=Z,0.7nm,0.6s,baz=208,slow=28,SNR=12
BRVK Borovoye 50.98 323 P **P** **09 23 49.1 -0.3**
NWAO Narrogin (SRO) 52.27 183 P **P** **09 23 58.2 -1.1**
NWAO Narrogin (SRO) 52.27 183 P **P** **09 23 57.7 -1.6**
NWAO IAmb IAmb 09 23 59.6
comp=Z,19nm,0.9s
TIXI Tiksi 52.34 3 P **P** **09 23 58.1 -1.1**
TIXI IAmb IAmb 09 24 02.0
comp=Z,10nm,0.9s
NRIK Noril'sk 53.71 346 P **P** **09 24 09.9 +0.6**
comp=Z,10nm,0.9s,baz=132,slow=6.9,SNR=16

BBOO Buckleboo 54.15 164 P **P** **09 24 10.6 -2.5**
STKA Stephens Creek 55.00 158 P **P** **09 24 18.8 -0.4**
comp=Z,3.4nm,0.5s,baz=335,slow=7.7,SNR=12
STKA Stephens Creek 55.00 158 P **P** **09 24 19.0 -0.2**
BILL Bilibino 56.25 19 P **P** **09 24 27.7 -0.1**
ABKAR Akbulak array 56.27 317 P **P** **09 24 28.1 -0.2**
ABKAR Akbulak array 56.27 317 P **P** **09 24 28.4 +0.1**
GEYT Alibeck 56.66 303 P **P** **09 24 32.1 +0.8**
comp=Z,9.1nm,0.9s,baz=204,slow=3.3,SNR=7.5
GEYT Alibeck 56.66 303 P **P** **09 24 30.8 -0.5**
AKTO Aktyubinsk 57.69 318 P **P** **09 24 38.8 +0.5**
comp=Z,2.7nm,0.7s,baz=78,slow=8.5,SNR=7.5
ARU Arti 58.45 325 P **P** **09 24 43.9 +0.3**
comp=Z,4.1nm,0.2s,baz=172,slow=5.2,SNR=8.0
ARU Arti 58.45 325 P **P** **09 24 42.8 -0.8**
GNI Garni 66.94 306 P **P** **09 25 42.3 +1.6**
comp=Z,4.8nm,0.4s,baz=178,slow=5.4,SNR=7.9
GNI Garni 66.94 306 P **P** **09 25 39.9 -0.8**
AKH Akhalkalaki 67.73 308 P **P** **09 25 46.3 +0.6**
KBZ Khabaz 67.91 310 P **P** **09 25 47.5 +1.1**
comp=Z,8.2nm,0.9s,baz=55,slow=24,SNR=13
KVAR Kislovodsk Arr 68.03 310 P **P** **09 25 48.4 +1.0**
comp=Z,3.7nm,0.4s,baz=253,slow=20,SNR=2.2
KIV Kislovodsk 68.03 310 P **P** **09 25 47.5 +0.1**
GEVA Gevas 68.47 304 P **P** **09 25 50.2 -0.2**
KLMR Klimovskoe 68.74 329 *e*P **P** **09 25 47.1 -4.3**
KLMR AMP 09 25 53.0
comp=Z,27nm,1.2s
RAYN Ar Rayn 69.12 288 P **P** **09 25 53.1 -1.4**
RAYN IAmb IAmb 09 26 11.5
comp=Z,11nm,1.2s
A21K Barrow 69.36 20 P **P** **09 25 53.8 -1.3**
IMAR Indian Mountai 70.61 26 P **P** **09 26 02.4 -0.4**
CAST Castle Rocks 71.58 28 P **P** **09 26 08.5 -0.2**
CAST IAmb IAmb 09 26 11.1
comp=Z,12nm,0.8s
COLD Coldfoot 71.90 24 P **P** **09 26 10.6 0.0**
COLD IAmb IAmb 09 26 13.3
comp=Z,16nm,1.5s
TOLK Toolik Lake Re 71.95 23 P **P** **09 26 09.8 -1.1**
TOLK IAmb IAmb 09 26 35.2
comp=Z,7.3nm,0.9s
BPAW Bear Paw Mtn. 71.97 27 P **P** **09 26 11.2 0.0**
SUA Susitna One 72.45 30 P **P** **09 26 13.9 -0.3**
I23K Minto, Yukon-K 72.52 26 P **P** **09 26 13.7 -0.6**
RND Reindeer 73.02 28 P **P** **09 26 16.9 -0.6**
RND IAmb IAmb 09 26 19.1
comp=Z,16nm,1.0s
MDM Murphy Dome 73.03 26 P **P** **09 26 16.5 -1.0**
PMR Palmer 73.20 30 P **P** **09 26 18.0 -0.4**
PMR IAmb IAmb 09 26 33.8
comp=Z,21nm,1.4s
CCB Clear Creek Bu 73.26 27 P **P** **09 26 17.6 -1.1**
GHO Glory Hole Cre 73.26 30 P **P** **09 26 19.8 +0.9**
GHO IAmb IAmb 09 26 26.2
comp=Z,23nm,1.4s
POKR Poker Plat Res 73.33 26 P **P** **09 26 19.2 0.0**
POKR IAmb IAmb 09 26 36.3
comp=Z,20nm,1.4s
ARCES ARCESS Array B 73.58 339 P **P** **09 26 20.7 +0.1**
comp=Z,3.5nm,0.8s,baz=72,slow=6.9,SNR=2.0
IL31 73.62 27 P **P** **09 26 20.1 -0.8**
ILAR Eielson Array 73.62 27 P **P** **09 26 20.0 -0.9**
comp=Z,1.9nm,0.8s,baz=268,slow=4.6,SNR=36
ILAR Eielson Array 73.62 27 P **P** **09 26 20.3 -0.6**
HDA Harding Lake 73.67 27 P **P** **09 26 21.1 -0.1**
HDA IAmb IAmb 09 26 44.0
comp=Z,16nm,1.4s
SPA0 Spitsbergen Ar 73.85 348 P **P** **09 26 21.8 -0.3**
SPITS Spitsbergen Ar 73.85 348 P **P** **09 26 23.0 +0.9**
comp=Z,5.7nm,0.6s,baz=81,slow=10,SNR=16
SCM Sheep Creek Mo 74.00 30 P **P** **09 26 23.2 0.0**
BMAR Burnt Mountain 74.01 24 P **P** **09 26 23.9 +0.7**
KLU Klutina 74.72 30 P **P** **09 26 28.0 +0.5**
KLU IAmb IAmb 09 26 42.4
comp=Z,21nm,1.4s
EYAK Cordova Ski Ar 75.02 31 P **P** **09 26 29.1 0.0**
DOT Dot Lake 75.07 27 P **P** **09 26 29.4 0.0**
FIA1 FINESS Array S 75.11 330 P **P** **09 26 30.3 +0.7**
FIA1 IAmb IAmb 09 26 39.0
comp=Z,13nm,0.8s
FINES FINESS Array B 75.11 330 P **P** **09 26 29.7 +0.1**
comp=Z,3.9nm,0.6s,baz=63,slow=6.2,SNR=16
N25K Chitina, Valde 75.32 29 P **P** **09 26 31.9 +1.0**
N25K IAmb IAmb 09 26 34.5
comp=Z,17nm,1.4s
GLB Gilahina Butte 75.72 30 P **P** **09 26 34.1 +0.9**
GLB IAmb IAmb 09 26 37.9
comp=Z,22nm,1.4s
K27K Chicken 75.83 27 P **P** **09 26 34.2 +0.5**
K27K IAmb IAmb 09 26 44.6
comp=Z,9.4nm,1.0s
AKASG Malin Array Be 75.90 319 P **P** **09 26 34.0 -0.3**
comp=Z,5.8nm,0.7s,baz=63,slow=5.8,SNR=11
AKASG Malin Array Be 75.90 319 P **P** **09 26 33.2 -1.1**
AKBB Malin Array Si 75.90 319 P **P** **09 26 32.1 -2.2**
AKBB IAmb IAmb 09 26 43.0
comp=Z,7.5nm,0.7s
EGAK Eagle 76.01 26 P **P** **09 26 34.6 -0.1**
EGAK IAmb IAmb 09 26 57.7
comp=Z,18nm,1.5s
BCAR Beaver Creek A 76.21 28 P **P** **09 26 36.3 +0.4**
NACGM Naroch 76.32 324 *e* P **P** **09 26 36.0 -0.7**
NACGM eLR LR 10 06 40.0
TGL Tana Glacier 76.36 30 P **P** **09 26 35.7 -1.2**
TGL IAmb IAmb 09 26 47.2
comp=Z,19nm,1.2s
BARN Barnard Glacie 76.83 30 P **P** **09 26 40.6 +0.9**
BARN IAmb IAmb 09 26 47.0
comp=Z,11nm,0.9s
DAWY Dawson 76.95 26 P **P** **09 26 41.1 +1.0**
DAWY IAmb IAmb 09 26 50.5
comp=Z,8.2nm,0.9s
CTGM Chitina Glacie 77.01 30 P **P** **09 26 41.1 +0.5**
INK Inuvik 77.75 21 P **P** **09 26 45.4 +0.9**
comp=Z,2.3nm,0.8s,baz=302,slow=4.5,SNR=6.2
INK Inuvik 77.75 21 P **P** **09 26 44.2 -0.2**
INK IAmb IAmb 09 26 54.4
comp=Z,17nm,1.5s
BCPM Bancas Point 78.11 30 P **P** **09 26 45.8 -0.8**
HYT Haines Junctio 78.83 29 P **P** **09 26 51.2 +0.4**
HYT IAmb IAmb 09 26 56.5
comp=Z,14nm,1.2s
BURAR Bucovina Array 79.26 317 P **P** **09 26 52.7 -0.6**
C36M Paulatuk 80.37 19 P **P** **09 26 58.5 -0.3**
NC405 NORSAR Array S 81.75 332 P **P** **09 27 06.2 -0.1**
NB2 NORSAR Subarra 82.00 332 P **P** **09 27 08.6 +0.9**
comp=Z,1.3nm,0.7s,baz=66,slow=5.1
NOA NORSAR Array B 82.00 332 P **P** **09 27 07.0 -0.6**
comp=Z,4.8nm,1.0s,baz=64,slow=5.2,SNR=7.7
MORC Moravsky Berou 83.32 320 *e*P **P** **09 27 15.1 +0.4**
RES Resolute Bay 83.32 9 P **P** **09 27 13.3 -0.9**
RES IAmb IAmb 09 27 16.7
comp=Z,9.6nm,1.1s
JAVC Velka Javorina 83.59 320 *e*P **P** **09 27 18.0 +1.8**
VRAC Vranov 84.07 320 *e*P **P** **09 27 19.1 +0.5**
BRG Berggiesshubel 84.99 322 *e*P **P** **09 27 24.1 +0.9**
comp=Z,19nm,1.4s
BRG *e* 09 27 43.5
comp=Z,9.8nm,1.2s
CLL Collm 85.34 323 *e*P **P** **09 27 25.0 +0.1**
CLL *e*S **S** **09 37 52.0 -2.3**
CLL *e* 09 38 34.0
CLL *e*SP **SPn** **09 38 53.0 +4.8**
CLL *e*SS **SS** **09 43 30.0 +1.6**
GERES GERESS Array B 85.99 321 P **P** **09 27 30.4 +2.0**
comp=Z,1.0nm,0.7s,baz=56,slow=7.2,SNR=8.3
GERES GERESS Array B 85.99 321 P **P** **09 27 27.8 -0.5**
YKA Yellowknife Ar 87.48 22 P **P** **09 27 36.6 +1.5**
comp=Z,2.2nm,0.7s,baz=318,slow=3.8,SNR=7.9
BEKR Beckworth 98.12 43 P **P** **09 28 24.7 -0.4**
BEKR IAmb IAmb 09 28 27.7
comp=Z,4.1nm,1.1s
CMB Columbia Colle 99.12 44 P **Pdif** **09 28 27.9 -1.5**
CMB IAmb IAmb 09 28 40.0
comp=Z,5.9nm,1.4s
VNDA Vanda 99.83 172 P **Pdif** **09 28 33.1 +1.7**
comp=Z,0.3nm,0.7s,baz=319,slow=6.7,SNR=2.1
NVAR Mina Array Bea 100.25 43 P **Pdif** **09 28 36.5 +1.8**
comp=Z,0.8nm,1.0s,baz=284,slow=3.6,SNR=4.5
TXAR Lajitas Array 115.39 42 PKP **PKPdf** **09 33 30.4 +0.2**
comp=Z,0.7nm,0.9s,baz=126,slow=2.2,SNR=5.5
TXAR Lajitas Array 115.39 42 **PKiKP** **09 33 28.8 -1.5**
MOTC Monteria, Cord 147.67 31 *e*P **PKPbc** **09 34 32.2 -1.1**

UREC	San Jos de Ur	148.62	32	eP		PKPdf	09 34 33.0 +0.9
DBBC	Dabeiba	148.90	33	eP		PKPab	09 34 40.1 -0.4
OCAC	Ocana	149.22	27	eP		PKPbc	09 34 36.7 -0.8
SDV	Santo Domingo	149.70	22	eP		PKPbc	09 34 38.7 -0.1
HELC	Santa Helena	149.96	33	eP		PKPab	09 34 49.6 +4.5
CBOC	Ciudad Bolivar	149.98	34	eP		PKPbc	09 34 38.4 -1.0
BRRC	Barranca, Sant	150.05	29	eP		PKPbc	09 34 38.1 -1.3
PTBC	PUERTO BERRIO	150.19	31	eP		PKPbc	09 34 39.5 -0.2
PAMC	Pamplona, Colo	150.29	27	eP		PKPbc	09 34 39.9 -0.6
NORC	Norcasia	150.83	33	eP		PKPdf	09 34 36.7 +1.0
SPBC	San Pablo de B	151.15	31	eP		PKPbc	09 34 41.5 -0.6
YOTC	Yotoco, Valle	151.35	37	eP		PKPdf	09 34 37.1 +0.6
RUSC	La Rusia	151.41	29	eP		PKPbc	09 34 42.8 -0.4
TOLC	Tolima	151.42	35	eP		PKPbc	09 34 43.2 +0.1
ANIL	Santa Ana	151.46	35	eP		PKPbc	09 34 40.8 -2.3
ROSC	El Rosal	151.73	33	PKPbc		PKiKP	09 34 44.1 -0.1
	comp=Z,9.6nm,0.4s,baz=329,slow=0.8,SNR=8.0						
ROSC	El Rosal	151.73	33			PKiKP	09 34 44.4 +0.2
ORTC	Ortega, Tolima	152.03	35	eP		PKPbc	09 34 43.1 -0.9
CHIC	Chingaza	152.20	32	eP		PKPbc	09 34 44.5 -0.4
POPC	Popayan, Colom	152.32	39	eP		PKPbc	09 34 44.0 -0.9
PRAC	Prado	152.38	35	eP		PKPbc	09 34 44.0 -0.8
PCON	Cinco Dias	152.66	39	eP		PKiKP	09 34 48.1 +1.8
SOTA	Rioblanco	152.69	40	eP		PKPdf	09 34 40.7 +1.7
BETC	Betania	152.93	37	eP		PKPdf	09 34 29.5 -9.3
GCUF	Volcan Galeras	152.94	42	eP		PKiKP	09 34 47.1 +0.3
GARC	Garzon, Huila	153.30	38	eP		PKPbc	09 34 46.7 -0.4
MACC	Macarena, Meta	154.25	35	eP		PKiKP	09 34 50.0 +1.1
LPAZ	La Paz	171.19	70	PKP		PKPdf	09 34 59.4 +1.6
	comp=Z,2.6nm,1.0s,baz=326,slow=0.7,SNR=7.4						
LPAZ	La Paz	171.19	70	PKPdf		PKPdf	09 34 58.8 +1.0

IDC ***18*** *09:15:52.3±0.3, 19°.45N×120°.52E, h0km, mb4.9/45, mb1 5.0/47, mb1mx4.9/56, mbtmp4.9/47, ML4.2/2, MS4.6/8, Ms1 4.6/8, ms1mx4.2/24, Error ellipse: s-maj=13.0km s-min=8.3km az=70.0*

MOS ***18*** *09:15:53.9±0.9, 19°.51N×120°.50E, h23km, mb5.3/73, MS4.9/17, Error ellipse: s-maj=7.1km s-min=4.0km az=112.5*

BJI ***18*** *09:15:53.3±0.0, 19°.27N×120°.48E, h27km, mB5.3/34, mb4.9/49, Ms5.4/49, Ms7 5.2/47*

NEIC ***18*** *09:15:53.5±1.9, 19°.47N±0°.06×120°.42E±0°.08, h10km±1km, mb5.3/139, Error ellipse: s-maj=12.0km s-min=9.8km az=271.0*

GCMT ***18*** *09:15:55.5±0.1, 19°.60N±0°.01×120°.30E±0°.01, h12km, MW5.4/136, Moment Tensor Solution. s56,c73; s136,c252; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr-1.00±.02; Mθθ 0.43±.01; Mϕϕ 0.57±.02; Mrθ 0.69±.05; Mθϕ 0.49±.01; Mϕr 0.60±.05; Best double couple: Mo1.35800×10^17 NP1:ϕs36.00000°, δ24.00000°, λ-100.00000°. NP2:ϕs226.00000°, δ66.00000°, λ-86.00000°. Principal axes: T 1.3550, Plg21.0000°, Azm313.0000°; N 0.0100, Plg4.0000°, Azm44.0000°; P -1.3620, Plg68.0000°, Azm144.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***18*** *09:16:01.0, 19°.36N×120°.50E, h63km, mb5.2*

ISC 18 09:15:55.8±0.7, 19°.46N±0°.03×120°.45E±0°.04, h23km±4km, n520, σ1$36/526, mb5.2/183, MS5.0/39, 21C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	Pinlang	3.39	10	Pn	Pn	09 16 46.4	-0.9
TPUB	Ta-pu	3.82	2	Pn	Pn	09 16 53.6	+0.4
YULB	Yu-li	3.99	11	Pn	Pn	09 16 56.0	+0.4
SSLB	Suanglung	4.33	6	Pn	Pn	09 16 59.4	-0.8
NACB	Ninganchiao	4.81	13	Pn	Pn	09 17 05.3	-1.5
YHNB	Yeheng	5.25	9	Pn	Pn	09 17 11.0	-2.0
KNMB	Chin-men Tao	5.33	339	Pn	Pn	09 17 13.1	-0.8
TGY	Tagaytay City	5.35	175	Pn	Pn	09 17 16.1	+1.8
	33nm,0.3s,baz=314,slow=8.8,SNR=4.7						
TGY				LR	LR	09 19 52.2	
	comp=Z,9μm,20.8s,baz=8.5,slow=45						
QZH	Quanzhou	5.72	343	eP	Pn	09 17 18.9	-0.4
QZH				Sn	Sn	09 18 19.8	-4.4
QZH				LR	LR		
	comp=N,15μm,9.0s						
QZH				LR	LR		
	comp=E,11μm,9.9s						
QZH				LR	LR		
	comp=Z,21μm,10.9s						
HKPS	Hong Kong Po S	6.53	296	Pn	Pn	09 17 27.6	-2.8
QIZ	Qiongzhong	10.03	269	P	Pn	09 18 15.6	-2.9
QIZ				pmax	pmax		
	comp=Z,20nm,0.7s						
QIZ				LR	LR		
	comp=N,10μm,12.8s						
QIZ				LR	LR		
	comp=E,10μm,10.8s						
QIZ				LR	LR		
	comp=Z,10μm,11.0s						
QIZ	Qiongzhong	10.03	269	Pn	Pn	09 18 16.3	-2.2
NJ2	Nanjing	12.62	354	eP	Pn	09 18 55.9	+2.0
NJ2				S	Sn	09 21 15.4	+1.7
NJ2				sS		09 21 24.0	
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,190nm,3.6s						
NJ2				LR	LR		
	comp=N,7μm,13.3s						
NJ2				LR	LR		
	comp=E,8μm,13.3s						
NJ2				LR	LR		
	comp=Z,7μm,14.7s						
DAV	Davao City (W)	13.29	157	LR	LR	09 24 20.4	
	comp=Z,10μm,20.8s,baz=324,slow=38						
KKM	Kota Kinabalu	13.96	198	Pn	Pn	09 19 12.1	-0.3
ENH	Enshi	14.64	319	Pn	Pn	09 19 22.1	+0.5
JSU	Suzuyama	15.00	35	Pn	Pn	09 19 25.7	-0.7
JSU				lAmb	lAmb	09 19 35.0	
	comp=Z,331nm,2.0s						
SPMM	Sapulut	15.17	195	P	P	09 19 34.0	+0.4
JNU	Nakatsue	16.49	32	Pn	Pn	09 19 45.4	-0.3
	comp=Z,1.0nm,0.3s,baz=239,slow=5.5,SNR=5.9						
JNU				LR	LR	09 26 47.0	
	comp=Z,1μm,18.1s,baz=220,slow=40						
JNU	Nakatsue	16.49	32	Pn	Pn	09 19 44.8	-0.9
JTU	Tsushima	16.98	26	Pn	Pn	09 19 50.7	-1.0
JTU				lAmb	lAmb	09 20 32.2	
	comp=Z,289nm,1.8s						
KMI	Kunming	17.32	292↑	eP	P	09 19 57.9	+0.2
KMI				pP	pP	09 20 03.8	+0.8
KMI				sP	pwP	09 20 08.3	+0.3
KMI				S	Sn	09 23 06.3	-2.4
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,440nm,4.3s						
KMI				LR	LR		
	comp=Z,8μm,11.1s						
KMI				LR	LR		
	comp=Z,6μm,11.7s						
KMI				LR	LR		
	comp=Z,9μm,11.6s						
TJN	Taejon	17.91	18	ceP	Pn	09 20 03.2	-0.2
CHAI	Chaiyaphum	17.94	262	P	P	09 20 12.6	+8.2
TOLI2	Tolitoli	18.24	179	P	Pn	09 20 08.2	+0.6
JMN	Monobe	18.58	37	P	Pn	09 20 12.2	+0.6
JMN				lAmb	lAmb	09 20 33.0	
	comp=Z,226nm,1.8s						
SBUM	Sibu	18.73	206	P	P	09 20 12.9	-0.1
SBUM	Sibu	18.73	206	P	Pn	09 20 15.0	+1.6
GTOI	Gorontalo	18.88	172	P	P	09 20 14.9	+0.3
	comp=Z,32nm,1.1s						
CD2	Chengdu	18.90	310	P	Pn	09 20 15.6	+0.1
CD2				S	S	09 23 49.8	+1.7
CD2				pmax	pmax		
	comp=Z,50nm,1.2s						
CD2				pmax	pmax		
	comp=Z,2μm,13.8s						
CD2				LR	LR		
	comp=Z,8μm,9.5s						
CD2				LR	LR		
	comp=Z,7μm,10.1s						
CD2				LR	LR		
	comp=Z,7μm,11.2s						
MRSI	Marisa	18.93	175	P	Pn	09 20 26.2	+10
UTTA	Uttaradit	18.93	268	P	Pn	09 20 24.2	+8.2
	comp=Z,312nmcomp=Z,22nm,1.0s						
MPSI	Mapaga	19.02	182	P	Pn	09 20 18.5	+1.6
	comp=Z,31nm,1.3s						
KSAR	Wonju Array Be	19.06	18	P	P	09 20 15.7	-0.7
KSAR	Wonju Array Be	19.06	18	P	P	09 20 15.7	-0.7
KSRS	Korea Array	19.08	18	P	P	09 20 16.8	+0.1
	comp=Z,0.4nm,0.3s,baz=195,slow=11,SNR=3.3						
KSRS				PcP	PcP	09 24 41.2	+0.4
	comp=Z,0.1nm,0.3s,baz=180,slow=0.4,SNR=5.0						
KSRS				LR	LR	09 27 32.5	
	comp=Z,1μm,18.7s,baz=205,slow=37						
DL2	Dalian	19.40	3	P	Pn	09 20 21.9	+0.5
DL2				S	Sn	09 24 01.6	+3.2
DL2				pmax	pmax		
	comp=Z,58nm,1.2s						
DL2				pmax	pmax		
	comp=Z,1μm,9.8s						
DL2				LR	LR		
	comp=Z,3μm,13.7s						
DL2				LR	LR		
	comp=Z,2μm,12.5s						
DL2				LR	LR		
	comp=Z,5μm,11.3s						
PAYA	Payao	19.41	273	P	Pn	09 20 23.8	+2.1
	comp=Z,5μmcomp=Z,457nm,1.2s						
TIY	Taiyuan	19.48	341	eP	Pn	09 20 24.4	+1.9
TIY				S	S	09 23 57.0	-3.0
TIY				LR	LR		
	comp=Z,5μm,12.0s						
TIY				LR	LR		
	comp=Z,5μm,14.7s						
TIY				LR	LR		
	comp=Z,4μm,16.2s						
SUKH	Sukhothai	19.84	268	P	Pn	09 20 30.2	+3.3
	comp=Z,39nm,1.1s						
SMKI	Samarinda	20.04	189	P	Pn	09 20 30.7	+1.5
	comp=Z,8μmcomp=Z,245nm,1.3s						
CM34	Chiang Mai Arr	20.13	272	P	Pn	09 20 30.0	-0.3
CM35	Chiang Mai Arr	20.14	271	P	Pn	09 20 30.0	-0.4
CM36	Chiang Mai Arr	20.21	271	P	Pn	09 20 31.0	-0.3
APSI	Ampana	20.28	177	P	Pn	09 20 38.0	+6.0
CM09	Chiang Mai Arr	20.32	271	P	Pn	09 20 33.2	+0.7
	comp=Z,244nmcomp=Z,23nm,1.1s						
CMMT	Chiang Mai	20.32	272	P	Pn	09 20 32.0	-0.6
	comp=Z,22nm,1.1s						
CM33	Chiang Mai Arr	20.32	272	P	P	09 20 31.0	+0.5
CHTO	Chiang Mai	20.33	272	P	P	09 20 29.0	-1.5
CHTO				pmax	pmax		
	comp=Z,58nm,1.2s						
CHTO	Chiang Mai	20.33	272	P	P	09 20 29.0	-1.5
CM04	Chiang Mai Arr	20.34	271	P	Pn	09 20 33.2	+0.5
	comp=Z,324nmcomp=Z,39nm,1.1s						
CM01	Chiang Mai Arr	20.35	271	P	Pn	09 20 33.5	+0.5
	comp=Z,255nmcomp=Z,33nm,1.1s						
CM02	Chiang Mai Arr	20.36	271	P	Pn	09 20 33.4	+0.4
	comp=Z,221nmcomp=Z,30nm,1.1s						
CM31	Chiang Mai Arr	20.36	271	P	Pn	09 20 34.0	+1.0
	comp=Z,649nm,1.0s						
CMAR	Chiang Mai Arr	20.36	271	P	Pn	09 20 32.6	-0.4
	comp=Z,22nm,1.1s,baz=78,slow=8.7,SNR=11						
CMAR				PcP	PcP	09 24 44.7	+1.2
	comp=Z,5.3nm,0.6s,baz=60,slow=0.3,SNR=11						
CMAR	Chiang Mai Arr	20.36	271	P	P	09 20 31.2	+0.3
CMAR						09 24 44.7	
CMAR	Chiang Mai Arr	20.36	271	P	P	09 20 31.2	+0.3
CMAR					PcP	09 24 44.7	+1.2
CM05	Chiang Mai Arr	20.37	271	P	Pn	09 20 33.0	-0.1
	comp=Z,225nmcomp=Z,30nm,1.1s						
CM15	Chiang Mai Arr	20.38	271	P	Pn	09 20 33.5	+0.3
	comp=Z,22nm,1.0s						
UTHA	Uthitani	20.40	262	P	Pn	09 20 37.6	+4.2
	comp=Z,61nm,1.1s						
CM13	Chiang Mai Arr	20.40	271	P	Pn	09 20 33.0	-0.5
	comp=Z,269nmcomp=Z,32nm,1.1s						
CM32	Chiang Mai Arr	20.43	271	P	Pn	09 20 34.0	+0.1
KSM	Kuching	20.45	210	P	P	09 20 30.7	-1.1
KSM	Kuching	20.45	210	P	Pn	09 20 33.0	-1.0
BJT	Baijiatuao	20.82	351	P	P	09 20 36.8	+1.2
BJT				pmax	pmax		
	comp=Z,145nm,1.0s						
BJT	Baijiatuao	20.82	351	P	P	09 20 36.8	+1.2
BJT				lAmb	lAmb	09 20 48.9	
	comp=Z,145nm,1.0s						
BJI	Beijing	20.84	351	P	P	09 20 36.9	+1.1
BJI				pmax	pmax		
	comp=Z,110nm,1.3s						
BJI				LR	LR		
	comp=Z,5μm,12.3s						
BJI				LR	LR		
	comp=Z,2μm,11.9s						
BJI				LR	LR		
	comp=Z,2μm,18.8s						
BKB	Balikpapan	20.89	190	P	P	09 20 34.7	-1.9
BKB				lAmb	lAmb	09 21 06.0	
	comp=Z,165nm,0.9s						
MTKI	Muara Teweh, K	21.00	196	P	Pn	09 20 41.6	+1.2
	comp=Z,76nm,1.1s						
JHJ	Hachijo jima 2	21.98	48	LR	LR	09 28 28.9	
	comp=Z,705nm,20.7s,baz=248,slow=34						
LZH	Lanzhou	22.08	322	↑P	P	09 20 50.3	+0.9
LZH				pP	pwP	09 20 59.5	+0.4
LZH				sP	sP	09 21 05.3	+7.9
LZH				PP	PnPn	09 21 11.3	-0.4
LZH				pmax	pmax		
	comp=Z,140nm,1.4s						
LZH				pmax	pmax		
	comp=Z,650nm,5.6s						
LZH				LR	LR		
	comp=Z,8μm,11.9s						
LZH				LR	LR		
	comp=Z,6μm,10.8s						
LZH				LR	LR		
	comp=Z,8μm,11.4s						
TTSI	Tana Toraja	22.38	182	P	P	09 20 59.1	+6.6
HHC	Hu-ho-hao-te	22.63	342	eP	P	09 20 55.5	+0.3
HHC				S	S	09 24 54.8	-7.1
HHC				pmax	pmax		
	comp=Z,61nm,1.3s						
HHC				pmax	pmax		
	comp=Z,640nm,4.7s						
HHC				LR	LR		
	comp=Z,6μm,10.6s						
HHC				LR	LR		
	comp=Z,3μm,11.3s						
HHC				LR	LR		
	comp=Z,5μm,11.3s						
SIJI	Sorong	22.82	151	P	P	09 20 56.6	-0.7
	comp=Z,27nm,0.7s,baz=9.6,slow=4.6,SNR=6.9						
KBKI	Kotabaru	23.01	191	P	P	09 21 01.7	+2.5
	comp=Z,1μmcomp=Z,33nm,0.9s						
MAJO	Matsushiro	23.07	39	iP	P	09 20 59.5	-0.2
MAJO				pmax	pmax		
	comp=Z,58nm,1.2s						
MAT	Matsushiro	23.07	39	P	P	09 21 00.9	+1.2
MJAR	Matsushiro Arr	23.07	39	P	P	09 21 00.9	+1.1
	comp=Z,19nm,1.0s,baz=232,slow=12,SNR=3.6						
MJAR	Matsushiro Arr	23.07	39	P	P	09 20 59.1	-0.7
MJAR				pmax	pmax		
	comp=Z,53nm,1.4s						
MJAR	Matsushiro Arr	23.07	39	P	P	09 20 59.1	-0.7
SPSI	Sidrap Palu	23.29	182	P	P	09 21 03.2	+1.2
	comp=Z,114nm,1.2s						
SURT	Suratani	23.41	247	P	P	09 21 07.1	+3.8
BBKI	Banjar Baru	23.44	194	P	P	09 21 04.1	+0.6
	comp=Z,79nm,0.9s						
NLAI	Namlea	23.49	163	P	P	09 21 06.8	+2.8
	comp=Z,2μmcomp=Z,179nm,1.0s						
BNSI	Bone	23.72	181	P	P	09 21 08.7	+2.5
	comp=Z,94nm,1.6s						
KULM	Kulim	23.88	236	P	P	09 21 08.0	+0.2
MYKOM	Kota Tinggi	23.92	225	P	P	09 21 06.6	-1.6
MYKOM	Kota Tinggi	23.92	225	P	P	09 21 09.0	+0.8
IPM	Ipoh	24.09	234	P	P	09 21 08.2	-1.7
IPM				lAmb	lAmb	09 21 10.4	
	comp=Z,45nm,0.9s						
IPM	Ipoh	24.09	234	P	P	09 21 10.0	+0.1
GUMO	Guam	24.11	100	P	P	09 21 09.3	-0.7
	comp=Z,256nm,1.2s,baz=189,slow=2.3,SNR=6.9						
GUMO	Guam	24.11	100	P	P	09 21 09.1	-0.9
GUMO				pmax	pmax		
	comp=Z,458nm,1.4s						
GUMO	Guam	24.11	100	P	P	09 21 09.1	-0.9
KAPI	Kappang	24.33	182	P	P	09 21 12.8	+0.9
	comp=Z,27nm,0.7s,baz=2.3,slow=8.5,SNR=8.1						
KAPI	Kappang	24.33	182	P	P	09 21 11.8	-0.2
KAPI				pmax	pmax		
	comp=Z,269nm,1.7s						
KAPI	Kappang	24.33	182	P	P	09 21 11.8	-0.2
CN2	Changchun	24.63	9	eP	P	09 21 14.9	+0.5
CN2				epP	sP	09 21 22.6	-0.2
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
CN2				LR	LR		
	comp=Z,2μm,12.0s						
CN2				LR	LR		
	comp=Z,3μm,12.0s						
CN2				LR	LR		
	comp=Z,2μm,12.0s						
FAKI	Fak Fak	25.09	151	P	P	09 21 18.4	-0.4
TPI	Tanjungpandan	25.41	211	P	P	09 21 22.7	+0.9
	comp=Z,7μmcomp=Z,55nm,0.9s						
VLA	Vladivostok	25.48	20	iP	P	09 21 21.6	-0.5
VLA				pmax	pmax		
	comp=Z,61nm,1.1s						
JMM	Marumori	25.49	40	P	P	09 21 21.3	-1.1
JMM				lAmb	lAmb	09 22 11.3	
	comp=Z,74nm,1.3s						
PPBI	Pangkal Pinang	25.68	215	P	P	09 21 25.5	+1.3
MDJ	Mudanjiang	26.21	15	P	P	09 21 29.3	+0.5
MDJ				pP	sP	09 21 37.9	+0.7
MDJ				sP	pwP	09 21 41.8	+3.0
MDJ				PP	PnPn	09 22 11.3	+3.3
MDJ				S	S	09 26 01.9	+2.2
MDJ				sS	sS	09 26 19.0	+10
MDJ				pmax	pmax		
	comp=Z,110nm,1.0s						
MDJ				LR	LR		
	comp=Z,3μm,12.8s						
MDJ				LR	LR		
	comp=Z,3μm,14.2s						
MDJ				LR	LR		
	comp=Z,3μm,14.2s						
MDJ	Mudanjiang	26.21	15	P	P	09 21 29.0	+0.2
MDJ				lAmb	lAmb	09 21 30.5	
	comp=Z,94nm,1.0s						
USA0B	Ussuriysk Arra	26.49	19	iP	P	09 21 29.7	-1.6
USA0B	Ussuriysk Arra	26.49	19	P	P	09 21 31.7	+0.5
USA0B				lAmb	lAmb	09 21 34.6	
	comp=Z,46nm,1.1s						
USRK	Ussuriysk Ar.	26.49	19	P	P	09 21 32.4	+1.1
	comp=Z,14nm,0.9s,baz=216,slow=9.4,SNR=10						
USRK				PcP	PcP	09 24 54.2	-1.7
	comp=Z,2.4nm,0.8s,baz=238,slow=2.7,SNR=3.2						
USRK	Ussuriysk Ar.	26.49	19	P	P	09 21 29.3	-1.9
USRK						09 24 53.9	
USRK	Ussuriysk Ar.	26.49	19	P	P	09 21 29.3	-1.9
USRK				PcP	PcP	09 24 53.9	-2.0
GTA	Gaotai	26.68	323	eP	P	09 21 35.8	+2.5
GTA				pP	pwP	09 21 46.4	+2.9
GTA				sP	sP	09 21 50.5	+9.0
GTA				pmax	pmax		
	comp=Z,13nm,1.2s						
GTA				pmax	pmax		
	comp=Z,170nm,6.0s						
GTA				LR	LR		
	comp=Z,4μm,10.5s						
GTA				LR	LR		
	comp=Z,4μm,10.2s						
GTA				LR	LR		
	comp=Z,5μm,11.3s						
PSI	Prapat	26.77	234	P	P	09 21 33.5	-0.8
PSI				pmax	pmax		
	comp=Z,23nm,1.0s						
RPSI	Rantau Prapat	26.84	234	P	P	09 21 33.5	-1.3
SDSI	Sungai Dareh	27.55	225	P	P	09 21 42.6	+1.5
	comp=Z,16nm,1.0s						
MNSI	Mandailing Nat	27.61	230	P	P	09 21 41.7	+0.1
	comp=Z,6μmcomp=Z,43nm,1.0s						
EDFI	Ende, Flores	28.06	177	P	P	09 21 46.2	+0.5
	comp=Z,494nmcomp=Z,41nm,1.4s						
BSI	Banda Aceh	28.15	244	P	P	09 21 48.6	+2.1
	comp=Z,18μmcomp=Z,2μm,0.8s						
PLAI	Plampang	28.23	186	P	P	09 21 51.3	+4.1
	comp=Z,74nm,1.3s						
KRJI	Kerinci	28.40	223	P	P	09 21 41.0	-7.8
LSA	Lhasa	28.45	297	P	P	09 21 49.7	+0.1
LSA				pmax	pmax		
	comp=Z,49nm,1.2s						
LSA	Lhasa	28.45	297	P	P	09 21 49.7	+0.1
LSA				lAmb	lAmb	09 22 01.1	
	comp=Z,49nm,1.2s						
KLSI		28.55	214	P	P	09 21 54.4	+4.4
	comp=Z,7μmcomp=Z,12nm,1.1s						
PWJI	Pagerwojo	28.61	198	P	P	09 21 50.8	+0.3
	comp=Z,90nm,1.1s						
WOJI	Wonogiri, Jawa	28.70	200	P	P	09 21 52.5	+1.1
	comp=Z,77nm,1.3s						
KPJI	Karang Pucung	28.94	204	P	P	09 21 56.1	+2.6
	comp=Z,70nm,1.9s						
LEM	Lembang	29.02	207	P	P	09 21 56.2	+1.8
	comp=Z,15nm,0.4s,baz=172,slow=16,SNR=4.6						
SOEI	Soe	29.28	172	P	P	09 22 07.6	+11
BATI	Baumata	29.65	174	P	P	09 21 58.2	-1.5
	comp=Z,123nm,0.8s,baz=52,slow=1.2,SNR=8.1						
ULN	Ulaanbaatar	30.35	342	ceP	P	09 22 05.9	0.0
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	30.35	342	P	P	09 22 06.1	+0.2
SONM	Songino Array	30.52	341	P	P	09 22 07.7	+0.4
	comp=Z,5.5nm,0.6s,baz=161,slow=9.2,SNR=6.9						
SONM	Songino Array	30.52	341	P	P	09 22 07.6	+0.2
SONM	Songino Array	30.52	341	P	P	09 22 07.6	+0.2
ASAJ	Asahikawa	30.77	32	P	P	09 22 12.7	+3.3
	comp=Z,4.3nm,0.6s,baz=183,slow=4.0,SNR=4.1						
KLR	Kul'dur	31.06	14	P	P	09 22 12.7	+0.8
	comp=Z,22nm,0.8s,baz=232,slow=7.2,SNR=12						
KLR	Kul'dur	31.06	14	ceP	P	09 22 12.4	+0.5
KLR				pmax	pmax		
	comp=Z,48nm,1.1s						
YUK	Yuzh-Kuril'sk	32.42	35	eP	P	09 22 24.9	+0.9
YUK				e		09 23 31.5	
YUK				ePPP	PPP	09 23 44.0	
YUK				eS	S	09 27 37.8	+0.6
YUK				eSS	SnSn	09 29 35.9	+5.1
YUK				eSSS	SSS	09 29 51.8	
YUK				pmax	pmax		
	comp=Z,345nm,1.5s						
YUK				pmax	pmax		
	comp=N,101nm,1.1s						
YUK				pmax	pmax		
	comp=Z,159nm,1.1s						
YUK				pmax	pmax		
	comp=E,136nm,1.0s						
YUK				MLR	MLR		
	comp=E,266nm,16.0s						
YUK				MLR	MLR		
	comp=Z,505nm,16.0s						
YUK				MLR	MLR		
	comp=N,269nm,11.0s						
YSS	Yuzh-Sakhalins	32.94	29	eP	P	09 22 28.5	+0.1
YSS				e		09 23 36.4	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,1μm,15.0s						
YSS				MLR	MLR		
	comp=N,500nm,13.0s						
YSS				MLR	MLR		
	comp=E,700nm,15.0s						
GRNR	Gornyy	33.71	18	eP	P	09 22 31.0	-4.1
ZAK	Zakamensk	33.74	340	eP	P	09 22 35.3	-0.2
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MTN	Manton Dam	33.78	161	P	P	09 22 34.9	-1.2
ZEA	Zeya	34.61	7	eP	P	09 22 42.8	-0.1
ZEA				pmax	pmax		
	comp=N,30nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.

comp=Z,32nm,1.0s
WMQ Urumqi 36.59 319 *e*P **P** **09 23 01.5 +1.3**
WMQ pP pwP 09 23 10.9 +0.3
WMQ S **S** **09 28 44.5 +2.8**
WMQ sS sS 09 28 55.8 +4.2
WMQ pmax pmax
comp=Z,32nm,1.1s
WMQ pmax pmax
comp=Z,250nm,3.7s
WMQ LR LR
comp=Z,4μm,14.9s
WMQ LR LR
comp=Z,3μm,15.9s
WMQ LR LR
comp=Z,3μm,16.7s
FITZ Fitzroy Crossi 37.67 172 P **P** **09 23 08.5 -0.9**
comp=Z,29nm,0.9s,baz=6.5,slow=7.0,SNR=14
FITZ PcP **PcP** **09 25 27.1 +0.5**
comp=Z,5.5nm,0.7s,baz=212,slow=1.4,SNR=4.0
FITZ Fitzroy Crossi 37.67 172 P **P** **09 23 08.6 -0.8**
FITZ IAmb IAmb 09 23 09.4
comp=Z,39nm,1.0s
PATS Pohnpei 38.84 104 P **P** **09 23 19.5 0.0**
KRVT Keravat (AS076 39.02 124 P **P** **09 23 20.8 -0.2**
comp=Z,46nm,0.9s,baz=316,slow=4.7,SNR=5.2
RABL Rabaul 39.06 124 P **P** **09 23 21.4 +0.1**
COEN Coen 40.04 144 P **P** **09 23 28.4 -1.0**
ZSN Zaisan 40.18 322 *e*P **P** **09 23 30.3 +0.1**
comp=Z,19nm,1.5s,baz=322
ZSN LR LR 09 40 42.9
comp=Z,524nm,12.2s,baz=322
ZSN Zaisan 40.18 322 *e*P **P** **09 23 30.3 +0.1**
ZSN pmax pmax
comp=Z,19nm,1.5s
ZSN MLR MLR
comp=Z,525nm,12.0s
PSA00 Pilbara Seismi 40.79 181 P **P** **09 23 35.1 -0.3**
WB0 Warramunga Arr 41.31 160 P **P** **09 23 38.8 -1.0**
WB0 **S** **09 29 49.1 -4.0**
MK31 Makanchi Array 41.37 320*ce*P **P** **09 23 40.9 +0.8**
MK31 Makanchi Array 41.37 320 P **P** **09 23 41.5 +1.3**
MK31 IAmb IAmb 09 23 50.9
comp=Z,60nm,1.4s
MKAR Makanchi Array 41.37 320 P **P** **09 23 41.5 +1.3**
comp=Z,18nm,0.9s,baz=118,slow=9.7,SNR=8.8
MKAR Makanchi Array 41.37 320 P **P** **09 23 41.0 +0.9**
MKAR Makanchi Array 41.37 320 P **P** **09 23 41.0 +0.9**
WRAB Tennant Creek 41.46 160*ce*P **P** **09 23 39.7 -1.3**
WRAB pmax pmax
comp=Z,41nm,1.7s
WRAB Tennant Creek 41.46 160 P **P** **09 23 39.9 -1.1**
WRA Warramunga Arr 41.46 160 P **P** **09 23 39.6 -1.4**
comp=Z,16nm,0.5s,baz=343,slow=8.9,SNR=21
WRA PcP **PcP** **09 25 39.0 +0.4**
comp=Z,9.7nm,0.7s,baz=341,slow=3.7,SNR=9.2
WRA S **S** **09 29 50.9 -4.3**
comp=Z,4.5nm,1.0s,baz=336,slow=15,SNR=7.3
WRA LR LR 09 43 00.6
comp=Z,541nm,18.6s,baz=315,slow=39
WRA Warramunga Arr 41.46 160 P **P** **09 23 40.1 -0.9**
WRA pmax pmax
comp=Z,3.0nm,1.4s
WRA Warramunga Arr 41.46 160 P **P** **09 23 40.0 -0.9**
WB2 Warramunga Arr 41.47 160 P **P** **09 23 40.1 -1.0**
WB2 IAmb IAmb 09 23 42.6
comp=Z,70nm,1.4s
WR0 Warramunga Arr 41.54 160 P **P** **09 23 40.5 -1.2**
WR0 IAmb IAmb 09 23 42.4
comp=Z,25nm,0.6s
MAKZ Makanchi 41.57 320 P **P** **09 23 41.4 -0.3**
MAKZ pmax pmax
comp=Z,90nm,1.7s
MAKZ Makanchi 41.57 320 P **P** **09 23 41.4 -0.3**
MAKZ IAmb IAmb 09 24 01.5
comp=Z,90nm,1.6s
SHLS Shalkode 41.67 314 *e*P **P** **09 23 40.9 -1.8**
comp=Z,13nm,1.4s,baz=314
SHLS Shalkode 41.67 314 *e*P **P** **09 23 40.9 -1.8**
SHLS pmax pmax
comp=Z,13nm,1.4s
KPKS Kokpek 42.31 314 *e*P **P** **09 23 48.2 +0.2**
baz=314
KPKS Kokpek 42.31 314 *e*P **P** **09 23 48.1 +0.2**
SATY Saty 42.36 313 *e*P **P** **09 23 48.7 +0.3**
baz=313
SATY Saty 42.36 313 *e*P **P** **09 23 48.7 +0.3**
SATY Saty 42.36 313 *e*S **P** **09 23 48.9 +0.6**
comp=Z,31nm,0.2s
YAK Yakutsk 43.02 6*ce*P **P** **09 23 51.5 -1.7**
YAK pmax pmax
comp=Z,35nm,1.3s
KSH Kashi 43.05 307 P **P** **09 23 57.6 +3.5**
KSH sP pwP 09 24 06.3 +1.8
KSH S **S** **09 30 25.0 +6.2**
KSH pmax pmax
comp=Z,27nm,0.7s
KSH pmax pmax
comp=Z,440nm,4.8s
KSH LR LR
comp=Z,2μm,12.9s
KSH LR LR
comp=Z,2μm,13.1s
KSH LR LR
comp=Z,3μm,15.6s
TDK Taldyqorghan 43.07 316 *e*P **P** **09 23 54.3 +0.4**
baz=316
TDK LR LR 09 42 00.7
comp=Z,834nm,12.1s,baz=316
TDK Taldyqorghan 43.07 316 *e*P **P** **09 23 54.3 +0.4**
TDK MLR MLR
comp=Z,834nm,12.0s
MDOK Medeo 43.33 313 *e*P **P** **09 23 56.4 +0.1**
baz=313
MDOK *e*S **S** **09 30 22.9 +0.1**
baz=313
MDOK LR LR 09 41 53.6
comp=Z,1μm,15.0s,baz=313
MDOK Medeo 43.33 313 *e*P **P** **09 23 56.4 +0.1**
MDOK *e*S **S** **09 30 22.9 +0.1**
MDOK MLR MLR
comp=Z,1μm,15.0s
TNSS Tian-Shan 43.36 313 *e*P **P** **09 23 57.9 +1.0**
baz=312
TNSS Tian-Shan 43.36 313 *e*P **P** **09 23 57.8 +1.0**
CHKK Chushkaly 43.60 314 *e*P **P** **09 23 59.1 +0.8**
baz=314
CHKK Chushkaly 43.60 314 *e*P **P** **09 23 59.0 +0.8**
ZAA0 Zalesovo Array 43.91 330 P **P** **09 23 59.6 -0.9**
ZALV Zalesovo Beam 43.91 330 P **P** **09 24 00.6 +0.1**
comp=Z,12nm,0.7s,baz=121,slow=6.8,SNR=8.3
ZALV Zalesovo Beam 43.91 330 P **P** **09 23 59.9 -0.6**
ZALV Zalesovo Beam 43.91 330 P **P** **09 23 59.9 -0.6**
KUU Kurty 44.06 314 *e*P **P** **09 24 02.2 +0.2**
comp=Z,17nm,1.2s,baz=313
KUU Kurty 44.06 314 *e*P **P** **09 24 02.1 +0.2**
KUU pmax pmax
comp=Z,17nm,1.2s
NIL Nilore 44.15 299 P **P** **09 24 03.1 +0.2**
NIL pmax pmax
comp=Z,31nm,0.8s
NIL Nilore 44.15 299 P **P** **09 24 03.1 +0.2**
NIL IAmb IAmb 09 24 14.4
comp=Z,31nm,0.8s
PEA0B Petropavlovsk- 44.19 32*ce*P **P** **09 24 01.1 -1.7**
PETK Petropavlovsk- 44.19 32 P **P** **09 24 03.1 +0.3**
comp=Z,8.0nm,0.8s,baz=225,slow=6.1,SNR=5.8
PETK Petropavlovsk- 44.19 32 P **P** **09 24 02.5 -0.3**
PETK Petropavlovsk- 44.19 32 P **P** **09 24 02.5 -0.3**
SEM Semipalatinsk 44.30 324 *e*P **P** **09 24 03.6 -0.5**
comp=Z,16nm,1.2s,baz=324
SEM Semipalatinsk 44.30 324 *e*P **P** **09 24 03.5 -0.5**
SEM pmax pmax
comp=Z,16nm,1.2s
PET Petropavlovsk 44.62 32*ce*P **P** **09 24 03.8 -2.4**
PET pmax pmax
comp=Z,319nm,1.7s
PET Petropavlovsk 44.62 32 P **P** **09 24 06.0 -0.2**
PET IAmb IAmb 09 24 07.0
comp=Z,74nm,1.3s
AS31 Alice Springs 44.83 162 P **P** **09 24 07.4 -0.9**
ASAR Alice Springs 44.83 162 P **P** **09 24 07.8 -0.5**
comp=Z,16nm,0.7s,baz=340,slow=6.8,SNR=22
ASAR Alice Springs 44.83 162 P **P** **09 24 07.4 -0.9**
ASAR Alice Springs 44.83 162 P **P** **09 24 07.4 -0.9**
AAK Ala-Archa 44.96 311*ce*P **P** **09 24 09.0 -0.3**
AAK pmax pmax
comp=Z,27nm,1.7s
KURK Kurchatov 45.36 323*ce*P **P** **09 24 12.0 -0.2**
KURK pmax pmax
comp=Z,62nm,1.3s
KURK Kurchatov 45.36 323 P **P** **09 24 12.7 +0.6**
KURK IAmb IAmb 09 24 23.9
comp=Z,45nm,0.9s
KURBB Kurchatov Arra 45.37 323 P **P** **09 24 13.0 +0.8**
comp=Z,22nm,0.7s,baz=118,slow=7.9,SNR=16
CTA Charters Tower 46.74 146 P **P** **09 24 24.2 +0.8**
comp=Z,7.2nm,0.7s,baz=334,slow=9.8,SNR=8.2
CTAO Charters Tower 46.74 146 P **P** **09 24 24.1 +0.8**
CTAO pmax pmax
comp=Z,79nm,1.9s
CTAO Charters Tower 46.74 146 P **P** **09 24 24.1 +0.8**
CTAO IAmb IAmb 09 24 27.6
comp=Z,78nm,1.9s
BTK Batken 47.05 307 P **P** **09 24 24.8 -0.9**
BTK pmax pmax
comp=Z,25nm,1.3s
BTK Batken 47.05 307 P **P** **09 24 24.8 -0.9**
BTK IAmb IAmb 09 25 07.9
comp=Z,25nm,1.2s
GAR Garm 47.24 305 P **P** **09 24 27.9 +0.5**
DZA Taraz 47.28 311 *e*P **P** **09 24 27.6 +0.1**
baz=311
DZA Taraz 47.28 311 *e*P **P** **09 24 27.5 +0.1**
KBL Kabul 47.72 299 P **P** **09 24 31.9 +0.7**
KBL pmax pmax
comp=Z,34nm,1.1s
KBL Kabul 47.72 299 P **P** **09 24 31.9 +0.7**
KBL IAmb IAmb 09 24 44.0
comp=Z,34nm,1.1s
KK31 Karatay Array 47.91 311 P **P** **09 24 32.9 +0.6**
KK31 pmax pmax
comp=Z,28nm,1.3s
KK31 Karatay Array 47.91 311 P **P** **09 24 32.9 +0.6**
KK31 IAmb IAmb 09 24 43.8
comp=Z,28nm,1.3s
KKAR Karatay Array 47.91 311 P **P** **09 24 30.9 -1.4**
KKAR pmax pmax
comp=Z,28nm,1.3s
KKAR Karatay Array 47.91 311 P **P** **09 24 30.9 -1.4**
KKAR IAmb IAmb 09 24 43.8
comp=Z,28nm,1.3s
IUG luzhnay 48.05 310 *e*P **P** **09 24 33.8 +0.2**
comp=Z,13nm,1.1s,baz=309
IUG luzhnay 48.05 310 *e*P **P** **09 24 33.7 +0.2**
IUG pmax pmax
comp=Z,13nm,1.1s
CHGR Chuyangaron 48.08 305 P **P** **09 24 32.8 -1.1**
CHGR IAmb IAmb 09 24 35.6
comp=Z,33nm,1.0s
MORW Morawa 48.43 185 P **P** **09 24 35.7 -0.7**
BRZS Berezniki 48.52 320 *e*P **P** **09 24 36.8 -0.1**
baz=320
BRZS *e*S **S** **09 31 36.6 -0.3**
baz=320
BRZS Berezniki 48.52 320 *e*P **P** **09 24 36.8 -0.1**
BRZS *e*S **S** **09 31 36.6 -0.3**
SEY Seymchan 48.64 19 P **P** **09 24 38.4 +0.8**
comp=Z,23nm,0.8s,baz=229,slow=5.4,SNR=17
SEY PcP **PcP** **09 26 03.1 +0.3**
comp=Z,2.9nm,0.5s,baz=94,slow=24,SNR=4.5
SEY Seymchan 48.64 19 *i* P **P** **09 24 34.7 -2.9**
FORT Forrest 50.48 172 P **P** **09 24 50.7 -1.3**
BVAR Borovoye Array 50.96 323 P **P** **09 24 55.9 +0.4**
comp=Z,1.5nm,0.5s,baz=210,slow=27,SNR=6.2
BRVK Borovoye 51.03 323*ce*P **P** **09 24 56.7 +0.8**
BRVK pmax pmax
comp=Z,16nm,1.0s
NWAO Narrogin (SRO) 52.18 183 P **P** **09 25 04.2 -0.5**
NWAO pmax pmax
comp=Z,43nm,0.8s
NWAO Narrogin (SRO) 52.18 183 P **P** **09 25 04.3 -0.4**
NWAO Narrogin (SRO) 52.18 183 P **P** **09 25 04.2 -0.5**
NWAO IAmb IAmb 09 25 05.4
comp=Z,43nm,0.8s
TIXI Tiksi 52.42 3*ce*P **P** **09 25 06.1 +0.1**
EIDS Eidsvold 53.60 145 P **P** **09 25 15.2 -0.2**
NRIK Noril'sk 53.78 346 P **P** **09 25 16.6 +0.5**
comp=Z,23nm,1.1s,baz=118,slow=6.0,SNR=7.7
NRIK Noril'sk 53.78 346*ce*P **P** **09 25 13.8 -2.3**
NRIK pmax pmax
comp=Z,42nm,1.4s
BBOO Buckleboo 54.08 164 P **P** **09 25 18.5 -0.2**
STKA Stephens Creek 54.93 158 P **P** **09 25 25.2 +0.3**
comp=Z,20nm,0.8s,baz=336,slow=7.5,SNR=14
STKA Stephens Creek 54.93 158 P **P** **09 25 25.3 +0.4**
STKA pmax pmax
comp=Z,7.0nm,1.0s
STKA Stephens Creek 54.93 158 P **P** **09 25 25.3 +0.4**
ABKAR Akbulak array 56.32 317 P **P** **09 25 34.8 0.0**
ABKAR Akbulak array 56.32 317 P **P** **09 25 33.5 -1.2**
BILL Bilibino 56.34 19*ce*P **P** **09 25 34.1 -0.5**
BILL pmax pmax
comp=Z,263nm,1.7s
BILL Bilibino 56.34 19 P **P** **09 25 34.9 +0.3**
GEYT Alibeck 56.69 303 P **P** **09 25 39.3 +1.7**
comp=Z,12nm,1.0s,baz=134,slow=4.3,SNR=6.5
WSAR Wadi Sarin 57.33 286 P **P** **09 25 42.6 +0.3**
comp=Z,5.4nm,0.8s,baz=139,slow=5.8,SNR=4.3
SVE Sverdlovsk 57.49 326 *e*P **P** **09 25 43.9 +1.0**
SVE pmax pmax
comp=Z,51nm,1.1s
SVE MLR MLR
comp=Z,1μm,16.0s
AKTO Aktyubinsk 57.73 318 P **P** **09 25 45.4 +0.6**
comp=Z,5.4nm,0.6s,baz=101,slow=5.6,SNR=5.3
ARU Arti 58.51 325 P **P** **09 25 49.9 -0.1**
comp=Z,3.3nm,0.2s,baz=103,slow=7.5,SNR=5.8
ARU Arti 58.51 325*ce*P **P** **09 25 49.3 -0.7**
ARU pmax pmax
comp=Z,21nm,1.0s
ARU Arti 58.51 325 P **P** **09 25 49.7 -0.4**
ARU IAmb IAmb 09 25 51.5
comp=Z,44nm,1.3s
DZM Mont Dzumac 61.03 130 *e*P **P** **09 26 09.3 +1.3**
comp=Z,66nm,1.4s
DZM Mont Dzumac 61.03 130 *e*LR LR 09 44 09.2
comp=Z,2μm,21.9s
DZM Mont Dzumac 61.03 130 P **P** **09 26 08.7 +0.7**
TOO Toolangi 61.44 157 P **P** **09 26 11.4 +1.0**
TOO pmax pmax
comp=Z,62nm,1.4s
TOO Toolangi 61.44 157 P **P** **09 26 11.4 +1.0**
KIRV Kirov 63.72 326 P **P** **09 26 25.3 0.0**
comp=Z,25nm,0.7s,baz=120,slow=5.0,SNR=5.2
MAK Makhachkala 64.66 309 *e*P **P** **09 26 31.6 -0.2**
MAK *e* 09 28 53.1
MAK *e*PPP PPP 09 30 27.8
MAK *e*S **S** **09 35 09.3 -1.2**
MAK *e*SS **SS** **09 39 21.5 +0.2**
MAK MLR MLR
comp=Z,842nm,16.0s
LGD Lagodekhi 65.67 308 P **P** **09 26 39.8 +1.4**
TAU Tasmania Unive 66.82 159 P **P** **09 26 47.0 +1.5**
TAU pmax pmax
comp=Z,72nm,1.8s
GUDG Gudauri 66.92 309 P **P** **09 26 49.3 +2.6**
GNI Garni 66.97 306 P **P** **09 26 48.4 +1.4**
comp=Z,9.5nm,0.4s,baz=151,slow=2.7,SNR=5.1
GNI Garni 66.97 306*ce*P **P** **09 26 47.5 +0.5**
GNI pmax pmax
comp=Z,48nm,1.3s
GNI Garni 66.97 306 P **P** **09 26 47.8 +0.8**
KZRT Kazreti 67.09 308 P **P** **09 26 49.1 +1.5**
RDOG Red Dog Mine 67.12 23 P **P** **09 26 47.1 -0.1**
RDOG IAmb IAmb 09 26 48.7
comp=Z,13nm,0.9s
ZEI Tsey 67.31 309 *e*P **P** **09 26 49.0 -0.2**
ZEI pmax pmax
comp=Z,44nm,1.4s
MSVF Nonsavu 67.57 119 P **P** **09 26 52.7 +1.8**
MSVF pmax pmax
comp=Z,21nm,0.9s
MSVF Nonsavu 67.57 119 P **P** **09 26 52.7 +1.8**
MSVF IAmb IAmb 09 26 54.2
comp=Z,21nm,0.8s
ONI Oni 67.66 309 P **P** **09 26 53.5 +2.3**
GOF Gofitskoye 67.70 312 *e*P **P** **09 26 51.7 +0.4**
GOF pmax pmax
comp=Z,61nm,1.4s
BGD Bogdanovka 67.70 307 P **P** **09 26 54.6 +2.9**
AKH Akhalkalaki 67.76 308 P **P** **09 26 52.5 +0.5**
AKH pmax pmax
comp=Z,123nm,1.0s
AKH Akhalkalaki 67.76 308 P **P** **09 26 52.5 +0.5**
KBZ Khabaz 67.94 310 P **P** **09 26 53.5 +0.7**
comp=Z,25nm,1.0s,baz=54,slow=23,SNR=13
KBZ Khabaz 67.94 310*ce*P **P** **09 26 52.4 -0.4**
KBZ pmax pmax
comp=Z,36nm,1.0s
KVAR Kislovodsk Arr 68.06 310 P **P** **09 26 55.7 +1.9**
comp=Z,14nm,0.8s,baz=253,slow=19,SNR=6.6
KIV Kislovodsk 68.07 310 *e*P **P** **09 26 54.0 +0.2**
KIV *e*S **S** **09 35 52.0 -0.2**
KIV *e*SS **SS** **09 40 16.2 +1.7**
KIV pmax pmax
comp=Z,197nm,1.1s
KIV pmax pmax
comp=Z,28nm,4.3s
KIV MLR MLR
comp=Z,2μm,17.0s
KIV Kislovodsk 68.07 310 P **P** **09 26 54.3 +0.5**
VRH Novokhopyorsk 68.07 318 *e*P **P** **09 26 52.8 -0.7**
VRH *e*PP **sP** **09 27 01.4 -1.0**
VRH pmax pmax
comp=Z,70nm,0.8s
VRH MLR MLR
comp=Z,420nm,14.0s
GEVA Gevas 68.50 304 P **P** **09 26 56.7 0.0**
GEVA IAmb IAmb 09 27 09.3
comp=Z,31nm,1.1s
KLMR Klimovskoe 68.80 329 *e*P **P** **09 26 55.6 -2.3**
KLMR pmax pmax
comp=Z,60nm,1.3s
KLMR MLR MLR
comp=Z,724nm,12.0s
KLMR Klimovskoe 68.80 329 *e*P **P** **09 26 55.6 -2.3**
KLMR AMP 09 27 09.2
comp=Z,60nm,1.3s
KLMR LQ LQ 09 51 09.4
KLMR LQ LQ 09 51 09.4
KLMR LR LR 09 52 29.0
KLMR AMP 10 01 14.8
comp=Z,724nm,11.8s
RAYN Ar Rayn 69.12 288 P **P** **09 27 00.0 -0.6**
RAYN pmax pmax
comp=Z,19nm,1.1s
RAYN Ar Rayn 69.12 288 P **P** **09 27 00.0 -0.6**
RAYN IAmb IAmb 09 27 12.3
comp=Z,20nm,1.1s
TMCR Tamitsa 69.37 332 *e*P **P** **09 27 00.4 -0.9**
TMCR pmax pmax
comp=Z,72nm,0.6s
A21K Barrow 69.45 20 P **P** **09 27 02.4 +0.7**
baz=270
A21K Barrow 69.45 20 P **P** **09 27 02.7 +0.9**
VSR Storozhevoye 69.67 318 *e*P **P** **09 27 03.1 -0.4**
VSR *e*PP **sP** **09 27 11.4 -0.9**
VSR pmax pmax
comp=Z,80nm,1.4s
VSR MLR MLR
comp=Z,400nm,14.0s
LPSR Galich'ya Gora 69.68 320 *e*P **P** **09 27 03.0 -0.5**
LPSR *e*PP **sP** **09 27 11.6 -0.8**
LPSR pmax pmax
comp=Z,70nm,0.8s
LPSR MLR MLR
comp=Z,470nm,13.0s
TTA Tatalina 69.94 29 P **P** **09 27 05.8 +0.8**
TTA pmax pmax
comp=Z,12nm,1.0s
TTA Tatalina 69.94 29 P **P** **09 27 05.8 +0.8**
MOS Moscow 70.13 323 *e*P **P** **09 27 05.7 -0.5**
MOS pmax pmax
comp=Z,60nm,0.8s
KNTN Kanton 70.14 100 P **P** **09 27 05.8 -1.2**
SOC Sochi 70.25 310 *e*P **P** **09 27 06.2 -1.0**
SOC *e* 09 29 39.7
SOC *e*PPP PPP 09 31 19.7
SOC *e*S **S** **09 36 15.9 -1.9**
SOC *e*SS **SS** **09 40 48.3 +0.4**
SOC pmax pmax
comp=Z,22nm,0.6s
SOC MLR MLR
comp=Z,584nm,16.0s
MARD Mardin 70.44 304 P **P** **09 27 09.1 +0.5**
MARD IAmb IAmb 09 27 21.0
comp=Z,32nm,1.1s
IMAR Indian Mountai 70.70 26 P **P** **09 27 09.9 +0.3**
OBN Obninsk 70.80 323ǁ *e*P **P** **09 27 09.6 -0.7**
OBN *i* 09 27 18.5
OBN *e* 09 27 30.3
OBN *e* 09 29 47.5
OBN *e*SS SS 09 40 52.1 -3.6
OBN pmax pmax
comp=Z,53nm,1.0s
OBN MLR MLR
comp=Z,500nm,15.0s
CAST Castle Rocks 71.67 28 P **P** **09 27 15.1 -0.4**
CAST IAmb IAmb 09 27 17.1
comp=Z,32nm,0.9s
PPLA Purkeypile 71.68 29 P **P** **09 27 15.7 0.0**
PPLA IAmb IAmb 09 27 51.0
comp=Z,22nm,1.0s
ANN Anapa 71.68 312 *e*P **P** **09 27 18.9 +3.1**
ANN *e*S **S** **09 36 42.2 +7.8**
ANN pmax pmax
comp=Z,50nm,1.0s
ANN MLR MLR
comp=N,819nm,16.0s
ANN MLR MLR
comp=Z,1μm,15.0s
ANN MLR MLR
comp=E,599nm,12.0s
COLD Coldfoot 71.99 24 P **P** **09 27 17.9 +0.6**
baz=277
COLD Coldfoot 71.99 24 P **P** **09 27 17.4 +0.1**
TOLK Toolik Lake Re 72.04 23 P **P** **09 27 18.2 +0.6**
baz=277
TOLK Toolik Lake Re 72.04 23 P **P** **09 27 17.6 -0.1**
TOLK IAmb IAmb 09 27 29.8
comp=Z,16nm,0.8s
MLY Manley 72.05 26 P **P** **09 27 18.4 +0.6**
baz=278
BPAW Bear Paw Mtn. 72.06 27 P **P** **09 27 17.5 -0.4**
BPAW IAmb IAmb 09 27 19.6
comp=Z,36nm,1.2s
KTH Kantishna Hill 72.17 28 P **P** **09 27 18.6 +0.1**
KTH IAmb IAmb 09 27 38.0
comp=Z,44nm,1.4s
JOF Joensuu 72.48 331 P **P** **09 27 20.6 +0.3**
JOF pmax pmax
comp=Z,30nm,1.2s
SUA Susitna One 72.54 30 P **P** **09 27 19.4 -1.5**
I23K Minto, Yukon-K 72.61 26 P **P** **09 27 22.0 +1.0**
baz=279
I23K Minto, Yukon-K 72.61 26 P **P** **09 27 21.1 +0.1**
BRLK Bradley Lake 72.74 32 P **P** **09 27 21.7 -0.2**
NEA2 Nenana 72.82 27 P **P** **09 27 23.2 +0.9**
baz=279
MSF Maaselka 72.99 335 P **P** **09 27 23.1 -0.2**
MSF pmax pmax
comp=Z,25nm,1.7s
MCK McKinley 73.02 28 P **P** **09 27 23.9 +0.4**
baz=280
KEV Kevo 73.10 339 P **P** **09 27 24.3 +0.5**
KEV pmax pmax
comp=Z,26nm,1.4s
RND Reindeer 73.11 28 P **P** **09 27 22.7 -1.4**
RND pmax pmax
comp=Z,37nm,0.8s
RND Reindeer 73.11 28 P **P** **09 27 22.7 -1.4**
MDM Murphy Dome 73.11 26 P **P** **09 27 24.4 +0.3**
MDM IAmb IAmb 09 27 26.1
comp=Z,26nm,0.9s
WRH Wood River Hil 73.26 27 P **P** **09 27 25.4 +0.5**
WRH IAmb IAmb 09 27 26.6
comp=Z,15nm,0.8s
TCOL CIGO, UAF Yank 73.28 26 P **P** **09 27 25.7 +0.7**
baz=280
TCOL CIGO, UAF Yank 73.28 26 P **P** **09 27 24.7 -0.3**
PMR Palmer 73.29 30 P **P** **09 27 24.3 -0.8**
PMR pmax pmax
comp=Z,23nm,0.9s
PMR Palmer 73.29 30 P **P** **09 27 24.3 -0.8**
PMR IAmb IAmb 09 27 25.4

comp=Z,23nm,0.9s
COLA College 73.29 26 *c i* P **P** 09 27 23.8 -1.2
COLA pmax pmax
comp=Z,9.0nm,0.8s
COLA College 73.29 26 P **P** 09 27 25.1 +0.1
CCB Clear Creek Bu 73.35 27 P **P** 09 27 25.0 -0.4
KVT Kavak 73.36 308 P **P** 09 27 27.4 +1.4
POKR Poker Plat Res 73.42 26 P **P** 09 27 27.4 +1.5
baz=280
POKR Poker Plat Res 73.42 26 P **P** 09 27 27.0 +1.2
POKR IAmb IAmb 09 27 27.9
comp=Z,14nm,0.8s
SML Sawmill 73.62 30 P **P** 09 27 26.7 -0.5
SML IAmb IAmb 09 27 32.5
comp=Z,47nm,1.2s
KNK Knik Glacier 73.64 30 P **P** 09 27 26.8 -0.4
ARCES ARCESS Array B 73.65 339 P **P** 09 27 26.1 -1.0
comp=Z,11nm,1.0s,baz=23,slow=6.6,SNR=6.1
SGF Sodankyl 73.70 336 P **P** 09 27 27.5 +0.1
SGF pmax pmax
comp=Z,41nm,1.9s
IL31 73.71 26 P **P** 09 27 26.0 -1.5
ILAR Eielson Array 73.71 26 P **P** 09 27 26.3 -1.3
comp=Z,5.2nm,0.8s,baz=283,slow=5.9,SNR=14
HDA Harding Lake 73.76 27 P **P** 09 27 27.0 -0.8
baz=281
HDA Harding Lake 73.76 27 P **P** 09 27 26.3 -1.6
DHY Denali Highway 73.82 28 P **P** 09 27 26.9 -1.5
SPA0 Spitsbergen Ar 73.93 348 P **P** 09 27 28.7 +0.1
SPA0 IAmb IAmb 09 27 42.0
comp=Z,43nm,1.2s
SPITS Spitsbergen Ar 73.93 348 P **P** 09 27 29.2 +0.6
comp=Z,16nm,0.8s,baz=81,slow=10,SNR=8.5
SCM Sheep Creek Mo 74.09 30 P **P** 09 27 29.4 -0.5
SCM Sheep Creek Mo 74.09 30 P **P** 09 27 29.4 -0.5
BMAR Burnt Mountain 74.10 24 P **P** 09 27 28.8 -1.0
PRP Porcupine Dome 74.13 26 P **P** 09 27 29.8 -0.4
PRP IAmb IAmb 09 27 53.1
comp=Z,40nm,1.8s
OUL Oulu 74.44 334 P **P** 09 27 32.0 +0.3
OUL pmax pmax
comp=Z,29nm,1.3s
M24K Tolsona, Glenn 74.56 29 P **P** 09 27 34.0 +1.3
baz=282
M24K Tolsona, Glenn 74.56 29 P **P** 09 27 33.2 +0.5
PAX Paxson 74.70 28 P **P** 09 27 32.6 -0.9
PAX pmax pmax
comp=Z,55nm,1.9s
PAX Paxson 74.70 28 P **P** 09 27 32.5 -0.9
PAX IAmb IAmb 09 27 54.7
comp=Z,55nm,1.9s
RIDG Independent Ri 74.80 27 P **P** 09 27 33.7 -0.3
RIDG IAmb IAmb 09 27 34.6
comp=Z,32nm,1.0s
KLU Klutina 74.81 30 P **P** 09 27 34.5 +0.3
KLU IAmb IAmb 09 27 37.4
comp=Z,65nm,1.7s
SUF Sumiainen 74.85 332 P **P** 09 27 34.0 -0.2
SUF pmax pmax
comp=Z,31nm,1.6s
EYAK Cordova Ski Ar 75.11 31 P **P** 09 27 34.8 -0.9
SCRK Sand Creek 75.11 27 P **P** 09 27 35.1 -0.8
baz=284
DOT Dot Lake 75.16 27 P **P** 09 27 36.0 0.0
FIA1 FINESS Array S 75.17 330 P **P** 09 27 35.6 -0.5
FIA1 IAmb IAmb 09 27 47.9
comp=Z,38nm,1.1s
FINES FINESS Array B 75.17 330 P **P** 09 27 36.0 -0.1
comp=Z,16nm,1.0s,baz=77,slow=8.4,SNR=8.4
N25K Chitina, Valde 75.41 29 P **P** 09 27 38.4 +0.9
baz=284
N25K Chitina, Valde 75.41 29 P **P** 09 27 38.0 +0.4
N25K IAmb IAmb 09 27 60.0
comp=Z,37nm,1.6s
MENT Mentasta 75.48 28 P **P** 09 27 38.6 +0.7
VSU Vasula 75.54 327 *e* P **P** 09 27 37.9 -0.4
VSU Vasula 75.54 327 *i* P **P** 09 27 36.6 -1.6
L26K Log Cabin Wild 75.62 28 P **P** 09 27 39.5 +0.7
baz=284
GLB Gilahina Butte 75.81 30 P **P** 09 27 39.8 -0.1
GLB IAmb IAmb 09 27 41.2
comp=Z,28nm,1.2s
MICGM Minsk 75.85 323 *e* **P** 09 27 40.0 -0.1
MICGM *e*LR LR 10 01 30.0
MNK Minsk 75.85 323 *e*P **P** 09 27 40.0 -0.1
K27K Chicken 75.92 27 P **P** 09 27 41.4 +1.1
baz=285
K27K Chicken 75.92 27 P **P** 09 27 40.5 +0.2
K27K IAmb IAmb 09 27 42.2
comp=Z,19nm,0.9s
AKASG Malin Array Be 75.95 319 P **P** 09 27 40.2 -0.5
comp=Z,18nm,0.9s,baz=63,slow=5.7,SNR=11
AKASG LR LR 10 04 40.8
comp=Z,640nm,19.5s,baz=55,slow=38
AKASG Malin Array Be 75.95 319 P **P** 09 27 40.0 -0.7
AKASG pmax pmax
comp=Z,12nm,1.1s
AKASG Malin Array Be 75.95 319 P **P** 09 27 40.0 -0.7
AKBB Malin Array Si 75.95 319 P **P** 09 27 39.8 -1.0
AKBB pmax pmax
comp=Z,19nm,0.9s
AKBB Malin Array Si 75.95 319 P **P** 09 27 39.8 -1.0
AKBB IAmb IAmb 09 27 40.9
comp=Z,19nm,0.9s
EGAK Eagle 76.10 26 P **P** 09 27 40.9 -0.5
EGAK IAmb IAmb 09 27 42.2
comp=Z,14nm,0.8s
MCARA McCarthy VSAT 76.19 30 P **P** 09 27 42.8 +0.8
MCARA IAmb IAmb 09 27 44.1
comp=Z,49nm,1.4s
IDID Didziasalis 76.30 324 *e*P **P** 09 27 43.5 +0.9
BCAR Beaver Creek A 76.30 28 P **P** 09 27 43.1 +0.5
IZAR Zarasai 76.46 325 *e*P **P** 09 27 44.9 +1.4
ISAL Salakas 76.57 324 *e*P **P** 09 27 45.1 +0.9
IIGN Ignalina 76.58 324 *e*P **P** 09 27 45.1 +0.9
BARN Barnard Glacie 76.92 30 P **P** 09 27 45.4 -0.9
BARN IAmb IAmb 09 27 47.8
comp=Z,20nm,0.8s
DAWY Dawson 77.04 26 P **P** 09 27 47.0 +0.3
DAWY IAmb IAmb 09 27 48.0
comp=Z,16nm,0.9s
MDUB Mudurnu 77.08 308 P **P** 09 27 47.4 -0.1
CTGM Chitina Glacie 77.10 30 P **P** 09 27 48.1 +0.9
PABE Paberze 77.77 325 *e*P **P** 09 27 51.5 +0.6
INK Inuvik 77.84 21 P **P** 09 27 50.6 -0.4
comp=Z,12nm,1.1s,baz=288,slow=5.4,SNR=5.7
INK Inuvik 77.84 21 P **P** 09 27 51.0 -0.1
INK pmax pmax
comp=Z,15nm,1.2s
INK Inuvik 77.84 21 P **P** 09 27 51.0 -0.1
CFR Carcaliu 78.04 314 P **P** 09 27 52.8 +0.2
CFR pmax pmax
comp=Z,13nm,1.0s
SUW Suwalki 78.64 323 P **P** 09 27 56.2 +0.4
SUW pmax pmax
comp=Z,105nm,1.2s
SUW Suwalki 78.64 323 P **P** 09 27 56.2 +0.4
VRI Vrincioaia 78.81 315 P **P** 09 27 57.8 +0.9
VRI pmax pmax
comp=Z,30nm,1.5s
ELL Elmali 79.04 305 P **P** 09 27 57.3 -1.2
ELL pmax pmax
comp=Z,64nm,1.0s
ELL Elmali 79.04 305 P **P** 09 27 57.3 -1.2
BURAR Bucovina Array 79.30 317 P **P** 09 27 60.0 +0.3
BUR08 Bucovina Ar. S 79.30 317 P **P** 09 27 59.7 0.0
VOIR 80.06 315 P **P** 09 28 05.7 +1.9
VOIR pmax pmax
comp=Z,5.0nm,1.0s
WHY Whitehorse 80.18 29 P **P** 09 28 05.1 +0.9
KWP Kalwaria Pacla 80.27 319 P **P** 09 28 04.5 -0.3
KWP pmax pmax
comp=Z,39nm,1.0s
KWP Kalwaria Pacla 80.27 319 P **P** 09 28 04.5 -0.3
KWP IAmb IAmb 09 28 06.1
comp=Z,39nm,1.0s
C36M Paulatuk 80.47 19 P **P** 09 28 05.2 -0.2
baz=300
C36M Paulatuk 80.47 19 P **P** 09 28 04.9 -0.5
C36M IAmb IAmb 09 28 06.4
comp=Z,25nm,1.1s
DAG Danmarks Havn 80.91 351 *i* P **P** 09 28 06.3 -1.3
DAG pmax pmax
comp=Z,7.0nm,0.8s
DAG Danmarks Havn 80.91 351 *i* P **P** 09 28 06.3 -1.3
comp=Z,6.9nm,0.8s
DAG Danmarks Havn 80.91 351 *i* P **P** 09 28 06.4 -1.3
DAG IAmb IAmb 09 28 08.2
comp=Z,6.9nm,0.8s
CRVS Cervenica-Dubn 81.28 319 *e*P **P** 09 28 11.0 +0.8
CRVS pmax pmax
comp=Z,39nm,1.4s
CRVS Cervenica-Dubn 81.28 319 *e*P **P** 09 28 11.0 +0.8
ABPO Ambohimpanom 81.35 246 P **P** 09 28 10.7 -0.5
ABPO pmax pmax
comp=Z,22nm,1.0s
ABPO Ambohimpanom 81.35 246 P **P** 09 28 10.7 -0.5
ABPO IAmb IAmb 09 28 12.3
comp=Z,22nm,1.0s
KARP Karpathos 81.51 305 P **P** 09 28 11.6 -0.2
KARP IAmb IAmb 09 28 12.8
comp=Z,34nm,1.0s
NC405 NORSAR Array S 81.81 332 P **P** 09 28 12.2 -0.5
NIE Niedzica 81.82 320 P **P** 09 28 13.5 +0.4
NIE pmax pmax
comp=Z,6.0nm,1.1s
OJC Ojcow 81.85 320 P **P** 09 28 12.8 -0.4
OJC pmax pmax
comp=Z,16nm,0.9s
OJC Ojcow 81.85 320 P **P** 09 28 12.8 -0.4
OJC IAmb IAmb 09 28 14.2
comp=Z,16nm,0.9s
NC303 NORSAR Array S 81.92 332 P **P** 09 28 12.8 -0.5
NB201 NORSAR Array S 82.03 332 P **P** 09 28 12.4 -1.5
NB2 NORSAR Subarra 82.06 332 P **P** 09 28 13.0 -1.1
comp=Z,2.3nm,0.8s,baz=65,slow=5.3
NOA NORSAR Array B 82.06 332 P **P** 09 28 13.2 -1.0
comp=Z,13nm,1.1s,baz=65,slow=5.3,SNR=7.0
DBG Daneborg 83.10 350 *i* P **P** 09 28 18.4 -0.9
DBG IAmb IAmb 09 28 19.6
comp=Z,8.9nm,0.9s
GRG Griva 83.33 311 P **P** 09 28 20.1 -1.0
GRG pmax pmax
comp=Z,10.0nm,1.4s
DLBC Dease Lake 83.35 30 P **P** 09 28 21.4 +0.5
DLBC IAmb IAmb 09 28 34.5
comp=Z,49nm,1.8s
MORC Moravsky Berou 83.36 320 *e*P **P** 09 28 20.8 -0.3
RES Resolute Bay 83.41 9 P **P** 09 28 21.1 +0.3
RES pmax pmax
comp=Z,19nm,1.0s
RES Resolute Bay 83.41 9 P **P** 09 28 21.1 +0.3
RES IAmb IAmb 09 28 21.7
comp=Z,19nm,0.9s
JAVC Velka Javorina 83.63 320 *e*P **P** 09 28 24.1 +1.6
KRLC Kraliky 83.70 321 *e*P **P** 09 28 23.1 +0.2
KRLC Kraliky 83.70 321 *e*P **P** 09 28 23.1 +0.2
OSTC Ostas 83.85 322 AMS AMS 10 08 40.0
comp=Z,800nm,14.7s
CHVC Chvalec 83.93 322 AMS AMS 10 08 40.0
comp=Z,800nm,14.8s
KMBO Kilima Mbogo 83.96 267 P **P** 09 28 26.9 +1.8
comp=Z,1.3nm,0.3s,baz=29,slow=10,SNR=3.6
KMBO LR LR 10 01 39.7
comp=Z,133nm,21.5s,baz=91,slow=33
UPC Upice 83.99 322 *ex* x 09 38 39.2
UPC AMS AMS 10 09 00.0
comp=Z,900nm,14.1s
VRAC Vranov 84.11 320 *e*P **P** 09 28 25.4 +0.5
KRUC Moravsky 84.33 320 *e*P **P** 09 28 26.3 +0.3
TREC Trest 84.79 321 AMS AMS 10 10 20.0
comp=Z,600nm,17.5s
BRG Berggiesshubel 85.04 322 *i* P **P** 09 28 29.9 +0.3
comp=Z,20nm,1.3s
BRG *e* 09 28 41.1
comp=Z,18nm,1.4s
BRG Berggiesshubel 85.04 322 *i* P **P** 09 28 29.9 +0.3
BRG *e* 09 28 41.1
BRG pmax pmax
comp=Z,10.0nm,1.3s
PRU Pruhonice 85.06 321 *e*P **P** 09 28 30.0 +0.3
PRU MLR MLR
comp=Z,600nm,14.0s
PRU Pruhonice 85.06 321 *e*P **P** 09 28 30.0 +0.3
PRU *ex* x 09 37 43.9
PRU AMS AMS 10 10 20.0
comp=Z,600nm,14.1s
PRA Prague 85.09 322 AMS AMS 10 09 30.0
comp=Z,300nm,15.7s
CLL Collm 85.40 323 *e*P **P** 09 28 31.0 -0.3
comp=Z,12nm,1.3s
CLL *i* 09 28 41.5
comp=Z,26nm,1.6s
CLL *e*S **S** 09 38 57.0 -4.0
CLL *e*PS **PnS** 09 39 55.0 -3.3
CLL *e*SS SS 09 44 48.0 +13
CLL *e*SSS SSS 09 47 54.0
CLL Collm 85.40 323 *e*P **P** 09 28 31.0 -0.3
CLL *i* 09 28 41.5
CLL *e*S **S** 09 38 57.0 -4.0
CLL pmax pmax
comp=Z,12nm,1.3s
KHC Kasperske Hory 85.99 321 *e*P **P** 09 28 34.0 -0.4
KHC MLR MLR
comp=Z,700nm,19.8s
KHC Kasperske Hory 85.99 321 *e*P **P** 09 28 34.0 -0.4
KHC AMS AMS 10 08 50.0
comp=Z,700nm,19.8s
GERES GERESS Array B 86.04 321 P **P** 09 28 34.2 -0.5
comp=Z,4.1nm,0.9s,baz=61,slow=6.3,SNR=8.0
SUMG Summit 87.10 354 *i* P **P** 09 28 39.7 -0.1
SUMG pmax pmax
comp=Z,45nm,1.3s
SUMG Summit 87.10 354 P **P** 09 28 39.9 0.0
SUMG Summit 87.10 354 *i* P **P** 09 28 39.7 -0.1
comp=Z,45nm,1.3s
SUMG Summit 87.10 354 *i* P **P** 09 28 39.7 -0.1
SUMG IAmb IAmb 09 28 41.2
comp=Z,45nm,1.3s
YKA Yellowknife Ar 87.57 22 P **P** 09 28 41.6 -0.1
comp=Z,11nm,0.9s,baz=316,slow=5.1,SNR=7.4
ICESG Greenland Ices 90.54 353 *e*P **P** 09 28 56.4 +0.3
BNI Bardonecchia 92.06 320 P **P** 09 29 02.7 -0.6
BNI pmax pmax
comp=Z,20nm,1.3s
D03D Eldon 92.37 37 P **P** 09 29 06.1 +1.6
baz=302
B08A Colville Reser 94.01 35 P **P** 09 29 12.6 +0.4
B08A IAmb IAmb 09 29 35.3
comp=Z,34nm,1.9s
NEW Newport 95.26 34 P **P** 09 29 18.4 +0.6
comp=Z,4.0nm,1.1s,baz=253,slow=5.8,SNR=3.9
NEW Newport 95.26 34 P **P** 09 29 18.7 +0.8
NEW pmax pmax
comp=Z,5.0nm,1.1s
NEW Newport 95.26 34 P **P** 09 29 18.7 +0.8
PINE Pine Mountain 95.67 40 P **P** 09 29 21.3 +1.2
PINE IAmb IAmb 09 29 22.9
comp=Z,12nm,1.1s
PPT2 Papeete2 95.69 107 *e*LR LR 10 00 19.0
comp=Z,737nm,24.2s
L04D Klamath Falls 95.69 42 P **P** 09 29 20.6 +0.5
baz=303
YBH Yreka Blue Hor 95.69 42 P **P** 09 29 20.9 +0.8
comp=Z,3.5nm,1.0s,baz=291,slow=3.6,SNR=5.8
YBH Yreka Blue Hor 95.69 42 P **P** 09 29 19.5 -0.6
YBH pmax pmax
comp=Z,12nm,1.5s
YBH Yreka Blue Hor 95.69 42 P **P** 09 29 19.5 -0.6
YBH IAmb IAmb 09 29 22.9
comp=Z,12nm,1.5s
J05D Fort Rock, OR 95.77 40 P **P** 09 29 21.4 +1.0
baz=304
M04C Macdoel 96.22 42 P **P** 09 29 23.4 +0.9
baz=303
K05A Sumner Lake 96.29 41 P **P** 09 29 23.4 +0.5
O02D Mt. Diablo Mer 96.47 44 P **P** 09 29 24.8 +1.2
baz=302
MOD Modoc Plateau 97.11 41 P Pdif 09 29 27.4 +0.7
MOD IAmb IAmb 09 29 28.8
comp=Z,7.0nm,1.0s
TBI Tubuai 97.58 112 *e*SS SS 09 47 35.5 +2.4
comp=Z,408nm,34.2s
TBI Tubuai 97.58 112 *e*LR LR 10 01 03.7
comp=Z,502nm,24.8s
NRS Narsarsuaq 98.86 353 P **P** 09 29 32.8 -0.9
NRS pmax pmax
comp=Z,64nm,1.4s
PAHR Pah Rah Range 98.92 42 P Pdif 09 29 35.2 +0.5
PAHR IAmb IAmb 09 29 36.6
comp=Z,7.7nm,1.1s
PNTR Pine Nut 99.13 43 P **Pdif** 09 29 36.4 +0.7
PNTR IAmb IAmb 09 29 38.6
comp=Z,8.5nm,1.2s
HLID Hailey 99.63 37 P **Pdif** 09 29 39.3 +1.4
baz=309
VNDA Vanda 99.75 172 P **Pdif** 09 29 38.0 +0.8
comp=Z,1.6nm,1.0s,baz=294,slow=4.9,SNR=5.2
NVAR Mina Array Bea 100.33 43 P **Pdif** 09 29 42.6 +1.5
comp=Z,2.8nm,1.1s,baz=287,slow=4.8,SNR=7.7
TAOE Nuku Hiva Isla 101.71 95 *e*LR LR 10 02 58.7
comp=Z,883nm,22.6s
SYO Syowa Base 104.77 202 ‖ *e*P Pdiff pPdif 09 30 04.0 -2.2
TORD Torodi Ar. Bea 111.55 293 PKiKP **PKiKP** 09 34 28.4 -0.9
comp=Z,1.6nm,0.7s,baz=12,slow=2.6,SNR=7.2
TORD Torodi Ar. Bea 111.55 293 **PKiKP** 09 34 28.2 -1.0
TXAR Lajitas Array 115.47 42 PKP **PKPdf** 09 34 36.7 +0.2
comp=Z,1.2nm,0.8s,baz=198,slow=1.0,SNR=9.2
TXAR Lajitas Array 115.47 42 PKIKP **PKiKP** 09 34 36.5 0.0
TXAR Lajitas Array 115.47 42 **PKiKP** 09 34 36.5 0.0
JCT Junction City 117.03 39 PKIKP **PKPdf** 09 34 39.4 -0.1
JCT Junction City 117.03 39 **PKPdf** 09 34 39.4 -0.1
SNAA Sanae 118.56 198 P **PKPdf** 09 34 40.1 -1.0
VNA2 Neumayer--Watz 120.21 197 P **PKPdf** 09 34 42.9 -1.3
DBIC Dimbokro 120.23 290 PKP **PKPdf** 09 34 44.8 -1.1
comp=Z,4.9nm,0.8s,baz=100,slow=6.1,SNR=3.2
VNA3 Neumayer Olymp 120.67 197 P **PKPdf** 09 34 44.5 -0.6
SDV Santo Domingo 149.79 22 **PKPbc** 09 35 44.0 -1.0
ROSC El Rosal 151.81 33 PKPbc **PKiKP** 09 35 50.9 +0.4
comp=Z,23nm,0.6s,baz=36,slow=5.2,SNR=7.5
ROSC El Rosal 151.81 33 **PKPbc** 09 35 50.0 -0.1
PLCA Paso Flores 156.80 158 PKPbc PKPdf 09 35 59.1 +10
comp=Z,2.7nm,0.7s,baz=242,slow=2.1,SNR=4.7
LC01 Cunco 157.89 154 PKPdf **PKPdf** 09 35 49.8 -1.1
LC01 **PKPab** 09 36 23.7 0.0
BO02 Sierra Bellavi 161.77 149 PKPdf **PKPdf** 09 35 54.4 -1.1
BO02 PKPab **PKPab** 09 36 39.9 -0.9
CO02 Combarbal 164.40 141 **PKPdf** 09 35 57.7 -0.4
CO02 PKPab **PKPab** 09 36 53.1 +0.6
CO01 Juntas del Tor 165.82 140 **PKPdf** 09 36 00.0 +0.5
LCO Las Campanas 166.09 135 PKIKP **PKPdf** 09 36 00.0 +0.1
LCO Las Campanas 166.09 135 **PKPdf** 09 35 60.0 +0.1
BDFB Brasilia 168.36 287 PKP **PKPdf** 09 36 00.7 -0.9
comp=Z,1.9nm,0.3s,baz=117,slow=3.0,SNR=4.4
BDFB Brasilia 168.36 287 PKIKP **PKPdf** 09 36 00.3 -1.3
BDFB Brasilia 168.36 287 **PKPdf** 09 36 00.3 -1.3
AC02 Maricunga 168.54 132 **PKPdf** 09 36 02.7 +0.7
SAML Samuel 168.97 19 PKIKP **PKPdf** 09 36 00.6 -1.4
SAML Samuel 168.97 19 **PKPdf** 09 36 00.6 -1.4
GO02 Mina Guanaco 169.12 123 **PKPdf** 09 36 00.2 -1.9
PB07 IPOC Station P 170.06 105 **PKPdf** 09 36 04.1 +1.5
PB11 IPOC Station P 170.47 93 **PKPdf** 09 36 03.6 +0.7
MNMC Minye Minye 170.51 90 **PKPdf** 09 36 04.2 +1.1
PB16 IPOC Station P 170.51 85 **PKPdf** 09 36 03.6 +0.2
LPAZ La Paz 171.24 70 PKP **PKPdf** 09 36 05.1 +1.2
comp=Z,6.8nm,1.1s,baz=48,slow=4.0,SNR=11
LPAZ PKPab **PKPab** 09 37 23.2 -0.7
comp=Z,2.1nm,0.6s,baz=293,slow=2.4,SNR=7.5
LPAZ La Paz 171.24 70 PKIKP **PKPdf** 09 36 04.2 +0.2
LPAZ La Paz 171.24 70 **PKPdf** 09 36 04.2 +0.2

SOME 18 09:22:48.6, 42.87N × 80.98E, h10km,
Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**0.74**	**322**	*e*P		Pg		09 23 03.1	+0.2
	19nm,0.2s								
KTMS				*e*S		Sb		09 23 13.6	-0.3
	111nm,0.2s								
SHLS	**Shalkode**	**1.15**	**285**	*e*P		Pb		09 23 05.2	-5.5
	16nm,0.2s								
SHLS				*e*S		Sg		09 23 17.1	-8.7
	26nm,0.5s								
UZB	**Uzynbulak**	**1.47**	**282**	*e*P		Pn		09 23 15.5	+0.3
	5.1nm,0.2s								
UZB				*e*S		Sb		09 23 34.9	+0.1
	26nm,0.1s								
KPKS	**Kokpek**	**1.79**	**290**	*e*P		Pb		09 23 21.2	-0.3
	26nm,0.2s								
KPKS				*e*S		Sb		09 23 44.7	+0.8
	22nm,0.2s								
ZHN	**Zhinishke**	**1.89**	**280**	*e*P		Pb		09 23 23.7	+0.3
	29nm,0.2s								
ZHN				*e*S		Sg		09 23 48.9	-0.5
	11nm,0.2s								
SATY	**Saty**	**1.90**	**277**	*e*P		Pb		09 23 23.5	+0.1
	5.6nm,0.2s								
KURS	**Kuram**	**2.15**	**288**	*e*P		Pb		09 23 28.2	+0.6
	7.1nm,0.7s								
KURS				*e*S		Sg		09 23 56.7	-0.9
	16nm,1.2s								
MNBS	**Baschi**	**2.24**	**304**	*e*P		Pb		09 23 29.0	-0.1
	7.2nm,0.2s								
MNBS				*e*S		Sb		09 23 58.2	+1.2
	19nm,0.3s								

*IDC **18** 09:35:25.4±0.7, 64.58N × 17.71W, h0km, mb3.9/12, mb1 4.2/13, mb1mx3.9/42, mbtmp3.9/13, ML4.1/1, Error ellipse: s-maj=21.2km s-min=13.5km az=23.0*
*REY **18** 09:35:25.1, 64.68N × 17.46W, h8km*
*NEIC **18** 09:35:26.0±1.3, 64.55N±0.09×17.6W±0.1, h7km±4km, mb4.5/21, Error ellipse: s-maj=12.7km s-min=8.6km az=197.0*

ISC 18 09:35:26.3±0.4, 64.68N±0.02×17.46W±0.02, h10km, n86,
σ2.503/99, mb4.2/23, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**20**	P		Pg		**09 35 28.1**	**-1.2**
	baz=19								
IDYN				S		**Sg**		**09 35 30.6**	**-0.8**
	baz=19								
IVON	**Vonarskard**	**0.13**	**268**	P		Pg		09 35 27.9	-1.5
	baz=269								
IVON				S		**Sg**		**09 35 29.7**	**-1.8**
	baz=269								
IHAM	**Hamarinn**	**0.25**	**218**	P		Pg		09 35 30.4	-1.1
	baz=219								
IGRF	**Grimsfjall**	**0.28**	**163**	P		Pg		09 35 30.9	-1.3
	baz=163								
IKVE	**Kverkfjoll**	**0.34**	**90**	P		Pg		09 35 31.5	-1.6
	baz=89								
ISKR	**Skrokkalda**	**0.41**	**254**	P		Pg		09 35 32.8	-1.7
	baz=254								
IVOT	**Vottur**	**0.43**	**163**	P		Pg		09 35 33.0	-1.7
	baz=164								
IKRE	**Kreppuhraun**	**0.47**	**77**	P		Pg		09 35 33.8	-1.8
	baz=76								
IKRE				S		**Sg**		**09 35 40.6**	**-1.3**
	baz=76								
IJOK	**Jokulheimar**	**0.49**	**223**	P		Pg		09 35 34.3	-1.6
	baz=223								
IMKO	**Mokollar**	**0.57**	**57**	P		Pg		09 35 35.6	-1.7
	baz=57								
IMKO				S		**Sg**		**09 35 43.5**	**-1.2**
	baz=57								
IIEY	**Innrieyrar**	**0.65**	**206**	P		Pg		09 35 36.7	-2.2
	baz=207								
ISVA	**Svartarkot**	**0.67**	**7**	P		Pg		09 35 37.3	-2.0
	baz=7.3								
IKSK	**Karasker**	**0.67**	**140**	P		Pg		09 35 36.5	-2.9
	baz=140								
IKAL	**Kalfafell**	**0.74**	**188**	P		Pg		09 35 38.2	-2.3
	baz=188								
IVSH	**V-Sauoahnukur**	**0.76**	**79**	P		Pg		09 35 38.4	-2.5
	baz=79								
IVSH				S		**Sg**		**09 35 48.7**	**-2.0**
	baz=79								
IVAT	**Vatnsfell**	**0.80**	**233**	P		Pg		09 35 39.4	-2.4
	baz=233								
IADA	**Aoalbol**	**0.88**	**66**	P		Pg		09 35 40.4	-2.8
	baz=66								
IADA				S		**Sg**		**09 35 52.3**	**-2.2**
	baz=66								
IFAG	**Fagurholsmyri**	**0.88**	**156**	P		Pg		09 35 40.4	-2.9
	baz=156								
IHVE	**Hveravellir**	**0.92**	**283**	P		Pg		09 35 41.0	-3.0
	baz=283								
IHVE				S		**Sg**		**09 35 53.9**	**-2.2**
	baz=283								
IMEL	**Melhnausar**	**0.96**	**20**	P		Pg		09 35 42.0	-2.8
	baz=20								
IREN	**Reynihlio**	**1.00**	**13**	P		Pg		09 35 42.7	-2.8

baz=13
IKVO Krokottuvotn 1.07 13 P Pg 09 35 43.6 -3.2
baz=13
ISNB Snabyli 1.07 209 P Pg 09 35 43.8 -3.1
baz=209
IGRS Grimsstaoir 1.12 30 P Pb 09 35 44.5 -3.2
baz=30
ISLY Slysaalda 1.12 221 P Pb 09 35 44.8 -3.0
baz=221
IFED Fedgar 1.17 237 P Pb 09 35 45.9 -2.7
baz=237
IRJU Rjupnafell 1.19 207 P Pb 09 35 46.0 -2.9
baz=207
ISKI Skildingahlsh 1.21 9 P Pn 09 35 46.2 -3.1
baz=8.4
ISKI S Sb 09 36 03.4 -1.6
baz=8.4
IGHA Grjothals 1.22 16 P Pn 09 35 46.2 -3.2
baz=16
IMJO Mjoaskard 1.22 233 P Pn 09 35 46.6 -2.8
baz=233
IGRA Granastaoir 1.25 358 P Pn 09 35 46.6 -3.1
baz=358
IGRA S Sb 09 36 03.8 -2.2
baz=358
IHVO Lagu-Hvolar 1.31 208 P Pn 09 35 48.0 -2.6
baz=208
IDIM Dimmadalss 1.31 10 P Pn 09 35 47.7 -3.0
baz=9.5
IHLA Hella 1.33 343 P Pn 09 35 48.2 -2.7
baz=343
IHLA S Sb 09 36 05.8 -2.5
baz=343
IESK Eystri-Skogar 1.45 218 P Pn 09 35 50.0 -2.5
baz=218
IBRE Brettingsstaoi 1.46 353 P Pn 09 35 50.1 -2.6
baz=353
IBRE S Sn 09 36 09.8 -2.1
baz=353
BORG Borgarnes 1.66 274 Pn **Pn 09 35 53.3 -2.1**
25nm,0.3s,baz=101,slow=7.8,SNR=61
BORG Sn **Sb 09 36 16.4 -1.4**
8.9nm,0.3s,baz=26,slow=15,SNR=3.8
BORG Borgarnes 1.66 274 Pn **Pn 09 35 53.8 -1.7**
BORG Sn **Sb 09 36 16.8 -1.1**
SCO Scoresbysund 6.08 346 Pn **Pn 09 36 56.4 +0.3**
SCO Scoresbysund 6.08 346 *e* **Pn 09 36 52.1 -3.9**
baz=158,slow=10
SCO *i* P **Pn 09 36 56.6 +0.6**
SCO *i* S **Sn 09 38 11.6 +6.1**
EKA Eskdalemuir Ar 11.76 136 Pn **Pn 09 38 13.6 -0.2**
baz=325,slow=13,SNR=8.4
DAG Danmarks Havn 12.16 359 *i* P Pn 09 38 23.9 +4.6
4.8nm,1.1s
DAG Danmarks Havn 12.16 359 *i* P Pn 09 38 23.9 +4.6
DAG IAmb IAmb 09 38 27.9
comp=Z,4.8nm,1.1s
NRS Narsarsuaq 13.15 267 Pn **Pn 09 38 34.4 +1.5**
HFS Hagfors 15.03 93 Pn **P 09 39 02.8 -1.1**
comp=Z,0.2nm,0.3s,baz=324,slow=7.3,SNR=9.5
CLL Collm 20.70 116 P Pn 09 40 07.6 -1.0
ECH Echery 21.15 129 P **P 09 40 11.2 0.0**
BRG Berggiesshubel 21.40 115 *eP* **P 09 40 15.1 +1.2**
comp=Z,13nm,1.2s
comp=Z,1μm,10.4s
comp=N,570nm,15.9s
comp=E,760nm,15.9s
KHC Kasperske Hory 22.67 118 P **P 09 40 27.3 -0.2**
GERES GERESS Array B 22.95 119 P **P 09 40 32.3 +1.8**
comp=E,0.3nm,0.3s,baz=316,slow=7.5,SNR=5.7
GERES GERESS Array B 22.95 119 P **P 09 40 30.2 -0.3**
MORC Moravsky Berou 23.69 112 P **P 09 40 38.2 +0.3**
MORC IAmb IAmb 09 40 49.9
comp=Z,22nm,1.9s
KWP Kalwaria Pacla 25.90 106 P **P 09 40 58.0 -0.1**
PSZ Piszkesteto 26.11 112 P **P 09 41 00.2 +0.2**
PSZ IAmb IAmb 09 41 17.8
comp=Z,5.4nm,1.0s
ESDC Sonseca Array 26.26 156 P **P 09 41 02.6 +1.2**
comp=Z,1.6nm,0.9s,baz=343,slow=9.9,SNR=5.9
ESDC Sonseca Array 26.26 156 P **P 09 41 00.3 -1.1**
NRIK Noril'sk 36.44 35 P **P 09 42 32.1 +1.6**
comp=Z,1.2nm,0.4s,baz=354,slow=16,SNR=4.2
BR131 Keskin Array S 38.47 105 P **P 09 42 49.7 +1.5**
BRTR Keskin Array B 38.47 105 P **P 09 42 50.7 +2.5**
KBZ Khabaz 39.10 92 P **P 09 42 56.3 +3.0**
comp=Z,3.8nm,0.9s,baz=236,slow=24,SNR=5.4
INK Inuvik 39.84 329 P **P 09 43 00.5 +1.3**
comp=Z,2.3nm,1.1s,baz=14,slow=9.1,SNR=3.4
AKH Akhalkalaki 41.24 94 P **P 09 43 13.6 +2.3**
ERPA Erie 41.34 268 P **P 09 43 12.0 +0.1**
ABKAR Akbulak array 41.97 73 P **P 09 43 17.6 +0.6**
ABKAR IAmb IAmb 09 44 09.9
comp=Z,8.7nm,1.8s
TIXI Tiksi 42.02 15 P **P 09 43 18.2 +1.2**
TIXI IAmb IAmb 09 43 20.8
comp=Z,5.2nm,0.8s
TOLK Toolik Lake Re 42.74 336 P **P 09 43 24.4 +1.3**
TOLK IAmb IAmb 09 43 26.9
comp=Z,14nm,1.2s
BMAR Burnt Mountain 42.89 333 P **P 09 43 25.8 +1.5**
ILAR Eielson Array 45.68 332 P **P 09 43 48.0 +1.3**
comp=Z,2.2nm,1.1s,baz=24,slow=5.9,SNR=11
ILAR PcP **PcP 09 45 24.9 +0.5**
comp=Z,1.2nm,1.0s,baz=354,slow=2.8,SNR=5.6
BCAR Beaver Creek A 46.11 329 P **P 09 43 51.9 +1.8**
ZAA0 Zalesovo Array 47.61 51 P **P 09 44 03.1 +1.3**
ZAA0 IAmb IAmb 09 44 04.6
comp=Z,11nm,1.8s
ZALV Zalesovo Beam 47.61 51 P **P 09 44 03.2 +1.4**
comp=Z,0.4nm,0.3s,baz=348,slow=6.2,SNR=3.8
ZALV Zalesovo Beam 47.61 51 P **P 09 44 03.5 +1.7**
PCA Pinnacle 48.35 326 P **P 09 44 07.9 +0.3**
KK31 Karatay Array 51.26 70 P **P 09 44 30.9 +1.1**
KK31 IAmb IAmb 09 44 34.7
comp=Z,7.7nm,1.5s
KKAR Karatay Array 51.26 70 P **P 09 44 30.7 +0.8**
TORD Torodi Ar. Bea 53.15 156 P **P 09 44 42.9 -1.2**
comp=Z,2.3nm,1.1s,baz=338,slow=7.3,SNR=6.0
TORD Torodi Ar. Bea 53.15 156 P **P 09 44 43.5 -0.6**
PD31 Pinedale Array 53.19 293 P **P 09 44 44.4 0.0**
PD31 IAmb IAmb 09 44 47.3
comp=Z,9.0nm,1.4s
PDAR Pinedale Array 53.19 293 P **P 09 44 44.8 +0.3**
comp=Z,2.2nm,1.0s,baz=61,slow=7.0,SNR=10
PDAR Pinedale Array 53.19 293 P **P 09 44 44.1 -0.3**
AAK Ala-Archa 53.24 67 P **P 09 44 45.9 +1.1**
AAK IAmb IAmb 09 44 47.5
comp=Z,10nm,1.6s
E08A Dider Farm, El 53.63 303 P **P 09 44 47.2 -0.2**
E08A IAmb IAmb 09 45 38.9
comp=Z,4.4nm,0.7s
BTK Batken 53.94 72 P **P 09 44 50.0 +0.2**
BTK IAmb IAmb 09 44 54.9
comp=Z,8.7nm,0.9s
SONM Songino Array 59.62 40 P **P 09 45 31.3 +1.2**
comp=Z,0.3nm,0.6s,baz=322,slow=9.4,SNR=3.6
TXAR Lajitas Array 62.30 280 P **P 09 45 49.5 +1.0**
comp=Z,1.3nm,1.0s,baz=49,slow=5.7,SNR=5.6
CMAR Chiang Mai Arr 84.11 59 P **P 09 47 57.4 +0.1**
comp=Z,1.1nm,0.3s,baz=318,slow=6.2,SNR=5.9

*IDC **18** 09:44:07.2±2.0, 19.°65N×121.°02E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/48, mbtmp3.7/6, Error ellipse: s-maj=210.9km s-min=18.1km az=62.0*
ISC 18 09:44:11.9±2.0, 19.°7N±0.°7×121.°1E±.°, h32km, n6, σ0§69/6, mb3.7/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.47**	**161**	P	**P**	**09 51 55.1**	**-0.9**
	0.7nm,0.6s,baz=342,slow=8.9,SNR=17						
MKAR	**Makanchi Array**	**41.57**	**320**	P	**P**	**09 51 56.8**	**+0.1**
	0.6nm,0.6s,baz=126,slow=9.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**44.00**	**330**	P	**P**	**09 52 16.1**	**-0.1**
	0.7nm,0.4s,baz=108,slow=9.3,SNR=3.6						
ASAR	**Alice Springs**	**44.86**	**163**	P	**P**	**09 52 23.4**	**-0.1**
	0.5nm,0.6s,baz=337,slow=6.9,SNR=10						
KURBB	**Kurchatov Arra**	**45.54**	**323**	P	**P**	**09 52 28.4**	**-0.1**
	1.0nm,0.6s,baz=124,slow=8.1,SNR=4.8						
STKA	**Stephens Creek**	**54.91**	**159**	P	**P**	**09 53 40.4**	**+0.7**
	1.2nm,0.8s,baz=326,slow=16,SNR=3.2						

*IDC **18** 09:50:59.1±1.1, 1.°90N×126.°75E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.5/41, mbtmp3.6/8, ML3.3/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/41, Error ellipse: s-maj=91.5km s-min=16.2km az=69.0*
*DJA **18** 09:50:59.1±0.5, 2.°N±.5°×12.°7E±.°, h10km, M3.5/4, MLv3.5/4*
ISC 18 09:51:06.9±1.0, 1.°9N±0.°2×126.°9E±0.°5, h63km, n10, σ1§01/9, mb3.7/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.19**	**158**	P	**Pn**	**09 51 27.1**	**-0.4**
SIJI	**Sorong**	**5.14**	**122**	LR	LR	09 54 44.3	
	comp=Z,259nm,19.6s,baz=276,slow=43						
FITZ	**Fitzroy Crossi**	**19.89**	**184**	P	**P**	**09 55 32.4**	**-0.9**
	0.1nm,0.3s,baz=354,slow=9.2,SNR=2.3						
WRA	**Warramunga Arr**	**22.88**	**162**	P	**P**	**09 56 03.9**	**-1.4**
	1.7nm,0.5s,baz=340,slow=11,SNR=24						
ASAR	**Alice Springs**	**26.29**	**165**	P	**P**	**09 56 38.1**	**+1.4**
	0.4nm,0.5s,baz=352,slow=14,SNR=8.1						
STKA	**Stephens Creek**	**36.35**	**159**	P	**P**	**09 58 05.8**	**+0.8**
	0.5nm,0.4s,baz=341,slow=12,SNR=2.7						
SONM	**Songino Array**	**49.10**	**342**	P	**P**	**09 59 47.9**	**-0.2**
	0.3nm,0.6s,baz=140,slow=7.4,SNR=1.7						
MKAR	**Makanchi Array**	**59.17**	**326**	P	**P**	**10 01 01.0**	**-0.4**
	0.3nm,0.5s,baz=128,slow=6.5,SNR=3.5						
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	**P**	**10 01 29.6**	**0.0**
	0.6nm,0.4s,baz=128,slow=6.3,SNR=2.1						
AKTO	**Aktyubinsk**	**75.22**	**322**	P	**P**	**10 02 43.0**	**+0.2**
	0.9nm,0.6s,baz=85,slow=11,SNR=5.1						

*IDC **18** 09:51:34.4±0.9, 19.°50N×120.°58E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.7/46, mbtmp3.9/11, MS3.4/1, Ms1 3.4/1, ms1mx2.7/52, Error ellipse: s-maj=52.9km s-min=14.4km az=64.0*
*NEIC **18** 09:51:35.1±1.3, 19.°52N±0.°04×120.°4E±0.°1, h10km±1km, mb4.4/9, Error ellipse: s-maj=18.4km s-min=4.9km az=254.0*
ISC 18 09:51:37.4±0.7, 19.°50N±0.°07×120.°4E±0.°1, h23km, n31, σ1§03/31, mb4.0/14, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.36**	**11**	Pn	**Pn**	**09 52 27.2**	**-1.3**
TPUB	**Ta-pu**	**3.79**	**3**	Pn	**Pn**	**09 52 33.0**	**-1.4**
TPUB				Sn	**Sn**	**09 53 17.6**	**-0.7**
YULB	**Yu-li**	**3.96**	**12**	Pn	**Pn**	**09 52 36.4**	**-0.4**
YULB				Sn	**Sn**	**09 53 22.1**	**-0.4**
SSLB	**Suanglung**	**4.30**	**7**	Pn	**Pn**	**09 52 40.9**	**-0.6**
NACB	**Ninganchiao**	**4.78**	**13**	Pn	**Pn**	**09 52 47.4**	**-0.6**
YHNB	**Yeheng**	**5.22**	**10**	Pn	**Pn**	**09 52 54.5**	**+0.4**
HKPS	**Hong Kong Po S**	**6.47**	**296**	Pn	**Pn**	**09 53 10.0**	**-1.3**
DAV	**Davao City (W)**	**13.34**	**157**	LR	LR	10 00 29.1	
	comp=Z,163nm,21.2s,baz=14,slow=40						
XAN	**Xi'an**	**17.72**	**327**	P	**Pn**	**09 55 41.4**	**-1.3**
CMAR	**Chiang Mai Arr**	**20.32**	**271**	P	Pn	09 56 14.5	+0.3
	0.8nm,0.3s,baz=79,slow=9.5,SNR=4.6						
SONM	**Songino Array**	**30.47**	**341**	P	**P**	**09 57 49.5**	**+0.9**
	0.6nm,0.7s,baz=157,slow=10,SNR=4.0						
FITZ	**Fitzroy Crossi**	**37.72**	**172**	P	**P**	**09 58 51.4**	**-0.1**
	1.7nm,0.8s,baz=357,slow=4.6,SNR=4.2						
MK31	**Makanchi Array**	**41.32**	**320**	P	**P**	**09 59 20.9**	**-0.4**
MK31				IAmb	IAmb	10 00 06.5	
	comp=Z,13nm,1.4s						
MKAR	**Makanchi Array**	**41.32**	**320**	P	**P**	**09 59 21.0**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=103,slow=10,SNR=5.1						
MKAR	**Makanchi Array**	**41.32**	**320**	P	**P**	**09 59 20.7**	**-0.6**
WB0	**Warramunga Arr**	**41.36**	**160**	P	**P**	**09 59 20.9**	**-1.0**
WB0				IAmb	IAmb	09 59 38.8	
	comp=Z,6.4nm,1.3s						
WRA	**Warramunga Arr**	**41.51**	**160**	P	**P**	**09 59 22.2**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=342,slow=9.1,SNR=12						
WRA	**Warramunga Arr**	**41.51**	**160**	P	**P**	**09 59 22.4**	**-0.7**
WB2	**Warramunga Arr**	**41.51**	**160**	P	**P**	**09 59 22.5**	**-0.6**
WB2				IAmb	IAmb	10 00 17.8	
	comp=Z,5.6nm,1.2s						
ZAA0	**Zalesovo Array**	**43.85**	**330**	P	**P**	**09 59 40.4**	**-1.3**
ZAA0				IAmb	IAmb	09 59 44.0	
	comp=Z,22nm,1.5s						
ZALV	**Zalesovo Beam**	**43.85**	**330**	P	**P**	**09 59 43.4**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=126,slow=7.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**43.85**	**330**	P	**P**	**09 59 41.1**	**-0.6**
AS31	**Alice Springs**	**44.88**	**162**	P	**P**	**09 59 50.4**	**+0.1**
ASAR	**Alice Springs**	**44.88**	**162**	P	**P**	**09 59 50.6**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=342,slow=6.8,SNR=13						
KURBB	**Kurchatov Arra**	**45.31**	**323**	P	**P**	**09 59 55.1**	**+1.7**
	comp=Z,2.6nm,0.7s,baz=120,slow=7.7,SNR=5.9						
BBOO	**Buckleboo**	**54.13**	**164**	P	**P**	**10 01 01.6**	**+0.9**
STKA	**Stephens Creek**	**54.98**	**158**	P	**P**	**10 01 07.8**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=326,slow=18,SNR=3.1						
SANVU	**Saraoutou**	**57.66**	**124**	P	**P**	**10 01 24.4**	**-1.9**
AKTO	**Aktyubinsk**	**57.68**	**318**	P	**P**	**10 01 27.4**	**+1.5**
	comp=Z,0.5nm,0.4s,baz=117,slow=6.8,SNR=2.6						
BMAR	**Burnt Mountain**	**74.08**	**24**	P	**P**	**10 03 11.9**	**+0.5**
FINES	**FINESS Array B**	**75.12**	**330**	P	**P**	**10 03 18.5**	**+1.1**
	comp=Z,2.8nm,1.0s,baz=111,slow=11,SNR=2.7						

IDC 18 09:57:15.3±464.0, 54.°63N×41.°63E, h0km, Error ellipse: s-maj=171.5km s-min=73.1km az=135.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.26**	**312**	*i*		10 17 00.0	
	baz=128,slow=332,SNR=1.4						
I31KZ	**AKTYUBINSK INF**	**10.85**	**106**	*i*		11 02 30.0	
	baz=303,slow=324,SNR=1.2						
I37NO	**I37NO**	**17.91**	**333**	*i*		11 58 10.0	
	baz=134,slow=326,SNR=0.7						

*IDC **18** 10:13:03.5±8.1, 16.°75S×173.°59W, h0km, mb4.4/5, mb1 4.5/6, mb1mx3.9/47, mbtmp4.4/6, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/40, Error ellipse: s-maj=159.8km s-min=129.0km az=115.0*
*NEIC **18** 10:14:04.2±0.9, 17.°7S±0.°1×176.°69W±0.°09, h359km±13km, mb4.1/13, Error ellipse: s-maj=16.3km s-min=10.3km az=207.0*
ISC 18 10:14:03.9±0.8, 17.°7S±0.°1×176.°8W±0.°1, h350km, n25, σ0§80/24, mb3.9/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.96**	**268**		**Pn**	**10 15 24.9**	**+1.7**
AFI	**Afiamalu**	**6.06**	**53**	Pn	**Pn**	**10 15 35.0**	**-0.5**
NIUE	**Niue**	**6.63**	**103**	Pn	**Pn**	**10 15 42.0**	**0.0**
RAR	**Rarotonga**	**16.40**	**105**	LR	LR	10 19 25.5	
	comp=Z,55nm,21.6s,baz=124,slow=28						
DZM	**Mont Dzumac**	**16.41**	**252**	P	**P**	**10 17 33.6**	**-0.4**
	0.3nm,0.3s,baz=90,slow=20,SNR=4.7						
OUZ	**Omahuta**	**19.50**	**204**	P	**P**	**10 18 06.4**	**-0.2**
OUZ				IAmb	IAmb	10 18 34.5	
	comp=Z,30nm,1.3s						
ARMA	**Armidale**	**31.44**	**240**	P	**P**	**10 19 54.1**	**0.0**
ARMA				IAmb	IAmb	10 20 16.4	
	comp=Z,17nm,1.3s						
JOHN	**Johnston Islan**	**34.90**	**12**	P	**P**	**10 20 24.4**	**+0.8**
CTA	**Charters Tower**	**35.05**	**260**	P	**P**	**10 20 25.2**	**+0.1**
	comp=Z,2.2nm,0.4s,baz=90,slow=12,SNR=5.4						
CTA	**Charters Tower**	**35.05**	**260**	P	**P**	**10 20 25.2**	**+0.1**
CTAO	**Charters Tower**	**35.05**	**260**	P	**P**	**10 20 25.1**	**0.0**
CTAO				IAmb	IAmb	10 20 25.5	
	comp=Z,5.3nm,0.8s						
TOO	**Toolangi**	**38.56**	**231**	P	**P**	**10 20 54.3**	**0.0**
TOO				IAmb	IAmb	10 21 12.1	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**40.14**	**241**	P	**P**	**10 21 07.1**	**-0.1**
	comp=Z,3.3nm,0.5s,baz=95,slow=9.5,SNR=11						
STKA	**Stephens Creek**	**40.14**	**241**	P	**P**	**10 21 07.1**	**-0.1**
BBOO	**Buckleboo**	**44.92**	**241**	P	**P**	**10 21 44.6**	**-0.7**
BBOO				IAmb	IAmb	10 22 10.1	
	comp=Z,11nm,1.3s						
WRA	**Warramunga Arr**	**46.24**	**259**	P	**P**	**10 21 53.8**	**-1.9**
	comp=Z,1.6nm,0.5s,baz=96,slow=6.7,SNR=19						
WRA	**Warramunga Arr**	**46.24**	**259**	P	**P**	**10 21 54.5**	**-1.2**
AS31	**Alice Springs**	**46.38**	**254**	P	**P**	**10 21 56.5**	**-0.3**
ASAR	**Alice Springs**	**46.39**	**254**	P	**P**	**10 21 55.4**	**-1.4**
	comp=Z,14nm,0.6s,baz=89,slow=8.7,SNR=157						
ASAR	**Alice Springs**	**46.39**	**254**	P	**P**	**10 21 55.8**	**-1.0**
KNRA	**Kununurra**	**52.09**	**264**	P	**P**	**10 22 39.6**	**0.0**
FITZ	**Fitzroy Crossi**	**54.63**	**260**	P	**P**	**10 22 58.1**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=112,slow=8.9,SNR=8.5						
FITZ	**Fitzroy Crossi**	**54.63**	**260**	P	**P**	**10 22 58.4**	**+0.5**
JNU	**Nakatsue**	**71.06**	**315**	P	**P**	**10 24 44.4**	**-0.6**
QSPA	**South Pole Qui**	**72.41**	**180**	P	**P**	**10 24 53.1**	**+0.6**
QSPA				IAmb	IAmb	10 25 01.4	
	comp=Z,5.7nm,1.5s						

*IDC **18** 10:16:14.0±1.8, 1.°65N×126.°22E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.5/54, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=117.0km s-min=23.9km az=69.0*
*DJA **18** 10:16:19.1±1.7, 2.°N±.5°×12.°7E±.°, h33km±28km, M3.8/5, MLv3.8/5*
ISC 18 10:16:19.5±1.0, 1.°8N±0.°2×126.°4E±0.°2, h47km, n6, σ1§27/7, mb3.7/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.37**	**135**	P	**Pn**	**10 16 41.4**	**-0.8**
TNTI				S	**Sn**	**10 16 59.4**	**+0.1**
SGSI	**Sangihe**	**2.11**	**336**	P	**Pn**	**10 16 51.3**	**-1.1**
FITZ	**Fitzroy Crossi**	**19.73**	**182**	P	**P**	**10 20 44.0**	**-1.4**
	0.1nm,0.3s,baz=346,slow=8.3,SNR=2.3						
WRA	**Warramunga Arr**	**22.92**	**160**	P	**P**	**10 21 19.2**	**-0.5**
	2.0nm,0.6s,baz=339,slow=11,SNR=22						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**10 26 15.2**	**+0.8**
	0.6nm,0.5s,baz=121,slow=8.9,SNR=12						
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**10 28 32.9**	**+1.4**
	0.3nm,0.5s,baz=302,slow=6.8,SNR=3.0						

*BJI **18** 10:18:40.7±0.0, 20.°57N×121.°40E, h34km, mB4.7/25, mb4.3/39, Ms4.2/20, Ms7.3/9/18*
*JMA **18** 10:18:40.5±0.3, 20.°89N×121.°43E, h0km, M5.3*
*NEIC **18** 10:18:42.2±1.4, 20.°63N±0.°08×121.°43E±0.°09, h36km±7km, mb4.7/68, Error ellipse: s-maj=12.6km s-min=11.3km az=130.0*
*MAN **18** 10:18:44.6, 20.°62N×121.°65E, h52km, mb4.8, ML3.7, MS3.7*
*IDC **18** 10:18:47.0±2.6, 20.°68N×121.°53E, h80km±23km, mb3.9/31, mb1 4.1/33, mb1mx4.0/63, mbtmp4.3/33, MS3.6/11, Ms1 3.6/11, ms1mx3.3/39, Error ellipse: s-maj=15.6km s-min=10.2km az=73.0*
ISC 18 10:18:44.3±0.4, 20.°75N±0.°03×121.°43E±0.°04, h50km, n204, σ1§55/206, mb4.5/73, MS3.6/13, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBP	**Basco**	**0.59**	**121**	*eP*	**Pn**	**10 18 55.4**	**-1.3**
BBP				*eS*	**Sn**	**10 19 05.0**	**-0.4**
TWG	**Pinlang**	**2.09**	**351**		**Pn**	**10 19 14.7**	**-2.2**
YULB	**Yu-li**	**2.63**	**357**		**Pn**	**10 19 24.6**	**+0.2**
TPUB	**Ta-pu**	**2.65**	**344**	Pn	**Pn**	**10 19 23.8**	**-0.7**
APYP	**Conner**	**2.88**	**184**	*eP*	**Pn**	**10 19 28.2**	**+0.6**
APYP				*eS*	**Sn**	**10 20 00.5**	**-0.5**
SSLB	**Suanglung**	**3.06**	**352**		**Pn**	**10 19 30.6**	**+0.5**
NACB	**Ninganchiao**	**3.41**	**3**		**Pn**	**10 19 35.1**	**+0.1**
YHNB	**Yeheng**	**3.90**	**359**	Pn	**Pn**	**10 19 43.4**	**+1.6**
JYNG	**Yonagunijimaku**	**3.94**	**21**	P	**Pn**	**10 19 44.5**	**+2.2**
JYNG				*eS*	**Sn**	**10 20 28.6**	**+1.3**
HATJ	**Hateruma jima**	**3.96**	**33**	P	**Pn**	**10 19 43.2**	**+0.7**
HATJ				S	**Sn**	**10 20 27.4**	**-0.3**
YOJ	**Yonaguni jima**	**3.98**	**21**	P	**Pn**	**10 19 44.5**	**+1.8**
YOJ				*eS*	**Sn**	**10 20 29.7**	**+1.6**
YOJ	**Yonaguni jima**	**3.98**	**21**		**Pn**	**10 19 41.0**	**-1.7**
IRIF	**Iriomote-Funau**	**4.16**	**30**	P	**Pn**	**10 19 46.0**	**+0.8**
IRIF				*eS*	**Sn**	**10 20 33.0**	**+0.5**
TATO	**Taipei**	**4.21**	**1**		**Pn**	**10 19 45.5**	**-0.4**
JKRS	**Kuro-shima**	**4.21**	**34**	P	**Pn**	**10 19 47.0**	**+1.0**
JKRS				*eS*	**Sn**	**10 20 34.5**	**+0.6**
JIJ	**Ishigaki jima**	**4.39**	**34**	P	**Pn**	**10 19 48.5**	**+0.1**
JIJ				*eS*	**Sn**	**10 20 35.7**	**-2.5**
SMPP	**San Manuel, Pa**	**4.63**	**189**	*eP*	**Pn**	**10 19 52.4**	**+0.7**
SMPP				*eS*	**Sn**	**10 20 44.9**	**+0.7**
KNMB	**Chin-men Tao**	**4.64**	**323**	Pn	**Pn**	**10 19 50.5**	**-1.4**
JISG	**Ishigakijimahi**	**4.66**	**34**	P	**Pn**	**10 19 52.2**	**+0.1**
JISG				*eS*	**Sn**	**10 20 43.6**	**-1.2**
JTJ	**Tarama**	**4.91**	**37**	P	**Pn**	**10 19 55.7**	**+0.1**
JTJ				S	**Sn**	**10 20 50.1**	**-1.1**
QZH	**Quanzhou**	**4.93**	**328**	*eP*	**Pn**	**10 19 55.1**	**-0.7**
QZH				S	**Sn**	**10 20 45.4**	**-6.1**
BALP	**Baler**	**4.98**	**178**	*eP*	**Pn**	**10 19 57.7**	**+1.1**
BALP				*eS*	**Sn**	**10 20 52.1**	**-0.8**
JIRB	**Irabujima**	**5.33**	**40**	P	**Pn**	**10 20 01.1**	**-0.2**
JIRB				*eS*	**Sn**	**10 20 59.3**	**-2.2**
JMJ2	**Miyako jima3**	**5.36**	**41**	P	**Pn**	**10 20 02.1**	**+0.4**
JMJ2				S	**Sn**	**10 21 01.9**	**-0.3**
JOGS	**Gusukube**	**5.42**	**42**	*eS*	**Sn**	**10 21 04.6**	**+0.9**
JIKM	**Ikemajima**	**5.45**	**40**	P	**Pn**	**10 20 03.5**	**+0.6**
JIKM				*eS*	**Sn**	**10 21 04.1**	**-0.2**
LQP	**Lukban**	**6.60**	**179**	*eP*	Pn	10 20 12.3	-6.7
JKE	**Kume jima 2**	**7.42**	**40**	P	**Pn**	**10 20 30.3**	**+0.4**
JKE				*eS*	**Sn**	**10 21 53.8**	**+1.1**
JJT3	**Tamagusuku3**	**7.93**	**46**	P	**Pn**	**10 20 37.3**	**+0.3**
JJT3				*eS*	**Sn**	**10 22 02.8**	**-2.5**
JNTH	**Nagotoyohara**	**8.34**	**45**	P	**Pn**	**10 20 41.9**	**-0.7**
JIH	**Iheya**	**8.66**	**42**	P	**Pn**	**10 20 47.8**	**+0.9**
JOW	**Kunigami**	**8.71**	**45**	P	**Pn**	**10 20 47.3**	**-0.4**
JOW				*eS*	**Sn**	**10 22 20.1**	**-4.5**
JMZ	**Minamidaito 2**	**10.32**	**59**	P	**Pn**	**10 21 08.1**	**-1.6**
JMZ	**Minamidaito 2**	**10.32**	**59**	Pn	**Pn**	**10 21 08.5**	**-1.2**
JKDJ	**Kitadaitoujima**	**10.44**	**58**	P	**Pn**	**10 21 09.9**	**-1.4**
QIZ	**Qiongzhong**	**11.03**	**263**	S	**Sn**	**10 23 18.8**	**-2.7**
QIZ	**Qiongzhong**	**11.03**	**263**	Pn	Pn	10 21 14.2	-5.3
QIZ	**Qiongzhong**	**11.03**	**263**	LR	LR		
	comp=Z,490nm,24.0s						
QIZ	**Qiongzhong**	**11.03**	**263**	LR	LR		
	comp=E,380nm,20.1s						
QIZ	**Qiongzhong**	**11.03**	**263**	P	Pn	10 21 25.3	+5.8
NJ2	**Nanjing**	**11.49**	**349**	*eP*	**Pn**	**10 21 27.1**	**+1.4**
NJ2				pmax	pmax		
	comp=E,12nm,0.5s						
DAV	**Davao City (W)**	**14.18**	**163**	LR	LR	10 27 32.4	
	comp=E,240nm,19.3s,baz=16,slow=37						
GYA	**Guiyang**	**14.67**	**296**	⇑P	**P**	**10 22 16.8**	**+2.6**
GYA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
JNU	**Nakatsue**	**14.92**	**32**	P

CM33 Chiang Mai Arr 21.24 269 P P 10 23 28.0 +1.7
CMMT Chiang Mai 21.24 269 P P 10 23 29.0 +2.7
comp=Z,3.0nm,1.0s
CM09 Chiang Mai Arr 21.26 268 P P 10 23 30.4 +3.9
comp=Z,6.0nm,1.2s
CM04 Chiang Mai Arr 21.28 268 P P 10 23 30.1 +3.4
comp=Z,6.6nm,1.0s
CM01 Chiang Mai Arr 21.29 268 P P 10 23 30.0 +3.1
comp=Z,162nmcomp=Z,7.6nm,1.2s
CMAR Chiang Mai Arr 21.30 268 P P 10 23 28.1 +1.1
comp=Z,2.7nm,0.7s,baz=70,slow=9.4,SNR=18
CMAR LR LR 10 32 47.7
comp=Z,136nm,19.0s,baz=130,slow=39
CMAR Chiang Mai Arr 21.30 268 P P 10 23 27.5 +0.6
CM02 Chiang Mai Arr 21.30 268 P P 10 23 30.4 +3.4
comp=Z,6.7nm,1.1s
CM05 Chiang Mai Arr 21.31 268 P P 10 23 30.0 +3.0
comp=Z,4.1nm,1.1s
CM13 Chiang Mai Arr 21.34 268 P P 10 23 30.6 +3.3
MAT Matsushiro 21.50 39 P P 10 23 29.7 +0.8
MAT S S 10 27 27.2 +2.5
MAJO Matsushiro 21.50 39 P P 10 23 29.8 +0.9
MAJO IAmb IAmb 10 23 39.6
comp=Z,32nm,1.2s
MJAR Matsushiro Arr 21.50 39 P P 10 23 31.1 +2.2
comp=Z,3.8nm,0.7s,baz=239,slow=12,SNR=3.7
MJAR Matsushiro Arr 21.50 39 P P 10 23 30.0 +1.1
LZH Lanzhou 21.69 319 *eP* **P 10 23 32.6 +1.5**
LZH pP pwP 10 23 45.1 -0.9
LZH sP sP 10 23 49.6 +1.9
LZH pmax pmax
comp=Z,12nm,1.1s
LZH pmax pmax
comp=Z,72nm,4.3s
LZH LR LR
comp=Z,290nm,11.4s
LZH LR LR
comp=Z,230nm,11.4s
LZH LR LR
comp=Z,200nm,11.4s
HHC Hu-ho-hao-te 21.73 339 *eP* **P 10 23 31.8 +0.4**
HHC S S 10 27 22.1 -7.0
HHC pmax pmax
comp=Z,9.0nm,0.8s
HHC LR LR
comp=Z,240nm,17.7s
HHC LR LR
comp=Z,200nm,12.8s
HHC LR LR
comp=Z,310nm,15.6s
BTO Baotou 22.05 336 *eP* **P 10 23 36.8 +1.9**
MTKI Muara Teweh, K 22.48 197 P P 10 23 28.5 -11
CN2 Changchun 23.23 7 *eP* **P 10 23 47.6 +0.6**
GUMO Guam 23.48 104 LR LR 10 32 44.0
comp=Z,88nm,19.8s,baz=280,slow=36
TTSI Tana Toraja 23.70 184 P P 10 24 00.7 +9.0
BBKI Banjar Baru 24.91 196 P P **10 24 05.8 +3.0**
comp=Z,15nm,0.7s
USRK Ussuriysk Ar. 24.98 18 P P **10 24 03.3 +0.1**
comp=Z,2.9nm,0.9s,baz=196,slow=8.9,SNR=4.1
USRK LR LR 10 33 53.6
comp=Z,99nm,19.7s,baz=207,slow=36
USRK Ussuriysk Ar. 24.98 18 P P **10 24 03.8 +0.7**
KAPI Kappang 25.65 184 LR LR 10 35 15.8
comp=Z,68nm,18.5s,baz=18,slow=39
GTA Gaotai 26.26 320 ⇑P P **10 24 16.1 +1.1**
GTA pP pwP 10 24 30.3 -1.2
GTA sP sP 10 24 35.5 +3.2
GTA PcP PcP **10 27 41.3 +0.8**
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,74nm,5.1s
GTA LR LR
comp=Z,95nm,11.3s
GTA LR LR
comp=Z,96nm,12.7s
GTA LR LR
comp=Z,100nm,12.7s
ASAJ Asahikawa 29.20 32 P P **10 24 41.6 +0.6**
comp=Z,4.9nm,0.7s,baz=210,slow=8.0,SNR=3.8
EDFI Ende, Flores 29.31 179 P P **10 24 44.0 +1.6**
comp=Z,11nm,0.9s
MLSI Meulaboh, Aceh 29.33 239 P P **10 24 46.7 +4.2**
comp=Z,11µm,0.4s
ULN Ulaanbaatar 29.44 340 P P **10 24 44.1 +0.7**
ULN IAmb IAmb 10 24 46.1
comp=Z,7.9nm,0.7s
KLR Kul'dur 29.59 14 P P **10 24 43.8 -0.7**
comp=Z,1.3nm,0.5s,baz=236,slow=7.5,SNR=4.5
SONM Songino Array 29.63 339 P P **10 24 45.1 +0.1**
comp=Z,4.4nm,0.8s,baz=159,slow=8.7,SNR=21
SONM LR LR 10 37 57.0
comp=Z,212nm,19.1s,baz=160,slow=39
SONM Songino Array 29.63 339 P P **10 24 44.8 -0.2**
BATI Baumata 30.84 176 LR LR 10 38 37.7
comp=Z,69nm,22.0s,baz=158,slow=39
TLY Talaya 33.85 340 P P **10 25 22.5 +0.6**
TLY IAmb IAmb 10 25 24.9
comp=Z,5.3nm,0.7s
WMQ Urumqi 36.26 317 *eP* **P 10 25 44.4 +1.6**
WMQ pmax pmax
comp=Z,20nm,0.7s
WMQ pmax pmax
comp=Z,72nm,3.9s
WMQ LR LR
comp=Z,740nm,29.9s
WMQ LR LR
comp=Z,1µm,29.2s
WMQ LR LR
comp=Z,330nm,21.5s
FITZ Fitzroy Crossi 38.83 174 P P **10 26 03.3 -1.2**
comp=Z,3.4nm,1.0s,baz=2.1,slow=10.0,SNR=3.7
FITZ Fitzroy Crossi 38.83 174 P P **10 26 03.5 -1.1**
MK31 Makanchi Array 41.00 319 P P **10 26 22.8 +0.3**
MKAR Makanchi Array 41.00 319 P P **10 26 23.9 +1.4**
comp=Z,4.7nm,0.7s,baz=109,slow=8.7,SNR=19
MKAR Makanchi Array 41.00 319 P P **10 26 22.2 -0.2**
WB0 Warramunga Arr 42.22 162 P P **10 26 29.9 -2.7**
WRAB Tennant Creek 42.36 162 P P **10 26 31.9 -1.9**
WRA Warramunga Arr 42.37 162 P P **10 26 32.0 -1.8**
comp=Z,2.0nm,0.7s,baz=344,slow=9.2,SNR=13
WRA Warramunga Arr 42.37 162 P P **10 26 32.1 -1.8**
WB2 Warramunga Arr 42.37 162 P P **10 26 32.3 -1.6**
WR0 Warramunga Arr 42.44 162 P P **10 26 32.9 -1.5**
H11N1 WAKE ISLAND Hy 42.56 83 T T 11 11 47.2
baz=282,slow=74,SNR=25
H11N2 WAKE ISLAND Hy 42.57 83 T T 11 11 50.8
baz=282,slow=74,SNR=24
H11N3 WAKE ISLAND Hy 42.58 83 T T 11 11 52.8
baz=282,slow=74,SNR=19
H11S3 WAKE ISLAND Hy 42.59 85 T T 11 11 37.7
baz=281,slow=74,SNR=45
H11S1 WAKE ISLAND Hy 42.60 85 T T 11 11 40.5
baz=281,slow=74,SNR=31
H11S2 WAKE ISLAND Hy 42.61 85 T T 11 11 40.7
baz=281
PETK Petropavlovsk- 42.62 32 LR LR 10 43 11.6
comp=Z,60nm,19.6s,baz=288,slow=34
KSH Kashi 43.03 306 *eP* **P 10 26 42.6 +3.4**
KSH pmax pmax
comp=Z,240nm,6.9s
ZAA0 Zalesovo Array 43.27 329 P P **10 26 40.3 -0.5**
ZAA0 IAmb IAmb 10 26 46.2
comp=Z,8.3nm,0.8s
ZALV Zalesovo Beam 43.27 329 P P **10 26 40.5 -0.3**
comp=Z,5.5nm,0.6s,baz=112,slow=7.1,SNR=29
ZALV Zalesovo Beam 43.27 329 P P **10 26 40.1 -0.6**
KURK Kurchatov 44.90 322 P P **10 26 54.1 +0.3**
KURK IAmb IAmb 10 26 55.4
comp=Z,6.3nm,1.0s
AS31 Alice Springs 45.79 164 P P **10 27 01.2 0.0**
ASAR Alice Springs 45.79 164 P P **10 27 00.5 -0.8**
comp=Z,0.5nm,0.3s,baz=349,slow=7.4,SNR=13
ASAR ScP **ScP** **10 32 21.1 -6.0**
comp=Z,0.5nm,1.1s,baz=350,slow=5.1,SNR=3.5
ASAR Alice Springs 45.79 164 P P **10 26 58.4 -2.8**
SEY Seymchan 47.13 19 P P **10 27 11.1 -0.1**
comp=Z,0.8nm,0.5s,baz=210,slow=20,SNR=3.1
CTA Charters Tower 47.30 148 P P **10 27 11.2 -1.9**
comp=Z,4.8nm,0.8s,baz=326,slow=7.3,SNR=2.7
KK31 Karatay Array 47.78 310 P P **10 27 16.5 -0.1**
KKAR Karatay Array 47.78 310 P P **10 27 16.4 -0.3**
KBL Kabul 47.91 298 P P **10 27 19.5 +1.5**
CHGR Chuyangaron 48.12 304 P P **10 27 19.5 0.0**
CHGR IAmb IAmb 10 27 21.2
comp=Z,11nm,1.1s
BRVK Borovoye 50.57 323 P P **10 27 36.3 -1.4**
BRVK IAmb IAmb 10 27 39.5
comp=Z,8.2nm,1.1s
TIXI Tiksi 51.10 3 P P **10 27 39.8 -1.6**
NRIK Noril'sk 52.77 346 P P **10 27 54.0 +0.1**
comp=Z,6.6nm,0.7s,baz=135,slow=6.9,SNR=15
NRIK LR LR 10 51 23.8
comp=Z,76nm,18.4s,baz=204,slow=37
STKA Stephens Creek 55.78 159 P P **10 28 15.8 -0.4**
comp=Z,2.8nm,0.9s,baz=279,slow=6.6,SNR=4.7
ABKAR Akbulak array 56.03 316 P P **10 28 16.2 -1.7**
ABKAR Akbulak array 56.03 316 P P **10 28 17.8 -0.1**
AKTO Aktyubinsk 57.41 317 P P **10 28 28.0 +0.3**
comp=Z,0.5nm,0.3s,baz=142,slow=17,SNR=3.1
ARU Arti 58.00 324 P P **10 28 31.7 0.0**
comp=Z,2.5nm,0.4s,baz=104,slow=2.8,SNR=8.2
ARU Arti 58.00 324 P P **10 28 31.0 -0.7**
ARU IAmb IAmb 10 28 34.0
comp=Z,6.2nm,0.7s
KBZ Khabaz 67.82 310 P P **10 29 37.6 +0.4**
comp=Z,4.7nm,1.0s,baz=233,slow=20
A21K Barrow 67.94 20 P P **10 29 38.3 +0.9**
TTA Tatalina 68.37 29 P P **10 29 40.8 +0.4**
TTA IAmb IAmb 10 29 42.9
comp=Z,6.4nm,0.8s
IMAR Indian Mountai 69.15 26 P P **10 29 45.6 +0.5**
RAYN Ar Rayn 69.59 288 P P **10 29 49.2 +0.5**
RAYN IAmb IAmb 10 29 50.9
comp=Z,15nm,1.2s
CAST Castle Rocks 70.10 29 P P **10 29 51.9 +0.8**
CAST IAmb IAmb 10 29 52.4
comp=Z,9.3nm,0.8s
TOLK Toolik Lake Re 70.51 23 P P **10 29 54.1 +0.6**
TOLK IAmb IAmb 10 29 55.5
comp=Z,3.7nm,0.8s
RND Reindeer 71.55 28 P P **10 29 59.5 -0.5**
MDM Murphy Dome 71.56 27 P P **10 29 57.9 -2.0**
PMR Palmer 71.72 30 P P **10 30 00.5 -0.3**
PMR IAmb IAmb 10 30 00.8
comp=Z,6.3nm,0.8s
TCOL CIGO, UAF Yank 71.73 27 P P **10 30 01.9 +1.0**
TCOL IAmb IAmb 10 30 03.6
comp=Z,4.4nm,0.7s
COLA College 71.73 27 P P **10 30 01.8 +0.9**
COLA IAmb IAmb 10 30 03.6
comp=Z,4.8nm,0.8s
GHO Glory Hole Cre 71.79 30 P P **10 30 01.4 0.0**
GHO IAmb IAmb 10 30 21.3
comp=Z,17nm,1.3s
CCB Clear Creek Bu 71.79 27 P P **10 30 01.4 +0.1**
POKR Poker Plat Res 71.87 26 P P **10 30 02.3 +0.5**
POKR IAmb IAmb 10 30 02.6
comp=Z,8.4nm,1.2s
SML Sawmill 72.06 30 P P **10 30 02.1 -0.9**
KNK Knik Glacier 72.07 30 P P **10 30 02.1 -0.9**
IL31 72.16 27 P P **10 30 02.1 -1.3**
IL31 IAmb IAmb 10 30 11.9
comp=Z,7.8nm,1.4s
ILAR Eielson Array 72.16 27 P P **10 30 01.9 -1.6**
comp=Z,1.1nm,0.7s,baz=268,slow=5.0,SNR=20
ILAR Eielson Array 72.16 27 P P **10 30 02.4 -1.1**
HDA Harding Lake 72.20 27 P P **10 30 03.1 -0.6**
HDA IAmb IAmb 10 30 06.1
comp=Z,8.9nm,1.4s
KEV Kevo 72.24 339 P P **10 30 04.1 +0.3**
DHY Denali Highway 72.26 29 P P **10 30 04.1 -0.2**
DHY IAmb IAmb 10 30 08.5
comp=Z,6.0nm,1.1s
SCM Sheep Creek Mo 72.52 30 P P **10 30 05.6 -0.2**
BMAR Burnt Mountain 72.56 24 P P **10 30 06.4 +0.6**
ARCES ARCESS Array B 72.80 339 P P **10 30 07.1 -0.1**
comp=Z,5.8nm,1.0s,baz=45,slow=2.2,SNR=5.7
SPITS Spitsbergen Ar 72.87 348 P P **10 30 07.7 +0.2**
comp=Z,2.4nm,0.6s,baz=103,slow=3.1,SNR=6.0
M24K Tolsona, Glenn 73.00 29 P P **10 30 08.6 0.0**
KLU Klutina 73.25 30 P P **10 30 10.5 +0.4**
KLU IAmb IAmb 10 30 26.8
comp=Z,9.8nm,1.2s
EYAK Cordova Ski Ar 73.54 31 P P **10 30 12.0 +0.4**
N25K Chitina, Valde 73.84 30 P P **10 30 14.0 +0.4**
N25K IAmb IAmb 10 30 14.7
comp=Z,11nm,1.4s
MENT Mentasta 73.92 28 P P **10 30 14.8 +0.9**
MENT IAmb IAmb 10 30 15.8
comp=Z,4.5nm,0.6s
GLB Gilahina Butte 74.25 30 P P **10 30 16.3 +0.4**
GLB IAmb IAmb 10 30 18.1
comp=Z,18nm,1.3s
K27K Chicken 74.36 27 P P **10 30 17.0 +0.6**
K27K IAmb IAmb 10 30 18.6
comp=Z,9.8nm,1.1s
FINES FINESS Array B 74.52 330 P P **10 30 18.4 +1.0**
comp=Z,3.2nm,0.8s,baz=130,slow=3.0,SNR=5.7
FINES FINESS Array B 74.52 330 P P **10 30 18.6 +1.2**
BCAR Beaver Creek A 74.74 28 P P **10 30 19.6 +0.8**
TGL Tana Glacier 74.88 30 P P **10 30 19.5 -0.2**
TGL IAmb IAmb 10 30 40.2
comp=Z,17nm,1.2s
BARN Barnard Glacie 75.35 30 P P **10 30 22.4 -0.1**
BARN IAmb IAmb 10 30 24.4
comp=Z,6.6nm,0.7s
BR131 Keskin Array S 75.40 307 P P **10 30 23.2 +0.1**
BRTR Keskin Array B 75.40 307 P P **10 30 23.6 +0.5**
comp=Z,1.4nm,0.8s,baz=66,slow=6.1,SNR=6.8
BRTR Keskin Array B 75.40 307 P P **10 30 23.0 -0.2**
DAWY Dawson 75.48 27 P P **10 30 23.2 +0.2**
DAWY IAmb IAmb 10 30 23.7
comp=Z,4.3nm,0.7s
CTGM Chitina Glacie 75.53 30 P P **10 30 24.1 +0.6**
CTGM IAmb IAmb 10 30 25.5
comp=Z,8.4nm,0.6s
AKASG Malin Array Be 75.59 319 P P **10 30 23.2 -0.6**
comp=Z,0.4nm,0.3s,baz=60,slow=6.1,SNR=4.5
HYT Haines Junctio 77.35 30 P P **10 30 34.6 +0.9**
HYT IAmb IAmb 10 30 35.0
comp=Z,5.1nm,1.0s
WHY Whitehorse 78.61 29 P P **10 30 41.3 +0.6**
WHY IAmb IAmb 10 30 57.9
comp=Z,4.3nm,0.9s
C36M Paulatuk 78.96 19 P P **10 30 40.8 -1.5**
BURAR Bucovina Array 79.00 317 P P **10 30 42.6 -0.5**
ELL Elmali 79.06 305 P P **10 30 41.9 -1.8**
MLR Muntele Rosu 79.20 315 P P **10 30 44.9 +0.6**
comp=Z,1.2nm,0.5s,baz=107,slow=17,SNR=2.7
KWP Kalwaria Pacla 79.90 319 P P **10 30 48.7 +0.9**
ALN Alexandroupoli 80.61 310 P P **10 30 51.4 -0.4**
HFS Hagfors 80.66 331 P P **10 30 51.3 -0.3**
comp=Z,2.0nm,0.7s,baz=132,slow=4.4,SNR=8.0
NC405 NORSAR Array S 81.11 332 P P **10 30 54.8 +0.8**
NC303 NORSAR Array S 81.21 333 P P **10 30 55.1 +0.5**
NB2 NORSAR Subarra 81.36 332 P P **10 30 54.5 -0.9**
comp=Z,9.2nm,1.2s,baz=63,slow=5.3
NOA NORSAR Array B 81.36 332 P P **10 30 54.7 -0.8**
comp=Z,1.2nm,0.7s,baz=61,slow=4.6,SNR=8.6
NOA LR LR 11 10 52.0
comp=Z,123nm,18.1s,baz=265,slow=38
BRG Berggiesshubel 84.59 323 *i* P P **10 31 13.0 +0.7**
comp=Z,9.8nm,1.2s
CLL Collm 84.92 323 *eP* P **10 31 14.0 0.0**
GERES GERESS Array B 85.63 321 P P **10 31 17.7 0.0**
comp=Z,2.2nm,0.9s,baz=54,slow=5.6,SNR=13
YKA Yellowknife Ar 86.04 23 P P **10 31 18.6 -0.6**
comp=Z,3.4nm,0.8s,baz=316,slow=4.0,SNR=10
EKA Eskdalemuir Ar 90.83 332 P P **10 31 40.6 -1.6**
comp=Z,1.7nm,0.7s,baz=84,slow=3.6,SNR=4.3
NVAR Mina Array Bea 98.77 43 P Pdif 10 32 19.7 +0.5
comp=Z,0.6nm,0.8s,baz=297,slow=6.5,SNR=4.0
SDV Santo Domingo 148.25 23 PKPbc **PKPbc** **10 38 26.1 +0.1**
comp=Z,3.7nm,0.2s,baz=344,slow=2.8,SNR=6.0

NEIC ***18*** *10:18:56.3±1.7, 3°.0N±0°.1×128°.64E±0°.09, h228km±9km, mb4.0/20, Error ellipse: s-maj=17.7km s-min=7.3km az=218.0*
IDC ***18*** *10:18:58.0±2.6, 2°.96N×128°.69E, h243km±29km, mb3.5/11, mb1 3.6/12, mb1mx3.3/51, mbtmp4.0/12, Error ellipse: s-maj=30.3km s-min=11.3km az=81.0*
DJA ***18*** *10:18:58.0±0.8, 3°N±7°×12°8E±°, h206km±9km, M3.9/4, MLv3.9/4*
ISC 18 10:18:54.4±0.6, 3°.08N±0°.07×128°.61E±0°.09, h200km, n43, σ1§25/44, mb3.9/17, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.60**	**209**	Pn	**Pn**	**10 19 42.4**	**+3.0**
SGSI	**Sangihe**	**3.13**	**281**	P	**Pn**	**10 19 46.3**	**+0.7**
SGSI				S	**Sn**	**10 20 25.9**	**+0.2**
SIJI	**Sorong**	**4.73**	**146**	P	**Pn**	**10 20 08.5**	**+3.1**
	1.8nm,0.3s,baz=334,slow=13,SNR=4.3						
MTN	**Manton Dam**	**16.01**	**171**	P	**P**	**10 22 27.1**	**-1.4**
MTN				IAmb	IAmb	10 22 28.2	
	comp=Z,7.7nm,1.0s						
SBUM	**Sibu**	**16.38**	**268**	P	**P**	**10 22 32.6**	**0.0**
SBUM				IAmb	IAmb	10 22 37.7	
	comp=Z,9.1nm,1.3s						
KSM	**Kuching**	**18.36**	**265**	P	**P**	**10 22 54.8**	**+0.6**
KNRA	**Kununurra**	**18.63**	**180**	P	**P**	**10 22 57.3**	**+0.1**
FITZ	**Fitzroy Crossi**	**21.24**	**188**	P	**P**	**10 23 24.4**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=12,slow=7.9,SNR=9.0						
FITZ	**Fitzroy Crossi**	**21.24**	**188**	P	**P**	**10 23 24.2**	**-0.8**
FITZ				IAmb	IAmb	10 23 25.9	
	comp=Z,1.7nm,0.5s						
WB0	**Warramunga Arr**	**23.40**	**166**	P	**P**	**10 23 44.5**	**-1.0**
WB0				IAmb	IAmb	10 23 45.0	
	comp=Z,7.8nm,1.4s						
WRAB	**Tennant Creek**	**23.55**	**166**	P	**P**	**10 23 45.0**	**-1.8**
WRAB				IAmb	IAmb	10 23 49.8	
	comp=Z,2.6nm,0.9s						
WRA	**Warramunga Arr**	**23.56**	**166**	P	**P**	**10 23 45.4**	**-1.6**
	comp=Z,1.2nm,0.4s,baz=344,slow=10,SNR=15						
WRA	**Warramunga Arr**	**23.56**	**166**	P	**P**	**10 23 45.2**	**-1.7**
WB2	**Warramunga Arr**	**23.56**	**166**	P	**P**	**10 23 45.9**	**-1.0**
WB2				IAmb	IAmb	10 23 56.2	
	comp=Z,5.5nm,1.3s						
WR0	**Warramunga Arr**	**23.62**	**166**	P	**P**	**10 23 45.6**	**-1.9**
WR0				IAmb	IAmb	10 23 49.6	
	comp=Z,2.8nm,1.1s						
AS31	**Alice Springs**	**27.08**	**169**	P	**P**	**10 24 17.6**	**-1.1**
ASAR	**Alice Springs**	**27.08**	**169**	P	**P**	**10 24 17.6**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=353,slow=6.8,SNR=18						
ASAR	**Alice Springs**	**27.08**	**169**	P	**P**	**10 24 17.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**32.82**	**300**	P	**P**	**10 25 10.6**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=124,slow=7.8,SNR=4.8						
CMAR	**Chiang Mai Arr**	**32.82**	**300**	P	**P**	**10 25 11.0**	**+1.7**
KSRS	**Korea Array**	**34.22**	**359**	P	**P**	**10 25 22.1**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=176,slow=9.3,SNR=4.2						
MJAR	**Matsushiro Arr**	**34.46**	**14**	P	**P**	**10 25 22.5**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=190,slow=8.8,SNR=4.0						
MAJO	**Matsushiro**	**34.46**	**14**	P	**P**	**10 25 23.0**	**-0.2**
BBOO	**Buckleboo**	**36.38**	**169**	P	**P**	**10 25 39.0**	**-0.6**
BBOO				IAmb	IAmb	10 25 39.9	
	comp=Z,18nm,1.4s						
STKA	**Stephens Creek**	**36.89**	**161**	P	**P**	**10 25 42.9**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=326,slow=7.2,SNR=9.8						
STKA	**Stephens Creek**	**36.89**	**161**	P	**P**	**10 25 41.5**	**-2.4**
NWAO	**Narrogin (SRO)**	**37.39**	**196**	P	**P**	**10 25 47.3**	**-0.8**
ASAJ	**Asahikawa**	**42.70**	**15**	P	**P**	**10 26 33.0**	**+1.4**
	comp=Z,2.4nm,0.6s,baz=103,slow=18,SNR=1.2						
RAMN	**Ramite**	**46.66**	**305**	*eP*	**P**	**10 27 04.2**	**+0.7**
	comp=Z,19nm,0.4s						
GUN	**Gumba**	**47.63**	**306**	*eP*	**P**	**10 27 11.2**	**+0.2**
	comp=Z,16nm,0.5s						
PKI	**Pulchoki**	**47.88**	**305**	*eP*	**P**	**10 27 12.7**	**-0.2**
	comp=Z,4.2nm,0.2s						
PKIN	**Phulchoki**	**47.89**	**305**	*eP*	**P**	**10 27 12.7**	**-0.3**
	comp=Z,6.6nm,0.3s						
SONM	**Songino Array**	**48.53**	**340**	P	**P**	**10 27 17.9**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=157,slow=7.8,SNR=2.9						
SONM	**Songino Array**	**48.53**	**340**	P	**P**	**10 27 17.7**	**+0.3**
KOLN	**Koldanda**	**49.44**	**304**	*eP*	**P**	**10 27 25.0**	**+0.3**
	comp=Z,14nm,0.4s						
DANN	**Dangsing**	**49.52**	**305**	*eP*	**P**	**10 27 25.7**	**+0.3**
	comp=Z,26nm,0.5s						
MKAR	**Makanchi Array**	**59.16**	**325**	P	**P**	**10 28 34.2**	**-0.1**
	comp=Z,1.3nm,0.4s,baz=111,slow=7.6,SNR=4.4						
MKAR	**Makanchi Array**	**59.16**	**325**	P	**P**	**10 28 34.0**	**-0.3**
KKAR	**Karatay Array**	**64.99**	**317**	P	**P**	**10 29 12.9**	**-0.1**
BRVK	**Borovoye**	**68.96**	**327**	P	**P**	**10 29 37.4**	**-0.5**
BRVK				IAmb	IAmb	10 29 37.7	
	comp=Z,3.1nm,0.6s						
ABKAR	**Akbulak array**	**73.84**	**321**	P	**P**	**10 30 05.8**	**-1.3**
VNDA	**Vanda**	**82.55**	**173**	P	**P**	**10 30 53.4**	**-0.9**
ARCES	**ARCESS Array B**	**91.70**	**340**	P	**P**	**10 31 37.0**	**-1.7**
	comp=Z,3.1nm,0.8s,baz=82,slow=6.8,SNR=2.0						

NNC 18 10:22:45.3±7.0, 37°.06N×71°.04E, h0km, mb3.8, mpv3.6, 3C-1D, Error ellipse: s-maj=70.5km s-min=45.1km az=142.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.05**	**356**	⇑P	Pn	10 24 17.4	+1.4
	2.6nm,0.3s,baz=183,slow=14,SNR=46						
KK31				⇑S	Sn	10 25 27.8	+1.8
	1.8nm,0.4s,baz=183,slow=24,SNR=6.2						
AAK	**Ala-Archa**	**6.17**	**24**	⇓P	Pn	10 24 17.5	-0.3
	1.1nm,0.3s						
AAK				⇑S	Sn	10 25 29.7	+0.6
	4.6nm,0.8s						
AB31	**Akbulak array**	**14.61**	**330**	P	Pn	10 26 10.3	-2.8
	0.3nm,0.4s,baz=163,slow=10,SNR=9.4						

IDC 18 10:26:50.0±2.3, 2°.12N×127°.12E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/37, mbtmp3.3/3, Error ellipse: s-maj=190.6km s-min=24.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.04**	**162**	P	P	10 31 57.5	+0.4
	0.2nm,0.6s,baz=342,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**26.47**	**166**	P	P	10 32 28.7	-0.3
	0.4nm,0.8s,baz=345,slow=6.7,SNR=3.4						
MKAR	**Makanchi Array**	**59.09**	**326**	P	P	10 36 52.2	0.0
	0.5nm,0.7s,baz=128,slow=8.6,SNR=2.8						

IDC ***18*** *10:28:25.9±0.7, 20°.77S×71°.65W, h0km, mb4.0/8, mb1 4.2/11, mb1mx4.1/24, mbtmp4.0/11, ML3.9/3, MS2.4/1, Ms1 2.5/1, ms1mx2.3/25, Error ellipse: s-maj=28.9km s-min=17.1km az=67.0*
GUC ***18*** *10:28:29.4±0.8, 21°.03S×71°.60W, h15km±19km, ML3.5*
NEIC ***18*** *10:28:29.1±2.7, 20°.93S±0°.02×71°.69W±0°.07, h35km±1km, mb4.4/15, ML3.6(GUC), Error ellipse: s-maj=11.6km s-min=3.7km az=265.0*
VAO ***18*** *10:28:33.5±0.6, 20°.74S×71°.16W, h10km, mb4.3*
ISC 18 10:28:25.9±0.5, 20°.93S±0°.04×71°.77W±0°.05, h10km, n111, σ1§68/128, mb4.3/13, 8C-5D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PATCX	**Punta Patache**	**1.51**	**86**	⇑*i*P	**Pn**	**10 28 52.2**	**-1.0**
PATCX				*e*S	**Sn**	**10 29 09.9**	**-3.0**
PATCX	**Punta Patache**	**1.51**	**86**		**Pn**	**10 28 52.4**	**-0.8**
PATCX				Sn	**Sn**	**10 29 10.7**	**-2.3**
TA01	**Diego Aracena**	**1.53**	**76**	⇑*i*P	**Pn**	**10 28 52.5**	**-0.8**
TA01				*e*S	**Sn**	**10 29 10.2**	**-3.0**
TA01				IAML		10 29 11.8	
	comp=N,824nm,0.5s						
TA01	**Diego Aracena**	**1.53**	**76**		**Pn**	**10 28 52.5**	**-0.8**
TA01				Sn	**Sn**	**10 29 10.4**	**-2.8**
TA02	**Huaiquique**	**1.67**	**67**	⇑*i*P	**Pn**	**10 28 54.5**	**-0.7**
TA02				*e*S	**Sn**	**10 29 13.9**	**-2.8**
TA02				IAML		10 29 23.4	
	comp=N,2µm,0.1s						
PB07	**IPOC Station P**	**1.92**	**115**	⇑*i*P	**Pn**	**10 28 58.3**	**-0.6**
PB07				*e*S	**Sn**	**10 29 20.4**	**-2.8**
PB07	**IPOC Station P**	**1.92**	**115**		**Pn**	**10 28 58.4**	**-0.5**
PB07				Sn	**Sn**	**10 29 20.6**	**-2.6**
PSGC	**Pisagua**	**2.04**	**50**	*i* P	**Pn**	**10 28 59.0**	**-1.4**
PSGCX	**Pisagua**	**2.04**	**50**	Pn	**Pn**	**10 28 58.9**	**-1.5**
PB04	**IPOC Station P**	**2.05**	**133**	⇓*e*P	**Pn**	**10 29 00.1**	**-0.6**
PB04				*e*S	**Sn**	**10 29 23.9**	**-2.5**
PB04				IAML		10 29 26.3	
	comp=N,515nm,0.4s						
PB04	**IPOC Station P**	**2.05**	**133**		**Pn**	**10 29 00.2**	**-0.4**
PB04				Sn	**Sn**	**10 29 24.8**	**-1.6**
PB01	**IPOC Station P**	**2.13**	**93**	*e*P	**Pn**	**10 29 01.9**	**+0.2**
PB01				*e*S	**Sn**	**10 29 25.3**	**-3.0**
PB01				IAML		10 29 29.0	
	comp=E,542nm,0.3s						
PB01	**IPOC Station P**	**2.13**	**93**		**Pn**	**10 29 01.9**	**+0.2**
PB01				Sn	**Sn**	**10 29 26.3**	**-2.0**
PB03	**IPOC Station P**	**2.18**	**121**	⇓*i*P	**Pn**	**10 29 02.3**	**-0.1**

PB03 eS Sn 10 29 26.8 -2.7
PB03 IAML 10 29 29.9
comp=N,335nm,0.4s
PB11 IPOC Station P 2.30 60 ⇑*iP* Pn 10 29 03.7 -0.4
PB11 eS Sn 10 29 29.9 -2.6
PB11 IAML 10 29 32.0
comp=N,550nm,0.3s
PB11 IPOC Station P 2.30 60 Pn 10 29 03.6 -0.4
PB11 Sn Sn 10 29 30.2 -2.3
PB05 IPOC Station P 2.40 143⇓*eP* Pn 10 29 04.6 -0.8
PB05 eS Sn 10 29 31.7 -3.3
PB09 IPOC Station P 2.50 111 *eP* Pb 10 29 08.1 -3.0
PB09 eS Sn 10 29 35.9 -1.7
PB09 IAML 10 29 41.5
comp=E,713nm,0.8s
PB09 IPOC Station P 2.50 111 Pn 10 29 07.8 +0.9
PB09 Sn Sn 10 29 37.8 +0.2
PB08 IPOC Station P 2.57 73 ⇑*iP* Pn 10 29 08.1 +0.1
PB08 eS Sn 10 29 37.6 -2.0
PB08 IAML 10 29 44.1
comp=N,233nm,0.2s
PB08 IPOC Station P 2.57 73 Pn 10 29 07.7 -0.3
PB08 Sn Sn 10 29 38.6 -1.0
PB06 IPOC Station P 2.70 131 *eP* Pn 10 29 09.6 +0.1
PB06 IAML 10 29 43.7
comp=E,258nm,0.4s
PB06 IPOC Station P 2.70 131 Pn 10 29 09.2 -0.3
PB06 Sn Sn 10 29 40.8 -1.5
MNMC Minye Minye 2.72 49 ⇑*iP* Pn 10 29 09.8 -0.1
MNMC eS Sn 10 29 40.9 -2.1
MNMC IAML 10 29 42.7
comp=E,506nm,0.3s
MNMC Minye Minye 2.72 49 Pn 10 29 09.4 -0.5
PB10 IPOC Station P 2.80 157⇓*iP* Pn 10 29 09.6 -1.2
PB10 eS Sn 10 29 39.0 -5.8
PB10 IAML 10 29 42.7
comp=N,306nm,0.4s
PB10 IPOC Station P 2.80 157 Pn Pn 10 29 09.7 -1.2
AP01 Chacalluta 2.88 28 Pn Pn 10 29 10.8 -1.0
PB15 IPOC Station P 3.11 137 *eP* Pn 10 29 14.8 -0.4
PB15 IPOC Station P 3.11 137 Pn 10 29 15.2 -0.1
LVC Limon Verde 3.14 123 Pn Pn 10 29 17.3 +1.5
comp=N,11nm,0.3s,baz=314,slow=8.7,SNR=95
LVC Sn Sn 10 29 52.6 -0.9
comp=N,16nm,0.3s,baz=118,slow=23,SNR=9.4
LVC Limon Verde 3.14 123 *eP* Pn 10 29 16.9 +1.1
LVC Limon Verde 3.14 123 *eP* Pn 10 29 17.1 +1.3
LVC Limon Verde 3.14 123 *eP* Pn 10 29 17.1 +1.3
PB16 IPOC Station P 3.35 40 ⇑*iP* Pn 10 29 18.6 -0.3
PB16 IAML 10 30 03.6
comp=N,91nm,0.5s
PB16 IPOC Station P 3.35 40 Pn 10 29 18.6 -0.3
PB14 IPOC Station P 3.88 161 Pn 10 29 24.3 -1.7
GO02 Mina Guanaco 4.66 155⇓*iP* Pn 10 29 36.4 -0.3
GO02 eS Sn 10 30 29.0 -2.1
GO02 Mina Guanaco 4.66 155 Pn 10 29 36.5 -0.3
AC01 Pan de Azucar 5.30 169 Pn Pn 10 29 44.0 -1.1
LPAZ La Paz 5.76 37 Pn Pn 10 29 54.6 +2.5
comp=N,1.9nm,0.3s,baz=225,slow=5.1,SNR=42
LPAZ LR LR 10 31 24.1
comp=N,35nm,20.9s,baz=288,slow=32
LPAZ La Paz 5.76 37 Pn 10 29 54.0 +1.9
AC02 Maricunga 6.35 158 Pn 10 29 59.8 -0.3
GO03 Copiap 6.78 168 Pn Pn 10 30 03.3 -2.2
AC04 Llanos de Chal 7.27 175 Pn Pn 10 30 10.6 -1.6
AC05 El Transito 7.99 171 Pn Pn 10 30 22.4 +0.3
LCO Las Campanas 8.10 173 Pn Pn 10 30 24.6 +0.7
GO04 Tololo Observa 9.24 175 Pn Pn 10 30 39.2 -0.4
SIV San Ignacio 11.27 66 Pn Pn 10 31 06.1 -1.1
comp=N,0.6nm,0.3s,baz=264,slow=12,SNR=28
MT02 Curacav 12.29 178 Pn Pn 10 31 19.3 -1.7
CZSB Cruzeiro do Su 13.16 356 *eP* P 10 31 39.3 -3.8
ViLB Vilhena 13.61 56 *eP* Pn 10 31 38.8 -0.4
H03N1 Juan Fernandez 13.98 206 T T 10 46 09.0
baz=29,slow=72,SNR=50
H03N2 Juan Fernandez 13.99 206 T T 10 46 05.1
baz=29,slow=72,SNR=32
H03N3 Juan Fernandez 14.00 206 T T 10 46 02.5
baz=29,slow=72,SNR=38
SAML Samuel 14.51 36 Pn 10 31 49.1 -2.4
AQDB Aquidauana 15.04 91 *eP* Pn 10 31 59.8 +1.1
BI02 San Fabin de 15.68 179 Pn Pn 10 32 06.8 -0.2
ITQB Itaqui 16.21 125 *eP* P 10 32 16.7 -0.3
PP1B Ponte de Pedra 16.28 81 *eP* Pn 10 32 15.2 +0.3
TRCB Terra Rica 17.86 99 *eP* P 10 32 35.9 +0.6
CLDB Colider 18.31 59 *eP* P 10 32 39.8 -0.6
PTGB Pitanga 18.55 105 *eP* Pn 10 32 45.4 +2.3
PCMB Pacaembu 19.12 96 *eP* Pn 10 32 51.3 +1.2
ARAG Araguaiana, MT 19.64 78 *eP* Pn 10 32 55.5 -0.8
PLCA Paso Flores 19.77 177 P Pn 10 32 58.2 +0.6
comp=N,0.1nm,0.3s,baz=344,slow=11,SNR=4.7
PLCA Paso Flores 19.77 177 P P 10 32 55.7 -0.5
CNLB Canela 20.67 118 *eP* Pn 10 33 08.8 +0.4
MACA Manacapuru-AM 20.70 33 *eP* Pn 10 33 08.9 +0.1
FRTB Fartura 20.70 101 *eP* Pn 10 33 09.3 +0.5
NPGB Novo Progresso 21.04 51 *eP* P 10 33 10.4 +0.2
TIJ01 Guaruva-PR 21.38 106 *eP* P 10 33 16.3 +2.5
SNDB Serra Nova Dou 21.54 69 *eP* P 10 33 16.0 +0.5
IPMB Ipameri, GO 22.40 87 *eP* P 10 33 24.7 -0.1
PET01 Itanhaem-SP 22.85 103 *eP* P 10 33 32.6 +3.1
VAO Valinhos 23.09 100 *eP* P 10 33 34.4 +2.3
SMTB Santa Maria do 26.22 66 *eP* P 10 34 03.2 +2.0
JANB Januaria 26.73 82 *eP* P 10 34 08.3 +2.4
MCPB Macapa, AP 28.09 46 *eP* P 10 34 21.0 +3.1
TMAB Tom-Au,PA,Br 29.54 54 *eP* P 10 34 34.4 +3.5
SDV Santo Domingo 29.65 2 P P 10 34 32.1 +0.1
comp=N,1.9nm,0.3s,baz=197,slow=7.3,SNR=1.5
UNM Universidad Na 48.18 324 P P 10 37 06.9 -0.1
TX32 Lajitas Array 58.68 327 P P 10 38 24.9 +1.1
TX32 IAmb IAmb 10 38 38.9
comp=Z,4.4nm,1.4s
TXAR Lajitas Array 58.68 327 P P 10 38 24.7 +0.9
comp=Z,0.6nm,0.7s,baz=153,slow=11,SNR=7.1
TXAR Lajitas Array 58.68 327 P P 10 38 24.4 +0.6
MIAR Mount Ida 58.94 339 P P 10 38 26.1 +0.6
MNTX Cornudas Mount 61.46 328 P P 10 38 42.5 -0.3
VNA3 Neumayer Olymp 61.47 161 P P 10 38 44.7 +2.3
SSPA Standing Stone 61.52 355 P P 10 38 40.7 -2.2
SNAA Sanae 63.69 161 P P 10 38 59.1 +1.9
SNAA Sanae 63.69 161 P P 10 38 59.4 +2.2
comp=Z,2.3nm,0.6s,baz=268,slow=9.5,SNR=20
SNAA Sanae 63.69 161 P P 10 38 58.8 +1.5
SNAA IAmb IAmb 10 39 00.1
comp=Z,3.5nm,0.9s
QSPA South Pole Qui 69.25 180 P P 10 39 35.2 +2.2
QSPA IAmb IAmb 10 39 36.4
comp=Z,4.2nm,1.1s
MSU Marysvale 70.24 327 P P 10 39 40.0 +0.5
PDAR Pinedale Array 72.32 332 P P 10 39 53.0 +1.0
comp=Z,0.4nm,0.6s,baz=140,slow=7.2,SNR=4.1
HWUT Hardware Ranch 72.32 330 P P 10 39 53.2 +1.1
HWUT IAmb IAmb 10 39 53.9
comp=Z,5.8nm,1.2s
NVAR Mina Array Bea 73.43 324 P P 10 40 01.1 +2.4
comp=Z,0.6nm,0.7s,baz=126,slow=7.5,SNR=4.9
NVAR Mina Array Bea 73.43 324 P P 10 40 00.7 +2.0
ULM Lac du Bonnet 74.01 344 P P 10 40 01.1 -0.4
comp=Z,1.6nm,0.8s,baz=170,slow=6.1,SNR=3.0
RLMT Red Lodge 74.09 333 P P 10 40 02.8 +0.4
RLMT IAmb IAmb 10 40 06.8
comp=Z,4.7nm,1.2s
YNE Yellowstone No 74.31 333 P P 10 40 05.3 +1.5
VNDA Vanda 76.94 190 P P 10 40 22.3 +4.2
comp=Z,0.6nm,1.0s,baz=151,slow=4.5,SNR=2.3
TOA0 Torodi Ar. Sit 79.69 72 P P 10 40 34.6 +0.2
TOA0 IAmb IAmb 10 40 35.9
comp=Z,3.7nm,0.8s
TORD Torodi Ar. Bea 79.69 72 P P 10 40 35.2 +0.8
comp=Z,2.8nm,0.7s,baz=255,slow=5.0,SNR=13
TORD Torodi Ar. Bea 79.69 72 P P 10 40 34.7 +0.3
ASAR Alice Springs 129.10 211 PKP **PKiKP** 10 47 35.6 -0.1
comp=Z,0.3nm,0.8s,baz=126,slow=1.6,SNR=5.5
ZALV Zalesovo Beam 142.52 23 PKP **PKiKP** 10 48 00.6 -1.3
comp=Z,2.2nm,0.3s,baz=343,slow=1.5,SNR=7.2
ZALV Zalesovo Beam 142.52 23 **PKiKP** 10 47 59.7 -2.2
MKAR Makanchi Array 146.68 33 PKPbc **PKiKP** 10 48 09.6 -1.2
comp=Z,2.9nm,0.8s,baz=329,slow=3.6,SNR=10
MKAR Makanchi Array 146.68 33 PKPbc **PKPab** 10 48 08.1 -1.0
USRK Ussuriysk Ar. 149.56 325 PKPbc **PKiKP** 10 48 17.2 +0.5
comp=Z,2.0nm,0.8s,baz=11,slow=1.5,SNR=5.0

*BJI **18** 10:30:01.9±0.0, 19°.58N×120°.32E, h5km, mB4.8/28, mb4.5/37,Ms4.2/18,Ms7 4.0/17*
*IDC **18** 10:30:01.7±0.5, 19°.54N×120°.55E, h0km, mb4.3/22, mb1 4.4/24,mb1mx4.3/42, mbtmp4.3/24, ML3.6/2, MS3.4/7, Ms1 3.4/7, ms1mx3.0/45, Error ellipse: s-maj=20.4km s-min=10.4km az=71.0*
*NEIC **18** 10:30:03.4±1.4, 19°.54N±0°.07×120°.45E±0°.08, h10km±1km, mb4.6/48, Error ellipse: s-maj=13.4km s-min=12.4km az=115.0*
*MAN **18** 10:30:05.8, 19°.53N×120°.71E, h20km, mb5.0, ML3.9, MS3.9*
ISC 18 10:30:03.5±0.3, 19°.57N±0°.03×120°.50E±0°.05, h10km, n122, σ1s16/126, mb4.5/48, MS3.5/9, 3C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBP	**Basco**	**1.62**	**58**	*eP*	**Pn**	**10 30 31.4**	**-0.7**
BBP				*eS*	**Sn**	**10 30 50.9**	**-2.2**
APYP	**Conner**	**1.84**	**157**	*eP*	**Pn**	**10 30 34.5**	**-0.6**
APYP				*eS*	**Sn**	**10 30 57.4**	**-1.1**
SGCP	**Mt. Cagua**	**1.97**	**132**	*eP*	**Pn**	**10 30 36.2**	**-0.7**
SGCP				*eS*	**Sn**	**10 30 59.2**	**-2.5**
CAUP	**Cauayan**	**2.90**	**154**	*eP*	**Pn**	**10 30 50.8**	**+1.0**
TWG	**Pinlang**	**3.27**	**9**		**Pn**	**10 30 53.6**	**-1.2**
SMPP	**San Manuel, Pa**	**3.41**	**177**	*eP*	**Pn**	**10 30 55.9**	**-0.8**
SMPP				*eS*	**Sn**	**10 31 37.9**	**+0.6**
TPUB	**Ta-pu**	**3.71**	**2**		**Pn**	**10 30 59.6**	**-1.2**
YULB	**Yu-li**	**3.87**	**11**		**Pn**	**10 31 03.3**	**+0.2**
BALP	**Baler**	**3.95**	**165**	*eP*	**Pn**	**10 31 05.3**	**+1.2**
BALP				*eS*	**Sn**	**10 31 51.3**	**+0.8**
SSLB	**Suanglung**	**4.21**	**6**		**Pn**	**10 31 08.5**	**+0.7**
NACB	**Ninganchiao**	**4.69**	**12**	Pn	**Pn**	**10 31 15.1**	**+0.8**
YHNB	**Yeheng**	**5.14**	**9**	Pn	**Pn**	**10 31 21.1**	**+0.5**
LQP	**Lukban**	**5.52**	**169**	*eP*	Pn	10 31 29.8	+3.9
HKPS	**Hong Kong Po S**	**6.53**	**295**	Pn	**Pn**	**10 31 37.0**	**-2.6**
QIZ	**Qiongzhong**	**10.08**	**269**	P	**Pn**	**10 32 27.3**	**-1.1**
QIZ				S	**Sn**	**10 34 20.4**	**-1.2**
QIZ				LR	LR		
	comp=N,620nm,16.7s						
QIZ				LR	LR		
	comp=E,450nm,9.3s						
QIZ				LR	LR		
	comp=Z,810nm,10.4s						
QIZ	**Qiongzhong**	**10.08**	**269**	Pn	**Pn**	**10 32 25.8**	**-2.6**
NJ2	**Nanjing**	**12.52**	**354**	*eP*	**Pn**	**10 33 03.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
DAV	**Davao City (W)**	**13.37**	**158**	LR	LR	10 39 03.8	
	comp=Z,363nm,19.1s,baz=331,slow=41						
JNU	**Nakatsue**	**16.37**	**32**	Pn	**Pn**	**10 33 51.5**	**-2.0**
	0.2nm,0.3s,baz=315,slow=14,SNR=2.1						
JNU	**Nakatsue**	**16.37**	**32**		**Pn**	**10 33 51.7**	**-1.8**
JNU				IAmb	IAmb	10 33 52.0	
	comp=Z,41nm,1.3s						
KMI	**Kunming**	**17.33**	**292**⇑	*eP*	**Pn**	**10 34 03.0**	**-2.8**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN	**Xi'an**	**17.71**	**327**	P	**P**	**10 34 12.0**	**+0.8**
XAN				pmax	pmax		
	comp=Z,12nm,1.3s						
XAN				LR	LR		
	comp=Z,420nm,10.8s						
XAN				LR	LR		
	comp=Z,270nm,11.9s						
XAN				LR	LR		
	comp=Z,530nm,11.9s						
SBUM	**Sibu**	**18.85**	**206**	P	**Pn**	**10 34 23.4**	**-0.9**
KSRS	**Korea Array**	**18.96**	**18**	P	**P**	**10 34 24.0**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=202,slow=11,SNR=7.9						
KSRS				LR	LR	10 42 04.9	
	comp=Z,47nm,19.9s,baz=180,slow=38						
CHTO	**Chiang Mai**	**20.38**	**271**	P	**P**	**10 34 40.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**20.41**	**270**	P	**P**	**10 34 41.9**	**+1.0**
	comp=Z,1.8nm,0.4s,baz=77,slow=9.2,SNR=18						
CMAR				PcP	**PcP**	**10 38 54.2**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=212,slow=0.9,SNR=4.9						
CMAR				LR	LR	10 43 45.8	
	comp=Z,96nm,18.2s,baz=161,slow=40						
BJT	**Baijiatuan**	**20.71**	**351**	P	**P**	**10 34 45.4**	**+1.4**
BJT				IAmb	IAmb	10 34 46.4	
	comp=Z,29nm,1.0s						
BJI	**Beijing**	**20.73**	**351**	P	**P**	**10 34 45.1**	**+0.9**
BJI				pmax	pmax		
	comp=Z,28nm,1.0s						
INU	**Inuyama**	**21.44**	**39**	P	**P**	**10 34 53.0**	**+1.2**
INU				IAmb	IAmb	10 35 04.5	
	comp=Z,37nm,1.4s						
LZH	**Lanzhou**	**22.03**	**322**	⇑P	**P**	**10 34 59.0**	**+0.7**
LZH				pP	pwP	10 35 03.1	-1.5
LZH				sP	sP	10 35 06.0	+4.8
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=Z,330nm,12.5s						
LZH				LR	LR		
	comp=Z,290nm,10.3s						
LZH				LR	LR		
	comp=Z,390nm,10.8s						
HHC	**Hu-ho-hao-te**	**22.54**	**342**	*eP*	**P**	**10 34 58.3**	**-5.5**
HHC				LR	LR		
	comp=N,250nm,9.9s						
HHC				LR	LR		
	comp=E,190nm,13.5s						
HHC				LR	LR		
	comp=Z,170nm,10.6s						
SIJI	**Sorong**	**22.90**	**151**	P	**P**	**10 35 07.1**	**-0.4**
	comp=Z,6.2nm,0.5s,baz=347,slow=11,SNR=4.5						
MAT	**Mashiro**	**22.95**	**39**	P	**P**	**10 35 09.6**	**+1.6**
MJAR	**Matsushiro Arr**	**22.95**	**39**	P	**P**	**10 35 09.3**	**+1.2**
	comp=Z,3.2nm,0.9s,baz=224,slow=8.8,SNR=5.3						
MJAR	**Matsushiro Arr**	**22.95**	**39**	P	**P**	**10 35 08.3**	**+0.2**
SPSI	**Sidrap Palu**	**23.40**	**182**	P	**P**	**10 35 12.9**	**+0.2**
	comp=Z,908nmcomp=Z,21nm,1.2s						
BBKI	**Banjar Baru**	**23.56**	**194**	P	**P**	**10 35 15.6**	**+1.3**
	comp=Z,2μmcomp=Z,9.7nm,0.7s						
NLAI	**Namlea**	**23.58**	**163**	P	**P**	**10 35 18.2**	**+3.8**
	comp=Z,41nm,0.8s						
GUMO	**Guam**	**24.08**	**101**	LR	LR	10 42 33.7	
	comp=Z,82nm,21.6s,baz=304,slow=31						
MDJ	**Mudanjiang**	**26.10**	**15**	P	**P**	**10 35 37.9**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,25nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.5s						
MDJ	**Mudanjiang**	**26.10**	**15**	P	**P**	**10 35 37.6**	**+0.3**
MDJ				IAmb	IAmb	10 35 39.5	
	comp=Z,22nm,1.0s						
USRK	**Ussuriysk Ar.**	**26.36**	**19**	P	**P**	**10 35 40.1**	**+0.3**
	comp=Z,5.0nm,1.1s,baz=200,slow=7.7,SNR=6.5						
USRK	**Ussuriysk Ar.**	**26.36**	**19**	P	**P**	**10 35 40.5**	**+0.7**
GTA	**Gaotai**	**26.63**	**322**	⇑P	**P**	**10 35 42.0**	**-0.4**
GTA				pP	sP	10 35 46.6	+1.3
GTA				sP	pwP	10 35 48.9	+0.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,22nm,5.5s						
GTA				LR	LR		
	comp=Z,220nm,10.9s						
GTA				LR	LR		
	comp=Z,150nm,10.9s						
GTA				LR	LR		
	comp=Z,210nm,10.9s						
BATI	**Baumata**	**29.75**	**174**	P	**P**	**10 36 09.8**	**-0.5**
	comp=Z,38nm,0.7s,baz=255,slow=5.8,SNR=4.2						
ULN	**Ulaanbaatar**	**30.26**	**342**	P	**P**	**10 36 14.1**	**-0.7**
SONM	**Songino Array**	**30.43**	**341**	P	**P**	**10 36 16.9**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=165,slow=9.2,SNR=12						
SONM				LR	LR	10 48 26.7	
	comp=Z,82nm,20.4s,baz=65,slow=36						
SONM	**Songino Array**	**30.43**	**341**	P	**P**	**10 36 16.5**	**+0.3**
TLY	**Talaya**	**34.67**	**341**	LR	LR	10 51 16.0	
	comp=Z,63nm,20.1s,baz=142,slow=37						
WMQ	**Urumqi**	**36.54**	**319**	*eP*	**P**	**10 37 10.3**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,84nm,4.5s						
WMQ				LR	LR		
	comp=Z,210nm,6.7s						
WMQ				LR	LR		
	comp=Z,47nm,4.9s						
WMQ				LR	LR		
	comp=Z,220nm,20.3s						
FITZ	**Fitzroy Crossi**	**37.77**	**172**	P	**P**	**10 37 18.9**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=358,slow=5.5,SNR=16						
FITZ	**Fitzroy Crossi**	**37.77**	**172**	P	**P**	**10 37 18.4**	**-1.5**
PATS	**Pohnpei**	**38.82**	**104**	P	**P**	**10 37 28.5**	**-0.4**
COEN	**Coen**	**40.10**	**144**	P	**P**	**10 37 38.7**	**-0.9**
MK31	**Makanchi Array**	**41.32**	**320**	P	**P**	**10 37 50.1**	**+0.8**
MK31				IAmb	IAmb	10 37 51.2	
	comp=Z,10.0nm,1.1s						
MKAR	**Makanchi Array**	**41.32**	**320**	P	**P**	**10 37 49.8**	**+0.5**
	comp=Z,7.3nm,0.9s,baz=115,slow=9.0,SNR=19						
MKAR	**Makanchi Array**	**41.32**	**320**	P	**P**	**10 37 50.0**	**+0.6**
WB0	**Warramunga Arr**	**41.40**	**160**	P	**P**	**10 37 48.5**	**-1.7**
WRAB	**Tennant Creek**	**41.54**	**160**	P	**P**	**10 37 49.6**	**-1.8**
WRA	**Warramunga Arr**	**41.55**	**160**	P	**P**	**10 37 49.9**	**-1.5**
	comp=Z,4.3nm,0.6s,baz=342,slow=9.0,SNR=46						
WRA				PcP	**PcP**	**10 39 48.5**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=342,slow=3.7,SNR=8.7						
WRA	**Warramunga Arr**	**41.55**	**160**	P	**P**	**10 37 50.2**	**-1.2**
WB2	**Warramunga Arr**	**41.55**	**160**	P	**P**	**10 37 50.1**	**-1.3**
WB2				IAmb	IAmb	10 37 54.8	
	comp=Z,5.7nm,0.6s						
WR0	**Warramunga Arr**	**41.63**	**160**	P	**P**	**10 37 50.6**	**-1.4**
WR0				IAmb	IAmb	10 37 55.6	
	comp=Z,5.7nm,0.6s						
ZAA0	**Zalesovo Array**	**43.84**	**330**	P	**P**	**10 38 09.4**	**-0.2**
ZAA0				IAmb	IAmb	10 38 10.7	
	comp=Z,7.1nm,0.8s						
ZALV	**Zalesovo Beam**	**43.84**	**330**	P	**P**	**10 38 09.8**	**+0.2**
	comp=Z,5.2nm,0.7s,baz=114,slow=7.7,SNR=23						
ZALV	**Zalesovo Beam**	**43.84**	**330**	P	**P**	**10 38 09.1**	**-0.6**
NIL	**Nilore**	**44.15**	**298**	P	**P**	**10 38 12.3**	**-0.2**
NIL				IAmb	IAmb	10 38 13.9	
	comp=Z,16nm,1.1s						
AS31	**Alice Springs**	**44.92**	**162**	P	**P**	**10 38 17.5**	**-1.1**
ASAR	**Alice Springs**	**44.92**	**162**	P	**P**	**10 38 17.3**	**-1.4**
	comp=Z,1.7nm,0.5s,baz=340,slow=6.5,SNR=32						
ASAR	**Alice Springs**	**44.92**	**162**	P	**P**	**10 38 18.4**	**-0.3**
KURK	**Kurchatov**	**45.30**	**323**	P	**P**	**10 38 22.2**	**+0.8**
CTA	**Charters Tower**	**46.80**	**146**	P	**P**	**10 38 34.5**	**+1.0**
	comp=Z,1.6nm,0.3s,baz=345,slow=11,SNR=4.4						
GAR	**Garm**	**47.22**	**305**	P	**P**	**10 38 36.7**	**-0.1**
KBL	**Kabul**	**47.71**	**299**	P	**P**	**10 38 40.1**	**-0.7**
KBL				IAmb	IAmb	10 38 42.3	
	comp=Z,5.4nm,0.7s						
KK31	**Karatay Array**	**47.88**	**311**	PcP	**PcP**	**10 40 10.4**	**0.0**
KKAR	**Karatay Array**	**47.88**	**311**	P	**P**	**10 38 41.8**	**0.0**
KKAR				IAmb	IAmb	10 38 44.3	
	comp=Z,4.4nm,1.2s						
KKAR					**PcP**	**10 40 10.3**	**0.0**
CHGR	**Chuyangaron**	**48.06**	**305**	P	**P**	**10 38 43.6**	**+0.2**
CHGR				IAmb	IAmb	10 38 45.0	
	comp=Z,9.5nm,1.0s						
MORW	**Morawa**	**48.55**	**185**	P	**P**	**10 38 46.3**	**-0.7**
FORT	**Forrest**	**50.59**	**172**	P	**P**	**10 39 02.2**	**-0.2**
BRVK	**Borovoye**	**50.97**	**323**	P	**P**	**10 39 05.6**	**+0.4**
BRVK				IAmb	IAmb	10 39 06.4	
	comp=Z,5.9nm,0.8s						
NWAO	**Narrogin (SRO)**	**52.30**	**183**	P	**P**	**10 39 14.5**	**-0.7**
NWAO	**Narrogin (SRO)**	**52.30**	**183**	P	**P**	**10 39 14.8**	**-0.5**
NWAO				IAmb	IAmb	10 39 15.8	
	comp=Z,26nm,1.1s						
TIXI	**Tiksi**	**52.31**	**3**	P	**P**	**10 39 15.9**	**+1.0**
TIXI				IAmb	IAmb	10 39 17.1	
	comp=Z,7.8nm,1.1s						
NRIK	**Noril'sk**	**53.69**	**346**	P	**P**	**10 39 25.8**	**+0.7**
	comp=Z,4.6nm,0.8s,baz=129,slow=5.7,SNR=6.2						
BBOO	**Buckleboo**	**54.17**	**164**	P	**P**	**10 39 28.6**	**-0.4**
STKA	**Stephens Creek**	**55.01**	**158**	P	**P**	**10 39 35.0**	**-0.1**
	comp=Z,3.6nm,0.7s,baz=343,slow=7.5,SNR=11						
STKA	**Stephens Creek**	**55.01**	**158**	P	**P**	**10 39 35.6**	**+0.4**
ABKAR	**Akbulak array**	**56.27**	**317**	P	**P**	**10 39 43.8**	**-0.3**
ABKAR	**Akbulak array**	**56.27**	**317**	P	**P**	**10 39 44.2**	**+0.1**
AKTO	**Aktyubinsk**	**57.68**	**318**	P	**P**	**10 39 54.7**	**+0.6**
	comp=Z,1.6nm,0.7s,baz=91,slow=7.2,SNR=7.0						
ARU	**Arti**	**58.45**	**325**	P	**P**	**10 39 59.4**	**0.0**
AKH	**Akhalkalaki**	**67.74**	**308**	P	**P**	**10 41 01.2**	**-0.4**
KBZ	**Khabaz**	**67.91**	**310**	P	**P**	**10 41 02.0**	**-0.4**
	comp=Z,6.8nm,0.9s,baz=55,slow=24,SNR=13						
KIV	**Kislovodsk**	**68.03**	**310**	P	**P**	**10 41 04.3**	**+1.0**
GEVA	**Gevas**	**68.48**	**304**	P	**P**	**10 41 07.0**	**+0.7**
GEVA				IAmb	IAmb	10 41 08.0	
	comp=Z,8.5nm,1.0s						
RAYN	**Ar Rayn**	**69.14**	**288**	P	**P**	**10 41 09.8**	**-0.7**
RAYN				IAmb	IAmb	10 41 11.5	
	comp=Z,2.7nm,0.8s						
IMAR	**Indian Mountai**	**70.58**	**26**	P	**P**	**10 41 19.4**	**+0.9**
TOLK	**Toolik Lake Re**	**71.92**	**23**	P	**P**	**10 41 27.6**	**+0.9**
TOLK				IAmb	IAmb	10 41 29.3	
	comp=Z,4.8nm,0.9s						
I23K	**Minto, Yukon-K**	**72.49**	**26**	P	**P**	**10 41 30.8**	**+0.8**
MDM	**Murphy Dome**	**72.99**	**26**	P	**P**	**10 41 33.9**	**+0.7**
MDM				IAmb	IAmb	10 41 35.2	
	comp=Z,6.4nm,1.0s						
IL31		**73.59**	**27**	P	**P**	**10 41 38.0**	**+1.4**
IL31				IAmb	IAmb	10 41 52.2	
	comp=Z,8.2nm,1.4s						
ILAR	**Eielson Array**	**73.59**	**27**	P	**P**	**10 41 35.5**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=290,slow=4.4,SNR=15						
ILAR	**Eielson Array**	**73.59**	**27**	P	**P**	**10 41 35.1**	**-1.5**
BMAR	**Burnt Mountain**	**73.98**	**24**	P	**P**	**10 41 39.4**	**+0.5**
FINES	**FINESS Array B**	**75.10**	**330**	P	**P**	**10 41 45.3**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=97,slow=9.8,SNR=8.0						
FINES	**FINESS Array B**	**75.10**	**330**	P	**P**	**10 41 45.5**	**+0.1**
BRTR	**Keskin Array B**	**75.42**	**307**	P	**P**	**10 41 48.1**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=90,slow=6.3,SNR=2.0						
BRTR	**Keskin Array B**	**75.42**	**307**	P	**P**	**10 41 47.9**	**-0.1**
K27K	**Chicken**	**75.80**	**27**	P	**P**	**10 41 50.1**	**+0.7**
K27K				IAmb	IAmb	10 41 51.8	
	comp=Z,3.8nm,0.8s						
AKASG	**Malin Array Be**	**75.90**	**319**	P	**P**	**10 41 49.7**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=60,slow=6.0,SNR=8.6						
AKASG	**Malin Array Be**	**75.90**	**319**	P	**P**	**10 41 49.1**	**-1.1**
AKBB	**Malin Array Si**	**75.90**	**319**	P	**P**	**10 41 48.7**	**-1.5**
AKBB				IAmb	IAmb	10 41 50.3	
	comp=Z,5.0nm,0.8s						
BCAR	**Beaver Creek A**	**76.18**	**28**	P	**P**	**10 41 52.1**	**+0.4**
DAWY	**Dawson**	**76.92**	**26**	P	**P**	**10 41 56.2**	**+0.4**
DAWY				IAmb	IAmb

PB09 *i* S **Sn** **10 34 08.1 +0.3**
PB09 IAML 10 34 11.2
comp=E,423nm,0.9s
PB09 IPOC Station P 1.46 318 Pn 10 33 47.7 +0.9
PB03 IPOC Station P 1.68 299 ⇑*iP* **Pn 10 33 49.6 +0.4**
PB03 *i* S **Sn** **10 34 11.8 -0.4**
PB03 IAML 10 34 12.8
comp=N,1µm,0.3s
PB05 IPOC Station P 1.87 271 ⇑*iP* **Pn 10 33 51.5 0.0**
PB05 *i* S **Sn** **10 34 15.2 -0.9**
PB05 IAML 10 34 24.7
comp=E,519nm,0.4s
PB04 IPOC Station P 1.90 286 ⇑*iP* **Pn 10 33 52.1 +0.1**
PB04 IAML 10 34 23.3
comp=N,899nm,0.3s
PB04 IPOC Station P 1.90 286 Pn 10 33 51.8 -0.1
PB07 IPOC Station P 1.96 306 ⇑*iP* **Pn 10 33 53.0 +0.4**
PB07 *i* S **Sn** **10 34 17.2 -1.0**
PB07 IAML 10 34 24.6
comp=E,1µm,0.4s
PB07 IPOC Station P 1.96 306 Pn **Pn 10 33 52.3 -0.3**
PB01 IPOC Station P 2.20 326 ⇑*iP* **Pn 10 33 56.0 +0.4**
PB01 *i* S **Sn** **10 34 23.3 -0.1**
PB01 IAML 10 34 25.6
comp=N,345nm,0.2s
PB01 IPOC Station P 2.20 326 Pn **Pn 10 33 56.0 +0.4**
PB10 IPOC Station P 2.27 254 IAML 10 34 36.6
comp=N,428nm,0.4s
PB10 IPOC Station P 2.27 254 Pn **Pn 10 33 56.3 -0.1**
GO02 Mina Guanaco 2.61 209 ⇑*iP* **Pn 10 34 01.4 +0.4**
GO02 *i* S **Sn** **10 34 33.5 +0.5**
GO02 Mina Guanaco 2.61 209 Pn **Pn 10 34 01.4 +0.4**
PB14 IPOC Station P 2.68 229 *eP* **Pn 10 34 01.5 -0.4**
PB14 *i* S **Sn** **10 34 33.3 -1.2**
PB14 IAML 10 34 45.1
comp=E,177nm,0.5s
PB14 IPOC Station P 2.68 229 Pn **Pn 10 34 01.4 -0.4**
PATCX Punta Patache 2.75 318 ⇓*iP* **Pn 10 34 02.2 -0.5**
PATCX *i* S **Sn** **10 34 32.9 -3.1**
PATCX IAML 10 34 42.9
comp=N,286nm,0.5s
PATCX Punta Patache 2.75 318 Pn 10 34 02.4 -0.3
PB08 IPOC Station P 2.88 341 ⇓*iP* **Pn 10 34 05.6 +1.1**
PB08 *i* S **Sn** **10 34 40.1 +0.8**
PB08 IAML 10 34 44.6
comp=E,124nm,0.5s
PB08 IPOC Station P 2.88 341 Pn 10 34 05.7 +1.2
TA01 Diego Aracena 2.97 321 *eP* **Pn 10 34 05.7 +0.4**
TA01 IAML 10 34 50.1
comp=E,174nm,0.4s
TA01 Diego Aracena 2.97 321 Pn 10 34 05.6 +0.4
PB11 IPOC Station P 3.40 336 *eP* **Pn 10 34 10.4 -0.8**
PB11 IAML 10 34 59.9
comp=N,177nm,0.6s
PB11 IPOC Station P 3.40 336 Pn 10 34 10.9 -0.3
PSGC Pisagua 3.74 331 *eP* **Pn 10 34 14.1 -1.5**
PSGCX Pisagua 3.74 331 Pn 10 34 15.5 -0.1
AC01 Pan de Azucar 3.92 214 *eP* **Pn 10 34 16.2 -1.7**
AC01 Pan de Azucar 3.92 214 Pn **Pn 10 34 16.9 -1.1**
MNMC Minye Minye 3.96 340 *eP* **Pn 10 34 18.5 -0.2**
MNMC Minye Minye 3.96 340 Pn **Pn 10 34 18.6 -0.2**
AC02 Maricunga 4.03 192 ⇑*iP* **Pn 10 34 20.2 +0.5**
AC02 Maricunga 4.03 192 Pn 10 34 20.2 +0.5
PB16 IPOC Station P 4.70 344 *eP* **Pn 10 34 29.6 +0.8**
PB16 IPOC Station P 4.70 344 Pn 10 34 30.0 +1.2
GO03 Copiap 5.04 201 *eP* **Pn 10 34 30.3 -2.7**
GO03 Copiap 5.04 201 Pn 10 34 31.3 -1.6
AC04 Llanos de Chal 5.91 206 Pn **Pn 10 34 40.6 -3.8**
AC05 El Transito 6.22 197 Pn **Pn 10 34 46.6 -2.2**
LCO Las Campanas 6.51 200 Pn **Pn 10 34 49.6 -3.2**
LPAZ La Paz 6.56 0 P **Pn 10 34 53.8 -0.2**
comp=N,1.2nm,0.3s,baz=168,slow=5.9,SNR=19
LPAZ La Paz 6.56 0 Pn **Pn 10 34 55.1 +1.2**
CO01 Juntas del Tor 7.27 193 Pn 10 35 01.1 -1.9
GO04 Tololo Observa 7.63 197 Pn 10 35 04.8 -3.1
CO03 El Pedregal 8.23 195 Pn 10 35 12.4 -3.5
CO02 Combarbal 8.66 196 Pn **Pn 10 35 17.3 -4.4**
SIV San Ignacio 9.59 46 P **Pn 10 35 30.5 -3.7**
comp=N,17nm,0.3s,baz=242,slow=12,SNR=128
SIV S Sn 10 37 11.2 -9.0
comp=N,0.6nm,0.3s,baz=146,slow=13,SNR=3.6
AQDB Aquidauana 11.85 81 *eP* **Pn 10 36 06.3 +2.0**
VILB Vilhena 12.45 39 *eP* **Pn 10 36 10.9 -1.4**
PP1B Ponte de Pedra 13.54 70 *eP* **Pn 10 36 27.2 +0.8**
PTGB Pitanga 14.86 100 *eP* **P 10 36 46.1 +0.3**
CPSB Cacapava Do Su 15.15 123 *eP* **P 10 36 49.0 +0.1**
PCMB Pacaembu 15.72 89 *eP* **P 10 36 56.0 +0.8**
CLDB Colider 16.81 47 *eP* **Pn 10 37 05.8 -1.4**
ITRB Iturama 16.90 83 *eP* **Pn 10 37 09.2 +0.7**
ARAG Araguaiana, MT 17.01 68 *eP* **P 10 37 09.1 -0.5**
FRTB Fartura 17.13 95 *eP* **P 10 37 10.9 0.0**
BB19B Bebedouro 18.32 85 *eP* **P 10 37 23.8 -0.1**
IPMB Ipameri, GO 19.33 79 *eP* **P 10 37 34.9 -0.1**
SNDB Serra Nova Dou 19.40 59 *eP* **P 10 37 34.0 -1.7**
VAO Valinhos 19.54 94 *eP* **P 10 37 35.8 -1.4**
NPGB Novo Progresso 20.01 40 *eP* **P 10 37 40.0 -2.3**
BDFB Brasilia 20.34 73 P **P 10 37 45.1 -0.8**
comp=N,3.1nm,0.4s,baz=236,slow=13,SNR=4.7
MACA Manacapuru-AM 20.91 21 *eP* **P 10 37 49.6 -2.4**
ITTB Itaituba 22.00 35 *eP* **P 10 38 00.7 -2.8**
JANB Januaria 23.85 75 *eP* **P 10 38 19.4 -1.9**
SMTB Santa Maria do 24.17 58 *eP* **P 10 38 23.3 -0.9**
PRPB Parauapebas 24.28 50 *eP* **P 10 38 23.5 -1.6**
SNAA Sanae 60.76 161 P **P 10 43 18.4 +0.9**
comp=N,1.3nm,0.6s,baz=284,slow=8.7,SNR=6.9
SNAA Sanae 60.76 161 P P 10 43 18.6 +1.2
WHTX Lake Whitney, 61.34 332 P **P 10 43 19.8 -2.0**
WHTX IAmb IAmb 10 43 25.8
comp=Z,4.6nm,1.0s
TXAR Lajitas Array 62.15 325 P **P 10 43 28.2 +0.8**
comp=Z,0.2nm,0.6s,baz=148,slow=8.6,SNR=1.8
QSPA South Pole Qui 67.31 180 P **P 10 44 02.2 +1.7**
QSPA IAmb IAmb 10 44 03.0
comp=Z,3.1nm,0.6s
DBIC Dimbokro 68.49 73 P **P 10 44 08.2 -0.2**
comp=Z,3.7nm,0.7s,baz=235,slow=4.6,SNR=5.2
DBIC Dimbokro 68.49 73 P **P 10 44 08.3 -0.2**
PDAR Pinedale Array 75.64 330 P **P 10 44 51.6 +0.8**
comp=Z,0.3nm,0.4s,baz=119,slow=8.6,SNR=4.7
PDAR Pinedale Array 75.64 330 P P 10 44 51.0 +0.2
ULM Lac du Bonnet 76.84 342 P **P 10 44 57.6 +0.5**
comp=Z,1.4nm,0.5s,baz=197,slow=7.1,SNR=4.1
ULM Lac du Bonnet 76.84 342 P **P 10 44 57.5 +0.5**
ULM IAmb IAmb 10 45 11.8
comp=Z,12nm,1.3s
NVAR Mina Array Bea 77.00 322 P **P 10 45 00.7 +2.2**
comp=Z,0.1nm,0.3s,baz=192,slow=8.3,SNR=1.7
TOA0 Torodi Ar. Sit 77.19 70 P **P 10 45 00.1 +0.3**
TOA0 IAmb IAmb 10 45 02.0
comp=Z,3.8nm,0.8s
TORD Torodi Ar. Bea 77.19 70 P **P 10 44 59.7 -0.1**
comp=Z,2.0nm,0.4s,baz=259,slow=5.4,SNR=26
TORD Torodi Ar. Bea 77.19 70 P P 10 44 59.8 -0.1
MAW Mawson 82.81 163 P **P 10 45 30.6 +1.5**
comp=Z,1.6nm,0.5s,baz=229,slow=9.3,SNR=2.2
YKA Yellowknife Ar 92.71 340 P **P 10 46 17.8 +1.1**
comp=Z,0.4nm,0.5s,baz=145,slow=4.4,SNR=4.0
ASAR Alice Springs 128.99 206 PKP **PKPdf 10 52 13.6 +0.5**
comp=Z,0.4nm,0.7s,baz=121,slow=1.1,SNR=5.4
WRA Warramunga Arr 132.09 209 PKP **PKiKP 10 52 20.3 +0.2**
comp=Z,0.5nm,0.6s,baz=151,slow=1.6,SNR=12
WRA Warramunga Arr 132.09 209 PKPdf **PKPdf 10 52 18.9 -0.1**

IDC 18 10:41:08.0±2.7,19°56N×120°68E,h0km,mb3.7/4,
mb1 3.9/4,mb1mx3.5/38,mbtmp3.7/4,MS2.9/1,Ms1 3.1/1,
ms1mx2.4/46,Error ellipse: s-maj=186.7km
s-min=24.1km az=62.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.59**	**271**	LR		LR	10 53 19.8	
	comp=Z,33nm,18.6s,baz=280,slow=36							
FITZ	**Fitzroy Crossi**	**37.74**	**172**	P		P	10 48 24.5	-1.3
	0.9nm,0.7s,baz=336,slow=10.0,SNR=2.4							
MKAR	**Makanchi Array**	**41.44**	**320**	P		P	10 48 56.3	-0.2
	0.9nm,0.8s,baz=112,slow=7.2,SNR=2.8							
WRA	**Warramunga Arr**	**41.48**	**160**	P		P	10 48 57.0	0.0
	0.8nm,0.6s,baz=342,slow=9.0,SNR=13							
ASAR	**Alice Springs**	**44.86**	**163**	P		P	10 49 25.1	+0.8
	0.5nm,0.6s,baz=354,slow=7.8,SNR=10							

*SOME **18** 10:52:23.6,40°.90N×70°.25E,h15km*
*KRNET **18** 10:52:24.5±0.1,41°.23N×70°.13E,mb2.5*
ISC 18 10:52:25.2±1.3,41°00N±0°.03×70°33E±0°.04,h4km±12km,
n14,σ2ᵍ53/25,19C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.81**	**49**	⇑*iP*		**Pg**	**10 52 40.1**	**-0.7**
	baz=73							
TRKS				⇑*iS*		**Sg**	**10 52 51.3**	**0.0**
	baz=73							
BTK	**Batken**	**1.01**	**158**	⇑*iP*		Pn	10 52 48.7	+2.5
	baz=56							
BTK				⇑*iS*		Sn	10 53 05.9	+5.0
	baz=56							
IUG	**Iuzhnay**	**1.17**	**349**	*eP*		**Pg**	**10 52 49.3**	**+1.6**
	25nm,0.2s							
IUG				*eS*		**Sn**	**10 53 07.4**	**+2.3**
	61nm,0.3s							
DRK	**Karamyk**	**1.89**	**143**	⇑*iP*		**Pg**	**10 53 03.6**	**+2.3**
	baz=43							
DRK				⇑*iS*		**Sg**	**10 53 31.6**	**+5.8**
	baz=43							
OHH	**Osh**	**1.92**	**103**	⇑*iP*		**Pg**	**10 53 03.0**	**+1.0**
	baz=8.0							
OHH				⇑*iS*		**Sg**	**10 53 30.8**	**+3.8**
	baz=8.0							
GAR	**Garm**	**1.99**	**180**	⇑*iP*		**Pg**	**10 53 04.0**	**+0.6**
	baz=76							
GAR				⇑*iS*		**Sg**	**10 53 32.8**	**+3.6**
	baz=76							
ARSB	**Arslanbob**	**2.03**	**80**	⇓*iP*		**Pg**	**10 53 03.2**	**-0.9**
	baz=87							
ARSB				⇓*iS*		**Sg**	**10 53 31.2**	**+0.8**
	baz=87							
KK31	**Karatay Array**	**2.11**	**4**	⇑Pg		**Pb**	**10 53 03.1**	**-0.9**
	1.1nm,0.3s,baz=194,slow=16,SNR=20							
KK31					Lg	Lg	10 53 32.4	
	1.1nm,0.2s,baz=191,slow=26,SNR=6.3							
MNAS	**Manas**	**2.21**	**47**	⇑*iP*		**Pn**	**10 53 03.3**	**+0.5**
	baz=54							
MNAS				⇑*iS*		**Sn**	**10 53 31.4**	**+0.8**
	baz=54							
CHGR	**Chuyangaron**	**2.50**	**201**	⇑*iP*		**Pg**	**10 53 09.7**	**-3.5**
	baz=96							
CHGR				⇑*iS*		**Sg**	**10 53 43.8**	**-1.8**
	baz=96							
SFK	**Sufi-Kurgan**	**2.61**	**111**	⇓*iP*		**Pg**	**10 53 12.8**	**-2.4**
	baz=14							
SFK				⇓*iS*		**Sg**	**10 53 47.6**	**-1.5**
	baz=14							
AML	**Almayashu**	**2.77**	**65**	⇑*iP*		**Pb**	**10 53 12.8**	**-2.7**
	baz=70							
AML				⇑*iS*		**Sn**	**10 53 47.1**	**+2.3**
	baz=70							
MRKS	**Merke**	**2.78**	**50**	*eP*		**Pb**	**10 53 16.7**	**+1.2**
	4.5nm,0.4s							
MRKS				*eS*		**Sg**	**10 53 54.7**	**+0.2**
	4.8nm,0.5s							
ARLS	**Aral**	**3.12**	**73**	⇑*iP*		**Pb**	**10 53 18.4**	**-3.0**
	baz=77							
ARLS				⇑*iS*		**Sb**	**10 53 56.9**	**-3.1**
	baz=77							

*IDC **18** 10:58:11.9±0.7,19°.41N×120°.57E,h0km,mb4.0/12,*
mb1 4.2/12,mb1mx3.8/55,mbtmp4.0/12,MS3.0/2,
Ms1 3.1/2,ms1mx2.5/44,Error ellipse: s-maj=32.0km
s-min=13.9km az=68.0
*NEIC **18** 10:58:12.8±1.6,19°.44N±0°.06×120°.4E±0°.1,h10km±1km,*
mb4.3/12,Error ellipse: s-maj=19.0km s-min=10.7km
az=272.0
ISC 18 10:58:15.1±0.6,19°44N±0°.08×120°4E±0°.1,h23km,n34,
σ1ᵍ05/33,mb4.2/16,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.42**	**10**	P		**Pn**	**10 59 04.9**	**-2.2**
TPUB	**Ta-pu**	**3.85**	**3**	P		**Pn**	**10 59 12.2**	**-0.8**
YULB	**Yu-li**	**4.02**	**11**	P		**Pn**	**10 59 14.6**	**-0.7**
SSLB	**Suanglung**	**4.36**	**6**	P		**Pn**	**10 59 19.0**	**-0.9**
YHNB	**Yeheng**	**5.28**	**9**	P		**Pn**	**10 59 32.0**	**-0.7**
QIZ	**Qiongzhong**	**10.01**	**269**	P		**Pn**	**11 00 36.3**	**-1.3**
CMAR	**Chiang Mai Arr**	**20.35**	**271**	P		Pn	11 02 52.6	+0.4
	1.5nm,0.9s,baz=77,slow=8.6,SNR=9.3							
CMAR					LR	LR	11 10 14.5	
	comp=Z,40nm,18.8s,baz=113,slow=35							
CMAR	**Chiang Mai Arr**	**20.35**	**271**	P		**P**	**11 02 50.6**	**+0.5**
BJT	**Baijiatuan**	**20.84**	**351**	P		**P**	**11 02 53.5**	**-1.6**
BJT					IAmb	IAmb	11 03 06.1	
	comp=Z,12nm,0.9s							
SONM	**Songino Array**	**30.54**	**341**	P		**P**	**11 04 26.9**	**0.0**
	comp=Z,0.6nm,0.6s,baz=172,slow=11,SNR=5.2							
SONM	**Songino Array**	**30.54**	**341**	P		**P**	**11 04 27.6**	**+0.8**
KLR	**Kul'dur**	**31.09**	**14**	P		**P**	**11 04 33.0**	**+1.5**
	comp=Z,0.6nm,0.4s,baz=250,slow=11,SNR=4.4							
KLR					LR	LR	11 18 07.0	
	comp=Z,24nm,20.4s,baz=230,slow=38							
KNRA	**Kununurra**	**35.84**	**166**	P		**P**	**11 05 12.3**	**-0.9**
KNRA					IAmb	IAmb	11 05 23.4	
	comp=Z,12nm,1.2s							
FITZ	**Fitzroy Crossi**	**37.65**	**172**	P		**P**	**11 05 27.9**	**-0.7**
	comp=Z,3.7nm,1.0s,baz=11,slow=4.5,SNR=6.5							
FITZ	**Fitzroy Crossi**	**37.65**	**172**	P		**P**	**11 05 29.1**	**+0.5**
FITZ					IAmb	IAmb	11 05 29.5	
	comp=Z,6.1nm,1.1s							
WB0	**Warramunga Arr**	**41.30**	**160**	P		**P**	**11 05 58.1**	**-0.9**
MKAR	**Makanchi Array**	**41.38**	**320**	P		**P**	**11 06 00.8**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=119,slow=9.0,SNR=6.8							
MKAR	**Makanchi Array**	**41.38**	**320**	P		**P**	**11 06 00.6**	**+1.1**
WRA	**Warramunga Arr**	**41.44**	**160**	P		**P**	**11 05 58.6**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=342,slow=8.9,SNR=15							
WB2	**Warramunga Arr**	**41.45**	**160**	P		**P**	**11 05 60.0**	**-0.3**
WB2					IAmb	IAmb	11 06 25.8	
	comp=Z,7.2nm,1.2s							
WR0	**Warramunga Arr**	**41.52**	**160**	P		**P**	**11 06 00.2**	**-0.6**
WR0					IAmb	IAmb	11 06 14.0	
	comp=Z,2.6nm,0.7s							
ZALV	**Zalesovo Beam**	**43.92**	**330**	P		**P**	**11 06 20.1**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=119,slow=9.3,SNR=6.1							
ZALV	**Zalesovo Beam**	**43.92**	**330**	P		**P**	**11 06 19.1**	**-0.8**
ASAR	**Alice Springs**	**44.81**	**162**	P		**P**	**11 06 28.2**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=340,slow=7.0,SNR=18							
ASAR	**Alice Springs**	**44.81**	**162**	P		**P**	**11 06 27.0**	**-0.4**
KURK	**Kurchatov**	**45.37**	**323**	P		**P**	**11 06 30.3**	**-1.3**
KURK					IAmb	IAmb	11 06 42.7	
	comp=Z,6.3nm,1.1s							
KURBB	**Kurchatov Arra**	**45.38**	**323**	P		**P**	**11 06 32.7**	**+1.0**
	comp=Z,4.4nm,0.8s,baz=122,slow=7.9,SNR=15							
MORW	**Morawa**	**48.41**	**185**	P		**P**	**11 06 55.6**	**+0.1**
BBOO	**Buckleboo**	**54.06**	**164**			**P**	**11 07 38.6**	**+0.7**
STKA	**Stephens Creek**	**54.91**	**158**	P		**P**	**11 07 44.6**	**+0.5**
	comp=Z,3.1nm,1.0s,baz=321,slow=7.2,SNR=5.1							
STKA	**Stephens Creek**	**54.91**	**158**	P		**P**	**11 07 42.6**	**-1.5**
KBZ	**Khabaz**	**67.94**	**310**	P		**P**	**11 09 13.6**	**+1.4**
	comp=Z,4.0nm,1.0s,baz=53,slow=20							
TOLK	**Toolik Lake Re**	**72.07**	**23**	P		**P**	**11 09 38.0**	**+0.8**
TOLK					IAmb	IAmb	11 09 46.4	
	comp=Z,4.1nm,1.2s							
ILAR	**Eielson Array**	**73.75**	**26**	P		**P**	**11 09 47.5**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=286,slow=4.6,SNR=4.2							

*IDC **18** 10:59:07.8±0.8,19°.52N×120°.60E,h0km,mb3.8/10,*
mb1 4.0/10,mb1mx3.7/55,mbtmp3.9/10,MS3.3/2,
Ms1 3.3/2,ms1mx2.6/42,Error ellipse: s-maj=32.5km
s-min=16.2km az=72.0
ISC 18 10:59:11.3±0.9,19°.5N±0°.1×120°.5E±0°.2,h23km,n12,
σ0ᵍ84/10,mb3.9/9,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**20.45**	**271**	P		**P**	**11 03 47.2**	**-0.1**
	0.4nm,0.3s,baz=72,slow=8.6,SNR=2.8							
SONM	**Songino Array**	**30.52**	**341**	P		**P**	**11 05 22.2**	**-0.7**
	0.7nm,0.7s,baz=153,slow=6.5,SNR=2.8							
KLR	**Kul'dur**	**31.00**	**14**	P		**P**	**11 05 27.8**	**+0.9**
	1.2nm,0.6s,baz=224,slow=8.3,SNR=4.1							
FITZ	**Fitzroy Crossi**	**37.70**	**172**	P		**P**	**11 06 24.1**	**-1.0**
	1.9nm,0.9s,baz=346,slow=4.2,SNR=2.3							
MKAR	**Makanchi Array**	**41.40**	**320**	P		**P**	**11 06 56.6**	**+0.7**
	2.7nm,1.0s,baz=118,slow=7.5,SNR=4.8							
WRA	**Warramunga Arr**	**41.46**	**160**	P		**P**	**11 06 57.0**	**+0.4**
	1.5nm,0.6s,baz=341,slow=9.2,SNR=5.1							
ZALV	**Zalesovo Beam**	**43.92**	**330**	P		**P**	**11 07 16.1**	**0.0**
	1.5nm,0.7s,baz=133,slow=8.1,SNR=3.6							
ASAR	**Alice Springs**	**44.84**	**163**	P		**P**	**11 07 24.7**	**+0.9**
	0.8nm,0.6s,baz=343,slow=6.9,SNR=3.4							
KURBB	**Kurchatov Arra**	**45.39**	**323**	P		**P**	**11 07 28.5**	**+0.6**
	2.4nm,0.7s,baz=124,slow=7.9,SNR=5.1							
HNR	**Honiara**	**48.30**	**123**	LR		LR	11 24 59.9	
	comp=Z,34nm,22.0s,baz=282,slow=32							
NRIK	**Noril'sk**	**53.77**	**346**	LR		LR	11 32 53.0	
	comp=Z,26nm,21.7s,baz=224,slow=38							
ILAR	**Eielson Array**	**73.64**	**27**	P		**P**	**11 10 41.7**	**-0.9**
	0.3nm,0.9s,baz=262,slow=6.3,SNR=2.5							

*IDC **18** 11:00:20.3±1.8,1°.80N×126°.45E,h0km,mb3.4/4,*
mb1 3.5/4,mb1mx3.3/48,mbtmp3.4/4,Error ellipse:
s-maj=184.7km s-min=20.9km az=66.0
*DJA **18** 11:00:24.4±1.6,2°N±3°×12°6E±°,h26km±14km,M3.2/6,*
MLv3.2/6
ISC 18 11:00:25.9±1.0,1°77N±0°.09×126°5E±0°.1,h47km,n7,
σ1ᵍ46/9,mb3.3/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.30**	**140**	P		**Pn**	**11 00 46.9**	**-0.8**
TNTI				S		**Sn**	**11 01 03.8**	**-0.1**
SGSI	**Sangihe**	**2.15**	**332**	P		**Pn**	**11 00 58.7**	**-0.6**
SGSI				S		**Sn**	**11 01 24.2**	**-0.5**
GTOI	**Gorontalo**	**3.69**	**252**	P		**Pn**	**11 01 19.8**	**-0.6**
WRA	**Warramunga Arr**	**22.90**	**161**	P		**P**	**11 05 24.6**	**-1.3**
	0.4nm,0.5s,baz=339,slow=11,SNR=9.7							
ASAR	**Alice Springs**	**26.28**	**165**	P		**P**	**11 05 59.6**	**+2.4**
	0.3nm,0.5s,baz=349,slow=14,SNR=3.2							
MKAR	**Makanchi Array**	**59.05**	**326**	P		**P**	**11 10 20.5**	**-0.7**
	0.3nm,0.4s,baz=114,slow=8.0,SNR=3.8							
KURBB	**Kurchatov Arra**	**63.27**	**328**	P		**P**	**11 10 51.5**	**+1.7**
	0.2nm,0.4s,baz=125,slow=8.0,SNR=2.9							

*IDC **18** 11:05:04.2±5.0,16°.13S×167°.91E,h177km±40km,mb4.0/6,*
mb1 4.0/7,mb1mx3.4/40,mbtmp4.4/7,Error ellipse:
s-maj=42.8km s-min=31.4km az=43.0
*NEIC **18** 11:05:04.5±1.1,16°.0S±0°.1×167°.9E±0°.2,h178km±13km,*
mb4.5/16,Error ellipse: s-maj=29.3km s-min=11.6km
az=51.0
ISC 18 11:05:03.6±1.7,16°09S±0°.09×168°0E±0°.2,h177km,n27,
σ0ᵍ90/28,mb4.5/12,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.00**	**310**			**Pn**	**11 05 31.4**	**+0.4**
DZM	**Mont Dzumac**	**6.13**	**194**	P		**Pn**	**11 06 33.6**	**+1.2**
	1.0nm,0.3s,baz=22,slow=19,SNR=16							
DZM				S		**Sn**	**11 07 40.4**	**-2.0**
	0.2nm,0.3s,baz=308,slow=20,SNR=4.6							
DZM	**Mont Dzumac**	**6.13**	**194**			**Pn**	**11 06 34.9**	**+2.5**
EIDS	**Eidsvold**	**18.30**	**237**			**Pn**	**11 09 05.6**	**-1.0**
OUZ	**Omahuta**	**19.70**	**166**	P		**Pn**	**11 09 21.5**	**-1.4**
OUZ				IAmb		IAmb	11 09 26.1	
	comp=Z,39nm,1.5s							
CTA	**Charters Tower**	**21.05**	**256**	P		**P**	**11 09 34.0**	**+0.1**
	comp=Z,2.5nm,0.4s,baz=81,slow=12,SNR=7.8							
CTAO	**Charters Tower**	**21.05**	**256**	P		**P**	**11 09 33.8**	**-0.1**
PMG	**Port Moresby**	**21.37**	**286**	P		**P**	**11 09 37.1**	**-0.4**
	comp=Z,13nm,0.8s,baz=83,slow=8.1,SNR=3.4							
PMG	**Port Moresby**	**21.37**	**286**	P		**P**	**11 09 38.8**	**+1.3**
PMG					IAmb	IAmb	11 09 41.1	
	comp=Z,16nm,0.8s							
COEN	**Coen**	**24.07**	**272**	P		**P**	**11 10 03.6**	**+0.7**
COEN					IAmb	IAmb	11 10 06.2	
	comp=Z,13nm,1.0s							
STKA	**Stephens Creek**	**28.68**	**232**	P		**P**	**11 10 44.4**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=78,slow=12,SNR=7.3							
STKA	**Stephens Creek**	**28.68**	**232**	P		**P**	**11 10 44.4**	**+0.2**
WB0	**Warramunga Arr**	**32.15**	**258**	P		**P**	**11 11 14.2**	**-0.6**
WB0					IAmb	IAmb	11 11 14.6	
	comp=Z,4.7nm,0.6s							
WRA	**Warramunga Arr**	**32.21**	**258**	P		**P**	**11 11 14.0**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=87,slow=8.5,SNR=47							
WRA	**Warramunga Arr**	**32.21**	**258**	P		**P**	**11 11 14.6**	**-0.8**
AS31	**Alice Springs**	**32.88**	**251**	P		**P**	**11 11 20.9**	**-0.2**
ASAR	**Alice Springs**	**32.88**	**251**	P		**P**	**11 11 20.6**	**-0.5**
	comp=Z,12nm,0.5s,baz=77,slow=8.7,SNR=211							
ASAR	**Alice Springs**	**32.88**	**251**	P		**P**	**11 11 20.8**	**-0.3**
BBOO	**Buckleboo**	**33.33**	**234**	P		**P**	**11 11 25.0**	**+0.1**
BBOO					IAmb	IAmb	11 11 54.2	
	comp=Z,16nm,1.4s							
MTN	**Manton Dam**	**35.81**	**270**	P		**P**	**11 11 46.0**	**-0.4**
MTN					IAmb	IAmb	11 11 49.8	
	comp=Z,11nm,1.3s							
FAKI	**Fak Fak**	**37.52**	**287**	P		**P**	**11 12 00.9**	**0.0**
KNRA	**Kununurra**	**37.70**	**265**	P		**P**	**11 12 02.1**	**-0.2**
KNRA					IAmb	IAmb	11 12 03.2	
	comp=Z,8.6nm,0.8s							
FORT	**Forrest**	**39.23**	**241**	P		**Pn**	**11 12 15.2**	**+0.3**
FORT					IAmb	IAmb	11 12 32.7	
	comp=Z,16nm,0.9s							
FITZ	**Fitzroy Crossi**	**40.48**	**261**	P		**P**	**11 12 25.4**	**+0.1**
	comp=Z,6.8nm,0.4s,baz=85,slow=7.9,SNR=74							
FITZ	**Fitzroy Crossi**	**40.48**	**261**	P		**P**	**11 12 25.6**	**+0.3**
FITZ					IAmb	IAmb	11 12 26.4	
	comp=Z,11nm,0.5s							
UGM	**Wanagama**	**56.66**	**271**	P		**P**	**11 14 29.2**	**+0.2**
ARCES	**ARCESS Array B**	**121.73**	**345**	PKP		**PKiKP**	**11 23 36.0**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=16,slow=2.0,SNR=5.6							

WEL 18 11:05:21.9±1.1,38°S±10°×18°0E±°,h33km,M3.4/19,
**ML3.7/19,ML

OUZ	**Omahuta**	**5.64**	**293**	P	Pn	11 06 44.0 +0.7
CTZ	**Chatham Island**	**6.70**	**158**	P	Pn	11 06 59.8 +2.0

IDC 18 11:08:20.4±12.0, 13°.86N×89°.87W, h0km, mb3.3/3, mb1 3.8/3, mb1mx3.6/26, mbtmp3.4/3, Error ellipse: s-maj=374.8km s-min=112.4km az=25.0, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**20.01**	**323**	P	P	11 12 55.1	+0.2
	0.4nm,0.8s,baz=134,slow=11,SNR=6.7						
NVAR	**Mina Array Bea**	**35.10**	**319**	P	P	11 15 15.6	-0.2
	0.6nm,0.7s,baz=129,slow=7.1,SNR=5.4						
ILAR	**Eielson Array**	**63.79**	**336**	P	P	11 18 54.2	0.0
	0.3nm,0.7s,baz=134,slow=6.5,SNR=3.4						

IDC 18 11:16:45.5±9.3, 11°.05S×166°.04E, h242km±97km, mb2.8/3, mb1 3.3/4, mb1mx3.0/35, mbtmp3.7/4, Error ellipse: s-maj=70.6km s-min=30.7km az=162.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.97**	**178**	P	Pn	11 19 17.4	+1.0
	2.9nm,0.3s,baz=25,slow=6.8,SNR=52						
DZM				S	S	11 21 17.0	-2.3
	0.1nm,0.3s,baz=311,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**31.76**	**250**	P	P	11 22 47.1	-0.3
	0.3nm,0.6s,baz=80,slow=8.9,SNR=5.1						
ASAR	**Alice Springs**	**33.05**	**243**	P	P	11 22 58.7	0.0
	0.4nm,0.6s,baz=67,slow=10,SNR=5.0						
ILAR	**Eielson Array**	**83.42**	**18**	P	P	11 28 44.9	-0.6
	0.2nm,0.5s,baz=237,slow=4.7,SNR=6.5						
ARCES	**ARCESS Array B**	**116.41**	**346**	PKP	PKiKP	11 35 00.2	+0.5
	4.0nm,1.0s,baz=75,slow=1.0,SNR=3.1						

*VIE **18** 11:19:12.5±0.5, 50°.52N×14°.11E, h0km, mb1.9/3, ml2.5/4, Error ellipse: s-maj=3.9km s-min=1.9km az=140.0 56 km NNW of Praha Suspected Mining explosion.*

ISC 18 11:19:15.4±3.3, 50°.6N±0°.1×14°.3E±0°.2, h0km, n4, σ0.94/7, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**1.28**	**76**	*e*Pg	**Pg**	**11 19 39.8**	**-0.1**
KSP				*e*Sg	**Sn**	**11 19 59.6**	**+1.2**
KRUC	**Moravsky**	**2.01**	**137**	*e*PN	**Pn**	**11 19 49.6**	**-0.9**
KRUC				*e*SG	**Sg**	**11 20 19.1**	**-0.7**
CONA	**Conrad Observa**	**2.81**	**159**	Pg	**Pb**	**11 20 06.9**	**+0.3**
	0.6nm,0.2s						
CONA				Sg	**Sg**	**11 20 46.2**	**+0.4**
	13nm,0.4s						
ARSA	**Arzberg**	**3.40**	**166**	Sg	**Sg**	**11 21 05.3**	**+0.7**
	4.2nm,0.4s						

IDC 18 11:21:17.2±4.2, 16°.84N×122°.75E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, Error ellipse: s-maj=360.4km s-min=26.1km az=62.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**38.28**	**162**	P	P	11 28 39.3	-0.3
	0.4nm,0.6s,baz=343,slow=9.0,SNR=7.6						
ASAR	**Alice Springs**	**41.70**	**165**	P	P	11 29 08.1	+0.1
	0.3nm,0.8s,baz=342,slow=6.9,SNR=5.5						
MKAR	**Makanchi Array**	**44.78**	**321**	P	P	11 29 32.6	-0.1
	0.8nm,0.8s,baz=99,slow=9.3,SNR=2.9						

WEL 18 11:21:46.7±0.5, 44°S±3°×177°3E±°, h5km, M2.3/7, ML2.4/7, MLv2.3/7, Error ellipse: s-maj=0.0km s-min=0.0km az=62.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.16**	**217**	P	Pg	11 21 50.1	+0.2
MQZ				S	Sg	11 21 52.9	+0.8
OKCZ	**Okains Bay**	**0.24**	**127**	P	Pg	11 21 52.9	+1.5
OKCZ				S	Sg	11 21 55.8	+1.1
AKCZ	**Akaroa Harbour**	**0.31**	**164**	P	Pg	11 21 53.1	+0.4
AKCZ				S	Sg	11 21 57.6	+0.8
AMCZ	**Amberley**	**0.41**	**346**	P	Pb	11 21 55.6	-0.8
AMCZ				S	Sg	11 22 00.6	+0.6
RACZ	**Rakaia**	**0.49**	**252**	P	Pg	11 21 56.7	+0.5
RACZ				S	Sb	11 22 04.1	-1.3
GVZ	**Greta Valley S**	**0.63**	**16**	P	Pg	11 21 58.4	-0.4
GVZ				S	Sg	11 22 07.7	+0.6
WACZ	**Wakanui South**	**0.78**	**242**	P	Pb	11 22 02.9	+0.2
WACZ				S	Sb	11 22 14.1	+0.5
LTZ	**Lake Taylor**	**0.88**	**334**	P	Pg	11 22 03.2	-0.4
MHCZ	**Mount Hutt**	**0.89**	**272**	P	Pg	11 22 03.7	0.0
ARCZ	**Arundel**	**1.23**	**252**	P	Pg	11 22 09.2	-1.0
RPZ	**Rata Peaks**	**1.27**	**263**	P	Pg	11 22 09.7	-1.2
KHZ	**Kahutara**	**1.28**	**26**	P	Pn	11 22 08.8	-2.4
THZ	**Tophouse**	**1.81**	**3**	P	Pn	11 22 16.2	-2.4
ODZ	**Otahua Downs**	**2.13**	**226**	P	Pg	11 22 27.4	0.0
PRHZ	**Porangahau**	**4.38**	**42**	P	Pn	11 22 53.2	-0.6
KRVZ	**Karewarewa**	**4.96**	**27**	P	Pn	11 22 59.5	-2.5

*GUC **18** 11:38:37.6±0.8, 18°.49S×71°.01W, h29km±5km, ML3.8*
*IDC **18** 11:38:46.5±8.2, 18°.72S×70°.47W, h89km±36km, mb3.5/2, mb1 3.6/3, mb1mx3.3/22, mbtmp3.7/3, MS3.3/2, Ms1 3.3/2, ms1mx2.9/17, Error ellipse: s-maj=206.8km s-min=25.2km az=118.0*

ISC 18 11:38:33.9±2.3, 18°.51S±0°.07×71°.1W±0°.1, h9km±12km, n24, σ1§12/26, 1C-7D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AP01	**Chacalluta**	**0.77**	**80**	*e*P	**Pg**	**11 38 49.6**	**+0.8**
AP01				*e*S	**Sg**	**11 38 58.6**	**-0.3**
AP01				IAML		11 39 00.5	
	comp=E,6μm,0.4s						
PSGC	**Pisagua**	**1.45**	**138**	⇓*i*P	**Pn**	**11 39 00.2**	**-0.2**
PSGC				*i*S	**Sn**	**11 39 17.9**	**-1.6**
PB16	**IPOC Station P**	**1.56**	**84**	⇓*i*P	**Pn**	**11 39 02.5**	**+0.2**
PB16				*i*S	**Sn**	**11 39 21.7**	**-1.3**
MNMC	**Minye Minye**	**1.59**	**113**	⇓*i*P	**Pn**	**11 39 02.3**	**-0.1**
MNMC				IAML		11 39 30.8	
	comp=E,5μm,0.2s						
PB11	**IPOC Station P**	**1.88**	**132**	⇓*i*P	**Pn**	**11 39 07.2**	**+0.9**
PB11				*i*S	**Sn**	**11 39 29.9**	**-0.2**
PB11				IAML		11 39 33.9	
	comp=N,2μm,0.6s						
TA02	**Huaiquique**	**1.99**	**152**	*e*P	**Pn**	**11 39 08.7**	**+0.9**
TA02				IAML		11 39 40.0	
	comp=N,1μm,0.3s						
TA01	**Diego Aracena**	**2.23**	**156**	⇓*i*P	**Pn**	**11 39 11.5**	**+0.4**
TA01				IAML		11 39 50.5	
	comp=N,524nm,0.7s						
PATCX	**Punta Patache**	**2.48**	**158**	⇓*i*P	**Pn**	**11 39 14.8**	**+0.3**
PATCX				IAML		11 40 03.9	
	comp=N,514nm,0.5s						
PB08	**IPOC Station P**	**2.48**	**131**	⇑*i*P	**Pn**	**11 39 16.2**	**+1.4**
PB08				*i*S	**Sn**	**11 39 45.5**	**+0.1**
PB08				IAML		11 39 52.5	
	comp=E,665nm,0.4s						
PB01	**IPOC Station P**	**2.96**	**148**	⇓*i*P	**Pn**	**11 39 21.7**	**+0.5**
PB01				IAML		11 39 57.2	
	comp=E,344nm,0.6s						
PB07	**IPOC Station P**	**3.41**	**160**	*e*P	**Pn**	**11 39 27.5**	**+0.1**
LPAZ	**La Paz**	**3.63**	**53**	P	**Pb**	**11 39 36.8**	**-1.9**
	comp=E,2.1nm,0.3s,baz=242,slow=3.1,SNR=41						
LPAZ				S	**Sn**	**11 40 15.6**	**+1.5**
	comp=E,1.9nm,0.3s,baz=182,slow=10,SNR=4.9						
LPAZ				LR	LR	11 41 23.3	
	comp=E,202nm,20.9s,baz=234,slow=48						
PB09	**IPOC Station P**	**3.72**	**152**	*e*P	**Pn**	**11 39 33.1**	**+1.4**
PB03	**IPOC Station P**	**3.75**	**160**	*e*P	**Pn**	**11 39 32.1**	**0.0**
PB04	**IPOC Station P**	**3.91**	**166**	*e*P	**Pn**	**11 39 33.8**	**-0.5**
PB05	**IPOC Station P**	**4.41**	**169**	*e*P	**Pn**	**11 39 39.9**	**-1.2**
PB06	**IPOC Station P**	**4.42**	**161**	*e*P	**Pn**	**11 39 40.5**	**-0.8**
PB15	**IPOC Station P**	**4.93**	**162**	*e*P	**Pn**	**11 39 47.2**	**-1.1**
H03N1	**Juan Fernandez**	**16.41**	**204**	T	T	11 59 51.5	
	baz=29,slow=73,SNR=41						
H03N2	**Juan Fernandez**	**16.42**	**204**	T	T	11 59 49.7	
	baz=29,slow=73,SNR=46						
H03N3	**Juan Fernandez**	**16.43**	**204**	T	T	11 59 49.5	
	baz=29,slow=73,SNR=40						

PLCA	**Paso Flores**	**22.15**	**179**	P	**P**	**11 43 32.8**	**+2.7**
	comp=E,2.8nm,0.8s,baz=335,slow=9.6,SNR=4.7						
RCBR	**Riachuelo**	**36.60**	**74**	LR	LR	12 01 42.0	
	comp=E,108nm,19.5s,baz=308,slow=38						
TORD	**Torodi Ar. Bea**	**78.38**	**72**	P	**P**	**11 50 35.0**	**-0.4**
	comp=E,0.8nm,0.8s,baz=254,slow=5.0,SNR=3.7						

IDC 18 11:40:25.9±6.0, 3°.33S×68°.71E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/52, mbtmp3.5/4, MS3.2/3, Ms1 3.2/3, ms1mx2.8/48, Error ellipse: s-maj=151.6km s-min=43.4km az=81.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**36.81**	**53**	P	P	11 47 36.0	0.0
	0.6nm,0.4s,baz=251,slow=8.5,SNR=4.2						
CMAR				LR	LR	12 00 58.3	
	comp=Z,21nm,20.1s,baz=240,slow=34						
GEYT	**Alibeck**	**42.21**	**347**	LR	LR	12 04 06.6	
	comp=Z,19nm,20.9s,baz=290,slow=34						
LBTB	**Lobatse**	**46.73**	**238**	LR	LR	12 05 53.1	
	comp=Z,60nm,18.2s,baz=62,slow=33						
SONM	**Songino Array**	**60.68**	**28**	P	P	11 50 39.1	-0.1
	0.1nm,0.3s,baz=213,slow=7.7,SNR=3.7						
WRA	**Warramunga Arr**	**65.97**	**110**	P	P	11 51 14.6	-0.1
	0.7nm,1.1s,baz=288,slow=5.8,SNR=5.2						
ASAR	**Alice Springs**	**65.98**	**114**	P	P	11 51 14.9	+0.2
	0.3nm,0.8s,baz=282,slow=6.7,SNR=3.0						

*IDC **18** 11:45:55.5±1.3, 19°.53N×120°.67E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/55, mbtmp3.8/6, Error ellipse: s-maj=60.4km s-min=18.6km az=60.0*
*NEIC **18** 11:45:56.8±2.0, 19°.48N±0°.05×120°.36E±0°.10, h10km±1km, mb4.3/7, Error ellipse: s-maj=17.1km s-min=6.6km az=65.0*

ISC 18 11:45:59.0±0.9, 19°.51N±0°.10×120°.4E±0°.1, h23km, n25, σ1§11/24, mb4.2/9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.36**	**11**	Pn	**Pn**	**11 46 49.0**	**-1.1**
TPUB	**Ta-pu**	**3.78**	**3**	Pn	**Pn**	**11 46 53.8**	**-2.1**
YULB	**Yu-li**	**3.96**	**12**	Pn	**Pn**	**11 46 58.0**	**-0.3**
SSLB	**Suanglung**	**4.29**	**7**	Pn	**Pn**	**11 47 03.0**	**+0.1**
YHNB	**Yeheng**	**5.22**	**10**	Pn	**Pn**	**11 47 15.4**	**-0.3**
HKPS	**Hong Kong Po S**	**6.47**	**296**	Pn	**Pn**	**11 47 30.7**	**-2.1**
QIZ	**Qiongzhong**	**9.98**	**269**	Pn	**Pn**	**11 48 19.9**	**-1.2**
KKM	**Kota Kinabalu**	**13.99**	**197**	Pn	Pn	11 49 11.4	-4.6
CMAR	**Chiang Mai Arr**	**20.32**	**271**	P	**P**	**11 50 35.6**	**+2.0**
	0.4nm,0.3s,baz=81,slow=8.4,SNR=4.5						
FITZ	**Fitzroy Crossi**	**37.72**	**172**	P	**P**	**11 53 13.0**	**0.0**
MKAR	**Makanchi Array**	**41.31**	**320**	P	**P**	**11 53 44.0**	**+1.2**
	1.3nm,0.8s,baz=112,slow=9.6,SNR=4.9						
MKAR	**Makanchi Array**	**41.31**	**320**	P	**P**	**11 53 43.0**	**+0.2**
WB0	**Warramunga Arr**	**41.37**	**160**	P	**P**	**11 53 42.0**	**-1.5**
WB0				IAmb	IAmb	11 54 52.4	
	comp=Z,9.3nm,1.5s						
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**11 53 43.4**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=342,slow=9.0,SNR=16						
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**11 53 44.6**	**-0.1**
WB2	**Warramunga Arr**	**41.52**	**160**	P	**P**	**11 53 43.7**	**-1.0**
WB2				IAmb	IAmb	11 54 31.9	
	comp=Z,7.5nm,1.4s						
ZAA0	**Zalesovo Array**	**43.84**	**330**	P	**P**	**11 54 02.8**	**-0.4**
ZAA0				IAmb	IAmb	11 54 06.3	
	comp=Z,5.2nm,1.4s						
ZALV	**Zalesovo Beam**	**43.84**	**330**	P	**P**	**11 54 03.7**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=111,slow=5.5,SNR=4.2						
ZALV	**Zalesovo Beam**	**43.84**	**330**	P	**P**	**11 54 02.8**	**-0.4**
AS31	**Alice Springs**	**44.89**	**162**	P	**P**	**11 54 12.3**	**+0.4**
ASAR	**Alice Springs**	**44.89**	**162**	P	**P**	**11 54 12.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=343,slow=6.9,SNR=15						
ASAR	**Alice Springs**	**44.89**	**162**	P	**P**	**11 54 12.4**	**+0.5**
KURBB	**Kurchatov Arra**	**45.31**	**323**	P	**P**	**11 54 16.1**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=124,slow=7.8,SNR=13						
TAS	**Tashkent**	**48.36**	**308**	P	**P**	**11 54 40.1**	**+1.0**
BBOO	**Buckleboo**	**54.13**	**164**	P	**P**	**11 55 22.6**	**+0.3**
BBOO				IAmb	IAmb	11 57 10.4	
	comp=Z,19nm,1.4s						

HEL 18 11:46:43.4±0.0, 60°.32N×24°.97E, h0km, ML0.9, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.30**	**251**	*e*P	Pg	11 46 48.8	-0.4
MEF				*e*S	Sg	11 46 52.7	-0.3
PVF	**Pernaja**	**0.50**	**62**	*e*P	Pg	11 46 52.4	-0.6
PVF				*e*S	Sg	11 46 58.2	-1.2
FIA0	**FINESS Array S**	**1.25**	**25**	*e*P	Pg	11 47 06.0	-1.4
FIA0				*e*S	Sg	11 47 21.3	-2.4
FIA1	**FINESS Array S**	**1.26**	**25**	*e*P	Pg	11 47 06.0	-1.4
FIA1				*e*S	Sg	11 47 21.3	-2.4
RAF	**Rauma**	**1.73**	**296**	*e*P	Pn	11 47 13.9	-0.7
RAF				*e*S	Sn	11 47 36.4	-1.0
RAF				MSG		11 47 41.0	
	comp=Z,0.6nm,0.1s						
KEF	**Keuruu**	**1.86**	**359**	*e*PN	Pn	11 47 16.5	0.0
KEF				*e*S	Sn	11 47 39.9	-0.7
KEF				MSG		11 47 44.1	
	comp=Z,0.5nm,0.1s						
KAF	**Kangasniemi**	**1.92**	**19**	*e*PG	Pn	11 47 17.6	+0.4
KAF				*e*SG	Sn	11 47 42.2	+0.2

BER 18 11:47:24.0±0.8, 61°.82N×5°.07E, h10km±3km, ML0.7, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FOO	**Floro**	**0.22**	**183**	*e*P	Pg	11 47 27.8	-0.7
FOO				*e*S	Sg	11 47 31.5	-0.1
SUE	**Sulen**	**0.78**	**191**	*e*P	Pg	11 47 38.0	-0.9
SUE				*e*S	Sg	11 47 48.1	-1.0
SUE				IAML		11 47 53.1	
	comp=Z,2.5nm,0.6s						
HYA	**Hoyanger**	**0.84**	**140**	*e*P	Pg	11 47 38.8	-1.5
HYA				*e*S	Sg	11 47 50.4	-0.9
HYA				IAML		11 47 57.7	
	comp=Z,3.7nm,0.7s						
AKN	**Aaknes**	**0.98**	**67**	*e*P	Pg	11 47 41.8	-1.0
AKN				*e*S	Sg	11 47 53.7	-1.8
AKN				IAML		11 47 59.5	
	comp=Z,2.5nm,0.2s						
SKAR	**Skarslia**	**1.94**	**125**	*e*P	Pn	11 47 54.9	-2.0
SKAR				*e*S	Sn	11 48 18.0	-3.4
SKAR				IAML		11 48 25.8	
	comp=Z,1.8nm,0.9s						

*KRNET **18** 11:53:21.7±0.1, 41°.88N×81°.60E, mb3.6*
*SOME **18** 11:53:25.8, 42°.18N×81°.13E, h15km*
*NNC **18** 11:53:26.9±1.0, 42°.16N×81°.07E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=6.7km s-min=6.0km az=23.0*

ISC 18 11:53:28.1±2.3, 42°.28N±0°.07×80°.99E±0°.07, h4km±11km, n50, σ2§04/81, 10C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.43**	**308**	⇑*i*P	**Pn**	**11 53 51.5**	**-3.5**
	105nm,0.2s						
SHLS				⇓*i*S	**Sn**	**11 54 10.5**	**-3.8**
	348nm,0.3s						
SHLS	**Shalkode**	**1.43**	**308**	P	**Pn**	**11 53 51.5**	**-3.5**
	105nm,0.2s						
SHLS				S	**Sn**	**11 54 10.5**	**-3.8**
	348nm,0.3s						
PDGK	**Podgornoye**	**1.52**	**314**	P	**Pb**	**11 53 56.7**	**-0.3**
	21nm,0.3s						
PDGK				S	**Sg**	**11 54 19.4**	**+2.3**
	37nm,0.2s						
PDGK	**Podgornoye**	**1.52**	**314**	⇓P	**Pb**	**11 53 56.6**	**-0.4**
	20nm,0.4s						
PDGK				⇑S	**Sg**	**11 54 19.2**	**+2.1**
	46nm,0.4s						
UZB	**Uzynbulak**	**1.69**	**301**	*e*P	**Pb**	**11 53 59.8**	**-0.1**
	41nm,0.3s						
UZB				*e*S	**Sg**	**11 54 24.9**	**+2.4**
	111nm,0.2s						
UZB	**Uzynbulak**	**1.69**	**301**	P	**Pb**	**11 53 59.8**	**-0.1**
	41nm,0.3s						
UZB				S	**Sg**	**11 54 24.9**	**+2.4**
	111nm,0.2s						
PRZ	**Przheval'sk**	**1.93**	**277**	⇑*i*P	**Pg**	**11 54 05.0**	**-0.1**
	baz=85						
PRZ				⇑*i*S	**Sg**	**11 54 36.7**	**+6.5**
	baz=85						
SATY	**Saty**	**2.06**	**293**	*e*P	**Pg**	**11 54 07.1**	**-0.6**
	57nm,0.5s						
SATY				*e*S	**Sg**	**11 54 36.9**	**+2.6**
	137nm,0.2s						
SATY	**Saty**	**2.06**	**293**	Pg	**Pg**	**11 54 07.1**	**-0.6**
	57nm,0.5s						
SATY				Lg	Lg	11 54 36.9	
	137nm,0.2s						
KPKS	**Kokpek**	**2.07**	**306**	*e*P	**Pb**	**11 54 06.7**	**+0.4**
	116nm,0.3s						
KPKS				*e*S	**Sg**	**11 54 36.2**	**+1.6**
	591nm,0.4s						
ZHN	**Zhinishke**	**2.08**	**296**	*e*P	**Pb**	**11 54 07.2**	**+0.6**
	86nm,0.2s						
ZHN				*e*S	**Sg**	**11 54 36.5**	**+1.5**
	80nm,0.3s						
ZHN	**Zhinishke**	**2.08**	**296**	Pg	**Pb**	**11 54 07.2**	**+0.6**
	86nm,0.2s						
ZHN				Lg	Lg	11 54 36.5	
	80nm,0.3s						
DJR	**Jarkent**	**2.23**	**337**	*e*P	**Pb**	**11 54 09.3**	**+0.2**
	14nm,0.4s						
DJR				*e*S	**Sg**	**11 54 40.7**	**+0.9**
	92nm,0.5s						
DJR	**Jarkent**	**2.23**	**337**	Pg	**Pb**	**11 54 09.3**	**+0.2**
	14nm,0.4s						
DJR				Lg	Lg	11 54 40.7	
	92nm,0.5s						
KURS	**Kuram**	**2.40**	**301**	*e*P	**Pb**	**11 54 12.4**	**+0.5**
	35nm,0.4s						
KURS				*e*S	**Sg**	**11 54 45.9**	**+0.7**
	52nm,0.6s						
KURS	**Kuram**	**2.40**	**301**	Pg	**Pb**	**11 54 12.5**	**+0.5**
	35nm,0.4s						
KURS				Lg	Lg	11 54 45.9	
	52nm,0.6s						
ANVS	**Anan'yevo**	**2.51**	**283**	⇓*i*P	**Pb**	**11 54 13.8**	**-0.1**
	baz=89						
ANVS				⇓*i*S	**Sg**	**11 54 51.5**	**+2.8**
	baz=89						
MNBS	**Baschi**	**2.61**	**314**	*e*P	**Pb**	**11 54 15.9**	**+0.3**
	0.5nm,0.4s						
MNBS				*e*S	**Sg**	**11 54 52.3**	**+0.3**
	2.2nm,0.5s						
MNBS	**Baschi**	**2.61**	**314**	Pg	**Pb**	**11 54 15.9**	**+0.3**
	0.5nm,0.4s						
MNBS				Lg	Lg	11 54 52.3	
	2.2nm,0.5s						
KDJ	**Kajisay**	**2.84**	**268**	⇑*i*P	**Pb**	**11 54 16.9**	**-2.6**
	baz=76						
KDJ				⇑*i*S	**Sb**	**11 54 57.3**	**+2.7**
	baz=76						
KOTS	**Kotyrbulak**	**3.01**	**290**	*e*P	**Pb**	**11 54 23.3**	**+0.9**
	27nm,0.2s						
KOTS				*e*S	**Sg**	**11 55 04.5**	**-0.4**
	107nm,0.6s						
KOTS	**Kotyrbulak**	**3.01**	**290**	Pg	**Pb**	**11 54 23.3**	**+0.9**
	27nm,0.2s						
KOTS				Lg	Lg	11 55 04.5	
	107nm,0.6s						
ARXS	**Arharly**	**3.01**	**311**	*e*P	**Pb**	**11 54 23.2**	**+0.8**
	22nm,0.4s						
ARXS				*e*S	**Sg**	**11 55 04.9**	**-0.1**
	88nm,0.6s						
ARXS	**Arharly**	**3.01**	**311**	Pg	**Pb**	**11 54 23.3**	**+0.8**
	22nm,0.4s						
ARXS				Lg	Lg	11 55 04.9	
	88nm,0.6s						
MDOK	**Medeo**	**3.04**	**288**	*e*P	**Pb**	**11 54 24.1**	**+1.2**
	9.6nm,0.4s						
MDOK				*e*S	**Sg**	**11 55 06.2**	**+0.5**
	24nm,0.5s						
MDOK	**Medeo**	**3.04**	**288**	Pg	**Pb**	**11 54 24.1**	**+1.2**
	9.6nm,0.4s						
MDOK				Lg	Lg	11 55 06.2	
	24nm,0.5s						
TNSS	**Tian-Shan**	**3.08**	**286**	*e*P	**Pb**	**11 54 24.5**	**+0.8**
	9.3nm,0.3s						
TNSS				*e*S	**Sg**	**11 55 06.9**	**-0.1**
	23nm,0.3s						
TNSS	**Tian-Shan**	**3.08**	**286**	Pg	**Pb**	**11 54 24.5**	**+0.8**
	9.3nm,0.3s						
TNSS				Lg	Lg	11 55 06.9	
	23nm,0.3s						
TDK	**Taldyqorghan**	**3.31**	**326**	*e*P	**Pb**	**11 54 29.0**	**+1.6**
	54nm,0.4s						
TDK				*e*S	**Sg**	**11 55 14.2**	**-0.1**
	87nm,0.4s						
TDK	**Taldyqorghan**	**3.31**	**326**	Pg	**Pb**	**11 54 29.0**	**+1.6**
	54nm,0.4s						
TDK				Lg	Lg	11 55 14.2	
	87nm,0.4s						
CHKK	**Chushkaly**	**3.33**	**300**	*e*P	**Pb**	**11 54 28.9**	**+1.1**
	4.9nm,0.3s						
CHKK				*e*S	**Sg**	**11 55 13.9**	**-1.2**
	50nm,0.3s						
CHKK	**Chushkaly**	**3.33**	**300**	Pg	**Pb**	**11 54 28.9**	**+1.1**
	4.9nm,0.3s						
CHKK				Lg	Lg	11 55 13.9	
	50nm,0.3s						
MTBS	**Maitube**	**3.47**	**286**	*e*P	**Pb**	**11 54 31.6**	**+1.4**
	8.1nm,0.3s						
MTBS				*e*S	**Sg**	**11 55 18.8**	**-0.7**
	31nm,0.3s						
MTBS	**Maitube**	**3.47**	**286**	Pg	**Pb**	**11 54 31.6**	**+1.4**
	8.1nm,0.3s						
MTBS				Lg	Lg	11 55 18.8	
	31nm,0.3s						
KTBS	**Karatobe**	**3.47**	**296**	*e*P	**Pb**	**11 54 30.6**	**+0.5**
	6.6nm,0.4s						
KTBS				*e*S	**Sb**	**11 55 17.7**	**+5.0**
	35nm,0.6s						
KTBS	**Karatobe**	**3.47**	**296**	Pg	**Pb**	**11 54 30.6**	**+0.5**
	6.6nm,0.4s						
KTBS				Lg	Lg	11 55 17.7	
	35nm,0.6s						
ULHL	**Ulahol**	**3.53**	**271**	⇑*i*P	**Pb**	**11 54 26.9**	**-4.3**
	baz=77						
ULHL				⇑*i*S	**Sb**	**11 55 14.5**	**0.0**
	baz=77						
BOOM	**Boomskoye usch**	**3.75**	**275**	⇓*i*P	**Pn**	**11 54 30.0**	**+3.1**
	baz=80						
BOOM				⇓*i*S	**Sb**	**11 55 20.4**	**-0.5**
	baz=80						
KUU	**Kurty**	**3.77**	**297**	*e*P	**Pg**	**11 54 38.1**	**-2.3**
	5.6nm,0

KRBS				Lg	Lg	11 55 39.8		
	26nm,0.4s							
MK31	**Makanchi Array**	**4.61**	**11**	Pg	**Pg**	**11 54 54.2**	**-2.2**	
	0.4nm,0.3s,baz=184,slow=14,SNR=8.1							
MK31				⇓Sn	**Sn**	**11 55 36.4**	**+3.8**	
	0.6nm,0.3s,baz=186,slow=23,SNR=3.5							
MK31				⇑Lg	Lg	11 55 53.2		
	2.7nm,0.4s,baz=190,slow=29,SNR=4.6							
SGDS	**Sogindy**	**4.82**	**286**	Pg	**Pg**	**11 54 56.9**	**-3.6**	
	1.5nm,0.4s							
SGDS				Lg	Lg	11 56 02.0		
	8.1nm,0.8s							

IDC 18 11:55:52.1±5.7, 8°14S×155°84E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/32, mbtmp3.6/3, MS3.5/2, Ms1 3.5/2, ms1mx2.5/34, Error ellipse: s-maj=100.2km s-min=77.1km az=178.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**17.21**	**145**	LR	LR	12 05 05.5	
	comp=Z,74nm,19.1s,baz=208,slow=32						
WRA	**Warramunga Arr**	**23.90**	**238**	P	P	12 01 07.2	-0.5
	0.7nm,0.7s,baz=65,slow=9.6,SNR=6.1						
ASAR	**Alice Springs**	**26.08**	**231**	P	P	12 01 27.6	-0.1
	0.9nm,0.8s,baz=65,slow=9.5,SNR=8.9						
STKA	**Stephens Creek**	**27.09**	**207**	P	P	12 01 37.2	+0.6
	1.4nm,0.6s,baz=10,slow=11,SNR=4.1						
TLY	**Talaya**	**74.47**	**329**	LR	LR	12 38 20.5	
	comp=Z,59nm,19.1s,baz=136,slow=34						

*IDC **18** 12:14:44.4±0.5, 19°.53N×120°.48E, h0km, mb4.3/20, mb1 4.4/21, mb1mx4.2/57, mbtmp4.3/21, ML3.6/1, MS3.5/18, Ms1 3.5/18, ms1mx3.2/59, Error ellipse: s-maj=22.0km s-min=12.0km az=71.0*

*NEIC **18** 12:14:45.6±1.3, 19°.57N±0°.05×120°.46E±0°.09, h10km±1km, mb4.6/43, Error ellipse: s-maj=14.9km s-min=7.7km az=260.0*

*MAN **18** 12:14:45.4, 19°.66N×120°.57E, h111km, mb5.3, ML4.2, MS4.4*

*BJI **18** 12:14:49.2±0.0, 20°.01N×120°.23E, h10km, mB4.7/34, mb4.5/37, Ms4.4/34, Ms7 4.3/31*

ISC 18 12:14:47.7±0.3, 19°.58N±0°.03×120°.62E±0°.05, h23km, n140, σ1§41/140, mb4.5/48, MS3.5/19, 2C-4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBP	**Basco**	**1.53**	**56**	*eP*	**Pn**	**12 15 13.8**	**+0.2**
BBP				*eS*	**Sb**	**12 15 33.5**	**-0.7**
SIPP	**Brgy, Tapao**	**1.66**	**185**	⇓*eP*	Pb	12 15 23.8	+6.3
APYP	**Conner**	**1.81**	**161**	*eP*	**Pn**	**12 15 17.9**	**+0.4**
APYP				*eS*	**Sb**	**12 15 42.1**	**-0.2**
SGCP	**Mt. Cagua**	**1.90**	**134**	*eP*	**Pn**	**12 15 19.6**	**+1.0**
SGCP				*eS*	**Sb**	**12 15 44.6**	**-0.2**
CAUP	**Cauayan**	**2.86**	**156**	*eP*	**Pn**	**12 15 32.1**	**+0.2**
TWG	**Pinlang**	**3.25**	**7**	Pn	**Pn**	**12 15 36.9**	**-0.4**
TWG				Sn	**Sn**	**12 16 14.6**	**-0.7**
SMPP	**San Manuel, Pa**	**3.41**	**179**	*eP*	**Pn**	**12 15 39.0**	**-0.5**
SMPP				*eS*	**Sn**	**12 16 19.8**	**+0.5**
TPUB	**Ta-pu**	**3.70**	**0**		**Pn**	**12 15 42.2**	**-1.3**
YULB	**Yu-li**	**3.85**	**9**		**Pn**	**12 15 45.4**	**-0.1**
YULB				Sn	**Sn**	**12 16 28.4**	**-1.6**
BALP	**Baler**	**3.92**	**166**	*eP*	**Pn**	**12 15 45.6**	**-0.9**
BALP				*eS*	**Sn**	**12 16 32.2**	**+0.3**
SSLB	**Suanglung**	**4.20**	**4**	Pn	**Pn**	**12 15 49.4**	**-1.0**
SSLB				Sn	**Sn**	**12 16 39.4**	**+0.7**
NACB	**Ninganchiao**	**4.66**	**11**	Pn	**Pn**	**12 15 56.4**	**-0.3**
KNMB	**Chin-men Tao**	**5.28**	**337**	Pn	**Pn**	**12 16 01.4**	**-3.8**
LQP	**Lukban**	**5.51**	**171**	⇑*eP*	**Pn**	**12 16 08.8**	**+0.2**
HKPS	**Hong Kong Po S**	**6.62**	**295**		**Pn**	**12 16 20.1**	**-3.6**
WHN	**Wuhan**	**12.30**	**334**	⇓P	**Pn**	**12 17 40.5**	**-0.9**
WHN				LR	LR		
	comp=N,2μm,13.5s						
WHN				LR	LR		
	comp=E,1μm,10.3s						
WHN				LR	LR		
	comp=Z,2μm,12.1s						
MYLDM	**Lahad Datu**	**14.46**	**188**	Pn	**Pn**	**12 18 09.4**	**-1.7**
GYA	**Guiyang**	**14.55**	**301**	⇓P	**P**	**12 18 17.9**	**-0.8**
GYA				PP	**PnPn**	**12 18 28.1**	**+7.7**
GYA				sP	Pn	12 18 34.0	+22
GYA				S	**Sn**	**12 20 56.4**	**+3.3**
GYA				SS	**S**	**12 21 15.5**	**+3.4**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GYA				pmax	pmax		
	comp=Z,170nm,4.9s						
GYA				LR	LR		
	comp=N,320nm,9.0s						
GYA				LR	LR		
	comp=E,510nm,10.5s						
GYA				LR	LR		
	comp=Z,650nm,12.9s						
ENH	**Enshi**	**14.66**	**319**		**Pn**	**12 18 12.8**	**-0.9**
JNU	**Nakatsue**	**16.31**	**32**	LR	LR	12 25 17.4	
	comp=Z,528nm,21.5s,baz=290,slow=39						
NONG	**Nongkai**	**16.61**	**268**	P	**P**	**12 18 43.0**	**+1.5**
	comp=Z,37nm,1.4s						
XAN	**Xi'an**	**17.77**	**327**	P	**Pn**	**12 18 51.9**	**-1.7**
XAN				pmax	pmax		
	comp=Z,24nm,1.6s						
XAN				LR	LR		
	comp=Z,960nm,10.0s						
XAN				LR	LR		
	comp=Z,850nm,10.6s						
XAN				LR	LR		
	comp=Z,1μm,10.6s						
XAN	**Xi'an**	**17.77**	**327**	Pn	**Pn**	**12 18 50.1**	**-3.5**
SBUM	**Sibu**	**18.90**	**207**	P	**P**	**12 19 04.0**	**-2.8**
KSRS	**Korea Array**	**18.92**	**18**	P	**Pn**	**12 19 07.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=205,slow=11,SNR=4.8						
KSRS				LR	LR	12 26 23.3	
	comp=Z,89nm,18.2s,baz=201,slow=37						
MRSI	**Marisa**	**19.03**	**176**	P	**Pn**	**12 19 10.1**	**+1.1**
	comp=Z,25nm,1.1s						
MPSI	**Mapaga**	**19.14**	**182**	P	**Pn**	**12 19 11.0**	**+0.7**
	comp=Z,7.2nm,1.2s						
DL2	**Dalian**	**19.28**	**2**	*eP*	**Pn**	**12 19 13.4**	**+1.5**
DL2				pmax	pmax		
	comp=Z,18nm,1.2s						
DL2				pmax	pmax		
	comp=Z,140nm,7.8s						
DL2				LR	LR		
	comp=Z,330nm,8.8s						
DL2				LR	LR		
	comp=Z,350nm,11.8s						
DL2				LR	LR		
	comp=Z,340nm,11.4s						
SUKH	**Sukhothai**	**20.01**	**267**	P	Pn	12 19 23.4	+2.7
	comp=Z,18nm,1.4s						
CM36	**Chiang Mai Arr**	**20.37**	**271**	P	**P**	**12 19 23.0**	**+0.1**
APSI	**Ampana**	**20.39**	**177**	P	Pn	12 19 24.9	-0.3
	comp=Z,22nm,1.4s						
CM09	**Chiang Mai Arr**	**20.48**	**270**	P	**P**	**12 19 25.1**	**+1.1**
	comp=Z,85nmcomp=Z,7.4nm,1.0s						
CM33	**Chiang Mai Arr**	**20.48**	**271**	P	**P**	**12 19 23.0**	**-1.1**
CMMT	**Chiang Mai**	**20.48**	**271**	P	**P**	**12 19 24.0**	**-0.1**
	comp=Z,8.5nm,1.6s						
CHTO	**Chiang Mai**	**20.48**	**271**	P	**P**	**12 19 22.5**	**-1.6**
CHTO				IAmb	IAmb	12 19 24.9	
	comp=Z,29nm,1.3s						
CM04	**Chiang Mai Arr**	**20.50**	**270**	P	**P**	**12 19 25.0**	**+0.8**
	comp=Z,94nmcomp=Z,9.7nm,1.1s						
CM01	**Chiang Mai Arr**	**20.51**	**270**	P	**P**	**12 19 25.0**	**+0.6**
	comp=Z,105nmcomp=Z,9.8nm,1.1s						
CM02	**Chiang Mai Arr**	**20.52**	**270**	P	**P**	**12 19 25.1**	**+0.6**
	comp=Z,80nmcomp=Z,7.2nm,1.2s						
CM31	**Chiang Mai Arr**	**20.52**	**270**	P	Pn	12 19 25.9	-0.9
	comp=Z,135nm,0.6s						
CM31	**Chiang Mai Arr**	**20.52**	**270**	P	**P**	**12 19 24.6**	**0.0**
CMAR	**Chiang Mai Arr**	**20.52**	**270**	P	**P**	**12 19 24.5**	**0.0**
	comp=Z,7.5nm,1.1s,baz=77,slow=9.1,SNR=34						
CMAR				PcP	**PcP**	**12 23 36.9**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=132,slow=0.2,SNR=6.2						
CMAR				LR	LR	12 26 32.4	
	comp=Z,140nm,21.5s,baz=134,slow=35						
CMAR	**Chiang Mai Arr**	**20.52**	**270**	P	**P**	**12 19 23.3**	**-1.2**
CM05	**Chiang Mai Arr**	**20.53**	**270**	P	**P**	**12 19 25.0**	**+0.4**
	comp=Z,78nmcomp=Z,7.4nm,1.2s						
CM15	**Chiang Mai Arr**	**20.54**	**270**	P	**P**	**12 19 25.2**	**+0.5**
	comp=Z,8.2nm,1.1s						
CM13	**Chiang Mai Arr**	**20.56**	**270**	P	**P**	**12 19 25.5**	**+0.6**
	comp=Z,68nmcomp=Z,7.3nm,1.1s						
UTHA	**Uthaitani**	**20.57**	**262**	P	Pn	12 19 29.2	+1.8
KSM	**Kuching**	**20.63**	**211**	P	**P**	**12 19 25.3**	**-0.4**
KSM				IAmb	IAmb	12 19 35.2	
	comp=Z,31nm,1.4s						
BJT	**Baijiatuao**	**20.73**	**350**	P	**P**	**12 19 27.2**	**+0.7**
BJT				IAmb	IAmb	12 19 28.9	
	comp=Z,46nm,1.2s						
BJI	**Beijing**	**20.75**	**350**	P	**P**	**12 19 27.6**	**+0.9**
BJI				pmax	pmax		
	comp=Z,35nm,1.2s						
BJI				LR	LR		
	comp=Z,370nm,10.3s						
BJI				LR	LR		
	comp=Z,230nm,11.6s						
JHJ	**Hachijo jima 2**	**21.79**	**48**	LR	LR	12 28 28.2	
	comp=Z,37nm,18.6s,baz=296,slow=38						
LZH	**Lanzhou**	**22.09**	**322**	⇑P	**P**	**12 19 42.3**	**+0.9**
LZH				pP	pP	12 19 46.8	-0.3
LZH				sP	sP	12 19 49.8	+0.2
LZH				PP	**PnPn**	**12 20 05.5**	**+1.7**
LZH				pmax	pmax		
	comp=Z,29nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.8s						
LZH				LR	LR		
	comp=Z,510nm,11.4s						
LZH				LR	LR		
	comp=Z,600nm,10.8s						
LZH				LR	LR		
	comp=Z,650nm,11.4s						
SIJI	**Sorong**	**22.85**	**152**	P	**P**	**12 19 50.1**	**+0.6**
	comp=Z,9.9nm,0.9s,baz=45,slow=4.8,SNR=3.7						
MJAR	**Matsushiro Arr**	**22.88**	**39**	P	**P**	**12 19 52.1**	**+2.4**
	comp=Z,1.2nm,0.7s,baz=245,slow=7.9,SNR=3.0						
MJAR				LR	LR	12 29 47.4	
	comp=Z,52nm,18.4s,baz=260,slow=39						
MJAR	**Matsushiro Arr**	**22.88**	**39**	P	**P**	**12 19 50.6**	**+0.9**
SPSI	**Sidrap Palu**	**23.41**	**182**	P	**P**	**12 19 57.1**	**+2.0**
	comp=Z,17nm,1.0s						
NLAI	**Namlea**	**23.55**	**164**	P	**P**	**12 19 59.1**	**+2.6**
	comp=Z,821nmcomp=Z,29nm,1.2s						
BBKI	**Banjar Baru**	**23.59**	**195**	P	**P**	**12 19 57.4**	**+0.5**
	comp=Z,4μmcomp=Z,17nm,0.6s						
GUMO	**Guam**	**23.98**	**101**	LR	LR	12 27 28.3	
	comp=Z,162nm,21.1s,baz=283,slow=32						
MDJ	**Mudanjiang**	**26.06**	**15**	P	**P**	**12 20 19.6**	**+0.3**
MDJ				IAmb	IAmb	12 20 22.1	
	comp=Z,24nm,1.2s						
GTA	**Gaotai**	**26.69**	**322**	⇓P	**P**	**12 20 24.4**	**-0.8**
GTA				pP	pwP	12 20 34.8	-0.3
GTA				sP	sP	12 20 38.9	+5.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,88nm,7.6s						
GTA				LR	LR		
	comp=Z,370nm,12.7s						
GTA				LR	LR		
	comp=Z,390nm,13.4s						
GTA				LR	LR		
	comp=Z,510nm,12.0s						
EDFI	**Ende, Flores**	**28.17**	**178**	P	**P**	**12 20 37.6**	**-1.0**
	comp=Z,186nmcomp=Z,8.1nm,1.3s						
BATI	**Baumata**	**29.75**	**174**	LR	LR	12 36 36.8	
	comp=Z,53nm,18.6s,baz=260,slow=44						
ULN	**Ulaanbaatar**	**30.29**	**342**	P	**P**	**12 20 57.6**	**+0.4**
SONM	**Songino Array**	**30.46**	**341**	P	**P**	**12 20 59.3**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=160,slow=9.3,SNR=14						
SONM				LR	LR	12 33 31.3	
	comp=Z,116nm,18.4s,baz=185,slow=37						
SONM	**Songino Array**	**30.46**	**341**	P	**P**	**12 20 58.4**	**-0.3**
ASAJ	**Asahikawa**	**30.59**	**32**	LR	LR	12 34 07.9	
	comp=Z,66nm,19.6s,baz=246,slow=38						
KLR	**Kul'dur**	**30.90**	**14**	P	**P**	**12 21 04.0**	**+1.6**
	comp=Z,2.3nm,0.6s,baz=208,slow=6.4,SNR=9.0						
KLR				LR	LR	12 33 49.4	
	comp=Z,56nm,18.3s,baz=192,slow=37						
FITZ	**Fitzroy Crossi**	**37.77**	**172**	P	**P**	**12 22 01.7**	**-0.4**
KRVT	**Keravat (AS076**	**38.95**	**124**	LR	LR	12 35 15.0	
	comp=Z,156nm,20.7s,baz=310,slow=32						
WB0	**Warramunga Arr**	**41.37**	**160**	P	**P**	**12 22 32.6**	**+0.4**
WB0				IAmb	IAmb	12 22 55.2	
	comp=Z,12nm,1.3s						
MK31	**Makanchi Array**	**41.39**	**320**	P	**P**	**12 22 30.6**	**-1.5**
MK31				IAmb	IAmb	12 22 33.9	
	comp=Z,16nm,1.1s						
MKAR	**Makanchi Array**	**41.39**	**320**	P	**P**	**12 22 33.0**	**+0.9**
	comp=Z,10nm,1.0s,baz=117,slow=9.7,SNR=20						
MKAR	**Makanchi Array**	**41.39**	**320**	P	**P**	**12 22 31.4**	**-0.7**
WRAB	**Tennant Creek**	**41.51**	**160**	P	**P**	**12 22 33.8**	**+0.5**
WRAB				IAmb	IAmb	12 22 54.4	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**12 22 32.3**	**-1.1**
	comp=Z,2.5nm,0.6s,baz=343,slow=9.0,SNR=24						
WRA				PcP	**PcP**	**12 24 31.4**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=344,slow=3.5,SNR=10.0						
WRA				S	**S**	**12 28 43.2**	**-4.7**
	comp=Z,1.3nm,0.9s,baz=347,slow=15,SNR=4.9						
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**12 22 33.7**	**+0.3**
WB2	**Warramunga Arr**	**41.52**	**160**	P	**P**	**12 22 32.1**	**-1.3**
WB2				IAmb	IAmb	12 22 54.4	
	comp=Z,15nm,1.3s						
MAKZ	**Makanchi**	**41.59**	**320**	P	**P**	**12 22 33.3**	**-0.4**
MAKZ				IAmb	IAmb	12 22 35.5	
	comp=Z,18nm,1.2s						
WR0	**Warramunga Arr**	**41.60**	**160**	P	**P**	**12 22 33.7**	**-0.4**
SHLS	**Shalkode**	**41.71**	**314**	*eP*	**P**	**12 22 32.8**	**-2.2**
	comp=Z,4.1nm,1.1s,baz=314						
KPKS	**Kopkek**	**42.35**	**314**	*eP*	**P**	**12 22 40.2**	**0.0**
	comp=Z,6.7nm,1.3s,baz=314						
TDK	**Taldyqorghan**	**43.09**	**316**	*eP*	**P**	**12 22 46.4**	**+0.3**
	baz=316						
ZAA0	**Zalesovo Array**	**43.88**	**330**	P	**P**	**12 22 51.6**	**-0.6**
ZAA0				IAmb	IAmb	12 22 53.2	
	comp=Z,9.9nm,1.1s						
ZALV	**Zalesovo Beam**	**43.88**	**330**	P	**P**	**12 22 52.3**	**+0.1**
	comp=Z,4.1nm,0.7s,baz=117,slow=8.0,SNR=21						
ZALV				LR	LR	12 41 23.2	
	comp=Z,28nm,20.2s,baz=82,slow=36						
ZALV	**Zalesovo Beam**	**43.88**	**330**	P	**P**	**12 22 51.2**	**-1.0**
KUU	**Kurty**	**44.09**	**314**	*eP*	**P**	**12 22 54.0**	**-0.2**
	comp=Z,12nm,1.5s,baz=313						
NIL	**Nilore**	**44.24**	**298**	P	**P**	**12 22 53.5**	**-2.0**
NIL				IAmb	IAmb	12 22 56.1	
	comp=Z,15nm,0.9s						
SEM	**Semipalatinsk**	**44.30**	**324**	*eP*	**P**	**12 22 55.1**	**-0.9**
	comp=Z,6.2nm,1.0s,baz=323						
AS31	**Alice Springs**	**44.89**	**163**	P	**P**	**12 23 01.1**	**+0.4**
ASAR	**Alice Springs**	**44.89**	**163**	P	**P**	**12 23 01.0**	**+0.3**
	comp=Z,2.9nm,0.7s,baz=344,slow=7.2,SNR=25						
ASAR				S	**S**	**12 29 36.9**	**-0.6**
	comp=Z,0.5nm,1.0s,baz=359,slow=25,SNR=3.3						
ASAR	**Alice Springs**	**44.89**	**163**	P	**P**	**12 23 00.5**	**-0.2**
KURK	**Kurchatov**	**45.36**	**323**	P	**P**	**12 23 02.2**	**-1.9**
MA2	**Magadan**	**45.44**	**21**	LR	LR	12 44 08.1	
	comp=Z,44nm,18.0s,baz=42,slow=39						
CTA	**Charters Tower**	**46.75**	**146**	P	**P**	**12 23 16.3**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=5.2,slow=7.8,SNR=2.0						
BTK	**Batken**	**47.11**	**307**	P	**P**	**12 23 17.1**	**-1.0**
GAR	**Garm**	**47.31**	**305**	P	**P**	**12 23 18.8**	**-1.0**
DZA	**Taraz**	**47.32**	**311**	*eP*	**P**	**12 23 19.9**	**+0.2**
	baz=310						
KK31	**Karatay Array**	**47.95**	**311**	P	**P**	**12 23 23.9**	**-0.7**
KK31				IAmb	IAmb	12 23 26.9	
	comp=Z,12nm,1.4s						
KKAR	**Karatay Array**	**47.95**	**311**	P	**P**	**12 23 24.4**	**-0.1**
KKAR				IAmb	IAmb	12 23 26.9	
	comp=Z,12nm,1.4s						
IUG	**Iuzhnay**	**48.09**	**309**	*eP*	**P**	**12 23 25.8**	**0.0**
	comp=Z,5.0nm,1.4s,baz=309						
CHGR	**Chuyangaron**	**48.15**	**305**	P	**P**	**12 23 26.6**	**+0.3**
SEY	**Seymchan**	**48.48**	**19**	P	**P**	**12 23 30.1**	**+1.8**
	comp=Z,3.9nm,0.8s,baz=210,slow=11,SNR=5.4						
BRZS	**Berezniki**	**48.53**	**320**	*eP*	**P**	**12 23 28.7**	**-0.3**
	baz=320						
BRVK	**Borovoye**	**51.03**	**323**	P	**P**	**12 23 47.2**	**-0.7**
BRVK				IAmb	IAmb	12 23 49.5	
	comp=Z,6.9nm,0.9s						
TIXI	**Tiksi**	**52.30**	**3**	P	**P**	**12 23 56.7**	**-0.3**
TIXI				IAmb	IAmb	12 23 59.7	
	comp=Z,6.5nm,1.1s						
NRIK	**Noril'sk**	**53.71**	**346**	P	**P**	**12 24 08.2**	**+0.8**
	comp=Z,4.7nm,0.8s,baz=130,slow=8.4,SNR=9.7						
BBOO	**Buckleboo**	**54.15**	**164**	P	**P**	**12 24 11.5**	**+0.4**
STKA	**Stephens Creek**	**54.98**	**158**	P	**P**	**12 24 18.2**	**+1.1**
	comp=Z,3.6nm,0.8s,baz=310,slow=9.0,SNR=6.1						
STKA	**Stephens Creek**	**54.98**	**158**	P	**P**	**12 24 17.5**	**+0.4**
BILL	**Bilibino**	**56.18**	**19**	P	**P**	**12 24 25.8**	**+0.4**
ABKAR	**Akbulak array**	**56.34**	**317**	P	**P**	**12 24 25.9**	**-0.9**
ABKAR	**Akbulak array**	**56.34**	**317**	P	**P**	**12 24 26.2**	**-0.6**
GEYT	**Alibeck**	**56.76**	**303**	LR	LR	12 49 56.6	
	comp=Z,52nm,20.4s,baz=40,slow=37						
ARU	**Arti**	**58.50**	**325**	P	**P**	**12 24 41.0**	**-0.9**
GNI	**Garni**	**67.03**	**306**	LR	LR	12 57 47.4	
	comp=Z,23nm,18.8s,baz=76,slow=39						
AKH	**Akhalkalaki**	**67.82**	**308**	P	**P**	**12 25 45.2**	**+1.0**
KIV	**Kislovodsk**	**68.11**	**310**	P	**P**	**12 25 46.4**	**+0.5**
KLMR	**Klimovskoe**	**68.78**	**329**	*eP*	**P**	**12 25 45.9**	**-3.8**
KLMR				AMP		12 25 50.3	
	comp=Z,21nm,1.4s						
MDM	**Murphy Dome**	**72.94**	**26**	P	**P**	**12 26 14.7**	**-0.2**
MDM				IAmb	IAmb	12 26 17.3	
	comp=Z,7.9nm,1.1s						
ILAR	**Eielson Array**	**73.54**	**27**	P	**P**	**12 26 18.2**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=264,slow=5.1,SNR=11						
SPITS	**Spitsbergen Ar**	**73.85**	**348**	LR	LR	13 02 29.0	
	comp=Z,35nm,19.9s,baz=260,slow=39						
BMAR	**Burnt Mountain**	**73.93**	**24**	P	**P**	**12 26 21.1**	**+0.3**
FINES	**FINESS Array B**	**75.15**	**330**	P	**P**	**12 26 27.9**	**+0.1**
	comp=Z,4.8nm,0.8s,baz=90,slow=5.7,SNR=8.5						
FINES	**FINESS Array B**	**75.15**	**330**	P	**P**	**12 26 27.5**	**-0.4**
K27K	**Chicken**	**75.74**	**27**	P	**P**	**12 26 32.5**	**+1.2**
K27K				IAmb	IAmb	12 26 42.5	
	comp=Z,5.1nm,0.9s						
AKASG	**Malin Array Be**	**75.97**	**319**	P	**P**	**12 26 32.1**	**-0.6**
	comp=Z,5.1nm,0.8s,baz=63,slow=5.9,SNR=11						
AKASG	**Malin Array Be**	**75.97**	**319**	P	**P**	**12 26 31.1**	**-1.7**
AKBB	**Malin Array Si**	**75.97**	**319**	P	**P**	**12 26 31.9**	**-0.9**
AKBB				IAmb	IAmb	12 26 33.0	
	comp=Z,9.4nm,1.1s						
BCAR	**Beaver Creek A**	**76.12**	**28**	P	**P**	**12 26 33.0**	**-0.5**
DAWY	**Dawson**	**76.86**	**26**	P	**P**	**12 26 38.1**	**+0.4**
DAWY				IAmb	IAmb	12 26 49.2	
	comp=Z,5.2nm,1.0s						
CTGM	**Chitina Glacie**	**76.92**	**30**	P	**P**	**12 26 38.3**	**+0.1**
CTGM				IAmb	IAmb	12 26 50.0	
	comp=Z,7.7nm,0.8s						
EIL	**Elat**	**76.94**	**297**	LR	LR	13 06 10.5	
	comp=Z,33nm,18.9s,baz=285,slow=40						
BURAR	**Bucovina Array**	**79.32**	**317**	P	**P**	**12 26 51.8**	**0.0**
MLR	**Muntele Rosu**	**79.47**	**315**	P	**P**	**12 26 51.7**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=113,slow=15,SNR=3.2						
NB2	**NORSAR Subarra**	**82.04**	**332**	P	**P**	**12 27 05.2**	**-0.7**
	comp=Z,5.8nm,1.1s,baz=60,slow=5.6						
NOA	**NORSAR Array B**	**82.04**	**332**	P	**P**	**12 27 05.3**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=65,slow=5.2,SNR=5.8						
NOA				LR	LR	13 08 43.3	
	comp=Z,25nm,20.3s,baz=250,slow=40						
VRAC	**Vranov**	**84.13**	**320**	P	**P**	**12 27 17.0**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=60,slow=9.2,SNR=4.9						
BRG	**Berggiesshubel**	**85.05**	**322**	*eP*	**P**	**12 27 21.9**	**+0.4**
	comp=Z,19nm,1.7s						
GERES	**GERESS Array B**	**86.05**	**321**	P	**P**	**12 27 26.6**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=60,slow=5.3,SNR=9.6						
GERES	**GERESS Array B**	**86.05**	**321**	P	**P**	**12 27 26.9**	**+0.2**

*IDC **18** 12:15:34.2±0.7, 54°.27N×169°.19E, h0km, mb3.9/14, mb1 4.1/15, mb1mx3.9/56, mbtmp3.9/15, ML3.1/1, MS4.3/5, Ms1 4.3/5, ms1mx3.0/56, Error ellipse: s-maj=23.5km s-min=14.9km az=158.0*

*NEIC **18** 12:15:35.8±1.4, 54°.2N±0°.1×169°.2E±0°.1, h10km±1km, mb4.4/42, Error ellipse: s-maj=23.0km s-min=12.0km az=187.0*

*MOS **18** 12:15:36.5±0.9, 53°.93N×169°.22E, h36km, mb4.5/10, Error ellipse: s-maj=8.6km s-min=5.5km az=22.4*

*KRSC **18** 12:15:38.2±2.3, 53°.82N×168°.70E, h44km±25km, ML4.4*

ISC 18 12:15:37.1±0.5, 53°.97N±0°.07×169°.17E±0°.05, h25km, n175, σ1§65/174, mb4.3/48, MS4.4/7, 1C, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**3.21**	**111**	PN	**Pn**	**12 16 24.6**	**-1.2**
SMY	**Shemya**	**3.21**	**111**	Pn	**Pn**	**12 16 24.6**	**-1.2**
KBTR	**Krutoberegovo**	**4.28**	**304**	*eP*	**Pn**	**12 16 41.0**	**+0.4**
KBTR	**Krutoberegovo**	**4.28**	**304**	PN	**Pn**	**12 16 41.0**	**+0.4**
KBG	**Krutoberegovo**	**4.36**	**304**	*eP*	**Pn**	**12 16 43.7**	**+2.0**
KBG	**Krutoberegovo**	**4.36**	**304**	PN	**Pn**	**12 16 43.7**	**+2.0**
MKZ	**Mys Kozlova**	**4.40**	**281**	*eP*	**Pn**	**12 16 41.9**	**-0.3**
MKZ				*eS*	**Sn**	**12 17 30.4**	**-2.2**
MKZ	**Mys Kozlova**	**4.40**	**281**	PN	**Pn**	**12 16 41.9**	**-0.3**
ZLN	**Zelenaya**	**5.24**	**296**	*eP*	**Pn**	**12 16 56.8**	**+3.0**
ZLN	**Zelenaya**	**5.24**	**296**	PN	**Pn**	**12 16 56.8**	**+3.0**
BDR	**Baidarnaya**	**5.24**	**303**	*eP*	**Pn**	**12 16 56.5**	**+2.6**
BDR	**Baidarnaya**	**5.24**	**

PETK					Sn		**Sn**	**12 18 33.2**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=32,slow=14,SNR=1.0								
PETK					LR		LR	12 20 17.2	
	comp=Z,50nm,19.1s,baz=86,slow=41								
PETK	**Petropavlovsk-**	**6.89**	**267**		Pn		**Pn**	**12 17 18.0**	**+1.5**
ASAK	**Asacha**	**6.96**	**261**	*eP*			**Pn**	**12 17 18.5**	**+1.1**
ASAK	**Asacha**	**6.96**	**261**		PN		**Pn**	**12 17 18.5**	**+1.1**
KDTR	**Khodutka, Kamc**	**7.05**	**257**	*eP*			**Pn**	**12 17 19.3**	**+0.7**
KDTR				*eS*			**Sn**	**12 18 33.4**	**-4.5**
KDTR	**Khodutka, Kamc**	**7.05**	**257**		PN		**Pn**	**12 17 19.3**	**+0.7**
APC	**Apacha**	**7.25**	**267**	*eP*			**Pn**	**12 17 25.0**	**+3.7**
APC	**Apacha**	**7.25**	**267**		PN		**Pn**	**12 17 25.0**	**+3.7**
BILL	**Bilibino**	**14.19**	**356**	*i*	P		**Pn**	**12 18 55.1**	**-1.0**
IMAR	**Indian Mountai**	**21.71**	**42**		P		**P**	**12 20 25.7**	**-0.3**
PPLA	**Purkeypile**	**21.79**	**50**		P		**P**	**12 20 25.8**	**-1.2**
PPLA					IAmb		IAmb	12 20 44.9	
	comp=Z,21nm,1.4s								
YAK	**Yakutsk**	**22.11**	**307**		P		**P**	**12 20 29.8**	**-0.4**
	comp=Z,5.8nm,0.5s,baz=129,slow=2.3,SNR=4.1								
YAK	**Yakutsk**	**22.11**	**307**	*i*	P		**P**	**12 20 29.0**	**-1.2**
YAK					pmax		pmax		
	comp=Z,14nm,0.9s								
BWN	**Browne**	**23.15**	**47**		P		**P**	**12 20 41.4**	**+0.3**
BWN					IAmb		IAmb	12 21 07.9	
	comp=Z,20nm,1.1s								
I23K	**Minto, Yukon-K**	**23.32**	**45**		P		**P**	**12 20 42.3**	**-0.5**
RND	**Reindeer**	**23.34**	**49**		P		**P**	**12 20 41.7**	**-1.5**
RND					pmax		pmax		
	comp=Z,7.0nm,1.1s								
RND	**Reindeer**	**23.34**	**49**		P		**P**	**12 20 41.7**	**-1.5**
COLD	**Coldfoot**	**23.41**	**40**		P		**P**	**12 20 42.6**	**-1.1**
MDM	**Murphy Dome**	**23.77**	**46**		P		**P**	**12 20 46.8**	**-0.5**
CCB	**Clear Creek Bu**	**23.91**	**46**		P		**P**	**12 20 47.6**	**-0.9**
COLA	**College**	**23.92**	**46**	*i*	P		**P**	**12 20 45.6**	**-3.0**
COLA					pmax		pmax		
	comp=Z,3.0nm,0.9s								
DHY	**Denali Highway**	**23.99**	**50**		P		**P**	**12 20 48.3**	**-1.3**
DHY					IAmb		IAmb	12 20 58.4	
	comp=Z,13nm,1.4s								
SCM	**Sheep Creek Mo**	**24.00**	**53**		P		**P**	**12 20 48.7**	**-0.9**
SCM					pmax		pmax		
	comp=Z,14nm,1.0s								
SCM	**Sheep Creek Mo**	**24.00**	**53**		P		**P**	**12 20 48.7**	**-0.9**
SCM					IAmb		IAmb	12 21 14.9	
	comp=Z,14nm,1.0s								
TOLK	**Toolik Lake Re**	**24.02**	**36**		P		**P**	**12 20 48.6**	**-1.0**
TOLK					IAmb		IAmb	12 20 55.0	
	comp=Z,21nm,1.5s								
IL31		**24.32**	**46**		P		**P**	**12 20 48.9**	**-3.4**
ILAR	**Eielson Array**	**24.32**	**46**		P		**P**	**12 20 50.6**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=247,slow=7.1,SNR=15								
ILAR	**Eielson Array**	**24.32**	**46**		P		**P**	**12 20 52.0**	**-0.4**
ILAR	**Eielson Array**	**24.32**	**46**		P		**P**	**12 20 52.0**	**-0.4**
M24K	**Tolsona, Glenn**	**24.54**	**53**		P		**P**	**12 20 52.7**	**-1.8**
KLU	**Klutina**	**24.68**	**54**		P		**P**	**12 20 54.7**	**-1.1**
KLU					IAmb		IAmb	12 21 19.7	
	comp=Z,12nm,1.2s								
TIXI	**Tiksi**	**24.77**	**331**	*i*	P		**P**	**12 20 55.5**	**-0.8**
TIXI	**Tiksi**	**24.77**	**331**		P		**P**	**12 20 56.2**	**-0.2**
TIXI					IAmb		IAmb	12 20 57.5	
	comp=Z,4.0nm,0.7s								
N25K	**Chitina, Valde**	**25.31**	**54**		P		**P**	**12 20 58.9**	**-2.5**
N25K					IAmb		IAmb	12 21 17.8	
	comp=Z,6.4nm,1.1s								
BMAR	**Burnt Mountain**	**25.58**	**40**		P		**P**	**12 21 02.2**	**-1.6**
BCAR	**Beaver Creek A**	**26.54**	**50**		P		**P**	**12 21 11.9**	**-0.6**
DAWY	**Dawson**	**27.56**	**48**		P		**P**	**12 21 19.1**	**-2.6**
DAWY					IAmb		IAmb	12 21 34.7	
	comp=Z,7.1nm,1.2s								
HYT	**Haines Junctio**	**28.81**	**55**		P		**P**	**12 21 32.1**	**-0.8**
HYT					IAmb		IAmb	12 21 52.8	
	comp=Z,6.1nm,0.9s								
INK	**Inuvik**	**29.82**	**39**		P		**P**	**12 21 40.6**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=304,slow=7.3,SNR=2.0								
INK	**Inuvik**	**29.82**	**39**		P		**P**	**12 21 40.4**	**-1.2**
INK					IAmb		IAmb	12 21 51.3	
	comp=Z,6.0nm,1.5s								
DLBC	**Dease Lake**	**33.09**	**57**		P		**P**	**12 22 10.7**	**0.0**
C36M	**Paulatuk**	**33.17**	**37**		P		**P**	**12 22 10.2**	**-0.9**
C36M					IAmb		IAmb	12 22 14.3	
	comp=Z,3.9nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**34.22**	**184**		T		T	12 58 44.9	
	baz=2.7,slow=76,SNR=1255								
H11N3	**WAKE ISLAND Hy**	**34.23**	**184**		T		T	12 58 41.7	
	baz=2.7,slow=76,SNR=1281								
H11N1	**WAKE ISLAND Hy**	**34.24**	**184**		T		T	12 58 42.0	
	baz=2.7,slow=76,SNR=1285								
H11S1	**WAKE ISLAND Hy**	**35.44**	**184**		T		T	13 00 14.0	
	baz=2.7,slow=76,SNR=479								
H11S3	**WAKE ISLAND Hy**	**35.46**	**184**		T		T	13 00 15.7	
	baz=2.7,slow=76,SNR=210								
H11S2	**WAKE ISLAND Hy**	**35.46**	**184**		T		T	13 00 14.1	
	baz=2.7,slow=76,SNR=447								
YKA	**Yellowknife Ar**	**38.75**	**46**		P		**P**	**12 22 58.4**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=297,slow=6.8,SNR=1.6								
SONM	**Songino Array**	**38.89**	**287**		P		**P**	**12 23 00.9**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=52,slow=7.5,SNR=2.2								
HHC	**Hu-ho-hao-te**	**40.02**	**275**	*eP*			P	12 23 03.6	-6.3
NJ2	**Nanjing**	**41.71**	**259**	*eP*			**P**	**12 23 25.4**	**+1.7**
NJ2					pmax		pmax		
	comp=Z,8.0nm,0.5s								
LZH	**Lanzhou**	**47.71**	**276**	*eP*			**P**	**12 24 13.0**	**+1.3**
LZH					pP		pP	12 24 17.5	-1.2
LZH					sP		pwP	12 24 20.3	-1.0
LZH					PP		PcP	12 25 50.4	+10
LZH					pmax		pmax		
	comp=Z,15nm,1.0s								
LZH					pmax		pmax		
	comp=Z,68nm,4.3s								
LZH					LR		LR		
	comp=N,290nm,13.8s								
LZH					LR		LR		
	comp=E,290nm,13.3s								
LZH					LR		LR		
	comp=Z,240nm,14.3s								
GTA	**Gaotai**	**47.81**	**282**	*eP*			**P**	**12 24 12.1**	**-0.3**
GTA					pP		pP	12 24 17.0	-2.6
GTA					sP		sP	12 24 20.1	-2.3
GTA					pmax		pmax		
	comp=Z,2.0nm,0.8s								
BEKR	**Beckworth**	**48.16**	**77**		P		**P**	**12 24 15.9**	**+0.7**
VCNR	**Virginia City**	**48.95**	**77**		P		**P**	**12 24 22.3**	**+1.1**
VCNR					IAmb		IAmb	12 24 23.1	
	comp=Z,2.6nm,0.7s								
PNTR	**Pine Nut**	**49.11**	**77**		P		**P**	**12 24 23.6**	**+1.1**
MCMT	**McKenzie Canyo**	**49.13**	**67**		P		**P**	**12 24 21.8**	**-0.8**
WAKR	**Walker**	**49.60**	**78**		P		**P**	**12 24 26.6**	**+0.3**
WAKR					IAmb		IAmb	12 24 27.2	
	comp=Z,6.6nm,1.4s								
KVN	**Kaiserville**	**50.00**	**76**		P		**P**	**12 24 29.9**	**+0.6**
KVN					pmax		pmax		
	comp=Z,3.0nm,0.8s								
KVN	**Kaiserville**	**50.00**	**76**		P		**P**	**12 24 29.9**	**+0.6**
KVN					IAmb		IAmb	12 24 31.0	
	comp=Z,2.9nm,0.8s								
NVAR	**Mina Array Bea**	**50.30**	**77**		P		**P**	**12 24 32.6**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=296,slow=7.9,SNR=14								
NVAR	**Mina Array Bea**	**50.30**	**77**		P		**P**	**12 24 32.2**	**+0.5**
TPH	**Tonopah**	**51.17**	**76**		P		**P**	**12 24 38.3**	**+0.2**
TPH					pmax		pmax		
	comp=Z,12nm,0.6s								
TPH	**Tonopah**	**51.17**	**76**		P		**P**	**12 24 38.3**	**+0.2**
WMQ	**Urumqi**	**51.68**	**294**	*eP*			**P**	**12 24 44.8**	**+3.1**
KURK	**Kurchatov**	**51.74**	**306**	*i*	P		**P**	**12 24 40.9**	**-1.1**
KURK					pmax		pmax		
	comp=Z,3.0nm,1.0s								
PD31	**Pinedale Array**	**52.28**	**67**		P		**P**	**12 24 45.6**	**-0.8**
PDAR	**Pinedale Array**	**52.28**	**67**		P		**P**	**12 24 46.5**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=331,slow=5.6,SNR=5.8								
PDAR	**Pinedale Array**	**52.28**	**67**		P		**P**	**12 24 46.8**	**+0.4**
TPNV	**Topopah Spring**	**52.50**	**77**		P		**P**	**12 24 49.0**	**+0.9**
TPNV					pmax		pmax		
	comp=Z,3.0nm,0.8s								
TPNV	**Topopah Spring**	**52.50**	**77**		P		**P**	**12 24 49.0**	**+0.9**
TPNV					IAmb		IAmb	12 24 50.0	
	comp=Z,3.2nm,0.8s								
BRVK	**Borovoye**	**53.97**	**312**	*i*	P		**P**	**12 24 58.0**	**-0.4**
BRVK					pmax		pmax		
	comp=Z,2.0nm,0.8s								
ARCES	**ARCESS Array B**	**53.99**	**345**		P		**P**	**12 24 56.0**	**-2.3**
	comp=Z,3.5nm,0.8s,baz=36,slow=6.8,SNR=5.2								
SRU	**San Rafael Swe**	**54.25**	**71**		P		**P**	**12 25 02.4**	**+1.5**
SRU					pmax		pmax		
	comp=Z,5.0nm,1.0s								
SRU	**San Rafael Swe**	**54.25**	**71**		P		**P**	**12 25 02.4**	**+1.5**
PV22	**Blue Mesa, Par**	**55.62**	**70**		P		**P**	**12 25 11.7**	**+0.9**
PV22					IAmb		IAmb	12 25 12.5	
	comp=Z,3.5nm,0.9s								
PV17	**East Wray Mesa**	**55.70**	**71**		P		**P**	**12 25 12.3**	**+0.9**
PV18	**Skein Mesa, Pa**	**55.76**	**71**		P		**P**	**12 25 13.2**	**+1.4**
PV18					IAmb		IAmb	12 25 14.4	
	comp=Z,4.8nm,0.9s								
PV13	**Radium Mtn., P**	**55.87**	**71**		P		**P**	**12 25 13.2**	**+0.5**
ARU	**Arti**	**56.27**	**321**	*ic*	*iP*		**P**	**12 25 14.8**	**-0.1**
ARU								12 27 19.5	
ARU					S		**S**	**12 33 05.5**	**+2.6**
ARU					SS		**SS**	**12 36 45.5**	**-3.3**
ARU					pmax		pmax		
	comp=Z,8.0nm,1.4s								
SPX	**San Pedro Mart**	**57.18**	**81**		P		**P**	**12 25 22.2**	**0.0**
SPX					IAmb		IAmb	12 25 24.3	
	comp=Z,3.0nm,0.7s								
ABKAR	**Akbulak array**	**61.18**	**315**		P		**P**	**12 25 49.3**	**+0.1**
ABKAR					IAmb		IAmb	12 25 52.8	
	comp=Z,1.8nm,0.8s								
MNTX	**Cornudas Mount**	**62.49**	**73**		P		**P**	**12 25 58.5**	**+0.2**
MNTX					IAmb		IAmb	12 26 00.6	
	comp=Z,2.3nm,0.8s								
MOS	**Moscow**	**63.65**	**332**	*eP*			P	12 25 57.6	-8.0
MOS				*e*				12 26 46.4	
MOS					pmax		pmax		
	comp=Z,51nm,0.7s								
CMAR	**Chiang Mai Arr**	**63.66**	**265**		P		**P**	**12 26 08.4**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=23,slow=7.8,SNR=4.9								
NB201	**NORSAR Array S**	**63.99**	**348**		P		**P**	**12 26 07.9**	**+0.1**
NOA	**NORSAR Array B**	**64.01**	**348**		P		**P**	**12 26 06.4**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=14,slow=6.7,SNR=2.5								
OBN	**Obninsk**	**64.49**	**332**	*eP*			**P**	**12 26 11.1**	**0.0**
OBN				*e*				12 28 33.2	
OBN					pmax		pmax		
	comp=Z,6.0nm,1.0s								
OBN					MLR		MLR		
	comp=Z,60nm,16.0s								
TX31	**Lajitas Ar. Si**	**65.24**	**74**		P		**P**	**12 26 17.0**	**+0.5**
TX32	**Lajitas Array**	**65.24**	**74**		P		**P**	**12 26 17.1**	**+0.5**
TXAR	**Lajitas Array**	**65.25**	**74**		P		**P**	**12 26 16.9**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=305,slow=4.8,SNR=45								
TXAR	**Lajitas Array**	**65.25**	**74**		P		**P**	**12 26 17.0**	**+0.4**
KAPI	**Kappang**	**71.77**	**233**		LR		LR	12 53 12.4	
	comp=Z,236nm,21.9s,baz=57,slow=31								
KIV	**Kislovodsk**	**72.28**	**322**	*eP*			**P**	**12 26 57.7**	**-2.4**
KIV					pmax		pmax		
	comp=Z,15nm,0.9s								
KBZ	**Khabaz**	**72.40**	**322**	*i*	P		**P**	**12 26 59.6**	**-1.1**
KBZ					pmax		pmax		
	comp=Z,2.0nm,0.9s								
BATI	**Baumata**	**74.60**	**227**		LR		LR	12 57 07.1	
	comp=Z,246nm,21.9s,baz=16,slow=33								
ILGA	**Ilgaz**	**77.91**	**327**		P		**P**	**12 27 28.1**	**-4.8**
WRA	**Warramunga Arr**	**79.47**	**213**		P		**P**	**12 27 42.7**	**+1.5**
	comp=Z,1.1nm,0.9s,baz=30,slow=5.4,SNR=6.7								
WRA					LR		LR	12 59 55.8	
	comp=Z,234nm,21.8s,baz=310,slow=33								
ASAR	**Alice Springs**	**83.09**	**212**		P		**P**	**12 28 02.8**	**+2.4**
	comp=Z,1.1nm,0.8s,baz=21,slow=4.4,SNR=7.2								
ASAR					LR		LR	13 03 52.6	
	comp=Z,168nm,21.6s,baz=354,slow=35								
ASAR	**Alice Springs**	**83.09**	**212**		P		**P**	**12 28 02.4**	**+2.0**
ASAR	**Alice Springs**	**83.09**	**212**		P		**P**	**12 28 02.4**	**+2.0**
STKA	**Stephens Creek**	**88.77**	**203**		P		**P**	**12 28 30.4**	**+2.3**
	comp=Z,0.8nm,0.5s,baz=356,slow=13,SNR=2.0								
STKA	**Stephens Creek**	**88.77**	**203**		IAmb		IAmb	12 28 30.8	
	comp=Z,0.9nm,1.1s								
NWAO	**Narrogin (SRO)**	**97.48**	**222**		LR		LR	13 09 50.3	
	comp=Z,68nm,20.9s,baz=308,slow=33								

*IDC **18** 12:29:11.7±1.5, 1.°94N×126.°35E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/43, mbtmp3.7/6, ML3.1/1, MS3.9/1, Ms1 3.9/1, ms1mx2.6/38, Error ellipse: s-maj=117.8km s-min=18.6km az=69.0*

*DJA **18** 12:29:15.5±1.5, 2.°N±4.°×12.°6E±.°, h11km±13km, M3.7/10, mb3.7/1, MLv3.7/10*

ISC 18 12:29:17.9±1.0, 1.°93N±0.°07×126.°52E±0.°08, h47km, n14, σ0°97/14, mb3.8/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**144**	P	**Pn**	**12 29 40.7**	**-0.8**
SGSI	**Sangihe**	**2.00**	**330**	P	**Pn**	**12 29 49.1**	**-0.2**
SGSI				S	**Sn**	**12 30 13.3**	**+0.2**
KMSI	**Cibinong**	**2.88**	**242**	P	**Pn**	**12 30 01.1**	**-0.2**
GTOI	**Gorontalo**	**3.74**	**250**	P	**Pn**	**12 30 12.9**	**-0.2**
LUWI	**Luwuk**	**4.77**	**232**	P	**Pn**	**12 30 27.6**	**+0.3**
MRSI	**Marisa**	**4.80**	**253**	P	**Pn**	**12 30 28.5**	**+0.8**
MPSI	**Mapaga**	**6.81**	**257**	P	**Pn**	**12 30 53.0**	**-2.3**
FITZ	**Fitzroy Crossi**	**19.93**	**182**	P	**P**	**12 33 45.0**	**-0.9**
	0.0nm,0.3s,baz=10,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**23.05**	**161**	P	**P**	**12 34 19.3**	**-0.1**
	2.5nm,0.6s,baz=340,slow=11,SNR=84						
ASAR	**Alice Springs**	**26.44**	**165**	P	**P**	**12 34 51.0**	**+0.5**
	0.8nm,0.8s,baz=346,slow=8.4,SNR=8.7						
CTA	**Charters Tower**	**29.22**	**139**	LR	LR	12 49 00.1	
	comp=Z,225nm,19.1s,baz=74,slow=40						
MKAR	**Makanchi Array**	**58.91**	**326**	P	**P**	**12 39 11.5**	**-0.8**
	0.7nm,0.6s,baz=118,slow=7.9,SNR=8.3						
KURBB	**Kurchatov Arra**	**63.13**	**328**	P	**P**	**12 39 40.8**	**0.0**
	0.5nm,0.4s,baz=131,slow=6.7,SNR=11						
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**12 41 32.2**	**+1.5**
	0.7nm,1.1s,baz=320,slow=3.5,SNR=3.1						

*IDC **18** 12:33:19.8±1.6, 1.°88N×126.°25E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/39, mbtmp3.7/5, ML3.1/1, Error ellipse: s-maj=109.3km s-min=22.5km az=67.0*

*DJA **18** 12:33:23.9±0.3, 2.°N±4.°×12.°6E±.°, h10km, M3.8/5, mb3.7/1, MLv3.8/5*

ISC 18 12:33:26.0±1.1, 1.°88N±0.°08×126.°46E±0.°09, h47km, n10, σ0°95/10, mb3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**140**	P	**Pn**	**12 33 49.4**	**-0.1**
SGSI	**Sangihe**	**2.02**	**333**	P	**Pn**	**12 33 58.1**	**+0.5**
KMSI	**Cibinong**	**2.79**	**242**	P	**Pn**	**12 34 09.1**	**+0.9**
GTOI	**Gorontalo**	**3.66**	**250**	P	**Pn**	**12 34 19.0**	**-1.1**
LUWI	**Luwuk**	**4.69**	**232**	P	**Pn**	**12 34 35.1**	**+0.8**
FITZ	**Fitzroy Crossi**	**19.87**	**182**	P	**P**	**12 37 52.0**	**-1.4**
	0.0nm,0.3s,baz=5.7,slow=16,SNR=1.1						
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**12 38 27.4**	**+0.2**
	2.3nm,0.6s,baz=340,slow=11,SNR=32						
ASAR	**Alice Springs**	**26.41**	**164**	P	**P**	**12 38 59.0**	**+0.7**
	1.1nm,1.0s,baz=344,slow=7.4,SNR=9.4						
STKA	**Stephens Creek**	**36.52**	**158**	P	**P**	**12 40 27.8**	**+0.7**
	0.7nm,0.5s,baz=355,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**58.92**	**326**	P	**P**	**12 43 19.8**	**-0.6**
	0.5nm,0.4s,baz=118,slow=8.3,SNR=8.3						

*BJI **18** 12:43:17.2±0.0, 1.°46N×126.°44E, h35km, mB5.1/39, mb4.9/57, Ms4.5/33, Ms7 4.3/35*

*IDC **18** 12:43:17.7±0.3, 1.°91N×126.°21E, h0km, mb4.9/38, mb1 4.9/41, mb1mx4.9/46, mbtmp4.9/41, ML4.4/3, MS3.9/16, Ms1 3.9/16, ms1mx3.6/39, Error ellipse: s-maj=16.4km s-min=9.0km az=67.0*

*DJA **18** 12:43:21.8±0.2, 2.°N±2.°×12.°6E±.°, h10km, M4.8/15, mB5.2/13, mb5.2/15, MLv5.0/15, Mw(mB)4.6/13, Mwp4.9/3*

*NEIC **18** 12:43:22.4±2.3, 1.°97N±0.°06×126.°38E±0.°06, h35km±1km, mb5.2/121, Error ellipse: s-maj=11.4km s-min=9.9km az=227.0*

*KLM **18** 12:43:23.0, 2.°08N×126.°60E, h50km, mb5.1*

*GCMT **18** 12:43:25.4±0.3, 1.°71N±0.°02×126.°29E±0.°02, h33km±1km, MW5.0/65, Moment Tensor Solution. s45,c59; s65,c94; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.19±.15; Mθθ-2.81±.10; Mϕϕ 1.62±.13; Mrθ 1.29±.14; Mrϕ-0.62±.10; Mθϕ 1.84±.24; Best double couple: M0 3.37300×10^16 NP1: ϕs 300.00000°, δ 43.00000°, λ 160.00000°. NP2: ϕs 45.00000°, δ 76.00000°, λ 48.00000°. Principal axes: T 3.2850, Plg 43.0000°, Azm 276.0000°; N 0.1760, Plg 40.0000°, Azm 57.0000°; P -3.4610, Plg 20.0000°, Azm 165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 12:43:23.4±0.8, 1.°95N±0.°03×126.°37E±0.°05, h41km±7km, n397, σ1°69/396, mb5.1/125, MS4.1/27, 13C-9D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.54**	**140**	P	**Pn**	**12 43 46.4**	**-1.9**
TNTI	**Ternate**	**1.54**	**140**	Pn	Pn	**12 43 46.5**	**-1.9**
SGSI	**Sangihe**	**1.92**	**334**	P	**Pn**	**12 43 54.2**	**+0.7**
SGSI				S	**Sn**	**12 44 19.0**	**+2.6**
KMSI	**Cibinong**	**2.75**	**240**	P	**Pn**	**12 44 06.7**	**+1.7**
GTOI	**Gorontalo**	**3.60**	**249**	P	**Pn**	**12 44 18.2**	**+1.5**
DDMP	**Don Marcelino,**	**4.18**	**351**	*eP*	**Pn**	**12 44 23.8**	**-0.8**
DDMP				*eS*	**Sn**	**12 45 10.4**	**-1.8**
MRSI	**Marisa**	**4.67**	**252**	P	**Pn**	**12 44 33.4**	**+2.1**
LUWI	**Luwuk**	**4.67**	**230**	P	**Pn**	**12 44 35.6**	**+4.2**
LUWI	**Luwuk**	**4.67**	**230**	Pn	**Pn**	**12 44 34.1**	**+2.7**
SKMP	**Bagumbayan, Su**	**4.89**	**338**	*eP*	**Pn**	**12 44 34.5**	**+0.1**
SKMP				*eS*	**Sn**	**12 45 30.2**	**+0.4**
MATI	**Mati**	**4.96**	**359**	*eP*	**Pn**	**12 44 35.9**	**+0.5**
MATI				*eS*	**Sn**	**12 45 29.8**	**-1.8**
DAV	**Davao City (W)**	**5.14**	**351**	Pn	**Pn**	**12 44 37.5**	**-0.5**
	67nm,0.3s,baz=22,slow=5.4,SNR=1.7						
DAV				Sn	Sn	12 45 47.4	+11
	48nm,0.3s,baz=121,slow=19,SNR=1.2						
DAV	**Davao City (W)**	**5.14**	**351**		**Pn**	**12 44 34.7**	**-3.2**
KCP	**Kidapawan**	**5.18**	**346**	*iP*	**Pn**	**12 44 41.1**	**+2.6**
KCP				*i*	**Sn**	**12 45 42.4**	**+5.3**
NLAI	**Namlea**	**5.21**	**172**	P	**Pn**	**12 44 38.4**	**-0.4**
	0.6nm2μm146nm,0.8s						
APSI	**Ampana**	**5.51**	**239**	P	Pn	12 44 48.4	+5.4
	3.2nm1μm6μm830nm,0.9s						
SIJI	**Sorong**	**5.64**	**120**	Pn	**Pn**	**12 44 44.3**	**-0.5**
	2.8nm,0.3s,baz=267,slow=4.0,SNR=11						
TOLI2	**Tolitoli**	**5.65**	**262**	Pn	**Pn**	**12 44 44.6**	**-0.2**
MSAI	**Masohi**	**5.85**	**154**	P	**Pn**	**12 44 50.9**	**+3.3**
	0.2nm781nm56nm,0.8s						
BUKP	**Musuan**	**6.03**	**348**	*eP*	**Pn**	**12 44 52.6**	**+2.5**
BUKP				*eS*	**Sn**	**12 45 58.1**	**+0.1**
ZCP	**Zamboanga City**	**6.54**	**319**	*eP*	**Pn**	**12 44 58.5**	**+1.4**
PAGZ	**Pagadian**	**6.57**	**333**	*eP*	**Pn**	**12 44 57.2**	**-0.3**
PAGZ				*eS*	**Sn**	**12 46 06.0**	**-5.2**
MPSI	**Mapaga**	**6.67**	**256**	P	**Pn**	**12 45 02.5**	**+3.7**
	0.7nm3μm2μm207nm,0.9s						
CGP	**Cagayan de Oro**	**6.67**	**346**	*eP*	**Pn**	**12 45 02.5**	**+3.6**
BNDI	**Bandanaira**	**7.34**	**151**	P	Pn	12 45 13.4	+5.4
FAKI	**Fak Fak**	**7.61**	**129**	P	Pn	12 45 17.3	+5.5
FAKI	**Fak Fak**	**7.61**	**129**	Pn	**Pn**	**12 45 11.4**	**-0.4**
GLSP	**General Luna,**	**7.78**	**358**	*eP*	**Pn**	**12 45 15.9**	**+1.7**
GLSP				*eS*	**Sn**	**12 46 37.1**	**-4.0**
TTSI	**Tana Toraja**	**8.22**	**233**	P	**Pn**	**12 45 23.5**	**+3.4**
	2μm189nm,0.8s						
MSLP	**Maasin**	**8.27**	**350**	*eP*	**Pn**	**12 45 24.4**	**+3.6**
MYLDM	**Lahad Datu**	**8.48**	**292**	Pn	**Pn**	**12 45 26.6**	**+2.8**
CNOP	**Candoni, Negro**	**8.66**	**335**	*eP*	**Pn**	**12 45 27.7**	**+1.5**
CNOP				*eS*	**Sn**	**12 46 54.3**	**-8.3**
SPSI	**Sidrap Palu**	**8.84**	**228**	P	**Pn**	**12 45 31.2**	**+2.6**
	952nm88nm,0.8s						
BNSI	**Bone**	**8.89**	**225**	P	**Pn**	**12 45 30.9**	**+1.6**
	1μm144nm,0.7s						
SMKI	**Samarinda**	**9.46**	**256**	P	Pn	12 45 44.9	+7.6
BKSI	**Bulukumba**	**9.55**	**221**	P	**Pn**	**12 45 42.0**	**+3.6**
	1μm130nm,0.7s						
KAPI	**Kappang**	**9.57**	**224**	Pn	**Pn**	**12 45 40.3**	**+1.6**
	12nm,0.3s,baz=338,slow=6.0,SNR=7.9						
KAPI				Sn	**Sn**	**12 47 24.4**	**-0.6**
	1.6nm,0.3s,baz=163,slow=20,SNR=1.3						
KAPI	**Kappang**	**9.57**	**224**	Pn	**Pn**	**12 45 40.9**	**+2.2**
BSSI	**Bau Bau, Buton**	**9.96**	**216**	P	Pn	12 45 49.6	+5.6

QIZ LR LR
comp=Z,840nm,17.7s
QIZ LR LR
comp=Z,550nm,22.1s
QIZ LR LR
comp=Z,840nm,24.5s
QIZ Qiongzhong 23.45 317 P **P** **12 48 28.5 -0.8**
QIZ IAmb IAmb 12 48 32.4
comp=Z,169nm,1.7s
PMG Port Moresby 23.59 119 P **P** **12 48 32.0 +1.4**
comp=Z,13nm,0.7s,baz=318,slow=6.5,SNR=5.5
PMG LR LR 12 58 57.8
comp=Z,460nm,21.0s,baz=324,slow=40
PSA00 Pilbara Seismi 24.24 195 P **P** **12 48 35.2 -1.3**
PSA00 Pilbara Seismi 24.24 195 P **P** **12 48 35.2 -1.3**
PSA00 IAmb IAmb 12 48 45.9
comp=Z,10nm,0.8s
UBPT Khong Chiam 24.50 304 P **P** **12 48 41.1 +2.1**
UBPT IAmb IAmb 12 48 56.2
comp=Z,66nm,1.4s
IPM Ipoh 25.43 276 P **P** **12 48 47.5 0.0**
IPM IAmb IAmb 12 48 50.5
comp=Z,96nm,1.6s
IPM **PcP** **12 52 20.5 +1.3**
IPM Ipoh 25.43 276 P **P** **12 48 48.0 +0.5**
QIS Mount Isa 25.86 151 P **P** **12 48 50.7 -0.6**
baz=26,SNR=24
KULM Kulim 25.88 278 P **P** **12 48 51.0 -0.6**
KULM IAmb IAmb 12 49 22.7
comp=Z,78nm,1.6s
KULM Kulim 25.88 278 P **P** **12 48 52.0 +0.4**
KRVT Keravat (AS076 26.38 104 P **P** **12 48 57.8 +1.6**
comp=Z,11nm,0.7s,baz=152,slow=18,SNR=2.7
AS31 Alice Springs 26.50 164 P **P** **12 48 56.2 -0.9**
ASAR Alice Springs 26.50 164 P **P** **12 48 56.0 -1.1**
comp=Z,23nm,0.7s,baz=344,slow=8.3,SNR=92
ASAR S **S** **12 53 28.2 -0.4**
comp=Z,4.4nm,1.0s,baz=350,slow=22,SNR=6.5
ASAR Alice Springs 26.50 164 P **P** **12 48 56.3 -0.8**
ASAR **PcP** **12 52 22.1 +0.7**
MTSU Mount Surprise 26.66 139 P **P** **12 48 57.5 -1.1**
baz=27,SNR=18
SRAK Srakaew 26.86 298 P **P** **12 48 58.9 -1.6**
comp=Z,273nm,0.7s
WRKA Warakurna 26.89 176 P **P** **12 49 00.2 -0.5**
baz=27,SNR=135
GIRL Giralia 27.16 205 P **P** **12 49 03.7 +0.7**
baz=27,SNR=7.3
GIRL Giralia 27.16 205 P **P** **12 49 01.7 -1.3**
KHON Khomkaen 27.23 303 P **P** **12 49 08.1 +4.3**
comp=Z,40nm,0.9s
RPSI Rantau Prapat 27.43 272 P **P** **12 49 05.8 +0.2**
CHAI Chaiyaphum 27.74 301 P **P** **12 49 09.6 +1.3**
comp=Z,48nm,0.7s
NONG Nongkai 27.85 307 P **P** **12 49 12.3 +3.0**
comp=Z,45nm,1.0s
GSI Gunungsitoli 28.79 269 P **P** **12 49 16.6 -1.1**
GSI IAmb IAmb 12 49 20.5
comp=Z,36nm,0.7s
JCJ Chichijima 29.24 30 P **P** **12 49 20.9 -0.6**
CTA Charters Tower 29.33 139 P **P** **12 49 23.6 +1.1**
comp=Z,2.6nm,0.4s,baz=312,slow=14,SNR=6.9
CTA LR LR 13 03 58.2
comp=Z,388nm,19.9s,baz=316,slow=42
CTAO Charters Tower 29.33 139 P **P** **12 49 22.1 -0.3**
MEEK Meekatharra 29.39 194 P **P** **12 49 22.1 -0.8**
baz=30,SNR=31
JSU Suzuyama 29.65 7 P **P** **12 49 26.1 +1.0**
PHIT Phitsanulok 29.66 302 P **P** **12 49 28.3 +2.9**
comp=Z,77nm,0.7s
UTHA Uthaitani 29.79 299 P **P** **12 49 27.7 +1.2**
comp=Z,229nmcomp=Z,21nm,0.7s
UTTA Uttaradit 29.81 303 P **P** **12 49 30.6 +3.9**
comp=Z,13nm,0.8s
SUKH Sukhothai 30.46 302 P **P** **12 49 33.7 +1.2**
comp=Z,21nm,0.7s
NJ2 Nanjing 30.77 347 *eP* **P** **12 49 37.0 +2.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 30.86 324 ⇑P P 12 49 41.0 +5.0
GYA PcP **PcP** **12 52 34.3 +1.9**
GYA S **S** **12 54 30.6 -6.7**
GYA pmax pmax
comp=Z,7.0nm,0.9s
GYA pmax pmax
comp=Z,210nm,4.1s
GYA LR LR
comp=Z,220nm,9.8s
LAMP Lampang 30.95 304 P **P** **12 49 41.5 +4.7**
comp=Z,6.9nm,0.6s
PAYA Payao 31.17 306 P **P** **12 49 40.0 +1.2**
comp=Z,130nm,1.0s
JNU Nakatsue 31.29 7 P **P** **12 49 38.9 -0.7**
JNU IAmb IAmb 12 49 48.2
comp=Z,45nm,0.9s
CM35 Chiang Mai Arr 31.43 304 P **P** **12 49 42.0 +1.0**
CM04 Chiang Mai Arr 31.44 303 P P 12 49 46.4 +5.2
comp=Z,65nmcomp=Z,6.1nm,0.9s
CM09 Chiang Mai Arr 31.45 303 P **P** **12 49 45.9 +4.6**
comp=Z,61nmcomp=Z,9.5nm,0.8s
CM01 Chiang Mai Arr 31.47 303 P **P** **12 49 44.9 +3.5**
comp=Z,74nmcomp=Z,5.2nm,0.8s
CM05 Chiang Mai Arr 31.47 303 P P 12 49 46.5 +5.2
comp=Z,4.0nm,1.0s
CM02 Chiang Mai Arr 31.48 303 P **P** **12 49 45.0 +3.5**
comp=Z,7.0nm,0.8s
CM31 Chiang Mai Arr 31.50 303 P P 12 49 46.6 +5.0
comp=Z,279nm,0.7s
CMAR Chiang Mai Arr 31.50 303 P **P** **12 49 40.1 -1.5**
comp=Z,1.6nm,0.4s,baz=130,slow=8.0,SNR=17
CMAR PcP **PcP** **12 52 36.1 +2.0**
comp=Z,2.9nm,0.8s,baz=170,slow=1.6,SNR=11
CMAR LR LR 13 01 37.0
comp=Z,317nm,21.6s,baz=168,slow=35
CMAR Chiang Mai Arr 31.50 303 P **P** **12 49 39.5 -2.1**
CMAR **PcP** **12 52 35.4 +1.3**
CM13 Chiang Mai Arr 31.51 303 P **P** **12 49 45.5 +3.8**
comp=Z,47nmcomp=Z,5.6nm,0.9s
CM15 Chiang Mai Arr 31.51 303 P **P** **12 49 44.9 +3.1**
comp=Z,190nmcomp=Z,14nm,0.8s
CM34 Chiang Mai Arr 31.51 304 P **P** **12 49 43.0 +1.3**
CMMT Chiang Mai 31.66 304 P **P** **12 49 44.0 +0.9**
comp=Z,5.0nm,1.0s
CHTO Chiang Mai 31.66 304 P **P** **12 49 42.3 -0.8**
CM33 Chiang Mai Arr 31.66 304 P **P** **12 49 43.0 -0.1**
CM32 Chiang Mai Arr 31.67 303 P **P** **12 49 44.0 +0.9**
MORW Morawa 32.39 197 P **P** **12 49 48.8 -0.5**
baz=33,SNR=16
MORW Morawa 32.39 197 P **P** **12 49 48.5 -0.9**
ENH Enshi 32.40 332 P **P** **12 49 48.9 -0.6**
ENH IAmb IAmb 12 49 50.2
comp=Z,22nm,0.8s
KMI Kunming 32.40 317 ⇓*eP* **P** **12 49 49.9 +0.2**
KMI pmax pmax
comp=Z,15nm,0.6s
KMI LR LR
comp=Z,380nm,21.9s
KMI LR LR
comp=Z,550nm,22.5s
KMI LR LR
comp=Z,690nm,22.7s
FORT Forrest 32.59 177 P **P** **12 49 50.5 -0.5**
baz=33,SNR=28
FORT Forrest 32.59 177 P **P** **12 49 49.6 -1.4**
QLP Quilpie 33.20 150 P **P** **12 49 55.7 -0.7**
baz=33,SNR=5.3
KMBL Kambalda 33.41 187 P **P** **12 49 57.9 -0.3**
baz=34,SNR=13
BLDU Ballidu 33.67 195 P **P** **12 49 59.8 -0.6**
baz=34,SNR=15
JWT Wachi 34.21 13 P **P** **12 50 06.6 +1.5**
KLBR Kellerberrin 34.35 193 P **P** **12 50 06.0 -0.3**
baz=34,SNR=19
INU Inuyama 34.67 15 P **P** **12 50 09.3 +0.2**
INU IAmb IAmb 12 50 10.7
comp=Z,22nm,0.7s
JGF Kuroka 35.00 16 P **P** **12 50 12.9 +1.0**
JGF IAmb IAmb 12 50 14.2
comp=Z,14nm,0.6s
MUN Mundaring 35.10 195 P **P** **12 50 12.3 -0.5**
baz=35,SNR=12
HNR Honiara 35.31 109 LR LR 13 06 13.1
comp=Z,69nm,19.8s,baz=272,slow=39
KSAR Wonju Array Be 35.34 2 P **P** **12 50 14.1 -0.8**
INCN Inchon 35.36 0 P **P** **12 50 12.8 -2.2**
INCN IAmb IAmb 12 50 23.5
comp=Z,41nm,1.1s
KSRS Korea Array 35.36 2 P **P** **12 50 16.3 +1.4**
comp=Z,6.2nm,0.6s,baz=183,slow=9.6,SNR=32
KS19 Wonju Array Si 35.40 2 P **P** **12 50 16.2 +0.9**
KS19 IAmb IAmb 12 50 38.4
comp=Z,36nm,1.3s
RMQ Roma 35.59 144 P **P** **12 50 17.6 +0.5**
baz=36,SNR=7.9
NWAO Narrogin (SRO) 35.75 193 P **P** **12 50 17.9 -0.5**
comp=Z,15nm,0.7s,baz=33,slow=8.8,SNR=9.4
NWAO Narrogin (SRO) 35.75 193 P **P** **12 50 18.3 -0.1**
baz=36,SNR=8.1
NWAO Narrogin (SRO) 35.75 193 P **P** **12 50 17.9 -0.5**
NWAO Narrogin (SRO) 35.75 193 P **P** **12 50 17.8 -0.6**
NWAO IAmb IAmb 12 50 22.3
comp=Z,64nm,1.6s
BBOO Buckleboo 35.77 166 P **P** **12 50 17.6 -1.0**
baz=36,SNR=40
BBOO Buckleboo 35.77 166 P **P** **12 50 17.7 -0.9**
BBOO IAmb IAmb 12 50 21.7
comp=Z,17nm,0.7s
XAN Xi'an 35.85 335 P **P** **12 50 18.3 -1.0**
XAN PcP **PcP** **12 52 47.3 +1.2**
XAN pmax pmax
comp=Z,21nm,1.1s
XAN LR LR
comp=Z,550nm,17.4s
XAN LR LR
comp=Z,690nm,20.6s
XAN Xi'an 35.85 335 P **P** **12 50 18.5 -0.8**
XAN IAmb IAmb 12 50 28.1
comp=Z,14nm,0.8s
CD2 Chengdu 35.88 326 P **P** **12 50 18.9 -0.7**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 pmax pmax
comp=Z,240nm,10.0s
CD2 LR LR
comp=Z,720nm,21.0s
CD2 LR LR
comp=Z,660nm,22.4s
CD2 LR LR
comp=Z,610nm,22.4s
MAJO Matsushiro 36.12 16 P **P** **12 50 21.1 -0.4**
MAJO IAmb IAmb 12 50 55.7
comp=Z,69nm,1.6s
MAT Matsushiro 36.12 16 P **P** **12 50 21.4 -0.1**
MJAR Matsushiro Arr 36.12 16 P **P** **12 50 21.5 0.0**
comp=Z,7.9nm,0.6s,baz=186,slow=9.4,SNR=16
MJAR LR LR 13 03 13.1
comp=Z,174nm,21.9s,baz=195,slow=33
MJAR Matsushiro Arr 36.12 16 P **P** **12 50 21.2 -0.3**
EIDS Eidsvold 36.20 140 P **P** **12 50 22.7 +0.3**
baz=36,SNR=3.7
EIDS Eidsvold 36.20 140 P **P** **12 50 22.4 0.0**
EIDS IAmb IAmb 12 50 28.9
comp=Z,34nm,1.5s
STKA Stephens Creek 36.62 158 P **P** **12 50 25.1 -0.7**
comp=Z,15nm,0.7s,baz=330,slow=8.8,SNR=26
STKA LR LR 13 07 43.0
comp=Z,225nm,21.2s,baz=347,slow=40
STKA Stephens Creek 36.62 158 P **P** **12 50 24.9 -1.0**
baz=37,SNR=24
STKA Stephens Creek 36.62 158 P **P** **12 50 25.2 -0.7**
DL2 Dalian 37.03 354 P **P** **12 50 30.5 +1.3**
DL2 *eS* **S** **12 56 14.8 +2.7**
DL2 pmax pmax
comp=Z,94nm,4.3s
DL2 LR LR
comp=Z,280nm,17.5s
DL2 LR LR
comp=Z,250nm,15.6s
DL2 LR LR
comp=Z,340nm,22.1s
HTT Hallett 37.13 162 P **P** **12 50 29.7 -0.5**
baz=37,SNR=24
RKGY Rocky Gully 37.42 193 P **P** **12 50 33.7 +1.1**
baz=38,SNR=9.4
CMSA Cobar Meteorol 38.03 153 P **P** **12 50 38.3 +0.5**
baz=38,SNR=7.9
JMM Marumori 38.12 19 P **P** **12 50 38.9 +0.4**
BJT Baijiatuan 39.01 348 P **P** **12 50 46.4 +0.5**
BJT IAmb IAmb 12 50 48.0
comp=Z,17nm,0.6s
BJI Beijing 39.03 348 P **P** **12 50 46.8 +0.8**
LZH Lanzhou 39.86 331 ⇑P **P** **12 50 53.1 -0.2**
LZH pP pP 12 51 03.0 -1.3
LZH sP pwP 12 51 06.8 +0.4
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,100nm,4.9s
LZH LR LR
comp=Z,320nm,17.5s
LZH LR LR
comp=Z,350nm,17.9s
LZH LR LR
comp=Z,470nm,18.6s
ARMA Armidale 40.20 145 P **P** **12 50 56.5 +0.3**
baz=40,SNR=5.8
ARMA Armidale 40.20 145 P **P** **12 50 56.0 -0.2**
SHL Shillong 40.66 308 P **P** **12 50 59.5 -0.6**
SHL IAmb IAmb 12 51 01.0
comp=Z,32nm,0.5s
JTM Tenmabayashi 40.88 17 P **P** **12 51 03.0 +1.6**
JTM IAmb IAmb 12 51 07.3
comp=Z,56nm,1.0s
HHC Hu-ho-hao-te 40.97 343 *eP* **P** **12 51 00.8 -1.5**
HHC pmax pmax
comp=Z,31nm,0.8s
HHC pmax pmax
comp=Z,130nm,5.1s
HHC LR LR
comp=Z,420nm,19.6s
HHC LR LR
comp=Z,160nm,17.0s
HHC LR LR
comp=Z,520nm,19.6s
ARPS Mount Arapiles 41.13 161 P **P** **12 51 03.4 -0.1**
baz=41,SNR=28
CN2 Changchun 41.68 359 *eP* **P** **12 51 10.3 +2.4**
CN2 *epP* pP 12 51 18.8 -0.2
CN2 *eS* **S** **12 57 26.4 +4.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,260nm,17.0s
CN2 LR LR
comp=Z,240nm,17.0s
CN2 LR LR
comp=Z,300nm,16.0s
USA0B Ussuriysk Arra 42.36 6 P **P** **12 51 14.4 +0.9**
USRK Ussuriysk Ar. 42.36 6 P **P** **12 51 14.6 +1.1**
comp=Z,13nm,0.9s,baz=182,slow=6.1,SNR=16
USRK Ussuriysk Ar. 42.36 6 P **P** **12 51 13.9 +0.5**
MDJ Mudanjiang 42.58 3 P **P** **12 51 16.8 +1.5**
MDJ pmax pmax
comp=Z,11nm,0.7s
MDJ pmax pmax
comp=Z,100nm,2.6s
MDJ Mudanjiang 42.58 3 P **P** **12 51 16.4 +1.1**
TOO Toolangi 43.13 158 P **P** **12 51 19.3 -0.7**
baz=43,SNR=7.1
LSA Lhasa 43.36 313 P **P** **12 51 22.8 +0.4**
LSA Lhasa 43.36 313 P **P** **12 51 22.7 +0.4**
LSA IAmb IAmb 12 51 25.5
comp=Z,27nm,0.6s
JKA Kamikawa-asahi 44.39 17 P **P** **12 51 32.0 +2.1**
JKA IAmb IAmb 12 51 45.4
comp=Z,30nm,1.1s
GTA Gaotai 44.44 330 *eP* **P** **12 51 30.6 +0.1**
GTA pP pP 12 51 40.8 -0.9
GTA sP sP 12 51 45.0 -1.4
GTA PcP **PP** **12 53 15.4 +0.6**
GTA pmax pmax
comp=Z,9.0nm,0.9s
GTA pmax pmax
comp=Z,57nm,6.4s
GTA LR LR
comp=Z,180nm,17.1s
GTA LR LR
comp=Z,200nm,16.4s
GTA LR LR
comp=Z,300nm,19.3s
TAPN Taplejung 44.80 308 *eP* **P** **12 51 33.2 -0.6**
comp=Z,21nm,0.7s
ODAN Odare 44.83 307 *eP* **P** **12 51 33.7 -0.2**
comp=Z,34nm,0.7s
RAMN Ramite 45.50 307 *eP* **P** **12 51 39.0 -0.3**
PALK Pallekele 45.80 278 P **P** **12 51 40.8 -0.8**
DZM Mont Dzumac 45.83 124 *eP* **P** **12 51 42.5 +0.7**
comp=Z,30nm,0.9s
DZM Mont Dzumac 45.83 124 *e*LR LR 13 04 37.6
comp=Z,559nm,25.9s
DZM 45.83 124 P **P** **12 51 39.8 -2.0**
GUN Gumba 46.50 308 *eP* **P** **12 51 46.6 -0.7**
comp=Z,28nm,0.4s
PKI Pulchoki 46.72 307 *eP* **P** **12 51 47.8 -1.2**
comp=Z,10.0nm,0.4s
PKIN Phulchoki 46.73 307 *eP* **P** **12 51 47.7 -1.3**
comp=Z,8.1nm,0.3s
KKN Kakani 46.92 307 *eP* **P** **12 51 49.5 -0.9**
comp=Z,15nm,0.4s
DMN Daman 46.98 307 *eP* **P** **12 51 49.7 -1.2**
comp=Z,41nm,1.0s
GKN Gorkha 47.52 307 *eP* **P** **12 51 54.0 -1.1**
comp=Z,17nm,0.6s
KOLN Koldanda 48.26 306 *eP* **P** **12 52 00.3 -0.5**
comp=Z,101nm,0.8s
DANN Dangsing 48.37 307 *eP* **P** **12 52 00.9 -0.9**
comp=Z,51nm,0.6s
ULN Ulaanbaatar 48.69 343 P **P** **12 52 03.7 0.0**
ULN IAmb IAmb 12 53 30.8
comp=Z,14nm,0.9s
SONM Songino Array 48.86 342 P **P** **12 52 05.6 +0.5**
comp=Z,6.7nm,0.8s,baz=151,slow=8.1,SNR=37
SONM PcP **PcP** **12 53 30.3 +1.2**
comp=Z,9.2nm,0.8s,baz=159,slow=3.9,SNR=11
SONM LR LR 13 16 19.4
comp=Z,164nm,19.9s,baz=169,slow=41
SONM Songino Array 48.86 342 P **P** **12 52 04.5 -0.6**
PYUN Piuthan 48.88 306 *eP* **P** **12 52 05.0 -0.6**
comp=Z,74nm,0.5s
HYB Hyderabad 49.40 291 *i* P **P** **12 52 07.0 -2.5**
TLY Talaya 53.10 342 P **P** **12 52 36.7 +0.1**
WMQ Urumqi 53.98 326 *eP* **P** **12 52 43.8 +0.5**
WMQ pP pP 12 52 48.8 -6.0
WMQ sP sP 12 53 01.9 +2.5
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,140nm,4.3s
WMQ LR LR
comp=Z,260nm,21.7s
WMQ LR LR
comp=Z,560nm,25.1s
WMQ LR LR
comp=Z,850nm,25.1s
WMQ Urumqi 53.98 326 P **P** **12 52 43.0 -0.3**
WMQ IAmb IAmb 12 52 45.2
comp=Z,13nm,0.7s
PETK Petropavlovsk- 57.20 22 P **P** **12 53 08.3 +2.1**
comp=Z,7.7nm,0.6s,baz=178,slow=3.2,SNR=22
PETK Petropavlovsk- 57.20 22 P **P** **12 53 06.0 -0.2**
ZSN Zaisan 57.80 328 *eP* **P** **12 53 10.3 -0.3**
comp=Z,3.7nm,1.1s,baz=328
SHLS Shalkode 58.49 321 *eP* **P** **12 53 13.6 -2.0**
comp=Z,10nm,0.8s,baz=322
NIL Nilore 58.73 309 P **P** **12 53 16.1 -1.2**
NIL IAmb IAmb 12 53 27.1
comp=Z,14nm,0.7s
MK31 Makanchi Array 58.81 326 P **P** **12 53 16.2 -1.5**
MK31 IAmb IAmb 12 53 19.2
comp=Z,15nm,0.5s
MKAR Makanchi Array 58.81 326 P **P** **12 53 17.9 +0.2**
comp=Z,23nm,0.5s,baz=121,slow=7.8,SNR=129
MKAR PcP **PcP** **12 54 07.6 +0.7**
comp=Z,6.7nm,0.6s,baz=109,slow=5.9,SNR=3.7
MKAR LR LR 13 20 11.3
comp=Z,199nm,18.8s,baz=109,slow=38
MKAR Makanchi Array 58.81 326 P **P** **12 53 17.0 -0.6**
MAKZ Makanchi 58.99 326 P **P** **12 53 18.9 0.0**
KSH Kashi 59.05 316 *eP* **P** **12 53 21.5 +1.9**
KSH pmax pmax
comp=Z,170nm,5.4s
SATY Saty 59.10 321 *eP* **P** **12 53 19.9 0.0**
comp=Z,13nm,0.7s,baz=321
KPKS Kokpek 59.13 321 *eP* **P** **12 53 19.1 -0.9**
comp=Z,15nm,0.7s,baz=321
YAK Yakutsk 59.98 2 P **P** **12 53 25.3 0.0**
MDOK Medeo 60.02 320 *eP* **P** **12 53 25.4 -0.9**
baz=320
MDOK LR LR 13 17 45.8
comp=Z,45nm,11.6s,baz=320
TDK Taldyqorghan 60.09 323 *eP* **P** **12 53 25.9 -0.6**
comp=Z,14nm,0.5s,baz=323
CHKK Chushkaly 60.39 321 *eP* **P** **12 53 27.9 -0.7**
baz=321
BOOM Boomskoye usch 60.42 319 P **P** **12 53 29.4 +0.5**
BOOM IAmb IAmb 12 55 39.9
comp=Z,22nm,1.3s
MA2 Magadan 60.50 14 P **P** **12 53 30.4 +1.4**
KUU Kurty 60.82 321 *eP* **P** **12 53 30.8 -0.7**
comp=Z,16nm,0.6s,baz=321
TUWZ Tuamarina 61.01 141 P **P** **12 53 31.2 -1.5**
KHZ Kahutara 61.29 142 P **P** **12 53 31.8 -2.8**
AAK Ala-Archa 61.44 319 P **P** **12 53 36.5 +0.6**
URZ Urewera 61.51 136 P **P** **12 53 34.2 -2.0**
URZ IAmb IAmb 12 55 35.1
comp=Z,36nm,1.2s
BKZ Black Stump Fm 61.52 137 P **P** **12 53 35.0 -1.3**
SGDS Sogindy 61.71 320 *eP* **P** **12 53 37.2 -0.4**
baz=320
ZAA0 Zalesovo Array 62.00 334 P **P** **12 53 37.9 -1.4**
ZALV Zalesovo Beam 62.00 334 P **P** **12 53 38.8 -0.4**
comp=Z,2.8nm,0.4s,baz=136,slow=7.4,SNR=16
ZALV LR LR 13 21 51.7
comp=Z,88nm,20.9s,baz=76,slow=37
ZALV Zalesovo Beam 62.00 334 P **P** **12 53 38.5 -0.7**
SEM Semipalatinsk 62.01 329 *eP* **P** **12 53 39.6 0.0**
baz=329
KBL Kabul 62.32 308 P **P** **12 53 41.8 -0.2**
KBL IAmb IAmb 12 53 45.4
comp=Z,17nm,0.7s
BTLS Baital 62.81 321 *eP* **P** **12 53 43.6 -1.2**
baz=321
GAR Garm 62.87 313 P **P** **12 53 44.9 -0.6**
BTK Batken 62.90 315 P **P** **12 53 45.1 -0.5**
BTK IAmb IAmb 12 53 48.0
comp=Z,12nm,1.0s
KURBB Kurchatov Arra 63.04 328 P **P** **12 53 45.7 -0.6**
comp=Z,24nm,0.6s,baz=128,slow=6.3,SNR=38
KURK Kurchatov 63.04 328 P **P** **12 53 46.0 -0.3**
CHGR Chuyangaron 63.59 313 P **P** **12 53 50.3 0.0**
CHGR IAmb IAmb 12 54 04.5
comp=Z,22nm,0.9s
DZA Taraz 63.65 318 *eP* **P** **12 53 49.3 -1.2**
baz=318
IUG Iuzhnay 64.24 317 *eP* **P** **12 53 53.5 -1.0**
comp=Z,6.1nm,0.7s,baz=317
KK31 Karatay Array 64.29 318 P **P** **12 53 54.5 -0.1**
KKAR Karatay Array 64.29 318 P **P** **12 53 54.6 -0.1**
KKAR Karatay Array 64.29 318 P **P** **12 53 54.4 -0.3**
BRZS Berezniki 65.93 325 *eP* **P** **12 54 04.2 -0.9**
comp=Z,3.3nm,0.7s,baz=325
BVAR Borovoye Array 68.61 327 P **P** **12 54 21.6 -0.4**
comp=Z,5.1nm,0.5s,baz=214,slow=31,SNR=41
BRVK Borovoye 68.68 327 P **P** **12 54 22.2 -0.3**
BRVK IAmb IAmb 12 54 30.5
comp=Z,13nm,0.6s
TIXI Tiksi 69.61 1 P **P** **12 54 27.7 -0.2**
GEYT Alibeck 71.73 309 P **P** **12 54 41.7 +0.2**
comp=Z,10.0nm,0.9s,baz=106,slow=4.9,SNR=8.5
GEYT Alibeck 71.73 309 P **P** **12 54 42.0 +0.5**
GYA0B ALIBECK ARRAY 71.73 309 P **P** **12 54 39.9 -1.7**
GYA0B IAmb IAmb 12 54 48.6
comp=Z,13nm,0.8s
NRIK Noril'sk 72.06 346 P **P** **12 54 43.4 +0.5**
comp=Z,17nm,0.7s,baz=130,slow=5.8,SNR=31
SOCY Socotra 72.37 282 P **P** **12 54 43.8 -2.1**
ABKAR Akbulak array 73.30 321 P **P** **12 54 50.2 -0.4**
ABKAR Akbulak array 73.30 321 P **P** **12 54 49.5 -1.1**
AKTO Aktyubinsk 74.82 322 P **P** **12 54 59.2 -0.3**
comp=Z,12nm,0.7s,baz=106,slow=8.3,SNR=48
ARU Arti 76.24 328 P **P** **12 55 07.7 +0.2**
comp=Z,5.8nm,0.5s,baz=115,slow=2.1,SNR=32
ARU Arti 76.24 328 P **P** **12 55 06.6 -0.9**
ARU IAmb IAmb 12 55 08.6
comp=Z,27nm,0.8s
ABPO Ambohimpanom 80.38 250 P **P** **12 55 31.2 -0.2**
ABPO IAmb IAmb 12 55 33.3
comp=Z,14nm,0.9s

RAYN	**Ar Rayn**	**80.85**	**293**	P	**P**		12 55 32.3 -1.3
RAYN				lAmb	lAmb		12 55 34.9
	comp=Z,16nm,0.8s						
KIRV	**Kirov**	**81.55**	**329**	P	**P**		12 55 36.6 +0.2
	comp=Z,22nm,0.7s,baz=100,slow=18,SNR=8.2						
VNDA	**Vanda**	**81.72**	**173**	P	**P**		12 55 37.5 +0.5
	comp=Z,3.1nm,0.5s,baz=316,slow=6.2,SNR=38						
VNDA				LR	LR		13 33 57.8
	comp=Z,46nm,18.6s,baz=344,slow=37						
VNDA	**Vanda**	**81.72**	**173**	P	**P**		12 55 37.7 +0.6
MAW	**Mawson**	**81.97**	**200**	P	**P**		12 55 40.1 +1.6
	comp=Z,3.8nm,0.7s,baz=106,slow=2.9,SNR=9.4						
MAW	**Mawson**	**81.97**	**200**	P	**P**		12 55 40.2 +1.6
	baz=82,SNR=9.9						
MAW	**Mawson**	**81.97**	**200**	P	**P**		12 55 39.6 +1.1
TTA	**Tatalina**	**82.64**	**27**	P	**P**		12 55 42.0 -0.3
TTA				lAmb	lAmb		12 55 45.5
	comp=Z,16nm,1.0s						
AKH	**Akhalkalaki**	**83.37**	**311**	P	**P**		12 55 47.0 +0.3
GEVA	**Gevas**	**83.54**	**308**	P	**P**		12 55 47.1 -0.5
GEVA				lAmb	lAmb		12 55 55.2
	comp=Z,21nm,0.7s						
KBZ	**Khabaz**	**83.93**	**314**	P	**P**		12 55 50.0 +0.8
	comp=Z,6.3nm,0.8s,baz=233,slow=20						
A21K	**Barrow**	**84.01**	**18**	P	**P**		12 55 51.8 +2.7
	baz=258						
A21K	**Barrow**	**84.01**	**18**	P	**P**		12 55 49.5 +0.5
IMAR	**Indian Mountai**	**84.10**	**24**	P	**P**		12 55 49.3 -0.4
SKT	**Skwentna**	**84.56**	**28**	P	**P**		12 55 50.5 -1.6
SKT				lAmb	lAmb		12 55 57.4
	comp=Z,14nm,0.9s						
SUA	**Susitna One**	**84.89**	**29**	P	**P**		12 55 53.2 -0.6
MARD	**Mardin**	**85.31**	**307**	P	**P**		12 55 56.5 -0.1
TBI	**Tubuai**	**85.41**	**113**	*e*LR	LR		13 22 49.2
	comp=Z,136nm,28.2s						
COLD	**Coldfoot**	**85.66**	**23**	P	**P**		12 55 59.6 +2.1
	baz=265						
PMR	**Palmer**	**85.67**	**29**	P	**P**		12 55 58.1 +0.5
PMR				lAmb	lAmb		12 56 00.1
	comp=Z,15nm,1.0s						
I23K	**Minto, Yukon-K**	**85.82**	**25**	P	**P**		12 56 00.2 +1.9
	baz=266						
I23K	**Minto, Yukon-K**	**85.82**	**25**	P	**P**		12 55 59.1 +0.9
I23K				lAmb	lAmb		12 56 01.9
	comp=Z,9.4nm,1.1s						
MCK	**McKinley**	**85.90**	**26**	P	**P**		12 56 00.1 +1.3
	baz=266						
KNK	**Knik Glacier**	**85.98**	**29**	P	**P**		12 56 00.2 +1.0
KNK				lAmb	lAmb		12 56 02.3
	comp=Z,17nm,0.9s						
TOLK	**Toolik Lake Re**	**86.02**	**21**	P	**P**		12 56 01.4 +2.2
	baz=265						
MDM	**Murphy Dome**	**86.29**	**25**	P	**P**		12 56 00.9 +0.2
CCB	**Clear Creek Bu**	**86.45**	**25**	P	**P**		12 56 00.6 -0.8
KLMR	**Klimovskoe**	**86.77**	**331**	*e*P	**P**		12 56 01.1 -1.9
KLMR				AMP			12 56 05.1
	comp=Z,46nm,1.4s						
HDA	**Harding Lake**	**86.81**	**26**	P	**P**		12 56 03.5 +0.3
	baz=268						
ILAR	**Eielson Array**	**86.85**	**25**	P	**P**		12 56 02.8 -0.6
	comp=Z,1.6nm,0.8s,baz=252,slow=4.6,SNR=12						
ILAR	**Eielson Array**	**86.85**	**25**	P	**P**		12 56 01.2 -2.2
L26K	**Log Cabin Wild**	**88.40**	**27**	P	**P**		12 56 12.3 +1.4
	baz=271						
ASF	**Jabal al Asfar**	**88.53**	**302**	P	**P**		12 56 14.0 +1.8
	comp=Z,7.5nm,0.9s,baz=46,slow=16,SNR=6.0						
K27K	**Chicken**	**88.94**	**26**	P	**P**		12 56 15.7 +2.3
	baz=272						
K27K	**Chicken**	**88.94**	**26**	P	**P**		12 56 14.6 +1.2
K27K				lAmb	lAmb		12 56 16.9
	comp=Z,12nm,1.0s						
KMBO	**Kilima Mbogo**	**89.16**	**269**	P	**P**		12 56 18.3 +2.6
	comp=Z,14nm,1.0s,baz=59,slow=6.9,SNR=14						
KMBO	**Kilima Mbogo**	**89.16**	**269**	P	**P**		12 56 15.5 -0.3
KMBO				lAmb	lAmb		12 56 21.2
	comp=Z,22nm,1.2s						
MMAI	**Mount Meron Ar**	**89.76**	**303**	P	**P**		12 56 18.9 +0.9
	comp=Z,16nm,1.0s,baz=81,slow=7.1,SNR=15						
DAWY	**Dawson**	**90.12**	**26**	P	**P**		12 56 20.1 +1.2
EIL	**Elat**	**90.28**	**300**	P	**P**		12 56 20.2 -0.1
	comp=Z,14nm,0.9s,baz=16,slow=5.2,SNR=8.2						
EIL				LR	LR		13 40 01.5
	comp=Z,32nm,21.7s,baz=107,slow=38						
SYO	**Syowa Base**	**90.65**	**201**⇑	*e*PcP	**PcP**		12 56 23.3 +1.1
SYO	**Syowa Base**	**90.65**	**201**⇑	*e*X	P		12 56 30.4 +9.2
ILGA	**Ilgaz**	**90.74**	**311**	P	**P**		12 56 22.7 +0.1
ILGA				lAmb	lAmb		12 56 23.4
	comp=Z,13nm,0.8s						
BR131	**Keskin Array S**	**90.87**	**310**	P	**P**		12 56 22.2 -0.9
BR131				lAmb	lAmb		12 56 23.6
	comp=Z,5.8nm,0.9s						
BRTR	**Keskin Array B**	**90.87**	**310**	P	**P**		12 56 22.6 -0.5
	comp=Z,6.6nm,0.8s,baz=103,slow=5.3,SNR=24						
BRTR				LR	LR		13 43 11.9
	comp=Z,21nm,20.9s,baz=105,slow=40						
CSS	**Mathiatis**	**91.39**	**305**	P	**P**		12 56 24.7 -0.7
QSPA	**South Pole Qui**	**91.87**	**180**	P	**P**		12 56 28.3 +1.2
QSPA				lAmb	lAmb		12 57 12.7
	comp=Z,25nm,1.9s						
ARC1	**ARCESS Array S**	**91.98**	**340**	P	**P**		12 56 25.9 -1.5
ARB1	**ARCESS Array S**	**91.98**	**340**	P	**P**		12 56 25.9 -1.5
ARCES	**ARCESS Array B**	**91.98**	**340**	P	**P**		12 56 27.2 -0.2
	comp=Z,10nm,0.8s,baz=57,slow=7.4,SNR=11						
ARCES				LR	LR		13 41 40.8
	comp=Z,68nm,21.2s,baz=70,slow=38						
SPITS	**Spitsbergen Ar**	**92.14**	**349**	P	**P**		12 56 28.2 +0.1
	comp=Z,9.8nm,0.8s,baz=106,slow=6.2,SNR=6.4						
AKASG	**Malin Array Be**	**93.03**	**321**	P	**P**		12 56 31.9 -0.7
	comp=Z,1.3nm,0.6s,baz=71,slow=4.3,SNR=5.1						
AKASG				LR	LR		13 43 30.1
	comp=Z,62nm,20.6s,baz=70,slow=39						
FINES	**FINESS Array B**	**93.22**	**332**	P	**P**		12 56 32.7 -0.6
	comp=Z,4.0nm,0.5s,baz=64,slow=4.4,SNR=16						
FINES				LR	LR		13 42 32.5
	comp=Z,76nm,19.5s,baz=73,slow=38						
ELL	**Elmali**	**94.02**	**307**	P	**P**		12 56 34.8 -2.9
CFR	**Carcaliu**	**94.43**	**315**	⇓P	**P**		12 56 38.7 -0.5
C36M	**Paulatuk**	**94.99**	**20**	P	**P**		12 56 41.9 +0.7
	baz=289						
TESR	**Tescani**	**95.28**	**317**	⇓P	**P**		12 56 43.2 +0.1
VRI	**Vrincioaia**	**95.32**	**316**	⇑P	**P**		12 56 44.2 +0.9
BISRR	**Bisoca**	**95.38**	**316**	⇑P	**P**		12 56 44.9 +1.3
BIZ	**Bicaz**	**95.59**	**317**	⇑P	**P**		12 56 44.1 -0.4
NEHR	**Nehoiu**	**95.69**	**316**	⇑P	**P**		12 56 45.6 +0.6
MLR	**Muntele Rosu**	**95.92**	**316**	P	**P**		12 56 46.3 +0.1
	comp=Z,7.5nm,0.8s,baz=37,slow=4.2,SNR=9.4						
MLR	**Muntele Rosu**	**95.92**	**316**	⇑P	**P**		12 56 46.7 +0.5
MLR	**Muntele Rosu**	**95.92**	**316**	P	**P**		12 56 43.8 -2.4
MLR				lAmb	lAmb		12 56 55.7
	comp=Z,8.6nm,0.7s						
BURAR	**Bucovina Array**	**96.08**	**318**	⇓P	**P**		12 56 47.6 +0.8
BURAR	**Bucovina Array**	**96.08**	**318**	P	**P**		12 56 45.7 -1.1
BUR08	**Bucovina Ar. S**	**96.08**	**318**	P	**P**		12 56 44.8 -2.1
BUR08				lAmb	lAmb		12 57 06.3
	comp=Z,12nm,1.2s						
DOPR	**Dopca**	**96.23**	**316**	⇑P	P		12 56 36.3 -11
VOIR		**96.55**	**316**	⇑P	**P**		12 56 48.7 -0.3
LOT	**Lotru**	**97.44**	**316**	⇑P	Pdif		12 56 53.7 +0.6
KOLS	**Kolonicke sedl**	**97.76**	**320**	*e*PDIFF	Pdif		12 56 58.0 +3.6
IDI	**Anoyia**	**98.24**	**306**	P	**P**		12 56 56.0 -0.8
	comp=Z,6.0nm,0.8s,baz=5.2,slow=6.2,SNR=5.9						
IDI	**Anoyia**	**98.24**	**306**	⇓P	**P**		12 56 56.5 -0.3
CRVS	**Cervenica-Dubn**	**98.29**	**320**	*e*PDIFF	Pdif		12 56 57.9 +1.2
HERR	**Herculane**	**98.48**	**316**	⇑P	**P**		12 56 57.6 0.0
DAG	**Danmarks Havn**	**98.95**	**352**	*i* P	**P**		12 56 58.5 -0.5
	comp=Z,7.7nm,0.8s						
DAG	**Danmarks Havn**	**98.95**	**352**	*i* P	**P**		12 56 58.5 -0.5
DAG				lAmb	lAmb		12 56 59.8
	comp=Z,7.7nm,0.8s						
HFS	**Hagfors**	**99.41**	**332**	P	**Pdif**		12 57 00.4 -1.0
	comp=Z,1.7nm,0.6s,baz=186,slow=2.9,SNR=2.3						
NB2	**NORSAR Subarra**	**100.21**	**333**	P	**Pdif**		12 57 03.6 -1.4
	comp=Z,2.2nm,0.9s,baz=70,slow=4.4						
NB2	**NORSAR Subarra**	**100.21**	**333**	P	**Pdif**		12 57 03.6 -1.4
	baz=70,slow=4.4						
NOA	**NORSAR Array B**	**100.21**	**333**	P	**Pdif**		12 57 04.3 -0.7
	comp=Z,1.0nm,0.7s,baz=107,slow=4.5,SNR=2.3						
DBG	**Daneborg**	**101.22**	**351**	*i* P	**Pdif**		12 57 09.6 +0.4
DBG				lAmb	lAmb		12 57 10.8
	comp=Z,4.0nm,0.9s						
NVAR	**Mina Array Bea**	**108.35**	**48**	PKKPab	PKKPab		13 13 12.7 -0.1
	comp=Z,0.8nm,0.8s,baz=134,slow=4.5,SNR=6.1						
PDAR	**Pinedale Array**	**112.92**	**41**	PKKPbc	PKKPbc		13 12 44.4 -0.7
	comp=Z,0.4nm,0.6s,baz=108,slow=5.9,SNR=3.9						
PDAR				PKKPab	PKKPab		13 12 51.7 -0.7
	comp=Z,1.8nm,0.8s,baz=120,slow=6.8,SNR=10						
ESDC	**Sonseca Array**	**118.54**	**318**	PKP	**PKiKP**		13 02 08.6 +1.3
	comp=Z,0.7nm,0.6s,baz=76,slow=1.5,SNR=3.2						
MNTX	**Cornudas Mount**	**120.64**	**51**	P	**PKiKP**		13 02 12.8 +1.2
	baz=294						
SCHQ	**Schefferville**	**122.37**	**9**	PKP	**PKiKP**		13 02 14.2 0.0
	comp=Z,2.9nm,0.6s,baz=266,slow=5.8,SNR=5.9						
SCHQ	**Schefferville**	**122.37**	**9**	PKP	**PKPdf**		13 02 11.2 -2.9
TXAR	**Lajitas Array**	**122.96**	**53**	PKP	**PKiKP**		13 02 17.4 +1.1
	comp=Z,0.4nm,0.8s,baz=116,slow=2.9,SNR=5.8						
TXAR				PKKPab	**PKKPbc**		13 12 09.2 +0.8
	comp=Z,0.4nm,0.8s,baz=120,slow=7.4,SNR=4.8						
TXAR	**Lajitas Array**	**122.96**	**53**		**PKiKP**		13 02 17.0 +0.7
TOA0	**Torodi Ar. Sit**	**123.11**	**287**	PKPdf	**PKiKP**		13 02 16.9 +0.1
TORD	**Torodi Ar. Bea**	**123.11**	**287**	PKP	**PKiKP**		13 02 17.2 +0.4
	comp=Z,12nm,0.7s,baz=49,slow=2.0,SNR=69						
TORD				PKKPab	**PKKPab**		13 12 08.7 +1.0
	comp=Z,0.6nm,0.6s,baz=266,slow=1.9,SNR=5.4						
S39A	**Bolivar**	**126.12**	**39**		**PKPdf**		13 02 21.9 +0.1
U40A	**Yellville**	**127.23**	**40**	P	**PKiKP**		13 02 24.9 +0.5
	baz=308						
KIC	**Kosan Boka**	**130.50**	**280**	*e*PKP1	**PKiKP**		13 02 31.8 +0.2
	comp=Z,35nm,1.0s						
DBIC	**Dimbokro**	**130.57**	**280**	PKP	**PKiKP**		13 02 32.0 +0.3
	comp=Z,7.5nm,0.7s,baz=81,slow=2.2,SNR=11						
DBIC	**Dimbokro**	**130.57**	**280**		**PKiKP**		13 02 31.3 -0.4
TIC	**Toumodi**	**130.73**	**280**	*e*PKP1	**PKiKP**		13 02 32.1 0.0
LIC	**Lamto**	**130.80**	**280**	*e*PKP1	**PKiKP**		13 02 32.5 +0.3
	comp=Z,51nm,1.1s						
PLCA	**Paso Flores**	**138.47**	**161**	PKP	**PKiKP**		13 02 47.4 +0.2
	comp=Z,1.4nm,0.7s,baz=98,slow=14,SNR=1.4						
BO02	**Sierra Bellavi**	**143.63**	**156**	PKPdf	**PKPdf**		13 02 53.3 -1.2
MT02	**Curacav**	**144.79**	**154**	PKPdf	**PKPdf**		13 02 57.0 +0.5
SIV	**San Ignacio**	**164.24**	**153**	PKP	**PKPdf**		13 03 24.7 +1.2
	comp=Z,1.0nm,0.8s,baz=243,slow=5.0,SNR=4.0						
SIV				PKPab	**PKPab**		13 04 18.9 +1.7
	comp=Z,3.5nm,0.8s,baz=222,slow=3.9,SNR=11						

*JMA **18** 12:59:33.5±0.1, 43°.28N×145°.53E, h70km±1km, M2.9*
*SKHL **18** 12:59:34.3±0.3, 43°.32N×145°.94E, h64km±2km, mb4.3/3*
ISC 18 12:59:34.1±2.0, 43°.30N±0°.06×145°.53E±0°.06, h66km±11km, n14, σ0s48/27, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NMR	**Nemuro--Hokkai**	**0.16**	**66**	*i* P		**Pn**	**12 59 44.0**	**-0.1**
NMR				*i* S		**Sn**	**12 59 51.0**	**-0.3**
NEM2	**Nemuro 2**	**0.17**	**69**	P		**Pn**	**12 59 44.1**	**0.0**
NEM2				*e*S		**Sn**	**12 59 52.0**	**+0.6**
JKHN	**Kushirohamanak**	**0.35**	**230**	P		**Pn**	**12 59 45.1**	**-0.1**
JKHN				*e*S		**Sn**	**12 59 53.7**	**+0.5**
GLVR	**Golovnino**	**0.43**	**359**	*i* P		**Pn**	**12 59 46.0**	**+0.1**
GLVR				AMB		AMB	12 59 46.0	
	99nm,0.3s							
GLVR				*i* S		**Sn**	**12 59 55.0**	**+0.4**
GLVR				A		A	12 59 57.0	
	1μm,0.2s							
GLVR				A		A	12 59 57.0	
	1μm,0.2s							
JNSB	**Nemuroshibetsu**	**0.60**	**321**	P		**Pn**	**12 59 47.5**	**-0.1**
JNSB				*e*S		**Sn**	**12 59 58.0**	**+0.4**
JNK	**Nakash**	**0.65**	**296**	P		**Pn**	**12 59 47.6**	**-0.6**
JNK				*e*S		**Sn**	**12 59 57.8**	**-0.7**
JAK	**Akkeshi**	**0.68**	**243**	P		**Pn**	**12 59 48.0**	**-0.4**
JAK				*e*S		**Sn**	**12 59 58.9**	**-0.1**
JRA	**Rausu**	**0.70**	**335**	P		**Pn**	**12 59 48.8**	**+0.1**
JRA				*e*S		**Sn**	**13 00 00.3**	**+0.9**
GRPR	**Tuman**	**0.71**	**15**	*e*P		**Pn**	**12 59 48.0**	**-0.8**
GRPR				AMB		AMB	12 59 49.0	
	217nm,0.3s							
GRPR				*e*S		**Sn**	**12 59 59.0**	**-0.7**
GRPR				A		A	13 00 00.0	
	956nm,0.3s							
GRPR				A		A	13 00 00.0	
	451nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**0.77**	**18**	*i* P		**Pn**	**12 59 49.0**	**-0.5**
YUK				AMB		AMB	12 59 50.0	
	73nm,0.4s							
YUK				AMB		AMB	12 59 50.0	
	313nm,0.4s							
YUK				*i* S		**Sn**	**13 00 01.0**	**+0.1**
YUK				A		A	13 00 02.0	
	449nm,0.4s							
JAR	**Ashorobuto**	**1.28**	**270**	P		**Pn**	**12 59 55.9**	**-0.1**
JAR				*e*S		**Sn**	**13 00 12.5**	**+0.1**
JOB	**Onbets**	**1.30**	**253**	P		**Pn**	**12 59 56.2**	**0.0**
JOB				*e*S		**Sn**	**13 00 13.1**	**+0.2**
JTKR	**Abashiri--Toko**	**1.35**	**300**	P		**Pn**	**12 59 57.1**	**+0.2**
JTKR				*e*S		**Sn**	**13 00 14.3**	**+0.3**
KUR	**Kuril'sk**	**2.56**	**40**	*e*S		**Sn**	**13 00 44.0**	**+0.8**

*IDC **18** 12:59:55.9±1.3, 5°.56S×147°.08E, h211km±17km, mb3.4/7, mb1 3.6/11, mb1mx3.4/29, mbtmp4.0/11, MS3.3/1, Ms1 3.3/1, ms1mx2.6/33, Error ellipse: s-maj=29.2km s-min=8.7km az=114.0*
*NEIC **18** 12:59:56.3±1.4, 5°.51S±0°.09×147°.1E±0°.1, h215km±7km, mb4.5/10, Error ellipse: s-maj=19.2km s-min=11.7km az=116.0*
ISC 18 12:59:54.7±0.7, 5°.48S±0°.07×147°.00E±0°.10, h195km, n28, σ1s36/30, mb3.5/7, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.44**	**6**	Pn		**Pn**	**13 00 52.5**	**+3.1**
PMG	**Port Moresby**	**3.90**	**178**	P		**Pn**	**13 00 57.1**	**+2.0**
	7.9nm,0.3s,baz=44,slow=9.7,SNR=64							
PMG				S		**Sn**	**13 01 42.6**	**0.0**
	22nm,0.3s,baz=194,slow=22,SNR=16							
PMG	**Port Moresby**	**3.90**	**178**			**Pn**	**13 00 55.7**	**+0.5**
KRVT	**Keravat (AS076**	**5.14**	**77**	P		**Pn**	**13 01 10.9**	**0.0**
	1.1nm,0.3s,baz=43,slow=19,SNR=3.3							
RABL	**Rabaul**	**5.30**	**76**	Pn		**Pn**	**13 01 16.3**	**+3.3**
COEN	**Coen**	**9.22**	**204**	Pn		**Pn**	**13 02 07.1**	**+3.1**
CTA	**Charters Tower**	**14.54**	**183**	P		**P**	**13 03 12.2**	**-0.7**
	0.2nm,0.3s,baz=13,slow=17,SNR=3.2							
MTN	**Manton Dam**	**17.28**	**244**	P		**Pn**	**13 03 44.1**	**-0.6**
MTN				lAmb		lAmb	13 03 56.8	
	comp=Z,12nm,1.4s							
WB0	**Warramunga Arr**	**18.76**	**220**	P		**P**	**13 03 58.4**	**-1.0**
WR0	**Warramunga Arr**	**18.81**	**219**	P		**P**	**13 04 00.7**	**+0.8**
WR0				lAmb		lAmb	13 04 01.5	
	comp=Z,9.5nm,0.7s							
WRAB	**Tennant Creek**	**18.91**	**219**	P		**P**	**13 04 01.5**	**+0.6**
WB2	**Warramunga Arr**	**18.92**	**219**	P		**P**	**13 04 01.7**	**+0.7**
WB2				lAmb		lAmb	13 04 03.2	
	comp=Z,10nm,0.5s							
WRA	**Warramunga Arr**	**18.93**	**219**	P		**P**	**13 04 01.8**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=48,slow=12,SNR=165							
WRA				S		**S**	**13 07 23.6**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=52,slow=17,SNR=5.0							
WRA	**Warramunga Arr**	**18.93**	**219**	P		**P**	**13 04 01.5**	**+0.4**
KNRA	**Kununurra**	**20.57**	**239**	P		**P**	**13 04 19.9**	**+1.2**
KNRA				lAmb		lAmb	13 04 37.9	
	comp=Z,21nm,1.5s							
AS31	**Alice Springs**	**22.04**	**214**	P		**P**	**13 04 34.5**	**+0.6**
ASAR	**Alice Springs**	**22.04**	**214**	P		**P**	**13 04 34.4**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=176,slow=14,SNR=14							
ASAR				S		**S**	**13 08 22.0**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=36,slow=18,SNR=4.2							
ASAR	**Alice Springs**	**22.04**	**214**	P		**P**	**13 04 34.0**	**+0.1**
FITZ	**Fitzroy Crossi**	**24.34**	**237**	P		**P**	**13 04 55.0**	**+0.1**
	comp=Z,7.7nm,0.4s,baz=50,slow=11,SNR=62							
FITZ	**Fitzroy Crossi**	**24.34**	**237**	P		**P**	**13 04 54.9**	**+0.1**
FITZ				lAmb		lAmb	13 04 57.4	
	comp=Z,8.3nm,0.5s							
STKA	**Stephens Creek**	**26.74**	**190**	P		**P**	**13 05 16.4**	**0.0**
	comp=Z,0.4nm,0.3s,baz=7.6,slow=15,SNR=2.3							
JHJ	**Hachijo jima 2**	**39.00**	**350**	LR		LR	13 19 51.2	
	comp=Z,46nm,21.4s,baz=168,slow=31							
KSRS	**Korea Array**	**46.27**	**339**	P		**P**	**13 08 01.0**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=162,slow=9.5,SNR=3.2							
PEA0B	**Petropavlovsk-**	**59.07**	**7**	P		**P**	**13 09 34.5**	**+0.2**
PETK	**Petropavlovsk-**	**59.07**	**7**	P		**P**	**13 09 34.6**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=162,slow=5.6,SNR=13							
PETK	**Petropavlovsk-**	**59.07**	**7**	P		**P**	**13 09 33.5**	**-0.7**
SONM	**Songino Array**	**63.96**	**331**	P		**P**	**13 10 06.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=144,slow=6.5,SNR=2.5							
ILAR	**Eielson Array**	**85.01**	**23**	P		**P**	**13 12 06.1**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=253,slow=4.9,SNR=12							

*IDC **18** 13:08:36.2±1.6, 2°.67N×127°.04E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/35, mbtmp3.6/6, Error ellipse: s-maj=110.4km s-min=22.7km az=68.0*
ISC 18 13:08:43.7±1.6, 2°.6N±0°.3×126°.9E±0°.6, h53km, n6, σ0s72/6, mb3.5/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.58**	**183**	P		**P**	**13 13 18.0**	**-0.3**
	0.7nm,0.7s,baz=32,slow=13,SNR=2.0							
WRA	**Warramunga Arr**	**23.54**	**162**	P		**P**	**13 13 48.4**	**-1.1**
	0.6nm,0.4s,baz=342,slow=10,SNR=22							
ASAR	**Alice Springs**	**26.96**	**166**	P		**P**	**13 14 20.4**	**-0.1**
	0.4nm,0.8s,baz=354,slow=7.5,SNR=6.4							
STKA	**Stephens Creek**	**37.00**	**159**	P		**P**	**13 15 48.8**	**+0.5**
	1.0nm,0.6s,baz=349,slow=10,SNR=3.3							
MKAR	**Makanchi Array**	**58.59**	**326**	P		**P**	**13 18 35.0**	**-0.1**
	1.0nm,1.0s,baz=116,slow=7.9,SNR=3.0							
VNDA	**Vanda**	**82.27**	**173**	P		**P**	**13 20 59.1**	**+0.2**
	0.4nm,0.8s,baz=312,slow=8.1,SNR=3.1							

*TEH **18** 13:11:24.7, 37°.25N×43°.88E, h4km, ML3.2*
*DDA **18** 13:11:25.6, 37°.31N×43°.89E, h5km±1km, MW3.1*
*ISK **18** 13:11:26.9, 37°.31N×43°.71E, h5km, ML3.1/12*
*ISN **18** 13:11:27.4±1.7, 37°.46N×43°.84E, h32km±346km, ML3.0*
ISC 18 13:11:26.0±1.3, 37°.31N±0°.03×43°.87E±0°.02, h1km±11km, n55, σ1s16/68, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CUKT	**Cukurca**	**0.21**	**254**	PG		**Pg**	**13 11 29.4**	**-0.7**
CUKT	**Cukurca**	**0.21**	**254**	*e*Pg		**Pg**	**13 11 29.2**	**-0.9**
HAKT	**HAKKARI**	**0.28**	**333**	*i* P		**Pg**	**13 11 31.5**	**+0.1**
HAKT				*i* S		**Sg**	**13 11 36.0**	**+1.0**
HAKT	**HAKKARI**	**0.28**	**333**	*e*Pg		**Pg**	**13 11 31.4**	**+0.1**
YOVA	**Hakkari_Yksek**	**0.44**	**50**	*i* P		**Pg**	**13 11 34.1**	**-0.3**
YOVA				*i* S		**Sg**	**13 11 40.2**	**+0.1**
YOVA	**Hakkari_Yksek**	**0.44**	**50**	*e*Pg		**Pg**	**13 11 34.0**	**-0.3**
BASK	**Baskale_VAN**	**0.75**	**8**	*i* P		**Pg**	**13 11 40.0**	**-0.4**
BASK	**Baskale_VAN**	**0.75**	**8**	*e*Pg		**Pg**	**13 11 40.0**	**-0.4**
SIRT	**Sirnak**	**1.15**	**280**	PG		**Pb**	**13 11 47.3**	**-1.5**
SIRT				SG		**Sb**	**13 12 03.3**	**-1.0**
SIRT	**Sirnak**	**1.15**	**280**	*e*Pg		**Pb**	**13 11 47.1**	**-1.7**
SIRN	**Sirnak**	**1.17**	**280**	*i* P		**Pb**	**13 11 47.5**	**-1.7**
SIRN				*i* S		**Sn**	**13 12 04.9**	**-1.4**
SIRN	**Sirnak**	**1.17**	**280**	*e*Pg		**Pb**	**13 11 47.4**	**-1.7**
GEVA	**Gevas**	**1.19**	**328**	*i* P		**Pb**	**13 11 47.9**	**-1.5**
GEVA				*i* S		**Sn**	**13 12 06.9**	**+0.1**
GEVA	**Gevas**	**1.19**	**328**	*e*Pg		**Pb**	**13 11 47.9**	**-1.5**
AKDM	**Akdamar-Van**	**1.24**	**326**	PN		**Pg**	**13 11 50.2**	**+0.5**
AKDM				SN		**Sn**	**13 12 08.1**	**+0.1**
AKDM	**Akdamar-Van**	**1.24**	**326**	*e*Pg		**Pg**	**13 11 50.2**	**+0.5**
TVAN	**Van**	**1.27**	**344**	*i* P		**Pn**	**13 11 49.6**	**-1.5**
TVAN				*i* S		**Sn**	**13 12 09.0**	**+0.1**
TVAN	**Van**	**1.27**	**344**	*e*Pn		**Pn**	**13 11 49.6**	**-1.5**
VANB	**Van**	**1.34**	**344**	PN		**Pb**	**13 11 51.5**	**-0.5

SKJI	**Sukabumi**	**1.46 115**	P		**Pn**	13 17 51.1	**+1.4**
SKJI			S		**Sn**	13 18 02.1	**-6.8**
DBJI	**Dramaga**	**1.52 97**	P		**Pn**	13 17 50.9	**+0.3**
KLSI		**1.75 344**	P		**Pb**	13 17 55.0	**-0.5**
LWLI	**Liwa**	**1.78 319**	P		**Pb**	13 17 56.3	**+0.2**
LEM	**Lembang**	**2.42 101**	Pn		**Pg**	13 18 12.3	**+2.7**
	2.9nm,0.3s,baz=12,slow=22,SNR=5.2						
WRA	**Warramunga Arr**	**31.32 118**	P		P	13 23 55.9	+12
	0.3nm,0.4s,baz=297,slow=9.7,SNR=8.0						
ASAR	**Alice Springs**	**32.48 125**	P		P	13 24 07.7	+13
	0.2nm,0.5s,baz=299,slow=8.0,SNR=8.6						
STKA	**Stephens Creek**	**42.37 132**	P		P	13 25 31.6	+14
	0.9nm,0.5s,baz=326,slow=9.6,SNR=4.4						

IPEC ***18*** *13:17:21.8±2.4,51˚60N×16˚23E,h0km,ML1.6/3,Error ellipse: s-maj=18.5km s-min=8.9km az=34.0*

PRU 18 13:17:24.2±0.0,51˚47N×16˚05E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**166**	*i* Pg	Pg	13 17 36.4	-0.1
KSP				*e*Sg	Sg	13 17 45.6	+0.7
CHVC	**Chvalec**	**0.88**	**180**	*e*PG	Pg	13 17 41.3	+0.2
CHVC				*e*SG	Sg	13 17 52.9	+0.4
OSTC	**Ostas**	**0.92**	**173**	*e*PG	Pg	13 17 42.1	+0.3
OSTC				*e*SG	Sg	13 17 54.6	+0.9
UPC	**Upice**	**0.96**	**181**	*e*PG	Pg	13 17 42.6	0.0
UPC				*e*SG	Sg	13 17 55.5	+0.4
	comp=Z,38nm,0.5s						
DPC	**Dobruska-Polom**	**1.13**	**171**	*e*PG	Pg	13 17 45.3	-0.6
DPC				*e*SG	Sg	13 18 00.1	-0.5
	14nm,0.2s						
PVCC	**Panska Ves**	**1.33**	**225**	*e*PG	Pg	13 17 49.7	+0.1
PVCC				*e*SG	Sb	13 18 07.8	+0.3
	comp=Z,67nm,0.2s						
BRG	**Berggiesshubel**	**1.46**	**247**	PG	Pn	13 17 51.8	+0.1
BRG				SG	Sn	13 18 12.2	+0.7
	41nm,0.4s						
KRLC	**Kraliky**	**1.47**	**161**	*e*PG	Pn	13 17 50.8	-1.2
KRLC				*e*SG	Sg	13 18 11.0	-0.4
	comp=Z,14nm,0.4s						
PRU	**Pruhonice**	**1.77**	**213**	*e*PG	Pb	13 17 57.1	-0.3
PRU				*e*SG	Sg	13 18 20.6	-0.3
	comp=Z,20nm,0.4s						
CLL	**Collm**	**1.92**	**266**	*e*Pg	Pb	13 18 00.0	0.0
CLL				*e*Sg	Sb	13 18 25.0	+0.6
	comp=Z,13nm,0.7s						
CLL				LmV		13 51 00.0	
	comp=Z,100nm,21.2s						
CLL				LmV		14 59 00.0	
	comp=Z,200nm,18.8s						
MORC	**Moravsky Berou**	**1.94**	**150**	*e*PN	Pn	13 17 57.1	-1.4
MORC				*e*SG	Sb	13 18 24.8	-0.5
MORC	**Moravsky Berou**	**1.94**	**150**	*e*Pn	Pn	13 17 57.0	-1.5
	baz=336						
MORC				*e*Sg	Sb	13 18 24.7	-0.6
	comp=Z,4.8nm,0.2s,baz=336						
VRAC	**Vranov**	**2.19**	**171**	*e*PN	Pn	13 18 01.7	-0.2
VRAC				*e*SG	Sg	13 18 33.7	-0.9
VRAC	**Vranov**	**2.19**	**171**	*e*Pn	Pn	13 18 01.6	-0.3
	baz=354						
VRAC				*e*Sg	Sg	13 18 33.6	-1.0
	comp=Z,3.8nm,0.2s,baz=354						
PBCC	**Pribram**	**2.21**	**217**	*e*SG	Sg	13 18 34.4	-0.9
KRUC	**Moravsky**	**2.42**	**175**	*e*PN	Pn	13 18 04.1	-0.9
KRUC				*e*SG	Sg	13 18 41.8	-0.1
KRUC	**Moravsky**	**2.42**	**175**	*e*Pn	Pn	13 18 04.0	-1.0
	baz=358						
KRUC				*e*Sg	Sg	13 18 41.8	-0.1
	comp=Z,2.0nm,0.2s,baz=358						
OJC	**Ojcow**	**2.69**	**116**	*e*Pg	Pg	13 18 14.8	-0.8
OJC				*e*Sg	Sg	13 18 49.6	-0.8
KHC	**Kasperske Hory**	**2.83**	**215**	*e*PN	Pn	13 18 09.9	-0.7
KHC				*e*PG	Pb	13 18 16.0	+0.4
KHC				*e*SG	Sg	13 18 53.5	-1.5
	comp=Z,4.5nm,0.5s						
MODS	**Modra-Piesok**	**3.20**	**165**	*e*SG	Sg	13 19 04.4	-2.5

WEL 18 13:21:58.1,36˚S±10˚×17˚8E±1˚,h212km±16km,M3.3/13, MLv3.3/13,Error ellipse: s-maj=0.0km s-min=0.0km az=97.6,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.63**	**179**	P	Pn	13 22 34.3	+0.3
MXZ				S	S	13 23 00.6	-1.3
HAZ	**Te Kaha**	**1.87**	**192**	P	Pn	13 22 36.3	+0.2
HAZ				S	S	13 23 04.6	-1.1
WMGZ	**Waiomatatini S**	**1.89**	**177**	P	Pn	13 22 37.2	+0.8
WMGZ				S	S	13 23 01.5	-4.6
RUGZ	**Raukumara Rang**	**2.09**	**193**	P	Pn	13 22 38.4	-0.1
PUZ	**Puketiti**	**2.14**	**180**	P	Pn	13 22 39.4	+0.5
PUZ				S	S	13 23 09.4	-1.1
TWGZ	**Tauwhareparae**	**2.26**	**186**	P	Pn	13 22 41.3	+1.1
OPRZ	**Ohinepanea**	**2.36**	**215**	P	Pn	13 22 42.4	+1.3
MARZ	**Manawahe**	**2.42**	**212**	P	Pn	13 22 43.3	+1.4
MWZ	**Matawai**	**2.48**	**194**	P	Pn	13 22 42.7	+0.3
MWZ				S	S	13 23 16.3	-0.7
URZ	**Urewera**	**2.51**	**202**	P	Pn	13 22 42.9	+0.1
URZ				S	S	13 23 17.2	-0.2
TKGZ	**Te Karaka**	**2.53**	**188**	P	Pn	13 22 43.5	+0.5
TKGZ				S	S	13 23 17.2	-0.7
CNGZ	**Carnagh Statio**	**2.55**	**181**	P	Pn	13 22 44.3	+1.1
RAGZ	**Rawiri**	**2.65**	**195**	P	Pn	13 22 45.2	+0.7
RAGZ				S	S	13 23 20.8	+0.2
RRRZ	**Republican Roa**	**2.79**	**210**	P	Pn	13 22 47.5	+1.6
RIGZ	**Rimuhau**	**2.80**	**188**	P	Pn	13 22 46.3	+0.2
RIGZ				S	S	13 23 23.2	-0.3
MUGZ	**Murupara**	**2.82**	**205**	P	Pn	13 22 46.6	+0.4
MUGZ				S	S	13 23 23.2	-0.4
RTZ	**Ruatahuna**	**2.88**	**201**	P	Pn	13 22 47.1	+0.1
PRGZ	**Paritu Road**	**3.01**	**186**	P	Pn	13 22 48.7	+0.3
KNZ	**Kokohu**	**3.13**	**189**	P	Pn	13 22 49.5	-0.2
KNZ				S	S	13 23 26.3	-3.7
RAHZ	**Arahi**	**3.13**	**197**	P	Pn	13 22 50.3	+0.5
MTHZ	**Maungataniwha**	**3.14**	**201**	P	Pn	13 22 50.5	+0.6
MHGZ	**Mahia Peninsul**	**3.23**	**185**	P	Pn	13 22 51.3	+0.3
WHHZ	**Waihua**	**3.25**	**195**	P	Pn	13 22 52.0	+0.8
WHZ	**Waihua**	**3.25**	**195**	P	S	13 23 33.3	+0.6
WHTZ	**Whakaora**	**3.30**	**213**	P	S	13 23 32.8	-1.0
ARHZ	**Aropaoanui**	**3.48**	**197**	P	Pn	13 22 54.1	+0.1
BKZ	**Black Stump Fm**	**3.53**	**203**	P	Pn	13 22 54.5	-0.1
RITZ	**Rihia Road**	**3.60**	**212**	P	Pn	13 22 55.6	+0.2
MCHZ	**McNeill Hill**	**3.73**	**199**	P	Pn	13 22 57.2	+0.3
HIZ	**Hauiti**	**3.76**	**226**	P	Pn	13 22 59.9	+2.6
TMVZ	**Te Maari**	**3.78**	**212**	P	Pn	13 22 58.2	+0.5
ETVZ	**East Tongariro**	**3.80**	**212**	P	Pn	13 22 58.3	+0.4
CKHZ	**Cape Kidnapper**	**3.84**	**194**	P	Pn	13 22 58.3	-0.1
NGZ	**Ngauruhoe**	**3.88**	**212**	P	Pn	13 22 59.5	+0.6
KRHZ	**Kereru**	**4.01**	**202**	P	Pn	13 22 59.5	-0.8
MOVZ	**Moawhango**	**4.01**	**209**	P	Pn	13 22 59.7	-0.7
KAHZ	**Kahuranaki**	**4.02**	**196**	P	Pn	13 23 00.4	-0.1
PXZ	**Pawanui**	**4.25**	**195**	P	Pn	13 23 02.2	-1.0
PNHZ	**Pukenui**	**4.30**	**202**	P	Pn	13 23 03.2	-0.9
TSZ	**Takapari Road**	**4.51**	**203**	P	Pn	13 23 05.0	-1.6
PRWZ	**Pori Road**	**4.96**	**201**	P	Pn	13 23 11.6	-0.6
BFZ	**Birch Farm**	**5.01**	**198**	P	Pn	13 23 11.5	-1.4
MRZ	**Mangatainoka R**	**5.18**	**203**	P	Pn	13 23 12.2	-1.8
OGWZ	**Otaki Gorge**	**5.46**	**206**	P	Pn	13 23 16.6	-1.9
TMWZ	**Te Maipa**	**5.50**	**199**	P	Pn	13 23 17.3	-1.8
KIW	**Kapiti Island**	**5.59**	**207**	P	Pn	13 23 18.0	-2.2
CAW	**Cannon Point**	**5.75**	**205**	P	Pn	13 23 19.7	-2.5
TRWZ	**Traveller**	**5.83**	**200**	P	Pn	13 23 20.4	-2.8
MSWZ	**Moikau Station**	**5.97**	**202**	P	Pn	13 23 22.9	-2.1
PLWZ	**Palliser**	**6.11**	**202**	P	Pn	13 23 24.2	-2.6
TCW	**Tory Channel**	**6.14**	**210**	P	Pn	13 23 24.2	-2.9
TUWZ	**Tuamarina**	**6.46**	**210**	P	Pn	13 23 28.6	-2.6

NEIC ***18*** *13:55:11.1±1.3,19˚06N±0˚08×146˚1E±0˚1,h125km±8km, mb4.3/16,Error ellipse: s-maj=20.3km s-min=11.9km az=85.0*

IDC ***18*** *13:55:14.6±3.2,18˚99N×145˚79E,h147km±31km,mb3.5/8, mb1 3.6/9,mb1mx3.2/58,mbtmp4.0/9,Error ellipse: s-maj=53.1km s-min=14.1km az=96.0*

ISC 18 13:55:10.1±0.6,19˚05N±0˚07×145˚9E±0˚1,h109km,n25, σ1§15/25,mb4.1/13,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.53**	**191**	P	**Pn**	**13 56 33.4**	**+3.2**
	5.3nm,0.3s,baz=49,slow=3.0,SNR=7.7						
GUMO				S	**Sn**	**13 57 31.8**	**-0.7**
	2.3nm,0.3s,baz=180,slow=20,SNR=2.4						
PATS	**Pohnpei**	**17.09**	**134**		**Pn**	**13 59 02.1**	**-0.5**
MAJO	**Matsushiro**	**18.70**	**340**	P	**P**	**13 59 20.8**	**+0.8**
MAJO				IAmb	IAmb	13 59 35.4	
	comp=Z,30nm,1.5s						
JMM	**Marumori**	**19.28**	**348**	Pn	**Pn**	**13 59 28.6**	**+0.2**
JMM				IAmb	IAmb	13 59 37.2	
	comp=Z,41nm,1.4s						
DAV	**Davao City (W)**	**23.10**	**242**	P	**P**	**14 00 05.4**	**-1.4**
YULB	**Yu-li**	**23.36**	**285**	P	**P**	**14 00 08.8**	**-0.3**
TWG	**Pinlang**	**23.52**	**283**	P	**P**	**14 00 09.3**	**-1.2**
ASAJ	**Asahikawa**	**25.15**	**354**	P	**P**	**14 00 26.9**	**+1.8**
	comp=Z,4.6nm,0.9s,baz=172,slow=18,SNR=3.9						
USA0B	**Ussuriysk Arra**	**27.66**	**338**	P	**P**	**14 00 47.2**	**-0.5**
USA0B				IAmb	IAmb	14 01 01.1	
	comp=Z,11nm,1.5s						
KLR	**Kul'dur**	**32.20**	**342**	P	**P**	**14 01 28.9**	**+1.2**
	comp=Z,1.2nm,0.3s,baz=161,slow=13,SNR=6.8						
MTN	**Manton Dam**	**34.90**	**206**	P	**P**	**14 01 51.0**	**-0.3**
MTN				IAmb	IAmb	14 02 14.8	
	comp=Z,6.0nm,1.1s						
KNRA	**Kununurra**	**38.43**	**207**	P	**P**	**14 02 21.3**	**-0.1**
WB0	**Warramunga Arr**	**40.21**	**197**	P	**P**	**14 02 35.9**	**-0.3**
WB0				IAmb	IAmb	14 03 01.5	
	comp=Z,7.0nm,1.4s						
WB2	**Warramunga Arr**	**40.39**	**197**	P	**P**	**14 02 37.0**	**-0.6**
WB2				IAmb	IAmb	14 02 46.5	
	comp=Z,9.6nm,1.3s						
WRA	**Warramunga Arr**	**40.39**	**197**	P	**P**	**14 02 37.0**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=16,slow=8.8,SNR=16						
WRA	**Warramunga Arr**	**40.39**	**197**	IAmb	IAmb	14 02 46.4	
	comp=Z,0.3nm,1.5s						
FITZ	**Fitzroy Crossi**	**41.96**	**210**	P	**P**	**14 02 50.7**	**+0.2**
	comp=Z,1.6nm,1.0s,baz=30,slow=10,SNR=16						
FITZ	**Fitzroy Crossi**	**41.96**	**210**	P	**P**	**14 02 50.1**	**-0.4**
ASAR	**Alice Springs**	**44.06**	**196**	P	**P**	**14 03 07.2**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=18,slow=12,SNR=6.3						
IL31		**63.23**	**26**	P	**P**	**14 05 26.0**	**-0.5**
IL31				IAmb	IAmb	14 05 45.2	
	comp=Z,4.1nm,1.4s						
RAR	**Rarotonga**	**66.52**	**124**	P	**P**	**14 05 46.7**	**-1.9**
ABKAR	**Akbulak array**	**73.24**	**317**	P	**P**	**14 06 29.0**	**-0.4**
ARCES	**ARCESS Array B**	**82.23**	**342**	P	**P**	**14 07 19.6**	**+0.7**
	comp=Z,5.2nm,1.0s,baz=86,slow=5.5,SNR=2.7						
NVAR	**Mina Array Bea**	**82.74**	**52**	P	**P**	**14 07 23.4**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=280,slow=5.4,SNR=2.7						
FINES	**FINESS Array B**	**86.66**	**335**	P	**P**	**14 07 39.9**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=54,slow=5.7,SNR=6.3						

NIED ***18*** *13:57:40.2,24˚99N×123˚58E,h9km,MW4.3,Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁵Nm; Mrr-2.97; Mθθ2.84; Mφφ0.13; Mrθ-1.08; Mθφ0.15; Mφr-0.22; Fault plane solution: Mo3.11000×10¹⁵ NP1:φ84.00000°, δ55.00000°,λ-93.00000°. NP2:φ270.00000°,δ35.00000°, λ-85.00000°.*

JMA ***18*** *13:57:40.1±0.2,24˚99N×123˚58E,h9km±4km,M4.5*

BJI ***18*** *13:57:42.6±0.0,24˚62N×123˚63E,h44km,mB4.5/25, mb4.2/36,ML4.3/3,Ms4.3/21,Ms7 4.1/19*

NEIC ***18*** *13:57:45.3±1.7,24˚82N±0˚04×123˚31E±0˚07,h44km±3km, mb4.5/54,Error ellipse: s-maj=8.9km s-min=5.3km az=98.0*

IDC ***18*** *13:57:46.1±5.8,24˚94N×123˚54E,h51km±55km,mb3.9/20, mb1 4.0/20,mb1mx3.8/60,mbtmp4.1/20,MS3.6/3, Ms1 3.6/3,ms1mx2.9/58,Error ellipse: s-maj=20.0km s-min=11.6km az=74.0*

ISC 18 13:57:40.0±1.5,24˚84N±0˚03×123˚51E±0˚03,h6km±9km, n136,σ1§55/142,mb4.4/54,MS4.0/3,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.54**	**158**	P	**Pn**	**13 57 53.1**	**-1.1**
IRIF				*e*S	**Sn**	**13 58 02.1**	**-1.5**
YOJ	**Yonaguni jima**	**0.58**	**230**	P	**Pn**	**13 57 54.2**	**-0.6**
YOJ				S	**Sn**	**13 58 03.5**	**-1.2**
YOJ	**Yonaguni jima**	**0.58**	**230**		**Pn**	**13 57 53.8**	**-1.1**
YOJ				Sn	**Sn**	**13 58 02.8**	**-2.0**
JYNG	**Yonagunijimaku**	**0.64**	**233**	P	**Pn**	**13 57 55.2**	**-0.4**
JYNG				*e*S	**Sn**	**13 58 05.8**	**-0.2**
JIJ	**Ishigaki jima**	**0.75**	**129**	P	**Pb**	**13 57 55.1**	**-0.3**
JIJ				*e*S	**Sb**	**13 58 05.5**	**-0.4**
JKRS	**Kuro-shima**	**0.75**	**142**	P	**Pn**	**13 57 56.1**	**-1.0**
JKRS				S	**Sn**	**13 58 07.7**	**-1.2**
JISG	**Ishigakijimahi**	**0.77**	**109**	P	**Pb**	**13 57 55.0**	**-0.8**
JISG				*e*S	**Sb**	**13 58 05.8**	**-0.8**
HATJ	**Hateruma jima**	**0.82**	**161**	P	**Pn**	**13 57 58.0**	**-0.1**
HATJ				S	**Sn**	**13 58 11.0**	**+0.4**
JTJ	**Tarama**	**1.10**	**100**	P	**Pg**	**13 58 00.6**	**-0.6**
JTJ				*e*S	**Sg**	**13 58 14.8**	**-0.7**
JIRB	**Irabujima**	**1.52**	**90**	P	**Pn**	**13 58 06.7**	**-0.9**
JIKM	**Ikemajima**	**1.58**	**86**	P	**Pn**	**13 58 08.1**	**-0.5**
JMJ2	**Miyako jima3**	**1.66**	**93**	P	**Pn**	**13 58 09.0**	**-0.6**
JMJ2				S	**Sn**	**13 58 29.9**	**-1.4**
TATO	**Taipei**	**1.84**	**275**		**Pb**	**13 58 12.3**	**-1.6**
NACB	**Ninganchiao**	**1.86**	**250**		**Pb**	**13 58 13.7**	**-0.7**
YHNB	**Yeheng**	**1.94**	**266**	Pn	**Pb**	**13 58 14.6**	**-1.2**
YULB	**Yu-li**	**2.48**	**235**		**Pn**	**13 58 21.3**	**+0.4**
SSLB	**Suanglung**	**2.55**	**246**	Pn	**Pb**	**13 58 23.3**	**-2.9**
TWG	**Pinlang**	**3.00**	**228**		**Pn**	**13 58 29.0**	**+1.0**
TPUB	**Ta-pu**	**3.04**	**240**	Pn	**Pb**	**13 58 31.4**	**-3.1**
QZH	**Quanzhou**	**4.46**	**272**	*e*Pn	Pn	13 58 41.0	-7.2
QZH				Sn	Sn	13 59 28.8	-12
QZH				smax	smax		
	comp=N,57nm,0.8s						
QZH				smax	smax		
	comp=E,73nm,0.9s						
JOW	**Kunigami**	**4.74**	**64**	Pn	Pb	13 58 57.6	-5.8
SSE	**Sheshan**	**6.56**	**342**	Pn	**Pn**	**13 59 19.6**	**+2.6**
NJ2	**Nanjing**	**8.27**	**331**	*e*P	**Pn**	**13 59 42.6**	**+2.1**
NJ2				pmax	pmax		
	comp=E,18nm,0.5s						
JNU	**Nakatsue**	**10.47**	**36**	LR	LR	14 04 48.1	
	comp=E,189nm,19.6s,baz=226,slow=41						
TGY	**Tagaytay City**	**10.95**	**193**	LR	LR	14 04 47.7	
	comp=E,318nm,18.9s,baz=117,slow=38						
KSRS	**Korea Array**	**13.13**	**16**	P	**P**	**14 00 54.1**	**-3.2**
	comp=E,0.2nm,0.3s,baz=197,slow=12,SNR=11						
KSRS				LR	LR	14 06 30.5	
	comp=E,303nm,18.8s,baz=208,slow=40						
XAN	**Xi'an**	**15.65**	**309**	P	**P**	**14 01 27.9**	**+2.4**
XAN				pmax	pmax		
	comp=E,7.0nm,1.3s						
XAN				LR	LR		
	comp=E,440nm,16.3s						
XAN				LR	LR		
	comp=E,520nm,13.0s						
JHJ2	**Mitsune**	**16.47**	**56**	Pn	**P**	**14 01 35.2**	**+0.8**
CD2	**Chengdu**	**18.47**	**294**	P	**Pn**	**14 01 57.9**	**+1.2**
CD2				pmax	pmax		
	comp=E,20nm,0.8s						
HHC	**Hu-ho-hao-te**	**18.83**	**331**	*e*P	**Pn**	**14 02 03.6**	**+2.5**
HHC				S	**Sn**	**14 05 24.9**	**-7.1**
HHC				LR	LR		
	comp=E,240nm,12.1s						
HHC				LR	LR		
	comp=E,240nm,9.9s						
CN2	**Changchun**	**18.99**	**4**	*e*P	**Pn**	**14 02 05.1**	**+2.3**
CN2				*es*P	pwP	14 02 21.5	+16
CN2				*e*S	**Sn**	**14 05 32.8**	**-2.8**
CN2				pmax	pmax		
	comp=E,10.0nm,0.8s						
CN2				LR	LR		
	comp=E,660nm,13.0s						
CN2				LR	LR		
	comp=E,330nm,11.0s						
CN2				LR	LR		
	comp=E,530nm,14.0s						
JMM	**Marumori**	**19.62**	**44**	P	**Pn**	**14 02 11.6**	**+1.0**
JMM				IAmb	IAmb	14 02 13.9	
	comp=Z,24nm,1.2s						
KKM	**Kota Kinabalu**	**19.95**	**202**	Pn	**Pn**	**14 02 15.7**	**+1.0**
KKM				IAmb	IAmb	14 02 35.9	
	comp=Z,46nm,1.3s						
NONG	**Nongkai**	**20.10**	**254**	P	Pn	14 02 22.5	+6.2
	comp=Z,24nm,1.0s						
LZH	**Lanzhou**	**20.28**	**308**	*e*P	Pn	14 02 19.3	+0.8
LZH				pP	pwP	14 02 31.0	+11
LZH				sP	sP	14 02 35.3	+17
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
LZH				pmax	pmax		
	comp=Z,91nm,5.4s						
LZH				LR	LR		
	comp=Z,320nm,10.7s						
LZH				LR	LR		
	comp=Z,290nm,12.5s						
LZH				LR	LR		
	comp=Z,360nm,13.0s						
MDJ	**Mudanjiang**	**20.34**	**13**	P	Pn	14 02 19.1	+0.1
MDJ				pP	pwP	14 02 27.0	+6.3
MDJ				sP	sP	14 02 31.3	+13
MDJ				S	**S**	**14 06 06.4**	**+1.1**
MDJ				sS	pS	14 06 19.9	+6.5
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,110nm,2.9s						
MDJ				LR	LR		
	comp=Z,540nm,15.0s						
MDJ				LR	LR		
	comp=Z,280nm,12.8s						
MDJ				LR	LR		
	comp=Z,650nm,18.5s						
MDJ	**Mudanjiang**	**20.34**	**13**	P	Pn	14 02 19.0	0.0
USA0B	**Ussuriysk Arra**	**20.52**	**18**	P	**P**	**14 02 18.6**	**-0.3**
USRK	**Ussuriysk Ar.**	**20.52**	**18**	P	**P**	**14 02 18.8**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=184,slow=9.2,SNR=5.9						
USRK	**Ussuriysk Ar.**	**20.52**	**18**	P	**P**	**14 02 19.2**	**+0.3**
SGSI	**Sangihe**	**21.12**	**174**	P	**P**	**14 02 26.3**	**+0.7**
JEW	**Eniwo**	**23.25**	**35**	P	**P**	**14 02 49.8**	**+1.7**
CM35	**Chiang Mai Arr**	**23.41**	**260**	P	**P**	**14 02 52.0**	**+2.0**
CM36	**Chiang Mai Arr**	**23.52**	**259**	P	**P**	**14 02 53.0**	**+2.0**
CM33	**Chiang Mai Arr**	**23.55**	**260**	P	**P**	**14 02 53.0**	**+1.6**
CMMT	**Chiang Mai**	**23.55**	**260**	P	**P**	**14 02 53.4**	**+2.0**
	comp=Z,3.5nm,0.8s						
CM09	**Chiang Mai Arr**	**23.64**	**259**	P	**P**	**14 02 55.0**	**+2.8**
	comp=Z,6.9nm,1.1s						
CM04	**Chiang Mai Arr**	**23.66**	**259**	P	**P**	**14 02 55.0**	**+2.5**
	comp=Z,5.9nm,0.8s						
CM01	**Chiang Mai Arr**	**23.68**	**259**	P	**P**	**14 02 55.0**	**+2.5**
	comp=Z,66nmcomp=Z,8.8nm,1.0s						
CM31	**Chiang Mai Arr**	**23.68**	**259**	P	**P**	**14 02 56.0**	**+3.4**
	comp=Z,172nm,1.1s						
CMAR	**Chiang Mai Arr**	**23.68**	**259**	P	**P**	**14 02 54.4**	**+1.8**
	comp=Z,5.7nm,1.0s,baz=61,slow=7.9,SNR=24						
CMAR	**Chiang Mai Arr**	**23.68**	**259**	P	**P**	**14 02 51.9**	**-0.7**
CM02	**Chiang Mai Arr**	**23.68**	**259**	P	**P**	**14 02 55.1**	**+2.5**
	comp=Z,8.2nm,1.1s						
CM05	**Chiang Mai Arr**	**23.69**	**259**	P	**P**	**14 02 55.9**	**+3.2**
	comp=Z,4.1nm,1.0s						
CM15	**Chiang Mai Arr**	**23.70**	**259**	P	**P**	**14 02 55.0**	**+2.3**
	comp=Z,6.7nm,1.1s						
CM32	**Chiang Mai Arr**	**23.70**	**260**	P	**P**	**14 02 55.0**	**+2.2**
CM13	**Chiang Mai Arr**	**23.72**	**259**	P	**P**	**14 02 56.0**	**+3.0**
TOLI2	**Tolitoli**	**23.73**	**187**	P	**P**	**14 02 53.4**	**+0.4**
TOLI2				IAmb	IAmb	14 03 10.0	
	comp=Z,9.8nm,0.8s						
GTOI	**Gorontalo**	**24.06**	**181**	P	**P**	**14 02 57.1**	**+0.9**
	comp=Z,12nm,0.8s						
KMSI	**Cibinong**	**24.12**	**179**	P	**P**	**14 02 55.6**	**-1.2**
	comp=Z,57nm,0.5s						
MPSI	**Mapaga**	**24.60**	**189**	P	**P**	**14 03 05.7**	**+4.5**
	comp=Z,10nm,1.1s						
GTA	**Gaotai**	**24.68**	**312**	P	**P**	**14 03 01.8**	**0.0**
GTA				pP	pwP	14 03 14.5	+8.9
GTA				sP	sP	14 03 19.4	+16
GTA				PcP	**PcP**	**14 06 39.6**	**+0.5**
GTA				sS	sS	14 07 34.8	+8.9
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,100nm,6.5s						
GTA				LR	LR		
	comp=Z,230nm,13.8s						
GTA				LR	LR		
	comp=Z,180nm,13.8s						
GTA				LR	LR		
	comp=Z,130nm,14.2s						
ASAJ	**Asahikawa**	**24.74**	**34**	P	**P**	**14 03 01.1**	**-1.1**
	comp=Z,7.9nm,1.0s,baz=141,slow=4.7,SNR=4.4						
JKA	**Kamikawa-asahi**	**24.75**	**34**	P	**P**	**14 03 01.1**	**-1.1**
JKA	**Kamikawa-asahi**	**24.75**	**34**	IAmb	IAmb	14 03 28.5	
	comp=Z,23nm,1.2s						
SBUM	**Sibu**	**24.78**	**208**	P	**P**	**14 03 03.3**	**+0.6**
SBUM				IAmb	IAmb	14 03 04.7	
	comp=Z,15nm,1.1s						
KLR	**Kul'dur**	**25.19**	**13**	P	**P**	**14 03 06.2**	**0.0**
	comp=Z,4.9nm,0.9s,baz=218,slow=7.2,SNR=12						
ULN	**Ulaanbaatar**	**26.42**	**335**	P	**P**	**14 03 18.3**	**+0.7**
KSM	**Kuching**	**26.50**	**211**	P	**P**	**14 03 17.7**	**-0.6**
KSM				IAmb	IAmb	14 03 20.9	
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**26.65**	**334**	P	**P**	**14 03 20

ASAR Alice Springs 49.26 167 P **P** **14 06 30.8 +1.1**
comp=Z,1.8nm,0.6s,baz=352,slow=13,SNR=30
ASAR PcP **PcP** **14 07 52.5 -0.1**
comp=Z,1.6nm,0.9s,baz=348,slow=4.1,SNR=4.1
ASAR Alice Springs 49.26 167 P **P** **14 06 30.0 +0.3**
NRIK Noril'sk 49.34 344 P **P** **14 06 28.7 -1.0**
comp=Z,3.1nm,0.8s,baz=127,slow=5.3,SNR=7.5
MORW Morawa 54.07 188 P **P** **14 07 05.8 +0.3**
ABKAR **Akbulak array 54.51 314** P **P** **14 07 07.8 -0.8**
ABKAR IAmb IAmb 14 07 09.2
comp=Z,4.3nm,0.9s
ABKAR **Akbulak array 54.51 314** P **P** **14 07 07.7 -0.8**
GEYT Alibeck 56.30 300 P **P** **14 07 21.4 -0.4**
comp=Z,9.3nm,1.0s,baz=178,slow=4.2,SNR=4.9
GEYT Alibeck 56.30 300 P **P** **14 07 20.0 -1.7**
NWAO Narrogin (SRO) 57.75 186 P **P** **14 07 32.5 +0.7**
BBOO Buckleboo 58.56 168 P **P** **14 07 38.1 +0.6**
STKA Stephens Creek 58.98 162 P **P** **14 07 41.4 +0.9**
comp=Z,3.5nm,0.8s,baz=315,slow=4.7,SNR=8.3
STKA Stephens Creek 58.98 162 P **P** **14 07 41.2 +0.7**
RND Reindeer 67.06 29 P **P** **14 08 32.9 -1.0**
RND IAmb IAmb 14 08 38.9
comp=Z,6.6nm,0.9s
MDM Murphy Dome 67.06 28 P **P** **14 08 33.5 -0.4**
MDM IAmb IAmb 14 08 39.4
comp=Z,4.6nm,1.0s
IL31 67.66 28 P **P** **14 08 37.9 +0.3**
ILAR Eielson Array 67.66 28 P **P** **14 08 37.5 -0.2**
comp=Z,0.3nm,0.7s,baz=299,slow=7.7,SNR=5.0
ILAR Eielson Array 67.66 28 P **P** **14 08 37.7 +0.1**
M24K Tolsona, Glenn 68.52 30 P **P** **14 08 43.4 +0.3**
PAX Paxson 68.64 29 P **P** **14 08 43.8 -0.1**
PAX IAmb IAmb 14 09 05.5
comp=Z,9.2nm,1.5s
N25K Chitina, Valde 69.36 31 P **P** **14 08 48.3 -0.1**
N25K IAmb IAmb 14 09 13.7
comp=Z,11nm,1.5s
K27K Chicken 69.87 28 P **P** **14 08 51.7 +0.3**
K27K IAmb IAmb 14 09 02.1
comp=Z,6.9nm,1.5s
BCAR Beaver Creek A 70.25 29 P **P** **14 08 53.5 -0.3**
DAWY Dawson 70.99 27 P **P** **14 08 58.3 0.0**
YAH Yahtse 71.03 32 P **P** **14 08 56.9 -1.9**
CTGM Chitina Glacie 71.05 31 P **P** **14 08 58.3 -0.6**
TABL Table Mountain 71.29 31 P **P** **14 09 01.6 +1.2**
PCA Pinnacle 71.82 32 P **P** **14 09 03.9 +0.4**
FIA1 FINESS Array S 71.95 330 P **P** **14 09 03.0 -1.0**
FINES FINESS Array B 71.95 330 P **P** **14 09 03.4 -0.7**
comp=Z,3.2nm,0.8s,baz=186,slow=1.9,SNR=5.9
NB2 NORSAR Subarra 78.63 333 P **P** **14 09 41.1 -1.5**
comp=Z,5.5nm,1.1s,baz=61,slow=5.3
NOA NORSAR Array B 78.63 333 P **P** **14 09 40.6 -2.0**
comp=Z,1.8nm,1.0s,baz=60,slow=5.3,SNR=3.7
GERES GERESS Array B 83.67 321 P **P** **14 10 09.9 +0.2**
comp=Z,0.3nm,0.3s,baz=51,slow=7.7,SNR=3.6
NVAR Mina Array Bea 94.50 44 P **P** **14 11 02.2 +0.4**
comp=Z,0.5nm,0.7s,baz=297,slow=3.6,SNR=3.7

IDC 18 14:01:41.5±1.8, 1°84.N×126°29E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/50, mbtmp3.6/4, Error ellipse: s-maj=179.3km s-min=23.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**4.55**	**253**	P	Pb	14 03 02.0	-0.4
	413nm21nm,1.1s						
WRA	**Warramunga Arr**	**23.05**	**160**	P	P	14 06 49.0	+0.3
	0.8nm,0.5s,baz=339,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**26.42**	**164**	P	P	14 07 19.8	-0.3
	0.7nm,0.6s,baz=354,slow=8.8,SNR=1.3						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	14 11 42.0	-0.1
	0.3nm,0.5s,baz=120,slow=8.7,SNR=5.1						
KURBB	**Kurchatov Arra**	**63.09**	**328**	P	P	14 12 10.8	+0.1
	0.3nm,0.4s,baz=130,slow=6.6,SNR=6.1						

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*IDC **18** 14:06:16.2±0.6, 24°.94N×123°.54E, h0km, mb4.2/26, mb1 4.3/27, mb1mx4.1/66, mbtmp4.2/27, ML2.8/1, MS4.0/34, Ms1 4.0/34, ms1mx3.9/50, Error ellipse: s-maj=17.5km s-min=12.4km az=81.0*

*BJI **18** 14:06:16.2±0.0, 24°.66N×123°.62E, h23km, mB4.9/39, mb4.3/43, Ms4.6/46, Ms7 4.5/45*

*NIED **18** 14:06:17.2, 24°.99N×123°.57E, h13km, MW4.7, Moment Tensor Solution. s2 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.27; $M_{\theta\theta}$1.16; $M_{r\theta}$-0.18; $M_{\theta\phi}$0.04; $M_{\theta r}$-0.03; Fault plane solution: $M_0$1.23000×10^{16} NP1:ϕ_s87.00000°, δ49.00000°, λ-92.00000°. NP2:ϕ_s269.00000°, δ41.00000°, λ-88.00000°.*

*JMA **18** 14:06:17.1±0.2, 24°.98N×123°.57E, h13km±4km, M5.0*
JMA Felt I J1.

*GCMT **18** 14:06:19.0±0.3, 24°.90N±0°.02×123°.47E±0°.05, h13km±1km, MW4.7/91, Moment Tensor Solution. s11, c11; s91, c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.58±.15; $M_{\theta\theta}$1.56±.10; $M_{\phi\phi}$0.01±.07; $M_{r\theta}$0.21±.19; $M_{\theta\phi}$0.04±.05; $M_{\phi r}$-0.28±.30; Best double couple: $M_0$1.60900×10^{16} NP1:ϕ_s79.00000°, δ42.00000°, λ-105.00000°. NP2: ϕ_s278.00000°, δ49.00000°, λ-77.00000°. Principal axes: T 1.5740, Plg4.0000°, Azm359.0000°; N 0.0680, Plg10.0000°, Azm90.0000°; P -1.6430, Plg79.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **18** 14:06:21.0±1.5, 24°.89N±0°.06×123°.47E±0°.08, h35km±4km, mb4.8/65 Error ellipse: s-maj=10.1km s-min=8.2km az=90.0*

ISC 18 14:06:17.7±1.1, 24°.93N±0°.04×123°.56E±0°.02, h11km±7km, n182, σ1§61/174, mb4.6/69, MS4.0/32, 2C-1D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.61**	**166**	P	**Pg**	**14 06 29.9**	**+0.2**
IRIF				*e*S	**Sb**	**14 06 38.6**	**-0.5**
YOJ	**Yonaguni jima**	**0.69**	**227**	P	**Pg**	**14 06 31.0**	**-0.1**
YOJ				S	**Sg**	**14 06 40.4**	**+0.3**
YOJ	**Yonaguni jima**	**0.69**	**227**		**Pg**	**14 06 31.0**	**-0.1**
YOJ					**Sg**	**14 06 38.4**	**-1.7**
JYNG	**Yonagunijimaku**	**0.74**	**230**	P	**Pg**	**14 06 31.6**	**-0.4**
JYNG				S	**Sg**	**14 06 42.2**	**+0.5**
JISG	**Ishigakijimahi**	**0.76**	**117**	P	**Pg**	**14 06 32.0**	**-0.5**
JISG				S	**Sg**	**14 06 42.8**	**+0.3**
JIJ	**Ishigaki jima**	**0.78**	**137**	P	**Pg**	**14 06 32.1**	**-0.6**
JIJ				S	**Sg**	**14 06 42.7**	**-0.2**
JKRS	**Kuro-shima**	**0.80**	**149**	P	**Pg**	**14 06 33.1**	**-0.2**
JKRS				S	**Sb**	**14 06 44.6**	**+0.1**
HATJ	**Hateruma jima**	**0.90**	**166**	P	**Pg**	**14 06 34.7**	**-0.4**
HATJ				S	**Sb**	**14 06 47.5**	**+0.2**
JTJ	**Tarama**	**1.08**	**105**	P	**Pb**	**14 06 37.3**	**-1.1**
JTJ				S	**Sb**	**14 06 51.5**	**-0.9**
JIRB	**Irabujima**	**1.47**	**94**	P	**Pn**	**14 06 43.7**	**-0.4**
JIRB				*e*S	**Sn**	**14 07 02.6**	**-0.7**
JIKM	**Ikemajima**	**1.53**	**90**	P	**Pn**	**14 06 44.9**	**-0.1**
JIKM				*e*S	**Sn**	**14 07 04.0**	**-0.8**
JMJ2	**Miyako jima3**	**1.62**	**96**	P	**Pn**	**14 06 45.9**	**-0.2**
JMJ2				*e*S	**Sn**	**14 07 06.0**	**-1.0**
TAIO	**Taipei**	**1.88**	**272**	Pn	**Pn**	**14 06 49.5**	**-0.4**
NACB	**Ninganchiao**	**1.94**	**248**		**Pn**	**14 06 50.5**	**-0.2**
YHNB	**Yeheng**	**2.00**	**263**	Pn	**Pn**	**14 06 51.5**	**-0.1**
YULB	**Yu-li**	**2.58**	**234**		**Pn**	**14 06 58.9**	**-0.5**
SSLB	**Suanglung**	**2.64**	**245**	Pn	**Pn**	**14 07 00.3**	**0.0**
TWG	**Pinlang**	**3.10**	**228**		**Pn**	**14 07 05.9**	**-0.7**
TPUB	**Ta-pu**	**3.13**	**239**	Pn	**Pn**	**14 07 08.4**	**+1.3**
JKE	**Kume jima 2**	**3.22**	**64**	P	**Pn**	**14 07 10.5**	**+2.2**
JIH	**Iheya**	**4.48**	**61**	P	**Pn**	**14 07 27.9**	**+2.3**
NJ2	**Nanjing**	**8.21**	**331**	*e*P	**Pn**	**14 08 17.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,270nm,5.0s						
NJ2				LR	LR		
	comp=N,3μm,8.5s						
NJ2				LR	LR		
	comp=E,2μm,6.9s						
NJ2				LR	LR		
	comp=Z,2μm,7.8s						
JNU	**Nakatsue**	**10.37**	**36**	LR	LR	14 13 15.6	
	comp=Z,438nm,19.0s,baz=216,slow=40						
LQP	**Lukban**	**10.93**	**190**	*e*P	Pn	14 09 07.3	+13
TGY	**Tagaytay City**	**11.05**	**193**	LR	LR	14 13 15.3	
	comp=Z,1μm,20.5s,baz=37,slow=38						
KSRS	**Korea Array**	**13.03**	**16**	Pn	**P**	**14 09 31.4**	**-1.7**
	0.1nm,0.3s,baz=200,slow=13,SNR=8.9						
KSRS				LR	LR	14 14 58.5	
	comp=Z,902nm,18.5s,baz=198,slow=40						
QIZ	**Qiongzhong**	**14.01**	**248**	P	**Pn**	**14 09 33.6**	**-2.7**
QIZ				S	**Sn**	**14 12 12.1**	**+0.2**
QIZ				LR	LR		
	comp=N,670nm,15.7s						
QIZ				LR	LR		
	comp=E,680nm,12.3s						
QIZ				LR	LR		
	comp=Z,640nm,11.3s						
DL2	**Dalian**	**14.03**	**354**	P	P	14 09 54.3	+10
DL2				S	S	14 12 45.8	+12
DL2				pmax	pmax		
	comp=Z,24nm,1.1s						
DL2				LR	LR		
	comp=N,2μm,12.2s						
DL2				LR	LR		
	comp=E,1μm,11.8s						
DL2				LR	LR		
	comp=Z,2μm,12.6s						
GYA	**Guiyang**	**15.31**	**279**	*e*P	**P**	**14 10 01.8**	**+3.0**
GYA				S	**S**	**14 13 04.1**	**+3.9**
GYA				pmax	pmax		
	comp=Z,12nm,1.1s						
GYA				pmax	pmax		
	comp=Z,310nm,3.5s						
GYA				LR	LR		
	comp=N,940nm,9.6s						
GYA				LR	LR		
	comp=E,1μm,7.7s						
GYA				LR	LR		
	comp=Z,970nm,7.7s						
XAN	**Xi'an**	**15.63**	**309**	P	**P**	**14 10 04.9**	**+2.6**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.8s						
XAN				LR	LR		
	comp=N,1μm,11.9s						
XAN				LR	LR		
	comp=E,2μm,15.2s						
XAN				LR	LR		
	comp=Z,1μm,16.3s						
BJI	**Beijing**	**16.29**	**339**	P	**P**	**14 10 08.8**	**-0.6**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BJI				LR	LR		
	comp=Z,1μm,10.8s						
BJI				LR	LR		
	comp=Z,880nm,16.1s						
BJI				LR	LR		
	comp=Z,470nm,22.2s						
JHJ	**Hachijo jima 2**	**16.35**	**56**	LR	LR	14 16 01.2	
	comp=Z,237nm,20.2s,baz=254,slow=36						
MJAR	**Matsushiro Arr**	**17.08**	**44**	P	**Pn**	**14 10 17.2**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=207,slow=8.8,SNR=5.0						
MJAR				LR	LR	14 17 06.9	
	comp=Z,408nm,19.9s,baz=230,slow=38						
DAV	**Davao City (W)**	**17.87**	**173**	LR	LR	14 17 06.9	
	comp=Z,685nm,21.2s,baz=352,slow=36						
KCP	**Kidapawan**	**17.88**	**175**	*e*P	**P**	**14 10 29.2**	**+1.9**
CD2	**Chengdu**	**18.48**	**293**	P	**P**	**14 10 31.5**	**-2.2**
CD2				S	**Sn**	**14 13 58.8**	**-1.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,820nm,8.8s						
CD2				LR	LR		
	comp=Z,2μm,11.6s						
CD2				LR	LR		
	comp=Z,2μm,8.2s						
CD2				LR	LR		
	comp=Z,2μm,9.4s						
HHC	**Hu-ho-hao-te**	**18.77**	**331**	*e*P	**Pn**	**14 10 39.4**	**+2.0**
HHC				S	**Sn**	**14 14 03.5**	**-3.9**
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,4.7s						
HHC				LR	LR		
	comp=Z,1μm,12.8s						
HHC				LR	LR		
	comp=Z,770nm,10.6s						
HHC				LR	LR		
	comp=Z,1μm,12.8s						
CN2	**Changchun**	**18.89**	**4**	*e*P	**Pn**	**14 10 39.9**	**+1.2**
CN2				*es*P	pwP	14 10 47.0	+3.6
CN2				*e*S	**Sn**	**14 14 07.0**	**-3.0**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=Z,2μm,14.0s						
CN2				LR	LR		
	comp=Z,890nm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
MDJ	**Mudanjiang**	**20.24**	**13**	P	Pn	14 10 54.0	-0.8
MDJ				S	Sn	14 14 41.8	-0.8
MDJ				pmax	pmax		
	comp=Z,16nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,700nm,14.5s						
MDJ				LR	LR		
	comp=Z,2μm,13.7s						
MDJ				LR	LR		
	comp=Z,1μm,11.4s						
MDJ				LR	LR		
	comp=Z,2μm,12.8s						
LZH	**Lanzhou**	**20.26**	**308**	*e*P	Pn	14 10 55.9	+0.5
LZH				pP	pwP	14 10 59.8	+1.1
LZH				sP	sP	14 11 02.3	+5.0
LZH				PP	**PnPn**	**14 11 19.1**	**+9.0**
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
LZH				pmax	pmax		
	comp=Z,71nm,4.9s						
LZH				LR	LR		
	comp=Z,850nm,14.1s						
LZH				LR	LR		
	comp=Z,1μm,16.3s						
LZH				LR	LR		
	comp=Z,950nm,14.1s						
USA0B	**Ussuriysk Arra**	**20.41**	**18**	P	**P**	**14 10 55.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**20.41**	**18**	P	Pn	14 10 56.5	-0.4
	comp=Z,3.3nm,0.8s,baz=207,slow=7.5,SNR=7.5						
USRK				LR	LR	14 19 09.7	
	comp=Z,600nm,18.8s,baz=186,slow=38						
USRK	**Ussuriysk Ar.**	**20.41**	**18**	P	**P**	**14 10 55.1**	**+0.4**
CHAI	**Chaiyaphum**	**22.10**	**250**	P	**P**	**14 11 16.0**	**+2.8**
	comp=Z,25nm,1.2s						
GUMO	**Guam**	**23.03**	**115**	LR	LR	14 18 28.1	
	comp=Z,118nm,21.1s,baz=314,slow=32						
JEW	**Eniwo**	**23.14**	**35**	P	**P**	**14 11 22.6**	**-1.4**
CM34	**Chiang Mai Arr**	**23.43**	**260**	P	**P**	**14 11 30.0**	**+2.9**
CM35	**Chiang Mai Arr**	**23.48**	**259**	P	**P**	**14 11 29.0**	**+1.4**
CM36	**Chiang Mai Arr**	**23.59**	**259**	P	**P**	**14 11 31.0**	**+2.3**
CM33	**Chiang Mai Arr**	**23.62**	**260**	P	**P**	**14 11 30.0**	**+1.0**
CMMT	**Chiang Mai**	**23.62**	**260**	P	**P**	**14 11 31.0**	**+2.0**
	comp=Z,7.4nm,1.7s						
CM09	**Chiang Mai Arr**	**23.71**	**259**	P	**P**	**14 11 33.8**	**+4.0**
	comp=Z,5.5nm,1.0s						
CM04	**Chiang Mai Arr**	**23.73**	**259**	P	**P**	**14 11 33.0**	**+2.9**
	comp=Z,6.4nm,1.3s						
CM01	**Chiang Mai Arr**	**23.74**	**259**	P	**P**	**14 11 34.0**	**+3.8**
CMAR	**Chiang Mai Arr**	**23.75**	**259**	P	**P**	**14 11 30.1**	**-0.1**
	comp=Z,5.0nm,1.1s,baz=61,slow=7.7,SNR=14						
CMAR	**Chiang Mai Arr**	**23.75**	**259**	P	**P**	**14 11 30.0**	**-0.2**
CM02	**Chiang Mai Arr**	**23.75**	**259**	P	**P**	**14 11 33.0**	**+2.8**
	comp=Z,5.0nm,1.0s						
CM05	**Chiang Mai Arr**	**23.76**	**259**	P	**P**	**14 11 33.6**	**+3.3**
	comp=Z,4.4nm,1.2s						
CM15	**Chiang Mai Arr**	**23.76**	**259**	P	**P**	**14 11 33.4**	**+3.0**
	comp=Z,4.1nm,0.9s						
CM32	**Chiang Mai Arr**	**23.77**	**260**	P	**P**	**14 11 33.0**	**+2.6**
CM13	**Chiang Mai Arr**	**23.79**	**259**	P	**P**	**14 11 33.8**	**+3.2**
	comp=Z,4.5nm,1.1s						
TOLI2	**Tolitoli**	**23.83**	**187**	P	**P**	**14 11 30.5**	**-0.5**
TOLI2				IAmb	IAmb	14 11 55.2	
	comp=Z,20nm,1.1s						
GTOI	**Gorontalo**	**24.16**	**181**	P	**P**	**14 11 35.7**	**+1.6**
	comp=Z,17nm,1.1s						
KMSI	**Cibinong**	**24.22**	**179**	P	**P**	**14 11 34.8**	**+0.2**
	comp=Z,237nmcomp=Z,2μmcomp=Z,26nm,0.5s						
TNTI	**Ternate**	**24.30**	**171**	P	**P**	**14 11 35.5**	**+0.2**
MRSI	**Marisa**	**24.36**	**184**	P	**P**	**14 11 37.5**	**+1.6**
	comp=Z,860nmcomp=Z,42nm,1.7s						
UTHA	**Uthaitani**	**24.44**	**252**	P	**P**	**14 11 41.6**	**+4.9**
HIA	**Hailar**	**24.47**	**354**	P	**P**	**14 11 35.3**	**-1.5**
ASAJ	**Asahikawa**	**24.64**	**34**	P	**P**	**14 11 37.5**	**-0.7**
	comp=Z,4.6nm,0.7s,baz=212,slow=11,SNR=5.0						
ASAJ				LR	LR	14 20 46.4	
	comp=Z,292nm,20.9s,baz=234,slow=35						
JKA	**Kamikawa-asahi**	**24.64**	**34**	P	**P**	**14 11 37.5**	**-0.7**
JKA	**Kamikawa-asahi**	**24.64**	**34**	IAmb	IAmb	14 11 39.4	
	comp=Z,18nm,1.2s						
GTA	**Gaotai**	**24.65**	**312**	⇑P	**P**	**14 11 39.3**	**+0.7**
GTA				pP	pwP	14 11 43.6	-0.5
GTA				sP	sP	14 11 46.4	+3.8
GTA				sS	sS	14 16 14.6	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,7.8s						
GTA				LR	LR		
	comp=Z,610nm,13.8s						
GTA				LR	LR		
	comp=Z,550nm,13.5s						
GTA				LR	LR		
	comp=Z,500nm,14.5s						
MPSI	**Mapaga**	**24.71**	**189**	P	**P**	**14 11 42.3**	**+3.3**
	comp=Z,391nmcomp=Z,18nm,1.5s						
SBUM	**Sibu**	**24.89**	**208**	P	**P**	**14 11 40.8**	**+0.1**
SBUM				IAmb	IAmb	14 11 48.0	
	comp=Z,27nm,1.3s						
KLR	**Kul'dur**	**25.09**	**13**	P	**P**	**14 11 42.4**	**+0.2**
	comp=Z,7.8nm,0.9s,baz=221,slow=8.3,SNR=15						
KLR				LR	LR	14 22 23.8	
	comp=Z,646nm,18.1s,baz=196,slow=39						
APSI	**Ampana**	**25.76**	**184**	P	**P**	**14 11 52.5**	**+4.0**
LUWI	**Luwuk**	**25.83**	**182**	P	**P**	**14 11 50.2**	**+1.0**
	comp=Z,1μmcomp=Z,52nm,1.2s						
SMKI	**Samarinda**	**25.97**	**195**	P	**P**	**14 11 53.6**	**+3.1**
	comp=Z,9μmcomp=Z,140nm,0.5s						
ULN	**Ulaanbaatar**	**26.35**	**334**	P	**P**	**14 11 54.0**	**+0.1**
SONM	**Songino Array**	**26.59**	**334**	P	**P**	**14 11 57.3**	**+1.2**
	comp=Z,4.4nm,1.1s,baz=148,slow=9.6,SNR=20						
SONM				LR	LR	14 23 11.1	
	comp=Z,517nm,19.7s,baz=167,slow=38						
SONM	**Songino Array**	**26.59**	**334**	P	**P**	**14 11 56.9**	**+0.9**
SIJI	**Sorong**	**26.71**	**163**	LR	LR	14 20 22.6	
	comp=Z,300nm,21.6s,baz=40,slow=32						
TTSI	**Tana Toraja**	**28.05**	**188**	P	P	14 12 18.4	+9.2
KAPI	**Kappang**	**30.00**	**188**	LR	LR	14 25 19.4	
	comp=Z,259nm,19.6s,baz=10,slow=38						
KAPI	**Kappang**	**30.00**	**188**	P	**P**	**14 12 26.2**	**-0.3**
TLY	**Talaya**	**30.74**	**335**	LR	LR	14 25 45.0	
	comp=Z,249nm,21.3s,baz=160,slow=38						
TLY	**Talaya**	**30.74**	**335**	P	**P**	**14 12 32.0**	**-0.8**
TLY				IAmb	IAmb	14 13 01.7	
	comp=Z,7.2nm,0.6s						
JAGI	**Jajag, Banyuwa**	**34.44**	**197**	P	**P**	**14 13 04.4**	**-1.2**
WMQ	**Urumqi**	**34.73**	**312**	*e*P	**P**	**14 13 08.9**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,59nm,3.7s						
WMQ				LR	LR		
	comp=Z,440nm,14.9s						
WMQ				LR	LR		
	comp=Z,510nm,14.9s						
WMQ				LR	LR		
	comp=Z,400nm,21.7s						
BATI	**Baumata**	**34.93**	**180**	LR	LR	14 29 12.5	
	comp=Z,124nm,18.6s,baz=320,slow=39						
YAK	**Yakutsk**	**37.32**	**5**	P	**P**	**14 13 29.4**	**-0.3**
	comp=Z,3.8nm,0.3s,baz=231,slow=3.7,SNR=1.4						
YAK				LR	LR	14 30 25.0	
	comp=Z,223nm,19.9s,baz=268,slow=39						
YAK	**Yakutsk**	**37.32**	**5**	IAmb	IAmb	14 13 35.9	
	comp=Z,18nm,1.1s						
PETK	**Petropavlovsk-**	**38.05**	**33**	P	**P**	**14 13 37.3**	**+1.3**
	comp=Z,3.4nm,0.9s,baz=240,slow=2.8,SNR=2.6						
PETK				LR	LR	14 29 26.5	
	comp=Z,250nm,19.2s,baz=232,slow=36						
MTN	**Manton Dam**	**38.27**	**168**	P	**P**	**14 13 37.6**	**-0.6**
MTN				IAmb	IAmb	14 13 44.6	
	comp=Z,27nm,1.5s						
MK31	**Makanchi Array**	**39.34**	**314**	P	**P**	**14 13 47.1**	**+0.2**
MK31				IAmb	IAmb	14 13 54.3	
	comp=Z,16nm,1.4s						
MKAR	**Makanchi Array**	**39.34**	**314**	P	**P**	**14 13 47.5**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=100,slow=11,SNR=14						
MKAR	**Makanchi Array**	**39.34**	**314**	P	**P**	**14 13 45.3**	**-1.6**
MA2	**Magadan**	**39.48**	**21**	LR	LR	14 31 43.0	
	comp=Z,353nm,18.4s,baz=216,slow=39						
KRVT	**Keravat (AS076**	**40.12**	**132**	LR	LR	14 27 11.3	
	comp=Z,104nm,21.7s,baz=1.6,slow=31						
KNRA	**Kununurra**	**40.68**	**172**	P	**P**	**14 13 58.0**	**-0.3**
KNRA				IAmb	IAmb	14 14 04.3	
	comp=Z,14nm,1.1s						
ZAA0	**Zalesovo Array**	**40.83**	**326**	P	**P**	**14 13 58.6**	**-0.5**
ZALV	**Zalesovo Beam**	**40.83**	**326**	P	**P**	**14 13 59.0**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=108,slow=8.0,SNR=16						
ZALV				LR	LR	14 32 06.2	
	comp=Z,429nm,18.6s,baz=115,slow=38						
ZALV	**Zalesovo Beam**	**40.83**	**326**	P	**P**	**14 13 58.3**	**-0.9**
SEY	**Seymchan**	**42.55**	**19**	LR	LR	14 32 35.2	
	comp=Z,201nm,19.2s,baz=202,slow=37						
FITZ	**Fitzroy Crossi**	**42.82**	**177**	P	**P**	**14 14 15.3**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=11,slow=12,SNR=6.6						
FITZ				LR	LR	14 32 46.8	
	comp=Z,48nm,20.3s,baz=350,slow=37						
FITZ	**Fitzroy Crossi**	**42.82**	**177**	P	**P**	**14 14 15.0**	**-0.7**
FITZ				IAmb	IAmb	14 14 27.7	
	comp=Z,16nm,1.4s						
KURK	**Kurchatov**	**42.93**	**319**	P	**P**	**14 14 16.1**	**-0.4**
KURBB	**Kurchatov Arra**	**42.96**	**319**	P	**P**	**14 14 16.9**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=111,slow=7.7,SNR=24						
COEN	**Coen**	**43.13**	**152**	P	**P**	**14 14 18.1**	**-0.2**
COEN				IAmb	IAmb	14 14 41.1	
	comp=Z,15nm,1.1s						
WB0	**Warramunga Arr**	**45.66**	**166**	P	**P**	**14 14 38.6**	**0.0**
WRAB	**Tennant Creek**	**45.81**	**166**	P	**P**	**14 14 39.8**	**0.0**
WRAB				IAmb	IAmb	14 14 47.2	
	comp=Z,15nm,1.1s						
WRA	**Warramunga Arr**	**45.82**	**166**	P	**P**	**14 14 40.0**	**+0.2**
	comp=Z,5.9nm,0.7s,baz=348,slow=8.8,SNR=48						
WRA	**Warramunga Arr**	**45.82**	**166**	P	**P**	**14 14 39.8**	**0.0**
WB2	**Warramunga Arr**	**45.82**	**166**	P	**P**	**14 14 39.9**	**0.0**
WB2				IAmb	IAmb	14 14 41.2	
	comp=Z,11nm,0.8s						
WR0	**Warramunga Arr**	**45.88**	**166**	P	**P**	**14 14 40.1**	**-0.2**
WR0				IAmb	IAmb	14 14 58.9	
	comp=Z,13nm,1.1s						
BTK	**Batken**	**46.33**	**302**	P	**P**	**14 14 43.4**	**-0.4**
PSA00	**Pilbara Seismi**	**46.37**	**185**	P	**P**	**14 14 43.7**	**-0.4**
PSA00				IAmb	IAmb	14 14 44.8	
	comp=Z,14nm,0.9s						
PSA00	**Pilbara Seismi**	**46.37**	**185**	P	**P**	**14 14 43.0**	**-1.1**
PSA00				I

comp=Z,120nm,18.4s,baz=105,slow=39
GYA0B ALIBECK ARRAY 56.29 300 P **P** **14 15 56.9 -1.7**
GYA0B IAmb IAmb 14 16 03.7
comp=Z,5.6nm,0.9s
NWAO Narrogin (SRO) 57.85 186 P **P** **14 16 10.0 +0.6**
BBOO Buckleboo 58.64 168 P **P** **14 16 15.3 +0.3**
STKA Stephens Creek 59.06 162 P **P** **14 16 18.6 +0.7**
comp=Z,2.9nm,0.8s,baz=0.8,slow=8.1,SNR=5.5
DZM Mont Dzumac 62.58 135 P **P** **14 16 43.2 +1.0**
DZM IAmb IAmb 14 17 05.2
comp=Z,16nm,1.5s
CHGN Chignik 63.06 38 P **P** **14 16 43.3 -1.5**
PPLA Purkeypile 65.52 30 P **P** **14 17 00.7 -0.4**
PPLA IAmb IAmb 14 17 25.6
comp=Z,15nm,1.3s
KLMR Klimovskoe 65.69 328 *eP* **P** **14 16 58.4 -3.5**
KLMR AMP 14 17 11.9
comp=Z,19nm,1.7s
TOLK Toolik Lake Re 65.90 24 P **P** **14 17 02.7 -0.6**
TOLK IAmb IAmb 14 17 04.3
comp=Z,16nm,1.5s
SKT Skwentna 65.95 31 P **P** **14 17 02.7 -0.9**
SKT IAmb IAmb 14 17 18.5
comp=Z,13nm,1.2s
KTH Kantishna Hill 66.01 29 P **P** **14 17 04.0 -0.1**
KTH IAmb IAmb 14 17 23.4
comp=Z,9.0nm,1.2s
TRF Thorofare Moun 66.30 29 P **P** **14 17 06.3 +0.2**
TRF IAmb IAmb 14 17 10.1
comp=Z,13nm,1.4s
SUA Susitna One 66.39 32 P **P** **14 17 06.4 -0.2**
KBZ Khabaz 66.70 309 P **P** **14 17 09.1 +0.3**
comp=Z,4.4nm,1.1s,baz=233,slow=20
RND Reindeer 66.95 29 P **P** **14 17 09.5 -0.6**
MDM Murphy Dome 66.95 28 P **P** **14 17 10.0 0.0**
MDM IAmb IAmb 14 17 35.9
comp=Z,14nm,1.3s
ILAR Eielson Array 67.55 28 P **P** **14 17 13.1 -0.7**
comp=Z,0.2nm,0.6s,baz=295,slow=6.9,SNR=6.4
ILAR LR LR 14 48 37.7
comp=Z,56nm,18.9s,baz=292,slow=38
ILAR Eielson Array 67.55 28 P **P** **14 17 13.7 -0.1**
DHY Denali Highway 67.66 29 P **P** **14 17 15.0 +0.3**
DHY IAmb IAmb 14 17 30.6
comp=Z,13nm,1.5s
SCM Sheep Creek Mo 67.93 31 P **P** **14 17 16.2 -0.2**
M24K Tolsona, Glenn 68.41 30 P **P** **14 17 20.3 +1.0**
KLU Klutina 68.66 31 P **P** **14 17 21.5 +0.6**
ARCES ARCESS Array B 69.65 338 LR LR 14 55 00.6
comp=Z,137nm,18.6s,baz=85,slow=42
K27K Chicken 69.76 28 P **P** **14 17 27.2 -0.4**
MCARA McCarthy VSAT 70.04 31 P **P** **14 17 30.5 +1.2**
MCARA IAmb IAmb 14 17 39.7
comp=Z,15nm,1.1s
BCAR Beaver Creek A 70.14 29 P **P** **14 17 30.5 +0.4**
BARN Barnard Glacie 70.76 31 P **P** **14 17 35.1 +1.1**
BARN IAmb IAmb 14 17 57.1
comp=Z,12nm,1.2s
DAWY Dawson 70.88 28 P **P** **14 17 34.5 -0.1**
CTGM Chitina Glacie 70.94 31 P **P** **14 17 35.8 +0.7**
INK Inuvik 71.72 22 P **P** **14 17 38.3 -1.1**
comp=Z,1.7nm,1.0s,baz=234,slow=1.3
FINES FINESS Array B 71.89 330 P **P** **14 17 40.6 +0.1**
comp=Z,2.3nm,0.8s,baz=41,slow=4.4,SNR=5.9
FINES LR LR 14 52 15.1
comp=Z,374nm,18.4s,baz=75,slow=38
AKASG Malin Array Be 73.75 319 P **P** **14 17 51.3 -0.5**
comp=Z,0.2nm,0.3s,baz=59,slow=5.8,SNR=5.0
AKASG Malin Array Be 73.75 319 P **P** **14 17 51.4 -0.5**
AKBB Malin Array Si 73.75 319 P **P** **14 17 51.1 -0.7**
AKBB IAmb IAmb 14 17 52.9
comp=Z,9.1nm,1.4s
AIN Ainahou 74.18 76 P **P** **14 17 54.8 -0.4**
BRTR Keskin Array B 74.47 307 LR LR 14 55 42.1
comp=Z,24nm,18.8s,baz=61,slow=40
ELL Elmali 78.27 305 P **P** **14 18 17.1 -1.0**
NOA NORSAR Array B 78.57 333 P **P** **14 18 18.5 -0.6**
comp=Z,2.4nm,1.0s,baz=54,slow=5.5,SNR=3.8
NOA LR LR 14 56 44.9
comp=Z,278nm,18.2s,baz=70,slow=39
URZ Urewera 80.44 140 LR LR 14 47 51.6
comp=Z,72nm,21.1s,baz=31,slow=31
YKA Yellowknife Ar 81.43 24 P **P** **14 18 35.0 +0.5**
comp=Z,5.0nm,1.2s,baz=316,slow=5.2,SNR=2.7
YKA LR LR 14 58 07.9
comp=Z,90nm,18.2s,baz=0.0,slow=38
GERES GERESS Array B 83.63 321 P **P** **14 18 46.9 +0.5**
comp=Z,0.7nm,0.3s,baz=15,slow=4.1,SNR=4.0
KMBO Kilima Mbogo 87.12 267 P **P** **14 19 07.1 +2.5**
comp=Z,2.7nm,1.1s,baz=50,slow=6.9,SNR=6.7
NEW Newport 89.15 36 P **P** **14 19 13.9 +0.5**
comp=Z,4.6nm,1.0s,baz=296,slow=6.0
NEW Newport 89.15 36 P **P** **14 19 14.2 +0.7**
NEW IAmb IAmb 14 19 15.2
comp=Z,5.6nm,1.0s
WALA Waterton Lakes 90.31 34 P **P** **14 19 20.0 +1.0**
FFC Flin Flon 91.57 24 P **P** **14 19 23.9 -0.6**
KEST Kesra 93.40 312 P **P** **14 19 31.0 -2.5**
comp=Z,2.0nm,0.5s,baz=63,slow=6.3,SNR=4.1
KEST LR LR 15 06 04.9
comp=Z,44nm,18.5s,baz=278,slow=38
NVAR Mina Array Bea 94.40 44 P **P** **14 19 39.8 +1.5**
comp=Z,0.6nm,0.8s,baz=305,slow=5.2,SNR=4.1
ULM Lac du Bonnet 97.39 24 LR LR 15 09 46.5
comp=Z,78nm,18.1s,baz=326,slow=39

IDC 18 14:07:46.7±884.0, 53.94N×3.38E, h0km, Error ellipse: s-maj=396.3km s-min=139.3km az=120.0, North Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**8.22**	**124**	*i*		14 59 40.0	
	baz=312,slow=328,SNR=1.5						
I48TN	**KESRA INFRASON**	**18.60**	**165**	*i*		16 01 00.0	
	baz=352,slow=318,SNR=0.6						
I43RU	**DUBNA INFRASON**	**19.34**	**68**	*i*		16 10 00.0	
	baz=278,slow=329,SNR=0.5						

*NEIC **18** 14:18:30.6±1.0, 5.20S±0.07°×147.05E±0.08, h179km±8km, mb4.5/24, Error ellipse: s-maj=13.8km s-min=8.4km az=127.0*
*IDC **18** 14:18:35.3±1.5, 5.53S×147.10E, h216km±15km, mb3.5/11, mb1 3.7/15, mb1mx3.4/43, mbtmp4.1/15, Error ellipse: s-maj=18.7km s-min=8.5km az=110.0*
*DJA **18** 14:18:36.3±0.4, 6°S±4°×14°7E±°, h200km±7km, M4.3/13, mb4.2/13, mB4.7/3, MLv4.5/3, Mw(mB)3.9/3*
ISC 18 14:18:33.7±0.5, 5.47S±0.06×147.14E±0.08, h195km, n55, σ1°87/57, mb4.1/20, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.42**	**4**	P	Pn	14 19 21.0	-7.1
PMG	**Port Moresby**	**3.91**	**180**	P	**Pn**	**14 19 34.8**	**+0.6**
	13nm,0.3s,baz=54,slow=10,SNR=115						
PMG				S	**Sn**	**14 20 20.4**	**-1.3**
	29nm,0.3s,baz=36,slow=22,SNR=9.5						
PMG	**Port Moresby**	**3.91**	**180**	Pn	**Pn**	**14 19 34.6**	**+0.4**
KRVT	**Keravat (AS076**	**5.00**	**77**	P	**Pn**	**14 19 49.9**	**+1.8**
	3.2nm,0.3s,baz=116,slow=3.8,SNR=4.4						
RABL	**Rabaul**	**5.16**	**76**	Pn	**Pn**	**14 19 47.1**	**-3.0**
COEN	**Coen**	**9.29**	**205**	Pn	**Pn**	**14 20 45.6**	**+1.7**
CTA	**Charters Tower**	**14.55**	**183**	P	**P**	**14 21 52.6**	**+0.5**
	0.5nm,0.3s,baz=360,slow=13,SNR=7.2						
CTAO	**Charters Tower**	**14.55**	**183**	P	**P**	**14 21 52.9**	**+0.8**
MTN	**Manton Dam**	**17.41**	**244**	Pn	**P**	**14 22 23.3**	**-0.3**
WB0	**Warramunga Arr**	**18.86**	**220**	P	**P**	**14 22 39.0**	**-0.3**
WB0					IAmb	14 22 43.5	
	comp=Z,13nm,0.8s						
WR0	**Warramunga Arr**	**18.91**	**219**	P	**P**	**14 22 39.8**	**-0.1**
WRAB	**Tennant Creek**	**19.01**	**220**	P	**P**	**14 22 40.9**	**-0.1**
WC3	**Warramunga Arr**	**19.02**	**220**			**14 22 41.0**	**0.0**
WB2	**Warramunga Arr**	**19.02**	**220**	P	**P**	**14 22 40.9**	**-0.1**
WRA	**Warramunga Arr**	**19.03**	**220**	P	**P**	**14 22 41.2**	**0.0**
	comp=Z,5.2nm,0.3s,baz=40,slow=11,SNR=226						
WRA				S	**S**	**14 26 03.6**	**-3.2**
	baz=42,slow=18,SNR=5.2						
WRA	**Warramunga Arr**	**19.03**	**220**	P	**P**	**14 22 39.6**	**-1.5**
EIDS	**Eidsvold**	**20.14**	**170**	P	**P**	**14 22 54.0**	**+1.0**
EIDS					IAmb	14 22 54.6	
	comp=Z,8.7nm,0.6s						
KNRA	**Kununurra**	**20.70**	**239**	P	**P**	**14 22 57.3**	**-1.7**
KNRA					IAmb	14 23 00.5	
	comp=Z,11nm,0.7s						

TNTI Ternate 20.70 287 P **P** **14 23 00.4 +1.3**
comp=Z,2μmcomp=Z,19nm,0.8s
AS31 Alice Springs 22.13 214 P **P** **14 23 13.7 0.0**
ASAR Alice Springs 22.13 214 P **P** **14 23 13.8 0.0**
comp=Z,21nm,1.0s,baz=48,slow=8.5,SNR=179
ASAR S **S** **14 27 01.1 -2.3**
comp=Z,1.6nm,0.9s,baz=30,slow=18,SNR=6.7
ASAR Alice Springs 22.13 214 P **P** **14 23 13.2 -0.5**
FITZ Fitzroy Crossi 24.46 237 P **P** **14 23 34.4 -0.6**
comp=Z,25nm,0.5s,baz=39,slow=8.7,SNR=137
FITZ Fitzroy Crossi 24.46 237 P **P** **14 23 34.2 -0.8**
GTOI Gorontalo 24.85 283 P **P** **14 23 45.1 +6.5**
comp=Z,3.9nm,0.6s
DZM Mont Dzumac 24.92 133 P **P** **14 23 38.6 -0.6**
comp=Z,1.7nm,0.6s,baz=326,slow=16,SNR=2.0
DZM Mont Dzumac 24.92 133 IAmb IAmb 14 23 45.1
comp=Z,10.0nm,1.4s
ARMA Armidale 25.17 171 P **P** **14 23 41.9 +0.5**
ARMA IAmb IAmb 14 23 44.8
comp=Z,9.8nm,0.8s
STKA Stephens Creek 26.78 191 P **P** **14 23 54.8 -0.8**
comp=Z,1.0nm,0.3s,baz=11,slow=9.0,SNR=4.9
STKA pP **pP** **14 24 40.0 +4.7**
comp=Z,2.8nm,0.7s,baz=21,slow=14,SNR=4.2
STKA Stephens Creek 26.78 191 P **P** **14 23 55.0 -0.7**
BBOO Buckleboo 29.10 199 P **P** **14 24 15.0 -1.2**
BBOO IAmb IAmb 14 24 16.5
comp=Z,12nm,1.1s
PSAD2 Pilbara Seismi 30.82 236 P **P** **14 24 30.3 -1.3**
PSAD2 IAmb IAmb 14 24 31.4
comp=Z,13nm,1.3s
PSAC2 Pilbara Seismi 30.85 236 P **P** **14 24 30.6 -1.2**
PSAD1 Pilbara Seismi 30.86 236 P **P** **14 24 31.1 -0.8**
PSAB2 Pilbara Seismi 30.88 236 P **P** **14 24 31.1 -1.1**
PSAB2 IAmb IAmb 14 24 31.7
comp=Z,6.4nm,0.7s
FORT Forrest 30.91 213 P **P** **14 24 31.6 -0.7**
GIRL Giralia 36.06 238 P **P** **14 25 16.2 -0.7**
MORW Morawa 37.63 228 P **P** **14 25 29.2 -0.8**
MORW IAmb IAmb 14 25 29.7
comp=Z,19nm,1.5s
OUZ Omahuta 38.36 144 P **P** **14 25 37.6 +1.6**
MJAR Matsushiro Arr 42.62 349 P **P** **14 26 10.9 0.0**
comp=Z,0.8nm,0.6s,baz=181,slow=4.2,SNR=2.4
KSRS Korea Array 46.31 339 P **P** **14 26 39.7 -0.4**
comp=Z,1.3nm,0.7s,baz=156,slow=9.8,SNR=5.9
HHC Hu-ho-hao-te 56.46 328 *eP* P 14 27 50.8 -4.7
LZH Lanzhou 57.91 319 *eP* **P** **14 28 03.3 -2.5**
LZH pP pP 14 28 47.3 -2.4
LZH sP sP 14 29 06.8 -4.0
LZH PP **PP** **14 30 22.9 +6.4**
LZH pmax pmax
comp=Z,13nm,1.1s
LZH pmax pmax
comp=Z,71nm,4.3s
PETK Petropavlovsk- 59.04 7 P **P** **14 28 13.4 +0.4**
comp=Z,2.0nm,0.5s,baz=158,slow=6.1,SNR=26
SONM Songino Array 64.02 331 P **P** **14 28 47.0 +0.4**
comp=Z,0.4nm,0.4s,baz=131,slow=4.1,SNR=5.1
SONM Songino Array 64.02 331 P **P** **14 28 44.9 -1.8**
VNDA Vanda 72.42 177 P **P** **14 29 38.0 -0.3**
comp=Z,1.4nm,0.5s,baz=332,slow=6.7,SNR=20
VNDA Vanda 72.42 177 P **P** **14 29 37.8 -0.4**
WMQ Urumqi 72.49 319 *eP* **P** **14 29 37.4 -1.9**
MKAR Makanchi Array 77.19 320 P **P** **14 30 05.4 -0.7**
comp=Z,0.4nm,0.5s,baz=119,slow=12,SNR=2.2
ZALV Zalesovo Beam 78.64 328 P **P** **14 30 12.4 -1.5**
comp=Z,0.7nm,0.5s,baz=111,slow=6.5,SNR=4.4
ILAR Eielson Array 84.94 23 P **P** **14 30 44.8 -1.8**
comp=Z,1.0nm,0.6s,baz=253,slow=5.1,SNR=20
NVAR Mina Array Bea 96.93 52 P **P** **14 31 45.3 +1.7**
comp=Z,0.2nm,0.5s,baz=265,slow=8.6,SNR=1.7
GERES GERESS Array B 121.56 326 PKP **PKPdf** **14 37 02.9 -1.4**
comp=Z,0.4nm,0.5s,baz=66,slow=2.4,SNR=2.4
TORD Torodi Ar. Bea 145.10 285 PKPbc **PKPbc** **14 37 47.0 -1.9**
comp=Z,0.5nm,0.5s,baz=66,slow=4.6,SNR=6.0

*IDC **18** 14:18:38.3±1.5, 24.99N×123.64E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.4/72, mbtmp3.5/7, MS3.2/3, Ms1 3.2/3, ms1mx2.7/43, Error ellipse: s-maj=54.3km s-min=21.1km az=65.0*
*JMA **18** 14:18:39.2±0.2, 24.95N±0.06×123.59E±0.03, h8km±10km, n21, σ0.52/28, mb3.5/7, Southwestern Ryukyu Islands*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.63**	**168**	P	**Pg**	**14 18 52.0**	**+0.6**
IRIF				S	**Sb**	**14 19 01.5**	**+0.1**
YOJ	**Yonaguni jima**	**0.72**	**227**	P	**Pg**	**14 18 53.0**	**-0.1**
YOJ				S	**Sg**	**14 19 02.1**	**-0.4**
JISG	**Ishigakijimahi**	**0.75**	**119**	P	**Pg**	**14 18 54.1**	**+0.4**
JISG				S	**Sb**	**14 19 05.2**	**+0.3**
JYNG	**Yonagunijimaku**	**0.77**	**230**	P	**Pg**	**14 18 53.9**	**-0.2**
JYNG				*eS*	**Sg**	**14 19 03.9**	**-0.2**
JIJ	**Ishigaki jima**	**0.77**	**139**	P	**Pg**	**14 18 54.2**	**+0.1**
JIJ				S	**Sg**	**14 19 04.6**	**+0.4**
JKRS	**Kuro-shima**	**0.81**	**152**	P	**Pb**	**14 18 55.2**	**-0.3**
JKRS				S	**Sb**	**14 19 06.6**	**+0.1**
HATJ	**Hateruma jima**	**0.91**	**168**	P	**Pb**	**14 18 56.8**	**-0.5**
HATJ				S	**Sb**	**14 19 09.2**	**-0.4**
JTJ	**Tarama**	**1.06**	**107**	P	**Pb**	**14 18 59.6**	**-0.2**
JTJ				S	**Sb**	**14 19 13.4**	**-0.4**
JIRB	**Irabujima**	**1.44**	**95**	P	**Pn**	**14 19 05.2**	**-0.4**
JIRB				*eS*	**Sn**	**14 19 23.3**	**-1.5**
JIKM	**Ikemajima**	**1.51**	**91**	P	**Pb**	**14 19 07.2**	**-0.2**
JMJ2	**Miyako jima3**	**1.59**	**97**	P	**Pb**	**14 19 08.2**	**-0.7**
JMJ2				*eS*	**Sb**	**14 19 29.1**	**-0.1**
KSRS	**Korea Array**	**13.00**	**16**	LR	LR	14 26 37.9	
	comp=Z,58nm,21.2s,baz=168,slow=37						
USRK	**Ussuriysk Ar.**	**20.39**	**18**	LR	LR	14 30 41.3	
	comp=Z,69nm,18.2s,baz=179,slow=36						
CMAR	**Chiang Mai Arr**	**23.77**	**259**	P	**P**	**14 23 53.2**	**+0.8**
	0.6nm,0.4s,baz=58,slow=8.1,SNR=5.9						
KLR	**Kul'dur**	**25.06**	**13**	LR	LR	14 33 57.2	
	comp=Z,90nm,19.1s,baz=210,slow=37						
SONM	**Songino Array**	**26.59**	**334**	P	**P**	**14 24 18.3**	**+0.3**
	0.6nm,0.8s,baz=138,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**39.34**	**314**	P	**P**	**14 26 09.8**	**+0.8**
	0.4nm,0.7s,baz=96,slow=9.4,SNR=2.8						
ZALV	**Zalesovo Beam**	**40.82**	**326**	P	**P**	**14 26 21.1**	**0.0**
	0.5nm,0.5s,baz=133,slow=13,SNR=2.0						
KURBB	**Kurchatov Arra**	**42.96**	**319**	P	**P**	**14 26 38.6**	**-0.1**
	0.4nm,0.6s,baz=110,slow=8.9,SNR=4.7						
WRA	**Warramunga Arr**	**45.83**	**166**	P	**P**	**14 27 02.0**	**+0.1**
	0.7nm,0.7s,baz=346,slow=8.7,SNR=3.5						
ASAR	**Alice Springs**	**49.35**	**168**	P	**P**	**14 27 29.9**	**+0.7**
	0.3nm,0.5s,baz=350,slow=6.9,SNR=4.4						

*NEIC **18** 14:19:00.3±1.9, 39.83N±0.04×141.67E±0.08, h55km±9km, mb4.5/11, Error ellipse: s-maj=10.5km s-min=1.6km az=118.0*
*JMA **18** 14:19:00.1, 39.76N×141.84E, h58km±1km, M3.8 Broadband fault plane solution: P waves. NP1: ϕs212.00000°, δ36.00000°, λ107.00000°. NP2: ϕs11.00000°, δ56.00000°, λ78.00000°. Principal axes: T Plg76.0000°, Azm243.0000°; N Plg10.0000°, Azm18.0000°; P Plg10.0000°, Azm110.0000°;*
JMA Felt II J1.
*IDC **18** 14:19:01.6±2.1, 39.78N×141.80E, h73km±20km, mb3.6/14, mb1 3.6/18, mb1mx3.4/74, mbtmp3.9/18 Error ellipse: s-maj=26.0km s-min=20.0km az=141.0*
ISC 18 14:18:60.0±0.7, 39.78N±0.03×141.83E±0.06, h58km±5km, n65, σ1°44/73, mb3.9/19, 4C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**0.16**	**9**	P	**Pn**	**14 19 09.4**	**+0.4**
JTH				S	**Sn**	**14 19 15.9**	**+0.4**
MIYJ	**Miyakonagasawa**	**0.20**	**182**	P	**Pn**	**14 19 09.4**	**+0.2**
MIYJ				S	**Sn**	**14 19 15.7**	**-0.1**
JKZ	**Kuzumaki**	**0.44**	**299**	P	**Pn**	**14 19 11.7**	**+0.5**
JKZ				S	**Sn**	**14 19 19.8**	**+0.5**
JKEN	**Kujiedanarisaw**	**0.44**	**348**	P	**Pn**	**14 19 11.5**	**+0.4**
JKEN				S	**Sn**	**14 19 19.7**	**+0.5**
JOM	**Ohasama**	**0.51**	**234**	P	**Pn**	**14 19 12.0**	**+0.1**
JOM				S	**Sn**	**14 19 20.6**	**0.0**
JANG	**Nango**	**0.64**	**338**	P	**Pn**	**14 19 13.6**	**+0.2**
JANG				S	**Sn**	**14 19 23.3**	**+0.1**
JMK	**Ichinoseki**	**0.95**	**210**	P	**Pn**	**14 19 17.1**	**-0.1**
JMK				S	**Sn**	**14 19 29.5**	**-0.5**
JRG	**Rokugo**	**1.00**	**248**	P	**Pn**	**14 19 17.9**	**0.0**
JRG				*eS*	**Sn**	**14 19 31.3**	**+0.1**
JAH	**Hinai**	**1.01**	**295**	P	**Pn**	**14 19 18.4**	**+0.4**
JAH				S	**Sn**	**14 19 32.4**	**+1.1**
JTM	**Tenmabayashi**	**1.17**	**330**	P	**Pn**	**14 19 20.5**	**+0.4**
JTM				S	**Sn**	**14 19 35.5**	**+0.4**
JTM	**Tenmabayashi**	**1.17**	**330**	Pn	**Pn**	**14 19 20.2**	**+0.1**
JTM				Sn	**Sn**	**14 19 34.3**	**-0.8**
JIO	**Ouri**	**1.37**	**196**	P	**Pn**	**14 19 22.6**	**-0.3**
JIO				*eS*	**Sn**	**14 19 39.7**	**-0.3**
JYK	**Kaneyama**	**1.43**	**234**	P	**Pn**	**14 19 23.7**	**+0.1**
JMM	**Marumori**	**2.07**	**203**	Pn	**Pn**	**14 19 31.9**	**-0.5**
ERM	**Erimo**	**2.45**	**24**	Pn	**Pn**	**14 19 38.2**	**+0.7**
JEW	**Eniwo**	**3.08**	**355**	Pn	**Pn**	**14 19 47.0**	**+0.9**
JSD	**Sado**	**3.28**	**239**	Pn	**Pn**	**14 19 48.8**	**-0.1**
JYT	**Yasato**	**3.77**	**201**	Pn	**Pn**	**14 19 55.3**	**-0.3**
MAJO	**Matsushiro**	**4.31**	**223**		**Pn**	**14 20 04.2**	**+1.2**
MAT	**Matsushiro**	**4.31**	**223**	P	**Pn**	**14 20 04.4**	**+1.4**
MAT				*eS*	**Sn**	**14 20 55.8**	**+3.8**
MJAR	**Matsushiro Arr**	**4.31**	**223**	P	**Pn**	**14 20 05.8**	**+2.8**
	0.5nm,0.3s,baz=72,slow=25,SNR=18						
MJAR	**Matsushiro Arr**	**4.31**	**223**		**Pn**	**14 20 04.2**	**+1.2**
ASAJ	**Asahikawa**	**4.37**	**7**	P	**Pn**	**14 20 05.0**	**+1.2**
	1.6nm,0.3s,baz=212,slow=12,SNR=22						
ASAJ				S	**Sn**	**14 20 48.5**	**-5.0**
	1.0nm,0.3s,baz=266,slow=4.4,SNR=3.8						
JKA	**Kamikawa-asahi**	**4.37**	**7**		**Pn**	**14 20 03.6**	**-0.2**
JKA	**Kamikawa-asahi**	**4.37**	**7**		**Sn**	**14 20 48.5**	**-5.0**
JGF	**Kuroka**	**5.47**	**222**	Pn	**Pn**	**14 20 20.0**	**+1.0**
INU	**Inuyama**	**5.84**	**222**	Pn	**Pn**	**14 20 24.2**	**+0.2**
JWT	**Wachi**	**6.80**	**231**	Pn	**Pn**	**14 20 37.2**	**+0.2**
JHJ	**Hachijo jima 2**	**6.84**	**195**	P	**Pn**	**14 20 37.6**	**-0.1**
	2.1nm,0.3s,baz=40,slow=16,SNR=2.1						
JHJ				S	**Sn**	**14 21 48.0**	**-6.2**
	3.1nm,0.3s,baz=265,slow=9.7,SNR=2.1						
JHJ2	**Mitsune**	**6.85**	**194**	Pn	**Pn**	**14 20 37.1**	**-0.6**
JHS	**Saijyo**	**8.41**	**238**	Pn	**Pn**	**14 20 58.6**	**-0.6**
USRK	**Ussuriysk Ar.**	**8.56**	**304**	P	**Pn**	**14 21 03.0**	**+1.9**
	baz=110,slow=12,SNR=6.2						
KSRS	**Korea Array**	**11.13**	**262**	P	Pn	14 21 41.5	+5.3
	0.4nm,0.3s,baz=66,slow=13,SNR=5.5						
KSAR	**Wonju Array Be**	**11.16**	**262**	Pn	**Pn**	**14 21 36.1**	**-0.5**
JMZ	**Minamidaito 2**	**16.51**	**216**	P	**P**	**14 22 51.3**	**+1.8**
YAK	**Yakutsk**	**23.48**	**346**	P	**P**	**14 24 03.5**	**-0.7**
	1.9nm,0.4s,baz=28,slow=2.2,SNR=2.0						
YAK	**Yakutsk**	**23.48**	**346**	P	**P**	**14 24 02.4**	**-1.8**
SEY	**Seymchan**	**24.04**	**12**	P	**P**	**14 24 10.6**	**+1.3**
	2.6nm,0.6s,baz=224,slow=8.9,SNR=3.8						
SONM	**Songino Array**	**26.62**	**299**	P	**P**	**14 24 33.3**	**+0.2**
	0.5nm,0.7s,baz=96,slow=10,SNR=2.8						
SONM	**Songino Array**	**26.62**	**299**	P	**P**	**14 24 31.3**	**-1.7**
H11N2	**WAKE ISLAND Hy**	**29.37**	**126**	T	T	14 55 34.6	
	baz=318,slow=75,SNR=357						
H11N1	**WAKE ISLAND Hy**	**29.38**	**126**	T	T	14 55 35.3	
	baz=318,slow=75,SNR=290						
H11N3	**WAKE ISLAND Hy**	**29.39**	**126**	T	T	14 55 37.9	
	baz=318,slow=75,SNR=301						
H11S1	**WAKE ISLAND Hy**	**30.17**	**127**	T	T	14 56 34.2	
	baz=319,slow=76,SNR=50						
H11S3	**WAKE ISLAND Hy**	**30.17**	**127**	T	T	14 56 32.4	
	baz=319,slow=76,SNR=58						
H11S2	**WAKE ISLAND Hy**	**30.19**	**127**	T	T	14 56 37.0	
	baz=319,slow=76,SNR=53						
ZAA0	**Zalesovo Array**	**40.36**	**310**	P	**P**	**14 26 31.4**	**-0.3**
ZAA0				IAmb	IAmb	14 26 32.2	
	comp=Z,2.8nm,0.6s						
ZALV	**Zalesovo Beam**	**40.36**	**310**	P	**P**	**14 26 31.3**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=91,slow=7.5,SNR=13						
MK31	**Makanchi Array**	**42.99**	**300**	P	**P**	**14 26 53.1**	**-0.3**
MK31				IAmb	IAmb	14 27 15.2	
	comp=Z,8.3nm,1.4s						
MKAR	**Makanchi Array**	**42.99**	**300**	P	**P**	**14 26 52.8**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=83,slow=10.0,SNR=5.7						
MAKZ	**Makanchi**	**43.20**	**300**	P	**P**	**14 26 54.6**	**-0.5**
MAKZ				IAmb	IAmb	14 27 05.5	
	comp=Z,15nm,1.5s						
KURK	**Kurchatov**	**44.54**	**306**	P	**P**	**14 27 05.2**	**-0.6**
OHAK	**Old Harbor**	**44.55**	**45**	P	**P**	**14 27 06.2**	**+0.6**
KURBB	**Kurchatov Arra**	**44.62**	**306**	P	**P**	**14 27 06.2**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=82,slow=8.5,SNR=18						
ILAR	**Eielson Array**	**47.02**	**34**	P	**P**	**14 27 24.5**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=274,slow=6.7,SNR=6.0						
BVAR	**Borovoye Array**	**49.00**	**311**	P	**P**	**14 27 40.5**	**0.0**
	comp=Z,0.4nm,0.4s,baz=27,slow=18,SNR=3.7						
ABKAR	**Akbulak array**	**56.45**	**309**	P	**P**	**14 28 35.1**	**-0.4**
ABKAR				IAmb	IAmb	14 28 35.9	
	comp=Z,1.8nm,0.6s						
ARCES	**ARCESS Array B**	**61.55**	**339**	P	**P**	**14 29 10.4**	**-0.2**
	comp=Z,4.4nm,1.0s,baz=67,slow=6.9,SNR=1.9						
GEYT	**Ailbeck**	**62.82**	**298**	P	**P**	**14 29 20.2**	**+0.6**
FINES	**FINESS Array B**	**66.55**	**332**	P	**P**	**14 29 43.1**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=34,slow=10,SNR=2.0						
NC405	**NORSAR Array S**	**71.58**	**337**	P	**P**	**14 30 14.4**	**-0.2**
NC405				IAmb	IAmb	14 30 21.1	
	comp=Z,26nm,1.2s						
HFS	**Hagfors**	**71.73**	**336**	P	**P**	**14 30 15.3**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=38,slow=7.5,SNR=5.5						
NOA	**NORSAR Array B**	**71.79**	**337**	P	**P**	**14 30 16.4**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=22,slow=5.3,SNR=1.8						
AKASG	**Malin Array Be**	**72.34**	**322**	P	**P**	**14 30 18.9**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=38,slow=4.7,SNR=1.9						
PDAR	**Pinedale Array**	**75.52**	**46**	P	**P**	**14 30 39.2**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=140,slow=49,SNR=2.3						

WEL 18 14:19:41.1, 43°S±1°×17°3E±°, h11km±1km, M3.2/10, ML3.4/10, MLv3.2/10, Error ellipse: s-maj=0.0km s-min=0.0km az=37.9, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.24**	**205**	P	Pb	14 19 47.7	+0.2
MQZ				S	Sg	14 19 51.7	+2.2
OKCZ	**Okains Bay**	**0.30**	**140**	P	Pb	14 19 48.8	+0.2
OKCZ				S	Sb	14 19 53.7	+0

TUVZ	**Tukino**	**4.74**	**28**	P		Pn	14 20 54.1	+1.6
NGZ	**Ngauruhoe**	**4.80**	**27**	P		Pn	14 20 56.5	+3.0
HIZ	**Hauiti**	**5.21**	**18**	P		Pn	14 20 60.0	+1.0
TLZ	**Tolley Road**	**5.56**	**23**	P		Pn	14 21 03.8	0.0
HLRZ	**Highlands Stat**	**5.89**	**28**	P		Pn	14 21 06.7	-1.6
URZ	**Urewera**	**6.16**	**33**	P		Pn	14 21 12.1	0.0
AWAZ	**Awhitu Peninsu**	**6.57**	**13**	P		Pn	14 21 20.5	+2.9

*IDC **18** 14:23:05.2±1.6, 1.°96N×126.°45E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/52, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=118.9km s-min=19.1km az=69.0*

*DJA **18** 14:23:09.3±1.0, 2.°N±3.°×12.°6E±.°, h12km±8km, M3.8/11, mb4.0/2, MLv3.6/11*

*NEIC **18** 14:23:10.7±2.4, 2.°02N±0.°09×126.°52E±0.°09, h50km±9km, mb4.0/10, Error ellipse: s-maj=14.9km s-min=10.1km az=47.0*

ISC 18 14:23:10.6±0.8, 1.°97N±0.°06×126.°53E±0.°08, h47km, n31, σ1§18/31, mb3.9/9, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
TNTI	**Ternate**	**1.45**	**145**	P	**Pn**		**14 23 35.4**	**+1.0**
TNTI	**Ternate**	**1.45**	**145**		**Pn**		**14 23 35.1**	**+0.7**
SGSI	**Sangihe**	**1.98**	**330**	P	**Pn**		**14 23 41.9**	**+0.2**
SGSI				S	**Sn**		**14 24 07.3**	**+2.0**
KMSI	**Cibinong**	**2.90**	**242**	P	**Pn**		**14 23 52.5**	**-1.8**
KMSI				S	**Sn**		**14 24 28.0**	**+0.1**
GTOI	**Gorontalo**	**3.76**	**249**	P	**Pn**		**14 24 06.7**	**+0.6**
LUWI	**Luwuk**	**4.80**	**232**	P	**Pn**		**14 24 19.7**	**-0.7**
LUWI	**Luwuk**	**4.80**	**232**	Pn	**Pn**		**14 24 22.8**	**+2.3**
MRSI	**Marisa**	**4.82**	**252**	P	**Pn**		**14 24 18.5**	**-2.2**
APSI	**Ampana**	**5.66**	**240**	P	**Pn**		**14 24 31.5**	**-0.6**
TOLI2	**Tolitoli**	**5.81**	**262**	Pn	**Pn**		**14 24 32.6**	**-1.7**
MYLDM	**Lahad Datu**	**8.63**	**292**	Pn	**Pn**		**14 25 13.5**	**+0.5**
KKM	**Kota Kinabalu**	**11.06**	**292**	Pn	**Pn**		**14 25 47.0**	**+0.7**
FITZ	**Fitzroy Crossi**	**19.96**	**182**	P	**P**		**14 27 39.6**	**+0.7**
	0.1nm,0.3s,baz=6.1,slow=12,SNR=1.4							
FITZ	**Fitzroy Crossi**	**19.96**	**182**	Pn	**Pn**		**14 27 41.5**	**+0.6**
WB0	**Warramunga Arr**	**22.93**	**161**	P	**P**		**14 28 10.9**	**0.0**
WB0				IAmb	IAmb		14 28 16.8	
	comp=Z,2.9nm,0.8s							
WRA	**Warramunga Arr**	**23.08**	**161**	P	**P**		**14 28 12.2**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=339,slow=11,SNR=12							
WRA	**Warramunga Arr**	**23.08**	**161**	IAmb	IAmb		14 28 16.2	
	comp=Z,0.2nm,1.2s							
WB2	**Warramunga Arr**	**23.09**	**161**	P	**P**		**14 28 12.9**	**+0.5**
WB2				IAmb	IAmb		14 28 15.9	
	comp=Z,6.0nm,1.2s							
WR0	**Warramunga Arr**	**23.16**	**161**	P	**P**		**14 28 13.5**	**+0.3**
WR0				IAmb	IAmb		14 28 22.5	
	comp=Z,2.1nm,0.9s							
AS31	**Alice Springs**	**26.47**	**165**	P	**P**		**14 28 43.4**	**-0.1**
ASAR	**Alice Springs**	**26.47**	**165**	P	**P**		**14 28 44.9**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=344,slow=9.4,SNR=7.3							
ASAR	**Alice Springs**	**26.47**	**165**	P	**P**		**14 28 44.0**	**+0.5**
MAJO	**Matsushiro**	**36.06**	**16**	P	**P**		**14 30 06.2**	**-1.5**
MAT	**Matsushiro**	**36.06**	**16**	P	**P**		**14 30 06.2**	**-1.5**
MJAR	**Matsushiro Arr**	**36.06**	**16**	P	**P**		**14 30 06.2**	**-1.5**
USRK	**Ussuriysk Ar.**	**42.33**	**6**	P	**P**		**14 30 58.6**	**-1.3**
MK31	**Makanchi Array**	**58.89**	**326**	P	**P**		**14 33 06.5**	**+0.7**
MK31				IAmb	IAmb		14 33 12.8	
	comp=Z,8.1nm,1.4s							
MKAR	**Makanchi Array**	**58.89**	**326**	P	**P**		**14 33 06.0**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=120,slow=7.9,SNR=10							
KURBB	**Kurchatov Arra**	**63.11**	**328**	P	**P**		**14 33 34.0**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=131,slow=6.4,SNR=12							
KURK	**Kurchatov**	**63.12**	**328**	P	**P**		**14 33 34.0**	**+0.7**
KURK	**Kurchatov**	**63.12**	**328**	IAmb	IAmb		14 33 47.9	
	comp=Z,3.3nm,1.3s							

WEL 18 14:23:19.6, 43.°S±1.°×17.°3E±.°, h11km±2km, M2.5/8, ML2.7/8, MLv2.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=40.2, South Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
MQZ	**McQueen's Vall**	**0.24**	**204**	P	Pb		14 23 26.1	+0.2
MQZ				S	Sg		14 23 30.0	+2.0
OKCZ	**Okains Bay**	**0.31**	**140**	P	Pb		14 23 27.2	+0.1
OKCZ				S	Sb		14 23 31.6	-0.5
AMCZ	**Amberley**	**0.32**	**342**	P	Pb		14 23 27.6	+0.3
AMCZ				S	Sb		14 23 32.6	+0.1
AKCZ	**Akaroa Harbour**	**0.40**	**167**	P	Pb		14 23 29.1	+0.5
RACZ	**Rakaia**	**0.53**	**243**	P	Pn		14 23 32.1	-0.9
RACZ				S	Sn		14 23 40.5	-1.4
GVZ	**Greta Valley S**	**0.55**	**19**	P	Pb		14 23 31.5	+0.4
GVZ				S	Sb		14 23 39.7	+0.7
OXZ	**Oxford**	**0.57**	**286**	P	Pb		14 23 32.4	+0.9
OXZ				S	Sn		14 23 41.9	-1.0
LTZ	**Lake Taylor**	**0.80**	**332**	P	Pn		14 23 36.5	-0.2
LTZ				S	Sn		14 23 48.0	-0.6
WACZ	**Wakanui South**	**0.83**	**236**	P	Pn		14 23 37.8	+0.7
MHCZ	**Mount Hutt**	**0.89**	**267**	P	Pn		14 23 38.5	+0.5
KHZ	**Kahutara**	**1.20**	**28**	P	Pn		14 23 42.1	-0.1
ARCZ	**Arundel**	**1.26**	**248**	P	Pg		14 23 44.4	+0.7
RPZ	**Rata Peaks**	**1.28**	**259**	P	Pg		14 23 45.5	+1.3
WVZ	**Waitaha Valley**	**1.55**	**285**	P	Pg		14 23 51.0	+1.6
THZ	**Tophouse**	**1.72**	**3**	P	Pn		14 23 49.6	+0.1
BSWZ	**Blackbirch Sta**	**1.94**	**25**	P	Pn		14 23 52.7	+0.3
CMWZ	**Cape Campbell**	**2.03**	**32**	P	Pg		14 24 00.3	+1.8
LBZ	**Lake Benmore**	**2.08**	**244**	P	Pb		14 23 56.1	-1.2
ODZ	**Otahua Downs**	**2.19**	**224**	P	Pn		14 23 56.5	+0.7
TCW	**Tory Channel**	**2.53**	**26**	P	Pn		14 24 00.1	-0.3
DUWZ	**D'Urville Isla**	**2.81**	**18**	P	Pb		14 24 10.1	+0.4

*NEIC **18** 14:33:40.4±1.6, 10.°67S±0.°08×161.°42E±0.°09, h28km±6km, mb4.4/15, Error ellipse: s-maj=15.3km s-min=8.0km az=46.0*

*IDC **18** 14:33:43.6±2.6, 10.°63S×161.°23E, h46km±23km, mb3.5/9, mb1 3.8/10, mb1mx3.6/39, mbtmp3.8/10, ML3.4/1, MS3.8/3, Ms1 3.8/3, ms1mx3.0/33, Error ellipse: s-maj=25.8km s-min=20.9km az=83.0*

ISC 18 14:33:43.7±0.5, 10.°72S±0.°07×161.°34E±0.°07, h61km, n39, σ1§64/34, mb3.9/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
HNR	**Honiara**	**1.87**	**313**	P	**Pn**		**14 34 11.4**	**-2.1**
	36nm,0.3s,baz=138,slow=10.0,SNR=14							
HNR				S	**Sn**		**14 34 35.9**	**-0.2**
	264nm,0.3s,baz=240,slow=17,SNR=6.6							
HNR				LR	LR		14 35 01.0	
	comp=Z,825nm,20.5s,baz=172,slow=45							
HNR	**Honiara**	**1.87**	**313**		**Pn**		**14 34 10.7**	**-2.8**
SANVU	**Saraoutou**	**7.40**	**130**		**Pn**		**14 35 26.7**	**-2.4**
DZM	**Mont Dzumac**	**12.30**	**157**	P	**Pn**		**14 36 36.6**	**+0.4**
	0.2nm,0.3s,baz=340,slow=9.7,SNR=11							
DZM				S	**Sn**		**14 38 48.7**	**-3.2**
	0.2nm,0.3s,baz=225,slow=18,SNR=2.2							
DZM	**Mont Dzumac**	**12.30**	**157**		**Pn**		**14 36 36.0**	**-0.3**
PMG	**Port Moresby**	**14.03**	**274**	LR	LR		14 42 11.3	
	comp=Z,340nm,19.9s,baz=102,slow=36							
PMG	**Port Moresby**	**14.03**	**274**	Pn	**Pn**		**14 36 56.2**	**-3.3**
TARA	**Tarawa**	**16.63**	**45**	P	**Pn**		**14 37 33.9**	**+0.9**
CTA	**Charters Tower**	**17.26**	**236**	P	**P**		**14 37 44.6**	**+3.1**
	0.2nm,0.3s,baz=60,slow=8.1,SNR=8.2							
CTAO	**Charters Tower**	**17.26**	**236**	Pn	**Pn**		**14 37 39.9**	**-0.9**
PATS	**Pohnpei**	**17.70**	**350**	P	**Pn**		**14 37 46.0**	**0.0**
FUNA	**Funafuti**	**17.74**	**85**	P	**Pn**		**14 37 45.0**	**-1.6**
FUNA				IAmb	IAmb		14 37 55.2	
	comp=Z,85nm,1.2s							
WB0	**Warramunga Arr**	**27.48**	**248**	P	**P**		**14 39 25.1**	**+0.6**
WB0				IAmb	IAmb		14 39 47.3	
	comp=Z,4.9nm,0.9s							
WB2	**Warramunga Arr**	**27.56**	**247**	P	**P**		**14 39 26.0**	**+0.8**
WB2				IAmb	IAmb		14 39 37.4	
	comp=Z,8.2nm,1.1s							
WRA	**Warramunga Arr**	**27.57**	**247**	P	**P**		**14 39 26.6**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=74,slow=9.1,SNR=7.4							
WRA				LR	LR		14 50 19.6	
	comp=Z,197nm,18.4s,baz=85,slow=36							
WRA	**Warramunga Arr**	**27.57**	**247**	P	**P**		**14 39 26.2**	**+0.9**
AS31	**Alice Springs**	**29.13**	**240**	P	**P**		**14 39 39.7**	**+0.5**
ASAR	**Alice Springs**	**29.14**	**240**	P	**P**		**14 39 39.8**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=64,slow=9.9,SNR=9.9							
ASAR				LR	LR		14 51 03.5	
	comp=Z,186nm,19.0s,baz=72,slow=36							
H11S2	**WAKE ISLAND Hy**	**29.50**	**10**	T	T		15 11 03.4	
	baz=188,slow=76,SNR=24							
H11S3	**WAKE ISLAND Hy**	**29.50**	**10**	T	T		15 11 01.7	
	baz=188,slow=76,SNR=5.9							
H11S1	**WAKE ISLAND Hy**	**29.52**	**10**	T	T		15 10 47.9	
	baz=188,slow=76,SNR=6.3							
H11N1	**WAKE ISLAND Hy**	**30.73**	**10**	T	T		15 12 21.2	
	baz=186							
H11N3	**WAKE ISLAND Hy**	**30.73**	**10**	T	T		15 12 32.0	
	baz=186							
H11N2	**WAKE ISLAND Hy**	**30.74**	**10**	T	T		15 12 19.0	
	baz=186							
KNRA	**Kununurra**	**32.08**	**258**	P	**P**		**14 40 06.5**	**+1.3**
KNRA				IAmb	IAmb		14 40 17.2	
	comp=Z,7.3nm,0.9s							
FITZ	**Fitzroy Crossi**	**35.30**	**254**	P	**P**		**14 40 33.6**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=62,slow=10,SNR=5.7							
FITZ	**Fitzroy Crossi**	**35.30**	**254**	P	**P**		**14 40 33.5**	**+0.3**
FITZ				IAmb	IAmb		14 40 43.2	
	comp=Z,3.3nm,1.1s							
VNDA	**Vanda**	**66.79**	**180**	P	**P**		**14 44 30.7**	**+2.3**
	comp=Z,0.6nm,0.8s,baz=342,slow=6.8,SNR=5.6							
VNDA	**Vanda**	**66.79**	**180**	P	**P**		**14 44 30.7**	**+2.3**
CMAR	**Chiang Mai Arr**	**68.03**	**295**	P	**P**		**14 44 37.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=136,slow=4.8,SNR=4.3							
ULN	**Ulaanbaatar**	**75.54**	**326**	P	**P**		**14 45 22.7**	**+0.8**
ULN				IAmb	IAmb		14 45 37.2	
	comp=Z,4.6nm,0.5s							
SONM	**Songino Array**	**75.89**	**325**	P	**P**		**14 45 24.8**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=145,slow=6.0,SNR=4.9							
SONM	**Songino Array**	**75.89**	**325**	P	**P**		**14 45 24.7**	**+0.9**
SVW2	**Sparrevohn**	**79.20**	**20**	P	**P**		**14 45 42.7**	**+0.8**
QSPA	**South Pole Qui**	**79.29**	**180**	P	**P**		**14 45 42.7**	**+0.1**
QSPA				IAmb	IAmb		14 45 50.6	
	comp=Z,2.9nm,1.1s							
ILAR	**Eielson Array**	**84.62**	**20**	P	**P**		**14 46 11.1**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=247,slow=5.6,SNR=2.3							
NVAR	**Mina Array Bea**	**89.14**	**51**	P	**P**		**14 46 35.9**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=241,slow=7.8,SNR=3.6							
NVAR	**Mina Array Bea**	**89.14**	**51**	P	**P**		**14 46 31.9**	**-1.2**
MKAR	**Makanchi Array**	**90.34**	**318**	P	**P**		**14 46 38.6**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=91,slow=6.5,SNR=7.3							

*IDC **18** 14:34:45.6±1.1, 33.°06N×138.°97E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.4/51, mbtmp3.7/4, ML2.9/1, Error ellipse: s-maj=24.6km s-min=16.4km az=166.0*

*NEIC **18** 14:34:46.9±1.2, 33.°88N±0.°06×139.°35E±0.°08, h55km±13km, mb4.3/7, Error ellipse: s-maj=11.6km s-min=5.4km az=49.0*

*JMA **18** 14:34:46.1±0.1, 33.°66N×140.°74E, h44km, M3.5*

ISC 18 14:34:45.7±1.4, 33.°61N±0.°05×140.°78E±0.°09, h37km±2km, n36, σ1§03/44, mb4.1/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
JHJ2	**Mitsune**	**0.95**	**239**	P	**Pn**		**14 35 03.3**	**+0.9**
JHJ2				S	**Sn**		**14 35 15.1**	**+0.4**
JHJ2	**Mitsune**	**0.95**	**239**		**Pn**		**14 35 03.1**	**+0.7**
JHJ2					**Sn**		**14 35 13.6**	**-1.1**
JHJ	**Hachijo jima 2**	**0.97**	**240**	Pn	**Pn**		**14 35 03.4**	**+0.7**
	424nm,0.3s,baz=124,slow=22,SNR=585							
JHJ					**Sn**		**14 35 14.3**	**-0.9**
	301nm,0.3s,baz=16,slow=23,SNR=21							
JHCJ	**Hachijojimakas**	**0.98**	**237**	P	**Pn**		**14 35 03.6**	**+0.7**
JHCJ				S	**Sn**		**14 35 15.4**	**-0.1**
JMKN	**Mikurajimanish**	**1.03**	**286**	P	**Pn**		**14 35 03.9**	**+0.4**
JMKN				S	**Sn**		**14 35 16.3**	**-0.4**
BSO1	**Boso 1**	**1.05**	**9**	P	**Pn**		**14 35 04.0**	**+0.6**
BSO3	**Boso 3**	**1.21**	**349**	P	**Pn**		**14 35 06.4**	**+0.6**
BSO4	**Boso 4**	**1.43**	**345**	P	**Pn**		**14 35 09.6**	**+0.7**
JAOM	**Aogashimamukai**	**1.43**	**217**	P	**Pn**		**14 35 10.0**	**+1.0**
JKO	**Kozu shima**	**1.48**	**293**	P	**Pn**		**14 35 10.4**	**+0.6**
JKO				S	**Sn**		**14 35 27.3**	**-0.6**
JTHY	**Toshimahigashi**	**1.54**	**307**	P	**Pn**		**14 35 11.1**	**+0.6**
JTHY				eS	**Sn**		**14 35 28.6**	**-0.7**
JIM2	**Oshima 3**	**1.57**	**315**	P	**Pn**		**14 35 11.1**	**+0.1**
JIM2				eS	**Sn**		**14 35 28.5**	**-1.7**
JIZS	**Izushimoda**	**1.93**	**306**	P	**Pn**		**14 35 16.6**	**+0.7**
JIZS				S	**Sn**		**14 35 38.6**	**-0.2**
KTJ3	**Kamata3**	**1.94**	**313**	P	**Pn**		**14 35 16.2**	**+0.2**
KTJ3				eS	**Sn**		**14 35 37.3**	**-1.8**
JOD2	**Odawara 2**	**2.16**	**320**	P	**Pn**		**14 35 19.4**	**+0.3**
JOD2				S	**Sn**		**14 35 43.2**	**-1.5**
JFNN	**Fujinakano**	**2.35**	**313**	P	**Pn**		**14 35 22.7**	**+1.1**
JYT	**Yasato**	**2.66**	**350**	Pn	**Pn**		**14 35 24.5**	**-1.3**
JGF	**Kuroka**	**3.45**	**306**	Pn	Pn		14 35 24.8	-12
INU	**Inuyama**	**3.56**	**300**	Pn	Pn		14 35 24.0	-14
MJAR	**Matsushiro Arr**	**3.61**	**325**	Pn	**Pn**		**14 35 41.2**	**+2.2**
	1.0nm,0.3s,baz=160,slow=14,SNR=13							
MJAR					**Sn**		**14 36 19.7**	**-0.6**
	0.6nm,0.3s,baz=201,slow=4.3,SNR=6.8							
MAT	**Matsushiro**	**3.61**	**325**	P	**Pn**		**14 35 41.2**	**+2.2**
MAT				eS	**Sn**		**14 36 19.3**	**-1.1**
JMM	**Marumori**	**4.25**	**0**	Pn	**Pn**		**14 35 48.9**	**+1.1**
ERM	**Erimo**	**8.60**	**12**	Pn	**Pn**		**14 36 50.1**	**+2.6**
H11N2	**WAKE ISLAND Hy**	**27.03**	**114**	T	T		15 09 15.1	
	baz=306,slow=75,SNR=11							
H11N1	**WAKE ISLAND Hy**	**27.05**	**114**	T	T		15 09 18.1	
	baz=306,slow=75,SNR=11							
H11N3	**WAKE ISLAND Hy**	**27.05**	**114**	T	T		15 09 13.8	
	baz=306,slow=75,SNR=9.9							
WB0	**Warramunga Arr**	**53.43**	**187**	P	**P**		**14 44 01.7**	**-0.2**
WB0				IAmb	IAmb		14 44 27.8	
	comp=Z,4.2nm,1.5s							
WRAB	**Tennant Creek**	**53.59**	**188**	P	**P**		**14 44 02.5**	**-0.6**
WR0	**Warramunga Arr**	**53.60**	**187**	P	**P**		**14 44 03.1**	**-0.1**
WR0				IAmb	IAmb		14 44 19.9	
	comp=Z,5.0nm,1.4s							
WB2	**Warramunga Arr**	**53.60**	**188**	P	**P**		**14 44 03.0**	**-0.2**
WRA	**Warramunga Arr**	**53.61**	**188**	P	**P**		**14 44 03.3**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=3.2,slow=7.7,SNR=19							
WC3	**Warramunga Arr**	**53.62**	**187**	P	**P**		**14 44 03.4**	**+0.1**
WC3				IAmb	IAmb		14 44 25.6	
	comp=Z,6.2nm,1.4s							
AS31	**Alice Springs**	**57.33**	**187**	P	**P**		**14 44 30.0**	**0.0**
ASAR	**Alice Springs**	**57.33**	**187**	P	**P**		**14 44 30.1**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=0.5,slow=6.5,SNR=15							
MBWA	**Marble Bar**	**58.05**	**203**	P	**P**		**14 44 33.7**	**-1.3**
AKTO	**Aktyubinsk**	**60.61**	**313**	P	**P**		**14 44 53.0**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=45,slow=4.3,SNR=2.0							

IDC 18 14:41:14.9±1.8, 2.°42N×125.°66E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.2/42, mbtmp3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.5/24, Error ellipse: s-maj=177.7km s-min=23.5km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
FITZ	**Fitzroy Crossi**	**20.39**	**180**	LR	LR		14 55 05.7	
	comp=Z,50nm,18.1s,baz=62,slow=41							
WRA	**Warramunga Arr**	**23.80**	**159**	P	P		14 46 29.9	+0.3
	0.4nm,0.6s,baz=337,slow=10,SNR=4.8							
ASAR	**Alice Springs**	**27.14**	**163**	P	P		14 46 59.9	-0.1
	0.1nm,0.5s,baz=347,slow=7.9,SNR=6.0							
MKAR	**Makanchi Array**	**58.03**	**326**	P	P		14 51 10.7	+0.9
	0.4nm,0.6s,baz=104,slow=6.1,SNR=1.9							
KURBB	**Kurchatov Arra**	**62.27**	**328**	P	P		14 51 37.7	-1.1
	0.3nm,0.8s,baz=127,slow=6.2,SNR=2.3							

*NIED **18** 14:45:53.2, 25.°00N×123.°61E, h13km, MW4.1, Moment Tensor Solution. s2 Moment tensor: Scale 10^15 Nm; Mrr=1.43; Mθθ=1.32; Mφφ=0.12; Mrθ=-0.08; Mθφ=0.04; Mφr=0.11; Fault plane solution: M0=1.38000×10^15 NP1:φs=84.00000°, δ=47.00000°, λ=-95.00000°. NP2:φs=272.00000°, δ=43.00000°, λ=-84.00000°.*

*JMA **18** 14:45:53.1±0.1, 25.°00N×123.°60E, h13km±3km, M3.8*

*NEIC **18** 14:45:58.1±1.7, 24.°78N±0.°07×123.°41E±0.°09, h41km±7km, mb4.4/19, Error ellipse: s-maj=12.2km s-min=8.5km az=123.0*

*IDC **18** 14:46:02.5±5.2, 24.°90N×123.°56E, h84km±52km, mb3.6/15, mb1 3.7/17, mb1mx3.5/49, mbtmp3.9/17, ML3.0/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/44, Error ellipse: s-maj=24.5km s-min=12.0km az=71.0*

ISC 18 14:45:53.9±1.3, 24.°90N±0.°05×123.°62E±0.°03, h10km, n62, σ0§99/68, mb4.3/23, MS3.3/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
IRIF	**Iriomote-Funau**	**0.57**	**170**	P	**Pb**		**14 46 06.1**	**+0.1**
IRIF				S	**Sb**		**14 46 15.3**	**+1.1**
JISG	**Ishigakijimahi**	**0.70**	**117**	P	**Pb**		**14 46 07.7**	**-0.5**
JISG				S	**Sb**		**14 46 18.3**	**+0.4**
YOJ	**Yonaguni jima**	**0.71**	**232**	P	**Pg**		**14 46 07.5**	**-0.1**
YOJ				S	**Sg**		**14 46 17.6**	**+0.7**
YOJ	**Yonaguni jima**	**0.71**	**232**	Pn	**Pg**		**14 46 07.3**	**-0.2**
YOJ				Sn	**Sg**		**14 46 13.9**	**-2.9**
JIJ	**Ishigaki jima**	**0.72**	**138**	P	**Pb**		**14 46 08.0**	**-0.4**
JIJ				S	**Sb**		**14 46 18.2**	**-0.1**
JKRS	**Kuro-shima**	**0.75**	**152**	P	**Pb**		**14 46 09.0**	**0.0**
JKRS				S	**Sb**		**14 46 20.6**	**+1.3**
JYNG	**Yonagunijimaku**	**0.76**	**234**	P	**Pg**		**14 46 08.5**	**-0.1**
JYNG				S	**Sg**		**14 46 19.1**	**+0.5**
HATJ	**Hateruma jima**	**0.86**	**169**	P	**Pb**		**14 46 10.9**	**0.0**
HATJ				S	**Sb**		**14 46 24.1**	**+1.7**
JTJ	**Tarama**	**1.02**	**105**	P	**Pb**		**14 46 13.2**	**-0.3**
JTJ				S	**Sb**		**14 46 27.0**	**0.0**
JIRB	**Irabujima**	**1.41**	**93**	P	**Pn**		**14 46 19.2**	**-0.4**
JIRB				eS	**Sb**		**14 46 37.2**	**-1.1**
JIKM	**Ikemajima**	**1.48**	**89**	P	**Pn**		**14 46 19.7**	**-0.8**
JIKM				eS	**Sb**		**14 46 39.0**	**-1.2**
JMJ2	**Miyako jima3**	**1.56**	**96**	P	**Pn**		**14 46 21.5**	**-0.1**
JMJ2				eS	**Sn**		**14 46 40.9**	**-1.0**
TATO	**Taipei**	**1.94**	**273**	Pn	**Pn**		**14 46 25.6**	**-1.2**
NACB	**Ninganchiao**	**1.98**	**249**	Pn	**Pn**		**14 46 26.3**	**-1.2**
YHNB	**Yeheng**	**2.06**	**264**	Pn	**Pn**		**14 46 28.0**	**-0.5**
YULB	**Yu-li**	**2.60**	**235**	Pn	**Pn**		**14 46 35.1**	**-0.9**
SSLB	**Suanglung**	**2.67**	**246**		**Pn**		**14 46 36.6**	**-0.4**
TPUB	**Ta-pu**	**3.17**	**240**	Pn	**Pn**		**14 46 44.3**	**+0.5**
KSAR	**Wonju Array Be**	**13.02**	**15**	Pn	**Pn**		**14 49 02.7**	**+3.8**
KSRS	**Korea Array**	**13.04**	**15**	P	Pn		14 49 03.9	+4.7
	0.2nm,0.3s,baz=122,slow=37,SNR=6.4							
KSRS				LR	LR		14 54 02.7	
	comp=Z,99nm,18.4s,baz=207,slow=37							
KS19	**Wonju Array Si**	**13.07**	**15**		P		14 49 04.3	-5.7
INU	**Inuyama**	**15.56**	**45**	Pn	**P**		**14 49 37.9**	**+0.2**
MJAR	**Matsushiro Arr**	**17.06**	**44**	P	**P**		**14 49 56.8**	**+2.5**
	0.0nm,0.3s,baz=232,slow=8.8,SNR=3.1							
MJAR				LR	LR		14 55 42.9	
	comp=Z,36nm,21.4s,baz=210,slow=34							
USRK	**Ussuriysk Ar.**	**20.43**	**17**	P	Pn		14 50 33.5	+0.3
	1.2nm,0.6s,baz=238,slow=14,SNR=3.1							
USRK	**Ussuriysk Ar.**	**20.43**	**17**	P	Pn		14 50 33.4	+0.1
CMAR	**Chiang Mai Arr**	**23.79**	**259**	P	**P**		**14 51 07.7**	**+0.7**
	2.5nm,1.1s,baz=58,slow=8.0,SNR=11							
CMAR	**Chiang Mai Arr**	**23.79**	**259**	P	**P**		**14 51 06.7**	**-0.2**
TOLI2	**Tolitoli**	**23.81**	**187**	P	**P**		**14 51 07.8**	**+0.8**
TOLI2				IAmb	IAmb		14 51 16.5	
	comp=Z,8.8nm,1.0s							
KLR	**Kul'dur**	**25.10**	**13**	P	**P**		**14 51 19.9**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=207,slow=2.3,SNR=2.6							
SONM	**Songino Array**	**26.64**	**334**	P	**P**		**14 51 32.9**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=156,slow=7.8,SNR=6.0							
SONM				LR	LR		15 03 49.8	
	comp=Z,80nm,18.8s,baz=160,slow=40							
SONM	**Songino Array**	**26.64**	**334**	P	**P**		**14 51 31.4**	**-1.4**
SIJI	**Sorong**	**26.67**	**163**	P	**P**		**14 51 32.9**	**-0.2**
	comp=Z,4.3nm,0.6s,baz=356,slow=14,SNR=2.3							
SIJI				LR	LR		15 00 45.2	
	comp=Z,180nm,21.7s,baz=76,slow=33		

comp=Z,20nm,1.4s
WR0 Warramunga Arr 20.22 215 P **P** **14 56 20.5 +0.3**
WR0 IAmb IAmb 14 56 23.1
comp=Z,13nm,0.8s
WRAB Tennant Creek 20.31 216 P **P** **14 56 21.4 +0.2**
WRAB IAmb IAmb 14 56 24.5
comp=Z,15nm,0.8s
WB2 Warramunga Arr 20.32 216 P **P** **14 56 21.6 +0.4**
WB2 IAmb IAmb 14 56 24.2
comp=Z,19nm,0.9s
WRA Warramunga Arr 20.33 216 P **P** **14 56 21.6 +0.3**
comp=Z,11nm,0.8s,baz=40,slow=11,SNR=40
WRA LR LR 15 05 01.9
comp=Z,264nm,18.3s,baz=30,slow=39
WRA Warramunga Arr 20.33 216 IAmb IAmb 14 56 25.5
comp=Z,0.3nm,0.8s
KNRA Kununurra 21.45 235 **P** **14 56 32.4 -1.1**
AS31 Alice Springs 23.56 211 **P** **14 56 55.2 -0.4**
ASAR Alice Springs 23.56 211 P **P** **14 56 56.2 +0.6**
comp=Z,3.4nm,0.7s,baz=42,slow=8.2,SNR=21
ASAR LR LR 15 06 46.6
comp=Z,365nm,18.2s,baz=36,slow=38
ASAR Alice Springs 23.56 211 **P** **14 56 55.6 0.0**
DAV Davao City (W) 23.65 296 LR LR 15 05 50.3
comp=Z,105nm,18.7s,baz=74,slow=35
BATI Baumata 23.88 253 LR LR 15 06 37.5
comp=Z,86nm,18.3s,baz=77,slow=37
GTOI Gorontalo 24.13 279 P **P** **14 56 58.7 -2.3**
comp=Z,12nm,1.1s
FITZ Fitzroy Crossi 25.26 234 P **P** **14 57 09.7 -1.6**
comp=Z,3.3nm,0.8s,baz=48,slow=8.3,SNR=8.3
FITZ LR LR 15 08 06.0
comp=Z,174nm,18.6s,baz=52,slow=39
FITZ Fitzroy Crossi 25.26 234 P **P** **14 57 09.7 -1.6**
FITZ IAmb IAmb 14 57 14.9
comp=Z,8.2nm,1.1s
DZM Mont Dzumac 26.51 136 P **P** **14 57 23.0 +0.3**
comp=Z,6.9nm,0.9s,baz=298,slow=17,SNR=4.8
STKA Stephens Creek 28.61 189 LR LR 15 09 43.7
comp=Z,144nm,18.9s,baz=14,slow=38
H11S3 WAKE ISLAND Hy 29.39 41 T T 15 28 31.4
baz=222,slow=75,SNR=16
H11S2 WAKE ISLAND Hy 29.40 41 T T 15 28 25.6
baz=222,slow=75,SNR=11
H11S1 WAKE ISLAND Hy 29.41 41 T T 15 28 25.4
baz=222,slow=75,SNR=10
H11N1 WAKE ISLAND Hy 30.41 40 T T 15 29 59.8
baz=218
H11N3 WAKE ISLAND Hy 30.42 40 T T 15 29 52.3
baz=218,slow=74
H11N2 WAKE ISLAND Hy 30.42 40 T T 15 29 52.9
baz=218,slow=74
CMWZ Cape Campbell 45.28 151 P **P** **15 00 01.6 -0.8**
ASAJ Asahikawa 47.59 356 P **P** **15 00 20.8 +0.2**
comp=Z,4.9nm,0.9s,baz=200,slow=15,SNR=2.1
USRK Ussuriysk Ar. 49.35 346 P **P** **15 00 34.2 +0.1**
comp=Z,1.1nm,0.7s,baz=193,slow=5.9,SNR=2.8
XAN Xi'an 51.68 319 P **P** **15 00 53.6 +1.6**
XAN pmax pmax
comp=Z,6.0nm,1.3s
CMAR Chiang Mai Arr 51.94 297 P **P** **15 00 55.5 +1.4**
comp=Z,1.2nm,0.8s,baz=125,slow=5.7,SNR=6.5
PETK Petropavlovsk- 57.19 8 P **P** **15 01 29.9 -1.7**
comp=Z,2.7nm,0.8s,baz=136,slow=4.5,SNR=4.5
SONM Songino Array 62.17 330 P **P** **15 02 07.0 +0.8**
comp=Z,0.5nm,0.9s,baz=144,slow=8.2,SNR=2.4
VNDA Vanda 74.36 177 P **P** **15 03 21.2 -0.7**
comp=Z,0.5nm,0.8s,baz=320,slow=4.9,SNR=6.3
VNDA LR LR 15 33 01.0
comp=Z,29nm,19.4s,baz=342,slow=33
MKAR Makanchi Array 75.49 320 P **P** **15 03 29.7 +0.7**
comp=Z,1.1nm,0.9s,baz=90,slow=7.2,SNR=2.3
ZALV Zalesovo Beam 76.84 328 P **P** **15 03 35.3 -1.2**
comp=Z,1.0nm,0.8s,baz=116,slow=3.4,SNR=2.1
KURBB Kurchatov Arra 79.16 323 P **P** **15 03 50.1 +0.6**
comp=Z,0.5nm,0.7s,baz=114,slow=5.4,SNR=2.2
ILAR Eielson Array 83.32 23 P **P** **15 04 09.2 -2.1**
comp=Z,1.0nm,0.9s,baz=277,slow=2.3,SNR=3.6
BVAR Borovoye Array 84.67 324 P **P** **15 04 19.1 +0.6**
comp=Z,0.2nm,0.5s,baz=64,slow=9.8,SNR=4.2
TORD Torodi Ar. Bea 144.22 288 PKP **PKPdf** **15 11 21.4 -0.2**
comp=Z,0.5nm,0.6s,baz=45,slow=3.7,SNR=3.1

*IDC **18** 14:54:31.0±0.8, 19°.46N×120°.51E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.7/46, mbtmp3.9/12, Error ellipse: s-maj=35.1km s-min=14.9km az=69.0*
*NEIC **18** 14:54:32.0±2.2, 19°.44N±0°.08×120°.43E±0°.09, h10km±1km, mb4.2/16, Error ellipse: s-maj=15.3km s-min=13.6km az=115.0*
ISC 18 14:54:34.0±0.7, 19°.46N±0°.08×120°.39E±0°.10, h23km, n41, σ1s07/39, mb4.0/17, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.40**	**11**	Pn	**Pn**	**14 55 24.2**	**-1.5**
TPUB	**Ta-pu**	**3.83**	**3**	Pn	**Pn**	**14 55 29.7**	**-1.9**
YULB	**Yu-li**	**4.00**	**12**	Pn	**Pn**	**14 55 33.3**	**-0.7**
SSLB	**Suanglung**	**4.33**	**7**	Pn	**Pn**	**14 55 38.2**	**-0.3**
NACB	**Ninganchiao**	**4.82**	**13**	Pn	**Pn**	**14 55 43.6**	**-1.6**
YHNB	**Yeheng**	**5.26**	**10**	Pn	**Pn**	**14 55 51.4**	**0.0**
KNMB	**Chin-men Tao**	**5.31**	**340**	Pn	**Pn**	**14 55 51.7**	**-0.3**
HKPS	**Hong Kong Po S**	**6.48**	**297**	Pn	**Pn**	**14 56 06.2**	**-1.8**
QIZ	**Qiongzhong**	**9.98**	**269**	Pn	**Pn**	**14 56 54.5**	**-1.5**
TOLI2	**Tolitoli**	**18.24**	**179**	P	**P**	**14 58 46.6**	**+0.7**
KSAR	**Wonju Array Be**	**19.07**	**19**	P	**Pn**	**14 58 55.4**	**-0.4**
CMAR	**Chiang Mai Arr**	**20.31**	**271**	P	Pn	14 59 11.2	+0.5
	0.6nm,0.4s,baz=70,slow=7.8,SNR=2.1						
JGF	**Kuroka**	**21.96**	**39**	P	**P**	**14 59 25.9**	**-0.4**
MJAR	**Matsushiro Arr**	**23.11**	**39**	P	**P**	**14 59 36.8**	**-1.6**
FAKI	**Fak Fak**	**25.11**	**151**	P	**P**	**14 59 57.2**	**-0.1**
ULN	**Ulaanbaatar**	**30.34**	**342**	P	**P**	**15 00 43.5**	**-0.6**
ULN				IAmb	IAmb	15 00 59.9	
	comp=Z,3.6nm,1.2s						
SONM	**Songino Array**	**30.50**	**341**	P	**P**	**15 00 45.4**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=161,slow=7.9,SNR=4.2						
SONM	**Songino Array**	**30.50**	**341**	IAmb	IAmb	15 00 48.5	
	comp=Z,0.7nm,0.8s						
KLR	**Kul'dur**	**31.07**	**14**	P	**P**	**15 00 50.7**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=227,slow=6.9,SNR=4.2						
FITZ	**Fitzroy Crossi**	**37.68**	**172**	P	**P**	**15 01 47.9**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=11,slow=7.3,SNR=5.0						
WB0	**Warramunga Arr**	**41.33**	**160**	P	**P**	**15 02 17.2**	**-1.1**
WB0				IAmb	IAmb	15 02 26.7	
	comp=Z,6.4nm,1.4s						
MK31	**Makanchi Array**	**41.34**	**320**	P	**P**	**15 02 19.2**	**+1.1**
MK31				IAmb	IAmb	15 02 39.2	
	comp=Z,12nm,1.5s						
MKAR	**Makanchi Array**	**41.34**	**320**	P	**P**	**15 02 20.1**	**+1.9**
	comp=Z,1.1nm,0.6s,baz=113,slow=9.3,SNR=5.5						
MKAR	**Makanchi Array**	**41.34**	**320**	P	**P**	**15 02 18.7**	**+0.6**
WRA	**Warramunga Arr**	**41.48**	**160**	P	**P**	**15 02 18.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=349,slow=8.8,SNR=40						
WRA	**Warramunga Arr**	**41.48**	**160**	P	**P**	**15 02 18.3**	**-1.1**
WB2	**Warramunga Arr**	**41.48**	**160**	P	**P**	**15 02 18.5**	**-1.0**
WR0	**Warramunga Arr**	**41.56**	**160**	P	**P**	**15 02 19.3**	**-0.8**
WR0				IAmb	IAmb	15 02 20.3	
	comp=Z,1.9nm,0.6s						
ZALV	**Zalesovo Beam**	**43.88**	**330**	P	**P**	**15 02 38.8**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=115,slow=8.6,SNR=7.6						
AS31	**Alice Springs**	**44.85**	**162**	P	**P**	**15 02 47.0**	**+0.3**
ASAR	**Alice Springs**	**44.85**	**162**	P	**P**	**15 02 47.3**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=339,slow=6.9,SNR=40						
KURK	**Kurchatov**	**45.33**	**323**	P	**P**	**15 02 51.4**	**+1.2**
KURK				IAmb	IAmb	15 02 52.6	
	comp=Z,2.5nm,0.9s						
KURBB	**Kurchatov Arra**	**45.34**	**323**	P	**P**	**15 02 51.8**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=122,slow=7.7,SNR=23						
ABKAR	**Akbulak array**	**56.28**	**317**	P	**P**	**15 04 13.7**	**+1.0**
RND	**Reindeer**	**73.13**	**28**	P	**P**	**15 06 02.2**	**-0.3**
MDM	**Murphy Dome**	**73.14**	**26**	P	**P**	**15 06 03.4**	**+0.9**
MDM				IAmb	IAmb	15 06 10.8	
	comp=Z,4.8nm,1.2s						
ILAR	**Eielson Array**	**73.74**	**26**	P	**P**	**15 06 07.7**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=275,slow=4.4,SNR=2.1						
BMAR	**Burnt Mountain**	**74.12**	**24**	P	**P**	**15 06 09.8**	**+1.6**
FINES	**FINESS Array B**	**75.15**	**330**	P	**P**	**15 06 15.2**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=81,slow=9.1,SNR=4.7						
AKASG	**Malin Array Be**	**75.92**	**319**	P	**P**	**15 06 18.2**	**-0.7**
	comp=Z,0.2nm,0.2s,baz=60,slow=5.6,SNR=5.1						
BCAR	**Beaver Creek A**	**76.33**	**28**	P	**P**	**15 06 21.6**	**+0.6**

IDC 18 14:58:03.2±2.3, 2°.94N×128°.88E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/41, mbtmp3.3/4, Error ellipse: s-maj=111.2km s-min=27.8km az=72.0, Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.14**	**189**	P	P	15 02 51.2	+1.2
	1.5nm,1.0s,baz=15,slow=12,SNR=1.7						
WRA	**Warramunga Arr**	**23.36**	**167**	P	P	15 03 13.7	+0.1
	0.4nm,0.5s,baz=346,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**26.89**	**170**	P	P	15 03 45.0	-1.1
	0.2nm,0.7s,baz=348,slow=7.6,SNR=1.2						
MKAR	**Makanchi Array**	**59.43**	**325**	P	P	15 08 07.9	+0.1
	0.5nm,0.7s,baz=116,slow=8.1,SNR=1.9						

*IDC **18** 14:57:53.4±1.4, 3°.38N×95°.98E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.7/51, mbtmp3.9/8, ML3.9/1, MS4.3/2, Ms1 4.3/2, ms1mx3.0/45, Error ellipse: s-maj=83.5km s-min=17.6km az=52.0*
*NEIC **18** 14:58:13.8±2.3, 4°.18N±0°.08×97°.13E±0°.10, h159km±8km, mb4.1/14, Error ellipse: s-maj=14.6km s-min=11.4km az=69.0*
*DJA **18** 14:58:13.8±0.5, 4°N±2°×9°7E±°, h140km±4km, M3.8/12, mb4.0/1, MLv3.8/12*
ISC 18 14:58:13.4±0.7, 4°.14N±0°.04×97°.17E±0°.06, h151km±6km, n42, σ0s88/47, mb4.0/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**0.77**	**280**	P	**Pn**	**14 58 36.7**	**+0.2**
MLSI				S	**Sn**	**14 58 53.4**	**-0.6**
KCSI	**Kotacane, Aceh**	**0.86**	**135**	P	**Pn**	**14 58 37.4**	**+0.2**
KCSI				S	**Sn**	**14 58 54.9**	**-0.3**
TPTI		**0.87**	**179**	P	**Pn**	**14 58 36.9**	**-0.3**
TPTI				S	**Sn**	**14 58 53.6**	**-1.8**
LHMI	**Lhok Sumawe**	**1.11**	**349**	P	**Pn**	**14 59.7**	**+0.5**
LHMI				S	**Sn**	**14 58 58.7**	**-0.2**
LHMI	**Lhok Sumawe**	**1.11**	**349**		**Pn**	**14 58 39.8**	**+0.6**
LHMI				Sn	**Sn**	**14 58 59.3**	**+0.4**
TSI	**Tuntungan**	**1.53**	**114**	P	**Pn**	**14 58 43.6**	**+0.2**
TSI				S	**Sn**	**14 59 06.4**	**+0.1**
SNSI	**Sinabang, Aceh**	**1.91**	**206**	P	**Pn**	**14 58 48.5**	**+0.9**
SNSI				S	**Sn**	**14 59 14.5**	**+0.7**
RPSI	**Rantau Prapat**	**2.27**	**129**		**Pn**	**14 58 50.2**	**-1.5**
GSI	**Gunungsitoli**	**2.84**	**172**	P	**Pn**	**14 58 59.5**	**+0.6**
GSI				S	**Sn**	**14 59 34.0**	**0.0**
GSI	**Gunungsitoli**	**2.84**	**172**	Pn	**Pn**	**14 58 59.1**	**+0.2**
KULM	**Kulim**	**3.66**	**72**	Pn	**Pn**	**14 59 09.2**	**-0.1**
IPM	**Ipoh**	**3.86**	**85**	Pn	**Pn**	**14 59 12.1**	**+0.1**
MNSI	**Mandailing Nat**	**4.10**	**144**	P	**Pn**	**14 59 16.1**	**+1.0**
MNSI				S	**Sn**	**15 00 01.2**	**-1.8**
SISI	**Saibi**	**5.76**	**160**	P	**Pn**	**14 59 36.4**	**-0.5**
KSM	**Kuching**	**13.39**	**101**	P	P	**15 01 23.6**	**+1.7**
CMAR	**Chiang Mai Arr**	**14.34**	**7**	Pn	**P**	**15 01 31.6**	**-0.8**
	0.2nm,0.3s,baz=209,slow=14,SNR=1.9						
KKM	**Kota Kinabalu**	**19.07**	**84**	P	**P**	**15 02 26.2**	**+1.6**
MYLDM	**Lahad Datu**	**21.29**	**86**	P	**P**	**15 02 50.3**	**+2.0**
MYLDM				IAmb	IAmb	15 02 51.3	
	comp=Z,7.5nm,1.0s						
TOLI2	**Tolitoli**	**23.78**	**97**	P	**P**	**15 03 12.9**	**+0.4**
TOLI2				IAmb	IAmb	15 03 15.5	
	comp=Z,4.7nm,0.6s						
H08S2	**Diego Garcia H**	**27.26**	**245**	T	T	15 30 07.6	
	baz=71						
H08S3	**Diego Garcia H**	**27.26**	**245**	T	T	15 30 31.4	
	baz=71						
H08S1	**Diego Garcia H**	**27.27**	**245**	T	T	15 30 49.4	
	baz=71						
FITZ	**Fitzroy Crossi**	**35.73**	**129**	P	**P**	**15 04 58.0**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=311,slow=9.3,SNR=14						
FITZ	**Fitzroy Crossi**	**35.73**	**129**	P	**P**	**15 04 58.0**	**+0.1**
FITZ				IAmb	IAmb	15 05 06.9	
	comp=Z,4.6nm,1.2s						
FAKI	**Fak Fak**	**35.75**	**101**	P	**P**	**15 04 58.5**	**+0.3**
MTN	**Manton Dam**	**37.72**	**117**	P	**P**	**15 05 14.0**	**-0.8**
WB0	**Warramunga Arr**	**43.62**	**124**	P	**P**	**15 06 03.5**	**+0.2**
WRA	**Warramunga Arr**	**43.66**	**125**	P	**P**	**15 06 04.2**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=302,slow=9.4,SNR=21						
WRA				PcP	**PcP**	**15 07 49.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=316,slow=3.0,SNR=5.0						
WRA	**Warramunga Arr**	**43.66**	**125**	P	**P**	**15 06 03.6**	**0.0**
WB2	**Warramunga Arr**	**43.67**	**125**	P	**P**	**15 06 03.7**	**+0.1**
WB2				IAmb	IAmb	15 06 20.7	
	comp=Z,6.9nm,1.3s						
WR0	**Warramunga Arr**	**43.84**	**124**	P	**P**	**15 06 04.6**	**-0.3**
WR0				IAmb	IAmb	15 06 07.6	
	comp=Z,5.3nm,1.3s						
MK31	**Makanchi Array**	**44.41**	**345**	P	**P**	**15 06 08.3**	**-0.8**
MKAR	**Makanchi Array**	**44.41**	**345**	P	**P**	**15 06 09.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=158,slow=8.9,SNR=5.3						
MKAR	**Makanchi Array**	**44.41**	**345**	P	**P**	**15 06 08.2**	**-0.9**
ASAR	**Alice Springs**	**45.23**	**129**	P	**P**	**15 06 16.9**	**+1.0**
	comp=Z,1.6nm,0.4s,baz=301,slow=7.6,SNR=77						
AS31	**Alice Springs**	**45.23**	**129**	P	**P**	**15 06 16.9**	**+0.9**
AS31				IAmb	IAmb	15 06 17.4	
	comp=Z,1.3nm,0.3s						
COEN	**Coen**	**49.05**	**112**	P	**P**	**15 06 46.4**	**+0.8**
COEN				IAmb	IAmb	15 07 13.0	
	comp=Z,5.1nm,1.1s						
JHJ	**Hachijo jima 2**	**49.09**	**49**	LR	LR	15 26 53.0	
	comp=Z,564nm,21.9s,baz=268,slow=34						
MJAR	**Matsushiro Arr**	**49.59**	**44**	LR	LR	15 29 15.2	
	comp=Z,214nm,21.2s,baz=235,slow=37						
AKASG	**Malin Array Be**	**72.93**	**322**	P	**P**	**15 09 24.5**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=89,slow=4.7,SNR=2.5						
FINES	**FINESS Array B**	**77.40**	**332**	P	**P**	**15 09 50.7**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=78,slow=6.4,SNR=3.6						
ARCES	**ARCESS Array B**	**79.78**	**340**	P	**P**	**15 10 04.5**	**0.0**
	comp=Z,2.1nm,0.7s,baz=95,slow=4.8,SNR=8.0						

*ISK **18** 14:58:18.6, 38°.90N×44°.87E, h5km, ML2.3/5*
*TEH **18** 14:58:23.7, 38°.56N×45°.13E, h10km, ML2.5*
ISC 18 14:58:18.7±0.9, 38°.83N±0°.05×44°.90E±0°.03, h10km, n9, σ0s75/13, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.83**	**293**	PG	**Pg**	**14 58 34.1**	**-0.7**
CLDR				SG	**Sb**	**14 58 46.7**	**0.0**
ITBZ	**Tabriz**	**1.14**	**121**	*e*Pg	**Pg**	**14 58 39.5**	**-1.2**
ITBZ				*e*		14 58 56.1	
GNI	**Garni**	**1.33**	**355**	PN	**Pn**	**14 58 43.9**	**+0.4**
GNI				SN	**Sg**	**14 59 02.1**	**+0.6**
IAZR	**Azarshahr**	**1.43**	**143**	*e*	Sn	14 59 13.4	+9.5
AKDM	**Akdamar-Van**	**1.59**	**252**	PN	**Pg**	**14 58 48.9**	**-0.3**
AKDM				SN	**Sg**	**14 59 11.0**	**+1.2**
AGRB	**Hanur-Agry**	**1.66**	**297**	PN	**Pb**	**14 58 49.2**	**-0.3**
AGRB				SN	**Sg**	**14 59 11.8**	**-0.4**
IHRS	**Heris**	**1.75**	**106**	*e*Pn	**Pb**	**14 58 51.5**	**+0.4**
IHRS				*e*		14 58 54.9	
IHRS				*e*Sg	**Sg**	**14 59 15.4**	**+0.3**
CUKT	**Cukurca**	**1.88**	**213**	PN	**Pg**	**14 58 53.9**	**-0.9**
ISRB	**Sarab**	**2.39**	**114**	*e*		14 59 09.3	
ISRB				*e*Pn	**Pb**	**14 59 02.6**	**+0.6**

MAN 18 14:58:36.1, 8°.25N×125°.96E, h47km, mb4.4, ML3.2, MS3.0, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BIP	**Bislig**	**0.29**	**95**	⇑*i*P	Pn	14 58 46.6	+1.7
BIP				*i* S	Sn	14 58 53.9	+2.8
BUKP	**Musuan**	**0.96**	**248**	*e*P	Pn	14 58 55.0	+1.7
BUKP				*e*S	Sn	14 59 09.2	+3.3
CGP	**Cagayan de Oro**	**1.27**	**279**	⇑*e*P	Pn	14 58 57.6	+0.2
CGP				*e*S	Sn	14 59 14.2	+0.9
KCP	**Kidapawan**	**1.50**	**215**	⇓*e*P	Pn	14 59 04.2	+3.5
KCP				*i* S	Sn	14 59 25.2	+6.0
GLSP	**General Luna,**	**1.53**	**6**	*e*P	Pn	14 59 01.3	+0.2
GLSP				*e*S	Sn	14 59 21.9	+2.0
DDMP	**Don Marcelino,**	**2.15**	**187**	*e*P	Pn	14 59 10.7	+1.3

*IDC **18** 15:05:18.7±1.1, 3°.44S×146°.69E, h0km, mb4.0/6, mb1 4.2/9, mb1mx3.9/32, mbtmp4.0/9, ML2.8/3, MS3.4/8, Ms1 3.4/8, ms1mx3.2/35, Error ellipse: s-maj=23.3km s-min=22.5km az=123.0*
*NEIC **18** 15:05:18.6±2.4, 3°.31S±0°.06×146°.61E±0°.07, h10km±1km, mb4.3/12, Error ellipse: s-maj=12.5km s-min=8.1km az=60.0*
ISC 18 15:05:20.6±0.8, 3°.31S±0°.07×146°.6E±0°.1, h20km, n32, σ1s61/27, mb4.1/6, MS3.5/5, Bismarck Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.46**	**31**	Pn	**Pn**	**15 05 42.1**	**-3.8**
KRVT	**Keravat (AS076**	**5.48**	**101**	Pn	**Pn**	**15 06 42.5**	**+1.3**
	1.0nm,0.3s,baz=149,slow=24,SNR=2.0						
PMG	**Port Moresby**	**6.08**	**175**	Pn	**Pn**	**15 06 48.9**	**-0.5**
	2.4nm,0.3s,baz=228,slow=13,SNR=4.4						
PMG				Sn	**Sn**	**15 07 57.0**	**-1.4**
	0.1nm,0.3s,baz=132,slow=4.2,SNR=1.3						
PMG	**Port Moresby**	**6.08**	**175**		**Pn**	**15 06 48.1**	**-1.3**
COEN	**Coen**	**11.11**	**198**	Pn	**Pn**	**15 07 57.7**	**-0.8**
HNR	**Honiara**	**14.57**	**115**	LR	LR	15 13 46.7	
	comp=Z,84nm,19.1s,baz=348,slow=35						
SIJI	**Sorong**	**15.54**	**279**	LR	LR	15 14 30.3	
	comp=Z,132nm,18.7s,baz=46,slow=35						
CTA	**Charters Tower**	**16.68**	**181**	Pn	**Pn**	**15 09 11.3**	**-2.1**
	0.1nm,0.3s,baz=356,slow=14,SNR=1.6						
CTAO	**Charters Tower**	**16.68**	**181**	Pn	**Pn**	**15 09 11.4**	**-1.9**
CTAO				IAmb	IAmb	15 09 31.6	
	comp=Z,13nm,1.2s						
GUMO	**Guam**	**16.88**	**354**	LR	LR	15 15 47.8	
	comp=Z,88nm,18.1s,baz=168,slow=37						
MTN	**Manton Dam**	**18.01**	**237**		**Pn**	**15 09 28.3**	**-1.6**
WB0	**Warramunga Arr**	**20.25**	**215**	P	**P**	**15 09 53.2**	**-1.6**
WB0				IAmb	IAmb	15 09 56.2	
	comp=Z,11nm,1.1s						
WR0	**Warramunga Arr**	**20.32**	**215**	P	**P**	**15 09 55.0**	**-0.6**
WR0				IAmb	IAmb	15 09 56.8	
	comp=Z,13nm,0.8s						
WB2	**Warramunga Arr**	**20.41**	**215**	P	**P**	**15 09 56.8**	**+0.2**
WB2				IAmb	IAmb	15 09 57.9	
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**20.42**	**215**	P	**P**	**15 09 57.0**	**+0.3**
	comp=Z,11nm,0.8s,baz=41,slow=11,SNR=84						
WRA				LR	LR	15 18 28.6	
	comp=Z,195nm,18.2s,baz=10.0,slow=39						
WRA	**Warramunga Arr**	**20.42**	**215**	P	**P**	**15 09 55.0**	**-1.7**
KNRA	**Kununurra**	**21.45**	**234**	P	**P**	**15 10 07.8**	**-0.1**
KNRA				IAmb	IAmb	15 10 08.8	
	comp=Z,16nm,0.8s						
DAV	**Davao City (W)**	**23.40**	**296**	LR	LR	15 18 43.4	
	comp=Z,25nm,20.6s,baz=104,slow=34						
AS31	**Alice Springs**	**23.68**	**210**	P	**P**	**15 10 30.6**	**-0.6**
ASAR	**Alice Springs**	**23.68**	**210**	P	**P**	**15 10 31.4**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=41,slow=7.2,SNR=34						
ASAR	**Alice Springs**	**23.68**	**210**	P	**P**	**15 10 30.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**25.27**	**233**	P	**P**	**15 10 46.3**	**+0.5**
	comp=Z,3.1nm,0.6s,baz=42,slow=8.5,SNR=12						
FITZ				LR	LR	15 21 24.7	
	comp=Z,168nm,19.7s,baz=52,slow=38						
FITZ	**Fitzroy Crossi**	**25.27**	**233**	P	**P**	**15 10 45.9**	**+0.2**
FITZ				IAmb	IAmb	15 10 59.3	
	comp=Z,6.7nm,1.1s						
DZM	**Mont Dzumac**	**26.80**	**136**	P	**P**	**15 10 59.7**	**0.0**
	comp=Z,4.4nm,0.7s,baz=319,slow=9.3,SNR=6.2						
DZM				LR	LR	15 20 06.4	
	comp=Z,236nm,20.3s,baz=263,slow=33						
DZM	**Mont Dzumac**	**26.80**	**136**	IAmb	IAmb	15 11 01.0	
	comp=Z,7.1nm,0.9s						
STKA	**Stephens Creek**	**28.81**	**189**	LR	LR	15 24 34.3	
	comp=Z,72nm,18.2s,baz=352,slow=40						
PSA00	**Pilbara Seismi**	**31.72**	**233**	P	**P**	**15 11 43.6**	**+0.2**
TPUB	**Ta-pu**	**36.63**	**318**	P	**P**	**15 12 27.4**	**+1.5**
CMAR	**Chiang Mai Arr**	**51.69**	**297**	P	**P**	**15 14 30.0**	**+3.3**
	comp=Z,1.4nm,0.9s,baz=120,slow=5.3,SNR=5.6						
CMAR	**Chiang Mai Arr**	**51.69**	**297**	P	**P**	**15 14 28.1**	**+1.4**
ILAR	**Eielson Array**	**83.17**	**23**	P	**P**	**15 17 45.8**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=252,slow=5.0,SNR=2.4						
SIV	**San Ignacio**	**146.56**	**126**	PKPbc	**PKPdf**	**15 25 01.3**	**+1.1**
	comp=Z,2.5nm,1.0s,baz=234,slow=4.0,SNR=7.3						

*IDC **18** 15:18:41.9±1.3, 19°.87N×121°.44E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/52, mbtmp3.6/6, Error ellipse: s-maj=55.8km s-min=19.4km az=62.0*
*NEIC **18** 15:18:44.3±1.6, 19°.57N±0°.10×121°.02E±0°.06, h10km±2km, mb4.3/4, Error ellipse: s-maj=18.9km s-min=4.8km az=151.0*
ISC 18 15:18:46.9±1.1, 19°.6N±0°.1×121°.0E±0°.1, h32km, n15, σ0s78/14, mb3.6/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.21**	**2**	Pn	**Pn**	**15 19 35.3**	**+0.2**
TPUB	**Ta-pu**	**3.70**	**355**	Pn	**Pn**	**15 19 42.6**	**+0.8**
YULB	**Yu-li**	**3.79**	**5**	Pn	**Pn**	**15 19 43.6**	**+0.5**
SSLB	**Suanglung**	**4.17**	**0**	Pn	**Pn**	**15 19 47.8**	**-0.5**
YHNB	**Yeheng**	**5.06**	**4**	Pn	**Pn**	**15 20 02.0**	**+1.3**
HKPS	**Hong Kong Po S**	**6.90**	**294**	Pn	**Pn**	**15 20 26.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**20.83**	**271**	P	Pn	15 23 30.6	+2.0
	0.3nm,0.3s,baz=80,slow=9.1,SNR=4.4						
SONM	**Songino Array**	**30.55**	**341**	P	**P**	**15 24 57.1**	**-0.4**
	0.4nm,0.5s,baz=131,slow=7.9,SNR=1.8						
WRA	**

JNN Nakanoshima 1.18 261 ⇑P **Pn 15 21 12.6 +0.9**
JNAR Kushima--Naru 1.49 2 ⇑P **Pn 15 21 15.5 -0.4**
JNAR *eS* **Sb 15 21 34.5 -2.0**
JSU Suzuyama 1.61 336 ⇑P **Pn 15 21 17.3 -0.2**
JSU *eS* **Sn 15 21 37.1 -0.4**
JSU Suzuyama 1.61 336 Pn Pn 15 21 17.4 -0.2
JNKG Nichinankitago 1.63 5 ⇑P **Pn 15 21 17.6 -0.2**
JNKG *eS* **Sn 15 21 37.4 -0.5**
JNU Nakatsue 3.09 355 Pn **Pn 15 21 37.9 -0.1**
43nm,0.3s,baz=259,slow=1.1,SNR=159
JNU Sn **Sn 15 22 12.1 -2.0**
52nm,0.3s,baz=308,slow=15,SNR=6.0
JMZ Minamidaito 2 4.20 180 Pn **Pn 15 21 52.7 -0.4**
JMN Monobe 4.32 31 Pn **Pn 15 21 54.7 -0.2**
JTU Tsushima 4.74 341 Pn **Pn 15 22 00.9 +0.3**
JHS Saijyo 5.21 17 Pn **Pn 15 22 07.0 -0.1**
JWT Wachi 6.31 33 Pn **Pn 15 22 22.1 0.0**
INU Inuyama 7.21 41 Pn **Pn 15 22 34.9 +0.4**
JSG Sagara 7.49 50 Pn **Pn 15 22 38.2 -0.2**
JGF Kuroka 7.58 41 Pn 15 22 39.2 -0.5
KSAR Wonju Array Be 7.89 340 P **Pn 15 22 44.0 +0.1**
KSAR Wonju Array Be 7.89 340 Pn 15 22 44.0 +0.1
KSRS Korea Array 7.89 341 Pn **Pn 15 22 45.5 +1.7**
1.7nm,0.3s,baz=162,slow=14,SNR=32
JHJ Hachijo jima 2 7.93 65 Pn **Pn 15 22 46.3 +1.9**
13nm,0.3s,baz=235,slow=22,SNR=7.3
JHJ2 Mitsune 7.95 65 Pn **Pn 15 22 44.7 +0.1**
KS19 Wonju Array Si 7.96 340 Pn **Pn 15 22 44.9 +0.2**
INCN Inchon 8.35 334 P **Pn 15 22 49.0 -1.2**
INCN Inchon 8.35 334 Pn **Pn 15 22 49.0 -1.2**
MAJO Matsushiro 8.74 40 *i* P **Pn 15 22 55.8 +0.3**
MAJO Matsushiro 8.74 40 Pn **Pn 15 22 55.5 0.0**
MAT Matsushiro 8.74 40 P **Pn 15 22 56.2 +0.7**
MAT *eS* **Sn 15 24 33.8 +0.7**
MJAR Matsushiro Arr 8.74 40 Pn **Pn 15 22 56.8 +1.3**
0.6nm,0.3s,baz=278,slow=20,SNR=30
MJAR Matsushiro Arr 8.74 40 Pn **Pn 15 22 55.9 +0.4**
MJB9 Matsu-Tunnel 8.74 40 Pn **Pn 15 22 55.1 -0.4**
JYT Yasato 9.73 48 Pn **Pn 15 23 09.6 +0.5**
NJ2 Nanjing 10.79 284 *eP* **Pn 15 23 22.0 -1.7**
NJ2 pmax pmax
comp=Z,12nm,0.5s
NJ2 pmax pmax
comp=Z,250nm,4.3s
NJ2 LR LR
comp=N,1μm,13.3s
NJ2 LR LR
comp=E,3μm,13.0s
NJ2 LR LR
comp=Z,4μm,14.2s
SSLB Suanglung 11.07 238 Pn **Pn 15 23 25.8 -1.7**
JMM Marumori 11.14 43 Pn 15 23 29.0 +0.6
DL2 Dalian 11.87 321 P **Pn 15 23 42.5 +4.2**
DL2 S **Sn 15 25 57.1 +7.4**
DL2 pmax pmax
comp=Z,20nm,1.4s
DL2 pmax pmax
comp=Z,260nm,5.6s
DL2 LR LR
comp=N,2μm,14.3s
DL2 LR LR
comp=E,2μm,10.6s
DL2 LR LR
comp=Z,3μm,14.5s
VLA Vladivostok 13.07 2 *i* P **Pn 15 23 51.3 -3.4**
VLA pmax pmax
comp=Z,19nm,1.0s
USA0B Ussuriysk Arra 14.15 2 P **P 15 24 16.9 +0.2**
USA0B Ussuriysk Arra 14.15 2 P 15 24 16.9 +0.2
USRK Ussuriysk Ar. 14.15 2 Pn **Pn 15 24 08.6 -1.0**
baz=186,slow=11,SNR=1.8
USRK LR LR 15 29 37.0
comp=Z,903nm,20.5s,baz=168,slow=38
USRK Ussuriysk Ar. 14.15 2 P 15 24 16.7 -0.1
CN2 Changchun 14.49 343 *eP* **P 15 24 21.1 +0.6**
CN2 *es*P Pn 15 24 30.9 +17
CN2 *eS* S 15 27 03.4 -9.5
CN2 pmax pmax
comp=Z,50nm,0.8s
CN2 LR LR
comp=N,4μm,14.0s
CN2 LR LR
comp=E,1μm,16.0s
CN2 LR LR
comp=Z,4μm,16.0s
WHN Wuhan 14.59 276 ⇓P **Pn 15 24 17.6 +2.1**
WHN LR LR
comp=Z,5μm,13.8s
MDJ Mudanjiang 14.62 355 P **Pn 15 24 16.1 +0.3**
MDJ S **Sn 15 26 58.4 +1.6**
MDJ pmax pmax
comp=Z,5.0nm,1.1s
MDJ pmax pmax
comp=Z,110nm,2.9s
MDJ LR LR
comp=Z,1μm,16.4s
MDJ LR LR
comp=Z,700nm,14.2s
MDJ LR LR
comp=Z,2μm,17.1s
ERM Erimo 15.35 36 P **P 15 24 29.2 -0.8**
ERM pmax pmax
comp=Z,72nm,1.4s
ERM Erimo 15.35 36 P **P 15 24 29.2 -0.8**
ERM IAmb IAmb 15 24 30.4
comp=Z,72nm,1.4s
TEY Ternei 15.57 14⇑ *eP* **P 15 24 30.5 -1.9**
TEY pmax pmax
comp=Z,10.0nm,1.9s
TEY pmax pmax
comp=N,10.0nm,1.3s
TEY pmax pmax
comp=E,10.0nm,1.2s
BJT Baijiatuau 15.83 313 P **P 15 24 34.3 -1.1**
BJT pmax pmax
comp=Z,37nm,0.8s
BJT Baijiatuau 15.83 313 P **P 15 24 34.3 -1.1**
BJI Beijing 15.84 313 P **P 15 24 36.8 +1.3**
BJI S **Sn 15 27 26.3 -0.3**
BJI pmax pmax
comp=Z,24nm,0.6s
BJI LR LR
comp=Z,1μm,17.5s
BJI LR LR
comp=Z,3μm,12.6s
BJI LR LR
comp=Z,2μm,13.5s
ASAJ Asahikawa 16.71 30 Pn **P 15 24 44.3 -0.8**
comp=Z,0.4nm,0.3s,baz=214,slow=11,SNR=2.4
JKA Kamikawa-asahi 16.71 30 P P 15 24 45.2 +0.1
ENH Enshi 18.80 276 P P 15 25 07.2 -1.1
YSS Yuzh-Sakhalins 19.12 25 *eP* **Pn 15 25 12.9 +0.3**
YSS *eS* Sn 15 28 33.9 -12
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,700nm,14.0s
YSS Yuzh-Sakhalins 19.12 25 P Pn 15 25 11.6 -1.1
YSS IAmb IAmb 15 25 22.4
comp=Z,66nm,1.3s
KLR Kul'dur 19.18 1 P P 15 25 11.8 -0.5
comp=Z,2.1nm,0.3s,baz=193,slow=7.0,SNR=32
KLR LR LR 15 33 09.5
comp=Z,536nm,19.1s,baz=178,slow=39
KLR Kul'dur 19.18 1 *ce*P **P 15 25 11.2 -1.1**
KLR pmax pmax
comp=Z,22nm,0.8s
HHC Hu-ho-hao-te 19.27 309 *eP* **P 15 25 11.0 -2.5**
HHC S **Sn 15 28 41.8 -8.1**
HHC LR LR
comp=Z,2μm,13.5s
HHC LR LR
comp=Z,2μm,13.5s
HHC LR LR
comp=Z,3μm,12.8s
XAN Xi'an 19.31 288 P **P 15 25 13.8 -0.2**
XAN pmax pmax
comp=Z,22nm,1.2s
XAN pmax pmax
comp=Z,390nm,5.3s
XAN LR LR
comp=Z,940nm,15.2s
XAN LR LR
comp=Z,2μm,12.8s
XAN LR LR
comp=Z,2μm,13.2s
XAN Xi'an 19.31 288 P **P 15 25 12.4 -1.6**
XAN pmax pmax
comp=Z,39nm,1.2s
XAN Xi'an 19.31 288 P 15 25 12.4 -1.6
KUR Kuril'sk 20.04 36 P **Pn 15 25 22.6 -1.0**
KUR *e* 15 25 38.5
KUR S **Sn 15 29 08.5 +0.3**
KUR *eSS* **SnSn 15 29 27.6 +4.8**
KUR MLR MLR
comp=Z,700nm,15.0s
BTO Baotou 20.21 307 *eP* Pn 15 25 25.9 +0.1
GUMO Guam 20.66 139 P Pn 15 25 31.9 +0.8
comp=Z,48nm,0.7s,baz=198,slow=8.5,SNR=3.9
GUMO Guam 20.66 139 IAmb IAmb 15 25 53.3
comp=Z,169nm,1.4s
GRNR Gornyy 21.08 9⇓ *i* P **P 15 25 36.8 +3.8**
GRNR *eS* Sn 15 29 36.6 +3.5
GRNR pmax pmax
comp=Z,10.0nm,0.7s
GRNR MLR MLR
comp=Z,660nm,16.0s
HIA Hailar 21.10 339 *i* P **P 15 25 31.6 -1.6**
HIA pmax pmax
comp=Z,12nm,0.9s
HIA Hailar 21.10 339 P 15 25 32.4 -0.8
GYA Guiyang 21.91 267 ⇑P **P 15 25 43.3 +1.1**
GYA S **S 15 29 37.6 -5.4**
GYA pmax pmax
comp=Z,55nm,0.5s
GYA pmax pmax
comp=Z,220nm,4.3s
GYA LR LR
comp=Z,690nm,11.3s
GYA LR LR
comp=Z,590nm,12.9s
GYA LR LR
comp=Z,890nm,15.2s
QIZ Qiongzhong 22.28 245 P **P 15 25 45.3 -0.8**
QIZ S **S 15 29 48.9 -0.9**
QIZ LR LR
comp=Z,870nm,22.1s
QIZ LR LR
comp=Z,860nm,15.2s
QIZ LR LR
comp=Z,1μm,21.6s
TYV Tymovskoe 22.50 19 *eP* **P 15 25 51.6 +3.4**
TYV pmax pmax
comp=Z,200nm,2.8s
TYV pmax pmax
comp=Z,51nm,0.8s
DAV Davao City (W) 23.45 194 LR LR 15 35 25.8
comp=Z,299nm,20.0s,baz=9.5,slow=37
CD2 Chengdu 23.66 279⇓ *i* P **P 15 26 00.1 -0.2**
CD2 PcP **PcP 15 29 41.8 -2.5**
CD2 S **S 15 30 12.6 -0.9**
CD2 sS sS 15 30 24.5 -1.7
CD2 pmax pmax
comp=Z,50nm,0.7s
CD2 pmax pmax
comp=Z,520nm,6.3s
CD2 LR LR
comp=Z,2μm,21.2s
CD2 LR LR
comp=Z,2μm,11.8s
CD2 LR LR
comp=Z,3μm,13.3s
LZH Lanzhou 23.68 292 ⇑P **P 15 26 01.8 +1.3**
LZH pP pP 15 26 06.4 -1.8
LZH sP sP 15 26 10.8 -0.4
LZH PP **PnPn 15 26 37.8 +10**
LZH S **S 15 30 15.1 +1.2**
LZH sS pS 15 30 24.1 +1.9
LZH SS **SnSn 15 31 02.3 +10**
LZH pmax pmax
comp=Z,38nm,1.3s
LZH pmax pmax
comp=Z,220nm,4.9s
LZH LR LR
comp=Z,990nm,14.6s
LZH LR LR
comp=Z,3μm,14.1s
LZH LR LR
comp=Z,3μm,14.6s
ZEA Zeya 23.86 354 *eP* **P 15 26 00.1 -1.8**
ZEA *eS* **S 15 30 07.1 -9.0**
ZEA pmax pmax
comp=Z,100nm,4.5s
ZEA pmax pmax
comp=N,20nm,0.7s
ZEA pmax pmax
comp=Z,40nm,0.8s
ZEA smax smax
comp=N,200nm,12.6s
ZEA MLR MLR
comp=N,500nm,11.0s
ZEA MLR MLR
comp=Z,400nm,13.0s
KMI Kunming 25.68 266⇓ *e*P **P 15 26 19.3 +0.3**
KMI pP pP 15 26 24.9 -1.8
KMI sP sP 15 26 27.5 -2.3
KMI S **S 15 30 41.3 -4.8**
KMI pmax pmax
comp=Z,27nm,0.8s
KMI pmax pmax
comp=Z,110nm,4.7s
KMI LR LR
comp=Z,1μm,14.9s
KMI LR LR
comp=Z,810nm,14.4s
KMI LR LR
comp=Z,1μm,14.6s
ULN Ulaanbaatar 25.72 321 *ce*P **P 15 26 17.1 -2.0**
ULN pmax pmax
comp=Z,7.0nm,0.7s
ULN Ulaanbaatar 25.72 321 P P 15 26 17.3 -1.7
SLVN Son La 26.04 257 P P 15 26 21.9 -0.2
SONM Songino Array 26.07 320 P P 15 26 21.4 -0.8
comp=Z,5.4nm,0.4s,baz=134,slow=9.8,SNR=38
SONM PcP **PcP 15 29 50.7 +1.3**
comp=Z,1.0nm,0.9s,baz=96,slow=4.3,SNR=2.4
GTA Gaotai 27.34 298 *eP* **P 15 26 32.3 -1.5**
GTA pP pP 15 26 38.1 -3.6
GTA sP pwP 15 26 40.9 -0.8
GTA PcP **PcP 15 29 54.3 +1.7**
GTA S **S 15 31 11.5 -0.5**
GTA sS pS 15 31 20.9 +0.2
GTA SS **SnSn 15 32 30.4 +8.7**
GTA pmax pmax
comp=Z,75nm,7.3s
GTA LR LR
comp=Z,720nm,14.5s
GTA LR LR
comp=Z,2μm,13.8s
GTA LR LR
comp=Z,2μm,13.8s
SKR Severo-Kuril's 27.80 35 *eP* P 15 26 29.6 -7.9
SKR pmax pmax
comp=Z,100nm,4.6s
SKR MLR MLR
comp=Z,300nm,13.0s
ZAK Zakamensk 29.19 322 *eP* **P 15 26 46.8 -3.3**
ZAK pmax pmax
comp=Z,7.0nm,1.4s
TLY Talaya 29.74 324 *eP* **P 15 26 54.2 -0.6**
TLY *eS* **S 15 31 53.8 +4.5**
TLY pmax pmax
comp=Z,18nm,0.8s
TLY MLR MLR
comp=Z,3μm,14.0s
PEA0B Petropavlovsk- 30.09 32 *i* P **P 15 26 59.4 +1.5**
PETK Petropavlovsk- 30.09 32 P **P 15 26 58.8 +1.0**
comp=Z,4.8nm,0.8s,baz=204,slow=3.3,SNR=6.2
PETK LR LR 15 40 32.0
comp=Z,335nm,18.4s,baz=233,slow=39
PETK Petropavlovsk- 30.09 32 P P 15 26 58.3 +0.4
PET Petropavlovsk 30.48 33 P **P 15 27 01.8 +0.5**
PET pmax pmax
comp=Z,20nm,0.9s
PET Petropavlovsk 30.48 33 P **P 15 27 01.8 +0.5**
PET IAmb IAmb 15 27 13.9
comp=Z,20nm,0.9s
SIJI Sorong 30.73 180 LR LR 15 40 14.5
comp=Z,175nm,18.1s,baz=38,slow=38
CHTO Chiang Mai 31.33 257 P **P 15 27 07.9 -1.3**
CHTO pmax pmax
comp=Z,15nm,0.6s
CHTO Chiang Mai 31.33 257 P **P 15 27 07.9 -1.3**
CHTO IAmb IAmb 15 27 09.8
comp=Z,15nm,0.6s
CMAR Chiang Mai Arr 31.50 256 P **P 15 27 10.8 +0.1**
comp=Z,3.4nm,0.6s,baz=47,slow=8.8,SNR=25
CMAR PcP **PcP 15 30 04.6 +1.3**
comp=Z,0.9nm,0.4s,baz=69,slow=1.1,SNR=5.9
CMAR LR LR 15 41 45.8
comp=Z,732nm,18.5s,baz=102,slow=40
YAK Yakutsk 32.02 359 *eP* **P 15 27 12.8 -1.9**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.4s
YAK Yakutsk 32.02 359 P **P 15 27 12.7 -2.1**
YAK IAmb IAmb 15 27 24.6
comp=Z,20nm,0.7s
FAKI Fak Fak 32.78 178 P **P 15 27 22.3 +0.5**
FAKI IAmb IAmb 15 27 25.8
comp=Z,21nm,0.9s
H11N2 WAKE ISLAND Hy 33.83 99 T T 16 03 34.3
baz=296,slow=75,SNR=365
H11N1 WAKE ISLAND Hy 33.83 99 T T 16 03 43.0
baz=296,slow=75,SNR=195
H11N3 WAKE ISLAND Hy 33.85 99 T T 16 03 46.2
baz=296,slow=75,SNR=299
H11S3 WAKE ISLAND Hy 34.18 101 T T 16 05 00.2
baz=304,slow=75,SNR=31
H11S1 WAKE ISLAND Hy 34.19 101 T T 16 05 01.0
baz=304,slow=75,SNR=41
H11S2 WAKE ISLAND Hy 34.20 101 T T 16 05 15.8
baz=304,slow=75,SNR=18
LSA Lhasa 34.63 280 P **P 15 27 39.0 +0.6**
LSA pmax pmax
comp=Z,8.0nm,0.7s
SHL Shillong 34.96 272 P **P 15 27 39.6 -1.5**
SHL pmax pmax
comp=Z,35nm,0.6s
SHL Shillong 34.96 272 P **P 15 27 39.6 -1.5**
SEY Seymchan 35.63 16 P **P 15 27 46.9 +0.8**
comp=Z,5.0nm,0.7s,baz=217,slow=7.3,SNR=16
KAPI Kappang 36.54 199 LR LR 15 45 16.6
comp=Z,50nm,18.5s,baz=360,slow=40
WMQ Urumqi 36.99 304 *eP* **P 15 27 58.4 +0.3**
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ pmax pmax
comp=Z,160nm,5.1s
KULM Kulim 37.89 236 P **P 15 28 07.5 +1.5**
KULM IAmb IAmb 15 28 08.0
comp=Z,24nm,1.0s
TAPN Taplejung 38.09 277 *eP* **P 15 28 08.0 +0.1**
comp=Z,26nm,0.8s
ODAN Odare 38.49 276 *eP* **P 15 28 10.3 -0.9**
comp=Z,49nm,0.6s
RAMN Ramite 39.15 277 *eP* **P 15 28 15.4 -1.3**
comp=Z,18nm,0.5s
GUN Gumba 39.53 278 *eP* **P 15 28 19.7 -0.3**
comp=Z,107nm,0.5s
PKI Pulchoki 40.02 278 *eP* **P 15 28 23.1 -0.9**
comp=Z,51nm,0.8s
KKN Kakani 40.07 279 *eP* **P 15 28 23.9 -0.4**
comp=Z,54nm,0.6s
DMN Daman 40.27 278 *eP* **P 15 28 25.3 -0.7**
comp=Z,17nm,0.5s
GKN Gorkha 40.57 279 *eP* **P 15 28 27.6 -0.8**
comp=Z,24nm,0.5s
ZAA0 Zalesovo Array 40.96 319 P **P 15 28 28.2 -2.9**
ZALV Zalesovo Beam 40.96 319 P **P 15 28 30.3 -0.7**
comp=Z,3.1nm,0.4s,baz=112,slow=9.1,SNR=19
ZALV PcP **PcP 15 30 30.9 0.0**
comp=Z,2.7nm,0.7s,baz=86,slow=4.6,SNR=5.7
ZALV Zalesovo Beam 40.96 319 *i* P **P 15 28 30.5 -0.6**
ZALV pmax pmax
comp=Z,3.0nm,0.4s
ZALV Zalesovo Beam 40.96 319 P **P 15 28 27.8 -3.2**
MK31 Makanchi Array 41.12 308 *i* P **P 15 28 31.9 -0.6**
MK31 pmax pmax
comp=Z,5.0nm,0.6s
MK31 Makanchi Array 41.12 308 P **P 15 28 32.0 -0.6**
MKAR Makanchi Array 41.12 308 P **P 15 28 32.0 -0.6**
comp=Z,5.0nm,0.5s,baz=89,slow=10,SNR=80
MKAR PcP **PcP 15 30 32.0 +0.4**
comp=Z,2.9nm,0.8s,baz=132,slow=1.8,SNR=5.2
MKAR Makanchi Array 41.12 308 *i* P **P 15 28 32.4 -0.2**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
DANN Dangsing 41.23 280 *eP* **P 15 28 33.6 -0.4**
comp=Z,76nm,0.5s
MAKZ Makanchi 41.34 308 P **P 15 28 32.3 -2.0**
KOLN Koldanda 41.52 279 *eP* **P 15 28 35.5 -0.7**
comp=Z,39nm,0.7s
TIXI Tiksi 41.69 359 *ce*P **P 15 28 36.4 -0.4**
TIXI pmax pmax
comp=Z,21nm,0.6s
TIXI Tiksi 41.69 359 P **P 15 28 36.4 -0.4**
TIXI IAmb IAmb 15 28 48.4
comp=Z,54nm,1.1s
PYUN Piuthan 41.95 280 *eP* **P 15 28 38.9 -0.9**
comp=Z,52nm,0.5s
MTN Manton Dam 42.63 180 P **P 15 28 44.7 -0.3**
GSI Gunungsitoli 42.86 235 P **P 15 28 46.9 -0.1**
GSI IAmb IAmb 15 29 05.4
comp=Z,16nm,0.8s
PDGK Podgornoye 42.91 303 P **P 15 28 45.1 -2.2**
SEM Semipalatinsk 42.94 313 *eP* **P 15 28 45.2 -2.4**
comp=Z,4.0nm,1.0s,baz=313
SEM *e*LR LR 15 46 50.6
comp=Z,260nm,14.9s,baz=313
SEM Semipalatinsk 42.94 313 *eP* **P 15 28 45.1 -2.4**
SEM pmax pmax
comp=Z,4.0nm,1.0s
SEM MLR MLR
comp=Z,260nm,15.0s
LEM Lembang 43.09 216 LR LR 15 48 40.6
comp=Z,97nm,20.3s,baz=359,slow=39
LEM Lembang 43.09 216 P **P 15 28 50.7 +1.7**
LEM pmax pmax
comp=Z,36nm,1.1s
KPKS Kokpek 43.50 303 *eP* **P 15 28 50.3 -1.7**
comp=Z,6.4nm,0.8s,baz=302
KPKS LR LR 15 48 13.8
comp=Z,238nm,13.3s,baz=302
KPKS Kokpek 43.50 303 *eP* **P 15 28 50.3 -1.7**
KPKS pmax pmax
comp=Z,6.0nm,0.8s
KPKS MLR MLR
comp=Z,238nm,13.0s
TDK Taldyqorghan 43.71 305 *eP* **P 15 28 52.9 -0.7**
baz=305
TDK Taldyqorghan 43.71 305 *eP* **P 15 28 52.9 -0.7**
KURK Kurchatov 44.01 313 *ce*P **P 15 28 53.8 -2.1**
KURK pmax pmax
comp=Z,15nm,1.3s
KURK Kurchatov 44.01 313 P **P 15 28 55.1 -0.8**
KURK IAmb IAmb 15 29 05.8
comp=Z,13nm,0.8s
KURBB Kurchatov Arra 44.05 313 P **P 15 28 54.7 -1.5**
MDOK Medeo 44.70 302 *eP* **P 15 29 00.8 -1.0**
baz=302
MDOK LR LR 15 48 38.3
comp=Z,389nm,14.8s,baz=302
MDOK Medeo 44.70 302 *eP* **P 15 29 00.7 -1.0**
MDOK MLR MLR
comp=Z,389nm,15.0s
CHKK Chushkaly 44.72 303 *eP* **P 15 29 01.3 -0.5**
baz=303
CHKK Chushkaly 44.72 303 *eP* **P 15 29 01.2 -0.5**
TNSS Tian-Shan 44.77 302 *eP* **P 15 29 02.2 -0.5**
baz=302
TNSS Tian-Shan 44.77 302 *eP* **P 15 29 02.1 -0.5**
AAA Alma-Ata 44.79 303 *eP* **P 15 29 02.2 -0.2**
baz=302
AAA LR LR 15 48 50.5
comp=Z,329nm,13.9s,baz=302
AAA Alma-Ata 44.79 303 *eP* **P 15 29 02.2 -0.2**
AAA MLR MLR
comp=Z,329nm,14.0s
KUU Kurty 45.19 304 *eP* **P 15 29 04.2 -1.3**
comp=Z,15nm,0.9s,baz=303
KUU LR LR 15 48 51.7
comp=Z,116nm,10.7s,baz=303
KUU Kurty 45.19 304 *eP* **P 15 29 04.2 -1.3**
KUU pmax pmax
comp=Z,15nm,0.9s

KUU MLR MLR
comp=Z,116nm,11.0s
KNRA Kununurra 45.50 183 P **P** **15 29 08.9 +0.8**
KNRA IAmb IAmb 15 29 27.5
comp=Z,14nm,1.1s
KSH Kashi 45.73 297 P **P** **15 29 13.9 +3.9**
KSH S S 15 36 01.3 +10
KSH pmax pmax
comp=Z,29nm,0.6s
KSH pmax pmax
comp=Z,280nm,5.0s
KSH LR LR
comp=Z,700nm,12.7s
KSH LR LR
comp=Z,2μm,15.0s
KSH LR LR
comp=Z,2μm,16.7s
TKM2 Tokmak 2 45.77 302 P **P** **15 29 11.1 +0.8**
SNR=19
TKM2 Tokmak 2 45.77 302 *i* P **P** **15 29 09.7 -0.6**
TKM2 pmax pmax
comp=Z,22nm,0.6s
KBK Karagaybulak 46.26 302 P **P** **15 29 14.6 +0.5**
SNR=11
CHMS Chumysh 46.38 302 P **P** **15 29 15.0 +0.1**
SNR=13
SGDS Sogindy 46.45 303 *e*P **P** **15 29 14.1 -1.4**
comp=Z,2.6nm,0.6s,baz=303
SGDS Sogindy 46.45 303 *e*P **P** **15 29 14.1 -1.4**
SGDS pmax pmax
comp=Z,3.0nm,0.6s
NRIK Noril'sk 46.51 340 P **P** **15 29 13.8 -1.7**
comp=Z,6.5nm,0.4s,baz=117,slow=8.3,SNR=20
NRIK LR LR 15 50 44.1
comp=Z,850nm,21.3s,baz=182,slow=39
NRIK Noril'sk 46.51 340*ce*P **P** **15 29 13.0 -2.5**
NRIK pmax pmax
comp=Z,8.0nm,0.9s
USP Ospenovka 46.55 303 P **P** **15 29 16.2 -0.1**
SNR=9.0
AAK Ala-Archa 46.59 302*ce*P **P** **15 29 16.3 -0.4**
AAK pmax pmax
comp=Z,23nm,0.7s
UCH Uchtor 46.61 301 P **P** **15 29 18.4 +1.2**
SNR=13
BTLS Baital 46.80 305 *e*P **P** **15 29 17.1 -1.0**
comp=Z,5.2nm,0.6s,baz=305
BTLS Baital 46.80 305 *e*P **P** **15 29 17.1 -1.0**
BTLS pmax pmax
comp=Z,5.0nm,0.6s
AML Almayashu 47.22 301 P **P** **15 29 22.7 +0.7**
SNR=9.7
BRZS Berezniki 47.74 312 *e*P **P** **15 29 23.9 -1.6**
comp=Z,2.6nm,0.6s,baz=312
BRZS Berezniki 47.74 312 *e*P **P** **15 29 23.8 -1.6**
BRZS pmax pmax
comp=Z,3.0nm,0.6s
HNR Honiara 47.99 140 LR LR 15 50 10.8
comp=Z,52nm,18.1s,baz=358,slow=37
FITZ Fitzroy Crossi 48.15 187 LR LR 15 52 55.6
comp=Z,51nm,18.1s,baz=344,slow=40
FITZ Fitzroy Crossi 48.15 187 P **P** **15 29 30.2 +1.4**
NIL Nilore 48.83 290 P **P** **15 29 34.0 0.0**
NIL pmax pmax
comp=Z,11nm,0.6s
NIL Nilore 48.83 290 P **P** **15 29 34.0 0.0**
NIL IAmb IAmb 15 29 36.3
comp=Z,11nm,0.6s
DZA Taraz 48.90 302 *e*P **P** **15 29 34.2 -0.2**
baz=302
DZA Taraz 48.90 302 *e*P **P** **15 29 34.2 -0.2**
BRVK Borovoye 49.36 316 *i* P **P** **15 29 37.0 -0.8**
BRVK pmax pmax
comp=Z,18nm,0.8s
BRVK Borovoye 49.36 316 P **P** **15 29 37.2 -0.6**
KK31 Karatay Array 49.47 303 P **P** **15 29 38.1 -0.8**
KK31 pmax pmax
comp=Z,20nm,0.7s
KK31 Karatay Array 49.47 303 P **P** **15 29 38.0 -0.8**
KKAR Karatay Array 49.47 303 P **P** **15 29 38.1 -0.8**
KKAR pmax pmax
comp=Z,20nm,0.7s
KKAR Karatay Array 49.47 303 P **P** **15 29 38.0 -0.8**
WB0 Warramunga Arr 49.60 176 P **P** **15 29 40.5 +0.6**
BTK Batken 49.61 299 P **P** **15 29 39.3 -0.7**
BTK Batken 49.61 299 P **P** **15 29 39.3 -0.7**
WRAB Tennant Creek 49.77 176*ce*P **P** **15 29 44.8 +3.6**
WRAB pmax pmax
comp=Z,9.0nm,1.7s
WRA Warramunga Arr 49.78 176 P **P** **15 29 42.6 +1.4**
comp=Z,3.0nm,0.7s,baz=355,slow=8.5,SNR=26
WRA LR LR 15 48 34.2
comp=Z,48nm,21.9s,baz=0.0,slow=33
WRA Warramunga Arr 49.78 176 *i* P **P** **15 29 43.2 +2.0**
WRA pmax pmax
comp=Z,3.0nm,0.7s
WRA Warramunga Arr 49.78 176 P **P** **15 29 41.7 +0.5**
WB2 Warramunga Arr 49.78 176 P **P** **15 29 40.5 -0.7**
WR0 Warramunga Arr 49.80 176 P **P** **15 29 41.5 +0.1**
IUG luzhnay 49.93 302 *e*P **P** **15 29 41.6 -0.8**
comp=Z,7.6nm,1.0s,baz=301
IUG luzhnay 49.93 302 *e*P **P** **15 29 41.6 -0.8**
IUG pmax pmax
comp=Z,8.0nm,1.0s
GAR Garm 50.16 298 P **P** **15 29 44.2 0.0**
CHGR Chuyangaron 51.10 297 P **P** **15 29 51.2 -0.1**
KBL Kabul 52.03 292 P **P** **15 29 58.3 -0.2**
KBL pmax pmax
comp=Z,24nm,1.4s
KBL Kabul 52.03 292 P **P** **15 29 58.3 -0.2**
KBL IAmb IAmb 15 30 00.2
comp=Z,24nm,1.4s
PSA00 Pilbara Seismi 52.46 193 P **P** **15 30 01.1 -0.3**
PSA00 IAmb IAmb 15 30 06.9
comp=Z,17nm,1.4s
AS31 Alice Springs 53.45 177 P **P** **15 30 11.2 +2.5**
ASAR Alice Springs 53.45 177 P **P** **15 30 10.5 +1.8**
comp=Z,1.8nm,0.7s,baz=10,slow=13,SNR=49
ASAR LR LR 15 53 57.1
comp=Z,63nm,19.5s,baz=327,slow=37
ASAR Alice Springs 53.45 177 P **P** **15 30 10.2 +1.5**
ASAR Alice Springs 53.45 177 P **P** **15 30 10.2 +1.5**
SVE Sverdlovsk 54.94 321 *e*P **P** **15 30 18.8 -0.4**
SVE pmax pmax
comp=Z,25nm,0.7s
AB31 Akbulak array 56.04 312 P **P** **15 30 26.6 -0.6**
ABKAR Akbulak array 56.04 312 P **P** **15 30 26.8 -0.5**
ABKAR IAmb IAmb 15 30 27.4
comp=Z,24nm,1.2s
ARU Arti 56.11 320*c i* P **P** **15 30 26.4 -1.2**
ARU 15 31 24.6
ARU 15 32 29.3
ARU S **S** **15 38 14.3 -0.3**
ARU SS **SS** **15 42 00.3 -0.3**
ARU pmax pmax
comp=Z,40nm,1.4s
ARU MLR MLR
comp=Z,1μm,17.0s
ARU Arti 56.11 320 P **P** **15 30 27.0 -0.6**
HRA Herat 57.50 294 P **P** **15 30 39.0 +0.9**
HRA IAmb IAmb 15 30 39.5
comp=Z,19nm,0.8s
PPLA Purkeypile 57.67 32 P **P** **15 30 40.3 +1.6**
PPLA IAmb IAmb 15 30 51.7
comp=Z,40nm,1.4s
EIDS Eidsvold 58.29 159 P **P** **15 30 41.8 -1.4**
EIDS IAmb IAmb 15 31 03.1
comp=Z,8.5nm,1.1s
SUA Susitna One 58.46 33 P **P** **15 30 44.4 +0.2**
SUA IAmb IAmb 15 30 48.6
comp=Z,22nm,1.0s
TOLK Toolik Lake Re 58.48 25 P **P** **15 30 45.7 +1.5**
baz=272
TOLK Toolik Lake Re 58.48 25 P **P** **15 30 44.4 +0.2**
TOLK IAmb IAmb 15 30 56.6
comp=Z,19nm,1.2s
I23K Minto, Yukon-K 58.76 29 P **P** **15 30 47.3 +1.2**
I23K IAmb IAmb 15 30 56.6
comp=Z,16nm,1.5s
BWN Browne 58.80 30 P **P** **15 30 47.7 +1.3**
MCK McKinley 59.07 31 P **P** **15 30 49.5 +1.1**
baz=276
RND Reindeer 59.14 31 P **P** **15 30 48.9 0.0**
RND pmax pmax
comp=Z,27nm,1.3s
RND Reindeer 59.14 31 P **P** **15 30 48.9 0.0**
RND IAmb IAmb 15 31 01.1
comp=Z,27nm,1.3s
SEW Seward 59.24 35 P **P** **15 30 50.1 +0.6**
MDM Murphy Dome 59.26 29 P **P** **15 30 50.1 +0.5**
CCB Clear Creek Bu 59.47 30 P **P** **15 30 51.3 +0.3**
POKR Poker Plat Res 59.58 29 P **P** **15 30 53.1 +1.3**
baz=276
POKR Poker Plat Res 59.58 29 P **P** **15 30 52.2 +0.3**
POKR IAmb IAmb 15 31 05.1
comp=Z,25nm,1.1s
GEYT Alibeck 59.73 299 P **P** **15 30 53.9 +0.6**
comp=Z,16nm,0.7s,baz=79,slow=3.2,SNR=17
GEYT Alibeck 59.73 299 P **P** **15 30 53.6 +0.3**
GYA0B ALIBECK ARRAY 59.73 299 P **P** **15 30 53.1 -0.2**
GYA0B IAmb IAmb 15 30 55.5
comp=Z,13nm,0.7s
DHY Denali Highway 59.84 31 P **P** **15 30 53.9 0.0**
IL31 59.85 29 P **P** **15 30 53.7 +0.1**
ILAR Eielson Array 59.85 29 P **P** **15 30 53.9 +0.3**
comp=Z,0.7nm,0.7s,baz=268,slow=6.3,SNR=11
ILAR Eielson Array 59.85 29 P **P** **15 30 53.0 -0.7**
HDA Harding Lake 59.86 30 P **P** **15 30 51.8 -2.0**
baz=277
IL18 Eielson Array 59.90 29 P **P** **15 30 54.5 +0.4**
SCM Sheep Creek Mo 60.03 33 P **P** **15 30 55.7 +0.6**
SCM pmax pmax
comp=Z,45nm,1.3s
SCM Sheep Creek Mo 60.03 33 P **P** **15 30 55.7 +0.6**
KIRV Kirov 60.73 324*ce*P **P** **15 30 58.8 -0.9**
RIDG Independent Ri 60.87 30 P **P** **15 31 00.3 -0.5**
SCRK Sand Creek 61.21 30 P **P** **15 31 03.7 +0.5**
baz=280
L26K Log Cabin Wild 61.66 31 P **P** **15 31 07.4 +1.3**
baz=281
GLB Gilahina Butte 61.76 33 P **P** **15 31 07.3 +0.5**
GLB IAmb IAmb 15 31 19.8
comp=Z,13nm,1.2s
DZM Mont Dzumac 61.90 143 P **P** **15 31 08.0 -0.2**
DZM IAmb IAmb 15 31 34.4
comp=Z,12nm,1.4s
K27K Chicken 62.03 30 P **P** **15 31 09.8 +1.3**
baz=282
K27K Chicken 62.03 30 P **P** **15 31 09.2 +0.7**
K27K IAmb IAmb 15 31 21.7
comp=Z,27nm,1.4s
MCARA McCarthy VSAT 62.14 33 P **P** **15 31 10.5 +1.2**
BCAR Beaver Creek A 62.35 31 P **P** **15 31 11.4 +0.6**
STKA Stephens Creek 62.35 170 P **P** **15 31 12.5 +1.6**
comp=Z,2.7nm,0.6s,baz=340,slow=6.3,SNR=6.9
STKA LR LR 15 59 07.8
comp=Z,81nm,19.3s,baz=13,slow=37
STKA Stephens Creek 62.35 170 P **P** **15 31 12.5 +1.6**
YAH Yahtse 62.97 34 P **P** **15 31 14.7 -0.4**
CTGM Chitina Glacie 63.03 33 P **P** **15 31 16.6 +1.1**
CTGM IAmb IAmb 15 31 19.4
comp=Z,10nm,1.0s
BELG Belogornoye 63.08 317*c i*P **P** **15 31 14.0 -1.6**
BELG pmax pmax
comp=Z,8.0nm,0.9s
DAWY Dawson 63.17 30 P **P** **15 31 17.2 +1.0**
INK Inuvik 64.36 24 P **P** **15 31 24.2 +0.3**
comp=Z,4.2nm,0.8s,baz=314,slow=6.5,SNR=14
INK Inuvik 64.36 24 P **P** **15 31 24.3 +0.5**
INK pmax pmax
comp=Z,10.0nm,0.7s
INK Inuvik 64.36 24 P **P** **15 31 24.3 +0.5**
INK IAmb IAmb 15 31 35.5
comp=Z,9.8nm,0.7s
TMCR Tamitsa 64.75 331 *e*P **P** **15 31 25.2 -1.3**
TMCR pmax pmax
comp=Z,28nm,0.6s
HYT Haines Junctio 64.87 33 P **P** **15 31 28.3 +0.8**
HYT IAmb IAmb 15 31 35.4
comp=Z,17nm,1.3s
LVZ Lovozero 64.95 335 P **P** **15 31 27.1 -0.7**
LVZ pmax pmax
comp=Z,55nm,1.4s
LVZ Lovozero 64.95 335 P **P** **15 31 27.1 -0.7**
KLMR Klimovskoe 65.06 327 *e*P **P** **15 31 24.4 -4.1**
KLMR pmax pmax
comp=Z,11nm,0.7s
KLMR MLR MLR
comp=Z,145nm,16.0s
KLMR Klimovskoe 65.06 327 *e*P **P** **15 31 24.5 -4.1**
KLMR AMP 15 31 28.4
comp=Z,11nm,0.7s
KLMR LQ LQ 15 58 10.4
KLMR LQ LQ 15 58 10.4
KLMR LR LR 16 00 35.6
KLMR AMP 16 03 32.8
comp=Z,145nm,16.2s
APA Apatity 65.51 335⇓ *i*P **P** **15 31 29.5 -1.8**
APA pmax pmax
comp=Z,14nm,0.7s
APA MLR MLR
comp=Z,500nm,13.0s
SPA0 Spitsbergen Ar 65.66 348 P **P** **15 31 31.6 -0.6**
SPA0 IAmb IAmb 15 31 46.7
comp=Z,25nm,1.3s
SPITS Spitsbergen Ar 65.66 348 P **P** **15 31 31.5 -0.8**
comp=Z,6.8nm,0.6s,baz=82,slow=9.3,SNR=12
MAK Makhachkala 65.93 307 *e*P P 15 31 25.2 -9.3
MAK *e*S S 15 40 07.9 -12
MAK *e*SSS SSS 15 47 31.1
MAK pmax pmax
comp=Z,234nm,1.4s
MAK MLR MLR
comp=Z,605nm,14.0s
KBS Kingsbay 66.01 349 P **P** **15 31 33.5 -0.9**
KBS pmax pmax
comp=Z,20nm,1.0s
KBS Kingsbay 66.01 349 P **P** **15 31 33.5 -0.9**
KBS IAmb IAmb 15 31 36.5
comp=Z,20nm,1.0s
WHY Whitehorse 66.15 32 P **P** **15 31 35.5 -0.3**
WHY IAmb IAmb 15 31 49.8
comp=Z,17nm,1.2s
JCUZ Jacuzzi 66.78 80 P **P** **15 31 40.3 -0.1**
KEV Kevo 66.88 338 P **P** **15 31 39.6 -0.5**
KEV pmax pmax
comp=Z,46nm,1.4s
KEV Kevo 66.88 338 P **P** **15 31 39.6 -0.5**
VRH Novokhopyorsk 66.93 317 *e*P **P** **15 31 39.3 -1.4**
VRH pmax pmax
comp=Z,70nm,1.9s
LGD Lagodekhi 67.19 306 P **P** **15 31 42.9 +0.3**
C36M Paulatuk 67.20 22 P **P** **15 31 43.1 +1.0**
baz=295
C36M Paulatuk 67.20 22 P **P** **15 31 42.1 0.0**
ARD3 ARCESS Array S 67.43 338 P **P** **15 31 42.9 -0.7**
ARCES ARCESS Array B 67.45 338 P **P** **15 31 43.1 -0.7**
comp=Z,2.3nm,0.4s,baz=59,slow=7.1,SNR=35
ARCES LR LR 16 06 58.2
comp=Z,622nm,18.2s,baz=80,slow=41
MOS Moscow 67.67 322 *e*P **P** **15 31 43.8 -1.5**
MOS pmax pmax
comp=Z,43nm,0.8s
JOF Joensuu 68.01 331 P **P** **15 31 46.8 -0.5**
JOF pmax pmax
comp=Z,67nm,0.7s
LPSR Galich'ya Gora 68.07 319 *e*P **P** **15 31 46.5 -1.4**
LPSR pmax pmax
comp=Z,20nm,0.8s
GUDG Gudauri 68.20 307 P **P** **15 31 49.7 +0.5**
EUNU Eureka 68.22 7 P **P** **15 31 49.0 +0.4**
EUNU IAmb IAmb 15 31 59.0
comp=Z,6.1nm,0.8s
GOF Gofitskoye 68.23 310⇑ *e*P **P** **15 31 49.1 0.0**
GOF pmax pmax
comp=Z,42nm,0.8s
VSR Storozhevoye 68.43 317 *e*P **P** **15 31 48.4 -1.8**
VSR pmax pmax
comp=Z,50nm,1.7s
OBN Obninsk 68.46 322⇓ *i*P **P** **15 31 49.8 -0.5**
OBN pmax pmax
comp=Z,30nm,1.3s
OBN MLR MLR
comp=Z,648nm,16.0s
ZEI Tsey 68.47 308 *e*P **P** **15 31 49.6 -1.3**
ZEI pmax pmax
comp=Z,16nm,0.6s
KBZ Khabaz 68.81 309 P **P** **15 31 52.9 +0.2**
comp=Z,18nm,0.8s,baz=238,slow=19
KBZ Khabaz 68.81 309*ce*P **P** **15 31 52.5 -0.2**
KBZ pmax pmax
comp=Z,24nm,0.9s
ONI Oni 68.86 308 P **P** **15 31 54.1 +1.0**
GNI Garni 68.86 305*ce*P **P** **15 31 53.9 +0.6**
GNI pmax pmax
comp=Z,25nm,1.3s
GNI Garni 68.86 305 P **P** **15 31 52.0 -1.3**
GNI IAmb IAmb 15 32 01.7
comp=Z,17nm,0.9s
KIV Kislovodsk 68.87 309 *e*P **P** **15 31 53.4 +0.2**
KIV pmax pmax
comp=Z,114nm,1.1s
KIV MLR MLR
comp=Z,706nm,17.0s
KIV Kislovodsk 68.87 309 P **P** **15 31 52.2 -1.0**
BGD Bogdanovka 69.25 306 P **P** **15 31 57.4 +1.6**
DLBC Dease Lake 69.26 34 P **P** **15 31 55.4 0.0**
DLBC IAmb IAmb 15 32 06.9
comp=Z,9.3nm,1.2s
DIB Dawson Inlet, 70.09 39 P **P** **15 32 00.8 +0.4**
SUF Sumiainen 70.24 332 P **P** **15 32 00.8 -0.4**
SUF pmax pmax
comp=Z,41nm,1.0s
GEVA Gevas 70.77 304 P **P** **15 32 04.1 -1.0**
FIA1 FINESS Array S 70.86 331 P **P** **15 32 04.4 -0.5**
FINES FINESS Array B 70.86 331 P **P** **15 32 04.6 -0.4**
comp=Z,14nm,0.5s,baz=67,slow=6.0,SNR=73
FINES LR LR 16 06 27.0
comp=Z,544nm,18.6s,baz=60,slow=39
SOC Sochi 71.00 310 *e*P **P** **15 32 04.9 -1.3**
SOC *e* 15 34 41.6
SOC *e*PPP PPP 15 36 23.0
SOC *e*S **S** **15 41 21.9 +1.5**
SOC *e*SS **SS** **15 45 54.8 +1.7**
SOC pmax pmax
comp=Z,15nm,0.7s
SOC MLR MLR
comp=Z,198nm,16.0s
RES Resolute Bay 71.32 12 P **P** **15 32 07.9 +0.4**
comp=Z,4.4nm,0.7s,baz=338,slow=6.0,SNR=9.4
RES Resolute Bay 71.32 12 P **P** **15 32 07.4 -0.1**
RES pmax pmax
comp=Z,13nm,0.9s
RES Resolute Bay 71.32 12 P **P** **15 32 07.4 -0.1**
RES IAmb IAmb 15 32 18.8
comp=Z,13nm,0.8s
DAG Danmarks Havn 71.83 353⇑ *i*P **P** **15 32 09.6 -1.0**
DAG pmax pmax
comp=Z,6.0nm,0.7s
DAG Danmarks Havn 71.83 353⇑ *i*P **P** **15 32 09.6 -1.0**
comp=Z,6.4nm,0.7s
DAG Danmarks Havn 71.83 353⇑ *i*P **P** **15 32 09.6 -1.0**
DAG IAmb IAmb 15 32 12.3
comp=Z,6.4nm,0.7s
ANN Anapa 72.00 312 *e*P **P** **15 32 11.2 -1.0**
ANN *e*S **S** **15 41 35.2 +3.2**
ANN pmax pmax
comp=Z,46nm,0.8s
MARD Mardin 72.83 303 P **P** **15 32 16.9 -0.5**
MARD IAmb IAmb 15 32 18.6
comp=Z,20nm,0.9s
TULEG Thule 72.95 5 P **P** **15 32 17.5 +0.3**
SOCY Socotra 73.03 274 P **P** **15 32 17.6 -1.3**
SOCY IAmb IAmb 15 32 19.2
comp=Z,23nm,1.0s
YKA Yellowknife Ar 73.97 26 P **P** **15 32 24.1 +0.6**
comp=Z,2.6nm,0.8s,baz=304,slow=6.0,SNR=5.5
MALT Malatya 74.08 305 P **P** **15 32 26.3 +1.5**
DBG Daneborg 74.22 352 *i* P **P** **15 32 22.5 -2.3**
DBG IAmb IAmb 15 32 24.9
comp=Z,3.7nm,0.9s
AKASG Malin Array Be 74.35 320 P **P** **15 32 25.1 -0.8**
comp=Z,3.5nm,0.4s,baz=52,slow=6.3,SNR=15
AKASG Malin Array Be 74.35 320 P **P** **15 32 24.5 -1.4**
AKBB Malin Array Si 74.35 320*ce*P **P** **15 32 23.6 -2.4**
AKBB Malin Array Si 74.35 320 P **P** **15 32 25.1 -0.8**
AKBB IAmb IAmb 15 32 26.1
comp=Z,12nm,1.1s
KVT Kavak 74.52 309 P **P** **15 32 28.8 +1.6**
RAYN Ar Rayn 75.10 289 P **P** **15 32 30.6 -0.3**
RAYN Ar Rayn 75.10 289 P **P** **15 32 30.6 -0.3**
RAYN IAmb IAmb 15 32 32.8
comp=Z,22nm,1.2s
BZK Bozkurt 75.49 310⇑ P **P** **15 32 33.2 +0.4**
ILGA Ilgaz 76.10 309 P **P** **15 32 35.9 -0.6**
ILGA IAmb IAmb 15 32 49.3
comp=Z,6.7nm,0.8s
RAO Raoul Island 76.34 136 P **P** **15 32 37.4 -0.1**
RAO Raoul Island 76.34 136 P **P** **15 32 37.4 -0.1**
HFS Hagfors 76.67 333 P **P** **15 32 39.1 0.0**
comp=Z,7.7nm,0.5s,baz=67,slow=5.0,SNR=38
BR131 Keskin Array S 76.78 308 P **P** **15 32 39.7 -0.6**
BR131 pmax pmax
comp=Z,11nm,0.9s
BR131 Keskin Array S 76.78 308 P **P** **15 32 39.7 -0.6**
BR131 IAmb IAmb 15 32 41.7
comp=Z,11nm,0.8s
BRTR Keskin Array B 76.78 308 P **P** **15 32 40.1 -0.2**
comp=Z,8.5nm,0.7s,baz=102,slow=5.4,SNR=31
BRTR Keskin Array B 76.78 308 *i* P **P** **15 32 40.4 +0.1**
BRTR pmax pmax
comp=Z,9.0nm,0.7s
BRTR Keskin Array B 76.78 308 P **P** **15 32 39.8 -0.4**
NC405 NORSAR Array S 76.82 334 P **P** **15 32 40.0 0.0**
NC303 NORSAR Array S 76.88 334 P **P** **15 32 40.2 -0.1**
NC303 IAmb IAmb 15 33 00.2
comp=Z,24nm,1.2s
NB201 NORSAR Array S 77.02 334 P **P** **15 32 40.8 -0.3**
NB2 NORSAR Subarra 77.06 334 P **P** **15 32 39.9 -1.4**
comp=Z,6.4nm,0.6s,baz=50,slow=5.9
NOA NORSAR Array B 77.06 334 P **P** **15 32 41.2 -0.1**
comp=Z,4.9nm,0.5s,baz=50,slow=5.6,SNR=47
NC204 NORSAR Array S 77.08 335 P **P** **15 32 41.3 -0.1**
NC602 NORSAR Array S 77.13 334 P **P** **15 32 41.0 -0.6**
NORES NORESS Array B 77.13 334 P **P** **15 32 43.6 +1.9**
NORES pmax pmax
comp=Z,2.0nm,0.4s
NBO00 NORSAR Array S 77.23 335 P **P** **15 32 42.1 -0.2**
NAO01 NORSAR Array S 77.31 334 P **P** **15 32 42.1 -0.6**
SUMG Summit 77.42 357 *i* P **P** **15 32 44.1 +0.5**
SUMG pmax pmax
comp=Z,43nm,0.7s
SUMG Summit 77.42 357 P **P** **15 32 43.9 +0.3**
SUMG Summit 77.42 357 *i* P **P** **15 32 44.1 +0.5**
comp=Z,43nm,0.7s
SUMG Summit 77.42 357 *i* P **P** **15 32 44.2 +0.5**
SUMG IAmb IAmb 15 32 44.9
comp=Z,43nm,0.7s
BUR08 Bucovina Ar. S 78.17 318 P **P** **15 32 47.2 -0.6**
BURAR Bucovina Array 78.17 318⇓ P **P** **15 32 47.5 -0.4**
BURAR Bucovina Array 78.17 318⇓ P **P** **15 32 47.5 -0.4**
BURAR Bucovina Array 78.17 318 P **P** **15 32 46.8 -1.1**
VRI Vrincioaia 78.19 316⇓ P **P** **15 32 48.1 +0.2**
VRI Vrincioaia 78.19 316⇓ P **P** **15 32 48.1 +0.2**
PLOR Plostina 78.25 316⇓ P **P** **15 32 47.8 -0.5**
PLOR Plostina 78.25 316⇓ P **P** **15 32 47.8 -0.5**
OZUR 78.64 317⇑ P **P** **15 32 51.2 +0.8**
NEHR Nehoiu 78.68 316⇓ P **P** **15 32 38.3 -12**
MLR Muntele Rosu 78.86 316⇓ P **P** **15 32 52.9 +1.1**
MLR Muntele Rosu 78.86 316⇓ P **P** **15 32 52.9 +1.1**
DOPR Dopca 78.94 317⇓ P **P** **15 32 52.8 +0.7**
CSS Mathiatis 79.26 304 P **P** **15 32 53.5 -0.5**
VOIR 79.42 317⇑ P **P** **15 32 54.0 -0.7**
VOIR 79.42 317⇑ P **P** **15 32 54.0 -0.7**
ARR Arges 79.71 317⇑ P **P** **15 32 58.2 +1.9**
OJC Ojcow 79.74 323 P **P** **15 32 55.4 -0.9**
OJC Ojcow 79.74 323 P **P** **15 32 55.4 -0.9**
NIE Niedzica 79.93 322 P **P** **15 32 58.2 +0.8**
NIE pmax pmax
comp=Z,3.0nm,1.0s
C09A Chrisman Ranch 80.62 40 P **P** **15 33 01.2 +0.1**
D08A Wollman Farm, 80.68 41 P **P** **15 33 01.6 +0.2**
ELL Elmali 80.79 307 P **P** **15 33 01.0 -1.4**
ELL pmax pmax
comp=Z,28nm,0.6s
ELL Elmali 80.79 307 P **P** **15 33 01.0 -1.4**
J04D Umpqua Nationa 80.90 45 P **P** **15 33 04.1 +1.1**
baz=303
ICESG Greenland Ices 80.94 357 *i* P **P** **15 33 03.1 +0.2**
ICESG IAmb IAmb 15 33 04.0
comp=Z,17nm,0.9s
NEW Newport 80.99 39 P **P** **15 33 03.9 +0.8**
comp=Z,4.7nm,0.8s,baz=311,slow=4.6,SNR=5.5
NEW Newport 80.99 39 P **P** **15 33 03.7 +0.5**

	baz=305							
L04D	**Klamath Falls**	**81.33**	**46**	P		**P**		**15 33 07.1 +1.9**
	baz=303							
YBH	**Yreka Blue Hor**	**81.34**	**47**	P		**P**		**15 33 06.0 +0.8**
	comp=Z,3.0nm,0.9s,baz=229,slow=4.2,SNR=6.3							
YBH	**Yreka Blue Hor**	**81.34**	**47**	P		**P**		**15 33 06.0 +0.8**
J05D	**Fort Rock, OR**	**81.42**	**45**	P		**P**		**15 33 07.3 +1.7**
	baz=303							
M02C	**Callahan**	**81.43**	**47**	P		**P**		**15 33 07.4 +1.7**
	baz=303							
N02D	**Trinity Center**	**81.75**	**47**	P		**P**		**15 33 09.3 +1.9**
	baz=303							
M04C	**Macdoel**	**81.86**	**46**	P		**P**		**15 33 09.4 +1.4**
	baz=303							
O02D	**Mt. Diablo Mer**	**82.13**	**48**	P		**P**		**15 33 11.1 +1.7**
	baz=303							
CLL	**Collm**	**82.51**	**326**	*e*P		**P**		**15 33 12.0 +1.0**
CLL				*es*P		**pP**		**15 33 19.0 -0.2**
CLL				LmV				15 42 00.0
	comp=Z,100nm,18.6s							
CLL	**Collm**	**82.51**	**326**	*e*P		**P**		**15 33 12.0 +1.0**
CLL				*e*				15 33 19.0
O03E	**Paynes Creek**	**82.70**	**48**	P		**P**		**15 33 14.6 +2.3**
	baz=303							
BMO	**Blue Mountains**	**82.87**	**42**	P		**P**		**15 33 13.8 +0.7**
BMO				pmax		pmax		
	comp=Z,7.0nm,1.1s							
BMO	**Blue Mountains**	**82.87**	**42**	P		**P**		**15 33 13.8 +0.7**
J08A	**Circle Bar Ran**	**83.04**	**44**	P		**P**		**15 33 13.8 -0.2**
SFJD	**Kangerlussuaq**	**83.27**	**1**	P		**P**		**15 33 14.8 +0.3**
	comp=Z,8.5nm,0.7s,baz=349,slow=7.0,SNR=5.2							
SFJD	**Kangerlussuaq**	**83.27**	**1**	IAmb		IAmb		15 33 19.2
	comp=Z,36nm,1.3s							
WVOR	**Wild Horse Val**	**83.47**	**44**	P		**P**		**15 33 18.5 +2.2**
WVOR				pmax		pmax		
	comp=Z,6.0nm,1.0s							
GERES	**GERESS Array B**	**83.73**	**324**	LR		LR		16 15 53.2
	comp=Z,395nm,18.5s,baz=20,slow=40							
BEKR	**Beckworth**	**83.86**	**47**	P		**P**		**15 33 18.7 +0.3**
BEKR				IAmb		IAmb		15 33 22.9
	comp=Z,5.0nm,0.8s							
FFC	**Flin Flon**	**84.02**	**28**	P		**P**		**15 33 18.8 +0.1**
FFC				pmax		pmax		
	comp=Z,9.0nm,0.9s							
FFC	**Flin Flon**	**84.02**	**28**	P		**P**		**15 33 18.8 +0.1**
FFC				IAmb		IAmb		15 33 30.4
	comp=Z,8.5nm,0.8s							
PAHR	**Pah Rah Range**	**84.57**	**47**	P		**P**		**15 33 22.6 +0.6**
PAHR				IAmb		IAmb		15 33 24.8
	comp=Z,4.4nm,0.9s							
HRY	**Holter Researc**	**84.79**	**38**	P		**P**		**15 33 23.2 +0.2**
IDI	**Anoyia**	**85.01**	**308**	P		**P**		**15 33 23.3 -0.9**
	comp=Z,3.3nm,0.7s,baz=38,slow=12,SNR=3.7							
DLMT	**Dillon**	**85.22**	**39**	P		**P**		**15 33 24.8 -0.3**
DLMT				IAmb		IAmb		15 33 42.0
	comp=Z,7.0nm,0.9s							
FRB	**Frobisher Bay**	**85.24**	**9**	P		**P**		**15 33 24.8 +0.2**
	comp=Z,12nm,0.9s,baz=45,slow=3.6,SNR=3.5							
HLID	**Hailey**	**85.30**	**42**	P		**P**		**15 33 27.6 +2.0**
	baz=308							
HLID	**Hailey**	**85.30**	**42**	P		**P**		**15 33 26.6 +1.0**
HLID				IAmb		IAmb		15 33 39.4
	comp=Z,7.0nm,1.0s							
BOZ	**Bozeman (W)**	**85.60**	**39**	P		**P**		**15 33 25.5 -1.6**
BOZ				pmax		pmax		
	comp=Z,4.0nm,0.7s							
BOZ	**Bozeman (W)**	**85.60**	**39**	P		**P**		**15 33 25.5 -1.6**
BOZ				IAmb		IAmb		15 33 26.2
	comp=Z,3.6nm,0.7s							
KVN	**Kaiserville**	**85.76**	**47**	P		**P**		**15 33 28.6 +0.5**
KVN				pmax		pmax		
	comp=Z,8.0nm,0.8s							
KVN	**Kaiserville**	**85.76**	**47**	P		**P**		**15 33 28.6 +0.5**
KVN				IAmb		IAmb		15 33 31.1
	comp=Z,7.8nm,0.8s							
NVAR	**Mina Array Bea**	**85.99**	**48**	P		**P**		**15 33 30.3 +1.0**
	comp=Z,4.3nm,0.9s,baz=288,slow=4.5,SNR=19							
YHB	**Horse Butte**	**86.37**	**39**	P		**P**		**15 33 31.3 +0.3**
EKA	**Eskdalemuir Ar**	**86.44**	**336**	P		**P**		**15 33 29.8 -1.0**
	comp=Z,1.9nm,0.4s,baz=47,slow=4.6,SNR=21							
ELK	**Elko**	**86.53**	**44**	P		**P**		**15 33 32.3 +0.4**
	comp=Z,1.9nm,0.8s,baz=338,slow=7.7,SNR=8.5							
ELK	**Elko**	**86.53**	**44**	P		**P**		**15 33 32.0 +0.2**
ELK				pmax		pmax		
	comp=Z,6.0nm,1.2s							
ELK	**Elko**	**86.53**	**44**	P		**P**		**15 33 32.0 +0.2**
H17A	**Grant Village**	**86.94**	**39**	P		**P**		**15 33 37.5 +3.6**
	baz=310							
RLMT	**Red Lodge**	**87.18**	**38**	P		**P**		**15 33 36.8 +1.9**
	baz=311							
R11A	**Troy Canyon, C**	**87.76**	**46**	P		**P**		**15 33 39.9 +2.1**
	baz=307							
TPNV	**Topopah Spring**	**88.18**	**48**	P		**P**		**15 33 41.7 +1.9**
	baz=307							
DUG	**Dugway, Tooele**	**88.32**	**44**	P		**P**		**15 33 41.5 +1.1**
DUG				pmax		pmax		
	comp=Z,7.0nm,1.0s							
DUG	**Dugway, Tooele**	**88.32**	**44**	P		**P**		**15 33 41.7 +1.3**
	baz=309							
BW06	**Boulder Array**	**88.56**	**40**	P		**P**		**15 33 43.0 +1.4**
	baz=311							
PD31	**Pinedale Array**	**88.56**	**40**	P		**P**		**15 33 41.7 +0.1**
PD31				IAmb		IAmb		15 33 54.4
	comp=Z,8.5nm,1.1s							
PDAR	**Pinedale Array**	**88.56**	**40**	P		**P**		**15 33 42.4 +0.9**
	comp=Z,3.0nm,0.8s,baz=288,slow=1.8,SNR=19							
PDAR	**Pinedale Array**	**88.56**	**40**	P		**P**		**15 33 41.5 -0.1**
ULM	**Lac du Bonnet**	**89.84**	**28**	P		**P**		**15 33 48.0 +0.9**
	comp=Z,4.3nm,0.9s,baz=316,slow=8.7,SNR=3.9							
ULM				LR		LR		16 17 13.1
	comp=Z,80nm,18.4s,baz=315,slow=38							
ULM	**Lac du Bonnet**	**89.84**	**28**	IAmb		IAmb		15 33 59.0
	comp=Z,9.0nm,0.8s							
RSSD	**Black Hills**	**90.60**	**36**	P		**P**		**15 33 52.7 +1.6**
RSSD				pmax		pmax		
	comp=Z,13nm,1.2s							
RSSD	**Black Hills**	**90.60**	**36**	P		**P**		**15 33 52.3 +1.2**
	baz=315							
PV14	**Lion Creek, Pa**	**91.75**	**43**	P		**P**		**15 33 57.2 +0.7**
PV22	**Blue Mesa, Par**	**91.78**	**43**	P		**P**		**15 33 56.1 -0.6**
PV22				IAmb		IAmb		15 34 17.6
	comp=Z,9.9nm,0.9s							
PV13	**Radium Mtn., P**	**92.01**	**43**	P		**P**		**15 33 57.9 +0.1**
SCHQ	**Schefferville**	**94.06**	**10**	LR		LR		16 19 50.8
	comp=Z,119nm,19.0s,baz=20,slow=38							
ESDC	**Sonseca Array**	**99.10**	**327**	LR		LR		16 24 54.3
	comp=Z,222nm,18.2s,baz=35,slow=39							
TXAR	**Lajitas Array**	**101.12**	**47**	P		**Pdif**		**15 34 40.1 +1.0**
	comp=Z,0.7nm,1.0s,baz=308,slow=4.4,SNR=2.6							
DBIC	**Dimbokro**	**124.26**	**304**	PKP		**PKiKP**		**15 39 48.2 0.0**
	comp=Z,5.3nm,1.0s,baz=15,slow=4.6,SNR=4.0							
SDV	**Santo Domingo**	**135.97**	**32**	PKP		**PKPdf**		**15 40 10.8 +0.5**
	comp=Z,7.2nm,0.8s,baz=16,slow=1.7,SNR=5.7							
MDP	**Montagnes des**	**144.87**	**7**	PKP		**PKPdf**		**15 40 25.9 -0.3**
	comp=Z,9.2nm,0.8s,baz=20,slow=2.6,SNR=6.3							
LPAZ	**La Paz**	**157.61**	**57**	PKPab		**PKPab**		**15 41 20.2 +2.1**
	comp=Z,1.7nm,0.8s,baz=58,slow=3.0,SNR=4.7							
SIV	**San Ignacio**	**162.04**	**42**	PKP		**PKPdf**		**15 40 52.1 +1.7**
	comp=Z,1.4nm,0.9s,baz=174,slow=2.2,SNR=4.4							

IDC ***18*** *15:26:02.3±1.0, 45˚.46N×27˚.86W, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/65, mbtmp3.7/5, MS3.6/14, Ms1 3.6/14, ms1mx3.4/53, Error ellipse: s-maj=40.8km s-min=27.7km az=2.0*

NEIC ***18*** *15:26:02.3±1.7, 45˚.3N±0˚.1×28˚.1W±0˚.2, h10km±1km, mb4.4/7, Error ellipse: s-maj=29.0km s-min=15.8km az=294.0*

ISC 18 15:26:03.5±0.8, 45˚.2N±0˚.1×28˚.0W±0˚.1, h14km, n32, σ0^{s}78/18, mb3.8/7, MS3.6/13, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	**Rosais**	**6.52**	**182**	Pn	**Pn**	**15 27 39.4**	**+0.4**
MTE	**Manteigas**	**15.73**	**101**	Pn	**Pn**	**15 29 45.7**	**+1.0**
DSB	**Dublin**	**16.16**	**53**	Pn	**Pn**	**15 29 50.1**	**0.0**
DSB				IAmb	IAmb	15 30 07.4	
	comp=Z,42nm,1.4s						
ESDC	**Sonseca Array**	**18.53**	**99**	LR	LR	15 36 16.6	
	comp=Z,170nm,18.2s,baz=300,slow=33						
CART	**Cartagena**	**21.54**	**101**	P	**P**	**15 30 52.4**	**+0.1**
CART				IAmb	IAmb	15 30 53.0	
	comp=Z,10nm,0.9s						
MDT	**Midelt**	**21.89**	**116**	LR	LR	15 37 37.8	
	comp=Z,77nm,22.0s,baz=335,slow=32						
SFJD	**Kangerlussuaq**	**24.91**	**339**	LR	LR	15 38 08.8	
	comp=Z,54nm,21.8s,baz=158,slow=29						
DAVOX	**Davos/Dischmat**	**26.16**	**73**	LR	LR	15 40 29.8	
	comp=Z,125nm,21.5s,baz=270,slow=33						
SCHQ	**Schefferville**	**26.43**	**305**	LR	LR	15 40 08.5	
	comp=Z,136nm,21.8s,baz=38,slow=32						
NOA	**NORSAR Array B**	**27.77**	**41**	LR	LR	15 41 38.8	
	comp=Z,56nm,18.6s,baz=285,slow=34						
GERES	**GERESS Array B**	**28.36**	**68**	P	**P**	**15 31 56.7**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=272,slow=9.7,SNR=3.7						
FRB	**Frobisher Bay**	**29.25**	**324**	LR	LR	15 40 24.9	
	comp=Z,129nm,19.0s,baz=61,slow=30						
KEST	**Kesra**	**29.69**	**95**	LR	LR	15 42 35.1	
	comp=Z,182nm,19.8s,baz=304,slow=34						
VRAC	**Vranov**	**30.16**	**66**	LR	LR	15 43 26.3	
	comp=Z,197nm,19.4s,baz=284,slow=35						
KOWA	**Kowa**	**36.73**	**139**	LR	LR	15 46 41.9	
	comp=Z,124nm,19.0s,baz=80,slow=34						
AKASG	**Malin Array Be**	**37.84**	**61**	LR	LR	15 49 52.1	
	comp=Z,89nm,18.3s,baz=285,slow=38						
TORD	**Torodi Ar. Bea**	**40.71**	**132**	P	**P**	**15 33 45.0**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=335,slow=6.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**40.71**	**132**	P	**P**	**15 33 42.3**	**-1.4**
DBIC	**Dimbokro**	**43.35**	**145**	LR	LR	15 51 03.5	
	comp=Z,74nm,18.7s,baz=308,slow=34						
BR131	**Keskin Array S**	**44.79**	**74**	P	**P**	**15 34 16.6**	**-0.3**
BRTR	**Keskin Array B**	**44.79**	**74**	P	**P**	**15 34 17.1**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=269,slow=6.2,SNR=3.8						
BRTR	**Keskin Array B**	**44.79**	**74**	P	**P**	**15 34 16.4**	**-0.4**
PDAR	**Pinedale Array**	**56.30**	**299**	LR	LR	15 58 19.4	
	comp=Z,132nm,19.6s,baz=16,slow=34						
TXAR	**Lajitas Array**	**60.19**	**283**	P	**P**	**15 36 12.2**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=67,slow=6.9,SNR=4.9						
TXAR				LR	LR	16 02 11.5	
	comp=Z,149nm,18.5s,baz=0.0,slow=36						
CPUP	**Villa Florida**	**76.10**	**207**	P	**P**	**15 37 49.2**	**-1.3**
CPUP				IAmb	IAmb	15 38 17.9	
	comp=Z,5.9nm,1.4s						
SONM	**Songino Array**	**79.03**	**29**	P	**P**	**15 38 07.1**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=335,slow=6.4,SNR=1.9						
SONM	**Songino Array**	**79.03**	**29**	IAmb	IAmb	15 38 14.1	
	comp=Z,1.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**145.12**	**48**	PKP	**PKPab**	**15 45 40.1**	**-0.1**
	comp=Z,2.2nm,0.9s,baz=225,slow=2.9,SNR=3.9						
FITZ	**Fitzroy Crossi**	**145.12**	**48**	PKPbc	**PKPbc**	**15 45 39.3**	**-0.9**
VNDA	**Vanda**	**147.37**	**184**	PKPbc	**PKPab**	**15 45 47.0**	**-0.3**
	comp=Z,1.6nm,1.1s,baz=292,slow=2.8,SNR=6.0						
WRA	**Warramunga Arr**	**150.82**	**36**	PKPbc	**PKPbc**	**15 45 55.7**	**0.0**
	comp=Z,0.5nm,0.8s,baz=336,slow=2.8,SNR=5.0						
ASAR	**Alice Springs**	**153.91**	**40**	PKPbc	**PKiKP**	**15 46 02.9**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=348,slow=2.2,SNR=5.7						

IDC ***18*** *15:29:34.5±1.8, 18˚.24N×106˚.37W, h0km, mb3.8/8, mb1 4.0/10, mb1mx3.8/55, mbtmp3.8/10, ML3.6/2, MS4.0/14, Ms1 4.0/14, ms1mx3.8/37, Error ellipse: s-maj=56.8km s-min=18.0km az=51.0*

GCMT ***18*** *15:29:34.7±0.5, 18˚.58N±0˚.02×106˚.29W±0˚.02, h20km±1km, MW4.8/86, Moment Tensor Solution. s12,c12; s86,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr=0.50±.12; Mθθ=0.59±.08; Mφφ 1.09±.10; Mrθ 0.43±.18; Mrφ -1.89±.08; Mθφ 0.70±.18; Best double couple: Mo2.26100×10^{16} NP1:φ284.00000°, δ67.00000°, λ-167.00000°. NP2: φs189.00000°, δ78.00000°, λ-23.00000°. Principal axes: T 2.3630, Plg7.0000°, Azm238.0000°; N -0.2090, Plg64.0000°, Azm344.0000°; P -2.1580, Plg25.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

MEX ***18*** *15:29:35.2±0.6, 18˚.56N×106˚.25W, h23km±13km, MD3.5*

NEIC ***18*** *15:29:36.7±1.7, 18˚.5N±0˚.1×106˚.17W±0˚.08, h10km±1km, mb4.1/57, Error ellipse: s-maj=18.3km s-min=11.9km az=203.0*

ISC 18 15:29:41.2±0.9, 18˚.65N±0˚.08×105˚.96W±0˚.08, h35km, n104, σ1^{s}42/97, mb4.0/20, MS4.0/9, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.21**	**46**	*e*P	**Pn**	**15 29 57.2**	**-4.4**
CJM				*e*S	**Sn**	**15 30 15.0**	**-1.8**
R15V		**1.94**	**74**	*e*P	**Pn**	**15 30 08.5**	**-3.2**
COIG	**Colima**	**2.21**	**76**	*e*P	**Pn**	**15 30 13.0**	**-2.5**
COIG				*e*S	**Sn**	**15 30 40.7**	**-1.0**
EZ5V		**2.38**	**69**	*e*P	**Pn**	**15 30 14.2**	**-3.7**
EZ5V				*i* S	**Sn**	**15 30 45.9**	**-0.1**
MMIG	**Aquila**	**2.51**	**98**	*e*P	**Pn**	**15 30 16.0**	**-3.5**
MMIG				*e*S	**Sn**	**15 30 47.6**	**-1.2**
ZIIG	**Zihuatanejo**	**4.40**	**103**	*i* P	**Pn**	**15 30 42.1**	**-3.3**
ZIIG				*i* S	**Sn**	**15 31 34.2**	**-1.3**
MOIG	**Morelia**	**4.62**	**76**	Pn	**Pn**	**15 30 49.3**	**+0.5**
ZAIG	**Zacatecas**	**5.18**	**37**	Pn	**Pn**	**15 30 57.0**	**+0.5**
SLBS	**Sierra La Lagu**	**6.24**	**324**	Pn	**Pn**	**15 31 09.0**	**-1.8**
UNM	**Universidad Na**	**6.45**	**83**	Pn	**Pn**	**15 31 14.9**	**+0.9**
LPIG	**La Paz**	**6.77**	**324**	LR	LR	15 33 13.6	
	comp=Z,3μm,18.4s,baz=181,slow=32						
TLIG	**Tlapa**	**7.11**	**98**	Pn	**Pn**	**15 31 22.7**	**-0.2**
CMIG	**Matias Romero**	**10.66**	**97**	Pn	**Pn**	**15 32 12.7**	**+1.3**
	0.8nm,0.3s,baz=277,slow=11,SNR=6.8						
CMIG				LR	LR	15 35 51.2	
	comp=Z,387nm,20.7s,baz=286,slow=34						
TX31	**Lajitas Ar. Si**	**10.84**	**11**		**Pn**	**15 32 14.6**	**+0.6**
TX32	**Lajitas Array**	**10.84**	**11**		**Pn**	**15 32 14.8**	**+0.8**
TXAR	**Lajitas Array**	**10.84**	**11**	Pn	**Pn**	**15 32 17.5**	**+3.5**
	0.1nm,0.3s,baz=188,slow=13,SNR=11						
TXAR				LR	LR	15 36 25.6	
	comp=Z,676nm,19.1s,baz=0.0,slow=36						
TXAR	**Lajitas Array**	**10.84**	**11**	Pn	**Pn**	**15 32 14.5**	**+0.5**
833A	**Chaparral WMA,**	**11.36**	**31**	Pn	**Pn**	**15 32 23.2**	**+2.3**
MNTX	**Cornudas Mount**	**13.00**	**2**	Pn	**Pn**	**15 32 44.1**	**+0.6**
319A	**Douglas**	**13.02**	**347**	Pn	**Pn**	**15 32 44.0**	**+0.1**
JCT	**Junction City**	**13.04**	**24**	Pn	**Pn**	**15 32 45.2**	**+1.2**
121A	**Cookes Peak, D**	**13.92**	**354**	Pn	**Pn**	**15 32 58.6**	**+2.4**
TUC	**Tucson**	**14.28**	**343**	Pn	**Pn**	**15 33 01.4**	**+0.4**
214A	**Organ Pipe Nat**	**14.62**	**336**	P	**P**	**15 33 11.5**	**0.0**
ABTX	**Abilene, Hawle**	**15.03**	**21**	Pn	**Pn**	**15 33 13.4**	**+2.4**
ABTX				IAmb	IAmb	15 33 31.0	
	comp=Z,8.2nm,1.0s						
SPX	**San Pedro Mart**	**15.04**	**327**	Pn	**Pn**	**15 33 11.6**	**+0.1**
SPX				IAmb	IAmb	15 33 18.8	
	comp=Z,7.7nm,1.2s						
BNM	**Barren Site**	**15.45**	**358**	Pn	**Pn**	**15 33 18.1**	**+1.3**
LENM	**Lemitar**	**15.48**	**357**	Pn	**Pn**	**15 33 18.0**	**+0.9**
MSTX	**Muleshoe**	**15.52**	**10**	Pn	**Pn**	**15 33 18.6**	**+1.0**
113A	**Mohawk Valley,**	**15.71**	**335**		**Pn**	**15 33 19.8**	**-0.1**
113A				IAmb	IAmb	15 33 25.2	
	comp=Z,16nm,1.4s						
237A	**Washetta, Mont**	**16.14**	**33**	Pn	**Pn**	**15 33 26.6**	**+1.2**
X18A	**Snowflake**	**16.21**	**348**	Pn	**Pn**	**15 33 26.4**	**0.0**
ANMO	**Albuquerque**	**16.24**	**359**	LR	LR	15 39 33.9	
	comp=Z,513nm,21.0s,baz=185,slow=36						
GLA	**Glamis**	**16.40**	**333**	Pn	**Pn**	**15 33 28.2**	**-0.5**
X16A	**Lo Mia Camp, P**	**16.45**	**344**		**P**	**15 33 31.6**	**-0.3**
MTO3	**Montecristo**	**16.46**	**102**		**P**	**15 33 33.6**	**+1.4**
MTO3				IAmb	IAmb	15 33 41.2	
	comp=Z,38nm,1.4s						
NATX	**Nacogdoches**	**16.56**	**36**	Pn	**P**	**15 33 32.1**	**-0.9**
Z35A	**Perchaven, San**	**16.57**	**26**	Pn	**P**	**15 33 32.2**	**-0.8**
Z35A				IAmb	IAmb	15 33 45.0	
	comp=Z,27nm,0.9s						
RMX	**La Rumorosa**	**16.61**	**329**	Pn	**Pn**	**15 33 28.8**	**-2.7**
441A	**DeRidder**	**16.71**	**41**	Pn	**P**	**15 33 34.1**	**-0.4**
WMOK	**Wichita Mounta**	**17.25**	**20**		**P**	**15 33 40.8**	**+0.2**
WUAZ	**Wupatki**	**17.47**	**345**	P	**Pn**	**15 33 42.4**	**+0.1**
PFO	**Pinyon Flats O**	**17.61**	**330**	LR	LR	15 39 36.9	
	comp=Z,405nm,18.7s,baz=182,slow=34						
W13A	**Hualapai Mount**	**17.83**	**338**		**Pn**	**15 33 45.9**	**-0.8**
X37A	**Clayton**	**18.46**	**29**	P	**Pn**	**15 33 55.2**	**+1.0**
U15A	**North Rim**	**18.57**	**344**	P	**P**	**15 33 55.2**	**-0.2**
MVCO	**Mesa Verde**	**18.63**	**354**	P	**P**	**15 33 56.4**	**+0.4**
OK030	**Cody Creek RV**	**19.03**	**23**	P	**Pn**	**15 34 02.0**	**+1.0**
OK030				IAmb	IAmb	15 34 18.6	
	comp=Z,12nm,0.9s						
SDCO	**Great Sand Dun**	**19.03**	**1**	P	**Pn**	**15 34 02.0**	**+0.5**
SDCO				IAmb	IAmb	15 34 25.7	
	comp=Z,12nm,1.4s						
KNB	**Kanab**	**19.27**	**343**	P	**P**	**15 34 02.9**	**-0.1**
MIAR	**Mount Ida**	**19.29**	**32**	P	**Pn**	**15 34 03.9**	**-0.4**
MIAR				IAmb	IAmb	15 34 17.1	
	comp=Z,8.2nm,1.0s						
LCMT	**Little Creek M**	**19.38**	**342**	P	**P**	**15 34 03.7**	**-0.5**
PKCU	**Pink Cliffs**	**19.54**	**345**	P	**P**	**15 34 05.2**	**-0.9**
ISA	**Isabella, Lake**	**20.24**	**329**	P	**P**	**15 34 13.0**	**-0.5**
HHAR	**Hobbs**	**20.52**	**29**	P	**P**	**15 34 16.9**	**+0.5**
MSU	**Marysvale**	**20.52**	**346**	P	**P**	**15 34 16.5**	**-0.1**
MVU	**Marysvale**	**20.52**	**346**	P	**P**	**15 34 16.1**	**-0.6**
Q16A	**Castle Valley**	**20.70**	**348**	P	**P**	**15 34 18.5**	**0.0**
CBKS	**Cedar Bluff**	**20.81**	**14**	P	**P**	**15 34 19.3**	**-0.3**
CBKS				IAmb	IAmb	15 34 34.1	
	comp=Z,15nm,1.0s						
PSUT	**Pine Spring**	**20.97**	**342**	P	**P**	**15 34 21.0**	**-0.6**
TMUT	**Trail Mountain**	**21.07**	**349**	P	**P**	**15 34 22.0**	**-0.7**
FCAR	**Ozark Folk Cen**	**21.08**	**33**	P	**P**	**15 34 22.7**	**+0.2**
FCAR				IAmb	IAmb	15 34 35.3	
	comp=Z,25nm,1.4s						
U40A	**Yellville**	**21.09**	**31**	P	**P**	**15 34 22.4**	**-0.1**
U40A				IAmb	IAmb	15 34 30.9	
	comp=Z,15nm,1.1s						
P17A	**Butcher Ranch,**	**21.16**	**350**	P	**P**	**15 34 22.9**	**-0.6**
R11A	**Troy Canyon, C**	**21.35**	**339**	P	**P**	**15 34 24.0**	**-1.6**
451A	**Vernon**	**21.86**	**53**	P	**P**	**15 33 33.4**	**+2.5**
S39A	**Bolivar**	**21.96**	**28**	P	**P**	**15 34 33.2**	**+1.3**
S39A				IAmb	IAmb	15 34 40.8	
	comp=Z,16nm,1.0s						
RDMU	**Red Mountain**	**22.07**	**353**	P	**P**	**15 34 33.5**	**+0.3**
OMMB	**Old Mammoth Mi**	**22.07**	**332**	P	**P**	**15 34 33.2**	**-0.2**
OMMB				IAmb	IAmb	15 35 00.4	
	comp=Z,10nm,1.5s						
MDPB	**Devils Postpil**	**22.13**	**331**	P	**P**	**15 34 33.6**	**-0.4**
MDPB				IAmb	IAmb	15 34 48.8	
	comp=Z,6.6nm,1.1s						
250A	**Grady**	**22.16**	**49**	P	**P**	**15 34 34.6**	**+0.6**
LRAL	**Lakeview Retre**	**22.23**	**46**	P	**P**	**15 34 36.0**	**+1.2**
DUG	**Dugway, Tooele**	**22.27**	**346**	P	**P**	**15 34 34.4**	**-1.0**
DUG				IAmb	IAmb	15 35 00.7	
	comp=Z,5.7nm,1.1s						
NV11	**Mina Array Sit**	**22.39**	**334**	P	**P**	**15 34 36.1**	**-0.7**
NV11				IAmb	IAmb	15 34 51.7	
	comp=Z,6.0nm,1.2s						
NVAR	**Mina Array Bea**	**22.45**	**334**	P	**P**	**15 34 36.9**	**-0.5**
	comp=Z,3.3nm,1.0s,baz=153,slow=10,SNR=5.7						
NVAR				LR	LR	15 42 40.9	
	comp=Z,325nm,19.4s,baz=162,slow=35						
NVAR	**Mina Array Bea**	**22.45**	**334**	P	**P**	**15 34 35.9**	**-1.5**
RYN	**Ryan**	**22.71**	**334**	P	**P**	**15 34 39.2**	**-1.0**
RYN				IAmb	IAmb	15 34 54.2	
	comp=Z,5.2nm,1.0s						
R40A	**Maddies Statio**	**22.92**	**29**	P	**P**	**15 34 42.8**	**+0.7**
R40A				IAmb	IAmb	15 34 50.2	
	comp=Z,12nm,1.0s						
ELK	**Elko**	**23.42**	**342**	P	**P**	**15 34 47.8**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=172,slow=11,SNR=3.3						
ELK				LR	LR	15 43 17.4	
	comp=Z,329nm,19.8s,baz=168,slow=35						
ELK	**Elko**	**23.42**	**342**	P	**P**	**15 34 47.5**	**+0.1**
ELK				IAmb	IAmb	15 34 49.1	
	comp=Z,5.9nm,1.4s						
PAHR	**Pah Rah Range**	**23.98**	**334**	P	**P**	**15 34 53.4**	**+0.8**
PAHR				IAmb	IAmb	15 34 56.3	
	comp=Z,9.3nm,1.5s						
V48A	**Smith Brothers**	**24.00**	**41**	P	**P**	**15 34 53.2**	**+0.5**
PDAR	**Pinedale Array**	**24.23**	**354**	P	**P**	**15 34 57.9**	**+2.9**
	comp=Z,0.7nm,0.8s,baz=160,slow=8.6,SNR=1.7						
PDAR				LR	LR	15 44 16.0	
	comp=Z,333nm,18.4s,baz=175,slow=36						
CLTN	**Cedars of Leba**	**24.53**	**41**	P	**P**	**15 34 58.4**	**+0.9**
TKL	**Tuckaleechee C**	**25.92**	**45**	LR	LR	15 47 52.9	
	comp=Z,171nm,19.9s,baz=244,slow=42						
BCYI	**Bear Canyon**	**26.34**	**348**	P	**P**	**15 35 13.2**	**-0.9**
MSO	**Missoula**	**28.86**	**

JKRS eS Sb 15 33 31.9 +0.3
HATJ Hateruma jima 0.95 168 P Pb 15 33 22.4 -0.1
HATJ eS Sb 15 33 34.6 -0.1

TAP 18 15:33:51.9, 25.17N×121.60E, h2km, ML1.1, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YM08	**YM08** baz=342	**0.02**	**343**	P	Pg	15 33 52.8	+0.3
YM01	**YM01** baz=231	**0.03**	**231**	*e*P	Pg	15 33 53.1	+0.5
YM10	**YM10** baz=252	**0.03**	**252**	P	Pg	15 33 53.0	+0.3
YM10	baz=252			*e*S	Sg	15 33 54.1	+1.0
YM03	**YM03** baz=284	**0.05**	**284**	*e*P	Pg	15 33 53.7	+0.7
ANP	**Anpu** baz=285	**0.07**	**286**	P	Pg	15 33 54.0	+0.6
ANP	baz=285			*e*S	Sg	15 33 55.3	+0.8

IDC ***18*** *15:52:53.9±0.7, 20.70S×174.20W, h0km, mb4.2/14, mb1 4.4/16, mb1mx4.2/37, mbtmp4.2/16, ML3.7/2, MS3.7/1, Ms1 3.7/1, ms1mx2.9/42, Error ellipse: s-maj=28.2km s-min=16.8km az=143.0*
NEIC ***18*** *15:52:54.2±1.6, 20.8S±0.1°×174.2W±0.1°, h10km±4km, mb4.6/22, Error ellipse: s-maj=23.9km s-min=9.0km az=136.0*

ISC 18 15:52:57.3±0.6, 20.7S±0.1°×174.2W±0.1°, h27km, n53, σ0s93/52, mb4.4/22, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.35**	**69**		Pn	15 53 51.5	-10
AFI	**Afiamalu**	**7.16**	**19**	Pn	Pn	15 54 34.3	-6.0
RAR	**Rarotonga** comp=Z,355nm,20.0s,baz=294,slow=33	**13.50**	**95**	LR	LR	16 00 23.1	
KNTN	**Kanton**	**18.00**	**8**	P	**Pn**	**15 57 04.0**	**-1.7**
DZM	**Mont Dzumac** 0.1nm,0.3s,baz=84,slow=18,SNR=3.2	**18.07**	**262**	P	**P**	**15 57 07.9**	**+1.1**
DZM	**Mont Dzumac**	**18.07**	**262**	P	**P**	**15 57 06.9**	**0.0**
URZ	**Urewera** 0.6nm,0.3s,baz=356,slow=8.2,SNR=3.7	**19.03**	**201**	P	**Pn**	**15 57 17.6**	**-0.4**
URZ	**Urewera**	**19.03**	**201**	P	**P**	**15 57 16.3**	**-0.9**
URZ	comp=Z,40nm,1.4s			IAmb	IAmb	15 57 19.1	
CTA	**Charters Tower** comp=Z,2.8nm,0.8s,baz=108,slow=12,SNR=2.7	**37.00**	**264**	P	**P**	**16 00 05.2**	**+0.3**
CTAO	**Charters Tower**	**37.00**	**264**	P	**P**	**16 00 04.1**	**-0.7**
CTAO	comp=Z,17nm,1.5s			IAmb	IAmb	16 00 05.8	
STKA	**Stephens Creek** comp=Z,3.2nm,0.8s,baz=72,slow=9.6,SNR=5.7	**40.90**	**245**	P	**P**	**16 00 37.5**	**0.0**
BBOO	**Buckleboo**	**45.64**	**244**	P	**P**	**16 01 15.1**	**-0.6**
BBOO	comp=Z,26nm,1.5s			IAmb	IAmb	16 01 43.0	
WR0	**Warramunga Arr**	**47.89**	**261**	P	**P**	**16 01 32.4**	**-1.1**
WR0	comp=Z,5.0nm,1.2s			IAmb	IAmb	16 01 50.8	
AS31	**Alice Springs**	**47.92**	**256**	P	**P**	**16 01 32.4**	**-1.3**
ASAR	**Alice Springs** comp=Z,6.1nm,1.0s,baz=87,slow=8.7,SNR=32	**47.92**	**256**	P	**P**	**16 01 33.6**	**-0.1**
ASAR				PcP	**PcP**	**16 03 03.2**	**+1.2**
	comp=Z,0.9nm,0.9s,baz=90,slow=3.7,SNR=1.9						
ASAR	**Alice Springs**	**47.92**	**256**	P	**P**	**16 01 32.5**	**-1.2**
WB0	**Warramunga Arr**	**48.06**	**262**	P	**P**	**16 01 34.6**	**-0.2**
WB0	comp=Z,3.3nm,0.8s			IAmb	IAmb	16 01 40.5	
WB2	**Warramunga Arr**	**48.07**	**261**	P	**P**	**16 01 34.4**	**-0.5**
WB2	comp=Z,7.8nm,1.2s			IAmb	IAmb	16 01 37.5	
WRA	**Warramunga Arr** comp=Z,1.1nm,0.6s,baz=97,slow=7.8,SNR=18	**48.08**	**261**	P	**P**	**16 01 34.1**	**-0.9**
WRA				PcP	**PcP**	**16 03 04.1**	**+1.6**
	comp=Z,1.7nm,1.0s,baz=95,slow=2.7,SNR=4.4						
WRA	**Warramunga Arr**	**48.08**	**261**	P	**P**	**16 01 33.7**	**-1.2**
MTN	**Manton Dam**	**52.71**	**269**	P	**P**	**16 02 10.2**	**+0.2**
MTN	comp=Z,6.8nm,0.9s			IAmb	IAmb	16 02 12.6	
SIJI	**Sorong** comp=Z,19nm,0.9s,baz=97,slow=7.1,SNR=9.3	**56.73**	**283**	P	**P**	**16 02 40.4**	**+1.2**
VNDA	**Vanda** comp=Z,0.7nm,0.8s,baz=21,slow=5.7,SNR=6.3	**58.04**	**186**	P	**P**	**16 02 49.1**	**+1.6**
SOEI	**Soe**	**60.05**	**271**	P	**P**	**16 03 02.0**	**-0.6**
TNTI	**Ternate**	**60.96**	**283**	P	**P**	**16 03 08.1**	**-0.5**
LUWI	**Luwuk**	**64.47**	**279**	P	**P**	**16 03 31.7**	**-0.3**
TOLI2	**Tolitoli**	**67.13**	**280**	P	**P**	**16 03 48.2**	**-0.9**
QSPA	**South Pole Qui**	**69.36**	**180**	P	**P**	**16 04 01.6**	**-0.8**
QSPA	comp=Z,12nm,1.2s			IAmb	IAmb	16 04 06.9	
MJAR	**Matsushiro Arr** comp=Z,1.4nm,0.7s,baz=155,slow=5.6,SNR=3.3	**72.54**	**321**	P	**P**	**16 04 23.1**	**+1.1**
SMY	**Shemya**	**73.84**	**353**	P	**P**	**16 04 28.4**	**-0.7**
JTM	**Tenmabayashi**	**73.96**	**326**	P	**P**	**16 04 29.8**	**-0.5**
PEA0B	**Petropavlovsk-**	**77.45**	**343**	P	**P**	**16 04 50.6**	**+0.7**
PETK	**Petropavlovsk-** comp=Z,2.8nm,0.9s,baz=116,slow=8.5,SNR=3.1	**77.45**	**343**	P	**P**	**16 04 50.9**	**+1.0**
NVAR	**Mina Array Bea** comp=Z,2.3nm,0.8s,baz=227,slow=9.0,SNR=11	**78.79**	**42**	P	**P**	**16 04 58.6**	**+0.6**
NV11	**Mina Array Sit**	**78.88**	**42**	P	**P**	**16 04 58.9**	**+0.5**
NV11	comp=Z,8.7nm,1.4s			IAmb	IAmb	16 05 00.9	
TXAR	**Lajitas Array** comp=Z,0.8nm,1.0s,baz=298,slow=2.7,SNR=5.2	**84.21**	**56**	P	**P**	**16 05 26.8**	**0.0**
HLID	**Hailey**	**84.21**	**39**	P	**P**	**16 05 25.3**	**-1.2**
HLID	comp=Z,4.4nm,1.1s			IAmb	IAmb	16 05 31.1	
PDAR	**Pinedale Array** comp=Z,0.8nm,0.8s,baz=198,slow=1.4,SNR=4.7	**86.72**	**42**	P	**P**	**16 05 39.3**	**+0.2**
PDAR	**Pinedale Array**	**86.72**	**42**	P	**P**	**16 05 38.3**	**-0.8**
SEY	**Seymchan** comp=Z,3.7nm,0.9s,baz=205,slow=4.6,SNR=3.8	**87.43**	**345**	P	**P**	**16 05 42.6**	**+0.9**
ILAR	**Eielson Array** comp=Z,0.9nm,1.1s,baz=210,slow=5.2,SNR=3.4	**87.78**	**11**	P	**P**	**16 05 44.3**	**+0.9**
BMAR	**Burnt Mountain**	**90.59**	**11**	P	**P**	**16 05 56.0**	**-0.6**
CMAR	**Chiang Mai Arr** comp=Z,1.1nm,1.0s,baz=111,slow=2.5,SNR=7.8	**93.54**	**288**	P	**P**	**16 06 14.0**	**+2.6**
CMAR	**Chiang Mai Arr**	**93.54**	**288**	P	**P**	**16 06 10.4**	**-0.9**
AKASG	**Malin Array Be** comp=Z,3.6nm,0.7s,baz=40,slow=3.9,SNR=16	**144.84**	**334**	PKP	**PKPdf**	**16 12 31.4**	**-0.2**
AKASG	**Malin Array Be**	**144.84**	**334**		**PKPdf**	**16 12 31.0**	**-0.6**
CLL	**Collm** comp=Z,8.0nm,1.1s	**148.95**	**351**	*e*PKPbc	**PKiKP**	**16 12 43.0**	**-0.9**
KRLC	**Kraliky**	**149.43**	**346**	*e*PKP	**PKiKP**	**16 12 46.0**	**+1.0**
BRTR	**Keskin Array B** comp=Z,2.5nm,0.8s,baz=104,slow=4.0,SNR=8.4	**149.56**	**315**	PKPbc	**PKiKP**	**16 12 45.6**	**-0.2**
BRTR	**Keskin Array B**	**149.56**	**315**		**PKPbc**	**16 12 44.3**	**-0.4**
KHC	**Kasperske Hory**	**150.97**	**349**	*e*PKP	**PKPdf**	**16 12 41.5**	**-0.4**
KHC				*ex*	x	16 12 48.5	
KHC				*ex*	x	16 12 58.6	
GERES	**GERESS Array B** comp=Z,1.4nm,0.8s,baz=45,slow=0.6,SNR=7.1	**151.22**	**349**	PKPbc	**PKiKP**	**16 12 49.4**	**+0.6**
GERES	**GERESS Array B**	**151.22**	**349**		**PKiKP**	**16 12 48.8**	**0.0**

IDC ***18*** *15:55:24.7±0.9, 32.72N×75.93E, h0km, mb3.8/12, mb1 4.0/14, mb1mx3.7/54, mbtmp3.9/14, ML3.8/2, MS4.0/2, Ms1 4.0/2, ms1mx3.0/47, Error ellipse: s-maj=24.1km s-min=14.4km az=53.0*
NDI ***18*** *15:55:28.2±2.6, 32.75N×76.43E, h5km, ML3.8, mb4.3(NEIC)*
BJI ***18*** *15:55:31.2±0.0, 32.93N×76.03E, h70km, mB4.2/5, mb4.0/6, Ms3.8/2, Ms7 3.6/2*
NEIC ***18*** *15:55:32.6±2.2, 32.94N±0.09×76.06E±0.09, h61km±7km, mb4.3/18, Error ellipse: s-maj=13.0km s-min=11.3km az=197.0*

ISC 18 15:55:27.5±0.4, 32.73N±0.05×76.02E±0.05, h20km, n64, σ1s57/65, mb4.2/18, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**0.54**	**153**	*i* Pg	**Pb**	**15 55 37.3**	**-1.2**
DHRM				*e*S	**Sb**	**15 55 46.6**	**+0.7**
DHRM	comp=E,3μm,0.5s			IAML		15 55 50.2	
DHRM	comp=N,23μm,0.6s			AMP		15 55 55.6	
SMLA	**Simla**	**1.88**	**148**	*i* Pg	**Pb**	**15 56 00.4**	**-0.7**
SMLA				*i* Sg	**Sb**	**15 56 25.3**	**+1.2**
SMLA	comp=N,842nm,0.3s			IAML		15 56 28.3	
SMLA	comp=E,829nm,0.3s			IAML		15 56 28.8	
NIL	**Nilore**	**2.49**	**292**	Pn	**Pb**	**15 56 11.1**	**-0.5**
DDI	**Dehra Dun**	**2.97**	**144**	*e*P	**Pn**	**15 56 16.0**	**+2.4**
DDI				*e*S	**Sn**	**15 56 48.1**	**-0.5**
DDI	comp=N,3μm,0.3s			AMP		15 56 56.0	
DDI	comp=N,226nm,0.5s			IAML		15 56 56.0	
SONA	**Sohna**	**4.56**	**168**	*ex*	Pb	15 56 52.6	+5.7
KBL	**Kabul**	**6.09**	**289**		**Pn**	**15 56 59.9**	**+3.3**
AJM	**Ajmer**	**6.34**	**191**	*e*P	**Pn**	**15 57 00.0**	**0.0**
AJM				*e*S	Sb	15 58 45.0	+12
GAR	**Garm**	**7.78**	**325**	Pn	**Pn**	**15 57 20.8**	**+1.1**
CHGR	**Chuyangaron**	**8.12**	**319**	Pn	**Pn**	**15 57 26.1**	**+1.7**
BTK	**Batken**	**8.42**	**332**	Pn	**Pn**	**15 57 29.8**	**+1.3**
KDJ	**Kajisay**	**9.43**	**5**	Pn	**Pn**	**15 57 44.3**	**+1.9**
BHPL	**Bhopal**	**9.54**	**172**	*e*P	**Pn**	**15 57 43.9**	**+0.1**
BHPL	comp=Z,8.4nm,0.3s			IAmb	IAmb	15 57 48.6	
BHPL				*e*S	**Sn**	**15 59 24.9**	**-5.6**
BOOM	**Boomskoye usch**	**9.74**	**360**	Pn	**Pn**	**15 57 49.4**	**+2.7**
BHUJ	**Bhuj**	**10.98**	**212**	*ex*	Sg	16 01 08.5	
KK31	**Karatay Array**	**11.22**	**339**	Pn	**Pn**	**15 58 06.8**	**0.0**
KKAR	**Karatay Array**	**11.22**	**339**	Pn	**Pn**	**15 58 07.0**	**+0.2**
KKAR	**Karatay Array**	**11.22**	**339**		**Pn**	**15 58 06.8**	**0.0**
WMQ	**Urumqi**	**14.36**	**36**	Pn	**Pn**	**15 58 50.1**	**+0.4**
MAKZ	**Makanchi**	**14.78**	**16**	Pn	**Pn**	**15 58 55.4**	**0.0**
MK31	**Makanchi Array**	**14.84**	**17**	Pn	**Pn**	**15 58 55.8**	**-0.4**
MKAR	**Makanchi Array** comp=Z,1.0nm,0.3s,baz=199,slow=14,SNR=28	**14.84**	**17**	Pn	**Pn**	**15 58 55.9**	**-0.3**
MKAR				Sn	**Sn**	**16 01 35.1**	**-4.9**
	comp=Z,0.3nm,0.3s,baz=196,slow=26,SNR=6.6						
MKAR	**Makanchi Array**	**14.84**	**17**	Pn	**Pn**	**15 58 55.6**	**-0.6**
ASHT	**Ashkhabad**	**15.29**	**295**	Pn	**Pn**	**15 59 03.7**	**+1.5**
KURBB	**Kurchatov Arra** comp=Z,0.1nm,0.3s,baz=192,slow=12,SNR=13	**17.97**	**5**	Pn	**Pn**	**15 59 34.6**	**-1.4**
WSAR	**Wadi Sarin** comp=Z,0.2nm,0.3s,baz=63,slow=12,SNR=2.9	**18.01**	**243**	Pn	**P**	**15 59 38.4**	**+1.3**
KURK	**Kurchatov**	**18.07**	**5**		**Pn**	**15 59 35.2**	**-2.1**
GTA	**Gaotai**	**20.33**	**64**	*e*P	**P**	**16 00 02.9**	**+0.3**
GTA	comp=Z,4.0nm,0.7s			pmax	pmax		
GTA	comp=Z,43nm,5.8s			pmax	pmax		
GTA	comp=Z,81nm,14.2s			LR	LR		
GTA	comp=Z,77nm,11.3s			LR	LR		
GTA	comp=Z,93nm,13.5s			LR	LR		
ABKAR	**Akbulak array**	**20.41**	**329**		Pn	16 00 04.7	-0.7
BVAR	**Borovoye Array** comp=Z,3.3nm,0.5s,baz=116,slow=10,SNR=29	**20.68**	**350**	P	**P**	**16 00 06.2**	**+0.1**
BRVK	**Borovoye**	**20.73**	**350**		**P**	**16 00 07.6**	**+0.9**
BRVK	comp=Z,14nm,0.7s			IAmb	IAmb	16 00 08.3	
ZAA0	**Zalesovo Array**	**22.12**	**14**	P	**P**	**16 00 20.2**	**-1.3**
ZALV	**Zalesovo Beam** comp=Z,2.0nm,0.5s,baz=209,slow=8.5,SNR=11	**22.12**	**14**	P	**P**	**16 00 20.7**	**-0.8**
ZALV	**Zalesovo Beam**	**22.12**	**14**	P	**P**	**16 00 19.9**	**-1.7**
AKTO	**Aktyubinsk** comp=Z,1.6nm,0.6s,baz=134,slow=12,SNR=4.2	**22.13**	**328**	P	**P**	**16 00 23.1**	**+1.4**
AKTO				S	**S**	**16 04 25.5**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=15,slow=20,SNR=2.3						
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.4s,baz=302,slow=9.4,SNR=10	**25.02**	**119**	P	**P**	**16 00 51.6**	**+1.3**
GNI	**Garni**	**26.13**	**295**	P	**P**	**16 00 58.7**	**-1.7**
GNI	comp=Z,12nm,1.2s			IAmb	IAmb	16 01 14.9	
SONM	**Songino Array** comp=Z,1.3nm,0.6s,baz=247,slow=10,SNR=8.2	**27.43**	**48**	P	**P**	**16 01 13.2**	**+1.2**
SONM	**Songino Array**	**27.43**	**48**	P	**P**	**16 01 13.6**	**+1.6**
TLY	**Talaya** comp=Z,80nm,18.3s,baz=310,slow=39	**27.62**	**39**	LR	LR	16 13 29.1	
ELL	**Elmali**	**37.82**	**289**	P	**P**	**16 02 43.5**	**+0.6**
KSAR	**Wonju Array Be**	**42.27**	**69**	P	**P**	**16 03 19.9**	**+0.4**
FINES	**FINESS Array B** comp=Z,0.8nm,0.6s,baz=132,slow=9.7,SNR=1.8	**42.89**	**327**	P	**P**	**16 03 25.6**	**+1.3**
PSZ	**Piszkesteto**	**44.42**	**307**	P	**P**	**16 03 35.8**	**-1.1**
PSZ	comp=Z,2.4nm,0.8s			IAmb	IAmb	16 03 54.8	
ARCES	**ARCESS Array B** comp=Z,5.6nm,1.0s,baz=117,slow=9.2,SNR=1.9	**46.19**	**338**	P	**P**	**16 03 51.4**	**+0.8**
ZCCA	**Zocca**	**50.94**	**303**	P	**P**	**16 04 27.1**	**-0.5**
SALO	**Salr**	**51.04**	**305**	P	**P**	**16 04 27.5**	**-0.8**
JMM	**Marumori**	**52.18**	**65**	P	**P**	**16 04 36.5**	**-0.3**
SEY	**Seymchan** comp=Z,2.5nm,0.7s,baz=18,slow=3.2,SNR=4.7	**55.29**	**33**	P	**P**	**16 05 00.1**	**+0.9**
FAKI	**Fak Fak**	**63.86**	**112**	P	**P**	**16 05 59.4**	**+0.5**
TOA0	**Torodi Ar. Sit**	**69.91**	**273**	P	**P**	**16 06 37.0**	**-0.5**
TOA0	comp=Z,3.1nm,1.1s			IAmb	IAmb	16 06 55.8	
TORD	**Torodi Ar. Bea** comp=Z,1.3nm,0.6s,baz=41,slow=5.3,SNR=8.8	**69.91**	**273**	P	**P**	**16 06 37.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**69.91**	**273**	P	**P**	**16 06 36.8**	**-0.8**
RES	**Resolute Bay** comp=Z,2.1nm,0.4s,baz=86,slow=6.2,SNR=16	**72.69**	**357**	P	**P**	**16 06 49.6**	**-3.7**
TOLK	**Toolik Lake Re**	**73.46**	**16**	P	**P**	**16 06 58.8**	**+0.6**
TOLK	comp=Z,4.7nm,1.2s			IAmb	IAmb	16 07 24.2	
IMAR	**Indian Mountai**	**74.44**	**19**	P	**P**	**16 07 03.6**	**-0.3**
BMAR	**Burnt Mountain**	**75.56**	**15**	P	**P**	**16 07 11.4**	**+1.1**
WB0	**Warramunga Arr**	**76.39**	**124**	P	**P**	**16 07 16.0**	**+0.3**
WB0	comp=Z,2.7nm,1.0s			IAmb	IAmb	16 07 22.3	
WRA	**Warramunga Arr** comp=Z,0.6nm,1.0s,baz=322,slow=5.9,SNR=2.3	**76.47**	**125**	P	**P**	**16 07 16.3**	**+0.1**
WRA	**Warramunga Arr**	**76.47**	**125**	P	**P**	**16 07 18.1**	**+1.9**
WB2	**Warramunga Arr**	**76.48**	**125**	P	**P**	**16 07 17.9**	**+1.7**
WB2	comp=Z,7.0nm,1.5s			IAmb	IAmb	16 07 20.8	
ILAR	**Eielson Array** comp=Z,0.2nm,0.6s,baz=319,slow=6.6,SNR=5.8	**77.20**	**17**	P	**P**	**16 07 20.3**	**+0.6**
ILAR	**Eielson Array**	**77.20**	**17**	P	**P**	**16 07 18.5**	**-1.1**
ASAR	**Alice Springs** comp=Z,0.5nm,1.0s,baz=310,slow=5.1,SNR=3.0	**78.70**	**128**	P	**P**	**16 07 28.5**	**-0.1**
ULM	**Lac du Bonnet** comp=Z,247nm,18.7s,baz=281,slow=39	**97.07**	**355**	LR	LR	16 57 49.1	

BJI ***18*** *16:02:03.6±0.0, 23.44S×174.41W, h7km, mB5.7/27, mb5.3/47, Ms5.1/18, Ms7 4.7/19*
IDC ***18*** *16:02:06.0±0.4, 23.49S×175.18W, h0km, mb5.1/28, mb1 5.2/29, mb1mx5.1/34, mbtmp5.1/29, ML5.7/1, MS4.3/26, Ms1 4.3/26, ms1mx4.2/40, Error ellipse: s-maj=13.7km s-min=12.4km az=152.0*
NEIC ***18*** *16:02:06.5±1.4, 23.53S±0.08×175.1W±0.1, h10km±1km, mb5.3/212, Error ellipse: s-maj=17.3km s-min=12.8km az=98.0*
MOS ***18*** *16:02:07.5±1.0, 23.52S×175.15W, h21km, mb5.4/49, Error ellipse: s-maj=8.5km s-min=7.6km az=93.9*
GCMT ***18*** *16:02:10.5±0.2, 23.65S±0.01°×174.60W±0.02, h14km, MW5.0/122, Moment Tensor Solution. s77,c99; s122,c199; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=4.35±.14; Mθθ3.95±.10; Mϕϕ0.40±.09; Mrθ0.95±.20; Mθϕ 1.62±.06; Mrϕ0.06±.23; Best double couple: Mo4.56600×10^16 NP1:ϕs65.00000°, δ39.00000°, λ-96.00000°. NP2:ϕs253.00000°, δ51.00000°, λ-85.00000°. Principal axes: T 4.6710, Plg6.0000°, Azm339.0000°; N -0.2050, Plg4.0000°, Azm70.0000°; P -4.4610, Plg83.0000°, Azm193.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***18*** *16:02:15.0±0.0, 23.06S×174.47W, h58km±3km*

ISC 18 16:02:07.7±0.5, 23.65S±0.04×175.00W±0.05, h19km±1km, h19km:pP-P, n806, σ1s58/846, mb5.3/196, **MS4.4**/38, **44C-20D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island** 182nm,0.3s,baz=120,slow=5.8,SNR=11	**6.17**	**204**	Pn	**Pn**	**16 03 38.9**	**+1.1**
RAO				Sn	**Sn**	**16 04 48.0**	**+0.3**
	241nm,0.3s,baz=84,slow=22,SNR=13						
RAO	**Raoul Island**	**6.17**	**204**	Pn	**Pn**	**16 03 38.0**	**+0.3**
NIUE	**Niue** baz=6.3,SNR=34	**6.56**	**47**	P	Pn	16 03 36.8	-6.4
NIUE	**Niue**	**6.56**	**47**		Pn	16 03 36.5	-6.7
MSVF	**Nonsavu**	**8.77**	**311**	*i* P	**Pn**	**16 04 14.0**	**+0.4**
MSVF	**Nonsavu**	**8.77**	**311**		**Pn**	**16 04 16.9**	**+3.3**
AFI	**Afiamalu**	**10.15**	**18**		Pn	16 04 25.4	-7.2
RAR	**Rarotonga** 13nm,0.3s,baz=264,slow=7.9,SNR=70	**14.29**	**83**	Pn	Pn	16 05 23.5	-5.5
RAR				Sn	Sn	16 07 45.5	-22
	3.6nm,0.3s,baz=80,slow=18,SNR=2.2						
RAR				LR	LR	16 10 29.6	
	comp=Z,1μm,20.0s,baz=242,slow=35						
RAR	**Rarotonga**	**14.29**	**83**	P	Pn	16 05 23.0	-6.0
RAR	**Rarotonga**	**14.29**	**83**	Pn	Pn	16 05 23.0	-6.0
OUZ	**Omahuta**	**15.21**	**218**	Pn	**Pn**	**16 05 41.6**	**+0.2**
WMGZ	**Waiomatatini S**	**15.21**	**200**	P	Pn	**16 05 35.8**	**-5.6**
HAZ	**Te Kaha**	**15.36**	**202**	P	Pn	16 05 36.0	-7.4
RUGZ	**Raukumara Rang**	**15.59**	**202**	P	**Pn**	**16 05 41.5**	**-5.1**
CNGZ	**Carnagh Statio**	**15.89**	**200**	P	**Pn**	**16 05 44.6**	**-5.6**
FUNA	**Funafuti**	**16.03**	**339**	Pn	**Pn**	**16 05 48.9**	**-3.3**
FUNA	comp=Z,397nm,1.4s			IAmb	IAmb	16 05 53.1	
URZ	**Urewera** comp=Z,1.4nm,0.3s,baz=272,slow=5.0,SNR=7.2	**16.05**	**203**	Pn	**Pn**	**16 05 46.9**	**-5.4**
URZ				Sn	Sn	16 08 38.1	-12
	comp=Z,5.7nm,0.3s,baz=200,slow=17,SNR=9.0						
URZ	**Urewera**	**16.05**	**203**	P	**Pn**	**16 05 46.9**	**-5.4**
MUGZ	**Murupara**	**16.37**	**204**	P	**Pn**	**16 05 53.8**	**-2.6**
MHGZ	**Mahia Peninsul**	**16.59**	**200**	P	**Pn**	**16 05 57.6**	**-1.6**
BKZ	**Black Stump Fm**	**17.08**	**203**	P	**Pn**	**16 06 02.5**	**-2.9**
HIZ	**Hauiti**	**17.16**	**208**	P	**Pn**	**16 06 06.2**	**-0.2**
DZM	**Mont Dzumac** comp=Z,2.7nm,0.3s,baz=88,slow=17,SNR=40	**17.18**	**272**	Pn	**P**	**16 06 09.1**	**+0.7**
DZM	**Mont Dzumac** comp=Z,325nm,1.3s	**17.18**	**272**	*e*P	**P**	**16 06 08.0**	**-0.4**
DZM	**Mont Dzumac**	**17.18**	**272**		**P**	**16 06 08.7**	**+0.3**
DZM	comp=Z,269nm,1.5s			IAmb	IAmb	16 06 13.6	
MCHZ	**McNeill Hill**	**17.25**	**202**	P	**P**	**16 06 08.9**	**0.0**
KAHZ	**Kahuranaki**	**17.50**	**201**	P	**Pn**	**16 06 08.0**	**-2.8**
FWVZ	**Far West T-bar**	**17.51**	**205**	P	**P**	**16 06 12.9**	**+0.9**
BHHZ	**Black Hill Sta**	**17.52**	**204**	P	**P**	**16 06 12.5**	**+0.6**
KRHZ	**Kereru**	**17.54**	**203**	P	**Pn**	**16 06 07.0**	**-4.2**
PXZ	**Pawanui**	**17.72**	**201**	P	**Pn**	**16 06 10.5**	**-2.9**
TSZ	**Takapari Road**	**18.06**	**203**	P	**Pn**	**16 06 15.6**	**-2.0**
SANVU	**Saraoutou**	**18.64**	**293**		**Pn**	**16 06 25.7**	**+0.9**
SANVU	comp=Z,317nm,1.2s			IAmb	IAmb	16 06 35.0	
PLWZ	**Palliser**	**19.64**	**202**	P	**P**	**16 06 35.9**	**+0.6**
NNZ	**Nelson**	**20.05**	**206**	P	**P**	**16 06 35.9**	**-3.7**
BSWZ	**Blackbirch Sta**	**20.27**	**205**	P	**P**	**16 06 39.5**	**-2.6**
KNTN	**Kanton**	**20.99**	**9**	P	**P**	**16 06 46.6**	**-3.4**
KNTN	comp=Z,174nm,1.0s			IAmb	IAmb	16 06 53.4	
RPZ	**Rata Peaks** comp=Z,23nm,0.7s,baz=54,slow=5.0,SNR=4.1	**23.08**	**206**	P	**P**	**16 07 13.8**	**+1.7**
RPZ				S	**S**	**16 11 14.2**	**-8.0**
	comp=Z,27nm,0.9s,baz=346,slow=19,SNR=3.6						
RPZ				LR	LR	16 17 08.4	
	comp=Z,1μm,18.5s,baz=28,slow=39						
RPZ	**Rata Peaks**	**23.08**	**206**	P	**P**	**16 07 13.2**	**+1.0**
RPZ	comp=Z,84nm,1.1s			IAmb	IAmb	16 07 29.7	
TBI	**Tubuai** comp=Z,210nm,26.8s	**23.41**	**94**	*e*S	**S**	**16 11 21.0**	**-7.1**
TBI				*e*LR	LR	16 12 55.2	
	comp=Z,1μm,22.5s						
LHI	**Lord Howe Isla** baz=24,SNR=5.1	**24.25**	**245**	P	**P**	**16 07 24.5**	**+0.9**
ODZ	**Otahua Downs**	**24.34**	**205**	P	**P**	**16 07 25.0**	**+0.7**
ODZ	comp=Z,59nm,1.1s			IAmb	IAmb	16 07 28.4	
PAE	**Paea** comp=Z,14nm,0.3s	**24.50**	**81**	*e*T	T	16 33 08.9	
PPT2	**Papeete2** comp=Z,76nm,1.3s	**24.52**	**81**	*e*P	**P**	**16 07 24.7**	**-1.6**
PPT2	comp=Z,216nm,29.5s			*e*S	**S**	**16 11 40.4**	**-5.7**
PPT2	comp=Z,1μm,26.8s			*e*LQ	LQ	16 12 06.0	
PPT2	comp=Z,1μm,22.5s			*e*LR	LR	16 13 26.0	
PPT2	**Papeete2** comp=Z,7.5nm,0.3s	**24.52**	**81**	*e*T	T	16 33 15.8	
PPT	**Papeete** comp=Z,649nm,20.3s,baz=262,slow=33	**24.53**	**81**	LR	LR	16 15 44.0	
TIAR	**Tiarei** comp=Z,19nm,1.1s	**24.74**	**81**	*e*P	**P**	**16 07 26.2**	**-2.0**
TVO	**Taravao** comp=Z,21nm,1.1s	**24.76**	**81**	*e*P	**P**	**16 07 26.7**	**-1.7**
WKZ	**Wanaka**	**24.83**	**208**	P	**P**	**16 07 30.1**	**+1.4**
WKZ	comp=Z,124nm,1.4s			IAmb	IAmb	16 07 44.6	
MLZ	**Mavora Lakes**	**25.65**	**208**	P	**P**	**16 07 37.4**	**+1.3**
MLZ	comp=Z,66nm,1.0s			IAmb	IAmb	16 07 42.5	
MEH	**Mehetia** comp=Z,24nm,0.3s	**25.81**	**82**	*e*T	T	16 35 19.6	
HNR	**Honiara** comp=Z,200nm,1.1s,baz=216,slow=12,SNR=4.4	**27.80**	**296**	P	**P**	**16 07 54.6**	**-1.2**
HNR	**Honiara**	**27.80**	**296**	P	**P**	**16 07 53.4**	**-2.4**
ARMA	**Armidale** baz=31,SNR=13	**30.41**	**250**	P	**P**	**16 08 20.5**	**+1.5**
ARMA	**Armidale**	**30.41**	**250**	P	**P**	**16 08 18.5**	**-0.5**
ARMA	comp=Z,37nm,0.8s			IAmb	IAmb	16 08 21.8	
EIDS	**Eidsvold** baz=31,SNR=10.0	**30.87**	**260**	P	**P**	**16 08 23.0**	**0.0**
EIDS	**Eidsvold**	**30.87**	**260**	P	**P**	**16 08 22.8**	**-0.2**

MANU **Manus Island** 42.28 295 P **P** **16 09 58.5 -1.8**
BBOO **Buckleboo** 43.76 247 P **P** **16 10 11.5 -0.6**
baz=44,SNR=11
BBOO **Buckleboo** 43.76 247 P **P** **16 10 10.6 -1.5**
BBOO IAmb IAmb 16 10 13.6
comp=Z,44nm,0.9s
WAKE **Wake Island** 46.27 336 P **P** **16 10 31.2 -0.9**
AS31 **Alice Springs** 46.59 259 P **P** **16 10 34.0 -0.8**
ASAR **Alice Springs** 46.59 259 P **P** **16 10 34.3 -0.5**
comp=Z,52nm,0.9s,baz=94,slow=8.1,SNR=204
ASAR PcP **PcP** **16 12 09.9 +1.2**
comp=Z,4.5nm,0.9s,baz=102,slow=4.3,SNR=2.0
ASAR S **S** **16 17 18.6 -4.4**
comp=Z,1.6nm,1.0s,baz=101,slow=15,SNR=6.0
ASAR LR LR 16 29 43.5
comp=Z,930nm,19.7s,baz=107,slow=36
ASAR Alice Springs 46.59 259 P **P** **16 10 33.7 -1.1**
WR0 Warramunga Arr 46.81 264 P **P** **16 10 34.9 -1.6**
WR0 IAmb IAmb 16 10 36.1
comp=Z,12nm,0.7s
WRMHI **West Rim** 46.91 26 P **P** **16 10 35.5 -1.7**
UWE Uwekahuna 46.92 26 P **P** **16 10 35.5 -1.9**
WB2 Warramunga Arr 46.98 264 P **P** **16 10 36.6 -1.2**
WB2 IAmb IAmb 16 10 37.5
comp=Z,26nm,0.7s
WRAB Tennant Creek 46.99 264*ce*P **P** **16 10 34.8 -3.1**
WRAB pmax pmax
comp=Z,25nm,0.8s
WRAB Tennant Creek 46.99 264 P **P** **16 10 37.2 -0.7**
WRAB IAmb IAmb 16 10 42.2
comp=Z,32nm,1.0s
WB0 Warramunga Arr 46.99 265 P **P** **16 10 36.6 -1.3**
WB0 IAmb IAmb 16 10 37.5
comp=Z,28nm,0.8s
WRA Warramunga Arr 46.99 264 P **P** **16 10 36.9 -1.1**
comp=Z,20nm,0.7s,baz=100,slow=8.1,SNR=92
WRA PcP **PcP** **16 12 11.2 +1.0**
comp=Z,9.6nm,0.9s,baz=101,slow=3.6,SNR=6.6
WRA S **S** **16 17 22.6 -6.3**
comp=Z,4.1nm,1.1s,baz=105,slow=13,SNR=4.6
WRA Warramunga Arr 46.99 264 P **P** **16 10 36.2 -1.7**
KIP Kipapa 47.75 22*ce*P **P** **16 10 43.1 -0.5**
KIP pmax pmax
comp=Z,132nm,1.3s
GENI Genyem 48.12 289 P **P** **16 10 46.6 -0.1**
comp=Z,43nm,0.9s
FORT Forrest 50.69 249 P **P** **16 11 05.7 -0.5**
baz=51,SNR=27
FORT Forrest 50.69 249 P **P** **16 11 05.7 -0.5**
KDU Kakadu 50.84 273 P **P** **16 11 06.1 -1.4**
baz=51,SNR=35
WRKA Warakurna 51.35 256 P **P** **16 11 10.5 -0.9**
baz=52,SNR=52
MTN Manton Dam 52.02 272 P **P** **16 11 15.6 -0.7**
baz=52,SNR=7.0
MTN Manton Dam 52.02 272 P **P** **16 11 15.2 -1.1**
KNRA Kununurra 53.27 268 P **P** **16 11 24.9 -0.7**
baz=53,SNR=110
KNRA Kununurra 53.27 268 P **P** **16 11 25.0 -0.6**
GUMO Guam 53.94 309 LR LR 16 32 05.1
comp=Z,158nm,20.7s,baz=142,slow=34
GUMO Guam 53.94 309 P **P** **16 11 29.8 -0.6**
GUMO pmax pmax
comp=Z,163nm,1.1s
GUMO Guam 53.94 309 P **P** **16 11 29.8 -0.6**
FAKI Fak Fak 54.94 284 P **P** **16 11 36.5 -1.3**
FAKI IAmb IAmb 16 11 37.6
comp=Z,30nm,1.1s
VNDA Vanda 55.06 186 P **P** **16 11 40.9 +3.2**
comp=Z,5.7nm,0.9s,baz=7.3,slow=6.8,SNR=35
VNDA PcP **PcP** **16 12 41.1 +2.1**
comp=Z,4.0nm,0.9s,baz=335,slow=3.0,SNR=4.2
VNDA LR LR 16 32 39.5
comp=Z,169nm,19.9s,baz=12,slow=33
VNDA Vanda 55.06 186 P **P** **16 11 39.1 +1.4**
FITZ Fitzroy Crossi 55.41 264 LR LR 16 35 02.2
comp=Z,499nm,19.9s,baz=113,slow=36
FITZ Fitzroy Crossi 55.41 264 P **P** **16 11 40.7 -0.5**
baz=56,SNR=73
FITZ Fitzroy Crossi 55.41 264 P **P** **16 11 41.1 0.0**
KMBL Kambalda 55.86 247 P **P** **16 11 44.4 +0.2**
baz=56,SNR=6.0
BNDI Bandanaira 56.34 281 P **P** **16 11 48.9 +1.1**
comp=Z,70nm,1.4s
SIJI Sorong 56.74 285 P **P** **16 11 50.3 -0.5**
comp=Z,153nm,0.8s,baz=73,slow=6.1,SNR=82
MSAI Masohi 57.72 282 P **P** **16 12 01.9 +4.3**
KLBR Kellerberrin 59.30 246 P **P** **16 12 08.8 +0.3**
baz=60,SNR=26
SOEI Soe 59.40 273 P **P** **16 12 10.5 +1.0**
comp=Z,2µmcomp=Z,278nm,0.9s
SOEI Soe 59.40 273 P **P** **16 12 09.9 +0.3**
NLAI Namlea 59.41 281 P **P** **16 12 09.1 -0.3**
comp=Z,27nm,1.1s
RKGY Rocky Gully 59.43 243 P **P** **16 12 10.1 +0.8**
baz=60,SNR=4.3
NWAO Narrogin (SRO) 59.50 245 P **P** **16 12 10.5 +0.6**
baz=60,SNR=4.4
NWAO Narrogin (SRO) 59.50 245 P **P** **16 12 10.4 +0.6**
NWAO pmax pmax
comp=Z,51nm,1.4s
NWAO Narrogin (SRO) 59.50 245 P **P** **16 12 10.4 +0.5**
MEEK Meekatharra 59.56 252 P **P** **16 12 10.1 -0.3**
baz=60,SNR=14
PSA00 Pilbara Seismi 59.71 258 P **P** **16 12 10.5 -1.0**
PSA00 IAmb IAmb 16 12 12.3
comp=Z,30nm,1.0s
BATI Baumata 59.79 272 LR LR 16 38 03.9
comp=Z,648nm,19.7s,baz=146,slow=36
BLDU Ballidu 60.36 247 P **P** **16 12 16.1 +0.3**
baz=60,SNR=42
MUN Mundaring 60.52 246 P **P** **16 12 17.7 +0.8**
baz=61,SNR=10
TNTI Ternate 60.95 285 P **P** **16 12 19.7 -0.3**
comp=Z,623nmcomp=Z,69nm,1.1s
TNTI Ternate 60.95 285 P **P** **16 12 18.9 -1.1**
MORW Morawa 61.25 249 P **P** **16 12 22.3 +0.4**
baz=61,SNR=24
MORW Morawa 61.25 249 P **P** **16 12 21.5 -0.4**
MMRI Maumere 61.67 273 P **P** **16 12 25.7 +0.8**
comp=Z,1µmcomp=Z,76nm,0.8s
MMRI Maumere 61.67 273 P **P** **16 12 24.0 -0.9**
EDFI Ende, Flores 62.13 272 P **P** **16 12 27.6 -0.5**
comp=Z,269nmcomp=Z,38nm,1.0s
CASY Casey 62.35 206 P **P** **16 12 30.6 +2.0**
BASI Baing, Sumba 62.61 271 P **P** **16 12 34.6 +3.4**
WSI Waingapu 63.07 271 P **P** **16 12 34.9 +0.6**
comp=Z,297nm,0.9s
KMSI Cibinong 63.88 283 P P 16 12 45.1 +5.5
WBSI Waikabubak, Su 63.91 271 P **P** **16 12 41.1 +1.2**
comp=Z,66nm,0.8s
SGSI Sangihe 63.94 287 P **P** **16 12 41.4 +1.4**
comp=Z,74nm,0.8s
LUWI Luwuk 64.25 281 P **P** **16 12 42.9 +0.8**
comp=Z,707nmcomp=Z,66nm,1.2s
LUWI Luwuk 64.25 281 P **P** **16 12 41.9 -0.2**
GIRL Giralia 64.42 255 P **P** **16 12 43.8 +0.7**
baz=65,SNR=4.4
GIRL Giralia 64.42 255 P **P** **16 12 43.8 +0.7**
GTOI Gorontalo 64.77 283 P **P** **16 12 46.4 +0.9**
comp=Z,330nmcomp=Z,27nm,1.1s
BNSI Bone 65.27 276 P **P** **16 12 50.0 +1.3**
comp=Z,25nm,1.4s
APSI Ampana 65.32 280 P **P** **16 12 50.1 +1.1**
comp=Z,331nmcomp=Z,31nm,1.2s
DAV Davao City (W) 65.53 290 LR LR 16 38 36.4
comp=Z,219nm,20.6s,baz=72,slow=34
PLAI Plampang 65.69 271 P **P** **16 12 51.7 +0.3**
comp=Z,72nm,1.1s
SPSI Sidrap Palu 65.75 277 P **P** **16 12 52.4 +0.6**
comp=Z,20nm,1.2s
TTSI Tana Toraja 66.08 277 P P 16 13 01.6 +7.6
QSPA South Pole Qui 66.44 180 P **P** **16 12 58.2 +2.6**
comp=Z,13nm,0.9s,baz=35,slow=2.7,SNR=36
QSPA South Pole Qui 66.44 180 P **P** **16 12 58.0 +2.4**
QSPA IAmb IAmb 16 12 59.5
comp=Z,27nm,1.1s
TWSI Taliwang, Sumb 66.55 271 P **P** **16 12 57.3 +0.4**
comp=Z,23nm,1.1s
TOLI2 Tolitoli 66.98 282 P **P** **16 12 58.4 -1.3**
TOLI2 IAmb IAmb 16 12 59.9
comp=Z,30nm,1.0s
MPSI Mapaga 67.44 281 P **P** **16 13 02.1 -0.5**
comp=Z,403nmcomp=Z,37nm,1.0s
SRBI Singaraja 68.32 271 P **P** **16 13 09.8 +1.6**
comp=Z,26nm,0.9s

JAGI Jajag, Banyuwa 69.15 270 P **P** **16 13 12.3 -1.1**
KMMI Kalianget 69.85 271 P **P** **16 13 19.2 +1.5**
comp=Z,43nm,1.3s
GMJI Gumukmas 69.87 270 P P 16 13 22.6 +4.8
BBKI Banjar Baru 70.45 275 P P 16 13 26.2 +4.8
MYLDM **Lahad Datu** 70.83 285 P **P** **16 13 22.8 -0.8**
GRJI Gresik 71.27 271 P **P** **16 13 27.7 +1.4**
comp=Z,579nmcomp=Z,81nm,0.8s
MTKI Muara Teweh, K 71.43 277 P **P** **16 13 28.6 +1.3**
comp=Z,5nm,0.5s
PWJI Pagerwojo 71.47 269 P **P** **16 13 28.8 +1.3**
comp=Z,30nm,0.7s
WOJI Wonogiri, Jawa 72.35 269 P **P** **16 13 35.8 +3.0**
comp=Z,42nm,1.3s
SPMM Sapulut 72.43 283 P **P** **16 13 34.0 +0.7**
UGM Wanagama 72.69 269 P **P** **16 13 34.7 -0.2**
KKM Kota Kinabalu 73.25 284 P **P** **16 13 38.5 +0.2**
KKM IAmb IAmb 16 13 57.9
comp=Z,29nm,1.1s
KPJI Karang Pucung 74.36 269 P **P** **16 13 48.1 +3.4**
MJAR Matsushiro Arr 74.39 322 P **P** **16 13 44.6 +0.3**
comp=Z,5.0nm,0.6s,baz=158,slow=6.4,SNR=16
MJAR LR LR 16 41 46.1
comp=Z,163nm,21.8s,baz=105,slow=32
MAJO Matsushiro 74.39 322 P **P** **16 13 44.8 +0.5**
MAJO pmax pmax
comp=Z,10.0nm,0.9s
MAJO Matsushiro 74.39 322 P **P** **16 13 44.8 +0.5**
MAT Matsushiro 74.39 322 P **P** **16 13 44.3 0.0**
MAT S **S** **16 23 19.0 +1.1**
ADK Adak 75.22 359 P **P** **16 13 48.1 -0.6**
ADK pmax pmax
comp=Z,107nm,1.3s
ADK Adak 75.22 359 P **P** **16 13 48.1 -0.6**
SBUM Sibu 75.27 279 P **P** **16 13 48.9 -1.0**
CISI Cisompet, Garu 75.30 268 P **P** **16 13 49.8 -0.4**
JSU Suzuyama 75.70 314 P **P** **16 13 52.5 +0.5**
JSU IAmb IAmb 16 14 15.7
comp=Z,33nm,1.2s
LEM Lembang 75.76 269 LR LR 16 46 30.2
comp=Z,216nm,21.8s,baz=156,slow=35
BELA Belgrano 2 76.08 172 P **P** **16 13 55.1 +1.6**
XMIS Christmas Isla 76.19 264 P **P** **16 13 55.9 +0.7**
JHS Saijyo 76.29 318 P **P** **16 13 56.0 +0.7**
YUK Yuzh-Kuril'sk 76.31 332 *eP* P 16 13 49.6 -5.5
YUK ePPP PPP 16 18 36.7
YUK S **S** **16 23 32.4 -6.4**
JNU Nakatsue 76.46 316 P **P** **16 13 56.6 +0.2**
KSM Kuching 76.60 278 P **P** **16 13 58.3 +0.8**
KSM IAmb IAmb 16 14 01.8
comp=Z,20nm,0.9s
DBJI Dramaga 76.66 269 P **P** **16 13 59.8 +1.9**
comp=Z,2µmcomp=Z,50nm,1.5s
PMSA Palmer Station 77.30 156 P **P** **16 14 01.6 +1.1**
YULB Yu-li 77.54 302 P **P** **16 14 02.2 -0.4**
JKA Kamikawa-asahi 77.82 330 P **P** **16 14 02.9 -0.7**
JKA IAmb IAmb 16 14 09.4
comp=Z,34nm,1.1s
ASAJ Asahikawa 77.82 330 P **P** **16 14 02.9 -0.7**
ASAJ pmax pmax
comp=Z,34nm,1.1s
TPUB Ta-pu 78.01 302 P **P** **16 14 03.9 -1.4**
SSLB Suanglung 78.02 303 P **P** **16 14 04.6 -0.6**
YHNB Yeheng 78.17 304 P **P** **16 14 05.2 -0.9**
SKR Severo-Kuril's 78.28 342 *eP* P 16 14 20.4 +14
SKR *eS* **S** **16 24 00.6 +0.6**
SKR pmax pmax
comp=Z,100nm,4.8s
SKR MLR MLR
comp=Z,200nm,18.0s
BLSI Bandar Lampung 78.50 269 P **P** **16 14 09.1 +0.9**
comp=Z,45nm,0.4s
SLBS Sierra La Lagu 78.74 58 P **P** **16 14 10.0 +0.6**
SLBS IAmb IAmb 16 14 11.9
comp=Z,31nm,1.1s
KASI Kota Agung 79.12 269 P **P** **16 14 12.2 +0.6**
comp=Z,1µmcomp=Z,154nm,1.0s
MURC Murrieta 79.16 46 P **P** **16 14 12.8 +1.4**
baz=232
SFX San Felipe 79.21 49 P **P** **16 14 11.2 -0.4**
SFX IAmb IAmb 16 14 31.7
comp=Z,21nm,0.8s
KLSI 79.23 270 P **P** **16 14 12.8 +0.6**
comp=Z,9.0nm,1.8s
IKP In-Ko-Pah, Jac 79.31 47 P **P** **16 14 13.7 +1.5**
baz=233
VES Vestal, Richgr 79.33 43 P **P** **16 14 14.0 +1.8**
baz=231
EDW2 Edwards Air Fo 79.42 45 P **P** **16 14 14.6 +1.7**
baz=232
KMRM Mail Ridge 79.48 37 P **P** **16 14 13.3 +0.3**
KMRM IAmb IAmb 16 14 16.4
comp=Z,45nm,1.1s
MAW Mawson 79.54 199 P **P** **16 14 15.5 +2.6**
comp=Z,19nm,0.9s,baz=130,slow=6.9,SNR=25
MAW LR LR 16 49 41.7
comp=Z,319nm,19.5s,baz=82,slow=36
MAW Mawson 79.54 199 P **P** **16 14 13.6 +0.7**
baz=80,SNR=15
MAW Mawson 79.54 199 P **P** **16 14 14.9 +2.0**
ISA Isabella, Lake 79.61 44 P **P** **16 14 15.4 +1.6**
baz=231
PFO Pinyon Flats O 79.65 46 P **P** **16 14 15.6 +1.5**
comp=Z,3.0nm,0.9s,baz=221,slow=6.3
PFO Pinyon Flats O 79.65 46 P **P** **16 14 13.8 -0.4**
TPFO Pinon Flats 79.65 46 P **P** **16 14 15.0 +0.8**
baz=233
PET Petropavlovsk 79.72 344 *i* P **P** **16 14 14.1 +0.3**
PET pmax pmax
comp=Z,122nm,1.1s
LWLI Liwa 79.72 269 P **P** **16 14 15.7 +0.7**
comp=Z,4µmcomp=Z,93nm,0.8s
CMB Columbia Colle 79.94 41 P **P** **16 14 15.8 +0.2**
CMB pmax pmax
comp=Z,11nm,1.0s
CMB Columbia Colle 79.94 41 P **P** **16 14 15.8 +0.2**
YSS Yuzh-Sakhalins 79.95 332 *eP* **P** **16 14 16.1 +0.8**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,200nm,16.0s
YSS MLR MLR
comp=N,200nm,12.0s
YSS MLR MLR
comp=E,100nm,13.0s
YSS Yuzh-Sakhalins 79.95 332 P **P** **16 14 15.0 -0.3**
YSS IAmb IAmb 16 14 20.8
comp=Z,30nm,0.9s
O02D Mt. Diablo Mer 79.97 38 P **P** **16 14 18.0 +2.3**
baz=227
LRMC Laurel Mtn Rad 80.00 44 P **P** **16 14 17.3 +1.3**
baz=232
PEA0B Petropavlovsk- 80.03 344*ce*P **P** **16 14 15.4 -0.2**
PEA0B Petropavlovsk- 80.03 344 P **P** **16 14 15.4 -0.2**
PEA0B IAmb IAmb 16 14 17.3
comp=Z,38nm,1.1s
PETK Petropavlovsk- 80.03 344 P **P** **16 14 16.2 +0.6**
comp=Z,10nm,0.8s,baz=134,slow=8.7,SNR=16
PETK LR LR 16 43 45.3
comp=Z,258nm,21.4s,baz=153,slow=31
PETK Petropavlovsk- 80.03 344 P **P** **16 14 15.6 -0.1**
BELC Belle Mtn. Jos 80.19 46 P **P** **16 14 18.6 +1.5**
baz=233
AFDM Forest Hills D 80.19 40 P **P** **16 14 17.2 +0.3**
ORV Oroville 80.28 39 P **P** **16 14 18.2 +0.9**
ORV pmax pmax
comp=Z,6.0nm,0.9s
ORV Oroville 80.28 39 P **P** **16 14 18.2 +0.9**
BC3 Big Chuckawall 80.35 47 P **P** **16 14 20.3 +2.3**
baz=233
WDC Whiskeytown Da 80.38 38 P **P** **16 14 18.6 +0.8**
WDC pmax pmax
comp=Z,19nm,1.1s
WDC Whiskeytown Da 80.38 38 P **P** **16 14 18.6 +0.8**
GSC Goldstone, Bar 80.45 45 P **P** **16 14 18.1 -0.3**
GSC pmax pmax
comp=Z,7.0nm,1.0s
GSC Goldstone, Bar 80.45 45 P **P** **16 14 20.1 +1.7**
baz=232
GSC Goldstone, Bar 80.45 45 P **P** **16 14 18.1 -0.3**
HEC Hector,Ludlow 80.47 45 P **P** **16 14 20.0 +1.5**
baz=233
MPMC Manual Prospec 80.48 44 P **P** **16 14 20.4 +1.7**
baz=232
N02D Trinity Center 80.55 37 P **P** **16 14 20.8 +2.0**
baz=227
O03E Paynes Creek 80.60 38 P **P** **16 14 20.9 +1.8**
baz=228
LHSI Lahat 80.68 270 P **P** **16 14 20.9 +0.9**
comp=Z,68nm,1.2s
M02C Callahan 80.75 37 P **P** **16 14 21.7 +1.8**
baz=227
IRM Iron Mountain 80.85 47 P **P** **16 14 21.8 +1.3**
baz=234
GMRC Granite Mounta 80.89 46 P **P** **16 14 22.2 +1.4**
baz=233
YBH Yreka Blue Hor 81.06 37 P **P** **16 14 21.9 +0.4**
YBH pmax pmax
comp=Z,10.0nm,0.9s
YBH Yreka Blue Hor 81.06 37 P **P** **16 14 21.9 +0.4**
KSRS Korea Array 81.08 317 P **P** **16 14 22.9 +1.4**
comp=Z,14nm,1.0s,baz=138,slow=6.1,SNR=30
KSRS LR LR 16 44 47.7
comp=Z,192nm,20.8s,baz=134,slow=32
KSAR Wonju Array Be 81.09 317 P **P** **16 14 21.5 -0.2**
KSAR Wonju Array Be 81.09 317 P **P** **16 14 21.4 -0.2**
PNTR Pine Nut 81.09 40 P **P** **16 14 22.5 +0.5**
PNTR IAmb IAmb 16 14 24.5
comp=Z,24nm,1.0s
GRAC Grapevine Rang 81.14 43 P **P** **16 14 24.0 +2.0**
baz=232
BEKR Beckworth 81.15 39 P **P** **16 14 21.9 -0.2**
SHOC Shoshone, Teco 81.16 45 P **P** **16 14 23.5 +1.4**
baz=232
LHV Little Huntoon 81.22 42 P **P** **16 14 23.2 +0.9**
LHV IAmb IAmb 16 14 42.0
comp=Z,21nm,1.2s
J01E Myrtle Point 81.38 35 P **P** **16 14 24.8 +1.7**
baz=226
RYN Ryan 81.45 41 P **P** **16 14 23.5 -0.2**
NVAR Mina Array Bea 81.45 42 P **P** **16 14 25.4 +1.5**
comp=Z,9.6nm,1.0s,baz=222,slow=9.3,SNR=27
NVAR LR LR 16 48 47.9
comp=Z,142nm,18.3s,baz=254,slow=34
NVAR Mina Array Bea 81.45 42 P **P** **16 14 23.8 0.0**
HUMO Hull Mountain 81.52 36 P **P** **16 14 24.4 +0.5**
NV11 Mina Array Sit 81.55 42 P **P** **16 14 23.9 -0.3**
M04C Macdoel 81.58 37 P **P** **16 14 26.0 +1.6**
baz=228
KSI Kapahiang 81.60 270 P **P** **16 14 25.5 +0.5**
comp=Z,5µmcomp=Z,211nm,0.9s
PDMCI Parker Dam,Lak 81.61 47 P **P** **16 14 26.2 +1.7**
baz=234
L04D Klamath Falls 81.61 37 P **P** **16 14 26.3 +1.8**
baz=228
PAHR Pah Rah Range 81.62 40 P **P** **16 14 24.0 -0.6**
TPNV Topopah Spring 81.81 44 P **P** **16 14 26.4 +0.7**
TPNV pmax pmax
comp=Z,7.0nm,1.1s
TPNV Topopah Spring 81.81 44 P **P** **16 14 27.5 +1.7**
baz=232
TPNV Topopah Spring 81.81 44 P **P** **16 14 26.4 +0.7**
TPH Tonopah 81.89 42 P **P** **16 14 27.0 +0.8**
TPH pmax pmax
comp=Z,92nm,1.4s
TPH Tonopah 81.89 42 P **P** **16 14 27.0 +0.8**
H03S2 Juan Fernandez 81.93 123 T P 17 46 13.1
baz=246,slow=75,SNR=38
H03S1 Juan Fernandez 81.95 123 T T 17 46 33.0
baz=246,slow=75,SNR=54
H03S3 Juan Fernandez 81.95 123 T T 17 46 31.9
baz=246,slow=75,SNR=57
KVN Kaiserville 81.97 41 P **P** **16 14 26.8 +0.3**
KVN pmax pmax
comp=Z,11nm,1.1s
KVN Kaiserville 81.97 41 P **P** **16 14 26.8 +0.3**
I03D Drain, OR 82.06 35 P **P** **16 14 28.6 +2.0**
baz=227
SHPR Sheep Range 82.24 45 P **P** **16 14 26.2 -1.8**
J04D Umpqua Nationa 82.41 36 P **P** **16 14 30.2 +1.4**
baz=228
MOD Modoc Plateau 82.52 38 P **P** **16 14 28.5 -0.8**
MYKOM **Kota Tinggi** 82.61 275 P **P** **16 14 28.6 -1.6**
MYKOM **Kota Tinggi** 82.61 275 P **P** **16 14 32.0 +1.8**
I04A Tendick Farm, 82.62 35 P **P** **16 14 30.7 +1.1**
baz=227
K05A Summer Lake 82.73 37 P **P** **16 14 31.3 +0.9**
K05A IAmb IAmb 16 14 33.1
comp=Z,28nm,1.0s
TUC Tucson 82.78 50 P **P** **16 14 32.5 +1.7**
baz=236
PRN Pahroc Range 82.85 44 P **P** **16 14 32.4 +1.2**
PRN IAmb IAmb 16 14 36.1
comp=Z,22nm,1.2s
J05D Fort Rock, OR 82.91 36 P **P** **16 14 33.3 +2.0**
baz=228
H04D Lebanon 82.95 35 P **P** **16 14 33.3 +2.1**
baz=227
TYV Tymovskoe 83.05 335 *eP* **P** **16 14 32.7 +1.1**
TYV pmax pmax
comp=Z,14nm,0.9s
TYV pmax pmax
comp=Z,300nm,5.9s
R11A Troy Canyon, C 83.08 43 P **P** **16 14 33.5 +1.2**
baz=233
R11A Troy Canyon, C 83.08 43 P **P** **16 14 33.3 +0.9**
USA0B Ussuriysk Arra 83.12 325*d* *i*P **P** **16 14 33.3 +1.1**
USA0B Ussuriysk Arra 83.12 325 P **P** **16 14 33.3 +1.1**
USRK Ussuriysk Ar. 83.12 325 P **P** **16 14 34.0 +1.9**
comp=Z,15nm,1.0s,baz=116,slow=4.4,SNR=22
USRK Ussuriysk Ar. 83.12 325 P **P** **16 14 33.0 +0.9**
USRK Ussuriysk Ar. 83.12 325 P **P** **16 14 33.0 +0.9**
KRJI Kerinci 83.25 271 P **P** **16 14 35.4 +1.7**
comp=Z,144nm,1.0s
319A Douglas 83.34 52 P **P** **16 14 34.0 +0.2**
H04A Detroit Lake 83.34 35 P **P** **16 14 34.0 +0.6**
H04A IAmb IAmb 16 14 35.4
comp=Z,33nm,1.3s
PINE Pine Mountain 83.41 36 P **P** **16 14 34.7 +0.8**
I05D Terrebonne, OR 83.56 36 P **P** **16 14 36.4 +1.9**
baz=228
SDSI Sungai Dareh 83.74 272 P **P** **16 14 36.3 +0.2**
comp=Z,33nm,1.1s
LCMT Little Creek M 83.78 45 P **P** **16 14 36.8 +0.8**
E03A Lebam 83.92 33 P **P** **16 14 37.1 +0.9**
NJ2 Nanjing 84.02 309 *eP* **P** **16 14 38.8 +1.8**
NJ2 pmax pmax
comp=Z,27nm,0.7s
CCUT Cedar City 84.02 45 P **P** **16 14 38.4 +1.2**
KNB Kanab 84.06 45 P **P** **16 14 38.0 +0.6**
KNB pmax pmax
comp=Z,22nm,1.1s
KNB Kanab 84.06 45 P **P** **16 14 38.0 +0.6**
U15A North Rim 84.07 46 P **P** **16 14 37.9 +0.4**
U15A IAmb IAmb 16 14 40.8
comp=Z,22nm,1.1s
F04A Amboy 84.07 34 P **P** **16 14 37.5 +0.5**
WUAZ Wupatki 84.16 47 P **P** **16 14 39.8 +1.8**
baz=236
WUAZ Wupatki 84.16 47 P **P** **16 14 39.2 +1.2**
WUAZ IAmb IAmb 16 14 41.0
comp=Z,19nm,1.4s
G05D Wamic, OR 84.18 35 P **P** **16 14 38.7 +1.1**
baz=226
SZCU Shurtz Canyon 84.22 45 P **P** **16 14 39.0 +0.8**
SPR3 Spring Creek 3 84.26 43 P **P** **16 14 38.6 +0.1**
SYO Syowa Base 84.26 192⇑ *i*P **P** **16 14 37.7 0.0**
SYO Syowa Base 84.26 192⇓ *e*pP pP 16 14 40.0 -1.1
PSUT Pine Spring 84.28 44 P **P** **16 14 38.6 +0.1**
I07A Izee 84.38 37 P **P** **16 14 39.7 +0.9**
I07A IAmb IAmb 16 14 41.2
comp=Z,14nm,0.9s
J08A Circle Bar Ran 84.49 38 P **P** **16 14 39.9 +0.6**
J08A IAmb IAmb 16 14 41.6
comp=Z,26nm,1.1s
BKNI Bangkinang 84.59 273 P P 16 14 48.2 +7.8
PKCU Pink Cliffs 84.64 45 P **P** **16 14 40.6 +0.1**
MDJ Mudanjiang 84.69 324 P **P** **16 14 41.8 +1.7**
MDJ pP pwP 16 14 51.3 -4.2
MDJ sP PcP 16 14 55.1 +12
MDJ PP **PP** **16 17 58.9 +2.4**
MDJ S **S** **16 25 10.4 +3.8**
MDJ sS ScS 16 25 24.4 +6.6
MDJ SS **SS** **16 30 46.6 +7.6**
MDJ pmax pmax
comp=Z,19nm,1.3s
MDJ pmax pmax
comp=Z,400nm,4.6s
MDJ LR LR
comp=Z,240nm,23.5s

MDJ LR LR
comp=Z,160nm,31.3s
MDJ LR LR
comp=Z,310nm,22.8s
MDJ Mudanjiang 84.69 324 P P 16 14 40.7 +0.5
MDJ IAmb IAmb 16 14 43.3
comp=Z,26nm,1.2s
ELK Elko 84.75 41 P P 16 14 41.5 +0.6
comp=Z,6.4nm,1.1s,baz=255,slow=4.5,SNR=7.7
ELK Elko 84.75 41 P P 16 14 40.3 -0.5
SNAA Sanae 84.78 178 P P 16 14 41.9 +1.5
SNAA Sanae 84.78 178 *ce*P **P 16 14 41.4 +1.0**
SNAA pmax pmax
comp=Z,35nm,1.3s
SNAA Sanae 84.78 178 P P 16 14 41.3 +0.9
SNAA IAmb IAmb 16 14 43.1
comp=Z,30nm,1.1s
VNA3 Neumayer Olymp 84.81 175 P P 16 14 42.0 +1.4
D03D Eldon 84.83 32 P P 16 14 42.6 +1.8
baz=226
LON Longmire 84.94 34 P P 16 14 41.4 0.0
LON pmax pmax
comp=Z,7.0nm,1.1s
LON Longmire 84.94 34 P P 16 14 41.4 0.0
121A Cookes Peak, D 85.03 51 P P 16 14 44.4 +2.0
baz=238
MTPU Mount Pierson 85.06 45 P P 16 14 43.3 +0.6
TLIG Tlapa 85.09 69 P P 16 14 44.0 +1.1
TLIG IAmb IAmb 16 14 47.8
comp=Z,31nm,1.1s
PLCA Paso Flores 85.10 132 P P 16 14 45.0 +2.3
comp=Z,15nm,1.1s,baz=226,slow=4.8,SNR=8.7
PLCA LR LR 16 49 47.9
comp=Z,72nm,18.5s,baz=324,slow=34
PLCA Paso Flores 85.10 132 P P 16 14 45.0 +2.3
PLCA Paso Flores 85.10 132 P P 16 14 44.6 +1.9
PLCA IAmb IAmb 16 14 47.8
comp=Z,26nm,1.1s
D05A Enumclaw 85.14 33 P P 16 14 43.4 +1.0
VNA2 Neumayer--Watz 85.28 176 P P 16 14 44.9 +2.0
MVU Marysvale 85.31 44 P P 16 14 44.4 +0.7
MSU Marysvale 85.34 44 P P 16 14 44.6 +0.7
MSU Marysvale 85.34 44 P P 16 14 44.6 +0.7
F07A Phinny Hill Vi 85.34 35 P P 16 14 43.8 +0.4
F07A IAmb IAmb 16 14 45.7
comp=Z,15nm,1.2s
G08A Pilot Rock 85.46 36 P P 16 14 44.0 -0.1
G08A IAmb IAmb 16 14 46.4
comp=Z,21nm,1.0s
VNA1 Neumayer--Stat 85.50 176 P P 16 14 45.6 +1.7
NVL N'lazarevskaya 85.72 182 *e*P **P 16 14 45.2 +0.2**
NVL *e*S **S 16 25 11.2 -5.1**
NVL pmax pmax
comp=Z,12nm,0.8s
SISI Saibi 85.73 270 P P 16 14 53.4 +7.3
E07A Sunnyside 85.81 35 P P 16 14 46.6 +0.9
E07A IAmb IAmb 16 14 48.3
comp=Z,21nm,1.2s
B05A Bryant 85.82 32 P P 16 14 47.4 +1.7
baz=227
LTY Liberty 85.86 34 P P 16 14 46.4 +0.4
HAWA Hanford 85.87 35 P P 16 14 46.1 0.0
BMO Blue Mountains 86.08 37 P P 16 14 47.1 -0.2
BMO pmax pmax
comp=Z,7.0nm,1.2s
BMO Blue Mountains 86.08 37 P P 16 14 47.1 -0.2
MNSI Mandailing Nat 86.12 273 P P 16 14 48.7 +0.6
comp=Z,45nm,0.9s
Q16A Castle Valley 86.22 45 P P 16 14 48.0 -0.1
IPM Ipoh 86.27 276 P P 16 14 48.9 +0.1
MNTX Cornudas Mount 86.35 53 P P 16 14 50.6 +1.8
baz=240
MNTX Cornudas Mount 86.35 53 P P 16 14 49.8 +1.0
MNTX IAmb IAmb 16 14 51.3
comp=Z,15nm,1.1s
TMUT Trail Mountain 86.41 44 P P 16 14 49.5 +0.2
BI02 San Fabin de 86.44 128 P P 16 14 49.6 +0.2
BI02 IAmb IAmb 16 14 51.7
comp=Z,12nm,0.8s
TX31 Lajitas Ar. Si 86.45 56 P P 16 14 49.8 +0.4
TX32 Lajitas Array 86.45 56 P P 16 14 49.9 +0.4
TX32 IAmb IAmb 16 14 52.1
comp=Z,25nm,1.2s
TXAR Lajitas Array 86.45 56 P P 16 14 51.0 +1.6
comp=Z,9.3nm,1.0s,baz=216,slow=6.2,SNR=55
TXAR LR LR 16 49 01.9
comp=Z,179nm,18.4s,baz=0.0,slow=33
TXAR Lajitas Array 86.45 56 P P 16 14 49.3 -0.2
LENM Lemitar 86.47 50 P P 16 14 48.3 -1.3
CN2 Changchun 86.48 321 *e*P **P 16 14 50.1 +1.0**
CN2 *e*S **S 16 25 25.3 +0.9**
CN2 pmax pmax
comp=Z,20nm,1.6s
CN2 pmax pmax
comp=Z,250nm,4.0s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,170nm,16.0s
CN2 LR LR
comp=Z,220nm,16.0s
WHN Wuhan 86.54 305 ⇑P **P 16 14 51.6 +1.9**
WHN pmax pmax
comp=Z,120nm,1.2s
D08A Wollman Farm, 86.63 35 P P 16 14 49.6 -0.1
KLR Kul'dur 86.65 328 *ce*P **P 16 14 51.1 +1.3**
KLR pmax pmax
comp=Z,4.0nm,1.0s
E09A Wood Farm, Sta 86.68 35 P P 16 14 49.5 -0.5
SRU San Rafael Swe 86.74 45 P P 16 14 51.0 +0.2
SRU pmax pmax
comp=Z,23nm,1.4s
SRU San Rafael Swe 86.74 45 P P 16 14 51.0 +0.2
P17A Butcher Ranch, 86.80 44 P P 16 14 51.3 +0.3
F10A Beach Ranch, E 86.83 36 P P 16 14 51.1 +0.2
F10A IAmb IAmb 16 14 54.4
comp=Z,14nm,1.1s
HVU Hansel Valley 86.85 42 P P 16 14 51.0 -0.2
HVU pmax pmax
comp=Z,4.0nm,1.0s
HVU Hansel Valley 86.85 42 P P 16 14 51.0 -0.2
HLID Hailey 86.93 39 P P 16 14 53.1 +1.6
baz=233
KULM Kulim 86.94 277 P P 16 14 55.0 +2.9
GLI Glacier Island 87.22 13 P P 16 14 52.4 +0.1
ANMO Albuquerque 87.24 50 P P 16 14 54.9 +1.6
comp=Z,5.6nm,1.0s,baz=220,slow=3.4,SNR=11
ANMO Albuquerque 87.24 50 *ce*P **P 16 14 53.8 +0.5**
ANMO pmax pmax
comp=Z,31nm,2.5s
ANMO Albuquerque 87.24 50 P P 16 14 55.1 +1.9
baz=239
ANMO Albuquerque 87.24 50 P P 16 14 53.9 +0.5
ANMO IAmb IAmb 16 14 56.0
comp=Z,15nm,1.2s
B08A Colville Reser 87.26 33 P P 16 14 52.9 0.0
PV17 East Wray Mesa 87.30 46 P P 16 14 52.7 -0.8
PV14 Lion Creek, Pa 87.31 46 P P 16 14 54.1 +0.4
PV14 IAmb IAmb 16 14 57.5
comp=Z,20nm,1.4s
TCUT Toone Canyon 87.31 43 P P 16 14 54.2 +0.6
PV20 West Nyswonger 87.33 46 P P 16 14 53.3 -0.4
PV20 IAmb IAmb 16 14 57.0
comp=Z,19nm,1.4s
GDL2 Guadalupe Moun 87.35 53 P P 16 14 53.7 -0.1
PV03 Paradox Valley 87.36 46 P P 16 14 53.0 -0.8
PV04 Paradox Valley 87.40 46 P P 16 14 54.3 +0.3
PV12 Saucer Basin, 87.43 46 P P 16 14 53.8 -0.4
PV12 IAmb IAmb 16 14 59.5
comp=Z,21nm,1.4s
TIA Tai'an 87.44 311 P P 16 14 54.9 +0.9
TIA pmax pmax
comp=Z,28nm,1.0s
C09A Chrisman Ranch 87.44 34 P P 16 14 53.6 -0.1
C09A IAmb IAmb 16 14 55.8
comp=Z,11nm,1.1s
PMR Palmer 87.46 12 P P 16 14 53.7 +0.3
PMR pmax pmax
comp=Z,20nm,1.1s
PMR Palmer 87.46 12 P P 16 14 53.7 +0.3
PMR IAmb IAmb 16 14 55.7
comp=Z,20nm,1.1s
RPSI Rantau Prapat 87.48 274 P P 16 14 54.0 -0.7
PSI Prapat 87.52 274 P P 16 14 54.0 -1.0
PSI pmax pmax
comp=Z,57nm,1.1s
PV22 Blue Mesa, Par 87.56 46 P P 16 14 54.0 -0.8
BO02 Sierra Bellavi 87.64 127 P P 16 14 56.0 +0.7
BO02 IAmb IAmb 16 14 57.6
comp=Z,24nm,1.3s
GHO Glory Hole Cre 87.67 12 P P 16 14 54.7 +0.2
CUT Chulitna 88.00 11 P P 16 14 57.2 +1.2
baz=203
SCM Sheep Creek Mo 88.03 13 P P 16 14 56.6 +0.3
SCM pmax pmax
comp=Z,35nm,1.0s
SCM Sheep Creek Mo 88.03 13 P P 16 14 56.6 +0.3
CMIG Matias Romero 88.05 71 P P 16 14 58.8 +1.5
comp=Z,14nm,1.1s,baz=250,slow=6.0
GSI Gunungsitoli 88.16 272 P P 16 15 00.6 +2.6
comp=Z,108nm,0.8s
GSI Gunungsitoli 88.16 272 P P 16 14 59.0 +1.1
N25K Chitina, Valde 88.41 14 P P 16 14 59.5 +1.4
baz=208
N25K Chitina, Valde 88.41 14 P P 16 14 58.9 +0.8
N25K IAmb IAmb 16 15 00.2
comp=Z,14nm,0.9s
BALM Baldy 88.43 15 P P 16 14 59.1 +0.9
BALM IAmb IAmb 16 15 00.4
comp=Z,27nm,1.2s
GLB Gilahina Butte 88.44 14 P P 16 14 58.6 +0.4
GLB IAmb IAmb 16 15 00.3
comp=Z,14nm,1.0s
S22A 4UR Ranch, Cre 88.44 47 P P 16 15 00.7 +1.6
baz=238
S22A 4UR Ranch, Cre 88.44 47 P P 16 15 00.1 +1.1
PEL Peldehue 88.46 126 P P 16 14 59.6 +0.4
PEL pmax pmax
comp=Z,35nm,1.2s
PEL Peldehue 88.46 126 P P 16 14 59.6 +0.4
MCARA McCarthy VSAT 88.57 15 P P 16 14 59.9 +1.2
MCARA IAmb IAmb 16 15 01.2
comp=Z,28nm,1.2s
CTGM Chitina Glacie 88.61 16 P P 16 15 00.1 +0.9
CTGM IAmb IAmb 16 15 01.3
comp=Z,14nm,1.0s
BARN Barnard Glacie 88.62 16 P P 16 15 00.2 +1.0
CAST Castle Rocks 88.64 10 P P 16 14 58.1 -0.9
CAST IAmb IAmb 16 14 59.6
comp=Z,15nm,1.0s
TRF Thorofare Moun 88.97 11 P P 16 15 00.8 +0.1
TRF IAmb IAmb 16 15 01.5
comp=Z,17nm,0.9s
SKAG Skagway 88.99 19 P P 16 15 01.5 +0.8
CO02 Combarbal 89.11 124 P P 16 15 03.4 +1.0
DHY Denali Highway 89.15 12 P P 16 15 02.0 +0.3
DHY IAmb IAmb 16 15 03.4
comp=Z,23nm,1.4s
RND Reindeer 89.18 11 P P 16 15 01.9 +0.2
RND pmax pmax
comp=Z,38nm,1.1s
RND Reindeer 89.18 11 P P 16 15 01.9 +0.2
833A Chaparral WMA, 89.27 59 P P 16 15 04.5 +1.6
baz=243
SDCO Great Sand Dun 89.34 48 P P 16 15 03.8 +0.4
baz=239
BW06 Boulder Array 89.38 42 P P 16 15 03.8 +0.5
baz=237
PD31 Pinedale Array 89.38 42 P P 16 15 03.2 -0.1
PDAR Pinedale Array 89.38 42 P P 16 15 04.0 +0.7
comp=Z,1.6nm,0.9s,baz=204,slow=3.3,SNR=9.9
PDAR LR LR 16 49 03.1
comp=Z,111nm,20.1s,baz=300,slow=32
PDAR Pinedale Array 89.38 42 P P 16 15 02.9 -0.4
MCK McKinley 89.46 11 P P 16 15 03.9 +1.0
baz=204
HYT Haines Junctio 89.50 17 P P 16 15 03.5 +0.3
HYT IAmb IAmb 16 15 05.4
comp=Z,15nm,1.2s
CO03 El Pedregal 89.51 124 P P 16 15 04.8 +0.6
CO03 IAmb IAmb 16 15 06.4
comp=Z,18nm,1.0s
YHL Hebgen Lake 89.57 40 P P 16 15 04.2 0.0
YHH Holmes Hill 89.73 40 P P 16 15 05.4 +0.4
BOZ Bozeman (W) 89.74 39 P P 16 15 05.4 +0.6
BOZ pmax pmax
comp=Z,14nm,1.3s
BOZ Bozeman (W) 89.74 39 P P 16 15 06.1 +1.3
baz=235
BOZ Bozeman (W) 89.74 39 P P 16 15 05.4 +0.6
BOZ IAmb IAmb 16 15 07.3
comp=Z,14nm,1.3s
BWN Browne 89.78 11 P P 16 15 04.7 +0.3
T25A Trinidad 89.78 49 P P 16 15 06.4 +1.1
baz=240
MENT Mentasta 89.78 14 P P 16 15 05.7 +1.2
MENT IAmb IAmb 16 15 06.8
comp=Z,19nm,1.0s
PATY Pattaya 89.84 284 P P 16 15 10.0 +4.2
comp=Z,60nm,0.7s
DLBC Dease Lake 89.88 22 P P 16 15 05.0 -0.1
L26K Log Cabin Wild 89.94 14 P P 16 15 06.8 +1.7
baz=209
JCT Junction City 89.94 57 P P 16 15 04.8 -1.2
JCT pmax pmax
comp=Z,13nm,1.1s
JCT Junction City 89.94 57 P P 16 15 04.8 -1.2
JCT IAmb IAmb 16 15 07.9
comp=Z,13nm,1.1s
BJI Beijing 90.07 314 P P 16 15 07.4 +1.1
BJI S **S 16 26 00.9 +2.3**
BJI pmax pmax
comp=Z,7.0nm,1.3s
BJI pmax pmax
comp=Z,200nm,4.0s
BJI LR LR
comp=Z,140nm,5.1s
BJI LR LR
comp=Z,140nm,4.5s
CHAI Chaiyaphum 90.08 287 P P 16 15 10.1 +3.3
SEY Seymchan 90.08 346 *i*P **P 16 15 05.7 0.0**
ENH Enshi 90.09 303 P P 16 15 06.0 -0.7
Q24A Divide 90.20 47 P P 16 15 08.5 +1.2
baz=240
HRY Holter Researc 90.26 38 P P 16 15 07.2 0.0
WRH Wood River Hil 90.29 11 P P 16 15 06.8 0.0
LCO Las Campanas 90.34 122 P P 16 15 08.5 +0.2
LCO pmax pmax
comp=Z,29nm,1.3s
LCO Las Campanas 90.34 122 P P 16 15 08.5 +0.2
LCO IAmb IAmb 16 15 12.9
comp=Z,29nm,1.3s
YNE Yellowstone No 90.35 40 P P 16 15 07.3 -0.5
CO01 Juntas del Tor 90.36 123 P P 16 15 09.2 +0.8
CO01 IAmb IAmb 16 15 32.8
comp=Z,16nm,1.4s
HDA Harding Lake 90.44 12 P P 16 15 08.4 +0.9
baz=206
HDA Harding Lake 90.44 12 P P 16 15 07.9 +0.5
HDA IAmb IAmb 16 15 09.1
comp=Z,23nm,1.0s
CCB Clear Creek Bu 90.50 11 P P 16 15 07.8 +0.1
CCB IAmb IAmb 16 15 09.1
comp=Z,23nm,1.1s
GYA Guiyang 90.61 299 ⇑P **P 16 15 11.6 +2.3**
GYA S **S 16 26 07.5 +3.1**
GYA pmax pmax
comp=Z,16nm,1.0s
GYA pmax pmax
comp=Z,150nm,4.7s
SCRK Sand Creek 90.64 13 P P 16 15 10.1 +1.5
baz=208
I23K Minto, Yukon-K 90.69 11 P P 16 15 09.1 +0.6
baz=203
I23K Minto, Yukon-K 90.69 11 P P 16 15 08.6 +0.1
I23K IAmb IAmb 16 15 09.9
comp=Z,14nm,1.3s
TCOL CIGO, UAF Yank 90.70 11 P P 16 15 09.4 +0.8
baz=205
TCOL CIGO, UAF Yank 90.70 11 P P 16 15 08.8 +0.2
COLA College 90.70 11 *i*P **P 16 15 07.6 -1.0**
COLA pmax pmax
comp=Z,21nm,1.0s
COLA College 90.70 11 P P 16 15 08.7 +0.1
COLA IAmb IAmb 16 15 10.0
comp=Z,22nm,0.9s
ZON Zonda 90.71 125 P P 16 15 10.2 +0.5
ZON pmax pmax
comp=Z,8.0nm,1.1s
ZON Zonda 90.71 125 P P 16 15 10.2 +0.5
MDM Murphy Dome 90.71 11 P P 16 15 08.9 +0.2
MDM IAmb IAmb 16 15 10.1
comp=Z,26nm,1.1s
AC05 El Transito 90.75 122 P P 16 15 11.6 +1.5
AC05 IAmb IAmb 16 15 15.0
comp=Z,22nm,1.1s
IL31 90.78 12 P P 16 15 09.0 0.0
IL31 IAmb IAmb 16 15 10.5
comp=Z,22nm,1.1s
ILAR Eielson Array 90.78 12 P P 16 15 09.7 +0.7
comp=Z,11nm,1.0s,baz=220,slow=5.2,SNR=43
ILAR Eielson Array 90.78 12 P P 16 15 08.7 -0.3
IMAR Indian Mountai 90.81 9 P P 16 15 08.2 -0.9
RLMT Red Lodge 90.85 40 P P 16 15 10.9 +0.8
baz=237
POKR Poker Plat Res 91.00 11 P P 16 15 10.6 +0.6
baz=205
POKR Poker Plat Res 91.00 11 P P 16 15 10.0 0.0
POKR IAmb IAmb 16 15 11.4
comp=Z,15nm,1.1s
ABTX Abilene, Hawle 91.05 55 P P 16 15 12.8 +1.7
baz=243
K27K Chicken 91.10 14 P P 16 15 12.4 +1.9
baz=210
K27K Chicken 91.10 14 P P 16 15 11.6 +1.1
K27K IAmb IAmb 16 15 13.8
comp=Z,22nm,1.1s
PRP Porcupine Dome 91.71 12 P P 16 15 14.2 +0.7
PRP IAmb IAmb 16 15 15.8
comp=Z,18nm,1.0s
ZEA Zeya 91.73 330 *e*P **P 16 15 14.5 +0.9**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
DAWY Dawson 91.74 15 P P 16 15 13.7 +0.2
DAWY IAmb IAmb 16 15 16.5
comp=Z,19nm,1.1s
EGAK Eagle 91.95 14 P P 16 15 14.9 +0.5
EGAK IAmb IAmb 16 15 17.2
comp=Z,20nm,1.1s
PHIT Phitsanulok 91.97 288 P P 16 15 19.2 +3.6
UTTA Uttaradit 92.08 288 P P 16 15 19.3 +3.2
UTHA Uthaitani 92.17 286 P P 16 15 20.3 +3.7
comp=Z,229nmcomp=Z,21nm,0.8s
XAN Xi'an 92.24 306 P P 16 15 18.8 +2.2
XAN pmax pmax
comp=Z,22nm,0.9s
XAN LR LR
comp=Z,300nm,14.1s
XAN LR LR
comp=Z,300nm,18.4s
XAN Xi'an 92.24 306 P P 16 15 15.9 -0.7
XAN pmax pmax
comp=Z,16nm,0.7s
XAN Xi'an 92.24 306 P P 16 15 15.9 -0.7
COLD Coldfoot 92.48 9 P P 16 15 18.7 +1.8
baz=203
COLD Coldfoot 92.48 9 P P 16 15 17.8 +0.9
COLD IAmb IAmb 16 15 19.4
comp=Z,10nm,1.3s
SUKH Sukhothai 92.78 288 P P 16 15 22.6 +3.2
HKT Hockley 92.78 59 *i*P **P 16 15 20.8 +1.8**
HKT pmax pmax
comp=Z,8.0nm,1.1s
HIA Hailar 92.86 323 *i*P **P 16 15 19.2 +0.1**
HIA pmax pmax
comp=Z,5.0nm,1.0s
GO02 Mina Guanaco 92.99 119 P P 16 15 21.3 +0.6
GO02 IAmb IAmb 16 15 25.7
comp=Z,10nm,0.9s
LAMP Lampang 93.19 289 P P 16 15 24.4 +3.2
PAYA Payao 93.32 290 P P 16 15 24.9 +3.0
RSSD Black Hills 93.51 43 P P 16 15 22.7 +0.3
RSSD pmax pmax
comp=Z,15nm,1.1s
RSSD Black Hills 93.51 43 P P 16 15 23.5 +1.0
baz=240
RSSD Black Hills 93.51 43 P P 16 15 22.7 +0.3
RSSD IAmb IAmb 16 15 24.8
comp=Z,14nm,1.1s
HHC Hu-ho-hao-te 93.53 313 *e*P **P 16 15 20.5 -2.0**
HHC LR LR
comp=Z,120nm,14.5s
HHC LR LR
comp=Z,190nm,15.3s
HHC LR LR
comp=Z,160nm,14.5s
BMAR Burnt Mountain 93.59 11 P P 16 15 22.1 +0.1
CM36 Chiang Mai Arr 93.66 288 P P 16 15 26.2 +2.8
CM35 Chiang Mai Arr 93.67 289 P P 16 15 26.0 +2.5
CM04 Chiang Mai Arr 93.71 288 P P 16 15 26.9 +3.2
comp=Z,208nmcomp=Z,30nm,0.8s
CM09 Chiang Mai Arr 93.72 288 P P 16 15 27.1 +3.4
comp=Z,194nmcomp=Z,24nm,0.9s
CM01 Chiang Mai Arr 93.74 288 P P 16 15 27.0 +3.2
comp=Z,181nmcomp=Z,26nm,0.8s
CM05 Chiang Mai Arr 93.74 288 P P 16 15 27.0 +3.2
comp=Z,130nmcomp=Z,21nm,0.8s
CM34 Chiang Mai Arr 93.74 289 P P 16 15 26.0 +2.2
CM02 Chiang Mai Arr 93.75 288 P P 16 15 27.0 +3.1
comp=Z,153nmcomp=Z,22nm,0.8s
CM31 Chiang Mai Arr 93.77 288 P P 16 15 27.2 +3.3
comp=Z,5μmcomp=Z,553nm,0.8s
CMAR Chiang Mai Arr 93.77 288 P P 16 15 26.3 +2.4
comp=Z,16nm,0.8s,baz=136,slow=3.3,SNR=102
CMAR PP **PP 16 19 05.2 -4.4**
comp=Z,0.7nm,0.8s,baz=126,slow=5.7,SNR=2.7
CMAR LR LR 16 57 48.9
comp=Z,72nm,19.1s,baz=168,slow=36
CMAR Chiang Mai Arr 93.77 288 P P 16 15 25.5 +1.6
CMAR Chiang Mai Arr 93.77 288 P P 16 15 25.5 +1.6
CM15 Chiang Mai Arr 93.78 288 P P 16 15 27.1 +3.1
comp=Z,139nmcomp=Z,21nm,0.8s
CM13 Chiang Mai Arr 93.78 288 P P 16 15 27.2 +3.2
comp=Z,168nmcomp=Z,24nm,0.8s
CMMT Chiang Mai 93.90 289 P P 16 15 27.0 +2.4
comp=Z,15nm,0.8s
CHTO Chiang Mai 93.91 289 P P 16 15 25.9 +1.4
CHTO pmax pmax
comp=Z,21nm,0.7s
CHTO Chiang Mai 93.91 289 P P 16 15 25.9 +1.4
CM33 Chiang Mai Arr 93.91 289 P P 16 15 26.0 +1.4
CM32 Chiang Mai Arr 93.93 289 P P 16 15 27.0 +2.3
JTS Las Juntas de 94.10 81 *i*P **P 16 15 26.9 +1.3**
JTS pmax pmax
comp=Z,16nm,1.2s
LVC Limon Verde 94.72 117 P P 16 15 28.7 -0.1
LVC pmax pmax
comp=Z,14nm,1.1s
LVC Limon Verde 94.72 117 P P 16 15 28.7 -0.1
LVC IAmb IAmb 16 15 34.9
comp=Z,14nm,1.1s
PB01 IPOC Station P 94.97 115 P P 16 15 29.4 -0.2
PB01 IAmb IAmb 16 15 35.0
comp=Z,11nm,1.2s
MNMC Minye Minye 95.76 114 P P 16 15 33.9 +0.4
MNMC IAmb IAmb 16 15 37.0
comp=Z,11nm,0.9s
YAK Yakutsk 96.07 337 *ce*P **P 16 15 32.0 -1.4**
YAK pmax pmax
comp=Z,10.0nm,1.1s
PB16 IPOC Station P 96.19 113 P P 16 15 34.1 -1.7
PB16 IAmb IAmb 16 15 41.8
comp=Z,7.9nm,0.8s
LZH Lanzhou 96.88 306 *e*P **P 16 15 37.9 0.0**
LZH pP sP 16 15 43.8 +1.6
LZH sP pwP 16 15 46.0 -7.4
LZH PP PP 16 19 41.4 +7.7
LZH pmax pmax
comp=Z,14nm,1.1s
LZH pmax pmax
comp=Z,63nm,4.9s
LZH LR LR
comp=Z,180nm,14.6s
LZH LR LR
comp=Z,230nm,15.2s
LZH LR LR
comp=Z,250nm,18.4s
YKA Yellowknife Ar 98.22 24 LR LR 16 53 34.8
comp=Z,117nm,21.6s,baz=0.0,slow=32
LPAZ La Paz 98.30 112 P Pdif 16 15 48.2 +2.7
comp=Z,1.8nm,0.9s,baz=205,slow=6.1,SNR=5.6
LPAZ LR LR 16 52 47.2
comp=Z,56nm,18.7s,baz=321,slow=31
ULN Ulaanbaatar 99.55 318 *i*P **Pdif 16 15 49.8 +0.1**
ULN pmax pmax

comp=Z,3.0nm,1.2s
SONM Songino Array 99.94 318 P **Pdif** **16 15 51.6 +0.3**
comp=Z,1.2nm,1.1s,baz=112,slow=3.9,SNR=2.5
SONM PP **PP** **16 19 51.8 -5.0**
comp=Z,1.3nm,0.9s,baz=126,slow=7.5,SNR=4.8
SONM LR LR 16 58 41.6
comp=Z,77nm,19.5s,baz=137,slow=34
GTA Gaotai 101.11 308 *e*P **Pdif** **16 15 56.8 +0.1**
GTA pP sPdif 16 16 01.3 +0.3
GTA sP pP 16 16 03.8 +3.5
GTA pmax pmax
comp=Z,1.0nm,1.0s
GTA pmax pmax
comp=Z,110nm,7.8s
GTA LR LR
comp=Z,90nm,19.3s
GTA LR LR
comp=Z,150nm,21.4s
GTA LR LR
comp=Z,180nm,18.5s
WMQ Urumqi 111.08 310 *e*PKP **PKiKP** **16 20 40.6 +0.6**
WMQ LR LR
comp=Z,760nm,29.1s
WMQ LR LR
comp=Z,280nm,24.1s
NRIK Noril'sk 114.52 337 *i* PKIKP **PKiKP** **16 20 45.9 +0.2**
ZALV Zalesovo Beam 114.68 320 PKP **PKiKP** **16 20 46.7 +0.3**
comp=Z,2.4nm,0.6s,baz=104,slow=0.8,SNR=12
MKAR Makanchi Array 115.37 312 PKP **PKiKP** **16 20 48.5 +0.4**
comp=Z,1.7nm,0.7s,baz=311,slow=0.3,SNR=9.4
SHLS Shalkode 116.85 308 *e*PKP **PKPdf** **16 20 49.5 -1.7**
baz=308
SHLS Shalkode 116.85 308 *e*PKIKP **PKPdf** **16 20 49.4 -1.7**
SEM Semipalatinsk 117.12 316 *e*PKP **PKPdf** **16 20 50.5 -1.1**
baz=316
SEM Semipalatinsk 117.12 316 *e*PKIKP **PKPdf** **16 20 50.5 -1.1**
KPKS Kokpek 117.45 308 *e*PKP **PKPdf** **16 20 50.6 -1.7**
comp=Z,3.7nm,1.1s,baz=308
KPKS Kokpek 117.45 308 *e*PKIKP **PKPdf** **16 20 50.5 -1.7**
KPKS pmax pmax
comp=Z,4.0nm,1.1s
TDK Taldyqorghan 117.83 310 *e*PKP **PKPdf** **16 20 52.2 -0.6**
baz=310
TDK Taldyqorghan 117.83 310 *e*PKIKP **PKPdf** **16 20 52.2 -0.6**
KURK Kurchatov 118.18 316 *i* PKIKP **PKPdf** **16 20 52.6 -0.7**
KURK Kurchatov 118.18 316 PKPdf **PKPdf** **16 20 53.2 0.0**
NIL Nilore 120.23 296 PKIKP **PKiKP** **16 20 57.9 0.0**
NIL Nilore 120.23 296 **PKiKP** **16 20 57.9 0.0**
SGDS Sogindy 120.39 308 *e*PKP **PKPdf** **16 20 57.4 -0.5**
comp=Z,2.4nm,0.9s,baz=308
SGDS Sogindy 120.39 308 *e*PKIKP **PKPdf** **16 20 57.3 -0.5**
SGDS pmax pmax
comp=Z,2.0nm,0.9s
AAK Ala-Archa 120.41 307 *i* PKIKP **PKiKP** **16 20 58.7 +0.5**
BTLS Baital 120.92 309 *e*PKP **PKPdf** **16 20 58.4 -0.3**
comp=Z,2.6nm,0.9s,baz=310
BTLS Baital 120.92 309 *e*PKIKP **PKPdf** **16 20 58.4 -0.3**
BTLS pmax pmax
comp=Z,3.0nm,0.9s
BRZS Berezniki 121.97 315 *e*PKP **PKPdf** **16 20 59.9 -0.8**
comp=Z,2.4nm,0.9s,baz=315
BRZS Berezniki 121.97 315 *e*PKIKP **PKPdf** **16 20 59.8 -0.8**
BRZS pmax pmax
comp=Z,2.0nm,0.9s
DZA Taraz 122.75 307 *e*PKP **PKPdf** **16 21 02.0 -0.4**
baz=307
DZA Taraz 122.75 307 *e*PKIKP **PKPdf** **16 21 02.0 -0.4**
BTK Batken 122.96 303 PKIKP **PKPdf** **16 21 02.8 -0.1**
BTK Batken 122.96 303 PKPdf **PKPdf** **16 21 02.8 -0.1**
GAR Garm 123.26 302 **PKiKP** **16 21 04.3 +0.5**
BRVK Borovoye 123.33 319 *i* PKIKP **PKPdf** **16 21 03.0 -0.1**
BRVK Borovoye 123.33 319 PKPdf **PKPdf** **16 21 03.1 0.0**
KK31 Karatay Array 123.37 307 PKIKP **PKiKP** **16 21 03.8 0.0**
KK31 Karatay Array 123.37 307 PKPdf **PKiKP** **16 21 03.8 0.0**
KKAR Karatay Array 123.37 307 PKIKP **PKPdf** **16 21 03.6 +0.1**
KKAR Karatay Array 123.37 307 **PKPdf** **16 21 03.6 +0.1**
KKAR Karatay Array 123.37 307 **PKPdf** **16 21 03.4 -0.2**
IUG luzhnay 123.68 306 *e*PKP **PKPdf** **16 21 04.0 -0.3**
comp=Z,4.0nm,1.0s,baz=306
IUG luzhnay 123.68 306 *e*PKIKP **PKPdf** **16 21 04.0 -0.3**
IUG pmax pmax
comp=Z,4.0nm,1.0s
KBL Kabul 123.81 297 PKIKP **PKPdf** **16 21 04.6 -0.3**
KBL Kabul 123.81 297 PKPdf **PKPdf** **16 21 04.6 -0.3**
CHGR Chuyangaron 124.13 302 **PKPdf** **16 21 05.3 +0.1**
BOSA Boshof 124.50 202 PKP **PKiKP** **16 21 07.8 +1.1**
comp=Z,5.5nm,1.0s,baz=119,slow=0.8,SNR=5.2
SUMG Summit 125.51 15 PKIKP **PKiKP** **16 21 07.7 +0.1**
SUMG Summit 125.51 15 PKPdf **PKiKP** **16 21 07.7 +0.1**
SUMG Summit 125.51 15 *i* P **PKiKP** **16 21 08.0 +0.4**
comp=Z,16nm,0.9s
SUMG Summit 125.51 15 *i* P **PKiKP** **16 21 08.1 +0.4**
SUMG IAmb IAmb 16 21 09.9
comp=Z,16nm,0.9s
DAG Danmarks Havn 125.56 7 *i* PKIKP **PKPdf** **16 21 06.2 -0.5**
DAG pmax pmax
comp=Z,7.0nm,1.0s
DAG Danmarks Havn 125.56 7 *i* P **PKPdf** **16 21 06.2 -0.5**
comp=Z,7.1nm,1.0s
DAG Danmarks Havn 125.56 7 *i* P **PKPdf** **16 21 06.2 -0.5**
DAG IAmb IAmb 16 21 07.0
comp=Z,7.1nm,1.0s
ICESG Greenland Ices 127.33 19 *i* P **PKPdf** **16 21 10.1 -0.6**
ICESG IAmb IAmb 16 21 12.1
comp=Z,19nm,1.0s
DBG Daneborg 127.56 8 *i* P **PKPdf** **16 21 09.7 -0.9**
DBG IAmb IAmb 16 21 12.1
comp=Z,8.1nm,0.9s
ARU Arti 129.36 325 *i* PKIKP **PKiKP** **16 21 15.6 +0.3**
ARU 16 23 24.1
ARU 16 28 26.3
ARU SS SS 16 40 49.9 +5.6
ARU Arti 129.36 325 PKPdf **PKPdf** **16 21 14.8 +0.3**
ABKAR Akbulak array 130.27 315 PKPdf **PKPdf** **16 21 16.6 +0.1**
ABKAR Akbulak array 130.27 315 PKPdf **PKPdf** **16 21 16.4 -0.1**
ARCES ARCESS Array B 132.49 350 PKP **PKiKP** **16 21 21.5 +0.2**
comp=Z,7.0nm,0.9s,baz=264,slow=2.2,SNR=7.4
GEYT Alibeck 132.79 300 PKP **PKiKP** **16 21 23.1 +0.2**
comp=Z,7.0nm,0.8s,baz=190,slow=2.7,SNR=6.1
KIRV Kirov 133.07 330 *i* PKIKP **PKiKP** **16 21 22.5 -0.1**
KLMR Klimovskoe 135.86 337 *e*PKIKP **PKPdf** **16 21 20.7 -5.9**
KLMR pmax pmax
comp=Z,22nm,1.2s
KLMR Klimovskoe 135.86 337 *e*PKPdf **PKPdf** **16 21 20.8 -5.9**
KLMR AMP 16 21 29.6
comp=Z,22nm,1.2s
BELG Belogornoye 136.78 323 *i* PKIKP **PKiKP** **16 21 31.0 +0.7**
FINES FINESS Array B 139.55 345 PKP **PKPdf** **16 21 34.2 +0.8**
comp=Z,3.0nm,0.8s,baz=149,slow=4.4,SNR=6.6
FINES FINESS Array B 139.55 345 **PKPdf** **16 21 32.9 -0.5**
MOS Moscow 139.97 332 *e*PKHKP PKPpre 16 21 27.0
MAK Makhachkala 140.10 309 *i* P **Pdif** **16 18 44.4 -5.4**
MAK *i* 16 21 32.8
MAK *e* 16 24 29.4
KMBO Kilima Mbogo 140.14 236 PKhKP PKPpre 16 21 32.5
comp=Z,2.6nm,0.7s,baz=114,slow=3.2,SNR=7.9
VRH Novokhopyorsk 140.58 324 *e*PKIKP **PKPdf** **16 21 34.8 -0.8**
VRH pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 141.28 327 *e*PKIKP **PKPdf** **16 21 38.1 +1.3**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
VSR Storozhevoye 141.93 325 *e*PKIKP **PKPdf** **16 21 36.7 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.9s
NB2 NORSAR Subarra 142.38 355 PKP **PKPdf** **16 21 34.3 -4.3**
comp=Z,3.1nm,1.1s,baz=10,slow=3.2
NOA NORSAR Array B 142.38 355 PKhKP PKPpre 16 21 35.1
comp=Z,2.3nm,1.0s,baz=8.1,slow=2.4,SNR=4.3
ZEI Tsey 142.69 310 *i* PKIKP **PKPdf** **16 21 39.1 -0.9**
ZEI pmax pmax
comp=Z,10.0nm,1.2s
RAYN Ar Rayn 142.97 278 PKIKP **PKPdf** **16 21 38.1 -2.7**
RAYN Ar Rayn 142.97 278 PKPpre PKPpre 16 21 38.1
KBZ Khabaz 143.07 312 PKhKP PKPpre 16 21 37.7
comp=Z,7.3nm,0.9s,baz=53,slow=20,SNR=15
KIV Kislovodsk 143.13 313 ⇓P PKPbc 16 21 38.8 +1.3
KIV Kislovodsk 143.13 313 *i* PKIKP PKPbc 16 21 38.1 +0.6
KIV pmax pmax
comp=Z,34nm,1.1s
KIV MLR MLR
comp=Z,574nm,24.0s
KIV Kislovodsk 143.13 313 PKPpre PKPpre 16 21 37.6
IZAR Zarasai 144.31 339 *e*P **PKiKP** **16 21 44.5 -1.2**
ISAL Salakas 144.50 339 *e*P **PKiKP** **16 21 44.5 -1.6**

IDID Didziasalis 144.51 339 *e*P **PKPdf** **16 21 43.6 +1.2**
GEVA Gevas 144.51 303 PKPdf **PKPdf** **16 21 42.7 -0.6**
BATM Batumi 144.62 309 ⇓P **PKPdf** **16 21 43.0 -0.1**
BATM Batumi 144.62 309 ⇓PKIKP **PKPdf** **16 21 43.0 -0.1**
IIGN Ignalina 144.65 339 *e*P **PKPdf** **16 21 44.2 +1.5**
NACGM Naroch 144.83 338 *e* **PKPab** **16 21 42.0 0.0**
PABE Paberze 145.22 341 *e*P **PKPdf** **16 21 44.5 +0.8**
SOC Sochi 145.26 313 *e*PKIKP **PKPbc** **16 21 43.2 -0.7**
SOC *i* 16 21 47.2
SOC *e* 16 25 02.1
SOC *e*SS SS 16 43 50.0 -3.7
SOC *e*SSS SSS 16 49 20.2
SOC pmax pmax
comp=Z,44nm,0.8s
SOC MLR MLR
comp=Z,231nm,20.0s
MBAR Mbarara 145.27 230 PKIKP **PKPdf** **16 21 46.1 +0.8**
MBAR Mbarara 145.27 230 PKPbc **PKPdf** **16 21 46.1 +0.8**
PBUR Paburge 145.34 343 *e*P **PKPdf** **16 21 44.4 +0.5**
KOPT Kop Dagi 145.98 307 **PKPab** **16 21 47.2 0.0**
KTUT Trabzon 146.19 309 ⇑P **PKPab** **16 21 48.5 +0.9**
ANN Anapa 146.21 317 *e*PKP2 **PKPab** **16 21 47.3 -0.2**
ANN pmax pmax
comp=Z,149nm,1.0s
MARD Mardin 146.50 302 **PKPbc** **16 21 48.2 +0.2**
SUW Suwalki 146.74 340 *e*P **PKPbc** **16 21 48.6 +0.6**
SUW Suwalki 146.74 340 PKP2 **PKPbc** **16 21 48.0 0.0**
SUW Suwalki 146.74 340 **PKPbc** **16 21 48.0 0.0**
MUD Monsted U'grnd 147.09 356 *i* PKIKP **PKPdf** **16 21 46.3 -0.5**
MUD pmax pmax
comp=Z,52nm,1.0s
MUD Monsted U'grnd 147.09 356 *i* P **PKPdf** **16 21 46.3 -0.5**
comp=Z,52nm,1.0s
MUD Monsted U'grnd 147.09 356 *i* P **PKPdf** **16 21 46.4 -0.5**
MUD IAmb IAmb 16 21 51.8
comp=Z,52nm,1.0s
AKASG Malin Array Be 147.10 331 PKPbc **PKPbc** **16 21 49.4 +0.2**
comp=Z,38nm,0.8s,baz=41,slow=4.0,SNR=84
AKASG Malin Array Be 147.10 331 PKPdf **PKPdf** **16 21 46.6 -0.4**
AKASG PKPbc **PKPbc** **16 21 49.2 +0.1**
AKBB Malin Array Si 147.10 331 PKIKP **PKPdf** **16 21 47.3 +0.3**
AKBB 16 21 49.4
AKBB Malin Array Si 147.10 331 PKPdf **PKPdf** **16 21 47.3 +0.3**
AKBB PKPbc **sPKPdf** **16 21 49.4 -2.0**
RGN Rugen 148.52 351 *e*PKPbc **PKPbc** **16 21 53.6 +0.8**
baz=12,slow=2.3
RGN *e*pPKPbc sPKPab 16 22 10.8 +10
baz=11,slow=2.4
SKMB Sankelmark Bun 148.79 355 *e*PKPbc **PKiKP** **16 21 55.1 +0.2**
baz=12,slow=2.3
GKP Gorka Klasztor 149.00 346 *e*P **PKiKP** **16 21 55.2 -0.2**
DIKM Dikmen 149.06 313 ⇓P **PKiKP** **16 21 56.2 +0.2**
SORM Soroca 149.33 329 ⇑P **PKiKP** **16 21 56.1 -0.2**
SORM Soroca 149.33 329 ⇑PKP2 **PKiKP** **16 21 56.1 -0.2**
BEL Belsk 149.35 341 *e*P **PKiKP** **16 21 56.6 +0.4**
BSEG Bad Segeberg 149.49 354 *e*PKPdf **PKPdf** **16 21 52.2 +1.4**
baz=11,slow=1.5
BSEG *e*PKPbc **PKiKP** **16 21 56.5 +0.2**
baz=12,slow=2.3
BSEG *e*pPKPbc **sPKPab** **16 22 13.3 +8.7**
baz=11,slow=2.4
PURM Purcari 149.65 325 ⇑P **PKPab** **16 21 59.1 -2.0**
BZK Bozkurt 149.75 314 ⇓P **PKiKP** **16 21 58.1 +0.7**
LVV L'vov 149.93 335 *e*PKP2 **PKiKP** **16 21 57.3 -0.2**
MILM Milestii Mici 149.94 326 ⇑P **PKiKP** **16 21 57.5 -0.1**
RUE Ruedersdorf 150.44 349 *e*P **PKiKP** **16 21 59.0 +0.6**
KWP Kalwaria Pacla 150.58 336 *e*P **PKiKP** **16 21 59.3 +0.5**
NRDL Niedersach Rie 150.93 354 *e*PKPdf **PKPdf** **16 21 54.5 +1.4**
baz=11,slow=1.5
NRDL *e*PKPbc **PKiKP** **16 21 59.9 +0.6**
baz=12,slow=2.3
NRDL *e*pPKPbc **sPKPab** **16 22 16.7 +6.1**
baz=11,slow=2.4
BR131 Keskin Array S 151.00 310 PKIKP **PKPbc** **16 21 59.3 -0.3**
BR131 Keskin Array S 151.00 310 **PKPbc** **16 21 59.3 -0.3**
BRTR Keskin Array B 151.00 310 PKP **PKPdf** **16 21 54.5 +0.6**
comp=Z,8.6nm,1.1s,baz=204,slow=3.2,SNR=4.3
BRTR PKPbc **PKiKP** **16 22 00.4 +0.2**
comp=Z,17nm,0.8s,baz=113,slow=2.8,SNR=52
BRTR Keskin Array B 151.00 310 PKIKP **PKPdf** **16 21 53.6 -0.3**
BRTR 16 21 59.7
BRTR Keskin Array B 151.00 310 PKPdf **PKPdf** **16 21 53.6 -0.3**
BRTR PKPbc **PKPbc** **16 21 59.7 0.0**
OJC Ojcow 151.07 340 *e*P **PKiKP** **16 22 00.4 +0.5**
OJC Ojcow 151.07 340 PKIKP **PKPbc** **16 21 58.6 -0.6**
OJC Ojcow 151.07 340 **PKPbc** **16 21 58.6 -0.6**
BUR08 Bucovina Ar. S 151.14 331 PKPdf **PKPdf** **16 21 52.6 -1.1**
BUR08 **PKPbc** **16 21 59.9 +0.2**
BURAR Bucovina Array 151.15 331 ⇑P **PKiKP** **16 22 01.4 +1.2**
BURAR Bucovina Array 151.15 331 ⇑PKIKP **PKiKP** **16 22 01.4 +1.2**
BURAR Bucovina Array 151.15 331 PKPdf **PKPdf** **16 21 53.7 -0.1**
ASSE Asse, Remlinge 151.23 353 *e*PKPdf **PKPdf** **16 21 55.0 +1.4**
baz=11,slow=1.5
ASSE *e*PKPbc **pPKPbc** **16 22 00.8 -2.3**
baz=12,slow=2.3
BIZ Bicaz 151.25 329 ⇑P **PKiKP** **16 22 01.7 +1.4**
IBBN Ibbenburen 151.31 356 *e*PKPbc **PKiKP** **16 22 01.0 +0.8**
baz=12,slow=2.3
KOLS Kolonicke sedl 151.32 336 *e*PKIKP **PKPdf** **16 21 56.7 +2.8**
KOLS *e* 16 22 01.7
KOLS Kolonicke sedl 151.32 336 *e*PKP **PKPdf** **16 21 56.7 +2.8**
KOLS *e* 16 22 01.7
BHL Bhannes 151.35 298 *e*P **PKiKP** **16 22 01.0 0.0**
QRWL Qaraoun 151.41 297 *e*P **PKiKP** **16 22 02.0 +0.9**
CFR Carcaliu 151.45 324 ⇓P **PKiKP** **16 22 01.4 +0.7**
CFR Carcaliu 151.45 324 ⇓PKIKP **PKiKP** **16 22 01.4 +0.7**
DQRL Deir Qamar 151.46 297 *e*P **PKiKP** **16 22 02.1 +0.8**
KSP Ksiaz 151.47 345 *e*P **PKiKP** **16 22 01.6 +1.0**
TPGR Topolog 151.51 324 ⇑P **PKiKP** **16 22 02.2 +1.2**
BR231 Keskin MP Arra 151.55 311 **PKPbc** **16 22 00.4 -0.5**
CLZ Clausthal 151.55 353 *e*PKPdf **PKPdf** **16 21 55.6 +1.4**
baz=11,slow=1.5
CLZ *e*PKPbc **pPKPbc** **16 22 01.6 -2.0**
baz=12,slow=2.3
UZH Uzhgorod 151.56 336 *e*PKIKP **PKiKP** **16 22 01.0 +0.1**
NIE Niedzica 151.60 339 *e*P **PKiKP** **16 22 02.5 +1.5**
CRVS Cervenica-Dubn 151.64 337 *e*PKIKP **PKPdf** **16 21 56.9 +2.5**
CRVS *e* 16 22 02.2
CRVS Cervenica-Dubn 151.64 337 *e*PKP **PKPdf** **16 21 56.9 +2.5**
CRVS *e* 16 22 02.2
CLL Collm 151.70 349 *e*PKPdf **PKPdf** **16 21 55.0 +0.6**
comp=Z,9.0nm,1.2s
CLL ⇓*i*PKPbc **PKiKP** **16 22 01.5 +0.4**
comp=Z,51nm,1.0s
CLL *e*PKPab **pPKPab** **16 22 11.0 -2.0**
comp=Z,14nm,0.9s
CLL *e* 16 22 15.0
CLL LmV 17 30 00.0
comp=Z,200nm,19.9s
CLL Collm 151.70 349 ⇓*e*PKIKP **PKPdf** **16 21 55.0 +0.6**
CLL *i* 16 22 01.5
CLL pmax pmax
comp=Z,9.0nm,1.2s
CLL Collm 151.70 349 *e*PKPdf **PKPdf** **16 21 55.8 +1.5**
baz=11,slow=1.5
CLL *e*PKPbc **pPKPbc** **16 22 01.8 -2.5**
baz=12,slow=2.3
VRI Vrincioaia 151.71 327 ⇓P **PKiKP** **16 22 01.8 +0.5**
VRI Vrincioaia 151.71 327 ⇓PKIKP **PKiKP** **16 22 01.8 +0.5**
OSTC Ostas 151.75 345 ⇑*e*PKP **PKiKP** **16 22 02.4 +1.1**
PLOR Plostina 151.76 327 ⇑P **PKiKP** **16 22 02.1 +0.7**
PLOR Plostina 151.76 327 ⇑PKIKP **PKiKP** **16 22 02.1 +0.7**
CHVC Chvalec 151.76 345 ⇑*e*PKP **PKiKP** **16 22 02.5 +1.2**
UPC Upice 151.85 345 *e*PKIKP **PKiKP** **16 22 02.6 +1.2**
UPC Upice 151.85 345 ⇑*e*PKP **PKiKP** **16 22 02.6 +1.2**
OKC Ostrava-Krasne 151.90 342 *e*PKIKP **PKiKP** **16 22 02.6 +1.1**
OKC Ostrava-Krasne 151.90 342 ⇑*e*PKP **PKiKP** **16 22 02.6 +1.1**
ARCR ARCALIA 151.94 331 ⇑P **PKiKP** **16 22 02.8 +1.1**
BRG Berggiesshubel 151.95 348 *e*PKP **PKPdf** **16 21 56.0 +1.3**
comp=Z,12nm,1.4s
BRG *i* 16 22 02.2
comp=Z,39nm,0.9s
BRG *i* 16 22 19.5
comp=Z,29nm,1.4s
BRG Berggiesshubel 151.95 348 *e*PKIKP **PKPdf** **16 21 56.0 +1.3**
BRG *i* 16 22 02.2
BRG pmax pmax
comp=Z,19nm,1.4s
BRG Berggiesshubel 151.95 348 *e*PKPdf **PKPdf** **16 21 56.2 +1.5**
baz=11,slow=1.5
BRG *e*PKPbc **pPKPbc** **16 22 02.5 -2.4**
baz=12,slow=2.3
BRG *e*pPKPbc **sPKPab** **16 22 19.4 +4.4**
baz=11,slow=2.4
NEUB Neuenburg 151.99 351 *e*PKPbc **PKiKP** **16 22 02.6 +0.9**
baz=12,slow=2.3
OZUR 152.01 328 ⇑P **PKiKP** **16 22 03.4 +1.4**
FBE Freiberg 152.01 349 *e*PKPdf **PKPdf** **16 21 56.4 +1.5**
baz=11,slow=1.5
FBE *e*PKPbc **pPKPbc** **16 22 02.9 -2.1**
baz=12,slow=2.3
KRLC Kraliky 152.06 344 *e*PKIKP **PKiKP** **16 22 02.9 +1.0**
KRLC Kraliky 152.06 344 ⇑*e*PKP **PKiKP** **16 22 02.9 +1.0**
MANR Mangalia 152.07 322 ⇑P **PKiKP** **16 22 03.4 +1.3**
LANS Liptovska Anna 152.11 339 *e*PKIKP **PKiKP** **16 22 03.9 +1.8**
LANS Liptovska Anna 152.11 339 *e*PKP **PKiKP** **16 22 03.9 +1.8**
MORC Moravsky Berou 152.13 342 ⇑P **PKiKP** **16 22 03.2 +1.1**
MORC Moravsky Berou 152.13 342 *e*PKP **PKPdf** **16 21 56.3 +1.2**
MORC *e* 16 22 02.7
MORC Moravsky Berou 152.13 342 PKIKP **PKPdf** **16 21 55.1 0.0**
MORC 16 22 02.6
MORC Moravsky Berou 152.13 342 PKPdf **PKPdf** **16 21 55.1 0.0**
MORC PKPbc **PKiKP** **16 22 02.6 +0.5**
PVCC Panska Ves 152.15 347 *e*PKIKP **PKiKP** **16 22 03.3 +1.3**
PVCC Panska Ves 152.15 347 ⇑*e*PKP **PKiKP** **16 22 03.3 +1.3**
BUG Bochum--Univer 152.20 357 *e*PKPbc **PKiKP** **16 22 02.8 +0.8**
baz=12,slow=2.3
BUG *e*PKPab **PKPab** **16 22 12.0 +0.6**
baz=11,slow=4.3
DOPR Dopca 152.29 328 ⇑P **PKiKP** **16 22 04.1 +1.5**
MDUB Mudurnu 152.32 314 **PKPbc** **16 22 02.5 -0.1**
MLR Muntele Rosu 152.37 327 ⇓P **PKiKP** **16 22 03.8 +1.0**
MLR Muntele Rosu 152.37 327 PKIKP **PKPdf** **16 21 55.1 -0.7**
MLR 16 22 02.7
MLR Muntele Rosu 152.37 327 PKPdf **PKPdf** **16 21 55.0 -0.7**
MLR PKPbc **PKiKP** **16 22 02.7 -0.1**
CJR Cluj-Napoca 152.56 332 ⇓P **PKiKP** **16 22 04.8 +1.7**
CJR Cluj-Napoca 152.56 332 ⇓PKIKP **PKiKP** **16 22 04.8 +1.7**
MOX Moxa 152.56 351 *e*PKPdf **PKPdf** **16 21 57.1 +1.4**
baz=11,slow=1.5
MOX *e*PKPbc **PKiKP** **16 22 03.5 +0.5**
baz=12,slow=2.3
MOX *e*pPKPbc **sPKPab** **16 22 20.5 +3.0**
baz=11,slow=2.4
UBBA Unterbreizbach 152.60 353 *e*PKPbc **PKiKP** **16 22 03.3 +0.5**
baz=12,slow=2.3
UBBA *e*PKPab **PKPab** **16 22 13.6 +0.6**
baz=11,slow=4.3
PLN Plauen 152.63 350 *e*PKPdf **PKPdf** **16 21 57.1 +1.3**
baz=11,slow=1.5
PLN *e*PKPbc **pPKPbc** **16 22 03.9 -2.6**
baz=12,slow=2.3
PLN *e*PKPab **PKPab** **16 22 13.9 +0.5**
baz=11,slow=4.3
TANN Tannenbergstha 152.65 350 *e*PKPdf **PKPdf** **16 21 57.4 +1.5**
baz=11,slow=1.5
TANN *e*PKPbc **pPKPbc** **16 22 04.1 -2.5**
baz=12,slow=2.3
TANN *e*PKPab **PKPab** **16 22 14.0 +0.5**
baz=11,slow=4.3
PRU Pruhonice 152.67 347 *e*PKIKP **PKiKP** **16 22 04.0 +0.9**
PRU *e* 16 22 13.6
PRU Pruhonice 152.67 347 ⇑*e*PKP **PKiKP** **16 22 04.0 +0.9**
PRU *e*PKPAB **PKPab** **16 22 13.6 +0.1**
GUNZ Gunzen 152.72 350 *e*PKPbc **PKiKP** **16 22 04.3 +1.0**
baz=12,slow=2.3
WERN Wernitzgruen 152.79 350 *e*PKPbc **PKiKP** **16 22 04.5 +1.1**
baz=12,slow=2.3
VRAC Vranov 152.81 343 *e*PKP **PKPdf** **16 21 56.9 +0.8**
VRAC *e* 16 22 04.0
VRAC *e* 16 22 14.6
VOIR 152.84 328 ⇓P **PKiKP** **16 22 05.5 +1.7**
VOIR 152.84 328 ⇓PKIKP **PKiKP** **16 22 05.5 +1.7**
DRGR 152.87 333 ⇓P **PKiKP** **16 22 04.7 +0.9**
DRGR 152.87 333 ⇓PKIKP **PKiKP** **16 22 04.7 +0.9**
VYHS Vyhne 152.89 340 *e*PKIKP **PKiKP** **16 22 04.7 +1.0**
VYHS *e* 16 22 15.1
VYHS Vyhne 152.89 340 *e*PKP **PKiKP** **16 22 04.7 +1.0**
VYHS *e* 16 22 15.1
JAVC Velka Javorina 152.92 341 *e*PKP **PKPdf** **16 21 58.4 +2.1**
JAVC *e* 16 22 05.8
CSS Mathiatis 152.94 301 **PKiKP** **16 22 04.3 +0.1**
PSZ Piszkesteto 153.03 338 ⇑P **PKiKP** **16 22 06.0 +2.0**
PSZ Piszkesteto 153.03 338 PKIKP **PKPdf** **16 21 56.3 -0.2**
PSZ Piszkesteto 153.03 338 PKPdf **PKPdf** **16 21 56.3 -0.2**
PBCC Pribram 153.07 347 ⇑*e*PKP **PKiKP** **16 22 05.0 +1.0**
MEM Membach 153.07 359 PKIKP **PKiKP** **16 22 05.0 +1.0**
KRUC Moravsky 153.09 343 *e*PKP **PKPdf** **16 21 57.3 +0.8**
KRUC *e* 16 22 04.6
KRUC *e* 16 22 13.7
BTNL Ternell 153.09 358 PKiKP **PKiKP** **16 22 04.7 +0.7**
ARR Arges 153.09 328 ⇑P **PKiKP** **16 22 06.0 +1.7**
MANZ Manzenberg 153.13 350 *e*PKPdf **PKPdf** **16 21 57.9 +1.3**
baz=11,slow=1.5
MANZ *e*PKPbc **pPKPbc** **16 22 05.2 -2.5**
baz=12,slow=2.3
MANZ *e*pPKPbc **sPKPab** **16 22 21.8 +1.8**
baz=11,slow=2.4
LEF Lefka 153.23 302 ⇑P **PKiKP** **16 22 05.7 +0.9**
ROTZ Rotzenmuhle 153.32 350 *e*PKPdf **PKPdf** **16 21 59.3 +2.5**
baz=11,slow=1.5
ROTZ *e*PKPbc **pPKPbc** **16 22 05.5 -2.5**
baz=12,slow=2.3
ROTZ *e*PKPab **PKPab** **16 22 17.1 +0.8**
baz=11,slow=4.3
TNS Taunus Mts 153.34 355 *e*PKPdf **PKPdf** **16 21 58.2 +1.3**
baz=11,slow=1.5
TNS *e*PKPbc **pPKPbc** **16 22 05.6 -2.1**
baz=12,slow=2.3
TNS *e*PKPab **pPKPab** **16 22 17.3 -2.7**
baz=11,slow=4.3
BMRD Maredsous 153.39 0 PKiKP **PKiKP** **16 22 05.3 +0.7**
MODS Modra-Piesok 153.47 341 *e*PKIKP **PKPbc** **16 22 04.0 -0.8**
MODS Modra-Piesok 153.47 341 *e*PKP **PKPbc** **16 22 04.0 -0.8**
GRF Grafenberg Arr 153.55 351 *e*PKPdf **PKPdf** **16 21 58.6 +1.4**
baz=11,slow=1.5
GRF *e*PKPbc **PKiKP** **16 22 05.7 +0.7**
baz=12,slow=2.3
GRF *e*PKPab **pPKPab** **16 22 18.4 -2.4**
baz=11,slow=4.3
DOU Dourbes 153.60 1 PKPbc **PKiKP** **16 22 05.4 +0.4**
DOU PKiKP **pPKPbc** **16 22 06.2 -1.9**
KHC Kasperske Hory 153.68 347 *e*PKIKP **PKPdf** **16 21 58.2 +0.8**
KHC *e* 16 22 06.3
KHC Kasperske Hory 153.68 347 *e*PKPDF **PKPdf** **16 21 58.2 +0.8**
KHC ⇑*e*PKP **pPKPbc** **16 22 06.3 -2.6**
KHC *e*PKPAB **pPKPab** **16 22 19.0 -2.4**
KHC Kasperske Hory 153.68 347 **PKPdf** **16 21 57.8 +0.3**
WET Wettzell 153.81 348 *e*PKPdf **PKPdf** **16 21 58.9 +1.4**
baz=11,slow=1.5
WET *e*PKPbc **PKiKP** **16 22 06.2 +0.6**
baz=12,slow=2.3
GEC2 GERESS Array S 153.93 347 *e*PKPdf **PKPdf** **16 21 58.9 +1.0**
baz=11,slow=1.5
GEC2 *e*PKPbc **pPKPbc** **16 22 06.6 +0.7**
baz=12,slow=2.3
GEC2 *e*pPKPbc **sPKPab** **16 22 24.5 +1.0**
baz=11,slow=2.4
GEC2 GERESS Array S 153.93 347 **PKiKP** **16 22 06.2 +0.3**
GERES GERESS Array B 153.93 347 PKP **PKPdf** **16 21 58.0 +0.2**
comp=Z,1.8nm,0.9s,baz=162,slow=1.3,SNR=11
GERES PKPbc **PKiKP** **16 22 06.8 +0.8**
comp=Z,2.9nm,0.8s,baz=52,slow=2.2,SNR=14
GERES GERESS Array B 153.93 347 **PKPdf** **16 21 57.6 -0.2**
GERES PKPbc **PKPbc** **16 22 05.8 0.0**
GZR Gura Zlata 153.94 331 ⇑P **PKPdf** **16 21 59.6 +1.7**
GZR Gura Zlata 153.94 331 ⇑PKIKP **PKPdf** **16 21 59.6 +1.7**
WLF Walferdange 154.01 358 PKiKP **PKiKP** **16 22 07.5 +1.6**
WLF Walferdange 154.01 358 *e*PKPdf **PKPdf** **16 21 59.5 +1.7**
baz=11,slow=1.5
WLF *e*PKPbc **pPKPbc** **16 22 07.4 -1.7**
baz=12,slow=2.3
WLF *e*PKPab **pPKPab** **16 22 20.4 -2.0**
baz=11,slow=4.3
BZS Buzias 154.27 332 ⇑P **PKPbc** **16 22 05.8 -0.7**
BZS Buzias 154.27 332 ⇑PKIKP **PKPbc** **16 22 05.8 -0.7**
CONA Conrad Observa 154.27 343 *e*P **PKPdf** **16 21 59.4 +1.1**
comp=Z,4.3nm,0.9s
CONA *e*P **pPKPab** **16 22 22.2 -1.8**
comp=Z,9.1nm,0.9s
HERR Herculane 154.50 330 ⇑P **PKPdf** **16 22 00.1 +1.4**
MOA Molln 154.74 345 *e*P **PKPdf** **16 21 59.5 +0.6**
comp=Z,4.4nm,1.2s
MOA *e*P **sPKPab** **16 22 24.9 -2.0**
comp=Z,6.9nm,1.2s
ARSA Arzberg 154.98 343 *e*P **PKPdf** **16 22 01.7 +2.4**
ARSA *e*P **pPKPab** **16 22 25.0 -2.0**

	comp=Z,3.1nm,0.8s						
BFO	**Black Forest**	**155.22 355**	*e*PKPbc	PKPdf	16 22 09.2	+10
	baz=12,slow=2.3						
BFO			*e*PKPab	**PKPab**	**16 22 24.7**	**+0.3**
	baz=11,slow=4.3						
AKAS	**Kas**	**155.34 306**	PKPdf	**PKPdf**	**16 21 58.9**	**-1.4**
AKAS				**PKPab**	**16 22 24.8**	**-0.8**
SOKA	**Soboth**	**155.64 343**	P	**PKPdf**	**16 22 00.8**	**+0.5**
	comp=Z,7.0nm,1.0s						
SOKA			*e*P	**pPKPab**	**16 22 27.5**	**-2.3**
	comp=Z,22nm,1.3s						
UBR	**Ueberruh**	**155.67 352**	*e*PKPdf	**PKPdf**	**16 22 01.1**	**+0.8**
	baz=11,slow=1.5						
KBA	**Koelnbreinsper**	**155.68 346**	*e*P	**PKPdf**	**16 21 59.6**	**-0.8**
	comp=Z,11nm,1.3s						
KBA			*i* P	**PKPab**	**16 22 26.7**	**+0.1**
	comp=Z,8.9nm,1.1s						
WATA	**Walderalm**	**155.78 349**	*e*P	**PKPab**	**16 22 29.0**	**+2.0**
	comp=Z,7.1nm,1.0s						
MOTA	**Moosalm**	**155.85 350**	*e*P	**PKPdf**	**16 22 00.8**	**+0.2**
	comp=Z,5.9nm,1.0s						
MOTA			*e*P	**pPKPab**	**16 22 28.8**	**-2.1**
	comp=Z,12nm,1.3s						
ABTA	**Abfaltersbach**	**156.17 347**	*e*P	**PKPdf**	**16 22 01.0**	**0.0**
	comp=Z,14nm,1.2s						
ABTA			*e*P	**PKPab**	**16 22 28.6**	**0.0**
	comp=Z,11nm,1.3s						
FETA	**Feichten**	**156.23 350**	*e*P	**PKPdf**	**16 22 01.4**	**+0.2**
	comp=Z,12nm,1.1s						
FETA			*e*P	**PKPab**	**16 22 29.1**	**+0.2**
	comp=Z,13nm,1.8s						
KARP	**Karpathos**	**157.43 307**	PKPab	**PKPab**	**16 22 34.5**	**0.0**
LIT	**Litokhoron**	**157.94 322**	PKP2	**PKPab**	**16 22 36.7**	**+0.3**
LIT	**Litokhoron**	**157.94 322**	PKPab	**PKPab**	**16 22 36.7**	**+0.3**
NRCA	**Norcia**	**159.72 343**		**PKPab**	**16 22 44.6**	**+0.6**
DBIC	**Dimbokro**	**160.64 149**	PKP	**PKPdf**	**16 22 07.7**	**+0.5**
	comp=Z,5.6nm,0.9s,baz=125,slow=2.7,SNR=3.6						
ESDC	**Sonseca Array**	**162.31 23**	PKP	**PKPdf**	**16 22 09.1**	**+0.8**
	comp=Z,4.8nm,1.1s,baz=344,slow=3.1,SNR=10.0						
ESDC	**Sonseca Array**	**162.31 23**		**PKPdf**	**16 22 07.8**	**-0.5**
KEST	**Kesra**	**167.38 344**	PKPab	**PKPab**	**16 23 17.9**	**+0.1**
	comp=Z,7.0nm,1.0s,baz=241,slow=3.5,SNR=4.3						
KOWA	**Kowa**	**167.53 135**		**PKPdf**	**16 22 13.0**	**-0.4**
TOA0	**Torodi Ar. Sit**	**169.10 163**		**PKPdf**	**16 22 14.4**	**0.0**
TORD	**Torodi Ar. Bea**	**169.10 163**	PKP	**PKPdf**	**16 22 14.9**	**+0.4**
	comp=Z,6.8nm,1.1s,baz=324,slow=1.3,SNR=21						
TORD			PKPab	**pPKPab**	**16 23 27.5**	**-1.5**
	comp=Z,4.7nm,0.8s,baz=208,slow=3.6,SNR=11						
TORD			PP	**PP**	**16 27 17.0**	**+3.2**
	comp=Z,2.1nm,1.2s,baz=167,slow=6.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**169.10 163**		**PKPdf**	**16 22 14.0**	**-0.5**
TORD			PKPab	**PKPab**	**16 23 26.2**	**+0.5**

ISN ***18*** *16:04:26.5±1.0,33.°10N×45.°86E,h10km±999km, ML3.0*
TEH ***18*** *16:04:28.0,33.°05N×45.°90E,h10km, ML2.7*

ISC 18 16:04:27.9±1.0, 33.°02N±0.°05×45.°86E±0.°05, h10km, n9, σ1s24.0/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.11**	**33**	*e*Pg	**Pg**	**16 04 29.0**	**-1.7**
IBDR				*e*Sg	**Sg**	**16 04 30.0**	**-2.6**
IBDR				AML	AML	16 04 34.3	
	comp=N,4μm,0.6s						
IBDR				AML	AML	16 04 35.0	
	comp=E,4μm,0.3s						
BHD	**Baghdad**	**1.26**	**282**	*e*Pn	**Pg**	**16 04 52.0**	**-0.1**
BHD				*e*Sn	**Sn**	**16 05 10.0**	**+1.4**
IGHG	**Ghaleghazi**	**1.44**	**24**	*e*Pg	**Pg**	**16 04 55.8**	**+0.3**
IGHG				*e*		16 05 21.6	
KCHF	**Cheshme Sefid,**	**1.60**	**38**	*e*Pg	**Pn**	**16 04 56.3**	**-0.1**
KCHF				*e*Sg	**Sg**	**16 05 20.0**	**+0.7**
KCHF				*e*		16 05 24.3	
IVIS	**Veis**	**1.72**	**29**	*e*Pg	**Pg**	**16 05 00.1**	**-0.8**
IVIS				*e*		16 05 30.0	
IDHR	**Dehrash**	**1.74**	**15**	*e*		16 05 03.5	
IDHR				*e*Pg	**Pg**	**16 05 01.1**	**-0.1**
IKFM	**Kafar-mosalman**	**1.74**	**73**	*e*Pg	**Pb**	**16 05 00.2**	**+0.2**
IKFM				*e*		16 05 25.1	
IKFM				*e*Sg	**Sg**	**16 05 26.0**	**+2.1**
IKOM	**Komasi**	**1.80**	**50**	*e*Pg	**Pb**	**16 05 00.9**	**-0.2**
IKOM				*e*Sg	**Sg**	**16 05 26.7**	**+0.9**
IKOM				*e*		16 05 29.1	
NSR	**Nassriya**	**2.01**	**173**	*e*Pn	**Pb**	**16 05 04.0**	**-0.6**
NSR				*e*Sn	**Sb**	**16 05 30.0**	**+0.3**

IDC ***18*** *16:16:06.5±3.2,36.°71N×97.°60W,h0km,mb3.3/1, mb1 3.7/4,mb1mx3.4/36,mbtmp3.3/4, ML3.8/3, Error ellipse: s-maj=53.5km s-min=16.8km az=97.0*
TUL ***18*** *16:16:07.6±0.9,36.°87N±0.°04×98.°34W±0.°04,h5km±6km, ML3.6, Error ellipse: s-maj=6.0km s-min=3.8km az=166.0*
NEIC ***18*** *16:16:08.3±0.9,36.°88N±0.°03×98.°29W±0.°04,h8km±6km, Error ellipse: s-maj=5.1km s-min=3.9km az=223.0*
ANF ***18*** *16:16:08.0±0.3,36.°86N×98.°35W,h0km, ML4.3/13, Error ellipse: s-maj=3.5km s-min=2.8km az=47.0*

ISC 18 16:16:08.5±0.7, 36.°87N±0.°03×98.°29W±0.°03, h10km, n92, σ0s95/97, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAN14	**Manchester OK**	**0.28**	**71**		**Pg**	**16 16 14.2**	**0.0**
KAN14				Sg	**Sg**	**16 16 17.2**	**-0.7**
KAN10	**Anthony SW Sta**	**0.30**	**31**		**Pg**	**16 16 14.4**	**-0.2**
KAN10				Sg	**Sg**	**16 16 17.8**	**-0.9**
GC02	**Grant County #**	**0.35**	**92**		**Pg**	**16 16 15.4**	**0.0**
KAN05	**Bluff City Nor**	**0.41**	**54**		**Pg**	**16 16 16.7**	**0.0**
CROK	**Carrier**	**0.44**	**146**		**Pg**	**16 16 16.8**	**-0.3**
KAN08	**Anthony NE Sta**	**0.44**	**35**		**Pg**	**16 16 16.9**	**-0.3**
KAN01	**Argonia South**	**0.51**	**56**		**Pg**	**16 16 18.4**	**-0.1**
KAN09	**Caldwell North**	**0.60**	**63**		**Pg**	**16 16 19.9**	**-0.3**
KAN13	**South Haven SW**	**0.67**	**77**		**Pg**	**16 16 21.2**	**-0.2**
KS20	**Mayfield South**	**0.69**	**58**		**Pg**	**16 16 21.7**	**-0.3**
U32A	**Winter Ranch,**	**0.75**	**230**	Pg	**Pg**	**16 16 21.6**	**-1.5**
OK029	**Liberty Lake**	**1.26**	**147**		**Pb**	**16 16 31.6**	**-0.9**
BCOK	**Bluff Creek, N**	**1.33**	**155**		**Pb**	**16 16 32.6**	**-0.9**
T35A	**Sooner Cattle**	**1.43**	**87**		**Pb**	**16 16 34.7**	**-0.5**
QUOK	**Quay**	**1.45**	**118**	Pn	**Pb**	**16 16 35.0**	**-0.7**
OK031	**S. Brethren Rd**	**1.48**	**127**		**Pb**	**16 16 35.4**	**-0.8**
OK025	**Westminster Rd**	**1.50**	**149**		**Pb**	**16 16 35.7**	**-0.7**
OK030	**Cody Creek RV**	**1.53**	**127**		**Pb**	**16 16 36.2**	**-0.8**
R32A	**Long Quarter,**	**1.59**	**348**		**Pb**	**16 16 36.9**	**-1.1**
OKCFA	**Oklahoma City**	**1.60**	**155**		**Pb**	**16 16 37.0**	**-1.2**
OKCSW	**OKLAHOMA CITY**	**1.61**	**154**	Pn	**Pb**	**16 16 37.2**	**-1.2**
FNO	**Franklin**	**1.76**	**156**		**Pb**	**16 16 39.7**	**-1.2**
W35A	**Tecumseh**	**2.06**	**146**		**Pn**	**16 16 43.4**	**+0.2**
WMOK	**Wichita Mounta**	**2.16**	**191**	P	**Pn**	**16 16 44.7**	**0.0**
	baz=9.4						
WMOK				S	**Sb**	**16 17 14.2**	**-0.4**
	baz=9.4						
WMOK	**Wichita Mounta**	**2.16**	**191**	Pn	**Pn**	**16 16 44.6**	**0.0**
TUL1	**Leonard**	**2.23**	**115**	P	**Pb**	**16 16 47.3**	**-1.6**
	baz=296						
TUL1				S	**Sb**	**16 17 17.7**	**+1.1**
	baz=296						
TUL1	**Leonard**	**2.23**	**115**		**Pn**	**16 16 46.0**	**+0.4**
CBKS	**Cedar Bluff**	**2.26**	**330**	P	**Pn**	**16 16 46.6**	**+0.7**
	baz=150						
CBKS				S	**Sb**	**16 17 17.2**	**-0.2**
	baz=150						
CBKS	**Cedar Bluff**	**2.26**	**330**		**Pn**	**16 16 46.3**	**+0.3**
U38A	**Gravette**	**3.17**	**97**		**Pn**	**16 16 58.4**	**-0.1**
X37A	**Clayton**	**3.29**	**133**		**Pn**	**16 17 00.5**	**+0.4**
AMTX	**Amarillo**	**3.39**	**235**	Pb	**Pb**	**16 17 08.9**	**+0.2**
	baz=53						
AMTX	**Amarillo**	**3.39**	**235**	Pn	**Pn**	**16 17 00.0**	**-1.6**
HHAR	**Hobbs**	**3.55**	**98**		**Pn**	**16 17 04.0**	**+0.3**
Z35A	**Perchaven, San**	**3.63**	**166**		**Pn**	**16 17 04.3**	**-0.5**
N33A	**J Bar K, Exete**	**3.92**	**9**	Pn	**Pn**	**16 17 08.2**	**-0.6**
W39A	**Magazine**	**4.01**	**113**	P	**Pn**	**16 17 11.3**	**+1.2**
	baz=296						
W39A				Sb	**Sg**	**16 18 14.1**	**-3.3**
	baz=296						
W39A	**Magazine**	**4.01**	**113**		**Pn**	**16 17 10.7**	**+0.6**
KSCO	**Kaye Shedlock'**	**4.04**	**303**	P	**Pn**	**16 17 10.9**	**+0.3**
	baz=121						
KSCO	**Kaye Shedlock'**	**4.04**	**303**	Pn	**Pn**	**16 17 10.6**	**0.0**
S39A	**Bolivar**	**4.05**	**77**		**Pn**	**16 17 10.9**	**+0.4**
ABTX	**Abilene, Hawle**	**4.38**	**195**	Pn	**Pn**	**16 17 15.3**	**+0.2**
U40A	**Yellville**	**4.40**	**95**	P	**Pn**	**16 17 15.9**	**+0.4**
	baz=278						
U40A	**Yellville**	**4.40**	**95**	Pn	**Pn**	**16 17 15.8**	**+0.4**

MIAR	**Mount Ida**	**4.48**	**120**	P	**Pn**	**16 17 17.4**	**+0.9**
	baz=302						
MIAR	**Mount Ida**	**4.48**	**120**		**Pn**	**16 17 17.1**	**+0.6**
Z38A	**Mt. Pleasant**	**4.50**	**142**	Pn	**Pn**	**16 17 16.8**	**0.0**
BGNE	**Belgrade**	**4.54**	**1**	P	**Pn**	**16 17 17.9**	**+0.6**
	baz=182						
BGNE	**Belgrade**	**4.54**	**1**	Pn	**Pn**	**16 17 17.0**	**-0.3**
P38A	**Dawn**	**4.65**	**52**	Pn	**Pn**	**16 17 19.5**	**+0.7**
MSTX	**Muleshoe**	**4.66**	**233**	S	**Sn**	**16 18 14.8**	**+1.5**
	baz=50						
MSTX	**Muleshoe**	**4.66**	**233**	Pn	**Pn**	**16 17 18.6**	**-0.5**
MGMO	**Mountain Grove**	**4.83**	**85**		**Pn**	**16 17 21.6**	**+0.4**
T25A	**Trinidad**	**4.91**	**275**		**Pn**	**16 17 22.8**	**+0.2**
WHTX	**Lake Whitney,**	**4.91**	**172**	P	**Pn**	**16 17 22.5**	**0.0**
	baz=352						
WHTX				Sb	**Sb**	**16 18 38.4**	**+4.6**
	baz=352						
WHTX	**Lake Whitney,**	**4.91**	**172**		**Pn**	**16 17 22.4**	**0.0**
R40A	**Maddies Statio**	**4.99**	**72**		**Pn**	**16 17 23.5**	**0.0**
X40A	**Basin Creek Fa**	**5.04**	**117**	P	**Pn**	**16 17 25.2**	**+1.0**
	baz=300						
X40A	**Basin Creek Fa**	**5.04**	**117**		**Pn**	**16 17 24.8**	**+0.7**
FCAR	**Ozark Folk Cen**	**5.07**	**99**		**Pn**	**16 17 24.3**	**-0.2**
WHAR	**Wooly Hollow**	**5.11**	**106**		**Pn**	**16 17 25.3**	**+0.2**
W41B	**Gary Mavity, V**	**5.18**	**107**	P	**Pn**	**16 17 26.4**	**+0.3**
	baz=291						
W41B	**Gary Mavity, V**	**5.18**	**107**	Pn	**Pn**	**16 17 26.1**	**0.0**
237A	**Washetta, Mont**	**5.27**	**156**	Pn	**Pn**	**16 17 26.6**	**-0.7**
WLAR	**White Oak Lake**	**5.29**	**125**	Pn	**Pn**	**16 17 28.0**	**+0.4**
L34A	**Svendsen Farm,**	**5.30**	**16**	Pn	**Pn**	**16 17 27.6**	**-0.2**
P40A	**Paris**	**5.59**	**60**	Pn	**Pn**	**16 17 31.7**	**0.0**
K31A	**O'Neill**	**5.76**	**357**	Pn	**Pn**	**16 17 32.9**	**-1.2**
T42A	**Van Buren**	**5.77**	**86**	Pn	**Pn**	**16 17 33.2**	**-1.0**
LCAR	**Lake Charles**	**5.80**	**96**	Pn	**Pn**	**16 17 34.4**	**-0.3**
Q24A	**Divide**	**5.81**	**293**	Pn	**Pn**	**16 17 33.2**	**-1.9**
SDCO	**Great Sand Dun**	**5.81**	**281**	Pn	**Pn**	**16 17 33.3**	**-1.8**
CPRX	**Cap Rock**	**5.97**	**232**	Pn	**Pn**	**16 17 36.7**	**-0.4**
CCAR	**Carr Creek**	**6.08**	**117**	Pn	**Pn**	**16 17 38.6**	**+0.1**
FVM	**French Village**	**6.36**	**78**	Pn	**Pn**	**16 17 42.1**	**-0.2**
SCIA	**State Center**	**6.38**	**36**	Pn	**Pn**	**16 17 42.2**	**-0.4**
ISCO	**Idaho Springs**	**6.46**	**299**	Pn	**Pn**	**16 17 42.3**	**-1.7**
X43A	**Marvell**	**6.47**	**109**	Pn	**Pn**	**16 17 43.4**	**-0.4**
JCT	**Junction City**	**6.49**	**192**	Pn	**Pn**	**16 17 43.4**	**-0.9**
ANMO	**Albuquerque**	**6.90**	**256**	Pn	Pn	16 17 57.6	+7.7
	0.2nm,0.3s,baz=79,slow=16,SNR=2.2						
ANMO				Lg	Lg	16 19 42.8	
	1.9nm,0.3s,baz=326,slow=17,SNR=7.8						
ANMO	**Albuquerque**	**6.90**	**256**	Pn	**Pn**	**16 17 49.7**	**-0.2**
ECSD	**EROS Data Cent**	**6.98**	**10**	Pn	**Pn**	**16 17 50.4**	**-0.4**
LNXT	**Lenox**	**7.13**	**94**	Pn	**Pn**	**16 17 53.1**	**+0.2**
OXF	**Oxford**	**7.60**	**105**		**Pn**	**16 17 58.6**	**-0.7**
MNTX	**Cornudas Mount**	**7.81**	**231**	Pn	**Pn**	**16 18 02.0**	**-0.4**
HDIL	**Hopedale**	**7.94**	**60**	Pn	**Pn**	**16 18 04.2**	**+0.3**
TX31	**Lajitas Ar. Si**	**8.76**	**213**	Pn	**Pn**	**16 18 14.9**	**-0.4**
TX32	**Lajitas Array**	**8.76**	**213**		**Pn**	**16 18 15.0**	**-0.4**
TXAR	**Lajitas Array**	**8.76**	**212**	Pn	**Pn**	**16 18 15.1**	**-0.2**
	0.4nm,0.3s,baz=37,slow=11,SNR=22						
TXAR				Lg	Lg	16 20 41.8	
	0.9nm,0.3s,baz=31,slow=28,SNR=8.4						
TXAR	**Lajitas Array**	**8.76**	**212**	Pn	**Pn**	**16 18 14.4**	**-0.9**
PDAR	**Pinedale Array**	**10.48**	**308**	Pn	Pn	16 18 46.9	+7.9
	0.2nm,0.3s,baz=116,slow=16,SNR=3.0						
PDAR				Lg	Lg	16 21 40.3	
	0.9nm,0.3s,baz=92,slow=33,SNR=5.9						
ILAR	**Eielson Array**	**39.91**	**330**	P	**P**	**16 23 45.0**	**+2.6**
	0.4nm,0.7s,baz=119,slow=5.4,SNR=5.6						

WEL 18 16:30:59.1,41.°5±2.°×17.°3E±.°, h103km±3km, M2.8/11, MLv2.8/11, Error ellipse: s-maj=0.0km s-min=0.0km az=118.2, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNZ	**Nelson**	**0.19**	**183**	P	Pn	16 31 14.2	+0.5
NNZ				S	Sn	16 31 24.7	+0.1
DUWZ	**D'Urville Isla**	**0.46**	**61**	P	Pn	16 31 08.3	-6.7
DUWZ				S	Sn	16 31 28.0	+1.0
TUWZ	**Tuamarina**	**0.58**	**134**	P	Pn	16 31 16.5	+0.7
TUWZ				S	Sn	16 31 28.1	-0.2
QRZ	**Quartz Range**	**0.69**	**287**	P	Pn	16 31 17.2	+0.5
QRZ				S	Sn	16 31 29.8	-0.1
TCW	**Tory Channel**	**0.69**	**106**	P	Pn	16 31 17.6	+0.9
TCW				S	Sn	16 31 29.8	-0.2
BSWZ	**Blackbirch Sta**	**0.78**	**152**	P	Pn	16 31 18.2	+0.6
BSWZ				S	Sn	16 31 31.2	-0.2
THZ	**Tophouse**	**0.82**	**206**	P	Pn	16 31 18.5	+0.4
THZ				S	Sn	16 31 32.6	+0.3
WEL	**Wellington**	**1.07**	**104**	P	Pn	16 31 21.1	+0.6
KIW	**Kapiti Island**	**1.16**	**82**	P	Pn	16 31 22.0	+0.5
KIW				S	Sn	16 31 38.6	+0.1
CAW	**Cannon Point**	**1.27**	**94**	P	Pn	16 31 22.9	+0.2
CAW				S	Sn	16 31 39.7	-0.9
OGWZ	**Otaki Gorge**	**1.36**	**82**	P	Pn	16 31 24.2	+0.3
KHZ	**Kahutara**	**1.39**	**176**	P	Pn	16 31 24.5	+0.3
DSZ	**Denniston Nort**	**1.40**	**238**	P	Pn	16 31 24.6	+0.3
DSZ				S	Sn	16 31 42.3	-1.1
PLWZ	**Palliser**	**1.50**	**112**	P	Pn	16 31 25.5	-0.1
PLWZ				S	Sn	16 31 43.3	-2.4
KHEZ	**Kahui Hut**	**1.79**	**16**	P	Pn	16 31 31.1	+1.8
LTZ	**Lake Taylor**	**1.94**	**205**	P	Pn	16 31 31.0	-0.1
LTZ				S	Sn	16 31 53.2	-2.3
GVZ	**Greta Valley S**	**1.96**	**188**	P	Pn	16 31 30.9	-0.3
VRZ	**Vera Road**	**2.17**	**29**	P	Pn	16 31 35.8	+1.8
TSZ	**Takapari Road**	**2.18**	**65**	P	Pn	16 31 33.7	-0.4
AMCZ	**Amberley**	**2.22**	**194**	P	Pn	16 31 34.2	-0.4
OKCZ	**Okains Bay**	**2.71**	**185**	P	Pn	16 31 40.2	-0.9
HIZ	**Hauiti**	**2.75**	**25**	P	Pn	16 31 42.8	+1.2
RACZ	**Rakaia**	**2.85**	**199**	P	Pn	16 31 41.5	-1.4
AKCZ	**Akaroa Harbour**	**2.87**	**187**	P	Pn	16 31 41.9	-1.2
WIAZ	**Waiheke Island**	**4.44**	**18**	P	Pn	16 32 02.9	-1.3
ODZ	**Otahua Downs**	**4.49**	**206**	P	Pn	16 32 04.7	-0.3
OUZ	**Omahuta**	**5.80**	**2**	P	Pn	16 32 23.8	+1.1

IDC ***18*** *16:35:30.0±1.7,37.°2S×179.°45E,h0km,mb3.8/3, mb1 4.0/4,mb1mx3.7/30,mbtmp3.8/4,ML3.9/1, Error ellipse: s-maj=48.9km s-min=30.6km az=155.0*
WEL ***18*** *16:35:30.9,37.°S±7.°×18.°0E±.°, h34km±18km,M4.1/10, ML4.5/10,MLv4.1/10, Error ellipse: s-maj=0.0km s-min=0.0km az=127.7*
NEIC ***18*** *16:35:31.5±2.3,37.°52S±0.°05×179.°6E±0.°1,h10km±2km, mb4.1/9, Error ellipse: s-maj=18.7km s-min=8.6km az=94.0*

ISC 18 16:35:30.4±2.6, 37.°64S±0.°06×179.°80E±0.°07, h14km±14km, n119, σ1s34/122, mb4.0/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.11**	**260**	P	**Pn**	**16 35 51.8**	**+0.3**
WMGZ				S	**Sg**	**16 36 07.1**	**+0.8**
MXZ	**Matakaoa Point**	**1.19**	**273**	P	**Pn**	**16 35 51.8**	**-0.8**
MXZ				S	**Sb**	**16 36 07.0**	**-0.9**
MXZ	**Matakaoa Point**	**1.19**	**273**	Pn	**Pn**	**16 35 51.3**	**-1.2**
PUZ	**Puketiti**	**1.29**	**250**	P	**Pn**	**16 35 54.6**	**+0.6**
PUZ				S	**Sg**	**16 36 12.5**	**+0.3**
CNGZ	**Carnagh Statio**	**1.51**	**236**	P	**Pb**	**16 35 58.8**	**+0.5**
TWGZ	**Tauwhareparae**	**1.53**	**249**	P	**Pb**	**16 35 58.5**	**-0.1**
TWGZ				S	**Sb**	**16 36 18.6**	**+0.6**
HAZ	**Te Kaha**	**1.60**	**265**	P	**Pn**	**16 35 58.5**	**+0.3**
HAZ				S	**Sn**	**16 36 18.9**	**+0.2**
RUGZ	**Raukumara Rang**	**1.71**	**258**	P	**Pn**	**16 36 00.3**	**+0.4**
MWZ	**Matawai**	**1.92**	**248**	P	**Pn**	**16 36 03.2**	**+0.4**
MWZ				S	**Sn**	**16 36 26.8**	**0.0**
RIGZ	**Rimuhau**	**1.93**	**236**	P	**Pn**	**16 36 03.8**	**+1.0**
RIGZ				S	**Sb**	**16 36 28.7**	**-0.6**
PRUZ	**Paritu Road**	**1.98**	**229**	P	**Pn**	**16 36 04.5**	**+1.7**
RAGZ	**Rawiri**	**2.06**	**245**	P	**Pn**	**16 36 06.4**	**+1.7**
MHGZ	**Mahia Peninsul**	**2.12**	**224**	P	**Pn**	**16 36 06.4**	**+1.0**
KNZ	**Kokohu**	**2.17**	**230**	P	**Pn**	**16 36 06.6**	**+0.6**
KNZ				S	**Sn**	**16 36 34.0**	**+1.3**
URZ	**Urewera**	**2.21**	**253**	Pn	**Pn**	**16 36 07.5**	**+0.8**
	36nm,0.3s,baz=61,slow=8.4,SNR=314						
URZ				Sn	**Sn**	**16 36 34.1**	**+0.3**
	49nm,0.3s,baz=175,slow=21,SNR=25						
URZ	**Urewera**	**2.21**	**253**	P	**Pn**	**16 36 07.6**	**+0.9**
URZ	**Urewera**	**2.21**	**253**		**Pn**	**16 36 07.6**	**+0.9**
WHRZ	**Whale Island**	**2.25**	**264**	P	**Pn**	**16 36 08.0**	**+0.8**
RTZ	**Ruatahuna**	**2.43**	**245**	P	**Pn**	**16 36 10.8**	**+1.1**
WHHZ	**Waihua**	**2.47**	**234**	P	**Pn**	**16 36 11.6**	**+1.3**
RAHZ	**Arahi**	**2.49**	**238**	P	**Pn**	**16 36 11.5**	**+1.0**

MARZ	**Manawahe**	**2.50**	**261**	P	**Pn**	**16 36 10.9**	**+0.3**
MUGZ	**Murupara**	**2.53**	**250**	P	**Pn**	**16 36 11.8**	**+0.7**
OPRZ	**Ohinepanea**	**2.58**	**264**	P	**Pn**	**16 36 11.4**	**-0.3**
MTHZ	**Maungataniwha**	**2.62**	**242**	P	**Pn**	**16 36 13.3**	**+0.9**
TARZ	**Mount Tarawera**	**2.67**	**256**	P	**Pn**	**16 36 14.1**	**+1.0**
RRRZ	**Republican Roa**	**2.69**	**254**	P	**Pn**	**16 36 14.5**	**+1.3**
ARHZ	**Aropaoanui**	**2.73**	**233**	P	**Pn**	**16 36 14.8**	**+1.0**
OMRZ	**Omania**	**2.75**	**259**	P	**Pn**	**16 36 15.9**	**+1.7**
NMHZ	**Naumai**	**2.77**	**237**	P	**Pn**	**16 36 15.5**	**+1.1**
TGRZ	**Tauranga**	**2.81**	**267**	P	**Pn**	**16 36 14.6**	**-0.3**
KARZ	**Kaharoa**	**2.84**	**261**	P	**Pn**	**16 36 15.4**	**+0.1**
ALRZ	**Allen Road**	**2.88**	**250**	P	**Pn**	**16 36 14.6**	**-1.2**
MRHZ	**Matea Rd**	**2.92**	**245**	P	**Pn**	**16 36 17.2**	**+0.8**
CKHZ	**Cape Kidnapper**	**2.93**	**226**	P	**Pn**	**16 36 16.9**	**+0.3**
BKZ	**Black Stump Fm**	**3.01**	**239**	P	**Pn**	**16 36 18.3**	**+0.6**
BKZ	**Black Stump Fm**	**3.01**	**239**	Pn	**Pn**	**16 36 18.2**	**+0.5**
MCHZ	**McNeill Hill**	**3.03**	**232**	P	**Pn**	**16 36 18.7**	**+0.8**
KAHZ	**Kahuranaki**	**3.14**	**226**	P	**Pn**	**16 36 19.7**	**+0.2**
KUTZ	**Kaahu Road**	**3.25**	**254**	P	**Pn**	**16 36 21.8**	**+0.8**
PXZ	**Pawanui**	**3.31**	**223**	P	**Pn**	**16 36 21.3**	**-0.5**
KRHZ	**Kereru**	**3.35**	**232**	P	**Pn**	**16 36 22.4**	**+0.1**
KUZ	**Kuaotunu**	**3.37**	**284**	P	**Pn**	**16 36 21.2**	**-1.4**
RITZ	**Rihia Road**	**3.37**	**245**	P	**Pn**	**16 36 23.6**	**+0.9**
TOZ	**Tahuroa Road**	**3.41**	**267**	P	**Pn**	**16 36 22.8**	**-0.3**
BHHZ	**Black Hill Sta**	**3.46**	**237**	P	**Pn**	**16 36 24.6**	**+0.7**
TMVZ	**Te Maari**	**3.54**	**244**	P	**Pn**	**16 36 25.8**	**+0.7**
ETVZ	**East Tongariro**	**3.54**	**244**	P	**Pn**	**16 36 25.8**	**+0.7**
WPHZ	**Waipukurau**	**3.57**	**226**	P	**Pn**	**16 36 25.0**	**-0.4**
KRVZ	**Karewarewa**	**3.58**	**245**	P	**Pn**	**16 36 26.2**	**+0.7**
PRHZ	**Porangahau**	**3.60**	**222**	P	**Pn**	**16 36 25.6**	**-0.1**
PNHZ	**Pukenui**	**3.62**	**230**	P	**Pn**	**16 36 25.7**	**-0.4**
WTVZ	**West Tongariro**	**3.62**	**245**	P	**Pn**	**16 36 27.4**	**+1.2**
MOVZ	**Moawhango**	**3.63**	**240**	P	**Pn**	**16 36 27.0**	**+0.7**
NGZ	**Ngauruhoe**	**3.64**	**244**	P	**Pn**	**16 36 26.7**	**+0.3**
TUVZ	**Tukino**	**3.64**	**242**	P	**Pn**	**16 36 27.8**	**+1.4**
WHVZ	**Whangaehu Hut**	**3.69**	**242**	P	**Pn**	**16 36 27.8**	**+0.6**
WNVZ	**Wahianoa**	**3.70**	**242**	P	**Pn**	**16 36 27.4**	**+0.1**
FWVZ	**Far West T-bar**	**3.70**	**243**	P	**Pn**	**16 36 28.4**	**+1.0**
MKAZ	**Moumakai**	**3.73**	**277**	P	**Pn**	**16 36 27.1**	**-0.5**
GRZ	**Great Barrier**	**3.74**	**290**	P	**Pn**	**16 36 26.8**	**-0.9**
WIAZ	**Waiheke Island**	**3.82**	**281**	P	**Pn**	**16 36 28.2**	**-0.6**
TSZ	**Takapari Road**	**3.85**	**230**	P	**Pn**	**16 36 28.1**	**-1.1**
DVHZ	**Dannevirke**	**3.88**	**226**	P	**Pn**	**16 36 29.3**	**-0.4

URZ	Urewera	2.19 254	Pn		Pb	16 42 05.2	-1.3	
	78nm,0.3s,baz=115,slow=1.0,SNR=164							
URZ			Sn		Sn	16 42 31.7	+1.5	
	112nm,0.3s,baz=152,slow=21,SNR=7.5							
URZ	Urewera	2.19 254			Pb	16 42 04.8	-1.7	
WHRZ	Whale Island	2.23 265	P		Pb	16 42 05.3	-2.0	
RTZ	Ruatahuna	2.40 246	P		Pb	16 42 08.4	-1.7	
WHHZ	Waihua	2.44 234	P		Pb	16 42 08.9	-1.9	
RAHZ	Arahi	2.46 239	P		Pb	16 42 09.1	-2.0	
MUGZ	Murupara	2.51 250	P		Pn	16 42 09.2	+1.7	
OPRZ	Ohinepanea	2.56 265	P		Pn	16 42 08.8	+0.6	
MTHZ	Maungataniwha	2.59 242	P		Pn	16 42 10.8	+2.0	
TARZ	Mount Tarawera	2.65 257	P		Pn	16 42 11.4	+1.8	
RRRZ	Republican Roa	2.66 255	P		Pb	16 42 11.8	-2.8	
ARHZ	Aropaoanui	2.70 233	P		Pn	16 42 12.2	+2.0	
OMRZ	Omania	2.73 260	P		Pb	16 42 12.8	-3.0	
NMHZ	Naumai	2.73 238	P		Pn	16 42 12.8	+2.0	
TGRZ	Tauranga	2.79 268	P		Pn	16 42 12.0	+0.6	
PRRZ	Plateau Road	2.80 252	P		Pn	16 42 13.3	+1.8	
KARZ	Kaharoa	2.82 262	P		Pn	16 42 12.8	+0.9	
MYRZ	Mayor Island	2.84 277	P		Pn	16 42 12.3	+0.1	
ALRZ	Allen Road	2.85 251	P		Pn	16 42 14.1	+1.8	
MRHZ	Matea Rd	2.89 245	P		Pn	16 42 14.5	+1.7	
CKHZ	Cape Kidnapper	2.90 226	P		Pn	16 42 14.4	+1.5	
WPRZ	Whakapapatarin	2.98 252	P		Pn	16 42 16.1	+2.1	
BKZ	Black Stump Fm	2.98 239	P		Pn	16 42 15.9	+1.8	
BKZ	Black Stump Fm	2.98 239			Pn	16 42 15.7	+1.6	
MCNZ	McNeill Hill	2.99 233	P		Pn	16 42 16.0	+1.8	
KAHZ	Kahuranaki	3.10 226	P		Pn	16 42 17.3	+1.5	
HATZ	Hinemaiaia	3.15 246	P		Pn	16 42 17.8	+1.4	
KWHZ	Kaweka Forest	3.16 235	P		Pn	16 42 18.3	+1.7	
KUTZ	Kaahu Road	3.23 254	P		Pn	16 42 19.1	+1.7	
PXZ	Pawanui	3.27 223	P		Pn	16 42 18.7	+0.6	
KRHZ	Kereru	3.31 233	P		Pn	16 42 19.8	+1.1	
RITZ	Rihia Road	3.35 246	P		Pn	16 42 21.2	+2.1	
RATZ	Rangitukua	3.37 248	P		Pn	16 42 21.8	+2.3	
KUZ	Kuaotunu	3.37 285	P		Pn	16 42 18.5	-0.9	
TOZ	Tahuroa Road	3.40 268	P		Pn	16 42 20.3	+0.6	
TMVZ	Te Maari	3.51 245	P		Pn	16 42 22.7	+1.3	
WPHZ	Waipukurau	3.53 227	P		Pn	16 42 22.5	+0.9	
KRVZ	Karewarewa	3.55 245	P		Pn	16 42 23.2	+1.2	
OTVZ	Oturere	3.56 244	P		Pn	16 42 24.2	+2.1	
PNHZ	Pukenui	3.58 230	P		Pn	16 42 23.3	+1.0	
WTVZ	West Tongariro	3.59 245	P		Pn	16 42 24.6	+2.0	
MOVZ	Moawhango	3.60 240	P		Pn	16 42 23.7	+1.1	
NGZ	Ngauruhoe	3.61 244	P		Pn	16 42 24.0	+1.2	
TUVZ	Tukino	3.61 243	P		Pn	16 42 24.8	+2.0	
WHVZ	Whangaehu Hut	3.66 243	P		Pn	16 42 25.2	+1.6	
WNVZ	Wahianoa	3.67 242	P		Pn	16 42 24.8	+1.1	
FWVZ	Far West T-bar	3.67 243	P		Pn	16 42 25.4	+1.6	
GRZ	Great Barrier	3.74 291	P		Pn	16 42 24.1	-0.4	
ANWZ	Angora Road	3.79 222	P		Pn	16 42 26.6	+1.5	
WIAZ	Waiheke Island	3.81 282	P		Pn	16 42 25.6	+0.1	
TSZ	Takapari Road	3.81 230	P		Pn	16 42 26.3	+0.7	
DVHZ	Dannevirke	3.84 226	P		Pn	16 42 26.7	+0.7	
ETAZ	East Tamaki Re	3.94 279	P		Pn	16 42 27.8	+0.7	
HIZ	Hauiti	3.98 256	P		Pn	16 42 30.0	+2.3	
HIZ	Hauiti	3.98 256	Pn		Pn	16 42 29.9	+2.3	
MBAZ	Motutapu North	4.00 282	P		Pn	16 42 28.7	+0.7	
BFZ	Birch Farm	4.07 221	P		Pn	16 42 28.9	0.0	
BFZ	Birch Farm	4.07 221	Pn		Pn	16 42 28.8	-0.2	
ABAZ	Army Bay	4.10 284	P		Pn	16 42 30.3	+0.9	
PRWZ	Pori Road	4.13 225	P		Pn	16 42 30.4	+0.6	
POWZ	Post Office Ro	4.14 228	P		Pn	16 42 30.9	+1.0	
AWAZ	Awhitu Peninsu	4.14 277	P		Pn	16 42 31.1	+1.1	
VRZ	Vera Road	4.20 248	P		Pn	16 42 33.1	+2.3	
WTAZ	Waiatarua	4.22 279	P		Pn	16 42 32.5	+1.4	
RVAZ	Riverhead Bore	4.25 281	P		Pn	16 42 32.4	+1.0	
WAZ	Wanganui	4.29 240	P		Pn	16 42 33.8	+1.8	
MRZ	Mangatainoka R	4.42 226	P		Pn	16 42 34.3	+0.4	
LREZ	Lake Rotokare	4.58 245	P		Pn	16 42 38.7	+2.7	
WCZ	Waipu Caves	4.70 290	P		Pn	16 42 37.9	+0.3	
NEZ	North Egmont	4.74 249	P		Pn	16 42 41.7	+3.5	
OGWZ	Otaki Gorge	4.76 227	P		Pn	16 42 38.3	-0.2	
PKE	Pukeiti	4.79 250	P		Pn	16 42 42.9	+3.9	
KHEZ	Kahui Hut	4.80 249	P		Pn	16 42 42.2	+3.0	
MSWZ	Moikau Station	5.12 222	Pn		Pn	16 42 41.7	-1.8	
PLWZ	Palliser	5.23 221	Pn		Pn	16 42 43.4	-1.6	
SNZO	South Karori	5.35 226	Pn		Pn	16 42 45.4	-1.2	
OUZ	Omahuta	5.56 294	P		Pn	16 42 50.2	+0.8	
OUZ	Omahuta	5.56 294			Pn	16 42 49.5	0.0	
TUWZ	Tuamarina	5.86 228	Pn		Pn	16 42 52.2	+1.5	
CMWZ	Cape Campbell	5.91 225	Pn		Pn	16 42 53.3	-1.0	
BSWZ	Blackbirch Sta	6.08 227	Pn		Pn	16 42 54.7	-2.0	
NNZ	Nelson	6.09 233	Pn		Pn	16 42 56.4	-0.3	
QRZ	Quartz Range	6.45 239	P		Pn	16 43 01.1	-0.6	
QRZ	Quartz Range	6.45 239	Pn		Pn	16 42 59.6	-2.1	
CTZ	Chatham Island	6.64 157	P		Pn	16 43 08.6	+4.3	
THZ	Tophouse	6.69 230	Pn		Pn	16 43 03.5	-1.5	
KHZ	Kahutara	6.73 223	Pn		Pn	16 43 03.4	-2.1	
LTZ	Lake Taylor	7.68 226	Pn		Pn	16 43 17.9	-0.7	
MQZ	McQueen's Vall	8.10 220			Pn	16 43 21.5	-2.8	
RPZ	Rata Peaks	8.96 225	Pn		Pn	16 43 36.1	0.0	
	1.3nm,0.3s,baz=79,slow=6.4,SNR=1.5							
RPZ			Sn		Sn	16 45 09.5	-7.4	
	4.3nm,0.3s,baz=165,slow=23,SNR=13							
LBZ	Lake Benmore	9.87 224	Pn		Pn	16 43 47.1	-1.5	
ODZ	Otahua Downs	10.06 220	Pn		Pn	16 43 49.2	-2.0	
ARMA	Armidale	24.36 279	P		P	16 46 43.0	-2.1	
ARMA			IAmb		IAmb	16 46 49.8		
	comp=Z,27nm,1.5s							
ASAR	Alice Springs	41.46 276	P		P	16 49 13.3	-0.5	
	comp=Z,0.8nm,0.5s,baz=128,slow=7.6,SNR=14							
WRA	Warramunga Arr	43.11 281	P		P	16 49 26.3	-0.9	
	comp=Z,0.4nm,0.3s,baz=123,slow=7.2,SNR=3.6							
QSPA	South Pole Qui	52.45 180	P		P	16 50 44.6	+5.3	
	comp=Z,1.7nm,0.9s,baz=32,slow=1.8,SNR=8.4							
QSPA	South Pole Qui	52.45 180	IAmb		IAmb	16 50 53.2		
	comp=Z,7.9nm,1.5s							
BELA	Belgrano 2	62.84 172	P		P	16 51 55.8	+3.8	
H03S2	Juan Fernandez	77.99 123	T		T	18 19 34.0		
	baz=231,slow=74,SNR=5.2							
H03S1	Juan Fernandez	78.00 123	T		T	18 19 35.9		
	baz=231,slow=74,SNR=5.1							
H03S3	Juan Fernandez	78.01 123	T		T	18 19 30.1		
	baz=231,slow=74,SNR=6.0							
H03N3	Juan Fernandez	78.23 123	T		T	18 19 43.0		
	baz=234,slow=72,SNR=24							
H03N2	Juan Fernandez	78.23 123	T		T	18 19 44.6		
	baz=234,slow=72,SNR=18							
H03N1	Juan Fernandez	78.24 123	T		T	18 19 39.2		
	baz=234,slow=72,SNR=30							
ARCES	ARCESS Array B	145.20 344	PKP		PKPdf	17 01 03.7	+0.4	
	comp=Z,3.6nm,1.0s,baz=15,slow=3.7,SNR=8.6							
FINES	FINESS Array B	151.11 334	PKPbc		PKiKP	17 01 19.6	0.0	
	comp=Z,0.8nm,0.6s,baz=43,slow=2.7,SNR=4.5							

*IDC **18** 16:43:34.7±1.1, 37°.78N×21°.43E, h0km, mb3.8/8, mb1 3.8/12, mb1mx3.6/55, mbtmp3.7/12, ML3.6/3, Error ellipse: s-maj=21.0km s-min=18.7km az=69.0*
*NEIC **18** 16:43:37.4±2.7, 37°.73N±0°.06×21°.34E±0°.08, h10km±2km, mb4.3/6, Error ellipse: s-maj=12.5km s-min=7.3km az=232.0*
*THE **18** 16:43:37.8, 37°.77N×21°.32E, h9km±1km, ML3.3/10, Error ellipse: s-maj=1.3km s-min=0.4km az=175.0*
*ATH **18** 16:43:37.5, 37°.77N×21°.32E, h20km±1km, ML3.3/28, Error ellipse: s-maj=1.3km s-min=0.7km az=358.0*
*BEO **18** 16:43:39.1±0.7, 37°.90N×21°.06E, h0km, MLS.5/8*
ISC 18 16:43:37.8±0.6, **37°.78N**±0°.02×**21°.31E**±0°.02, **h20**km±4km, **n140**,σ1§**20**/165, **mb3.8**/10, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.31	24	P	P	Pb	16 43 45.0	+0.4
RLS				S	S	Sb	16 43 49.6	+0.4
RLS				AML	AML		16 43 51.9	
	comp=E,12249μm,0.5s							
RLS				AML	AML		16 43 52.2	
	comp=N,18533μm,0.4s							
RLS	Riolos of Patr	0.31	24	P	P	Pb	16 43 44.0	-0.6
RLS				S	S	Sb	16 43 48.5	-0.7
	comp=N,8μm,0.5s							
AMT	Artemida-Makis	0.40	127	P	P	Pb	16 43 45.5	-0.7
AMT				S	S	Sb	16 43 52.2	+0.4
AMT				AML	AML		16 43 54.4	
	comp=E,8836μm,0.6s							
AMT				AML	AML		16 43 57.9	
	comp=N,11544μm,0.7s							
AMT	Artemida-Makis	0.40	127	P	P	Pb	16 43 45.5	-0.7
AMT				S	S	Sb	16 43 51.3	-0.6
	comp=N,6μm,0.4s							
KRI1	kERI	0.40	254	P	P	Pb	16 43 46.2	0.0
VLMS	Volimes, Zakyn	0.52	281	P	P	Pb	16 43 48.2	0.0
VLMS				S	S	Sb	16 43 55.9	+0.6
VLMS				AML	AML		16 43 57.8	
	comp=N,9682μm,0.6s							
VLMS				AML	AML		16 43 59.1	
	comp=E,9243μm,0.2s							
VLMS	Volimes, Zakyn	0.52	281	P	P	Pb	16 43 48.0	-0.2
VLMS				S	S	Sb	16 43 55.7	+0.4
	comp=E,6μm,0.3s							
VLS	Valsamata	0.69	305	P	P	Pb	16 43 51.1	-0.1
VLS				AML	AML		16 44 08.3	
	comp=N,2681μm,0.5s							
VLS				AML	AML		16 44 11.2	
	comp=E,1917μm,0.2s							
VLS	Valsamata	0.69	305	P	P	Pb	16 43 51.3	+0.1
KLV	Kalavryta, Ach	0.72	68	P	P	Pb	16 43 51.2	-0.5
KLV				S	S	Sb	16 44 02.2	+1.0
KLV				AML	AML		16 44 03.4	
	comp=E,3086μm,0.4s							
KLV				AML	AML		16 44 06.5	
	comp=N,2158μm,0.4s							
KLV	Kalavryta, Ach	0.72	68	P	P	Pb	16 43 51.0	-0.7
KLV				S	S	Sb	16 44 02.0	+0.9
	comp=N,2μm,0.8s							
ITM	Ithomi	0.78	140	P	P	Pb	16 43 52.2	-0.4
ITM				S	S	Sb	16 44 02.9	+0.2
ITM				AML	AML		16 44 10.1	
	comp=N,5085μm,0.8s							
ITM				AML	AML		16 44 10.4	
	comp=E,4102μm,0.6s							
ITM	Ithomi	0.78	140			Pb	16 43 52.0	-0.6
ITM	Ithomi	0.78	140	P	P	Pb	16 43 52.2	-0.4
ITM				S	S	Sb	16 44 02.8	+0.2
	comp=E,3μm,1.0s							
ALIK	Aliki, Aigiali	0.80	53	P	P	Pb	16 43 52.9	0.0
EFP	Efpalio	0.80	36	P	P	Pb	16 43 52.7	-0.3
EFP				AML	AML		16 44 13.0	
	comp=N,3135μm,0.4s							
EFP				AML	AML		16 44 14.2	
	comp=E,3481μm,0.6s							
EFP	Efpalio	0.80	36	P	P	Pb	16 43 52.7	-0.3
EFP				S	S	Sn	16 44 04.8	-0.5
	comp=E,2μm,0.8s							
LXRA	Lixouri, Kepha	0.81	302	P	P	Pb	16 43 53.6	+0.5
TRIP	Tripoli	0.81	108	P	P	Pb	16 43 52.7	-0.4
TRIP				S	S	Sn	16 44 04.6	-0.9
TRIP				AML	AML		16 44 08.4	
	comp=E,2287μm,0.5s							
TRIP				AML	AML		16 44 09.8	
	comp=N,3413μm,0.5s							
TRIP	Tripoli	0.81	108	P	P	Pb	16 43 52.7	-0.4
PDO	Prodromos	0.82	353	P	P	Pn	16 43 54.0	-0.2
PDO				S	S	Sn	16 44 05.7	-0.2
PDO	Prodromos	0.82	353	P	P	Pn	16 43 54.1	-0.2
PDO				S	S	Sb	16 44 05.0	+0.9
	comp=N,4μm,0.4s							
KEF5	Kardakata, Kep	0.83	307	P	P	Pb	16 43 53.5	0.0
KEF5	Kardakata, Kep	0.83	307	P	P	Pb	16 43 53.5	0.0
GUR	Goura	0.84	79	P	P	Pb	16 43 52.8	-0.8
GUR				S	S	Sn	16 44 05.9	-0.4
GUR				AML	AML		16 44 13.8	
	comp=E,7864μm,0.5s							
GUR				AML	AML		16 44 14.2	
	comp=N,14200μm,0.7s							
TRIZ	Trizonia	0.84	46	P	P	Pb	16 43 53.5	-0.2
TRIZ	Trizonia	0.84	46	P	P	Pb	16 43 53.5	-0.2
KEF4	Livadi, Kephal	0.84	305	P	P	Pb	16 43 54.1	+0.3
DMLN	Damoulianata-K	0.87	302	P	P	Pb	16 43 54.5	+0.4
SERG	Sergoula	0.87	43	P	P	Pb	16 43 53.8	-0.3
SERG	Sergoula	0.87	43	P	P	Pb	16 43 53.9	-0.3
SERG				S	S	Sn	16 44 07.5	+0.5
	comp=N,3μm,0.6s							
FSK	Fiskardo	0.90	319	P	P	Pb	16 43 55.0	+0.3
FSK				AML	AML		16 44 14.2	
	comp=E,3858μm,0.9s							
FSK				AML	AML		16 44 14.8	
	comp=N,3168μm,0.8s							
FSK	Fiskardo	0.90	319	P	P	Pb	16 43 54.4	-0.3
KALE	Kalithea	0.90	47	P	P	Pb	16 43 54.3	-0.4
KALE				AML	AML		16 44 14.0	
	comp=E,3948μm,0.5s							
KALE				AML	AML		16 44 15.2	
	comp=N,7094μm,0.6s							
KALE	Kalithea	0.90	47	P	P	Pb	16 43 54.4	-0.4
VLX	Vlachokerasia	0.94	115	P	P	Pb	16 43 55.7	+0.1
VLX				AML	AML		16 44 12.7	
	comp=N,3723μm,0.7s							
VLX				AML	AML		16 44 13.2	
	comp=E,2936μm,0.7s							
VLX	Vlachokerasia	0.94	115	P	P	Pn	16 43 55.9	-0.1
VLX				S	S	Sn	16 44 09.0	+0.1
	comp=E,2μm,0.6s							
PYL	PYLOS	0.95	158	P	P	Pb	16 43 54.4	-1.1
PYL				AML	AML		16 44 14.1	
	comp=E,3968μm,0.4s							
PYL				AML	AML		16 44 14.3	
	comp=N,2888μm,0.6s							
PYL	PYLOS	0.95	158	P	P	Pb	16 43 55.4	-0.1
PYL				S	S	Sn	16 44 08.7	-0.1
	comp=N,2μm,0.8s							
ANX	Ano Chora	0.95	31	P	P	Pb	16 43 55.2	-0.4
ANX				AML	AML		16 44 16.4	
	comp=E,5070μm,0.6s							
ANX				AML	AML		16 44 18.6	
	comp=N,9300μm,0.8s							
ANX	Ano Chora	0.95	31	P	P	Pb	16 43 55.4	-0.2
MGNA	Meganis	0.97	335	P	P	Pb	16 43 55.9	+0.1
MGNA				AML	AML		16 44 17.9	
	comp=E,2999μm,0.7s							
MGNA				AML	AML		16 44 18.5	
	comp=N,1820μm,0.7s							
EVGl	Lefkada island	0.98	329	P	P	Pb	16 43 56.2	0.0
NYDR	Nydri-Lefkada	1.05	333	P	P	Pb	16 43 57.2	0.0
NYDR	Nydri-Lefkada	1.05	333	P	P	Pb	16 43 57.4	+0.2
THAL	Thalero	1.10	76	P	P	Pb	16 43 58.4	+0.2
THAL				AML	AML		16 44 21.2	
	comp=E,11949μm,0.5s							
THAL				AML	AML		16 44 23.8	
	comp=N,12006μm,0.5s							
THAL	Thalero	1.10	76	P	P	Pb	16 43 58.3	+0.2
LKD2	Lefkada island	1.13	333	P	P	Pn	16 43 58.7	+0.2
LKD2				AML	AML		16 44 21.0	
	comp=N,4491μm,0.6s							
LKD2				AML	AML		16 44 23.3	
	comp=E,2264μm,0.5s							
LKD2	Lefkada island	1.13	333	P	P	Pb	16 43 59.1	+0.4
DSF	Desfina	1.15	56	P	P	Pn	16 43 58.8	0.0
DSF				AML	AML		16 44 22.3	
	comp=E,2000μm,0.5s							
DSF				AML	AML		16 44 24.2	
	comp=N,2637μm,0.6s							
DSF	Desfina	1.15	56	P	P	Pn	16 43 58.7	-0.1
TSLK	Tsoukalades, L	1.16	334	P	P	Pb	16 43 59.8	+0.6
TSLK				AML	AML		16 44 23.8	
	comp=N,2076μm,0.7s							
TSLK				AML	AML		16 44 24.4	
	comp=E,2718μm,0.8s							
DLFA	Delphi	1.17	53	P	P	Pn	16 43 58.6	-0.4
EVR	Evrytania	1.20	19	P	P	Pb	16 44 00.5	+0.6
EVR				AML	AML		16 44 26.5	
	comp=E,1933μm,0.5s							
EVR				AML	AML		16 44 28.7	
	comp=N,2243μm,0.9s							
EVR	Evrytania	1.20	19	P	P	Pb	16 44 00.2	+0.3
LOUT	Loutraki	1.34	80	P	P	Pb	16 44 03.4	+1.2
LOUT				AML	AML		16 44 25.4	
	comp=N,631μm,0.6s							
LOUT				AML	AML		16 44 26.7	
	comp=E,615μm,0.5s							
LTK	Loutraki	1.34	79	P	P	Pb	16 44 02.5	+0.3
LTK	Loutraki	1.34	79	P	P	Pb	16 44 01.9	-0.3
MAKR	Makrakomi, Fth	1.39	28	P	P	Pb	16 44 04.0	+0.9
MAKR				AML	AML		16 44 31.8	
	comp=E,3948μm,0.7s							
MAKR				AML	AML		16 44 33.6	
	comp=N,3176μm,0.5s							
EPID	Epidavros	1.45	96	P	P	Pb	16 44 05.1	+1.0
AXAR	Agios Charalam	1.45	47	P	P	Pb	16 44 04.6	+0.5
AXAR				AML	AML		16 44 31.6	
	comp=E,4971μm,0.4s							
AXAR				AML	AML		16 44 35.8	
	comp=N,6351μm,0.5s							
AGG	Agios Georgios	1.48	33	P	P	Pb	16 44 04.7	0.0
AGG	Agios Georgios	1.48	33			Pb	16 44 06.1	+1.5
KRND	KRANIDI	1.52	104	P		Pb	16 44 06.3	+1.1
KRND				AML	AML		16 44 28.3	
	comp=N,1294μm,0.6s							
KRND				AML	AML		16 44 31.5	
	comp=E,1958μm,0.6s							
LKR	Lokris	1.59	56	P	P	Pb	16 44 06.9	+0.4
LKR				AML	AML		16 44 20.3	
	comp=E,470μm,0.4s							
LKR				AML	AML		16 44 33.4	
	comp=N,1448μm,0.3s							
VIL2	Platees	1.61	74	P	P	Pb	16 44 06.9	+0.1
VIL2				AML	AML		16 44 36.4	
	comp=N,1212μm,0.4s							
VIL2				AML	AML		16 44 36.9	
	comp=E,4101μm,0.7s							
ATAL	Atalanti	1.63	55	P	P	Pb	16 44 07.4	+0.2
ATAL				AML	AML		16 44 34.4	
	comp=E,1159μm,1.0s							
ATAL				AML	AML		16 44 35.1	
	comp=N,1166μm,1.1s							
VLI	Veliai	1.68	129	P	P	Pb	16 44 08.9	+0.9
THL	Klokotos Trika	1.87	17	P	P	Pb	16 44 11.5	+0.3
IGT	Igoumenitsa	1.91	337	P	P	Pb	16 44 11.0	-1.0
ATHU	Athens Univers	1.97	84	P	P	Pb	16 44 12.2	-0.8
ATHU				AML	AML		16 44 39.5	
	comp=E,167μm,0.5s							
ATHU				AML	AML		16 44 40.5	
	comp=N,522μm,0.4s							
VLY	Voula,Athens	1.97	87	P	Pn		16 44 11.2	+1.1
PTL	Penteli	2.04	82	P	Pb		16 44 13.2	-0.9
KTHA	Kythira Island	2.07	137	P	Pb		16 44 14.3	-0.4
DION	Dionisos Attik	2.10	81	P	Pb		16 44 13.7	-1.5
XOR	Xorichti	2.17	42	P	Pb		16 44 15.0	-1.3
KYMI	Kymi, Euboea I	2.36	68	P	Pn		16 44 17.0	+1.6
ANKY	Antikythira Is	2.49	139	P	Pn		16 44 19.2	+2.0
KARY	Karystos	2.49	83	P	Pn		16 44 19.4	+2.3
LIT	Litokhoron	2.50	21		Pn		16 44 19.5	+2.3
PAIG	Paliouri	2.84	40	P	Pn		16 44 23.8	+1.9
FNA	Florina	3.00	1		Pn		16 44 26.7	+2.4
TIR	Tirane	3.73	343	Pn	Pn		16 44 36.8	+2.5
IDI	Anoyia	3.81	130	Pn	Pn		16 44 35.4	+0.1
	comp=N,0.2nm,0.3s,baz=302,slow=13,SNR=2.1							
IDI				Sn	Sn		16 45 19.2	-0.3
	comp=N,2.0nm,0.3s,baz=264,slow=23,SNR=5.7							
IDI	Anoyia	3.81	130	Pn	Pn		16 44 35.2	-0.1
TIP	Timpagrande	3.83	293	Pn	Pn		16 44 37.1	+1.4
SKO	Skopje	4.19	1	ePn	Pn		16 44 42.2	+1.7
PRVS	Prvonek	4.76	7	ePn	Pn		16 44 51.1	+2.7
PRVS				eSn	Sn		16 45 43.2	+0.2
BOSS	Bosilegrad	4.80	10	ePn	Pn		16 44 50.8	+1.9
ALN	Alexandroupoli	4.82	48		Pn		16 44 51.0	+1.9
PDG	Podgorica	4.91	342	ePn	Pn		16 44 51.8	+1.5
PDG	Podgorica	4.91	342	Pn	Pn		16 44 52.8	+2.4
KARP	Karpathos	5.21	114	Pn	Pn		16 44 54.5	0.0
SELS	Selova	5.44	359	ePn	Pn		16 44 58.2	+0.5
SJES	Sjenica	5.57	350	ePn	Pn		16 45 01.3	+1.7
SJES				eSn	Sn		16 46 02.6	-0.4
ZAPS	Zavoj	5.58	10	ePn	Pn		16 45 03.1	+3.4
ZAPS				eSn	Sn		16 46 04.0	+0.8
STON	Ston	5.79	333	ePn	Pn		16 45 03.1	+0.7
STON	Ston	5.79	333	ePn	Pn		16 45 03.0	+0.6
SGRT	San Giovanni R	5.84	315	Pn	Pn		16 45 03.6	+0.3
BOVS	Bovan	5.86	3	ePn	Pn		16 45 04.4	+1.0
BOVS				eSn	Sn		16 46 10.1	+0.1
IVAS	Ivanjica	5.86	352	ePn	Pn		16 45 03.5	0.0
IVAS				eSn	Sn		16 46 10.5	+0.4
LSTV	Lastovo	6.02	327	ePn	Pn		16 45 05.8	+0.2
ZAGS	Zajecar	6.07	6	ePn	Pn		16 45 07.5	+1.2
GRUS	Gruza	6.12	356	ePn	Pn		16 45 07.9	+0.9
PAOL	Paolisi	6.15	304	Pn	Pn		16 45 08.9	+1.5
CORL	Corleone	6.33	273	Pn	Pn		16 45 11.9	+1.9
DIVS	Divibare	6.39	351	ePn	Pn		16 45 11.2	+0.4
DIVS				eSn	Sn		16 46 20.1	-3.1
DIVS	Divibare	6.39	351		Pn		16 45 10.9	+0.1
MAKA	Makarska	6.40	331	ePn	Pn		16 45 09.6	-1.2
TRUS	Trudelj	6.47	354	ePn	Pn		16 45 12.7	+0.8
RICI	Ricice	6.53	332	ePn	Pn		16 45 12.5	-0.2
RICI				Sn	Sn		16 46 21.5	-5.1
HAPS	Han Pijesak,Bl	6.55	345	eSn	Sn		16 46 24.5	-2.6
KJIV	Kijevo	7.24	331	ePn	Pn		16 45 22.8	+0.4
KJIV				Sn	Sn		16 46 39.2	-4.8
ZIRJ	Zirje	7.28	326	ePn	Pn		16 45 23.0	+0.1
MORI	Morici	7.42	327	ePn	Pn		16 45 25.0	+0.3
DUGI	Dugi Otok	7.80	325	ePn	Pn		16 45 29.7	-0.5
DUGI				Sn	Sn		16 46 53.

WRA				S	Sn	16 50 44.2	-1.7
	0.6nm,0.3s,baz=329,slow=23,SNR=7.5						
WRA	**Warramunga Arr**	**14.35**	**165**		**Pn**	**16 48 08.9**	**+1.6**
WB2	**Warramunga Arr**	**14.35**	**165**	Pn	**Pn**	**16 48 08.8**	**+1.5**
WR0	**Warramunga Arr**	**14.42**	**164**	Pn	**Pn**	**16 48 09.4**	**+1.2**
COEN	**Coen**	**14.83**	**123**	Pn	**Pn**	**16 48 13.4**	**-0.1**
AS31	**Alice Springs**	**17.85**	**169**	P	**Pn**	**16 48 51.5**	**+1.0**
ASAR	**Alice Springs**	**17.85**	**169**	P	**Pn**	**16 48 52.0**	**+1.6**
	0.8nm,0.3s,baz=350,slow=11,SNR=61						
ASAR				S	**S**	**16 52 04.8**	**-3.7**
	0.1nm,0.3s,baz=349,slow=16,SNR=4.9						
PSA00	**Pilbara Seismi**	**18.52**	**212**		**P**	**16 48 57.5**	**+0.8**
PSA00				IAmb	IAmb	16 48 58.4	
	comp=Z,7.6nm,0.7s						
PSAA1	**Pilbara Seismi**	**18.53**	**212**		**P**	**16 48 57.8**	**+1.0**
PSAA1				IAmb	IAmb	16 48 58.4	
	comp=Z,7.7nm,0.7s						
PSAB1	**Pilbara Seismi**	**18.53**	**213**	P	**P**	**16 48 57.4**	**+0.6**
PSAB1				IAmb	IAmb	16 48 58.4	
	comp=Z,8.3nm,0.7s						
KKM	**Kota Kinabalu**	**18.56**	**310**		**P**	**16 48 56.1**	**-1.2**
KKM				IAmb	IAmb	16 49 07.7	
	comp=Z,42nm,1.4s						
JWT	**Wachi**	**41.36**	**6**	P	**P**	**16 52 21.1**	**-2.5**
MKAR	**Makanchi Array**	**67.64**	**326**	P	**P**	**16 55 29.9**	**-3.6**
	comp=Z,0.4nm,0.5s,baz=123,slow=6.5,SNR=6.5						

*IDC **18** 16:56:38.6±3.0, 19°.75N×121°.08E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/40, mbtmp3.6/4, Error ellipse: s-maj=203.2km s-min=28.0km az=62.0*
*NEIC **18** 16:56:40.2±1.0, 19°.68N±0°.10×121°.0E±0°.3, h10km±1km, mb4.2/7, Error ellipse: s-maj=52.9km s-min=6.1km az=253.0*

ISC 18 16:56:43.2±1.0, 19°.7N±0°.1×120°.9E±0°.3, h32km, n14, σ0§49/13, mb3.9/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TPUB	**Ta-pu**	**3.61**	**356**	Pn	**Pn**	**16 57 36.2**	**-0.8**
YULB	**Yu-li**	**3.71**	**6**	Pn	**Pn**	**16 57 37.8**	**-0.6**
SSLB	**Suanglung**	**4.09**	**1**	Pn	**Pn**	**16 57 43.5**	**-0.1**
YHNB	**Yeheng**	**4.99**	**5**	Pn	**Pn**	**16 57 56.5**	**+0.6**
TNTI	**Ternate**	**19.83**	**161**	P	**P**	**17 01 11.5**	**+0.1**
KNRA	**Kununurra**	**35.98**	**167**	P	**P**	**17 03 41.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**37.83**	**173**	P	**P**	**17 03 56.6**	**-0.4**
	1.2nm,0.8s,baz=11,slow=16,SNR=2.6						
FITZ	**Fitzroy Crossi**	**37.83**	**173**	IAmb	IAmb	17 04 22.4	
	comp=Z,5.9nm,1.4s						
WB0	**Warramunga Arr**	**41.38**	**161**	P	**P**	**17 04 26.2**	**-0.4**
WB0				IAmb	IAmb	17 04 27.6	
	comp=Z,2.8nm,1.1s						
MKAR	**Makanchi Array**	**41.48**	**320**	P	**P**	**17 04 27.7**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=135,slow=6.5,SNR=2.3						
WRA	**Warramunga Arr**	**41.52**	**161**	P	**P**	**17 04 27.8**	**0.0**
	comp=Z,0.5nm,0.5s,baz=343,slow=9.0,SNR=10						
WB2	**Warramunga Arr**	**41.53**	**161**	P	**P**	**17 04 27.5**	**-0.3**
WB2				IAmb	IAmb	17 04 34.8	
	comp=Z,7.1nm,1.4s						
WR0	**Warramunga Arr**	**41.60**	**160**	P	**P**	**17 04 28.1**	**-0.3**
WR0				IAmb	IAmb	17 04 44.1	
	comp=Z,7.6nm,1.4s						
ASAR	**Alice Springs**	**44.91**	**163**	P	**P**	**17 04 55.8**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=344,slow=7.1,SNR=19						

*THE **18** 17:02:45.3, 37°.89N×21°.99E, h14km±4km, ML1.9/8, Error ellipse: s-maj=4.3km s-min=0.7km az=18.0*

ATH 18 17:02:44.9, 37°.90N×22°.00E, h17km±3km, ML1.9/9, Error ellipse: s-maj=3.3km s-min=0.7km az=67.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLV	**Kalavryta, Ach**	**0.19**	**38**	P	Pg	17 02 49.3	-0.4
KLV				S	Sg	17 02 52.5	-0.4
KLV				AML	AML	17 02 53.1	
	comp=N,1200μm,0.2s						
KLV				AML	AML	17 02 53.3	
	comp=E,1050μm,0.1s						
KLV	**Kalavryta, Ach**	**0.19**	**38**	P	Pg	17 02 49.3	-0.4
KLV				S	Sg	17 02 52.5	-0.4
	comp=E,578nm,0.1s						
DRO	**Drossia**	**0.24**	**284**	P	Pg	17 02 50.0	-0.3
DRO				S	Sb	17 02 54.6	-0.1
DRO				AML	AML	17 02 56.3	
	comp=N,1376μm,0.1s						
DRO				AML	AML	17 02 57.2	
	comp=E,914μm,0.2s						
DRO	**Drossia**	**0.24**	**284**	P	Pg	17 02 50.0	-0.4
GUR	**Goura**	**0.27**	**81**	P	Pg	17 02 50.7	-0.3
GUR				S	Sg	17 02 55.0	-0.1
GUR				AML	AML	17 02 56.0	
	comp=E,1923μm,0.2s						
GUR				AML	AML	17 02 57.9	
	comp=N,1586μm,0.3s						
GUR	**Goura**	**0.27**	**81**	P	Pg	17 02 50.7	-0.3
ALIK	**Aliki, Aigiali**	**0.38**	**13**	P	Pg	17 02 52.6	-0.1
ALIK				S	Sb	17 02 59.3	+0.6
TRIP	**Tripoli**	**0.42**	**150**	P	Pg	17 02 53.5	-0.1
TRIP				S	Sb	17 03 00.1	0.0
TRIP				AML	AML	17 03 02.5	
	comp=E,303μm,0.2s						
TRIP				AML	AML	17 03 03.8	
	comp=N,275μm,0.4s						
TRIP	**Tripoli**	**0.42**	**150**	P	Pg	17 02 53.5	-0.1
AMT	**Artemida-Makis**	**0.43**	**213**	P	Pg	17 02 53.4	-0.3
AMT				S	Sb	17 03 00.4	+0.1
AMT				AML	AML	17 03 01.8	
	comp=N,387μm,0.2s						
AMT				AML	AML	17 03 01.9	
	comp=E,359μm,0.2s						
AMT	**Artemida-Makis**	**0.43**	**213**	P	Pg	17 02 53.7	0.0
AMT				S	Sb	17 03 00.2	0.0
	comp=E,195nm,0.2s						
RLS	**Riolos of Patr**	**0.45**	**291**	P	Pg	17 02 53.4	-0.6
RLS	**Riolos of Patr**	**0.45**	**291**	P	Pg	17 02 53.3	-0.8
TRIZ	**Trizonia**	**0.47**	**7**	P	Pg	17 02 54.2	-0.2
TRIZ				S	Sb	17 03 01.6	+0.1
TRIZ	**Trizonia**	**0.47**	**7**	P	Pg	17 02 54.1	-0.4
TRIZ				S	Sb	17 03 01.6	+0.1
	comp=E,138nm,0.4s						
KALE	**Kalithea**	**0.51**	**12**	P	Pg	17 02 54.9	-0.3
KALE				S	Sb	17 03 02.7	+0.1
KALE				AML	AML	17 03 04.0	
	comp=N,313μm,0.2s						
KALE				AML	AML	17 03 04.2	
	comp=E,210μm,0.2s						
KALE	**Kalithea**	**0.51**	**12**	P	Pg	17 02 54.8	-0.3
KALE				S	Sb	17 03 03.3	+0.7
	comp=E,132nm,0.2s						
SERG	**Sergoula**	**0.52**	**5**	P	Pg	17 02 55.1	-0.2
SERG				S	Sb	17 03 03.1	+0.3
SERG				AML	AML	17 03 05.1	
	comp=N,302μm,0.3s						
SERG				AML	AML	17 03 06.1	
	comp=E,242μm,0.2s						
SERG	**Sergoula**	**0.52**	**5**	P	Pg	17 02 55.0	-0.3
SERG				S	Sb	17 03 03.9	+1.0
	comp=E,138nm,0.2s						
EFP	**Efpalio**	**0.54**	**352**	P	Pg	17 02 55.6	0.0
EFP				S	Sb	17 03 03.5	+0.2
EFP				AML	AML	17 03 06.0	
	comp=N,418μm,0.3s						
EFP				AML	AML	17 03 06.3	
	comp=E,292μm,0.2s						
EFP	**Efpalio**	**0.54**	**352**	P	Pg	17 02 55.4	-0.2
EFP				S	Sb	17 03 03.7	+0.4
	comp=E,188nm,0.2s						
THAL	**Thalero**	**0.54**	**75**	P	Pg	17 02 55.4	-0.3
THAL	**Thalero**	**0.54**	**75**	P	Pg	17 02 55.5	-0.2
THAL				S	Sb	17 03 03.6	+0.2
	comp=E,370nm,0.2s						
VLX	**Vlachokerasia**	**0.60**	**150**	P	Pg	17 02 56.8	-0.1
VLX				S	Sb	17 03 05.7	+0.4
VLX				AML	AML	17 03 07.8	
	comp=E,219μm,0.2s						
VLX				AML	AML	17 03 08.3	
	comp=N,423μm,0.4s						
VLX	**Vlachokerasia**	**0.60**	**150**	P	Pg	17 02 56.8	-0.1
VLX				S	Sn	17 03 06.9	-1.3
	comp=N,168nm,0.4s						
DSF	**Desfina**	**0.66**	**39**	P	Pg	17 02 57.9	-0.1
ANX	**Ano Chora**	**0.70**	**355**	P	Pg	17 02 58.4	-0.3
ITM	**Ithomi**	**0.72**	**185**	P	Pb	17 02 58.7	-0.2

TAP 18 17:05:12.2, 24°.80N×121°.69E, h14km, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWE	**Neicheng**	**0.07**	**193**	P	Pg	17 05 15.4	+0.4
	baz=183						
TWE				S	Sg	17 05 17.6	+0.6
	baz=183						
NHDH	**Xindian Distri**	**0.22**	**319**	*e*S	Sg	17 05 21.0	+0.5
	baz=318						
EGS		**0.23**	**77**	*e*S	Sb	17 05 21.8	-0.4
	baz=77						
TWC	**Suao**	**0.24**	**141**	P	Pb	17 05 17.9	-0.4
	baz=141						
TWC				S	Sg	17 05 21.2	+0.4
	baz=141						
ENA	**Nanau**	**0.37**	**172**	*e*P	Pg	17 05 20.1	+0.4
	baz=166						

JMA 18 17:06:07.9±0.2, 24°.98N×123°.58E, h20km, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.66**	**168**	P	Pb	17 06 20.4	-0.3
IRIF				*e*S	Sb	17 06 29.5	+0.1
YOJ	**Yonaguni jima**	**0.73**	**225**	P	Pb	17 06 21.8	-0.1
JISG	**Ishigakijimahi**	**0.77**	**120**	P	Pb	17 06 22.5	-0.1
JISG				*e*S	Sb	17 06 33.5	+0.8
JIJ	**Ishigaki jima**	**0.80**	**140**	P	Pb	17 06 22.7	-0.4
JIJ				*e*S	Sb	17 06 33.5	0.0
JKRS	**Kuro-shima**	**0.84**	**152**	*e*S	Sb	17 06 35.0	+0.5
HATJ	**Hateruma jima**	**0.94**	**167**	*e*S	Sb	17 06 37.9	+0.3

WEL 18 17:34:19.6, 43°.3±1°.7×17°.2E±°, h13km±2km, M2.3/6, ML2.4/6, MLv2.3/6, Error ellipse: s-maj=0.0km s-min=0.0km az=99.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OXZ	**Oxford**	**0.19**	**225**	P	Pb	17 34 25.3	+0.4
OXZ				S	Sb	17 34 28.8	+0.3
AMCZ	**Amberley**	**0.32**	**87**	P	Pb	17 34 27.1	0.0
AMCZ				S	Sb	17 34 31.7	-0.5
LTZ	**Lake Taylor**	**0.41**	**5**	P	Pb	17 34 29.2	+0.5
LTZ				S	Sb	17 34 35.4	+0.5
RACZ	**Rakaia**	**0.54**	**186**	P	Pb	17 34 31.8	+0.9
MQZ	**McQueen's Vall**	**0.60**	**148**	P	Pb	17 34 32.1	+0.2
MQZ				S	Sb	17 34 40.1	-0.2
GVZ	**Greta Valley S**	**0.64**	**70**	P	Pb	17 34 33.4	+0.8
GVZ				S	Sb	17 34 42.8	+1.3
WACZ	**Wakanui South**	**0.80**	**200**	P	Pn	17 34 37.1	+0.6
WACZ				S	Sn	17 34 48.6	+0.3
AKCZ	**Akaroa Harbour**	**0.84**	**144**	P	Pb	17 34 36.6	+0.5
RPZ	**Rata Peaks**	**1.00**	**238**	P	Pn	17 34 41.1	+1.9
ARCZ	**Arundel**	**1.07**	**225**	P	Pn	17 34 41.2	+0.9
WVZ	**Waitaha Valley**	**1.09**	**276**	P	Pg	17 34 42.0	+2.0
LBZ	**Lake Benmore**	**1.90**	**230**	P	Pg	17 34 57.8	+1.9
ODZ	**Otahua Downs**	**2.17**	**211**	P	Pn	17 34 55.5	+0.1

IDC 18 17:49:19.9±2.3, 1°.88N×127°.00E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/29, mbtmp3.3/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/23, Error ellipse: s-maj=181.6km s-min=26.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.97**	**227**	LR	LR	17 55 26.4	
	comp=Z,38nm,19.0s,baz=86,slow=37						
WRA	**Warramunga Arr**	**22.85**	**162**	P	P	17 54 25.5	+0.4
	0.5nm,0.5s,baz=341,slow=12,SNR=14						
ASAR	**Alice Springs**	**26.27**	**166**	P	P	17 54 57.0	-0.1
	0.1nm,0.3s,baz=341,slow=9.2,SNR=7.5						
MKAR	**Makanchi Array**	**59.22**	**326**	P	P	17 59 22.8	-0.3
	0.7nm,0.9s,baz=131,slow=6.4,SNR=4.0						

*IDC **18** 17:53:06.8±1.9, 5°.53S×101°.81E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/36, mbtmp3.8/8, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/37, Error ellipse: s-maj=65.3km s-min=17.7km az=49.0*
*NEIC **18** 17:53:10.2±2.0, 5°.5S±0°.2×101°.8E±0°.2, h25km±9km, mb4.3/8, Error ellipse: s-maj=33.6km s-min=5.4km az=220.0*

ISC 18 17:53:10.7±1.2, 5°.5S±0°.2×101°.8E±0°.1, h29km, n26, σ1§40/20, mb3.9/11, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**5.92**	**103**	Pn	**Pn**	**17 54 38.0**	**+1.5**
	3.0nm,0.3s,baz=185,slow=23,SNR=4.0						
LEM				Sn	**Sn**	**17 55 44.4**	**+0.9**
	2.0nm,0.3s,baz=343,slow=19,SNR=3.0						
CISI	**Cisompet, Garu**	**6.30**	**109**		**Pn**	**17 54 39.7**	**-2.0**
GSI	**Gunungsitoli**	**7.99**	**328**	Pn	**Pn**	**17 55 04.3**	**-0.7**
UGM	**Wanagama**	**8.97**	**106**	Pn	**Pn**	**17 55 15.7**	**-2.7**
MYLDM	**Lahad Datu**	**19.76**	**58**	P	**P**	**17 57 38.8**	**+0.2**
MYLDM				IAmb	IAmb	17 58 27.9	
	comp=Z,39nm,2.0s						
BATI	**Baumata**	**22.13**	**103**	P	**P**	**17 58 03.4**	**-0.9**
	comp=Z,10nm,0.6s,baz=297,slow=6.8,SNR=3.6						
SOEI	**Soe**	**22.64**	**102**	P	**P**	**17 58 09.6**	**-0.2**
CM31	**Chiang Mai Arr**	**23.99**	**353**	P	**P**	**17 58 22.0**	**-1.0**
CM31				IAmb	IAmb	17 59 13.8	
	comp=Z,15nm,1.8s						
CMAR	**Chiang Mai Arr**	**23.99**	**353**	P	**P**	**17 58 24.1**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=186,slow=8.0,SNR=11						
CMAR	**Chiang Mai Arr**	**23.99**	**353**	P	**P**	**17 58 23.3**	**+0.3**
CHTO	**Chiang Mai**	**24.34**	**353**	P	**P**	**17 58 25.5**	**-0.8**
CHTO				IAmb	IAmb	17 58 40.1	
	comp=Z,17nm,2.0s						
FITZ	**Fitzroy Crossi**	**26.41**	**120**	P	**P**	**17 58 48.6**	**+3.6**
FITZ				IAmb	IAmb	17 59 31.8	
	comp=Z,12nm,1.7s						
TGY	**Tagaytay City**	**27.21**	**44**	LR	LR	18 11 01.0	
	comp=Z,136nm,20.1s,baz=118,slow=40						
H08S2	**Diego Garcia H**	**29.20**	**264**	T	T	18 29 45.6	
	baz=87,slow=74,SNR=31						
H08S3	**Diego Garcia H**	**29.21**	**264**	T	T	18 29 40.9	
	baz=87,slow=74,SNR=48						
H08S1	**Diego Carcia H**	**29.22**	**264**	T	T	18 29 41.0	
	baz=87,slow=74,SNR=24						
H01W3	**Cape Leeuwin H**	**31.36**	**160**	T	T	18 32 18.3	
	baz=337,slow=76,SNR=10						
H01W2	**Cape Leeuwin H**	**31.37**	**160**	T	T	18 32 21.1	
	baz=337,slow=76,SNR=12						
H01W1	**Cape Leeuwin H**	**31.38**	**160**	T	T	18 32 20.6	
	baz=337,slow=76,SNR=9.9						
WRA	**Warramunga Arr**	**34.72**	**117**	P	**P**	**17 59 58.2**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=297,slow=8.8,SNR=4.2						
WR0	**Warramunga Arr**	**34.90**	**117**	P	**P**	**18 00 00.0**	**0.0**
WR0				IAmb	IAmb	18 00 04.9	
	comp=Z,4.0nm,1.1s						
ASAR	**Alice Springs**	**35.77**	**124**	P	**P**	**18 00 08.6**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=299,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**45.49**	**130**	P	**P**	**18 01 28.1**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=312,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**54.89**	**344**	P	**P**	**18 02 39.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=159,slow=8.6,SNR=4.1						
ZALV	**Zalesovo Beam**	**60.95**	**349**	P	**P**	**18 03 20.7**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=163,slow=6.0,SNR=2.3						
ABKAR	**Akbulak array**	**65.58**	**331**	P	**P**	**18 03 52.2**	**+0.5**

*UPP **18** 18:02:38.1±0.1, 67°.05N×20°.92E, h0km, ML1.7, Explosion*
*HEL **18** 18:02:38.9±0.1, 67°.06N×20°.91E, h0km, ML1.9, ML1.7(UPP), Explosion*
*IDC **18** 18:02:39.8±1.1, 67°.16N×21°.37E, h0km, mb1 2.8/3, mb1mx2.7/39, mbtmp2.6/3, ML1.8/3, Error ellipse: s-maj=20.3km s-min=8.2km az=110.0*
*NAO **18** 18:02:39.7±1.0, 67°.21N×21°.01E, ML2.2*
*BER **18** 18:02:42.7±3.8, 67°.12N×21°.08E, h0km, ML1.7, ML2.2(NAO), Suspected explosion*

ISC 18 18:02:38.7±0.7, 67°.09N±0°.03×20°.89E±0°.03, h0km, n43, σ1§31/55, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.56**	**49**	P	**Pg**	**18 02 49.2**	**-0.3**
MASU	**Masugnsbyn**	**0.56**	**49**	*i* P	**Pg**	**18 02 49.2**	**-0.3**
ERTU	**Ertsjaerv**	**0.75**	**136**	P	**Pg**	**18 02 51.4**	**-1.6**
ERTU	**Ertsjaerv**	**0.75**	**136**	*i* P	**Pg**	**18 02 51.4**	**-1.6**
PAJU	**Pajala**	**0.88**	**94**	P	**Pg**	**18 02 54.2**	**-1.2**
PAJU				S	**Sg**	**18 03 06.1**	**-0.7**
PAJU	**Pajala**	**0.88**	**94**	*i* P	**Pg**	**18 02 54.2**	**-1.2**
PAJU				*i* S	**Sg**	**18 03 06.1**	**-0.7**
RATU	**Laukkuluspa**	**0.89**	**326**	P	**Pg**	**18 02 55.5**	**-0.2**
RATU	**Laukkuluspa**	**0.89**	**326**	*e*P	**Pg**	**18 02 55.5**	**-0.2**
KUA	**Kurravaara**	**0.89**	**347**	P	**Pg**	**18 02 55.3**	**-0.3**
KUA	**Kurravaara**	**0.89**	**347**	*e*P	**Pg**	**18 02 55.3**	**-0.3**
HARU	**Harads**	**0.94**	**178**	P	**Pg**	**18 02 55.1**	**-1.4**
HARU	**Harads**	**0.94**	**178**	*e*P	**Pg**	**18 02 55.1**	**-1.4**
SALU	**Saltoluokta**	**0.97**	**288**	*e*P	**Pn**	**18 02 59.1**	**-0.4**
LANU	**Lannavaara**	**1.05**	**23**	P	**Pg**	**18 02 58.2**	**-0.5**
LANU	**Lannavaara**	**1.05**	**23**	*e*P	**Pg**	**18 02 57.9**	**-0.9**
LANU				*e*SB	**Sb**	**18 03 13.4**	**-0.5**
KOVU	**Salmi**	**1.17**	**347**	P	**Pg**	**18 03 00.8**	**-0.2**
KOVU	**Salmi**	**1.17**	**347**	*e*P	**Pg**	**18 03 00.8**	**-0.2**
TOF	**Tornio**	**1.71**	**125**	MSG		18 03 39.0	
	comp=Z,16nm,0.2s						
KIF	**Kilpisjarvi**	**1.92**	**359**	Pn	**Pn**	**18 03 11.5**	**-1.0**
KIF				Sn	**Sb**	**18 03 38.3**	**-0.6**
KIF	**Kilpisjarvi**	**1.92**	**359**	MSG		18 03 33.5	
	comp=Z,5.1nm,0.2s						
KIF	**Kilpisjarvi**	**1.92**	**359**	*e*P	**Pg**	**18 03 16.8**	**+1.4**
KIF				Sn	**Sb**	**18 03 38.3**	**-0.6**
FAUS	**Fauske**	**2.20**	**280**	*e*P	**Pb**	**18 03 17.9**	**-1.2**
FAUS				*e*S	**Sg**	**18 03 49.7**	**+0.6**
FAUS				IAML		18 03 53.4	
	comp=Z,8.9nm,0.1s						
N2TV	**Tʏrnvik**	**2.28**	**285**	*e*P	**Pb**	**18 03 20.3**	**-0.4**
N2TV				*e*S	**Sg**	**18 03 51.0**	**-0.9**
N2TV				IAML		18 03 56.7	
	comp=Z,7.3nm,0.2s						
STEI	**Steigen**	**2.33**	**294**	*e*P	**Pb**	**18 03 20.6**	**-0.8**
BURU	**Burvik**	**2.53**	**175**	*e*PB	**Pn**	**18 03 22.4**	**+1.5**
OUL	**Oulu**	**2.87**	**132**	*e*PG	**Pb**	**18 03 29.4**	**-1.2**
OBF0	**Syolatti, Pyha**	**2.95**	**151**	*e*PB	**Pn**	**18 03 29.8**	**+3.1**
ARA0	**ARCESS Array S**	**2.99**	**33**	Pn	**Pn**	**18 03 27.1**	**-0.1**
	baz=216,slow=14						
ARA0				Sn	**Sn**	**18 04 03.1**	**-0.7**
	baz=210,slow=16						
ARA0				Lg	Lg	18 04 09.2	
	baz=202,slow=22						
ARA0	**ARCESS Array S**	**2.99**	**33**	*e*P	**Pn**	**18 03 27.8**	**+0.5**
ARA0				*e*SB	**Sb**	**18 04 10.2**	**+0.4**
ARA0	**ARCESS Array S**	**2.99**	**33**	Pn	**Pn**	**18 03 27.1**	**-0.1**
	baz=216,slow=14						
ARA0				Sn	**Sn**	**18 04 03.1**	**-0.7**
	baz=210,slow=16						
ARCES	**ARCESS Array B**	**2.99**	**33**	Pn	**Pn**	**18 03 26.9**	**-0.4**
	baz=211,slow=14,SNR=15						
ARCES				Lg	Lg	18 04 08.9	
	baz=210,slow=25,SNR=9.2						
APA0	**Apatity Array**	**4.71**	**78**	Pn	**Pn**	**18 03 51.9**	**+1.1**
APA0				Sn	**Sn**	**18 04 47.3**	**+1.2**
	baz=276,slow=37						
APA0	**Apatity Array**	**4.71**	**78**	Pn	**Pn**	**18 03 51.9**	**+1.1**
FIA0	**FINESS Array S**	**6.11**	**156**	Pn	**Pn**	**18 04 13.3**	**+3.4**
	baz=344,slow=16						
FIA0				Sn	**Sn**	**18 05 21.6**	**+1.2**
	baz=349,slow=22						
FIA0	**FINESS Array S**	**6.11**	**156**	Pn	**Pn**	**18 04 13.4**	**+3.4**
	baz=344,slow=16						
FIA0				Sn	**Sn**	**18 05 21.6**	**+1.2**
	baz=349,slow=22						
FINES	**FINESS Array B**	**6.11**	**156**	Pn	**Pn**	**18 04 11.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=6.0						
FINES				Sn	**Sn**	**18 05 21.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=342,slow=23,SNR=6.0						
NB2	**NORSAR Subarra**	**7.40**	**219**	Pn	**Pn**	**18 04 28.1**	**+0.3**
	baz=35,slow=12						
NB2	**NORSAR Subarra**	**7.40**	**219**	Pn	**Pn**	**18 04 28.1**	**+0.3**
	baz=35,slow=12						
NOA	**NORSAR Array B**	**7.40**	**219**	Pn	**Pn**	**18 04 29.5**	**+1.7**
	comp=Z,0.0nm,0.3s,baz=16,slow=12,SNR=2.9						
NRA0	**NORESS Array S**	**7.59**	**217**	Pn	**Pn**	**18 04 32.8**	**+2.5**
	baz=35,slow=16						
NRA0	**NORESS Array S**	**7.59**	**217**	Pn	**Pn**	**18 04 32.8**	**+2.5**
	baz=35,slow=16						
HFS	**Hagfors**	**7.68**	**208**	Pn	**Pn**	**18 04 33.1**	**+1.5**
	baz=25,slow=16						
HFS	**Hagfors**	**7.68**	**208**	Pn	**Pn**	**18 04 33.1**	**+1.5**
	baz=25,slow=16						

*IDC **18** 18:07:53.4±1.3, 23°.88N×122°.28E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/41, mbtmp3.5/5, ML3.5/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/27, Error ellipse: s-maj=72.1km s-min=21.6km az=69.0*
*TAP **18** 18:07:56.9, 23°.96N×122°.70E, h24km, ML3.8, D*
*JMA **18** 18:07:57.0±0.2, 23°.97N×122°.64E, h24km±4km, M3.3*

ISC 18 18:07:56.8±0.7, 23°.91N±0°.02×122°.67E±0°.02, h22km±4km, n133, σ0§93/249, mb3.3/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.60**	**25**	P	**Pb**	**18 08 07.9**	**-0.8**
JYNG				S	**Sb**	**18 08 15.1**	**-1.6**
YOJ	**Yonaguni jima**	**0.63**	**29**	P	**Pb**	**18 08 08.6**	**-0.7**
	baz=32						
YOJ				S	**Sb**	**18 08 16.5**	**-1.2**
	baz=32						
YOJ	**Yonaguni jima**	**0.63**	**29**	P	**Pb**	**18 08 08.5**	**-0.7**
YOJ				S	**Sb**	**18 08 16.3**	**-1.4**
ENAH	**Nanao**	**0.95**	**305**	P	**Pn**	**18 08 14.7**	**-0.2**
	baz=300						
ENAH				S	**Sn**	**18 08 28.4**	**+0.6**

TWB1					*e*S		**Sb**	**18 08 36.6 +1.0**	**TYC**	**Yuchr**		**1.66 270**	*e*P		**Pn**	**18 08 25.4 +0.7**	**MASBT**	**Mashibuluo**		**2.27 236**	*e*P		**Pn**	**18 08 34.1 +0.9**
	baz=327									baz=268								baz=229						
NDT	**Datong Townshi**		**1.26 303**	P		**Pn**	**18 08 18.8 -0.4**	TYC					*e*S		**Sb**	**18 08 46.3 -0.9**	MASBT				*e*S		**Sn**	**18 09 02.3 +1.8**
	baz=286									baz=268								baz=229						
NDT					S		**Sb**	**18 08 37.0 +1.2**	**NTST**	**Danshui**		**1.67 319**	*e*P		**Pn**	**18 08 25.5 +0.7**	**CHN8**	**Yiju**		**2.32 257**	*e*P		**Pb**	**18 08 36.0 -2.0**
	baz=286									baz=316								baz=255						
JKRS	**Kuro-shima**		**1.27 75**	P		**Pb**	**18 08 19.8 -0.2**	NTST					*e*S		**Sb**	**18 08 46.6 -0.9**	CHN8				S		**Sb**	**18 09 04.6 -1.6**
JKRS				S		**Sb**	**18 08 37.1 +1.2**			baz=316								baz=255						
NNSB	**Datong**		**1.28 294**	*e*P		**Pn**	**18 08 19.3 -0.3**	**TWY**	**Chenhua**		**1.67 325**	P		**Pn**	**18 08 25.0 +0.1**	**SGLT**	**Jiouru**		**2.32 240**	*e*P		**Pb**	**18 08 36.2 -1.8**
	baz=278									baz=322								baz=235						
NNSB					*e*S		**Sb**	**18 08 38.7 +2.2**	TWY				*e*S		**Sn**	**18 08 46.3 +0.6**	SGLT				*e*S		**Sb**	**18 09 06.6 +0.3**
	baz=278									baz=322								baz=235						
NNSH	**Datong**		**1.28 294**	*e*P		**Pn**	**18 08 19.5 -0.1**	**ELDTW**	**Lidau**		**1.68 245**	P		**Pn**	**18 08 24.6 -0.4**	**TWM1**	**Shoushan**		**2.33 243**	*e*P		**Pb**	**18 08 37.0 -1.2**
	baz=279									baz=244								baz=241						
NNSH					S		**Sb**	**18 08 37.4 +0.9**	ELDTW				S		**Sn**	**18 08 44.9 -1.0**	TWM1				S		**Sb**	**18 09 07.3 +0.8**
	baz=279									baz=244								baz=241						
NNS	**Nan Shan**		**1.30 294**	P		**Pn**	**18 08 19.6 -0.2**	**WHYT**	**Xinyi Township**		**1.68 263**	*e*P		**Pn**	**18 08 25.5 +0.6**	**SCLT**	**Jiali**		**2.39 253**	*e*S		**Sb**	**18 09 08.1 0.0**
	baz=278									baz=250								baz=251						
NNS					S		**Sb**	**18 08 36.6 -0.3**	WHYT				*e*S		**Sb**	**18 08 47.6 -0.1**	**SSPT**	**Xinbi**		**2.40 234**	*e*P		**Pn**	**18 08 35.6 +0.8**
	baz=278									baz=250								baz=227						
EHY	**Hungye**		**1.30 252**	P		**Pn**	**18 08 19.5 -0.2**	**LIOB**	**Emei**		**1.68 296**	*e*P		**Pn**	**18 08 25.5 +0.6**	SSPT				*e*S		**Sn**	**18 09 05.0 +1.5**
	baz=250									baz=293								baz=227						
EHY					S		**Sb**	**18 08 36.6 -0.2**	LIOB				*e*S		**Sn**	**18 08 46.5 +0.6**	**SLIU**	**Shizi**		**2.41 226**	*e*P		**Pn**	**18 08 35.8 +0.8**
	baz=250									baz=293								baz=226						
WHF	**Hehuan Shan**		**1.31 281**	*e*P		**Pn**	**18 08 19.7 -0.4**	**NSTT**	**Nanjuang**		**1.68 296**	*e*P		**Pb**	**18 08 26.1 -1.0**	SLIU				*e*S		**Sn**	**18 09 05.2 +1.4**
	baz=278									baz=293								baz=226						
WHF					S		**Sb**	**18 08 37.7 +0.3**	NSTT				*e*S		**Sb**	**18 08 48.4 +0.5**	**SCZT**	**Fangliau**		**2.43 231**	*e*P		**Pn**	**18 08 35.8 +0.6**
	baz=278									baz=293								baz=224						
TIPB	**Shuangxi**		**1.31 324**	P		**Pb**	**18 08 20.3 -0.5**	**NCUH**	**Zhongli**		**1.71 308**	*e*P		**Pn**	**18 08 26.3 +0.9**	SCZT				*e*S		**Sn**	**18 09 05.6 +1.3**
	baz=336									baz=305								baz=224						
TIPB					S		**Sb**	**18 08 38.1 +1.0**	NCUH				*e*S		**Sb**	**18 08 48.1 -0.6**	**JMJ**	**Miyako jima 2**		**2.56 69**	*e*P		**Pn**	**18 08 37.4 +0.4**
	baz=336									baz=305								baz=71						
FUSS	**Fushou**		**1.35 285**	P		**Pb**	**18 08 21.0 -0.5**	**LONT**	**Longtian**		**1.73 235**	*e*P		**Pn**	**18 08 25.5 -0.1**	JMJ				*e*S		**Sn**	**18 09 07.2 -0.3**
	baz=282									baz=225								baz=71						
FUSS					S		**Sb**	**18 08 39.3 +0.9**	LONT				*e*S		**Sn**	**18 08 47.2 +0.1**	**HEN**	**Hengchun**		**2.60 224**	*e*P		**Pn**	**18 08 39.1 +1.5**
	baz=282									baz=225								baz=223						
EYUL	**Yuli**		**1.36 246**	*e*P		**Pb**	**18 08 21.1 -0.4**	**ALS**	**Alishan**		**1.75 257**	*e*P		**Pn**	**18 08 26.7 +0.5**	HEN				*e*S		**Sn**	**18 09 10.6 +2.1**
	baz=244									baz=255								baz=223						
EYUL					S		**Sb**	**18 08 39.1 +0.6**	ALS				*e*S		**Sn**	**18 08 47.4 -0.7**	**TWKBT**	**Hengchun**		**2.60 222**	*e*P		**Pn**	**18 08 38.3 +0.7**
	baz=244									baz=255								baz=221						
YULB	**Yu-li**		**1.36 248**	*e*P		**Pn**	**18 08 20.5 -0.1**	**WJS**	**Zhushan**		**1.78 268**	*e*P		**Pn**	**18 08 27.4 +1.1**	TWKBT				*e*S		**Sn**	**18 09 09.5 +0.9**
	baz=246									baz=265								baz=221						
YULB					*e*S		**Sn**	**18 08 37.9 0.0**	WJS				*e*S		**Sb**	**18 08 53.0 +2.4**	**TWK1**	**Hengchun**		**2.60 222**	*e*P		**Pn**	**18 08 40.1 +2.4**
	baz=246									baz=265								baz=221						
OWD	**Renai**		**1.37 272**	*e*P		**Pn**	**18 08 20.7 -0.1**	**TWQ1**	**Liyutan**		**1.79 285**	*e*P		**Pn**	**18 08 27.3 +0.9**	TWK1				*e*S		**Sn**	**18 09 09.3 +0.6**
	baz=270									baz=282								baz=221						
OWD					*e*S		**Sn**	**18 08 37.2 -1.1**	TWQ1				S		**Sb**	**18 08 51.5 +0.6**	**PHUB**	**P'eng-hu**		**2.87 263**	*e*P		**Pb**	**18 08 44.5 -2.8**
	baz=270									baz=282								baz=276						
NWLT	**Wulai**		**1.37 309**	*e*P		**Pb**	**18 08 21.5 -0.3**	**NSY**	**Sanyi**		**1.81 287**	*e*P		**Pb**	**18 08 28.4 -0.9**	PHUB				*e*S		**Sn**	**18 09 15.9 +0.8**
	baz=306									baz=284								baz=276						
NWLT					*e*S		**Sb**	**18 08 41.2 +2.3**	NSY				*e*S		**Sb**	**18 08 52.1 +0.4**	**PNG**	**Penghu**		**2.87 264**	*e*S		**Sn**	**18 09 16.8 +1.5**
	baz=306									baz=284								baz=261						
CHGB	**Renai**		**1.38 277**	*i* P		**Pn**	**18 08 20.9 0.0**	**WNT**	**Mingjian**		**1.82 269**	P		**Pb**	**18 08 29.0 -0.4**	**PTTC**	**Pingtan**		**3.08 302**	*e*P		**Pn**	**18 08 44.3 +0.2**
	baz=274									baz=267								baz=299						
CHGB					*e*S		**Sb**	**18 08 39.1 -0.2**	WNT				S		**Sb**	**18 08 51.5 -0.3**	PTTC				*e*S		**Sn**	**18 09 21.1 +0.8**
	baz=274									baz=267								baz=299						
TWF1	**Yuli**		**1.38 247**	*e*P		**Pn**	**18 08 21.3 +0.5**	**TWGBT**	**Beinan**		**1.82 234**	P		**Pn**	**18 08 27.6 +0.7**	**VWUC**	**VWUC**		**3.13 291**	*e*P		**Pn**	**18 08 45.1 +0.3**
	baz=245									baz=224								baz=288						
TWF1					S		**Sb**	**18 08 39.5 +0.5**	TWGBT				*e*S		**Sn**	**18 08 48.2 -1.1**	VWUC				*e*S		**Sn**	**18 09 22.6 +1.1**
	baz=245									baz=224								baz=288						
YHNB	**Yeheng**		**1.40 303**	*i* P		**Pn**	**18 08 21.3 +0.1**	**TWG**	**Pinlang**		**1.82 234**	P		**Pn**	**18 08 27.8 +0.9**	**PTMZ**	**Houxiangcun**		**3.42 290**	*e*P		**Pn**	**18 08 49.9 +1.0**
	baz=300									baz=224								baz=288						
YHNB					*e*S		**Sb**	**18 08 41.0 +1.2**	TWG				*e*S		**Sn**	**18 08 50.2 +0.8**	**XPSS**	**Dashiqiu**		**3.75 324**	*e*P		**Pn**	**18 08 53.6 +0.2**
	baz=300									baz=224								baz=321						
TWT	**Tachien**		**1.41 284**	*e*P		**Pb**	**18 08 22.8 +0.3**	**NMLH**	**Miaoli**		**1.83 290**	*e*S		**Sb**	**18 08 53.0 +1.1**	**KNMB**	**Chin-men Tao**		**3.95 279**	*e*P		**Pn**	**18 08 56.5 +0.4**
	baz=269									baz=288								baz=276						
TWT					*e*S		**Sb**	**18 08 40.5 +0.3**	**TCU**	**Taichung**		**1.84 278**	*e*P		**Pb**	**18 08 28.4 -1.3**	**AXDP**	**Jialang**		**4.40 284**	*e*P		**Pn**	**18 09 04.5 +2.2**
	baz=269									baz=275								baz=270						
NWF	**Wu-fen Shan**		**1.41 325**	*e*P		**Pn**	**18 08 21.7 +0.3**	TCU					*e*S		**Sb**	**18 08 52.8 +0.5**	AXDP				*e*S		**Sn**	**18 09 54.0 +1.1**
	baz=322									baz=275								baz=270						
NWF					*e*S		**Sb**	**18 08 40.5 +0.3**	**CHN5**	**Tsauling**		**1.85 261**	*e*P		**Pn**	**18 08 28.4 +1.0**	**KSRS**	**Korea Array**		**14.23 17**	Pn		**Pn**	**18 11 19.5 +2.4**
	baz=322									baz=259								0.2nm,0.3s,baz=199,slow=11,SNR=9.9						
WFSB	**Wu-fen Shan**		**1.41 325**	*i* P		**Pb**	**18 08 21.7 -0.8**	CHN5					*e*S		**Sb**	**18 08 51.7 -1.0**	KSRS				LR		LR	18 17 15.6
	baz=322									baz=259								comp=Z,30nm,18.8s,baz=176,slow=39						
WFSB					*e*S		**Sb**	**18 08 39.5 -0.6**	**STYT**	**Tauyuan**		**1.91 247**	*e*P		**Pn**	**18 08 28.9 +0.8**	**KLR**	**Kul'dur**		**26.26 14**	LR		LR	18 23 17.6
	baz=322									baz=237								comp=Z,25nm,19.1s,baz=246,slow=35						
JIJ	**Ishigaki jima**		**1.42 71**	P		**Pn**	**18 08 21.4 0.0**	STYT					*e*S		**Sn**	**18 08 52.7 +1.2**	**SONM**	**Songino Array**		**27.16 336**	P		**P**	**18 13 36.5 -2.3**
JIJ				S		**Sn**	**18 08 39.4 0.0**			baz=237								0.5nm,0.6s,baz=146,slow=11,SNR=3.6						
NSK	**Sanguang**		**1.42 303**	P		**Pn**	**18 08 21.6 +0.2**	**WCHH**	**Zhanghua**		**1.94 275**	*e*P		**Pb**	**18 08 30.6 -0.9**	**MKAR**	**Makanchi Array**		**39.48 316**	P		**P**	**18 15 24.1 -1.6**
	baz=300									baz=273								0.4nm,0.7s,baz=110,slow=10,SNR=2.8						
NSK					S		**Sb**	**18 08 40.6 +0.3**	WCHH				*e*S		**Sb**	**18 08 56.3 +1.1**	**WRA**	**Warramunga Arr**		**45.05 164**	P		**P**	**18 16 11.0 -0.2**
	baz=300									baz=273								0.6nm,0.7s,baz=348,slow=9.0,SNR=5.3						
TDCB	**Techi**		**1.42 284**	P		**Pn**	**18 08 22.0 +0.4**	**WGK**	**Gukeng**		**1.94 264**	*e*P		**Pb**	**18 08 32.1 +0.6**	**ASAR**	**Alice Springs**		**48.53 166**	P		**P**	**18 16 39.3 +0.8**
	baz=269									baz=262								0.1nm,0.5s,baz=347,slow=7.4,SNR=6.3						
TDCB					*e*S		**Sb**	**18 08 40.2 -0.3**	WGK				*e*S		**Sb**	**18 08 55.7 +0.4**									
	baz=269									baz=262														
CHKT	**Chengkung**		**1.44 236**	*e*P		**Pn**	**18 08 22.1 +0.4**	**WDLH**	**Douliu**		**1.96 264**	*e*P		**Pb**	**18 08 31.2 -0.7**									
	baz=223									baz=262														
CHKT					*e*S		**Sn**	**18 08 39.1 -0.9**	WDLH				*e*S		**Sb**	**18 08 56.5 +0.6**									
	baz=223									baz=262														
FULB	**Fuli**		**1.45 241**	*e*P		**Pn**	**18 08 22.3 +0.6**	**TPUB**	**Ta-pu**		**1.97 252**	*e*P		**Pb**	**18 08 30.8 -1.1**									
	baz=228									baz=243														
FULB					*e*S		**Sn**	**18 08 40.5 +0.3**	TPUB				*e*S		**Sb**	**18 08 56.0 -0.1**									
	baz=228									baz=243														
TWA	**Mucha**		**1.46 317**	P		**Pb**	**18 08 22.7 -0.5**	**JTJ**	**Tarama**		**1.99 68**	P		**Pn**	**18 08 29.8 +0.6**									
	baz=314							JTJ					S		**Sn**	**18 08 53.7 +0.2**									
TWA					*e*S		**Sb**	**18 08 41.3 -0.1**	**WTP**	**Ta-pu**		**2.00 251**	*e*P		**Pn**	**18 08 30.4 +1.0**									
	baz=314									baz=241														
NHDH	**Xindian Distri**		**1.48 315**	*e*P		**Pn**	**18 08 22.6 +0.5**	WTP					S		**Sb**	**18 08 57.7 +0.7**									
	baz=329									baz=241														
NHDH					*e*S		**Sb**	**18 08 41.6 -0.4**	**ECL**	**Taimali**		**2.05 231**	P		**Pn**	**18 08 29.6 -0.4**									
	baz=329									baz=243														
TATO	**Taipei**		**1.51 315**	*e*P		**Pb**	**18 08 23.4 -0.8**	ECL					S		**Sn**	**18 08 54.0 -0.9**									
	baz=329									baz=243														
TATO					*e*S		**Sb**	**18 08 43.0 0.0**	**SLGT**	**Liugui**		**2.07 244**	*e*P		**Pn**	**18 08 31.7 +1.4**									
	baz=329									baz=236														
TAP1	**Taipei**		**1.54 317**	*e*P		**Pb**	**18 08 23.6 -1.0**	SLGT					*e*S		**Sb**	**18 08 59.2 +0.2**									
	baz=314									baz=236														
TAP1					*e*S		**Sb**	**18 08 44.7 +1.1**	**SGST**	**Jiashian**		**2.08 247**	*e*P		**Pb**	**18 08 32.6 -1.4**									
	baz=314									baz=235														
TAP	**Taipei**		**1.55 317**	*e*P		**Pb**	**18 08 24.2 -0.6**	SGST					*e*S		**Sb**	**18 08 59.0 -0.4**									
	baz=330									baz=235														
TAP					*e*S		**Sb**	**18 08 43.9 0.0**	**CHN1**	**Nanshi**		**2.09 250**	*e*P		**Pb**	**18 08 33.1 -1.0**									
	baz=330									baz=249														
EDH	**Donghe**		**1.56 234**	*e*P		**Pn**	**18 08 23.3 0.0**	CHN1					*e*S		**Sb**	**18 08 59.2 -0.5**									
	baz=223									baz=249														
EDH					S		**Sn**	**18 08 41.4 -1.5**	**CHY**	**Chiayi**		**2.10 259**	*e*P		**Pn**	**18 08 31.9 +1.2**									
	baz=223									baz=257														
SSLB	**Suanglung**		**1.58 266**	*e*P		**Pn**	**18 08 24.3 +0.7**	CHY					*e*S		**Sb**	**18 08 58.4 -1.4**									
	baz=264									baz=257														
SSLB					*e*S		**Sb**	**18 08 44.1 -0.7**	**WTK**	**Tuku**		**2.10 264**	*e*P		**Pb**	**18 08 32.9 -1.3**									
	baz=264									baz=262														
YM01	**YM01**		**1.59 321**	*e*P		**Pn**	**18 08 23.8 +0.1**	WTK					S		**Sb**	**18 08 60.0 +0.1**									
	baz=318									baz=262														
YM01					*e*S		**Sb**	**18 08 45.1 -0.1**	**SNST**	**Tainan City**		**2.11 251**	*e*P		**Pb**	**18 08 33.3 -1.1**									
	baz=318									baz=250														
DPDB	**Guoxing**		**1.60 275**	*e*P		**Pn**	**18 08 24.6 +0.7**	SNST					*e*S		**Sb**	**18 08 59.6 -0.5**									
	baz=272									baz=250														
DPDB					*e*S		**Sb**	**18 08 44.7 -0.8**	**RLNB**	**Erlin**		**2.12 270**	*e*P		**Pb**	**18 08 33.1 -1.3**									
	baz=272									baz=282														
YM10	**YM10**		**1.60 321**	P		**Pn**	**18 08 24.3 +0.4**	RLNB					*e*S		**Sb**	**18 08 59.6 -0.6**									
	baz=318									baz=282														
YM10					*e*S		**Sb**	**18 08 45.3 -0.3**	**LAY**	**Lan-yu**		**2.13 209**	*e*P		**Pn**	**18 08 31.6 +0.4**									
	baz=318									baz=209														
YM11	**YM11**		**1.60 322**	*e*P		**Pb**	**18 08 24.8 -1.0**	LAY					*e*S		**Sn**	**18 08 57.3 +0.4**									
	baz=319									baz=209														
YM11					*e*S		**Sb**	**18 08 44.7 -0.9**	**WTCT**	**Ta-ch'eng**		**2.19 269**	*e*P		**Pb**	**18 08 33.9 -1.8**									
	baz=319									baz=267														
YM08	**YM08**		**1.61 323**	*e*P		**Pn**	**18 08 24.4 +0.4**	WTCT					S		**Sb**	**18 09 01.6 -0.8**									
	baz=320									baz=267														
YM08					*e*S		**Sn**	**18 08 44.1 0.0**	**SSD**	**Sandimen**		**2.20 239**	*e*P		**Pn**	**18 08 31.9 -0.2**									
	baz=320									baz=232														
YM04	**YM04**		**1.61 320**	P		**Pn**	**18 08 24.3 +0.3**	SSD					*e*S		**Sn**	**18 09 00.2 +1.5**									
	baz=317									baz=232														
YM04					*e*S		**Sn**	**18 08 44.3 +0.1**	**TSMG**	**Majia**		**2.21 238**	*e*P		**Pn**	**18 08 33.2 +0.9**									
	baz=317									baz=231														
WHP	**Taichung City**		**1.62 283**	*e*P		**Pb**	**18 08 25.1 -0.9**	TSMG					*e*S		**Sn**	**18 09 00.1 +1.2**									
	baz=269									baz=231														
WHP					S		**Sb**	**18 08 46.1 0.0**	**WLGB**	**Puzi**		**2.21 259**	*e*S		**Sb**	**18 09 03.1 -0.1**									
	baz=269									baz=257														
SMLT	**Sun Moon Lake**		**1.62 269**	*e*P		**Pn**	**18 08 25.0 +0.8**	**SCST**	**Cishan**		**2.24 243**	*e*P		**Pn**	**18 08 34.5 +1.8**									
	baz=267									baz=232														
SMLT					*e*S		**Sb**	**18 08 45.9 -0.2**	SCST				*e*S		**Sb**	**18 09 04.2 +0.3**									
	baz=267									baz=232														
YM03	**YM03**		**1.63 321**	*e*P		**Pn**	**18 08 24.2 -0.1**	**ICHU**	**Yijhu**		**2.26 256**	*e*P		**Pb**	**18 08 35.0 -1.9**									
	baz=318									baz=254														
JISG	**Ishigakijimahi**		**1.64 65**	P		**Pn**	**18 08 24.3 -0.1**	ICHU					*e*S		**Sb**	**18 09 03.9 -0.6**									
JISG				S		**Sn**	**18 08 44.4 -0.5**			baz=254														
TWS1	**Kuangyinshan**		**1.65 316**	*e*P		**Pb**	**18 08 25.5 -0.9**	**WSF**	**Szhu**		**2.26 264**	*e*P		**Pn**	**18 08 34.5 +1.6**									
	baz=329									baz=261														
TWS1					*e*S		**Sb**	**18 08 46.5 -0.3**	WSF				S		**Sb**	**18 09 03.9 -0.6**									
	baz=329									baz=261														
ANP	**Anpu**		**1.65 321**	*e*P		**Pn**	**18 08 24.4 -0.2**	**EAST**	**Anshuo**		**2.26 228**	*e*P		**Pn**	**18 08 33.7 +0.7**									
	baz=318									baz=238														
LDUT	**Ludao**		**1.65 222**	*e*P		**Pn**	**18 08 24.9 +0.3**	EAST					*e*S		**Sn**	**18 08 58.4 -1.8**									
	baz=222									baz=238														
LDUT					*e*S		**Sn**	**18 08 43.9 -1.2**	**CHN3**	**Shinhua**		**2.27 249**	*e*S		**Sb**	**18 09 05.4 +0.6**									
	baz=222									baz=247														

REY ***18*** *18:21:36.6,64.°67N×17.°45W,h8km*
IDC ***18*** *18:21:37.1±0.7,64.°59N×17.°71W,h0km,mb3.7/11, mb1 4.0/13,mb1mx3.8/39,mbtmp3.7/13,ML3.2/2,Error ellipse: s-maj=24.0km s-min=13.1km az=20.0*
NEIC ***18*** *18:21:37.9±1.6,64.°59N±0.°09×17.°6W±0.°1,h6km±2km, mb4.3/20,Error ellipse: s-maj=13.2km s-min=6.4km az=199.0*

ISC 18 18:21:38.3±0.4,**64.°67N**±0.°02×**17.°47W**±0.°02,**h10**km,**n95,** σ**2s27**/104,**mb4.0**/20,**Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.12**	**271**	P		**Pg**	**18 21 39.4**	**-1.9**
	baz=271							
IDYN	**Dyngjuhals**	**0.13**	**21**	P		**Pg**	**18 21 39.6**	**-1.8**
	baz=17							
IDYN				S		**Sg**	**18 21 42.0**	**-1.6**
	baz=17							
IHAM	**Hamarinn**	**0.24**	**218**	P		**Pg**	**18 21 41.3**	**-2.0**
	baz=220							
IKVE	**Kverkfjoll**	**0.34**	**88**	P		**Pg**	**18 21 43.1**	**-2.0**
	baz=88							
IHUS	**Husbondi**	**0.39**	**192**	P		**Pg**	**18 21 44.2**	**-1.7**
	baz=193							
ISKR	**Skrokkalda**	**0.41**	**255**	P		**Pg**	**18 21 44.4**	**-2.0**
	baz=255							
IVOT	**Vottur**	**0.42**	**162**	P		**Pg**	**18 21 44.4**	**-2.2**
	baz=164							
IKRE	**Kreppuhraun**	**0.48**	**76**	P		**Pg**	**18 21 45.2**	**-2.5**
	baz=76							
IJOK	**Jokulheimar**	**0.48**	**223**	P		**Pg**	**18 21 45.7**	**-2.0**
	baz=223							
IMKO	**Mokollar**	**0.57**	**57**	P		**Pg**	**18 21 47.0**	**-2.5**
	baz=57							
IMKO				S		**Sg**	**18 21 55.4**	**-1.6**
	baz=57							
IIEY	**Innrieyrar**	**0.64**	**206**	P		**Pg**	**18 21 48.2**	**-2.5**
	baz=207							
IIEY				S		**Sg**	**18 21 57.0**	**-2.2**
	baz=207							
IKSK	**Karasker**	**0.67**	**139**	P		**Pg**	**18 21 48.0**	**-3.3**
	baz=140							
IKSK				S		**Sg**	**18 21 57.1**	**-2.9**
	baz=140							
ISVA	**Svartarkot**	**0.68**	**8**	P		**Pg**	**18 21 48.7**	**-2.6**
	baz=7.1							
IKAL	**Kalfafell**	**0.73**	**187**	P		**Pg**	**18 21 49.8**	**-2.6**
	baz=188							
IVSH	**V-Sauoahnukur**	**0.76**	**79**	P		**Pg**	**18 21 49.8**	**-3.1**
	baz=79							
IVSH				S		**Sg**	**18 22 00.0**	**-2.9**
	baz=79							
IVAT	**Vatnsfell**	**0.79**	**233**	P		**Pg**	**18 21 51.2**	**-2.4**
	baz=233							
IADA	**Aoalbol**	**0.88**	**66**	P		**Pg**	**18 21 51.8**	**-3.5**
	baz=66							
IADA				S		**Sg**	**18 22 03.8**	**-3.0**
	baz=66							
IHVE	**Hveravellir**	**0.92**	**284**	P		**Pg**	**18 21 52.6**	**-3.4**
	baz=283							
IHVE				S		**Sg**	**18 22 05.2**	**-2.7**
	baz=283							
IMEL	**Melhnausar**	**0.97**	**21**	P		**Pg**	**18 21 53.4**	**-3.4**
	baz=20							
IREN	**Reynihlio**	**1.01**	**13**	P		**Pg**	**18 21 54.2**	**-3.5**
	baz=13							
ISNB	**Snabyli**	**1.07**	**209**	P		**Pg**	**18 21 55.4**	**-3.4**
	baz=209							
IKVO	**Krokottuvotn**	**1.08**	**13**	P		**Pg**	**18 21 55.2**	**-3.7**
	baz=13							
IGRS	**Grimsstaoir**	**1.13**	**30**	P		**Pb**	**18 21 56.2**	**-3.6**
	baz=29							
IFED	**Fedgar**	**1.16**	**237**	P		**Pb**	**18 21 57.5**	**-3.0**
	baz=237							
IRJU	**Rjupnafell**	**1.18**	**207**	P		**Pb**	**18 21 57.6**	**-3.1**
	baz=207							
IMJO	**Mjoaskard**	**1.21**	**233**	P		**Pn**	**18 21 58.2**	**-3.1**
	baz=234							
ISKI	**Skildingahlsh**	**1.22**	**9**	P		**Pn**	**18 21 57.7**	**-3.7**
	baz=8.3							
IGHA	**Grjothals**	**1.23**	**16**	P		**Pn**	**18 21 57.5**	**-3.9**

	baz=15							
IGYG	**Gygjarholskot**	**1.25**	**253**	P		**Pn**	**18 21 58.3**	**-3.5**
	baz=253							
IGRA	**Granastaoir**	**1.25**	**358**	P		**Pn**	**18 21 58.0**	**-3.8**
	baz=358							
IDIM	**Dimmadalss**	**1.32**	**10**	P		**Pn**	**18 21 59.1**	**-3.6**
	baz=9.4							
IHLA	**Hella**	**1.33**	**344**	P		**Pn**	**18 21 59.7**	**-3.2**
	baz=343							
IALF	**Alftagrof**	**1.40**	**213**	P		**Pn**	**18 22 01.1**	**-2.8**
	baz=214							
IHED	**Heoinshofoi**	**1.42**	**3**	P		**Pn**	**18 22 00.6**	**-3.5**
	baz=2.4							
IBRE	**Brettingsstaoi**	**1.47**	**353**	P		**Pn**	**18 22 01.6**	**-3.2**
	baz=353							
ISIG	**Siglufjorour**	**1.59**	**338**	P		**Pn**	**18 22 03.5**	**-2.9**
	baz=338							
BORG	**Borgarnes**	**1.66**	**274**	Pn		**Pn**	**18 22 04.8**	**-2.6**
	19nm,0.3s,baz=98,slow=10,SNR=44							
BORG					Sn	**Sn**	**18 22 28.0**	**-0.7**
	6.2nm,0.3s,baz=30,slow=22,SNR=10.0							
BORG	**Borgarnes**	**1.66**	**274**	Pn		**Pn**	**18 22 04.6**	**-2.8**
IKRO	**Krokur**	**1.69**	**252**	P		**Pn**	**18 22 05.0**	**-2.8**
	baz=252							
ISOL	**Solvholt**	**1.69**	**245**	P		**Pn**	**18 22 05.2**	**-2.6**
	baz=246							
IHEI	**Heioarbar**	**1.70**	**256**	P		**Pn**	**18 22 05.3**	**-2.6**
	baz=256							
ILEI	**Leirhofn**	**1.79**	**13**	P		**Pn**	**18 22 06.4**	**-2.8**
	baz=12							
IHRN	**Hraun**	**1.82**	**324**	P		**Pn**	**18 22 06.9**	**-2.7**
	baz=324							
SCO	**Scoresbysund**	**6.08**	**346**	Pn		**Pn**	**18 23 08.2**	**+0.1**
SCO	**Scoresbysund**	**6.08**	**346**	*e*		**Pn**	**18 23 05.4**	**-2.7**
	baz=193,slow=7.9							
SCO	**Scoresbysund**	**6.08**	**346**	*i* P		**Pn**	**18 23 08.0**	**-0.1**
SCO	**Scoresbysund**	**6.08**	**346**	*i* S		**Sn**	**18 24 21.5**	**+3.8**
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn		**Pn**	**18 24 25.1**	**-0.7**
	baz=321,slow=14,SNR=6.6							
NAO01	**NORSAR Array S**	**13.47**	**93**			**Pn**	**18 24 52.8**	**+3.5**
NOA	**NORSAR Array B**	**13.52**	**92**	Pn		**Pn**	**18 24 50.3**	**+0.3**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.7							
CLL	**Collm**	**20.70**	**116**	*e*P		Pn	18 26 20.0	-0.6
ECH	**Echery**	**21.15**	**129**	P		**P**	**18 26 22.9**	**-0.3**
GRA1	**Grafenberg Arr**	**21.32**	**121**	P		**P**	**18 26 24.2**	**-0.9**
GRA1					IAmb	IAmb	18 26 34.4	
	comp=Z,30nm,1.6s							
BRG	**Berggiesshbel**	**21.40**	**115**	*e*P		**P**	**18 26 26.4**	**+0.6**
	comp=Z,8.6nm,1.2s							
BFO	**Black Forest**	**21.44**	**127**	P		**P**	**18 26 26.7**	**+0.3**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P		**P**	**18 26 39.5**	**+0.1**
KHC	**Kasperske Hory**	**22.67**	**118**	P		**P**	**18 26 39.5**	**+0.1**
KHC					IAmb	IAmb	18 27 06.4	
	comp=Z,11nm,1.6s							
DPC	**Dobruska-Polom**	**22.75**	**113**	*e*P		**P**	**18 26 41.2**	**+0.9**
SENIN	**Lac Senin/Sane**	**22.82**	**132**	P		**P**	**18 26 42.5**	**+1.2**
GEC2	**GERESS Array S**	**22.95**	**119**	P		**P**	**18 26 42.6**	**+0.2**
GEC2					IAmb	IAmb	18 26 47.1	
	comp=Z,11nm,1.6s							
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**	**18 26 43.5**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=325,slow=8.4,SNR=4.4							
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**	**18 26 43.3**	**+0.9**
EUNU	**Eureka**	**23.67**	**336**	P		**P**	**18 26 50.8**	**+1.4**
EUNU					IAmb	IAmb	18 26 57.7	
	comp=Z,9.4nm,1.1s							
VRAC	**Vranov**	**23.69**	**114**	*e*P		**P**	**18 26 51.3**	**+1.5**
MORC	**Moravsky Berou**	**23.69**	**112**	*e*P		**P**	**18 26 51.3**	**+1.5**
MORC	**Moravsky Berou**	**23.69**	**112**	P		**P**	**18 26 49.9**	**+0.1**
KRUC	**Moravsky**	**23.81**	**115**	*e*P		**P**	**18 26 51.3**	**+0.4**
ESDC	**Sonseca Array**	**26.25**	**156**	P		**P**	**18 27 14.0**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=352,slow=11,SNR=5.4							
KOLS	**Kolonicke sedl**	**26.27**	**108**	*e*P		**P**	**18 27 16.1**	**+2.7**
AKASG	**Malin Array Be**	**27.83**	**98**	P		**P**	**18 27 28.1**	**+0.7**
BR131	**Keskin Array S**	**38.47**	**105**	P		**P**	**18 29 00.2**	**0.0**
BRTR	**Keskin Array B**	**38.47**	**105**	P		**P**	**18 29 01.7**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=303,slow=7.9,SNR=5.0							
BRTR	**Keskin Array B**	**38.47**	**105**	P		**P**	**18 29 01.3**	**+1.1**
KBZ	**Khabaz**	**39.10**	**92**	P		**P**	**18 29 06.6**	**+1.3**
	comp=Z,2.2nm,0.8s,baz=53,slow=20							
ABKAR	**Akbulak array**	**41.98**	**73**	P		**P**	**18 29 29.8**	**+0.8**
ABKAR					IAmb	IAmb	18 29 33.0	
	comp=Z,9.8nm,1.8s							
TIXI	**Tiksi**	**42.02**	**15**	P		**P**	**18 29 31.0**	**+1.9**
TIXI					IAmb	IAmb	18 29 32.1	
	comp=Z,5.6nm,1.1s							
TOLK	**Toolik Lake Re**	**42.75**	**336**	P		**P**	**18 29 36.0**	**+0.8**
TOLK					IAmb	IAmb	18 29 38.1	
	comp=Z,9.7nm,1.2s							
IL31		**45.69**	**332**	P		**P**	**18 29 59.0**	**+0.4**
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**	**18 30 00.1**	**+1.5**
	comp=Z,1.4nm,1.0s,baz=21,slow=6.1,SNR=8.2							
ILAR					PcP	**PcP**	**18 31 35.6**	**-0.7**
	comp=Z,0.9nm,1.0s,baz=332,slow=2.3,SNR=5.8							
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**	**18 29 59.3**	**+0.7**
ZAA0	**Zalesovo Array**	**47.62**	**51**	P		**P**	**18 30 14.3**	**+0.4**
ZAA0					IAmb	IAmb	18 30 15.6	
	comp=Z,4.3nm,1.4s							
ZALV	**Zalesovo Beam**	**47.62**	**51**	P		**P**	**18 30 14.4**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=355,slow=3.7,SNR=3.7							
ZALV	**Zalesovo Beam**	**47.62**	**51**	P		**P**	**18 30 14.5**	**+0.6**
ZALV					PcP	**PcP**	**18 31 43.8**	**+0.5**
KURK	**Kurchatov**	**48.10**	**58**	P		**P**	**18 30 17.9**	**+0.3**
KURK					IAmb	IAmb	18 30 18.8	
	comp=Z,3.2nm,0.9s							
BOZ	**Bozeman (W)**	**51.62**	**297**	P		**P**	**18 30 45.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P		**P**	**18 30 55.5**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=334,slow=9.4,SNR=5.2							
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P		**P**	**18 30 55.9**	**-0.1**
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**	**18 30 56.2**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=66,slow=7.2,SNR=4.4							
GAR	**Garm**	**54.64**	**73**	P		**P**	**18 31 08.4**	**+1.5**
WMQ	**Urumqi**	**57.22**	**56**	*e*P		**P**	**18 31 28.8**	**+3.5**
SONM	**Songino Array**	**59.63**	**40**	P		**P**	**18 31 43.6**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=351,slow=8.0,SNR=2.1							
TXAR	**Lajitas Array**	**62.29**	**280**	P		**P**	**18 32 01.3**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=57,slow=4.6,SNR=4.9							
HHC	**Hu-ho-hao-te**	**67.50**	**40**	*e*P		**P**	**18 32 30.5**	**-3.7**
LZH	**Lanzhou**	**69.62**	**48**	*e*P		**P**	**18 32 46.1**	**-1.4**
LZH					pP	pP	18 32 50.8	-0.4
LZH					sP	sP	18 32 52.9	+0.3
LZH					pmax	pmax		
	comp=Z,13nm,1.0s							
LZH					pmax	pmax		
	comp=Z,74nm,4.3s							
CMAR	**Chiang Mai Arr**	**84.12**	**59**	P		**P**	**18 34 09.6**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=309,slow=5.6,SNR=5.7							

*REY **18** 18:26:24.7,64.°68N×17.°37W,h10km*
*IDC **18** 18:26:25.7±0.6,64.°58N×17.°78W,h0km,mb3.9/19, mb1 4.1/21,mb1mx4.0/39,mbtmp3.9/21,ML3.6/2,MS3.5/20, Ms1 3.5/20,ms1mx3.2/50,Error ellipse: s-maj=19.5km s-min=10.7km az=19.0*
*NEIC **18** 18:26:29.1±2.4,64.°60N±0.°09×17.°5W±0.°1,h15km±4km, mb4.6/36,Error ellipse: s-maj=12.7km s-min=7.8km az=174.0*

ISC 18 18:26:27.6±0.4,**64.°65N**±0.°03×**17.°40W**±0.°03,**h10**km,**n131,** σ2**s13**/122,**mb4.2**/38,**MS3.5**/17,**Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BARD	**Bardarbunga**	**0.02**	**243**	S		**Sg**	**18 26 26.3**	**-4.8**
	baz=222							
BARD				P		**Pg**	**18 26 24.9**	**-4.7**
	baz=222							
IDYN	**Dyngjuhals**	**0.14**	**5**	P		**Pg**	**18 26 27.5**	**-3.4**
	baz=1.5							
IDYN				S		**Sg**	**18 26 30.0**	**-3.2**
	baz=1.5							
IGRF	**Grimsfjall**	**0.25**	**167**	P		**Pg**	**18 26 30.0**	**-2.8**
	baz=170							
IHAM	**Hamarinn**	**0.25**	**227**	P		**Pg**	**18 26 30.4**	**-2.3**
	baz=225							
IKVE	**Kverkfjoll**	**0.31**	**85**	P		**Pg**	**18 26 30.9**	**-2.9**
	baz=89							
IHUS	**Husbondi**	**0.38**	**198**	P		**Pg**	**18 26 32.4**	**-2.6**
	baz=198							
IVOT	**Vottur**	**0.39**	**166**	P		**Pg**	**18 26 32.4**	**-3.0**
	baz=168							
IKRE	**Kreppuhraun**	**0.46**	**73**	P		**Pg**	**18 26 32.9**	**-3.6**
	baz=75							
IJOK	**Jokulheimar**	**0.49**	**227**	P		**Pg**	**18 26 34.1**	**-3.0**
	baz=226							
IMKO	**Mokollar**	**0.56**	**54**	P		**Pg**	**18 26 34.7**	**-3.8**
	baz=55							
IKSK	**Karasker**	**0.63**	**140**	P		**Pg**	**18 26 35.7**	**-4.1**
	baz=142							
IIEY	**Innrieyrar**	**0.64**	**210**	P		**Pg**	**18 26 36.6**	**-3.4**
	baz=210							
ISVA	**Svartarkot**	**0.69**	**5**	P		**Pg**	**18 26 36.3**	**-4.7**
	baz=4.3							
IKAL	**Kalfafell**	**0.72**	**190**	P		**Pg**	**18 26 37.7**	**-3.7**
	baz=191							
IVSH	**V-Sauoahnukur**	**0.73**	**77**	P		**Pg**	**18 26 37.5**	**-4.2**
	baz=79							
IVAT	**Vatnsfell**	**0.81**	**235**	P		**Pg**	**18 26 39.7**	**-3.4**
	baz=234							
IFAG	**Fagurholsmyri**	**0.84**	**157**	P		**Pg**	**18 26 39.9**	**-3.9**
	baz=158							
IADA	**Aoalbol**	**0.86**	**64**	P		**Pg**	**18 26 39.6**	**-4.5**
	baz=65							
IMEL	**Melhnausar**	**0.97**	**18**	P		Pg	18 26 41.4	-4.9
	baz=18							
IREN	**Reynihlio**	**1.02**	**11**	P		Pg	18 26 42.2	-5.0
	baz=11							
ISNB	**Snabyli**	**1.07**	**211**	P		**Pg**	**18 26 44.1**	**-3.9**
	baz=211							
IKVO	**Krokottuvotn**	**1.09**	**11**	P		Pg	18 26 43.3	-5.2
	baz=11							
BORG	**Borgarnes**	**1.69**	**275**	Pn		**Pn**	**18 26 52.8**	**-4.3**
	17nm,0.3s,baz=104,slow=8.7,SNR=41							
BORG					Sn	**Sn**	**18 27 14.3**	**-4.5**
	20nm,0.3s,baz=236,slow=23,SNR=10							
BORG	**Borgarnes**	**1.69**	**275**	Pn		**Pn**	**18 26 53.8**	**-3.3**
BORG					Sn	**Sn**	**18 27 18.1**	**-0.7**
SCO	**Scoresbysund**	**6.11**	**345**	Pn		**Pn**	**18 27 58.2**	**+0.4**
SCO					Sn	**Sn**	**18 29 08.1**	**+0.6**
SCO	**Scoresbysund**	**6.11**	**345**	*i* P		**Pn**	**18 27 58.0**	**+0.2**
SCO	**Scoresbysund**	**6.11**	**345**	*i* P		**Pn**	**18 27 58.2**	**+0.4**
SCO	**Scoresbysund**	**6.11**	**345**	*i* P		**Pn**	**18 27 58.0**	**+0.2**
SUMG	**Summit**	**10.98**	**325**	Pn		**Pn**	**18 29 05.1**	**+0.3**
EKA	**Eskdalemuir Ar**	**11.72**	**136**	Pn		**Pn**	**18 29 13.6**	**-0.9**
	baz=327,slow=13,SNR=11							
NC204	**NORSAR Array S**	**13.19**	**92**	Pn		**Pn**	**18 29 30.9**	**-3.7**
NBO00	**NORSAR Array S**	**13.30**	**93**	Pn		**Pn**	**18 29 33.8**	**-2.5**
NOA	**NORSAR Array B**	**13.49**	**92**	Pn		**Pn**	**18 29 36.4**	**-2.4**
	0.0nm,0.3s,baz=298,slow=13,SNR=4.9							
NOA					LR	LR	18 34 51.7	
	comp=Z,63nm,21.1s,baz=270,slow=37							
NC405	**NORSAR Array S**	**13.67**	**92**	Pn		**Pn**	**18 29 42.3**	**+1.1**
SFJD	**Kangerlussuaq**	**13.71**	**295**	LR		LR	18 34 40.8	
	comp=Z,332nm,18.4s,baz=89,slow=36							
HFS	**Hagfors**	**15.00**	**93**	Pn		**P**	**18 30 03.8**	**-1.0**
	0.1nm,0.3s,baz=311,slow=6.8,SNR=7.3							
ARCES	**ARCESS Array B**	**17.09**	**55**	LR		LR	18 35 47.8	
	comp=Z,118nm,20.3s,baz=290,slow=32							
BMRD	**Maredsous**	**18.52**	**130**	Pn		**P**	**18 30 42.4**	**-1.3**
BMRD	**Maredsous**	**18.52**	**130**	P		Pn	18 30 52.3	+8.5
MEM	**Membach**	**18.67**	**128**	x		x	18 30 50.0	
FINES	**FINESS Array B**	**19.66**	**79**	P		**Pn**	**18 30 58.5**	**+0.9**
	0.1nm,0.3s,baz=337,slow=9.1,SNR=5.2							
FINES					LR	LR	18 38 31.8	
	comp=Z,79nm,19.9s,baz=288,slow=37							
CLL	**Collm**	**20.66**	**116**	*e*P		**P**	**18 31 07.0**	**-0.1**
	comp=Z,18nm,1.5s							
CLL				*i*			18 31 16.6	
CLL				*e*PPP		PPP	18 31 33.0	
NKC	**Novy Kostel**	**21.30**	**118**	*e*P		**P**	**18 31 17.6**	**+3.5**
BRG	**Berggiesshubel**	**21.37**	**115**	*e*P		**P**	**18 31 14.9**	**+0.2**
	comp=Z,19nm,1.3s							
BFO	**Black Forest**	**21.41**	**127**	P		**P**	**18 31 14.9**	**-0.3**
FRB	**Frobisher Bay**	**21.80**	**291**	LR		LR	18 38 50.1	
	comp=Z,116nm,20.2s,baz=22,slow=34							
KHC	**Kasperske Hory**	**22.63**	**119**	*e*P		**P**	**18 31 27.7**	**-0.6**
KHC				*e*pP		**pP**	**18 31 32.1**	**+0.5**
KHC	**Kasperske Hory**	**22.63**	**119**	P		**P**	**18 31 27.4**	**-1.0**
DPC	**Dobruska-Polom**	**22.71**	**113**	*e*P		**P**	**18 31 30.8**	**+1.6**
GEC2	**GERESS Array S**	**22.91**	**119**	P		**P**	**18 31 32.6**	**+1.2**
GEC2					IAmb	IAmb	18 31 39.8	
	comp=Z,22nm,1.6s							
GERES	**GERESS Array B**	**22.91**	**119**	P		**P**	**18 31 32.2**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=352,slow=8.1,SNR=9.1							
GERES	**GERESS Array B**	**22.91**	**119**	P		**P**	**18 31 32.0**	**+0.6**
DAVOX	**Davos/Dischmat**	**23.27**	**127**	P		**P**	**18 31 35.8**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=200,slow=4.9,SNR=3.7							
DAVOX					LR	LR	18 40 59.5	
	comp=Z,90nm,20.7s,baz=336,slow=37							
VRAC	**Vranov**	**23.65**	**114**	P		**P**	**18 31 39.7**	**+1.0**
	comp=Z,1.2nm,0.4s,baz=315,slow=14,SNR=4.2							
VRAC					LR	LR	18 40 42.5	
	comp=Z,66nm,18.0s,baz=316,slow=36							
VRAC	**Vranov**	**23.65**	**114**	*e*P		**P**	**18 31 38.8**	**+0.1**
MORC	**Moravsky Berou**	**23.65**	**112**	*e*P		**P**	**18 31 38.1**	**-0.7**
EUNU	**Eureka**	**23.70**	**336**	P		**P**	**18 31 40.7**	**+1.7**
EUNU					IAmb	IAmb	18 31 43.2	
	comp=Z,23nm,1.4s							
KRUC	**Moravsky**	**23.77**	**115**	*e*P		**P**	**18 31 39.2**	**-0.6**
VYHS	**Vyhne**	**25.19**	**113**	*e*P		**P**	**18 31 55.4**	**+2.5**
KLMR	**Klimovskoe**	**25.57**	**72**	*e*P		**P**	**18 31 52.2**	**-3.9**
KLMR					AMP		18 31 59.5	
	comp=Z,20nm,1.5s							
KWP	**Kalwaria Pacla**	**25.86**	**106**	P		**P**	**18 31 59.1**	**+0.1**
KWP					IAmb	IAmb	18 32 04.2	
	comp=Z,14nm,0.9s							
CRVS	**Cervenica-Dubn**	**25.92**	**109**	*e*P		**P**	**18 32 02.6**	**+3.1**
SCHQ	**Schefferville**	**26.08**	**272**	P		**P**	**18 31 59.8**	**-1.2**
	comp=Z,4.4nm,0.8s,baz=31,slow=15,SNR=2.3							
ESDC	**Sonseca Array**	**26.22**	**156**	P		**P**	**18 32 03.3**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=353,slow=9.6,SNR=2.7							
ESDC					LR	LR	18 40 58.9	
	comp=Z,46nm,21.3s,baz=235,slow=33							
KOLS	**Kolonicke sedl**	**26.23**	**108**	*e*P		**P**	**18 32 04.4**	**+2.1**
RES	**Resolute Bay**	**26.50**	**324**	LR		LR	18 42 00.6	
	comp=Z,64nm,19.5s,baz=77,slow=35							
AKASG	**Malin Array Be**	**27.80**	**98**	P		**P**	**18 32 17.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=323,slow=9.5,SNR=5.5							
BURAR	**Bucovina Array**	**28.48**	**106**	P		**P**	**18 32 21.7**	**-0.9**
NRIK	**Noril'sk**	**36.45**	**35**	P		**P**	**18 33 33.0**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=294,slow=9.1,SNR=5.0							
BR131	**Keskin Array S**	**38.43**	**105**	P		**P**	**18 33 50.6**	**+1.4**
BRTR	**Keskin Array B**	**38.43**	**105**	P		**P**	**18 33 49.8**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=296,slow=6.6,SNR=6.3							
BRTR	**Keskin Array B**	**38.43**	**105**	P		**P**	**18 33 51.1**	**+1.9**
KIV	**Kislovodsk**	**38.80**	**93**	P		**P**	**18 33 52.9**	**+0.7**
KBZ	**Khabaz**	**39.07**	**93**	P		**P**	**18 33 55.0**	**+0.8**
	comp=Z,2.5nm,0.9s,baz=236,slow=24,SNR=5.8							
YKA	**Yellowknife Ar**	**39.26**	**313**	LR		LR	18 49 43.1	
	comp=Z,88nm,18.2s,baz=0.0,slow=36							
KARP	**Karpathos**	**39.42**	**116**	P		**P**	**18 33 58.3**	**+1.0**
KARP					IAmb	IAmb	18 34 03.0	
	comp=Z,22nm,1.1s							
INK	**Inuvik**			**39.88**	**329**	P	**P**	**18 34 01.4**	**+0.6**
	comp=Z,4.6nm,1.1s,baz=51,slow=11,SNR=5.6							
INK	**Inuvik**			**39.88**	**329**	P	**P**	**18 34 02.4**	**+1.7**
ULM	**Lac du Bonnet**			**41.65**	**289**	LR	LR	18 50 06.2	
	comp=Z,66nm,20.7s,baz=0.5,slow=34							
ABKAR	**Akbulak array**			**41.95**	**73**	P	**P**	**18 34 17.1**	**-1.0**
TIXI	**Tiksi**			**42.03**	**15**	P	**P**	**18 34 19.7**	**+1.3**
TIXI						IAmb	IAmb	18 34 22.8	
	comp=Z,11nm,1.1s							
B35A	**Bob, Littlefor**			**42.23**	**285**	P	**P**	**18 34 21.9**	**+1.5**
TOLK	**Toolik Lake Re**			**42.78**	**336**	P	**P**	**18 34 26.4**	**+1.8**
TOLK						IAmb	IAmb	18 34 29.2	
	comp=Z,17nm,1.2s							
GNI	**Garni**			**42.78**	**94**	P	**P**	**18 34 29.4**	**-0.3**
BMAR	**Burnt Mountain**			**42.93**	**333**	P	**P**	**18 34 27.1**	**+1.2**
BRVK	**Borovoye**			**43.10**	**62**	P	**P**	**18 34 29.1**	**+1.8**
MARD	**Mardin**			**43.46**	**100**	P	**P**	**18 34 32.1**	**+1.5**
K27K	**Chicken**			**45.37**	**329**	P	**P**	**18 34 47.8**	**+2.5**
K27K						IAmb	IAmb	18 34 49.4	
	comp=Z,9.1nm,1.2s							
ILAR	**Eielson Array**			**45.72**	**332**	P	**P**	**18 34 47.1**	**-1.1**
	comp=Z,2.1nm,1.0s,baz=23,slow=6.3,SNR=12							
ILAR						PcP	**PcP**	**18 36 25.7**	**0.0**
	comp=Z,1.3nm,1.0s,baz=347,slow=3.2,SNR=7.1							
ILAR	**Eielson Array**			**45.72**	**332**	P	**P**	**18 34 48.4**	**+0.2**
MDM	**Murphy Dome**			**45.82**	**333**	P	**P**	**18 34 51.0**	**+2.1**
MDM						IAmb	IAmb	18 34 53.9	
	comp=Z,10nm,1.2s							
COLA	**College**			**45.82**	**333**	P	**P**	**18 34 50.9**	**+2.0**
TCOL	**CIGO, UAF Yank**			**45.82**	**333**	P	**P**	**18 34 50.9**	**+1.9**
IMAR	**Indian Mountai**			**45.89**	**337**	P	**P**	**18 34 51.1**	**+1.6**
BCAR	**Beaver Creek A**			**46.14**	**329**	P	**P**	**18 34 53.2**	**+1.6**
ZAA0	**Zalesovo Array**			**47.61**	**51**	P	**P**	**18 35 04.5**	**+1.5**
ZAA0						IAmb	IAmb	18 35 06.1	
	comp=Z,4.9nm,1.4s							
ZALV	**Zalesovo Beam**			**47.61**	**51**	P	**P**	**18 35 03.0**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=332,slow=9.1,SNR=4.7							
ZALV	**Zalesovo Beam**			**47.61**	**51**	P	**P**	**18 35 03.1**	**0.0**
ZALV						PcP	**PcP**	**18 36 33.7**	**+1.2**
KURK	**Kurchatov**			**48.08**	**58**	P	**P**	**18 35 06.7**	**-0.1**
KURK						IAmb	IAmb	18 35 08.8	
	comp=Z,6.0nm,0.9s							
KKAR	**Karatay Array**			**51.24**	**70**	P	**P**	**18 35 30.9**	**0.0**
YNE	**Yellowstone No**			**51.52**	**295**	P	**P**	**18 35 35.0**	**+1.7**
BOZ	**Bozeman (W)**			**51.65**	**297**	P	**P**	**18 35 36.0**	**+1.8**
BOZ						IAmb	IAmb	18 35 38.1	
	comp=Z,11nm,1.2s							
MK31	**Makanchi Array**			**52.70**	**58**	P	**P**	**18 35 43.0**	**+1.3**
MK31						IAmb	IAmb	18 35 51.6	
	comp=Z,14nm,1.9s							
MKAR	**Makanchi Array**			**52.70**	**58**	P	**P**	**18 35 42.7**	**+0.9**
	comp=Z,1.7nm,0.9s,baz=332,slow=6.9,SNR=6.3							
MKAR						LR	LR	19 00 30.7	
	comp=Z,24nm,19.6s,baz=324,slow=39							
MKAR	**Makanchi Array**			**52.70**	**58**	P	**P**	**18 35 42.8**	**+1.0**
TORD	**Torodi Ar. Bea**			**53.11**	**157**	P	**P**	**18 35 44.5**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=343,slow=7.3,SNR=3.7							
TORD	**Torodi Ar. Bea**			**53.11**	**157**	P	**P**	**18 35 45.3**	**+0.3**
BW06	**Boulder Array**			**53.22**	**293**	P	**P**	**18 35 46.6**	**+0.7**
BW06						IAmb	IAmb	18 35 51.1	
	comp=Z,4.1nm,0.9s							
PD31	**Pinedale Array**			**53.22**	**293**	P	**P**	**18 35 46.0**	**0.0**
PDAR	**Pinedale Array**			**53.22**	**293**	P	**P**	**18 35 45.8**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=54,slow=5.4,SNR=9.0							
PDAR						LR	LR	18 57 49.8	
	comp=Z,85nm,20.9s,baz=86,slow=36							
HWUT	**Hardware Ranch**			**55.00**	**294**	IAmb	IAmb	18 36 05.6	
	comp=Z,6.1nm,1.0s							
PV03	**Paradox Valley**			**56.77**	**290**	P	**P**	**18 36 13.5**	**+1.8**
PV03						IAmb	IAmb	18 36 17.7	
	comp=Z,3.1nm,0.8s							
PV13	**Radium Mtn., P**			**56.84**	**290**	P	**P**	**18 36 13.7**	**+1.5**
ELK	**Elko**			**57.17**	**296**	LR	LR	19 00 30.5	
	comp=Z,86nm,18.6s,baz=35,slow=36							
WMQ	**Urumqi**			**57.20**	**56**	*e*P	**P**	**18 36 18.1**	**+3.7**
MVU	**Marysvale**			**57.91**	**293**	P	**P**	**18 36 21.2**	**+1.5**
ANMO	**Albuquerque**			**58.64**	**286**	LR	LR	18 59 53.2	
	comp=Z,38nm,22.0s,baz=68,slow=34							
YBH	**Yreka Blue Hor**			**59.10**	**303**	LR	LR	19 02 32.4	
	comp=Z,41nm,18.0s,baz=24,slow=37							
SONM	**Songino Array**			**59.62**	**40**	P	**P**	**18 36 32.3**	**+1.0**
	comp=Z,1.3nm,1.1s,baz=5.3,slow=3.5,SNR=5.8							
SONM	**Songino Array**			**59.62**	**40**	P	**P**	**18 36 32.5**	**+1.1**
NVAR	**Mina Array Bea**			**60.35**	**297**	P	**P**	**18 36 35.4**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=51,slow=4.7,SNR=2.5							
NVAR						LR	LR	19 02 41.7	
	comp=Z,102nm,18.3s,baz=81,slow=36							
X16A	**Lo Mia Camp, P**			**61.14**	**290**	P	**P**	**18 36 44.0**	**+2.1**
X16A						IAmb	IAmb	18 36 45.6	
	comp=Z,4.9nm,1.1s							
TXAR	**Lajitas Array**			**62.33**	**280**	P	**P**	**18 36 48.3**	**-1.6**
	comp=Z,0.8nm,0.9s,baz=28,slow=3.2,SNR=5.8							
TXAR						LR	LR	19 03 18.1	
	comp=Z,79nm,19.7s,baz=0.0,slow=36							
GTA	**Gaotai**			**65.28**	**49**	*e*P	**P**	**18 37 09.6**	**+0.3**
GTA						pP	sP	18 37 19.9	+5.6
GTA						sP	pP	18 37 23.8	+11
GTA	

LVC	Limon Verde	2.53	269	Pn		Pn	19 09 02.2 +0.8
LVC	Limon Verde	2.53	269	*e*P		Pn	19 09 02.5 +1.0
LVC				*e*S		S	19 09 40.3 -0.2
LVC	Limon Verde	2.53	269	*e*P		Pn	19 09 01.6 +0.1
PB09	IPOC Station P	2.95	285			Pn	19 09 06.8 +1.3
PB09	IPOC Station P	2.95	285	*e*P		Pn	19 09 06.9 +1.4
PB09				IAML			19 09 57.8
	comp=Z,130nm,0.2s						
PB15	IPOC Station P	3.10	258			Pn	19 09 08.0 +0.9
PB15	IPOC Station P	3.10	258	*e*P		Pn	19 09 08.1 +1.0
PB15				*e*S		S	19 09 50.4 -0.3
PB06	IPOC Station P	3.14	267			Pn	19 09 08.1 +0.6
PB06	IPOC Station P	3.14	267	*e*P		Pn	19 09 08.6 +1.1
PB06				*e*S		S	19 09 51.0 -0.4
PB06				IAML			19 09 54.5
	comp=Z,240nm,0.1s						
PB03	IPOC Station P	3.36	278	*e*P		Pn	19 09 10.5 +0.7
PB03				IAML			19 09 59.7
	comp=Z,417nm,0.2s						
PB01	IPOC Station P	3.44	296			Pn	19 09 11.2 +0.6
PB01	IPOC Station P	3.44	296	*e*P		Pn	19 09 11.3 +0.6
PB01				IAML			19 10 01.2
	comp=Z,183nm,0.2s						
FSA	Cafayete	3.52	177	*e*P		Pn	19 09 13.2 +1.6
PB07	IPOC Station P	3.54	283	Pn		Pn	19 09 12.4 +0.5
PB04	IPOC Station P	3.69	273			Pn	19 09 13.9 +0.5
PB04	IPOC Station P	3.69	273	*e*P		Pn	19 09 14.2 +0.8
PB04				IAML			19 10 06.5
	comp=Z,353nm,0.2s						
PB08	IPOC Station P	3.69	311			Pn	19 09 15.3 +1.5
PB05	IPOC Station P	3.73	265	*e*P		Pn	19 09 14.8 +0.9
PB05				IAML			19 10 05.8
	comp=Z,144nm,0.3s						
GO01	Chusmiza	4.04	315			Pn	19 09 18.9 +1.0
GO02	Mina Guanaco	4.05	230	Pn		Pn	19 09 18.3 +0.7
PATCX	Punta Patache	4.09	295			Pn	19 09 18.6 +0.6
PB10	IPOC Station P	4.14	256	Pn		Pn	19 09 18.7 +0.3
PB10	IPOC Station P	4.14	256	*e*P		Pn	19 09 19.0 +0.6
PB10				IAML			19 10 12.8
	comp=Z,98nm,0.2s						
TA01	Diego Aracena	4.24	298			Pn	19 09 19.7 +0.2
AHML	Horco Molle	4.25	170	*e*P		Pn	19 09 20.4 +0.7
PB11	IPOC Station P	4.29	310			Pn	19 09 20.6 +0.2
PB14	IPOC Station P	4.38	242	Pn		Pn	19 09 21.8 +0.3
PB14	IPOC Station P	4.38	242	*e*P		Pn	19 09 22.1 +0.6
PB14				IAML			19 10 18.5
	comp=Z,147nm,0.5s						
MNMC	Minye Minye	4.69	316			Pn	19 09 26.0 +0.7
PSGCX	Pisagua	4.74	308	Pn		Pn	19 09 25.3 -0.3
AC02	Maricunga	5.01	212			Pn	19 09 30.0 +0.8
PB16	IPOC Station P	5.26	323	Pn		Pn	19 09 33.4 +1.2
AC01	Pan de Azucar	5.37	228	Pn		Pn	19 09 32.5 -0.6
GO03	Copiap	6.20	216			Pn	19 09 43.4 +0.2
GO03	Copiap	6.20	216	*e*P		Pn	19 09 43.4 +0.2
LPAZ	La Paz	6.53	343	*e*P		Pn	19 09 49.0 +1.1
	comp=Z,1.9nm,0.3s,baz=167,slow=9.2,SNR=33						
LPAZ				S		S	19 11 03.6 -1.2
	comp=Z,0.2nm,0.3s,baz=320,slow=19,SNR=4.2						
LPAZ	La Paz	6.53	343			Pn	19 09 48.8 +0.9
LPAZ	La Paz	6.53	343	*e*P		Pn	19 09 48.5 +0.6
ACLC	CERRO LA CRUZ	6.85	186	*e*P		Pn	19 09 51.3 0.0
ACLC				*e*S		S	19 11 08.6 -2.5
ACLC				IAML			19 11 10.8
	comp=Z,22nm,0.5s						
AC05	El Transito	7.24	210	Pn		Pn	19 09 56.0 -0.2
LCO	Las Campanas	7.59	212			Pn	19 09 59.9 -0.7
SIV	San Ignacio	8.13	37	P		Pn	19 10 06.2 -1.1
	comp=Z,0.8nm,0.3s,baz=237,slow=7.6,SNR=35						
CO01	Juntas del Tor	8.16	205			Pn	19 10 08.6 +0.9
GO04	Tololo Observa	8.62	208	Pn		Pn	19 10 12.4 -1.0
CO03	El Pedregal	9.16	205	Pn		Pn	19 10 19.6 -0.4
ZON	Zonda	9.20	193	Pn		Pn	19 10 18.9 -1.6
CO02	Combarbal	9.60	206	Pn		Pn	19 10 25.1 -0.5
MT02	Curacav	11.50	201	Pn		Pn	19 10 48.9 -0.2
ETMB	Extrema	12.69	360	*e*P		P	19 11 04.7 -0.8
SAML	Samuel	13.86	12	P		P	19 11 19.2 +0.8
PCMB	Pacaembu	13.86	89	*e*P		P	19 11 19.6 +1.2
ITRB	Iturama	15.03	82	*e*P		Pn	19 11 32.3 +0.1
ARAG	Araguaiana, MT	15.19	66	*e*P		Pn	19 11 34.8 +0.7
CLDB	Colider	15.30	42	*e*P		Pn	19 11 34.8 -0.6
IPMB	Ipameri, GO	17.46	78	*e*P		Pn	19 11 39.2 -1.5
SNDB	Serra Nova Dou	17.68	56	*e*P		P	19 12 00.4 +0.1
VAO	Valinhos	17.72	95	*e*P		P	19 12 01.5 +0.8
BDFB	Brasilia	18.49	71	P		P	19 12 10.4 +1.3
	comp=Z,0.5nm,0.3s,baz=250,slow=12,SNR=6.6						
BDFB	Brasilia	18.49	71	P		P	19 12 10.6 +1.4
BDFB				IAmb		IAmb	19 12 11.7
	comp=Z,21nm,1.3s						
BSCB	Bom Sucesso	19.93	90	*e*P		P	19 12 26.5 +2.0
PEXB	Peixe	19.97	62	*e*P		P	19 12 26.0 +1.2
MACA	Manacapuru-AM	20.03	16	*e*P		P	19 12 25.6 +0.2
ITTB	Itaituba	20.74	31	*e*P		P	19 12 31.7 -1.1
JANB	Januaria	21.99	74	*e*P		P	19 12 44.8 +0.1
SMTB	Santa Maria do	22.46	56	*e*P		P	19 12 45.2 +0.5
SDBA	SAO DESIDERIO	22.64	67	*e*P		P	19 12 50.8 +0.1
PRPB	Paraupebas	22.70	47	*e*P		P	19 12 50.2 -1.0
MALB	Monte Alegre	23.63	31	*e*P		P	19 13 00.4 +0.8
RIB01	Linhares ES	24.28	87	*e*P		P	19 13 05.8 +0.3
BANI	BANI	40.93	354	P		P	19 15 28.0 -1.0
SNAA	Sanae	60.43	161	P		P	19 17 56.2 +3.0
TOA0	Torodi Ar. Sit	75.35	69	P		P	19 19 27.6 +0.9
TOA0				IAmb		IAmb	19 19 27.7
	comp=Z,2.6nm,0.9s						
TORD	Torodi Ar. Bea	75.35	69	P		P	19 19 27.5 +0.8
	comp=Z,1.2nm,0.4s,baz=261,slow=5.7,SNR=19						
TORD	Torodi Ar. Bea	75.35	69	P		P	19 19 27.4 +0.7
ASAR	Alice Springs	130.05	204	PKP		PKiKP	19 26 53.6 +2.0
	comp=Z,0.3nm,0.8s,baz=136,slow=8.8,SNR=3.6						
WRA	Warramunga Arr	133.23	207	PKP		PKiKP	19 26 59.9 +1.9
	comp=Z,0.4nm,1.0s,baz=154,slow=2.0,SNR=4.9						
MKAR	Makanchi Array	144.95	39	PKP		PKiKP	19 27 20.2 -1.0
	comp=Z,0.6nm,0.4s,baz=341,slow=2.9,SNR=13						
MKAR	Makanchi Array	144.95	39			PKiKP	19 27 19.4 -1.7
LZH	Lanzhou	163.99	31	sPKP			19 29 16.9
LZH	Lanzhou	163.99	31	*e*PKP		PKPdf	19 27 39.3 -4.3
LZH	Lanzhou	163.99	31	pPKP		pPKPdf	19 28 55.9 +2.3

SJA 18 19:11:15.7±0.6,24°.19S×67°.19W,h193km±5km,ML3.7, MW4.1,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.62	109	*i* P	Pn	19 11 50.9	+0.8
SLA				*e*S	Sn	19 12 16.8	0.0
HJA	Humahuaca	1.90	59	*i* P	Pn	19 11 54.0	+0.9
HJA				*e*S	Sn	19 12 22.7	+0.6
FSA	Cafayete	2.20	150	*i* P	Pn	19 11 56.8	+0.5
LVC	Limon Verde	2.23	315	*i* P	Pn	19 11 57.6	+1.0
LVC				*e*S	Sn	19 12 27.8	-0.6
PB15	IPOC Station P	2.31	295	*i* P	Pn	19 11 58.1	+0.8
PB15				*e*S	Sn	19 12 28.8	-0.9
PB15				IAML		19 12 31.6	
	comp=Z,714nm,0.3s						
YJA	Yavi	2.53	38	*i* P	Pn	19 12 00.9	+0.9
PB06	IPOC Station P	2.64	304	*i* P	Pn	19 12 01.9	+0.9
PB06				IAML		19 12 39.9	
	comp=Z,137nm,0.3s						
PB14	IPOC Station P	2.96	261	*i* P	Pn	19 12 05.4	+0.5
PB09	IPOC Station P	3.05	321	*i* P	Pn	19 12 07.2	+1.4
PB09				IAML		19 12 49.6	
	comp=Z,84nm,0.4s						
PB05	IPOC Station P	3.07	295	*i* P	Pn	19 12 06.6	+0.6
PB10	IPOC Station P	3.16	282	*i* P	Pn	19 12 07.6	+0.8
PB10				IAML		19 12 54.2	
	comp=Z,78nm,0.5s						
PB03	IPOC Station P	3.18	312	*i* P	Pn	19 12 07.9	+0.5
PB03				IAML		19 12 52.1	
	comp=Z,129nm,0.2s						
PB04	IPOC Station P	3.29	304	*i* P	Pn	19 12 09.3	+0.6
PB04				IAML		19 12 54.2	
	comp=Z,137nm,0.2s						
PB07	IPOC Station P	3.50	314	*i* P	Pn	19 12 11.7	+0.5
PB07				IAML		19 12 58.8	
	comp=Z,100nm,0.3s						
AROD	Rodeo	6.29	198	*i* P	Pn	19 12 46.3	-0.6

WEL 18 19:14:24.1±1.4,33°S±16°×17°.9W±4°.5,h120km±63km, M4.5/12,mB5.1/8,ML4.7/10,MLv4.6/12,Mw(mB)4.5/8, Error ellipse: s-maj=0.1km s-min=0.0km az=108.3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.64	22	S	Sn	19 16 01.6	+0.4
MXZ	Matakaoa Point	5.22	200	P	Pn	19 15 40.0	+0.2
MXZ				S	Sn	19 16 38.3	-0.6
WMGZ	Waiomatatini S	5.43	198	P	Pn	19 15 43.3	+0.6
WMGZ				S	Sn	19 16 45.1	+1.2
HAZ	Te Kaha	5.56	203	P	Pn	19 15 43.7	-0.7
HAZ				S	Sn	19 16 45.5	-1.6
PUZ	Puketiti	5.71	198	P	Pn	19 15 45.9	-0.6
PUZ				S	Sn	19 16 49.9	-0.9
RUGZ	Raukumara Rang	5.78	203	P	Pn	19 15 47.5	-0.1
TWGZ	Tauwhareparae	5.88	200	P	Pn	19 15 50.9	+2.0
TWGZ				S	Sn	19 16 55.6	+0.6
WHRZ	Whale Island	5.94	208	P	Pn	19 15 51.0	+1.3
CNGZ	Carnagh Station	6.11	198	P	Pn	19 15 52.8	+1.0
OPRZ	Ohinepanea	6.11	211	P	Pn	19 15 52.7	+0.8
MWZ	Matawai	6.17	203	P	Pn	19 15 51.0	-1.7
MWZ				S	Sn	19 16 58.9	-3.0
URZ	Urewera	6.24	206	P	Pn	19 15 53.4	-0.3
URZ				S	Sn	19 17 00.1	-3.5
RIGZ	Rimuhau	6.43	200	P	Pn	19 15 56.5	+0.2
MUGZ	Murupara	6.56	207	P	Pn	19 15 57.2	-0.8
PRGZ	Paritu Road	6.60	198	P	Pn	19 15 59.1	+0.4
RTZ	Ruatahuna	6.61	205	P	Pn	19 15 55.4	-3.3
MHGZ	Mahia Peninsul	6.81	198	P	Pn	19 16 01.2	-0.2
RAHZ	Arahi	6.84	203	P	Pn	19 15 60.0	-1.8
MTHZ	Maungataniwha	6.87	205	P	Pn	19 16 00.8	-1.4
WHHZ	Waihua	6.94	202	P	Pn	19 16 01.3	-1.8
ARHZ	Aropaoanui	7.18	203	P	Pn	19 16 03.0	-3.4
BKZ	Black Stump Fm	7.27	206	P	Pn	19 16 05.3	-2.3
MCHZ	McNeill Hill	7.44	204	P	Pn	19 16 07.6	-2.4
HIZ	Hauiti	7.45	217	P	Pn	19 16 10.2	+0.2
CKHZ	Cape Kidnapper	7.52	201	P	Pn	19 16 08.0	-3.0
TMVZ	Te Maari	7.54	210	P	Pn	19 16 08.9	-2.4
ETVZ	East Tongariro	7.55	210	P	Pn	19 16 08.1	-3.5
KAHZ	Kahuranaki	7.70	202	P	Pn	19 16 10.9	-2.6
FWVZ	Far West T-bar	7.72	210	P	Pn	19 16 10.9	-2.9
KRHZ	Kereru	7.74	205	P	Pn	19 16 10.2	-3.7
MOVZ	Moawhango	7.76	209	P	Pn	19 16 10.5	-3.8
PXZ	Pawanui	7.92	201	P	Pn	19 16 12.6	-3.8
PNHZ	Pukenui	8.04	205	P	Pn	19 16 13.8	-4.1
PRHZ	Porangahau	8.21	201	P	Pn	19 16 15.7	-4.6
TSZ	Takapari Road	8.25	205	P	Pn	19 16 15.9	-4.9
BFZ	Birch Farm	8.71	202	P	Pn	19 16 22.3	-4.7

*IDC **18** 19:32:07.3±2.5,51°.81N×173°.55W,h26km±16km,mb4.3/40, mb1 4.5/42,mb1mx4.5/49,mbtmp4.5/42,ML4.7/2,MS3.6/18, Ms1 3.6/18,ms1mx3.4/37,Error ellipse: s-maj=15.8km s-min=8.2km az=177.0*

*BJI **18** 19:32:07.2±0.0,51°.99N×173°.80W,h31km,mB5.0/25, mb4.7/36,Ms4.4/8,Ms7 4.1/8*

*NEIC **18** 19:32:08.9±2.2,51°.66N±0°.07×173°.39W±0°.08,h48km±6km, mb4.9/260,ML4.6(AEIC),Error ellipse: s-maj=9.7km s-min=7.0km az=190.0*

*AEIC **18** 19:32:08±2.5,51°.58N±0°.06×173°.42W±0°.08,h43km±5km, Error ellipse: s-maj=9.5km s-min=7.2km az=191.0*

ISC 18 19:32:10.5±0.4,51°.77N±0°.08×173°.47W±0°.04,h56km, n642,e0s95/540,mb4.8/165,MS3.6/20,10C-11D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.62	314	Pn	ISC	19 32 22.7	-0.8
ATKA	Atka Island	0.62	314		Sn	19 32 34.0	+1.0
KOFP	Korovin Flat P	0.64	323		Pn	19 32 23.6	-0.2
KOSE	Korovin Southe	0.68	328		Pn	19 32 24.6	+0.3
KONE	Korovin Northe	0.74	328		Pn	19 32 25.4	+0.4
KOWE	Korovin West	0.76	321		Pn	19 32 25.7	+0.3
GSMY	Great Sitkin M	1.62	281		Pn	19 32 35.1	-1.6
GSTR	Great Sitkin T	1.63	282		Pn	19 32 35.7	-1.2
GSTD	Great Sitkin T	1.68	281		Pn	19 32 36.4	-1.2
ADAG	Mount Adagdak	1.95	277		Pn	19 32 40.6	-0.7
ADK	Adak	2.00	274	Pn	Pn	19 32 40.0	-1.8
KIKV	Kanaga Island	2.30	274		Pn	19 32 45.0	-0.9
KICM	Kanaga Island	2.31	275		Pn	19 32 45.8	-0.3
KIMD	Kanaga Island	2.34	271		Pn	19 32 44.9	-1.6
TAFP	Tanaga Falls P	2.80	274		Pn	19 32 52.3	-0.5
TASE	Tanaga Southea	2.83	273		Pn	19 32 52.8	-0.5
NIKH	Nikolski High	3.08	65	Pn	Pn	19 32 55.2	-1.4
NIKH	Nikolski High	3.08	65		Sn	19 33 31.6	-0.5
GALAA	Gareloi Lava P	3.29	272		Pn	19 32 58.9	-0.6
OKSP	Okmok Steeple	3.50	63		Pn	19 33 01.9	-0.5
OKRE	Okmok R'deer P	3.68	59		Pn	19 33 05.2	+0.3
OKFG	Magazine Ridge	3.77	62		Pn	19 33 06.3	+0.2
CERAA	Semis' Rag'd T	4.25	275		Pn	19 33 11.7	-0.9
CESW	Semis' Southwe	4.32	274		Pn	19 33 12.5	-1.1
MAPS	Pakushin South	4.46	60		Pn	19 33 15.2	-0.3
MGOD	Makushin Gods	4.49	61		Pn	19 33 15.6	-0.4
AMKA	Amchitka	4.52	268	Pn	Pn	19 33 14.6	-1.8
MREP	Makushin Rep't	4.57	61		Pn	19 33 16.8	-0.3
MSW	Makushin Switc	4.59	59		Pn	19 33 17.3	0.0
MNAT	Makushin Natee	4.63	60		Pn	19 33 17.9	+0.1
UNV	Unalaska Valle	4.71	61	Pn	Pn	19 33 18.7	-0.2
LSPA	Little Sitkin	4.93	275		Pn	19 33 21.4	-0.6
LSSA	Little Sitkin	4.97	275		Pn	19 33 21.9	-0.7
AKRB	Akutan Reef Bi	5.06	59		Pn	19 33 24.1	+0.3
AKRB					Sn	19 34 22.9	+2.1
ZRO	Akutan Zero	5.09	60		Pn	19 33 24.9	+0.6
AKBBA	Akutan Broad B	5.12	60		Pn	19 33 25.4	+0.8
AKLV	Akutan Long Va	5.14	59		Pn	19 33 25.8	+0.9
AKLV					Sn	19 34 25.2	+2.4
AKUT	Akutan	5.22	60	Pn	Pn	19 33 27.3	+1.3
SPIA	Saint Paul Isl	5.73	18		Pn	19 33 35.0	+2.1
WESP	Westdahl Peak	5.93	59		Pn	19 33 35.8	0.0
WESE	West Dahl East	6.00	60		Pn	19 33 36.6	-0.1
FALS	False Pass	6.77	59		Pn	19 33 49.1	+2.0
DT1	Dutton Round H	7.47	59		Pn	19 33 56.6	-0.2
SMY	Shemya	7.69	282	Pn	Pn	19 33 57.2	-2.5
SDPT	Sand Point	8.53	60		Pn	19 34 09.8	-1.4
CNBA	Chernabura Isl	8.86	64	Pn	Pn	19 34 14.2	-1.5
CHGN	Chignik	9.95	57	Pn	Pn	19 34 29.2	-1.3
CHIR	Chirikof Islan	11.30	62	Pn	Pn	19 34 47.3	-1.8
GAMB	Gambell	12.07	4	Pn	Pn	19 34 56.9	-2.6
SII	Sitkinak Islan	12.26	59	Pn	Pn	19 34 57.6	-4.6
OHAK	Old Harbor	12.92	57	Pn	Pn	19 35 06.7	-4.4
KDAK	Kodiak Island	13.45	55	Pn	Pn	19 35 12.8	-5.4
ANM	Nome	13.50	15	Pn	Pn	19 35 17.0	-2.0
SVW2	Sparrevohn	13.56	40	Pn	Pn	19 35 20.6	+0.7
TNA	Tin City	14.12	9	Pn	Pn	19 35 29.7	+2.4
TTA	Tatalina	14.56	33	Pn	Pn	19 35 29.8	-3.4
CNPM	China Poot	14.70	49	P	Pn	19 35 30.9	-4.1
BRLK	Bradley Lake	14.96	49	P	Pn	19 35 34.7	-3.6
SUA	Susitna One	15.74	43	P	Pn	19 35 47.6	-0.9
SEW	Seward	15.76	49	P	Pn	19 35 45.6	-2.9
SEW				IAmb	IAmb	19 35 55.2	
	comp=Z,71nm,1.2s						
PPLA	Purkeypile	15.91	37		Pn	19 35 52.2	+1.6
PPLA				IAmb	IAmb	19 36 02.0	
	comp=Z,67nm,1.2s						
RC01	Rabbit Creek A baz=245	16.01	45	P	Pn	19 35 50.4	-1.5
CAST	Castle Rocks	16.25	36	P	Pn	19 35 54.5	-0.4
GHO	Glory Hole Cre	16.66	44	P	Pn	19 35 59.4	-0.6
GHO				IAmb	IAmb	19 36 01.5	
	comp=Z,40nm,0.4s						
KNK	Knik Glacier	16.71	45	P	Pn	19 35 59.7	-0.9
KTH	Kantishna Hill	16.76	37	P	Pn	19 36 01.3	+0.1
KTH				IAmb	IAmb	19 36 04.3	
	comp=Z,79nm,0.8s						
SML	Sawmill	16.93	44	P	Pn	19 36 02.1	-1.2
TRF	Thorofare Moun	16.94	37		Pn	19 36 04.1	+0.6
BPAW	Bear Paw Mtn.	17.05	35	P	Pn	19 36 05.0	+0.3
BPAW				IAmb	IAmb	19 36 09.6	
	comp=Z,47nm,0.7s						
GLI	Glacier Island	17.12	48	P	Pn	19 36 03.7	-1.9
GLI				IAmb	IAmb	19 36 09.5	
	comp=Z,30nm,0.6s						
RDOG	Red Dog Mine	17.12	14	P	Pn	19 36 05.9	+0.2
FID	Port Fidalgo	17.36	48	P	Pn	19 36 05.7	-2.9
FID				IAmb	IAmb	19 36 09.9	
	comp=Z,43nm,0.6s						
SCM	Sheep Creek Mo	17.38	44	P	Pn	19 36 06.7	-2.2
SCM				IAmb	IAmb	19 36 10.0	
	comp=Z,54nm,0.7s						
IMAR	Indian Mountai	17.39	28	P	Pn	19 36 10.1	+1.2
RND	Reindeer	17.46	39	P	Pn	19 36 08.2	-1.7
PEA0B	Petropavlovsk-	17.58	286	P	Pn	19 36 11.6	+0.3
PETK	Petropavlovsk-	17.58	286	P	Pn	19 36 11.4	+0.1
	comp=Z,2.2nm,0.3s,baz=88,slow=12,SNR=39						
PETK	Petropavlovsk-	17.58	286	P	Pn	19 36 08.6	-2.7
MCK	McKinley baz=239,SNR=18	17.60	38	P	Pn	19 36 10.4	-1.1
BWN	Browne	17.64	36	P	Pn	19 36 10.3	-1.7
BWN				IAmb	IAmb	19 36 13.9	
	comp=Z,67nm,0.6s						
MLY	Manley baz=232,SNR=14	17.70	33	P	Pn	19 36 12.4	-0.3
KLU	Klutina	17.87	46	P	Pn	19 36 12.1	-2.8
DHY	Denali Highway	17.89	41	P	Pn	19 36 14.2	-1.0
M24K	Tolsona, Glenn baz=248	17.98	44	P	Pn	19 36 15.1	-1.2
M24K	Tolsona, Glenn	17.98	44	P	Pn	19 36 14.4	-1.9
M24K				IAmb	IAmb	19 36 31.2	
	comp=Z,39nm,0.7s						
NEA2	Nenana baz=236,SNR=6.5	18.02	35	P	Pn	19 36 15.2	-1.4
I23K	Minto, Yukon-K baz=234,SNR=60	18.23	33	P	P	19 36 19.1	+0.3
I23K	Minto, Yukon-K	18.23	33	P	P	19 36 19.4	+0.6
I23K				IAmb	IAmb	19 36 24.9	
	comp=Z,70nm,0.7s						
WRH	Wood River Hil	18.30	36	P	P	19 36 16.3	-3.3
WRH				IAmb	IAmb	19 36 23.7	
	comp=Z,32nm,0.5s						
CCB	Clear Creek Bu	18.50	36	P	P	19 36 19.7	-2.1
CCB				IAmb	IAmb	19 36 24.4	
	comp=Z,46nm,0.5s						
N25K	Chitina, Valde baz=251,SNR=9.7	18.50	47	P	P	19 36 20.4	-1.5
MDM	Murphy Dome	18.52	35	P	P	19 36 21.0	-1.0
TCOL	CIGO, UAF Yank baz=237	18.60	35	P	P	19 36 21.1	-1.8
TCOL	CIGO, UAF Yank	18.60	35	P	P	19 36 20.4	-2.5
COLA	College	18.61	35	P	P	19 36 20.8	-2.1
HDA	Harding Lake baz=240,SNR=83	18.70	37	P	P	19 36 22.5	-1.5
HDA	Harding Lake	18.70	37	P	P	19 36 22.3	-1.7
POKR	Poker Flat Res baz=238,SNR=9.1	18.89	35	P	P	19 36 24.3	-1.8
IL31		18.91	36	P	P	19 36 23.4	-2.7
IL31				IAmb	IAmb	19 36 27.2	
	comp=Z,57nm,0.9s						
ILAR	Eielson Array	18.91	36	P	P	19 36 23.7	-2.5
	comp=Z,14nm,0.3s,baz=233,slow=9.2,SNR=190						
ILAR				LR	LR	19 44 13.4	
	comp=Z,166nm,21.3s,baz=223,slow=38						
ILAR				ScP	ScP	19 44 25.3	+4.7
	comp=Z,0.1nm,0.3s,baz=275,slow=3.5,SNR=7.8						
ILAR	Eielson Array	18.91	36	P	P	19 36 24.4	-1.8
CRQM	Cirque	18.93	50	P	P	19 36 26.4	-0.3
CRQM				IAmb	IAmb	19 36 39.8	
	comp=Z,33nm,0.6s						
ISLE	Juniper Island comp=Z,104nm,1.3s	19.28	51	IAmb	IAmb	19 36 38.3	
COLD	Coldfoot baz=228	19.28	28	P	P	19 36 28.9	-1.4
COLD	Coldfoot	19.28	28	P	P	19 36 29.0	-1.2
MENT	Mentasta	19.35	43	P	P	19 36 31.3	+0.1
YAH	Yahtse comp=Z,56nm,0.7s	19.51	51	IAmb	IAmb	19 36 39.0	
L26K	Log Cabin Wild baz=249,SNR=12	19.54	43	P	P	19 36 31.9	-1.3
SCRK	Sand Creek baz=246,SNR=77	19.65	40	P	P	19 36 32.9	-1.6
PRP	Porcupine Dome comp=Z,39nm,0.6s	19.78	35	IAmb	IAmb	19 36 40.2	
TABL	Table Mountain comp=Z,68nm,0.9s	19.82	51	IAmb	IAmb	19 36 44.6	
CTGM	Chitina Glacie	19.84	50	P	P	19 36 35.2	-1.4
CTGM				IAmb	IAmb	19 36 39.2	
	comp=Z,40nm,0.8s						
PCA	Pinnacle comp=Z,69nm,0.6s	20.19	53	IAmb	IAmb	19 36 43.4	
BCAR	Beaver Creek A	20.23	44	P	P	19 36 39.1	-1.5
TOLK	Toolik Lake Re baz=226,SNR=24	20.42	25	P	P	19 36 43.2	+0.5
TOLK	Toolik Lake Re	20.42	25	P	P	19 36 43.0	+0.3
TOLK				IAmb	IAmb	19 36 44.5	
	comp=Z,39nm,0.8s						
K27K	Chicken comp=Z,44nm,1.1s	20.45	41	IAmb	IAmb	19 36 47.9	
BMAR	Burnt Mountain	21.12	31	P	P	19 36 50.4	+0.1
SEY	Seymchan comp=Z,2.2nm,0.4s,baz=108,slow=24,SNR=5.0	21.25	315	P	P	19 36 52.2	+0.6
MA2	Magadan comp=Z,10nm,1.0s,baz=143,slow=20,SNR=1.4	21.40	305	P	P	19 36 51.5	-1.7
MA2				L

HAWA IAmb IAmb 19 38 59.5
comp=Z,16nm,0.7s
F07A Phinny Hill Vi 35.05 78 IAmb IAmb 19 39 00.1
comp=Z,8.6nm,0.8s
J04D Umpqua Nationa 35.08 83 P **P 19 38 59.6 +1.3**
baz=303
D08A Wollman Farm, 35.10 76 IAmb IAmb 19 38 59.5
comp=Z,10.0nm,0.7s
C09A Chrisman Ranch 35.14 74 P **P 19 38 58.3 -0.1**
C09A IAmb IAmb 19 38 59.8
comp=Z,19nm,0.8s
H11N2 WAKE ISLAND Hy 35.48 213 T T 20 16 56.4
baz=21,slow=76,SNR=967
H11N3 WAKE ISLAND Hy 35.49 213 T T 20 16 53.7
baz=21,slow=76,SNR=1059
H11N1 WAKE ISLAND Hy 35.50 213 T T 20 16 59.6
baz=21,slow=76,SNR=707
PINE Pine Mountain 35.51 82 P **P 19 39 02.9 +1.1**
L04D Klamath Falls 35.52 85 P **P 19 39 01.9 0.0**
baz=304
YBH Yreka Blue Hor 35.53 86 P **P 19 39 03.1 +1.0**
comp=Z,2.1nm,0.7s,baz=300,slow=9.9,SNR=6.0
YBH LR LR 19 49 59.1
comp=Z,61nm,20.5s,baz=308,slow=30
J05D Fort Rock, OR 35.59 83 P **P 19 39 03.7 +1.1**
baz=303,SNR=8.7
NEW Newport 35.61 73 P **P 19 39 03.0 +0.4**
comp=Z,19nm,0.6s,baz=296,slow=7.5,SNR=27
NEW Newport 35.61 73 P **P 19 39 02.7 +0.2**
baz=298
NEW Newport 35.61 73 IAmb IAmb 19 39 03.9
comp=Z,21nm,0.7s
E09A Wood Farm, Sta 35.83 76 IAmb IAmb 19 39 05.7
comp=Z,8.5nm,0.8s
M04C Macdoel 36.05 85 P **P 19 39 07.6 +1.1**
baz=304
K05A Summer Lake 36.11 83 IAmb IAmb 19 39 09.5
comp=Z,12nm,0.7s
I07A Izee 36.23 80 P **P 19 39 09.0 +1.0**
I07A IAmb IAmb 19 39 09.8
comp=Z,8.1nm,0.7s
O02D Mt. Diablo Mer 36.38 88 P **P 19 39 10.7 +1.5**
baz=306
USRK Ussuriysk Ar. 36.52 280 P **P 19 39 09.6 -0.7**
comp=Z,3.6nm,0.5s,baz=55,slow=8.6,SNR=14
H11S1 WAKE ISLAND Hy 36.69 213 T T 20 18 23.4
baz=20,slow=76,SNR=1381
H11S2 WAKE ISLAND Hy 36.70 213 T T 20 18 24.3
baz=20,slow=76,SNR=730
H11S3 WAKE ISLAND Hy 36.70 213 T T 20 18 23.7
baz=20,slow=76,SNR=500
O03E Paynes Creek 36.92 87 P **P 19 39 14.5 +0.7**
baz=306
MJAR Matsushiro Arr 37.13 265 P **P 19 39 15.9 +0.3**
comp=Z,2.0nm,0.5s,baz=42,slow=6.5,SNR=6.3
MJAR LR LR 19 52 46.0
comp=Z,91nm,21.5s,baz=105,slow=33
MAT Matsushiro 37.13 265 P **P 19 39 15.5 -0.1**
WALA Waterton Lakes 37.13 70 IAmb IAmb 19 39 17.2
comp=Z,22nm,1.1s
J08A Circle Bar Ran 37.25 81 IAmb IAmb 19 39 18.4
comp=Z,8.9nm,0.7s
JTMT Jette 37.54 72 IAmb IAmb 19 39 20.4
comp=Z,11nm,0.7s
RES Resolute Bay 37.99 25 P **P 19 39 22.4 0.0**
comp=Z,0.8nm,0.4s,baz=258,slow=4.1,SNR=4.7
RES ScP **ScP 19 45 23.4 +4.1**
comp=Z,2.4nm,0.8s,baz=275,slow=6.5,SNR=3.8
RES LR LR 19 59 17.5
comp=Z,122nm,18.3s,baz=306,slow=43
MSO Missoula 38.19 73 P **P 19 39 24.5 0.0**
baz=300,SNR=9.8
MSO Missoula 38.19 73 P **P 19 39 24.0 -0.5**
MSO IAmb IAmb 19 39 25.7
comp=Z,20nm,1.2s
PNTR Pine Nut 39.00 87 P **P 19 39 32.4 +0.8**
PNTR IAmb IAmb 19 39 55.1
comp=Z,14nm,0.8s
HLID Hailey 39.62 78 P **P 19 39 36.9 +0.2**
baz=304,SNR=6.5
DLMT Dillon 39.75 74 P **P 19 39 37.3 -0.3**
EGMT Eagleton 40.05 69 P **P 19 39 40.6 +0.5**
baz=300
BOZ Bozeman (W) 40.20 74 P **P 19 39 41.5 +0.1**
baz=302,SNR=31
BOZ Bozeman (W) 40.20 74 IAmb IAmb 19 39 42.4
comp=Z,20nm,0.7s
NVAR Mina Array Bea 40.21 87 P **P 19 39 42.1 +0.6**
comp=Z,3.3nm,0.8s,baz=286,slow=7.1,SNR=8.1
NVAR Mina Array Bea 40.21 87 P **P 19 39 41.8 +0.2**
ELK Elko 40.72 82 P **P 19 39 46.4 +0.6**
comp=Z,2.8nm,0.6s,baz=302,slow=7.8,SNR=18
YHH Holmes Hill 41.10 74 P **P 19 39 49.3 +0.4**
FFC Flin Flon 41.18 57 P **P 19 39 48.8 -0.4**
FFC IAmb IAmb 19 39 50.1
comp=Z,28nm,0.7s
YPP Pitchstone Pla 41.41 75 P **P 19 39 51.5 0.0**
H17A Grant Village 41.48 74 P **P 19 39 52.9 +0.9**
baz=304,SNR=8.9
H17A Grant Village 41.48 74 IAmb IAmb 19 39 54.7
comp=Z,15nm,0.7s
LKWY Lake 41.49 74 IAmb IAmb 19 39 54.6
comp=Z,25nm,0.7s
IMW Indian Meadow 41.54 75 P **P 19 39 53.1 +0.5**
FLWY Flagg Ranch 41.58 75 IAmb IAmb 19 40 02.8
comp=Z,79nm,1.6s
CWC Cottonwood Cre 41.59 89 P **P 19 39 53.1 +0.2**
baz=310
ISA Isabella, Lake 41.84 90 P **P 19 39 54.5 -0.3**
RLMT Red Lodge 41.86 73 P **P 19 39 54.7 -0.4**
baz=303
REDW Red Top Meadow 41.89 76 IAmb IAmb 19 40 18.2
comp=Z,49nm,1.4s
R11A Troy Canyon, C 41.94 85 P **P 19 39 56.0 +0.2**
baz=308
MPMC Manual Prospec 42.20 89 P **P 19 39 57.8 -0.1**
baz=310
FURC Furnace Creek, 42.33 88 P **P 19 39 59.5 +0.8**
baz=310
TPNV Topopah Spring 42.40 87 P **P 19 39 59.5 -0.1**
baz=309,SNR=9.4
TPNV Topopah Spring 42.40 87 P **P 19 39 59.6 +0.1**
TPNV IAmb IAmb 19 40 22.1
comp=Z,14nm,0.9s
LRMC Laurel Mtn Rad 42.45 90 P **P 19 39 59.7 -0.2**
baz=311
DUG Dugway, Tooele 42.53 81 P **P 19 40 00.2 -0.3**
baz=307
PRN Pahroc Range 42.86 86 IAmb IAmb 19 40 14.5
comp=Z,11nm,0.7s
KSRS Korea Array 42.94 274 P **P 19 40 04.1 +0.5**
comp=Z,3.9nm,0.6s,baz=58,slow=7.5,SNR=18
KSRS LR LR 20 01 08.0
comp=Z,16nm,18.1s,baz=67,slow=41
KSAR Wonju Array Be 42.97 274 P **P 19 40 04.0 +0.1**
BW06 Boulder Array 43.01 76 P **P 19 40 04.7 +0.2**
baz=305
PDAR Pinedale Array 43.01 76 P **P 19 40 05.0 +0.6**
comp=Z,17nm,0.5s,baz=310,slow=4.5,SNR=6.0
PDAR LR LR 19 55 39.1
comp=Z,50nm,18.4s,baz=315,slow=33
FCC Fort Churchill 43.25 48 IAmb IAmb 19 40 07.1
comp=Z,23nm,0.8s
BFSC Mount Baldy Ra 43.28 91 P **P 19 40 06.6 +0.1**
baz=312
TUQ Turquoise Moun 43.57 89 P **P 19 40 08.1 -0.9**
baz=311
GMRC Granite Mounta 44.16 89 P **P 19 40 13.2 -0.5**
baz=311
PFO Pinyon Flats O 44.44 91 P **P 19 40 16.2 +0.3**
comp=Z,2.7nm,0.9s,baz=350,slow=6.1,SNR=1.3
BELC Belle Mtn. Jos 44.47 90 P **P 19 40 15.9 -0.3**
baz=312
O20A White River Ci 45.36 78 P **P 19 40 23.0 -0.3**
baz=308,SNR=5.8
O20A White River Ci 45.36 78 IAmb IAmb 19 40 24.1
comp=Z,22nm,0.7s
NRIK Noril'sk 45.72 331 P **P 19 40 25.7 +0.3**
comp=Z,6.2nm,0.8s,baz=73,slow=6.9,SNR=5.0
PV23 Carpenter Ridg 45.93 80 IAmb IAmb 19 40 36.9
comp=Z,26nm,1.3s
MDND Maddock 45.94 64 P **P 19 40 27.0 -0.5**
baz=304
PV14 Lion Creek, Pa 45.97 81 IAmb IAmb 19 40 48.8
comp=Z,8.7nm,0.9s
PV22 Blue Mesa, Par 46.01 80 IAmb IAmb 19 40 37.7
comp=Z,8.6nm,0.9s
PV20 West Nyswonger 46.02 81 P **P 19 40 28.3 -0.2**
PV20 IAmb IAmb 19 40 38.4
comp=Z,21nm,1.5s
PV04 Paradox Valley 46.03 80 IAmb IAmb 19 40 29.4
comp=Z,10nm,0.7s
PV19 Morning Glory 46.03 81 IAmb IAmb 19 40 29.4
comp=Z,7.1nm,0.8s
PV17 East Wray Mesa 46.07 81 IAmb IAmb 19 40 29.7
comp=Z,12nm,0.7s
PV16 Nyswonger Mesa 46.08 81 IAmb IAmb 19 40 38.0
comp=Z,15nm,1.1s
PV11 David Mesa, Pa 46.11 80 IAmb IAmb 19 40 59.2
comp=Z,20nm,0.9s
PV18 Skein Mesa, Pa 46.12 81 P **P 19 40 29.6 +0.3**
PV18 IAmb IAmb 19 40 51.3
comp=Z,20nm,1.3s
PV12 Saucer Basin, 46.14 80 IAmb IAmb 19 40 39.5
comp=Z,11nm,0.7s
PV03 Paradox Valley 46.15 81 IAmb IAmb 19 40 30.3
comp=Z,8.9nm,0.7s
PV13 Radium Mtn., P 46.23 81 IAmb IAmb 19 40 31.1
comp=Z,18nm,0.8s
PV02 Paradox Valley 46.25 80 IAmb IAmb 19 40 31.2
comp=Z,14nm,0.7s
PV15 Paradox Valley 46.32 80 IAmb IAmb 19 41 08.0
comp=Z,8.7nm,0.8s
PV01 Paradox Valley 46.40 80 IAmb IAmb 19 40 32.3
comp=Z,12nm,0.7s
ULM Lac du Bonnet 46.65 60 P **P 19 40 33.0 0.0**
comp=Z,14nm,0.5s,baz=303,slow=8.0,SNR=36
ULM LR LR 19 59 45.6
comp=Z,78nm,19.2s,baz=302,slow=36
ULM Lac du Bonnet 46.65 60 IAmb IAmb 19 40 33.2
comp=Z,15nm,0.6s
MVCO Mesa Verde 47.03 81 P **P 19 40 36.0 -0.4**
baz=310
MVCO Mesa Verde 47.03 81 IAmb IAmb 19 41 09.7
comp=Z,10nm,1.0s
W18A Petrified Fore 47.62 84 IAmb IAmb 19 41 03.4
comp=Z,10.0nm,0.8s
S22A 4UR Ranch, Cre 47.71 80 P **P 19 40 42.3 +0.5**
baz=310
S22A 4UR Ranch, Cre 47.71 80 IAmb IAmb 19 40 44.3
comp=Z,26nm,1.8s
AGMN Agassiz Nation 47.76 62 P **P 19 40 40.8 -0.8**
baz=305,SNR=8.6
AGMN Agassiz Nation 47.76 62 P **P 19 40 41.1 -0.6**
AGMN IAmb IAmb 19 40 42.1
comp=Z,24nm,0.9s
SDCO Great Sand Dun 48.52 79 P **P 19 40 47.3 -0.7**
baz=310,SNR=5.5
SDCO Great Sand Dun 48.52 79 IAmb IAmb 19 40 49.5
comp=Z,8.0nm,1.1s
F33A 5 Mile Ranch, 48.96 65 IAmb IAmb 19 40 51.0
comp=Z,16nm,1.1s
SONM Songino Array 49.40 299 P **P 19 40 54.6 +0.1**
comp=Z,1.6nm,0.5s,baz=47,slow=8.1,SNR=10
SONM ScP **ScP 19 46 08.3 +2.0**
comp=Z,1.0nm,0.7s,baz=42,slow=3.5,SNR=4.9
SONM LR LR 20 04 05.7
comp=Z,96nm,18.3s,baz=14,slow=39
SONM Songino Array 49.40 299 IAmb IAmb 19 40 55.6
comp=Z,1.6nm,0.6s
KSCO Kaye Shedlock' 49.46 76 P **P 19 40 54.2 -0.8**
baz=310
T25A Trinidad 49.57 79 P **P 19 40 55.6 -0.4**
baz=310,SNR=7.2
T25A Trinidad 49.57 79 IAmb IAmb 19 41 23.2
comp=Z,19nm,1.1s
ANMO Albuquerque 49.75 82 P **P 19 40 59.1 +1.8**
comp=Z,1.6nm,0.8s,baz=109,slow=13,SNR=3.6
ANMO Albuquerque 49.75 82 P **P 19 40 58.0 +0.6**
baz=312
ECSD EROS Data Cent 50.05 67 P **P 19 40 58.1 -1.2**
baz=308
ECSD EROS Data Cent 50.05 67 P **P 19 40 58.1 -1.2**
ECSD IAmb IAmb 19 40 59.1
comp=Z,12nm,0.8s
SPA0 Spitsbergen Ar 50.17 357 *e*P **P 19 40 59.5 -0.3**
EYMN Ely 50.33 60 P **P 19 41 00.1 -1.2**
baz=307,SNR=5.5
EYMN Ely 50.33 60 IAmb IAmb 19 41 02.6
comp=Z,14nm,0.6s
F36A Milaca 50.49 63 IAmb IAmb 19 41 02.8
comp=Z,11nm,0.8s
DAG Danmarks Havn 50.73 7 *i* P **P 19 41 03.4 -0.5**
comp=Z,4.1nm,0.8s
DAG *i* 19 41 22.8
DAG Danmarks Havn 50.73 7 *i* P **P 19 41 03.5 -0.5**
DAG IAmb IAmb 19 41 05.3
comp=Z,4.1nm,0.8s
DAG *i* 19 41 22.8
HHC Hu-ho-hao-te 50.74 289 *e*P **P 19 41 04.3 -0.4**
E38A The Farm, Brul 51.12 61 P **P 19 41 06.6 -0.6**
SPMN Marine on St. 51.28 63 P **P 19 41 07.9 -0.6**
baz=309
CBKS Cedar Bluff 51.31 74 P **P 19 41 08.1 -0.8**
baz=310,SNR=5.1
SUMG Summit 52.07 16 P **P 19 41 14.3 -0.2**
SUMG IAmb IAmb 19 41 16.1
comp=Z,28nm,1.3s
SUMG Summit 52.07 16 *i* P **P 19 41 14.5 +0.1**
comp=Z,26nm,0.6s
SUMG Summit 52.07 16 *i* P **P 19 41 14.6 +0.1**
SUMG IAmb IAmb 19 41 15.2
comp=Z,26nm,0.6s
NJ2 Nanjing 52.10 275 *e*P **P 19 41 14.4 -0.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
MNTX Cornudas Mount 52.60 85 P **P 19 41 18.7 +0.1**
baz=314
MNTX Cornudas Mount 52.60 85 P **P 19 41 18.4 -0.1**
MSTX Muleshoe 52.67 81 P **P 19 41 18.8 -0.3**
baz=313
AMTX Amarillo 52.72 79 P **P 19 41 19.1 -0.4**
baz=312
DBG Daneborg 52.92 9 *i* P **P 19 41 19.0 -1.3**
DBG IAmb IAmb 19 41 20.2
comp=Z,5.2nm,0.9s
KSU1 Kansas State U 52.98 72 P **P 19 41 20.8 -0.5**
baz=311
SCIA State Center 53.14 67 P **P 19 41 21.6 -0.7**
baz=310
JFWS Jewell Farm 54.17 64 P **P 19 41 28.7 -1.1**
baz=311
T35A Sooner Cattle 54.48 74 IAmb IAmb 19 41 32.8
comp=Z,17nm,0.7s
WMOK Wichita Mounta 54.58 77 P **P 19 41 32.4 -0.6**
baz=313,SNR=8.4
WMOK Wichita Mounta 54.58 77 IAmb IAmb 19 41 33.8
comp=Z,7.5nm,0.8s
ICESG Greenland Ices 54.77 18 *i* P **P 19 41 33.4 -0.9**
ICESG IAmb IAmb 19 41 34.5
comp=Z,8.7nm,0.8s
TX31 Lajitas Ar. Si 55.31 85 P **P 19 41 37.9 -0.5**
TX31 IAmb IAmb 19 41 43.2
comp=Z,19nm,0.8s
TX32 Lajitas Array 55.31 85 IAmb IAmb 19 41 43.2
comp=Z,6.1nm,0.8s
TXAR Lajitas Array 55.31 85 P **P 19 41 38.0 -0.4**
comp=Z,4.7nm,0.7s,baz=294,slow=5.1,SNR=31
TXAR Lajitas Array 55.31 85 P **P 19 41 37.1 -1.3**
TUL1 Leonard 55.59 74 P **P 19 41 39.1 -1.0**
baz=313
TUL1 Leonard 55.59 74 IAmb IAmb 19 41 40.6
comp=Z,15nm,0.8s
S39A Bolivar 55.85 71 IAmb IAmb 19 41 40.8
comp=Z,12nm,0.7s
U38A Gravette 56.07 73 IAmb IAmb 19 41 43.3
comp=Z,18nm,0.7s
ZALV Zalesovo Beam 56.12 316 P **P 19 41 42.9 -0.8**
comp=Z,0.4nm,0.4s,baz=47,slow=6.9,SNR=2.2
ZALV PcP **PcP 19 42 41.5 +0.5**
comp=Z,2.0nm,0.6s,baz=29,slow=3.4,SNR=8.3
HDIL Hopedale 56.26 66 P **P 19 41 44.0 -0.9**
baz=312
MATQ Matagami 56.26 51 P **P 19 41 43.7 -1.0**
baz=312
HHAR Hobbs 56.44 72 IAmb IAmb 19 41 45.8
comp=Z,11nm,0.7s
XAN Xi'an 56.82 284 P **P 19 41 48.9 -0.1**
XAN pP pP 19 41 57.3 -6.1
XAN pmax pmax
comp=Z,8.0nm,1.5s
CCM Cathedral Cave 56.82 69 P **P 19 41 47.6 -1.3**
baz=313
CCM Cathedral Cave 56.82 69 P **P 19 41 47.5 -1.5**
CCM IAmb IAmb 19 41 48.6
comp=Z,7.7nm,0.6s
MGMO Mountain Grove 56.83 71 IAmb IAmb 19 41 48.1
comp=Z,16nm,0.7s
JCT Junction City 56.89 82 P **P 19 41 49.2 -0.4**
baz=315
U40A Yellville 57.03 72 P **P 19 41 49.0 -1.5**
baz=313,SNR=12
LSQQ Lebel-sur-Quev 57.05 51 P **P 19 41 49.4 -1.0**
baz=313
WHTX Lake Whitney, 57.27 79 P **P 19 41 51.9 -0.3**
baz=314
W39A Magazine 57.27 73 P **P 19 41 51.5 -0.7**
baz=314,SNR=6.0
W39A Magazine 57.27 73 IAmb IAmb 19 41 52.5
comp=Z,14nm,0.7s
VLDQ Val d'Or 57.46 52 P **P 19 41 51.5 -1.7**
SCHQ Schefferville 57.58 41 P **P 19 41 53.5 -0.5**
comp=Z,9.2nm,0.7s,baz=314,slow=6.5,SNR=9.9
SCHQ LR LR 20 09 13.1
comp=Z,96nm,18.2s,baz=334,slow=39
SCHQ Schefferville 57.58 41 IAmb IAmb 19 42 07.7
comp=Z,25nm,1.2s
T42A Van Buren 57.60 70 IAmb IAmb 19 41 53.5
comp=Z,14nm,0.7s
SFIN Lafayette 57.62 65 P **P 19 41 54.1 -0.4**
baz=313
CHGQ Chibougamau 57.71 49 P **P 19 41 53.7 -1.3**
baz=314
MIAR Mount Ida 57.84 74 P **P 19 41 55.9 -0.3**
baz=314,SNR=12
WHAR Wooly Hollow 58.09 72 IAmb IAmb 19 41 57.8
comp=Z,22nm,1.1s
W41B Gary Mavity, V 58.20 72 P **P 19 41 57.6 -1.1**
baz=314,SNR=6.7
W41B Gary Mavity, V 58.20 72 IAmb IAmb 19 41 58.5
comp=Z,14nm,0.7s
ARA0 ARCESS Array S 58.21 352 *e*P **P 19 41 57.8 -0.5**
ARCES ARCESS Array B 58.21 352 P **P 19 41 57.5 -0.8**
comp=Z,3.0nm,0.6s,baz=8.9,slow=6.7,SNR=20
ARCES PcP **PcP 19 42 49.2 +0.2**
comp=Z,7.8nm,0.9s,baz=2.3,slow=6.1,SNR=4.7
ARCES LR LR 20 06 58.3
comp=Z,58nm,21.9s,baz=290,slow=36
LCAR Lake Charles 58.23 71 IAmb IAmb 19 41 57.9
comp=Z,10nm,0.8s
X40A Basin Creek Fa 58.33 73 P **P 19 41 58.8 -0.7**
baz=314,SNR=5.0
X40A Basin Creek Fa 58.33 73 IAmb IAmb 19 42 00.3
comp=Z,11nm,0.8s
LZH Lanzhou 58.43 289 *e*P **P 19 42 02.5 +2.0**
LZH pP pP 19 42 12.8 -2.7
LZH sP sP 19 42 18.8 -3.0
LZH pmax pmax
comp=Z,27nm,1.1s
LZH pmax pmax
comp=Z,85nm,4.3s
LZH LR LR
comp=Z,180nm,16.4s
LZH LR LR
comp=Z,190nm,16.5s
LZH LR LR
comp=Z,200nm,17.6s
GTA Gaotai 58.46 295 P **P 19 42 00.9 +0.3**
GTA pP pP 19 42 15.8 +0.2
GTA sP sP 19 42 20.5 -1.2
GTA S **S 19 49 57.0 -2.7**
GTA pmax pmax
comp=Z,2.0nm,1.1s
GTA pmax pmax
comp=Z,47nm,6.7s
GTA LR LR
comp=Z,91nm,16.4s
GTA LR LR
comp=Z,120nm,16.7s
GTA LR LR
comp=Z,92nm,16.0s
TRO Tromso 58.57 355 *e*P **P 19 42 00.3 -0.4**
ALGO Algonquin Park 58.64 54 P **P 19 42 01.2 -0.4**
baz=314
KTK1 Kautokeino 58.90 353 *e*P **P 19 42 03.5 +0.5**
SADO Sadowa 58.90 56 P **P 19 42 03.3 -0.1**
comp=Z,16nm,0.7s,baz=356,slow=3.0
G54A Lake Saint Pet 59.01 55 P **P 19 42 04.0 -0.2**
baz=314
P48A Milroy 59.18 64 IAmb IAmb 19 42 05.3
comp=Z,18nm,0.9s
D55A Sainte-Anne-du 59.19 52 P **P 19 42 04.8 -0.6**
baz=314,SNR=9.7
E55A Montcerf-Lytto 59.29 53 P **P 19 42 05.5 -0.6**
baz=314
D56A ZEC Mazanza, M 59.52 52 P **P 19 42 06.8 -0.8**
baz=315,SNR=6.2
P49A Miami Univ. Ec 59.52 64 P **P 19 42 06.4 -1.4**
baz=314
WCI Wyandotte Cave 59.54 66 P **P 19 42 07.3 -0.6**
baz=314
WCI Wyandotte Cave 59.54 66 P **P 19 42 07.3 -0.6**
M51A Elyria 59.67 61 P **P 19 42 07.6 -1.2**
baz=314
E56A St. Veronique 59.73 52 P **P 19 42 08.3 -0.8**
baz=315,SNR=5.2
ACSO Alum Creek Sta 60.00 62 P **P 19 42 10.4 -0.6**
baz=314
WVT Waverly 60.12 69 P **P 19 42 11.3 -0.7**
baz=315
WVT Waverly 60.12 69 P **P 19 42 11.5 -0.4**
WVT IAmb IAmb 19 42 11.9
comp=Z,12nm,1.1s
LATQ La Tuque 60.23 50 P **P 19 42 11.9 -0.7**
baz=315
E57A Chemin Saint G 60.26 52 P **P 19 42 12.0 -0.8**
baz=315,SNR=9.1
O51A Pataskala 60.27 62 P **P 19 42 12.4 -0.5**
baz=314
OXF Oxford 60.33 71 P **P 19 42 12.9 -0.5**
baz=315,SNR=6.9
D58A Chemin du LacG 60.39 51 P **P 19 42 12.7 -0.9**
baz=316
STEI Steigen 60.44 356 *e*P **P 19 42 13.1 -0.5**
O52A Adamsville 60.71 62 P **P 19 42 15.7 -0.2**
baz=315
E58A La Victoria 60.72 51 P **P 19 42 14.5 -1.3**
baz=316
G57A Newington 60.78 53 P **P 19 42 15.5 -0.8**
baz=315
M54A Oil Creek Stat 60.90 59 P **P 19 42 16.4 -0.8**
baz=315
D59A Saint-Raymond 60.95 50 P **P 19 42 17.0 -0.4**
baz=316
O53A New Philadelph 60.95 61 P **P 19 42 16.7 -0.9**
baz=315
FAUS Fauske 60.99 356 *e*P **P 19 42 16.9 -0.4**
H57A Richville 61.03 54 P **P 19 42 17.5 -0.4**
baz=316
N54A Moraine State 61.11 60 P **P 19 42 18.4 -0.2**
baz=315
I57A Carthage 61.27 55 P **P 19 42 18.8 -0.8**
baz=316
K56A Middlesex 61.29 57 P **P 19 42 19.6 -0.2**
baz=315
LONY Lake Ozonia 61.32 54 P **P 19 42 19.3 -0.8**
baz=316
LONY Lake Ozonia 61.32 54 P **P 19 42 19.2 -0.8**
P53A Whipple 61.40 62 P **P 19 42 20.3 -0.3**
baz=315
D60A Saint Jean D'O 61.45 50 P **P 19 42 20.3 -0.5**
baz=316
O54A Avella 61.45 61 P **P 19 42 20.4 -0.5**
baz=315
J57A Williamstown 61.47 55 P **P 19 42 20.9 -0.1**
baz=316
L56A Greenwood 61.57 57 P **P 19 42 21.8 0.0**
baz=316
E60A Ste Agathe de 61.60 50 P **P 19 42 20.9 -0.9**
baz=316
F60A Warwick 61.65 51 P **P 19 42 21.4 -0.7**
baz=316
H58A Gabriels 61.67 53 P **P 19 42 22.1 -0.3**
baz=316
M56A Emporium 61.71 58 P **P 19 42 22.4 -0.3**
baz=316
H59A Cadyville 61.75 53 P **P 19 42 22.1 -0.7**
baz=316,SNR=5.3
Q53A Leroy 61.77 62 P **P 19 42 22.8 -0.3**
baz=315
I58A Old Forge 61.79 55 P **P 19 42 22.7 -0.5**
baz=316
WMQ Urumqi 61.86 306 *e*P **P 19 42 25.3 +1.6**

WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ pmax pmax
comp=Z,140nm,5.7s
WMQ LR LR
comp=Z,910nm,29.1s
WMQ LR LR
comp=Z,2µm,29.1s
WMQ LR LR
comp=Z,270nm,29.0s

J58A Remsen 61.87 55 P P 19 42 23.8 +0.1
baz=316,SNR=5.2
R53A Hurricane 61.90 63 P P 19 42 23.8 -0.2
baz=315
L57A Andrews Acres 62.04 57 P P 19 42 24.7 -0.2
baz=316
N56A West Decatur 62.05 59 P P 19 42 24.8 -0.2
baz=316
Q54A Coxs Mills 62.06 62 P P 19 42 24.5 -0.5
baz=316
G60A Masonville 62.09 52 P P 19 42 24.9 -0.3
baz=316
F61A St Evariste 62.10 50 P P 19 42 24.8 -0.4
baz=317
K58A Earlville 62.11 56 P P 19 42 24.8 -0.6
baz=316
MCWV Mont Chateau 62.12 61 P P 19 42 24.8 -0.6
baz=316
J59A Piesco 62.19 54 P P 19 42 25.5 -0.4
baz=316
MOR8 Moi Rana 62.23 356 eP P 19 42 24.3 -1.5
P55A Reedsville 62.23 61 P P 19 42 25.4 -0.8
baz=316
I59A Olmsteadville 62.27 54 P P 19 42 25.8 -0.6
baz=316
S53A Williamson 62.27 64 P P 19 42 26.0 -0.5
baz=316
TZTN Tazewell 62.28 65 P P 19 42 26.1 -0.4
baz=316
H60A Morristown 62.30 52 P P 19 42 26.0 -0.6
baz=317
E62A Clayton Lake 62.33 49 P P 19 42 25.8 -0.9
baz=317
MKAR Makanchi Array 62.33 311 P P 19 42 26.1 -0.7
comp=Z,0.6nm,0.3s,baz=47,slow=6.7,SNR=18
MKAR Makanchi Array 62.33 311 P P 19 42 26.6 -0.2
BINY Binghamton 62.34 56 P P 19 42 26.9 0.0
baz=316
G61A St-Isidore-de- 62.35 51 P P 19 42 26.2 -0.6
baz=317
M57A Sunshine Farm, 62.37 58 P P 19 42 26.9 -0.1
baz=316
O56A Blue Knob Stat 62.37 59 P P 19 42 26.5 -0.6
baz=316
Q55A Buckhannon 62.46 61 P P 19 42 28.0 +0.2
baz=316
K59A Cooperstown 62.51 55 P P 19 42 28.1 +0.1
baz=316,SNR=5.3
L58A Harry Jones Me 62.52 56 P P 19 42 28.3 +0.2
baz=316,SNR=5.1
I60A Shoreham 62.52 53 P P 19 42 27.6 -0.4
baz=317
T53A Wise 62.54 64 P P 19 42 28.0 -0.4
baz=316
R54A Victor 62.54 63 P P 19 42 28.1 -0.2
baz=316,SNR=5.7
N57A Milroy 62.56 58 P P 19 42 28.0 -0.3
baz=316
S54A Dingess, Beckl 62.64 63 P P 19 42 28.8 -0.2
baz=316
D63A Stockholm 62.68 48 P P 19 42 28.2 -0.8
baz=318
BRVK Borovoye 62.69 322 P P 19 42 29.3 +0.3
BRVK IAmb IAmb 19 42 30.0
comp=Z,5.2nm,0.6s
M58A Price's Panora 62.69 57 P P 19 42 29.4 +0.2
baz=316
H61A Lyndonville 62.70 52 P P 19 42 28.7 -0.5
baz=317
P56A Dayton Farm, R 62.77 60 P P 19 42 29.9 +0.2
baz=316
TKL Tuckaleechee C 62.78 66 P P 19 42 29.4 -0.5
comp=Z,5.9nm,0.5s,baz=27,slow=6.8,SNR=4.7
TKL Tuckaleechee C 62.78 66 IAmb IAmb 19 42 31.4
comp=Z,58nm,1.8s
LRAL Lakeview Retre 62.79 71 P P 19 42 29.1 -0.9
baz=316
L59A Walton 62.84 56 P P 19 42 30.5 +0.3
baz=316,SNR=9.5
G62A West of Eustis 62.88 51 P P 19 42 30.0 -0.4
baz=317
G62A West of Eustis 62.88 51 P P 19 42 30.3 -0.1
J60A Lant Hill Farm 62.90 54 P P 19 42 30.5 0.0
baz=317,SNR=6.4
O57A Amberson 62.91 59 P P 19 42 30.7 0.0
baz=316
R55A Marlinton 62.95 62 P P 19 42 31.1 0.0
baz=316
E63A Oxbow 62.99 49 P P 19 42 30.2 -0.9
baz=318
I61A Oroboro, Fairl 63.00 53 P P 19 42 31.4 +0.2
baz=317
T54A Tazewell 63.02 64 P P 19 42 31.7 +0.1
baz=316,SNR=5.6
H62A Milan 63.05 52 P P 19 42 31.3 -0.3
baz=317,SNR=5.0
M59A Waymart 63.10 56 P P 19 42 31.7 -0.3
baz=316
S55A Lewisburg 63.10 63 P P 19 42 32.1 +0.1
baz=316
K60A Five Rivers En 63.12 55 P P 19 42 31.8 -0.2
baz=317
KRVT Keravat (AS076 63.12 219 LR LR 20 06 46.5
comp=Z,34nm,19.1s,baz=60,slow=33
F63A Nahmakanta, Br 63.20 50 P P 19 42 32.0 -0.6
baz=318
P57A Homestead Farm 63.23 60 P P 19 42 32.5 -0.3
baz=316
R56A Bull Pasture M 63.25 61 P P 19 42 32.6 -0.5
baz=316
J61A Chester 63.26 53 P P 19 42 32.7 -0.2
baz=317
E64A Bridgewater 63.27 48 P P 19 42 32.2 -0.8
baz=318
U54A Nelsons Funny 63.27 64 P P 19 42 33.1 -0.2
baz=316
Q57A Strasburg 63.34 60 P P 19 42 33.2 -0.3
baz=316
O58A Lewisberry 63.35 58 P P 19 42 33.1 -0.4
baz=316
N59A State Game Lan 63.38 57 P P 19 42 33.5 -0.3
baz=317
G63A Kingsbury 63.39 50 P P 19 42 33.1 -0.6
baz=318
K61A Williamstown 63.39 54 P P 19 42 33.2 -0.7
baz=317
L60A Shokan 63.40 55 P P 19 42 34.0 0.0
baz=317
T55A Pulaski 63.42 63 P P 19 42 34.2 +0.1
baz=316
PKME Peaks-Kenny Pk 63.44 50 P P 19 42 33.9 -0.2
baz=318
F64A Sherman 63.44 49 P P 19 42 33.6 -0.4
baz=318
H63A New Sharon 63.52 51 P P 19 42 34.2 -0.5
baz=318
BLA Blacksburg 63.55 63 P P 19 42 34.9 -0.2
baz=316
GYA Guiyang 63.56 280 ⇑P P 19 42 35.5 +0.2
GYA pmax pmax
comp=Z,7.0nm,0.9s
L61A Hillsdale 1, H 63.59 55 P P 19 42 35.0 -0.2
baz=317
M60A Port Jervis 63.68 56 P P 19 42 36.0 +0.2
baz=317,SNR=8.1
S56A Natural Bridge 63.69 62 P P 19 42 36.0 +0.1
baz=316
I63A Otisfield 63.71 52 P P 19 42 35.3 -0.6
baz=318
J62A Henniker 63.71 53 P P 19 42 35.9 0.0
baz=317
V54A Nebo 63.73 65 P P 19 42 36.0 -0.2
baz=316
N60A Cedar Hill Far 63.76 57 P P 19 42 36.4 +0.1
baz=317
Q58A Fox Den Farm, 63.80 60 P P 19 42 36.3 -0.3
baz=317
R57A Stanardsville 63.81 61 P P 19 42 36.7 +0.1
baz=317
L61B Northampton 63.85 54 P P 19 42 36.5 -0.3
baz=317
T56A Rocky Mt 63.90 63 P P 19 42 37.3 0.0
baz=316
K62A Royalston 63.91 54 P P 19 42 37.2 -0.1
baz=317
H64A Troy 63.93 50 P P 19 42 36.6 -0.7
baz=318
ARU Arti 63.95 331 P P 19 42 36.7 -0.6
S57A Dark Hollow, R 63.96 62 P P 19 42 37.5 -0.1
baz=317
P59A Jarrettsville 63.98 59 P P 19 42 37.3 -0.4
baz=317
R58A Rapidan 64.09 61 P P 19 42 38.5 0.0
baz=317
V55A Taylorsville 64.09 64 P P 19 42 38.4 -0.2
baz=316
W54A Cherokee Point 64.09 66 P P 19 42 38.2 -0.3
baz=316
BRAL Brewton 64.10 72 P P 19 42 38.8 +0.1
baz=317
M61A Granite Spring 64.13 56 P P 19 42 38.7 0.0
baz=317
BRZS Berezniki 64.14 319 eP P 19 42 37.8 -0.9
baz=319
U56A King 64.20 64 P P 19 42 39.3 0.0
baz=317
K63A Dunstable 64.25 53 P P 19 42 39.4 -0.1
baz=318
N61A South Mountain 64.27 56 P P 19 42 39.7 +0.1
baz=317
PAL Palisades 64.28 56 P P 19 42 39.9 +0.2
baz=317
G65A Princeton 64.30 49 P P 19 42 39.2 -0.5
baz=319
T57A Hurt 64.35 62 P P 19 42 40.0 -0.2
baz=317
X54A Belton 64.38 66 P P 19 42 40.1 -0.3
baz=317
R58B Mineral 64.40 61 P P 19 42 40.5 0.0
baz=317
V56A Mocksville 64.52 64 P P 19 42 40.9 -0.5
baz=317
KMSC Kings Mountain 64.53 65 P P 19 42 41.0 -0.5
baz=317
S58A Poland Farm, P 64.56 61 P P 19 42 41.5 -0.1
baz=317
GOGA Godfrey 64.57 68 P P 19 42 41.1 -0.6
baz=317
R59A King George, V 64.64 60 P P 19 42 41.3 -0.8
baz=317
KLMR Klimovskoe 64.65 343 eP P 19 42 38.9 -2.9
KLMR AMP 19 42 41.1
comp=Z,21nm,1.6s
U57A Blanch 64.72 63 P P 19 42 42.3 -0.3
baz=317
T58A Grand View Acr 64.78 62 P P 19 42 42.7 -0.3
baz=317
X55A Gracelyn & Ava 64.85 66 P P 19 42 43.2 -0.3
baz=317,SNR=5.0
S59A Mechanicsville 64.86 61 P P 19 42 43.8 +0.2
baz=317
V57A Coltrane Farms 64.87 64 P P 19 42 43.2 -0.4
baz=317
M63A Gales Ferry 64.94 54 P P 19 42 43.6 -0.4
baz=318
W56A Indian Trail 64.96 65 P P 19 42 43.9 -0.3
baz=317
X56A White Oak 65.18 65 P P 19 42 45.5 -0.1
baz=317
W57A Gilead 65.28 64 P P 19 42 45.8 -0.5
baz=317
T59A Double "B" Far 65.30 61 P P 19 42 46.4 0.0
baz=317
V58A Windy Hill, Pi 65.30 63 P P 19 42 46.7 +0.3
baz=317
X57A Johnson Farm, 65.73 65 P P 19 42 49.3 +0.1
baz=317
W58A Raeford 65.80 64 P P 19 42 49.5 -0.1
baz=317
V59A Millesex 65.81 63 P P 19 42 49.9 +0.2
baz=318
Z56A Williston 65.84 66 P P 19 42 49.9 0.0
baz=317
MOL Molde 66.00 359 eP P 19 42 50.1 -0.4
FINES FINESS Array B 66.06 350 P P 19 42 50.5 -0.3
comp=Z,3.5nm,0.6s,baz=25,slow=8.8,SNR=14
FINES LR LR 20 15 22.0
comp=Z,35nm,18.0s,baz=1.0,slow=39
Z57A Bowman 66.24 66 P P 19 42 52.9 +0.4
baz=318
SHLS Shalkode 66.39 310 eP P 19 42 52.2 -1.2
comp=Z,3.3nm,1.2s,baz=310
AKN Aaknes 66.40 360 eP P 19 42 52.9 -0.1
DOMB Dombas 66.52 359 eP P 19 42 52.7 -1.1
NC204 NORSAR Array S 67.25 358 P P 19 42 58.1 -0.5
NC204 IAmb IAmb 19 43 09.5
comp=Z,25nm,1.1s
BTLS Baital 67.41 315 eP P 19 42 58.9 -0.9
baz=315
NB2 NORSAR Subarra 67.48 358 P P 19 42 59.4 -0.6
comp=Z,1.2nm,0.5s,baz=3.7,slow=6.5
NB2 NORSAR Subarra 67.48 358 P P 19 42 59.4 -0.6
baz=3.7,slow=6.5
NOA NORSAR Array B 67.48 358 P P 19 42 59.6 -0.4
comp=Z,0.5nm,0.5s,baz=3.1,slow=7.5,SNR=20
MDOK Medeo 67.51 312 eP P 19 43 00.6 0.0
baz=312
NC602 NORSAR Array S 67.77 357 eP P 19 43 01.4 -0.4
SKAR Skarslia 67.89 359 eP P 19 43 02.5 -0.1
ASK Askoy 68.09 1 eP P 19 43 03.6 -0.1
KONO Kongsberg 68.91 358 eP P 19 43 09.0 +0.1
BLS5 Blasjo 69.16 0 eP P 19 43 10.5 0.0
ABKAR Akbulak array 69.56 326 P P 19 43 13.0 -0.1
ABKAR Akbulak array 69.56 326 IAmb IAmb 19 43 14.6
comp=Z,9.0nm,0.5s
DZA Taraz 70.31 315 eP P 19 43 17.6 -0.3
baz=315
LSA Lhasa 70.39 293 P P 19 43 20.4 +1.3
LSA pmax pmax
comp=Z,17nm,0.7s
LSA Lhasa 70.39 293 IAmb IAmb 19 43 45.0
comp=Z,5.6nm,0.6s
KK31 Karatay Array 70.50 316 P P 19 43 18.9 -0.1
KKAR Karatay Array 70.50 316 P P 19 43 18.9 -0.1
KKAR Karatay Array 70.50 316 P P 19 43 18.8 -0.2
KSH Kashi 70.86 310 eP P 19 43 25.3 +3.9
KSH pP pP 19 43 33.4 -3.1
KSH pmax pmax
comp=Z,13nm,0.6s
KSH pmax pmax
comp=Z,220nm,6.5s
UTTA Uttaradit 73.80 278 P P 19 43 42.6 +3.6
GAR Garm 73.90 313 IAmb IAmb 19 44 05.6
comp=Z,9.0nm,0.9s
TAPN Tanjejung 74.14 294 eP P 19 43 42.5 +1.2
comp=Z,26nm,0.6s
CMAR Chiang Mai Arr 74.25 280 P P 19 43 42.1 +0.5
comp=Z,1.1nm,0.5s,baz=25,slow=7.1,SNR=9.6
CMAR Chiang Mai Arr 74.25 280 P P 19 43 41.5 -0.2
CM02 Chiang Mai Arr 74.27 280 P P 19 43 49.4 +7.6
CM15 Chiang Mai Arr 74.27 280 P P 19 43 48.0 +6.3
CM04 Chiang Mai Arr 74.27 280 P P 19 43 48.0 +6.2
CM05 Chiang Mai Arr 74.29 280 P P 19 43 47.0 +5.1
CM13 Chiang Mai Arr 74.30 280 P P 19 43 49.1 +7.2
CHGR Chuyangaron 74.70 314 IAmb IAmb 19 43 45.2
comp=Z,15nm,0.7s
GUN Gumba 74.74 296 eP P 19 43 45.6 +0.8
comp=Z,16nm,0.4s
RAMN Ramite 75.07 294 eP P 19 43 47.3 +0.7
comp=Z,29nm,0.6s
MHMT Maesarieng 75.08 280 P P 19 43 54.8 +8.4
KKN Kakani 75.17 296 eP P 19 43 48.2 +1.1
PKI Pulchoki 75.26 296 eP P 19 43 48.1 +0.3
comp=Z,6.1nm,0.5s
PKIN Phulchoki 75.27 296 eP P 19 43 48.2 +0.5
comp=Z,9.0nm,0.5s
GKN Gorkha 75.36 297 eP P 19 43 48.5 +0.4
comp=Z,13nm,0.4s
DANN Dangsing 75.58 297 eP P 19 43 50.2 +0.7
comp=Z,34nm,0.7s
AKASG Malin Array Be 76.10 345 P P 19 43 51.0 -0.7
comp=Z,4.9nm,0.4s,baz=17,slow=6.0,SNR=25
AKASG LR LR 20 21 17.4
comp=Z,28nm,20.5s,baz=335,slow=39
AKASG Malin Array Be 76.10 345 P P 19 43 50.9 -0.9
AKBB Malin Array Si 76.10 345 IAmb IAmb 19 43 51.5
comp=Z,8.2nm,0.5s
KOLN Koldanda 76.11 297 eP P 19 43 53.1 +0.6
comp=Z,3.7nm,0.3s
PYUN Piuthan 76.19 298 eP P 19 43 53.4 +0.4
comp=Z,10nm,0.4s
IBBN Ibbenburen 76.29 359 eP P 19 43 53.3 +0.4
comp=Z,11nm,0.7s,baz=2.9,slow=5.7
CLZ Clausthal 76.71 358 eP P 19 43 56.0 +0.7
comp=Z,11nm,0.8s,baz=2.9,slow=5.7
NIL Nilore 76.86 308 P P 19 43 57.1 +0.7
NIL IAmb IAmb 19 43 58.1
comp=Z,11nm,0.7s
CLL Collm 77.15 356 *i* P P 19 43 57.5 -0.2
comp=Z,7.0nm,0.7s
CLL Collm 77.15 356 eP P 19 43 57.6 -0.1
comp=Z,6.6nm,0.7s,baz=2.9,slow=5.7
BRG Berggiesshubel 77.54 355 ⇓P P 19 44 00.2 +0.3
comp=Z,9.3nm,0.8s
BRG Berggiesshubel 77.54 355 eP P 19 43 60.0 +0.1
comp=Z,9.2nm,0.8s,baz=2.9,slow=5.7
CHVC Chvalec 77.70 354 eP P 19 44 00.5 -0.3
OSTC Ostas 77.72 354 eP P 19 44 01.4 +0.5
UPC Upice 77.78 354 eP P 19 44 01.5 +0.3
PVCC Panska Ves 77.85 355 eP P 19 44 02.3 +0.7
MOX Moxa 77.87 357 eP P 19 44 02.1 +0.4
comp=Z,11nm,1.3s,baz=2.9,slow=5.7
DPC Dobruska-Polom 77.92 354 eP P 19 44 02.6 +0.5
PLN Plauen 78.01 356 eP P 19 44 02.7 +0.2
comp=Z,5.0nm,0.9s,baz=2.9,slow=5.7
GUNZ Gunzen 78.12 356 eP P 19 44 03.6 +0.4
comp=Z,4.9nm,0.8s,baz=2.9,slow=5.7
KBL Kabul 78.14 312 P P 19 44 02.9 -0.9
KBL IAmb IAmb 19 44 03.9
comp=Z,5.9nm,0.7s
KRLC Kraliky 78.16 353 eP P 19 44 03.6 +0.2
WERN Wernitzgruen 78.20 356 eP P 19 44 04.1 +0.5
comp=Z,12nm,1.1s,baz=2.9,slow=5.7
NKC Novy Kostel 78.25 356 eP P 19 44 04.1 +0.2
TNS Taunus Mts 78.37 359 eP P 19 44 05.0 +0.4
comp=Z,10nm,1.2s,baz=2.9,slow=5.7
PRU Pruhonice 78.39 355 eP P 19 44 04.6 0.0
MORC Moravsky Berou 78.39 353 ⇓P P 19 44 05.1 +0.4
MORC Moravsky Berou 78.39 353 eP P 19 44 04.7 0.0
MANZ Manzenberg 78.51 356 eP P 19 44 05.5 +0.2
comp=Z,4.9nm,0.8s,baz=2.9,slow=5.7
PBCC Pribram 78.72 355 eP P 19 44 06.5 0.0
ROTZ Rotzenmuhle 78.72 356 eP P 19 44 06.9 +0.4
comp=Z,13nm,1.4s,baz=2.9,slow=5.7
SORM Soroca 78.73 345 ⇑P P 19 44 06.0 -0.6
KOLS Kolonicke sedl 78.78 349 eP P 19 44 06.9 +0.1
GRA1 Grafenberg Arr 78.83 357 IAmb IAmb 19 44 08.7
comp=Z,17nm,0.7s
GRF Grafenberg Arr 78.83 357 eP P 19 44 08.0 +0.9
comp=Z,35nm,1.3s,baz=2.9,slow=5.7
LANS Liptovska Anna 78.85 351 eP P 19 44 08.1 +0.9
VRAC Vranov 78.93 353 ⇑P P 19 44 08.2 +0.5
VRAC Vranov 78.93 353 eP P 19 44 07.9 +0.3
KRUC Moravsky 79.19 353 eP P 19 44 09.0 0.0
KHC Kasperske Hory 79.30 355 eP P 19 44 10.1 +0.4
JAVC Velka Javorina 79.30 353 eP P 19 44 10.5 +0.8
WET Wettzell 79.32 356 eP P 19 44 10.2 +0.4
comp=Z,4.2nm,1.1s,baz=2.9,slow=5.7
GEC2 GERESS Array S 79.57 355 eP P 19 44 11.3 +0.1
comp=Z,4.3nm,0.8s,baz=2.9,slow=5.7
GERES GERESS Array B 79.57 355 P P 19 44 11.3 +0.1
comp=Z,2.7nm,0.6s,baz=18,slow=5.6,SNR=22
GERES GERESS Array B 79.57 355 P P 19 44 11.0 -0.3
KIV Kislovodsk 79.65 334 ⇓P P 19 44 12.3 +0.6
KIV Kislovodsk 79.65 334 P P 19 44 11.9 +0.1
BURAR Bucovina Array 79.70 347 ⇑P P 19 44 12.0 0.0
BURAR Bucovina Array 79.70 347 P P 19 44 11.9 -0.1
KBZ Khabaz 79.81 334 P P 19 44 12.9 +0.5
comp=Z,4.4nm,0.7s,baz=232,slow=20
GEYT Alibeck 79.96 321 P P 19 44 13.7 +0.2
comp=Z,3.5nm,0.8s,baz=337,slow=3.4,SNR=4.6
BIZ Bicaz 80.24 347 ⇑P P 19 44 15.6 +0.8
ARCR ARCALIA 80.34 348 ⇓P P 19 44 16.3 +1.0
CONA Conrad Observa 80.36 354 *i* P P 19 44 16.0 +0.5
comp=Z,3.5nm,0.6s
ECH Echery 80.39 360 IAmb IAmb 19 44 17.2
comp=Z,9.1nm,1.0s
DRGR 80.84 349 ⇑P P 19 44 18.0 -0.1
RETA Reutte 81.05 357 *i* P P 19 44 19.6 +0.4
comp=Z,2.1nm,0.5s
ARSA Arzberg 81.06 354 eP P 19 44 19.7 +0.6
comp=Z,4.4nm,0.7s
WATA Walderalm 81.18 357 eP P 19 44 19.9 0.0
comp=Z,2.9nm,0.6s
VRI Vrincioaia 81.20 346 ⇓P P 19 44 20.4 +0.5
WTTA Wattenberg 81.25 356 eP P 19 44 20.9 +0.5
comp=Z,6.7nm,0.6s,SNR=6.5
DAVA Damuels 81.28 358 eP P 19 44 21.5 +1.0
comp=Z,3.2nm,0.7s
DOPR Dopca 81.29 347 ⇑P P 19 44 21.3 +0.8
SQTA Sankt Quirin 81.31 357 eP P 19 44 21.0 +0.4
comp=Z,4.2nm,0.7s
KBA Koelnbreinsper 81.36 355 eP P 19 44 21.7 +0.8
comp=Z,14nm,0.6s
FETA Feichten 81.52 357 eP P 19 44 22.2 +0.4
comp=Z,7.6nm,0.8s
TLCR 81.53 344 ⇓P P 19 44 22.2 +0.6
CFR Carcaliu 81.64 345 ⇑P P 19 44 24.0 +1.8
SOKA Soboth 81.66 354 *i* P P 19 44 23.0 +0.5
comp=Z,4.9nm,0.7s,SNR=5.4
MLR Muntele Rosu 81.68 346 ⇓P P 19 44 23.5 +0.9
VOIR 81.86 347 ⇓P P 19 44 24.1 +0.6
TUE Stuetta 82.11 358 IAmb IAmb 19 44 26.6
comp=Z,10nm,0.9s
BZS Buzias 82.12 349 ⇑P P 19 44 24.5 -0.2
HARR Harsova 82.15 345 ⇓P P 19 44 25.5 +0.6
GZR Gura Zlata 82.20 349 ⇑P P 19 44 25.1 -0.2
TIRR Tirgusor 82.30 344 ⇓P P 19 44 26.1 +0.5
ICOR Ion Corvin 82.73 345 ⇓P P 19 44 29.1 +1.2
WRA Warramunga Arr 84.68 228 P P 19 44 36.9 -1.2
comp=Z,0.9nm,0.6s,baz=32,slow=5.9,SNR=13
WRA Warramunga Arr 84.68 228 IAmb IAmb 19 44 40.0
comp=Z,0.2nm,1.1s
BRTR Keskin Array B 85.86 339 P P 19 44 44.9 +0.8
comp=Z,0.4nm,0.8s,baz=52,slow=3.8,SNR=14
BRTR Keskin Array B 85.86 339 P P 19 44 44.5 +0.4
ALN Alexandroupoli 86.16 345 IAmb IAmb 19 44 47.9
comp=Z,11nm,1.2s
FNA Florina 86.92 349 IAmb IAmb 19 44 49.7
comp=Z,11nm,0.7s
ASAR Alice Springs 88.10 227 P P 19 44 54.2 -0.6
comp=Z,1.6nm,0.7s,baz=26,slow=4.7,SNR=25
ESDC Sonseca Array 88.47 8 P P 19 44 56.5 -0.1
comp=Z,2.3nm,0.8s,baz=348,slow=3.7,SNR=12
STKA Stephens Creek 92.15 217 P P 19 45 13.1 -0.4
comp=Z,1.6nm,0.7s,baz=31,slow=7.4,SNR=4.1
STKA LR LR 20 20 16.6
comp=Z,60nm,20.9s,baz=208,slow=31
TORD Torodi Ar. Bea 115.22 5 PKP PKiKP 19 50 45.0 -0.7
comp=Z,0.3nm,0.5s,baz=357,slow=2.7,SNR=3.5
H03N2 Juan Fernandez 118.09 109 T T 22 00 25.5
baz=317,slow=77,SNR=26
H03N1 Juan Fernandez 118.11 109 T T 22 00 20.5
baz=317,slow=77,SNR=26
H03N3 Juan Fernandez 118.11 109 T T 22 00 28.3
baz=317,slow=77,SNR=24
DBIC Dimbokro 120.97 13 PKP PKPdf 19 50 58.2 +1.4
comp=Z,1.8nm,0.5s,baz=344,slow=3.2,SNR=6.6
MAW Mawson 148.83 218 PKPbc PKPdf 19 51 50.4 +4.2
comp=Z,2.2nm,0.8s,baz=24,slow=0.3,SNR=3.1
BOSA Boshof 152.96 322 PKPbc PKPbc 19 52 01.5 +0.2
comp=Z,2.1nm,0.4s,baz=35,slow=2.1,SNR=11

EAF ***18*** *19:39:12.7±2.6,6˚.48S×27˚.62E,h10km,MD4.2*
LSZ ***18*** *19:39:14.2±0.3,12˚.63S×29˚.34E,h10km*
BUL ***18*** *19:39:15.9±0.7,6˚.82S×29˚.53E,h10km,MD4.5*
ISC 18 19:39:12.4±2.4,7˚.12S×31˚.22E,h10km,n23,ML3.2,Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KSMZ	**Kasama**	**3.04**	**180**	*i* P		**Pn**	**19 40 03.2**	**+2.5**
KSMZ				*i*			19 40 03.4	
	baz=217,slow=11							
KSMZ				*i* S		**Sn**	**19 40 38.9**	**+1.7**
MZUN	**Kiwira**	**3.04**	**132**	*i* P		**Pg**	**19 40 09.8**	**-0.9**
MZUN				*i* S		**Sb**	**19 40 45.3**	**+1.2**
MZUN				IAML			19 41 05.7	
	comp=Z,476nm,0.4s							

PR61	**Kiloki Boma**	**5.76**	**44**	*i* P	**Pn**	**19 40 40.2**	**+2.1**
PR61				*i* S	**Sn**	**19 41 39.9**	**-4.6**
PR61				IAML		19 42 30.8	
	comp=Z,105nm,0.2s						
NG56	**Ngoile bomas**	**5.77**	**46**	*i* P	**Pn**	**19 40 40.9**	**+2.5**
NG56				*i* S	**Sn**	**19 41 43.5**	**-1.4**
NG56				IAML		19 42 27.7	
	comp=Z,123nm,0.5s						
PR62	**Oldupai Boma**	**5.83**	**45**	IAML		19 42 36.0	
	comp=Z,152nm,0.4s						
PR63	**Meshili Boma**	**5.91**	**46**	*i* P	**Pn**	**19 40 42.5**	**+2.2**
PR63				*i* S	**Sn**	**19 41 44.2**	**-4.1**
PR63				IAML		19 42 36.0	
	comp=Z,46nm,0.8s						
NG55	**Lemala Gate**	**5.95**	**49**	*i* P	**Pn**	**19 40 43.4**	**+2.5**
NG55				*i* S	**Sn**	**19 41 46.2**	**-3.0**
NG55				IAML		19 42 43.3	
	comp=Z,75nm,0.5s						
NG54	**Nasera Bomas**	**6.00**	**44**	*i* P	**Pn**	**19 40 43.5**	**+2.0**
NG54				*i* S	**Sn**	**19 41 45.7**	**-4.7**
NG54				IAML		19 42 31.4	
	comp=Z,40nm,0.4s						
LL66	**Piyaya bomas**	**6.17**	**44**	*i* P	**Pn**	**19 40 45.8**	**+2.0**
LL66				IAML		19 42 43.6	
	comp=Z,38nm,0.5s						
LL22	**Malambo SS**	**6.31**	**44**	*i* P	**Pn**	**19 40 47.6**	**+1.8**
LL22				IAML		19 42 39.0	
	comp=Z,108nm,0.4s						
PR31	**Engaruka Boma**	**6.36**	**49**	*i* P	**Pn**	**19 40 49.5**	**+3.1**
PR31				IAML		19 42 49.6	
	comp=Z,75nm,0.4s						
LN26	**Engaresero PS**	**6.45**	**46**	*i* P	**Pn**	**19 40 50.0**	**+2.4**
LN26				IAML		19 42 44.2	
	comp=Z,52nm,0.7s						
PR33	**Engutoto Boma**	**6.48**	**49**	*i* P	**Pn**	**19 40 50.6**	**+2.6**
PR33				IAML		19 42 45.0	
	comp=Z,56nm,0.6s						
MBAR	**Mbarara**	**6.49**	**356**	*i* P	**Pn**	**19 40 51.5**	**+3.3**
MBAR				*i* S	**Sn**	**19 42 00.4**	**-2.1**
MBAR	**Mbarara**	**6.49**	**356**	*i* P	**Pn**	**19 40 51.5**	**+3.3**
MBAR				*i* S	**Sn**	**19 42 00.4**	**-2.1**
MBAR	**Mbarara**	**6.49**	**356**	*e*P	**Pn**	**19 40 51.2**	**+3.0**
MBAR				*e*S	**Sn**	**19 42 00.2**	**-2.3**
MBAR	**Mbarara**	**6.49**	**356**	*i* P	**Pn**	**19 40 51.6**	**+3.3**
MBAR				IAML		19 42 45.0	
	comp=Z,129nm,0.2s						
LN35	**Magadini PS**	**6.52**	**47**	*i* P	**Pn**	**19 40 51.5**	**+2.9**
LN35				IAML		19 42 58.5	
	comp=Z,34nm,0.9s						
LL23	**Sali PS**	**6.54**	**43**	*i* P	**Pn**	**19 40 49.7**	**+0.8**
LL23				IAML		19 42 44.5	
	comp=Z,64nm,0.5s						
LL21	**Loliondo SS**	**6.62**	**41**	*i* P	**Pn**	**19 40 52.8**	**+2.7**
LL21				IAML		19 42 55.1	
	comp=Z,94nm,0.4s						
LL24	**Masusu PS**	**6.64**	**44**	*i* P	**Pn**	**19 40 51.8**	**+1.6**
LL24				IAML		19 42 51.6	
	comp=Z,64nm,0.3s						
LN15	**Lekule Girls S**	**6.66**	**48**	*i* P	**Pn**	**19 40 53.4**	**+2.9**
LN15				IAML		19 42 58.0	
	comp=Z,47nm,0.7s						
LN46	**New Vision PS**	**6.79**	**53**	*i* P	**Pn**	**19 40 55.5**	**+3.1**
LN46				IAML		19 43 07.3	
	comp=Z,24nm,0.4s						
LN16	**Kitarini PS**	**6.87**	**50**	*i* P	**Pn**	**19 40 55.7**	**+2.2**
LN16				IAML		19 42 55.9	
	comp=Z,27nm,0.7s						
LN14	**Matela PS**	**6.95**	**48**	*i* P	**Pn**	**19 40 57.0**	**+2.4**
LN14				IAML		19 43 09.6	
	comp=Z,32nm,1.0s						
KEN4	**Ngurumani**	**7.16**	**42**	*i* P	**Pn**	**19 40 57.8**	**+0.5**
KEN4				IAML		19 43 25.2	
	comp=Z,50nm,1.6s						
KEN2	**Magadi Soda Va**	**7.22**	**45**	*i* P	**Pn**	**19 41 01.1**	**+2.9**
KEN2				IAML		19 43 19.2	
	comp=Z,26nm,0.8s						
LSZ	**Lusaka**	**8.64**	**200**	*i* P	**Pn**	**19 41 19.6**	**+1.9**
LSZ				*i* S	**Sn**	**19 42 50.7**	**-4.6**
LSZ	**Lusaka**	**8.64**	**200**	*i* P	**Pn**	**19 41 19.6**	**+1.9**
LSZ				*i* S	**Sn**	**19 42 50.7**	**-4.6**

DJA ***18*** *20:01:36.7±0.5,3°S±2°×12°7E±°, h17km±5km, M4.4/24, mB4.8/7, mb4.7/17, MLv4.5/24, Mw(mB)4.1/7*

NEIC ***18*** *20:01:39.0±2.6,2°.93S±0°.06×127°.51E±0°.04, h53km±10km, mb4.4/26, Error ellipse: s-maj=9.3km s-min=4.5km az=210.0*

IDC ***18*** *20:01:39.3±1.7,2°.98S×127°.60E, h50km±15km, mb3.7/10, mb1 3.9/15, mb1mx3.8/33, mbtmp4.0/15, ML4.0/5, MS3.4/5, Ms1 3.4/5, ms1mx2.9/34, Error ellipse: s-maj=23.9km s-min=13.2km az=82.0*

ISC 18 20:01:38.7±0.4,3°.00S±0°.04×127°.43E±0°.04, h42km, n84, σ1s94/97, mb4.3/18, MS3.6/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.41**	**235**	P	**Pn**	**20 01 44.7**	**-3.6**
NLAI				S	**Sn**	**20 01 51.1**	**-4.0**
MSAI	**Masohi**	**1.53**	**103**	P	**Pn**	**20 02 05.2**	**+1.7**
MSAI				S	**Sn**	**20 02 25.9**	**+3.6**
BNDI	**Bandanaira**	**2.89**	**122**	P	**Pn**	**20 02 24.0**	**+1.8**
TNTI	**Ternate**	**3.75**	**359**	P	**Pn**	**20 02 32.9**	**-1.1**
TNTI				S	**Sn**	**20 03 15.5**	**-1.5**
TNTI	**Ternate**	**3.75**	**359**	Pn	**Pn**	**20 02 33.1**	**-0.9**
SIJI	**Sorong**	**4.38**	**61**	P	**Pn**	**20 02 42.4**	**-0.3**
	21nm,0.3s,baz=55,slow=23,SNR=85						
SIJI				S	**Sn**	**20 03 31.9**	**-0.5**
	11nm,0.3s,baz=62,slow=22,SNR=7.2						
SIJI				LR	LR	20 05 19.2	
	comp=Z,316nm,18.6s,baz=340,slow=52						
FAKI	**Fak Fak**	**4.81**	**89**	P	**Pn**	**20 02 48.3**	**-0.3**
FAKI				S	**Sn**	**20 03 42.4**	**-0.7**
FAKI	**Fak Fak**	**4.81**	**89**	Pn	**Pn**	**20 02 47.9**	**-0.8**
KMSI	**Cibinong**	**4.95**	**316**	P	**Pn**	**20 02 48.5**	**-2.1**
KMSI				S	**Sn**	**20 03 44.2**	**-2.4**
LUWI	**Luwuk**	**5.05**	**293**	P	**Pn**	**20 02 50.0**	**-1.9**
LUWI	**Luwuk**	**5.05**	**293**	Pn	**Pn**	**20 02 51.0**	**-0.9**
GTOI	**Gorontalo**	**5.71**	**309**	P	**Pn**	**20 03 01.1**	**+0.1**
	0.4nm22nm,0.4s						
GTOI				S	**Sn**	**20 04 07.5**	**+2.2**
	0.4nm22nm,0.4s						
APSI	**Ampana**	**6.14**	**290**	P	**Pn**	**20 03 06.5**	**-0.4**
	0.3nm888nm74nm,0.9s						
SAUI	**Saumlaki**	**6.27**	**142**	P	**Pn**	**20 03 11.5**	**+2.8**
	0.5nm180nm,0.9s						
SAUI	**Saumlaki**	**6.27**	**142**	Pn	**Pn**	**20 03 12.5**	**+3.8**
MRSI	**Marisa**	**6.49**	**302**	P	**Pn**	**20 03 09.6**	**-2.1**
	0.2nm733nm62nm,0.5s						
SGSI	**Sangihe**	**6.91**	**344**	P	**Pn**	**20 03 15.3**	**-2.2**
	0.4nm1μm79nm,0.6s						
SOEI	**Soe**	**7.41**	**205**	P	**Pn**	**20 03 29.0**	**+4.6**
	0.3nm1μm83nm,0.9s						
SOEI	**Soe**	**7.41**	**205**		**Pn**	**20 03 28.5**	**+4.0**
BNSI	**Bone**	**7.44**	**259**	P	**Pn**	**20 03 25.0**	**+0.2**
	0.1nm25nm,0.7s						
BSSI	**Bau Bau, Buton**	**7.59**	**245**	P	**Pn**	**20 03 28.2**	**+1.4**
	0.2nm71nm,0.9s						
TTSI	**Tana Toraja**	**7.60**	**269**	P	**Pn**	**20 03 27.8**	**+0.8**
	0.1nm21nm,0.8s						
MMRI	**Maumere**	**7.62**	**222**	Pn	**Pn**	**20 03 30.5**	**+3.3**
BKSI	**Bulukumba**	**7.65**	**252**	P	**Pn**	**20 03 28.8**	**+1.2**
	0.2nm524nm54nm,0.7s						
SPSI	**Sidrap Palu**	**7.71**	**263**	P	**Pn**	**20 03 30.6**	**+2.2**
	0.2nm44nm,0.7s						
TOLI2	**Tolitoli**	**7.80**	**301**	Pn	**Pn**	**20 03 29.3**	**-0.5**
KAPI	**Kappang**	**7.92**	**255**	P	**Pn**	**20 03 34.1**	**+2.8**
	2.3nm,0.3s,baz=115,slow=6.2,SNR=8.5						
KAPI				S	**Sn**	**20 05 07.2**	**+7.6**
	0.3nm,0.3s,baz=272,slow=18,SNR=1.8						
KAPI				LR	LR	20 06 45.3	
	comp=Z,154nm,19.2s,baz=81,slow=38						
KAPI	**Kappang**	**7.92**	**255**	Pn	**Pn**	**20 03 33.0**	**+1.7**
EDFI	**Ende, Flores**	**8.07**	**225**	P	**Pn**	**20 03 36.9**	**+3.3**
	312nm26nm,0.6s						
BATI	**Baumata**	**8.08**	**207**	P	**Pn**	**20 03 37.0**	**+3.5**
	1.2nm,0.3s,baz=225,slow=5.3,SNR=2.0						
BATI	**Baumata**	**8.08**	**207**	P	**Pn**	**20 03 34.4**	**+0.9**
	19nm,0.7s						
MPSI	**Mapaga**	**8.23**	**294**	P	**Pn**	**20 03 35.4**	**-0.2**
	22nm,0.7s						
BASI	**Baing, Sumba**	**9.88**	**223**	P	**Pn**	**20 03 57.7**	**-0.6**
MTN	**Manton Dam**	**10.44**	**160**	Pn	**Pn**	**20 04 08.7**	**+2.8**
MYLDM	**Lahad Datu**	**12.07**	**312**	Pn	**Pn**	**20 04 28.9**	**+0.7**
KNRA	**Kununurra**	**12.66**	**174**	Pn	**Pn**	**20 04 37.4**	**+1.1**

FITZ	**Fitzroy Crossi**	**15.11**	**187**	P	**Pn**	**20 05 09.2**	**-0.1**
	0.1nm,0.3s,baz=8.3,slow=3.0,SNR=4.5						
FITZ				LR	LR	20 11 49.9	
	comp=Z,152nm,18.4s,baz=10,slow=40						
FITZ	**Fitzroy Crossi**	**15.11**	**187**	Pn	**Pn**	**20 05 09.8**	**+0.5**
UGM	**Wanagama**	**17.52**	**253**	P	**P**	**20 05 41.9**	**+1.2**
WB0	**Warramunga Arr**	**18.00**	**158**		**Pn**	**20 05 44.5**	**-1.3**
WRAB	**Tennant Creek**	**18.13**	**159**	P	**Pn**	**20 05 47.4**	**-0.1**
WRA	**Warramunga Arr**	**18.14**	**159**	P	**P**	**20 05 45.8**	**-1.7**
	1.1nm,0.3s,baz=340,slow=12,SNR=36						
WRA				S	**Sn**	**20 09 06.7**	**-2.4**
	0.1nm,0.3s,baz=345,slow=21,SNR=4.7						
WRA				ScP	**ScP**	**20 13 51.2**	**-0.9**
	0.1nm,0.3s,baz=319,slow=2.2,SNR=7.7						
WRA	**Warramunga Arr**	**18.14**	**159**	P	**P**	**20 05 46.3**	**-1.2**
WB2	**Warramunga Arr**	**18.14**	**159**		**P**	**20 05 45.5**	**-2.0**
WB2				IAmb	IAmb	20 05 58.6	
	comp=Z,22nm,1.1s						
WC3	**Warramunga Arr**	**18.16**	**159**	P	**P**	**20 05 47.0**	**-0.8**
WC3				IAmb	IAmb	20 05 58.9	
	comp=Z,23nm,1.0s						
WR0	**Warramunga Arr**	**18.23**	**158**		**P**	**20 05 47.4**	**-1.1**
WR0				IAmb	IAmb	20 06 00.3	
	comp=Z,40nm,1.6s						
COEN	**Coen**	**18.98**	**126**		**P**	**20 05 55.7**	**-1.1**
COEN				IAmb	IAmb	20 06 14.0	
	comp=Z,24nm,1.1s						
MBWA	**Marble Bar**	**19.54**	**202**		**Pn**	**20 06 04.3**	**-0.2**
PSAD1	**Pilbara Seismi**	**19.78**	**201**	P	**P**	**20 06 04.7**	**-0.7**
PSAC2	**Pilbara Seismi**	**19.85**	**201**	P	**P**	**20 06 05.4**	**-0.8**
PSAC2				IAmb	IAmb	20 06 14.8	
	comp=Z,10nm,0.7s						
PSAB2	**Pilbara Seismi**	**19.86**	**201**		**P**	**20 06 06.5**	**+0.2**
PSAB2				IAmb	IAmb	20 06 18.8	
	comp=Z,22nm,1.3s						
PSAA2	**Pilbara Seismi**	**19.87**	**201**	P	**P**	**20 06 06.0**	**-0.5**
PSAA2				IAmb	IAmb	20 06 09.0	
	comp=Z,25nm,1.4s						
CISI	**Cisompet, Garu**	**20.05**	**256**	P	**P**	**20 06 07.8**	**-0.7**
AS31	**Alice Springs**	**21.47**	**164**	P	**P**	**20 06 23.7**	**-0.1**
ASAR	**Alice Springs**	**21.48**	**164**	P	**P**	**20 06 24.4**	**+0.6**
	comp=Z,21nm,0.8s,baz=344,slow=11,SNR=146						
ASAR				S	**S**	**20 10 15.1**	**-4.8**
	comp=Z,20nm,1.1s,baz=345,slow=22,SNR=35						
ASAR				ScP	**ScP**	**20 13 58.8**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=352,slow=2.5,SNR=7.7						
ASAR	**Alice Springs**	**21.48**	**164**	P	**P**	**20 06 24.2**	**+0.4**
XMIS	**Christmas Isla**	**22.86**	**250**	P	**P**	**20 06 38.3**	**-0.4**
GIRL	**Giralia**	**23.35**	**212**	P	**P**	**20 06 41.6**	**-1.8**
FORT	**Forrest**	**27.63**	**179**	P	**P**	**20 07 20.7**	**-1.7**
MORW	**Morawa**	**28.10**	**202**	P	**P**	**20 07 26.1**	**-0.4**
MORW				IAmb	IAmb	20 07 31.0	
	comp=Z,16nm,1.3s						
BBOO	**Buckleboo**	**30.74**	**166**	P	**P**	**20 07 48.1**	**-1.8**
BBOO				IAmb	IAmb	20 08 13.8	
	comp=Z,20nm,1.4s						
NWAO	**Narrogin (SRO)**	**31.27**	**197**	P	**P**	**20 07 55.1**	**+0.5**
NWAO	**Narrogin (SRO)**	**31.27**	**197**	P	**P**	**20 07 55.4**	**+0.8**
NWAO				IAmb	IAmb	20 08 20.9	
	comp=Z,25nm,1.4s						
STKA	**Stephens Creek**	**31.66**	**157**	P	**P**	**20 07 56.9**	**-1.3**
	comp=Z,1.6nm,0.5s,baz=354,slow=8.7,SNR=6.2						
STKA	**Stephens Creek**	**31.66**	**157**	P	**P**	**20 07 57.1**	**-1.1**
CMAR	**Chiang Mai Arr**	**35.24**	**308**	P	**P**	**20 08 31.9**	**+2.4**
	comp=Z,0.2nm,0.5s,baz=134,slow=6.4,SNR=1.5						
KSAR	**Wonju Array Be**	**40.24**	**1**	P	**P**	**20 09 10.4**	**-0.9**
KSRS	**Korea Array**	**40.25**	**1**	P	**P**	**20 09 11.0**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=176,slow=8.7,SNR=16						
MJAR	**Matsushiro Arr**	**40.60**	**13**	P	**P**	**20 09 13.2**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=188,slow=9.6,SNR=2.7						
XAN	**Xi'an**	**40.77**	**336**	P	P	20 09 24.8	+8.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
LZH	**Lanzhou**	**44.70**	**333**	*e*P	**P**	**20 09 49.5**	**+1.6**
LZH				pP	pwP	20 09 59.9	-2.4
LZH				sP	sP	20 10 05.4	+1.9
LZH				PP	**PP**	**20 11 35.4**	**+2.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,80nm,4.8s						
HHC	**Hu-ho-hao-te**	**45.99**	**343**	*e*P	**P**	**20 09 56.9**	**-1.1**
USRK	**Ussuriysk Ar.**	**47.17**	**4**	P	**P**	**20 10 07.2**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=192,slow=8.6,SNR=7.9						
USRK				LR	LR	20 30 24.4	
	comp=Z,34nm,19.3s,baz=142,slow=37						
LSA	**Lhasa**	**47.56**	**316**	P	**P**	**20 10 10.4**	**-0.5**
LSA				IAmb	IAmb	20 10 29.0	
	comp=Z,3.7nm,1.0s						
GTA	**Gaotai**	**49.26**	**332**	*e*P	**P**	**20 10 24.3**	**+0.9**
GTA				pP	pP	20 10 34.4	+0.1
GTA				sP	pwP	20 10 38.9	+0.1
GTA				PcP	**PcP**	**20 11 46.9**	**+1.0**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,62nm,5.1s						
GTA				LR	LR		
	comp=N,53nm,14.2s						
GTA				LR	LR		
	comp=E,90nm,15.6s						
GTA				LR	LR		
	comp=Z,43nm,14.9s						
ULN	**Ulaanbaatar**	**53.71**	**343**	P	**P**	**20 10 56.9**	**+0.3**
ULN				IAmb	IAmb	20 11 07.3	
	comp=Z,4.6nm,1.0s						
SONM	**Songino Array**	**53.88**	**343**	P	**P**	**20 10 57.5**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=159,slow=8.6,SNR=7.3						
SONM	**Songino Array**	**53.88**	**343**		**P**	**20 10 56.3**	**-1.5**
WMQ	**Urumqi**	**58.67**	**327**	*e*P	**P**	**20 11 33.0**	**+1.0**
MKAR	**Makanchi Array**	**63.50**	**327**	P	**P**	**20 12 04.0**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=139,slow=8.1,SNR=8.2						
ZALV	**Zalesovo Beam**	**66.89**	**334**	P	**P**	**20 12 24.8**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=142,slow=12,SNR=1.9						
KURK	**Kurchatov**	**67.80**	**329**	P	**P**	**20 12 31.5**	**-0.7**
KURK				IAmb	IAmb	20 12 33.0	
	comp=Z,3.5nm,1.1s						
VNDA	**Vanda**	**76.70**	**173**	P	**P**	**20 13 24.3**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=311,slow=7.3,SNR=5.9						
VNDA				LR	LR	20 47 27.4	
	comp=Z,31nm,18.5s,baz=333,slow=36						
TORD	**Torodi Ar. Bea**	**125.45**	**284**	PKP	**PKiKP**	**20 20 36.2**	**-0.4**
	comp=Z,0.7nm,1.0s,baz=15,slow=1.1,SNR=3.0						

IDC 18 20:24:39.0±3.3,30°.27S×177°.55W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/19, mbtmp3.5/2, Error ellipse: s-maj=67.1km s-min=25.1km az=97.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.06**	**342**	Pn	Pn	20 25 01.5	+0.3
	128nm,0.3s,baz=79,slow=18,SNR=16						
RAO				Sn	Sn	20 25 17.0	+0.3
	360nm,0.3s,baz=127,slow=23,SNR=8.4						
ASAR	**Alice Springs**	**43.50**	**267**	P	P	20 32 44.7	+0.2
	0.2nm,0.4s,baz=106,slow=6.9,SNR=2.2						
WRA	**Warramunga Arr**	**44.49**	**272**	P	P	20 32 52.0	-0.4
	0.4nm,0.3s,baz=110,slow=8.1,SNR=19						
FINES	**FINESS Array B**	**145.16**	**340**	PKPbc	PKPbc	20 44 16.4	-1.0
	1.3nm,0.8s,baz=92,slow=4.9,SNR=3.6						

RSNC ***18*** *20:32:27.4±0.8,8°.85N×77°.40W, h100km±5km, ML3.5, Mw3.8*

UPA ***18*** *20:32:27.0±1.4,8°.86N×77°.34W, h39km±5km, MW4.4*

ISC 18 20:32:26.6±1.2,8°.89N±0°.04×77°.35W±0°.02, h65km±16km, n50, σ1s25/71, 7C-10D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAP2	**Capurgana**	**0.24**	**182**	*i*P	Pn	20 32 34.3	-2.5
CAP2				*i* S	Sn	20 32 39.3	-5.0
CAPC	**Capurgana**	**0.25**	**180**	*i*P	Pn	20 32 34.3	-2.6
CAPC				*e*S	Sn	20 32 39.7	-4.7
UPD2	**Meteti**	**0.74**	**243**	*i*P	**Pn**	**20 32 40.6**	**-1.0**
UPD2				*i* S	**Sn**	**20 32 51.2**	**-1.5**
LCBC	**Los crdobas,**	**0.97**	**92**	*e*P	**Pn**	**20 32 45.5**	**+1.1**
LCBC				*e*S	**Sn**	**20 32 58.8**	**+1.1**
LCBC				*i*		20 33 03.6	
	comp=Z,735nm,0.5s						
MOTC	**Monteria, Cord**	**1.67**	**94**	*i*P	**Pn**	**20 32 54.3**	**+0.6**
MOTC				*e*S	**Sn**	**20 33 14.7**	**+0.6**
MOTC				*i*		20 33 15.9	
	comp=Z,206nm,0.7s						
MONA	**Monteria**	**1.67**	**94**	*i*P	**Pn**	**20 32 54.2**	**+0.4**
MONA				*i* S	**Sn**	**20 33 14.9**	**+0.5**
CHPO	**Chepo, Panama**	**1.77**	**279**	*i*P	**Pn**	**20 32 54.7**	**-0.2**
CHPO				*i* S	**Sn**	**20 33 16.4**	**-0.1**
PTAC	**Punta Ardita,**	**1.79**	**195**	*e*P	**Pn**	**20 32 54.9**	**-0.4**
PTAC				*i*		20 33 20.4	
	comp=Z,1μm,0.3s						
MIRA3	**Miramar, Colon**	**2.07**	**289**	*e*P	**Pn**	**20 32 59.2**	**+0.1**
UREC	**San Jos de Ur**	**2.12**	**122**	*i*P	**Pn**	**20 32 59.9**	**+0.1**
UREC				*i*		20 33 27.4	
	comp=Z,240nm,0.1s						
UPA	**Univ. de Panam**	**2.16**	**273**	*e*P	**Pn**	**20 32 59.6**	**-0.7**
UPA				*e*S	**Sn**	**20 33 24.6**	**-1.5**
UPA	**Univ. de Panam**	**2.16**	**273**	*i*P	**Pn**	**20 32 59.5**	**-0.8**
FLAM	**Flamenco Islan**	**2.16**	**271**	*i*P	**Pn**	**20 33 00.5**	**+0.2**
DBBC	**Dabeiba**	**2.18**	**149**	*e*P	**Pn**	**20 33 00.6**	**0.0**
DBBC				*i*		20 33 35.4	
	comp=Z,647nm,0.5s						
ARRA3	**Arraijan, Pana**	**2.28**	**272**	*i*P	**Pn**	**20 33 02.7**	**+0.8**
SJCC	**San Jacinto, C**	**2.36**	**65**	*e*P	**Pn**	**20 33 04.0**	**+0.9**
SJCC				*i*		20 33 39.5	
	comp=Z,61nm,0.4s						
SJCC	**San Jacinto, C**	**2.36**	**65**	*e*P	**Pn**	**20 33 03.6**	**+0.5**
SJCC				*e*S	**Sn**	**20 33 30.9**	**-0.2**
FRIJ	**El Hiral**	**2.37**	**278**	*i*P	**Pn**	**20 33 04.0**	**+0.8**
FRIJ				*i* S	**Sn**	**20 33 31.6**	**+0.5**
CHOR3	**La Chorrera**	**2.39**	**270**	*e*P	**Pn**	**20 33 04.0**	**+0.6**
CHOR3				*e*S	**Sn**	**20 33 32.6**	**+1.0**
ZANG	**Zanguenga, Cho**	**2.49**	**272**	*e*P	**Pn**	**20 33 05.0**	**+0.3**
ZANG				*e*S	**Sn**	**20 33 34.2**	**+0.2**
MLIR	**Monte Lirio**	**2.50**	**278**	*i*P	**Pn**	**20 33 05.7**	**+0.8**
MLIR				*e*S	**Sn**	**20 33 34.4**	**+0.2**
VTON	**El Valle, Cocl**	**2.75**	**264**	*e*P	**Pn**	**20 33 09.3**	**+1.0**
PNME	**Penonome**	**2.97**	**262**	*e*P	**Pn**	**20 33 09.9**	**-1.4**
AZU	**Azuero**	**3.09**	**250**	*e*P	**Pn**	**20 33 14.1**	**+1.1**
AZU	**Azuero**	**3.09**	**250**	*e*P	**Pn**	**20 33 13.4**	**+0.4**
AZU				*e*S	**Sn**	**20 33 47.9**	**-0.9**
ARGC	**Ariguani, Magd**	**3.21**	**72**	*e*P	**Pn**	**20 33 15.1**	**+0.5**
ARGC				*e*S	**Sn**	**20 33 52.4**	**+0.6**
ARGC				*i*		20 33 54.0	
	comp=Z,141nm,0.3s						
HELC	**Santa Helena**	**3.23**	**146**	*e*P	**Pn**	**20 33 15.2**	**0.0**
HELC				*i*		20 33 56.5	
	comp=Z,39nm,0.4s						
HELC	**Santa Helena**	**3.23**	**146**	*i*P	**Pn**	**20 33 15.4**	**+0.1**
HELC				*i* S	**Sn**	**20 33 51.9**	**-0.8**
CRIS3	**El Cristo, Coc**	**3.29**	**259**	*e*P	**Pn**	**20 33 15.5**	**-0.2**
PTBC	**PUERTO BERRIO,**	**3.70**	**129**	*e*P	**Pn**	**20 33 20.8**	**-0.5**
PTBC				*e*S	**Sn**	**20 34 01.3**	**-2.4**
PTBC				*i*		20 34 04.0	
	comp=Z,99nm,0.3s						
CACAO	**El Cacao, Vera**	**3.80**	**246**	*e*P	**Pn**	**20 33 23.4**	**+0.8**
MARI3	**Mariato, Veraq**	**3.81**	**251**	*e*P	**Pn**	**20 33 23.9**	**+1.2**
SMRC	**Santa Marta, M**	**3.82**	**53**	*e*P	**Pn**	**20 33 24.2**	**+1.3**
SMRC				*e*S	**Sn**	**20 34 03.5**	**-3.1**
SMRC				*i*		20 34 08.3	
	comp=Z,70nm,0.4s						
GMAL	**Guarumal, Vera**	**4.00**	**254**	*e*P	**Pn**	**20 33 27.6**	**+2.1**
BRRC	**Barranca, Sant**	**4.01**	**116**	*e*P	**Pn**	**20 33 26.3**	**+0.7**
BRRC				*e*S	**Sn**	**20 34 09.5**	**-2.0**
BRRC				*i*		20 34 23.0	
	comp=Z,41nm,0.3s						
OCAC	**Ocana**	**4.04**	**99**	*e*P	**Pn**	**20 33 26.4**	**+0.4**
OCAC				*e*S	**Sn**	**20 34 11.3**	**-1.0**
OCAC				*i*		20 34 15.8	
	comp=Z,177nm,0.3s						
NORC	**Norcasia**	**4.12**	**143**	*e*P	**Pn**	**20 33 27.4**	**+0.3**
NORC				*e*S	**Sn**	**20 34 12.7**	**-1.4**
CVALL	**Valledupar, Ce**	**4.34**	**68**	*e*P	**Pn**	**20 33 30.8**	**+0.6**
CVALL				*e*S	**Sn**	**20 34 17.0**	**-2.5**
BARC	**Barichara**	**4.72**	**119**	*e*P	**Pn**	**20 33 36.9**	**+1.5**
BARC				*i*		20 34 34.7	
	comp=Z,42nm,0.4s						
TOLC	**Tolima**	**4.73**	**155**	*e*P	**Pn**	**20 33 39.0**	**+3.4**
PAMC	**Pamplona, Colo**	**4.86**	**108**	*e*P	**Pn**	**20 33 38.1**	**+0.6**
PAMC				*e*S	**Sn**	**20 34 32.6**	**-0.1**
YOTC	**Yotoco, Valle**	**4.97**	**168**	*e*P	**Pn**	**20 33 39.1**	**+0.2**
**BC

PB05	**IPOC Station P**	**1.74**	**298**	⇑*iP*	**Pn**	**20 48 53.5**	**-0.1**
PB05				*i* S	**Sn**	**20 49 16.7**	**-0.2**
PB05				IAML		20 49 26.0	
	comp=E,802nm,0.9s						
GO02	**Mina Guanaco**	**1.77**	**213**	⇑*iP*	**Pn**	**20 48 54.3**	**+0.1**
GO02				*e*S	**Sn**	**20 49 18.7**	**+0.8**
GO02				IAML		20 49 22.1	
	comp=N,1µm,0.2s						
PB10	**IPOC Station P**	**1.86**	**274**	⇑*iP*	**Pn**	**20 48 55.1**	**+0.1**
PB10				*i* S	**Sn**	**20 49 19.4**	**+0.1**
PB10				IAML		20 49 24.9	
	comp=E,186nm,0.4s						
PB14	**IPOC Station P**	**1.96**	**241**	⇑*iP*	**Pn**	**20 48 56.2**	**-0.3**
PB14				*i* S	**Sn**	**20 49 22.9**	**+1.0**
PB03	**IPOC Station P**	**1.97**	**325**	⇑*iP*	**Pn**	**20 48 56.5**	**+0.1**
PB03				*i* S	**Sn**	**20 49 21.9**	**0.0**
PB03				IAML		20 49 27.6	
	comp=E,290nm,0.2s						
AC01	**Pan de Azucar**	**3.10**	**217**	IAML		20 49 59.9	
	comp=E,175nm,0.1s						
AC02	**Maricunga**	**3.20**	**190**	*eP*	**Pn**	**20 49 12.5**	**0.0**
PATCX	**Punta Patache**	**3.21**	**332**	*eP*	**Pn**	**20 49 11.5**	**-0.8**
PATCX				*e*S	**Sn**	**20 49 50.9**	**+0.7**
PB08	**IPOC Station P**	**3.56**	**351**	*eP*	**Pn**	**20 49 17.3**	**0.0**
GO03	**Copiap**	**4.20**	**201**	*eP*	**Pn**	**20 49 23.1**	**-2.3**
LPAZ	**La Paz**	**7.35**	**3**	Pn	**Pn**	**20 50 09.6**	**+1.1**
	comp=E,0.3nm,0.3s,baz=176,slow=6.2,SNR=3.3						
TORD	**Torodi Ar. Bea**	**77.76**	**70**	P	**P**	**21 00 07.5**	**+0.3**
	comp=E,0.5nm,0.6s,baz=254,slow=5.1,SNR=9.7						
MKAR	**Makanchi Array**	**147.15**	**38**	PKPbc	**PKiKP**	**21 07 53.8**	**-0.4**
	comp=E,0.5nm,0.7s,baz=308,slow=2.8,SNR=4.1						

IDC ***18*** *20:59:33.3±44.0, 16.07°S×172.76°W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/33, mbtmp3.9/3, Error ellipse: s-maj=843.4km s-min=185.9km az=79.0*

NEIC ***18*** *20:59:38.2±1.2, 15.7°S±0.4×172.8°W±0.6, h43km±45km, mb4.3/7, Error ellipse: s-maj=94.2km s-min=49.7km az=65.0*

ISC 18 20:59:30.3±24.0, 15.5°S±2.2°×172.9°W±1.4°, h35km, n9, σ0s71/9, mb4.2/6, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**28.93**	**205**	P	**P**	**21 05 26.2**	**0.0**
BSWZ	**Blackbirch Sta**	**29.17**	**202**	P	**P**	**21 05 28.0**	**-0.3**
STKA	**Stephens Creek**	**45.40**	**240**	P	**P**	**21 07 45.1**	**-0.6**
	0.6nm,0.4s,baz=99,slow=7.2,SNR=3.7						
BBOO	**Buckleboo**	**50.18**	**240**	P	**P**	**21 08 23.9**	**+1.1**
WB0	**Warramunga Arr**	**51.26**	**257**	P	**P**	**21 08 30.9**	**-0.3**
WB0				IAmb	IAmb	21 08 49.3	
	comp=Z,4.2nm,1.2s						
WB2	**Warramunga Arr**	**51.29**	**256**	P	**P**	**21 08 30.5**	**-0.9**
WB2				IAmb	IAmb	21 08 33.4	
	comp=Z,6.4nm,1.4s						
WRA	**Warramunga Arr**	**51.30**	**256**	P	**P**	**21 08 31.3**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=96,slow=7.2,SNR=8.2						
AS31	**Alice Springs**	**51.55**	**252**	P	**P**	**21 08 33.8**	**+0.4**
AS31				IAmb	IAmb	21 08 34.1	
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**51.55**	**252**	P	**P**	**21 08 33.7**	**+0.3**
	comp=Z,3.5nm,0.5s,baz=89,slow=8.1,SNR=72						

NEIC ***18*** *21:15:38.8±1.2, 36.96N±0.04×140.60E±0.08, h106km±6km, mb4.5/23, Error ellipse: s-maj=9.8km s-min=5.8km az=100.0*

IDC ***18*** *21:15:39.0±0.7, 36.92N×140.54E, h105km±5km, mb3.8/16, mb1 3.9/19, mb1mx3.6/70, mbtmp4.2/19, MS2.5/2, Ms1 2.5/2, ms1mx2.2/41, Error ellipse: s-maj=10.3km s-min=8.8km az=107.0*

NIED ***18*** *21:15:39.8, 36.95N×140.56E, h106km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr-1.35; Mθθ0.55; Mφφ0.81; Mrθ0.74; Mθφ0.46; Mφr0.65; Fault plane solution: M₀1.59000×10¹⁵ NP1: φs224.00000°, δ64.00000°, λ-85.00000°. NP2:φs33.00000°, δ26.00000°, λ-100.00000°.*

JMA ***18*** *21:15:39.7±0.1, 36.95N×140.56E, h106km±1km, M3.9*

JMA Felt II J1.

ISC 18 21:15:39.1±0.5, 36.97N±0.04×140.56E±0.04, h107km±4km, n114, σ1s04/129, mb4.3/30, 1C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFFD	**Fukushimafurud**	**0.12**	**1**	P	**Pn**	**21 15 54.7**	**+0.7**
JFFD				*e*S	**Sn**	**21 16 05.6**	**+0.5**
ONAJ	**Iwakimizuishiy**	**0.23**	**56**	P	**Pn**	**21 15 55.0**	**+0.7**
ONAJ				S	**Sn**	**21 16 06.5**	**+0.8**
JHO	**Hitachi**	**0.36**	**179**	P	**Pn**	**21 15 55.3**	**+0.5**
JHO				S	**Sn**	**21 16 06.7**	**+0.2**
JFK	**Kawauchi**	**0.47**	**32**	P	**Pn**	**21 15 56.2**	**+0.8**
JFK				S	**Sn**	**21 16 08.3**	**+0.6**
JFT	**Otama**	**0.57**	**342**	P	**Pn**	**21 15 57.0**	**+0.8**
JFT				S	**Sn**	**21 16 10.1**	**+1.1**
JYT	**Yasato**	**0.80**	**202**		**Pn**	**21 15 58.5**	**+0.4**
JYT				Sn	**Sn**	**21 16 11.8**	**-0.4**
JFY	**Yanaizu**	**0.81**	**303**	P	**Pn**	**21 15 59.1**	**+1.0**
JFY				S	**Sn**	**21 16 13.4**	**+0.9**
JMM	**Marumori**	**0.91**	**12**	P	**Pn**	**21 15 59.6**	**+0.4**
JMM				S	**Sn**	**21 16 14.3**	**+0.1**
JMM	**Marumori**	**0.91**	**12**		**Pn**	**21 15 59.5**	**+0.4**
JMM				Sn	**Sn**	**21 16 14.2**	**-0.1**
JAG	**Ashikaga**	**1.04**	**239**	P	**Pn**	**21 16 01.2**	**+0.7**
JAG				S	**Sn**	**21 16 17.0**	**+0.4**
JKT	**Katashina**	**1.07**	**259**	P	**Pn**	**21 16 02.0**	**+1.1**
JHK	**Hiroka**	**1.26**	**283**	P	**Pn**	**21 16 04.0**	**+1.1**
JHK				S	**Sn**	**21 16 21.9**	**+1.0**
JNS	**Sasagawa**	**1.30**	**311**	P	**Pn**	**21 16 04.0**	**+0.7**
JNS				S	**Sn**	**21 16 21.9**	**+0.2**
JYS	**Shirataka**	**1.31**	**343**	P	**Pn**	**21 16 04.5**	**+1.1**
JYS				S	**Sn**	**21 16 23.3**	**+1.4**
JOU	**Okura**	**1.39**	**3**	P	**Pn**	**21 16 05.3**	**+0.8**
JOU				S	**Sn**	**21 16 25.1**	**+1.4**
JRY	**Ryogami san**	**1.64**	**235**	P	**Pn**	**21 16 08.1**	**+0.6**
JRY				*e*S	**Sn**	**21 16 29.1**	**+0.1**
JAW	**Awa shima**	**1.81**	**325**	P	**Pn**	**21 16 10.2**	**+0.7**
JAW				*e*S	**Sn**	**21 16 33.5**	**+0.8**
MJAR	**Matsushiro Arr**	**1.94**	**258**	P	**Pn**	**21 16 11.9**	**+0.8**
	4.4nm,0.3s,baz=69,slow=9.4,SNR=163						
MJAR				S	**Sn**	**21 16 34.8**	**-0.8**
	4.7nm,0.3s,baz=100,slow=17,SNR=5.2						
MJAR	**Matsushiro Arr**	**1.94**	**258**		**Pn**	**21 16 11.5**	**+0.4**
MAJO	**Matsushiro**	**1.94**	**258**	Pn	**Pn**	**21 16 12.2**	**+1.1**
MAJO					**Sn**	**21 16 36.6**	**+1.0**
MAT	**Matsushiro**	**1.94**	**258**	P	**Pn**	**21 16 12.4**	**+1.3**
MAT				S	**Sn**	**21 16 34.8**	**-0.8**
MJB9	**Matsu-Tunnel**	**1.94**	**258**	Pn	**Pn**	**21 16 12.4**	**+1.3**
JSD	**Sado**	**2.12**	**301**	Pn	**Pn**	**21 16 13.6**	**+0.2**
JSD				Sn	**Sn**	**21 16 39.9**	**+0.3**
JGF	**Kuroka**	**2.93**	**243**		**Pn**	**21 16 25.4**	**+1.4**
JSG	**Sagara**	**3.00**	**221**	Pn	**Pn**	**21 16 25.0**	**+0.1**
INU	**Inuyama**	**3.29**	**242**	Pn	**Pn**	**21 16 29.9**	**+1.1**
JTM	**Tenmabayashi**	**3.83**	**6**	Pn	**Pn**	**21 16 36.2**	**+0.2**
JHJ	**Hachijo jima 2**	**3.90**	**190**	P	**Pn**	**21 16 36.5**	**-0.5**
	32nm,0.3s,baz=92,slow=23,SNR=20						
JHJ				S	**Sn**	**21 17 20.1**	**-1.7**
	85nm,0.3s,baz=240,slow=23,SNR=13						
JHJ2	**Mitsune**	**3.90**	**189**	Pn	**Pn**	**21 16 37.0**	**-0.1**
JWT	**Wachi**	**4.50**	**250**	Pn	**Pn**	**21 16 46.4**	**+1.3**
ERM	**Erimo**	**5.42**	**21**	Pn	**Pn**	**21 16 57.4**	**-0.1**
JEW	**Eniwo**	**5.90**	**6**	Pn	**Pn**	**21 17 05.2**	**+1.2**
JMN	**Monobe**	**6.34**	**241**	Pn	**Pn**	**21 17 10.1**	**0.0**
JHS	**Saijyo**	**6.35**	**254**	Pn	**Pn**	**21 17 11.3**	**+1.1**
ASAJ	**Asahikawa**	**7.30**	**12**	P	**Pn**	**21 17 21.0**	**-2.0**
	1.1nm,0.3s,baz=207,slow=9.5,SNR=10						
ASAJ				S	**Sn**	**21 18 37.9**	**-6.4**
	0.5nm,0.3s,baz=79,slow=32,SNR=1.3						
JKA	**Kamikawa-asahi**	**7.30**	**12**	Pn	**Pn**	**21 17 21.8**	**-1.2**
USA0B	**Ussuriysk Arra**	**9.72**	**321**	Pn	**Pn**	**21 17 55.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**9.72**	**321**	P	**Pn**	**21 17 56.3**	**+0.5**
	baz=139,slow=13,SNR=12						
USRK	**Ussuriysk Ar.**	**9.72**	**321**	Pn	**Pn**	**21 17 56.0**	**+0.1**
KSRS	**Korea Array**	**10.09**	**277**	P	**Pn**	**21 18 03.0**	**+2.1**
	0.5nm,0.3s,baz=88,slow=13,SNR=16						
KLR	**Kul'dur**	**13.83**	**335**	LR	LR	21 23 58.4	
	comp=Z,18nm,20.0s,baz=62,slow=36						
BJT	**Baijiatuau**	**19.32**	**287**	P	**P**	**21 19 55.5**	**-0.3**
WHN	**Wuhan**	**22.67**	**261**	⇑P	P	21 20 42.9	+11
HHC	**Hu-ho-hao-te**	**22.84**	**289**	*eP*	**P**	**21 20 32.8**	**-0.5**
GUMO	**Guam**	**23.60**	**169**	LR	LR	21 30 09.9	
	comp=Z,14nm,18.3s,baz=80,slow=37						
YAK	**Yakutsk**	**25.99**	**348**	P	**P**	**21 21 00.1**	**-1.4**
	4.0nm,0.5s,baz=59,slow=0.5,SNR=2.0						
YAK	**Yakutsk**	**25.99**	**348**	P	**P**	**21 21 00.5**	**-1.0**
ENH	**Enshi**	**26.65**	**265**	P	**P**	**21 21 07.2**	**-0.6**
ENH				IAmb	IAmb	21 21 07.8	
	comp=Z,9.1nm,0.6s						
ULN	**Ulaanbaatar**	**26.82**	**305**	P	**P**	**21 21 09.4**	**0.0**
SONM	**Songino Array**	**27.25**	**304**	P	**P**	**21 21 12.9**	**-0.4**
	comp=Z,7.4nm,0.7s,baz=105,slow=7.7,SNR=51						
SONM	**Songino Array**	**27.25**	**304**	P	**P**	**21 21 12.7**	**-0.5**
H11N2	**WAKE ISLAND Hy**	**28.71**	**120**	T	T	21 51 43.5	
	baz=313,slow=75,SNR=55						
H11N1	**WAKE ISLAND Hy**	**28.72**	**120**	T	T	21 51 41.8	
	baz=313,slow=75,SNR=54						
H11N3	**WAKE ISLAND Hy**	**28.73**	**120**	T	T	21 51 44.3	
	baz=313,slow=75,SNR=53						
LZH	**Lanzhou**	**29.40**	**279**	*eP*	**P**	**21 21 31.3**	**-1.2**
LZH				pP	pP	21 21 58.6	+2.2
LZH				sP	sP	21 22 08.8	-0.1
LZH				PP	**PnPn**	**21 22 27.3**	**-4.2**
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,79nm,4.3s						
H11S1	**WAKE ISLAND Hy**	**29.41**	**122**	T	T	21 52 35.2	
	baz=314,slow=75,SNR=50						
H11S3	**WAKE ISLAND Hy**	**29.41**	**122**	T	T	21 52 37.3	
	baz=314,slow=75,SNR=48						
H11S2	**WAKE ISLAND Hy**	**29.42**	**122**	T	T	21 52 36.0	
	baz=314,slow=75,SNR=50						
GYA	**Guiyang**	**30.54**	**260**	*eP*	**P**	**21 21 41.6**	**-0.9**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA	**Gaotai**	**31.93**	**287**	*eP*	**P**	**21 21 54.9**	**+0.3**
GTA				pP	pP	21 22 20.8	+2.1
GTA				sP	sP	21 22 33.3	+2.2
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,31nm,6.9s						
GTA				LR	LR		
	comp=N,47nm,13.1s						
GTA				LR	LR		
	comp=E,53nm,15.6s						
GTA				LR	LR		
	comp=Z,61nm,14.9s						
WMQ	**Urumqi**	**40.26**	**297**	*eP*	**P**	**21 23 06.9**	**+1.4**
WMQ	**Urumqi**	**40.26**	**297**	P	**P**	**21 23 05.4**	**0.0**
ZAA0	**Zalesovo Array**	**41.45**	**312**	P	**P**	**21 23 14.8**	**-0.2**
ZAA0				IAmb	IAmb	21 23 15.8	
	comp=Z,7.0nm,0.9s						
ZALV	**Zalesovo Beam**	**41.45**	**312**	P	**P**	**21 23 15.3**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=95,slow=7.4,SNR=20						
ZALV	**Zalesovo Beam**	**41.45**	**312**	P	**P**	**21 23 14.4**	**-0.5**
MK31	**Makanchi Array**	**43.57**	**302**	P	**P**	**21 23 32.3**	**0.0**
MKAR	**Makanchi Array**	**43.57**	**302**	P	**P**	**21 23 32.5**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=85,slow=9.1,SNR=27						
MKAR				pP	**pP**	**21 23 56.3**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=88,slow=8.8,SNR=3.2						
MKAR	**Makanchi Array**	**43.57**	**302**	P	**P**	**21 23 32.1**	**-0.2**
MAKZ	**Makanchi**	**43.78**	**302**	P	**P**	**21 23 34.1**	**+0.1**
MAKZ				IAmb	IAmb	21 23 34.6	
	comp=Z,7.1nm,1.2s						
TAPN	**Taplejung**	**45.26**	**274**	*eP*	**P**	**21 23 47.2**	**+0.9**
KURK	**Kurchatov**	**45.43**	**308**	P	**P**	**21 23 46.6**	**-0.4**
ODAN	**Odare**	**45.73**	**273**	*eP*	**P**	**21 23 50.6**	**+0.6**
RAMN	**Ramite**	**46.33**	**274**	*eP*	**P**	**21 23 54.8**	**+0.2**
	comp=Z,20nm,0.7s						
GUN	**Gumba**	**46.48**	**275**	*eP*	**P**	**21 23 56.4**	**+0.4**
PKI	**Pulchoki**	**47.00**	**275**	*eP*	**P**	**21 24 00.1**	**+0.1**
KKN	**Kakani**	**47.01**	**275**	*eP*	**P**	**21 24 00.5**	**+0.6**
	comp=Z,9.7nm,0.6s						
PKIN	**Phulchoki**	**47.01**	**275**	*eP*	**P**	**21 24 00.1**	**+0.1**
GKN	**Gorkha**	**47.43**	**276**	*eP*	**P**	**21 24 03.3**	**+0.2**
	comp=Z,19nm,0.7s						
DANN	**Dangsing**	**47.98**	**277**	*eP*	**P**	**21 24 07.0**	**-0.5**
	comp=Z,39nm,0.7s						
KOLN	**Koldanda**	**48.36**	**276**	*eP*	**P**	**21 24 10.6**	**+0.3**
PYUN	**Piuthan**	**48.70**	**277**	*eP*	**P**	**21 24 13.6**	**+0.6**
	comp=Z,8.8nm,0.4s						
ILAR	**Eielson Array**	**49.91**	**32**	P	**P**	**21 24 22.1**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=266,slow=5.6,SNR=7.3						
ILAR				pP	**pP**	**21 24 47.3**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=266,slow=6.0,SNR=4.1						
ILAR				sP	**sP**	**21 24 58.8**	**0.0**
	comp=Z,0.7nm,0.7s,baz=276,slow=6.4,SNR=4.7						
AAK	**Ala-Archa**	**49.92**	**298**	P	**P**	**21 24 22.1**	**+0.1**
COEN	**Coen**	**50.71**	**177**	P	**P**	**21 24 28.2**	**+0.3**
COEN				IAmb	IAmb	21 24 35.0	
	comp=Z,11nm,1.3s						
KK31	**Karatay Array**	**52.56**	**300**	P	**P**	**21 24 41.7**	**+0.1**
KK31				IAmb	IAmb	21 24 45.2	
	comp=Z,2.8nm,0.8s						
KKAR	**Karatay Array**	**52.56**	**300**	P	**P**	**21 24 41.6**	**0.0**
KKAR				IAmb	IAmb	21 24 45.3	
	comp=Z,2.8nm,0.8s						
KKAR	**Karatay Array**	**52.56**	**300**	P	**P**	**21 24 41.7**	**+0.2**
KNRA	**Kununurra**	**53.53**	**194**	P	**P**	**21 24 48.5**	**-0.3**
NIL	**Nilore**	**53.98**	**288**	P	**P**	**21 24 52.4**	**+0.3**
NIL				IAmb	IAmb	21 24 53.5	
	comp=Z,6.4nm,0.8s						
GAR	**Garm**	**54.11**	**295**	P	**P**	**21 24 53.3**	**+0.3**
ARU	**Arti**	**55.95**	**318**	P	**P**	**21 25 05.7**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=63,slow=9.0,SNR=15						
ARU	**Arti**	**55.95**	**318**	P	**P**	**21 25 05.7**	**-0.2**
FITZ	**Fitzroy Crossi**	**56.55**	**197**	P	**P**	**21 25 10.1**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=22,slow=5.4,SNR=2.4						
WB0	**Warramunga Arr**	**56.73**	**187**	P	**P**	**21 25 11.2**	**-0.5**
WB0				IAmb	IAmb	21 25 12.3	
	comp=Z,4.1nm,0.9s						
WR0	**Warramunga Arr**	**56.91**	**187**	P	**P**	**21 25 12.5**	**-0.5**
WR0				IAmb	IAmb	21 25 13.5	
	comp=Z,7.0nm,1.1s						
WRA	**Warramunga Arr**	**56.91**	**187**	P	**P**	**21 25 12.7**	**-0.3**
	comp=Z,2.1nm,0.5s,baz=4.7,slow=7.4,SNR=40						
WRA	**Warramunga Arr**	**56.91**	**187**	P	**P**	**21 25 12.3**	**-0.7**
ABKAR	**Akbulak array**	**57.46**	**310**	P	**P**	**21 25 16.2**	**-0.4**
ABKAR	**Akbulak array**	**57.46**	**310**	P	**P**	**21 25 16.2**	**-0.4**
ABKAR				IAmb	IAmb	21 25 16.8	
	comp=Z,2.8nm,0.7s						
AKTO	**Aktyubinsk**	**58.21**	**312**	P	**P**	**21 25 22.7**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=88,slow=9.7,SNR=3.6						
KIRV	**Kirov**	**59.88**	**323**	P	**P**	**21 25 33.4**	**+0.2**
	comp=Z,7.5nm,0.7s,baz=73,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**60.64**	**187**	P	**P**	**21 25 38.7**	**-0.1**
	comp=Z,1.9nm,1.1s,baz=12,slow=3.9,SNR=8.9						
HRA	**Herat**	**61.91**	**293**	P	**P**	**21 25 47.8**	**+0.1**
EIDS	**Eidsvold**	**62.80**	**169**	P	**P**	**21 25 54.1**	**+0.9**
EIDS				IAmb	IAmb	21 26 07.9	
	comp=Z,14nm,1.5s						
FINES	**FINESS Array B**	**68.55**	**332**	P	**P**	**21 26 29.4**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=20,slow=6.1,SNR=4.6						
KBZ	**Khabaz**	**70.42**	**310**	P	**P**	**21 26 42.4**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=52,slow=20						
NOA	**NORSAR Array B**	**73.98**	**337**	P	**P**	**21 27 02.1**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=40,slow=6.0,SNR=3.7						
NOA				pP	**pP**	**21 27 28.9**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=34,slow=3.0,SNR=1.5						
NVAR	**Mina Array Bea**	**75.57**	**53**	P	**P**	**21 27 13.5**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=294,slow=5.2,SNR=8.3						
NVAR	**Mina Array Bea**	**75.57**	**53**	P	**P**	**21 27 13.9**	**+1.5**
TXAR	**Lajitas Array**	**90.70**	**52**	P	**P**	**21 28 31.2**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=302,slow=2.8,SNR=3.9						
LPAZ	**La Paz**	**147.31**	**59**	PKPbc	**PKPab**	**21 35 11.3**	**-2.1**
	comp=Z,1.0nm,0.6s,baz=306,slow=3.9,SNR=4.3						
H03N2	**Juan Fernandez**	**147.70**	**96**	T	T	00 20 39.8	
	baz=291,slow=76,SNR=8.8						
H03N3	**Juan Fernandez**	**147.71**	**96**	T	T	00 20 40.9	
	baz=291,slow=76,SNR=11						
H03N1	**Juan Fernandez**	**147.71**	**96**	T	T	00 20 41.1	
	baz=291,slow=76,SNR=8.9						

SJA ***18*** *21:15:58.4±0.6, 28.06S×63.07W, h595km±7km, ML4.7, MW4.5*

VAO ***18*** *21:16:05.1±0.3, 27.78S×63.37W, h568km±4km, mb4.6*

IDC ***18*** *21:16:05.4±0.5, 27.73S×63.31W, h560km±4km, mb3.9/18, mb1 4.0/24, mb1mx3.8/40, mbtmp4.8/24, Error ellipse: s-maj=11.8km s-min=9.7km az=73.0*

NEIC ***18*** *21:16:06.1±1.4, 27.70S±0.05×63.4W±0.1, h568km±5km, mb4.6/53, Md5.2(SJA), Error ellipse: s-maj=14.8km s-min=7.5km az=100.0*

ISC 18 21:16:05.3±0.3, 27.74S±0.05×63.36W±0.05, h562km, n254, σ1s01/281, mb4.6/41, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHML	**Horco Molle**	**2.00**	**298**	*eP*	**P**	**21 17 16.6**	**+0.3**
AHML				*e*S	**S**	**21 18 13.5**	**-0.3**
AHML				IAML		21 18 15.1	
	comp=Z,36nm,0.6s						
CYA	**Choya**	**2.27**	**251**	*eP*	**P**	**21 17 16.8**	**-0.6**
CYA				*e*S	**S**	**21 18 14.2**	**-1.9**
CYA				IAML		21 18 16.4	
	comp=Z,62nm,0.5s						
FSA	**Cafayete**	**2.85**	**304**	*eP*	**P**	**21 17 20.9**	**+0.1**
AANI	**Anillaco**	**3.34**	**250**	*eP*	**P**	**21 17 23.1**	**-0.5**
AANI				IAML		21 18 34.0	
	comp=Z,309nm,0.7s						
VCA	**Vinchina**	**4.39**	**256**	*eP*	**P**	**21 17 31.8**	**+0.6**
VCA				*e*S	**S**	**21 18 41.4**	**+0.1**
VCA				IAML		21 18 47.8	
	comp=Z,686nm,0.6s						
AGUA	**GUANDACOL**	**4.84**	**248**	*eP*	**P**	**21 17 35.1**	**+0.5**
AGUA				*e*S	**S**	**21 18 47.8**	**+0.2**
AGUA				IAML		21 18 48.9	
	comp=Z,120nm,0.9s						
AC02	**Maricunga**	**5.22**	**279**	P	**P**	**21 17 40.0**	**+1.7**
CPUP	**Villa Florida**	**5.55**	**77**	P	**P**	**21 17 41.4**	**+0.8**
	comp=Z,81nm,0.3s,baz=249,slow=8.7,SNR=712						
CPUP				S	**S**	**21 18 58.2**	**-0.2**
	baz=221,slow=13,SNR=0.5						
ACDV	**Cuesta del Vie**	**5.60**	**243**	*eP*	**P**	**21 17 41.9**	**+0.8**
ACDV				IAML		21 19 19.4	
	comp=Z,71nm,0.9s						
ACCO	**Cerro Coronel**	**5.75**	**239**	*eP*	**P**	**21 17 43.6**	**+1.0**
ACCO				IAML		21 19 13.9	
	comp=Z,128nm,0.6s						
AROD	**Rodeo**	**5.88**	**244**	*eP*	**P**	**21 17 45.1**	**+1.3**
ZON	**Zonda**	**5.99**	**229**	P	**P**	**21 17 44.9**	**+0.5**
ZON	**Zonda**	**5.99**	**229**	*eP*	**P**	**21 17 44.8**	**+0.4**
ZON				*e*S	**S**	**21 19 05.4**	**-0.1**
ZON				IAML		21 19 08.3	
	comp=Z,50nm,0.8s						
ZON				*e*S	S	21 19 14.2	+8.7
GO03	**Copiap**	**6.10**	**270**	P	**P**	**21 17 46.1**	**+0.6**
GO03	**Copiap**	**6.10**	**270**	*eP*	**P**	**21 17 46.2**	**+0.6**
GO03				*e*S	**S**	**21 19 13.1**	**+5.6**
GO02	**Mina Guanaco**	**6.15**	**293**	P	**P**	**21 17 47.5**	**+1.2**
AC05	**El Transito**	**6.20**	**258**	P	**P**	**21 17 47.5**	**+1.1**
ITQB	**Itaqui**	**6.22**	**110**	*eP*	**P**	**21 17 47.1**	**+0.7**
CO01	**Juntas del Tor**	**6.32**	**248**	P	**P**	**21 17 49.4**	**+1.8**
LCO	**Las Campanas**	**6.60**	**257**	P	**P**	**21 17 50.4**	**+0.2**
AC01	**Pan de Azucar**	**6.66**	**282**	P	**P**	**21 17 51.1**	**+0.5**
ASAL	**Salagasta**	**6.78**	**223**	*eP*	**P**	**21 17 52.3**	**+0.7**
ASAL				*e*S	**S**	**21 19 18.1**	**-0.7**
ASAL				IAML		21 19 20.2	
	comp=Z,239nm,0.7s						
AUSP	**Uspallata**	**6.88**	**228**	*eP*	**P**	**21 17 53.7**	**+0.8**
GO04	**Tololo Observa**	**6.96**	**248**	P	**P**	**21 17 53.8**	**+0.2**
PB14	**IPOC Station P**	**7.05**	**294**	P	**P**	**21 17 55.0**	**+0.4**
CO03	**El Pedregal**	**7.11**	**242**	P	**P**	**21 17 55.1**	**+0.2**
AAGR	**Agrelo**	**7.12**	**220**	*eP*	**P**	**21 17 55.4**	**+0.5**
AAGR				*e*S	**S**	**21 19 25.4**	**+0.5**
PB15	**IPOC Station P**	**7.13**	**308**	P	**P**	**21 17 56.3**	**+0.9**
LVC	**Limon Verde**	**7.17**	**314**	P	**P**	**21 17 56.5**	**+0.6**
	comp=Z,25nm,0.3s,baz=150,slow=6.2,SNR=118						
LVC				S	**S**	**21 19 24.3**	**-1.9**
	comp=Z,15nm,0.3s,baz=144,slow=3.9,SNR=6.2						
LVC	**Limon Verde**	**7.17**	**314**	P	**P**	**21 17 56.3**	**+0.4**
LVC	**Limon Verde**	**7.17**	**314**	*eP*	**P**	**21 17 56.9**	**+1.0**
CO02	**Combarbal**	**7.51**	**241**	P	**P**	**21 17 58.7**	**0.0**
PB06	**IPOC Station P**	**7.53**	**310**	P	**P**	**21 17 59.9**	**+0.8**
PB10	**IPOC Station P**	**7.74**	**301**	P	**P**	**21 18 01.6**	**+0.6**
PB09	**IPOC Station P**	**7.97**	**317**	P	**P**	**21 18 04.5**	**+

GDU01	Guandu, BA	26.18	63	*e*P		P		21 20 55.9	-0.2
MALB	Monte Alegre	27.17	20	*e*P		P		21 21 04.6	-0.1
TMAB	Tom-Au,PA,Br	29.14	33	*e*P		P		21 21 22.1	+0.2
MCPB	Macapa, AP	29.30	24	*e*P		P		21 21 23.0	-0.2
ROSB	Rosrio	30.78	40	*e*P		P		21 21 34.9	-1.1
PUAC	Puerto Asis, P	30.86	334	*e*P		P		21 21 38.0	+1.4
OTAV	Otavalo	31.36	330	P		P		21 21 42.8	+1.3
OTAV				IAmb		IAmb		21 21 45.4	
	comp=Z,6.1nm,0.7s								
OTAV	Otavalo	31.36	330	*e*P		P		21 21 41.6	+0.1
PCON	Cinco Dias	32.42	335	*e*P		P		21 21 51.1	+0.5
MARP	Paez Belalcaza	32.73	335	*e*P		P		21 21 53.2	+0.2
PTGC	Puerto Gaitan,	32.86	344	*e*P		P		21 21 52.5	-1.1
ORTC	Ortega, Tolima	33.48	338	*e*P		P		21 21 58.6	-0.4
CHIC	Chingaza	33.70	341	*e*P		P		21 22 00.8	-0.4
YOTC	Yotoco, Valle	33.93	336	*e*P		P		21 21 60.0	-2.9
RCBR	Riachuelo	33.98	55	P		P		21 22 03.7	+0.6
	comp=Z,15nm,0.5s,baz=225,slow=8.4,SNR=20								
RCBR	Riachuelo	33.98	55	P		P		21 22 03.5	+0.3
RCBR				IAmb		IAmb		21 22 04.7	
	comp=Z,19nm,0.6s								
RCBR	Riachuelo	33.98	55	*e*P		P		21 22 04.0	+0.9
TOLC	Tolima	34.14	338	*e*P		P		21 22 03.6	-1.2
MDP	Montagnes des	34.24	19	P		P		21 22 05.0	-0.3
	comp=Z,14nm,0.4s,baz=189,slow=12,SNR=56								
RUSC	La Rusia	34.73	343	*e*P		P		21 22 09.0	-0.8
NORC	Norcasia	34.92	340	*e*P		P		21 22 10.2	-0.9
PTBC	PUERTO BERRIO,	35.72	341	*e*P		P		21 22 13.2	-4.4
PAMC	Pamplona, Colo	36.02	344	*e*P		P		21 22 19.2	-1.4
SDV	Santo Domingo	37.08	348	P		P		21 22 27.8	-1.2
	comp=Z,12nm,0.4s,baz=328,slow=20,SNR=13								
SDV				ScP		ScP		21 27 28.4	+0.2
	comp=Z,2.4nm,0.3s,baz=326,slow=3.2,SNR=1.6								
SDV	Santo Domingo	37.08	348	*e*P		P		21 22 27.6	-1.3
SDV	Santo Domingo	37.08	348	P		P		21 22 27.7	-1.2
SDV				IAmb		IAmb		21 22 28.5	
	comp=Z,26nm,1.1s								
SDV	Santo Domingo	37.08	348	*e*P		P		21 22 27.6	-1.3
UREC	San Jos de Ur	37.19	340	*e*P		P		21 22 27.5	-2.1
PAYG	Puerto Ayora	37.29	312	P		P		21 22 30.0	-0.5
PCRV	Puerto La Cruz	37.71	358	P		P		21 22 33.6	-0.3
	comp=Z,15nm,0.4s,baz=62,slow=2.7,SNR=10								
MOTC	Monteria, Cord	38.20	340	*e*P		P		21 22 36.6	-1.3
TOSP	Speyside	38.90	4	P		P		21 22 43.5	+0.1
GRGR	Grenville	39.66	3	P		P		21 22 49.7	0.0
URIC	Uribia, Colomb	40.09	347	*e*P		P		21 22 48.9	-4.0
SVB	Belmont	40.81	3	P		P		21 22 58.2	-0.6
FDF	Fort de France	42.27	3	P		P		21 23 09.6	-0.7
JTS	Las Juntas de	43.20	328	P		P		21 23 18.9	+1.3
	comp=Z,2.0nm,0.4s,baz=321,slow=6.2,SNR=3.7								
MLPR	Magueyes Islan	45.57	355	P		P		21 23 34.4	-1.3
CRPR	Cabo Rojo, PR	45.62	355	P		P		21 23 34.9	-1.1
MATN	Matagalpa	45.97	329	P		P		21 23 38.7	-0.2
MATN				IAmb		IAmb		21 23 40.3	
	comp=Z,24nm,1.0s								
ASCN	Ascension	50.24	77	P		P		21 24 11.1	+0.4
BELA	Belgrano 2	51.92	173	P		P		21 24 22.1	+0.3
SNAA	Sanae	54.75	160	P		P		21 24 42.0	-0.1
	comp=Z,0.6nm,0.5s,baz=270,slow=11,SNR=2.7								
SNAA				pP		pP		21 26 28.7	-0.5
	comp=Z,7.0nm,1.2s,baz=291,slow=6.6,SNR=6.7								
SNAA				ScP		ScP		21 28 40.5	-0.2
	comp=Z,0.7nm,0.7s,baz=298,slow=4.0,SNR=6.4								
QSPA	South Pole Qui	62.49	180	P		P		21 25 34.8	+0.6
LRAL	Lakeview Retre	64.47	338	P		P		21 25 47.0	-0.1
X51A	Calhoun	65.22	341	P		P		21 25 52.1	+0.3
X51A				IAmb		IAmb		21 25 52.8	
	comp=Z,30nm,0.9s								
V55A	Taylorsville	65.45	344	P		P		21 25 54.2	+1.0
LIC	Lamto	65.62	68	*e*P		P		21 25 54.2	-0.5
	comp=Z,26nm,0.5s								
X48A	Hartselle	65.79	339	P		P		21 25 55.7	+0.3
X48A				IAmb		IAmb		21 25 56.0	
	comp=Z,12nm,0.5s								
TIC	Toumodi	65.86	68	*e*P		P		21 25 55.7	-0.5
KIC	Kosan Boka	65.93	68	*e*P		P		21 25 56.3	-0.4
	comp=Z,36nm,0.4s								
W50A	Signal Mountai	65.94	340	P		P		21 25 56.2	-0.1
W50A				IAmb		IAmb		21 25 57.3	
	comp=Z,14nm,0.7s								
DBIC	Dimbokro	66.01	68	P		P		21 25 57.0	-0.1
	comp=Z,14nm,0.3s,baz=203,slow=3.7,SNR=87								
DBIC	Dimbokro	66.01	68	P		P		21 25 57.0	-0.1
DBIC				IAmb		IAmb		21 25 57.7	
	comp=Z,23nm,0.9s								
SWET	Sewanee	66.15	340	P		P		21 25 57.7	+0.1
SWET				IAmb		IAmb		21 25 58.0	
	comp=Z,20nm,0.4s								
U54A	Nelsons Funny	66.24	344	P		P		21 25 58.8	+0.7
PLAL	Pickwick Lake	66.61	338	P		P		21 26 00.2	-0.2
PLAL				IAmb		IAmb		21 26 01.1	
	comp=Z,20nm,1.1s								
WVT	Waverly	67.58	339	P		P		21 26 05.9	-0.4
WVT				IAmb		IAmb		21 26 06.7	
	comp=Z,14nm,0.7s								
P57A	Homestead Farm	68.25	348	P		P		21 26 12.0	+1.7
P57A				IAmb		IAmb		21 26 12.5	
	comp=Z,21nm,0.5s								
TXAR	Lajitas Array	68.62	323	P		P		21 26 13.6	+0.6
	comp=Z,0.8nm,0.4s,baz=150,slow=8.1,SNR=18								
TXAR	Lajitas Array	68.62	323	P		P		21 26 13.4	+0.5
TX31	Lajitas Ar. Si	68.62	323	P		P		21 26 13.4	+0.5
FCAR	Ozark Folk Cen	68.86	335	P		P		21 26 14.2	+0.2
PBMO	Poplar Bluff	69.04	337	P		P		21 26 15.1	0.0
PBMO				IAmb		IAmb		21 26 15.9	
	comp=Z,17nm,0.8s								
MGMO	Mountain Grove	70.03	336	P		P		21 26 21.2	+0.2
MGMO				IAmb		IAmb		21 26 22.7	
	comp=Z,12nm,0.9s								
CCM	Cathedral Cave	70.47	337	P		P		21 26 23.4	-0.2
CCM				IAmb		IAmb		21 26 24.4	
	comp=Z,10.0nm,0.7s								
SUR	Sutherland	71.16	117	P		P		21 26 28.8	+0.5
SUR				IAmb		IAmb		21 26 30.2	
	comp=Z,10nm,0.8s								
KOWA	Kowa	71.18	62	P		P		21 26 28.0	-0.3
KOWA				IAmb		IAmb		21 26 28.5	
	comp=Z,14nm,0.9s								
VNDA	Vanda	71.58	189	P		P		21 26 30.6	+1.0
	comp=Z,3.0nm,0.9s,baz=133,slow=5.5,SNR=18								
VNDA	Vanda	71.58	189	P		P		21 26 30.4	+0.8
TSUM	Tsumeb	73.54	103	P		P		21 26 42.3	+0.1
TSUM				IAmb		IAmb		21 26 43.3	
	comp=Z,9.3nm,0.8s								
ANMO	Albuquerque	74.47	324	P		P		21 26 47.4	+0.4
	comp=Z,1.9nm,0.6s,baz=124,slow=8.3,SNR=5.1								
ANMO	Albuquerque	74.47	324	P		P		21 26 47.6	+0.5
TOA0	Torodi Ar. Sit	74.95	66	P		P		21 26 49.7	-0.2
TOA0				IAmb		IAmb		21 26 50.4	
	comp=Z,27nm,0.6s								
TORD	Torodi Ar. Bea	74.95	66	P		P		21 26 49.5	-0.4
	comp=Z,20nm,0.5s,baz=278,slow=7.2,SNR=415								
TORD				pP		pP		21 28 46.9	-0.3
	comp=Z,3.5nm,0.9s,baz=250,slow=5.0,SNR=7.1								
TORD	Torodi Ar. Bea	74.95	66	P		P		21 26 49.4	-0.5
BOSA	Boshof	76.15	115	P		P		21 26 56.2	-0.3
	comp=Z,9.0nm,0.5s,baz=260,slow=3.9,SNR=38								
BOSA	Boshof	76.15	115	P		P		21 26 56.4	-0.1
I37A	Lemond, Waseca	76.52	338	P		P		21 26 58.2	+0.2
I37A				IAmb		IAmb		21 26 58.5	
	comp=Z,19nm,0.6s								
ECSD	EROS Data Cent	77.39	336	P		P		21 27 02.9	+0.3
LBTB	Lobatse	77.91	112	P		P		21 27 06.1	-0.1
LBTB				IAmb		IAmb		21 27 06.8	
	comp=Z,14nm,0.7s								
B35A	Bob, Littlefor	80.50	340	P		P		21 27 19.7	+0.7
B35A				IAmb		IAmb		21 27 20.2	
	comp=Z,15nm,0.6s								
PD31	Pinedale Array	82.03	328	P		P		21 27 27.7	+0.3
PDAR	Pinedale Array	82.03	328	P		P		21 27 27.6	+0.3
	comp=Z,1.8nm,0.7s,baz=120,slow=5.3,SNR=10.0								
PDAR	Pinedale Array	82.03	328	P		P		21 27 27.5	+0.2
SCHQ	Schefferville	82.28	358	P		P		21 27 28.2	+0.2
	comp=Z,12nm,0.8s,baz=203,slow=3.9,SNR=7.3								
ULM	Lac du Bonnet	82.83	340	P		P		21 27 30.9	+0.1
	comp=Z,5.5nm,0.8s,baz=94,slow=2.8,SNR=5.5								
PVAQ	Vaqueiros	83.20	41	P		P		21 27 33.4	+0.4
PVAQ				IAmb		IAmb		21 27 42.0	
	comp=Z,22nm,1.0s								
TAM	Tamanrasset	83.31	60	P		P		21 27 34.4	+0.3
ELK	Elko	83.41	323	P		P		21 27 35.0	+0.7
	comp=Z,0.8nm,0.4s,baz=213,slow=4.1,SNR=5.5								
LSZ	Lusaka	84.37	104	P		P		21 27 41.2	+1.7
LSZ				IAmb		IAmb		21 27 42.0	
	comp=Z,14nm,0.9s								
HLID	Hailey	85.00	325	P		P		21 27 43.5	+1.6
MCMT	McKenzie Canyo	85.16	327	P		P		21 27 44.1	+1.3
ESDC	Sonseca Array	86.91	42	P		P		21 27 51.5	+0.5
	comp=Z,1.8nm,0.5s,baz=250,slow=5.0,SNR=22								
ESDC	Sonseca Array	86.91	42	P		P		21 27 51.4	+0.4
ESBB	Sonseca Array	86.91	42	P		P		21 27 50.8	-0.1
KEST	Kesra	93.14	51	P		P		21 28 19.9	0.0
	comp=Z,1.6nm,0.7s,baz=246,slow=3.8,SNR=2.3								
EKA	Eskdalemuir Ar	97.36	30	P		Pdif		21 28 37.6	-0.8
	comp=Z,0.5nm,0.4s,baz=233,slow=4.4,SNR=7.9								
VYHS	Vyhne	105.40	43	*e*PDIFF		Pdif		21 29 18.7	+4.3
FINES	FINESS Array B	113.69	32	PKiKP		PKiKP		21 33 39.3	-0.3
	comp=Z,2.9nm,1.0s,baz=147,slow=2.8,SNR=1.7								
ARCES	ARCESS Array B	115.29	23	PKP		PKPdf		21 33 42.0	-0.5
	comp=Z,4.8nm,1.0s,baz=250,slow=3.6,SNR=6.7								
ARCES				PKKPbc		PKKPbc		21 44 19.1	-1.4
	comp=Z,3.2nm,0.9s,baz=81,slow=3.5,SNR=7.3								
KBZ	Khabaz	119.92	53	PKP		PKPdf		21 33 52.0	-0.2
	comp=Z,1.5nm,0.8s,baz=232,slow=19								
ASAR	Alice Springs	126.25	200	PKP		PKPdf		21 34 04.6	-0.5
	comp=Z,0.2nm,0.3s,baz=134,slow=1.3,SNR=5.3								
ASAR				pPKP		pPKPdf		21 36 13.8	-2.3
	comp=Z,0.4nm,0.8s,baz=160,slow=3.2,SNR=2.9								
ASAR				SKP				21 36 47.1	
	comp=Z,0.4nm,0.5s,baz=146,slow=2.0,SNR=4.6								
ASAR				PKKPbc		PKKPbc		21 43 39.5	-1.0
	comp=Z,0.3nm,0.6s,baz=330,slow=3.5,SNR=4.1								
ASAR	Alice Springs	126.25	200			PKPdf		21 34 05.0	-0.2
WRA	Warramunga Arr	129.60	202	PKP		PKPdf		21 34 11.4	-0.2
	comp=Z,0.2nm,0.3s,baz=171,slow=1.7,SNR=9.1								
WRA				pPKP		pPKPdf		21 36 21.6	-1.0
	comp=Z,0.5nm,0.7s,baz=168,slow=1.6,SNR=3.6								
WRA				SKPbc		SKPab		21 36 40.1	-1.3
	comp=Z,9.0nm,0.6s,baz=158,slow=3.5,SNR=77								
WRA				SKP				21 36 53.2	
	comp=Z,0.6nm,0.5s,baz=160,slow=2.3,SNR=5.1								
ARU	Arti	130.19	38	PKP		PKiKP		21 34 12.6	+0.3
	comp=Z,1.0nm,0.4s,baz=299,slow=3.5,SNR=5.9								
ARU				SKPbc		SKPbc		21 36 42.5	+0.1
	comp=Z,2.1nm,0.6s,baz=335,slow=2.4,SNR=12								
GEYT	Alibeck	130.49	62	SKPbc		SKPbc		21 36 44.5	+0.2
	comp=Z,2.4nm,0.7s,baz=212,slow=19,SNR=4.1								
AKTO	Aktyubinsk	130.62	46	SKPbc		SKPbc		21 36 44.5	+0.3
	comp=Z,3.3nm,0.9s,baz=256,slow=4.6,SNR=7.5								
ABKAR	Akbulak array	131.96	47			PKiKP		21 34 16.1	0.0
ABKAR	Akbulak array	131.96	47			PKiKP		21 34 16.1	0.0
BVAR	Borovoye Array	137.86	40	SKPbc		SKPbc		21 37 07.5	+0.8
	comp=Z,2.2nm,0.7s,baz=228,slow=31,SNR=6.6								
SEY	Seymchan	137.80	337	PKP		PKPdf		21 34 26.2	+0.7
	comp=Z,2.1nm,0.6s,baz=197,slow=19,SNR=7.6								
EKS2	Erkin-Say	142.35	55	P		PKPdf		21 34 31.8	-2.7
	SNR=5.8								
AML	Almayashu	142.37	56	P		PKPdf		21 34 32.1	-2.8
	SNR=9.4								
USP	Ospenovka	142.77	54	P		PKPdf		21 34 33.4	-1.7
	SNR=9.7								
UCH	Uchtor	142.96	56	P		PKPdf		21 34 34.9	-1.1
	SNR=11								
CHMS	Chumysh	143.00	54	P		PKPbc		21 34 34.0	+0.4
	SNR=11								
KBK	Karagaybulak	143.21	55	P		PKPbc		21 34 35.2	+0.7
	SNR=13								
KURBB	Kurchatov Arra	143.23	41	PKP		PKPbc		21 34 34.6	+0.6
	comp=Z,18nm,0.7s,baz=294,slow=3.9,SNR=178								
KURBB				SKPbc		SKPbc		21 37 21.3	+0.1
	comp=Z,1.1nm,0.8s,baz=294,slow=3.4,SNR=8.4								
KURK	Kurchatov	143.25	41			PKPbc		21 34 34.8	+0.7
TKM2	Tokmak 2	143.63	54	P		PKPdf		21 34 36.6	-0.2
	SNR=21								
ULHL	Ulahol	144.22	55	P		PKPab		21 34 38.8	+0.7
	SNR=19								
KSH	Kashi	144.43	60	PKP		PKPdf		21 34 38.0	-0.2
YAK	Yakutsk	144.62	349			PKPab		21 34 38.6	0.0
ZAA0	Zalesovo Array	144.94	33			PKPbc		21 34 39.4	+0.2
ZALV	Zalesovo Beam	144.94	33	PKP		PKPbc		21 34 39.5	+0.4
	comp=Z,12nm,0.4s,baz=304,slow=4.1,SNR=82								
ZALV				pPKP		pPKPdf		21 36 50.3	+0.5
	comp=Z,1.6nm,0.7s,baz=309,slow=4.7,SNR=3.8								
ZALV				SKPbc		SKiKP		21 37 26.2	+0.7
	comp=Z,4.9nm,0.7s,baz=300,slow=3.3,SNR=9.9								
ZALV	Zalesovo Beam	144.94	33			PKPbc		21 34 39.1	-0.1
MAKZ	Makanchi	146.85	46			PKPdf		21 34 42.7	+0.8
MAKZ				PKPbc		PKPbc		21 34 45.1	+0.3
MK31	Makanchi Array	147.05	45			PKPdf		21 34 43.0	+0.8
MK31				PKPbc		PKPbc		21 34 45.6	+0.3
MKAR	Makanchi Array	147.05	45	PKPbc		PKPdf		21 34 43.3	+1.0
	comp=Z,15nm,0.6s,baz=343,slow=1.8,SNR=93								
MKAR				pPKPbc		pPKPdf		21 36 53.8	+0.1
	comp=Z,6.5nm,1.0s,baz=289,slow=3.7,SNR=12								
MKAR				SKPbc		SKiKP		21 37 30.3	+0.1
	comp=Z,0.9nm,0.7s,baz=315,slow=1.9,SNR=2.0								
MKAR	Makanchi Array	147.05	45			PKPdf		21 34 42.7	+0.4
MKAR				PKPbc		PKPbc		21 34 45.7	+0.3
PYUN	Piuthan	150.31	81	*e*P		PKPbc		21 34 54.0	-0.2
	comp=Z,22nm,0.4s								
KOLN	Koldanda	150.80	82	*e*P		PKPbc		21 34 54.8	-0.5
	comp=Z,7.7nm,0.4s								
DANN	Dangsing	151.02	81	*e*P		PKPbc		21 34 55.9	0.0
	comp=Z,45nm,0.6s								
GKN	Gorkha	151.74	82	*e*P		PKPbc		21 34 57.0	-0.4
	comp=Z,22nm,0.5s								
DMN	Daman	152.10	83	*e*P		PKPbc		21 34 58.1	-0.2
KKN	Kakani	152.28	82	*e*P		PKPbc		21 34 58.3	-0.3
	comp=Z,13nm,0.4s								
PKIN	Phulchoki	152.36	83	*e*P		PKPbc		21 34 58.2	-0.7
	comp=Z,12nm,0.6s								
PKI	Pulchoki	152.37	83	*e*P		PKPbc		21 34 58.4	-0.6
	comp=Z,15nm,0.6s								
GUN	Gumba	152.82	82	*e*P		PKPbc		21 34 59.8	-0.2
	comp=Z,10.0nm,0.4s								
RAMN	Ramite	153.33	85	*e*P		PKiKP		21 35 01.2	+0.2
ODAN	Odare	154.01	85	*e*P		PKPbc		21 35 01.5	-0.9
TAPN	Taplejung	154.36	84	*e*P		PKiKP		21 35 01.5	-1.7
LSA	Lhasa	157.57	79			PKPab		21 35 35.0	+0.6
SONM	Songino Array	158.40	19	PKP		PKPdf		21 34 59.7	+1.0
	comp=Z,1.4nm,0.8s,baz=315,slow=0.1,SNR=10								
SONM				PKPab		PKPab		21 35 36.4	-0.6
	comp=Z,1.4nm,0.8s,baz=307,slow=3.8,SNR=7.0								
SONM	Songino Array	158.40	19	PKPdf		PKPdf		21 34 59.0	+0.4
SONM						PKPab		21 35 37.4	+0.4
GTA	Gaotai	161.81	46	*e*PKP		PKPdf		21 35 03.8	+1.1
GTA				PKPab		PKPab		21 35 53.0	+0.8
GTA				pPKP		pPKPdf		21 37 17.9	+3.1
GTA				sPKP				21 38 06.0	
LZH	Lanzhou	166.31	49	*e*PKP		PKPdf		21 35 08.5	+1.7
LZH				pPKP		pPKPdf		21 37 14.8	-4.4
LZH				sPKP				21 38 06.3	
NJ2	Nanjing	175.29	337	*e*P		PKPdf		21 35 10.8	-0.5

IDC ***18*** *22:01:28.7±2.4, 6°.53S×146°.96E, h47km±25km, mb3.5/10, mb1 3.8/14, mb1mx3.7/28, mbtmp3.9/14, ML3.5/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/18, Error ellipse: s-maj=27.3km s-min=17.0km az=111.0*

ISC 18 22:01:28.9±0.7, 6°.49S±0°.07×146°.9E±0°.1, h49km, n16, σ1§04/16, mb3.7/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.91	174	P		P	Pn	22 02 11.6	-1.2
	7.7nm,0.3s,baz=2.8,slow=10,SNR=8.7								
PMG				S			Sn	22 02 48.7	+2.1
	3.3nm,0.3s,baz=163,slow=21,SNR=1.5								
KRVT	Keravat (AS076	5.57	67	P		P	Pn	22 02 49.1	-0.2
	2.3nm,0.3s,baz=67,slow=20,SNR=1.3								
KRVT				S			Sn	22 04 00.7	+8.6
	4.3nm,0.3s,baz=120,slow=18,SNR=1.1								
KRVT				LR		LR		22 04 58.7	
	comp=Z,254nm,18.5s,baz=230,slow=38								
HNR	Honiara	13.28	104	LR		LR		22 09 19.8	
	comp=Z,38nm,20.3s,baz=290,slow=36								
SIJI	Sorong	16.54	289	P		P		22 05 20.0	+0.4
	1.0nm,0.3s,baz=78,slow=11,SNR=5.9								
WRA	Warramunga Arr	18.08	221	P		P		22 05 35.6	-1.1
	0.1nm,0.3s,baz=44,slow=12,SNR=12								
WRA				LR		LR		22 13 24.0	
	comp=Z,62nm,19.9s,baz=205,slow=40								
ASAR	Alice Springs	21.15	215	P		P		22 06 10.3	+0.3
	2.0nm,0.8s,baz=39,slow=11,SNR=18								
FITZ	Fitzroy Crossi	23.70	239	P		P		22 06 35.7	-0.8
	2.0nm,0.8s,baz=120,slow=9.5,SNR=4.7								
STKA	Stephens Creek	25.73	190	P		P		22 06 55.5	+0.5
	1.7nm,0.7s,baz=356,slow=16,SNR=4.0								
STKA				LR		LR		22 17 23.1	
	comp=Z,35nm,18.6s,baz=211,slow=37								
KSRS	Korea Array	47.16	339	P		P		22 09 56.8	+0.2
	1.5nm,0.9s,baz=147,slow=7.4,SNR=4.2								
CMAR	Chiang Mai Arr	53.37	299	P		P		22 10 44.0	+0.1
	1.3nm,0.3s,baz=118,slow=7.3,SNR=1.0								
PETK	Petropavlovsk-	60.08	8	P		P		22 11 30.8	-0.1
	1.2nm,0.5s,baz=167,slow=5.7,SNR=5.5								
VNDA	Vanda	71.43	177	P		P		22 12 43.4	-0.3
	0.2nm,0.5s,baz=322,slow=4.7,SNR=2.2								
MKAR	Makanchi Array	77.79	321	P		P		22 13 21.9	+0.8
	0.1nm,0.4s,baz=92,slow=8.2,SNR=1.5								
ZALV	Zalesovo Beam	79.36	328	P		P		22 13 31.0	+1.5
	0.4nm,0.4s,baz=127,slow=4.3,SNR=2.4								
ILAR	Eielson Array	85.98	23	P		P		22 14 02.1	-1.6
	0.5nm,0.6s,baz=240,slow=4.9,SNR=6.5								
TORD	Torodi Ar. Bea	145.08	284	PKPbc		PKPdf		22 21 02.0	0.0
	1.1nm,0.5s,baz=69,slow=2.9,SNR=14								

IDC ***18*** *22:26:53.4±2.0, 43°.86N×105°.64W, h0km, mb1 3.7/3, mb1mx3.4/37, mbtmp3.4/3, ML3.3/3, Error ellipse: s-maj=70.7km s-min=9.0km az=149.0*

NEIC ***18*** *22:26:53.5±1.0, 43°.74N±0°.06×105°.31W±0°.05, h0km±2km, ML3.4/61, Error ellipse: s-maj=10.0km s-min=5.9km az=340.0*

ISC 18 22:26:46.8±1.1, 43°.94N±0°.05×104°.73W±0°.07, h0km, n54, σ1§80/49, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.53	70	Pg		Pn		22 27 12.2	+10
K22A	Casper	1.83	226				Pn	22 27 17.9	-1.8
K22A				IAML				22 27 39.9	
	comp=N,857nm,0.4s								
K22A				IAML				22 27 40.5	
	comp=E,989nm,0.4s								
PHWY	Pilot Hill	2.69	192	Pn		Pn		22 27 34.3	+2.7
PHWY				IAML				22 28 10.0	
	comp=E,298nm,0.4s								
RWWY	Rawlins	2.89	220				Pn	22 27 35.6	+1.3
N23A	Red Feather La	3.17	197	Pn		Pn		22 27 40.5	+2.3
RLMT	Red Lodge	3.45	292				Pn	22 27 44.6	+2.6
RLMT				IAML				22 28 39.9	
	comp=E,85nm,0.5s								
RLMT				IAML				22 28 41.0	
	comp=E,80nm,0.4s								
PD31	Pinedale Array	3.71	253				Pn	22 27 45.6	0.0
PDAR	Pinedale Array	3.71	253	Pn		Pn		22 27 45.8	+0.2
	comp=E,2.6nm,0.3s,baz=72,slow=16,SNR=45								
PDAR				Lg		Lg		22 28 29.5	
	comp=E,15nm,0.3s,baz=63,slow=38,SNR=7.6								
PDAR	Pinedale Array	3.71	253	Pn		Pn		22 27 46.5	+0.9
BW06	Boulder Array	3.71	253				Pn	22 27 45.7	+0.1
BW06				IAML				22 28 33.3	
	comp=E,87nm,0.6s								
E28A	Huff	3.88	46	Pn		Pg		22 28 00.5	-0.7
YNE	Yellowstone No	3.92	288	Pn		Pn		22 27 50.6

mB5.3/4,mb4.4/7,MLv4.3/12,Mw(mB)4.7/4
ISC 18 22:33:23.9±0.6,2°14S±0.05×133°33E±0.04,h26km,n54,
σ2s01/54,mb4.2/15,MS3.3/7,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.33**	**234**	P	**Pn**	**22 33 47.9**	**+1.1**
FAKI				S	**Sb**	**22 34 08.0**	**+3.1**
FAKI	**Fak Fak**	**1.33**	**234**		**Pn**	**22 33 47.2**	**+0.4**
FAKI				Sn	**Sn**	**22 34 03.1**	**-0.6**
KMPI	**Kaimana, Papua**	**1.56**	**166**	P	**Pb**	**22 33 54.1**	**+2.0**
SIJI	**Sorong**	**2.42**	**301**	Pn	**Pn**	**22 34 01.2**	**-0.5**
	20nm,0.3s,baz=211,slow=21,SNR=90						
SIJI				Sn	**Sn**	**22 34 31.0**	**+0.5**
	29nm,0.3s,baz=133,slow=24,SNR=8.0						
SRPI	**Serui, Papua**	**2.92**	**85**	P	**Pn**	**22 34 11.8**	**+3.1**
SRPI				S	**Sn**	**22 34 45.5**	**+2.5**
BAKI	**Biak**	**2.93**	**71**	P	**Pn**	**22 34 10.5**	**+1.7**
BNDI	**Bandanaira**	**4.16**	**235**	P	**Pn**	**22 34 26.9**	**+1.2**
BNDI				S	**Sn**	**22 35 16.6**	**+3.0**
MSAI	**Masohi**	**4.56**	**255**	P	**Pn**	**22 34 34.5**	**+3.3**
MSAI				S	**Sn**	**22 35 26.5**	**+3.1**
AAI	**Ambon**	**5.36**	**253**	P	**Pn**	**22 34 42.9**	**+0.7**
	0.2nm47nm,0.8s						
AAI				S	**Sn**	**22 35 41.4**	**-1.7**
	0.2nm47nm,0.8s						
SMPI	**Sarmi**	**5.38**	**89**	P	**Pn**	**22 34 44.6**	**+2.1**
	0.2nm2µm16nm,0.9s						
SAUI	**Saumlaki**	**6.15**	**199**	P	**Pn**	**22 34 57.8**	**+4.7**
	1.1nm12µm121nm,0.4s						
NLAI	**Namlea**	**6.32**	**260**	P	**Pn**	**22 34 56.5**	**+1.1**
NLAI				S	**Sn**	**22 36 06.7**	**-0.1**
GENI	**Genyem**	**6.85**	**94**	P	Pn	22 35 09.7	+7.0
MTN	**Manton Dam**	**10.86**	**191**		**Pn**	**22 35 57.0**	**-0.7**
KAPI	**Kappang**	**13.85**	**258**	LR	LR	22 42 31.1	
	comp=Z,57nm,20.6s,baz=86,slow=39						
KNRA	**Kununurra**	**14.19**	**198**		**Pn**	**22 36 40.8**	**-2.4**
COEN	**Coen**	**15.25**	**141**	Pn	**Pn**	**22 36 55.3**	**-2.4**
COEN				IAmb	IAmb	22 37 07.5	
	comp=Z,12nm,1.1s						
PMG	**Port Moresby**	**15.53**	**118**	LR	LR	22 44 13.7	
	comp=Z,73nm,18.5s,baz=118,slow=42						
WB0	**Warramunga Arr**	**17.55**	**177**		**Pn**	**22 37 25.6**	**-1.4**
WB0				IAmb	IAmb	22 37 34.4	
	comp=Z,12nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.57**	**205**	P	**Pn**	**22 37 23.6**	**-3.5**
	comp=Z,1.5nm,0.3s,baz=23,slow=9.6,SNR=45						
FITZ				S	Sn	22 40 29.1	-13
	comp=Z,0.7nm,0.3s,baz=87,slow=6.9,SNR=3.3						
FITZ	**Fitzroy Crossi**	**17.57**	**205**		**Pn**	**22 37 24.8**	**-2.2**
WRA	**Warramunga Arr**	**17.73**	**177**	P	**Pn**	**22 37 25.8**	**-3.3**
	comp=Z,0.9nm,0.3s,baz=354,slow=12,SNR=25						
WRA				S	Sn	22 40 31.8	-14
	comp=Z,0.1nm,0.3s,baz=358,slow=23,SNR=5.8						
WRA				LR	LR	22 44 56.4	
	comp=Z,82nm,19.6s,baz=355,slow=39						
WRA	**Warramunga Arr**	**17.73**	**177**		**Pn**	**22 37 26.3**	**-2.7**
KRVT	**Keravat (AS076**	**18.79**	**97**	LR	LR	22 44 25.6	
	comp=Z,46nm,19.2s,baz=266,slow=36						
GUMO	**Guam**	**19.37**	**36**	LR	LR	22 43 49.1	
	comp=Z,33nm,21.2s,baz=154,slow=33						
AS31	**Alice Springs**	**21.41**	**179**	P	**P**	**22 38 09.7**	**-0.3**
ASAR	**Alice Springs**	**21.41**	**179**	P	**P**	**22 38 11.5**	**+1.5**
	comp=Z,21nm,0.8s,baz=3.5,slow=12,SNR=76						
ASAR				S	**S**	**22 41 59.4**	**-7.1**
	comp=Z,0.7nm,0.7s,baz=354,slow=24,SNR=2.8						
ASAR				LR	LR	22 47 45.8	
	comp=Z,91nm,21.1s,baz=354,slow=40						
ASAR	**Alice Springs**	**21.41**	**179**	P	**P**	**22 38 10.1**	**+0.1**
PSA00	**Pilbara Seismi**	**23.36**	**213**	P	**P**	**22 38 30.1**	**-0.4**
PSA00				IAmb	IAmb	22 38 37.9	
	comp=Z,8.7nm,0.8s						
STKA	**Stephens Creek**	**30.59**	**166**	P	**P**	**22 39 36.8**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=326,slow=14,SNR=3.3						
STKA				LR	LR	22 53 21.4	
	comp=Z,78nm,20.4s,baz=20,slow=39						
ARMA	**Armidale**	**33.05**	**150**	P	**P**	**22 39 57.0**	**-0.5**
ARMA				IAmb	IAmb	22 40 11.2	
	comp=Z,20nm,1.3s						
KSRS	**Korea Array**	**39.71**	**353**	LR	LR	22 56 29.8	
	comp=Z,28nm,19.2s,baz=160,slow=35						
USRK	**Ussuriysk Ar.**	**46.14**	**359**	P	**P**	**22 41 46.2**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=156,slow=4.0,SNR=5.4						
USRK	**Ussuriysk Ar.**	**46.14**	**359**	P	**P**	**22 41 45.1**	**-1.0**
KLR	**Kul'dur**	**51.18**	**359**	P	**P**	**22 42 24.9**	**+0.1**
	comp=Z,2.2nm,0.6s,baz=269,slow=5.3,SNR=12						
BKZ	**Black Stump Fm**	**53.85**	**139**	P	**P**	**22 42 44.8**	**-0.1**
PETK	**Petropavlovsk-**	**58.72**	**17**	LR	LR	23 11 46.7	
	comp=Z,7.8nm,18.0s,baz=207,slow=39						
MK31	**Makanchi Array**	**66.12**	**324**	P	**P**	**22 44 09.5**	**+0.6**
MK31				IAmb	IAmb	22 44 10.2	
	comp=Z,1.5nm,0.7s						
MKAR	**Makanchi Array**	**66.12**	**324**	P	**P**	**22 44 10.0**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=114,slow=7.7,SNR=23						
MKAR	**Makanchi Array**	**66.12**	**324**	P	**P**	**22 44 09.6**	**+0.7**
MAKZ	**Makanchi**	**66.31**	**324**	P	**P**	**22 44 10.7**	**+0.5**
MAKZ				IAmb	IAmb	22 44 11.8	
	comp=Z,2.4nm,0.7s						
ZALV	**Zalesovo Beam**	**68.81**	**332**	P	**P**	**22 44 25.3**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=124,slow=7.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**68.81**	**332**	P	**P**	**22 44 25.1**	**-0.7**
KURK	**Kurchatov**	**70.22**	**327**	P	**P**	**22 44 34.9**	**+0.4**
KURK				IAmb	IAmb	22 44 35.9	
	comp=Z,3.3nm,0.8s						
VNDA	**Vanda**	**76.87**	**174**	P	**P**	**22 45 13.6**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=317,slow=6.1,SNR=7.5						
VNDA				LR	LR	23 18 26.2	
	comp=Z,33nm,18.2s,baz=358,slow=35						
VNDA	**Vanda**	**76.87**	**174**	P	**P**	**22 45 13.4**	**+0.1**
NRIK	**Noril'sk**	**77.72**	**345**	LR	LR	23 20 10.4	
	comp=Z,26nm,21.7s,baz=15,slow=36						
DHY	**Denali Highway**	**87.05**	**27**	P	**P**	**22 46 06.9**	**-0.2**
CCB	**Clear Creek Bu**	**87.15**	**25**	P	**P**	**22 46 06.6**	**-0.8**
CCB				IAmb	IAmb	22 46 07.2	
	comp=Z,2.2nm,0.6s						
KLU	**Klutina**	**87.44**	**28**	P	**P**	**22 46 08.9**	**0.0**
ILAR	**Eielson Array**	**87.56**	**25**	P	**P**	**22 46 08.2**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=253,slow=4.9,SNR=14						
QSPA	**South Pole Qui**	**87.81**	**180**	P	**P**	**22 46 10.8**	**+0.1**
QSPA				IAmb	IAmb	22 46 26.6	
	comp=Z,1.2nm,1.0s						
BMAR	**Burnt Mountain**	**88.91**	**22**	P	**P**	**22 46 15.8**	**0.0**
BRTR	**Keskin Array B**	**98.82**	**310**	LR	LR	23 37 54.3	
	comp=Z,8.1nm,18.2s,baz=126,slow=39						

*DJA **18**22:41:49.0±0.6,1°N±4°×12°7E±°,h227km±7km,M4.1/11,*
mB4.2/1,mb4.0/2,MLv4.1/11,Mw(mB)3.2/1
*IDC **18**22:41:59.5±1.4,1.62N×126.37E,h0km,mb3.7/4,*
mb1 3.7/5,mb1mx3.4/47,mbtmp3.6/5,ML2.9/1,Error
ellipse: s-maj=103.9km s-min=19.7km az=70.0
ISC 18 22:42:05.5±0.9,1.33N±0.08×126.15E±0.06,h54km,n12,
σ2s65/13,mb3.6/4,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**114**	P	**Pn**	**22 42 26.9**	**-1.0**
TNTI				S	**Sn**	**22 42 43.3**	**-1.4**
KMSI	**Cibinong**	**2.29**	**251**	P	**Pn**	**22 42 39.7**	**-1.2**
SGSI	**Sangihe**	**2.42**	**345**	P	**Pn**	**22 42 41.0**	**-1.7**
GTOI	**Gorontalo**	**3.21**	**258**	P	**Pn**	**22 42 57.0**	**+3.5**
LUWI	**Luwuk**	**4.11**	**235**	P	**Pn**	**22 43 02.0**	**-3.9**
MRSI	**Marisa**	**4.29**	**259**	P	**Pn**	**22 43 06.5**	**-1.8**
	0.2nm30nm,0.5s						
APSI	**Ampana**	**5.02**	**244**	P	**Pn**	**22 43 14.7**	**-3.6**
FITZ	**Fitzroy Crossi**	**19.31**	**181**	P	**Pn**	**22 46 28.7**	**+1.0**
	0.0nm,0.3s,baz=27,slow=14,SNR=1.2						
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**22 47 03.5**	**+1.5**
	1.7nm,0.6s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	**25.97**	**164**	P	**P**	**22 47 37.2**	**+3.9**
	0.8nm,0.6s,baz=353,slow=16,SNR=7.4						
SONM	**Songino Array**	**49.38**	**343**	P	**P**	**22 50 49.0**	**-0.8**
	0.3nm,0.5s,baz=139,slow=9.5,SNR=0.8						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**22 52 01.8**	**+0.6**
	0.6nm,0.4s,baz=121,slow=8.3,SNR=23						

IDC 18 22:50:11.6±1.9,2.80S×142.73E,h0km,mb3.4/3,
mb1 3.8/4,mb1mx3.4/37,mbtmp3.5/4,ML3.5/1,MS3.2/2,
Ms1 3.2/2,ms1mx2.5/24,Error ellipse: s-maj=106.0km
s-min=19.2km az=115.0,Near north coast of New
Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.90**	**146**	LR	LR	22 54 57.7	
	comp=Z,46nm,20.5s,baz=343,slow=36						
WRA	**Warramunga Arr**	**18.91**	**205**	P	P	22 54 33.1	-0.9
	0.1nm,0.3s,baz=26,slow=12,SNR=11						
WRA				S	S	22 58 09.7	-0.3
	0.1nm,0.3s,baz=32,slow=26,SNR=1.9						
ASAR	**Alice Springs**	**22.43**	**202**	P	P	22 55 11.1	-1.2
	0.5nm,0.6s,baz=31,slow=8.7,SNR=5.1						
FITZ	**Fitzroy Crossi**	**22.63**	**227**	P	P	22 55 12.6	-1.7
	1.5nm,0.7s,baz=56,slow=13,SNR=4.3						
DZM	**Mont Dzumac**	**29.96**	**132**	LR	LR	23 06 12.7	
	comp=Z,136nm,18.1s,baz=87,slow=32						
H11N1	**WAKE ISLAND Hy**	**32.61**	**46**	T	T	23 32 05.7	
	baz=230,slow=76,SNR=18						
H11N2	**WAKE ISLAND Hy**	**32.63**	**46**	T	T	23 32 08.0	
	baz=230,slow=76,SNR=21						
H11N3	**WAKE ISLAND Hy**	**32.63**	**46**	T	T	23 32 07.5	
	baz=230,slow=76,SNR=14						
ILAR	**Eielson Array**	**84.27**	**24**	P	P	23 02 46.2	+1.2
	0.4nm,0.6s,baz=248,slow=6.4,SNR=1.2						

*IDC **18**23:00:32.1±1.2,23.55S×179.92E,h525km±10km,*
mb3.8/18,mb1 3.9/19,mb1mx3.7/43,mbtmp4.7/19,Error
ellipse: s-maj=15.6km s-min=13.2km az=72.0
*NEIC **18**23:00:32.3±1.3,23.67S±0.09×179.91E±0.08,h535km±6km,*
mb4.6/51,Error ellipse: s-maj=15.3km s-min=6.8km
az=140.0
ISC 18 23:00:32.6±0.4,23.69S±0.05×179.91E±0.07,h535km,
n156,σ1s38/172,mb4.5/42,21C-3D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**5.86**	**161**	P	**P**	**23 02 10.3**	**+1.3**
RAO	**Raoul Island**	**5.87**	**161**	P	**P**	**23 02 10.2**	**+1.1**
	227nm,0.3s,baz=119,slow=19,SNR=9.3						
RAO	**Raoul Island**	**5.87**	**161**	P	**P**	**23 02 10.0**	**+0.9**
GLKZ	**Green Lake**	**5.88**	**161**	P	**P**	**23 02 09.1**	**0.0**
GLKZ				S	**S**	**23 03 28.6**	**+0.3**
MSVF	**Nonsavu**	**6.18**	**343**	P	**P**	**23 02 11.1**	**-1.3**
DZM	**Mont Dzumac**	**12.52**	**275**	P	**P**	**23 03 18.0**	**+1.4**
	1.0nm,0.3s,baz=67,slow=23,SNR=13						
DZM	**Mont Dzumac**	**12.52**	**275**	P	**P**	**23 03 18.5**	**+1.9**
KUZ	**Kuaotunu**	**13.50**	**195**	P	P	23 03 32.8	+6.4
MBAZ	**Motutapu North**	**13.73**	**197**	P	**P**	**23 03 31.6**	**+2.8**
MXZ	**Matakaoa Point**	**13.89**	**185**	P	**P**	**23 03 31.0**	**+0.5**
MXZ	**Matakaoa Point**	**13.89**	**185**	P	**P**	**23 03 30.9**	**+0.3**
WTAZ	**Waiatarua**	**13.97**	**198**	P	P	23 03 38.3	+6.9
AWAZ	**Awhitu Peninsu**	**14.08**	**198**	P	**P**	**23 03 33.6**	**+1.1**
HAZ	**Te Kaha**	**14.14**	**187**	P	**P**	**23 03 33.3**	**+0.2**
HAZ				S	**S**	**23 05 59.0**	**-2.9**
WMGZ	**Waiomatatini S**	**14.14**	**185**	P	**P**	**23 03 34.5**	**+1.4**
WMGZ				S	**S**	**23 05 57.5**	**-4.4**
RUGZ	**Raukumara Rang**	**14.35**	**187**	P	**P**	**23 03 35.9**	**+0.4**
RUGZ				S	**S**	**23 06 00.7**	**-5.6**
PUZ	**Puketiti**	**14.40**	**185**	P	**P**	**23 03 35.7**	**-0.2**
TWGZ	**Tauwhareparae**	**14.53**	**186**	P	**P**	**23 03 37.0**	**-0.2**
TWGZ				S	**S**	**23 06 10.1**	**+0.5**
URZ	**Urewera**	**14.71**	**189**	P	**P**	**23 03 37.7**	**-1.4**
	18nm,0.3s,baz=50,slow=1.6,SNR=53						
URZ				S	**S**	**23 06 07.6**	**-5.3**
	1.3nm,0.3s,baz=175,slow=23,SNR=3.4						
URZ	**Urewera**	**14.71**	**189**	P	**P**	**23 03 37.9**	**-1.2**
URZ				S	**S**	**23 06 09.3**	**-3.7**
URZ	**Urewera**	**14.71**	**189**	P	**P**	**23 03 38.2**	**-0.9**
CNGZ	**Carnagh Statio**	**14.81**	**185**	P	**P**	**23 03 40.8**	**+0.7**
BKZ	**Black Stump Fm**	**15.70**	**190**	P	**P**	**23 03 48.1**	**-1.2**
BKZ				IAmb	IAmb	23 03 56.9	
	comp=Z,30nm,1.1s						
KHZ	**Kahutara**	**19.41**	**194**	P	**P**	**23 04 22.9**	**-0.9**
MLZ	**Mavora Lakes**	**23.65**	**201**	P	**P**	**23 05 04.1**	**+2.2**
MLZ				IAmb	IAmb	23 05 16.1	
	comp=Z,43nm,1.3s						
ARMA	**Armidale**	**26.02**	**249**	P	**P**	**23 05 25.3**	**+2.0**
EIDS	**Eidsvold**	**26.26**	**260**	P	**P**	**23 05 24.9**	**-0.5**
EIDS				IAmb	IAmb	23 05 26.8	
	comp=Z,19nm,1.2s						
CTA	**Charters Tower**	**31.39**	**270**	P	**P**	**23 06 10.8**	**+0.8**
	comp=Z,38nm,0.4s,baz=94,slow=11,SNR=105						
CTAO	**Charters Tower**	**31.39**	**270**	P	**P**	**23 06 10.7**	**+0.8**
KRVT	**Keravat (AS076**	**33.09**	**301**	P	**P**	**23 06 23.6**	**-0.9**
	comp=Z,27nm,0.3s,baz=166,slow=5.9,SNR=4.5						
PMG	**Port Moresby**	**34.35**	**289**	P	**P**	**23 06 34.6**	**-0.4**
	comp=Z,41nm,0.8s,baz=103,slow=4.9,SNR=12						
PMG	**Port Moresby**	**34.35**	**289**	P	**P**	**23 06 34.7**	**-0.3**
STKA	**Stephens Creek**	**34.73**	**248**	P	**P**	**23 06 38.4**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=78,slow=9.7,SNR=6.4						
STKA	**Stephens Creek**	**34.73**	**248**	P	**P**	**23 06 38.5**	**+0.5**
COEN	**Coen**	**36.00**	**279**	P	**P**	**23 06 49.7**	**+0.8**
PATS	**Pohnpei**	**36.96**	**323**	P	**P**	**23 06 56.4**	**-0.3**
PATS				IAmb	IAmb	23 07 15.8	
	comp=Z,42nm,1.3s						
BBOO	**Buckleboo**	**39.45**	**247**	P	**P**	**23 07 16.4**	**-0.4**
BBOO				IAmb	IAmb	23 07 16.7	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**41.99**	**260**	P	**P**	**23 07 37.3**	**+0.1**
ASAR	**Alice Springs**	**41.99**	**260**	P	**P**	**23 07 37.2**	**+0.1**
	comp=Z,7.4nm,0.5s,baz=97,slow=7.8,SNR=90						
ASAR				pP	**pP**	**23 09 12.2**	**+0.7**
	comp=Z,2.1nm,0.9s,baz=85,slow=7.8,SNR=3.4						
ASAR				ScP	**ScP**	**23 12 22.6**	**+3.1**
	comp=Z,4.0nm,0.7s,baz=106,slow=4.0,SNR=19						
ASAR				S	**S**	**23 13 16.3**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=116,slow=14,SNR=4.1						
ASAR	**Alice Springs**	**41.99**	**260**	P	**P**	**23 07 36.9**	**-0.3**
WR0	**Warramunga Arr**	**42.15**	**266**	P	**P**	**23 07 37.9**	**-0.5**
WB2	**Warramunga Arr**	**42.33**	**266**	P	**P**	**23 07 39.3**	**-0.5**
WB2				IAmb	IAmb	23 07 40.0	
	comp=Z,15nm,0.7s						
WB0	**Warramunga Arr**	**42.33**	**266**	P	**P**	**23 07 39.3**	**-0.6**
WB0				IAmb	IAmb	23 07 40.0	
	comp=Z,18nm,0.7s						
WRAB	**Tennant Creek**	**42.33**	**266**	P	**P**	**23 07 39.0**	**-0.8**
WRAB				IAmb	IAmb	23 07 40.0	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**42.34**	**266**	P	**P**	**23 07 39.4**	**-0.6**
	comp=Z,15nm,0.6s,baz=103,slow=8.3,SNR=108						
WRA				ScP	**ScP**	**23 12 24.4**	**+3.4**
	comp=Z,2.4nm,0.9s,baz=101,slow=3.9,SNR=12						
WRA				S	**S**	**23 13 17.6**	**-5.0**
	comp=Z,1.1nm,0.7s,baz=100,slow=13,SNR=6.3						
WRA	**Warramunga Arr**	**42.34**	**266**	P	**P**	**23 07 39.4**	**-0.6**
FORT	**Forrest**	**46.31**	**249**	P	**P**	**23 08 10.0**	**-0.3**
MTN	**Manton Dam**	**47.36**	**274**	P	**P**	**23 08 17.9**	**-0.6**
KNRA	**Kununurra**	**48.61**	**270**	P	**P**	**23 08 27.7**	**-0.1**
KNRA				IAmb	IAmb	23 08 28.5	
	comp=Z,39nm,1.2s						
HPAH	**Hawaii Prepara**	**49.54**	**31**	P	**P**	**23 08 34.1**	**-0.5**
FAKI	**Fak Fak**	**50.45**	**287**	P	**P**	**23 08 40.0**	**-1.4**
FAKI				IAmb	IAmb	23 08 41.4	
	comp=Z,20nm,1.3s						
GUMO	**Guam**	**50.47**	**314**	P	**P**	**23 08 40.8**	**-0.6**
	comp=Z,29nm,0.6s,baz=164,slow=13,SNR=2.3						
GUMO	**Guam**	**50.47**	**314**	P	**P**	**23 08 41.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**50.76**	**265**	P	**P**	**23 08 43.7**	**+0.1**
VNDA	**Vanda**	**54.58**	**185**	P	**P**	**23 09 11.7**	**+1.8**
	comp=Z,1.0nm,0.7s,baz=349,slow=4.7,SNR=9.3						
VNDA				ScP	**ScP**	**23 13 12.7**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=330,slow=4.0,SNR=8.8						
VNDA	**Vanda**	**54.58**	**185**	P	**P**	**23 09 11.8**	**+1.8**
SOEI	**Soe**	**54.75**	**275**	P	**P**	**23 09 12.1**	**-0.3**
SOEI				IAmb	IAmb	23 09 23.4	
	comp=Z,26nm,0.8s						
PSA00	**Pilbara Seismi**	**55.12**	**260**	P	**P**	**23 09 14.1**	**-0.6**
MORW	**Morawa**	**56.87**	**250**	P	**P**	**23 09 26.4**	**-0.3**
JCJ	**Chichijima**	**62.27**	**322**	P	**P**	**23 10 01.9**	**-0.6**
TOLI2	**Tolitoli**	**62.45**	**285**	P	**P**	**23 10 03.1**	**-0.9**
TOLI2				IAmb	IAmb	23 10 05.4	
	comp=Z,14nm,0.7s						
QSPA	**South Pole Qui**	**66.39**	**180**	P	**P**	**23 10 29.9**	**+1.6**
QSPA				IAmb	IAmb	23 10 30.5	
	comp=Z,10nm,0.8s						
UGM	**Wanagama**	**68.02**	**271**	P	**P**	**23 10 39.0**	**-0.1**
KKM	**Kota Kinabalu**	**68.77**	**287**	P	**P**	**23 10 43.8**	**+0.1**
KKM				IAmb	IAmb	23 10 54.9	
	comp=Z,22nm,1.1s						
MJAR	**Matsushiro Arr**	**71.68**	**326**	P	**P**	**23 11 00.1**	**-0.3**
	comp=Z,5.6nm,0.8s,baz=157,slow=5.1,SNR=13						
MJAR	**Matsushiro Arr**	**71.68**	**326**	P	**P**	**23 11 00.3**	**0.0**
MAT	**Matsushiro**	**71.68**	**326**	P	**P**	**23 10 59.9**	**-0.5**
JMN	**Monobe**	**71.97**	**321**	P	**P**	**23 11 03.1**	**+1.0**
JMN				IAmb	IAmb	23 11 09.6	
	comp=Z,21nm,1.1s						
JWT	**Wachi**	**72.24**	**323**	P	**P**	**23 11 03.9**	**+0.3**
JSU	**Suzuyama**	**72.47**	**317**	P	**P**	**23 11 05.0**	**-0.1**
JSU				IAmb	IAmb	23 11 05.9	
	comp=Z,16nm,0.7s						
JHS	**Saijyo**	**73.32**	**321**	P	**P**	**23 11 09.9**	**0.0**
JHS				IAmb	IAmb	23 11 11.1	
	comp=Z,26nm,1.2s						
JNU	**Nakatsue**	**73.32**	**319**	P	**P**	**23 11 08.6**	**-1.3**
	comp=Z,6.4nm,0.7s,baz=124,slow=6.1,SNR=2.0						
JNU	**Nakatsue**	**73.32**	**319**	P	**P**	**23 11 09.0**	**-0.9**
JNU				IAmb	IAmb	23 11 15.8	
	comp=Z,31nm,1.2s						
TWG	**Pinlang**	**73.53**	**305**	P	**P**	**23 11 09.3**	**-2.0**
SSLB	**Suanglung**	**74.17**	**305**	P	**P**	**23 11 14.9**	**0.0**
SSLB				IAmb	IAmb	23 11 15.0	
	comp=Z,19nm,0.8s						
ADK	**Adak**	**75.31**	**2**	P	**P**	**23 11 19.9**	**-0.7**
BELA	**Belgrano 2**	**76.65**	**173**	P	**P**	**23 11 28.1**	**+0.3**
MAW	**Mawson**	**77.91**	**200**	P	**P**	**23 11 35.7**	**+0.9**
	comp=Z,4.8nm,1.1s,baz=120,slow=6.2,SNR=4.2						
MAW	**Mawson**	**77.91**	**200**	P	**P**	**23 11 34.5**	**-0.3**
KSRS	**Korea Array**	**79.04**	**320**	P	**P**	**23 11 36.6**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=132,slow=5.6,SNR=9.7						
UNV	**Unalaska Valle**	**78.11**	**8**	P	**P**	**23 11 35.1**	**-0.8**
PEA0B	**Petropavlovsk-**	**78.88**	**347**	P	**P**	**23 11 40.2**	**+0.2**
PEA0B				IAmb	IAmb	23 11 53.5	
	comp=Z,36nm,1.4s						
PETK	**Petropavlovsk-**	**78.88**	**347**	P	**P**	**23 11 40.0**	**-0.1**
	comp=Z,5.4nm,0.7s,baz=126,slow=7.7,SNR=7.4						
PETK	**Petropavlovsk-**	**78.88**	**347**	P	**P**	**23 11 39.9**	**-0.1**
USRK	**Ussuriysk Ar.**	**80.55**	**327**	P	**P**	**23 11 49.4**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=161,slow=4.6,SNR=5.5						
USRK	**Ussuriysk Ar.**	**80.55**	**327**	P	**P**	**23 11 49.7**	**+0.7**
IPM	**Ipoh**	**81.65**	**279**	P	**P**	**23 11 55.2**	**-0.3**
IPM				IAmb	IAmb	23 11 56.3	
	comp=Z,9.9nm,0.7s						
MDJ	**Mudanjiang**	**82.05**	**326**	P	**P**	**23 11 57.0**	**+0.3**
MDJ				IAmb	IAmb	23 11 57.8	
	comp=Z,7.5nm,0.6s						
KLR	**Kul'dur**	**84.31**	**331**	P	**P**	**23 12 08.5**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=228,slow=1.4,SNR=5.2						
SNAA	**Sanae**	**84.87**	**179**	P	**P**	**23 12 10.0**	**-0.5**
SNAA	**Sanae**	**84.87**	**179**	P	**P**	**23 12 10.1**	**-0.5**
VNA3	**Neumayer Olymp**	**85.08**	**177**	P	**P**	**23 12 11.2**	**-0.3**
VNA2	**Neumayer--Wätz**	**85.50**	**178**	P	**P**	**23 12 13.3**	**-0.2**
	baz=188,slow=4.0						
XAN	**Xi'an**	**88.55**	**308**	P	**P**	**23 12 29.4**	**+0.9**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
XAN	**Xi'an**	**88.55**	**308**	P	**P**	**23 12 29.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**89.38**	**290**	P	**P**	**23 12 34.2**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=135,slow=3.5,SNR=10						
CMAR	**Chiang Mai Arr**	**89.38**	**290**	P	**P**	**23 12 33.8**	**+1.1**
TXAR	**Lajitas Array**	**90.39**	**58**	P	**P**	**23 12 38.4**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=215,slow=6.0,SNR=9.9						
ILAR	**Eielson Array**	**91.85**	**14**	P	**P**	**23 12 41.8**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=223,slow=5.7,SNR=6.0						
BW06	**Boulder Array**	**92.60**	**44**	P	**P**	**23 12 47.5**	**+0.3**
BW06				IAmb	IAmb	23 13 04.3	
	comp=Z,4.1nm,0.7s						
PD31	**Pinedale Array**	**92.60**	**44**	P	**P**	**23 12 46.3**	**-1.0**
PD31				IAmb	IAmb	23

50nm,0.1s
IUG ⇑*iS* **Sb** **23 40 16.9 +2.4**
506nm,0.3s
IUG luzhnay 0.32 81 P **Pb** **23 40 09.1 +0.1**
45nm,0.1s
IUG S **Sb** **23 40 16.6 +2.1**
506nm,0.3s
KK31 Karatay Array 1.21 33 P **Pn** **23 40 23.0 -1.3**
3.6nm,0.2s,baz=227,slow=17,SNR=134
KK31 ⇓S **Sn** **23 40 39.8 -1.1**
24nm,0.3s,baz=224,slow=25,SNR=6.1
DZA Taraz 1.50 58 *eP* **Pg** **23 40 29.8 +0.1**
20nm,0.1s
DZA *eS* **Sg** **23 40 51.8 +2.7**
230nm,0.3s
BTK Batken 2.23 155 ⇓*iP* **Pg** **23 40 44.4 +0.7**
baz=54
BTK ⇓*iS* **Sg** **23 41 13.6 +0.9**
baz=54
ARSB Arslanbob 2.64 106 ⇓*iP* **Pg** **23 40 51.0 -0.5**
baz=4.0
ARSB ⇓*iS* **Sb** **23 41 24.7 +3.3**
baz=4.0
MRKS Merke 2.76 75 *eP* **Pb** **23 40 51.8 +1.2**
4.1nm,0.3s
MRKS *eS* **Sg** **23 41 29.9 +0.6**
74nm,0.5s
MRKS Merke 2.76 75 Pg **Pb** **23 40 51.8 +1.2**
4.1nm,0.3s
MRKS Lg Lg 23 41 29.9
28nm,0.5s
OHH Osh 2.87 122 ⇓*iP* **Pb** **23 40 53.6 +1.2**
baz=21
OHH ⇓*iS* **Sb** **23 41 29.1 +1.4**
baz=21
DRK Karamyk 3.10 147 ⇓*iP* **Pb** **23 40 56.9 +0.3**
baz=46
DRK ⇓*iS* **Sb** **23 41 35.0 +0.2**
baz=46
ARLS Aral 3.52 92 ⇓*iP* **Pb** **23 41 03.6 -0.1**
baz=91
ARLS ⇓*iS* **Sb** **23 41 46.1 -0.7**
baz=91
SFK Sufi-Kurgan 3.61 124 ⇑*iP* **Pb** **23 41 04.0 -1.2**
baz=23
SFK ⇑*iS* **Sb** **23 41 47.6 -1.7**
baz=23
SGDS Sogindy 3.94 68 Pg **Pb** **23 41 12.6 +1.9**
2.4nm,0.3s
SGDS Lg Lg 23 42 05.4
10nm,0.3s
BTLS Baital 4.36 46 *eP* **Pg** **23 41 22.7 -1.7**
2.1nm,0.3s
BTLS *eS* **Sg** **23 42 22.4 +1.4**
6.7nm,0.4s
BTLS Baital 4.36 46 Pg **Pg** **23 41 22.7 -1.7**
2.1nm,0.3s
BTLS Lg Lg 23 42 22.4
6.7nm,0.4s
KST Kastek 4.79 77 *eP* **Pb** **23 41 28.2 +3.0**
0.9nm,0.2s
KST *eS* **Sg** **23 42 32.3 -2.3**
7.7nm,0.6s
KST Kastek 4.79 77 Pg **Pb** **23 41 28.2 +3.0**
0.9nm,0.2s
KST Lg Lg 23 42 32.3
8.3nm,0.6s
KUU Kurty 5.25 68 *eP* **Pg** **23 41 38.3 -3.2**
1.0nm,0.7s
KUU *eS* **Sg** **23 42 48.8 -0.7**
7.8nm,0.3s
KUU Kurty 5.25 68 Pg **Pg** **23 41 38.3 -3.2**
1.2nm,0.4s
KUU Lg Lg 23 42 48.8
7.9nm,0.6s
TNSS Tian-Shan 5.50 78 *eP* **Pb** **23 41 41.6 +4.0**
1.0nm,0.4s
TNSS *eS* **Sg** **23 42 55.2 -2.3**
4.6nm,0.6s
TNSS Tian-Shan 5.50 78 Pg **Pb** **23 41 41.6 +4.0**
0.4nm,0.1s
TNSS Lg Lg 23 42 55.2
3.8nm,0.6s

*IDC **18** 23:40:37.1±0.5,48.˚07S×32.˚03E, h0km, mb4.3/17, mb1 4.4/18, mb1mx4.3/37, mbtmp4.3/18, ML4.1/1, MS4.0/22, Ms1 4.0/22, ms1mx3.8/34, Error ellipse: s-maj=21.3km s-min=12.8km az=68.0*
*NEIC **18** 23:40:39.2±1.8, 48.˚2S±0.˚1×31.˚9E±0.˚2, h10km±1km, mb4.9/40, Error ellipse: s-maj=21.3km s-min=17.4km az=78.0*
*GCMT **18** 23:40:40.2±0.3, 48.˚20S±0.˚02×31.˚64E±0.˚05, h20km±1km, MW5.0/63, Moment Tensor Solution. s20,c25; s63,c85; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.33±.26; Mθθ2.15±.17; Mϕϕ0.18±.16; Mrθ2.27±.35; Mrϕ1.98±.11; Mθϕ0.23±.38; Best double couple: Mo3.71800×10¹⁶ NP1:ϕs33.00000°, δ32.00000°, λ-130.00000°. NP2: ϕs258.00000°, δ66.00000°, λ-68.00000°. Principal axes: T 4.0570, Plg18.0000°, Azm332.0000°; N -0.6740, Plg20.0000°, Azm69.0000°; P -3.3800, Plg62.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 23:40:39.6±0.4, 48.˚13S±0.˚07×31.˚8E±0.˚1, h12km, n91, σ0s96/79, mb4.7/30, MS4.0/21, 3D, South of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**17.81**	**328**	P	**Pn**	**23 44 46.0**	**-1.4**
	0.8nm,0.3s,baz=142,slow=12,SNR=20						
SUR				LR	LR	23 50 20.6	
	comp=Z,703nm,21.0s,baz=188,slow=33						
SUR	**Sutherland**	**17.81**	**328**		**Pn**	**23 44 47.1**	**-0.3**
BOSA	**Boshof**	**20.14**	**343**	P	**P**	**23 45 13.3**	**-0.3**
	20nm,0.6s,baz=172,slow=11,SNR=25						
BOSA				LR	LR	23 51 32.6	
	comp=Z,522nm,20.9s,baz=158,slow=33						
BOSA	**Boshof**	**20.14**	**343**	P	**P**	**23 45 13.0**	**-0.6**
BOSA				IAmb	IAmb	23 45 14.6	
	comp=Z,28nm,0.9s						
SYO	**Syowa Base**	**21.29**	**172**	⇓*eP*	**P**	**23 45 24.4**	**-1.2**
SYO	**Syowa Base**	**21.29**	**172**	⇓*ePn*	**P**	**23 45 27.1**	**+1.5**
SYO	**Syowa Base**	**21.29**	**172**	⇓*ipP*	pP	23 45 30.6	+2.8
LBTB	**Lobatse**	**23.59**	**346**	P	**P**	**23 45 48.9**	**-1.3**
	comp=Z,9.1nm,0.6s,baz=168,slow=11,SNR=19						
LBTB				LR	LR	23 53 46.4	
	comp=Z,347nm,18.9s,baz=176,slow=34						
LBTB	**Lobatse**	**23.59**	**346**	P	**P**	**23 45 49.6**	**-0.6**
LBTB				IAmb	IAmb	23 45 59.0	
	comp=Z,33nm,1.3s						
MAW	**Mawson**	**25.08**	**152**	P	**P**	**23 46 03.8**	**+0.3**
	comp=Z,13nm,1.0s,baz=281,slow=12,SNR=11						
MAW				LR	LR	23 53 32.8	
	comp=Z,267nm,21.3s,baz=266,slow=31						
MAW	**Mawson**	**25.08**	**152**	P	**P**	**23 46 04.0**	**+0.5**
MATP	**Matopo**	**27.77**	**353**	P	**P**	**23 46 27.0**	**-1.3**
	comp=Z,3.7nm,0.7s,baz=186,slow=12,SNR=9.3						
MATP				LR	LR	23 55 50.7	
	comp=Z,512nm,20.3s,baz=174,slow=33						
SNAA	**Sanae**	**28.53**	**202**	P	**P**	**23 46 34.5**	**-0.1**
SNAA	**Sanae**	**28.53**	**202**	P	**P**	**23 46 34.1**	**-0.5**
	comp=Z,1.5nm,1.0s,baz=38,slow=21,SNR=6.0						
SNAA				LR	LR	23 55 41.0	
	comp=Z,278nm,19.8s,baz=28,slow=32						
SNAA	**Sanae**	**28.53**	**202**	P	**P**	**23 46 34.2**	**-0.5**
VNA2	**Neumayer--Watz**	**29.34**	**205**	P	**P**	**23 46 45.7**	**+4.0**
	baz=65,slow=9.0						
TSUM	**Tsumeb**	**31.09**	**333**	P	**P**	**23 46 57.6**	**-0.1**
TSUM				IAmb	IAmb	23 46 59.2	
	comp=Z,32nm,1.2s						
ABPO	**Ambohimpanom**	**31.62**	**29**	P	**P**	**23 47 04.4**	**+1.9**
ABPO				IAmb	IAmb	23 47 14.3	
	comp=Z,10nm,1.2s						
LSZ	**Lusaka**	**32.90**	**354**	P	**P**	**23 47 13.8**	**+0.2**
LSZ				IAmb	IAmb	23 47 14.5	
	comp=Z,23nm,1.5s						
QSPA	**South Pole Qui**	**42.09**	**180**	P	**P**	**23 48 30.3**	**-0.8**
	comp=Z,16nm,0.9s,baz=258,slow=4.1,SNR=19						
QSPA	**South Pole Qui**	**42.09**	**180**	P	**P**	**23 48 30.5**	**-0.6**
QSPA				IAmb	IAmb	23 48 41.2	
	comp=Z,26nm,0.9s						
KMBO	**Kilima Mbogo**	**47.05**	**7**	P	**P**	**23 49 09.8**	**-1.5**
	comp=Z,1.5nm,0.9s,baz=229,slow=17,SNR=2.3						
KMBO				LR	LR	00 07 33.5	
	comp=Z,297nm,18.3s,baz=102,slow=34						
KMBO	**Kilima Mbogo**	**47.05**	**7**	P	**P**	**23 49 12.1**	**+0.8**
VNDA	**Vanda**	**50.88**	**168**	P	**P**	**23 49 39.7**	**0.0**
	comp=Z,1.5nm,0.7s,baz=248,slow=8.0,SNR=14						
VNDA				LR	LR	00 09 53.0	
	comp=Z,329nm,21.2s,baz=212,slow=34						
VNDA	**Vanda**	**50.88**	**168**	P	**P**	**23 49 39.7**	**0.0**
DBIC	**Dimbokro**	**63.39**	**318**	P	**P**	**23 51 08.2**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=162,slow=6.4,SNR=2.0						
DBIC				LR	LR	00 13 54.6	
	comp=Z,80nm,21.5s,baz=144,slow=32						
DBIC	**Dimbokro**	**63.39**	**318**	P	**P**	**23 51 07.8**	**-1.0**
DBIC				IAmb	IAmb	23 51 20.4	
	comp=Z,8.1nm,1.0s						
NWAO	**Narrogin (SRO)**	**63.46**	**110**	P	**P**	**23 51 08.1**	**-1.2**
TOA0	**Torodi Ar. Sit**	**66.63**	**328**	P	**P**	**23 51 31.0**	**+1.1**
TOA0				IAmb	IAmb	23 51 43.7	
	comp=Z,15nm,1.4s						
TORD	**Torodi Ar. Bea**	**66.63**	**328**	P	**P**	**23 51 30.2**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=163,slow=6.9,SNR=13						
TORD				LR	LR	00 19 02.8	
	comp=Z,73nm,19.9s,baz=220,slow=35						
TORD	**Torodi Ar. Bea**	**66.63**	**328**	P	**P**	**23 51 30.1**	**+0.2**
CPUP	**Villa Florida**	**70.35**	**252**	P	**P**	**23 51 53.2**	**0.0**
	comp=Z,6.7nm,0.9s,baz=125,slow=5.7,SNR=11						
CPUP	**Villa Florida**	**70.35**	**252**	P	**P**	**23 51 53.2**	**0.0**
CPUP				IAmb	IAmb	23 51 54.5	
	comp=Z,16nm,1.2s						
BDFB	**Brasilia**	**71.78**	**267**	P	**P**	**23 52 03.0**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=135,slow=7.1,SNR=2.0						
PEL	**Peldehue**	**73.61**	**239**	P	**P**	**23 52 12.0**	**-0.7**
MT02	**Curacav**	**73.78**	**238**	P	**P**	**23 52 13.3**	**-0.3**
MT02				IAmb	IAmb	23 52 14.4	
	comp=Z,14nm,0.9s						
VA03	**San Esteban**	**73.81**	**239**	P	**P**	**23 52 13.8**	**-0.2**
VA03				IAmb	IAmb	23 52 15.1	
	comp=Z,20nm,1.1s						
CO02	**Combarbal**	**75.21**	**240**	P	**P**	**23 52 22.1**	**-0.1**
CO03	**El Pedregal**	**75.30**	**240**	P	**P**	**23 52 22.8**	**+0.2**
CO03				IAmb	IAmb	23 52 23.7	
	comp=Z,12nm,0.9s						
CO01	**Juntas del Tor**	**75.58**	**241**	P	**P**	**23 52 25.7**	**+1.2**
UOSS	**Minazif**	**75.96**	**23**	P	**P**	**23 52 27.0**	**+0.9**
UOSS				IAmb	IAmb	23 52 27.9	
	comp=Z,13nm,1.5s						
AC05	**El Transito**	**76.53**	**242**	P	**P**	**23 52 29.2**	**-0.5**
AC05				IAmb	IAmb	23 52 31.0	
	comp=Z,11nm,0.8s						
LCO	**Las Campanas**	**76.65**	**241**	P	**P**	**23 52 31.0**	**+0.4**
SMRI	**Semarang**	**77.18**	**86**	P	**P**	**23 52 34.4**	**+1.0**
STKA	**Stephens Creek**	**78.61**	**125**	P	**P**	**23 52 40.3**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=25,slow=9.3,SNR=3.7						
STKA				LR	LR	00 20 01.1	
	comp=Z,89nm,20.4s,baz=206,slow=30						
STKA	**Stephens Creek**	**78.61**	**125**	P	**P**	**23 52 41.8**	**+0.7**
FITZ	**Fitzroy Crossi**	**79.23**	**105**	P	**P**	**23 52 43.4**	**-1.3**
	comp=Z,1.5nm,0.7s,baz=90,slow=5.4,SNR=3.2						
FITZ				LR	LR	00 20 44.6	
	comp=Z,57nm,20.1s,baz=232,slow=30						
FITZ	**Fitzroy Crossi**	**79.23**	**105**	P	**P**	**23 52 43.9**	**-0.8**
ASAR	**Alice Springs**	**80.34**	**115**	P	**P**	**23 52 49.9**	**-0.9**
	comp=Z,2.3nm,0.8s,baz=217,slow=5.0,SNR=18						
ASAR				LR	LR	00 21 46.8	
	comp=Z,63nm,21.8s,baz=201,slow=31						
ASAR	**Alice Springs**	**80.34**	**115**	P	**P**	**23 52 50.0**	**-0.7**
AS31	**Alice Springs**	**80.34**	**115**	P	**P**	**23 52 50.0**	**-0.8**
PB06	**IPOC Station P**	**80.64**	**247**	P	**P**	**23 52 53.2**	**+0.6**
PB06				IAmb	IAmb	23 52 54.3	
	comp=Z,16nm,0.8s						
PB07	**IPOC Station P**	**81.56**	**247**	P	**P**	**23 52 57.1**	**-0.4**
PB07				IAmb	IAmb	23 52 59.2	
	comp=Z,15nm,0.9s						
RPZ	**Rata Peaks**	**81.76**	**151**	LR	LR	00 27 26.5	
	comp=Z,78nm,18.5s,baz=208,slow=34						
PB11	**IPOC Station P**	**82.89**	**248**	P	**P**	**23 53 04.5**	**+0.1**
PSGCX	**Pisagua**	**83.30**	**248**	P	**P**	**23 53 06.2**	**-0.3**
MNMC	**Minye Minye**	**83.32**	**249**	P	**P**	**23 53 08.2**	**+1.4**
WRA	**Warramunga Arr**	**83.38**	**112**	P	**P**	**23 53 05.4**	**-1.4**
	comp=Z,2.3nm,0.9s,baz=219,slow=4.0,SNR=11						
WRA				LR	LR	00 24 31.8	
	comp=Z,46nm,18.9s,baz=245,slow=32						
WRA	**Warramunga Arr**	**83.38**	**112**	P	**P**	**23 53 06.1**	**-0.7**
WRAB	**Tennant Creek**	**83.40**	**112**	P	**P**	**23 53 07.2**	**+0.3**
WB0	**Warramunga Arr**	**83.55**	**112**	P	**P**	**23 53 06.8**	**-0.9**
WB0				IAmb	IAmb	23 53 10.3	
	comp=Z,9.6nm,1.2s						
BATI	**Baumata**	**83.71**	**98**	LR	LR	00 23 52.8	
	comp=Z,67nm,21.5s,baz=224,slow=31						
PB16	**IPOC Station P**	**83.86**	**250**	P	**P**	**23 53 10.7**	**+0.7**
PB16				IAmb	IAmb	23 53 11.9	
	comp=Z,7.5nm,0.8s						
LPAZ	**La Paz**	**84.51**	**252**	P	**P**	**23 53 14.3**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=139,slow=5.6,SNR=6.4						
LPAZ				LR	LR	00 28 46.6	
	comp=Z,45nm,18.6s,baz=126,slow=34						
LPAZ	**La Paz**	**84.51**	**252**	P	**P**	**23 53 13.5**	**+0.2**
LPAZ				IAmb	IAmb	23 53 16.1	
	comp=Z,10nm,1.4s						
HRA	**Herat**	**86.53**	**25**	P	**P**	**23 53 23.2**	**+0.9**
SAML	**Samuel**	**86.74**	**260**	P	**P**	**23 53 22.6**	**-1.0**
SAML				IAmb	IAmb	23 53 24.9	
	comp=Z,7.2nm,1.3s						
CMAR	**Chiang Mai Arr**	**89.22**	**61**	LR	LR	00 27 53.0	
	comp=Z,51nm,18.4s,baz=208,slow=32						
ESDC	**Sonseca Array**	**93.02**	**333**	LR	LR	00 37 08.8	
	comp=Z,91nm,18.3s,baz=40,slow=36						
DAVOX	**Davos/Dischmat**	**96.45**	**345**	LR	LR	00 40 17.5	
	comp=Z,91nm,18.7s,baz=118,slow=37						
GERES	**GERESS Array B**	**97.86**	**348**	LR	LR	00 43 49.3	
	comp=Z,68nm,18.0s,baz=315,slow=39						
VRAC	**Vranov**	**97.95**	**350**	LR	LR	00 43 03.9	
	comp=Z,50nm,18.2s,baz=190,slow=38						
TXAR	**Lajitas Array**	**141.18**	**257**	PKhKP	PKPpre	00 00 03.3	
	comp=Z,0.4nm,0.8s,baz=116,slow=2.9,SNR=3.9						
TXAR	**Lajitas Array**	**141.18**	**257**		PKPpre	00 00 00.7	
MSTX	**Mulesfoot**	**143.50**	**264**	PKPdf	PKPab	00 00 10.4	+0.2
ECSD	**EROS Data Cent**	**144.43**	**283**	PKPdf	PKPbc	00 00 14.2	+0.6
121A	**Cookes Peak, D**	**145.94**	**258**		**PKPdf**	**00 00 18.4**	**+0.2**
BNM	**Barren Site**	**146.17**	**261**	PKPbc	**PKPab**	**00 00 20.2**	**-0.2**
ULM	**Lac du Bonnet**	**146.33**	**294**	PKPbc	**PKPab**	**00 00 20.0**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=115,slow=3.0,SNR=5.1						
ULM	**Lac du Bonnet**	**146.33**	**294**		**PKPbc**	**00 00 19.4**	**+0.1**
LENM	**Lemitar**	**146.41**	**261**	PKPbc	**PKPab**	**00 00 21.5**	**+0.3**
Q24A	**Divide**	**147.87**	**270**	PKPbc	**PKPbc**	**00 00 25.1**	**+0.6**
S22A	**4UR Ranch, Cre**	**148.35**	**266**	PKPbc	**PKPbc**	**00 00 26.5**	**+0.7**
SMCO	**Snowmass**	**149.20**	**269**	PKPbc	**PKiKP**	**00 00 28.8**	**-0.4**
N23A	**Red Feather La**	**149.35**	**272**	PKPbc	**PKiKP**	**00 00 28.8**	**-0.4**
RSSD	**Black Hills**	**149.47**	**279**	PKPbc	**PKPbc**	**00 00 28.6**	**+0.3**
X16A	**Lo Mia Camp, P**	**149.50**	**257**	PKPbc	**PKPbc**	**00 00 28.6**	**0.0**
113A	**Mohawk Valley,**	**149.96**	**252**	PKPbc	**PKPbc**	**00 00 28.9**	**-0.6**
PDAR	**Pinedale Array**	**152.60**	**273**	PKPbc	**PKPbc**	**00 00 33.3**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=98,slow=3.0,SNR=7.1						
PDAR	**Pinedale Array**	**152.60**	**273**		**PKPbc**	**00 00 33.5**	**-2.2**
NVAR	**Mina Array Bea**	**156.33**	**257**	PKPab	**PKPab**	**00 01 02.4**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=122,slow=4.6,SNR=5.0						

IDC 18 23:45:52.2±1.9, 1.˚64N×126.˚12E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/32, mbtmp3.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/41, Error ellipse: s-maj=177.6km s-min=23.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.92**	**160**	P	P	23 50 57.3	-0.8
	1.3nm,0.5s,baz=338,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.27**	**164**	P	P	23 51 30.3	+0.7
	0.6nm,0.6s,baz=341,slow=11,SNR=6.4						
TLY	**Talaya**	**53.32**	**343**	LR	LR	00 18 45.7	
	comp=Z,15nm,18.2s,baz=3.0,slow=37						
MKAR	**Makanchi Array**	**58.93**	**326**	P	P	23 55 53.2	-0.1
	0.5nm,0.6s,baz=119,slow=8.2,SNR=13						
OBN	**Obninsk**	**88.41**	**325**	LR	LR	00 43 09.7	
	comp=Z,6.6nm,18.2s,baz=294,slow=39						

IDC 18 23:59:35.7±2.0, 1.˚84N×126.˚52E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/35, mbtmp3.5/3, Error ellipse: s-maj=175.9km s-min=24.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.96**	**161**	P	P	00 04 41.2	-0.7
	0.6nm,0.4s,baz=339,slow=11,SNR=7.6						
ASAR	**Alice Springs**	**26.35**	**165**	P	P	00 05 14.5	+0.9
	0.3nm,0.4s,baz=348,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**58.99**	**326**	P	P	00 09 37.1	-0.2
	0.3nm,0.4s,baz=124,slow=8.2,SNR=11						

IDC 19 00:01:47.9±1.6, 4.˚38S×153.˚25E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/36, mbtmp3.6/3, Error ellipse: s-maj=42.8km s-min=18.1km az=3.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.23**	**273**	Pg	Pn	00 02 12.7	+0.4
	212nm,0.3s,baz=190,slow=2.3,SNR=94						
KRVT				Lg	Lg	00 02 27.2	
	250nm,0.3s,baz=262,slow=23,SNR=18						
WRA	**Warramunga Arr**	**24.06**	**228**	P	P	00 07 05.7	+0.6
	0.4nm,0.3s,baz=51,slow=9.9,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**26.31**	**30**	T	T	00 35 07.9	
	baz=211,slow=76,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**26.31**	**30**	T	T	00 35 04.4	
	baz=211,slow=76,SNR=4.9						
H11S1	**WAKE ISLAND Hy**	**26.32**	**30**	T	T	00 34 58.6	
	baz=211,slow=76,SNR=3.7						
FITZ	**Fitzroy Crossi**	**30.25**	**241**	P	P	00 08 00.5	-0.4
	0.6nm,0.4s,baz=73,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**80.31**	**319**	P	P	00 14 01.1	+0.1
	0.1nm,0.5s,baz=100,slow=8.0,SNR=1.8						
TORD	**Torodi Ar. Bea**	**150.60**	**289**	PKPbc	PKPbc	00 21 41.9	-1.1
	1.0nm,0.7s,baz=58,slow=2.4,SNR=8.6						

*NEIC **19** 00:10:24.3±0.8, 15.˚0S±0.˚1×167.˚8E±0.˚2, h126km±8km, mb4.2/9, Error ellipse: s-maj=25.6km s-min=15.0km az=132.0*
*IDC **19** 00:10:28.9±6.7, 15.˚44S×167.˚49E, h139km±51km, mb3.5/4, mb1 3.8/5, mb1mx3.4/37, mbtmp4.0/5, MS2.9/1, Ms1 2.9/1, ms1mx2.5/21, Error ellipse: s-maj=53.6km s-min=27.4km az=32.0*

ISC 19 00:10:26.7±0.9, 15.˚31S±0.˚09×167.˚7E±0.˚1, h124km, n20, σ0s96/21, mb4.1/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**0.45**	**252**	Pn	**Pn**	**00 10 44.6**	**-0.2**
SANVU				Sn	**Sn**	**00 10 59.9**	**+1.4**
DZM	**Mont Dzumac**	**6.82**	**189**	P	**Pn**	**00 12 05.8**	**+1.4**
	5.0nm,0.3s,baz=18,slow=13,SNR=54						
DZM				S	**Sn**	**00 13 18.6**	**-2.0**
	3.6nm,0.3s,baz=150,slow=22,SNR=8.6						
DZM	**Mont Dzumac**	**6.82**	**189**	Pn	**Pn**	**00 12 04.8**	**+0.5**
FUNA	**Funafuti**	**13.15**	**60**	P	**Pn**	**00 13 28.5**	**-0.3**
EIDS	**Eidsvold**	**18.46**	**235**	P	**Pn**	**00 14 34.9**	**+0.3**
EIDS				IAmb	IAmb	00 14 35.2	
	comp=Z,6.9nm,0.6s						
KRVT	**Keravat (AS076**	**18.86**	**304**	LR	LR	00 21 42.9	
	comp=Z,41nm,21.7s,baz=76,slow=36						
BKZ	**Black Stump Fm**	**25.00**	**164**	P	**P**	**00 15 39.4**	**+0.4**
BKZ				IAmb	IAmb	00 15 40.2	
	comp=Z,24nm,1.4s						
LTZ	**Lake Taylor**	**27.66**	**173**	P	**P**	**00 16 03.4**	**+0.5**
WB0	**Warramunga Arr**	**31.99**	**257**	P	**P**	**00 16 40.5**	**-0.8**
WB0				IAmb	IAmb	00 16 40.7	
	comp=Z,2.1nm,0.6s						
WB2	**Warramunga Arr**	**32.03**	**257**	P	**P**	**00 16 40.9**	**-0.9**
WB2				IAmb	IAmb	00 16 48.0	
	comp=Z,2.9nm,1.2s						
WRA	**Warramunga Arr**	**32.05**	**257**	P	**P**	**00 16 41.0**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=85,slow=8.8,SNR=7.9						
WRA	**Warramunga Arr**	**32.05**	**257**	P	**P**	**00 16 40.2**	**-1.6**
AS31	**Alice Springs**	**32.81**	**250**	P	**P**	**00 16 47.7**	**-0.8**
ASAR	**Alice Springs**	**32.82**	**250**	P	**P**	**00 16 47.8**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=77,slow=8.9,SNR=24						
BBOO	**Buckleboo**	**33.52**	**233**	P	**P**	**00 16 55.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**40.27**	**260**	P	**P**	**00 17 51.2**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=87,slow=9.0,SNR=12						
FITZ	**Fitzroy Crossi**	**40.27**	**260**	P	**P**	**00 17 52.1**	**+0.2**
VNDA	**Vanda**	**62.29**	**181**	P	**P**	**00 20 35.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=8.4,slow=6.8,SNR=6.8						
VNDA	**Vanda**	**62.29**	**181**	P	**P**	**00 20 35.5**	**+0.3**
ARCES	**ARCESS Array B**	**120.90**	**345**	PKP	**PKiKP**	**00 29 03.8**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=83,slow=2.2,SNR=6.1						

IDC 19 00:12:59.3±7.2, 2.˚50N×122.˚29E, h535km±101km, mb2.8/4, mb1 3.1/5, mb1mx2.6/42, mbtmp3.9/5, Error ellipse: s-maj=113.1km s-min=22.7km az=59.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**12.69**	**174**	P	P	00 15 45.1	0.0
	5.6nm,0.3s,baz=317,slow=5.4,SNR=3.6						
FITZ	**Fitzroy Crossi**	**20.73**	**171**	P	P	00 17 02.5	-0.3
	0.5nm,0.4s,baz=347,slow=7.4,SNR=9.5						
WRA	**Warramunga Arr**	**25.24**	**153**	P	P	00 17 42.9	-0.2
	1.5nm,0.3s,baz=337,slow=9.7,SNR=17						
ASAR	**Alice Springs**	**28.36**	**157**	P	P	00 18 10.9	+0.4
	0.7nm,0.6s,baz=328,slow=7.0,SNR=7.9						
MKAR	**Makanchi Array**	**56.14**	**328**	P	P	00 21 48.5	+0.3
	0.4nm,0.3s,baz=125,slow=8.7,SNR=14						
KURBB	**Kurchatov Arra**	**60.47**	**330**	P	P	00 22 16.7	-0.6
	baz=141,slow=6.0						

*REY **19** 00:27:03.0, 64.˚69N×17.˚47W, h15km*
*IDC **19** 00:27:04.0±1.3, 64.˚53N×17.˚69W, h0km, mb3.6/5, mb1 4.0/6, mb1mx3.5/44, mbtmp3.7/6, ML4.0/1, Error ellipse: s-maj=35.7km s-min=13.5km az=24.0*
*NEIC **19** 00:27:05.6±2.9, 64.˚67N±0.˚10×17.˚8W±0.˚2, h10km±2km, mb4.2/4, Error ellipse: s-maj=17.6km s-min=9.1km az=206.0*

ISC 19 00:27:05.1±0.6, 64.˚67N±0.˚03×17.˚46W±0.˚03, h10km, n34, σ2s12/38, mb3.7/7, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**19**	P	**Pg**	**00 27 06.3**	**-1.9**
	baz=22						
IDYN				S	**Sg**	**00 27 08.8**	**-1.5**
	baz=22						
**IHA

BRG	**Berggiesshubel**	**21.40**	**115**	*e*P		**P**	**00 31 55.2**	**+2.6**
	comp=Z,13nm,1.5s							
CHVC	**Chvalec**	**22.45**	**113**	*e*P		**P**	**00 32 06.5**	**+2.6**
KHC	**Kasperske Hory**	**22.66**	**118**	*e*P		**P**	**00 32 06.7**	**+0.5**
DPC	**Dobruska-Polom**	**22.75**	**113**	*e*P		**P**	**00 32 08.2**	**+1.1**
ESDC	**Sonseca Array**	**26.25**	**156**	P		**P**	**00 32 40.7**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=338,slow=9.7,SNR=3.5							
ABKAR	**Akbulak array**	**41.98**	**73**	P		**P**	**00 34 55.8**	**0.0**
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**	**00 35 26.9**	**+1.5**
	comp=Z,0.6nm,0.9s,baz=18,slow=7.2,SNR=4.9							
IMAR	**Indian Mountai**	**45.86**	**337**	P		**P**	**00 35 27.6**	**+0.9**
ZALV	**Zalesovo Beam**	**47.62**	**51**	P		**P**	**00 35 41.8**	**+1.2**
TOA0	**Torodi Ar. Sit**	**53.14**	**156**	P		**P**	**00 36 25.4**	**+2.7**
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P		**P**	**00 36 21.7**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=343,slow=7.6,SNR=3.5							
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**	**00 36 22.9**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=49,slow=6.8,SNR=5.0							
ANMO	**Albuquerque**	**58.60**	**286**	P		**P**	**00 37 02.8**	**+0.8**
ANMO				IAmb		IAmb	00 37 05.9	
	comp=Z,1.6nm,1.1s							
TXAR	**Lajitas Array**	**62.30**	**280**	P		**P**	**00 37 27.8**	**+0.6**
	comp=Z,0.8nm,1.0s,baz=57,slow=6.6,SNR=4.2							
TXAR	**Lajitas Array**	**62.30**	**280**	P		**P**	**00 37 28.1**	**+0.9**

BGR ***19*** *00:29:31.6±0.0, 64°.57N×20°.58W, h33km, mb4.1*
REY ***19*** *00:29:36.7, 64°.66N×17°.50W, h7km*
IDC ***19*** *00:29:37.3±0.7, 64°.56N×17°.66W, h0km, mb3.9/12, mb1 4.0/15, mb1mx3.8/49, mbtmp3.8/15, ML3.2/2, MS3.3/6, Ms1 3.3/6, ms1mx2.8/50, Error ellipse: s-maj=21.6km s-min=9.9km az=12.0*
NEIC ***19*** *00:29:38.5±1.2, 64°.53N±0°.05×17°.7W±0°.2, h8km±4km, mb4.4/29, Error ellipse: s-maj=10.7km s-min=4.4km az=57.0*

ISC 19 00:29:38.2±0.4, 64°.68N±0°.02×17°.55W±0°.02, h10km, n127, σ2s11/135, mb4.3/26, MS3.6/3, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.09**	**269**	P	**Pg**	**00 29 39.2**	**-1.5**
	baz=275						
IVON				S	**Sg**	**00 29 41.8**	**-0.8**
	baz=275						
IDYN	**Dyngjuhals**	**0.14**	**34**	P	**Pg**	**00 29 39.9**	**-1.7**
	baz=23						
IDYN				S	**Sg**	**00 29 42.6**	**-1.2**
	baz=23						
IHAM	**Hamarinn**	**0.23**	**211**	P	**Pg**	**00 29 41.2**	**-1.8**
	baz=218						
IGRF	**Grimsfjall**	**0.30**	**155**	P	**Pg**	**00 29 42.2**	**-2.0**
	baz=159						
ISKR	**Skrokkalda**	**0.38**	**253**	P	**Pb**	**00 29 44.1**	**-2.9**
	baz=255						
IHUS	**Husbondi**	**0.38**	**187**	P	**Pg**	**00 29 43.8**	**-2.0**
	baz=191						
IVOT	**Vottur**	**0.44**	**158**	P	**Pg**	**00 29 44.6**	**-2.2**
	baz=161						
THOR	**Thorvaldshraun**	**0.46**	**55**	P	**Pg**	**00 29 44.9**	**-2.2**
	baz=52						
THOR				S	**Sg**	**00 29 51.8**	**-1.4**
	baz=52						
IJOK	**Jokulheimar**	**0.46**	**219**	P	**Pg**	**00 29 45.4**	**-1.9**
	baz=222						
IKRE	**Kreppuhraun**	**0.51**	**77**	P	**Pg**	**00 29 45.6**	**-2.6**
	baz=75						
IMKO	**Mokollar**	**0.60**	**59**	P	**Pg**	**00 29 47.4**	**-2.5**
	baz=57						
IMKO				S	**Sg**	**00 29 55.5**	**-2.3**
	baz=57						
IIEY	**Innrieyrar**	**0.63**	**203**	P	**Pg**	**00 29 48.1**	**-2.4**
	baz=206						
IIEY				S	**Sg**	**00 29 57.1**	**-1.6**
	baz=206						
ISVA	**Svartarkot**	**0.68**	**11**	P	**Pg**	**00 29 49.0**	**-2.4**
	baz=8.5						
ISVA				S	**Sg**	**00 29 58.7**	**-1.4**
	baz=8.5						
IKSK	**Karasker**	**0.70**	**137**	P	**Pg**	**00 29 48.4**	**-3.2**
	baz=138						
IKAL	**Kalfafell**	**0.73**	**185**	P	**Pg**	**00 29 49.6**	**-2.7**
	baz=187						
IKAL				S	**Sg**	**00 30 00.6**	**-1.3**
	baz=187						
IVAT	**Vatnsfell**	**0.77**	**231**	P	**Pg**	**00 29 50.7**	**-2.3**
	baz=233						
IVSH	**V-Sauoahnukur**	**0.79**	**79**	P	**Pg**	**00 29 50.2**	**-3.3**
	baz=78						
IVSH				S	**Sg**	**00 30 01.7**	**-2.2**
	baz=78						
IHVE	**Hveravellir**	**0.89**	**284**	P	**Pg**	**00 29 52.5**	**-2.8**
	baz=284						
IHVE				S	**Sb**	**00 30 05.0**	**-2.6**
	baz=284						
IFAG	**Fagurholsmyri**	**0.89**	**154**	P	**Pg**	**00 29 52.1**	**-3.3**
	baz=155						
IMEL	**Melhnausar**	**0.98**	**22**	P	**Pg**	**00 29 53.7**	**-3.3**
	baz=21						
IMEL				S	**Sg**	**00 30 07.5**	**-2.2**
	baz=21						
IREN	**Reynihlio**	**1.01**	**15**	P	**Pg**	**00 29 54.5**	**-3.2**
	baz=14						
ISNB	**Snabyli**	**1.05**	**207**	P	**Pg**	**00 29 55.1**	**-3.4**
	baz=209						
IKVO	**Krokottuvotn**	**1.08**	**15**	P	**Pb**	**00 29 55.5**	**-3.5**
	baz=14						
IGRS	**Grimsstaoir**	**1.14**	**31**	P	**Pb**	**00 29 56.4**	**-3.6**
	baz=30						
IRJU	**Rjupnafell**	**1.17**	**205**	P	**Pb**	**00 29 57.3**	**-3.2**
	baz=207						
IMJO	**Mjoaskard**	**1.19**	**232**	P	**Pb**	**00 29 57.7**	**-3.1**
	baz=233						
IGYG	**Gygjarholskot**	**1.22**	**252**	P	**Pb**	**00 29 58.1**	**-3.3**
	baz=253						
ISKI	**Skildingahlsh**	**1.22**	**10**	P	**Pn**	**00 29 57.9**	**-3.4**
	baz=9.0						
ISKI				S	**Sb**	**00 30 15.2**	**-2.0**
	baz=9.0						
IGHA	**Grjothals**	**1.23**	**17**	P	**Pn**	**00 29 58.0**	**-3.5**
	baz=16						
IGRA	**Granastaoir**	**1.25**	**359**	P	**Pn**	**00 29 58.2**	**-3.5**
	baz=358						
IGRA				S	**Sb**	**00 30 15.8**	**-2.2**
	baz=358						
IHAU	**Haukadalur**	**1.27**	**237**	P	**Pn**	**00 29 59.0**	**-3.0**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.29**	**207**	P	**Pn**	**00 29 59.4**	**-2.8**
	baz=208						
IDIM	**Dimmadalss**	**1.32**	**11**	P	**Pn**	**00 29 59.3**	**-3.4**
	baz=10.0						
IHLA	**Hella**	**1.32**	**345**	P	**Pn**	**00 29 59.8**	**-2.9**
	baz=344						
IHLA				S	**Sb**	**00 30 18.2**	**-1.9**
	baz=344						
IALF	**Alftagrof**	**1.39**	**212**	P	**Pn**	**00 30 01.2**	**-2.4**
	baz=213						
IHED	**Heoinshofoi**	**1.42**	**4**	P	**Pn**	**00 30 00.8**	**-3.2**
	baz=3.0						
IHED				S	**Sn**	**00 30 20.6**	**-2.0**
	baz=3.0						
IESK	**Eystri-Skogar**	**1.42**	**217**	P	**Pn**	**00 30 01.6**	**-2.5**
	baz=218						
IMID	**Miomork**	**1.45**	**226**	P	**Pn**	**00 30 02.2**	**-2.2**
	baz=227						
IBRE	**Brettingsstaoi**	**1.46**	**354**	P	**Pn**	**00 30 01.8**	**-2.9**
	baz=353						
ISIG	**Siglufjorour**	**1.57**	**339**	P	**Pn**	**00 30 03.5**	**-2.6**
	baz=339						
ISIG				S	**Sb**	**00 30 25.7**	**-1.5**
	baz=339						
IASM	**Asmuli**	**1.58**	**239**	P	**Pn**	**00 30 03.8**	**-2.5**
	baz=240						
BORG	**Borgarnes**	**1.62**	**274**	Pg	**Pn**	**00 30 04.6**	**-2.3**
	72nm,0.3s,baz=98,slow=9.3,SNR=39						
BORG				Lg	Lg	00 30 27.9	
	33nm,0.3s,baz=67,slow=22,SNR=10						
BORG	**Borgarnes**	**1.62**	**274**	Pn	**Pn**	**00 30 04.5**	**-2.3**
BORG				Sn	**Sg**	**00 30 26.7**	**-3.7**
IKRO	**Krokur**	**1.66**	**251**	P	**Pn**	**00 30 04.6**	**-2.7**
	baz=252						
IKRO				S	**Sg**	**00 30 27.6**	**-3.8**
	baz=252						
ISOL	**Solvholt**	**1.66**	**245**	P	**Pn**	**00 30 04.9**	**-2.4**
	baz=245						
IHEI	**Heioarbar**	**1.67**	**255**	P	**Pn**	**00 30 05.3**	**-2.1**
	baz=256						
IBJA	**Bjarnastaoir**	**1.79**	**248**	P	**Pn**	**00 30 07.3**	**-1.8**
	baz=248						
ILEI	**Leirhofn**	**1.79**	**14**	P	**Pn**	**00 30 06.7**	**-2.5**
	baz=13						
IHRN	**Hraun**	**1.80**	**324**	P	**Pn**	**00 30 06.9**	**-2.3**
	baz=324						
ISAN	**Sandskeio**	**1.85**	**252**	P	**Pn**	**00 30 08.7**	**-1.3**
	baz=253						
IKUD	**Kuludalsa**	**1.91**	**261**	P	**Pn**	**00 30 08.8**	**-1.9**
	baz=262						
IKAS	**Kald??rsel**	**1.98**	**253**	P	**Pn**	**00 30 10.4**	**-1.4**
	baz=253						
SCO	**Scoresbysund**	**6.07**	**346**	Pn	**Pn**	**00 31 06.5**	**-1.3**
SCO	**Scoresbysund**	**6.07**	**346**	*e*	Pn	00 31 02.3	-5.5
	baz=159,slow=7.9						
SCO				*i* P	**Pn**	**00 31 08.0**	**+0.1**
SCO				*i* S	**Sn**	**00 32 22.1**	**+4.8**
JMIC	**Jan Mayen**	**7.20**	**24**	LR	LR	00 33 40.3	
	comp=Z,166nm,18.6s,baz=107,slow=33						
SUMG	**Summit**	**10.92**	**325**	Pn	Pn	00 32 19.9	+5.2
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn	**Pn**	**00 32 25.1**	**-1.0**
	baz=315,slow=13,SNR=9.9						
DAG	**Danmarks Havn**	**12.16**	**359**	*i* P	Pn	00 32 34.7	+3.5
DAG	**Danmarks Havn**	**12.16**	**359**	*i* P	Pn	00 32 34.8	+3.5
NOA	**NORSAR Array B**	**13.56**	**92**	Pn	**Pn**	**00 32 48.5**	**-1.9**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.2						
SFJD	**Kangerlussuaq**	**13.64**	**295**	LR	LR	00 37 29.8	
	comp=Z,35nm,19.4s,baz=174,slow=35						
SPITS	**Spitsbergen Ar**	**16.87**	**23**	LR	LR	00 38 16.9	
	comp=Z,57nm,18.5s,baz=220,slow=31						
FINES	**FINESS Array B**	**19.73**	**79**	P	**Pn**	**00 34 09.5**	**+0.5**
	baz=284,slow=5.6,SNR=2.3						
CLL	**Collm**	**20.73**	**116**	*e*P	**P**	**00 34 19.0**	**+0.5**
CLL				*e*		00 34 26.0	
CLL	**Collm**	**20.73**	**116**	P	**P**	**00 34 17.8**	**-0.8**
CLL				IAmb	IAmb	00 34 26.7	
	comp=Z,19nm,1.5s						
GRF	**Grafenberg Arr**	**21.36**	**121**	*e*P	**P**	**00 34 27.3**	**+1.9**
	comp=Z,8.1nm,1.1s,baz=322,slow=10						
STU	**Stuttgart**	**21.40**	**125**	P	**P**	**00 34 25.5**	**-0.2**
STU				IAmb	IAmb	00 34 26.9	
	comp=Z,9.2nm,0.6s						
BRG	**Berggiesshubel**	**21.44**	**115**	*e*P	**P**	**00 34 27.1**	**+1.0**
	comp=Z,58nm,2.2s						
CHVC	**Chvalec**	**22.49**	**113**	*e*P	**P**	**00 34 40.1**	**+2.6**
KHC	**Kasperske Hory**	**22.70**	**118**	*e*P	**P**	**00 34 40.4**	**+0.7**
DPC	**Dobruska-Polom**	**22.78**	**113**	*e*P	**P**	**00 34 41.9**	**+1.3**
GEC2	**GERESS Array S**	**22.98**	**119**	P	**P**	**00 34 43.5**	**+0.8**
GERES	**GERESS Array B**	**22.98**	**119**	P	**P**	**00 34 43.2**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=306,slow=9.2,SNR=4.3						
GERES	**GERESS Array B**	**22.98**	**119**	P	**P**	**00 34 42.9**	**+0.2**
VRAC	**Vranov**	**23.72**	**114**	*e*P	**P**	**00 34 52.2**	**+2.1**
MORC	**Moravsky Berou**	**23.72**	**112**	*e*P	**P**	**00 34 52.1**	**+2.0**
MORC	**Moravsky Berou**	**23.72**	**112**	P	**P**	**00 34 52.2**	**+2.0**
KRUC	**Moravsky**	**23.84**	**115**	*e*P	**P**	**00 34 53.5**	**+2.3**
SMOL	**Smolenice**	**24.68**	**114**	*e*P	**P**	**00 34 59.3**	**+0.3**
LANS	**Liptovska Anna**	**24.99**	**111**	*e*P	**P**	**00 35 01.1**	**-0.7**
KLMR	**Klimovskoe**	**25.62**	**72**	*e*P	P	00 34 58.1	-9.2
KLMR				AMP		00 35 10.3	
	comp=Z,13nm,1.2s						
KWP	**Kalwaria Pacla**	**25.93**	**106**	P	**P**	**00 35 11.5**	**+1.2**
KWP				IAmb	IAmb	00 35 21.1	
	comp=Z,12nm,1.1s						
SCHQ	**Schefferville**	**26.02**	**271**	P	**P**	**00 35 12.3**	**+1.3**
	comp=Z,9.5nm,0.9s,baz=46,slow=7.3,SNR=4.2						
PSZ	**Piszkesteto**	**26.14**	**112**	P	**P**	**00 35 13.0**	**+0.7**
PSZ				IAmb	IAmb	00 35 27.6	
	comp=Z,16nm,1.4s						
ESDC	**Sonseca Array**	**26.27**	**156**	P	**P**	**00 35 13.5**	**0.0**
	comp=Z,0.8nm,0.7s,baz=348,slow=8.2,SNR=6.1						
AKASG	**Malin Array Be**	**27.87**	**98**	P	**P**	**00 35 28.1**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=317,slow=9.3,SNR=2.0						
AKASG	**Malin Array Be**	**27.87**	**98**	P	**P**	**00 35 29.3**	**+1.7**
OBN	**Obninsk**	**27.90**	**84**	P	**P**	**00 35 29.6**	**+1.7**
NRIK	**Noril'sk**	**36.47**	**35**	P	**P**	**00 36 44.1**	**+1.4**
	comp=Z,1.2nm,0.7s,baz=304,slow=8.1,SNR=2.2						
BRTR	**Keskin Array B**	**38.50**	**105**	P	**P**	**00 37 02.1**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=290,slow=3.6,SNR=5.9						
BRTR	**Keskin Array B**	**38.50**	**105**	P	**P**	**00 37 01.7**	**+1.2**
AKAS	**Kas**	**39.85**	**112**	P	**P**	**00 37 11.9**	**+0.2**
ULM	**Lac du Bonnet**	**41.58**	**289**	LR	LR	00 53 43.8	
	comp=Z,70nm,20.0s,baz=7.5,slow=35						
ABKAR	**Akbulak array**	**42.01**	**73**	P	**P**	**00 37 30.4**	**+1.1**
TIXI	**Tiksi**	**42.03**	**15**	P	**P**	**00 37 31.2**	**+2.1**
TIXI				IAmb	IAmb	00 37 32.5	
	comp=Z,8.6nm,1.2s						
TOLK	**Toolik Lake Re**	**42.73**	**336**	P	**P**	**00 37 36.7**	**+1.8**
BRVK	**Borovoye**	**43.15**	**62**	P	**P**	**00 37 39.4**	**+1.0**
MARD	**Mardin**	**43.53**	**100**	P	**P**	**00 37 43.7**	**+1.8**
MARD				IAmb	IAmb	00 37 50.6	
	comp=Z,7.0nm,1.1s						
ILAR	**Eielson Array**	**45.67**	**332**	P	**P**	**00 38 00.4**	**+2.0**
	comp=Z,3.3nm,1.1s,baz=35,slow=4.2,SNR=6.8						
ILAR	**Eielson Array**	**45.67**	**332**		**P**	**00 37 59.7**	**+1.3**
IMAR	**Indian Mountai**	**45.84**	**337**	P	**P**	**00 38 01.0**	**+1.2**
ZAA0	**Zalesovo Array**	**47.65**	**51**	P	**P**	**00 38 15.6**	**+1.6**
ZAA0				IAmb	IAmb	00 38 18.3	
	comp=Z,4.1nm,1.3s						
ZALV	**Zalesovo Beam**	**47.65**	**51**	P	**P**	**00 38 15.7**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=321,slow=12,SNR=4.4						
KURK	**Kurchatov**	**48.13**	**58**	P	**P**	**00 38 18.5**	**+0.7**
KURK				IAmb	IAmb	00 38 21.0	
	comp=Z,3.6nm,0.9s						
T47A	**Sharon Grove**	**48.61**	**270**	P	**P**	**00 38 22.0**	**+0.3**
HRY	**Holter Researc**	**50.73**	**298**	P	**P**	**00 38 38.8**	**+0.9**
KK31	**Karatay Array**	**51.29**	**70**	P	**P**	**00 38 44.0**	**+2.0**
KK31				IAmb	IAmb	00 38 45.8	
	comp=Z,4.9nm,1.3s						
KKAR	**Karatay Array**	**51.29**	**70**	P	**P**	**00 38 43.6**	**+1.5**
BOZ	**Bozeman (W)**	**51.58**	**297**	P	**P**	**00 38 44.5**	**+0.2**
BOZ				IAmb	IAmb	00 38 48.5	
	comp=Z,8.9nm,1.4s						
YMP	**Mirror Lake PI**	**51.73**	**295**	P	**P**	**00 38 46.1**	**+0.5**
MCMT	**McKenzie Canyo**	**52.70**	**297**	P	**P**	**00 38 54.3**	**+1.6**
MKAR	**Makanchi Array**	**52.74**	**58**	P	**P**	**00 38 52.6**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=316,slow=6.0,SNR=5.7						
MKAR	**Makanchi Array**	**52.74**	**58**	P	**P**	**00 38 53.4**	**+0.7**
PD31	**Pinedale Array**	**53.15**	**293**	P	**P**	**00 38 56.0**	**-0.1**
PDAR	**Pinedale Array**	**53.15**	**293**	P	**P**	**00 38 56.2**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=62,slow=7.2,SNR=10						
PDAR				LR	LR	01 01 32.1	
	comp=Z,54nm,20.1s,baz=118,slow=36						
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	**P**	**00 38 55.6**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=342,slow=8.2,SNR=6.8						
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	**P**	**00 38 55.4**	**-0.7**
HWUT	**Hardware Ranch**	**54.93**	**294**	P	**P**	**00 39 08.9**	**-0.1**
TCUT	**Toone Canyon**	**55.28**	**293**	P	**P**	**00 39 11.2**	**-0.5**
WMQ	**Urumqi**	**57.25**	**56**	*e*P	P	00 39 29.5	+4.1
SPR3	**Spring Creek 3**	**58.25**	**294**	P	**P**	**00 39 35.3**	**+2.5**
SPR3				IAmb	IAmb	00 39 41.1	
	comp=Z,6.2nm,1.4s						
LCMT	**Little Creek M**	**59.54**	**292**	P	**P**	**00 39 42.3**	**+0.7**
U15A	**North Rim**	**59.66**	**291**	P	**P**	**00 39 43.4**	**+0.8**
U15A				IAmb	IAmb	00 39 44.2	
	comp=Z,4.5nm,1.1s						
NVAR	**Mina Array Bea**	**60.28**	**297**	LR	LR	01 06 06.7	
	comp=Z,67nm,19.5s,baz=85,slow=36						
NIL	**Nilore**	**60.47**	**73**	P	**P**	**00 39 48.1**	**+0.2**
TXAR	**Lajitas Array**	**62.26**	**280**	P	**P**	**00 40 00.8**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=57,slow=4.6,SNR=3.8						
NJ2	**Nanjing**	**77.75**	**37**	*e*P	**P**	**00 41 37.8**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						

ISK ***19*** *00:37:26.8, 38°.68N×23°.44E, h17km, ML3.7/39*
ATH ***19*** *00:37:26.6, 38°.64N×23°.42E, h24km, ML3.9/34, Error ellipse: s-maj=0.9km s-min=0.5km az=217.0*
MOS ***19*** *00:37:26.5±1.2, 38°.60N×23°.36E, h16km, mb4.2/4, Error ellipse: s-maj=8.4km s-min=5.8km az=96.0*
NEIC ***19*** *00:37:27.5±2.2, 38°.65N±0°.04×23°.43E±0°.05, h10km±1km, mb4.5/13, ML3.9(ATH), ML4.2(THE), Error ellipse: s-maj=7.8km s-min=5.8km az=207.0*
BEO ***19*** *00:37:27.5±2.0, 38°.41N×23°.80E, h63km±4km, ML3.6/12*
THE ***19*** *00:37:27.2, 38°.64N×23°.43E, h3km±1km, ML4.0/18, Error ellipse: s-maj=1.4km s-min=0.4km az=172.0*
IDC ***19*** *00:37:30.8±2.1, 38°.64N×23°.32E, h36km±21km, mb3.7/12, mb1 3.8/18, mb1mx3.6/55, mbtmp3.8/18, ML3.6/6, MS3.3/3, Ms1 3.3/3, ms1mx2.6/45, Error ellipse: s-maj=15.9km s-min=12.6km az=127.0*

ISC 19 00:37:27.6±0.9, 38°.64N±0°.02×23°.43E±0°.02, h13km±6km, n360, σ1s03/398, mb4.0/22, 31C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.32**	**280**	P	**Pg**	**00 37 33.5**	**-0.7**
ATAL				S	**Sg**	**00 37 38.6**	**0.0**
ATAL				AML	AML	00 37 39.6	
	comp=E,24682μm,0.4s						
ATAL				AML	AML	00 37 44.5	
	comp=N,22482μm,0.4s						
ATAL	**Atalanti**	**0.32**	**280**	P	**Pg**	**00 37 33.5**	**-0.7**
ATAL				S	**Sg**	**00 37 38.4**	**-0.3**
	comp=N,12μm,0.5s						
LKR	**Lokris**	**0.34**	**272**	P	**Pg**	**00 37 33.5**	**-0.9**
LKR				S	**Sg**	**00 37 38.9**	**-0.2**
LKR				AML	AML	00 37 43.7	
	comp=N,40033μm,0.2s						
LKR				AML	AML	00 37 45.1	
	comp=E,59196μm,0.2s						
LKR	**Lokris**	**0.34**	**272**	P	**Pg**	**00 37 33.5**	**-0.9**
LKR				S	**Sg**	**00 37 38.7**	**-0.3**
	comp=E,26μm,0.2s						
VIL2	**Platees**	**0.44**	**197**	P	**Pg**	**00 37 36.3**	**-0.1**
VIL2				S	**Sb**	**00 37 44.0**	**+0.1**
VIL2				AML	AML	00 37 44.6	
	comp=N,49791μm,0.7s						
VIL2				AML	AML	00 37 44.8	
	comp=E,44124μm,0.7s						
VILL	**Villia**	**0.48**	**191**	P	**Pg**	**00 37 36.3**	**-0.8**
VILL				S	**Sg**	**00 37 43.8**	**+0.3**
	comp=E,26μm,0.7s						
KYMI	**Kymi, Euboea I**	**0.53**	**90**	P	**Pg**	**00 37 37.4**	**-0.5**
KYMI				S	**Sg**	**00 37 45.4**	**+0.5**
KYMI				AML	AML	00 37 46.6	
	comp=E,19946μm,0.4s						
KYMI				AML	AML	00 37 51.1	
	comp=N,18093μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.53**	**90**	P	**Pg**	**00 37 37.2**	**-0.7**
KYMI				S	**Sg**	**00 37 45.3**	**+0.4**
	comp=N,9μm,0.5s						
ALNA	**Alonissos**	**0.61**	**34**	P	**Pg**	**00 37 39.1**	**-0.5**
ALNA				AML	AML	00 37 52.0	
	comp=N,33367μm,0.4s						
ALNA				AML	AML	00 37 52.0	
	comp=E,23094μm,0.5s						
AXAR	**Agios Charalam**	**0.62**	**282**	P	**Pg**	**00 37 38.6**	**-1.1**
AXAR				AML	AML	00 37 51.2	
	comp=E,31242μm,0.5s						
AXAR				AML	AML	00 37 53.2	
	comp=N,41267μm,0.4s						
AXAR	**Agios Charalam**	**0.62**	**282**	P	**Pg**	**00 37 38.5**	**-1.1**
AXAR				S	**Sg**	**00 37 48.7**	**+0.9**
	comp=N,19μm,0.4s						
AOS	**Alonnisos**	**0.64**	**33**	P	**Pg**	**00 37 39.2**	**-0.9**
AOS				AML	AML	00 37 52.3	
	comp=N,37580μm,0.3s						
AOS				AML	AML	00 37 52.4	
	comp=E,45687μm,0.3s						
AOS	**Alonnisos**	**0.64**	**33**	PG	**Pg**	**00 37 39.3**	**-0.7**
AOS	**Alonnisos**	**0.64**	**33**	P	**Pg**	**00 37 39.3**	**-0.7**
AOS				S	**Sg**	**00 37 48.6**	**+0.1**
	comp=E,21μm,0.3s						
PTL	**Penteli**	**0.68**	**150**	P	**Pg**	**00 37 40.4**	**-0.4**
PTL				S	**Sg**	**00 37 49.5**	**-0.3**
PTL				AML	AML	00 37 52.7	
	comp=N,17801μm,0.6s						
PTL				AML	AML	00 37 53.0	
	comp=E,24765μm,0.4s						
PTL	**Penteli**	**0.68**	**150**	P	**Pg**	**00 37 40.1**	**-0.7**
PTL				S	**Sb**	**00 37 50.2**	**-0.5**
	comp=E,11μm,0.5s						
DION	**Dionisos Attik**	**0.69**	**145**	P	**Pg**	**00 37 40.5**	**-0.5**
DION				S	**Sg**	**00 37 49.8**	**-0.1**
DION				AML	AML	00 37 52.9	
DION				AML	AML	00 37 53.1	
DION	**Dionisos Attik**	**0.69**	**145**	P	**Pg**	**00 37 40.3**	**-0.6**
DION				S	**Sg**	**00 37 50.1**	**+0.2**
	comp=E,55μm,0.4s						
NEO	**Neokhori**	**0.69**	**347**	P	**Pb**	**00 37 40.7**	**-0.8**
NEO				AML	AML	00 37 53.5	
	comp=N,96714μm,0.3s						
NEO				AML	AML	00 37 53.6	
	comp=E,71225μm,0.3s						
NEO	**Neokhori**	**0.69**	**347**	P	**Pb**	**00 37 40.7**	**-0.8**
NEO				S	**Sb**	**00 37 49.4**	**-1.6**
	comp=E,42μm,0.3s						
ATH	**Athens Observa**	**0.70**	**161**	P	**Pb**	**00 37 40.6**	**-1.1**
ATH				AML	AML	00 37 54.2	
	comp=N,43806μm,0.5s						
ATH				AML	AML	00 37 54.4	
	comp=E,45212μm,0.3s						
LTK	**Loutraki**	**0.71**	**211**	P	**Pb**	**00 37 40.1**	**-1.8**
LTK				AML	AML	00 37 55.7	
	comp=N,27312μm,0.3s						
LTK				AML	AML	00 37 55.7	
	comp=E,22457μm,0.3s						
LTK	**Loutraki**	**0.71**	**211**	P	**Pb**	**00 37 40.3**	**-1.6**
LTK				S	**Sb**	**00 37 51.5**	**-0.2**
	comp=E,12μm,0.4s						
ATHU	**Athens Univers**	**0.73**	**157**	P	**Pb**	**00 37 41.3**	**-0.8**
ATHU				AML	AML	00 37 53.4	
	comp=N,10699μm,0.4s						
ATHU				AML	AML	00 37 53.9	
	comp=E,7229μm,0.4s						
ATHU	**Athens Univers**	**0.73**	**157**	P	**Pb**	**00 37 40.9**	**-1.2**
ATHU				S	**Sb**	**00 37 51.0**	**-1.0**

KARY	**Karystos**	1.00	127	P		**Pb**	00 37 45.8	-1.0
KARY				S		**Sg**	00 38 00.0	+0.2
	comp=N,5µm,0.8s							
KALE	**Kalithea**	1.04	257	P		**Pb**	00 37 45.9	-1.6
KALE				AML	AML		00 38 05.4	
	comp=E,7372µm,0.4s							
KALE				AML	AML		00 38 06.1	
	comp=N,9614µm,0.5s							
EPID	**Epidavros**	1.05	194	P		**Pb**	00 37 46.8	-0.9
EPID	**Epidavros**	1.05	194	P		**Pb**	00 37 46.3	-1.4
MAKR	**Makrakomi, Fth**	1.08	291	P		**Pb**	00 37 47.8	-0.4
MAKR				AML	AML		00 38 04.8	
	comp=N,2945µm,0.5s							
MAKR				AML	AML		00 38 16.5	
	comp=E,1867µm,0.5s							
MAKR	**Makrakomi, Fth**	1.08	291	P		**Pb**	00 37 47.9	-0.3
MAKR				S		**Sb**	00 38 03.1	+0.8
	comp=E,4µm,0.7s							
TRIZ	**Trizonia**	1.10	256	P		**Pb**	00 37 46.9	-1.6
SERG	**Sergoula**	1.10	259	P		**Pb**	00 37 46.4	-2.1
SERG				AML	AML		00 38 07.7	
	comp=E,7484µm,0.3s							
SERG				AML	AML		00 38 09.4	
	comp=N,11514µm,0.6s							
GUR	**Goura**	1.11	231	P		**Pb**	00 37 48.2	-0.5
GUR				S		**Sb**	00 38 03.1	+0.1
GUR				AML	AML		00 38 05.5	
	comp=E,30098µm,0.6s							
GUR				AML	AML		00 38 05.8	
	comp=N,27881µm,0.4s							
GUR	**Goura**	1.11	231	P		**Pb**	00 37 48.2	-0.5
GUR				S		**Sb**	00 38 03.4	+0.4
	comp=N,15µm,0.5s							
KLV	**Kalavryta, Ach**	1.17	240	P		**Pn**	00 37 48.3	-1.4
KLV				AML	AML		00 38 09.1	
	comp=E,3872µm,1.2s							
KLV				AML	AML		00 38 09.4	
	comp=N,3842µm,0.5s							
KLV	**Kalavryta, Ach**	1.17	240	P		**Pn**	00 37 48.3	-1.4
ANX	**Ano Chora**	1.18	268	P		**Pn**	00 37 49.3	-0.7
ANX				AML	AML		00 38 12.4	
	comp=E,6642µm,0.5s							
ANX				AML	AML		00 38 15.8	
	comp=N,8857µm,0.7s							
ANX	**Ano Chora**	1.18	268	P		**Pn**	00 37 48.4	-1.6
KRND	**KRANIDI**	1.27	190	P		**Pn**	00 37 50.5	-0.6
KRND				AML	AML		00 38 14.2	
	comp=E,11680µm,0.5s							
KRND				AML	AML		00 38 16.3	
	comp=N,9166µm,0.6s							
YDRA	**Hydra**	1.29	179	P		**Pn**	00 37 50.8	-0.5
YDRA				AML	AML		00 38 11.0	
	comp=E,9050µm,0.4s							
YDRA				AML	AML		00 38 13.5	
	comp=N,5644µm,0.5s							
EVR	**Evrytania**	1.30	283	P		**Pn**	00 37 51.7	+0.2
EVR	**Evrytania**	1.30	283	P		**Pn**	00 37 51.5	-0.1
PAIG	**Paliouri**	1.30	8	P		**Pn**	00 37 50.8	-0.7
PAIG	**Paliouri**	1.30	8	P		**Pn**	00 37 50.8	-0.7
LRSO	**Larissa Observ**	1.31	322	P		**Pn**	00 37 51.1	-0.5
LRSO	**Larissa Observ**	1.31	322	P		**Pn**	00 37 51.3	-0.3
TRIP	**Tripoli**	1.44	220	P		**Pn**	00 37 53.3	-0.2
TRIP				AML	AML		00 38 19.4	
	comp=N,4291µm,0.6s							
TRIP				AML	AML		00 38 21.0	
	comp=E,5137µm,0.5s							
TRIP	**Tripoli**	1.44	220	P		**Pn**	00 37 53.4	-0.1
THL	**Klokotos Trika**	1.44	310	P		**Pn**	00 37 53.0	-0.4
THL	**Klokotos Trika**	1.44	310	P		**Pn**	00 37 53.0	-0.4
EFSA	**Agios Efstrati**	1.51	53	P		**Pn**	00 37 53.6	-0.8
VLX	**Vlachokerasia**	1.51	214	P		**Pn**	00 37 54.6	0.0
VLX	**Vlachokerasia**	1.51	214	P		**Pn**	00 37 54.5	0.0
DRO	**Drossia**	1.52	244	P		**Pn**	00 37 54.7	+0.2
DRO				AML	AML		00 38 21.6	
	comp=N,8578µm,1.1s							
DRO				AML	AML		00 38 22.2	
	comp=E,4165µm,0.6s							
DRO	**Drossia**	1.52	244	P		**Pn**	00 37 54.5	0.0
LIT	**Litokhoron**	1.63	334	P		**Pn**	00 37 55.6	-0.5
LIT	**Litokhoron**	1.63	334	P		**Pn**	00 37 55.6	-0.5
LIT							00 38 16.4	
LIT	**Litokhoron**	1.63	334			**Pn**	00 37 55.6	-0.5
LIT				Sn		**Sn**	00 38 16.4	-0.7
RLS	**Riolos of Patr**	1.65	250	P		**Pn**	00 37 56.9	+0.6
PLG	**Polygyros**	1.73	0	P		**Pn**	00 37 57.0	-0.6
PLG				AML	AML		00 38 19.1	
	comp=N,2614µm,0.6s							
PLG				AML	AML		00 38 19.3	
	comp=E,2678µm,0.4s							
PLG	**Polygyros**	1.73	0	P		**Pn**	00 37 56.9	-0.6
OUR	**Ouranopolis**	1.75	14	P		**Pn**	00 37 57.2	-0.4
OUR	**Ouranopolis**	1.75	14	PN		**Pn**	00 37 57.2	-0.7
OUR	**Ouranopolis**	1.75	14	P		**Pn**	00 37 57.3	-0.4
AMT	**Artemida-Makis**	1.75	231	P		**Pn**	00 37 58.2	+0.5
AMT	**Artemida-Makis**	1.75	231	P		**Pn**	00 37 58.8	+1.1
TNSA	**Tinos**	1.75	128	P		**Pn**	00 37 57.4	-0.3
LIA	**Limnos Island**	1.85	47	P		**Pn**	00 37 58.3	-0.8
LIA	**Limnos Island**	1.85	47	P		**Pn**	00 37 58.4	-0.8
ITM	**Ithomi**	1.88	220	P		**Pn**	00 38 00.5	+0.9
ITM	**Ithomi**	1.88	220	Pn		**Pn**	00 38 00.4	+0.9
ITM	**Ithomi**	1.88	220	P		**Pn**	00 38 00.4	+0.9
VLI	**Veliai**	1.96	192	P		**Pn**	00 37 60.0	-0.6
VLI	**Veliai**	1.96	192	P		**Pn**	00 38 00.1	-0.4
HORT	**Hortiatis**	1.97	353	P		**Pn**	00 38 00.4	-0.5
HORT	**Hortiatis**	1.97	353	PN		**Pn**	00 37 59.9	-1.0
HORT	**Hortiatis**	1.97	353	P		**Pn**	00 38 00.4	-0.5
SIGR	**SIGRI**	1.98	72	P		**Pn**	00 37 59.3	-1.5
SIGR	**SIGRI**	1.98	72	PN		**Pn**	00 38 00.4	-0.4
THE	**Thessaloniki**	2.02	350	P		**Pn**	00 38 00.8	-0.7
THE				AML	AML		00 38 28.3	
	comp=E,1039µm,0.4s							
THE				AML	AML		00 38 28.4	
	comp=N,1072µm,0.5s							
MHLA	**Plaka, Milos I**	2.05	157	P		**Pn**	00 38 01.3	-0.5
KPRO	**Kipourio**	2.07	310	P		**Pn**	00 38 02.3	+0.1
MHLO	**Agia Marina, M**	2.09	158	P		**Pn**	00 38 02.3	-0.1
KZN	**Kozani**	2.10	323	P		**Pn**	00 38 02.9	+0.3
KZN	**Kozani**	2.10	323	P		**Pn**	00 38 02.9	+0.3
EVGI	**Lefkada island**	2.17	270	P		**Pn**	00 38 04.8	+1.3
LKD2	**Lefkada island**	2.17	275	P		**Pn**	00 38 04.8	+1.2
TSLK	**Tsoukalades, L**	2.18	276	P		**Pn**	00 38 05.3	+1.7
SOH	**Sokhos**	2.18	358	P		**Pn**	00 38 03.7	0.0
SOH				AML	AML		00 38 31.9	
	comp=N,2022µm,0.6s							
SOH				AML	AML		00 38 33.0	
	comp=E,3438µm,0.5s							
PYL	**PYLOS**	2.19	218	P		**Pn**	00 38 05.3	+1.5
PYL	**PYLOS**	2.19	218	P		**Pn**	00 38 05.4	+1.6
THAS	**Thassos island**	2.20	26	P		**Pn**	00 38 02.5	-1.4
FSK	**Fiskardo**	2.25	266	P		**Pn**	00 38 04.7	0.0
APE	**Apeiranthos**	2.28	133	⇑P		**Pn**	00 38 05.4	+0.3
APE	**Apeiranthos**	2.28	133	PN		**Pn**	00 38 04.8	-0.3
APE	**Apeiranthos**	2.28	133	*i* P		**Pn**	00 38 04.5	-0.6
PRK	**Paraskevi**	2.30	74	P		**Pn**	00 38 05.8	+0.6
BOZC	**Bozcaada**	2.37	59	PN		**Pn**	00 38 05.5	-0.7
KTHA	**Kythira Island**	2.40	187	P		**Pn**	00 38 06.3	-0.3
SMTH	**Samothraki Isl**	2.45	41	P		**Pn**	00 38 06.0	-1.3
GRG	**Griva**	2.45	341	PN		**Pn**	00 38 06.9	-0.4
GADA	**Gvkgeada**	2.46	50	PN		**Pn**	00 38 06.9	-0.6
SRS	**Serrai**	2.48	3	ePn		**Pn**	00 38 07.4	-0.3
SRS				eSn		**Sn**	00 38 34.9	-3.0
SRS	**Serrai**	2.48	3	P		**Pn**	00 38 07.5	-0.3
SRS				AML	AML		00 38 38.4	
	comp=E,948µm,0.4s							
SRS				AML	AML		00 38 38.9	
	comp=N,581µm,0.6s							
URLA	**Izmir**	2.50	95	PN		**Pn**	00 38 08.1	+0.1
KAVA	**Kavala**	2.50	19	P		**Pn**	00 38 06.9	-1.1
EZN	**Ezine**	2.54	61	PN		**Pn**	00 38 08.5	-0.1
KNT	**Kendrikon**	2.55	351	P		**Pn**	00 38 09.2	+0.5
KNT	**Kendrikon**	2.55	351	PN		**Pn**	00 38 08.7	-0.1
IGT	**Igoumenitsa**	2.57	291	ePn		**Pn**	00 38 11.1	+2.1
IGT	**Igoumenitsa**	2.57	291	P		**Pn**	00 38 10.3	+1.3
FNA	**Florina**	2.67	324	ePn		**Pn**	00 38 11.0	+0.7
FNA	**Florina**	2.67	324	P		**Pn**	00 38 11.1	+0.7
FNA	**Florina**	2.67	324	Pn		**Pn**	00 38 11.1	+0.7
CMBO	**Columbo, Santo**	2.67	143	P		**Pn**	00 38 10.4	0.0
NVR	**Nevrokopi**	2.73	7	P		**Pn**	00 38 10.9	-0.3
DKL	**Dikili**	2.75	80	PN		**Pn**	00 38 11.2	-0.2
ANKY	**Antikythira Is**	2.77	182	P		**Pn**	00 38 11.7	0.0
SMG	**Samos**	2.84	108	P		**Pn**	00 38 12.8	+0.1
BLCB	**Balcova**	2.84	94	PN		**Pn**	00 38 13.2	+0.5
GELI	**Tayfur-Gelibol**	2.94	52	PN		**Pn**	00 38 13.5	-0.5
MMB	**Musomiste**	2.96	4	*e*P		**Pn**	00 38 13.9	-0.4
ENEZ	**Enez**	2.97	44	PN		**Pn**	00 38 13.7	-0.7
RDO	**Rodhopi**	2.98	32	P		**Pn**	00 38 13.6	-1.1
RDO	**Rodhopi**	2.98	32	PN		**Pn**	00 38 13.3	-1.4
ALN	**Alexandroupoli**	3.03	41	PN		**Pn**	00 38 14.4	-0.8
ALN	**Alexandroupoli**	3.03	41	P		**Pn**	00 38 14.2	-1.0
ALN	**Alexandroupoli**	3.03	41			**Pn**	00 38 14.2	-1.0
LPK	**Lapseki**	3.10	55	PN		**Pn**	00 38 16.1	-0.2
ERIK	**Erikli-Kesan**	3.13	49	PN		**Pn**	00 38 16.5	-0.1
GCAM	**G?zelcaml?**	3.14	106	PN		**Pn**	00 38 17.1	+0.3
STIP	**Stip**	3.20	343	*i* Pn		**Pn**	00 38 17.9	+0.3
IMMV	**Iera Moni Meta**	3.20	172	P		**Pn**	00 38 17.6	-0.1
RZN	**Rozhen**	3.20	18	*e*P		**Pn**	00 38 17.9	+0.1
KKB	**Krupnik**	3.24	355	*e*P		**Pn**	00 38 18.1	-0.1
KDZ	**Kurdzhali**	3.37	26	PN		**Pn**	00 38 19.0	-1.0
KOSK	**Kos Island**	3.39	123	PN		**Pn**	00 38 20.8	+0.6
BODT	**Bodrum**	3.45	116	PN		**Pn**	00 38 21.5	+0.4
UKOP	**Uzunkopru-Edir**	3.50	44	PN		**Pn**	00 38 21.3	-0.5
IDI	**Anoyia**	3.54	160	Pn		**Pn**	00 38 22.6	+0.2
	comp=N,13nm,0.3s,baz=302,slow=19,SNR=52							
IDI				Sn		**Sn**	00 39 02.7	-1.5
	comp=N,11nm,0.3s,baz=112,slow=18,SNR=4.5							
IDI	**Anoyia**	3.54	160	P		**Pn**	00 38 22.2	-0.2
IDI	**Anoyia**	3.54	160	⇑P		**Pn**	00 38 23.5	+1.1
RKY	**Sarkoy-Tekirda**	3.54	54	PN		**Pn**	00 38 21.9	-0.5
AYDB	**Zeytinkoy-Aydi**	3.58	100	PN		**Pn**	00 38 23.2	+0.3
PLD	**Plovdiv**	3.60	15	PN		**Pn**	00 38 23.0	-0.1
PLD	**Plovdiv**	3.60	15	*e*P		**Pn**	00 38 24.1	+1.0
BALB	**Balikesir**	3.60	72	PN		**Pn**	00 38 23.4	+0.2
NIS1	**Nisyros Isl.**	3.60	123	PN		**Pn**	00 38 24.1	+0.9
SKO	**Skopje**	3.66	336	*e*Pn		**Pn**	00 38 23.5	-0.5
MLSB	**Milas**	3.69	110	PN		**Pn**	00 38 25.1	+0.7
DIM	**Dimitrovgrad**	3.77	25	*e*P		**Pn**	00 38 25.7	+0.3
MRMT	**Marmara Adasi**	3.77	57	PN		**Pn**	00 38 25.5	0.0
GVD	**Gavdhos**	3.83	172	P		**Pn**	00 38 27.6	+1.4
EDC	**Edincik**	3.83	62	PN		**Pn**	00 38 26.7	+0.4
TIR	**Tirane**	3.85	316	P		**Pn**	00 38 28.9	+2.3
TIR	**Tirane**	3.85	316	Pn		**Pn**	00 38 28.9	+2.3
BOSS	**Bosilegrad**	3.92	350	*e*Pn		**Pn**	00 38 28.1	+0.5
BOSS				*e*Sn		**Sn**	00 39 11.7	-1.8
VTS	**Vitosha**	3.98	358	*e*P		**Pn**	00 38 29.0	+0.5
PRVS	**Prvonek**	4.00	345	*e*Pn		**Pn**	00 38 29.5	+0.8
PRVS				*e*Sn		**Sn**	00 39 14.0	-1.5
EDRB	**Edirne**	4.09	37	PN		**Pn**	00 38 30.1	+0.3
KULA	**Kula-Manisa**	4.10	90	PN		**Pn**	00 38 31.0	+0.9
SCTE	**Santa Cesarea**	4.11	292	Pn		**Pn**	00 38 31.1	+1.0
YER	**Yerkesik**	4.12	116	PN		**Pn**	00 38 31.4	+1.0
CRLT	**Corlu**	4.14	52	PN		**Pn**	00 38 30.4	-0.2
TURN	**Turunc**	4.25	114	PN		**Pn**	00 38 33.0	+1.0
KARP	**Karpathos**	4.29	135			**Pn**	00 38 33.0	+0.3
SIMA	**Simav-Kutahya**	4.36	82	PN		**Pn**	00 38 34.3	+0.7
SLVT	**Silivri**	4.50	53	PN		**Pn**	00 38 35.9	+0.5
ARMT	**Armutlu**	4.62	64	PN		**Pn**	00 38 37.9	+0.8
ZAPS	**Zavoj**	4.67	353	*e*Pn		**Pn**	00 38 39.6	+1.7
ZAPS				*e*Sn		**Sn**	00 39 29.3	-2.7
CTKS	**Kestanelik-??a**	4.69	55	PN		**Pn**	00 38 38.6	+0.6
GEDZ	**Gediz**	4.69	83	PN		**Pn**	00 38 38.9	+0.7
TVSB	**Tavsanli**	4.77	78	PN		**Pn**	00 38 40.2	+0.9
DRME	**Dracevica, Mon**	4.80	319	⇑*i* Pn		**Pn**	00 38 41.0	+1.3
TRML	**Termal-Yalova**	4.85	64	PN		**Pn**	00 38 39.6	-0.7
SELS	**Selova**	4.90	340	*e*Pn		**Pn**	00 38 40.7	-0.3
PDG	**Podgorica**	4.95	321	*e*Pn		**Pn**	00 38 43.2	+1.6
PDG				*e*Sn		**Sn**	00 39 39.0	+0.3
PDG	**Podgorica**	4.95	321	⇑P		**Pn**	00 38 42.3	+0.7
PDG	**Podgorica**	4.95	321	⇑*i* Pn		**Pn**	00 38 43.1	+1.5
PDG	**Podgorica**	4.95	321			**Pn**	00 38 42.0	+0.4
SZH	**Strazhica**	5.00	21	*e*P		**Pn**	00 38 42.8	+0.5
KLYT	**Kilyos**	5.04	57	PN		**Pn**	00 38 43.5	+0.6
TAR1	**Taranto**	5.11	294	*e*Pn		**Pn**	00 38 45.4	+1.6
BOVS	**Bovan**	5.16	346	*e*Pn		**Pn**	00 38 43.8	-0.8
TIP	**Timpagrande**	5.23	278	⇑P		**Pn**	00 38 46.0	+0.4
TIP	**Timpagrande**	5.23	278			**Pn**	00 38 46.2	+0.6
ZAGS	**Zajecar**	5.25	350	*e*Pn		**Pn**	00 38 45.9	+0.1
ZAGS				*e*Sn		**Sn**	00 39 41.1	-5.0
SJES	**Sjenica**	5.31	332	*e*Pn		**Pn**	00 38 48.0	+1.3
SJES				*e*Sn		**Sn**	00 39 45.7	-2.1
HCY	**Herceg Novi**	5.35	317	*e*Pn		**Pn**	00 38 47.6	+0.4
SILT	**Sile**	5.40	60	PN		**Pn**	00 38 48.3	+0.5
ELL	**Elmali**	5.47	108	P		**Pn**	00 38 48.3	-0.7
ELL	**Elmali**	5.47	108	Pn		**Pn**	00 38 48.3	-0.7
IVAS	**Ivanjica**	5.52	334	*e*Pn		**Pn**	00 38 48.3	+0.6
MATE	**Matera**	5.57	293	⇓P		**Pn**	00 38 50.4	+0.3
BAI	**Bari**	5.61	298	⇑*i* Pn		**Pn**	00 38 51.2	+0.5
GRUS	**Gruza**	5.63	340	*e*Pn		**Pn**	00 38 51.8	+0.8
BRY	**Bratogost**	5.65	320	*e*Pn		**Pn**	00 38 52.0	+0.6
UPM	**Unac-Piva**	5.70	325	*e*Pn		**Pn**	00 38 53.9	+1.7
SAUV	**Serdivan-Sakar**	5.72	66	PN		**Pn**	00 38 52.6	+0.4
SRCK	**Saricakaya, Es**	5.75	74	PN		**Pn**	00 38 53.2	+0.5
GULT	**Gulveren**	5.76	70	PN		**Pn**	00 38 53.2	+0.3
RUDO	**Rudo**	5.84	330	*e*Pn		**Pn**	00 38 53.8	-0.2
CEL	**Celeste**	5.93	269	Pn		**Pn**	00 38 55.2	0.0
TRUS	**Trudelj**	6.03	339	*e*Pn		**Pn**	00 38 57.7	+1.2
DIVS	**Divibare**	6.04	336	*e*Pn		**Pn**	00 38 58.8	+2.1
DIVS	**Divibare**	6.04	336	⇑*i* Pn		**Pn**	00 38 58.2	+1.5
DIVS	**Divibare**	6.04	336			**Pn**	00 38 57.1	+0.4
BBLS	**Lazići**	6.04	331	*e*Pn		**Pn**	00 38 58.7	+2.0
BBLS	**Lazići**	6.04	331	⇑*i* Pn		**Pn**	00 38 58.3	+1.6
STON	**Ston**	6.07	316	*e*Pn		**Pn**	00 38 57.2	+0.2
STON	**Ston**	6.07	316	⇓*i* Pn		**Pn**	00 38 56.9	-0.1
STON	**Ston**	6.07	316	*e*Pn		**Pn**	00 38 57.1	+0.2
MDVR	**Moldovita**	6.27	349	⇓P		**Pn**	00 39 00.1	+0.2
MDUB	**Mudurnu**	6.28	71	Pn		**Pn**	00 39 02.0	+2.0
HERR	**Herculane**	6.28	353	⇓P		**Pn**	00 38 59.7	-0.3
ICOR	**Ion Corvin**	6.38	30	⇓P		**Pn**	00 39 02.1	+0.7
HAPS	**Han Pijesak,BI**	6.40	330	*e*Pn		**Pn**	00 39 02.1	+0.4
HAPS				*e*Sn		**Sn**	00 40 11.2	-3.5
HAPS	**Han Pijesak,BI**	6.40	330	⇑*i* Pn		**Pn**	00 39 02.1	+0.4
TEKS	**Tekeris**	6.59	335	*e*Pn		**Pn**	00 39 03.2	-1.0
SGRT	**San Giovanni R**	6.66	300	Pn		**Pn**	00 39 05.1	-0.1
GZR	**Gura Zlata**	6.77	356	⇑P		**Pn**	00 39 06.3	-0.4
ARR	**Arges**	6.78	7	⇓P		**Pn**	00 39 07.4	+0.4
RICI	**Ricice**	6.79	318	*e*Pn		**Pn**	00 39 07.3	+0.3
LOT	**Lotru**	6.81	2	⇑P		**Pn**	00 39 07.1	-0.2
TLBR	**Topalu**	6.84	29	⇑P		**Pn**	00 39 08.0	+0.4
VOIR		6.90	10	⇑P		**Pn**	00 39 09.4	+0.9
TIRG	**Tirgusor**	6.91	31	P		**Pn**	00 39 08.6	0.0
TIRR	**Tirgusor**	6.91	31	Pn		**Pn**	00 39 08.6	0.0
FRGS	**Fruska Gora**	7.05	339	*e*Pn		**Pn**	00 39 12.3	+1.7
FRGS	**Fruska Gora**	7.05	339	*e*Pn		**Pn**	00 39 12.1	+1.5
MLR	**Muntele Rosu**	7.10	14	Pn		**Pn**	00 39 13.0	+1.7
	comp=N,1.3nm,0.3s,baz=193,slow=3.9,SNR=26							
MLR				Sn		**Sn**	00 40 33.3	+1.4
	comp=N,0.8nm,0.3s,baz=249,slow=18,SNR=1.3							
MLR	**Muntele Rosu**	7.10	14	⇓P		**Pn**	00 39 12.9	+1.5
MLR	**Muntele Rosu**	7.10	14	Pn		**Pn**	00 39 13.2	+1.9
BZS	**Buzias**	7.10	350	*e*Pn		**Pn**	00 39 11.3	+0.1
BZS	**Buzias**	7.10	350	⇑P		**Pn**	00 39 11.3	+0.1
NEHR	**Nehoiu**	7.11	17	⇑P		**Pn**	00 39 13.0	+1.6
VAE	**Valguarnera**	7.21	264	Pn		**Pn**	00 39 14.2	+1.5
	comp=N,0.8nm,0.3s,baz=124,slow=18,SNR=1.6							
VAE				Sn		**Sn**	00 40 36.1	+1.5
	comp=N,1.4nm,0.3s,baz=62,slow=7.8,SNR=3.1							
VAE				LR	LR		00 42 13.4	
	comp=N,824nm,22.0s,baz=357,slow=39							
PAOL	**Paolisi**	7.23	292	Pn		**Pn**	00 39 15.0	+2.0
BISRR	**Bisoca**	7.32	18	⇑P		**Pn**	00 39 15.9	+1.6
DOPR	**Dopca**	7.47	11	⇓P		**Pn**	00 39 17.4	+1.2
MGRS	**Mrkonjic Grad**	7.48	323	*e*Pn		Pb	00 39 30.9	-6.4
KIJV	**Kijevo**	7.53	318	*e*Pn		**Pn**	00 39 17.1	0.0
MDB	**Medias**	7.53	5	⇓P		**Pn**	00 39 19.2	+2.0
PLOR	**Plostina**	7.59	17	⇓P		**Pn**	00 39 19.2	+1.2
VRI	**Vrincioaia**	7.63	17	⇑P		**Pn**	00 39 19.6	+1.1
OZUR		7.65	12	⇑P		**Pn**	00 39 20.5	+1.7
BLY	**Banja Luka**	7.69	325	*e*Pn		**Pn**	00 39 20.0	+0.8
BLY	**Banja Luka**	7.69	325	⇑*i* Pn		**Pn**	00 39 19.4	+0.2
ZIRJ	**Zirje**	7.72	313	*e*Pn		**Pn**	00 39 18.9	-0.8
MORI	**Morici**	7.82	314	*e*Pn		**Pn**	00 39 21.4	+0.4
CORL	**Corleone**	8.00	268	Pn		**Pn**	00 39 23.1	-0.5
BR131	**Keskin Array S**	8.00	79	*i* P		**Pn**	00 39 25.8	+2.0
BR131	**Keskin Array S**	8.00	79			**Pn**	00 39 23.9	+0.2
BRTR	**Keskin Array B**	8.00	79	Pn		Pn	00 39 27.3	+3.5
	comp=N,0.3nm,0.3s,baz=263,slow=14,SNR=6.0							
BRTR				LR	LR		00 42 37.2	
	comp=N,39nm,20.5s,baz=278,slow=38							
INTR	**Introdacqua**	8.02	298	Pn		**Pn**	00 39 25.2	+1.3
CJR	**Cluj-Napoca**	8.07	1	⇑P		**Pn**	00 39 25.4	+0.9
CLTB	**Caltabellotta**	8.12	266	Pn		**Pn**	00 39 26.9	+1.6
DRGR		8.17	357	⇑P		**Pn**	00 39 26.6	+0.7
TESR	**Tescani**	8.22	16	⇓P		**Pn**	00 39 28.2	+1.7
DUGI	**Dugi Otok**	8.26	313	*e*Pn		**Pn**	00 39 26.4	-0.8
MORH	**Mrgy, Hungar**	8.36	337	⇑*i* Pn		**Pn**	00 39 28.8	+0.4
ARCR	**ARCALIA**	8.47	4	⇑P		**Pn**	00 39 31.5	+1.5
AQU	**L'Aquila**	8.49	299	P		**Pn**	00 39 31.6	+1.2
AQU	**L'Aquila**	8.49	299	⇑*i* Pn		**Pn**	00 39 31.3	+0.9
AQU	**L'Aquila**	8.49	299	Pn		**Pn**	00 39 31.6	+1.2
BIZ	**Bicaz**	8.53	12	⇑P		**Pn**	00 39 32.9	+2.1
NVLJ	**Novalja**	8.72	315	*e*Pn		**Pn**	00 39 33.0	-0.4
PRAR	**RASCA**	8.96	12	⇑P		**Pn**	00 39 37.9	+1.2
BURAR	**Bucovina Array**	9.07	8	⇑P		**Pn**	00 39 39.2	+0.9
BURAR	**Bucovina Array**	9.07	8	Pn		**Pn**	00 39 39.6	+1.4
BUR08	**Bucovina Ar.

HHC			pmax	pmax		
	comp=Z,24nm,1.1s					
HHC			pmax	pmax		
	comp=Z,120nm,6.9s					
MKAR	**Makanchi Array**	**12.71 304**	Pn	Pn	00 41 09.7	-3.9
	comp=Z,0.3nm,0.3s,baz=114,slow=14,SNR=8.3					
MKAR			Sn	Sn	00 43 26.3	-8.7
	comp=Z,0.1nm,0.3s,baz=103,slow=19,SNR=1.6					
MKAR			Lg	Lg	00 44 52.5	
	comp=Z,0.1nm,0.3s,baz=104,slow=29,SNR=4.3					
ZALV	**Zalesovo Beam**	**15.89 331**	Pn	**Pn**	**00 41 56.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=142,slow=11,SNR=1.9					
ZALV			Lg	Lg	00 46 32.5	
	comp=Z,0.1nm,0.3s,baz=156,slow=23,SNR=3.8					

NAO ***19*** *00:38:43.6±2.1, 71.62N×2.14W, ML3.4*
IDC ***19*** *00:38:47.6±4.5, 71.60N×1.07W, h0km, mb3.5/1, mb1 3.7/6, mb1mx3.3/58, mbtmp3.6/6, ML3.0/5, Error ellipse: s-maj=66.6km s-min=27.1km az=90.0*
BER ***19*** *00:38:47.1±3.2, 71.65N×2.41W, h13km±65km, ML2.1, ML3.4(NAO), Confirmed Earthquake*

ISC 19 00:38:46.7±1.6, 71.57N±0.08×1.4W±0.1, h10km, n49, σ2.09/51, 1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBG	**Daneborg**	**6.18**	**305**	Pn	Pn	00 40 11.2	-6.6
DBG	**Daneborg**	**6.18**	**305**	*eP*	Pn	00 40 11.1	-6.8
DBG				*eS*	Sn	00 41 12.9	-15
LOF	**Lofoten**	**6.18**	**117**	Pn	**Pn**	**00 40 20.0**	**+2.1**
LOF	**Lofoten**	**6.18**	**117**	*eP*	**Pn**	**00 40 20.2**	**+2.3**
LOF				*eS*	**Sn**	**00 41 28.0**	**-0.5**
LOF				IAML		00 41 50.4	
	comp=Z,2.8nm,0.7s						
N2SV	**S rv∀gen**	**6.20**	**120**	*eP*	**Pn**	**00 40 20.0**	**+2.0**
N2RO	**R st**	**6.22**	**124**	*eP*	**Pn**	**00 40 20.5**	**+2.1**
N2VI	**Vinje**	**6.25**	**114**	*eP*	**Pn**	**00 40 21.5**	**+2.7**
N2VA	**Vr,y**	**6.27**	**122**	*eP*	**Pn**	**00 40 21.1**	**+2.0**
N2VA				*eS*	**Sn**	**00 41 27.1**	**-3.5**
STEI	**Steigen**	**6.80**	**114**	*iP*	**Pn**	**00 40 28.6**	**+2.3**
STEI				IAML		00 41 46.6	
	comp=Z,2.2nm,0.5s						
N2NF	**Nordfold**	**6.91**	**115**	*eP*	**Pn**	**00 40 30.4**	**+2.6**
N2NF				IAML		00 41 47.4	
	comp=Z,3.4nm,0.4s						
N2IH	**Innhavet**	**6.98**	**113**	*eP*	**Pn**	**00 40 31.9**	**+3.0**
N2IH				*eS*	**Sn**	**00 41 46.8**	**-1.3**
N2IH				IAML		00 41 50.4	
	comp=Z,3.2nm,0.3s						
NBB08	**Skaug oppvekst**	**7.00**	**119**	*eP*	**Pn**	**00 40 31.1**	**+2.1**
N2TV	**T∀rnvik**	**7.01**	**117**	*eP*	**Pn**	**00 40 31.3**	**+2.1**
TRO	**Tromso**	**7.01**	**96**	*eP*	**Pn**	**00 40 30.0**	**+0.7**
DAG	**Danmarks Havn**	**7.01**	**326**	*eP*	Pn	00 40 23.3	-5.9
DAG				*eS*	Sn	00 41 28.8	-20
DAG				IAML		00 41 31.2	
	comp=Z,3.1nm,0.3s						
DAG	**Danmarks Havn**	**7.01**	**326**	*e*	Pn	00 40 22.4	-6.9
	baz=135,slow=16						
DAG				*i* P	Pn	00 40 23.4	-5.9
DAG				*i* S	Sn	00 41 29.3	-20
DAG				IAML		00 41 31.2	
	comp=Z,3.1nm,0.3s						
NBB30	**Finnes**	**7.05**	**123**	*eP*	**Pn**	**00 40 32.1**	**+2.3**
HSPB	**Hornsund (broa**	**7.09**	**32**	Pn	**Pn**	**00 40 28.8**	**-1.6**
FAUS	**Fauske**	**7.18**	**118**	*eP*	**Pn**	**00 40 34.0**	**+2.4**
FAUS				*eS*	**Sn**	**00 41 51.1**	**-1.9**
FAUS				IAML		00 42 23.4	
	comp=Z,1.9nm,0.8s						
KONS	**Konsvik**	**7.25**	**127**	*eP*	**Pn**	**00 40 34.0**	**+1.5**
STOK	**Stokkvaagen**	**7.36**	**129**	*eP*	**Pn**	**00 40 36.5**	**+2.6**
BRBB	**Barentsburg B**	**7.68**	**25**	Pn	**Pn**	**00 40 38.3**	**-0.1**
BRBB	**Barentsburg B**	**7.68**	**25**	*eP*	**Pn**	**00 40 38.0**	**-0.5**
MOR8	**Moi Rana**	**7.84**	**126**	*eP*	**Pn**	**00 40 44.2**	**+3.5**
KIF	**Kilpisjarvi**	**7.89**	**98**	Pn	**Pn**	**00 40 42.3**	**+1.0**
KIF	**Kilpisjarvi**	**7.89**	**98**	Pn	**Pn**	**00 40 42.3**	**+1.0**
SPA0	**Spitsbergen Ar**	**8.04**	**27**	Pn	**Pn**	**00 40 42.9**	**-0.5**
	baz=207,slow=16						
SPA0	**Spitsbergen Ar**	**8.04**	**27**	Pn	**Pn**	**00 40 42.9**	**-0.5**
	baz=207,slow=16						
SPITS	**Spitsbergen Ar**	**8.04**	**27**	Pn	**Pn**	**00 40 42.9**	**-0.5**
	baz=205,slow=15,SNR=28						
KBS	**Kingsbay**	**8.10**	**18**	*eP*	**Pn**	**00 40 41.5**	**-2.7**
NSS	**Namsos**	**8.62**	**138**	*eP*	**Pn**	**00 40 54.0**	**+2.7**
KTK1	**Kautokeino**	**8.66**	**95**	*eP*	**Pn**	**00 40 53.3**	**+1.4**
HOPEN	**Hopen**	**8.71**	**44**	*eP*	**Pn**	**00 40 52.0**	**-0.5**
ARA0	**ARCESS Array S**	**9.14**	**90**	Pn	**Pn**	**00 40 59.5**	**+1.0**
	baz=287,slow=12						
ARA0	**ARCESS Array S**	**9.14**	**90**	Pn	**Pn**	**00 40 59.5**	**+1.0**
	baz=287,slow=12						
ARCES	**ARCESS Array B**	**9.14**	**90**	Pn	**Pn**	**00 40 59.5**	**+1.1**
	baz=290,slow=11,SNR=37						
AKN	**Aaknes**	**9.97**	**157**	Pn	**Pn**	**00 41 11.7**	**+1.9**
AKN				Sn	**Sn**	**00 42 57.7**	**-3.9**
AKN	**Aaknes**	**9.97**	**157**	Pn	**Pn**	**00 41 11.7**	**+1.9**
AKN				Sn	**Sn**	**00 42 57.7**	**-3.9**
FOO	**Floro**	**10.32**	**163**	*eP*	**Pn**	**00 41 16.6**	**+2.1**
NB2	**NORSAR Subarra**	**11.68**	**148**	Pn	**Pn**	**00 41 33.9**	**+0.7**
NB2	**NORSAR Subarra**	**11.68**	**148**	Pn	**Pn**	**00 41 33.9**	**+0.7**
NOA	**NORSAR Array B**	**11.68**	**148**	Pn	**Pn**	**00 41 36.5**	**+3.3**
	comp=Z,0.0nm,0.3s,baz=336,slow=11,SNR=3.8						
HFS	**Hagfors**	**12.96**	**145**	Pn	**Pn**	**00 41 53.8**	**+3.1**
	comp=Z,0.5nm,0.3s,baz=345,slow=11,SNR=14						
HFS	**Hagfors**	**12.96**	**145**	Pn	**Pn**	**00 41 52.3**	**+1.7**
	baz=338,slow=11						
HFS	**Hagfors**	**12.96**	**145**	Pn	**Pn**	**00 41 52.3**	**+1.7**
	baz=338,slow=11						
FIA0	**FINESS Array S**	**14.74**	**120**	P	**Pn**	**00 42 15.7**	**+0.9**
	baz=334,slow=14						
FIA0	**FINESS Array S**	**14.74**	**120**	P	**Pn**	**00 42 15.7**	**+0.9**
	baz=334,slow=14						
FINES	**FINESS Array B**	**14.74**	**120**	Pn	**Pn**	**00 42 16.2**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=332,slow=12,SNR=9.4						
AKASG	**Malin Array Be**	**25.06**	**130**	P	**P**	**00 44 12.4**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=339,slow=10,SNR=2.2						

IDC 19 00:50:36.7±582.0, 14.28S×31.62E, h0km, Error ellipse: s-maj=220.7km s-min=200.8km az=62.0, Zambia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I32KE	**NAIROBI INFRAS**	**13.94**	**22**	*i*		02 18 30.0	
	baz=203,slow=326,SNR=2.4						
I35NA	**TSUMEB INFRASO**	**14.31**	**248**	*i*		02 20 10.0	
	baz=72,slow=323,SNR=2.9						
I47ZA	**BOSHOF INFRASO**	**15.45**	**202**	*i*		02 27 40.0	
	baz=27,slow=322,SNR=0.5						

NEIC ***19*** *00:54:42.6±2.2, 36.72N±0.05×141.94E±0.09, h19km±5km, mb4.2/5, Error ellipse: s-maj=11.9km s-min=5.3km az=116.0*
JMA ***19*** *00:54:43.5±0.3, 36.75N×141.82E, h48km, M3.9*
JMA Felt I J1.
NIED ***19*** *00:54:43.5, 36.75N×141.82E, h48km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=4.92; Mθθ=0.09; Mϕϕ=4.83; Mrθ=0.02; Mθϕ=1.58; Mϕr=2.55; Fault plane solution: M₀5.72000×10¹⁴ NP1:ϕ=9.00000°, δ=58.00000°, λ=-99.00000°. NP2:ϕ=205.00000°, δ=33.00000°, λ=-76.00000°.*
IDC ***19*** *00:54:46.3±2.8, 36.68N×141.77E, h46km±26km, mb3.5/11, mb1 3.7/15, mb1mx3.6/41, mbtmp3.8/15, ML3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/44 Error ellipse: s-maj=28.2km s-min=17.5km az=74.0*

ISC 19 00:54:41.5±3.1, 36.75N±0.05×141.87E±0.06, h9km±19km, n60, σ1.14/62, mb3.8/13, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.93**	**293**	P	**Pb**	**00 54 59.7**	**-0.1**
ONAJ				S	**Sb**	**00 55 12.3**	**+0.1**
JFK	**Kawauchi**	**1.01**	**308**	P	**Pb**	**00 55 00.8**	**-0.4**
JFK				S	**Sb**	**00 55 14.6**	**+0.1**
JHO	**Hitachi**	**1.05**	**263**	P	**Pb**	**00 55 01.2**	**-0.7**
JFFD	**Fukushimafurud**	**1.10**	**289**	P	**Pb**	**00 55 02.2**	**-0.6**
JHYU	**Hitachinakayam**	**1.11**	**249**	P	**Pn**	**00 55 02.6**	**-0.6**
JHYU				S	**Sb**	**00 55 16.6**	**-0.8**
JMM	**Marumori**	**1.41**	**323**	P	**Pn**	**00 55 07.0**	**-0.3**
JMM				S	**Sn**	**00 55 23.7**	**-2.3**
JMM	**Marumori**	**1.41**	**323**		**Pn**	**00 55 07.1**	**-0.3**
JYT	**Yasato**	**1.45**	**249**		**Pn**	**00 55 07.6**	**-0.2**
JFT	**Otama**	**1.45**	**303**	P	**Pn**	**00 55 08.3**	**+0.4**
JIO	**Ouri**	**1.75**	**347**	P	**Pn**	**00 55 12.2**	**+0.1**
JFY	**Yanaizu**	**1.85**	**291**	P	**Pn**	**00 55 14.4**	**+1.0**
JOU	**Okura**	**1.88**	**330**	P	**Pn**	**00 55 14.7**	**+0.9**
JOU				S	**Sn**	**00 55 37.5**	**-0.1**
JAG	**Ashikaga**	**1.97**	**261**	P	**Pn**	**00 55 14.9**	**-0.2**
MJAR	**Matsushiro Arr**	**2.95**	**267**	P	**Pn**	**00 55 29.8**	**+1.2**
	2.7nm,0.3s,baz=110,slow=11,SNR=74						
MJAR				S	**Sn**	**00 56 06.0**	**+1.9**
	2.5nm,0.3s,baz=118,slow=18,SNR=11						
MJAR				LR	LR	00 56 50.6	
	comp=Z,160nm,18.5s,baz=100,slow=44						
MJAR	**Matsushiro Arr**	**2.95**	**267**		**Pn**	**00 55 28.8**	**+0.3**
MAJO	**Matsushiro**	**2.95**	**267**	Pn	**Pn**	**00 55 30.0**	**+1.4**
MAT	**Matsushiro**	**2.95**	**267**	P	**Pn**	**00 55 29.4**	**+0.8**
MAT				S	**Sn**	**00 56 04.4**	**+0.3**
MJB9	**Matsu-Tunnel**	**2.95**	**267**	Pn	**Pn**	**00 55 29.9**	**+1.3**
JSD	**Sado**	**3.15**	**295**	Pn	**Pn**	**00 55 33.1**	**+1.8**
JGF	**Kuroka**	**3.82**	**254**	Pn	**Pn**	**00 55 43.0**	**+2.4**
JHJ2	**Mitsune**	**4.00**	**206**	Pn	**Pn**	**00 55 43.9**	**+0.9**
JHJ	**Hachijo jima 2**	**4.00**	**206**	P	**Pn**	**00 55 43.3**	**+0.3**
	29nm,0.3s,baz=63,slow=21,SNR=6.0						
JTM	**Tenmabayashi**	**4.08**	**351**	Pn	**Pn**	**00 55 46.8**	**+2.7**
INU	**Inuyama**	**4.17**	**252**	Pn	**Pn**	**00 55 48.0**	**+2.7**
ERM	**Erimo**	**5.36**	**10**	Pn	**Pn**	**00 56 01.0**	**-0.5**
JHS	**Saijyo**	**7.32**	**259**	Pn	**Pn**	**00 56 31.2**	**+2.7**
JCJ	**Chichijima**	**9.63**	**178**	Pn	**Pn**	**00 56 59.4**	**-0.8**
USRK	**Ussuriysk Ar.**	**10.58**	**318**	P	**Pn**	**00 57 14.0**	**+0.8**
	baz=97,slow=12,SNR=1.8						
USRK	**Ussuriysk Ar.**	**10.58**	**318**	Pn	**Pn**	**00 57 13.4**	**+0.2**
KSRS	**Korea Array**	**11.16**	**278**	P	**Pn**	**00 57 23.6**	**+2.4**
	0.4nm,0.3s,baz=95,slow=15,SNR=1.5						
H11N2	**WAKE ISLAND Hy**	**27.69**	**121**	T	T	01 29 55.8	
	baz=313,slow=75,SNR=74						
H11N1	**WAKE ISLAND Hy**	**27.70**	**121**	T	T	01 29 59.4	
	baz=313,slow=75,SNR=75						
H11N3	**WAKE ISLAND Hy**	**27.71**	**121**	T	T	01 29 55.4	
	baz=313,slow=75,SNR=68						
SONM	**Songino Array**	**28.25**	**304**	P	**P**	**01 00 35.4**	**+0.5**
	1.8nm,0.6s,baz=101,slow=9.0,SNR=9.2						
SONM	**Songino Array**	**28.25**	**304**	P	**P**	**01 00 34.9**	**-0.1**
H11S1	**WAKE ISLAND Hy**	**28.40**	**123**	T	T	01 30 39.3	
	baz=315,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**28.40**	**123**	T	T	01 30 41.1	
	baz=315,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**28.41**	**123**	T	T	01 30 49.3	
	baz=315,slow=76,SNR=21						
ZALV	**Zalesovo Beam**	**42.38**	**313**	P	**P**	**01 02 34.3**	**-1.5**
	1.3nm,0.6s,baz=89,slow=9.2,SNR=7.1						
ZALV				PcP	**PcP**	**01 04 28.6**	**-0.5**
	0.3nm,0.4s,baz=116,slow=3.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**42.38**	**313**	P	**P**	**01 02 35.0**	**-0.9**
MK31	**Makanchi Array**	**44.58**	**302**	P	**P**	**01 02 53.2**	**-0.6**
MKAR	**Makanchi Array**	**44.58**	**302**	P	**P**	**01 02 53.5**	**-0.3**
	1.0nm,0.8s,baz=87,slow=9.8,SNR=6.0						
MKAR	**Makanchi Array**	**44.58**	**302**	P	**P**	**01 02 53.2**	**-0.6**
KURK	**Kurchatov**	**46.40**	**308**	P	**P**	**01 03 06.9**	**-1.2**
KURK				IAmb	IAmb	01 03 22.0	
	comp=Z,2.1nm,0.8s						
WRH	**Wood River Hil**	**49.03**	**33**	P	**P**	**01 03 31.0**	**+2.7**
ILAR	**Eielson Array**	**49.54**	**32**	P	**P**	**01 03 32.9**	**+0.7**
	comp=Z,0.7nm,1.1s,baz=267,slow=5.9,SNR=2.6						
WB0	**Warramunga Arr**	**56.65**	**188**	P	**P**	**01 04 24.4**	**-0.6**
WB0				IAmb	IAmb	01 04 38.2	
	comp=Z,4.0nm,1.2s						
FITZ	**Fitzroy Crossi**	**56.66**	**199**	P	**P**	**01 04 25.4**	**+0.3**
WRA	**Warramunga Arr**	**56.83**	**188**	P	**P**	**01 04 25.1**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=3.8,slow=7.3,SNR=7.3						
ABKAR	**Akbulak array**	**58.40**	**310**	P	**P**	**01 04 36.7**	**-0.5**
ASAR	**Alice Springs**	**60.56**	**188**	P	**P**	**01 04 51.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=9.6,slow=6.9,SNR=7.4						
ASAR	**Alice Springs**	**60.56**	**188**	P	**P**	**01 04 51.9**	**-0.4**
NB2	**NORSAR Subarra**	**74.59**	**337**	P	**P**	**01 06 20.5**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**74.59**	**337**	P	**P**	**01 06 20.5**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=38,slow=5.7,SNR=4.2						
AKASG	**Malin Array Be**	**74.75**	**323**	P	**P**	**01 06 21.1**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=49,slow=6.0,SNR=4.1						
AKASG	**Malin Array Be**	**74.75**	**323**	P	**P**	**01 06 21.4**	**-0.2**
NVAR	**Mina Array Bea**	**74.87**	**53**	P	**P**	**01 06 22.9**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=290,slow=5.7,SNR=2.2						
BURAR	**Bucovina Array**	**78.76**	**322**	P	**P**	**01 06 44.9**	**+0.4**
GERES	**GERESS Array B**	**83.15**	**328**	P	**P**	**01 07 07.8**	**0.0**
	comp=Z,0.4nm,0.6s,baz=24,slow=5.6,SNR=2.6						
TXAR	**Lajitas Array**	**90.01**	**53**	P	**P**	**01 07 42.2**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=350,slow=4.6,SNR=1.9						

IDC ***19*** *00:57:52.3±1.6, 24.59N×122.92E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/35, mbtmp3.6/5, MS3.0/5, Ms1 3.0/5, ms1mx2.7/40, Error ellipse: s-maj=74.9km s-min=26.2km az=69.0*
JMA ***19*** *00:57:52.1±0.2, 25.00N×123.56E, h20km, M3.4*

ISC 19 00:57:52.1±1.7, 24.94N±0.06×123.56E±0.04, h8km±12km, n17, σ0.67/21, mb3.5/4, MS2.9/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.62**	**166**	P	**Pb**	**00 58 05.1**	**-0.2**
IRIF				S	**Sb**	**00 58 14.0**	**-0.2**
YOJ	**Yonaguni jima**	**0.69**	**226**	P	**Pb**	**00 58 06.1**	**-0.4**
YOJ				S	**Sb**	**00 58 15.9**	**-0.3**
JYNG	**Yonagunijimaku**	**0.74**	**229**	P	**Pg**	**00 58 06.3**	**-0.2**
JYNG				S	**Sb**	**00 58 17.4**	**-0.3**
JISG	**Ishigakijimahi**	**0.77**	**117**	P	**Pg**	**00 58 07.1**	**+0.2**
JISG				S	**Sb**	**00 58 18.0**	**-0.3**
JIJ	**Ishigaki jima**	**0.78**	**137**	P	**Pg**	**00 58 07.2**	**0.0**
JIJ				S	**Sb**	**00 58 18.7**	**0.0**
JKRS	**Kuro-shima**	**0.81**	**150**	P	**Pb**	**00 58 08.3**	**-0.2**
JKRS				S	**Sg**	**00 58 18.9**	**+0.6**
HATJ	**Hateruma jima**	**0.91**	**166**	P	**Pb**	**00 58 09.9**	**-0.2**
HATJ				S	**Sb**	**00 58 22.1**	**-0.3**
JTJ	**Tarama**	**1.08**	**106**	P	**Pb**	**00 58 12.7**	**-0.3**
JTJ				S	**Sb**	**00 58 26.7**	**-0.6**
KSRS	**Korea Array**	**13.02**	**16**	Pn	**P**	**01 01 06.8**	**-1.1**
	baz=198,slow=12,SNR=1.6						
KSRS				LR	LR	01 05 49.8	
	comp=Z,42nm,20.2s,baz=176,slow=35						
MJAR	**Matsushiro Arr**	**17.07**	**44**	LR	LR	01 08 35.7	
	comp=Z,22nm,19.0s,baz=115,slow=36						
ASAJ	**Asahikawa**	**24.63**	**34**	LR	LR	01 13 48.0	
	comp=Z,34nm,18.3s,baz=304,slow=38						
KLR	**Kul'dur**	**25.08**	**13**	LR	LR	01 14 17.7	
	comp=Z,35nm,18.9s,baz=260,slow=39						
SONM	**Songino Array**	**26.58**	**334**	P	**P**	**01 03 32.1**	**+1.2**
	0.6nm,0.6s,baz=139,slow=9.5,SNR=2.4						
MKAR	**Makanchi Array**	**39.33**	**314**	P	**P**	**01 05 23.6**	**+1.8**
	0.6nm,0.8s,baz=101,slow=7.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**40.82**	**326**	P	**P**	**01 05 33.6**	**-0.4**
	0.3nm,0.3s,baz=123,slow=5.3,SNR=1.8						
WRA	**Warramunga Arr**	**45.83**	**166**	P	**P**	**01 06 14.6**	**-0.2**
	0.7nm,0.8s,baz=347,slow=8.2,SNR=5.0						
NOA	**NORSAR Array B**	**78.56**	**333**	LR	LR	01 49 20.6	
	comp=Z,22nm,18.2s,baz=325,slow=39						

NEIC ***19*** *01:30:49.0±2.9, 55.86N±0.05×157.76W±0.05, h48km±7km, Error ellipse: s-maj=7.0km s-min=4.1km az=167.0*
AEIC ***19*** *01:30:48±2.7, 55.89N±0.04×157.74W±0.07, h34km±5km, ML3.5, mb4.3/12(NEIC), Error ellipse: s-maj=6.1km s-min=5.0km az=123.0*
IDC ***19*** *01:30:50.4±4.7, 56.19N×157.78W, h57km±40km, mb3.6/16, mb1 3.9/18, mb1mx3.6/58, mbtmp3.9/18, ML3.7/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/60, Error ellipse: s-maj=29.0km s-min=17.7km az=21.0*

ISC 19 01:30:49.6±0.7, 55.95N±0.06×157.82W±0.04, h58km±6km, n106, σ1.31/115, mb4.0/21, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHGN	**Chignik**	**0.48**	**317**		**Pn**	**01 31 00.2**	**-1.0**
CHGN					**Sn**	**01 31 07.5**	**-2.1**
VNHG	**Veniaminof 1**	**0.80**	**290**		**Pn**	**01 31 05.0**	**-0.1**
VNWF	**Veniaminof 8**	**1.00**	**282**		**Pn**	**01 31 07.7**	**+0.1**
VNWF					**Sn**	**01 31 21.2**	**+0.2**
VNFG	**Fog Glacier, M**	**1.03**	**290**		**Pn**	**01 31 08.4**	**+0.4**
VNFG					**Sn**	**01 31 22.8**	**+1.1**
CHIR	**Chirikof Islan**	**1.24**	**95**		**Pn**	**01 31 09.8**	**-1.0**
CHIR					**Sn**	**01 31 25.3**	**-1.3**
CNBA	**Chernabura Isl**	**1.52**	**222**		**Pn**	**01 31 13.8**	**-0.6**
CNBA					**Sn**	**01 31 33.1**	**-0.1**
SDPT	**Sand Point**	**1.62**	**249**		**Pn**	**01 31 16.0**	**+0.2**
SDPT					**Sn**	**01 31 36.9**	**+1.1**
PLK3	**Peulik 3**	**1.94**	**25**		**Pn**	**01 31 21.5**	**+1.3**
PLK3					**Sn**	**01 31 46.2**	**+2.8**
PLK1	**Peulik 1**	**1.97**	**19**		**Pn**	**01 31 21.4**	**+0.8**
PLK5	**Peulik 5**	**2.12**	**14**		**Pn**	**01 31 23.4**	**+0.9**
SII	**Sitkinak Islan**	**2.12**	**72**		**Pn**	**01 31 20.5**	**-2.1**
PVV	**Pavlof Volcano**	**2.32**	**257**		**Pn**	**01 31 25.6**	**+0.2**
PS4A	**Pavlof South-4**	**2.37**	**257**		**Pn**	**01 31 26.3**	**+0.3**
HAG	**Hague Volcano**	**2.40**	**256**		**Pn**	**01 31 27.0**	**+0.5**
KJL	**Kejulik**	**2.44**	**29**		**Pn**	**01 31 27.9**	**+0.9**
CAHL	**Cahill**	**2.52**	**32**		**Pn**	**01 31 28.8**	**+0.7**
ANCK	**Angle Creek**	**2.59**	**28**		**Pn**	**01 31 29.9**	**+0.9**
DT1	**Dutton Round H**	**2.67**	**253**		**Pn**	**01 31 30.3**	**+0.1**
KABR	**Katmai Barrier**	**2.68**	**34**		**Pn**	**01 31 30.8**	**+0.4**
KABR					**Sn**	**01 32 03.5**	**+1.8**
KABU	**Katmai Buttres**	**2.71**	**30**		**Pn**	**01 31 31.7**	**+1.0**
KELA	**Mount Kelaz**	**2.74**	**23**		**Pn**	**01 31 31.7**	**+0.5**
KCG	**Knife Ck. Glac**	**2.79**	**31**		**Pn**	**01 31 32.9**	**+1.1**
KAKN	**Katmai Knife C**	**2.79**	**31**		**Pn**	**01 31 32.6**	**+0.7**
OHAK	**Old Harbor**	**2.81**	**61**		**Pn**	**01 31 31.2**	**-0.8**
KARR	**Katmai Rainbow**	**3.06**	**32**		**Pn**	**01 31 36.0**	**+0.5**
KAHC	**Katmai Hardscr**	**3.10**	**28**		**Pn**	**01 31 36.8**	**+0.6**
KAPH	**Katmai Pasha**	**3.25**	**34**		**Pn**	**01 31 39.0**	**+0.8**
FALS	**False Pass**	**3.38**	**253**		**Pn**	**01 31 38.9**	**-0.9**
KDAK	**Kodiak Island**	**3.41**	**55**		**Pn**	**01 31 40.5**	**+0.3**
BRPK	**Brown Peak**	**3.63**	**251**		**Pn**	**01 31 44.4**	**+1.1**
SSLS	**Shishaldin Sou**	**3.74**	**253**		**Pn**	**01 31 45.6**	**+0.7**
AKUT	**Akutan**	**4.92**	**252**	Pn	**Pn**	**01 32 03.3**	**+2.4**
CNPM	**China Poot**	**5.03**	**42**	Pn	**Pn**	**01 32 05.2**	**+2.8**
RSO	**Redoubt South**	**5.25**	**29**		**Pn**	**01 32 05.6**	**-0.1**
SVW2	**Sparrevohn**	**5.29**	**12**	Pn	**Pn**	**01 32 06.3**	**+0.3**
BRLK	**Bradley Lake**	**5.32**	**41**	Pn	**Pn**	**01 32 05.2**	**-1.2**
UNV	**Unalaska Valle**	**5.44**	**251**	Pn	**Pn**	**01 32 08.7**	**+0.7**
SEW	**Seward**	**6.09**	**43**	Pn	**Pn**	**01 32 16.8**	**0.0**
SUA	**Susitna One**	**6.64**	**31**	Pn	**Pn**	**01 32 24.9**	**+0.4**
SKT	**Skwentna**	**6.86**	**26**	Pn	**Pn**	**01 32 28.9**	**+1.4**
SPIA	**Saint Paul Isl**	**6.98**	**285**	Pn	**Pn**	**01 32 30.3**	**+1.2**
TTA	**Tatalina**	**7.06**	**7**	Pn	**Pn**	**01 32 29.4**	**-0.9**
GHO	**Glory Hole Cre**	**7.43**	**35**	Pn	**Pn**	**01 32 35.7**	**+0.3**
PPLA	**Purkeypile**	**7.53**	**20**	Pn	**Pn**	**01 32 39.3**	**+2.6**
FID	**Port Fidalgo**	**7.66**	**46**	Pn	**Pn**	**01 32 37.5**	**-0.8**
EYAK	**Cordova Ski Ar**	**7.85**	**49**	Pn	**Pn**	**01 32 40.2**	**-0.8**
SCM	**Sheep Creek Mo**	**8.01**	**38**	Pn	**Pn**	**01 32 42.6**	**-0.7**
KLU	**Klutina**	**8.31**	**43**	Pn	**Pn**	**01 32 46.6**	**-0.7**
TRF	**Thorofare Moun**	**8.42**	**24**	Pn	**Pn**	**01 32 47.6**	**-1.4**
M24K	**Tolsona, Glenn**	**8.60**	**39**	Pn	**Pn**	**01 32 51.0**	**-0.3**
RND	**Reindeer**	**8.74**	**27**	Pn	**Pn**	**01 32 52.1**	**-1.0**
DHY	**Denali Highway**	**8.89**	**32**	Pn	**Pn**	**01 32 54.3**	**-1.0**
N25K	**Chitina, Valde**	**8.89**	**45**	Pn	**Pn**	**01 32 55.4**	**+0.1**
TGL	**Tana Glacier**	**9.22**	**52**	Pn	**Pn**	**01 32 59.4**	**-0.5**
ANM	**Nome**	**9.41**	**340**	Pn	**Pn**	**01 33 03.1**	**+0.8**
WRH	**Wood River Hil**	**9.81**	**25**	Pn	**Pn**	**01 33 05.8**	**-1.9**
CCB	**Clear Creek Bu**	**10.02**	**25**	Pn

TPUB	**Ta-pu**	**3.74**	**1**	Pn	**Pn**	**01 35 49.3**	**-2.1**
YULB	**Yu-li**	**3.89**	**10**	Pn	**Pn**	**01 35 52.9**	**-0.4**
YULB				Sn	**Sn**	**01 36 38.5**	**+0.2**
SSLB	**Suanglung**	**4.24**	**5**	Pn	**Pn**	**01 35 58.1**	**0.0**
NACB	**Ninganchiao**	**4.70**	**11**	Pn	**Pn**	**01 36 03.5**	**-1.0**
YHNB	**Yeheng**	**5.16**	**8**	Pn	**Pn**	**01 36 11.5**	**+0.7**
CHTO	**Chiang Mai**	**20.46 272**		P	**P**	**01 39 31.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**20.50 271**		P	**P**	**01 39 32.0**	**+0.5**
	0.7nm,0.3s,baz=81,slow=9.2,SNR=5.4						
CMAR				LR	LR	01 46 35.4	
	comp=Z,30nm,18.1s,baz=148,slow=34						
CMAR	**Chiang Mai Arr**	**20.50 271**		P	**P**	**01 39 31.2**	**-0.3**
BJT	**Baijiatuau**	**20.76 350**		P	Pn	01 39 35.3	-1.3
BJT				IAmb	IAmb	01 39 36.2	
	comp=Z,9.0nm,0.9s						
ULN	**Ulaanbaatar**	**30.32 342**		P	**P**	**01 41 05.3**	**+0.5**
ULN				IAmb	IAmb	01 41 05.8	
	comp=Z,2.7nm,0.8s						
SONM	**Songino Array**	**30.49 341**		P	**P**	**01 41 05.6**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=156,slow=11,SNR=2.4						
SONM	**Songino Array**	**30.49 341**		P	**P**	**01 41 06.3**	**0.0**
FITZ	**Fitzroy Crossi**	**37.73 172**		P	**P**	**01 42 08.9**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=3,9,slow=8.3,SNR=8.6						
FITZ	**Fitzroy Crossi**	**37.73 172**		P	**P**	**01 42 09.3**	**+0.2**
FITZ				IAmb	IAmb	01 42 18.7	
	comp=Z,4.5nm,0.9s						
MBWA	**Marble Bar**	**40.46 181**		P	**P**	**01 42 30.2**	**-1.7**
WB0	**Warramunga Arr**	**41.34 160**		P	P	01 42 34.3	-5.0
MK31	**Makanchi Array**	**41.40 320**		P	**P**	**01 42 39.9**	**+0.4**
MK31				IAmb	IAmb	01 42 41.3	
	comp=Z,3.9nm,1.1s						
MKAR	**Makanchi Array**	**41.40 320**		P	**P**	**01 42 40.1**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=118,slow=9.7,SNR=11						
MKAR	**Makanchi Array**	**41.40 320**		P	**P**	**01 42 39.5**	**-0.1**
WRA	**Warramunga Arr**	**41.49 160**		P	**P**	**01 42 37.7**	**-2.7**
WB2	**Warramunga Arr**	**41.49 160**		P	**P**	**01 42 37.2**	**-3.3**
ZAA0	**Zalesovo Array**	**43.91 330**		P	**P**	**01 42 59.4**	**-0.2**
ZAA0				IAmb	IAmb	01 43 00.7	
	comp=Z,3.4nm,1.1s						
ZALV	**Zalesovo Beam**	**43.91 330**		P	**P**	**01 42 60.0**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=115,slow=8.0,SNR=8.5						
ZALV	**Zalesovo Beam**	**43.91 330**		P	**P**	**01 42 59.2**	**-0.5**
ASAR	**Alice Springs**	**44.87 163**		P	**P**	**01 43 09.2**	**+1.5**
	comp=Z,1.8nm,0.8s,baz=340,slow=6.7,SNR=14						
KURK	**Kurchatov**	**45.39 323**		P	**P**	**01 43 12.1**	**+0.6**
KURBB	**Kurchatov Arra**	**45.39 323**		P	**P**	**01 43 12.5**	**+1.0**
	comp=Z,4.3nm,0.8s,baz=121,slow=7.9,SNR=17						
BRVK	**Borovoye**	**51.05 323**		P	**P**	**01 43 55.9**	**+0.7**
BRVK				IAmb	IAmb	01 43 57.0	
	comp=Z,2.8nm,0.9s						
NRIK	**Noril'sk**	**53.74 346**		P	**P**	**01 44 15.2**	**+0.2**
	comp=Z,2.0nm,0.5s,baz=109,slow=6.4,SNR=5.2						
STKA	**Stephens Creek**	**54.95 158**		P	**P**	**01 44 26.0**	**+1.8**
	comp=Z,0.9nm,0.5s,baz=328,slow=15,SNR=2.3						
STKA	**Stephens Creek**	**54.95 158**		P	**P**	**01 44 23.6**	**-0.6**
ABKAR	**Akbulak array**	**56.35 317**		P	**P**	**01 44 34.3**	**+0.1**
KBZ	**Khabaz**	**67.99 310**		P	**P**	**01 45 52.4**	**0.0**
	comp=Z,2.3nm,0.9s,baz=59,slow=19,SNR=5.1						
KIV	**Kislovodsk**	**68.12 310**		P	**P**	**01 45 54.3**	**+1.0**
ILAR	**Eielson Array**	**73.58 27**		P	**P**	**01 46 25.8**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=281,slow=5.2,SNR=2.9						
FINES	**FINESS Array B**	**75.17 330**		P	**P**	**01 46 34.9**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=63,slow=8.8,SNR=4.1						
AKASG	**Malin Array Be**	**75.98 319**		P	**P**	**01 46 39.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=57,slow=5.7,SNR=5.2						
BURAR	**Bucovina Array**	**79.33 317**		P	**P**	**01 46 59.5**	**+0.5**

DJA ***19*** *01:41:05.1±1.4, 1°N±6°×12°8E±1°,1, h76km±16km, M4.1/7, mB4.7/3, mb4.1/3, MLv4.1/7, Mw(mB)3.9/3*
IDC ***19*** *01:41:17.1±2.0, 1.86N×126.64E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/36, mbtmp3.7/3, Error ellipse: s-maj=178.6km s-min=23.7km az=66.0*
NEIC ***19*** *01:41:23.2±0.6, 1.7N±0.1×126.5E±0.1, h44km±10km, mb4.2/9, Error ellipse: s-maj=22.5km s-min=11.9km az=213.0*

ISC 19 01:41:23.5±0.9, 1.62N±0.09×126.44E±0.10, h47km, n20, σ1§45/20, mb4.0/7, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**132**		**Pn**	**01 41 44.1**	**-0.4**
SGSI	**Sangihe**	**2.25**	**336**	P	**Pn**	**01 41 56.8**	**-1.5**
KMSI	**Cibinong**	**2.67**	**247**	P	**Pn**	**01 42 02.5**	**-1.6**
GTOI	**Gorontalo**	**3.57**	**254**	P	**Pn**	**01 42 18.5**	**+2.1**
	0.1nm230nm12nm,0.6s						
LUWI	**Luwuk**	**4.52**	**234**	P	**Pn**	**01 42 25.9**	**-3.6**
	0.6nm4µm27nm,0.6s						
MPSI	**Mapaga**	**6.67**	**259**	P	**Pn**	**01 43 01.3**	**+2.4**
BKB	**Balikpapan**	**9.96**	**253**	Pn	**Pn**	**01 43 44.3**	**+0.2**
WB0	**Warramunga Arr**	**22.64**	**160**	P	**P**	**01 46 21.4**	**+0.6**
WRA	**Warramunga Arr**	**22.78**	**160**	P	**P**	**01 46 22.3**	**0.0**
	1.5nm,0.5s,baz=340,slow=11,SNR=8.0						
WRA	**Warramunga Arr**	**22.78**	**160**	P	**P**	**01 46 23.1**	**+0.8**
WB2	**Warramunga Arr**	**22.79**	**160**	P	**P**	**01 46 23.1**	**+0.8**
ASAR	**Alice Springs**	**26.16**	**164**	P	**P**	**01 46 55.9**	**+2.2**
	0.9nm,0.8s,baz=336,slow=8.6,SNR=8.4						
MORW	**Morawa**	**32.09**	**197**	P	**P**	**01 47 46.1**	**-0.2**
MORW				IAmb	IAmb	01 47 60.0	
	comp=Z,11nm,1.4s						
MK31	**Makanchi Array**	**59.13**	**326**	P	**P**	**01 51 19.0**	**-0.5**
MK31				IAmb	IAmb	01 51 22.1	
	comp=Z,1.9nm,1.4s						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**01 51 18.9**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=121,slow=8.2,SNR=14						
MKAR	**Makanchi Array**	**59.13**	**326**	P	**P**	**01 51 19.0**	**-0.4**
MAKZ	**Makanchi**	**59.31**	**326**	P	**P**	**01 51 20.7**	**0.0**
MAKZ				IAmb	IAmb	01 51 24.2	
	comp=Z,2.0nm,1.1s						
WKZ	**Wanaka**	**59.73**	**146**	P	**P**	**01 51 23.8**	**+0.3**
KNTN	**Kanton**	**61.97**	**94**	P	**P**	**01 51 38.9**	**-0.5**
KURK	**Kurchatov**	**63.37**	**328**	P	**P**	**01 51 47.8**	**-0.1**
KURK				IAmb	IAmb	01 51 50.0	
	comp=Z,1.8nm,0.9s						

IDC ***19*** *01:56:45.5±0.5, 42.74N×105.40E, h0km, mb4.1/29, mb1 4.3/37, mb1mx4.1/73, mbtmp4.2/37, ML4.1/6, MS3.9/17, Ms1 3.9/17, ms1mx3.6/45, Error ellipse: s-maj=13.0km s-min=10.8km az=36.0*
MOS ***19*** *01:56:46.2±1.1, 42.82N×105.39E, h12km, mb4.7/30, MS4.0/8, Error ellipse: s-maj=6.4km s-min=4.8km az=119.2*
BJI ***19*** *01:56:48.0±0.0, 42.78N×105.43E, h3km, mB4.7/25, mb4.7/30, ML5.1/19, Ms4.7/41, Ms7 4.4/35*
NEIC ***19*** *01:56:48.9±1.6, 42.80N±0.06×105.4E±0.1, h16km±4km, mb4.6/66, Error ellipse: s-maj=12.2km s-min=8.6km az=74.0*

ISC 19 01:56:48.2±0.3, 42.86N±0.03×105.37E±0.03, h10km, n274, σ1§89/294, mb4.6/82, MS4.0/21, 7C-3D, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**4.15**	**121**	*e*Pn	**Pn**	**01 57 49.3**	**-2.3**
BTO				Sg	**Sb**	**01 58 51.8**	**+0.3**
SONM	**Songino Array**	**5.03**	**8**	Pn	**Pn**	**01 58 04.6**	**+0.8**
	15nm,0.3s,baz=186,slow=14,SNR=122						
SONM				Pg	**Pb**	**01 58 19.6**	**+3.2**
	29nm,0.3s,baz=190,slow=18,SNR=16						
SONM				Lg	Lg	01 59 27.7	
	156nm,0.3s,baz=192,slow=30,SNR=22						
SONM				LR	LR	02 00 24.3	
	comp=Z,781nm,21.4s,baz=199,slow=42						
SONM	**Songino Array**	**5.03**	**8**	Pn	**Pn**	**01 58 04.5**	**+0.7**
HHC	**Hu-ho-hao-te**	**5.04**	**111**	*e*Pn	**Pn**	**01 58 03.6**	**-0.4**
HHC				Sn	**Sn**	**01 59 01.6**	**-0.8**
HHC				Sg	**Sb**	**01 59 19.0**	**+1.7**
HHC				smax	smax		
	comp=N,3µm,0.3s						
HHC				smax	smax		
	comp=E,4µm,0.4s						
ULN	**Ulaanbaatar**	**5.15**	**13**	*ce*P	**Pn**	**01 58 06.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,70nm,1.3s						
ULN	**Ulaanbaatar**	**5.15**	**13**	Pn	**Pn**	**01 58 06.0**	**+0.6**
GTA	**Gaotai**	**5.42**	**232**	Pn	**Pn**	**01 58 09.8**	**+0.6**
GTA				Pg	**Pb**	**01 58 23.9**	**+0.8**
GTA				Sn	**Sn**	**01 59 09.0**	**-2.7**
GTA				Sg	**Sb**	**01 59 34.3**	**+6.1**
GTA				smax	smax		
	comp=Z,2µm,1.1s						
GTA				smax	smax		
	comp=Z,2µm,1.0s						
GTA				LR	LR		
	comp=Z,5µm,7.3s						
GTA				LR	LR		
	comp=Z,4µm,8.0s						
GTA				LR	LR		
	comp=Z,5µm,9.1s						
LZH	**Lanzhou**	**6.86**	**190**	Pn	**Pn**	**01 58 29.8**	**+0.8**
LZH				Sn	**Sn**	**01 59 49.3**	**+2.1**
LZH				Sg	**Sg**	**02 00 23.5**	**-4.9**
LZH				smax	smax		
	comp=Z,1µm,1.1s						
LZH				smax	smax		
	comp=Z,2µm,1.0s						
LZH				LR	LR		
	comp=Z,4µm,5.6s						
LZH				LR	LR		
	comp=Z,11µm,6.8s						
LZH				LR	LR		
	comp=Z,2µm,7.3s						
TIY	**Taiyuan**	**7.45**	**131**	Pn	**Pn**	**01 58 36.3**	**-0.7**
TIY				Sn	**Sn**	**02 00 00.0**	**-1.6**
TIY				smax	smax		
	comp=Z,760nm,0.7s						
TIY				smax	smax		
	comp=Z,490nm,0.5s						
ZAK	**Zakamensk**	**7.66**	**350**	*e*P	**Pn**	**01 58 41.4**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,169nm,0.8s						
TLY	**Talaya**	**8.91**	**353**	Pn	**Pn**	**01 58 57.9**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=160,slow=9.6,SNR=27						
TLY				Lg	Lg	02 01 31.2	
	comp=Z,0.2nm,0.3s,baz=129,slow=4.1,SNR=11						
TLY	**Talaya**	**8.91**	**353**	*e*P	**Pn**	**01 58 58.3**	**+1.5**
TLY				pmax	pmax		
	comp=Z,27nm,0.6s						
TLY				pmax	pmax		
	comp=Z,70nm,0.7s						
TLY				MLR	MLR		
	comp=Z,3µm,9.0s						
TLY	**Talaya**	**8.91**	**353**	Pn	**Pn**	**01 58 57.7**	**+0.9**
XAN	**Xi'an**	**9.23**	**161**	P	**Pn**	**01 59 00.5**	**-0.9**
XAN				smax	smax		
	comp=Z,180nm,1.3s						
XAN				smax	smax		
	comp=Z,190nm,1.0s						
XAN				LR	LR		
	comp=Z,1µm,13.6s						
XAN				LR	LR		
	comp=Z,1µm,6.7s						
XAN				LR	LR		
	comp=Z,1µm,14.6s						
XAN	**Xi'an**	**9.23**	**161**	P	**Pn**	**01 59 00.2**	**-1.2**
XAN	**Xi'an**	**9.23**	**161**	Pn	**Pn**	**01 59 00.2**	**-1.2**
MOY	**Mondy**	**9.30**	**343**	*e*P	**Pn**	**01 59 04.0**	**+1.7**
IRK	**Irkutsk**	**9.42**	**356**	*e*P	**Pn**	**01 59 03.9**	**0.0**
HIA	**Hailar**	**11.86**	**52**	*i* P	**Pn**	**01 59 35.6**	**-1.6**
HIA	**Hailar**	**11.86**	**52**	Pn	**Pn**	**01 59 35.6**	**-1.6**
WMQ	**Urumqi**	**12.90**	**280**	*e*P	Pn	02 00 01.6	+10
WMQ				smax	smax		
	comp=N,37nm,0.7s						
WMQ				smax	smax		
	comp=E,36nm,1.1s						
ENH	**Enshi**	**12.99**	**164**	Pn	**Pn**	**01 59 50.5**	**-2.2**
WHN	**Wuhan**	**14.23**	**147**	P	**P**	**02 00 13.5**	**-3.7**
WHN				S	**Sn**	**02 02 51.3**	**+3.6**
WHN				LR	LR		
	comp=E,3µm,15.3s						
WHN				LR	LR		
	comp=E,5µm,13.4s						
WHN				LR	LR		
	comp=E,2µm,12.3s						
CN2	**Changchun**	**14.65**	**79**	*e*P	**Pn**	**02 00 15.0**	**-0.4**
CN2				*e*S	**Sn**	**02 03 05.1**	**+7.4**
CN2				pmax	pmax		
	comp=E,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=E,200nm,5.0s						
CN2				LR	LR		
	comp=E,1µm,10.0s						
CN2				LR	LR		
	comp=E,900nm,10.0s						
CN2				LR	LR		
	comp=E,1µm,10.0s						
NJ2	**Nanjing**	**15.18**	**131**	*e*P	**Pn**	**02 00 24.3**	**+1.7**
NJ2				pmax	pmax		
	comp=E,19nm,0.5s						
NJ2				LR	LR		
	comp=E,2µm,12.8s						
NJ2				LR	LR		
	comp=E,3µm,16.1s						
NJ2				LR	LR		
	comp=E,2µm,14.2s						
BOD	**Bodaibo**	**15.94**	**17**	*e*P	**P**	**02 00 37.0**	**+1.0**
BOD				pmax	pmax		
	comp=Z,16nm,1.5s						
GYA	**Guiyang**	**16.39**	**176**	⇓P	**P**	**02 00 41.6**	**+0.3**
GYA				S	**Sn**	**02 03 43.3**	**+2.8**
GYA				SS	**SnSn**	**02 03 57.6**	**+4.0**
GYA				pmax	pmax		
	comp=Z,27nm,1.3s						
GYA				pmax	pmax		
	comp=Z,140nm,3.7s						
GYA				LR	LR		
	comp=Z,890nm,9.4s						
GYA				LR	LR		
	comp=Z,690nm,10.4s						
GYA				LR	LR		
	comp=Z,740nm,11.7s						
MK31	**Makanchi Array**	**16.82**	**291**	*i* P	**P**	**02 00 45.8**	**0.0**
MK31				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MK31	**Makanchi Array**	**16.82**	**291**	Pn	**Pn**	**02 00 41.9**	**-1.8**
MKAR	**Makanchi Array**	**16.82**	**291**	Pn	**Pn**	**02 00 42.1**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=92,slow=14,SNR=18						
MKAR				Lg	Lg	02 05 33.7	
	comp=Z,0.1nm,0.3s,baz=101,slow=26,SNR=3.6						
MKAR				LR	LR	02 08 07.3	
	comp=Z,115nm,19.3s,baz=91,slow=40						
MKAR	**Makanchi Array**	**16.82**	**291**	*i* P	**Pn**	**02 00 44.0**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	**Makanchi Array**	**16.82**	**291**	Pn	**Pn**	**02 00 41.3**	**-2.4**
MAKZ	**Makanchi**	**17.04**	**291**	*i* P	**P**	**02 00 49.0**	**+0.8**
MAKZ				pmax	pmax		
	comp=Z,16nm,0.8s						
MAKZ	**Makanchi**	**17.04**	**291**	P	**Pn**	**02 00 45.6**	**-0.8**
LSA	**Lhasa**	**17.39**	**226**	P	**P**	**02 00 54.4**	**+1.6**
LSA				S	**Sn**	**02 03 59.3**	**-5.9**
LSA				pmax	pmax		
	comp=Z,44nm,0.6s						
LSA				pmax	pmax		
	comp=Z,280nm,4.6s						
LSA				LR	LR		
	comp=Z,3µm,20.3s						
LSA				LR	LR		
	comp=Z,4µm,19.2s						
LSA				LR	LR		
	comp=Z,890nm,8.9s						
LSA	**Lhasa**	**17.39**	**226**	P	**Pn**	**02 00 51.4**	**0.0**
LSA				pmax	pmax		
	comp=Z,15nm,0.6s						
LSA	**Lhasa**	**17.39**	**226**	P	**Pn**	**02 00 51.4**	**0.0**
ZAA0	**Zalesovo Array**	**17.51**	**316**	P	**Pn**	**02 00 52.3**	**0.0**
ZALV	**Zalesovo Beam**	**17.51**	**316**	P	**Pn**	**02 00 52.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=122,slow=11,SNR=15						
ZALV				Lg	Lg	02 05 54.8	
	comp=Z,0.1nm,0.3s,baz=116,slow=20,SNR=10						
ZALV				LR	LR	02 07 49.8	
	comp=Z,350nm,20.0s,baz=114,slow=38						
ZALV	**Zalesovo Beam**	**17.51**	**316**	*i* P	**P**	**02 00 56.0**	**+2.6**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	**Zalesovo Beam**	**17.51**	**316**	P	**P**	**02 00 54.8**	**+1.4**
KMI	**Kunming**	**17.82**	**188**	⇑*e*P	**P**	**02 00 57.9**	**+0.7**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				LR	LR		
	comp=Z,400nm,8.4s						
KMI				LR	LR		
	comp=Z,610nm,10.7s						
KMI				LR	LR		
	comp=Z,600nm,11.3s						
KMI	**Kunming**	**17.82**	**188**	P	**Pn**	**02 00 55.3**	**-1.2**
KMI				pmax	pmax		
	comp=Z,26nm,1.2s						
KMI	**Kunming**	**17.82**	**188**	P	**Pn**	**02 00 55.2**	**-1.2**
KS19	**Wonju Array Si**	**17.99**	**100**	P	**Pn**	**02 00 57.9**	**-0.4**
KSAR	**Wonju Array Be**	**18.02**	**100**	P	**Pn**	**02 00 58.7**	**0.0**
KSAR	**Wonju Array Be**	**18.02**	**100**	P	**Pn**	**02 00 58.7**	**0.0**
KSRS	**Korea Array**	**18.05**	**100**	P	**Pn**	**02 00 57.6**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=291,slow=12,SNR=12						
KSRS				Lg	Lg	02 06 15.5	
	baz=295,slow=26,SNR=1.0						
ZEA	**Zeya**	**18.10**	**45**	*e*P	**P**	**02 01 01.7**	**+1.8**
ZEA				*e*S	**Sn**	**02 04 11.2**	**-10**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				smax	smax		
	comp=E,100nm,3.5s						
ZEA				smax	smax		
	comp=N,100nm,6.1s						
ZEA				MLR	MLR		
	comp=E,1µm,8.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,9.0s						
TJN	**Taejon**	**18.12**	**104**	*i* P	**Pn**	**02 00 59.6**	**-0.2**
SEM	**Semipalatinsk**	**18.77**	**302**	*e*P	**P**	**02 01 06.3**	**-1.3**
	baz=302						
SEM	**Semipalatinsk**	**18.77**	**302**	*e*P	**P**	**02 01 06.2**	**-1.3**
PDGK	**Podgornoye**	**18.89**	**280**	P	**P**	**02 01 04.8**	**-3.9**
SHLS	**Shalkode**	**18.93**	**280**	*e*P	**P**	**02 01 04.2**	**-5.1**
	baz=279						
SHLS				*i* LR	LR	02 08 03.1	
	comp=Z,146nm,8.9s,baz=279						
SHLS	**Shalkode**	**18.93**	**280**	*e*P	**P**	**02 01 04.1**	**-5.1**
SHLS				MLR	MLR		
	comp=Z,146nm,9.0s						
USA0B	**Ussuriysk Arra**	**19.33**	**77**	*i* P	**P**	**02 01 12.9**	**-0.5**
USRK	**Ussuriysk Ar.**	**19.33**	**77**	P	**P**	**02 01 13.7**	**+0.3**
	baz=288,slow=7.2,SNR=8.7						
USRK				Lg	Lg	02 06 55.6	
	baz=287,slow=26,SNR=4.6						
USRK	**Ussuriysk Ar.**	**19.33**	**77**	P	**Pn**	**02 01 14.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**19.33**	**77**	P	**Pn**	**02 01 14.2**	**-0.3**
KLR	**Kul'dur**	**19.33**	**62**	P	**P**	**02 01 13.4**	**0.0**
	comp=Z,0.3nm,0.3s,baz=271,slow=12,SNR=12						
KLR				Lg	Lg	02 07 03.7	
	comp=Z,0.2nm,0.3s,baz=178,slow=2.7,SNR=4.9						
KLR				LR	LR	02 09 18.1	
	comp=Z,240nm,21.5s,baz=252,slow=39						
KLR	**Kul'dur**	**19.33**	**62**	*ce*P	**P**	**02 01 12.8**	**-0.7**
KLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KPKS	**Kokpek**	**19.45**	**281**	*e*P	**P**	**02 01 14.9**	**0.0**
	baz=280						
KPKS				LR	LR	02 08 23.0	
	comp=Z,84nm,8.3s,baz=280						
KPKS	**Kokpek**	**19.45**	**281**	*e*P	**P**	**02 01 14.9**	**0.0**
KPKS				MLR	MLR		
	comp=Z,84nm,8.0s						
SATY	**Saty**	**19.71**	**280**	*e*P	**P**	**02 01 18.1**	**+0.3**
	baz=279						
SATY				LR	LR	02 09 03.3	
	comp=Z,73nm,9.3s,baz=279						
SATY	**Saty**	**19.71**	**280**	*e*P	**P**	**02 01 18.0**	**+0.3**
SATY				MLR	MLR		
	comp=Z,73nm,9.0s						
KURK	**Kurchatov**	**19.85**	**303**	*i* P	**P**	**02 01 19.2**	**+0.1**
KURK				pmax	pmax		
	comp=Z,27nm,1.3s						
KURK	**Kurchatov**	**19.85**	**303**	P	**P**	**02 01 18.4**	**-0.7**
KURK				IAmb	IAmb	02 01 29.5	
	comp=Z,15nm,0.7s						
KURBB	**Kurchatov Arra**	**19.88**	**302**	P	**P**	**02 01 19.1**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=104,slow=11,SNR=26						
KURBB				Lg	Lg	02 07 09.8	
	comp=Z,0.1nm,0.3s,baz=178,slow=28,SNR=2.3						
SHL	**Shillong**	**20.49**	**217**	P	**P**	**02 01 25.6**	**-0.8**
SHL				pmax	pmax		
	comp=Z,13nm,0.5s						
SHL	**Shillong**	**20.49**	**217**	P	**P**	**02 01 25.6**	**-0.8**
SHL				IAmb	IAmb	02 01 32.3	
	comp=Z,13nm,0.5s						
CHKK	**Chushkaly**	**20.62**	**283**	*e*P	**P**	**02 01 27.1**	**-0.5**
	baz=282						
CHKK	**Chushkaly**	**20.62**	**283**	*e*P	**P**	**02 01 27.0**	**-0.5**
MDOK	**Medeo**	**20.67**	**281**	*e*P	**P**	**02 01 28.1**	**-0.2**
	baz=280						
MDOK				LR	LR	02 09 11.3	
	comp=Z,252nm,11.7s,baz=280						
MDOK	**Medeo**	**20.67**	**281**	*e*P	**P**	**02 01 28.1**	**-0.2**
MDOK				MLR	MLR		
	comp=Z,252nm,12.0s						
AAA	**Alma-Ata**	**20.76**	**281**	*e*P	**P**	**02 01 29.7**	**+0.5**
	baz=280						
AAA				LR	LR	02 09 21.0	
	comp=Z,284nm,10.0s,baz=280						
AAA	**Alma-Ata**	**20.76**	**281**	*e*P	**P**	**02 01 29.6**	**+0.5**
AAA				MLR	MLR		
	comp=Z,283nm,10.0s						
TNSS	**Tian-Shan**	**20.77**	**280**	*e*P	**P**	**02 01 29.8**	**+0.1**
	baz=280						
TNSS	**Tian-Shan**	**20.77**	**280**	*e*P	**P**	**02 01 29.7**	**+0.1**
KUU	**Kurty**	**21.08**	**283**	*e*P	**P**	**02 01 32.5**	**0.0**
	baz=282						
KUU				LR	LR	02 09 38.2	
	comp=Z,223nm,9.8s,baz=282						
KUU	**Kurty**	**21.08**	**283**	*e*P	**P**	**02 01 32.5**	**0.0**
KUU				MLR	MLR		
	comp=Z,223nm,10.0s						
TAPN	**Taplejung**	**21.10**	**229**	*e*P	**P**	**02 01 33.9**	**+0.8**
	comp=Z,170nm,1.1s						
SLVN	**Son La**	**21.50**	**184**	P	**P**	**02 01 37.4**	**+0.2**
SLVN				IAmb	IAmb	02 01 42.9	
	comp=Z,28nm,1.1s						
ODAN	**Odare**	**21.66**	**228**	*e*P	**P**	**02 01 39.4**	**+0.3**
	comp=Z,107nm,0.9s						
GUN	**Gumba**	**21.71**	**233**	*e*P	**P**	**02 01 40.0**	**+0.2**
	comp=Z,91nm,0.7s						
TKM2	**Tokmak 2**	**21.76**	**280**	*i* P	**P**	**02 01 42.2**	**+2.1**
TKM2				pmax	pmax		
	comp=Z,17nm,1.1s						
RAMN	**Ramite**	**22.03**	**230**	*e*P	**P**	**02 01 43.3**	**+0.2**
	comp=Z,72nm,0.6s						
KKN	**Kakani**	**22.16**	**234**	*e*P	**P**	**02 01 44.4**	**0.0**
	comp=Z,101nm,0.8s						
PKI	**Pulchoki**	**22.24**	**233**	*e*P	**P**	**02 01 45.3**	**-0.2**
	comp=Z,76nm,1.0s						
PKIN	**Phulchoki**	**22.25**	**233**	*e*P	**P**	**02 01 45.2**	**-0.2**
	comp=Z,42nm,0.7s						
KSH	**Kashi**	**22.32**	**271**	P	**P**	**02 01 52.9**	**+6.9**
KSH				pP	sP	02 01 55.9	+5.1
KSH				S	**S**	**02 05 55.9**	**+4.5**
KSH				pmax	pmax	

YAK e*PP **sP** **02 02 08.3 +0.8**
YAK eS **S** **02 06 23.7 +4.5**
YAK e 02 13 13.1
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.2s
YAK smax smax
comp=E,95nm,3.0s
YAK smax smax
comp=N,69nm,2.5s
YAK MLR MLR
comp=Z,471nm,12.0s
YAK MLR MLR
comp=E,389nm,13.0s
YAK Yakutsk 24.00 29 P **P** **02 02 02.4 -0.2**
YAK IAmb IAmb 02 02 09.9
comp=Z,22nm,0.8s
QIZ Qiongzhong 24.05 170 P **P** **02 02 05.3 +1.8**
QIZ S **S** **02 06 25.3 +4.5**
QIZ pmax pmax
comp=Z,530nm,4.9s
QIZ LR LR
comp=Z,420nm,10.3s
QIZ LR LR
comp=Z,580nm,10.8s
QIZ LR LR
comp=Z,810nm,10.3s
CM33 Chiang Mai Arr 24.57 195 P **P** **02 02 12.0 +3.7**
CHTO Chiang Mai 24.58 195 P **P** **02 02 08.3 0.0**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 24.58 195 P **P** **02 02 07.5 -0.9**
CMMT Chiang Mai 24.58 195 P **P** **02 02 12.9 +4.5**
comp=Z,239nmcomp=Z,4.9nm,1.6s
CM35 Chiang Mai Arr 24.67 194 P **P** **02 02 15.0 +5.8**
CM32 Chiang Mai Arr 24.75 195 P **P** **02 02 15.0 +5.1**
NONG Nongkai 24.79 185 P **P** **02 02 14.0 +3.8**
comp=Z,28nm,0.9s
CM36 Chiang Mai Arr 24.84 194 P **P** **02 02 17.0 +6.3**
CMAR Chiang Mai Arr 24.93 195 P **P** **02 02 07.5 -4.0**
comp=Z,1.1nm,0.4s,baz=342,slow=11,SNR=1.6
CMAR Chiang Mai Arr 24.93 195 P **P** **02 02 11.2 -0.3**
CMAR Chiang Mai Arr 24.93 195 P **P** **02 02 11.2 -0.3**
CM04 Chiang Mai Arr 24.97 194 P P 02 02 20.6 +8.6
comp=Z,124nmcomp=Z,6.2nm,1.1s
BVAR Borovoye Array 25.30 306 P **P** **02 02 13.9 -0.7**
comp=Z,5.0nm,0.7s,baz=56,slow=18,SNR=23
BRVK Borovoye 25.37 306 *i* P **P** **02 02 14.0 -1.3**
BRVK pmax pmax
comp=Z,10.0nm,0.7s
BRVK Borovoye 25.37 306 P **P** **02 02 15.2 -0.1**
BRVK IAmb IAmb 02 02 21.0
comp=Z,10nm,0.7s
KK31 Karatay Array 25.39 283 *i* P **P** **02 02 15.9 +0.3**
KK31 Karatay Array 25.39 283 P **P** **02 02 15.4 -0.2**
KK31 IAmb IAmb 02 02 23.9
comp=Z,17nm,0.8s
KKAR Karatay Array 25.39 283 P **P** **02 02 15.6 0.0**
KKAR *PP **sP** **02 02 20.7 +0.1**
KKAR pmax pmax
comp=Z,17nm,0.9s
KKAR Karatay Array 25.39 283 P **P** **02 02 15.3 -0.3**
KKAR IAmb IAmb 02 02 23.9
comp=Z,17nm,0.8s
KKAR Karatay Array 25.39 283 P **P** **02 02 15.6 0.0**
KKAR **sP** **02 02 20.7 +0.1**
SUKH Sukhothai 25.76 193 P **P** **02 02 23.8 +4.8**
MJAR Matsushiro Arr 25.93 93 P **P** **02 02 18.5 -2.1**
comp=Z,3.2nm,0.7s,baz=287,slow=7.4,SNR=5.6
MJAR LR LR 02 12 10.2
comp=Z,82nm,19.5s,baz=250,slow=36
MJAR Matsushiro Arr 25.93 93 P **P** **02 02 18.7 -1.9**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR Matsushiro Arr 25.93 93 P **P** **02 02 18.7 -1.9**
IUG luzhnay 25.95 281 *eP* **P** **02 02 21.1 +0.3**
baz=280
IUG luzhnay 25.95 281 *eP* **P** **02 02 21.0 +0.3**
GAR Garm 26.64 274 P **P** **02 02 26.6 -0.4**
GAR IAmb IAmb 02 02 38.2
comp=Z,11nm,0.7s
NIL Nilore 26.71 261 P **P** **02 02 27.9 +0.3**
NIL pmax pmax
comp=Z,20nm,1.0s
NIL Nilore 26.71 261 P **P** **02 02 27.9 +0.3**
NIL IAmb IAmb 02 02 37.0
comp=Z,20nm,0.9s
ASAJ Asahikawa 26.90 74 P **P** **02 02 27.5 -1.7**
comp=Z,12nm,0.7s,baz=269,slow=14,SNR=6.8
ASAJ Asahikawa 26.90 74 P **P** **02 02 29.3 +0.1**
ASAJ pmax pmax
comp=Z,51nm,1.2s
JKA Kamikawa-asahi 26.90 74 P **P** **02 02 29.2 +0.1**
CHGR Chuyangaron 27.61 274 P **P** **02 02 35.3 -0.4**
NRIK Noril'sk 28.11 347 P **P** **02 02 39.8 0.0**
comp=Z,3.1nm,0.9s,baz=148,slow=7.9,SNR=5.6
NRIK LR LR 02 13 21.1
comp=Z,116nm,18.4s,baz=201,slow=35
NRIK Noril'sk 28.11 347 *ceP* **P** **02 02 39.2 -0.6**
NRIK pmax pmax
comp=Z,12nm,1.0s
TIXI Tiksi 31.09 14 *ceP* **P** **02 03 04.4 -1.7**
TIXI Tiksi 31.09 14 P **P** **02 03 05.2 -0.9**
TIXI IAmb IAmb 02 03 15.0
comp=Z,4.8nm,0.7s
ABKAR Abkulak array 31.77 298 P **P** **02 03 11.6 -0.8**
ABKAR Abkulak array 31.77 298 P **P** **02 03 12.4 0.0**
ARU Arti 32.53 311 P **P** **02 03 18.3 -0.6**
comp=Z,0.6nm,0.4s,baz=78,slow=5.1,SNR=3.4
ARU Arti 32.53 311 *d iP* **P** **02 03 18.4 -0.6**
ARU 02 04 22.1
ARU S **S** **02 08 35.9 +2.0**
ARU pmax pmax
comp=Z,5.0nm,1.0s
ARU Arti 32.53 311 P **P** **02 03 19.2 +0.3**
ARU IAmb IAmb 02 03 23.7
comp=Z,7.0nm,1.0s
AKTO Aktyubinsk 32.90 300 P **P** **02 03 20.9 -1.3**
comp=Z,0.8nm,0.7s,baz=60,slow=8.1,SNR=3.3
AKTO Aktyubinsk 32.90 300 P **P** **02 03 21.0 -1.3**
HRA Herat 34.42 270 P **P** **02 03 35.8 -0.2**
HRA IAmb IAmb 02 03 42.8
comp=Z,6.9nm,1.0s
GEYT Alibeck 35.95 278 P **P** **02 03 49.6 +0.7**
comp=Z,2.8nm,0.7s,baz=153,slow=4.2,SNR=3.0
GEYT LR LR 02 19 58.6
comp=Z,213nm,18.9s,baz=190,slow=39
GEYT Alibeck 35.95 278 P **P** **02 03 49.0 +0.2**
KIRV Kirov 37.54 315 *ceP* **P** **02 04 03.2 +1.2**
BELG Belogornoye 39.10 305 *i* P **P** **02 04 14.6 -0.7**
BELG pmax pmax
comp=Z,2.0nm,0.9s
MAK Makhachkala 41.64 291 *eP* **P** **02 04 33.0 -3.4**
MAK *e* 02 06 10.5
MAK *eS* **S** **02 10 50.8 -1.9**
MAK *eSS* **SS** **02 13 57.1 -0.5**
MAK MLR MLR
comp=Z,255nm,13.0s
KLMR Klimovskoe 42.42 319 *eP* P 02 04 35.5 -7.1
KLMR pmax pmax
comp=Z,21nm,1.8s
KLMR Klimovskoe 42.42 319 *eP* P 02 04 35.5 -7.1
KLMR AMP 02 04 44.0
comp=Z,21nm,1.8s
BKNI Bangkinang 42.52 186 P **P** **02 04 44.5 +0.7**
VRH Novokhopyorsk 42.93 304 *eP* **P** **02 04 46.1 -0.8**
VRH pmax pmax
comp=Z,10.0nm,1.4s
MOS Moscow 44.24 311 *eP* **P** **02 05 00.7 +3.4**
LPSR Galich'ya Gora 44.25 307 *eP* **P** **02 04 56.2 -1.2**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 44.48 305 *eP* **P** **02 04 57.8 -1.5**
VSR pmax pmax
comp=Z,5.0nm,0.5s
KBZ Khabaz 44.50 293 P **P** **02 04 58.7 -0.9**
comp=Z,1.5nm,0.8s,baz=60,slow=20,SNR=2.4
KBZ Khabaz 44.50 293 *i* P **P** **02 04 59.5 -0.1**
KBZ pmax pmax
comp=Z,6.0nm,2.0s
KIV Kislovodsk 44.56 294 *eP* **P** **02 04 59.7 -0.5**
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,639nm,16.0s
GNI Garni 44.62 288 *i* P **P** **02 05 01.6 +0.8**
GNI pmax pmax
comp=Z,12nm,1.4s
OBN Obninsk 44.97 311 ‖ *eP* **P** **02 05 01.6 -1.5**
OBN *e*PP **sP** **02 05 07.8 -0.4**
OBN SSS SSS 02 15 46.0
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,148nm,17.0s
ARCES ARCESS Array B 47.16 332 P **P** **02 05 21.1 +0.8**
comp=Z,4.9nm,0.8s,baz=89,slow=16,SNR=2.5
ARCES PcP **PcP** **02 06 51.2 -0.5**
comp=Z,3.5nm,1.0s,baz=87,slow=4.6,SNR=1.2
ARCES LR LR 02 27 06.8
comp=Z,118nm,20.5s,baz=185,slow=38
ANN Anapa 47.73 297 *eP* **P** **02 05 27.8 +2.8**
ANN *eS* **PcP** **02 06 51.6 -2.5**
ANN pmax pmax
comp=Z,80nm,1.0s
SPITS Spitsbergen Ar 48.26 344 P **P** **02 05 29.6 +0.9**
comp=Z,3.0nm,0.7s,baz=134,slow=19,SNR=1.4
MARD Mardin 48.65 286 P **P** **02 05 33.5 +1.1**
MARD IAmb IAmb 02 05 42.6
comp=Z,9.8nm,1.0s
FINES FINESS Array B 48.70 321 P **P** **02 05 31.9 -0.4**
comp=Z,2.4nm,0.9s,baz=68,slow=15,SNR=2.0
FINES LR LR 02 28 02.0
comp=Z,141nm,18.4s,baz=90,slow=38
LEM Lembang 49.49 177 LR LR 02 29 24.6
comp=Z,82nm,18.1s,baz=210,slow=40
TOKA Tokat 50.26 292 P **P** **02 05 44.9 +0.3**
TOKA IAmb IAmb 02 05 49.8
comp=Z,5.2nm,1.2s
AKASG Malin Array Be 50.58 307 P **P** **02 05 45.9 -0.8**
comp=Z,0.3nm,0.2s,baz=56,slow=7.9,SNR=2.7
AKASG LR LR 02 27 28.1
comp=Z,189nm,19.3s,baz=50,slow=36
AKASG Malin Array Be 50.58 307 P **P** **02 05 46.1 -0.6**
AKASG pmax pmax
comp=Z,1.0nm,0.9s
AKASG Malin Array Be 50.58 307 P **P** **02 05 46.1 -0.6**
AKBB Malin Array Si 50.58 307 *ceP* **P** **02 05 46.4 -0.3**
KIWB Kanaga Island 50.92 51 P **P** **02 05 50.9 +1.6**
BR131 Keskin Array S 52.47 293 P **P** **02 06 01.5 +0.3**
BR131 pmax pmax
comp=Z,4.0nm,0.9s
BR131 Keskin Array S 52.47 293 P **P** **02 06 01.4 +0.3**
BR131 IAmb IAmb 02 06 13.3
comp=Z,4.3nm,0.9s
BRTR Keskin Array B 52.47 293 P **P** **02 06 01.5 +0.3**
comp=Z,1.3nm,0.7s,baz=72,slow=8.2,SNR=6.4
BRTR LR LR 02 30 24.1
comp=Z,71nm,19.2s,baz=58,slow=38
BRTR Keskin Array B 52.47 293 P **P** **02 06 01.3 +0.1**
RAYN Ar Rayn 52.57 269 P **P** **02 06 01.2 -0.8**
RAYN pmax pmax
comp=Z,7.0nm,1.5s
RAYN Ar Rayn 52.57 269 P **P** **02 06 01.2 -0.8**
MDUB Mudurnu 53.76 294 P **P** **02 06 10.6 -0.1**
BUR08 Bucovina Ar. S 54.25 305 P **P** **02 06 14.6 +0.4**
BUR08 IAmb IAmb 02 06 17.1
comp=Z,8.3nm,1.4s
BURAR Bucovina Array 54.26 305 P **P** **02 06 13.8 -0.5**
MMAI Mount Meron Ar 54.60 284 P **P** **02 06 17.6 +0.7**
comp=Z,1.2nm,0.6s,baz=38,slow=7.3,SNR=2.8
MLR Muntele Rosu 54.78 302 P **P** **02 06 17.6 -0.5**
comp=Z,1.2nm,0.7s,baz=37,slow=20,SNR=2.4
MLR Muntele Rosu 54.78 302 P **P** **02 06 18.6 +0.5**
MLR pmax pmax
comp=Z,2.0nm,0.7s
MLR Muntele Rosu 54.78 302 P **P** **02 06 18.6 +0.5**
HFS Hagfors 54.83 322 P **P** **02 06 17.6 -0.5**
comp=Z,4.8nm,0.7s,baz=72,slow=9.5,SNR=16
KWP Kalwaria Pacla 54.83 308 P **P** **02 06 19.0 +0.7**
KWP pmax pmax
comp=Z,9.0nm,0.8s
KWP Kalwaria Pacla 54.83 308 P **P** **02 06 19.0 +0.7**
KWP IAmb IAmb 02 06 27.5
comp=Z,9.0nm,0.8s
KOLS Kolonicke sedl 55.40 307 *eP* **P** **02 06 26.1 +3.7**
KOLS Kolonicke sedl 55.40 307 *eP* **P** **02 06 26.1 +3.7**
NB2 NORSAR Subarra 55.52 324 P **P** **02 06 22.0 -1.1**
comp=Z,6.2nm,1.0s,baz=62,slow=7.4
NOA NORSAR Array B 55.52 324 P **P** **02 06 22.3 -0.8**
comp=Z,1.8nm,0.6s,baz=62,slow=7.1,SNR=9.5
NOA LR LR 02 32 19.1
comp=Z,166nm,19.4s,baz=65,slow=38
COLD Coldfoot 56.43 27 P **P** **02 06 29.5 0.0**
COLD IAmb IAmb 02 06 45.2
comp=Z,6.6nm,0.9s
ELL Elmali 56.49 291 P **P** **02 06 30.1 -0.4**
ELL pmax pmax
comp=Z,51nm,1.3s
ELL Elmali 56.49 291 P **P** **02 06 30.1 -0.4**
DPC Dobruska-Polom 58.11 311 P **P** **02 06 43.3 +1.6**
DPC pmax pmax
comp=Z,23nm,0.8s
BMAR Burnt Mountain 58.14 25 P **P** **02 06 42.8 +1.2**
TCOL CIGO, UAF Yank 58.52 29 P **P** **02 06 44.3 +0.2**
COLA College 58.52 29 *i* P **P** **02 06 43.6 -0.6**
COLA pmax pmax
comp=Z,9.0nm,1.0s
ILAR Eielson Array 58.92 28 P **P** **02 06 46.6 -0.3**
comp=Z,2.3nm,0.8s,baz=281,slow=5.9,SNR=21
ILAR LR LR 02 33 17.0
comp=Z,179nm,18.4s,baz=318,slow=37
CLL Collm 59.43 313 *eP* **P** **02 06 51.0 +0.3**
comp=Z,4.0nm,1.1s
CLL *ep*P **sP** **02 06 56.0 +0.2**
CLL LmH 02 29 00.0
comp=N,400nm,20.0s
CLL LmH 02 29 00.0
comp=E,200nm,19.8s
CLL LmV 02 30 00.0
comp=Z,100nm,19.4s
CLL Collm 59.43 313 *eP* **P** **02 06 51.0 +0.3**
CLL *e* 02 06 56.0
CLL pmax pmax
comp=Z,4.0nm,1.1s
CONA Conrad Observa 59.61 309 *eP* P 02 06 57.3 +5.1
comp=Z,10nm,1.3s
GERES GERESS Array B 60.35 311 LR LR 02 34 35.8
comp=Z,140nm,19.2s,baz=90,slow=38
KBA Koelnbreinsper 61.51 309 P **P** **02 07 04.1 -1.1**
KBA pmax pmax
comp=Z,10.0nm,1.4s
SUMG Summit 62.13 348 *i* P **P** **02 07 09.3 0.0**
SUMG pmax pmax
comp=Z,29nm,1.2s
SUMG Summit 62.13 348 P **P** **02 07 08.6 -0.7**
SUMG Summit 62.13 348 *i* P **P** **02 07 09.3 0.0**
comp=Z,28nm,1.2s
SUMG Summit 62.13 348 *i* P **P** **02 07 09.4 0.0**
SUMG IAmb IAmb 02 07 10.1
comp=Z,28nm,1.2s
C36M Paulatuk 62.36 18 P **P** **02 07 09.4 -0.9**
C36M IAmb IAmb 02 07 10.6
comp=Z,7.5nm,1.0s
WATA Walderalm 62.37 310 *eP* **P** **02 07 14.7 +3.7**
comp=Z,5.4nm,1.0s
WTTA Wattenberg 62.38 310 *eP* **P** **02 07 11.3 +0.2**
comp=Z,4.3nm,0.9s
SQTA Sankt Quirin 62.64 310 *eP* **P** **02 07 16.2 +3.4**
comp=Z,10nm,1.5s
RETA Reutte 62.74 310 *eP* **P** **02 07 12.7 -0.7**
MEM Membach 63.50 315 P **P** **02 07 22.9 +4.6**
BCLA Clavier 63.98 316 P P 02 07 28.3 +6.9
comp=Z,268nm,3.9s
BCLA PcP **PcP** **02 08 00.3 +3.5**
WRAB Tennant Creek 67.95 151 *i* P **P** **02 07 46.2 -1.0**
WRAB pmax pmax
comp=Z,6.0nm,1.2s
WRA Warramunga Arr 67.95 151 P **P** **02 07 46.7 -0.5**
comp=Z,3.2nm,0.8s,baz=345,slow=6.9,SNR=5.0
WRA Warramunga Arr 67.95 151 P **P** **02 07 46.7 -0.5**
YKA Yellowknife Ar 70.21 18 P **P** **02 08 00.2 -0.6**
comp=Z,2.8nm,0.8s,baz=332,slow=6.8,SNR=6.6
KEST Kesra 70.65 301 LR LR 02 41 32.2
comp=Z,102nm,18.2s,baz=261,slow=38
AS31 Alice Springs 71.23 152 P **P** **02 08 07.5 +0.1**
ASAR Alice Springs 71.23 152 P **P** **02 08 05.0 -2.4**
comp=Z,5.6nm,0.9s,baz=338,slow=6.1,SNR=6.9
ASAR Alice Springs 71.23 152 P **P** **02 08 06.4 -1.0**
ASAR Alice Springs 71.23 152 P **P** **02 08 06.4 -1.0**
CTA Charters Tower 73.08 140 P **P** **02 08 17.7 -0.8**
comp=Z,5.1nm,1.0s,baz=345,slow=5.1,SNR=3.6
KMBO Kilima Mbogo 74.88 254 P **P** **02 08 28.6 -1.1**
comp=Z,0.4nm,0.5s,baz=113,slow=13,SNR=1.2
ESDC Sonseca Array 75.93 311 P **P** **02 08 34.8 -0.3**
comp=Z,0.7nm,0.6s,baz=46,slow=5.1,SNR=4.9
C09A Chrisman Ranch 81.85 28 P **P** **02 09 07.2 -0.2**
C09A IAmb IAmb 02 09 08.5
comp=Z,5.1nm,0.9s
MSO Missoula 84.14 26 P **P** **02 09 18.8 -0.6**
BMO Blue Mountains 84.73 29 P **P** **02 09 22.1 -0.4**
BMO pmax pmax
comp=Z,6.0nm,1.3s
BMO Blue Mountains 84.73 29 P **P** **02 09 22.1 -0.4**
BMO IAmb IAmb 02 09 30.2
comp=Z,6.0nm,1.2s
HRY Holter Researc 84.91 25 P **P** **02 09 23.8 +0.5**
J08A Circle Bar Ran 85.60 30 P **P** **02 09 27.1 +0.3**
J08A IAmb IAmb 02 09 28.3
comp=Z,9.0nm,1.2s
MCMT McKenzie Canyo 86.27 26 P **P** **02 09 31.1 +0.8**
WVOR Wild Horse Val 86.33 31 P **P** **02 09 30.2 -0.3**
WVOR pmax pmax
comp=Z,6.0nm,1.2s
WVOR Wild Horse Val 86.33 31 P **P** **02 09 30.2 -0.3**
WVOR IAmb IAmb 02 09 31.8
comp=Z,6.2nm,1.2s
HLID Hailey 86.87 28 P **P** **02 09 33.2 +0.1**
HLID IAmb IAmb 02 09 36.0
comp=Z,2.3nm,0.9s
YPP Pitchstone Pla 87.42 25 P **P** **02 09 36.5 +0.5**
IMW Indian Meadow 87.72 25 P **P** **02 09 37.9 +0.5**
IMW IAmb IAmb 02 09 39.9
comp=Z,5.7nm,1.0s
PDAR Pinedale Array 89.17 25 P **P** **02 09 42.6 -1.6**
comp=Z,0.7nm,0.8s,baz=4.4,slow=1.9,SNR=4.9
HWUT Hardware Ranch 89.57 27 P **P** **02 09 45.6 -0.4**
HWUT IAmb IAmb 02 09 47.7
comp=Z,7.9nm,1.2s
NVAR Mina Array Bea 89.90 33 P **P** **02 09 48.0 +0.2**
comp=Z,0.7nm,1.0s,baz=319,slow=4.3,SNR=3.9
NVAR LR LR 02 51 04.5
comp=Z,85nm,19.5s,baz=289,slow=36
TCUT Toone Canyon 90.06 27 P **P** **02 09 48.1 -0.4**
DUG Dugway, Tooele 90.41 28 P **P** **02 09 51.0 +1.1**
DUG pmax pmax
comp=Z,4.0nm,2.8s
TORD Torodi Ar. Bea 90.92 289 P **P** **02 09 50.6 -1.9**
comp=Z,1.1nm,1.1s,baz=25,slow=6.5,SNR=4.2
TORD Torodi Ar. Bea 90.92 289 P **P** **02 09 51.5 -1.0**
SPR3 Spring Creek 3 90.92 30 P **P** **02 09 53.8 +1.2**
SPR3 IAmb IAmb 02 09 54.9
comp=Z,5.7nm,1.2s
RDMU Red Mountain 91.15 26 P **P** **02 09 54.4 +0.9**
PSUT Pine Spring 91.51 30 P **P** **02 09 55.6 +0.4**
ECSD EROS Data Cent 91.57 16 P **P** **02 09 55.4 +0.2**
P17A Butcher Ranch, 91.76 27 P **P** **02 09 56.2 0.0**
TMUT Trail Mountain 91.76 28 P **P** **02 09 57.0 +0.5**
PRN Pahroc Range 92.06 31 P **P** **02 09 58.3 +0.7**
MVU Marysvale 92.12 29 P **P** **02 09 59.2 +1.1**
MSU Marysvale 92.13 29 P **P** **02 09 59.2 +1.1**
MSU Marysvale 92.13 29 P **P** **02 09 59.2 +1.1**
MTPU Mount Pierson 92.55 29 P **P** **02 10 01.6 +1.4**
KNB Kanab 93.23 30 P **P** **02 10 04.7 +1.6**
KNB pmax pmax
comp=Z,11nm,1.1s
KNB Kanab 93.23 30 P **P** **02 10 04.7 +1.6**
X16A Lo Mia Camp, P 96.05 30 P **P** **02 10 16.4 +0.3**
CCM Cathedral Cave 98.06 13 P **P** **02 10 24.0 -0.8**
CCM pmax pmax
comp=Z,6.0nm,0.5s
CCM Cathedral Cave 98.06 13 P **P** **02 10 24.0 -0.8**
BDFB Brasilia 144.58 312 PKP **PKPab** **02 16 23.1 -0.7**
comp=Z,4.7nm,0.9s,baz=28,slow=6.1,SNR=4.9
LPAZ La Paz 152.94 346 PKPbc **PKPbc** **02 16 43.9 -2.8**
comp=Z,1.1nm,0.7s,baz=0.0,slow=7.1,SNR=3.6

IDC ***19*** *01:58:34.4±0.4, 19°.44N×120°.32E, h0km, mb4.5/33, mb1 4.5/34, mb1mx4.4/69, mbtmp4.5/34, ML3.8/1, MS3.8/13, Ms1 3.8/13, ms1mx3.4/42, Error ellipse: s-maj=17.4km s-min=10.8km az=66.0*

MAN ***19*** *01:58:34.3, 19°.59N×120°.20E, h24km, mb4.9, ML3.8, MS3.8*

NEIC ***19*** *01:58:36.2±2.6, 19°.53N±0°.07×120°.27E±0°.09, h10km±1km, mb4.7/50, Error ellipse: s-maj=14.6km s-min=11.7km az=118.0*

BJI ***19*** *01:58:37.3±0.0, 19°.77N×120°.23E, h10km, mB4.8/22, mb4.7/29, ML4.3/1, Ms4.4/19, Ms7 4.1/19*

ISC 19 01:58:38.4±0.3, 19°.49N±0°.04×120°.27E±0°.05, h23km, n160, σ1s51/168, mb4.6/61, MS3.9/14, 4C-6D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
CVP	**Callao Caves**	**2.31**	**140**	⇑*iP*	Pn	01 59 09.3	-5.7
CVP				*i* S	**Sn**	**01 59 42.4**	**-0.3**
TWG	**Pinlang**	**3.40**	**13**		**Pn**	**01 59 28.0**	**-2.1**
TWG				Sn	**Sn**	**02 00 06.9**	**-2.9**
TPUB	**Ta-pu**	**3.81**	**5**	Pn	**Pn**	**01 59 32.8**	**-3.0**
TPUB				Sn	**Sn**	**02 00 13.0**	**-6.8**
YULB	**Yu-li**	**4.00**	**14**		**Pn**	**01 59 36.1**	**-2.3**
YULB				Sn	**Sn**	**02 00 23.1**	**-1.5**
SSLB	**Suanglung**	**4.33**	**8**	Pn	**Pn**	**01 59 41.9**	**-0.9**
NACB	**Ninganchiao**	**4.83**	**15**		**Pn**	**01 59 48.4**	**-1.3**
KNMB	**Chin-men Tao**	**5.25**	**341**	Pn	**Pn**	**01 59 52.3**	**-3.2**
YHNB	**Yeheng**	**5.26**	**11**	Pn	**Pn**	**01 59 54.5**	**-1.3**
TGY	**Tagaytay City**	**5.39**	**173**	LR	LR	02 02 26.1	
	comp=Z,2μm,19.9s,baz=60,slow=43						
LQP	**Lukban**	**5.48**	**167**	‖*eP*	**Pn**	**01 59 58.2**	**-0.7**
QZH	**Quanzhou**	**5.65**	**344**	*eP*	**Pn**	**01 59 58.8**	**-2.1**
QZH					**Sn**	**02 01 01.8**	**-3.3**
QZH					LR	LR	
	comp=N,1μm,9.5s						
QZH					LR	LR	
	comp=E,860nm,10.9s						
QZH					LR	LR	
	comp=Z,1μm,12.3s						
HKPS	**Hong Kong Po S**	**6.36**	**297**		Pn	**Pn**	**02 00 08.7**	**-2.1**
QIZ	**Qiongzhong**	**9.86**	**269**		P	**Pn**	**02 00 58.8**	**0.0**
QIZ					S	**Sn**	**02 02 46.9**	**-1.9**
QIZ					pmax	pmax		
	comp=Z,30nm,1.3s						
QIZ					LR	LR		
	comp=N,810nm,14.9s						
QIZ					LR	LR		
	comp=E,570nm,12.0s						
QIZ					LR	LR		
	comp=Z,880nm,11.8s						
QIZ	**Qiongzhong**	**9.86**	**269**		Pn	**Pn**	**02 00 57.9**	**-0.9**
NJ2	**Nanjing**	**12.58**	**354**	*eP*	**Pn**	**02 01 36.0**	**+0.1**
NJ2					pmax	pmax		
	comp=Z,9.0nm,0.5s						
KCP	**Kidapawan**	**13.26**	**159**	‖*eP*	**P**	**02 01 56.5**	**+1.4**
DAV	**Davao City (W)**	**13.38**	**157**		LR	LR	02 07 59.5	
	comp=Z,719nm,18.1s,baz=346,slow=42						
JNU	**Nakatsue**	**16.57**	**33**		LR	LR	02 08 34.2	
	comp=Z,214nm,18.7s,baz=130,slow=36						
SBUM	**Sibu**	**18.67**	**206**	P	**P**	**02 02 51.5**	**-3.5**
CD2	**Chengdu**	**18.75**	**311**	*eP*	**Pn**	**02 02 56.5**	**+0.1**
CD2					pmax	pmax		
	comp=Z,30nm,1.3s						
CD2					pmax	pmax		
	comp=Z,270nm,5.5s						
CD2					LR	LR		
	comp=N,1μm,9.8s						
CD2					LR	LR		
	comp=E,1μm,10.8s						
CD2					LR	LR		
	comp=Z,1μm,12.2s						
KSAR	**Wonju Array Be**	**19.09**	**19**	P	**P**	**02 02 57.4**	**-2.1**
KSRS	**Korea Array**	**19.11**	**19**	P	**P**	**02 02 57.8**	**-1.9**
	0.3nm,0.3s,baz=205,slow=12,SNR=9.8						
KSRS					LR	LR	02 10 56.9	
	comp=Z,159nm,18.3s,baz=218,slow=39						
CHTO	**Chiang Mai**	**20.16**	**272**	P	Pn	02 03 13.4	+0.2
CMAR	**Chiang Mai Arr**	**20.19**	**271**	P	**P**	**02 03 12.4**	**+0.7**
	4.7nm,0.9s,baz=75,slow=10.0,SNR=14						
CMAR				PcP	**PcP**	**02 07 25.4**	**-0.4**
	0.9nm,0.3s,baz=82,slow=1.0,SNR=4.8						
CMAR	**Chiang Mai Arr**	**20.19**	**271**	P	**P**	**02 03 11.7**	**0.0**

KSM	**Kuching**	**20.38**	**210**	P		**P**		**02 03 14.5**	**+0.8**
BKB	**Balikpapan**	**20.88**	**189**	P		**P**		**02 03 19.9**	**+0.8**
BKB				IAmb		IAmb		02 03 30.9	
	comp=Z,41nm,0.7s								
INU	**Inuyama**	**21.65**	**40**	P		**P**		**02 03 26.0**	**-1.2**
INU				IAmb		IAmb		02 03 27.8	
	comp=Z,34nm,1.1s								
LZH	**Lanzhou**	**21.96**	**322**	*e*P		**P**		**02 03 31.6**	**+0.9**
LZH				pP		pP		02 03 37.1	+1.1
LZH				sP		pwP		02 03 40.1	-1.3
LZH				PP		**PnPn**		**02 03 57.4**	**+4.7**
LZH				pmax		pmax			
	comp=Z,77nm,1.0s								
LZH				pmax		pmax			
	comp=Z,140nm,4.6s								
LZH				LR		LR			
	comp=Z,790nm,12.5s								
LZH				LR		LR			
	comp=Z,570nm,13.0s								
LZH				LR		LR			
	comp=Z,700nm,14.6s								
HHC	**Hu-ho-hao-te**	**22.56**	**343**	*e*P		**P**		**02 03 35.0**	**-2.1**
HHC				pmax		pmax			
	comp=Z,33nm,1.0s								
HHC				pmax		pmax			
	comp=Z,600nm,5.8s								
HHC				LR		LR			
	comp=Z,730nm,12.2s								
HHC				LR		LR			
	comp=Z,460nm,12.2s								
HHC				LR		LR			
	comp=Z,640nm,11.1s								
MAT	**Matsushiro**	**23.16**	**39**	P		**P**		**02 03 43.0**	**-0.3**
MAT				S		**S**		**02 07 55.8**	**+2.1**
MJAR	**Matsushiro Arr**	**23.16**	**39**	P		**P**		**02 03 43.1**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=234,slow=9.4,SNR=5.6								
MJAR	**Matsushiro Arr**	**23.16**	**39**	P		**P**		**02 03 42.8**	**-0.6**
KAPI	**Kappang**	**24.35**	**181**	P		**P**		**02 03 53.6**	**-1.1**
	comp=Z,6.0nm,0.3s,baz=356,slow=7.8,SNR=7.4								
KAPI				LR		LR		02 16 05.6	
	comp=Z,69nm,19.3s,baz=54,slow=43								
KAPI	**Kappang**	**24.35**	**181**	P		**P**		**02 03 55.1**	**+0.3**
KAPI				IAmb		IAmb		02 04 14.2	
	comp=Z,20nm,1.1s								
CN2	**Changchun**	**24.63**	**9**	*e*P		**P**		**02 03 57.9**	**+0.8**
CN2				*e*S		**S**		**02 08 17.1**	**0.0**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.8s								
CN2				pmax		pmax			
	comp=Z,100nm,3.0s								
CN2				LR		LR			
	comp=Z,200nm,12.0s								
CN2				LR		LR			
	comp=Z,100nm,12.0s								
CN2				LR		LR			
	comp=Z,200nm,13.0s								
MDJ	**Mudanjiang**	**26.24**	**15**	P		**P**		**02 04 11.6**	**-0.1**
MDJ				pP		pP		02 04 18.3	+1.0
MDJ				sP		pwP		02 04 21.8	-0.8
MDJ				S		**S**		**02 08 45.6**	**+2.9**
MDJ				sS		sS		02 08 55.6	+3.5
MDJ				SS		**SnSn**		**02 09 50.5**	**+7.7**
MDJ				pmax		pmax			
	comp=Z,39nm,1.0s								
MDJ				pmax		pmax			
	comp=Z,120nm,4.7s								
MDJ	**Mudanjiang**	**26.24**	**15**	P		**P**		**02 04 10.9**	**-0.8**
USRK	**Ussuriysk Ar.**	**26.52**	**19**	P		**P**		**02 04 13.6**	**-0.6**
	comp=Z,6.7nm,0.9s,baz=202,slow=9.7,SNR=7.8								
USRK	**Ussuriysk Ar.**	**26.52**	**19**	P		**P**		**02 04 13.3**	**-0.9**
USA0B	**Ussuriysk Arra**	**26.52**	**19**	P		**P**		**02 04 13.7**	**-0.5**
GTA	**Gaotai**	**26.56**	**323**	*e*P		**P**		**02 04 16.5**	**+1.7**
GTA				pmax		pmax			
	comp=Z,13nm,1.5s								
GTA				pmax		pmax			
	comp=Z,420nm,6.5s								
GTA				LR		LR			
	comp=Z,230nm,12.7s								
GTA				LR		LR			
	comp=Z,370nm,12.7s								
GTA				LR		LR			
	comp=Z,340nm,12.4s								
LSA	**Lhasa**	**28.29**	**297**	P		**P**		**02 04 32.3**	**+1.5**
LSA				IAmb		IAmb		02 04 33.1	
	comp=Z,7.0nm,0.8s								
SONM	**Songino Array**	**30.44**	**341**	LR		LR		02 17 52.1	
	comp=Z,249nm,19.2s,baz=115,slow=38								
KLR	**Kul'dur**	**31.08**	**15**	P		**P**		**02 04 55.0**	**+0.3**
	comp=Z,11nm,1.0s,baz=215,slow=7.0,SNR=11								
TLY	**Talaya**	**34.68**	**342**	LR		LR		02 20 39.6	
	comp=Z,191nm,18.0s,baz=146,slow=38								
WMQ	**Urumqi**	**36.46**	**319**	*e*P		**P**		**02 05 45.1**	**+3.4**
WMQ				pmax		pmax			
	comp=Z,110nm,1.7s								
WMQ				LR		LR			
	comp=Z,950nm,28.8s								
WMQ				LR		LR			
	comp=Z,3μm,29.0s								
WMQ				LR		LR			
	comp=Z,230nm,22.7s								
FITZ	**Fitzroy Crossi**	**37.72**	**172**	P		**P**		**02 05 50.3**	**-2.2**
PMG	**Port Moresby**	**39.07**	**135**	P		**P**		**02 06 03.7**	**-0.2**
	comp=Z,7.2nm,0.4s,baz=257,slow=6.3,SNR=3.2								
PMG	**Port Moresby**	**39.07**	**135**	P		**P**		**02 06 05.4**	**+1.5**
PMG				IAmb		IAmb		02 06 07.1	
	comp=Z,21nm,1.1s								
PSA00	**Pilbara Seismi**	**40.81**	**181**	P		**P**		**02 06 17.7**	**-0.6**
PSA00				IAmb		IAmb		02 06 19.3	
	comp=Z,14nm,1.1s								
MKAR	**Makanchi Array**	**41.25**	**320**	LR		LR		02 25 16.8	
	comp=Z,96nm,18.2s,baz=93,slow=39								
WB0	**Warramunga Arr**	**41.40**	**160**	P		**P**		**02 06 20.6**	**-2.5**
WRA	**Warramunga Arr**	**41.54**	**160**	P		**P**		**02 06 22.1**	**-2.2**
	comp=Z,3.0nm,0.6s,baz=343,slow=9.1,SNR=14								
WRA				PcP		**PcP**		**02 08 20.8**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=333,slow=3.7,SNR=2.4								
WRA	**Warramunga Arr**	**41.54**	**160**	P		**P**		**02 06 21.8**	**-2.5**
WB2	**Warramunga Arr**	**41.55**	**160**	P		**P**		**02 06 23.1**	**-1.2**
WB2				IAmb		IAmb		02 06 31.6	
	comp=Z,12nm,1.1s								
WR0	**Warramunga Arr**	**41.62**	**160**	P		**P**		**02 06 22.9**	**-2.0**
WR0				IAmb		IAmb		02 06 31.5	
	comp=Z,6.0nm,0.6s								
KSH	**Kashi**	**42.90**	**307**	*e*P		**P**		**02 06 35.8**	**+0.3**
KSH				pmax		pmax			
	comp=Z,280nm,5.5s								
TDK	**Taldyqorghan**	**42.93**	**316**	*e*P		**P**		**02 06 36.6**	**+1.1**
	comp=Z,18nm,1.0s,baz=315								
TNSS	**Tian-Shan**	**43.22**	**313**	*e*P		**P**		**02 06 39.1**	**+0.8**
	baz=312								
ZALV	**Zalesovo Beam**	**43.80**	**330**	P		**P**		**02 06 42.6**	**+0.3**
	comp=Z,14nm,0.9s,baz=101,slow=8.0,SNR=5.3								
ZALV				LR		LR		02 25 48.2	
	comp=Z,138nm,21.1s,baz=99,slow=37								
KUU	**Kurty**	**43.92**	**314**	*e*P		**P**		**02 06 44.2**	**+0.7**
	comp=Z,9.0nm,1.1s,baz=313								
KUU				*e*S		**S**		**02 13 15.1**	**+1.4**
	baz=313								
NIL	**Nilore**	**43.99**	**299**	P		**P**		**02 06 44.3**	**+0.1**
NIL				IAmb		IAmb		02 06 45.7	
	comp=Z,18nm,1.1s								
AS31	**Alice Springs**	**44.91**	**162**	P		**P**		**02 06 49.4**	**-2.1**
ASAR	**Alice Springs**	**44.91**	**162**	P		**P**		**02 06 50.5**	**-1.0**
	comp=Z,4.6nm,0.7s,baz=341,slow=7.0,SNR=25								
ASAR				ScP		**ScP**		**02 12 25.0**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=330,slow=5.4,SNR=3.1								
ASAR				LR		LR		02 27 15.4	
	comp=Z,61nm,18.7s,baz=351,slow=38								
ASAR	**Alice Springs**	**44.91**	**162**	P		**P**		**02 06 50.0**	**-1.5**
KURK	**Kurchatov**	**45.24**	**323**	P		**P**		**02 06 54.5**	**+0.6**
KURBB	**Kurchatov Arra**	**45.25**	**323**	P		**P**		**02 06 53.9**	**0.0**
	comp=Z,11nm,0.8s,baz=122,slow=7.6,SNR=16								
GAR	**Garm**	**47.09**	**305**	P		**P**		**02 07 09.5**	**+0.7**
DZA	**Taraz**	**47.13**	**311**	*e*P		**P**		**02 07 09.1**	**+0.2**
	baz=310								
KBL	**Kabul**	**47.55**	**299**	P		**P**		**02 07 12.3**	**-0.3**
KBL				IAmb		IAmb		02 07 15.3	
	comp=Z,10.0nm,1.1s								
KK31	**Karatay Array**	**47.77**	**311**	P		**P**		**02 07 14.5**	**+0.6**
KK31				IAmb		IAmb		02 07 16.7	
	comp=Z,8.7nm,1.1s								
KKAR	**Karatay Array**	**47.77**	**311**	P		**P**		**02 07 15.1**	**+1.2**
KKAR	**Karatay Array**	**47.77**	**311**	P		**P**		**02 07 14.5**	**+0.6**
KKAR				IAmb		IAmb		02 07 16.7	
	comp=Z,8.7nm,1.1s								
IUG	**Iuzhnay**	**47.90**	**310**	*e*P		**P**		**02 07 15.9**	**+0.9**
	comp=Z,8.6nm,1.9s,baz=309								
IUG				*e*S		**S**		**02 14 13.0**	**+1.8**
	baz=309								
BRZS	**Berezniki**	**48.39**	**320**	*e*P		**P**		**02 07 18.5**	**-0.1**
	baz=320								
SEY	**Seymchan**	**48.67**	**19**	P		**P**		**02 07 20.3**	**-0.1**
	comp=Z,6.4nm,0.6s,baz=229,slow=4.6,SNR=11								
BRVK	**Borovoye**	**50.91**	**323**	P		**P**		**02 07 38.4**	**+0.8**
BRVK				IAmb		IAmb		02 07 39.5	
	comp=Z,7.7nm,0.9s								
TIXI	**Tiksi**	**52.41**	**3**	P		**P**		**02 07 49.7**	**+1.2**
TIXI				IAmb		IAmb		02 07 50.5	
	comp=Z,4.8nm,0.8s								
HRA	**Herat**	**53.16**	**299**	P		**P**		**02 07 55.4**	**+0.4**
NRIK	**Noril'sk**	**53.72**	**346**	P		**P**		**02 07 58.6**	**+0.4**
	comp=Z,7.4nm,0.8s,baz=132,slow=4.6,SNR=9.0								
NRIK				LR		LR		02 32 30.7	
	comp=Z,188nm,19.8s,baz=198,slow=38								
BBOO	**Buckleboo**	**54.15**	**164**	P		**P**		**02 07 60.0**	**-1.9**
STKA	**Stephens Creek**	**55.01**	**158**	P		**P**		**02 08 08.2**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=342,slow=8.6,SNR=6.1								
STKA				LR		LR		02 34 58.1	
	comp=Z,56nm,18.2s,baz=208,slow=40								
STKA	**Stephens Creek**	**55.01**	**158**	P		**P**		**02 08 07.5**	**-0.6**
ABKAR	**Akbulak array**	**56.18**	**317**	P		**P**		**02 08 16.2**	**-0.2**
ABKAR	**Akbulak array**	**56.18**	**317**	P		**P**		**02 08 16.4**	**-0.1**
ABKAR				IAmb		IAmb		02 08 18.1	
	comp=Z,3.9nm,1.0s								
GEYT	**Alibeck**	**56.53**	**303**	P		**P**		**02 08 19.9**	**+0.8**
	comp=Z,3.3nm,0.8s,baz=60,slow=12,SNR=6.2								
GEYT	**Alibeck**	**56.53**	**303**	P		**P**		**02 08 20.8**	**+1.6**
GYA0B	**ALIBECK ARRAY**	**56.53**	**303**	P		**P**		**02 08 20.8**	**+1.6**
AKTO	**Aktyubinsk**	**57.60**	**318**	P		**P**		**02 08 26.8**	**+0.3**
	comp=Z,3.1nm,1.0s,baz=126,slow=4.4,SNR=6.1								
ARU	**Arti**	**58.39**	**325**	P		**P**		**02 08 31.7**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=114,slow=2.2,SNR=7.6								
ARU	**Arti**	**58.39**	**325**	P		**P**		**02 08 31.7**	**-0.2**
ARU				IAmb		IAmb		02 08 32.4	
	comp=Z,9.8nm,1.0s								
DZM	**Mont Dzumac**	**61.18**	**130**	P		**P**		**02 08 51.3**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=295,slow=7.6,SNR=3.7								
DZM				LR		LR		02 31 33.8	
	comp=Z,88nm,19.9s,baz=96,slow=32								
KIRV	**Kirov**	**63.60**	**326**	P		**P**		**02 09 06.7**	**-0.5**
	comp=Z,5.2nm,0.5s,baz=65,slow=17,SNR=4.8								
GNI	**Garni**	**66.81**	**306**	P		**P**		**02 09 29.8**	**+1.2**
	comp=Z,7.9nm,1.1s,baz=176,slow=11,SNR=6.0								
GNI	**Garni**	**66.81**	**306**	P		**P**		**02 09 30.1**	**+1.5**
AKH	**Akhalkalaki**	**67.61**	**308**	P		**P**		**02 09 35.2**	**+1.5**
KBZ	**Khabaz**	**67.79**	**310**	P		**P**		**02 09 35.1**	**+0.6**
	comp=Z,7.9nm,0.9s,baz=236,slow=23,SNR=12								
KIV	**Kislovodsk**	**67.92**	**310**	P		**P**		**02 09 36.6**	**+1.1**
KLMR	**Klimovskoe**	**68.69**	**329**	*e*P		**P**		**02 09 38.2**	**-1.6**
KLMR				AMP				02 09 40.4	
	comp=Z,30nm,1.3s								
RAYN	**Ar Rayn**	**68.95**	**288**	P		**P**		**02 09 42.0**	**-0.2**
RAYN				IAmb		IAmb		02 09 43.4	
	comp=Z,7.0nm,1.1s								
KOPT	**Kop Dagi**	**70.06**	**306**	P		**P**		**02 09 50.3**	**+1.2**
KOPT				IAmb		IAmb		02 09 53.5	
	comp=Z,4.8nm,1.0s								
MARD	**Mardin**	**70.28**	**304**	P		**P**		**02 09 51.2**	**+0.9**
MARD				IAmb		IAmb		02 09 52.1	
	comp=Z,11nm,1.0s								
OBN	**Obninsk**	**70.68**	**323**	P		**P**		**02 09 52.2**	**0.0**
	comp=Z,2.7nm,0.4s,baz=71,slow=17,SNR=6.4								
OBN	**Obninsk**	**70.68**	**323**	P		**P**		**02 09 51.4**	**-0.8**
IMAR	**Indian Mountai**	**70.76**	**26**	P		**P**		**02 09 52.1**	**-0.4**
MDM	**Murphy Dome**	**73.17**	**26**	P		**P**		**02 10 06.0**	**-1.0**
MDM				IAmb		IAmb		02 10 07.9	
	comp=Z,8.5nm,0.9s								
ARCES	**ARCES Array B**	**73.57**	**339**	P		**P**		**02 10 09.4**	**+0.1**
	comp=Z,4.7nm,0.9s,baz=93,slow=10.0,SNR=6.0								
ILAR	**Eielson Array**	**73.77**	**26**	P		**P**		**02 10 10.4**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=275,slow=5.0,SNR=7.3								
ILAR	**Eielson Array**	**73.77**	**26**	P		**P**		**02 10 08.7**	**-1.8**
SPITS	**Spitsbergen Ar**	**73.87**	**348**	P		**P**		**02 10 11.8**	**+0.9**
	comp=Z,6.6nm,0.8s,baz=79,slow=9.4,SNR=11								
BMAR	**Burnt Mountain**	**74.15**	**24**	P		**P**		**02 10 13.5**	**+0.7**
FINES	**FINESS Array B**	**75.07**	**330**	P		**P**		**02 10 18.0**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=50,slow=4.5,SNR=19								
FINES	**FINESS Array B**	**75.07**	**330**	P		**P**		**02 10 17.0**	**-1.1**
BRTR	**Keskin Array B**	**75.29**	**307**	P		**P**		**02 10 19.4**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=134,slow=8.8,SNR=4.3								
BRTR	**Keskin Array B**	**75.29**	**307**	P		**P**		**02 10 20.0**	**-0.1**
VSU	**Vasula**	**75.43**	**327**	*e*P		**P**		**02 10 20.4**	**+0.2**
AKASG	**Malin Array Be**	**75.82**	**319**	P		**P**		**02 10 21.9**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=62,slow=5.7,SNR=14								
AKASG	**Malin Array Be**	**75.82**	**319**	P		**P**		**02 10 21.4**	**-1.2**
AKBB	**Malin Array Si**	**75.82**	**319**	P		**P**		**02 10 22.1**	**-0.5**
AKBB				IAmb		IAmb		02 10 22.9	
	comp=Z,9.3nm,1.0s								
IDID	**Didziasalis**	**76.18**	**324**	*e*P		**P**		**02 10 24.8**	**+0.2**
NACGM	**Naroch**	**76.25**	**324**	*e*		**P**		**02 10 24.0**	**-1.0**
BCAR	**Beaver Creek A**	**76.36**	**28**	P		**P**		**02 10 25.8**	**+0.2**
ISAL	**Salakas**	**76.45**	**324**	*e*P		**P**		**02 10 26.8**	**+0.7**
IIGN	**Ignalina**	**76.46**	**324**	*e*P		**P**		**02 10 25.6**	**-0.6**
SORM	**Soroca**	**76.99**	**317**	⇓P		**P**		**02 10 27.3**	**-2.0**
PABE	**Paberze**	**77.65**	**325**	*e*P		**P**		**02 10 32.8**	**-0.1**
INK	**Inuvik**	**77.88**	**21**	P		**P**		**02 10 32.8**	**-1.2**
INK				IAmb		IAmb		02 10 34.8	
	comp=Z,5.0nm,1.1s								
CFR	**Carcaliu**	**77.90**	**314**	⇑P		**P**		**02 10 34.5**	**0.0**
SUW	**Suwalki**	**78.52**	**323**	P		**P**		**02 10 37.3**	**-0.4**
VRI	**Vrincioaia**	**78.67**	**315**	⇓P		**P**		**02 10 37.4**	**-1.3**
ELL	**Elmali**	**78.88**	**305**	P		**P**		**02 10 39.6**	**-0.7**
BURAR	**Bucovina Array**	**79.16**	**317**	⇑P		**P**		**02 10 42.1**	**+0.5**
BURAR	**Bucovina Array**	**79.16**	**317**	P		**P**		**02 10 41.4**	**-0.2**
BUR08	**Bucovina Ar. S**	**79.17**	**317**	P		**P**		**02 10 42.0**	**+0.4**
MLR	**Muntele Rosu**	**79.30**	**314**	P		**P**		**02 10 42.0**	**-0.3**
	comp=Z,2.8nm,0.9s,baz=34,slow=3.6								
MLR	**Muntele Rosu**	**79.30**	**314**	⇓P		**P**		**02 10 43.3**	**+1.0**
MLR	**Muntele Rosu**	**79.30**	**314**	P		**P**		**02 10 41.0**	**-1.4**
MLR				IAmb		IAmb		02 10 43.7	
	comp=Z,5.1nm,1.0s								
VOIR		**79.92**	**315**	⇓P		**P**		**02 10 45.3**	**-0.4**
KWP	**Kalwaria Pacla**	**80.14**	**319**	P		**P**		**02 10 47.1**	**+0.4**
C36M	**Paulatuk**	**80.50**	**19**	P		**P**		**02 10 46.6**	**-1.6**
C36M				IAmb		IAmb		02 10 48.1	
	comp=Z,9.1nm,1.1s								
KOLS	**Kolonicke sedl**	**80.63**	**319**	*e*P		**P**		**02 10 50.8**	**+1.4**
DRGR		**81.04**	**316**	⇑P		**P**		**02 10 52.1**	**+0.4**
CRVS	**Cervenica-Dubn**	**81.15**	**319**	*e*P		**P**		**02 10 52.4**	**+0.3**
HFS	**Hagfors**	**81.23**	**331**	P		**P**		**02 10 52.3**	**0.0**
	comp=Z,1.8nm,0.7s,baz=132,slow=2.2,SNR=6.5								
NB2	**NORSAR Subarra**	**81.96**	**332**	P		**P**		**02 10 54.7**	**-1.5**
	comp=Z,12nm,1.2s,baz=66,slow=5.6								
NOA	**NORSAR Array B**	**81.96**	**332**	P		**P**		**02 10 55.1**	**-1.1**
	comp=Z,3.8nm,1.0s,baz=63,slow=5.3,SNR=8.3								
MORC	**Moravsky Berou**	**83.24**	**320**	*e*P		**P**		**02 11 04.0**	**+0.9**
JAVC	**Velka Javorina**	**83.50**	**320**	*e*P		**P**		**02 11 05.6**	**+1.1**
VRAC	**Vranov**	**83.99**	**320**	P		**P**		**02 11 07.7**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=98,slow=2.8,SNR=6.0								
VRAC	**Vranov**	**83.99**	**320**	*e*P		**P**		**02 11 07.1**	**+0.2**
KRUC	**Moravsky**	**84.20**	**320**	*e*P		**P**		**02 11 08.0**	**0.0**
BRG	**Berggiesshubel**	**84.92**	**322**	*i* P		**P**		**02 11 11.5**	**0.0**
	comp=Z,9.5nm,1.1s								
CLL	**Collm**	**85.27**	**323**	*e*P		**P**		**02 11 13.0**	**-0.3**
	comp=Z,4.0nm,0.8s								
GERES	**GERESS Array B**	**85.91**	**321**	P		**P**		**02 11 17.2**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=58,slow=5.0,SNR=9.1								
GERES	**GERESS Array B**	**85.91**	**321**	P		**P**		**02 11 15.6**	**-1.1**
YKA	**Yellowknife Ar**	**87.61**	**22**	P		**P**		**02 11 24.2**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=322,slow=5.0,SNR=9.1								
TXAR	**Lajitas Array**	**115.57**	**42**	PKP		**PKiKP**		**02 17 19.2**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=191,slow=2.6,SNR=3.7								
TXAR	**Lajitas Array**	**115.57**	**42**			**PKiKP**		**02 17 18.2**	**-1.1**
ROSC	**El Rosal**	**151.89**	**32**	PKPbc		**PKiKP**		**02 18 33.1**	**-0.2**
	comp=Z,7.1nm,0.4s,baz=291,slow=6.5,SNR=5.8								

IDC ***19*** *02:00:51.0±1.9, 1.80N×126.29E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/49, mbtmp3.7/3, Error ellipse: s-maj=170.2km s-min=23.9km az=65.0*
NEIC ***19*** *02:00:56.2±0.7, 1.8N±0.1×126.29E±0.06, h35km±2km, mb4.2/7, Error ellipse: s-maj=20.6km s-min=9.1km az=190.0*

ISC 19 02:00:56.0±0.9, 1.7N±0.1×126.26E±0.1, h35km, n15, σ0.8s80/15, mb3.9/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.45**	**130**			**Pn**	**02 01 19.8**	**+0.1**
TOLI2	**Tolitoli**	**5.51**	**264**	Pn		**Pn**	**02 02 16.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.70**	**182**	P		**Pn**	**02 02 25.4**	**+0.4**
WRA	**Warramunga Arr**	**22.93**	**160**	P		**P**	**02 05 57.9**	**+0.5**
	1.4nm,0.6s,baz=339,slow=11,SNR=16							
WRA	**Warramunga Arr**	**22.93**	**160**	P		**P**	**02 05 57.7**	**+0.4**
WB2	**Warramunga Arr**	**22.94**	**160**	P		**P**	**02 05 57.8**	**+0.5**
WB2				IAmb		IAmb	02 06 02.9	
	comp=Z,3.2nm,0.8s							
WR0	**Warramunga Arr**	**23.02**	**160**	P		**P**	**02 05 59.7**	**+1.5**
WR0				IAmb		IAmb	02 06 16.9	
	comp=Z,5.9nm,1.2s							
ASAR	**Alice Springs**	**26.30**	**164**	P		**P**	**02 06 29.1**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=343,slow=7.7,SNR=6.3							
ASAR	**Alice Springs**	**26.30**	**164**	P		**P**	**02 06 29.7**	**+1.1**
MORW	**Morawa**	**32.14**	**197**	P		**P**	**02 07 18.7**	**-1.6**
MK31	**Makanchi Array**	**58.95**	**326**	P		**P**	**02 10 52.2**	**+0.3**
MK31				IAmb		IAmb	02 10 55.4	
	comp=Z,5.1nm,1.5s							
MKAR	**Makanchi Array**	**58.95**	**326**	P		**P**	**02 10 51.9**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=120,slow=7.8,SNR=11							
MKAR	**Makanchi Array**	**58.95**	**326**	P		**P**	**02 10 52.0**	**0.0**
KURK	**Kurchatov**	**63.19**	**328**	P		**P**	**02 11 20.9**	**+0.3**
KURK				IAmb		IAmb	02 11 33.8	
	comp=Z,10nm,1.3s							
KIWB	**Kanaga Island**	**68.61**	**34**	P		**P**	**02 11 55.2**	**-0.3**

GCG ***19*** *02:05:35.8±0.6, 13.23N×88.48W, h357km±16km, MD4.4*
NEIC ***19*** *02:05:39.8±2.8, 12.47N±0.07×88.07W±0.05, h35km±2km, mb4.5/153, Md4.6(SNET), Error ellipse: s-maj=12.4km s-min=7.8km az=195.0*
INET ***19*** *02:05:41.2, 12.47N×88.03W, h15km, ML4.7*
SNET ***19*** *02:05:42.9±1.0, 12.64N×88.05W, h36km±287km, ML4.6*
UCR ***19*** *02:05:43.5±2.1, 12.67N×88.05W, h34km±15km, ML4.5, MW4.4, mb4.5(NEIC)*
IDC ***19*** *02:05:43.1±0.8, 12.87N×87.66W, h68km±6km, mb4.0/12, mb1 4.2/14, mb1mx3.8/42, mbtmp4.2/14, MS3.2/6, Ms1 3.2/6, ms1mx3.0/32, Error ellipse: s-maj=25.6km s-min=12.7km az=58.0*

ISC 19 02:05:43.0±0.7, 12.71N±0.05×87.97W±0.03, h64km±5km, n324, σ1s10/336, mb4.4/68, 2C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CSGN	**Cosiguina Volc**	**0.48**	**56**	*e*P		**Pn**	**02 05 54.6**	**-0.6**
CSGN	**Cosiguina Volc**	**0.48**	**56**	*e*P		**Pn**	**02 05 54.6**	**-0.6**
CSGN	**Cosiguina Volc**	**0.48**	**56**			**Pn**	**02 05 54.6**	**-0.6**
CSGN				Sn		**Sn**	02 06 04.2	+0.1
LCND	**La Caada**	**0.60**	**7**	*e*P		**Pn**	**02 05 56.2**	**-0.2**
LCND				*e*S		**Sn**	**02 06 07.0**	**+0.7**
LCND				IAML			02 06 09.0	
	comp=Z,42μm,0.4s							
LCND	**La Caada**	**0.60**	**7**	*e*P		**Pn**	**02 05 56.2**	**-0.2**
LCND				*e*S		**Sn**	**02 06 07.0**	**+0.7**
LCND				IAML			02 06 09.0	
	comp=Z,42μm,0.4s							
JUCU	**Jucuarn**	**0.61**	**333**	*i* P		**Pn**	**02 05 55.5**	**-1.1**
JUCU				*e*S		**Sn**	**02 06 05.4**	**-1.1**
JUCU				IAML			02 06 07.5	
	comp=Z,46μm,0.2s							
JUCU	**Jucuarn**	**0.61**	**333**	*i* P		**Pn**	**02 05 55.5**	**-1.1**
JUCU				*e*S		**Sn**	**02 06 05.4**	**-1.1**
JUCU				IAML			02 06 07.5	
	comp=Z,46μm,0.2s							
VSM	**San Miguel**	**0.78**	**337**	*i* P		**Pn**	**02 05

comp=Z,7µm,0.3s
SNET Serv Nac Est T 1.57 309 Pn 02 06 08.2 -0.7
UEES Universidad Ev 1.59 309 eP **Pn 02 06 09.0 -0.1**
UEES eS **Sn 02 06 28.6 -0.3**
UEES IAML 02 06 32.2
comp=Z,7µm,0.2s
UEES Universidad Ev 1.59 309 eP **Pn 02 06 09.0 -0.1**
UEES eS **Sn 02 06 28.6 -0.3**
UEES IAML 02 06 32.2
comp=Z,7µm,0.2s
BOQS Boqueron 1.64 309 eP **Pn 02 06 09.9 0.0**
BOQS Boqueron 1.64 309 eP **Pn 02 06 09.9 0.0**
CEDA San Andres 1.77 308 eP **Pn 02 06 11.3 -0.1**
CEDA eS **Sn 02 06 33.5 +0.5**
CEDA San Andres 1.77 308 eP **Pn 02 06 11.3 -0.1**
CEDA eS **Sn 02 06 33.5 +0.5**
TACO Tacachico 1.84 313 eP **Pn 02 06 12.1 -0.3**
TACO Tacachico 1.84 313 eP **Pn 02 06 12.1 -0.3**
SBLS San Blas 1.97 305 eP **Pn 02 06 14.7 +0.4**
SBLS San Blas 1.97 305 eP **Pn 02 06 14.7 +0.4**
SNJE San Jose 1.97 306 eP **Pn 02 06 14.9 +0.6**
SNJE San Jose 1.97 306 eP **Pn 02 06 14.9 +0.6**
MATN Matagalpa 2.00 83 Pn **Pn 02 06 14.2 -0.5**
MATN Sn **Sn 02 06 38.2 -0.7**
NUBE Las Nubes 2.13 304 eP **Pn 02 06 16.0 -0.4**
NUBE eS **Sn 02 06 41.3 -0.6**
NUBE IAML 02 06 43.1
comp=Z,4µm,0.2s
NUBE Las Nubes 2.13 304 eP **Pn 02 06 16.0 -0.4**
NUBE eS **Sn 02 06 41.3 -0.6**
NUBE IAML 02 06 43.1
comp=Z,4µm,0.2s
MTO3 Montecristo 2.16 321 eP **Pn 02 06 16.9 0.0**
MTO3 Montecristo 2.16 321 eP **Pn 02 06 16.9 0.0**
MTO3 Montecristo 2.16 321 Pn 02 06 16.8 -0.1
ESQI Esquipulas 2.28 324 Pn **Pn 02 06 18.2 -0.2**
ACON Acoyapa 2.83 105 Pn **Pn 02 06 24.5 -1.3**
MRL Marmol 2.89 325 eP **Pn 02 06 30.9 +4.0**
MRL eS Sn 02 07 14.4 +14
NBG Las Nubes 2.97 309 eP **Pn 02 06 31.8 +3.7**
NBG eS Sn 02 07 13.3 +11
PCG Pacaya 3.06 303 eP Pn 02 06 33.6 +4.3
PCG eS Sn 02 07 17.2 +12
GBS3 Finca Las Img 3.12 128 eP **Pn 02 06 30.0 +0.2**
GB1A Borinquen Arri 3.14 126 eP **Pn 02 06 31.3 +1.1**
LAPC Finca la Perla 3.14 128 eP **Pn 02 06 30.1 0.0**
BUEV Buena Vista 3.14 127 eP **Pn 02 06 31.6 +1.4**
BUAI Buenos Aires 3.16 125 eP **Pn 02 06 30.9 +0.6**
GPS1 Guardaparques 3.20 127 eP **Pn 02 06 31.6 +0.6**
GPS3 Bodega del ICE 3.20 127 eP **Pn 02 06 32.0 +1.0**
GPS2 Hotel Rincn d 3.21 127 eP **Pn 02 06 31.3 +0.1**
FUG Fuego 3 3.29 302 eP **Pn 02 06 34.5 +2.2**
FUG eS Sn 02 07 20.0 +10
LIM1 Limonal 3.33 127 eP **Pn 02 06 33.2 +0.5**
GUAB Guayabo de Bag 3.34 126 eP **Pn 02 06 34.6 +1.8**
HORNC Hornillas 3.38 126 eP **Pn 02 06 33.0 -0.3**
COLC Colonia 3.38 127 eP **Pn 02 06 34.9 +1.4**
ORTG Ortega, Santa 3.39 133 eP **Pn 02 06 33.9 +0.4**
GUAI GUAI 3.42 135 eP **Pn 02 06 34.2 +0.3**
CUI Cuipilapa 3.42 126 eP **Pn 02 06 34.5 +0.5**
DUNO Dulce Nombre, 3.56 137 eP **Pn 02 06 35.8 -0.1**
JTS Las Juntas de 3.81 129 eP **Pn 02 06 39.3 0.0**
CEDE Laguna Cedeo 3.88 124 eP **Pn 02 06 42.8 +2.5**
ARE1 Arenal 1 3.89 125 eP **Pn 02 06 41.8 +1.4**
CASO Castillo 3.89 125 eP Pn 02 06 45.1 +4.7
ERG Entre ros, C 3.90 297 eP **Pn 02 06 42.3 +1.8**
ERG eS **Sn 02 07 29.4 +4.3**
COVE Coope Vega, Sa 4.01 119 eP **Pn 02 06 43.8 +1.8**
STG3 Santiaguito 3, 4.03 300 eP **Pn 02 06 43.5 +1.1**
STG3 eS **Sn 02 07 32.8 +4.3**
RTAL Retalhuleu 4.05 297 Pn 02 06 43.4 +0.9
LAFE Finca La Fe, P 4.16 134 eP **Pn 02 06 43.7 -0.4**
JACO JACO, Garabito 4.44 133 eP **Pn 02 06 50.9 +3.0**
PETF Flores 4.57 337 Pn **Pn 02 06 51.9 +2.2**
LCR2 La Lucha 2 4.88 127 eP **Pn 02 06 57.2 +3.1**
RIMA Rio Macho 4.97 126 eP **Pn 02 06 58.0 +2.7**
CDM Cerro de Muert 5.18 127 eP **Pn 02 07 00.7 +2.2**
CCIG Comitan 5.38 312 Pn **Pn 02 07 01.7 +0.8**
DRK0 Durika 5.76 126 eP **Pn 02 07 08.2 +2.1**
TEIG Tepich 7.48 358 Pn **Pn 02 07 32.5 +2.9**
CMIG Matias Romero 7.98 304 P **Pn 02 07 37.3 +1.0**
comp=Z,1.5nm,0.3s,baz=138,slow=12,SNR=22
CMIG S **Sn 02 09 02.6 -2.6**
comp=Z,1.4nm,0.3s,baz=352,slow=17,SNR=1.7
TLIG Tlapa 11.31 297 Pn **Pn 02 08 23.4 +1.3**
GTBY Guantanamo Bay 14.27 58 P **P 02 09 08.2 +0.9**
ROSC El Rosal 15.58 119 LR LR 02 15 20.3
comp=Z,97nm,20.5s,baz=330,slow=38
SDV Santo Domingo 17.44 101 P **Pn 02 09 39.2 -3.2**
comp=Z,0.6nm,0.3s,baz=329,slow=12,SNR=1.6
451A Vernon 17.94 6 P **Pn 02 09 51.7 +3.6**
344A Westbrook Farm 18.83 353 P **Pn 02 10 00.1 +1.3**
344A IAmb IAmb 02 10 16.7
comp=Z,41nm,1.1s
833A Chaparral WMA, 18.84 327 P **Pn 02 09 59.0 0.0**
baz=144,SNR=6.1
833A Chaparral WMA, 18.84 327 P **Pn 02 10 00.2 +1.1**
833A IAmb IAmb 02 10 00.6
comp=Z,20nm,0.6s
342A Flagon Creek P 19.01 348 P **Pn 02 10 01.2 +0.2**
342A IAmb IAmb 02 10 04.1
comp=Z,17nm,0.7s
TIGA Tifton 19.08 12 P **Pn 02 10 02.8 +1.1**
baz=193
VBMS Vicksburg 19.56 354 P **Pn 02 10 07.9 +0.4**
baz=173,SNR=5.8
VBMS Vicksburg 19.56 354 P **Pn 02 10 07.6 +0.1**
152A Waverly Hall 20.09 8 P Pn 02 10 14.4 +0.6
152A IAmb IAmb 02 10 32.7
comp=Z,19nm,0.8s
LRAL Lakeview Retre 20.25 2 P Pn 02 10 15.3 -0.3
baz=183
LRAL Lakeview Retre 20.25 2 P Pn 02 10 16.6 +0.9
LRAL IAmb IAmb 02 10 34.0
comp=Z,18nm,1.0s
Z47A Carrollton 20.40 360 P Pn 02 10 18.0 +0.6
Z47A IAmb IAmb 02 10 35.3
comp=Z,39nm,1.1s
Z51A Franklin 20.68 7 P Pn 02 10 19.9 -0.7
Z51A IAmb IAmb 02 10 23.2
comp=Z,10nm,0.6s
JCT Junction City 20.80 330 P **P 02 10 20.1 +0.9**
baz=146,SNR=5.4
JCT Junction City 20.80 330 P Pn 02 10 22.0 -0.2
JCT IAmb IAmb 02 10 23.4
comp=Z,11nm,0.6s
Z41A Richland Creek 20.93 349 P Pn 02 10 22.2 -1.4
baz=167
Z41A Richland Creek 20.93 349 P Pn 02 10 22.1 -1.5
Z41A IAmb IAmb 02 10 38.8
comp=Z,24nm,0.9s
GOGA Godfrey 21.02 11 P **P 02 10 23.3 +1.9**
baz=192,SNR=7.3
GOGA Godfrey 21.02 11 P **P 02 10 23.3 +1.9**
Y49A Blount Mountai 21.10 4 P **P 02 10 22.6 +0.3**
Y52A Lilburn 21.36 9 P **P 02 10 25.9 +0.8**
Y52A IAmb IAmb 02 10 29.0
comp=Z,14nm,0.8s
EMPR Esperanza - Ma 21.42 72 P **P 02 10 25.6 -0.3**
X48A Hartselle 21.66 2 P **P 02 10 30.3 +2.0**
X48A IAmb IAmb 02 10 48.7
comp=Z,18nm,0.9s
OXF Oxford 21.75 357 P **P 02 10 30.7 +1.5**
baz=176,SNR=5.6
OXF Oxford 21.75 357 P **P 02 10 31.4 +2.2**
OXF IAmb IAmb 02 10 49.3
comp=Z,37nm,1.3s
PDPR Patillas Dam, 21.80 73 P **P 02 10 31.1 +1.2**
PDPR IAmb IAmb 02 10 31.9
comp=Z,12nm,0.9s
FPAL Fort Paine 21.84 5 P **P 02 10 31.3 +1.1**
ATAH Atahualpa 21.89 154 LR LR 02 17 13.7
comp=Z,90nm,20.6s,baz=334,slow=32
HODGE Hodges 22.05 13 P **P 02 10 33.8 +1.4**
HODGE IAmb IAmb 02 10 53.1
comp=Z,27nm,1.0s
TXAR Lajitas Array 22.06 321 P **P 02 10 33.7 +1.0**
comp=Z,5.3nm,0.5s,baz=141,slow=10,SNR=91
TXAR PcP **PcP 02 14 28.7 +0.1**
comp=Z,0.3nm,0.6s,baz=126,slow=4.6,SNR=3.0
TXAR LR LR 02 20 37.2
comp=Z,26nm,20.0s,baz=0.0,slow=40
TXAR Lajitas Array 22.06 321 P **P 02 10 33.7 +1.0**
TXAR PcP **PcP 02 14 29.3 +0.6**
TX31 Lajitas Ar. Si 22.06 321 P **P 02 10 33.7 +1.0**
TX31 IAmb IAmb 02 10 34.9
comp=Z,20nm,0.7s
TX32 Lajitas Array 22.06 321 P **P 02 10 33.8 +1.1**
JSC Jenkinsville 22.33 15 P **P 02 10 37.5 +2.0**
X54A Belton 22.33 12 P **P 02 10 36.6 +1.1**
baz=195
MIAR Mount Ida 22.33 348 pmax pmax
comp=Z,31nm,0.8s
MIAR Mount Ida 22.33 348 P **P 02 10 36.5 +1.0**
baz=166,SNR=9.2
MIAR Mount Ida 22.33 348 P **P 02 10 36.5 +1.0**
MIAR IAmb IAmb 02 10 38.0
comp=Z,17nm,0.8s
MIAR Mount Ida 22.33 348 P **P 02 10 36.4 +1.0**
X55A Gracelyn & Ava 22.42 14 P **P 02 10 37.9 +1.5**
baz=196
SWET Sewanee 22.49 4 P **P 02 10 37.7 +0.5**
W50A Signal Mountai 22.52 6 P **P 02 10 38.1 +0.4**
W50A IAmb IAmb 02 10 49.0
comp=Z,15nm,1.1s
ABTX Abilene, Hawle 22.53 334 P **P 02 10 38.4 +0.7**
baz=150
ABTX Abilene, Hawle 22.53 334 P **P 02 10 39.3 +1.6**
X56A White Oak 22.59 15 P **P 02 10 39.4 +1.1**
baz=198
BG3 Lake Jocassee 22.65 11 P **P 02 10 40.6 +1.7**
BG3 IAmb IAmb 02 10 41.0
comp=Z,8.3nm,0.6s
W41B Gary Mavity, V 22.70 351 P **P 02 10 40.3 +0.9**
baz=170
PAULI Pauline 22.71 13 P **P 02 10 41.1 +1.5**
X37A Clayton 22.80 344 P **P 02 10 42.5 +2.1**
CPCT Cooper Cave 22.86 7 P **P 02 10 41.7 +0.6**
CPCT IAmb IAmb 02 10 43.8
comp=Z,23nm,1.2s
BIRD Birdtown, Kers 22.88 16 P **P 02 10 42.4 +1.1**
BIRD IAmb IAmb 02 10 43.1
comp=Z,15nm,0.8s
W54A Cherokee Point 22.89 12 P **P 02 10 42.6 +1.2**
baz=195
V48A Smith Brothers 22.96 2 P **P 02 10 42.5 +0.4**
W39A Magazine 23.00 348 P **P 02 10 43.8 +1.3**
baz=166
W39A Magazine 23.00 348 P **P 02 10 43.6 +1.1**
X58A Rowland 23.12 18 P **P 02 10 44.5 +0.9**
baz=202
KMSC Kings Mountain 23.13 14 P **P 02 10 44.7 +0.9**
baz=197
KMSC Kings Mountain 23.13 14 P **P 02 10 44.9 +1.1**
KMSC IAmb IAmb 02 11 03.7
comp=Z,14nm,0.9s
TKL Tuckaleechee C 23.16 9 P **P 02 10 43.4 -0.7**
comp=Z,6.7nm,0.7s,baz=190,slow=6.4,SNR=9.0
TKL Tuckaleechee C 23.16 9 P **P 02 10 44.9 +0.8**
TKL IAmb IAmb 02 11 03.9
comp=Z,13nm,0.9s
W56A Indian Trail 23.31 15 P **P 02 10 46.1 +0.6**
baz=198
WVT Waverly 23.32 0 P **P 02 10 44.3 -1.3**
CLTN Cedars of Leba 23.33 3 P **P 02 10 45.6 -0.1**
CLTN IAmb IAmb 02 10 47.4
comp=Z,11nm,1.0s
V53A Saluda 23.33 11 P **P 02 10 46.5 +0.8**
V53A IAmb IAmb 02 11 06.0
comp=Z,18nm,1.1s
FCAR Ozark Folk Cen 23.39 351 P **P 02 10 46.0 -0.2**
LCAR Lake Charles 23.44 354 P **P 02 10 46.2 -0.4**
LCAR IAmb IAmb 02 10 46.6
comp=Z,18nm,1.4s
W57A Gilead 23.49 17 P **P 02 10 47.5 +0.4**
baz=200
W57A Gilead 23.49 17 P **P 02 10 47.4 +0.3**
W57A IAmb IAmb 02 10 48.3
comp=Z,11nm,0.7s
X60A Albert Glenn T 23.59 21 P **P 02 10 48.6 +0.5**
baz=205
V54A Nebo 23.61 12 P **P 02 10 49.1 +0.9**
baz=195
W35A Tecumseh 23.76 342 P **P 02 10 52.3 +2.7**
U49A Red Boiling Sp 23.79 4 P **P 02 10 49.7 -0.1**
U49A IAmb IAmb 02 10 51.7
comp=Z,19nm,1.4s
V55A Taylorsville 23.84 14 P **P 02 10 51.2 +0.9**
baz=196
V55A Taylorsville 23.84 14 P **P 02 10 51.1 +0.7**
V55A IAmb IAmb 02 10 53.2
comp=Z,18nm,1.2s
U40A Yellville 23.96 350 P **P 02 10 52.1 +0.7**
baz=169
U40A Yellville 23.96 350 P **P 02 10 52.5 +1.1**
U40A IAmb IAmb 02 11 10.9
comp=Z,17nm,1.0s
V56A Mocksville 23.97 15 P **P 02 10 52.0 +0.5**
baz=198
FNO Franklin 24.02 341 P **P 02 10 52.0 0.0**
WMOK Wichita Mounta 24.03 338 P **P 02 10 52.3 +0.3**
baz=154
WMOK Wichita Mounta 24.03 338 P **P 02 10 52.6 +0.6**
TZTN Tazewell 24.07 9 P **P 02 10 52.8 +0.4**
baz=191
TZTN Tazewell 24.07 9 P **P 02 10 52.9 +0.5**
TZTN IAmb IAmb 02 10 59.1
comp=Z,27nm,1.4s
PBMO Poplar Bluff 24.07 355 P **P 02 10 52.0 -0.4**
PBMO IAmb IAmb 02 10 53.2
comp=Z,11nm,0.6s
HHAR Hobbs 24.08 348 P **P 02 10 53.6 +1.0**
HHAR IAmb IAmb 02 10 55.1
comp=Z,7.8nm,0.6s
TUL1 Leonard 24.16 344 P **P 02 10 54.4 +1.2**
baz=162,SNR=6.6
TUL1 Leonard 24.16 344 P **P 02 10 54.5 +1.3**
TUL1 IAmb IAmb 02 10 56.3
comp=Z,16nm,0.8s
T47A Sharon Grove 24.19 2 P **P 02 10 53.1 -0.4**
T47A IAmb IAmb 02 11 12.0
comp=Z,26nm,1.2s
V57A Coltrane Farms 24.24 16 P **P 02 10 54.2 +0.3**
baz=200
U38A Gravette 24.33 347 P **P 02 10 55.8 +1.1**
U38A IAmb IAmb 02 10 57.1
comp=Z,9.3nm,0.8s
V58A Windy Hill, Pi 24.34 18 P **P 02 10 55.3 +0.5**
baz=201
V58A Windy Hill, Pi 24.34 18 P **P 02 10 55.4 +0.5**
U54A Nelsons Funny 24.35 12 P **P 02 10 55.7 +0.7**
T42A Van Buren 24.38 354 P **P 02 10 54.8 -0.4**
OK031 S. Brethren Rd 24.49 342 IAmb IAmb 02 10 56.6
comp=Z,13nm,0.6s
OK029 Liberty Lake 24.53 341 IAmb IAmb 02 10 56.7
comp=Z,13nm,0.8s
QUOK Quay 24.66 343 IAmb IAmb 02 10 59.6
comp=Z,24nm,1.3s
T53A Wise 24.66 10 P **P 02 10 58.0 +0.1**
baz=193
MNTX Cormudas Mount 24.78 323 P **P 02 10 58.7 -0.2**
baz=136,SNR=5.7
U57A Blanch 24.87 17 P **P 02 11 00.0 +0.4**
baz=200
T54A Tazewell 24.92 12 P **P 02 11 01.2 +1.0**
baz=195
U58A Oxford 25.06 18 P **P 02 11 01.3 -0.1**
baz=202
MSTX Muleshoe 25.09 330 P **P 02 11 01.6 -0.3**
baz=145,SNR=6.0
T55A Pulaski 25.15 14 P **P 02 11 02.9 +0.7**
baz=197
S39A Bolivar 25.34 350 IAmb IAmb 02 11 22.1
comp=Z,12nm,0.8s
AMTX Amarillo 25.34 333 P **P 02 11 04.9 +0.8**
baz=148
AMTX Amarillo 25.34 333 IAmb IAmb 02 11 08.7
comp=Z,13nm,0.6s
CCM Cathedral Cave 25.41 354 P **P 02 11 04.2 -0.5**
baz=173
CCM Cathedral Cave 25.41 354 P **P 02 11 04.4 -0.2**
CCM IAmb IAmb 02 11 04.8
comp=Z,9.7nm,0.7s
T57A Hurt 25.42 16 P **P 02 11 05.3 +0.6**
baz=200
WCI Wyandotte Cave 25.46 3 P **P 02 11 04.8 -0.3**
baz=184
R40A Maddies Statio 25.77 352 IAmb IAmb 02 11 07.7
comp=Z,5.8nm,0.6s
RCRC Randolf Colleg 25.82 16 P **P 02 11 09.0 +0.6**
R54A Victor 26.12 13 P **P 02 11 11.7 +0.7**
baz=196
Q51A Peebles 26.53 8 P **P 02 11 14.9 +0.2**
Q51A IAmb IAmb 02 11 15.4
comp=Z,12nm,0.9s
Q52A Bidwell 26.64 10 P **P 02 11 15.5 -0.1**
baz=193
Q53A Leroy 26.67 11 P **P 02 11 16.0 +0.1**
baz=194
R57A Stanardsville 26.84 17 P **P 02 11 17.6 +0.2**
baz=201
Q54A Coxs Mills 26.93 12 P **P 02 11 18.3 +0.1**
baz=196
Q54A Coxs Mills 26.93 12 P **P 02 11 18.8 +0.5**
Q54A IAmb IAmb 02 11 37.5
comp=Z,9.6nm,0.8s
R58A Rapidan 26.99 17 P **P 02 11 19.2 +0.4**
baz=202
P38A Dawn 27.26 351 IAmb IAmb 02 11 21.7
comp=Z,9.6nm,0.8s
P53A Whipple 27.30 11 P **P 02 11 21.7 +0.1**
baz=194
Q56A Snyder Ridge, 27.36 15 P **P 02 11 23.3 +1.1**
Q56A IAmb IAmb 02 11 40.4
comp=Z,8.9nm,1.0s
Q57A Strasburg 27.56 16 P **P 02 11 24.4 +0.5**
baz=200
ANMO Albuquerque 27.76 326 P **P 02 11 26.0 -0.1**
comp=Z,1.1nm,0.6s,baz=139,slow=6.6,SNR=3.8
ANMO Albuquerque 27.76 326 P **P 02 11 26.7 +0.7**
ACSO Alum Creek Sta 27.77 8 P **P 02 11 25.9 +0.1**
baz=191
O53A New Philadelph 28.07 11 P **P 02 11 28.6 +0.1**
baz=194
P57A Homestead Farm 28.09 17 P **P 02 11 28.6 -0.1**
baz=201
P57A Homestead Farm 28.09 17 P **P 02 11 29.9 +1.3**
P57A IAmb IAmb 02 11 43.6
comp=Z,21nm,1.3s
P58A Pank, Wackersv 28.30 18 P **P 02 11 30.8 +0.3**
baz=202
N54A Moraine State 29.00 13 P **P 02 11 37.0 +0.2**
baz=196
N54A Moraine State 29.00 13 P **P 02 11 36.5 -0.3**
N54A IAmb IAmb 02 11 37.5
comp=Z,12nm,0.9s
P60A Greenville 29.11 20 P **P 02 11 37.9 +0.1**
baz=205
O59A Robesonia 29.39 19 P **P 02 11 40.6 +0.4**
baz=204
N57A Milroy 29.40 16 P **P 02 11 40.3 +0.1**
baz=201
M54A Oil Creek Stat 29.60 13 P **P 02 11 42.0 0.0**
214A Organ Pipe Nat 29.79 314 P **P 02 11 41.5 -2.4**
baz=125
M57A Sunshine Farm, 30.06 16 P **P 02 11 46.5 +0.4**
baz=202
N59A State Game Lan 30.07 19 P **P 02 11 46.7 +0.4**
baz=204
N59A State Game Lan 30.07 19 P **P 02 11 47.0 +0.7**
JFWS Jewell Farm 30.16 357 P **P 02 11 46.7 -0.3**
baz=176
MVCO Mesa Verde 30.55 327 P **P 02 11 50.6 -0.2**
baz=138
MVCO Mesa Verde 30.55 327 IAmb IAmb 02 11 53.2
comp=Z,4.2nm,0.7s
ODNJ Ogdensburg 30.60 20 P **P 02 11 51.2 +0.3**
ODNJ IAmb IAmb 02 11 51.7
comp=Z,11nm,1.1s
M59A Waymart 30.74 19 P **P 02 11 52.3 +0.1**
baz=204
M60A Port Jervis 30.81 20 P **P 02 11 52.6 -0.1**
baz=206
SMCO Snowmass 31.28 331 P **P 02 11 58.8 +1.4**
PV03 Paradox Valley 31.51 328 P **P 02 12 00.2 +1.0**
PV05 Paradox Valley 31.51 327 IAmb IAmb 02 12 01.9
comp=Z,5.6nm,0.6s
PV17 East Wray Mesa 31.59 327 P **P 02 12 00.7 +0.8**
PV17 PcP **PcP 02 14 51.3 +0.2**
PV23 Carpenter Ridg 31.74 328 IAmb IAmb 02 12 03.8
comp=Z,8.3nm,0.8s
ECSD EROS Data Cent 31.80 348 P **P 02 12 00.5 -1.0**
baz=164
ECSD EROS Data Cent 31.80 348 P **P 02 12 00.7 -0.8**
ECSD IAmb IAmb 02 12 01.3
comp=Z,3.2nm,0.6s
W13A Hualapai Mount 32.35 318 P **P 02 12 07.9 +1.3**
J58A Remsen 32.45 17 P **P 02 12 07.5 +0.3**
O20A White River Ci 32.64 330 P **P 02 12 09.6 +0.5**
baz=142,SNR=5.6
SAML Samuel 32.70 130 P **P 02 12 08.1 -1.5**
SADO Sadowa 32.83 12 P **P 02 12 08.4 -2.1**
comp=Z,14nm,0.9s,baz=223,slow=8.7,SNR=7.1
SADO Sadowa 32.83 12 P **P 02 12 09.3 -1.2**
MTPU Mount Pierson 33.20 324 P **P 02 12 15.2 +1.1**
P17A Butcher Ranch, 33.41 327 P **P 02 12 16.9 +1.1**
CCUT Cedar City 33.56 322 P **P 02 12 18.1 +0.8**
K22A Casper 33.90 335 P **P 02 12 21.5 +1.5**
K22A IAmb IAmb 02 12 40.0
comp=Z,6.1nm,1.1s
RSSD Black Hills 34.21 339 P **P 02 12 23.2 +0.5**
baz=152
RSSD Black Hills 34.21 339 P **P 02 12 24.4 +1.6**
RSSD IAmb IAmb 02 12 25.7
comp=Z,5.1nm,0.6s
PSUT Pine Spring 34.50 323 P **P 02 12 26.3 +1.0**
TPNV Topopah Spring 34.99 319 P **P 02 12 31.4 +1.8**
TPNV PcP **PcP 02 15 01.6 +0.9**
DUG Dugway, Tooele 35.04 326 P **P 02 12 30.0 +0.2**
baz=135
PDAR Pinedale Array 35.31 332 P **P 02 12 32.5 +0.2**
comp=Z,1.9nm,0.6s,baz=127,slow=11,SNR=21
PDAR LR LR 02 29 18.7
comp=Z,29nm,18.2s,baz=92,slow=40
PDAR Pinedale Array 35.31 332 P **P 02 12 32.9 +0.7**
BW06 Boulder Array 35.31 332 P **P 02 12 32.5 +0.2**
baz=142
MDP Montagnes des 35.67 99 LR LR 02 28 21.6
comp=Z,60nm,18.1s,baz=73,slow=38
PB16 IPOC Station P 35.82 149 P **P 02 12 38.2 +1.0**
PB16 IAmb IAmb 02 12 38.9
comp=Z,4.4nm,0.9s
AGMN Agassiz Nation 36.09 351 P **P 02 12 38.1 -0.5**
baz=167
SNOW Snow King Moun 36.40 332 P **P 02 12 42.9 +1.3**
IMW Indian Meadow 36.82 332 IAmb IAmb 02 12 48.0
comp=Z,5.6nm,0.5s
FLWY Flagg Ranch 36.86 332 P **P 02 12 46.8 +1.4**
FLWY IAmb IAmb 02 12 48.0
comp=Z,6.5nm,0.6s
H17A Grant Village 37.05 333 P **P 02 12 48.0 +1.0**
baz=142
RLMT Red Lodge 37.06 335 P **P 02 12 47.5 +0.4**
baz=144
GO01 Chusmiza 37.10 150 P **P 02 12 49.6 +1.6**
NVAR Mina Array Bea 37.18 319 P **P 02 12 49.8 +1.5**
comp=Z,1.1nm,0.6s,baz=129,slow=7.4,SNR=15
NVAR pP **pP 02 13 06.2 +2.1**
comp=Z,0.8nm,0.7s,baz=125,slow=8.9,SNR=3.4
NVAR PcP **PcP 02 15 07.0 -0.2**
comp=Z,1.2nm,0.6s,baz=131,slow=3.7,SNR=9.9
YHL Hebgen Lake 37.67 333 P **P 02 12 53.9 +1.5**
GCMT Greycliff 37.77 335 P **P 02 12 52.2 -0.8**
GCMT PcP **PcP 02 15 09.9 +1.2**
ULM Lac du Bonnet 37.99 352 P **P 02 12 52.5 -2.1**
comp=Z,5.4nm,0.7s,baz=173,slow=8.9,SNR=11
ULM LR LR 02 30 00.1
comp=Z,34nm,18.1s,baz=88,slow=38
HLID Hailey 38.26 328 P **P 02 12 57.2 0.0**
baz=136,SNR=7.2
PNTR Pine Nut 38.39 319 P **P 02 13 00.3 +1.9**
PNTR IAmb IAmb 02 13 02.4
comp=Z,4.9nm,0.9s
BOZ Bozeman (W) 38.45 333 P **P 02 12 59.1 +0.3**
baz=141
BOZ Bozeman (W) 38.45 333 IAmb IAmb 02 13 00.1
comp=Z,4.1nm,0.6s
DLMT Dillon 38.71 332 IAmb IAmb 02 13 02.4
comp=Z,4.4nm,0.7s
PB09 IPOC Station P 38.90 152 P **P 02 13 03.9 +1.1**
PB09 IAmb IAmb 02 13 06.5
comp=Z,20nm,1.5s
SIV San Ignacio 39.00 136 P **P 02 13 02.6 -0.9**
comp=Z,5.1nm,0.6s,baz=316,slow=8.0,SNR=30
SIV PcP **PcP 02 15 12.6 -0.3**

	comp=Z,2.7nm,0.5s,baz=275,slow=3.1,SNR=13							
WVOR	**Wild Horse Val**	**39.80**	**324**	P		**P**	**02 13 11.3**	**+1.2**
J08A	**Circle Bar Ran**	**40.30**	**325**	P		**P**	**02 13 14.5**	**+0.3**
BMO	**Blue Mountains**	**40.65**	**328**	P		**P**	**02 13 16.4**	**-0.7**
F10A	**Beach Ranch, E**	**41.38**	**329**	IAmb		IAmb	02 13 23.8	
	comp=Z,5.3nm,0.7s							
L04D	**Klamath Falls**	**41.85**	**321**	P		**P**	**02 13 26.4**	**-0.6**
	baz=125							
PINE	**Pine Mountain**	**41.97**	**324**	P		**P**	**02 13 28.1**	**+0.2**
E09A	**Wood Farm, Sta**	**42.21**	**329**	P		**P**	**02 13 30.1**	**+0.5**
I04A	**Tendick Farm,**	**42.82**	**323**	P		**P**	**02 13 34.6**	**-0.2**
	baz=126							
NEW	**Newport**	**42.94**	**331**	P		**P**	**02 13 34.9**	**-0.7**
	baz=136							
D08A	**Wollman Farm,**	**42.98**	**329**	P		**P**	**02 13 35.8**	**0.0**
D08A				IAmb		IAmb	02 13 36.8	
	comp=Z,6.3nm,0.8s							
C09A	**Chrisman Ranch**	**43.16**	**330**	IAmb		IAmb	02 13 38.6	
	comp=Z,5.7nm,0.7s							
LTY	**Liberty**	**44.00**	**328**	IAmb		IAmb	02 13 44.4	
	comp=Z,4.5nm,0.7s							
B08A	**Colville Reser**	**44.06**	**330**	P		**P**	**02 13 44.4**	**-0.2**
G03D	**McMinnville, O**	**44.15**	**324**	P		**P**	**02 13 44.5**	**-0.7**
	baz=126							
SCHQ	**Schefferville**	**45.18**	**17**	P		**P**	**02 13 51.3**	**-2.1**
	comp=Z,6.3nm,0.5s,baz=216,slow=6.1,SNR=14							
SCHQ	**Schefferville**	**45.18**	**17**	P		**P**	**02 13 52.0**	**-1.4**
B05A	**Bryant**	**45.38**	**328**	P		**P**	**02 13 53.9**	**-1.1**
	baz=130							
D03D	**Eldon**	**45.45**	**327**	P		**P**	**02 13 54.8**	**-0.8**
	baz=128							
A04D	**Lummi Island**	**45.99**	**328**	P		**P**	**02 13 59.1**	**-0.7**
	baz=130							
CPUP	**Villa Florida**	**48.92**	**143**	P		**P**	**02 14 21.4**	**-1.5**
	comp=Z,1.9nm,0.7s,baz=339,slow=8.9,SNR=5.4							
CPUP	**Villa Florida**	**48.92**	**143**	P		**P**	**02 14 21.6**	**-1.3**
CPUP				IAmb		IAmb	02 14 31.1	
	comp=Z,8.1nm,1.5s							
YKA	**Yellowknife Ar**	**53.23**	**345**	P		**P**	**02 14 53.2**	**-1.4**
	comp=Z,1.3nm,0.5s,baz=140,slow=7.7,SNR=11							
YKA				pP		**pP**	**02 15 10.8**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=134,slow=7.8,SNR=6.3							
SCRK	**Sand Creek**	**64.11**	**336**	P		**P**	**02 16 09.8**	**-0.6**
	baz=116							
ILAR	**Eielson Array**	**65.58**	**336**	P		**P**	**02 16 18.1**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=170,slow=5.4,SNR=12							
ILAR				pP		**pP**	**02 16 36.1**	**-0.9**
	comp=Z,3.2nm,1.1s,baz=132,slow=4.3,SNR=7.3							
BMAR	**Burnt Mountain**	**65.86**	**339**	P		**P**	**02 16 20.9**	**-0.8**
SUA	**Susitna One**	**66.04**	**332**	P		**P**	**02 16 23.4**	**+0.4**
TOLK	**Toolik Lake Re**	**68.08**	**340**	P		**P**	**02 16 34.0**	**-1.7**
	baz=112							
LZH	**Lanzhou**	**130.21**	**347**	*e*PKP		**PKPdf**	**02 24 45.3**	**-1.3**
LZH				pPKP		PKiKP	02 24 48.8	+1.3
LZH				sPKP			02 25 09.1	
LZH				LR		LR		
	comp=N,48nm,18.0s							
LZH				LR		LR		
	comp=E,53nm,18.1s							
LZH				LR		LR		
	comp=Z,79nm,20.3s							
WRA	**Warramunga Arr**	**138.85**	**254**	PKhKP		PKPpre	02 24 53.3	
	comp=Z,0.2nm,0.4s,baz=89,slow=3.3,SNR=1.8							
WRA				PKP		**PKPdf**	**02 25 02.3**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=92,slow=2.7,SNR=5.2							
WRA				pPKP		pPKPdf	02 25 23.2	+1.6
	comp=Z,0.8nm,0.9s,baz=88,slow=1.6,SNR=2.4							
WRA	**Warramunga Arr**	**138.85**	**254**	PKPdf		**PKPdf**	**02 25 03.3**	**+0.4**
ASAR	**Alice Springs**	**138.89**	**249**	PKhKP		PKPpre	02 24 55.7	
	comp=Z,0.7nm,0.9s,baz=141,slow=2.4,SNR=5.1							
ASAR				PKP		**PKPdf**	**02 25 02.6**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=111,slow=2.1,SNR=8.5							
ASAR				pPKP		sPKPdf	02 25 23.6	-4.8
	comp=Z,0.5nm,0.7s,baz=128,slow=1.3,SNR=3.1							
ASAR	**Alice Springs**	**138.89**	**249**			PKPpre	02 24 56.0	
ASAR				PKPdf		**PKiKP**	**02 25 05.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**147.19**	**256**	PKPbc		**PKPbc**	**02 25 19.3**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=146,slow=3.1,SNR=5.5							
FITZ	**Fitzroy Crossi**	**147.19**	**256**			**PKPbc**	**02 25 19.5**	**-0.4**

*IDC **19** 02:10:18.7±0.9, 19°.41N×120°.41E, h0km, mb3.8/7, mb1 1.0/7, mb1mx3.6/36, mbtmp3.8/7, MS3.2/4, Ms1 3.2/4, ms1mx2.8/43, Error ellipse: s-maj=64.7km s-min=18.8km az=65.0*

*NEIC **19** 02:10:18.9±2.7, 19°.50N±0°.10×120°.1E±0°.2, h9km±6km, mb4.1/7, Error ellipse: s-maj=29.1km s-min=14.0km az=92.0*

ISC 19 02:10:22.5±0.9, 19°.57N±0°.08×120°.4E±0°.2, h23km, n30, σ1°.72/30, mb3.9/11, MS3.2/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.31**	**12**	Pn	**Pn**	**02 11 12.1**	**-0.8**
TWG				Sn	**Sn**	**02 11 50.8**	**-0.7**
TPUB	**Ta-pu**	**3.72**	**4**	Pn	**Pn**	**02 11 15.6**	**-3.0**
TPUB				Sn	**Sn**	**02 11 59.0**	**-2.9**
YULB	**Yu-li**	**3.91**	**13**	Pn	**Pn**	**02 11 21.3**	**+0.2**
YULB				Sn	**Sn**	**02 12 05.5**	**-0.8**
SSLB	**Suanglung**	**4.24**	**7**	Pn	**Pn**	**02 11 25.4**	**-0.3**
SSLB					**Sn**	**02 12 11.8**	**-2.7**
NACB	**Ninganchiao**	**4.73**	**14**	Pn	**Pn**	**02 11 32.0**	**-0.4**
YHNB	**Yeheng**	**5.17**	**10**	Pn	**Pn**	**02 11 39.0**	**+0.5**
KAPI	**Kappang**	**24.43**	**181**	LR	LR	02 27 02.2	
	comp=Z,30nm,19.3s,baz=34,slow=41						
FITZ	**Fitzroy Crossi**	**37.79**	**172**	LR	LR	02 35 43.2	
	comp=Z,45nm,18.2s,baz=58,slow=40						
FITZ	**Fitzroy Crossi**	**37.79**	**172**	P	**P**	**02 17 35.5**	**-1.7**
FITZ				IAmb	IAmb	02 17 48.7	
	comp=Z,5.3nm,1.5s						
PMG	**Port Moresby**	**39.07**	**135**	LR	LR	02 35 11.9	
	comp=Z,51nm,18.5s,baz=94,slow=38						
KRVT	**Keravat (AS076**	**39.16**	**124**	LR	LR	02 31 00.7	
	comp=Z,34nm,19.4s,baz=316,slow=32						
MK31	**Makanchi Array**	**41.24**	**320**	P	**P**	**02 18 07.5**	**+1.8**
MKAR	**Makanchi Array**	**41.24**	**320**	P	**P**	**02 18 07.2**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=119,slow=9.9,SNR=6.2						
MKAR	**Makanchi Array**	**41.24**	**320**	P	**P**	**02 18 07.5**	**+1.7**
WB0	**Warramunga Arr**	**41.44**	**160**	P	**P**	**02 18 05.5**	**-2.2**
WRA	**Warramunga Arr**	**41.59**	**160**	P	**P**	**02 18 06.3**	**-2.5**
	comp=Z,0.7nm,0.6s,baz=342,slow=8.9,SNR=9.6						
WRA	**Warramunga Arr**	**41.59**	**160**	P	**P**	**02 18 06.7**	**-2.2**
WB2	**Warramunga Arr**	**41.59**	**160**	P	**P**	**02 18 06.7**	**-2.2**
WB2				IAmb	IAmb	02 18 25.2	
	comp=Z,7.6nm,1.4s						
WR0	**Warramunga Arr**	**41.67**	**160**	P	**P**	**02 18 07.4**	**-2.1**
WR0				IAmb	IAmb	02 18 21.3	
	comp=Z,3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**43.77**	**330**	P	**P**	**02 18 26.6**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=138,slow=8.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**43.77**	**330**	P	**P**	**02 18 26.0**	**-0.2**
PETK	**Petropavlovsk-**	**44.15**	**32**	P	**P**	**02 18 31.8**	**+2.6**
ASAR	**Alice Springs**	**44.96**	**162**	P	**P**	**02 18 35.1**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=338,slow=6.8,SNR=9.3						
ASAR	**Alice Springs**	**44.96**	**162**	P	**P**	**02 18 34.8**	**-1.2**
KURK	**Kurchatov**	**45.22**	**323**	P	**P**	**02 18 37.5**	**-0.3**
KURK				IAmb	IAmb	02 18 39.8	
	comp=Z,4.1nm,1.2s						
KURBB	**Kurchatov Arra**	**45.23**	**323**	P	**P**	**02 18 38.8**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=121,slow=7.8,SNR=6.7						
ILAR	**Eielson Array**	**73.66**	**26**	P	**P**	**02 21 54.9**	**+0.8**
	comp=Z,0.7nm,1.0s,baz=282,slow=4.5,SNR=3.4						
ILAR	**Eielson Array**	**73.66**	**26**	P	**P**	**02 21 56.4**	**+2.4**
FINES	**FINESS Array B**	**75.04**	**330**	P	**P**	**02 22 02.4**	**+0.3**
	comp=Z,2.3nm,1.0s,baz=63,slow=9.5,SNR=4.2						
FINES	**FINESS Array B**	**75.04**	**330**	P	**P**	**02 22 02.8**	**+0.7**

*IDC **19** 02:11:34.4±0.9, 19°.26N×120°.07E, h0km, mb3.8/9, mb1 1.0/9, mb1mx3.8/35, mbtmp3.8/9, Error ellipse: s-maj=40.6km s-min=18.4km az=67.0*

*NEIC **19** 02:11:35.5±2.8, 19°.50N±0°.08×119°.7E±0°.3, h25km±7km, mb4.2/7, Error ellipse: s-maj=35.2km s-min=11.3km az=93.0*

ISC 19 02:11:37.9±0.8, 19°.43N±0°.08×120°.2E±0°.2, h24km, n21, σ2°.04/22, mb3.9/13, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.48**	**14**	Pn	**Pn**	**02 12 28.9**	**-1.7**
TWG				Sn	**Sn**	**02 13 06.8**	**-4.2**
TPUB	**Ta-pu**	**3.88**	**6**	Pn	**Pn**	**02 12 35.0**	**-1.1**
YULB	**Yu-li**	**4.08**	**15**	Pn	**Pn**	**02 12 38.2**	**-0.6**
SSLB	**Suanglung**	**4.40**	**9**	Pn	**Pn**	**02 12 41.1**	**-2.1**
YOJ	**Yonaguni jima**	**5.66**	**27**	Pn	**Pn**	**02 13 01.2**	**+0.7**
MJB9	**Matsu-Tunnel**	**23.27**	**39**		**P**	**02 16 48.2**	**+4.5**
MJB9				IAmb	IAmb	02 16 48.8	
	comp=Z,24nm,0.6s						
MJAR	**Matsushiro Arr**	**23.27**	**39**	P	**P**	**02 16 47.5**	**+3.8**
	comp=Z,1.1nm,0.3s,baz=234,slow=11,SNR=1.6						
SONM	**Songino Array**	**30.47**	**342**	P	**P**	**02 17 50.2**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=163,slow=10,SNR=3.6						
FITZ	**Fitzroy Crossi**	**37.67**	**171**	P	**P**	**02 18 51.0**	**-0.4**
FITZ				IAmb	IAmb	02 19 00.6	
	comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**41.24**	**320**	P	**P**	**02 19 21.6**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=121,slow=8.7,SNR=5.0						
WB0	**Warramunga Arr**	**41.37**	**160**	P	**P**	**02 19 21.1**	**-1.2**
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**02 19 22.1**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=340,slow=9.7,SNR=6.7						
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**02 19 22.2**	**-1.3**
WB2	**Warramunga Arr**	**41.52**	**160**	P	**P**	**02 19 22.5**	**-1.0**
WB2				IAmb	IAmb	02 19 24.8	
	comp=Z,4.3nm,1.1s						
WR0	**Warramunga Arr**	**41.60**	**159**	P	**P**	**02 19 22.4**	**-1.7**
WR0				IAmb	IAmb	02 19 33.5	
	comp=Z,2.9nm,0.8s						
ZALV	**Zalesovo Beam**	**43.81**	**330**	P	**P**	**02 19 42.8**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=89,slow=8.9,SNR=5.1						
ASAR	**Alice Springs**	**44.88**	**162**	P	**P**	**02 19 50.4**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=347,slow=7.1,SNR=7.5						
KURBB	**Kurchatov Arra**	**45.24**	**323**	P	**P**	**02 19 54.7**	**+1.5**
	comp=Z,0.7nm,0.2s,baz=124,slow=8.0,SNR=6.1						
BBOO	**Buckleboo**	**54.12**	**163**	P	**P**	**02 20 59.5**	**-1.4**
ILAR	**Eielson Array**	**73.86**	**26**	P	**P**	**02 23 10.1**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=265,slow=5.9,SNR=2.8						
FINES	**FINESS Array B**	**75.08**	**330**	P	**P**	**02 23 17.9**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=57,slow=5.6,SNR=5.5						

*IDC **19** 02:17:41.6±2.1, 13°.23N×87°.44W, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/32, mbtmp3.7/5, ML3.0/1, MS3.0/2, Ms1 3.1/2, ms1mx2.5/35, Error ellipse: s-maj=75.5km s-min=29.5km az=48.0*

*INET **19** 02:17:43.7, 12°.38N×88°.09W, h20km, ML3.8*

*NEIC **19** 02:17:44.9±1.8, 12°.45N±0°.03×87°.99W±0°.07, h47km±12km, mb4.2/24, Md3.7(SNET), Error ellipse: s-maj=10.4km s-min=2.9km az=67.0*

*SNET **19** 02:17:45.6±1.4, 12°.48N×88°.02W, h35km±5km, ML3.7*

*UCR **19** 02:17:46.3±1.5, 12°.52N×88°.04W, h34km±12km, ML3.7, mb4.2(NEIC)*

ISC 19 02:17:45.1±1.2, 12°.47N±0°.08×88°.02W±0°.04, h47km±11km, n83, σ1°.14/104, mb4.1/15, 2C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSGN	**Cosiguina Volc**	**0.68**	**42**	Pn	**Pn**	**02 17 58.2**	**-0.4**
JUCU	**Jucuarın**	**0.81**	**344**	*e*P	**Pn**	**02 18 00.2**	**-0.1**
JUCU				*e*S	**Sn**	**02 18 11.7**	**+0.3**
JUCU				IAML		02 18 16.3	
	comp=Z,6µm,0.4s						
JUCU	**Jucuarın**	**0.81**	**344**	*e*P	**Pn**	**02 18 00.2**	**-0.1**
JUCU				*e*S	**Sn**	**02 18 11.7**	**+0.3**
JUCU				IAML		02 18 16.3	
	comp=Z,6µm,0.4s						
LCND	**La Caada**	**0.84**	**9**	*e*P	**Pn**	**02 18 01.1**	**+0.4**
LCND				*e*S	**Sn**	**02 18 13.0**	**+0.9**
LCND				IAML		02 18 15.2	
	comp=Z,6µm,0.3s						
LCND	**La Caada**	**0.84**	**9**	*e*P	**Pn**	**02 18 01.1**	**+0.4**
LCND				*e*S	**Sn**	**02 18 13.0**	**+0.9**
LCND				IAML		02 18 15.2	
	comp=Z,6µm,0.3s						
CRIN	**San Cristobal**	**0.98**	**76**	Pn	**Pn**	**02 18 02.9**	**+0.3**
LCY	**Lacayo**	**0.98**	**344**	*e*P	**Pn**	**02 18 03.4**	**+0.7**
LCY	**Lacayo**	**0.98**	**344**	*e*P	**Pn**	**02 18 03.4**	**+0.7**
VSM	**San Miguel**	**0.98**	**346**	*e*P	**Pn**	**02 18 03.7**	**+0.9**
VSM	**San Miguel**	**0.98**	**346**	*e*P	**Pn**	**02 18 03.7**	**+0.9**
ALJI	**Alcalda de J**	**1.00**	**328**	*i*P	**Pn**	**02 18 03.1**	**+0.2**
ALJI				*e*S	**Sn**	**02 18 16.6**	**+0.7**
ALJI				IAML		02 18 18.9	
	comp=Z,3µm,0.2s						
ALJI	**Alcalda de J**	**1.00**	**328**	*i*P	**Pn**	**02 18 03.1**	**+0.2**
ALJI				*e*S	**Sn**	**02 18 16.6**	**+0.7**
ALJI				IAML		02 18 18.9	
	comp=Z,3µm,0.2s						
PACA	**Pacayal**	**1.03**	**344**	*e*P	**Pn**	**02 18 04.3**	**+0.9**
PACA				*e*S	**Sn**	**02 18 17.6**	**+0.7**
PACA				IAML		02 18 20.1	
	comp=Z,2µm,0.3s						
PACA	**Pacayal**	**1.03**	**344**	*e*P	**Pn**	**02 18 04.3**	**+0.9**
PACA				*e*S	**Sn**	**02 18 17.6**	**+0.7**
PACA				IAML		02 18 20.1	
	comp=Z,2µm,0.3s						
TECA	**Tecapa**	**1.12**	**335**	*i*P	**Pn**	**02 18 04.9**	**+0.3**
TECA	**Tecapa**	**1.12**	**335**	*i*P	**Pn**	**02 18 04.9**	**+0.3**
COEB	**Comit de Eme**	**1.14**	**334**	*e*P	**Pn**	**02 18 05.0**	**+0.2**
COEB				*e*S	**Sn**	**02 18 19.9**	**+0.6**
COEB				IAML		02 18 29.8	
	comp=Z,2µm,0.4s						
COEB	**Comit de Eme**	**1.14**	**334**	*e*P	**Pn**	**02 18 05.0**	**+0.2**
COEB				*e*S	**Sn**	**02 18 19.9**	**+0.6**
COEB				IAML		02 18 29.8	
	comp=Z,2µm,0.4s						
CNGN	**Cerro Negro**	**1.29**	**89**	*e*P	**Pn**	**02 18 06.6**	**-0.2**
CNGN	**Cerro Negro**	**1.29**	**89**	*e*P	**Pn**	**02 18 06.6**	**-0.2**
COEG	**Centro de Oper**	**1.42**	**324**	*e*P	**Pn**	**02 18 08.9**	**+0.4**
COEG				*e*S	**Sn**	**02 18 26.3**	**+0.3**
COEG				IAML		02 18 30.3	
	comp=Z,4µm,0.3s						
COEG	**Centro de Oper**	**1.42**	**324**	*e*P	**Pn**	**02 18 08.9**	**+0.4**
COEG				*e*S	**Sn**	**02 18 26.3**	**+0.3**
COEG				IAML		02 18 30.3	
	comp=Z,4µm,0.3s						
PAVA	**Las Pavas**	**1.52**	**324**	*e*P	**Pn**	**02 18 11.1**	**+1.0**
PAVA				*e*S	**Sn**	**02 18 30.6**	**+1.9**
PAVA	**Las Pavas**	**1.52**	**324**	*e*P	**Pn**	**02 18 11.1**	**+1.0**
PAVA				*e*S	**Sn**	**02 18 30.6**	**+1.9**
LFRS	**El Faro**	**1.53**	**319**	*i*P	**Pn**	**02 18 10.7**	**+0.6**
LFRS	**El Faro**	**1.53**	**319**	*i*P	**Pn**	**02 18 10.7**	**+0.6**
LBRS	**Las Brisas**	**1.60**	**322**	*e*P	**Pn**	**02 18 12.0**	**+0.8**
LBRS	**Las Brisas**	**1.60**	**322**	*e*P	**Pn**	**02 18 12.0**	**+0.8**
SNET	**Serv Nac Est T**	**1.69**	**316**	Pn	**Pn**	**02 18 12.7**	**+0.4**
UEES	**Universidad Ev**	**1.71**	**316**	*e*P	**Pn**	**02 18 13.4**	**+0.7**
UEES				*e*S	**Sn**	**02 18 34.0**	**+0.5**
UEES	**Universidad Ev**	**1.71**	**316**	*e*P	**Pn**	**02 18 13.4**	**+0.7**
UEES				*e*S	**Sn**	**02 18 34.0**	**+0.5**
TGUH	**Tegucigalpa,Un**	**1.74**	**25**	Pn	**Pn**	**02 18 13.3**	**+0.3**
BOQS	**Boqueron**	**1.75**	**316**	*e*P	**Pn**	**02 18 14.3**	**+1.0**
BOQS	**Boqueron**	**1.75**	**316**	*e*P	**Pn**	**02 18 14.3**	**+1.0**
TACO	**Tacachico**	**1.98**	**319**	*e*P	**Pn**	**02 18 16.6**	**+0.4**
TACO				*e*S	**Sn**	**02 18 41.5**	**+1.7**
TACO				IAML		02 18 44.9	
	comp=Z,165nm,0.5s						
TACO	**Tacachico**	**1.98**	**319**	*e*P	**Pn**	**02 18 16.6**	**+0.4**
TACO				*e*S	**Sn**	**02 18 41.5**	**+1.7**
TACO				IAML		02 18 44.9	
	comp=Z,165nm,0.5s						
SBLS	**San Blas**	**2.07**	**311**	*e*P	**Pn**	**02 18 17.6**	**0.0**
SBLS	**San Blas**	**2.07**	**311**	*e*P	**Pn**	**02 18 17.6**	**0.0**
MATN	**Matagalpa**	**2.10**	**77**	Pn	**Pn**	**02 18 17.6**	**-0.4**
RTR	**El Retiro**	**2.12**	**312**	*e*P	**Pn**	**02 18 20.6**	**+2.3**
RTR	**El Retiro**	**2.12**	**312**	*e*P	**Pn**	**02 18 20.6**	**+2.3**
NUBE	**Las Nubes**	**2.23**	**310**	*e*P	**Pn**	**02 18 20.4**	**+0.6**
NUBE				*e*S	**Sn**	**02 18 46.7**	**+0.6**
NUBE	**Las Nubes**	**2.23**	**310**	*e*P	**Pn**	**02 18 20.4**	**+0.6**
NUBE				*e*S	**Sn**	**02 18 46.7**	**+0.6**
MTO3	**Montecristo**	**2.32**	**326**	Pn	**Pn**	**02 18 21.5**	**+0.5**
ESQI	**Esquipulas**	**2.44**	**328**	Pn	**Pn**	**02 18 23.3**	**+0.6**
ACON	**Acoyapa**	**2.83**	**100**	Pn	**Pn**	**02 18 28.1**	**+0.2**
JTS	**Las Juntas de**	**3.71**	**125**	Pn	**Pn**	**02 18 41.3**	**+1.3**
	baz=337,slow=0.2,SNR=1.9						
JTS				Sn	**Sn**	**02 19 24.2**	**+1.7**
	baz=330,slow=0.2,SNR=0.2						
TEIG	**Tepich**	**7.72**	**358**	Pn	**Pn**	**02 19 38.2**	**+3.2**
CMIG	**Matias Romero**	**8.07**	**306**	Pn	**Pn**	**02 19 40.7**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=6.3,slow=17,SNR=1.7						
CMIG				Sn	**Sn**	**02 21 06.8**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=25,slow=12,SNR=3.7						
CMIG				LR	LR	02 22 55.8	
	comp=Z,46nm,20.7s,baz=354,slow=39						
PLIG	**Platanillo**	**12.53**	**299**		**Pn**	**02 20 39.8**	**-1.1**
ARIG	**Puente Sto Nin**	**13.21**	**297**		**Pn**	**02 20 48.8**	**-1.4**
Z41A	**Richland Creek**	**21.15**	**349**		**P**	**02 22 27.1**	**+0.9**
Z41A				IAmb	IAmb	02 22 29.1	
	comp=Z,8.4nm,0.8s						
GOGA	**Godfrey**	**21.26**	**11**		**P**	**02 22 29.1**	**+1.7**
GOGA				IAmb	IAmb	02 22 39.0	
	comp=Z,13nm,1.4s						
TX32	**Lajitas Array**	**22.21**	**321**	P	**P**	**02 22 37.9**	**+0.2**
TXAR	**Lajitas Array**	**22.21**	**321**	P	**P**	**02 22 37.9**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=138,slow=11,SNR=34						
TX31	**Lajitas Ar. Si**	**22.21**	**321**	P	**P**	**02 22 38.0**	**+0.2**
TX31				IAmb	IAmb	02 22 39.4	
	comp=Z,8.8nm,0.8s						
MIAR	**Mount Ida**	**22.55**	**348**	P	**P**	**02 22 40.9**	**-0.3**
MIAR				IAmb	IAmb	02 22 42.7	
	comp=Z,7.8nm,0.9s						
FCAR	**Ozark Folk Cen**	**23.61**	**352**	P	**P**	**02 22 50.9**	**-1.0**
LCAR	**Lake Charles**	**23.67**	**354**	P	**P**	**02 22 50.9**	**-1.5**
OK030	**Cody Creek RV**	**24.66**	**343**	P	**P**	**02 23 00.9**	**-0.5**
OK030				IAmb	IAmb	02 23 04.9	
	comp=Z,9.0nm,0.7s						
OK031	**S. Brethren Rd**	**24.70**	**343**	P	**P**	**02 23 01.4**	**-0.5**
OK031				IAmb	IAmb	02 23 05.7	
	comp=Z,17nm,1.1s						
OK029	**Liberty Lake**	**24.74**	**341**	P	**P**	**02 23 04.7**	**+2.5**
MSTX	**Muleshoe**	**25.27**	**330**	P	**P**	**02 23 06.3**	**-0.9**
MSTX				IAmb	IAmb	02 23 07.3	
	comp=Z,8.7nm,0.8s						
AMTX	**Amarillo**	**25.52**	**333**	P	**P**	**02 23 10.9**	**+1.4**
AMTX				IAmb	IAmb	02 23 13.2	
	comp=Z,8.3nm,1.4s						
S39A	**Bolivar**	**25.56**	**350**	P	**P**	**02 23 08.6**	**-1.1**
RCRC	**Randolf Colleg**	**26.06**	**16**	P	**P**	**02 23 16.6**	**+2.3**
SMCO	**Snowmass**	**31.46**	**331**	P	**P**	**02 24 01.2**	**-1.5**
SMCO				IAmb	IAmb	02 24 19.3	
	comp=Z,2.6nm,0.7s						
PV03	**Paradox Valley**	**31.68**	**328**	P	**P**	**02 24 04.7**	**+0.3**
PV03				IAmb	IAmb	02 24 09.1	
	comp=Z,3.2nm,1.4s						
ECSD	**EROS Data Cent**	**32.02**	**348**	P	**P**	**02 24 07.4**	**+0.3**
F33A	**5 Mile Ranch,**	**33.99**	**350**	P	**P**	**02 24 21.9**	**-2.4**
PDAR	**Pinedale Array**	**35.49**	**332**	P	**P**	**02 24 36.9**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=124,slow=13,SNR=5.0						
PDAR	**Pinedale Array**	**35.49**	**332**	P	**P**	**02 24 37.3**	**-0.3**
REDW	**Red Top Meadow**	**36.55**	**332**	P	**P**	**02 24 46.2**	**-0.4**
SNOW	**Snow King Moun**	**36.58**	**332**	P	**P**	**02 24 47.6**	**+0.7**
TPAW	**Teton Pass**	**36.70**	**332**	P	**P**	**02 24 48.2**	**+0.3**
TPAW				IAmb	IAmb	02 24 49.0	
	comp=Z,2.5nm,0.8s						
YNE	**Yellowstone No**	**37.47**	**334**	P	**P**	**02 24 54.2**	**-0.2**
YHL	**Hebgen Lake**	**37.86**	**333**	P	**P**	**02 24 57.7**	**-0.1**
ULM	**Lac du Bonnet**	**38.22**	**352**	P	**P**	**02 24 56.8**	**-3.6**
	comp=Z,1.2nm,0.6s,baz=167,slow=9.9,SNR=2.0						
ULM	**Lac du Bonnet**	**38.22**	**352**	P	**P**	**02 24 57.3**	**-3.1**
ULM				IAmb	IAmb	02 25 06.4	
	comp=Z,6.4nm,1.2s						
MCMT	**McKenzie Canyo**	**38.60**	**331**	P	**P**	**02 25 05.0**	**+1.0**
CPUP	**Villa Florida**	**48.77**	**142**	LR	LR	02 48 53.4	
	comp=Z,38nm,18.8s,baz=350,slow=38						
YKA	**Yellowknife Ar**	**53.45**	**345**	P	**P**	**02 26 59.7**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=139,slow=9.7,SNR=2.1						
FYU	**Fort Yukon**	**65.91**	**338**	P	**P**	**02 28 27.4**	**+1.6**

MEX 19 02:19:29.1±0.8, 16°.33N×98°.19W, h17km±6km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.09**	**47**	*i*P

	baz=341							
TWA				*e*S		Sb	02 44 44.4	-0.9
	baz=341							
NHDH	**Xindian Distri**	**0.33**	**331**	P		Pb	02 44 40.2	0.0
	baz=330							
NHDH				*e*S		Sb	02 44 44.5	-0.9
	baz=330							
TATO	**Taipei**	**0.36**	**327**	P		Pb	02 44 40.6	0.0
	baz=327							
TATO				*e*S		Sb	02 44 45.4	-0.8
	baz=327							
NNS	**Nan Shan**	**0.38**	**232**	P		Pb	02 44 40.8	-0.3
	baz=230							
NNS				*e*S		Sg	02 44 45.8	+0.6
	baz=230							
NNSB	**Datong**	**0.38**	**230**	P		Pb	02 44 40.9	-0.2
	baz=229							
NNSB				*e*S		Sg	02 44 45.7	+0.5
	baz=229							
NNSH	**Datong**	**0.38**	**230**	P		Pb	02 44 41.0	-0.2
	baz=229							
NNSH				*e*S		Sg	02 44 45.7	+0.5
	baz=229							
NWF	**Wu-fen Shan**	**0.40**	**10**	P		Pb	02 44 41.4	-0.1
	baz=10.0							
NWF				*e*S		Sg	02 44 46.2	+0.4
	baz=10.0							
WFSB	**Wu-fen Shan**	**0.40**	**10**	P		Pb	02 44 41.4	0.0
	baz=10.0							
WFSB				*e*S		Sg	02 44 46.3	+0.5
	baz=10.0							
TWB1	**Santiao Chiao**	**0.42**	**38**	*e*S		Sg	02 44 47.0	+0.6
	baz=39							
YM01	**YM01**	**0.48**	**346**	P		Pb	02 44 43.0	+0.2
	baz=345							
YM01				*e*S		Sg	02 44 49.2	+0.8
	baz=345							
YM10	**YM10**	**0.49**	**345**	*e*P		Pb	02 44 43.5	+0.4
	baz=345							
YM10				*e*S		Sg	02 44 49.5	+0.7
	baz=345							
TWS1	**Kuangyinshan**	**0.50**	**329**	*e*P		Pb	02 44 43.7	+0.6
	baz=329							
TWS1				*e*S		Sb	02 44 50.9	+0.6
	baz=329							
YM04	**YM04**	**0.50**	**343**	*e*P		Pb	02 44 43.4	+0.3
	baz=342							
YM04				*e*S		Sg	02 44 49.6	+0.6
	baz=342							
YM05	**YM05**	**0.50**	**346**	P		Pb	02 44 43.5	+0.3
	baz=345							
YM05				*e*S		Sb	02 44 50.0	-0.5
	baz=345							
YM11	**YM11**	**0.50**	**347**	*e*P		Pb	02 44 43.2	0.0
	baz=346							
ETLH	**Xiulin Townshi**	**0.51**	**203**	P		Pb	02 44 43.5	+0.2
	baz=203							
ETLH				*e*S		Sb	02 44 50.0	-0.6
	baz=203							
NACB	**Ninganchiao**	**0.51**	**191**	P		Pb	02 44 43.4	+0.2
	baz=191							
NACB				*e*S		Sb	02 44 50.3	-0.3
	baz=191							
YM08	**YM08**	**0.52**	**349**	*e*P		Pb	02 44 43.3	-0.2
	baz=348							
YM08				*e*S		Sg	02 44 49.9	+0.3
	baz=348							
YM03	**YM03**	**0.52**	**344**	*e*P		Pb	02 44 43.8	+0.3
	baz=343							
FUSS	**Fushou**	**0.60**	**225**	P		Pb	02 44 44.9	0.0
	baz=224							
FUSS				S		Sb	02 44 53.0	-0.3
	baz=224							
TWD	**Chiawan**	**0.60**	**189**	*e*P		Pb	02 44 45.3	+0.5
	baz=188							
TWD				*e*S		Sb	02 44 52.6	-0.5
	baz=188							
NSTT	**Nanjuang**	**0.64**	**266**	*e*P		Pb	02 44 46.2	+0.8
	baz=265							
NSTT				*e*S		Sb	02 44 54.7	+0.4
	baz=265							
TDCB	**Techi**	**0.65**	**230**	P		Pb	02 44 45.8	+0.1
	baz=229							
TDCB				*e*S		Sg	02 44 53.4	-0.3
	baz=229							
WHF	**Hehuan Shan**	**0.66**	**217**	*e*P		Pb	02 44 46.3	+0.2
	baz=216							
WHF				*e*S		Sb	02 44 55.6	+0.3
	baz=216							
CHGB	**Renai**	**0.78**	**218**	*e*P		Pb	02 44 48.3	+0.3
	baz=218							
CHGB				*e*S		Sb	02 44 58.3	-0.3
	baz=218							
OWD	**Renai**	**0.86**	**214**	*e*P		Pb	02 44 49.6	+0.2
	baz=213							
OWD				*e*S		Sb	02 45 01.2	+0.3
	baz=213							
TWQ1	**Liyutan**	**0.91**	**249**	*e*P		Pn	02 44 51.8	+0.9
	baz=248							
TWQ1				*e*S		Sn	02 45 05.0	+1.1
	baz=248							

***IDC* 19 02:45:14.6±2.4, 19°.68N×121°.08E, *h*0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/39, mbtmp3.7/5, Error ellipse: s-maj=236.2km s-min=21.1km az=63.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.47**	**161**	P	P	02 53 02.8	-0.7
	0.4nm,0.7s,baz=342,slow=8.9,SNR=3.0						
MKAR	**Makanchi Array**	**41.59**	**320**	P	P	02 53 03.9	-0.4
	0.6nm,0.6s,baz=116,slow=10,SNR=5.5						
ZALV	**Zalesovo Beam**	**44.01**	**330**	P	P	02 53 23.9	+0.1
	1.1nm,0.6s,baz=112,slow=6.4,SNR=4.6						
ASAR	**Alice Springs**	**44.87**	**163**	P	P	02 53 31.3	+0.4
	0.4nm,0.5s,baz=337,slow=7.1,SNR=5.0						
KURBB	**Kurchatov Arra**	**45.55**	**323**	P	P	02 53 36.0	-0.1
	1.4nm,0.7s,baz=123,slow=7.6,SNR=14						

IDC **19** *02:49:15.4±2.2, 42°.75N×105°.41E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.5/47, mbtmp3.5/6, ML3.4/2, MS2.7/2, Ms1 2.7/2, ms1mx2.4/52, Error ellipse: s-maj=38.4km s-min=27.7km az=133.0*

BJI **19** *02:49:19.4±0.0, 42°.75N×105°.47E, h4km, mb4.0/1, ML4.0/8, Ms3.8/3*

ISC 19 02:49:17.6±0.7, 42°.74N±0°.05×105°.31E±0°.05, *h*10km, n12, σ2s20/16, mb3.6/4, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HHC	**Hu-ho-hao-te**	**5.04**	**110**	*e*Pn	**Pn**	**02 50 33.9**	**+0.6**
HHC				Sn	**Sn**	**02 51 30.5**	**-1.2**
HHC				Sg	**Sb**	**02 51 48.0**	**+1.4**
HHC				smax	smax		
	comp=N,390nm,0.3s						
HHC				smax	smax		
	comp=E,270nm,0.3s						
SONM	**Songino Array**	**5.16**	**8**	Pn	**Pn**	**02 50 34.6**	**-0.3**
	3.3nm,0.3s,baz=186,slow=14,SNR=24						
SONM				Pg	**Pb**	**02 50 49.2**	**+1.3**
	4.1nm,0.3s,baz=189,slow=20,SNR=10						
SONM				Lg	Lg	02 51 57.4	
	20nm,0.3s,baz=182,slow=29,SNR=15						
GTA	**Gaotai**	**5.32**	**233**	Pn	**Pn**	**02 50 39.5**	**+2.3**
GTA				Pg	**Pb**	**02 50 53.8**	**+3.1**
GTA				Sn	**Sn**	**02 51 41.8**	**+3.3**
GTA				Sg	**Sg**	**02 52 03.9**	**-4.4**
GTA				smax	smax		
	comp=N,70nm,0.7s						
GTA				smax	smax		
	comp=E,67nm,0.9s						
LZH	**Lanzhou**	**6.74**	**190**	*e*Pg	**Pg**	**02 51 23.8**	**-2.8**
LZH				Sg	**Sg**	**02 52 53.0**	**-0.8**
LZH				smax	smax		
	comp=N,200nm,1.0s						
LZH				smax	smax		
	comp=E,220nm,1.0s						
LZH				LR	LR		
	comp=N,300nm,5.7s						
LZH				LR	LR		
	comp=E,340nm,6.0s						
TLY	**Talaya**	**9.02**	**353**	Lg	Lg	02 53 55.6	
	0.0nm,0.3s,baz=245,slow=13,SNR=3.7						
TLY				LR	LR	02 55 28.0	
	comp=Z,29nm,19.9s,baz=148,slow=41						
WMQ	**Urumqi**	**12.89**	**281**	*e*P	Pn	02 52 28.1	+7.3
KSRS	**Korea Array**	**18.07**	**99**	LR	LR	03 01 33.1	
	comp=Z,47nm,21.7s,baz=242,slow=41						
KURBB	**Kurchatov Arra**	**19.91**	**303**	P	**Pn**	**02 53 49.6**	**-1.3**
	0.1nm,0.3s,baz=104,slow=11,SNR=6.7						
BVAR	**Borovoye Array**	**25.34**	**306**	P	**P**	**02 54 43.8**	**-0.6**
	0.4nm,0.5s,baz=98,slow=11,SNR=3.7						
NOA	**NORSAR Array B**	**55.59**	**324**	P	**P**	**02 58 51.7**	**-1.3**
	0.6nm,0.8s,baz=60,slow=6.8,SNR=2.6						
ILAR	**Eielson Array**	**59.05**	**28**	P	**P**	**02 59 16.6**	**-0.7**
	0.4nm,0.8s,baz=291,slow=6.4,SNR=5.0						
YKA	**Yellowknife Ar**	**70.34**	**18**	P	**P**	**03 00 30.5**	**-0.5**
	0.4nm,0.6s,baz=329,slow=5.4,SNR=2.0						

IDC **19** *02:52:36.8±13.0, 22°.07N×124°.49E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.5/48, mbtmp3.8/6, ML4.0/1, MS4.6/1, Ms1 4.6/1, ms1mx2.7/56, Error ellipse: s-maj=235.5km s-min=55.7km az=152.0*

NIED **19** *02:53:01.2, 24°.99N×123°.57E, h19km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr=8.18; Mθθ7.96; Mφφ0.23; Mrθ0.78; Mθφ0.67; Mφr-0.60; Fault plane solution: M₀8.16000×10¹⁴ NP1: φs270.00000°, δ48.00000°, λ-84.00000°. NP2:φs81.00000°, δ43.00000°, λ-97.00000°.*

JMA **19** *02:53:01.2±0.2, 24°.99N×123°.57E, h19km±4km, M3.5*

ISC 19 02:53:03.8±0.8, 24°.83N±0°.06×123°.57E±0°.04, *h*32km, n16, σ1s25/23, mb3.5/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.52**	**163**	P	**Pn**	**02 53 13.9**	**-1.1**
IRIF				*e*S	**Sb**	**02 53 22.7**	**+0.7**
YOJ	**Yonaguni jima**	**0.63**	**234**	P	**Pn**	**02 53 15.0**	**-1.5**
YOJ				S	**Sb**	**02 53 24.4**	**-0.6**
JYNG	**Yonagunijimaku**	**0.68**	**236**	P	**Pn**	**02 53 15.8**	**-1.4**
JYNG				*e*S	**Sn**	**02 53 26.4**	**-0.3**
JIJ	**Ishigaki jima**	**0.70**	**132**	P	**Pn**	**02 53 16.0**	**-1.5**
JIJ				*e*S	**Sn**	**02 53 26.5**	**-0.8**
JKRS	**Kuro-shima**	**0.72**	**146**	P	**Pn**	**02 53 17.0**	**-0.7**
JKRS				S	**Sn**	**02 53 28.3**	**+0.7**
JISG	**Ishigakijimahi**	**0.72**	**110**	P	**Pn**	**02 53 15.8**	**-2.0**
JISG				S	**Sn**	**02 53 26.8**	**-0.9**
HATJ	**Hateruma jima**	**0.80**	**164**	P	**Pn**	**02 53 18.8**	**-0.1**
HATJ				S	**Sn**	**02 53 30.9**	**+1.2**
JTJ	**Tarama**	**1.05**	**100**	P	**Pn**	**02 53 21.2**	**-1.1**
JTJ				*e*S	**Sn**	**02 53 35.3**	**-0.5**
JIRB	**Irabujima**	**1.46**	**90**	P	**Pn**	**02 53 27.1**	**-0.8**
KSRS	**Korea Array**	**13.12**	**15**	Pn	**P**	**02 56 18.5**	**+0.8**
	0.7nm,0.3s,baz=196,slow=13,SNR=2.0						
KLR	**Kul'dur**	**25.18**	**13**	P	**P**	**02 58 26.7**	**+0.5**
	0.7nm,0.6s,baz=311,slow=19,SNR=2.7						
SONM	**Songino Array**	**26.68**	**334**	P	**P**	**02 58 43.1**	**+3.1**
	1.8nm,0.9s,baz=146,slow=8.5,SNR=3.3						
MKAR	**Makanchi Array**	**39.41**	**314**	P	**P**	**03 00 29.9**	**-0.8**
	0.7nm,0.7s,baz=105,slow=9.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**40.91**	**326**	P	**P**	**03 00 42.6**	**-0.3**
	0.7nm,0.6s,baz=112,slow=12,SNR=2.2						
KURBB	**Kurchatov Arra**	**43.03**	**319**	P	**P**	**03 00 59.0**	**-1.4**
	0.7nm,0.7s,baz=112,slow=8.6,SNR=4.9						
DZM	**Mont Dzumac**	**62.51**	**135**	LR	LR	03 26 16.7	
	comp=Z,510nm,19.8s,baz=206,slow=34						

IDC **19** *02:56:24.5±0.4, 10°.33S×124°.11E, h0km, mb4.8/28, mb1 4.8/31, mb1mx4.7/45, mbtmp4.8/31, ML4.8/4, MS3.9/13, Ms1 3.9/13, ms1mx3.6/40, Error ellipse: s-maj=12.1km s-min=10.1km az=42.0*

BJI **19** *02:56:24.8±0.0, 10°.62S×124°.29E, h37km, mB5.1/40, mb5.2/56, Ms4.9/19, Ms7 4.6/13*

DJA **19** *02:56:27.2±0.2, 11°.5±2°×12°.4E±°, h10km, M4.8/42, mb5.1/42, mB5.3/24, MLv5.2/17, Mw(mB)4.7/24, Mwp4.9/1*

NEIC **19** *02:56:27.1±2.2, 10°.48S±0°.04×123°.84E±0°.06, h25km±4km, mb5.2/64, Error ellipse: s-maj=8.8km s-min=5.2km az=58.0*

GCMT **19** *02:56:29.1±0.4, 10°.51S±0°.02×123°.82E±0°.05, h15km±1km, MW4.8/56, Moment Tensor Solution. s25,c26; s56,c75; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.24±.15; Mθθ-1.19±.10; Mφφ-0.04±.11; Mrθ1.04±.20; Mθφ-0.28±.06; Mφr-0.87±.27; Best double couple: M₀1.80100×10¹⁶ NP1:φs239.00000°, δ31.00000°, λ44.00000°. NP2: φs109.00000°, δ69.00000°, λ113.00000°. Principal axes: T 2.0260, Plg59.0000°, Azm52.0000°; N -0.4460, Plg22.0000°, Azm280.0000°; P -1.5750, Plg21.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 02:56:28.4±0.3, 10°.48S±0°.04×123°.92E±0°.04, *h*27km, n424, σ1s61/440, mb5.1/84, MS4.1/16, 4C-4D, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.37**	**317**	Pg	**Pb**	**02 56 34.0**	**-2.6**
	12μm,0.3s,baz=30,slow=15,SNR=56						
BATI	**Baumata**	**0.37**	**317**	P	**Pb**	**02 56 34.2**	**-2.4**
SOEI	**Soe**	**0.80**	**25**	P	**Pb**	**02 56 43.4**	**-0.3**
SOEI	**Soe**	**0.80**	**25**		**Pb**	**02 56 43.0**	**-0.7**
SOEI				Sn	**Sn**	**02 56 57.2**	**+2.2**
MMRI	**Maumere**	**2.47**	**318**	P	**Pn**	**02 57 08.3**	**+1.4**
MMRI				S	**Sb**	**02 57 40.8**	**-1.4**
MMRI	**Maumere**	**2.47**	**318**	Pn	**Pn**	**02 57 07.0**	**+0.1**
MMRI					**Sn**	**02 57 39.4**	**+3.2**
EDFI	**Ende, Flores**	**2.79**	**308**	P	**Pn**	**02 57 11.9**	**+0.5**
BASI	**Baing, Sumba**	**3.30**	**274**	P	**Pn**	**02 57 20.0**	**+1.7**
BASI				S	**Sn**	**02 57 59.8**	**+3.1**
WBSI	**Waikabubak, Su**	**4.54**	**280**	P	**Pn**	**02 57 36.3**	**+0.9**
BSSI	**Bau Bau, Buton**	**5.48**	**321**	P	**Pn**	**02 57 50.5**	**+2.1**
	1.0nm3μm356nm,1.0s						
PLAI	**Plampang**	**6.28**	**285**	P	**Pn**	**02 58 00.5**	**+1.3**
	2.2nm4μm503nm,0.9s						
BKSI	**Bulukumba**	**6.36**	**323**	P	**Pn**	**02 58 02.5**	**+2.2**
	1.4nm3μm490nm,0.8s						
KAPI	**Kappang**	**6.82**	**322**	Pn	**Pn**	**02 58 09.9**	**+3.2**
	12nm,0.3s,baz=147,slow=10,SNR=53						
KAPI				LR	LR	03 00 55.8	
	comp=Z,2μm,18.5s,baz=132,slow=40						
KAPI	**Kappang**	**6.82**	**322**	P	**Pn**	**02 58 09.8**	**+3.1**
KAPI	**Kappang**	**6.82**	**322**	Pn	**Pn**	**02 58 06.6**	**-0.2**
KNRA	**Kununurra**	**7.00**	**138**	P	**Pn**	**02 58 09.8**	**+0.7**
	baz=7.0,SNR=83						
KNRA				S	**Sn**	**02 59 28.1**	**+0.3**
	baz=7.0						
KNRA	**Kununurra**	**7.00**	**138**	Pn	**Pn**	**02 58 08.8**	**-0.3**
BNSI	**Bone**	**7.12**	**328**	P	**Pn**	**02 58 14.2**	**+3.3**
	0.7nm2μm210nm,0.8s						
TWSI	**Taliwang, Sumb**	**7.15**	**283**	P	**Pn**	**02 58 12.5**	**+1.2**
	1.3nm1μm135nm,1.1s						
MTN	**Manton Dam**	**7.45**	**109**	P	**Pn**	**02 58 15.6**	**+0.3**
	baz=7.4,SNR=86						
MTN	**Manton Dam**	**7.45**	**109**	Pn	**Pn**	**02 58 14.9**	**-0.4**
SPSI	**Sidrap Palu**	**7.67**	**327**	P	**Pn**	**02 58 21.2**	**+2.8**
	0.3nm1μm89nm,1.2s						
SAUI	**Saumlaki**	**7.70**	**72**	P	**Pn**	**02 58 20.1**	**+1.4**
	1.7nm13μm374nm,0.8s						
FITZ	**Fitzroy Crossi**	**7.76**	**168**	Pn	**Pn**	**02 58 19.2**	**-0.3**
	5.0nm,0.3s,baz=355,slow=9.0,SNR=260						
FITZ				Sn	**Sn**	**02 59 43.3**	**-3.2**
	20nm,0.3s,baz=167,slow=6.0,SNR=15						
FITZ				LR	LR	03 01 35.0	
	comp=Z,1μm,21.1s,baz=354,slow=40						
FITZ	**Fitzroy Crossi**	**7.76**	**168**	P	**Pn**	**02 58 19.2**	**-0.3**
	baz=7.8,SNR=98						
FITZ	**Fitzroy Crossi**	**7.76**	**168**	Pn	**Pn**	**02 58 19.0**	**-0.5**
NLAI	**Namlea**	**7.85**	**24**	P	**Pn**	**02 58 23.8**	**+2.9**
	0.3nm69nm,0.7s						
AAI	**Ambon**	**7.97**	**32**	P	Pn	02 58 29.2	+6.7
BNDI	**Bandanaira**	**8.38**	**46**	P	**Pn**	**02 58 30.6**	**+2.5**
	25μm254nm,1.1s						
TTSI	**Tana Toraja**	**8.43**	**331**	P	**Pn**	**02 58 33.3**	**+4.4**
	2μm102nm,0.9s						
MSAI	**Masohi**	**8.65**	**35**	P	**Pn**	**02 58 34.7**	**+2.8**
	33nm,1.3s						
KDU	**Kakadu**	**8.66**	**106**	P	**Pn**	**02 58 32.8**	**+0.8**
	baz=8.6,SNR=26						
SRBI	**Singaraja**	**8.92**	**285**	P	**Pn**	**02 58 38.7**	**+3.2**
	904nm41nm,0.8s						
LUWI	**Luwuk**	**9.44**	**353**	P	**Pn**	**02 58 45.1**	**+2.4**
	4μm240nm,1.1s						
LUWI	**Luwuk**	**9.44**	**353**	Pn	**Pn**	**02 58 42.9**	**+0.2**
APSI	**Ampana**	**9.77**	**346**	P	**Pn**	**02 58 50.2**	**+3.0**
	1μm110nm,1.1s						
JAGI	**Jajag, Banyuwa**	**9.84**	**281**	P	**Pn**	**02 58 47.0**	**-1.2**
	1μm91nm,1.1s						
JAGI	**Jajag, Banyuwa**	**9.84**	**281**	Pn	**Pn**	**02 58 46.1**	**-2.1**
GMJI	**Gumukmas**	**10.57**	**281**	P	**Pn**	**02 58 59.7**	**+1.6**
	48nm,0.9s						
MRSI	**Marisa**	**11.06**	**350**	P	**Pn**	**02 59 06.7**	**+1.8**
	63nm,1.2s						
GTOI	**Gorontalo**	**11.08**	**355**	P	Pn	02 59 10.4	+5.3
	383nm36nm,1.2s						
FAKI	**Fak Fak**	**11.17**	**48**	P	**Pn**	**02 59 07.1**	**+0.7**
	53nm,0.9s						
FAKI	**Fak Fak**	**11.17**	**48**	Pn	**Pn**	**02 59 05.7**	**-0.7**
BBKI	**Banjar Baru**	**11.39**	**307**	P	**Pn**	**02 59 11.6**	**+2.2**
	48nm,1.0s						
MPSI	**Mapaga**	**11.47**	**339**	P	**Pn**	**02 59 13.1**	**+2.7**
	417nm34nm,0.8s						
PSAD1	**Pilbara Seismi**	**11.60**	**199**	Pn	**Pn**	**02 59 11.8**	**-0.4**
TNTI	**Ternate**	**11.69**	**17**	P	**Pn**	**02 59 16.8**	**+3.3**
	63nm,1.3s						
TNTI	**Ternate**	**11.69**	**17**	Pn	**Pn**	**02 59 15.8**	**+2.3**
PSA00	**Pilbara Seismi**	**11.70**	**199**		**Pn**	**02 59 12.1**	**-1.6**
TOLI2	**Tolitoli**	**11.93**	**345**	Pn	**Pn**	**02 59 19.8**	**+3.0**
SIJI	**Sorong**	**12.02**	**38**	Pn	**Pn**	**02 59 17.1**	**-0.9**
	2.5nm,0.3s,baz=228,slow=1.6,SNR=13						
PWJI	**Pagerwojo**	**12.21**	**281**	P	**Pn**	**02 59 20.9**	**+0.3**
	50nm,0.8s						
MTKI	**Muara Teweh, K**	**13.05**	**316**	P	**P**	**02 59 46.5**	**+4.3**
WOJI	**Wonogiri, Jawa**	**13.10**	**280**	P	**Pn**	**02 59 31.1**	**-1.7**
	59nm,1.1s						
UGM	**Wanagama**	**13.47**	**280**	P	**P**	**02 59 50.6**	**+3.7**
WB0	**Warramunga Arr**	**13.69**	**134**	Pn	**Pn**	**02 59 36.9**	**-3.9**
SMRI	**Semarang**	**13.75**	**283**	P	**P**	**02 59 52.5**	**+2.5**
WRA	**Warramunga Arr**	**13.76**	**134**	Pn	**Pn**	**02 59 38.5**	**-3.3**
	3.3nm,0.3s,baz=303,slow=14,SNR=52						
WRA				Sn	Sn	03 02 02.9	-11
	2.4nm,0.3s,baz=303,slow=23,SNR=11						
WRA				LR	LR	03 05 33.3	
	comp=Z,762nm,20.4s,baz=320,slow=40						
WRA	**Warramunga Arr**	**13.76**	**134**	Pn	**Pn**	**02 59 37.5**	**-4.3**
WRAB	**Tennant Creek**	**13.76**	**134**	Pn	**Pn**	**02 59 38.6**	**-3.2**
WB2	**Warramunga Arr**	**13.77**	**134**	P	**Pn**	**02 59 38.6**	**-3.4**
	baz=14						
WB2				S	**Sn**	**03 02 06.5**	**-7.6**
	baz=14						
WB2	**Warramunga Arr**	**13.77**	**134**	Pn	**Pn**	**02 59 38.2**	**-3.8**
WC3	**Warramunga Arr**	**13.80**	**134**	P	**Pn**	**02 59 39.6**	**-2.7**
	baz=14						
WC3	**Warramunga Arr**	**13.80**	**134**	Pn	**Pn**	**02 59 38.7**	**-3.6**
WR0	**Warramunga Arr**	**13.92**	**134**	Pn	**Pn**	**02 59 39.9**	**-4.1**
WRKA	**Warakurna**	**15.06**	**165**	P	**Pn**	**02 59 57.1**	**-2.4**
	baz=15,SNR=50						
KPJI	**Karang Pucung**	**15.13**	**281**	P	**Pn**	**03 00 02.7**	**+2.2**
	1μm84nm,0.6s						
BAKI	**Biak**	**15.22**	**53**	P	**P**	**03 00 09.9**	**+3.5**
GIRL	**Giralia**	**15.24**	**216**	P	**Pn**	**03 00 02.7**	**+0.9**
	baz=15,SNR=13						
JCJI	**Jatiwangi**	**15.98**	**283**	P	**P**	**03 00 17.3**	**+2.6**
CISI	**Cisompet, Garu**	**16.17**	**279**	P	**Pn**	**03 00 15.1**	**+1.1**
	2μm189nm,0.6s						
CISI	**Cisompet, Garu**	**16.17**	**279**	Pn	**Pn**	**03 00 12.1**	**-1.9**
CISI				IAmb	IAmb	03 00 31.2	
	comp=Z,139nm,0.6s						
AS31	**Alice Springs**	**16.21**	**145**	Pn	**Pn**	**03 00 12.6**	**-1.8**
ASAR	**Alice Springs**	**16.21**	**145**	Pn	**Pn**	**03 00 12.2**	**-2.2**
	comp=Z,5.3nm,0.3s,baz=318,slow=12,SNR=202						
ASAR				Sn	**Sn**	**03 03 06.2**	**-7.3**
	comp=Z,1.5nm,0.3s,baz=313,slow=23,SNR=8.7						
ASAR	**Alice Springs**	**16.21**	**145**	Pn	**Pn**	**03 00 12.6**	**-1.8**
MYLDM	**Lahad Datu**	**16.46**	**341**	P	**P**	**03 00 19.7**	**-0.5**
LEM	**Lembang**	**16.52**	**281**	Pn	**P**	**03 00 21.7**	**+0.7**
	comp=Z,23nm,0.3s,baz=48,slow=9.1,SNR=38						
SPMM	**Sapulut**	**16.82**	**333**	P	**P**	**03 00 24.0**	**-0.1**
MEEK	**Meekatharra**	**16.84**	**197**	P	**Pn**	**03 00 22.3**	**0.0**
	baz=17,SNR=26						
SBUM	**Sibu**	**17.34**	**317**	P	**P**	**03 00 30.6**	**+0.8**
SBUM	**Sibu**	**17.34**	**317**	P	**P**	**03 00 31.0**	**+1.2**
CBJI	**Citeko**	**17.36**	**282**	P	**Pn**	**03 00 28.6**	**-0.3**
	comp=Z,457nm,0.9s						
DBJI	**Dramaga**	**17.42**	**282**	P	**P**	**03 00 32.7**	**+1.9**
	comp=Z,272nm,1.1s						
SKJI	**Sukabumi**	**17.50**	**280**	P	**P**	**03 00 33.2**	**+1.5**
	comp=Z,431nm,1.2s						
GENI	**Genyem**	**17.93**	**65**	P	**P**	**03 00 36.5**	**+0.1**
	comp=Z,72nm,0.8s						
KSM	**Kuching**	**18.01**	**310**	P	**Pn**	**03 00 36.0**	**-1.0**
KSM	**Kuching**	**18.01**	**310**	P	**Pn**	**03 00 37.0**	**0.0**
QIS	**Mount Isa**	**18.12**	**125**	P	**Pn**	**03 00 36.3**	**-1.9**
	baz=18,SNR=9.7						
KKM	**Kota Kinabalu**	**18.12**	**335**	P	**Pn**	**03 00 38.1**	**-0.3**
SBJI	**Serang**	**18.13**	**282**	P	**P**	**03 00 39.9**	**+1.4**
	comp=Z,165nm,0.8s						
COEN	**Coen**	**19.13**	**102**	P	**Pn**	**03 00 51.5**	**+0.9**
	baz=19,SNR=8.0						
KASI	**Kota Agung**	**19.85**	**283**	P	**Pn**	**03 00 58.6**	**-0.6**
MORW	**Morawa**	**19.91**	**201**	P	**Pn**	**03 00 59.8**	**+0.1**
	baz=20,SNR=23						
MORW	**Morawa**	**19.91**	**201**	P	**Pn**	**03 00 59.3**	**-0.5**
FORT	**Forrest**	**20.56**	**170**	P	Pn	03 01 07.6	+0.2
	baz=21,SNR=8.9						
FORT	**Forrest**	**20.56**	**170**	P	Pn	03 01 06.3	-1.1
FORT				IAmb	IAmb	03 01 17.4	
	comp=Z,61nm,0.8s						
KMBL	**Kambalda**	**20.87**	**185**	P	Pn	03 01 10.1	-1.0
	baz=21,SNR=11						
BLDU	**Ballidu**	**21.13**	**197**	P	**P**	**03 01 12.7**	**+1.5**
	baz=21,SNR=24						
MTSU	**Mount Surprise**	**21.16**	**113**	P	**P**	**03 01 14.2**	**+2.5**
	baz=21,SNR=33

comp=Z,321nmcomp=Z,46nm,0.8s
CM01 Chiang Mai Arr 37.83 319 P **P** **03 03 44.3 +1.3**
comp=Z,333nmcomp=Z,38nm,0.8s
CM02 Chiang Mai Arr 37.85 319 P **P** **03 03 43.0 -0.2**
CM31 Chiang Mai Arr 37.87 319 P **P** **03 03 42.4 -0.9**
CM31 IAmb IAmb 03 03 52.7
comp=Z,21nm,0.6s
CMAR Chiang Mai Arr 37.87 319 PcP **PcP** **03 06 02.1 +2.7**
comp=Z,4.7nm,0.8s,baz=171,slow=2.6,SNR=7.0
CMAR LR LR 03 22 23.8
comp=Z,207nm,18.5s,baz=226,slow=41
CMAR Chiang Mai Arr 37.87 319 P **P** **03 03 42.0 -1.3**
GYA Guiyang 40.37 336 ⇓P **P** **03 04 03.5 -0.7**
GYA S **S** **03 10 12.5 +1.7**
GYA pmax pmax
comp=Z,22nm,0.8s
GYA pmax pmax
comp=Z,240nm,4.3s
KMI Kunming 40.97 330⇓ *e*P **P** **03 04 09.9 +0.5**
KMI pP sP 03 04 19.9 -0.8
KMI sP pP 03 04 24.6 +7.3
KMI pmax pmax
comp=Z,45nm,1.2s
KMI LR LR
comp=Z,220nm,5.8s
KMI LR LR
comp=Z,460nm,8.5s
KMI LR LR
comp=Z,290nm,10.1s
KMI Kunming 40.97 330 P **P** **03 04 09.8 +0.5**
KMI IAmb IAmb 03 04 11.1
comp=Z,46nm,1.1s
WHN Wuhan 41.81 348⇑P **P** **03 04 15.6 -0.2**
JSU Suzuyama 42.21 8 P **P** **03 04 17.2 -1.9**
JSU IAmb IAmb 03 04 18.5
comp=Z,22nm,0.8s
NJ2 Nanjing 42.57 354 *e*P **P** **03 04 23.9 +1.9**
NJ2 pmax pmax
comp=Z,41nm,0.5s
ENH Enshi 42.83 342 P **P** **03 04 22.0 -2.2**
JNU Nakatsue 43.86 8 P **P** **03 04 30.6 -1.9**
comp=Z,16nm,0.9s,baz=212,slow=2.8,SNR=4.2
JNU Nakatsue 43.86 8 P **P** **03 04 31.3 -1.2**
JNU IAmb IAmb 03 04 36.1
comp=Z,26nm,1.0s
JMN Monobe 44.97 12 P **P** **03 04 40.3 -1.1**
CD2 Chengdu 45.48 335 P **P** **03 04 44.0 -1.5**
CD2 pmax pmax
comp=Z,40nm,0.8s
JHS Saijyo 46.06 10 P **P** **03 04 49.0 -0.9**
XAN Xi'an 46.51 343 P **P** **03 04 51.3 -2.3**
XAN pmax pmax
comp=Z,34nm,0.9s
XAN pmax pmax
comp=Z,170nm,5.1s
XAN Xi'an 46.51 343 P **P** **03 04 50.7 -2.9**
XAN IAmb IAmb 03 04 52.2
comp=Z,20nm,0.8s
SHL Shillong 47.51 319 P **P** **03 05 00.8 -0.9**
SNR=12
SHL Shillong 47.51 319 P **P** **03 04 59.2 -2.5**
SHL IAmb IAmb 03 05 01.1
comp=Z,34nm,1.1s
KSAR Wonju Array Be 47.81 4 P **P** **03 05 02.0 -1.6**
KSRS Korea Array 47.83 4 P **P** **03 05 02.7 -1.0**
comp=Z,3.6nm,0.7s,baz=183,slow=10.0,SNR=17
KSRS PcP **PcP** **03 06 33.3 +1.1**
comp=Z,1.5nm,0.5s,baz=189,slow=2.6,SNR=4.1
KSRS LR LR 03 27 02.7
comp=Z,40nm,20.5s,baz=160,slow=39
MJAR Matsushiro Arr 48.66 15 P **P** **03 05 08.8 -1.5**
comp=Z,17nm,0.7s,baz=191,slow=8.7,SNR=34
MJAR Matsushiro Arr 48.66 15 P **P** **03 05 06.9 -3.3**
MAJO Matsushiro 48.67 15 P **P** **03 05 08.5 -1.7**
MAJO IAmb IAmb 03 05 13.4
comp=Z,26nm,0.8s
MAT Matsushiro 48.67 15 P **P** **03 05 08.7 -1.5**
MJB9 Matsu-Tunnel 48.67 15 P **P** **03 05 08.9 -1.3**
MJB9 IAmb IAmb 03 05 13.4
comp=Z,37nm,0.9s
LZH Lanzhou 50.04 339⇑P **P** **03 05 20.5 -0.4**
LZH pP sP 03 05 31.3 -1.1
LZH sP pP 03 05 35.6 +6.5
LZH PP **PP** **03 07 17.4 +1.2**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,130nm,6.5s
LZH LR LR
comp=Z,500nm,14.5s
LZH LR LR
comp=Z,510nm,14.7s
LZH LR LR
comp=Z,800nm,17.2s
JMM Marumori 50.62 17 P **P** **03 05 24.2 -0.8**
BJT Baijiatuan 50.75 352 P **P** **03 05 24.0 -2.0**
BJT IAmb IAmb 03 05 26.5
comp=Z,17nm,0.9s
BJI Beijing 50.77 352 P **P** **03 05 24.3 -1.8**
BJI pmax pmax
comp=Z,16nm,0.7s
LSA Lhasa 50.91 323 P **P** **03 05 26.9 -1.1**
LSA IAmb IAmb 03 05 29.8
comp=Z,28nm,0.9s
ODAN Odare 51.33 317 *e*P **P** **03 05 29.4 -1.5**
comp=Z,124nm,1.2s
TAPN Taplejung 51.44 318 *e*P **P** **03 05 30.8 -1.0**
comp=Z,256nm,1.1s
RAMN Ramite 51.92 317 *e*P **P** **03 05 34.1 -1.3**
comp=Z,162nm,1.0s
HHC Hu-ho-hao-te 52.33 348 *e*P **P** **03 05 36.6 -1.4**
HHC pmax pmax
comp=Z,21nm,1.0s
HHC pmax pmax
comp=Z,130nm,5.5s
HHC LR LR
comp=Z,130nm,15.5s
HHC LR LR
comp=Z,190nm,14.4s
HYB Hyderabad 52.70 301 *i*P **P** **03 05 37.0 -4.1**
GUN Gumba 53.03 317 *e*P **P** **03 05 42.2 -1.5**
comp=Z,130nm,0.8s
PKI Pulchoki 53.13 316 *e*P **P** **03 05 43.0 -1.4**
PKIN Phulchoki 53.14 316 *e*P **P** **03 05 42.4 -2.0**
comp=Z,38nm,0.6s
KKN Kakani 53.36 316 *e*P **P** **03 05 44.8 -1.2**
DMN Daman 53.36 316 *e*P **P** **03 05 44.9 -1.1**
GKN Gorkha 53.93 316 *e*P **P** **03 05 48.7 -1.4**
comp=Z,100nm,1.0s
CN2 Changchun 54.04 1 *e*P **P** **03 05 48.1 -2.2**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,200nm,9.0s
CN2 LR LR
comp=Z,400nm,10.0s
CN2 LR LR
comp=Z,400nm,10.0s
CN2 LR LR
comp=Z,700nm,10.0s
GTA Gaotai 54.46 337 P **P** **03 05 53.5 -0.2**
GTA pP sP 03 06 04.0 -0.9
GTA sP pP 03 06 08.3 +6.4
GTA PcP **PcP** **03 06 59.4 +2.4**
GTA pmax pmax
comp=Z,15nm,1.4s
GTA pmax pmax
comp=Z,97nm,6.2s
GTA LR LR
comp=Z,100nm,18.2s
GTA LR LR
comp=Z,190nm,18.5s
KOLN Koldanda 54.50 315 *e*P **P** **03 05 52.7 -1.6**
DANN Dangsing 54.75 316 *e*P **P** **03 05 54.4 -1.8**
comp=Z,85nm,0.6s
USA0B Ussuriysk Arra 54.91 7 P **P** **03 05 55.9 -0.8**
USA0B IAmb IAmb 03 05 59.0
comp=Z,21nm,0.9s
USRK Ussuriysk Ar. 54.91 7 P **P** **03 05 55.6 -1.0**
comp=Z,14nm,0.8s,baz=194,slow=6.3,SNR=19
USRK Ussuriysk Ar. 54.91 7 P **P** **03 05 55.4 -1.2**
MDJ Mudanjiang 55.07 5 P **P** **03 05 57.5 -0.3**
MDJ pP sP 03 06 07.9 -1.3
MDJ sP pP 03 06 12.6 +6.6
MDJ PP **PP** **03 08 01.5 +0.1**
MDJ pmax pmax
comp=Z,100nm,1.1s
MDJ pmax pmax
comp=Z,210nm,3.0s
PYUN Piuthan 55.12 315 *e*P **P** **03 05 57.2 -1.6**
ASAJ Asahikawa 56.92 16 P **P** **03 06 10.1 -0.9**
comp=Z,17nm,1.0s,baz=266,slow=7.0,SNR=5.8
JKA Kamikawa-asahi 56.92 16 P **P** **03 06 11.2 +0.1**
JKA IAmb IAmb 03 06 13.3
comp=Z,29nm,1.1s
HIA Hailar 59.60 357 P **P** **03 06 29.5 -0.2**
HIA IAmb IAmb 03 06 32.5
comp=Z,11nm,1.0s
KLR Kul'dur 59.85 6 P **P** **03 06 30.3 -1.1**
comp=Z,3.5nm,0.7s,baz=314,slow=3.1,SNR=11
ULN Ulaanbaatar 59.99 347 P **P** **03 06 31.4 -1.2**
ULN IAmb IAmb 03 06 37.2
comp=Z,14nm,1.0s
SONM Songino Array 60.11 346 P **P** **03 06 32.5 -1.0**
comp=Z,11nm,1.0s,baz=166,slow=7.2,SNR=18
SONM Songino Array 60.11 346 P **P** **03 06 32.4 -1.0**
WMQ Urumqi 63.28 331 *e*P **P** **03 06 54.8 0.0**
WMQ pP sP 03 07 05.9 -0.3
WMQ pmax pmax
comp=Z,41nm,1.1s
WMQ pmax pmax
comp=Z,190nm,3.8s
WMQ LR LR
comp=Z,650nm,29.1s
WMQ LR LR
comp=Z,1μm,29.1s
WMQ LR LR
comp=Z,250nm,29.2s
WMQ Urumqi 63.28 331 P **P** **03 06 54.8 0.0**
WMQ IAmb IAmb 03 06 55.6
comp=Z,26nm,0.7s
TLY Talaya 64.34 346 P **P** **03 07 01.3 -0.2**
comp=Z,4.8nm,0.6s,baz=320,slow=15,SNR=3.0
TLY Talaya 64.34 346 P **P** **03 07 00.9 -0.7**
TLY IAmb IAmb 03 07 03.5
comp=Z,11nm,0.9s
NIL Nilore 65.14 315 P **P** **03 07 05.9 -1.3**
NIL Nilore 65.14 315 P **P** **03 07 05.4 -1.8**
KSH Kashi 66.73 321 P **P** **03 07 17.3 -0.1**
KSH sP sP 03 07 32.3 +3.5
KSH S **S** **03 16 05.9 -2.0**
KSH ScS **SKSac** **03 17 12.0 -0.7**
KSH pmax pmax
comp=Z,52nm,0.7s
KSH pmax pmax
comp=Z,290nm,4.8s
KSH LR LR
comp=Z,250nm,5.4s
KSH LR LR
comp=Z,250nm,4.9s
KSH LR LR
comp=Z,230nm,5.9s
SHLS Shalkode 67.01 326 *e*P **P** **03 07 17.6 -1.5**
comp=Z,30nm,0.9s,baz=326
ZSN Zaisan 67.31 332 *e*P **P** **03 07 20.3 -0.5**
comp=Z,18nm,1.0s,baz=332
SATY Saty 67.53 326 *i*P **P** **03 07 22.1 -0.3**
comp=Z,19nm,1.0s,baz=325
KPKS Kokpek 67.64 326⇑ *i*P **P** **03 07 22.8 -0.3**
comp=Z,39nm,1.0s,baz=326
MK31 Makanchi Array 68.05 331 P **P** **03 07 25.1 -0.4**
MKAR Makanchi Array 68.05 331 P **P** **03 07 25.3 -0.2**
comp=Z,54nm,0.7s,baz=135,slow=7.9,SNR=373
MKAR Makanchi Array 68.05 331 P **P** **03 07 25.1 -0.4**
MAKZ Makanchi 68.21 330 P **P** **03 07 24.9 -1.6**
MAKZ IAmb IAmb 03 07 26.7
comp=Z,29nm,0.8s
TNSS Tian-Shan 68.33 325 *e*P **P** **03 07 27.4 -0.4**
baz=325
MDOK Medeo 68.36 325 *e*P **P** **03 07 27.4 -0.3**
baz=325
AAA Alma-Ata 68.46 325 *e*P **P** **03 07 27.9 -0.3**
baz=325
BOOM Boomskoye usch 68.57 324 P **P** **03 07 28.0 -1.0**
BOOM IAmb IAmb 03 07 30.8
comp=Z,26nm,0.8s
KBL Kabul 68.58 314 P **P** **03 07 28.6 -0.7**
KBL Kabul 68.58 314 P **P** **03 07 28.4 -1.0**
TDK Taldygorghan 68.80 327 *e*P **P** **03 07 30.0 -0.2**
comp=Z,40nm,1.1s,baz=327
CHKK Chushkaly 68.83 325 *e*P **P** **03 07 29.4 -1.0**
baz=325
TKM2 Tokmak 2 69.04 324 P **P** **03 07 31.3 -0.6**
SNR=13
KUU Kurty 69.22 325⇑ *i*P **P** **03 07 32.1 -0.7**
comp=Z,32nm,0.8s,baz=325
KBK Karagaybulak 69.25 323 P **P** **03 07 33.4 +0.1**
SNR=6.3
AAK Ala-Archa 69.51 323 P **P** **03 07 34.7 -0.2**
SNR=13
AAK Ala-Archa 69.51 323 *i*P **P** **03 07 34.7 -0.2**
SNR=16
AAK Ala-Archa 69.51 323 P **P** **03 07 34.6 -0.2**
AAK Ala-Archa 69.51 323 P **P** **03 07 34.5 -0.3**
AAK IAmb IAmb 03 07 36.8
comp=Z,14nm,0.9s
MAW Mawson 69.55 201 P **P** **03 07 36.1 +1.6**
comp=Z,1.4nm,0.5s,baz=50,slow=13,SNR=2.9
MAW LR LR 03 35 18.5
comp=Z,100nm,20.9s,baz=58,slow=34
PETK Petropavlovsk- 69.59 21 P **P** **03 07 35.4 +0.4**
comp=Z,24nm,0.9s,baz=191,slow=5.6,SNR=19
PETK Petropavlovsk- 69.59 21 P **P** **03 07 34.4 -0.5**
AML Almayashu 69.68 322 P **P** **03 07 35.9 -0.3**
SNR=9.6
VNDA Vanda 69.81 172 P **P** **03 07 37.5 +1.5**
comp=Z,1.2nm,0.8s,baz=302,slow=6.2,SNR=5.9
VNDA LR LR 03 37 36.4
comp=Z,268nm,19.4s,baz=334,slow=35
USP Ospenovka 69.88 324 P **P** **03 07 36.8 -0.2**
SNR=19
SGDS Sogindy 69.92 324 *i*P **P** **03 07 36.3 -0.9**
comp=Z,11nm,1.1s,baz=324
EKS2 Erkin-Say 69.94 323 P **P** **03 07 37.7 +0.3**
SNR=12
GAR Garm 70.03 318 P **P** **03 07 37.3 -0.8**
BTK Batken 70.28 319 P **P** **03 07 38.7 -0.8**
BTK IAmb IAmb 03 07 42.2
comp=Z,12nm,1.1s
CHGR Chuyangaron 70.62 317 P **P** **03 07 40.2 -1.4**
BTLS Baital 71.22 325 *i*P **P** **03 07 44.2 -0.8**
comp=Z,8.0nm,1.3s,baz=325
DZA Taraz 71.54 322 *e*P **P** **03 07 45.9 -1.2**
baz=322
SEM Semipalatinsk 71.56 332 *e*P **P** **03 07 45.8 -1.4**
comp=Z,19nm,1.0s,baz=332
WBK Wadi Bani Khal 71.59 298 P **P** **03 07 48.3 +0.5**
WBK P **P** **03 07 48.3 +0.5**
IUG Iuzhnay 71.92 321 *e*P **P** **03 07 48.9 -0.6**
comp=Z,10nm,0.8s,baz=321
MHTO MHTO 71.93 296 P **P** **03 07 49.5 -0.3**
MHTO P **P** **03 07 49.5 -0.3**
DQM DQM 71.97 295 P **P** **03 07 50.6 +0.5**
DQM P **P** **03 07 50.6 +0.5**
KK31 Karatay Array 72.16 322 P **P** **03 07 50.7 -0.1**
KKAR Karatay Array 72.16 322 P **P** **03 07 48.8 -2.0**
ZAA0 Zalesovo Array 72.22 337 P **P** **03 07 49.1 -1.8**
ZALV Zalesovo Beam 72.22 337 P **P** **03 07 49.6 -1.2**
comp=Z,58nm,0.9s,baz=132,slow=3.6,SNR=143
JMDO Jabal Madar 72.27 298 P **P** **03 07 52.3 +0.4**
SNR=6.1
JMDO P **P** **03 07 52.3 +0.4**
SNR=6.1
YAK Yakutsk 72.42 3 P **P** **03 07 51.2 -0.6**
comp=Z,15nm,0.5s,baz=353,slow=1.2,SNR=9.1
YAK Yakutsk 72.42 3 P **P** **03 07 50.6 -1.2**
KURBB Kurchatov Arra 72.50 332 P **P** **03 07 51.8 -0.8**
comp=Z,27nm,1.0s,baz=137,slow=5.2,SNR=145
KURK Kurchatov 72.52 332 P **P** **03 07 52.4 -0.3**
KURK Kurchatov 72.52 332 P **P** **03 07 51.4 -1.3**
SMDO Samad 72.55 298 P **P** **03 07 54.0 +0.4**
SNR=5.2
SMDO P **P** **03 07 54.0 +0.4**
SNR=5.2
BIDO Bidbid 72.64 299 P **P** **03 07 55.0 +1.0**
SNR=13
SOCY Socotra 73.02 286 P **P** **03 07 56.8 +0.3**
MA2 Magadan 73.08 14 P **P** **03 07 56.2 +0.3**
comp=Z,28nm,0.8s,baz=210,slow=3.4,SNR=6.1
MA2 Magadan 73.08 14 P **P** **03 07 56.1 +0.3**
MA2 IAmb IAmb 03 08 00.3
comp=Z,42nm,1.0s
BSY Bisya 73.18 298 P **P** **03 07 57.9 +0.6**
BSY P **P** **03 07 57.9 +0.6**
HOQ Hoqain 73.36 298 P **P** **03 07 59.2 +0.8**
SNR=9.6
HOQ P **P** **03 07 59.2 +0.8**
SNR=9.6
HRA Herat 73.48 311 P **P** **03 07 58.1 -1.0**
SOHO SOHO 74.21 299 *i*P **P** **03 08 03.6 +0.3**
SNR=12
SOHO SOHO 74.21 299 P **P** **03 08 03.8 +0.6**
SOHO P **P** **03 08 03.8 +0.6**
RBK Rabkut 74.25 292 P **P** **03 08 05.4 +1.7**
RBK P **P** **03 08 05.4 +1.7**
UOSS Minazif 74.77 299 *i*P **P** **03 08 06.7 +0.2**
SNR=19
UOSS Minazif 74.77 299 P **P** **03 08 07.1 +0.6**
UOSS P **P** **03 08 07.1 +0.6**
UOSS Minazif 74.77 299 P **P** **03 08 04.7 -1.8**
UOSS IAmb IAmb 03 08 07.9
comp=Z,31nm,1.1s
WHFO Wadi Hawf 74.77 292 P **P** **03 08 06.9 +0.3**
HATD Hatta, Dubai 74.79 299 *i*P **P** **03 08 07.4 +0.8**
SNR=14
HATD Hatta, Dubai 74.79 299 P **P** **03 08 07.7 +1.1**
SNR=9.8
HATD P **P** **03 08 07.7 +1.1**
SNR=9.8
MDH Madha 74.80 300 P **P** **03 08 06.2 -0.5**
ASHO Ashiyiah 74.80 299 *i*P **P** **03 08 07.3 +0.5**
SNR=27
ASHO Ashiyiah 74.80 299 P **P** **03 08 07.7 +0.9**
SNR=12
MSFE Esma-Masafi 74.94 300 *i*P **P** **03 08 08.6 +1.1**
SNR=18
BRZS Berezniki 74.96 329 *i*P **P** **03 08 06.4 -0.6**
comp=Z,8.9nm,0.9s,baz=328
BANOM Banah 75.01 300 *i*P **P** **03 08 08.5 +0.6**
SNR=20
BANOM Banah 75.01 300 P **P** **03 08 10.0 +2.0**
SNR=9.0
SHME Shamm 75.19 301 *i*P **P** **03 08 09.9 +1.0**
SNR=18
FAQ Al Faqa, Dubai 75.22 299 *i*P **P** **03 08 10.0 +0.8**
SNR=16
FAQ Al Faqa, Dubai 75.22 299 P **P** **03 08 09.9 +0.8**
SNR=12
FAQ P **P** **03 08 09.9 +0.8**
SNR=12
NAZ Nazwa, Dubai 75.24 299 P **P** **03 08 10.1 +0.9**
SNR=6.6
NAZ P **P** **03 08 10.1 +0.9**
SNR=6.6
ASUD Al Ashush, Dub 75.41 299 *i*P **P** **03 08 11.2 +1.0**
SNR=6.4
ASUD Al Ashush, Dub 75.41 299 P **P** **03 08 11.4 +1.2**
ASUD P **P** **03 08 11.4 +1.2**
SEY Seymchan 76.42 13 P **P** **03 08 15.1 0.0**
comp=Z,25nm,0.7s,baz=213,slow=4.9,SNR=38
BVAR Borovoye Array 77.93 330 P **P** **03 08 23.5 -0.3**
comp=Z,7.0nm,1.0s,baz=246,slow=29,SNR=27
GYB1 ALIBECK ARRAY 77.97 312 P **P** **03 08 24.9 +0.4**
GEYT Alibeck 77.98 312 P **P** **03 08 25.1 +0.5**
comp=Z,6.5nm,0.8s,baz=166,slow=6.7,SNR=7.9
GEYT Alibeck 77.98 312 P **P** **03 08 24.0 -0.6**
GYA0B ALIBECK ARRAY 77.98 312 P **P** **03 08 24.9 +0.4**
BRVK Borovoye 78.00 330 P **P** **03 08 24.1 -0.1**
BRVK Borovoye 78.00 330 P **P** **03 08 23.4 -0.8**
BRVK IAmb IAmb 03 08 26.0
comp=Z,21nm,1.0s
SYO Syowa Base 78.25 201⇓ *e*P **P** **03 08 26.0 +0.6**
SYO Syowa Base 78.25 201⇓ *e*PcP **PcP** **03 08 35.0 +0.3**
QSPA South Pole Qui 79.52 180 P **P** **03 08 34.3 +1.7**
comp=Z,6.6nm,1.0s,baz=337,slow=2.7,SNR=10
QSPA South Pole Qui 79.52 180 P **P** **03 08 33.1 +0.5**
ABKAR Akbulak array 81.59 323 P **P** **03 08 42.7 -1.1**
TIXI Tiksi 82.01 2 P **P** **03 08 44.5 -1.0**
AKTO Aktyubinsk 83.23 324 P **P** **03 08 52.0 -0.4**
comp=Z,8.3nm,0.7s,baz=107,slow=7.8,SNR=23
NRIK Noril'sk 83.56 348 P **P** **03 08 53.6 0.0**
comp=Z,29nm,1.1s,baz=135,slow=4.8,SNR=20
PPT Papeete 83.60 107 LR LR 03 45 09.6
comp=Z,18nm,18.2s,baz=276,slow=35
RAYN Ar Rayn 83.71 295 *i*P **P** **03 08 57.0 +1.6**
SNR=26
RAYN Ar Rayn 83.71 295 P **P** **03 08 55.8 +0.3**
RAYN IAmb IAmb 03 08 59.1
comp=Z,28nm,1.1s
ARU Arti 85.55 330 P **P** **03 09 03.5 -0.4**
comp=Z,2.8nm,0.7s,baz=109,slow=3.2,SNR=12
ARU Arti 85.55 330 P **P** **03 09 02.3 -1.6**
ARU IAmb IAmb 03 09 08.1
comp=Z,11nm,0.8s
KMBO Kilima Mbogo 86.52 270 LR LR 03 43 09.9
comp=Z,69nm,21.5s,baz=93,slow=32
AKH Akhalkalaki 89.77 312 P **P** **03 09 25.8 +1.0**
AKH IAmb IAmb 03 09 33.1
comp=Z,30nm,1.2s
KBZ Khabaz 90.76 314 P **P** **03 09 29.5 +0.4**
comp=Z,1.8nm,0.8s,baz=236,slow=24,SNR=3.3
SNAA Sanae 90.85 195 P **P** **03 09 31.7 +2.5**
VNA2 Neumayer--Watz 92.45 194 P **P** **03 09 39.2 +2.7**
baz=119,slow=5.5
VNA3 Neumayer Olymp 92.78 194 P **P** **03 09 40.2 +2.1**
KLMR Klimovskoe 96.35 331 *e*P **P** **03 09 52.1 -2.3**
KLMR AMP 03 10 01.2
comp=Z,20nm,1.7s
KLMR *e*PP PP 03 13 39.0 -9.2
BRTR Keskin Array B 96.82 309 P **P** **03 09 57.0 -0.2**
comp=Z,1.6nm,0.9s,baz=152,slow=3.6,SNR=6.1
BRTR LR LR 03 58 47.4
comp=Z,18nm,20.2s,baz=80,slow=39
BRTR Keskin Array B 96.82 309 P **P** **03 09 55.3 -2.0**
CUT Chulitna 97.26 28 P Pdif 03 09 58.6 0.0
baz=262
COLD Coldfoot 97.98 23 P Pdif 03 10 01.8 +0.1
baz=262
I23K Minto, Yukon-K 98.05 25 P Pdif 03 10 02.3 +0.3
baz=263
I23K Minto, Yukon-K 98.05 25 P Pdif 03 10 01.8 -0.2
I23K IAmb IAmb 03 10 04.0
comp=Z,4.8nm,0.9s
ILAR Eielson Array 99.05 26 P **Pdif** **03 10 04.5 -2.0**
comp=Z,0.7nm,1.0s,baz=308,slow=4.5,SNR=4.6
AKASG Malin Array Be 100.99 320 P **Pdif** **03 10 14.9 -0.5**
comp=Z,0.2nm,0.2s,baz=80,slow=4.5,SNR=4.7
AKASG Malin Array Be 100.99 320 Pdif **Pdif** **03 10 13.9 -1.5**
CLL Collm 111.17 321 *e*PP **PP** **03 15 40.0 +1.1**
E04D Cinebar 113.67 44 P **PKiKP** **03 15 03.7 -0.8**
baz=280
NVAR Mina Array Bea 118.15 52 PKP **PKiKP** **03 15 13.7 0.0**
comp=Z,1.0nm,0.9s,baz=239,slow=2.2,SNR=5.6
TORD Torodi Ar. Bea 123.49 279 PKP **PKiKP** **03 15 25.5 +1.0**
comp=Z,2.0nm,0.6s,baz=60,slow=1.5,SNR=9.6
PDAR Pinedale Array 123.59 45 PKP **PKiKP** **03 15 25.6 +1.4**
comp=Z,1.1nm,0.8s,baz=196,slow=1.0,SNR=8.9
LAO LASA Array 124.40 40 PKPpre PKPpre 03 15 12.5
ESDC Sonseca Array 125.52 312 PKP **PKiKP** **03 15 28.3 +0.4**
comp=Z,1.0nm,1.1s,baz=23,slow=2.4,SNR=2.7
TXAR Lajitas Array 131.86 60 PKP **PKPdf** **03 15 38.9 -1.1**
comp=Z,0.5nm,0.7s,baz=270,slow=1.5,SNR=3.0
TXAR SKPbc **SKPab** **03 19 07.3 +2.3**
comp=Z,0.8nm,0.8s,baz=240,slow=2.8,SNR=7.4
TXAR Lajitas Array 131.86 60 **PKPdf** **03 15 38.3 -1.7**
U49A Red Boiling Sp 142.69 41 PKPdf **PKPdf** **03 15 56.4 -3.2**
E64A Bridgewater 142.81 13 P **PKiKP** **03 16 01.7 -1.0**
baz=341
P53A Whipple 143.37 34 P **PKiKP** **03 16 02.7 -1.3**
baz=315
CPUP Villa Florida 143.39 178 PKP **PKPdf** **03 16 00.4 -0.8**
comp=Z,1.2nm,0.6s,baz=182,slow=7.6,SNR=2.9
CPUP Villa Florida 143.39 178 PKPdf PKPbc 03 15 59.3 +1.1
J59A Piesco 143.44 23 P **PKiKP** **03 16 02.5 -1.6**
baz=329
G63A Kingsbury 143.58 16 P **PKiKP** **03 16 02.8 -1.5**
baz=337
W50A Signal Mountai 143.76 43 PKPdf **PKPdf** **03 16 00.8 -0.8**
M57A Sunshine Farm, 144.11 27 P **PKiKP** **03 16 04.2 -1.3**
baz=323
K60A Five Rivers En 144.40 23 P **PKPdf** **03 16 03.9 +1.5**
baz=329
Q55A Buckhannon 144.43 33 P **PKPdf** **03 16 03.8 +1.1**
baz=317
S54A Dingess, Beckl 144.59 36 P **PKPdf** **03 16 04.3 +1.4**
baz=314
J62A Henniker 144.62 20 P **PKiKP** **03 16 05.2 -1.3**

	baz=333							
I64A	**Boothbay**	144.67	17	P	PKPdf	03 16 04.1	+1.3	
	baz=337							
BRAL	**Brewton**	144.68	50	P	PKiKP	03 16 04.9	-2.1	
	baz=299							
M59A	**Waymart**	144.69	25	P	PKPdf	03 16 04.1	+1.1	
	baz=326							
N58A	**Sunbury**	144.69	28	P	PKPdf	03 16 03.8	+0.8	
	baz=323							
P56A	**Dayton Farm, R**	144.70	31	P	PKPdf	03 16 03.4	+0.3	
	baz=319,SNR=6.4							
O57A	**Amberson**	144.76	29	P	PKPdf	03 16 04.5	+1.4	
	baz=321							
L60A	**Shokan**	144.81	24	P	PKiKP	03 16 04.9	-2.1	
	baz=328							
J63A	**Strafford**	144.81	19	P	PKiKP	03 16 04.7	-2.1	
	baz=334							
Q56A	**Snyder Ridge,**	144.87	32	P	PKPdf	03 16 04.0	+0.6	
	baz=318,SNR=7.0							
R55A	**Marlinton**	144.92	34	P	PKPdf	03 16 04.2	+0.7	
	baz=316,SNR=8.9							
T54A	**Tazewell**	144.94	37	P	PKPdf	03 16 04.7	+1.1	
	baz=313							
K62A	**Royalston**	144.97	21	P	PKPdf	03 16 04.9	+1.5	
	baz=332							
L61B	**Northampton**	145.00	22	P	PKPdf	03 16 04.8	+1.3	
	baz=331							
N59A	**State Game Lan**	145.05	26	P	PKPdf	03 16 04.8	+1.2	
	baz=325,SNR=6.0							
S55A	**Lewisburg**	145.07	35	P	PKPdf	03 16 05.1	+1.3	
	baz=315							
P57A	**Homestead Farm**	145.13	30	P	PKPdf	03 16 04.8	+1.0	
	baz=320,SNR=7.2							
U54A	**Nelsons Funny**	145.16	38	P	PKPdf	03 16 05.6	+1.5	
	baz=312							
O58A	**Lewisberry**	145.16	29	P	PKPdf	03 16 04.8	+0.9	
	baz=322,SNR=6.4							
K63A	**Dunstable**	145.19	20	P	PKPdf	03 16 05.4	+1.7	
	baz=333							
M60A	**Port Jervis**	145.20	25	P	PKiKP	03 16 05.6	-2.2	
	baz=327							
R56A	**Bull Pasture M**	145.22	33	P	PKiKP	03 16 05.8	-2.2	
	baz=317							
Q57A	**Strasburg**	145.27	31	P	PKPdf	03 16 05.3	+1.2	
	baz=319,SNR=5.2							
HRV	**Adam Dziewonsk**	145.34	20	P	PKiKP	03 16 06.0	-2.0	
	baz=333							
O59A	**Robesonia**	145.35	28	P	PKiKP	03 16 05.9	-2.2	
	baz=324							
T55A	**Pulaski**	145.37	36	P	PKPdf	03 16 05.9	+1.5	
	baz=314,SNR=6.2							
N60A	**Cedar Hill Far**	145.38	26	P	PKPab	03 16 05.5	+1.3	
	baz=326,SNR=6.8							
P58A	**Pank, Wackersv**	145.48	30	P	PKPab	03 16 05.9	+1.3	
	baz=321,SNR=11							
BLA	**Blacksburg**	145.51	36	P	PKPab	03 16 06.4	+1.5	
	baz=314,SNR=7.9							
M61A	**Granite Spring**	145.56	24	P	PKPab	03 16 06.4	+1.5	
	baz=328,SNR=5.3							
V54A	**Nebo**	145.57	39	P	PKiKP	03 16 06.8	-1.9	
	baz=311,SNR=5.2							
S56A	**Natural Bridge**	145.66	34	P	PKPab	03 16 06.7	+1.3	
	baz=316,SNR=5.8							
O60A	**Telford**	145.70	27	P	PKPab	03 16 06.7	+1.3	
	baz=325,SNR=6.5							
Q58A	**Fox Den Farm,**	145.72	31	P	PKPab	03 16 06.8	+1.3	
	baz=320,SNR=13							
PAL	**Palisades**	145.76	24	P	PKiKP	03 16 07.1	-1.7	
	baz=328,SNR=7.1							
R57A	**Stanardsville**	145.77	32	P	PKiKP	03 16 07.3	-1.7	
	baz=318,SNR=11							
P59A	**Jarrettsville**	145.80	29	P	PKPab	03 16 06.7	+0.9	
	baz=323,SNR=7.3							
N61A	**South Mountain**	145.82	25	P	PKiKP	03 16 07.3	-1.7	
	baz=327							
T56A	**Rocky Mt**	145.86	35	P	PKPab	03 16 07.2	+1.0	
	baz=315,SNR=9.2							
W54A	**Cherokee Point**	145.86	40	P	PKiKP	03 16 07.6	-1.8	
	baz=310,SNR=11							
L63A	**North Scituate**	145.89	21	P	PKiKP	03 16 07.3	-1.8	
	baz=332							
S57A	**Dark Hollow, R**	145.93	33	P	PKiKP	03 16 07.7	-1.7	
	baz=317							
V55A	**Taylorsville**	145.97	38	P	PKiKP	03 16 08.0	-1.5	
	baz=312,SNR=11							
P60A	**Greenville**	146.01	27	P	PKPab	03 16 07.7	+1.1	
	baz=324,SNR=10							
R58A	**Rapidan**	146.04	32	P	PKiKP	03 16 07.9	-1.6	
	baz=319,SNR=8.1							
GOGA	**Godfrey**	146.05	44	P	PKiKP	03 16 08.4	-1.3	
	baz=306,SNR=7.7							
X54A	**Belton**	146.08	41	P	PKiKP	03 16 08.6	-1.1	
	baz=309,SNR=6.8							
L64A	**Middleborough**	146.09	20	P	PKiKP	03 16 08.0	-1.5	
	baz=334							
U56A	**King**	146.13	37	P	PKiKP	03 16 08.7	-1.1	
	baz=314							
M63A	**Gales Ferry**	146.14	22	P	PKiKP	03 16 08.4	-1.2	
	baz=331							
Q59A	**Harwood**	146.28	30	P	PKiKP	03 16 09.5	-0.5	
	baz=322							
M64A	**Tiverton**	146.31	21	P	PKiKP	03 16 08.8	-1.1	
	baz=333							
T57A	**Hurt**	146.32	35	P	PKiKP	03 16 08.8	-1.4	
	baz=316,SNR=5.9							
R58B	**Mineral**	146.35	32	P	PKiKP	03 16 09.1	-1.1	
	baz=319							
KMSC	**Kings Mountain**	146.36	39	P	PKiKP	03 16 09.1	-1.2	
	baz=311,SNR=8.1							
V56A	**Mocksville**	146.43	37	P	PKiKP	03 16 09.4	-1.0	
	baz=313							
P61A	**Hammonton**	146.50	27	P	PKiKP	03 16 09.4	-1.0	
	baz=325							
S58A	**Poland Farm, P**	146.53	33	P	PKiKP	03 16 09.5	-1.1	
	baz=318							
Q60A	**Greensboro**	146.56	29	P	PKiKP	03 16 09.7	-0.8	
	baz=323							
X55A	**Gracelyn & Ava**	146.60	40	P	PKiKP	03 16 10.1	-0.8	
	baz=310,SNR=5.9							
U57A	**Blanch**	146.68	35	P	PKiKP	03 16 09.7	+0.5	
	baz=315							
T58A	**Grand View Acr**	146.76	34	P	PKPab	03 16 10.0	+0.4	
	baz=317							
R60A	**Leonardtown, M**	146.78	30	P	PKPab	03 16 10.0	+0.4	
	baz=321							
V57A	**Coltrane Farms**	146.80	37	P	PKPab	03 16 09.9	+0.2	
	baz=314							
S59A	**Mechanicsville**	146.81	32	P	PKiKP	03 16 10.3	-0.9	
	baz=320							
W56A	**Indian Trail**	146.83	38	P	PKPab	03 16 10.2	+0.3	
	baz=312							
X56A	**White Oak**	146.97	40	P	PKPab	03 16 10.6	+0.1	
	baz=311							
TIGA	**Tifton**	147.08	47	P	PKPab	03 16 11.0	0.0	
	baz=304							
U58A	**Oxford**	147.15	35	P	PKPab	03 16 11.1	0.0	
	baz=316,SNR=7.1							
W57A	**Gilead**	147.18	38	P	PKPab	03 16 11.5	-0.5	
	baz=313,SNR=6.4							
S60A	**Water View**	147.18	31	P	PKiKP	03 16 11.3	-0.6	
	baz=321							
Y56A	**Pelion**	147.25	41	P	PKiKP	03 16 11.6	-0.6	
	baz=309							
V58A	**Windy Hill, Pi**	147.25	36	P	PKPab	03 16 11.5	0.0	
	baz=315,SNR=5.6							
T59A	**Double "B" Far**	147.27	33	P	PKiKP	03 16 11.6	-0.5	
	baz=318,SNR=10							
R61A	**Willards**	147.33	29	P	PKiKP	03 16 11.7	-0.5	
	baz=323							
Z56A	**Williston**	147.50	42	P	PKPab	03 16 12.1	-0.4	
	baz=309							
T60A	**Surry**	147.57	32	P	PKPab	03 16 12.2	-0.5	
	baz=320							
X57A	**Johnson Farm,**	147.57	39	P	PKPab	03 16 12.2	-0.6	
	baz=312							
U59A	**Littleton**	147.60	34	P	PKPab	03 16 12.4	-0.5	
	baz=318							
W58A	**Raeford**	147.72	37	P	PKiKP	03 16 12.8	-0.3	
	baz=314							
V59A	**Middlesex**	147.77	35	P	PKiKP	03 16 12.9	-0.3	
	baz=316							
U60A	**Pendleton**	147.85	33	P	PKiKP	03 16 13.1	-0.2	
	baz=319							
Z57A	**Bowman**	147.95	41	P	PKPab	03 16 13.8	-0.6	
	baz=310							
X58A	**Rowland**	147.97	38	P	PKPab	03 16 13.8	-0.6	
	baz=313							
W59A	**Clinton**	148.08	36	P	PKiKP	03 16 13.9	0.0	
	baz=315							
Y58A	**Scranton**	148.21	39	P	PKiKP	03 16 14.3	+0.2	
	baz=312							
V60A	**Jim Taylor Roa**	148.32	34	P	PKiKP	03 16 14.0	-0.3	
	baz=318							
CNNC	**Cliffs of the**	148.35	35	P	PKiKP	03 16 14.5	+0.1	
	baz=316							
PB16	**IPOC Station P**	148.45	155	PKPbc	PKPbc	03 16 13.2	-1.1	
Y59A	**Loris**	148.64	38	P	PKPab	03 16 15.9	-1.2	
	baz=313							
LPAZ	**La Paz**	150.85	156	PKPbc	PKiKP	03 16 21.5	+0.6	
	comp=Z,4.2nm,0.7s,baz=200,slow=6.1,SNR=9.4							

*BJI **19** 03:04:19.2±0.0,6.°92S×131.°55E,h71km,mB5.2/21, mb5.2/30,Ms4.8/7,Ms7 4.4/2*
*IDC **19** 03:04:22.6±2.4,6.°59S×131.°31E,h61km±21km,mb4.4/23, mb1 4.4/27,mb1mx4.3/48,mbtmp4.7/27,ML4.0/3,MS3.6/5, Ms1 3.6/5,ms1mx3.1/41,Error ellipse: s-maj=17.1km s-min=10.7km az=66.0*
*DJA **19** 03:04:23.8±0.2,7.°S±2.°×13.°1E±.°,h93km±5km,M5.2/30, mb5.2/30,mB5.6/23,MLv5.6/15,Mw(mB)5.1/23*
*NEIC **19** 03:04:24±1.8,6.°56S±0.°05×131.°28E±0.°09,h84km±6km, mb4.9/38,Error ellipse: s-maj=12.6km s-min=6.8km az=89.0*

ISC 19 03:04:26.0±0.3,6.°80S±0.°04×131.°14E±0.°05,h100km,n242, σ1s83/243,mb4.8/67,8C-2D,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
SAUI	**Saumlaki**	1.19	172	P	**Pn**	03 04 49.2	+0.6	
SAUI				S	**Sn**	03 05 05.3	-0.4	
SAUI	**Saumlaki**	1.19	172	Pn	**Pn**	03 04 49.0	+0.4	
SAUI				Sn	**Sn**	03 05 04.6	-1.1	
BNDI	**Bandanaira**	2.57	331	P	**Pn**	03 05 04.1	-2.0	
BNDI				S	**Sn**	03 05 34.3	-2.6	
FAKI	**Fak Fak**	4.01	16	P	Pn	03 05 19.7	-5.7	
FAKI	**Fak Fak**	4.01	16	Pn	Pn	03 05 19.5	-5.9	
FAKI				Sn	Sn	03 05 59.7	-12	
KMPI	**Kaimana, Papua**	4.03	40	P	Pn	03 05 19.3	-6.4	
MSAI	**Masohi**	4.07	327	P	**Pn**	03 05 24.2	-2.1	
AAI	**Ambon**	4.26	316	P	**Pn**	03 05 27.8	-0.9	
NLAI	**Namlea**	5.35	311	P	**Pn**	03 05 44.0	+0.4	
	1.3nm8μm339nm,0.5s							
SIJI	**Sorong**	5.89	1	P	Pn	03 05 45.1	-5.8	
	100nm,0.3s,baz=214,slow=17,SNR=125							
SIJI				S	Sn	03 06 43.5	-14	
	138nm,0.3s,baz=165,slow=10,SNR=23							
SIJI				LR	LR	03 09 21.7		
	comp=Z,562nm,18.8s,baz=124,slow=53							
KDU	**Kakadu**	6.00	167	P	**Pn**	03 05 50.5	-1.8	
	baz=6.1,SNR=526							
KDU				S	**Sn**	03 06 55.1	-4.7	
	baz=6.1							
MTN	**Manton Dam**	6.01	180	P	**Pn**	03 05 52.3	-0.3	
	baz=6.2,SNR=550							
MTN				S	**Sn**	03 06 56.5	-3.4	
	baz=6.2							
MTN	**Manton Dam**	6.01	180	Pn	**Pn**	03 05 52.0	-0.5	
MTN				Sn	**Sn**	03 06 57.3	-2.7	
RKPI	**Ransiki, Papua**	6.06	30	P	Pn	03 05 48.5	-4.8	
	42μm4μm,0.6s							
LBMI	**Labuha**	7.11	329	P	**Pn**	03 06 05.7	-1.8	
	2.4nm6μm598nm,1.0s							
SOEI	**Soe**	7.41	246	P	**Pn**	03 06 13.0	+1.4	
	48nm5μm481nm,0.8s							
SOEI	**Soe**	7.41	246	Pn	**Pn**	03 06 11.8	+0.2	
BAKI	**Biak**	7.46	42	P	Pn	03 06 07.3	-4.9	
	1.3nm3μm311nm,0.7s							
BATI	**Baumata**	8.13	245	P	Pn	03 05 49.4	-32	
TNTI	**Ternate**	8.41	333		Pn	03 06 20.1	-5.0	
TNTI					Sn	**03 07 50.5**	**-7.9**	
MMRI	**Maumere**	9.01	258	P	**Pn**	03 06 34.4	+1.1	
	5μm102nm,0.9s							
KNRA	**Kununurra**	9.13	195	P	**Pn**	03 06 34.4	-0.6	
	baz=9.3,SNR=276							
KNRA				S	**Sn**	03 08 12.6	-3.3	
	baz=9.3							
KNRA	**Kununurra**	9.13	195	Pn	**Pn**	03 06 34.2	-0.7	
MMPI	**Merauke**	9.31	101	P	**Pn**	03 06 35.6	-1.9	
EDFI	**Ende, Flores**	9.56	258	P	**Pn**	03 06 41.5	+0.6	
	30nm,0.9s							
BSSI	**Bau Bau, Buton**	10.60	273	P	**Pn**	03 06 56.3	+1.3	
	76nm,1.1s							
BASI	**Baing, Sumba**	10.98	251	P	**Pn**	03 07 00.4	+0.2	
	2μm174nm,0.8s							
BKSI	**Bulukumba**	11.05	277	P	Pn	03 07 07.3	+6.2	
APSI	**Ampana**	11.12	301	P	**Pn**	03 07 04.6	+2.5	
	874nm87nm,0.9s							
BNSI	**Bone**	11.23	282	P	Pn	03 07 15.9	+12	
KAPI	**Kappang**	11.46	278	P	**Pn**	03 07 05.5	-1.1	
	0.9nm,0.3s,baz=244,slow=21,SNR=1.3							
KAPI				S	**Sn**	03 09 06.4	-6.4	
	11nm,0.3s,baz=144,slow=4.5,SNR=8.7							
KAPI	**Kappang**	11.46	278	Pn	**Pn**	03 07 06.1	-0.5	
SPSI	**Sidrap Palu**	11.66	283	P	**Pn**	03 07 11.8	+2.5	
	1μm139nm,0.6s							
MRSI	**Marisa**	11.68	308	P	**Pn**	03 07 09.0	-0.5	
	2μm136nm,1.0s							
TTSI	**Tana Toraja**	11.87	288	P	**Pn**	03 07 16.3	+4.2	
	2μm56nm,1.2s							
WBSI	**Waikabubak, Su**	11.96	256	P	**Pn**	03 07 14.3	+0.9	
	87nm,0.8s							
FITZ	**Fitzroy Crossi**	12.45	205	P	**Pn**	03 07 17.1	-2.6	
	110nm,0.3s,baz=39,slow=12,SNR=249							
FITZ				S	Sn	03 09 28.3	-8.3	
	10nm,0.3s,baz=123,slow=14,SNR=4.7							
FITZ				LR	LR	03 13 20.8		
	comp=Z,262nm,18.1s,baz=6.5,slow=42							
FITZ	**Fitzroy Crossi**	12.45	205	P	**Pn**	03 07 17.0	-2.6	
	baz=13							
FITZ				S	**Sn**	03 09 29.9	-6.7	
	baz=13							
FITZ	**Fitzroy Crossi**	12.45	205	Pn	**Pn**	03 07 19.3	-0.5	
MPSI	**Mapaga**	13.26	302	P	**Pn**	03 07 30.4	-0.1	
	588nm19nm,0.5s							
PLAI	**Plampang**	13.39	260	P	**Pn**	03 07 30.9	-1.3	
	94nm,0.5s							
WRA	**Warramunga Arr**	13.43	167	P	Pn	03 07 27.7	-5.0	
	22nm,0.3s,baz=348,slow=14,SNR=98							
WRA				S	Sn	03 09 49.2	-11	
	28nm,0.3s,baz=350,slow=23,SNR=8.4							
WRA	**Warramunga Arr**	13.43	167	Pn	Pn	03 07 28.3	-4.4	
WC3	**Warramunga Arr**	13.46	167	P	Pn	03 07 27.9	-5.1	
	baz=14							
COEN	**Coen**	13.81	122	P	Pn	03 07 32.1	-5.6	
	baz=14,SNR=68							
COEN	**Coen**	13.81	122	Pn	**Pn**	03 07 33.4	-4.3	
TWSI	**Taliwang, Sumb**	14.25	261	P	**Pn**	03 07 43.3	-0.1	
	16nm,0.7s							
DAV	**Davao City (W)**	14.85	338	LR	LR	03 15 06.3		
	comp=Z,169nm,20.6s,baz=165,slow=44							
BKB	**Balikpapan**	15.23	291	P	**P**	03 08 02.4	+4.0	
KBKI	**Kotabaru**	15.31	282	P	**P**	03 07 59.6	+0.3	
	30nm,0.8s							
QIS	**Mount Isa**	15.95	150	P	**Pn**	03 08 01.3	-3.6	
	baz=16,SNR=39							
PMG	**Port Moresby**	16.07	100	P	**Pn**	03 08 02.3	-4.1	
	5.5nm,0.3s,baz=279,slow=7.7,SNR=18							
PMG	**Port Moresby**	16.07	100	P	**Pn**	03 08 03.4	-3.0	
PMG				IAmb	IAmb	03 08 07.2		
	comp=Z,109nm,0.7s							
BBKI	**Banjar Baru**	16.56	281	P	**P**	03 08 15.8	+2.5	
	comp=Z,4μmcomp=Z,295nm,0.8s							
JAGI	**Jajag, Banyuwa**	16.91	263	P	**Pn**	03 08 17.4	+0.6	
	comp=Z,50nm,0.5s							
ASAR	**Alice Springs**	16.98	171	P	**Pn**	03 08 14.6	-3.0	
	comp=Z,9.1nm,0.3s,baz=351,slow=14,SNR=67							
ASAR				S	**Sn**	03 11 16.1	-10	
	comp=Z,8.8nm,0.3s,baz=351,slow=23,SNR=16							
ASAR	**Alice Springs**	16.98	171	Pn	**Pn**	03 08 17.5	0.0	
MTSU	**Mount Surprise**	17.09	132	P	**Pn**	03 08 16.4	-2.5	
	baz=17,SNR=17							
MTKI	**Muara Teweh, K**	17.21	289	P	**Pn**	03 08 21.1	+0.7	
MYLDM	**Lahad Datu**	17.34	313		**P**	03 08 18.9	-2.9	
MYLDM				IAmb	IAmb	03 08 33.3		
	comp=Z,54nm,1.0s							
PSA00	**Pilbara Seismi**	18.30	215	P	**Pn**	03 08 34.0	+0.5	
PSA00				IAmb	IAmb	03 08 50.9		
	comp=Z,38nm,0.7s							
WRKA	**Warakurna**	18.34	188	P	**P**	03 08 32.9	+0.1	
	baz=19,SNR=61							
SPMM	**Sapulut**	18.57	308	P	**Pn**	03 08 37.0	+0.2	
KKM	**Kota Kinabalu**	19.61	310	P	**P**	03 08 45.1	-1.6	
CTA	**Charters Tower**	19.74	133	P	**P**	03 08 47.8	-0.3	
	comp=Z,0.9nm,0.3s,baz=313,slow=13,SNR=7.1							
CTA				S	**Sn**	03 12 34.0	+1.4	
	comp=Z,0.9nm,0.3s,baz=313,slow=20,SNR=3.8							
CTAO	**Charters Tower**	19.74	133	P	**P**	03 08 46.6	-1.5	
SBUM	**Sibu**	21.00	295	P	**P**	03 09 01.9	+0.2	
SBUM				IAmb	IAmb	03 09 05.1		
	comp=Z,71nm,0.8s							
SBUM	**Sibu**	21.00	295	P	**P**	03 09 02.0	+0.3	
KSM	**Kuching**	22.35	291	P	**P**	03 09 15.7	-0.3	
KSM				IAmb	IAmb	03 09 19.1		
	comp=Z,22nm,0.8s							
KSM	**Kuching**	22.35	291	P	**P**	03 09 16.0	0.0	
MEEK	**Meekatharra**	23.05	210	P	**P**	03 09 24.7	+1.7	
	baz=23,SNR=16							
TGY	**Tagaytay City**	23.10	334	P	**P**	03 09 22.7	-0.8	
	comp=Z,155nm,0.4s,baz=334,slow=3.1,SNR=3.5							
CISI	**Cisompet, Garu**	23.15	267	P	**P**	03 09 25.1	+1.0	
LEM	**Lembang**	23.35	269	P	**P**	03 09 27.9	+1.8	
	comp=Z,77nm,0.8s,baz=26,slow=23,SNR=9.2							
FORT	**Forrest**	24.03	187	P	**P**	03 09 34.4	+2.6	
	baz=24,SNR=7.7							
FORT	**Forrest**	24.03	187	P	**P**	03 09 32.9	+1.0	
KMBL	**Kambalda**	25.93	198	P	**P**	03 09 51.3	+2.2	
	baz=26,SNR=11							
BBOO	**Buckleboo**	26.29	171	P	**P**	03 09 53.4	+1.1	
	baz=26,SNR=29							
BBOO	**Buckleboo**	26.29	171	P	**P**	03 09 53.2	+1.0	
BBOO				IAmb	IAmb	03 09 54.0		
	comp=Z,17nm,0.7s							
MORW	**Morawa**	26.34	211	P	**P**	03 09 56.3	+3.5	
	baz=27,SNR=4.8							
MORW	**Morawa**	26.34	211	P	**P**	03 09 54.3	+1.5	
STKA	**Stephens Creek**	26.80	160	P	**P**	03 09 57.9	+1.1	
	comp=Z,6.3nm,0.3s,baz=339,slow=8.5,SNR=18							
STKA	**Stephens Creek**	26.80	160	P	**P**	03 09 58.0	+1.1	
	baz=27,SNR=17							
STKA	**Stephens Creek**	26.80	160	P	**P**	03 09 57.7	+0.8	
HTT	**Hallett**	27.47	166	P	**P**	03 10 04.3	+1.4	
	baz=28,SNR=7.9							
CMSA	**Cobar Meteorol**	28.13	153	P	**P**	03 10 10.1	+1.4	
	baz=28,SNR=6.5							
RKGY	**Rocky Gully**	30.61	203	P	**P**	03 10 34.8	+4.2	
	baz=31,SNR=5.5							
ARPS	**Mount Arapiles**	31.39	163	P	**P**	03 10 39.7	+2.2	
	baz=32,SNR=6.7							
IPM	**Ipoh**	32.08	290	P	**P**	03 10 47.0	+3.2	
KULM	**Kulim**	32.71	291	P	**P**	03 10 49.0	-0.4	
TOO	**Toolangi**	33.30	159	P	**P**	03 10 57.0	+2.7	
	baz=33,SNR=4.6							
RPSI	**Rantau Prapat**	33.51	285	P	**P**	03 10 55.5	-0.8	
RPSI				IAmb	IAmb	03 10 60.0		
	comp=Z,17nm,0.9s							
KHON	**Khomkaen**	36.24	310	P	**P**	03 11 20.4	+0.6	
	comp=Z,116nm,0.8s							
CHAI	**Chaiyaphum**	36.63	308	P	**P**	03 11 23.0	-0.1	
	comp=Z,2μmcomp=Z,110nm,0.5s							
PHET	**Kaeng Krachan**	36.92	302	P	**P**	03 11 26.5	+0.9	
	comp=Z,57nm,0.8s							
PHET	**Kaeng Krachan**	36.92	302	P	**P**	03 11 26.5	+0.9	
	comp=Z,57nm,0.8s							
DZM	**Mont Dzumac**	37.28	118	P	**P**	03 11 28.7	0.0	
	comp=Z,5.3nm,0.6s,baz=256,slow=9.0,SNR=9.8							
UTHA	**Uthaitani**	38.46	305	P	**P**	03 11 38.0	-0.5	
	comp=Z,728nmcomp=Z,84nm,0.7s							
PHIT	**Phitsanulok**	38.60	308	P	**P**	03 11 40.0	+0.3	
	comp=Z,172nm,0.8s							
PHIT	**Phitsanulok**	38.60	308	P	**P**	03 11 40.0	+0.3	
SUKH	**Sukhothai**	39.38	308	P	**P**	03 11 47.0	+0.8	
	comp=Z,50nm,1.0s							
NJ2	**Nanjing**	40.37	344	*e*P	**P**	03 11 54.3	+0.2	
NJ2				pmax	pmax			
	comp=Z,32nm,0.7s							
CM04	**Chiang Mai Arr**	40.41	309	P	**P**	03 11 56.0	+1.2	
	comp=Z,17nm,0.9s							
CM09	**Chiang Mai Arr**	40.43	309	P	**P**	03 11 56.5	+1.6	
	comp=Z,14nm,0.9s							
CM01	**Chiang Mai Arr**	40.44	309	P	**P**	03 11 56.5	+1.6	
	comp=Z,18nm,1.1s							
CM05	**Chiang Mai Arr**	40.44	309	P	**P**	03 11 56.0	+1.0	
	comp=Z,14nm,1.0s							
CM02	**Chiang Mai Arr**	40.46	309	P	**P**	03 11 56.3	+1.2	
	comp=Z,145nmcomp=Z,19nm,0.9s							
WHN	**Wuhan**	40.47	337	⇓P	**P**	03 11 55.3	+0.3	
WHN				pmax	pmax			
	comp=Z,100nm,1.0s							
CMAR	**Chiang Mai Arr**	40.47	309	P	**P**	03 11 56.0	+0.8	
	comp=Z,8.9nm,0.8s,baz=140,slow=7.5,SNR=30							
CMAR				PcP	**PcP**	03 13 58.4	+2.1	
	comp=Z,1.9nm,0.4s,baz=164,slow=3.6,SNR=4.6							
CMAR	**Chiang Mai Arr**	40.47	309	P	**P**	03 11 54.3	-1.0	
CMAR				PcP	**PcP**	03 13 56.7	+0.4	
CM13	**Chiang Mai Arr**	40.48	309	P	**P**	03 11 56.5	+1.1	
	comp=Z,116nmcomp=Z,17nm,1.0s							
CM15	**Chiang Mai Arr**	40.48	309	P	**P**	03 11 56.5	+1.1	
	comp=Z,15nm,0.6s							
CMMT	**Chiang Mai**	40.67	309	P	**P**	03 11 57.6	+0.7	
CHTO	**Chiang Mai**	40.68	309	P	**P**	03 11 55.6	-1.4	
CHTO				IAmb	IAmb

comp=Z,147nm,0.5s
GUN Gumba 55.67 310 *e*P P **03 13 52.8 +0.2**
comp=Z,115nm,0.6s
PKI Pulchoki 55.86 310 *e*P P **03 13 53.8 -0.1**
PKIN Phulchoki 55.87 310 *e*P P **03 13 53.8 -0.2**
KKN Kakani 56.07 310 *e*P P **03 13 55.4 +0.1**
DMN Daman 56.11 310 *e*P P **03 13 55.9 +0.3**
GKN Gorkha 56.66 310 *e*P P **03 13 59.7 +0.2**
KOLN Koldanda 57.34 309 *e*P P **03 14 04.8 +0.5**
DANN Dangsing 57.51 310 *e*P P **03 14 05.7 +0.1**
comp=Z,39nm,0.5s
PYUN Piuthan 57.98 309 *e*P P **03 14 09.3 +0.5**
SONM Songino Array 58.61 341 P P **03 14 13.3 +0.6**
comp=Z,3.9nm,0.4s,baz=161,slow=7.6,SNR=2.5
SONM Songino Array 58.61 341 P P **03 14 11.1 -1.6**
PETK Petropavlovsk- 63.79 17 P P **03 14 47.3 0.0**
comp=Z,7.1nm,0.8s,baz=175,slow=5.2,SNR=11
PETK Petropavlovsk- 63.79 17 P P **03 14 45.8 -1.6**
WMQ Urumqi 63.84 326 *e*P P **03 14 49.4 +1.4**
WMQ pmax pmax
comp=Z,26nm,1.9s
WMQ pmax pmax
comp=Z,650nm,6.3s
WMQ LR LR
comp=Z,1μm,29.0s
WMQ LR LR
comp=Z,2μm,29.1s
WMQ LR LR
comp=Z,190nm,20.5s
NIL Nilore 67.94 310 P P **03 15 14.3 -0.2**
NIL lAmb lAmb 03 15 16.5
comp=Z,8.2nm,0.6s
SHLS Shalkode 68.25 322⇑ *i*P P **03 15 15.8 -0.5**
comp=Z,18nm,0.6s,baz=322
SHLS *e*S S **03 24 11.5 +2.2**
baz=322
KSH Kashi 68.64 317 *e*P P **03 15 20.4 +1.6**
KSH pmax pmax
comp=Z,46nm,0.7s
KSH pmax pmax
comp=Z,210nm,3.9s
MKAR Makanchi Array 68.68 326 P P **03 15 19.6 +0.8**
comp=Z,21nm,0.4s,baz=118,slow=7.3,SNR=118
MKAR Makanchi Array 68.68 326 P P **03 15 18.4 -0.4**
SATY Saty 68.85 321⇑ *i*P P **03 15 21.3 +1.2**
comp=Z,14nm,0.6s,baz=322
KPKS Kokpek 68.90 322⇑ *i*P P **03 15 21.3 +1.0**
comp=Z,16nm,0.5s,baz=322
KDJ Kajisay 69.14 320 P P **03 15 21.3 -0.7**
TNSS Tian-Shan 69.75 321 *i*P P **03 15 27.5 +1.5**
baz=321
MDOK Medeo 69.75 321 *i*P P **03 15 26.9 +1.2**
baz=321
MDOK *e*S S **03 24 32.3 +5.2**
baz=321
TDK Taldyqorghan 69.89 323 *e*P P **03 15 27.0 +0.7**
baz=323
CHKK Chushkaly 70.15 321 *e*P P **03 15 28.4 +0.5**
baz=322
TKM2 Tokmak 2 70.55 320 P P **03 15 31.8 +1.2**
SNR=16
KUU Kurty 70.57 321⇑ *i*P P **03 15 31.4 +0.9**
comp=Z,31nm,0.7s,baz=321
KBK Karagaybulak 70.83 320 P P **03 15 34.0 +1.7**
SNR=6.3
UCH Uchtor 70.91 319 P P **03 15 34.8 +1.7**
SNR=6.6
AAK Ala-Archa 71.12 319 P P **03 15 35.5 +1.4**
SNR=13
AML Almayashu 71.40 319 P P **03 15 37.6 +1.6**
SNR=17
SEY Seymchan 71.41 10 P P **03 15 35.1 +0.1**
comp=Z,7.8nm,0.6s,baz=207,slow=5.0,SNR=13
USP Ospenovka 71.42 320 P P **03 15 36.4 +0.7**
SNR=17
SGDS Sogindy 71.42 320⇑ *i*P P **03 15 36.5 +0.7**
comp=Z,6.5nm,0.8s,baz=320
KBL Kabul 71.50 310 P P **03 15 37.0 +0.5**
SNR=6.1
KBL Kabul 71.50 310 P P **03 15 36.0 -0.5**
KBL lAmb lAmb 03 15 38.8
comp=Z,17nm,0.8s
EKS2 Erkin-Say 71.59 319 P P **03 15 38.4 +1.6**
SNR=12
ZALV Zalesovo Beam 71.90 333 P P **03 15 37.7 -0.6**
comp=Z,6.7nm,0.6s,baz=133,slow=6.2,SNR=7.9
ZALV LR LR 03 49 53.0
comp=Z,30nm,21.0s,baz=66,slow=38
ZALV Zalesovo Beam 71.90 333 P P **03 15 37.3 -0.9**
GAR Garm 72.33 314 P P **03 15 41.2 -0.1**
BTK Batken 72.42 316 P P **03 15 41.1 -0.6**
BTK lAmb lAmb 03 15 44.6
comp=Z,10nm,0.6s
VNDA Vanda 72.52 173 P P **03 15 43.5 +1.9**
comp=Z,0.6nm,0.7s,baz=324,slow=7.9,SNR=5.3
BTLS Baital 72.56 321 *i*P P **03 15 43.0 +0.6**
baz=322
KURBB Kurchatov Arra 72.93 328 P P **03 15 44.7 +0.3**
comp=Z,9.9nm,0.5s,baz=126,slow=4.9,SNR=38
KURK Kurchatov 72.94 328 P P **03 15 44.1 -0.3**
KURK lAmb lAmb 03 15 45.8
comp=Z,27nm,1.1s
CHGR Chuyangaron 73.01 314 P P **03 15 45.2 -0.2**
DZA Taraz 73.30 318 *e*P P **03 15 47.4 +0.6**
baz=319
IUG Iuzhnay 73.84 317 *e*P P **03 15 51.3 +1.1**
comp=Z,15nm,1.3s,baz=318
KK31 Karatay Array 73.93 318 P P **03 15 50.4 -0.1**
KK31 lAmb lAmb 03 15 52.2
comp=Z,6.7nm,0.8s
KKAR Karatay Array 73.93 318 P P **03 15 50.5 -0.1**
KKAR lAmb lAmb 03 15 52.2
comp=Z,6.7nm,0.8s
KKAR Karatay Array 73.93 318 P P **03 15 50.3 -0.2**
MAW Mawson 75.55 202 P P **03 16 02.2 +2.8**
comp=Z,2.2nm,0.7s,baz=16,slow=5.2,SNR=4.5
MAW Mawson 75.55 202 P P **03 16 01.6 +2.2**
BRZS Berezniki 75.78 325⇑ *i*P P **03 16 01.5 +0.4**
comp=Z,9.9nm,1.0s,baz=326
JLN Jalan Bani Buh 75.84 295 P P **03 16 03.1 +1.2**
MHTO MHTO 76.89 293 P P **03 16 08.9 +1.1**
JMDO Jabal Madar 77.07 295 P P **03 16 11.7 +2.8**
BSY Bisya 77.97 295 P P **03 16 14.9 +1.0**
HOQ Hoqain 78.05 296 P P **03 16 15.8 +1.5**
TIXI Tiksi 78.30 359 P P **03 16 13.8 -0.8**
BVAR Borovoye Array 78.50 327 P P **03 16 15.7 -0.4**
comp=Z,2.9nm,0.5s,baz=127,slow=13,SNR=20
BRVK Borovoye 78.57 327 P P **03 16 16.3 -0.2**
BRVK lAmb lAmb 03 16 17.7
comp=Z,13nm,0.9s
SOHO SOHO 78.87 296 P P **03 16 19.8 +1.0**
SOCY Socotra 78.97 284 P P **03 16 20.6 +1.0**
SNR=18
DMTO DMTO 79.02 289 P P **03 16 21.0 +1.2**
SNR=6.5
UOSS Minazif 79.33 297 P P **03 16 22.3 +1.0**
UOSS Minazif 79.33 297 P P **03 16 21.5 +0.2**
ASHO Ashiyiah 79.41 297 P P **03 16 23.2 +1.5**
BANOM Banah 79.47 298 P P **03 16 23.7 +1.6**
SNR=9.1
WHFO Wadi Hawf 80.16 289 P P **03 16 26.6 +0.6**
SNR=23
ABTO Aybut 80.51 289 P P **03 16 29.3 +1.5**
SNR=14
GEYT Alibeck 80.94 310 P P **03 16 30.9 +1.1**
comp=Z,9.2nm,0.6s,baz=167,slow=8.4,SNR=10
GEYT Alibeck 80.94 310 P P **03 16 29.9 +0.1**
GYA0B ALIBECK ARRAY 80.94 310 P P **03 16 29.8 0.0**
GYA0B lAmb lAmb 03 16 31.4
comp=Z,9.9nm,0.6s
NRIK Noril'sk 81.64 346 P P **03 16 32.8 +0.1**
comp=Z,4.5nm,0.6s,baz=138,slow=3.4,SNR=5.4
ABKAR Akbulak array 83.05 321 P P **03 16 40.5 0.0**
ABKAR Akbulak array 83.05 321 P P **03 16 40.5 0.0**
QSPA South Pole Qui 83.18 180 P P **03 16 43.0 +2.0**
comp=Z,1.8nm,0.7s,baz=190,slow=1.0,SNR=3.5
QSPA South Pole Qui 83.18 180 P P **03 16 42.6 +1.6**
SYO Syowa Base 84.26 201⇑ *e*P P **03 16 47.8 +1.5**
SYO Syowa Base 84.26 201⇓ *e*pP pP 03 17 10.4 -1.4
AKTO Aktyubinsk 84.60 322 P P **03 16 48.8 +0.4**
comp=Z,5.5nm,0.7s,baz=101,slow=5.3,SNR=14
AKTO LR LR 03 58 06.1
comp=Z,40nm,19.0s,baz=134,slow=38
ARU Arti 86.13 328 P P **03 16 55.9 +0.1**
comp=Z,1.8nm,0.5s,baz=167,slow=3.6,SNR=6.9
ARU Arti 86.13 328 P P **03 16 55.6 -0.2**
ARU lAmb lAmb 03 16 56.2
comp=Z,7.7nm,0.6s
RAYN Ar Rayn 88.70 294 P P **03 17 09.2 +0.3**
RAYN lAmb lAmb 03 17 10.9
comp=Z,12nm,0.8s
ILAR Eielson Array 92.68 25 P P **03 17 24.8 -1.7**
comp=Z,0.8nm,0.6s,baz=247,slow=4.5,SNR=5.8
ARCES ARCESS Array B 101.78 340 PKiKP **PKiKP 03 22 30.7 +0.6**
comp=Z,5.7nm,1.1s,baz=81,slow=0.9,SNR=7.6
FINES FINESS Array B 103.12 332 PKiKP **PKiKP 03 22 33.7 +0.9**
comp=Z,1.6nm,0.9s,baz=123,slow=5.1,SNR=4.1
YKA Yellowknife Ar 107.07 26 PKiKP **PKiKP 03 22 40.5 +0.4**
comp=Z,0.7nm,0.6s,baz=307,slow=0.8,SNR=5.9
NVAR Mina Array Bea 110.28 52 PKKPbc PKKPbc 03 33 50.0 +0.8
comp=Z,0.2nm,0.5s,baz=85,slow=2.1,SNR=4.4
CLL Collm 112.67 323 *e*PKiKP **PKiKP 03 22 51.0 +0.1**
GERES GERESS Array B 112.98 320 PKiKP **PKiKP 03 22 52.2 +0.5**
comp=Z,1.0nm,0.6s,baz=64,slow=3.1,SNR=8.7
WTTA Wattenberg 114.78 319 *e*P **PKiKP 03 22 55.8 +0.5**
comp=Z,2.5nm,0.4s
WATA Walderalm 114.80 319 *e*P **PKiKP 03 22 55.5 +0.2**
comp=Z,1.6nm,0.5s
SQTA Sankt Quirin 115.07 319 *e*P **PKPdf 03 22 56.3 +0.5**
comp=Z,1.7nm,0.8s
MOTA Moosalm 115.10 319 *e*P **PKiKP 03 22 56.2 +0.3**
comp=Z,2.2nm,0.5s
FETA Feichten 115.44 319 *e*P **PKiKP 03 22 57.1 +0.5**
comp=Z,3.7nm,0.9s
DAVA Damuels 115.91 320 *i*P **PKiKP 03 22 58.0 +0.5**
comp=Z,3.8nm,0.5s
PDAR Pinedale Array 115.94 46 PKKPbc PKKPbc 03 33 30.1 -0.2
comp=Z,0.3nm,0.7s,baz=97,slow=4.6,SNR=3.5
ULM Lac du Bonnet 121.66 33 PKP **PKPdf 03 23 08.2 0.0**
comp=Z,0.8nm,0.4s,baz=189,slow=20,SNR=1.7
ULM Lac du Bonnet 121.66 33 **PKPdf 03 23 08.1 -0.1**
TXAR Lajitas Array 123.86 59 PKP **PKiKP 03 23 14.4 +0.9**
comp=Z,0.2nm,0.5s,baz=205,slow=3.1,SNR=5.3
TXAR Lajitas Array 123.86 59 **PKPdf 03 23 12.5 -0.7**
TORD Torodi Ar. Bea 129.88 281 PKP **PKiKP 03 23 26.5 +0.8**
comp=Z,1.9nm,0.5s,baz=70,slow=2.0,SNR=13
SCHQ Schefferville 129.97 13 PKP **PKPdf 03 23 24.8 +0.7**
comp=Z,4.6nm,0.7s,baz=293,slow=2.0,SNR=5.0
SCHQ Schefferville 129.97 13 **PKPdf 03 23 24.1 +0.1**
DBIC Dimbokro 136.31 273 PKP **PKiKP 03 23 39.8 +1.0**
comp=Z,3.0nm,0.5s,baz=93,slow=4.0,SNR=7.1
CPUP Villa Florida 146.06 166 PKPbc **PKPab 03 23 56.4 +0.5**
comp=Z,2.1nm,0.8s,baz=215,slow=4.0,SNR=6.2
LPAZ La Paz 150.17 140 PKPbc **PKiKP 03 24 09.0 +1.1**
comp=Z,2.7nm,0.6s,baz=122,slow=2.3,SNR=9.1

*IDC **19** 03:05:44.6±0.5,42.°84N×105.°46E,h0km,mb4.4/31, mb1 4.5/39,mb1mx4.4/64,mbtmp4.4/39,ML3.8/8,MS3.6/16, Ms1 3.6/16,ms1mx3.4/44,Error ellipse: s-maj=11.5km s-min=9.1km az=1.0*
*MOS **19** 03:05:44.3±0.7,42.°83N×105.°39E,h14km,mb4.8/30, MS4.1/7,Error ellipse: s-maj=7.1km s-min=5.0km az=121.4*
*BJI **19** 03:05:45.9±0.0,42.°84N×105.°44E,h5km,mB4.8/24, mb4.6/29,ML5.0/18,Ms4.5/34,Ms7 4.3/28*
*NEIC **19** 03:05:47.0±0.9,42.°81N±0.°06×105.°4E±0.°1,h16km±4km, mb4.7/69,Error ellipse: s-maj=11.7km s-min=9.4km az=81.0*
ISC 19 03:05:46.5±0.3,42.°86N±0.°03×105.°41E±0.°03,h10km,n244, σ1s65/255,mb4.7/92,MS3.9/13,4C-3D,Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**4.12**	**122**	*e*Pn	**Pn**	**03 06 47.8**	**-1.8**
BTO				Sg	**Sb**	**03 07 47.5**	**-1.6**
HHC	**Hu-ho-hao-te**	**5.02**	**112**	*e*Pn	**Pn**	**03 07 01.4**	**-0.5**
HHC				Pg	**Pg**	**03 07 18.9**	**-3.7**
HHC				Sn	**Sn**	**03 07 58.8**	**-1.2**
HHC				Sg	**Sb**	**03 08 14.6**	**-0.3**
HHC				smax	smax		
	comp=N,3μm,0.8s						
HHC				smax	smax		
	comp=E,3μm,0.6s						
SONM	**Songino Array**	**5.02**	**8**	Pn	**Pn**	**03 07 03.0**	**+1.0**
	29nm,0.3s,baz=186,slow=14,SNR=72						
SONM				Pg	**Pb**	**03 07 17.4**	**+2.9**
	35nm,0.3s,baz=189,slow=15,SNR=10						
SONM				Lg	Lg	03 08 24.0	
	116nm,0.3s,baz=192,slow=32,SNR=11						
SONM				LR	LR	03 09 23.8	
	comp=Z,564nm,20.9s,baz=201,slow=44						
SONM	**Songino Array**	**5.02**	**8**	P	**Pn**	**03 07 03.0**	**+1.0**
SONM	**Songino Array**	**5.02**	**8**		**Pn**	**03 07 02.9**	**+1.0**
SONM				Sn	**Sn**	**03 07 59.9**	**-0.2**
ULN	**Ulaanbaatar**	**5.14**	**12**	*c*P	**Pn**	**03 07 03.6**	**0.0**
ULN	**Ulaanbaatar**	**5.14**	**12**	Pn	**Pn**	**03 07 04.3**	**+0.7**
ULN				Sn	**Sn**	**03 08 03.5**	**+0.5**
GTA	**Gaotai**	**5.45**	**233**	Pn	**Pn**	**03 07 07.8**	**-0.1**
GTA				Pg	**Pb**	**03 07 22.8**	**+1.0**
GTA				Sn	**Sn**	**03 08 08.9**	**-1.8**
GTA				Sg	**Sb**	**03 08 32.6**	**+5.3**
GTA				smax	smax		
	comp=N,1μm,1.1s						
GTA				smax	smax		
	comp=E,1μm,1.2s						
GTA				LR	LR		
	comp=N,3μm,8.4s						
GTA				LR	LR		
	comp=E,3μm,10.2s						
GTA				LR	LR		
	comp=Z,3μm,9.1s						
LZH	**Lanzhou**	**6.87**	**191**	Pn	**Pn**	**03 07 27.9**	**+0.5**
LZH				Pg	Pg	03 07 52.0	-6.1
LZH				Sn	**Sn**	**03 08 47.5**	**+1.7**
LZH				Sg	**Sg**	**03 09 21.8**	**-5.2**
LZH				smax	smax		
	comp=N,1μm,1.0s						
LZH				smax	smax		
	comp=E,1μm,0.9s						
LZH				LR	LR		
	comp=N,2μm,5.4s						
LZH				LR	LR		
	comp=E,4μm,6.5s						
LZH				LR	LR		
	comp=Z,2μm,7.3s						
TIY	**Taiyuan**	**7.43**	**131**	Pn	**Pn**	**03 07 36.1**	**+1.0**
TIY				Pg	**Pb**	**03 07 59.4**	**+3.8**
TIY				Sn	**Sn**	**03 09 00.9**	**+1.4**
TIY				Sg	**Sb**	**03 09 30.5**	**+6.2**
TIY				smax	smax		
	comp=N,1μm,0.9s						
TIY				smax	smax		
	comp=E,490nm,0.8s						
ZAK	**Zakamensk**	**7.66**	**350**	*e*P	**Pn**	**03 07 39.2**	**+1.0**
TLY	**Talaya**	**8.90**	**353**	Pn	**Pn**	**03 07 56.4**	**+1.3**
	0.1nm,0.3s,baz=172,slow=8.3,SNR=20						
TLY				Lg	Lg	03 10 29.9	
	0.1nm,0.3s,baz=279,slow=17,SNR=4.4						
TLY				LR	LR	03 11 41.2	
	comp=Z,369nm,20.2s,baz=150,slow=40						
TLY	**Talaya**	**8.90**	**353**	*e*P	**Pn**	**03 07 56.3**	**+1.2**
TLY				*e*S	**Sn**	**03 09 38.2**	**+2.7**
TLY				pmax	pmax		
	comp=Z,93nm,0.6s						
TLY				MLR	MLR		
	comp=Z,2μm,7.0s						
TLY	**Talaya**	**8.90**	**353**	Pn	**Pn**	**03 07 56.0**	**+0.8**
XAN	**Xi'an**	**9.23**	**161**	P	**Pn**	**03 07 58.0**	**-1.6**
XAN				smax	smax		
	comp=Z,260nm,1.0s						
XAN				smax	smax		
	comp=Z,150nm,1.0s						
XAN				LR	LR		
	comp=Z,540nm,8.1s						
XAN				LR	LR		
	comp=Z,720nm,7.6s						
XAN				LR	LR		
	comp=Z,800nm,17.4s						
XAN	**Xi'an**	**9.23**	**161**	P	**Pn**	**03 07 58.4**	**-1.2**
XAN	**Xi'an**	**9.23**	**161**	Pn	**Pn**	**03 07 58.4**	**-1.2**
MOY	**Mondy**	**9.30**	**343**	*e*P	**Pn**	**03 08 02.2**	**+1.5**
MOY				*e*S	**Sn**	**03 09 45.9**	**+0.5**
IRK	**Irkutsk**	**9.42**	**356**	*e*P	**Pn**	**03 08 03.3**	**+1.1**
HIA	**Hailar**	**11.83**	**52**	*i*P	**Pn**	**03 08 36.3**	**+1.1**
HIA	**Hailar**	**11.83**	**52**	Pn	**Pn**	**03 08 36.1**	**+0.9**
HIA					**Sn**	**03 10 47.6**	**+0.4**
CD2	**Chengdu**	**12.00**	**187**	*e*P	**Pn**	**03 08 38.4**	**+0.8**
WMQ	**Urumqi**	**12.93**	**280**	*e*P	**Pn**	**03 08 52.1**	**+1.8**
WMQ				pP		03 08 54.9	
WMQ				sP		03 09 01.3	
WMQ				S	**Sn**	**03 11 17.6**	**+3.3**
WMQ				pmax	pmax		
	comp=Z,15nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.7s						
ENH	**Enshi**	**12.98**	**164**	Pn	**Pn**	**03 08 48.5**	**-2.6**
SNY	**Shenyang**	**13.48**	**88**	⇑P	**P**	**03 09 08.5**	**+1.4**
SNY				S	S	03 12 45.9	+55
SNY				pmax	pmax		
	comp=Z,14nm,0.7s						
SNY				pmax	pmax		
	comp=Z,76nm,6.0s						
SNY				LR	LR		
	comp=N,2μm,11.8s						
SNY				LR	LR		
	comp=E,2μm,8.2s						
SNY				LR	LR		
	comp=Z,2μm,9.8s						
WHN	**Wuhan**	**14.22**	**147**	⇑P	**Pn**	**03 09 09.9**	**+2.0**
WHN				S	**Sn**	**03 11 47.8**	**+2.1**
WHN				LR	LR		
	comp=Z,2μm,14.0s						
WHN				LR	LR		
	comp=Z,1μm,10.6s						
CN2	**Changchun**	**14.62**	**79**	*e*P	**Pn**	**03 09 14.6**	**+1.3**
CN2				*e*S	**Sn**	**03 11 56.3**	**+1.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				pmax	pmax		
	comp=Z,100nm,7.0s						
CN2				LR	LR		
	comp=Z,400nm,10.0s						
CN2				LR	LR		
	comp=Z,400nm,10.0s						
CN2				LR	LR		
	comp=Z,700nm,10.0s						
NJ2	**Nanjing**	**15.16**	**131**	*e*P	**Pn**	**03 09 21.8**	**+1.2**
NJ2				S	**Sn**	**03 12 11.5**	**+3.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,390nm,4.5s						
NJ2				LR	LR		
	comp=Z,800nm,11.8s						
NJ2				LR	LR		
	comp=Z,810nm,16.6s						
NJ2				LR	LR		
	comp=Z,830nm,11.4s						
ZSN	**Zaisan**	**15.19**	**295**	*e*P	**Pn**	**03 09 20.5**	**-0.5**
	baz=294						
ZSN	**Zaisan**	**15.19**	**295**	*e*P	**Pn**	**03 09 20.4**	**-0.5**
BOD	**Bodaibo**	**15.93**	**17**	*e*P	**P**	**03 09 35.3**	**+1.2**
BOD				pmax	pmax		
	comp=Z,17nm,1.4s						
GYA	**Guiyang**	**16.40**	**176**	⇓P	**P**	**03 09 39.9**	**+0.3**
GYA				pmax	pmax		
	comp=Z,61nm,0.9s						
GYA				pmax	pmax		
	comp=Z,250nm,3.8s						
MK31	**Makanchi Array**	**16.85**	**291**	*i*P	**Pn**	**03 09 40.5**	**-1.8**
MK31	**Makanchi Array**	**16.85**	**291**	P	**Pn**	**03 09 42.2**	**-0.1**
MKAR	**Makanchi Array**	**16.85**	**291**	Pn	**Pn**	**03 09 42.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=93,slow=15,SNR=3.3						
MKAR				Lg	Lg	03 14 50.6	
	comp=Z,0.2nm,0.3s,baz=86,slow=30,SNR=4.8						
MKAR				LR	LR	03 15 17.9	
	comp=Z,64nm,19.0s,baz=92,slow=34						
MKAR	**Makanchi Array**	**16.85**	**291**	Pn	**Pn**	**03 09 42.1**	**-0.2**
MAKZ	**Makanchi**	**17.06**	**291**	P	**Pn**	**03 09 45.3**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.7s						
MAKZ	**Makanchi**	**17.06**	**291**	P	**Pn**	**03 09 45.3**	**+0.3**
LSA	**Lhasa**	**17.42**	**226**	P	**P**	**03 09 52.0**	**+0.7**
LSA				pmax	pmax		
	comp=Z,20nm,0.7s						
ZALV	**Zalesovo Beam**	**17.53**	**316**	P	**P**	**03 09 52.6**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=99,slow=8.9,SNR=5.8						
ZALV				Lg	Lg	03 14 53.8	
	comp=Z,0.2nm,0.3s,baz=115,slow=21,SNR=5.6						
ZALV				LR	LR	03 16 48.5	
	comp=Z,192nm,20.1s,baz=34,slow=38						
ZALV	**Zalesovo Beam**	**17.53**	**316**	P	**P**	**03 09 51.3**	**-0.6**
MDJ	**Mudanjiang**	**17.55**	**76**	P	P	03 10 00.5	+8.3
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,220nm,6.3s						
KMI	**Kunming**	**17.83**	**188**⇑	*e*P	**P**	**03 09 55.4**	**-0.2**
KMI				pP	sP	03 10 00.6	+0.3
KMI				sP	pP	03 10 02.0	+3.2
KMI				pmax	pmax		
	comp=Z,27nm,0.5s						
KMI	**Kunming**	**17.83**	**188**	P	**Pn**	**03 09 54.7**	**-0.2**
KMI				pmax	pmax		
	comp=Z,34nm,0.6s						
KSRS	**Korea Array**	**18.02**	**100**	P	**Pn**	**03 09 55.9**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=292,slow=12,SNR=8.9						
KSRS				LR	LR	03 17 43.0	
	comp=Z,120nm,18.2s,baz=180,slow=40						
ZEA	**Zeya**	**18.08**	**45**	*e*P	P	03 10 06.7	+8.8
ZEA				pmax	pmax		
	comp=Z,40nm,0.4s						
ZEA				MLR	MLR		
	comp=E,700nm,8.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,9.0s						
SEM	**Semipalatinsk**	**18.79**	**302**	*e*P	**P**	**03 10 05.1**	**-0.9**
	baz=302						
SEM	**Semipalatinsk**	**18.79**	**302**	*e*P	**P**	**03 10 05.1**	**-0.9**
SHLS	**Shalkode**	**18.96**	**280**	*e*P	**P**	**03 10 03.4**	**-4.5**
	comp=Z,7.0nm,1.1s,baz=280						
SHLS				LR	LR	03 16 57.9	
	comp=Z,132nm,10.6s,baz=280						
SHLS	**Shalkode**	**18.96**	**280**	*e*P	**P**	**03 10 03.3**	**-4.5**
SHLS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SHLS				MLR	MLR		
	comp=Z,132nm,11.0s						
USA0B	**Ussuriysk Arra**	**19.30**	**77**	*i*P	**P**	**03 10 11.4**	**0.0**
USA0B	**Ussuriysk Arra**	**19.30**	**77**		**P**	**03 10 10.9**	**-0.4**
USRK	**Ussuriysk Ar.**	**19.30**	**77**	P	**Pn**	**03 10 12.1**	**-0.3**
	baz=262,slow=10.0,SNR=3.4						
USRK				Lg	Lg	03 15 55.7	
	baz=286,slow=21,SNR=4.2						
USRK				LR	LR	03 18 07.7	
	comp=Z,149nm,20.5s,baz=271,slow=39						
USRK	**Ussuriysk Ar.**	**19.30**	**77**	P	**P**	**03 10 11.4**	**0.0**
KLR	**Kul'dur**	**19.31**	**62**	P	**P**	**03 10 12.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=280,slow=6.6,SNR=8.8						
KLR				S	**Sn**	**03 13 48.8**	**0.0**
	comp=Z,0.2nm,0.3s,baz=298,slow=23,SNR=6.1						
KLR				Lg	Lg	03 15 56.5	
	comp=Z,0.1nm,0.3s,baz=344,slow=22,SNR=6.1						
KLR				LR	LR	03 18 16.7	
	comp=Z,193nm,21.0s,baz=245,slow=39						
KLR	**Kul'dur**	**19.31**	**62**	*i*P	**P**	**03 10 11.7**	**+0.2**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KPKS	**Kokpek**	**19.48**	**281**	*e*P	**P**	**03 10 12.2**	**-1.3**
	comp=Z,7.6nm,1.1s,baz=281						
KPKS				LR	LR	03 17 25.1	
	comp=Z,72nm,9.6s,baz=281						
KPKS	**Kokpek**	**19.48**	**281**	*e*P	**P**	**03 10 12.2**	**-1.3**
KPKS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KPKS				MLR	MLR		
	comp=Z,72nm,10.0s						
TDK	**Taldyqorghan**	**19.53**	**286**	*e*P	**P**	**03 10 13.4**	**-0.7**
	baz=285						
TDK				LR	LR	03 17 31.9	
	comp=Z,249nm,12.5s,baz=285						
TDK	**Taldyqorghan**	**19.53**	**286**	*e*P	**P**	**03 10 13.3**	**-0.7**
TDK				MLR	MLR		
	comp=Z,249nm,12.0s						
KURK	**Kurchatov**	**19.87**	**303**	*i*P	**P**	**03 10 18.0**	**+0.4**
KURK				pmax	pmax		
	comp=Z,20nm,0.9s						
KURK	**Kurchatov**	**19.87**	**303**	P	**P**	**03 10 17.1**	**-0.5**
KURBB	**Kurchatov Arra**	**19.91**	**302**	P	**P**	**03 10 17.8**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=103,slow=11,SNR=23						
KURBB				Lg	Lg	03 16 14.4	
	comp=Z,0.1nm,0.3s,baz=107,slow=28,SNR=5.7						
SHL	**Shillong**	**20.51**	**217**	P	**P**	**03 10 24.1**	**-0.9**
SHL				pmax	pmax		
	comp=Z,21nm,0.7s						

SHL	**Shillong**	**20.51**	**217**	P	**P**	**03 10 24.1**	**-0.9**		
SHL				IAmb	IAmb	03 10 34.2			
	comp=Z,21nm,0.7s								
MDOK	**Medeo**	**20.70**	**281**	*e*P	**P**	**03 10 26.2**	**-0.7**		
	baz=280								
MDOK	**Medeo**	**20.70**	**281**	*e*P	**P**	**03 10 26.2**	**-0.7**		
AAA	**Alma-Ata**	**20.79**	**281**	*e*P	**P**	**03 10 27.2**	**-0.7**		
	baz=281								
AAA	**Alma-Ata**	**20.79**	**281**	*e*P	**P**	**03 10 27.1**	**-0.7**		
TNSS	**Tian-Shan**	**20.80**	**280**	*e*P	**P**	**03 10 27.8**	**-0.4**		
	baz=280								
TNSS	**Tian-Shan**	**20.80**	**280**	*e*P	**P**	**03 10 27.8**	**-0.4**		
KUU	**Kurty**	**21.11**	**283**	*e*P	**P**	**03 10 30.2**	**-1.0**		
	baz=283								
KUU	**Kurty**	**21.11**	**283**	*e*P	**P**	**03 10 30.1**	**-1.0**		
TAPN	**Taplejung**	**21.12**	**229**	*e*P	**P**	**03 10 32.2**	**+0.5**		
	comp=Z,50nm,0.5s								
SLVN	**Son La**	**21.50**	**184**	P	**P**	**03 10 35.6**	**0.0**		
SLVN				IAmb	IAmb	03 10 37.6			
	comp=Z,28nm,1.1s								
ODAN	**Odare**	**21.68**	**228**	*e*P	**P**	**03 10 37.5**	**-0.2**		
	comp=Z,99nm,0.9s								
GUN	**Gumba**	**21.74**	**233**	*e*P	**P**	**03 10 37.9**	**-0.5**		
	comp=Z,66nm,0.7s								
RAMN	**Ramite**	**22.05**	**230**	*e*P	**P**	**03 10 41.8**	**+0.1**		
	comp=Z,89nm,0.8s								
KKN	**Kakani**	**22.18**	**234**	*e*P	**P**	**03 10 43.1**	**+0.1**		
	comp=Z,96nm,0.8s								
JNU	**Nakatsue**	**22.23**	**107**	P	**P**	**03 10 43.5**	**+0.2**		
	comp=Z,9.6nm,1.0s,baz=26,slow=1.8,SNR=2.2								
JNU	**Nakatsue**	**22.23**	**107**	P	**P**	**03 10 42.3**	**-1.0**		
PKI	**Pulchoki**	**22.27**	**233**	*e*P	**P**	**03 10 43.7**	**-0.4**		
	comp=Z,62nm,1.0s								
PKIN	**Phulchoki**	**22.27**	**233**	*e*P	**P**	**03 10 43.8**	**-0.2**		
	comp=Z,24nm,0.5s								
KSH	**Kashi**	**22.35**	**271**	P	P	03 10 52.5	+7.9		
KSH				S	Sn	03 14 59.9	-2.4		
KSH				pmax	pmax				
	comp=Z,27nm,0.7s								
KSH				pmax	pmax				
	comp=Z,350nm,4.4s								
KSH				LR	LR				
	comp=Z,710nm,5.1s								
KSH				LR	LR				
	comp=Z,850nm,6.2s								
KSH				LR	LR				
	comp=Z,880nm,6.9s								
GKN	**Gorkha**	**22.41**	**235**	*e*P	**P**	**03 10 46.0**	**+0.6**		
DMN	**Daman**	**22.42**	**234**	*e*P	**P**	**03 10 45.5**	**-0.1**		
BTLS	**Baital**	**22.61**	**286**	*e*P	**P**	**03 10 46.4**	**-0.9**		
	baz=286								
BTLS	**Baital**	**22.61**	**286**	*e*P	**P**	**03 10 46.3**	**-0.9**		
AAK	**Ala-Archa**	**22.64**	**280**	*i* P	**P**	**03 10 45.4**	**-2.4**		
AAK				pmax	pmax				
	comp=Z,23nm,0.9s								
DANN	**Dangsing**	**22.70**	**237**	*e*P	**P**	**03 10 49.1**	**+0.5**		
	comp=Z,261nm,0.9s								
SSLB	**Suanglung**	**22.97**	**141**	P	**P**	**03 10 49.9**	**-1.2**		
KOLN	**Koldanda**	**23.21**	**237**	*e*P	**P**	**03 10 53.9**	**+0.1**		
	comp=Z,162nm,0.9s								
PYUN	**Piuthan**	**23.36**	**238**	*e*P	**P**	**03 10 55.5**	**+0.2**		
	comp=Z,257nm,0.9s								
BRZS	**Berezniki**	**23.52**	**299**	*e*P	**P**	**03 10 55.4**	**-1.1**		
	baz=299								
BRZS	**Berezniki**	**23.52**	**299**	*e*P	**P**	**03 10 55.4**	**-1.1**		
YAK	**Yakutsk**	**23.98**	**28**	*e*P	**P**	**03 11 05.1**	**+4.3**		
YAK				*e*		03 22 07.3			
YAK				pmax	pmax				
	comp=Z,15nm,0.8s								
YAK				pmax	pmax				
	comp=N,5.0nm,1.1s								
YAK				pmax	pmax				
	comp=E,4.0nm,1.1s								
YAK				MLR	MLR				
	comp=Z,379nm,10.0s								
YAK				MLR	MLR				
	comp=N,194nm,8.0s								
YAK				MLR	MLR				
	comp=E,224nm,8.0s								
CM33	**Chiang Mai Arr**	**24.59**	**195**	P	**P**	**03 11 08.0**	**+1.3**		
CHTO	**Chiang Mai**	**24.59**	**195**	P	**P**	**03 11 05.9**	**-0.9**		
CHTO				pmax	pmax				
	comp=Z,9.0nm,0.7s								
CHTO	**Chiang Mai**	**24.59**	**195**	P	**P**	**03 11 05.9**	**-0.9**		
CMMT	**Chiang Mai**	**24.59**	**195**	P	**P**	**03 11 10.9**	**+4.2**		
	comp=Z,6.8nm,1.7s								
CM35	**Chiang Mai Arr**	**24.68**	**194**	P	**P**	**03 11 12.0**	**+4.4**		
LAMP	**Lampang**	**24.75**	**193**	P	P	03 11 16.8	+8.5		
	comp=Z,541nmcomp=Z,21nm,0.8s								
CM32	**Chiang Mai Arr**	**24.76**	**195**	P	**P**	**03 11 13.4**	**+5.1**		
CM36	**Chiang Mai Arr**	**24.85**	**194**	P	**P**	**03 11 09.0**	**-0.1**		
CMAR	**Chiang Mai Arr**	**24.94**	**195**	P	**P**	**03 11 09.8**	**0.0**		
	comp=Z,3.6nm,0.7s,baz=358,slow=9.5,SNR=14								
CMAR	**Chiang Mai Arr**	**24.94**	**195**	P	**P**	**03 11 09.0**	**-0.9**		
CM02	**Chiang Mai Arr**	**24.96**	**195**	P	**P**	**03 11 14.0**	**+3.9**		
	comp=Z,144nmcomp=Z,7.5nm,0.8s								
CM13	**Chiang Mai Arr**	**24.98**	**195**	P	**P**	**03 11 15.8**	**+5.5**		
	comp=Z,116nmcomp=Z,6.0nm,0.7s								
CM04	**Chiang Mai Arr**	**24.99**	**195**	P	**P**	**03 11 14.0**	**+3.6**		
	comp=Z,158nmcomp=Z,8.4nm,0.8s								
CM05	**Chiang Mai Arr**	**24.99**	**195**	P	**P**	**03 11 14.3**	**+3.9**		
	comp=Z,6.7nm,0.8s								
BVAR	**Borovoye Array**	**25.33**	**306**	P	**P**	**03 11 12.0**	**-1.1**		
	comp=Z,5.0nm,0.4s,baz=129,slow=15,SNR=24								
BRVK	**Borovoye**	**25.39**	**306**	*i* P	**P**	**03 11 12.4**	**-1.4**		
BRVK				pmax	pmax				
	comp=Z,9.0nm,0.9s								
BRVK	**Borovoye**	**25.39**	**306**	P	**P**	**03 11 13.7**	**-0.1**		
BRVK				IAmb	IAmb	03 11 19.2			
	comp=Z,9.9nm,0.7s								
KK31	**Karatay Array**	**25.42**	**283**	P	**P**	**03 11 13.8**	**-0.4**		
KK31				pmax	pmax				
	comp=Z,19nm,0.8s								
KK31	**Karatay Array**	**25.42**	**283**	P	**P**	**03 11 13.8**	**-0.4**		
KK31				IAmb	IAmb	03 11 19.7			
	comp=Z,19nm,0.8s								
KKAR	**Karatay Array**	**25.42**	**283**	P	**P**	**03 11 14.0**	**-0.2**		
KKAR				pmax	pmax				
	comp=Z,19nm,0.8s								
KKAR	**Karatay Array**	**25.42**	**283**	P	**P**	**03 11 13.9**	**-0.2**		
KKAR				IAmb	IAmb	03 11 19.7			
	comp=Z,19nm,0.8s								
KKAR	**Karatay Array**	**25.42**	**283**	P	**P**	**03 11 13.9**	**-0.3**		
SUKH	**Sukhothai**	**25.77**	**193**	P	**P**	**03 11 18.4**	**+1.0**		
	comp=Z,50nm,1.0s								
MAJO	**Matsushiro**	**25.90**	**93**	*i* P	**P**	**03 11 17.2**	**-1.4**		
MAJO				pmax	pmax				
	comp=Z,9.0nm,1.1s								
MAT	**Matsushiro**	**25.90**	**93**	P	**P**	**03 11 16.7**	**-1.9**		
MAT				*e*S	**S**	**03 15 48.4**	**-0.2**		
MJAR	**Matsushiro Arr**	**25.91**	**93**	P	**P**	**03 11 17.2**	**-1.4**		
	comp=Z,3.4nm,0.8s,baz=291,slow=8.9,SNR=6.0								
BTK	**Batken**	**25.96**	**276**	P	**P**	**03 11 18.6**	**-0.6**		
BTK				pmax	pmax				
	comp=Z,7.0nm,0.7s								
BTK	**Batken**	**25.96**	**276**	P	**P**	**03 11 18.6**	**-0.6**		
IUG	**Iuzhnay**	**25.98**	**281**	*e*P	**P**	**03 11 18.8**	**-0.5**		
	baz=280								
IUG	**Iuzhnay**	**25.98**	**281**	*e*P	**P**	**03 11 18.8**	**-0.5**		
NIL	**Nilore**	**26.74**	**261**	P	**P**	**03 11 28.2**	**+2.0**		
NIL				pmax	pmax				
	comp=Z,16nm,1.1s								
ASAJ	**Asahikawa**	**26.87**	**74**	P	**P**	**03 11 26.6**	**-0.6**		
	comp=Z,8.5nm,0.6s,baz=251,slow=9.4,SNR=8.7								
CHGR	**Chuyangaron**	**27.64**	**274**	P	**P**	**03 11 33.6**	**-0.7**		
NRIK	**Noril'sk**	**28.11**	**347**	P	**P**	**03 11 38.7**	**+0.6**		
	comp=Z,1.5nm,0.4s,baz=36,slow=0.5,SNR=2.5								
NRIK				LR	LR	03 22 18.8			
	comp=Z,84nm,18.8s,baz=199,slow=35								
NRIK	**Noril'sk**	**28.11**	**347**	*i* P	**P**	**03 11 36.6**	**-1.5**		
NRIK				pmax	pmax				
	comp=Z,7.0nm,1.1s								
TIXI	**Tiksi**	**31.07**	**14**	*i* P	**P**	**03 12 03.1**	**-1.2**		
TIXI	**Tiksi**	**31.07**	**14**	P	**P**	**03 12 03.5**	**-0.8**		
ABKAR	**Akbulak array**	**31.80**	**298**	P	**P**	**03 12 10.7**	**-0.3**		
ABKAR	**Akbulak array**	**31.80**	**298**	P	**P**	**03 12 10.9**	**0.0**		
ARU	**Arti**	**32.55**	**311**	P	**P**	**03 12 19.2**	**+1.8**		
	comp=Z,1.7nm,0.6s,baz=113,slow=5.0,SNR=5.9								
ARU	**Arti**	**32.55**	**311**	*d* P	**P**	**03 12 16.7**	**-0.7**		
ARU						03 13 24.4			
ARU				S	**S**	**03 17 34.0**	**+1.5**		
ARU				SS	**SnSn**	**03 19 30.8**	**+4.8**		
ARU				pmax	pmax				
	comp=Z,6.0nm,0.9s								
ARU	**Arti**	**32.55**	**311**	P	**P**	**03 12 17.5**	**0.0**		
ARU				IAmb	IAmb	03 12 25.0			
	comp=Z,7.3nm,0.9s								
AKTO	**Aktyubinsk**	**32.92**	**300**	P	**P**	**03 12 20.4**	**-0.4**		
	comp=Z,1.3nm,0.5s,baz=80,slow=12,SNR=2.3								
SEY	**Seymchan**	**33.68**	**37**	*i* P	**P**	**03 12 26.4**	**-0.8**		
PETK	**Petropavlovsk-**	**35.72**	**55**	LR	LR	03 28 00.9			
	comp=Z,109nm,18.1s,baz=260,slow=37								
GEYT	**Alibeck**	**35.98**	**278**	P	**P**	**03 12 48.5**	**+1.1**		
	comp=Z,4.8nm,0.7s,baz=194,slow=3.1,SNR=5.6								
KIRV	**Kirov**	**37.55**	**315**	*i* P	**P**	**03 12 59.3**	**-1.2**		
BELG	**Belogornoye**	**39.12**	**305**	*i* P	**P**	**03 13 11.8**	**-2.0**		
BELG				pmax	pmax				
	comp=Z,2.0nm,0.9s								
PSI	**Prapat**	**40.30**	**190**	P	**P**	**03 13 23.4**	**-0.7**		
PSI				pmax	pmax				
	comp=Z,19nm,0.7s								
RPSI	**Rantau Prapat**	**40.41**	**190**	P	**P**	**03 13 23.4**	**-1.4**		
RPSI				IAmb	IAmb	03 13 25.0			
	comp=Z,19nm,0.7s								
MAK	**Makhachkala**	**41.66**	**291**	*e*P	P	03 13 29.1	-5.8		
MAK				*e*S	**S**	**03 19 43.0**	**-8.4**		
MAK				*e*SS	**SS**	**03 22 51.9**	**-4.5**		
MAK				*e*SSS	SSS	03 23 26.5			
MAK				MLR	MLR				
	comp=Z,346nm,14.0s								
VRH	**Novokhopyorsk**	**42.95**	**304**	*e*P	**P**	**03 13 43.9**	**-1.4**		
VRH				pmax	pmax				
	comp=Z,10.0nm,0.6s								
MOS	**Moscow**	**44.26**	**311**	*e*P	**P**	**03 13 53.2**	**-2.6**		
LPSR	**Galich'ya Gora**	**44.27**	**307**	*e*P	**P**	**03 13 55.1**	**-0.8**		
LPSR				pmax	pmax				
	comp=Z,10.0nm,0.8s								
VORD	**Divnogorie**	**44.49**	**304**	*e*P	**P**	**03 13 56.7**	**-1.0**		
VORD				pmax	pmax				
	comp=Z,6.0nm,0.7s								
VSR	**Storozhevoye**	**44.50**	**305**	*e*P	**P**	**03 13 56.7**	**-1.1**		
VSR				pmax	pmax				
	comp=Z,10.0nm,0.5s								
KBZ	**Khabaz**	**44.53**	**294**	P	**P**	**03 13 58.3**	**+0.2**		
	comp=Z,2.0nm,0.9s,baz=236,slow=24,SNR=3.9								
KBZ	**Khabaz**	**44.53**	**294**	*i* P	**P**	**03 13 56.4**	**-1.7**		
KBZ				pmax	pmax				
	comp=Z,3.0nm,1.0s								
KIV	**Kislovodsk**	**44.59**	**294**	*e*P	**P**	**03 13 55.0**	**-3.7**		
KIV				pmax	pmax				
	comp=Z,16nm,1.1s								
KIV				MLR	MLR				
	comp=Z,297nm,16.0s								
GNI	**Garni**	**44.65**	**288**	*i* P	**P**	**03 13 57.8**	**-1.6**		
GNI				pmax	pmax				
	comp=Z,5.0nm,0.9s								
OBN	**Obninsk**	**44.99**	**311**	*e*P	**P**	**03 14 03.4**	**+1.8**		
OBN				*PP	**pP**	**03 14 05.0**	**-0.2**		
OBN				*SP	**sP**	**03 14 07.0**	**+0.4**		
OBN				pmax	pmax				
	comp=Z,6.0nm,0.9s								
OBN				MLR	MLR				
	comp=Z,102nm,17.0s								
ARCES	**ARCESS Array B**	**47.17**	**332**	P	**P**	**03 14 18.9**	**+0.3**		
	comp=Z,5.2nm,0.8s,baz=65,slow=9.7,SNR=8.4								
ARCES				PcP	**PcP**	**03 15 49.5**	**-0.5**		
	comp=Z,2.2nm,0.5s,baz=46,slow=3.5,SNR=5.5								
ARCES				LR	LR	03 34 41.3			
	comp=Z,48nm,18.5s,baz=125,slow=37								
SPITS	**Spitsbergen Ar**	**48.26**	**344**	P	**P**	**03 14 26.9**	**-0.2**		
	comp=Z,2.9nm,0.7s,baz=62,slow=20,SNR=1.5								
FINES	**FINESS Array B**	**48.71**	**321**	P	**P**	**03 14 30.3**	**-0.4**		
	comp=Z,2.5nm,0.8s,baz=113,slow=4.4,SNR=8.5								
KAPI	**Kappang**	**49.40**	**161**	LR	LR	03 38 04.8			
	comp=Z,26nm,18.9s,baz=338,slow=39								
AKASG	**Malin Array Be**	**50.60**	**307**	P	**P**	**03 14 44.3**	**-0.8**		
	comp=Z,2.2nm,0.8s,baz=56,slow=8.0,SNR=6.4								
AKASG	**Malin Array Be**	**50.60**	**307**	P	**P**	**03 14 44.5**	**-0.7**		
AKASG				pmax	pmax				
	comp=Z,1.0nm,1.0s								
AKASG	**Malin Array Be**	**50.60**	**307**	P	**P**	**03 14 44.5**	**-0.7**		
BRTR	**Keskin Array B**	**52.49**	**293**	P	**P**	**03 15 00.1**	**+0.4**		
	comp=Z,1.9nm,0.6s,baz=110,slow=4.2,SNR=7.1								
BRTR	**Keskin Array B**	**52.49**	**293**	P	**P**	**03 14 59.2**	**-0.5**		
RAYN	**Ar Rayn**	**52.60**	**269**	P	**P**	**03 14 59.8**	**-0.8**		
RAYN				pmax	pmax				
	comp=Z,3.0nm,0.7s								
RAYN	**Ar Rayn**	**52.60**	**269**	P	**P**	**03 14 59.8**	**-0.8**		
BUR08	**Bucovina Ar. S**	**54.27**	**305**	P	**P**	**03 15 12.4**	**-0.2**		
BURAR	**Bucovina Array**	**54.28**	**305**	P	**P**	**03 15 11.9**	**-0.8**		
KWP	**Kalwaria Pacla**	**54.85**	**308**	P	**P**	**03 15 16.6**	**-0.1**		
KWP				pmax	pmax				
	comp=Z,12nm,1.0s								
KWP	**Kalwaria Pacla**	**54.85**	**308**	P	**P**	**03 15 16.6**	**-0.1**		
KWP				IAmb	IAmb	03 15 23.7			
	comp=Z,12nm,1.0s								
NC405	**NORSAR Array S**	**55.28**	**324**	P	**P**	**03 15 19.4**	**-0.2**		
NC405				IAmb	IAmb	03 15 35.0			
	comp=Z,9.9nm,1.0s								
NB2	**NORSAR Subarra**	**55.53**	**324**	P	**P**	**03 15 20.4**	**-1.1**		
	comp=Z,5.7nm,0.7s,baz=62,slow=7.4								
NOA	**NORSAR Array B**	**55.53**	**324**	P	**P**	**03 15 20.6**	**-0.9**		
	comp=Z,5.4nm,0.7s,baz=61,slow=7.1,SNR=18								
NOA				LR	LR	03 41 18.3			
	comp=Z,199nm,18.0s,baz=65,slow=38								
DAG	**Danmarks Havn**	**55.62**	**347**	P	**P**	**03 15 20.9**	**-0.9**		
DAG				pmax	pmax				
	comp=Z,5.0nm,1.0s								
COLD	**Coldfoot**	**56.42**	**27**	P	**P**	**03 15 28.2**	**+0.5**		
COLD				IAmb	IAmb	03 15 33.2			
	comp=Z,9.9nm,1.0s								
ELL	**Elmali**	**56.52**	**291**	P	**P**	**03 15 28.4**	**-0.6**		
ELL				pmax	pmax				
	comp=Z,20nm,0.7s								
ELL	**Elmali**	**56.52**	**291**	P	**P**	**03 15 28.4**	**-0.6**		
BMAR	**Burnt Mountain**	**58.12**	**25**	P	**P**	**03 15 40.1**	**+0.3**		
MDM	**Murphy Dome**	**58.32**	**29**	P	**P**	**03 15 41.1**	**0.0**		
MDM				IAmb	IAmb	03 15 42.5			
	comp=Z,6.9nm,0.9s								
CCB	**Clear Creek Bu**	**58.65**	**29**	P	**P**	**03 15 43.4**	**0.0**		
CCB				IAmb	IAmb	03 15 47.8			
	comp=Z,9.9nm,1.0s								
IL31		**58.90**	**28**	IAmb	IAmb	03 15 46.0			
	comp=Z,3.8nm,0.7s								
ILAR	**Eielson Array**	**58.90**	**28**	P	**P**	**03 15 44.8**	**-0.4**		
	comp=Z,3.7nm,0.7s,baz=291,slow=5.9,SNR=40								
ILAR	**Eielson Array**	**58.90**	**28**	P	**P**	**03 15 45.0**	**-0.2**		
ILAR	**Eielson Array**	**58.90**	**28**	P	**P**	**03 15 45.0**	**-0.2**		
TREC	**Trest**	**59.14**	**310**	P	**P**	**03 15 46.4**	**-0.7**		
TREC				pmax	pmax				
	comp=Z,2.0nm,1.4s								
BRG	**Berggiesshubel**	**59.17**	**312**	P	**P**	**03 15 47.3**	**0.0**		
BRG				pmax	pmax				
	comp=Z,3.0nm,1.2s								
CLL	**Collm**	**59.45**	**313**	*i* P	**P**	**03 15 49.2**	**0.0**		
	comp=Z,5.0nm,0.9s								
CLL	**Collm**	**59.45**	**313**	*i* P	**P**	**03 15 49.2**	**0.0**		
CLL				pmax	pmax				
	comp=Z,5.0nm,0.9s								
CONA	**Conrad Observa**	**59.63**	**309**	*e*P	**P**	**03 15 52.1**	**+1.5**		
	comp=Z,9.1nm,1.3s								
CLZ	**Clausthal**	**60.56**	**315**	P	**P**	**03 15 57.4**	**+0.6**		
CLZ				pmax	pmax				
	comp=Z,11nm,1.2s								
SOKA	**Soboth**	**60.78**	**308**	*e*P	**P**	**03 15 58.8**	**+0.3**		
	comp=Z,8.8nm,1.6s								
INK	**Inuvik**	**60.78**	**21**	P	**P**	**03 15 58.0**	**0.0**		
	comp=Z,5.9nm,0.9s,baz=320,slow=7.7,SNR=7.8								
INK	**Inuvik**	**60.78**	**21**	P	**P**	**03 15 58.3**	**+0.3**		
INK				pmax	pmax				
	comp=Z,10.0nm,1.5s								
INK	**Inuvik**	**60.78**	**21**	IAmb	IAmb	03 16 03.3			
	comp=Z,9.7nm,1.1s								
KBA	**Koelnbreinsper**	**61.53**	**309**	*e*P	**P**	**03 16 04.7**	**+1.0**		
	comp=Z,13nm,1.3s								
KBA	**Koelnbreinsper**	**61.53**	**309**	P	**P**	**03 16 07.3**	**+3.6**		
BCAR	**Beaver Creek A**	**61.73**	**28**	P	**P**	**03 16 05.0**	**+0.4**		
RES	**Resolute Bay**	**61.96**	**6**	P	**P**	**03 16 05.3**	**-0.5**		
	comp=Z,4.6nm,0.8s,baz=355,slow=5.4,SNR=12								
RES	**Resolute Bay**	**61.96**	**6**	IAmb	IAmb	03 16 11.1			
	comp=Z,6.0nm,0.9s								
SUMG	**Summit**	**62.14**	**348**	P	**P**	**03 16 07.5**	**-0.1**		
SUMG				pmax	pmax				
	comp=Z,8.0nm,1.1s								
SUMG	**Summit**	**62.14**	**348**	P	**P**	**03 16 07.5**	**-0.1**		
SUMG				IAmb	IAmb	03 16 12.6			
	comp=Z,7.9nm,1.1s								
MOTA	**Moosalm**	**62.65**	**310**	*e*P	**P**	**03 16 11.7**	**+0.5**		
	comp=Z,5.6nm,1.2s								
SQTA	**Sankt Quirin**	**62.66**	**310**	*e*P	**P**	**03 16 11.6**	**+0.3**		
	comp=Z,5.2nm,0.8s								
RETA	**Reutte**	**62.76**	**311**	*e*P	**P**	**03 16 12.5**	**+0.7**		
	comp=Z,6.2nm,1.0s								
FETA	**Feichten**	**63.05**	**310**	*e*P	**P**	**03 16 11.9**	**-1.9**		
	comp=Z,4.9nm,1.3s								
WRA	**Warramunga Arr**	**67.94**	**151**	P	**P**	**03 16 44.8**	**-0.6**		
	comp=Z,5.3nm,0.7s,baz=345,slow=7.5,SNR=4.1								
DLBC	**Dease Lake**	**69.08**	**28**	P	**P**	**03 16 52.1**	**-0.2**		
	comp=Z,2.1nm,0.7s,baz=275,slow=18,SNR=2.2								
YKA	**Yellowknife Ar**	**70.20**	**18**	P	**P**	**03 16 58.4**	**-0.6**		
	comp=Z,4.6nm,0.7s,baz=337,slow=5.4,SNR=17								
ASAR	**Alice Springs**	**71.22**	**152**	P	**P**	**03 17 05.1**	**-0.5**		
	comp=Z,8.1nm,0.8s,baz=338,slow=5.1,SNR=5.1								
BBB	**Bella Bella**	**74.64**	**31**	LR	LR	03 50 59.8			
	comp=Z,57nm,20.4s,baz=342,slow=36								
ESDC	**Sonseca Array**	**75.95**	**311**	P	**P**	**03 17 33.3**	**-0.2**		
	comp=Z,1.3nm,0.5s,baz=38,slow=5.2,SNR=16								
ESDC				LR	LR	03 53 33.8			
	comp=Z,31nm,19.9s,baz=220,slow=38								
ESDC	**Sonseca Array**	**75.95**	**311**	P	**P**	**03 17 33.0**	**-0.5**		
NEW	**Newport**	**81.83**	**27**	P	**P**	**03 18 06.0**	**+0.4**		
	comp=Z,2.5nm,0.8s,baz=289,slow=2.4,SNR=4.5								
NEW	**Newport**	**81.83**	**27**	P	**P**	**03 18 06.0**	**+0.4**		
C09A	**Chrisman Ranch**	**81.83**	**28**	IAmb	IAmb	03 18 11.1			
	comp=Z,8.0nm,1.0s								
SCHQ	**Schefferville**	**82.45**	**355**	P	**P**	**03 18 08.6**	**-0.2**		
	comp=Z,7.5nm,0.7s,baz=212,slow=7.9,SNR=2.8								
JTMT	**Jette**	**83.21**	**26**	IAmb	IAmb	03 18 18.3			
	comp=Z,3.9nm,0.7s								
MSO	**Missoula**	**84.13**	**26**	P	**P**	**03 18 17.4**	**-0.3**		
BMO	**Blue Mountains**	**84.71**	**29**	IAmb	IAmb	03 18 25.6			
	comp=Z,6.3nm,1.1s								
ULM	**Lac du Bonnet**	**85.42**	**14**	P	**P**	**03 18 22.5**	**-1.5**		
	comp=Z,4.5nm,0.8s,baz=342,slow=7.5,SNR=5.3								
DZM	**Mont Dzumac**	**85.58**	**126**	P	**P**	**03 18 25.3**	**+0.2**		
	comp=Z,9.8nm,1.1s,baz=336,slow=15,SNR=4.4								
DZM	**Mont Dzumac**	**85.58**	**126**	P	**P**	**03 18 24.4**	**-0.7**		
DZM				IAmb	IAmb	03 18 28.8			
	comp=Z,7.1nm,1.0s								
WVOR	**Wild Horse Val**	**86.31**	**31**	P	**P**	**03 18 29.5**	**+0.8**		
WVOR				pmax	pmax				
	comp=Z,8.0nm,1.1s								
HLID	**Hailey**	**86.85**	**28**	IAmb	IAmb	03 18 38.5			
	comp=Z,4.4nm,0.8s								
FLWY	**Flagg Ranch**	**87.61**	**25**	IAmb	IAmb	03 18 36.7			
	comp=Z,4.0nm,0.9s								
ELK	**Elko**	**89.04**	**30**	IAmb	IAmb	03 18 48.2			
	comp=Z,3.5nm,1.1s								
PDAR	**Pinedale Array**	**89.15**	**25**	P	**P**	**03 18 41.9**	**-0.5**		
	comp=Z,1.2nm,0.8s,baz=28,slow=1.7,SNR=9.9								
PDAR				LR	LR	04 02 30.6			
	comp=Z,61nm,21.4s,baz=338,slow=38								
PDAR	**Pinedale Array**	**89.15**	**25**	P	**P**	**03 18 41.6**	**-0.9**		
RSSD	**Black Hills**	**89.48**	**21**	P	**P**	**03 18 43.5**	**-0.4**		
RSSD				pmax	pmax				
	comp=Z,11nm,1.1s								
RSSD	**Black Hills**	**89.48**	**21**	P	**P**	**03 18 43.5**	**-0.4**		
HWUT	**Hardware Ranch**	**89.55**	**27**	IAmb	IAmb	03 18 52.5			
	comp=Z,5.6nm,1.1s								
NVAR	**Mina Array Bea**	**89.88**	**33**	P	**P**	**03 18 46.7**	**+0.7**		
	comp=Z,0.3nm,0.6s,baz=226,slow=35,SNR=4.5								
DUG	**Dugway, Tooele**	**90.39**	**28**	IAmb	IAmb	03 18 53.7			
	comp=Z,2.8nm,0.8s								
TORD	**Torodi Ar. Bea**	**90.95**	**289**	P	**P**	**03 18 50.5**	**-0.4**		
	comp=Z,1.8nm,1.0s,baz=41,slow=5.1,SNR=5.0								
TORD				LR	LR	04 07 01.0			
	comp=Z,59nm,18.0s,baz=240,slow=40								
TORD	**Torodi Ar. Bea**

	comp=Z,17nm,0.6s,baz=137,slow=6.5,SNR=26							
PETK	**Petropavlovsk-**	**69.57**	**21**	P		**P**	**03 18 31.5**	**-0.4**
	comp=Z,6.6nm,0.9s,baz=170,slow=3.4,SNR=5.9							
PETK	**Petropavlovsk-**	**69.57**	**21**	P		**P**	**03 18 31.2**	**-0.7**
MAW	**Mawson**	**69.58**	**201**	P		**P**	**03 18 33.8**	**+2.0**
	comp=Z,1.6nm,0.6s,baz=128,slow=6.0,SNR=2.7							
MAW	**Mawson**	**69.58**	**201**	P		**P**	**03 18 31.5**	**-0.3**
ZALV	**Zalesovo Beam**	**72.08**	**337**	P		**P**	**03 18 46.6**	**-0.6**
	comp=Z,10nm,0.5s,baz=135,slow=4.7,SNR=17							
KURBB	**Kurchatov Arra**	**72.36**	**332**	P		**P**	**03 18 49.1**	**+0.2**
	comp=Z,5.8nm,0.6s,baz=144,slow=5.6,SNR=12							
KURK	**Kurchatov**	**72.38**	**332**	P		**P**	**03 18 48.3**	**-0.7**
SEY	**Seymchan**	**76.37**	**13**	P		**P**	**03 19 12.2**	**+0.2**
	comp=Z,9.2nm,0.7s,baz=194,slow=4.6,SNR=18							
BVAR	**Borovoye Array**	**77.78**	**330**	P		**P**	**03 19 20.9**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=90,slow=9.1,SNR=2.8							
QSPA	**South Pole Qui**	**79.60**	**180**	P		**P**	**03 19 31.3**	**+1.0**
	comp=Z,9.9nm,0.8s,baz=319,slow=3.8,SNR=4.2							
QSPA	**South Pole Qui**	**79.60**	**180**	P		**P**	**03 19 29.6**	**-0.7**
QSPA				IAmb		IAmb	03 19 33.8	
	comp=Z,2.1nm,0.7s							
NRIK	**Noril'sk**	**83.45**	**348**	P		**P**	**03 19 50.6**	**+0.4**
	comp=Z,4.7nm,0.8s,baz=132,slow=6.1,SNR=5.5							
TORD	**Torodi Ar. Bea**	**123.33**	**279**	PKP		**PKiKP**	**03 26 22.0**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=188,slow=1.7,SNR=3.7							
PDAR	**Pinedale Array**	**123.64**	**45**	PKP		**PKiKP**	**03 26 22.3**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=204,slow=5.8,SNR=1.8							
TXAR	**Lajitas Array**	**131.95**	**60**	PKP		**PKPdf**	**03 26 37.4**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=13,slow=4.8,SNR=2.5							
TXAR	**Lajitas Array**	**131.95**	**60**			**PKPdf**	**03 26 36.6**	**-0.7**
TKL	**Tuckaleechee C**	**144.53**	**40**	PKP		**PKPdf**	**03 26 59.7**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=179,slow=13,SNR=1.6							

*IDC **19** 03:14:05.8±1.0, 42.°81N×105.°63E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.6/58, mbtmp3.8/7, ML3.5/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/45, Error ellipse: s-maj=35.0km s-min=16.3km az=80.0*
*BJI **19** 03:14:08.6±0.0, 42.°71N×105.°50E, h7km, ML4.5/11, Ms4.0/5, Ms7 3.8/1*
*NEIC **19** 03:14:09.0±1.3, 42.°93N±0.°07×106.°6E±0.°2, h15km±6km, mb4.3/4, Error ellipse: s-maj=23.2km s-min=9.1km az=80.0*

ISC 19 03:14:06.5±0.6, 42.°76N±0.°05×105.°53E±0.°04, h10km, n26, σ2s78/32, mb3.9/6, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BTO	**Baotou**	**3.99**	**121**	*e*Pn		**Pn**	**03 15 08.4**	**+0.6**
BTO				Sg		**Sb**	**03 16 09.3**	**+4.0**
HHC	**Hu-ho-hao-te**	**4.90**	**111**	*e*Pn		**Pn**	**03 15 22.5**	**+2.2**
HHC				Pg		**Pg**	**03 15 39.1**	**-1.2**
HHC				Sn		**Sn**	**03 16 19.5**	**+2.5**
HHC				Sg		**Sb**	**03 16 36.3**	**+4.9**
HHC				smax	smax			
	comp=N,2μm,0.3s							
HHC				smax	smax			
	comp=E,1μm,0.4s							
SONM	**Songino Array**	**5.11**	**7**	Pn		**Pn**	**03 15 23.8**	**+0.6**
	3.5nm,0.3s,baz=186,slow=15,SNR=25							
SONM				Pg		**Pb**	**03 15 38.5**	**+2.4**
	10nm,0.3s,baz=191,slow=17,SNR=16							
SONM				Lg		Lg	03 16 46.2	
	19nm,0.3s,baz=188,slow=31,SNR=12							
SONM	**Songino Array**	**5.11**	**7**	Pn		**Pn**	**03 15 22.8**	**-0.4**
SONM				Sn		**Sn**	**03 16 19.1**	**-3.2**
ULN	**Ulaanbaatar**	**5.22**	**11**	Pn		**Pn**	**03 15 22.8**	**-1.9**
GTA	**Gaotai**	**5.46**	**234**	Pn		**Pn**	**03 15 27.3**	**-0.8**
GTA				Pg		**Pb**	**03 15 42.3**	**+0.2**
GTA				Sn		**Sn**	**03 16 28.1**	**-2.9**
GTA				Sg		**Sb**	**03 16 52.3**	**+4.6**
GTA				smax	smax			
	comp=N,240nm,0.8s							
GTA				smax	smax			
	comp=E,250nm,0.8s							
GTA				LR	LR			
	comp=N,680nm,7.6s							
GTA				LR	LR			
	comp=E,960nm,7.3s							
GTA				LR	LR			
	comp=Z,770nm,9.5s							
BJI	**Beijing**	**8.45**	**105**	Pg		**Pg**	**03 16 50.8**	**+2.6**
BJI				Sg		**Sg**	**03 18 33.4**	**-4.1**
BJI				smax	smax			
	comp=N,140nm,0.7s							
BJI				smax	smax			
	comp=E,110nm,0.8s							
TLY	**Talaya**	**9.02**	**352**	Pn		**Pn**	**03 16 17.0**	**+0.3**
	comp=E,0.0nm,0.3s,baz=180,slow=8.5,SNR=6.6							
TLY				Lg		Lg	03 18 45.3	
	comp=E,0.0nm,0.3s,baz=62,slow=14,SNR=3.8							
TLY				LR		LR	03 20 04.4	
	comp=E,78nm,19.1s,baz=167,slow=40							
TLY	**Talaya**	**9.02**	**352**			**Pn**	**03 16 16.0**	**-0.7**
XAN	**Xi'an**	**9.10**	**162**	Pn		**Pn**	**03 16 16.3**	**-1.7**
XAN				Pg			03 17 00.8	
XAN				Sn		**Sn**	**03 17 54.8**	**-5.7**
XAN				Sg			03 19 00.3	
XAN				smax	smax			
	comp=N,56nm,1.0s							
XAN				smax	smax			
	comp=E,35nm,1.1s							
WMQ	**Urumqi**	**13.04**	**281**	*e*P		**Pn**	**03 17 11.4**	**-0.4**
WMQ				pP		P	03 17 13.6	-8.7
WMQ				pmax	pmax			
	comp=Z,38nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,120nm,4.5s							
WMQ				smax	smax			
	comp=N,19nm,0.5s							
WMQ				smax	smax			
	comp=E,12nm,0.9s							
WMQ				LR	LR			
	comp=N,570nm,26.9s							
WMQ				LR	LR			
	comp=E,2μm,28.9s							
WMQ				LR	LR			
	comp=Z,200nm,22.9s							
MK31	**Makanchi Array**	**16.97**	**292**			P	03 18 19.8	+14
MK31				IAmb		IAmb	03 18 24.4	
	comp=Z,15nm,0.8s							
MKAR	**Makanchi Array**	**16.97**	**292**	Lg		Lg	03 23 12.2	
	comp=Z,0.0nm,0.3s,baz=80,slow=28,SNR=2.7							
MKAR	**Makanchi Array**	**16.97**	**292**			P	03 18 18.9	+13
MAKZ	**Makanchi**	**17.18**	**292**			P	03 18 17.4	+9.2
MAKZ				IAmb		IAmb	03 18 24.8	
	comp=Z,12nm,0.8s							
ZALV	**Zalesovo Beam**	**17.67**	**316**	LR		LR	03 25 23.2	
	comp=Z,26nm,21.0s,baz=252,slow=38							
BVAR	**Borovoye Array**	**25.46**	**306**	P		**P**	**03 19 36.8**	**+2.4**
	comp=Z,1.2nm,0.5s,baz=90,slow=13,SNR=5.4							
KKAR	**Karatay Array**	**25.53**	**283**	P		**P**	**03 19 39.7**	**+4.4**
YSS	**Yuzh-Sakhalins**	**26.55**	**68**	P		**P**	**03 19 38.8**	**-5.5**
YSS				IAmb		IAmb	03 19 44.6	
	comp=Z,48nm,1.0s							
NOA	**NORSAR Array B**	**55.67**	**324**	P		**P**	**03 23 41.3**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=60,slow=7.2,SNR=2.5							
ILAR	**Eielson Array**	**58.95**	**28**	P		**P**	**03 24 05.7**	**+0.2**
	comp=Z,0.5nm,0.9s,baz=289,slow=5.6,SNR=5.6							
ILAR	**Eielson Array**	**58.95**	**28**	P		**P**	**03 24 04.4**	**-1.1**
WRA	**Warramunga Arr**	**67.81**	**151**	P		**P**	**03 25 05.3**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=346,slow=6.4,SNR=4.2							
WRA	**Warramunga Arr**	**67.81**	**151**	P		**P**	**03 25 04.8**	**+0.1**
ASAR	**Alice Springs**	**71.09**	**153**	P		**P**	**03 25 26.2**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=342,slow=6.2,SNR=10							
ASAR	**Alice Springs**	**71.09**	**153**	P		**P**	**03 25 25.1**	**+0.2**

MEX 19 03:31:16.2±0.7, 14.°88N×91.°80W, h133km±22km, MD3.9, Guatemala

*TUL **19** 03:34:24.7±1.3, 35.°93N±0.°01×97.°44W±0.°02, h6km±6km, ML3.3, Error ellipse: s-maj=2.4km s-min=1.7km az=80.0*
*NEIC **19** 03:34:24.8±0.8, 35.°94N±0.°01×97.°45W±0.°02, h8km±6km, Error ellipse: s-maj=2.5km s-min=1.7km az=85.0*
*ANF **19** 03:34:27.1±1.2, 35.°90N×97.°39W, h20km±11km, ML3.9/10, Error ellipse: s-maj=5.6km s-min=3.1km az=161.0*

ISC 19 03:34:25.0±0.9, 35.°94N±0.°02×97.°43W±0.°02, h8km±8km, n61, σ0s63/80, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OK029	**Liberty Lake**	**0.15**	**186**			**Pg**	**03 34 27.8**	**-0.3**
OK029				Sg		**Sg**	**03 34 30.1**	**-0.2**
BCOK	**Bluff Creek, N**	**0.32**	**206**			**Pg**	**03 34 31.0**	**-0.4**
BCOK				Sg		**Sg**	**03 34 35.5**	**-0.1**
OK009	**Oakdale Elemen**	**0.36**	**179**			**Pg**	**03 34 31.9**	**-0.3**
OK009				Sg		**Sg**	**03 34 37.1**	**+0.2**
OK025	**Westminster Rd**	**0.37**	**168**			**Pg**	**03 34 32.1**	**-0.2**
OK025				Sg		**Sg**	**03 34 37.4**	**+0.2**
OK001	**Jones High Sch**	**0.40**	**163**	Pg		**Pg**	**03 34 32.6**	**-0.2**
OK001				Sg		**Sg**	**03 34 38.3**	**+0.2**
OK031	**S. Brethren Rd**	**0.48**	**89**			**Pg**	**03 34 34.4**	**0.0**
OK031				Sg		**Sg**	**03 34 41.5**	**+0.8**
OK030	**Cody Creek RV**	**0.53**	**92**			**Pg**	**03 34 35.3**	**0.0**
OK030				Sg		**Sg**	**03 34 42.6**	**+0.4**
OKCFA	**Oklahoma City**	**0.53**	**182**			**Pg**	**03 34 34.8**	**-0.5**
OKCFA				Sg		**Sg**	**03 34 42.1**	**0.0**
OKCSW	**OKLAHOMA CITY**	**0.54**	**180**			**Pg**	**03 34 35.0**	**-0.4**
OKCSW				Sg		**Sg**	**03 34 42.7**	**+0.2**
QUOK	**Quay**	**0.63**	**69**	Pg		**Pg**	**03 34 37.2**	**0.0**
QUOK				Sg		**Sg**	**03 34 46.0**	**+0.6**
FNO	**Franklin**	**0.69**	**178**			**Pg**	**03 34 37.6**	**-0.6**
FNO				Sg		**Sg**	**03 34 47.2**	**0.0**
CROK	**Carrier**	**0.71**	**322**			**Pg**	**03 34 38.6**	**-0.2**
CROK				Sg		**Sg**	**03 34 48.5**	**+0.4**
W35A	**Tecumseh**	**0.91**	**150**			**Pg**	**03 34 41.5**	**-1.1**
W35A				Sg		**Sg**	**03 34 53.9**	**-0.6**
GC02	**Grant County #**	**0.97**	**339**			**Pg**	**03 34 43.3**	**-0.4**
GC02				Sg		**Sg**	**03 34 56.5**	**+0.3**
KAN13	**South Haven SW**	**1.07**	**358**			**Pg**	**03 34 45.1**	**-0.4**
KAN14	**Manchester OK**	**1.10**	**337**			**Pg**	**03 34 45.5**	**-0.6**
KAN09	**Caldwell North**	**1.20**	**353**			**Pb**	**03 34 47.5**	**-0.6**
KAN05	**Bluff City Nor**	**1.21**	**343**			**Pb**	**03 34 47.6**	**-0.7**
T35A	**Sooner Cattle**	**1.22**	**37**	Pn		**Pn**	**03 34 47.9**	**-0.6**
KAN01	**Argonia South**	**1.23**	**348**			**Pn**	**03 34 48.0**	**-0.6**
KS20	**Mayfield South**	**1.29**	**356**			**Pn**	**03 34 49.1**	**-0.3**
KAN10	**Anthony SW Sta**	**1.29**	**336**			**Pn**	**03 34 48.8**	**-0.7**
TUL1	**Leonard**	**1.33**	**91**	P		**Pn**	**03 34 48.8**	**-1.2**
	baz=271							
TUL1				S		**Sb**	**03 35 07.2**	**-0.3**
	baz=271							
TUL1	**Leonard**	**1.33**	**91**	Pn		**Pn**	**03 34 48.8**	**-1.2**
U32A	**Winter Ranch,**	**1.34**	**289**			**Pn**	**03 34 49.4**	**-0.7**
KAN08	**Anthony NE Sta**	**1.35**	**342**			**Pn**	**03 34 50.0**	**-0.3**
KAN12	**Harper NE Stat**	**1.42**	**342**			**Pn**	**03 34 51.2**	**0.0**
WMOK	**Wichita Mounta**	**1.63**	**223**	P		**Pn**	**03 34 54.0**	**-0.1**
	baz=42							
WMOK				S		**Sb**	**03 35 15.6**	**-0.6**
	baz=42							
WMOK	**Wichita Mounta**	**1.63**	**223**			**Pn**	**03 34 53.6**	**-0.5**
X37A	**Clayton**	**2.16**	**128**			**Pn**	**03 35 01.0**	**-0.4**
U38A	**Gravette**	**2.52**	**78**			**Pn**	**03 35 06.2**	**0.0**
Z35A	**Perchaven, San**	**2.61**	**177**			**Pn**	**03 35 07.6**	**+0.1**
R32A	**Long Quarter,**	**2.67**	**338**			**Pn**	**03 35 09.1**	**+0.6**
HHAR	**Hobbs**	**2.85**	**82**			**Pn**	**03 35 10.7**	**-0.2**
W39A	**Magazine**	**3.07**	**103**	P		**Pn**	**03 35 14.2**	**+0.4**
	baz=285							
W39A	**Magazine**	**3.07**	**103**			**Pn**	**03 35 14.2**	**+0.4**
KSU1	**Kansas State U**	**3.22**	**12**	Pb		**Pb**	**03 35 24.1**	**+1.6**
	baz=192							
KSU1				Sb		**Sg**	**03 36 06.3**	**-2.1**
	baz=192							
KSU1	**Kansas State U**	**3.22**	**12**	Pn		**Pn**	**03 35 16.7**	**+0.8**
Z38A	**Mt. Pleasant**	**3.35**	**142**	Pn		**Pn**	**03 35 18.0**	**+0.3**
CBKS	**Cedar Bluff**	**3.40**	**328**	Pb		**Pb**	**03 35 27.1**	**+1.5**
	baz=147							
CBKS				Sb		**Sg**	**03 36 13.4**	**-0.9**
	baz=147							
CBKS	**Cedar Bluff**	**3.40**	**328**	Pn		**Pn**	**03 35 19.3**	**+0.8**
MIAR	**Mount Ida**	**3.45**	**113**	P		**Pn**	**03 35 20.1**	**+0.9**
	baz=295							
MIAR	**Mount Ida**	**3.45**	**113**			**Pn**	**03 35 19.6**	**+0.5**
AMTX	**Amarillo**	**3.63**	**254**	P		**Pn**	**03 35 23.2**	**+1.6**
	baz=72							
AMTX	**Amarillo**	**3.63**	**254**	Pn		**Pn**	**03 35 22.9**	**+1.3**
U40A	**Yellville**	**3.73**	**82**	Pn		**Pn**	**03 35 22.6**	**-0.3**
S39A	**Bolivar**	**3.73**	**61**			**Pn**	**03 35 22.8**	**-0.2**
ABTX	**Abilene, Hawle**	**3.78**	**210**	S		**Sn**	**03 36 08.6**	**+0.2**
	baz=28							
WHTX	**Lake Whitney,**	**3.94**	**180**	P		**Pn**	**03 35 26.0**	**+0.1**
	baz=0.2							
X40A	**Basin Creek Fa**	**4.04**	**110**			**Pn**	**03 35 27.4**	**+0.2**
237A	**Washetta, Mont**	**4.16**	**161**	Pn		**Pn**	**03 35 28.2**	**-0.6**
WHAR	**Wooly Hollow**	**4.24**	**97**	Pn		**Pn**	**03 35 30.2**	**+0.2**
W41B	**Gary Mavity, V**	**4.30**	**99**	P		**Pn**	**03 35 31.1**	**+0.3**
	baz=282							
W41B	**Gary Mavity, V**	**4.30**	**99**	Pn		**Pn**	**03 35 31.0**	**+0.3**
FCAR	**Ozark Folk Cen**	**4.31**	**89**	Pn		**Pn**	**03 35 30.6**	**-0.3**
MGMO	**Mountain Grove**	**4.33**	**72**	Pn		**Pn**	**03 35 31.2**	**0.0**
MGMO						**Sn**	**03 36 22.0**	**+0.1**
R40A	**Maddies Statio**	**4.75**	**59**	Pn		**Pn**	**03 35 36.7**	**-0.2**
P38A	**Dawn**	**4.80**	**39**	Pn		**Pn**	**03 35 38.0**	**+0.3**
MSTX	**Muleshoe**	**4.81**	**247**	Pn		**Pn**	**03 35 37.3**	**-0.5**
435B	**Jarrell**	**5.15**	**181**	Pn		**Pn**	**03 35 42.4**	**-0.1**
P40A	**Paris**	**5.57**	**48**	Pn		**Pn**	**03 35 48.2**	**0.0**

ROM 19 03:37:33.0±0.2, 36.°35N±0.°02×13.°57E±0.°02, h22km±1km, ML2.7/1, Error ellipse: s-maj=2.2km s-min=0.5km az=319.0, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CLTA	**Licata**	**0.86**	**21**	P		Pb	03 37 49.4	+0.1
FAVR	**Favara**	**0.91**	**5**	P		Pb	03 37 50.3	+0.1
FAVR				AML		AML		
	comp=N,404μm,1.4s							
FAVR				AML		AML		
	comp=E,515μm,0.8s							
LPDG	**Lampedusa Capo**	**1.13**	**223**	P		Pn	03 37 53.4	-0.1
HMDC	**Modica**	**1.14**	**58**	P		Pn	03 37 53.5	-0.2
HMDC				S		Sn	03 38 09.8	+1.1
HMDC				AML		AML		
	comp=E,306μm,1.4s							
HMDC				AML		AML		
	comp=N,300μm,0.4s							
HPAC	**Pachino**	**1.28**	**74**	P		Pn	03 37 55.4	-0.2
HPAC				AML		AML		
	comp=E,423μm,0.4s							
HPAC				AML		AML		
	comp=N,494μm,1.2s							
RESU	**Resuttano**	**1.35**	**17**	P		Pb	03 37 57.6	0.0
RESU				AML		AML		
	comp=N,126μm,0.4s							
RESU				AML		AML		
	comp=E,120μm,0.8s							
HAVL	**Avola**	**1.39**	**64**	P		Pn	03 37 56.9	-0.1
HAVL				AML		AML		
	comp=N,288μm,0.4s							
HAVL				AML		AML		
	comp=E,290μm,1.5s							
SSY	**Sortino**	**1.44**	**56**	P		Pn	03 37 58.2	+0.4
SSY				S		Sb	03 38 18.1	+0.9
HCRL	**Carlentini**	**1.49**	**51**	P		Pn	03 37 58.8	+0.4
HCRL				S		Sb	03 38 19.1	+0.6
HCRL				AML		AML		
	comp=N,318μm,0.5s							
HCRL				AML		AML		
	comp=E,222μm,1.1s							
CRJA	**Costa Raja**	**1.52**	**343**	P		Pn	03 37 58.0	-0.8
PETRA	**Petralia Sopra**	**1.54**	**16**	AML		AML		
	comp=N,123μm,0.8s							
PETRA				AML		AML		
	comp=E,136μm,0.6s							
GALF	**Gagliano Caste**	**1.57**	**30**	P		Pb	03 38 00.9	-0.5
GALF				AML		AML		
	comp=N,92μm,0.7s							
GALF				AML		AML		
	comp=E,73μm,0.6s							
MTGR	**Montagna Grand**	**1.67**	**337**	P		Pn	03 38 00.3	-0.6
EPZF	**Pizzo Felice**	**1.79**	**35**	P		Pn	03 38 03.9	+1.2
EPZF				AML		AML		
	comp=N,283μm,0.5s							
EPZF				AML		AML		
	comp=E,176μm,1.5s							
MSFR	**San Fratello**	**1.86**	**26**	P		Pn	03 38 04.7	+1.2
AIO	**Antillo**	**2.09**	**39**	P		Pn	03 38 07.7	+1.1
MCSR	**Castroreale**	**2.17**	**38**	P		Pn	03 38 08.3	+0.5
MCSR				AML		AML		
	comp=E,82μm,1.4s							
MCSR				AML		AML		
	comp=N,105μm,1.6s							
MSRU	**Castanea**	**2.45**	**38**	P		Pn	03 38 12.8	+1.1
VSL	**Villasalto**	**4.56**	**315**	P		Pn	03 38 39.8	-0.9

*JMA **19** 03:54:21.1±0.1, 22.°62N×121.°66E, h28km±4km, M3.4*
*TAP **19** 03:54:22.1, 22.°56N×121.°60E, h16km, ML3.5, C*

ISC 19 03:54:20.9±1.0, 22.°56N±0.°02×121.°66E±0.°03, h23km±8km, n61, σ0s79/119, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LDUT	**Ludao**	**0.21**	**302**	*i* P		**Pb**	**03 54 26.8**	**+0.2**
	baz=320							
LDUT				*e*S		**Sb**	**03 54 30.1**	**-0.3**
	baz=320							
TTN	**Taitung**	**0.52**	**292**	*e*P		**Pb**	**03 54 31.4**	**0.0**
	baz=307							
TTN				*e*S		**Sb**	**03 54 38.7**	**+0.3**
	baz=307							
LAY	**Lan-yu**	**0.53**	**191**	*i* P		**Pb**	**03 54 31.5**	**-0.1**
	baz=174							
LAY				*e*S		**Sb**	**03 54 38.8**	**0.0**
	baz=174							
EDH	**Donghe**	**0.53**	**321**	*i* P		**Pb**	**03 54 31.4**	**-0.2**
	baz=326							
EDH				*e*S		**Sb**	**03 54 38.5**	**-0.4**
	baz=326							
TWGBT	**Beinan**	**0.60**	**296**	*i* P		**Pb**	**03 54 32.5**	**-0.3**
	baz=308							
TWGBT				*e*S		**Sb**	**03 54 41.3**	**+0.5**
	baz=308							
LONT	**Longtian**	**0.60**	**305**	P		**Pb**	**03 54 32.6**	**-0.2**
	baz=309							
LONT				*e*S		**Sb**	**03 54 41.5**	**+0.5**
	baz=309							
CHKT	**Chengkung**	**0.60**	**333**	P		**Pb**	**03 54 32.6**	**-0.3**
	baz=339							
CHKT				*e*S		**Sb**	**03 54 40.4**	**-0.6**
	baz=339							
ECL	**Taimali**	**0.66**	**273**	*i* P		**Pb**	**03 54 33.5**	**-0.3**
	baz=287							
ECL				*e*S		**Sb**	**03 54 41.7**	**-0.8**
	baz=287							
FULB	**Fuli**	**0.72**	**332**	*e*P		**Pb**	**03 54 34.7**	**-0.2**
	baz=336							
FULB				*e*S		**Sb**	**03 54 43.7**	**-0.7**
	baz=336							
EAST	**Anshuo**	**0.78**	**257**	P		**Pb**	**03 54 35.3**	**-0.5**
	baz=266							
EAST				*e*S		**Sb**	**03 54 45.1**	**-0.8**
	baz=266							
EYUL	**Yuli**	**0.85**	**338**	*i* P		**Pb**	**03 54 37.2**	**+0.2**
	baz=342							
EYUL				*e*S		**Sn**	**03 54 48.3**	**-0.8**
	baz=342							
TWF1	**Yuli**	**0.86**	**337**	P		**Pb**	**03 54 37.2**	**0.0**
	baz=341							
TWF1				*e*S		**Sb**	**03 54 48.2**	**-0.1**
	baz=341							
ELDTW	**Lidau**	**0.86**	**317**	*e*P		**Pb**	**03 54 36.6**	**-0.8**
	baz=320							
ELDTW				*e*S		**Sb**	**03 54 47.4**	**-1.3**
	baz=320							
SLIU	**Shizi**	**0.87**	**247**	P		**Pb**	**03 54 37.0**	**-0.3**
	baz=245							
SLIU				*e*S		**Sb**	**03 54 47.4**	**-1.2**
	baz=245							
YULB	**Yu-li**	**0.90**	**338**	P		**Pb**	**03 54 37.2**	**-0.6**
	baz=352							
YULB				*e*S		**Sb**	**03 54 48.5**	**-0.9**
	baz=352							
TSMG	**Majia**	**0.95**	**279**	P		**Pb**	**03 54 38.1**	**-0.7**
	baz=279							
TSMG				*e*S		**Sb**	**03 54 49.4**	**-1.6**
	baz=279							
HGSD	**Ruisui**	**0.95**	**347**	*e*P		**Pb**	**03 54 38.0**	**-0.9**
	baz=350							
HGSD				*e*S		**Sn**	**03 54 52.2**	**+0.4**
	baz=350							
MASBT	**Mashibuluo**	**0.95**	**273**	*i* P		**Pb**	**03 54 38.2**	**-0.6**
	baz=280							
MASBT				*e*S		**Sb**	**03 54 50.6**	**-0.4**
	baz=280							
SSD	**Sandimen**	**0.97**	**281**	P		**Pb**	**03 54 38.3**	**-0.8**
	baz=282							
SSD				*e*S		**Sb**	**03 54 50.4**	**-1.2**
	baz=282							
SCZT	**Fangliau**	**0.98**	**259**	P		**Pb**	**03 54 38.9**	**-0.4**
	baz=258							
SCZT				*e*S		**Sn**	**03 54 52.4**	**-0.1**
	baz=258							
EHY	**Hungye**	**0.99**	**342**	*e*P		**Pb**	**03 54 39.0**	**-0.5**
	baz=354							
EHY				*e*S		**Sb**	**03 54 51.9**	**-0.3**
	baz=354							
TWKBT	**Hengchun**	**1.00**	**232**	P		**Pb**	**03 54 39.6**	**0.0**
	baz=230							
TWKBT				*e*S		**Sb**	**03 54 50.7**	**-1.6**
	baz=230							
TWK1	**Hengchun**	**1.00**	**233**	*e*P		**Pb**	**03 54 39.5**	**-0.1**
	baz=230							
TWK1				*e*S		**Sb**	**03 54 52.0**	**-0.5**
	baz=230							
SSPT	**Xinbi**	**1.02**	**266**	*e*P		**Pb**	**03 54 40.0**	**+0.1**
	baz=265							
STYT	**Tauyuan**	**1.03**	**306**	P		**Pb**	**03 54 39.6**	**-0.5**
	baz=308							
STYT				*e*S		**Sb**	**03 54 52.6**	**-0.6**
	baz=308							
SLGT	**Liugui**	**1.03**	**295**	*e*P		**Pb**	**03 54 39.6**	**-0.6**
	baz=301							
SLGT				*e*S		**Sn**	**03 54 53.5**	**-0.3**
	baz=301							
SGST	**Jiashian**	**1.12**	**298**	P		**Pn**	**03 54 41.3**	**0.0**
	baz=304							
SGST				*e*S		**Sn**	**03 54 55.8**	**-0.2**
	baz=304							
SCST	**Cishan**	**1.13**	**287**	P		**Pn**	**03 54 40.2**	**-1.1**
	baz=282							
SCST				*e*S		**Sb**	**03 54 55.0**	**-1.0**
	baz=282							
TWM1	**Shoushan**	**1.18**	**283**	*e*P

ICHU	**Yijhu**	**1.50**	**302**	*eP*	**Pb**	**03 54 47.5**	**-0.7**
	baz=305							
ICHU				*eS*	**Sb**	**03 55 07.0**	**+0.2**
	baz=305							
TWD	**Chiawan**	**1.52**	**358**	*eS*	**Sn**	**03 55 04.2**	**-1.5**
	baz=11							
WDLH	**Douliu**	**1.53**	**318**	*eP*	**Pb**	**03 54 49.4**	**+0.7**
	baz=320							
WDLH				*eS*	**Sb**	**03 55 09.1**	**+1.5**
	baz=320							
TYC	**Yuchr**	**1.53**	**331**	*eP*	**Pb**	**03 54 48.5**	**-0.1**
	baz=348							
TYC				*eS*	**Sb**	**03 55 07.1**	**-0.6**
	baz=348							
CHGB	**Renai**	**1.56**	**343**	*eP*	**Pn**	**03 54 47.9**	**+0.4**
	baz=357							
CHGB				*eS*	**Sn**	**03 55 05.6**	**-1.5**
	baz=357							
NACB	**Ninganchiao**	**1.61**	**358**	*eP*	**Pn**	**03 54 47.5**	**-0.4**
	baz=10.0							
NACB				*eS*	**Sn**	**03 55 07.0**	**-1.0**
	baz=10.0							
WHF	**Hehuan Shan**	**1.62**	**347**	*eP*	**Pn**	**03 54 48.6**	**+0.1**
	baz=349							
WHF				*eS*	**Sn**	**03 55 08.0**	**-0.9**
	baz=349							
TDCB	**Techi**	**1.75**	**345**	P	**Pn**	**03 54 51.3**	**+1.3**
	baz=346							
TDCB				*eS*	**Sn**	**03 55 11.5**	**-0.2**
	baz=346							
WHP	**Taichung City**	**1.83**	**339**	*eP*	**Pb**	**03 54 53.7**	**-0.2**
	baz=348							
WHP				*eS*	**Sb**	**03 55 17.5**	**+1.0**
	baz=348							
TWQ1	**Liyutan**	**1.96**	**335**	*eP*	**Pn**	**03 54 54.1**	**+1.3**
	baz=337							
TWQ1				*eS*	**Sb**	**03 55 19.3**	**-0.7**
	baz=337							
YHNB	**Yeheng**	**2.12**	**353**	*eP*	**Pn**	**03 54 56.5**	**+1.5**
	baz=5.0							
YHNB				*eS*	**Sn**	**03 55 21.0**	**+0.4**
	baz=5.0							
JYNG	**Yonagunijimaku**	**2.22**	**32**	P	**Pn**	**03 54 56.4**	**+0.1**
JYNG				*eS*	**Sn**	**03 55 22.6**	**-0.5**
HATJ	**Hateruma jima**	**2.47**	**52**	P	**Pn**	**03 55 00.5**	**+0.7**
HATJ				S	**Sn**	**03 55 28.3**	**-0.9**
IRIF	**Iriomote-Funau**	**2.59**	**47**	P	**Pn**	**03 55 02.4**	**+0.9**
IRIF				S	**Sn**	**03 55 32.4**	**+0.1**
JKRS	**Kuro-shima**	**2.73**	**52**	P	**Pn**	**03 55 04.4**	**+1.1**
JKRS				*eS*	**Sn**	**03 55 35.1**	**-0.4**
JIJ	**Ishigaki jima**	**2.90**	**51**	P	**Pn**	**03 55 06.2**	**+0.5**
JIJ				*eS*	**Sn**	**03 55 38.4**	**-1.4**
JISG	**Ishigakijimahi**	**3.16**	**50**	P	**Pn**	**03 55 09.5**	**+0.3**
JISG				S	**Sn**	**03 55 45.4**	**-0.8**
JTJ	**Tarama**	**3.47**	**53**	P	**Pn**	**03 55 14.4**	**+0.8**
JTJ				S	**Sn**	**03 55 53.8**	**-0.2**
JIRB	**Irabujima**	**3.93**	**54**	P	**Pn**	**03 55 20.7**	**+0.8**
JIRB				*eS*	**Sn**	**03 56 05.7**	**+0.4**
JMJ2	**Miyako jima3**	**4.00**	**56**	P	**Pn**	**03 55 21.5**	**+0.7**
JMJ2				*eS*	**Sn**	**03 56 07.3**	**+0.3**

*IDC **19** 04:01:52.0±1.7,2˝.15N×126˚.75E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/52, mbtmp3.5/4, Error ellipse: s-maj=113.0km s-min=24.0km az=69.0*
*DJA **19** 04:01:58.5±1.7,2˝N±6˝×12˚7E±˚, h22^{km}±17^{km}, M3.5/6, MLv3.5/6*

ISC 19 04:01:59.8±1.1,2˝.1N±0˝.1×126˚.9E±0˝.1, h63^{km}, n7, σ1°16/8, mb3.4/3, Northern Moluccan Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**158**	P	**Pn**	**04 02 21.9**	**-1.1**
SGSI	**Sangihe**	**2.09**	**321**	P	**Pn**	**04 02 32.0**	**-0.6**
GTOI	**Gorontalo**	**4.09**	**250**	P	**Pn**	**04 02 59.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**20.07**	**183**	P	**P**	**04 06 28.1**	**0.0**
	0.8nm,0.7s,baz=357,slow=12,SNR=2.3						
WRA	**Warramunga Arr**	**23.07**	**162**	P	**P**	**04 06 59.8**	**-0.4**
	0.6nm,0.3s,baz=341,slow=11,SNR=14						
WRA				PcP	**PcP**	**04 10 49.2**	**+1.5**
	0.2nm,0.5s,baz=329,slow=2.1,SNR=1.9						
ASAR	**Alice Springs**	**26.47**	**165**	P	**P**	**04 07 32.7**	**+1.4**
	0.2nm,0.5s,baz=342,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**04 11 52.4**	**-0.6**
	0.3nm,0.4s,baz=121,slow=8.1,SNR=7.4						

*IDC **19** 04:06:49.9±1.9,36˚.57N×97˚.92W, h0^{km}, mb1 3.6/2, mb1mx3.3/51, mbtmp3.3/2, ML2.8/2, Error ellipse: s-maj=27.6km s-min=12.0km az=100.0*
*TUL **19** 04:06:50.9±0.8,36˚.59N±0˝.02×98˚.26W±0˝.03, h6^{km}±6^{km}, ML3.1, Error ellipse: s-maj=3.3km s-min=2.7km az=123.0*
*NEIC **19** 04:06:51.3±0.8,36˚.58N±0˝.02×98˚.24W±0˝.03, h9^{km}±4^{km}, Error ellipse: s-maj=3.3km s-min=2.0km az=118.0*
*ANF **19** 04:06:52.5±1.5,36˚.64N×98˚.21W, h17^{km}±12^{km}, ML4.0/9, Error ellipse: s-maj=5.3km s-min=3.3km az=111.0*

ISC 19 04:06:51.6±0.9,36˚.59N±0˝.02×98˚.21W±0˝.02, h10^{km}±8^{km}, n66, σ0°83/85, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.20**	**115**		**Pg**	**04 06 56.0**	**+0.1**
CROK				Sg	**Sg**	**04 06 59.5**	**+0.7**
GC02	**Grant County #**	**0.38**	**47**		**Pg**	**04 06 59.2**	**0.0**
GC02				Sg	**Sb**	**04 07 05.2**	**-1.3**
KAN14	**Manchester OK**	**0.42**	**29**		**Pg**	**04 06 59.7**	**-0.1**
KAN10	**Anthony SW Sta**	**0.54**	**10**		**Pg**	**04 07 01.8**	**-0.4**
KAN10				Sg	**Sg**	**04 07 09.4**	**+0.1**
KAN05	**Bluff City Nor**	**0.58**	**28**		**Pg**	**04 07 02.7**	**-0.3**
KAN05				Sg	**Sg**	**04 07 10.9**	**+0.3**
KAN08	**Anthony NE Sta**	**0.66**	**17**		**Pg**	**04 07 04.1**	**-0.4**
KAN08				Sg	**Sg**	**04 07 13.3**	**+0.1**
KAN01	**Argonia South**	**0.67**	**33**	Pg	**Pg**	**04 07 04.3**	**-0.3**
KAN01				Sg	**Sg**	**04 07 13.8**	**+0.4**
U32A	**Winter Ranch,**	**0.67**	**252**		**Pg**	**04 07 03.3**	**-1.3**
U32A				Sg	**Sg**	**04 07 12.3**	**-1.1**
KAN09	**Caldwell North**	**0.72**	**41**		**Pg**	**04 07 05.3**	**-0.3**
KAN09				Sg	**Sg**	**04 07 15.3**	**+0.2**
KAN13	**South Haven SW**	**0.72**	**54**		**Pg**	**04 07 05.3**	**-0.3**
KAN13				Sg	**Sb**	**04 07 15.6**	**-0.7**
KAN12	**Harper NE Stat**	**0.73**	**14**		**Pg**	**04 07 05.2**	**-0.5**
KAN12				Sg	**Sg**	**04 07 15.0**	**-0.1**
KS20	**Mayfield South**	**0.83**	**39**		**Pg**	**04 07 07.1**	**-0.5**
KS20				Sg	**Sb**	**04 07 18.6**	**-0.7**
OK029	**Liberty Lake**	**1.00**	**142**		**Pg**	**04 07 10.2**	**-0.7**
BCOK	**Bluff Creek, N**	**1.05**	**152**		**Pg**	**04 07 10.9**	**-1.0**
BCOK				Sg	**Sg**	**04 07 25.3**	**-0.2**
OK025	**Westminster Rd**	**1.23**	**145**	Pn	**Pn**	**04 07 14.1**	**-0.8**
OK025				Sg	**Sn**	**04 07 31.2**	**-0.4**
OK031	**S. Brethren Rd**	**1.28**	**119**		**Pn**	**04 07 15.2**	**-0.3**
OK031					**Sn**	**04 07 33.2**	**+0.4**
QUOK	**Quay**	**1.28**	**109**		**Pn**	**04 07 15.4**	**-0.2**
QUOK					**Sn**	**04 07 33.3**	**+0.5**
OKCFA	**Oklahoma City**	**1.32**	**152**	Pn	**Pn**	**04 07 15.2**	**-0.9**
OKCFA				Sg	**Sn**	**04 07 33.7**	**-0.1**
OK030	**Cody Creek RV**	**1.33**	**119**		**Pn**	**04 07 16.1**	**-0.1**
OK030					**Sg**	**04 07 34.9**	**+0.4**
OKCSW	**OKLAHOMA CITY**	**1.34**	**152**		**Pn**	**04 07 15.8**	**-0.6**
OKCSW					**Sg**	**04 07 34.2**	**-0.5**
T35A	**Sooner Cattle**	**1.40**	**76**		**Pb**	**04 07 17.6**	**-0.3**
T35A					**Sg**	**04 07 36.6**	**-0.1**
FNO	**Franklin**	**1.48**	**153**		**Pn**	**04 07 18.3**	**-0.1**
W35A	**Tecumseh**	**1.80**	**142**		**Pn**	**04 07 22.6**	**-0.1**
R32A	**Long Quarter,**	**1.87**	**348**		**Pn**	**04 07 23.9**	**+0.2**
WMOK	**Wichita Mounta**	**1.91**	**194**	P	**Pn**	**04 07 24.4**	**+0.2**
	baz=13						
WMOK				S	**Sb**	**04 07 50.1**	**-0.2**
	baz=13						
WMOK	**Wichita Mounta**	**1.91**	**194**		**Pn**	**04 07 23.9**	**-0.3**
TUL1	**Leonard**	**2.07**	**108**	P	**Pn**	**04 07 27.3**	**+0.8**
	baz=290						
TUL1	**Leonard**	**2.07**	**108**		**Pn**	**04 07 26.9**	**+0.5**
CBKS	**Cedar Bluff**	**2.53**	**332**	Pb	**Pb**	**04 07 36.3**	**-0.8**
	baz=152						
CBKS				Sb	**Sb**	**04 08 08.2**	**0.0**
	baz=152						
CBKS	**Cedar Bluff**	**2.53**	**332**	Pn	**Pn**	**04 07 33.9**	**+1.2**
KSU1	**Kansas State U**	**2.81**	**26**	Sb	**Sb**	**04 08 17.0**	**+0.7**
	baz=208						
KSU1	**Kansas State U**	**2.81**	**26**	Pn	**Pn**	**04 07 36.6**	**0.0**
X37A	**Clayton**	**3.06**	**130**		**Pn**	**04 07 40.9**	**+0.9**
U38A	**Gravette**	**3.09**	**92**		**Pn**	**04 07 41.4**	**+1.0**
AMTX	**Amarillo**	**3.30**	**240**	Pb	**Pb**	**04 07 50.2**	**0.0**
	baz=58						
AMTX	**Amarillo**	**3.30**	**240**	Pn	**Pn**	**04 07 42.9**	**-0.4**
HHAR	**Hobbs**	**3.46**	**94**		**Pn**	**04 07 45.8**	**+0.3**
W39A	**Magazine**	**3.85**	**110**		**Pn**	**04 07 52.1**	**+1.1**
S39A	**Bolivar**	**4.06**	**73**	Pn	**Pn**	**04 07 54.1**	**+0.4**
ABTX	**Abilene, Hawle**	**4.13**	**197**	Pn	**Pn**	**04 07 54.3**	**-0.5**
KSCO	**Kaye Shedlock'**	**4.25**	**306**	Pb	**Pb**	**04 08 07.7**	**+1.2**
	baz=124						
KSCO	**Kaye Shedlock'**	**4.25**	**306**	Pn	**Pn**	**04 07 55.8**	**-0.7**
MIAR	**Mount Ida**	**4.29**	**117**		**Pn**	**04 07 57.8**	**+0.9**
U40A	**Yellville**	**4.33**	**92**	Pn	**Pn**	**04 07 58.5**	**+1.1**
MSTX	**Muleshoe**	**4.56**	**236**	Sb	**Sb**	**04 09 11.5**	**+4.8**
	baz=53						
MSTX	**Muleshoe**	**4.56**	**236**	Pn	**Pn**	**04 07 59.6**	**-1.1**
WHTX	**Lake Whitney,**	**4.63**	**172**	P	**Pn**	**04 08 02.4**	**+0.8**
	baz=352						
WHTX	**Lake Whitney,**	**4.63**	**172**	Pn	**Pn**	**04 08 02.0**	**+0.3**
P38A	**Dawn**	**4.77**	**49**	Pn	**Pn**	**04 08 05.1**	**+1.6**
BGNE	**Belgrade**	**4.81**	**1**	P	**Pn**	**04 08 04.5**	**+0.3**
	baz=181						
BGNE	**Belgrade**	**4.81**	**1**	Pn	**Pn**	**04 08 04.0**	**-0.1**
X40A	**Basin Creek Fa**	**4.86**	**114**	Pn	**Pn**	**04 08 05.8**	**+1.0**
FCAR	**Ozark Folk Cen**	**4.97**	**96**	Pn	**Pn**	**04 08 06.6**	**+0.3**
WHAR	**Wooly Hollow**	**4.98**	**103**	Pn	**Pn**	**04 08 07.2**	**+0.8**
T25A	**Trinidad**	**5.00**	**278**	Pn	**Pn**	**04 08 06.4**	**-0.5**
R40A	**Maddies Statio**	**5.02**	**68**	Pn	**Pn**	**04 08 07.3**	**+0.2**
W41B	**Gary Mavity, V**	**5.04**	**105**	Pn	**Pn**	**04 08 07.5**	**+0.2**
L34A	**Svendsen Farm,**	**5.55**	**14**	Pn	**Pn**	**04 08 14.5**	**+0.2**
P40A	**Paris**	**5.68**	**57**	Pn	**Pn**	**04 08 16.4**	**+0.4**
T42A	**Van Buren**	**5.73**	**83**	Pn	**Pn**	**04 08 16.8**	**+0.1**
CCM	**Cathedral Cave**	**5.74**	**73**	Pn	**Pn**	**04 08 16.8**	**-0.1**
SDCO	**Great Sand Dun**	**5.93**	**283**	Pn	**Pn**	**04 08 18.6**	**-1.2**
TXAR	**Lajitas Array**	**8.56**	**214**	Pn	**Pn**	**04 08 55.0**	**-0.7**
	0.2nm,0.3s,baz=39,slow=11,SNR=12						
TXAR				Pg	Pg	04 09 23.8	-12
	0.5nm,0.3s,baz=27,slow=13,SNR=9.9						
TXAR				Lg	Lg	04 11 18.1	
	0.6nm,0.3s,baz=35,slow=31,SNR=4.8						
TXAR	**Lajitas Array**	**8.56**	**214**		**Pn**	**04 08 54.9**	**-0.9**
PDAR	**Pinedale Array**	**10.70**	**309**	Pg	Pn	04 10 10.0	+45
	0.1nm,0.3s,baz=122,slow=17,SNR=6.4						
PDAR				Lg	Lg	04 12 28.4	
	0.3nm,0.3s,baz=112,slow=29,SNR=7.3						
ULM	**Lac du Bonnet**	**13.76**	**6**	Pn	Pn	04 10 00.9	-5.7
	0.2nm,0.3s,baz=179,slow=14,SNR=1.8						
ULM				Sn	Sn	04 12 26.4	-13
	0.2nm,0.3s,baz=331,slow=19,SNR=1.2						
ULM				Lg	Lg	04 13 55.6	
	0.1nm,0.3s,baz=292,slow=3.2,SNR=2.1						

*IDC **19** 04:07:24.7±0.6,2˝.59S×68˚.14E, h0^{km}, mb4.1/15, mb1 4.3/15, mb1mx3.9/61, mbtmp4.1/15, MS3.3/6, Ms1 3.3/6, ms1mx3.0/33, Error ellipse: s-maj=18.9km s-min=16.9km az=9.0*
*NEIC **19** 04:07:26.6±0.8,2˝.6S±0˝.1×68˚.2E±0˝.2, h14^{km}±4^{km}, mb4.5/8, Error ellipse: s-maj=22.3km s-min=15.4km az=109.0*

ISC 19 04:07:26.3±0.7,2˝.6S±0˝.1×68˚.2E±0˝.1, h11^{km}, n34, σ0°61/29, mb4.2/18, MS3.3/6, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**27.29**	**341**	LR	LR	04 22 23.3	
	comp=Z,45nn,18.5s,baz=185,slow=33						
KMBO	**Kilima Mbogo**	**30.92**	**272**	P	**P**	**04 13 43.7**	**0.0**
	1.5nm,0.8s,baz=58,slow=10,SNR=4.6						
NIL	**Nilore**	**36.36**	**7**	P	**P**	**04 14 29.3**	**-1.2**
NIL				IAmb	IAmb	04 14 34.6	
	comp=Z,10nm,1.1s						
CMAR	**Chiang Mai Arr**	**36.82**	**54**	P	**P**	**04 14 33.6**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=241,slow=11,SNR=1.3						
CMAR				LR	LR	04 27 51.1	
	comp=Z,49nn,19.2s,baz=240,slow=33						
CMAR	**Chiang Mai Arr**	**36.82**	**54**	P	**P**	**04 14 34.5**	**-0.2**
KBL	**Kabul**	**36.93**	**1**	P	**P**	**04 14 34.9**	**-0.8**
KBL				IAmb	IAmb	04 14 40.7	
	comp=Z,8.2nm,1.3s						
LSZ	**Lusaka**	**41.35**	**250**	P	**P**	**04 15 12.4**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=333,slow=2.3,SNR=2.6						
GEYT	**Alibeck**	**41.37**	**348**	LR	LR	04 31 21.1	
	comp=Z,52nm,20.6s,baz=35,slow=35						
GAR	**Garm**	**41.42**	**3**	P	**P**	**04 15 13.3**	**+0.2**
BTK	**Batken**	**42.50**	**3**	P	**P**	**04 15 23.2**	**+1.4**
MATP	**Matopo**	**42.53**	**242**	P	**P**	**04 15 22.2**	**-0.2**
	comp=Z,7.3nm,1.2s,baz=39,slow=6.8,SNR=4.7						
BOSA	**Boshof**	**48.34**	**233**	LR	LR	04 33 11.8	
	comp=Z,30nn,19.0s,baz=45,slow=32						
MKAR	**Makanchi Array**	**50.72**	**13**	P	**P**	**04 16 25.8**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=165,slow=6.1,SNR=4.6						
MKAR	**Makanchi Array**	**50.72**	**13**	P	**P**	**04 16 26.0**	**-0.1**
KBZ	**Khabaz**	**51.38**	**337**	P	**P**	**04 16 31.4**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=56,slow=24,SNR=4.3						
ABKAR	**Akbulak array**	**52.12**	**350**	P	**P**	**04 16 36.2**	**-0.2**
KURBB	**Kurchatov Arra**	**53.74**	**8**	P	**P**	**04 16 48.5**	**+0.1**
	comp=Z,2.5nm,0.2s,baz=202,slow=7.7,SNR=3.9						
KURK	**Kurchatov**	**53.84**	**8**	P	**P**	**04 16 48.2**	**-0.9**
KURK				IAmb	IAmb	04 16 52.0	
	comp=Z,5.0nm,1.1s						
ZALV	**Zalesovo Beam**	**58.02**	**12**	P	**P**	**04 17 19.2**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=216,slow=7.1,SNR=4.6						
ZALV	**Zalesovo Beam**	**58.02**	**12**	P	**P**	**04 17 19.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**58.36**	**110**	P	**P**	**04 17 23.0**	**+0.9**
	comp=Z,4.2nm,1.1s,baz=274,slow=6.9,SNR=6.0						
FITZ	**Fitzroy Crossi**	**58.36**	**110**	P	**P**	**04 17 21.6**	**-0.5**
FITZ				IAmb	IAmb	04 17 24.1	
	comp=Z,7.1nm,1.3s						
SONM	**Songino Array**	**60.29**	**29**	P	**P**	**04 17 36.1**	**+1.0**
	comp=Z,2.4nm,1.0s,baz=215,slow=5.5,SNR=10.0						
SONM	**Songino Array**	**60.29**	**29**	P	**P**	**04 17 35.6**	**+0.5**
AKASG	**Malin Array Be**	**62.63**	**333**	P	**P**	**04 17 51.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=121,slow=5.9,SNR=4.3						
WRA	**Warramunga Arr**	**66.75**	**110**	P	**P**	**04 18 18.8**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=284,slow=6.1,SNR=19						
WRA	**Warramunga Arr**	**66.75**	**110**	P	**P**	**04 18 18.1**	**-0.2**
ASAR	**Alice Springs**	**66.79**	**115**	P	**P**	**04 18 18.6**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=285,slow=6.3,SNR=17						
KSRS	**Korea Array**	**68.09**	**48**	LR	LR	04 49 38.5	
	comp=Z,16nm,18.4s,baz=170,slow=37						
ARCES	**ARCESS Array B**	**77.49**	**346**	LR	LR	04 55 13.0	
	comp=Z,24nn,18.6s,baz=335,slow=37						
ESDC	**Sonseca Array**	**77.98**	**311**	P	**P**	**04 19 25.4**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=85,slow=4.9,SNR=9.8						
ESDC	**Sonseca Array**	**77.98**	**311**	P	**P**	**04 19 24.6**	**-0.4**
SNAA	**Sanae**	**81.64**	**198**	P	**P**	**04 19 44.3**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=70,slow=3.4,SNR=5.5						
TXAR	**Lajitas Array**	**152.28**	**345**	PKPbc	**PKiKP**	**04 27 23.2**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=340,slow=1.5,SNR=5.4						

*VAO **19** 04:08:40.6±0.5,22˚.01S×68˚.75W, h104^{km}, mb4.2*
*IDC **19** 04:08:40.7±0.7,22˚.18S×68˚.54W, h94^{km}±7^{km}, mb3.7/7, mb1 3.7/9, mb1mx3.6/29, mbtmp4.0/9, Error ellipse: s-maj=29.4km s-min=17.9km az=120.0*
*GUC **19** 04:08:42.7±0.7,22˚.29S×68˚.66W, h109^{km}±4^{km}, ML3.9*

ISC 19 04:08:41.3±0.6,22˚.27S±0˝.04×68˚.53W±0˝.06, h105^{km}±6^{km}, n50, σ1°41/56, mb4.0/6, 6C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.49**	**226**	P	**Pn**	**04 08 58.3**	**+0.3**
	478nm,0.3s,baz=28,slow=3.2,SNR=6725						
LVC				S	**Sn**	**04 09 10.2**	**-0.2**
	2µm,0.3s,baz=111,slow=1.5,SNR=54						
LVC	**Limon Verde**	**0.49**	**226**	*eP*	**Pn**	**04 08 58.5**	**+0.5**
LVC				*i* S	**Sn**	**04 09 10.2**	**-0.2**
LVC	**Limon Verde**	**0.49**	**226**	*eP*	**Pn**	**04 08 58.6**	**+0.7**
PB09	**IPOC Station P**	**0.81**	**305**	⇑*iP*	**Pn**	**04 09 01.4**	**+1.1**
PB09				*i* S	**Sn**	**04 09 15.3**	**+0.7**
PB09				IAML		04 09 17.2	
	comp=N,3µm,0.6s						
PB06	**IPOC Station P**	**1.06**	**245**	⇑*iP*	**Pn**	**04 09 03.0**	**+0.2**
PB06				*i* S	**Sn**	**04 09 19.0**	**-0.1**
PB06				IAML		04 09 22.1	
	comp=N,7µm,0.2s						
PB15	**IPOC Station P**	**1.28**	**223**	⇑*iP*	**Pn**	**04 09 06.0**	**+0.6**
PB15				*i* S	**Sn**	**04 09 24.1**	**+0.5**
PB07	**IPOC Station P**	**1.37**	**293**	⇑*iP*	**Pn**	**04 09 06.8**	**+0.4**
PB07				*i* S	**Sn**	**04 09 25.0**	**-0.4**
PB04	**IPOC Station P**	**1.50**	**267**	⇑*iP*	**Pn**	**04 09 07.8**	**-0.2**
PB04				*i* S	**Sn**	**04 09 27.1**	**-1.1**
PB04				IAML		04 09 30.2	
	comp=E,3µm,0.5s						
PB01	**IPOC Station P**	**1.51**	**324**	⇓*iP*	**Pn**	**04 09 08.8**	**+0.8**
PB01				*i* S	**Sn**	**04 09 28.5**	**+0.3**
PB01				IAML		04 09 30.6	
	comp=E,1µm,0.3s						
PB05	**IPOC Station P**	**1.65**	**249**	⇑*iP*	**Pn**	**04 09 09.4**	**-0.4**
PB05				*i* S	**Sn**	**04 09 30.4**	**-1.1**
PB05				IAML		04 09 33.8	
	comp=E,1µm,0.5s						
PB08	**IPOC Station P**	**2.19**	**345**	*eP*	**Pn**	**04 09 19.3**	**+2.4**
PB08				IAML		04 09 52.4	
	comp=E,308nm,0.5s						
PB10	**IPOC Station P**	**2.24**	**236**	IAML		04 09 51.4	
	comp=N,680nm,0.4s						
TA01	**Diego Aracena**	**2.29**	**317**	IAML		04 09 50.8	
	comp=N,893nm,0.4s						
TA02	**Huaiquique**	**2.48**	**323**	*eP*	**Pn**	**04 09 20.5**	**+0.2**
GO01	**Chusmiza**	**2.66**	**346**	*eP*	**Pn**	**04 09 25.2**	**+2.1**
GO01				IAML		04 10 02.3	
	comp=N,441nm,0.3s						
PB11	**IPOC Station P**	**2.70**	**337**	IAML		04 10 03.4	
	comp=E,515nm,0.6s						
PB14	**IPOC Station P**	**2.91**	**216**	IAML		04 10 11.4	
	comp=N,493nm,0.4s						
PSGC	**Pisagua**	**3.04**	**330**	*eP*	**Pn**	**04 09 27.1**	**-0.8**
GO02	**Mina Guanaco**	**3.04**	**198**	⇓*iP*	**Pn**	**04 09 28.0**	**-0.1**
GO02				*i* S	**Sn**	**04 10 03.1**	**-0.9**
MNMC	**Minye Minye**	**3.27**	**342**	IAML		04 10 26.8	
	comp=N,522nm,0.6s						
PB16	**IPOC Station P**	**4.02**	**347**	*eP*	**Pn**	**04 09 43.4**	**+2.1**
AC01	**Pan de Azucar**	**4.30**	**206**	*eP*	**Pn**	**04 09 42.6**	**-2.0**
AC02	**Maricunga**	**4.58**	**187**	⇓*iP*	**Pn**	**04 09 49.1**	**+0.2**
LPAZ	**La Paz**	**5.96**	**4**	P	**Pn**	**04 10 11.1**	**+3.4**
	comp=N,1.0nm,0.3s,baz=185,slow=7.0,SNR=16						
SIV	**San Ignacio**	**9.41**	**50**	P	**Pn**	**04 10 53.0**	**-1.1**
	comp=N,3.3nm,0.3s,baz=250,slow=8.6,SNR=18						
SIV				S	**Sn**	**04 12 32.4**	**-5.7**
	comp=N,0.4nm,0.3s,baz=136,slow=23,SNR=1.4						
PTLB	**Pontes e Lacer**	**11.18**	**54**	*eP*	**Pn**	**04 11 17.6**	**-0.4**
PP1B	**Ponte de Pedra**	**13.65**	**73**	*eP*	**Pn**	**04 11 50.8**	**+0.2**
TRCB	**Terra Rica**	**14.70**	**95**	*eP*	**P**	**04 12 07.4**	**0.0**
PTGB	**Pitanga**	**15.30**	**102**	*eP*	**Pn**	**04 12 13.4**	**+1.7**
ITAB	**Concordia**	**15.70**	**112**	*eP*	**P**	**04 12 20.8**	**+2.4**
CPSB	**Cacapava Do Su**	**15.76**	**124**	*eP*	**P**	**04 12 19.7**	**+0.6**
PLTB	**Pedras Altas**	**16.31**	**129**	*eP*	**P**	**04 12 28.0**	**+2.8**
CLDB	**Colider**	**16.64**	**49**	*eP*	**Pn**	**04 12 28.7**	**+0.4**
FRTB	**Fartura**	**17.52**	**97**	*eP*	**Pn**	**04 12 40.0**	**+0.9**
PLCA	**Paso Flores**	**18.49**	**185**	P	**Pn**	**04 12 50.7**	**+0.1**
	comp=N,0.2nm,0.3s,baz=0.4,slow=17,SNR=1.8						
BB19B	**Bebedouro**	**18.63**	**90**	*eP*	**Pn**	**04 12 52.8**	**+0.4**
SNDB	**Serra Nova Dou**	**19.37**	**61**	*eP*	**P**	**04 12 58.9**	**0.0**
IPMB	**Ipameri, GO**	**19.55**	**81**	*eP*	**P**	**04 13 02.1**	**+1.2**
NPGB	**Novo Progresso**	**19.76**	**42**	*eP*	**P**	**04 13 02.2**	**-0.9**
VAO	**Valinhos**	**19.92**	**96**	*eP*	**P**	**04 13 06.1**	**+1.2**
BDFB	**Brasilia**	**20.48**	**75**	P	**P**	**04 13 11.0**	**0.0**
	comp=N,1.6nm,0.5s,baz=240,slow=15,SNR=3.4						
ITTB	**Itaituba**	**21.68**	**37**	*eP*	**P**	**04 13 21.8**	**-2.1**
MDP	**Montagnes des**	**31.33**	**32**	P	**P**	**04 14 51.9**	**0.0**
	comp=N,6.8nm,0.8s,baz=202,slow=11,SNR=1.6						
RCBR	**Riachuelo**	**35.50**	**68**	P	**P**	**04 15 27.6**	**-0.7**
	comp=N,4.4n

ZALV	**Zalesovo Beam**	**53.45 351**	P	**P**	**04 25 18.4**	**+1.0**
	comp=Z,6.1nm,0.6s,baz=178,slow=6.1,SNR=16					
ZALV	**Zalesovo Beam**	**53.45 351**	P	**P**	**04 25 17.9**	**+0.4**
STKA	**Stephens Creek**	**53.56 132**	P	**P**	**04 25 19.5**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=310,slow=11,SNR=3.9					
BRVK	**Borovoye**	**56.17 341**	P	**P**	**04 25 36.3**	**-0.9**
BRVK			IAmb	IAmb	04 25 38.1	
	comp=Z,3.7nm,0.7s					
ABKAR	**Akbulak array**	**57.35 332**	P	**P**	**04 25 46.2**	**+0.5**
ABKAR			IAmb	IAmb	04 25 47.1	
	comp=Z,3.5nm,0.8s					
ARCES	**ARCESS Array B**	**82.39 340**	P	**P**	**04 28 19.8**	**+0.5**
	comp=Z,7.5nm,0.9s,baz=81,slow=5.6,SNR=4.6					
GERES	**GERESS Array B**	**84.62 319**	P	**P**	**04 28 32.9**	**+1.6**
	comp=Z,1.1nm,1.1s,baz=103,slow=2.1,SNR=3.8					
GERES	**GERESS Array B**	**84.62 319**	P	**P**	**04 28 31.4**	**+0.2**

*NNC **19** 04:18:55.4±1.1, 44.30N×83.12E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=9.2km s-min=3.6km az=127.0*
*SOME **19** 04:18:55.2, 44.30N×83.12E, h10km*

ISC 19 04:18:54.7±1.4, 44.26N±0.06×83.20E±0.06, h10km, n46, σ2s49/63, 7C-4D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.22 249**		*eP*	**Pb**	**04 19 35.5**	**+0.6**
	70nm,0.2s						
KTMS				*eS*	**Sg**	**04 20 05.0**	**-0.9**
	247nm,0.2s						
KTMS	**Ketmen**	**2.22 249**		Pg	**Pb**	**04 19 35.5**	**+0.6**
	70nm,0.2s						
KTMS				Lg	Lg	04 20 05.0	
	247nm,0.2s						
DJR	**Jarkent**	**2.45 273**		*eP*	**Pb**	**04 19 40.2**	**+1.3**
	53nm,0.4s						
DJR				*eS*	**Sg**	**04 20 12.7**	**-0.7**
	52nm,0.3s						
DJR	**Jarkent**	**2.45 273**		Pg	**Pb**	**04 19 40.2**	**+1.3**
	53nm,0.4s						
DJR				Lg	Lg	04 20 12.7	
	52nm,0.3s						
MK31	**Makanchi Array**	**2.61 346**	⇑	Pg	**Pb**	**04 19 41.7**	**+0.1**
	2.8nm,0.2s,baz=160,slow=16,SNR=7.4						
MK31			⇓	Lg	Lg	04 20 15.0	
	14nm,0.2s,baz=158,slow=28,SNR=22						
MAKZ	**Makanchi**	**2.69 342**	⇑	Pg	**Pb**	**04 19 43.2**	**+0.3**
	10.0nm,0.5s						
MAKZ			⇑	Lg	Lg	04 20 17.7	
	48nm,0.4s						
PDGK	**Podgornoye**	**2.84 252**	⇑	Pg	**Pb**	**04 19 45.4**	**-0.3**
	3.8nm,0.3s						
PDGK			⇑	Lg	Lg	04 20 24.3	
	102nm,0.7s						
KAPS	**Kapalarasan**	**2.92 292**		*eP*	**Pb**	**04 19 48.6**	**+1.6**
	7.2nm,0.1s						
KAPS				*eS*	**Sg**	**04 20 27.1**	**-1.5**
	69nm,0.4s						
KAPS	**Kapalarasan**	**2.92 292**		Pg	**Pb**	**04 19 48.6**	**+1.6**
	7.2nm,0.1s						
KAPS				Lg	Lg	04 20 27.1	
	69nm,0.4s						
SHLS	**Shalkode**	**2.93 249**		*eP*	**Pn**	**04 19 42.4**	**+1.0**
	46nm,0.4s						
SHLS				*eS*	**Sn**	**04 20 16.8**	**+0.1**
	278nm,0.6s						
SHLS	**Shalkode**	**2.93 249**		Pg	**Pn**	**04 19 42.4**	**+1.0**
	46nm,0.4s						
SHLS				Lg	Lg	04 20 16.8	
	278nm,0.6s						
UZB	**Uzynbulak**	**3.23 251**		*eP*	**Pb**	**04 19 53.0**	**+0.8**
	4.1nm,0.2s						
UZB				*eS*	**Sb**	**04 20 34.5**	**+2.9**
	53nm,0.3s						
UZB	**Uzynbulak**	**3.23 251**		Pg	**Pb**	**04 19 53.0**	**+0.8**
	4.1nm,0.2s						
UZB				Lg	Lg	04 20 34.5	
	53nm,0.3s						
KPKS	**Kokpek**	**3.36 258**		*eP*	**Pb**	**04 19 55.0**	**+0.6**
	17nm,0.2s						
KPKS				*eS*	**Sb**	**04 20 38.3**	**+2.9**
	179nm,0.4s						
ZSN	**Zaisan**	**3.39 19**		*eP*	**Pb**	**04 19 55.8**	**+0.8**
	41nm,0.2s						
ZSN				*eS*	**Sb**	**04 20 39.1**	**+2.9**
	75nm,0.6s						
ZSN	**Zaisan**	**3.39 19**		Pg	**Pb**	**04 19 55.8**	**+0.8**
	41nm,0.2s						
ZSN				Lg	Lg	04 20 39.1	
	75nm,0.6s						
MNBS	**Baschi**	**3.46 269**		*eP*	**Pb**	**04 19 56.7**	**+0.6**
	10nm,0.2s						
MNBS				*eS*	**Sb**	**04 20 41.4**	**+3.2**
	55nm,0.4s						
MNBS	**Baschi**	**3.46 269**		Pg	**Pb**	**04 19 56.7**	**+0.6**
	10nm,0.2s						
MNBS				Lg	Lg	04 20 41.4	
	55nm,0.4s						
TDK	**Taldyqorghan**	**3.50 284**		*eP*	**Pg**	**04 19 59.7**	**-2.0**
	81nm,0.5s						
TDK				*eS*	**Sg**	**04 20 46.4**	**-0.7**
	85nm,0.5s						
TDK	**Taldyqorghan**	**3.50 284**		Pg	**Pg**	**04 19 59.7**	**-2.0**
	81nm,0.5s						
TDK				Lg	Lg	04 20 46.4	
	85nm,0.5s						
KURS	**Kuram**	**3.72 260**		*eP*	**Pb**	**04 20 01.9**	**+1.5**
	3.1nm,0.4s						
KURS				*eS*	**Sg**	**04 20 50.3**	**-3.8**
	21nm,0.5s						
KURS	**Kuram**	**3.72 260**		Pg	**Pb**	**04 20 01.9**	**+1.5**
	3.1nm,0.4s						
KURS				Lg	Lg	04 20 50.3	
	21nm,0.5s						
ARXS	**Arharly**	**3.86 271**		*eP*	**Pb**	**04 20 05.3**	**+2.4**
	14nm,0.3s						
ARXS				*eS*	**Sg**	**04 20 56.0**	**-2.7**
	39nm,0.3s						
ARXS	**Arharly**	**3.86 271**		Pg	**Pb**	**04 20 05.3**	**+2.4**
	14nm,0.3s						
ARXS				Lg	Lg	04 20 56.1	
	39nm,0.3s						
CHKK	**Chushkaly**	**4.50 267**		*eP*	**Pg**	**04 20 18.4**	**-2.4**
	13nm,0.1s						
CHKK				*eS*	**Sg**	**04 21 17.8**	**-1.3**
	48nm,0.2s						
CHKK	**Chushkaly**	**4.50 267**		Pg	**Pg**	**04 20 18.4**	**-2.4**
	13nm,0.1s						
CHKK				Lg	Lg	04 21 17.8	
	48nm,0.2s						
KOTS	**Kotyrbulak**	**4.53 259**		*eP*	**Pb**	**04 20 17.6**	**+3.2**
	18nm,0.2s						
KOTS				*eS*	**Sg**	**04 21 16.5**	**-3.6**
	82nm,0.4s						
KOTS	**Kotyrbulak**	**4.53 259**		Pg	**Pb**	**04 20 17.5**	**+3.2**
	18nm,0.2s						
KOTS				Lg	Lg	04 21 16.5	
	82nm,0.4s						
MDOK	**Medeo**	**4.59 258**		*eP*	**Pb**	**04 20 18.0**	**+2.6**
	10nm,0.3s						
MDOK				*eS*	**Sg**	**04 21 17.6**	**-4.6**
	24nm,0.7s						
MDOK	**Medeo**	**4.59 258**		Pg	**Pb**	**04 20 18.0**	**+2.6**
	10nm,0.3s						
MDOK				Lg	Lg	04 21 17.6	
	24nm,0.7s						
TNSS	**Tian-Shan**	**4.70 257**		*eP*	**Pg**	**04 20 21.9**	**-2.8**
	4.4nm,0.4s						
TNSS				*eS*	**Sg**	**04 21 24.0**	**-1.6**
	9.0nm,0.3s						
TNSS	**Tian-Shan**	**4.70 257**		Pg	**Pg**	**04 20 21.9**	**-2.8**
	4.4nm,0.4s						
TNSS				Lg	Lg	04 21 24.0	
	9.0nm,0.3s						
KTBS	**Karatobe**	**4.74 266**		*eP*	**Pb**	**04 20 20.5**	**+2.7**
	3.0nm,0.6s						
KTBS				*eS*	**Sg**	**04 21 21.8**	**-5.0**
	35nm,0.9s						
KTBS	**Karatobe**	**4.74 266**		Pg	**Pb**	**04 20 20.5**	**+2.7**
	3.0nm,0.6s						
KTBS				Lg	Lg	04 21 21.8	
	35nm,0.9s						
KUU	**Kurty**	**4.96 268**		*eP*	**Pg**	**04 20 26.2**	**-3.5**
	3.3nm,0.4s						
KUU				*eS*	**Sg**	**04 21 31.1**	**-2.7**
	19nm,0.6s						
KUU	**Kurty**	**4.96 268**		Pg	**Pg**	**04 20 26.2**	**-3.5**
	3.3nm,0.4s						
KUU				Lg	Lg	04 21 31.1	
	19nm,0.6s						
MTBS	**Maitube**	**5.04 259**		*eP*	**Pb**	**04 20 27.3**	**+4.3**
	2.6nm,0.2s						
MTBS				*eS*	**Sg**	**04 21 33.4**	**-3.0**
	17nm,0.4s						
MTBS	**Maitube**	**5.04 259**		Pg	**Pb**	**04 20 27.3**	**+4.3**
	2.6nm,0.2s						
MTBS				Lg	Lg	04 21 33.4	
	17nm,0.4s						
KST	**Kastek**	**5.39 259**		*eP*	**Pg**	**04 20 34.4**	**-3.6**
	4.6nm,0.5s						
KST				*eS*	**Sg**	**04 21 45.6**	**-2.1**
	19nm,0.7s						
KST	**Kastek**	**5.39 259**		Pg	**Pg**	**04 20 34.4**	**-3.6**
	4.6nm,0.5s						
KST				Lg	Lg	04 21 45.6	
	19nm,0.7s						
KRBS	**Karabastau**	**5.46 267**		*eP*	**Pg**	**04 20 37.4**	**-1.8**
	4.3nm,0.3s						
KRBS				*eS*	**Sg**	**04 21 51.2**	**+1.2**
	10nm,0.5s						
KRBS	**Karabastau**	**5.46 267**		Pg	**Pg**	**04 20 37.4**	**-1.8**
	4.3nm,0.3s						
KRBS				Lg	Lg	04 21 51.2	
	10nm,0.5s						
TKM2	**Tokmak 2**	**5.68 259**	⇑	Pg	**Pb**	**04 20 38.4**	**+4.3**
	3.8nm,0.6s						
TKM2			⇓	Lg	Lg	04 21 54.9	
	7.8nm,0.5s						
AAK	**Ala-Archa**	**6.54 259**	⇑	Pg	Pg	04 20 55.3	-4.7
	2.9nm,0.6s						
AAK				Lg	Lg	04 22 22.2	
	6.2nm,0.6s						
KURBB	**Kurchatov Arra**	**7.11 335**	⇓	Lg	Lg	04 22 38.0	
	36nm,0.7s						
KK31	**Karatay Array**	**9.27 267**	⇓	Lg	Lg	04 23 49.9	
	1.3nm,0.5s,baz=71,slow=28,SNR=4.0						

*IDC **19** 04:18:57.0±2.9, 36.92S×179.31E, h0km, mb3.8/2, mb1 4.1/3, mb1mx3.7/31, mbtmp3.8/3, ML3.9/1, Error ellipse: s-maj=74.8km s-min=32.0km az=136.0*
*WEL **19** 04:18:59.2±1.1, 38.5S±9.9×18.0E±.1°, h33km, M3.7/12, ML4.0/12, MLv3.7/12, Error ellipse: s-maj=0.0km s-min=0.0km az=157.2*

ISC 19 04:18:58.1±2.3, 37.66S±0.06×179.72E±0.08, h12km±11km, n60, σ1s23/65, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.04 261**		P	**Pg**	**04 19 18.8**	**+0.6**
WMGZ				S	**Sn**	**04 19 35.2**	**+2.2**
MXZ	**Matakaoa Point**	**1.12 275**		P	**Pb**	**04 19 19.1**	**-0.3**
MXZ				S	**Sn**	**04 19 35.3**	**+0.3**
PUZ	**Puketiti**	**1.23 250**		P	**Pb**	**04 19 21.7**	**+0.5**
PUZ				S	**Sn**	**04 19 39.6**	**+2.0**
CNGZ	**Carnagh Statio**	**1.45 235**		P	**Pb**	**04 19 25.6**	**+0.7**
TWGZ	**Tauwhareparae**	**1.47 249**		P	**Pn**	**04 19 25.3**	**+0.9**
TWGZ				S	**Sg**	**04 19 45.8**	**+0.5**
HAZ	**Te Kaha**	**1.54 266**		P	**Pn**	**04 19 25.8**	**+0.5**
RUGZ	**Raukumara Rang**	**1.64 259**		P	**Pn**	**04 19 27.4**	**+0.5**
TKGZ	**Te Karaka**	**1.67 242**		P	**Pn**	**04 19 28.0**	**+0.9**
TKGZ				S	**Sg**	**04 19 50.4**	**-1.3**
MWZ	**Matawai**	**1.85 248**		P	**Pn**	**04 19 30.1**	**+0.4**
MWZ				S	**Sn**	**04 19 53.8**	**+0.6**
RIGZ	**Rimuhau**	**1.86 235**		P	**Pn**	**04 19 30.7**	**+0.9**
RIGZ				S	**Sb**	**04 19 55.4**	**+0.2**
PRGZ	**Paritu Road**	**1.92 228**		P	**Pn**	**04 19 31.4**	**+0.9**
RAGZ	**Rawiri**	**2.00 245**		P	**Pn**	**04 19 33.2**	**+1.4**
MHGZ	**Mahia Peninsul**	**2.06 223**		P	**Pn**	**04 19 33.6**	**+1.1**
MHGZ				S	**Sb**	**04 20 00.2**	**-0.8**
KNZ	**Kokohu**	**2.10 229**		P	**Pn**	**04 19 33.4**	**+0.3**
URZ	**Urewera**	**2.14 253**		Pn	**Pn**	**04 19 34.7**	**+1.0**
	36nm,0.3s,baz=54,slow=2.4,SNR=132						
URZ				Sn	**Sb**	**04 20 01.7**	**-1.7**
	50nm,0.3s,baz=321,slow=23,SNR=6.8						
URZ	**Urewera**	**2.14 253**		P	**Pn**	**04 19 34.7**	**+1.0**
URZ				S	**Sn**	**04 20 01.4**	**+1.2**
WHRZ	**Whale Island**	**2.18 264**		P	**Pn**	**04 19 35.6**	**+1.4**
WHHZ	**Waihua**	**2.41 233**		P	**Pn**	**04 19 38.5**	**+1.2**
WHHZ				S	**Sb**	**04 20 08.6**	**-2.4**
RAHZ	**Arahi**	**2.42 238**		P	**Pn**	**04 19 38.2**	**+0.8**
MUGZ	**Murupara**	**2.46 250**		P	**Pn**	**04 19 38.9**	**+0.8**
OPRZ	**Ohinepanea**	**2.51 265**		P	**Pn**	**04 19 39.2**	**+0.5**
MTHZ	**Maungataniwha**	**2.56 241**		P	**Pn**	**04 19 40.2**	**+0.8**
ARHZ	**Aropaoanui**	**2.67 232**		P	**Pn**	**04 19 42.2**	**+1.3**
NMHZ	**Naumai**	**2.70 237**		P	**Pn**	**04 19 42.5**	**+1.2**
CKHZ	**Cape Kidnapper**	**2.87 225**		P	**Pn**	**04 19 43.9**	**+0.3**
BKZ	**Black Stump Fm**	**2.94 238**		P	**Pn**	**04 19 45.7**	**+1.0**
MCHZ	**McNeill Hill**	**2.96 232**		P	**Pn**	**04 19 45.6**	**+0.7**
KAHZ	**Kahuranaki**	**3.08 225**		P	**Pn**	**04 19 46.8**	**+0.3**
KWHZ	**Kaweka Forest**	**3.12 235**		P	**Pn**	**04 19 47.7**	**+0.5**
KRHZ	**Kereru**	**3.28 232**		P	**Pn**	**04 19 49.6**	**+0.2**
KUZ	**Kuaotunu**	**3.32 285**		P	**Pn**	**04 19 48.9**	**-0.9**
TOZ	**Tahuroa Road**	**3.34 268**		P	**Pn**	**04 19 51.0**	**+0.8**
BHHZ	**Black Hill Sta**	**3.40 236**		P	**Pn**	**04 19 51.5**	**+0.5**
TMVZ	**Te Maari**	**3.47 244**		P	**Pn**	**04 19 53.0**	**+1.0**
WPHZ	**Waipukurau**	**3.51 226**		P	**Pn**	**04 19 52.1**	**-0.3**
PNHZ	**Pukenui**	**3.55 230**		P	**Pn**	**04 19 52.6**	**-0.4**
MOVZ	**Moawhango**	**3.56 240**		P	**Pn**	**04 19 54.1**	**+0.9**
MKAZ	**Moumakai**	**3.67 277**		P	**Pn**	**04 19 54.2**	**-0.8**
GRZ	**Great Barrier**	**3.69 291**		P	**Pn**	**04 19 54.1**	**-0.8**
TSZ	**Takapari Road**	**3.78 230**		P	**Pn**	**04 19 55.6**	**-0.7**
DVHZ	**Dannevirke**	**3.82 225**		P	**Pn**	**04 19 56.2**	**-0.6**
HIZ	**Hauiti**	**3.93 256**		P	**Pn**	**04 19 58.6**	**+0.4**
MBAZ	**Motutapu North**	**3.95 282**		P	**Pn**	**04 19 59.8**	**+1.4**
BFZ	**Birch Farm**	**4.04 221**		P	**Pn**	**04 19 58.3**	**-1.5**
PRWZ	**Pori Road**	**4.10 224**		P	**Pn**	**04 20 00.5**	**-0.1**
POWZ	**Post Office Ro**	**4.11 227**		P	**Pn**	**04 20 00.7**	**0.0**
MRZ	**Mangatainoka R**	**4.39 226**		P	**Pn**	**04 20 03.4**	**-1.2**
WCZ	**Waipu Caves**	**4.64 290**		P	**Pn**	**04 20 07.9**	**-0.1**
OUZ	**Omahuta**	**5.50 294**		P	**Pn**	**04 20 20.2**	**+0.3**
CTZ	**Chatham Island**	**6.67 157**		P	**Pn**	**04 20 36.8**	**+0.9**
ASAR	**Alice Springs**	**41.41 276**		P	**P**	**04 26 41.8**	**-2.7**
	1.1nm,0.6s,baz=121,slow=7.6,SNR=10						
WRA	**Warramunga Arr**	**43.05 281**		P	**P**	**04 26 55.4**	**-2.5**
	0.5nm,0.4s,baz=120,slow=7.8,SNR=13						
H03S2	**Juan Fernandez**	**78.05 123**		T	T	05 57 01.3	
	baz=233						
H03S1	**Juan Fernandez**	**78.05 123**		T	T	05 57 06.8	
	baz=233,slow=74						
H03S3	**Juan Fernandez**	**78.06 123**		T	T	05 56 53.2	
	baz=233,slow=74						
H03N3	**Juan Fernandez**	**78.28 123**		T	T	05 57 11.8	
	baz=234,slow=72,SNR=13						
H03N2	**Juan Fernandez**	**78.28 123**		T	T	05 57 09.7	
	baz=234,slow=72,SNR=12						
H03N1	**Juan Fernandez**	**78.29 123**		T	T	05 57 14.1	
	baz=234,slow=72,SNR=10						
ARCES	**ARCESS Array B**	**145.17 344**		PKP	**PKPbc**	**04 38 32.5**	**-1.5**
	5.4nm,1.1s,baz=19,slow=3.1,SNR=5.1						
FINES	**FINESS Array B**	**151.08 334**		PKPbc	**PKPdf**	**04 38 48.8**	**+4.6**
	2.1nm,0.8s,baz=20,slow=4.4,SNR=2.3						

*JMA **19** 04:32:33.3±0.1, 38.92N×141.93E, h51km±1km, M3.9*
JMA Felt II J1.
*NEIC **19** 04:32:33.9±0.9, 38.87N±0.07×141.9E±0.1, h66km±10km, mb4.3/10, Error ellipse: s-maj=14.7km s-min=5.4km az=125.0*
*NIED **19** 04:32:33.3, 38.92N×141.93E, h51km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr4.71; Mθθ-0.61; Mϕϕ-4.10; Mrθ1.56; Mθϕ-0.91; Mϕr4.79; Fault plane solution: M₀6.77000×10¹⁴ NP1:ϕs17.00000°, δ69.00000°, λ,92.00000°. NP2:ϕs191.00000°, δ21.00000°, λ85.00000°.*
*IDC **19** 04:32:35.4±1.0, 38.93N×141.81E, h75km±7km, mb3.6/12, mb1 3.7/16, mb1mx3.6/45, mbtmp3.9/16, MS2.5/4, Ms1 2.5/4, ms1mx2.4/40 Error ellipse: s-maj=21.1km s-min=13.6km az=104.0*

ISC 19 04:32:32.5±0.8, 38.90N±0.05×141.95E±0.07, h49km±4km, n60, σ1s21/68, mb4.2/17, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.28 310**		P	**Pn**	**04 32 42.2**	**+0.8**
OFUJ				S	**Sn**	**04 32 48.3**	**+0.6**
JKMT	**Kesennumamotoy**	**0.38 256**		P	**Pn**	**04 32 43.1**	**+0.8**
JKMT				S	**Sn**	**04 32 49.8**	**+0.5**
JMK	**Ichinoseki**	**0.57 275**		P	**Pn**	**04 32 45.2**	**+0.7**
JMK				S	**Sn**	**04 32 53.7**	**+0.5**
JIO	**Ouri**	**0.65 226**		P	**Pn**	**04 32 46.1**	**+0.6**
JIO				S	**Sn**	**04 32 54.9**	**0.0**
JOM	**Ohasama**	**0.76 318**		P	**Pn**	**04 32 47.6**	**+0.5**
JOM				S	**Sn**	**04 32 58.0**	**+0.4**
JRG	**Rokugo**	**1.13 296**		P	**Pn**	**04 32 52.4**	**+0.4**
JRG				*eS*	**Sn**	**04 33 07.0**	**+0.5**
JOU	**Okura**	**1.14 242**		P	**Pn**	**04 32 52.5**	**+0.4**
JOU				S	**Sn**	**04 33 07.2**	**+0.6**
JYK	**Kaneyama**	**1.24 271**		P	**Pn**	**04 32 54.1**	**+0.7**
JMM	**Marumori**	**1.38 222**		P	**Pn**	**04 32 55.5**	**+0.2**
JMM	**Marumori**	**1.38 222**			**Pn**	**04 32 55.7**	**+0.4**
JMM				Sn	**Sn**	**04 33 12.2**	**-0.1**
JANG	**Nango**	**1.51 347**		P	**Pn**	**04 32 57.3**	**+0.2**
JTM	**Tenmabayashi**	**2.00 341**			**Pn**	**04 33 04.8**	**+0.9**
JYT	**Yasato**	**3.01 208**		Pn	**Pn**	**04 33 18.6**	**+0.9**
JSD	**Sado**	**3.02 255**		Pn	**Pn**	**04 33 18.9**	**+1.1**
ERM	**Erimo**	**3.24 16**		Pn	**Pn**	**04 33 22.5**	**+1.6**
MAJO	**Matsushiro**	**3.79 233**			**Pn**	**04 33 29.3**	**+0.9**
MAT	**Matsushiro**	**3.79 233**		P	**Pn**	**04 33 30.5**	**+2.1**
MAT				*eS*	**Sn**	**04 34 12.4**	**+0.7**
MJAR	**Matsushiro Arr**	**3.79 233**		P	**Pn**	**04 33 29.4**	**+1.0**
	1.1nm,0.3s,baz=40,slow=12,SNR=23						
MJAR				S	**Sn**	**04 34 16.9**	**+5.2**
	0.3nm,0.3s,baz=64,slow=14,SNR=4.4						
MJAR				LR	LR	04 35 10.3	
	comp=Z,67nm,19.4s,baz=80,slow=42						
MJB9	**Matsu-Tunnel**	**3.79 233**		Pn	**Pn**	**04 33 29.6**	**+1.2**
JGF	**Kuroka**	**4.92 229**			**Pn**	**04 33 45.8**	**+1.8**
JKA	**Kamikawa-asahi**	**5.23 5**		Pn	**Pn**	**04 33 51.8**	**+3.7**
ASAJ	**Asahikawa**	**5.23 5**		P	**Pn**	**04 33 49.8**	**+1.6**
	1.8nm,0.3s,baz=13,slow=4.9,SNR=2.2						
ASAJ				S	**Sn**	**04 34 48.9**	**+1.8**
	1.3nm,0.3s,baz=102,slow=33,SNR=1.7						
ASAJ				LR	LR	04 35 52.5	
	comp=Z,37nm,20.4s,baz=153,slow=38						
JHS	**Saijyo**	**8.07 244**		Pn	**Pn**	**04 34 28.1**	**+1.0**
USA0B	**Ussuriysk Arra**	**9.15 309**		Pn	**Pn**	**04 34 43.7**	**+1.9**
USRK	**Ussuriysk Ar.**	**9.15 309**		P	**Pn**	**04 34 42.7**	**+0.9**
	baz=114,slow=14,SNR=17						
USRK	**Ussuriysk Ar.**	**9.15 309**		Pn	**Pn**	**04 34 44.6**	**+2.8**
KSRS	**Korea Array**	**11.13 267**		P	**Pn**	**04 35 10.2**	**+1.2**
	0.4nm,0.3s,baz=76,slow=14,SNR=5.1						
KSRS				LR	LR	04 39 05.7	
	comp=Z,30nm,19.4s,baz=185,slow=35						
KLR	**Kul'dur**	**12.65 328**		LR	LR	04 40 00.8	
	comp=Z,34nm,20.6s,baz=249,slow=35						
SONM	**Songino Array**	**27.14 301**		P	**P**	**04 38 10.6**	**-0.5**
	0.4nm,0.4s,baz=118,slow=9.3,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**28.80 124**		T	T	05 08 50.7	
	baz=317,slow=75,SNR=917						
H11N1	**WAKE ISLAND Hy**	**28.81 124**		T	T	05 08 52.9	
	baz=317,slow=75,SNR=592						
H11N3	**WAKE ISLAND Hy**	**28.82 124**		T	T	05 08 53.6	
	baz=317,slow=75,SNR=444						
H11S1	**WAKE ISLAND Hy**	**29.57 126**		T	T	05 09 51.1	
	baz=318,slow=76,SNR=100						
H11S3	**WAKE ISLAND Hy**	**29.57 126**		T	T	05 09 42.7	
	baz=318,slow=76,SNR=165						
H11S2	**WAKE ISLAND Hy**	**29.59 126**		T	T	05 09 53.6	
	baz=318,slow=76,SNR=127						
ZAA0	**Zalesovo Array**	**40.99 311**		P	**P**	**04 40 10.0**	**-0.4**
ZALV	**Zalesovo Beam**	**40.99 311**		P	**P**	**04 40 09.4**	**-1.0**
	2.8nm,0.6s,baz=89,slow=8.5,SNR=11						
ZALV				pP	**sP**	**04 40 28.2**	**-1.0**
	1.2nm,0.5s,baz=76,slow=6.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**40.99 311**		P	**P**	**04 40 10.7**	**+0.3**
CM31	**Chiang Mai Arr**	**42.40 254**		P	**P**	**04 40 21.5**	**-0.9**
CM31				IAmb	IAmb	04 40 22.3	
	comp=Z,3.8nm,0.6s						
MK31	**Makanchi Array**	**43.51 301**		P	**P**	**04 40 31.5**	**+0.4**
MK31				IAmb	IAmb	04 40 32.1	
	comp=Z,3.8nm,0.8s						
MKAR	**Makanchi Array**	**43.51 301**		P	**P**	**04 40 31.1**	**0.0**
	comp=Z,3.8nm,0.7s,baz=85,slow=10,SNR=30						
MKAR				pP	**sP**	**04 40 49.2**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=88,slow=7.8,SNR=5.5						
MKAR	**Makanchi Array**	**43.51 301**		P	**P**	**04 40 30.8**	**-0.2**
MAKZ	**Makanchi**	**43.72 301**		P	**P**	**04 40 32.8**	**+0.1**
MAKZ				IAmb	IAmb	04 40 33.9	
	comp=Z,4.6nm,0.8s						
KURK	**Kurchatov**	**45.13 307**		P	**P**	**04 40 44.1**	**+0.2**
KURK				IAmb	IAmb	04 40 44.7	
	comp=Z,8.7nm,1.1s						
ILAR	**Eielson Array**	**47.70 33**		P	**P**	**04 41 04.5**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=263,slow=5.6,SNR=5.7						
KK31	**Karatay Array**	**52.57 299**		P	**P**	**04 41 40.6**	**-0.5**
KK31				IAmb	IAmb	04 42 00.4	
	comp=Z,1.6nm,0.7s						
KKAR	**Karatay Array**	**52.57 299**		P	**P**	**04 41 41.0**	**-0.1**
KKAR	**Karatay Array**	**52.57 299**		P	**P**	**04 41 40.5**	**-0.6**
KKAR				IAmb	IAmb	04 41 41.5	
	comp=Z,1.6nm,0.7s						
ARU	**Arti**	**55.25 318**		P	**P**	**04 41 59.1**	**-1.3**
ABKAR	**Akbulak array**	**57.07 309**		P	**P**	**04 42 13.4**	**0.0**
WRA	**Warramunga Arr**	**58.97 188**		P	**P**	**04 42 26.7**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=5.8,slow=7.3,SNR=6.8						
RES	**Resolute Bay**	**60.69 15**	

WHRZ Whale Island 2.17 270 P Pn 04 42 36.8 -0.4
RTZ Ruatahuna 2.28 250 P Pn 04 42 36.3 -2.5
WHHZ Waihua 2.29 238 P Pn 04 42 40.3 +1.4
RAHZ Arahi 2.32 242 P Pn 04 42 40.7 +1.4
EDRZ Edgecumbe 2.37 263 P Pn 04 42 40.7 +0.8
MUGZ Murupara 2.40 254 P Pn 04 42 41.3 +0.9
MTHZ Maungataniwha 2.47 246 P Pn 04 42 38.3 -3.0
OPRZ Ohinepanea 2.50 270 P Pn 04 42 42.0 +0.3
ARHZ Aropaoanui 2.55 236 P Pn 04 42 41.4 -1.0
TARZ Mount Tarawera 2.56 261 P Pn 04 42 43.4 +0.7
RRRZ Republican Roa 2.57 259 P Pn 04 42 43.5 +0.8
NMHZ Naumai 2.59 241 P Pn 04 42 42.3 -0.8
OMRZ Omania 2.66 264 P Pn 04 42 44.6 +0.7
HLRZ Highlands Stat 2.69 261 P Pn 04 42 45.7 +1.4
PRRZ Plateau Road 2.70 256 P Pn 04 42 45.2 +0.8
CKHZ Cape Kidnapper 2.73 228 P Pn 04 42 44.6 -0.3
ALRZ Allen Road 2.75 254 P Pn 04 42 45.9 +0.8
KARZ Kaharoa 2.75 266 P Pn 04 42 45.8 +0.6
HRRZ Handcock Road 2.76 258 P Pn 04 42 46.2 +0.9
MRHZ Matea Rd 2.77 249 P Pn 04 42 46.7 +1.2
HSRZ Hossack Road 2.78 260 P Pn 04 42 46.7 +1.1
MCHZ McNeill Hill 2.84 235 P Pn 04 42 44.0 -2.4
BKZ Black Stump Fm 2.84 242 P Pn 04 42 43.5 -3.0
BKZ Black Stump Fm 2.84 242 Pn Pn 04 42 43.3 -3.2
KAHZ Kahuranaki 2.94 228 P Pn 04 42 47.5 -0.2
KMRZ Kaimai 2.99 269 P Pn 04 42 47.8 -0.7
KWHZ Kaweka Forest 3.01 238 P Pn 04 42 49.7 +0.9
PXZ Pawanui 3.10 225 P Pn 04 42 48.5 -1.5
KUTZ Kaahu Road 3.13 257 P Pn 04 42 51.4 +1.0
KRHZ Kereru 3.16 235 P Pn 04 42 51.2 +0.4
BHHZ Black Hill Sta 3.29 239 P Pn 04 42 49.9 -2.7
TOZ Tahuroa Road 3.34 271 P Pn 04 42 52.6 -0.7
WPHZ Waipukurau 3.37 228 P Pn 04 42 54.0 +0.3
TMVZ Te Maari 3.39 247 P Pn 04 42 55.2 +1.1
ETVZ East Tongariro 3.39 247 P Pn 04 42 55.0 +0.9
MOVZ Moawhango 3.46 242 P Pn 04 42 56.5 +1.4
WNVZ Wahianoa 3.54 244 P Pn 04 42 57.8 +1.6
TSZ Takapari Road 3.66 232 P Pn 04 42 57.7 +0.1
DVHZ Dannevirke 3.68 228 P Pn 04 42 58.2 +0.2
PKVZ Pokaka 3.71 246 P Pn 04 43 03.7 +5.3
GRZ Great Barrier 3.77 294 P Pn 04 42 57.9 -1.4
HIZ Hauiti 3.89 259 P Pn 04 43 02.1 +1.3
HIZ Hauiti 3.89 259 Pn Pn 04 42 56.7 -4.1
BFZ Birch Farm 3.89 223 Pn Pn 04 42 58.9 -2.0
ETAZ East Tamaki Re 3.92 282 P Pn 04 43 01.5 +0.2
PRWZ Pori Road 3.96 226 P Pn 04 43 02.0 +0.3
POWZ Post Office Ro 3.97 229 P Pn 04 43 02.7 +0.7
MBAZ Motutapu North 4.00 284 P Pn 04 43 02.2 0.0
CPWZ Castlepoint 4.08 221 P Pn 04 43 03.9 +0.5
VRZ Vera Road 4.09 221 P Pn 04 43 04.4 +0.9
AWAZ Awhitu Peninsu 4.12 280 P Pn 04 43 04.2 +0.2
WAZ Wanganui 4.15 242 P Pn 04 43 06.5 +2.1
RVAZ Riverhead Bore 4.24 283 P Pn 04 43 06.0 +0.4
HOWZ Holdsworth Sta 4.44 226 P Pn 04 43 08.1 -0.4
MTW Mount Morrison 4.63 223 P Pn 04 43 09.4 -1.5
KHEZ Kahui Hut 4.69 251 P Pn 04 43 16.2 +4.3
KIW Kapiti Island 4.78 230 P Pn 04 43 13.1 0.0
CAW Cannon Point 4.84 227 P Pn 04 43 13.2 -0.7
MSWZ Moikau Station 4.94 223 Pn Pn 04 43 13.3 -2.0
PLWZ Palliser 5.05 222 Pn Pn 04 43 15.2 -1.6
BHW Baring Head 5.15 225 P Pn 04 43 17.1 -0.9
BHW Baring Head 5.15 225 Pn Pn 04 43 17.2 -0.9
DUWZ D'Urville Isla 5.36 235 P Pn 04 43 20.6 -0.5
TCW Tory Channel 5.37 230 P Pn 04 43 19.7 -1.5
OUZ Omahuta 5.59 296 P Pn 04 43 23.9 -0.4
OUZ Omahuta 5.59 296 Pn 04 43 19.1 -5.1
BSWZ Blackbirch Sta 5.92 228 P Pn 04 43 27.4 -1.3
NNZ Nelson 5.93 234 P Pn 04 43 27.6 -1.2
QRZ Quartz Range 6.31 240 P Pn 04 43 32.0 -2.0
THZ Tophouse 6.53 231 P Pn 04 43 35.2 -1.9
GVZ Greta Valley S 7.21 223 P Pn 04 43 46.0 -0.4
LTZ Lake Taylor 7.51 227 P Pn 04 43 48.7 -1.9
RPZ Rata Peaks 8.79 226 Pn **Pn 04 44 06.1 -2.0**
0.7nm,0.3s,baz=83,slow=19,SNR=2.4
RPZ Sn **Sn 04 45 39.5 -6.4**
2.5nm,0.3s,baz=136,slow=23,SNR=14
RPZ Rata Peaks 8.79 226 Pn **Pn 04 44 07.7 -0.4**
ARCZ Arundel 8.87 224 P **Pn 04 44 09.4 +0.2**
STKA Stephens Creek 31.69 269 P **P 04 48 23.2 -0.6**
1.7nm,0.5s,baz=89,slow=5.8,SNR=4.0
COEN Coen 40.20 296 P **P 04 49 34.6 -2.2**
AS31 Alice Springs 41.43 276 P P 04 49 45.1 -1.8
ASAR Alice Springs 41.43 276 P **P 04 49 46.0 -0.9**
8.1nm,0.8s,baz=118,slow=7.7,SNR=37
ASAR PcP **PcP 04 51 44.5 +0.1**
0.4nm,0.7s,baz=122,slow=3.7,SNR=1.6
ASAR Alice Springs 41.43 276 P P 04 49 45.2 -1.7
FORT Forrest 42.80 264 P P 04 49 56.9 -1.0
WR0 Warramunga Arr 42.93 282 P 04 49 56.9 -2.2
WR0 IAmb IAmb 04 49 58.7
comp=Z,7.7nm,1.1s
WB2 Warramunga Arr 43.09 281 P 04 49 58.3 -2.1
WB2 IAmb IAmb 04 49 59.5
comp=Z,5.7nm,0.7s
WRA Warramunga Arr 43.10 281 P **P 04 49 59.1 -1.4**
comp=Z,5.4nm,0.7s,baz=121,slow=7.8,SNR=33
WRA PcP **PcP 04 51 50.1 +0.2**
comp=Z,0.8nm,0.6s,baz=119,slow=3.1,SNR=3.9
WRA Warramunga Arr 43.10 281 P P 04 49 58.5 -2.0
WB0 Warramunga Arr 43.15 282 P 04 49 59.0 -1.9
WB0 IAmb IAmb 04 49 59.9
comp=Z,6.7nm,0.7s
FITZ Fitzroy Crossi 50.92 277 P P 04 51 00.5 -1.1
FITZ IAmb IAmb 04 51 01.7
comp=Z,5.5nm,0.7s
QSPA South Pole Qui 52.26 180 P P 04 51 13.9 +2.9
comp=Z,4.4nm,0.9s,baz=13,slow=3.3,SNR=12
QSPA South Pole Qui 52.26 180 P P 04 51 14.7 +3.6
QSPA IAmb IAmb 04 51 16.7
comp=Z,7.1nm,0.9s
SNAA Sanae 70.75 179 P P 04 53 18.1 +2.4
SNAA Sanae 70.75 179 P P 04 53 18.3 +2.6
VNA3 Neumayer Olymp 70.98 177 P P 04 53 19.3 +2.2
VNA2 Neumayer--Watz 71.39 178 P P 04 53 22.3 +2.8
baz=180,slow=6.3
H03S2 Juan Fernandez 77.93 123 T T 06 19 47.5
baz=231,slow=74,SNR=14
H03S1 Juan Fernandez 77.94 123 T T 06 19 45.4
baz=231,slow=74,SNR=12
H03S3 Juan Fernandez 77.95 123 T T 06 19 46.5
baz=231,slow=74,SNR=12
H03N3 Juan Fernandez 78.16 123 T T 06 20 01.0
baz=234,slow=72,SNR=74
H03N2 Juan Fernandez 78.17 123 T T 06 20 01.2
baz=234,slow=72,SNR=74
H03N1 Juan Fernandez 78.18 123 T T 06 20 05.6
baz=234,slow=72,SNR=81
KSRS Korea Array 88.89 321 P **P 04 54 51.8 -2.2**
comp=Z,0.8nm,0.7s,baz=141,slow=4.7,SNR=1.2
ARCES ARCESS Array B 145.37 344 PKP **PKPdf 05 01 37.0 +0.5**
comp=Z,2.9nm,0.8s,baz=26,slow=2.3,SNR=5.8
FINES FINESS Array B 151.26 334 PKPbc **PKPbc 05 01 51.3 -1.1**
comp=Z,1.0nm,0.6s,baz=72,slow=4.5,SNR=2.1
TORD Torodi Ar. Bea 155.32 185 PKPbc PKPdf 05 02 03.7 +10
comp=Z,0.7nm,1.0s,baz=151,slow=3.3,SNR=3.0
TORD PKPab **PKPab 05 02 20.4 +1.7**
comp=Z,0.6nm,0.8s,baz=183,slow=4.5,SNR=3.5

IDC ***19*** *05:01:31.8s 1.4, 2.°88S × 68.°07E, h0km, mb3.9/7, mb1 4.2/7, mb1mx3.7/53, mbtmp3.9/7, Error ellipse: s-maj=44.1km s-min=28.1km az=45.0*

ISC 19 05:01:33.5 ±1.5, 2.°9S ±0.°3 × 68.°1E ±0.°2, h11 km, n8, σ0 s 51/8, mb4.0/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.03**	**54**	P	**P**	**05 08 43.7**	**-0.1**
	0.8nm,0.3s,baz=238,slow=12,SNR=1.8						
MKAR	**Makanchi Array**	**51.01**	**13**	P	**P**	**05 10 35.3**	**-0.3**
	0.4nm,0.8s,baz=197,slow=4.5,SNR=2.3						
ZALV	**Zalesovo Beam**	**58.31**	**12**	P	**P**	**05 11 28.8**	**+0.4**
	0.5nm,0.4s,baz=211,slow=5.0,SNR=2.2						
SONM	**Songino Array**	**60.57**	**29**	P	**P**	**05 11 44.3**	**0.0**
	1.4nm,0.8s,baz=217,slow=6.2,SNR=3.2						
WRA	**Warramunga Arr**	**66.71**	**110**	P	**P**	**05 12 25.8**	**+0.5**
	2.6nm,0.9s,baz=284,slow=5.9,SNR=9.1						
ASAR	**Alice Springs**	**66.72**	**114**	P	**P**	**05 12 25.1**	**-0.3**
	0.2nm,0.6s,baz=288,slow=6.6,SNR=2.5						
ESDC	**Sonseca Array**	**78.12**	**311**	P	**P**	**05 13 33.3**	**+0.3**
	1.4nm,0.8s,baz=91,slow=4.7,SNR=5.9						
TXAR	**Lajitas Array**	**152.54**	**344**	PKPbc	**PKPbc**	**05 21 30.2**	**-0.8**
	1.6nm,1.1s,baz=64,slow=2.1,SNR=1.5						

2014 NOV

IDC ***19*** *05:03:09.3s 0.5, 2.°68S × 68.°15E, h0km, mb4.3/29, mb1 4.4/29, mb1mx4.2/54, mbtmp4.3/29, MS4.6/3, Ms1 4.6/3, ms1mx3.9/44, Error ellipse: s-maj=15.6km s-min=11.8km az=173.0*

NEIC ***19*** *05:03:10.9s 1.5, 2.°7S ±0.°1 × 68.°13E ±0.°09, h10 km s 1km, mb4.8/57, Error ellipse: s-maj=17.5km s-min=15.3km az=204.0*

BJI ***19*** *05:03:11.5 ±0.0, 2.°70S × 68.°10E, h10km, mB5.3/21, mb4.8/23, Ms5.1/13, Ms7 4.9/13*

GCMT ***19*** *05:03:12.9 ±0.2, 2.°80S ±0.°01 × 68.°06E ±0.°02, h12km, MW5.3/132, Moment Tensor Solution. s80,c109; s132,c224; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr=0.86±.02; Mθθ=0.59±.02; Mϕϕ=0.26±.02; Mrθ=0.50±.05; Mθϕ=-0.42±.02; Mϕr=-0.13±.05; Best double couple: M=1.01600×10^17 NP1:φs134.00000°, δ31.00000°, λ-73.00000°. NP2:φs295.00000°, δ60.00000°, λ-100.00000°. Principal axes: T 1.0150, Plg15.0000°, Azm32.0000°; N 0.0030, Plg9.0000°, Azm300.0000°; P -1.0180, Plg73.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 05:03:11.3 ±0.3, 2.°75S ±0.°06 × 68.°10E ±0.°06, h11 km, n156, σ1 s 44/149, mb4.6/66, MS4.8/7, 1C-1D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**6.35**	**137**		**Pn**	**05 04 45.1**	**+0.3**
H08S3	**Diego Garcia H**	**6.53**	**138**	T	T	05 11 31.2	
	baz=356,slow=74						
H08S1	**Diego Garcia H**	**6.53**	**138**	T	T	05 11 30.5	
	baz=356,slow=74						
H08S2	**Diego Garcia H**	**6.55**	**138**	T	T	05 11 35.7	
	baz=356,slow=74						
PALK	**Pallekele**	**16.04**	**52**		**Pn**	**05 06 58.1**	**+1.1**
HYB	**Hyderabad**	**22.53**	**27**	*i* P	**P**	**05 08 12.0**	**+0.5**
HYB				eS	Sn	05 12 36.0	+4.2
OPO	**Ambohidratompo**	**25.82**	**231**	P	**P**	**05 08 43.2**	**+0.2**
	2.0nm,0.8s,baz=79,slow=10,SNR=1.8						
OPO				LR	LR	05 16 39.2	
	comp=Z,4μm,21.2s,baz=174,slow=31						
ATD	**Arta Tunnel**	**28.84**	**300**	P	**P**	**05 09 10.3**	**+0.3**
	3.5nm,0.3s,baz=284,slow=22,SNR=1.3						
GSI	**Gunungsitoli**	**29.74**	**83**	P	**P**	**05 09 16.9**	**-1.1**
UOSS	**Minazif**	**29.85**	**338**	P	**P**	**05 09 16.9**	**-1.9**
KMBO	**Kilima Mbogo**	**30.87**	**272**	P	**P**	**05 09 28.9**	**+0.6**
	1.2nm,0.4s,baz=59,slow=11,SNR=5.3						
MNSI	**Mandailing Nat**	**31.67**	**84**	P	**P**	**05 09 39.4**	**+4.3**
	12μm18nm,0.5s						
KULM	**Kulim**	**33.48**	**76**	P	**P**	**05 09 50.2**	**-0.8**
IPM	**Ipoh**	**33.68**	**78**	P	P	05 09 46.6	-6.1
NIL	**Nilore**	**36.52**	**7**	P	**P**	**05 10 16.3**	**-0.7**
NIL				IAmb	IAmb	05 10 25.2	
	comp=Z,20nm,0.9s						
CM13	**Chiang Mai Arr**	**36.91**	**54**	P	**P**	**05 10 24.0**	**+3.5**
CM05	**Chiang Mai Arr**	**36.93**	**54**	P	**P**	**05 10 24.3**	**+3.6**
CM15	**Chiang Mai Arr**	**36.94**	**54**	P	P	05 10 29.0	+8.2
CM02	**Chiang Mai Arr**	**36.95**	**54**	P	**P**	**05 10 24.5**	**+3.7**
CM01	**Chiang Mai Arr**	**36.95**	**54**	P	P	05 10 26.1	+5.2
CM04	**Chiang Mai Arr**	**36.96**	**54**	P	**P**	**05 10 24.6**	**+3.7**
CMAR	**Chiang Mai Arr**	**36.96**	**54**	P	**P**	**05 10 19.6**	**-1.3**
	comp=Z,2.4nm,0.3s,baz=246,slow=9.7,SNR=18						
CMAR	**Chiang Mai Arr**	**36.96**	**54**	P	**P**	**05 10 20.1**	**-0.8**
CM09	**Chiang Mai Arr**	**36.99**	**54**	P	P	05 10 26.0	+4.8
SUKH	**Sukhothai**	**37.03**	**56**	P	P	05 10 29.7	+8.2
KBL	**Kabul**	**37.10**	**1**	P	**P**	**05 10 22.7**	**+0.6**
CM36	**Chiang Mai Arr**	**37.12**	**54**	P	**P**	**05 10 25.0**	**+2.8**
CHTO	**Chiang Mai**	**37.15**	**54**	P	**P**	**05 10 22.1**	**-0.4**
CHTO				IAmb	IAmb	05 10 30.8	
	comp=Z,18nm,0.8s						
CM33	**Chiang Mai Arr**	**37.15**	**54**	P	**P**	**05 10 25.0**	**+2.5**
CM35	**Chiang Mai Arr**	**37.25**	**54**	P	**P**	**05 10 26.0**	**+2.7**
CM34	**Chiang Mai Arr**	**37.33**	**54**	P	**P**	**05 10 27.0**	**+2.9**
HRA	**Herat**	**37.34**	**352**	P	**P**	**05 10 24.5**	**+0.4**
MBAR	**Mbarara**	**37.40**	**273**	P	**P**	**05 10 25.4**	**+0.5**
	comp=Z,2.3nm,0.2s,baz=48,slow=9.7,SNR=7.1						
MBAR	**Mbarara**	**37.40**	**273**	P	**P**	**05 10 25.3**	**+0.3**
MBAR				IAmb	IAmb	05 10 34.2	
	comp=Z,19nm,1.1s						
PHIT	**Phitsanulok**	**37.54**	**57**	P	P	05 10 34.2	+8.4
CHAI	**Chaiyaphum**	**38.29**	**60**	P	**P**	**05 10 35.0**	**+2.8**
LSA	**Lhasa**	**39.08**	**33**	P	**P**	**05 10 40.2**	**+1.0**
LSA				IAmb	IAmb	05 10 49.4	
	comp=Z,15nm,1.1s						
LEM	**Lembang**	**39.58**	**97**	P	**P**	**05 10 42.6**	**-0.6**
	comp=Z,14nm,0.3s,baz=3.6,slow=22,SNR=1.8						
LSZ	**Lusaka**	**41.24**	**250**	P	**P**	**05 10 57.3**	**+0.4**
	comp=Z,4.1nm,0.6s,baz=68,slow=7.3,SNR=8.0						
LSZ	**Lusaka**	**41.24**	**250**	P	**P**	**05 10 57.7**	**+0.7**
GAR	**Garm**	**41.59**	**3**	P	**P**	**05 10 59.3**	**-0.1**
GAR				IAmb	IAmb	05 11 08.2	
	comp=Z,31nm,1.0s						
SLVN	**Son La**	**42.44**	**54**	P	**P**	**05 11 09.3**	**+2.7**
SLVN				IAmb	IAmb	05 11 09.6	
	comp=Z,23nm,1.4s						
BTK	**Batken**	**42.67**	**3**	P	**P**	**05 11 08.6**	**+0.4**
BTK				IAmb	IAmb	05 11 15.8	
	comp=Z,14nm,0.9s						
KSH	**Kashi**	**42.67**	**9**	P	**P**	**05 11 11.9**	**+3.6**
KSH				S	**S**	**05 17 29.0**	**-2.6**
KSH				pmax	pmax		
	comp=Z,400nm,5.0s						
KSH				LR	LR		
	comp=Z,630nm,9.4s						
KSH				LR	LR		
	comp=Z,500nm,8.9s						
KSH				LR	LR		
	comp=Z,850nm,9.5s						
IUG	**Iuzhnay**	**44.72**	**2**	*e*P	**P**	**05 11 24.4**	**-0.2**
	comp=Z,6.3nm,1.1s,baz=2.0						
DZA	**Taraz**	**45.52**	**3**	*e*P	**P**	**05 11 30.5**	**-0.5**
	baz=3.3						
AAK	**Ala-Archa**	**45.54**	**7**	P	**P**	**05 11 32.1**	**+0.8**
AAK				IAmb	IAmb	05 11 41.3	
	comp=Z,8.1nm,1.0s						
KK31	**Karatay Array**	**45.69**	**2**	P	**P**	**05 11 32.4**	**+0.1**
KKAR	**Karatay Array**	**45.69**	**2**	P	**P**	**05 11 34.0**	**+1.8**
KKAR	**Karatay Array**	**45.69**	**2**	P	**P**	**05 11 31.7**	**-0.6**
KKAR				IAmb	IAmb	05 11 39.2	
	comp=Z,4.1nm,1.2s						
SGDS	**Sogindy**	**46.36**	**7**	*e*P	**P**	**05 11 37.4**	**-0.2**
	comp=Z,3.1nm,1.2s,baz=6.6						
MDOK	**Medeo**	**46.41**	**9**	*e*P	**P**	**05 11 37.9**	**-0.2**
	baz=9.0						
MDOK				*e*S	**S**	**05 18 25.9**	**0.0**
	baz=9.0						
MDOK				LR	LR	05 30 47.5	
	comp=Z,629nm,17.1s,baz=9.0						
AAA	**Alma-Ata**	**46.43**	**9**	*e*P	**P**	**05 11 38.3**	**+0.1**
	baz=8.9						
AAA				LR	LR	05 30 53.1	
	comp=Z,482nm,15.7s,baz=8.9						
LBTB	**Lobatse**	**46.52**	**238**	P	**P**	**05 11 39.9**	**+0.6**
LBTB				IAmb	IAmb	05 11 53.0	
	comp=Z,22nm,1.4s						
SHLS	**Shalkode**	**46.83**	**11**	*e*P	**P**	**05 11 41.9**	**+0.5**
	baz=12						
KPKS	**Kokpek**	**46.98**	**11**	*e*P	**P**	**05 11 41.8**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=10						
KUU	**Kurty**	**47.01**	**8**	*e*P	**P**	**05 11 42.1**	**-0.6**
	comp=Z,3.3nm,1.0s,baz=8.1						
KUU				LR	LR	05 32 03.9	
	comp=Z,507nm,15.7s,baz=8.1						
GYA	**Guiyang**	**47.23**	**50**	⇓P	P	05 11 51.1	+6.3
GYA				PP	**PP**	**05 13 36.9**	**+1.0**
GYA				S	**S**	**05 18 41.3**	**+3.2**
GYA				pmax	pmax		
	comp=Z,13nm,0.8s						
GYA				pmax	pmax		
	comp=Z,220nm,5.0s						
GYA				LR	LR		
	comp=Z,750nm,21.4s						
GYA				LR	LR		
	comp=Z,650nm,14.8s						
GYA				LR	LR		
	comp=Z,1μm,21.6s						
CD2	**Chengdu**	**47.68**	**43**	*e*P	**P**	**05 11 49.0**	**+0.8**
BTLS	**Baital**	**47.87**	**6**	*e*P	**P**	**05 11 48.7**	**-0.6**
	comp=Z,2.3nm,1.0s,baz=5.7						
BOSA	**Boshof**	**48.20**	**233**	P	**P**	**05 11 51.8**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=111,slow=6.2,SNR=3.1						
BOSA	**Boshof**	**48.20**	**233**	IAmb	IAmb	05 11 58.4	
	comp=Z,8.1nm,1.0s						
TDK	**Taldyqorghan**	**48.42**	**10**	*e*P	**P**	**05 11 52.8**	**-0.7**
	baz=9.8						
TDK				*e*S	**S**	**05 18 53.7**	**-0.5**
	baz=9.8						
TDK				LR	LR	05 32 15.2	
	comp=Z,736nm,17.2s,baz=9.8						
MAKZ	**Makanchi**	**50.84**	**12**	P	**P**	**05 12 11.1**	**-0.9**
MK31	**Makanchi Array**	**50.89**	**13**	P	**P**	**05 12 11.1**	**-1.3**
MKAR	**Makanchi Array**	**50.89**	**13**	P	**P**	**05 12 11.8**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=189,slow=7.2,SNR=12						
MKAR				PcP	**PcP**	**05 13 28.1**	**-0.8**
	comp=Z,1.3nm,1.0s,baz=213,slow=4.7,SNR=1.9						
MKAR	**Makanchi Array**	**50.89**	**13**	P	**P**	**05 12 11.4**	**-1.0**
GTA	**Gaotai**	**51.08**	**32**	*e*P	**P**	**05 12 14.9**	**+0.8**
GTA				pP	pwP	05 12 21.3	+0.6
GTA				sP	sP	05 12 24.3	+6.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,84nm,7.6s						
GTA				LR	LR		
	comp=Z,1μm,18.5s						
GTA				LR	LR		
	comp=Z,1μm,18.9s						
GTA				LR	LR		
	comp=Z,2μm,18.2s						
ENH	**Enshi**	**51.36**	**47**	P	**P**	**05 12 14.9**	**-1.3**
KBZ	**Khabaz**	**51.51**	**337**	P	**P**	**05 12 16.7**	**-0.3**
	comp=Z,6.1nm,1.0s,baz=236,slow=24,SNR=6.1						
KVAR	**Kislovodsk Arr**	**51.78**	**337**	LR	LR	05 34 32.8	
	comp=Z,292nm,21.3s,baz=82,slow=36						
TSUM	**Tsumeb**	**51.99**	**248**	P	**P**	**05 12 21.7**	**+0.5**
	comp=Z,7.4nm,1.0s,baz=94,slow=9.7,SNR=3.6						
TSUM	**Tsumeb**	**51.99**	**248**	P	**P**	**05 12 21.0**	**-0.2**
TSUM				IAmb	IAmb	05 12 30.0	
	comp=Z,9.2nm,1.0s						
ZSN	**Zaisan**	**52.11**	**14**	*e*P	**P**	**05 12 21.1**	**-0.4**
	baz=14						
ABKAR	**Akbulak array**	**52.27**	**353**	P	**P**	**05 12 21.9**	**-0.7**
ABKAR	**Akbulak array**	**52.27**	**353**	P	**P**	**05 12 21.9**	**-0.7**
BRZS	**Berezniki**	**52.67**	**4**	*e*P	**P**	**05 12 24.5**	**-1.1**
	baz=3.7						
BRTR	**Keskin Array B**	**52.78**	**327**	P	**P**	**05 12 26.5**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=139,slow=12,SNR=6.5						
TOLI2	**Tolitoli**	**52.81**	**87**	P	**P**	**05 12 26.2**	**-1.0**
TOLI2				IAmb	IAmb	05 12 33.8	
	comp=Z,9.5nm,0.8s						
XAN	**Xi'an**	**53.05**	**43**	P	**P**	**05 12 28.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,12nm,1.4s						
XAN	**Xi'an**	**53.05**	**43**	⇑P	P	05 12 34.1	+5.4
XAN				pP	pwP	05 12 43.0	+7.7
XAN				pmax	pmax		
	comp=Z,24nm,1.1s						
XAN				pmax	pmax		
	comp=Z,200nm,4.7s						
XAN				LR	LR		
	comp=Z,770nm,18.4s						
XAN				LR	LR		
	comp=Z,640nm,19.5s						
XAN				LR	LR		
	comp=Z,1μm,27.1s						
XAN	**Xi'an**	**53.05**	**43**	P	**P**	**05 12 27.1**	**-1.6**
XAN				IAmb	IAmb	05 12 34.8	
	comp=Z,15nm,0.8s						
PSA00	**Pilbara Seismi**	**53.63**	**115**	P	**P**	**05 12 33.5**	**+0.2**
PSA00				IAmb	IAmb	05 12 41.2	
	comp=Z,19nm,1.0s						
SEM	**Semipalatinsk**	**53.97**	**10**	*e*P	**P**	**05 12 34.1**	**-1.2**
	comp=Z,3.1nm,0.9s,baz=9.6						
KURK	**Kurchatov**	**54.01**	**8**	P	**P**	**05 12 34.9**	**-0.5**
KURK				IAmb	IAmb	05 12 42.1	
	comp=Z,9.9nm,0.9s						
GTOI	**Gorontalo**	**55.00**	**87**	P	**P**	**05 12 41.5**	**-1.8**
ZAA0	**Zalesovo Array**	**58.19**	**12**	P	**P**	**05 13 04.5**	**-0.7**
ZALV	**Zalesovo Beam**	**58.19**	**12**	P	**P**	**05 13 04.7**	**-0.5**
	comp=Z,2.4nm,0.6s,baz=212,slow=7.4,SNR=8.5						
ZALV	**Zalesovo Beam**	**58.19**	**12**	P	**P**	**05 13 04.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**58.36**	**109**	P	**P**	**05 13 07.3**	**+0.2**
FITZ				IAmb	IAmb	05 13 14.8	
	comp=Z,12nm,1.1s						
ARU	**Arti**	**59.49**	**354**	P	**P**	**05 13 11.7**	**-2.6**
ARU				IAmb	IAmb	05 13 22.8	
	comp=Z,16nm,1.1s						
SONM	**Songino Array**	**60.46**	**29**	P	**P**	**05 13 20.8**	**-0.5**
	comp=Z,4.3nm,0.8s,baz=225,slow=5.3,SNR=17						
SONM	**Songino Array**	**60.46**	**29**	P	**P**	**05 13 20.9**	**-0.5**
ULN	**Ulaanbaatar**	**60.80**	**29**	P	**P**	**05 13 23.4**	**-0.2**
ULN				IAmb	IAmb	05 13 27.0	
	comp=Z,13nm,1.4s						
KNRA	**Kununurra**	**61.04**	**106**	P	**P**	**05 13 25.2**	**-0.4**
KNRA				IAmb	IAmb	05 13 32.3	
	comp=Z,11nm,0.8s						
AKASG	**Malin Array Be**	**62.75**	**333**	P	**P**	**05 13 35.1**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=131,slow=5.8,SNR=2.2						
FAKI	**Fak Fak**	**64.06**	**92**	P	**P**	**05 13 46.5**	**+0.5**
KOLS	**Kolonicke sedl**	**64.96**	**329**	*e*P	**P**	**05 13 51.1**	**0.0**
CRVS	**Cervenica-Dubn**	**65.37**	**328**	*e*P	**P**	**05 13 54.7**	**+0.9**
LANS	**Liptovska Anna**	**66.57**	**328**	*e*P	**P**	**05 14 01.6**	**0.0**
WRA	**Warramunga Arr**	**66.75**	**110**	P	**P**	**05 14 03.4**	**+0.1**
	comp=Z,13nm,1.1s,baz=284,slow=5.9,SNR=26						
WRA	**Warramunga Arr**	**66.75**	**110**	P	**P**	**05 14 02.8**	**-0.5**
WRAB	**Tennant Creek**	**66.76**	**110**	P	**P**	**05 14 02.9**	**-0.4**
WB2	**Warramunga Arr**	**66.76**	**110**	P	**P**	**05 14 02.9**	**-0.5**
ASAR	**Alice Springs**	**66.78**	**114**	P	**P**	**05 14 03.3**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=283,slow=5.9,SNR=21						
ASAR	**Alice Springs**	**66.78**	**114**	P	**P**	**05 14 02.6**	**-0.8**
AS31	**Alice Springs**	**66.78**	**114**	P	**P**	**05 14 02.9**	**-0.6**
WB0	**Warramunga Arr**	**66.78**	**110**	P	**P**	**05 14 03.2**	**-0.3**
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MJAR Matsushiro Arr 75.79 51 IAmb IAmb 05 14 59.7
comp=Z,6.4nm,1.3s
MDT Midelt 77.03 304 P **P** **05 15 05.7 +0.8**
comp=Z,1.5nm,0.9s,baz=59,slow=5.9,SNR=2.9
NOA NORSAR Array B 77.05 335 P **P** **05 15 03.4 -1.0**
comp=Z,1.0nm,1.0s,baz=116,slow=6.0,SNR=3.4
CTA Charters Tower 77.94 110 P **P** **05 15 09.5 -0.6**
comp=Z,2.1nm,0.5s,baz=272,slow=7.1,SNR=3.7
ESBB Sonseca Array 78.04 311 P **P** **05 15 08.9 -1.4**
ESBB IAmb IAmb 05 15 20.3
comp=Z,13nm,1.2s
ESDC Sonseca Array 78.04 311 P **P** **05 15 10.6 +0.2**
comp=Z,2.5nm,0.7s,baz=93,slow=4.6,SNR=19
ESDC Sonseca Array 78.04 311 P **P** **05 15 10.5 +0.2**
PAB San Pablo 78.30 311 P **P** **05 15 12.4 +0.6**
PAB IAmb IAmb 05 15 19.4
comp=Z,11nm,1.1s
SNAA Sanae 81.47 198 P **P** **05 15 28.4 +0.1**
SNAA Sanae 81.47 198 P **P** **05 15 28.9 +0.5**
SNAA IAmb IAmb 05 15 30.5
comp=Z,6.5nm,1.1s
VNA2 Neumayer--Watz 82.69 199 P **P** **05 15 35.6 +0.9**
baz=65,slow=5.4
VNA1 Neumayer--Stat 82.91 199 P **P** **05 15 38.3 +2.5**
VNA3 Neumayer Olymp 83.48 199 P **P** **05 15 39.2 +0.4**
TIXI Tiksi 83.72 16 P **P** **05 15 39.5 -0.4**
QSPA South Pole Qui 87.26 180 P **P** **05 15 57.8 -0.1**
comp=Z,3.6nm,0.8s,baz=269,slow=2.4,SNR=10
QSPA South Pole Qui 87.26 180 P **P** **05 15 58.0 +0.1**
VNDA Vanda 88.16 167 P **P** **05 16 02.2 +0.4**
comp=Z,0.7nm,0.9s,baz=264,slow=7.9,SNR=4.3
VNDA Vanda 88.16 167 P **P** **05 16 03.8 +1.9**
VNDA IAmb IAmb 05 16 10.1
comp=Z,4.0nm,1.3s
BELA Belgrano 2 90.00 192 **P** **05 16 10.4 -0.1**
RPZ Rata Peaks 97.45 135 LR LR 05 52 52.2
comp=Z,165nm,20.4s,baz=273,slow=31
PDAR Pinedale Array 140.10 357 PKP **PKPdf** **05 22 40.0 -0.7**
comp=Z,0.5nm,0.7s,baz=64,slow=4.1,SNR=4.0
PDAR Pinedale Array 140.10 357 **PKPdf** **05 22 37.2 -3.5**
NVAR Mina Array Bea 144.00 9 PKP PKPab 05 22 45.3 +0.2
comp=Z,0.5nm,0.8s,baz=274,slow=3.5,SNR=2.4
PV18 Skein Mesa, Pa 144.56 356 **PKPab** **05 22 46.7 -0.5**
TXAR Lajitas Array 152.42 344 PKPbc **PKPbc** **05 23 08.5 0.0**
comp=Z,1.0nm,0.7s,baz=140,slow=0.9,SNR=9.0

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*BGR **19** 05:06:23.8±0.0,3.˙60S×68.˙61E,h10km,mb5.2*
*IDC **19** 05:06:28.9±0.4,2.˙69S×68.˙09E,h0km,mb4.5/30,*
mb1 4.6/30,mb1mx4.4/51,mbtmp4.5/30,MS4.9/15,
Ms1 4.9/15,ms1mx4.6/33,Error ellipse: s-maj=14.1km
s-min=11.6km az=163.0
*BJI **19** 05:06:30.0±0.0,2.˙70S×68.˙10E,h10km,mB5.2/46,*
mb4.9/54,Ms5.2/49,Ms7 5.0/47
*NEIC **19** 05:06:30.1±2.4,2.˙72S±0.˙08×68.˙02E±0.˙04,h10km±1km,*
mb5.1/91,Error ellipse: s-maj=14.6km s-min=6.1km
az=196.0
*GCMT **19** 05:06:32.1±0.2,2.˙83S±0.˙01×68.˙06E±0.˙01,h12km,*
MW5.3/130,Moment Tensor Solution. s77,c102;
s130,c239; Duration: 1s1 Moment tensor: Scale 10^17
Nm; Mrr~1.21±.02; Mθθ0.69±.02; Mϕϕ0.52±.02;
Mrθ0.41±.06; Mθϕ~0.59±.02; Mϕr~0.18±.06; Best double
couple: Mo1.28500×10^17 NP1:ϕs136.00000°,δ35.00000°,
λ-81.00000°. NP2:ϕs305.00000°,δ55.00000°,
λ-96.00000°. Principal axes: T 1.2750, Plg10.0000°,
Azm40.0000°; N 0.0180, Plg5.0000°, Azm309.0000°; P
-1.2950, Plg79.0000°, Azm192.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
ISC 19 05:06:32.0±0.6, 2.˙77S±0.˙05×68.˙00E±0.˙05, h19km±2km,
h19km:pP-P,n303,σ1s59/334,mb5.0/107,MS5.0/28,
19C-5D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**6.40**	**136**	Pn	**Pn**	**05 08 04.7**	**-0.6**
PALK	**Pallekele**	**16.13**	**52**	Pn	**Pn**	**05 10 17.4**	**-0.5**
OPO	**Ambohidratompo**	**25.73**	**231**	P	**P**	**05 12 02.6**	**+0.8**
	2.8nm,0.8s,baz=41,slow=11,SNR=3.7						
WSAR	**Wadi Sarin**	**27.41**	**341**	LR	LR	05 21 12.1	
	comp=Z,2μm,20.1s,baz=172,slow=32						
ATD	**Arta Tunnel**	**28.77**	**300**	LR	LR	05 21 32.8	
	comp=Z,729nm,21.8s,baz=121,slow=31						
KMBO	**Kilima Mbogo**	**30.77**	**272**	P	**P**	**05 12 50.9**	**+3.9**
	2.2nm,0.7s,baz=56,slow=9.9,SNR=6.4						
KMBO	**Kilima Mbogo**	**30.77**	**272**	P	**P**	**05 12 47.2**	**+0.1**
KULM	**Kulim**	**33.58**	**76**	P	**P**	**05 13 10.8**	**-0.6**
KULM				IAmb	IAmb	05 13 14.2	
	comp=Z,27nm,1.0s						
RAYN	**Ar Rayn**	**34.10**	**321**	P	**P**	**05 13 14.7**	**-1.1**
SHL	**Shillong**	**36.45**	**38**	P	**P**	**05 13 35.7**	**-0.5**
SHL				IAmb	IAmb	05 13 38.7	
	comp=Z,26nm,1.0s						
NIL	**Nilore**	**36.56**	**7**	P	**P**	**05 13 36.9**	**+0.1**
NIL				IAmb	IAmb	05 13 40.0	
	comp=Z,25nm,0.9s						
CM13	**Chiang Mai Arr**	**37.00**	**54**	P	**P**	**05 13 43.5**	**+2.7**
CM05	**Chiang Mai Arr**	**37.02**	**54**	P	**P**	**05 13 43.6**	**+2.6**
CM15	**Chiang Mai Arr**	**37.03**	**54**	P	**P**	**05 13 44.2**	**+3.2**
CM02	**Chiang Mai Arr**	**37.04**	**54**	P	**P**	**05 13 43.9**	**+2.8**
CM01	**Chiang Mai Arr**	**37.04**	**54**	P	**P**	**05 13 43.0**	**+1.9**
CM04	**Chiang Mai Arr**	**37.05**	**54**	P	**P**	**05 13 43.9**	**+2.7**
CM31	**Chiang Mai Arr**	**37.05**	**54**	P	**P**	**05 13 44.6**	**+3.4**
CM31	**Chiang Mai Arr**	**37.05**	**54**	P	**P**	**05 13 40.8**	**-0.4**
CM31				IAmb	IAmb	05 13 44.2	
	comp=Z,25nm,1.1s						
CMAR	**Chiang Mai Arr**	**37.05**	**54**	P	**P**	**05 13 40.8**	**-0.4**
	comp=Z,9.5nm,1.0s,baz=245,slow=10,SNR=25						
CMAR				LR	LR	05 26 57.1	
	comp=Z,1μm,21.7s,baz=284,slow=33						
CMAR	**Chiang Mai Arr**	**37.05**	**54**	P	**P**	**05 13 41.5**	**+0.3**
CM09	**Chiang Mai Arr**	**37.08**	**54**	P	**P**	**05 13 44.0**	**+2.5**
SUKH	**Sukhothai**	**37.12**	**56**	P	**P**	**05 13 44.7**	**+3.0**
KBL	**Kabul**	**37.12**	**1**	P	**P**	**05 13 42.5**	**+0.7**
KBL				IAmb	IAmb	05 13 44.8	
	comp=Z,34nm,1.4s						
CM36	**Chiang Mai Arr**	**37.20**	**54**	P	**P**	**05 13 44.0**	**+1.5**
CHTO	**Chiang Mai**	**37.24**	**54**	P	**P**	**05 13 42.6**	**-0.1**
CHTO				IAmb	IAmb	05 13 45.6	
	comp=Z,29nm,1.1s						
CM33	**Chiang Mai Arr**	**37.24**	**54**	P	**P**	**05 13 44.0**	**+1.2**
MBAR	**Mbarara**	**37.31**	**273**	P	**P**	**05 13 45.3**	**+1.6**
	comp=Z,3.8nm,0.2s,baz=78,slow=8.8,SNR=9.1						
MBAR	**Mbarara**	**37.31**	**273**	P	**P**	**05 13 45.3**	**+1.6**
MBAR				IAmb	IAmb	05 13 48.9	
	comp=Z,58nm,1.8s						
CM35	**Chiang Mai Arr**	**37.34**	**54**	P	**P**	**05 13 46.0**	**+2.4**
HRA	**Herat**	**37.35**	**352**	P	**P**	**05 13 44.1**	**+0.3**
CM34	**Chiang Mai Arr**	**37.42**	**54**	P	**P**	**05 13 46.0**	**+1.7**
PHIT	**Phitsanulok**	**37.63**	**57**	P	**P**	**05 13 49.2**	**+3.1**
UTTA	**Uttaradit**	**38.01**	**56**	P	**P**	**05 13 52.3**	**+3.0**
PAYA	**Payao**	**38.27**	**54**	P	**P**	**05 13 54.0**	**+2.5**
CHAI	**Chaiyaphum**	**38.38**	**60**	P	**P**	**05 13 55.2**	**+2.8**
LSA	**Lhasa**	**39.15**	**33**	P	**P**	**05 13 59.1**	**-0.2**
LEM	**Lembang**	**39.67**	**97**	P	**P**	**05 14 02.2**	**-1.3**
	comp=Z,14nm,0.3s,baz=320,slow=19,SNR=1.8						
NONG	**Nongkai**	**40.34**	**58**	P	**P**	**05 14 11.0**	**+2.2**
LSZ	**Lusaka**	**41.15**	**250**	P	**P**	**05 14 16.9**	**+1.2**
	comp=Z,5.7nm,0.6s,baz=65,slow=5.6,SNR=9.1						
LSZ	**Lusaka**	**41.15**	**250**	P	**P**	**05 14 14.7**	**-1.0**
CHGR	**Chuyangaron**	**41.23**	**1**	P	**P**	**05 14 15.6**	**-0.3**
GEYT	**Alibeck**	**41.51**	**348**	P	**P**	**05 14 17.7**	**-0.5**
	comp=Z,2.1nm,0.4s,baz=191,slow=14,SNR=4.0						
GEYT				LR	LR	05 30 37.7	
	comp=Z,2μm,20.8s,baz=130,slow=35						
GYA0B	**ALIBECK ARRAY**	**41.51**	**348**	P	**P**	**05 14 18.0**	**-0.2**
GAR	**Garm**	**41.61**	**3**	P	**P**	**05 14 19.4**	**+0.3**
MATP	**Matopo**	**42.31**	**242**	P	**P**	**05 14 24.7**	**-0.5**
	comp=Z,7.7nm,0.7s,baz=69,slow=8.3,SNR=7.2						
MATP				LR	LR	05 29 46.7	
	comp=Z,2μm,18.1s,baz=126,slow=33						
SLVN	**Son La**	**42.52**	**54**	P	**P**	**05 14 26.0**	**-0.8**
BTK	**Batken**	**42.69**	**3**	P	**P**	**05 14 28.0**	**+0.1**
BTK				IAmb	IAmb	05 14 30.5	
	comp=Z,28nm,1.1s						
KSH	**Kashi**	**42.71**	**9**	P	**P**	**05 14 26.0**	**-2.1**
KSH				S	**S**	**05 20 49.4**	**-1.5**
KSH				ScS	**ScS**	**05 24 28.3**	**-0.5**
KSH				pmax	pmax		
	comp=Z,47nm,1.1s						
KSH				pmax	pmax		
	comp=Z,500nm,5.3s						
KSH				LR	LR		
	comp=Z,630nm,9.4s						
KSH				LR	LR		
	comp=Z,950nm,9.4s						
KSH				LR	LR		
	comp=Z,850nm,9.5s						
IUG	**Iuzhnay**	**44.74**	**2**	*e*P	**P**	**05 14 43.6**	**-0.7**
	comp=Z,13nm,1.1s,baz=1.9						
IUG				*e*S	**S**	**05 21 19.4**	**-1.1**
	baz=1.9						
DZA	**Taraz**	**45.55**	**3**	*e*P	**P**	**05 14 50.5**	**-0.1**
	baz=3.2						
DZA				LR	LR	05 33 40.8	
	comp=Z,91nm,13.9s,baz=3.2						
AAK	**Ala-Archa**	**45.57**	**7**	P	**P**	**05 14 51.3**	**+0.3**
AAK				IAmb	IAmb	05 14 53.5	
	comp=Z,19nm,1.3s						
BOOM	**Boomskoye usch**	**45.62**	**8**	P	**P**	**05 14 51.7**	**+0.3**
BOOM				IAmb	IAmb	05 14 56.3	
	comp=Z,30nm,1.4s						
KK31	**Karatay Array**	**45.71**	**3**	P	**P**	**05 14 51.2**	**-0.8**
KKAR	**Karatay Array**	**45.71**	**3**	P	**P**	**05 14 51.7**	**-0.3**
KKAR	**Karatay Array**	**45.71**	**3**	P	**P**	**05 14 52.4**	**+0.4**
KKAR				IAmb	IAmb	05 16 36.6	
	comp=Z,6.3nm,1.2s						
FRU1	**Bishkek**	**45.76**	**7**	P	**P**	**05 14 53.8**	**+1.4**
FRU1				IAmb	IAmb	05 14 55.4	
	comp=Z,32nm,0.9s						
TNSS	**Tian-Shan**	**46.30**	**9**	*e*P	**P**	**05 14 55.5**	**-1.6**
	baz=8.9						
SGDS	**Sogindy**	**46.39**	**7**	*e*P	**P**	**05 14 56.3**	**-1.1**
	comp=Z,6.4nm,1.2s,baz=6.5						
LBTB	**Lobatse**	**46.42**	**238**	LR	LR	05 32 09.7	
	comp=Z,3μm,19.2s,baz=68,slow=33						
LBTB	**Lobatse**	**46.42**	**238**	P	**P**	**05 15 02.4**	**+4.3**
MDOK	**Medeo**	**46.44**	**9**	*e*P	**P**	**05 14 56.8**	**-1.0**
	baz=9.0						
MDOK				*e*S	**S**	**05 21 43.6**	**-1.4**
	baz=9.0						
AAA	**Alma-Ata**	**46.46**	**9**	*e*P	**P**	**05 14 57.2**	**-0.7**
	baz=8.8						
AAA				*e*S	**S**	**05 21 44.3**	**-0.9**
	baz=8.8						
QIZ	**Qiongzhong**	**46.49**	**60**	P	**P**	**05 14 56.9**	**-1.6**
QIZ				PP	**PP**	**05 16 47.8**	**-0.2**
QIZ				S	**S**	**05 21 48.3**	**+2.1**
QIZ				sS	**sS**	**05 21 57.9**	**+3.9**
QIZ				LR	LR		
	comp=Z,1μm,18.1s						
QIZ				LR	LR		
	comp=Z,2μm,19.1s						
QIZ				LR	LR		
	comp=Z,2μm,16.2s						
SHLS	**Shalkode**	**46.87**	**11**	*e*P	**P**	**05 15 01.1**	**-0.1**
	comp=Z,11nm,1.2s,baz=12						
SHLS				LR	LR	05 33 03.0	
	comp=Z,110nm,13.6s,baz=12						
KPKS	**Kokpek**	**47.02**	**11**	*e*P	**P**	**05 15 01.3**	**-1.0**
	comp=Z,7.2nm,1.2s,baz=10						
KPKS				LR	LR	05 33 47.0	
	comp=Z,203nm,13.1s,baz=10						
KUU	**Kurty**	**47.05**	**8**	*e*P	**P**	**05 15 01.7**	**-0.8**
	comp=Z,5.2nm,0.9s,baz=8.1						
KUU				*e*S	**S**	**05 21 52.3**	**-1.2**
	baz=8.1						
CHKK	**Chushkaly**	**47.11**	**9**	*e*P	**P**	**05 15 01.1**	**-1.8**
	baz=8.7						
MARD	**Mardin**	**47.22**	**330**	P	**P**	**05 15 05.6**	**+1.6**
MARD				IAmb	IAmb	05 15 06.7	
	comp=Z,15nm,1.2s						
GYA	**Guiyang**	**47.32**	**50**	⇓P	**P**	**05 15 05.8**	**+0.8**
GYA				PP	**PP**	**05 16 59.4**	**+3.1**
GYA				S	**S**	**05 21 59.6**	**+1.6**
GYA				SS	**SS**	**05 25 19.6**	**-6.2**
GYA				pmax	pmax		
	comp=Z,14nm,1.3s						
GYA				pmax	pmax		
	comp=Z,250nm,4.3s						
GYA				LR	LR		
	comp=Z,830nm,20.1s						
GYA				LR	LR		
	comp=Z,730nm,20.4s						
GYA				LR	LR		
	comp=Z,710nm,19.8s						
GNI	**Garni**	**47.73**	**336**	P	**P**	**05 15 09.8**	**+1.8**
CD2	**Chengdu**	**47.76**	**43**	P	**P**	**05 15 08.9**	**+0.6**
CD2				S	**S**	**05 22 06.5**	**+2.4**
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,290nm,8.4s						
CD2				LR	LR		
	comp=Z,1μm,14.9s						
CD2				LR	LR		
	comp=Z,1μm,18.4s						
CD2				LR	LR		
	comp=Z,2μm,20.9s						
BTLS	**Baital**	**47.90**	**6**	*e*P	**P**	**05 15 08.0**	**-1.0**
	comp=Z,5.6nm,1.4s,baz=5.6						
BOSA	**Boshof**	**48.11**	**233**	P	**P**	**05 15 10.7**	**-0.4**
	comp=Z,4.5nm,0.9s,baz=96,slow=5.2,SNR=4.8						
BOSA				LR	LR	05 31 42.4	
	comp=Z,2μm,21.8s,baz=76,slow=31						
BOSA	**Boshof**	**48.11**	**233**	IAmb	IAmb	05 15 24.1	
	comp=Z,29nm,1.5s						
TDK	**Taldyqorghan**	**48.45**	**10**	*e*P	**P**	**05 15 12.8**	**-0.6**
	baz=9.7						
TDK				*e*S	**S**	**05 22 12.7**	**-0.7**
	baz=9.7						
GAZ	**Gaziantep**	**48.96**	**327**	P	**P**	**05 15 19.2**	**+1.7**
GAZ				IAmb	IAmb	05 15 20.5	
	comp=Z,22nm,1.4s						
AKH	**Akhalkalaki**	**49.30**	**336**	P	**P**	**05 15 21.0**	**+0.9**
AKH				IAmb	IAmb	05 15 22.3	
	comp=Z,32nm,1.1s						
WMQ	**Urumqi**	**49.64**	**19**	*e*P	**P**	**05 15 24.3**	**+1.8**
WMQ				pP	sP	05 15 28.4	-1.3
WMQ				S	**S**	**05 22 31.8**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,26nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.7s						
WMQ				LR	LR		
	comp=Z,3μm,21.7s						
WMQ				LR	LR		
	comp=Z,2μm,21.7s						
WMQ				LR	LR		
	comp=Z,5μm,23.3s						
WMQ	**Urumqi**	**49.64**	**19**	P	**P**	**05 15 22.6**	**+0.1**
WMQ				IAmb	IAmb	05 15 30.2	
	comp=Z,52nm,1.7s						
MAKZ	**Makanchi**	**50.88**	**12**	P	**P**	**05 15 31.1**	**-0.7**
MK31	**Makanchi Array**	**50.93**	**13**	P	**P**	**05 15 31.1**	**-1.1**
MKAR	**Makanchi Array**	**50.93**	**13**	P	**P**	**05 15 31.2**	**-1.1**
	comp=Z,2.7nm,1.0s,baz=188,slow=7.4,SNR=9.9						
MKAR				PcP	**PcP**	**05 16 47.8**	**-0.6**
	comp=Z,2.7nm,1.0s,baz=191,slow=5.6,SNR=4.3						
MKAR				LR	LR	05 37 34.6	
	comp=Z,526nm,18.7s,baz=188,slow=37						
MKAR	**Makanchi Array**	**50.93**	**13**	P	**P**	**05 15 30.8**	**-1.4**
LZH	**Lanzhou**	**51.11**	**38**	*e*P	**P**	**05 15 34.6**	**+0.7**
LZH				sP	pwP	05 15 41.5	-1.8
LZH				S	**S**	**05 22 51.5**	**+0.3**
LZH				sS	sS	05 22 59.6	+0.2
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,180nm,5.7s						
LZH				LR	LR		
	comp=Z,1μm,16.0s						
LZH				LR	LR		
	comp=Z,930nm,16.2s						
LZH				LR	LR		
	comp=Z,2μm,18.4s						
GTA	**Gaotai**	**51.15**	**32**	⇑P	**P**	**05 15 34.5**	**+0.4**
GTA				pP	sP	05 15 38.9	-2.5
GTA				sP	pwP	05 15 41.8	-1.7
GTA				PcP	**PcP**	**05 16 51.3**	**+1.7**
GTA				S	**S**	**05 22 48.8**	**-2.7**
GTA				SS	**SS**	**05 26 25.3**	**-1.8**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,93nm,6.4s						
GTA				LR	LR		
	comp=Z,2μm,18.9s						
GTA				LR	LR		
	comp=Z,2μm,20.7s						
GTA				LR	LR		
	comp=Z,3μm,21.1s						
ENH	**Enshi**	**51.44**	**47**	P	**P**	**05 15 35.3**	**-1.1**
ENH				IAmb	IAmb	05 15 53.6	
	comp=Z,39nm,1.4s						
KBZ	**Khabaz**	**51.49**	**337**	P	**P**	**05 15 35.1**	**-1.2**
	comp=Z,10nm,1.0s,baz=235,slow=24,SNR=9.2						
TOKA	**Tokat**	**51.68**	**329**	P	**P**	**05 15 36.8**	**-1.1**
KIV	**Kislovodsk**	**51.76**	**337**	P	**P**	**05 15 37.0**	**-1.5**
TSUM	**Tsumeb**	**51.89**	**248**	P	**P**	**05 15 41.2**	**+1.1**
	comp=Z,7.4nm,1.1s,baz=108,slow=14,SNR=4.1						
TSUM	**Tsumeb**	**51.89**	**248**	P	**P**	**05 15 41.4**	**+1.3**
TSUM				IAmb	IAmb	05 15 53.8	
	comp=Z,32nm,1.5s						
ZSN	**Zaisan**	**52.15**	**14**	*e*P	**P**	**05 15 40.7**	**-0.6**
	comp=Z,5.8nm,1.2s,baz=14						
ABKAR	**Akbulak array**	**52.28**	**353**	P	**P**	**05 15 42.1**	**-0.1**
MORW	**Morawa**	**52.57**	**125**	P	**P**	**05 15 45.9**	**+1.2**
MORW				IAmb	IAmb	05 15 52.9	
	comp=Z,42nm,1.4s						
BRZS	**Berezniki**	**52.69**	**4**	*e*P	**P**	**05 15 44.7**	**-0.6**
	comp=Z,3.9nm,1.2s,baz=3.6						
BR131	**Keskin Array S**	**52.74**	**327**	P	**P**	**05 15 45.5**	**-0.5**
BRTR	**Keskin Array B**	**52.74**	**327**	P	**P**	**05 15 45.9**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=151,slow=8.1,SNR=13						
BRTR				PcP	**PcP**	**05 16 55.2**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=150,slow=6.0,SNR=1.9						
BRTR	**Keskin Array B**	**52.74**	**327**	P	**P**	**05 15 45.3**	**-0.7**
TOLI2	**Tolitoli**	**52.90**	**87**	P	**P**	**05 15 46.1**	**-1.4**
TOLI2				IAmb	IAmb	05 15 53.5	
	comp=Z,17nm,1.1s						
ELL	**Elmali**	**52.93**	**322**	P	**P**	**05 15 47.5**	**+0.1**
ELL				IAmb	IAmb	05 15 49.1	
	comp=Z,35nm,1.1s						
XAN	**Xi'an**	**53.13**	**43**	P	**P**	**05 15 47.8**	**-1.0**
XAN				pP	pwP	05 15 56.6	-1.6
XAN				ScS	ScS	05 25 33.8	-4.1
XAN				pmax	pmax		
	comp=Z,24nm,1.5s						
XAN				pmax	pmax		
	comp=Z,170nm,3.7s						
XAN				LR	LR		
	comp=Z,930nm,20.6s						
XAN				LR	LR		
	comp=Z,820nm,17.3s						
XAN				LR	LR		
	comp=Z,1μm,23.8s						
XAN	**Xi'an**	**53.13**	**43**	P	**P**	**05 15 49.3**	**+0.5**
XAN				IAmb	IAmb	05 15 57.6	
	comp=Z,21nm,1.0s						
SUR	**Sutherland**	**53.14**	**231**	LR	LR	05 34 28.0	
	comp=Z,3μm,22.0s,baz=62,slow=32						
PSA00	**Pilbara Seismi**	**53.71**	**115**	P	**P**	**05 15 52.6**	**-0.6**
PSA00	**Pilbara Seismi**	**53.71**	**115**	P	**P**	**05 15 52.3**	**-0.9**
PSA00				IAmb	IAmb	05 15 58.2	
	comp=Z,19nm,0.8s						
SEM	**Semipalatinsk**	**54.00**	**10**	*e*P	**P**	**05 15 54.0**	**-1.1**
	comp=Z,8.6nm,1.3s,baz=9.5						
KURK	**Kurchatov**	**54.05**	**8**	P	**P**	**05 15 54.4**	**-0.7**
KURK				IAmb	IAmb	05 15 56.9	
	comp=Z,19nm,1.1s						
MDUB	**Mudurnu**	**54.61**	**326**	P	**P**	**05 15 57.9**	**-1.7**
LUWI	**Luwuk**	**54.76**	**89**	P	**P**	**05 16 00.1**	**-0.9**
NWAO	**Narrogin (SRO)**	**54.94**	**129**	P	**P**	**05 16 01.6**	**-0.4**
	comp=Z,14nm,1.1s,baz=17,slow=3.2,SNR=4.4						
NWAO	**Narrogin (SRO)**	**54.94**	**129**	P	**P**	**05 16 01.5**	**-0.5**
NWAO	**Narrogin (SRO)**	**54.94**	**129**	P	**P**	**05 16 02.1**	**+0.1**
NWAO				IAmb	IAmb	05 16 03.7	
	comp=Z,68nm,1.5s						
BRVK	**Borovoye**	**55.65**	**2**	P	**P**	**05 16 06.0**	**-0.8**
SOEI	**Soe**	**56.30**	**100**	P	**P**	**05 16 11.5**	**-0.8**
ZAA0	**Zalesovo Array**	**58.23**	**12**	P	**P**	**05 16 23.9**	**-1.1**
ZAA0				IAmb	IAmb	05 16 25.5	
	comp=Z,13nm,1.1s						
ZALV	**Zalesovo Beam**	**58.23**	**12**	P	**P**	**05 16 24.0**	**-1.0**
	comp=Z,5.0nm,0.9s,baz=216,slow=7.3,SNR=12						
ZALV				LR	LR	05 40 37.2	
	comp=Z,863nm,21.8s,baz=182,slow=35						
ZALV	**Zalesovo Beam**	**58.23**	**12**	P	**P**	**05 16 23.4**	**-1.6**
FITZ	**Fitzroy Crossi**	**58.44**	**109**	P	**P**	**05 16 27.0**	**-0.2**
FITZ				IAmb	IAmb	05 16 34.4	
	comp=Z,15nm,1.1s						
HHC	**Hu-ho-hao-te**	**58.81**	**38**	*e*P	P	05 16 34.6	+5.1
HHC				PP	**PP**	**05 18 45.1**	**+5.4**
HHC				PcS	**PcS**	**05 21 16.4**	**-4.4**
HHC				S	**S**	**05 24 41.5**	**+7.3**
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,260nm,6.2s						
HHC				LR	LR		
	comp=Z,640nm,16.3s						
HHC				LR	LR		
	comp=Z,830nm,17.1s						
HHC				LR	LR		
	comp=Z,840nm,16.3s						
HARR	**Harsova**	**59.23**	**328**	⇑P	P	05 16 45.9	+14
HARR				⇓P	**PP**	**05 18 48.8**	**+5.6**
NJ2	**Nanjing**	**59.32**	**50**	*e*P	**P**	**05 16 34.4**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,18nm,0.8s						
NJ2				LR	LR		
	comp=Z,1μm,22.7s						
NJ2				LR	LR		
	comp=Z,1μm,19.9s						
NJ2				LR	LR		
	comp=Z,950nm,17.1s						
TNTI	**Ternate**	**59.45**	**87**	P	**P**	**05 16 35.0**	**+0.7**
ARU	**Arti**	**59.50**	**354**	P	**P**	**05 16 32.7**	**-1.1**
ARU				IAmb	IAmb	05 16 35.5	
	comp=Z,18nm,1.1s						
SONM	**Songino Array**	**60.52**	**29**	P	**P**	**05 16 40.9**	**-0.2**
	comp=Z,14nm,1.1s,baz=222,slow=7.1,SNR=30						
SONM				LR	LR	05 42 37.3	
	comp=Z,3μm,21.1s,baz=225,slow=36						
SONM	**Songino Array**	**60.52**	**29**	P	**P**	**05 16 42.0**	**+0.8**
VRI	**Vrincioaia**	**60.64**	**328**	⇑P	**P**	**05 16 42.5**	**+0.6**
VRI				⇑P	**PP**	**05 19 01.5**	**+5.8**
PLOR	**Plostina**	**60.67**	**328**	⇓P	**P**	**05 16 41.0**	**-1.1**
PLOR				⇑P	**PP**	**05 19 01.1**	**+5.1**
MLR	**Muntele Rosu**	**60.82**	**327**	⇑P	**P**	**05 16 44.0**	**+0.8**
MLR				⇑P	**PP**	**05 19 01.9**	**+4.5**
MLR	**Muntele Rosu**	**60.82**	**327**	P	**P**	**05 16 43.1**	**-0.2**
MLR				IAmb	IAmb	05 16 45.9	
	comp=Z,35

comp=Z,17nm,1.4s
MTN Manton Dam 63.20 103 P P 05 16 59.3 -0.3
MTN IAmb IAmb 05 17 44.6
comp=Z,16nm,1.2s
BZS Buzias 63.29 325 ⇑P P 05 17 00.8 +1.2
BZS ⇑P PP **05 19 13.0 -6.1**
DIVS Divibare 63.37 323 P P 05 16 58.9 -1.5
DIVS IAmb IAmb 05 17 02.3
comp=Z,30nm,1.3s
FAKI Fak Fak 64.16 92 P P 05 17 04.8 -1.3
DL2 Dalian 64.39 44 P P 05 17 05.9 -1.1
DL2 S S **05 25 47.3 +2.5**
DL2 pmax pmax
comp=Z,250nm,4.2s
DL2 LR LR
comp=Z,710nm,19.6s
DL2 LR LR
comp=Z,510nm,19.7s
DL2 LR LR
comp=Z,1μm,20.3s
CORL Corleone 64.70 314 P P 05 17 10.1 +0.9
MAW Mawson 64.82 182 P P 05 17 10.0 +0.7
KOLS Kolonicke sedl 64.93 329 *eP* **P 05 17 11.0 +0.6**
JOW Kunigami 65.10 59 P P 05 17 08.5 -3.4
KWP Kalwaria Pacla 65.14 329 P P 05 17 11.1 -0.6
CRVS Cervenica-Dubn 65.33 328 *eP* **P 05 17 13.3 +0.3**
KECS Kecovo 65.60 327 *eP* **P 05 17 14.9 +0.1**
LANS Liptovska Anna 66.54 328 *eP* **P 05 17 21.6 +0.8**
KEST Kesra 66.74 311 P P 05 17 21.8 -0.7
KEST IAmb IAmb 05 18 00.8
comp=Z,30nm,1.6s
WRA Warramunga Arr 66.83 110 P P 05 17 23.2 -0.1
comp=Z,9.2nm,0.8s,baz=284,slow=6.3,SNR=14
WRA Warramunga Arr 66.83 110 P P 05 17 22.0 -1.3
WRAB Tennant Creek 66.84 110 P P 05 17 23.1 -0.2
WB2 Warramunga Arr 66.84 110 P P 05 17 21.9 -1.4
ASAR Alice Springs 66.85 114 P P 05 17 23.2 -0.2
comp=Z,6.3nm,0.8s,baz=283,slow=6.0,SNR=14
ASAR Alice Springs 66.85 114 P P 05 17 24.0 +0.6
WB0 Warramunga Arr 66.87 110 P P 05 17 22.2 -1.3
WR0 Warramunga Arr 67.02 110 P P 05 17 23.5 -1.0
KLMR Klimovskoe 67.17 345 *eP* **P 05 17 20.9 -3.6**
KLMR AMP 05 17 26.2
comp=Z,41nm,1.7s
KLMR *eP* **PP 05 19 54.0 +1.3**
KLMR LQ LQ 05 37 59.7
KLMR LQ LQ 05 37 59.7
KLMR LR LR 05 39 39.1
KLMR AMP 05 47 24.8
comp=Z,195nm,13.8s
MODS Modra-Piesok 67.30 326 *eP* **P 05 17 24.2 -1.5**
JAVC Velka Javorina 67.35 327 *eP* **P 05 17 26.6 +0.6**
TOA0 Torodi Ar. Sit 67.66 285 P P 05 17 27.8 -0.7
TOA0 IAmb IAmb 05 17 31.1
comp=Z,28nm,1.8s
TORD Torodi Ar. Bea 67.66 285 P P 05 17 28.7 +0.2
comp=Z,3.1nm,1.2s,baz=105,slow=3.2,SNR=8.0
TORD Torodi Ar. Bea 67.66 285 P P 05 17 28.1 -0.4
ARSA Arzberg 67.71 324 *eP* **P 05 17 28.5 +0.2**
comp=Z,13nm,1.6s
CONA Conrad Observa 67.86 325 *eP* **P 05 17 29.2 -0.2**
comp=Z,16nm,1.2s
MORC Moravsky Berou 67.93 327 *eP* **P 05 17 28.9 -0.7**
MORC Moravsky Berou 67.93 327 P P 05 17 29.0 -0.7
MORC IAmb IAmb 05 17 30.4
comp=Z,14nm,1.3s
KRUC Moravsky 68.17 326 *eP* **P 05 17 30.4 -0.7**
VRAC Vranov 68.19 327 *eP* **P 05 17 30.8 -0.4**
KSAR Wonju Array Be 68.29 48 P P 05 17 30.0 -2.1
KSRS Korea Array 68.32 48 P P 05 17 31.1 -1.2
comp=Z,2.4nm,0.9s,baz=246,slow=7.3,SNR=8.0
KSRS LR LR 05 48 53.5
comp=Z,819nm,18.4s,baz=236,slow=37
KRLC Kraliky 68.50 327 *eP* **P 05 17 33.5 +0.3**
KRLC *ep*P **pP 05 17 37.8 -0.4**
KRLC *ex* x 05 19 48.6
MOA Molln 68.74 324 *eP* **P 05 17 35.0 +0.3**
comp=Z,6.6nm,0.9s
SYO Syowa Base 68.82 191⇑*eP* **P 05 17 34.8 0.0**
SYO Syowa Base 68.82 191⇓*es*P sP 05 17 41.8 +0.1
DPC Dobruska-Polom 68.90 327 *eP* **P 05 17 35.5 -0.2**
DPC *ep*P **sP 05 17 41.1 -1.6**
DPC *ex* x 05 19 51.8
OSTC Ostas 69.07 328 *eP* **P 05 17 37.3 +0.6**
OSTC *ex* x 05 17 42.4
CN2 Changchun 69.14 41 *eP* **P 05 17 37.3 +0.1**
CN2 *eS* **S 05 26 45.4 +3.3**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=Z,400nm,17.0s
CN2 LR LR
comp=Z,700nm,17.0s
CN2 LR LR
comp=Z,800nm,17.0s
ABTA Abfaltersbach 69.25 323 *eP* **P 05 17 38.3 +0.3**
comp=Z,13nm,1.2s
KHC Kasperske Hory 69.78 325 *eP* **P 05 17 40.0 -1.2**
KHC *ep*P **pP 05 17 45.4 -0.8**
KHC *ex* x 05 19 55.3
WTTA Wattenberg 70.02 323 *eP* **P 05 17 42.4 -0.4**
comp=Z,17nm,1.4s
WATA Walderalm 70.09 323 *eP* **P 05 17 42.5 -0.7**
comp=Z,13nm,1.3s
SQTA Sankt Quirin 70.26 323 *eP* **P 05 17 43.8 -0.4**
comp=Z,13nm,1.1s
MOTA Moosalm 70.38 323 P P 05 17 44.3 -0.7
comp=Z,16nm,1.3s
FETA Feichten 70.46 322 *eP* **P 05 17 45.4 -0.2**
comp=Z,11nm,1.3s
RETA Reutte 70.65 323 *eP* **P 05 17 47.1 +0.5**
comp=Z,14nm,1.5s
FBE Freiberg 70.81 327 *eP* **P 05 17 48.2 +0.9**
comp=Z,24nm,1.5s,baz=118,slow=6.0
NKC Novy Kostel 70.97 326 *eP* **P 05 17 48.8 +0.4**
NKC *ep*P **sP 05 17 54.2 -1.2**
NKC *eP*P PP 05 20 08.7 -17
WERN Wernitzgruen 71.03 326 *eP* **P 05 17 49.6 +0.8**
comp=Z,35nm,1.4s,baz=118,slow=6.0
TUE Stuetta 71.07 321 P P 05 17 47.8 -1.5
TUE IAmb IAmb 05 17 53.7
comp=Z,27nm,1.4s
DAVA Damuels 71.09 322 *eP* **P 05 17 49.9 +0.5**
comp=Z,28nm,1.8s
GUNZ Gunzen 71.10 326 *eP* **P 05 17 50.1 +0.9**
comp=Z,30nm,1.7s,baz=118,slow=6.0
UBR Ueberruh 71.13 323 *eP* **P 05 17 49.9 +0.5**
comp=Z,71nm,1.4s,baz=118,slow=6.0
CLL Collm 71.20 327 *i* P **P 05 17 48.7 -1.0**
comp=Z,20nm,1.3s
CLL *i* 05 17 55.2
CLL *eP*P **PP 05 20 28.0 +0.2**
CLL *e*(S) S 05 27 18.0 +12
CLL *eSS* **SS 05 31 42.0 +2.0**
CLL Collm 71.20 327 *eP* **P 05 17 50.3 +0.6**
comp=Z,20nm,1.3s,baz=118,slow=6.0
CLL Collm 71.20 327 P P 05 17 48.2 -1.5
CLL IAmb IAmb 05 17 51.2
comp=Z,16nm,1.2s
GRA1 Grafenberg Arr 71.40 325 P P 05 17 49.3 -1.7
GRF Grafenberg Arr 71.40 325 *eP* **P 05 17 51.2 +0.2**
comp=Z,44nm,1.4s,baz=118,slow=6.0
GRF *eP*P PP 05 20 09.9 -20
baz=124,slow=6.7
NEUB Neuenburg 71.82 327 *eP* **P 05 17 54.2 +0.8**
comp=Z,30nm,1.3s,baz=118,slow=6.0
MDJ Mudanjiang 72.19 41 P P 05 17 56.8 +1.0
MDJ pP pP 05 18 00.0 -0.9
MDJ PP **PP 05 20 37.9 +1.5**
MDJ S **S 05 27 20.0 +2.4**
MDJ sS sS 05 27 24.6 -1.7
MDJ ScS **ScS 05 28 01.8 +0.4**
MDJ pmax pmax
comp=Z,15nm,1.2s
MDJ pmax pmax
comp=Z,210nm,5.0s
MDJ LR LR
comp=Z,510nm,14.9s
MDJ LR LR
comp=Z,640nm,21.0s
MDJ LR LR
comp=Z,910nm,21.4s
SENIN Lac Senin/Sane 72.31 321 P P 05 17 55.7 -1.1

BFO Black Forest 72.49 323 *eP* **P 05 17 57.9 +0.3**
comp=Z,31nm,1.5s,baz=118,slow=6.0
ASSE Asse, Remlinge 72.86 327 *eP* **P 05 17 59.7 +0.1**
comp=Z,55nm,1.9s,baz=118,slow=6.0
NRIK Noril'sk 73.19 7 P P 05 18 00.8 -0.5
comp=Z,1.2nm,0.4s,baz=162,slow=4.2,SNR=5.8
NRIK LR LR 05 49 50.5
comp=Z,946nm,20.8s,baz=200,slow=36
TNS Taunus Mts 73.24 325 *eP* **P 05 18 03.0 +1.0**
comp=Z,22nm,1.5s,baz=118,slow=6.0
DBIC Dimbokro 73.33 278 P P 05 18 03.5 +0.2
comp=Z,4.6nm,0.9s,baz=69,slow=16,SNR=2.5
KOWA Kowa 73.34 286 P P 05 18 04.1 +0.9
comp=Z,7.7nm,1.2s,baz=140,slow=2.9,SNR=5.0
KOWA Kowa 73.34 286 P P 05 18 02.0 -1.2
KOWA IAmb IAmb 05 18 06.3
comp=Z,39nm,1.6s
NRDL Niedersach Rie 73.34 327 *eP* **P 05 18 03.5 +1.1**
comp=Z,25nm,1.5s,baz=118,slow=6.0
USRK Ussuriysk Ar. 73.63 42 P P 05 18 03.0 -1.4
comp=Z,1.6nm,0.6s,baz=237,slow=5.0,SNR=2.9
USRK Ussuriysk Ar. 73.63 42 P P 05 18 02.6 -1.7
MAT Matsushiro 75.88 51 P P 05 18 17.8 +0.2
MAT S S **05 28 01.4 +1.9**
MJAR Matsushiro Arr 75.88 51 P P 05 18 16.7 -0.9
comp=Z,3.6nm,0.8s,baz=254,slow=5.1,SNR=6.7
MJAR Matsushiro Arr 75.88 51 P P 05 18 16.7 -0.9
MDT Midelt 76.97 304 P P 05 18 24.2 +0.2
comp=Z,2.5nm,0.8s,baz=99,slow=4.2,SNR=3.9
NOA NORSAR Array B 77.03 335 P P 05 18 22.7 -1.0
comp=Z,3.4nm,1.2s,baz=112,slow=6.3,SNR=4.6
ARCES ARCESS Array B 77.63 346 LR LR 05 54 09.1
comp=Z,386nm,21.1s,baz=135,slow=37
ESDC Sonseca Array 77.98 311 P P 05 18 30.3 +0.8
comp=Z,6.8nm,1.0s,baz=93,slow=4.6,SNR=19
ESDC Sonseca Array 77.98 311 P P 05 18 30.1 +0.6
SNAA Sanae 81.42 198 P P 05 18 48.3 +0.7
SNAA Sanae 81.42 198 P P 05 18 48.2 +0.7
YSS Yuzh-Sakhalins 81.66 42 P P 05 18 49.6 +0.5
VNA2 Neumayer--Watz 82.64 199 P P 05 18 55.0 +1.2
baz=54,slow=4.6
VNA1 Neumayer--Stat 82.86 199 P P 05 18 56.1 +1.2
VNA3 Neumayer Olymp 83.44 199 P P 05 18 59.1 +1.1
TIXI Tiksi 83.77 16 P P 05 18 59.2 -0.4
TIXI IAmb IAmb 05 19 00.6
comp=Z,18nm,1.1s
QSPA South Pole Qui 87.24 180 P P 05 19 17.6 +0.4
comp=Z,3.2nm,0.7s,baz=171,slow=0.3,SNR=6.1
QSPA South Pole Qui 87.24 180 P P 05 19 18.5 +1.3
QSPA IAmb IAmb 05 20 23.8
comp=Z,17nm,1.1s
VNDA Vanda 88.16 167 P P 05 19 21.6 +0.3
comp=Z,0.8nm,0.8s,baz=264,slow=7.7,SNR=4.6
VNDA LR LR 05 54 55.4
comp=Z,654nm,18.4s,baz=260,slow=33
VNDA Vanda 88.16 167 P P 05 19 22.9 +1.6
VNDA IAmb IAmb 05 19 35.1
comp=Z,20nm,1.9s
BELA Belgrano 2 89.96 192 P P 05 19 28.6 -1.2
MFID Camas Ranch 139.38 4 PKPpre 05 25 51.0
PDAR Pinedale Array 140.11 357 PKP PKPdf 05 25 59.5 -0.7
comp=Z,1.1nm,0.8s,baz=64,slow=3.4,SNR=7.8
DUG Dugway, Tooele 142.73 1 PKPdf 05 26 01.3 -3.5
SPR3 Spring Creek 3 143.87 3 PKPdf PKPbc 05 26 05.4 +0.7
Q16A Castle Valley 144.01 359 PKPbc 05 26 05.5 +0.5
MIAR Mount Ida 144.03 334 P PKPdf 05 26 06.9 -0.1
baz=32
NVAR Mina Array Bea 144.04 8 PKP PKPdf 05 26 06.6 -0.7
comp=Z,1.0nm,1.0s,baz=282,slow=2.7,SNR=5.9
NVAR Mina Array Bea 144.04 8 PKPab 05 26 02.8 -1.9
CMB Columbia Colle 144.07 11 PKPbc 05 26 05.2 +0.2
PSUT Pine Spring 144.36 2 PKPbc 05 26 05.8 -0.3
PV07 Paradox Valley 144.36 355 PKPab 05 26 05.1 -0.7
PV04 Paradox Valley 144.43 356 PKPdf 05 26 07.2 -0.7
R11A Troy Canyon, C 144.43 5 P PKPdf 05 26 07.3 -0.6
baz=354
PV15 Paradox Valley 144.45 355 PKPbc 05 26 06.2 -0.2
PV20 West Nyswonger 144.48 356 PKPdf 05 26 06.9 -1.1
PV18 Skein Mesa, Pa 144.57 356 PKPdf 05 26 07.2 -1.0
PV13 Radium Mtn., P 144.65 356 PKPbc 05 26 06.9 -0.2
SDCO Great Sand Dun 144.68 351 P PKPdf 05 26 08.5 0.0
baz=11
MDPB Devils Postpil 144.70 10 PKPdf 05 26 07.8 -0.7
Z41A Richland Creek 144.74 331 P PKPdf 05 26 08.8 +0.5
baz=34
S22A 4UR Ranch, Cre 144.87 353 P PKPab 05 26 07.2 -0.6
baz=8.8
T25A Trinidad 145.09 349 P PKPdf 05 26 10.2 +1.1
baz=13
TIN Tinemaha, Big 145.40 9 P PKiKP 05 26 12.1 -1.4
baz=349
MVCO Mesa Verde 145.57 355 P PKPab 05 26 10.6 +0.3
baz=6.0
MVCO Mesa Verde 145.57 355 PKPab 05 26 09.8 -0.5
GRAC Grapevine Rang 145.58 8 P PKiKP 05 26 11.6 -2.2
baz=350
TPNV Topoah Spring 145.76 6 P PKPab 05 26 11.6 +0.7
baz=352
WMOK Wichita Mounta 145.89 340 P PKPab 05 26 12.3 +1.0
baz=24
WMOK Wichita Mounta 145.89 340 PKPab 05 26 12.0 +0.7
CWC Cottonwood Cre 146.02 9 P PKiKP 05 26 13.3 -1.5
baz=349
FURC Furnace Creek, 146.16 7 P PKiKP 05 26 13.9 -1.0
baz=351
OTAV Otavalo 146.37 266 PKPbc 05 26 13.0 -0.5
MPMC Manual Prospec 146.48 8 P PKiKP 05 26 14.5 -1.3
baz=350
U15A North Rim 146.50 0 PKPab 05 26 13.5 -0.4
SHOC Shoshone, Teco 146.79 6 P PKiKP 05 26 15.0 -1.2
baz=352
LRMC Laurel Mtn Rad 147.02 9 P PKiKP 05 26 16.1 -0.8
baz=350
PKM Mcpherson Peak 147.22 12 P PKiKP 05 26 17.1 -0.3
baz=345
TUQ Turquoise Moun 147.29 6 P PKiKP 05 26 16.9 -0.5
baz=353
GSC Goldstone, Bar 147.32 7 P PKiKP 05 26 16.7 -0.7
baz=351
WUAZ Wupatki 147.41 359 P PKiKP 05 26 17.7 0.0
baz=1.0
EDW2 Edwards Air Fo 147.56 9 P PKPab 05 26 17.2 -0.6
baz=349
ANMO Albuquerque 147.57 351 P PKPdf 05 26 13.1 -0.2
baz=10
ANMO Albuquerque 147.57 351 PKPdf PKPdf 05 26 13.9 +0.6
W13A Hualapai Mount 147.78 3 PKPbc 05 26 16.3 -0.2
MSTX Muleshoe 147.78 346 PKPbc 05 26 15.5 -0.9
BNM Barren Site 148.38 351 PKPdf PKPbc 05 26 16.4 -1.8
IRM Iron Mountain 148.63 5 P PKPab 05 26 20.6 -1.4
baz=354
BELC Belle Mtn. Jos 148.70 6 P PKiKP 05 26 20.9 +0.5
baz=352
HKT Hockley 148.92 332 PKPab PKiKP 05 26 21.3 +0.7
PFO Pinyon Flats O 149.03 7 P PKPab 05 26 22.0 -1.8
baz=351
PFO Pinyon Flats O 149.03 7 PKPab PKPab 05 26 21.9 -1.8
BC3 Big Chuckawall 149.10 6 P PKiKP 05 26 21.7 +0.5
baz=353
113A Mohawk Valley, 150.11 3 PKPdf 05 26 18.7 +1.5
JCT Junction City 150.12 339 P PKiKP 05 26 23.3 0.0
baz=25
JCT Junction City 150.12 339 PKPdf PKPdf 05 26 18.1 +0.7
121A Cookes Peak, D 150.12 353 PKPdf PKPdf 05 26 15.4 -2.1
MNTX Cornudas Mount 150.55 348 P PKiKP 05 26 24.7 +0.6
baz=13
MNTX Cornudas Mount 150.55 348 PKPbc 05 26 22.8 -0.6
214A Organ Pipe Nat 150.95 1 PKPbc 05 26 23.8 -0.6
TX31 Lajitas Ar. Si 152.41 344 PKPdf PKPdf 05 26 19.3 -1.7
TX32 Lajitas Array 152.42 344 PKPdf PKPdf 05 26 19.0 -2.0
TXAR Lajitas Array 152.42 344 PKPbc PKPbc 05 26 27.4 -0.4
comp=Z,2.4nm,1.0s,baz=163,slow=1.1,SNR=10
TXAR Lajitas Array 152.42 344 PKPdf PKPdf 05 26 19.1 -1.9

*IDC **19** 05:08:00.5±0.6, 12°.10S×65°.68E, h0km, mb4.2/22, mb1 4.3/23,mb1mx4.1/50, mbtmp4.2/23,ML3.9/1, Error ellipse: s-maj=19.3km s-min=14.6km az=23.0*
*NEIC **19** 05:08:02.3±1.9, 12°.0S±0°.1×65°.80E±0°.06, h10km±1km, mb4.9/23, Error ellipse: s-maj=21.1km s-min=10.4km az=178.0*
*GCMT **19** 05:08:06.1±0.1, 11°.95S±0°.01×65°.63E±0°.01, h13km±1km, MW5.4/139, Moment Tensor Solution. s82,c113; s139,c243; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr-0.17±.03; Mθθ-1.10±.02; Mϕϕ1.27±.02; Mrθ-0.33±.06; Mrϕ0.59±.02; Mθϕ0.55±.08; Best double couple: M0 1.47300×10^17 NP1:ϕ58.00000°, δ64.00000°, λ-4.00000°. NP2:ϕ150.00000°, δ86.00000°, λ-154.00000°. Principal axes: T 1.5350, Plg16.0000°, Azm281.0000°; N -0.1190, Plg63.0000°, Azm157.0000°; P -1.4110, Plg21.0000°, Azm17.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 05:08:02.1±0.5, 12°.10S±0°.09×65°.78E±0°.07, h10km, n72, σ1°56/64, mb4.6/41, 1C-1D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**7.94**	**57**	T	T	05 17 55.7	
	baz=236,slow=79						
H08S2	**Diego Garcia H**	**7.96**	**57**	T	T	05 18 04.4	
	baz=236,slow=79						
H08S3	**Diego Garcia H**	**7.96**	**57**	T	T	05 17 55.3	
	baz=236,slow=79						
DGAR	**Diego Garcia**	**8.06**	**55**	Pn	**Pn**	**05 09 58.6**	**-0.7**
OPO	**Ambohidratompo**	**19.04**	**248**	P	**P**	**05 12 23.6**	**-1.1**
	0.3nm,0.3s,baz=106,slow=11,SNR=2.6						
ABPO	**Ambohimpanom**	**19.14**	**247**	P	**P**	**05 12 26.1**	**+0.2**
KMBO	**Kilima Mbogo**	**30.31**	**289**	P	**P**	**05 14 13.4**	**-0.9**
	0.7nm,0.4s,baz=103,slow=11,SNR=1.8						
WSAR	**Wadi Sarin**	**35.81**	**349**	P	**P**	**05 15 01.7**	**-0.2**
	3.0nm,0.6s,baz=208,slow=7.8,SNR=4.8						
LSZ	**Lusaka**	**36.63**	**261**	P	**P**	**05 15 08.3**	**-0.8**
	9.0nm,0.7s,baz=80,slow=7.8,SNR=6.3						
LSZ	**Lusaka**	**36.63**	**261**	P	**P**	**05 15 08.0**	**-1.2**
LSZ				IAmb	IAmb	05 15 25.1	
	comp=Z,23nm,1.1s						
UOSS	**Minazif**	**37.98**	**346**	P	**P**	**05 15 18.0**	**-2.3**
UOSS				IAmb	IAmb	05 15 31.1	
	comp=Z,18nm,1.1s						
IPM	**Ipoh**	**38.72**	**67**	P	**P**	**05 15 25.9**	**-0.9**
IPM				IAmb	IAmb	05 15 44.5	
	comp=Z,23nm,1.4s						
RAYN	**Ar Rayn**	**40.58**	**331**	P	**P**	**05 15 40.6**	**-1.5**
CMAR	**Chiang Mai Arr**	**44.63**	**48**	P	**P**	**05 16 16.1**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=242,slow=8.5,SNR=2.6						
CMAR	**Chiang Mai Arr**	**44.63**	**48**	P	**P**	**05 16 12.7**	**-2.5**
SHL	**Shillong**	**45.26**	**34**	P	**P**	**05 16 20.2**	**-0.1**
NIL	**Nilore**	**46.04**	**9**	P	**P**	**05 16 28.1**	**+2.0**
NIL				IAmb	IAmb	05 16 39.5	
	comp=Z,14nm,0.8s						
KBL	**Kabul**	**46.48**	**4**	P	**P**	**05 16 31.5**	**+1.7**
KBL				IAmb	IAmb	05 16 41.7	
	comp=Z,20nm,1.3s						
LSA	**Lhasa**	**48.22**	**30**	P	**P**	**05 16 41.7**	**-2.0**
SBUM	**Sibu**	**48.36**	**76**	P	**P**	**05 16 44.7**	**+0.2**
SBUM				IAmb	IAmb	05 16 57.6	
	comp=Z,13nm,1.2s						
H01W3	**Cape Leeuwin H**	**49.25**	**126**	T	T	06 09 47.4	
	baz=285,slow=75,SNR=268						
H01W2	**Cape Leeuwin H**	**49.25**	**126**	T	T	06 09 52.6	
	baz=285,slow=75,SNR=264						
H01W1	**Cape Leeuwin H**	**49.26**	**126**	T	T	06 09 59.4	
	baz=285,slow=75,SNR=222						
SLVN	**Son La**	**50.06**	**49**	P	**P**	**05 16 57.2**	**-0.3**
SLVN				IAmb	IAmb	05 17 10.0	
	comp=Z,24nm,1.3s						
MAW	**Mawson**	**55.48**	**181**	P	**P**	**05 17 37.2**	**+0.4**
	comp=Z,3.6nm,0.9s,baz=318,slow=8.5,SNR=2.3						
SYO	**Syowa Base**	**59.30**	**191**⇓	*eP*	**P**	**05 18 05.4**	**+1.7**
BRTR	**Keskin Array B**	**59.59**	**332**	P	**P**	**05 18 06.5**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=148,slow=8.5,SNR=4.2						
MKAR	**Makanchi Array**	**60.46**	**13**	P	**P**	**05 18 11.7**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=200,slow=7.8,SNR=5.4						
ASAR	**Alice Springs**	**65.34**	**111**	P	**P**	**05 18 45.1**	**-0.1**
	comp=Z,6.0nm,0.7s,baz=273,slow=6.1,SNR=14						
ASAR	**Alice Springs**	**65.34**	**111**	P	**P**	**05 18 44.2**	**-0.9**
AS31	**Alice Springs**	**65.34**	**111**	P	**P**	**05 18 44.5**	**-0.7**
WRA	**Warramunga Arr**	**65.99**	**107**	P	**P**	**05 18 50.0**	**+0.6**
	comp=Z,6.8nm,0.7s,baz=272,slow=5.7,SNR=16						
WRA	**Warramunga Arr**	**65.99**	**107**	IAmb	IAmb	05 18 51.0	
	comp=Z,0.7nm,0.8s						
WRAB	**Tennant Creek**	**66.00**	**107**	P	**P**	**05 18 49.9**	**+0.5**
WB2	**Warramunga Arr**	**66.00**	**107**	P	**P**	**05 18 49.8**	**+0.4**
WC3	**Warramunga Arr**	**66.02**	**107**	P	**P**	**05 18 50.6**	**+1.1**
WB0	**Warramunga Arr**	**66.06**	**106**	P	**P**	**05 18 50.1**	**+0.4**
WB0				IAmb	IAmb	05 18 51.1	
	comp=Z,6.4nm,0.7s						
WR0	**Warramunga Arr**	**66.18**	**107**	P	**P**	**05 18 51.3**	**+0.8**
WR0				IAmb	IAmb	05 18 52.0	
	comp=Z,8.1nm,0.7s						
CFR	**Carcaliu**	**66.38**	**332**	⇑P	**P**	**05 18 53.3**	**+2.1**
ZAA0	**Zalesovo Array**	**67.75**	**12**	P	**P**	**05 18 59.2**	**-0.5**
ZAA0				IAmb	IAmb	05 19 09.9	
	comp=Z,13nm,1.2s						
ZALV	**Zalesovo Beam**	**67.75**	**12**	P	**P**	**05 18 58.7**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=212,slow=5.1,SNR=2.8						
ZALV	**Zalesovo Beam**	**67.75**	**12**		**P**	**05 18 59.0**	**-0.8**
TORD	**Torodi Ar. Bea**	**68.32**	**289**	P	**P**	**05 19 03.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=126,slow=5.2,SNR=5.0						
SONM	**Songino Array**	**69.74**	**28**	P	**P**	**05 19 13.2**	**+0.8**
	comp=Z,4.3nm,0.8s,baz=213,slow=6.9,SNR=8.4						
SONM	**Songino Array**	**69.74**	**28**	P	**P**	**05 19 12.3**	**-0.2**
AKASG	**Malin Array Be**	**70.19**	**336**	P	**P**	**05 19 13.3**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=139,slow=5.4,SNR=3.9						
STKA	**Stephens Creek**	**71.74**	**120**	P	**P**	**05 19 24.6**	**-0.4**
	comp=Z,4.1nm,0.9s,baz=345,slow=16,SNR=2.1						
KOWA	**Kowa**	**74.01**	**289**	P	**P**	**05 19 37.6**	**-1.0**
	baz=90,slow=2.0						
ARSA	**Arzberg**	**74.12**	**327**	*eP*	**P**	**05 19 40.5**	**+1.9**
	comp=Z,13nm,1.1s						
OBKA	**Obir**	**74.19**	**326**	*eP*	**P**	**05 19 40.3**	**+1.2**
	comp=Z,0.2nm,0.3s						
CONA	**Conrad Observa**	**74.36**	**328**	P	**P**	**05 19 43.4**	**+3.3**
	comp=Z,7.1nm,1.1s						
MOA	**Molln**	**75.16**	**327**	P	**P**	**05 19 46.2**	**+1.5**
	comp=Z,7.0nm,0.9s						
ABTA	**Abfaltersbach**	**75.45**	**325**	*eP*	P	05 19 52.1	+5.6
	comp=Z,10.0nm,1.2s						
GERES	**GERESS Array B**	**76.06**	**328**	P	**P**	**05 19 50.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=159,slow=6.0,SNR=4.3						
KSRS	**Korea Array**	**76.26**	**46**	P	**P**	**05 19 51.3**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=242,slow=7.1,SNR=2.0						
WATA	**Walderalm**	**76.32**	**325**	*eP*	**P**	**05 19 56.2**	**+4.7**
	comp=Z,14nm,1.5s						
SQTA	**Sankt Quirin**	**76.46**	**325**	*eP*	P	05 19 57.6	+5.4
	comp=Z,4.0nm,0.7s						
MOTA	**Moosalm**	**76.59**	**325**	*eP*	P	05 20 01.3	+8.3
	comp=Z,10nm,1.0s						
FETA	**Feichten**	**76.61**	**325**	P	**P**	**05 19 57.6**	**+4.4**
	comp=Z,11nm,1.3s						
CTA	**Charters Tower**	**77.11**	**108**	P	**P**	**05 19 57.3**	**+0.9**
	comp=Z,3.8nm,0.7s,baz=285,slow=7.1,SNR=5.3						
BRG	**Berggiesshubel**	**77.18**	**329**	*eP*	**P**	**05 20 00.1**	**+4.0**
	comp=Z,21nm,1.7s						
CLL	**Collm**	**77.92**	**329**	*e*(P)	**P**	**05 20 03.0**	**+2.9**
CLL				*eS*	**S**	**05 29 55.0**	**+1.7**
CLL				*eSS*	**SS**	**05 34 57.0**	**+2.4**
FINES	**FINESS Array B**	**79.69**	**342**	P	**P**	**05 20 10.6**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=175,slow=7.0,SNR=1.7						
ESDC	**Sonseca Array**	**82.59**	**313**	P	**P**	**05 20 24.8**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=110,slow=5.1,SNR=2.2						
NRIK	**Noril'sk**	**82.66**	**8**	P	**P**	**05 20 26.0**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=50,slow=22,SNR=2.0						
NOA	**NORSAR Array B**	**84.60**	**337**	P	**P**	**05 20 35.2**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=116,slow=4.9,SNR=1.8						
ARCES	**ARCESS Array B**	**86.12**	**347**	P	**P**	**05 20 42.5**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=150,slow=3.8,SNR=6.6						
ILAR	**Eielson Array**	**122.75**	**16**	PKP	**PKiKP**	**05 26 58.8**	**+0.7**
	comp=Z,0.5nm,0.9s,baz=302,slow=2.8,SNR=2.5						
YKA	**Yellowknife Ar**	**129.68**	**0**	PKP	**PKiKP**	**05 27 11.8**	**-0.1**
	comp=Z,1.3nm,1.0s,baz=347,slow=2.0,SNR=3.1						
PDAR	**Pinedale Array**	**149.17**	**353**	PKP	**PKPdf**	**05 27 47.1**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=54,slow=5.0,SNR=4.6						
PDAR				PKPbc	**PKPbc**	**05 27 51.6**	**+0.2**
	comp=Z,2.9nm,0.8s,baz=78,slow=2.2,SNR=11						
NVAR	**Mina Array Bea**	**153.52**	**7**	PKPbc	**PKiKP**	**05 28 03.3**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=325,slow=1.1,SNR=6.0						
TXAR	**Lajitas Array**	**160.23**	**332**	PKPab	PKPab	05 28 50.7	+7.9
	comp=Z,0.9nm,0.9s,baz=60,slow=4.3,SNR=3.2						

*WEL **19** 05:08:51.7, 38°.S±7°.×18°.0W±°, h30km±21km, M4.3/18, ML4.6/18, MLv4.3/18, Error ellipse: s-maj=0.0km s-min=0.0km az=16.5*
*NEIC **19** 05:08:51.7±2.0, 37°.74S±0°.08×179°.7W±0°.1, h

mb1 4.6/7, mb1mx4.2/27, mbtmp4.4/7, ML3.9/2, MS3.6/1, Ms1 3.6/1, ms1mx2.9/21, Error ellipse: s-maj=30.1km s-min=22.7km az=17.0

ISC 19 05:08:49.6±3.7, **37°79.9S**±0.06×**179°87.8W**±0.08, **h2**km±22km, **n148**, σ1°25/141, **mb4.6**/9, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.36**	**268**	P	**Pn**	**05 09 15.4**	**-0.1**
WMGZ				S	**Sn**	**05 09 32.6**	**-1.6**
MXZ	**Matakaoa Point**	**1.47**	**278**	P	**Pn**	**05 09 16.3**	**-0.7**
MXZ	**Matakaoa Point**	**1.47**	**278**	Pn	**Pn**	**05 09 16.0**	**-1.0**
PUZ	**Puketiti**	**1.51**	**259**	P	**Pn**	**05 09 17.7**	**+0.1**
PUZ				S	**Sn**	**05 09 36.9**	**-1.0**
CNGZ	**Carnagh Statio**	**1.67**	**245**	P	**Pb**	**05 09 21.4**	**+0.3**
TWGZ	**Tauwhareparae**	**1.75**	**256**	P	**Pn**	**05 09 21.5**	**+0.6**
TWGZ				S	**Sn**	**05 09 43.3**	**-0.4**
HAZ	**Te Kaha**	**1.86**	**270**	P	**Pn**	**05 09 22.4**	**-0.1**
HAZ				S	**Sn**	**05 09 45.2**	**-1.3**
TKGZ	**Te Karaka**	**1.92**	**249**	P	**Pn**	**05 09 24.1**	**+0.9**
TKGZ				S	**Sn**	**05 09 47.7**	**-0.2**
RUGZ	**Raukumara Rang**	**1.95**	**264**	P	**Pn**	**05 09 23.6**	**-0.2**
RIGZ	**Rimuhau**	**2.08**	**243**	P	**Pn**	**05 09 26.7**	**+1.2**
RIGZ				S	**Sn**	**05 09 52.4**	**+0.4**
PRGZ	**Paritu Road**	**2.10**	**237**	P	**Pn**	**05 09 27.1**	**+1.3**
MWZ	**Matawai**	**2.13**	**254**	P	**Pn**	**05 09 26.2**	**0.0**
MHGZ	**Mahia Peninsul**	**2.22**	**231**	P	**Pn**	**05 09 29.0**	**+1.7**
RAGZ	**Rawiri**	**2.26**	**251**	P	**Pn**	**05 09 28.5**	**+0.5**
KNZ	**Kokohu**	**2.29**	**237**	P	**Pn**	**05 09 29.3**	**+1.0**
WIZ	**White Island**	**2.35**	**275**	P	**Pn**	**05 09 29.6**	**+0.4**
URZ	**Urewera** 70nm,0.3s,baz=81,slow=4.1,SNR=192	**2.44**	**258**	Pn	**Pn**	**05 09 31.2**	**+0.9**
URZ				Sn	**Sn**	**05 09 58.0**	**-2.6**
	53nm,0.3s,baz=360,slow=23,SNR=12						
URZ	**Urewera**	**2.44**	**258**	P	**Pn**	**05 09 31.2**	**+0.9**
URZ	**Urewera**	**2.44**	**258**	Pn	**Pn**	**05 09 29.8**	**-0.5**
WHRZ	**Whale Island**	**2.50**	**267**	P	**Pn**	**05 09 32.3**	**+1.0**
WHHZ	**Waihua**	**2.62**	**240**	P	**Pn**	**05 09 34.0**	**+1.2**
RTZ	**Ruatahuna**	**2.62**	**251**	P	**Pn**	**05 09 34.3**	**+1.4**
RAHZ	**Arahi**	**2.65**	**244**	P	**Pn**	**05 09 34.7**	**+1.4**
EDRZ	**Edgecumbe**	**2.70**	**262**	P	**Pn**	**05 09 34.6**	**+0.5**
MUGZ	**Murupara**	**2.74**	**254**	P	**Pn**	**05 09 35.1**	**+0.6**
MTHZ	**Maungataniwha**	**2.80**	**247**	P	**Pn**	**05 09 36.4**	**+1.0**
OPRZ	**Ohinepanea**	**2.84**	**268**	P	**Pn**	**05 09 35.6**	**-0.3**
ARHZ	**Aropaoanui**	**2.87**	**238**	P	**Pn**	**05 09 37.6**	**+1.3**
TARZ	**Mount Tarawera**	**2.90**	**260**	P	**Pn**	**05 09 37.3**	**+0.5**
RRRZ	**Republican Roa**	**2.91**	**258**	P	**Pn**	**05 09 37.5**	**+0.6**
MKRZ	**Makatiti**	**2.92**	**262**	P	**Pn**	**05 09 40.0**	**+2.9**
NMHZ	**Naumai**	**2.92**	**242**	P	**Pn**	**05 09 38.4**	**+1.3**
OMRZ	**Omania**	**2.99**	**263**	P	**Pn**	**05 09 38.1**	**0.0**
HLRZ	**Highlands Stat**	**3.02**	**260**	P	**Pn**	**05 09 40.2**	**+1.8**
CKHZ	**Cape Kidnapper**	**3.04**	**231**	P	**Pn**	**05 09 39.5**	**+0.9**
PRRZ	**Plateau Road**	**3.04**	**255**	P	**Pn**	**05 09 39.0**	**+0.4**
TGRZ	**Tauranga**	**3.07**	**270**	P	**Pn**	**05 09 39.0**	**-0.1**
KARZ	**Kaharoa**	**3.09**	**264**	P	**Pn**	**05 09 40.5**	**+1.2**
ALRZ	**Allen Road**	**3.09**	**254**	P	**Pn**	**05 09 39.9**	**+0.6**
HRRZ	**Handcock Road**	**3.10**	**258**	P	**Pn**	**05 09 39.8**	**+0.3**
MRHZ	**Matea Rd**	**3.11**	**249**	P	**Pn**	**05 09 40.4**	**+0.8**
HSRZ	**Hossack Road**	**3.12**	**259**	P	**Pn**	**05 09 40.3**	**+0.6**
UTU	**Utuhina**	**3.14**	**262**	P	**Pn**	**05 09 42.7**	**+2.7**
MCHZ	**McNeill Hill**	**3.16**	**237**	P	**Pn**	**05 09 41.4**	**+1.1**
BKZ	**Black Stump Fm**	**3.17**	**243**	P	**Pn**	**05 09 41.5**	**+1.0**
BKZ	**Black Stump Fm**	**3.17**	**243**		**Pn**	**05 09 40.7**	**+0.2**
WPRZ	**Whakapapataran**	**3.22**	**256**	P	**Pn**	**05 09 43.4**	**+2.3**
GRRZ	**Galatos Road**	**3.23**	**259**	P	**Pn**	**05 09 41.7**	**+0.4**
KAHZ	**Kahuranaki**	**3.24**	**231**	P	**Pn**	**05 09 42.4**	**+1.0**
KWHZ	**Kaweka Forest**	**3.34**	**240**	P	**Pn**	**05 09 43.9**	**+1.1**
PXZ	**Pawanui**	**3.40**	**228**	P	**Pn**	**05 09 44.0**	**+0.4**
KRHZ	**Kereru**	**3.48**	**237**	P	**Pn**	**05 09 45.0**	**+0.3**
RITZ	**Rihia Road**	**3.56**	**249**	P	**Pn**	**05 09 47.8**	**+1.9**
BHHZ	**Black Hill Sta**	**3.61**	**241**	P	**Pn**	**05 09 47.3**	**+0.7**
KUZ	**Kuaotunu**	**3.67**	**285**	P	**Pn**	**05 09 46.0**	**-1.3**
WPHZ	**Waipukurau**	**3.67**	**231**	P	**Pn**	**05 09 47.7**	**+0.3**
TOZ	**Tahuroa Road**	**3.67**	**269**	P	**Pn**	**05 09 47.1**	**-0.2**
TMVZ	**Te Maari**	**3.72**	**248**	P	**Pn**	**05 09 48.9**	**+0.7**
ETVZ	**East Tongariro**	**3.73**	**247**	P	**Pn**	**05 09 49.3**	**+1.2**
PNHZ	**Pukenui**	**3.73**	**234**	P	**Pn**	**05 09 48.5**	**+0.3**
MOVZ	**Moawhango**	**3.79**	**243**	P	**Pn**	**05 09 50.1**	**+1.0**
WTVZ	**West Tongariro**	**3.81**	**248**	P	**Pn**	**05 09 51.5**	**+2.2**
NGZ	**Ngauruhoe**	**3.82**	**247**	P	**Pn**	**05 09 52.5**	**+3.0**
WHVZ	**Whangaehu Hut**	**3.87**	**246**	P	**Pn**	**05 09 53.1**	**+2.9**
WNVZ	**Wahianoa**	**3.88**	**245**	P	**Pn**	**05 09 51.5**	**+1.2**
TSZ	**Takapari Road**	**3.97**	**234**	P	**Pn**	**05 09 51.7**	**+0.3**
DVHZ	**Dannevirke**	**3.98**	**230**	P	**Pn**	**05 09 51.4**	**-0.2**
MKAZ	**Moumakai**	**4.02**	**278**	P	**Pn**	**05 09 51.6**	**-0.5**
PKVZ	**Pokaka**	**4.04**	**247**	P	**Pn**	**05 09 54.0**	**+1.5**
GRZ	**Great Barrier**	**4.04**	**291**	P	**Pn**	**05 09 51.8**	**-0.7**
BFZ	**Birch Farm**	**4.18**	**225**	P	**Pn**	**05 09 53.8**	**-0.6**
BFZ	**Birch Farm**	**4.18**	**225**	Pn	**Pn**	**05 09 53.7**	**-0.6**
HIZ	**Hauiti**	**4.22**	**258**	P	**Pn**	**05 09 55.9**	**+1.0**
HIZ	**Hauiti**	**4.22**	**258**	Pn	**Pn**	**05 09 55.1**	**+0.2**
ETAZ	**East Tamaki Re**	**4.23**	**280**	P	**Pn**	**05 09 55.2**	**+0.1**
PRWZ	**Pori Road**	**4.26**	**228**	P	**Pn**	**05 09 55.4**	**0.0**
POWZ	**Post Office Ro**	**4.28**	**231**	P	**Pn**	**05 09 56.1**	**+0.4**
MBAZ	**Motutapu North**	**4.30**	**282**	P	**Pn**	**05 09 56.0**	**+0.1**
EPAZ	**Eden Park BICE**	**4.39**	**280**	P	**Pn**	**05 09 57.8**	**+0.6**
VRZ	**Vera Road**	**4.43**	**251**	P	**Pn**	**05 09 58.6**	**+0.9**
AWAZ	**Awhitu Peninsu**	**4.43**	**278**	P	**Pn**	**05 09 58.1**	**+0.4**
WAZ	**Wanganui**	**4.48**	**242**	P	**Pn**	**05 10 00.5**	**+2.0**
WTAZ	**Waiatarua**	**4.51**	**279**	P	**Pn**	**05 09 59.5**	**+0.6**
RVAZ	**Riverhead Bore**	**4.54**	**281**	P	**Pn**	**05 10 00.1**	**+0.7**
MRZ	**Mangatainoka R**	**4.56**	**230**	P	**Pn**	**05 09 58.9**	**-0.6**
HOWZ	**Holdsworth Sta**	**4.74**	**228**	P	**Pn**	**05 10 01.8**	**-0.3**
NEZ	**North Egmont**	**4.96**	**251**	P	**Pn**	**05 10 09.8**	**+4.7**
WCZ	**Waipu Caves**	**5.00**	**290**	P	**Pn**	**05 10 05.4**	**-0.1**
KHEZ	**Kahui Hut**	**5.03**	**251**	P	**Pn**	**05 10 09.6**	**+3.6**
CAW	**Cannon Point**	**5.14**	**228**	P	**Pn**	**05 10 07.1**	**-0.4**
MSWZ	**Moikau Station**	**5.23**	**225**		**Pn**	**05 10 06.8**	**-2.0**
PLWZ	**Palliser**	**5.33**	**253**	Pn	**Pn**	**05 10 08.9**	**-1.1**
BHW	**Baring Head**	**5.44**	**227**	Pn	**Pn**	**05 10 10.5**	**-1.1**
SNZO	**South Karori**	**5.48**	**228**	Pn	**Pn**	**05 10 11.4**	**-0.7**
TCW	**Tory Channel**	**5.68**	**231**	P	**Pn**	**05 10 14.0**	**-0.8**
DUWZ	**D'Urville Isla**	**5.68**	**236**	P	**Pn**	**05 10 14.1**	**-0.9**
OUZ	**Omahuta**	**5.86**	**294**	P	**Pn**	**05 10 17.6**	**+0.3**
OUZ	**Omahuta**	**5.86**	**294**		**Pn**	**05 10 17.1**	**-0.3**
TUWZ	**Tuamarina**	**6.01**	**231**	Pn	**Pn**	**05 10 19.8**	**+0.4**
BSWZ	**Blackbirch Sta**	**6.22**	**229**	Pn	**Pn**	**05 10 21.6**	**-0.7**
NNZ	**Nelson**	**6.25**	**235**	P	**Pn**	**05 10 22.0**	**-0.7**
NNZ	**Nelson**	**6.25**	**235**	Pn	**Pn**	**05 10 22.4**	**-0.3**
CTZ	**Chatham Island**	**6.43**	**159**	P	Pn	05 10 31.4	+6.1
QRZ	**Quartz Range**	**6.63**	**240**	Pn	**Pn**	**05 10 28.9**	**+0.9**
THZ	**Tophouse**	**6.84**	**232**	Pn	**Pn**	**05 10 29.7**	**-1.2**
KHZ	**Kahutara**	**6.85**	**225**	P	**Pn**	**05 10 30.8**	**-0.1**
KHZ	**Kahutara**	**6.85**	**225**	Pn	**Pn**	**05 10 30.9**	**-0.1**
LTZ	**Lake Taylor**	**7.81**	**228**	Pn	**Pn**	**05 10 44.8**	**+0.6**
MQZ	**McQueen's Vall**	**8.20**	**221**	Pn	**Pn**	**05 10 48.8**	**-0.7**
OXZ	**Oxford**	**8.28**	**226**	P	**Pn**	**05 10 52.2**	**+1.6**
OXZ	**Oxford**	**8.28**	**226**	Pn	**Pn**	**05 10 50.6**	**0.0**
FOZ	**Fox Glacier**	**9.71**	**231**	Pn	**Pn**	**05 11 10.9**	**+0.7**
LBZ	**Lake Benmore**	**9.99**	**226**	Pn	**Pn**	**05 11 13.6**	**-0.4**
ODZ	**Otahua Downs**	**10.16**	**221**	Pn	**Pn**	**05 11 16.2**	**-0.2**
DZM	**Mont Dzumac** 33nm,1.3s	**19.61**	**319**	*e*Pn	**Pn**	**05 13 19.9**	**-0.7**
DZM				*e*LR	LR	05 17 50.8	
	comp=Z,266nm,23.3s						
DZM	**Mont Dzumac** 0.2nm,0.3s,baz=138,slow=10.0,SNR=3.5	**19.61**	**319**	P	**P**	**05 13 18.8**	**-0.5**
DZM				LR	LR	05 19 16.1	
	comp=Z,197nm,19.6s,baz=177,slow=33						
TBI	**Tubuai** 12nm,0.3s	**29.72**	**70**	*e*T	T	05 46 10.8	
PAE	**Paea** 1.6nm,0.3s	**33.25**	**61**	*e*T	T	05 50 31.0	
PPT2	**Papeete2** comp=Z,66nm,26.8s	**33.30**	**61**	*e*LR	LR	05 24 23.6	
PPT2	**Papeete2** 3.0nm,0.4s	**33.30**	**61**	*e*T	T	05 50 36.2	
AS31	**Alice Springs**	**41.75**	**276**	P	**P**	**05 16 39.2**	**-1.1**
ASAR	**Alice Springs** 5.8nm,0.6s,baz=121,slow=7.9,SNR=40	**41.75**	**276**	P	**P**	**05 16 39.8**	**-0.5**
ASAR	**Alice Springs**	**41.75**	**276**	P	**P**	**05 16 39.0**	**-1.3**
FORT	**Forrest**	**43.13**	**263**	P	**P**	**05 16 51.0**	**-0.4**
WR0	**Warramunga Arr**	**43.24**	**281**	P	**P**	**05 16 51.5**	**-0.9**
WR0				IAmb	IAmb	05 16 60.0	
	comp=Z,13nm,1.1s						
WC3	**Warramunga Arr**	**43.37**	**281**	P	**P**	**05 16 52.3**	**-1.2**
WC3				IAmb	IAmb	05 17 01.1	
	comp=Z,16nm,1.1s						
WB2	**Warramunga Arr**	**43.39**	**281**	P	**P**	**05 16 52.1**	**-1.6**
WRAB	**Tennant Creek**	**43.40**	**281**	P	**P**	**05 16 53.0**	**-0.7**
WRAB				IAmb	IAmb	05 17 01.2	
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**43.40**	**281**	P	**P**	**05 16 53.0**	**-0.8**
	comp=Z,4.3nm,0.5s,baz=120,slow=7.9,SNR=53						
WRA	**Warramunga Arr**	**43.40**	**281**	P	**P**	**05 16 51.7**	**-2.0**
WB0	**Warramunga Arr**	**43.46**	**281**	P	**P**	**05 16 53.0**	**-1.2**
WB0				IAmb	IAmb	05 17 02.2	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.24**	**277**	P	**P**	**05 17 54.0**	**-0.8**
QSPA	**South Pole Qui**	**52.34**	**180**	P	P	05 18 09.8	+7.2
	comp=Z,3.3nm,1.0s,baz=55,slow=3.1,SNR=4.4						
QSPA	**South Pole Qui**	**52.34**	**180**	P	**P**	**05 18 00.6**	**-2.0**
QSPA				IAmb	IAmb	05 18 18.6	
	comp=Z,6.9nm,0.9s						
H03S2	**Juan Fernandez** baz=230,slow=74,SNR=22	**77.70**	**123**	T	T	06 46 37.1	
H03S1	**Juan Fernandez** baz=230,slow=74,SNR=22	**77.71**	**123**	T	T	06 46 39.3	
H03S3	**Juan Fernandez** baz=230,slow=74,SNR=22	**77.72**	**123**	T	T	06 46 36.3	
H03N3	**Juan Fernandez** baz=234,slow=72,SNR=144	**77.93**	**123**	T	T	06 46 56.9	
H03N2	**Juan Fernandez** baz=234,slow=72,SNR=92	**77.94**	**123**	T	T	06 46 54.0	
H03N1	**Juan Fernandez** baz=234,slow=72,SNR=101	**77.95**	**123**	T	T	06 46 54.6	
PLCA	**Paso Flores**	**78.61**	**133**	P	P	05 20 59.5	+6.6
	comp=Z,1.0nm,0.5s,baz=270,slow=8.1,SNR=2.1						
CMAR	**Chiang Mai Arr**	**94.41**	**290**	P	**P**	**05 22 12.6**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=152,slow=4.1,SNR=1.7						
KURBB	**Kurchatov Arra**	**124.88**	**310**	PKP	**PKiKP**	**05 27 52.7**	**+1.9**
	comp=Z,0.3nm,0.2s,baz=99,slow=1.8,SNR=2.4						
ARCES	**ARCESS Array B**	**145.38**	**345**	PKP	**PKiKP**	**05 28 30.4**	**-1.5**
	comp=Z,3.9nm,0.9s,baz=37,slow=3.5,SNR=9.9						
KBZ	**Khabaz**	**147.35**	**294**	PKPbc	**PKiKP**	**05 28 37.3**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=232,slow=20,SNR=2.9						
FINES	**FINESS Array B**	**151.33**	**334**	PKPbc	**PKiKP**	**05 28 47.4**	**+3.1**
	comp=Z,0.9nm,0.5s,baz=35,slow=4.7,SNR=6.6						
BRTR	**Keskin Array B**	**153.88**	**285**	PKPbc	**PKiKP**	**05 28 53.8**	**+3.3**
	comp=Z,1.3nm,1.0s,baz=69,slow=2.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**155.42**	**184**	PKPbc	PKPab	05 28 59.0	-11
	comp=Z,0.3nm,0.7s,baz=203,slow=1.0,SNR=1.5						
TORD				PKPab	sPKPab	05 29 14.5	+4.7
	comp=Z,0.4nm,0.6s,baz=206,slow=2.7,SNR=2.6						

*IDC **19** 05:21:35.3±1.2, 27°.41N×57°.65E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/48, mbtmp3.7/6, Error ellipse: s-maj=27.1km s-min=24.2km az=111.0*
*DSN **19** 05:21:39.8±1.9, 27°.74N×57°.79E, h10km, ML4.0/8, Error ellipse: s-maj=45.2km s-min=11.8km az=139.0*
*TEH **19** 05:21:41.3, 27°.76N×57°.42E, h22km, ML3.8*
*OMAN **19** 05:21:42.3±0.4, 27°.85N×57°.57E, h108km, mb4.4/2, ml3.6/13, Error ellipse: s-maj=6.0km s-min=2.2km az=337.0*
*THR **19** 05:21:42.9±0.6, 27°.83N×57°.29E, h17km±7km, ML3.6*

ISC 19 05:21:40.8±1.7, **27°75N**±0°04×**57°50E**±0°04, **h17**km±13km, **n67**, σ1°99/79, **mb3.6**/6, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase Op	ISC	Time h m s	Res ISC
KHNJ	**Kahnooj**	**0.27**	**42**	*e*Pg	**Pb**	**05 21 48.6**	**+1.3**
IBND	**Bandar-abas**	**0.90**	**251**	*e*Pg	**Pb**	**05 21 57.7**	**-0.2**
IBND				*e*		05 22 22.9	
GENO	**Geno**	**1.23**	**254**	*e*		05 22 04.0	
GENO				*e*Pg	**Pn**	**05 22 03.1**	**-0.2**
GENO				*e*Sg	**Sb**	**05 22 19.3**	**+0.1**
BNDS	**Bandar-Abbas**	**1.23**	**254**	*e*Pg	**Pn**	**05 22 03.0**	**-0.3**
BNDS				*e*Sg	**Sb**	**05 22 18.3**	**-0.9**
BNDS				IAML		05 22 21.0	
	comp=N,2μm,0.4s						
BNDS	**Bandar-Abbas**	**1.23**	**254**	*e*Pg	**Pn**	**05 22 03.0**	**-0.3**
KBAM	**BAM**	**1.62**	**31**	*e*Pg	**Pg**	**05 22 11.0**	**-1.0**
KBAM				*e*		05 22 40.6	
NGRK	**Negar Kerman**	**2.01**	**341**	*e*Pn	**Pn**	**05 22 15.5**	**+1.2**
NGRK				*e*		05 22 43.8	
SHME	**Shamm** SNR=52	**2.08**	**216**	*e*P	**Pn**	**05 22 15.8**	**+0.8**
SHME				S	**Sb**	**05 22 45.3**	**+1.6**
SHME	**Shamm**	**2.08**	**216**	*e*Pn	**Pn**	**05 22 16.0**	**+1.1**
BANOM	**Banah** SNR=205	**2.11**	**211**	*e*P	**Pn**	**05 22 17.0**	**+1.7**
BANOM				S	**Sb**	**05 22 46.2**	**+1.8**
BANOM	**Banah** SNR=198	**2.11**	**211**	P	**Pn**	**05 22 16.8**	**+1.4**
BANOM				S	**Sb**	**05 22 46.6**	**+2.1**
BANOM	**Banah**	**2.11**	**211**	*e*Pn	**Pn**	**05 22 16.7**	**+1.4**
CHMN	**Cheshme madani**	**2.11**	**1**	*e*Pn	**Pn**	**05 22 16.8**	**+1.2**
CHMN				*e*		05 22 22.7	
KRBR	**Kerman**	**2.32**	**344**	*e*Pn	**Pb**	**05 22 21.1**	**-1.3**
KRBR				*e*Sg	**Sb**	**05 22 52.2**	**+1.3**
KRBR				IAML		05 22 58.6	
	comp=N,274nm,0.5s						
KRBR	**Kerman**	**2.32**	**344**	*e*Pn	**Pb**	**05 22 21.1**	**-1.3**
TVBK	**TV Kerman**	**2.33**	**344**	*e*Pn	**Pn**	**05 22 20.8**	**+2.2**
TVBK				*e*		05 22 55.4	
MSFE	**Esma-Masafi** SNR=30	**2.66**	**207**	*e*P	**Pn**	**05 22 24.9**	**+2.0**
MSFE	**Esma-Masafi**	**2.66**	**207**	*e*Pn	**Pn**	**05 22 24.8**	**+1.9**
MDH	**Madha**	**2.66**	**204**	P	**Pn**	**05 22 23.5**	**+0.6**
MDH	**Madha**	**2.66**	**204**	*e*Pn	**Pn**	**05 22 23.5**	**+0.6**
UMQ	**Umm Al-Quwin**	**2.75**	**217**	*e*Pn	**Pn**	**05 22 26.3**	**+2.1**
KHGB	**Koh Gabri**	**2.77**	**341**	*e*Pn	**Pn**	**05 22 27.3**	**+2.7**
KHGB				*e*		05 23 14.3	
UOSS	**Minazif** SNR=9.7	**3.02**	**203**	*i* P	**Pn**	**05 22 28.5**	**+0.7**
UOSS	**Minazif**	**3.02**	**203**	P	**Pn**	**05 22 29.8**	**+1.9**
UOSS	**Minazif**	**3.02**	**203**	*e*Pn	**Pn**	**05 22 28.3**	**+0.5**
HATD	**Hatta, Dubai**	**3.15**	**203**	P	**Pn**	**05 22 32.0**	**+2.3**
HATD	**Hatta, Dubai**	**3.15**	**203**	P	**Pn**	**05 22 33.1**	**+3.4**
HATD	**Hatta, Dubai**	**3.15**	**203**	*e*Pn	**Pn**	**05 22 31.8**	**+2.1**
NAZ	**Nazwa, Dubai**	**3.20**	**211**	P	**Pn**	**05 22 32.7**	**+2.4**
NAZ	**Nazwa, Dubai**	**3.20**	**211**	*e*Pn	**Pn**	**05 22 32.7**	**+2.4**
ASHO	**Ashiyiah** SNR=23	**3.31**	**203**	*i* P	**Pn**	**05 22 35.0**	**+3.1**
ASHO	**Ashiyiah** SNR=24	**3.31**	**203**	P	**Pn**	**05 22 34.4**	**+2.5**
ASHO	**Ashiyiah**	**3.31**	**203**	*e*Pn	**Pn**	**05 22 34.5**	**+2.6**
ZHSF	**Zahedan**	**3.43**	**56**	*e*Pn	**Pb**	**05 22 39.5**	**-1.6**
ZHSF	**Zahedan**	**3.43**	**56**	*e*Pn	**Pb**	**05 22 39.5**	**-1.6**
FAQ	**Al Faqa, Dubai**	**3.44**	**210**	P	**Pn**	**05 22 36.6**	**+2.9**
FAQ	**Al Faqa, Dubai**	**3.44**	**210**	*e*Pn	**Pn**	**05 22 33.9**	**+0.3**
ASUD	**Al Ashush, Dub** SNR=8.4	**3.67**	**213**	*i* P	**Pn**	**05 22 38.2**	**+1.5**
ASUD	**Al Ashush, Dub** SNR=10	**3.67**	**213**	P	**Pn**	**05 22 39.0**	**+2.3**
ASUD				S	**Sn**	**05 23 23.6**	**+4.0**
ASUD	**Al Ashush, Dub**	**3.67**	**213**	*e*Pn	**Pn**	**05 22 39.3**	**+2.6**
SOHO	**SOHO** SNR=12	**3.70**	**194**	*i* P	**Pn**	**05 22 36.0**	**-1.2**
SOHO	**SOHO**	**3.70**	**194**	P	**Pn**	**05 22 37.3**	**+0.2**
SOHO	**SOHO**	**3.70**	**194**	*e*Pn	**Pn**	**05 22 37.3**	**+0.2**
HOQ	**Hoqain** SNR=15	**4.15**	**182**	P	**Pn**	**05 22 43.6**	**+0.2**
HOQ				S	**Sn**	**05 23 29.2**	**-2.3**
IMEH	**Mehriz**	**4.42**	**326**	*e*Pn	**Pn**	**05 22 48.9**	**+1.6**
BSRN	**Basiran**	**4.44**	**18**	*e*Pn	**Pn**	**05 22 51.1**	**+3.7**
BSRN	**Basiran**	**4.44**	**18**	*e*Pn	**Pn**	**05 22 51.1**	**+3.7**
ARQ	**Araqi** SNR=25	**4.48**	**192**	P	**Pn**	**05 22 51.2**	**+3.3**
ARQ				S	**Sn**	**05 23 44.4**	**+4.8**
WSAR	**Wadi Sarin**	**4.60**	**167**	Pg	**Pn**	**05 22 51.8**	**+2.2**
	comp=N,2.1nm,0.3s,baz=353,slow=6.1,SNR=14						
WSAR				Lg	Lg	05 23 41.4	
	comp=N,4.3nm,0.3s,baz=205,slow=22,SNR=12						
SMDO	**Samad**	**4.69**	**174**	P	**Pn**	**05 22 51.9**	**+0.9**
YZKH	**Yazd**	**5.27**	**332**	*e*Pn	**Pn**	**05 23 00.9**	**+2.0**
YZKH	**Yazd**	**5.27**	**332**	*e*Pn	**Pn**	**05 23 00.9**	**+2.0**
WBK	**Wadi Bani Khal** SNR=11	**5.28**	**165**	P	**Pn**	**05 23 01.5**	**+2.5**
WBK				S	**Sn**	**05 24 00.2**	**+0.6**
JLN	**Jalan Bani Buh**	**5.83**	**162**	P	**Pn**	**05 23 08.9**	**+2.3**
JLN				S	**Sn**	**05 24 11.6**	**-1.4**
IRAM	**Ramesheh**	**6.01**	**314**	*e*Pn	**Pn**	**05 23 10.2**	**+1.0**
KLNJ	**Kolanjah**	**6.09**	**304**	*e*Pn	**Pn**	**05 23 10.1**	**-0.3**
ANAR	**Anarak**	**6.33**	**330**	*e*Pn	**Pn**	**05 23 14.5**	**+1.1**
MHTO	**MHTO** SNR=18	**6.74**	**176**	P	**Pn**	**05 23 23.0**	**+4.0**
MHTO				S	**Sn**	**05 24 35.6**	**+0.2**
WHFO	**Wadi Hawf** SNR=6.7	**10.37**	**200**	P	**Pn**	**05 24 08.7**	**0.0**
IKOM	**Komasi**	**10.70**	**309**	*e*Pn	**Pn**	**05 24 14.1**	**+0.7**
ABTO	**Aybut** SNR=7.7	**11.04**	**201**	P	**Pn**	**05 24 17.7**	**-0.4**
AKTO	**Aktyubinsk** comp=N,0.7nm,0.5s,baz=167,slow=10,SNR=4.3	**22.66**	**1**	P	**P**	**05 26 41.8**	**+0.7**
BRTR	**Keskin Array B** comp=N,0.8nm,0.6s,baz=122,slow=11,SNR=6.2	**23.09**	**307**	P	**P**	**05 26 45.5**	**-0.3**
MKAR	**Makanchi Array** comp=N,0.4nm,0.6s,baz=238,slow=8.3,SNR=4.2	**27.21**	**39**	P	**P**	**05 27 22.9**	**-0.8**
ZALV	**Zalesovo Beam** comp=N,1.2nm,0.5s,baz=240,slow=8.1,SNR=3.9	**32.97**	**30**	P	**P**	**05 28 12.7**	**-1.7**
TORD	**Torodi Ar. Bea** comp=N,0.5nm,0.3s,baz=64,slow=7.4,SNR=13	**53.85**	**266**	P	**P**	**05 31 01.5**	**-1.7**
WRA	**Warramunga Arr** comp=N,0.2nm,0.5s,baz=316,slow=4.4,SNR=1.9	**88.12**	**114**	P	**P**	**05 34 27.4**	**-3.5**

IDC 19 05:35:18.3±2.1, **28°.81S**×**62°.03E**, **h0**km, **mb3.8**/4, **mb1 4.0**/4, **mb1mx3.6**/39, **mbtmp3.8**/4, **Error ellipse: s-maj=66.2km s-min=41.5km az=84.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H** baz=204,slow=76,SNR=11	**23.24**	**27**	T	T	06 04 37.2	
H08S2	**Diego Garcia H** baz=204,slow=76,SNR=7.6	**23.25**	**27**	T	T	06 04 39.0	
H08S3	**Diego Garcia H** baz=204,slow=76,SNR=12	**23.26**	**27**	T	T	06 04 35.7	
ASAR	**Alice Springs** 0.5nm,0.7s,baz=246,slow=6.0,SNR=4.8	**63.79**	**104**	P	P	05 45 52.6	0.0
VNDA	**Vanda** 0.8nm,0.7s,baz=263,slow=5.3,SNR=5.0	**64.20**	**166**	P	P	05 45 54.4	0.0
WRA	**Warramunga Arr** 1.2nm,1.1s,baz=248,slow=5.7,SNR=4.9	**65.58**	**100**	P	P	05 46 04.4	0.0
ZALV	**Zalesovo Beam** 0.8nm,0.6s,baz=198,slow=4.2,SNR=5.6	**84.74**	**13**	P	P	05 47 53.9	0.0

*NEIC **19** 05:46:24.6±1.1, 2°.7S±0°.1×68°.21E±0°.09, h10km±1km, mb4.6/8, Error ellipse: s-maj=26.0km s-min=4.8km az=144.0*
*IDC **19** 05:46:24.0±0.6, 2°.72S×68°.09E, h0km, mb4.1/14, mb1 4.2/14, mb1mx3.9/50, mbtmp4.1/14, MS3.7/5, Ms1 3.7/5, ms1mx3.3/37, Error ellipse: s-maj=19.5km s-min=17.4km az=142.0*

ISC 19 05:46:25.3±0.6, **2°.7S**±0°.1×**68°.2E**±0°.1, **h11

baz=56
IIEY Innrieyrar 0.65 207 P **Pb** 05 47 18.5 -1.5
baz=207
IIEY S **Sb** 05 47 27.6 -1.6
baz=207
IKSK Karasker 0.67 140 P **Pg** 05 47 18.1 -1.3
baz=140
ISVA Svartarkot 0.67 7 P **Pg** 05 47 18.9 -0.6
baz=6.9
ISVA S **Sg** 05 47 28.7 +0.4
baz=6.9
IKAL Kalfafell 0.73 188 P **Pb** 05 47 20.0 -1.5
baz=188
IVSH V-Sauoahnukur 0.76 79 P **Pg** 05 47 20.0 -1.1
baz=78
IVSH S **Sg** 05 47 30.4 -0.5
baz=78
IVAT Vatnsfell 0.80 233 P **Pb** 05 47 21.3 -1.3
baz=234
IFAG Fagurholsmyri 0.88 156 P **Pb** 05 47 22.3 -1.6
baz=156
IADA Aoalbol 0.88 66 P **Pg** 05 47 22.0 -1.4
baz=65
IHVE Hveravellir 0.92 283 P **Pg** 05 47 23.0 -1.3
baz=284
IHVE S **Sg** 05 47 35.9 -0.4
baz=284
IMEL Melhnausar 0.96 20 P **Pg** 05 47 23.6 -1.5
baz=20
IMEL S **Sg** 05 47 37.9 +0.4
baz=20
IREN Reynihlio 1.00 13 P **Pg** 05 47 24.4 -1.5
baz=13
IREN S **Sg** 05 47 38.7 -0.2
baz=13
IKVO Krokottuvotn 1.07 13 P Pg 05 47 25.4 -1.7
baz=13
IGRS Grimsstaoir 1.12 30 P Pg 05 47 26.3 -1.8
baz=29
IRJU Rjupnafell 1.19 207 P **Pn** 05 47 27.8 -1.4
baz=208
ISKI Skildingahlsh 1.22 8 P Pg 05 47 27.8 -2.0
baz=8.2
ISKI S **Sg** 05 47 44.9 -0.7
baz=8.2
IGHA Grjothals 1.22 16 P Pg 05 47 27.7 -2.3
baz=15
IDIM Dimmadalss 1.31 9 P Pn 05 47 29.3 -1.7
baz=9.3
IHLA Hella 1.33 343 P **Pn** 05 47 29.8 -1.5
baz=343
ILAR Eielson Array 45.69 332 P **P** 05 55 30.6 +3.6
1.3nm,1.1s,baz=34,slow=6.6,SNR=5.6
DLBC Dease Lake 47.08 318 LR LR 06 15 52.4
comp=Z,148nm,19.7s,baz=313,slow=36
TORD Torodi Ar. Bea 53.14 156 P **P** 05 56 24.6 +0.2
0.8nm,1.0s,baz=337,slow=8.3,SNR=2.9
PDAR Pinedale Array 53.19 293 P **P** 05 56 27.0 +2.2
0.9nm,0.9s,baz=51,slow=7.1,SNR=4.8
CMAR Chiang Mai Arr 84.11 59 LR LR 06 36 59.8
comp=Z,16nm,20.6s,baz=60,slow=36

*IDC **19** 05:50:33.5±2.1,37˚.44S×179˚.95W,h0km,mb4.1/3,*
mb1 4.3/4,mb1mx3.9/31,mbtmp4.1/4,ML3.7/1,Error
ellipse: s-maj=58.8km s-min=40.8km az=177.0
*NEIC **19** 05:50:33.1±1.3,37˚.76S±0˚.10×179˚.84W±0˚.09,h10km±2km,*
Error ellipse: s-maj=19.6km s-min=5.4km az=143.0
*WEL **19** 05:50:37.4,38˚S±6˚×18˚0W±˚,h42km±18km,M3.8/18,*
ML4.1/18,MLv3.8/18,Error ellipse: s-maj=0.0km
s-min=0.0km az=178.8
ISC 19 05:50:34.7±2.3,37˚.82S±0˚.05×179˚.90W±0˚.08,
h16km±12km,n84,σ1s67/96,mb4.1/5,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.33**	**269**	P	**Pb**	**05 50 59.5**	**+0.1**
MXZ	**Matakaoa Point**	**1.44**	**280**	P	**Pn**	**05 51 00.3**	**+0.1**
MXZ				S	**Sn**	**05 51 17.0**	**-1.8**
MXZ	**Matakaoa Point**	**1.44**	**280**	Pn	**Pn**	**05 51 00.2**	**0.0**
PUZ	**Puketiti**	**1.48**	**259**	P	**Pb**	**05 51 01.9**	**0.0**
PUZ				S	**Sb**	**05 51 20.2**	**-0.2**
CNGZ	**Carnagh Statio**	**1.63**	**245**	P	**Pg**	**05 51 06.0**	**-0.1**
TWGZ	**Tauwhareparae**	**1.71**	**257**	P	**Pb**	**05 51 05.7**	**-0.2**
TWGZ				S	**Sb**	**05 51 26.7**	**-0.4**
HAZ	**Te Kaha**	**1.84**	**271**	P	**Pn**	**05 51 06.5**	**+0.9**
TKGZ	**Te Karaka**	**1.88**	**250**	P	**Pb**	**05 51 08.2**	**-0.4**
TKGZ				S	**Sb**	**05 51 30.9**	**-1.0**
RIGZ	**Rimuhau**	**2.04**	**244**	P	**Pb**	**05 51 10.9**	**-0.6**
RIGZ				S	**Sb**	**05 51 35.6**	**-1.1**
PRGZ	**Paritu Road**	**2.06**	**237**	P	**Pb**	**05 51 11.3**	**-0.5**
MWZ	**Matawai**	**2.09**	**255**	P	**Pn**	**05 51 10.2**	**+1.1**
MWZ				S	**Sn**	**05 51 34.5**	**-0.4**
MHGZ	**Mahia Peninsul**	**2.18**	**232**	P	**Pb**	**05 51 13.2**	**-0.5**
MHGZ				S	**Sb**	**05 51 41.2**	**+0.7**
RAGZ	**Rawiri**	**2.22**	**251**	P	**Pb**	**05 51 13.3**	**-1.3**
RAGZ				S	**Sn**	**05 51 38.8**	**+0.7**
KNZ	**Kokohu**	**2.25**	**237**	P	**Pn**	**05 51 13.3**	**+2.0**
URZ	**Urewera**	**2.40**	**258**	Pn	**Pn**	**05 51 15.0**	**+1.7**
	15nm,0.3s,baz=134,slow=0.6,SNR=69						
URZ				Sn	**Sn**	**05 51 42.8**	**+0.5**
	29nm,0.3s,baz=20,slow=22,SNR=14						
URZ	**Urewera**	**2.40**	**258**	P	**Pn**	**05 51 15.1**	**+1.7**
URZ				S	**Sn**	**05 51 42.9**	**+0.5**
WHRZ	**Whale Island**	**2.47**	**268**	P	**Pn**	**05 51 16.1**	**+1.7**
WHHZ	**Waihua**	**2.58**	**240**	P	**Pn**	**05 51 18.3**	**+2.5**
WHHZ				S	**Sn**	**05 51 48.3**	**+1.5**
RTZ	**Ruatahuna**	**2.58**	**251**	P	**Pn**	**05 51 17.4**	**+1.5**
RTZ				S	**Sn**	**05 51 49.3**	**+2.3**
RAHZ	**Arahi**	**2.61**	**244**	P	**Pn**	**05 51 18.8**	**+2.5**
RAHZ				S	**Sn**	**05 51 50.1**	**+2.4**
MUGZ	**Murupara**	**2.71**	**255**	P	**Pn**	**05 51 19.4**	**+1.8**
MUGZ				S	**Sn**	**05 51 49.6**	**-0.3**
MTHZ	**Maungataniwha**	**2.76**	**247**	P	**Pn**	**05 51 20.4**	**+2.0**
MTHZ				S	**Sn**	**05 51 52.6**	**+1.2**
OPRZ	**Ohinepanea**	**2.81**	**268**	P	**Pn**	**05 51 19.7**	**+0.8**
ARHZ	**Aropaoanui**	**2.83**	**238**	P	**Pn**	**05 51 22.3**	**+3.0**
TARZ	**Mount Tarawera**	**2.87**	**261**	P	**Pn**	**05 51 22.1**	**+2.3**
RRRZ	**Republican Roa**	**2.88**	**258**	P	**Pn**	**05 51 21.8**	**+1.9**
NMHZ	**Naumai**	**2.88**	**243**	P	**Pn**	**05 51 22.8**	**+2.7**
CKHZ	**Cape Kidnapper**	**2.99**	**231**	P	**Pn**	**05 51 23.6**	**+2.1**
ALRZ	**Allen Road**	**3.05**	**255**	P	**Pn**	**05 51 24.4**	**+2.1**
MCHZ	**McNeill Hill**	**3.12**	**238**	P	**Pn**	**05 51 26.0**	**+2.7**
BKZ	**Black Stump Fm**	**3.13**	**243**	P	**Pn**	**05 51 25.4**	**+1.9**
BKZ	**Black Stump Fm**	**3.13**	**243**		**Pn**	**05 51 24.7**	**+1.2**
KAHZ	**Kahuranaki**	**3.20**	**231**	P	**Pn**	**05 51 26.9**	**+2.5**
KRHZ	**Kereru**	**3.44**	**237**	P	**Pn**	**05 51 29.1**	**+1.4**
BHHZ	**Black Hill Sta**	**3.57**	**241**	P	**Pn**	**05 51 31.7**	**+2.2**
KUZ	**Kuaotunu**	**3.65**	**286**	P	**Pn**	**05 51 30.2**	**-0.4**
PNHZ	**Pukenui**	**3.69**	**234**	P	**Pn**	**05 51 32.9**	**+1.7**
MOVZ	**Moawhango**	**3.76**	**244**	P	**Pn**	**05 51 35.1**	**+3.1**
WNVZ	**Wahianoa**	**3.84**	**245**	P	**Pn**	**05 51 35.9**	**+2.6**
TSZ	**Takapari Road**	**3.93**	**234**	P	**Pn**	**05 51 35.3**	**+0.9**
MKAZ	**Moumakai**	**3.99**	**279**	P	**Pn**	**05 51 35.5**	**+0.3**
GRZ	**Great Barrier**	**4.03**	**291**	P	**Pn**	**05 51 35.8**	**+0.1**
BFZ	**Birch Farm**	**4.14**	**225**	P	**Pn**	**05 51 38.4**	**+1.2**
BFZ	**Birch Farm**	**4.14**	**225**	Pn	**Pn**	**05 51 38.9**	**+1.7**
BFZ				Sn	**Sn**	**05 52 23.5**	**-1.8**
HIZ	**Hauiti**	**4.19**	**259**	Pn	**Pn**	**05 51 38.0**	**0.0**
ETAZ	**East Tamaki Re**	**4.21**	**280**	P	**Pn**	**05 51 39.2**	**+1.0**
PRWZ	**Pori Road**	**4.21**	**228**	P	**Pn**	**05 51 40.1**	**+1.8**
MRZ	**Mangatainoka R**	**4.51**	**230**	P	**Pn**	**05 51 43.9**	**+1.5**
RVAZ	**Riverhead Bore**	**4.52**	**282**	P	**Pn**	**05 51 44.3**	**+1.8**
HOWZ	**Holdsworth Sta**	**4.70**	**228**	P	**Pn**	**05 51 45.6**	**+0.6**
MTW	**Mount Morrison**	**4.88**	**225**	P	**Pn**	**05 51 48.7**	**+1.3**
WCZ	**Waipu Caves**	**4.98**	**290**	P	**Pn**	**05 51 49.5**	**+0.7**
MSWZ	**Moikau Station**	**5.19**	**225**	Pn	**Pn**	**05 51 51.5**	**-0.2**
MSWZ				Sn	**Sn**	**05 52 46.0**	**-5.2**
PLWZ	**Palliser**	**5.29**	**223**	Pn	**Pn**	**05 51 52.8**	**-0.4**
PLWZ				Sn	**Sn**	**05 52 49.1**	**-4.6**
BHW	**Baring Head**	**5.40**	**227**	Pn	**Pn**	**05 51 54.6**	**0.0**
BHW				Sn	**Sn**	**05 52 52.6**	**-3.7**
SNZO	**South Karori**	**5.44**	**228**	Sn	**Sn**	**05 52 54.5**	**-2.6**
OUZ	**Omahuta**	**5.84**	**294**	P	**Pn**	**05 52 01.6**	**+1.0**
OUZ	**Omahuta**	**5.84**	**294**	Pn	**Pn**	**05 51 58.2**	**-2.5**
TUWZ	**Tuamarina**	**5.97**	**231**	Sn	**Sn**	**05 53 07.0**	**-3.3**
CTZ	**Chatham Island**	**6.42**	**158**	P	Pn	05 52 15.3	+6.8
QRZ	**Quartz Range**	**6.59**	**241**	Pn	**Pn**	**05 52 11.2**	**+0.3**
THZ	**Tophouse**	**6.80**	**232**	P	**Pn**	**05 52 14.5**	**+0.7**
THZ	**Tophouse**	**6.80**	**232**	Pn	**Pn**	**05 52 13.4**	**-0.4**
KHZ	**Kahutara**	**6.81**	**226**	Pn	**Pn**	**05 52 14.4**	**+0.5**
LTZ	**Lake Taylor**	**7.77**	**228**	P	**Pn**	**05 52 27.7**	**+0.6**
LTZ	**Lake Taylor**	**7.77**	**228**	Pn	**Pn**	**05 52 27.0**	**-0.1**
AS31	**Alice Springs**	**41.73**	**276**	P	**P**	**05 58 23.2**	**+0.1**
ASAR	**Alice Springs**	**41.73**	**276**	P	**P**	**05 58 23.5**	**+0.4**
	2.5nm,0.9s,baz=116,slow=7.3,SNR=17						
ASAR	**Alice Springs**	**41.73**	**276**	P	**P**	**05 58 23.2**	**+0.1**
WR0	**Warramunga Arr**	**43.21**	**281**	P	**P**	**05 58 35.2**	**0.0**
WR0				IAmb	IAmb	05 58 37.1	
	comp=Z,4.2nm,1.1s						
WB2	**Warramunga Arr**	**43.37**	**281**	P	**P**	**05 58 36.2**	**-0.3**
WB2				IAmb	IAmb	05 58 45.1	
	comp=Z,3.8nm,0.9s						
WRA	**Warramunga Arr**	**43.38**	**281**	P	**P**	**05 58 36.6**	**0.0**
	comp=Z,2.9nm,0.9s,baz=120,slow=7.7,SNR=14						
WRA	**Warramunga Arr**	**43.38**	**281**	P	**P**	**05 58 36.2**	**-0.4**
WB0	**Warramunga Arr**	**43.44**	**281**	P	**P**	**05 58 37.0**	**0.0**
FITZ	**Fitzroy Crossi**	**51.22**	**277**	P	**P**	**05 59 38.3**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=143,slow=5.1,SNR=4.4						
FITZ	**Fitzroy Crossi**	**51.22**	**277**	P	**P**	**05 59 37.4**	**-0.2**
FITZ				IAmb	IAmb	05 59 39.5	
	comp=Z,3.5nm,1.0s						
H03S2	**Juan Fernandez**	**77.71**	**123**	T	T	07 28 23.2	
	baz=231,slow=74,SNR=5.2						
H03S1	**Juan Fernandez**	**77.72**	**123**	T	T	07 28 24.6	
	baz=231,slow=74,SNR=6.2						
H03S3	**Juan Fernandez**	**77.72**	**123**	T	T	07 28 23.9	
	baz=231,slow=74,SNR=5.3						
H03N3	**Juan Fernandez**	**77.94**	**123**	T	T	07 28 39.6	
	baz=234,slow=72,SNR=28						
H03N2	**Juan Fernandez**	**77.94**	**123**	T	T	07 28 34.7	
	baz=234,slow=72,SNR=22						
H03N1	**Juan Fernandez**	**77.96**	**123**	T	T	07 28 35.1	
	baz=234,slow=72,SNR=32						
ARCES	**ARCESS Array B**	**145.40**	**345**	PKPbc	**PKPbc**	**06 10 11.6**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=15,slow=3.7,SNR=1.3						
TORD	**Torodi Ar. Bea**	**155.39**	**184**	PKPab	**PKPab**	**06 10 54.7**	**+1.7**
	comp=Z,0.3nm,0.9s,baz=201,slow=3.1,SNR=1.4						

IDC 19 05:55:49.1±7.9,3˚.07S×148˚.04E,h0km,mb3.1/2,
mb1 3.4/2,mb1mx3.2/34,mbtmp3.1/2,Error ellipse:
s-maj=343.5km s-min=54.5km az=107.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.45**	**218**	P	P	06 00 39.0	-0.3
	0.6nm,0.9s,baz=42,slow=10,SNR=7.2						
ASAR	**Alice Springs**	**24.62**	**213**	P	P	06 01 11.7	+0.2
	0.4nm,0.7s,baz=44,slow=8.1,SNR=4.3						
TORD	**Torodi Ar. Bea**	**145.25**	**289**	PKPbc	PKPbc	06 15 28.8	-0.9
	0.5nm,0.9s,baz=48,slow=2.1,SNR=2.5						

*ISU **19** 06:07:01.0,41˚.55N×72˚.77E,h10km*
*KRNET **19** 06:07:02.5±0.1,41˚.48N×72˚.71E,h15km,mb3.4*
*SOME **19** 06:07:02.7,41˚.53N×72˚.68E,h5km*
*NNC **19** 06:07:03.9±0.7,41˚.50N×72˚.74E,h0km,mb3.9,mpv3.6,*
Error ellipse: s-maj=6.9km s-min=2.4km az=176.0
*KNET **19** 06:07:04.2±0.5,41˚.60N×72˚.73E,h0km,ml2.8,Error*
ellipse: s-maj=5.3km s-min=2.9km az=126.0
ISC 19 06:07:02.3±1.1,41˚.49N±0˚.02×72˚.75E±0˚.02,h2km±10km,
n67,σ1s57/114,41C-17D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.24**	**135**	⇓*i*P	**Pg**	**06 07 07.2**	**+0.2**
ARSB				⇓*i*S	**Sg**	**06 07 11.2**	**+1.1**
	baz=27						
ARSB	**Arslanbob**	**0.24**	**135**	*e*P	**Pg**	**06 07 06.7**	**-0.3**
ARSB				*e*S	**Sg**	**06 07 10.9**	**+0.8**
AML	**Almayashu**	**0.95**	**48**	⇑*i*P	**Pb**	**06 07 21.4**	**-0.3**
AML				⇑*i*S	**Sb**	**06 07 34.6**	**-0.2**
	baz=48						
AML	**Almayashu**	**0.95**	**48**	⇑P	**Pb**	**06 07 21.6**	**-0.1**
	32nm,0.2s,SNR=28						
AML				⇓S	**Sn**	**06 07 36.0**	**-1.2**
	118nm,0.2s						
OHH	**Osh**	**0.97**	**179**	⇓*i*P	**Pg**	**06 07 20.6**	**-0.3**
	baz=77						
OHH				⇓*i*S	**Sg**	**06 07 33.3**	**-0.1**
	baz=77						
OHH	**Osh**	**0.97**	**179**	*e*P	**Pg**	**06 07 21.5**	**+0.6**
OHH				*e*S	**Sg**	**06 07 31.7**	**-1.7**
FRG	**Fergana**	**1.05**	**224**	*e*P	**Pn**	**06 07 27.7**	**+3.6**
FRG				*i* S	Sn	06 07 48.6	+9.3
TRKS	**Terek-Say**	**1.21**	**272**	⇑*i*P	**Pb**	**06 07 24.2**	**-1.8**
	baz=70						
TRKS				⇑*i*S	**Sb**	**06 07 39.7**	**-2.5**
	baz=70						
ARLS	**Aral**	**1.23**	**72**	⇑*i*P	**Pg**	**06 07 26.5**	**+0.6**
	baz=72						
ARLS				⇑*i*S	**Sn**	**06 07 43.6**	**-0.3**
	baz=72						
MRKS	**Merke**	**1.30**	**16**	*e*P	**Pg**	**06 07 27.6**	**+0.5**
	11nm,0.2s						
MRKS				*e*S	**Sn**	**06 07 45.7**	**+0.2**
	64nm,0.2s						
MRKS	**Merke**	**1.30**	**16**	P	**Pg**	**06 07 27.7**	**+0.5**
	11nm,0.2s						
MRKS				S	**Sn**	**06 07 45.7**	**+0.2**
	64nm,0.2s						
EKS2	**Erkin-Say**	**1.39**	**33**	⇑*i*P	**Pb**	**06 07 28.7**	**-0.4**
EKS2				⇑*i*S	**Sg**	**06 07 47.2**	**+0.1**
	baz=34						
EKS2	**Erkin-Say**	**1.39**	**33**	⇑P	**Pg**	**06 07 29.5**	**+0.5**
	10nm,0.2s,SNR=11						
EKS2				⇓S	**Sg**	**06 07 48.8**	**+1.8**
	22nm,0.1s						
UCH	**Uchtor**	**1.50**	**60**	⇓*i*P	**Pg**	**06 07 31.6**	**+0.5**
	baz=60						
UCH				⇓*i*S	**Sg**	**06 07 52.1**	**+1.4**
	baz=60						
UCH	**Uchtor**	**1.50**	**60**	⇑P	**Pg**	**06 07 31.6**	**+0.5**
	25nm,0.2s,SNR=27						
UCH				⇓S	**Sg**	**06 07 54.1**	**+3.4**
	90nm,0.2s						
AAK	**Ala-Archa**	**1.73**	**48**	⇑*e*P	**Pg**	**06 07 35.2**	**-0.2**
	baz=48						
AAK				⇑*i*S	**Sg**	**06 07 58.2**	**+0.4**
	baz=48						
AAK	**Ala-Archa**	**1.73**	**48**	⇓P	**Pg**	**06 07 35.6**	**+0.2**
	21nm,0.2s,SNR=54						
AAK				⇑S	**Sg**	**06 08 00.8**	**+3.0**
	78nm,0.2s						
AAK	**Ala-Archa**	**1.73**	**48**	⇑P	**Pg**	**06 07 36.0**	**+0.6**
	18nm,0.5s						
AAK				⇑S	**Sg**	**06 07 59.4**	**+1.5**
	23nm,0.3s						
DZA	**Taraz**	**1.75**	**323**	P	**Pg**	**06 07 36.9**	**+1.0**
	75nm,0.1s						
DZA				S	**Sg**	**06 08 01.4**	**+2.8**
	120nm,0.2s						
FRU1	**Bishkek**	**1.92**	**46**	⇑*e*P	**Pb**	**06 07 38.2**	**+0.2**
	baz=46						
FRU1				⇑*i*S	**Sg**	**06 08 03.0**	**-0.9**
	baz=46						
KBK	**Karagaybulak**	**2.00**	**54**	⇑*i*P	**Pb**	**06 07 39.6**	**+0.1**
	baz=54						
KBK				⇑*i*S	**Sg**	**06 08 05.7**	**-1.0**
	baz=54						
KBK	**Karagaybulak**	**2.00**	**54**	⇑P	**Pg**	**06 07 40.8**	**+0.1**
	29nm,0.2s,SNR=20						
KBK				⇑S	**Sg**	**06 08 09.5**	**+2.8**
	69nm,0.2s						
BTK	**Batken**	**2.05**	**226**	⇑*i*P	**Pn**	**06 07 38.7**	**+0.8**
	baz=26						
BTK				⇑*i*S	**Sb**	**06 08 05.9**	**-0.4**
	baz=26						
BTK	**Batken**	**2.05**	**226**	*i* P	**Pb**	**06 07 39.3**	**-1.0**
BTK				*i* S	**Sb**	**06 08 07.2**	**+0.9**
CHMS	**Chumysh**	**2.11**	**44**	⇑*i*P	**Pb**	**06 07 40.6**	**-0.7**
	baz=44						
CHMS				⇑*i*S	**Sb**	**06 08 07.9**	**-0.1**
	baz=44						
CHMS	**Chumysh**	**2.11**	**44**	⇑P	**Pg**	**06 07 42.7**	**-0.1**
	52nm,0.3s,SNR=23						
CHMS				⇓S	**Sg**	**06 08 12.1**	**+2.0**
	137nm,0.5s						
IUG	**luzhnay**	**2.14**	**289**	*e*P	**Pb**	**06 07 41.9**	**+0.2**
	42nm,0.3s						
IUG				*e*S	**Sg**	**06 08 10.1**	**-0.8**
	125nm,0.5s						
IUG	**luzhnay**	**2.14**	**289**	Pg	**Pb**	**06 07 41.9**	**+0.2**
	42nm,0.3s						
IUG				Lg	Lg	06 08 10.1	
	125nm,0.5s						
DRK	**Karamyk**	**2.14**	**200**	⇑*i*P	**Pn**	**06 07 40.1**	**+0.9**
	baz=99						
DRK				⇑*i*S	**Sn**	**06 08 07.1**	**+0.6**
	baz=99						
USP	**Ospenovka**	**2.19**	**36**	⇓*i*P	**Pb**	**06 07 41.6**	**-1.1**
	baz=36						
USP				⇓*i*S	**Sb**	**06 08 09.6**	**-0.7**
	baz=36						
USP	**Ospenovka**	**2.19**	**36**	⇑P	**Pg**	**06 07 43.6**	**-0.7**
	18nm,0.2s,SNR=30						
USP				⇑S	**Sg**	**06 08 14.3**	**+1.6**
	89nm,0.3s						
KK31	**Karatay Array**	**2.31**	**315**	⇑P	**Pb**	**06 07 44.0**	**-0.7**
	4.0nm,0.2s,baz=132,slow=3.5,SNR=69						
KK31				⇑S	**Sg**	**06 08 14.7**	**-1.9**
	10nm,0.3s,baz=134,slow=25,SNR=12						
TKM2	**Tokmak 2**	**2.55**	**55**	⇑*i*P	**Pb**	**06 07 47.1**	**-1.7**
	baz=55						
TKM2				⇑*i*S	**Sb**	**06 08 18.9**	**-1.8**
	baz=55						
TKM2	**Tokmak 2**	**2.55**	**55**	⇓P	**Pg**	**06 07 49.9**	**-1.2**
	37nm,0.3s,SNR=58						
TKM2	**Tokmak 2**	**2.55**	**55**	⇑Pg	**Pg**	**06 07 49.9**	**-1.2**
	26nm,0.6s						
TKM2				⇓Lg	Lg	06 08 25.3	
	27nm,0.5s						
BOOM	**Boomskoye usch**	**2.58**	**66**	⇑*i*P	**Pb**	**06 07 47.3**	**-2.0**
	baz=66						
BOOM				⇑*i*S	**Sb**	**06 08 19.7**	**-1.7**
	baz=66						
ULHL	**Ulahol**	**2.71**	**73**	⇑*i*P	**Pb**	**06 07 49.2**	**-2.4**
	baz=73						
ULHL				⇑*i*S	**Sb**	**06 08 23.2**	**-2.2**
	baz=73						
ULHL	**Ulahol**	**2.71**	**73**	⇓P	**Pb**	**06 07 52.0**	**+0.4**
	5.8nm,0.2s,SNR=14						
DGS	**Degeres**	**2.84**	**51**	*e*P	**Pg**	**06 07 55.9**	**-0.7**
	36nm,0.4s						
DGS				*e*S	**Sg**	**06 08 34.5**	**+1.0**
	38nm,0.4s						
DGS	**Degeres**	**2.84**	**51**	Pg	**Pg**	**06 07 55.9**	**-0.7**
	36nm,0.4s						
DGS				Lg	Lg	06 08 34.5	
	38nm,0.4s						
KST	**Kastek**	**2.84**	**56**	*e*P	**Pg**	**06 07 56.0**	**-0.7**
	36nm,0.5s						
KST				*e*S	**Sg**	**06 08 34.6**	**+1.1**
	36nm,0.5s						
KST	**Kastek**	**2.84**	**56**	Pg	**Pg**	**06 07 56.0**	**-0.7**
	36nm,0.5s						
KST				Lg	Lg	06 08 34.6	
	36nm,0.5s						
KRBS	**Karabastau**	**3.08**	**43**	*e*P	**Pg**	**06 07 59.8**	**-1.6**
	6.6nm,0.2s						
KRBS				*e*S	**Sg**	**06 08 41.1**	**-0.2**
	24nm,0.4s						
KRBS	**Karabastau**	**3.08**	**43**	Pg	**Pg**	**06 07 59.8**	**-1.6**
	6.6nm,0.2s						
KRBS				Lg	Lg	06 08 41.1	
	24nm,0.4s						
MTBS	**Maitube**	**3.18**	**58**	*e*P	**Pg**	**06 08 02.0**	**-1.2**
	14nm,0.3s						
MTBS				*e*S	**Sg**	**06 08 44.8**	**+0.4**
	28nm,0.4s						
MTBS	**Maitube**	**3.18**	**58**	Pg	**Pg**	**06 08 02.0**	**-1.2**
	14nm,0.3s						
MTBS				Lg	Lg	06 08 44.8	
	28nm,0.4s						
TNSS	**Tian-Shan**	**3.47**	**62**	*e*P	**Pg**	**06 08 07.5**	**-1.3**
	14nm,0.4s						
TNSS				*e*S	**Sg**	**06 08 53.8**	**-0.1**
	9.4nm,0.6s						
TNSS	**Tian-Shan**	**3.47**	**62**	Pg	**Pg**	**06 08 07.5**	**-1.3**
	14nm,0.4s						
TNSS				Lg	Lg	06 08 53.7	
	9.4nm,0.6s						
KUU	**Kurty**	**3.57**	**47**	*e*P	**Pg**	**06 08 08.8**	**-1.8**
	3.2nm,0.3s						
KUU				*e*S	**Sg**	**06 08 56.1**	**-0.7**
	23nm,0.9s						
KUU	**Kurty**	**3.57**	**47**	Pg	**Pg**	**06 08 08.8**	**-1.8**
	3.2nm,0.3s						
KUU				Lg	Lg	06 08 56.1	
	23nm,0.9s						
MDOK	**Medeo**	**3.59**	**61**	*e*P	**Pg**	**06 08 09.2**	**-2.0**
	12nm,0.7s						
MDOK				*e*S	**Sg**	**06 08 57.4**	**-0.3**
	18nm,0.8s						
MDOK	**Medeo**	**3.59**	**61**	Pg	**Pg**	**06 08 09.2**	**-2.0**
	12nm,0.7s						
MDOK				Lg	Lg	06 08 57.4	
	18nm,0.8s						
KTBS	**Karatobe**	**3.65**	**51**	*e*P	**Pb**	**06 08 09.6**	**+2.1**
	4.6nm,0.5s						
KTBS				*e*S	**Sg**	**06 08 57.7**	**-1.8**
	33nm,0.5s						
KTBS	**Karatobe**	**3.65**	**51**	Pg	**Pb**	**06 08 09.6**	**+2.1**
	4.6nm,0.5s						
KTBS				Lg	Lg	06 08 57.7	
	33nm,0.5s						
KOTS	**Kotyrbulak**	**3.67**	**60**	*e*P	**Pg**	**06 08 10.5**	**-2.0**
	16nm,0.4s						
KOTS				*e*S	**Sg**	**06 08 59.7**	**-0.4**
	58nm,0.6s						
KOTS	**Kotyrbulak**	**3.67**	**60**	Pg	**Pg**	**06 08 10.5**	**-2.0**
	16nm,0.4s						
KOTS				Lg	Lg	06 08 59.7	
	58nm,0.6s						
BTLS	**Baital**	**3.67**	**14**	*e*P	**Pg**	**06 08 10.0**	**-2.6**
	1.9nm,0.2s						
BTLS				*e*S	**Sg**	**06 08 58.1**	**-2.0**
	16nm,0.5s						
BTLS	**Baital**	**3.67**	**14**	Pg	**Pg**	**06 08 10.0**	**-2.6**
	1.9nm,0.2s						
BTLS				Lg	Lg	06 08 58.1	
	16nm,0.5s						
SATY	**Saty**	**4.48**	**68**	*e*P	**Pg**	**06 08 25.9**	**-2.1**
	4.4nm,0.6s						
SATY				*e*S	**Sg**	**06 09 25.9**	**-0.1**
	14nm,0.7s						
SATY	**Saty**	**4.48**	**68**	Pg	**Pg**	**06 08 25.9**	**-2.1**
	4.4nm,0.6s						
SATY				Lg	Lg	06 09 25.9	
	14nm,0.7s						
KPKS	**

DZM	**Mont Dzumac**	**14.88**	**252**	P	**P**	**06 13 34.3**	**+0.3**
	2.3nm,0.3s,baz=168,slow=2.9,SNR=26						
DZM	**Mont Dzumac**	**14.88**	**252**	P	**P**	**06 13 34.4**	**+0.4**
KNTN	**Kanton**	**16.53**	**24**	P	**P**	**06 13 46.6**	**-2.5**
KNTN				IAmb	IAmb	06 13 49.0	
	comp=Z,30nm,0.8s						
OUZ	**Omahuta**	**18.52**	**201**	P	**P**	**06 14 08.1**	**+1.2**
OUZ				IAmb	IAmb	06 14 16.9	
	comp=Z,34nm,1.4s						
BFZ	**Birch Farm**	**23.00**	**191**	P	**P**	**06 14 45.4**	**-1.4**
QRZ	**Quartz Range**	**24.00**	**197**	P	**P**	**06 14 54.9**	**-0.7**
PLWZ	**Palliser**	**24.05**	**192**	P	**P**	**06 14 54.2**	**-1.9**
NNZ	**Nelson**	**24.13**	**196**	P	**P**	**06 14 55.2**	**-1.6**
TUWZ	**Tuamarina**	**24.20**	**194**	P	**P**	**06 14 54.8**	**-2.5**
LTZ	**Lake Taylor**	**25.89**	**196**	P	**P**	**06 15 10.4**	**-1.8**
MQZ	**McQueen's Vall**	**26.66**	**195**	P	**P**	**06 15 15.9**	**-2.9**
RPZ	**Rata Peaks**	**27.08**	**197**	P	**P**	**06 15 21.4**	**-1.2**
FOZ	**Fox Glacier**	**27.28**	**199**	P	**P**	**06 15 22.4**	**-1.9**
LBZ	**Lake Benmore**	**27.95**	**198**	P	**P**	**06 15 27.8**	**-2.3**
WKZ	**Wanaka**	**28.70**	**199**	P	**P**	**06 15 35.1**	**-1.5**
EIDS	**Eidsvold**	**29.31**	**250**	P	**P**	**06 15 42.4**	**+0.3**
EIDS				IAmb	IAmb	06 15 43.3	
	comp=Z,12nm,0.7s						
MLZ	**Mavora Lakes**	**29.46**	**200**	P	**P**	**06 15 43.0**	**-0.1**
ARMA	**Armidale**	**29.95**	**240**	P	**P**	**06 15 48.2**	**+0.6**
CTAO	**Charters Tower**	**33.53**	**261**	P	**P**	**06 16 18.5**	**+0.6**
CTAO				IAmb	IAmb	06 16 19.4	
	comp=Z,16nm,0.8s						
TOO	**Toolangi**	**37.14**	**231**	P	**P**	**06 16 48.3**	**+1.0**
TOO				IAmb	IAmb	06 16 49.3	
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**38.64**	**241**	P	**P**	**06 17 00.2**	**+0.8**
	comp=Z,15nm,0.7s,baz=90,slow=10,SNR=39						
STKA	**Stephens Creek**	**38.64**	**241**	P	**P**	**06 16 59.8**	**+0.3**
BBOO	**Buckleboo**	**43.42**	**241**	P	**P**	**06 17 37.6**	**+0.7**
BBOO				IAmb	IAmb	06 17 38.4	
	comp=Z,24nm,0.8s						
HMH	**Humu'ula Sheep**	**43.64**	**32**	P	**P**	**06 17 39.8**	**+0.8**
WR0	**Warramunga Arr**	**44.52**	**260**	P	**P**	**06 17 45.0**	**-0.5**
WR0				IAmb	IAmb	06 17 47.2	
	comp=Z,8.6nm,1.1s						
WB0	**Warramunga Arr**	**44.68**	**260**	P	**P**	**06 17 46.8**	**+0.1**
WB0				IAmb	IAmb	06 17 47.6	
	comp=Z,16nm,0.5s						
WC3	**Warramunga Arr**	**44.68**	**260**	P	**P**	**06 17 47.0**	**+0.2**
WC3				IAmb	IAmb	06 17 47.6	
	comp=Z,15nm,0.6s						
WB2	**Warramunga Arr**	**44.70**	**260**	P	**P**	**06 17 47.0**	**+0.1**
WB2				IAmb	IAmb	06 17 47.8	
	comp=Z,25nm,1.1s						
WRAB	**Tennant Creek**	**44.70**	**260**	P	**P**	**06 17 46.7**	**-0.3**
WRAB				IAmb	IAmb	06 17 47.8	
	comp=Z,26nm,1.2s						
WRA	**Warramunga Arr**	**44.71**	**260**	P	**P**	**06 17 46.9**	**-0.1**
	comp=Z,8.6nm,0.4s,baz=96,slow=6.9,SNR=445						
WRA				PcP	**PcP**	**06 19 15.5**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=94,slow=3.8,SNR=4.1						
WRA				S	**S**	**06 23 36.7**	**-2.1**
	comp=Z,0.4nm,0.8s,baz=94,slow=13,SNR=3.0						
WRA	**Warramunga Arr**	**44.71**	**260**	P	**P**	**06 17 47.0**	**-0.1**
AS31	**Alice Springs**	**44.85**	**254**	P	**P**	**06 17 48.5**	**+0.5**
AS31				IAmb	IAmb	06 17 49.7	
	comp=Z,8.2nm,0.5s						
ASAR	**Alice Springs**	**44.85**	**254**	P	**P**	**06 17 48.6**	**+0.5**
	comp=Z,57nm,1.0s,baz=90,slow=7.9,SNR=347						
ASAR				PcP	**PcP**	**06 19 15.6**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=106,slow=3.9,SNR=4.4						
ASAR				ScP	**ScP**	**06 22 07.8**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=93,slow=4.1,SNR=3.9						
ASAR				S	**S**	**06 23 40.4**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=89,slow=15,SNR=7.2						
ASAR	**Alice Springs**	**44.85**	**254**	P	**P**	**06 17 47.5**	**-0.6**
MTN	**Manton Dam**	**48.91**	**269**	P	**P**	**06 18 18.4**	**0.0**
MTN				IAmb	IAmb	06 18 19.0	
	comp=Z,12nm,0.7s						
FORT	**Forrest**	**50.03**	**245**	P	**P**	**06 18 26.3**	**-0.1**
FORT				IAmb	IAmb	06 18 27.0	
	comp=Z,29nm,0.8s						
KNRA	**Kununurra**	**50.59**	**264**	P	**P**	**06 18 30.5**	**0.0**
KNRA				IAmb	IAmb	06 18 31.7	
	comp=Z,14nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.11**	**261**	P	**P**	**06 18 48.9**	**+0.4**
SOEI	**Soe**	**56.19**	**270**	P	**P**	**06 19 12.8**	**+2.7**
PSA00	**Pilbara Seismi**	**57.98**	**256**	P	**P**	**06 19 21.8**	**-0.1**
PSA00				IAmb	IAmb	06 19 22.9	
	comp=Z,11nm,0.8s						
NWAO	**Narrogin (SRO)**	**59.23**	**242**	P	**P**	**06 19 29.8**	**-0.3**
NWAO				IAmb	IAmb	06 19 36.6	
	comp=Z,33nm,1.4s						
VNDA	**Vanda**	**60.27**	**185**	P	**P**	**06 19 36.7**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=7.1,slow=6.5,SNR=4.4						
VNDA	**Vanda**	**60.27**	**185**	P	**P**	**06 19 37.3**	**+1.2**
MORW	**Morawa**	**60.51**	**246**	P	**P**	**06 19 38.1**	**-0.5**
MPSI	**Mapaga**	**63.42**	**280**	P	**P**	**06 19 56.4**	**-1.2**
MTKI	**Muara Teweh, K**	**67.70**	**277**	P	P	06 20 34.5	+10
ADK	**Adak**	**69.69**	**1**	P	**P**	**06 20 35.0**	**-0.1**
UGM	**Wanagama**	**69.76**	**268**	P	**P**	**06 20 35.4**	**-1.1**
QSPA	**South Pole Qui**	**71.96**	**180**	P	**P**	**06 20 49.2**	**+0.7**
QSPA				IAmb	IAmb	06 20 49.8	
	comp=Z,4.9nm,0.8s						
PETK	**Petropavlovsk-**	**73.89**	**345**	P	**P**	**06 21 00.2**	**+0.9**
	comp=Z,3.6nm,0.6s,baz=124,slow=8.2,SNR=8.8						
PETK	**Petropavlovsk-**	**73.89**	**345**	P	**P**	**06 20 59.7**	**+0.4**
CMB	**Columbia Colle**	**77.89**	**43**	P	**P**	**06 21 23.1**	**+1.5**
MDPB	**Devils Postpil**	**78.53**	**44**	P	**P**	**06 21 23.4**	**-2.0**
YBH	**Yreka Blue Hor**	**78.59**	**39**	P	**P**	**06 21 26.5**	**+1.1**
	comp=Z,2.9nm,0.5s,baz=180,slow=2.7,SNR=12						
BEKR	**Beckworth**	**78.95**	**42**	P	**P**	**06 21 27.7**	**+0.3**
HUMO	**Hull Mountain**	**78.97**	**38**	P	**P**	**06 21 28.2**	**+0.9**
PNTR	**Pine Nut**	**79.00**	**43**	P	**P**	**06 21 29.6**	**+1.8**
PNTR				IAmb	IAmb	06 21 30.2	
	comp=Z,7.1nm,0.9s						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	**P**	**06 21 31.6**	**+1.3**
	comp=Z,2.5nm,0.7s,baz=225,slow=8.3,SNR=23						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	**P**	**06 21 31.0**	**+0.7**
PAHR	**Pah Rah Range**	**79.48**	**42**	P	**P**	**06 21 29.8**	**-0.3**
MOD	**Modoc Plateau**	**80.15**	**40**	P	**P**	**06 21 34.6**	**+1.0**
MOD				IAmb	IAmb	06 21 35.8	
	comp=Z,5.4nm,0.8s						
K05A	**Summer Lake**	**80.27**	**39**	P	**P**	**06 21 35.2**	**+1.0**
K05A				IAmb	IAmb	06 21 36.9	
	comp=Z,10nm,1.0s						
H04A	**Detroit Lake**	**80.67**	**37**	P	**P**	**06 21 37.1**	**+1.1**
H04A				IAmb	IAmb	06 21 37.4	
	comp=Z,3.9nm,0.5s						
PINE	**Pine Mountain**	**80.86**	**38**	P	**P**	**06 21 38.1**	**+0.8**
PINE				IAmb	IAmb	06 21 39.5	
	comp=Z,6.8nm,0.9s						
E03A	**Lebam**	**81.04**	**35**	P	**P**	**06 21 38.9**	**+1.1**
E03A				IAmb	IAmb	06 21 40.7	
	comp=Z,39nm,1.3s						
R11A	**Troy Canyon, C**	**81.24**	**45**	P	**P**	**06 21 40.1**	**+0.8**
WVOR	**Wild Horse Val**	**81.47**	**40**	P	**P**	**06 21 40.7**	**+0.4**
BELA	**Belgrano 2**	**81.97**	**173**	P	**P**	**06 21 41.3**	**-0.8**
J08A	**Circle Bar Ran**	**82.09**	**40**	P	**P**	**06 21 44.5**	**+1.1**
J08A				IAmb	IAmb	06 21 45.7	
	comp=Z,8.7nm,1.2s						
U15A	**North Rim**	**82.55**	**48**	P	**P**	**06 21 47.2**	**+1.1**
ELK	**Elko**	**82.71**	**43**	P	**P**	**06 21 47.8**	**+1.0**
	comp=Z,1.7nm,0.8s,baz=229,slow=3.9,SNR=9.1						
PMR	**Palmer**	**82.75**	**14**	P	**P**	**06 21 46.5**	**+0.5**
PMR				IAmb	IAmb	06 21 59.4	
	comp=Z,26nm,1.5s						
G08A	**Pilot Rock**	**82.88**	**38**	P	**P**	**06 21 48.0**	**+0.7**
GHO	**Glory Hole Cre**	**82.96**	**14**	P	**P**	**06 21 47.3**	**0.0**
GHO				IAmb	IAmb	06 22 06.0	
	comp=Z,10nm,1.3s						
PPLA	**Purkeypile**	**83.29**	**12**	P	**P**	**06 21 48.2**	**-0.7**
PPLA				IAmb	IAmb	06 21 52.1	
	comp=Z,18nm,1.3s						
SCM	**Sheep Creek Mo**	**83.38**	**14**	P	**P**	**06 21 49.2**	**-0.1**
MAW	**Mawson**	**83.73**	**200**	P	**P**	**06 21 51.6**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=111,slow=6.3,SNR=5.1						
MAW	**Mawson**	**83.73**	**200**	IAmb	IAmb	06 21 52.7	
	comp=Z,1.2nm,1.0s						
TABL	**Table Mountain**	**83.81**	**18**	P	**P**	**06 21 51.3**	**-0.3**
N25K	**Chitina, Valde**	**83.85**	**15**	P	**P**	**06 21 51.1**	**-0.5**
N25K				IAmb	IAmb	06 21 53.9	
	comp=Z,12nm,1.1s						
GLB	**Gilahina Butte**	**83.91**	**16**	P	**P**	**06 21 52.4**	**+0.5**
GLB				IAmb	IAmb	06 22 05.0	
	comp=Z,17nm,1.4s						
KTH	**Kantishna Hill**	**84.13**	**12**	P	**P**	**06 21 52.5**	**-0.5**
KTH				IAmb	IAmb	06 21 53.9	
	comp=Z,9.4nm,1.0s						
CTGM	**Chitina Glacie**	**84.18**	**17**	P	**P**	**06 21 53.6**	**+0.2**
B08A	**Colville Reser**	**84.42**	**35**	P	**P**	**06 21 55.5**	**+0.8**
TX31	**Lajitas Ar. Si**	**86.00**	**58**	IAmb	IAmb	06 22 05.9	
	comp=Z,11nm,0.8s						
TX32	**Lajitas Array**	**86.00**	**58**	IAmb	IAmb	06 22 05.9	
	comp=Z,3.8nm,0.8s						
TXAR	**Lajitas Array**	**86.00**	**58**	P	**P**	**06 22 04.8**	**+2.1**
	comp=Z,2.8nm,0.7s,baz=219,slow=6.2,SNR=36						
IL31		**86.04**	**13**	P	**P**	**06 22 02.0**	**+0.1**
IL31				IAmb	IAmb	06 22 06.8	
	comp=Z,8.6nm,1.4s						
ILAR	**Eielson Array**	**86.04**	**13**	P	**P**	**06 22 01.8**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=220,slow=5.0,SNR=43						
ILAR	**Eielson Array**	**86.04**	**13**	P	**P**	**06 22 01.6**	**-0.4**
PD31	**Pinedale Array**	**87.41**	**43**	P	**P**	**06 22 10.2**	**+1.0**
PDAR	**Pinedale Array**	**87.41**	**43**	P	**P**	**06 22 10.2**	**+1.0**
	comp=Z,1.6nm,0.6s,baz=221,slow=3.8,SNR=20						
BMAR	**Burnt Mountain**	**88.81**	**12**	P	**P**	**06 22 16.0**	**+1.0**
SNAA	**Sanae**	**90.41**	**179**	P	**P**	**06 22 22.5**	**0.0**
VNA3	**Neumayer Olymp**	**90.55**	**176**	P	**P**	**06 22 23.4**	**+0.3**
VNA2	**Neumayer--Watz**	**90.99**	**177**	P	**P**	**06 22 25.0**	**-0.1**
	baz=185,slow=5.2						
VNA1	**Neumayer--Stat**	**91.22**	**177**	P	**P**	**06 22 26.3**	**+0.2**
YKA	**Yellowknife Ar**	**94.45**	**25**	P	**P**	**06 22 40.9**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=249,slow=4.9,SNR=4.3						
MKAR	**Makanchi Array**	**109.34**	**314**	PKiKP	**PKiKP**	**06 27 46.8**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=76,slow=2.4,SNR=2.6						
ARCES	**ARCESS Array B**	**126.52**	**350**	PKP	**PKPdf**	**06 28 19.2**	**+0.1**
	comp=Z,4.7nm,1.0s,baz=60,slow=2.9,SNR=8.1						
AKASG	**Malin Array Be**	**140.78**	**332**	PKhKP	PKPpre	06 28 40.5	
	comp=Z,0.7nm,0.3s,baz=43,slow=4.2,SNR=4.9						
BRTR	**Keskin Array B**	**144.99**	**315**	PKP	**PKPdf**	**06 28 54.5**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=80,slow=1.6,SNR=2.8						
CLL	**Collm**	**145.67**	**347**	i PKPbc	**PKPbc**	**06 28 57.3**	**+0.8**
	comp=Z,9.0nm,0.6s						
GERES	**GERESS Array B**	**147.82**	**345**	PKPbc	**PKPbc**	**06 29 02.6**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=25,slow=3.5,SNR=10.0						

MEX 19 06:16:04.7±0.3, 14.51N×92.76W, h38km±55km, MD3.5, Near coast of Chiapas

IDC 19 06:17:50.5±7.7, 11.95S×166.29E, h155km±72km, mb3.3/4, mb1 3.4/5, mb1mx3.2/30, mbtmp3.7/5, Error ellipse: s-maj=54.7km s-min=44.6km az=167.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.06**	**179**	P	Pn	06 20 12.0	+0.5
	0.5nm,0.3s,baz=354,slow=19,SNR=9.5						
DZM				S	Sn	06 22 02.2	-0.8
	0.2nm,0.3s,baz=112,slow=24,SNR=1.3						
WRA	**Warramunga Arr**	**31.69**	**251**	P	P	06 23 59.7	0.0
	0.2nm,0.5s,baz=83,slow=8.4,SNR=2.0						
ASAR	**Alice Springs**	**32.88**	**245**	P	P	06 24 09.9	-0.2
	0.4nm,0.7s,baz=76,slow=9.6,SNR=2.8						
ASAR				PcP	PcP	06 26 51.2	0.0
	0.4nm,0.6s,baz=66,slow=2.3,SNR=4.5						
SONM	**Songino Array**	**79.71**	**324**	P	P	06 29 40.9	-0.4
	0.3nm,0.3s,baz=130,slow=5.8,SNR=1.8						
MKAR	**Makanchi Array**	**94.55**	**317**	P	P	06 30 53.6	0.0
	1.0nm,0.5s,baz=87,slow=6.0,SNR=11						
ARCES	**ARCESS Array B**	**117.34**	**346**	PKP	PKPdf	06 36 16.8	-0.3
	3.0nm,0.8s,baz=54,slow=2.3,SNR=6.2						

JMA 19 06:25:27.3±0.2, 24.73N×123.88E, h70km±3km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.42**	**199**	P	Pn	06 25 39.4	0.0
IRIF				*e*S	Sn	06 25 47.9	-0.3
JISG	**Ishigakijimahi**	**0.42**	**110**	P	Pn	06 25 39.4	+0.1
JISG				*e*S	Sn	06 25 48.6	+0.4
JIJ	**Ishigaki jima**	**0.44**	**147**	P	Pn	06 25 39.3	-0.2
JIJ				S	Sn	06 25 48.3	-0.2
JKRS	**Kuro-shima**	**0.50**	**166**	P	Pn	06 25 40.3	+0.1
JKRS				S	Sn	06 25 50.2	+0.6
JTJ	**Tarama**	**0.75**	**97**	P	Pn	06 25 43.0	+0.2
JTJ				S	Sn	06 25 54.8	+0.6

TAP 19 06:26:23.9, 24.48N×121.88E, h10km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.07**	**242**	P	Pg	06 26 26.4	+0.3
	baz=246						
ENAH				S	Sg	06 26 27.9	+0.2
	baz=246						
TWC	**Suao**	**0.13**	**348**	*i* P	Pg	06 26 27.3	+0.3
	baz=352						
TWC				*i* S	Sg	06 26 29.1	+0.1
	baz=352						
ENA	**Nanau**	**0.14**	**247**	*i* P	Pg	06 26 26.9	-0.1
	baz=245						
ENA				S	Sg	06 26 29.4	+0.2
	baz=245						
NDT	**Datong Townshi**	**0.35**	**290**	*i* P	Pb	06 26 31.9	-0.4
	baz=290						
NDT				*i* S	Sg	06 26 36.4	+0.7
	baz=290						
NACB	**Ninganchiao**	**0.40**	**220**	P	Pg	06 26 31.6	-0.1
	baz=220						
NACB				S	Sg	06 26 37.3	+0.2
	baz=220						
NWLT	**Wulai**	**0.45**	**311**	P	Pg	06 26 33.3	+0.5
	baz=302						
NWLT				*e*S	Sg	06 26 39.6	+0.9
	baz=302						
ETLH	**Xiulin Townshi**	**0.45**	**233**	P	Pg	06 26 32.8	0.0
	baz=233						
ETLH				S	Sg	06 26 39.5	+0.7
	baz=233						
NNSB	**Datong**	**0.45**	**263**	P	Pg	06 26 33.1	+0.3
	baz=263						
NNSB				S	Sg	06 26 39.4	+0.6
	baz=263						
NNSH	**Datong**	**0.45**	**263**	*i* P	Pg	06 26 33.1	+0.3
	baz=264						
NNSH				*i* S	Sg	06 26 38.8	0.0
	baz=264						
NNS	**Nan Shan**	**0.46**	**265**	*e*P	Pg	06 26 32.9	-0.1
	baz=264						
NNS				S	Sg	06 26 39.6	+0.5
	baz=264						
TIPB	**Shuangxi**	**0.49**	**354**	P	Pb	06 26 34.4	-0.2
	baz=356						
TIPB				S	Sg	06 26 40.5	+0.6
	baz=356						
YHNB	**Yeheng**	**0.49**	**292**	P	Pb	06 26 34.4	-0.3
	baz=292						
YHNB				S	Sg	06 26 40.7	+0.6
	baz=292						
NSK	**Sanguang**	**0.51**	**292**	P	Pb	06 26 34.7	-0.2
	baz=298						
NSK				S	Sg	06 26 41.2	+0.5
	baz=298						
FUSS	**Fushou**	**0.62**	**248**	P	Pb	06 26 36.6	-0.4
	baz=248						
FUSS				S	Sb	06 26 45.3	-0.6
	baz=248						
TDCB	**Techi**	**0.69**	**251**	P	Pb	06 26 38.1	0.0
	baz=251						
TDCB				S	Sg	06 26 47.1	+0.6
	baz=251						
CHGB	**Renai**	**0.77**	**237**	*e*P	Pg	06 26 38.7	-0.1
	baz=224						

*IDC **19** 06:40:48.8±0.6, 37.43S×179.63E, h0km, mb4.8/8, mb1 4.8/10, mb1mx4.5/25, mbtmp4.7/10, ML4.1/2, MS3.8/9, Ms1 3.8/9, ms1mx3.5/23, Error ellipse: s-maj=21.5km s-min=18.4km az=35.0*

*BJI **19** 06:40:49.9±0.0, 38.07S×179.45E, h12km, mB5.6/3, mb5.2/5, Ms4.9/3, Ms7 4.6/3*

*WEL **19** 06:40:50.5±1.4, 38.3S×13.18W±1.6, h29km±36km, M4.7/17, ML5.0/17, MLv4.7/17, Error ellipse: s-maj=0.0km s-min=0.0km az=53.8*

*NEIC **19** 06:40:52.9±2.8, 37.69S±0.05×179.7E±0.1, h35km±2km, mb4.9/25, ML4.7(WEL), Error ellipse: s-maj=14.2km s-min=8.2km az=70.0*

ISC 19 06:40:53.0±1.1, 37.84S±0.05×179.80E±0.05, h31km±6km, n197, σ1°58/204, mb4.8/21, MS3.9/9, 1C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.10**	**270**	P	**Pn**	**06 41 11.6**	**-0.5**
WMGZ				S	**Sb**	**06 41 29.1**	**+1.7**
MXZ	**Matakaoa Point**	**1.22**	**282**	P	**Pn**	**06 41 12.5**	**-1.4**
MXZ				S	**Sn**	**06 41 30.0**	**+0.8**
MXZ	**Matakaoa Point**	**1.22**	**282**		**Pn**	**06 41 12.4**	**-1.4**
PUZ	**Puketiti**	**1.24**	**259**	P	**Pn**	**06 41 14.0**	**-0.2**
PUZ				S	**Sb**	**06 41 32.7**	**+1.1**
CNGZ	**Carnagh Statio**	**1.41**	**242**	P	**Pn**	**06 41 18.1**	**+1.5**
TWGZ	**Tauwhareparae**	**1.48**	**256**	P	**Pn**	**06 41 18.0**	**+0.5**
TWGZ				S	**Sb**	**06 41 39.6**	**+1.3**
HAZ	**Te Kaha**	**1.60**	**272**	P	**Pn**	**06 41 18.6**	**-0.5**
HAZ				S	**Sb**	**06 41 41.2**	**-0.5**
TKGZ	**Te Karaka**	**1.65**	**248**	P	**Pn**	**06 41 20.5**	**+0.7**
TKGZ				S	**Sb**	**06 41 43.5**	**+0.2**
RUGZ	**Raukumara Rang**	**1.69**	**265**	P	**Pn**	**06 41 19.8**	**-0.5**
RIGZ	**Rimuhau**	**1.83**	**241**	P	**Pn**	**06 41 23.1**	**+0.8**
RIGZ				S	**Sb**	**06 41 48.4**	**+0.2**
MWZ	**Matawai**	**1.86**	**254**	P	**Pn**	**06 41 22.4**	**-0.3**
MWZ				S	**Sn**	**06 41 47.5**	**+2.2**
MHGZ	**Mahia Peninsul**	**1.98**	**228**	P	**Pn**	**06 41 25.4**	**+1.0**
MHGZ				S	**Sb**	**06 41 53.6**	**+0.8**
RAGZ	**Rawiri**	**1.99**	**250**	P	**Pn**	**06 41 25.3**	**+0.7**
RAGZ				S	**Sn**	**06 41 51.2**	**+2.7**
KNZ	**Kokohu**	**2.05**	**234**	P	**Pn**	**06 41 25.5**	**+0.3**
URZ	**Urewera**	**2.17**	**258**	Pn	**Pn**	**06 41 27.3**	**+0.5**
	62nm,0.3s,baz=91,slow=1.3,SNR=253						
URZ				Sn	**Sn**	**06 41 55.0**	**+2.3**
	176nm,0.3s,baz=186,slow=20,SNR=22						
URZ	**Urewera**	**2.17**	**258**	P	**Pn**	**06 41 27.4**	**+0.5**
URZ				S	**Sn**	**06 41 55.5**	**+2.9**
URZ	**Urewera**	**2.17**	**258**		**Pn**	**06 41 26.8**	**-0.1**
WHRZ	**Whale Island**	**2.24**	**269**	P	**Pn**	**06 41 28.4**	**+0.5**
RTZ	**Ruatahuna**	**2.35**	**250**	P	**Pn**	**06 41 30.4**	**+0.9**
WHHZ	**Waihua**	**2.37**	**238**	P	**Pn**	**06 41 30.4**	**+0.7**
RAHZ	**Arahi**	**2.39**	**242**	P	**Pn**	**06 41 30.9**	**+0.9**
EDRZ	**Edgecumbe**	**2.44**	**263**	P	**Pn**	**06 41 31.8**	**+1.1**
MUGZ	**Murupara**	**2.47**	**254**	P	**Pn**	**06 41 31.3**	**+0.2**
MARZ	**Manawahe**	**2.48**	**266**	P	**Pn**	**06 41 31.7**	**+0.5**
MTHZ	**Maungataniwha**	**2.54**	**246**	P	**Pn**	**06 41 32.8**	**+0.8**
OPRZ	**Ohinepanea**	**2.57**	**269**	P	**Pn**	**06 41 31.8**	**-0.6**
ARHZ	**Aropaoanui**	**2.62**	**236**	P	**Pn**	**06 41 34.2**	**+1.1**
TARZ	**Mount Tarawera**	**2.63**	**260**	P	**Pn**	**06 41 33.9**	**+0.5**
RRRZ	**Republican Roa**	**2.64**	**258**	P	**Pn**	**06 41 34.0**	**+0.6**
NMHZ	**Naumai**	**2.67**	**241**	P	**Pn**	**06 41 34.8**	**+0.9**
OMRZ	**Omania**	**2.72**	**263**	P	**Pn**	**06 41 35.6**	**+1.0**
HLRZ	**Highlands Stat**	**2.75**	**260**	P	**Pn**	**06 41 36.4**	**+1.4**
PRRZ	**Plateau Road**	**2.77**	**255**	P	**Pn**	**06 41 35.7**	**-0.1**
CKHZ	**Cape Kidnapper**	**2.80**	**229**	P	**Pn**	**06 41 36.1**	**+0.5**
TGRZ	**Tauranga**	**2.81**	**271**	P	**Pn**	**06 41 35.0**	**-0.7**
KARZ	**Kaharoa**	**2.82**	**265**	P	**Pn**	**06 41 35.6**	**-0.3**
ALRZ	**Allen Road**	**2.82**	**254**	P	**Pn**	**06 41 36.0**	**+0.1**
HRRZ	**Handcock Road**	**2.83**	**258**	P	**Pn**	**06 41 36.3**	**+0.2**
MRHZ	**Matea Rd**	**2.84**	**248**	P	**Pn**	**06 41 36.6**	**+0.4**
HSRZ	**Hossack Road**	**2.85**	**259**	P	**Pn**	**06 41 36.9**	**+0.6**
UTU	**Utuhina**	**2.87**	**262**	P	**Pn**	**06 41 39.0**	**+2.4**
MYRZ	**Mayor Island**	**2.88**	**280**	P	**Pn**	**06 41 35.9**	**-0.9**
MCHZ	**McNeill Hill**	**2.91**	**236**	P	**Pn**	**06 41 37.7**	**+0.5**
BKZ	**Black Stump Fm**	**2.92**	**242**	P	**Pn**	**06 41 37.7**	**+0.5**
BKZ	**Black Stump Fm**	**2.92**	**242**		**Pn**	**06 41 37.5**	**+0.3**
BKZ				Sn	**Sn**	**06 42 10.4**	**-0.9**
WPRZ	**Whakapapatarin**	**2.95**	**255**	P	**Pn**	**06 41 37.9**	**+0.2**
GRRZ	**Galatos Road**	**2.96**	**259**	P	**Pn**	**06 41 40.0**	**+2.2**
KAHZ	**Kahuranaki**	**3.01**	**229**	P	**Pn**	**06 41 38.8**	**+0.3**
KWHZ	**Kaweka Forest**	**3.09**	**238**	P	**Pn**	**06 41 40.5**	**+0.9**
PXZ	**Pawanui**	**3.17**	**225**	P	**Pn**	**06 41 40.1**	**-0.2**
KUTZ	**Kaahu Road**	**3.20**	**257**	P	**Pn**	**06 41 42.8**	**+1.6**
KRHZ	**Kereru**	**3.23**	**235**	P	**Pn**	**06 41 41.7**	**+0.1**
RITZ	**Rihia Road**	**3.30**	**249**	P	**Pn**	**06 41 43.1**	**+0.6**
RATZ	**Rangitukua**	**3.33**	**251**	P	**Pn**	**06 41 44.2**	**+1.2**
BHHZ	**Black Hill Sta**	**3.36**	**239**	P	**Pn**	**06 41 44.0**	**+0.7**

TBI	**Tubuai**	**29.98**	**70**	*eT*	T		07 18 09.3	
	36nm,0.3s							
STKA	**Stephens Creek**	**31.75**	**269**	P	**P**		**06 47 13.6**	**-0.7**
	8.5nm,0.9s,baz=105,slow=10,SNR=13							
STKA				LR	LR		06 59 25.1	
	comp=Z,157nm,19.6s,baz=102,slow=35							
STKA	**Stephens Creek**	**31.75**	**269**	P	**P**		**06 47 13.4**	**-0.9**
PAE	**Paea**	**33.50**	**62**	*eT*	T		07 22 31.2	
	3.5nm,0.3s							
PPT2	**Papeete2**	**33.55**	**62**	*eT*	T		07 22 35.8	
	4.3nm,0.3s							
TVO	**Taravao**	**33.65**	**62**	*eT*	T		07 22 42.6	
	1.3nm,0.3s							
CTAO	**Charters Tower**	**34.03**	**292**	P	**P**		**06 47 33.3**	**-0.9**
CTAO				IAmb	IAmb		06 47 34.2	
	comp=Z,13nm,0.8s							
BBOO	**Buckleboo**	**35.80**	**265**	P	**P**		**06 47 48.9**	**-0.5**
BBOO				IAmb	IAmb		06 47 59.9	
	comp=Z,27nm,1.4s							
VAH	**Vaihoa**	**36.52**	**61**	*eT*	T		07 26 17.0	
	comp=Z,6.2nm,0.3s							
COEN	**Coen**	**40.24**	**296**	P	**P**		**06 48 25.8**	**-1.3**
VNDA	**Vanda**	**40.53**	**186**	LR	LR		07 03 24.4	
	comp=Z,66nm,18.1s,baz=18,slow=33							
AS31	**Alice Springs**	**41.49**	**276**	P	**P**		**06 48 36.1**	**-1.2**
ASAR	**Alice Springs**	**41.49**	**276**	P	**P**		**06 48 36.0**	**-1.4**
	comp=Z,19nm,0.9s,baz=118,slow=7.3,SNR=139							
ASAR				PcP	**PcP**		**06 50 33.8**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=128,slow=4.3,SNR=1.7							
ASAR				ScP	**ScP**		**06 54 24.9**	**+2.6**
	comp=Z,0.5nm,0.9s,baz=126,slow=6.0,SNR=3.9							
ASAR				S	**S**		**06 54 49.0**	**-1.9**
	comp=Z,2.0nm,1.1s,baz=126,slow=13,SNR=8.8							
ASAR				LR	LR		07 06 47.3	
	comp=Z,112nm,18.1s,baz=134,slow=38							
ASAR	**Alice Springs**	**41.49**	**276**	P	**P**		**06 48 35.4**	**-1.9**
FORT	**Forrest**	**42.87**	**263**	P	**P**		**06 48 47.7**	**-0.7**
FORT				IAmb	IAmb		06 48 52.9	
	comp=Z,28nm,0.7s							
WR0	**Warramunga Arr**	**42.99**	**281**	P	**P**		**06 48 47.8**	**-1.7**
WR0				IAmb	IAmb		06 48 49.4	
	comp=Z,19nm,0.9s							
WB2	**Warramunga Arr**	**43.14**	**281**	P	**P**		**06 48 49.4**	**-1.3**
WB2				IAmb	IAmb		06 48 50.1	
	comp=Z,32nm,1.1s							
WRAB	**Tennant Creek**	**43.15**	**281**	P	**P**		**06 48 49.1**	**-1.7**
WRAB				IAmb	IAmb		06 48 50.1	
	comp=Z,21nm,0.9s							
WRA	**Warramunga Arr**	**43.15**	**281**	P	**P**		**06 48 49.1**	**-1.7**
	comp=Z,19nm,0.9s,baz=121,slow=7.9,SNR=115							
WRA				PcP	**PcP**		**06 50 40.0**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=119,slow=3.2,SNR=4.1							
WRA				LR	LR		07 07 58.3	
	comp=Z,147nm,18.6s,baz=100,slow=38							
WRA	**Warramunga Arr**	**43.15**	**281**	P	**P**		**06 48 49.2**	**-1.7**
WB0	**Warramunga Arr**	**43.21**	**282**	P	**P**		**06 48 49.6**	**-1.7**
WB0				IAmb	IAmb		06 48 50.5	
	comp=Z,20nm,0.9s							
MTN	**Manton Dam**	**49.84**	**287**	IAmb	IAmb		06 49 42.5	
	comp=Z,9.9nm,1.1s							
FITZ	**Fitzroy Crossi**	**50.98**	**277**	P	**P**		**06 49 50.9**	**-1.0**
FITZ				IAmb	IAmb		06 49 52.0	
	comp=Z,20nm,0.9s							
QSPA	**South Pole Qui**	**52.29**	**180**	P	**P**		**06 50 05.5**	**+4.2**
	comp=Z,17nm,0.9s,baz=35,slow=1.8,SNR=43							
QSPA	**South Pole Qui**	**52.29**	**180**	P	**P**		**06 50 03.3**	**+2.1**
QSPA				IAmb	IAmb		06 50 06.9	
	comp=Z,21nm,0.9s							
SOEI	**Soe**	**57.01**	**284**	P	**P**		**06 50 34.4**	**-1.7**
	comp=Z,44nm,1.2s							
MLOA	**Mauna Loa Obse**	**61.59**	**27**	P	**P**		**06 51 05.0**	**-2.9**
BELA	**Belgrano 2**	**62.68**	**172**	P	**P**		**06 51 16.2**	**+2.1**
TWSI	**Taliwang, Sumb**	**63.35**	**280**	P	**P**		06 51 13.8	-5.6
MAW	**Mawson**	**64.74**	**202**	P	**P**		**06 51 30.1**	**+2.4**
	comp=Z,5.6nm,1.1s,baz=106,slow=4.2,SNR=6.4							
MAW				LR	LR		07 18 18.5	
	comp=Z,88nm,19.7s,baz=74,slow=35							
MPSI	**Mapaga**	**66.83**	**290**	P	**P**		**06 51 42.4**	**+0.4**
SYO	**Syowa Base**	**69.48**	**194**	*ep*	pP		06 52 07.4	+1.0
SNAA	**Sanae**	**70.78**	**179**	P	**P**		**06 52 08.4**	**+2.6**
SNAA	**Sanae**	**70.78**	**179**	P	**P**		**06 52 06.9**	**+1.1**
SNAA				IAmb	IAmb		06 52 09.6	
	comp=Z,13nm,1.3s							
VNA3	**Neumayer Olymp**	**71.01**	**177**	P	**P**		**06 52 09.4**	**+2.2**
VNA2	**Neumayer--Watz**	**71.42**	**178**	P	**P**		**06 52 12.4**	**+2.8**
	baz=178,slow=6.7							
VNA1	**Neumayer--Stat**	**71.66**	**177**	P	**P**		**06 52 13.1**	**+2.0**
H03S2	**Juan Fernandez**	**77.89**	**123**	T	T		08 18 32.9	
	baz=231,slow=74,SNR=36							
H03S1	**Juan Fernandez**	**77.90**	**123**	T	T		08 18 29.1	
	baz=231,slow=74,SNR=37							
H03S3	**Juan Fernandez**	**77.91**	**123**	T	T		08 18 43.8	
	baz=231,slow=74,SNR=42							
H03N3	**Juan Fernandez**	**78.13**	**123**	T	T		08 18 46.5	
	baz=234,slow=72,SNR=115							
H03N2	**Juan Fernandez**	**78.13**	**123**	T	T		08 18 50.9	
	baz=234,slow=72,SNR=105							
H03N1	**Juan Fernandez**	**78.14**	**123**	T	T		08 18 54.2	
	baz=234,slow=72,SNR=116							
PLCA	**Paso Flores**	**78.77**	**133**	P	**P**		**06 52 55.6**	**+3.0**
	comp=Z,12nm,1.1s,baz=229,slow=4.1,SNR=10							
PLCA	**Paso Flores**	**78.77**	**133**	P	**P**		**06 52 54.3**	**+1.7**
PLCA				IAmb	IAmb		06 52 56.9	
	comp=Z,17nm,1.1s							
BI02	**San Fabin de**	**80.99**	**130**	P	**P**		**06 53 06.7**	**+2.0**
BI02				IAmb	IAmb		06 53 09.3	
	comp=Z,16nm,1.0s							
BO02	**Sierra Bellavi**	**82.51**	**128**	P	**P**		**06 53 14.3**	**+1.5**
PEL	**Peldehue**	**83.66**	**127**	P	**P**		**06 53 19.8**	**+1.1**
CO01	**Juntas del Tor**	**86.13**	**125**	P	**P**		**06 53 31.1**	**-0.4**
NJ2	**Nanjing**	**89.78**	**312**	*eP*	**P**		**06 53 50.8**	**+2.6**
NJ2				pmax	pmax			
	comp=Z,13nm,0.6s							
USRK	**Ussuriysk Ar.**	**92.40**	**328**	LR	LR		07 27 19.5	
	comp=Z,33nm,21.7s,baz=33,slow=30							
PETK	**Petropavlovsk-**	**92.58**	**347**	P	**P**		**06 54 00.5**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=142,slow=7.3,SNR=3.4							
CMAR	**Chiang Mai Arr**	**94.18**	**290**	P	**P**		**06 54 08.7**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=151,slow=4.9,SNR=4.6							
CPUP	**Villa Florida**	**96.67**	**131**	LR	LR		07 30 24.0	
	comp=Z,111nm,21.1s,baz=274,slow=31							
HHC	**Hu-ho-hao-te**	**100.10**	**314**	*eP*	**Pdif**		**06 54 37.1**	**+1.8**
HHC				pmax	pmax			
	comp=Z,100nm,7.5s							
HHC				LR	LR			
	comp=Z,150nm,18.6s							
HHC				LR	LR			
	comp=Z,160nm,17.6s							
HHC				LR	LR			
	comp=Z,77nm,17.7s							
LZH	**Lanzhou**	**101.69**	**307**	*eP*	**Pdif**		**06 54 44.9**	**+2.3**
LZH				pP	sPdif		06 54 53.5	-1.2
LZH				sP	pwP		06 54 56.3	-0.1
LZH				pmax	pmax			
	comp=Z,79nm,7.0s							
LZH				LR	LR			
	comp=Z,110nm,17.0s							
LZH				LR	LR			
	comp=Z,130nm,17.2s							
LZH				LR	LR			
	comp=Z,160nm,19.7s							
WMQ	**Urumqi**	**116.27**	**306**	*eP*	**PKiKP**		**06 59 33.9**	**+1.0**
MKAR	**Makanchi Array**	**120.99**	**307**	PKP	**PKPdf**		**06 59 41.5**	**-0.4**
	comp=Z,0.6nm,1.0s,baz=95,slow=1.6,SNR=2.4							
ZALV	**Zalesovo Beam**	**122.23**	**316**	PKP	**PKiKP**		**06 59 44.4**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=86,slow=4.8,SNR=1.7							
NRIK	**Noril'sk**	**125.60**	**334**	PKP	**PKiKP**		**06 59 50.2**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=108,slow=6.4,SNR=1.7							
ARCES	**ARCESS Array B**	**145.36**	**344**	PKP	**PKPbc**		**07 00 26.4**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=25,slow=3.3,SNR=17							
KLMR	**Klimovskoe**	**146.18**	**326**	*eP*	**PKPdf**		**07 00 27.5**	**-0.6**
KLMR				AMP			07 00 37.0	
	comp=Z,67nm,1.4s							
KBZ	**Khabaz**	**147.13**	**294**	PKPbc	**PKPbc**		**07 00 32.6**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=56,slow=24,SNR=1.9							
DBIC	**Dimbokro**	**148.69**	**171**	PKPbc	**PKiKP**		**07 00 38.9**	**-0.1**
	comp=Z,7.9nm,1.0s,baz=150,slow=4.9,SNR=4.4							
FINES	**FINESS Array B**	**151.26**	**334**	PKPbc	**PKPbc**		**07 00 41.9**	**-0.4**
	comp=Z,2.5nm,0.5s,baz=19,slow=4.4,SNR=16							
FINES				PKPab	**sPKPdf**		**07 00 49.1**	**+0.6**
	comp=Z,5.7nm,0.6s,baz=36,slow=4.0,SNR=18							
FINES	**FINESS Array B**	**151.26**	**334**		**PKPbc**		**07 00 42.1**	**-0.2**
BRTR	**Keskin Array B**	**153.64**	**285**	PKPbc	**PKPbc**		**07 00 48.5**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=183,slow=2.5,SNR=4.4							
TORD	**Torodi Ar. Bea**	**155.36**	**184**	PKPbc	PKPdf		07 00 53.5	+10
	comp=Z,0.5nm,0.8s,baz=159,slow=2.2,SNR=2.6							
TORD				PKPab	**PKPab**		**07 01 10.4**	**+1.6**
	comp=Z,3.7nm,0.9s,baz=174,slow=3.7,SNR=14							
TORD	**Torodi Ar. Bea**	**155.36**	**184**	PKPdf	**PKPdf**		**07 00 43.9**	**+0.2**
AKASG	**Malin Array Be**	**155.50**	**311**	PKP	**PKPdf**		**07 00 42.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=53,slow=2.4,SNR=4.2							
AKASG				PKPab	**PKPab**		**07 01 08.0**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=160,slow=6.1,SNR=4.1							
AKASG	**Malin Array Be**	**155.50**	**311**		**PKPdf**		**07 00 41.9**	**-0.9**
NOA	**NORSAR Array B**	**155.69**	**346**	PKPab	**PKPab**		**07 01 08.0**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=27,slow=3.4,SNR=2.9							
CLL	**Collm**	**163.61**	**329**	*e*	PKPab	**PKPab**	**07 01 44.0**	**+0.1**
CLL				*e*			07 01 49.0	

DJA 19 06:49:57.9±0.5, 1°N±3°×10°0E±°, h151km±6km, M3.8/9, mb4.2/2, MLv3.5/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.50**	**306**	P	Pn	06 50 20.1	+0.8
MNSI				S	Sn	06 50 37.9	+2.3
BKNI	**Bangkinang**	**1.07**	**99**	P	Pn	06 50 23.3	-0.1
PBSI	**Pulau Batu**	**1.79**	**252**	P	Pn	06 50 31.6	+0.9
PBSI				S	Sn	06 50 56.2	+0.4
SISI	**Saibi**	**2.02**	**206**	P	Pn	06 50 33.6	+0.2
SISI				S	Sn	06 51 01.1	+0.5
SDSI	**Sungai Dareh**	**2.03**	**134**	P	Pn	06 50 33.9	+0.5
GSI	**Gunungsitoli**	**2.53**	**288**	P	Pn	06 50 39.8	+0.3
KCSI	**Kotacane, Aceh**	**3.73**	**324**	P	Pn	06 50 54.8	+0.1
TPTI		**3.92**	**314**	P	Pn	06 50 57.1	0.0
LHSI	**Lahat**	**5.57**	**141**	P	Pn	06 51 19.8	+0.9
MNAI	**Manna**	**5.67**	**148**	P	Pn	06 51 19.2	-1.1
	0.9nm129nm,1.6s						

IDC 19 06:57:06.7±22.0, 3°13S×67°61E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/48, mbtmp3.8/3, MS2.9/1, Ms1 3.1/1, ms1mx2.6/38, Error ellipse: s-maj=665.4km s-min=46.4km az=73.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**37.58**	**54**	LR	LR	07 18 17.1	
	comp=Z,19nm,19.4s,baz=125,slow=34						
SONM	**Songino Array**	**61.03**	**29**	P	P	07 07 22.2	-0.1
	0.6nm,0.4s,baz=231,slow=4.6,SNR=4.4						
ASAR	**Alice Springs**	**67.06**	**114**	P	P	07 08 02.5	+0.1
	0.7nm,0.8s,baz=260,slow=11,SNR=4.2						
WRA	**Warramunga Arr**	**67.08**	**110**	P	P	07 08 02.5	0.0
	0.8nm,0.7s,baz=284,slow=6.3,SNR=9.5						

WEL 19 07:07:42.4, 37°S±4°×17°7E±°, h219km±6km, M2.9/30, MLv2.9/30, Error ellipse: s-maj=0.0km s-min=0.0km az=177.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OMRZ	**Omania**	**0.63**	**190**	P	Pn	07 08 12.6	+0.5
TOZ	**Tahuroa Road**	**0.84**	**253**	P	Pn	07 08 13.8	+0.7
URZ	**Urewera**	**0.91**	**148**	P	Pn	07 08 12.9	-0.6
URZ				S	S	07 08 36.0	-1.8
GRRZ	**Galatos Road**	**0.92**	**200**	P	Pn	07 08 14.3	+0.7
KUZ	**Kuaotunu**	**0.97**	**319**	P	Pn	07 08 14.0	+0.1
MUGZ	**Murupara**	**1.01**	**168**	P	Pn	07 08 13.9	-0.2
MUGZ				S	S	07 08 36.0	-3.0
RUGZ	**Raukumara Rang**	**1.04**	**118**	P	Pn	07 08 13.3	-1.2
RUGZ				S	S	07 08 36.9	-2.6
HAZ	**Te Kaha**	**1.05**	**105**	P	Pn	07 08 13.6	-0.7
HAZ				S	S	07 08 37.1	-2.0
WPRZ	**Whakapapatarin**	**1.07**	**195**	P	Pn	07 08 15.0	+0.5
ALRZ	**Allen Road**	**1.08**	**187**	P	Pn	07 08 14.8	+0.2
MKAZ	**Moumakai**	**1.14**	**289**	P	Pn	07 08 15.2	+0.2
MWZ	**Matawai**	**1.17**	**137**	P	Pn	07 08 14.7	-0.5
MWZ				S	S	07 08 39.5	-1.4
RTZ	**Ruatahuna**	**1.19**	**162**	P	Pn	07 08 15.2	-0.1
RAGZ	**Rawiri**	**1.23**	**145**	P	Pn	07 08 15.8	+0.1
RAGZ				S	S	07 08 41.2	-0.6
MRHZ	**Matea Rd**	**1.35**	**183**	P	Pn	07 08 16.3	-0.3
TWGZ	**Tauwhareparae**	**1.35**	**121**	P	Pn	07 08 17.1	+0.5
TWGZ				S	S	07 08 42.8	-0.4
ETAZ	**East Tamaki Re**	**1.37**	**292**	P	Pn	07 08 17.3	+0.6
MTHZ	**Maungataniwha**	**1.39**	**169**	P	Pn	07 08 16.7	-0.1
MTHZ				S	S	07 08 43.3	-0.5
TKGZ	**Te Karaka**	**1.42**	**132**	P	Pn	07 08 17.1	+0.1
TKGZ				S	S	07 08 42.3	-1.7
MXZ	**Matakaoa Point**	**1.43**	**94**	P	Pn	07 08 17.0	-0.2
MXZ				S	S	07 08 43.3	-0.8
RATZ	**Rangitukua**	**1.49**	**203**	P	Pn	07 08 17.9	+0.2
GRZ	**Great Barrier**	**1.50**	**325**	P	Pn	07 08 17.8	+0.1
RAHZ	**Arahi**	**1.50**	**162**	P	Pn	07 08 18.1	+0.4
RAHZ				S	S	07 08 44.9	-0.5
PUZ	**Puketiti**	**1.50**	**113**	P	Pn	07 08 17.6	-0.2
AWAZ	**Awhitu Peninsu**	**1.55**	**285**	P	Pn	07 08 18.6	+0.4
WMGZ	**Waiomatatini S**	**1.55**	**103**	P	Pn	07 08 18.2	+0.1
RIGZ	**Rimuhau**	**1.57**	**141**	P	Pn	07 08 18.7	+0.4
RITZ	**Rihia Road**	**1.57**	**199**	P	Pn	07 08 18.8	+0.5
NMHZ	**Naumai**	**1.62**	**172**	P	Pn	07 08 19.4	+0.6
CNHZ	**Carnagh Statio**	**1.67**	**127**	P	Pn	07 08 19.9	+0.7
BKZ	**Black Stump Fm**	**1.68**	**180**	P	Pn	07 08 18.7	-0.1
WHHZ	**Waihua**	**1.69**	**160**	P	Pn	07 08 19.6	+0.3
TMVZ	**Te Maari**	**1.74**	**201**	P	Pn	07 08 19.9	-0.1
ETVZ	**East Tongariro**	**1.76**	**201**	P	Pn	07 08 20.0	-0.2
WTVZ	**West Tongariro**	**1.78**	**204**	P	Pn	07 08 20.3	0.0
KNZ	**Kokohu**	**1.79**	**149**	P	Pn	07 08 20.1	-0.1
TWVZ	**Taurewa**	**1.79**	**208**	P	Pn	07 08 20.3	-0.1
PRGZ	**Paritu Road**	**1.80**	**143**	P	Pn	07 08 20.6	+0.3
ARHZ	**Aropaoanui**	**1.81**	**168**	P	Pn	07 08 20.7	+0.3
NGZ	**Ngauruhoe**	**1.83**	**203**	P	Pn	07 08 21.2	+0.4
FWVZ	**Far West T-bar**	**1.92**	**203**	P	Pn	07 08 21.5	-0.2
WHVZ	**Whangaehu Hut**	**1.93**	**202**	P	Pn	07 08 21.7	-0.1
MCHZ	**McNeill Hill**	**1.96**	**176**	P	Pn	07 08 22.1	+0.3
WNVZ	**Wahianoa**	**1.97**	**201**	P	Pn	07 08 21.8	-0.3
MHGZ	**Mahia Peninsul**	**1.99**	**147**	P	Pn	07 08 22.2	0.0
MOVZ	**Moawhango**	**2.01**	**197**	P	Pn	07 08 21.6	-0.8
PKVZ	**Pokaka**	**2.02**	**207**	P	Pn	07 08 22.3	-0.2
BHHZ	**Black Hill Sta**	**2.03**	**190**	P	Pn	07 08 21.9	-0.7
MTVZ	**Mangateitei**	**2.06**	**203**	P	Pn	07 08 21.5	-1.5
VRZ	**Vera Road**	**2.14**	**220**	P	Pn	07 08 24.3	+0.7
KRHZ	**Kereru**	**2.15**	**183**	P	Pn	07 08 21.3	-2.5
KRHZ				P	Pn	07 08 21.4	-2.5
CKHZ	**Cape Kidnapper**	**2.21**	**169**	P	Pn	07 08 24.2	-0.2
KAHZ	**Kahuranaki**	**2.32**	**173**	P	Pn	07 08 25.3	-0.2
WCZ	**Waipu Caves**	**2.33**	**311**	P	Pn	07 08 26.0	+0.3
PNHZ	**Pukenui**	**2.43**	**186**	P	Pn	07 08 26.0	-0.7
WAZ	**Wanganui**	**2.56**	**207**	P	Pn	07 08 27.8	-0.3
WPHZ	**Waipukurau**	**2.57**	**181**	P	Pn	07 08 27.4	-0.7
DVHZ	**Dannevirke**	**2.82**	**185**	P	Pn	07 08 29.6	-1.3
PRWZ	**Pori Road**	**3.09**	**188**	P	Pn	07 08 32.8	-1.1
BFZ	**Birch Farm**	**3.20**	**184**	P	Pn	07 08 33.9	-1.3
MRZ	**Mangatainoka R**	**3.25**	**193**	P	Pn	07 08 33.9	-1.9
OUZ	**Omahuta**	**3.26**	**313**	P	Pn	07 08 36.1	0.0
CPWZ	**Castlepoint**	**3.43**	**184**	P	Pn	07 08 37.3	-0.5
OGWZ	**Otaki Gorge**	**3.48**	**197**	P	Pn	07 08 36.9	-1.6
KIW	**Kapiti Island**	**3.59**	**200**	P	Pn	07 08 37.7	-2.1
TMWZ	**Te Maipa**	**3.65**	**187**	P	Pn	07 08 38.8	-1.8
MTW	**Mount Morrison**	**3.75**	**192**	P	Pn	07 08 39.2	-2.5
CAW	**Cannon Point**	**3.78**	**197**	P	Pn	07 08 39.9	-2.2
DUWZ	**D'Urville Isla**	**3.87**	**210**	P	Pn	07 08 41.0	-2.2
TRWZ	**Traveller**	**3.96**	**189**	P	Pn	07 08 42.6	-1.6
MSWZ	**Moikau Station**	**4.04**	**194**	P	Pn	07 08 42.6	-2.7
TCW	**Tory Channel**	**4.10**	**204**	P	Pn	07 08 43.6	-2.4
BHW	**Baring Head**	**4.12**	**197**	P	Pn	07 08 43.5	-2.6
PLWZ	**Palliser**	**4.19**	**193**	P	Pn	07 08 44.4	-2.7
TUWZ	**Tuamarina**	**4.41**	**206**	P	Pn	07 08 47.2	-2.6
NNZ	**Nelson**	**4.44**	**212**	P	Pn	07 08 47.7	-2.4
QRZ	**Quartz Range**	**4.55**	**222**	P	Pn	07 08 48.9	-2.6
BSWZ	**Blackbirch Sta**	**4.69**	**205**	P	Pn	07 08 50.8	-2.4
THZ	**Tophouse**	**5.09**	**212**	P	Pn	07 08 55.7	-2.6
KHZ	**Kahutara**	**5.42**	**204**	P	Pn	07 08 59.8	-2.7
DSZ	**Denniston Nort**	**5.59**	**219**	P	Pn	07 09 01.1	-3.6
GVZ	**Greta Valley S**	**6.08**	**205**	P	Pn	07 09 08.2	-2.6
LTZ	**Lake Taylor**	**6.20**	**210**	P	Pn	07 09 09.2	-3.2
INZ	**Inchbonnie**	**6.51**	**215**	P	Pn	07 09 12.9	-3.5
MQZ	**McQueen's Vall**	**6.87**	**204**	P	Pn	07 09 16.5	-4.3
RPZ	**Rata Peaks**	**7.48**	**212**	P	Pn	07 09 31.1	+2.3
ARCZ	**Arundel**	**7.62**	**210**	P	Pn	07 09 26.8	-3.7

IDC 19 07:10:27.3±3.1, 33°63S×179°28W, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.6/26, mbtmp3.6/3, ML3.8/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/18, Error ellipse: s-maj=71.2km s-min=46.9km az=117.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.47**	**211**	Pn	Pn	07 11 49.9	-0.1
	2.8nm,0.3s,baz=33,slow=15,SNR=7.1						
URZ				Sn	Sn	07 12 49.7	-4.0
	0.9nm,0.3s,baz=52,slow=20,SNR=1.3						
DZM	**Mont Dzumac**	**17.07**	**309**	LR	LR	07 19 17.3	
	comp=Z,54nm,20.0s,baz=47,slow=31						
KRVT	**Keravat (AS076**	**39.56**	**311**	LR	LR	07 29 46.4	
	comp=Z,54nm,21.8s,baz=85,slow=29						
ASAR	**Alice Springs**	**41.97**	**271**	P	P	07 18 20.4	+0.2
	0.3nm,0.7s,baz=112,slow=8.3,SNR=4.7						
WRA	**Warramunga Arr**	**43.25**	**276**	P	P	07 18 30.3	-0.4
	0.5nm,0.5s,baz=118,slow=7.5,SNR=10.0						
FINES	**FINESS Array B**	**147.75**	**337**	PKPbc	PKPbc	07 30 12.6	-0.6
	3.8nm,1.1s,baz=28,slow=3.3,SNR=4.4						

IDC 19 07:20:37.8±4.6, 7.°58N×94.°62E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/43, mbtmp3.4/4, Error ellipse: s-maj=269.1km s-min=23.9km az=59.0

ISC 19 07:20:44.2±1.7, 7.°9N±0.°2×95.°1E±0.°3, h35km, n9, σ1s54/7, mb3.5/4, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CM34	**Chiang Mai Arr**	**11.62**	**19**	P	**Pn**	**07 23 30.0**	**+2.3**
PAYA	**Payao**	**12.34**	**22**	P	**Pn**	**07 23 35.6**	**-2.0**
H08S3	**Diego Garcia H**	**27.28**	**236**	T	T	07 52 56.2	
	baz=55,slow=75,SNR=23						
H08S2	**Diego Garcia H**	**27.28**	**236**	T	T	07 52 51.4	
	baz=55,slow=75,SNR=16						
H08S1	**Diego Garcia H**	**27.30**	**236**	T	T	07 52 57.4	
	baz=55,slow=75,SNR=12						
MKAR	**Makanchi Array**	**40.32**	**346**	P	**P**	**07 28 18.0**	**-0.3**
	0.6nm,0.7s,baz=165,slow=8.6,SNR=7.2						
KURBB	**Kurchatov Arra**	**44.80**	**345**	P	**P**	**07 28 54.5**	**-0.1**
	1.0nm,0.8s,baz=170,slow=7.4,SNR=9.2						
WRA	**Warramunga Arr**	**47.49**	**126**	P	**P**	**07 29 16.3**	**+0.1**
	0.1nm,0.6s,baz=305,slow=8.6,SNR=1.9						
WRA				PcP	**PcP**	**07 30 46.0**	**-0.2**
	0.2nm,0.8s,baz=310,slow=3.5,SNR=1.2						
ASAR	**Alice Springs**	**49.19**	**131**	P	**P**	**07 29 29.6**	**+0.3**
	0.2nm,0.4s,baz=298,slow=8.0,SNR=2.6						

BUC 19 07:24:23.0±0.4, 45.°49N×26.°36E, h127km±2km, ml3.6/42, Error ellipse: s-maj=2.3km s-min=1.8km az=149.0

ISC 19 07:24:21.8±1.3, 45.°50N±0.°03×26.°35E±0.°02, h139km±6km, n102, σ0s83/171, 117C-52D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEHR	**Nehoiu**	**0.08**	**206**	↑P	**Pn**	**07 24 41.2**	**+0.6**
NEHR				↑S	**Sn**	**07 24 54.4**	**-0.4**
NEHR	**Nehoiu**	**0.08**	**206**	↑P	**Pn**	**07 24 41.2**	**+0.6**
NEHR				↑S	**Sn**	**07 24 54.4**	**-0.4**
BISRR	**Bisoca**	**0.26**	**80**	↑P	**Pn**	**07 24 41.5**	**+0.6**
BISRR				↑S	**Sn**	**07 24 54.7**	**-0.8**
BISRR	**Bisoca**	**0.26**	**80**	↑P	**Pn**	**07 24 41.5**	**+0.6**
BISRR				↑S	**Sn**

SGRR	**Singureni**	**1.31**	**192**	⇑P		**Pn**	**07 24 49.0**	**+0.6**
SGRR				⇓S		**Sn**	**07 25 08.2**	**-0.6**
SGRR	**Singureni**	**1.31**	**192**	⇑P		**Pn**	**07 24 49.0**	**+0.6**
SGRR				⇓S		**Sn**	**07 25 08.2**	**-0.6**
HUMR	**Humele**	**1.37**	**225**	⇑P		**Pn**	**07 24 49.7**	**+0.5**
HUMR				⇓S		**Sn**	**07 25 09.6**	**-0.4**
HUMR	**Humele**	**1.37**	**225**	⇑P		**Pn**	**07 24 49.7**	**+0.5**
HUMR				⇓S		**Sn**	**07 25 09.6**	**-0.4**
BIZ	**Bicaz**	**1.45**	**353**	⇓S		**Sn**	**07 25 11.7**	**+0.3**
BIZ	**Bicaz**	**1.45**	**353**	⇓S		**Sn**	**07 25 11.7**	**+0.3**
VASR	**Vaslui**	**1.52**	**41**	⇑P		**Pn**	**07 24 51.6**	**+0.9**
VASR				⇑S		**Sn**	**07 25 11.9**	**-0.9**
VASR	**Vaslui**	**1.52**	**41**	⇑P		**Pn**	**07 24 51.6**	**+0.9**
VASR				⇑S		**Sn**	**07 25 11.9**	**-0.9**
TLBR	**Topalu**	**1.54**	**128**	⇓P		**Pn**	**07 24 51.7**	**+0.7**
TLBR				⇑S		**Sn**	**07 25 12.0**	**-1.1**
TLBR	**Topalu**	**1.54**	**128**	⇓P		**Pn**	**07 24 51.7**	**+0.7**
TLBR				⇑S		**Sn**	**07 25 12.0**	**-1.1**
COPA	**Copaceanca**	**1.59**	**211**	⇑P		**Pn**	**07 24 52.1**	**+0.6**
COPA				⇑S		**Sn**	**07 25 13.5**	**-0.5**
COPA	**Copaceanca**	**1.59**	**211**	⇑P		**Pn**	**07 24 52.1**	**+0.6**
COPA				⇑S		**Sn**	**07 25 13.5**	**-0.5**
TPGR	**Topolog**	**1.60**	**113**	⇑P		**Pn**	**07 24 52.2**	**+0.5**
TPGR				⇑S		**Sn**	**07 25 13.2**	**-1.3**
TPGR	**Topolog**	**1.60**	**113**	⇑P		**Pn**	**07 24 52.2**	**+0.5**
TPGR				⇑S		**Sn**	**07 25 13.2**	**-1.3**
CVDA	**Cernavoda**	**1.68**	**134**	⇑S		**Sn**	**07 25 15.0**	**-0.9**
CVDA	**Cernavoda**	**1.68**	**134**	⇑S		**Sn**	**07 25 15.0**	**-0.9**
ICOR	**Ion Corvin**	**1.73**	**143**	⇑S		**Sn**	**07 25 16.1**	**-0.9**
ICOR	**Ion Corvin**	**1.73**	**143**	⇑S		**Sn**	**07 25 16.1**	**-0.9**
TLCR		**1.77**	**99**	⇑P		**Pn**	**07 24 54.4**	**+0.9**
TLCR				⇑S		**Sn**	**07 25 17.6**	**-0.2**
TLCR		**1.77**	**99**	⇑P		**Pn**	**07 24 54.4**	**+0.9**
TLCR				⇑S		**Sn**	**07 25 17.6**	**-0.2**
TIRR	**Tirgusor**	**1.80**	**125**	⇓S		**Sn**	**07 25 16.8**	**-1.6**
TIRR	**Tirgusor**	**1.80**	**125**	⇓S		**Sn**	**07 25 16.8**	**-1.6**
LOT	**Lotru**	**1.81**	**269**	⇑S		**Sn**	**07 25 18.9**	**-0.1**
LOT	**Lotru**	**1.81**	**269**	⇑S		**Sn**	**07 25 18.9**	**-0.1**
IAS	**Iasi**	**1.89**	**26**	⇓P		**Pn**	**07 24 56.4**	**+1.6**
IAS	**Iasi**	**1.89**	**26**	⇓P		**Pn**	**07 24 56.4**	**+1.6**
ZIMR		**1.97**	**201**	⇑S		**Sn**	**07 25 21.0**	**-1.0**
ZIMR		**1.97**	**201**	⇑S		**Sn**	**07 25 21.0**	**-1.0**
VLAD	**Vladila**	**2.04**	**223**	⇓P		**Pn**	**07 24 57.2**	**+0.4**
VLAD				⇓S		**Sn**	**07 25 22.2**	**-1.3**
VLAD	**Vladila**	**2.04**	**223**	⇓P		**Pn**	**07 24 57.2**	**+0.4**
VLAD				⇓S		**Sn**	**07 25 22.2**	**-1.3**
MILM	**Milestii Mici**	**2.22**	**50**	⇓P		**Pn**	**07 24 59.7**	**+0.8**
MILM				⇓S		**Sn**	**07 25 26.4**	**-1.0**
MILM	**Milestii Mici**	**2.22**	**50**	⇓P		**Pn**	**07 24 59.7**	**+0.8**
MILM				⇓S		**Sn**	**07 25 26.4**	**-1.0**
SZH	**Strazhica**	**2.25**	**188**	*e*P		**Pn**	**07 24 59.3**	**-0.1**
KIS	**Kishinev**	**2.27**	**48**	⇑*i*P		**Pn**	**07 25 00.5**	**+1.0**
KIS	70nm,0.2s			*e*S		**Sn**	**07 25 27.4**	**-1.2**
	130nm,0.4s							
KIS	**Kishinev**	**2.27**	**48**	⇓P		**Pn**	**07 25 00.3**	**+0.8**
KIS				⇑S		**Sn**	**07 25 28.1**	**-0.5**
KIS	**Kishinev**	**2.27**	**48**	⇓P		**Pn**	**07 25 00.3**	**+0.8**
KIS				⇑S		**Sn**	**07 25 28.1**	**-0.5**
SRE	**Strehaia**	**2.38**	**250**	⇓S		**Sn**	**07 25 30.4**	**-0.5**
SRE	**Strehaia**	**2.38**	**250**	⇓S		**Sn**	**07 25 30.4**	**-0.5**
GZR	**Gura Zlata**	**2.52**	**269**	⇑S		**Sn**	**07 25 34.8**	**+0.8**
GZR	**Gura Zlata**	**2.52**	**269**	⇑S		**Sn**	**07 25 34.8**	**+0.8**
HERR	**Herculane**	**2.85**	**259**	⇑P		**Pn**	**07 25 06.8**	**+0.1**
HERR	**Herculane**	**2.85**	**259**	⇑P		**Pn**	**07 25 06.8**	**+0.1**
SORM	**Soroca**	**2.97**	**27**	⇑P		**Pn**	**07 25 08.7**	**+0.4**
SORM	**Soroca**	**2.97**	**27**	⇑P		**Pn**	**07 25 08.7**	**+0.4**

KRNET ***19*** *07:31:05.4±0.1,43°.91N×77°.22E,h19km,mb2.4*
SOME ***19*** *07:31:05.9,43°.97N×77°.07E*
NNC ***19*** *07:31:06.9±0.5,43°.97N×77°.03E,h1km,2km,mb2.5, mpv2.5,Error ellipse: s-maj=5.0km s-min=2.5km az=147.0, Suspected Mining explosion.*

ISC 19 07:31:05.4±1.0,43°.92N±0°.05×77°.18E±0°.04,h0km,n13, σ0°77/24,10C-3D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKK	**Chushkaly**	**0.15**	**245**	P	**Pg**	**07 31 08.9**	**+0.6**
CHKK	10nm,0.2s			S	**Sg**	**07 31 11.0**	**+0.8**
	125nm,0.5s						
KTBS	**Karatobe**	**0.41**	**240**	P	**Pg**	**07 31 13.9**	**+0.6**
KTBS	5.5nm,0.2s			S	**Sg**	**07 31 19.7**	**+0.9**
	20nm,0.4s						
ARXS	**Arharly**	**0.55**	**58**	P	**Pb**	**07 31 17.8**	**-0.2**
ARXS	5.6nm,0.2s			S	**Sb**	**07 31 26.5**	**0.0**
	14nm,0.4s						
KUU	**Kurty**	**0.61**	**268**	P	**Pg**	**07 31 16.8**	**-0.2**
KUU	0.9nm,0.1s			S	**Sg**	**07 31 24.5**	**-0.4**
	11nm,0.3s						
KRBS	**Karabastau**	**1.11**	**259**	P	**Pg**	**07 31 26.0**	**-0.7**
KRBS	1.1nm,0.3s			S	**Sg**	**07 31 40.3**	**-0.8**
	1.8nm,0.3s						
ANVS	**Anan'yevo**	**1.19**	**162**	⇑*i*P	**Pg**	**07 31 27.7**	**-0.5**
ANVS	baz=64			⇑*i*S	**Sg**	**07 31 43.7**	**+0.1**
	baz=64						
KST	**Kastek**	**1.25**	**226**	P	**Pg**	**07 31 29.3**	**+0.1**
KST	4.0nm,0.2s			S	**Sb**	**07 31 46.2**	**-0.3**
	2.7nm,0.3s						
TKM2	**Tokmak 2**	**1.52**	**230**	⇓*i*P	**Pn**	**07 31 33.9**	**-0.2**
TKM2	baz=31			⇓*i*S	**Sn**	**07 31 55.4**	**+0.6**
	baz=31						
TKM2	**Tokmak 2**	**1.52**	**230**	⇑P	**Pn**	**07 31 33.7**	**-0.4**
TKM2	0.6nm,0.3s			⇓S	**Sn**	**07 31 55.4**	**+0.6**
	1.2nm,0.2s						
BOOM	**Boomskoye usch**	**1.69**	**213**	⇑*e*P	**Pn**	**07 31 36.8**	**+0.4**
BOOM	baz=14			⇑*i*S	**Sg**	**07 31 59.7**	**0.0**
	baz=14						
ULHL	**Ulahol**	**1.81**	**203**	⇑*i*P	**Pb**	**07 31 39.2**	**-0.3**
ULHL	baz=4.0			⇑*i*S	**Sg**	**07 32 03.4**	**-0.1**
	baz=4.0						
AAK	**Ala-Archa**	**2.34**	**238**	⇑Lg	Lg	07 32 18.7	
	3.0nm,0.5s						
UCH	**Uchtor**	**2.58**	**230**	⇑*i*P	**Pn**	**07 31 50.6**	**+1.7**
UCH	baz=31			⇑*i*S	**Sb**	**07 32 23.2**	**-2.1**
	baz=31						

IDC ***19*** *07:54:45.8±0.6,19°.41N×120°.47E,h0km,mb4.2/21, mb1 4.3/22,mb1mx4.2/44,mbtmp4.2/22,ML3.9/1,MS3.8/10, Ms1 3.8/10,ms1mx3.4/30,Error ellipse: s-maj=20.3km s-min=12.3km az=76.0*
NEIC ***19*** *07:54:47.6±2.1,19°.47N±0°.08×120°.34E±0°.09,h10km±1km, mb4.7/45,Error ellipse: s-maj=15.6km s-min=12.5km az=119.0*
MAN ***19*** *07:54:48.3,19°.58N×120°.49E,h24km,mb4.7,ML3.6, MS3.5*
BJI ***19*** *07:54:53.0±0.0,19°.81N×120°.13E,h31km,mB4.8/39, mb4.5/45,Ms4.5/40,Ms7 4.2/38*

ISC 19 07:54:49.8±0.3,19°.51N±0°.03×120°.40E±0°.05,h23km,n142, σ1°43/123,mb4.5/41,MS4.0/17,2C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**1.57**	**178**	⇑*i*P	**Pn**	**07 55 15.0**	**-1.3**
BBP	**Basco**	**1.74**	**57**	*e*P	**Pn**	**07 55 16.7**	**-2.0**
BBP				*e*S	**Sn**	**07 55 35.5**	**-4.7**
APYP	**Conner**	**1.82**	**154**	*e*P	**Pn**	**07 55 18.0**	**-1.8**
APYP				*e*S	**Sn**	**07 55 41.3**	**-0.7**
SGCP	**Mt. Cagua**	**2.00**	**129**	*e*P	**Pn**	**07 55 20.6**	**-1.6**
SGCP				*e*S	**Sn**	**07 55 46.1**	**-0.5**
CVP	**Callao Caves**	**2.24**	**143**	⇑*i*P	**Pn**	**07 55 25.8**	**+0.3**
CVP				*i* S	**Sn**	**07 55 53.4**	**+0.8**
CAUP	**Cauayan**	**2.88**	**152**	*e*P	**Pn**	**07 55 35.8**	**+1.4**
SMPP	**San Manuel, Pa**	**3.35**	**175**	*e*P	**Pn**	**07 55 40.8**	**0.0**
TWG	**Pinlang**	**3.36**	**11**		**Pn**	**07 55 39.5**	**-1.5**
TPUB	**Ta-pu**	**3.78**	**3**	Pn	**Pn**	**07 55 46.0**	**-0.8**

BALP	**Baler**	**3.91**	**163**	*e*P		**Pn**	**07 55 49.9**	**+1.4**
YULB	**Yu-li**	**3.96**	**12**			**Pn**	**07 55 49.0**	**-0.2**
SSLB	**Suanglung**	**4.29**	**7**	Pn		**Pn**	**07 55 53.5**	**-0.3**
YHNB	**Yeheng**	**5.22**	**10**	Pn		**Pn**	**07 56 04.8**	**-1.8**
KNMB	**Chin-men Tao**	**5.28**	**340**			**Pn**	**07 56 05.5**	**-1.8**
LQP	**Lukban**	**5.47**	**168**	⇓*e*P		**Pb**	**07 56 23.4**	**-1.5**
HKPS	**Hong Kong Po S**	**6.47**	**296**	Pn		**Pn**	**07 56 20.8**	**-2.9**
QIZ	**Qiongzhong**	**9.98**	**269**	P		**Pn**	**07 57 10.8**	**-1.1**
QIZ				S		**Sn**	**07 59 00.9**	**-2.4**
QIZ				pmax	pmax			
	comp=Z,31nm,1.5s							
QIZ				LR	LR			
	comp=N,1μm,12.9s							
QIZ				LR	LR			
	comp=E,900nm,10.6s							
QIZ				LR	LR			
	comp=Z,950nm,11.0s							
QIZ	**Qiongzhong**	**9.98**	**269**	Pn		**Pn**	**07 57 10.6**	**-1.3**
NJ2	**Nanjing**	**12.57**	**354**	*e*P		**Pn**	**07 57 46.0**	**-1.3**
NJ2				pmax	pmax			
	comp=Z,14nm,0.6s							
NJ2				LR	LR			
	comp=N,1μm,12.8s							
NJ2				LR	LR			
	comp=E,910nm,14.2s							
NJ2				LR	LR			
	comp=Z,900nm,18.0s							
DAV	**Davao City (W)**	**13.35**	**157**	LR	LR	08 04 10.2		
	comp=Z,832nm,20.8s,baz=316,slow=43							
GYA	**Guiyang**	**14.41**	**301**	*e*P		**Pn**	**07 58 13.4**	**+0.8**
GYA				S		Sn	08 00 38.8	-13
GYA				pmax	pmax			
	comp=Z,8.0nm,0.9s							
GYA				pmax	pmax			
	comp=Z,230nm,4.8s							
GYA				LR	LR			
	comp=N,380nm,9.0s							
GYA				LR	LR			
	comp=E,420nm,14.6s							
GYA				LR	LR			
	comp=Z,540nm,11.6s							
NONG	**Nongkai**	**16.40**	**268**	P	P	07 58 53.5	+12	
JNU	**Nakatsue**	**16.48**	**33**	P	**Pn**	**07 58 40.5**	**+0.9**	
JNU				IAmb	IAmb	07 58 59.6		
	comp=Z,106nm,1.3s							
TIA	**Tai'an**	**16.89**	**351**	P	**P**	**07 58 49.8**	**+3.1**	
TIA				pmax	pmax			
	comp=Z,11nm,1.0s							
TIA				LR	LR			
	comp=N,540nm,12.7s							
TIA				LR	LR			
	comp=E,430nm,15.7s							
TIA				LR	LR			
	comp=Z,810nm,14.2s							
XAN	**Xi'an**	**17.71**	**327**	P	**P**	**07 58 56.5**	**+0.7**	
XAN				pP	pwP	07 59 06.6	+0.4	
XAN				pmax	pmax			
	comp=Z,11nm,1.7s							
XAN				LR	LR			
	comp=Z,1μm,10.8s							
XAN				LR	LR			
	comp=Z,670nm,11.9s							
XAN				LR	LR			
	comp=Z,1μm,12.3s							
TOLI2	**Tolitoli**	**18.28**	**179**	P	**P**	**07 59 02.5**	**+0.3**	
KSRS	**Korea Array**	**19.05**	**19**	P	**P**	**07 59 08.3**	**-2.1**	
	comp=Z,0.4nm,0.3s,baz=202,slow=11,SNR=8.7							
MPSI	**Mapaga**	**19.05**	**182**	P	Pn	07 59 22.9	+11	
PHIT	**Phitsanulok**	**19.11**	**266**	P	Pn	07 59 22.0	+10	
	comp=Z,78nm,1.0s							
PAYA	**Payao**	**19.36**	**273**	P	Pn	07 59 25.4	+10	
	comp=Z,194nm,1.1s							
SUKH	**Sukhothai**	**19.80**	**268**	P	Pn	07 59 32.2	+12	
	comp=Z,15nm,1.2s							
CM34	**Chiang Mai Arr**	**20.08**	**272**	P	Pn	07 59 25.0	+1.2	
CM36	**Chiang Mai Arr**	**20.17**	**271**	P	Pn	07 59 34.0	+9.2	
CM09	**Chiang Mai Arr**	**20.27**	**271**	P	Pn	07 59 34.3	+8.3	
	comp=Z,7.8nm,0.8s							
CHTO	**Chiang Mai**	**20.28**	**272**	P	**P**	**07 59 24.1**	**+0.1**	
CM04	**Chiang Mai Arr**	**20.29**	**270**	P	Pn	07 59 28.0	+1.8	
CM01	**Chiang Mai Arr**	**20.31**	**270**	P	Pn	07 59 35.2	+8.8	
	comp=Z,193nmcomp=Z,14nm,1.0s							
CM02	**Chiang Mai Arr**	**20.32**	**271**	P	Pn	07 59 35.0	+8.5	
	comp=Z,14nm,1.1s							
CMAR	**Chiang Mai Arr**	**20.32**	**271**	P	**P**	**07 59 24.4**	**0.0**	
	comp=Z,1.3nm,0.4s,baz=77,slow=9.1,SNR=12							
CMAR				PcP	**PcP**	**08 03 38.6**	**+1.1**	
	comp=Z,1.2nm,0.4s,baz=126,slow=1.2,SNR=1.8							
CMAR				LR	LR	08 06 31.8		
	comp=Z,100nm,20.3s,baz=132,slow=35							
CMAR	**Chiang Mai Arr**	**20.32**	**271**	P	**P**	**07 59 24.9**	**+0.5**	
CM05	**Chiang Mai Arr**	**20.32**	**270**	P	Pn	07 59 28.0	+1.4	
CM15	**Chiang Mai Arr**	**20.34**	**271**	P	Pn	07 59 35.9	+9.1	
	comp=Z,12nm,1.1s							
CM13	**Chiang Mai Arr**	**20.36**	**271**	P	Pn	07 59 36.2	+9.2	
	comp=Z,92nmcomp=Z,12nm,1.1s							
UTHA	**Uthaitani**	**20.36**	**262**	P	Pn	07 59 34.2	+7.2	
KSM	**Kuching**	**20.46**	**210**	P	**P**	**07 59 26.8**	**+0.8**	
KSM				IAmb	IAmb	07 59 36.4		
	comp=Z,41nm,1.3s							
BJT	**Baijiatuan**	**20.77**	**351**	P	**P**	**07 59 29.8**	**+0.7**	
BJT				IAmb	IAmb	07 59 44.0		
	comp=Z,40nm,1.0s							
BJI	**Beijing**	**20.79**	**351**	P	**P**	**07 59 30.4**	**+1.1**	
BJI				pmax	pmax			
	comp=Z,21nm,1.3s							
BJI				pmax	pmax			
	comp=Z,140nm,3.5s							
BJI				LR	LR			
	comp=Z,430nm,12.1s							
BJI				LR	LR			
	comp=Z,310nm,14.4s							
BJI				LR	LR			
	comp=Z,250nm,14.7s							
INU	**Inuyama**	**21.55**	**40**	P	**P**	**07 59 37.2**	**-0.4**	
INU				IAmb	IAmb	07 59 54.6		
	comp=Z,36nm,1.0s							
JGF	**Kuroka**	**21.93**	**40**	P	**P**	**07 59 41.5**	**-0.1**	
JGF				IAmb	IAmb	07 59 57.2		
	comp=Z,63nm,1.5s							
LZH	**Lanzhou**	**22.02**	**322**	*e*P	**P**	**07 59 44.3**	**+1.5**	
LZH				pP	pwP	07 59 52.3	-1.0	
LZH				sP	sP	07 59 56.9	+6.0	
LZH				sS	sS	08 03 50.6	-2.8	
LZH				SS	**SnSn**	**08 04 10.8**	**-0.7**	
LZH				pmax	pmax			
	comp=Z,37nm,1.2s							
LZH				pmax	pmax			
	comp=Z,220nm,4.6s							
LZH				LR	LR			
	comp=Z,910nm,12.2s							
LZH				LR	LR			
	comp=Z,930nm,13.0s							
LZH				LR	LR			
	comp=Z,1μm,14.7s							
HHC	**Hu-ho-hao-te**	**22.58**	**342**	*e*P	**P**	**07 59 47.5**	**-1.2**	
HHC				PP	**PnPn**	**08 00 16.8**	**+4.3**	
HHC				sS	sS	08 04 04.1	-0.2	
HHC				SS	**SnSn**	**08 04 28.3**	**+3.3**	
HHC				pmax	pmax			
	comp=Z,34nm,0.7s							
HHC				pmax	pmax			
	comp=Z,110nm,3.9s							
HHC				LR	LR			
	comp=Z,920nm,13.7s							
HHC				LR	LR			
	comp=Z,420nm,13.5s							
HHC				LR	LR			
	comp=Z,730nm,11.6s							
SIJI	**Sorong**	**22.88**	**151**	LR	LR	08 10 10.3		
	comp=Z,107nm,19.6s,baz=157,slow=41							
MAJO	**Matsushiro**	**23.07**	**39**	P	**P**	**07 59 53.8**	**0.0**	
MAT	**Matsushiro**	**23.07**	**39**	P	**P**	**07 59 58.7**	**+4.9**	
MJAR	**Matsushiro Arr**	**23.07**	**39**	P	**P**	**07 59 55.4**	**+1.6**	
	comp=Z,5.6nm,0.9s,baz=240,slow=7.6,SNR=2.6							
MJAR	**Matsushiro Arr**	**23.07**	**39**	P	**P**	**07 59 54.2**	**+0.5**	
SPSI	**Sidrap Palu**	**23.33**	**182**	P	P	08 00 06.5	+10	
MSAI	**Masohi**	**24.21**	**159**	P	**P**	**08 00 06.6**	**+1.7**	
KAPI	**Kappang**	**24.37**	**182**	LR	LR	08 12 12.7		
	comp=Z,149nm,18.5s,baz=16,slow=43							
KAPI	**Kappang**	**24.37**	**182**	P	**P**	**08 00 04.5**	**-1.9**	
USA0B	**Ussuriysk Arra**	**26.46**	**19**	P	**P**	**08 00 24.6**	**-0.5**	
USA0B				IAmb	IAmb	08 00 37.0		
	comp=Z,14nm,1.1s							
USRK	**Ussuriysk Ar.**	**26.46**	**19**	P	**P**	**08 00 25.2**	**+0.2**	
	comp=Z,5.5nm,1.0s,baz=205,slow=8.4,SNR=7.4							

USRK	**Ussuriysk Ar.**	**26.46**	**19**	P		**P**	**08 00 25.0**	**-0.1**
GTA	**Gaotai**	**26.62**	**323**	*e*P		**P**	**08 00 28.3**	**+1.5**
GTA				pP	pwP	08 00 37.9	+0.2	
GTA				sP	sP	08 00 41.8	+6.7	
GTA				pmax	pmax			
	comp=Z,7.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,110nm,6.2s							
GTA				LR	LR			
	comp=Z,430nm,11.3s							
GTA				LR	LR			
	comp=Z,620nm,10.9s							
GTA				LR	LR			
	comp=Z,660nm,10.9s							
RPSI	**Rantau Prapat**	**26.83**	**234**	P	**P**	**08 00 25.5**	**-3.2**	
RPSI				IAmb	IAmb	08 00 38.2		
	comp=Z,19nm,1.3s							
SHL	**Shillong**	**26.99**	**288**	P	**P**	**08 00 30.3**	**0.0**	
SHL				IAmb	IAmb	08 00 43.5		
	comp=Z,21nm,1.3s							
EDFI	**Ende, Flores**	**28.11**	**177**	P	**P**	**08 00 41.0**	**+0.8**	
	comp=Z,8.8nm,1.1s							
LSA	**Lhasa**	**28.39**	**297**	P	**P**	**08 00 44.8**	**+1.6**	
LSA	**Lhasa**	**28.39**	**297**	P	**P**	**08 00 44.4**	**+1.2**	
LSA				IAmb	IAmb	08 00 54.7		
	comp=Z,16nm,1.0s							
WOJI	**Wonogiri, Jawa**	**28.73**	**200**	P	P	08 00 57.2	+12	
ULN	**Ulaanbaatar**	**30.30**	**342**	P	**P**	**08 01 00.5**	**+1.0**	
ULN				PcP	**PcP**	**08 03 58.9**	**-0.7**	
SONM	**Songino Array**	**30.47**	**341**	P	**P**	**08 01 01.5**	**+0.6**	
	comp=Z,2.2nm,0.8s,baz=154,slow=9.8,SNR=8.4							
SONM				LR	LR	08 13 44.9		
	comp=Z,229nm,20.6s,baz=160,slow=37							
SONM	**Songino Array**	**30.47**	**341**	P	**P**	**08 01 00.4**	**-0.6**	
KLR	**Kul'dur**	**31.03**	**14**	P	**P**	**08 01 06.7**	**+0.9**	
	comp=Z,4.9nm,0.9s,baz=200,slow=6.3,SNR=12							
KLR				LR	LR	08 14 56.1		
	comp=Z,114nm,20.8s,baz=198,slow=39							
WMQ	**Urumqi**	**36.53**	**319**	*e*P	**P**	**08 01 54.9**	**+1.2**	
WMQ				pmax	pmax			
	comp=Z,26nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,230nm,4.7s							
WMQ				LR	LR			
	comp=Z,330nm,14.9s							
WMQ				LR	LR			
	comp=Z,390nm,14.9s							
WMQ				LR	LR			
	comp=Z,310nm,21.7s							
FITZ	**Fitzroy Crossi**	**37.72**	**172**	P	**P**	**08 02 02.2**	**-1.7**	
	comp=Z,4.3nm,0.8s,baz=327,slow=7.7,SNR=9.4							
FITZ	**Fitzroy Crossi**	**37.72**	**172**	P	**P**	**08 02 03.4**	**-0.5**	
FITZ				IAmb	IAmb	08 02 13.2		
	comp=Z,8.7nm,0.9s							
MK31	**Makanchi Array**	**41.31**	**320**	P	**P**	**08 02 34.5**	**+0.8**	
MKAR	**Makanchi Array**	**41.31**	**320**	P	**P**	**08 02 34.9**	**+1.2**	
	comp=Z,3.7nm,0.8s,baz=110,slow=10,SNR=20							
MKAR				LR	LR	08 21 55.5		
	comp=Z,105nm,18.1s,baz=103,slow=39							
MKAR	**Makanchi Array**	**41.31**	**320**	P	**P**	**08 02 33.7**	**0.0**	
WB0	**Warramunga Arr**	**41.37**	**160**	P	**P**	**08 02 32.7**	**-1.7**	
MAKZ	**Makanchi**	**41.51**	**320**	P	**P**	**08 02 35.3**	**0.0**	
MAKZ				IAmb	IAmb	08 02 46.4		
	comp=Z,12nm,1.1s							
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**08 02 33.6**	**-2.0**	
	comp=Z,2.7nm,0.6s,baz=342,slow=9.1,SNR=27							
WRA	**Warramunga Arr**	**41.52**	**160**	P	**P**	**08 02 33.1**	**-2.4**	
WB2	**Warramunga Arr**	**41.52**	**160**	P	**P**	**08 02 34.1**	**-1.4**	
H11S3	**WAKE ISLAND Hy**	**43.68**	**83**	T	T	08 48 31.8		
	baz=275							
H11S1	**WAKE ISLAND Hy**	**43.69**	**83**	T	T	08 48 32.2		
	baz=275							
H11N1	**WAKE ISLAND Hy**	**43.69**	**82**	T	T	08 48 32.0		
	baz=277							
H11N2	**WAKE ISLAND Hy**	**43.69**	**82**	T	T	08 48 33.0		
	baz=277							
H11S2	**WAKE ISLAND Hy**	**43.69**	**83**	T	T	08 48 35.2		
	baz=275							
H11N3	**WAKE ISLAND Hy**	**43.70**	**82**	T	T	08 48 36.2		
	baz=277							
ZAA0	**Zalesovo Array**	**43.85**	**330**	P	**P**	**08 02 53.8**	**-0.2**	
ZAA0				IAmb	IAmb	08 03 04.2		
	comp=Z,8.6nm,0.9s							
ZALV	**Zalesovo Beam**	**43.85**	**330**	P	**P**	**08 02 54.2**	**+0.1**	
	comp=Z,5.0nm,0.8s,baz=113,slow=8.1,SNR=14							
ZALV				LR	LR	08 22 01.3		
	comp=Z,165nm,19.7s,baz=90,slow=37							
NIL	**Nilore**	**44.09**	**298**	P	**P**	**08 02 56.5**	**0.0**	
NIL				IAmb	IAmb	08 03 06.7		
	comp=Z,12nm,0.8s							
PETK	**Petropavlovsk-**	**44.18**	**32**	P	**P**	**08 02 56.6**	**-0.2**	
	comp=Z,1.1nm,0.4s,baz=224,slow=10,SNR=3.9							
AS31	**Alice Springs**	**44.88**	**162**	P	**P**	**08 03 01.6**	**-1.2**	
ASAR	**Alice Springs**	**44.89**	**162**	P	**P**	**08 03 01.6**	**-1.1**	
	comp=Z,2.9nm,0.4s,baz=339,slow=7.0,SNR=48							
ASAR	**Alice Springs**	**44.89**	**162**	P	**P**	**08 03 01.9**	**-0.9**	
KURK	**Kurchatov**	**45.30**	**323**	P	**P**	**08 03 05.8**	**0.0**	
KURBB	**Kurchatov Arra**	**45.31**	**323**	P	**P**	**08 03 06.4**	**+0.6**	
	comp=Z,7.4nm,0.8s,baz=124,slow=7.9,SNR=34							
GAR	**Garm**	**47.18**	**305**	P	**P**	**08 03 21.2**	**+0.3**	
KBL	**Kabul**	**47.65**	**299**	P	**P**	**08 03 24.

CLL *e* 08 07 33.0
comp=Z,5.0nm,1.0s
GERES GERESS Array B 85.98 321 P **P** **08 07 28.4 0.0**
comp=Z,1.0nm,0.8s,baz=72,slow=4.3,SNR=4.8
YKA Yellowknife Ar 87.55 22 P **P** **08 07 35.0 -0.7**
comp=Z,0.9nm,0.7s,baz=317,slow=5.2,SNR=5.1
PPT2 Papeete2 95.74 107 eLR LR 08 39 27.1
comp=Z,116nm,26.8s
TAOE Nuku Hiva Isla 101.76 95 eLR LR 08 42 18.4
comp=Z,95nm,28.5s
TXAR Lajitas Array 115.47 42 PKP **PKPdf** **08 13 31.1 +0.5**
comp=Z,0.3nm,0.8s,baz=344,slow=2.9,SNR=3.8
LPAZ La Paz 171.27 70 PKP **PKPdf** **08 14 57.6 -0.4**
comp=Z,1.2nm,0.9s,baz=300,slow=1.0,SNR=3.8

*IDC **19** 07:56:32.0±0.5, 19°.40N×120°.42E, h0km, mb4.2/20, mb1 4.3/21, mb1mx4.1/44, mbtmp4.2/21, ML3.8/1, MS3.7/4, Ms1 3.7/4, ms1mx3.3/28, Error ellipse: s-maj=23.3km s-min=11.7km az=79.0*
*NEIC **19** 07:56:33.2±1.5, 19°.37N±0°.08×120°.40E±0°.08, h10km±1km, mb4.5/21, Error ellipse: s-maj=15.6km s-min=10.5km az=142.0*
ISC 19 07:56:35.4±0.5, 19°.41N±0°.06×120°.41E±0°.10, h23km, n64, σ0s93/61, mb4.4/28, MS3.7/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.45**	**10**	Pn	**Pn**	**07 57 27.3**	**-0.4**
TPUB	**Ta-pu**	**3.88**	**3**	Pn	**Pn**	**07 57 33.7**	**+0.1**
YULB	**Yu-li**	**4.05**	**12**	Pn	**Pn**	**07 57 34.1**	**-1.8**
SSLB	**Suanglung**	**4.39**	**7**	Pn	**Pn**	**07 57 41.8**	**+1.1**
NACB	**Ninganchiao**	**4.87**	**13**	Pn	**Pn**	**07 57 46.9**	**-0.3**
YHNB	**Yeheng**	**5.31**	**10**	Pn	**Pn**	**07 57 53.7**	**+0.4**
HKPS	**Hong Kong Po S**	**6.52**	**297**	Pn	**Pn**	**07 58 06.2**	**-3.7**
JOW	**Kunigami**	**10.34**	**43**	Pn	**Pn**	**07 59 01.0**	**-1.4**
KSAR	**Wonju Array Be**	**19.12**	**18**	P	**Pn**	**08 00 57.1**	**-0.6**
KSRS	**Korea Array**	**19.14**	**19**	P	**Pn**	**08 00 56.9**	**-1.0**
	0.3nm,0.3s,baz=199,slow=11,SNR=2.3						
CMAR	**Chiang Mai Arr**	**20.32**	**271**	P	Pn	08 01 10.6	-1.6
	0.7nm,0.4s,baz=68,slow=7.9,SNR=1.1						
BJT	**Baijiatuan**	**20.86**	**351**	P	**P**	**08 01 16.2**	**+0.5**
MAJO	**Matsushiro**	**23.14**	**39**	P	**P**	**08 01 39.6**	**-0.5**
MJAR	**Matsushiro Arr**	**23.14**	**39**	P	**P**	**08 01 40.5**	**+0.4**
	3.4nm,0.9s,baz=236,slow=12,SNR=2.1						
MJAR	**Matsushiro Arr**	**23.14**	**39**	P	**P**	**08 01 39.4**	**-0.6**
KAPI	**Kappang**	**24.28**	**182**	P	**P**	**08 01 52.2**	**+1.1**
	10.0nm,0.8s,baz=352,slow=9.3,SNR=5.0						
USRK	**Ussuriysk Ar.**	**26.55**	**19**	P	**P**	**08 02 12.6**	**+1.2**
	2.3nm,0.8s,baz=223,slow=7.4,SNR=2.6						
USRK	**Ussuriysk Ar.**	**26.55**	**19**	P	**P**	**08 02 11.0**	**-0.4**
USA0B	**Ussuriysk Arra**	**26.55**	**19**	P	**P**	**08 02 12.5**	**+1.1**
USA0B				IAmb	IAmb	08 02 22.9	
	comp=Z,21nm,1.3s						
RPSI	**Rantau Prapat**	**26.78**	**234**	P	**P**	**08 02 14.0**	**+0.2**
RPSI				IAmb	IAmb	08 02 23.3	
	comp=Z,8.9nm,0.9s						
SONM	**Songino Array**	**30.56**	**341**	P	**P**	**08 02 47.9**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=166,slow=10,SNR=2.8						
SONM	**Songino Array**	**30.56**	**341**	P	**P**	**08 02 46.9**	**-0.4**
ASAJ	**Asahikawa**	**30.84**	**22**	LR	LR	08 15 23.4	
	comp=Z,105nm,21.0s,baz=334,slow=37						
KLR	**Kul'dur**	**31.12**	**14**	P	**P**	**08 02 52.7**	**+0.6**
	comp=Z,4.5nm,1.0s,baz=170,slow=8.5,SNR=4.3						
FITZ	**Fitzroy Crossi**	**37.63**	**172**	P	**P**	**08 03 48.0**	**-0.6**
	comp=Z,9.1nm,0.8s,baz=356,slow=7.9,SNR=12						
FITZ	**Fitzroy Crossi**	**37.63**	**172**	P	**P**	**08 03 47.9**	**-0.7**
FITZ				IAmb	IAmb	08 03 49.2	
	comp=Z,14nm,0.9s						
KRVT	**Keravat (AS076**	**39.03**	**124**	LR	LR	08 16 27.4	
	comp=Z,226nm,21.8s,baz=285,slow=31						
COEN	**Coen**	**40.02**	**144**	P	**P**	**08 04 08.2**	**-0.6**
PSA00	**Pilbara Seismi**	**40.73**	**181**	P	**P**	**08 04 13.7**	**-0.9**
WB0	**Warramunga Arr**	**41.28**	**160**	P	**P**	**08 04 18.4**	**-0.8**
WB0				IAmb	IAmb	08 04 18.6	
	comp=Z,5.5nm,0.7s						
MK31	**Makanchi Array**	**41.39**	**320**	P	**P**	**08 04 20.9**	**+1.1**
MKAR	**Makanchi Array**	**41.39**	**320**	P	**P**	**08 04 20.8**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=112,slow=9.0,SNR=4.0						
MKAR	**Makanchi Array**	**41.39**	**320**	P	**P**	**08 04 20.6**	**+0.8**
WRAB	**Tennant Creek**	**41.42**	**160**	P	**P**	**08 04 19.5**	**-0.8**
WRA	**Warramunga Arr**	**41.42**	**160**	P	**P**	**08 04 19.1**	**-1.2**
	comp=Z,6.0nm,0.6s,baz=343,slow=8.9,SNR=24						
WRA				PcP	**PcP**	**08 06 18.6**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=344,slow=3.4,SNR=5.7						
WRA				LR	LR	08 23 17.6	
	comp=Z,60nm,18.1s,baz=345,slow=39						
WRA	**Warramunga Arr**	**41.42**	**160**	P	**P**	**08 04 19.9**	**-0.5**
WB2	**Warramunga Arr**	**41.43**	**160**	P	**P**	**08 04 19.6**	**-0.8**
WB2				IAmb	IAmb	08 04 21.8	
	comp=Z,8.4nm,0.8s						
WR0	**Warramunga Arr**	**41.51**	**160**	P	**P**	**08 04 20.2**	**-0.8**
WR0				IAmb	IAmb	08 04 21.9	
	comp=Z,7.9nm,0.6s						
MAKZ	**Makanchi**	**41.59**	**320**	P	**P**	**08 04 22.9**	**+1.5**
MAKZ				IAmb	IAmb	08 04 32.4	
	comp=Z,12nm,1.4s						
ZAA0	**Zalesovo Array**	**43.93**	**330**	P	**P**	**08 04 39.1**	**-1.2**
ZAA0				IAmb	IAmb	08 04 50.3	
	comp=Z,5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**43.93**	**330**	P	**P**	**08 04 39.8**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=113,slow=9.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**43.93**	**330**	P	**P**	**08 04 38.7**	**-1.6**
PETK	**Petropavlovsk-**	**44.25**	**32**	P	**P**	**08 04 42.6**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=174,slow=4.2,SNR=2.9						
AS31	**Alice Springs**	**44.79**	**162**	P	**P**	**08 04 46.6**	**-0.9**
AS31				IAmb	IAmb	08 04 48.9	
	comp=Z,3.1nm,0.5s						
ASAR	**Alice Springs**	**44.79**	**162**	P	**P**	**08 04 47.7**	**+0.1**
	comp=Z,4.9nm,0.4s,baz=341,slow=7.0,SNR=22						
ASAR	**Alice Springs**	**44.79**	**162**	P	**P**	**08 04 46.6**	**-0.9**
KURK	**Kurchatov**	**45.38**	**323**	P	**P**	**08 04 52.5**	**+0.6**
KURK	**Kurchatov**	**45.38**	**323**	IAmb	IAmb	08 05 03.2	
	comp=Z,8.7nm,0.9s						
KURBB	**Kurchatov Arra**	**45.39**	**323**	P	**P**	**08 04 52.5**	**+0.6**
	comp=Z,3.3nm,0.7s,baz=121,slow=7.6,SNR=5.9						
CTA	**Charters Tower**	**46.72**	**146**	P	**P**	**08 05 03.4**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=338,slow=11,SNR=4.6						
BBOO	**Buckleboo**	**54.04**	**164**	P	**P**	**08 05 57.9**	**-0.1**
STKA	**Stephens Creek**	**54.89**	**158**	P	**P**	**08 06 04.8**	**+0.6**
	comp=Z,7.2nm,0.8s,baz=328,slow=7.2,SNR=11						
STKA	**Stephens Creek**	**54.89**	**158**	P	**P**	**08 06 03.9**	**-0.3**
ABKAR	**Akbulak array**	**56.33**	**317**	P	**P**	**08 06 15.2**	**+0.8**
ILAR	**Eielson Array**	**73.78**	**26**	P	**P**	**08 08 07.3**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=254,slow=5.0,SNR=3.4						
FINES	**FINESS Array B**	**75.20**	**330**	P	**P**	**08 08 16.2**	**+0.4**
	comp=Z,2.6nm,0.8s,baz=69,slow=6.3,SNR=2.0						
AKASG	**Malin Array Be**	**75.96**	**319**	P	**P**	**08 08 19.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=63,slow=5.0,SNR=2.2						
AKASG				LR	LR	08 45 10.1	
	comp=Z,50nm,18.3s,baz=330,slow=38						
NOA	**NORSAR Array B**	**82.09**	**332**	P	**P**	**08 08 53.8**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=62,slow=5.6,SNR=2.7						
CLL	**Collm**	**85.41**	**323**	*eP*	**P**	**08 09 11.0**	**0.0**
YKA	**Yellowknife Ar**	**87.63**	**22**	P	**P**	**08 09 21.8**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=313,slow=4.2,SNR=2.5						
NVAR	**Mina Array Bea**	**100.40**	**43**	P	**Pdif**	**08 10 20.8**	**-0.2**
	comp=Z,0.5nm,1.0s,baz=286,slow=3.7,SNR=2.7						
TXAR	**Lajitas Array**	**115.54**	**42**	PKP	**PKPdf**	**08 15 16.5**	**+0.2**
	comp=Z,0.3nm,0.9s,baz=352,slow=1.8,SNR=1.7						
ROSC	**El Rosal**	**151.88**	**33**	PKPbc	**PKiKP**	**08 16 30.7**	**+0.4**
	comp=Z,3.8nm,0.4s,baz=294,slow=20,SNR=4.0						
LPAZ	**La Paz**	**171.30**	**70**	PKP	**PKPdf**	**08 16 44.9**	**+1.3**
	comp=Z,3.1nm,1.2s,baz=320,slow=3.7,SNR=2.7						

*IDC **19** 08:03:55.8±1.0, 19°.65N×120°.80E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/37, mbtmp3.6/7, Error ellipse: s-maj=41.4km s-min=20.4km az=64.0*
ISC 19 08:03:59.2±1.0, 19°.6N±0°.2×120°.7E±0°.2, h23km, n7, σ1s09/8, mb3.5/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.64**	**270**	P	**P**	**08 08 36.1**	**-1.2**
	2.3nm,0.4s,baz=74,slow=9.5,SNR=4.6						
SONM	**Songino Array**	**30.46**	**341**	P	**P**	**08 10 11.2**	**+0.9**
	0.7nm,0.9s,baz=155,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**41.43**	**320**	P	**P**	**08 11 44.7**	**+0.7**
	0.7nm,0.8s,baz=113,slow=9.3,SNR=5.7						
WRA	**Warramunga Arr**	**41.51**	**161**	P	**P**	**08 11 44.6**	**-0.2**
	0.3nm,0.6s,baz=344,slow=9.1,SNR=2.2						
WRA				PcP	**PcP**	**08 13 42.8**	**+0.5**
	0.4nm,0.8s,baz=347,slow=3.2,SNR=4.7						
ZALV	**Zalesovo Beam**	**43.91**	**330**	P	**P**	**08 12 04.2**	**+0.3**
	0.5nm,0.4s,baz=117,slow=8.2,SNR=2.3						
ASAR	**Alice Springs**	**44.90**	**163**	P	**P**	**08 12 13.1**	**+0.9**
	0.7nm,0.8s,baz=341,slow=7.5,SNR=5.8						
ILAR	**Eielson Array**	**73.45**	**27**	P	**P**	**08 15 28.0**	**-1.4**
	0.4nm,1.0s,baz=294,slow=6.8,SNR=1.8						

*IDC **19** 08:20:03.7±1.7, 37°.59S×179°.82E, h0km, mb4.1/5, mb1 4.3/7, mb1mx4.0/38, mbtmp4.1/7, ML3.6/2, Error ellipse: s-maj=43.3km s-min=28.7km az=164.0*
*NEIC **19** 08:20:04.4±2.1, 38°.0S±0°.1×179°.9W±0°.2, h24km±7km, mb4.2/8, ML3.9(WEL), Error ellipse: s-maj=19.9km s-min=14.6km az=90.0*
*WEL **19** 08:20:06.1±1.1, 38°.S±9°.×18°.0E±°, h33km, M3.9/16, ML4.1/16, MLv3.9/16, Error ellipse: s-maj=0.0km s-min=0.0km az=164.9*
ISC 19 08:20:01.6±2.3, 37°.87S±0°.06×179°.92W±0°.08, h1km±12km, n120, σ1s51/128, mb4.2/9, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.32**	**272**	P	**Pg**	**08 20 27.2**	**+0.2**
WMGZ				S	**Sg**	**08 20 44.2**	**+0.1**
MXZ	**Matakaoa Point**	**1.44**	**282**	P	**Pn**	**08 20 28.0**	**-0.9**
MXZ				S	**Sg**	**08 20 45.4**	**-2.5**
MXZ	**Matakaoa Point**	**1.44**	**282**	Pn	**Pn**	**08 20 27.9**	**-1.0**
PUZ	**Puketiti**	**1.46**	**262**	P	**Pn**	**08 20 29.5**	**+0.4**
PUZ				S	**Sg**	**08 20 48.2**	**-0.2**
CNGZ	**Carnagh Statio**	**1.60**	**247**	P	**Pg**	**08 20 33.4**	**+1.1**
TWGZ	**Tauwhareparae**	**1.69**	**259**	P	**Pb**	**08 20 33.5**	**0.0**
TWGZ				S	**Sn**	**08 20 53.9**	**-0.7**
HAZ	**Te Kaha**	**1.83**	**273**	P	**Pn**	**08 20 34.1**	**0.0**
TKGZ	**Te Karaka**	**1.85**	**251**	P	**Pb**	**08 20 36.0**	**-0.2**
TKGZ				S	**Sn**	**08 20 59.2**	**+0.6**
RUGZ	**Raukumara Rang**	**1.91**	**266**	P	**Pb**	**08 20 35.6**	**+0.2**
RIGZ	**Rimuhau**	**2.01**	**245**	P	**Pb**	**08 20 38.6**	**-0.4**
RIGZ				S	**Sn**	**08 21 03.6**	**+1.1**
PRGZ	**Paritu Road**	**2.02**	**238**	P	**Pb**	**08 20 39.2**	**0.0**
MWZ	**Matawai**	**2.07**	**256**	P	**Pn**	**08 20 38.0**	**+0.4**
MWZ				S	**Sn**	**08 21 04.0**	**0.0**
MHGZ	**Mahia Peninsul**	**2.13**	**232**	P	**Pb**	**08 20 40.6**	**-0.4**
RAGZ	**Rawiri**	**2.19**	**253**	P	**Pn**	**08 20 40.5**	**+1.2**
KNZ	**Kokohu**	**2.21**	**238**	P	**Pn**	**08 20 41.0**	**+1.5**
URZ	**Urewera**	**2.38**	**260**	Pn	**Pn**	**08 20 42.9**	**+1.2**
	24nm,0.3s,baz=61,slow=4.8,SNR=154						
URZ				Sn	**Sn**	**08 21 10.3**	**-1.3**
	31nm,0.3s,baz=163,slow=19,SNR=7.5						
URZ	**Urewera**	**2.38**	**260**	P	**Pn**	**08 20 42.9**	**+1.2**
URZ				S	**Sn**	**08 21 10.5**	**-1.1**
WHRZ	**Whale Island**	**2.46**	**269**	P	**Pn**	**08 20 44.6**	**+1.7**
WHHZ	**Waihua**	**2.54**	**241**	P	**Pn**	**08 20 45.6**	**+1.7**
WHHZ				S	**Sn**	**08 21 16.5**	**+0.9**
RAHZ	**Arahi**	**2.58**	**245**	P	**Pn**	**08 20 46.5**	**+2.0**
EDRZ	**Edgecumbe**	**2.65**	**264**	P	**Pn**	**08 20 46.8**	**+1.2**
MUGZ	**Murupara**	**2.68**	**256**	P	**Pn**	**08 20 47.1**	**+1.2**
MTHZ	**Maungataniwha**	**2.73**	**248**	P	**Pn**	**08 20 48.1**	**+1.4**
ARHZ	**Aropaoanui**	**2.79**	**239**	P	**Pn**	**08 20 49.3**	**+1.9**
OPRZ	**Ohinepanea**	**2.79**	**269**	P	**Pn**	**08 20 47.3**	**-0.1**
TARZ	**Mount Tarawera**	**2.85**	**262**	P	**Pn**	**08 20 50.0**	**+1.7**
NMHZ	**Naumai**	**2.85**	**244**	P	**Pn**	**08 20 50.2**	**+1.9**
RRRZ	**Republican Roa**	**2.85**	**259**	P	**Pn**	**08 20 49.5**	**+1.2**
CKHZ	**Cape Kidnapper**	**2.95**	**232**	P	**Pn**	**08 20 51.3**	**+1.7**
PRRZ	**Plateau Road**	**2.98**	**257**	P	**Pn**	**08 20 50.7**	**+0.7**
ALRZ	**Allen Road**	**3.03**	**256**	P	**Pn**	**08 20 52.1**	**+1.4**
KARZ	**Kaharoa**	**3.04**	**266**	P	**Pn**	**08 20 51.1**	**+0.2**
HRRZ	**Handcock Road**	**3.04**	**259**	P	**Pn**	**08 20 52.2**	**+1.3**
HSRZ	**Hossack Road**	**3.06**	**261**	P	**Pn**	**08 20 52.2**	**+1.1**
MCHZ	**McNeill Hill**	**3.08**	**238**	P	**Pn**	**08 20 53.6**	**+2.1**
UTU	**Utuhina**	**3.09**	**263**	P	**Pb**	**08 20 57.0**	**-0.4**
BKZ	**Black Stump Fm**	**3.10**	**244**	P	**Pn**	**08 20 53.3**	**+1.6**
BKZ	**Black Stump Fm**	**3.10**	**244**	Pn	**Pn**	**08 20 53.2**	**+1.4**
BKZ				Sn	**Sn**	**08 21 28.2**	**-1.2**
KAHZ	**Kahuranaki**	**3.16**	**232**	P	**Pn**	**08 20 54.4**	**+1.9**
KWHZ	**Kaweka Forest**	**3.26**	**240**	P	**Pn**	**08 20 55.5**	**+1.5**
PXZ	**Pawanui**	**3.31**	**228**	P	**Pn**	**08 20 55.7**	**+1.2**
KRHZ	**Kereru**	**3.40**	**237**	P	**Pn**	**08 20 57.1**	**+1.2**
RITZ	**Rihia Road**	**3.50**	**250**	P	**Pn**	**08 20 58.0**	**+0.8**
BHHZ	**Black Hill Sta**	**3.54**	**242**	P	**Pn**	**08 20 59.2**	**+1.5**
WPHZ	**Waipukurau**	**3.59**	**231**	P	**Pn**	**08 20 59.5**	**+1.1**
TOZ	**Tahuroa Road**	**3.63**	**271**	P	**Pn**	**08 20 58.8**	**-0.2**
PNHZ	**Pukenui**	**3.65**	**235**	P	**Pn**	**08 21 00.4**	**+1.0**
TMVZ	**Te Maari**	**3.65**	**249**	P	**Pn**	**08 21 01.3**	**+1.8**
ETVZ	**East Tongariro**	**3.66**	**248**	P	**Pn**	**08 21 00.8**	**+1.3**
KUZ	**Kuaotunu**	**3.66**	**287**	P	**Pn**	**08 20 57.6**	**-1.7**
KRVZ	**Karewarewa**	**3.69**	**249**	P	**Pn**	**08 21 01.9**	**+1.9**
MOVZ	**Moawhango**	**3.72**	**244**	P	**Pn**	**08 21 02.2**	**+1.9**
NGZ	**Ngauruhoe**	**3.75**	**248**	P	**Pn**	**08 21 04.1**	**+3.3**
WHVZ	**Whangaehu Hut**	**3.79**	**247**	P	**Pn**	**08 21 03.7**	**+2.3**
WNVZ	**Wahianoa**	**3.80**	**246**	P	**Pn**	**08 21 03.6**	**+2.0**
TSZ	**Takapari Road**	**3.88**	**235**	P	**Pn**	**08 21 03.4**	**+0.9**
DVHZ	**Dannevirke**	**3.89**	**230**	P	**Pn**	**08 21 03.1**	**+0.5**
MKAZ	**Moumakai**	**3.99**	**280**	P	**Pn**	**08 21 03.3**	**-0.6**
GRZ	**Great Barrier**	**4.04**	**292**	P	**Pn**	**08 21 03.4**	**-1.1**
BFZ	**Birch Farm**	**4.09**	**225**	P	**Pn**	**08 21 05.9**	**+0.6**
BFZ	**Birch Farm**	**4.09**	**225**	Pn	**Pn**	**08 21 05.5**	**+0.2**
BFZ				Sn	**Sn**	**08 21 53.1**	**-0.7**
HIZ	**Hauiti**	**4.17**	**260**	P	**Pn**	**08 21 07.8**	**+1.5**
HIZ	**Hauiti**	**4.17**	**260**	Pn	**Pn**	**08 21 06.8**	**+0.5**
PRWZ	**Pori Road**	**4.17**	**229**	P	**Pn**	**08 21 07.3**	**+0.9**
POWZ	**Post Office Ro**	**4.20**	**232**	P	**Pn**	**08 21 09.2**	**+2.3**
ETAZ	**East Tamaki Re**	**4.21**	**281**	P	**Pn**	**08 21 06.7**	**-0.2**
MBAZ	**Motutapu North**	**4.28**	**283**	P	**Pn**	**08 21 07.5**	**-0.3**
VRZ	**Vera Road**	**4.36**	**252**	P	**Pn**	**08 21 11.2**	**+2.1**
AWAZ	**Awhitu Peninsu**	**4.40**	**279**	P	**Pn**	**08 21 09.8**	**+0.2**
WAZ	**Wanganui**	**4.40**	**243**	P	**Pn**	**08 21 13.3**	**+3.7**
MRZ	**Mangatainoka R**	**4.47**	**230**	P	**Pn**	**08 21 10.9**	**+0.4**
RVAZ	**Riverhead Bore**	**4.52**	**282**	P	**Pn**	**08 21 11.3**	**+0.1**
OGWZ	**Otaki Gorge**	**4.81**	**231**	P	**Pn**	**08 21 15.7**	**+0.4**
NEZ	**North Egmont**	**4.90**	**252**	P	**Pn**	**08 21 20.8**	**+4.3**
KHEZ	**Kahui Hut**	**4.96**	**251**	P	**Pn**	**08 21 21.4**	**+4.1**
WCZ	**Waipu Caves**	**4.99**	**291**	P	**Pn**	**08 21 17.0**	**-0.6**
CAW	**Cannon Point**	**5.05**	**229**	P	**Pn**	**08 21 18.3**	**-0.2**
MSWZ	**Moikau Station**	**5.14**	**225**	Pn	**Pn**	**08 21 19.3**	**-0.5**
MSWZ				Sn	**Sn**	**08 22 15.3**	**-4.5**
PLWZ	**Palliser**	**5.24**	**224**	Pn	**Pn**	**08 21 20.9**	**-0.3**
PLWZ				Sn	**Sn**	**08 22 18.7**	**-3.7**
BHW	**Baring Head**	**5.35**	**227**	Pn	**Pn**	**08 21 20.7**	**-1.9**
BHW				Sn	**Sn**	**08 22 21.2**	**-3.7**
SNZO	**South Karori**	**5.39**	**229**	Pn	**Pn**	**08 21 22.7**	**-0.4**
SNZO				Sn	**Sn**	**08 22 23.1**	**-2.7**
TCW	**Tory Channel**	**5.59**	**232**	P	**Pn**	**08 21 26.3**	**+0.3**
OUZ	**Omahuta**	**5.85**	**295**	P	**Pn**	**08 21 29.3**	**-0.3**
OUZ	**Omahuta**	**5.85**	**295**	Pn	**Pn**	**08 21 29.2**	**-0.3**
TUWZ	**Tuamarina**	**5.92**	**231**	Pn	**Pn**	**08 21 30.6**	**+0.2**
BSWZ	**Blackbirch Sta**	**6.13**	**229**	Pn	**Pn**	**08 21 33.3**	**0.0**
NNZ	**Nelson**	**6.17**	**235**	Pn	**Pn**	**08 21 34.9**	**+1.2**
CTZ	**Chatham Island**	**6.37**	**158**	P	Pn	08 21 42.7	+6.1
QRZ	**Quartz Range**	**6.56**	**241**	P	**Pn**	**08 21 39.0**	**-0.2**
QRZ	**Quartz Range**	**6.56**	**241**	Pn	**Pn**	**08 21 39.5**	**+0.3**
THZ	**Tophouse**	**6.75**	**233**	Pn	**Pn**	**08 21 41.0**	**-0.9**
LTZ	**Lake Taylor**	**7.72**	**228**	Pn	**Pn**	**08 21 53.8**	**-1.4**
MQZ	**McQueen's Vall**	**8.11**	**222**	Pn	**Pn**	**08 21 58.5**	**-1.9**
RPZ	**Rata Peaks**	**8.99**	**227**	Pn	**Pn**	**08 22 12.0**	**-0.7**
	0.5nm,0.3s,baz=40,slow=19,SNR=1.4						
RPZ				Sn	Sn	08 23 45.8	-8.8
	2.0nm,0.3s,baz=9.0,slow=19,SNR=7.9						
LBZ	**Lake Benmore**	**9.90**	**226**	Pn	**Pn**	**08 22 23.6**	**-1.4**
ODZ	**Otahua Downs**	**10.07**	**222**	Pn	**Pn**	**08 22 26.2**	**-1.1**
DZM	**Mont Dzumac**	**19.65**	**319**	P	**P**	**08 24 31.4**	**-0.6**
	0.1nm,0.3s,baz=148,slow=9.5,SNR=2.0						
STKA	**Stephens Creek**	**31.98**	**269**	P	**P**	**08 26 30.8**	**+1.5**
	2.2nm,0.9s,baz=126,slow=8.7,SNR=4.6						
STKA	**Stephens Creek**	**31.98**	**269**	IAmb	IAmb	08 26 33.3	
	comp=Z,2.1nm,1.4s						
CTA	**Charters Tower**	**34.25**	**292**	P	**P**	**08 26 48.9**	**-0.4**
	comp=Z,2.0nm,0.7s,baz=119,slow=13,SNR=1.7						
COEN	**Coen**	**40.46**	**296**	P	**P**	**08 27 41.7**	**-0.3**
COEN				IAmb	IAmb	08 27 44.3	
	comp=Z,4.1nm,0.7s						
AS31	**Alice Springs**	**41.72**	**276**	P	**P**	**08 27 52.6**	**+0.3**
ASAR	**Alice Springs**	**41.72**	**276**	P	**P**	**08 27 51.5**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=120,slow=8.0,SNR=18						
ASAR	**Alice Springs**	**41.72**	**276**	P	**P**	**08 27 51.8**	**-0.6**
WR0	**Warramunga Arr**	**43.21**	**281**	P	**P**	**08 28 05.5**	**+1.0**
WR0				IAmb	IAmb	08 28 12.1	
	comp=Z,4.8nm,0.9s						
WB2	**Warramunga Arr**	**43.37**	**281**	P	**P**	**08 28 04.6**	**-1.1**
WB2				IAmb	IAmb	08 28 12.9	
	comp=Z,6.1nm,1.0s						
WRAB	**Tennant Creek**	**43.38**	**281**	P	**P**	**08 28 05.2**	**-0.6**
WRA	**Warramunga Arr**	**43.38**	**281**	P	**P**	**08 28 04.7**	**-1.2**
	comp=Z,1.9nm,0.5s,baz=122,slow=8.0,SNR=19						
WRA	**Warramunga Arr**	**43.38**	**281**	P	**P**	**08 28 04.3**	**-1.5**
WB0	**Warramunga Arr**	**43.44**	**281**	P	**P**	**08 28 04.8**	**-1.5**
WB0				IAmb	IAmb	08 28 12.9	
	comp=Z,5.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**51.21**	**277**	P	**P**	**08 29 08.4**	**+1.5**
	comp=Z,2.2nm,0.6s,baz=150,slow=8.1,SNR=6.0						
H03S2	**Juan Fernandez**	**77.69**	**123**	T	T	09 57 52.1	
	baz=231,slow=74,SNR=9.7						
H03S1	**Juan Fernandez**	**77.70**	**123**	T	T	09 57 55.1	
	baz=231,slow=74,SNR=9.6						
H03S3	**Juan Fernandez**	**77.71**	**123**	T	T	09 57 46.3	
	baz=231,slow=74,SNR=11						
H03N3	**Juan Fernandez**	**77.92**	**123**	T	T	09 58 00.0	
	baz=234,slow=72,SNR=64						
H03N2	**Juan Fernandez**	**77.92**	**123**	T	T	09 57 58.8	
	baz=234,slow=72,SNR=57						
H03N1	**Juan Fernandez**	**77.94**	**123**	T	T	09 58 07.9	
	baz=234,slow=72,SNR=79						
ARCES	**ARCESS Array B**	**145.45**	**345**	PKPbc	**PKPab**	**08 39 39.8**	**-0.8**
	comp=Z,6.2nm,1.0s,baz=53,slow=2.7,SNR=5.0						
FINES	**FINESS Array B**	**151.39**	**334**	PKPbc	**PKiKP**	**08 39 58.5**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=25,slow=3.7,SNR=2.4						
TORD	**Torodi Ar. Bea**	**155.34**	**184**	PKPab	**PKPab**	**08 40 25.1**	**+2.8**
	comp=Z,0.5nm,0.7s,baz=174,slow=5.0,SNR=2.7						

*IDC **19** 08:20:02.8±1.9, 1°.94N×126°.46E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/34, mbtmp3.6/4, Error ellipse: s-maj=178.8km s-min=23.4km az=65.0*
*NEIC **19** 08:20:07.6±1.4, 1°.8N±0°.2×126°.51E±0°.09, h36km±13km, mb4.0/7, Error ellipse: s-maj=24.0km s-min=7.8km az=206.0*
ISC 19 08:20:09.0±1.0, 1°.8N±0°.1×126°.5E±0°.1, h47km, n15, σ1s13/15, mb3.9/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.35**	**138**	Pn	**Pn**	**08 20 29.9**	**-1.6**
TOLI2	**Tolitoli**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.93**	**16**	*eP*	**Pn**	**08 31 15.6**	**-2.5**
FUG				*eS*	**Sn**	**08 31 36.3**	**+4.0**
PCG	**Pacaya**	**0.97**	**30**	*eP*	**Pn**	**08 31 17.3**	**-1.3**
PCG				*eS*	**Sn**	**08 31 38.1**	**+4.8**
ERG	**Entre ros, C**	**0.99**	**333**	*eP*	**Pn**	**08 31 17.2**	**-1.4**
ERG				*eS*	**Sn**	**08 31 35.9**	**+2.6**
STG3	**Santiaguito 3,**	**1.24**	**339**	*eP*	**Pn**	**08 31 20.0**	**-1.8**
STG3				*eS*	**Sn**	**08 31 38.5**	**-0.3**
NBG	**Las Nubes**	**1.27**	**35**	*eP*	**Pn**	**08 31 21.2**	**-1.0**
NBG				*eS*	**Sn**	**08 31 40.8**	**+1.2**
NUBE	**Las Nubes**	**1.34**	**75**	*eP*	**Pn**	**08 31 20.9**	**-2.0**
NUBE				*eS*	**Sn**	**08 31 37.1**	**-3.7**
NUBE	comp=Z,307nm,0.3s			IAML		08 31 41.8	
TACO	**Tacachico**	**1.75**	**76**	*eP*	**Pn**	**08 31 27.2**	**-0.9**
TACO				*eS*	**Sn**	**08 31 48.7**	**-1.4**
UEES	**Universidad Ev**	**1.82**	**85**	*eP*	**Pn**	**08 31 28.6**	**-0.4**
COEG	**Centro de Oper**	**2.17**	**88**	*eP*	**Pn**	**08 31 33.7**	**+0.1**
COEG				*eS*	**Sn**	**08 31 59.9**	**0.0**
COEG	comp=Z,325nm,0.5s			IAML		08 32 15.6	
ALJI	**Alcalda de J**	**2.48**	**95**	*eP*	**Pn**	**08 31 39.3**	**+1.7**
ALJI				*eS*	**Sn**	**08 32 07.5**	**+0.3**
COEB	**Comit de Eme**	**2.51**	**91**	*eP*	**Pn**	**08 31 38.6**	**+0.5**
COEB				*eS*	**Sn**	**08 32 07.6**	**-0.4**
COEB	comp=Z,123nm,0.5s			IAML		08 32 10.5	
LCND	**La Caada**	**3.14**	**94**	*eP*	**Pn**	**08 31 47.1**	**+0.6**
LCND				*eS*	**Sn**	**08 32 24.5**	**+1.4**

NEIC ***19*** *08:44:43.5±1.3,61.77N±0.01×149.16W±0.05,h35km±6km, Error ellipse: s-maj=3.3km s-min=2.0km az=69.0*
ANF ***19*** *08:44:43.1±0.5,61.81N×149.21W,h25km±5km,ML4.2/16, Error ellipse: s-maj=4.3km s-min=2.9km az=94.0*
AEIC ***19*** *08:44:44±1.7,61.78N±0.02×149.14W±0.05,h31km±5km, ML3.8,Mwr3.7/16(SLM),Error ellipse: s-maj=3.9km s-min=2.7km az=147.0*
NEIC ***19*** *08:44:44,61.80N×149.10W,h38km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.02; $M_{\theta\theta}$1.02; $M_{\phi\phi}$0.00; $M_{r\theta}$2.80; $M_{\theta\phi}$2.46; $M_{\phi r}$-0.43; Fault plane solution: M_o3.89000×10^{14} NP1:$\phi_1$12.00000°, δ41.00000°,λ-165.00000°. NP2:$\phi_2$270.00000°, δ80.00000°,λ-50.00000°. Principal axes: T 3.8886, Plg24.0000°, Azm330.0000°; N -0.0001, Plg39.0000°, Azm82.0000°; P -3.8884, Plg41.0000°, Azm217.0000°;*
IDC ***19*** *08:44:45.8±5.0,61.94N×149.47W,h71km±40km,mb3.4/8, mb1 3.6/11,mb1mx3.3/48,mbtmp3.7/11,ML3.4/3,MS3.0/3, Ms1 3.0/3,ms1mx2.5/34 Error ellipse: s-maj=42.2km s-min=19.6km az=56.0*

ISC 19 08:44:42.3±0.8,61.80N±0.02×149.22W±0.02,h33km±2km, n160,σ1$57/206,mb3.7/8,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHO	**Glory Hole Cre**	**0.14**	**101**	Pg	**Pb**	**08 44 49.5**	**+1.0**
GHO				Sg	**Sb**	**08 44 55.1**	**+2.4**
PMR	**Palmer**	**0.21**	**169**	Pg	**Pn**	**08 44 49.6**	**+1.0**
PMR				Sg	**Sb**	**08 44 54.8**	**+1.3**
SML	**Sawmill**	**0.42**	**89**	Pg	**Pb**	**08 44 51.8**	**0.0**
SML				Sg	**Sb**	**08 44 59.0**	**+0.8**
KNK	**Knik Glacier**	**0.53**	**137**		**Pb**	**08 44 53.2**	**-0.2**
KNK				Sg	**Sb**	**08 45 01.3**	**+0.3**
RC01	**Rabbit Creek A** baz=22,SNR=176	**0.76**	**200**	P	**Pn**	**08 44 56.7**	**+0.1**
RC01	baz=22			S	**Sn**	**08 45 07.6**	**+0.7**
RC01	**Rabbit Creek A**	**0.76**	**200**		**Pn**	**08 44 56.7**	**+0.1**
RC01					**Sn**	**08 45 07.2**	**+0.4**
CUT	**Chulitna** baz=139,SNR=151	**0.78**	**321**	P	**Pn**	**08 44 57.8**	**+0.8**
CUT	baz=139			S	**Sb**	**08 45 08.7**	**+0.9**
CUT	**Chulitna**	**0.78**	**321**		**Pn**	**08 44 57.8**	**+0.8**
CUT					**Sb**	**08 45 09.3**	**+1.5**
SUA	**Susitna One**	**0.81**	**246**		**Pn**	**08 44 57.8**	**+0.4**
SUA				Sg	**Sn**	**08 45 09.3**	**+1.1**
FIS	**Fire Island**	**0.81**	**217**		**Pn**	**08 44 58.4**	**+1.0**
FIS					**Sb**	**08 45 11.2**	**+2.5**
SCM	**Sheep Creek Mo**	**0.90**	**87**		**Pn**	**08 44 58.5**	**-0.1**
SCM	**Sheep Creek Mo**	**0.90**	**87**	Sn	**Sn**	**08 45 10.8**	**+0.4**
PWL	**Port Wells**	**1.03**	**155**		**Pn**	**08 45 00.1**	**-0.3**
WAT6	**Susitna Watana**	**1.05**	**41**		**Pn**	**08 45 00.9**	**+0.1**
WAT6					**Sn**	**08 45 14.7**	**+0.4**
WAT7	**Susitna Watana**	**1.05**	**9**		**Pn**	**08 45 01.4**	**+0.6**
WAT1	**Susitna Watana**	**1.08**	**16**		**Pn**	**08 45 01.6**	**+0.5**
SKT	**Skwentna**	**1.11**	**280**	Pn	**Pn**	**08 45 02.6**	**+1.1**
SKT				Sn	**Sb**	**08 45 18.2**	**+1.1**
HUR	**Hurricane**	**1.20**	**351**		**Pn**	**08 45 04.2**	**+1.5**
HUR					**Sb**	**08 45 20.9**	**+1.2**
WAT2	**Susitna Watana**	**1.21**	**14**		**Pn**	**08 45 03.6**	**+0.7**
STLK	**Strandline Lak**	**1.28**	**258**		**Pn**	**08 45 05.4**	**+1.4**
GLI	**Glacier Island**	**1.38**	**131**		**Pn**	**08 45 05.5**	**+0.4**
GLI				Sn	**Sn**	**08 45 23.5**	**+1.2**
SLKM	**Skilak Lake**	**1.38**	**201**		**Pn**	**08 45 05.8**	**+0.5**
SLKM					**Sn**	**08 45 24.4**	**+2.0**
CAPN	**Captain Cook N** baz=43,SNR=11	**1.40**	**223**	P	**Pb**	**08 45 07.9**	**+0.2**
CAPN	baz=43			S	**Sb**	**08 45 26.1**	**+0.9**
CAPN	**Captain Cook N**	**1.40**	**223**		**Pb**	**08 45 08.0**	**+0.2**
SPCG	**Spurr Capps Gl**	**1.44**	**250**		**Pn**	**08 45 07.8**	**+1.7**
SPCG					**Sb**	**08 45 27.6**	**+1.1**
M24K	**Tolsona, Glenn** baz=258,SNR=103	**1.47**	**77**	P	**Pn**	**08 45 07.8**	**+1.3**
M24K	baz=258			S	**Sb**	**08 45 27.3**	**-0.1**
M24K	**Tolsona, Glenn**	**1.47**	**77**		**Pn**	**08 45 07.8**	**+1.3**
M24K	**Tolsona, Glenn**	**1.47**	**77**		**Sb**	**08 45 27.1**	**-0.3**
SPCP	**Crater Peak Br**	**1.50**	**250**		**Pn**	**08 45 08.8**	**+1.7**
SPCP					**Sb**	**08 45 29.4**	**+1.0**
CRP	**Crater Peak**	**1.51**	**251**		**Pn**	**08 45 09.1**	**+2.0**
CRP					**Sb**	**08 45 29.6**	**+1.1**
CKN	**Chakachatna No**	**1.53**	**249**		**Pn**	**08 45 09.4**	**+2.1**
SPCN	**Chakachatna No**	**1.53**	**249**		**Pn**	**08 45 09.3**	**+2.0**
DHY	**Denali Highway**	**1.54**	**33**		**Pn**	**08 45 08.5**	**+0.9**
DHY					**Sn**	**08 45 28.1**	**+1.7**
CP2	**Crater Peak Tw**	**1.55**	**251**		**Pn**	**08 45 09.4**	**+1.7**
CP2					**Sb**	**08 45 30.6**	**+0.9**
VMT	**TAPS Tl Valdez**	**1.55**	**116**		**Pn**	**08 45 07.9**	**+0.4**
VMT					**Sn**	**08 45 27.9**	**+1.5**
SPCR	**Spurr Chakacha**	**1.56**	**249**		**Pn**	**08 45 09.2**	**+1.6**
SPCR					**Sb**	**08 45 29.9**	**0.0**
KLU	**Klutina**	**1.60**	**100**		**Pn**	**08 45 08.7**	**+0.4**
KLU	**Klutina**	**1.60**	**100**		**Sn**	**08 45 28.4**	**+0.5**
SPBG	**Spurr Blockage**	**1.60**	**252**		**Pn**	**08 45 10.2**	**+1.8**
RND	**Reindeer**	**1.62**	**6**		**Pn**	**08 45 10.1**	**+1.5**
RND					**Sn**	**08 45 30.6**	**+2.3**
FID	**Port Fidalgo**	**1.69**	**127**		**Pn**	**08 45 09.9**	**+0.4**
SEW	**Seward**	**1.71**	**184**		**Pn**	**08 45 10.6**	**+0.9**
SEW	**Seward**	**1.71**	**184**		**Sn**	**08 45 33.3**	**+3.0**
SPNN	**North Nagishla**	**1.72**	**257**		**Pn**	**08 45 12.1**	**+2.1**
SPNN					**Sb**	**08 45 34.6**	**-0.1**
TRF	**Thorofare Moun**	**1.73**	**344**		**Pn**	**08 45 12.1**	**+1.9**
PPLA	**Purkeypile**	**1.77**	**310**	Pn	**Pn**	**08 45 12.7**	**+2.0**
PPLA	**Purkeypile**	**1.77**	**310**		**Sb**	**08 45 35.8**	**-0.3**
DIV	**Divide**	**1.79**	**111**		**Pn**	**08 45 10.9**	**+0.1**
PS11	**TAPS Pump St11**	**1.79**	**79**		**Pn**	**08 45 12.5**	**+1.7**
HIN	**Hinchinbrook I**	**1.93**	**136**		**Pn**	**08 45 14.1**	**+1.3**
KTH	**Kantishna Hill**	**1.93**	**337**		**Pn**	**08 45 15.0**	**+2.2**
KTH	**Kantishna Hill**	**1.93**	**337**		**Sb**	**08 45 39.3**	**-1.2**
MCK	**McKinley** baz=183	**1.94**	**4**	P	**Pn**	**08 45 14.8**	**+1.9**
MCK	baz=183			S	**Sn**	**08 45 38.4**	**+2.2**
MCK	**McKinley**	**1.94**	**4**		**Pn**	**08 45 15.0**	**+2.0**
PS12	**TAPS Pump St12**	**1.97**	**98**		**Pn**	**08 45 14.1**	**+0.7**
PS12					**Sn**	**08 45 38.3**	**+1.4**
RDT	**Redoubt**	**1.97**	**233**		**Pn**	**08 45 14.4**	**+1.0**
DFR	**Drift River**	**2.07**	**236**		**Pn**	**08 45 15.9**	**+1.1**
DFR	**Drift River**	**2.07**	**236**		**Pn**	**08 45 15.9**	**+1.1**
DFR					**Sn**	**08 45 42.4**	**+2.9**
EYAK	**Cordova Ski Ar**	**2.10**	**125**		**Pn**	**08 45 16.2**	**+1.2**
EYAK	**Cordova Ski Ar**	**2.10**	**125**		**Sn**	**08 45 43.1**	**+3.2**
CAST	**Castle Rocks**	**2.10**	**322**		**Pn**	**08 45 17.0**	**+1.9**
PAX	**Paxson**	**2.10**	**54**		**Pn**	**08 45 17.3**	**+2.1**
RDJH	**Redoubt Jeurge**	**2.12**	**237**		**Pn**	**08 45 16.7**	**+1.3**
REF	**Redoubt East F**	**2.14**	**234**		**Pn**	**08 45 17.0**	**+1.2**
REF					**Sn**	**08 45 44.4**	**+3.1**
RSO	**Redoubt South**	**2.18**	**234**		**Pn**	**08 45 17.3**	**+0.9**
RDWB	**Redoubt West**	**2.19**	**235**		**Pn**	**08 45 17.7**	**+1.1**
RDWB					**Sn**	**08 45 45.6**	**+3.0**
BRSE	**Bradley Lake S**	**2.20**	**201**		**Pn**	**08 45 16.9**	**+0.4**
BRLK	**Bradley Lake**	**2.20**	**203**		**Pn**	**08 45 17.2**	**+0.8**
N25K	**Chitina, Valde** baz=277,SNR=22	**2.21**	**93**	P	**Pn**	**08 45 17.9**	**+1.3**
N25K	baz=277			S	**Sn**	**08 45 45.5**	**+2.7**
N25K	**Chitina, Valde**	**2.21**	**93**		**Pn**	**08 45 17.8**	**+1.2**
N25K					**Sn**	**08 45 45.2**	**+2.4**
RED	**Redoubt Volcan**	**2.21**	**233**		**Pn**	**08 45 17.6**	**+0.9**
RED					**Sn**	**08 45 45.1**	**+2.2**
BMRM	**Bremner River**	**2.37**	**109**		**Pn**	**08 45 19.5**	**+0.6**
BWN	**Browne**	**2.38**	**357**		**Pn**	**08 45 21.3**	**+2.3**
BWN					**Sn**	**08 45 50.1**	**+3.1**
BPAW	**Bear Paw Mtn.**	**2.45**	**341**		**Pn**	**08 45 21.5**	**+1.6**
BPAW					**Sn**	**08 45 51.6**	**+3.0**
HOM	**Homer** baz=29	**2.46**	**210**	P	**Pn**	**08 45 20.9**	**+1.0**
CNPM	**China Poot**	**2.49**	**204**		**Pn**	**08 45 21.1**	**+0.7**
CHUM	**Lake Minchumin**	**2.53**	**327**		**Pn**	**08 45 23.0**	**+2.0**
IVE	**Iliamna Volcan**	**2.58**	**228**		**Pn**	**08 45 22.6**	**+0.8**
GLB	**Gilahina Butte**	**2.61**	**96**		**Pn**	**08 45 23.2**	**+1.1**
GLB					**Sn**	**08 45 54.8**	**+2.2**
RAGM	**Ragged Mountai**	**2.62**	**121**		**Pn**	**08 45 23.7**	**+1.4**
WRH	**Wood River Hil**	**2.73**	**10**		**Pn**	**08 45 25.1**	**+1.4**
RIDG	**Independent Ri**	**2.80**	**44**	Pn	**Pn**	**08 45 28.7**	**+3.9**
MENT	**Mentasta**	**2.81**	**64**		**Pn**	**08 45 27.3**	**+2.5**
NEA2	**Nenana** baz=181,SNR=57	**2.81**	**1**	P	**Pn**	**08 45 26.0**	**+1.3**
NEA2	baz=181			S	**Sn**	**08 45 58.6**	**+1.2**
NEA2	**Nenana**	**2.81**	**1**		**Pn**	**08 45 26.1**	**+1.3**
HDA	**Harding Lake** baz=202,SNR=26	**2.82**	**20**	P	**Pn**	**08 45 26.5**	**+1.6**
HDA	**Harding Lake**	**2.82**	**20**		**Pn**	**08 45 26.8**	**+1.9**
HMT	**Hamilton**	**2.82**	**119**		**Pn**	**08 45 25.5**	**+0.5**
CCB	**Clear Creek Bu**	**2.93**	**12**		**Pn**	**08 45 27.7**	**+1.2**
MCARA	**McCarthy VSAT**	**2.99**	**95**		**Pn**	**08 45 28.6**	**+1.3**
L26K	**Log Cabin Wild** baz=248	**3.00**	**63**	P	**Pn**	**08 45 29.4**	**+2.0**
L26K	**Log Cabin Wild**	**3.00**	**63**		**Pn**	**08 45 29.1**	**+1.6**
NICHA	**Nichawak Mount**	**3.00**	**119**		**Pn**	**08 45 27.9**	**+0.5**
DOT	**Dot Lake**	**3.01**	**50**	Pn	**Pn**	**08 45 30.4**	**+2.7**
BERG	**Berg Lake**	**3.03**	**115**		**Pn**	**08 45 28.6**	**+0.8**
CRQM	**Cirque**	**3.12**	**107**		**Pn**	**08 45 30.3**	**+1.1**
SVW2	**Sparrevohn**	**3.14**	**260**		**Pn**	**08 45 30.6**	**+1.2**
TCOL	**CIGO, UAF Yank** baz=191,SNR=104	**3.15**	**11**	P	**Pn**	**08 45 30.9**	**+1.5**
TCOL	baz=191			S	**Sn**	**08 46 06.4**	**+0.6**
TCOL	**CIGO, UAF Yank**	**3.15**	**11**		**Pn**	**08 45 31.0**	**+1.5**
COLA	**College**	**3.15**	**11**		**Pn**	**08 45 30.9**	**+1.5**
IL31		**3.16**	**18**		**Pn**	**08 45 30.9**	**+1.3**
ILAR	**Eielson Array** 5.8nm,0.3s,baz=202,slow=14,SNR=335	**3.16**	**18**	P	**Pn**	**08 45 30.9**	**+1.3**
ILAR	26nm,0.3s,baz=201,slow=22,SNR=3.3			S	**Sn**	**08 46 08.5**	**+2.3**
KHIT	**Khitrov Hills**	**3.20**	**113**		**Pn**	**08 45 31.3**	**+1.0**
MDM	**Murphy Dome**	**3.20**	**8**		**Pn**	**08 45 31.8**	**+1.6**
SCRK	**Sand Creek** baz=229,SNR=31	**3.24**	**45**	P	**Pn**	**08 45 32.0**	**+1.1**
SCRK	**Sand Creek**	**3.24**	**45**		**Pn**	**08 45 31.9**	**+1.1**
GRIN	**Grindle Hills**	**3.25**	**115**		**Pn**	**08 45 31.9**	**+1.0**
TGL	**Tana Glacier**	**3.26**	**106**		**Pn**	**08 45 32.3**	**+1.2**
PTPK	**Patty Peak**	**3.29**	**98**		**Pn**	**08 45 32.9**	**+1.2**
MLY	**Manley** baz=167,SNR=59	**3.32**	**349**	P	**Pn**	**08 45 33.4**	**+1.6**
MLY	baz=167			S	**Sn**	**08 46 10.6**	**+0.5**
MLY	**Manley**	**3.32**	**349**		**Pn**	**08 45 33.5**	**+1.6**
TT01	**Tatalina**	**3.36**	**292**		**Pn**	**08 45 33.8**	**+1.3**
I23K	**Minto, Yukon-K** baz=178,SNR=152	**3.36**	**359**	P	**Pn**	**08 45 34.3**	**+1.9**
I23K	baz=178			S	**Sn**	**08 46 12.2**	**+1.1**
I23K	**Minto, Yukon-K**	**3.36**	**359**		**Pn**	**08 45 34.1**	**+1.8**
TTA	**Tatalina**	**3.36**	**293**		**Pn**	**08 45 33.8**	**+1.3**
POKR	**Poker Plat Res** baz=194,SNR=40	**3.43**	**13**	P	**Pn**	**08 45 34.8**	**+1.5**
POKR	baz=194			S	**Sn**	**08 46 13.4**	**+0.7**
POKR	**Poker Plat Res**	**3.43**	**13**		**Pn**	**08 45 35.1**	**+1.8**
KULT	**Kultieth River**	**3.52**	**113**		**Pn**	**08 45 35.9**	**+1.2**
BC03		**3.68**	**67**		**Pn**	**08 45 38.7**	**+2.0**
BARN	**Barnard Glacie**	**3.71**	**98**		**Pn**	**08 45 38.4**	**+1.1**
GRNC	**Granite Creek**	**3.76**	**103**		**Pn**	**08 45 38.5**	**+0.4**
YAH	**Yahtse**	**3.90**	**108**		**Pn**	**08 45 40.9**	**+0.8**
K27K	**Chicken** baz=238	**3.96**	**52**	P	**Pn**	**08 45 42.1**	**+1.5**
K27K	baz=238			Sb	**Sb**	**08 46 41.4**	**+2.8**
YUK2	**White River**	**3.98**	**86**		**Pn**	**08 45 42.4**	**+1.4**
PRP	**Porcupine Dome**	**4.08**	**22**		**Pn**	**08 45 44.7**	**+2.3**
RKAV	**Rock Avalanche**	**4.11**	**108**		**Pn**	**08 45 44.1**	**+1.2**
YUK3	**Moose Creek**	**4.16**	**86**		**Pn**	**08 45 44.7**	**+1.1**
IM03		**4.65**	**337**		**Pn**	**08 45 51.8**	**+1.7**
IMAR	**Indian Mountai**	**4.65**	**337**		**Pn**	**08 45 51.4**	**+1.3**
EGAK	**Eagle**	**4.71**	**47**		**Pn**	**08 45 52.1**	**+1.2**
DAWY	**Dawson**	**5.03**	**59**		**Pn**	**08 45 55.3**	**-0.1**
BCPM	**Bancas Point**	**5.03**	**107**	Pn	**Pn**	**08 45 56.8**	**+1.4**
OHAK	**Old Harbor**	**5.04**	**206**		**Pn**	**08 45 54.6**	**-0.8**
PS05	**TAPS Pump Stn5**	**5.07**	**354**		**Pn**	**08 45 58.1**	**+2.3**
FYU	**Fort Yukon**	**5.09**	**18**		**Pn**	**08 45 58.3**	**+2.2**
COLD	**Coldfoot** baz=175	**5.47**	**356**	P	**Pn**	**08 46 03.1**	**+1.8**
COLD	baz=175			S	**Sn**	**08 47 04.3**	**+1.4**
COLD	**Coldfoot**	**5.47**	**356**		**Pn**	**08 46 03.2**	**+1.8**
BM03	**Burnt Mountain**	**5.98**	**17**		**Pn**	**08 46 09.2**	**+0.8**
BMAR	**Burnt Mountain**	**5.99**	**17**		**Pn**	**08 46 09.6**	**+1.1**
TOLK	**Toolik Lake Re** baz=178	**6.87**	**359**	P	**Pn**	**08 46 23.5**	**+2.9**
TOLK	baz=178			S	**Sn**	**08 47 39.2**	**+1.7**
TOLK	**Toolik Lake Re**	**6.87**	**359**		**Pn**	**08 46 23.6**	**+2.9**
SIT	**Sitka**	**8.52**	**118**	Pn	**Pn**	**08 46 43.1**	**-0.1**
TNA	**Tin City** baz=106	**9.11**	**303**	P	**Pn**	**08 46 53.8**	**+2.7**
TNA	**Tin City**	**9.11**	**303**	Pn	**Pn**	**08 46 52.9**	**+1.7**
INK	**Inuvik** 0.5nm,0.3s,baz=227,slow=14,SNR=18	**9.28**	**39**	P	**Pn**	**08 46 56.9**	**+3.5**
INK	1.2nm,0.3s,baz=157,slow=31,SNR=18			S	**Sn**	**08 48 37.4**	**+0.9**
INK	comp=Z,74nm,19.4s,baz=232,slow=39			LR	LR	08 50 43.5	
INK	**Inuvik**	**9.28**	**39**		**Pn**	**08 46 53.8**	**+0.3**
A21K	**Barrow** baz=159	**10.00**	**346**	S	**Sn**	**08 48 53.1**	**-0.9**
C36M	**Paulatuk** baz=246	**12.77**	**43**	P	**Pn**	**08 47 42.0**	**+0.9**
C36M	baz=246			S	**Sn**	**08 49 58.9**	**-2.9**
C36M	**Paulatuk**	**12.77**	**43**	Pn	**Pn**	**08 47 41.7**	**+0.6**
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=281,slow=9.0,SNR=6.4	**16.08**	**72**	P	**Pn**	**08 48 27.8**	**+2.3**
NEW	**Newport** comp=Z,30nm,21.2s,baz=138,slow=39	**22.54**	**112**	LR	LR	08 59 26.7	
ELK	**Elko** comp=Z,34nm,18.1s,baz=4.0,slow=34	**29.38**	**120**	LR	LR	09 01 46.1	
NVAR	**Mina Array Bea** 0.5nm,0.8s,baz=331,slow=9.6,SNR=2.8	**30.14**	**127**	P	**P**	**08 50 49.8**	**+0.7**
TXAR	**Lajitas Array** 0.2nm,0.8s,baz=340,slow=5.0,SNR=1.8	**44.00**	**116**	P	**P**	**08 52 48.0**	**+1.7**
ARCES	**ARCESS Array B** 6.0nm,1.1s,baz=354,slow=7.3,SNR=1.7	**48.90**	**2**	P	**P**	**08 53 22.6**	**-1.6**
NOA	**NORSAR Array B** 0.5nm,0.8s,baz=341,slow=4.7,SNR=1.7	**56.57**	**11**	P	**P**	**08 54 19.2**	**-1.8**
KURBB	**Kurchatov Arra** 0.4nm,0.4s,baz=27,slow=6.1,SNR=3.0	**61.65**	**328**	P	**P**	**08 54 54.4**	**-1.8**
MKAR	**Makanchi Array** 0.3nm,0.6s,baz=31,slow=7.0,SNR=4.1	**64.14**	**323**	P	**P**	**08 55 10.6**	**-2.3**
AKTO	**Aktyubinsk** 1.3nm,0.4s,baz=26,slow=9.9,SNR=4.3	**66.02**	**341**	P	**P**	**08 55 23.5**	**-1.5**
AKASG	**Malin Array Be** 0.7nm,0.4s,baz=2.2,slow=6.4,SNR=3.6	**67.84**	**1**	P	**P**	**08 55 34.6**	**-1.9**

IDC 19 08:57:54.2±2.2,2.00N×126.47E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.2/36,mbtmp3.3/3,Error ellipse: s-maj=181.0km s-min=26.5km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=340,slow=11,SNR=8.5	**23.13**	**161**	P	P	09 03 00.8	-1.4
ASAR	**Alice Springs** 0.3nm,0.7s,baz=342,slow=11,SNR=3.2	**26.52**	**165**	P	P	09 03 35.6	+1.9
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=121,slow=7.6,SNR=5.3	**58.83**	**326**	P	P	09 07 54.4	-0.3

IDC 19 09:13:53.8±8.7,26.14S×28.48E,h0km,mb1 2.7/1, mb1mx2.7/31,mbtmp2.7/1,ML2.1/1,Error ellipse: s-maj=86.2km s-min=54.8km az=138.0,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof** 0.1nm,0.3s,baz=46,slow=14,SNR=1.9	**3.78**	**229**	Pn	Pn	09 14 53.9	+0.5
BOSA	0.2nm,0.3s,baz=137,slow=15,SNR=1.6			Sn	Sn	09 15 38.9	+0.2
BOSA	0.9nm,0.3s,baz=328,slow=21,SNR=10			Lg	Lg	09 15 53.7	
I47ZA	**BOSHOF INFRASO** baz=50,slow=318,SNR=0.7	**3.80**	**229**	*i*		09 39 20.0	
I35NA	**TSUMEB INFRASO** baz=124,slow=323,SNR=1.3	**12.21**	**302**	*i*		10 31 50.0	

SOME ***19*** *09:15:00.2,41.30N×71.05E,h0km*
KRNET ***19*** *09:15:00.7±0.1,41.34N×70.95E,h7km,mb2.4*
NNC ***19*** *09:15:01.8±1.6,41.25N×71.21E,h0km,mb3.5,mpv3.1, Error ellipse: s-maj=12.8km s-min=7.1km az=21.0*

ISC 19 09:15:01.3±1.4,41.34N±0.04×71.03E±0.04,h5km±11km, n13,σ1$26/22,16C-4D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKS	**Terek-Say** baz=54	**0.20**	**23**	⇑*iP*	**Pg**	**09 15 04.2**	**-1.2**
TRKS	baz=54			⇑*iS*	**Sg**	**09 15 08.0**	**-0.1**
IUG	**luzhnay** 7.6nm,0.3s	**1.10**	**317**	*eP*	**Pb**	**09 15 22.3**	**-0.6**
IUG	22nm,0.7s			*eS*	**Sn**	**09 15 38.3**	**-0.9**
BTK	**Batken** baz=85	**1.29**	**187**	⇑*iP*	**Pg**	**09 15 25.6**	**-0.5**
BTK	baz=85			⇑*iS*	**Sn**	**09 15 43.3**	**-0.6**
ARSB	**Arslanbob** baz=90	**1.47**	**90**	⇑*iP*	**Pg**	**09 15 29.5**	**0.0**
ARSB	baz=90			⇑*iS*	**Sg**	**09 15 50.6**	**+2.1**
MNAS	**Manas** baz=45	**1.59**	**43**	⇑*iP*	**Pg**	**09 15 31.3**	**-0.4**
MNAS	baz=45			⇑*iS*	**Sg**	**09 15 54.4**	**+2.1**
KK31	**Karatay Array** 13nm,0.8s,baz=172,slow=17,SNR=53	**1.80**	**348**	⇑P	**Pg**	**09 15 35.9**	**0.0**
KK31	10nm,0.7s,baz=162,slow=28,SNR=20			⇓S	**Sg**	**09 16 01.8**	**+2.5**
AML	**Almayashu** baz=68	**2.14**	**68**	⇑*eP*	**Pb**	**09 15 40.6**	**-0.3**
AML	baz=68			⇑*iS*	**Sg**	**09 16 10.5**	**+0.3**
MRKS	**Merke** 2.7nm,0.4s	**2.15**	**49**	*eP*	**Pg**	**09 15 41.6**	**-1.0**
MRKS	3.0nm,0.3s			*eS*	**Sg**	**09 16 11.3**	**+0.8**
EKS2	**Erkin-Say** baz=57	**2.43**	**56**	⇓*iP*	**Pb**	**09 15 43.9**	**-1.8**
EKS2	baz=57			⇓*iS*	**Sb**	**09 16 16.5**	**+0.5**
ARLS	**Aral** baz=77	**2.52**	**77**	⇑*iP*	**Pb**	**09 15 46.0**	**-1.2**
ARLS	baz=77			⇑*iS*	**Sb**	**09 16 19.3**	**+0.7**
UCH	**Uchtor** baz=70	**2.75**	**70**	⇑*iP*	**Pn**	**09 15 47.8**	**+1.3**
UCH	baz=70			⇑*iS*	**Sb**	**09 16 24.2**	**-1.2**
AAK	**Ala-Archa** 4.2nm,0.8s	**2.89**	**62**	⇓Lg	Lg	09 16 31.7	
TKM2	**Tokmak 2** 2.2nm,0.8s	**3.74**	**64**	⇑Lg	Lg	09 16 58.2	

ISC 19 09:23:38.5±1.2,48.80N±0.06×18.10E±0.05,h10km,n6, σ0$31/9,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAVC	**Velka Javorina**	**0.29**	**282**	*e*PG	**Pg**	**09 23 44.3**	**-0.1**
JAVC				*e*SG	**Sg**	**09 23 48.7**	**+0.4**
KOLL	**Kolacno**	**0.30**	**138**	*e*PG	**Pg**	**09 23 44.9**	**+0.4**
KOLL				*e*SG	**Sg**	**09 23 48.7**	**+0.2**
VYHS	**Vyhne**	**0.58**	**122**	*e*PG	**Pg**	**09 23 49.3**	**-0.4**
MODS	**Modra-Piesok**	**0.69**	**232**	*e*PG	**Pb**	**09 23 52.6**	**-0.1**
MODS				*e*SG	**Sg**	**09 24 01.2**	**+0.2**
MODS				*e*LG	Lg	09 24 01.

URZ			S	**Sb**	**09 34 48.3**	**-0.8**	
WHRZ	**Whale Island**	**2.18 263**	P	**Pb**	**09 34 21.5**	**-1.7**	
RPZ	**Rata Peaks**	**8.96 224**	Pn	**Pn**	**09 35 49.7**	**-3.1**	
	0.5nm,0.3s,baz=40,slow=17,SNR=1.9						
RPZ			Sn	Sn	09 37 23.5	-10	
	2.9nm,0.3s,baz=165,slow=20,SNR=11						
DZM	**Mont Dzumac**	**19.26 320**	LR	LR	09 44 29.6		
	comp=Z,87nm,18.8s,baz=199,slow=34						
STKA	**Stephens Creek**	**31.69 269**	P	**P**	**09 40 07.0**	**+0.2**	
	2.4nm,0.9s,baz=97,slow=8.1,SNR=4.0						
ASAR	**Alice Springs**	**41.40 276**	P	**P**	**09 41 29.0**	**-0.7**	
	3.5nm,0.7s,baz=124,slow=8.0,SNR=39						
KRVT	**Keravat (AS076**	**41.71 316**	LR	LR	09 57 07.4		
	comp=Z,23nm,18.7s,baz=201,slow=34						
WRA	**Warramunga Arr**	**43.04 281**	P	**P**	**09 41 42.1**	**-1.0**	
	2.7nm,0.6s,baz=124,slow=7.7,SNR=31						
FITZ	**Fitzroy Crossi**	**50.89 277**	P	**P**	**09 42 43.9**	**-0.6**	
	4.0nm,0.8s,baz=135,slow=10.0,SNR=8.5						
QSPA	**South Pole Qui**	**52.51 180**	P	**P**	**09 42 58.1**	**+2.0**	
	1.2nm,0.9s,baz=8.2,slow=3.8,SNR=2.8						
KAPI	**Kappang**	**63.33 285**	LR	LR	10 12 26.7		
	comp=Z,38nm,18.9s,baz=29,slow=37						
H03S2	**Juan Fernandez**	**78.07 123**	T	T	11 11 30.6		
	baz=231						
H03S1	**Juan Fernandez**	**78.08 124**	T	T	11 11 38.5		
	baz=231,slow=74						
H03S3	**Juan Fernandez**	**78.09 123**	T	T	11 11 30.8		
	baz=231,slow=74						
H03N3	**Juan Fernandez**	**78.31 123**	T	T	11 11 41.6		
	baz=234,slow=72,SNR=24						
H03N2	**Juan Fernandez**	**78.31 123**	T	T	11 11 42.3		
	baz=234,slow=72,SNR=20						
H03N1	**Juan Fernandez**	**78.32 123**	T	T	11 11 48.4		
	baz=234,slow=72,SNR=30						
ARCES	**ARCESS Array B**	**145.12 344**	PKP	**PKPdf**	**09 53 19.7**	**+0.2**	
	3.5nm,1.0s,baz=19,slow=3.8,SNR=1.5						
FINES	**FINESS Array B**	**151.03 334**	PKPbc	**PKiKP**	**09 53 35.5**	**-0.2**	
	5.1nm,1.2s,baz=64,slow=3.2,SNR=2.6						

*IDC **19** 09:37:40.2±1.8,2°03N×126°83E,h0km,mb3.6/4, mb1 3.9/4,mb1mx3.5/39,mbtmp3.6/4,MS3.5/1,Ms1 3.5/1, ms1mx2.3/33,Error ellipse: s-maj=114.9km s-min=26.3km az=69.0*

*DJA **19** 09:37:47.6±0.4,2°N±3°×12°6E±°,h10km,M3.9/8,mB4.5/1, mb4.4/2,MLv3.7/8,Mw(mB)3.6/1*

ISC 19 09:37:48.1±1.0,1°82N±0°07×126°48E±0°08,h47km,n12, σ1§54/13,mb3.7/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.37**	**140**	P	**Pn**	**09 38 12.8**	**+2.0**
SGSI	**Sangihe**	**2.08**	**333**	P	**Pn**	**09 38 21.8**	**+1.2**
SGSI				S	**Sn**	**09 38 46.1**	**+0.8**
KMSI	**Cibinong**	**2.79**	**244**	P	**Pn**	**09 38 30.3**	**0.0**
GTOI	**Gorontalo**	**3.66**	**251**	P	**Pn**	**09 38 42.8**	**+0.5**
MRSI	**Marisa**	**4.73**	**254**	P	**Pn**	**09 38 58.3**	**+1.4**
APSI	**Ampana**	**5.54**	**241**	P	**Pn**	**09 39 09.7**	**+1.6**
MPSI	**Mapaga**	**6.74**	**257**	P	**Pn**	**09 39 27.4**	**+2.8**
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P	**P**	**09 42 14.8**	**-0.1**
	0.5nm,0.3s,baz=15,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**22.96**	**161**	P	**P**	**09 42 47.3**	**-1.4**
	2.9nm,0.5s,baz=341,slow=11,SNR=27						
ASAR	**Alice Springs**	**26.34**	**165**	P	**P**	**09 43 19.2**	**-0.7**
	0.9nm,0.4s,baz=336,slow=8.5,SNR=14						
ASAR				PcP	**PcP**	**09 46 44.7**	**-0.5**
	0.2nm,0.4s,baz=352,slow=2.4,SNR=1.5						
CTA	**Charters Tower**	**29.16**	**139**	LR	LR	09 57 31.0	
	comp=Z,91nm,18.5s,baz=241,slow=41						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**09 47 41.5**	**-1.5**
	0.2nm,0.5s,baz=123,slow=8.2,SNR=2.4						

*NEIC **19** 09:47:41.9±0.9,6°3S±0°1×128°1E±0°1,h346km±25km, mb4.1/3,Error ellipse: s-maj=22.4km s-min=11.9km az=147.0*

*IDC **19** 09:47:42.1±1.7,6°29S×128°14E,h348km±25km,mb2.8/1, mb1 3.2/5,mb1mx2.8/41,mbtmp3.9/5,Error ellipse: s-maj=34.7km s-min=20.5km az=92.0*

ISC 19 09:47:41.1±0.8,6°27S±0°07×128°12E±0°08,h353km,n20, σ2§10/26,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**5.15**	**228**		**Pn**	**09 49 03.4**	**+0.7**
SOEI				S	**S**	**09 50 05.1**	**-3.6**
FAKI	**Fak Fak**	**5.29**	**51**	Pn	**Pn**	**09 49 06.1**	**+1.9**
FAKI					**S**	**09 50 05.4**	**-6.0**
BATI	**Baumata**	**5.89**	**228**	P	**Pn**	**09 49 11.7**	**+0.8**
	35nm,0.3s,baz=108,slow=3.2,SNR=11						
BATI				S	**S**	**09 50 21.2**	**-2.5**
	12nm,0.3s,baz=298,slow=18,SNR=4.1						
SIJI	**Sorong**	**6.22**	**30**	P	**Pn**	**09 49 15.6**	**+1.0**
	1.2nm,0.3s,baz=177,slow=19,SNR=2.6						
SIJI				S	**S**	**09 50 27.5**	**-3.0**
	2.4nm,0.3s,baz=301,slow=23,SNR=8.7						
MTN	**Manton Dam**	**7.17**	**156**		**Pn**	**09 49 26.7**	**+1.0**
KNRA	**Kununurra**	**9.37**	**176**		**Pn**	**09 49 52.5**	**+0.9**
FITZ	**Fitzroy Crossi**	**12.00**	**191**	P	**P**	**09 50 22.9**	**+0.2**
	0.4nm,0.3s,baz=28,slow=11,SNR=13						
FITZ	**Fitzroy Crossi**	**12.00**	**191**	P	**P**	**09 50 23.3**	**+0.6**
WB0	**Warramunga Arr**	**14.74**	**156**	P	**P**	**09 50 53.9**	**+1.1**
WRAB	**Tennant Creek**	**14.87**	**157**		**P**	**09 50 55.7**	**+1.4**
WRA	**Warramunga Arr**	**14.87**	**157**	P	**P**	**09 50 55.1**	**+0.8**
	0.5nm,0.3s,baz=336,slow=12,SNR=54						
WRA				S	**S**	**09 53 31.4**	**-3.1**
	0.3nm,0.3s,baz=335,slow=18,SNR=10						
WRA	**Warramunga Arr**	**14.87**	**157**		**P**	**09 50 54.3**	**0.0**
WB2	**Warramunga Arr**	**14.88**	**157**	P	**P**	**09 50 55.5**	**+1.1**
WC3	**Warramunga Arr**	**14.90**	**157**	P	**P**	**09 50 56.0**	**+1.4**
WR0	**Warramunga Arr**	**14.97**	**156**		**P**	**09 50 56.5**	**+1.1**
COEN	**Coen**	**16.66**	**118**	P	**P**	**09 51 16.0**	**+2.2**
COEN				IAmb	IAmb	09 51 16.7	
	comp=Z,7.0nm,0.7s						
PSAC2	**Pilbara Seismi**	**17.16**	**207**	P	**P**	**09 51 19.2**	**+0.1**
PSAC2				IAmb	IAmb	09 51 19.8	
	comp=Z,9.1nm,1.1s						
PSA00	**Pilbara Seismi**	**17.19**	**207**	P	**P**	**09 51 19.9**	**+0.5**
PSA00				IAmb	IAmb	09 51 20.1	
	comp=Z,6.7nm,0.7s						
ASAR	**Alice Springs**	**18.17**	**163**	P	**P**	**09 51 30.9**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=340,slow=10,SNR=5.1						
ASAR				S	**S**	**09 54 37.8**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=344,slow=18,SNR=8.1						
MKAR	**Makanchi Array**	**66.60**	**328**	P	**P**	**09 57 56.2**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=122,slow=7.6,SNR=2.3						

*IDC **19** 09:50:01.3±1.7,1°89N×127°37E,h0km,mb4.1/4, mb1 4.2/5,mb1mx3.6/44,mbtmp4.0/5,ML3.8/1,Error ellipse: s-maj=105.1km s-min=23.3km az=68.0*

*DJA **19** 09:50:16.8±0.4,2°N±5°×12°7E±°,h10km,M4.1/6,mb4.9/1, MLv3.7/6*

ISC 19 09:50:12.8±1.4,1°9N±0°1×127°5E±0°1,h100km,n10, σ1§36/10,mb4.0/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.17**	**187**	P	**Pn**	**09 50 37.4**	**+2.2**
SGSI	**Sangihe**	**2.62**	**311**	P	Pn	09 51 05.5	+12
SGSI				S	**Sn**	**09 51 24.6**	**-0.3**
KMSI	**Cibinong**	**3.77**	**249**	P	**Pn**	**09 51 09.2**	**+0.3**
GTOI	**Gorontalo**	**4.67**	**254**	P	**Pn**	**09 51 22.7**	**+1.6**
LUWI	**Luwuk**	**5.58**	**238**	P	**Pn**	**09 51 33.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**20.00**	**185**	P	**P**	**09 54 36.6**	**-0.9**
	0.2nm,0.3s,baz=24,slow=10.0,SNR=1.8						
WRA	**Warramunga Arr**	**22.76**	**163**	P	**P**	**09 55 05.6**	**-1.4**
	3.8nm,0.3s,baz=339,slow=11,SNR=17						
ASAR	**Alice Springs**	**26.20**	**167**	P	**P**	**09 55 37.1**	**-1.3**
	1.4nm,0.4s,baz=346,slow=7.8,SNR=18						
STKA	**Stephens Creek**	**36.20**	**159**	P	**P**	**09 57 05.3**	**-0.6**
	1.8nm,0.5s,baz=337,slow=10,SNR=7.1						
MKAR	**Makanchi Array**	**59.45**	**326**	P	**P**	**10 00 05.9**	**+0.7**
	0.4nm,0.4s,baz=124,slow=8.6,SNR=6.5						

*SOME **19** 09:51:27.3,44°72N×82°18E,h15km*

*NNC **19** 09:51:29.2±1.2,44°72N×82°09E,h0km,mb3.6,mpv3.4, Error ellipse: s-maj=13.1km s-min=5.1km az=123.0*

ISC 19 09:51:27.8±1.7,44°69N±0°05×82°27E±0°09,h10km,n18, σ0§76/28,2C-2D,Northern Xinjiang

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

DJR	**Jarkent**	**1.81 259**		*e*P	**Pb**	**09 52 00.6**	**-0.4**
	7.3nm,0.2s						
DJR				*e*S	**Sb**	**09 52 24.6**	**+0.7**
	4.0nm,0.3s						
DJR	**Jarkent**	**1.81 259**		P	**Pb**	**09 52 00.6**	**-0.4**
	7.3nm,0.2s						
DJR				S	**Sb**	**09 52 24.6**	**+0.7**
	4.0nm,0.3s						
KTMS	**Ketmen**	**1.86 229**		*e*P	**Pb**	**09 52 01.5**	**-0.5**
	10nm,0.2s						
KTMS				*e*S	**Sb**	**09 52 26.3**	**+0.9**
	23nm,0.4s						
KTMS	**Ketmen**	**1.86 229**		P	**Pb**	**09 52 01.9**	**-0.1**
	10nm,0.2s						
KTMS				S	**Sb**	**09 52 26.5**	**+1.1**
	23nm,0.4s						
MK31	**Makanchi Array**	**2.10**	**0**	⇓Pn	**Pb**	**09 52 05.8**	**-0.2**
	3.4nm,0.2s,baz=182,slow=14,SNR=258						
MK31				⇓Lg	Lg	09 52 33.9	
	3.7nm,0.3s,baz=177,slow=27,SNR=17						
MAKZ	**Makanchi**	**2.12 355**		⇑Pn	**Pb**	**09 52 05.8**	**-0.6**
	1.1nm,0.2s						
MAKZ				⇑Lg	Lg	09 52 34.1	
	3.7nm,0.3s						
KAPS	**Kapalarasan**	**2.15 287**		*e*P	**Pb**	**09 52 06.2**	**-0.6**
	3.9nm,0.2s						
KAPS				*e*S	**Sb**	**09 52 34.1**	**+0.5**
	7.5nm,0.4s						
KAPS	**Kapalarasan**	**2.15 287**		Pg	**Pb**	**09 52 06.2**	**-0.6**
	3.9nm,0.2s						
KAPS				Lg	Lg	09 52 34.1	
	7.5nm,0.4s						
PDGK	**Podgornoye**	**2.42 237**		Pg	**Pb**	**09 52 10.5**	**-1.1**
	2.9nm,0.2s						
PDGK				Lg	Lg	09 52 41.6	
	7.6nm,0.6s						
SHLS	**Shalkode**	**2.54 234**		*e*P	**Pn**	**09 52 09.4**	**+0.2**
	8.5nm,0.2s						
SHLS				*e*S	**Sn**	**09 52 39.6**	**-0.7**
	16nm,0.3s						
SHLS	**Shalkode**	**2.54 234**		Pg	**Pn**	**09 52 09.4**	**+0.2**
	8.5nm,0.2s						
SHLS				Lg	Lg	09 52 39.6	
	16nm,0.3s						
UZB	**Uzynbulak**	**2.81 238**		*e*P	**Pb**	**09 52 17.6**	**-0.6**
	1.8nm,0.1s						
UZB				*e*S	**Sb**	**09 52 53.5**	**+0.9**
	4.5nm,0.2s						
UZB	**Uzynbulak**	**2.81 238**		Pg	**Pb**	**09 52 17.6**	**-0.6**
	1.8nm,0.1s						
UZB				Lg	Lg	09 52 53.5	
	4.5nm,0.2s						
MNBS	**Baschi**	**2.84 259**		*e*P	**Pb**	**09 52 17.7**	**-1.0**
	7.3nm,0.2s						
MNBS				*e*S	**Sb**	**09 52 54.0**	**+0.5**
	11nm,0.2s						
MNBS	**Baschi**	**2.84 259**		Pg	**Pb**	**09 52 17.7**	**-1.0**
	7.3nm,0.2s						
MNBS				Lg	Lg	09 52 54.0	
	11nm,0.2s						
KPKS	**Kokpek**	**2.86 246**		*e*P	**Pb**	**09 52 18.1**	**-0.9**
	11nm,0.1s						
KPKS				*e*S	**Sb**	**09 52 54.7**	**+0.6**
	20nm,0.4s						
ARXS	**Arharly**	**3.22 263**		*e*P	**Pb**	**09 52 24.5**	**-0.5**
	5.7nm,0.2s						
ARXS				*e*S	**Sb**	**09 53 05.8**	**+1.5**
	8.9nm,0.3s						
ARXS	**Arharly**	**3.22 263**		Pg	**Pb**	**09 52 24.5**	**-0.5**
	5.7nm,0.2s						
ARXS				Lg	Lg	09 53 05.8	
	8.9nm,0.3s						

*IDC **19** 09:54:36.3±0.6, 19°52N×120°59E,h0km,mb4.0/18, mb1 4.2/19,mb1mx4.0/50,mbtmp4.0/19,ML3.2/1,MS3.4/17, Ms1 3.4/17,ms1mx3.1/48,Error ellipse: s-maj=23.5km s-min=12.6km az=71.0*

*NEIC **19** 09:54:37.2±1.7, 19°55N±0°08×120°4E±0°1,h10km±1km, mb4.2/22, Error ellipse: s-maj=17.1km s-min=12.2km az=113.0*

*MAN **19** 09:54:39.6, 19°56N×120°56E,h20km,mb4.8,ML3.7, MS3.6*

ISC 19 09:54:39.4±0.4,19°53N±0°03×120°51E±0°06,h23km,n73, σ1§10/70,mb4.2/26,MS3.3/15,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**1.60**	**182**	⇓*e*P	**Pn**	**09 55 06.9**	**+0.6**
SIPP				*i* S	Sb	09 55 49.0	+21
BBP	**Basco**	**1.64**	**56**	*e*P	**Pn**	**09 55 06.7**	**-0.1**
BBP				*e*S	**Sn**	**09 55 27.1**	**+0.1**
APYP	**Conner**	**1.80**	**157**	*e*P	**Pn**	**09 55 10.0**	**+1.0**
APYP				*e*S	**Sb**	**09 55 33.0**	**-0.8**
SGCP	**Mt. Cagua**	**1.94**	**131**	*e*P	**Pn**	**09 55 11.4**	**+0.5**
CAUP	**Cauayan**	**2.86**	**154**	*e*P	**Pb**	**09 55 26.5**	**-3.3**
CAUP				*e*S	**Sn**	**09 55 56.4**	**-1.0**
TWG	**Pinlang**	**3.31**	**9**	Pn	**Pn**	**09 55 29.9**	**+0.1**
TWG				Sn	**Sn**	**09 56 08.5**	**0.0**
SMPP	**San Manuel, Pa**	**3.37**	**177**	*e*P	**Pn**	**09 55 32.2**	**+1.6**
SMPP				*e*S	**Sn**	**09 56 09.2**	**-0.8**
TPUB	**Ta-pu**	**3.75**	**2**	Pn	**Pn**	**09 55 34.7**	**-1.1**
TPUB				Sn	**Sn**	**09 56 17.9**	**-1.4**
YULB	**Yu-li**	**3.91**	**11**		**Pn**	**09 55 37.3**	**-0.7**
SSLB	**Suanglung**	**4.25**	**5**	Pn	**Pn**	**09 55 43.3**	**+0.5**
SSLB				Sn	**Sn**	**09 56 31.8**	**0.0**
NACB	**Ninganchiao**	**4.72**	**12**	Pn	**Pn**	**09 55 48.2**	**-1.0**
YHNB	**Yeheng**	**5.17**	**9**	Pn	**Pn**	**09 55 56.5**	**+1.1**
HKPS	**Hong Kong Po S**	**6.55**	**296**	Pn	**Pn**	**09 56 12.8**	**-1.6**
QIZ	**Qiongzhong**	**10.09**	**269**	Pn	**Pn**	**09 57 01.2**	**-1.7**
DAV	**Davao City (W)**	**13.33**	**158**	LR	LR	10 03 40.3	
	comp=Z,294nm,20.4s,baz=324,slow=41						
SBUM	**Sibu**	**18.82**	**207**	P	**Pn**	**09 58 58.4**	**+0.2**
KSRS	**Korea Array**	**18.99**	**18**	P	**Pn**	**09 59 00.4**	**+0.3**
	0.1nm,0.3s,baz=203,slow=11,SNR=2.2						
KSRS				LR	LR	10 07 46.1	
	comp=Z,39nm,18.8s,baz=196,slow=42						
CMAR	**Chiang Mai Arr**	**20.43**	**271**	P	Pn	09 59 16.6	-0.7
	1.4nm,0.7s,baz=79,slow=9.5,SNR=10						
CMAR				LR	LR	10 08 13.5	
	comp=Z,54nm,19.1s,baz=158,slow=40						
CMAR	**Chiang Mai Arr**	**20.43**	**271**	P	**P**	**09 59 15.9**	**+0.8**
SIJI	**Sorong**	**22.86**	**151**	LR	LR	10 10 14.3	
	comp=Z,39nm,19.0s,baz=282,slow=41						
MJAR	**Matsushiro Arr**	**22.98**	**39**	P	**P**	**09 59 43.2**	**+0.8**
	0.7nm,0.5s,baz=237,slow=11,SNR=2.3						
MJAR	**Matsushiro Arr**	**22.98**	**39**	P	**P**	**09 59 41.3**	**-1.1**
GUMO	**Guam**	**24.07**	**100**	LR	LR	10 07 30.5	
	comp=Z,50nm,21.3s,baz=296,slow=32						
JAY	**Jayapura**	**29.56**	**136**	LR	LR	10 10 17.6	
	comp=Z,82nm,21.6s,baz=358,slow=32						
SONM	**Songino Array**	**30.47**	**341**	P	**P**	**10 00 51.1**	**+0.5**
	0.7nm,0.6s,baz=146,slow=9.0,SNR=5.4						
SONM				LR	LR	10 12 48.9	
	comp=Z,49nm,19.1s,baz=146,slow=36						
KLR	**Kul'dur**	**30.97**	**14**	P	**P**	**10 00 55.2**	**+0.5**
	1.0nm,0.5s,baz=222,slow=7.9,SNR=4.7						
KLR				LR	LR	10 14 14.0	
	comp=Z,44nm,18.2s,baz=211,slow=38						
KNRA	**Kununurra**	**35.92**	**166**	P	**P**	**10 01 38.0**	**-0.1**
KNRA				IAmb	IAmb	10 02 01.1	
	comp=Z,9.0nm,1.2s						
FITZ	**Fitzroy Crossi**	**37.74**	**172**	P	**P**	**10 01 53.9**	**+0.3**
	comp=Z,4.7nm,0.9s,baz=352,slow=7.0,SNR=9.2						
FITZ	**Fitzroy Crossi**	**37.74**	**172**	P	**P**	**10 01 54.1**	**+0.6**
FITZ				IAmb	IAmb	10 01 55.3	
	comp=Z,3.9nm,0.9s						
MK31	**Makanchi Array**	**41.36**	**320**	P	**P**	**10 02 25.4**	**+1.8**
MK31				IAmb	IAmb	10 02 35.4	
	comp=Z,3.7nm,1.0s						
MKAR	**Makanchi Array**	**41.36**	**320**	P	**P**	**10 02 24.1**	**+0.5**
	comp=Z,3.4nm,0.9s,baz=113,slow=9.3,SNR=18						
MKAR	**Makanchi Array**	**41.36**	**320**	P	**P**	**10 02 25.3**	**+1.7**
WB0	**Warramunga Arr**	**41.36**	**160**	P	**P**	**10 02 23.8**	**0.0**
WRAB	**Tennant Creek**	**41.50**	**160**	P	**P**	**10 02 25.3**	**+0.3**
WRAB				IAmb	IAmb	10 02 53.7	
	comp=Z,9.4nm,1.4s						
WRA	**Warramunga Arr**	**41.51**	**160**	P	**P**	**10 02 24.4**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=342,slow=9.1,SNR=24						
WRA				PcP	**PcP**	**10 04 23.4**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=344,slow=3.6,SNR=7.6						
WRA	**Warramunga Arr**	**41.51**	**160**	P	**P**	**10 02 24.8**	**-0.3**
WB2	**Warramunga Arr**	**41.51**	**160**	P	**P**	**10 02 25.2**	**+0.1**
WB2				IAmb	IAmb	10 02 31.4	
	comp=Z,4.1nm,0.9s						
MAKZ	**Makanchi**	**41.56**	**320**	P	**P**	**10 02 23.0**	**-2.2**
MAKZ				IAmb	IAmb	10 02 27.7	
	comp=Z,4.1nm,0.9s						
WR0	**Warramunga Arr**	**41.59**	**160**	P	**P**	**10 02 25.8**	**+0.1**
YAK	**Yakutsk**	**42.94**	**6**	LR	LR	10 20 45.0	
	comp=Z,32nm,18.8s,baz=265,slow=36						
ZAA0	**Zalesovo Array**	**43.87**	**330**	P	**P**	**10 02 43.5**	**-0.3**
ZAA0				IAmb	IAmb	10 02 45.5	
	comp=Z,2.5nm,0.8s						
ZALV	**Zalesovo Beam**	**43.87**	**330**	P	**P**	**10 02 44.5**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=111,slow=8.1,SNR=8.5						
ZALV				LR	LR	10 21 50.3	
	comp=Z,52nm,18.8s,baz=113,slow=37						
ZALV	**Zalesovo Beam**	**43.87**	**330**	P	**P**	**10 02 43.2**	**-0.6**
NIL	**Nilore**	**44.17**	**298**	P	**P**	**10 02 46.9**	**+0.2**
NIL				IAmb	IAmb	10 02 48.4	
	comp=Z,6.5nm,0.9s						
AS31	**Alice Springs**	**44.88**	**162**	P	**P**	**10 02 51.3**	**-0.9**
ASAR	**Alice Springs**	**44.88**	**162**	P	**P**	**10 02 53.1**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=341,slow=7.0,SNR=70						
ASAR	**Alice Springs**	**44.88**	**162**	P	**P**	**10 02 51.2**	**-1.1**
KURK	**Kurchatov**	**45.34**	**323**	P	**P**	**10 02 54.6**	**-1.0**
KURBB	**Kurchatov Arra**	**45.35**	**323**	P	**P**	**10 02 57.1**	**+1.5**
	comp=Z,4.8nm,0.7s,baz=122,slow=7.9,SNR=11						
KKAR	**Karatay Array**	**47.91**	**311**	P	**P**	**10 03 14.7**	**-1.3**
HNR	**Honiara**	**48.35**	**123**	LR	LR	10 20 15.3	
	comp=Z,29nm,19.4s,baz=324,slow=32						
FORT	**Forrest**	**50.55**	**172**	P	**P**	**10 03 36.7**	**+0.7**
BRVK	**Borovoye**	**51.01**	**323**	P	**P**	**10 03 37.1**	**-2.3**
BRVK				IAmb	IAmb	10 03 41.7	
	comp=Z,2.4nm,0.6s						
TIXI	**Tiksi**	**52.35**	**3**	P	**P**	**10 03 47.8**	**-1.3**
TIXI				IAmb	IAmb	10 03 52.0	
	comp=Z,2.4nm,0.8s						
NRIK	**Noril'sk**	**53.73**	**346**	P	**P**	**10 04 00.0**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=101,slow=8.1,SNR=1.9						
NRIK				LR	LR	10 28 36.2	
	comp=Z,50nm,18.5s,baz=201,slow=38						
BBOO	**Buckleboo**	**54.13**	**164**	P	**P**	**10 04 03.8**	**+1.1**
STKA	**Stephens Creek**	**54.97**	**158**	P	**P**	**10 04 08.2**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=325,slow=11,SNR=4.1						
STKA	**Stephens Creek**	**54.97**	**158**	P	**P**	**10 04 08.4**	**-0.4**
ABKAR	**Akbulak array**	**56.31**	**317**	P	**P**	**10 04 18.0**	**-0.2**
GEYT	**Alibeck**	**56.70**	**303**	LR	LR	10 32 09.9	
	comp=Z,41nm,18.9s,baz=230,slow=40						
AKTO	**Aktyubinsk**	**57.72**	**318**	P	**P**	**10 04 29.2**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=141,slow=6.5,SNR=1.8						
KBZ	**Khabaz**	**67.94**	**310**	P	**P**	**10 05 37.8**	**+1.4**
	comp=Z,4.1nm,0.9s,baz=53,slow=20,SNR=7.1						
KBZ				LR	LR	10 38 15.3	
	comp=Z,48nm,18.3s,baz=170,slow=38						
MDM	**Murphy Dome**	**73.02**	**26**	P	**P**	**10 06 08.8**	**+1.6**
ARCES	**ARCESS Array B**	**73.61**	**339**	LR	LR	10 42 07.6	
	comp=Z,23nm,18.3s,baz=275,slow=39						
ILAR	**Eielson Array**	**73.62**	**27**	P	**P**	**10 06 10.2**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=262,slow=4.8,SNR=7.2						
ILAR	**Eielson Array**	**73.62**	**27**	P	**P**	**10 06 10.5**	**-0.2**
BMAR	**Burnt Mountain**	**74.01**	**24**	P	**P**	**10 06 15.3**	**+2.4**
FINES	**FINESS Array B**	**75.14**	**330**	P	**P**	**10 06 19.9**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=72,slow=6.2,SNR=4.7						
BRTR	**Keskin Array B**	**75.45**	**307**	LR	LR	10 43 16.5	
	comp=Z,22nm,18.3s,baz=192,slow=39						
K27K	**Chicken**	**75.83**	**27**	P	**P**	**10 06 25.7**	**+2.3**
AKASG	**Malin Array Be**	**75.94**	**319**	P	**P**	**10 06 24.4**	**+0.1**
	comp=Z,2.0nm,0.4s,baz=63,slow=5.7,SNR=5.6						
NOA	**NORSAR Array B**	**82.03**	**332**	LR	LR	10 46 22.2	
	comp=Z,44nm,19.3s,baz=65,slow=38						
YKA	**Yellowknife Ar**	**87.48**	**22**	P	**P**	**10 07 25.9**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=326,slow=3.5,SNR=3.6						

*KOLA **19** 10:00:06.0,64°69N×30°79E,h0km*

*IDC **19** 10:00:06.1±2.4,64°77N×30°22E,h0km,mb1 2.8/3, mb1mx2.7/46,mbtmp2.7/3,ML2.0/3,Error ellipse: s-maj=38.9km s-min=8.0km az=98.0*

ISC 19 10:00:05.3±1.2,64°84N±0°07×29°9E±0°1,h0km,n5, σ0§58/9,Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APA0	**Apatity Array**	**3.04**	**23**	P	**Pn**	**10 00 55.0**	**+0.5**
APA0				S	**Sn**	**10 01 31.8**	**+0.1**
APA	**Apatity**	**3.08**	**26**	P	**Pn**	**10 00 55.3**	**+0.2**
APA				S	**Sn**	**10 01 32.2**	**-0.4**
FINES	**FINESS Array B**	**3.83**	**209**	Pn	**Pn**	**10 01 06.0**	**+0.7**

AHWZ	**Ahwaz**	**2.03**	**254**	*e*Pn	**Pn**	**10 12 25.3**	**+0.9**
GHVR	**GHOM**	**2.58**	**7**	*e*Pn	**Pb**	**10 12 36.4**	**-0.2**
GHVR				*e*Sg	**Sg**	**10 13 14.2**	**+1.2**
GHVR				IAML		10 13 24.5	
	comp=E,70nm,0.6s						
IKMR	**Kamar-syah**	**2.68**	**307**	*e*Pn	**Pn**	**10 12 34.0**	**+0.7**
ASAO	**Ashtian**	**2.73**	**344**	*e*Pn	**Pb**	**10 12 38.4**	**-0.9**
ASAO				IAML		10 13 26.1	
	comp=N,60nm,0.4s						
IQOM	**Qom**	**2.92**	**2**	*e*Pn	**Pn**	**10 12 37.4**	**+0.5**
IDOB	**Doab**	**2.97**	**310**	*e*Pn	**Pn**	**10 12 38.2**	**+0.6**
HSAM	**Samen**	**3.01**	**320**	*e*Pn	**Pn**	**10 12 39.0**	**+0.9**
HSAM				*e*		10 13 30.8	
IKFM	**Kafar-mosalman**	**3.05**	**303**	*e*Pn	**Pn**	**10 12 39.1**	**+0.7**
IVRN	**Varamin**	**3.15**	**12**	*e*Pn	**Pn**	**10 12 40.7**	**+0.9**
YZKH	**Yazd**	**3.15**	**80**	*e*Pn	**Pb**	**10 12 44.0**	**-2.2**
IRAZ	**Razeghan**	**3.58**	**347**	*e*Pn	**Pn**	**10 12 46.3**	**+0.4**
IBZA	**Bozab**	**3.62**	**316**	*e*Pn	**Pn**	**10 12 47.4**	**+0.9**
IKOM	**Komasi**	**3.65**	**309**	*e*Pn	**Pn**	**10 12 47.9**	**+1.1**
QABG	**Abgarm-Qazvin**	**3.95**	**344**	*e*Pn	**Pn**	**10 12 51.7**	**+0.7**
IBAF	**Bafgh**	**3.97**	**93**	*e*Pn	**Pn**	**10 12 52.9**	**+1.7**
HSRG	**Sareghieh**	**3.99**	**327**	*e*Pn	**Pn**	**10 12 52.6**	**+1.0**
SNGE	**Sanandaj**	**4.36**	**318**	*e*Pn	**Pn**	**10 13 00.6**	**+4.0**
SNGE				IAML		10 13 57.4	
	comp=N,26nm,0.5s						
QALM	**Alamut, Qazvin**	**4.51**	**357**	*e*Pn	**Pn**	**10 13 00.3**	**+1.5**
IDHR	**Dehrash**	**4.71**	**307**	*e*Pn	**Pn**	**10 13 01.4**	**0.0**
QSDN	**Sirdan**	**4.80**	**343**	*e*Pn	**Pn**	**10 13 03.7**	**+1.0**
GNI	**Garni**	**9.62**	**330**	LR	LR	10 18 19.2	
	comp=N,39nm,19.1s,baz=233,slow=41						
AKASG	**Malin Array Be**	**24.70**	**326**	P	**P**	**10 17 10.3**	**-1.0**
	comp=N,0.4nm,0.4s,baz=127,slow=7.6,SNR=1.6						
MKAR	**Makanchi Array**	**28.22**	**49**	P	**P**	**10 17 44.3**	**+1.2**
	comp=N,0.4nm,0.6s,baz=234,slow=8.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**48.71**	**259**	P	**P**	**10 20 34.0**	**-1.1**
	comp=N,0.9nm,0.7s,baz=50,slow=7.6,SNR=6.5						
JHJ	**Hachijo jima 2**	**72.52**	**62**	LR	LR	10 57 00.1	
	comp=N,23nm,19.2s,baz=232,slow=37						

IDC 19 10:12:27.6±1.6, 19°58.8N×120°39.7E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/46, mbtmp3.5/4, Error ellipse: s-maj=155.6km s-min=22.2km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**30.57**	**341**	P	P	10 18 43.4	+0.3
	0.2nm,0.5s,baz=124,slow=7.7,SNR=1.4						
WRA	**Warramunga Arr**	**41.41**	**161**	P	P	10 20 15.7	-0.2
	0.6nm,0.5s,baz=342,slow=8.9,SNR=12						
MKAR	**Makanchi Array**	**41.60**	**320**	P	P	10 20 16.9	-0.4
	0.4nm,0.6s,baz=113,slow=9.3,SNR=4.2						
ASAR	**Alice Springs**	**44.80**	**163**	P	P	10 20 43.2	-0.1
	0.4nm,0.4s,baz=340,slow=7.1,SNR=8.7						

IDC 19 10:28:53.1±2.1, 2°.06N×126°.65E, h0km, mb3.2/4, mb1 3.5/4, mb1mx3.3/43, mbtmp3.3/4, Error ellipse: s-maj=120.0km s-min=26.8km az=69.0
DJA 19 10:29:00.3±1.8, 2°.N±9°×12°.6E±°, h46km±162km, M3.3/5, MLv3.3/5
ISC 19 10:28:59.5±1.4, 2°.1N±0°.3×126°.7E±0°.5, h47km, n6, σ0s73/8, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.45**	**152**	P	**Pn**	**10 29 23.6**	**+0.3**
TNTI				S	**Sn**	**10 29 41.3**	**+0.1**
SGSI	**Sangihe**	**1.98**	**325**	P	**Pn**	**10 29 31.5**	**+0.8**
SGSI				S	**Sn**	**10 29 53.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**20.05**	**183**	P	**P**	**10 33 28.6**	**-0.2**
	1.1nm,0.9s,baz=338,slow=11,SNR=1.9						
WRA	**Warramunga Arr**	**23.12**	**161**	P	**P**	**10 34 00.7**	**-1.0**
	0.5nm,0.4s,baz=340,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.52**	**165**	P	**P**	**10 34 33.2**	**+0.3**
	0.2nm,0.4s,baz=345,slow=9.2,SNR=6.5						
MKAR	**Makanchi Array**	**58.90**	**326**	P	**P**	**10 38 53.6**	**-0.2**
	0.1nm,0.4s,baz=117,slow=8.2,SNR=1.9						

IDC 19 10:38:20.4±1.5, 19°.53N×120°.69E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/55, mbtmp3.5/6, Error ellipse: s-maj=132.0km s-min=18.3km az=66.0
ISC 19 10:38:23.9±1.4, 19°.5N±0°.3×120°.5E±0°.8, h23km, n6, σ0s35/6, mb3.5/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**30.55**	**341**	P	**P**	**10 44 35.6**	**-0.2**
	0.3nm,0.5s,baz=156,slow=11,SNR=2.2						
FITZ	**Fitzroy Crossi**	**37.66**	**172**	P	**P**	**10 45 37.2**	**-0.3**
	1.3nm,1.0s,baz=346,slow=12,SNR=2.3						
MKAR	**Makanchi Array**	**41.42**	**320**	P	**P**	**10 46 08.8**	**+0.1**
	0.2nm,0.5s,baz=126,slow=9.1,SNR=4.6						
WRA	**Warramunga Arr**	**41.43**	**160**	P	**P**	**10 46 09.2**	**+0.3**
	0.5nm,0.5s,baz=343,slow=9.2,SNR=9.4						
ASAR	**Alice Springs**	**44.81**	**162**	P	**P**	**10 46 36.5**	**+0.2**
	0.5nm,0.6s,baz=342,slow=6.9,SNR=14						
KURBB	**Kurchatov Arra**	**45.41**	**323**	P	**P**	**10 46 41.1**	**+0.3**
	0.7nm,0.6s,baz=121,slow=7.8,SNR=5.5						

NNC 19 10:40:53.2±0.4, 42°.83N×70°.95E, h0km, mb2.9, mpv2.3, Error ellipse: s-maj=8.4km s-min=1.3km az=31.0, Suspected Mining explosion.
SOME 19 10:40:53.2, 43°.02N×71°.07E, h5km
KRNET 19 10:40:55.2±0.1, 42°.91N×71°.25E, h13km, mb2.4
ISC 19 10:40:53.3±0.8, 42°.96N±0°.05×71°.08E±0°.02, h0km, n22, σ0s91/42, 26C-14D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK06	**Karatay Array**	**0.43**	**289**	↑P	**Pg**	**10 41 01.2**	**-0.3**
KK06				↑S	**Sg**	**10 41 07.0**	**0.0**
KK05	**Karatay Array**	**0.44**	**291**	↓P	**Pg**	**10 41 01.5**	**-0.2**
KK05				↓S	**Sg**	**10 41 07.4**	**+0.1**
KK02	**Karatay Array**	**0.44**	**289**	↑P	**Pg**	**10 41 01.5**	**-0.2**
KK02				↑S	**Sg**	**10 41 07.4**	**0.0**
KK31	**Karatay Array**	**0.44**	**289**	↑P	**Pg**	**10 41 01.6**	**-0.1**
	1.0nm,0.2s,baz=221,slow=63,SNR=76						
KK31				↓S	**Sg**	**10 41 07.5**	**0.0**
	4.2nm,0.2s,baz=117,slow=32,SNR=18						
KK07	**Karatay Array**	**0.44**	**287**	↓P	**Pg**	**10 41 01.6**	**-0.2**
KK07				↑S	**Sg**	**10 41 07.5**	**-0.1**
KK01	**Karatay Array**	**0.45**	**289**	↑P	**Pg**	**10 41 01.6**	**-0.2**
KK01				↑S	**Sg**	**10 41 07.7**	**+0.1**
KK04	**Karatay Array**	**0.45**	**290**	↑P	**Pg**	**10 41 01.6**	**-0.3**
KK04				↑S	**Sg**	**10 41 07.7**	**0.0**
KK03	**Karatay Array**	**0.45**	**289**	↑P	**Pg**	**10 41 01.7**	**-0.2**
KK03				↓S	**Sg**	**10 41 07.6**	**-0.1**
KK09	**Karatay Array**	**0.46**	**291**	↑P	**Pg**	**10 41 01.8**	**-0.2**
KK09				↓S	**Sg**	**10 41 07.9**	**0.0**
KK08	**Karatay Array**	**0.46**	**289**	↑P	**Pg**	**10 41 01.8**	**-0.3**
KK08				↑S	**Sg**	**10 41 07.8**	**-0.2**
IUG	**luzhnay**	**1.12**	**224**	*e*P	**Pn**	**10 41 15.1**	**-1.2**
	2.4nm,0.2s						
IUG				*e*S	**Sn**	**10 41 30.6**	**-2.0**
	11nm,0.3s						
MNAS	**Manas**	**1.15**	**114**	↓*e*P	**Pg**	**10 41 14.5**	**-0.8**
	baz=14						
MNAS				↑*i*S	**Sg**	**10 41 29.2**	**-1.1**
	baz=14						
TRKS	**Terek-Say**	**1.43**	**178**	↑*i*P	**Pb**	**10 41 22.7**	**+1.8**
	baz=82						
TRKS				↑*i*S	**Sn**	**10 41 43.0**	**+2.8**
	baz=82						
MRKS	**Merke**	**1.59**	**97**	*e*P	**Pb**	**10 41 23.6**	**-0.1**
	3.3nm,0.2s						
MRKS				*e*S	**Sg**	**10 41 45.4**	**+0.9**
	3.1nm,0.5s						
EKS2	**Erkin-Say**	**2.01**	**98**	↑*e*P	**Pb**	**10 41 30.9**	**+0.2**
	baz=97						
EKS2				↑*i*S	**Sb**	**10 41 56.5**	**+0.2**
	baz=97						
AML	**Almayashu**	**2.10**	**112**	↓*e*P	**Pb**	**10 41 31.7**	**-0.8**
	baz=12						
AML				↓*i*S	**Sb**	**10 41 58.8**	**-0.5**
	baz=12						
ARSB	**Arslanbob**	**2.16**	**138**	↑*i*P	**Pb**	**10 41 33.0**	**-0.4**
	baz=40						
ARSB				↑*i*S	**Sg**	**10 42 01.0**	**-1.7**
	baz=40						
USP	**Ospenovka**	**2.52**	**82**	↓*e*P	**Pb**	**10 41 38.9**	**-0.6**
	baz=80						
USP				↓*i*S	**Sb**	**10 42 11.4**	**+0.3**
	baz=80						
AAK	**Ala-Archa**	**2.53**	**96**	↓*e*P	**Pb**	**10 41 38.2**	**-1.5**
	baz=95						
AAK				↓*i*S	**Sb**	**10 42 10.6**	**-0.9**
	baz=95						
AAK	**Ala-Archa**	**2.53**	**96**	↑Pg	**Pb**	**10 41 40.0**	**+0.2**
	0.9nm,0.3s						
AAK				↑Lg	Lg	10 42 15.8	
	1.9nm,0.6s						
ARLS	**Aral**	**2.64**	**113**	↓*i*P	**Pn**	**10 41 39.1**	**+1.8**
	baz=13						
ARLS				↓*i*S	**Sn**	**10 42 11.3**	**+1.2**
	baz=13						
TKM2	**Tokmak 2**	**3.32**	**89**	↑Pg	**Pg**	**10 41 57.1**	**+0.2**
	2.2nm,1.1s						
TKM2				↑Lg	Lg	10 42 43.8	
	1.4nm,0.8s						

IDC 19 10:42:17.2±0.8, 19°.46N×120°.56E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.7/51, mbtmp3.8/12, MS2.8/3, Ms1 2.8/3, ms1mx2.5/42, Error ellipse: s-maj=34.2km s-min=15.2km az=69.0
NEIC 19 10:42:18.8±0.9, 19°.46N±0°.09×120°.7E±0°.2, h10km±2km, mb4.2/10, Error ellipse: s-maj=31.2km s-min=14.8km az=84.0
ISC 19 10:42:20.5±0.7, 19°.48N±0°.08×120°.6E±0°.1, h23km, n35, σ0s78/32, mb4.0/16, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**3.35**	**7**	Pn	**Pn**	**10 43 11.4**	**-0.1**
TWG				Sn	**Sn**	**10 43 50.1**	**-0.6**
TPUB	**Ta-pu**	**3.81**	**0**	Pn	**Pn**	**10 43 16.9**	**-0.9**
YULB	**Yu-li**	**3.95**	**9**	Pn	**Pn**	**10 43 18.1**	**-1.6**
SSLB	**Suanglung**	**4.30**	**4**	Pn	**Pn**	**10 43 24.8**	**+0.2**
YHNB	**Yeheng**	**5.22**	**8**	Pn	**Pn**	**10 43 36.8**	**-0.4**
QIZ	**Qiongzhong**	**10.20**	**269**	Pn	Pn	10 44 41.3	-4.3
DAV	**Davao City (W)**	**13.24**	**158**	LR	LR	10 51 31.5	
	comp=Z,110nm,19.1s,baz=324,slow=42						
CMAR	**Chiang Mai Arr**	**20.53**	**271**	P	**P**	**10 46 57.0**	**-0.5**
	0.5nm,0.3s,baz=66,slow=7.6,SNR=5.6						
CMAR	**Chiang Mai Arr**	**20.53**	**271**	P	**P**	**10 46 57.2**	**-0.3**
BJT	**Baijiatuao**	**20.83**	**350**	P	**P**	**10 47 00.9**	**+0.4**
MJAR	**Matsushiro Arr**	**22.96**	**39**	LR	LR	10 56 15.4	
	comp=Z,17nm,19.8s,baz=300,slow=36						
GUMO	**Guam**	**23.95**	**100**	LR	LR	10 54 51.1	
	comp=Z,16nm,20.0s,baz=132,slow=31						
SONM	**Songino Array**	**30.56**	**341**	P	**P**	**10 48 32.9**	**+0.4**
	0.4nm,0.4s,baz=160,slow=11,SNR=4.0						
KLR	**Kul'dur**	**31.00**	**14**	P	**P**	**10 48 37.2**	**+1.0**
	2.1nm,0.9s,baz=219,slow=3.5,SNR=4.3						
FITZ	**Fitzroy Crossi**	**37.66**	**172**	P	**P**	**10 49 34.2**	**+0.2**
	1.3nm,0.8s,baz=17,slow=11,SNR=1.5						
FITZ	**Fitzroy Crossi**	**37.66**	**172**	P	**P**	**10 49 32.7**	**-1.3**
WB0	**Warramunga Arr**	**41.27**	**160**	P	**P**	**10 50 03.1**	**-1.1**
WB0				IAmb	IAmb	10 50 30.9	
	comp=Z,6.5nm,1.4s						
WRA	**Warramunga Arr**	**41.41**	**160**	P	**P**	**10 50 04.8**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=343,slow=9.3,SNR=18						
WRA	**Warramunga Arr**	**41.41**	**160**	P	**P**	**10 50 04.6**	**-0.8**
WB2	**Warramunga Arr**	**41.42**	**160**	P	**P**	**10 50 05.4**	**0.0**
WB2				IAmb	IAmb	10 50 10.8	
	comp=Z,6.4nm,1.4s						
MK31	**Makanchi Array**	**41.47**	**320**	P	**P**	**10 50 06.5**	**+0.8**
MK31				IAmb	IAmb	10 50 16.2	
	comp=Z,3.0nm,1.1s						
MKAR	**Makanchi Array**	**41.47**	**320**	P	**P**	**10 50 05.0**	**-0.6**
	comp=Z,1.6nm,0.8s,baz=114,slow=11,SNR=8.1						
MKAR	**Makanchi Array**	**41.47**	**320**	P	**P**	**10 50 06.5**	**+0.8**
WR0	**Warramunga Arr**	**41.49**	**160**	P	**P**	**10 50 06.3**	**+0.3**
WR0				IAmb	IAmb	10 50 15.8	
	comp=Z,8.9nm,1.4s						
ZALV	**Zalesovo Beam**	**43.98**	**330**	P	**P**	**10 50 25.3**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=111,slow=8.3,SNR=6.5						
AS31	**Alice Springs**	**44.79**	**163**	P	**P**	**10 50 33.3**	**+0.6**
ASAR	**Alice Springs**	**44.79**	**163**	P	**P**	**10 50 33.6**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=336,slow=6.8,SNR=22						
ASAR	**Alice Springs**	**44.79**	**163**	P	**P**	**10 50 32.5**	**-0.2**
KURK	**Kurchatov**	**45.45**	**323**	P	**P**	**10 50 35.9**	**-1.7**
KURK				IAmb	IAmb	10 50 39.2	
	comp=Z,3.6nm,0.8s						
KURBB	**Kurchatov Arra**	**45.46**	**323**	P	**P**	**10 50 38.5**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=124,slow=7.8,SNR=19						
BBOO	**Buckleboo**	**54.04**	**164**	P	**P**	**10 51 43.2**	**0.0**
ABKAR	**Akbulak array**	**56.42**	**317**	P	**P**	**10 52 00.9**	**+0.7**
ILAR	**Eielson Array**	**73.63**	**27**	P	**P**	**10 53 52.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=302,slow=5.2,SNR=2.6						
FINES	**FINESS Array B**	**75.25**	**330**	P	**P**	**10 54 01.1**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=35,slow=5.1,SNR=2.9						
AKASG	**Malin Array Be**	**76.05**	**319**	P	**P**	**10 54 05.7**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=66,slow=3.8,SNR=2.2						

NEIC 19 10:49:30.9±1.1, 15°.13S±0°.08×174°.9W±0°.1, h225km±8km, mb4.1/16, Error ellipse: s-maj=19.0km s-min=9.9km az=105.0
IDC 19 10:49:34.7±14.0, 15°.10S×174°.99W, h261km±139km, mb3.3/9, mb1 3.6/9, mb1mx3.4/39, mbtmp4.0/9, Error ellipse: s-maj=33.5km s-min=19.7km az=101.0
ISC 19 10:49:33.3±0.6, 15°.28S±0°.09×174°.76W±0°.08, h250km, n32, σ1s17/34, mb4.0/17, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.19**	**65**	Pn	**Pn**	**10 50 25.9**	**-2.0**
AFI				S	**S**	**10 51 12.1**	**+1.0**
NIUE	**Niue**	**5.96**	**130**	Pn	**Pn**	**10 51 00.9**	**-0.1**
NIUE					**S**	**10 52 08.3**	**-2.8**
CTAO	**Charters Tower**	**37.40**	**257**	P	**P**	**10 56 22.3**	**-0.5**
CTAO				IAmb	IAmb	10 56 23.1	
	comp=Z,11nm,1.1s						
COEN	**Coen**	**40.69**	**266**	P	**P**	**10 56 50.9**	**+0.9**
COEN				IAmb	IAmb	10 57 01.4	
	comp=Z,13nm,1.4s						
TOO	**Toolangi**	**41.54**	**230**	P	**P**	**10 56 56.4**	**-0.3**
TOO				IAmb	IAmb	10 57 02.1	
	comp=Z,7.4nm,1.2s						
STKA	**Stephens Creek**	**42.97**	**239**	P	**P**	**10 57 07.3**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=97,slow=11,SNR=5.5						
STKA	**Stephens Creek**	**42.97**	**239**	P	**P**	**10 57 07.5**	**-0.7**
BBOO	**Buckleboo**	**47.75**	**239**	P	**P**	**10 57 45.0**	**-0.6**
BBOO				IAmb	IAmb	10 57 53.8	
	comp=Z,14nm,1.2s						
WR0	**Warramunga Arr**	**48.41**	**257**	P	**P**	**10 57 49.7**	**-1.1**
WB0	**Warramunga Arr**	**48.56**	**257**	P	**P**	**10 57 50.7**	**-1.2**
WB0				IAmb	IAmb	10 57 52.3	
	comp=Z,5.1nm,0.7s						
WB2	**Warramunga Arr**	**48.59**	**257**	P	**P**	**10 57 51.5**	**-0.7**
WB2				IAmb	IAmb	10 57 53.1	
	comp=Z,7.1nm,0.8s						
WRAB	**Tennant Creek**	**48.59**	**257**	P	**P**	**10 57 50.4**	**-1.8**
WRAB				IAmb	IAmb	10 57 53.0	
	comp=Z,4.6nm,0.7s						
WRA	**Warramunga Arr**	**48.60**	**257**	P	**P**	**10 57 51.2**	**-1.1**
	comp=Z,3.1nm,0.5s,baz=92,slow=7.2,SNR=46						
WRA	**Warramunga Arr**	**48.60**	**257**	P	**P**	**10 57 51.0**	**-1.2**
AS31	**Alice Springs**	**48.91**	**252**	P	**P**	**10 57 54.2**	**-0.4**
ASAR	**Alice Springs**	**48.91**	**252**	P	**P**	**10 57 54.0**	**-0.6**
	comp=Z,30nm,0.5s,baz=86,slow=8.0,SNR=534						
ASAR	**Alice Springs**	**48.91**	**252**	P	**P**	**10 57 53.7**	**-0.9**
FORT	**Forrest**	**54.31**	**243**	P	**P**	**10 58 33.8**	**-0.5**
PSA00	**Pilbara Seismi**	**61.99**	**253**	P	**P**	**10 59 26.8**	**-0.7**
VNDA	**Vanda**	**63.37**	**186**	P	**P**	**10 59 36.9**	**+1.3**
	comp=Z,1.1nm,0.9s,baz=354,slow=6.2,SNR=7.2						
VNDA	**Vanda**	**63.37**	**186**	P	**P**	**10 59 37.4**	**+1.8**
VNDA				IAmb	IAmb	10 59 38.4	
	comp=Z,2.3nm,1.1s						
QSPA	**South Pole Qui**	**74.77**	**180**	P	**P**	**11 00 47.1**	**+1.3**
	comp=Z,1.8nm,0.6s,baz=77,slow=5.5,SNR=20						
QSPA	**South Pole Qui**	**74.77**	**180**	P	**P**	**11 00 47.2**	**+1.3**
QSPA				IAmb	IAmb	11 00 47.7	
	comp=Z,2.5nm,0.8s						
NVAR	**Mina Array Bea**	**75.12**	**43**	P	**P**	**11 00 49.6**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=244,slow=7.5,SNR=2.1						
NVAR	**Mina Array Bea**	**75.12**	**43**	P	**P**	**11 00 49.2**	**+0.8**
TXAR	**Lajitas Array**	**81.63**	**57**	P	**P**	**11 01 25.3**	**+1.3**
	comp=Z,0.4nm,0.9s,baz=280,slow=5.1,SNR=2.2						
ILAR	**Eielson Array**	**82.58**	**12**	P	**P**	**11 01 27.2**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=223,slow=5.5,SNR=11						
PDAR	**Pinedale Array**	**83.05**	**42**	P	**P**	**11 01 31.0**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=194,slow=3.1,SNR=8.0						
PDAR	**Pinedale Array**	**83.05**	**42**	P	**P**	**11 01 31.6**	**+0.3**
MAW	**Mawson**	**87.49**	**199**	P	**P**	**11 01 53.1**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=154,slow=6.8,SNR=4.5						
MAW	**Mawson**	**87.49**	**199**	P	**P**	**11 01 53.6**	**+1.2**
ARCES	**ARCESS Array B**	**124.30**	**352**	PKP	**PKiKP**	**11 08 01.5**	**-0.6**
	comp=Z,7.1nm,1.0s,baz=58,slow=3.5,SNR=3.9						

IDC 19 11:06:54.0±9.1, 6°.85S×129°.37E, h269km±87km, mb3.3/1, mb1 3.0/4, mb1mx2.7/39, mbtmp3.6/4, Error ellipse: s-maj=72.8km s-min=64.4km az=157.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.76**	**198**	P	Pn	11 09 33.4	-0.9
	0.1nm,0.3s,baz=326,slow=22,SNR=1.9						
FITZ				S	S	11 11 47.2	+1.7
	0.1nm,0.3s,baz=289,slow=22,SNR=1.3						
WRA	**Warramunga Arr**	**13.88**	**160**	P	P	11 10 00.8	+0.2
	0.1nm,0.3s,baz=340,slow=12,SNR=9.6						
WRA				S	S	11 12 29.8	-4.0
	0.0nm,0.3s,baz=336,slow=22,SNR=0.8						
ASAR	**Alice Springs**	**17.28**	**166**	P	P	11 10 38.4	+0.5
	0.2nm,0.3s,baz=345,slow=11,SNR=20						
STKA	**Stephens Creek**	**27.39**	**157**	P	P	11 12 14.9	-0.1
	1.7nm,0.8s,baz=315,slow=13,SNR=3.3						

NEIC 19 11:08:24.6±1.6, 7°.1S±0°.2×157°.0E±0°.1, h83km±13km, mb4.3/11, Error ellipse: s-maj=25.4km s-min=12.8km az=216.0
IDC 19 11:08:25.8±1.6, 7°.09S×156°.96E, h99km±17km, mb3.5/5, mb1 3.8/8, mb1mx3.4/43, mbtmp4.0/8, MS3.2/3, Ms1 3.2/3, ms1mx2.6/30, Error ellipse: s-maj=27.3km s-min=12.3km az=33.0
ISC 19 11:08:24.9±0.8, 7°.0S±0°.1×157°.03E±0°.09, h100km, n32, σ1s38/26, mb4.2/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.74**	**130**	P	**Pn**	**11 09 20.8**	**+0.2**
	44nm,0.3s,baz=250,slow=4.9,SNR=7.8						
HNR				S	**Sn**	**11 10 05.8**	**+2.1**
	14nm,0.3s,baz=68,slow=22,SNR=1.4						
HNR	**Honiara**	**3.74**	**130**		**Pn**	**11 09 20.1**	**-0.6**
RABL	**Rabaul**	**5.61**	**300**		**Pn**	**11 09 42.8**	**-3.2**
KRVT	**Keravat (AS076**	**5.67**	**298**	P	**Pn**	**11 09 48.7**	**+1.9**
	6.6nm,0.3s,baz=316,slow=4.1,SNR=5.8						
KRVT				S	**Sn**	**11 10 50.4**	**-0.3**
	3.3nm,0.3s,baz=344,slow=20,SNR=1.3						
KRVT				LR	LR	11 12 14.6	
	comp=Z,95nm,18.9s,baz=124,slow=41						
PMG	**Port Moresby**	**10.05**	**256**	P	**Pn**	**11 10 47.3**	**+0.9**
	1.5nm,0.3s,baz=63,slow=9.4,SNR=6.5						
SANVU	**Saraoutou**	**13.01**	**131**	Pn	**Pn**	**11 11 24.1**	**-2.0**
COEN	**Coen**	**15.25**	**242**	Pn	**Pn**	**11 11 55.2**	**+0.2**
WR0	**Warramunga Arr**	**25.32**	**237**		**P**	**11 13 43.1**	**+0.6**
WR0				IAmb	IAmb	11 13 46.0	
	comp=Z,15nm,0.9s						
WB0	**Warramunga Arr**	**25.35**	**238**	P	**P**	**11 13 43.6**	**+0.7**
WB0				IAmb	IAmb	11 13 45.9	
	comp=Z,7.1nm,0.7s						
WRAB	**Tennant Creek**	**25.46**	**238**	P	**P**	**11 13 44.4**	**+0.5**
WRAB				IAmb	IAmb	11 13 47.3	
	comp=Z,10nm,0.8s						
WB2	**Warramunga Arr**	**25.47**	**238**	P	**P**	**11 13 44.8**	**+0.9**
WB2				IAmb	IAmb	11 13 47.1	
	comp=Z,9.0nm,0.7s						
WRA	**Warramunga Arr**	**25.48**	**238**	P	**P**	**11 13 44.2**	**+0.2**
	comp=Z,8.6nm,0.7s,baz=62,slow=9.7,SNR=63						
WRA	**Warramunga Arr**	**25.48**	**238**	P	**P**	**11 13 43.6**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**27.10**	**20**	T	T	11 42 12.1	
	baz=201,slow=76,SNR=656						
H11S2	**WAKE ISLAND Hy**	**27.10**	**20**	T	T	11 42 10.5	
	baz=201,slow=76,SNR=481						
H11S1	**WAKE ISLAND Hy**	**27.12**	**20**	T	T	11 42 11.8	
	baz=201,slow=76,SNR=383						
AS31	**Alice Springs**	**27.68**	**231**	P	**P**	**11 14 04.5**	**+0.6**
ASAR	**Alice Springs**	**27.68**	**231**	P	**P**	**11 14 04.0**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=59,slow=9.6,SNR=16						
ASAR	**Alice Springs**	**27.68**	**231**	P	**P**	**11 14 03.9**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**28.30**	**20**	T	T	11 43 41.8

MXZ	**Matakaoa Point**	**1.43 276**	P	**Pn**	**11 25 39.6**	**0.0**
MXZ			S	**Sn**	**11 25 57.1**	**-1.8**
MXZ	**Matakaoa Point**	**1.43 276**		**Pn**	**11 25 39.7**	**+0.1**
PUZ	**Puketiti**	**1.49 256**	P	**Pn**	**11 25 40.9**	**+0.4**
PUZ			S	**Sn**	**11 25 59.2**	**-1.3**
CNGZ	**Carnagh Statio**	**1.67 242**	P	**Pg**	**11 25 44.8**	**+0.1**
TWGZ	**Tauwhareparae**	**1.73 254**	P	**Pb**	**11 25 44.8**	**-0.4**
TWGZ			S	**Sn**	**11 26 06.0**	**-0.4**
HAZ	**Te Kaha**	**1.83 268**	P	**Pn**	**11 25 45.9**	**+0.7**
TKGZ	**Te Karaka**	**1.91 247**	P	**Pb**	**11 25 47.3**	**-0.9**
RUGZ	**Raukumara Rang**	**1.93 262**	P	**Pn**	**11 25 46.8**	**+0.3**
RIGZ	**Rimuhau**	**2.08 241**	P	**Pb**	**11 25 50.0**	**-1.1**
RIGZ			S	**Sn**	**11 26 15.0**	**0.0**
PRGZ	**Paritu Road**	**2.11 235**	P	**Pb**	**11 25 50.5**	**-1.2**
MWZ	**Matawai**	**2.11 253**	P	**Pn**	**11 25 49.4**	**+0.3**
MWZ			S	**Sn**	**11 26 14.2**	**-1.7**
MHGZ	**Mahia Peninsul**	**2.23 230**	P	**Pb**	**11 25 52.5**	**-1.2**
RAGZ	**Rawiri**	**2.25 249**	P	**Pn**	**11 25 51.9**	**+1.0**
RAGZ			S	**Sn**	**11 26 18.4**	**-0.8**
KNZ	**Kokohu**	**2.30 235**	P	**Pn**	**11 25 52.5**	**+0.9**
URZ	**Urewera**	**2.41 256**	P	**Pn**	**11 25 54.3**	**+1.1**
	28nm,0.3s,baz=261,slow=1.7,SNR=101					
URZ			S	**Sn**	**11 26 21.0**	**-2.2**
	42nm,0.3s,baz=332,slow=23,SNR=20					
URZ	**Urewera**	**2.41 256**	P	**Pn**	**11 25 54.4**	**+1.3**
URZ	**Urewera**	**2.41 256**		**Pn**	**11 25 54.1**	**+1.0**
WHRZ	**Whale Island**	**2.47 266**	P	**Pn**	**11 25 55.5**	**+1.5**
RTZ	**Ruatahuna**	**2.61 249**	P	**Pn**	**11 25 57.4**	**+1.5**
WHHZ	**Waihua**	**2.62 238**	P	**Pn**	**11 25 57.4**	**+1.4**
WHHZ			S	**Sn**	**11 26 29.1**	**+0.8**
RAHZ	**Arahi**	**2.65 242**	P	**Pn**	**11 25 58.0**	**+1.7**
EDRZ	**Edgecumbe**	**2.68 261**	P	**Pn**	**11 25 58.0**	**+1.1**
MARZ	**Manawahe**	**2.72 264**	P	**Pb**	**11 26 00.7**	**-1.3**
MUGZ	**Murupara**	**2.72 253**	P	**Pn**	**11 25 58.2**	**+0.8**
MTHZ	**Maungataniwha**	**2.79 245**	P	**Pn**	**11 25 59.7**	**+1.3**
MTHZ			S	**Sn**	**11 26 32.6**	**-0.1**
OPRZ	**Ohinepanea**	**2.80 267**	P	**Pn**	**11 25 58.7**	**+0.1**
ARHZ	**Aropaoanui**	**2.87 237**	P	**Pn**	**11 26 01.3**	**+1.8**
TARZ	**Mount Tarawera**	**2.88 259**	P	**Pn**	**11 26 01.8**	**+2.2**
RRRZ	**Republican Roa**	**2.89 257**	P	**Pn**	**11 26 00.9**	**+1.1**
NMHZ	**Naumai**	**2.92 241**	P	**Pn**	**11 26 01.8**	**+1.6**
HLRZ	**Highlands Stat**	**3.00 259**	P	**Pn**	**11 26 03.5**	**+2.3**
PRRZ	**Plateau Road**	**3.02 254**	P	**Pn**	**11 26 02.2**	**+0.7**
TQRZ	**Tauranga**	**3.04 269**	P	**Pn**	**11 26 02.0**	**+0.3**
CKHZ	**Cape Kidnapper**	**3.05 230**	P	**Pn**	**11 26 03.1**	**+1.3**
KARZ	**Kaharoa**	**3.06 263**	P	**Pn**	**11 26 02.8**	**+0.8**
ALRZ	**Allen Road**	**3.07 253**	P	**Pn**	**11 26 03.1**	**+0.9**
HRRZ	**Handcock Road**	**3.08 256**	P	**Pn**	**11 26 03.2**	**+0.8**
HSRZ	**Hossack Road**	**3.09 258**	P	**Pn**	**11 26 03.6**	**+1.1**
MRHZ	**Matea Rd**	**3.10 248**	P	**Pn**	**11 26 05.0**	**+2.4**
MCHZ	**McNeill Hill**	**3.17 236**	P	**Pn**	**11 26 04.9**	**+1.4**
BKZ	**Black Stump Fm**	**3.17 242**	P	**Pn**	**11 26 04.7**	**+1.0**
BKZ	**Black Stump Fm**	**3.17 242**		**Pn**	**11 26 04.0**	**+0.3**
WPRZ	**Whakapapatarin**	**3.20 254**	P	**Pn**	**11 26 04.1**	**+0.1**
KAHZ	**Kahuranaki**	**3.25 230**	P	**Pn**	**11 26 06.2**	**+1.4**
KWHZ	**Kaweka Forest**	**3.34 238**	P	**Pn**	**11 26 07.4**	**+1.4**
PXZ	**Pawanui**	**3.41 227**	P	**Pn**	**11 26 08.5**	**+1.6**
KUTZ	**Kaahu Road**	**3.45 256**	P	**Pn**	**11 26 09.2**	**+1.7**
KRHZ	**Kereru**	**3.48 236**	P	**Pn**	**11 26 08.8**	**+0.8**
BHHZ	**Black Hill Sta**	**3.61 240**	P	**Pn**	**11 26 10.8**	**+1.1**
KUZ	**Kuaotunu**	**3.62 284**	P	**Pn**	**11 26 09.6**	**-0.2**
TOZ	**Tahuroa Road**	**3.64 269**	P	**Pn**	**11 26 10.4**	**+0.4**
WPHZ	**Waipukurau**	**3.68 230**	P	**Pn**	**11 26 11.8**	**+1.2**
TMVZ	**Te Maari**	**3.71 247**	P	**Pn**	**11 26 13.5**	**+2.3**
PNHZ	**Pukenui**	**3.74 233**	P	**Pn**	**11 26 11.9**	**+0.5**
MOVZ	**Moawhango**	**3.79 242**	P	**Pn**	**11 26 14.1**	**+1.9**
TUVZ	**Tukino**	**3.81 245**	P	**Pn**	**11 26 15.5**	**+3.0**
NGZ	**Ngauruhoe**	**3.81 246**	P	**Pn**	**11 26 14.0**	**+1.5**
WHVZ	**Whangaehu Hut**	**3.86 245**	P	**Pn**	**11 26 15.9**	**+2.7**
WNVZ	**Wahianoa**	**3.87 244**	P	**Pn**	**11 26 15.7**	**+2.4**
FWVZ	**Far West T-bar**	**3.87 245**	P	**Pn**	**11 26 16.7**	**+3.2**
ANWZ	**Angora Road**	**3.92 225**	P	**Pn**	**11 26 15.9**	**+2.0**
MKAZ	**Moumakai**	**3.97 278**	P	**Pn**	**11 26 14.8**	**+0.2**
TSZ	**Takapari Road**	**3.98 233**	P	**Pn**	**11 26 14.9**	**+0.3**
GRZ	**Great Barrier**	**3.99 290**	P	**Pn**	**11 26 14.8**	**-0.1**
DVHZ	**Dannevirke**	**3.99 229**	P	**Pn**	**11 26 15.5**	**+0.6**
ETAZ	**East Tamaki Re**	**4.19 279**	P	**Pn**	**11 26 18.3**	**+0.8**
BFZ	**Birch Farm**	**4.20 224**	Pn	**Pn**	**11 26 17.9**	**+0.2**
HIZ	**Hauiti**	**4.20 258**	P	**Pn**	**11 26 19.1**	**+1.4**
HIZ	**Hauiti**	**4.20 258**	Pn	**Pn**	**11 26 18.9**	**+1.1**
MBAZ	**Motutapu North**	**4.21 281**	P	**Pn**	**11 26 20.1**	**+1.0**
PRWZ	**Pori Road**	**4.27 227**	P	**Pn**	**11 26 19.3**	**+0.6**
POWZ	**Post Office Ro**	**4.29 230**	P	**Pn**	**11 26 20.4**	**+1.4**
EPAZ	**Eden Park BICE**	**4.35 280**	P	**Pn**	**11 26 21.2**	**+1.5**
HBAZ	**Herne Bay Bore**	**4.36 280**	P	**Pn**	**11 26 21.5**	**+1.5**
AWAZ	**Awhitu Peninsu**	**4.39 277**	P	**Pn**	**11 26 21.5**	**+1.2**
VRZ	**Vera Road**	**4.41 250**	P	**Pn**	**11 26 22.7**	**+2.0**
WAZ	**Wanganui**	**4.48 242**	P	**Pn**	**11 26 24.0**	**+2.5**
RVAZ	**Riverhead Bore**	**4.50 281**	P	**Pn**	**11 26 23.0**	**+1.2**
OGWZ	**Otaki Gorge**	**4.91 230**	P	**Pn**	**11 26 27.8**	**+0.3**
WCZ	**Waipu Caves**	**4.94 289**	P	**Pn**	**11 26 28.8**	**+0.9**
NEZ	**North Egmont**	**4.95 250**	P	**Pn**	**11 26 31.8**	**+3.7**
MSWZ	**Moikau Station**	**5.25 224**	Pn	**Pn**	**11 26 31.4**	**-0.7**
PLWZ	**Palliser**	**5.35 223**	Pn	**Pn**	**11 26 33.0**	**-0.6**
BHW	**Baring Head**	**5.46 226**	P	**Pn**	**11 26 35.0**	**0.0**
BHW	**Baring Head**	**5.46 226**	Pn	**Pn**	**11 26 36.0**	**+1.0**
SNZO	**South Karori**	**5.49 228**	Pn	**Pn**	**11 26 35.3**	**-0.1**
TCW	**Tory Channel**	**5.69 230**	P	**Pn**	**11 26 37.9**	**-0.2**
OUZ	**Omahuta**	**5.80 294**	P	**Pn**	**11 26 40.9**	**+1.2**
OUZ	**Omahuta**	**5.80 294**	Pn	**Pn**	**11 26 40.6**	**+0.9**
TUWZ	**Tuamarina**	**6.02 230**	P	**Pn**	**11 26 42.4**	**-0.3**
TUWZ	**Tuamarina**	**6.02 230**	Pn	**Pn**	**11 26 42.2**	**-0.4**
BSWZ	**Blackbirch Sta**	**6.23 228**	Pn	**Pn**	**11 26 45.2**	**-0.4**
NNZ	**Nelson**	**6.25 234**	P	**Pn**	**11 26 46.1**	**+0.1**
QRZ	**Quartz Range**	**6.63 240**	P	**Pn**	**11 26 51.4**	**+0.4**
QRZ	**Quartz Range**	**6.63 240**	Pn	**Pn**	**11 26 51.5**	**+0.4**
GVZ	**Greta Valley S**	**7.51 224**	P	**Pn**	**11 27 03.9**	**+0.7**
LTZ	**Lake Taylor**	**7.82 227**	Pn	**Pn**	**11 27 07.7**	**+0.2**
OXZ	**Oxford**	**8.30 225**	P	Pn	11 27 18.6	+4.6
RPZ	**Rata Peaks**	**9.10 226**	P	**Pn**	**11 27 23.7**	**-1.3**
	0.8nm,0.3s,baz=323,slow=11,SNR=1.5					
RPZ			S	Sn	11 28 57.4	-11
	1.7nm,0.3s,baz=50,slow=23,SNR=1.6					
RPZ	**Rata Peaks**	**9.10 226**	P	**Pn**	**11 27 26.0**	**+1.1**
ARCZ	**Arundel**	**9.18 225**	P	**Pn**	**11 27 26.6**	**+0.5**
DZM	**Mont Dzumac**	**19.55 319**	LR	LR	11 36 36.6	
	comp=Z,52nm,18.0s,baz=222,slow=34					
STKA	**Stephens Creek**	**31.98 269**	P	**P**	**11 31 41.3**	**+1.1**
	1.5nm,0.9s,baz=121,slow=18,SNR=2.0					
COEN	**Coen**	**40.40 296**	P	**P**	**11 32 53.0**	**+0.6**
COEN			IAmb	IAmb	11 33 01.5	
	comp=Z,5.9nm,0.8s					
AS31	**Alice Springs**	**41.71 276**	P	**P**	**11 33 03.6**	**+0.5**
ASAR	**Alice Springs**	**41.71 276**	P	**P**	**11 33 02.8**	**-0.3**
	comp=Z,1.8nm,0.6s,baz=122,slow=8.0,SNR=15					
ASAR	**Alice Springs**	**41.71 276**	P	**P**	**11 33 03.0**	**-0.1**
WR0	**Warramunga Arr**	**43.19 281**	P	**P**	**11 33 14.2**	**-1.0**
WR0			IAmb	IAmb	11 33 17.4	
	comp=Z,9.5nm,1.4s					
WB2	**Warramunga Arr**	**43.35 281**	P	**P**	**11 33 16.3**	**-0.1**
WRAB	**Tennant Creek**	**43.35 281**	P	**P**	**11 33 16.1**	**-0.3**
WRAB			IAmb	IAmb	11 33 26.1	
	comp=Z,3.7nm,0.9s					
WRA	**Warramunga Arr**	**43.36 281**	P	**P**	**11 33 15.4**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=121,slow=7.7,SNR=21					
WRA	**Warramunga Arr**	**43.36 281**	P	**P**	**11 33 16.4**	**-0.2**
WB0	**Warramunga Arr**	**43.41 281**	P	**P**	**11 33 16.7**	**-0.3**
WB0			IAmb	IAmb	11 33 24.9	
	comp=Z,3.7nm,0.8s					
FITZ	**Fitzroy Crossi**	**51.20 277**	P	**P**	**11 34 17.8**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=118,slow=9.0,SNR=4.1					
FITZ	**Fitzroy Crossi**	**51.20 277**	P	**P**	**11 34 18.4**	**+0.8**
FITZ			IAmb	IAmb	11 34 25.5	
	comp=Z,4.7nm,0.9s					
H03S2	**Juan Fernandez**	**77.76 123**	T	T	13 03 01.2	
	baz=231,slow=74,SNR=5.6					
H03S1	**Juan Fernandez**	**77.77 123**	T	T	13 02 58.5	
	baz=231,slow=74,SNR=6.3					
H03S3	**Juan Fernandez**	**77.78 123**	T	T	13 03 00.4	
	baz=231,slow=74,SNR=7.0					
H03N3	**Juan Fernandez**	**77.99 123**	T	T	13 03 14.2	
	baz=234,slow=72,SNR=68					
H03N2	**Juan Fernandez**	**78.00 123**	T	T	13 03 13.0	
	baz=234,slow=72,SNR=32					
H03N1	**Juan Fernandez**	**78.01 123**	T	T	13 03 17.1	
	baz=234,slow=72,SNR=37					
ARCES	**ARCESS Array B**	**145.31 345**	PKPbc	**PKiKP**	**11 44 54.5**	**-0.3**
	comp=Z,3.4nm,0.8s,baz=37,slow=3.0,SNR=3.8					

*SOME **19** 11:29:37.8,41°.73N×72°.12E,h15km*

*KRNET **19** 11:29:37.9±0.1,41°.77N×72°.13E,h20km,mb2.7*
*NNC **19** 11:29:39.4±1.1,41°.89N×72°.09E,h0km,mb3.4,mpv3.6,*
Error ellipse: s-maj=11.7km s-min=3.4km az=0.0
*KNET **19** 11:29:40.8±0.4,41°.85N×72°.34E,h5km,2km,ml2.4, Error ellipse: s-maj=5.1km s-min=2.7km az=158.0*

ISC 19 11:29:37.5±1.1,41.79N±0.02×72.15E±0.02,h4km±10km, n41,σ1§05/77,33C-21D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MNAS	**Manas**	**0.75**	**20**	⇓*iP*		**Pb**	**11 29 52.9**	**-0.3**
MNAS	baz=21			⇓*iS*		**Sb**	**11 30 03.4**	**-0.4**
ARSB	**Arslanbob**	**0.77**	**126**	⇑*iP*		**Pg**	**11 29 53.0**	**+0.7**
ARSB	baz=25			⇑*iS*		**Sg**	**11 30 03.9**	**+1.5**
TRKS	**Terek-Say**	**0.80**	**252**	⇓*iP*		**Pg**	**11 29 52.9**	**+0.1**
TRKS	baz=47			⇑*iS*		**Sg**	**11 30 03.7**	**+0.5**
AML	**Almayashu**	**1.20**	**73**	⇑*iP*		**Pb**	**11 30 00.6**	**-0.4**
AML	baz=72			⇑*iS*		**Sn**	**11 30 17.4**	**-0.9**
AML	**Almayashu**	**1.20**	**73**	⇓*P*		**Pb**	**11 30 00.9**	**-0.1**
AML	13nm,0.1s,SNR=24			⇑*S*		**Sn**	**11 30 17.5**	**-0.9**
MRKS	**Merke**	**1.25**	**39**	*eP*		**Pg**	**11 30 01.9**	**+0.5**
MRKS	44nm,0.2s			*eS*		**Sn**	**11 30 19.0**	**-0.1**
MRKS	**Merke**	**1.25**	**39**	*P*		**Pg**	**11 30 01.9**	**+0.5**
MRKS	58nm,0.1s			*S*		**Sn**	**11 30 19.0**	**-0.1**
DZA	**Taraz**	**1.26**	**331**	*eP*		**Pg**	**11 30 01.8**	**0.0**
DZA	21nm,0.1s			*eS*		**Sn**	**11 30 18.6**	**-0.7**
DZA	**Taraz**	**1.26**	**331**	*P*		**Pg**	**11 30 01.8**	**0.0**
DZA	52nm,0.1s			*S*		**Sn**	**11 30 18.6**	**-0.7**
OHH	**Osh**	**1.35**	**159**	⇑*iP*		**Pn**	**11 30 02.6**	**-0.5**
OHH	baz=58			⇑*iS*		**Sb**	**11 30 21.1**	**+0.2**
EKS2	**Erkin-Say**	**1.49**	**53**	⇓*iP*		**Pb**	**11 30 05.6**	**-0.2**
EKS2	baz=53			⇓*iS*		**Sg**	**11 30 26.2**	**+0.8**
EKS2	**Erkin-Say**	**1.49**	**53**	⇓*P*		**Pg**	**11 30 06.3**	**+0.3**
EKS2	4.0nm,0.1s,SNR=7.4			⇑*S*		**Sg**	**11 30 26.3**	**+0.8**
IUG	**luzhnay**	**1.62**	**284**	*eP*		**Pg**	**11 30 08.4**	**-0.2**
IUG	6.5nm,0.1s 28nm,0.1s			*eS*		**Sg**	**11 30 30.4**	**+0.8**
IUG	**luzhnay**	**1.62**	**284**	*P*		**Pg**	**11 30 08.4**	**-0.2**
IUG	114nm,0.2s 28nm,0.1s			*S*		**Sg**	**11 30 30.4**	**+0.8**
ARLS	**Aral**	**1.62**	**87**	⇑*iP*		**Pb**	**11 30 07.8**	**-0.3**
ARLS	baz=86			⇑*iS*		**Sg**	**11 30 30.1**	**+0.4**
KK31	**Karatay Array**	**1.79**	**318**	⇑Pn		**Pb**	**11 30 10.5**	**-0.4**
KK31	3.0nm,0.2s,baz=335,slow=39,SNR=88 6.9nm,0.3s,baz=127,slow=28,SNR=10			⇑Sn		**Sb**	**11 30 33.6**	**-0.1**
UCH	**Uchtor**	**1.81**	**75**	⇑*iP*		**Pb**	**11 30 11.3**	**-0.2**
UCH	baz=75			⇑*iS*		**Sg**	**11 30 36.2**	**+0.4**
UCH	**Uchtor**	**1.81**	**75**	⇓*P*		**Pg**	**11 30 12.2**	**-0.1**
UCH	baz=75 4.2nm,0.2s,SNR=11			⇓*S*		**Sg**	**11 30 36.5**	**+0.7**
AAK	**Ala-Archa**	**1.94**	**63**	⇑*iP*		**Pb**	**11 30 13.6**	**+0.2**
AAK	baz=63			⇑*iS*		**Sg**	**11 30 39.6**	**-0.1**
AAK	**Ala-Archa**	**1.94**	**63**	⇓*P*		**Pg**	**11 30 14.3**	**-0.3**
AAK	baz=63 6.8nm,0.3s,SNR=14 14nm,0.4s			⇓*S*		**Sg**	**11 30 39.7**	**0.0**
AAK	**Ala-Archa**	**1.94**	**63**	⇓Pn		**Pb**	**11 30 13.9**	**+0.5**
AAK				⇓Sn		**Sg**	**11 30 40.2**	**+0.5**
BTK	**Batken**	**2.00**	**211**	⇑*eP*		**Pb**	**11 30 13.4**	**-1.0**
BTK	4.9nm,0.3s baz=11			⇑*iS*		**Sb**	**11 30 39.5**	**-0.2**
SFK	**Sufi-Kurgan**	**2.04**	**150**	⇑*iP*		**Pb**	**11 30 14.4**	**-0.9**
SFK	baz=49			⇑*iS*		**Sb**	**11 30 41.2**	**0.0**
TAS	**Tashkent**	**2.19**	**259**	⇓*eP*		**Pb**	**11 30 16.6**	**-1.1**
TAS	baz=59			⇓*eS*		**Sb**	**11 30 44.8**	**-0.4**
KBK	**Karagaybulak**	**2.25**	**66**	⇓*iP*		**Pb**	**11 30 18.1**	**-0.7**
KBK	baz=66			⇓*iS*		**Sb**	**11 30 47.2**	**+0.1**
CHMS	**Chumysh**	**2.27**	**57**	⇑*eP*		**Pb**	**11 30 18.2**	**-0.9**
CHMS	baz=57			⇑*iS*		**Sb**	**11 30 47.4**	**-0.2**
USP	**Ospenovka**	**2.28**	**49**	⇓*iP*		**Pb**	**11 30 18.3**	**-0.9**
USP	baz=49			⇓*iS*		**Sb**	**11 30 48.2**	**+0.4**
USP	**Ospenovka**	**2.28**	**49**	⇑*P*		**Pb**	**11 30 19.5**	**+0.2**
USP	8.8nm,0.3s,SNR=27 25nm,0.2s			⇑*S*		**Sg**	**11 30 50.4**	**-0.3**
DRK	**Karamyk**	**2.32**	**187**	⇑*iP*		**Pn**	**11 30 18.2**	**+1.5**
DRK	baz=86			⇑*iS*		**Sb**	**11 30 47.8**	**-1.3**
TKM2	**Tokmak 2**	**2.79**	**65**	⇓*iP*		**Pn**	**11 30 25.3**	**+2.2**
TKM2	baz=65			⇓*iS*		**Sb**	**11 31 00.5**	**-2.2**
TKM2	**Tokmak 2** 1.9nm,0.5s	**2.79**	**65**	⇑*Pg*		**Pb**	**11 30 29.7**	**+1.6**
TKM2	7.2nm,0.5s			⇓*Lg*		Lg	11 31 06.4	
BOOM	**Boomskoye usch** baz=74	**2.90**	**75**	⇑*iP*		**Pn**	**11 30 27.1**	**+2.5**
BOOM				⇑*iS*		**Sb**	**11 31 02.8**	**-3.0**
DGS	**Degeres** 7.4nm,0.4s	**3.05**	**60**	*eP*		**Pg**	**11 30 34.2**	**-1.6**
DGS	10.0nm,0.3s			*eS*		**Sg**	**11 31 14.8**	**-0.6**
DGS	**Degeres** 7.4nm,0.4s	**3.05**	**60**	*Pg*		**Pg**	**11 30 34.2**	**-1.6**
DGS	10.0nm,0.3s			*Lg*		Lg	11 31 14.8	
ULHL	**Ulahol** baz=80	**3.08**	**80**	⇑*iP*		**Pn**	**11 30 29.0**	**+1.9**
ULHL				⇑*iS*		**Sn**	**11 31 07.1**	**+2.6**
KST	**Kastek** 3.3nm,0.2s	**3.09**	**65**	*eP*		**Pg**	**11 30 35.0**	**-1.7**
KST	15nm,0.3s			*eS*		**Sg**	**11 31 15.8**	**-1.0**
KST	**Kastek** 3.3nm,0.2s	**3.09**	**65**	*Pg*		**Pg**	**11 30 35.0**	**-1.7**
KST	15nm,0.3s			*Lg*		Lg	11 31 15.7	
BTLS	**Baital** 1.7nm,0.2s	**3.54**	**22**	*eP*		**Pg**	**11 30 44.0**	**-1.2**
BTLS	4.6nm,0.5s			*eS*		**Sg**	**11 31 31.0**	**0.0**
BTLS	**Baital** 1.7nm,0.2s	**3.54**	**22**	*Pg*		**Pg**	**11 30 44.0**	**-1.2**
BTLS	4.6nm,0.5s			*Lg*		Lg	11 31 31.0	
TNSS	**Tian-Shan** 1.5nm,0.1s	**3.76**	**69**	*eP*		**Pg**	**11 30 47.8**	**-1.8**
TNSS				*eS*		**Sg**	**11 31 38.0**	**-0.4**
	5.0nm,0.6s							
TNSS	**Tian-Shan** 1.5nm,0.1s	**3.76**	**69**	Pg		**Pg**	**11 30 47.8**	**-1.8**
TNSS	5.0nm,0.6s			Lg		Lg	11 31 38.0	

*IDC **19** 11:33:33.6±0.7, 19°.43N×120°.45E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/47, mbtmp3.9/14, ML3.5/1, MS2.9/5, Ms1 3.0/5, ms1mx2.7/50, Error ellipse: s-maj=26.1km s-min=14.5km az=73.0*
*NEIC **19** 11:33:34.9±1.8, 19°.48N±0°.08×120°.34E±0°.08, h10km±1km, mb4.2/10, Error ellipse: s-maj=13.6km s-min=11.9km az=191.0*

ISC 19 11:33:37.2±0.8, 19°.49N±0°.08×120°.3E±0°.1, h23km, n40, σ1§33/39, mb4.1/17, MS2.6/3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.39**	**12**		Pn	**Pn**	**11 34 27.3**	**-1.3**
TPUB	**Ta-pu**	**3.80**	**4**		Pn	**Pn**	**11 34 32.3**	**-2.1**
TPUB					Sn	**Sn**	**11 35 16.9**	**-1.5**
YULB	**Yu-li**	**3.99**	**13**		Pn	**Pn**	**11 34 37.3**	**+0.4**
YULB					Sn	**Sn**	**11 35 22.5**	**-0.5**
SSLB	**Suanglung**	**4.32**	**8**		Pn	**Pn**	**11 34 40.5**	**-1.0**
NACB	**Ninganchiao**	**4.81**	**14**		Pn	**Pn**	**11 34 47.4**	**-0.8**
YHNB	**Yeheng**	**5.25**	**11**		Pn	**Pn**	**11 34 53.9**	**-0.4**
KNMB	**Chin-men Tao**	**5.26**	**340**		Pn	**Pn**	**11 34 54.6**	**+0.2**
QIZ	**Qiongzhong**	**9.90**	**269**		Pn	**Pn**	**11 35 57.1**	**-1.1**
DAV	**Davao City (W)**	**13.36**	**157**		LR	LR	11 42 46.8	
	comp=Z,98nm,19.1s,baz=314,slow=42							
KSRS	**Korea Array**	**19.09**	**19**		P	**P**	**11 37 57.7**	**-0.5**
	0.1nm,0.3s,baz=299,slow=36,SNR=2.3							
KSRS					LR	LR	11 45 17.2	
	comp=Z,17nm,21.4s,baz=200,slow=37							
CMAR	**Chiang Mai Arr**	**20.24**	**271**		P	Pn	11 38 12.2	-0.8
	0.6nm,0.4s,baz=80,slow=9.0,SNR=6.3							
CMAR					LR	LR	11 47 10.0	
	comp=Z,28nm,18.6s,baz=203,slow=40							
MJAR	**Matsushiro Arr**	**23.13**	**39**		P	**P**	**11 38 41.6**	**-0.2**
	0.7nm,0.6s,baz=236,slow=10,SNR=1.9							
GUMO	**Guam**	**24.24**	**100**		LR	LR	11 46 58.8	
	comp=Z,21nm,20.5s,baz=260,slow=33							
SONM	**Songino Array**	**30.45**	**341**		P	**P**	**11 39 48.3**	**+0.1**
	0.3nm,0.4s,baz=243,slow=7.6,SNR=2.7							
KLR	**Kul'dur**	**31.06**	**15**		P	**P**	**11 39 54.2**	**+0.9**
	1.3nm,0.5s,baz=222,slow=8.2,SNR=3.6							
KNRA	**Kununurra**	**35.92**	**166**		P	**P**	**11 40 35.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**37.72**	**172**		P	**P**	**11 40 50.6**	**-0.6**
	2.0nm,0.8s,baz=19,slow=5.3,SNR=5.1							
FITZ	**Fitzroy Crossi**	**37.72**	**172**		P	**P**	**11 40 51.0**	**-0.2**
FITZ					IAmb	IAmb	11 40 53.4	
	comp=Z,5.7nm,1.2s							
MK31	**Makanchi Array**	**41.27**	**320**		P	**P**	**11 41 18.3**	**-2.4**
MKAR	**Makanchi Array**	**41.27**	**320**		P	**P**	**11 41 22.4**	**+1.8**
	comp=Z,1.8nm,0.8s,baz=111,slow=10,SNR=15							
MKAR	**Makanchi Array**	**41.27**	**320**		P	**P**	**11 41 16.4**	**-4.3**
WB0	**Warramunga Arr**	**41.38**	**160**		P	**P**	**11 41 20.7**	**-1.1**
WB0					IAmb	IAmb	11 41 48.8	
	comp=Z,5.7nm,1.3s							
WRAB	**Tennant Creek**	**41.52**	**160**		P	**P**	**11 41 21.9**	**-1.0**
WRAB					IAmb	IAmb	11 41 40.4	
	comp=Z,9.2nm,1.4s							
WRA	**Warramunga Arr**	**41.53**	**160**		P	**P**	**11 41 21.2**	**-1.8**
	comp=Z,1.2nm,0.6s,baz=342,slow=9.0,SNR=20							
WB2	**Warramunga Arr**	**41.53**	**160**		P	**P**	**11 41 21.8**	**-1.2**
WB2					IAmb	IAmb	11 41 44.0	
	comp=Z,9.3nm,1.4s							
WC3	**Warramunga Arr**	**41.55**	**160**		P	**P**	**11 41 22.3**	**-0.9**
WC3					IAmb	IAmb	11 41 24.3	
	comp=Z,2.7nm,0.6s							
WR0	**Warramunga Arr**	**41.61**	**160**		P	**P**	**11 41 22.6**	**-1.1**
WR0					IAmb	IAmb	11 41 39.3	
	comp=Z,4.5nm,1.1s							
ZALV	**Zalesovo Beam**	**43.82**	**330**		P	**P**	**11 41 41.8**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=113,slow=6.8,SNR=8.8							
ZALV					LR	LR	12 00 01.0	
	comp=Z,38nm,19.0s,baz=151,slow=36							
AS31	**Alice Springs**	**44.90**	**162**		P	**P**	**11 41 50.4**	**+0.2**
ASAR	**Alice Springs**	**44.90**	**162**		P	**P**	**11 41 50.2**	**0.0**
	comp=Z,1.4nm,0.5s,baz=340,slow=7.0,SNR=47							
KURK	**Kurchatov**	**45.27**	**323**		P	**P**	**11 41 54.7**	**+1.9**
KURBB	**Kurchatov Arra**	**45.27**	**323**		P	**P**	**11 41 54.3**	**+1.4**
	comp=Z,1.4nm,0.3s,baz=123,slow=7.9,SNR=16							
ABKAR	**Akbulak array**	**56.21**	**317**		P	**P**	**11 43 17.1**	**+1.7**
I23K	**Minto, Yukon-K**	**72.64**	**26**		P	**P**	**11 45 03.6**	**+1.0**
ILAR	**Eielson Array**	**73.74**	**26**		P	**P**	**11 45 09.3**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=277,slow=7.6,SNR=5.0							
BMAR	**Burnt Mountain**	**74.12**	**24**		P	**P**	**11 45 12.9**	**+1.5**
FINES	**FINESS Array B**	**75.09**	**330**		P	**P**	**11 45 17.2**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=66,slow=5.6,SNR=9.0							
FINES	**FINESS Array B**	**75.09**	**330**		P	**P**	**11 45 17.4**	**+0.4**
AKASG	**Malin Array Be**	**75.85**	**319**		P	**P**	**11 45 21.4**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=88,slow=5.3,SNR=2.0							
BCAR	**Beaver Creek A**	**76.33**	**28**		P	**P**	**11 45 25.7**	**+1.5**

*GCG **19** 11:39:22.7±0.6, 14°.80N×95°.40W, h35km±999km, MD5.1*
*BJI **19** 11:39:47.0±0.0, 14°.80N×93°.20W, h35km, mB5.3/2, Ms5.

CMIG Matias Romero 2.71 327 Pn 11 40 30.8 +0.2
CMIG Sn 11 41 03.1 +0.9
HUIG Huatulco 2.85 290 *eP* Pn 11 40 31.0 -1.4
HUIG ⇑*i*S Sn 11 41 03.9 -1.6
HUIG Huatulco 2.85 290 Pn 11 40 31.0 -1.4
HUIG Sn 11 41 03.9 -1.6
NBG Las Nubes 2.89 94 *eP* Pn 11 40 35.7 +2.5
NBG *eS* Sn 11 41 30.2 +23
MRL Marmol 3.53 85 *eP* Pn 11 40 43.9 +2.1
CEVE Cerro Verde 3.72 105 *eP* Pn 11 40 47.3 +2.8
CEVE *eS* Sn 11 41 31.2 +4.1
CEVE Cerro Verde 3.72 105 *eP* Pn 11 40 47.3 +2.8
CEVE *eS* Sn 11 41 31.2 +4.1
MTO3 Montecristo 3.86 96 Pn 11 40 47.2 +0.8
ESQI Esquipulas 3.86 93 *eP* Pn 11 40 47.7 +1.4
ESQI Esquipulas 3.86 93 Pn Pn 11 40 47.4 +1.1
PETF Flores 3.93 57 Pn 11 40 47.7 +0.6
PETF Sn Sn 11 41 32.2 +0.2
CEDA San Andres 3.94 104 *eP* Pn 11 40 50.1 +2.8
CEDA IAML 11 41 57.2
comp=Z,5µm,0.7s
CEDA San Andres 3.94 104 *eP* Pn 11 40 50.1 +2.8
CEDA *eS* Sn 11 41 38.3 +5.9
CEDA IAML 11 41 57.2
comp=Z,5µm,0.7s
BOQS Boqueron 4.06 105 *eP* Pn 11 40 51.9 +2.7
BOQS Boqueron 4.06 105 *eP* Pn 11 40 51.9 +2.7
SNET Serv Nac Est T 4.12 105 Pn 11 40 51.7 +1.8
SNET Sn Sn 11 40 32.6 -4.3
COEG Centro de Oper 4.47 105 *eP* Pn 11 40 56.8 +2.2
COEG *eS* Sn 11 41 48.3 +2.9
COEG IAML 11 42 02.3
comp=Z,2µm,0.5s
COEG Centro de Oper 4.47 105 *eP* Pn 11 40 56.8 +2.2
COEG *eS* Sn 11 41 48.3 +2.9
COEG IAML 11 42 02.3
comp=Z,2µm,0.5s
COEB Comit de Eme 4.83 105 *eP* Pn 11 41 02.7 +3.1
COEB *eS* Sn 11 41 60.0 +5.6
COEB Comit de Eme 4.83 105 *eP* Pn 11 41 02.7 +3.1
COEB *eS* Sn 11 41 60.0 +5.6
ALJI Alcalda de J 4.84 107 *eP* Pn 11 41 03.5 +3.9
ALJI *eS* Sn 11 41 56.2 +1.7
ALJI IAML 11 42 05.5
comp=Z,2µm,0.6s
ALJI Alcalda de J 4.84 107 *eP* Pn 11 41 03.5 +3.9
ALJI *eS* Sn 11 41 56.2 +1.7
ALJI IAML 11 42 05.5
comp=Z,2µm,0.6s
TLIG Tlapa 5.73 299 Pn Pn 11 41 14.0 +2.0
TGUH Tegucigalpa,Un 5.91 97 *eP* Pn 11 41 15.4 +1.0
TGUH Tegucigalpa,Un 5.91 97 Pn Pn 11 41 15.4 +1.0
CRIN San Cristobal 6.45 108 Pn 11 41 23.2 +1.4
TEIG Tepich 7.22 41 *eP* Pn 11 41 31.9 -0.3
TEIG Tepich 7.22 41 Pn 11 41 31.3 -1.0
MATN Matagalpa 7.42 104 Pn Pn 11 41 36.7 +1.0
ACON Acoyapa 8.42 109 *eP* Pn 11 41 50.8 +2.1
ACON Acoyapa 8.42 109 Pn Pn 11 41 49.7 +1.0
GBS3 Finca Las Img 8.66 117 *eP* Pn 11 41 54.4 +2.4
LAPC Finca la Perla 8.68 117 *eP* Pn 11 41 53.8 +1.4
GB1A Borinquen Arri 8.69 116 *eP* Pn 11 41 54.8 +2.3
BUEV Buena Vista 8.69 116 *eP* Pn 11 41 54.8 +2.3
BUAI Buenos Aires 8.72 116 *eP* Pn 11 41 55.6 +2.7
GPS3 Bodega del ICE 8.75 117 *eP* Pn 11 41 55.5 +2.2
GPS1 Guardaparques 8.75 116 *eP* Pn 11 41 56.4 +3.1
GPS2 Hotel Rincn d 8.76 117 *eP* Pn 11 41 55.2 +1.8
ORTG Ortega, Santa 8.86 119 *eP* Pn 11 41 57.7 +2.9
GUAI GUAI 8.86 120 *eP* Pn 11 41 57.5 +2.7
GUAB Guayabo de Bag 8.89 116 *eP* Pn 11 41 58.2 +3.0
MOIG Morelia 8.93 304 Pn Pn 11 41 58.5 +2.6
CUI Cuipilapa 8.97 116 *eP* Pn 11 41 57.9 +1.7
DUNO Dulce Nombre, 8.98 121 *eP* Pn 11 41 59.5 +3.1
ESPN Las Esperanzas 9.15 105 *eP* Pn 11 42 00.6 +1.8
ESPN Las Esperanzas 9.15 105 Pn 11 42 00.8 +2.1
JTS Las Juntas de 9.33 118 P Pn 11 42 02.5 +1.3
comp=Z,9.5nm,0.3s,baz=32,slow=6.0,SNR=25
JTS S Sn 11 43 40.8 -3.9
baz=7.9,slow=21,SNR=0.6
JTS Las Juntas de 9.33 118 *eP* Pn 11 42 03.4 +2.2
JTS Las Juntas de 9.33 118 *eP* Pn 11 42 04.0 +2.9
JTS Las Juntas de 9.33 118 Pn 11 42 02.6 +1.5
ARE1 Arenal 1 9.45 116 *eP* Pn 11 42 05.8 +3.0
CASO Castillo 9.45 116 *eP* Pn 11 42 06.4 +3.6
CEDE Laguna Cedeo 9.45 116 *eP* Pn 11 42 06.6 +3.8
FORC Fortuna 9.49 116 *eP* Pn 11 42 06.8 +3.4
LAFE Finca La Fe, P 9.61 120 *eP* Pn 11 42 06.7 +1.7
JACO JACO, Garabito 9.89 120 *eP* Pn 11 42 11.6 +2.7
HDC Heredia 10.19 117 *eP* Pn 11 42 16.2 +3.3
HDC Heredia 10.19 117 Pn 11 42 14.9 +1.8
LCR2 La Lucha 2 10.41 118 *eP* Pn 11 42 18.2 +2.1
CVTR Volcan Turrial 10.49 116 *eP* Pn 11 42 19.9 +2.5
PEZE Perez Zeledon, 10.87 119 *eP* Pn 11 42 25.1 +2.9
PTJ1 Puerto Jimnez 11.63 121 *eP* Pn 11 42 37.3 +4.7
ZAIG Zacatecas 11.79 313 Pn Pn 11 42 38.8 +3.7
FSCY Frank Sound, G 12.44 67 Pn 11 42 43.5 -0.2
LCCY Blossom Villag 13.54 67 Pn 11 42 59.0 +0.4
CBCY The Bluff, Cay 13.85 67 Pn 11 43 02.5 -0.3
AZU Azuero 14.57 117 *eP* Pn 11 43 13.2 +0.8
833A Chaparral WMA, 14.57 338 P Pn 11 43 13.3 +0.9
baz=156,SNR=42
833A Chaparral WMA, 14.57 338 Pn Pn 11 43 14.5 +2.1
735A Kenedy 14.57 344 Pn 11 43 12.7 +0.4
HKT Hockley 15.24 352 Pn Pn 11 43 21.6 +0.7
HKT IAmb IAmb 11 43 23.7
comp=Z,126nm,1.5s
MTDJ Mount Denham 15.51 75 *eP* P 11 43 28.8 +0.8
MTDJ Mount Denham 15.51 75 Pn 11 43 26.0 +1.3
MTDJ IAmb IAmb 11 43 44.5
comp=Z,80nm,0.9s
PAYG Puerto Ayora 15.68 169 Pn Pn 11 43 27.1 +0.4
441A DeRidder 15.86 0 Pn 11 43 29.2 +0.4
441A IAmb IAmb 11 43 33.4
comp=Z,228nm,1.4s
061Z Ochoppi 16.00 45 Pn 11 43 29.0 -1.6
435B Jarrell 16.37 347 P Pn 11 43 35.8 +0.5
baz=166,SNR=9.6
435B Jarrell 16.37 347 IAmb IAmb 11 43 49.4
comp=Z,101nm,0.6s
HPIG 16.67 318 P P 11 43 41.7 +0.9
JCT Junction City 16.69 340 P Pn 11 43 40.3 +0.9
baz=158,SNR=19
JCT Junction City 16.69 340 P 11 43 41.0 +0.1
JCT IAmb IAmb 11 44 03.4
comp=Z,68nm,0.8s
344A Westbrook Farm 16.73 8 Pn 11 43 39.8 0.0
344A IAmb IAmb 11 43 43.0
comp=Z,96nm,0.9s
346A Big Creek Wild 16.87 11 Pn 11 43 40.3 -1.2
NATX Nacogdoches 16.91 356 P Pn 11 43 42.6 +0.5
baz=176
NATX Nacogdoches 16.91 356 Pn Pn 11 43 41.9 -0.1
237A Washetta, Mont 17.26 353 IAmb IAmb 11 43 52.3
comp=Z,66nm,0.7s
BRAL Brewton 17.26 18 P Pn 11 43 46.8 +0.4
baz=201,SNR=8.4
H06E1 SOCORRO T-PHAS 17.31 286 T T 12 01 55.5
SNR=49
TX31 Lajitas Ar. Si 17.32 328 IAmb IAmb 11 44 04.7
comp=Z,176nm,1.1s
TXAR Lajitas Array 17.32 328 P P 11 43 48.9 +0.9
comp=Z,0.6nm,0.3s,baz=147,slow=14,SNR=83
TXAR LR LR 11 51 09.1
comp=Z,87nm,20.4s,baz=0.0,slow=39
TXAR Lajitas Array 17.32 328 P 11 43 49.6 +1.7
H06S1 SOCORRO T 17.33 285 T T 12 01 46.6
SNR=7.7
WHTX Lake Whitney, 17.51 348 P P 11 43 50.4 +0.6
baz=167,SNR=27
WHTX Lake Whitney, 17.51 348 IAmb IAmb 11 43 54.4
comp=Z,69nm,0.7s
VBMS Vicksburg 17.51 8 P P 11 43 49.9 0.0
baz=189,SNR=8.8
VBMS Vicksburg 17.51 8 IAmb IAmb 11 44 16.2
comp=Z,131nm,0.8s
143A Socs Landing, 17.89 5 IAmb IAmb 11 43 58.2
comp=Z,167nm,0.9s
SLBS Sierra La Lagu 17.99 302 P P 11 43 54.9 -0.4
GTBY Guantanamo Bay 18.11 71 *eP* P 11 43 53.3 -3.3
GTBY Guantanamo Bay 18.11 71 P Pn 11 43 57.2 +0.4
GTBY IAmb IAmb 11 44 24.2
comp=Z,54nm,0.7s
146A Union 18.16 12 IAmb IAmb 11 44 03.9
comp=Z,89nm,0.9s

250A Grady 18.26 19 P P 11 43 56.5 -1.6
250A IAmb IAmb 11 44 02.7
comp=Z,108nm,0.7s
352A Blakely 18.28 23 P Pn 11 43 58.9 +0.1
MOTC Monteria, Cord 18.29 107 *eP* P 11 43 58.4 -0.2
Z41A Richland Creek 18.37 1 P P 11 43 59.0 -0.3
baz=182,SNR=15
Z41A Richland Creek 18.37 1 IAmb IAmb 11 44 17.2
comp=Z,107nm,0.8s
SJCC San Jacinto, C 18.38 103 *eP* P 11 43 58.9 -0.7
Z38A Mt. Pleasant 18.42 356 P P 11 43 59.8 -0.1
Z38A IAmb IAmb 11 44 05.4
comp=Z,70nm,1.0s
LPIG La Paz 18.47 303 P Pn 11 44 03.6 +2.4
baz=162,slow=8.9,SNR=0.6
LPIG LR LR 11 51 15.4
comp=Z,185nm,18.7s,baz=121,slow=37
DBBC Dabeiba 18.49 113 *eP* Pn 11 44 02.8 +1.1
ABTX Abilene, Hawle 18.64 343 P Pn 11 44 03.5 +0.3
baz=161,SNR=17
ABTX Abilene, Hawle 18.64 343 IAmb IAmb 11 44 23.0
comp=Z,43nm,0.6s
Z35A Perchaven, San 18.77 350 IAmb IAmb 11 44 12.2
comp=Z,65nm,0.8s
WLAR White Oak Lake 18.79 1 P Pn 11 44 05.6 +0.7
TIGA Tifton 18.79 27 P Pn 11 44 05.2 +0.2
baz=210,SNR=17
Z47A Carrollton 18.91 14 IAmb IAmb 11 44 29.2
comp=Z,125nm,0.8s
LRAL Lakeview Retre 19.03 16 P Pn 11 44 07.7 -0.1
baz=199,SNR=27
LRAL Lakeview Retre 19.03 16 P P 11 44 06.9 +0.4
LRAL IAmb IAmb 11 44 14.4
comp=Z,49nm,0.7s
CBOC Ciudad Bolivar 19.20 116 *eP* Pn 11 44 10.9 +0.7
Y45A Yeager Farm, C 19.27 10 IAmb IAmb 11 44 35.6
comp=Z,145nm,1.1s
152A Waverly Hall 19.42 22 IAmb IAmb 11 44 27.2
comp=Z,83nm,1.2s
HELC Santa Helena 19.47 114 *eP* P 11 44 09.1 -2.8
X40A Basin Creek Fa 19.59 1 P P 11 44 13.0 +0.4
baz=182,SNR=5.5
MIAR Mount Ida 19.65 359 P P 11 44 13.0 -0.2
baz=179,SNR=50
X43A Marvell 19.74 6 P Pn 11 44 16.2 0.0
baz=187
X37A Clayton 19.77 355 P Pn 11 44 16.2 -0.4
X37A IAmb IAmb 11 44 24.7
comp=Z,120nm,1.1s
Z51A Franklin 19.85 20 P P 11 44 16.3 +0.8
Z51A IAmb IAmb 11 44 27.8
comp=Z,52nm,0.8s
CLNB Carlsbad 19.86 333 P Pn 11 44 17.7 0.0
YOTC Yotoco, Valle 19.89 121 *eP* Pn 11 44 18.3 0.0
OXF Oxford 19.93 10 P P 11 44 16.6 +0.3
baz=191,SNR=19
OXF Oxford 19.93 10 P P 11 44 17.4 +1.1
Y49A Blount Mountai 19.96 17 IAmb IAmb 11 44 39.0
comp=Z,73nm,0.9s
MNTX Cornudas Mount 20.10 329 P P 11 44 19.5 +1.3
baz=144
PTBC PUERTO BERRIO, 20.27 112 *eP* P 11 44 20.5 +0.3
W41B Gary Mavity, V 20.29 3 P P 11 44 20.6 +0.3
baz=183,SNR=16
W41B Gary Mavity, V 20.29 3 P P 11 44 20.9 +0.6
W41B IAmb IAmb 11 44 27.8
comp=Z,131nm,1.2s
W39A Magazine 20.30 359 P P 11 44 20.9 +0.5
baz=179,SNR=17
W39A Magazine 20.30 359 IAmb IAmb 11 44 30.1
comp=Z,68nm,1.0s
NORC Noxia 20.34 115 *eP* P 11 44 20.5 -0.5
X48A Hartselle 20.36 15 IAmb IAmb 11 44 27.6
comp=Z,66nm,0.8s
ANIL Santa Ana 20.41 118 *eP* Pn 11 44 25.9 +1.3
WHAR Wooly Hollow 20.41 2 P P 11 44 21.7 +0.2
WHAR IAmb IAmb 11 44 29.1
comp=Z,100nm,1.1s
TOLC Tolima 20.43 118 *eP* Pn 11 44 25.5 +0.6
WMOK Wichita Mounta 20.44 347 P P 11 44 22.3 +0.4
baz=165,SNR=17
POPC Popayan, Colom 20.46 125 *eP* P 11 44 22.1 -0.4
GOGA Godfrey 20.56 24 P P 11 44 24.3 +1.1
baz=206,SNR=16
GOGA Godfrey 20.56 24 IAmb IAmb 11 44 43.2
comp=Z,54nm,0.8s
PLAL Pickwick Lake 20.63 12 IAmb IAmb 11 44 30.8
comp=Z,76nm,0.8s
OTAV Otavalo 20.64 133 *eP* Pn 11 44 26.8 -0.7
OTAV Otavalo 20.64 133 P P 11 44 25.4 +0.7
OTAV Otavalo 20.64 133 *eP* Pn 11 44 27.1 -0.4
GCUF Volcan Galeras 20.77 129 *eP* P 11 44 25.5 -0.7
PCON Cinco Dias 20.81 125 *eP* Pn 11 44 28.8 -0.8
FPAL Fort Paine 20.84 18 IAmb IAmb 11 44 33.6
comp=Z,54nm,0.9s
OKCFA Oklahoma City 20.84 350 IAmb IAmb 11 44 51.3
comp=Z,129nm,1.1s
ORTC Ortega, Tolima 20.85 120 *eP* Pn 11 44 28.8 -0.7
MARP Paez Belalcaza 20.86 123 *eP* Pn 11 44 29.5 -0.4
MSTX Muleshoe 20.90 338 P P 11 44 28.1 +1.1
baz=154,SNR=40
MSTX Muleshoe 20.90 338 P P 11 44 28.1 +1.1
OK025 Westminster Rd 20.99 351 IAmb IAmb 11 44 36.2
comp=Z,79nm,0.9s
157A Early Branch 21.02 30 P P 11 44 29.4 +1.2
baz=215,SNR=6.9
X51A Calhoun 21.09 20 IAmb IAmb 11 44 54.2
comp=Z,51nm,1.0s
TUL1 Leonard 21.12 354 P P 11 44 30.4 +1.2
baz=174,SNR=16
TUL1 Leonard 21.12 354 IAmb IAmb 11 44 50.5
comp=Z,72nm,0.9s
ROSC El Rosal 21.16 116 P P 11 44 32.6 +2.3
comp=Z,6.9nm,0.3s,baz=105,slow=3.5,SNR=7.4
ROSC El Rosal 21.16 116 P P 11 44 31.4 +1.1
OK029 Liberty Lake 21.22 351 IAmb IAmb 11 44 52.0
comp=Z,134nm,1.2s
OK030 Cody Creek RV 21.25 352 IAmb IAmb 11 44 39.0
comp=Z,106nm,1.0s
PRAC Prado 21.25 119 *eP* P 11 44 32.6 +1.8
OK031 S. Brethren Rd 21.28 352 IAmb IAmb 11 45 00.1
comp=Z,102nm,0.9s
AMTX Amarillo 21.35 341 P P 11 44 33.3 +1.5
baz=158
AMTX Amarillo 21.35 341 P P 11 44 32.9 +1.1
SWET Sewanee 21.37 17 IAmb IAmb 11 44 55.7
comp=Z,45nm,0.7s
Z56A Williston 21.38 28 P P 11 44 33.9 +1.9
baz=213
BARC Barichara 21.39 110 *eP* P 11 44 34.0 +1.4
U40A Yellville 21.45 1 P P 11 44 34.2 +1.4
baz=181,SNR=14
U40A Yellville 21.45 1 IAmb IAmb 11 45 00.2
comp=Z,42nm,0.8s
158A Hollywood 21.47 32 P P 11 44 34.8 +1.8
baz=217,SNR=5.8
W50A Signal Mountai 21.54 18 IAmb IAmb 11 44 58.1
comp=Z,48nm,0.8s
PAMC Pamplona, Colo 21.55 108 *eP* P 11 44 35.7 +1.3
GARC Garzon, Huila 21.61 124 *eP* P 11 44 36.5 +1.6
V48A Smith Brothers 21.64 14 IAmb IAmb 11 44 55.9
comp=Z,42nm,0.8s
HODGE Hodges 21.76 25 IAmb IAmb 11 44 44.1
comp=Z,135nm,1.4s
NHSC New Hope 21.77 31 P P 11 44 38.8 +2.5
baz=216,SNR=15
RUSC La Rusia 21.78 112 *eP* P 11 44 37.6 +0.7
CHIC Chingaza 21.78 116 *eP* P 11 44 38.5 +1.6
WVT Waverly 21.79 12 P P 11 44 38.9 +2.6
baz=194
WVT Waverly 21.79 12 P P 11 44 36.2 -0.1
WVT IAmb IAmb 11 44 43.9
comp=Z,41nm,0.7s
PUAC Puerto Asis, P 21.80 129 *eP* P 11 44 38.7 +2.1
FLOC Florencia 21.85 125 *eP* P 11 44 39.4 +2.2
W52A Murphy 21.89 21 IAmb IAmb 11 45 05.6
comp=Z,40nm,0.8s
X54A Belton 21.99 25 P P 11 44 40.9 +2.4
baz=209
121A Cookes Peak, D 22.01 326 P P 11 44 41.3 +2.3
baz=140,SNR=80
CPCT Cooper Cave 22.01 19 IAmb IAmb 11 45 01.7
comp=Z,36nm,0.8s
319A Douglas 22.02 321 IAmb IAmb 11 45 00.2
comp=Z,77nm,1.2s
PBMO Poplar Bluff 22.02 6 IAmb IAmb 11 45 08.5
comp=Z,67nm,0.8s

U32A Winter Ranch, 22.07 348 IAmb IAmb 11 44 49.3
comp=Z,72nm,0.9s
Z58A St. Stephen 22.14 31 P P 11 44 42.9 +2.7
baz=217,SNR=23
BG3 Lake Jocassee 22.16 23 IAmb IAmb 11 45 09.4
comp=Z,64nm,1.0s
T35A Sooner Cattle 22.19 353 IAmb IAmb 11 45 01.1
comp=Z,62nm,0.9s
T42A Van Buren 22.21 5 IAmb IAmb 11 45 05.7
comp=Z,67nm,1.1s
X55A Gracelyn & Ava 22.23 26 P P 11 44 44.2 +3.0
baz=211,SNR=12
JSC Jenkinsville 22.23 27 IAmb IAmb 11 44 50.2
comp=Z,49nm,1.1s
MGMO Mountain Grove 22.27 2 IAmb IAmb 11 44 51.6
comp=Z,137nm,1.5s
V51A Loudon 22.39 19 IAmb IAmb 11 45 00.2
comp=Z,43nm,0.6s
TKL Tuckaleechee C 22.45 21 P P 11 44 44.7 +1.2
comp=Z,7.5nm,0.5s,baz=188,slow=8.5,SNR=18
TKL LR LR 11 55 03.8
comp=Z,411nm,19.7s,baz=220,slow=41
TKL Tuckaleechee C 22.45 21 IAmb IAmb 11 45 01.8
comp=Z,46nm,0.8s
PAULI Pauline 22.46 25 IAmb IAmb 11 44 51.8
comp=Z,68nm,1.1s
X56A White Oak 22.51 27 P P 11 44 46.8 +2.7
baz=212,SNR=12
W54A Cherokee Point 22.53 24 P P 11 44 46.9 +2.5
baz=209,SNR=10.0
U49A Red Boiling Sp 22.63 16 IAmb IAmb 11 45 04.4
comp=Z,54nm,0.8s
KS20 Mayfield South 22.64 351 IAmb IAmb 11 44 56.8
comp=Z,37nm,0.8s
Y58A Scranton 22.67 31 P P 11 44 47.0 +1.2
baz=216
V52A Sevierville 22.68 21 IAmb IAmb 11 45 16.1
comp=Z,54nm,0.8s
TAMC Tame, Arauca 22.72 109 *eP* P 11 44 43.1 -3.6
T47A Sharon Grove 22.77 13 IAmb IAmb 11 45 05.9
comp=Z,69nm,0.9s
TVZX PASSCAL Wareho 22.77 330 P P 11 44 47.7 +0.8
baz=144
S39A Bolivar 22.78 0 IAmb IAmb 11 45 14.4
comp=Z,40nm,0.8s
V53A Saluda 22.81 23 IAmb IAmb 11 45 06.2
comp=Z,89nm,1.1s
BIRD Birdtown, Kers 22.90 28 IAmb IAmb 11 45 12.7
comp=Z,69nm,1.0s
KMSC Kings Mountain 22.93 26 P P 11 44 49.1 +0.5
baz=211
KMSC Kings Mountain 22.93 26 IAmb IAmb 11 45 11.5
comp=Z,109nm,1.2s
SDV Santo Domingo 22.96 102 P P 11 44 49.1 -0.2
comp=Z,18nm,0.6s,baz=269,slow=7.5,SNR=12
SDV LR LR 11 54 48.7
comp=Z,258nm,20.3s,baz=256,slow=40
SDV Santo Domingo 22.96 102 *eP* P 11 44 47.0 -2.3
SDV Santo Domingo 22.96 102 P P 11 44 46.5 -2.8
SDV Santo Domingo 22.96 102 *eP* P 11 44 48.4 -0.9
MACC Macarena, Meta 22.98 121 *eP* P 11 44 51.6 +2.4
Y59A Loris 23.13 32 P P 11 44 53.2 +2.6
baz=218
CCM Cathedral Cave 23.22 4 P P 11 44 48.9 -2.5
baz=185
CCM Cathedral Cave 23.22 4 P P 11 44 48.5 -2.9
V54A Nebo 23.23 24 P P 11 44 52.7 +1.2
baz=209
W56A Indian Trail 23.25 27 P P 11 44 52.9 +1.2
baz=213
ANMO Albuquerque 23.27 332 P P 11 44 53.5 +1.4
comp=Z,21nm,0.9s,baz=140,slow=12,SNR=33
ANMO Albuquerque 23.27 332 P P 11 44 53.9 +1.8
baz=146
ANMO Albuquerque 23.27 332 P P 11 44 52.1 0.0
TZTN Tazewell 23.33 20 P P 11 44 54.2 +1.8
baz=204,SNR=9.3
X58A Rowland 23.35 30 P P 11 44 54.2 +1.6
baz=216
X58A Rowland 23.35 30 IAmb IAmb 11 45 17.0
comp=Z,80nm,0.9s
PTGC Puerto Gaitan, 23.38 115 *eP* P 11 44 54.2 +1.1
PTLC Puerto Leguiza 23.39 127 *eP* P 11 44 57.0 +3.7
W57A Gilead 23.53 28 P P 11 44 55.7 +1.4
baz=214,SNR=6.4
W57A Gilead 23.53 28 IAmb IAmb 11 45 05.7
comp=Z,72nm,1.1s
V55A Taylorsville 23.59 25 P P 11 44 56.1 +1.3
baz=210
V55A Taylorsville 23.59 25 IAmb IAmb 11 45 16.9
comp=Z,71nm,1.1s
X59A McDuffie Farm, 23.73 31 P P 11 44 57.0 +0.9
baz=218
W58A Raeford 23.78 30 P P 11 44 57.3 +0.7
baz=216
V56A Mocksville 23.86 26 P P 11 44 57.5 +0.2
baz=212,SNR=5.7
SLM Saint Louis 23.88 6 IAmb IAmb 11 45 22.7
comp=Z,41nm,0.8s
U54A Nelsons Funny 23.93 23 P P 11 44 57.6 -0.5
baz=208,SNR=8.6
R32A Long Quarter, 23.99 350 IAmb IAmb 11 45 15.1
comp=Z,45nm,0.8s
X60A Albert Glenn T 24.05 32 P P 11 44 58.8 -0.2
baz=219
T53A Wise 24.08 22 P P 11 44 59.4 0.0
baz=206
WCI Wyandotte Cave 24.14 14 P P 11 45 00.2 +0.4
baz=197
WCI Wyandotte Cave 24.14 14 P P 11 44 59.9 +0.1
WCI IAmb IAmb 11 45 24.4
comp=Z,36nm,0.7s
V57A Coltrane Farms 24.24 28 P P 11 45 00.2 -0.5
baz=214
OLIL Olney 24.27 10 P P 11 45 00.1 -0.9
Q44A Meyer Farm, Va 24.29 8 IAmb IAmb 11 45 27.1
comp=Z,52nm,0.8s
S51A Beattyville 24.32 19 IAmb IAmb 11 45 29.1
comp=Z,52nm,0.9s
T25A Trinidad 24.32 338 P P 11 45 03.9 +2.1
baz=153,SNR=42
U56A King 24.36 26 P P 11 45 01.5 -0.4
baz=212
U56A King 24.36 26 IAmb IAmb 11 45 28.3
comp=Z,91nm,1.4s
KSU1 Kansas State U 24.36 354 P P 11 45 01.1 -0.8
baz=172
KSU1 Kansas State U 24.36 354 IAmb IAmb 11 45 23.6
comp=Z,45nm,0.9s
V58A Windy Hill, Pi 24.46 29 P P 11 45 02.6 -0.2
baz=215
R49A Shelbyville 24.47 16 IAmb IAmb 11 45 23.4
comp=Z,55nm,1.2s
T54A Tazewell 24.50 23 P P 11 45 03.9 +0.7
baz=208
W60A Pink Hill 24.56 32 P P 11 45 02.5 -1.1
baz=219
CBKS Cedar Bluff 24.57 348 P P 11 45 03.9 +0.2
baz=165,SNR=7.0
CBKS Cedar Bluff 24.57 348 P P 11 45 02.1 -1.6
CBKS IAmb IAmb 11 45 19.3
comp=Z,58nm,0.8s
P40A Paris 24.64 2 IAmb IAmb 11 45 32.0
comp=Z,51nm,0.8s
214A Organ Pipe Nat 24.65 317 P P 11 45 04.6 0.0
baz=130,SNR=7.4
214A Organ Pipe Nat 24.65 317 IAmb IAmb 11 45 23.2
comp=Z,69nm,1.4s
X18A Snowflake 24.70 326 IAmb IAmb 11 45 24.1
comp=Z,40nm,0.9s
T55A Pulaski 24.86 24 P P 11 45 07.8 +1.4
baz=210
V59A Middlesex 24.86 30 P P 11 45 05.3 -1.1
baz=217
U57A Blanch 24.89 28 P P 11 45 07.6 +0.9
baz=214
P43A Skaggs, Pawnee 24.95 7 IAmb IAmb 11 45 38.1
comp=Z,60nm,1.0s
W61A Ground Anchor 25.03 33 P P 11 45 08.5 +0.6
baz=220
BLA Blacksburg 25.08 25 P P 11 45 10.9 +2.4
baz=211
T56A Rocky Mt 25.09 26 P P 11 45 10.8 +2.3
baz=212
U58A Oxford 25.22 29 P P 11 45 10.3 +0.6
baz=215
S54A Dingess, Beckl 25.25 23 P P 11 45 10.9 +0.9

baz=208
SDCO Great Sand Dun 25.26 337 P P 11 45 12.6 +2.2
baz=152,SNR=22
SDCO Great Sand Dun 25.26 337 IAmb IAmb 11 45 28.2
comp=Z,43nm,1.1s
P46A Rosedale 25.28 11 IAmb IAmb 11 45 37.3
comp=Z,63nm,0.9s
V60A Jim Taylor Roa 25.34 32 P P 11 45 11.7 +0.9
baz=219
V60A Jim Taylor Roa 25.34 32 IAmb IAmb 11 45 16.6
comp=Z,49nm,0.6s
T57A Hurt 25.40 27 P P 11 45 12.7 +1.4
baz=213
T57A Hurt 25.40 27 IAmb IAmb 11 45 30.2
comp=Z,34nm,0.9s
KSCO Kaye Shedlock' 25.46 343 P P 11 45 13.4 +1.4
baz=159
KSCO Kaye Shedlock' 25.46 343 IAmb IAmb 11 45 18.2
comp=Z,61nm,1.1s
R53A Hurricane 25.49 21 P P 11 45 15.4 +3.3
baz=206
P48A Milroy 25.51 14 IAmb IAmb 11 45 43.9
comp=Z,48nm,0.9s
S55A Lewisburg 25.54 24 P P 11 45 14.0 +1.4
baz=210
U59A Littleton 25.55 30 P P 11 45 14.2 +1.6
baz=217
U59A Littleton 25.55 30 IAmb IAmb 11 45 41.0
comp=Z,49nm,0.8s
Q51A Peebles 25.67 18 IAmb IAmb 11 45 44.1
comp=Z,62nm,1.0s
T58A Grand View Acr 25.68 28 P P 11 45 15.0 +1.2
baz=215
R54A Victor 25.70 23 P P 11 45 16.8 +2.8
baz=208
V61A Roper 25.72 33 P P 11 45 16.0 +1.8
baz=220
P49A Miami Univ. Ec 25.76 15 P P 11 45 17.2 +2.7
baz=200
113A Mohawk Valley, 25.79 317 IAmb IAmb 11 45 35.1
comp=Z,53nm,1.2s
S22A 4UR Ranch, Cre 25.79 335 P P 11 45 16.9 +1.7
baz=149,SNR=18
S56A Natural Bridge 25.84 26 P P 11 45 18.6 +3.3
baz=212
HDIL Hopedale 25.88 7 P P 11 45 17.9 +2.2
baz=189
Q52A Bidwell 25.95 20 P P 11 45 18.0 +1.7
baz=205
SFIN Lafayette 26.04 11 P P 11 45 19.2 +2.1
baz=194
Y14A Wickenburg 26.06 320 IAmb IAmb 11 45 37.5
comp=Z,40nm,1.1s
MVCO Mesa Verde 26.07 332 P P 11 45 19.2 +1.6
baz=145,SNR=18
MVCO Mesa Verde 26.07 332 IAmb IAmb 11 45 42.3
comp=Z,23nm,0.7s
N33A J Bar K, Exete 26.08 353 IAmb IAmb 11 45 21.5
comp=Z,58nm,0.8s
Q53A Leroy 26.11 21 P P 11 45 20.3 +2.6
baz=207
R55A Marlinton 26.13 24 P P 11 45 20.0 +2.0
baz=210
S57A Dark Hollow, R 26.16 26 P P 11 45 20.3 +2.1
baz=213
Q24A Divide 26.21 339 P P 11 45 20.7 +1.7
baz=154
SJG San Juan 26.25 79 LR LR 11 56 44.4
comp=Z,126nm,18.0s,baz=254,slow=39
ATAH Atahualpa 26.36 145 P P 11 45 22.9 +2.3
comp=Z,32nm,0.8s,baz=326,slow=7.3,SNR=20
ATAH LR LR 11 54 13.3
comp=Z,204nm,20.3s,baz=310,slow=33
S58A Poland Farm, P 26.44 28 P P 11 45 22.5 +1.8
baz=215
Q54A Coxs Mills 26.47 22 P P 11 45 23.8 +2.8
baz=208
GLA Glamis 26.66 317 P P 11 45 23.8 +1.0
baz=128,SNR=8.7
GLA Glamis 26.66 317 P P 11 45 23.9 +1.0
GLA IAmb IAmb 11 45 43.4
comp=Z,54nm,1.4s
Q55A Buckhannon 26.76 23 P P 11 45 26.1 +2.4
baz=210
R57A Stanardsville 26.80 26 P P 11 45 26.7 +2.8
baz=213
R58B Mineral 26.81 28 P P 11 45 27.1 +3.1
baz=215
ESJX Sierra Juarez 26.81 314 P P 11 45 25.4 +1.1
PV15 Paradox Valley 26.99 333 IAmb IAmb 11 45 45.1
comp=Z,66nm,1.2s
SCIA State Center 26.99 0 P P 11 45 28.3 +2.7
baz=180
SCIA State Center 26.99 0 IAmb IAmb 11 45 40.5
comp=Z,37nm,0.7s
PDMCI Parker Dam,Lak 27.01 320 P P 11 45 27.8 +1.9
baz=131,SNR=9.3
R58A Rapidan 27.03 27 P P 11 45 29.2 +3.3
baz=214
SMCO Snowmass 27.08 336 IAmb IAmb 11 45 45.1
comp=Z,36nm,1.2s
PV03 Paradox Valley 27.08 332 IAmb IAmb 11 45 45.3
comp=Z,53nm,1.2s
PV18 Skein Mesa, Pa 27.10 332 IAmb IAmb 11 45 45.4
comp=Z,57nm,1.3s
ISCO Idaho Springs 27.12 339 P P 11 45 30.4 +3.2
baz=153
PV11 David Mesa, Pa 27.13 332 IAmb IAmb 11 45 48.3
comp=Z,39nm,0.7s
PV07 Paradox Valley 27.14 333 IAmb IAmb 11 45 46.1
comp=Z,52nm,1.0s
PV16 Nyswonger Mesa 27.16 332 IAmb IAmb 11 45 46.0
comp=Z,63nm,1.2s
PV19 Morning Glory 27.19 332 IAmb IAmb 11 45 46.1
comp=Z,47nm,1.2s
PV20 West Nyswonger 27.21 332 IAmb IAmb 11 45 46.3
comp=Z,45nm,1.1s
L40A Anamosa 27.21 3 IAmb IAmb 11 45 50.1
comp=Z,41nm,0.7s
SWSC Sam W. Stewart 27.25 315 P P 11 45 30.0 +2.0
baz=126,SNR=9.4
PV14 Lion Creek, Pa 27.26 332 IAmb IAmb 11 45 46.8
comp=Z,62nm,1.2s
PV10 Paradox Valley 27.27 332 IAmb IAmb 11 45 46.2
comp=Z,44nm,1.1s
PV22 Blue Mesa, Par 27.29 333 IAmb IAmb 11 45 47.1
comp=Z,48nm,0.9s
IKP In-Ko-Pah, Jac 27.29 315 P P 11 45 30.8 +2.2
baz=126,SNR=15
PV23 Carpenter Ridg 27.32 332 IAmb IAmb 11 45 55.8
comp=Z,34nm,0.8s
BC3 Big Chuckawall 27.44 317 P P 11 45 32.2 +2.3
baz=128,SNR=46
Q57A Strasburg 27.47 26 P P 11 45 33.3 +3.4
baz=213
IRM Iron Mountain 27.55 318 P P 11 45 33.1 +2.3
baz=129,SNR=20
NEE2 Needles Airpor 27.61 320 P P 11 45 33.6 +2.3
baz=131
MONP2 Monument Peak 27.64 315 P P 11 45 33.2 +1.3
baz=125,SNR=11
O54A Avella 27.69 22 P P 11 45 33.2 +1.3
baz=208
BAR Barrett 27.70 314 P P 11 45 33.6 +1.5
Q58A Fox Den Farm, 27.70 27 P P 11 45 33.7 +1.7
baz=214
P57A Homestead Farm 28.01 26 P P 11 45 36.5 +1.7
baz=213
BELC Belle Mtn. Jos 28.01 317 P P 11 45 37.1 +2.0
baz=128,SNR=14
TPFO Pinon Flats 28.08 316 P P 11 45 37.7 +2.0
baz=126,SNR=9.5
PFO Pinyon Flats O 28.09 316 P P 11 45 37.7 +2.0
comp=Z,6.2nm,0.9s,baz=121,slow=6.4,SNR=16
PFO LR LR 11 58 13.7
comp=Z,257nm,19.0s,baz=130,slow=39
PFO Pinyon Flats O 28.09 316 P P 11 45 37.8 +2.1
baz=126,SNR=9.8
PFO Pinyon Flats O 28.09 316 P P 11 45 38.1 +2.4
109C Camp Elliot, M 28.12 314 P P 11 45 37.0 +1.3
baz=124
JFWS Jewell Farm 28.12 5 P P 11 45 35.8 +0.1
baz=186
JFWS Jewell Farm 28.12 5 IAmb IAmb 11 46 01.8
comp=Z,32nm,0.8s
M51A Elyria 28.14 18 P P 11 45 37.4 +1.5
baz=203
N23A Red Feather La 28.21 339 P P 11 45 39.2 +2.4
baz=154
GMRC Granite Mounta 28.28 319 P P 11 45 39.5 +2.1
baz=129,SNR=15
O20A White River Ci 28.40 335 P P 11 45 40.6 +2.1
baz=149
O20A White River Ci 28.40 335 IAmb IAmb 11 45 59.0
comp=Z,46nm,1.4s
O56A Blue Knob Stat 28.45 24 P P 11 45 42.4 +3.7
baz=211
N54A Moraine State 28.52 21 P P 11 45 41.8 +2.5
baz=208
MURC Murrieta 28.58 315 P P 11 45 42.3 +2.3
baz=125,SNR=6.0
HEC Hector,Ludlow 28.74 318 P P 11 45 43.7 +2.3
baz=128,SNR=7.0
BBRC Big Bear Solar 28.78 316 P P 11 45 44.1 +2.1
baz=127
TUQ Turquoise Moun 28.86 319 P P 11 45 44.7 +2.1
baz=130,SNR=13
ECSD EROS Data Cent 28.96 355 P P 11 45 43.4 +0.2
baz=174
SSPA Standing Stone 29.03 25 P P 11 45 46.6 +2.7
baz=212
BFSC Mount Baldy Ra 29.26 316 P P 11 45 48.2 +2.0
baz=126,SNR=11
L53A Girard 29.31 20 P P 11 45 48.3 +2.0
baz=206
CIS Catalina Islan 29.31 314 P P 11 45 48.4 +1.9
baz=123,SNR=6.4
GSC Goldstone, Bar 29.34 318 P P 11 45 48.1 +1.4
baz=128
RWWY Rawlins 29.36 338 IAmb IAmb 11 46 06.4
comp=Z,46nm,1.1s
SHOC Shoshone, Teco 29.37 320 P P 11 45 47.8 +0.8
baz=130
M56A Emporium 29.64 23 P P 11 45 52.5 +3.3
baz=211
DECC Green Verdugo 29.73 315 P P 11 45 52.2 +2.0
baz=125
EDW2 Edwards Air Fo 29.86 316 P P 11 45 52.9 +1.5
baz=126,SNR=6.7
K22A Casper 29.98 340 P P 11 45 54.5 +2.2
baz=154,SNR=7.8
LRMC Laurel Mtn Rad 30.01 318 P P 11 45 54.1 +1.3
baz=127,SNR=7.2
TPNV Topopah Spring 30.04 321 P P 11 45 54.6 +1.6
baz=131,SNR=8.0
O61A Allentown 30.06 30 P P 11 45 56.1 +3.1
baz=218
FURC Furnace Creek, 30.10 320 P P 11 45 55.4 +2.1
baz=130
N59A State Game Lan 30.16 27 P P 11 45 56.6 +2.8
baz=216
MPMC Manual Prospec 30.24 319 P P 11 45 56.9 +2.0
baz=128,SNR=22
SPMN Marine on St. 30.31 1 P P 11 45 57.3 +2.1
baz=181
SPMN Marine on St. 30.31 1 IAmb IAmb 11 46 20.0
comp=Z,44nm,1.3s
CZSB Cruzeiro do Su 30.33 136 eP P 11 45 57.0 +1.4
DUG Dugway, Tooele 30.49 330 P P 11 45 58.5 +1.6
baz=141
SCZ2 Santa Cruz Isl 30.49 313 P P 11 45 58.8 +1.9
baz=122
ARVC Arvin 30.56 316 P P 11 45 59.3 +1.8
baz=125,SNR=6.4
R11A Troy Canyon, C 30.59 324 P P 11 45 58.9 +1.0
baz=134,SNR=9.7
RSSD Black Hills 30.60 345 P P 11 45 59.3 +1.3
baz=160
RSSD Black Hills 30.60 345 P P 11 45 59.1 +1.1
ISA Isabella, Lake 30.64 317 P P 11 46 00.0 +1.8
baz=126
ISA Isabella, Lake 30.64 317 P P 11 45 59.1 +0.9
GRAC Grapevine Rang 30.75 320 P P 11 46 01.6 +2.4
baz=130,SNR=19
M59A Waymart 30.82 27 P P 11 46 02.7 +3.0
baz=215
CWC Cottonwood Cre 30.85 319 P P 11 46 02.2 +2.0
baz=128
L58A Harry Jones Me 31.05 26 P P 11 46 04.7 +3.0
baz=214
PKM Mcpherson Peak 31.10 315 P P 11 46 04.2 +1.8
baz=124,SNR=9.2
BINY Binghamton 31.12 25 P P 11 46 05.2 +2.9
baz=214
VES Vestal, Richgr 31.14 317 P P 11 46 05.1 +2.5
baz=126
BW06 Boulder Array 31.16 337 P P 11 46 04.9 +2.0
baz=149,SNR=8.2
PDAR Pinedale Array 31.16 337 P P 11 46 03.9 +0.9
comp=Z,6.3nm,1.0s,baz=139,slow=9.6,SNR=22
PDAR PcP PcP 11 48 56.0 -0.8
comp=Z,0.6nm,0.5s,baz=140,slow=6.3,SNR=2.3
PDAR pPcP 11 49 13.4
comp=Z,1.9nm,0.7s,baz=148,slow=4.0,SNR=5.2
PDAR LR LR 12 00 46.1
comp=Z,97nm,21.6s,baz=147,slow=40
TIN Tinemaha, Big 31.32 320 P P 11 46 06.7 +2.4
baz=129
SMMC Simmler 31.46 315 P P 11 46 07.4 +2.0
baz=124
L59A Walton 31.51 26 P P 11 46 08.9 +3.1
baz=215
K58A Earlville 31.73 25 P P 11 46 10.2 +2.6
baz=214
MLAC Mammoth, Mammo 32.06 320 P P 11 46 14.2 +3.3
baz=128
NV11 Mina Array Sit 32.15 322 IAmb IAmb 11 46 30.3
comp=Z,27nm,0.9s
SADO Sadowa 32.19 19 LR LR 12 00 36.5
comp=Z,377nm,19.9s,baz=216,slow=39
MDPB Devils Postpil 32.21 320 IAmb IAmb 11 46 31.3
comp=Z,15nm,0.9s
NVAR Mina Array Bea 32.24 322 P P 11 46 14.7 +2.3
comp=Z,18nm,0.8s,baz=132,slow=8.1,SNR=151
NVAR PcP PcP 11 49 00.3 +0.4
comp=Z,2.4nm,0.8s,baz=134,slow=3.4,SNR=3.8
NVAR pPcP 11 49 17.6
comp=Z,5.2nm,0.9s,baz=137,slow=3.6,SNR=6.1
NVAR LR LR 12 00 04.7
comp=Z,255nm,20.8s,baz=115,slow=38
LHV Little Huntoon 32.24 321 IAmb IAmb 11 46 31.3
comp=Z,21nm,1.0s
PMPB Monarch Peak 32.50 316 P P 11 46 16.7 +2.1
PMPB IAmb IAmb 11 46 18.0
comp=Z,32nm,1.0s
IMW Indian Meadow 32.65 336 IAmb IAmb 11 46 34.7
comp=Z,20nm,0.9s
FLWY Flagg Ranch 32.71 337 IAmb IAmb 11 46 41.6
comp=Z,28nm,1.1s
I58A Old Forge 32.77 25 P P 11 46 19.7 +2.9
baz=214
H17A Grant Village 32.93 337 P P 11 46 21.0 +2.5
baz=148,SNR=8.4
H17A Grant Village 32.93 337 IAmb IAmb 11 46 38.9
comp=Z,44nm,1.2s
RLMT Red Lodge 33.09 339 P P 11 46 21.3 +1.5
baz=151,SNR=9.6
RLMT Red Lodge 33.09 339 P P 11 46 20.5 +0.8
RLMT IAmb IAmb 11 46 36.7
comp=Z,27nm,1.1s
MDND Maddock 33.34 352 P P 11 46 22.0 +0.3
baz=169
PNTR Pine Nut 33.44 321 IAmb IAmb 11 46 44.1
comp=Z,18nm,0.9s
AGMN Agassiz Nation 33.45 357 P P 11 46 23.6 +0.9
baz=176
AGMN Agassiz Nation 33.45 357 P P 11 46 21.7 -0.9
AGMN IAmb IAmb 11 46 39.9
comp=Z,14nm,0.7s
LAO LASA Array 33.56 344 P P 11 46 25.1 +1.4
baz=157,SNR=7.1
LAO LASA Array 33.56 344 P P 11 46 22.9 -0.8
LAO IAmb IAmb 11 46 39.7
comp=Z,39nm,1.1s
RUBR Rubicon Trail 33.75 321 IAmb IAmb 11 46 47.5
comp=Z,29nm,0.9s
HLID Hailey 33.85 332 P P 11 46 28.0 +1.6
baz=142,SNR=12
HLID Hailey 33.85 332 IAmb IAmb 11 46 44.9
comp=Z,15nm,0.9s
BOZ Bozeman (W) 34.35 337 P P 11 46 32.2 +1.5
baz=148,SNR=17
BOZ Bozeman (W) 34.35 337 IAmb IAmb 11 46 51.0
comp=Z,26nm,1.2s
BEKR Beckworth 34.38 322 IAmb IAmb 11 46 34.7
comp=Z,14nm,1.0s
ORV Oroville 34.88 320 P P 11 46 38.0 +2.8
I63A Otisfield 34.99 29 P P 11 46 37.7 +1.7
baz=221
WVOR Wild Horse Val 35.11 327 IAmb IAmb 11 46 55.8
comp=Z,25nm,1.2s
ULM Lac du Bonnet 35.40 357 P P 11 46 37.2 -2.2
comp=Z,3.8nm,0.6s,baz=174,slow=9.0,SNR=9.3
ULM PcP PcP 11 49 07.7 -0.6
comp=Z,11nm,0.9s,baz=206,slow=3.7,SNR=4.0
ULM pPcP 11 49 24.7
comp=Z,9.9nm,1.0s,baz=170,slow=4.4,SNR=3.6
ULM LR LR 12 03 36.8
comp=Z,142nm,19.6s,baz=146,slow=40
ULM Lac du Bonnet 35.40 357 IAmb IAmb 11 47 04.7
comp=Z,21nm,1.2s
O03E Paynes Creek 35.52 321 P P 11 46 41.9 +1.2
baz=128,SNR=5.5
MOD Modoc Plateau 35.66 324 IAmb IAmb 11 47 06.6
comp=Z,18nm,0.9s
G63A Kingsbury 36.24 29 P P 11 46 49.1 +2.4
baz=221
MSO Missoula 36.26 336 P P 11 46 48.4 +1.3
baz=145,SNR=10
ETMB Extrema 36.35 131 eP P 11 46 48.0 0.0
M04C Macdoel 36.46 323 P P 11 46 49.5 +0.7
baz=129
N02D Trinity Center 36.48 321 P P 11 46 49.3 +0.4
baz=127
LSQQ Lebel-sur-Quev 36.69 18 P P 11 46 51.6 +1.2
baz=207
M02C Callahan 36.82 322 P P 11 46 52.3 +0.5
baz=128
MACA Manacapuru-AM 36.94 116 eP P 11 46 53.0 0.0
YBH Yreka Blue Hor 36.94 322 P P 11 46 52.9 0.0
comp=Z,3.2nm,0.5s,baz=140,slow=5.2,SNR=26
K04D Chiloquin, OR 36.95 324 P P 11 46 53.9 +1.0
baz=130
L04D Klamath Falls 37.00 323 P P 11 46 54.9 +1.5
baz=129
J05D Fort Rock, OR 37.09 325 P P 11 46 55.6 +1.5
baz=132
J04D Umpqua Nationa 37.54 325 P P 11 46 59.2 +1.1
baz=130
I05D Terrebonne, OR 37.84 327 P P 11 47 01.4 +0.9
baz=132
SAML Samuel 38.09 126 eP P 11 47 01.3 -1.4
SAML Samuel 38.09 126 P P 11 47 01.3 -1.4
SAML pP pP 11 47 16.2 -1.3
SAML IAmb IAmb 11 47 18.4
comp=Z,19nm,0.8s
SAML Samuel 38.09 126 eP P 11 47 01.2 -1.4
WALA Waterton Lakes 38.10 338 IAmb IAmb 11 47 19.9
comp=Z,24nm,1.2s
G05D Wamic, OR 38.45 328 P P 11 47 07.8 +2.4
baz=133
I03D Drain, OR 38.53 324 P P 11 47 07.5 +1.4
baz=129
J01E Myrtle Point 38.53 323 P P 11 47 07.5 +1.4
baz=128
NEW Newport 38.71 334 P P 11 47 07.5 -0.1
comp=Z,2.7nm,0.6s,baz=151,slow=9.9,SNR=5.1
NEW PcP PcP 11 49 17.8 -0.7
comp=Z,1.2nm,0.4s,baz=13,slow=14,SNR=2.6
NEW pPcP 11 49 35.3
comp=Z,5.9nm,0.9s,baz=202,slow=6.0,SNR=4.2
NEW Newport 38.71 334 P P 11 47 08.0 +0.4
baz=142
NEW Newport 38.71 334 IAmb IAmb 11 47 24.2
comp=Z,18nm,1.1s
H04D Lebanon 38.72 326 P P 11 47 08.8 +1.1
baz=131
C09A Chrisman Ranch 38.84 333 IAmb IAmb 11 47 26.0
comp=Z,34nm,1.1s
F05D White Salmon 38.96 328 P P 11 47 10.3 +0.6
baz=134
I02D Swisshome 39.06 325 P P 11 47 12.8 +2.2
baz=129
G03D McMinnville, O 39.45 326 P P 11 47 15.6 +1.8
baz=131
LTY Liberty 39.54 331 IAmb IAmb 11 47 32.1
comp=Z,21nm,1.1s
LPAZ La Paz 39.68 140 P P 11 47 17.0 +0.3
comp=Z,8.8nm,0.8s,baz=324,slow=6.3,SNR=33
LPAZ LR LR 12 03 17.9
comp=Z,93nm,21.7s,baz=310,slow=36
LPAZ La Paz 39.68 140 P P 11 47 16.6 -0.1
LPAZ La Paz 39.68 140 eP P 11 47 16.6 -0.1
FFC Flin Flon 40.39 352 P P 11 47 20.9 -0.5
FFC IAmb IAmb 11 47 37.9
comp=Z,19nm,1.1s
PB16 IPOC Station P 40.45 144 IAmb IAmb 11 47 25.5
comp=Z,21nm,0.9s
D03D Eldon 40.91 329 P P 11 47 26.8 +1.0
baz=133
PB11 IPOC Station P 41.51 145 P P 11 47 31.9 +0.7
A04D Lummi Island 41.54 331 P P 11 47 32.4 +1.5
baz=134
GO01 Chusmiza 41.69 145 IAmb IAmb 11 47 35.7
comp=Z,32nm,0.9s
ITTB Itaituba 41.84 114 eP P 11 47 32.6 -1.3
TA01 Diego Aracena 41.87 147 IAmb IAmb 11 47 36.1
comp=Z,33nm,1.0s
MALB Monte Alegre 42.06 110 eP P 11 47 36.2 +0.6
PB08 IPOC Station P 42.09 145 IAmb IAmb 11 47 38.6
comp=Z,15nm,0.8s
VILB Vilhena 42.86 128 eP P 11 47 41.9 -0.2
PB09 IPOC Station P 43.38 146 IAmb IAmb 11 47 48.9
comp=Z,19nm,0.9s
NPGB Novo Progresso 43.46 117 eP P 11 47 44.9 -2.2
MCPB Macapa, AP 43.50 107 eP P 11 47 47.0 -0.4
PB06 IPOC Station P 43.95 148 IAmb IAmb 11 47 53.0
comp=Z,29nm,1.0s
LVC Limon Verde 44.22 147 P P 11 47 53.8 +0.4
comp=Z,12nm,0.9s,baz=333,slow=4.0,SNR=8.6
LVC Limon Verde 44.22 147 eP P 11 47 53.3 -0.1
SCHQ Schefferville 44.92 21 LR LR 12 07 30.8
comp=Z,461nm,21.4s,baz=256,slow=37
CLDB Colider 45.10 122 eP P 11 47 57.8 -2.4
PTLB Pontes e Lacer 45.23 130 eP P 11 48 00.3 -0.8
AC02 Maricunga 47.61 150 IAmb IAmb 11 48 22.8
comp=Z,21nm,0.9s
PRPB Parauapebas 47.91 113 eP P 11 48 21.2 -1.0
TMAB Tom-Au,PA,Br 47.92 107 eP P 11 48 21.9 -0.3
LCO Las Campanas 48.75 153 P P 11 48 29.9 +1.2
AC05 El Transito 48.78 153 IAmb IAmb 11 48 30.3
comp=Z,18nm,0.9s
SNDB Serra Nova Dou 49.41 120 eP P 11 48 34.0 +0.3
PP1B Ponte de Pedra 49.75 129 eP P 11 48 36.6 +0.4
YKA Yellowknife Ar 49.95 347 P P 11 48 37.2 +0.2
comp=Z,7.0nm,0.7s,baz=150,slow=7.2,SNR=32
YKA pP pP 11 48 52.5 +0.2
comp=Z,6.7nm,0.6s,baz=150,slow=7.4,SNR=10
YKA PcP PcP 11 49 56.1 -0.3
comp=Z,2.9nm,0.7s,baz=152,slow=3.3,SNR=5.2
YKA LR LR 12 16 07.7
comp=Z,66nm,18.2s,baz=0.0,slow=44
AQDB Aquidauana 50.96 133 eP P 11 48 44.7 -0.5
ARAG Araguaiana, MT 51.01 125 eP P 11 48 44.5 -1.3
SMTB Santa Maria do 51.08 115 eP P 11 48 45.8 -0.6
DLBC Dease Lake 51.39 336 P P 11 48 51.0 +2.9
ROSB Rosrio 51.80 106 eP P 11 48 51.5 -0.2
ZON Zonda 51.81 153 P P 11 48 52.9 +1.3
TAOE Nuku Hiva Isla 52.04 246 eS S 11 56 10.8 -2.7
comp=Z,87nm,27.3s
TAOE eLR LR 12 03 48.2
comp=Z,354nm,25.5s
TAOE Nuku Hiva Isla 52.04 246 eT T 12 44 27.7
comp=Z,45nm,0.2s
BO02 Sierra Bellavi 53.78 157 IAmb IAmb 11 49 13.4
comp=Z,13nm,0.8s
CPUP Villa Florida 53.83 139 P P 11 49 05.4 -1.1
comp=Z,12nm,0.8s,baz=327,slow=8.1,SNR=23
CPUP PcP PcP 11 50 11.8 +0.1
comp=Z,3.6nm,0.8s,baz=1.7,slow=8.1,SNR=2.8
CPUP LR LR 12 11 42.7
comp=Z,68nm,20.1s,baz=332,slow=36
CPUP Villa Florida 53.83 139 P P 11 49 05.1 -1.4
CPUP IAmb IAmb 11 49 06.4
comp=Z,21nm,1.0s
CPUP Villa Florida 53.83 139 eP P 11 49 05.9 -0.6
BDFB Brasilia 54.04 122 P P 11 49 07.2 -1.1
comp=Z,7.6nm,0.7s,baz=292,slow=6.7,SNR=12
BDFB pP pP 11 49 23.2 -0.6
comp=Z,9.1nm,0.6s,baz=316,slow=11,SNR=5.4
BDFB LR LR 12 12 35.9
comp=Z,124nm,20.5s,baz=316,slow=36
BDFB Brasilia 54.04 122 P P 11 49 07.7 -0.6

BDFB					pP	**pP**	**11 49 22.8**	**-1.0**
BDFB					lAmb	lAmb	11 49 25.0	
	comp=Z,8.8nm,0.6s							
ITRB	**Iturama**	**54.43**	**128**	*e*P	**P**		**11 49 11.0**	**0.0**
TRCB	**Terra Rica**	**54.63**	**132**	*e*P	**P**		**11 49 12.1**	**-0.3**
PCMB	**Pacaembu**	**54.89**	**130**	*e*P	**P**		**11 49 13.8**	**-0.5**
SDBA	**SAO DESIDERIO**	**55.05**	**117**	*e*P	**P**		**11 49 14.7**	**-0.9**
IPMB	**Ipameri, GO**	**55.13**	**125**	*e*P	**P**		**11 49 16.3**	**+0.1**
BI02	**San Fabin de**	**55.27**	**158**	lAmb	lAmb		11 49 18.6	
	comp=Z,30nm,1.3s							
PTGB	**Pitanga**	**56.25**	**134**	*e*P	**P**		**11 49 22.7**	**-1.4**
BB19B	**Bebedouro**	**56.62**	**128**	*e*P	**P**		**11 49 25.9**	**-0.8**
ITQB	**Itaqui**	**56.65**	**141**	*e*P	**P**		**11 49 26.7**	**0.0**
JANB	**Januaria**	**56.82**	**119**	*e*P	**P**		**11 49 29.1**	**+0.8**
LC01	**Cunco**	**57.08**	**160**	P	**P**		**11 49 28.9**	**-0.7**
FRTB	**Fartura**	**57.19**	**131**	*e*P	**P**		**11 49 30.8**	**+0.1**
C36M	**Paulatuk**	**57.83**	**348**	P	**P**		**11 49 35.1**	**+0.7**
	baz=144							
ITAB	**Concordia**	**57.84**	**136**	*e*P	**P**		**11 49 34.5**	**-0.6**
MCARA	**McCarthy VSAT**	**58.41**	**334**	P	**P**		**11 49 41.0**	**+2.4**
DAWY	**Dawson**	**58.45**	**338**	P	**P**		**11 49 39.9**	**+0.9**
DAWY				lAmb	lAmb		11 49 55.8	
	comp=Z,9.1nm,0.8s							
TIJ01	**Guaruva-PR**	**58.79**	**132**	*e*P	**P**		**11 49 41.9**	**-0.1**
SPB	**Sao Paulo**	**58.91**	**130**	*e*P	**P**		**11 49 42.8**	**+0.1**
VAO	**Valinhos**	**58.91**	**129**	*e*P	**P**		**11 49 43.5**	**+0.7**
CPSB	**Cacapava Do Su**	**59.12**	**140**	*e*P	**P**		**11 49 43.1**	**-0.9**
PLCA	**Paso Flores**	**59.17**	**160**	P	**P**		**11 49 44.9**	**+0.6**
	comp=Z,16nm,0.9s,baz=332,slow=8.3,SNR=24							
PLCA				LR	LR		12 10 07.7	
	comp=Z,86nm,19.8s,baz=336,slow=31							
PLCA	**Paso Flores**	**59.17**	**160**	P	**P**		**11 49 45.2**	**+0.9**
PLCA	**Paso Flores**	**59.17**	**160**	*e*P	**P**		**11 49 44.8**	**+0.6**
N25K	**Chitina, Valde**	**59.17**	**334**	P	**P**		**11 49 45.6**	**+1.5**
	baz=119							
INK	**Inuvik**	**59.30**	**344**	P	**P**		**11 49 44.7**	**0.0**
	comp=Z,25nm,1.0s,baz=131,slow=8.5,SNR=34							
INK				pP	**pP**		**11 50 00.5**	**+0.2**
	comp=Z,36nm,0.6s,baz=124,slow=6.6,SNR=23							
L26K	**Log Cabin Wild**	**59.37**	**336**	P	**P**		**11 49 46.9**	**+1.5**
	baz=121							
K27K	**Chicken**	**59.41**	**337**	P	**P**		**11 49 46.9**	**+1.4**
	baz=122							
K27K	**Chicken**	**59.41**	**337**		**P**		**11 49 47.0**	**+1.4**
PET01	**Itanhaem-SP**	**59.43**	**130**	*e*P	**P**		**11 49 46.4**	**+0.1**
BSCB	**Bom Sucesso**	**59.49**	**126**	*e*P	**P**		**11 49 46.3**	**-0.5**
RES	**Resolute Bay**	**59.87**	**360**	lAmb	lAmb		11 49 50.8	
	comp=Z,8.8nm,0.7s							
DOT	**Dot Lake**	**59.96**	**336**	P	**P**		**11 49 50.2**	**+0.8**
DOT				pP	**pP**		**11 50 06.0**	**+1.0**
PLTB	**Pedras Altas**	**59.96**	**141**	*e*P	**P**		**11 49 50.0**	**+0.1**
M24K	**Tolsona, Glenn**	**60.07**	**334**	P	**P**		**11 49 50.2**	**0.0**
	baz=117							
LL01	**San Ignacio de**	**60.08**	**162**	P	**P**		**11 49 50.9**	**+0.5**
SCRK	**Sand Creek**	**60.10**	**337**	P	**P**		**11 49 50.9**	**+0.4**
	baz=120							
RCBR	**Riachuelo**	**60.50**	**106**	P	**P**		**11 49 54.0**	**+0.1**
RCBR					**pP**		**11 50 09.2**	**-0.3**
RCBR	**Riachuelo**	**60.50**	**106**	*e*P	**P**		**11 49 56.2**	**+2.3**
ESAR	**Angra dos Reis**	**60.85**	**127**	*e*P	**P**		**11 49 56.5**	**+0.5**
MAN01	**Angra dos Reis**	**61.13**	**127**	*e*P	**P**		**11 49 59.0**	**+1.1**
RC01	**Rabbit Creek A**	**61.18**	**332**	P	**P**		**11 49 58.6**	**+0.9**
	baz=113							
SJMB	**Sao Joao De Ma**	**61.21**	**121**	*e*P	**P**		**11 49 58.6**	**+0.1**
HDA	**Harding Lake**	**61.44**	**337**	P	**P**		**11 49 60.0**	**+0.5**
	baz=118							
PMOR	**Pomariorio Ree**	**61.55**	**244**	*e*T	T		12 56 21.8	
	comp=Z,6.9nm,0.3s							
ILAR	**Eielson Array**	**61.59**	**337**	P	**P**		**11 50 00.9**	**+0.5**
	comp=Z,6.3nm,0.7s,baz=141,slow=4.6,SNR=61							
ILAR				pP	**pP**		**11 50 16.6**	**+0.5**
	comp=Z,21nm,0.9s,baz=130,slow=5.1,SNR=22							
ILAR	**Eielson Array**	**61.59**	**337**	P	**P**		**11 50 00.5**	**+0.1**
ILAR				pP	**pP**		**11 50 16.4**	**+0.2**
CCB	**Clear Creek Bu**	**61.88**	**337**	lAmb	lAmb		11 50 19.6	
	comp=Z,8.2nm,0.8s							
MCK	**McKinley**	**61.92**	**335**	P	**P**		**11 50 03.3**	**+0.6**
	baz=115,SNR=5.4							
CUT	**Chulitna**	**61.93**	**334**	P	**P**		**11 50 03.6**	**+0.9**
	baz=113							
POKR	**Poker Plat Res**	**61.96**	**337**	P	**P**		**11 50 03.5**	**+0.7**
	baz=118							
COLA	**College**	**62.00**	**337**	P	**P**		**11 50 03.8**	**+0.6**
TCOL	**CIGO, UAF Yank**	**62.01**	**337**	P	**P**		**11 50 03.5**	**+0.4**
	baz=117							
BMAR	**Burnt Mountain**	**62.09**	**340**	P	**P**		**11 50 04.5**	**+0.8**
BMAR				pP	**pP**		**11 50 20.1**	**+0.5**
RIB01	**Linhares ES**	**62.16**	**122**	*e*P	**P**		**11 50 04.6**	**-0.3**
MDM	**Murphy Dome**	**62.19**	**337**	P	**P**		**11 50 03.9**	**-0.5**
MDM				lAmb	lAmb		11 50 21.0	
	comp=Z,18nm,1.1s							
NEA2	**Nenana**	**62.35**	**336**	P	**P**		**11 50 06.1**	**+0.6**
	baz=116							
I23K	**Minto, Yukon-K**	**62.70**	**337**	P	**P**		**11 50 08.6**	**+0.8**
	baz=116,SNR=9.2							
MLY	**Manley**	**63.18**	**336**	P	**P**		**11 50 11.8**	**+0.7**
	baz=114,SNR=13							
COLD	**Coldfoot**	**63.91**	**339**	P	**P**		**11 50 16.8**	**+1.0**
	baz=116							
COLD	**Coldfoot**	**63.91**	**339**	P	**P**		**11 50 17.1**	**+1.4**
COLD				lAmb	lAmb		11 50 34.2	
	comp=Z,30nm,1.2s							
TIAR	**Tiarei**	**63.93**	**242**	*e*T	T		12 59 21.0	
	comp=Z,2.3nm,0.3s							
TVO	**Taravao**	**63.95**	**241**	*e*T	T		12 59 22.5	
	comp=Z,1.1nm,0.2s							
PPT	**Papeete**	**64.13**	**242**	LR	LR		12 09 46.2	
	comp=Z,140nm,20.5s,baz=4.0,slow=28							
PPT2	**Papeete2**	**64.14**	**242**	*e*LR	LR		12 09 16.4	
	comp=Z,281nm,27.2s,baz=68							
TOLK	**Toolik Lake Re**	**64.32**	**340**	P	**P**		**11 50 19.5**	**+0.9**
	baz=117,SNR=6.4							
IMAR	**Indian Mountai**	**64.71**	**337**	P	**P**		**11 50 20.4**	**-0.6**
EUNU	**Eureka**	**65.34**	**1**	P	**P**		**11 50 24.8**	**-0.2**
EUNU				lAmb	lAmb		11 50 45.4	
	comp=Z,16nm,0.8s							
TBI	**Tubuai**	**66.72**	**236**	*e*LR	LR		12 10 36.6	
	comp=Z,241nm,28.5s,baz=65							
TBI	**Tubuai**	**66.72**	**236**	*e*T	T		13 02 50.5	
	comp=Z,7.0nm,0.3s							
A21K	**Barrow**	**67.63**	**342**	P	**P**		**11 50 41.9**	**+2.2**
	baz=111							
DAG	**Danmarks Havn**	**72.17**	**13**	*e*	**P**		**11 51 03.9**	**-3.5**
	baz=255,slow=5.6							
DAG				*i* P	**P**		**11 51 06.7**	**-0.7**
DAG				IAML			11 51 27.3	
	comp=Z,1.7nm,0.4s							
EKA	**Eskdalemuir Ar**	**78.06**	**36**	P	**P**		**11 51 38.6**	**-3.0**
	comp=Z,1.1nm,0.5s,baz=287,slow=5.7,SNR=6.2							
EKA				pP	**pP**		**11 51 54.8**	**-3.2**
	comp=Z,2.9nm,0.6s,baz=277,slow=5.4,SNR=4.6							
ESDC	**Sonseca Array**	**80.22**	**52**	P	**P**		**11 51 50.9**	**-3.1**
	comp=Z,0.5nm,0.4s,baz=290,slow=5.4,SNR=4.1							
ESDC				LR	LR		12 21 21.7	
	comp=Z,66nm,21.9s,baz=345,slow=31							
PMSA	**Palmer Station**	**82.42**	**168**	*e*P	**P**		**11 52 03.3**	**-1.5**
NB2	**NORSAR Subarra**	**84.04**	**28**	P	**P**		**11 52 15.6**	**+2.1**
	comp=Z,9.0nm,1.1s,baz=292,slow=4.8							
NOA	**NORSAR Array B**	**84.04**	**28**	P	**P**		**11 52 13.0**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=293,slow=4.9,SNR=6.9							
NOA				pP	**pP**		**11 52 30.3**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=299,slow=5.2,SNR=7.2							
NOA				LR	LR		12 28 48.2	
	comp=Z,97nm,20.8s,baz=285,slow=35							
HFS	**Hagfors**	**85.51**	**29**	LR	LR		12 29 10.0	
	comp=Z,133nm,20.9s,baz=273,slow=35							
ARD8	**ARCESS Array S**	**85.75**	**18**	P	**P**		**11 52 21.1**	**-0.7**
ARA0	**ARCESS Array S**	**85.76**	**18**	P	**P**		**11 52 21.3**	**-0.6**
ARA0				lAmb	lAmb		11 52 23.5	
	comp=Z,24nm,1.3s							
ARCES	**ARCESS Array B**	**85.76**	**18**	P	**P**		**11 52 21.6**	**-0.3**
	comp=Z,4.9nm,0.6s,baz=290,slow=4.2,SNR=26							
ARCES				pP	**pP**		**11 52 38.0**	**-0.4**
	comp=Z,4.0nm,0.7s,baz=299,slow=4.7,SNR=2.4							
ARCES				LR	LR		12 31 15.4	
	comp=Z,102nm,19.5s,baz=295,slow=36							
TIC	**Toumodi**	**86.69**	**84**	*e*PKP2	**P**		**11 52 27.2**	**-0.4**
LIC	**Lamto**	**86.79**	**84**	*e*PKP2	**P**		**11 52 27.2**	**-0.8**
	comp=Z,16nm,1.1s							
DBIC	**Dimbokro**	**86.85**	**84**	P	**P**		**11 52 26.9**	**-1.3**
	comp=Z,3.7nm,0.8s,baz=264,slow=5.3,SNR=4.2							
DBIC				pP	**pP**		**11 52 44.4**	**-0.5**
	comp=Z,3.5nm,0.6s,baz=211,slow=7.0,SNR=3.1							
DBIC				LR	LR		12 25 35.4	
	comp=Z,60nm,21.5s,baz=288,slow=32							
KIC	**Kosan Boka**	**87.03**	**84**	*e*PKP2	**P**		**11 52 28.4**	**-0.8**
	comp=Z,27nm,1.2s							
CLL	**Collm**	**88.44**	**37**	*e*pP	**pP**		**11 52 51.0**	**-0.8**
CLL				*e*S	**S**		**12 03 16.0**	**-0.3**
CLL				*e*PS	**PnS**		**12 04 23.0**	**-2.7**
CLL				LmV			12 31 00.0	
	comp=Z,200nm,19.4s							
TIXI	**Tiksi**	**89.19**	**348**	P	**P**		**11 52 37.8**	**-0.6**
PETK	**Petropavlovsk-**	**89.25**	**325**	P	**P**		**11 52 38.8**	**-0.1**
	comp=Z,3.6nm,1.0s,baz=302,slow=8.5,SNR=3.8							
PETK				pP	**pP**		**11 52 56.7**	**+1.2**
	comp=Z,4.2nm,1.0s,baz=72,slow=8.1,SNR=3.9							
GERES	**GERESS Array B**	**89.79**	**39**	P	**P**		**11 52 40.1**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=210,slow=34,SNR=2.5							
GERES				pP	**pP**		**11 52 58.7**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=299,slow=1.4,SNR=2.8							
MA2	**Magadan**	**89.79**	**333**	P	**P**		**11 52 42.2**	**+0.8**
FINES	**FINESS Array B**	**90.30**	**25**	P	**P**		**11 52 42.8**	**-0.9**
	comp=Z,2.4nm,0.8s,baz=318,slow=2.6,SNR=5.5							
FINES				pP	**pP**		**11 52 59.1**	**-1.2**
	comp=Z,2.0nm,0.6s,baz=259,slow=1.9,SNR=3.0							
FINES				LR	LR		12 32 13.9	
	comp=Z,104nm,21.9s,baz=313,slow=35							
TORD	**Torodi Ar. Bea**	**91.43**	**76**	P	**P**		**11 52 48.6**	**-1.3**
	comp=Z,0.2nm,0.4s,baz=275,slow=4.1,SNR=4.1							
TORD				pP	**pP**		**11 53 05.0**	**-1.5**
	comp=Z,0.3nm,0.4s,baz=301,slow=4.8,SNR=1.9							
TORD				LR	LR		12 28 36.9	
	comp=Z,38nm,21.9s,baz=295,slow=32							
NRIK	**Noril'sk**	**96.06**	**360**	LR	LR		12 42 22.2	
	comp=Z,54nm,18.2s,baz=18,slow=39							
AKASG	**Malin Array Be**	**97.75**	**33**	LR	LR		12 38 36.2	
	comp=Z,53nm,20.5s,baz=340,slow=36							
OBN	**Obninsk**	**98.53**	**26**	LR	LR		12 38 29.8	
	comp=Z,22nm,18.9s,baz=7.0,slow=36							
DZM	**Mont Dzumac**	**104.73**	**251**	*e*LR	LR		12 28 13.2	
	comp=Z,155nm,23.1s							
ZALV	**Zalesovo Beam**	**111.50**	**1**	PKiKP	**PKiKP**		**11 58 15.8**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=70,slow=1.7,SNR=4.1							
ZALV				pPKiKP	**pPKiKP**		**11 58 33.8**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=270,slow=3.0,SNR=3.0							
KSRS	**Korea Array**	**115.14**	**325**	PKP	**PKiKP**		**11 58 23.5**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=1.3,slow=2.1,SNR=4.7							
SONM	**Songino Array**	**115.19**	**345**	PKP	**PKiKP**		**11 58 23.8**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=111,slow=3.2,SNR=3.0							
MKAR	**Makanchi Array**	**118.55**	**3**	PKP	**PKPdf**		**11 58 29.9**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=354,slow=1.5,SNR=11							
MKAR				pPKP	**pPKPdf**		**11 58 47.2**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=355,slow=2.3,SNR=9.2							
MKAR	**Makanchi Array**	**118.55**	**3**	PKPdf	**PKPdf**		**11 58 29.5**	**-1.3**
HHC	**Hu-ho-hao-te**	**120.00**	**338**	*e*PKP	**PKiKP**		**11 58 34.3**	**+0.4**
HHC				LR	LR			
	comp=Z,410nm,20.2s							
HHC				LR	LR			
	comp=Z,310nm,19.2s							
HHC				LR	LR			
	comp=Z,360nm,19.5s							
WMQ	**Urumqi**	**121.64**	**359**	*e*PKP	**PKiKP**		**11 58 38.3**	**+1.3**
WMQ				LR	LR			
	comp=Z,960nm,29.1s							
WMQ				LR	LR			
	comp=Z,340nm,23.5s							
BOSA	**Boshof**	**121.86**	**115**	PKP	**PKPdf**		**11 58 36.7**	**-1.0**
	comp=Z,8.2nm,0.9s,baz=266,slow=1.2,SNR=9.9							
BOSA				pPKP	**pPKPdf**		**11 58 55.0**	**+0.1**
	comp=Z,7.3nm,0.7s,baz=229,slow=2.1,SNR=6.2							
BOSA	**Boshof**	**121.86**	**115**	PKPdf	**PKPdf**		**11 58 37.7**	**0.0**
LBTB	**Lobatse**	**122.09**	**110**	PKP	**PKPdf**		**11 58 37.2**	**-1.0**
	comp=Z,1.9nm,0.6s,baz=291,slow=13,SNR=2.6							
LBTB				pPKP	**pPKPdf**		**11 58 55.5**	**+0.2**
	comp=Z,2.9nm,0.5s,baz=278,slow=8.3,SNR=3.6							
LSZ	**Lusaka**	**123.67**	**99**	PKP	**PKPdf**		**11 58 41.6**	**+0.1**
	comp=Z,2.1nm,0.5s,baz=49,slow=1.8,SNR=4.8							
NJ2	**Nanjing**	**124.12**	**327**	*e*PKP	**PKiKP**		**11 58 43.3**	**+1.2**
MATP	**Matopo**	**124.50**	**105**	PKP	**PKPdf**		**11 58 42.9**	**-0.1**
	comp=Z,5.2nm,0.9s,baz=249,slow=1.3,SNR=11							
MATP				pPKP	**pPKPdf**		**11 59 00.0**	**-0.1**
	comp=Z,7.0nm,0.8s,baz=190,slow=2.2,SNR=9.1							
GTA	**Gaotai**	**124.68**	**348**	*e*PKP	**PKiKP**		**11 58 43.3**	**+0.1**
GTA				sPKP			11 58 59.8	
GTA				LR	LR			
	comp=Z,76nm,18.2s							
GTA				LR	LR			
	comp=Z,120nm,17.1s							
MAW	**Mawson**	**125.02**	**169**	PKP	**PKPdf**		**11 58 42.3**	**0.0**
	comp=Z,4.5nm,0.6s,baz=149,slow=2.9,SNR=15							
MAW				pPKP	**pPKPdf**		**11 58 59.8**	**+0.3**
	comp=Z,3.7nm,0.8s,baz=226,slow=2.6,SNR=3.6							
XAN	**Xi'an**	**127.00**	**337**	PKP	**PKiKP**		**11 58 48.9**	**+1.0**
XAN				sPKP			11 59 04.8	
STKA	**Stephens Creek**	**127.33**	**241**	PKP	**PKiKP**		**11 58 48.4**	**-0.1**
	comp=Z,9.5nm,0.8s,baz=66,slow=1.9,SNR=23							
STKA				pPKP	**pPKPdf**		**11 59 05.6**	**+0.5**
	comp=Z,6.5nm,0.7s,baz=46,slow=1.8,SNR=7.8							
STKA	**Stephens Creek**	**127.33**	**241**	PKPdf	**PKPdf**		**11 58 47.9**	**0.0**
WRAB	**Tennant Creek**	**134.33**	**257**		**PKPdf**		**11 59 01.8**	**+0.2**
WRA	**Warramunga Arr**	**134.34**	**257**	PKhKP	PKPpre		11 58 47.7	
	comp=Z,1.1nm,0.9s,baz=91,slow=3.8,SNR=4.6							
WRA				PKP	**PKPdf**		**11 59 01.2**	**-0.4**
	comp=Z,5.9nm,0.8s,baz=87,slow=2.7,SNR=14							
WRA				pPKP	pPKPdf		11 59 19.2	+0.5
	comp=Z,2.6nm,0.7s,baz=16,slow=0.9,SNR=6.5							
ASAR	**Alice Springs**	**134.72**	**251**	PKhKP	PKPpre		11 58 50.3	
	comp=Z,0.8nm,0.6s,baz=98,slow=3.1,SNR=15							
ASAR				PKP	**PKPdf**		**11 59 02.1**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=102,slow=1.9,SNR=17							
FITZ	**Fitzroy Crossi**	**142.54**	**260**	PKhKP	PKPpre		11 59 13.5	
	comp=Z,5.8nm,0.7s,baz=2.4,slow=3.7,SNR=16							
PAYA	**Payao**	**143.64**	**339**	P	PKPbc		11 59 16.0	0.0
CMMT	**Chiang Mai**	**144.46**	**340**	P	**PKPab**		**11 59 18.4**	**0.0**
	comp=Z,6.8nm,1.1s							
LAMP	**Lampang**	**144.50**	**339**	P	PKPbc		11 59 19.1	+0.4
	comp=Z,35nm,0.7s							
CM32	**Chiang Mai Arr**	**144.65**	**340**	P	**PKPab**		**11 59 19.0**	**0.0**
CM36	**Chiang Mai Arr**	**144.69**	**339**	P	**PKPab**		**11 59 19.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**144.80**	**340**	PKP	**PKPab**		**11 59 19.7**	**+0.2**
	comp=Z,21nm,0.8s,baz=342,slow=3.8,SNR=114							
CMAR				pPKP	**pPKPdf**		**11 59 36.5**	**-1.2**
	comp=Z,28nm,0.8s,baz=341,slow=3.7,SNR=16							
CM01	**Chiang Mai Arr**	**144.82**	**339**	P	PKPbc		11 59 20.0	+0.3
	comp=Z,303nmcomp=Z,39nm,0.9s							
UTTA	**Uttaradit**	**144.87**	**337**	P	PKPbc		11 59 20.1	+0.3
	comp=Z,395nmcomp=Z,49nm,0.9s							
KHON	**Khomkaen**	**145.18**	**332**	P	**PKiKP**		**11 59 23.6**	**-1.6**
	comp=Z,5µmcomp=Z,50nm,0.8s							
PHIT	**Phitsanulok**	**145.43**	**336**	P	**PKPab**		**11 59 22.5**	**+0.6**
	comp=Z,4µmcomp=Z,483nm,0.9s							
SUKH	**Sukhothai**	**145.46**	**338**	P	**PKPab**		**11 59 22.3**	**+0.4**
	comp=Z,126nm,0.8s							
CHAI	**Chaiyaphum**	**145.94**	**333**	P	PKiKP		11 59 40.0	+13
KAPI	**Kappang**	**146.04**	**283**	PKPbc	**PKPab**		**11 59 24.4**	**+0.1**
	comp=Z,45nm,1.0s,baz=249,slow=2.1,SNR=9.7							
KAPI	**Kappang**	**146.04**	**283**	PKPdf	**PKPdf**		**11 59 23.4**	**+0.6**
HYB	**Hyderabad**	**146.98**	**14**	*i* PKP	**PKPdf**		**11 59 25.0**	**+0.6**
HYB				*es*PKP			11 59 42.0	
SBUM	**Sibu**	**149.44**	**302**		**PKiKP**		**11 59 34.2**	**+0.1**
KSM	**Kuching**	**151.56**	**303**		**PKPbc**		**11 59 38.2**	**+0.3**

NEIC ***19*** *11:48:05.8±1.1, 59°.35N±0°.04×153°.10W±0°.07, h94km±4km, Error ellipse: s-maj=6.3km s-min=4.3km az=135.0*

AEIC 19 11:48:07±0.9, 59°.35N±0°.04×153°.08W±0°.07, h84km±3km, ML2.7, Error ellipse: s-maj=6.0km s-min=4.3km az=133.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res
							h m s	ISC
AU22	**Augustine Moun**	**0.14**	**278**			Pn	11 48 18.7	-0.3
AU22						Sn	11 48 28.1	+0.3
AUP	**Augustine Pinn**	**0.18**	**274**			Pn	11 48 18.9	-0.3
AUP						Sn	11 48 29.1	+0.7
AUL	**Augustine Lava**	**0.18**	**280**			Pn	11 48 19.1	-0.1
AUL						Sn	11 48 28.5	+0.4
AUH	**Augustine H**	**0.19**	**274**			Pn	11 48 19.7	+0.4
AUCH	**Augustine Cone**	**0.19**	**274**			Pn	11 48 19.4	+0.2
AUW	**Augustine West**	**0.20**	**276**			Pn	11 48 19.2	0.0
OPT	**Oil Point**	**0.31**	**346**			Pn	11 48 19.5	-0.3
ILS	**Iliamna Low So**	**0.61**	**1**			Pn	11 48 21.4	-0.8
ILS						Sn	11 48 32.5	-0.9
IVE	**Iliamna Volcan**	**0.67**	**3**			Pn	11 48 21.9	-0.9
IVE						Sn	11 48 33.6	-0.9
HOM	**Homer**	**0.80**	**67**			Pn	11 48 23.9	0.0
HOM						Sn	11 48 37.4	+0.8
CNPM	**China Poot**	**0.96**	**79**			Pn	11 48 25.5	-0.2
CNPM						Sn	11 48 39.5	-0.3
KAPH	**Katmai Pasha**	**1.00**	**222**			Pn	11 48 25.8	-0.5
KAPH						Sn	11 48 40.8	0.0
RED	**Redoubt Volcan**	**1.08**	**8**			Pn	11 48 26.5	-0.9
RED						Sn	11 48 41.8	-0.8
RSO	**Redoubt South**	**1.13**	**8**			Pn	11 48 27.1	-0.8
RDWB	**Redoubt West**	**1.15**	**6**			Pn	11 48 27.4	-0.8
RDWB						Sn	11 48 43.5	-0.6
REF	**Redoubt East F**	**1.16**	**9**			Pn	11 48 27.7	-0.6
BRLK	**Bradley Lake**	**1.19**	**69**			Pn	11 48 27.9	-0.7
BRLK					Sn	Sn	11 48 44.1	-0.7
KAHC	**Katmai Hardscr**	**1.22**	**236**			Pn	11 48 28.4	-0.6
RDJH	**Redoubt Jeurge**	**1.25**	**6**			Pn	11 48 28.7	-0.7
RDJH						Sn	11 48 46.1	-0.2
BRSE	**Bradley Lake S**	**1.25**	**71**			Pn	11 48 28.8	-0.5
BRSE						Sn	11 48 45.6	-0.5
DFR	**Drift River**	**1.26**	**9**			Pn	11 48 28.8	-0.7
DFR						Sn	11 48 46.8	+0.3
RDT	**Redoubt**	**1.27**	**15**			Pn	11 48 28.8	-0.8
KAKN	**Katmai Knife C**	**1.48**	**225**			Pn	11 48 31.7	-0.5
KAKN						Sn	11 48 50.6	-0.7
KCG	**Knife Ck. Glac**	**1.49**	**226**			Pn	11 48 31.8	-0.5
KABR	**Katmai Barrier**	**1.57**	**220**			Pn	11 48 33.0	-0.4
KDAK	**Kodiak Island**	**1.59**	**170**			Pn	11 48 32.6	-1.0
KDAK						Sn	11 48 52.1	-1.7
KELA	**Mount Kelaz**	**1.66**	**238**			Pn	11 48 34.0	-0.6
KELA						Sn	11 48 53.2	-2.1
CAPN	**Captain Cook N**	**1.72**	**33**			Pn	11 48 36.4	+1.2
CAHL	**Cahill**	**1.74**	**223**			Pn	11 48 35.6	-0.1
SLKM	**Skilak Lake**	**1.85**	**50**			Pn	11 48 36.7	-0.3
SPCR	**Spurr Chakacha**	**1.91**	**13**			Pn	11 48 37.3	-0.5
SPCN	**Chakachatna No**	**1.93**	**13**			Pn	11 48 37.9	-0.2
BGL	**Barrier Glacie**	**1.95**	**10**			Pn	11 48 38.1	-0.3
CRP	**Crater Peak**	**1.98**	**13**			Pn	11 48 38.3	-0.5
SPCP	**Crater Peak Br**	**1.98**	**13**			Pn	11 48 38.4	-0.4
SEW	**Seward**	**1.99**	**66**			Pn	11 48 37.5	-1.3
SEW	**Seward**	**1.99**	**66**			Sn	11 49 00.7	-2.2
SPCG	**Spurr Capps Gl**	**2.02**	**15**			Pn	11 48 38.9	-0.4
SPNN	**North Nagishla**	**2.03**	**5**			Pn	11 48 39.3	-0.2
OHAK	**Old Harbor**	**2.14**	**183**			Pn	11 48 39.6	-1.1
STLK	**Strandline Lak**	**2.24**	**15**			Pn	11 48 42.0	-0.2
RC01	**Rabbit Creek A**	**2.41**	**42**			Pn	11 48 44.0	-0.4
RC01						Sn	11 49 11.3	-1.8
SUA	**Susitna One**	**2.42**	**28**		Pn	Pn	11 48 44.8	+0.2
PWL	**Port Wells**	**2.82**	**55

MOIG	Morelia	8.88	304	Pn		Pn	11 52 34.9	+1.9	
ESPN	Las Esperanzas	9.20	106			Pn	11 52 37.3	+0.2	
JTS	Las Juntas de	9.38	118	P		Pn	11 52 39.4	-0.1	
	5.7nm,0.3s,baz=8.9,slow=20,SNR=18								
JTS				S		Sn	11 54 29.6	+6.1	
	0.9nm,0.3s,baz=354,slow=11,SNR=2.6								
JTS	Las Juntas de	9.38	118	*eP*		Pn	11 52 37.3	-2.3	
JTS	Las Juntas de	9.38	118			Pn	11 52 38.6	-0.9	
HDC	Heredia	10.24	117	Pn		Pn	11 52 50.6	-0.8	
ZAIG	Zacatecas	11.74	313	Pn		Pn	11 53 12.9	+0.8	
LCCY	Blossom Villag	13.55	67	Pn		Pn	11 53 35.9	-0.6	
CBCY	The Bluff, Cay	13.87	68	Pn		Pn	11 53 40.6	0.0	
833A	Chaparral WMA,	14.53	338			P	11 53 52.0	-2.2	
HKT	Hockley	15.20	352	Pn		Pn	11 53 58.6	+0.7	
HKT				IAmb		IAmb	11 54 18.1		
	comp=Z,35nm,1.5s								
441A	DeRidder	15.82	1	Pn		P	11 54 07.2	-1.5	
441A				IAmb		IAmb	11 54 28.5		
	comp=Z,24nm,0.5s								
061Z	Ochoppi	16.00	45	Pn		Pn	11 54 08.0	-0.2	
435B	Jarrell	16.32	347	Pn		P	11 54 13.5	-0.7	
435B				IAmb		IAmb	11 54 27.9		
	comp=Z,18nm,0.6s								
JCT	Junction City	16.64	340	P		P	11 54 18.3	+0.5	
344A	Westbrook Farm	16.70	8	Pn		Pn	11 54 16.6	-0.4	
344A				IAmb		IAmb	11 54 19.1		
	comp=Z,25nm,0.8s								
346A	Big Creek Wild	16.84	12			P	11 54 19.1	-0.8	
346A				IAmb		IAmb	11 54 34.1		
	comp=Z,34nm,0.6s								
NATX	Nacogdoches	16.87	356			P	11 54 20.2	-0.1	
BRAL	Brewton	17.24	19	Pn		P	11 54 23.6	-0.8	
H06E1	SOCORRO T-PHAS	17.26	286	T		T	12 12 33.9		
	SNR=5.8								
TXAR	Lajitas Array	17.27	328	P		P	11 54 24.9	+0.1	
	comp=Z,0.2nm,0.3s,baz=150,slow=12,SNR=22								
TXAR	Lajitas Array	17.27	328			P	11 54 27.3	+2.5	
TX31	Lajitas Ar. Si	17.27	328	IAmb		IAmb	11 54 31.5		
	comp=Z,78nm,1.5s								
143A	Socs Landing,	17.86	5	IAmb		IAmb	11 54 34.3		
	comp=Z,30nm,0.9s								
250A	Grady	18.24	20	P		Pn	11 54 36.2	+0.4	
250A				IAmb		IAmb	11 54 38.8		
	comp=Z,34nm,0.7s								
352A	Blakely	18.26	24	P		Pn	11 54 37.1	+1.0	
Z41A	Richland Creek	18.33	1	P		Pn	11 54 38.3	+1.4	
Z41A				IAmb		IAmb	11 54 53.3		
	comp=Z,23nm,0.7s								
DBBC	Dabeiba	18.54	113	*eP*		Pn	11 54 41.7	+2.0	
Z35A	Perchaven, San	18.73	350	P		Pn	11 54 43.0	+1.2	
Z35A				IAmb		IAmb	11 54 48.0		
	comp=Z,22nm,0.7s								
LRAL	Lakeview Retre	19.00	17	P		Pn	11 54 45.6	+0.6	
CBOC	Ciudad Bolivar	19.25	116	*eP*		P	11 54 45.1	-1.6	
152A	Waverly Hall	19.40	22	P		Pn	11 54 49.7	-0.1	
MIAR	Mount Ida	19.61	359	P		P	11 54 49.3	-1.0	
MIAR				IAmb		IAmb	11 54 56.0		
	comp=Z,35nm,1.1s								
X43A	Marvell	19.71	6	P		Pn	11 54 54.3	+1.0	
X37A	Clayton	19.73	355	IAmb		IAmb	11 55 01.2		
	comp=Z,21nm,1.0s								
OXF	Oxford	19.90	10	P		Pn	11 54 55.8	+0.2	
Y49A	Blount Mountai	19.94	17	P		Pn	11 54 54.5	-1.6	
Y49A				IAmb		IAmb	11 55 21.8		
	comp=Z,18nm,0.9s								
GDL2	Guadalupe Moun	19.97	332	P		Pn	11 54 57.5	+0.9	
MNTX	Cornudas Mount	20.05	329	P		Pn	11 54 57.0	-0.4	
W41B	Gary Mavity, V	20.26	3	P		P	11 54 56.5	-0.8	
W39A	Magazine	20.26	359	P		Pn	11 55 02.5	+2.6	
W39A				IAmb		IAmb	11 55 12.9		
	comp=Z,37nm,1.5s								
PTBC	PUERTO BERRIO,	20.32	112	*eP*		P	11 54 56.4	-1.8	
X48A	Hartselle	20.33	15	IAmb		IAmb	11 55 04.1		
	comp=Z,12nm,0.7s								
WHAR	Wooly Hollow	20.37	3	IAmb		IAmb	11 55 17.3		
	comp=Z,18nm,1.1s								
NORC	Norcasia	20.39	115	*eP*		P	11 54 57.0	-2.1	
ANIL	Santa Ana	20.46	118	*eP*		P	11 54 60.0	-0.1	
TOLC	Tolima	20.48	118	*eP*		P	11 55 01.6	+1.3	
POPC	Popayan, Colom	20.51	125	*eP*		P	11 55 01.6	+1.1	
GOGA	Godfrey	20.54	24	IAmb		IAmb	11 55 05.8		
	comp=Z,17nm,1.1s								
PLAL	Pickwick Lake	20.60	12	IAmb		IAmb	11 55 06.8		
	comp=Z,15nm,0.8s								
OTAV	Otavalo	20.69	133	*eP*		Pn	11 55 05.4	-0.2	
MSTX	Muleshoe	20.85	338	P		P	11 55 04.3	+0.4	
MSTX				IAmb		IAmb	11 55 21.3		
	comp=Z,20nm,0.9s								
PCON	Cinco Dias	20.86	125	*eP*		P	11 55 06.4	+1.8	
ORTC	Ortega, Tolima	20.90	120	*eP*		P	11 55 04.3	-0.2	
MARP	Paez Belalcaza	20.91	123	*eP*		P	11 55 06.2	+1.3	
BCOK	Bluff Creek, N	21.06	350	P		P	11 55 07.1	+1.0	
OK030	Cody Creek RV	21.21	352	IAmb		IAmb	11 55 15.1		
	comp=Z,32nm,1.1s								
ROSC	El Rosal	21.21	116	P		P	11 55 08.8	+0.5	
	comp=Z,6.1nm,0.3s,baz=64,slow=18,SNR=5.9								
ROSC	El Rosal	21.21	116	P		P	11 55 08.7	+0.5	
ROSC				IAmb		IAmb	11 55 10.7		
	comp=Z,24nm,1.1s								
OK031	S. Brethren Rd	21.24	352	P		P	11 55 08.6	+0.6	
OK031				IAmb		IAmb	11 55 36.3		
	comp=Z,20nm,0.9s								
PRAC	Prado	21.30	119	*eP*		P	11 55 09.0	+0.1	
U40A	Yellville	21.42	1	P		P	11 55 10.0	+0.2	
U40A				IAmb		IAmb	11 55 17.1		
	comp=Z,27nm,1.4s								
QUOK	Quay	21.44	353	P		P	11 55 09.3	-0.7	
QUOK				IAmb		IAmb	11 55 17.7		
	comp=Z,27nm,1.2s								
BARC	Barichara	21.44	110	*eP*		P	11 55 09.6	-1.0	
W50A	Signal Mountai	21.52	18	P		P	11 55 11.6	+0.7	
W50A				IAmb		IAmb	11 55 32.8		
	comp=Z,30nm,1.2s								
PAMC	Pamplona, Colo	21.59	108	*eP*		P	11 55 09.7	-2.7	
WVT	Waverly	21.76	12	P		P	11 55 18.1	+4.7	
WVT				IAmb		IAmb	11 55 31.0		
	comp=Z,13nm,0.8s								
RUSC	La Rusia	21.82	112	*eP*		P	11 55 13.8	-1.1	
CHIC	Chingaza	21.83	116	*eP*		P	11 55 13.9	-1.0	
FLOC	Florencia	21.90	125	*eP*		P	11 55 19.1	+3.9	
121A	Cookes Peak, D	21.96	326	P		P	11 55 17.8	+1.9	
121A				IAmb		IAmb	11 55 32.6		
	comp=Z,21nm,0.8s								
319A	Douglas	21.97	321	P		P	11 55 16.4	+0.5	
319A				IAmb		IAmb	11 55 35.9		
	comp=Z,15nm,1.0s								
SC01	Santiago de lo	22.09	75	P		P	11 55 16.4	-0.8	
MGMO	Mountain Grove	22.23	2	P		P	11 55 17.9	-0.7	
MGMO				IAmb		IAmb	11 55 27.2		
	comp=Z,24nm,1.2s								
TKL	Tuckaleechee C	22.43	21	P		P	11 55 20.7	0.0	
	comp=Z,2.3nm,0.4s,baz=198,slow=9.7,SNR=7.5								
KAN09	Caldwell North	22.51	351	P		P	11 55 22.9	+1.2	
U49A	Red Boiling Sp	22.61	16	IAmb		IAmb	11 55 41.9		
	comp=Z,15nm,0.9s								
BNM	Barren Site	22.65	330	P		P	11 55 29.1	+5.8	
KAN08	Anthony NE Sta	22.66	350	P		P	11 55 22.7	-0.4	
Y22D	IRIS PASSCAL I	22.73	330	P		P	11 55 23.7	-0.3	
KAN12	Harper NE Stat	22.73	350	P		P	11 55 23.2	-0.7	
V53A	Saluda	22.79	23	P		P	11 55 25.4	+0.9	
V53A				IAmb		IAmb	11 55 51.3		
	comp=Z,14nm,0.8s								
KMSC	Kings Mountain	22.92	26	P		P	11 55 27.3	+1.5	
KMSC				IAmb		IAmb	11 55 42.8		
	comp=Z,12nm,0.8s								
SOCV	Socops	22.98	104	*eP*		P	11 55 24.5	-2.2	
SDV	Santo Domingo	23.01	102	P		P	11 55 25.3	-1.9	
	comp=Z,3.7nm,0.3s,baz=308,slow=8.7,SNR=5.5								
SDV	Santo Domingo	23.01	102	*eP*		P	11 55 23.0	-4.1	
SDV	Santo Domingo	23.01	102	P		P	11 55 25.1	-2.0	
SDV				IAmb		IAmb	11 55 49.4		
	comp=Z,9.5nm,0.9s								
MACC	Macarena, Meta	23.03	121	*eP*		P	11 55 24.0	-3.2	
ANMO	Albuquerque	23.22	332	P		P	11 55 30.3	+1.2	
	comp=Z,4.0nm,0.9s,baz=163,slow=12,SNR=5.9								
ANMO	Albuquerque	23.22	332	P		P	11 55 29.8	+0.8	
R40A	Maddies Statio	23.37	2	P		P	11 55 27.5	-2.6	
R32A	Long Quarter,	23.95	350	P		P	11 55 34.9	-0.6	
R32A				IAmb		IAmb	11 55 51.3		
	comp=Z,14nm,0.8s								
T25A	Trinidad	24.28	338	P		P	11 55 40.9	+2.2	
P40A	Paris	24.61	2	P		P	11 55 39.4	-2.0	
P40A				IAmb		IAmb	11 56 08.1		
	comp=Z,11nm,0.8s								
SDCO	Great Sand Dun	25.22	337	P		P	11 55 47.3	-0.1	
MLPR	Magueyes Islan	25.43	79	P		P	11 55 47.9	-1.2	
MVCO	Mesa Verde	26.02	332	P		P	11 55 55.2	+0.7	
MVCO				IAmb		IAmb	11 56 16.3		
	comp=Z,7.8nm,0.8s								
ATAH	Atahualpa	26.41	145	P		P	11 55 59.4	+0.9	
	comp=Z,4.7nm,0.7s,baz=305,slow=6.4,SNR=4.2								
PV01	Paradox Valley	26.81	333	IAmb		IAmb	11 56 19.1		
	comp=Z,16nm,1.5s								
PV03	Paradox Valley	27.03	332	IAmb		IAmb	11 56 21.7		
	comp=Z,19nm,1.4s								
PV11	David Mesa, Pa	27.08	332	IAmb		IAmb	11 56 24.1		
	comp=Z,8.7nm,0.7s								
PV07	Paradox Valley	27.10	333	IAmb		IAmb	11 56 21.6		
	comp=Z,27nm,1.5s								
PV16	Nyswonger Mesa	27.11	332	IAmb		IAmb	11 56 22.3		
	comp=Z,24nm,1.5s								
PV04	Paradox Valley	27.17	333	IAmb		IAmb	11 56 22.9		
	comp=Z,12nm,1.0s								
PV22	Blue Mesa, Par	27.24	333	IAmb		IAmb	11 56 22.7		
	comp=Z,22nm,1.4s								
PV23	Carpenter Ridg	27.27	332	IAmb		IAmb	11 56 22.9		
	comp=Z,8.6nm,1.0s								
RSSD	Black Hills	30.56	345	P		P	11 56 35.2	+0.3	
RSSD				IAmb		IAmb	11 56 35.3		
	comp=Z,5.2nm,0.6s								
PDAR	Pinedale Array	31.11	337	P		P	11 56 39.1	-0.7	
	comp=Z,0.7nm,0.7s,baz=146,slow=3.2,SNR=4.2								
HVU	Hansel Valley	31.66	332	P		P	11 56 47.7	+3.1	
AHID	Auburn Hatcher	31.72	335	P		P	11 56 47.0	+1.8	
NV11	Mina Array Sit	32.10	322	P		P	11 56 50.9	+2.4	
NV11				IAmb		IAmb	11 57 07.5		
	comp=Z,4.9nm,0.9s								
REDW	Red Top Meadow	32.12	336	P		P	11 56 50.7	+2.0	
REDW						pP	11 57 04.6	+0.5	
SNOW	Snow King Moun	32.16	336	P		P	11 56 50.7	+1.6	
SNOW						pP	11 57 05.6	+1.1	
NVAR	Mina Array Bea	32.19	322	P		P	11 56 50.8	+1.4	
	comp=Z,2.8nm,0.7s,baz=133,slow=7.4,SNR=24								
NVAR				PcP		PcP	11 59 36.5	-0.5	
	comp=Z,0.3nm,0.6s,baz=191,slow=3.0,SNR=2.1								
NVAR	Mina Array Bea	32.19	322	P		P	11 56 52.0	+2.6	
IMW	Indian Meadow	32.60	336	P		P	11 56 53.3	+0.3	
IMW				IAmb		IAmb	11 57 11.0		
	comp=Z,6.9nm,1.1s								
YHH	Holmes Hill	33.32	337			sP	11 57 15.7	-6.4	
AGMN	Agassiz Nation	33.41	357	P		P	11 56 60.0	+0.3	
AGMN				IAmb		IAmb	11 57 16.1		
	comp=Z,13nm,1.1s								
GCMT	Greycliff	33.76	339	P		P	11 57 03.7	+0.8	
MCMT	McKenzie Canyo	34.14	335	P		P	11 57 08.3	+2.0	
BOZ	Bozeman (W)	34.30	337	P		P	11 57 09.0	+1.4	
BOZ				IAmb		IAmb	11 57 27.7		
	comp=Z,5.3nm,1.1s								
DLMT	Dillon	34.48	336	P		P	11 57 10.9	+1.8	
LRM	Limekiln Ridge	34.80	336	P		P	11 57 13.6	+1.6	
HRY	Holter Researc	35.32	338	P		P	11 57 17.4	+1.1	
SAML	Samuel	38.14	126	P		P	11 57 39.7	-0.8	
SAML				IAmb		IAmb	11 57 40.2		
	comp=Z,5.8nm,0.8s								
LPAZ	La Paz	39.73	140	P		P	11 57 55.2	+0.7	
	comp=Z,0.7nm,0.4s,baz=331,slow=18,SNR=3.6								
MNMC	Minye Minye	41.08	145	P		P	11 58 05.4	+0.2	
MNMC				IAmb		IAmb	11 58 06.6		
	comp=Z,9.0nm,1.0s								
GO01	Chusmiza	41.74	145	P		P	11 58 11.1	+0.2	
YKA	Yellowknife Ar	49.90	347	P		P	11 59 13.2	-0.9	
	comp=Z,2.5nm,0.6s,baz=151,slow=7.9,SNR=18								
TAOE	Nuku Hiva Isla	52.02	246	*eLR*		LR	12 14 02.2		
	comp=Z,81nm,26.4s								
TAOE	Nuku Hiva Isla	52.02	246	*eT*		T	12 55 08.5		
	comp=Z,15nm,0.2s								
BDFB	Brasilia	54.09	122	P		P	11 59 45.9	-0.1	
	comp=Z,1.5nm,0.3s,baz=351,slow=6.0,SNR=3.3								
RSD	Rainshed	59.08	284	P		P	12 00 22.7	+1.2	
PLCA	Paso Flores	59.22	160	P		P	12 00 20.7	-1.2	
	comp=Z,3.6nm,0.9s,baz=356,slow=5.6,SNR=5.5								
PLCA	Paso Flores	59.22	160	IAmb		IAmb	12 00 22.2		
	comp=Z,7.4nm,1.1s								
INK	Inuvik	59.26	344	P		P	12 00 22.2	+0.5	
PMOR	Pomariorio Ree	61.53	244	*eT*		T	13 07 01.6		
	comp=Z,2.1nm,0.2s								
ILAR	Eielson Array	61.54	337	P		P	12 00 37.5	+0.1	
	comp=Z,1.3nm,0.7s,baz=133,slow=5.1,SNR=15								
BMAR	Burnt Mountain	62.04	340	P		P	12 00 42.4	+1.6	
MEH	Mehetia	62.98	241	*eT*		T	13 08 49.0		
	comp=Z,22nm,0.2s								
TIAR	Tiarei	63.92	242	*eT*		T	13 10 00.4		
	comp=Z,2.6nm,0.3s								
TVO	Taravao	63.94	241	*eT*		T	13 10 01.2		
	comp=Z,0.8nm,0.3s								
PPT2	Papeete2	64.13	242	*eLR*		LR	12 19 22.9		
	comp=Z,73nm,26.5s								
TBI	Tubuai	66.71	236	*eLR*		LR	12 20 51.4		
	comp=Z,98nm,34.2s								
ESDC	Sonseca Array	80.22	52	P		P	12 02 29.6	-1.7	
	comp=Z,0.6nm,0.4s,baz=16,slow=38,SNR=3.7								
ARCES	ARCESS Array B	85.74	18	P		P	12 02 58.0	-1.1	
	comp=Z,1.4nm,0.4s,baz=284,slow=5.2,SNR=20								
FINES	FINESS Array B	90.28	25	P		P	12 03 18.9	-2.0	
	comp=Z,2.2nm,0.9s,baz=297,slow=6.1,SNR=1.9								
KURBB	Kurchatov Arra	114.42	6	PKP		PKiKP	12 09 00.3	+0.4	
	comp=Z,0.3nm,0.7s,baz=186,slow=3.8,SNR=5.3								
LZH	Lanzhou	126.79	343	*e*PKP		PKiKP	12 09 26.5	+1.7	
LZH				pPKP		pPKPdf	12 09 38.3	-4.3	
LZH				sPKP			12 09 42.1		
LZH				LR		LR			
	comp=N,47nm,18.1s								
LZH				LR		LR			
	comp=E,51nm,18.0s								
LZH				LR		LR			
	comp=Z,83nm,20.2s								
STKA	Stephens Creek	127.32	241	PKP		PKPdf	12 09 24.6	-0.5	
	comp=Z,0.5nm,0.3s,baz=334,slow=3.7,SNR=4.2								
WRA	Warramunga Arr	134.32	257	PKP		PKPdf	12 09 37.7	-1.0	
	comp=Z,0.8nm,0.8s,baz=87,slow=3.0,SNR=8.0								
WRA	Warramunga Arr	134.32	257			PKPdf	12 09 37.8	-0.9	
ASAR	Alice Springs	134.70	251	PKP		PKPdf	12 09 38.0	-1.3	
	comp=Z,0.3nm,0.6s,baz=88,slow=2.1,SNR=4.1								
CMAR	Chiang Mai Arr	144.75	339	PKP		PKPab	12 09 56.5	0.0	
	comp=Z,1.9nm,0.6s,baz=338,slow=3.3,SNR=11								
CMAR	Chiang Mai Arr	144.75	339			PKPab	12 09 56.3	-0.3	

IDC ***19*** *12:09:07.7±0.9, 17°.74S×167°.96E, h0km, mb3.8/11, mb1 4.1/12, mb1mx3.9/41, mbtmp3.9/12, ML3.4/1, MS3.5/9, Ms1 3.5/9, ms1mx3.2/36, Error ellipse: s-maj=30.5km s-min=20.3km az=130.0*

NEIC ***19*** *12:09:10.5±0.9, 17°.74S±0°.02×167°.8E±0°.1, h10km±1km, mb4.6/11, Error ellipse: s-maj=21.8km s-min=3.5km az=95.0*

ISC 19 12:09:11.9±0.6, 17°.77S±0°.05×167°.7E±0°.1, h23km, n49, σ1s29/46, mb4.1/15, MS3.6/9, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SANVU	Saraoutou	2.36	348		Pn	12 09 49.0			-0.3
DZM	Mont Dzumac	4.45	196	*e*Pn	Pn	12 10 19.0			+0.9
DZM	15nm,0.2s			*e*Sn	Sn	12 11 07.9			-1.3
DZM	36nm,0.2s			*e*LR	LR	12 11 17.6			
	comp=Z,601nm,23.1s								
DZM	Mont Dzumac	4.45	196	Pn	Pn	12 10 16.9			-1.2
DZM	1.9nm,0.3s,baz=141,slow=12,SNR=52			Sn	Sn	12 11 05.6			-3.6
DZM	8.1nm,0.3s,baz=316,slow=22,SNR=7.8			LR	LR	12 11 58.3			
	comp=Z,619nm,19.1s,baz=25,slow=38								
DZM	Mont Dzumac	4.45	196		Pn	12 10 18.7			+0.6
DZM				Sn	Sn	12 11 07.0			-2.2
HNR	Honiara	11.21	317	LR	LR	12 15 51.2			
	comp=Z,204nm,19.5s,baz=122,slow=36								
KRVT	Keravat (AS076	20.38	309	LR	LR	12 20 50.4			
	comp=Z,72nm,20.1s,baz=140,slow=34								
CTA	Charters Tower	20.44	260	P	Pn	12 13 51.1			+1.0
	2.9nm,0.7s,baz=85,slow=14,SNR=2.5								
TUWZ	Tuamarina	24.18	169	P	P	12 14 27.6			+1.1
STKA	Stephens Creek	27.47	234	P	P	12 14 56.5			0.0
	1.1nm,0.7s,baz=80,slow=11,SNR=3.9								
STKA				LR	LR	12 25 51.5			
	comp=Z,101nm,18.6s,baz=105,slow=36								
RAR	Rarotonga	30.80	102	LR	LR	12 25 11.6			
	comp=Z,47nm,21.6s,baz=276,slow=32								
WB0	Warramunga Arr	31.60	261	P	P	12 15 32.8			-0.4
WB0				IAmb	IAmb	12 15 44.1			
	comp=Z,9.7nm,1.5s								
WRAB	Tennant Creek	31.63	261	P	P	12 15 33.3			-0.2
WRAB				IAmb	IAmb	12 15 45.9			
	comp=Z,7.2nm,1.5s								
WRA	Warramunga Arr	31.64	261	P	P	12 15 33.9			+0.3
	comp=Z,0.2nm,0.7s,baz=80,slow=5.9,SNR=2.8								
WRA				PcP	PcP	12 18 26.0			+0.4
	comp=Z,0.5nm,0.8s,baz=85,slow=2.4,SNR=3.6								
WRA				LR	LR	12 27 18.7			
	comp=Z,114nm,20.2s,baz=220,slow=34								
AS31	Alice Springs	32.12	254	P	P	12 15 39.9			+2.1
ASAR	Alice Springs	32.12	254	P	P	12 15 38.9			+1.1
	comp=Z,1.4nm,0.7s,baz=82,slow=8.6,SNR=21								
ASAR				PcP	PcP	12 18 26.8			0.0
	comp=Z,0.4nm,0.8s,baz=104,slow=3.9,SNR=3.2								
ASAR				LR	LR	12 28 22.9			
	comp=Z,170nm,19.0s,baz=86,slow=36								
FITZ	Fitzroy Crossi	39.98	263	P	P	12 16 46.5			+1.4
	comp=Z,1.7nm,0.8s,baz=120,slow=5.7,SNR=4.3								
FITZ				LR	LR	12 32 36.7			
	comp=Z,100nm,20.2s,baz=134,slow=35								
FITZ	Fitzroy Crossi	39.98	263	P	P	12 16 46.4			+1.4
FITZ				IAmb	IAmb	12 16 57.8			
	comp=Z,18nm,1.4s								
PPT2	Papeete2	40.62	96	*e*LR	LR	12 28 29.8			
	comp=Z,108nm,25.0s								
TAOE	Nuku Hiva Isla	51.35	87	*e*LR	LR	12 33 25.7			
	comp=Z,120nm,25.1s								
VNDA	Vanda	59.85	181	P	P	12 19 15.3			+0.1
	comp=Z,1.0nm,1.0s,baz=350,slow=6.3,SNR=2.8								
VNDA	Vanda	59.85	181	P	P	12 19 16.1			+0.9
MJAR	Matsushiro Arr	60.79	333	P	P	12 19 20.3			-1.8
	comp=Z,2.4nm,0.9s,baz=139,slow=7.0,SNR=4.5								
QSPA	South Pole Qui	72.28	180	P	P	12 20 36.4			+1.0
QSPA				IAmb	IAmb	12 20 36.9			
	comp=Z,7.3nm,0.9s								
CMAR	Chiang Mai Arr	76.59	295	P	P	12 21 02.5			+1.4
	comp=Z,0.4nm,0.3s,baz=133,slow=5.3,SNR=2.1								
ULN	Ulaanbaatar	84.83	324	P	P	12 21 45.6			+0.8
ULN				IAmb	IAmb	12 21 48.0			
	comp=Z,5.2nm,1.0s								
YAK	Yakutsk	85.05	343	P	P	12 21 46.0			+0.7
SONM	Songino Array	85.19	324	P	P	12 21 47.5			+1.0
	comp=Z,1.2nm,0.9s,baz=146,slow=3.9,SNR=7.8								
SONM	Songino Array	85.19	324	P	P	12 21 47.6			+1.1
PMSA	Palmer Station	88.78	160	P	P	12 22 05.8			+2.3
NVAR	Mina Array Bea	88.92	49	P	P	12 22 04.2			-0.7
	comp=Z,0.3nm,0.6s,baz=231,slow=8.3,SNR=4.1								
NVAR	Mina Array Bea	88.92	49	P	P	12 22 05.1			+0.2
ILAR	Eielson Array	89.27	18	P	P	12 22 03.6			-2.1
	comp=Z,0.3nm,0.7s,baz=241,slow=5.1,SNR=6.5								
SNAA	Sanae	90.56	183	P	P	12 22 11.8			-0.1
SNAA	Sanae	90.56	183	P	P	12 22 12.3			+0.4
SNAA				IAmb	IAmb	12 22 12.9			
	comp=Z,6.3nm,1.2s								
VNA3	Neumayer Olymp	91.20	181	P	P	12 22 14.7			-0.2
VNA2	Neumayer--Watz	91.47	182	P	P	12 22 16.2			+0.1
	baz=164,slow=5.7								
PDAR	Pinedale Array	96.67	47	LR	LR	12 57 38.6			
	comp=Z,20nm,20.9s,baz=334,slow=30								
ARCES	ARCESS Array B	123.28	345	PKP	PKPdf	12 28 06.1			-0.2
	comp=Z,2.6nm,0.8s,baz=56,slow=2.3,SNR=4.1								
GERES	GERESS Array B	142.52	332	PKP	PKPdf	12 28 40.3			-2.8
	comp=Z,0.3nm,0.6s,baz=355,slow=2.2,SNR=3.5								
MOA	Molln	142.97	330	*eP*	PKPdf	12 28 41.6			-2.2
	comp=Z,6.9nm,1.2s								
ABTA	Abfaltersbach	144.60	330	*eP*	PKPbc	12 28 45.9			+0.4
	comp=Z,10nm,0.7s								
WTTA	Wattenberg

ROSC	**El Rosal**	**50.61**	**45**	LR	LR	12 46 24.1	
	comp=Z,186nm,18.5s,baz=232,slow=32						
SPB	**Sao Paulo**	**53.05**	**95**	P	**P**	**12 29 04.0**	**+0.1**
QSPA	**South Pole Qui**	**55.11**	**180**	P	**P**	**12 29 19.1**	**+0.5**
	comp=Z,2.0nm,1.1s,baz=139,slow=7.3,SNR=6.4						
QSPA	**South Pole Qui**	**55.11**	**180**	P	**P**	**12 29 19.2**	**+0.6**
QSPA				IAmb	IAmb	12 29 32.2	
	comp=Z,7.7nm,1.6s						
VNDA	**Vanda**	**56.14**	**195**	P	**P**	**12 29 26.4**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=101,slow=3.9,SNR=1.3						
TXAR	**Lajitas Array**	**64.20**	**4**	P	**P**	**12 30 21.4**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=189,slow=7.3,SNR=5.8						
TXAR	**Lajitas Array**	**64.20**	**4**	P	**P**	**12 30 22.0**	**+0.6**
WHTX	**Lake Whitney,**	**67.42**	**9**	P	**P**	**12 30 43.4**	**+1.4**
ISA	**Isabella, Lake**	**71.11**	**351**	P	**P**	**12 31 05.5**	**+0.5**
ISA				IAmb	IAmb	12 31 21.2	
	comp=Z,8.4nm,1.5s						
NVAR	**Mina Array Bea**	**73.82**	**351**	P	**P**	**12 31 20.6**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=185,slow=7.4,SNR=6.1						
NVAR	**Mina Array Bea**	**73.82**	**351**	P	**P**	**12 31 21.4**	**+0.2**
BW06	**Boulder Array**	**77.51**	**359**	P	**P**	**12 31 43.2**	**+0.9**
PD31	**Pinedale Array**	**77.51**	**359**	P	**P**	**12 31 43.1**	**+0.8**
PDAR	**Pinedale Array**	**77.51**	**359**	P	**P**	**12 31 42.2**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=152,slow=6.8,SNR=10						
PDAR	**Pinedale Array**	**77.51**	**359**	P	**P**	**12 31 41.0**	**-1.3**
HLID	**Hailey**	**78.53**	**355**	P	**P**	**12 31 48.7**	**+0.9**
HLID				IAmb	IAmb	12 32 02.6	
	comp=Z,3.9nm,1.0s						
H01W1	**Cape Leeuwin H**	**100.16**	**214**	T	T	14 25 50.1	
	baz=145,slow=75,SNR=8.9						
H01W2	**Cape Leeuwin H**	**100.16**	**214**	T	T	14 25 54.2	
	baz=145,slow=75,SNR=8.2						
H01W3	**Cape Leeuwin H**	**100.17**	**214**	T	T	14 25 51.3	
	baz=145,slow=75,SNR=8.0						
AKASG	**Malin Array Be**	**145.33**	**50**	PKPbc	**PKPbc**	**12 39 21.6**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=276,slow=3.6,SNR=2.0						
CMAR	**Chiang Mai Arr**	**151.16**	**242**	PKPbc	**PKPbc**	**12 39 39.7**	**-0.8**
	comp=Z,0.8nm,0.3s,baz=188,slow=2.6,SNR=5.1						
SONM	**Songino Array**	**151.72**	**307**	PKPbc	**PKPbc**	**12 39 39.3**	**-1.8**
	comp=Z,0.7nm,1.1s,baz=202,slow=1.6,SNR=2.5						

*CRAAG **19** 12:21:10.0, 35°.95N×2°.13E, Ml3.0*
*MDD **19** 12:21:11.8±1.1, 35°.96N×2°.13E, h0km, mb3.9/11, Error ellipse: s-maj=15.9km s-min=6.3km az=175.0, PRXIMO*
ISC 19 12:21:10.9±1.6, **35°.92N**±0°.10×**2°.17E**±0°.06, **h16**km**, n14,** σ1§**20**/23**, 1D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.64**	**306**	P	**Pg**	**12 21 23.0**	**-0.5**
EMHD	**Djebel Mahouad**	**0.69**	**66**	P	**Pb**	**12 21 24.8**	**+0.1**
EMHD	**Djebel Mahouad**	**0.69**	**66**	P	**Pb**	**12 21 24.8**	**+0.1**
OKGL	**Djebel Kef Gue**	**1.24**	**276**	P	**Pn**	**12 21 33.3**	**-0.3**
	18nm,0.1s,SNR=7.9						
OKGL				S	**Sb**	**12 21 49.4**	**-0.5**
	124nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**3.17**	**348**	⇓P	**Pn**	**12 22 00.6**	**+0.5**
	6.7nm,0.2s,SNR=18						
EIBI				S	**Sn**	**12 22 35.9**	**-1.8**
	1.0nm,0.3s,SNR=7.9						
EBEN2	**Beniarda presa**	**3.33**	**326**	P	**Pn**	**12 22 03.4**	**+1.0**
	1.8nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**12 22 41.8**	**+0.1**
	6.1nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.03**	**314**	P	**Pn**	**12 22 12.3**	**+0.4**
	1.6nm,0.3s,SNR=7.9						
ETOB				S	**Sn**	**12 23 00.2**	**+1.4**
	0.9nm,0.5s,SNR=7.9						
EBER	**Berja**	**4.20**	**285**	P	**Pn**	**12 22 14.1**	**-0.3**
	1.9nm,0.2s,SNR=6.6						
EBER				S	**Sn**	**12 23 02.3**	**-0.9**
	1.3nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**4.37**	**302**	P	**Pn**	**12 22 18.6**	**+1.8**
	2.2nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**12 23 07.8**	**+0.5**
	11nm,0.4s,SNR=7.9						
ECHE	**Chera**	**4.43**	**327**	P	**Pn**	**12 22 18.9**	**+1.4**
	1.4nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.61**	**296**	P	**Pn**	**12 22 21.7**	**+1.7**
	1.0nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**12 23 13.5**	**+0.4**
	3.9nm,0.3s,SNR=4.9						
EQUE	**Quentar**	**4.70**	**288**	P	**Pn**	**12 22 22.3**	**+1.1**
	3.7nm,0.3s,SNR=9.0						
EQUE				S	**Sn**	**12 23 14.4**	**-0.9**
	2.5nm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**4.77**	**283**	P	**Pn**	**12 22 23.1**	**+0.9**
	2.2nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.90**	**336**	P	**Pn**	**12 22 25.4**	**+1.3**
	1.7nm,0.1s,SNR=17						
EMOS				S	**Sn**	**12 23 17.8**	**-2.8**
	0.9nm,0.4s,SNR=7.9						

*BGR **19** 12:24:17.6±0.0, 65°.06N×20°.08W, h10km, mb4.2*
*REY **19** 12:24:26.4, 64°.66N×17°.40W, h1km*
*IDC **19** 12:24:28.0±0.7, 64°.55N×17°.51W, h0km, mb3.9/12, mb1 4.1/15, mb1mx3.8/52, mbtmp3.8/15, ML3.2/3, MS3.4/2, Ms1 3.4/2, ms1mx2.7/48, Error ellipse: s-maj=20.4km s-min=10.3km az=11.0*
*NEIC **19** 12:24:30.0±2.0, 64°.53N±0°.08×17°.2W±0°.2, h8km±4km, mb4.4/26, Error ellipse: s-maj=12.6km s-min=9.8km az=202.0*
ISC 19 12:24:29.1±0.4, **64°.64N**±0°.02×**17°.33W**±0°.02, **h10**km**, n103,** σ2§**61**/114**, mb4.2**/24**, Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.15**	**354**	P	**Pg**	**12 24 29.6**	**-3.0**
	baz=5.5						
IDYN				S	**Sg**	**12 24 32.2**	**-2.9**
	baz=5.5						
IVON	**Vonarskard**	**0.19**	**280**	P	**Pg**	**12 24 29.8**	**-3.3**
	baz=274						
IVON				S	**Sg**	**12 24 32.6**	**-3.3**
	baz=274						
IGRF	**Grimsfjall**	**0.24**	**173**	P	**Pg**	**12 24 32.0**	**-2.1**
	baz=168						
IHAM	**Hamarinn**	**0.27**	**233**	P	**Pg**	**12 24 31.9**	**-2.7**
	baz=225						
IKVE	**Kverkfjoll**	**0.28**	**82**	P	**Pg**	**12 24 32.9**	**-2.0**
	baz=87						
IHUS	**Husbondi**	**0.37**	**202**	P	**Pg**	**12 24 34.1**	**-2.4**
	baz=197						
IVOT	**Vottur**	**0.38**	**170**	P	**Pg**	**12 24 34.3**	**-2.3**
	baz=167						
THOR	**Thorvaldshraun**	**0.41**	**43**	P	**Pg**	**12 24 34.3**	**-2.8**
	baz=48						
THOR				S	**Sg**	**12 24 41.4**	**-1.1**
	baz=48						
IKRE	**Kreppuhraun**	**0.43**	**70**	P	**Pg**	**12 24 35.0**	**-2.6**
	baz=74						
IKRE				S	**Sg**	**12 24 41.4**	**-1.9**
	baz=74						
ISKR	**Skrokkalda**	**0.46**	**260**	P	**Pg**	**12 24 34.8**	**-3.4**
	baz=257						
IJOK	**Jokulheimar**	**0.51**	**230**	P	**Pg**	**12 24 35.8**	**-3.2**
	baz=226						
IJOK				S	**Sg**	**12 24 43.6**	**-2.0**
	baz=226						
IMKO	**Mokollar**	**0.54**	**51**	P	**Pg**	**12 24 36.8**	**-2.9**
	baz=54						
IMKO				S	**Sg**	**12 24 45.1**	**-1.7**
	baz=54						
IKSK	**Karasker**	**0.61**	**142**	P	**Pg**	**12 24 37.6**	**-3.3**
	baz=141						
IKSK				S	**Sg**	**12 24 46.6**	**-2.3**
	baz=141						
IIEY	**Innrieyrar**	**0.65**	**213**	P	**Pg**	**12 24 38.6**	**-3.1**
	baz=209						
ISVA	**Svartarkot**	**0.70**	**3**	P	**Pg**	**12 24 38.8**	**-3.9**
	baz=5.0						
IVSH	**V-Sauoahnukur**	**0.71**	**76**	P	**Pg**	**12 24 39.6**	**-3.2**
	baz=78						
IVSH				S	**Sg**	**12 24 50.1**	**-1.9**
	baz=78						
IKAL	**Kalfafell**	**0.71**	**193**	P	**Pg**	**12 24 39.7**	**-3.2**
	baz=190						
IKAL				S	**Sg**	**12 24 49.9**	**-2.2**
	baz=190						
IFAG	**Fagurholsmyri**	**0.82**	**159**	P	**Pg**	**12 24 41.7**	**-3.2**
	baz=157						
IFAG				S	**Sg**	**12 24 53.8**	**-1.9**
	baz=157						
IVAT	**Vatnsfell**	**0.83**	**237**	P	**Pg**	**12 24 41.3**	**-3.7**
	baz=235						
IADA	**Aoalbol**	**0.84**	**62**	P	**Pg**	**12 24 41.6**	**-3.7**
	baz=64						
IADA				S	**Sg**	**12 24 54.4**	**-1.9**
	baz=64						
IMEL	**Melhnausar**	**0.98**	**17**	P	**Pg**	**12 24 43.5**	**-4.4**
	baz=19						
IREN	**Reynihlio**	**1.03**	**10**	P	**Pg**	**12 24 44.2**	**-4.7**
	baz=12						
IKVO	**Krokottuvotn**	**1.09**	**10**	P	Pg	12 24 45.1	-5.1
	baz=11						
IGRS	**Grimsstaoir**	**1.12**	**26**	P	**Pb**	**12 24 46.1**	**-4.6**
	baz=28						
IRJU	**Rjupnafell**	**1.18**	**210**	P	**Pb**	**12 24 48.1**	**-3.6**
	baz=209						
IGHA	**Grjothals**	**1.24**	**13**	P	Pn	12 24 47.6	-4.9
	baz=14						
ISKI	**Skildingahlsh**	**1.24**	**6**	P	**Pn**	**12 24 47.8**	**-4.8**
	baz=7.1						
IMJO	**Mjoaskard**	**1.25**	**236**	P	**Pn**	**12 24 48.6**	**-4.1**
	baz=235						
IGRA	**Granastaoir**	**1.29**	**355**	P	**Pn**	**12 24 48.4**	**-4.8**
	baz=357						
IGYG	**Gygjarholskot**	**1.30**	**255**	P	**Pn**	**12 24 48.9**	**-4.5**
	baz=254						
IHVO	**Lagu-Hvolar**	**1.30**	**212**	P	**Pn**	**12 24 49.9**	**-3.5**
	baz=210						
IHAU	**Haukadalur**	**1.33**	**241**	P	**Pn**	**12 24 49.7**	**-4.0**
	baz=239						
IDIM	**Dimmadalss**	**1.34**	**7**	P	**Pn**	**12 24 49.1**	**-4.7**
	baz=8.3						
IHLA	**Hella**	**1.38**	**342**	P	**Pn**	**12 24 49.9**	**-4.6**
	baz=342						
IALF	**Alftagrof**	**1.41**	**216**	P	**Pn**	**12 24 51.5**	**-3.3**
	baz=215						
IHED	**Heoinshofoi**	**1.45**	**0**	P	**Pn**	**12 24 50.5**	**-4.8**
	baz=1.4						
IESK	**Eystri-Skogar**	**1.46**	**221**	P	**Pn**	**12 24 52.1**	**-3.4**
	baz=219						
IBRE	**Brettingsstaoi**	**1.51**	**351**	P	**Pn**	**12 24 51.7**	**-4.5**
	baz=352						
ISIG	**Siglufjorour**	**1.64**	**337**	P	**Pn**	**12 24 53.7**	**-4.2**
	baz=337						
BORG	**Borgarnes**	**1.72**	**275**	Pg	**Pn**	**12 24 56.2**	**-2.9**
	14nm,0.3s,baz=103,slow=11,SNR=15						
BORG				Lg	Lg	12 25 19.3	
	19nm,0.3s,baz=245,slow=21,SNR=7.4						
BORG	**Borgarnes**	**1.72**	**275**	Sn	**Sn**	**12 25 21.1**	**0.0**
SCO	**Scoresbysund**	**6.13**	**345**	Pn	**Pn**	**12 26 01.2**	**+1.7**
SCO				Sn	**Sn**	**12 27 13.7**	**+4.1**
SCO	**Scoresbysund**	**6.13**	**345**	*e*	**Pn**	**12 25 55.2**	**-4.4**
	baz=171,slow=8.6						
SCO				*i* P	**Pn**	**12 26 00.0**	**+0.4**
SCO				*i* S	**Sn**	**12 27 14.0**	**+4.4**
EKA	**Eskdalemuir Ar**	**11.69**	**136**	Pn	**Pn**	**12 27 14.7**	**-1.0**
	baz=323,slow=4,SNR=7.6						
NOA	**NORSAR Array B**	**13.46**	**92**	Pn	**Pn**	**12 27 37.9**	**-2.1**
	0.0nm,0.3s,baz=299,slow=13,SNR=3.5						
SFJD	**Kangerlussuaq**	**13.74**	**295**	LR	LR	12 32 32.0	
	comp=Z,173nm,21.2s,baz=92,slow=35						
FINES	**FINESS Array B**	**19.64**	**79**	P	**Pn**	**12 28 59.4**	**+0.5**
	0.1nm,0.3s,baz=267,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**19.64**	**79**	P	**Pn**	**12 28 59.0**	**+0.1**
CLL	**Collm**	**20.63**	**116**	*e*P	**P**	**12 29 08.0**	**-0.3**
	comp=Z,10.0nm,1.2s						
CLL				*i*		12 29 17.1	
CLL	**Collm**	**20.63**	**116**	P	**P**	**12 29 08.8**	**+0.5**
ECH	**Echery**	**21.08**	**130**	P	**P**	**12 29 13.9**	**+0.6**
GRF	**Grafenberg Arr**	**21.26**	**121**	*e*P	**P**	**12 29 16.4**	**+1.2**
	comp=Z,11nm,1.2s,baz=324,slow=10						
BRG	**Berggiesshubel**	**21.34**	**115**	*e*P	**P**	**12 29 16.4**	**+0.4**
	comp=Z,17nm,1.3s						
BFO	**Black Forest**	**21.38**	**128**	P	**P**	**12 29 17.5**	**+1.0**
BFO				IAmb	IAmb	12 29 33.1	
	comp=Z,17nm,1.3s						
FRB	**Frobisher Bay**	**21.83**	**291**	LR	LR	12 37 25.4	
	comp=Z,89nm,19.3s,baz=26,slow=36						
KHC	**Kasperske Hory**	**22.60**	**119**	P	**P**	**12 29 29.8**	**+0.2**
GEC2	**GERESS Array S**	**22.88**	**119**	P	**P**	**12 29 33.1**	**+0.6**
GEC2				IAmb	IAmb	12 29 40.1	
	comp=Z,13nm,1.4s						
GERES	**GERESS Array B**	**22.88**	**119**	P	**P**	**12 29 32.7**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=318,slow=7.2,SNR=4.4						
MORC	**Moravsky Berou**	**23.62**	**112**	P	**P**	**12 29 40.1**	**+0.1**
EUNU	**Eureka**	**23.72**	**336**	P	**P**	**12 29 41.9**	**+1.1**
EUNU				IAmb	IAmb	12 29 44.8	
	comp=Z,15nm,1.3s						
KLMR	**Klimovskoe**	**25.54**	**72**	*e*P	**P**	**12 29 59.5**	**+2.0**
KLMR				AMP		12 30 12.4	
	comp=Z,15nm,1.5s						
KWP	**Kalwaria Pacla**	**25.83**	**106**		**S**	**12 34 27.5**	**-2.0**
PSZ	**Piszkesteto**	**26.04**	**112**	P	**P**	**12 30 01.6**	**-0.6**
PSZ				IAmb	IAmb	12 30 24.9	
	comp=Z,7.4nm,1.0s						
ESDC	**Sonseca Array**	**26.20**	**156**	P	**P**	**12 30 05.1**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=346,slow=8.3,SNR=7.0						
ILGA	**Ilgaz**	**37.32**	**104**	P	**P**	**12 31 41.4**	**-0.1**
ILGA				IAmb	IAmb	12 31 50.6	
	comp=Z,7.5nm,0.9s						
ANTO	**Ankara**	**37.93**	**106**	P	**P**	**12 31 43.8**	**-2.6**
INK	**Inuvik**	**39.90**	**329**	P	**P**	**12 32 04.2**	**+1.7**
	comp=Z,1.8nm,0.9s,baz=53,slow=11,SNR=4.7						
ABKAR	**Akbulak array**	**41.93**	**73**	P	**P**	**12 32 20.0**	**+0.6**
TIXI	**Tiksi**	**42.04**	**15**	P	**P**	**12 32 22.0**	**+1.9**
TIXI				IAmb	IAmb	12 32 24.6	
	comp=Z,8.3nm,1.1s						
TOLK	**Toolik Lake Re**	**42.80**	**336**	P	**P**	**12 32 29.4**	**+3.0**
BMAR	**Burnt Mountain**	**42.95**	**333**	P	**P**	**12 32 30.5**	**+2.9**
IL31		**45.74**	**333**	P	**P**	**12 32 51.3**	**+1.5**
IL31				IAmb	IAmb	12 33 00.7	
	comp=Z,7.7nm,1.4s						
ILAR	**Eielson Array**	**45.74**	**333**	P	**P**	**12 32 51.0**	**+1.1**
	comp=Z,2.3nm,1.1s,baz=30,slow=5.7,SNR=11						
ILAR				PcP	**PcP**	**12 34 28.4**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=352,slow=3.8,SNR=6.3						
MDM	**Murphy Dome**	**45.84**	**333**	P	**P**	**12 32 52.9**	**+2.2**
IMAR	**Indian Mountai**	**45.91**	**337**	P	**P**	**12 32 53.9**	**+2.7**
BCAR	**Beaver Creek A**	**46.17**	**329**	P	**P**	**12 32 56.4**	**+3.1**
ZALV	**Zalesovo Beam**	**47.59**	**52**	P	**P**	**12 33 05.7**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=340,slow=7.8,SNR=2.2						
ZALV	**Zalesovo Beam**	**47.59**	**52**	P	**P**	**12 33 05.0**	**+0.5**
KURK	**Kurchatov**	**48.06**	**58**	P	**P**	**12 33 08.4**	**+0.2**
KURK				IAmb	IAmb	12 33 11.0	
	comp=Z,3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**48.11**	**58**	P	**P**	**12 33 09.1**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=325,slow=7.4,SNR=21						
KKAR	**Karatay Array**	**51.22**	**70**	P	**P**	**12 33 33.5**	**+1.1**
BOZ	**Bozeman (W)**	**51.68**	**297**	P	**P**	**12 33 38.4**	**+2.4**
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**12 33 43.5**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=298,slow=6.0,SNR=10						
MCMT	**McKenzie Canyo**	**52.80**	**297**	P	**P**	**12 33 46.3**	**+1.9**
TORD	**Torodi Ar. Bea**	**53.09**	**157**	P	**P**	**12 33 45.7**	**-0.8**
	comp=Z,1.2nm,0.9s,baz=347,slow=8.0,SNR=5.3						
TORD	**Torodi Ar. Bea**	**53.09**	**157**	P	**P**	**12 33 45.4**	**-1.1**
AAK	**Ala-Archa**	**53.20**	**67**	P	**P**	**12 33 48.5**	**+1.3**
AAK				IAmb	IAmb	12 34 09.8	
	comp=Z,5.7nm,1.3s						
BW06	**Boulder Array**	**53.25**	**293**	P	**P**	**12 33 49.2**	**+1.4**
BW06				IAmb	IAmb	12 33 50.1	
	comp=Z,3.9nm,1.0s						
PD31	**Pinedale Array**	**53.25**	**293**	P	**P**	**12 33 49.6**	**+1.8**
PD31				IAmb	IAmb	12 33 50.1	
	comp=Z,3.5nm,1.0s						
PDAR	**Pinedale Array**	**53.25**	**293**	P	**P**	**12 33 48.4**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=55,slow=6.9,SNR=8.6						
PDAR	**Pinedale Array**	**53.25**	**293**	P	**P**	**12 33 48.1**	**+0.3**
GAR	**Garm**	**54.59**	**73**	P	**P**	**12 33 58.5**	**+1.0**
PV01	**Paradox Valley**	**56.80**	**290**	P	**P**	**12 34 15.2**	**+1.8**
PV01				IAmb	IAmb	12 34 16.9	
	comp=Z,2.9nm,1.0s						
MSU	**Marysvale**	**57.92**	**293**	P	**P**	**12 34 23.8**	**+2.4**
BANI	**BANI**	**58.06**	**243**	P	**P**	**12 34 23.1**	**+0.7**
SZCU	**Shurtz Canyon**	**59.07**	**293**		**S**	**12 42 39.4**	**+3.2**
R11A	**Troy Canyon, C**	**59.40**	**295**	P	**P**	**12 34 33.6**	**+2.0**
SONM	**Songino Array**	**59.61**	**41**	P	**P**	**12 34 34.1**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=331,slow=5.8,SNR=4.9						
WUAZ	**Wupatki**	**60.19**	**290**	P	**P**	**12 34 37.8**	**+0.8**
TXAR	**Lajitas Array**	**62.36**	**280**	P	**P**	**12 34 52.9**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=15,slow=5.3,SNR=5.3						
ISA	**Isabella, Lake**	**62.87**	**296**		**S**	**12 43 27.6**	**+3.3**
CMAR	**Chiang Mai Arr**	**84.08**	**59**	P	**P**	**12 37 00.7**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=321,slow=6.9,SNR=4.4						
CMAR	**Chiang Mai Arr**	**84.08**	**59**	P	**P**	**12 37 00.2**	**+0.3**

IDC 19 12:26:25.0±1.9, **8°.84N×96°.39E, h0**km**, mb3.7**/6**, mb1 3.8**/6**, mb1mx3.5**/50**, mbtmp3.7**/6**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx2.8**/56**, Error ellipse: s-maj=73.3km s-min=21.5km az=58.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**39.69**	**345**	P	P	12 33 58.6	-0.4
	0.9nm,0.8s,baz=173,slow=6.7,SNR=6.1						
JNU	**Nakatsue**	**39.95**	**48**	P	P	12 34 00.6	-0.8
	8.0nm,1.0s,baz=212,slow=15,SNR=2.3						
KSRS	**Korea Array**	**40.29**	**40**	LR	LR	12 52 27.8	
	comp=Z,68nm,18.2s,baz=186,slow=39						
KURBB	**Kurchatov Arra**	**44.21**	**344**	P	P	12 34 35.3	-0.5
	0.5nm,0.3s,baz=164,slow=6.2,SNR=6.4						
ZALV	**Zalesovo Beam**	**45.94**	**351**	P	P	12 34 50.6	+1.0
	0.8nm,0.4s,baz=181,slow=8.4,SNR=4.0						
WRA	**Warramunga Arr**	**47.05**	**128**	P	P	12 34 59.1	+0.4
	0.2nm,0.5s,baz=305,slow=8.6,SNR=5.4						
ASAR	**Alice Springs**	**48.86**	**132**	P	P	12 35 12.4	-0.4
	0.2nm,0.5s,baz=303,slow=7.5,SNR=6.7						
KLR	**Kul'dur**	**49.94**	**30**	LR	LR	12 59 39.2	
	comp=Z,59nm,18.1s,baz=359,slow=40						
IDI	**Anoyia**	**69.86**	**304**	LR	LR	13 13 47.4	
	comp=Z,20nm,18.3s,baz=216,slow=41						
HFS	**Hagfors**	**78.75**	**330**	LR	LR	13 14 54.0	
	comp=Z,9.5nm,21.6s,baz=288,slow=37						

*NEIC **19** 12:37:11.2±1.4, 19°.48N±0°.02×120°.5E±0°.1, h10km±1km, mb4.4/16, Error ellipse: s-maj=18.1km s-min=4.3km az=94.0*
*IDC **19** 12:37:16.6±4.6, 19°.39N×120°.46E, h48km±47km, mb3.8/15, mb1 3.9/17, mb1mx3.7/46, mbtmp4.0/17, ML3.6/1, MS3.5/12, Ms1 3.5/12, ms1mx3.2/46, Error ellipse: s-maj=23.2km s-min=12.1km az=76.0*
ISC 19 12:37:13.0±0.5, **19°.48N**±0°.05×**120°.48E**±0°.08, **h23**km**, n55,** σ1§**66**/51**, mb4.2**/19**, MS3.3**/11**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**2.17**	**144**	⇑*i* P	**Pb**	**12 37 49.9**	**-1.9**
CVP				*i* S	**Sb**	**12 38 17.7**	**-0.6**
TWG	**Pinlang**	**3.37**	**9**		**Pn**	**12 38 03.8**	**-0.6**
TWG				Sn	**Sn**	**12 38 40.3**	**-3.3**
TPUB	**Ta-pu**	**3.81**	**2**	Pn	**Pn**	**12 38 08.7**	**-1.6**
TPUB				Sn	**Sn**	**12 38 49.6**	**-4.9**
YULB	**Yu-li**	**3.97**	**11**		**Pn**	**12 38 12.1**	**-0.5**
SSLB	**Suanglung**	**4.31**	**6**	Pn	**Pn**	**12 38 18.9**	**+1.6**
NACB	**Ninganchiao**	**4.79**	**12**	Pn	**Pn**	**12 38 23.9**	**+0.2**
YHNB	**Yeheng**	**5.24**	**9**	Pn	**Pn**	**12 38 30.3**	**+0.3**
HKPS	**Hong Kong Po S**	**6.55**	**296**	Pn	**Pn**	**12 38 44.7**	**-3.3**
QIZ	**Qiongzhong**	**10.06**	**269**	Pn	**Pn**	**12 39 33.9**	**-2.2**
DAV	**Davao City (W)**	**13.29**	**157**	LR	LR	12 46 24.3	
	comp=Z,409nm,20.4s,baz=326,slow=41						
JNU	**Nakatsue**	**16.46**	**32**	P	**P**	**12 41 06.0**	**+0.8**
	0.2nm,0.3s,baz=67,slow=18,SNR=2.4						
KSRS	**Korea Array**	**19.06**	**18**	P	**Pn**	**12 41 36.3**	**+1.8**
	baz=201,slow=12,SNR=4.6						
CMAR	**Chiang Mai Arr**	**20.39**	**271**	P	**P**	**12 41 50.4**	**+1.9**
	0.5nm,0.4s,baz=69,slow=9.5,SNR=5.1						
CMAR				LR	LR	12 49 09.3	
	comp=Z,46nm,19.1s,baz=128,slow=35						
CMAR	**Chiang Mai Arr**	**20.39**	**271**	P	**P**	**12 41 48.7**	**+0.3**
BJT	**Baijiatuan**	**20.81**	**351**		**P**	**12 41 53.3**	**+0.5**
BJT				IAmb	IAmb	12 42 13.6	
	comp=Z,33nm,1.2s						
JGF	**Kuroka**	**21.90**	**39**	P	**P**	**12 42 04.1**	**-0.5**
JGF				IAmb	IAmb	12 42 33.0	
	comp=Z,23nm,1.2s						
SIJI	**Sorong**	**22.82**	**151**	LR	LR	12 53 58.8	
	comp=Z,65nm,18.3s,baz=280,slow=44						
MJAR	**Matsushiro Arr**	**23.04**	**39**	P	**P**	**12 42 13.1**	**-3.6**
GUMO	**Guam**	**24.09**	**100**	LR	LR	12 49 43.5	
	comp=Z,62nm,21.1s,baz=286,slow=31						
USRK	**Ussuriysk Ar.**	**26.46**	**19**	P	**P**	**12 42 46.2**	**-2.1**
USA0B	**Ussuriysk Arra**	**26.46**	**19**	P	**P**	**12 42 43.9**	**-4.4**
USA0B				IAmb	IAmb	12 42 46.1	
	comp=Z,6.0nm,0.8s						
JAY	**Jayapura**	**29.54**	**136**	LR	LR	12 54 52.8	
	comp=Z,74nm,20.1s,baz=346,slow=36						
SONM	**Songino Array**	**30.52**	**341**	P	**P**	**12 43 26.5**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=164,slow=10.0,SNR=3.6						
SONM	**Songino Array**	**30.52**	**341**	P	**P**	**12 43 23.9**	**-0.7**
KLR	**Kul'dur**	**31.04**	**14**	P	**P**	**12 43 30.2**	**+1.3**
	comp=Z,1.5nm,0.5s,baz=234,slow=5.6,SNR=5.8						
FITZ	**Fitzroy Crossi**	**37.68**	**172**	P	**P**	**12 44 26.1**	**-0.7**
	comp=Z,7.1nm,1.1s,baz=14,slow=7.9,SNR=8.3						
FITZ	**Fitzroy Crossi**	**37.68**	**172**	P	**P**	**12 44 26.2**	**-0.5**
FITZ				IAmb	IAmb	12 44 27.3	
	comp=Z,9.9

TEVE					SG	Sg	12 50 35.8	+0.7
KARG	**Kargicak-Mersi**	**0.42**	**203**		PG	Pg	12 50 29.0	-0.5
YESI	**Yesilovacik-Me**	**0.45**	**209**		PG	Pg	12 50 29.5	-0.5
TISA	**Tisan-Mersin**	**0.47**	**204**		PG	Pg	12 50 29.9	-0.4
TEPK	**Tepekoy-MERSIN**	**0.47**	**219**		PG	Pg	12 50 29.9	-0.5
GULN	**MERSIN_Gulnar**	**0.50**	**217**	*i*	P	Pg	12 50 30.6	-0.4
GULN				*i*	S	Sg	12 50 37.8	+0.1
GULN					IAML		12 50 40.0	
	comp=E,14nm,0.2s							
GULN					IAML		12 50 42.0	
	comp=N,12nm,0.1s							
AKKU	**Akkuyu-Mersin**	**0.52**	**214**		PG	Pg	12 50 30.9	-0.4
OREN	**Orenkoy-Mersin**	**0.53**	**224**		PG	Pg	12 50 31.2	-0.3
MERS	**Mersin**	**0.56**	**60**		PG	Pb	12 50 32.3	+0.1
YORU	**Yoruktepe-Mers**	**0.60**	**224**		PG	Pb	12 50 32.6	-0.1
BERE	**Bereket-Mersin**	**0.61**	**247**		PG	Pb	12 50 32.8	-0.2
TEKE	**Tekeli-Mersin**	**0.79**	**236**		PG	Pb	12 50 35.9	0.0
KERG	**Konya-Eregli**	**0.84**	**11**	*i*	P	Pb	12 50 36.5	-0.6
KERG				*i*	S	Sb	12 50 47.9	-0.1
KERG					IAML		12 50 49.0	
	comp=E,27nm,0.3s							
KERG					IAML		12 50 52.0	
	comp=N,27nm,0.2s							
GULE	**Gulek**	**0.98**	**45**	*i*	P	Pb	12 50 39.5	+0.1
GULE				*i*	S	Sg	12 50 53.0	+0.2
GULE					IAML		12 51 02.0	
	comp=E,15nm,0.4s							
GULE					IAML		12 51 02.0	
	comp=N,12nm,0.4s							
KEPZ	**Antalya-Kepez**	**1.88**	**280**	*i*	P	Pn	12 50 52.7	+0.6
KEPZ				*i*	S	Sg	12 51 20.9	-0.6

IDC 19 12:53:39.0±2.3, 10°.96N×124°.67E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/55, mbtmp3.6/5, Error ellipse: s-maj=234.0km s-min=20.5km az=66.0, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.15**	**163**	P	P	13 00 09.2	+0.6
	0.3nm,0.6s,baz=342,slow=8.9,SNR=4.7						
ASAR	**Alice Springs**	**35.58**	**165**	P	P	13 00 37.8	-0.7
	0.2nm,0.4s,baz=343,slow=6.9,SNR=8.9						
MKAR	**Makanchi Array**	**50.53**	**323**	P	P	13 02 38.9	-0.4
	0.6nm,0.7s,baz=122,slow=9.2,SNR=5.5						
ZALV	**Zalesovo Beam**	**53.27**	**332**	P	P	13 02 57.7	-1.7
	0.4nm,0.3s,baz=120,slow=7.5,SNR=1.9						
KURBB	**Kurchatov Arra**	**54.62**	**326**	P	P	13 03 10.6	+1.2
	1.1nm,0.6s,baz=124,slow=7.7,SNR=9.1						

ROM 19 13:06:13.7±0.2, 36°.36N±0°.01×13°.50E±0°.02, h32km±2km, ML3.7, 12C, Error ellipse: s-maj=1.9km s-min=0.6km az=136.0, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLTA	**Licata**	**0.88**	**25**	⇑P	Pn	13 06 29.9	+0.2
CLTA				S	Sb	13 06 44.2	+2.3
CLTA				AML	AML		
	comp=E,8995μm,0.7s						
CLTA				AML	AML		
	comp=N,8385μm,0.7s						
FAVR	**Favara**	**0.91**	**8**	⇑P	Pb	13 06 30.9	-0.2
FAVR				S	Sb	13 06 43.6	+0.7
FAVR				AML	AML		
	comp=E,6940μm,0.9s						
FAVR				AML	AML		
	comp=N,5005μm,0.5s						
FAVR				AML	AML		
	comp=E,6935μm,0.9s						
LPDG	**Lampedusa Capo**	**1.10**	**220**	P	Pb	13 06 33.8	-0.4
HMDC	**Modica**	**1.19**	**60**	⇑P	Pn	13 06 34.0	-0.1
HMDC				S	Sb	13 06 50.7	-0.1
HMDC				AML	AML		
	comp=E,2665μm,0.4s						
HMDC				AML	AML		
	comp=E,3420μm,0.6s						
HMDC				AML	AML		
	comp=N,3080μm,1.3s						
HPAC	**Pachino**	**1.34**	**75**	P	Pn	13 06 35.9	-0.2
RESU	**Resuttano**	**1.36**	**19**	P	Pb	13 06 38.0	-0.6
RESU				AML	AML		
	comp=E,2385μm,0.8s						
RESU				AML	AML		
	comp=N,2170μm,0.6s						
MMGO	**Monte Magaggia**	**1.36**	**342**	P	Pn	13 06 35.6	-0.9
ALJA	**Alia**	**1.40**	**8**	P	Pb	13 06 38.4	-0.9
ALJA				AML	AML		
	comp=N,2120μm,0.7s						
ALJA				AML	AML		
	comp=E,2225μm,0.5s						
HAVL	**Avola**	**1.43**	**65**	⇑P	Pn	13 06 37.5	0.0
HAVL				AML	AML		
	comp=E,2380μm,0.4s						
HAVL				AML	AML		
	comp=N,2195μm,0.4s						
HLNI	**Lentini**	**1.47**	**48**	⇑P	Pn	13 06 38.1	+0.1
HLNI				S	Sn	13 06 57.1	+0.9
HLNI				AML	AML		
	comp=E,1695μm,1.6s						
HLNI				AML	AML		
	comp=N,1710μm,1.1s						
SSY	**Sortino**	**1.49**	**57**	⇑P	Pn	13 06 38.7	+0.5
SSY				AML	AML		
	comp=E,3825μm,0.8s						
SSY				AML	AML		
	comp=N,6435μm,0.6s						
CRJA	**Costa Raja**	**1.49**	**345**	P	Pn	13 06 38.3	0.0
MFNL	**Monte Finestre**	**1.50**	**342**	P	Pn	13 06 38.1	-0.3
HCRL	**Carlentini**	**1.53**	**53**	⇑P	Pn	13 06 39.2	+0.4
HCRL				S	Sb	13 06 59.4	-1.2
HCRL				AML	AML		
	comp=E,2185μm,0.3s						
HCRL				AML	AML		
	comp=N,3365μm,0.2s						
CORL	**Corleone**	**1.54**	**354**	P	Pn	13 06 39.2	+0.3
CORL				AML	AML		
	comp=E,1240μm,0.6s						
CORL				AML	AML		
	comp=N,1750μm,0.9s						
PETRA	**Petralia Sopra**	**1.55**	**18**	⇑P	Pb	13 06 40.7	-1.1
PETRA				AML	AML		
	comp=N,2590μm,0.7s						
PETRA				AML	AML		
	comp=E,2360μm,0.6s						
GALF	**Gagliano Caste**	**1.59**	**32**	P	Pn	13 06 41.0	+1.3
GALF				AML	AML		
	comp=E,1146μm,0.5s						
GALF				AML	AML		
	comp=N,1625μm,0.7s						
HAGA	**Augusta**	**1.61**	**55**	⇑P	Pn	13 06 40.0	+0.1
HAGA				AML	AML		
	comp=E,2180μm,0.6s						
HAGA				AML	AML		
	comp=N,1705μm,0.5s						
AGST	**Augusta-Monte**	**1.65**	**57**	P	Pn	13 06 40.0	-0.4
AGST				AML	AML		
	comp=E,2945μm,0.6s						
AGST				AML	AML		
	comp=N,2990μm,0.5s						
GIB	**Gibilmanna**	**1.68**	**14**	P	Pn	13 06 42.0	+1.1
GIB				AML	AML		
	comp=N,6295μm,0.6s						
GIB				AML	AML		
	comp=E,6010μm,0.6s						
SOLUN	**Solunto**	**1.73**	**1**	P	Pn	13 06 41.8	+0.3
SOLUN				AML	AML		
	comp=N,472μm,0.6s						
SOLUN				AML	AML		
	comp=E,545μm,0.5s						
ESLN	**Serra La Nave**	**1.77**	**41**	⇑P	Pn	13 06 43.6	+1.2
ESLN				AML	AML		
	comp=E,2800μm,0.5s						
ESLN				AML	AML		
	comp=N,2800μm,0.5s						
MPG	**Monte Pellegri**	**1.80**	**356**	P	Pn	13 06 43.6	+1.1
EPZF	**Pizzo Felice**	**1.82**	**36**	P	Pb	13 06 44.9	-1.5
EPZF				AML	AML		
	comp=N,5180μm,0.3s						
EPZF				AML	AML		
	comp=E,2330μm,0.9s						
MSFR	**San Fratello**	**1.88**	**27**	P	Pn	13 06 45.1	+1.5
MSFR				AML	AML		
	comp=E,390μm,1.6s						
MSFR				AML	AML		
	comp=N,608μm,0.4s						
MUCR	**Ucria**	**2.00**	**33**	P	Pn	13 06 46.6	+1.3
MUCR				AML	AML		
	comp=N,1765μm,0.4s						
MUCR				AML	AML		
	comp=E,1230μm,0.4s						
AIO	**Antillo**	**2.12**	**40**	P	Pn	13 06 47.8	+0.8
MCSR	**Castroreale**	**2.20**	**39**	⇑P	Pn	13 06 48.8	+0.8
MCSR				AML	AML		
	comp=E,1910μm,0.4s						
MCSR				AML	AML		
	comp=N,1810μm,0.3s						
IACL	**Alicudi**	**2.27**	**17**	P	Pn	13 06 49.4	+0.4
IACL				AML	AML		
	comp=E,1305μm,0.6s						
IACL				AML	AML		
	comp=N,830μm,0.4s						
MPNC	**Port Mandanici**	**2.31**	**39**	P	Pn	13 06 50.6	+1.0
MPNC				AML	AML		
	comp=E,960μm,0.6s						
MPNC				AML	AML		
	comp=N,962μm,0.5s						
VPL	**Vulcano Piano**	**2.33**	**30**	P	Pn	13 06 50.6	+0.8
VPL				AML	AML		
	comp=E,2770μm,0.5s						
VPL				AML	AML		
	comp=N,3045μm,0.5s						
USI	**Ustica**	**2.35**	**354**	AML	AML		
	comp=N,1385μm,0.7s						
USI				AML	AML		
	comp=E,964μm,0.5s						
MSRU	**Castanea**	**2.48**	**40**	P	Pn	13 06 53.1	+1.2
MSRU				AML	AML		
	comp=E,606μm,1.5s						
MSRU				AML	AML		
	comp=N,526μm,0.7s						
MPAZ	**Palizzi**	**2.55**	**51**	P	Pn	13 06 53.9	+1.0
MPAZ				AML	AML		
	comp=E,206μm,1.1s						
MPAZ				AML	AML		
	comp=N,282μm,0.9s						
SOI	**Samo**	**2.66**	**49**	P	Pn	13 06 54.9	+0.6
SOI				AML	AML		
	comp=E,155μm,0.7s						
SOI				AML	AML		
	comp=N,164μm,0.5s						
PLAC	**Placanica**	**3.13**	**47**	⇑P	Pn	13 07 02.3	+1.4
PLAC				AML	AML		
	comp=N,134μm,0.8s						
PLAC				AML	AML		
	comp=E,123μm,0.5s						
TIP	**Timpagrande**	**3.81**	**42**	P	Pn	13 07 11.8	+1.5
CELI	**Celico**	**3.85**	**37**	P	Pn	13 07 12.0	+1.1
CELI				AML	AML		
	comp=E,110μm,1.2s						
CELI				AML	AML		
	comp=N,146μm,1.6s						
VSL	**Villasalto**	**4.52**	**315**	P	Pn	13 07 20.4	+0.5
VSL				AML	AML		
	comp=E,58μm,0.5s						
VSL				AML	AML		
	comp=N,47μm,0.6s						

ROM 19 13:07:33.2±0.2, 36°.31N±0°.02×13°.64E±0°.03, h23km±2km, Md2.6/8, Error ellipse: s-maj=3.2km s-min=1.0km az=312.0, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLTA	**Licata**	**0.88**	**17**	P	Pb	13 07 49.4	-0.4
CLTA				S	Sn	13 08 03.4	+1.1
CLTA				AML	AML		
	comp=E,2765μm,0.7s						
CLTA				AML	AML		
	comp=N,3025μm,0.7s						
CLTA				END			
FAVR	**Favara**	**0.95**	**1**	P	Pb	13 07 50.4	-0.6
FAVR				END			
HMDC	**Modica**	**1.12**	**55**	P	Pn	13 07 53.7	+0.2
HPAC	**Pachino**	**1.24**	**72**	P	Pn	13 07 55.3	+0.2
HAVL	**Avola**	**1.35**	**61**	P	Pn	13 07 57.0	+0.2
SSY	**Sortino**	**1.42**	**53**	P	Pb	13 07 58.4	-0.7
SSY				S	Sb	13 08 17.9	+1.2
SSY				END			
HLNI	**Lentini**	**1.43**	**43**	P	Pn	13 07 57.5	-0.3
HLNI				S	Sb	13 08 16.7	-0.2
HLNI				END			
ALJA	**Alia**	**1.44**	**4**	P	Pn	13 07 58.5	+0.6
HCRL	**Carlentini**	**1.48**	**49**	P	Pn	13 07 58.8	+0.4
HCRL				S	Sb	13 08 19.0	+0.7
HCRL				END			
PETRA	**Petralia Sopra**	**1.56**	**14**	P	Pn	13 08 00.4	+0.6
PETRA				END			
ESML	**S. M. di Licod**	**1.63**	**37**	P	Pn	13 08 01.4	+0.8
ESLN	**Serra La Nave**	**1.74**	**37**	P	Pn	13 08 03.0	+0.8
ESLN				END			

ROM 19 13:12:36.4±0.2, 36°.41N±0°.02×13°.52E±0°.03, h31km±2km, ML3.0/1, Error ellipse: s-maj=2.8km s-min=1.1km az=303.0, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLTA	**Licata**	**0.83**	**26**	P	Pb	13 12 52.6	+0.2
CLTA				AML	AML		
	comp=E,1670μm,0.7s						
CLTA				AML	AML		
	comp=N,1570μm,0.7s						
FAVR	**Favara**	**0.86**	**8**	P	Pb	13 12 53.7	+0.7
FAVR				S	Sb	13 13 04.7	+0.4
FAVR				AML	AML		
	comp=E,1115μm,0.8s						
FAVR				AML	AML		
	comp=N,742μm,1.3s						
LPDG	**Lampedusa Capo**	**1.14**	**219**	P	Pb	13 12 57.4	-0.2
HMDC	**Modica**	**1.16**	**61**	P	Pn	13 12 56.6	+0.1
HMDC				S	Sb	13 13 12.7	+0.1
HMDC				AML	AML		
	comp=E,332μm,0.7s						
HMDC				AML	AML		
	comp=N,348μm,1.0s						
HAVL	**Avola**	**1.41**	**67**	P	Pn	13 12 59.8	-0.1
HLNI	**Lentini**	**1.44**	**49**	P	Pn	13 13 00.6	+0.3
HLNI				AML	AML		
	comp=E,302μm,0.2s						
HLNI				AML	AML		
	comp=N,238μm,1.1s						
CRJA	**Costa Raja**	**1.45**	**344**	P	Pn	13 13 01.1	+0.6
SSY	**Sortino**	**1.45**	**59**	P	Pn	13 13 01.5	+0.9
SSY				AML	AML		
	comp=E,554μm,0.7s						
SSY				AML	AML		
	comp=N,858μm,0.4s						
HCRL	**Carlentini**	**1.50**	**54**	P	Pn	13 13 01.9	+0.7
HCRL				S	Sb	13 13 21.4	-0.9
HCRL				AML	AML		
	comp=E,317μm,0.8s						
HCRL				AML	AML		
	comp=N,382μm,0.3s						
MCSR	**Castroreale**	**2.15**	**39**	P	Pn	13 13 11.8	+1.5
MCSR				AML	AML		
	comp=N,295μm,1.0s						
MCSR				AML	AML		
	comp=E,302μm,0.4s						
VSL	**Villasalto**	**4.49**	**315**	P	Pn	13 13 42.9	+0.6

IDC 19 13:18:25.9±1.8, 10°.19S×124°.20E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.2/35, mbtmp3.2/4, ML2.9/3, Error ellipse: s-maj=32.9km s-min=11.8km az=6.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.53**	**269**	Pg	Pg	13 18 36.6	+0.6
	134nm,0.3s,baz=301,slow=2.8,SNR=95						
BATI				Lg	Lg	13 18 42.5	
	127nm,0.3s,baz=167,slow=21,SNR=11						
FITZ	**Fitzroy Crossi**	**7.98**	**170**	Pn	Pn	13 20 23.0	-0.2
	0.2nm,0.3s,baz=356,slow=11,SNR=12						
FITZ				Sn	Sn	13 21 46.3	-8.0
	0.2nm,0.3s,baz=23,slow=14,SNR=2.2						
WRA	**Warramunga Arr**	**13.77**	**136**	Pn	Pn	13 21 42.2	-0.4
WRA				Sn	Sn	13 24 14.4	-2.0
	0.0nm,0.3s,baz=308,slow=23,SNR=2.8						
ASAR	**Alice Springs**	**16.29**	**147**	Pn	Pn	13 22 15.3	-0.9
	0.1nm,0.3s,baz=321,slow=12,SNR=6.2						
MKAR	**Makanchi Array**	**67.94**	**330**	P	P	13 29 26.6	0.0
	0.3nm,0.7s,baz=140,slow=7.0,SNR=3.3						

WEL 19 13:39:05.9, 44°S±2°×17°2E±°, h9km±2km, M2.2/7, ML2.2/7, MLv2.2/7, Error ellipse: s-maj=0.0km s-min=0.0km az=139.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RACZ	**Rakaia**	**0.15**	**245**	P	Pg	13 39 11.1	+1.8
MQZ	**McQueen's Vall**	**0.24**	**100**	P	Pg	13 39 12.0	+1.3
OXZ	**Oxford**	**0.40**	**328**	P	Pb	13 39 14.5	-0.7
WACZ	**Wakanui South**	**0.45**	**232**	P	Pb	13 39 16.9	+0.9
AKCZ	**Akaroa Harbour**	**0.47**	**117**	P	Pb	13 39 16.7	+0.4
OKCZ	**Okains Bay**	**0.53**	**97**	P	Pb	13 39 18.0	+0.5
AMCZ	**Amberley**	**0.54**	**26**	P	Pb	13 39 17.8	+0.3
MHCZ	**Mount Hutt**	**0.57**	**283**	P	Pb	13 39 18.4	+0.3
GVZ	**Greta Valley S**	**0.86**	**37**	P	Pn	13 39 23.8	-0.5
LTZ	**Lake Taylor**	**0.88**	**357**	P	Pb	13 39 23.6	+0.2
ARCZ	**Arundel**	**0.88**	**251**	P	Pn	13 39 24.2	-0.3
INZ	**Inchbonnie**	**1.14**	**325**	P	Pn	13 39 32.0	+4.0
ODZ	**Otahua Downs**	**1.84**	**221**	P	Pg	13 39 42.4	+1.3

IDC 19 13:55:25.5±1.7, 2°.32S×139°.10E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.3/25, mbtmp3.3/3, ML3.5/1, Error ellipse: s-maj=30.6km s-min=14.9km az=0.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.61**	**97**	Pg	Pn	13 55 55.3	0.0
	27nm,0.3s,baz=274,slow=15,SNR=125						
JAY				Lg	Lg	13 56 16.1	
	24nm,0.3s,baz=117,slow=16,SNR=19						
WRA	**Warramunga Arr**	**18.12**	**195**	P	Pn	13 59 38.7	-0.1
	0.1nm,0.3s,baz=18,slow=12,SNR=11						
WRA				S	Sn	14 02 50.5	-11
	0.0nm,0.3s,baz=5.7,slow=23,SNR=3.2						
ASAR	**Alice Springs**	**21.81**	**193**	P	P	14 00 19.5	+0.1
	0.6nm,0.8s,baz=12,slow=10,SNR=11						
ASAR				S	S	14 04 17.5	-4.0
	0.2nm,0.8s,baz=12,slow=23,SNR=1.8						
MKAR	**Makanchi Array**	**69.73**	**322**	P	P	14 06 37.3	-0.2
	0.5nm,0.9s,baz=132,slow=8.0,SNR=2.3						

*NNC **19** 14:02:28.0±1.5, 39°.71N×73°.41E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=11.3km s-min=5.6km az=171.0*
*KRNET **19** 14:02:29.1±0.1, 39°.50N×73°.65E, h17km, mb2.8*
ISC 19 14:02:31.7±2.4, 39°.63N±0°.07×73°.46E±0°.04, h0km±16km, n30, σ1°.73/46, 16C-20D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	**Osh**	**1.04**	**330**	*i*P	Pb	14 02 52.3	-0.3
	baz=27						
OHH				⇓*i*S	Sn	14 03 09.4	+0.5
	baz=27						
DRK	**Karamyk**	**1.29**	**264**	⇑*i*P	Pb	14 02 55.9	-1.2
	baz=70						
DRK				⇑*i*S	Sn	14 03 16.2	+0.7
	baz=70						
ARSB	**Arslanbob**	**1.73**	**348**	⇑*i*P	Pb	14 03 04.4	-0.1
	baz=45						
ARSB				⇑*i*S	Sg	14 03 30.3	+2.8
	baz=45						
BTK	**Batken**	**2.08**	**283**	⇑*i*P	Pb	14 03 09.5	-0.9
	baz=85						
BTK				⇑*i*S	Sg	14 03 39.6	+1.0
	baz=85						
ARLS	**Aral**	**2.33**	**16**	⇓*i*P	Pb	14 03 12.3	-2.3
	baz=12						
ARLS				⇓*i*S	Sb	14 03 43.3	-0.7
	baz=12						
AML	**Almayashu**	**2.51**	**4**	⇓*i*P	Pn	14 03 14.7	+0.6
	baz=1.0						
AML				⇓*i*S	Sb	14 03 48.4	-1.0
	baz=1.0						
TRKS	**Terek-Say**	**2.60**	**318**	⇑*i*P	Pn	14 03 15.8	+0.7
	baz=17						
TRKS				⇑*i*S	Sb	14 03 50.5	-1.3
	baz=17						
UCH	**Uchtor**	**2.72**	**17**	⇓*i*P	Pn	14 03 18.0	+1.0
	baz=13						
UCH				⇓*i*S	Sb	14 03 53.6	-1.9
	baz=13						
EKS2	**Erkin-Say**	**3.04**	**4**	⇓*i*P	Pn	14 03 22.6	+1.4
	baz=2.0						
EKS2				⇓*e*S	Sb	14 04 01.3	-3.2
	baz=2.0						
AAK	**Ala-Archa**	**3.11**	**14**	⇑*i*P	Pn	14 03 23.1	+1.0
	baz=11						
AAK				⇑*i*S	Sn	14 04 02.0	+2.0
	baz=11						
AAK	**Ala-Archa**	**3.11**	**14**	Pg	Pb	14 03 25.0	-3.0
	2.1nm,0.4s						
AAK				⇓Lg	Lg	14 04 05.1	
	12nm,0.8s						
MRKS	**Merke**	**3.12**	**357**	Pg	Pn	14 03 22.9	+0.6
	2.8nm,0.2s						
MRKS				Lg	Lg	14 04 04.2	
	10nm,0.3s						
KBK	**Karagaybulak**	**3.23**	**20**	⇑*i*P	Pn	14 03 24.6	+0.8
	baz=17						
KBK				⇑*i*S	Sn	14 04 05.2	+2.2
	baz=17						
ULHL	**Ulahol**	**3.36**	**38**	⇓*i*P	Pn	14 03 25.3	-0.3
	baz=35						
ULHL				⇓*i*S	Sn	14 04 06.3	0.0
	baz=35						
CHMS	**Chumysh**	**3.51**	**16**	⇓*e*P	Pn	14 03 28.1	+0.6
	baz=13						
CHMS				⇓*i*S	Sn	14 04 11.3	+1.6
	baz=13						
IUG	**Iuzhnay**	**3.62**	**315**	Pg	Pn	14 03 31.6	+2.5
	3.4nm,0.2s						
IUG				Lg	Lg	14 04 19.0	
	11nm,0.5s						
DZA	**Taraz**	**3.64**	**334**	Pg	Pb	14 03 33.1	-3.8
	151nm,0.1s						
DZA				Lg	Lg	14 04 21.6	
	91nm,0.1s						
TKM2	**Tokmak 2**	**3.66**	**25**	⇑*i*P	Pn	14 03 30.2	+0.4
	baz=23						
TKM2				⇑*i*S	Sn	14 04 14.5	+0.7
	baz=23						
TKM2	**Tokmak 2**	**3.66**	**25**	⇑Pg	Pb	14 03 35.7	-1.7
	2.5nm,0.8s						
TKM2				⇑Lg	Lg	14 04 23.4	
	6.4nm,0.8s						
USP	**Ospenovka**	**3.72**	**12**	⇓*e*P	Pn	14 03 31.8	+1.4
	baz=9.0						
USP				⇓*i*S	Sn	14 04 16.8	+1.8
	baz=9.0						
KST	**Kastek**	**3.90**	**28**	Pg	Pb	14 03 39.0	-2.3
	2.5nm,0.3s						
KST				Lg	Lg	14 04 32.0	
	8.5nm,0.6s						
DGS	**Degeres**	**4.01**	**25**	Pg	Pb	14 03 41.6	-1.6
	4.2nm,0.3s						
DGS				Lg	Lg	14 04 36.6	
	5.1nm,0.5s						
KK31	**Karatay Array**	**4.12**	**328**	⇓Pn	Pn	14 03 33.9	-2.1
	0.2nm,0.2s,baz=170,slow=18,SNR=4.6						
KK31				⇓Pg	Pb	14 03 43.6	-1.6
	0.6nm,0.3s,baz=151,slow=17,SNR=4.9						
KK31				⇓Lg	Lg	14 04 38.9	
	3.5nm,0.6s,baz=138,slow=30,SNR=5.7						
TNSS	**Tian-Shan**	**4.30**	**36**	Pg	Pb	14 03 46.1	-2.3
	1.4nm,0.3s						
TNSS				Lg	Lg	14 04 44.0	
	2.5nm,0.3s						
KRBS	**Karabastau**	**4.39**	**21**	Pg	Pb	14 03 48.1	-1.6
	1.7nm,0.2s						
KRBS				Lg	Lg	14 04 47.7	
	6.4nm,0.3s						
KOTS	**Kotyrbulak**	**4.53**	**36**	Pg	Pb	14 03 50.4	-1.7
	4.2nm,0.2s						
KOTS				Lg	Lg	14 04 51.5	

18nm,0.3s
KTBS Karatobe 4.74 30 Pg Pb 14 03 54.3 -1.4
1.6nm,0.2s
KTBS Lg Lg 14 04 57.8
6.9nm,0.5s
KUU Kurty 4.77 26 Pg Pb 14 03 54.4 -1.9
1.9nm,0.7s
KUU Lg Lg 14 04 58.3
5.6nm,0.4s
ARXS Arharly 5.62 34 Pg Pb 14 04 10.7 0.0
2.8nm,0.4s
ARXS Lg Lg 14 05 26.0
4.6nm,0.3s
KAPS Kapalarasan 7.14 36 Pg Pb 14 04 38.7 +2.2
0.8nm,0.7s
KAPS Lg Lg 14 06 14.1
1.0nm,0.3s

*IDC **19** 14:08:36.9±1.4, 10°26'S×124°22'E, h0km, mb3.8/2, mb1 3.8/5, mb1mx3.5/40, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=27.0km s-min=10.7km az=8.0*
*NEIC **19** 14:08:39.8±2.4, 10°51'S±0°08'×123°97'E±0°08, h19km±7km, mb4.2/3, Error ellipse: s-maj=15.7km s-min=2.9km az=47.0*
ISC 19 14:08:40.0±0.9, 10°58'S±0°1'×124°0E±0°1, h27km, n22, σ1§74/23, mb4.1/4, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.46**	**312**	Pg	**Pb**	**14 08 47.7**	**-2.0**
	680nm,0.3s,baz=99,slow=6.0,SNR=369						
BATI				Lg	Lg	14 08 54.8	
	1µm,0.3s,baz=319,slow=19,SNR=16						
SOEI	**Soe**	**0.80**	**19**	Pg	**Pn**	**14 08 56.5**	**+0.8**
MMRI	**Maumere**	**2.56**	**317**		**Pn**	**14 09 21.0**	**+1.2**
KNRA	**Kununurra**	**6.91**	**138**		**Pn**	**14 10 22.9**	**+3.2**
MTN	**Manton Dam**	**7.35**	**109**	Pn	**Pn**	**14 10 27.6**	**+1.9**
FITZ	**Fitzroy Crossi**	**7.70**	**168**	Pn	**Pn**	**14 10 33.6**	**+3.1**
	1.0nm,0.3s,baz=357,slow=10,SNR=38						
WB0	**Warramunga Arr**	**13.60**	**134**	Pn	**Pn**	**14 11 51.5**	**+0.3**
WRA	**Warramunga Arr**	**13.67**	**134**	Pn	**Pn**	**14 11 52.1**	**-0.2**
	0.2nm,0.3s,baz=315,slow=13,SNR=15						
WRA				Sn	**Sn**	**14 14 18.8**	**-4.7**
	0.2nm,0.3s,baz=239,slow=26,SNR=2.8						
WRA	**Warramunga Arr**	**13.67**	**134**		**Pn**	**14 11 51.6**	**-0.7**
WRAB	**Tennant Creek**	**13.68**	**134**	Pn	**Pn**	**14 11 51.2**	**-1.1**
WB2	**Warramunga Arr**	**13.68**	**134**	Pn	**Pn**	**14 11 52.9**	**+0.5**
WR0	**Warramunga Arr**	**13.83**	**134**	Pn	**Pn**	**14 11 54.3**	**-0.1**
AS31	**Alice Springs**	**16.12**	**145**	Pn	**Pn**	**14 12 25.7**	**+0.7**
AS31				IAmb	IAmb	14 12 41.7	
	comp=Z,1.6nm,1.2s						
ASAR	**Alice Springs**	**16.12**	**145**	Pn	**Pn**	**14 12 26.2**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=318,slow=12,SNR=36						
ASAR				Sn	**Sn**	**14 15 24.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=311,slow=21,SNR=5.3						
ASAR	**Alice Springs**	**16.12**	**145**		**Pn**	**14 12 25.9**	**+0.9**
MK31	**Makanchi Array**	**68.13**	**330**	P	**P**	**14 19 38.4**	**+0.7**
MK31				IAmb	IAmb	14 19 39.8	
	comp=Z,5.7nm,1.9s						
MKAR	**Makanchi Array**	**68.13**	**330**	P	**P**	**14 19 38.4**	**+0.7**
ZALV	**Zalesovo Beam**	**72.29**	**337**	P	**P**	**14 20 02.4**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=146,slow=4.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**72.29**	**337**	P	**P**	**14 20 02.7**	**-0.2**
KURBB	**Kurchatov Arra**	**72.58**	**332**	P	**P**	**14 20 05.8**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=143,slow=5.3,SNR=2.3						
KURK	**Kurchatov**	**72.60**	**332**	P	**P**	**14 20 05.8**	**+1.0**
KURK	**Kurchatov**	**72.60**	**332**	IAmb	IAmb	14 21 13.7	
	comp=Z,12nm,1.9s						

*IDC **19** 14:17:28.2±2.0, 37°19N×97°82W, h0km, mb3.5/2, mb1 3.8/5, mb1mx3.5/42, mbtmp3.4/5, ML4.2/2, Error ellipse: s-maj=29.4km s-min=12.2km az=96.0*
*NEIC **19** 14:17:29.5±1.1, 37°00N±0°01×97°92W±0°02, h8km±4km, mb_Lg3.2/77, Error ellipse: s-maj=2.2km s-min=1.8km az=60.0*
*ANF **19** 14:17:30.8±1.4, 36°99N×97°95W, h6km±9km, ML3.9/10, Error ellipse: s-maj=4.4km s-min=3.7km az=68.0*
ISC 19 14:17:29.5±0.8, 37°01N±0°02×97°90W±0°02, h7km±6km, n101, σ1§00/100, Kansas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAN14	**Manchester OK**	**0.07**	**222**		**Pg**	**14 17 31.4**	**+0.1**
KAN05	**Bluff City Nor**	**0.10**	**14**		**Pg**	**14 17 31.6**	**-0.1**
KAN05				Sg	**Sg**	**14 17 33.0**	**-0.3**
GC02	**Grant County #**	**0.16**	**168**		**Pg**	**14 17 33.3**	**+0.5**
GC02				Sg	**Sg**	**14 17 36.0**	**+0.9**
KAN01	**Argonia South**	**0.18**	**39**		**Pg**	**14 17 33.2**	**0.0**
KAN01				Sg	**Sg**	**14 17 35.7**	**0.0**
KAN10	**Anthony SW Sta**	**0.19**	**306**		**Pg**	**14 17 33.4**	**0.0**
KAN10				Sg	**Sg**	**14 17 35.9**	**0.0**
KAN08	**Anthony NE Sta**	**0.22**	**346**		**Pg**	**14 17 33.9**	**0.0**
KAN08				Sg	**Sg**	**14 17 37.0**	**+0.1**
KAN09	**Caldwell North**	**0.26**	**61**		**Pg**	**14 17 34.8**	**+0.2**
KAN09				Sg	**Sg**	**14 17 37.7**	**-0.4**
KAN12	**Harper NE Stat**	**0.30**	**345**		**Pg**	**14 17 35.3**	**-0.1**
KAN12				Sg	**Sg**	**14 17 39.4**	**+0.1**
KS21	**Milan North St**	**0.33**	**35**	Pg	**Pg**	**14 17 36.1**	**0.0**
KAN13	**South Haven SW**	**0.34**	**90**		**Pg**	**14 17 36.4**	**+0.3**
KAN13				Sg	**Sg**	**14 17 41.2**	**+0.6**
KS20	**Mayfield South**	**0.35**	**52**	Pg	**Pg**	**14 17 36.5**	**+0.1**
CROK	**Carrier**	**0.51**	**187**		**Pg**	**14 17 39.7**	**+0.3**
U32A	**Winter Ranch,**	**1.09**	**235**		**Pg**	**14 17 49.8**	**-0.5**
T35A	**Sooner Cattle**	**1.12**	**94**	Pg	**Pg**	**14 17 50.5**	**-0.5**
OK029	**Liberty Lake**	**1.27**	**163**		**Pg**	**14 17 53.3**	**-0.4**
QUOK	**Quay**	**1.27**	**131**		**Pn**	**14 17 53.4**	**-0.4**
OK031	**S. Brethren Rd**	**1.36**	**141**		**Pn**	**14 17 54.8**	**-0.2**
BCOK	**Bluff Creek, N**	**1.37**	**170**		**Pn**	**14 17 54.8**	**-0.4**
OK030	**Cody Creek RV**	**1.41**	**140**		**Pn**	**14 17 55.5**	**-0.1**
OK025	**Westminster Rd**	**1.50**	**162**		**Pb**	**14 17 57.2**	**-0.4**
R32A	**Long Quarter,**	**1.55**	**336**		**Pn**	**14 17 57.6**	**0.0**
OKCFA	**Oklahoma City**	**1.63**	**167**		**Pb**	**14 17 59.2**	**-0.8**
OKCSW	**OKLAHOMA CITY**	**1.65**	**167**	Pn	**Pb**	**14 17 59.4**	**-0.8**
FNO	**Franklin**	**1.80**	**167**		**Pn**	**14 18 01.7**	**+0.7**
TUL1	**Leonard**	**2.02**	**122**	P	**Pb**	**14 18 05.9**	**-0.8**
	baz=303						
TUL1				S	**Sb**	**14 18 33.4**	**+1.3**
	baz=303						
TUL1	**Leonard**	**2.02**	**122**		**Pn**	**14 18 05.1**	**+1.0**
TUL1				IAmb_Lg		14 18 38.9	
	comp=Z,134nm,0.9s						
W35A	**Tecumseh**	**2.03**	**156**		**Pn**	**14 18 04.9**	**+0.6**
CBKS	**Cedar Bluff**	**2.31**	**322**	P	**Pn**	**14 18 08.9**	**+0.8**
	baz=141						
CBKS				S	**Sb**	**14 18 40.1**	**-0.3**
	baz=141						
CBKS	**Cedar Bluff**	**2.31**	**322**	Pn	**Pn**	**14 18 08.6**	**+0.5**
KSU1	**Kansas State U**	**2.32**	**26**	P	**Pn**	**14 18 09.3**	**+1.1**
	baz=206						
KSU1				S	**Sb**	**14 18 40.5**	**-0.2**
	baz=206						
KSU1	**Kansas State U**	**2.32**	**26**	Pn	**Pn**	**14 18 08.9**	**+0.7**
WMOK	**Wichita Mounta**	**2.38**	**198**	P	**Pn**	**14 18 09.7**	**+0.6**
	baz=17						
WMOK				Sb	**Sg**	**14 18 45.1**	**-0.8**
	baz=17						
WMOK	**Wichita Mounta**	**2.38**	**198**	Pn	**Pn**	**14 18 09.6**	**+0.6**
U38A	**Gravette**	**2.88**	**100**		**Pn**	**14 18 16.6**	**+0.6**
X37A	**Clayton**	**3.17**	**139**		**Pn**	**14 18 20.6**	**+0.7**
X37A				IAmb_Lg		14 19 17.4	
	comp=Z,71nm,0.8s						
HHAR	**Hobbs**	**3.27**	**102**	Pn	**Pn**	**14 18 21.9**	**+0.7**
HHAR				IAmb_Lg		14 19 17.1	
	comp=Z,53nm,0.9s						
Z35A	**Perchaven, San**	**3.71**	**172**	Pn	**Pn**	**14 18 27.8**	**+0.5**
S39A	**Bolivar**	**3.71**	**78**		**Pn**	**14 18 27.6**	**+0.3**
S39A				IAmb_Lg		14 19 28.1	
	comp=Z,61nm,1.1s						
AMTX	**Amarillo**	**3.73**	**236**	Pb	**Pb**	**14 18 37.3**	**+1.6**
	baz=54						
AMTX				Sb	**Sg**	**14 19 26.5**	**-2.8**
	baz=54						
AMTX	**Amarillo**	**3.73**	**236**		**Pn**	**14 18 27.6**	**0.0**
N33A	**J Bar K, Exete**	**3.74**	**5**	Pn	**Pn**	**14 18 27.5**	**-0.2**
N33A				IAmb_Lg		14 19 35.7	
	comp=Z,63nm,0.8s						
W39A	**Magazine**	**3.79**	**117**	Pb	**Pb**	**14 18 38.7**	**+1.9**
	baz=300						
W39A	**Magazine**	**3.79**	**117**		**Pn**	**14 18 28.5**	**+0.1**
W39A				IAmb_Lg		14 19 33.5	
	comp=Z,56nm,0.8s						

U40A	**Yellville**	**4.11**	**98**	Pn	**Pn**	**14 18 33.0**	**+0.2**
U40A				IAmb_Lg		14 19 44.4	
	comp=Z,48nm,0.8s						
N35A	**Tabor**	**4.23**	**24**	Pn	**Pn**	**14 18 33.8**	**-0.6**
KSCO	**Kaye Shedlock'**	**4.23**	**300**	P	**Pn**	**14 18 35.2**	**+0.7**
	baz=117						
KSCO	**Kaye Shedlock'**	**4.23**	**300**	Pn	**Pn**	**14 18 34.7**	**+0.1**
MIAR	**Mount Ida**	**4.29**	**124**	P	**Pn**	**14 18 37.2**	**+1.9**
	baz=306						
MIAR	**Mount Ida**	**4.29**	**124**	Pn	**Pn**	**14 18 36.2**	**+1.0**
MIAR				IAmb_Lg		14 19 53.5	
	comp=Z,48nm,1.0s						
P38A	**Dawn**	**4.31**	**51**	Pn	**Pn**	**14 18 36.1**	**+0.5**
P38A				IAmb_Lg		14 19 48.9	
	comp=Z,78nm,0.8s						
BGNE	**Belgrade**	**4.39**	**358**	Pn	**Pn**	**14 18 36.7**	**0.0**
BGNE				IAmb_Lg		14 20 00.4	
	comp=Z,74nm,0.7s						
Z38A	**Mt. Pleasant**	**4.44**	**147**	Pn	**Pn**	**14 18 37.1**	**-0.2**
Z38A				IAmb_Lg		14 19 57.0	
	comp=Z,46nm,0.7s						
MGMO	**Mountain Grove**	**4.51**	**86**		**Pn**	**14 18 38.9**	**+0.6**
ABTX	**Abilene, Hawle**	**4.61**	**199**	Pn	**Pn**	**14 18 39.7**	**+0.1**
R40A	**Maddies Statio**	**4.65**	**72**		**Pn**	**14 18 39.9**	**-0.3**
R40A				IAmb_Lg		14 19 59.9	
	comp=Z,50nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.79**	**102**	Pn	**Pn**	**14 18 42.1**	**0.0**
X40A	**Basin Creek Fa**	**4.83**	**120**		**Pn**	**14 18 42.8**	**+0.2**
X40A				IAmb_Lg		14 20 14.6	
	comp=Z,36nm,1.0s						
WHAR	**Wooly Hollow**	**4.86**	**109**	Pn	**Pn**	**14 18 43.9**	**+0.8**
WHAR				IAmb_Lg		14 20 07.9	
	comp=Z,62nm,0.9s						
W41B	**Gary Mavity, V**	**4.93**	**110**	P	**Pn**	**14 18 45.7**	**+1.6**
	baz=293						
W41B	**Gary Mavity, V**	**4.93**	**110**		**Pn**	**14 18 44.9**	**+0.8**
W41B				IAmb_Lg		14 20 11.7	
	comp=Z,62nm,1.0s						
MSTX	**Muleshoe**	**5.00**	**234**	IAmb_Lg		14 20 20.7	
	comp=Z,43nm,1.2s						
WHTX	**Lake Whitney,**	**5.02**	**176**	P	**Pn**	**14 18 45.6**	**+0.3**
	baz=356						
WHTX				S	**Sn**	**14 19 42.5**	**-1.1**
	baz=356						
WHTX	**Lake Whitney,**	**5.02**	**176**		**Pn**	**14 18 45.5**	**+0.1**
L34A	**Svendsen Farm,**	**5.09**	**13**	Pn	**Pn**	**14 18 47.1**	**+0.9**
WLAR	**White Oak Lake**	**5.13**	**129**	IAmb_Lg		14 20 15.9	
	comp=Z,33nm,0.8s						
T25A	**Trinidad**	**5.21**	**273**	IAmb_Lg		14 20 21.5	
	comp=Z,43nm,1.0s						
N38A	**Joes South For**	**5.24**	**43**	Pn	**Pn**	**14 18 48.1**	**-0.2**
P40A	**Paris**	**5.25**	**60**	Pn	**Pn**	**14 18 48.4**	**0.0**
237A	**Washetta, Mont**	**5.29**	**160**		**Pn**	**14 18 47.9**	**-1.1**
237A				IAmb_Lg		14 20 12.7	
	comp=Z,42nm,1.0s						
CCM	**Cathedral Cave**	**5.39**	**77**	Pn	**Pn**	**14 18 51.3**	**+0.9**
CCM				IAmb_Lg		14 20 31.8	
	comp=Z,35nm,0.7s						
T42A	**Van Buren**	**5.45**	**88**	Pn	**Pn**	**14 18 51.6**	**+0.4**
Z41A	**Richland Creek**	**5.61**	**130**	IAmb_Lg		14 20 42.6	
	comp=Z,32nm,0.8s						
K31A	**O'Neill**	**5.64**	**354**	IAmb_Lg		14 20 44.5	
	comp=Z,60nm,0.8s						
PBMO	**Poplar Bluff**	**5.99**	**90**	IAmb_Lg		14 20 43.3	
	comp=Z,36nm,0.8s						
FVM	**French Village**	**6.02**	**78**	IAmb_Lg		14 20 50.7	
	comp=Z,27nm,0.9s						
SCIA	**State Center**	**6.09**	**35**	IAmb_Lg		14 20 45.0	
	comp=Z,47nm,0.7s						
435B	**Jarrell**	**6.22**	**177**	IAmb_Lg		14 20 58.6	
	comp=Z,28nm,0.8s						
JCT	**Junction City**	**6.70**	**194**	IAmb_Lg		14 21 18.1	
	comp=Z,26nm,0.8s						
ECSD	**EROS Data Cent**	**6.79**	**8**	Pn	**Pn**	**14 19 09.0**	**-0.5**
L40A	**Anamosa**	**7.22**	**44**	IAmb_Lg		14 21 26.0	
	comp=Z,42nm,0.8s						
ANMO	**Albuquerque**	**7.24**	**256**	Pn	**Pn**	**14 19 16.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=90,slow=9.1,SNR=1.5						
ANMO				Sn	**Sn**	**14 20 44.6**	**+6.1**
	comp=Z,0.3nm,0.3s,baz=61,slow=13,SNR=1.9						
ANMO				Lg	Lg	14 21 13.9	
	comp=Z,1.1nm,0.3s,baz=43,slow=6.0,SNR=4.6						
PHWY	**Pilot Hill**	**7.27**	**308**	Pn	**Pn**	**14 19 15.9**	**-0.5**
PHWY				IAmb_Lg		14 21 19.2	
	comp=Z,21nm,0.9s						
W45A	**Hickory Valley**	**7.30**	**102**	IAmb_Lg		14 21 28.9	
	comp=Z,34nm,0.8s						
N23A	**Red Feather La**	**7.37**	**304**	IAmb_Lg		14 21 30.9	
	comp=Z,29nm,0.8s						
SUSD	**Miller**	**7.47**	**354**	IAmb_Lg		14 21 38.8	
	comp=Z,29nm,0.8s						
SMCO	**Snowmass**	**7.47**	**290**	Pn	**Pn**	**14 19 18.8**	**-0.6**
HDIL	**Hopedale**	**7.60**	**60**	Pn	**Pn**	**14 19 18.6**	**-2.0**
MNTX	**Cornudas Mount**	**8.14**	**232**	Pn	**Pn**	**14 19 28.1**	**-0.1**
JFWS	**Jewell Farm**	**8.32**	**43**	Pn	**Pn**	**14 19 30.8**	**+0.2**
JFWS				IAmb_Lg		14 21 57.9	
	comp=Z,27nm,0.7s						
T47A	**Sharon Grove**	**8.64**	**87**	IAmb_Lg		14 22 08.6	
	comp=Z,17nm,0.8s						
K22A	**Casper**	**8.70**	**313**	Pn	**Pn**	**14 19 35.3**	**-0.6**
K22A				IAmb_Lg		14 22 21.8	
	comp=Z,18nm,0.8s						
F33A	**5 Mile Ranch,**	**8.90**	**7**	IAmb_Lg		14 22 08.3	
	comp=Z,21nm,1.1s						
TX31	**Lajitas Ar. Si**	**9.05**	**214**	Pn	**Pn**	**14 19 39.6**	**-1.1**
TXAR	**Lajitas Array**	**9.05**	**214**	Pn	**Pn**	**14 19 40.2**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=36,slow=11,SNR=17						
TXAR				Pg		14 20 12.1	
	comp=Z,0.6nm,0.3s,baz=30,slow=13,SNR=6.1						
TXAR				Sn	**Sn**	**14 21 24.2**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=36,slow=20,SNR=2.2						
TXAR				Lg	Lg	14 22 12.8	
	comp=Z,0.5nm,0.3s,baz=48,slow=24,SNR=2.0						
TXAR	**Lajitas Array**	**9.05**	**214**	Pn	**Pn**	**14 19 39.8**	**-1.0**
CLTN	**Cedars of Leba**	**9.36**	**92**	IAmb_Lg		14 22 33.8	
	comp=Z,18nm,1.2s						
BW06	**Boulder Array**	**10.64**	**306**	Pn	**Pn**	**14 20 01.9**	**-0.7**
PD31	**Pinedale Array**	**10.64**	**306**	Pn	**Pn**	**14 20 01.8**	**-0.8**
PDAR	**Pinedale Array**	**10.64**	**306**	Pn	**Pn**	**14 20 00.8**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=111,slow=16,SNR=4.8						
PDAR				Pg		14 20 45.7	
	comp=Z,0.4nm,0.3s,baz=112,slow=16,SNR=4.8						
PDAR				Lg	Lg	14 23 01.2	
	comp=Z,0.3nm,0.3s,baz=122,slow=13,SNR=3.4						
YKA	**Yellowknife Ar**	**27.52**	**343**	P	**P**	**14 23 15.5**	**-1.0**
	comp=Z,0.6nm,0.7s,baz=135,slow=8.6,SNR=3.6						
ILAR	**Eielson Array**	**39.94**	**330**	P	**P**	**14 25 04.1**	**0.0**
	comp=Z,0.6nm,0.7s,baz=108,slow=7.0,SNR=8.3						

*VAO **19** 14:17:46.1±0.4, 15°98S×73°75W, h10km, mb4.6*
*ARE **19** 14:17:51±2.3, 16°08S±0°07×74°0W±0°1, h77km±4km, Error ellipse: s-maj=16.4km s-min=1.6km az=55.0*
*NEIC **19** 14:17:52.1±1.6, 15°81S±0°08×73°8W±0°1, h73km±5km, mb4.8/147, ML4.6(ARE), Error ellipse: s-maj=16.9km s-min=7.6km az=52.0*
*IDC **19** 14:17:52.5±0.4, 15°75S×73°70W, h73km±3km, mb4.2/19, mb1 4.2/24, mb1mx4.1/42, mbtmp4.4/24, MS3.4/9, Ms1 3.4/9, ms1mx3.2/25, Error ellipse: s-maj=15.7km s-min=9.8km az=67.0*
*GUC **19** 14:17:55.6±0.3, 16°30S×73°50W, h180km±63km, MW4.7*
ISC 19 14:17:51.9±0.4, 15°83S±0°04×73°72W±0°06, h70km±3km, h70km:pP-P, n315, σ1§10/331, mb4.7/76, 7C-2D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**4.10**	**128**	*eP*	**Pn**	**14 18 53.1**	**+0.9**
AP01				*eS*	**Sn**	**14 19 37.4**	**-1.5**
AP01	**Chacalluta**	**4.10**	**128**		**Pn**	**14 18 53.0**	**+0.9**
PB16	**IPOC Station P**	**4.74**	**122**	↑	*iP*	**14 19 03.4**	**+2.0**
PB16					*i S*	**14 19 55.0**	**-0.4**
PB16	**IPOC Station P**	**4.74**	**122**	Pn	**Pn**	**14 19 02.8**	**+1.4**
NNA	**Nana**	**4.87**	**321**	P	**Pn**	**14 19 02.1**	**-0.7**
	13nm,0.3s,baz=165,slow=9.2,SNR=17						
NNA				S	**Sn**	**14 19 56.1**	**-1.9**
	85nm,0.3s,baz=310,slow=4.5,SNR=6.3						
PSGC	**Pisagua**	**5.08**	**138**	↑	*iP*	**14 19 05.5**	**-0.1**
PSGC					*i S*	**14 19 59.4**	**-3.6**
PSGCX	**Pisagua**	**5.08**	**138**	Pn	**Pn**	**14 19 05.3**	**-0.3**
MNMC	**Minye Minye**	**5.13**	**130**	↑	*iP*	**14 19 07.1**	**+0.7**
MNMC					*i S*	**14 20 02.5**	**-2.0**
MNMC	**Minye Minye**	**5.13**	**130**	Pn	**Pn**	**14 19 07.1**	**+0.7**
LPAZ	**La Paz**	**5.40**	**96**	P	Pn	14 19 15.2	+4.8
	7.1nm,0.3s,baz=321,slow=4.8,SNR=80						
LPAZ					LR	LR	14 22 00.2
	comp=Z,278nm,20.8s,baz=249,slow=46						
LPAZ	**La Paz**	**5.40**	**96**	↑	*iP*	**Pn**	**14 19 15.1**	**+4.7**
LPAZ	**La Paz**	**5.40**	**96**	↑	*iP*	**Pn**	**14 19 14.7**	**+4.3**
LPAZ	**La Paz**	**5.40**	**96**	Pn		**Pn**	**14 19 14.8**	**+4.4**
PB11	**IPOC Station P**	**5.50**	**136**	↑	*iP*	**Pn**	**14 19 11.7**	**+0.2**
PB11					*i S*	**Sn**	**14 20 09.9**	**-3.7**
PB11	**IPOC Station P**	**5.50**	**136**			**Pn**	**14 19 11.4**	**-0.1**
GO01	**Chusmiza**	**5.76**	**132**	↓	*iP*	**Pn**	**14 19 10.3**	**+1.0**
GO01					*i S*	**Sn**	**14 20 18.5**	**-1.8**
GO01	**Chusmiza**	**5.76**	**132**			**Pn**	**14 19 15.9**	**+0.6**
TA01	**Diego Aracena**	**5.79**	**145**			**Pn**	**14 19 14.8**	**-0.5**
PATCX	**Punta Patache**	**6.01**	**146**	Pn		**Pn**	**14 19 17.8**	**-0.5**
PB08	**IPOC Station P**	**6.11**	**135**			**Pn**	**14 19 20.3**	**+0.4**
PB01	**IPOC Station P**	**6.56**	**143**			**Pn**	**14 19 25.9**	**0.0**
PB07	**IPOC Station P**	**6.90**	**149**	Pn		**Pn**	**14 19 29.8**	**-0.8**
PB09	**IPOC Station P**	**7.30**	**145**			**Pn**	**14 19 36.8**	**+0.8**
PB04	**IPOC Station P**	**7.30**	**153**			**Pn**	**14 19 35.0**	**-1.1**
PB06	**IPOC Station P**	**7.88**	**151**			**Pn**	**14 19 42.9**	**-1.2**
CZSB	**Cruzeiro do Su**	**8.11**	**7**	*eP*		**Pn**	**14 19 47.0**	**0.0**
LVC	**Limon Verde**	**8.13**	**147**	P		**Pn**	**14 19 48.0**	**+0.4**
	14nm,0.3s,baz=332,slow=9.1,SNR=25						
LVC				S		**Sn**	**14 21 15.0**	**-3.2**
	28nm,0.3s,baz=72,slow=14,SNR=15						
LVC	**Limon Verde**	**8.13**	**147**	Pn		**Pn**	**14 19 48.2**	**+0.5**
PB10	**IPOC Station P**	**8.21**	**159**	Pn		**Pn**	**14 19 46.5**	**-1.7**
PB15	**IPOC Station P**	**8.36**	**152**			**Pn**	**14 19 50.0**	**-0.6**
PB14	**IPOC Station P**	**9.29**	**161**	Pn		**Pn**	**14 20 01.4**	**-1.9**
ATAH	**Atahualpa**	**9.78**	**332**	P		**Pn**	**14 20 11.7**	**+1.5**
	0.4nm,0.3s,baz=137,slow=13,SNR=1.5						
ATAH				S		**Sn**	**14 21 57.3**	**-1.3**
	1.8nm,0.3s,baz=34,slow=11,SNR=1.8						
GO02	**Mina Guanaco**	**10.06**	**158**	Pn		**Pn**	**14 20 10.6**	**-3.3**
AC01	**Pan de Azucar**	**10.67**	**165**	Pn		**Pn**	**14 20 19.0**	**-3.0**
AC02	**Maricunga**	**11.76**	**159**	Pn		**Pn**	**14 20 37.8**	**+0.5**
GO03	**Copiap**	**12.15**	**165**	Pn		**Pn**	**14 20 40.3**	**-1.8**
SIV	**San Ignacio**	**12.17**	**92**	P		**Pn**	**14 20 41.2**	**-1.4**
	1.0nm,0.3s,baz=287,slow=10,SNR=21						
SIV					LR	LR	14 26 11.2
	comp=Z,160nm,21.4s,baz=286,slow=41						
SAML	**Samuel**	**12.36**	**58**	*eP*		**Pn**	**14 20 44.1**	**-0.9**
SAML	**Samuel**	**12.36**	**58**	Pn		**Pn**	**14 20 43.2**	**-1.8**
SAML	**Samuel**	**12.36**	**58**	*eP*		**Pn**	**14 20 43.9**	**-1.2**
AC05	**El Transito**	**13.33**	**167**			**Pn**	**14 20 58.2**	**0.0**
VILB	**Vilhena**	**13.41**	**79**	*eP*		**Pn**	**14 20 57.9**	**-1.4**
PTLB	**Pontes e Lacer**	**14.06**	**90**	*eP*		**Pn**	**14 21 06.9**	**-0.9**
GO04	**Tololo Observa**	**14.53**	**170**	Pn		**Pn**	**14 21 13.0**	**-1.1**
CO03	**El Pedregal**	**15.20**	**170**	Pn		**Pn**	**14 21 21.2**	**-1.4**
OTAV	**Otavalo**	**16.63**	**343**	P		**Pn**	**14 21 41.2**	**+0.1**
OTAV	**Otavalo**	**16.63**	**343**	*eP*		**P**	**14 21 42.1**	**-0.4**
VA03	**San Esteban**	**17.10**	**171**	P		**Pn**	**14 21 48.0**	**+1.4**
FLOC	**Florencia**	**17.41**	**354**	*eP*		**P**	**14 21 58.8**	**+8.1**
AQDB	**Aquidauana**	**17.74**	**108**	*eP*		**P**	**14 21 53.2**	**-1.0**
MACC	**Macarena, Meta**	**17.86**	**360**	*eP*		**Pn**	**14 21 56.8**	**+0.9**
MACA	**Manacapuru-AM**	**17.98**	**47**	*eP*		**Pn**	**14 21 58.3**	**+1.1**
PP1B	**Ponte de Pedra**	**18.14**	**98**	*eP*		**P**	**14 21 58.3**	**-0.4**
H03N1	**Juan Fernandez**	**18.15**	**194**	T		T	14 40 28.8	
	baz=17,slow=74						
H03N2	**Juan Fernandez**	**18.16**	**194**	T		T	14 40 31.2	
	baz=17,slow=74						
H03N3	**Juan Fernandez**	**18.17**	**194**	T		T	14 40 22.3	
	baz=17,slow=74						
PCON	**Cinco Dias**	**18.23**	**351**	*eP*		**Pn**	**14 22 06.0**	**+5.1**
GUVC	**San Jose del G**	**18.29**	**3**	*eP*		**P**	**14 21 58.4**	**-2.0**
BETC	**Betania**	**18.47**	**355**	*eP*		**Pn**	**14 22 05.2**	**+2.0**
POPC	**Popayan, Colom**	**18.48**	**351**	*eP*		**Pn**	**14 22 04.3**	**+0.8**
CPUP	**Villa Florida**	**18.51**	**127**	P		**P**	**14 22 01.5**	**-1.1**
	0.2nm,0.3s,baz=294,slow=18,

Y49A	**Blount Mountai**	**50.87**	**346**	P	**P**	**14 26 44.6**	**-1.2**
Y49A				IAmb	IAmb	14 26 54.3	
	comp=Z,7.3nm,1.1s						
FPAL	**Fort Paine**	**51.35**	**347**	P	**P**	**14 26 48.5**	**-0.9**
W50A	**Signal Mountai**	**51.93**	**348**	P	**P**	**14 26 52.1**	**-1.6**
W50A				IAmb	IAmb	14 26 54.1	
	comp=Z,16nm,1.1s						
SWET	**Sewanee**	**52.07**	**347**	P	**P**	**14 26 53.5**	**-1.3**
SWET				IAmb	IAmb	14 26 54.7	
	comp=Z,18nm,1.0s						
V52A	**Sevierville**	**52.23**	**350**	P	**P**	**14 26 55.3**	**-0.6**
V51A	**Loudon**	**52.33**	**349**	P	**P**	**14 26 56.0**	**-0.6**
WLAR	**White Oak Lake**	**52.60**	**340**	P	**P**	**14 26 59.6**	**+1.0**
WHTX	**Lake Whitney,**	**52.71**	**335**	P	**P**	**14 26 59.2**	**-0.3**
WHTX				IAmb	IAmb	14 26 60.0	
	comp=Z,10nm,0.8s						
V48A	**Smith Brothers**	**52.77**	**347**	P	**P**	**14 26 59.0**	**-0.9**
SLBS	**Sierra La Lagu**	**52.87**	**317**	P	**P**	**14 27 00.7**	**-0.3**
SLBS				IAmb	IAmb	14 27 01.9	
	comp=Z,12nm,1.2s						
U49A	**Red Boiling Sp**	**53.29**	**348**	P	**P**	**14 27 02.5**	**-1.2**
U49A				IAmb	IAmb	14 27 31.6	
	comp=Z,20nm,1.1s						
JSRW	**J. Sargeant Re**	**53.38**	**356**	P	**P**	**14 27 03.5**	**-0.8**
TX31	**Lajitas Ar. Si**	**53.40**	**327**	P	**P**	**14 27 04.2**	**-0.7**
TX32	**Lajitas Array**	**53.40**	**327**	P	**P**	**14 27 04.5**	**-0.3**
TX32				IAmb	IAmb	14 27 05.6	
	comp=Z,8.2nm,1.2s						
TXAR	**Lajitas Array**	**53.40**	**327**	P	**P**	**14 27 04.3**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=151,slow=9.0,SNR=29						
TXAR				pP	**pP**	**14 27 23.0**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=146,slow=7.8,SNR=4.0						
TXAR				PcP	**PcP**	**14 28 11.3**	**0.0**
	comp=Z,0.7nm,0.8s,baz=154,slow=8.6,SNR=1.4						
MIAR	**Mount Ida**	**53.54**	**340**	P	**P**	**14 27 05.2**	**-0.4**
MIAR				IAmb	IAmb	14 27 05.8	
	comp=Z,15nm,1.3s						
W41B	**Gary Mavity, V**	**53.68**	**341**	P	**P**	**14 27 05.9**	**-0.7**
W41B				IAmb	IAmb	14 27 06.9	
	comp=Z,23nm,1.5s						
WHAR	**Wooly Hollow**	**53.80**	**341**	P	**P**	**14 27 07.1**	**-0.4**
WHAR				IAmb	IAmb	14 27 28.3	
	comp=Z,6.8nm,1.1s						
LCAR	**Lake Charles**	**54.19**	**343**	P	**P**	**14 27 09.4**	**-0.9**
LCAR				IAmb	IAmb	14 27 10.2	
	comp=Z,13nm,1.3s						
ABTX	**Abilene, Hawle**	**54.19**	**333**	P	**P**	**14 27 10.1**	**-0.3**
ABTX				IAmb	IAmb	14 27 10.7	
	comp=Z,12nm,0.8s						
X37A	**Clayton**	**54.20**	**338**	P	**P**	**14 27 10.4**	**0.0**
X37A				IAmb	IAmb	14 27 10.6	
	comp=Z,28nm,1.5s						
R49A	**Shelbyville**	**54.90**	**349**	P	**P**	**14 27 15.6**	**+0.3**
U40A	**Yellville**	**54.96**	**341**	P	**P**	**14 27 15.3**	**-0.6**
U40A				IAmb	IAmb	14 27 16.3	
	comp=Z,9.0nm,0.8s						
WCI	**Wyandotte Cave**	**55.05**	**348**	P	**P**	**14 27 15.5**	**-1.0**
T42A	**Van Buren**	**55.07**	**343**	P	**P**	**14 27 15.4**	**-1.2**
T42A				IAmb	IAmb	14 27 32.0	
	comp=Z,11nm,1.4s						
S44A	**Carbondale**	**55.20**	**345**	P	**P**	**14 27 16.8**	**-0.8**
HHAR	**Hobbs**	**55.24**	**340**	P	**P**	**14 27 17.6**	**-0.3**
HHAR				IAmb	IAmb	14 27 18.5	
	comp=Z,13nm,1.2s						
MGMO	**Mountain Grove**	**55.52**	**342**	P	**P**	**14 27 19.2**	**-0.7**
MGMO				IAmb	IAmb	14 27 20.3	
	comp=Z,13nm,1.1s						
TUL1	**Leonard**	**55.54**	**338**	P	**P**	**14 27 19.6**	**-0.4**
TUL1				IAmb	IAmb	14 27 20.0	
	comp=Z,18nm,1.1s						
FVM	**French Village**	**55.78**	**344**	P	**P**	**14 27 21.0**	**-0.7**
FVM				IAmb	IAmb	14 27 21.6	
	comp=Z,16nm,1.4s						
OLIL	**Olney**	**55.92**	**346**	P	**P**	**14 27 21.9**	**-0.8**
MNTX	**Cornudas Mount**	**56.18**	**327**	P	**P**	**14 27 23.8**	**-0.9**
MNTX				IAmb	IAmb	14 27 25.4	
	comp=Z,9.9nm,1.4s						
Q44A	**Meyer Farm, Va**	**56.30**	**346**	P	**P**	**14 27 23.9**	**-1.5**
S39A	**Bolivar**	**56.34**	**341**	P	**P**	**14 27 24.5**	**-1.2**
S39A				IAmb	IAmb	14 27 26.0	
	comp=Z,11nm,0.8s						
ACSO	**Alum Creek Sta**	**56.43**	**351**	P	**P**	**14 27 25.5**	**-0.8**
PAL	**Palisades**	**56.54**	**360**	P	**P**	**14 27 25.6**	**-1.5**
P46A	**Rosedale**	**56.58**	**348**	P	**P**	**14 27 26.6**	**-0.8**
R40A	**Maddies Statio**	**56.58**	**343**	P	**P**	**14 27 26.1**	**-1.3**
R40A				IAmb	IAmb	14 27 27.0	
	comp=Z,10.0nm,1.1s						
MSTX	**Muleshoe**	**56.73**	**331**	P	**P**	**14 27 27.7**	**-1.1**
MSTX				IAmb	IAmb	14 27 29.8	
	comp=Z,5.7nm,0.9s						
L56A	**Greenwood**	**57.78**	**357**	P	**P**	**14 27 36.0**	**+0.1**
319A	**Douglas**	**58.04**	**324**	P	**P**	**14 27 38.3**	**+0.3**
319A				IAmb	IAmb	14 27 39.4	
	comp=Z,8.6nm,0.8s						
121A	**Cookes Peak, D**	**58.09**	**326**	P	**P**	**14 27 38.9**	**+0.4**
121A				IAmb	IAmb	14 28 07.6	
	comp=Z,4.9nm,0.9s						
R32A	**Long Quarter,**	**58.83**	**337**	P	**P**	**14 27 42.6**	**-0.7**
MEDO	**Medina**	**58.86**	**356**	P	**P**	**14 27 42.0**	**-1.3**
LENM	**Lemitar**	**58.94**	**328**	P	**P**	**14 27 44.2**	**-0.1**
ANMO	**Albuquerque**	**59.30**	**329**	P	**P**	**14 27 46.3**	**-0.4**
K43A	**Burlington**	**59.77**	**348**	P	**P**	**14 27 48.5**	**-1.1**
T25A	**Trinidad**	**60.10**	**332**	P	**P**	**14 27 52.4**	**+0.1**
T25A				IAmb	IAmb	14 28 12.0	
	comp=Z,17nm,1.4s						
JFWS	**Jewell Farm**	**60.40**	**346**	P	**P**	**14 27 54.3**	**+0.4**
SDCO	**Great Sand Dun**	**61.09**	**332**	P	**P**	**14 27 59.0**	**-0.1**
SDCO				IAmb	IAmb	14 28 00.1	
	comp=Z,7.1nm,0.7s						
SDCO				pP	**pP**	**14 28 17.7**	**-0.7**
X16A	**Lo Mia Camp, P**	**61.51**	**325**	P	**P**	**14 28 02.5**	**+0.6**
X16A				IAmb	IAmb	14 28 03.5	
	comp=Z,3.7nm,0.8s						
S22A	**4UR Ranch, Cre**	**61.71**	**331**	P	**P**	**14 28 03.4**	**+0.1**
S22A				pP	**pP**	**14 28 22.5**	**-0.1**
Q24A	**Divide**	**61.93**	**333**	P	**P**	**14 28 05.0**	**+0.2**
Q24A				IAmb	IAmb	14 28 05.7	
	comp=Z,6.6nm,1.1s						
Y14A	**Wickenburg**	**62.05**	**323**	P	**P**	**14 28 05.7**	**+0.4**
Y14A				IAmb	IAmb	14 28 06.7	
	comp=Z,4.1nm,0.8s						
MVCO	**Mesa Verde**	**62.10**	**329**	P	**P**	**14 28 05.9**	**0.0**
MVCO				IAmb	IAmb	14 28 06.8	
	comp=Z,6.9nm,1.2s						
E62A	**Clayton Lake**	**62.27**	**3**	P	**P**	**14 28 07.2**	**+0.7**
WUAZ	**Wupatki**	**62.29**	**326**	P	**P**	**14 28 07.7**	**+0.6**
WUAZ				IAmb	IAmb	14 28 08.8	
	comp=Z,5.6nm,0.9s						
ESJX	**Sierra Juarez**	**62.44**	**320**	P	**P**	**14 28 07.8**	**-0.3**
ISCO	**Idaho Springs**	**62.82**	**333**	P	**P**	**14 28 10.5**	**-0.1**
PV01	**Paradox Valley**	**62.85**	**330**	P	**P**	**14 28 10.9**	**0.0**
ECSD	**EROS Data Cent**	**62.87**	**342**	P	**P**	**14 28 09.9**	**-0.6**
ECSD				IAmb	IAmb	14 28 10.8	
	comp=Z,9.9nm,0.8s						
SMCO	**Snowmass**	**62.93**	**331**	P	**P**	**14 28 11.7**	**+0.2**
SMCO				pP	**pP**	**14 28 30.9**	**0.0**
SMCO				IAmb	IAmb	14 28 32.9	
	comp=Z,4.3nm,0.9s						
PV15	**Paradox Valley**	**62.98**	**330**	P	**P**	**14 28 11.9**	**+0.3**
PV15				IAmb	IAmb	14 28 13.1	
	comp=Z,8.9nm,0.9s						
PV02	**Paradox Valley**	**62.99**	**330**	P	**P**	**14 28 12.2**	**+0.4**
PV02				IAmb	IAmb	14 28 39.8	
	comp=Z,4.0nm,0.9s						
PV13	**Radium Mtn., P**	**63.00**	**329**	P	**P**	**14 28 11.9**	**+0.2**
PV13				IAmb	IAmb	14 28 12.3	
	comp=Z,3.6nm,0.7s						
SPMN	**Marine on St.**	**63.19**	**345**	P	**P**	**14 28 12.0**	**-0.6**
BAR	**Barrett**	**63.35**	**320**	P	**P**	**14 28 13.6**	**-0.4**
BAR				IAmb	IAmb	14 28 15.7	
	comp=Z,5.7nm,1.1s						
U15A	**North Rim**	**63.47**	**326**	P	**P**	**14 28 15.7**	**+0.7**
PFO	**Pinyon Flats O**	**63.86**	**321**	P	**P**	**14 28 18.3**	**+0.9**
N23A	**Red Feather La**	**63.86**	**333**	P	**P**	**14 28 17.3**	**-0.2**
F36A	**Milaca**	**63.96**	**345**	P	**P**	**14 28 17.3**	**-0.4**
KNB	**Kanab**	**64.19**	**326**	P	**P**	**14 28 20.2**	**+0.6**
KNB					**pP**	**14 28 39.2**	**+0.1**
SRU	**San Rafael Swe**	**64.58**	**329**	P	**P**	**14 28 22.0**	**-0.1**
MTPU	**Mount Pierson**	**64.61**	**327**	P	**P**	**14 28 22.8**	**+0.2**
F33A	**5 Mile Ranch,**	**64.69**	**343**	P	**P**	**14 28 21.9**	**-0.5**
SZCU	**Shurtz Canyon**	**64.76**	**326**	P	**P**	**14 28 24.0**	**+0.6**
CCUT	**Cedar City**	**64.87**	**326**	P	**P**	**14 28 25.0**	**+0.9**
MSU	**Marysvale**	**64.96**	**327**	P	**P**	**14 28 24.8**	**+0.1**
P17A	**Butcher Ranch,**	**64.96**	**329**	P	**P**	**14 28 24.6**	**+0.1**
MVU	**Marysvale**	**64.97**	**327**	P	**P**	**14 28 25.4**	**+0.7**
MVU				pP	**pP**	**14 28 44.3**	**0.0**
BELA	**Belgrano 2**	**64.98**	**172**	P	**P**	**14 28 24.8**	**+0.8**
TMUT	**Trail Mountain**	**65.06**	**329**	P	**P**	**14 28 25.2**	**-0.2**
SHPR	**Sheep Range**	**65.11**	**324**	P	**P**	**14 28 26.2**	**+0.6**
TCRU	**Three Creeks R**	**65.17**	**327**	P	**P**	**14 28 25.7**	**-0.4**
PSUT	**Pine Spring**	**65.86**	**326**	P	**P**	**14 28 30.8**	**+0.3**
TPNV	**Topopah Spring**	**66.04**	**324**	P	**P**	**14 28 32.4**	**+0.8**
JLU	**Jordanelle**	**66.17**	**329**	P	**P**	**14 28 32.6**	**+0.1**
B35A	**Bob, Littlefor**	**66.34**	**346**	P	**P**	**14 28 32.3**	**-0.8**
B35A				IAmb	IAmb	14 28 33.2	
	comp=Z,14nm,0.7s						
CTU	**Camp Tracy**	**66.39**	**329**	P	**P**	**14 28 33.0**	**-0.7**
SPR3	**Spring Creek 3**	**66.45**	**326**	P	**P**	**14 28 34.2**	**-0.2**
SPR3				pP	**pP**	**14 28 53.4**	**-0.2**
DUG	**Dugway, Tooele**	**66.55**	**328**	P	**P**	**14 28 35.3**	**+0.5**
DUG				IAmb	IAmb	14 28 36.4	
	comp=Z,6.9nm,0.8s						
TCUT	**Toone Canyon**	**66.55**	**330**	P	**P**	**14 28 35.1**	**+0.2**
R11A	**Troy Canyon, C**	**66.66**	**325**	P	**P**	**14 28 35.6**	**+0.1**
R11A				pP	**pP**	**14 28 55.2**	**+0.5**
AGMN	**Agassiz Nation**	**66.82**	**344**	P	**P**	**14 28 35.0**	**-1.1**
AGMN				IAmb	IAmb	14 28 36.5	
	comp=Z,12nm,0.8s						
VNA3	**Neumayer Olymp**	**66.88**	**162**	P	**P**	**14 28 37.2**	**+1.0**
PDAR	**Pinedale Array**	**66.97**	**332**	P	**P**	**14 28 36.8**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=141,slow=7.5,SNR=4.6						
HWUT	**Hardware Ranch**	**67.00**	**330**	P	**P**	**14 28 37.1**	**-0.6**
HWUT				IAmb	IAmb	14 28 38.4	
	comp=Z,4.8nm,0.8s						
BGU	**Big Grassy Mou**	**67.20**	**329**	P	**P**	**14 28 38.6**	**-0.3**
TPH	**Tonopah**	**67.38**	**324**	P	**P**	**14 28 40.5**	**+0.3**
VNA2	**Neumayer--Watz**	**67.48**	**161**	P	**P**	**14 28 41.0**	**+0.9**
	baz=290,slow=8.9						
MDND	**Maddock**	**67.48**	**341**	P	**P**	**14 28 40.7**	**+0.4**
HVU	**Hansel Valley**	**67.72**	**329**	P	**P**	**14 28 42.0**	**-0.1**
HVU					**pP**	**14 29 01.1**	**-0.4**
SNOW	**Snow King Moun**	**68.06**	**332**	P	**P**	**14 28 44.5**	**+0.2**
SNOW				IAmb	IAmb	14 28 45.2	
	comp=Z,4.5nm,0.6s						
OMMB	**Old Mammoth Mi**	**68.09**	**323**	P	**P**	**14 28 45.0**	**+0.2**
OMMB					**pP**	**14 29 04.4**	**+0.3**
MDPB	**Devils Postpil**	**68.15**	**323**	P	**P**	**14 28 45.5**	**+0.5**
ELK	**Elko**	**68.20**	**327**	P	**P**	**14 28 44.8**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=120,slow=2.2,SNR=7.6						
LHV	**Little Huntoon**	**68.23**	**323**	P	**P**	**14 28 46.3**	**+1.1**
NVAR	**Mina Array Bea**	**68.24**	**324**	P	**P**	**14 28 46.1**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=151,slow=6.6,SNR=6.1						
NVAR				pP	**pP**	**14 29 04.8**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=140,slow=6.9,SNR=3.5						
NVAR	**Mina Array Bea**	**68.24**	**324**	P	**P**	**14 28 45.7**	**+0.1**
IMW	**Indian Meadow**	**68.48**	**332**	P	**P**	**14 28 46.9**	**-0.1**
FLWY	**Flagg Ranch**	**68.52**	**332**	P	**P**	**14 28 47.5**	**+0.4**
FLWY				IAmb	IAmb	14 28 48.6	
	comp=Z,7.6nm,0.9s						
ULM	**Lac du Bonnet**	**68.62**	**345**	P	**P**	**14 28 46.5**	**-1.0**
	comp=Z,4.9nm,0.5s,baz=154,slow=7.5,SNR=7.6						
ULM				pP	**pP**	**14 29 06.3**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=155,slow=11,SNR=2.4						
ULM	**Lac du Bonnet**	**68.62**	**345**	P	**P**	**14 28 46.4**	**-1.0**
ULM				IAmb	IAmb	14 28 47.0	
	comp=Z,6.9nm,0.7s						
RLMT	**Red Lodge**	**68.71**	**334**	P	**P**	**14 28 48.7**	**+0.3**
YNE	**Yellowstone No**	**68.94**	**333**	P	**P**	**14 28 49.8**	**0.0**
YNE					**pP**	**14 29 08.8**	**-0.7**
SAO	**San Andreas Ge**	**69.00**	**320**	P	**P**	**14 28 49.1**	**-0.9**
SAO				IAmb	IAmb	14 29 02.2	
	comp=Z,10nm,1.1s						
SNAA	**Sanae**	**69.09**	**161**	P	**P**	**14 28 50.6**	**+0.3**
SNAA	**Sanae**	**69.09**	**161**	P	**P**	**14 28 50.8**	**+0.6**
SNAA				IAmb	IAmb	14 28 51.8	
	comp=Z,7.8nm,0.8s						
YHL	**Hebgen Lake**	**69.33**	**332**	P	**P**	**14 28 52.9**	**+0.6**
GCMT	**Greycliff**	**69.42**	**334**	P	**P**	**14 28 51.9**	**-0.7**
PNTR	**Pine Nut**	**69.43**	**323**	P	**P**	**14 28 53.4**	**+0.5**
PNTR				IAmb	IAmb	14 28 56.4	
	comp=Z,6.6nm,0.9s						
PAHR	**Pah Rah Range**	**69.73**	**324**	P	**P**	**14 28 55.5**	**+0.9**
PAHR				IAmb	IAmb	14 28 56.6	
	comp=Z,7.8nm,0.8s						
PAHR				pP	**pP**	**14 29 14.3**	**+0.2**
HLID	**Hailey**	**69.86**	**330**	P	**P**	**14 28 56.1**	**+0.7**
BCYI	**Bear Canyon**	**69.93**	**331**	P	**P**	**14 28 56.4**	**+0.4**
MCMT	**McKenzie Canyo**	**70.07**	**331**	P	**P**	**14 28 57.0**	**+0.2**
MFID	**Camas Ranch**	**70.44**	**329**	P	**P**	**14 28 59.7**	**+0.7**
MFID				IAmb	IAmb	14 29 00.7	
	comp=Z,8.1nm,0.9s						
SCHQ	**Schefferville**	**70.62**	**4**	P	**P**	**14 28 58.9**	**-0.7**
	comp=Z,4.9nm,0.8s,baz=153,slow=3.8,SNR=3.6						
LRM	**Limekiln Ridge**	**70.65**	**332**	P	**P**	**14 29 00.5**	**+0.2**
ORV	**Oroville**	**70.84**	**323**	P	**P**	**14 29 01.9**	**+0.6**
ORV				IAmb	IAmb	14 29 03.3	
	comp=Z,11nm,1.1s						
ORV					**PcP**	**14 29 20.9**	**-0.7**
LIC	**Lamto**	**71.43**	**78**	*e*P	**P**	**14 29 04.5**	**-0.9**
	comp=Z,33nm,0.9s						
TIC	**Toumodi**	**71.57**	**77**	*e*P	**P**	**14 29 05.4**	**-0.9**
DBIC	**Dimbokro**	**71.73**	**77**	P	**P**	**14 29 06.8**	**-0.4**
	comp=Z,11nm,0.6s,baz=241,slow=6.5,SNR=21						
DBIC				LR	LR	14 58 49.5	
	comp=Z,34nm,20.6s,baz=185,slow=34						
DBIC	**Dimbokro**	**71.73**	**77**	P	**P**	**14 29 06.8**	**-0.4**
DBIC				IAmb	IAmb	14 29 07.5	
	comp=Z,11nm,0.6s						
KIC	**Kosan Boka**	**71.74**	**78**	*e*P	**P**	**14 29 06.9**	**-0.4**
	comp=Z,56nm,0.9s						
WDC	**Whiskeytown Da**	**72.12**	**323**	P	**P**	**14 29 07.8**	**-1.2**
BMO	**Blue Mountains**	**72.22**	**329**	P	**P**	**14 29 09.4**	**-0.1**
KMRM	**Mail Ridge**	**72.57**	**322**	P	**P**	**14 29 11.0**	**-0.8**
I07A	**Izee**	**72.79**	**327**	P	**P**	**14 29 13.4**	**+0.4**
WALA	**Waterton Lakes**	**73.77**	**334**	P	**P**	**14 29 17.6**	**-1.0**
WALA				IAmb	IAmb	14 29 43.3	
	comp=Z,11nm,1.4s						
QSPA	**South Pole Qui**	**74.33**	**180**	P	**P**	**14 29 22.7**	**+0.9**
	comp=Z,3.7nm,0.6s,baz=308,slow=0.5,SNR=56						
QSPA				pP	**pP**	**14 29 41.9**	**+1.1**
	comp=Z,5.2nm,0.9s,baz=298,slow=1.7,SNR=6.5						
QSPA	**South Pole Qui**	**74.33**	**180**	P	**P**	**14 29 22.9**	**+1.1**
QSPA				IAmb	IAmb	14 29 24.1	
	comp=Z,17nm,1.4s						
QSPA					**pP**	**14 29 42.6**	**+1.8**
KOWA	**Kowa**	**75.17**	**70**	P	**P**	**14 29 27.3**	**-0.1**
KOWA				IAmb	IAmb	14 29 28.5	
	comp=Z,11nm,0.7s						
TOA0	**Torodi Ar. Sit**	**79.93**	**73**	P	**P**	**14 29 53.9**	**-0.1**
TOA0				pP	**pP**	**14 30 13.2**	**-0.4**
TORD	**Torodi Ar. Bea**	**79.93**	**73**	P	**P**	**14 29 54.1**	**+0.2**
	comp=Z,18nm,0.7s,baz=258,slow=5.3,SNR=94						
TORD				pP	**pP**	**14 30 13.4**	**-0.2**
	comp=Z,9.0nm,0.9s,baz=262,slow=5.1,SNR=6.5						
TORD				LR	LR	15 05 29.4	
	comp=Z,35nm,18.2s,baz=240,slow=36						
TORD	**Torodi Ar. Bea**	**79.93**	**73**	P	**P**	**14 29 53.7**	**-0.2**
VNDA	**Vanda**	**81.59**	**190**	P	**P**	**14 30 03.0**	**+1.3**
	comp=Z,1.8nm,0.9s,baz=111,slow=4.9,SNR=9.9						
VNDA				pP	**pP**	**14 30 22.2**	**+1.1**
	comp=Z,1.8nm,1.0s,baz=104,slow=6.3,SNR=4.9						
VNDA	**Vanda**	**81.59**	**190**	P	**P**	**14 30 03.4**	**+1.7**
SYO	**Syowa Base**	**83.36**	**161**	*e*P	**P**	**14 30 10.2**	**-0.8**
YKA	**Yellowknife Ar**	**84.39**	**342**	P	**P**	**14 30 15.7**	**-0.5**
	comp=Z,4.4nm,0.9s,baz=136,slow=5.7,SNR=16						
YKA				pP	**pP**	**14 30 35.6**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=136,slow=5.2,SNR=5.1						
PAB	**San Pablo**	**84.82**	**47**	P	**P**	**14 30 20.2**	**+1.2**
PAB				IAmb	IAmb	14 30 21.6	
	comp=Z,15nm,1.0s						
ESDC	**Sonseca Array**	**85.14**	**47**	P	**P**	**14 30 21.6**	**+1.0**
	comp=Z,6.1nm,0.9s,baz=252,slow=5.9,SNR=20						
ESDC				pP	**pP**	**14 30 41.1**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=254,slow=5.2,SNR=5.3						
ESDC	**Sonseca Array**	**85.14**	**47**	P	**P**	**14 30 21.3**	**+0.7**
MAW	**Mawson**	**91.01**	**165**	P	**P**	**14 30 48.8**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=210,slow=8.8,SNR=7.4						
SUMG	**Summit**	**91.25**	**10**	P	**P**	**14 30 49.9**	**+0.4**
ECH	**Echery**	**95.71**	**42**	P	**P**	**14 31 10.8**	**+0.8**
ILAR	**Eielson Array**	**97.21**	**336**	P	**P**	**14 31 15.3**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=151,slow=2.5,SNR=7.4						
STKA	**Stephens Creek**	**121.72**	**215**	PKP	**PKPdf**	**14 36 38.2**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=41,slow=2.4,SNR=6.3						
H11N3	**WAKE ISLAND Hyl**	**22.39**	**284**	T	T	16 50 40.3	
	baz=97,slow=74						
H11N2	**WAKE ISLAND Hyl**	**22.40**	**284**	T	T	16 50 41.4	
	baz=97,slow=74						
H11N1	**WAKE ISLAND Hyl**	**22.40**	**284**	T	T	16 50 38.7	
	baz=97,slow=74						
H11S2	**WAKE ISLAND Hyl**	**22.43**	**282**	T	T	16 50 39.6	
	baz=99,slow=75						
H11S1	**WAKE ISLAND Hyl**	**22.44**	**282**	T	T	16 50 48.4	
	baz=99,slow=75						
H11S3	**WAKE ISLAND Hyl**	**22.45**	**282**	T	T	16 50 37.3	
	baz=99,slow=75						
SEY	**Seymchan**	**123.12**	**337**	PKP	**PKPdf**	**14 36 40.1**	**0.0**
	comp=Z,3.9nm,0.7s,baz=115,slow=1.7,SNR=15						
PETK	**Petropavlovsk-**	**125.32**	**325**	PKP	**PKPdf**	**14 36 44.8**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=80,slow=2.1,SNR=4.0						
CTA	**Charters Tower**	**126.92**	**229**	PKP	**PKPdf**	**14 36 48.7**	**0.0**
	comp=Z,2.0nm,0.5s,baz=42,slow=15,SNR=2.5						
ASAR	**Alice Springs**	**132.35**	**215**	PKP	**PKPdf**	**14 36 58.5**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=127,slow=1.6,SNR=44						
ASAR				pPKP	**pPKPdf**	**14 37 19.1**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=145,slow=2.6,SNR=8.3						
ASAR	**Alice Springs**	**132.35**	**215**	PKPdf	**PKPdf**	**14 36 58.0**	**-1.0**
WRA	**Warramunga Arr**	**135.00**	**219**	PKP	**PKPdf**	**14 37 03.9**	**-0.2**
	comp=Z,3.4nm,0.5s,baz=130,slow=1.7,SNR=70						
WRA				pPKP	**pPKPdf**	**14 37 24.6**	**-0.2**
	comp=Z,4.3nm,0.7s,baz=153,slow=1.5,SNR=11						
WRA	**Warramunga Arr**	**135.00**	**219**	PKPdf	**PKPdf**	**14 37 02.8**	**-1.2**
ZALV	**Zalesovo Beam**	**138.43**	**19**	PKP	**PKPdf**	**14 37 09.7**	**+0.4**
	comp=Z,4.0nm,0.6s,baz=191,slow=1.5,SNR=8.4						
ZALV				pPKP	**pPKPdf**	**14 37 30.2**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=304,slow=3.2,SNR=2.5						
ZALV	**Zalesovo Beam**	**138.43**	**19**		**PKPdf**	**14 37 09.4**	**+0.1**
KURK	**Kurchatov**	**138.70**	**27**		**PKPdf**	**14 37 08.9**	**-0.9**
KURBB	**Kurchatov Arra**	**138.73**	**27**	PKP	**PKPdf**	**14 37 08.9**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=318,slow=2.3,SNR=6.7						
KLR	**Kul'dur**	**140.75**	**334**	PKP	**PKPdf**	**14 37 13.6**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=18,slow=4.8,SNR=6.0						
FITZ	**Fitzroy Crossi**	**141.26**	**210**	PKhKP	PKPpre	14 37 08.0	
	comp=Z,2.3nm,0.6s,baz=232,slow=2.3,SNR=12						
MKAR	**Makanchi Array**	**143.24**	**28**	PKP	PKPbc	14 37 15.3	-0.1
	comp=Z,2.0nm,0.5s,baz=303,slow=3.1,SNR=26						
MKAR	**Makanchi Array**	**143.24**	**28**		PKPpre	14 37 14.2	
USRK	**Ussuriysk Ar.**	**144.30**	**328**	PKPbc	PKPbc	14 37 18.4	-0.1
	comp=Z,8.4nm,0.8s,baz=75,slow=1.7,SNR=12						
USRK	**Ussuriysk Ar.**	**144.30**	**328**	PKPdf	PKPbc	14 37 18.9	+0.3
SONM	**Songino Array**	**148.09**	**360**	PKPbc	**PKPbc**	**14 37 30.0**	**+0.2**
	comp=Z,6.4nm,0.5s,baz=333,slow=1.2,SNR=4.2						
BATI	**Baumata**	**148.93**	**215**	PKPbc	**PKPbc**	**14 37 33.4**	**+0.5**
	comp=Z,16nm,0.4s,baz=8.9,slow=1.2,SNR=4.2						
SIJI	**Sorong**	**150.26**	**238**	PKPbc	**PKPbc**	**14 37 36.0**	**-0.2**
	comp=Z,11nm,0.7s,baz=6.1,slow=8.0,SNR=4.6						
KSRS	**Korea Array**	**151.18**	**322**	PKPbc	**PKPbc**	**14 37 37.0**	**-0.5**
	comp=Z,9.7nm,0.9s,baz=179,slow=0.3,SNR=9.3						
GTA	**Gaotai**	**155.84**	**12**	⇑PKP	PKPdf	14 37 48.6	+10
GTA				pPKP	PKPab	14 38 05.0	-0.3
GTA				sPKP		14 38

	comp=N,112nm,0.3s							
GELI	**Tayfur-Gelibol**	**1.57**	**16**	PN	**Pb**	**14 20 40.1**	**-0.3**
GCAM	**G?zelcaml?**	**1.58**	**138**	PN	**Pn**	**14 20 39.9**	**+0.8**
GCAM	**G?zelcaml?**	**1.58**	**138**	*i* P	**Pb**	**14 20 40.9**	**+0.5**
GCAM				*i* S	**Sg**	**14 21 02.9**	**+0.9**
BALY	**Balya**	**1.58**	**57**	*i* P	**Pg**	**14 20 41.1**	**-0.6**
BALY				*i* S	**Sg**	**14 21 03.5**	**+1.3**
BALY				IAML		14 21 05.0	
	comp=N,58nm,0.3s						
BALY				IAML		14 21 06.0	
	comp=E,68nm,0.4s						
AOS	**Alonnisos**	**1.60**	**281**	P	**Pn**	**14 20 39.6**	**+0.1**
AOS	**Alonnisos**	**1.60**	**281**	PN	**Pn**	**14 20 40.6**	**+1.1**
SMTH	**Samothraki Isl**	**1.61**	**350**	P	**Pn**	**14 20 39.4**	**-0.2**
SMTH	**Samothraki Isl**	**1.61**	**350**	P	**Pb**	**14 20 40.8**	**-0.2**
DION	**Dionisos Attik**	**1.74**	**243**	P	**Pn**	**14 20 41.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.80**	**49**	PN	**Pb**	**14 20 43.4**	**-0.9**
AYDB	**Zeytinkoy-Aydi**	**1.82**	**120**	PN	**Pn**	**14 20 42.4**	**-0.2**
APE	**Apeiranthos**	**1.84**	**189**	P	**Pn**	**14 20 41.4**	**-1.3**
APE				S	**Sn**	**14 21 05.1**	**-0.8**
ALN	**Alexandroupoli**	**2.01**	**3**	P	**Pn**	**14 20 45.1**	**-0.1**
ALN	**Alexandroupoli**	**2.01**	**3**	PN	**Pn**	**14 20 45.6**	**+0.5**
AMGA	**Amorgos Island**	**2.05**	**180**	P	**Pn**	**14 20 44.6**	**-1.0**
BODT	**Bodrum**	**2.13**	**148**	PN	**Pn**	**14 20 47.9**	**+1.1**
MRMT	**Marmara Adasi**	**2.16**	**37**	PN	**Pn**	**14 20 48.4**	**+1.2**
ANAF	**Anafi Island**	**2.52**	**182**	P	**Pn**	**14 20 51.8**	**-0.4**
ARMT	**Armutlu**	**2.83**	**53**	PN	**Pn**	**14 20 58.0**	**+1.6**

BJI ***19*** *14:34:35.8±0.0,30.°44N×131.°81E,h10km,mB4.9/55, mb4.7/64,Ms5.0/65,Ms7 4.9/62*

IDC ***19*** *14:34:40.0±0.4,30.°67N×131.°24E,h0km,mb4.7/37, mb1 4.7/41,mb1mx4.6/55,mbtmp4.6/41,ML3.9/4,MS4.5/38, Ms1 4.5/38,ms1mx4.4/59,Error ellipse: s-maj=12.8km s-min=9.7km az=79.0*

NEIC ***19*** *14:34:42.9±1.4,30.°61N±0.°05×131.°35E±0.°08,h23km±4km, mb5.1/129,Error ellipse: s-maj=9.4km s-min=7.9km az=81.0*

MOS ***19*** *14:34:42.6±1.1,30.°66N×131.°35E,h28km,mb5.2/83, MS4.8/23,Error ellipse: s-maj=6.7km s-min=3.6km az=117.7*

BGR ***19*** *14:34:43.3±0.0,30.°03N×131.°79E,h33km,mb5.4*

NIED ***19*** *14:34:43.6,30.°61N×131.°57E,h38km,MW5.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^16^Nm; Mrr3.23; Mθθ-1.01; Mφφ-2.22; Mrθ 0.91; Mθφ-1.95; Mφr 0.92; Fault plane solution: M0 3.68000×10^16^ NP1:φs40.00000°, δ55.00000°,λ.94.00000°. NP2:φs213.00000°,δ35.00000°, λ,84.00000°.*

JMA ***19*** *14:34:43.5±0.1,30.°61N×131.°57E,h38km±2km,M4.7*

JMA Felt II J1.

GCMT ***19*** *14:34:45.8±0.3,30.°53N±0.°02×131.°64E±0.°03,h32km±1km, MW4.9/69,Moment Tensor Solution. s41,c53; s69,c96; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr2.21±.16; Mθθ-0.59±.10; Mφφ-1.62±.10; Mrθ 1.22±.15; Mθφ-0.97±.06; Mφr 1.87±.14; Best double couple: M0 3.14000×10^16^ NP1:φs210.00000°,δ22.00000°,λ.87.00000°. NP2: φs33.00000°,δ68.00000°,λ.91.00000°. Principal axes: T 3.1430, Plg67.0000°, Azm305.0000°; N -0.0030, Plg1.0000°, Azm212.0000°; P -3.1380, Plg23.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 14:34:43.8±0.5, 30.°61N±0.°03×131.°50E±0.°03, h27km±2km, h27km:pP-P,n635,σ1s54/696, mb5.0/213, MS4.8/85, 29C-34D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.45**	**276**	⇑P	**Pn**	**14 34 54.0**	**-0.4**
JTN				*e*S	**Sn**	**14 35 02.1**	**+0.5**
JMTN	**Minamitane**	**0.56**	**248**	⇑P	**Pn**	**14 34 56.0**	**+0.1**
JMTN				*e*S	**Sn**	**14 35 05.0**	**+0.8**
JTSR	**Tashiro 2**	**0.74**	**319**	⇑P	**Pb**	**14 34 58.1**	**-0.1**
JTSR				*e*S	**Sn**	**14 35 09.5**	**+0.6**
JYAK	**Yakushimahirau**	**0.93**	**247**	⇑P	**Pn**	**14 35 01.1**	**+0.1**
JYAK				*e*S	**Sn**	**14 35 13.9**	**+0.5**
JNAR	**Kushima--Naru**	**0.94**	**348**	⇑P	**Pn**	**14 35 00.9**	**-0.2**
JNAR				*e*S	**Sb**	**14 35 12.6**	**-0.8**
JNKG	**Nichinankitago**	**1.05**	**354**	⇑P	**Pb**	**14 35 02.9**	**-0.5**
JNKG				*e*S	**Sb**	**14 35 16.6**	**-0.2**
JKC	**Kuchinoerabu**	**1.13**	**263**	⇑P	**Pn**	**14 35 04.1**	**+0.3**
JKC				*e*S	**Sb**	**14 35 20.6**	**+1.6**
JSU	**Suzuyama**	**1.26**	**315**	P	**Pn**	**14 35 05.5**	**-0.2**
JSU				*e*S	**Sn**	**14 35 21.8**	**0.0**
JSU	**Suzuyama**	**1.26**	**315**		**Pn**	**14 35 05.5**	**-0.2**
JTZ	**Takazaki**	**1.33**	**345**	⇑P	**Pn**	**14 35 06.8**	**+0.2**
JTZ				*e*S	**Sn**	**14 35 23.1**	**-0.4**
JNN	**Nakanoshima**	**1.60**	**242**	P	**Pn**	**14 35 11.0**	**+0.8**
JNN				S	**Sb**	**14 35 31.6**	**-0.8**
JTSN	**Tsuno**	**1.63**	**0**	⇑P	**Pn**	**14 35 10.4**	**-0.3**
JTSN				*e*S	**Sn**	**14 35 30.6**	**-0.2**
JZO	**Okuchi**	**1.71**	**334**	P	**Pn**	**14 35 12.0**	**+0.2**
JNU	**Nakatsue**	**2.56**	**348**	Pn	**Pn**	**14 35 23.7**	**+0.2**
	15nm,0.3s,baz=359,slow=22,SNR=183						
JNU				Sn	**Sn**	**14 35 53.5**	**-0.3**
	38nm,0.3s,baz=192,slow=6.2,SNR=8.8						
JNU	**Nakatsue**	**2.56**	**348**	Pn	**Pn**	**14 35 24.0**	**+0.5**
JMN	**Monobe**	**3.71**	**32**		**Pn**	**14 35 39.6**	**+0.3**
JTU	**Tsushima**	**4.29**	**336**	Pn	**Pn**	**14 35 47.6**	**+0.5**
JHS	**Saijyo**	**4.59**	**17**	Pn	**Pn**	**14 35 51.7**	**+0.4**
JMZ	**Minamidaito 2**	**4.78**	**183**		**Pn**	**14 35 53.9**	**-0.1**
JWT	**Wachi**	**5.70**	**34**	Pn	**Pn**	**14 36 07.1**	**+0.5**
INU	**Inuyama**	**6.62**	**43**	Pn	**Pn**	**14 36 20.6**	**+1.3**
TJN	**Taejon**	**6.71**	**330**	*ce*P	**Pn**	**14 36 19.5**	**-0.9**
JSG	**Sagara**	**6.95**	**53**	Pn	**Pn**	**14 36 24.9**	**+1.1**
JGF	**Kuroka**	**7.00**	**43**	Pn	**Pn**	**14 36 24.4**	**-0.1**
KSRS	**Korea Array**	**7.44**	**337**	Pn	**Pn**	**14 36 32.4**	**+1.9**
	1.2nm,0.3s,baz=175,slow=13,SNR=21						
KSRS				Lg	Lg	14 38 33.4	
	0.3nm,0.3s,baz=174,slow=28,SNR=0.9						
KSRS				LR	LR	14 39 41.4	
	comp=Z,4μm,19.8s,baz=155,slow=41						
KSAR	**Wonju Array Be**	**7.45**	**337**	P	**Pn**	**14 36 29.5**	**-1.1**
KSAR	**Wonju Array Be**	**7.45**	**337**	Pn	**Pn**	**14 36 29.5**	**-1.1**
JHJ	**Hachijo jima 2**	**7.48**	**68**	Pn	**Pn**	**14 36 33.4**	**+2.3**
	32nm,0.3s,baz=84,slow=23,SNR=8.7						
JHJ				LR	LR	14 39 32.3	
	comp=Z,3μm,18.1s,baz=270,slow=38						
JHJ2	**Mitsune**	**7.50**	**68**	Pn	**Pn**	**14 36 31.8**	**+0.4**
KSI9	**Wonju Array Si**	**7.50**	**337**	Pn	**Pn**	**14 36 30.2**	**-1.3**
MAJO	**Matsushiro**	**8.14**	**42**	*i* P	**Pn**	**14 36 40.8**	**+0.5**
MAJO	**Matsushiro**	**8.14**	**42**	Pn	**Pn**	**14 36 40.7**	**+0.5**
MAT	**Matsushiro**	**8.14**	**42**	P	**Pn**	**14 36 40.9**	**+0.7**
MAT				*e*S	**Sn**	**14 38 11.2**	**-0.2**
MJAR	**Matsushiro Arr**	**8.15**	**42**	Pn	**Pn**	**14 36 41.2**	**+0.9**
	0.7nm,0.3s,baz=253,slow=14,SNR=23						
MJAR	**Matsushiro Arr**	**8.15**	**42**		**Pn**	**14 36 40.9**	**+0.7**
MJB9	**Matsu-Tunnel**	**8.15**	**42**	Pn	**Pn**	**14 36 40.3**	**+0.1**
SSE	**Sheshan**	**8.88**	**276**	P	**Pn**	**14 36 51.4**	**+1.2**
SSE				S	**Sn**	**14 38 32.6**	**+3.3**
SSE				LR	LR		
	comp=N,1μm,15.1s						
SSE				LR	LR		
	comp=E,1μm,15.3s						
SSE				LR	LR		
	comp=Z,3μm,15.1s						
JYT	**Yasato**	**9.18**	**50**		**Pn**	**14 36 55.1**	**+0.7**
JSD	**Sado**	**9.28**	**35**	Pn	**Pn**	**14 36 55.5**	**-0.2**
TATO	**Taipei**	**10.48**	**240**	P	**Pn**	**14 37 08.7**	**-3.6**
JMM	**Marumori**	**10.56**	**44**		**Pn**	**14 37 14.0**	**+0.8**
NACB	**Ninganchiao**	**10.88**	**236**	Pn	**Pn**	**14 37 15.9**	**-1.8**
NJ2	**Nanjing**	**10.91**	**281**	*e*P	**Pn**	**14 37 19.3**	**+1.3**
NJ2				sP		14 37 26.8	
NJ2				S	**Sn**	**14 39 17.1**	**-2.1**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,510nm,4.5s						
NJ2				LR	LR		
	comp=N,3μm,18.0s						
NJ2				LR	LR		
	comp=E,5μm,15.2s						
NJ2				LR	LR		
	comp=E,6μm,15.2s						
SSLB	**Suanglung**	**11.58**	**237**	Pn	**Pn**	**14 37 25.7**	**-1.6**
DL2	**Dalian**	**11.58**	**318**	P	**Pn**	**14 37 28.8**	**+1.5**
DL2				S	**Sn**	**14 39 43.6**	**+7.9**
DL2				pmax	pmax		
	comp=Z,43nm,1.5s						
DL2				pmax	pmax		
	comp=Z,480nm,5.7s						
DL2				LR	LR		
	comp=N,3μm,12.8s						
DL2				LR	LR		
	comp=E,4μm,13.7s						
DL2				LR	LR		
	comp=Z,5μm,14.1s						
YULB	**Yu-li**	**11.59**	**234**	Pn	**Pn**	**14 37 25.1**	**-2.3**
TPUB	**Ta-pu**	**12.12**	**236**	Pn	**Pn**	**14 37 32.8**	**-1.8**
QZH	**Quanzhou**	**12.74**	**247**	*e*P	**Pn**	**14 37 43.6**	**+0.5**
QZH				*e*S	**Sn**	**14 40 02.9**	**-1.2**
QZH				LR	LR		
	comp=N,2μm,17.0s						
QZH				LR	LR		
	comp=E,1μm,16.2s						
QZH				LR	LR		
	comp=Z,3μm,17.3s						
TIA	**Tai'an**	**13.24**	**299**	P	**Pn**	**14 37 51.9**	**+2.0**
TIA				pmax	pmax		
	comp=Z,21nm,1.2s						
TIA				pmax	pmax		
	comp=Z,370nm,6.0s						
TIA				LR	LR		
	comp=N,1μm,17.0s						
TIA				LR	LR		
	comp=E,3μm,17.1s						
TIA				LR	LR		
	comp=Z,4μm,15.2s						
CN2	**Changchun**	**14.02**	**342**	*e*P	**P**	**14 38 06.8**	**-1.3**
CN2				*e*S	**Sn**	**14 40 43.4**	**+8.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,5μm,15.0s						
CN2				LR	LR		
	comp=E,3μm,15.0s						
CN2				LR	LR		
	comp=Z,7μm,16.0s						
MDJ	**Mudanjiang**	**14.06**	**354**	Pn	**Pn**	**14 37 59.5**	**-1.6**
WHN	**Wuhan**	**14.77**	**274**	⇓P	**Pn**	**14 38 12.5**	**+1.6**
WHN				S	**Sn**	**14 40 54.5**	**+0.8**
WHN				LR	LR		
	comp=Z,3μm,14.2s						
WHN				LR	LR		
	comp=Z,8μm,14.0s						
WHN				LR	LR		
	comp=Z,10μm,15.6s						
TEY	**Ternei**	**14.95**	**14**	⇑*e*P	**Pn**	**14 38 13.3**	**+0.1**
TEY						14 40 58.1	
TEY				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TEY				pmax	pmax		
	comp=E,20nm,0.7s						
BJT	**Baijiatuan**	**15.62**	**311**	P	**P**	**14 38 24.6**	**-1.3**
BJT				pmax	pmax		
	comp=Z,115nm,1.1s						
BJT	**Baijiatuan**	**15.62**	**311**	P	**P**	**14 38 24.6**	**-1.3**
BJT				IAmb	IAmb	14 38 43.8	
	comp=Z,114nm,1.1s						
BJI	**Beijing**	**15.63**	**311**	P	**P**	**14 38 27.0**	**+1.0**
BJI				pmax	pmax		
	comp=Z,27nm,1.1s						
BJI				LR	LR		
	comp=Z,2μm,20.5s						
BJI				LR	LR		
	comp=Z,2μm,12.8s						
BJI				LR	LR		
	comp=Z,2μm,15.5s						
ASAJ	**Asahikawa**	**16.09**	**30**	LR	LR	14 45 12.2	
	comp=Z,2μm,18.7s,baz=237,slow=39						
TIY	**Taiyuan**	**17.28**	**299**	*e*P	**P**	**14 38 47.1**	**+2.7**
TIY				pmax	pmax		
	comp=Z,460nm,4.3s						
TIY				LR	LR		
	comp=Z,990nm,14.0s						
TIY				LR	LR		
	comp=Z,390nm,13.0s						
TIY				LR	LR		
	comp=Z,3μm,16.7s						
YUK	**Yuzh-Kuril'sk**	**17.57**	**36**	*d* iP	**Pn**	**14 38 46.1**	**-0.5**
YUK				*e*S	**Sn**	**14 42 02.5**	**+1.0**
YUK				MLR	MLR		
	comp=Z,1μm,19.0s						
YUK				MLR	MLR		
	comp=N,2μm,17.0s						
YUK				MLR	MLR		
	comp=E,898nm,17.0s						
YSS	**Yuzh-Sakhalins**	**18.50**	**25**	*e*P	**P**	**14 38 52.5**	**-5.2**
YSS				*e*S	**Sn**	**14 42 13.2**	**-11**
YSS				pmax	pmax		
	comp=Z,200nm,3.0s						
YSS				MLR	MLR		
	comp=N,800nm,15.0s						
KLR	**Kul'dur**	**18.60**	**1**	P	**Pn**	**14 38 59.5**	**+0.3**
	comp=N,0.9nm,0.3s,baz=185,slow=8.1,SNR=27						
KLR				LR	LR	14 46 21.8	
	comp=N,1μm,18.7s,baz=180,slow=38						
KLR	**Kul'dur**	**18.60**	**1**	*ce*P	**Pn**	**14 38 58.8**	**-0.4**
KLR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ENH	**Enshi**	**18.98**	**275**		**P**	**14 39 00.6**	**-2.5**
HHC	**Hu-ho-hao-te**	**19.10**	**308**	*e*P	**Pn**	**14 39 05.3**	**-0.1**
HHC				PP	**PnPn**	**14 39 17.3**	**-1.0**
HHC				S	**Sn**	**14 42 35.8**	**-2.8**
HHC				pmax	pmax		
	comp=Z,47nm,0.9s						
HHC				pmax	pmax		
	comp=Z,750nm,5.2s						
HHC				LR	LR		
	comp=Z,2μm,14.3s						
HHC				LR	LR		
	comp=Z,2μm,12.5s						
HHC				LR	LR		
	comp=Z,4μm,12.4s						
XAN	**Xi'an**	**19.38**	**286**	P	**P**	**14 39 06.8**	**-0.7**
XAN				pP	pP	14 39 14.6	-0.1
XAN				sP	sP	14 39 18.3	+0.3
XAN				pmax	pmax		
	comp=Z,14nm,1.4s						
XAN				pmax	pmax		
	comp=Z,630nm,6.1s						
XAN				LR	LR		
	comp=Z,7μm,14.3s						
XAN				LR	LR		
	comp=Z,8μm,14.1s						
XAN	**Xi'an**	**19.38**	**286**	P	**P**	**14 39 05.0**	**-2.5**
XAN				pmax	pmax		
	comp=Z,37nm,1.1s						
XAN	**Xi'an**	**19.38**	**286**	P	**P**	**14 39 05.0**	**-2.5**
KUR	**Kuril'sk**	**19.44**	**37**	*e*P	**Pn**	**14 39 14.9**	**+5.6**
KUR				MLR	MLR		
	comp=Z,1μm,15.0s						
BTO	**Baotou**	**20.06**	**306**	*e*P	Pn	14 39 16.4	-0.5
GRNR	**Gornyy**	**20.47**	**9**	⇓*i*P	**P**	**14 39 18.2**	**-1.1**
GRNR				*e*S	**S**	**14 43 08.3**	**+1.3**
GRNR				smax	smax		
	comp=N,2.0nm,0.8s						
GRNR				MLR	MLR		
	comp=N,820nm,16.0s						
GRNR				MLR	MLR		
	comp=E,700nm,16.0s						
GRNR				MLR	MLR		
	comp=Z,330nm,16.0s						
HIA	**Hailar**	**20.65**	**338**	P	**P**	**14 39 19.6**	**-1.7**
HIA				pmax	pmax		
	comp=Z,53nm,1.3s						
HIA	**Hailar**	**20.65**	**338**	P	**P**	**14 39 19.6**	**-1.7**
GUMO	**Guam**	**20.95**	**141**	P	Pn	14 39 26.3	-1.0
	comp=Z,96nm,1.1s,baz=198,slow=3.5,SNR=4.9						
GUMO				LR	LR	14 46 40.3	
	comp=Z,2μm,19.2s,baz=328,slow=34						
GUMO	**Guam**	**20.95**	**141**	P	**P**	**14 39 24.5**	**-0.2**
TYV	**Tymovskoe**	**21.88**	**19**	*e*P	**P**	**14 39 36.0**	**+1.6**
TYV				*e*S	Sn	14 43 39.9	-5.3
TYV				pmax	pmax		
	comp=Z,200nm,2.6s						
TYV				pmax	pmax		
	comp=Z,32nm,1.6s						
GYA	**Guiyang**	**22.19**	**265**	⇓P	**P**	**14 39 38.3**	**+0.2**
GYA				S	**S**	**14 43 43.0**	**+1.8**
GYA				pmax	pmax		
	comp=Z,53nm,1.0s						
GYA				pmax	pmax		
	comp=Z,270nm,3.5s						
GYA				LR	LR		
	comp=Z,800nm,13.0s						
GYA				LR	LR		
	comp=Z,940nm,15.5s						
GYA				LR	LR		
	comp=Z,2μm,20.6s						
QIZ	**Qiongzhong**	**22.74**	**245**	P	**P**	**14 39 39.4**	**-4.5**
QIZ				S	**S**	**14 43 48.4**	**-2.6**
QIZ				pmax	pmax		
	comp=Z,34nm,2.5s						
QIZ				LR	LR		
	comp=Z,1μm,18.6s						
QIZ				LR	LR		
	comp=Z,1μm,17.2s						
QIZ				LR	LR		
	comp=Z,2μm,15.7s						
ZEA	**Zeya**	**23.32**	**354**	*ce*P	**P**	**14 39 47.5**	**-1.9**
ZEA				*e*		14 40 29.4	
ZEA				*e*S	**S**	**14 43 55.4**	**-4.8**
ZEA				pmax	pmax		
	comp=N,100nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,100nm,4.9s						
ZEA				pmax	pmax		
	comp=Z,30nm,1.1s						
ZEA				smax	smax		
	comp=N,100nm,9.7s						
ZEA				MLR	MLR		
	comp=E,600nm,13.0s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,14.0s						
NKL	**Nikolayevsk**	**23.50**	**14**	*e*P	**P**	**14 39 50.3**	**-0.9**
NKL				*e*S	**S**	**14 44 06.0**	**+2.9**
NKL				pmax	pmax		
	comp=N,6.0nm,0.7s						
NKL				pmax	pmax		
	comp=Z,35nm,1.4s						
NKL				pmax	pmax		
	comp=E,56nm,1.5s						
NKL				MLR	MLR		
	comp=N,109nm,17.0s						
NKL				MLR	MLR		
	comp=E,2μm,17.0s						
NKL				MLR	MLR		
	comp=Z,1μm,19.0s						
LZH	**Lanzhou**	**23.70**	**291**	⇓P	**P**	**14 39 53.3**	**-0.2**
LZH				sP	sP	14 40 04.1	-0.3
LZH				PP	**PnPn**	**14 40 27.3**	**+6.0**
LZH				*e*S	**S**	**14 44 08.9**	**+1.9**
LZH				sS	sS	14 44 20.8	+0.8
LZH				SS	**SnSn**	**14 44 54.4**	**+8.9**
LZH				pmax	pmax		
	comp=Z,34nm,1.1s						
LZH				pmax	pmax		
	comp=Z,400nm,4.7s						
LZH				LR	LR		
	comp=Z,2μm,13.2s						
LZH				LR	LR		
	comp=Z,3μm,13.0s						
LZH				LR	LR		
	comp=Z,4μm,14.8s						
CD2	**Chengdu**	**23.82**	**278**	P	**P**	**14 39 53.3**	**-1.3**
CD2				sP	sP	14 40 05.1	-0.5
CD2				S	**S**	**14 44 09.4**	**+0.6**
CD2				pmax	pmax		
	comp=Z,40nm,1.2s						
CD2				pmax	pmax		
	comp=Z,600nm,9.2s						
CD2				LR	LR		
	comp=Z,3μm,16.1s						
CD2				LR	LR		
	comp=Z,3μm,16.7s						
CD2				LR	LR		
	comp=Z,3μm,17.3s						
CIT	**Chita**	**25.15**	**333**	*e*P	**P**	**14 40 05.3**	**-1.3**
CIT				*e*		14 40 16.2	
CIT				*e*		14 40 45.1	
CIT				pmax	pmax		
	comp=Z,22nm,1.9s						
ULN	**Ulaanbaatar**	**25.43**	**320**	P	**P**	**14 40 09.6**	**+0.3**
ULN	**Ulaanbaatar**	**25.43**	**320**	*ce*P	**P**	**14 40 08.6**	**-0.7**
ULN				pmax	pmax		
	comp=Z,66nm,1.2s						
ULN	**Ulaanbaatar**	**25.43**	**320**	P	**P**	**14 40 07.4**	**-1.9**
ULN				IAmb	IAmb	14 40 11.5	
	comp=Z,52nm,1.1s						
SONM	**Songino Array**	**25.79**	**319**	P	**P**	**14 40 11.4**	**-1.1**
	comp=Z,16nm,0.8s,baz=137,slow=9.7,SNR=34						
SONM				LR	LR	14 51 56.6	
	comp=Z,2μm,18.1s,baz=128,slow=40						
SONM	**Songino Array**	**25.79**	**319**	P	**P**	**14 40 10.9**	**-1.6**
KMI	**Kunming**	**25.96**	**265**	⇑*e*P	**P**	**14 40 15.8**	**+1.4**
KMI				pP	pP	14 40 21.3	-0.8
KMI				S	**S**	**14 44 41.1**	**-2.4**
KMI				pmax	pmax		
	comp=Z,25nm,0.6s						
KMI				pmax	pmax		
	comp=Z,150nm,7.5s						
KMI				LR	LR		
	comp=Z,1μm,17.2s						
KMI				LR	LR		
	comp=Z,2μm,16.6s						
KMI				LR	LR		
	comp=Z,2μm,15.9s						
SLVN	**Son La**	**26.41**	**256**	P	**P**	**14 40 15.0**	**-3.3**
SKR	**Severo-Kuril's**	**27.19**	**35**	*e*P	**P**	**14 40 20.1**	**-4.8**
SKR				*e*		14 41 19.7	
SKR				pmax	pmax		
	comp=Z,28nm,1.4s						
SKR				pmax	pmax		
	comp=Z,200nm,4.3s						
SKR				MLR	MLR		
	comp=Z,300nm,17.0s						
GTA	**Gaotai**	**27.28**	**297**	⇑P	**P**	**14 40 24.6**	**-1.5**
GTA				pP	pP	14 40 29.9	-3.9
GTA				sP	sP	14 40 32.6	-4.5
GTA				PP	**PnPn**	**14 41 12.0**	**+1.8**
GTA				PcP	**PcP**	**14 43 46.3**	**+1.0**
GTA				S	**S**	**14 45 04.3**	**+0.3**
GTA				sS	sS	14 45 16.3	-0.4
GTA				ScP	**ScP**	**14 47 25.4**	**+1.5**
GTA				PcS	**PcS**	**14 47 27.8**	**+0.7**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,150nm,5.6s						
GTA				LR	LR		
	comp=Z,810nm,14.5s						
GTA				LR	LR		
	comp=Z,1μm,14.2s						
GTA				LR	LR		
	comp=Z,2μm,14.9s						
NONG	**Nongkai**	**28.60**	**251**	P	**P**	**14 40 39.3**	**+1.5**
	comp=Z,23nm,1.1s						
ZAK	**Zakamensk**	**28.89**	**321**	*e*P	**P**	**14 40 38.0**	**-2.2**
ZAK				pmax	pmax		
	comp=Z,11nm,1.3s						
PEA0B	**Petropavlovsk-**	**29.47**	**33**	*ce*P	**P**	**14 40 46.8**	**+1.5**
PETK	**Petropavlovsk-**	**29.47**	**33**	P	**P**	**14 40 46.6**	**+1.3**
	comp=Z,3.2nm,0.8s,baz=206,slow=5.8,SNR=5.8						
PETK				LR	LR	14 53 25.7	
	comp=Z,873nm,19.5s,baz=221,slow=38						
PETK	**Petropavlovsk-**	**29.47**	**33**	P	**P**	**14 40 44.6**	**-0.7**
BOD	**Bodaibo**	**29.77**	**341**	*e*P	**P**	**14 40 45.2**	**-2.6**
BOD				pmax	pmax		
	comp=Z,22nm,1.6s						
KHON	**Khomkaen**	**29.78**	**248**	P	**P**	**14 40 48.0**	**-0.4**
	comp=Z,53nm,0.5s						
PET	**Petropavlovsk**	**29.87**	**34**	*e*P	P	14 41 00.9	+12
TNTI	**Ternate**	**29.93**	**188**	P	**P**	**14 40 50.8**	**+1.2**
	comp=Z,777nmcomp=Z,33nm,1.4s						
TNTI	**Ternate**	**29.93**	**188**	P	**P**	**14 40 48.8**	**-0.8**
PAYA	**Payao**	**30.68**	**256**	P	**P**	**14 40 57.2**	**+0.9**
	comp=Z,173nm,0.8s						
CHAI	**Chaiyaphum**	**30.69**	**248**	P	**P**	**14 40 56.4**	**0.0**
	comp=Z,582nmcomp=Z,55nm,0.7s						
UTTA	**Uttaradit**	**30.89**	**253**	P	**P**	**14 40 57.9**	**-0.1**
	comp=Z,416nmcomp=Z,55nm,0.8s						
TOLI2	**Tolitoli**	**31.05**	**201**	P	**P**	**14 40 58.7**	**-0.8**
LAMP	**Lampang**	**31.27**	**255**	P	**P**	**14 41 02.5**	**+1.0**
	comp=Z,25nm,0.9s						

comp=Z,120nm,0.8s
SIJI Sorong 31.30 180 LR LR 14 52 44.6
comp=Z,725nm,19.9s,baz=32,slow=35
YAK Yakutsk 31.45 358 P **P** **14 41 02.9 +0.3**
comp=Z,18nm,0.8s,baz=202,slow=1.0,SNR=21
YAK Yakutsk 31.45 358 *e*P **P** **14 41 02.7 +0.1**
YAK *e**PP **pP** **14 41 11.7 +1.4**
YAK *e* 14 42 02.0
YAK *e*S **S** **14 46 09.1 +0.5**
YAK *e**SS **sS** **14 46 25.8 +4.4**
YAK *e*SS **SnSn** **14 47 55.5 +1.5**
YAK *e* 14 51 34.9
YAK pmax pmax
comp=Z,25nm,0.9s
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=Z,41nm,2.0s
YAK pmax pmax
comp=N,25nm,2.0s
YAK smax smax
comp=E,14nm,2.0s
YAK smax smax
comp=N,56nm,2.1s
YAK MLR MLR
comp=Z,605nm,16.0s
YAK MLR MLR
comp=N,516nm,17.0s
YAK MLR MLR
comp=E,154nm,18.0s
YAK Yakutsk 31.45 358 P **P** **14 41 02.3 -0.3**
CM34 Chiang Mai Arr 31.51 256 P **P** **14 41 04.0 +0.3**
CM35 Chiang Mai Arr 31.59 255 P **P** **14 41 04.0 -0.3**
CM33 Chiang Mai Arr 31.70 256 P **P** **14 41 04.0 -1.3**
CMMT Chiang Mai 31.70 256 P **P** **14 41 04.9 -0.4**
comp=E,15nm,1.0s
CHTO Chiang Mai 31.70 256 P **P** **14 41 04.9 -0.4**
CHTO Chiang Mai 31.70 256 P **P** **14 41 03.9 -1.4**
CHTO pmax pmax
comp=Z,19nm,0.7s
CHTO Chiang Mai 31.70 256 P **P** **14 41 03.9 -1.4**
CHTO IAmb IAmb 14 41 06.5
comp=Z,19nm,0.7s
CM36 Chiang Mai Arr 31.72 255 P **P** **14 41 05.0 -0.4**
SRAK Srakaew 31.73 245 P **P** **14 41 03.0 -2.5**
comp=Z,258nm,0.9s
MA2 Magadan 31.75 19 P **P** **14 41 06.7 +1.4**
comp=Z,12nm,0.8s,baz=180,slow=4.0,SNR=2.2
MA2 Magadan 31.75 19 IAmb IAmb 14 41 09.1
comp=Z,36nm,1.3s
SUKH Sukhothai 31.78 253 P **P** **14 41 08.9 +2.9**
comp=Z,16nm,0.9s
CM09 Chiang Mai Arr 31.84 255 P **P** **14 41 07.2 +0.7**
comp=Z,9.5nm,1.1s
CM32 Chiang Mai Arr 31.86 256 P **P** **14 41 07.0 +0.3**
CM04 Chiang Mai Arr 31.87 255 P **P** **14 41 07.5 +0.7**
comp=Z,96nmcomp=Z,12nm,0.9s
CM31 Chiang Mai Arr 31.87 255 P **P** **14 41 05.5 -1.4**
CMAR Chiang Mai Arr 31.87 255 P **P** **14 41 06.4 -0.4**
comp=Z,3.7nm,0.7s,baz=54,slow=6.5,SNR=29
CMAR PcP **PcP** **14 43 58.1 +0.9**
comp=Z,2.0nm,0.6s,baz=45,slow=1.5,SNR=8.6
CMAR LR LR 14 55 34.0
comp=Z,1µm,18.4s,baz=104,slow=40
CMAR Chiang Mai Arr 31.87 255 *i* P **P** **14 41 06.9 +0.1**
CMAR pmax pmax
comp=Z,4.0nm,0.7s
CMAR Chiang Mai Arr 31.87 255 P **P** **14 41 05.5 -1.3**
CM01 Chiang Mai Arr 31.88 255 P **P** **14 41 08.2 +1.3**
comp=Z,184nmcomp=Z,8.7nm,1.0s
CM02 Chiang Mai Arr 31.88 255 P **P** **14 41 07.8 +1.0**
comp=Z,8.8nm,1.0s
CM15 Chiang Mai Arr 31.89 255 P **P** **14 41 07.8 +0.8**
comp=Z,10nm,0.9s
CM05 Chiang Mai Arr 31.90 255 P **P** **14 41 08.1 +1.0**
comp=Z,80nmcomp=Z,8.5nm,1.0s
CM13 Chiang Mai Arr 31.92 255 P **P** **14 41 08.0 +0.8**
comp=Z,73nmcomp=Z,8.2nm,0.9s
MPSI Mapaga 32.06 202 P **P** **14 41 09.9 +1.5**
comp=Z,6.1nm,1.5s
LUWI Luwuk 32.55 196 P **P** **14 41 10.8 -2.0**
LUWI IAmb IAmb 14 41 32.4
comp=Z,29nm,1.1s
UTHA Uthaitani 32.93 250 P **P** **14 41 17.1 +1.1**
comp=Z,250nmcomp=Z,25nm,1.1s
SMPI Sarmi 33.14 167 P **P** **14 41 21.6 +3.8**
comp=Z,33nm,1.2s
FAKI Fak Fak 33.35 179 P **P** **14 41 21.2 +1.5**
comp=Z,814nmcomp=Z,83nm,1.2s
FAKI Fak Fak 33.35 179 P **P** **14 41 19.4 -0.3**
H11N2 WAKE ISLAND Hy 33.69 100 T T 15 17 13.6
baz=296,slow=75
H11N1 WAKE ISLAND Hy 33.70 100 T T 15 17 14.2
baz=296,slow=75
H11N3 WAKE ISLAND Hy 33.71 100 T T 15 17 14.9
baz=296,slow=75
NLAI Namlea 33.92 188 P **P** **14 41 27.5 +2.9**
comp=Z,1µmcomp=Z,25nm,1.2s
JAY Jayapura 34.09 163 LR LR 14 53 41.9
comp=Z,1µm,19.2s,baz=350,slow=33
LSA Lhasa 34.77 279 P **P** **14 41 33.1 +0.6**
LSA Lhasa 34.77 279 P **P** **14 41 33.1 +0.6**
LSA pmax pmax
comp=Z,6.0nm,1.4s
SEY Seymchan 35.02 17 P **P** **14 41 34.8 +1.2**
comp=Z,2.6nm,0.7s,baz=210,slow=7.4,SNR=6.9
SEY Seymchan 35.02 17 *i* P **P** **14 41 34.5 +0.8**
SHL Shillong 35.18 272 P **P** **14 41 34.7 -1.1**
SNR=9.9
SHL Shillong 35.18 272 P **P** **14 41 33.9 -1.9**
SHL pmax pmax
comp=Z,36nm,1.1s
SHL Shillong 35.18 272 P **P** **14 41 33.9 -1.9**
SHL IAmb IAmb 14 41 35.8
comp=Z,36nm,1.1s
WMQ Urumqi 36.87 303 *e*P **P** **14 41 49.3 -0.6**
WMQ pP pP 14 41 58.1 +0.3
WMQ sP sP 14 42 00.3 -0.4
WMQ pmax pmax
comp=Z,24nm,1.9s
WMQ pmax pmax
comp=Z,21nm,3.6s
WMQ LR LR
comp=Z,1µm,13.3s
WMQ LR LR
comp=Z,1µm,18.5s
WMQ LR LR
comp=Z,2µm,21.1s
WMQ Urumqi 36.87 303 P **P** **14 41 48.9 -1.0**
WMQ pmax pmax
comp=Z,24nm,1.3s
WMQ Urumqi 36.87 303 P **P** **14 41 48.9 -1.0**
KAPI Kappang 37.16 200 LR LR 14 59 49.5
comp=Z,108nm,18.8s,baz=354,slow=41
SURT Suratani 37.33 242 P **P** **14 41 57.5 +3.5**
comp=Z,2.3nm,1.1s
TRTT Trang 37.38 239 P **P** **14 41 57.1 +2.7**
comp=Z,31nm,1.3s
TAPN Taplejung 38.27 276 *e*P **P** **14 42 01.5 -0.7**
PKDT Phuket 38.36 241 P **P** **14 42 05.2 +2.5**
ODAN Odare 38.67 276 *e*P **P** **14 42 04.9 -0.6**
comp=Z,58nm,0.9s
IPM Ipoh 38.73 234 P **P** **14 42 05.8 +0.1**
MYKOM Kota Tinggi 38.82 228 P **P** **14 42 04.7 -1.9**
ZSN Zaisan 39.29 309 *e*P **P** **14 42 09.1 -1.2**
baz=308
ZSN LR LR 14 58 45.0
comp=Z,594nm,15.5s,baz=308
ZSN Zaisan 39.29 309 *e*P **P** **14 42 09.0 -1.2**
ZSN MLR MLR
comp=Z,594nm,16.0s
RAMN Ramite 39.33 276 *e*P **P** **14 42 10.0 -1.0**
GUN Gumba 39.68 278 *e*P **P** **14 42 13.7 -0.4**
comp=Z,74nm,0.5s
KRVT Keravat (AS076 39.88 147 LR LR 14 56 49.4
comp=Z,353nm,21.0s,baz=334,slow=33
PKI Pulchoki 40.17 278 *e*P **P** **14 42 17.1 -1.1**
PKIN Phulchoki 40.18 278 *e*P **P** **14 42 16.8 -1.4**
KKN Kakani 40.23 278 *e*P **P** **14 42 17.7 -0.8**
DMN Daman 40.42 278 *e*P **P** **14 42 19.9 -0.3**
ZAA0 Zalesovo Array 40.68 319 P **P** **14 42 19.6 -2.1**
ZALV Zalesovo Beam 40.68 319 P **P** **14 42 20.0 -1.6**
comp=Z,14nm,1.0s,baz=103,slow=6.5,SNR=31
ZALV PcP **PcP** **14 44 22.5 -0.4**
comp=Z,3.8nm,0.7s,baz=90,slow=2.6,SNR=5.8
ZALV LR LR 15 00 40.8
comp=Z,2µm,18.6s,baz=99,slow=38
ZALV Zalesovo Beam 40.68 319 P **P** **14 42 19.5 -2.1**
GKN Gorkha 40.72 278 *e*P **P** **14 42 21.7 -0.8**
SOEI Soe 40.73 191 P P 14 42 36.0 +14
SOEI Soe 40.73 191 P **P** **14 42 20.4 -2.1**
SOEI IAmb IAmb 14 42 48.9
comp=Z,47nm,1.1s
MK31 Makanchi Array 40.96 307 *i* P **P** **14 42 22.3 -1.8**
MK31 pmax pmax
comp=Z,8.0nm,0.9s
MK31 Makanchi Array 40.96 307 P **P** **14 42 22.0 -2.1**
MKAR Makanchi Array 40.96 307 P **P** **14 42 22.5 -1.6**
comp=Z,1.4nm,0.5s,baz=89,slow=11,SNR=18
MKAR PcP **PcP** **14 44 23.0 -1.0**
comp=Z,2.0nm,0.8s,baz=75,slow=3.0,SNR=5.8
MKAR ScP **ScP** **14 48 13.0 +1.2**
comp=Z,0.4nm,0.5s,baz=76,slow=6.6,SNR=1.9
MKAR LR LR 15 01 04.4
comp=Z,1µm,18.1s,baz=91,slow=39
MKAR Makanchi Array 40.96 307 *i* P **P** **14 42 23.1 -1.0**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 40.96 307 P **P** **14 42 22.3 -1.8**
TIXI Tiksi 41.12 359 *ce*P **P** **14 42 24.6 -0.4**
TIXI Tiksi 41.12 359 P **P** **14 42 23.9 -1.1**
TIXI IAmb IAmb 14 42 38.2
comp=Z,40nm,1.4s
MAKZ Makanchi 41.18 307 P **P** **14 42 22.8 -3.1**
MAKZ pmax pmax
comp=Z,8.0nm,1.0s
MAKZ Makanchi 41.18 307 P **P** **14 42 22.8 -3.1**
BATI Baumata 41.27 192 P **P** **14 42 26.6 -0.2**
comp=Z,26nm,0.8s,baz=337,slow=4.7,SNR=4.4
BATI LR LR 15 01 26.2
comp=Z,201nm,19.7s,baz=346,slow=39
DANN Dangsing 41.38 279 *e*P **P** **14 42 27.6 -0.4**
PSI Prapat 41.38 234 P **P** **14 42 26.4 -1.6**
PSI pmax pmax
comp=Z,12nm,0.8s
RPSI Rantau Prapat 41.46 234 P **P** **14 42 26.4 -2.0**
KOLN Koldanda 41.66 279 *e*P **P** **14 42 29.8 -0.5**
comp=Z,68nm,1.1s
PYUN Piuthan 42.10 279 *e*P **P** **14 42 33.3 -0.5**
comp=Z,119nm,1.1s
MNSI Mandailing Nat 42.38 232 P **P** **14 42 37.8 +1.9**
comp=Z,16nm,0.5s
SDSI Sungai Dareh 42.45 228 P **P** **14 42 38.7 +2.2**
comp=Z,11nm,1.2s
PMG Port Moresby 42.53 157 LR LR 15 00 12.4
comp=Z,656nm,18.2s,baz=318,slow=36
SEM Semipalatinsk 42.72 313 *e*P **P** **14 42 37.3 -1.3**
comp=Z,16nm,1.1s,baz=312
SEM LR LR 15 00 45.8
comp=Z,198nm,12.3s,baz=312
SEM Semipalatinsk 42.72 313 *e*P **P** **14 42 37.3 -1.3**
SEM pmax pmax
comp=Z,16nm,1.1s
SEM MLR MLR
comp=Z,198nm,12.0s
SHLS Shalkode 42.83 302 *e*P **P** **14 42 35.7 -3.9**
comp=Z,4.8nm,1.5s,baz=302
SHLS *e*S **S** **14 48 57.0 -5.2**
baz=302
SHLS LR LR 15 00 49.1
comp=Z,176nm,13.1s,baz=302
SHLS Shalkode 42.83 302 *e*P **P** **14 42 35.6 -3.9**
SHLS *e*S **S** **14 48 57.0 -5.2**
SHLS pmax pmax
comp=Z,5.0nm,1.5s
SHLS MLR MLR
comp=Z,176nm,13.0s
MTN Manton Dam 43.20 181 P **P** **14 42 41.1 -1.4**
MTN IAmb IAmb 14 42 44.3
comp=Z,78nm,1.3s
KPKS Kokpek 43.39 302 *e*P **P** **14 42 43.0 -1.0**
comp=Z,8.6nm,1.2s,baz=302
KPKS LR LR 15 01 51.5
comp=Z,477nm,15.3s,baz=302
KPKS Kokpek 43.39 302 *e*P **P** **14 42 43.0 -1.0**
KPKS pmax pmax
comp=Z,9.0nm,1.2s
KPKS MLR MLR
comp=Z,477nm,15.0s
TDK Taldyqorghan 43.58 305 *e*P **P** **14 42 45.0 -0.5**
baz=304
TDK LR LR 15 00 39.9
comp=Z,640nm,16.2s,baz=304
TDK Taldyqorghan 43.58 305 *e*P **P** **14 42 44.9 -0.5**
TDK MLR MLR
comp=Z,640nm,16.0s
SATY Saty 43.60 302 *e*P **P** **14 42 44.6 -1.2**
comp=Z,6.1nm,1.4s,baz=301
SATY LR LR 15 02 05.9
comp=Z,178nm,13.5s,baz=301
SATY Saty 43.60 302 *e*P **P** **14 42 44.6 -1.2**
SATY pmax pmax
comp=Z,6.0nm,1.4s
SATY MLR MLR
comp=Z,178nm,13.0s
LEM Lembang 43.70 216 P **P** **14 42 47.1 +0.3**
comp=Z,17nm,0.6s,baz=320,slow=12,SNR=5.6
LEM LR LR 15 03 14.9
comp=Z,177nm,18.6s,baz=16,slow=39
KURK Kurchatov 43.79 313 P **P** **14 42 46.2 -0.8**
KURK P **P** **14 42 46.2 -0.8**
KURK P **P** **14 42 46.2 -0.8**
KURK Kurchatov 43.79 313 *i* P **P** **14 42 45.4 -1.6**
KURK pmax pmax
comp=Z,23nm,1.1s
KURK Kurchatov 43.79 313 P **P** **14 42 45.0 -1.9**
KURK IAmb IAmb 14 43 01.5
comp=Z,38nm,1.1s
KURK Kurchatov 43.79 313 **PcP** **14 44 32.7 -0.5**
KURBB Kurchatov Arra 43.84 313 P **P** **14 42 46.1 -1.3**
comp=Z,12nm,0.7s,baz=100,slow=9.0,SNR=64
KURBB PcP **PcP** **14 44 32.7 -0.7**
comp=Z,0.8nm,0.4s,baz=104,slow=3.2,SNR=2.0
MDOK Medeo 44.59 302 *e*P **P** **14 42 53.3 -0.4**
baz=302
MDOK *e*S **S** **14 49 28.1 0.0**
baz=302
MDOK LR LR 15 02 25.6
comp=Z,503nm,16.3s,baz=302
MDOK Medeo 44.59 302 *e*P **P** **14 42 53.3 -0.4**
MDOK *e*S **S** **14 49 28.0 0.0**
MDOK MLR MLR
comp=Z,503nm,16.0s
CHKK Chushkaly 44.61 303 *e*P **P** **14 42 52.7 -1.1**
baz=303
CHKK Chushkaly 44.61 303 *e*P **P** **14 42 52.6 -1.1**
TNSS Tian-Shan 44.67 302 *e*P **P** **14 42 54.4 -0.3**
baz=301
TNSS Tian-Shan 44.67 302 *e*P **P** **14 42 54.3 -0.3**
AAA Alma-Ata 44.69 302 *e*P **P** **14 42 54.2 -0.3**
baz=302
AAA LR LR 15 02 37.4
comp=Z,501nm,16.2s,baz=302
AAA Alma-Ata 44.69 302 *e*P **P** **14 42 54.1 -0.3**
AAA MLR MLR
comp=Z,501nm,16.0s
TKM2 Tokmak 2 45.67 302 P **P** **14 43 02.2 -0.1**
SNR=21
KSH Kashi 45.68 297 P **P** **14 43 05.6 +3.2**
KSH S **S** **14 49 48.9 +5.0**
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,360nm,4.5s
KSH LR LR
comp=Z,1µm,12.3s
KSH LR LR
comp=Z,690nm,12.7s
KSH LR LR
comp=Z,1µm,11.7s
NRIK Noril'sk 46.05 340 P **P** **14 43 03.5 -1.3**
comp=Z,6.7nm,1.0s,baz=107,slow=8.2,SNR=7.6
NRIK LR LR 15 04 24.4
comp=Z,2µm,18.5s,baz=146,slow=39
NRIK Noril'sk 46.05 340 *ce*P **P** **14 43 03.0 -1.7**
NRIK pmax pmax
comp=Z,4.0nm,0.7s
KNRA Kununurra 46.09 184 P **P** **14 43 05.7 +0.1**
KBK Karagaybulak 46.16 301 P **P** **14 43 06.3 +0.1**
SNR=12
CHMS Chumysh 46.28 302 P **P** **14 43 06.3 -0.7**
SNR=10.0
SGDS Sogindy 46.34 303 *e*P **P** **14 43 06.8 -0.6**
comp=Z,4.5nm,1.6s,baz=302
SGDS Sogindy 46.34 303 *e*P **P** **14 43 06.8 -0.6**
SGDS pmax pmax
comp=Z,4.0nm,1.6s
USP Ospenovka 46.45 302 P **P** **14 43 08.1 -0.2**
SNR=11
AAK Ala-Archa 46.49 301 P **P** **14 43 08.7 -0.1**
SNR=6.5
AAK Ala-Archa 46.49 301 P **P** **14 43 08.7 -0.1**
AAK Ala-Archa 46.49 301 P **P** **14 43 08.7 -0.1**
AAK P **P** **14 43 08.7 -0.1**
AAK Ala-Archa 46.49 301 *ce*P **P** **14 43 07.5 -1.3**
AAK pmax pmax
comp=Z,43nm,1.7s
UCH Uchtor 46.52 301 P **P** **14 43 10.1 +0.8**
SNR=10
BTLS Baital 46.67 305 *e*P **P** **14 43 09.1 -0.9**
baz=304
BTLS Baital 46.67 305 *e*P **P** **14 43 09.0 -0.9**
AML Almayashu 47.13 301 P **P** **14 43 13.0 -1.0**
SNR=8.9
BRZS Berezniki 47.54 312 *e*P **P** **14 43 15.8 -0.9**
comp=Z,10.0nm,1.2s,baz=311
BRZS LR LR 15 03 16.2
comp=Z,318nm,14.5s,baz=311
BRZS Berezniki 47.54 312 *e*P **P** **14 43 15.8 -0.9**
BRZS pmax pmax
comp=Z,10.0nm,1.2s
BRZS MLR MLR
comp=Z,318nm,15.0s
FITZ Fitzroy Crossi 48.75 187 LR LR 15 04 59.1
comp=Z,112nm,18.1s,baz=26,slow=37
FITZ Fitzroy Crossi 48.75 187 P **P** **14 43 26.1 -0.2**
DZA Taraz 48.79 302 *e*P **P** **14 43 26.0 -0.5**
baz=302
DZA LR LR 15 04 17.2
comp=Z,101nm,15.8s,baz=302
DZA Taraz 48.79 302 *e*P **P** **14 43 26.0 -0.5**
DZA MLR MLR
comp=Z,101nm,16.0s
TARA Tarawa 48.84 119 P **P** **14 43 26.0 -1.1**
NIL Nilore 48.86 290 P **P** **14 43 26.3 -0.8**
NIL pmax pmax
comp=Z,18nm,0.7s
NIL Nilore 48.86 290 P **P** **14 43 26.3 -0.8**
NIL IAmb IAmb 14 43 28.9
comp=Z,18nm,0.7s
BVAR Borovoye Array 49.05 316 P **P** **14 43 26.7 -1.6**
comp=Z,5.3nm,0.5s,baz=53,slow=17,SNR=59
BVAR PcP **PcP** **14 44 51.6 -0.1**
comp=Z,1.9nm,0.6s,baz=34,slow=16,SNR=3.8
BRVK Borovoye 49.12 316 P **P** **14 43 28.2 -0.5**
BRVK P **P** **14 43 28.2 -0.5**
BRVK Borovoye 49.12 316 *i* P **P** **14 43 27.5 -1.2**
BRVK pmax pmax
comp=Z,38nm,1.2s
BRVK Borovoye 49.12 316 P **P** **14 43 27.6 -1.2**
BRVK IAmb IAmb 14 43 29.2
comp=Z,21nm,0.7s
KK31 Karatay Array 49.37 302 *i* P **P** **14 43 30.3 -0.6**
KK31 Karatay Array 49.37 302 P **P** **14 43 29.9 -0.9**
KK31 IAmb IAmb 14 43 32.2
comp=Z,18nm,1.1s
KKAR Karatay Array 49.37 302 P **P** **14 43 29.8 -1.0**
KKAR pmax pmax
comp=Z,18nm,1.1s
KKAR Karatay Array 49.37 302 P **P** **14 43 29.8 -1.0**
KKAR Karatay Array 49.37 302 P **P** **14 43 30.0 -0.8**
KKAR IAmb IAmb 14 43 32.2
comp=Z,18nm,1.1s
IUG Iuzhnay 49.84 301 *e*P **P** **14 43 34.1 -0.5**
comp=Z,6.5nm,1.4s,baz=301
IUG Iuzhnay 49.84 301 *e*P **P** **14 43 34.0 -0.5**
IUG pmax pmax
comp=Z,6.0nm,1.4s
GAR Garm 50.10 297 P **P** **14 43 35.3 -1.3**
WB0 Warramunga Arr 50.16 176 P **P** **14 43 36.9 -0.1**
WB0 IAmb IAmb 14 43 38.8
comp=Z,27nm,0.9s
WRAB Tennant Creek 50.33 177 *i* P **P** **14 43 37.6 -0.6**
WRAB pmax pmax
comp=Z,18nm,0.8s
WRAB Tennant Creek 50.33 177 P **P** **14 43 38.3 0.0**
WRAB IAmb IAmb 14 43 40.1
comp=Z,26nm,0.9s
WRA Warramunga Arr 50.33 177 P **P** **14 43 38.9 +0.6**
comp=Z,30nm,1.1s,baz=353,slow=8.3,SNR=114
WRA LR LR 15 03 49.1
comp=Z,256nm,21.9s,baz=20,slow=35
WRA Warramunga Arr 50.33 177 P **P** **14 43 37.7 -0.6**
WB2 Warramunga Arr 50.34 177 P **P** **14 43 38.5 +0.2**
WB2 IAmb IAmb 14 43 40.2
comp=Z,30nm,0.9s
WR0 Warramunga Arr 50.36 176 P **P** **14 43 38.9 +0.4**
CHGR Chuyangaron 51.06 297 P **P** **14 43 42.3 -1.5**
KBL Kabul 52.04 292 P **P** **14 43 51.3 -0.1**
SNR=15
KBL P **P** **14 43 51.3 -0.1**
SNR=15
KBL Kabul 52.04 292 P **P** **14 43 49.6 -1.8**
KBL pmax pmax
comp=Z,30nm,1.2s
KBL Kabul 52.04 292 P **P** **14 43 49.6 -1.8**
KBL IAmb IAmb 14 43 53.2
comp=Z,30nm,1.2s
CTAO Charters Tower 52.37 162 P **P** **14 43 53.2 -0.3**
CTAO pmax pmax
comp=Z,35nm,1.4s
CTAO Charters Tower 52.37 162 P **P** **14 43 53.2 -0.3**
CTAO IAmb IAmb 14 44 18.8
comp=Z,35nm,1.4s
AS31 Alice Springs 54.01 177 P **P** **14 44 06.0 +0.3**
ASAR Alice Springs 54.02 177 P **P** **14 44 06.6 +0.9**
comp=Z,10.0nm,0.9s,baz=10,slow=13,SNR=147
ASAR PcP **PcP** **14 45 11.7 +1.1**
comp=Z,1.6nm,0.8s,baz=356,slow=2.8,SNR=1.4
ASAR LR LR 15 06 46.0
comp=Z,236nm,20.4s,baz=359,slow=36
ASAR Alice Springs 54.02 177 P **P** **14 44 05.6 0.0**
SVE Sverdlovsk 54.65 320 *e*P **P** **14 44 09.5 -0.4**
SVE pmax pmax
comp=Z,53nm,1.4s
SVE MLR MLR
comp=Z,1µm,16.0s
ARU Arti 55.82 320 P **P** **14 44 17.1 -1.2**
comp=Z,2.4nm,0.5s,baz=77,slow=5.3,SNR=16
ARU PcP **PcP** **14 45 18.3 +1.2**
comp=Z,2.0nm,0.4s,baz=94,slow=4.9,SNR=6.1
ARU Arti 55.82 320 *ce*P **P** **14 44 17.5 -0.9**
ARU pmax pmax
comp=Z,34nm,1.7s
ARU Arti 55.82 320 P **P** **14 44 16.7 -1.7**
ARU IAmb IAmb 14 44 29.5
comp=Z,29nm,1.0s
AB31 Akbulak array 55.84 311 *e*P **P** **14 44 17.6 -1.0**
ABKAR Akbulak array 55.84 311 P **P** **14 44 17.3 -1.4**
ABKAR IAmb IAmb 14 44 19.1
comp=Z,39nm,1.4s
IMAR Indian Mountai 56.29 28 P **P** **14 44 22.9 +1.3**
AKTO Aktyubinsk 56.89 313 P **P** **14 44 24.9 -1.2**
comp=Z,3.5nm,0.6s,baz=88,slow=7.7,SNR=9.3
RSO Redoubt South 56.96 35 P **P** **14 44 26.8 +0.1**
PPLA Purkeypile 57.06 32 P **P** **14 44 27.1 -0.1**
SANVU Saraoutou 57.25 138 P **P** **14 44 27.9 -1.0**
KDAK Kodiak Island 57.30 38 P **P** **14 44 29.3 +0.4**
KDAK pmax pmax
comp=Z,54nm,1.3s
KDAK Kodiak Island 57.30 38 P **P** **14 44 29.3 +0.4**
HRA Herat 57.49 294 P **P** **14 44 29.7 -1.2**
HRA IAmb IAmb 14 44 31.7
comp=Z,29nm,1.5s
RND Reindeer 58.52 31 P **P** **14 44 38.2 +0.7**
RND pmax pmax
comp=Z,27nm,1.2s
RND Reindeer 58.52 31 P **P** **14 44 38.1 +0.7**
RND IAmb IAmb 14 44 53.4
comp=Z,27nm,1.2s
PMR Palmer 58.60 33 P **P** **14 44 38.0 +0.1**
PMR pmax pmax
comp=Z,21nm,1.4s
PMR Palmer 58.60 33 P **P** **14 44 38.0 +0.1**
PMR IAmb IAmb 14 44 54.5
comp=Z,21nm,1.4s
SEW Seward 58.63 35 P **P** **14 44 38.2 +0.1**

MDM	**Murphy Dome**	**58.64**	**29**	P	**P**	**14 44 38.8**	**+0.6**
MDM				IAmb	IAmb	14 44 53.6	
	comp=Z,27nm,1.4s						
GHO	**Glory Hole Cre**	**58.68**	**33**	P	**P**	**14 44 38.3**	**-0.3**
GHO				IAmb	IAmb	14 44 56.5	
	comp=Z,33nm,1.2s						
EIDS	**Eidsvold**	**58.74**	**159**	P	**P**	**14 44 40.3**	**+1.0**
EIDS				IAmb	IAmb	14 44 55.0	
	comp=Z,15nm,1.1s						
WRH	**Wood River Hil**	**58.75**	**30**	P	**P**	**14 44 40.2**	**+1.3**
POKR	**Poker Plat Res**	**58.96**	**29**	P	**P**	**14 44 40.9**	**+0.5**
POKR				IAmb	IAmb	14 45 03.1	
	comp=Z,26nm,1.3s						
DHY	**Denali Highway**	**59.23**	**32**	P	**P**	**14 44 42.9**	**+0.4**
DHY				IAmb	IAmb	14 45 03.5	
	comp=Z,22nm,1.3s						
IL31		**59.23**	**30**	P	**P**	**14 44 42.3**	**+0.1**
ILAR	**Eielson Array**	**59.23**	**30**	P	**P**	**14 44 42.6**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=272,slow=6.3,SNR=15						
ILAR				LR	LR	15 11 24.7	
	comp=Z,222nm,20.9s,baz=286,slow=37						
ILAR	**Eielson Array**	**59.23**	**30**	P	**P**	**14 44 41.9**	**-0.4**
GEYT	**Alibeck**	**59.66**	**299**	P	**P**	**14 44 43.5**	**-2.3**
	comp=Z,2.3nm,0.6s,baz=68,slow=3.9,SNR=3.4						
GEYT				LR	LR	15 14 24.1	
	comp=Z,776nm,18.6s,baz=95,slow=40						
GEYT	**Alibeck**	**59.66**	**299**	P	**P**	**14 44 44.9**	**-0.9**
GYA0B	**ALIBECK ARRAY**	**59.66**	**299**	P	**P**	**14 44 45.0**	**-0.7**
BMAR	**Burnt Mountain**	**59.83**	**26**	P	**P**	**14 44 46.7**	**+0.2**
KLU	**Klutina**	**60.14**	**33**	P	**P**	**14 44 48.2**	**-0.4**
KLU				IAmb	IAmb	14 45 08.5	
	comp=Z,16nm,1.2s						
KIRV	**Kirov**	**60.41**	**323**	*i* P	**P**	**14 44 50.2**	**-0.2**
DOT	**Dot Lake**	**60.62**	**31**	P	**P**	**14 44 51.7**	**-0.2**
DOT				IAmb	IAmb	14 45 10.0	
	comp=Z,23nm,1.4s						
FORT	**Forrest**	**61.14**	**183**	P	**P**	**14 44 56.8**	**+1.2**
GLB	**Gilahina Butte**	**61.14**	**33**	P	**P**	**14 44 57.1**	**+1.6**
GLB				IAmb	IAmb	14 45 14.5	
	comp=Z,20nm,1.3s						
HMT	**Hamilton**	**61.15**	**34**	P	**P**	**14 44 56.9**	**+1.4**
K27K	**Chicken**	**61.41**	**30**	P	**P**	**14 44 56.6**	**-0.5**
K27K				IAmb	IAmb	14 45 25.0	
	comp=Z,22nm,1.5s						
CRQM	**Cirque**	**61.60**	**34**	P	**P**	**14 44 59.0**	**+0.2**
CRQM				IAmb	IAmb	14 45 09.1	
	comp=Z,34nm,1.4s						
BCAR	**Beaver Creek A**	**61.74**	**31**	P	**P**	**14 45 00.0**	**+0.6**
ISLE	**Juniper Island**	**62.02**	**34**	P	**P**	**14 45 01.7**	**+0.2**
DZM	**Mont Dzumac**	**62.21**	**143**	*e*P	**P**	**14 45 04.2**	**+1.1**
	comp=Z,33nm,0.9s						
DZM				*e*S	**S**	**14 53 31.4**	**+4.1**
	comp=Z,282nm,25.4s						
DZM	**Mont Dzumac**	**62.21**	**143**	*e*LR	LR	15 03 35.6	
	comp=Z,299nm,24.6s						
DZM	**Mont Dzumac**	**62.21**	**143**	P	**P**	**14 45 04.7**	**+1.6**
	comp=Z,11nm,0.7s,baz=322,slow=2.1,SNR=9.6						
DZM	**Mont Dzumac**	**62.21**	**143**	P	**P**	**14 45 04.8**	**+1.6**
DZM				IAmb	IAmb	14 45 06.0	
	comp=Z,12nm,0.7s						
BELG	**Belogornoye**	**62.82**	**317**	*i* P	**P**	**14 45 05.9**	**-0.9**
BELG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
STKA	**Stephens Creek**	**62.88**	**170**	P	**P**	**14 45 08.5**	**+1.2**
	comp=Z,15nm,0.8s,baz=344,slow=6.6,SNR=58						
STKA	**Stephens Creek**	**62.88**	**170**	P	**P**	**14 45 08.0**	**+0.7**
PCA	**Pinnacle**	**63.15**	**34**	P	**P**	**14 45 10.0**	**+1.0**
BBOO	**Buckleboo**	**63.22**	**176**	P	**P**	**14 45 09.3**	**-0.3**
BBOO				IAmb	IAmb	14 45 28.8	
	comp=Z,34nm,1.4s						
INK	**Inuvik**	**63.74**	**24**	P	**P**	**14 45 13.2**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=300,slow=9.7,SNR=7.4						
INK	**Inuvik**	**63.74**	**24**	P	**P**	**14 45 12.4**	**-0.2**
JLN	**Jalan Bani Buh**	**64.16**	**281**	P	**P**	**14 45 17.0**	**+0.8**
	SNR=7.6						
JLN				P	**P**	**14 45 17.0**	**+0.8**
	SNR=7.6						
WBK	**Wadi Bani Khal**	**64.35**	**282**	P	**P**	**14 45 18.5**	**+1.1**
	SNR=9.1						
WBK				P	**P**	**14 45 18.5**	**+1.1**
	SNR=9.1						
TMCR	**Tamitsa**	**64.37**	**331**	*e*P	P	14 45 11.5	-5.3
WSAR	**Wadi Sarin**	**64.38**	**283**	P	**P**	**14 45 17.2**	**-0.4**
	comp=Z,11nm,0.6s,baz=86,slow=4.6,SNR=21						
BIDO	**Bidbid**	**64.69**	**283**	P	**P**	**14 45 21.2**	**+1.6**
	SNR=9.7						
KLMR	**Klimovskoe**	**64.71**	**327**	*e*P	**P**	**14 45 18.0**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,21nm,1.1s						
KLMR				MLR	MLR		
	comp=Z,482nm,16.0s						
KLMR	**Klimovskoe**	**64.71**	**327**	*e*P	**P**	**14 45 18.0**	**-1.1**
KLMR				AMP		14 45 29.9	
	comp=Z,21nm,1.1s						
KLMR				LQ	LQ	15 10 03.2	
KLMR				LQ	LQ	15 10 03.2	
KLMR				LR	LR	15 13 00.5	
KLMR				AMP		15 16 58.9	
	comp=Z,482nm,16.4s						
SMDO	**Samad**	**64.94**	**283**	P	**P**	**14 45 22.1**	**+0.8**
	SNR=9.5						
SMDO				P	**P**	**14 45 22.1**	**+0.8**
	SNR=9.5						
APA	**Apatity**	**65.08**	**335**	⇑ *i*P	P	14 45 26.2	+4.8
APA				pmax	pmax		
	comp=Z,16nm,1.0s						
JMDO	**Jabal Madar**	**65.18**	**282**	P	**P**	**14 45 23.5**	**+0.7**
	SNR=7.0						
JMDO				P	**P**	**14 45 23.5**	**+0.7**
	SNR=7.0						
BANOM	**Banah**	**65.25**	**287**	P	**P**	**14 45 23.9**	**+0.6**
BANOM				P	**P**	**14 45 24.7**	**+1.4**
SHME	**Shamm**	**65.33**	**287**	P	**P**	**14 45 25.6**	**+1.8**
HOQ	**Hoqain**	**65.35**	**284**	P	**P**	**14 45 24.7**	**+0.8**
	SNR=7.9						
HOQ				P	**P**	**14 45 24.7**	**+0.8**
	SNR=7.9						
MDH	**Madha**	**65.50**	**286**	P	**P**	**14 45 26.1**	**+1.2**
MSFE	**Esma-Masafi**	**65.59**	**286**	P	**P**	**14 45 27.6**	**+2.1**
SOHO	**SOHO**	**65.77**	**285**	*i* P	**P**	**14 45 27.1**	**+0.4**
	SNR=18						
SOHO	**SOHO**	**65.77**	**285**	P	**P**	**14 45 27.7**	**+1.1**
SOHO				P	**P**	**14 45 27.7**	**+1.1**
MAK	**Makhachkala**	**65.78**	**307**	*e*P	P	14 45 21.4	-4.9
MAK				*e*		14 47 46.3	
MAK				*e*PPP	PPP	14 49 20.9	
MAK				*e*S	**S**	**14 54 05.0**	**-6.1**
MAK				*e*SS	**SS**	**14 58 26.7**	**+1.3**
MAK				MLR	MLR		
	comp=Z,981nm,15.0s						
BSY	**Bisya**	**65.78**	**283**	P	**P**	**14 45 27.6**	**+0.8**
BSY				P	**P**	**14 45 27.6**	**+0.8**
HATD	**Hatta, Dubai**	**65.83**	**285**	*i* P	**P**	**14 45 28.2**	**+1.2**
	SNR=6.6						
HATD	**Hatta, Dubai**	**65.83**	**285**	P	**P**	**14 45 28.3**	**+1.3**
	SNR=6.5						
HATD				P	**P**	**14 45 28.3**	**+1.3**
	SNR=6.5						
MHTO	**MHTO**	**65.87**	**281**	P	**P**	**14 45 27.8**	**+0.5**
	SNR=8.9						
MHTO				P	**P**	**14 45 27.8**	**+0.5**
	SNR=8.9						
ASHO	**Ashiyiah**	**65.94**	**285**	*i* P	**P**	**14 45 28.8**	**+1.0**
	SNR=12						
ASHO	**Ashiyiah**	**65.94**	**285**	P	**P**	**14 45 29.0**	**+1.2**
	SNR=8.7						
ASHO				P	**P**	**14 45 29.0**	**+1.2**
	SNR=8.7						
HMH	**Humu'ula Sheep**	**66.03**	**81**	P	**P**	**14 45 27.4**	**-1.3**
ARQ	**Araqi**	**66.11**	**284**	P	**P**	**14 45 30.3**	**+1.4**
	SNR=5.6						
ARQ				P	**P**	**14 45 30.3**	**+1.4**
	SNR=5.6						
ARQ				P	**P**	**14 45 30.3**	**+1.4**
	SNR=5.6						
NAZ	**Nazwa, Dubai**	**66.15**	**286**	P	**P**	**14 45 30.6**	**+1.5**
NAZ				P	**P**	**14 45 30.6**	**+1.5**
FAQ	**Al Faqa, Dubai**	**66.31**	**286**	P	**P**	**14 45 30.8**	**+0.7**
FAQ	**Al Faqa, Dubai**	**66.31**	**286**	P	**P**	**14 45 31.6**	**+1.5**
FAQ				P	**P**	**14 45 31.6**	**+1.5**
LKRN	**Lenkeran, Azer**	**66.36**	**302**	P	**P**	**14 45 30.0**	**-0.1**
ALNE	**Al Ain**	**66.46**	**285**	P	**P**	**14 45 31.6**	**+0.5**
ASUD	**Al Ashush, Dub**	**66.58**	**286**	P	**P**	**14 45 33.1**	**+1.4**
ASUD	**Al Ashush, Dub**	**66.58**	**286**	P	**P**	**14 45 33.3**	**+1.5**
C36M	**Paulatuk**	**66.58**	**22**	P	**P**	**14 45 31.7**	**+0.7**
C36M				IAmb	IAmb	14 45 44.2	
	comp=Z,12nm,0.7s						
SEKA	**Sheki**	**66.60**	**305**	P	**P**	**14 45 31.9**	**+0.1**
VRH	**Novokhopyorsk**	**66.67**	**317**	*e*P	**P**	**14 45 30.9**	**-1.0**
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
VRH				MLR	MLR		
	comp=Z,1μm,16.0s						
DQM	**DQM**	**66.68**	**280**	P	**P**	**14 45 33.2**	**+0.7**
MNGR	**Mingechevir, A**	**66.84**	**305**	P	**P**	**14 45 33.0**	**-0.2**
ZKTA	**Zakatala**	**66.85**	**306**	P	**P**	**14 45 32.6**	**-0.7**
ARCES	**ARCESS Array B**	**67.00**	**338**	P	**P**	**14 45 33.6**	**-0.2**
	comp=Z,7.5nm,1.0s,baz=28,slow=5.9,SNR=4.4						
ARCES				LR	LR	15 20 39.8	
	comp=Z,1μm,18.7s,baz=60,slow=41						
LGD	**Lagodekhi**	**67.05**	**306**	P	**P**	**14 45 35.6**	**+1.0**
MOS	**Moscow**	**67.36**	**322**	*e*P	**P**	**14 45 35.2**	**-1.0**
MOS				*e*		14 45 43.5	
MOS				*e*		14 45 57.8	
MOS				*e*S	**S**	**14 54 35.6**	**+5.7**
MOS				pmax	pmax		
	comp=Z,100nm,1.2s						
MOS				pmax	pmax		
	comp=Z,49nm,1.1s						
MOS				MLR	MLR		
	comp=Z,600nm,15.0s						
GANJ	**Ganja**	**67.42**	**305**	P	**P**	**14 45 37.2**	**+0.2**
EUNU	**Eureka**	**67.62**	**7**	P	**P**	**14 45 37.6**	**0.0**
EUNU				IAmb	IAmb	14 45 49.7	
	comp=Z,15nm,1.2s						
LPSR	**Galich'ya Gora**	**67.79**	**319**	*e*P	**P**	**14 45 38.2**	**-0.8**
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
LPSR				MLR	MLR		
	comp=Z,860nm,16.0s						
GOF	**Gofitskoye**	**68.04**	**310**	⇑ *e*P	**P**	**14 45 40.8**	**0.0**
GOF				pmax	pmax		
	comp=Z,42nm,0.9s						
OBN	**Obninsk**	**68.15**	**322**	⇑ *i*P	**P**	**14 45 41.5**	**+0.3**
OBN				*i* *SP	**sP**	**14 45 51.4**	**-1.0**
OBN						14 46 03.0	
OBN				SS	SS	14 58 57.0	-4.6
OBN				SSS	SSS	15 02 08.0	
OBN				pmax	pmax		
	comp=Z,34nm,1.2s						
OBN				MLR	MLR		
	comp=Z,665nm,16.0s						
VSR	**Storozhevoye**	**68.17**	**317**	*e*P	**P**	**14 45 40.5**	**-0.9**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VSR				MLR	MLR		
	comp=Z,630nm,14.0s						
VORD	**Divnogorie**	**68.19**	**317**	*e*P	**P**	**14 45 39.8**	**-1.7**
VORD				pmax	pmax		
	comp=Z,20nm,1.5s						
ZEI	**Tsey**	**68.31**	**308**	*e*P	**P**	**14 45 41.5**	**-1.3**
ZEI				pmax	pmax		
	comp=Z,17nm,1.0s						
KZRT	**Kazreti**	**68.50**	**306**	P	**P**	**14 45 45.8**	**+2.1**
NAX	**Nakhchivan**	**68.56**	**304**	P	**P**	**14 45 44.0**	**-0.2**
KBZ	**Khabaz**	**68.64**	**309**	P	**P**	**14 45 44.7**	**+0.3**
	comp=Z,34nm,1.0s,baz=233,slow=20						
KBZ				LR	LR	15 19 30.5	
	comp=Z,728nm,18.6s,baz=68,slow=39						
KBZ	**Khabaz**	**68.64**	**309**	*ce*P	**P**	**14 45 44.8**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,36nm,1.0s						
KIV	**Kislovodsk**	**68.69**	**309**	⇓P	**P**	**14 45 46.4**	**+1.4**
KIV	**Kislovodsk**	**68.69**	**309**	*i* P	**P**	**14 45 45.9**	**+0.9**
	SNR=7.9						
KIV	**Kislovodsk**	**68.69**	**309**	P	**P**	**14 45 46.4**	**+1.4**
KIV				P	**P**	**14 45 46.4**	**+1.4**
KIV	**Kislovodsk**	**68.69**	**309**	*e*P	**P**	**14 45 45.3**	**+0.3**
KIV				pmax	pmax		
	comp=Z,144nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1μm,17.0s						
KIV	**Kislovodsk**	**68.69**	**309**	P	**P**	**14 45 44.6**	**-0.4**
GNI	**Garni**	**68.73**	**305**	P	**P**	**14 45 47.5**	**+2.2**
GNI				P	**P**	**14 45 47.5**	**+2.2**
GNI	**Garni**	**68.73**	**305**	*ce*P	**P**	**14 45 45.8**	**+0.5**
GNI				pmax	pmax		
	comp=Z,34nm,1.3s						
GNI	**Garni**	**68.73**	**305**	P	**P**	**14 45 45.6**	**+0.2**
TOO	**Toolangi**	**69.08**	**168**	P	**P**	**14 45 48.4**	**+1.3**
TOO				pmax	pmax		
	comp=Z,17nm,1.1s						
TOO	**Toolangi**	**69.08**	**168**	P	**P**	**14 45 48.4**	**+1.3**
TOO				IAmb	IAmb	14 46 02.6	
	comp=Z,17nm,1.1s						
BGD	**Bogdanovka**	**69.10**	**306**	P	**P**	**14 45 50.2**	**+2.5**
AKH	**Akhalkalaki**	**69.12**	**306**	⇓P	**P**	**14 45 48.8**	**+1.0**
AKH	**Akhalkalaki**	**69.12**	**306**	P	**P**	**14 45 47.7**	**-0.1**
AKH				pmax	pmax		
	comp=Z,43nm,0.9s						
AKH	**Akhalkalaki**	**69.12**	**306**	P	**P**	**14 45 47.6**	**-0.1**
SHAO	**Shalim**	**69.14**	**279**	P	**P**	**14 45 49.2**	**+1.1**
SHAO				P	**P**	**14 45 49.2**	**+1.1**
KARS	**Kars**	**69.71**	**306**	P	**P**	**14 45 54.6**	**+3.2**
BATM	**Batumi**	**70.28**	**307**	P	**P**	**14 45 56.3**	**+1.6**
FIA1	**FINESS Array S**	**70.48**	**331**	P	**P**	**14 45 54.3**	**-1.2**
FIA1				IAmb	IAmb	14 46 06.8	
	comp=Z,8.8nm,0.8s						
FINES	**FINESS Array B**	**70.48**	**331**	P	**P**	**14 45 54.5**	**-1.1**
	comp=Z,6.8nm,0.5s,baz=73,slow=5.5,SNR=45						
FINES				LR	LR	15 20 28.5	
	comp=Z,1μm,18.3s,baz=58,slow=39						
FINES	**FINESS Array B**	**70.48**	**331**	P	**P**	**14 45 54.3**	**-1.2**
RBK	**Rabkut**	**70.58**	**279**	P	**P**	**14 45 57.4**	**+0.4**
RBK				P	**P**	**14 45 57.4**	**+0.4**
RBK				P	**P**	**14 45 57.4**	**+0.4**
GEVA	**Gevas**	**70.65**	**304**	P	**P**	**14 45 57.1**	**-0.1**
RES	**Resolute Bay**	**70.71**	**12**	P	**P**	**14 45 56.6**	**-0.1**
RES				pmax	pmax		
	comp=Z,24nm,1.0s						
RES	**Resolute Bay**	**70.71**	**12**	P	**P**	**14 45 56.6**	**-0.1**
RES				IAmb	IAmb	14 46 10.0	
	comp=Z,24nm,0.9s						
WHFO	**Wadi Hawf**	**70.77**	**280**	P	**P**	**14 45 58.1**	**+0.1**
WHFO				P	**P**	**14 45 58.1**	**+0.1**
SOC	**Sochi**	**70.82**	**310**	*e*P	**P**	**14 45 55.6**	**-2.3**
SOC				*e**SP	**pP**	**14 46 04.6**	**-1.4**
SOC				*e*		14 48 30.5	
SOC				*e*PPP	PPP	14 50 16.3	
SOC				*e*S	**S**	**14 55 11.8**	**+0.6**
SOC				*e*SS	**SS**	**14 59 45.7**	**+2.5**
SOC				pmax	pmax		
	comp=Z,25nm,0.7s						
SOC				MLR	MLR		
	comp=Z,563nm,19.0s						
DAG	**Danmarks Havn**	**71.29**	**353**	*i* P	**P**	**14 45 59.5**	**-0.7**
DAG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DAG	**Danmarks Havn**	**71.29**	**353**	*i* P	**P**	**14 45 59.5**	**-0.7**
	comp=Z,9.4nm,1.1s						
DAG	**Danmarks Havn**	**71.29**	**353**	*i* P	**P**	**14 45 59.6**	**-0.7**
DAG				IAmb	IAmb	14 46 02.2	
	comp=Z,9.4nm,1.1s						
ABTO	**Aybut**	**71.42**	**280**	P	**P**	**14 46 02.5**	**+0.5**
ABTO				P	**P**	**14 46 02.5**	**+0.5**
VSU	**Vasula**	**71.61**	**328**	*e*P	**P**	**14 46 02.4**	**0.0**
KOPT	**Kop Dagi**	**71.76**	**306**	P	**P**	**14 46 03.0**	**-1.0**
KOPT				IAmb	IAmb	14 46 06.8	
	comp=Z,26nm,1.3s						
TULEG	**Thule**	**72.36**	**5**	P	**P**	**14 46 06.8**	**+0.2**
MARD	**Mardin**	**72.71**	**303**	P	**P**	**14 46 09.3**	**-0.3**
IDID	**Didziasalis**	**73.13**	**325**	*e*P	**P**	**14 46 12.0**	**+0.4**
SOCY	**Socotra**	**73.23**	**274**	P	**P**	**14 46 12.9**	**0.0**
SOCY	**Socotra**	**73.23**	**274**	P	**P**	**14 46 10.6**	**-2.3**
ISAL	**Salakas**	**73.31**	**325**	*e*P	**P**	**14 46 12.5**	**-0.1**
NACGM	**Naroch**	**73.31**	**324**	*e*	**P**	**14 46 13.0**	**+0.4**
NACGM				*e*LQ	LQ	15 17 38.0	
NACGM				*e*LR	LR	15 22 22.0	
YKA	**Yellowknife Ar**	**73.35**	**26**	P	**P**	**14 46 13.1**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=303,slow=6.3,SNR=4.7						
IIGN	**Ignalina**	**73.37**	**325**	*e*P	**P**	**14 46 12.4**	**-0.6**
MALT	**Malatya**	**73.95**	**305**	P	**P**	**14 46 18.2**	**+1.3**
AKASG	**Malin Array Be**	**74.07**	**320**	P	**P**	**14 46 16.1**	**-1.0**
	comp=Z,5.4nm,0.5s,baz=51,slow=6.5,SNR=35						
AKASG				LR	LR	15 21 57.0	
	comp=Z,798nm,19.7s,baz=50,slow=38						
AKASG	**Malin Array Be**	**74.07**	**320**	P		**14 46 15.1**	**-2.1**
AKBB	**Malin Array Si**	**74.07**	**320**	*ce*P	**P**	**14 46 16.7**	**-0.5**
AKBB	**Malin Array Si**	**74.07**	**320**	P	**P**	**14 46 15.8**	**-1.3**
AKBB				IAmb	IAmb	14 46 18.2	
	comp=Z,20nm,1.0s						
KIEV	**Kiev**	**74.08**	**320**	P	**P**	**14 46 15.0**	**-2.2**
PABE	**Paberze**	**74.40**	**326**	*e*P	**P**	**14 46 19.0**	**0.0**
RAYN	**Ar Rayn**	**75.14**	**289**	*i* P	**P**	**14 46 24.4**	**+0.4**
	SNR=27						
RAYN	**Ar Rayn**	**75.14**	**289**	P	**P**	**14 46 23.2**	**-0.8**
RAYN				pmax	pmax		
	comp=Z,26nm,1.0s						
RAYN	**Ar Rayn**	**75.14**	**289**	P	**P**	**14 46 23.2**	**-0.8**
RAYN				IAmb	IAmb	14 46 26.0	
	comp=Z,26nm,1.0s						
SUW	**Suwalki**	**75.58**	**325**	*e*P	**P**	**14 46 26.1**	**+0.3**
SUW	**Suwalki**	**75.58**	**325**	P	**P**	**14 46 25.6**	**-0.2**
SUW	**Suwalki**	**75.58**	**325**	P	**P**	**14 46 25.6**	**-0.2**
SORM	**Soroca**	**75.83**	**318**	⇓P	**P**	**14 46 27.1**	**-0.3**
SORM	**Soroca**	**75.83**	**318**	P	**P**	**14 46 27.0**	**-0.3**
HORU	**Horodok**	**76.38**	**319**	P	**P**	**14 46 30.2**	**-0.3**
NC405	**NORSAR Array S**	**76.41**	**334**	P	**P**	**14 46 29.4**	**-1.1**
NC405				IAmb	IAmb	14 46 47.6	
	comp=Z,36nm,1.4s						
NC303	**NORSAR Array S**	**76.47**	**335**	P	**P**	**14 46 29.6**	**-1.2**
NC303				IAmb	IAmb	14 46 49.2	
	comp=Z,25nm,1.2s						
BR131	**Keskin Array S**	**76.61**	**308**	*i* P	**P**	**14 46 32.2**	**0.0**
BR131	**Keskin Array S**	**76.61**	**308**	P	**P**	**14 46 30.7**	**-1.5**
BR131				IAmb	IAmb	14 46 34.4	
	comp=Z,19nm,0.9s						
BRTR	**Keskin Array B**	**76.61**	**308**	P	**P**	**14 46 31.6**	**-0.6**
	comp=Z,22nm,0.9s,baz=101,slow=3.9,SNR=49						
BRTR				LR	LR	15 25 07.5	
	comp=Z,128nm,20.1s,baz=57,slow=40						
BRTR	**Keskin Array B**	**76.61**	**308**	P	**P**	**14 46 31.2**	**-1.0**
BRTR	**Keskin Array B**	**76.61**	**308**	P	**P**	**14 46 31.2**	**-1.0**
NB201	**NORSAR Array S**	**76.61**	**334**	P	**P**	**14 46 30.8**	**-0.8**
NB2	**NORSAR Subarra**	**76.64**	**334**	P	**P**	**14 46 30.5**	**-1.3**
	comp=Z,2.9nm,0.6s,baz=50,slow=5.9						
NOA	**NORSAR Array B**	**76.64**	**334**	P	**P**	**14 46 30.4**	**-1.5**
	comp=Z,2.8nm,0.6s,baz=49,slow=5.6,SNR=18						
NOA				LR	LR	15 24 12.5	
	comp=Z,405nm,18.4s,baz=45,slow=39						
NC204	**NORSAR Array S**	**76.66**	**335**	P	**P**	**14 46 30.0**	**-1.9**
NC204				IAmb	IAmb	14 46 31.1	
	comp=Z,36nm,1.4s						
NBO00	**NORSAR Array S**	**76.81**	**335**	P	**P**	**14 46 32.2**	**-0.5**
SUMG	**Summit**	**76.86**	**357**	*i* P	**P**	**14 46 33.1**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,28nm,0.8s						
SUMG	**Summit**	**76.86**	**357**	P	**P**	**14 46 33.3**	**0.0**
SUMG				IAmb	IAmb	14 46 51.8	
	comp=Z,27nm,1.2s						
SUMG	**Summit**	**76.86**	**357**	*i* P	**P**	**14 46 33.1**	**-0.2**
	comp=Z,28nm,0.8s						
SUMG	**Summit**	**76.86**	**357**	*i* P	**P**	**14 46 33.1**	**-0.2**
SUMG				IAmb	IAmb	14 46 34.5	
	comp=Z,28nm,0.8s						
TLCR		**77.03**	**315**	⇓P	**P**	**14 46 35.1**	**+0.9**
LVV	**L'vov**	**77.39**	**321**	*e*P	**P**	**14 46 37.6**	**+1.4**
LVV				*e*S	**SKSac**	**14 56 47.7**	**+0.3**
LVV				MLR	MLR		
	comp=E,400nm,15.0s						
LVV				MLR	MLR		
	comp=N,200nm,14.0s						
LVV				MLR	MLR		
	comp=Z,1μm,17.0s						
TPGR	**Topolog**	**77.44**	**315**	⇓P	**P**	**14 46 36.9**	**+0.3**
CFR	**Carcaliu**	**77.45**	**315**	⇓P	**P**	**14 46 36.6**	**0.0**
CFR	**Carcaliu**	**77.45**	**315**	P	**P**	**14 46 36.5**	**0.0**
KSV	**Kosov**	**77.62**	**319**	P	**P**	**14 46 36.2**	**-1.3**
TESR	**Tescani**	**77.65**	**317**	⇓P	**P**	**14 46 38.1**	**+0.3**
BIZ	**Bicaz**	**77.75**	**317**	⇓P	**P**	**14 46 38.6**	**+0.3**
HARR	**Harsova**	**77.83**	**315**	⇓P	**P**	**14 46 39.3**	**+0.6**
HARR	**Harsova**	**77.83**	**315**	P	**P**	**14 46 39.3**	**+0.6**
MORS	**Morshin**	**77.83**	**320**	P	**P**	**14 46 39.5**	**+0.8**
MDUB	**Mudurnu**	**77.88**	**310**	P	**P**	**14 46 37.5**	**-1.8**
BUR08	**Bucovina Ar. S**	**77.90**	**318**	P	**P**	**14 46 38.2**	**-1.1**
BURAR	**Bucovina Array**	**77.90**	**318**	⇓P	**P**	**14 46 39.8**	**+0.6**
BURAR	**Bucovina Array**	**77.90**	**318**	P	**P**	**14 46 39.8**	**+0.6**
BURAR	**Bucovina Array**	**77.90**	**318**	P	**P**	**14 46 38.2**	**-1.0**
VRI	**Vrincioaia**	**77.94**	**316**	⇓P	**P**	**14 46 40.4**	**+1.0**
VRI	**Vrincioaia**	**77.94**	**316**	P	**P**	**14 46 39.8**	**+0.4**
VRI				pmax	pmax		
	comp=Z,26nm,1.3s						
PLOR	**Plostina**	**78.00**	**316**	⇓P	**P**	**14 46 41.5**	**+1.7**
PLOR	**Plostina**	**78.00**	**316**	P	**P**	**14 46 41.4**	**+1.7**
ICOR	**Ion Corvin**	**78.20**	**314**	⇓P	**P**	**14 46 41.8**	**+1.0**
KWP	**Kalwaria Pacla**	**78.21**	**321**	*e*P	**P**	**14 46 40.5**	**-0.3**
KWP	**Kalwaria Pacla**	**78.21**	**321**	P	**P**	**14 46 39.1**	**-1.7**
KWP				pmax	pmax		
	comp=Z,31nm,0.9s						
KWP	**Kalwaria Pacla**	**78.21**	**321**	P	**P**	**14 46 39.1**	**-1.7**
OZUR		**78.38**	**317**	⇑P	**P**	**14 46 43.3**	**+1.5**
NEHR	**Nehoiu**	**78.43**	**316**	⇓P	**P**	**14 46 43.7**	**+1.6**
MLR	**Muntele Rosu**	**78.61**	**316**	⇓P	**P**	**14 46 44.2**	**+0.9**

comp=Z,800nm,12.5s
KRLC Kraliky 81.07 324 *e*P **P** **14 46 56.6 +0.2**
KRLC *e* 14 47 04.7
KRLC MLR MLR
comp=Z,600nm,17.2s
KRLC Kraliky 81.07 324 *e*P **P** **14 46 56.6 +0.2**
KRLC *e*pP **pP** **14 47 04.7 0.0**
KRLC AMS AMS 15 27 30.0
comp=Z,600nm,17.2s
BZS Buzias 81.08 318 ⇓P **P** **14 46 56.8 +0.4**
BZS Buzias 81.08 318 P **P** **14 46 56.9 +0.5**
BZS pmax pmax
comp=Z,7.0nm,0.9s
CHVC Chvalec 81.12 324 AMS AMS 15 27 30.0
comp=Z,800nm,15.7s
DPC Dobruska-Polom 81.14 324 *e*P **P** **14 46 57.5 +0.8**
DPC *e* 14 47 06.3
DPC MLR MLR
comp=Z,600nm,18.5s
DPC Dobruska-Polom 81.14 324 *e*P **P** **14 46 57.5 +0.8**
DPC *e*pP **pP** **14 47 06.3 +1.3**
DPC AMS AMS 15 27 40.0
comp=Z,600nm,18.5s
UPC Upice 81.20 324 AMS AMS 15 27 30.0
comp=Z,900nm,13.6s
JAVC Velka Javorina 81.35 322 *e*P **P** **14 47 00.1 +2.2**
MDVR Moldovita 81.50 317 ⇓P **P** **14 46 59.3 +0.6**
VRAC Vranov 81.64 323 ⇓P **P** **14 47 00.9 +1.6**
VRAC Vranov 81.64 323 *e*P **P** **14 47 00.5 +1.2**
VRAC Vranov 81.64 323 P **P** **14 47 00.6 +1.2**
VRAC pmax pmax
comp=Z,15nm,1.1s
SMOL Smolenice 81.68 322 *e*P **P** **14 47 01.4 +1.8**
SMOL pmax pmax
comp=Z,8.0nm,1.1s
SMOL Smolenice 81.68 322 *e*P **P** **14 47 01.4 +1.8**
MODS Modra-Piesok 81.85 322 *e*P **P** **14 47 01.1 +0.6**
MODS pmax pmax
comp=Z,27nm,1.3s
MODS Modra-Piesok 81.85 322 *e*P **P** **14 47 01.1 +0.6**
KRUC Moravsky 81.89 323 *e*P **P** **14 47 01.8 +1.1**
KRUC Moravsky 81.89 323 P **P** **14 47 01.8 +1.1**
KRUC pmax pmax
comp=Z,13nm,1.4s
PVCC Panska Ves 81.90 325 AMS AMS 15 27 50.0
comp=Z,1μm,14.5s
BRG Berggiesshubel 81.99 325 *e*P **P** **14 47 02.0 +0.8**
comp=Z,18nm,1.6s
comp=Z,2μm,14.4s
comp=N,870nm,14.5s
comp=E,890nm,14.5s
BRG Berggiesshubel 81.99 325 *e*P **P** **14 47 02.0 +0.8**
BRG pmax pmax
comp=Z,23nm,1.6s
BRG MLR MLR
comp=N,2μm,14.5s
BRG MLR MLR
comp=E,870nm,14.5s
CLL Collm 82.17 326 ⇓*i*P **P** **14 47 02.9 +0.8**
comp=Z,40nm,1.7s
CLL *i* sP **sP** **14 47 12.2 -1.2**
CLL Lm MLR 15 27 00.0
comp=N,600nm,18.5s
CLL Lm MLR 15 27 00.0
comp=E,500nm,18.6s
CLL Lm MLR 15 27 00.0
comp=Z,1μm,18.9s
CLL Collm 82.17 326 P **P** **14 47 02.3 +0.2**
CLL pmax pmax
comp=Z,14nm,1.0s
CLL Collm 82.17 326 *e*P **P** **14 47 03.0 +1.0**
comp=Z,40nm,1.7s,baz=57,slow=4.7
CLL Collm 82.17 326 P **P** **14 47 02.3 +0.2**
CLL IAmb IAmb 14 47 04.8
comp=Z,14nm,1.0s
TREC Trest 82.22 324 AMS AMS 15 28 20.0
comp=Z,700nm,16.3s
PRU Pruhonice 82.26 325 *e*P **P** **14 47 03.8 +1.2**
PRU MLR MLR
comp=Z,1μm,14.2s
PRU Pruhonice 82.26 325 *e*P **P** **14 47 03.8 +1.2**
PRU AMS AMS 15 27 50.0
comp=Z,1μm,14.2s
PRA Prague 82.26 325 AMS AMS 15 28 10.0
comp=Z,600nm,17.4s
SRS Serrai 82.44 314 P **P** **14 47 03.2 -0.5**
SRS pmax pmax
comp=Z,13nm,1.3s
CONA Conrad Observa 82.87 322 *e*P **P** **14 47 07.2 +1.2**
comp=Z,18nm,1.0s
DIVS Divibare 82.90 318 P **P** **14 47 04.6 -1.5**
DIVS IAmb IAmb 14 47 09.9
comp=Z,14nm,1.0s
NKC Novy Kostel 83.14 326 *e*P **P** **14 47 10.4 +3.2**
NKC MLR MLR
comp=Z,2μm,16.7s
NKC Novy Kostel 83.14 326 *e*P **P** **14 47 10.4 +3.2**
NKC AMS AMS 15 28 20.0
comp=Z,2μm,16.7s
GRG Griva 83.27 314 P **P** **14 47 08.9 +0.9**
GRG pmax pmax
comp=Z,13nm,1.6s
KHC Kasperske Hory 83.29 324 *e*P **P** **14 47 08.4 +0.4**
KHC MLR MLR
comp=Z,900nm,19.2s
KHC Kasperske Hory 83.29 324 *e*P **P** **14 47 08.4 +0.4**
KHC AMS AMS 15 28 30.0
comp=Z,900nm,19.2s
GERES GERESS Array B 83.41 324 P **P** **14 47 08.3 -0.4**
comp=Z,1.7nm,0.6s,baz=50,slow=4.4,SNR=12
GERES LR LR 15 29 45.1
comp=Z,357nm,18.1s,baz=50,slow=40
GERES GERESS Array B 83.41 324 P **P** **14 47 07.9 -0.8**
GERES GERESS Array B 83.41 324 P **P** **14 47 07.9 -0.8**
ARSA Arzberg 83.47 322 *i*P **P** **14 47 10.6 +1.6**
comp=Z,4.5nm,0.6s,SNR=6.3
MOA Molln 83.76 323 *e*P **P** **14 47 10.6 +0.2**
comp=Z,6.9nm,0.8s
GRF Grafenberg Arr 84.09 326 *e*P **P** **14 47 13.0 +1.0**
comp=Z,43nm,1.1s,baz=57,slow=4.7
SOKA Soboth 84.09 322 *e*P **P** **14 47 13.3 +1.0**
comp=Z,26nm,1.1s
PDG Podgorica 84.32 316 ⇓P **P** **14 47 14.8 +1.5**
OBKA Obir 84.46 322 *i*P **P** **14 47 13.3 -0.8**
comp=Z,16nm,0.7s,SNR=6.0
HLID Hailey 84.72 42 P **P** **14 47 14.5 -1.1**
KBA Koelnbreinsper 84.73 323 *e*P **P** **14 47 15.1 -0.4**
comp=Z,10.0nm,0.6s
IDI Anoyia 84.85 308 ⇓P **P** **14 47 16.6 +0.4**
IDI Anoyia 84.85 308 P **P** **14 47 14.0 -2.3**
IDI IAmb IAmb 14 47 17.7
comp=Z,11nm,0.8s
MYKA Terra Mystica 84.86 322 *e*P **P** **14 47 16.8 +0.7**
comp=Z,16nm,0.6s
PRED Cave del Predi 85.03 322 P **P** **14 47 16.6 -0.3**
PRED IAmb IAmb 14 47 21.3
comp=Z,7.6nm,0.7s
ZOU Zoufplan 85.26 323 P **P** **14 47 18.0 -0.2**
ABTA Abfaltersbach 85.38 323 *e*P **P** **14 47 19.0 +0.3**
comp=Z,31nm,1.2s
NVAR Mina Array Bea 85.42 48 P **P** **14 47 20.4 +1.1**
comp=Z,1.6nm,0.6s,baz=303,slow=5.3,SNR=19
NVAR PKiKP **PKiKP** **14 52 30.6 +0.9**
comp=Z,0.7nm,0.8s,baz=273,slow=3.5,SNR=3.9
NVAR LR LR 15 19 04.6
comp=Z,86nm,21.9s,baz=283,slow=31
NVAR Mina Array Bea 85.42 48 P **P** **14 47 20.0 +0.7**
WATA Walderalm 85.47 324 *e*P **P** **14 47 20.8 +1.6**
comp=Z,10nm,0.9s
WTTA Wattenberg 85.49 324 *e*P **P** **14 47 20.2 +0.8**
comp=Z,7.4nm,0.7s
STAL STALIGIAL 85.59 322 P **P** **14 47 18.5 -1.2**
CIMO Cimolais 85.70 323 P **P** **14 47 19.7 -0.6**
CIMO IAmb IAmb 14 47 21.6
comp=Z,14nm,0.7s
MOTA Moosalm 85.71 324 *e*P **P** **14 47 21.1 +0.6**
comp=Z,10nm,1.1s
SQTA Sankt Quirin 85.74 324 *e*P **P** **14 47 17.8 -2.7**
comp=Z,5.5nm,1.0s
RETA Reutte 85.79 324 *e*P **P** **14 47 21.7 +1.0**
comp=Z,3.9nm,0.6s
ELK Elko 85.95 44 P **P** **14 47 21.6 -0.3**
ELK pmax pmax
comp=Z,7.0nm,1.2s
ELK Elko 85.95 44 P **P** **14 47 21.6 -0.3**
EKA Eskdalemuir Ar 86.01 336 P **P** **14 47 21.5 0.0**

FETA Feichten 86.11 324 *e*P **P** **14 47 18.8 -3.7**
comp=Z,10nm,1.0s
CTI Castel Tesino 86.29 323 P **P** **14 47 22.8 -0.5**
CTI pmax pmax
comp=Z,18nm,1.1s
CTI Castel Tesino 86.29 323 P **P** **14 47 22.8 -0.5**
CTI IAmb IAmb 14 47 25.4
comp=Z,18nm,1.1s
DAVA Damuels 86.36 324 *e*P **P** **14 47 23.3 -0.3**
comp=Z,22nm,1.2s
BFO Black Forest 86.41 326 P **P** **14 47 23.2 -0.5**
BFO pmax pmax
comp=Z,19nm,1.1s
BFO Black Forest 86.41 326 *e*P **P** **14 47 23.7 0.0**
comp=Z,23nm,1.2s,baz=57,slow=4.7
BFO Black Forest 86.41 326 P **P** **14 47 23.2 -0.5**
BFO IAmb IAmb 14 47 26.7
comp=Z,19nm,1.1s
WLF Walferdange 86.50 328 PcP **PcP** **14 47 25.6 -0.9**
WLF Walferdange 86.50 328 P **P** **14 47 24.2 +0.1**
WLF pmax pmax
comp=Z,30nm,1.3s
BMRD Maredsous 86.67 329 PcP **P** **14 47 25.8 +0.9**
DOU Dourbes 86.89 329 PcP **P** **14 47 25.8 -0.2**
ECH Echery 87.05 326 P **P** **14 47 26.5 -0.3**
ECH pmax pmax
comp=Z,15nm,1.1s
ECH Echery 87.05 326 P **P** **14 47 26.5 -0.3**
ECH IAmb IAmb 14 47 29.6
comp=Z,15nm,1.1s
HINF Hinteralfeld 87.48 326 *e*P **P** **14 47 29.2 +0.3**
HINF pmax pmax
comp=Z,11nm,1.2s
HAU Haudompre 87.59 327 *e*P **P** **14 47 29.9 +0.5**
HAU pmax pmax
comp=Z,14nm,1.1s
NRCA Norcia 87.61 320 P **P** **14 47 29.6 -0.1**
AQU L'Aquila 87.76 319 P **P** **14 47 32.7 +2.3**
AQU pmax pmax
comp=Z,43nm,1.1s
PD31 Pinedale Array 87.97 40 P **P** **14 47 31.3 -0.3**
PDAR Pinedale Array 87.97 40 P **P** **14 47 32.8 +1.1**
comp=Z,1.8nm,0.8s,baz=286,slow=1.5,SNR=9.7
PDAR Pinedale Array 87.97 40 P **P** **14 47 31.6 0.0**
LPL La Plagne 89.16 325 *e*P **P** **14 47 37.6 +0.4**
LPL pmax pmax
comp=Z,5.0nm,0.7s
LPG La Plagne 89.17 325 *e*P **P** **14 47 37.8 +0.5**
LPG pmax pmax
comp=Z,5.0nm,0.3s
ULM Lac du Bonnet 89.22 28 P **P** **14 47 38.4 +1.4**
comp=Z,3.3nm,0.9s,baz=315,slow=8.6,SNR=2.9
ULM LR LR 15 30 50.0
comp=Z,174nm,18.6s,baz=322,slow=38
ULM Lac du Bonnet 89.22 28 IAmb IAmb 14 47 55.5
comp=Z,19nm,1.2s
PPT Papeete 89.66 111 LR LR 15 21 46.0
comp=Z,236nm,19.9s,baz=326,slow=31
PPT2 Papeete2 89.67 111 *e*LR LR 15 16 19.9
comp=Z,344nm,21.2s,baz=293
PMOR Pomariorio Ree 89.68 108 *e*T T 16 26 48.6
comp=Z,3.3nm,0.2s
SMF Signal de Mont 89.75 327 *e*P **P** **14 47 40.0 +0.3**
SMF pmax pmax
comp=Z,11nm,1.0s
SRU San Rafael Swe 89.79 43 P **P** **14 47 40.2 -0.1**
SRU pmax pmax
comp=Z,5.0nm,0.8s
SRU San Rafael Swe 89.79 43 P **P** **14 47 40.2 -0.1**
AVF Avril sur Loir 89.87 327 *e*P **P** **14 47 40.7 +0.5**
AVF pmax pmax
comp=Z,9.0nm,1.0s
BGF Bois d'Agland 90.28 327 *e*P **P** **14 47 42.7 +0.6**
BGF pmax pmax
comp=Z,21nm,1.3s
FRF La Foret Royal 90.59 323 *e*P **P** **14 47 47.8 +4.2**
FRF pmax pmax
comp=Z,21nm,1.3s
TCF Toulx Ste Croi 90.78 328 *e*P **P** **14 47 45.2 +0.7**
TCF pmax pmax
comp=Z,14nm,1.1s
PV14 Lion Creek, Pa 91.16 43 P **P** **14 47 47.5 +0.8**
PV14 IAmb IAmb 14 48 04.6
comp=Z,14nm,1.1s
PV01 Paradox Valley 91.59 43 P **P** **14 47 50.0 +1.4**
PV01 IAmb IAmb 14 48 06.5
comp=Z,12nm,1.1s
CAF Calviac 91.86 327 *e*P **P** **14 47 48.9 -0.6**
CAF pmax pmax
comp=Z,15nm,1.1s
TBI Tubuai 92.81 115 *e*LR LR 15 17 45.5
comp=Z,267nm,25.8s,baz=304
SCHQ Schefferville 93.45 11 LR LR 15 34 04.3
comp=Z,317nm,18.2s,baz=11,slow=38
KEST Kesra 94.51 319 P **P** **14 48 02.4 +0.4**
comp=Z,5.0nm,0.9s,baz=328,slow=5.5,SNR=5.1
KEST LR LR 15 36 29.4
comp=Z,369nm,18.1s,baz=324,slow=39
ETSF Etsaut 94.63 327 *e*P **P** **14 48 03.9 +1.5**
ETSF pmax pmax
comp=Z,29nm,1.8s
ANMO Albuquerque 94.99 44 LR LR 15 33 16.9
comp=Z,83nm,18.2s,baz=70,slow=37
ESDC Sonseca Array 98.75 327 P **P** **14 48 20.8 -0.3**
comp=Z,1.3nm,1.0s,baz=34,slow=2.7,SNR=5.9
ESDC LR LR 15 40 05.5
comp=Z,177nm,20.6s,baz=35,slow=40
ESDC Sonseca Array 98.75 327 P **P** **14 48 20.3 -0.7**
SADO Sadowa 99.95 22 LR LR 15 38 49.5
comp=Z,169nm,18.2s,baz=323,slow=38
TXAR Lajitas Array 100.55 47 P **Pdif** **14 48 31.2 +1.9**
comp=Z,0.4nm,0.7s,baz=316,slow=2.5,SNR=2.9

NEIC ***19*** *14:39:36.8±2.0,30.66N×0.08×131.51E±0.04,h10km±1km, mb4.5/33, Error ellipse: s-maj=14.0km s-min=5.9km az=172.0*
NIED ***19*** *14:39:40.0,30.62N×131.55E,h34km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}3.83; $M_{\theta\theta}$-0.56; $M_{\phi\phi}$-3.27; $M_{r\theta}$0.28; $M_{\theta\phi}$-1.27; $M_{\phi r}$1.23; Fault plane solution: $M_0$4.00000×10^{15} NP1:ϕ_s19.00000°, δ54.00000°, λ87.00000°. NP2:ϕ_s204.00000°, δ36.00000°, λ94.00000°.*
JMA ***19*** *14:39:40.0±0.1,30.62N×131.55E,h34km±2km,M3.7*
IDC ***19*** *14:39:41.7±1.9,30.68N×131.34E,h42km±18km,mb3.9/18, mb1 3.9/22,mb1mx3.8/51,mbtmp4.0/22,ML2.7/4, Error ellipse: s-maj=23.4km s-min=11.4km az=73.0*
ISC 19 14:39:39.8±1.3, 30.64N±0.04×131.55E±0.05, h30km±9km, n86, σ0°83/96, mb4.4/34, 1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTN	**Tanegashima 3**	**0.49**	**271**	P	**Pb**	**14 39 50.1**	**+0.1**
JTN				*e*S	**Sn**	**14 39 57.8**	**-0.5**
JMTN	**Minamitane**	**0.61**	**246**	P	**Pb**	**14 39 52.1**	**+0.1**
JMTN				*e*S	**Sn**	**14 40 01.1**	**-0.1**
JTSR	**Tashiro 2**	**0.75**	**314**	P	**Pb**	**14 39 54.2**	**-0.1**
JTSR				*e*S	**Sn**	**14 40 05.3**	**+0.6**
JNAR	**Kushima--Naru**	**0.91**	**345**	P	**Pb**	**14 39 57.1**	**0.0**
JNAR				*e*S	**Sb**	**14 40 09.2**	**+0.3**
JYAK	**Yakushimahirau**	**0.98**	**246**	P	**Pn**	**14 39 57.1**	**-0.4**
JYAK				*e*S	**Sn**	**14 40 10.0**	**-0.4**
JNKG	**Nichinankitago**	**1.03**	**352**	P	**Pb**	**14 39 59.0**	**0.0**
JNKG				*e*S	**Sb**	**14 40 12.4**	**+0.3**
JKC	**Kuchinoerabu**	**1.18**	**262**	P	**Pn**	**14 40 00.9**	**+0.7**
JKC				*e*S	**Sb**	**14 40 16.7**	**+0.3**
JSU	**Suzuyama**	**1.27**	**313**	P	**Pn**	**14 40 01.6**	**0.0**
JSU				*e*S	**Sb**	**14 40 18.3**	**-0.8**
JSU	**Suzuyama**	**1.27**	**313**	Pn	**Pn**	**14 40 01.7**	**+0.1**
JTZ	**Takazaki**	**1.31**	**343**	P	**Pn**	**14 40 02.9**	**+0.8**
JTZ				*e*S	**Sb**	**14 40 20.0**	**-0.3**
JNU	**Nakatsue**	**2.54**	**347**	P	**Pn**	**14 40 20.1**	**+1.2**
	3.6nm,0.3s,baz=182,slow=21,SNR=15						
JNU				S	**Sn**	**14 40 49.0**	**+0.2**
	8.3nm,0.3s,baz=11,slow=12,SNR=5.2						
JNU	**Nakatsue**	**2.54**	**347**	Pn	**Pn**	**14 40 19.9**	**+0.9**
JMN	**Monobe**	**3.66**	**32**	Pn	**Pn**	**14 40 35.2**	**+0.9**
JTU	**Tsushima**	**4.27**	**335**	Pn	**Pn**	**14 40 43.3**	**+0.5**
JHS	**Saijyo**	**4.54**	**17**	Pn	**Pn**	**14 40 46.9**	**+0.4**
JWT	**Wachi**	**5.65**	**34**	Pn	**Pn**	**14 41 01.9**	**+0.2**
INU	**Inuyama**	**6.57**	**43**	Pn	**Pn**	**14 41 13.3**	**-1.0**
JGF	**Kuroka**	**6.94**	**43**	Pn	**Pn**	**14 41 17.9**	**-1.7**
KSRS	**Korea Array**	**7.43**	**337**	P	**Pn**	**14 41 26.5**	**+0.4**

0.0nm,0.3s,baz=158,slow=15,SNR=2.8
MAJO Matsushiro 8.09 42 Pn **Pn** **14 41 36.4 +1.1**
MJAR Matsushiro Arr 8.09 42 P **Pn** **14 41 37.0 +1.7**
0.1nm,0.3s,baz=248,slow=14,SNR=6.0
USA0B Ussuriysk Arra 13.54 1 Pn **Pn** **14 42 48.3 -1.4**
BJT Baijiatuan 15.63 311 P **P** **14 43 23.5 +1.7**
KLR Kul'dur 18.57 0 P **P** **14 43 53.9 -0.2**
0.1nm,0.3s,baz=180,slow=20,SNR=1.3
XAN Xi'an 19.41 286 P Pn 14 44 13.9 +9.0
XAN pmax pmax
comp=Z,16nm,1.3s
XAN LR LR
comp=E,960nm,14.1s
XAN LR LR
comp=Z,1μm,13.0s
GYA Guiyang 22.23 265 ⇓P **P** **14 44 35.1 +0.8**
GYA pmax pmax
comp=Z,16nm,0.9s
ULN Ulaanbaatar 25.44 319 P **P** **14 45 04.0 -1.1**
ULN IAmb IAmb 14 45 06.5
comp=Z,6.2nm,0.8s
SONM Songino Array 25.79 319 P **P** **14 45 07.4 -0.9**
comp=Z,3.2nm,0.8s,baz=140,slow=8.4,SNR=6.6
SONM Songino Array 25.79 319 P **P** **14 45 07.2 -1.1**
DLV T Lat 28.32 234 P **P** **14 45 31.9 +0.6**
KKM Kota Kinabalu 28.40 214 P **P** **14 45 32.2 +0.4**
SIJI Sorong 31.34 181 P **P** **14 45 58.7 +0.9**
comp=Z,3.7nm,0.4s,baz=244,slow=22,SNR=4.0
CHTO Chiang Mai 31.75 256 P **P** **14 46 00.8 -0.7**
CMAR Chiang Mai Arr 31.92 255 P **P** **14 46 01.8 -1.2**
comp=Z,1.4nm,0.6s,baz=57,slow=6.5,SNR=8.5
CMAR PcP **PcP** **14 48 53.0 0.0**
comp=Z,0.4nm,0.3s,baz=108,slow=2.9,SNR=4.1
CMAR Chiang Mai Arr 31.92 255 P **P** **14 46 02.0 -0.9**
FAKI Fak Fak 33.38 179 P **P** **14 46 16.7 +1.0**
H11N2 WAKE ISLAND Hy 33.66 100 T T 15 22 13.9
baz=296,slow=74
H11N1 WAKE ISLAND Hy 33.66 100 T T 15 22 10.5
baz=296,slow=74
H11N3 WAKE ISLAND Hy 33.67 100 T T 15 22 11.3
baz=296,slow=74
PATS Pohnpei 34.51 128 P **P** **14 46 23.7 -1.7**
IPM Ipoh 38.78 234 P **P** **14 47 02.6 +0.6**
IPM IAmb IAmb 14 47 03.9
comp=Z,13nm,0.9s
ZAA0 Zalesovo Array 40.69 319 P **P** **14 47 16.8 -0.5**
ZALV Zalesovo Beam 40.69 319 P **P** **14 47 16.2 -1.2**
comp=Z,0.7nm,0.3s,baz=130,slow=4.3,SNR=5.2
ZALV PcP **PcP** **14 49 18.1 -0.4**
comp=Z,1.9nm,0.8s,baz=108,slow=4.8,SNR=5.4
ZALV Zalesovo Beam 40.69 319 P **P** **14 47 16.4 -1.0**
ZALV PcP **PcP** **14 49 18.3 -0.2**
MK31 Makanchi Array 40.98 307 P **P** **14 47 19.2 -0.7**
MKAR Makanchi Array 40.98 307 P **P** **14 47 18.9 -1.0**
comp=Z,0.9nm,0.8s,baz=94,slow=12,SNR=4.4
MKAR PcP **PcP** **14 49 19.3 -0.4**
comp=Z,0.6nm,0.8s,baz=81,slow=3.9,SNR=2.6
MKAR Makanchi Array 40.98 307 P **P** **14 47 18.5 -1.4**
KURK Kurchatov 43.80 313 P **P** **14 47 41.5 -1.2**
KURK IAmb IAmb 14 47 43.8
comp=Z,4.7nm,0.9s
KURBB Kurchatov Arra 43.84 313 P **P** **14 47 41.3 -1.8**
comp=Z,3.9nm,0.9s,baz=102,slow=8.6,SNR=11
KNRA Kununurra 46.13 184 P **P** **14 48 02.8 +1.2**
FITZ Fitzroy Crossi 48.79 187 P **P** **14 48 21.9 -0.3**
comp=Z,1.2nm,0.8s,baz=18,slow=9.6,SNR=2.1
BRVK Borovoye 49.12 316 P **P** **14 48 24.0 -0.5**
BRVK IAmb IAmb 14 48 25.1
comp=Z,11nm,1.4s
KK31 Karatay Array 49.38 302 P **P** **14 48 26.3 -0.4**
KK31 IAmb IAmb 14 48 27.8
comp=Z,3.6nm,0.8s
KKAR Karatay Array 49.38 302 P **P** **14 48 26.3 -0.4**
KKAR IAmb IAmb 14 48 27.8
comp=Z,3.6nm,0.8s
KKAR Karatay Array 49.38 302 P **P** **14 48 26.1 -0.5**
WB0 Warramunga Arr 50.20 177 P **P** **14 48 33.6 +0.7**
WB0 IAmb IAmb 14 48 49.5
comp=Z,7.2nm,1.2s
WRAB Tennant Creek 50.36 177 P **P** **14 48 34.8 +0.6**
WRAB IAmb IAmb 14 48 48.5
comp=Z,9.3nm,1.4s
WRA Warramunga Arr 50.37 177 P **P** **14 48 34.8 +0.5**
comp=Z,2.2nm,0.7s,baz=354,slow=8.5,SNR=15
WRA Warramunga Arr 50.37 177 P **P** **14 48 34.4 +0.1**
WB2 Warramunga Arr 50.37 177 P **P** **14 48 34.9 +0.7**
WB2 IAmb IAmb 14 48 35.9
comp=Z,6.5nm,0.9s
WR0 Warramunga Arr 50.39 176 P **P** **14 48 35.2 +0.7**
WR0 IAmb IAmb 14 48 36.2
comp=Z,4.2nm,0.8s
CHGR Chuyangaron 51.08 297 P **P** **14 48 39.3 -0.4**
CHGR IAmb IAmb 14 48 40.8
comp=Z,7.1nm,0.9s
AS31 Alice Springs 54.05 177 P **P** **14 49 03.1 +1.5**
ASAR Alice Springs 54.05 177 P **P** **14 49 02.4 +0.8**
comp=Z,1.3nm,0.6s,baz=10,slow=13,SNR=22
ASAR Alice Springs 54.05 177 **P** **14 49 02.5 +0.9**
ABKAR Akbulak array 55.85 311 **P** **14 49 14.0 -0.4**
ABKAR IAmb IAmb 14 49 15.3
comp=Z,2.5nm,0.7s
ABKAR Akbulak array 55.85 311 P **P** **14 49 13.4 -1.0**
HRA Herat 57.52 293 P **P** **14 49 26.9 +0.2**
HRA IAmb IAmb 14 49 29.3
comp=Z,3.1nm,0.8s
ILAR Eielson Array 59.18 30 P **P** **14 49 37.6 0.0**
comp=Z,0.3nm,0.7s,baz=261,slow=5.9,SNR=2.3
STKA Stephens Creek 62.91 170 P **P** **14 50 03.8 +0.7**
comp=Z,2.4nm,0.8s,baz=339,slow=7.3,SNR=8.8
STKA Stephens Creek 62.91 170 P **P** **14 50 04.3 +1.2**
KBZ Khabaz 68.65 309 P **P** **14 50 39.8 -0.4**
comp=Z,6.8nm,0.9s,baz=53,slow=20
KIV Kislovodsk 68.70 309 P **P** **14 50 41.5 +0.8**
FINES FINESS Array B 70.47 331 P **P** **14 50 49.9 -1.2**
comp=Z,0.9nm,0.6s,baz=85,slow=4.2,SNR=4.7
GEVA Gevas 70.67 304 P **P** **14 50 54.0 +1.0**
AKASG Malin Array Be 74.07 320 P **P** **14 51 12.2 -0.6**
comp=Z,3.3nm,0.7s,baz=54,slow=6.1,SNR=12
AKASG Malin Array Be 74.07 320 P **P** **14 51 11.8 -1.0**
RAYN Ar Rayn 75.17 289 P **P** **14 51 19.6 -0.2**
RAYN IAmb IAmb 14 51 21.6
comp=Z,6.7nm,0.9s
BR131 Keskin Array S 76.62 308 P **P** **14 51 27.6 -0.3**
BRTR Keskin Array B 76.62 308 P **P** **14 51 28.1 +0.2**
comp=Z,6.6nm,0.9s,baz=100,slow=5.1,SNR=17
NOA NORSAR Array B 76.63 334 P **P** **14 51 27.2 -0.2**
comp=Z,0.6nm,0.6s,baz=49,slow=5.6,SNR=3.4
BUR08 Bucovina Ar. S 77.90 318 P **P** **14 51 35.5 +0.7**
BUR08 IAmb IAmb 14 51 36.8
comp=Z,5.0nm,1.0s
BURAR Bucovina Array 77.91 318 P **P** **14 51 35.0 0.0**
CLL Collm 82.17 326 *e*P **P** **14 51 59.0 +1.3**
GERES GERESS Array B 83.41 324 P **P** **14 52 03.9 -0.4**
comp=Z,0.5nm,0.6s,baz=38,slow=6.7,SNR=3.6
NVAR Mina Array Bea 85.37 48 P **P** **14 52 16.3 +1.7**
comp=Z,0.3nm,0.6s,baz=294,slow=4.6,SNR=2.5

JMA 19 14:41:38.0, 36.69N×140.62E, h5km±1km, M1.8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.09**	**207**	P	Pg	14 41 40.0	+0.1
JHO				S	Sg	14 41 41.5	+0.3
JHYU	**Hitachinakayam**	**0.35**	**184**	P	Pg	14 41 45.1	+0.3
JFFD	**Fukushimafurud**	**0.40**	**353**	P	Pg	14 41 46.0	+0.2
ONAJ	**Iwakimizuishiy**	**0.43**	**19**	P	Pg	14 41 46.5	+0.1
ONAJ				S	Sg	14 41 52.6	+0.5
JYT	**Yasato**	**0.57**	**217**	P	Pg	14 41 49.1	+0.1
JYT				S	Sg	14 41 57.0	+0.5
JYT	**Yasato**	**0.57**	**217**	Pn	Pg	14 41 49.0	-0.1
JFK	**Kawauchi**	**0.70**	**17**	S	Sg	14 42 00.8	+0.1
JFT	**Otama**	**0.86**	**345**	P	Pg	14 41 54.4	-0.1
JFT				S	Sg	14 42 05.6	0.0

IDC 19 14:47:06.8±2.2, 1.84N×126.45E, h0km, mb3.0/3, mb1 3.2/3, mb1mx3.1/32, mbtmp3.1/3, Error ellipse: s-maj=173.7km s-min=28.5km az=66.0, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.99**	**161**	P	P	14 52 13.4	+0.1

0.2nm,0.4s,baz=340,slow=11,SNR=8.0
ASAR Alice Springs 26.37 164 P P 14 52 45.0 0.0
0.1nm,0.4s,baz=342,slow=7.1,SNR=1.4
MKAR Makanchi Array 58.95 326 P P 14 57 07.9 -0.2
0.2nm,0.7s,baz=133,slow=10,SNR=2.5

IDC 19 14:51:04.1±4.9, 9°60S×156°57E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/28, mbtmp3.6/3, Error ellipse: s-maj=107.8km s-min=50.1km az=111.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**23.80**	**242**	P		P	14 56 17.1	-1.7
	0.9nm,0.8s,baz=65,slow=9.3,SNR=5.3							
ASAR	**Alice Springs**	**25.77**	**234**	P		P	14 56 37.0	+0.1
	0.8nm,0.9s,baz=62,slow=9.4,SNR=7.9							
CMAR	**Chiang Mai Arr**	**63.31**	**296**	P		P	15 01 36.6	+1.2
	0.4nm,0.3s,baz=107,slow=6.1,SNR=1.8							

IDC 19 14:55:11.1±1.8, 2°49N×127°42E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/32, mbtmp3.6/5, Error ellipse: s-maj=111.4km s-min=19.1km az=68.0
NEIC 19 14:55:15.7±1.9, 2°5N±0°1×126°9E±0°1, h35km±9km, mb4.0/10, Error ellipse: s-maj=22.4km s-min=11.8km az=47.0
DJA 19 14:55:18.6±1.4, 2°N±3°×127°7E±°, h16km±13km, M3.9/10, mB5.0/1, mb4.2/4, MLv3.7/10, Mw(mB)4.3/1
ISC 19 14:55:17.8±0.9, 2°41N±0°08×126°93E±0°10, h53km, n26, σ1°69/27, mb3.9/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.69**	**165**	P		**Pn**	**14 55 45.7**	**+0.8**
TNTI	**Ternate**	**1.69**	**165**			**Pn**	**14 55 44.5**	**-0.3**
SGSI	**Sangihe**	**1.89**	**312**	P		**Pn**	**14 55 49.7**	**+2.1**
KMSI	**Cibinong**	**3.46**	**238**	P		**Pn**	**14 56 12.4**	**+3.2**
GTOI	**Gorontalo**	**4.29**	**246**	P		**Pn**	**14 56 22.4**	**+1.8**
MRSI	**Marisa**	**5.34**	**249**	P		**Pn**	**14 56 36.5**	**+1.5**
	0.1nm26nm,0.5s							
LUWI	**Luwuk**	**5.38**	**231**	P		**Pn**	**14 56 34.4**	**-1.2**
	0.4nm1μm31nm,1.1s							
LUWI	**Luwuk**	**5.38**	**231**	Pn		**Pn**	**14 56 33.6**	**-2.0**
TOLI2	**Tolitoli**	**6.28**	**258**			**Pn**	**14 56 47.2**	**-0.6**
FITZ	**Fitzroy Crossi**	**20.42**	**184**	P		**P**	**14 59 52.0**	**+1.4**
	1.0nm,0.6s,baz=20,slow=11,SNR=2.4							
FITZ	**Fitzroy Crossi**	**20.42**	**184**	P		**P**	**14 59 51.3**	**+0.7**
DLV	**T Lat**	**20.58**	**298**	P		**P**	**14 59 49.7**	**-3.0**
WB0	**Warramunga Arr**	**23.23**	**162**	P		**P**	**15 00 21.5**	**+1.0**
WB0				IAmb		IAmb	15 00 33.9	
	comp=Z,9.4nm,1.4s							
WRAB	**Tennant Creek**	**23.37**	**162**	P		**P**	**15 00 22.5**	**+0.7**
WRAB				IAmb		IAmb	15 00 25.4	
	comp=Z,8.6nm,1.4s							
WRA	**Warramunga Arr**	**23.37**	**162**	P		**P**	**15 00 20.9**	**-1.1**
	comp=Z,1.1nm,0.6s,baz=341,slow=10,SNR=7.1							
WRA				S		**S**	**15 04 34.0**	**+2.9**
	comp=Z,0.3nm,0.9s,baz=357,slow=14,SNR=2.2							
WRA	**Warramunga Arr**	**23.37**	**162**	P		**P**	**15 00 21.6**	**-0.3**
WB2	**Warramunga Arr**	**23.38**	**162**	P		**P**	**15 00 22.7**	**+0.7**
WB2				IAmb		IAmb	15 00 34.1	
	comp=Z,6.3nm,1.2s							
WR0	**Warramunga Arr**	**23.45**	**162**	P		**P**	**15 00 23.2**	**+0.6**
WR0				IAmb		IAmb	15 00 39.7	
	comp=Z,3.5nm,1.1s							
ASAR	**Alice Springs**	**26.79**	**166**	P		**P**	**15 00 53.0**	**0.0**
	comp=Z,0.4nm,0.6s,baz=335,slow=6.3,SNR=3.4							
ASAR	**Alice Springs**	**26.79**	**166**	P		**P**	**15 00 52.8**	**-0.3**
STKA	**Stephens Creek**	**36.83**	**159**	P		**P**	**15 02 21.9**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=335,slow=7.2,SNR=4.6							
MKAR	**Makanchi Array**	**58.75**	**326**	P		**P**	**15 05 11.9**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=121,slow=7.6,SNR=9.0							
MKAR	**Makanchi Array**	**58.75**	**326**	P		**P**	**15 05 11.6**	**+1.3**
MAKZ	**Makanchi**	**58.93**	**325**	P		**P**	**15 05 13.1**	**+1.4**
KKAR	**Karatay Array**	**64.33**	**317**	P		**P**	**15 05 46.6**	**-1.5**
GEYT	**Alibeck**	**71.87**	**309**	P		**P**	**15 06 32.5**	**-3.0**

NEIC 19 15:13:24.6±1.5, 11°07S±0°08×162°46E±0°09, h31km±5km, mb4.8/46, Error ellipse: s-maj=14.6km s-min=9.8km az=47.0
IDC 19 15:13:26.8±2.3, 11°11S×162°50E, h57km±18km, mb3.8/15, mb1 4.1/18, mb1mx4.0/34, mbtmp4.2/18, ML4.3/4, MS3.8/11, Ms1 3.8/11, ms1mx3.5/29, Error ellipse: s-maj=19.2km s-min=13.4km az=79.0
ISC 19 15:13:26.1±0.4, 11°11S±0°06×162°51E±0°07, h46km, n94, σ1°20/83, mb4.7/39, MS3.8/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**3.02**	**303**	P		**Pn**	**15 14 10.3**	**-1.2**
	160nm,0.3s,baz=175,slow=4.7,SNR=52							
HNR				S		**Sn**	**15 14 48.7**	**+2.4**
	542nm,0.3s,baz=349,slow=6.7,SNR=5.8							
HNR				LR		LR	15 15 24.5	
	comp=Z,2μm,19.0s,baz=138,slow=39							
HNR	**Honiara**	**3.02**	**303**	Pn		**Pn**	**15 14 09.6**	**-1.8**
SANVU	**Saraoutou**	**6.29**	**134**	Pn		**Pn**	**15 14 55.8**	**-0.5**
DZM	**Mont Dzumac**	**11.54**	**161**	*e*Pn		**Pn**	**15 16 09.3**	**+1.0**
	2.9nm,0.2s							
DZM				*e*LR		LR	15 18 46.7	
	comp=Z,532nm,23.4s							
DZM	**Mont Dzumac**	**11.54**	**161**	P		**Pn**	**15 16 08.5**	**+0.2**
	0.5nm,0.3s,baz=0.6,slow=22,SNR=14							
DZM				LR		LR	15 19 57.7	
	comp=Z,408nm,19.1s,baz=10.0,slow=34							
DZM	**Mont Dzumac**	**11.54**	**161**	Pn		**Pn**	**15 16 08.2**	**-0.2**
KRVT	**Keravat (AS076**	**12.38**	**302**	P		**Pn**	**15 16 21.2**	**+1.4**
	1.7nm,0.3s,baz=198,slow=20,SNR=1.4							
KRVT				LR		LR	15 21 31.2	
	comp=Z,632nm,20.8s,baz=120,slow=39							
PMG	**Port Moresby**	**15.20**	**275**	LR		LR	15 22 26.3	
	comp=Z,642nm,20.1s,baz=102,slow=36							
EIDS	**Eidsvold**	**17.84**	**216**			**P**	**15 17 31.0**	**-0.3**
CTA	**Charters Tower**	**18.01**	**238**	P		**P**	**15 17 34.5**	**+1.3**
	0.8nm,0.3s,baz=68,slow=13,SNR=24							
CTAO	**Charters Tower**	**18.01**	**238**	P		**P**	**15 17 33.4**	**+0.2**
CTAO				IAmb		IAmb	15 17 38.0	
	comp=Z,58nm,1.1s							
PATS	**Pohnpei**	**18.31**	**347**			**P**	**15 17 35.7**	**-0.8**
PATS				IAmb		IAmb	15 17 57.7	
	comp=Z,110nm,1.3s							
COEN	**Coen**	**19.08**	**259**			**P**	**15 17 44.4**	**-0.7**
JAY	**Jayapura**	**23.25**	**290**	P		**P**	**15 18 34.5**	**+4.7**
	comp=Z,14nm,0.9s,baz=42,slow=7.1,SNR=2.0							
STKA	**Stephens Creek**	**28.28**	**220**	P		**P**	**15 19 15.6**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=60,slow=11,SNR=4.8							
STKA				LR		LR	15 30 21.2	
	comp=Z,251nm,18.7s,baz=27,slow=36							
STKA	**Stephens Creek**	**28.28**	**220**	P		**P**	**15 19 15.9**	**+0.6**
WR0	**Warramunga Arr**	**28.31**	**248**	P		**P**	**15 19 14.2**	**-1.5**
WB0	**Warramunga Arr**	**28.40**	**249**	P		**P**	**15 19 15.1**	**-1.4**
WRAB	**Tennant Creek**	**28.48**	**249**	P		**P**	**15 19 15.7**	**-1.4**
WB2	**Warramunga Arr**	**28.48**	**249**	P		**P**	**15 19 15.8**	**-1.4**
WRA	**Warramunga Arr**	**28.49**	**249**	P		**P**	**15 19 15.6**	**-1.7**
	comp=Z,2.7nm,0.6s,baz=81,slow=9.1,SNR=40							
WRA				PcP		**PcP**	**15 22 26.7**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=71,slow=3.0,SNR=3.5							
WRA				LR		LR	15 30 38.2	
	comp=Z,344nm,18.5s,baz=70,slow=36							
H11S2	**WAKE ISLAND Hy**	**29.70**	**8**	T		T	15 50 21.8	
	baz=189,slow=76							
H11S3	**WAKE ISLAND Hy**	**29.70**	**8**	T		T	15 50 21.9	
	baz=189,slow=76							
H11S1	**WAKE ISLAND Hy**	**29.72**	**8**	T		T	15 50 23.1	
	baz=189,slow=76							
AS31	**Alice Springs**	**29.94**	**242**	P		**P**	**15 19 27.4**	**-2.8**
ASAR	**Alice Springs**	**29.95**	**242**	P		**P**	**15 19 28.4**	**-1.8**
	comp=Z,2.4nm,0.8s,baz=67,slow=9.6,SNR=33							
ASAR				PcP		**PcP**	**15 22 31.2**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=48,slow=1.4,SNR=2.9							
ASAR				ScP		**ScP**	**15 26 10.3**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=42,slow=2.9,SNR=2.5							
ASAR				LR		LR	15 30 59.2	
	comp=Z,131nm,18.5s,baz=70,slow=35							
ASAR	**Alice Springs**	**29.95**	**242**	P		**P**	**15 19 27.2**	**-3.0**
TOO	**Toolangi**	**30.46**	**207**	P		**P**	**15 19 35.3**	**+0.7**
TOO				IAmb		IAmb	15 19 43.1	
	comp=Z,13nm,1.1s							
BKZ	**Black Stump Fm**	**30.59**	**158**	P		**P**	**15 19 36.8**	**+1.1**
BKZ				IAmb		IAmb	15 20 04.6	
	comp=Z,20nm,1.2s							
MTN	**Manton Dam**	**30.73**	**264**	P		**P**	**15 19 36.9**	**-0.2**
MTN				IAmb		IAmb	15 19 44.1	
	comp=Z,19nm,1.4s							
SAUI	**Saumlaki**	**30.92**	**273**	P		**P**	**15 19 39.3**	**+0.4**
H11N1	**WAKE ISLAND Hy**	**30.93**	**8**	T		T	15 51 54.0	
	baz=188,slow=76							
H11N3	**WAKE ISLAND Hy**	**30.93**	**8**	T		T	15 51 54.5	
	baz=188,slow=76							
H11N2	**WAKE ISLAND Hy**	**30.95**	**8**	T		T	15 51 55.3	
	baz=188,slow=76							
BBOO	**Buckleboo**	**32.51**	**224**	P		**P**	**15 19 52.5**	**-0.2**
BBOO				IAmb		IAmb	15 20 10.7	
	comp=Z,16nm,1.1s							
LTZ	**Lake Taylor**	**32.69**	**167**	P		**P**	**15 19 55.2**	**+1.2**
LTZ				IAmb		IAmb	15 20 18.3	
	comp=Z,32nm,1.2s							
BNDI	**Bandanaira**	**32.93**	**279**	P		P	15 20 03.0	+6.5
	comp=Z,62nm,1.1s							
KNRA	**Kununurra**	**33.12**	**258**	P		**P**	**15 19 56.7**	**-1.4**
KNRA				IAmb		IAmb	15 19 58.7	
	comp=Z,17nm,0.7s							
MQZ	**McQueen's Vall**	**33.65**	**167**	P		**P**	**15 20 02.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**36.30**	**255**	P		**P**	**15 20 24.0**	**-1.6**
FITZ				IAmb		IAmb	15 20 25.7	
	comp=Z,6.3nm,0.7s							
SOEI	**Soe**	**37.61**	**268**	P		**P**	**15 20 37.5**	**+0.5**
SOEI				IAmb		IAmb	15 20 58.4	
	comp=Z,10nm,0.8s							
PSA00	**Pilbara Seismi**	**42.12**	**250**	P		**P**	**15 21 13.7**	**-0.5**
PSA00				IAmb		IAmb	15 21 27.6	
	comp=Z,14nm,1.2s							
BNSI	**Bone**	**42.50**	**276**	P		P	15 21 24.0	+6.6
PPT	**Papeete**	**46.77**	**104**	LR		LR	15 36 31.8	
	comp=Z,60nm,21.3s,baz=316,slow=30							
PPT2	**Papeete2**	**46.77**	**104**	*e*LR		LR	15 35 10.3	
	comp=Z,108nm,22.5s							
MORW	**Morawa**	**46.82**	**241**	P		**P**	**15 21 51.2**	**-0.4**
MORW				IAmb		IAmb	15 21 52.7	
	comp=Z,15nm,1.2s							
TBI	**Tubuai**	**47.26**	**112**	*e*LR		LR	15 35 21.6	
	comp=Z,125nm,37.0s							
AIN	**Ainahou**	**51.31**	**54**	P		**P**	**15 22 25.2**	**-1.0**
UGM	**Wanagama**	**51.32**	**269**	P		**P**	**15 22 24.7**	**-1.6**
HLP	**Hilina Pali**	**51.39**	**54**	P		**P**	**15 22 25.8**	**-1.0**
UWB	**Uwekahuna B**	**51.48**	**54**	P		**P**	**15 22 27.2**	**-0.2**
SBLHI	**Steaming Bluff**	**51.49**	**54**	P		**P**	**15 22 27.3**	**-0.3**
JMN	**Monobe**	**52.25**	**330**	P		**P**	**15 22 33.5**	**+0.6**
JMN				IAmb		IAmb	15 22 49.2	
	comp=Z,49nm,1.4s							
MJAR	**Matsushiro Arr**	**52.63**	**335**	P		**P**	**15 22 34.9**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=162,slow=9.5,SNR=3.0							
MJAR	**Matsushiro Arr**	**52.63**	**335**	P		**P**	**15 22 35.3**	**-0.3**
MAJO	**Matsushiro**	**52.63**	**335**	P		**P**	**15 22 35.3**	**-0.3**
JWT	**Wachi**	**52.79**	**332**	P		**P**	**15 22 37.0**	**+0.2**
JNU	**Nakatsue**	**53.33**	**327**	P		**P**	**15 22 40.8**	**0.0**
JNU				IAmb		IAmb	15 22 44.4	
	comp=Z,46nm,1.3s							
JTM	**Tenmabayashi**	**55.31**	**340**	P		**P**	**15 22 56.7**	**+1.7**
ASAJ	**Asahikawa**	**57.86**	**343**	P		**P**	**15 23 12.1**	**-1.1**
	comp=Z,6.6nm,0.9s,baz=139,slow=19,SNR=1.8							
KSRS	**Korea Array**	**58.18**	**328**	P		**P**	**15 23 14.8**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=142,slow=6.8,SNR=5.1							
KSRS				LR		LR	15 46 21.1	
	comp=Z,65nm,19.1s,baz=129,slow=34							
KRJI	**Kerinci**	**61.20**	**274**	P		P	15 23 49.8	+13
USRK	**Ussuriysk Ar.**	**61.63**	**335**	P		**P**	**15 23 39.3**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=117,slow=7.9,SNR=7.7							
AMKA	**Amchitka**	**63.91**	**12**	P		**P**	**15 23 54.7**	**+0.7**
PETK	**Petropavlovsk-**	**64.09**	**357**	P		**P**	**15 23 54.8**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=152,slow=6.5,SNR=3.0							
CASY	**Casey**	**65.19**	**201**	P		**P**	**15 24 02.9**	**+0.6**
VNDA	**Vanda**	**66.40**	**180**	P		**P**	**15 24 10.6**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=341,slow=6.3,SNR=12							
VNDA	**Vanda**	**66.40**	**180**	P		**P**	**15 24 11.9**	**+2.0**
CMAR	**Chiang Mai Arr**	**69.23**	**295**	P		**P**	**15 24 27.5**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=127,slow=5.7,SNR=5.0							
CMAR				LR		LR	15 57 10.8	
	comp=Z,15nm,18.4s,baz=115,slow=38							
CHGN	**Chignik**	**74.58**	**21**	P		**P**	**15 25 00.0**	**0.0**
GTA	**Gaotai**	**76.83**	**315**	*e*P		P	15 25 20.3	+6.8
GTA				pP		sP	15 25 31.9	0.0
GTA				sP		pP	15 25 35.8	+9.0
GTA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
GTA				pmax		pmax		
	comp=Z,77nm,6.9s							
GTA				LR		LR		
	comp=N,77nm,17.8s							
GTA				LR		LR		
	comp=E,110nm,15.3s							
GTA				LR		LR		
	comp=Z,70nm,17.4s							
SONM	**Songino Array**	**76.86**	**325**	P		**P**	**15 25 12.6**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=131,slow=7.9,SNR=3.6							
SONM	**Songino Array**	**76.86**	**325**	P		**P**	**15 25 13.9**	**+0.4**
QSPA	**South Pole Qui**	**78.90**	**180**	P		**P**	**15 25 25.4**	**+0.9**
QSPA				IAmb		IAmb	15 25 26.7	
	comp=Z,5.6nm,1.0s							
HDA	**Harding Lake**	**84.35**	**20**	P		**P**	**15 25 53.2**	**+0.2**
HDA				IAmb		IAmb	15 25 54.1	
	comp=Z,5.8nm,0.8s							
IL31		**84.60**	**19**	P		**P**	**15 25 53.8**	**-0.4**
ILAR	**Eielson Array**	**84.60**	**19**	P		**P**	**15 25 53.0**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=242,slow=5.0,SNR=10							
ILAR	**Eielson Array**	**84.60**	**19**	P		**P**	**15 25 53.4**	**-0.9**
RIDG	**Independent Ri**	**84.64**	**21**	P		**P**	**15 25 55.2**	**+0.7**
RIDG				IAmb		IAmb	15 26 15.8	
	comp=Z,7.5nm,1.1s							
DOT	**Dot Lake**	**84.85**	**21**	P		**P**	**15 25 55.6**	**0.0**
DOT				IAmb		IAmb	15 26 20.2	
	comp=Z,13nm,1.4s							
BCAR	**Beaver Creek A**	**85.33**	**22**	P		**P**	**15 25 58.5**	**+0.5**
K27K	**Chicken**	**85.79**	**21**	P		**P**	**15 26 01.9**	**+1.7**
K27K				IAmb		IAmb	15 26 02.1	
	comp=Z,8.8nm,1.4s							
TOLK	**Toolik Lake Re**	**86.39**	**16**	P		**P**	**15 26 03.5**	**+0.3**
TOLK				IAmb		IAmb	15 26 28.0	
	comp=Z,10nm,1.5s							
BBB	**Bella Bella**	**86.44**	**35**	P		**P**	**15 26 04.6**	**+0.9**
EGAK	**Eagle**	**86.55**	**21**	P		**P**	**15 26 04.6**	**+0.7**
EGAK				IAmb		IAmb	15 26 28.1	
	comp=Z,12nm,1.4s							
K05A	**Summer Lake**	**87.81**	**46**	P		**P**	**15 26 12.1**	**+1.3**
K05A				IAmb		IAmb	15 26 12.8	
	comp=Z,6.1nm,1.2s							
PINE	**Pine Mountain**	**88.09**	**45**	P		**P**	**15 26 12.0**	**-0.1**
NVAR	**Mina Array Bea**	**88.50**	**51**	P		**P**	**15 26 14.0**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=228,slow=8.8,SNR=6.4							
NVAR	**Mina Array Bea**	**88.50**	**51**	P		**P**	**15 26 14.9**	**+0.6**
I07A	**Izee**	**89.17**	**45**	P		**P**	**15 26 17.8**	**+0.6**
I07A				IAmb		IAmb	15 26 38.6	
	comp=Z,6.7nm,1.4s							
MKAR	**Makanchi Array**	**91.40**	**317**	P		**P**	**15 26 25.8**	**-1.6**
	comp=Z,0.6nm,0.6s,baz=99,slow=5.3,SNR=6.1							
PDAR	**Pinedale Array**	**95.94**	**48**	P		**P**	**15 26 48.1**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=251,slow=7.5,SNR=1.1							
TXAR	**Lajitas Array**	**98.66**	**62**	LR		LR	16 02 40.2	
	comp=Z,35nm,21.9s,baz=0.0,slow=30							
TORD	**Torodi Ar. Bea**	**161.13**	**278**	PKP		**PKPdf**	**15 33 22.6**	**0.0**
	comp=Z,0.2nm,0.5s,baz=105,slow=3.1,SNR=1.9							

ISN 19 15:25:09.9±0.9, 32°82N×47°71E, h14km±5km, ML2.9
TEH 19 15:25:10.6, 32°84N×47°66E, h14km, ML3.3
THR 19 15:25:12.7±0.3, 32°81N×47°74E, h16km±2km, ML3.4
ISC 19 15:25:10.0±1.2, 32°82N±0°03×47°64E±0°03, h5km±12km, n40, σ1°30/47, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IKFM	**Kafar-mosalman**	**0.73**	**14**	*e*Pg		**Pg**	**15 25 23.8**	**-0.2**
IKMR	**Kamar-syah**	**0.94**	**42**	*e*Pg		**Pg**	**15 25 27.6**	**-0.4**
IKMR				*e*			15 25 31.6	
IDOB	**Doab**	**1.07**	**25**	*e*Pg		**Pg**	**15 25 30.4**	**-0.2**
IKOM	**Komasi**	**1.36**	**356**	*e*Pg		**Pb**	**15 25 36.4**	**+0.4**
IKOM				*e*			15 25 38.1	
IBDR	**Badra**	**1.46**	**282**	*e*Pg		**Pg**	**15 25 38.0**	**-0.1**
IBDR				*e*Sg		**Sg**	**15 25 58.0**	**+0.9**
IBDR				AML		AML	15 26 06.7	
	comp=E,199nm,0.4s							
IBDR				AML		AML	15 26 06.8	
	comp=N,208nm,0.8s							
KCHF	**Cheshme Sefid,**	**1.54**	**341**	*e*Pg		**Pb**	**15 25 39.3**	**+0.2**
KCHF				*e*			15 26 03.8	
HSAM	**Samen**	**1.61**	**30**	*e*Pg		**Pb**	**15 25 41.0**	**+0.7**
HSAM				*e*			15 25 42.3	
KER	**Kermanshah**	**1.62**	**345**	*e*Pg		**Pb**	**15 25 40.6**	**+0.1**
IBZA	**Bozab**	**1.66**	**6**	*e*Pg		**Pb**	**15 25 41.6**	**+0.4**
IBZA				*e*			15 25 44.8	
AHWZ	**Ahwaz**	**1.71**	**150**	*e*Pg		**Pg**	**15 25 43.1**	**+0.2**
AHWZ				*e*Sg		**Sg**	**15 26 06.7**	**+1.6**
IGHG	**Ghaleghazi**	**1.75**	**330**	*e*Pg		**Pb**	**15 25 42.9**	**+0.1**
IGHG				*e*			15 26 19.8	
IVIS	**Veis**	**1.83**	**339**	*e*Pn		**Pb**	**15 25 44.3**	**+0.3**
IVIS				*e*			15 26 15.0	
IALM	**Almabolaq**	**2.08**	**12**	*e*Pn		**Pb**	**15 25 47.9**	**-0.6**
IDHR	**Dehrash**	**2.15**	**331**	*e*Pn		**Pb**	**15 25 48.3**	**-1.2**
IDHR				*e*			15 26 24.9	
KHMZ	**Khomeyn**	**2.15**	**64**	*e*Pn		**Pb**	**15 25 49.2**	**-0.4**
KHMZ				*e*Sg		**Sg**	**15 26 18.5**	**-0.7**
ILIN	**Lien**	**2.17**	**345**	*e*Pn		**Pn**	**15 25 48.2**	**+1.2**
ILIN				*e*			15 26 25.0	
NSR	**Nassriya**	**2.21**	**216**	*e*Pn		**Pn**	**15 25 48.0**	**+0.7**
NSR				*e*Sn		**Sn**	**15 26 15.0**	**+0.1**
SNGE	**Sanandaj**	**2.28**	**354**	*e*Pn		**Pb**	**15 25 52.1**	**+0.3**
HSRG	**Sareghieh**	**2.48**	**12**	*e*Pn		**Pb**	**15 25 54.1**	**-1.1**
HSRG				*e*			15 26 34.9	
ASAO	**Ashtian**	**2.63**	**48**	*e*Pn		**Pb**	**15 25 55.9**	**-1.9**
ASAO				*e*Sg		**Sg**	**15 26 33.6**	**-1.1**
IPIR	**Pirpir**	**2.75**	**92**	*e*Pn		**Pn**	**15 25 56.5**	**+1.5**
IPIR				*e*			15 26 46.1	
BHD	**Baghdad**	**2.77**	**280**	*e*Pn		**Pn**	**15 25 56.0**	**+1.0**
BHD				*e*Sn		**Sb**	**15 26 31.0**	**-3.3**
IRAZ	**Razeghan**	**3.21**	**36**	*e*Pn		**Pn**	**15 26 03.6**	**+2.4**
QABG	**Abgarm-Qazvin**	**3.30**	**29**	*e*Pn		**Pn**	**15 26 03.4**	**+0.8**
IKLH	**Kolahrood**	**3.35**	**80**	*e*			15 26 10.7	
IKLH				*e*Pn		**Pn**	**15 26 05.3**	**+2.1**
GHVR	**GHOM**	**3.47**	**60**	*e*Pn		**Pn**	**15 26 06.7**	**+2.0**
GHVR				*e*S		**Sn**	**15 26 46.2**	**-0.1**
IQOM	**Qom**	**3.50**	**54**	*e*Pn		**Pn**	**15 26 06.6**	**+1.3**
IGAR	**Gharneh**	**3.74**	**95**	*e*			15 26 59.3	
IGAR				*e*Pn		**Pn**	**15 26 09.7**	**+1.1**
KLNJ	**Kolanjah**	**3.82**	**117**	*e*Pn		**Pn**	**15 26 09.8**	**0.0**
KLNJ				*e*			15 27 35.3	
IZEF	**Zefreh**	**3.95**	**88**	*e*Pn		**Pn**	**15 26 12.8**	**+1.3**
IVRN	**Varamin**	**4.04**	**56**	*e*Pn		**Pn**	**15 26 14.1**	**+1.6**
IRAM	**Ramesheh**	**4.14**	**103**	*e*Pn		**Pn**	**15 26 14.2**	**+0.1**
QALM	**Alamut, Qazvin**	**4.38**	**34**	*e*Pn		**Pn**	**15 26 19.0**	**+1.6**
IDMV	**Damavand**	**4.57**	**52**	*e*Pn		**Pn**	**15 26 21.1**	**+1.1**
ILAS	**Lasjerd**	**5.10**	**58**	*e*Pn		**Pn**	**15 26 29.8**	**+2.5**
ANAR	**Anarak**	**5.13**	**84**	*e*Pn		**Pn**	**15 26 28.1**	**+0.5**
ISAD	**Sadrabad**	**5.20**	**98**	*e*Pn		**Pn**	**15 26 28.8**	**+0.1**
IALA	**Alasht**	**5.37**	**51**	*e*Pn		**Pn**	**15 26 33.4**	**+2.3**
ISHM	**Shahmirzad**	**5.55**	**56**	*e*Pn		**Pn**	**15 26 35.7**	**+2.2**
IANJ	**Anjilo**	**5.84**	**61**	*e*Pn		**Pn**	**15 26 38.5**	**+1.1**

NDI 19 15:26:02.4±1.1, 24°41N×72°04E, h10km, ML3.5, Northern India

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AJM	**Ajmer**	**3.13**	**48**	*e*P		Pb	15 26 57.0	-1.2
AJM				*i* S		Sb	15 27 34.0	-2.5
BHPL	**Bhopal**	**5.07**	**102**	*e*P		Pn	15 27 18.9	+0.4
BHPL				*e*S		Sn	15 28 13.4	-3.8
SMLA	**Simla**	**8.09**	**33**	*e*P		Pn	15 27 59.7	-0.2
SMLA				*e*S		Sn	15 29 24.5	-7.0
SMLA				IAML			15 29 30.3	
	comp=N,25nm,0.5s							
SMLA				IAML			15 29 30.4	
	comp=E,32nm,0.3s							

**IDC 19 15:42:30.1±8.4, 26°30S×29°20E, h0km, mb1 2

WRA				S	Sn	16 26 43.5	-3.8	
	1.7nm,0.3s,baz=301,slow=17,SNR=8.7							
ASAR	**Alice Springs**	**15.86**	**163**	P	P	16 25 12.2	+0.9	
	0.2nm,0.3s,baz=331,slow=9.3,SNR=34							
ASAR				S	Sn	16 28 04.8	-1.8	
	0.5nm,0.3s,baz=262,slow=18,SNR=6.8							
MKAR	**Makanchi Array**	**68.84**	**328**	P	P	16 32 24.5	-0.1	
	0.4nm,0.9s,baz=134,slow=4.2,SNR=2.1							

DJA 19 16:24:40.3±0.6, 2°N±4°×12°7E±°, h160km±6km, M4.0/13, mB4.3/1, mb4.2/5, MLv3.9/13, Mw(mB)3.5/1, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
TNTI	**Ternate**	**1.17**	**154**	P	P		Pn	16 25 10.3	+2.8
TNTI				S	S		Sn	16 25 27.6	-0.8
SGSI	**Sangihe**	**2.27**	**324**	P	P		Pn	16 25 17.9	-1.3
KMSI	**Cibinong**	**3.14**	**247**	P	P		Pn	16 25 31.6	+1.8
KMSI				S	S		Sn	16 26 09.9	+1.7
GTOI	**Gorontalo**	**4.03**	**253**	P	P		Pn	16 25 43.2	+2.0
LUWI	**Luwuk**	**4.99**	**235**	P	P		Pn	16 25 56.6	+2.9
MRSI	**Marisa**	**5.10**	**255**	P	P		Pn	16 25 54.4	-0.8
	0.1nm457nm33nm,0.5s								
APSI	**Ampana**	**5.88**	**242**	P	P		Pn	16 26 03.4	-2.1
	0.1nm33nm,0.8s								
BNDI	**Bandanaira**	**7.00**	**154**	P	P		Pn	16 26 17.9	-2.6
	0.4nm99nm,0.6s								
MPSI	**Mapaga**	**7.12**	**258**	P	P		Pn	16 26 20.5	-1.5

NIED ***19*** *16:28:42.0, 40°.92N×143°.09E, h3km, MW3.4, Moment Tensor Solution. s2 Moment tensor: Scale 10^14Nm; Mrr1.14; Mθθ-0.23; Mφφ-0.91; Mrθ0.26; Mθφ-0.76; Mφr0.58; Fault plane solution: Mo1.42000×10^14 NP1:φ=28.00000°, δ58.00000°, λ84.00000°. NP2:φ=219.00000°, δ32.00000°, λ99.00000°.*

JMA 19 16:28:42.0±0.2, 40°.92N×143°.09E, h3km±3km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
JEM	**Erimo**	**1.10**	**3**	P	P		Pg	16 29 03.0	0.0
JEM				S	eS		Sg	16 29 17.7	+0.5
JKEN	**Kujiedanarisaw**	**1.27**	**236**	P	P		Pg	16 29 05.8	-0.5
JKEN				S	eS		Sb	16 29 23.1	-0.2
JARK	**Aomorirokkasho**	**1.31**	**274**	P	P		Pg	16 29 06.4	-0.7
JAPK				S	eS		Sg	16 29 23.9	-0.1
JANG	**Nango**	**1.32**	**246**	P	P		Pg	16 29 06.7	-0.5
JANG				S	eS		Sg	16 29 24.4	+0.1
JTH	**Tanohata**	**1.35**	**224**	P	P		Pn	16 29 07.2	-0.6
JTH				S	eS		Sg	16 29 25.1	-0.4
JNBK	**Urakawa-nobuka**	**1.38**	**350**	P	P		Pn	16 29 07.8	-0.4
JTM	**Tenmabayashi**	**1.54**	**266**	P	P		Pn	16 29 10.4	+0.1
JTM				S	eS		Sn	16 29 30.7	-0.1
JOT	**Ohata**	**1.61**	**287**	P	P		Pn	16 29 11.1	-0.2
JOT				S	eS		Sn	16 29 32.2	-0.4
JKB	**Kayabe**	**1.82**	**303**	P	P		Pn	16 29 14.0	-0.2
JKB				S	eS		Sn	16 29 37.3	-0.6
JIAM	**Iburiatsuma**	**1.91**	**333**	P	P		Pb	16 29 16.7	-0.8
JOM	**Ohasama**	**2.00**	**224**	P	P		Pn	16 29 17.7	+1.1
JOM				S	eS		Sb	16 29 43.4	-0.8
JEW	**Eniwo**	**2.28**	**328**	P	P		Pn	16 29 21.5	+1.0
JMK	**Ichinoseki**	**2.44**	**217**	P	P		Pn	16 29 23.4	+0.8
JMK				S	eS		Sn	16 29 53.7	+0.8

IDC 19 16:28:56.0±1.9, 8°.86S×124°.16E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.3/30, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=42.5km s-min=17.8km az=100.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
BATI	**Baumata**	**1.43**	**200**	Pg	Pb		Pb	16 29 24.2	+0.7
	baz=235,slow=10								
BATI				Lg	Lg		Lg	16 29 40.8	
	baz=277,slow=17								
FITZ	**Fitzroy Crossi**	**9.30**	**171**	Pn	Pn		Pn	16 31 09.3	-2.1
	0.2nm,0.3s,baz=350,slow=11,SNR=1.6								
WRA	**Warramunga Arr**	**14.78**	**139**	Pn	Pn		Pn	16 32 25.8	-0.7
	0.1nm,0.3s,baz=315,slow=15,SNR=1.6								
WRA				Sn	Sn		Sn	16 35 04.2	-6.8
	0.1nm,0.3s,baz=278,slow=20,SNR=6.9								
ASAR	**Alice Springs**	**17.43**	**149**	P	P		P	16 33 01.8	-0.4
	0.1nm,0.3s,baz=320,slow=12,SNR=3.1								
ASAR				S	S		Sn	16 36 08.4	-7.1
	0.1nm,0.3s,baz=312,slow=21,SNR=5.3								
MKAR	**Makanchi Array**	**66.77**	**330**	P	P		P	16 39 48.8	-0.4
	0.1nm,0.4s,baz=125,slow=8.4,SNR=1.8								

WEL 19 16:48:35.1, 44°S±8°×17°2E±°, h11km±7km, M2.0/6, ML2.0/6, MLv2.0/6, Error ellipse: s-maj=0.0km s-min=0.0km az=156.3, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
RACZ	**Rakaia**	**0.03**	**125**	P	P		Pg	16 48 38.1	+1.1
WACZ	**Wakanui South**	**0.30**	**219**	P	P		Pb	16 48 43.1	+0.6
OXZ	**Oxford**	**0.39**	**353**	P	P		Pb	16 48 44.1	+0.1
MQZ	**McQueen's Vall**	**0.40**	**90**	P	P		Pb	16 48 44.3	+0.1
MHCZ	**Mount Hutt**	**0.43**	**294**	P	P		Pb	16 48 45.0	+0.4
AKCZ	**Akaroa Harbour**	**0.61**	**106**	P	P		Pb	16 48 48.5	+0.7
AMCZ	**Amberley**	**0.67**	**37**	P	P		Pn	16 48 49.9	-0.6
OKCZ	**Okains Bay**	**0.69**	**92**	P	P		Pn	16 48 50.9	0.0
ARCZ	**Arundel**	**0.71**	**250**	P	P		Pn	16 48 50.5	-0.6
RPZ	**Rata Peaks**	**0.76**	**269**	P	P		Pn	16 48 51.1	-0.7
LTZ	**Lake Taylor**	**0.93**	**8**	P	P		Pn	16 48 54.0	-0.3

TAP 19 16:53:32.9, 22°.55N×122°.34E, h77km±1km, ML2.3, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
LDUT	**Ludao**	**0.81**	**279**	*e*P	P		Pn	16 53 48.8	-0.8
	baz=286								
LAY	**Lan-yu**	**0.89**	**235**	P	P		Pn	16 53 49.6	-0.9
	baz=239								
LAY				*i* S	Sn		Sn	16 54 03.0	-0.6
	baz=239								
EDH	**Donghe**	**1.04**	**294**	*e*P	P		Pn	16 53 53.4	+1.0
	baz=297								
EDH				S	Sn		Sn	16 54 07.5	+0.6
	baz=297								
TTN	**Taitung**	**1.12**	**281**	P	P		Pn	16 53 53.8	+0.5
	baz=283								
TTN				S	Sn		Sn	16 54 09.1	+0.6
	baz=283								
FULB	**Fuli**	**1.16**	**304**	*e*S	Sn		Sn	16 54 10.0	+0.6
	baz=301								
LONT	**Longtian**	**1.17**	**288**	*e*P	P		Pn	16 53 54.6	+0.7
	baz=289								
LONT				*e*S	Sn		Sn	16 54 10.2	+0.5
	baz=289								
TWGBT	**Beinan**	**1.19**	**283**	*e*P	P		Pn	16 53 55.7	+1.5
	baz=284								
TWGBT				*e*S	Sn		Sn	16 54 10.4	+0.3
	baz=284								
EYUL	**Yuli**	**1.23**	**310**	*e*P	P		Pn	16 53 54.3	-0.4
	baz=316								
EYUL				S	Sn		Sn	16 54 11.5	+0.5
	baz=316								
TWF1	**Yuli**	**1.25**	**310**	P	P		Pn	16 53 55.0	+0.1
	baz=316								
TWF1				S	Sn		Sn	16 54 11.4	0.0
	baz=316								
HGSD	**Ruisui**	**1.26**	**318**	P	P		Pn	16 53 54.2	-0.9
	baz=324								
YULB	**Yu-li**	**1.27**	**311**	P	P		Pn	16 53 54.7	-0.5
	baz=316								
YULB				S	Sn		Sn	16 54 11.9	-0.1
	baz=316								
ECL	**Taimali**	**1.28**	**272**	P	P		Pn	16 53 55.5	+0.2
	baz=272								
ECL				S	Sn		Sn	16 54 12.3	+0.3
	baz=272								
EHY	**Hungye**	**1.34**	**316**	P	P		Pn	16 53 56.3	+0.3
	baz=321								
EHY				S	Sn		Sn	16 54 13.0	-0.4
	baz=321								
ELDTW	**Lidau**	**1.38**	**298**	P	P		Pn	16 53 56.1	-0.6
	baz=298								
ELDTW				S	Sn		Sn	16 54 13.9	-0.5
	baz=298								
EAST	**Anshuo**	**1.39**	**263**	P	P		Pn	16 53 58.0	+1.3
	baz=255								
EAST				S	S		Sn	16 54 14.6	0.0
	baz=255								
TSEB	**Hengchuen, Pin**	**1.48**	**244**	P	P		Pn	16 53 59.3	+1.5
	baz=252								
WTP	**Ta-pu**	**1.73**	**294**	P	P		Pn	16 54 02.8	+1.6
	baz=301								
WTP				S	S		Sn	16 54 24.7	+1.9
	baz=301								
TPUB	**Ta-pu**	**1.74**	**296**	*e*P	P		Pn	16 54 02.8	+1.5
	baz=303								
TPUB				*e*S	S		Sn	16 54 24.1	+1.2
	baz=303								
NACB	**Ninganchiao**	**1.76**	**337**	*e*P	P		Pn	16 54 02.3	+0.8
	baz=342								
NACB				*e*S	S		Sn	16 54 21.5	-1.6
	baz=342								
OWD	**Renai**	**1.76**	**323**	*e*P	P		Pn	16 54 02.4	+0.7
	baz=328								
OWD				*e*S	S		Sn	16 54 22.9	-0.6
	baz=328								
ETLH	**Xiulin Townshi**	**1.83**	**335**	*e*P	P		Pn	16 54 04.3	+1.8
	baz=339								
ETLH				*e*S	S		Sn	16 54 24.9	-0.1
	baz=339								
CHGB	**Renai**	**1.85**	**325**	P	P		Pn	16 54 03.9	+1.0
	baz=330								
CHGB				*e*S	S		Sn	16 54 25.5	-0.2
	baz=330								
CHN5	**Tsauling**	**1.85**	**305**	*e*P	P		Pn	16 54 04.3	+1.5
	baz=304								
CHN5				*e*S	S		Sn	16 54 27.1	+1.5
	baz=304								
WHF	**Hehuan Shan**	**1.87**	**328**	*e*P	P		Pn	16 54 03.8	+0.4
	baz=328								
WHF				*e*S	S		Sn	16 54 26.3	-0.2
	baz=328								

JMA ***19*** *16:54:20.7±0.2, 25°.00N×123°.56E, h16km±4km, M3.1*
IDC ***19*** *16:54:22.1±1.1, 24°.44N×122°.70E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.3/66, mbtmp3.5/6, ML2.9/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/35, Error ellipse: s-maj=52.3km s-min=20.9km az=76.0*

ISC 19 16:54:21.2±1.7, 24°.95N±0°.07×123°.58E±0°.04, h9km±12km, n16, σ0°.96/22, mb3.6/5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
IRIF	**Iriomote-Funau**	**0.62**	**167**	P	P		Pg	16 54 33.7	+0.4
IRIF				S	eS		Sg	16 54 43.0	+1.5
YOJ	**Yonaguni jima**	**0.71**	**227**	P	P		Pg	16 54 34.6	-0.2
YOJ				S	eS		Sg	16 54 44.2	+0.1
JISG	**Ishigakijimahi**	**0.76**	**118**	P	P		Pb	16 54 35.7	-0.8
JISG				S	eS		Sb	16 54 46.7	-0.2
JYNG	**Yonagunijimaku**	**0.76**	**230**	P	P		Pb	16 54 35.4	-1.1
JYNG				S	eS		Sg	16 54 45.8	+0.1
JIJ	**Ishigaki jima**	**0.78**	**138**	P	P		Pb	16 54 35.9	-1.0
JIJ				S	eS		Sb	16 54 46.4	-1.1
JKRS	**Kuro-shima**	**0.81**	**151**	P	P		Pb	16 54 36.9	-0.5
JKRS				S	S		Sb	16 54 48.3	-0.1
HATJ	**Hateruma jima**	**0.91**	**167**	P	P		Pb	16 54 38.7	-0.4
HATJ				S	S		Sb	16 54 50.8	-0.5
JTJ	**Tarama**	**1.07**	**106**	P	P		Pb	16 54 41.2	-0.6
JTJ				S	eS		Sb	16 54 55.7	-0.2
JIRB	**Irabujima**	**1.45**	**94**	P	P		Pn	16 54 47.1	-0.5
JMJ2	**Miyako jima3**	**1.60**	**97**	P	P		Pb	16 54 49.6	-1.4
KSRS	**Korea Array**	**13.01**	**16**	Pn	P		P	16 57 39.8	+3.0
	0.1nm,0.3s,baz=190,slow=12,SNR=1.5								
KSRS				LR	LR			17 03 19.7	
	comp=Z,26nm,18.5s,baz=140,slow=39								
KLR	**Kul'dur**	**25.07**	**13**	P	P		P	16 59 53.5	+7.7
	1.7nm,0.9s,baz=230,slow=5.3,SNR=4.2								
MKAR	**Makanchi Array**	**39.34**	**314**	P			**P**	**17 01 50.8**	**0.0**
	0.3nm,0.8s,baz=115,slow=10,SNR=2.6								
ZALV	**Zalesovo Beam**	**40.82**	**326**	P			**P**	**17 02 05.4**	**+2.5**
	0.9nm,0.7s,baz=120,slow=8.5,SNR=4.5								
WRA	**Warramunga Arr**	**45.83**	**166**	P			**P**	**17 02 43.4**	**-0.3**
	0.7nm,0.8s,baz=347,slow=8.1,SNR=7.2								
ASAR	**Alice Springs**	**49.35**	**167**	P			**P**	**17 03 11.4**	**+0.3**
	0.2nm,0.6s,baz=351,slow=7.5,SNR=4.5								

IDC ***19*** *16:54:49.2±2.2, 2°.08N×126°.55E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/43, mbtmp3.3/3, Error ellipse: s-maj=176.0km s-min=26.6km az=66.0*
DJA ***19*** *16:54:53.5±1.1, 2°N±3°×12°6E±°, h15km±8km, M3.1/7, MLv3.1/7*

ISC 19 16:54:55.7±1.1, 1°.89N±0°.07×126°.43E±0°.08, h47km, n7, σ1°65/9, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
TNTI	**Ternate**	**1.45**	**140**	P	P		Pn	16 55 19.0	-0.5
SGSI	**Sangihe**	**2.00**	**333**	P	P		Pn	16 55 27.3	+0.2
SGSI				S	S		Sn	16 55 51.2	+0.2
KMSI	**Cibinong**	**2.77**	**242**	P	P		Pn	16 55 36.6	-1.1
KMSI				S	S		Sn	16 56 12.2	+2.2
GTOI	**Gorontalo**	**3.64**	**250**	P	P		Pn	16 55 48.3	-1.3
WRA	**Warramunga Arr**	**23.04**	**161**	P	P		P	16 59 56.2	-0.9
	0.4nm,0.3s,baz=339,slow=11,SNR=18								
ASAR	**Alice Springs**	**26.42**	**164**	P			**P**	**17 00 30.9**	**+2.6**
	0.3nm,0.7s,baz=347,slow=14,SNR=4.6								
MKAR	**Makanchi Array**	**58.90**	**326**	P			**P**	**17 04 49.2**	**-0.8**
	0.3nm,0.7s,baz=120,slow=8.3,SNR=4.3								

JMA ***19*** *17:16:42.2±0.1, 25°.00N×123°.56E, h16km±3km, M3.4*
IDC ***19*** *17:17:04.5±5.5, 24°.97N×123°.27E, h220km±65km, mb3.0/6, mb1 3.2/8, mb1mx2.9/63, mbtmp3.7/8, MS2.9/3, Ms1 2.9/3, ms1mx2.5/15, Error ellipse: s-maj=41.2km s-min=14.2km az=57.0*

ISC 19 17:16:42.3±1.6, 24°.93N±0°.06×123°.54E±0°.04, h9km±11km, n21, σ0°88/27, mb3.5/6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
IRIF	**Iriomote-Funau**	**0.61**	**164**	P	P		Pb	17 16 55.2	0.0
IRIF				S	eS		Sb	17 17 04.2	+0.3
YOJ	**Yonaguni jima**	**0.67**	**226**	P	P		Pb	17 16 56.0	-0.1
YOJ				S	eS		Sb	17 17 05.6	+0.1
JYNG	**Yonagunijimaku**	**0.72**	**229**	P	P		Pb	17 16 56.8	-0.2
JYNG				S	eS		Sb	17 17 07.2	+0.3
JISG	**Ishigakijimahi**	**0.78**	**116**	P	P		Pg	17 16 57.2	-0.1
JISG				S	S		Sg	17 17 07.9	+0.5
JIJ	**Ishigaki jima**	**0.79**	**135**	P	P		Pg	17 16 57.3	-0.1
JIJ				S	S		Sg	17 17 07.9	+0.3
JKRS	**Kuro-shima**	**0.81**	**148**	P	P		Pb	17 16 58.3	-0.2
JKRS				S	S		Sb	17 17 10.1	+0.6
HATJ	**Hateruma jima**	**0.90**	**164**	P	P		Pb	17 17 00.0	0.0
HATJ				S	eS		Sb	17 17 12.3	+0.2
JTJ	**Tarama**	**1.09**	**105**	P	P		Pg	17 17 02.6	-0.7
JTJ				S	eS		Sg	17 17 17.0	-0.5
JIRB	**Irabujima**	**1.49**	**93**	P	P		Pn	17 17 08.5	-0.7
JMJ2	**Miyako jima3**	**1.64**	**96**	P	P		Pn	17 17 11.1	-0.1
JMJ2				S	eS		Sn	17 17 31.5	-0.9
JOGS	**Gusukube**	**1.70**	**95**	P	P		Pn	17 17 12.1	-0.1
JNU	**Nakatsue**	**10.38**	**36**	P	P		Pn	17 19 30.4	+19
	0.1nm,0.3s,baz=203,slow=15,SNR=2.7								
KSRS	**Korea Array**	**13.04**	**16**	P			**P**	**17 20 00.8**	**+2.6**
	0.1nm,0.3s,baz=195,slow=12,SNR=7.6								
KSRS				LR	LR			17 25 22.3	
	comp=Z,59nm,18.6s,baz=225,slow=38								
CMAR	**Chiang Mai Arr**	**23.72**	**259**	P			**P**	**17 21 55.0**	**+0.1**
	0.5nm,1.0s,baz=72,slow=8.6,SNR=2.2								
ASAJ	**Asahikawa**	**24.65**	**34**	LR	LR			17 31 25.0	
	comp=Z,16nm,20.1s,baz=347,slow=35								
KLR	**Kul'dur**	**25.10**	**13**	LR	LR			17 32 57.3	
	comp=Z,32nm,18.8s,baz=190,slow=38								
MKAR	**Makanchi Array**	**39.33**	**314**	P			**P**	**17 24 09.3**	**-2.5**
	0.7nm,0.7s,baz=96,slow=11,SNR=6.2								
ZALV	**Zalesovo Beam**	**40.82**	**326**	P			**P**	**17 24 23.1**	**-0.9**
	0.8nm,0.6s,baz=108,slow=9.3,SNR=2.2								
KURBB	**Kurchatov Arra**	**42.95**	**319**	P			**P**	**17 24 41.0**	**-0.5**
	0.5nm,0.8s,baz=113,slow=8.9,SNR=5.0								
WRA	**Warramunga Arr**	**45.82**	**166**	P			**P**	**17 25 04.8**	**+0.1**
	1.7nm,0.7s,baz=348,slow=8.7,SNR=19								
ASAR	**Alice Springs**	**49.34**	**167**	P			**P**	**17 25 32.5**	**+0.5**
	0.4nm,0.5s,baz=350,slow=7.4,SNR=22								

TAP 19 17:21:29.6, 24°.72N×121°.11E, h5km, ML2.0, 3C-1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
LIOB	**Emei**	**0.12**	**228**	⇑*i*P	P		Pg	17 21 32.8	+0.7
	baz=228								
LIOB				*i* S	S		Sg	17 21 35.1	+1.5
	baz=228								
SBCB	**Hsinchu**	**0.13**	**302**	P	P		Pg	17 21 33.0	+0.7
	baz=301								
SBCB				S	S		Sg	17 21 35.6	+1.4
	baz=301								
NSTT	**Nanjuang**	**0.13**	**227**	*i* P	P		Pg	17 21 33.0	+0.7
	baz=224								
NSTT				*i* S	S		Sg	17 21 35.5	+1.3
	baz=224								
HSN	**Hsinchu**	**0.15**	**302**	⇓*i*P	P		Pg	17 21 33.1	+0.4
	baz=320								
HSN				*i* S	S		Sg	17 21 35.8	+1.1
	baz=320								
NSK	**Sanguang**	**0.23**	**102**	⇑*i*P	P		Pg	17 21 35.6	+1.4
	baz=101								
NSK				*i* S	S		Sg	17 21 39.5	+2.2
	baz=101								
YHNB	**Yeheng**	**0.25**	**102**	⇑P	P		Pg	17 21 35.8	+1.3
	baz=102								
YHNB				S	S		Sg	17 21 40.1	+2.3
	baz=102								
NMLH	**Miaoli**	**0.34**	**237**	P	P		Pb	17 21 37.7	-0.5
	baz=237								
NMLH				S	S		Sb	17 21 44.1	+0.1
	baz=237								
NWLT	**Wulai**	**0.36**	**81**	*e*P	P		Pb	17 21 37.9	-0.6
	baz=81								
NWLT				*e*S	S		Sb	17 21 44.1	-0.4
	baz=81								
NNS	**Nan Shan**	**0.37**	**139**	*i* P	P		Pb	17 21 38.3	-0.4
	baz=138								
NNS				*i* S	S		Sb	17 21 43.9	-1.0
	baz=138								
NNSB	**Datong**	**0.39**	**140**	P	P		Pb	17 21 38.5	-0.4
	baz=139								
NNSB				S	S		Sb	17 21 44.0	-1.2
	baz=139								
NNSH	**Datong**	**0.39**	**140**	*e*P	P		Pb	17 21 38.4	-0.6
	baz=139								
NNSH				*e*S	S		Sb	17 21 43.6	+1.4
	baz=139								
NDT	**Datong Townshi**	**0.39**	**108**	P	P		Pb	17 21 38.7	-0.2
	baz=108								
NDT				S	S		Sb	17 21 44.5	-0.6
	baz=108								
NSY	**Sanyi**	**0.44**	**226**	S	S		Sb	17 21 46.8	+0.1
	baz=225								
WHP	**Taichung City**	**0.47**	**199**	*i* P	P		Pb	17 21 39.7	-0.7
	baz=198								
WHP				*e*S	S		Sb	17 21 46.2	-1.4
	baz=198								
TWS1	**Kuangyinshan**	**0.47**	**37**	P	P		Pb	17 21 40.2	-0.2
	baz=37								
TWS1				S	S		Sb	17 21 48.3	+0.7
	baz=37								
TDCB	**Techi**	**0.47**	**175**	*e*P	P		Pb	17 21 39.7	-0.8
	baz=174								
FUSS	**Fushou**	**0.49**	**165**	P	P		Pb	17 21 40.5	-0.3
	baz=165								
FUSS				S	S		Sb	17 21 48.1	-0.2
	baz=165								
TWE	**Neicheng**	**0.51**	**90**	P	P		Pb	17 21 41.5	+0.5
	baz=90								
TWE				S	S		Sb	17 21 49.4	+0.8
	baz=90								
WDJ	**Dajia District**	**0.57**	**229**	*e*S	Sb		Sb	17 21 51.5	+1.2
	baz=228								
YM04	**YM04**	**0.58**	**42**	P	P		Pb	17 21 42.3	0.0
	baz=42								
YM04				S	S		Sb	17 21 50.4	-0.3
	baz=42								
ANP	**Anpu**	**0.59**	**39**	P	P		Pb	17 21 42.4	-0.1
	baz=39								
ANP				S	S		Sb	17 21 51.9	+0.6
	baz=39								
YM01	**YM01**	**0.59**	**45**	*e*P	P		Pb	17 21 42.6	+0.1
	baz=44								
YM01				*e*S	S		Sb	17 21 51.5	+0.3
	baz=44								
YM10	**YM10**	**0.59**	**44**	*e*P	P		Pb	17 21 42.4	-0.1
	baz=43								
YM10				*e*S	S		Sb	17 21 51.4	+0.1
	baz=43								
YM03	**YM03**	**0.60**	**41**	*e*P	P		Pb	17 21 42.6	0.0
	baz=40								
YM03				*e*S	S		Sb	17 21 51.0	-0.4
	baz=40								
YM11	**YM11**	**0.61**	**44**	P	P		Pb	17 21 43.1	+0.3
	baz=43								
YM11				S	S		Sb	17 21 51.9	+0.1
	baz=43								
ETLH	**Xiulin Townshi**	**0.62**	**146**	*e*P	P		Pb	17 21 42.9	0.0
	baz=146								
ETLH				S	S		Sb	17 21 53.2	+1.3
	baz=146								
CHGB	**Renai**	**0.66**	**175**	P	P		Pb	17 21 43.6	-0.2
	baz=174								
TIPB	**Shuangxi**	**0.70**	**69**	P	P		Pb	17 21 44.5	+0.3
	baz=69								
TIPB				S	S		Sb	17 21 55.4	+1.3
	baz=69								
NACB	**Ninganchiao**	**0.70**	**141**	*e*P	P		Pb	17 21 44.5	+0.2
	baz=141								
DPDB	**Guoxing**	**0.71**	**194**	*e*P	P		Pb	17 21 44.2	-0.2
	baz=193								
DPDB				*e*S	S		Sb	17 21 55.6	+1.2
	baz=193								
OWD	**Renai**	**0.77**	**175**	*e*P	P		Pg	17 21 44.2	-0.1
	baz=175								
OWD				*e*S	S		Sg	17 21 55.3	+0.9
	baz=175								
TYC	**Yuchr**	**0.85**	**196**	P	P		Pn	17 21 47.6	-0.5
	baz=195								
TYC				*e*S	Sn		Sn	17 21 59.7	-1.2
	baz=195								
SMLT	**Sun Moon Lake**	**0.86**	**193**	P	P		Pb	17 21 47.0	-0.1
	baz=192								
SMLT				*e*S	Sn		Sn	17 22 00.3	-1.0
	baz=192								
SSLB	**Suanglung**	**0.94**	**189**	*e*P	P		Pb	17 21 48.3	-0.1
	baz=188

WRA	**Warramunga Arr**	**45.79**	**166**	P	**P**	**17 30 16.8**	**-0.7**
	0.5nm,0.7s,baz=346,slow=8.8,SNR=7.0						
ASAR	**Alice Springs**	**49.31**	**167**	P	**P**	**17 30 44.2**	**-0.6**
	0.2nm,0.7s,baz=350,slow=7.0,SNR=5.3						

IDC 19 17:27:13.0±12.0, **27.70N**×**87.67E**, **h0**km, **mb3.7**/3, **mb1 3.6**/4, **mb1mx3.3**/50, **mbtmp3.6**/4, **ML3.5**/1, **Error ellipse: s-maj=244.1km s-min=106.8km az=125.0, Nepal**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**19.52**	**349**	P	P	17 31 41.5	-0.4
	0.1nm,0.3s,baz=172,slow=10,SNR=6.9						
KURBB	**Kurchatov Arra**	**23.92**	**346**	P	P	17 32 28.8	+0.2
	0.9nm,0.6s,baz=167,slow=8.6,SNR=8.7						
ZALV	**Zalesovo Beam**	**26.30**	**356**	P	P	17 32 50.1	-0.1
	0.6nm,0.4s,baz=187,slow=9.9,SNR=4.6						
FINES	**FINESS Array B**	**52.54**	**328**	P	P	17 36 27.8	0.0
	1.1nm,0.6s,baz=69,slow=7.6,SNR=4.1						

*JMA **19** 17:30:17.9*±*0.1, 24.99N*×*123.56E, h20km, M2.9*
*IDC **19** 17:30:18.2*±*1.3, 24.40N*×*122.13E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.4/38, mbtmp3.6/7, ML2.5/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/39, Error ellipse: s-maj=71.9km s-min=20.8km az=67.0*
ISC 19 17:30:18.8±1.3, **24.91N**±0.08×**123.54E**±0.06, **h22**km±11km, **n15**, σ1s**56**/20, **mb3.4**/6, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.60**	**163**	P	**Pn**	**17 30 30.6**	**-1.3**
IRIF				*e*S	**Sb**	**17 30 39.7**	**+1.1**
YOJ	**Yonaguni jima**	**0.66**	**227**	P	**Pn**	**17 30 31.6**	**-1.1**
YOJ				S	**Sn**	**17 30 40.7**	**-1.7**
JYNG	**Yonagunijimaku**	**0.71**	**230**	P	**Pn**	**17 30 32.4**	**-1.0**
JYNG				S	**Sn**	**17 30 42.7**	**-1.0**
JISG	**Ishigakijimahi**	**0.77**	**115**	P	**Pb**	**17 30 32.9**	**-0.6**
JISG				*e*S	**Sb**	**17 30 43.5**	**0.0**
JIJ	**Ishigaki jima**	**0.77**	**135**	P	**Pn**	**17 30 32.9**	**-1.4**
JIJ				*e*S	**Sb**	**17 30 43.3**	**-0.3**
JKRS	**Kuro-shima**	**0.80**	**147**	P	**Pb**	**17 30 34.0**	**+0.1**
JKRS				*e*S	**Sn**	**17 30 45.2**	**-0.6**
HATJ	**Hateruma jima**	**0.88**	**164**	P	**Pb**	**17 30 35.5**	**+0.1**
HATJ				S	**Sb**	**17 30 48.4**	**+1.6**
KSRS	**Korea Array**	**13.05**	**16**	Pn	P	17 33 35.7	+2.7
	0.0nm,0.3s,baz=186,slow=11,SNR=2.7						
KSRS				LR	LR	17 39 08.7	
	comp=Z,23nm,18.8s,baz=265,slow=38						
DAV	**Davao City (W)**	**17.85**	**173**	LR	LR	17 40 43.0	
	comp=Z,29nm,20.8s,baz=294,slow=36						
SONM	**Songino Array**	**26.60**	**334**	P	**P**	**17 35 58.6**	**+3.1**
	4.2nm,0.5s,baz=160,slow=17,SNR=2.8						
MKAR	**Makanchi Array**	**39.34**	**314**	P	**P**	**17 37 45.1**	**-1.2**
	0.2nm,0.6s,baz=106,slow=11,SNR=2.3						
ZALV	**Zalesovo Beam**	**40.83**	**326**	P	**P**	**17 37 59.3**	**+0.7**
	0.5nm,0.6s,baz=102,slow=13,SNR=1.8						
KURBB	**Kurchatov Arra**	**42.96**	**319**	P	**P**	**17 38 13.1**	**-2.9**
	0.3nm,0.4s,baz=116,slow=6.3,SNR=3.1						
WRA	**Warramunga Arr**	**45.81**	**166**	P	**P**	**17 38 40.3**	**+1.3**
	0.7nm,0.7s,baz=349,slow=9.0,SNR=5.1						
ASAR	**Alice Springs**	**49.32**	**167**	P	**P**	**17 39 08.1**	**+1.7**
	0.2nm,0.5s,baz=351,slow=8.1,SNR=1.6						

*NNC **19** 17:30:40.3*±*3.1, 37.20N*×*70.67E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=25.6km s-min=24.5km az=110.0*
*DMN **19** 17:30:46.2*±*49.0, 35.37N*×*72.56E, h10km, Mb5.0/4, Error ellipse: s-maj=1308.0km s-min=155.9km az=110.0*
ISC 19 17:30:38.6±6.2, **36.4N**±0.2×**71.8E**±0.7, **h100**km, **n9**, σ0s**73**/9, **1C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.56**	**18**	⇓P	**Pn**	**17 32 12.8**	**+0.3**
	0.8nm,0.6s						
AAK				⇓S	**Sn**	**17 33 25.4**	**-0.5**
	3.8nm,0.5s						
KK31	**Karatay Array**	**6.76**	**352**	⇑P	Pn	17 32 09.0	-6.2
	0.5nm,0.3s,baz=152,slow=8.5,SNR=11						
PYUN	**Piuthan**	**12.57**	**128**	*e*P	**Pn**	**17 33 33.1**	**-1.0**
	5.4nm,0.2s						
DANN	**Dangsing**	**12.90**	**125**	*e*P	**Pn**	**17 33 37.9**	**-0.6**
	7.3nm,0.3s						
GKN	**Gorkha**	**13.71**	**124**	*e*P	**Pn**	**17 33 49.3**	**+0.3**
KKN	**Kakani**	**14.28**	**123**	*e*P	**Pn**	**17 33 57.5**	**+1.1**
	12nm,0.5s						
PKIN	**Phulchoki**	**14.50**	**124**	*e*P	**Pn**	**17 33 59.5**	**+0.3**
PKI	**Pulchoki**	**14.51**	**124**	*e*P	**Pn**	**17 33 59.6**	**+0.2**
GUN	**Gumba**	**14.61**	**121**	*e*P	**Pn**	**17 34 01.1**	**+0.3**
	5.9nm,0.4s						

*MOS **19** 17:46:21.7*±*1.1, 24.94N*×*122.14E, h17km, mb5.3/36, MS4.9/13, Error ellipse: s-maj=5.9km s-min=3.8km az=110.6*
*BJI **19** 17:46:21.4*±*0.0, 24.95N*×*122.05E, h10km, mB5.4/62, mb4.9/64, ML5.4/11, Ms5.4/82, Ms7 5.2/79*
*TAP **19** 17:46:21.6, 24.90N*×*122.06E, h14km, ML5.2, B*
*JMA **19** 17:46:21.8*±*0.1, 24.88N*×*122.00E, h46km, M5.3*
*NIED **19** 17:46:21.9, 24.88N*×*122.00E, h46km, MW5.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr=7.85; Mθθ=6.03; Mϕϕ 1.83; Mrθ=-0.09; Mθϕ=4.18; Mϕr=-2.55; Fault plane solution: M0=8.64000×10^16 NP1:ϕs=44.00000°, δ52.00000°, λ=-109.00000°. NP2:ϕs=253.00000°, δ42.00000°, λ=-67.00000°.*
*ASIES **19** 17:46:22.7, 24.89N*×*122.02E, h24km, MW5.0*
*NEIC **19** 17:46:22*±*1.5, 24.89N*±*0.05×122.08E*±*0.02, h10km*±*1km, mb5.2/224, Mww5.2, Error ellipse: s-maj=8.2km s-min=3.8km az=13.0*
*GCMT **19** 17:46:23.0*±*0.1, 25.01N*±*0.01×122.12E*±*0.01, h12km, MW5.2/119, Moment Tensor Solution. s64,c94; s119,c216; Duration: 1s0 Moment tensor: Scale 10^16 Nm; Mrr=5.80±.14; Mθθ=3.44±.12; Mϕϕ=2.37±.13; Mrθ=3.60±.36; Mθϕ=4.99±.10; Mϕr=-1.11±.39; Best double couple: M0=8.03400×10^16 NP1:ϕs=21.00000°, δ44.00000°, λ=-133.00000°. NP2:ϕs=254.00000°, δ59.00000°, λ=-56.00000°. Principal axes: T 8.2120, Plg8.0000°, Azm321.0000°; N -0.3460, Plg28.0000°, Azm55.0000°; P -7.8560, Plg60.0000°, Azm216.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **19** 17:46:24.2*±*0.0, 24.56N*×*123.93E, h33km, mb5.2*
*NEIC **19** 17:46:26, 24.81N*×*122.14E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr=7.19; Mθθ=5.02; Mϕϕ=2.17; Mrθ=0.19; Mθϕ=5.15; Mϕr=0.55; Fault plane solution: M0=8.22000×10^16 NP1:ϕs=238.00000°, δ45.00000°, λ=-81.00000°. NP2:ϕs=47.00000°, δ46.00000°, λ=-98.00000°. Principal axes: T 8.9380, Plg1.0000°, Azm143.0000°; N -1.6880, Plg6.0000°, Azm53.0000°; P -7.2500, Plg84.0000°, Azm239.0000°;*
*IDC **19** 17:46:27.9*±*2.6, 24.91N*×*122.14E, h51km*±*23km, mb4.5/48, mb1 4.6/50, mb1mx4.5/65, mbtmp4.8/50, ML3.3/1, MS4.6/46, Ms1 4.6/46, ms1mx4.6/55 Error ellipse: s-maj=11.2km s-min=8.0km az=62.0*
ISC 19 17:46:22.6±0.4, **24.89N**±0.02×**122.12E**±0.02, **h12**km±2km, **h12**km:**pP-P, n969**, σ1s**59**/1024, **mb5.1**/262, **MS4.8**/67, **45C-7D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.17**	**315**	⇑*i*P	**Pg**	**17 46 25.1**	**-1.3**
	baz=322						
TWB1				*i* S	**Sg**	**17 46 27.5**	**-1.5**
	baz=322						
EGS		**0.17**	**255**	*i* P	**Pg**	**17 46 25.3**	**-1.1**
	baz=251						
EGS				*i* S	**Sg**	**17 46 28.4**	**-0.8**
	baz=251						
NTC	**Toucheng**	**0.26**	**262**	⇑*i*P	**Pg**	**17 46 26.9**	**-1.1**
	baz=265						
NTC				S	**Sg**	**17 46 30.7**	**-1.0**
	baz=265						
TIPB	**Shuangxi**	**0.28**	**287**	⇑*i*P	**Pg**	**17 46 27.1**	**-1.2**
	baz=289						
TIPB				*i* S	**Sg**	**17 46 30.4**	**-1.7**
	baz=289						
NWF	**Wu-fen Shan**	**0.35**	**301**	*i* P	**Pg**	**17 46 28.9**	**-0.9**
	baz=304						
NWF				S	**Sg**	**17 46 33.5**	**-1.0**
	baz=304						
WFSB	**Wu-fen Shan**	**0.35**	**301**	⇑*i*P	**Pg**	**17 46 28.8**	**-0.9**
	baz=304						
WFSB				*i* S	**Sg**	**17 46 33.5**	**-0.9**
	baz=304						
ILA	**Ilan**	**0.36**	**250**	P	**Pg**	**17 46 28.6**	**-1.2**
	baz=246						
ILA				S	**Sg**	**17 46 34.0**	**-0.5**
	baz=246						
TWC	**Suao**	**0.37**	**221**	P	**Pg**	**17 46 28.9**	**-1.1**
	baz=223						
TWC				S	**Sg**	**17 46 33.7**	**-1.3**
	baz=223						
TWE	**Neicheng**	**0.44**	**248**	*i* P	**Pg**	**17 46 29.9**	**-1.4**
	baz=238						
TWE				S	**Sg**	**17 46 36.1**	**-1.1**
	baz=238						
TWA	**Mucha**	**0.49**	**281**	*i* P	**Pg**	**17 46 31.2**	**-1.1**
	baz=282						
TWA				S	**Sg**	**17 46 37.2**	**-1.6**
	baz=282						
NWRT	**Kuosheng**	**0.52**	**307**	*i* P	**Pb**	**17 46 32.1**	**-1.5**
	baz=312						
NWRT				S	**Sb**	**17 46 38.6**	**-2.5**
	baz=312						
ENAH	**Nanao**	**0.52**	**212**	*i* P	**Pg**	**17 46 31.7**	**-1.1**
	baz=218						
ENAH				*e*S	**Sg**	**17 46 38.0**	**-1.7**
	baz=218						
NHDH	**Xindian Distri**	**0.54**	**278**	*i* P	**Pb**	**17 46 32.6**	**-1.4**
	baz=279						
NHDH				*i* S	**Sb**	**17 46 39.6**	**-2.2**
	baz=279						
YM01	**YM01**	**0.56**	**297**	⇑*i*P	**Pb**	**17 46 33.0**	**-1.4**
	baz=299						
YM01				S	**Sb**	**17 46 39.9**	**-2.5**
	baz=299						
TAP1	**Taipei**	**0.56**	**286**	⇑*i*P	**Pb**	**17 46 32.8**	**-1.6**
	baz=286						
TAP1				*i* S	**Sg**	**17 46 39.1**	**-1.8**
	baz=286						
YM08	**YM08**	**0.56**	**302**	⇑*i*P	**Pb**	**17 46 32.8**	**-1.6**
	baz=297						
YM11	**YM11**	**0.56**	**299**	P	**Pb**	**17 46 33.2**	**-1.2**
	baz=301						
YM11				*e*S	**Sg**	**17 46 39.7**	**-1.4**
	baz=301						
NWLT	**Wulai**	**0.57**	**259**	P	**Pg**	**17 46 32.3**	**-1.4**
	baz=260						
NWLT				S	**Sg**	**17 46 39.8**	**-1.4**
	baz=260						
YM10	**YM10**	**0.57**	**298**	⇑*i*P	**Pb**	**17 46 33.1**	**-1.4**
	baz=299						
ENA	**Nanau**	**0.57**	**217**	P	**Pg**	**17 46 33.1**	**-0.7**
	baz=219						
ENA				*e*S	**Sg**	**17 46 41.0**	**-0.4**
	baz=219						
TAP	**Taipei**	**0.57**	**285**	⇑*i*P	**Pb**	**17 46 33.1**	**-1.5**
	baz=287						
TAP				*i* S	**Sg**	**17 46 39.7**	**-1.7**
	baz=287						
TATO	**Taipei**	**0.58**	**279**	⇑*i*P	**Pg**	**17 46 32.8**	**-1.1**
	baz=280						
TATO				*i* S	**Sg**	**17 46 40.1**	**-1.3**
	baz=280						
TATO	**Taipei**	**0.58**	**279**	P	**Pb**	**17 46 33.0**	**-1.6**
TATO	**Taipei**	**0.58**	**279**		**Pg**	**17 46 32.7**	**-1.1**
YM04	**YM04**	**0.59**	**297**	⇑*i*P	**Pb**	**17 46 33.3**	**-1.6**
	baz=297						
YM03	**YM03**	**0.60**	**299**	⇑*i*P	**Pb**	**17 46 33.4**	**-1.7**
	baz=300						
ANP	**Anpu**	**0.61**	**299**	⇑*i*P	**Pg**	**17 46 33.6**	**-1.0**
	baz=300						
NDT	**Datong Townshi**	**0.62**	**243**	P	**Pg**	**17 46 33.3**	**-1.4**
	baz=235						
NSM	**Shimen**	**0.62**	**310**	*e*P	**Pb**	**17 46 34.5**	**-1.0**
	baz=312						
NSM				*e*S	**Sn**	**17 46 43.8**	**-3.4**
	baz=312						
NTST	**Danshui**	**0.66**	**294**	⇑*i*P	**Pb**	**17 46 35.2**	**-0.9**
	baz=295						
TWS1	**Kuangyinshan**	**0.67**	**288**	⇑*i*P	**Pb**	**17 46 35.3**	**-0.9**
	baz=299						
TWS1				*e*S	**Sb**	**17 46 43.2**	**-2.3**
	baz=299						
YHNB	**Yeheng**	**0.71**	**252**	⇑*i*P	**Pg**	**17 46 34.5**	**-1.9**
	baz=251						
YHNB	**Yeheng**	**0.71**	**252**	Pg	**Pg**	**17 46 33.8**	**-2.5**
NSK	**Sanguang**	**0.72**	**253**	⇑*i*P	**Pg**	**17 46 34.7**	**-1.9**
	baz=253						
NSK				S	**Sg**	**17 46 42.6**	**-3.5**
	baz=253						
PCYT	**Pengchaiyu**	**0.74**	**357**	P	**Pn**	**17 46 37.1**	**-1.8**
	baz=6.0						
NNSB	**Datong**	**0.81**	**236**	*e*P	**Pb**	**17 46 37.0**	**-1.8**
	baz=238						
NNSH	**Datong**	**0.81**	**236**	*e*P	**Pb**	**17 46 37.2**	**-1.5**
	baz=231						
NNS	**Nan Shan**	**0.81**	**237**	P	**Pb**	**17 46 37.0**	**-1.8**
	baz=237						
NNS				*e*S	**Sb**	**17 46 47.3**	**-2.4**
	baz=237						
NCU	**National Centr**	**0.85**	**276**	⇑*i*P	**Pn**	**17 46 38.9**	**-1.5**
	baz=277						
NCU				*e*S	**Sn**	**17 46 50.9**	**-1.9**
	baz=277						
NCUH	**Zhongli**	**0.85**	**275**	⇑*i*P	**Pn**	**17 46 38.8**	**-1.6**
	baz=277						
NCUH				S	**Sn**	**17 46 49.9**	**-3.0**
	baz=277						
NACB	**Ninganchiao**	**0.86**	**214**	P	**Pb**	**17 46 38.4**	**-1.1**
	baz=213						
NACB	**Ninganchiao**	**0.86**	**214**		**Pb**	**17 46 37.9**	**-1.6**
JYNG	**Yonagunijimaku**	**0.87**	**120**	P	**Pb**	**17 46 39.1**	**-0.6**
JYNG				*e*S	**Sb**	**17 46 51.2**	**-0.1**
ETLH	**Xiulin Townshi**	**0.89**	**220**	*e*P	**Pb**	**17 46 39.0**	**-1.1**
	baz=222						
ETLH				*e*S	**Sb**	**17 46 49.6**	**-2.4**
	baz=222						
YOJ	**Yonaguni jima**	**0.92**	**117**	⇑*i*P	**Pb**	**17 46 39.9**	**-0.6**
	baz=115						
YOJ	**Yonaguni jima**	**0.92**	**117**	P	**Pb**	**17 46 39.6**	**-0.9**
YOJ				*e*S	**Sb**	**17 46 52.7**	**0.0**
YOJ	**Yonaguni jima**	**0.92**	**117**	P	**Pb**	**17 46 39.6**	**-0.9**
YOJ	**Yonaguni jima**	**0.92**	**117**		**Pb**	**17 46 39.6**	**-0.9**
TWD	**Chiawan**	**0.94**	**211**	P	**Pg**	**17 46 39.9**	**-0.7**
	baz=222						
TWD				S	**Sb**	**17 46 52.0**	**-1.2**
	baz=222						
FUSS	**Fushou**	**1.02**	**231**	P	**Pg**	**17 46 41.4**	**-0.9**
	baz=231						
HWA	**Hwalien**	**1.02**	**207**	P	**Pg**	**17 46 42.7**	**+0.4**
	baz=217						
LIOB	**Emei**	**1.03**	**257**	P	**Pg**	**17 46 42.4**	**-0.1**
	baz=257						
SBCB	**Hsinchu**	**1.03**	**265**	P	**Pg**	**17 46 42.1**	**-0.4**
	baz=285						
SBCB				*e*S	**Sn**	**17 46 55.3**	**-2.0**
	baz=285						
HSN	**Hsinchu**	**1.04**	**265**	⇑*e*P	**Pb**	**17 46 41.2**	**-1.5**
	baz=270						
HSN				*e*S	**Sb**	**17 46 53.2**	**-3.1**
	baz=270						
NSTT	**Nanjuang**	**1.05**	**256**	*e*P	**Pg**	**17 46 42.1**	**-0.6**
	baz=253						
NSTT				*e*S	**Sb**	**17 46 54.6**	**-1.8**
	baz=253						
TWT	**Tachien**	**1.06**	**234**	P	**Pg**	**17 46 43.0**	**-0.1**
	baz=237						
TWT				*e*S	**Sn**	**17 46 57.4**	**-1.0**
	baz=237						
WHF	**Hehuan Shan**	**1.07**	**226**	*i* P	**Pg**	**17 46 42.6**	**-0.7**
	baz=226						
TDCB	**Techi**	**1.08**	**234**	P	**Pn**	**17 46 42.3**	**-1.4**
	baz=231						
CHGB	**Renai**	**1.19**	**226**	*i* P	**Pb**	**17 46 44.3**	**-1.0**
	baz=227						
WHP	**Taichung City**	**1.23**	**240**	P	**Pb**	**17 46 44.9**	**-0.9**
	baz=232						
ESL	**Shilin**	**1.24**	**210**	P	**Pb**	**17 46 45.1**	**-0.8**
	baz=220						
NMLH	**Miaoli**	**1.25**	**254**	*i* P	**Pg**	**17 46 46.5**	**-0.3**
	baz=257						
NMLH				*e*S	**Sn**	**17 47 00.8**	**-2.0**
	baz=257						
OWD	**Renai**	**1.27**	**223**	P	**Pb**	**17 46 45.6**	**-0.9**
	baz=227						
OWD				*e*S	**Sg**	**17 47 03.6**	**+0.2**
	baz=227						
NSY	**Sanyi**	**1.32**	**249**	P	**Pg**	**17 46 47.5**	**-0.5**
	baz=253						
NSY				*e*S	**Sg**	**17 47 05.0**	**-0.2**
	baz=253						
TWQ1	**Liyutan**	**1.34**	**246**	*e*P	**Pg**	**17 46 47.9**	**-0.4**
	baz=262						
TWQ1				*e*S	**Sn**	**17 47 02.7**	**-2.2**
	baz=262						
EGFH	**Guangfu**	**1.37**	**207**	P	**Pb**	**17 46 47.5**	**-0.6**
	baz=218						
EGFH				*e*S	**Sg**	**17 47 06.3**	**-0.4**
	baz=218						
DPDB	**Guoxing**	**1.38**	**232**	P	**Pg**	**17 46 48.4**	**-0.7**
	baz=224						
WDJ	**Dajia District**	**1.45**	**248**	*e*P	**Pg**	**17 46 49.5**	**-0.9**
	baz=267						
SMLT	**Sun Moon Lake**	**1.50**	**228**	P	**Pg**	**17 46 50.1**	**-1.2**
	baz=221						
TCU	**Taichung**	**1.50**	**241**	*e*P	**Pg**	**17 46 50.6**	**-0.9**
	baz=261						
TYC	**Yuchr**	**1.51**	**230**	*e*P	**Pg**	**17 46 50.4**	**-1.2**
	baz=224						
SSLB	**Suanglung**	**1.53**	**224**	P	**Pb**	**17 46 50.1**	**-0.8**
	baz=226						
SSLB	**Suanglung**	**1.53**	**224**	Pn	**Pb**	**17 46 49.1**	**-1.8**
HGSD	**Ruisui**	**1.53**	**205**	P	**Pg**	**17 46 50.7**	**-1.3**
	baz=222						
EHY	**Hungye**	**1.56**	**208**	*e*P	**Pb**	**17 46 50.2**	**-1.2**
	baz=210						
IRIF	**Iriomote-Funau**	**1.57**	**110**	P	**Pn**	**17 46 48.8**	**-1.5**
WCHH	**Zhanghua**	**1.63**	**241**	*e*P	**Pb**	**17 46 51.5**	**-1.2**
	baz=260						
WNT	**Mingjian**	**1.65**	**233**	*e*P	**Pg**	**17 46 53.9**	**-0.4**
	baz=253						
WJS	**Zhushan**	**1.65**	**230**	P	**Pg**	**17 46 54.0**	**-0.3**
	baz=225						
WHYT	**Xinyi Township**	**1.66**	**224**	*e*P	**Pg**	**17 46 53.9**	**-0.5**
	baz=227						
YULB	**Yu-li**	**1.67**	**207**	*e*P	**Pb**	**17 46 52.3**	**-1.0**
	baz=209						
YULB	**Yu-li**	**1.67**	**207**		**Pb**	**17 46 51.5**	**-1.9**
EYUL	**Yuli**	**1.70**	**206**	*e*P	**Pb**	**17 46 52.5**	**-1.4**
	baz=221						
TWF1	**Yuli**	**1.70**	**206**	*e*P	**Pb**	**17 46 53.0**	**-1.0**
	baz=228						
TWF1				*e*S	**Sb**	**17 47 15.4**	**0.0**
	baz=228						
HATJ	**Hateruma jima**	**1.75**	**118**	P	**Pn**	**17 46 52.0**	**-0.8**
HATJ				*e*S	**Sn**	**17 47 13.1**	**-1.9**
ALS	**Alishan**	**1.82**	**221**	*e*P	**Pg**	**17 46 56.2**	**-1.4**
	baz=231						
CHN5	**Tsauling**	**1.84**	**226**	*e*P	**Pg**	**17 46 57.3**	**-0.6**
	baz=228						
JKRS	**Kuro-shima**	**1.84**	**110**	P	**Pn**	**17 46 53.3**	**-0.8**
JKRS				*e*S	**Sn**	**17 47 15.0**	**-2.3**
FULB	**Fuli**	**1.84**	**204**	*e*P	**Pb**	**17 46 55.5**	**-0.8**
	baz=219						
WGK	**Gukeng**	**1.86**	**230**	*e*P	**Pg**	**17 46 56.6**	**-1.6**
	baz=251						
WDLH	**Douliu**	**1.87**	**231**	*e*P	**Pg**	**17 46 57.2**	**-1.4**
	baz=252						
RLNB	**Erlin**	**1.89**	**239**	*e*P	**Pb**	**17 46 55.3**	**-1.6**
	baz=258						
CHKT	**Chengkung**	**1.91**	**201**	*e*P	**Pn**	**17 46 55.1**	**+0.1**
	baz=179						
JIJ	**Ishigaki jima**	**1.92**	**105**	P	**Pn**	**17 46 53.7**	**-1.4**
JIJ				*e*S	**Sn**	**17 47 17.1**	**-2.1**
ELDTW	**Lidau**	**1.97**	**211**	*e*P	**Pb**	**17 46 57.2**	**-1.3**
	baz=199						
WTK	**Tuku**	**1.98**	**233**	*e*P	**Pb**	**17 46 57.3**	**-1.3**
	baz=254						
CHN2	**Minshiung**	**2.02**	**228**	*e*P	**Pb**	**17 46 58.6**	**-0.7**
	baz=249						
JISG	**Ishigakijimahi**	**2.02**	**98**	P	**Pn**	**17 46 54.9**	**-1.6**
JISG				*e*S	**Sn**	**17 47 19.4**	**-2.3**
EDH	**Donghe**	**2.05**	**201**	*e*P	**Pb**	**17 46 57.9**	**-1.9**
	baz=180						
CHY	**Chiayi**	**2.08**	**228**	*e*P	**Pb**	**17 46 59.9**	**-0.4**
	baz=248						
TPUB	**Ta-pu**	**2.08**	**221**	*e*P	**Pb**	**17 47 00.4**	**0.0**
	baz=216						
TPUB				*e*S	**Sg**	**17 47 27.2**	**-2.5**
	baz=216						
TPUB	**Ta-pu**	**2.08**	**221**	Pn	**Pb**	**17 46 59.1**	**-1.4**
STYT	**Tauyuan**	**2.12**	**216**	*e*P	**Pb**	**17 47 01.2**	**+0.2**
	baz=220						
WSF	**Szhu**	**2.13**	**235**	*e*P	**Pb**	**17 46 59.0**	**-2.2**
	baz=253						
WTP	**Ta-pu**	**2.14**	**220**	*e*P	**Pb**	**17 47 01.3**	**0.0**
	baz=224						
LONT	**Longtian**	**2.17**	**205**	*e*P	**Pb**	**17 46 59.2**	**-2.7**
	baz=189						
WLGB	**Puzi**	**2.17**	**230**	*e*P	**Pn**	**17 46 58.7**	**+0.1**
	baz=254						
WLGB				*e*S	**Sb**	**17 47 27.4**	**-1.4**
	baz=254						
PTTC	**Pingtan**	**2.21**	**286**	*e*P	**Pn**	**17 46 57.5**	**-1.7**
	baz=286						
SNST	**Tainan City**	**2.23**	**222**	*e*P	**Pb**	**17 47 02.3**	**-0.5**
	baz=226						
CHN1	**Nanshi**	**2.23**	**221**	*e*P	**Pb**	**17 47 02.7**	**-0.2**
	baz=225						
ICHU	**Yijhu**	**2.27**	**228**	*e*P	**Pb**	**17 47 01.7**	**-1.8**
	baz=253						
ICHU				*e*S	**Sg**	**17 47 32.8**	**-2.6**
	baz=253						
TWG	**Pinlang**	**2.27**	**205**	*e*P	**Pb**	**17 47 01.6**	**-2.0**
	baz=190						
TWG	**Pinlang**	**2.27**	**205**		**Pn**	**17 46 59.1**	**-0.9**
TWGBT	**Beinan**	**2.27**	**205**	*e*P	**Pn**	**17 47 00.4**	**+0.4**
	baz=190						
SGST	**Jiashian**	**2.28**	**218**	P	**Pb**	**17 47 02.3**	**-1.5**
	baz=222						
LDUT	**Ludao**	**2.29**	**195**	*e*P	**Pn**	**17 46 58.9**	**-1.2**
	baz=176						
TTN	**Taitung**	**2.30**	**203**	*e*P	**Pn**	**17 47 00.6**	**+0.1**
	baz=207						
SLGT	**Liugui**	**2.32**	**216**	*e*P	**Pb**	**17 47 04.5**	**+0.1**
	baz=220						
CHN8	**Yiju**	**2.32**	**229**	*e*P	**Pb**	**17 47 02.9**	**-1.6**
	baz=233						
MATB	**Ma-tsu**	**2.33**	**303**	*e*P	**Pn**	**17 46 59.4**	**-1.4**
	baz=302						
JTJ	**Tarama**	**2.36**	**95**	P	**Pn**	**17 47 01.2**	**-0.1**
CHN3	**Shinhua**	**2.41**	**222**	*e*P	**Pb**	**17 47 04.5**	**-1.5**
	baz=226						
VWUC	**VWUC**	**2.42**	**273**	*e*P	**Pn**	**17 47 00.4**	**-1.7**
	baz=273						
SCLT	**Jiali**	**2.45**	**226**	*e*P	**Pb**	**17 47 04.7**	**-1.9**
	baz=230						

SSPT Xinbi 2.78 211 *e*P Pb 17 47 10.5 -1.8
baz=201
JIKM Ikemajima 2.84 89 P Pn 17 47 08.9 +1.0
SCZT Fangliau 2.86 209 *e*P Pb 17 47 11.7 -1.9
baz=198
LAY Lan-yu 2.89 190 *e*P Pn 17 47 08.1 -0.4
baz=172
JMJ Miyako jima 2 2.89 91 *e*P Pb 17 47 10.7 -3.4
baz=91
JMJ2 Miyako jima3 2.92 92 P Pn 17 47 09.9 +0.9
SLIU Shizi 2.92 205 *e*P Pn 17 47 10.3 +1.4
baz=194
VCHM Qimei 2.97 236 *e*P Pn 17 47 09.7 +0.1
baz=252
WLCH Liuqiu 2.99 213 *e*P Pb 17 47 13.9 -1.9
baz=234
JOGS Gusukube 2.99 92 P Pn 17 47 10.5 +0.6
TWP Hsiaoliuchiu 3.00 213 *e*P Pb 17 47 13.9 -2.1
baz=234
MHZQ Yeshan 3.04 294 *e*P Pn 17 47 09.4 -1.2
baz=293
HEN Hengchun 3.14 204 *e*P Pb 17 47 14.1 -4.3
baz=188
TWK1 Hengchun 3.17 203 *e*P Pn 17 47 13.4 +1.1
baz=188
TWKBT Hengchun 3.17 202 *e*P Pn 17 47 13.3 +0.9
baz=188
TSEB Hengchuen, Pin 3.18 201 *e*P Pb 17 47 14.9 -4.2
baz=188
QZH Quanzhou 3.20 272 Pn Pn 17 47 12.1 -0.7
QZH Sn **Sn** 17 47 49.9 -1.0
QZH smax smax
comp=N,3µm,1.2s
QZH smax smax
comp=E,1µm,1.1s
QZH LR LR
comp=N,66µm,12.7s
QZH LR LR
comp=E,13µm,5.7s
QZH LR LR
comp=Z,29µm,7.1s
KNM Kinmen 3.38 263 *e*P Pn 17 47 15.7 +0.4
baz=265
KNMB Chin-men Tao 3.42 264 *e*P Pn 17 47 14.8 -1.0
baz=266
KNMB Chin-men Tao 3.42 264 Pn Pn 17 47 14.1 -1.7
AXDP Jialang 3.77 271 *e*P Pn 17 47 19.2 -1.4
baz=271
ZPLA Ao Xicun 4.09 257 *e*P Pn 17 47 24.5 -0.5
baz=261
ZZJH Jiuhuzhen 4.10 265 *e*P Pn 17 47 24.1 -1.0
baz=268
JKE Kume jima 2 4.45 70 P Pn 17 47 32.8 +2.8
JIH Iheya 5.68 67 P Pn 17 47 50.1 +3.2
JOW Kunigami 5.88 69 P Pn 17 47 53.2 +3.6
SSE Sheshan 6.24 353 Pn Pn 17 47 53.6 -0.9
SSE Sn **Sn** 17 49 09.0 +3.3
SSE smax smax
comp=N,660nm,1.2s
SSE smax smax
comp=E,810nm,1.2s
SSE LR LR
comp=N,4µm,18.7s
SSE LR LR
comp=E,4µm,18.7s
SSE Sheshan 6.24 353 Pn Pn 17 47 53.2 -1.3
SGCP Mt. Cagua 6.62 181 *e*P Pn 17 47 59.2 -0.6
APYP Conner 7.04 187 *e*P Pn 17 48 07.4 +1.8
NJ2 Nanjing 7.69 339 *e*Pn Pn 17 48 12.4 -2.1
NJ2 Sn **Sn** 17 49 37.0 -4.5
NJ2 smax smax
comp=N,1µm,1.4s
NJ2 smax smax
comp=E,2µm,1.8s
NJ2 LR LR
comp=N,24µm,9.2s
NJ2 LR LR
comp=E,16µm,8.1s
NJ2 LR LR
comp=Z,26µm,8.5s
CAUP Cauayan 7.91 182 *e*P Pn 17 48 20.4 +2.8
GZH Guangzhou 8.22 259 Pn Pn 17 48 17.5 -4.3
GZH Sn **Sn** 17 49 47.8 -6.8
GZH smax smax
comp=N,610nm,1.1s
GZH smax smax
comp=E,410nm,1.3s
SMPP San Manuel, Pa 8.80 189 *e*P Pn 17 48 30.9 +1.1
WHN Wuhan 8.89 311 P Pn 17 48 31.4 +0.5
WHN S **Sn** 17 50 13.4 +2.3
WHN LR LR
comp=N,25µm,10.5s
WHN LR LR
comp=E,20µm,8.8s
WHN LR LR
comp=Z,33µm,9.8s
BALP Baler 9.12 183 *e*P Pn 17 48 37.8 +3.7
JSU Suzuyama 9.87 46 Pn Pn 17 48 43.0 -1.5
POLP Polilio Island 10.11 181 *e*P Pn 17 48 50.1 +2.3
LQP Lukban 10.74 183 *e*P Pn 17 48 51.3 -5.2
TGY Tagaytay City 10.79 186 P Pn 17 49 02.0 +5.0
40nm,0.3s,baz=258,slow=7.9,SNR=5.7
TGY LR LR 17 53 07.0
comp=Z,3µm,21.8s,baz=344,slow=37
JNU Nakatsue 11.22 41 P Pn 17 49 08.6 +5.6
0.8nm,0.3s,baz=189,slow=7.5,SNR=9.3
JNU LR LR 17 54 20.3
comp=Z,3µm,18.7s,baz=234,slow=42
JNU Nakatsue 11.22 41 Pn Pn 17 49 03.5 +0.5
LUBP Lubang 11.24 189 *e*P Pn 17 49 07.1 +3.9
SCSP San Jose Seism 11.26 173 *e*P Pn 17 49 05.6 +2.2
BOAC Boac 11.38 181 *e*P Pn 17 49 16.8 +12
PVCP Virac 11.40 170 *e*P Pn 17 49 03.7 -1.7
JTU Tsushima 11.49 32 Pn Pn 17 49 07.6 +1.0
TIA Tai'an 12.07 340 P Pn 17 49 13.8 -0.7
TIA pmax pmax
comp=Z,360nm,9.0s
TIA LR LR
comp=N,8µm,10.4s
TIA LR LR
comp=E,7µm,13.7s
TIA LR LR
comp=Z,14µm,9.2s
TJN Taejon 12.30 20*ce*P Pn 17 49 17.4 -0.3
SJMP San Jose 12.40 185 *e*P Pn 17 49 22.4 +3.3
ENH Enshi 12.41 298 Pn Pn 17 49 19.0 -0.3
OTRP Odiongan 12.46 180 *e*P P 17 49 28.2 -3.7
QIZ Qiongzhong 12.79 245 P Pn 17 49 24.5 +0.1
QIZ S **Sn** 17 51 52.8 +6.0
QIZ LR LR
comp=N,8µm,12.7s
QIZ LR LR
comp=E,6µm,13.2s
QIZ LR LR
comp=Z,6µm,10.3s
BUSP Coron 12.95 188 *e*P Pn 17 49 27.4 +0.8
INCN Inchon 13.13 16 P Pn 17 49 29.1 +0.1
INCN Inchon 13.13 16 Pn Pn 17 49 29.1 +0.1
KSRS Korea Array 13.47 20 P Pn 17 49 33.6 0.0
0.9nm,0.3s,baz=360,slow=14,SNR=5.7
KSRS LR LR 17 55 06.6
comp=Z,2µm,18.8s,baz=203,slow=39
KS19 Wonju Array Si 13.50 20 Pn Pn 17 49 34.1 +0.2
JMN Monobe 13.51 47 Pn 17 49 35.5 +1.3
ENPP El Nido 13.85 191 *e*P Pn 17 49 36.5 -2.4
JHS Saijyo 13.86 41 Pn Pn 17 49 38.7 -0.3
OCLP Ormoc 13.97 170 *e*P Pn 17 49 43.4 +2.9
DL2 Dalian 13.98 358 P Pn 17 49 42.3 +1.8
DL2 S **Sn** 17 52 22.0 +6.3
DL2 pmax pmax
comp=Z,54nm,1.0s
DL2 pmax pmax
comp=Z,690nm,4.1s
DL2 LR LR
comp=N,2µm,18.7s
DL2 LR LR
comp=E,12µm,16.4s
DL2 LR LR
comp=Z,4µm,11.1s
GYA Guiyang 14.02 280 ⇓P Pn 17 49 42.3 +1.0
GYA S **Sn** 17 52 21.9 +4.8
GYA SS S 17 52 29.3 -9.3
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,360nm,6.6s
GYA LR LR
comp=N,5µm,8.9s
GYA LR LR
comp=E,10µm,7.8s
GYA LR LR
comp=Z,10µm,8.0s
GUIM Jordan 14.19 178 *e*P Pn 17 49 46.1 +2.5
PYAG Pyongyang 14.45 11 P P 17 49 50.8 -3.0
XAN Xi'an 14.66 311 P Pn 17 49 49.5 -0.4
XAN pP P 17 49 57.1 +0.9
XAN pmax pmax
comp=Z,38nm,1.1s
XAN pmax pmax
comp=Z,530nm,5.9s
XAN LR LR
comp=N,10µm,9.2s
XAN LR LR
comp=E,7µm,9.6s
XAN LR LR
comp=Z,13µm,10.2s
XAN Xi'an 14.66 311 P Pn 17 49 49.9 0.0
XAN Xi'an 14.66 311 Pn Pn 17 49 49.9 0.0
MSLP Maasin 14.91 169 *e*P P 17 49 55.2 -3.8
CNOP Candoni, Negro 14.99 178 *e*P Pn 17 49 55.3 +0.8
TIY Taiyuan 15.21 329 *e*P P 17 50 03.8 +1.4
TIY PP **sP** 17 50 14.1 +7.2
TIY S **S** 17 53 00.0 -2.8
TIY SS Sn 17 53 08.8 +23
TIY pmax pmax
comp=Z,47nm,0.8s
TIY pmax pmax
comp=Z,1µm,5.1s
TIY LR LR
comp=N,6µm,13.6s
TIY LR LR
comp=E,6µm,10.9s
TIY LR LR
comp=Z,5µm,17.0s
SUJ Sinuiju 15.30 7 P P 17 50 00.4 -2.8
GLSP General Luna, 15.50 165 *e*P P 17 50 05.3 -0.3
HHU Hamhung 15.67 16 P P 17 50 05.8 -1.5
HHU S **S** 17 53 06.9 -5.0
BJT Baijiatuau 15.89 343 P Pn 17 50 06.0 -0.1
BJT pmax pmax
comp=Z,17nm,0.8s
BJT Baijiatuau 15.89 343 Pn 17 50 06.0 -0.1
BJI Beijing 15.91 343 P P 17 50 07.5 -2.5
BJI S **Sn** 17 53 05.8 +3.1
BJI pmax pmax
comp=Z,17nm,1.3s
BJI pmax pmax
comp=Z,750nm,3.6s
BJI LR LR
comp=Z,5µm,10.9s
BJI LR LR
comp=Z,7µm,14.6s
BJI LR LR
comp=Z,2µm,24.9s
BATP Bataraza 16.52 195 *e*P P 17 50 15.6 -1.4
INU Inuyama 16.56 48 Pn 17 50 14.8 0.0
JGF Kuroka 16.93 47 P P 17 50 20.3 -1.1
SNY Shenyang 16.94 4 ⇓P P 17 50 28.3 +6.9
SNY S **S** 17 53 36.8 -1.0
SNY pmax pmax
comp=Z,22nm,0.6s
SNY pmax pmax
comp=Z,170nm,6.4s
SNY LR LR
comp=N,4µm,17.5s
SNY LR LR
comp=E,13µm,18.0s
SNY LR LR
comp=Z,6µm,15.7s
PAGZ Pagadian 16.99 176 *e*P P 17 50 22.3 +0.2
SLVN Son La 17.12 262 P P 17 50 22.0 -1.7
BUKP Musuan 17.15 170 *e*P P 17 50 24.4 +0.4
CD2 Chengdu 17.29 294 P Pn 17 50 23.0 -1.0
CD2 S **Sn** 17 53 36.4 -0.1
CD2 pmax pmax
comp=Z,210nm,0.9s
CD2 pmax pmax
comp=Z,610nm,4.3s
CD2 LR LR
comp=Z,19µm,13.1s
CD2 LR LR
comp=Z,10µm,13.1s
CD2 LR LR
comp=Z,6µm,9.6s
JHJ Hachijo jima 2 17.48 58 P P 17 50 32.5 +5.1
comp=Z,13nm,0.3s,baz=198,slow=3.2,SNR=3.5
KMI Kunming 17.57 275⇑*e*P P 17 50 29.0 +0.3
KMI pP pP 17 50 30.3 -1.6
KMI sP sP 17 50 31.6 -1.9
KMI S **Sn** 17 53 42.0 -1.4
KMI pmax pmax
comp=Z,29nm,1.9s
KMI pmax pmax
comp=Z,340nm,3.9s
KMI LR LR
comp=Z,5µm,7.7s
KMI LR LR
comp=Z,6µm,12.7s
KMI LR LR
comp=Z,8µm,15.3s
KMI Kunming 17.57 275 P P 17 50 31.1 +2.4
KMI pmax pmax
comp=Z,85nm,1.5s
KMI Kunming 17.57 275 P P 17 50 31.1 +2.4
KCP Kidapawan 18.01 170⇑*i*P P 17 50 34.1 +0.7
DAV Davao City (W) 18.03 169 P P 17 50 35.5 +1.9
comp=Z,118nm,0.3s,baz=54,slow=7.4,SNR=4.9
DAV LR LR 17 57 50.0
comp=Z,3µm,18.6s,baz=352,slow=38
MAJO Matsushiro 18.04 46⇑*i*P P 17 50 34.0 +0.4
MAJO pmax pmax
comp=Z,16nm,0.9s
MAJO Matsushiro 18.04 46 P P 17 50 34.0 +0.4
MAT Matsushiro 18.04 46 P P 17 50 33.6 0.0
MAT *e*S S 17 53 56.0 -4.3
MJAR Matsushiro Arr 18.04 46 P P 17 50 34.9 +1.2
comp=Z,0.1nm,0.3s,baz=242,slow=10,SNR=35
MJAR LR LR 17 58 13.9
comp=Z,2µm,21.4s,baz=260,slow=39
MJAR Matsushiro Arr 18.04 46 P Pn 17 50 31.7 -1.5
MJAR pmax pmax
comp=Z,18nm,1.0s
MJAR Matsushiro Arr 18.04 46 P Pn 17 50 31.7 -1.5
HHC Hu-ho-hao-te 18.19 334 *e*P P 17 50 37.3 +1.9
HHC PP **PnPn** 17 50 48.6 +2.1
HHC S **S** 17 54 04.0 +0.4
HHC pmax pmax
comp=Z,67nm,0.8s
HHC pmax pmax
comp=Z,3µm,4.1s
HHC LR LR
comp=Z,7µm,10.1s
HHC LR LR
comp=Z,5µm,10.4s
HHC LR LR
comp=Z,8µm,10.9s
DLV T Lat 18.23 227 P P 17 50 40.2 +4.2
MATI Mati 18.28 167 *e*P P 17 50 43.4 +7.0
SKMP Bagumbayan, Su 18.41 172 *e*P Pn 17 50 39.4 +1.5
BTO Baotou 18.65 330 *e*P Pn 17 50 44.0 +3.2
NONG Nongkai 18.91 253 P Pn 17 50 55.6 +12
JSD Sado 18.97 42 Pn 17 50 47.0 +2.4
DDMP Don Marcelino, 19.00 169 *e*P Pn 17 50 44.0 -1.0
CN2 Changchun 19.06 7 *e*P Pn 17 50 45.8 +0.2
CN2 *e*S **S** 17 54 18.1 -2.8
CN2 pmax pmax
comp=Z,800nm,5.0s
CN2 LR LR
comp=Z,2µm,18.0s
CN2 LR LR
comp=Z,9µm,18.0s
CN2 LR LR
comp=Z,4µm,12.0s
LZH Lanzhou 19.27 310 ⇑P Pn 17 50 48.8 +0.5
LZH pP pP 17 50 50.8 +0.2
LZH sP sP 17 50 52.3 +0.4
LZH *e*S **S** 17 54 27.3 +1.8
LZH sS sS 17 54 31.1 +0.4
LZH SS **SnSn** 17 54 44.3 +5.8
LZH pmax pmax
comp=Z,120nm,1.3s
LZH pmax pmax
comp=Z,3µm,4.6s
LZH LR LR
comp=Z,7µm,11.4s
LZH LR LR
comp=Z,6µm,12.1s
LZH LR LR
comp=Z,7µm,14.6s
KKM Kota Kinabalu 19.57 198 P P 17 50 50.0 -0.7
KKM IAmb IAmb 17 50 58.6
comp=Z,149nm,1.2s
VLA Vladivostok 19.88 21⇓*i*P Pn 17 50 56.7 +1.4
VLA pmax pmax
comp=Z,404nm,1.2s
MYLDM Lahad Datu 19.90 191 P Pn 17 50 54.0 -1.8
KHON Khomkaen 19.94 248 P Pn 17 51 01.4 +5.0
comp=Z,123nm,1.1s
JMM Marumori 20.48 46 P P 17 50 58.9 -1.5
MDJ Mudanjiang 20.60 15 P Pn 17 51 03.0 -0.8
MDJ IAmb IAmb 17 51 05.9
comp=Z,126nm,1.0s
CHAI Chaiyaphum 20.86 248 P Pn 17 51 08.0 +0.9
comp=Z,686nmcomp=Z,85nm,0.9s
USA0B Ussuriysk Arra 20.88 20⇑*i*P Pn 17 51 06.5 -0.6
USA0B Ussuriysk Arra 20.88 20 P Pn 17 51 07.0 -0.1
USA0B IAmb IAmb 17 51 10.3
comp=Z,81nm,1.0s
USRK Ussuriysk Ar. 20.88 20 P Pn 17 51 07.1 0.0
comp=Z,65nm,0.9s,baz=210,slow=9.8,SNR=59
USRK LR LR 17 59 20.4
comp=Z,2µm,18.1s,baz=203,slow=37
USRK Ussuriysk Ar. 20.88 20 P Pn 17 51 05.4 -1.7
USRK Ussuriysk Ar. 20.88 20 P Pn 17 51 05.4 -1.7
UTTA Uttaradit 21.29 255 P P 17 51 12.7 +3.4
comp=Z,250nmcomp=Z,21nm,1.1s
PAYA Payao 21.32 259 P P 17 51 13.9 +4.3
comp=Z,3µmcomp=Z,343nm,1.1s
PHIT Phitsanulok 21.64 253 P P 17 51 16.0 +3.0
comp=Z,2µmcomp=Z,190nm,1.1s
SRAK Srakaew 21.77 244 P P 17 51 14.1 -0.3
comp=Z,8µmcomp=Z,721nm,1.1s
LAMP Lampang 21.82 258 P P 17 51 18.0 +3.1
comp=Z,478nmcomp=Z,45nm,0.8s
CM34 Chiang Mai Arr 22.13 259 P P 17 51 21.0 +2.7
CM35 Chiang Mai Arr 22.18 258 P P 17 51 21.2 +2.3
SUKH Sukhothai 22.20 255 P P 17 51 22.0 +2.9
CM36 Chiang Mai Arr 22.29 258 P P 17 51 24.0 +3.9
CM33 Chiang Mai Arr 22.32 259 P P 17 51 22.0 +1.6
CMMT Chiang Mai 22.32 259 P P 17 51 23.1 +2.7
comp=Z,340nmcomp=Z,14nm,1.0s
CHTO Chiang Mai 22.33 259 P P 17 51 23.5 +3.1
CHTO P P 17 51 23.5 +3.1
CHTO Chiang Mai 22.33 259 P P 17 51 20.8 +0.4
CHTO pmax pmax
comp=Z,63nm,1.4s
CHTO Chiang Mai 22.33 259 P 17 51 20.8 +0.4
JTM Tenmabayashi 22.39 40 P P 17 51 18.1 -2.9
JTM IAmb IAmb 17 51 24.3
comp=Z,158nm,1.2s
CM09 Chiang Mai Arr 22.41 258 P P 17 51 26.0 +4.7
comp=Z,244nmcomp=Z,25nm,1.4s
CM04 Chiang Mai Arr 22.44 258 P P 17 51 25.8 +4.1
comp=Z,167nmcomp=Z,18nm,1.4s
CM01 Chiang Mai Arr 22.45 258 P P 17 51 26.7 +5.0
comp=Z,196nmcomp=Z,23nm,1.2s
CM31 Chiang Mai Arr 22.45 258 P P 17 51 26.0 +4.3
comp=Z,6µmcomp=Z,398nm,1.0s
CM31 Chiang Mai Arr 22.45 258 P P 17 51 23.6 +1.9
CMAR Chiang Mai Arr 22.45 258 P P 17 51 23.1 +1.3
comp=Z,7.2nm,0.9s,baz=64,slow=8.6,SNR=16
CMAR PcP **PcP** 17 55 16.8 +0.5
comp=Z,2.4nm,0.7s,baz=26,slow=0.9,SNR=10
CMAR LR LR 18 01 13.2
comp=Z,3µm,18.4s,baz=106,slow=39
CMAR Chiang Mai Arr 22.45 258 P P 17 51 23.6 +1.9
CMAR Chiang Mai Arr 22.45 258 P P 17 51 23.6 +1.9
CM02 Chiang Mai Arr 22.45 258 P P 17 51 27.0 +5.2
comp=Z,170nmcomp=Z,15nm,0.9s
CM05 Chiang Mai Arr 22.47 258 P P 17 51 27.3 +5.4
comp=Z,126nmcomp=Z,12nm,1.1s
CM15 Chiang Mai Arr 22.47 258 P P 17 51 26.0 +4.1
comp=Z,164nmcomp=Z,14nm,1.0s
CM32 Chiang Mai Arr 22.47 259 P P 17 51 26.0 +4.1
CM13 Chiang Mai Arr 22.49 258 P P 17 51 27.0 +4.8
comp=Z,164nmcomp=Z,15nm,1.2s
UTHA Uthaitani 23.18 251 P P 17 51 33.2 +3.8
comp=Z,416nmcomp=Z,22nm,0.8s
TEY Ternei 23.27 27⇑*e*P P 17 51 29.6 -0.5
TEY *e* 17 51 31.6
TEY pmax pmax
comp=E,20nm,0.8s
TEY pmax pmax
comp=N,60nm,0.6s
TEY pmax pmax
comp=Z,80nm,0.6s
TOLI2 Tolitoli 23.68 183 P P 17 51 31.7 -2.5
LKP Lekhapani 23.70 282 *e*P P 17 51 35.1 +0.6
LKP IAmb IAmb 17 51 39.0
comp=Z,41nm,0.8s
GTA Gaotai 23.71 313 ⇑P P 17 51 34.5 -0.1
GTA pP pP 17 51 38.5 +0.5
GTA sP sP 17 51 41.0 +1.7
GTA S **S** 17 55 51.3 +1.7
GTA sS sS 17 55 59.3 +4.0
GTA pmax pmax
comp=Z,23nm,1.2s
GTA pmax pmax
comp=Z,900nm,7.1s
GTA LR LR
comp=Z,3µm,15.3s
GTA LR LR
comp=Z,3µm,13.1s
GTA LR LR
comp=Z,3µm,12.4s
JEW Eniwo 23.95 37 P P 17 51 35.9 -0.8
SRDT SRDT 24.03 248 P P 17 51 47.0 +9.3
comp=Z,22µmcomp=Z,33nm,1.5s
GTOI Gorontalo 24.13 178 P P 17 51 39.5 +0.9
comp=Z,502nmcomp=Z,26nm,1.1s
GUMO Guam 24.20 113 P P 17 51 39.2 -0.1
comp=Z,82nm,1.0s,baz=12,slow=19,SNR=2.6
GUMO LR LR 17 59 32.8
comp=Z,976nm,21.7s,baz=302,slow=32
SBUM Sibu 24.27 205 P P 17 51 39.9 +0.1
SBUM IAmb IAmb 17 51 44.2
comp=Z,41nm,0.9s
SBUM Sibu 24.27 205 P P 17 51 40.0 +0.1
MRSI Marisa 24.27 180 P P 17 51 45.5 +5.6
PHET Kaeng Krachan 24.34 245 P P 17 51 48.8 +8.2
comp=Z,39nm,1.1s
ERM Erimo 24.39 40*ce*P P 17 51 41.0 +0.2
ERM pmax pmax
comp=Z,46nm,0.7s
ERM Erimo 24.39 40 P P 17 51 39.8 -0.9
ERM IAmb IAmb 17 51 42.1
comp=Z,54nm,0.8s
HIA Hailar 24.40 356 P P 17 51 39.8 -1.1
HIA pmax pmax
comp=Z,31nm,0.9s
HIA Hailar 24.40 356 P P 17 51 39.8 -1.1
MPSI Mapaga 24.50 185 P P 17 51 47.1 +5.1
TNTI Ternate 24.51 167 P P 17 51 44.1 +2.0
comp=Z,1µmcomp=Z,89nm,1.2s
TNTI Ternate 24.51 167 P P 17 51 40.5 -1.6
TNTI IAmb IAmb 17 51 57.8
comp=Z,96nm,1.1s
DIBR DIBRUGARH 24.53 282 *e*P P 17 51 43.3 +1.1
DIBR AMP 17 51 44.3
comp=Z,4µm,0.1s
JORH JORHAT 25.13 280 *e*P P 17 51 49.2 +1.6
JORH IAmb IAmb 17 52 03.6
comp=Z,13nm,0.8s
KOHI KOHIMA 25.32 278 *e*P P 17 51 48.6 -0.9
KOHI IAmb IAmb 17 52 03.1
comp=Z,31nm,1.2s
ASAJ Asahikawa 25.43 36 P P 17 51 51.0 +0.9
comp=Z,47nm,0.7s,baz=237,slow=9.6,SNR=24
ASAJ LR LR 18 01 24.2
comp=Z,1µm,21.1s,baz=240,slow=35
ASAJ Asahikawa 25.43 36 P P 17 51 50.7 +0.5
ASAJ pmax pmax
comp=Z,54nm,0.8s
JKA Kamikawa-asahi 25.43 36 P P 17 51 50.7 +0.6
JKA IAmb IAmb 17 51 52.9
comp=Z,54nm,0.8s

KLR Kul'dur 25.44 15 P **P 17 51 51.8 +1.6**
comp=Z,35nm,0.9s,baz=222,slow=8.4,SNR=65
KLR PcP **PcP 17 55 21.5 -0.6**
comp=Z,1.6nm,0.5s,baz=204,slow=4.2,SNR=4.5
KLR LR LR 18 01 47.8
comp=Z,2µm,20.0s,baz=199,slow=36
KLR Kul'dur 25.44 15*ce*P **P 17 51 50.8 +0.6**
KLR pmax pmax
comp=Z,47nm,1.3s
ZIRO ZIRO 25.47 282 *e*P **P 17 51 52.7 +1.7**
ZIRO IAmb IAmb 17 52 11.7
comp=Z,40nm,1.1s
APSI Ampana 25.65 181 P **P 17 51 57.4 +5.0**
LUWI Luwuk 25.79 178 P P 17 52 03.8 +10
LUWI Luwuk 25.79 178 P **P 17 51 53.1 -0.6**
ULN Ulaanbaatar 25.85 336 P **P 17 51 55.8 +1.7**
ULN P **P 17 51 55.8 +1.7**
ULN Ulaanbaatar 25.85 336*ce*P **P 17 51 54.5 +0.4**
ULN pmax pmax
comp=Z,49nm,1.3s
ULN Ulaanbaatar 25.85 336 P **P 17 51 54.9 +0.7**
ULN IAmb IAmb 17 52 00.2
comp=Z,72nm,1.4s
KSM Kuching 25.92 208 P **P 17 51 52.6 -2.3**
KSM Kuching 25.92 208 P **P 17 51 55.0 +0.1**
SONM Songino Array 26.06 335 P **P 17 51 56.6 +0.6**
comp=Z,51nm,0.9s,baz=151,slow=9.6,SNR=23
SONM LR LR 18 03 09.4
comp=Z,4µm,20.2s,baz=146,slow=38
SONM Songino Array 26.06 335 P **P 17 51 55.9 -0.2**
SONM pmax pmax
comp=Z,49nm,0.9s
SONM Songino Array 26.06 335 P **P 17 51 55.9 -0.2**
TEZP TEZPUR 26.44 280 *e*P **P 17 52 00.3 +0.8**
TEZP *e*S **S 17 56 37.3 +4.2**
SILR SILCHAR 26.58 276 *e*P **P 17 52 03.0 +2.2**
MTKI Muara Teweh, K 26.61 196 P **P 17 52 01.0 -0.2**
comp=Z,4µmcomp=Z,16nm,0.6s
STKI Sintang 26.74 204 P P 17 52 10.8 +8.5
SIJI Sorong 27.10 160 P **P 17 52 05.3 -0.2**
comp=Z,15nm,0.8s,baz=2.4,slow=6.2,SNR=13
SIJI LR LR 18 01 47.9
comp=Z,733nm,19.3s,baz=344,slow=34
YUK Yuzh-Kuril'sk 27.19 39 *e*P **P 17 52 04.8 -1.3**
YUK *e*PPP PPP 17 52 58.7
YUK S **S 17 56 44.7 +0.1**
YUK *e*SSS SSS 17 58 13.0
SURT Suratani 27.29 239 P P 17 52 15.0 +7.7
SHL Shillong 27.33 278 *e*P **P 17 52 08.1 +0.3**
SHL IAmb IAmb 17 52 17.2
comp=Z,48nm,1.1s
SHL *e*S **S 17 56 51.8 +4.2**
SHL Shillong 27.33 278 P **P 17 52 09.1 +1.3**
SNR=32
SHL Shillong 27.33 278 P **P 17 52 07.8 0.0**
SHL pmax pmax
comp=Z,101nm,1.1s
SHL Shillong 27.33 278 P **P 17 52 07.8 0.0**
GUWA GUWAHATI 27.45 279 *e*S S 17 57 01.6 +12
YSS Yuzh-Sakhalins 27.48 32*ce*P **P 17 52 09.7 +1.0**
YSS *e**SP **pP 17 52 13.2 +1.1**
YSS *e*S **S 17 56 46.7 -2.5**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS pmax pmax
comp=Z,500nm,4.4s
YSS Yuzh-Sakhalins 27.48 32 P **P 17 52 09.8 +1.0**
CIT Chita 27.87 349 *e*P **P 17 52 09.4 -2.8**
CIT *e* 17 53 01.6
CIT pmax pmax
comp=Z,140nm,2.4s
LSA Lhasa 27.89 287 P **P 17 52 14.6 +1.5**
LSA S **S 17 56 59.8 +3.0**
LSA pmax pmax
comp=Z,25nm,1.1s
LSA pmax pmax
comp=Z,710nm,6.1s
LSA LR LR
comp=Z,5µm,12.1s
LSA LR LR
comp=Z,7µm,11.7s
LSA LR LR
comp=Z,11µm,17.1s
LSA Lhasa 27.89 287 P **P 17 52 15.3 +2.3**
LSA Lhasa 27.89 287 P **P 17 52 15.0 +1.9**
LSA P **P 17 52 15.0 +1.9**
LSA P **P 17 52 15.0 +1.9**
LSA Lhasa 27.89 287 P **P 17 52 13.0 -0.1**
LSA pmax pmax
comp=Z,37nm,1.4s
LSA Lhasa 27.89 287 P **P 17 52 13.0 -0.1**
BELO BELONIA 28.02 273 *e*P **P 17 52 15.0 +1.3**
BELO *e*S **S 17 56 59.8 +1.6**
GRNR Gornyy 28.10 19↓ *i*P **P 17 52 14.9 +0.7**
GRNR *e*S **S 17 57 03.3 +4.5**
GRNR pmax pmax
comp=Z,4.0nm,1.2s
GRNR smax smax
comp=E,2.0nm,0.9s
GRNR MLR MLR
comp=N,870nm,13.0s
GRNR MLR MLR
comp=Z,1µm,14.0s
AGT Agartala 28.10 274 *e*P **P 17 52 16.5 +2.0**
KULM Kulim 28.36 230 P **P 17 52 18.0 +1.2**
NLAI Namlea 28.38 169 P **P 17 52 18.2 +1.3**
comp=Z,46nm,1.0s
IPM Ipoh 28.68 228 P **P 17 52 20.2 +0.4**
IPM Ipoh 28.68 228 P **P 17 52 21.0 +1.2**
MYKOM Kota Tinggi 28.95 220 P P 17 52 27.0 +4.9
BBKI Banjar Baru 29.06 195 P **P 17 52 22.9 -0.1**
comp=Z,660nmcomp=Z,22nm,1.2s
ZEA Zeya 29.07 6 *e*P **P 17 52 24.2 +1.5**
ZEA *e*S **S 17 57 17.8 +3.8**
ZEA pmax pmax
comp=E,10.0nm,1.2s
ZEA pmax pmax
comp=N,20nm,1.0s
ZEA pmax pmax
comp=Z,50nm,1.1s
ZEA pmax pmax
comp=E,100nm,3.4s
ZEA pmax pmax
comp=N,200nm,3.6s
ZEA pmax pmax
comp=Z,200nm,4.8s
ZEA smax smax
comp=E,100nm,6.7s
ZEA smax smax
comp=N,200nm,7.3s
ZEA MLR MLR
comp=N,2µm,13.0s
ZEA MLR MLR
comp=Z,2µm,11.0s
ZAK Zakamensk 29.33 335 *e*P **P 17 52 24.4 -0.8**
ZAK pmax pmax
comp=Z,14nm,1.5s
FAKI Fak Fak 29.34 159 P **P 17 52 26.3 +0.8**
comp=Z,29nm,1.0s
FAKI Fak Fak 29.34 159 P **P 17 52 25.3 -0.3**
FAKI IAmb IAmb 17 52 26.6
comp=Z,46nm,1.3s
KAPI Kappang 29.81 185 LR LR 18 04 31.4
comp=Z,624nm,21.1s,baz=356,slow=36
KAPI Kappang 29.81 185 P P 17 52 36.5 +6.8
KAPI P P 17 52 36.5 +6.8
KAPI P P 17 52 36.5 +6.8
GTK Tadong 30.14 282 *e*P **P 17 52 34.9 +2.1**
GTK IAmb IAmb 17 52 43.3
comp=Z,31nm,1.1s
BNDI Bandanaira 30.20 164 P **P 17 52 33.3 +0.2**
comp=Z,67nm,1.3s
TYV Tymovskoe 30.38 26 *e*P P 17 52 38.4 +4.0
TYV pmax pmax
comp=Z,500nm,4.4s
TYV pmax pmax
comp=Z,90nm,1.1s
IRK Irkutsk 30.50 338 *e*P **P 17 52 35.6 +0.1**
IRK pmax pmax
comp=Z,95nm,2.4s
TAPN Taplejung 30.93 282 *e*P **P 17 52 41.2 +1.3**
comp=Z,74nm,1.1s
TSI Tuntungan 31.09 231 P **P 17 52 41.6 +0.6**
comp=Z,51nm,1.2s
MOY Mondy 31.23 334 *e*P **P 17 52 42.7 +0.6**
MOY pmax pmax
comp=Z,119nm,2.5s
ODAN Odare 31.25 281 *e*P **P 17 52 44.1 +1.4**
comp=Z,48nm,1.0s
PSI Prapat 31.34 229 P **P 17 52 43.8 +0.5**
PSI pmax pmax
comp=Z,30nm,1.2s
RPSI Rantau Prapat 31.41 229 P **P 17 52 43.8 -0.1**
RPSI IAmb IAmb 17 52 51.0
comp=Z,30nm,1.2s
NKL Nikolayevsk 31.50 22 *e*P **P 17 52 45.7 +1.5**
NKL pmax pmax
comp=E,78nm,1.1s
NKL pmax pmax
comp=N,15nm,0.9s
NKL MLR MLR
comp=N,131nm,10.0s
NKL MLR MLR
comp=Z,3µm,15.0s
BKNI Bangkinang 31.81 223 P **P 17 52 47.1 -0.3**
BKNI IAmb IAmb 17 52 57.2
comp=Z,28nm,0.8s
RAMN Ramite 31.95 281 *e*P **P 17 52 49.4 +0.6**
MNSI Mandailing Nat 32.38 226 P **P 17 52 53.1 +0.7**
comp=Z,33nm,1.4s
GUN Gumba 32.52 283 *e*P **P 17 52 54.6 +0.6**
comp=Z,43nm,1.0s
JAY Jayapura 32.67 144 LR LR 18 03 27.2
comp=Z,2µm,21.8s,baz=334,slow=31
PKI Pulchoki 32.96 283 *e*P **P 17 52 58.5 +0.7**
BOK Bokaro 32.97 276 *e*P **P 17 52 59.0 +1.5**
PKIN Phulchoki 32.97 283 *e*P **P 17 52 58.5 +0.7**
comp=Z,93nm,1.8s
KKN Kakani 33.06 283 *e*P **P 17 52 59.5 +1.0**
MMRI Maumere 33.32 180 P **P 17 53 01.7 +1.1**
comp=Z,48nm,1.2s
MMRI Maumere 33.32 180 P **P 17 53 00.2 -0.4**
BOD Bodaibo 33.41 352 *e*P **P 17 52 59.7 -1.2**
BOD pmax pmax
comp=Z,22nm,2.0s
EDFI Ende, Flores 33.44 181 P **P 17 53 02.3 +0.6**
comp=Z,16nm,1.0s
KRJI Kerinci 33.48 220 P **P 17 53 03.1 +1.0**
comp=Z,119nm,1.3s
GKN Gorkha 33.62 284 *e*P **P 17 53 03.2 -0.1**
comp=Z,37nm,1.1s
WMQ Urumqi 33.79 313 *e*P P 17 53 09.6 +5.0
WMQ sP sP 17 53 14.8 +5.4
WMQ S **S 17 58 24.5 -3.7**
WMQ sS sS 17 58 36.8 +2.8
WMQ pmax pmax
comp=Z,21nm,0.7s
WMQ pmax pmax
comp=Z,400nm,3.8s
WMQ LR LR
comp=Z,3µm,10.7s
WMQ LR LR
comp=Z,2µm,11.1s
WMQ LR LR
comp=Z,2µm,18.1s
WMQ Urumqi 33.79 313 P **P 17 53 03.2 -1.3**
WMQ pmax pmax
comp=Z,42nm,1.3s
WMQ Urumqi 33.79 313 P **P 17 53 03.2 -1.3**
WMQ IAmb IAmb 17 53 19.3
comp=Z,42nm,1.3s
SAUI Saumlaki 33.88 164 P **P 17 53 04.4 -1.0**
KLSI 33.92 212 P **P 17 53 05.9 +0.1**
comp=Z,194nmcomp=Z,11nm,1.2s
KSI Kapahiang 34.13 216 P **P 17 53 07.5 -0.2**
comp=Z,39nm,1.3s
PWJI Pagerwoja 34.22 198 P **P 17 53 11.3 +2.9**
comp=Z,39nm,1.1s
WOJI Wonogiri, Jawa 34.31 200 P P 17 53 15.5 +6.4
SISI Saibi 34.31 224 P **P 17 53 09.7 +0.5**
comp=Z,21nm,1.5s
DANN Dangsing 34.37 284 *e*P **P 17 53 11.1 +1.1**
comp=Z,40nm,1.0s
KPJI Karang Pucung 34.51 204 P **P 17 53 11.9 +1.0**
comp=Z,24nm,1.0s
LWLI Liwa 34.53 213 P **P 17 53 11.9 +0.7**
comp=Z,2µmcomp=Z,50nm,0.9s
LEM Lembang 34.54 206 P **P 17 53 12.2 +0.9**
comp=Z,6.7nm,0.4s,baz=17,slow=19,SNR=1.9
KOLN Koldanda 34.55 283 *e*P **P 17 53 11.6 +0.1**
comp=Z,37nm,1.0s
DBJI Dramaga 34.65 208 P **P 17 53 14.9 +2.7**
comp=Z,38nm,1.1s
KASI Kota Agung 34.76 212 P **P 17 53 13.0 0.0**
comp=Z,33nm,0.9s
PYUN Piuthan 35.06 284 *e*P **P 17 53 16.5 +0.6**
comp=Z,31nm,0.9s
MANU Manus Island 36.29 134 P **P 17 53 25.5 -0.8**
SKR Severo-Kuril's 36.69 37 *e*P P 17 53 17.8 -11
SKR *e*S **S 17 59 05.5 -6.8**
SKR pmax pmax
comp=Z,200nm,2.6s
SKR pmax pmax
comp=Z,23nm,1.1s
SKR MLR MLR
comp=Z,500nm,17.0s
ZSN Zaisan 37.06 317 *e*P **P 17 53 33.0 +0.4**
baz=317
ZSN Zaisan 37.06 317 *e*P **P 17 53 32.9 +0.4**
YAK Yakutsk 37.48 6*ce*P **P 17 53 34.9 -0.9**
YAK pmax pmax
comp=Z,78nm,1.3s
YAK Yakutsk 37.48 6 P **P 17 53 35.5 -0.3**
YAK IAmb IAmb 17 53 37.8
comp=Z,50nm,0.9s
MK31 Makanchi Array 38.43 315*ce*P **P 17 53 43.5 -0.7**
MK31 Makanchi Array 38.43 315 P **P 17 53 44.0 -0.2**
MKAR Makanchi Array 38.43 315 P **P 17 53 44.2 0.0**
comp=Z,13nm,0.8s,baz=104,slow=9.8,SNR=93
MKAR PcP **PcP 17 55 57.9 +0.5**
comp=Z,1.0nm,0.7s,baz=96,slow=5.8,SNR=1.7
MKAR LR LR 18 10 50.4
comp=Z,2µm,20.9s,baz=98,slow=38
MKAR Makanchi Array 38.43 315 P **P 17 53 43.6 -0.6**
MKAR Makanchi Array 38.43 315 P **P 17 53 43.6 -0.6**
MTN Manton Dam 38.52 166 P **P 17 53 43.2 -2.0**
MTN IAmb IAmb 17 53 45.5
comp=Z,26nm,0.8s
MAKZ Makanchi 38.64 315 P **P 17 53 45.5 -0.4**
MAKZ pmax pmax
comp=Z,39nm,1.1s
MAKZ Makanchi 38.64 315 P **P 17 53 45.5 -0.4**
MAKZ IAmb IAmb 17 53 51.4
comp=Z,39nm,1.1s
PETK Petropavlovsk- 38.81 34 P **P 17 53 47.1 -0.1**
comp=Z,2.1nm,0.8s,baz=192,slow=2.9,SNR=7.4
PETK LR LR 18 10 02.2
comp=Z,393nm,20.0s,baz=230,slow=36
PATS Pohnpei 38.99 111 P **P 17 53 49.4 +0.2**
SHLS Shalkode 39.28 308 *e*P **P 17 53 49.0 -2.5**
comp=Z,7.9nm,0.9s,baz=309
SHLS Shalkode 39.28 308 *e*P **P 17 53 48.9 -2.5**
SHLS pmax pmax
comp=Z,8.0nm,0.9s
KPKS Kokpek 39.91 309 *e*P **P 17 53 56.5 -0.2**
comp=Z,18nm,2.4s,baz=309
KPKS Kokpek 39.91 309 *e*P **P 17 53 56.4 -0.2**
KPKS pmax pmax
comp=Z,19nm,2.4s
SMLA Simla 39.96 289 *e*P **P 17 53 57.6 +0.5**
SMLA IAmb IAmb 17 54 02.2
comp=Z,54nm,1.4s
SATY Saty 40.01 308 *e*P **P 17 53 57.7 +0.1**
comp=Z,7.6nm,1.3s,baz=308
SATY Saty 40.01 308 *e*P **P 17 53 57.6 +0.1**
SATY pmax pmax
comp=Z,8.0nm,1.3s
ZAA0 Zalesovo Array 40.12 326 P **P 17 53 56.7 -1.4**
ZAA0 IAmb IAmb 17 54 02.7
comp=Z,38nm,1.0s
ZALV Zalesovo Beam 40.12 326 P **P 17 53 57.7 -0.4**
comp=Z,28nm,0.9s,baz=111,slow=8.1,SNR=91
ZALV PcP **PcP 17 56 01.7 -0.8**
comp=Z,1.1nm,0.6s,baz=103,slow=3.1,SNR=1.8
ZALV LR LR 18 11 37.3
comp=Z,3µm,18.2s,baz=122,slow=38
ZALV Zalesovo Beam 40.12 326 P **P 17 53 56.9 -1.3**
ZALV 17 56 01.5
ZALV Zalesovo Beam 40.12 326 P **P 17 53 56.9 -1.3**
ZALV **PcP 17 56 01.5 -1.0**
TDK Taldyqorghan 40.47 311 *e*P **P 17 54 01.6 +0.4**
comp=Z,20nm,1.0s,baz=311
TDK Taldyqorghan 40.47 311 *e*P **P 17 54 01.6 +0.4**
TDK pmax pmax
comp=Z,20nm,1.0s
DHRM DHARAMSHALA 40.66 291 *e*P **P 17 54 03.4 +0.2**
DHRM IAmb IAmb 17 54 13.8
comp=Z,8.4nm,0.7s
MDOK Medeo 41.01 308 *e*P **P 17 54 06.0 +0.2**
baz=308
MDOK *e*S **S 18 00 18.8 +0.7**
baz=308
MDOK Medeo 41.01 308 *e*P **P 17 54 06.0 +0.2**
MDOK *e*S **S 18 00 18.8 +0.7**
SEM Semipalatinsk 41.02 319 *e*P **P 17 54 04.6 -1.3**
comp=Z,12nm,1.0s,baz=320
SEM Semipalatinsk 41.02 319 *e*P **P 17 54 04.6 -1.3**
SEM pmax pmax
comp=Z,11nm,1.0s
TNSS Tian-Shan 41.05 308 *e*P **P 17 54 07.2 +0.7**
baz=308
TNSS Tian-Shan 41.05 308 *e*P **P 17 54 07.2 +0.7**
KRVT Keravat (AS076 41.08 131 LR LR 18 07 57.1
comp=Z,1µm,21.8s,baz=315,slow=31
RABL Rabaul 41.09 131 P **P 17 54 06.4 -0.2**
RABL IAmb IAmb 17 54 11.3
comp=Z,85nm,1.2s
HYB Hyderabad 41.16 268 *i*P **P 17 54 08.0 +0.7**
CHKK Chushkaly 41.19 309 *e*P **P 17 54 07.8 +0.5**
baz=309
CHKK Chushkaly 41.19 309 *e*P **P 17 54 07.7 +0.5**
KSH Kashi 41.23 302 P P 17 54 12.5 +4.8
KSH S S 18 00 28.8 +7.3
KSH SS **SS 18 03 25.3 +0.7**
KSH pmax pmax
comp=Z,12nm,0.6s
KSH pmax pmax
comp=Z,510nm,4.0s
KSH LR LR
comp=Z,1µm,11.3s
KSH LR LR
comp=Z,2µm,12.0s
KSH LR LR
comp=Z,3µm,15.6s
KUU Kurty 41.66 309 *e*P **P 17 54 11.1 +0.1**
comp=Z,22nm,1.8s,baz=309
KUU Kurty 41.66 309 *e*P **P 17 54 11.1 +0.1**
KUU pmax pmax
comp=Z,22nm,1.8s
PMG Port Moresby 41.93 141 P **P 17 54 13.8 +0.4**
comp=Z,27nm,0.9s,baz=339,slow=9.3,SNR=5.9
PMG LR LR 18 11 23.2
comp=Z,960nm,19.6s,baz=302,slow=36
PMG Port Moresby 41.93 141*ce*P **P 17 54 12.5 -1.0**
PMG pmax pmax
comp=Z,46nm,1.3s
PMG Port Moresby 41.93 141 P **P 17 54 13.0 -0.5**
PMG IAmb IAmb 17 54 21.0
comp=Z,33nm,0.9s
TKM2 Tokmak 2 42.01 307 P **P 17 54 15.3 +1.2**
SNR=18
KURK Kurchatov 42.10 319 P **P 17 54 14.8 +0.3**
KURK Kurchatov 42.10 319*ce*P **P 17 54 13.4 -1.1**
KURK pmax pmax
comp=Z,50nm,1.3s
KURK Kurchatov 42.10 319 P **P 17 54 14.1 -0.4**
KURK IAmb IAmb 17 54 19.6
comp=Z,60nm,1.4s
KURBB Kurchatov Arra 42.12 319 P **P 17 54 14.3 -0.3**
comp=Z,11nm,0.9s,baz=112,slow=8.7,SNR=33
KURBB PP **PP 17 55 51.6 -0.5**
comp=Z,0.5nm,0.3s,baz=109,slow=11,SNR=2.2
KBK Karagaybulak 42.43 307 P **P 17 54 18.3 +0.8**
SNR=12
CHMS Chumysh 42.63 307 P **P 17 54 20.1 +1.1**
SNR=7.9
UCH Uchtor 42.69 306 P P 17 54 23.7 +3.7
SNR=8.7
AAK Ala-Archa 42.76 307 P **P 17 54 20.1 -0.1**
SNR=6.4
AAK Ala-Archa 42.76 307 *i*P **P 17 54 21.4 +1.2**
SNR=9.3
AAK Ala-Archa 42.76 307 P **P 17 54 21.2 +1.0**
AAK Ala-Archa 42.76 307 *i*P **P 17 54 20.1 -0.1**
AAK pmax pmax
comp=Z,15nm,0.8s
AAK Ala-Archa 42.76 307 P **P 17 54 19.1 -1.1**
SGDS Sogindy 42.79 308 *e*P **P 17 54 19.2 -1.2**
baz=308
SGDS Sogindy 42.79 308 *e*P **P 17 54 19.1 -1.2**
FITZ Fitzroy Crossi 42.87 175 P **P 17 54 21.3 +0.4**
SEY Seymchan 43.03 20 *i*P **P 17 54 22.4 +0.6**
PALK Pallekele 43.25 253 P P 17 54 28.2 +3.9
AML Almayashu 43.27 306 P **P 17 54 26.2 +1.6**
SNR=16
EKS2 Erkin-Say 43.29 307 P **P 17 54 25.6 +1.2**
SNR=7.8
BTLS Baital 43.49 310 *e*P **P 17 54 26.1 +0.2**
baz=310
BTLS Baital 43.49 310 *e*P **P 17 54 26.1 +0.2**
COEN Coen 43.74 150 P **P 17 54 28.1 0.0**
COEN IAmb IAmb 17 54 33.6
comp=Z,36nm,1.1s
DZA Taraz 45.10 307 *e*P **P 17 54 40.0 +1.1**
baz=306
DZA Taraz 45.10 307 *e*P **P 17 54 39.9 +1.1**
BRZS Berezniki 45.50 317 *e*P **P 17 54 41.5 -0.4**
comp=Z,4.6nm,1.1s,baz=317
BRZS Berezniki 45.50 317 *e*P **P 17 54 41.4 -0.4**
BRZS pmax pmax
comp=Z,5.0nm,1.1s
KK31 Karatay Array 45.72 307 P **P 17 54 43.3 -0.5**
KK31 pmax pmax
comp=Z,20nm,1.5s
KK31 Karatay Array 45.72 307 P **P 17 54 43.3 -0.5**
KKAR Karatay Array 45.72 307 P **P 17 54 43.4 -0.4**
KKAR pmax pmax
comp=Z,20nm,1.5s
KKAR Karatay Array 45.72 307 P **P 17 54 43.4 -0.4**
WB0 Warramunga Arr 45.97 164 P **P 17 54 45.1 -0.7**
IUG luzhnay 45.98 305 *e*P **P 17 54 46.0 +0.1**
comp=Z,7.1nm,0.9s,baz=305
IUG luzhnay 45.98 305 *e*P **P 17 54 46.0 +0.1**
IUG pmax pmax
comp=Z,7.0nm,0.9s
WRAB Tennant Creek 46.12 164*ce*P **P 17 54 46.6 -0.4**
WRAB pmax pmax
comp=Z,78nm,1.3s
WRAB Tennant Creek 46.12 164 P **P 17 54 46.4 -0.6**
WRA Warramunga Arr 46.12 164 P **P 17 54 46.7 -0.3**
comp=Z,29nm,0.8s,baz=347,slow=8.9,SNR=182
WRA PcP **PcP 17 56 23.6 +0.4**
comp=Z,4.2nm,0.8s,baz=340,slow=3.6,SNR=4.1
WRA LR LR 18 16 00.1
comp=Z,108nm,20.2s,baz=15,slow=38
WRA Warramunga Arr 46.12 164 P **P 17 54 45.4 -1.7**
WRA pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 46.12 164 P **P 17 54 45.4 -1.7**
WB2 Warramunga Arr 46.13 164 P **P 17 54 46.1 -1.0**
WC3 Warramunga Arr 46.15 164 P **P 17 54 45.9 -1.3**
WR0 Warramunga Arr 46.19 164 P **P 17 54 46.4 -1.1**
PSAC1 Pilbara Seismi 46.20 183 P **P 17 54 47.4 -0.2**
PSAC1 IAmb IAmb 17 54 54.7
comp=Z,14nm,0.8s
PSAB2 Pilbara Seismi 46.22 183 P **P 17 54 45.8 -2.0**
PSAB2 IAmb IAmb 17 54 55.2
comp=Z,16nm,0.8s
PSA00 Pilbara Seismi 46.24 183 P **P 17 54 45.9 -1.9**
PSA00 Pilbara Seismi 46.24 183 P **P 17 54 47.0 -0.8**
PSA00 IAmb IAmb 17 55 05.5
comp=Z,25nm,1.2s
KBL Kabul 46.63 295 P **P 17 54 52.8 +1.6**
SNR=15
KBL P **P 17 54 52.8 +1.6**
SNR=15
KBL Kabul 46.63 295 P **P 17 54 49.3 -2.0**
KBL pmax pmax
comp=Z,32nm,1.4s
KBL Kabul 46.63 295 P **P 17 54 49.3 -2.0**
KBL IAmb IAmb 17 55 02.3
comp=Z,32nm,1.4s
TIXI Tiksi 46.95 3*ce*P **P 17 54 51.9 -1.0**
TIXI Tiksi 46.95 3 P **P 17 54 52.1 -0.8**
BVAR Borovoye Array 47.67 320 P **P 17 54 58.5 -0.3**
comp=Z,4.7nm,0.6s,baz=204,slow=29,SNR=38
BRVK Borovoye 47.74 320 P **P 17 54 59.6 +0.2**

BRVK P P 17 54 59.6 +0.2
BRVK Borovoye 47.74 320 *ce* P P 17 54 59.7 +0.3
BRVK pmax pmax
comp=Z,37nm,0.8s
BRVK Borovoye 47.74 320 P P 17 54 59.0 -0.4
NRIK Noril'sk 48.95 345 P P 17 55 08.1 -0.3
comp=Z,71nm,1.2s,baz=131,slow=7.1,SNR=41
NRIK LR LR 18 17 08.1
comp=Z,2μm,19.1s,baz=146,slow=38
NRIK Noril'sk 48.95 345 *ce* P P 17 55 06.6 -1.8
NRIK pmax pmax
comp=Z,38nm,1.2s
AS31 Alice Springs 49.60 166 P P 17 55 14.1 +0.1
ASAR Alice Springs 49.60 166 P P 17 55 13.7 -0.3
comp=Z,10nm,0.8s,baz=342,slow=6.7,SNR=98
ASAR PcP PcP 17 56 35.6 +0.1
comp=Z,12nm,1.2s,baz=349,slow=3.0,SNR=3.2
ASAR LR LR 18 16 21.6
comp=Z,338nm,20.7s,baz=356,slow=36
ASAR Alice Springs 49.60 166 P P 17 55 14.9 +0.9
ASAR Alice Springs 49.60 166 P P 17 55 14.8 +0.9
CTA Charters Tower 50.50 150 LR LR 18 14 18.0
comp=Z,1μm,21.6s,baz=346,slow=33
CTAO Charters Tower 50.50 150 P P 17 55 20.9 0.0
CTAO pmax pmax
comp=Z,20nm,1.1s
CTAO Charters Tower 50.50 150 P P 17 55 20.9 0.0
HRA Herat 52.24 295 P P 17 55 32.5 -1.6
AB06 Akbulak array 53.54 314 P P 17 55 43.0 -0.2
ABKAR Akbulak array 53.56 314 P P 17 55 43.2 -0.1
ABKAR Akbulak array 53.56 314 P P 17 55 43.1 -0.3
SVE Sverdlovsk 53.98 323 *eP* P 17 55 47.1 +0.8
SVE pmax pmax
comp=Z,38nm,1.5s
SVE MLR MLR
comp=Z,2μm,14.0s
AKTO Aktyubinsk 54.87 315 P P 17 55 53.5 +0.6
comp=Z,3.1nm,0.8s,baz=98,slow=6.5,SNR=8.1
ARU Arti 55.06 323 P P 17 55 54.2 +0.1
comp=Z,4.1nm,0.8s,baz=132,slow=4.9,SNR=12
ARU Arti 55.06 323 *d i* P P 17 55 53.8 -0.3
ARU 17 56 54.8
ARU 17 57 57.4
ARU S S 18 03 39.6 +3.3
ARU SS SS 18 07 24.2 +4.4
ARU pmax pmax
comp=Z,27nm,1.2s
ARU MLR MLR
comp=Z,961nm,25.0s
ARU Arti 55.06 323 P P 17 55 53.2 -0.9
ARU IAmb IAmb 17 55 59.0
comp=Z,19nm,1.0s
GYB1 ALIBECK ARRAY 55.17 300 P P 17 55 54.5 -0.9
GYB1 IAmb IAmb 17 56 05.6
comp=Z,23nm,1.2s
GYA2 ALIBECK ARRAY 55.17 300 P P 17 55 53.7 -1.7
GYA2 IAmb IAmb 17 56 06.9
comp=Z,20nm,1.1s
GEYT Alibeck 55.18 300 P P 17 55 56.6 +1.2
comp=Z,8.2nm,0.8s,baz=74,slow=5.4,SNR=12
GEYT LR LR 18 23 46.3
comp=Z,1μm,18.7s,baz=90,slow=41
GEYT Alibeck 55.18 300 P P 17 55 55.8 +0.4
GYA0B ALIBECK ARRAY 55.18 300 P P 17 55 54.8 -0.5
JLN Jalan Bani Buh 57.11 281 P P 17 56 11.0 +1.6
JLN P P 17 56 11.0 +1.6
EIDS Eidsvold 57.28 149 P P 17 56 09.6 -0.7
WBK Wadi Bani Khal 57.38 282 P P 17 56 13.2 +1.9
SNR=5.5
WBK P P 17 56 13.2 +1.9
SNR=5.5
WSAR Wadi Sarin 57.51 283 P P 17 56 13.4 +1.2
comp=Z,4.0nm,0.8s,baz=94,slow=5.7,SNR=8.5
BIDO Bidbid 57.88 283 P P 17 56 16.8 +2.0
SNR=7.3
SMDO Samad 58.07 283 P P 17 56 17.9 +1.6
SNR=6.3
SMDO P P 17 56 17.9 +1.6
SNR=6.3
JMDO Jabal Madar 58.21 282 P P 17 56 18.9 +1.8
JMDO P P 17 56 18.9 +1.8
JMDO P P 17 56 18.9 +1.8
HOQ Hoqain 58.59 283 P P 17 56 21.1 +1.3
SNR=11
HOQ P P 17 56 21.1 +1.3
SNR=11
MHTO MHTO 58.73 280 P P 17 56 21.5 +0.7
MHTO P P 17 56 21.5 +0.7
BANOM Banah 58.87 286 P P 17 56 23.4 +1.7
BBOO Buckleboo 58.90 166 P P 17 56 21.2 -0.3
BBOO IAmb IAmb 17 56 24.0
comp=Z,16nm,0.8s
BSY Bisya 58.91 282 P P 17 56 23.3 +1.3
BSY P P 17 56 23.3 +1.3
SOHO SOHO 59.12 284 P P 17 56 23.9 +0.4
SOHO SOHO 59.12 284 P P 17 56 24.3 +0.9
SOHO P P 17 56 24.3 +0.9
UOSS Minazif 59.20 285 P P 17 56 25.5 +1.5
UOSS Minazif 59.20 285 P P 17 56 26.0 +2.0
UOSS P P 17 56 26.0 +2.0
HATD Hatta, Dubai 59.29 285 P P 17 56 25.8 +1.1
HATD Hatta, Dubai 59.29 285 P P 17 56 26.6 +2.0
HATD P P 17 56 26.6 +2.0
ARQ Araqi 59.35 283 P P 17 56 26.6 +1.6
ARQ P P 17 56 26.6 +1.6
ASHO Ashiyiah 59.40 285 P P 17 56 27.2 +1.8
ASHO Ashiyiah 59.40 285 P P 17 56 27.2 +1.8
ASHO P P 17 56 27.2 +1.8
STKA Stephens Creek 59.44 161 P P 17 56 24.6 -0.7
comp=Z,7.7nm,0.6s,baz=340,slow=7.2,SNR=24
STKA LR LR 18 23 18.3
comp=Z,306nm,19.7s,baz=0.2,slow=37
STKA Stephens Creek 59.44 161 P P 17 56 24.3 -1.0
STKA pmax pmax
comp=Z,3.0nm,0.9s
STKA Stephens Creek 59.44 161 P P 17 56 24.3 -1.0
SANVU Saraoutou 59.50 128 P P 17 56 25.6 -0.4
KIRV Kirov 60.13 325 P P 17 56 29.6 -0.2
comp=Z,6.7nm,0.5s,baz=124,slow=6.4,SNR=7.8
KIRV Kirov 60.13 325 *ce* P P 17 56 29.1 -0.7
BELG Belogornoye 61.34 318 *i* P P 17 56 38.4 +0.3
BELG pmax pmax
comp=Z,4.0nm,1.1s
LKRN Lenkeran, Azer 62.33 302 P P 17 56 46.8 +1.8
MAK Makhachkala 62.54 307 *eP* P 17 56 36.3 -10
MAK *e*SSS SSS 18 12 02.1
MAK pmax pmax
comp=Z,215nm,1.3s
MAK MLR MLR
comp=Z,561nm,14.0s
SEKA Sheki 63.06 305 P P 17 56 51.9 +1.9
RBK Rabkut 63.19 278 P P 17 56 53.5 +2.4
RBK P P 17 56 53.5 +2.4
MNGR Mingechevir, A 63.23 305 P P 17 56 53.1 +2.1
ZKTA Zakatala 63.41 306 P P 17 56 54.1 +1.8
DZM Mont Dzumac 63.50 134 *eP* P 17 56 53.2 +0.1
comp=Z,95nm,1.2s
DZM *e*S S 18 05 23.7 -2.7
comp=Z,619nm,26.5s
DZM Mont Dzumac 63.50 134 *e*LR LR 18 15 49.5
comp=Z,3μm,25.1s
DZM Mont Dzumac 63.50 134 P P 17 56 53.2 +0.1
comp=Z,25nm,0.9s,baz=312,slow=9.5,SNR=9.9
DZM LR LR 18 19 42.9
comp=Z,1μm,21.9s,baz=296,slow=31
DZM Mont Dzumac 63.50 134 P P 17 56 53.0 -0.1
GANJ Ganja 63.82 305 P P 17 56 56.7 +1.7
ABTO Aybut 64.06 278 P P 17 57 00.4 +3.5
ABTO P P 17 57 00.4 +3.5
NAX Nakhchivan 64.74 303 P P 17 57 13.7 +1.6
KLMR Klimovskoe 65.02 328 *eP* P 17 56 59.5 -2.9
KLMR *e* 17 59 21.1
KLMR pmax pmax
comp=Z,45nm,1.5s
KLMR MLR MLR
comp=Z,411nm,16.0s
KLMR Klimovskoe 65.02 328 *eP* P 17 56 59.5 -2.9
KLMR AMP 17 57 06.9
comp=Z,45nm,1.5s
KLMR *e*PP PP 17 59 21.1 -4.1
KLMR LQ LQ 18 20 33.7
KLMR LQ LQ 18 20 33.7
KLMR LR LR 18 22 33.5
KLMR AMP 18 27 42.4
comp=Z,411nm,15.5s
GNI Garni 65.10 304 P P 17 57 04.0 +0.4
comp=Z,12nm,1.1s,baz=163,slow=10.0,SNR=6.8
GNI Garni 65.10 304 P P 17 57 07.0 +3.5
GNI Garni 65.10 304 P P 17 57 04.9 +1.3
GNI P P 17 57 04.9 +1.3
GNI Garni 65.10 304 *i* P P 17 57 03.8 +0.2
GNI pmax pmax
comp=Z,40nm,1.7s
GNI Garni 65.10 304 P P 17 57 03.7 +0.1
VRH Novokhopyorsk 65.12 317 *eP* P 17 57 02.2 -1.0
VRH pmax pmax
comp=Z,50nm,1.6s
ZEI Tsey 65.17 307 *eP* P 17 57 01.1 -3.0
ZEI pmax pmax
comp=Z,14nm,0.9s
SOCY Socotra 65.25 272 P P 17 57 06.3 +1.5
GOF Gofitskoye 65.34 310 *eP* P 17 57 06.2 +1.4
TMCR Tamitsa 65.34 331 *eP* P 17 57 04.1 -0.3
TMCR pmax pmax
comp=Z,68nm,1.1s
KBZ Khabaz 65.70 309 P P 17 57 07.2 0.0
comp=Z,9.3nm,0.9s,baz=56,slow=24,SNR=19
KBZ LR LR 18 29 30.4
comp=Z,914nm,19.2s,baz=338,slow=39
KBZ Khabaz 65.70 309 *ce* P P 17 57 06.7 -0.4
KBZ pmax pmax
comp=Z,15nm,1.0s
BGD Bogdanovka 65.71 306 P P 17 57 11.8 +4.2
KVAR Kislovodsk Arr 65.80 309 P P 17 57 07.2 -0.7
comp=Z,3.8nm,0.9s,baz=85,slow=21,SNR=2.4
KIV Kislovodsk 65.81 309 *i* P P 17 57 09.3 +1.3
SNR=10
KIV Kislovodsk 65.81 309 P P 17 57 09.1 +1.1
KIV P P 17 57 09.1 +1.1
KIV Kislovodsk 65.81 309 *eP* P 17 57 08.6 +0.6
KIV pmax pmax
comp=Z,78nm,1.0s
KIV MLR MLR
comp=Z,2μm,17.0s
KIV Kislovodsk 65.81 309 P P 17 57 07.5 -0.4
TOO Toolangi 65.91 160 P P 17 57 07.9 -0.5
TOO pmax pmax
comp=Z,36nm,1.2s
TOO Toolangi 65.91 160 P P 17 57 07.9 -0.5
CAST Castle Rocks 66.19 29 P P 17 57 09.4 -0.6
CAST IAmb IAmb 17 57 14.0
comp=Z,15nm,1.0s
PPLA Purkeypile 66.22 30 P P 17 57 10.8 +0.5
PPLA IAmb IAmb 17 57 28.0
comp=Z,33nm,1.4s
COLD Coldfoot 66.43 25 P P 17 57 12.1 +0.6
baz=278
COLD Coldfoot 66.43 25 P P 17 57 12.3 +0.8
COLD IAmb IAmb 17 57 17.8
comp=Z,19nm,1.3s
TOLK Toolik Lake Re 66.47 24 P P 17 57 12.6 +0.9
baz=278
TOLK Toolik Lake Re 66.47 24 P P 17 57 12.4 +0.7
TOLK IAmb IAmb 17 57 13.8
comp=Z,17nm,0.9s
MLY Manley 66.53 28 P P 17 57 12.5 +0.2
baz=279,SNR=17
BPAW Bear Paw Mtn. 66.57 29 P P 17 57 13.1 +0.7
LPSR Galich'ya Gora 66.58 319 *eP* P 17 57 12.1 -0.6
LPSR pmax pmax
comp=Z,30nm,1.1s
KTH Kantishna Hill 66.68 29 P P 17 57 12.2 -1.1
KTH IAmb IAmb 17 57 16.8
comp=Z,11nm,1.0s
VSR Storozhevoye 66.70 317 *eP* P 17 57 13.1 -0.3
VSR pmax pmax
comp=Z,40nm,1.6s
MOS Moscow 66.77 322 *eP* P 17 57 11.7 -2.0
MOS pmax pmax
comp=Z,67nm,1.7s
MOS pmax pmax
comp=Z,300nm,2.5s
APA Apatity 66.77 335 *i* P P 17 57 12.8 -0.8
APA pmax pmax
comp=Z,16nm,1.0s
GEVA Gevas 66.79 303 P P 17 57 13.1 -1.5
GEVA IAmb IAmb 17 57 20.4
comp=Z,25nm,1.5s
KDAK Kodiak Island 66.84 35 P P 17 57 13.4 -0.8
KDAK pmax pmax
comp=Z,50nm,1.4s
KDAK Kodiak Island 66.84 35 P P 17 57 13.4 -0.8
TRF Thorofare Moun 66.98 29 P P 17 57 15.3 +0.1
I23K Minto, Yukon-K 67.09 27 P P 17 57 16.1 +0.4
baz=280,SNR=6.0
I23K Minto, Yukon-K 67.09 27 P P 17 57 16.3 +0.6
SUA Susitna One 67.11 31 P P 17 57 15.2 -0.8
SUA IAmb IAmb 17 57 18.7
comp=Z,19nm,0.8s
CUT Chulitna 67.17 30 P P 17 57 16.5 +0.3
baz=280
BWN Browne 67.22 28 P P 17 57 16.0 -0.5
NEA2 Nenana 67.31 28 P P 17 57 16.8 -0.3
baz=280,SNR=18
BRLK Bradley Lake 67.35 33 P P 17 57 15.4 -2.0
BRLK IAmb IAmb 17 57 19.6
comp=Z,13nm,0.9s
OBN Obninsk 67.47 322 P P 17 57 18.0 -0.3
comp=Z,2.7nm,0.4s,baz=242,slow=1.0,SNR=5.7
OBN Obninsk 67.47 322 *de* P P 17 57 17.7 -0.5
OBN *e**PP pP 17 57 19.6 -2.2
OBN *e**SP sP 17 57 24.0 +0.8
OBN 17 57 48.0
OBN 17 59 46.0
OBN *i* S S 18 06 21.4 +7.3
OBN *e* 18 07 15.4
OBN SS SS 18 10 37.0 +3.1
OBN pmax pmax
comp=Z,43nm,1.7s
OBN MLR MLR
comp=Z,725nm,20.0s
OBN Obninsk 67.47 322 P P 17 57 15.8 -2.5
MCK McKinley 67.53 29 P P 17 57 17.3 -1.2
baz=281,SNR=5.3
MDM Murphy Dome 67.60 27 P P 17 57 18.5 -0.4
RND Reindeer 67.62 29 P P 17 57 18.7 -0.5
RND pmax pmax
comp=Z,32nm,0.8s
RND Reindeer 67.62 29 P P 17 57 18.7 -0.5
WRH Wood River Hil 67.75 28 P P 17 57 19.8 -0.1
WRH IAmb IAmb 17 57 22.6
comp=Z,16nm,1.0s
TCOL CIGO, UAF Yank 67.77 27 P P 17 57 18.6 -1.3
TCOL IAmb IAmb 17 57 22.9
comp=Z,14nm,0.8s
COLA College 67.77 27 P P 17 57 18.2 -1.8
COLA pmax pmax
comp=Z,15nm,0.9s
COLA College 67.77 27 P P 17 57 18.2 -1.8
COLA IAmb IAmb 17 57 22.9
comp=Z,15nm,0.8s
CCB Clear Creek Bu 67.84 28 P P 17 57 20.3 -0.1
PMR Palmer 67.85 31 P P 17 57 19.0 -1.5
PMR pmax pmax
comp=Z,32nm,1.5s
PMR Palmer 67.85 31 P P 17 57 19.0 -1.5
PMR IAmb IAmb 17 57 25.1
comp=Z,32nm,1.5s
POKR Poker Plat Res 67.90 27 P P 17 57 21.7 +0.9
baz=282,SNR=10
POKR Poker Plat Res 67.90 27 P P 17 57 21.6 +0.9
GHO Glory Hole Cre 67.91 31 P P 17 57 20.5 -0.5
GHO IAmb IAmb 17 57 47.1
comp=Z,32nm,1.3s
SOC Sochi 67.99 309 *eP* P 17 57 19.7 -2.0
SOC *e*PPP PPP 18 01 29.6
SOC *e*S S 18 06 19.6 -1.1
SOC pmax pmax
comp=Z,15nm,0.9s
SOC MLR MLR
comp=Z,646nm,21.0s
IL31 68.20 27 P P 17 57 21.6 -1.0
ILAR Eielson Array 68.20 27 P P 17 57 21.9 -0.7
comp=Z,2.2nm,0.6s,baz=285,slow=6.6,SNR=24
ILAR PP PP 17 59 51.6 -1.2
comp=Z,0.9nm,1.0s,baz=293,slow=7.7,SNR=3.1
ILAR LR LR 18 30 47.4
comp=Z,182nm,18.5s,baz=324,slow=39
ILAR Eielson Array 68.20 27 P P 17 57 20.2 -2.5
ILAR Eielson Array 68.20 27 P P 17 57 20.2 -2.5
IL18 Eielson Array 68.25 27 P P 17 57 21.2 -1.8
HDA Harding Lake 68.25 28 P P 17 57 21.9 -1.2
baz=282,SNR=6.7
HDA Harding Lake 68.25 28 P P 17 57 22.2 -0.8
HDA IAmb IAmb 17 57 23.8
comp=Z,18nm,1.0s
KOPT Kop Dagi 68.30 305 P P 17 57 25.6 +1.5
KOPT IAmb IAmb 17 57 28.9
comp=Z,32nm,1.4s
DHY Denali Highway 68.35 29 P P 17 57 23.6 -0.2
FYU Fort Yukon 68.48 25 P P 17 57 25.1 +0.8
FYU IAmb IAmb 17 57 26.7
comp=Z,17nm,0.9s
PRP Porcupine Dome 68.60 27 P P 17 57 24.8 -0.6
SCM Sheep Creek Mo 68.64 31 P P 17 57 24.5 -1.1
SCM pmax pmax
comp=Z,29nm,0.8s
SCM Sheep Creek Mo 68.64 31 P P 17 57 24.5 -1.1
MARD Mardin 68.80 302 P P 17 57 27.2 +0.1
MARD IAmb IAmb 17 57 30.4
comp=Z,16nm,0.7s
RAYN Ar Rayn 68.95 287 *i* P P 17 57 28.4 +0.2
SNR=23
RAYN Ar Rayn 68.95 287 P P 17 57 27.5 -0.7
RAYN pmax pmax
comp=Z,32nm,1.3s
RAYN Ar Rayn 68.95 287 P P 17 57 27.5 -0.7
RAYN IAmb IAmb 17 57 34.3
comp=Z,32nm,1.3s
SPB2 Spitsbergen Ar 68.97 348 P P 17 57 27.6 +0.2
SPB5 Spitsbergen Ar 68.97 348 P P 17 57 27.4 0.0
MSVF Nonsavu 69.02 122 P P 17 57 29.0 +0.4
MSVF pmax pmax
comp=Z,36nm,1.0s
MSVF Nonsavu 69.02 122 P P 17 57 29.0 +0.4
M24K Tolsona, Glenn 69.11 30 P P 17 57 28.8 +0.4
baz=284
M24K Tolsona, Glenn 69.11 30 P P 17 57 28.1 -0.4
ARCES ARCESS Array B 69.20 338 P P 17 57 29.2 +0.3
comp=Z,11nm,1.0s,baz=61,slow=8.5,SNR=11
ARCES LR LR 18 32 57.4
comp=Z,616nm,18.8s,baz=40,slow=40
ARD6 ARCESS Array S 69.21 338 P P 17 57 29.5 +0.5
ARD7 ARCESS Array S 69.22 338 P P 17 57 29.5 +0.5
RIDG Independent Ri 69.30 28 P P 17 57 29.6 -0.1
RIDG IAmb IAmb 17 57 30.9
comp=Z,26nm,1.2s
KLU Klutina 69.37 31 P P 17 57 30.3 +0.2
KLU IAmb IAmb 17 57 31.8
comp=Z,10nm,0.6s
SCRK Sand Creek 69.61 28 P P 17 57 31.0 -0.6
baz=285,SNR=6.6
DOT Dot Lake 69.66 28 P P 17 57 31.4 -0.5
DOT IAmb IAmb 17 57 33.1
comp=Z,14nm,0.9s
N25K Chitina, Valde 69.95 31 P P 17 57 34.1 +0.3
baz=285
N25K Chitina, Valde 69.95 31 P P 17 57 34.3 +0.6
MENT Mentasta 70.00 29 P P 17 57 34.5 +0.5
MENT IAmb IAmb 17 57 36.1
comp=Z,20nm,0.9s
L26K Log Cabin Wild 70.14 29 P P 17 57 34.4 -0.4
baz=286,SNR=7.9
MALT Malatya 70.31 304 P P 17 57 37.6 +1.2
GLB Gilahina Butte 70.36 31 P P 17 57 36.7 +0.5
GLB IAmb IAmb 17 57 38.1
comp=Z,28nm,1.2s
K27K Chicken 70.41 28 P P 17 57 37.0 +0.6
K27K IAmb IAmb 17 57 38.4
comp=Z,21nm,1.0s
EGAK Eagle 70.57 27 P P 17 57 37.5 +0.2
EGAK IAmb IAmb 17 57 39.0
comp=Z,16nm,0.8s
MCARA McCarthy VSAT 70.74 31 P P 17 57 38.7 +0.3
MCARA IAmb IAmb 17 57 41.6
comp=Z,26nm,1.0s
CRQM Cirque 70.87 31 P P 17 57 38.7 -0.8
TGL Tana Glacier 71.01 31 P P 17 57 40.5 +0.3
TGL IAmb IAmb 17 57 41.8
comp=Z,27nm,1.0s
FINES FINESS Array B 71.27 330 P P 17 57 41.7 +0.1
comp=Z,6.7nm,0.8s,baz=72,slow=6.2,SNR=18
FINES LR LR 18 31 59.6
comp=Z,2μm,19.1s,baz=72,slow=38
BARN Barnard Glacie 71.47 31 P P 17 57 42.0 -1.1
BARN IAmb IAmb 17 57 43.4
comp=Z,19nm,1.2s
DAWY Dawson 71.52 27 P P 17 57 43.7 +0.5
DAWY IAmb IAmb 17 57 45.1
comp=Z,18nm,0.8s
GAZ Gaziantep 71.56 303 P P 17 57 44.9 +0.9
MESA MESA 71.60 32 P P 17 57 43.3 -0.7
CTGM Chitina Glacie 71.65 31 P P 17 57 43.6 -0.5
CTGM IAmb IAmb 17 57 46.3
comp=Z,20nm,0.8s
VSU Vasula 71.86 327 *eP* P 17 57 44.7 -0.5
INK Inuvik 72.25 22 P P 17 57 47.7 +0.3
comp=Z,27nm,0.9s,baz=283,slow=7.0,SNR=51
INK Inuvik 72.25 22 P P 17 57 47.4 0.0
INK pmax pmax
comp=Z,30nm,0.9s
INK Inuvik 72.25 22 P P 17 57 47.4 0.0
PCA Pinnacle 72.43 31 P P 17 57 48.7 -0.1
IDID Didziasalis 72.86 323 *eP* P 17 57 52.3 +1.0
AKASG Malin Array Be 72.91 318 P P 17 57 50.8 -0.8
comp=Z,2.5nm,0.7s,baz=57,slow=5.8,SNR=15
AKASG LR LR 18 32 16.7
comp=Z,399nm,20.2s,baz=60,slow=38
AKBB Malin Array Si 72.91 318 P P 17 57 50.3 -1.3
AKBB pmax pmax
comp=Z,11nm,1.0s
AKBB Malin Array Si 72.91 318 P P 17 57 50.3 -1.3
ILGA Ilgaz 72.96 308 P P 17 57 50.2 -2.3
ILGA IAmb IAmb 17 58 05.4
comp=Z,30nm,1.5s
IZAR Zarasai 72.98 324 *eP* P 17 57 52.9 +0.9
ISAL Salakas 73.10 324 *eP* P 17 57 53.6 +0.9
IIGN Ignalina 73.12 324 *eP* P 17 57 53.9 +1.1
ASF Jabal al Asfar 73.38 298 P P 17 57 56.7 +1.7
comp=Z,0.6nm,0.3s,baz=48,slow=20,SNR=3.2
BR131 Keskin Array S 73.44 306 P P 17 57 54.4 -0.8
BR131 pmax pmax
comp=Z,13nm,1.1s
BR131 Keskin Array S 73.44 306 P P 17 57 54.4 -0.8
BRTR Keskin Array B 73.44 306 P P 17 57 55.0 -0.3
comp=Z,7.0nm,0.9s,baz=90,slow=6.2,SNR=22
BRTR LR LR 18 35 15.7
comp=Z,152nm,18.8s,baz=64,slow=40
HYT Haines Junctio 73.46 30 P P 17 57 56.1 +1.2
HYT IAmb IAmb 17 57 57.5
comp=Z,20nm,1.1s
BR231 Keskin MP Arra 74.03 307 P P 17 57 59.2 +0.6
EUNU Eureka 74.13 5 P P 17 57 58.3 -0.1
PABE Paberze 74.28 324 *eP* P 17 57 59.0 -0.5
MMAI Mount Meron Ar 74.29 299 P P 17 58 00.3 0.0
comp=Z,1.5nm,0.6s,baz=52,slow=7.5,SNR=4.0
WHY Whitehorse 74.71 30 P P 17 58 03.3 +1.1
WHY IAmb IAmb 17 58 04.2
comp=Z,19nm,1.0s
C36M Paulatuk 74.86 20 P P 17 58 02.8 +0.1
baz=301
C36M Paulatuk 74.86 20 P P 17 58 02.0 -0.7
C36M pP 17 58 02.3 -4.1
MDUB Mudurnu 74.96 308 P P 17 58 03.2 -0.9
SKAG Skagway 74.99 31 P P 17 58 05.0 +1.4
SKAG IAmb IAmb 17 58 06.3
comp=Z,20nm,0.9s
SUW Suwalki 75.25 323 *eP* P 17 58 05.2 -0.1
CSS Mathiatis 75.25 302 P P 17 58 04.7 -1.0
CSS IAmb IAmb 17 58 10.7
comp=Z,34nm,1.1s
BESE Bessie Mountai 75.57 32 P P 17 58 06.8 -0.3
BESE IAmb IAmb 17 58 10.9
comp=Z,27nm,1.2s
ATD Arta Tunnel 75.59 276 P P 17 58 09.0 +1.0
comp=Z,3.2nm,0.3s,baz=107,slow=19,SNR=1.9
DAG Danmarks Havn 75.80 351 P P 17 58 07.5 -0.6
VRI Vrincioaia 76.12 314 P P 17 58 12.9 +2.4
ISP Isparta 76.37 305 P P 17 58 11.8 -0.4
ISP pmax pmax
comp=Z,21nm,0.7s
ISP Isparta 76.37 305 P P 17 58 11.8 -0.4
ISP IAmb IAmb 17 58 12.7
comp=Z,21nm,0.7s

BUR08 Bucovina Ar. S 76.44 316 P **P** 17 58 11.8 -0.6
BURAR Bucovina Array 76.44 316 P **P** 17 58 11.0 -1.4
BURAR Bucovina Array 76.44 316 P **P** 17 58 12.0 -0.4
MLR Muntele Rosu 76.77 314 P **P** 17 58 14.2 -0.1
MLR Muntele Rosu 76.77 314 P **P** 17 58 14.2 -0.1
KWP Kalwaria Pacla 77.20 319 *e*P **P** 17 58 16.9 +0.4
KWP Kalwaria Pacla 77.20 319 P **P** 17 58 16.4 -0.1
KWP pmax pmax
comp=Z,41nm,1.2s
KWP Kalwaria Pacla 77.20 319 P **P** 17 58 16.4 -0.1
ELL Elmali 77.22 305 P **P** 17 58 16.2 -0.8
ELL pmax pmax
comp=Z,219nm,1.5s
ELL Elmali 77.22 305 P **P** 17 58 16.2 -0.8
MANT Manisa 77.57 307 P **P** 17 58 18.4 -0.6
KOLS Kolonicke sedl 77.74 318 *e*P **P** 17 58 21.6 +2.0
KOLS Kolonicke sedl 77.74 318 *e*P **P** 17 58 21.6 +2.0
NC405 NORSAR Array S 77.75 332 P **P** 17 58 18.7 -0.7
RES Resolute Bay 77.83 9 P **P** 17 58 18.9 -0.6
comp=Z,5.8nm,0.8s,baz=281,slow=6.8,SNR=12
RES Resolute Bay 77.83 9 P **P** 17 58 18.4 -1.1
RES pmax pmax
comp=Z,8.0nm,0.9s
RES Resolute Bay 77.83 9 P **P** 17 58 18.4 -1.1
NC303 NORSAR Array S 77.84 332 P **P** 17 58 19.6 -0.2
UZH Uzhgorod 77.85 318 *e*P **P** 17 58 22.1 +2.0
UZH *e* 17 58 30.6
DLBC Dease Lake 77.91 31 P **P** 17 58 21.0 +0.6
comp=Z,10nm,1.0s,baz=295,slow=6.6,SNR=7.1
DLBC LR LR 18 34 32.6
comp=Z,153nm,19.2s,baz=320,slow=37
DLBC Dease Lake 77.91 31 P **P** 17 58 21.4 +1.1
DLBC IAmb IAmb 17 58 23.3
comp=Z,19nm,1.1s
NB201 NORSAR Array S 77.96 332 P **P** 17 58 19.9 -0.7
NB201 IAmb IAmb 17 58 22.4
comp=Z,27nm,1.0s
NB2 NORSAR Subarra 78.00 332 P **P** 17 58 20.0 -0.7
comp=Z,47nm,2.0s,baz=59,slow=5.6
NB2 NORSAR Subarra 78.00 332 P **P** 17 58 20.1 -0.7
NB2 pmax pmax
comp=Z,231nm,2.3s
NB2 NORSAR Subarra 78.00 332 P **P** 17 58 20.0 -0.7
baz=59,slow=5.6
NOA NORSAR Array B 78.00 332 P **P** 17 58 20.3 -0.4
comp=Z,6.4nm,0.9s,baz=58,slow=5.7,SNR=22
NOA LR LR 18 36 13.9
comp=Z,1μm,18.5s,baz=65,slow=38
NC204 NORSAR Array S 78.07 333 P **P** 17 58 20.3 -0.9
NC204 IAmb IAmb 17 58 23.3
comp=Z,30nm,1.1s
CRVS Cervenica-Dubn 78.25 319 *e*P **P** 17 58 22.5 +0.1
CRVS Cervenica-Dubn 78.25 319 *e*P **P** 17 58 22.5 +0.1
TULEG Thule 78.58 3 P **P** 17 58 23.1 -0.6
TULEG IAmb IAmb 17 58 28.4
comp=Z,40nm,1.5s
OJC Ojcow 78.68 320 *e*P P 17 58 28.4 +3.7
OJC Ojcow 78.68 320 P **P** 17 58 24.6 -0.1
OJC pmax pmax
comp=Z,31nm,1.4s
OJC Ojcow 78.68 320 P **P** 17 58 24.6 -0.1
OJC IAmb IAmb 17 58 29.2
comp=Z,30nm,1.4s
NIE Niedzica 78.72 319 *e*P **P** 17 58 26.4 +1.4
RAO Raoul Island 78.83 130 LR LR 18 26 50.5
comp=Z,383nm,20.1s,baz=334,slow=31
VYHS Vyhne 79.99 319 *e*P **P** 17 58 32.2 +0.3
VYHS Vyhne 79.99 319 *e*P **P** 17 58 32.2 +0.3
MORC Moravsky Berou 80.18 320 *e*P **P** 17 58 33.6 +0.7
MORC Moravsky Berou 80.18 320 P **P** 17 58 33.6 +0.7
MORC pmax pmax
comp=Z,9.0nm,1.4s
MORC Moravsky Berou 80.18 320 P **P** 17 58 33.6 +0.7
KSP Ksiaz 80.40 322 *e*P **P** 17 58 34.7 +0.6
KRLC Kraliky 80.48 321 *e*P **P** 17 58 35.2 +0.6
KRLC MLR MLR
comp=Z,700nm,14.9s
KRLC Kraliky 80.48 321 *e*P **P** 17 58 35.2 +0.6
KRLC AMS AMS 18 36 20.0
comp=Z,700nm,14.9s
JAVC Velka Javorina 80.52 320 *e*P **P** 17 58 36.6 +1.8
OSTC Ostas 80.58 322 AMS AMS 18 37 30.0
comp=Z,900nm,22.4s
DPC Dobruska-Polom 80.62 321 *e*P **P** 17 58 37.2 +1.9
DPC MLR MLR
comp=Z,800nm,12.7s
DPC Dobruska-Polom 80.62 321 *e*P **P** 17 58 37.2 +1.9
DPC AMS AMS 18 37 30.0
comp=Z,800nm,12.7s
UPC Upice 80.72 322 AMS AMS 18 37 30.0
comp=Z,800nm,20.7s
VRAC Vranov 80.94 320 *e*P **P** 17 58 37.9 +0.9
KRUC Moravsky 81.17 320 *e*P **P** 17 58 36.8 -1.4
URZ Urewera 81.26 139 LR LR 18 30 11.8
comp=Z,364nm,21.5s,baz=31,slow=32
PVCC Panska Ves 81.52 322 AMS AMS 18 38 50.0
comp=Z,900nm,11.3s
BRG Berggiesshubel 81.70 323 *e*P P 17 58 44.4 +3.4
comp=Z,31nm,1.9s
comp=Z,1μm,10.6s
comp=N,220nm,11.0s
comp=E,710nm,11.0s
BRG Berggiesshubel 81.70 323 *e*P P 17 58 44.4 +3.4
BRG pmax pmax
comp=Z,3.0nm,1.9s
BRG MLR MLR
comp=N,1μm,11.0s
BRG MLR MLR
comp=E,220nm,11.0s
RPZ Rata Peaks 81.70 146 P **P** 17 58 41.2 +0.4
comp=E,31nm,1.0s,baz=342,slow=13,SNR=2.6
RPZ LR LR 18 32 08.9
comp=E,394nm,21.4s,baz=328,slow=34
RPZ Rata Peaks 81.70 146 P **P** 17 58 40.9 0.0
PRU Pruhonice 81.80 322 AMS AMS 18 38 10.0
comp=E,700nm,20.5s
PRA Prague 81.82 322 AMS AMS 18 38 00.0
comp=E,300nm,13.3s
YKA Yellowknife Ar 81.99 23 P **P** 17 58 42.0 -0.3
comp=E,7.3nm,0.6s,baz=318,slow=4.6,SNR=45
YKA LR LR 18 38 23.8
comp=E,371nm,19.1s,baz=0.0,slow=38
CLL Collm 82.00 323 *e*P **P** 17 58 43.0 +0.5
CLL *e*PP **PP** 18 01 52.0 +2.3
CLL *e*S **S** 18 08 56.0 -0.5
CLL *e*SS SS 18 14 25.0 +10
CLL *e*SSS SSS 18 18 24.0
CLL LmV 18 39 00.0
comp=Z,1μm,20.0s
CLL Collm 82.00 323 P **P** 17 58 41.4 -1.1
CLL pmax pmax
comp=Z,10.0nm,1.3s
CLL Collm 82.00 323 P **P** 17 58 41.4 -1.1
ARSA Arzberg 82.55 319 *e*P **P** 17 58 45.4 -0.1
comp=Z,3.4nm,0.9s
KHC Kasperske Hory 82.76 321 *e*P P 17 58 51.1 +4.4
KHC MLR MLR
comp=Z,800nm,16.2s
KHC Kasperske Hory 82.76 321 *e*P P 17 58 51.1 +4.4
KHC AMS AMS 18 37 50.0
comp=Z,800nm,16.2s
KHC Kasperske Hory 82.76 321 P P 17 58 50.1 +3.4
GEC2 GERESS Array S 82.84 321 P **P** 17 58 46.7 -0.4
GERES GERESS Array B 82.84 321 P **P** 17 58 48.2 +1.1
comp=Z,1.5nm,0.9s,baz=64,slow=6.1,SNR=8.0
GERES LR LR 18 38 07.5
comp=Z,513nm,21.1s,baz=64,slow=37
MOA Molln 83.00 320 *e*P **P** 17 58 50.0 +2.1
comp=Z,11nm,1.5s
SOKA Soboth 83.12 318 *e*P P 17 58 53.0 +4.5
comp=Z,13nm,1.7s
OBKA Obir 83.49 318 *e*P **P** 17 58 51.9 +1.4
comp=Z,2.4nm,0.7s
GRF Grafenberg Arr 83.80 322 *e*P P 17 58 55.9 +3.9
comp=Z,28nm,1.9s,baz=65,slow=5.2
MYKA Terra Mystica 83.97 319 *e*P **P** 17 58 53.7 +0.8
comp=Z,2.5nm,0.6s
ZOU Zoufplan 84.41 319 P **P** 17 58 54.5 -0.8
ABTA Abfaltersbach 84.58 319 *e*P **P** 17 58 56.3 +0.2
comp=Z,10nm,1.1s
WATA Walderalm 84.83 320 *e*P **P** 17 58 58.9 +1.5
comp=Z,8.1nm,1.0s
WTTA Wattenberg 84.83 320 *e*P **P** 17 58 58.1 +0.7
comp=Z,6.3nm,0.8s
ABPO Ambohimpanom 84.93 246 P **P** 17 58 57.7 -0.6
ABPO pmax pmax
comp=Z,17nm,1.1s
ABPO Ambohimpanom 84.93 246 P **P** 17 58 57.7 -0.6
ABPO IAmb IAmb 17 58 59.8
comp=Z,17nm,1.1s
MOTA Moosalm 85.10 320 *e*P **P** 17 58 57.9 -0.8
comp=Z,2.8nm,0.8s
SQTA Sankt Quirin 85.10 320 *e*P **P** 17 59 00.3 +1.6
comp=Z,11nm,1.4s
RETA Reutte 85.22 321 *e*P **P** 17 58 60.0 +0.7
comp=Z,4.3nm,1.1s
FETA Feichten 85.49 320 *e*P **P** 17 59 03.1 +2.4
comp=Z,5.8nm,1.1s
KIBK Kibwezi 85.60 265 P **P** 17 59 04.4 +2.7
SNR=9.7
LODK Lodwar 85.63 272 P **P** 17 59 03.7 +1.8
KMBO Kilima Mbogo 85.81 267 P **P** 17 59 05.8 +2.9
comp=Z,3.6nm,0.8s,baz=49,slow=6.4,SNR=11
KMBO Kilima Mbogo 85.81 267 *i*P **P** 17 59 04.6 +1.7
SNR=8.3
KMBO Kilima Mbogo 85.81 267 P **P** 17 59 05.1 +2.2
KMBO P **P** 17 59 05.1 +2.2
KMBO Kilima Mbogo 85.81 267 P **P** 17 59 03.7 +0.8
KMBO pmax pmax
comp=Z,15nm,1.2s
KMBO Kilima Mbogo 85.81 267 P **P** 17 59 03.7 +0.8
KMBO IAmb IAmb 17 59 09.3
comp=Z,15nm,1.1s
DAVA Damuels 85.83 321 *e*P **P** 17 59 01.8 -0.7
comp=Z,5.6nm,1.2s
NRCA Norcia 86.21 316 P **P** 17 59 05.0 +0.6
BORG Borgarnes 86.26 345 P **P** 17 59 02.1 -1.8
comp=Z,13nm,0.4s,baz=236,slow=5.8
BORG Borgarnes 86.26 345 P **P** 17 59 01.9 -2.1
BORG pmax pmax
comp=Z,66nm,1.3s
BORG Borgarnes 86.26 345 P **P** 17 59 01.9 -2.1
AQU L'Aquila 86.28 315 P **P** 17 59 04.1 -0.5
AQU pmax pmax
comp=Z,48nm,1.4s
AQU L'Aquila 86.28 315 P **P** 17 59 04.1 -0.5
MURB Monte Urbino 86.37 316 P **P** 17 59 05.0 0.0
WLF Walferdange 86.57 324 P **P** 17 59 04.3 -1.5
WLF pmax pmax
comp=Z,18nm,1.2s
WLF Walferdange 86.57 324 P **P** 17 59 04.3 -1.5
WLF IAmb IAmb 17 59 16.5
comp=Z,18nm,1.2s
TUE Stuetta 86.58 320 P **P** 17 59 07.6 +1.4
TUE IAmb IAmb 17 59 13.3
comp=Z,16nm,1.3s
D03D Eldon 87.15 38 P **P** 17 59 09.8 +1.1
baz=304
B06A Marblemount 87.47 37 P **P** 17 59 09.4 -0.7
B06A IAmb IAmb 17 59 17.3
comp=Z,10nm,0.9s
RAR Rarotonga 88.62 114 LR LR 18 30 38.7
comp=Z,105nm,21.8s,baz=308,slow=30
B08A Colville Reser 88.72 36 P **P** 17 59 15.2 -1.0
B08A IAmb IAmb 17 59 20.1
comp=Z,17nm,1.1s
E07A Sunnyside 89.52 38 P **P** 17 59 19.4 -0.6
E07A IAmb IAmb 17 59 24.4
comp=Z,16nm,1.0s
K02D Willamette Mer 89.53 42 P **P** 17 59 20.0 -0.2
baz=304
C09A Chrisman Ranch 89.62 36 P **P** 17 59 20.8 +0.4
C09A IAmb IAmb 17 59 24.5
comp=Z,30nm,1.4s
D08A Wollman Farm, 89.73 37 P **P** 17 59 20.8 -0.1
HAWA Hanford 89.79 38 P **P** 17 59 20.3 -1.0
HAWA IAmb IAmb 17 59 26.4
comp=Z,15nm,1.3s
F07A Phinny Hill Vi 89.87 38 P **P** 17 59 21.9 +0.3
F07A IAmb IAmb 17 59 25.5
comp=Z,8.9nm,0.7s
NEW Newport 89.94 35 P **P** 17 59 21.1 -0.9
comp=Z,9.6nm,0.9s,baz=296,slow=5.8,SNR=7.5
NEW Newport 89.94 35 P **P** 17 59 22.2 +0.2
NEW pmax pmax
comp=Z,15nm,1.1s
NEW Newport 89.94 35 P **P** 17 59 21.8 -0.2
baz=309
NEW Newport 89.94 35 P **P** 17 59 22.2 +0.2
NEW IAmb IAmb 17 59 25.9
comp=Z,15nm,1.1s
E08A Dider Farm, El 90.00 37 P **P** 17 59 22.6 +0.4
J04D Umpqua Nationa 90.17 41 P **P** 17 59 22.8 -0.5
baz=305
E09A Wood Farm, Sta 90.48 37 P **P** 17 59 24.2 -0.3
E09A IAmb IAmb 17 59 28.8
comp=Z,23nm,1.3s
PINE Pine Mountain 90.54 40 P **P** 17 59 25.4 +0.4
L04D Klamath Falls 90.63 42 P **P** 17 59 25.1 -0.3
baz=305
J05D Fort Rock, OR 90.66 41 P **P** 17 59 25.2 -0.3
baz=306
YBH Yreka Blue Hor 90.66 43 P **P** 17 59 26.2 +0.6
comp=Z,5.6nm,1.1s,baz=193,slow=4.1,SNR=4.1
YBH Yreka Blue Hor 90.66 43 P **P** 17 59 25.5 0.0
YBH pmax pmax
comp=Z,19nm,1.4s
YBH Yreka Blue Hor 90.66 43 P **P** 17 59 25.5 0.0
YBH IAmb IAmb 17 59 30.6
comp=Z,19nm,1.4s
M02C Callahan 90.77 43 P **P** 17 59 25.1 -0.9
baz=305
G08A Pilot Rock 90.78 38 P **P** 17 59 25.8 -0.2
G08A IAmb IAmb 17 59 31.2
comp=Z,14nm,1.5s
WALA Waterton Lakes 91.06 33 P **P** 17 59 26.3 -0.9
WALA IAmb IAmb 17 59 31.4
comp=Z,16nm,1.1s
K05A Summer Lake 91.19 41 P **P** 17 59 28.2 +0.1
I07A Izee 91.20 39 P **P** 17 59 28.8 +0.8
I07A IAmb IAmb 17 59 55.5
comp=Z,13nm,1.5s
CASY Casey 91.31 185 P **P** 17 59 27.2 -0.3
CASY IAmb IAmb 17 59 28.0
comp=Z,12nm,1.4s
O02D Mt. Diablo Mer 91.50 44 P **P** 17 59 29.7 +0.3
baz=305
BMO Blue Mountains 91.97 38 P **P** 17 59 31.7 +0.1
BMO pmax pmax
comp=Z,17nm,1.5s
BMO Blue Mountains 91.97 38 P **P** 17 59 31.6 +0.1
BMO IAmb IAmb 17 59 36.4
comp=Z,17nm,1.5s
MOD Modoc Plateau 92.03 41 P **P** 17 59 31.7 -0.3
O03E Paynes Creek 92.05 43 P **P** 17 59 31.9 0.0
baz=305
FFC Flin Flon 92.14 24 P **P** 17 59 31.8 -0.2
FFC pmax pmax
comp=Z,15nm,1.1s
FFC Flin Flon 92.14 24 P **P** 17 59 31.8 -0.2
FFC IAmb IAmb 17 59 33.9
comp=Z,15nm,1.1s
J08A Circle Bar Ran 92.23 39 P **P** 17 59 32.9 +0.1
J08A IAmb IAmb 17 59 38.0
comp=Z,12nm,1.1s
KEST Kesra 92.44 311 LR LR 18 47 52.8
comp=Z,393nm,18.2s,baz=316,slow=40
MSO Missoula 92.52 35 P **P** 17 59 33.8 -0.2
baz=311
ORV Oroville 92.67 44 P **P** 17 59 34.2 -0.5
ORV pmax pmax
comp=Z,12nm,1.3s
ORV Oroville 92.67 44 P **P** 17 59 34.2 -0.5
ORV IAmb IAmb 17 59 36.7
comp=Z,12nm,1.3s
WVOR Wild Horse Val 92.70 40 P **P** 17 59 35.2 +0.2
WVOR pmax pmax
comp=Z,12nm,1.2s
WVOR Wild Horse Val 92.70 40 P **P** 17 59 35.2 +0.2
WVOR IAmb IAmb 17 59 40.1
comp=Z,12nm,1.2s
BEKR Beckworth 93.20 43 P **P** 17 59 37.5 +0.1
BEKR IAmb IAmb 17 59 39.1
comp=Z,11nm,1.1s
AFDM Forest Hills D 93.35 44 P **P** 17 59 37.0 -1.0
AFDM IAmb IAmb 17 59 38.8
comp=Z,10nm,1.2s
MFID Camas Ranch 93.70 38 P **P** 17 59 40.0 +0.5
MFID IAmb IAmb 17 59 44.7
comp=Z,14nm,1.4s
EGMT Eagleton 93.80 32 P **P** 17 59 39.8 0.0
baz=314
PAHR Pah Rah Range 93.90 43 P **P** 17 59 40.5 0.0
PAHR IAmb IAmb 17 59 41.3
comp=Z,18nm,1.4s
DLMT Dillon 94.19 35 P **P** 17 59 42.3 +0.5
DLMT IAmb IAmb 17 59 46.5
comp=Z,10nm,1.2s
CMB Columbia Colle 94.26 45 P **P** 17 59 41.7 -0.5
CMB pmax pmax
comp=Z,9.0nm,1.1s
CMB Columbia Colle 94.26 45 P **P** 17 59 41.7 -0.5
CMB IAmb IAmb 17 59 43.7
comp=Z,9.0nm,1.1s
HLID Hailey 94.40 37 P **P** 17 59 42.7 -0.2
baz=311
HLID Hailey 94.40 37 P **P** 17 59 43.8 +0.9
WAKR Walker 94.58 44 P **P** 17 59 44.5 +0.7
WAKR IAmb IAmb 17 59 48.0
comp=Z,9.2nm,1.2s
RYN Ryan 95.08 43 P **P** 17 59 46.0 -0.1
RYN IAmb IAmb 17 59 47.6
comp=Z,7.0nm,1.0s
LHV Little Huntoon 95.32 44 P **P** 17 59 46.4 -0.5
LHV IAmb IAmb 17 59 49.0
comp=Z,12nm,1.2s
MDPB Devils Postpil 95.33 44 P **P** 17 59 47.7 +0.3
MDPB IAmb IAmb 17 59 49.1
comp=Z,8.1nm,1.2s
NVAR Mina Array Bea 95.34 43 P **P** 17 59 46.8 -0.6
comp=Z,3.5nm,0.9s,baz=285,slow=4.2,SNR=16
NVAR LR LR 18 39 03.2
comp=Z,70nm,20.6s,baz=284,slow=33
NVAR Mina Array Bea 95.34 43 P **P** 17 59 46.3 -1.0
OMMB Old Mammoth Mi 95.39 44 P **P** 17 59 46.6 -1.1
OMMB IAmb IAmb 17 59 49.6
comp=Z,9.0nm,1.3s
NV11 Mina Array Sit 95.43 43 P **P** 17 59 47.3 -0.3
NV11 IAmb IAmb 17 59 48.5
comp=Z,9.4nm,1.4s
PPT Papeete 95.74 107 LR LR 18 39 29.0
comp=Z,62nm,18.2s,baz=339,slow=33
ELK Elko 95.74 40 P **P** 17 59 50.0 +0.8
comp=Z,1.3nm,1.0s,baz=350,slow=7.4,SNR=3.1
PPT2 Papeete2 95.75 107 *e*LR LR 18 30 43.9
comp=Z,1μm,30.8s
IMW Indian Meadow 96.05 36 P **P** 17 59 49.5 -1.0
RLMT Red Lodge 96.07 34 P **P** 17 59 50.1 -0.3
RLMT IAmb IAmb 18 00 00.6
comp=Z,7.1nm,0.9s
TIN Tinemaha, Big 96.22 44 P **P** 17 59 51.2 0.0
baz=308
TPH Tonopah 96.23 43 P **P** 17 59 51.2 -0.1
TPH pmax pmax
comp=Z,31nm,0.9s
TPH Tonopah 96.23 43 P **P** 17 59 51.2 -0.1
PKM Mcpherson Peak 96.49 47 P **P** 17 59 52.5 -0.1
baz=306
CWC Cottonwood Cre 96.69 45 P **P** 17 59 52.8 -0.6
baz=308
ISA Isabella, Lake 96.91 46 P **P** 17 59 53.9 -0.4
baz=307
MPMC Manual Prospec 97.30 45 P Pdif 17 59 55.5 -0.8
baz=308
FURC Furnace Creek, 97.45 44 P Pdif 17 59 56.5 -0.1
baz=308
LRMC Laurel Mtn Rad 97.53 45 P Pdif 17 59 56.8 -0.5
baz=308
TPNV Topopah Spring 97.53 43 P Pdif 17 59 57.2 -0.1
baz=309
BW06 Boulder Array 97.56 36 P Pdif 17 59 56.2 -1.1
baz=314
BW06 Boulder Array 97.56 36 P **P** 17 59 55.4 -1.9
BW06 IAmb IAmb 18 00 02.2
comp=Z,9.7nm,1.2s
PD31 Pinedale Array 97.56 36 P **P** 17 59 55.1 -2.2
PD31 IAmb IAmb 18 00 02.3
comp=Z,9.7nm,1.2s
PDAR Pinedale Array 97.56 36 LR LR 18 48 09.4
comp=Z,67nm,18.2s,baz=348,slow=38
EDW2 Edwards Air Fo 97.69 46 P Pdif 17 59 57.8 -0.1
baz=308
ULM Lac du Bonnet 97.97 24 LR LR 18 47 28.7
comp=Z,482nm,18.3s,baz=56,slow=37
TBI Tubuai 98.16 112 *e*LR LR 18 31 45.0
comp=Z,351nm,24.0s,baz=299
GSC Goldstone, Bar 98.20 45 P Pdif 17 59 59.5 -0.7
GSC pmax pmax
comp=Z,13nm,0.3s
GSC Goldstone, Bar 98.20 45 P Pdif 17 59 59.5 -0.7
ESDC Sonseca Array 98.43 321 LR LR 18 49 07.3
comp=Z,498nm,18.4s,baz=5.0,slow=38
KNB Kanab 99.59 42 P **Pdif** 18 00 05.8 -0.7
KNB pmax pmax
comp=Z,6.0nm,0.5s
KNB Kanab 99.59 42 **Pdif** 18 00 05.8 -0.7
DBIC Dimbokro 119.62 294 PKP **PKiKP** 18 05 13.0 -0.5
comp=Z,4.0nm,1.0s,baz=76,slow=8.3,SNR=2.2
SNAA Sanae 124.17 198 PKPdf **PKiKP** 18 05 19.8 -1.0
VNA2 Neumayer--Watz 125.82 198 PKPdf **PKiKP** 18 05 23.6 -0.4
baz=102,slow=1.9
LCBC Los cerdobas, 141.92 31 *e*P **PKiKP** 18 05 59.7 +1.4
DBBC Dabeiba 143.61 32 *e*P PKPab 18 05 53.1 -1.8
SDV Santo Domingo 144.20 22 *e*P PKPbc 18 05 56.5 -1.2
SDV Santo Domingo 144.20 22 PKPdf PKPbc 18 05 56.6 -1.0
HELC Santa Helena 144.65 31 *e*P **PKPdf** 18 05 59.6 -1.1
CBOC Ciudad Bolivar 144.70 32 *e*P PKPbc 18 05 57.7 -1.6
PTBC PUERTO BERRIO 144.84 29 *e*P **PKPab** 18 05 57.5 -1.9
PAMC Pamplona, Colo 144.86 26 *e*P **PKPdf** 18 05 59.3 -1.9
BARC Barichara 145.34 27 *e*P **PKPbc** 18 05 59.3 -2.2
PLMC San Jos del P 145.40 34 *e*P **PKPbc** 18 05 58.6 -2.8
NORC Norcasia 145.51 31 *e*P **PKPdf** 18 06 00.1 -1.6
MALC Bahia Malaga 145.61 36 *e*P **PKPab** 18 06 01.4 -0.8
SPBC San Pablo de B 145.80 30 *e*P **PKPdf** 18 06 00.9 -1.3
RUSC La Rusia 146.01 28 *e*P **PKPdf** 18 06 01.6 -1.5
TAMC Tame, Arauca 146.05 25 *e*P **PKPab** 18 06 02.3 -1.6
TOLC Tolima 146.15 32 *e*P **PKPab** 18 06 03.3 -1.4
YOTC Yotoco, Valle 146.15 35 *e*P **PKPbc** 18 06 02.3 -1.5
ANIL Santa Ana 146.19 33 *e*P **PKPab** 18 06 03.0 -1.8
ROSC El Rosal 146.40 31 PKPbc **PKPab** 18 06 04.5 -1.2
comp=Z,19nm,0.8s,baz=108,slow=14,SNR=6.6
ROSC El Rosal 146.40 31 *e*P **PKPab** 18 06 04.0 -1.7
ROSC El Rosal 146.40 31 **PKPbc** 18 06 03.3 -1.6
ORTC Ortega, Tolima 146.77 33 *e*P **PKPdf** 18 06 02.5 -1.3
CHIC Chingaza 146.86 30 *e*P **PKPdf** 18 06 03.9 -0.6
PRAC Prado 147.12 33 *e*P **PKPbc** 18 06 05.7 -0.8
POPC Popayan, Colom 147.19 36 *e*P **PKPbc** 18 06 05.4 -1.7
MARP Paez Belalcaza 147.32 35 *e*P **PKPbc** 18 06 05.7 -1.7
PCON Cinco Dias 147.52 36 *e*P **PKPdf** 18 06 05.4 -0.4
BETC Betania 147.72 34 *e*P **PKPbc** 18 06 06.7 -1.6
PAC1 Pacto, Paraso 147.83 42 *e*P **PKPbc** 18 06 07.4 -1.2
GCUF Volcan Galeras 147.91 39 *e*P **PKPbc** 18 06 07.1 -2.2
PTGC Puerto Gaitan, 147.94 28 *e*P **PKPdf** 18 06 05.5 -0.2
CUSE Cuicocha Este 148.03 41 *e*P **PKPbc** 18 06 07.5 -2.1
OTAV Otavalo 148.06 42 *e*P **PKPdf** 18 06 05.7 -0.8
OTAV Otavalo 148.06 42 PKIKP **PKPdf** 18 06 06.1 -0.5
OTAV Otavalo 148.06 42 **PKPdf** 18 06 06.1 -0.5
GARC Garzon, Huila 148.12 35 *e*P **PKPbc** 18 06 08.7 -0.9
FLOC Florencia 148.55 36 *e*P **PKPbc** 18 06 07.1 -3.3
PUAC Puerto Asis, P 148.90 38 *e*P **PKPbc** 18 06 08.8 -2.5
GUVC San Jose del G 149.20 30 *e*P **PKPdf** 18 06 07.3 -0.5
PTLC Puerto Leguiza 150.19 36 *e*P **PKiKP** 18 06 13.5 -1.8
PLCA Paso Flores 160.98 149 PKPab **PKPab** 18 07 06.4 +0.6
comp=Z,1.9nm,0.7s,baz=302,slow=6.2,SNR=3.1
SAML Samuel 163.36 19 PKIKP **PKPdf** 18 06 24.8 -1.4
SAML Samuel 163.36 19 **PKPdf** 18 06 24.8 -1.4
BO02 Sierra Bellavi 165.09 134 **PKPdf** 18 06 26.6 -0.6
BDFB Brasilia 166.95 313 PKP **PKPdf** 18 06 28.9 -0.3
comp=Z,1.6nm,0.4s,baz=86,slow=14,SNR=1.7
LPAZ La Paz 167.15 50 PKP **PKPdf** 18 06 30.0 0.0
comp=Z,12nm,1.2s,baz=7.6,slow=3.8,SNR=21
LPAZ PKPab **PKPab** 18 07 32.3 -1.9
comp=Z,3.4nm,1.0s,baz=346,slow=9.6,SNR=3.8
LPAZ La Paz 167.15 50 *e*P **PKPdf** 18 06 28.7 -1.3
LPAZ La Paz 167.15 50 PKIKP **PKPdf** 18 06 29.6 -0.4
LPAZ La Paz 167.15 50 **PKPdf** 18 06 29.6 -0.4
PB16 IPOC Station P 167.38 61 **PKPdf** 18 06 29.4 -0.7
MNMC Minye Minye 167.72 64 **PKPdf** 18 06 30.4 +0.5
PB11 IPOC Station P 167.97 67 **PKPdf** 18 06 28.4 -1.6
GO01 Chusmiza 168.31 66 **PKPdf** 18 06 30.3 -0.3
PB07 IPOC Station P 168.53 76 **PKPdf** 18 06 30.7 +0.4
PB08 IPOC Station P 168.56 68 **PKPdf** 18 06 29.8 -0.9
PB01 IPOC Station P 168.65 73 **PKPdf** 18 06 29.4 -0.9
PB01 **PKPab** 18 07 40.0 -0.2
PB09 IPOC Station P 169.12 76 **PKPdf** 18 06 31.9 +1.2

GO02 Mina Guanaco 169.38 94 PKPdf 18 06 31.6 +0.6

*MEX **19** 17:49:40.9±0.3, 14°.43N×92°.72W, h30km±8km, MD3.9*
*GCG **19** 17:49:45.4±1.6, 15°.17N×92°.22W, h54km±79km, MD3.6*
ISC 19 17:49:41.0±2.0, **14°.68N**±0°.08×**92°.65W**±0°.07, **h23**km±16km, **n10**, σ1§**24**/20, **1D**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.43**	**59**	*i* P	**Pn**	**17 49 51.3**	**-0.6**
THIG				*i* S	**Sn**	**17 49 60.0**	**+0.9**
STG3	**Santiaguito 3,**	**1.04**	**88**	*e*P	**Pn**	**17 50 01.1**	**+0.6**
STG3				*e*S	**Sb**	**17 50 14.2**	**+0.3**
ERG	**Entre ros, C**	**1.07**	**103**	*e*P	**Pb**	**17 50 02.0**	**+1.0**
ERG				*e*S	**Sn**	**17 50 16.4**	**+1.5**
PCIG		**1.16**	**332**	*e*P	**Pn**	**17 50 01.8**	**-0.1**
PCIG				*e*S	**Sn**	**17 50 17.1**	**+0.2**
CCIG	**Comitan**	**1.67**	**17**	*e*P	**Pb**	**17 50 10.5**	**-0.7**
CCIG				*e*S	**Sb**	**17 50 32.3**	**+0.6**
FUG	**Fuego 3**	**1.77**	**97**	*e*P	**Pb**	**17 50 11.8**	**-1.1**
FUG				*e*S	**Sn**	**17 50 33.3**	**+1.1**
PCG	**Pacaya**	**2.00**	**98**	*e*P	**Pn**	**17 50 14.1**	**+0.4**
PCG				*e*S	**Sn**	**17 50 36.9**	**-1.3**
TGIG		**2.13**	**348**	*i* P	**Pn**	**17 50 15.8**	**+0.5**
TGIG				*i* S	**Sn**	**17 50 42.7**	**+1.5**
NBG	**Las Nubes**	**2.23**	**92**	*e*P	**Pb**	**17 50 20.2**	**-0.6**
NBG				⇓*e*S	**Sn**	**17 50 40.5**	**-3.3**
CMIG	**Matias Romero**	**3.22**	**318**	*e*P	**Pn**	**17 50 29.9**	**-0.4**
CMIG				*i* S	**Sn**	**17 51 07.4**	**-0.6**

IDC 19 17:51:43.1±7.6, **18°.38S×176°.55W**, **h0**km, **mb3.4**/2, **mb1 3.6**/2, **mb1mx3.4**/43, **mbtmp3.4**/2, **Error ellipse: s-maj=309.8km s-min=122.4km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.28**	**260**	P	P	18 00 10.9	+0.1
	0.1nm,0.3s,baz=97,slow=7.4,SNR=6.8						
ASAR	**Alice Springs**	**46.37**	**255**	P	P	18 00 11.2	-0.3
	0.6nm,0.9s,baz=86,slow=8.3,SNR=4.5						
AKASG	**Malin Array Be**	**141.78**	**333**	PKP	PKPdf	18 11 16.0	-0.6
	0.3nm,0.4s,baz=43,slow=3.9,SNR=2.0						

*IDC **19** 17:54:33.5±3.7, 36°.90N×71°.75E, h70km±32km, mb3.5/12, mb1 3.6/17, mb1mx3.4/63, mbtmp3.9/17, ML3.8/5, Error ellipse: s-maj=25.4km s-min=19.0km az=166.0*
*NEIC **19** 17:54:38.6±1.2, 37°.20N±0°.07×71°.71E±0°.09, h103km±9km, mb4.0/13, Error ellipse: s-maj=10.9km s-min=9.0km az=123.0*
*NNC **19** 17:54:39.4±2.3, 37°.31N×71°.28E, h73km±68km, mb3.7, mpv3.9, Error ellipse: s-maj=23.4km s-min=16.1km az=134.0*
ISC 19 17:54:36.3±0.6, **36°.98N**±0°.06×**71°.60E**±0°.06, **h106**km, **n82**, σ1§**87**/82, **mb3.7**/13, **4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**2.25**	**334**	Pn	**Pn**	**17 55 12.8**	**+0.4**
CHGR	**Chuyangaron**	**2.55**	**312**	Pn	**Pn**	**17 55 16.9**	**+0.6**
KBL	**Kabul**	**3.20**	**221**	Pn	Pn	17 55 30.2	+5.2
NIL	**Nilore**	**3.59**	**157**		Pn	17 55 35.4	+5.3
AML	**Almayashu**	**5.39**	**17**	P	**Pn**	**17 55 54.6**	**0.0**
	SNR=133						
EKS2	**Erkin-Say**	**5.91**	**16**	P	**Pn**	**17 56 02.8**	**+1.3**
	SNR=20						
AAK	**Ala-Archa**	**6.07**	**21**	P	**Pn**	**17 56 04.3**	**+0.7**
	SNR=11						
AAK	**Ala-Archa**	**6.07**	**21**	⇑P	**Pn**	**17 56 04.3**	**+0.7**
	5.4nm,0.5s						
AAK				S	**Sn**	**17 57 09.6**	**-2.1**
	13nm,0.5s						
AAK	**Ala-Archa**	**6.07**	**21**	Pn	**Pn**	**17 56 04.1**	**+0.5**
DHRM	**DHARAMSHALA**	**6.11**	**139**	*e*P	Pn	17 56 07.7	+3.4
DHRM				*e*S	**Sn**	**17 57 11.9**	**-1.0**
DHRM				IAML		17 57 15.4	
	comp=E,620nm,0.8s						
KK31	**Karatay Array**	**6.17**	**353**	⇓P	**Pn**	**17 56 04.6**	**-0.3**
	comp=E,4.5nm,0.3s,baz=180,slow=13,SNR=133						
KK31				S	**Sn**	**17 57 09.1**	**-4.8**
	comp=E,13nm,0.3s,baz=173,slow=18,SNR=14						
KK31	**Karatay Array**	**6.17**	**353**		**Pn**	**17 56 04.5**	**-0.3**
KKAR	**Karatay Array**	**6.17**	**353**		**Pn**	**17 56 04.5**	**-0.3**
KKAR	**Karatay Array**	**6.17**	**353**		**Pn**	**17 56 04.5**	**-0.3**
CHMS	**Chumysh**	**6.48**	**21**	P	**Pn**	**17 56 09.4**	**+0.4**
	SNR=7.6						
USP	**Ospenovka**	**6.66**	**19**	P	**Pn**	**17 56 11.2**	**-0.3**
	SNR=10.0						
TKM2	**Tokmak 2**	**6.68**	**26**	⇑P	**Pn**	**17 56 12.4**	**+0.5**
	comp=E,4.6nm,0.6s						
SMLA	**Simla**	**7.45**	**140**	*e*P	Pn	17 56 25.1	+2.9
SMLA				*e*S	**Sn**	**17 57 42.5**	**-2.5**
SMLA				IAML		17 57 46.1	
	comp=E,165nm,0.5s						
DDI	**Dehra Dun**	**8.55**	**139**	*e*S	**Sn**	**17 58 10.2**	**-1.8**
GYB1	**ALIBECK ARRAY**	**10.75**	**279**	Pn	**Pn**	**17 57 06.2**	**-0.9**
GYA2	**ALIBECK ARRAY**	**10.76**	**279**	Pn	**Pn**	**17 57 06.3**	**-0.8**
GEYT	**Alibeck**	**10.76**	**279**	P	**Pn**	**17 57 05.2**	**-2.0**
	comp=E,1.4nm,0.3s,baz=98,slow=8.4,SNR=10						
GEYT				S	**Sn**	**17 58 58.5**	**-7.1**
	comp=E,1.5nm,0.3s,baz=104,slow=10,SNR=6.6						
GEYT	**Alibeck**	**10.76**	**279**	Pn	**Pn**	**17 57 06.3**	**-0.9**
GYA0B	**ALIBECK ARRAY**	**10.76**	**279**	⇓P	**Pn**	**17 57 05.2**	**-2.0**
GYA0B	**ALIBECK ARRAY**	**10.76**	**279**	Pn	**Pn**	**17 57 05.6**	**-1.6**
GYA3	**ALIBECK ARRAY**	**10.76**	**279**	Pn	**Pn**	**17 57 06.3**	**-0.9**
GYB5	**ALIBECK ARRAY**	**10.77**	**279**	Pn	**Pn**	**17 57 06.3**	**-1.0**
GYB4	**ALIBECK ARRAY**	**10.78**	**279**	Pn	**Pn**	**17 57 06.0**	**-1.4**
MAKZ	**Makanchi**	**12.48**	**35**	Pn	**Pn**	**17 57 27.6**	**-2.4**
MK31	**Makanchi Array**	**12.62**	**36**	⇑P	**Pn**	**17 57 34.6**	**+2.8**
	comp=E,0.1nm,0.3s,baz=222,slow=12,SNR=4.1						
MK31	**Makanchi Array**	**12.62**	**36**	Pn	**Pn**	**17 57 31.7**	**-0.2**
MKAR	**Makanchi Array**	**12.62**	**36**	P	**Pn**	**17 57 31.0**	**-0.9**
	comp=E,0.1nm,0.3s,baz=217,slow=16,SNR=3.3						
MKAR	**Makanchi Array**	**12.62**	**36**		**Pn**	**17 57 30.9**	**-1.0**
PYUN	**Piuthan**	**13.06**	**129**	*e*P	**Pn**	**17 57 36.2**	**-1.7**
	comp=E,28nm,0.4s						
DANN	**Dangsing**	**13.37**	**127**	*e*P	**Pn**	**17 57 40.1**	**-2.0**
	comp=E,10nm,0.3s						
KOLN	**Koldanda**	**13.67**	**129**	*e*P	**Pn**	**17 57 43.9**	**-2.0**
	comp=E,29nm,0.7s						
GKN	**Gorkha**	**14.17**	**125**	*e*P	**Pn**	**17 57 50.6**	**-1.7**
KURBB	**Kurchatov Arra**	**14.51**	**18**	P	**Pn**	**17 57 59.2**	**+2.9**
	comp=E,0.1nm,0.3s,baz=204,slow=11,SNR=6.0						
KURK	**Kurchatov**	**14.62**	**18**		**Pn**	**17 57 57.1**	**-0.6**
KKN	**Kakani**	**14.74**	**125**	*e*P	**Pn**	**17 57 57.2**	**-2.4**
	comp=E,12nm,0.4s						
DMN	**Daman**	**14.74**	**125**	*e*P	**Pn**	**17 57 59.3**	**-0.4**
AB07	**Akbulak array**	**14.89**	**329**	Pn	**Pn**	**17 57 59.1**	**-2.0**
AB08	**Akbulak array**	**14.90**	**329**	Pn	**Pn**	**17 57 59.0**	**-2.2**
AB31	**Akbulak array**	**14.90**	**329**	P	**Pn**	**17 57 59.0**	**-2.3**
	comp=E,0.5nm,0.3s,baz=135,slow=12,SNR=33						
ABKAR	**Akbulak array**	**14.90**	**329**		**Pn**	**17 57 59.3**	**-2.0**
ABKAR	**Akbulak array**	**14.90**	**329**	Pn	**Pn**	**17 57 59.1**	**-2.2**
PKIN	**Phulchoki**	**14.96**	**125**	*e*P	**Pn**	**17 58 01.2**	**-1.2**
	comp=E,19nm,0.6s						
PKI	**Pulchoki**	**14.97**	**125**	*e*P	**Pn**	**17 58 01.4**	**-1.2**
	comp=E,21nm,0.6s						
GUN	**Gumba**	**15.06**	**123**	*e*P	**Pn**	**17 58 02.4**	**-1.4**
	comp=E,53nm,0.8s						
BVAR	**Borovoye Array**	**16.06**	**357**	P	**Pn**	**17 58 17.0**	**+1.2**
	comp=E,0.4nm,0.3s,baz=143,slow=12,SNR=4.1						
BRVK	**Borovoye**	**16.10**	**357**	Pn	**Pn**	**17 58 12.9**	**-3.4**
AKTO	**Aktyubinsk**	**16.61**	**328**	P	**Pn**	**17 58 22.8**	**+0.3**
	comp=E,2.5nm,0.3s,baz=137,slow=9.9,SNR=29						
AKTO				S	Sn	18 01 13.3	-14
	comp=E,0.1nm,0.3s,baz=210,slow=20,SNR=2.8						
AKTO	**Aktyubinsk**	**16.61**	**328**	⇑P	**P**	**17 58 24.7**	**+1.5**
	comp=E,9.8nm,0.6s						
ZAA0	**Zalesovo Array**	**19.28**	**24**	P	**P**	**17 58 51.8**	**-0.6**
ZAA0				IAmb	IAmb	17 58 57.3	
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**19.28**	**24**	P	**P**	**17 58 52.2**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=209,slow=10,SNR=8.1						
ZALV	**Zalesovo Beam**	**19.28**	**24**	P	**P**	**17 58 52.3**	**-0.1**
SHL	**Shillong**	**20.69**	**118**	P	Pn	17 59 10.2	-1.2
SHL				IAmb	IAmb	17 59 10.8	
	comp=Z,11nm,1.0s						
ARU	**Arti**	**21.34**	**340**	P	**P**	**17 59 15.5**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=128,slow=19,SNR=2.1						
ARU	**Arti**	**21.34**	**340**	P	**P**	**17 59 14.6**	**+0.1**
ARU				IAmb	IAmb	17 59 25.2	
	comp=Z,3.6nm,0.9s						
KBZ	**Khabaz**	**22.81**	**296**	P	**P**	**17 59 31.9**	**+1.9**
	comp=Z,1.0nm,0.8s,baz=53,slow=20,SNR=1.3						
ASF	**Jabal al Asfar**	**28.87**	**271**	P	**P**	**18 00 28.6**	**+3.6**
	comp=Z,2.1nm,0.5s,baz=45,slow=10.0,SNR=2.6						
FIA1	**FINESS Array S**	**37.35**	**326**	P	**P**	**18 01 39.8**	**+1.6**
FIA1				IAmb	IAmb	18 01 41.5	
	comp=Z,13nm,1.2s						
FINES	**FINESS Array B**	**37.35**	**326**	P	**P**	**18 01 40.5**	**+2.4**
	comp=Z,0.8nm,0.3s,baz=118,slow=9.5,SNR=4.7						
FINES	**FINESS Array B**	**37.35**	**326**	P	**P**	**18 01 40.3**	**+2.2**
ARC3	**ARCESS Array S**	**40.88**	**337**	P	**P**	**18 02 09.5**	**+2.2**
ARC2	**ARCESS Array S**	**40.88**	**337**	P	**P**	**18 02 09.7**	**+2.3**
ARD2	**ARCESS Array S**	**40.88**	**337**	P	**P**	**18 02 09.4**	**+2.0**
ARCES	**ARCESS Array B**	**40.88**	**337**	P	**P**	**18 02 09.4**	**+2.0**
	comp=Z,1.5nm,0.6s,baz=114,slow=8.6,SNR=9.9						
ARC6	**ARCESS Array S**	**40.89**	**337**	P	**P**	**18 02 09.4**	**+1.9**
YAK	**Yakutsk**	**43.29**	**36**	P	**P**	**18 02 26.5**	**-0.5**
	comp=Z,3.2nm,0.3s,baz=172,slow=3.6,SNR=2.6						
YAK	**Yakutsk**	**43.29**	**36**	P	**P**	**18 02 26.6**	**-0.5**
NC303	**NORSAR Array S**	**44.23**	**323**	P	**P**	**18 02 36.9**	**+2.4**
NB201	**NORSAR Array S**	**44.25**	**323**	P	**P**	**18 02 36.3**	**+1.5**
NB2	**NORSAR Subarra**	**44.29**	**323**	P	**P**	**18 02 36.2**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.29**	**323**	P	**P**	**18 02 36.9**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=94,slow=7.6,SNR=6.6						
NC204	**NORSAR Array S**	**44.52**	**323**	P	**P**	**18 02 38.6**	**+1.6**
TORD	**Torodi Ar. Bea**	**66.21**	**269**	P	**P**	**18 05 13.8**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=54,slow=7.2,SNR=6.1						
IMAR	**Indian Mountai**	**71.57**	**18**	P	**P**	**18 05 46.6**	**+1.2**
INK	**Inuvik**	**73.35**	**9**	P	**P**	**18 05 57.8**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=63,slow=2.3,SNR=1.7						
YKA	**Yellowknife Ar**	**80.74**	**3**	P	**P**	**18 06 39.0**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=6.7,slow=8.7,SNR=1.9						
WRA	**Warramunga Arr**	**81.84**	**122**	P	**P**	**18 06 44.7**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=328,slow=6.2,SNR=1.8						
ASAR	**Alice Springs**	**84.14**	**125**	P	**P**	**18 06 56.7**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=305,slow=5.1,SNR=3.0						

*NEIC **19** 17:55:24.8±1.3, 24°.94N±0°.05×122°.09E±0°.02, h7km±5km, mb4.4/10, Error ellipse: s-maj=7.4km s-min=2.9km az=191.0*
*JMA **19** 17:55:25.5, 24°.91N×122°.01E, h40km, M3.5*
*TAP **19** 17:55:25.2, 24°.90N×122°.03E, h14km, ML4.0, C*
*NIED **19** 17:55:25.6, 24°.91N×122°.01E, h40km, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^15^Nm; M_{rr}=4.73; $M_{\theta\theta}$3.66; $M_{\phi\phi}$1.07; $M_{r\theta}$-3.33; $M_{\theta\phi}$1.93; $M_{\phi r}$-0.37; Fault plane solution: $M_0$5.78000×10^15^ NP1:ϕ_s74.00000°, δ63.00000°, λ-79.00000°. NP2:ϕ_s231.00000°, δ29.00000°, λ-110.00000°.*
*IDC **19** 17:55:40.8±5.6, 24°.93N×122°.08E, h141km±57km, mb3.6/12, mb1 3.6/14, mb1mx3.4/51, mbtmp3.9/14, MS4.1/1, Ms1 4.1/1, ms1mx3.2/39 Error ellipse: s-maj=21.6km s-min=13.6km az=76.0*
ISC 19 17:55:25.4±0.9, **24°.90N**±0°.02×**122°.09E**±0°.02, **h7**km±6km, **n169**, σ1§**105**/222, **mb4.3**/17, **16C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.14**	**319**	⇑*i* P	**Pg**	**17 55 28.2**	**-0.3**
	baz=335						
TWB1				*i* S	**Sg**	**17 55 30.5**	**0.0**
	baz=335						
EGS		**0.16**	**250**	*i* P	**Pg**	**17 55 28.8**	**+0.2**
	baz=234						
EGS				*i* S	**Sg**	**17 55 31.3**	**+0.5**
	baz=234						
NTC	**Toucheng**	**0.24**	**260**	*i* P	**Pg**	**17 55 30.0**	**-0.3**
	baz=264						
NTC				*i* S	**Sg**	**17 55 33.1**	**-0.4**
	baz=264						
TIPB	**Shuangxi**	**0.25**	**287**	⇑*i* P	**Pg**	**17 55 30.2**	**-0.2**
	baz=286						
TIPB				*i* S	**Sg**	**17 55 33.5**	**-0.3**
	baz=286						
NWF	**Wu-fen Shan**	**0.33**	**301**	⇑*i* P	**Pg**	**17 55 32.0**	**0.0**
	baz=307						
NWF				S	**Sg**	**17 55 36.2**	**-0.1**
	baz=307						
WFSB	**Wu-fen Shan**	**0.33**	**301**	⇑*i* P	**Pg**	**17 55 32.0**	**0.0**
	baz=302						
WFSB				*i* S	**Sg**	**17 55 36.4**	**+0.1**
	baz=302						
ILA	**Ilan**	**0.34**	**247**	P	**Pg**	**17 55 31.8**	**-0.3**
	baz=235						
ILA				*i* S	**Sg**	**17 55 36.3**	**-0.3**
	baz=235						
TWC	**Suao**	**0.36**	**218**	⇑*i* P	**Pg**	**17 55 32.1**	**-0.4**
	baz=219						
TWC				*i* S	**Sg**	**17 55 36.7**	**-0.6**
	baz=219						
TWE	**Neicheng**	**0.43**	**246**	⇑*i* P	**Pg**	**17 55 33.2**	**-0.5**
	baz=236						
TWE				S	**Sg**	**17 55 38.0**	**-1.3**
	baz=236						
TWA	**Mucha**	**0.47**	**280**	P	**Pg**	**17 55 34.3**	**-0.3**
	baz=282						
TWA				S	**Sg**	**17 55 40.6**	**-0.1**
	baz=282						
NWRT	**Kuosheng**	**0.50**	**308**	P	**Pg**	**17 55 35.2**	**+0.2**
	baz=311						
NWRT				S	**Sg**	**17 55 41.4**	**-0.2**
	baz=311						
ENAH	**Nanao**	**0.52**	**210**	*e*P	**Pg**	**17 55 35.2**	**-0.2**
	baz=212						
ENAH				*e*S	**Sg**	**17 55 41.8**	**-0.4**
	baz=212						
NHDH	**Xindian Distri**	**0.52**	**277**	*e*P	**Pg**	**17 55 35.7**	**+0.2**
	baz=279						
NHDH				*i* S	**Sg**	**17 55 42.1**	**-0.1**
	baz=279						
YM01	**YM01**	**0.54**	**298**	⇑*i* P	**Pg**	**17 55 36.1**	**+0.3**
	baz=300						
YM01				*e*S	**Sg**	**17 55 42.4**	**-0.4**
	baz=300						
TAP1	**Taipei**	**0.54**	**285**	⇑*i* P	**Pg**	**17 55 36.3**	**+0.5**
	baz=287						
TAP1				*i* S	**Sg**	**17 55 43.1**	**+0.3**
	baz=287						
YM08	**YM08**	**0.54**	**302**	⇑*i* P	**Pg**	**17 55 36.0**	**+0.1**
	baz=305						
YM08				*e*S	**Sg**	**17 55 42.7**	**-0.3**
	baz=305						
YM11	**YM11**	**0.54**	**300**	*i* P	**Pg**	**17 55 36.3**	**+0.4**
	baz=302						
YM11				*e*S	**Sg**	**17 55 42.6**	**-0.3**
	baz=302						
YM10	**YM10**	**0.55**	**298**	⇑*i* P	**Pg**	**17 55 36.3**	**+0.3**
	baz=301						
YM10				*e*S	**Sg**	**17 55 42.5**	**-0.7**
	baz=301						
NWLT	**Wulai**	**0.55**	**257**	P	**Pg**	**17 55 35.5**	**-0.6**
	baz=258						
NWLT				S	**Sg**	**17 55 42.5**	**-0.7**
	baz=258						
TAP	**Taipei**	**0.55**	**285**	⇑*i* P	**Pg**	**17 55 36.3**	**+0.2**
	baz=287						
TAP				*i* S	**Sg**	**17 55 43.0**	**-0.2**
	baz=287						
TATO	**Taipei**	**0.56**	**278**	P	**Pg**	**17 55 36.1**	**-0.1**
	baz=280						
TATO				*i* S	**Sg**	**17 55 43.0**	**-0.4**
	baz=280						
TATO	**Taipei**	**0.56**	**278**		**Pg**	**17 55 36.1**	**-0.1**
YM04	**YM04**	**0.57**	**297**	⇑*i* P	**Pg**	**17 55 36.6**	**+0.2**
	baz=299						
YM04				S	**Sg**	**17 55 43.0**	**-0.7**
	baz=299						
ENA	**Nanau**	**0.57**	**214**	*e*P	**Pg**	**17 55 36.1**	**-0.3**
	baz=216						
ENA				*e*S	**Sg**	**17 55 43.1**	**-0.7**
	baz=216						
YM03	**YM03**	**0.57**	**299**	⇑*i* P	**Pg**	**17 55 36.5**	**0.0**
	baz=302						
YM03				*e*S	**Sg**	**17 55 43.9**	**-0.2**
	baz=302						
TWY	**Chenhua**	**0.58**	**310**	⇑*i* P	**Pg**	**17 55 37.1**	**+0.4**
	baz=313						
TWY				*e*S	**Sg**	**17 55 44.1**	**-0.3**
	baz=313						
ANP	**Anpu**	**0.59**	**299**	P	**Pg**	**17 55 36.9**	**0.0**
	baz=301						
NSM	**Shimen**	**0.60**	**310**	*e*P	**Pg**	**17 55 37.6**	**+0.6**
	baz=313						
NDT	**Datong Townshi**	**0.60**	**241**	P	**Pg**	**17 55 36.6**	**-0.5**
	baz=242						
NDT				*e*S	**Sg**	**17 55 45.9**	**+0.9**
	baz=242						
NTST	**Danshui**	**0.64**	**294**	⇑*i* P	**Pg**	**17 55 38.4**	**+0.6**
	baz=296						
TWS1	**Kuangyinshan**	**0.65**	**288**	⇑*i* P	**Pg**	**17 55 38.5**	**+0.6**
	baz=300						
TWS1				S	**Sg**	**17 55 47.0**	**+0.7**
	baz=300						
YHNB	**Yeheng**	**0.69**	**251**	P	**Pg**	**17 55 38.0**	**-0.8**
	baz=251						
YHNB				S	**Sg**	**17 55 46.1**	**-1.6**
	baz=251						
YHNB	**Yeheng**	**0.69**	**251**		**Pg**	**17 55 37.9**	**-0.9**
NSK	**Sanguang**	**0.70**	**252**	P	**Pg**	**17 55 38.1**	**-0.9**
	baz=252						
NSK				*e*S	**Sg**	**17 55 46.3**	**-1.8**
	baz=252						
PCYT	**Pengchaiyu**	**0.73**	**358**	P	**Pb**	**17 55 40.4**	**-0.1**
	baz=1.0						
PCYT				*e*S	**Sb**	**17 55 50.5**	**-0.2**
	baz=1.0						
NNSB	**Datong**	**0.80**	**234**	*e*P	**Pg**	**17 55 40.2**	**-0.6**
	baz=234						
NNSB				*e*S	**Sg**	**17 55 51.7**	**+0.5**
	baz=234						
NNSH	**Datong**	**0.80**	**234**	*e*P	**Pg**	**17 55 40.4**	**-0.4**
	baz=236						
NNSH				*e*S	**Sg**	**17 55 51.8**	**+0.6**
	baz=236						
NNS	**Nan Shan**	**0.80**	**235**	P	Pg	**17 55 40.2**	**-0.7**
	baz=234						
NCU	**National Centr**	**0.83**	**275**	*e*P	**Pb**	**17 55 42.0**	**-0.1**
	baz=276						
NCU				*e*S	**Sb**	**17 55 53.5**	**0.0**
	baz=276						
NCUH	**Zhongli**	**0.83**	**275**	*e*P	**Pg**	**17 55 41.6**	**+0.2**
	baz=277						
NCUH				*e*S	**Sg**	**17 55 52.9**	**+0.8**
	baz=277						
NACB	**Ninganchiao**	**0.85**	**212**	P	**Pg**	**17 55 41.3**	**-0.5**
	baz=213						
NACB				*e*S	**Sg**	**17 55 51.1**	**-1.8**
	baz=213						
NACB	**Ninganchiao**	**0.85**	**212**		**Pg**	**17 55 41.5**	**-0.3**
ETLH	**Xiulin Townshi**	**0.89**	**219**	P	**Pg**	**17 55 42.0**	**-0.5**
	baz=220						
ETLH				S	**Sg**	**17 55 54.7**	**+0.7**
	baz=220						
JYNG	**Yonagunijimaku**	**0.89**	**120**	P	**Pg**	**17 55 42.9**	**+0.3**
JYNG				S	**Sg**	**17 55 55.2**	**+1.0**
TWD	**Chiawan**	**0.93**	**209**	*e*P	**Pg**	**17 55 42.7**	**-0.6**
	baz=210						
TWD				*e*S	**Sg**	**17 55 55.0**	**-0.5**
	baz=210						
YOJ	**Yonaguni jima**	**0.94**	**117**	*e*P	**Pg**	**17 55 43.1**	**-0.4**
	baz=115						
YOJ	**Yonaguni jima**	**0.94**	**117**	P	**Pg**	**17 55 43.6**	**0.0**
YOJ				S	**Sg**	**17 55 56.0**	**+0.3**
YOJ	**Yonaguni jima**	**0.94**	**117**		**Pg**	**17 55 43.5**	**0.0**
FUSS	**Fushou**	**1.01**	**230**	P	**Pg**	**17 55 44.3**	**-0.6**
	baz=227						
FUSS				*e*S	**Sg**	**17 55 58.7**	**+0.7**
	baz=227						
LIOB	**Emei**	**1.01**	**256**	*e*P	**Pg**	**17 55 45.3**	**+0.5**
	baz=258						
LIOB				*e*S	**Sg**	**17 55 58.7**	**+0.7**
	baz=258						
SBCB	**Hsinchu**	**1.01**	**264**	P	**Pg**	**17 55 45.0**	**+0.2**
	baz=285						
SBCB				S	**Sg**	**17 55 58.4**	**+0.4**
	baz=285						
HWA	**Hwalien**	**1.02**	**206**	*e*P	**Pb**	**17 55 46.3**	**+0.8**
	baz=216						
NSTT	**Nanjuang**	**1.03**	**255**	*e*P	**Pg**	**17 55 45.1**	**-0.1**
	baz=257						
NSTT				*e*S	**Sg**	**17 55 57.8**	**-0.7**
	baz=257						
TWT	**Tachien**	**1.05**	**233**	*e*P	**Pg**	**17 55 45.1**	**-0.6**
	baz=235						
TWT				*e*S	**Sg**	**17 56 00.0**	**+0.6**
	baz=235						
WHF	**Hehuan Shan**	**1.06**	**225**	P	**Pg**	**17 55 45.3**	**-0.6**
	baz=227						
WHF				*e*S	**Sg**	**17 55 59.9**	**+0.1**
	baz=227						
TDCB	**Techi**	**1.07**	**233**	*e*P	**Pg**	**17 55 45.4**	**-0.5**
	baz=229						
CHGB	**Renai**	**1.18**	**225**	*e*P	**Pg**	**17 55 47.5**	**-0.6**
	baz=221						
WHP	**Taichung City**	**1.21**	**240**	*e*P	**Pg**	**17 55 48.3**	**-0.5**
	baz=240						
ESL	**Shilin**	**1.24**	**209**	P	**Pb**	**17 55 48.3**	**-0.9**
	baz=212						
ESL				*e*S	**Sg**	**17 56 04.4**	**-0.8**
	baz=212						
NMLH	**Miaoli**	**1.24**	**253**	*e*P	**Pg**	**17 55 48.0**	**-1.2**
	baz=256						
NMLH				*e*S	**Sg**	**17 56 04.9**	**-0.4**
	baz=256						
OWD	**Renai**	**1.26**	**222**	P	**Pg**	**17 55 48.9**	**-0.7**
	baz=223						
NSY	**Sanyi**	**1.30**	**249**	*e*P	**Pn**	**17 55 50.5**	**+0.3**
	baz=251						
NSY				*e*S	**Sb**	**17 56 06.3**	**-1.0**
	baz=251						
TWQ1	**Liyutan**	**1.32**	**246**	*e*P

	baz=186						
JIJ	**Ishigaki jima**	**1.94**	**106**	P	**Pn**	**17 55 58.4**	**-0.5**
ELDTW	**Lidau**	**1.97**	**210**	*eP*	**Pn**	**17 56 00.9**	**+1.5**
	baz=198						
WTK	**Tuku**	**1.97**	**233**	*eP*	**Pn**	**17 56 00.7**	**+1.4**
	baz=252						
EDH	**Donghe**	**2.05**	**201**	*eP*	**Pn**	**17 55 58.9**	**-1.5**
	baz=187						
CHY	**Chiayi**	**2.07**	**228**	*eP*	**Pb**	**17 56 02.4**	**-0.9**
	baz=247						
TPUB	**Ta-pu**	**2.08**	**220**	*eP*	**Pb**	**17 56 03.6**	**0.0**
	baz=224						
TPUB	**Ta-pu**	**2.08**	**220**		**Pb**	**17 56 04.2**	**+0.6**
STYT	**Tauyuan**	**2.12**	**216**	*eP*	**Pb**	**17 56 04.2**	**0.0**
	baz=206						
WTP	**Ta-pu**	**2.13**	**220**	*eP*	**Pb**	**17 56 04.5**	**0.0**
	baz=223						
LONT	**Longtian**	**2.17**	**204**	*eP*	**Pn**	**17 56 03.4**	**+1.4**
	baz=192						
PTTC	**Pingtan**	**2.19**	**286**	*eP*	**Pn**	**17 55 59.7**	**-2.6**
	baz=285						
TWK	**Hsinying**	**2.19**	**222**	*eP*	**Pb**	**17 56 04.7**	**-0.8**
	baz=226						
SNST	**Tainan City**	**2.22**	**221**	*eP*	**Pn**	**17 56 04.3**	**+1.6**
	baz=225						
CHN1	**Nanshi**	**2.23**	**220**	*eP*	**Pb**	**17 56 05.1**	**-1.0**
	baz=224						
ICHU	**Yijhu**	**2.26**	**228**	*eP*	**Pb**	**17 56 05.4**	**-1.2**
	baz=231						
TWG	**Pinlang**	**2.27**	**205**	*eP*	**Pn**	**17 56 04.9**	**+1.5**
	baz=193						
TWG	**Pinlang**	**2.27**	**205**	Pn	**Pn**	**17 56 03.9**	**+0.5**
TWGBT	**Beinan**	**2.27**	**204**	*eP*	**Pn**	**17 56 04.1**	**+0.7**
	baz=193						
SGST	**Jiashian**	**2.28**	**218**	*eP*	**Pb**	**17 56 05.8**	**-1.1**
	baz=207						
MATB	**Ma-tsu**	**2.31**	**303**	*eP*	**Pn**	**17 56 02.7**	**-1.2**
	baz=301						
CHN8	**Yiju**	**2.31**	**228**	*eP*	**Pn**	**17 56 06.2**	**+2.1**
	baz=246						
SLGT	**Liugui**	**2.31**	**215**	*eP*	**Pb**	**17 56 07.3**	**-0.2**
	baz=219						
VWUC	**VWUC**	**2.40**	**273**	*eP*	**Pn**	**17 56 02.7**	**-2.5**
	baz=272						
SCST	**Cishan**	**2.48**	**216**	*eP*	**Pn**	**17 56 07.2**	**+0.8**
	baz=221						
ECL	**Taimali**	**2.52**	**205**	*eP*	**Pn**	**17 56 07.8**	**+0.9**
	baz=196						
SSD	**Sandimen**	**2.53**	**212**	*eP*	**Pb**	**17 56 10.3**	**-0.9**
	baz=216						
TSMG	**Majia**	**2.56**	**212**	*eP*	**Pn**	**17 56 09.9**	**+2.5**
	baz=216						
TWM1	**Shoushan**	**2.57**	**217**	*eP*	**Pb**	**17 56 10.4**	**-1.5**
	baz=221						
MASBT	**Mashibuluo**	**2.64**	**211**	*eP*	**Pb**	**17 56 11.7**	**-1.5**
	baz=215						
XPSS	**Dashiqiu**	**2.65**	**320**	*eP*	**Pn**	**17 56 07.2**	**-1.5**
	baz=319						
PNG	**Penghu**	**2.67**	**241**	*eP*	**Pn**	**17 56 09.4**	**+0.5**
	baz=243						
LYJJ	**Jianjiangzhen**	**2.67**	**308**	*eP*	**Pn**	**17 56 07.5**	**-1.5**
	baz=307						
PHUB	**P'eng-hu**	**2.68**	**240**	*eP*	**Pn**	**17 56 06.7**	**-2.4**
	baz=255						
PTMZ	**Houxiangcun**	**2.70**	**274**	*eP*	**Pn**	**17 56 07.9**	**-1.4**
	baz=272						
EAST	**Anshuo**	**2.75**	**205**	*eP*	**Pn**	**17 56 11.4**	**+1.3**
	baz=197						
WDGT	**Dungji**	**2.76**	**234**	*eP*	**Pn**	**17 56 10.9**	**+0.8**
	baz=250						
SSPT	**Xinbi**	**2.78**	**210**	*eP*	**Pn**	**17 56 11.1**	**+0.6**
	baz=200						
SCZT	**Fanglliau**	**2.85**	**209**	*eP*	**Pb**	**17 56 14.9**	**-1.8**
	baz=198						
LAY	**Lan-yu**	**2.89**	**190**	*eP*	**Pn**	**17 56 11.4**	**-0.6**
	baz=182						
SLIU	**Shizi**	**2.92**	**204**	*eP*	**Pn**	**17 56 14.5**	**+2.1**
	baz=198						
MHZQ	**Yeshan**	**3.02**	**294**	*eP*	**Pn**	**17 56 12.1**	**-1.6**
	baz=292						
TWK1	**Hengchun**	**3.17**	**202**	*eP*	**Pn**	**17 56 16.2**	**+0.4**
	baz=195						
TWKBT	**Hengchun**	**3.17**	**202**	*eP*	**Pn**	**17 56 17.5**	**+1.6**
	baz=195						
KNM	**Kinmen**	**3.37**	**263**	*eP*	**Pn**	**17 56 19.1**	**+0.6**
	baz=264						
KNMB	**Chin-men Tao**	**3.40**	**263**	*eP*	**Pn**	**17 56 17.6**	**-1.3**
	baz=265						
KNMB	**Chin-men Tao**	**3.40**	**263**	Pn	**Pn**	**17 56 18.2**	**-0.8**
AXDP	**Jialang**	**3.75**	**271**	*eP*	**Pn**	**17 56 23.0**	**-0.7**
	baz=270						
ZPLA	**Ao Xiaun**	**4.08**	**257**	*eP*	**Pn**	**17 56 27.1**	**-1.1**
	baz=260						
ZZJH	**Jiuhuzhen**	**4.08**	**265**	*eP*	**Pn**	**17 56 26.9**	**-1.5**
	baz=266						
JOW	**Kunigami**	**5.89**	**70**	Pn	**Pn**	**17 56 51.5**	**-1.8**
KSRS	**Korea Array**	**13.47**	**20**	P	**P**	**17 58 45.8**	**-0.6**
	0.2nm,0.3s,baz=204,slow=14,SNR=2.4						
DAV	**Davao City (W)**	**18.04**	**169**	LR	LR	18 07 13.7	
	comp=Z,576nm,18.3s,baz=346,slow=38						
MJAR	**Matsushiro Arr**	**18.05**	**46**	P	**P**	**17 59 40.6**	**+3.3**
	0.0nm,0.3s,baz=243,slow=8.0,SNR=2.6						
USRK	**Ussuriysk Ar.**	**20.88**	**20**	P	Pn	18 00 11.4	+0.7
	2.6nm,0.7s,baz=214,slow=13,SNR=4.4						
CMAR	**Chiang Mai Arr**	**22.43**	**258**	P	**P**	**18 00 28.4**	**+3.3**
	0.7nm,0.3s,baz=48,slow=8.7,SNR=2.2						
ASAJ	**Asahikawa**	**25.43**	**36**	P	**P**	**18 00 55.0**	**+1.2**
	7.2nm,0.8s,baz=180,slow=3.0,SNR=1.7						
KLR	**Kul'dur**	**25.44**	**15**	P	**P**	**18 00 55.6**	**+1.8**
	1.3nm,0.7s,baz=222,slow=4.7,SNR=4.1						
SONM	**Songino Array**	**26.05**	**325**	P	**P**	**18 01 01.2**	**+1.6**
	3.7nm,0.6s,baz=168,slow=7.4,SNR=2.7						
WMQ	**Urumqi**	**33.77**	**313**	*eP*	**P**	**18 02 10.3**	**+2.3**
WMQ				PP	**PP**	**18 03 30.0**	**+5.7**
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,7.0nm,6.9s						
WMQ				LR	LR		
	comp=N,1μm,28.9s						
WMQ				LR	LR		
	comp=E,3μm,29.2s						
WMQ				LR	LR		
	comp=Z,370nm,16.7s						
MK31	**Makanchi Array**	**38.41**	**315**	P	**P**	**18 02 47.1**	**-0.5**
MKAR	**Makanchi Array**	**38.41**	**315**	P	**P**	**18 02 48.3**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=100,slow=10,SNR=8.8						
MKAR	**Makanchi Array**	**38.41**	**315**	P	**P**	**18 02 48.2**	**+0.5**
ZAA0	**Zalesovo Array**	**40.10**	**326**	P	**P**	**18 03 00.2**	**-1.5**
ZALV	**Zalesovo Beam**	**40.10**	**326**	P	**P**	**18 03 01.3**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=111,slow=8.1,SNR=8.5						
ZALV	**Zalesovo Beam**	**40.10**	**326**	P	**P**	**18 03 00.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**42.88**	**175**	P	**P**	**18 03 23.9**	**-0.8**
FITZ				IAmb	IAmb	18 03 31.9	
	comp=Z,9.7nm,1.4s						
WB0	**Warramunga Arr**	**45.98**	**164**	P	**P**	**18 03 48.8**	**-0.7**
WB0				IAmb	IAmb	18 03 53.7	
	comp=Z,4.5nm,1.0s						
WRAB	**Tennant Creek**	**46.13**	**164**	P	**P**	**18 03 50.2**	**-0.6**
WRAB				IAmb	IAmb	18 03 55.0	
	comp=Z,5.5nm,1.0s						
WRA	**Warramunga Arr**	**46.14**	**164**	P	**P**	**18 03 50.5**	**-0.3**
	comp=Z,3.9nm,1.0s,baz=347,slow=8.8,SNR=44						
WRA	**Warramunga Arr**	**46.14**	**164**	P	**P**	**18 03 50.2**	**-0.6**
WB2	**Warramunga Arr**	**46.14**	**164**	P	**P**	**18 03 50.6**	**-0.2**
WB2				IAmb	IAmb	18 03 55.0	
	comp=Z,3.3nm,0.9s						
WR0	**Warramunga Arr**	**46.20**	**164**	P	**P**	**18 03 49.9**	**-1.4**
TIXI	**Tiksi**	**46.94**	**3**	P	**P**	**18 03 56.1**	**-0.3**
BRVK	**Borovoye**	**47.72**	**320**	P	**P**	**18 04 02.0**	**-0.9**
BRVK				IAmb	IAmb	18 04 07.0	
	comp=Z,2.0nm,0.8s						
NRIK	**Noril'sk**	**48.93**	**345**	P	**P**	**18 04 11.3**	**-0.6**
	comp=Z,2.5nm,0.7s,baz=160,slow=6.0,SNR=4.8						
ASAR	**Alice Springs**	**49.62**	**166**	P	**P**	**18 04 18.6**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=350,slow=13,SNR=11						
STKA	**Stephens Creek**	**59.45**	**161**	P	**P**	**18 05 29.2**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=354,slow=10,SNR=2.3						
BMAR	**Burnt Mountain**	**68.54**	**24**	P	**P**	**18 06 25.5**	**-3.0**
INK	**Inuvik**	**72.25**	**22**	P	**P**	**18 06 50.4**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=258,slow=9.3,SNR=3.1						

WEL 19 18:01:32.8,42°S±2°×17°4E±°, h17km±3km, M2.0/12, ML2.3/12, MLv2.0/12, Error ellipse: s-maj=0.0km s-min=0.0km az=144.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.13**	**165**	P	Pb	18 01 37.1	+0.3
BSWZ	**Blackbirch Sta**	**0.24**	**248**	P	Pg	18 01 38.2	0.0
TUWZ	**Tuamarina**	**0.26**	**319**	P	Pb	18 01 39.2	+0.2
TCW	**Tory Channel**	**0.42**	**11**	P	Pb	18 01 41.8	0.0
BHW	**Baring Head**	**0.57**	**68**	P	Pb	18 01 44.6	+0.3
PLWZ	**Palliser**	**0.82**	**86**	P	Pn	18 01 49.2	-0.4
MSWZ	**Moikau Station**	**0.84**	**76**	P	Pn	18 01 49.7	-0.1
DUWZ	**D'Urville Isla**	**0.84**	**347**	P	Pg	18 01 49.3	+0.1
CAW	**Cannon Point**	**0.85**	**53**	P	Pn	18 01 49.7	-0.3
KHZ	**Kahutara**	**0.92**	**211**	P	Pg	18 01 50.6	-0.1
KIW	**Kapiti Island**	**0.95**	**36**	P	Pb	18 01 50.9	+0.1
THZ	**Tophouse**	**0.96**	**261**	P	Pb	18 01 51.0	+0.1
PAWZ	**Paruwai Farm**	**0.97**	**76**	P	Pb	18 01 51.1	-0.1
MTW	**Mount Morrison**	**1.10**	**65**	P	Pb	18 01 53.3	-0.2
OGWZ	**Otaki Gorge**	**1.10**	**43**	P	Pn	18 01 53.7	+0.3
MRZ	**Mangatainoka R**	**1.44**	**48**	P	Pn	18 01 58.3	+0.3

TAP 19 18:09:03.1, 24°94N×122°05E, h17km, ML2.0, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.09**	**322**	*i* P	Pg	18 09 06.7	+0.1
	baz=325						
TWB1				*i* S	Sg	18 09 09.0	+0.1
	baz=325						
TIPB	**Shuangxi**	**0.21**	**279**	*i* P	Pb	18 09 08.3	-0.1
	baz=281						
TIPB				*i* S	Sg	18 09 11.4	0.0
	baz=281						
NWF	**Wu-fen Shan**	**0.28**	**299**	*eP*	Pb	18 09 10.0	+0.3
	baz=299						
NWF				*eS*	Sb	18 09 14.6	+0.5
	baz=299						
WFSB	**Wu-fen Shan**	**0.28**	**299**	*eS*	Sb	18 09 15.1	+1.0
	baz=299						

JMA 19 18:09:34.1±0.2, 25°01N×123°58E, h19km, M1.3, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.69**	**168**	P	Pb	18 09 47.1	-0.3
IRIF				*eS*	Sb	18 09 56.3	-0.2
YOJ	**Yonaguni jima**	**0.75**	**224**	*eS*	Sg	18 09 58.9	0.0
JISG	**Ishigakijimahi**	**0.79**	**122**	P	Pb	18 09 49.1	-0.1
JIJ	**Ishigaki jima**	**0.82**	**141**	P	Pb	18 09 49.2	-0.6
JIJ				*eS*	Sg	18 10 00.9	-0.2
JKRS	**Kuro-shima**	**0.86**	**153**	S	Sb	18 10 01.7	+0.1
HATJ	**Hateruma jima**	**0.97**	**168**	*eS*	Sb	18 10 04.6	-0.1

IDC 19 18:25:07.6±2.5, 18°92S×176°75W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.6/42, mbtmp3.8/4, Error ellipse: s-maj=182.6km s-min=31.8km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**34.85**	**262**	P	P	18 32 02.4	+1.6
	0.8nm,0.4s,baz=79,slow=10,SNR=1.3						
WRA	**Warramunga Arr**	**46.01**	**260**	P	P	18 33 32.2	-1.0
	0.8nm,0.6s,baz=96,slow=7.5,SNR=38						
ASAR	**Alice Springs**	**46.05**	**255**	P	P	18 33 33.3	-0.2
	1.2nm,0.7s,baz=91,slow=7.9,SNR=28						
TXAR	**Lajitas Array**	**85.21**	**57**	P	P	18 37 46.5	+0.1
	0.2nm,0.6s,baz=217,slow=5.7,SNR=2.9						
BRTR	**Keskin Array B**	**146.61**	**315**	PKPbc	PKPdf	18 44 50.8	+0.7
	1.1nm,0.3s,baz=5.9,slow=2.3,SNR=8.5						

IDC 19 18:27:31.1±1.8, 31°98N×40°75W, h0km, mb3.4/5, mb1 3.8/5, mb1mx3.5/49, mbtmp3.4/5, MS3.7/1, Ms1 3.7/1, ms1mx3.0/35, Error ellipse: s-maj=67.2km s-min=27.9km az=12.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**43.11**	**106**	P	P	18 35 33.0	-0.3
	0.5nm,0.8s,baz=301,slow=5.9,SNR=2.9						
H10N2	**ASCENSION HYDR**	**46.85**	**143**	T	T	19 25 38.9	
	baz=329,slow=75,SNR=11						
H10N3	**ASCENSION HYDR**	**46.86**	**143**	T	T	19 25 44.0	
	baz=329,slow=75,SNR=14						
H10N1	**ASCENSION HYDR**	**46.87**	**143**	T	T	19 25 47.2	
	baz=329,slow=75,SNR=18						
H10S3	**ASCENSION HYDR**	**47.73**	**144**	T	T	19 26 41.7	
	baz=328,slow=74,SNR=15						
H10S2	**ASCENSION HYDR**	**47.74**	**144**	T	T	19 26 42.8	
	baz=252,slow=74,SNR=7.8						
SPITS	**Spitsbergen Ar**	**52.35**	**13**	LR	LR	18 54 16.5	
	comp=Z,75nm,18.1s,baz=225,slow=31						
TXAR	**Lajitas Array**	**53.51**	**285**	P	P	18 36 53.4	-0.2
	0.3nm,0.9s,baz=57,slow=8.7,SNR=2.3						
AKASG	**Malin Array Be**	**53.71**	**48**	P	P	18 36 55.0	+0.3
	0.9nm,0.5s,baz=277,slow=6.3,SNR=4.7						
PDAR	**Pinedale Array**	**54.36**	**302**	P	P	18 37 00.7	+0.8
	0.7nm,0.8s,baz=78,slow=5.6,SNR=1.9						
ILAR	**Eielson Array**	**67.98**	**334**	P	P	18 38 30.7	-1.0
	0.4nm,1.0s,baz=85,slow=9.8,SNR=2.2						

IDC ***19*** *18:29:06.8±1.3, 32°06S×69°36W, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.6/38, mbtmp3.6/4, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.7/21, Error ellipse: s-maj=52.2km s-min=43.2km az=97.0*

ISC 19 18:29:22.1±1.4, 31°6S±0°2×69°2W±0°3, h110km, n9, σ0°51/8, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**11.63**	**66**	LR	LR	18 36 57.2	
	comp=Z,88nm,18.1s,baz=23,slow=39						
LPAZ	**La Paz**	**15.27**	**4**	Pn	**Pn**	**18 32 52.5**	**+0.1**
	0.1nm,0.3s,baz=188,slow=5.3,SNR=6.2						
SIV	**San Ignacio**	**17.20**	**27**	P	**P**	**18 33 15.1**	**-0.5**
	0.2nm,0.3s,baz=248,slow=12,SNR=3.9						
TXAR	**Lajitas Array**	**68.89**	**328**	P	**P**	**18 40 15.4**	**+0.3**
	0.2nm,0.7s,baz=158,slow=7.8,SNR=1.7						
TORD	**Torodi Ar. Bea**	**81.11**	**69**	P	**P**	**18 41 26.1**	**+0.5**
	0.7nm,0.7s,baz=288,slow=5.4,SNR=4.6						
YKA	**Yellowknife Ar**	**100.58**	**340**	P	**Pdif**	**18 42 56.2**	**-0.5**
	1.2nm,0.5s,baz=155,slow=13,SNR=5.4						
WRA	**Warramunga Arr**	**124.01**	**207**	PKP	**PKPdf**	**18 48 07.5**	**-0.6**
	0.3nm,0.9s,baz=159,slow=1.5,SNR=5.5						
ZALV	**Zalesovo Beam**	**150.91**	**32**	PKPbc	**PKPbc**	**18 49 01.6**	**+0.2**
	1.2nm,0.5s,baz=295,slow=3.4,SNR=6.8						
MKAR	**Makanchi Array**	**153.37**	**47**	PKPbc	**PKPbc**	**18 49 07.0**	**-0.2**
	0.1nm,0.5s,baz=283,slow=0.9,SNR=1.7						

IGIL ***19*** *18:31:23.4, 36°62N×11°99W, h10km, ML2.2*
MDD ***19*** *18:31:23.7±2.2, 36°57N×12°07W, h30km, mb3.8/5, Error ellipse: s-maj=18.0km s-min=16.5km az=88.0, PRXIMO*
INMG ***19*** *18:31:24.6±1.3, 36°51N×12°07W, h31km, ML2.2, Error ellipse: s-maj=9.8km s-min=6.1km az=82.0*

ISC 19 18:31:22.1±3.9, 36°7N±0°1×11°9W±0°2, h10km, n39, σ1°46/59, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.51**	**80**	P	**Pn**	**18 32 03.3**	**+0.4**
	2.1nm,0.1s,SNR=7.9						
PFVI				S	**Sn**	**18 32 32.1**	**-1.5**
	7.4nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**2.51**	**80**	*e*Pn	**Pn**	**18 32 03.4**	**+0.5**
PFVI				*e*Sn	**Sn**	**18 32 33.0**	**-0.6**
MORF	**Marmelete**	**2.68**	**77**	*e*P	**Pn**	**18 32 06.1**	**+0.8**
MORF				*e*S	**Sn**	**18 32 37.1**	**-0.7**
MORF				AML	AML	18 32 40.3	
	comp=N,11nm,0.0s						
MORF	**Marmelete**	**2.68**	**77**	P	**Pn**	**18 32 06.1**	**+0.8**
MORF				S	**Sn**	**18 32 37.1**	**-0.7**
MORF	**Marmelete**	**2.68**	**77**	*e*Pn	**Pn**	**18 32 06.3**	**+1.0**
PTEO	**Sao Teotonio**	**2.68**	**72**	S	**Sn**	**18 32 38.6**	**+0.9**
PTEO	**Sao Teotonio**	**2.68**	**72**	*e*Sn	**Sn**	**18 32 38.6**	**+0.9**
PNCL	**Nicolau / Gran**	**3.03**	**62**	P	**Pn**	**18 32 11.6**	**+1.6**
PNCL				S	**Sn**	**18 32 46.3**	**0.0**
	comp=N,2.3nm,0.1s						
PNCL	**Nicolau / Gran**	**3.03**	**62**	*e*Pn	**Pn**	**18 32 11.6**	**+1.6**
PNCL				*e*Sn	**Sn**	**18 32 46.3**	**0.0**
PNCL				A	A	18 32 50.5	
	comp=N,2.3nm,0.1s						
PMAFR	**Mafra**	**3.04**	**43**	P	**Pn**	**18 32 12.3**	**+2.1**
	comp=N,2.1nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**18 32 45.9**	**-0.8**
	comp=N,19nm,0.2s,SNR=6.9						
PMAFR	**Mafra**	**3.04**	**43**	*e*Sn	**Sn**	**18 32 48.2**	**+1.5**
PMAFR				A	A	18 32 49.0	
	comp=N,19nm,0.5s						
PCVE	**Castro Verde**	**3.23**	**73**	P	**Pn**	**18 32 13.8**	**+1.0**
PCVE				S	**Sn**	**18 32 51.6**	**+0.4**
	comp=N,3.4nm,1.0s						
PCVE	**Castro Verde**	**3.23**	**73**	*e*Pn	**Pn**	**18 32 13.8**	**+1.0**
PCVE				*e*Sn	**Sn**	**18 32 51.6**	**+0.4**
PCVE				A	A	18 32 54.6	
	comp=N,3.4nm,1.0s						
PBDV	**Barranco-do-Ve**	**3.23**	**80**	P	**Pn**	**18 32 14.3**	**+1.4**
PBDV				S	**Sn**	**18 32 51.8**	**+0.3**
PBDV	**Barranco-do-Ve**	**3.23**	**80**	*e*Pn	**Pn**	**18 32 14.3**	**+1.4**
PBDV				*e*Sn	**Sn**	**18 32 51.8**	**+0.3**
PVAQ	**Vaqueiros**	**3.43**	**78**	P	**Pn**	**18 32 16.7**	**+1.2**
PVAQ				S	**Sn**	**18 32 55.5**	**-0.7**
	comp=N,5.1nm,0.8s						
PVAQ	**Vaqueiros**	**3.43**	**78**	*e*Pn	**Pn**	**18 32 16.7**	**+1.2**
PVAQ				*e*Sn	**Sn**	**18 32 55.5**	**-0.7**
PVAQ				A	A	18 32 59.4	
	comp=N,5.1nm,0.8s						
EVO	**Evora**	**3.58**	**59**	S	**Sn**	**18 32 59.2**	**-0.8**
EVO	**Evora**	**3.58**	**59**	*e*Sn	**Sn**	**18 32 59.2**	**-0.8**
PSBE	**So Bento**	**3.71**	**41**	*e*Sn	**Sn**	**18 33 04.0**	**+0.9**
PMTG	**Montargil**	**3.73**	**50**	P	**Pn**	**18 32 21.8**	**+2.1**
PMTG				S	**Sn**	**18 33 03.2**	**-0.5**
	comp=N,2.2nm,0.1s						
PMTG	**Montargil**	**3.73**	**50**	*e*Pn	**Pn**	**18 32 21.8**	**+2.1**
PMTG				*e*Sn	**Sn**	**18 33 03.2**	**-0.5**
PMTG				A	A	18 33 03.7	
	comp=N,2.2nm,0.1s						
EMIN	**Mina Concepcio**	**4.31**	**75**	P	**Pn**	**18 32 28.0**	**+0.3**
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**18 33 16.5**	**-1.5**
	comp=N,0.0nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	**4.47**	**52**	P	**Pn**	**18 32 30.8**	**+1.0**
PMRV				S	**Sn**	**18 33 20.4**	**-1.5**
	comp=N,1.6nm,0.2s						
PMRV	**Marv??o**	**4.47**	**52**	*e*Pn	**Pn**	**18 32 30.8**	**+1.0**
PMRV				*e*Sn	**Sn**	**18 33 20.4**	**-1.5**
PMRV				A	A	18 33 23.1	
	comp=N,1.6nm,0.2s						
ESPR	**Espera**	**4.87**	**87**	S	**Sn**	**18 33 28.3**	**-3.5**
	comp=N,7.4nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**5.06**	**37**	S	**Sn**	**18 33 35.9**	**-0.7**
	comp=N,2.0nm,0.2s						
PVIS	**Viseu**	**5.06**	**37**	*e*Sn	**Sn**	**18 33 35.9**	**-0.7**
PVIS				A	A	18 33 37.8	
	comp=N,4.1nm,0.2s						
ECAB	**El Cabril**	**5.34**	**74**	P	**Pn**	**18 32 43.0**	**+1.0**
	comp=N,0.8nm,0.2s,SNR=7.2						
ECAB				S	**Sn**	**18 33 40.7**	**-2.8**
	comp=N,0.5nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.63**	**34**	S	**Sn**	**18 33 50.0**	**-0.6**
	comp=N,1.4nm,1.1s						
POLO	**Lamas de Olo**	**5.63**	**34**	*e*Sn	**Sn**	**18 33 50.0**	**-0.6**
POLO				A	A	18 33 50.9	
	comp=N,1.4nm,1.1s						
MVO	**Moncorvo**	**5.83**	**39**	S	**Sn**	**18 33 53.3**	**-2.4**
	comp=N,2.8nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**5.83**	**39**	*e*Sn	**Sn**	**18 33 55.0**	**-0.6**
MVO				A	A	18 33 55.7	
	comp=N,3.6nm,0.2s						
ELOB	**Lobios**	**5.93**	**29**	S	**Sn**	**18 33 55.7**	**-2.2**
	comp=N,2.5nm,0.2s,SNR=7.9						
PGAV	**Gavieira, Arco**	**5.93**	**27**	S	**Sn**	**18 33 57.0**	**-1.1**
PGAV	**Gavieira, Arco**	**5.93**	**27**	*e*Sn	**Sn**	**18 33 57.0**	**-1.1**
EADA	**Adamuz**	**6.01**	**74**	P	**Pn**	**18 32 51.5**	**+0.3**
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**18 33 58.0**	**-2.0**
	comp=N,1.4nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**6.56**	**36**	S	**Sn**	**18 34 11.2**	**-2.4**
	comp=N,0.8nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.60**	**19**	S	**Sn**	**18 34 09.6**	**-4.8**
	comp=N,1.9nm,0.2s,SNR=7.9						

WEL 19 18:36:29.0±0.6, 43°S±3°×17°3E±°, h8km±5km, M2.6/11, ML2.8/11, MLv2.6/11, Error ellipse: s-maj=0.0km s-min=0.0km az=67.6, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMCZ	**Amberley**	**0.25**	**334**	P	Pg	18 36 34.9	+0.8
AMCZ				S	Sb	18 36 39.0	-1.4
MQZ	**McQueen's Vall**	**0.32**	**200**	P	Pg	18 36 35.9	+0.6
MQZ				S	Sg	18 36 40.7	+1.1
OKCZ	**Okains Bay**	**0.37**	**149**	P	Pb	18 36 37.2	-0.6
OKCZ				S	Sb	18 36 43.0	-0.8
GVZ	**Greta Valley S**	**0.47**	**21**	P	Pb

	comp=Z,15nm,1.4s								
DBIC	**Dimbokro**	**32.24**	**16**	P		**P**	**18 45 23.8**	**+2.1**	
	comp=Z,1.7nm,0.7s,baz=195,slow=8.2,SNR=1.6								
DBIC				LR		LR	18 55 09.8		
	comp=Z,320nm,21.3s,baz=86,slow=30								
BDFB	**Brasilia**	**33.85**	**279**	LR		LR	18 57 39.6		
	comp=Z,689nm,18.2s,baz=119,slow=33								
BOSA	**Boshof**	**34.46**	**105**	P		**P**	**18 45 41.5**	**+0.3**	
	comp=Z,5.6nm,1.0s,baz=203,slow=9.1,SNR=4.1								
BOSA				LR		LR	18 57 44.9		
	comp=Z,467nm,18.4s,baz=279,slow=33								
BOSA	**Boshof**	**34.46**	**105**	P		**P**	**18 45 41.3**	**+0.1**	
BOSA				IAmb		IAmb	18 45 51.1		
	comp=Z,14nm,1.1s								
LBTB	**Lobatse**	**35.09**	**99**	P		**P**	**18 45 46.2**	**-0.5**	
	comp=Z,2.3nm,0.9s,baz=257,slow=16,SNR=2.0								
LBTB	**Lobatse**	**35.09**	**99**	P		**P**	**18 45 46.1**	**-0.5**	
LBTB				IAmb		IAmb	18 45 53.8		
	comp=Z,27nm,1.6s								
MATP	**Matopo**	**38.61**	**92**	P		**P**	**18 46 17.9**	**+1.3**	
	comp=Z,2.3nm,0.9s,baz=262,slow=7.1,SNR=3.1								
CPUP	**Villa Florida**	**39.73**	**258**	LR		LR	18 59 45.7		
	comp=Z,258nm,20.6s,baz=124,slow=32								
LSZ	**Lusaka**	**39.86**	**84**	P		**P**	**18 46 27.8**	**+0.7**	
	comp=Z,1.6nm,0.8s,baz=288,slow=6.4,SNR=1.8								
LSZ	**Lusaka**	**39.86**	**84**	P		**P**	**18 46 25.7**	**-1.5**	
LSZ				IAmb		IAmb	18 46 46.9		
	comp=Z,27nm,1.9s								
KOWA	**Kowa**	**40.00**	**14**	P		**P**	**18 46 29.3**	**+1.3**	
	comp=Z,2.7nm,0.8s,baz=192,slow=11,SNR=4.9								
KOWA	**Kowa**	**40.00**	**14**	P		**P**	**18 46 28.0**	**0.0**	
TOA0	**Torodi Ar. Sit**	**40.35**	**23**	P		**P**	**18 46 30.4**	**-0.5**	
TOA0				IAmb		IAmb	18 46 39.3		
	comp=Z,22nm,1.4s								
TORD	**Torodi Ar. Bea**	**40.35**	**23**	P		**P**	**18 46 31.6**	**+0.6**	
	comp=Z,1.5nm,0.8s,baz=194,slow=8.1,SNR=8.0								
TORD				LR		LR	18 59 53.8		
	comp=Z,375nm,21.9s,baz=175,slow=31								
TORD	**Torodi Ar. Bea**	**40.35**	**23**	P		**P**	**18 46 31.5**	**+0.6**	
SIV	**San Ignacio**	**45.55**	**272**	P		**P**	**18 47 14.0**	**+0.7**	
	comp=Z,1.6nm,0.7s,baz=110,slow=6.3,SNR=5.8								
SNAA	**Sanae**	**47.34**	**176**	P		**P**	**18 47 26.4**	**-0.2**	
	comp=Z,1.1nm,1.0s,baz=358,slow=11,SNR=3.1								
SNAA	**Sanae**	**47.34**	**176**	P		**P**	**18 47 26.0**	**-0.6**	
PLCA	**Paso Flores**	**49.99**	**237**	LR		LR	19 07 32.7		
	comp=Z,335nm,19.0s,baz=96,slow=34								
SAML	**Samuel**	**50.09**	**279**	P		**P**	**18 47 47.1**	**-1.4**	
COO1	**Juntas del Tor**	**50.40**	**251**	P		**P**	**18 47 51.8**	**+0.8**	
TAM	**Tamanrasset**	**50.60**	**23**	P		**P**	**18 47 48.8**	**-3.5**	
TAM				IAmb		IAmb	18 48 01.7		
	comp=Z,13nm,1.8s								
GO02	**Mina Guanaco**	**50.82**	**257**	P		**P**	**18 47 53.2**	**-1.1**	
GO02				IAmb		IAmb	18 47 59.8		
	comp=Z,24nm,1.4s								
PB15	**IPOC Station P**	**51.15**	**259**	P		**P**	**18 47 54.8**	**-1.9**	
PB15				IAmb		IAmb	18 48 00.7		
	comp=Z,10nm,1.0s								
LPAZ	**La Paz**	**51.88**	**268**	P		**P**	**18 48 02.0**	**-0.6**	
	comp=Z,0.8nm,0.6s,baz=133,slow=5.4,SNR=5.2								
LPAZ				LR		LR	19 08 04.8		
	comp=Z,322nm,21.4s,baz=62,slow=34								
LPAZ	**La Paz**	**51.88**	**268**	P		**P**	**18 48 00.8**	**-1.9**	
LPAZ				IAmb		IAmb	18 48 20.4		
	comp=Z,8.4nm,1.4s								
PB07	**IPOC Station P**	**51.89**	**261**	P		**P**	**18 48 01.5**	**-0.7**	
PB04	**IPOC Station P**	**51.97**	**260**	P		**P**	**18 48 00.1**	**-2.8**	
PB11	**IPOC Station P**	**52.21**	**264**	P		**P**	**18 48 03.1**	**-1.5**	
PB11				IAmb		IAmb	18 48 12.8		
	comp=Z,8.6nm,1.0s								
MNMC	**Minye Minye**	**52.34**	**264**	P		**P**	**18 48 03.8**	**-1.9**	
MNMC				IAmb		IAmb	18 48 15.9		
	comp=Z,16nm,1.5s								
PB16	**IPOC Station P**	**52.49**	**265**	P		**P**	**18 48 04.4**	**-2.8**	
PB16				IAmb		IAmb	18 48 21.5		
	comp=Z,14nm,1.3s								
PSGCX	**Pisagua**	**52.68**	**264**	P		**P**	**18 48 09.3**	**+1.3**	
KMBO	**Kilima Mbogo**	**54.03**	**72**	LR		LR	19 09 55.6		
	comp=Z,274nm,18.6s,baz=274,slow=34								
KMBO	**Kilima Mbogo**	**54.03**	**72**	P		**P**	**18 48 15.5**	**-2.6**	
SYO	**Syowa Base**	**54.10**	**159**	*eP*		**P**	**18 48 16.8**	**-0.8**	
MAW	**Mawson**	**62.08**	**155**	P		**P**	**18 49 14.9**	**+1.5**	
	comp=Z,1.0nm,0.6s,baz=276,slow=9.2,SNR=2.1								
MAW				LR		LR	19 10 23.9		
	comp=Z,93nm,19.5s,baz=242,slow=30								
KEST	**Kesra**	**63.80**	**20**	P		**P**	**18 49 28.6**	**+3.2**	
	comp=Z,2.5nm,0.7s,baz=23,slow=7.7,SNR=2.8								
KEST				LR		LR	19 15 33.2		
	comp=Z,229nm,19.3s,baz=236,slow=34								
ESDC	**Sonseca Array**	**64.64**	**8**	LR		LR	19 14 38.1		
	comp=Z,80nm,18.8s,baz=255,slow=33								
QSPA	**South Pole Qui**	**65.40**	**180**	P		**P**	**18 49 37.4**	**+1.2**	
BRTR	**Keskin Array B**	**77.57**	**35**	LR		LR	19 23 48.3		
	comp=Z,12nm,20.2s,baz=266,slow=35								
VNDA	**Vanda**	**77.94**	**179**	LR		LR	19 22 24.8		
	comp=Z,94nm,18.1s,baz=176,slow=34								
AKASG	**Malin Array Be**	**83.92**	**26**	LR		LR	19 29 23.8		
	comp=Z,35nm,19.5s,baz=285,slow=36								
GNI	**Garni**	**84.08**	**41**	LR		LR	19 28 41.2		
	comp=Z,47nm,18.5s,baz=235,slow=36								
WSAR	**Wadi Sarin**	**84.38**	**61**	LR		LR	19 28 21.1		
	comp=Z,126nm,20.7s,baz=240,slow=35								
NOA	**NORSAR Array B**	**87.73**	**12**	LR		LR	19 30 20.0		
	comp=Z,61nm,18.3s,baz=240,slow=35								
GEYT	**Alibeck**	**91.37**	**49**	LR		LR	19 32 39.5		
	comp=Z,116nm,19.5s,baz=250,slow=35								
ARCES	**ARCESS Array B**	**98.03**	**13**	LR		LR	19 36 47.0		
	comp=Z,64nm,18.1s,baz=230,slow=35								
BBB	**Bella Bella**	**124.33**	**317**	PKP		**PKiKP**	**18 57 54.2**	**+2.2**	
	comp=Z,17nm,0.9s,baz=319,slow=1.4,SNR=3.1								
ILAR	**Eielson Array**	**130.18**	**336**	PKP		**PKiKP**	**18 58 05.8**	**+2.4**	
	comp=Z,0.2nm,0.7s,baz=38,slow=1.6,SNR=2.3								
KSRS	**Korea Array**	**144.59**	**60**	PKP		**PKiKP**	**18 58 31.9**	**-1.7**	
	comp=Z,1.0nm,0.8s,baz=279,slow=2.3,SNR=3.4								

*IDC **19** 18:47:58.6±2.1,1˚.80N×126˚.45E,h0km,mb3.2/3, mb1 3.4/4,mb1mx3.3/38,mbtmp3.2/4,ML3.2/1,Error ellipse: s-maj=120.6km s-min=26.9km az=68.0*
*DJA **19** 18:48:04.2±1.6,2˚.N±3˚×12˚.7E±˚,h26km±14km,M3.0/6, MLv3.0/6*

ISC 19 18:48:04.5±1.5,1˚.8N±0˚.2×126˚.6E±0˚.1,h47km,n7,σ1§36/8, mb3.1/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.31**	**143**	P		Pn	**18 48 26.2**	**-0.2**
TNTI				S		Sn	**18 48 43.7**	**+1.0**
KMSI	**Cibinong**	**2.89**	**244**	P		Pn	**18 48 48.3**	**+0.3**
GTOI	**Gorontalo**	**3.77**	**252**	P		Pn	**18 48 59.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**19.82**	**183**	P		P	**18 52 30.3**	**-1.1**
	0.1nm,0.3s,baz=3.4,slow=17,SNR=1.4							
WRA	**Warramunga Arr**	**22.94**	**161**	P		P	**18 53 03.2**	**-1.6**
	0.3nm,0.4s,baz=339,slow=11,SNR=12							
ASAR	**Alice Springs**	**26.32**	**165**	P		P	**18 53 38.2**	**+2.1**
	0.1nm,0.3s,baz=346,slow=12,SNR=6.2							
MKAR	**Makanchi Array**	**59.03**	**326**	P		P	**18 57 59.7**	**0.0**
	0.1nm,0.4s,baz=112,slow=7.5,SNR=2.4							

*IDC **19** 18:52:48.8±1.0,52˚.85N×167˚.53W,h0km,mb3.6/10, mb1 3.9/10,mb1mx3.6/55,mbtmp3.7/10,MS3.8/3, Ms1 3.9/3,ms1mx2.9/52,Error ellipse: s-maj=36.9km s-min=20.0km az=164.0*
*AEIC **19** 18:52:53±1.8,52˚.96N±0˚.07×167˚.46W±0˚.06,h49km±7km, mb4.3/6(NEIC),Error ellipse: s-maj=11.2km s-min=1.5km az=151.0*
*NEIC **19** 18:52:54.5±1.6,52˚.94N±0˚.08×167˚.43W±0˚.07,h51km±8km, Error ellipse: s-maj=12.6km s-min=4.2km az=155.0*

ISC 19 18:52:54.2±0.7,52˚.91N±0˚.08×167˚.38W±0˚.05,h42km,n62, σ1§16/64,mb3.7/10,MS4.0/3,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.59**	**328**			**Pn**	**18 53 05.9**	**-0.3**
OKFG						**Sn**	**18 53 15.3**	**+0.5**
OKTU	**Okmok Mt. Tuli**	**0.62**	**320**			**Pn**	**18 53 06.4**	**-0.2**
OKSP	**Okmok Steeple**	**0.64**	**302**			**Pn**	**18 53 06.2**	**-0.8**
OKER	**Okmok East Rim**	**0.68**	**324**			**Pn**	**18 53 07.5**	**+0.1**
OKWR	**Okmok West Rim**	**0.72**	**317**			**Pn**	**18 53 08.2**	**+0.1**
OKWE	**Okmok W'ng Wal**	**0.76**	**318**			**Pn**	**18 53 08.6**	**0.0**
OKRE	**Okmok R'deer P**	**0.77**	**323**			**Pn**	**18 53 08.7**	**0.0**
NIKH	**Nikolski High**	**0.89**	**274**			**Pn**	**18 53 09.3**	**-1.0**
NIKH						**Sn**	**18 53 21.6**	**-0.4**
MAPS	**Pakushin South**	**0.94**	**16**			**Pn**	**18 53 10.3**	**-0.6**
MAPS						**Sn**	**18 53 23.0**	**-0.1**
MGOD	**Makushin Gods**	**0.94**	**19**			**Pn**	**18 53 10.4**	**-0.5**
MGOD						**Sn**	**18 53 23.0**	**-0.2**
MREP	**Makushin Rep't**	**0.98**	**23**			**Pn**	**18 53 11.0**	**-0.5**
MNAT	**Makushin Natee**	**1.06**	**23**			**Pn**	**18 53 12.2**	**-0.4**
MNAT						**Sn**	**18 53 25.7**	**-0.5**
MSW	**Makushin Switc**	**1.07**	**19**			**Pn**	**18 53 12.4**	**-0.3**
MSW						**Sn**	**18 53 26.8**	**+0.4**
UNV	**Unalaska Valle**	**1.07**	**29**			**Pn**	**18 53 12.1**	**-0.6**
UNV						**Sn**	**18 53 26.2**	**-0.3**
MCIR	**Makushin Cirqu**	**1.08**	**16**			**Pn**	**18 53 13.5**	**+0.5**
MTBL	**Makushin Table**	**1.14**	**21**			**Pn**	**18 53 13.8**	**+0.1**
AKMO	**Akutan Morgan**	**1.44**	**34**			**Pn**	**18 53 18.0**	**+0.2**
AKMO						**Sn**	**18 53 35.6**	**+0.2**
ZRO	**Akutan Zero**	**1.45**	**35**			**Pn**	**18 53 18.1**	**+0.2**
AKRB	**Akutan Reef Bi**	**1.45**	**32**			**Pn**	**18 53 18.5**	**+0.6**
AKRB						**Sn**	**18 53 37.1**	**+1.3**
AKBBA	**Akutan Broad B**	**1.47**	**36**			**Pn**	**18 53 19.1**	**+0.9**
AKBBA						**Sn**	**18 53 38.5**	**+2.2**
AKV	**Akutan Volcano**	**1.48**	**34**			**Pn**	**18 53 18.9**	**+0.4**
AKLV	**Akutan Long Va**	**1.52**	**34**			**Pn**	**18 53 19.3**	**+0.5**
AKGG	**Akutan Green G**	**1.53**	**32**			**Pn**	**18 53 19.5**	**+0.4**
AKUT	**Akutan**	**1.56**	**38**			**Pn**	**18 53 19.6**	**+0.2**
AKUT						**Sn**	**18 53 39.0**	**+0.6**
AKSA	**Akutan Strait**	**1.59**	**39**			**Pn**	**18 53 20.2**	**+0.5**
WESP	**Westdahl Peak**	**2.24**	**44**			**Pn**	**18 53 30.3**	**+1.4**
WECS	**Westdahl Cape**	**2.24**	**43**			**Pn**	**18 53 30.2**	**+1.3**
WESE	**West Dahl East**	**2.28**	**46**			**Pn**	**18 53 30.7**	**+1.2**
KOFP	**Korovin Flat P**	**4.14**	**264**			**Pn**	**18 53 55.8**	**+0.9**
ATKA	**Atka Island**	**4.22**	**263**			**Pn**	**18 53 57.4**	**+1.5**
GSTD	**Great Sitkin T**	**5.42**	**264**			**Pn**	**18 54 14.3**	**+1.8**
VNWF	**Veniaminof 8**	**5.59**	**51**			**Pn**	**18 54 17.8**	**+3.0**
ADK	**Adak**	**5.79**	**263**	Pn		**Pn**	**18 54 18.4**	**+1.0**
AMKA	**Amchitka**	**8.33**	**265**	Pn		**Pn**	**18 54 53.4**	**+1.1**
SVW2	**Sparrevohn**	**10.41**	**33**	Pn		**Pn**	**18 55 17.3**	**-3.4**
SCM	**Sheep Creek Mo**	**13.97**	**42**	Pn		**Pn**	**18 56 08.7**	**-0.7**
KLU	**Klutina**	**14.40**	**45**	Pn		**Pn**	**18 56 13.0**	**-2.1**
M24K	**Tolsona, Glenn**	**14.58**	**43**	Pn		**Pn**	**18 56 17.0**	**-0.6**
TGL	**Tana Glacier**	**15.48**	**50**	P		**P**	**18 56 31.4**	**-1.9**
TGL				IAmb		IAmb	18 56 40.7	
	comp=Z,15nm,1.1s							
TABL	**Table Mountain**	**16.18**	**52**	P		**P**	**18 56 41.6**	**+0.4**
CTGM	**Chitina Glacie**	**16.25**	**50**	P		**Pn**	**18 56 38.5**	**-0.7**
CTGM				IAmb		IAmb	18 56 43.9	
	comp=Z,17nm,1.2s							
PEA0B	**Petropavlovsk-**	**20.89**	**285**	P		Pn	18 57 31.9	-3.5
PEA0B				IAmb		IAmb	18 57 38.4	
	comp=Z,23nm,1.2s							
PETK	**Petropavlovsk-**	**20.89**	**285**	P		Pn	18 57 32.5	-2.9
	comp=Z,1.0nm,0.4s,baz=89,slow=13,SNR=15							
INK	**Inuvik**	**22.23**	**33**	P		**P**	**18 57 47.3**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=226,slow=9.8,SNR=6.6							
INK	**Inuvik**	**22.23**	**33**	P		**P**	**18 57 44.4**	**-2.4**
YKA	**Yellowknife Ar**	**28.97**	**50**	P		**P**	**18 58 51.5**	**+2.3**
	comp=Z,0.8nm,0.7s,baz=277,slow=7.7,SNR=2.9							
H11N2	**WAKE ISLAND Hy**	**38.65**	**221**	T		T	19 41 35.7	
	baz=25,slow=76,SNR=114							
H11N3	**WAKE ISLAND Hy**	**38.65**	**221**	T		T	19 41 35.9	
	baz=25,slow=76,SNR=145							
H11N1	**WAKE ISLAND Hy**	**38.66**	**221**	T		T	19 41 33.4	
	baz=25,slow=76,SNR=10.0							
LAO	**LASA Array**	**38.90**	**74**	P		**P**	**19 00 13.8**	**-1.6**
LAO				IAmb		IAmb	19 00 42.1	
	comp=Z,8.8nm,0.8s							
H11S1	**WAKE ISLAND Hy**	**39.83**	**220**	T		T	19 43 04.5	
	baz=24,slow=76,SNR=87							
H11S2	**WAKE ISLAND Hy**	**39.84**	**220**	T		T	19 43 05.6	
	baz=24,slow=76,SNR=83							
H11S3	**WAKE ISLAND Hy**	**39.84**	**220**	T		T	19 43 03.0	
	baz=24,slow=76,SNR=73							
KSRS	**Korea Array**	**46.54**	**278**	P		**P**	**19 01 17.8**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=46,slow=7.0,SNR=2.6							
TXAR	**Lajitas Array**	**51.54**	**91**	P		**P**	**19 01 56.9**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=293,slow=4.5,SNR=6.0							
TXAR	**Lajitas Array**	**51.54**	**91**	P		**P**	**19 01 53.5**	**-2.4**
TKL	**Tuktaleechee C**	**58.89**	**71**	LR		LR	19 28 17.7	
	comp=Z,70nm,19.7s,baz=103,slow=36							
MKAR	**Makanchi Array**	**64.30**	**314**	P		**P**	**19 03 24.2**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=46,slow=7.5,SNR=3.7							
CMAR	**Chiang Mai Arr**	**77.67**	**284**	P		**P**	**19 04 47.2**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=31,slow=6.0,SNR=6.6							
CMAR				LR		LR	19 43 01.7	
	comp=Z,75nm,20.6s,baz=262,slow=39							
ESDC	**Sonseca Array**	**86.67**	**13**	P		**P**	**19 05 34.5**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=339,slow=4.7,SNR=1.8							
WRA	**Warramunga Arr**	**88.29**	**233**	P		**P**	**19 05 40.8**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=34,slow=5.8,SNR=7.6							
ASAR	**Alice Springs**	**91.68**	**232**	P		**P**	**19 05 57.2**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=38,slow=5.2,SNR=4.6							
ASAR				LR		LR	19 42 20.5	
	comp=Z,51nm,20.4s,baz=276,slow=32							

*IDC **19** 18:53:09.2±0.7,64˚.62N×17˚.64W,h0km,mb3.7/12, mb1 3.9/14,mb1mx3.7/51,mbtmp3.7/14,ML3.4/2,Error ellipse: s-maj=22.4km s-min=10.3km az=16.0*

ISC 19 18:53:10.2±0.7,64˚.56N±0˚.08×17˚.65W±0˚.09,h9km,n21, σ1§34/23,mb3.7/13,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.59**	**278**	Pg		Pn	**18 53 36.7**	**-1.7**
	13nm,0.3s,baz=120,slow=8.7,SNR=25							
BORG				Lg		Lg	18 54 00.4	
	14nm,0.3s,baz=35,slow=23,SNR=7.1							
SCO	**Scoresbysund**	**6.17**	**346**	*e*		**Pn**	**18 54 39.7**	**-1.6**
	baz=146,slow=10							
SCO				*i*	P	**Pn**	**18 54 40.9**	**-0.4**
SCO				*e*	S	**Sn**	**18 55 53.6**	**+1.7**
EKA	**Eskdalemuir Ar**	**11.73**	**135**	Pn		**Pn**	**18 55 57.5**	**0.0**
	baz=323,slow=13,SNR=7.4							
NOA	**NORSAR Array B**	**13.60**	**92**	Pn		**Pn**	**18 56 19.2**	**-3.7**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.1							
HFS	**Hagfors**	**15.11**	**93**	Pn		**Pn**	**18 56 45.0**	**+1.5**
	baz=266,slow=19,SNR=1.4							
FINES	**FINESS Array B**	**19.79**	**79**	P		**Pn**	**18 57 41.3**	**-0.5**
	0.1nm,0.3s,baz=268,slow=14,SNR=2.0							
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P		P	**18 57 58.5**	**+0.4**
	6.9nm,1.1s							
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P		P	**18 58 13.2**	**+1.6**
DPC	**Dobruska-Polom**	**22.78**	**112**	*e*P		P	**18 58 13.4**	**+0.7**
GERES	**GERESS Array B**	**22.96**	**118**	P		P	**18 58 15.0**	**+0.4**
	0.6nm,0.8s,baz=316,slow=9.3,SNR=5.6							
DAVOX	**Davos/Dischmat**	**23.31**	**127**	P		P	**18 58 19.4**	**+1.1**
	1.6nm,0.7s,baz=321,slow=13,SNR=3.5							
VRAC	**Vranov**	**23.71**	**114**	P		P	**18 58 22.4**	**+0.3**
	1.4nm,0.6s,baz=47,slow=11,SNR=3.3							
ESDC	**Sonseca Array**	**26.18**	**156**	P		P	**18 58 46.0**	**+1.2**
	1.2nm,0.9s,baz=337,slow=8.7,SNR=4.5							
BRTR	**Keskin Array B**	**38.52**	**105**	P		P	**19 00 33.4**	**+0.8**
	1.3nm,0.9s,baz=288,slow=5.9,SNR=2.6							
KBZ	**Khabaz**	**39.18**	**92**	P		P	**19 00 39.0**	**+1.1**
	2.0nm,0.9s,baz=56,slow=24,SNR=4.4							
INK	**Inuvik**	**39.90**	**329**	P		P	**19 00 44.4**	**+0.7**
	1.2nm,0.7s,baz=322,slow=3.3,SNR=3.3							
ILAR	**Eielson Array**	**45.75**	**332**	P		P	**19 01 31.3**	**+0.1**
	1.2nm,1.1s,baz=22,slow=4.9,SNR=7.8							
ZALV	**Zalesovo Beam**	**47.75**	**51**	P		P	**19 01 46.3**	**-0.6**
	0.4nm,0.4s,baz=316,slow=6.2,SNR=3.9							
MKAR	**Makanchi Array**	**52.84**	**58**	P		P	**19 02 24.3**	**-1.2**
	0.2nm,0.6s,baz=299,slow=8.2,SNR=5.0							
TORD	**Torodi Ar. Bea**	**53.07**	**156**	P		P	**19 02 27.7**	**+0.2**
	1.0nm,0.8s,baz=334,slow=9.0,SNR=4.1							
PDAR	**Pinedale Array**	**53.16**	**293**	P		P	**19 02 28.6**	**+0.3**
	1.6nm,1.0s,baz=52,slow=9.6,SNR=3.8							

*ISK **19** 19:14:32.2,36˚.10N×31˚.15E,h12km,ML3.0/35*
*NIC **19** 19:14:33.5±0.0,36˚.18N×31˚.17E,h13km±8km,Ml3.3/5*
*DDA **19** 19:14:33.7,36˚.11N×31˚.21E,h47km±1km,ML2.8*

ISC 19 19:14:33.9±1.1,36˚.16N±0˚.02×31˚.19E±0˚.02,h29km±12km, n78,σ1§67/107,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KEMT	**Kemer-ANTALYA**	**0.68**	**311**	PG		**Pb**	**19 14 46.5**	**-0.7**
AKUM	**Antalya-Kumluc**	**0.70**	**284**	*i*	P	**Pn**	**19 14 49.5**	**+1.6**
AKUM				*i*	S	**Sn**	**19 14 59.0**	**+1.2**
AKUM					IAML		19 15 05.0	
	comp=E,346nm,0.3s							
ALAN	**Alanya-ANTALYA**	**0.79**	**59**	PG		**Pn**	**19 14 49.5**	**+0.4**
ALAN				SG		**Sn**	**19 15 00.9**	**+1.0**
KEPZ	**Antalya-Kepez**	**0.81**	**24**	*i*	P	**Pn**	**19 14 50.1**	**+0.6**
KEPZ				*i*	S	**Sb**	**19 14 59.0**	**-1.2**
GAZI	**Gazipasa**	**0.91**	**85**	PG		**Pb**	**19 14 50.9**	**-0.3**
GAZI				SG		**Sn**	**19 15 04.2**	**+1.2**
GAZI	**Gazipasa**	**0.91**	**85**	*i*	P	**Pn**	**19 14 51.3**	**+0.5**
GAZI				*i*	S	**Sb**	**19 15 01.7**	**-1.4**
DEMR	**Demre-Antalya**	**1.04**	**275**	PG		**Pn**	**19 14 52.1**	**-0.5**
KORT	**Korkueli**	**1.08**	**321**	PN		**Pb**	**19 14 53.8**	**-0.3**
KORT	**Korkueli**	**1.08**	**321**	*i*	P	**Pn**	**19 14 53.3**	**0.0**
KORT				*i*	S	**Sn**	**19 15 08.7**	**+1.4**
KORT					IAML		19 15 17.0	
	comp=E,177nm,0.9s							
ELL	**Elmali**	**1.19**	**300**	PN		**Pb**	**19 14 56.0**	**+0.1**
ELL	**Elmali**	**1.19**	**300**	P		**Pb**	**19 14 56.5**	**+0.5**
ELL				S		**Sn**	**19 15 12.6**	**+2.6**
AKAS	**Kas**	**1.28**	**274**	PN		**Pn**	**19 14 56.2**	**+0.2**
AKAS	**Kas**	**1.28**	**274**	*i*	P	**Pb**	**19 14 56.6**	**-0.9**
AKAS				*i*	S	**Sn**	**19 15 09.8**	**-2.6**
KSL	**Kastellorizon**	**1.30**	**270**	P		**Pb**	**19 14 56.8**	**-0.9**
KSL				S		**Sb**	**19 15 13.8**	**-0.3**
SEYD	**Seydisehir-KON**	**1.35**	**22**	PN		**Pb**	**19 14 58.4**	**-0.2**
ERMK	**Ermenek**	**1.47**	**70**	*i*	P	**Pb**	**19 15 00.4**	**-0.4**
ERMK				*i*	S	**Sb**	**19 15 18.7**	**-0.4**
ERMK					IAML		19 15 27.0	
	comp=N,144nm,0.6s							
ERMK					IAML		19 15 27.0	
	comp=E,134nm,0.5s							
AKMS	**Akamas**	**1.47**	**140**	P		**Pb**	**19 14 59.5**	**-1.1**
AKMS				S		**Sb**	**19 15 21.3**	**+2.3**
AKMS					AML	AML	19 15 27.9	
	comp=E,1.6nm,0.3s							
AKMS					AML	AML	19 15 27.9	
	comp=E,1.6nm,0.3s							
ALFC	**Alefka**	**1.52**	**131**	P		**Pn**	**19 14 59.3**	**0.0**
ALFC				S		**Sn**	**19 15 16.9**	**-1.2**
ALFC					AML	AML	19 15 28.4	
	comp=E,0.9nm,0.2s							
ALFC					AML	AML	19 15 28.4	
	comp=E,0.9nm,0.2s							
ALFC					AML	AML	19 15 28.6	
	comp=E,1.6nm,0.3s							
ALFC					AML	AML	19 15 28.6	
	comp=E,1.6nm,0.3s							
TEKE	**Tekeli-Mersin**	**1.56**	**90**	PN		**Pn**	**19 15 00.8**	**+1.1**
BERE	**Bereket-Mersin**	**1.65**	**83**	PN		**Pb**	**19 15 02.6**	**-1.2**
AKDN	**Akdeniz- Kıbrı**	**1.68**	**120**	PN		**Pn**	**19 15 02.4**	**+1.0**
GOLH	**Golhisar**	**1.69**	**310**	*i*	P	**Pb**	**19 15 04.6**	**+0.1**
GOLH				*i*	S	**Sn**	**19 15 23.8**	**+1.3**
CAME	**Cameli-Denizli**	**1.71**	**298**	PN		**Pn**	**19 15 02.3**	**+0.4**
LEF	**Lefka**	**1.73**	**126**	PN		**Pn**	**19 15 01.9**	**-0.1**
LEF	**Lefka**	**1.73**	**126**	*i*	P	**Pn**	**19 15 01.8**	**-0.3**
LEF				*i*	S	**Sn**	**19 15 19.0**	**-4.1**
ISP	**Isparta**	**1

BNSI				S	Sn	19 16 32.2	+2.8		
SPSI	**Sidrap Palu**	**2.77**	**246**	P	Pn	19 15 59.1	+0.1		
SPSI				S	Sn	19 16 31.3	0.0		
MRSI	**Marisa**	**3.29**	**354**	P	Pn	19 16 05.2	-0.9		
MRSI				S	Sn	19 16 43.9	-0.1		
BKSI	**Bulukumba**	**3.31**	**221**	P	Pn	19 16 06.1	-0.2		
BKSI				S	Sn	19 16 45.6	+1.2		
KAPI	**Kappang**	**3.35**	**229**	Pn	Pn	19 16 07.6	+0.6		
	7.2nm,0.3s,baz=60,slow=6.1,SNR=14								
KAPI				Sn	Sn	19 16 48.5	+2.9		
	5.1nm,0.3s,baz=96,slow=20,SNR=2.1								
KAPI				LR	LR	19 17 19.2			
	comp=Z,62nm,18.9s,baz=314,slow=38								
GTOI	**Gorontalo**	**3.50**	**12**	P	Pn	19 16 09.5	+0.5		
GTOI				S	Sn	19 16 52.7	+3.5		
KMSI	**Cibinong**	**3.76**	**27**	P	Pn	19 16 11.5	-1.1		
BSSI	**Bau Bau, Buton**	**3.77**	**209**	P	Pn	19 16 12.8	+0.1		
MPSI	**Mapaga**	**3.94**	**322**	P	Pn	19 16 14.9	-0.2		
NLAI	**Namlea**	**4.81**	**95**	P	Pn	19 16 28.2	+1.2		
MMRI	**Maumere**	**5.79**	**181**	P	Pn	19 16 40.5	+0.1		
	0.2nm62nm,0.7s								
EDFI	**Ende, Flores**	**5.93**	**186**	P	Pn	19 16 41.8	-0.7		
	0.1nm203nm14nm,0.6s								
KBKI	**Kotabaru**	**6.14**	**265**	P	Pn	19 16 44.1	-1.3		
	0.1nm18nm,0.9s								
MSAI	**Masohi**	**6.64**	**95**	P	Pn	19 16 51.9	-0.3		
	0.0nm6.7nm,0.6s								
SIJI	**Sorong**	**9.17**	**78**	Pn	Pn	19 17 27.1	+0.2		
	2.0nm,0.3s,baz=254,slow=12,SNR=16								
SIJI				Sn	Sn	19 19 08.8	0.0		
	0.2nm,0.3s,baz=63,slow=22,SNR=1.5								
FITZ	**Fitzroy Crossi**	**15.54**	**168**	Pn	Pn	19 18 51.3	-2.3		
	0.0nm,0.3s,baz=356,slow=14,SNR=2.5								
FITZ				LR	LR	19 26 51.1			
	comp=Z,60nm,18.4s,baz=351,slow=45								
JAY	**Jayapura**	**18.39**	**90**	LR	LR	19 28 55.1			
	comp=Z,39nm,18.1s,baz=322,slow=45								
WRA	**Warramunga Arr**	**20.69**	**146**	P	P	19 19 53.2	-1.1		
	0.7nm,0.7s,baz=322,slow=11,SNR=8.5								
ASAR	**Alice Springs**	**23.57**	**153**	P	P	19 20 24.8	+0.1		
	1.4nm,0.8s,baz=328,slow=8.7,SNR=9.2								
CMAR	**Chiang Mai Arr**	**31.24**	**313**	P	P	19 21 34.2	+0.7		
	0.4nm,0.4s,baz=135,slow=8.3,SNR=5.4								
STKA	**Stephens Creek**	**34.14**	**150**	P	P	19 21 59.1	+0.3		
	1.9nm,0.8s,baz=336,slow=10.0,SNR=3.5								

SOME ***19*** *19:19:12.2, 42.°23N × 84.°60E, h10km*
NNC ***19*** *19:19:16.4±2.0, 42.°16N × 84.°54E, h0km, mb4.6, mpv4.4, Error ellipse: s-maj=17.2km s-min=10.5km az=157.0*
IDC ***19*** *19:19:20.5±0.6, 42.°32N × 84.°45E, h0km, mb4.0/17, mb1 4.1/22, mb1mx3.8/65, mbtmp4.0/22, ML3.4/5, MS3.4/7, Ms1 3.4/7, ms1mx2.9/56, Error ellipse: s-maj=17.0km s-min=10.4km az=58.0*
NEIC ***19*** *19:19:24.9±3.2, 42.°25N±0.°07 × 84.°39E±0.°05, h37km±6km, mb4.6/29, Error ellipse: s-maj=10.9km s-min=5.1km az=183.0*
BJI ***19*** *19:19:25.0±0.0, 42.°37N × 84.°42E, h13km, mB4.3/2, mb3.9/7, ML4.2/11*
MOS ***19*** *19:19:28.0±1.4, 42.°57N × 84.°54E, h39km, mb4.4/5, Error ellipse: s-maj=8.0km s-min=5.9km az=128.7*
ISC 19 19:19:21.5±0.3, 42.°40N±0.°04 × 84.°42E±0.°03, h10km, n198, σ1 996/210, mb4.2/29, MS3.7/4, 16C-14D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
WMQ	**Urumqi**	**2.79**	**58**	*e*Pn		**Pb**	**19 20 11.3**	**-0.1**	
WMQ				Sn		**Sg**	**19 20 50.8**	**-0.2**	
WMQ				smax		smax			
	comp=N,1μm,0.7s								
WMQ				smax		smax			
	comp=E,1μm,0.7s								
WMQ	**Urumqi**	**2.79**	**58**	P		**Pb**	**19 20 09.5**	**-1.9**	
WMQ	**Urumqi**	**2.79**	**58**	Pn		**Pb**	**19 20 09.4**	**-1.9**	
SHLS	**Shalkode**	**3.73**	**283**	*e*P		**Pn**	**19 20 18.8**	**-0.5**	
	169nm,0.5s								
SHLS				*e*S		**Sb**	**19 21 10.3**	**-2.5**	
	1μm,0.9s								
SHLS	**Shalkode**	**3.73**	**283**	Pg		**Pn**	**19 20 18.8**	**-0.5**	
	169nm,0.5s								
SHLS				Lg		Lg	19 21 10.3		
	1μm,0.9s								
SHLS	**Shalkode**	**3.73**	**283**	*e*P		**Pn**	**19 20 18.8**	**-0.5**	
SHLS				*e*S		**Sb**	**19 21 10.3**	**-2.5**	
PDGK	**Podgornoye**	**3.74**	**286**	⇓Pn		**Pn**	**19 20 21.7**	**+2.3**	
	4.3nm,0.6s								
PDGK				⇑Pg		**Pb**	**19 20 29.6**	**+1.8**	
	42nm,0.6s								
PDGK				⇓Lg		Lg	19 21 20.8		
	674nm,0.8s								
PDGK	**Podgornoye**	**3.74**	**286**	P		**Pn**	**19 20 22.3**	**+2.9**	
DJR	**Jarkent**	**3.89**	**301**	*e*P		**Pb**	**19 20 27.1**	**-3.1**	
	53nm,0.4s								
DJR				*e*S		**Sg**	**19 21 25.7**	**-0.7**	
	186nm,0.4s								
DJR	**Jarkent**	**3.89**	**301**	Pg		**Pb**	**19 20 27.1**	**-3.1**	
	53nm,0.4s								
DJR				Lg		Lg	19 21 25.7		
	186nm,0.4s								
DJR	**Jarkent**	**3.89**	**301**	*e*P		**Pb**	**19 20 27.1**	**-3.1**	
UZB	**Uzynbulak**	**4.04**	**282**	*e*P		**Pb**	**19 20 30.8**	**-2.1**	
	33nm,0.2s								
UZB				*e*S		**Sg**	**19 21 32.2**	**+0.8**	
	320nm,0.4s								
UZB	**Uzynbulak**	**4.04**	**282**	Pg		**Pb**	**19 20 30.7**	**-2.1**	
	33nm,0.2s								
UZB				Lg		Lg	19 21 32.2		
	320nm,0.4s								
UZB	**Uzynbulak**	**4.04**	**282**	*e*P		**Pb**	**19 20 30.8**	**-2.1**	
KPKS	**Kokpek**	**4.35**	**286**	*e*P		**Pb**	**19 20 36.0**	**-2.0**	
	58nm,0.4s								
KPKS				*e*S		**Sg**	**19 21 41.1**	**+0.1**	
	454nm,0.4s								
KPKS	**Kokpek**	**4.35**	**286**	*e*P		**Pb**	**19 20 36.0**	**-2.0**	
ZHN	**Zhinishke**	**4.47**	**282**	*e*P		**Pb**	**19 20 36.9**	**-3.3**	
	74nm,0.4s								
ZHN				*e*S		**Sg**	**19 21 43.5**	**-1.6**	
	107nm,0.4s								
ZHN	**Zhinishke**	**4.47**	**282**	Pg		**Pb**	**19 20 36.9**	**-3.3**	
	74nm,0.4s								
ZHN				Lg		Lg	19 21 43.5		
	107nm,0.4s								
ZHN	**Zhinishke**	**4.47**	**282**	*e*P		**Pb**	**19 20 36.9**	**-3.3**	
SATY	**Saty**	**4.48**	**280**	*e*P		**Pb**	**19 20 36.9**	**-3.4**	
	56nm,0.4s								
SATY				*e*S		**Sg**	**19 21 43.1**	**-2.2**	
	313nm,0.4s								
SATY	**Saty**	**4.48**	**280**	Pg		**Pb**	**19 20 36.9**	**-3.4**	
	56nm,0.4s								
SATY				Lg		Lg	19 21 43.1		
	313nm,0.4s								
SATY	**Saty**	**4.48**	**280**	*e*P		**Pb**	**19 20 36.9**	**-3.4**	
MK31	**Makanchi Array**	**4.65**	**342**	⇑Pn		**Pn**	**19 20 33.9**	**+2.1**	
	0.8nm,0.3s,baz=161,slow=14,SNR=304								
MK31				⇑Pg		**Pg**	**19 20 47.0**	**-3.5**	
	7.8nm,0.3s,baz=147,slow=15,SNR=48								
MK31				⇓Lg		Lg	19 21 50.4		
	231nm,0.6s,baz=154,slow=30,SNR=14								
MK31	**Makanchi Array**	**4.65**	**342**	*ce*P		**Pn**	**19 20 34.8**	**+3.0**	
MK31	**Makanchi Array**	**4.65**	**342**			**Pn**	**19 20 35.0**	**+3.2**	
MKAR	**Makanchi Array**	**4.65**	**342**	Pn		**Pn**	**19 20 35.0**	**+3.2**	
	1.3nm,0.3s,baz=163,slow=14,SNR=52								
MKAR				Sn		**Sn**	**19 21 29.1**	**+3.3**	
	16nm,0.3s,baz=152,slow=18,SNR=7.1								
MKAR				Lg		Lg	19 21 52.0		
	33nm,0.3s,baz=132,slow=1.8,SNR=9.5								
MKAR				LR		LR	19 21 56.4		
	comp=Z,145nm,21.2s,baz=236,slow=33								
MKAR	**Makanchi Array**	**4.65**	**342**	*i* P		**Pn**	**19 20 35.0**	**+3.2**	
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.3s								
MKAR	**Makanchi Array**	**4.65**	**342**			**Pn**	**19 20 33.8**	**+2.0**	
KAPS	**Kapalarasan**	**4.66**	**310**	*e*P		**Pb**	**19 20 42.2**	**-1.2**	
	comp=Z,21nm,0.6s								
KAPS				*e*S		**Sg**	**19 21 52.6**	**+1.4**	
	comp=Z,266nm,0.7s								
KAPS	**Kapalarasan**	**4.66**	**310**	Pg		**Pb**	**19 20 42.2**	**-1.2**	
	comp=Z,21nm,0.6s								
KAPS				Lg		Lg	19 21 52.6		
	comp=Z,266nm,0.7s								
KAPS	**Kapalarasan**	**4.66**	**310**	*e*P		**Pb**	**19 20 42.2**	**-1.2**	
MNBS	**Baschi**	**4.71**	**293**	*e*P		**Pb**	**19 20 41.5**	**-2.7**	
	comp=Z,15nm,0.2s								
MNBS				*e*S		**Sg**	**19 21 51.1**	**-1.6**	
	comp=Z,55nm,0.6s								
MNBS	**Baschi**	**4.71**	**293**	Pg		**Pb**	**19 20 42.2**	**-2.0**	
	comp=Z,36nm,0.3s								
MNBS				Lg		Lg	19 21 51.1		
	comp=Z,55nm,0.6s								
MNBS	**Baschi**	**4.71**	**293**	*e*P		**Pb**	**19 20 41.5**	**-2.7**	
KURS	**Kuram**	**4.72**	**285**	*e*P		**Pb**	**19 20 41.3**	**-3.0**	
	comp=Z,18nm,0.7s								
KURS				*e*S		**Sg**	**19 21 50.8**	**-2.1**	
	comp=Z,148nm,0.5s								
KURS	**Kuram**	**4.72**	**285**	Pg		**Pb**	**19 20 41.3**	**-3.0**	
	comp=Z,18nm,0.7s								
KURS				Lg		Lg	19 21 50.8		
	comp=Z,148nm,0.5s								
KURS	**Kuram**	**4.72**	**285**	*e*P		**Pb**	**19 20 41.3**	**-3.0**	
MAKZ	**Makanchi**	**4.74**	**339**	⇑Pn		**Pn**	**19 20 35.2**	**+2.1**	
	comp=Z,1.9nm,0.5s								
MAKZ				⇓Pg		**Pg**	**19 20 49.3**	**-3.0**	
	comp=Z,44nm,0.7s								
MAKZ				⇑Lg		Lg	19 21 51.7		
	comp=Z,97nm,0.7s								
MAKZ	**Makanchi**	**4.74**	**339**	P		**Pn**	**19 20 36.2**	**+3.2**	
MAKZ	**Makanchi**	**4.74**	**339**			**Pn**	**19 20 36.2**	**+3.2**	
ZSN	**Zaisan**	**5.06**	**3**	*e*P		**Pb**	**19 20 48.3**	**-1.8**	
	comp=Z,13nm,0.3s								
ZSN				*e*S		**Sg**	**19 22 02.9**	**-1.0**	
	comp=Z,219nm,0.4s								
ZSN	**Zaisan**	**5.06**	**3**	Pg		**Pb**	**19 20 48.3**	**-1.8**	
	comp=Z,13nm,0.3s								
ZSN				Lg		Lg	19 22 02.9		
	comp=Z,219nm,0.4s								
ZSN	**Zaisan**	**5.06**	**3**	*e*P		**Pb**	**19 20 48.3**	**-1.8**	
TDK	**Taldyqorghan**	**5.08**	**303**	Pg		**Pb**	**19 20 50.7**	**+0.2**	
	comp=Z,193nm,0.3s								
TDK				Lg		Lg	19 22 07.5		
	comp=Z,775nm,0.9s								
ARXS	**Arharly**	**5.14**	**293**	Pg		**Pb**	**19 20 52.6**	**+1.0**	
	comp=Z,56nm,0.4s								
ARXS				Lg		Lg	19 22 10.5		
	comp=Z,175nm,0.4s								
KOTS	**Kotyrbulak**	**5.44**	**281**	Pg		**Pb**	**19 20 57.2**	**+0.5**	
	comp=Z,64nm,0.3s								
KOTS				Lg		Lg	19 22 18.9		
	comp=Z,216nm,0.4s								
MDOK	**Medeo**	**5.48**	**280**	Pg		**Pb**	**19 20 57.7**	**+0.3**	
	comp=Z,20nm,0.5s								
MDOK				Lg		Lg	19 22 20.1		
	comp=Z,109nm,0.7s								
TNSS	**Tian-Shan**	**5.54**	**279**	Pg		**Pb**	**19 20 57.9**	**-0.7**	
	comp=Z,14nm,0.4s								
TNSS				Lg		Lg	19 22 20.6		
	comp=Z,70nm,0.5s								
KNDC	**Almaty**	**5.55**	**281**	⇑Pg		**Pb**	**19 21 01.1**	**+2.7**	
	comp=Z,85nm,0.8s								
KNDC				⇓Lg		Lg	19 22 16.4		
	comp=Z,337nm,0.8s								
CHKK	**Chushkaly**	**5.63**	**287**	Pg		**Pb**	**19 20 59.7**	**-0.1**	
	comp=Z,9.1nm,0.3s								
CHKK				Lg		Lg	19 22 23.9		
	comp=Z,87nm,0.4s								
KTBS	**Karatobe**	**5.82**	**286**	Pg		**Pb**	**19 21 03.5**	**+0.4**	
	comp=Z,11nm,0.3s								
KTBS				Lg		Lg	19 22 30.3		
	comp=Z,154nm,0.6s								
MTBS	**Maitube**	**5.93**	**280**	Pg		**Pb**	**19 21 05.7**	**+0.7**	
	comp=Z,11nm,0.2s								
MTBS				Lg		Lg	19 22 34.4		
	comp=Z,74nm,0.2s								
KUU	**Kurty**	**6.10**	**287**	Pg		**Pb**	**19 21 08.9**	**+1.1**	
	comp=Z,9.7nm,0.6s								
KUU				Lg		Lg	19 22 40.0		
	comp=Z,112nm,0.7s								
KST	**Kastek**	**6.26**	**279**	Pg		**Pb**	**19 21 11.7**	**+1.0**	
	comp=Z,31nm,0.4s								
KST				Lg		Lg	19 22 44.4		
	comp=Z,187nm,0.5s								
TKM2	**Tokmak 2**	**6.53**	**278**	⇑Pn		**Pn**	**19 20 59.8**	**+2.0**	
	comp=Z,16nm,0.7s								
TKM2				⇑Pg		**Pb**	**19 21 18.5**	**+3.3**	
	comp=Z,35nm,1.0s								
TKM2				⇓Lg		Lg	19 22 48.6		
	comp=Z,124nm,0.8s								
TKM2	**Tokmak 2**	**6.53**	**278**	P		**Pn**	**19 21 00.7**	**+2.9**	
KRBS	**Karabastau**	**6.54**	**284**	Pg		**Pb**	**19 21 16.3**	**+1.0**	
	comp=Z,9.1nm,0.5s								
KRBS				Lg		Lg	19 22 52.7		
	comp=Z,64nm,0.4s								
KSH	**Kashi**	**7.01**	**249**	P		**Pn**	**19 21 04.4**	**+0.1**	
KSH				pP		Pb	19 21 13.0	-10	
KSH				S		**Sn**	**19 22 25.1**	**+0.9**	
KSH				pmax		pmax			
	comp=Z,26nm,0.8s								
KSH				pmax		pmax			
	comp=Z,210nm,6.0s								
KSH				LR		LR			
	comp=N,710nm,2.6s								
KSH				LR		LR			
	comp=E,570nm,1.8s								
KSH				LR		LR			
	comp=Z,590nm,4.8s								
AAK	**Ala-Archa**	**7.34**	**275**	⇓Pn		**Pn**	**19 21 07.7**	**-1.1**	
	comp=Z,2.7nm,0.5s								
AAK				⇓Pg		**Pb**	**19 21 32.4**	**+3.3**	
	comp=Z,15nm,0.8s								
AAK				⇓Lg		Lg	19 23 12.9		
	comp=Z,84nm,0.8s								
AAK	**Ala-Archa**	**7.34**	**275**	*i* P		**Pn**	**19 21 06.6**	**-2.3**	
BTLS	**Baital**	**7.97**	**293**	Pg		**Pb**	**19 21 42.7**	**+3.1**	
	comp=Z,5.6nm,0.4s								
BTLS				Lg		Lg	19 23 39.6		
	comp=Z,7.8nm,0.6s								
MRKS	**Merke**	**8.27**	**276**	Pg		**Pb**	**19 21 49.1**	**+4.2**	
	comp=Z,5.8nm,0.4s								
MRKS				Lg		Lg	19 23 49.9		
	comp=Z,23nm,0.5s								
SEM	**Semipalatinsk**	**8.51**	**342**	Pg		Pg	19 21 54.0	-10	
	comp=Z,13nm,0.3s								
SEM				Lg		Lg	19 24 00.2		
	comp=Z,61nm,0.9s								
KURBB	**Kurchatov Arra**	**9.17**	**336**	Pn		**Pn**	**19 21 36.5**	**+2.7**	
	comp=Z,0.2nm,0.3s,baz=154,slow=12,SNR=4.4								
KURBB				Sn		**Sn**	**19 23 18.0**	**+1.0**	
	comp=Z,0.3nm,0.3s,baz=147,slow=21,SNR=1.7								
KURBB				Lg		Lg	19 24 16.3		
	comp=Z,0.7nm,0.3s,baz=131,slow=53,SNR=3.5								
KURK	**Kurchatov**	**9.22**	**336**	⇓Lg		Lg	19 24 18.4		
	comp=Z,84nm,1.0s								
KURK	**Kurchatov**	**9.22**	**336**	*i* P		**Pn**	**19 21 39.0**	**+4.5**	
KURK	**Kurchatov**	**9.22**	**336**	Pn		**Pn**	**19 21 36.6**	**+2.1**	
DZA	**Taraz**	**9.66**	**277**	Pg		Pn	19 22 14.3	+34	
	comp=Z,14nm,0.2s								
DZA				Lg		Lg	19 24 35.5		
	comp=Z,42nm,0.5s								
KK06	**Karatay Array**	**10.25**	**279**	Pn		**Pn**	**19 21 49.1**	**+0.5**	
KK05	**Karatay Array**	**10.25**	**279**	Pn		**Pn**	**19 21 49.4**	**+0.8**	
KK02	**Karatay Array**	**10.26**	**279**	Pn		**Pn**	**19 21 48.3**	**-0.4**	
KK31	**Karatay Array**	**10.26**	**279**	⇓Pg		Pn	19 22 26.2	+38	
	comp=Z,1.2nm,0.6s,baz=94,slow=10,SNR=4.3								
KK31				⇓Lg		Lg	19 24 46.9		
	comp=Z,6.8nm,0.6s,baz=80,slow=26,SNR=4.2								
KK31	**Karatay Array**	**10.26**	**279**	P		**Pn**	**19 21 48.8**	**0.0**	
KK31	**Karatay Array**	**10.26**	**279**	Pn		**Pn**	**19 21 48.8**	**0.0**	
KKAR	**Karatay Array**	**10.26**	**279**	P		**Pn**	**19 21 48.2**	**-0.6**	
KKAR	**Karatay Array**	**10.26**	**279**	Pn		**Pn**	**19 21 48.0**	**-0.7**	
KKAR	**Karatay Array**	**10.26**	**279**	Pn		**Pn**	**19 21 48.2**	**-0.6**	
IUG	**Iuzhnay**	**10.67**	**273**	Pg		Pn	19 22 33.1	+39	
	comp=Z,5.2nm,0.5s								
BRZS	**Berezniki**	**11.12**	**317**	Pg		Pn	19 22 43.9	+43	
	comp=Z,4.9nm,0.3s								
GAR	**Garm**	**11.23**	**257**			**Pn**	**19 21 59.1**	**-3.1**	
ZAA0	**Zalesovo Array**	**11.56**	**1**	⇑Pn		**Pn**	**19 22 06.7**	**+0.2**	
	comp=Z,0.8nm,0.6s								
ZAA0	**Zalesovo Array**	**11.56**	**1**			**Pn**	**19 22 06.0**	**-0.5**	
ZALV	**Zalesovo Beam**	**11.56**	**1**	Pn		**Pn**	**19 22 07.1**	**+0.7**	
	comp=Z,1.4nm,0.3s,baz=179,slow=14,SNR=30								
ZALV				Sn		**Sn**	**19 24 13.1**	**-2.4**	
	comp=Z,1.2nm,0.3s,baz=168,slow=25,SNR=3.4								
ZALV				Lg		Lg	19 25 30.5		
	baz=94,slow=21,SNR=2.3								
ZALV				LR		LR	19 27 03.0		
	comp=Z,102nm,21.1s,baz=264,slow=40								
ZALV	**Zalesovo Beam**	**11.56**	**1**	Pn		**Pn**	**19 22 06.5**	**0.0**	
GTA	**Gaotai**	**12.02**	**99**	*e*P		**Pn**	**19 22 14.1**	**+1.1**	
GTA				pP			19 22 19.8		
GTA				sP			19 22 23.0		
GTA				S		**Sn**	**19 24 29.0**	**+1.8**	
GTA				SS		**SnSn**	**19 24 43.1**	**+4.2**	
GTA				pmax		pmax			
	comp=Z,2.0nm,1.2s								
GTA				pmax		pmax			
	comp=Z,39nm,4.7s								
GTA				LR		LR			
	comp=N,180nm,6.9s								
GTA				LR		LR			
	comp=E,160nm,7.3s								
GTA				LR		LR			
	comp=Z,100nm,9.5s								
THN	**Thein Dam**	**12.11**	**218**	*e*P		Pn	19 22 25.0	+11	
THN				*e*S		**Sn**	**19 24 31.0**	**+1.9**	
CHGR	**Chuyangaron**	**12.20**	**257**	Pn		**Pn**	**19 22 14.6**	**-0.8**	
NIL	**Nilore**	**12.39**	**229**	P		**Pn**	**19 22 17.3**	**-0.7**	
NIL	**Nilore**	**12.39**	**229**	Pn		**Pn**	**19 22 17.3**	**-0.7**	
CEP	**Cherat**	**13.04**	**233**	P		**Pn**	**19 22 26.8**	**-0.1**	
CEP				S		Sn	19 24 41.0	-11	
THW	**Thamme Wali**	**13.88**	**230**	⇓P		**Pn**	**19 22 39.4**	**+1.2**	
DANN	**Dangsing**	**14.03**	**182**	*e*P		**P**	**19 22 50.7**	**+2.1**	
	comp=Z,51nm,0.4s								
BVAR	**Borovoye Array**	**14.19**	**323**	Pn		**Pn**	**19 22 45.3**	**+2.9**	
	comp=Z,0.2nm,0.3s,baz=130,slow=14,SNR=5.1								
BRVK	**Borovoye**	**14.26**	**323**	⇑Pn		**Pn**	**19 22 45.0**	**+1.6**	
	comp=Z,7.6nm,0.9s								
BRVK				⇑Lg		Lg	19 26 56.9		
	comp=Z,38nm,1.3s								
BRVK	**Borovoye**	**14.26**	**323**	*i* P		**Pn**	**19 22 45.7**	**+2.3**	
BRVK				pmax		pmax			
	comp=Z,1.0nm,0.7s								
BRVK	**Borovoye**	**14.26**	**323**	Pn		**Pn**	**19 22 46.5**	**+3.1**	
PYUN	**Piuthan**	**14.31**	**185**	*e*P		**P**	**19 22 52.3**	**+0.6**	
	comp=Z,22nm,0.5s								
KBL	**Kabul**	**14.36**	**242**	P		**P**	**19 22 51.3**	**-0.9**	
KBL	**Kabul**	**14.36**	**242**	P		**P**	**19 22 51.3**	**-0.9**	
GKN	**Gorkha**	**14.37**	**179**	*e*P		**P**	**19 22 53.7**	**+1.5**	
	comp=Z,34nm,0.4s								
GUN	**Gumba**	**14.51**	**175**	*e*P		**P**	**19 22 54.9**	**+1.0**	
	comp=Z,49nm,0.9s								
KKN	**Kakani**	**14.59**	**177**	*e*P		**P**	**19 22 55.2**	**+0.5**	
	comp=Z,21nm,0.5s								
KOLN	**Koldanda**	**14.61**	**183**	*e*P		**P**	**19 22 56.4**	**+1.5**	
	comp=Z,27nm,0.5s								
PKIN	**Phulchoki**	**14.81**	**177**	*e*P		**P**	**19 22 58.3**	**+1.1**	
	comp=Z,15nm,0.5s								
PKI	**Pulchoki**	**14.82**	**177**	*e*P		**P**	**19 22 58.3**	**+1.0**	
	comp=Z,11nm,0.5s								
ZAK	**Zakamensk**	**15.24**	**52**	*e*P		**Pn**	**19 22 58.5**	**+1.8**	
ZAK				pmax		pmax			
	comp=Z,8.0nm,0.8s								
TAPN	**Taplejung**	**15.25**	**169**	*e*P		**P**	**19 23 03.2**	**+1.0**	
	comp=Z,43nm,1.0s								
RAMN	**Ramite**	**15.52**	**173**	*e*P		**P**	**19 23 05.5**	**+0.5**	
SONM	**Songino Array**	**16.41**	**63**	Pn		**P**	**19 23 14.3**	**-0.5**	
	comp=Z,0.5nm,0.3s,baz=258,slow=12,SNR=13								
SONM				LR		LR	19 30 34.2		
	comp=Z,61nm,19.0s,baz=160,slow=41								
SONM	**Songino Array**	**16.41**	**63**			**P**	**19 23 14.0**	**-0.8**	
ULN	**Ulaanbaatar**	**16.85**	**63**	*i* P		**P**	**19 23 19.2**	**-0.5**	
ULN				pmax		pmax			
	comp=Z,5.0nm,0.7s								
ULN	**Ulaanbaatar**	**16.85**	**63**	Pn		**P**	**19 23 18.8**	**-0.9**	
SHL	**Shillong**	**17.88**	**158**	P		**Pn**	**19 23 27.8**	**-2.7**	
SHL				pmax		pmax			
	comp=Z,12nm,0.9s								
SHL	**Shillong**	**17.88**	**158**	Pn		**Pn**	**19 23 27.8**	**-2.7**	
AB07	**Akbulak array**	**18.32**	**300**	P		**P**	**19 23 36.8**	**+1.1**	
AB02	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 35.1**	**-0.6**	
AB03	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 34.1**	**-1.7**	
AB01	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 34.2**	**-1.5**	
AB31	**Akbulak array**	**18.34**	**300**	⇑P		**Pn**	**19 23 35.3**	**-0.5**	
	comp=Z,1.8nm,0.7s,baz=77,slow=10,SNR=11								
AB31	**Akbulak array**	**18.34**	**300**	P		**P**	**19 23 37.9**	**+2.1**	
AB31	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 34.1**	**-1.6**	
ABKAR	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 35.2**	**-0.5**	
ABKAR	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 34.9**	**-0.9**	
AB04	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 35.1**	**-0.7**	
AB05	**Akbulak array**	**18.34**	**300**	P		**Pn**	**19 23 35.3**	**-0.5**	
**AB

comp=Z,36nm,1.3s
DIVS Divibare 45.88 295 P **P** 19 27 45.0 +1.1
DIVS IAmb IAmb 19 28 10.4
comp=Z,6.8nm,1.3s
IDI Anoyia 46.08 282 P **P** 19 27 46.1 +0.4
NB2 NORSAR Subarra 46.29 320 P **P** 19 27 47.3 +0.4
comp=Z,1.0nm,0.6s,baz=79,slow=7.9
NOA NORSAR Array B 46.29 320 P **P** 19 27 47.1 +0.1
comp=Z,0.5nm,0.4s,baz=79,slow=7.8,SNR=4.2
CLL Collm 47.85 307 *ep*P pP 19 28 10.0 +6.7
GERES GERESS Array B 48.25 303 P **P** 19 28 03.8 +1.4
comp=Z,0.4nm,0.5s,baz=71,slow=10.0,SNR=2.5
GERES GERESS Array B 48.25 303 P **P** 19 28 04.1 +1.6
GERES GERESS Array B 48.25 303 P **P** 19 28 04.1 +1.6
PETK Petropavlovsk- 48.36 51 LR LR 19 47 49.7
comp=Z,52nm,18.7s,baz=346,slow=35
BNI Bardonecchia 54.17 301 P **P** 19 28 47.1 +0.1
BNI pmax pmax
comp=Z,17nm,1.5s
BNI Bardonecchia 54.17 301 P **P** 19 28 47.1 +0.1
BNI IAmb IAmb 19 28 53.2
comp=Z,17nm,1.5s
TOLK Toolik Lake Re 62.25 20 P **P** 19 29 43.6 +0.5
ESBB Sonseca Array 63.68 301 P **P** 19 29 53.2 +0.2
ESDC Sonseca Array 63.69 301 P **P** 19 29 53.6 +0.6
comp=Z,1.0nm,0.6s,baz=48,slow=6.7,SNR=6.6
ESDC LR LR 20 00 12.8
comp=Z,89nm,18.0s,baz=330,slow=38
IL31 65.89 22 P **P** 19 30 05.5 -1.4
IL31 IAmb IAmb 19 32 19.8
comp=Z,13nm,1.6s
ILAR Eielson Array 65.89 22 P **P** 19 30 07.0 0.0
comp=Z,0.6nm,0.9s,baz=305,slow=6.2,SNR=4.2
ILAR Eielson Array 65.89 22 P **P** 19 30 07.0 0.0
ILAR Eielson Array 65.89 22 P **P** 19 30 05.1 -1.8
GLI Glacier Island 68.87 24 P **P** 19 30 26.8 +1.0
TORD Torodi Ar. Bea 75.93 275 P **P** 19 31 08.1 -0.6
comp=Z,0.8nm,0.6s,baz=40,slow=4.3,SNR=7.9
TORD Torodi Ar. Bea 75.93 275 P **P** 19 31 07.7 -1.0
WRAB Tennant Creek 77.24 132 P **P** 19 31 12.5 -3.3
WRAB pmax pmax
comp=Z,10.0nm,1.4s
WRAB Tennant Creek 77.24 132 P **P** 19 31 12.5 -3.3
WRAB IAmb IAmb 19 31 50.8
comp=Z,10.0nm,1.4s
WRA Warramunga Arr 77.24 132 P **P** 19 31 15.6 -0.2
comp=Z,1.3nm,0.6s,baz=330,slow=5.2,SNR=16
WRA Warramunga Arr 77.24 132 P **P** 19 31 13.2 -2.7
WB2 Warramunga Arr 77.24 132 P **P** 19 31 11.7 -4.2
WB2 IAmb IAmb 19 33 06.0
comp=Z,8.8nm,1.4s
WC3 Warramunga Arr 77.27 132 P P 19 31 10.7 -5.3
WR0 Warramunga Arr 77.36 132 P **P** 19 31 12.0 -4.5
WR0 IAmb IAmb 19 33 43.5
comp=Z,18nm,1.9s
ASAR Alice Springs 80.03 135 P **P** 19 31 31.5 +0.3
comp=Z,1.0nm,0.7s,baz=327,slow=5.4,SNR=13
ASAR Alice Springs 80.03 135 P **P** 19 31 31.6 +0.4
BBB Bella Bella 81.67 20 LR LR 20 14 29.3
comp=Z,52nm,19.7s,baz=106,slow=40
GCMT Greycliff 91.30 10 P **P** 19 32 26.2 -1.1

IDC 19 19:25:23.8±2.1, 7°22S×127°89E, h0km, mb3.8/2, mb1 3.4/4, mb1mx3.2/33, mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=295.6km s-min=30.4km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.11**	**154**	Pn	Pn	19 28 44.4	-0.7
	0.0nm,0.3s,baz=333,slow=14,SNR=2.6						
ASAR	**Alice Springs**	**17.34**	**161**	P	Pn	19 29 27.8	+0.3
	0.0nm,0.3s,baz=340,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**67.28**	**328**	P	P	19 36 19.5	-0.9
	0.3nm,0.3s,baz=119,slow=7.5,SNR=12						
KURBB	**Kurchatov Arra**	**71.62**	**329**	P	P	19 36 48.3	+1.2
	0.5nm,0.5s,baz=124,slow=6.0,SNR=5.4						

DJA 19 19:26:24.9±1.2, 2°N±3°×12°7E±°, h36km±22km, M3.2/7, MLv3.2/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**145**	P	Pn	19 26 47.6	0.0
TNTI				S	Sn	19 27 05.2	+0.6
SGSI	**Sangihe**	**2.05**	**329**	P	Pn	19 26 57.1	+0.2
SGSI				S	Sn	19 27 22.1	+0.8
KMSI	**Cibinong**	**2.92**	**243**	P	Pn	19 27 09.6	+0.8
GTOI	**Gorontalo**	**3.79**	**251**	P	Pn	19 27 21.9	+1.2

*IDC **19** 19:31:45.6±2.6, 11°.14S×123°.13E, h0km, mb3.5/1, mb1 3.4/3, mb1mx3.1/37, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=210.2km s-min=34.4km az=51.0*
*DJA **19** 19:31:53.8±0.9, 10°S±7°×12°4E±°, h21km±6km, M3.1/7, MLv3.1/7*
ISC 19 19:31:50.8±0.9, 10°.56S±0°.08×124°.08E±0°.08, h27km, n8, σ1§31/11, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.82**	**13**	P	**Pb**	**19 32 06.4**	**-0.1**
SOEI				S	**Sn**	**19 32 19.5**	**+1.5**
MMRI	**Maumere**	**2.63**	**316**	P	**Pn**	**19 32 31.5**	**-0.1**
EDFI	**Ende, Flores**	**2.96**	**307**	P	**Pn**	**19 32 36.4**	**+0.2**
EDFI				S	**Sn**	**19 33 09.0**	**-1.9**
WSI	**Waingapu**	**3.82**	**283**	P	**Pn**	**19 32 49.8**	**+1.8**
WBSI	**Waikabubak, Su**	**4.70**	**281**	P	**Pn**	**19 33 01.3**	**+1.2**
WRA	**Warramunga Arr**	**13.60**	**135**	Pn	**Pn**	**19 35 02.2**	**+0.1**
	0.1nm,0.3s,baz=306,slow=13,SNR=2.2						
WRA				Sn	**Sn**	**19 37 31.1**	**-1.3**
	0.1nm,0.3s,baz=303,slow=23,SNR=4.9						
ASAR	**Alice Springs**	**16.06**	**146**	Pn	**Pn**	**19 35 35.8**	**+0.9**
	0.1nm,0.3s,baz=318,slow=12,SNR=7.2						
MKAR	**Makanchi Array**	**68.19**	**330**	P	**P**	**19 42 48.2**	**-0.7**
	0.3nm,0.5s,baz=141,slow=7.8,SNR=4.3						

*TEH **19** 19:42:43.2, 28°.50N×52°.99E, h5km, ML2.9*
*IDC **19** 19:42:44.3±1.7, 28°.38N×52°.81E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.4/41, mbtmp3.7/5, ML2.9/1, Error ellipse: s-maj=36.8km s-min=31.9km az=158.0*
ISC 19 19:42:46.1±1.0, 28°.37N±0°.07×52°.94E±0°.10, h10km, n12, σ1§32/13, mb3.7/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
QIR1	**Qir**	**0.14**	**41**	*e*Pg	Pg	19 42 44.6	-4.8
QIR1				*e*		19 42 46.6	
JHRM	**Jahrom**	**0.58**	**76**	*e*Pg	**Pg**	**19 42 55.2**	**-2.2**
JHRM				*e*		19 43 20.4	
SHI	**Shiraz**	**1.32**	**344**	*e*Sg	**Sg**	**19 43 30.5**	**+1.7**
SHI				*e*Pg	**Pn**	**19 43 09.7**	**-1.1**
SHI				*e*		19 43 40.7	
LAR1	**LAR**	**1.45**	**118**	*e*Pg	**Pg**	**19 43 15.6**	**+1.7**
LAR1				*e*		19 43 51.7	
KLNJ	**Kolanjah**	**2.88**	**336**	*e*Pn	**Pn**	**19 43 32.1**	**-0.3**
KLNJ				*e*		19 44 34.5	
IRAM	**Ramesheh**	**3.46**	**352**	*e*Pn	**Pn**	**19 43 40.5**	**+0.2**
IRAM				*e*		19 44 48.4	
IBAF	**Bafgh**	**3.94**	**35**	*e*	**Pg**	**19 44 03.1**	**+1.5**
WSAR	**Wadi Sarin**	**7.24**	**134**	Pn	**Pn**	**19 44 32.9**	**+1.0**
	0.2nm,0.3s,baz=308,slow=9.4,SNR=1.9						
WSAR				Sn	**Sn**	**19 45 53.7**	**-0.6**
	baz=190,slow=23,SNR=1.7						
KURBB	**Kurchatov Arra**	**29.47**	**34**	P	**P**	**19 48 50.2**	**+0.1**
	0.2nm,0.3s,baz=225,slow=12,SNR=1.4						
ZALV	**Zalesovo Beam**	**34.56**	**33**	P	**P**	**19 49 34.8**	**+0.1**
	0.6nm,0.4s,baz=231,slow=9.4,SNR=3.7						
FINES	**FINESS Array B**	**37.60**	**339**	P	**P**	**19 50 00.2**	**-0.4**
	3.7nm,1.0s,baz=140,slow=11,SNR=3.6						
TORD	**Torodi Ar. Bea**	**49.89**	**263**	P	**P**	**19 51 38.8**	**-1.3**
	0.4nm,0.7s,baz=60,slow=8.4,SNR=3.7						

*DDA **19** 19:47:09.7, 37°.21N×27°.96E, h7km±3km, ML2.4*
*ISK **19** 19:47:10.1, 37°.18N×27°.96E, h8km, ML2.6/19*
ISC 19 19:47:09.2±1.0, 37°25N±0°.02×27°99E±0°.02, h15km±9km, n35, σ1§03/51, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSB	**Milas**	**0.18**	**284**	PG	**Pb**	**19 47 16.1**	**+1.9**
MLSB				SG	**Sb**	**19 47 18.7**	**+1.2**
YER	**Yerkesik**	**0.26**	**117**	PG	**Pb**	**19 47 15.8**	**+0.2**
AYDN	**Tasoluk**	**0.42**	**348**	*i* P	**Pb**	**19 47 19.5**	**+1.1**
AYDN				*i* S	**Sb**	**19 47 25.1**	**+0.6**
AYDN				IAML		19 47 27.0	
	comp=E,477nm,0.3s						
BDRM	**Kayabasi**	**0.47**	**247**	*i* P	**Pg**	**19 47 18.5**	**-0.2**
BDRM				*i* S	**Sg**	**19 47 23.6**	**-1.5**
TURN	**Turunc**	**0.52**	**157**	PG	**Pg**	**19 47 19.4**	**-0.1**
TURN				SG	**Sg**	**19 47 26.6**	**+0.2**
TURN	**Turunc**	**0.52**	**157**	*i* P	**Pg**	**19 47 19.4**	**-0.1**
TURN				*i* S	**Sg**	**19 47 24.3**	**-2.1**
TURN				IAML		19 47 29.0	
	comp=E,213nm,0.2s						
DATC	**Datca-Mugla**	**0.56**	**208**	PG	**Pg**	**19 47 20.1**	**-0.1**
MRSB	**Marmaris-Mugla**	**0.56**	**163**	PG	**Pg**	**19 47 20.5**	**+0.2**
MRSB				SG	**Sg**	**19 47 27.9**	**+0.2**
BODT	**Bodrum**	**0.58**	**251**	PG	**Pg**	**19 47 20.8**	**+0.2**
YKAV	**Yalikavak-Bodr**	**0.58**	**258**	PG	**Pg**	**19 47 21.1**	**+0.4**
DALY	**Dalyan (Mula)**	**0.69**	**129**	PG	**Pg**	**19 47 23.5**	**+0.9**
DALY	**Dalyan (Mula)**	**0.69**	**129**	*i* P	**Pg**	**19 47 23.3**	**+0.7**
DALY				*i* S	**Sb**	**19 47 33.0**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**0.70**	**353**	PG	**Pn**	**19 47 24.6**	**-0.1**
GCAM	**G?zelcaml?**	**0.75**	**307**	PG	**Pn**	**19 47 25.5**	**+0.3**
GCAM	**G?zelcaml?**	**0.75**	**307**	*i* P	**Pg**	**19 47 25.0**	**+1.2**
GCAM				*i* S	**Sb**	**19 47 33.7**	**-0.3**
GCAM				IAML		19 47 38.0	
	comp=N,343nm,0.4s						
GCAM				IAML		19 47 38.0	
	comp=E,412nm,0.5s						
TAVA	**DENIZLI_Tavas**	**0.77**	**74**	*i* P	**Pn**	**19 47 25.4**	**-0.1**
TAVA				*i* S	**Sb**	**19 47 32.9**	**-1.7**
NIS1	**Nisyros Isl.**	**0.92**	**225**	PG	**Pb**	**19 47 26.9**	**+0.1**
KOSK	**Kos Island**	**0.95**	**239**	PG	**Pb**	**19 47 27.4**	**0.0**
ARG	**Arkhangelos**	**1.04**	**174**	PG	**Pb**	**19 47 29.4**	**+0.5**
FETY	**Fethiye**	**1.07**	**125**	PG	**Pg**	**19 47 30.9**	**+1.0**
FETY	**Fethiye**	**1.07**	**125**	*i* P	**Pg**	**19 47 30.4**	**+0.6**
FETY				*i* S	**Sn**	**19 47 43.9**	**-0.3**
CAME	**Cameli-Denizli**	**1.09**	**106**	PN	**Pg**	**19 47 31.9**	**+1.5**
DGB	**zmir**	**1.19**	**313**	*i* P	**Pg**	**19 47 32.4**	**+0.3**
DGB				*i* S	**Sb**	**19 47 45.9**	**-0.7**
GOLH	**Golhisar**	**1.25**	**90**	*i* P	**Pg**	**19 47 35.3**	**+1.9**
GOLH				*i* S	**Sg**	**19 47 49.8**	**0.0**
MANT	**Manisa**	**1.32**	**20**	*i* P	**Pg**	**19 47 35.0**	**+0.3**
MANT				*i* S	**Sg**	**19 47 51.8**	**0.0**
URLA	**Izmir**	**1.56**	**315**	PN	**Pg**	**19 47 39.5**	**+0.2**
ELL	**Elmali**	**1.61**	**108**	PN	**Pb**	**19 47 39.6**	**+0.8**
AKAS	**Kas**	**1.65**	**128**	PN	**Pb**	**19 47 39.6**	**+0.3**
AKAS	**Kas**	**1.65**	**128**	*i* P	**Pg**	**19 47 41.6**	**+0.7**
AKAS				*i* S	**Sg**	**19 48 04.2**	**+1.9**
AKAS				IAML		19 48 13.0	
	comp=N,57nm,1.2s						
USAK	**Uak-Merkez**	**1.67**	**29**	*i* P	**Pb**	**19 47 40.0**	**+0.3**
USAK				*i* S	**Sn**	**19 47 58.2**	**-0.9**
USAK				IAML		19 48 03.0	
	comp=E,42nm,0.9s						
USAK				IAML		19 48 42.0	
	comp=N,34nm,2.4s						
BRDR	**BURDUR-Merkez**	**1.71**	**74**	*i* P	**Pg**	**19 47 41.9**	**-0.1**
BRDR				*i* S	**Sg**	**19 48 03.9**	**-0.3**
KARP	**Karpathos**	**1.83**	**202**	PN	**Pn**	**19 47 41.5**	**+1.4**
KORT	**Korkueli**	**1.90**	**97**	PN	**Pb**	**19 47 44.2**	**+0.5**
APE	**Apeiranthos**	**1.97**	**265**	PN	**Pb**	**19 47 44.2**	**-0.6**
KDHN	**Kadinhani**	**3.50**	**68**	*i* P	**Pn**	**19 47 59.6**	**-3.6**

*THE **19** 19:54:08.8, 38°.64N×23°.43E, h1km±1km, ML3.6/21, Error ellipse: s-maj=1.7km s-min=0.5km az=17.0*
*ATH **19** 19:54:08.3, 38°.64N×23°.43E, h23km, ML3.5/33, Error ellipse: s-maj=0.9km s-min=0.5km az=201.0*
*ISK **19** 19:54:08.5, 38°.65N×23°.42E, h14km, ML3.5/16*
*IDC **19** 19:54:09.7±1.2, 38°.57N×23°.20E, h0km, mb3.3/5, mb1 3.5/7, mb1mx3.3/61, mbtmp3.4/7, ML3.7/2, Error ellipse: s-maj=30.1km s-min=20.2km az=124.0*
ISC 19 19:54:09.0±0.9, 38°.65N±0°.02×23°.44E±0°.01, h15km±6km, n214, σ1§19/273, mb3.3/5, 9C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAL	**Atalanti**	**0.33**	**278**	P	**Pg**	**19 54 15.6**	**-0.3**
ATAL				S	**Sg**	**19 54 20.4**	**-0.2**
ATAL				AML	AML	19 54 22.0	
	comp=N,14307μm,0.4s						
ATAL				AML	AML	19 54 22.9	
	comp=E,10657μm,0.2s						
ATAL	**Atalanti**	**0.33**	**278**	P	**Pg**	**19 54 15.5**	**-0.3**
ATAL				S	**Sg**	**19 54 20.4**	**-0.2**
	comp=E,6μm,0.3s						
LKR	**Lokris**	**0.34**	**271**	P	**Pg**	**19 54 15.7**	**-0.5**
LKR				S	**Sg**	**19 54 20.8**	**-0.1**
LKR				AML	AML	19 54 23.6	
	comp=E,24167μm,0.3s						
LKR				AML	AML	19 54 24.6	
	comp=N,17030μm,0.2s						
LKR	**Lokris**	**0.34**	**271**	P	**Pg**	**19 54 15.6**	**-0.5**
LKR				S	**Sg**	**19 54 20.8**	**-0.1**
	comp=N,10μm,0.2s						
EREA	**Eretria**	**0.45**	**120**	P	**Pb**	**19 54 17.9**	**-0.8**
EREA				S	**Sb**	**19 54 24.3**	**-0.9**
EREA				AML	AML	19 54 26.2	
	comp=N,55516μm,0.2s						
EREA				AML	AML	19 54 26.3	
	comp=E,81548μm,0.3s						
EREA	**Eretria**	**0.45**	**120**	P	**Pb**	**19 54 17.9**	**-0.8**
EREA				S	**Sb**	**19 54 24.4**	**-0.8**
	comp=E,35μm,0.3s						
VIL2	**Platees**	**0.45**	**197**	P	**Pg**	**19 54 18.3**	**+0.2**
VIL2				S	**Sg**	**19 54 25.3**	**+1.1**
VIL2				AML	AML	19 54 26.4	
	comp=E,37040μm,0.5s						
VIL2				AML	AML	19 54 27.2	
	comp=N,12517μm,0.3s						
VILL	**Villia**	**0.49**	**192**	P	**Pg**	**19 54 18.2**	**-0.6**
VILL				S	**Sg**	**19 54 25.3**	**-0.1**
	comp=N,13μm,0.5s						
KYMI	**Kymi, Euboea I**	**0.52**	**91**	P	**Pb**	**19 54 19.0**	**-0.8**
KYMI				S	**Sb**	**19 54 26.4**	**-0.8**
KYMI				AML	AML	19 54 27.9	
	comp=E,8210μm,0.3s						
KYMI				AML	AML	19 54 28.2	
	comp=N,10872μm,0.4s						
KYMI	**Kymi, Euboea I**	**0.52**	**91**	P	**Pb**	**19 54 19.0**	**-0.8**
KYMI				S	**Sb**	**19 54 26.4**	**-0.8**
	comp=N,5μm,0.3s						
ALNA	**Alonissos**	**0.60**	**33**	P	**Pb**	**19 54 20.9**	**-0.4**
ALNA				S	**Sb**	**19 54 29.4**	**-0.2**
ALNA				AML	AML	19 54 30.3	
	comp=E,12565μm,0.5s						
ALNA				AML	AML	19 54 33.3	
	comp=N,11352μm,0.7s						
AXAR	**Agios Charalam**	**0.62**	**281**	P	**Pg**	**19 54 20.5**	**-0.8**
AXAR				S	**Sb**	**19 54 29.9**	**-0.4**
AXAR				AML	AML	19 54 34.7	
	comp=E,25651μm,0.4s						
AXAR				AML	AML	19 54 36.5	
	comp=N,23443μm,0.3s						
AXAR	**Agios Charalam**	**0.62**	**281**	P	**Pg**	**19 54 20.5**	**-0.8**
AXAR				S	**Sb**	**19 54 29.9**	**-0.4**
	comp=N,12μm,0.4s						
AOS	**Alonnisos**	**0.63**	**33**	P	**Pb**	**19 54 21.0**	**-0.7**
AOS				S	**Sb**	**19 54 29.4**	**-0.9**
AOS				AML	AML	19 54 32.9	
	comp=E,14690μm,0.5s						
AOS				AML	AML	19 54 33.8	
	comp=N,12762μm,0.4s						
AOS	**Alonnisos**	**0.63**	**33**	PG	**Pb**	**19 54 21.1**	**-0.7**
AOS				SG	**Sb**	**19 54 30.2**	**-0.1**
AOS	**Alonnisos**	**0.63**	**33**	P	**Pb**	**19 54 21.0**	**-0.7**
AOS				S	**Sb**	**19 54 29.4**	**-0.9**
	comp=N,6μm,0.5s						
NEO	**Neokhori**	**0.68**	**346**	P	**Pb**	**19 54 22.5**	**-0.2**
NEO				AML	AML	19 54 35.8	
	comp=N,19997μm,0.3s						
NEO				AML	AML	19 54 36.2	
	comp=E,12414μm,0.3s						
NEO	**Neokhori**	**0.68**	**346**	P	**Pb**	**19 54 22.5**	**-0.2**
PTL	**Penteli**	**0.68**	**151**	P	**Pg**	**19 54 22.0**	**-0.4**
PTL				S	**Sg**	**19 54 32.1**	**+0.7**
PTL				AML	AML	19 54 35.3	
	comp=N,8592μm,0.4s						
PTL				AML	AML	19 54 36.3	
	comp=E,5742μm,0.5s						
PTL	**Penteli**	**0.68**	**151**	P	**Pg**	**19 54 22.0**	**-0.4**
PTL				S	**Sg**	**19 54 32.1**	**+0.7**
	comp=E,3μm,0.4s						
DION	**Dionisos Attik**	**0.69**	**146**	P	**Pg**	**19 54 22.2**	**-0.3**
DION				S	**Sg**	**19 54 31.8**	**+0.3**
DION				AML	AML	19 54 34.2	
	comp=E,30556μm,0.4s						
DION				AML	AML	19 54 34.5	
	comp=N,45730μm,0.4s						
DION	**Dionisos Attik**	**0.69**	**146**	P	**Pg**	**19 54 22.0**	**-0.5**
DION				S	**Sg**	**19 54 31.8**	**+0.3**
	comp=N,19μm,0.4s						
ATH	**Athens Observa**	**0.71**	**162**	P	**Pg**	**19 54 22.2**	**-0.7**
ATH				S	**Sg**	**19 54 31.1**	**-1.0**
ATH				AML	AML	19 54 34.8	
	comp=E,11402μm,0.3s						
ATH				AML	AML	19 54 35.7	
	comp=N,12035μm,0.4s						
ATH	**Athens Observa**	**0.71**	**162**	P	**Pg**	**19 54 22.4**	**-0.4**
ATH				S	**Sg**	**19 54 31.1**	**-1.0**
	comp=N,6μm,0.3s						
LTK	**Loutraki**	**0.72**	**211**	P	**Pg**	**19 54 22.3**	**-0.9**
LTK				S	**Sg**	**19 54 32.4**	**-0.4**
LTK				AML	AML	19 54 36.9	
	comp=E,11554μm,0.8s						
LTK				AML	AML	19 54 36.9	
	comp=N,14733μm,0.4s						
LTK	**Loutraki**	**0.72**	**211**	P	**Pg**	**19 54 22.4**	**-0.8**
LTK				S	**Sg**	**19 54 33.7**	**+1.0**
	comp=N,7μm,0.6s						
ATHU	**Athens Univers**	**0.73**	**158**	P	**Pg**	**19 54 22.8**	**-0.5**
ATHU				S	**Sg**	**19 54 32.9**	**0.0**
ATHU	**Athens Univers**	**0.73**	**158**	P	**Pg**	**19 54 22.8**	**-0.5**
ATHU				S	**Sg**	**19 54 32.9**	**0.0**
	comp=N,2μm,0.5s						
XOR	**Xorichti**	**0.74**	**345**	P	**Pb**	**19 54 23.6**	**-0.2**
XOR				S	**Sb**	**19 54 32.5**	**-1.3**
XOR				AML	AML	19 54 36.8	
	comp=E,7558μm,0.4s						
XOR				AML	AML	19 54 36.8	
	comp=N,11123μm,0.5s						
XOR	**Xorichti**	**0.74**	**345**	P	**Pb**	**19 54 23.6**	**-0.2**
XOR				S	**Sb**	**19 54 33.5**	**-0.3**
LOUT	**Loutraki**	**0.75**	**209**	P	**Pg**	**19 54 22.9**	**-0.7**
LOUT				S	**Sg**	**19 54 34.0**	**+0.4**
LOUT	**Loutraki**	**0.75**	**209**	P	**Pg**	**19 54 22.8**	**-0.9**
LOUT				S	**Sg**	**19 54 34.0**	**+0.4**
	comp=N,6μm,0.5s						
DSF	**Desfina**	**0.75**	**252**	P	**Pg**	**19 54 22.2**	**-1.5**
DSF				S	**Sg**	**19 54 32.6**	**-1.1**
DSF				AML	AML	19 54 35.8	
	comp=N,7096μm,0.4s						
DSF				AML	AML	19 54 37.6	
	comp=E,7620μm,0.5s						
DSF	**Desfina**	**0.75**	**252**	P	**Pg**	**19 54 22.2**	**-1.5**
DSF				S	**Sg**	**19 54 32.6**	**-1.1**
	comp=E,4μm,0.4s						
DLFA	**Delphi**	**0.76**	**258**	P	**Pg**	**19 54 22.2**	**-1.6**
DLFA				AML	AML	19 54 36.3	
	comp=E,4447μm,0.5s						
DLFA				AML	AML	19 54 37.9	
	comp=N,3748μm,0.6s						
VOL2	**Volos**	**0.81**	**332**	P	**Pn**	**19 54 27.4**	**+1.4**
VOL2				S	**Sn**	**19 54 39.0**	**+1.2**
VLY	**Voula,Athens**	**0.84**	**161**	P	**Pg**	**19 54 24.7**	**-0.6**
VLY				S	**Sg**	**19 54 35.4**	**-0.9**
VLY				AML	AML	19 54 39.0	
	comp=E,12611μm,0.5s						
VLY				AML	AML	19 54 40.7	
	comp=N,4877μm,0.5s						
VLY	**Voula,Athens**	**0.84**	**161**	P	**Pg**	**19 54 24.7**	**-0.6**
VLY				S	**Sg**	**19 54 35.4**	**-0.9**
	comp=N,4μm,0.4s						
THAL	**Thalero**	**0.86**	**225**	P	**Pg**	**19 54 25.0**	**-0.7**
THAL				S	**Sg**	**19 54 37.8**	**+0.8**
THAL				AML	AML	19 54 44.0	
	comp=E,20108μm,0.3s						
THAL				AML	AML	19 54 44.2	
	comp=N,14987μm,0.4s						
THAL	**Thalero**	**0.86**	**225**	P	**Pg**	**19 54 25.0**	**-0.7**
THAL				S	**Sg**	**19 54 37.8**	**+0.8**
	comp=N,9μm,0.5s						
SKY	**Skiros Island**	**0.90**	**75**	P	**Pb**	**19 54 25.9**	**-0.4**
SKY				AML	AML	19 54 42.0	
	comp=N,11529μm,0.2s						
SKY				AML	AML	19 54 42.1	
	comp=E,17322μm,0.2s						
SKY	**Skiros Island**	**0.90**	**75**	P	**Pb**	**19 54 25.9**	**-0.4**
AGG	**Agios Georgios**	**0.94**	**294**	P	**Pb**	**19 54 26.7**	**-0.5**
AGG				S	**Sb**	**19 54 39.4**	**-0.2**
AGG				AML	AML	19 54 45.1	
	comp=E,4123μm,0.7s						
AGG				AML	AML	19 54 46.4	
	comp=N,2833μm,0.5s						
AGG	**Agios Georgios**	**0.94**	**294**	PG	**Pb**	**19 54 26.8**	**-0.4**
AGG				SG	**Sb**	**19 54 40.0**	**+0.5**
AGG	**Agios Georgios**	**0.94**	**294**	P	**Pb**	**19 54 26.7**	**-0.5**
AGG				S	**Sb**	**19 54 39.4**	**-0.2**
	comp=N,2μm,0.6s						
KARY	**Karystos**	**0.99**	**128**	P	**Pg**	**19 54 27.6**	**-0.7**
KARY				S	**Sg**	**19 54 40.8**	**-0.5**
KARY				AML	AML	19 54 43.2	
	comp=E,6809μm,0.3s						
KARY				AML	AML	19 54 44.8	
	comp=N,4939μm,0.6s						
KARY	**Karystos**	**0.99**	**128**	P	**Pg**	**19 54 27.6**	**-0.7**
KARY				S	**Sg**	**19 54 40.8**	**-0.5**
	comp=N,3μm,0.5s						
KALE	**Kalithea**	**1.05**	**256**	P	**Pg**	**19 54 27.5**	**-1.9**
KALE	**Kalithea**	**1.05**	**256**	P	**Pg**	**19 54 27.5**	**-1.9**
EPID	**Epidavros**	**1.06**	**194**	P	**Pg**	**19 54 28.6**	**-0.9**
EPID				S	**Sg**	**19 54 43.9**	**+0.5**
EPID	**Epidavros**	**1.06**	**194**	P	**Pg**	**19 54 28.6**	**-0.9**
EPID				S	**Sg**	**19 54 43.9**	**+0.5**
	comp=N,3μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.09**	**290**	P	**Pb**	**19 54 29.4**	**-0.2**
MAKR				AML	AML	19 54 47.8	
	comp=N,2235μm,0.7s						
MAKR				AML	AML	19 54 51.0	
	comp=E,1288μm,0.6s						
MAKR	**Makrakomi, Fth**	**1.09**	**290**	P	**Pb**	**19 54 29.4**	**-0.2**
TRIZ	**Trizonia**	**1.11**	**256**	P	**Pg**	**19 54 28.3**	**-2.1**
TRIZ	**Trizonia**	**1.11**	**256**	P	**Pg**	**19 54 28.3**	**-2.1**
SERG	**Sergoula**	**1.11**	**258**	P	**Pg**	**19 54 28.5**	**-2.0**
SERG				AML	AML	19 54 49.4	
	comp=N,3703μm,0.4s						
SERG				AML	AML	19 54 50.0	
	comp=E,2932μm,0.5s						
SERG	**Sergoula**	**1.11**	**258**	P	**Pg**	**19 54 28.5**	**-2.0**

EVR	**Evrytania**	**1.30**	**282**	P	**Pn**	**19 54 33.6**	**+0.8**
EVR				AML	AML	19 54 56.9	
	comp=N,1086µm,0.6s						
EVR				AML	AML	19 55 02.3	
	comp=E,992µm,0.8s						
EVR	**Evrytania**	**1.30**	**282**	P	**Pn**	**19 54 33.6**	**+0.8**
THL	**Klokotos Trika**	**1.44**	**310**	P	**Pb**	**19 54 35.2**	**-0.4**
THL				S	**Sb**	**19 54 54.0**	**+0.3**
THL				AML	AML	19 55 00.8	
	comp=E,608µm,0.8s						
THL				AML	AML	19 55 01.5	
	comp=N,459µm,0.5s						
THL	**Klokotos Trika**	**1.44**	**310**	P	**Pb**	**19 54 35.2**	**-0.4**
THL				S	**Sb**	**19 54 54.0**	**+0.3**
	comp=N,260nm,0.7s						
TRIP	**Tripoli**	**1.45**	**220**	P	**Pn**	**19 54 35.3**	**+0.5**
TRIP				AML	AML	19 54 57.9	
	comp=E,1930µm,0.6s						
TRIP				AML	AML	19 54 58.3	
	comp=N,2347µm,0.6s						
TRIP	**Tripoli**	**1.45**	**220**	P	**Pn**	**19 54 35.3**	**+0.5**
VLX	**Vlachokerasia**	**1.52**	**214**	P	**Pn**	**19 54 36.7**	**+0.8**
VLX				AML	AML	19 54 59.8	
	comp=E,4976µm,0.6s						
VLX				AML	AML	19 55 04.0	
	comp=N,2346µm,0.6s						
VLX	**Vlachokerasia**	**1.52**	**214**	P	**Pn**	**19 54 36.7**	**+0.8**
DRO	**Drossia**	**1.53**	**244**	P	**Pn**	**19 54 36.4**	**+0.6**
DRO				AML	AML	19 55 04.5	
	comp=N,1701µm,0.4s						
DRO				AML	AML	19 55 06.9	
	comp=E,1459µm,0.8s						
DRO	**Drossia**	**1.53**	**244**	P	**Pn**	**19 54 36.4**	**+0.6**
LIT	**Litokhoron**	**1.63**	**333**	P	**Pn**	**19 54 37.5**	**+0.2**
LIT	**Litokhoron**	**1.63**	**333**	P	**Pn**	**19 54 37.5**	**+0.2**
RLS	**Riolos of Patr**	**1.66**	**250**	P	**Pn**	**19 54 37.8**	**+0.2**
RLS	**Riolos of Patr**	**1.66**	**250**	P	**Pn**	**19 54 38.5**	**+0.9**
PLG	**Polygyros**	**1.73**	**0**	P	**Pn**	**19 54 38.6**	**0.0**
PLG	**Polygyros**	**1.73**	**0**	P	**Pn**	**19 54 38.6**	**0.0**
OUR	**Ouranopolis**	**1.74**	**14**	P	**Pn**	**19 54 38.9**	**+0.2**
OUR				AML	AML	19 55 00.5	
	comp=E,1529µm,0.8s						
OUR				AML	AML	19 55 01.2	
	comp=N,1615µm,0.3s						
OUR	**Ouranopolis**	**1.74**	**14**	PN	**Pn**	**19 54 38.9**	**+0.2**
OUR	**Ouranopolis**	**1.74**	**14**	P	**Pn**	**19 54 38.9**	**+0.2**
TNSA	**Tinos**	**1.75**	**129**	P	**Pn**	**19 54 39.0**	**+0.1**
AMT	**Artemida-Makis**	**1.76**	**231**	P	**Pn**	**19 54 40.3**	**+1.2**
AMT	**Artemida-Makis**	**1.76**	**231**	P	**Pn**	**19 54 40.3**	**+1.2**
PDO	**Prodromos**	**1.77**	**269**	P	**Pn**	**19 54 40.7**	**+1.6**
PDO	**Prodromos**	**1.77**	**269**	P	**Pn**	**19 54 40.7**	**+1.6**
LIA	**Limnos Island**	**1.84**	**47**	P	**Pn**	**19 54 39.6**	**-0.6**
LIA	**Limnos Island**	**1.84**	**47**	P	**Pn**	**19 54 39.8**	**-0.3**
ITM	**Ithomi**	**1.89**	**220**	P	**Pn**	**19 54 42.1**	**+1.3**
ITM	**Ithomi**	**1.89**	**220**	P	**Pn**	**19 54 42.1**	**+1.3**
VLI	**Veliai**	**1.96**	**192**	P	**Pn**	**19 54 41.4**	**-0.4**
VLI	**Veliai**	**1.96**	**192**	P	**Pn**	**19 54 41.6**	**-0.2**
SIGR	**SIGRI**	**1.97**	**73**	P	**Pn**	**19 54 41.6**	**-0.2**
SIGR	**SIGRI**	**1.97**	**73**	PN	**Pn**	**19 54 42.7**	**+0.9**
SIGR	**SIGRI**	**1.97**	**73**	P	**Pn**	**19 54 41.6**	**-0.2**
HORT	**Hortiatis**	**1.97**	**352**	P	**Pn**	**19 54 42.0**	**0.0**
HORT	**Hortiatis**	**1.97**	**352**	PN	**Pn**	**19 54 42.3**	**+0.3**
HORT	**Hortiatis**	**1.97**	**352**	P	**Pn**	**19 54 42.0**	**0.0**
MHLA	**Plaka, Milos I**	**2.05**	**157**	P	**Pn**	**19 54 42.7**	**-0.3**
KPRO	**Kipourio**	**2.08**	**310**	P	**Pn**	**19 54 44.8**	**+1.3**
KPRO	**Kipourio**	**2.08**	**310**	P	**Pb**	**19 54 45.5**	**-1.0**
SOH	**Sokhos**	**2.17**	**358**	P	**Pn**	**19 54 45.5**	**+0.7**
SOH	**Sokhos**	**2.17**	**358**	P	**Pn**	**19 54 45.5**	**+0.7**
EVGI	**Lefkada island**	**2.18**	**270**	P	**Pn**	**19 54 46.2**	**+1.4**
EVGI	**Lefkada island**	**2.18**	**270**	P	**Pb**	**19 54 47.2**	**-1.0**
LKD2	**Lefkada island**	**2.18**	**275**	P	**Pn**	**19 54 45.7**	**+0.9**
LKD2	**Lefkada island**	**2.18**	**275**	P	**Pb**	**19 54 48.4**	**+0.2**
PYL	**PYLOS**	**2.21**	**218**	P	**Pn**	**19 54 46.8**	**+1.7**
PYL	**PYLOS**	**2.21**	**218**	P	**Pn**	**19 54 47.4**	**+2.2**
FSK	**Fiskardo**	**2.26**	**266**	P	**Pn**	**19 54 47.5**	**+1.5**
FSK	**Fiskardo**	**2.26**	**266**	P	**Pb**	**19 54 48.4**	**-1.2**
APE	**Apeiranthos**	**2.28**	**133**	P	**Pn**	**19 54 46.5**	**+0.2**
APE	**Apeiranthos**	**2.28**	**133**	⇑P	**Pn**	**19 54 46.5**	**0.0**
APE	**Apeiranthos**	**2.28**	**133**	PN	**Pn**	**19 54 46.5**	**+0.2**
APE	**Apeiranthos**	**2.28**	**133**	P	**Pn**	**19 54 46.5**	**+0.2**
PRK	**Paraskevi**	**2.29**	**74**	P	**Pn**	**19 54 46.8**	**+0.6**
PRK	**Paraskevi**	**2.29**	**74**	P	**Pn**	**19 54 47.6**	**+1.3**
VLS	**Valsamata**	**2.29**	**259**	P	**Pn**	**19 54 47.7**	**+1.4**
VLS	**Valsamata**	**2.29**	**259**	P	**Pb**	**19 54 48.9**	**-1.2**
VLMS	**Volimes, Zakyn**	**2.32**	**252**	P	**Pn**	**19 54 48.0**	**+1.3**
VLMS	**Volimes, Zakyn**	**2.32**	**252**	P	**Pn**	**19 54 48.7**	**+2.0**
BOZC	**Bozcaada**	**2.35**	**59**	PN	**Pn**	**19 54 48.2**	**+1.0**
KEF5	**Kardakata, Kep**	**2.36**	**262**	P	**Pn**	**19 54 49.5**	**+2.2**
KEF5	**Kardakata, Kep**	**2.36**	**262**	P	**Pn**	**19 54 49.5**	**+2.2**
KEF4	**Livadi, Kephal**	**2.40**	**262**	P	**Pn**	**19 54 49.9**	**+2.1**
KEF4	**Livadi, Kephal**	**2.40**	**262**	P	**Pn**	**19 54 49.9**	**+2.1**
KTHA	**Kythira Island**	**2.40**	**187**	P	**Pn**	**19 54 47.8**	**-0.1**
KTHA	**Kythira Island**	**2.40**	**187**	P	**Pn**	**19 54 47.8**	**-0.1**
SMTH	**Samothraki Isl**	**2.44**	**41**	P	**Pn**	**19 54 47.9**	**-0.5**
SMTH	**Samothraki Isl**	**2.44**	**41**	P	**Pn**	**19 54 47.9**	**-0.5**
GRG	**Griva**	**2.44**	**341**	PN	**Pn**	**19 54 49.0**	**+0.5**
GADA	**Gvkgeada**	**2.45**	**50**	PN	**Pn**	**19 54 49.5**	**+1.0**
KEF3	**Kipouria, Keph**	**2.47**	**261**	P	**Pn**	**19 54 50.2**	**+1.4**
KEF3	**Kipouria, Keph**	**2.47**	**261**	P	**Pn**	**19 54 50.1**	**+1.4**
SRS	**Serrai**	**2.47**	**3**	P	**Pn**	**19 54 49.0**	**+0.2**
SRS	**Serrai**	**2.47**	**3**	P	**Pn**	**19 54 49.0**	**+0.2**
KAVA	**Kavala**	**2.49**	**19**	P	**Pn**	**19 54 48.8**	**-0.3**
KAVA	**Kavala**	**2.49**	**19**	P	**Pn**	**19 54 48.8**	**-0.3**
URLA	**Izmir**	**2.49**	**96**	PN	**Pn**	**19 54 50.3**	**+1.2**
EZN	**Ezine**	**2.53**	**61**	PN	**Pn**	**19 54 50.8**	**+1.2**
KNT	**Kendrikon**	**2.55**	**351**	P	**Pn**	**19 54 50.9**	**+1.0**
KNT	**Kendrikon**	**2.55**	**351**	PN	**Pn**	**19 54 50.6**	**+0.7**
KNT	**Kendrikon**	**2.55**	**351**	P	**Pn**	**19 54 50.9**	**+1.0**
AMGA	**Amorgos Island**	**2.66**	**132**	P	**Pn**	**19 54 51.8**	**+0.4**
AMGA	**Amorgos Island**	**2.66**	**132**	P	**Pn**	**19 54 51.8**	**+0.4**
FNA	**Florina**	**2.66**	**324**	P	**Pn**	**19 54 52.8**	**+1.3**
FNA	**Florina**	**2.66**	**324**	P	**Pn**	**19 54 52.8**	**+1.3**
THT2	**Imerovigli**	**2.71**	**144**	PN	**Pn**	**19 54 52.4**	**+0.3**
NVR	**Nevrokopi**	**2.72**	**7**	P	**Pn**	**19 54 52.4**	**+0.1**
NVR	**Nevrokopi**	**2.72**	**7**	P	**Pn**	**19 54 52.4**	**+0.1**
DKL	**Dikili**	**2.74**	**80**	PN	**Pn**	**19 54 53.8**	**+1.3**
ANKY	**Antikythira Is**	**2.78**	**182**	P	**Pn**	**19 54 53.6**	**+0.6**
ANKY	**Antikythira Is**	**2.78**	**182**	P	**Pn**	**19 54 53.6**	**+0.6**
BLCB	**Balcova**	**2.84**	**94**	PN	**Pn**	**19 54 55.2**	**+1.4**
GELI	**Tayfur-Gelibol**	**2.93**	**52**	PN	**Pn**	**19 54 55.4**	**+0.3**
ANAF	**Anafi Island**	**2.94**	**140**	P	**Pn**	**19 54 55.9**	**+0.6**
ANAF	**Anafi Island**	**2.94**	**140**	P	**Pn**	**19 54 55.9**	**+0.6**
RDO	**Rodhopi**	**2.97**	**32**	P	**Pn**	**19 54 55.6**	**-0.1**
RDO	**Rodhopi**	**2.97**	**32**	PN	**Pn**	**19 54 56.4**	**+0.7**
RDO	**Rodhopi**	**2.97**	**32**	P	**Pn**	**19 54 55.6**	**-0.1**
ALN	**Alexandroupoli**	**3.01**	**41**	PN	**Pn**	**19 54 57.5**	**+1.2**
KEK	**Kerkira**	**3.02**	**292**	P	**Pn**	**19 54 57.8**	**+1.3**
KEK	**Kerkira**	**3.02**	**292**	P	**Pn**	**19 54 58.3**	**+1.9**
ERIK	**Erikli-Kesan**	**3.12**	**49**	PN	**Pn**	**19 54 58.9**	**+1.2**
STIP	**Stip**	**3.19**	**343**	*i* Pn	**Pn**	**19 54 59.7**	**+0.9**
IMMV	**Iera Moni Meta**	**3.21**	**172**	P	**Pn**	**19 54 59.1**	**+0.1**
IMMV	**Iera Moni Meta**	**3.21**	**172**	P	**Pn**	**19 54 59.1**	**+0.1**
VAM	**Vamos**	**3.29**	**169**	P	**Pn**	**19 55 00.5**	**+0.4**
VAM	**Vamos**	**3.29**	**169**	P	**Pn**	**19 55 00.5**	**+0.4**
YKAV	**Yalikavak-Bodr**	**3.40**	**115**	PN	**Pn**	**19 55 03.1**	**+1.6**
BODT	**Bodrum**	**3.45**	**116**	PN	**Pn**	**19 55 03.7**	**+1.5**
IDI	**Anoyia**	**3.55**	**160**	Pn	**Pn**	**19 55 04.4**	**+0.7**
	comp=N,5.2nm,0.3s,baz=337,slow=13,SNR=42						
IDI				Sn	**Sn**	**19 55 43.8**	**-1.5**
	comp=N,4.5nm,0.3s,baz=85,slow=21,SNR=5.7						
IDI	**Anoyia**	**3.55**	**160**	P	**Pn**	**19 55 04.3**	**+0.7**
IDI	**Anoyia**	**3.55**	**160**	⇓P	**Pn**	**19 55 04.4**	**+0.7**
IDI				⇑S	**Sn**	**19 55 45.3**	**-0.1**
IDI	**Anoyia**	**3.55**	**160**	P	**Pn**	**19 55 04.3**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**3.57**	**100**	PN	**Pn**	**19 55 05.7**	**+1.7**
PLD	**Plovdiv**	**3.59**	**15**	PN	**Pn**	**19 55 05.5**	**+1.4**
MRMT	**Marmara Adasi**	**3.76**	**57**	PN	**Pn**	**19 55 08.1**	**+1.5**
GVD	**Gavdhos**	**3.83**	**172**	P	**Pn**	**19 55 09.3**	**+1.7**
GVD	**Gavdhos**	**3.83**	**172**	P	**Pn**	**19 55 09.9**	**+2.3**
EDRB	**Edirne**	**4.08**	**37**	PN	**Pn**	**19 55 12.7**	**+1.8**
TURN	**Turunc**	**4.24**	**115**	PN	**Pn**	**19 55 15.0**	**+1.9**
CAME	**Cameli-Denizli**	**4.94**	**108**	PN	**Pn**	**19 55 25.1**	**+2.2**
PDG	**Podgorica**	**4.95**	**321**	⇓P	**Pn**	**19 55 23.7**	**+0.9**
TIP	**Timpagrande**	**5.24**	**278**	⇑P	**Pn**	**19 55 28.2**	**+1.3**
MATE	**Matera**	**5.57**	**293**	⇑P	**Pn**	**19 55 31.1**	**-0.3**
STON	**Ston**	**6.07**	**316**	*e*Pn	**Pn**	**19 55 39.7**	**+1.5**
STON				Sn	**Sn**	**19 56 44.8**	**-2.5**
HERR	**Herculane**	**6.28**	**353**	⇓P	**Pn**	**19 55 41.2**	**+0.1**
LSTV	**Lastovo**	**6.46**	**312**	*e*Pn	**Pn**	**19 55 43.8**	**+0.2**
LSTV				Sn	**Sn**	**19 56 51.8**	**-5.2**
MAKA	**Makarska**	**6.71**	**316**	*e*Pn	**Pn**	**19 55 48.9**	**+1.8**
MAKA				Sn	**Sn**	**19 56 59.8**	**-3.5**
RICI	**Ricice**	**6.79**	**317**	*e*Pn	**Pn**	**19 55 49.7**	**+1.5**
RICI				Sn	**Sn**	**19 57 05.4**	**+0.1**
VOIR		**6.89**	**9**	⇓P	**Pn**	**19 55 50.8**	**+1.1**
MLR	**Muntele Rosu**	**7.09**	**14**	Pn	**Pn**	**19 55 56.2**	**+3.8**
	comp=N,0.5nm,0.3s,baz=317,slow=3.5,SNR=6.9						
MLR				Sn	**Sn**	**19 57 15.0**	**+2.3**
	comp=N,0.6nm,0.3s,baz=244,slow=18,SNR=4.2						
MLR	**Muntele Rosu**	**7.09**	**14**	⇑P	**Pn**	**19 55 53.0**	**+0.6**
BZS	**Buzias**	**7.10**	**350**	⇑P	**Pn**	**19 55 52.5**	**+0.2**
NEHR	**Nehoiu**	**7.10**	**16**	⇑P	**Pn**	**19 55 53.5**	**+1.1**
DOPR	**Dopca**	**7.46**	**11**	⇑P	**Pn**	**19 55 58.3**	**+1.0**
KIJV	**Kijevo**	**7.53**	**318**	*e*Pn	**Pn**	**19 55 59.4**	**+1.1**
VRI	**Vrincioaia**	**7.62**	**18**	⇓P	**Pn**	**19 56 00.3**	**+0.8**
ZIRJ	**Zirje**	**7.72**	**313**	*e*Pn	**Pn**	**19 56 02.0**	**+1.1**
ZIRJ				Sn	**Sn**	**19 57 24.4**	**-3.6**
NVLJ	**Novalja**	**8.72**	**315**	*e*Pn	**Pn**	**19 56 14.6**	**-0.1**
NVLJ				Sn	**Sn**	**19 57 47.4**	**-5.3**
BURAR	**Bucovina Array**	**9.06**	**8**	⇑P	**Pn**	**19 56 20.8**	**+1.4**
ESDC	**Sonseca Array**	**21.25**	**281**	P	**P**	**19 58 55.4**	**+0.8**
	comp=N,0.8nm,0.9s,baz=78,slow=11,SNR=5.4						
TORD	**Torodi Ar. Bea**	**31.89**	**223**	P	**P**	**20 00 35.7**	**+1.8**
	comp=N,0.4nm,0.5s,baz=27,slow=9.2,SNR=3.5						
KURBB	**Kurchatov Arra**	**40.10**	**54**	P	**P**	**20 01 47.3**	**+3.4**
	comp=N,0.2nm,0.5s,baz=283,slow=8.2,SNR=1.8						
MKAR	**Makanchi Array**	**43.10**	**59**	P	P	20 02 13.9	+5.4
	comp=N,0.4nm,0.7s,baz=280,slow=8.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**43.67**	**49**	P	P	20 02 18.7	+5.7
	comp=N,0.3nm,0.3s,baz=270,slow=7.2,SNR=1.9						

*IDC **19** 19:56:17.4±1.3, 12°.61N×91°.37E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/47, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=40.1km s-min=22.3km az=55.0*

ISC 19 19:56:22.4±1.3, 12°.7N±0°.1×91°.3E±0°.1, h35km, n20, σ1s06/18, mb3.5/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.32**	**51**	Pn	**Pn**	**19 58 33.4**	**-1.0**
	0.1nm,0.3s,baz=241,slow=15,SNR=4.2						
CMAR				Sn	**Sn**	**20 00 19.7**	**+1.7**
	0.3nm,0.3s,baz=227,slow=29,SNR=4.6						
ODAN	**Odare**	**14.57**	**346**	*e*P	**Pn**	**19 59 45.3**	**-1.1**
	15nm,0.3s						
RAMN	**Ramite**	**14.86**	**343**	*e*P	**Pn**	**19 59 48.9**	**-1.4**
	8.6nm,0.3s						
TAPN	**Taplejung**	**14.97**	**347**	*e*P	**Pn**	**19 59 50.1**	**-1.7**
	10nm,0.2s						
PKI	**Pulchoki**	**15.80**	**340**	*e*P	**Pn**	**20 00 01.7**	**-1.0**
	5.5nm,0.2s						
PKIN	**Phulchoki**	**15.81**	**340**	*e*P	**Pn**	**20 00 01.8**	**-1.0**
	6.2nm,0.2s						
DMN	**Daman**	**15.94**	**340**	*e*P	**Pn**	**20 00 03.8**	**-0.6**
GKN	**Gorkha**	**16.46**	**339**	*e*P	**Pn**	**20 00 10.7**	**-0.3**
	14nm,0.3s						
KOLN	**Koldanda**	**16.65**	**335**	*e*P	**Pn**	**20 00 13.5**	**+0.1**
DANN	**Dangsing**	**17.10**	**337**	*e*P	**P**	**20 00 20.1**	**-0.5**
	12nm,0.4s						
PYUN	**Piuthan**	**17.19**	**334**	*e*P	**Pn**	**20 00 20.7**	**+0.5**
H08S3	**Diego Garcia H**	**27.53**	**224**	T	T	20 31 11.0	
	baz=51						
H08S2	**Diego Garcia H**	**27.53**	**224**	T	T	20 31 11.3	
	baz=51,slow=74						
H08S1	**Diego Garcia H**	**27.55**	**224**	T	T	20 31 17.7	
	baz=51,slow=74						
MKAR	**Makanchi Array**	**34.84**	**349**	P	**P**	**20 03 11.0**	**+0.9**
	0.8nm,0.5s,baz=168,slow=8.6,SNR=14						
ZALV	**Zalesovo Beam**	**41.48**	**354**	P	**P**	**20 04 06.8**	**+1.0**
	0.4nm,0.5s,baz=171,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**53.33**	**127**	P	**P**	**20 05 37.7**	**-0.9**
	0.4nm,0.7s,baz=301,slow=9.8,SNR=5.4						
ASAR	**Alice Springs**	**55.13**	**131**	P	**P**	**20 05 51.7**	**0.0**
	0.2nm,0.5s,baz=302,slow=5.8,SNR=2.1						
FINES	**FINESS Array B**	**67.18**	**332**	P	**P**	**20 07 13.6**	**+0.9**
	1.2nm,0.5s,baz=123,slow=7.0,SNR=7.9						
NOA	**NORSAR Array B**	**74.20**	**330**	P	**P**	**20 07 56.3**	**+0.8**
	0.2nm,0.5s,baz=112,slow=4.5,SNR=1.7						

*IDC **19** 19:58:35.5±1.0, 37°.35N×141°.84E, h0km, mb3.5/6, mb1 3.7/10, mb1mx3.5/55, mbtmp3.6/10, ML3.3/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/39, Error ellipse: s-maj=27.3km s-min=16.9km az=100.0*
*JMA **19** 19:58:40.1±0.1, 37°.42N×141°.72E, h41km±2km, M4.0*
JMA Felt II J1.
*NIED **19** 19:58:40.1, 37°.42N×141°.72E, h41km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr2.18; Mθθ-1.63; Mφφ-0.55; Mrθ4.23; Mθφ0.18; Mφr-1.78; Fault plane solution: M04.97000×10^14^ NP1: φs112.00000°, δ79.00000°, λ93.00000°. NP2: φs277.00000°, δ12.00000°, λ76.00000°.*

ISC 19 19:58:38.0±1.8, 37°.40N±0°.04×141°.82E±0°.06, h16km±10km, n33, σ1s24/38, mb3.4/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
JFK	**Kawauchi**	**0.76**	**268**	P	**Pg**	**19 58 53.2**	**+0.4**
JFK				S	**Sg**	**19 59 02.1**	**-0.7**
JMST	**Minamisoumatoc**	**0.81**	**294**	P	**Pb**	**19 58 53.9**	**+0.2**
JMST				S	**Sb**	**19 59 03.6**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.87**	**251**	P	**Pb**	**19 58 54.9**	**+0.2**
ONAJ				S	**Sb**	**19 59 05.1**	**-1.0**
JMM	**Marumori**	**0.94**	**300**	P	**Pb**	**19 58 56.0**	**0.0**
JMM				S	**Sb**	**19 59 07.0**	**-1.2**
JIKH	**Ishinomakikobu**	**0.96**	**343**	P	**Pb**	**19 58 56.5**	**+0.3**
JIKH				S	**Sb**	**19 59 07.5**	**-1.1**
JIO	**Ouri**	**1.12**	**341**	P	**Pn**	**19 58 58.9**	**-0.1**
JIO				S	**Sb**	**19 59 11.7**	**-1.6**
JFT	**Otama**	**1.19**	**276**	P	**Pn**	**19 59 00.2**	**+0.2**
JFT				S	**Sb**	**19 59 14.1**	**-1.2**
JHO	**Hitachi**	**1.27**	**232**	P	**Pn**	**19 59 00.4**	**-0.7**
JHO				S	**Sb**	**19 59 15.0**	**-2.7**
JOU	**Okura**	**1.33**	**317**	P	**Pn**	**19 59 02.1**	**+0.1**
JOU				S	**Sn**	**19 59 18.2**	**-1.2**
JYS	**Shirataka**	**1.62**	**301**	S	**Sn**	**19 59 26.3**	**-0.1**
JMK	**Ichinoseki**	**1.63**	**343**	P	**Pn**	**19 59 06.5**	**+0.6**
JMK				S	**Sn**	**19 59 26.1**	**-0.4**
JFY	**Yanaizu**	**1.69**	**271**	P	**Pn**	**19 59 07.2**	**+0.4**
JFY				*e*S	**Sn**	**19 59 27.2**	**-0.9**
MJAR	**Matsushiro Arr**	**3.02**	**255**	Pn	**Pn**	**19 59 25.8**	**+0.7**
	0.8nm,0.3s,baz=126,slow=21,SNR=33						
MJAR				Sn	**Sn**	**20 00 05.4**	**+4.5**
	1.2nm,0.3s,baz=50,slow=28,SNR=5.8						
MJAR				LR	LR	20 00 53.2	
	comp=Z,121nm,19.8s,baz=80,slow=46						
MAT	**Matsushiro**	**3.02**	**255**	P	**Pn**	**19 59 26.5**	**+1.4**
MAT				*e*S	**Sn**	**20 00 02.1**	**+1.2**
JHJ	**Hachijo jima 2**	**4.58**	**202**	Pn	**Pn**	**19 59 47.4**	**+0.8**
	41nm,0.3s,baz=329,slow=14,SNR=17						
JHJ				Sn	**Sn**	**20 00 38.5**	**-1.0**
	20nm,0.3s,baz=66,slow=23,SNR=1.2						
ASAJ	**Asahikawa**	**6.74**	**5**	Pn	**Pn**	**20 00 17.2**	**+1.0**
	1.1nm,0.3s,baz=192,slow=13,SNR=11						
ASAJ				Sn	**Sn**	**20 01 33.4**	**+0.8**
	0.4nm,0.3s,baz=252,slow=30,SNR=1.1						
USRK	**Ussuriysk Ar.**	**10.08**	**315**	Pn	**Pn**	**20 01 03.7**	**+1.6**
	baz=121,slow=14,SNR=2.7						
H11N2	**WAKE ISLAND Hy**	**28.06**	**122**	T	T	20 33 59.7	
	baz=320,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.06**	**122**	T	T	20 34 00.4	
	baz=320,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.07**	**122**	T	T	20 33 58.9	
	baz=320,slow=75						
H11S1	**WAKE ISLAND Hy**	**28.79**	**124**	T	T	20 34 58.3	
	baz=314,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.79**	**124**	T	T	20 35 00.3	
	baz=314,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.80**	**124**	T	T	20 35 04.4	
	baz=314						
DAV	**Davao City (W)**	**33.61**	**210**	LR	LR	20 20 52.3	
	comp=Z,82nm,18.2s,baz=214,slow=40						
ZALV	**Zalesovo Beam**	**41.91**	**312**	P	**P**	**20 06 27.2**	**-0.3**
	0.2nm,0.3s,baz=81,slow=8.9,SNR=1.8						
MKAR	**Makanchi Array**	**44.20**	**302**	P	**P**	**20 06 45.2**	**-0.9**
	0.2nm,0.6s,baz=91,slow=11,SNR=4.5						
ILAR	**Eielson Array**	**49.02**	**33**	P	**P**	**20 07 24.2**	**+0.6**
	0.8nm,0.8s,baz=261,slow=6.3,SNR=7.2						
WRA	**Warramunga Arr**	**57.46**	**188**	P	**P**	**20 08 25.2**	**-0.9**
	0.7nm,0.5s,baz=6.2,slow=7.3,SNR=17						
ASAR	**Alice Springs**	**61.19**	**188**	P	**P**	**20 08 51.5**	**-0.4**
	0.1nm,0.6s,baz=7.1,slow=3.2,SNR=1.6						
TXAR	**Lajitas Array**	**89.64**	**53**	P	**P**	**20 11 36.2**	**+0.8**
	0.2nm,0.7s,baz=292,slow=4.8,SNR=2.0						
H03N2	**Juan Fernandez**	**146.74**	**96**	T	T	23 02 28.8	
	baz=292,slow=76,SNR=6.7						
H03N3	**Juan Fernandez**	**146.75**	**96**	T	T	23 02 28.5	
	baz=292,slow=76,SNR=4.9						
H03N1	**Juan Fernandez**	**146.75**	**96**	T	T	23 02 30.6	
	baz=292,slow=76,SNR=5.2						

*BGR **19** 19:58:45.1±0.0, 27°.98N×43°.45W, h10km, mb5.2*
*IDC **19** 19:59:09.6±0.7, 31°.51N×40°.84W, h0km, mb4.0/21, mb1 4.2/21, mb1mx4.0/55, mbtmp4.0/21, MS3.7/13, Ms1 3.7/13, ms1mx3.4/35, Error ellipse: s-maj=20.1km s-min=15.1km az=173.0*
*NEIC **19** 19:59:11.5±2.0, 31°.61N±0°.02×41°.0W±0°.1, h10km±1km, mb4.8/78, Error ellipse: s-maj=18.2km s-min=4.0km az=276.0*

ISC 19 19:59:12.1±0.5, 31°.5N±0°.1×41°.02W±0°.08, h14km, n159, σ2s05/148, mb4.7/77, MS3.7/13, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
MDP	**Montagnes des**	**28.46**	**205**	LR	LR	20 14 11.2	
	comp=Z,39nm,18.4s,baz=18,slow=32						
SCHQ	**Schefferville**	**29.64**	**329**	LR	LR	20 16 17.1	
	comp=Z,258nm,19.4s,baz=96,slow=35						
SADO	**Sadowa**	**32.47**	**305**	LR	LR	20 15 59.4	
	comp=Z,80nm,20.2s,baz=115,slow=31						
SDV	**Santo Domingo**	**35.56**	**237**	P	**P**	**20 06 09.3**	**0.0**
SFJD	**Kangerlussuaq**	**35.97**	**354**	LR	LR	20 16 54.5	
	comp=Z,118nm,18.7s,baz=182,slow=30						
Y49A	**Blount Mountai**	**38.04**	**286**	P	**P**	**20 06 29.7**	**-0.3**
BFO	**Black Forest**	**40.65**	**51**	P	**P**	**20 06 51.5**	**-0.2**
TUE	**Stuetta**	**41.19**	**54**	P	**P**	**20 06 56.7**	**+0.3**
LCAR	**Lake Charles**	**41.54**	**290**	P	**P**	**20 06 59.6**	**+0.5**
DAVA	**Damuels**	**41.60**	**53**	*e*P	**P**	**20 07 03.5**	**+3.8**
	16nm,1.4s						
UBR	**Ueberruh**	**41.78**	**52**	*e*P	**P**	**20 07 05.4**	**+4.4**
	91nm,2.4s,baz=263,slow=7.8						
DBIC	**Dimbokro**	**41.85**	**119**	LR	LR	20 21 32.5	
	comp=Z,88nm,20.9s,baz=318,slow=32						
TAM	**Tamanrasset**	**42.06**	**90**	P	**P**	**20 07 04.3**	**+0.6**
FETA	**Feichten**	**42.17**	**53**	*e*P	**P**	**20 07 05.2**	**

comp=Z,2.9nm,0.8s,baz=165,slow=7.9,SNR=4.6
FINES FINESS Array B 51.98 34 P P 20 08 19.4 -1.0
BURAR Bucovina Array 51.98 52 P P 20 08 20.3 -0.5
MLR Muntele Rosu 52.78 54 P P 20 08 27.9 +1.1
TXAR Lajitas Array 53.40 285 P P 20 08 32.5 +0.8
comp=Z,0.6nm,0.8s,baz=95,slow=8.4,SNR=4.8
TXAR LR LR 20 30 02.9
comp=Z,45nm,18.8s,baz=0.0,slow=35
TXAR Lajitas Array 53.40 285 P P 20 08 30.3 -1.3
ANMO Albuquerque 53.97 292 P P 20 08 37.1 +1.3
comp=Z,0.4nm,0.3s,baz=140,slow=5.4,SNR=4.1
ANMO Albuquerque 53.97 292 P P 20 08 35.2 -0.7
MNTX Cornudas Mount 54.06 288 P P 20 08 37.0 +0.7
AKASG Malin Array Be 54.19 48 P P 20 08 34.4 -2.5
comp=Z,3.9nm,0.8s,baz=275,slow=6.4,SNR=14
AKASG Malin Array Be 54.19 48 P P 20 08 35.9 -1.0
AKBB Malin Array Si 54.19 48 P P 20 08 35.1 -1.8
AKBB IAmb IAmb 20 08 41.3
comp=Z,10nm,1.0s
LPAZ La Paz 54.20 213 P P 20 08 38.8 +0.8
comp=Z,1.5nm,0.8s,baz=51,slow=3.2,SNR=7.5
LPAZ La Paz 54.20 213 P P 20 08 39.6 +1.6
LPAZ IAmb IAmb 20 08 54.4
comp=Z,22nm,2.0s
YNE Yellowstone No 54.27 305 P P 20 08 38.9 +0.9
BNM Barren Site 54.33 292 P P 20 08 40.6 +2.1
BW06 Boulder Array 54.41 303 P P 20 08 38.4 -0.6
BW06 IAmb IAmb 20 08 46.2
comp=Z,11nm,1.0s
PD31 Pinedale Array 54.41 303 P P 20 08 39.1 +0.2
PD31 IAmb IAmb 20 08 46.2
comp=Z,9.4nm,0.9s
PDAR Pinedale Array 54.41 303 P P 20 08 39.4 +0.4
comp=Z,3.6nm,0.8s,baz=82,slow=7.5,SNR=21
PDAR LR LR 20 31 07.8
comp=Z,65nm,18.1s,baz=106,slow=35
PDAR Pinedale Array 54.41 303 P P 20 08 38.8 -0.2
RDMU Red Mountain 54.91 300 P P 20 08 41.9 -0.7
YHH Holmes Hill 54.91 305 P P 20 08 40.3 -2.4
YKA Yellowknife Ar 55.05 327 P P 20 08 42.5 -0.5
comp=Z,0.7nm,0.8s,baz=263,slow=33,SNR=3.7
YKA LR LR 20 31 39.0
comp=Z,103nm,19.7s,baz=0.0,slow=35
SNOW Snow King Moun 55.11 304 P P 20 08 42.2 -1.9
IMW Indian Meadow 55.15 304 P P 20 08 42.4 -2.0
IMW IAmb IAmb 20 08 52.2
comp=Z,7.5nm,0.9s
REDW Red Top Meadow 55.20 304 P P 20 08 44.4 -0.3
TPAW Teton Pass 55.25 304 P P 20 08 42.1 -3.0
TPAW IAmb IAmb 20 09 01.6
comp=Z,8.1nm,1.2s
SRU San Rafael Swe 55.98 298 P P 20 08 47.8 -2.5
HWUT Hardware Ranch 56.12 302 P P 20 08 51.7 +0.4
WALA Waterton Lakes 56.15 311 P P 20 08 51.1 -0.2
WALA IAmb IAmb 20 09 01.5
comp=Z,18nm,1.4s
JTMT Jette 56.64 309 P P 20 08 55.6 +0.7
JTMT IAmb IAmb 20 08 57.4
comp=Z,10nm,0.8s
TCRU Three Creeks R 57.56 298 P P 20 09 02.6 +1.0
GO01 Chusmiza 57.63 212 P P 20 09 02.9 +0.5
GO01 IAmb IAmb 20 09 10.1
comp=Z,17nm,1.4s
WUAZ Wupatki 57.65 295 P P 20 09 04.7 +2.5
WUAZ IAmb IAmb 20 09 06.6
comp=Z,9.1nm,1.3s
OBN Obninsk 57.91 41 P P 20 09 03.5 +0.1
PB11 IPOC Station P 57.92 212 P P 20 09 04.4 +0.3
PB11 IAmb IAmb 20 09 07.5
comp=Z,7.5nm,0.9s
U15A North Rim 58.08 296 P P 20 09 05.5 +0.2
NEW Newport 58.39 310 P P 20 09 07.9 +0.9
comp=Z,3.2nm,0.8s,baz=71,slow=7.8,SNR=4.7
NEW Newport 58.39 310 P P 20 09 05.4 -1.7
NEW IAmb IAmb 20 09 13.6
comp=Z,7.2nm,0.8s
PLID Pearl Lake 58.40 307 P P 20 09 07.5 +0.1
PLID IAmb IAmb 20 09 16.6
comp=Z,7.9nm,1.1s
CCUT Cedar City 58.56 297 P P 20 09 10.4 +1.7
LCMT Little Creek M 58.63 297 P P 20 09 07.0 -2.0
PSUT Pine Spring 58.64 299 P P 20 09 09.2 +0.1
MFID Camas Ranch 58.71 305 P P 20 09 10.1 +0.6
MFID IAmb IAmb 20 09 18.8
comp=Z,5.9nm,0.9s
F10A Beach Ranch, E 59.01 308 P P 20 09 10.2 -1.3
Y14A Wickenburg 59.42 293 P P 20 09 14.9 +0.4
W13A Hualapai Mount 59.73 295 P P 20 09 16.9 +0.1
G08A Pilot Rock 60.37 307 P P 20 09 21.2 +0.4
G08A IAmb IAmb 20 09 28.6
comp=Z,11nm,1.4s
HAWA Hanford 60.45 309 P P 20 09 22.0 +0.8
J08A Circle Bar Ran 60.58 305 P P 20 09 21.5 -0.9
NVAR Mina Array Bea 61.99 300 P P 20 09 32.8 +0.7
comp=Z,0.7nm,0.7s,baz=62,slow=6.8,SNR=6.0
NVAR LR LR 20 36 24.1
comp=Z,114nm,18.4s,baz=88,slow=36
NVAR Mina Array Bea 61.99 300 P P 20 09 31.5 -0.6
INK Inuvik 62.03 335 P P 20 09 31.5 0.0
comp=Z,2.7nm,0.9s,baz=62,slow=10,SNR=6.6
INK Inuvik 62.03 335 P P 20 09 31.1 -0.4
INK IAmb IAmb 20 09 37.6
comp=Z,9.5nm,1.1s
SPX San Pedro Mart 62.39 291 P P 20 09 34.1 -0.9
SPX IAmb IAmb 20 09 43.6
comp=Z,6.7nm,1.1s
KBZ Khabaz 64.91 53 P P 20 09 50.2 -0.8
comp=Z,2.5nm,0.9s,baz=56,slow=24,SNR=6.4
MARD Mardin 65.72 60 P P 20 09 54.6 -1.9
GEVA Gevas 67.01 58 P P 20 10 04.1 -0.8
BCAR Beaver Creek A 67.01 331 P P 20 10 04.2 -0.1
GNI Garni 67.51 56 P P 20 10 07.6 -0.4
COLD Coldfoot 68.29 337 P P 20 10 12.6 +0.3
COLD IAmb IAmb 20 10 15.1
comp=Z,10.0nm,1.3s
IL31 68.29 334 P P 20 10 12.1 0.0
IL31 IAmb IAmb 20 10 18.5
comp=Z,12nm,1.4s
ILAR Eielson Array 68.29 334 P P 20 10 12.7 +0.5
comp=Z,1.1nm,0.9s,baz=46,slow=4.9,SNR=10
ILAR LR LR 20 39 37.7
comp=Z,78nm,18.2s,baz=99,slow=36
ILAR Eielson Array 68.29 334 P P 20 10 11.7 -0.5
MESA MESA 68.31 328 P P 20 10 11.6 -1.1
HDA Harding Lake 68.48 333 P P 20 10 13.1 -0.4
CCB Clear Creek Bu 68.69 334 P P 20 10 15.0 +0.2
CCB IAmb IAmb 20 10 21.5
comp=Z,7.2nm,1.0s
WRH Wood River Hil 68.89 334 P P 20 10 17.3 +1.3
ARU Arti 69.29 36 P P 20 10 18.8 +0.2
ARU IAmb IAmb 20 10 24.2
comp=Z,10nm,1.2s
IMAR Indian Mountai 70.15 336 P P 20 10 23.9 +0.2
NRIK Noril'sk 72.70 17 P P 20 10 39.6 +0.5
comp=Z,1.3nm,0.6s,baz=336,slow=11,SNR=1.9
ABKAR Akbulak array 73.34 42 P P 20 10 42.3 -0.9
H09W1 TRISTAN DA CUN 73.35 156 T T 21 30 48.7
SNR=5.5
BRVK Borovoye 76.85 35 P P 20 11 02.5 -0.9
BRVK IAmb IAmb 20 11 15.7
comp=Z,5.0nm,0.8s
LSZ Lusaka 81.00 114 P P 20 11 28.3 +1.4
LSZ IAmb IAmb 20 11 33.7
comp=Z,9.5nm,1.3s
KURK Kurchatov 82.35 34 P P 20 11 34.2 +0.9
KURK IAmb IAmb 20 11 39.4
comp=Z,8.3nm,1.3s
ZAA0 Zalesovo Array 82.87 29 P P 20 11 35.0 -1.0
ZAA0 IAmb IAmb 20 11 42.1
comp=Z,9.0nm,1.3s
ZALV Zalesovo Beam 82.87 29 P P 20 11 36.1 +0.1
comp=Z,0.8nm,0.6s,baz=297,slow=6.5,SNR=3.5
ZALV Zalesovo Beam 82.87 29 P P 20 11 35.6 -0.4
CHGR Chuyangaron 84.66 48 P P 20 11 45.0 -0.6
GAR Garm 85.18 47 P P 20 11 47.8 -0.5
MKAR Makanchi Array 86.80 35 P P 20 11 55.5 -0.5
comp=Z,0.6nm,0.9s,baz=330,slow=7.0,SNR=4.6
KSH Kashi 88.29 44 *eP* **P 20 12 05.1 +1.7**
KSH pmax pmax
comp=Z,140nm,4.3s
PETK Petropavlovsk- 94.16 349 LR LR 20 53 22.9
comp=Z,30nm,19.5s,baz=53,slow=34
ASAR Alice Springs 170.97 31 PKP **PKPdf 20 19 19.8 -0.6**
comp=Z,0.7nm,1.0s,baz=336,slow=2.7,SNR=4.6
ASAR PKPab **PKPab 20 20 38.1 -0.9**

comp=Z,0.7nm,0.8s,baz=342,slow=4.1,SNR=6.4

*NEIC **19** 20:11:01.9±1.0, 1.9N±0.1×127.6E±0.1, h242km±7km, mb4.1/7, Error ellipse: s-maj=18.9km s-min=12.5km az=216.0*
*IDC **19** 20:11:02.0±1.7, 1.95N×127.69E, h241km±15km, mb3.3/8, mb1 3.4/10, mb1mx3.2/44, mbtmp3.9/10, Error ellipse: s-maj=26.1km s-min=10.8km az=70.0*
*DJA **19** 20:11:02.9±0.4, 2.1N±3×12.8E±°, h216km±3km, M4.0/15, mB4.5/5, mb4.1/9, MLv4.1/15, Mw(mB)3.7/5*
ISC 19 20:11:01.9±0.7, 1.98N±0.06×127.74E±0.07, h250km, n40, σ1§74/53, mb3.8/9, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**197**	P	**Pn**	**20 11 37.1**	**-1.4**
TNTI				S	**S**	**20 12 03.1**	**-4.3**
TNTI	**Ternate**	**1.26**	**197**		**Pn**	**20 11 37.1**	**-1.4**
SGSI	**Sangihe**	**2.78**	**308**	P	**Pn**	**20 11 51.1**	**-1.0**
SGSI				S	**S**	**20 12 28.3**	**-3.5**
KMSI	**Cibinong**	**4.01**	**250**	P	**Pn**	**20 12 06.1**	**+0.3**
KMSI				S	**S**	**20 12 55.5**	**-1.1**
SIJI	**Sorong**	**4.52**	**129**	P	**Pn**	**20 12 12.7**	**+0.8**
	0.9nm,0.3s,baz=311,slow=19,SNR=5.1						
DDMP	**Don Marcelino,**	**4.57**	**334**	*eP*	**Pn**	**20 12 10.2**	**-2.3**
GTOI	**Gorontalo**	**4.91**	**254**	P	**Pn**	**20 12 17.8**	**+1.2**
GTOI				S	**S**	**20 13 15.4**	**-0.8**
NLAI	**Namlea**	**5.22**	**187**	P	**Pn**	**20 12 20.1**	**-0.4**
	0.5nm29nm,0.6s						
NLAI				S	**S**	**20 13 18.0**	**-5.2**
	0.5nm29nm,0.6s						
SKMP	**Bagumbayan, Su**	**5.52**	**325**	*eP*	**Pn**	**20 12 21.6**	**-2.5**
KCP	**Kidapawan**	**5.65**	**332**	*iP*	**Pn**	**20 12 25.4**	**-0.4**
LUWI	**Luwuk**	**5.80**	**239**	P	**Pn**	**20 12 28.2**	**+0.6**
	0.8nm1μm35nm,0.6s						
LUWI				S	**S**	**20 13 32.4**	**-3.7**
	0.8nm1μm35nm,0.6s						
LUWI	**Luwuk**	**5.80**	**239**	Pn	**Pn**	**20 12 26.2**	**-1.4**
MRSI	**Marisa**	**5.99**	**256**	P	**Pn**	**20 12 29.8**	**-0.1**
	0.2nm630nm32nm,0.5s						
MRSI				S	**S**	**20 13 37.9**	**-2.4**
	0.2nm630nm32nm,0.5s						
BUKP	**Musuan**	**6.44**	**336**	*eP*	**Pn**	**20 12 34.2**	**-1.4**
APSI	**Ampana**	**6.73**	**245**	P	**Pn**	**20 12 39.4**	**+0.1**
	0.2nm756nm33nm,0.6s						
APSI				S	**S**	**20 14 00.6**	**+3.3**
	0.2nm756nm33nm,0.6s						
TOLI2	**Tolitoli**	**7.01**	**263**		**Pn**	**20 12 42.8**	**+0.1**
PAGZ	**Pagadian**	**7.27**	**323**	*eP*	**Pn**	**20 12 43.6**	**-2.3**
MPSI	**Mapaga**	**8.01**	**258**	P	**Pn**	**20 12 56.5**	**+1.1**
	0.0nm234nm5.9nm,0.7s						
TTSI	**Tana Toraja**	**9.36**	**238**	P	**Pn**	**20 13 13.6**	**+1.1**
	28nm,0.8s						
SPSI	**Sidrap Palu**	**9.91**	**233**	P	**Pn**	**20 13 18.7**	**-0.8**
	16nm,0.8s						
KAPI	**Kappang**	**10.58**	**229**	P	**Pn**	**20 13 28.0**	**+0.2**
	0.7nm,0.3s,baz=56,slow=11,SNR=1.6						
KAPI				S	**S**	**20 15 24.6**	**-2.0**
	0.7nm,0.3s,baz=258,slow=19,SNR=1.7						
MMRI	**Maumere**	**11.89**	**207**	Pn	**Pn**	**20 13 43.1**	**-1.0**
MTN	**Manton Dam**	**15.11**	**167**	P	**P**	**20 14 23.4**	**+0.4**
MTN				IAmb	IAmb	20 14 41.6	
	comp=Z,18nm,1.6s						
KSM	**Kuching**	**17.43**	**269**	Pn	**Pn**	**20 14 49.3**	**-1.7**
FITZ	**Fitzroy Crossi**	**20.06**	**186**	P	**P**	**20 15 17.8**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=9.4,slow=9.3,SNR=9.8						
FITZ	**Fitzroy Crossi**	**20.06**	**186**	P	**P**	**20 15 17.2**	**+0.6**
FITZ				IAmb	IAmb	20 16 11.7	
	comp=Z,6.6nm,1.3s						
WB0	**Warramunga Arr**	**22.58**	**163**	P	**P**	**20 15 41.4**	**+0.1**
WB0				IAmb	IAmb	20 15 42.7	
	comp=Z,4.5nm,0.8s						
WRA	**Warramunga Arr**	**22.73**	**164**	P	**P**	**20 15 42.6**	**0.0**
	comp=Z,1.5nm,0.3s,baz=345,slow=10,SNR=75						
WRA				PcP	**PcP**	**20 19 27.5**	**+1.1**
	comp=Z,0.6nm,1.1s,baz=341,slow=2.2,SNR=2.7						
WRA				S	**S**	**20 19 35.0**	**+2.6**
	comp=Z,0.3nm,0.8s,baz=337,slow=16,SNR=2.5						
WRA	**Warramunga Arr**	**22.73**	**164**	P	**P**	**20 15 41.6**	**-1.0**
WB2	**Warramunga Arr**	**22.73**	**164**	P	**P**	**20 15 42.8**	**+0.1**
WB2				IAmb	IAmb	20 15 46.8	
	comp=Z,8.7nm,1.3s						
ASAR	**Alice Springs**	**26.19**	**167**	P	**P**	**20 16 13.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=342,slow=7.2,SNR=11						
ASAR				PcP	**PcP**	**20 19 35.0**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=359,slow=2.4,SNR=6.2						
ASAR				ScP	**ScP**	**20 22 51.9**	**+2.0**
	comp=Z,0.2nm,0.7s,baz=356,slow=3.7,SNR=2.2						
ASAR	**Alice Springs**	**26.19**	**167**	P	**P**	**20 16 14.1**	**+0.2**
STKA	**Stephens Creek**	**36.15**	**160**	P	**P**	**20 17 41.4**	**+0.8**
	comp=Z,4.2nm,0.4s,baz=340,slow=8.4,SNR=14						
STKA	**Stephens Creek**	**36.15**	**160**	P	**P**	**20 17 41.4**	**+0.8**
SONM	**Songino Array**	**49.27**	**341**	P	**P**	**20 19 26.8**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=148,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**59.56**	**325**	P	**P**	**20 20 40.4**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=114,slow=8.1,SNR=21						
MKAR	**Makanchi Array**	**59.56**	**325**	P	**P**	**20 20 40.0**	**+0.6**
ZALV	**Zalesovo Beam**	**62.59**	**333**	P	**P**	**20 20 60.0**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=126,slow=7.3,SNR=2.0						
ZALV	**Zalesovo Beam**	**62.59**	**333**	P	**P**	**20 20 59.7**	**+0.2**
VNDA	**Vanda**	**81.58**	**173**	P	**P**	**20 22 52.7**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=354,slow=7.9,SNR=2.3						

JMA 19 20:11:17.8±0.2, 25.00N×123.57E, h17km±4km, M2.3, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.68**	**168**	P	Pg	20 11 30.7	-0.4
IRIF				eS	Sg	20 11 39.7	-0.5
YOJ	**Yonaguni jima**	**0.74**	**224**	P	Pb	20 11 31.7	-0.5
YOJ				eS	Sb	20 11 41.1	-0.9
JYNG	**Yonagunijimaku**	**0.79**	**226**	P	Pb	20 11 32.4	-0.7
JYNG				eS	Sb	20 11 42.8	-0.6
JISG	**Ishigakijimahi**	**0.79**	**121**	P	Pb	20 11 32.6	-0.5
JISG				S	Sb	20 11 43.3	-0.2
JIJ	**Ishigaki jima**	**0.82**	**140**	P	Pb	20 11 32.8	-0.8
JIJ				S	Sb	20 11 43.6	-0.8
JKRS	**Kuro-shima**	**0.86**	**152**	P	Pb	20 11 33.8	-0.4
JKRS				S	Sb	20 11 45.1	-0.3
HATJ	**Hateruma jima**	**0.96**	**167**	P	Pb	20 11 35.7	-0.3
HATJ				S	Sb	20 11 48.3	-0.2
JTJ	**Tarama**	**1.09**	**109**	P	Pn	20 11 38.3	0.0
JTJ				S	Sb	20 11 52.4	+0.3

TAP 19 20:12:10.9, 24.90N×122.06E, h13km, ML2.2, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.12**	**329**	*i* P		20 12 14.6	+0.3
	baz=322						
TWB1				*i* S		20 12 16.8	+0.2
	baz=322						
NTC	**Toucheng**	**0.21**	**257**	*i* P		20 12 16.1	+0.5
	baz=266						
NTC				*e*S		20 12 19.6	-0.8
	baz=266						
TIPB	**Shuangxi**	**0.22**	**288**	*i* P		20 12 16.5	-0.4
	baz=289						
TIPB				S		20 12 19.8	+0.7
	baz=289						
WFSB	**Wu-fen Shan**	**0.30**	**304**	*e*P		20 12 18.0	-0.2
	baz=304						
WFSB				S		20 12 23.0	-0.1
	baz=304						
TWE	**Neicheng**	**0.40**	**243**	P		20 12 19.1	+0.2
	baz=246						
TWE				S		20 12 25.6	-0.2
	baz=246						
TWA	**Mucha**	**0.44**	**280**	*e*P		20 12 20.5	0.0
	baz=282						
TWA				S		20 12 27.2	+0.2
	baz=282						
YM01	**YM01**	**0.51**	**299**	P		20 12 22.5	+0.8
	baz=299						
YM01				S		20 12 29.4	+0.4
	baz=299						
YM08	**YM08**	**0.51**	**304**	P		20 12 22.2	+0.5
	baz=304						
YM08				S		20 12 29.2	+0.1
	baz=304						
YM11	**YM11**	**0.51**	**301**	P		20 12 22.8	+1.0
	baz=301						
YM11				*e*S		20 12 29.5	+0.3
	baz=301						
YM10	**YM10**	**0.52**	**299**	P		20 12 22.7	+0.8
	baz=299						
YM05	**YM05**	**0.52**	**300**	P		20 12 22.5	+0.6
	baz=300						
NWLT	**Wulai**	**0.52**	**256**	*i* P		20 12 21.4	+0.2
	baz=260						
NWLT				*i* S		20 12 28.5	+0.4
	baz=260						
YM04	**YM04**	**0.54**	**298**	P		20 12 22.2	+0.1
	baz=298						
YM04				*e*S		20 12 30.1	+0.3
	baz=298						
ENA	**Nanau**	**0.55**	**212**	*e*P		20 12 22.1	+0.3
	baz=219						
ENA				S		20 12 30.4	+0.2
	baz=219						
YHNB	**Yeheng**	**0.66**	**250**	P		20 12 24.0	+0.1
	baz=253						
YHNB				*e*S		20 12 32.9	+0.3
	baz=253						
LIOB	**Emei**	**0.98**	**255**	*e*P		20 12 30.4	+0.1
	baz=259						
LIOB				*e*S		20 12 44.5	+0.3
	baz=259						

*IDC **19** 20:20:17.0±1.9, 6.23S×152.56E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.5/34, mbtmp3.5/5, ML1.4/1, Error ellipse: s-maj=58.1km s-min=22.6km az=117.0*
ISC 19 20:20:23.0±1.5, 6.1S±0.1×152.4E±0.2, h38km, n7, σ1§11/9, mb3.4/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.82**	**349**	Pn	**Pn**	**20 20 51.5**	**-0.4**
	19nm,0.3s,baz=132,slow=2.6,SNR=23						
KRVT				Sn	**Sn**	**20 21 13.6**	**-0.2**
	88nm,0.3s,baz=88,slow=21,SNR=11						
PMG	**Port Moresby**	**6.12**	**237**	Pn	**Pn**	**20 21 50.6**	**-0.3**
	0.5nm,0.3s,baz=86,slow=13,SNR=1.7						
PMG				Sn	**Sn**	**20 22 60.0**	**+0.3**
	0.6nm,0.3s,baz=113,slow=19,SNR=1.9						
WRA	**Warramunga Arr**	**22.27**	**230**	P	**P**	**20 25 15.0**	**-2.1**
	0.9nm,0.9s,baz=55,slow=9.8,SNR=4.0						
ASAR	**Alice Springs**	**24.91**	**224**	P	**P**	**20 25 42.3**	**-0.4**
	0.9nm,0.8s,baz=60,slow=8.9,SNR=8.1						
FITZ	**Fitzroy Crossi**	**28.68**	**243**	P	**P**	**20 26 18.2**	**+1.6**
	0.6nm,0.6s,baz=65,slow=11,SNR=1.1						
ILAR	**Eielson Array**	**83.53**	**22**	P	**P**	**20 32 47.0**	**+0.4**
	0.5nm,0.7s,baz=245,slow=6.5,SNR=4.4						
TORD	**Torodi Ar. Bea**	**150.28**	**286**	PKPbc	**PKPbc**	**20 40 11.3**	**0.0**
	0.9nm,1.0s,baz=108,slow=4.4,SNR=4.4						

*KRNET **19** 20:32:44.0±0.1, 41.41N×71.97E, h20km, mb2.5*
*ISU **19** 20:32:44.5, 41.33N×72.08E, h20km*
*SOME **19** 20:32:44.1, 41.40N×72.00E, h10km*
*NNC **19** 20:32:45.0±1.4, 41.44N×72.03E, h0km, mb3.2, mpv3.2, Error ellipse: s-maj=12.7km s-min=4.2km az=177.0*
ISC 19 20:32:43.0±1.0, 41.43N±0.03×72.05E±0.02, h14km±10km, n42, σ1§21/73, 24C-10D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRKS	**Terek-Say**	**0.69**	**279**	⇑*i* P		**Pg**	**20 32 55.7**	**-0.7**
	baz=75						
TRKS				⇑*i* S		**Sg**	**20 33 03.7**	**-1.8**
	baz=75						
ARSB	**Arslanbob**	**0.71**	**98**	⇑*i* P		**Pn**	**20 32 58.9**	**+0.1**
	baz=96						
ARSB				⇑*i* S		**Sn**	**20 33 09.7**	**+0.1**
	baz=96						
ARSB	**Arslanbob**	**0.71**	**98**	*e*P		**Pn**	**20 32 59.1**	**+0.3**
ARSB				*e*S		**Sn**	**20 33 09.5**	**-0.1**
OHH	**Osh**	**1.06**	**148**	⇑*i* P		**Pn**	**20 33 04.1**	**+0.6**
	baz=45						
OHH				⇑*i* S		**Sn**	**20 33 19.2**	**+1.1**
	baz=45						
OHH	**Osh**	**1.06**	**148**	*e*P		**Pn**	**20 33 03.6**	**+0.1**
OHH				*e*S		**Sg**	**20 33 17.3**	**-0.1**
AML	**Almayashu**	**1.42**	**60**	⇓*i* P		**Pg**	**20 33 11.3**	**+1.0**
	baz=60						
AML				⇓*i* S		**Sg**	**20 33 30.4**	**+1.6**
	baz=60						
DZA	**Taraz**	**1.56**	**340**	*e*P		**Pg**	**20 33 13.6**	**+0.7**
	24nm,0.1s						
DZA				*e*S		**Sg**	**20 33 34.5**	**+1.4**
	149nm,0.2s						
DZA	**Taraz**	**1.56**	**340**	P		**Pg**	**20 33 13.6**	**+0.7**
	24nm,0.1s						
DZA				S		**Sg**	**20 33 34.5**	**+1.4**
	149nm,0.2s						
MRKS	**Merke**	**1.58**	**33**	*e*P		**Pg**	**20 33 14.4**	**+1.0**
	9.8nm,0.2s						
MRKS				*e*S		**Sg**	**20 33 36.1**	**+2.2**
	21nm,0.1s						
MRKS	**Merke**	**1.58**	**33**	P		**Pg**	**20 33 14.4**	**+1.0**
	9.8nm,0.2s						
MRKS				S		**Sg**	**20 33 36.1**	**+2.2**
	21nm,0.1s						
BTK	**Batken**	**1.66**	**215**	⇑*i* P		**Pb**	**20 33 13.4**	**+0.1**
	baz=13						
BTK				⇑*i* S		**Sb**	**20 33 35.1**	**+1.0**
	baz=13						
BTK	**Batken**	**1.66**	**215**	*i* P		**Pb**	**20 33 13.8**	**+0.5**
BTK				*i* S		**Sb**	**20 33 34.8**	**+0.7**
IUG	**luzhnay**	**1.67**	**296**	*e*P		**Pg**	**20 33 14.3**	**-0.7**
	14nm,0.2s						
IUG				*e*S		**Sg**	**20 33 36.0**	**-0.7**
	121nm,0.2s						
IUG	**luzhnay**	**1.67**	**296**	P		**Pg**	**20 33 14.3**	**-0.7**
	14nm,0.2s						
IUG				S		**Sg**	**20 33 36.0**	**-0.7**
	121nm,0.2s						
ARLS	**Aral**	**1.76**	**75**	⇑*i* P		**Pg**	**20 33 17.5**	**+0.7**
	baz=75						
ARLS				⇑*i* S		**Sg**	**20 33 41.1**	**+1.5**
	baz=75						
EKS2	**Erkin-Say**	**1.78**	**46**	⇑*i* P		**Pg**	**20 33 17.6**	**+0.4**
	baz=46						
EKS2				⇑*i* S		**Sg**	**20 33 42.4**	**+2.0**
	baz=46						
DRK	**Karamyk**	**1.96**	**186**	⇑*i* P		**Pb**	**20 33 19.2**	**+0.7**
	baz=84						
DRK				⇑*i* S		**Sb**	**20 33 44.4**	**+1.5**
	baz=84						
UCH	**Uchtor**	**2.01**	**66**	⇓*i* P		**Pg**	**20 33 20.8**	**-0.7**
	baz=66						
UCH				⇓*i* S		**Sg**	**20 33 48.2**	**+0.6**
	baz=66						
KK31	**Karatay Array**	**2.02**	**326**	⇓Pn		**Pb**	**20 33 19.6**	**0.0**
	1.1nm,0.3s,baz=163,slow=19,SNR=23						
KK31				Lg		Lg	20 33 47.4	
	4.9nm,0.3s,baz=142,slow=27,SNR=15						
CHM	**Chimkent**	**2.03**	**297**	*e*P		**Pg**	**20 33 21.3**	**-0.6**
	5.1nm,0.3s						
CHM				*e*S		**Sg**	**20 33 47.8**	**-0.5**
	116nm,0.2s						
AAK	**Ala-Archa**	**2.19**	**56**	⇑*i* P		**Pg**	**20 33 24.0**	**-0.9**
	baz=56						
AAK				⇑*i* S		**Sg**	**20 33 52.3**	**-1.0**
	baz=56						
AAK	**Ala-Archa**	**2.19**	**56**	⇑Pn		**Pg**	**20 33 24.8**	**-0.1**
	1.5nm,0.3s						
AAK				⇓Lg		Lg	20 33 54.5	
	4.4nm,0.4s						
KBK	**Karagaybulak**	**2.48**	**59**	⇑*i* P		**Pb**	**20 33 27.9**	**+0.4**
	baz=60						
KBK				⇑*i* S		**Sb**	**20 33 59.5**	**+1.5**
	baz=60						
CHMS	**Chumysh**	**2.55**	**51**	⇑*e*P		**Pb**	**20 33 28.7**	**+0.2**
	baz=52						
CHMS				⇑*i* S		**Sb**	**20 34 01.1**	**+1.4**
	baz=52						
USP	**Ospenovka**	**2.58**	**44**	⇑*i* P		**Pb**	**20 33

	3.6nm,0.5s								
ULHL	**Ulahol**	**3.24**	**74**	⇓*i*	*P*		**Pb**	**20 33 38.4**	**-2.0**
	baz=74								
ULHL				⇓*i*	S		**Sb**	**20 34 17.3**	**-2.4**
	baz=74								
DGS	**Degeres**	**3.30**	**56**	*e*	P		**Pg**	**20 33 44.9**	**-1.3**
	1.9nm,0.5s								
DGS					*e*S		**Sg**	**20 34 28.6**	**-0.5**
	4.8nm,0.7s								
DGS	**Degeres**	**3.30**	**56**	Pg	Pg		**Pg**	**20 33 44.9**	**-1.3**
	1.9nm,0.5s								
DGS					Lg	Lg		20 34 28.6	
	4.8nm,0.7s								
KST	**Kastek**	**3.33**	**60**	*e*	P		**Pg**	**20 33 45.7**	**-1.0**
	3.4nm,0.6s								
KST					*e*S		**Sg**	**20 34 29.4**	**-0.3**
	4.0nm,0.6s								
KST	**Kastek**	**3.33**	**60**	Pg	Pg		**Pg**	**20 33 45.7**	**-1.0**
	3.4nm,0.6s								
KST					Lg	Lg		20 34 29.4	
	4.0nm,0.6s								
KRBS	**Karabastau**	**3.51**	**49**	*e*	P		**Pg**	**20 33 49.0**	**-1.2**
	1.8nm,0.5s								
KRBS					*e*S		**Sg**	**20 34 35.5**	**-0.1**
	3.7nm,0.3s								
KRBS	**Karabastau**	**3.51**	**49**	Pg	Pg		**Pg**	**20 33 49.0**	**-1.2**
	1.8nm,0.5s								
KRBS					Lg	Lg		20 34 35.6	
	3.7nm,0.3s								
BTLS	**Baital**	**3.89**	**21**	*e*	P		**Pg**	**20 33 56.2**	**-1.3**
	3.0nm,0.6s								
BTLS					*e*S		**Sg**	**20 34 47.7**	**-0.3**
	5.5nm,0.4s								
BTLS	**Baital**	**3.89**	**21**	Pg	Pg		**Pg**	**20 33 56.2**	**-1.3**
	3.0nm,0.6s								
BTLS					Lg	Lg		20 34 47.7	
	5.5nm,0.4s								
KUU	**Kurty**	**4.01**	**51**	*e*	P		**Pg**	**20 33 57.6**	**-2.2**
	0.8nm,0.4s								
KUU					*e*S		**Sg**	**20 34 50.5**	**-1.2**
	3.0nm,0.3s								
KUU	**Kurty**	**4.01**	**51**	Pg	Pg		**Pg**	**20 33 57.6**	**-2.2**
	0.8nm,0.4s								
KUU					Lg	Lg		20 34 50.5	
	3.0nm,0.3s								
KTBS	**Karatobe**	**4.11**	**55**	*e*	P		**Pg**	**20 33 59.7**	**-2.1**
	1.7nm,0.5s								
KTBS					*e*S		**Sg**	**20 34 53.9**	**-1.1**
	4.4nm,0.5s								
KTBS	**Karatobe**	**4.11**	**55**	Pg	Pg		**Pg**	**20 33 59.7**	**-2.1**
	1.7nm,0.5s								
KTBS					Lg	Lg		20 34 53.9	
	4.4nm,0.5s								
CHKK	**Chushkaly**	**4.38**	**55**	*e*	P		**Pg**	**20 34 05.1**	**-1.6**
	0.6nm,0.0s								
CHKK					*e*S		**Sg**	**20 35 02.8**	**-0.7**
	2.6nm,0.2s								
CHKK	**Chushkaly**	**4.38**	**55**	Pg	Pg		**Pg**	**20 34 05.1**	**-1.6**
	0.6nm,0.0s								
CHKK					Lg	Lg		20 35 02.8	
	2.6nm,0.2s								

IDC ***19*** *20:37:44.7±0.8, 1°.88N×126°.95E, h0km, mb3.9/8, mb1 4.1/10, mb1mx3.9/37, mbtmp3.9/10, ML3.7/2, MS3.1/1, Ms1 3.1/1, ms1mx2.4/38, Error ellipse: s-maj=34.2km s-min=15.1km az=65.0*

NEIC ***19*** *20:37:50.5±0.8, 1°.67N±0°.09×126°.52E±0°.07, h40km±9km, mb4.2/18, Error ellipse: s-maj=13.8km s-min=8.7km az=208.0*

DJA ***19*** *20:37:51.3±1.2,2°N±3°×12°7E±°, h36km±23km, M4.2/13, mB4.5/2, mb4.5/7, MLv4.1/13, Mw(mB)3.7/2*

ISC 19 20:37:51.6±0.5, 1°.65N±0°.05×126°.49E±0°.07, h47km, n57, σ1s92/65, mb4.2/18, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**135**	P		**Pn**	**20 38 12.2**	**-0.3**
TNTI				S		**Sn**	**20 38 28.8**	**+0.8**
TNTI	**Ternate**	**1.23**	**135**			**Pn**	**20 38 12.1**	**-0.4**
SGSI	**Sangihe**	**2.24**	**335**	P		**Pn**	**20 38 25.2**	**-1.1**
SGSI				S		**Sn**	**20 38 52.2**	**-0.6**
KMSI	**Cibinong**	**2.73**	**247**	P		**Pn**	**20 38 34.0**	**+1.1**
GTOI	**Gorontalo**	**3.62**	**254**	P		**Pn**	**20 38 46.7**	**+1.4**
DDMP	**Don Marcelino,**	**4.50**	**350**	*e*P		**Pn**	**20 38 57.7**	**+0.4**
DDMP				*e*S		**Sn**	**20 39 52.4**	**+4.0**
LUWI	**Luwuk**	**4.58**	**234**	P		**Pn**	**20 39 00.5**	**+2.1**
LUWI	**Luwuk**	**4.58**	**234**			**Pn**	**20 39 59.1**	**+0.7**
MRSI	**Marisa**	**4.70**	**256**	P		**Pn**	**20 39 02.3**	**+2.3**
NLAI	**Namlea**	**4.89**	**173**	P		**Pn**	**20 39 03.1**	**+0.4**
SKMP	**Bagumbayan, Su**	**5.22**	**338**	*e*P		**Pn**	**20 39 04.9**	**-2.3**
SKMP				*e*S		**Sn**	**20 40 00.7**	**-5.4**
MATI	**Mati**	**5.27**	**357**	*e*P		**Pn**	**20 39 08.3**	**+0.3**
MATI				*e*S		**Sn**	**20 40 15.8**	**+8.4**
APSI	**Ampana**	**5.47**	**242**	P		**Pn**	**20 39 11.4**	**+0.8**
	0.3nm745nm69nm,1.0s							
KCP	**Kidapawan**	**5.51**	**345**	⇑*i*	P	**Pn**	**20 39 14.1**	**+2.9**
TOLI2	**Tolitoli**	**5.73**	**265**	Pn		**Pn**	**20 39 13.5**	**-0.8**
MPSI	**Mapaga**	**6.72**	**259**	P		**Pn**	**20 39 27.4**	**-0.4**
	0.1nm24nm,0.8s							
PAGZ	**Pagadian**	**6.90**	**333**	*e*P		**Pn**	**20 39 28.1**	**-2.1**
PAGZ				*e*S		**Sn**	**20 40 43.2**	**-4.2**
TTSI	**Tana Toraja**	**8.14**	**235**	P		**Pn**	**20 39 47.7**	**+0.5**
	30nm,0.9s							
MYLDM	**Lahad Datu**	**8.71**	**294**	Pn		**Pn**	**20 39 55.8**	**+0.6**
BNSI	**Bone**	**8.76**	**227**	P		**Pn**	**20 39 55.6**	**-0.2**
KAPI	**Kappang**	**9.44**	**225**	Pn		**Pn**	**20 40 07.2**	**+2.0**
	1.0nm,0.3s,baz=62,slow=15,SNR=1.7							
KAPI	**Kappang**	**9.44**	**225**	Pn		**Pn**	**20 40 05.5**	**+0.4**
KKM	**Kota Kinabalu**	**11.14**	**293**	Pn		**Pn**	**20 40 28.8**	**+0.2**
MTN	**Manton Dam**	**15.11**	**162**	Pn		**Pn**	**20 41 22.7**	**+0.5**
KNRA	**Kununurra**	**17.36**	**173**	P		**Pn**	**20 41 50.6**	**0.0**
KNRA				IAmb		IAmb	20 41 54.2	
	comp=Z,18nm,1.1s							
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**20 42 16.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=9.1,SNR=3.5							
FITZ	**Fitzroy Crossi**	**19.64**	**182**	P		**P**	**20 42 16.3**	**-0.2**
WB0	**Warramunga Arr**	**22.65**	**160**	P		**P**	**20 42 48.5**	**-0.6**
WB0				IAmb		IAmb	20 42 50.4	
	comp=Z,6.9nm,0.8s							
WRAB	**Tennant Creek**	**22.79**	**161**	P		**P**	**20 42 50.1**	**-0.4**
WRAB				IAmb		IAmb	20 42 53.7	
	comp=Z,15nm,1.2s							
WRA	**Warramunga Arr**	**22.79**	**161**	P		**P**	**20 42 50.2**	**-0.3**
	comp=Z,4.8nm,0.5s,baz=340,slow=11,SNR=7.4							
WRA				PcP		**PcP**	**20 46 41.9**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=324,slow=2.2,SNR=2.2							
WRA	**Warramunga Arr**	**22.79**	**161**	P		**P**	**20 42 49.4**	**-1.1**
WB2	**Warramunga Arr**	**22.80**	**161**	P		**P**	**20 42 50.0**	**-0.5**
WB2				IAmb		IAmb	20 42 56.5	
	comp=Z,16nm,1.1s							
WR0	**Warramunga Arr**	**22.88**	**160**	P		**P**	**20 42 50.8**	**-0.6**
WR0				IAmb		IAmb	20 42 53.2	
	comp=Z,18nm,1.4s							
NACB	**Ninganchiao**	**22.89**	**348**	P		**P**	**20 42 50.5**	**-1.0**
AS31	**Alice Springs**	**26.17**	**164**	P		**P**	**20 43 21.1**	**-0.8**
ASAR	**Alice Springs**	**26.17**	**164**	P		**P**	**20 43 22.6**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=343,slow=8.7,SNR=2.4							
ASAR				PcP		**PcP**	**20 46 49.4**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=342,slow=2.2,SNR=2.9							
ASAR	**Alice Springs**	**26.17**	**164**	P		**P**	**20 43 21.7**	**-0.2**
KRVT	**Keravat (AS076**	**26.19**	**103**	P		**P**	**20 43 16.3**	**-5.9**
	comp=Z,32nm,0.4s,baz=63,slow=9.0,SNR=2.9							
KRVT				LR		LR	20 52 14.1	
	comp=Z,42nm,21.4s,baz=252,slow=34							
CMAR	**Chiang Mai Arr**	**31.77**	**303**	P		**P**	**20 44 13.2**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=113,slow=7.0,SNR=5.0							
XAN	**Xi'an**	**36.17**	**335**	P		**P**	**20 44 50.0**	**+0.2**
XAN				pP		pP	20 45 00.3	-1.5
XAN				pmax		pmax		
	comp=Z,7.0nm,1.3s							
STKA	**Stephens Creek**	**36.29**	**158**	P		**P**	**20 44 50.3**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=301,slow=12,SNR=3.6							
STKA	**Stephens Creek**	**36.29**	**158**	P		**P**	**20 44 50.0**	**-0.8**
LZH	**Lanzhou**	**40.18**	**331**	*e*P		**P**	**20 45 24.0**	**+0.3**
LZH				pP		pP	20 45 35.4	-0.4
LZH				sP		sP	20 45 40.3	-0.8
LZH				*e*PP		**PnPn**	**20 47 01.5**	**+0.8**
LZH				pmax		pmax		
	comp=Z,20nm,1.3s							
LZH				pmax		pmax		
	comp=Z,54nm,5.4s							
HHC	**Hu-ho-hao-te**	**41.30**	**343**	*e*P		**P**	**20 45 32.3**	**-0.4**
HHC				pmax		pmax		
	comp=Z,15nm,0.9s							
HHC				pmax		pmax		
	comp=Z,55nm,5.1s							
SONM	**Songino Array**	**49.19**	**342**	P		**P**	**20 46 34.6**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=156,slow=6.6,SNR=5.6							
WMQ	**Urumqi**	**54.30**	**326**	*e*P		**P**	**20 47 15.4**	**+2.1**
MK31	**Makanchi Array**	**59.13**	**326**	IAmb		IAmb	20 47 49.6	
	comp=Z,1.6nm,0.8s							
MKAR	**Makanchi Array**	**59.13**	**326**	P		**P**	**20 47 47.2**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=121,slow=7.7,SNR=23							
MKAR	**Makanchi Array**	**59.13**	**326**	P		**P**	**20 47 47.0**	**-0.6**
ZALV	**Zalesovo Beam**	**62.33**	**334**	P		**P**	**20 48 08.3**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=100,slow=7.5,SNR=2.3							
GAR	**Garm**	**63.16**	**313**	P		**P**	**20 48 15.2**	**+0.1**
KURK	**Kurchatov**	**63.37**	**328**			**P**	**20 48 15.7**	**-0.3**
KKAR	**Karatay Array**	**64.59**	**318**	P		**P**	**20 48 24.2**	**-0.1**
ABKAR	**Akbulak array**	**73.61**	**321**	P		**P**	**20 49 19.6**	**-0.5**
ABKAR				IAmb		IAmb	20 49 20.5	
	comp=Z,1.4nm,0.8s							
VNDA	**Vanda**	**81.40**	**173**	P		**P**	**20 50 04.0**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=322,slow=5.6,SNR=6.7							
VNDA	**Vanda**	**81.40**	**173**	P		**P**	**20 50 04.2**	**+1.2**
VNDA				IAmb		IAmb	20 50 05.2	
	comp=Z,2.0nm,1.1s							
TORD	**Torodi Ar. Bea**	**123.31**	**287**	PKP		**PKiKP**	**20 56 45.8**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=61,slow=2.0,SNR=2.5							

IDC ***19*** *20:45:11.4±0.6, 70°.91N×6°.73W, h0km, mb3.7/13, mb1 4.0/18, mb1mx3.8/44, mbtmp3.8/18, ML3.3/4, MS3.4/28, Ms1 3.4/28, ms1mx3.2/59, Error ellipse: s-maj=19.0km s-min=11.4km az=27.0*

NAO ***19*** *20:45:11.9±3.3, 70°.81N×6°.47W, h15km±38km, ML4.1*

NEIC ***19*** *20:45:13.5±2.5, 70°.86N±0°.08×6°.0W±0°.3, h11km±4km, mb4.5/54, Error ellipse: s-maj=13.2km s-min=10.1km az=55.0*

BER ***19*** *20:45:14.9±1.9, 70°.79N×6°.73W, h27km±21km, ML3.1, ML4.1(NAO), Confirmed Earthquake*

DNK ***19*** *20:45:19.1±2.9, 71°.55N×7°.26W, h5km±93km, ML2.7*

ISC 19 20:45:12.8±0.4, 70°.99N±0°.06×6°.46W±0°.04, h9km, n200, σ2s25/190, mb4.4/42, MS3.4/25, 7C-2D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNE	**Jan Mayen East**	**0.60**	**270**	*e*P		**Pb**	**20 45 25.1**	**-0.4**
JNE				IAML			20 45 35.3	
	comp=Z,3μm,0.7s							
JNW	**Jan Mayen West**	**0.65**	**274**	*e*P		**Pb**	**20 45 25.5**	**-0.7**
JNW				IAML			20 45 34.7	
	comp=Z,3μm,0.3s							
JMIC	**Jan Mayen**	**0.67**	**270**	Pn		**Pg**	**20 45 25.7**	**0.0**
	baz=62,slow=4.4,SNR=50							
JMIC				Sn		**Sg**	**20 45 34.7**	**+0.3**
	baz=151,slow=21,SNR=13							
JMIC	**Jan Mayen**	**0.67**	**270**	Pg		**Pg**	**20 45 25.5**	**-0.2**
JMIC				Lg			20 45 34.9	
JMIC	**Jan Mayen**	**0.67**	**270**	*e*P		**Pg**	**20 45 25.7**	**0.0**
JMIC				*e*S		**Sb**	**20 45 34.9**	**-1.1**
JMIC				IAML			20 45 37.5	
	comp=Z,1μm,0.4s							
DBG	**Daneborg**	**5.28**	**315**	Pn		**Pn**	**20 46 30.7**	**-1.1**
DBG				Sn		**Sn**	**20 47 25.8**	**-6.9**
DBG	**Daneborg**	**5.28**	**315**	⇓*i*	P	**Pn**	**20 46 30.6**	**-1.1**
DBG				*e*S		**Sn**	**20 47 26.0**	**-6.6**
DBG	**Daneborg**	**5.28**	**315**	*i*	P	**Pn**	**20 46 30.4**	**-1.3**
DBG				IAmb		IAmb	20 46 33.0	
	comp=Z,8.6nm,0.6s							
DBG				*i*	S	**Sn**	**20 47 26.2**	**-6.4**
DBG				IAML			20 47 28.6	
	comp=Z,4.7nm,0.4s							
DAG	**Danmarks Havn**	**6.71**	**335**	⇓*i*	P	**Pn**	**20 46 50.5**	**-0.8**
DAG				*i*	S	**Sn**	**20 48 01.6**	**-6.0**
DAG				IAML			20 48 04.7	
	comp=Z,3.7nm,0.4s							
DAG	**Danmarks Havn**	**6.71**	**335**	*i*	P	**Pn**	**20 46 50.0**	**-1.2**
	comp=Z,8.5nm,0.8s							
DAG				*i*	S	**Sn**	**20 48 01.5**	**-6.0**
DAG	**Danmarks Havn**	**6.71**	**335**	*i*	P	**Pn**	**20 46 50.0**	**-1.2**
DAG				*i*	P	**Pn**	**20 46 50.0**	**-1.2**
DAG				*i*	P	**Pn**	**20 46 50.4**	**-0.8**
DAG				IAmb		IAmb	20 46 51.4	
	comp=Z,8.5nm,0.8s							
DAG				*i*	S	**Sn**	**20 48 01.6**	**-6.0**
DAG				IAML			20 48 04.7	
	comp=Z,3.7nm,0.4s							
N2RO	**R_st**	**7.44**	**109**	⇑*i*	P	**Pn**	**20 46 58.6**	**-2.7**
N2RO				*e*S		Sn	20 48 15.4	-10
N2SV	**S_rv¥gen**	**7.51**	**105**	⇑*i*	P	**Pn**	**20 46 59.1**	**-3.1**
N2VA	**Vr_y**	**7.54**	**107**	⇑*i*	P	**Pn**	**20 46 59.6**	**-3.0**
LOF	**Lofoten**	**7.55**	**103**	Pn		**Pn**	**20 46 59.3**	**-3.5**
LOF	**Lofoten**	**7.55**	**103**	*e*P		**Pn**	**20 46 59.6**	**-3.1**
N2VI	**Vinje**	**7.66**	**101**	*e*P		**Pn**	**20 47 01.5**	**-2.8**
STEI	**Steigen**	**8.20**	**101**	*e*P		**Pn**	**20 47 09.4**	**-2.3**
NBB30	**Finnes**	**8.27**	**109**	⇑*i*	P	**Pn**	**20 47 10.0**	**-2.7**
NBB05	**Inndyr**	**8.32**	**108**	*e*P		**Pn**	**20 47 10.7**	**-2.8**
NBB40	**Tonnes**	**8.35**	**113**	⇑*i*	P	**Pn**	**20 47 11.0**	**-2.7**
N2TV	**Tømnvik**	**8.36**	**104**	⇑*i*	P	**Pn**	**20 47 11.3**	**-2.5**
KONS	**Konsvik**	**8.39**	**113**	*e*P		**Pn**	**20 47 11.7**	**-2.6**
N2IH	**Innhavet**	**8.40**	**100**	⇑*i*	P	**Pn**	**20 47 12.5**	**-1.9**
NBB17	**Glomfjord BÝr**	**8.44**	**110**	*e*P		**Pn**	**20 47 12.9**	**-2.1**
STOK	**Stokkvaagen**	**8.47**	**114**	*e*P		**Pn**	**20 47 12.9**	**-2.5**
HSPB	**Hornsund (broa**	**8.49**	**35**	Pn		**Pn**	**20 47 16.6**	**+1.0**
HSPB	**Hornsund (broa**	**8.49**	**35**	*e*P		**Pn**	**20 47 16.6**	**+1.0**
FAUS	**Fauske**	**8.52**	**105**	*e*P		**Pn**	**20 47 13.5**	**-2.5**
TRO	**Tromso**	**8.64**	**87**	*e*P		**Pn**	**20 47 14.7**	**-3.1**
BRBB	**Barentsburg B**	**8.93**	**28**	Pn		**Pn**	**20 47 23.1**	**+1.4**
BRBB	**Barentsburg B**	**8.93**	**28**	*e*P		**Pn**	**20 47 22.8**	**+1.1**
MOR8	**Moi Rana**	**9.01**	**112**	*e*P		**Pn**	**20 47 18.3**	**-4.5**
KBS	**Kingsbay**	**9.22**	**22**	Pn		**Pn**	**20 47 26.5**	**+0.9**
KBS	**Kingsbay**	**9.22**	**22**			**Pn**	**20 47 27.1**	**+1.5**
KBS	**Kingsbay**	**9.22**	**22**	*e*P		**Pn**	**20 47 26.7**	**+1.1**
KBS	**Kingsbay**	**9.22**	**22**	*i*	P	**Pn**	**20 47 26.8**	**+1.1**
KBS				IAmb		IAmb	20 47 27.4	
	comp=Z,65nm,0.4s							
SPA0	**Spitsbergen Ar**	**9.33**	**30**	Pn		**Pn**	**20 47 29.1**	**+2.0**
	baz=224,slow=12							
SPA0	**Spitsbergen Ar**	**9.33**	**30**	Pn		**Pn**	**20 47 29.3**	**+2.1**
SPA0	**Spitsbergen Ar**	**9.33**	**30**	Pn		**Pn**	**20 47 29.1**	**+2.0**
	baz=224,slow=12							
SPITS	**Spitsbergen Ar**	**9.33**	**30**	Pn		**Pn**	**20 47 28.9**	**+1.7**
	baz=214,slow=13,SNR=75							
NSS	**Namsos**	**9.49**	**124**	*e*P		**Pn**	**20 47 27.6**	**-1.7**
KIF	**Kilpisjarvi**	**9.50**	**89**	Pn		**Pn**	**20 47 27.3**	**-2.2**
KIF	**Kilpisjarvi**	**9.50**	**89**	*e*P		**Pn**	**20 47 27.2**	**-2.3**
SALU	**Saltoluokta**	**9.55**	**100**	*e*P		**Pn**	**20 47 28.2**	**-2.0**
SUMG	**Summit**	**10.06**	**294**	*i*	P	**Pn**	**20 47 38.5**	**+0.9**
SUMG	**Summit**	**10.06**	**294**	*i*	P	**Pn**	**20 47 38.4**	**+0.9**
SUMG	**Summit**	**10.06**	**294**	*i*	P	**Pn**	**20 47 38.5**	**+0.9**
KTK1	**Kautokeino**	**10.30**	**87**	*e*P		**Pn**	**20 47 38.1**	**-2.3**
AKN	**Aaknes**	**10.31**	**142**	Pn		**Pn**	**20 47 37.8**	**-2.8**
AKN	**Aaknes**	**10.31**	**142**	Pn		**Pn**	**20 47 37.8**	**-2.8**
ARD9	**ARCESS Array S**	**10.81**	**82**	Pn		**Pn**	**20 47 46.4**	**-1.1**
ARD7	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 46.3**	**-1.2**
ARC6	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 46.4**	**-1.2**
ARC7	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 46.4**	**-1.2**
ARD1	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 46.1**	**-1.5**
ARB5	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 46.5**	**-1.1**
ARA3	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 46.2**	**-1.5**
ARB4	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 44.9**	**-2.7**
ARC1	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 46.4**	**-1.2**
ARA1	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 44.6**	**-3.1**
ARB1	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 45.0**	**-2.7**
ARC5	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 45.1**	**-2.5**
ARD6	**ARCESS Array S**	**10.82**	**82**	Pn		**Pn**	**20 47 45.5**	**-2.2**
ARA0	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 46.1**	**-1.6**
	baz=288,slow=12							
ARA0	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 44.6**	**-3.0**
ARA0	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 46.1**	**-1.6**
	baz=288,slow=12							
ARCES	**ARCESS Array B**	**10.83**	**82**	Pn		**Pn**	**20 47 46.4**	**-1.2**
	baz=291,slow=12,SNR=11							
ARCES				LR		LR	20 51 19.7	
	comp=Z,150nm,18.4s,baz=280,slow=34							
ARA2	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 46.1**	**-1.5**
ARB2	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 46.1**	**-1.6**
ARB3	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 45.2**	**-2.5**
ARC2	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 45.6**	**-2.1**
ARC4	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 45.7**	**-2.1**
ARD2	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 45.8**	**-1.9**
ARC3	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 46.0**	**-1.7**
ARD5	**ARCESS Array S**	**10.83**	**82**	Pn		**Pn**	**20 47 44.7**	**-3.0**
ARD4	**ARCESS Array S**	**10.84**	**82**	Pn		**Pn**	**20 47 45.3**	**-2.6**
ARD3	**ARCESS Array S**	**10.84**	**82**	Pn		**Pn**	**20 47 46.0**	**-1.8**
NOD	**Norderasen**	**11.13**	**122**	*e*		**Pn**	**20 47 50.3**	**-1.6**
KEV	**Kevo**	**11.23**	**80**	Pn		**Pn**	**20 47 50.5**	**-2.7**
ICESG	**Greenland Ices**	**11.41**	**276**	*e*P		**Pn**	**20 47 59.2**	**+3.3**
ICESG	**Greenland Ices**	**11.41**	**276**	*e*P		**Pn**	**20 47 59.2**	**+3.3**
NC204	**NORSAR Array S**	**11.92**	**136**	Pn		**Pn**	**20 48 01.4**	**-1.3**
NC303	**NORSAR Array S**	**12.11**	**135**	Pn		**Pn**	**20 48 03.5**	**-1.7**
NBO00	**NORSAR Array S**	**12.14**	**137**	Pn		**Pn**	**20 48 04.1**	**-1.6**
NOA	**NORSAR Array B**	**12.23**	**136**	Pn		**Pn**	**20 48 05.9**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=324,slow=13,SNR=4.7							
NOA				LR		LR	20 52 31.3	
	comp=Z,91nm,21.0s,baz=330,slow=36							
NB201	**NORSAR Array S**	**12.24**	**136**	Pn		**Pn**	**20 48 06.9**	**-0.2**
NC405	**NORSAR Array S**	**12.29**	**135**	Pn		**Pn**	**20 48 07.1**	**-0.5**
NRA0	**NORESS Array S**	**12.58**	**136**	Pn		**Pn**	**20 48 10.2**	**-1.5**
NRA0	**NORESS Array S**	**12.58**	**136**	Pn		**Pn**	**20 48 10.2**	**-1.5**
HFS	**Hagfors**	**13.62**	**133**	Pn		**Pn**	**20 48 24.0**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=350,slow=7.7,SNR=9.7							
HFS				LR		LR	20 53 14.8	
	comp=Z,168nm,20.2s,baz=324,slow=36							
HFS	**Hagfors**	**13.62**	**133**	Pn		**Pn**	**20 48 23.2**	**-2.6**
	baz=329,slow=12							
HFS	**Hagfors**	**13.62**	**133**	Pn		**Pn**	**20 48 23.2**	**-2.6**
	baz=329,slow=12							
EKA	**Eskdalemuir Ar**	**15.79**	**173**	Pn		**Pn**	**20 48 52.4**	**-2.5**
	baz=356,slow=12,SNR=5.3							
FIA0	**FINESS Array S**	**15.99**	**110**	P		**Pn**	**20 48 55.3**	**-2.2**
	baz=328,slow=14							
FIA0	**FINESS Array S**	**15.99**	**110**	P		**Pn**	**20 48 55.3**	**-2.2**
	baz=328,slow=14							
FIA1	**FINESS Array S**	**15.99**	**110**			**Pn**	**20 48 54.9**	**-2.7**
FIA1				IAmb		IAmb	20 49 06.9	
	comp=Z,36nm,0.8s							
FINES	**FINESS Array B**	**15.99**	**110**	Pn		**Pn**	**20 48 55.2**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=332,slow=12,SNR=13							
FINES				LR		LR	20 54 24.2	
	comp=Z,155nm,19.1s,baz=306,slow=34							
FINES	**FINESS Array B**	**15.99**	**110**			**Pn**	**20 48 53.6**	**-3.9**
KLMR	**Klimovskoe**	**20.72**	**96**	*e*P		**P**	**20 49 51.5**	**-1.5**
KLMR				AMP			20 50 04.2	
	comp=Z,24nm,1.3s							
MEM	**Membach**	**21.25**	**158**	P		**P**	**20 49 55.9**	**-2.9**
SUW	**Suwalki**	**21.44**	**127**	P		**P**	**20 49 59.5**	**-1.4**
SUW				IAmb		IAmb	20 50 10.4	
	comp=Z,21nm,1.0s							
CLL	**Collm**	**21.66**	**145**	*e*(P)		**P**	**20 50 05.0**	**+1.8**
CLL				*i*			20 50 10.0	
	comp=Z,20nm,1.8s							
CLL	**Collm**	**21.66**	**145**	P		**P**	**20 50 01.8**	**-1.4**
FRB	**Frobisher Bay**	**23.88**	**284**

MSO	**Missoula**	**51.73**	**303**	P	**P**	**20 54 21.7**	**+1.7**
MSO				IAmb	IAmb	20 54 31.9	
	comp=Z,12nm,1.4s						
ULN	**Ulaanbaatar**	**52.37**	**51**	P	**P**	**20 54 25.0**	**+0.2**
TKL	**Tuckaleechee C**	**52.63**	**272**	LR	LR	21 16 32.8	
	comp=Z,51nm,18.4s,baz=32,slow=36						
PDAR	**Pinedale Array**	**54.23**	**298**	P	**P**	**20 54 38.4**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=2.5,slow=3.4,SNR=3.9						
PDAR				LR	LR	21 16 25.1	
	comp=Z,50nm,18.6s,baz=39,slow=35						
PDAR	**Pinedale Array**	**54.23**	**298**	P	**P**	**20 54 38.7**	**+0.1**
BMO	**Blue Mountains**	**54.47**	**305**	P	**P**	**20 54 42.8**	**+2.6**
BMO				IAmb	IAmb	20 54 57.5	
	comp=Z,6.1nm,1.3s						
RWWY	**Rawlins**	**54.53**	**295**	P	**P**	**20 54 43.9**	**+3.0**
PLAL	**Pickwick Lake**	**54.66**	**275**	P	**P**	**20 54 43.1**	**+1.6**
PLAL				IAmb	IAmb	20 55 07.5	
	comp=Z,6.2nm,1.0s						
HLID	**Hailey**	**54.87**	**302**	P	**P**	**20 54 45.1**	**+1.9**
NIL	**Nilore**	**55.26**	**87**	P	**P**	**20 54 44.0**	**-2.0**
NIL				IAmb	IAmb	20 54 52.6	
	comp=Z,4.7nm,0.8s						
RAYN	**Ar Rayn**	**55.93**	**119**	P	**P**	**20 54 50.7**	**-0.1**
RAYN				IAmb	IAmb	20 55 10.4	
	comp=Z,3.8nm,1.1s						
RDMU	**Red Mountain**	**56.26**	**297**	P	**P**	**20 54 55.1**	**+1.9**
O20A	**White River Ci**	**56.27**	**296**	P	**P**	**20 54 53.9**	**+0.6**
ELK	**Elko**	**57.72**	**302**	LR	LR	21 20 36.3	
	comp=Z,29nm,21.5s,baz=24,slow=37						
T25A	**Trinidad**	**57.88**	**291**	P	**P**	**20 55 05.2**	**+0.4**
T25A				IAmb	IAmb	20 55 17.2	
	comp=Z,7.3nm,1.3s						
TOA0	**Torodi Ar. Sit**	**58.03**	**171**	P	**P**	**20 55 03.0**	**-2.7**
TOA0				IAmb	IAmb	20 55 06.5	
	comp=Z,5.2nm,1.1s						
TORD	**Torodi Ar. Bea**	**58.03**	**171**	P	**P**	**20 55 05.6**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=351,slow=7.1,SNR=10						
TORD	**Torodi Ar. Bea**	**58.03**	**171**	P	**P**	**20 55 05.9**	**+0.2**
GTA	**Gaotai**	**58.24**	**61**	P	**P**	**20 55 09.9**	**+2.7**
GTA				pP	pwP	20 55 14.3	+1.9
GTA				sP	sP	20 55 17.0	+6.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.8s						
GTA				pmax	pmax		
	comp=Z,73nm,6.4s						
GTA				LR	LR		
	comp=N,62nm,16.0s						
GTA				LR	LR		
	comp=E,87nm,16.0s						
GTA				LR	LR		
	comp=Z,97nm,16.0s						
YBH	**Yreka Blue Hor**	**58.80**	**308**	LR	LR	21 19 34.8	
	comp=Z,45nm,21.6s,baz=26,slow=35						
MVU	**Marysvale**	**58.94**	**298**	P	**P**	**20 55 14.6**	**+2.4**
MVCO	**Mesa Verde**	**59.05**	**294**	P	**P**	**20 55 14.3**	**+1.4**
SPR3	**Spring Creek 3**	**59.08**	**300**	P	**P**	**20 55 16.7**	**+3.4**
SPR3				IAmb	IAmb	20 55 31.1	
	comp=Z,3.0nm,1.2s						
R11A	**Troy Canyon, C**	**60.04**	**301**	P	**P**	**20 55 21.9**	**+2.2**
R11A				IAmb	IAmb	20 55 38.2	
	comp=Z,4.4nm,1.5s						
ORV	**Oroville**	**60.52**	**306**	P	**P**	**20 55 25.6**	**+2.8**
ORV				IAmb	IAmb	20 55 53.9	
	comp=Z,4.0nm,1.1s						
ANMO	**Albuquerque**	**60.53**	**292**	LR	LR	21 20 52.1	
	comp=Z,38nm,21.0s,baz=27,slow=35						
ANMO	**Albuquerque**	**60.53**	**292**	P	**P**	**20 55 25.5**	**+2.4**
ABTX	**Abilene, Hawle**	**60.56**	**285**	P	**P**	**20 55 26.8**	**+3.7**
LCMT	**Little Creek M**	**60.62**	**298**	P	**P**	**20 55 26.6**	**+2.9**
AFDM	**Forest Hills D**	**60.95**	**306**	P	**P**	**20 55 27.4**	**+1.7**
AFDM				IAmb	IAmb	20 55 27.7	
	comp=Z,5.9nm,1.4s						
TPNV	**Topopah Spring**	**61.54**	**301**	P	**P**	**20 55 31.6**	**+1.7**
TXAR	**Lajitas Array**	**64.88**	**287**	P	**P**	**20 55 53.4**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=46,slow=3.6,SNR=4.6						
TXAR				LR	LR	21 25 11.8	
	comp=Z,43nm,18.7s,baz=0.0,slow=37						
MJAR	**Matsushiro Arr**	**69.83**	**30**	P	**P**	**20 56 23.9**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=345,slow=9.2,SNR=4.2						
LPIG	**La Paz**	**71.82**	**291**	LR	LR	21 27 39.1	
	comp=Z,39nm,18.9s,baz=16,slow=36						
CMAR	**Chiang Mai Arr**	**77.60**	**70**	P	**P**	**20 57 09.9**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=1.0,slow=26,SNR=1.8						
CMAR	**Chiang Mai Arr**	**77.60**	**70**	P	**P**	**20 57 09.2**	**+0.2**
KSM	**Kuching**	**97.09**	**64**	P	Pdif	20 58 46.3	+1.2
MAW	**Mawson**	**145.93**	**140**	PKPbc	**PKPab**	**21 04 51.6**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=349,slow=5.2,SNR=2.7						

*SOME **19** 20:46:26.1,42°.47N×83°.22E,h15km*
*NNC **19** 20:46:27.1±2.0,42°.36N×83°.04E,h0km,mb3.2,mpv3.0,*
Error ellipse: s-maj=14.8km s-min=9.3km az=153.0
ISC 19 20:46:10.6±4.1,41°.8N±0°.2×83°.8E±0°.1,h10km,n19,
σ0s98/23,3C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.47**	**294**	*eP*		**Pb**	**20 47 12.8**	**+0.5**
	23nm,0.4s							
SHLS				*eS*		**Sn**	**20 47 45.9**	**-0.1**
	17nm,0.5s							
SHLS	**Shalkode**	**3.47**	**294**	Pg		**Pb**	**20 47 12.8**	**+0.5**
	23nm,0.4s							
SHLS				Lg		Lg	20 47 45.9	
	17nm,0.5s							
PDGK	**Podgornoye**	**3.52**	**296**	Pg		**Pg**	**20 47 18.2**	**+0.3**
	0.9nm,0.6s							
PDGK				Lg		Lg	20 47 55.2	
	3.8nm,0.3s							
PDGK	**Podgornoye**	**3.52**	**296**	⇑Pg		**Pg**	**20 47 16.9**	**-1.1**
	1.5nm,0.6s							
PDGK				⇓Lg		Lg	20 47 55.6	
	5.3nm,0.5s							
UZB	**Uzunbulak**	**3.77**	**292**	*eP*		**Pg**	**20 47 22.5**	**-0.4**
	1.2nm,0.4s							
UZB				*eS*		**Sb**	**20 48 02.5**	**-0.6**
	3.7nm,0.5s							
UZB	**Uzunbulak**	**3.77**	**292**	Pg		**Pg**	**20 47 22.5**	**-0.4**
	1.2nm,0.4s							
UZB				Lg		Lg	20 48 02.5	
	3.7nm,0.5s							
DJR	**Jarkent**	**3.85**	**312**	*eP*		**Pg**	**20 47 23.7**	**-0.8**
	1.2nm,0.3s							
DJR				*eS*		**Sb**	**20 48 04.6**	**-0.9**
	3.4nm,0.6s							
DJR	**Jarkent**	**3.85**	**312**	Pg		**Pg**	**20 47 23.7**	**-0.8**
	1.2nm,0.3s							
DJR				Lg		Lg	20 48 04.6	
	3.4nm,0.6s							
KPKS	**Kokpek**	**4.11**	**295**	*eP*		**Pg**	**20 47 28.7**	**-0.7**
	3.4nm,0.2s							
KPKS				*eS*		**Sb**	**20 48 12.9**	**0.0**
	6.1nm,0.2s							
MNBS	**Baschi**	**4.55**	**301**	*eP*		**Pg**	**20 47 37.0**	**-0.8**
	1.3nm,0.6s							
MNBS				*eS*		**Sb**	**20 48 27.8**	**+2.2**
	4.4nm,0.5s							
MNBS	**Baschi**	**4.55**	**301**	Pg		**Pg**	**20 47 37.0**	**-0.8**
	1.3nm,0.6s							
MNBS				Lg		Lg	20 48 27.8	
	4.4nm,0.5s							
KAPS	**Kapalarasan**	**4.72**	**318**	*eP*		**Pg**	**20 47 39.6**	**-1.5**
	1.1nm,0.5s							
KAPS				*eS*		**Sb**	**20 48 32.0**	**+1.6**
	1.8nm,0.3s							
KAPS	**Kapalarasan**	**4.72**	**318**	Pg		**Pg**	**20 47 39.6**	**-1.5**
	1.1nm,0.5s							
KAPS				Lg		Lg	20 48 32.0	
	1.8nm,0.3s							
MK31	**Makanchi Array**	**5.07**	**348**	⇑Lg		Lg	20 48 49.6	
	1.1nm,0.7s,baz=122,slow=8.2,SNR=2.8							
MK31	**Makanchi Array**	**5.07**	**348**	⇑Pg		**Pg**	**20 47 47.2**	**-0.4**
	1.6nm,0.7s,baz=167,slow=16,SNR=36							
MK31	**Makanchi Array**	**5.07**	**348**	P		**Pg**	**20 47 47.0**	**-0.7**
MAKZ	**Makanchi**	**5.14**	**346**	⇓Lg		Lg	20 48 51.6	
	0.8nm,0.6s							
MAKZ	**Makanchi**	**5.14**	**346**	⇓Pg		**Pg**	**20 47 49.3**	**+0.3**
	5.3nm,1.2s							
MAKZ	**Makanchi**	**5.14**	**346**	P		**Pg**	**20 47 48.1**	**-0.9**

*IDC **19** 20:57:35.7±2.9,37°.06N×71°.61E,h85km±27km,mb3.6/18,*
mb1 3.8/25,mb1mx3.6/60,mbtmp4.0/25,Error ellipse:
s-maj=18.4km s-min=12.5km az=16.0
*MOS **19** 20:57:36.6±1.3,37°.19N×71°.56E,h93km,mb4.3/10,Error*
ellipse: s-maj=7.5km s-min=5.5km az=102.6
*NNC **19** 20:57:38.4±1.1,37°.28N×71°.31E,h114km±18km,mb3.9,*
mpv4.5,Error ellipse: s-maj=10.9km s-min=7.0km az=0.0
*NEIC **19** 20:57:39.4±2.1,37°.23N±0°.07×71°.50E±0°.09,h108km±8km,*
mb4.8/37,Error ellipse: s-maj=11.2km s-min=9.2km
az=67.0
*BJI **19** 20:57:42.9±0.0,37°.28N×72°.13E,h122km,mB4.6/23,*
mb4.3/30
ISC 19 20:57:38.1±0.4,37°.19N±0°.04×71°.50E±0°.04,h106km,n192,
σ2s19/201,mb4.4/43,15C-9D,Afghanistan-Tajikistan
border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.03**	**333**			**Pn**	**20 58 12.7**	**+1.3**
CHGR	**Chuyangaron**	**2.36**	**309**			**Pn**	**20 58 16.3**	**+0.7**
KBL	**Kabul**	**3.31**	**218**	PN		**Pn**	**20 58 30.8**	**+2.5**
KBL	**Kabul**	**3.31**	**218**	Pn		**Pn**	**20 58 30.8**	**+2.5**
CEP	**Cherat**	**3.38**	**174**	P		**Pn**	**20 58 30.9**	**+1.8**
CEP				S		**Sn**	**20 59 08.0**	**-0.5**
NIL	**Nilore**	**3.81**	**157**	PN		**Pn**	**20 58 37.0**	**+2.1**
NIL	**Nilore**	**3.81**	**157**	Pn		**Pn**	**20 58 37.0**	**+2.1**
KSH	**Kashi**	**4.21**	**55**	P		**Pn**	**20 58 36.9**	**-3.4**
KSH				S		**Sn**	**20 59 20.4**	**-8.2**
KSH				smax	smax			
	comp=N,810nm,0.6s							
KSH				smax	smax			
	comp=E,630nm,0.5s							
KSH				LR	LR			
	comp=Z,1.0nm,4.6s							
THW	**Thamme Wali**	**4.39**	**177**	P		**Pn**	**20 58 43.6**	**+1.0**
IUG	**Iuzhnay**	**5.08**	**348**	Lg		Lg	20 59 47.7	
	150nm,0.4s							
AML	**Almayashu**	**5.22**	**18**	P		**Pn**	**20 58 55.4**	**+1.3**
	SNR=78							
UCH	**Uchtor**	**5.54**	**24**	P		**Pn**	**20 59 00.1**	**+1.5**
	SNR=26							
EKS2	**Erkin-Say**	**5.74**	**17**	P		**Pn**	**20 59 02.3**	**+1.5**
	SNR=20							
AAK	**Ala-Archa**	**5.91**	**22**	P		**Pn**	**20 59 04.9**	**+1.7**
	SNR=69							
AAK	**Ala-Archa**	**5.91**	**22**	⇑P		**Pn**	**20 59 04.2**	**+0.9**
	31nm,0.4s							
AAK				⇑S		**Sn**	**21 00 09.0**	**-0.6**
	29nm,0.5s							
AAK	**Ala-Archa**	**5.91**	**22**	⇓*i*	PN	**Pn**	**20 59 04.7**	**+1.5**
AAK	**Ala-Archa**	**5.91**	**22**		Pn	**Pn**	**20 59 05.1**	**+1.9**
KK31	**Karatay Array**	**5.96**	**353**	P		**Pn**	**20 59 03.8**	**+0.1**
	23nm,0.3s,baz=167,slow=7.2,SNR=384							
KK31				⇑S		**Sn**	**21 00 09.2**	**-1.3**
	75nm,0.6s,baz=170,slow=19,SNR=8.0							
KK31	**Karatay Array**	**5.96**	**353**	PN		**Pn**	**20 59 04.7**	**+1.0**
KK31	**Karatay Array**	**5.96**	**353**	Pn		**Pn**	**20 59 04.7**	**+1.0**
KKAR	**Karatay Array**	**5.96**	**353**	PN		**Pn**	**20 59 04.7**	**+1.0**
KKAR	**Karatay Array**	**5.96**	**353**	Pn		**Pn**	**20 59 04.7**	**+1.0**
KKAR	**Karatay Array**	**5.96**	**353**	Pn		**Pn**	**20 59 04.3**	**+0.6**
KBK	**Karagaybulak**	**6.07**	**25**	P		**Pn**	**20 59 07.0**	**+1.6**
	SNR=15							
ULHL	**Ulahol**	**6.23**	**34**	P		**Pn**	**20 59 08.4**	**+0.7**
	SNR=17							
CHMS	**Chumysh**	**6.31**	**22**	P		**Pn**	**20 59 10.1**	**+1.5**
	SNR=37							
DHRM	**DHARAMSHALA**	**6.32**	**140**	*eP*		**Pn**	**20 59 08.1**	**-0.8**
DHRM				*eS*		**Sn**	**21 00 14.8**	**-4.9**
DHRM				IAML			21 00 19.3	
	comp=E,1μm,0.7s							
DHRM				IAML			21 00 20.3	
	comp=N,990nm,0.3s							
USP	**Ospenovka**	**6.49**	**20**	P		**Pn**	**20 59 11.9**	**+1.0**
	SNR=58							
TKM2	**Tokmak 2**	**6.53**	**27**	P		**Pn**	**20 59 12.9**	**+1.2**
	SNR=34							
TKM2	**Tokmak 2**	**6.53**	**27**	⇑P		**Pn**	**20 59 12.6**	**+0.9**
	comp=N,20nm,0.6s							
TKM2	**Tokmak 2**	**6.53**	**27**	PN		**Pn**	**20 59 12.6**	**+0.9**
MTBS	**Maitube**	**7.03**	**31**	P		**Pn**	**20 59 19.6**	**+1.2**
	comp=N,21nm,0.4s							
TNSS	**Tian-Shan**	**7.18**	**34**	P		**Pn**	**20 59 21.0**	**+0.4**
	comp=N,6.6nm,0.4s							
KRBS	**Karabastau**	**7.24**	**25**	Lg		Lg	21 00 38.1	
	comp=N,9.8nm,0.3s							
KOTS	**Kotrbulak**	**7.41**	**34**	P		**Pn**	**20 59 24.7**	**+1.2**
	comp=N,56nm,0.4s							
SMLA	**Simla**	**7.65**	**141**	*eP*		**Pn**	**20 59 25.9**	**-0.9**
SMLA				*eS*		**Sn**	**21 00 44.4**	**-7.5**
SMLA				IAML			21 00 50.8	
	comp=N,376nm,0.2s							
SMLA				IAML			21 00 50.9	
	comp=E,532nm,0.2s							
CHKK	**Chushkaly**	**7.86**	**30**	P		**Pn**	**20 59 30.3**	**+0.8**
	comp=E,19nm,0.4s							
SATY	**Saty**	**7.89**	**40**	P		**Pn**	**20 59 30.3**	**+0.2**
	comp=E,6.7nm,0.6s							
HRA	**Herat**	**8.02**	**252**	Pn		**Pn**	**20 59 33.0**	**+1.0**
BTLS	**Baital**	**8.07**	**13**	P		**Pn**	**20 59 32.7**	**+0.3**
	comp=E,7.2nm,0.2s							
KURS	**Kuram**	**8.09**	**37**	P		**Pn**	**20 59 33.7**	**+0.9**
	comp=E,14nm,0.6s							
UZB	**Uzunbulak**	**8.28**	**42**	P		**Pn**	**20 59 35.4**	**0.0**
	comp=E,10nm,0.5s							
KKR	**Kurukshetra**	**8.46**	**147**	*eP*		**Pn**	**20 59 33.2**	**-4.6**
KKR				*eS*		Sn	21 01 01.4	-10
ARXS	**Arharly**	**8.50**	**32**	P		**Pn**	**20 59 38.4**	**0.0**
	comp=E,17nm,0.6s							
SHLS	**Shalkode**	**8.52**	**43**	P		**Pn**	**20 59 41.8**	**+3.1**
	comp=E,18nm,0.6s							
MNBS	**Baschi**	**8.65**	**35**	P		**Pn**	**20 59 40.6**	**+0.2**
	comp=E,3.1nm,0.3s							
PDGK	**Podgornoye**	**8.65**	**42**	P		**Pn**	**20 59 40.4**	**0.0**
	comp=E,5.9nm,0.5s							
PDGK	**Podgornoye**	**8.65**	**42**	⇑P		**Pn**	**20 59 40.4**	**0.0**
	comp=E,9.8nm,0.6s							
PDGK	**Podgornoye**	**8.65**	**42**	PN		**Pn**	**20 59 40.4**	**0.0**
DDI	**Dehra Dun**	**8.76**	**140**	*eP*		**Pn**	**20 59 41.2**	**-0.7**
DDI				*eS*		Sn	21 01 09.5	-9.4
DDI				AMP			21 01 18.0	
	comp=N,5μm,0.2s							
DDI				IAML			21 01 19.8	
	comp=N,405nm,0.3s							
TDK	**Taldyqorghan**	**9.38**	**32**	P		**Pn**	**20 59 50.1**	**-0.1**
	comp=N,39nm,0.5s							
DJR	**Jarkent**	**9.51**	**39**	P		**Pn**	**20 59 51.1**	**-0.8**
	comp=N,4.8nm,0.6s							
KAPS	**Kapalarasan**	**10.02**	**34**	P		**Pn**	**20 59 58.6**	**-0.3**
	comp=N,5.7nm,0.5s							
SONA	**Sohna**	**10.08**	**151**	*eP*		**Pn**	**20 59 58.2**	**-1.5**
SONA				*eS*		Sn	21 01 40.8	-10
SONA				IAML			21 01 44.9	
	comp=N,35nm,0.3s							
GEYT	**Alibeck**	**10.65**	**278**	P		**Pn**	**21 00 05.2**	**-2.4**
	comp=N,3.9nm,0.3s,baz=90,slow=12,SNR=39							
GEYT				S		**Sn**	**21 01 56.5**	**-8.2**
	comp=N,9.8nm,0.3s,baz=116,slow=17,SNR=7.7							
GEYT	**Alibeck**	**10.65**	**278**	Pn		**Pn**	**21 00 05.5**	**-2.1**
GYA0B	**ALIBECK ARRAY**	**10.65**	**278**	⇑P		**Pn**	**21 00 05.5**	**-2.0**
GYA0B				⇑S		**Sn**	**21 02 00.1**	**-4.7**
GYA0B	**ALIBECK ARRAY**	**10.65**	**278**	Pn		**Pn**	**21 00 05.6**	**-1.9**
MAKZ	**Makanchi**	**12.36**	**36**	⇓P		**Pn**	**21 00 29.0**	**-1.2**
	comp=N,3.0nm,0.9s							
MAKZ	**Makanchi**	**12.36**	**36**	P		**Pn**	**21 00 29.4**	**-0.9**
MAKZ	**Makanchi**	**12.36**	**36**	Pn		**Pn**	**21 00 29.4**	**-0.9**
MK31	**Makanchi Array**	**12.50**	**36**	P		**Pn**	**21 00 31.5**	**-0.6**
	comp=N,4.0nm,0.9s,baz=226,slow=14,SNR=22							
MK31	**Makanchi Array**	**12.50**	**36**	*eP*		**Pn**	**21 00 31.3**	**-0.8**
MK31	**Makanchi Array**	**12.50**	**36**	Pn		**Pn**	**21 00 31.6**	**-0.4**
MKAR	**Makanchi Array**	**12.50**	**36**	P		**Pn**	**21 00 31.4**	**-0.6**
	comp=N,0.2nm,0.3s,baz=226,slow=14,SNR=22							
MKAR	**Makanchi Array**	**12.50**	**36**	*i* P		**Pn**	**21 00 32.0**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**12.50**	**36**	Pn		**Pn**	**21 00 31.7**	**-0.4**
BRZS	**Berezniki**	**12.82**	**3**	P		**Pn**	**21 00 38.5**	**+2.3**
	comp=Z,2.5nm,0.2s							
PYUN	**Piuthan**	**13.25**	**130**	*eP*		**Pn**	**21 00 37.9**	**-4.3**
	comp=Z,212nm,0.3s							
DANN	**Dangsing**	**13.56**	**127**	*eP*		Pn	21 00 41.2	-5.1
	comp=Z,89nm,0.5s							
KOLN	**Koldanda**	**13.86**	**129**	*eP*		**Pn**	**21 00 46.1**	**-4.1**
	comp=Z,58nm,0.5s							
WMQ	**Urumqi**	**13.98**	**57**	*eP*		**Pn**	**21 00 52.1**	**+0.7**
WMQ				pmax	pmax			
	comp=Z,5.0nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,98nm,5.7s							
KURBB	**Kurchatov Arra**	**14.34**	**18**	P		**Pn**	**21 00 53.8**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=8.7							
GKN	**Gorkha**	**14.36**	**126**	*eP*		**Pn**	**21 00 52.1**	**-4.4**
	comp=Z,104nm,0.4s							
KURK	**Kurchatov**	**14.45**	**18**	⇑P		**Pn**	**21 00 56.9**	**-0.4**
	comp=Z,4.7nm,0.9s							
KURK	**Kurchatov**	**14.45**	**18**	*i* P		**Pn**	**21 00 57.9**	**+0.6**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.8s							
KURK	**Kurchatov**	**14.45**	**18**	Pn		**Pn**	**21 00 55.9**	**-1.4**
AB31	**Akbulak array**	**14.69**	**329**	⇓P		**Pn**	**21 00 58.6**	**-1.8**
	comp=Z,3.0nm,0.3s,baz=161,slow=10,SNR=205							
AB31				⇓S		**Sn**	**21 03 35.0**	**-7.3**
	comp=Z,15nm,0.6s,baz=141,slow=23,SNR=15							
AB31	**Akbulak array**	**14.69**	**329**	P		**Pn**	**21 00 58.6**	**-1.8**
AB31				S		**Sn**	**21 03 35.0**	**-7.3**
ABKAR	**Akbulak array**	**14.69**	**329**	Pn		**Pn**	**21 00 59.1**	**-1.3**
ABKAR	**Akbulak array**	**14.69**	**329**	Pn		**Pn**	**21 00 59.1**	**-1.3**
BHPL	**Bhopal**	**14.81**	**158**	*eP*		**P**	**21 01 05.8**	**+0.5**
BHPL				*eS*		Sn	21 03 33.4	-12
KKN	**Kakani**	**14.92**	**125**	*eP*		Pn	21 00 58.7	-5.0
	comp=Z,59nm,0.5s							
DMN	**Daman**	**14.93**	**126**	*eP*		**Pn**	**21 00 59.7**	**-4.2**
	comp=Z,39nm,0.4s							
PKIN	**Phulchoki**	**15.14**	**125**	*eP*		**Pn**	**21 01 01.7**	**-4.8**
	comp=Z,45nm,0.4s							
PKI	**Pulchoki**	**15.15**	**125**	*eP*		**Pn**	**21 01 02.1**	**-4.6**
	comp=Z,59nm,0.5s							
GUN	**Gumba**	**15.24**	**123**	*eP*		**Pn**	**21 01 03.1**	**-4.7**
	comp=Z,198nm,0.9s							
BVAR	**Borovoye Array**	**15.85**	**358**	P		**Pn**	**21 01 14.9**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=196,slow=10,SNR=8.8							
BRVK	**Borovoye**	**15.89**	**357**	⇑P		**Pn**	**21 01 14.2**	**-1.3**
	comp=Z,3.3nm,1.0s							
BRVK	**Borovoye**	**15.89**	**357**	*ce*P		**Pn**	**21 01 15.4**	**0.0**
BRVK				pmax	pmax			
	comp=Z,2.0nm,1.1s							
BRVK	**Borovoye**	**15.89**	**357**	P		**Pn**	**21 01 15.8**	**+0.4**
RAMN	**Ramite**	**16.35**	**124**	*eP*		**Pn**	**21 01 17.0**	**-4.6**
	comp=Z,65nm,0.5s							
AKTO	**Aktyubinsk**	**16.39**	**328**	P		**Pn**	**21 01 21.6**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=130,slow=13,SNR=17							
AKTO	**Aktyubinsk**	**16.39**	**328**	⇓P		**Pn**	**21 01 20.5**	**-1.2**
	comp=Z,3.0nm,0.4s							
AKTO				⇑S		**Sn**	**21 04 19.5**	**-4.0**
	comp=Z,18nm,0.8s							
TAPN	**Taplejung**	**16.84**	**121**	*eP*		**Pn**	**21 01 24.5**	**-3.1**
	comp=Z,31nm,0.3s							
ODAN	**Odare**	**16.94**	**123**	*eP*		**Pn**	**21 01 25.2**	**-3.6**
	comp=Z,27nm,0.4s							
WSAR	**Wadi Sarin**	**17.78**	**222**	P		**P**	**21 01 37.0**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=54,slow=4.9,SNR=12							
UOSS	**Minazif**	**17.88**	**231**			**Pn**	**21 01 40.5**	**+0.5**
LKRN	**Lenkeran, Azer**	**17.98**	**282**	P		**Pn**	**21 01 43.3**	**+2.2**
LSA	**Lhasa**	**18.00**	**109**	P		**Pn**	**21 01 41.8**	**-0.1**
LSA				pmax	pmax			
	comp=Z,31nm,0.9s							
LSA	**Lhasa**	**18.00**	**109**	P		**Pn**	**21 01 41.7**	**-0.1**
LSA				pmax	pmax			
	comp=Z,12nm,0.6s							
LSA	**Lhasa**	**18.00**	**109**			**Pn**	**21 01 41.7**	**-0.1**
BOK	**Bokaro**	**18.19**	**133**	*eP*		**P**	**21 01 42.5**	**-0.1**
BOK				*eS*		S	21 04 48.0	-17
ZAA0	**Zalesovo Array**	**19.12**	**25**	⇓P		**P**	**21 01 52.6**	**+0.2**
	comp=Z,0.6nm,0.8s							
ZAA0	**Zalesovo Array**	**19.12**	**25**	P		**P**	**21 01 52.9**	**+0.4**
ZALV	**Zalesovo Beam**	**19.12**	**25**	P		**P**	**21 01 52.4**	**0.0**
	comp=Z,1.2nm,0.3s,baz=221,slow=10,SNR=12							
ZALV	**Zalesovo Beam**	**19.12**	**25**	*i* P		**Pn**	**21 01 55.9**	**+1.4**
ZALV				pmax	pmax			
	comp=Z,4.0nm,0.5s							
MAK	**Makhachkala**	**19.22**	**295**	*eP*		**P**	**21 01 54.0**	**+0.4**
MAK				*eS*		**Sn**	**21 05 29.4**	**-1.9**
MAK				pmax	pmax			
	comp=Z,225nm,0.9s							
MAK				MLR	MLR			
	comp=Z,54nm,13.0s							
SEKA	**Sheki**	**19.24**	**290**	P		**Pn**	**21 01 56.7**	**+0.7**
MNGR	**Mingechevir, A**	**19.30**	**288**	P		**Pn**	**21 01 57.4**	**+0.8**
ZKTA	**Zakatala**	**19.70**	**291**	P		**Pn**	**21 02 01.6**	**+0.2**
GANJ	**Ganja**	**19.87**	**288**	P		**Pn**	**21 02 04.1**	**+0.7**
NAX	**Nakhchivan**	**20.52**	**284**	P		Pn	21 02 10.8	-0.2
SHL	**Shillong**	**20.86**	**118**	P		**P**	**21 02

ELL					IAmb	IAmb	21 04 18.7			
	comp=Z,21nm,1.2s									
MLR	**Muntele Rosu**	**34.80**	**298**		P	**P**	**21 04 18.7**	**+0.1**		
	comp=Z,4.7nm,0.8s,baz=153,slow=5.2,SNR=6.0									
MLR	**Muntele Rosu**	**34.80**	**298**		P	**P**	**21 04 22.2**	**+3.6**		
MLR					pmax	pmax				
	comp=Z,7.0nm,1.0s									
MLR	**Muntele Rosu**	**34.80**	**298**		P	**P**	**21 04 22.2**	**+3.6**		
MLR					IAmb	IAmb	21 04 22.4			
	comp=Z,7.1nm,1.0s									
BURAR	**Bucovina Array**	**35.25**	**302**		P	**P**	**21 04 22.4**	**+0.1**		
BUR08	**Bucovina Ar. S**	**35.26**	**302**		P	**P**	**21 04 22.8**	**+0.3**		
BUR08					IAmb	IAmb	21 04 23.9			
	comp=Z,8.9nm,1.4s									
FINES	**FINESS Array B**	**37.14**	**325**		P	**P**	**21 04 39.4**	**+1.3**		
	comp=Z,1.3nm,0.6s,baz=115,slow=10.0,SNR=8.6									
FINES	**FINESS Array B**	**37.14**	**325**	*i*	P	**P**	**21 04 42.7**	**+4.6**		
FINES					pmax	pmax				
	comp=Z,1.0nm,0.6s									
NJ2	**Nanjing**	**38.99**	**83**	*eP*		**P**	**21 04 54.0**	**0.0**		
NJ2					pmax	pmax				
	comp=Z,7.0nm,0.6s									
ARD4	**ARCESS Array S**	**40.65**	**337**		P	**P**	**21 05 08.6**	**+1.3**		
ARC3	**ARCESS Array S**	**40.66**	**337**		P	**P**	**21 05 08.5**	**+1.2**		
ARC2	**ARCESS Array S**	**40.66**	**337**		P	**P**	**21 05 08.2**	**+0.8**		
ARC2					IAmb	IAmb	21 05 32.8			
	comp=Z,46nm,1.4s									
ARC4	**ARCESS Array S**	**40.66**	**337**		P	**P**	**21 05 09.1**	**+1.7**		
ARB3	**ARCESS Array S**	**40.66**	**337**		P	**P**	**21 05 07.8**	**+0.4**		
ARB3					IAmb	IAmb	21 05 08.7			
	comp=Z,34nm,1.3s									
ARD2	**ARCESS Array S**	**40.66**	**337**		P	**P**	**21 05 07.5**	**+0.1**		
ARD2					IAmb	IAmb	21 05 32.5			
	comp=Z,48nm,1.4s									
ARA2	**ARCESS Array S**	**40.66**	**337**		P	**P**	**21 05 07.8**	**+0.4**		
ARA2					IAmb	IAmb	21 05 08.7			
	comp=Z,33nm,1.2s									
ARCES	**ARCESS Array B**	**40.66**	**337**		P	**P**	**21 05 08.2**	**+0.8**		
	comp=Z,4.1nm,0.9s,baz=117,slow=9.0,SNR=8.0									
ARA3	**ARCESS Array S**	**40.66**	**337**		P	**P**	**21 05 08.8**	**+1.4**		
ARA3					IAmb	IAmb	21 05 36.5			
	comp=Z,46nm,1.4s									
ARB5	**ARCESS Array S**	**40.67**	**337**		P	**P**	**21 05 09.4**	**+1.9**		
ARC6	**ARCESS Array S**	**40.67**	**337**		P	**P**	**21 05 09.4**	**+1.9**		
ARD1	**ARCESS Array S**	**40.67**	**337**		P	**P**	**21 05 09.1**	**+1.7**		
ARC7	**ARCESS Array S**	**40.67**	**337**		P	**P**	**21 05 09.2**	**+1.8**		
ARD7	**ARCESS Array S**	**40.67**	**337**		P	**P**	**21 05 09.2**	**+1.7**		
ARD9	**ARCESS Array S**	**40.67**	**337**		P	**P**	**21 05 09.5**	**+2.0**		
ARD9					IAmb	IAmb	21 05 11.8			
	comp=Z,35nm,1.4s									
ARD8	**ARCESS Array S**	**40.68**	**337**		P	**P**	**21 05 09.2**	**+1.7**		
ARD8					IAmb	IAmb	21 05 10.8			
	comp=Z,36nm,1.4s									
HFS	**Hagfors**	**42.77**	**321**		P	**P**	**21 05 25.8**	**+1.1**		
	comp=Z,2.7nm,0.4s,baz=98,slow=11,SNR=28									
CLL	**Collm**	**43.07**	**308**	*eP*		**P**	**21 05 27.0**	**-0.2**		
NC405	**NORSAR Array S**	**43.84**	**323**		P	**P**	**21 05 34.5**	**+1.3**		
NC405					IAmb	IAmb	21 05 35.0			
	comp=Z,13nm,1.1s									
NC303	**NORSAR Array S**	**44.01**	**323**		P	**P**	**21 05 36.4**	**+1.7**		
NC303					IAmb	IAmb	21 05 51.4			
	comp=Z,24nm,1.4s									
NB201	**NORSAR Array S**	**44.04**	**323**		P	**P**	**21 05 36.1**	**+1.2**		
NB201					IAmb	IAmb	21 05 46.2			
	comp=Z,28nm,1.1s									
NB2	**NORSAR Subarra**	**44.07**	**323**		P	**P**	**21 05 36.1**	**+0.9**		
	comp=Z,0.8nm,0.5s,baz=94,slow=7.9									
NOA	**NORSAR Array B**	**44.07**	**323**		P	**P**	**21 05 35.9**	**+0.7**		
	comp=Z,1.4nm,0.6s,baz=107,slow=7.2,SNR=7.3									
NBO00	**NORSAR Array S**	**44.28**	**323**		P	**P**	**21 05 38.0**	**+1.1**		
NC204	**NORSAR Array S**	**44.31**	**323**		P	**P**	**21 05 38.4**	**+1.3**		
NC204					IAmb	IAmb	21 05 52.1			
	comp=Z,17nm,1.2s									
DAVOX	**Davos/Dischmat**	**45.73**	**302**		P	**P**	**21 05 49.1**	**+0.5**		
	comp=Z,1.5nm,0.5s,baz=32,slow=10,SNR=3.4									
KEST	**Kesra**	**49.20**	**288**		P	**P**	**21 06 17.8**	**+2.2**		
	comp=Z,1.9nm,0.7s,baz=64,slow=11,SNR=2.6									
KEST	**Kesra**	**49.20**	**288**		P	**P**	**21 06 17.8**	**+2.2**		
KEST					IAmb	IAmb	21 06 32.9			
	comp=Z,9.9nm,1.5s									
KMBO	**Kilima Mbogo**	**49.59**	**228**	*i*	P	**P**	**21 06 19.5**	**+0.6**		
ESDC	**Sonseca Array**	**57.49**	**298**		P	**P**	**21 07 17.0**	**+0.8**		
	comp=Z,1.0nm,0.6s,baz=55,slow=7.8,SNR=11									
TORD	**Torodi Ar. Bea**	**66.14**	**269**		P	**P**	**21 08 14.2**	**-0.1**		
	comp=Z,0.7nm,0.6s,baz=52,slow=6.1,SNR=7.8									
TOLK	**Toolik Lake Re**	**70.15**	**15**		P	**P**	**21 08 39.7**	**+1.0**		
KTH	**Kantishna Hill**	**74.08**	**18**		P	**P**	**21 09 02.5**	**+0.3**		
KTH					IAmb	IAmb	21 09 29.8			
	comp=Z,16nm,1.4s									
PPLA	**Purkeypile**	**74.30**	**19**		P	**P**	**21 09 03.9**	**+0.3**		
PPLA					IAmb	IAmb	21 09 29.0			
	comp=Z,26nm,1.4s									
RSO	**Redoubt South**	**76.15**	**21**		P	**P**	**21 09 13.7**	**-0.6**		
SCM	**Sheep Creek Mo**	**76.43**	**18**		P	**P**	**21 09 16.0**	**+0.3**		
SCM					pmax	pmax				
	comp=Z,38nm,1.5s									
SCM	**Sheep Creek Mo**	**76.43**	**18**			**P**	**21 09 16.0**	**+0.3**		
SCM					IAmb	IAmb	21 09 25.4			
	comp=Z,38nm,1.5s									
WRA	**Warramunga Arr**	**82.02**	**122**		P	**P**	**21 09 45.1**	**-1.5**		
	comp=Z,0.2nm,0.5s,baz=324,slow=4.9,SNR=6.7									
WRA	**Warramunga Arr**	**82.02**	**122**	*i*	P	**P**	**21 09 46.5**	**-0.1**		
ASAR	**Alice Springs**	**84.32**	**125**		P	**P**	**21 09 56.5**	**-1.9**		
	comp=Z,0.2nm,0.5s,baz=325,slow=4.5,SNR=4.0									
HRY	**Holter Researc**	**96.42**	**2**		P	**P**	**21 10 55.6**	**+0.4**		

REY ***19*** *21:01:56.7, 64.66N×17.50W, h1km*

IDC ***19*** *21:01:57.6±0.9, 64.60N×17.60W, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.6/60, mbtmp3.7/9, ML4.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/45, Error ellipse: s-maj=27.7km s-min=11.5km az=8.0*

NEIC ***19*** *21:01:58.6±1.7, 64.57N±0.10×17.7W±0.1, h7km±4km, mb4.4/15, Error ellipse: s-maj=14.2km s-min=8.3km az=187.0*

ISC 19 21:01:58.5±0.5, 64.68N±0.02×17.52W±0.02, h10km, n89, σ2s04/103, mb4.2/15, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARD	**Bardarbunga**	**0.05**	**139**	P	**Pg**	**21 01 57.5**	**-3.2**
	baz=130						
IVON	**Vonarskard**	**0.10**	**267**	P	**Pg**	**21 01 59.6**	**-1.5**
	baz=277						
IVON				S	**Sg**	**21 02 02.0**	**-1.0**
	baz=277						
IDYN	**Dyngjuhals**	**0.13**	**31**	P	**Pg**	**21 02 00.3**	**-1.3**
	baz=23						
IDYN				S	**Sg**	**21 02 03.1**	**-0.7**
	baz=23						
IHAM	**Hamarinn**	**0.24**	**213**	P	**Pg**	**21 02 01.6**	**-1.7**
	baz=218						
IHAM				S	**Sg**	**21 02 05.8**	**-0.9**
	baz=218						
IGRF	**Grimsfjall**	**0.29**	**158**	P	**Pg**	**21 02 02.6**	**-1.8**
	baz=158						
IKVE	**Kverkfjoll**	**0.36**	**90**	P	**Pg**	**21 02 04.1**	**-1.6**
	baz=87						
IHUS	**Husbondi**	**0.39**	**189**	P	**Pg**	**21 02 04.1**	**-2.0**
	baz=191						
ISKR	**Skrokkalda**	**0.39**	**253**	P	**Pg**	**21 02 04.5**	**-1.6**
	baz=256						
IVOT	**Vottur**	**0.43**	**160**	P	**Pg**	**21 02 04.9**	**-2.0**
	baz=160						
THOR	**Thorvaldshraun**	**0.45**	**54**	P	**Pg**	**21 02 05.4**	**-1.7**
	baz=52						
THOR				S	**Sg**	**21 02 12.3**	**-0.7**
	baz=52						
IJOK	**Jokulheimar**	**0.47**	**220**	P	**Pg**	**21 02 05.7**	**-2.0**
	baz=223						
IASK	**Askja**	**0.53**	**45**	P	**Pg**	**21 02 06.8**	**-1.9**
	baz=42						
IMKO	**Mokollar**	**0.59**	**59**	P	**Pg**	**21 02 07.8**	**-2.0**
	baz=57						
IMKO				S	**Sg**	**21 02 16.8**	**-0.9**
	baz=57						
IIEY	**Innrieyrar**	**0.64**	**204**	P	**Pg**	**21 02 08.5**	**-2.3**
	baz=206						
ISVA	**Svartarkot**	**0.67**	**10**	P	**Pg**	**21 02 09.5**	**-2.0**
	baz=8.6						
ISVA				S	**Sg**	**21 02 19.2**	**-1.0**
	baz=8.6						
IKSK	**Karasker**	**0.69**	**138**	P	**Pg**	**21 02 09.1**	**-2.7**
	baz=138						
IKAL	**Kalfafell**	**0.74**	**186**	P	**Pg**	**21 02 10.1**	**-2.5**
	baz=187						
IVAT	**Vatnsfell**	**0.78**	**231**	P	**Pg**	**21 02 11.0**	**-2.5**
	baz=233						
IVSH	**V-Sauoahnukur**	**0.78**	**80**	P	**Pg**	**21 02 10.7**	**-2.8**
	baz=78						
IFAG	**Fagurholsmyri**	**0.89**	**154**	P	**Pg**	**21 02 12.6**	**-3.0**
	baz=154						
IHVE	**Hveravellir**	**0.90**	**283**	P	**Pg**	**21 02 12.9**	**-2.8**
	baz=284						
IADA	**Aoalbol**	**0.90**	**67**	P	**Pg**	**21 02 12.7**	**-3.0**
	baz=65						
IADA				S	**Sg**	**21 02 25.1**	**-2.4**
	baz=65						
IMEL	**Melhnausar**	**0.97**	**22**	P	**Pg**	**21 02 14.2**	**-2.9**
	baz=21						
IREN	**Reynihlio**	**1.01**	**15**	P	**Pg**	**21 02 14.9**	**-2.9**
	baz=14						
ISNB	**Snabyli**	**1.06**	**208**	P	**Pg**	**21 02 15.9**	**-2.9**
	baz=209						
IKVO	**Krokottuvotn**	**1.07**	**14**	P	**Pg**	**21 02 16.0**	**-3.1**
	baz=14						
IGRS	**Grimsstaoir**	**1.13**	**31**	P	**Pb**	**21 02 16.9**	**-3.1**
	baz=30						
IFED	**Fedgar**	**1.15**	**236**	P	**Pb**	**21 02 17.4**	**-2.9**
	baz=237						
IRJU	**Rjupnafell**	**1.18**	**206**	P	**Pb**	**21 02 17.9**	**-3.0**
	baz=207						
IMJO	**Mjoaskard**	**1.20**	**232**	P	**Pb**	**21 02 18.3**	**-3.0**
	baz=233						
ISKI	**Skildingahlsh**	**1.22**	**10**	P	**Pn**	**21 02 18.3**	**-3.2**
	baz=9.1						
ISKI				S	**Sb**	**21 02 35.5**	**-1.7**
	baz=9.1						
IGHA	**Grjothals**	**1.23**	**17**	P	**Pn**	**21 02 18.4**	**-3.2**
	baz=16						
IGYG	**Gygjarholskot**	**1.23**	**252**	P	**Pn**	**21 02 18.4**	**-3.2**
	baz=253						
IGRA	**Granastaoir**	**1.25**	**359**	P	**Pn**	**21 02 18.7**	**-3.1**
	baz=358						
IGRA				S	**Sb**	**21 02 36.1**	**-2.0**
	baz=358						
IHVO	**Lagu-Hvolar**	**1.29**	**207**	P	**Pn**	**21 02 19.9**	**-2.6**
	baz=208						
IDIM	**Dimmadalss**	**1.31**	**11**	P	**Pn**	**21 02 19.8**	**-3.0**
	baz=10						
IHLA	**Hella**	**1.32**	**344**	P	**Pn**	**21 02 20.3**	**-2.6**
	baz=344						
IALF	**Alftagrof**	**1.40**	**212**	P	**Pn**	**21 02 21.4**	**-2.5**
	baz=213						
IHED	**Heoinshofoi**	**1.41**	**4**	P	**Pn**	**21 02 21.4**	**-2.8**
	baz=3.1						
IHED				S	**Sn**	**21 02 41.0**	**-1.7**
	baz=3.1						
IESK	**Eystri-Skogar**	**1.43**	**217**	P	**Pn**	**21 02 22.1**	**-2.3**
	baz=218						
ISAU	**Saurbar**	**1.44**	**243**	P	**Pn**	**21 02 21.6**	**-2.9**
	baz=243						
IBRE	**Brettingsstaoi**	**1.46**	**354**	P	**Pn**	**21 02 22.2**	**-2.6**
	baz=354						
IBRE				S	**Sn**	**21 02 42.6**	**-1.3**
	baz=354						
ISIG	**Siglufjorour**	**1.57**	**339**	P	**Pn**	**21 02 24.0**	**-2.4**
	baz=339						
ISIG				S	**Sn**	**21 02 46.0**	**-0.7**
	baz=339						
IASM	**Asmuli**	**1.59**	**239**	P	**Pn**	**21 02 24.6**	**-2.0**
	baz=240						
BORG	**Borgarnes**	**1.64**	**274**	Pg	**Pn**	**21 02 25.1**	**-2.1**
	35nm,0.3s,baz=98,slow=11,SNR=85						
BORG				Lg	Lg	21 02 49.3	
	16nm,0.3s,baz=258,slow=19,SNR=9.0						
BORG	**Borgarnes**	**1.64**	**274**	Pn	**Pn**	**21 02 24.8**	**-2.4**
BORG					**Sn**	**21 02 48.2**	**-0.1**
IKRO	**Krokur**	**1.67**	**251**	P	**Pn**	**21 02 25.2**	**-2.4**
	baz=252						
ISOL	**Solvholt**	**1.67**	**245**	P	**Pn**	**21 02 25.4**	**-2.3**
	baz=246						
SCO	**Scoresbysund**	**6.07**	**346**			**Pn**	**21 03 29.0**	**+0.9**
SCO	**Scoresbysund**	**6.07**	**346**	*e*		**Pn**	**21 03 24.9**	**-3.2**
	baz=157,slow=11							
SCO				*i*	P	**Pn**	**21 03 29.0**	**+0.9**
SCO				*i*	S	**Sn**	**21 04 41.1**	**+3.7**
SCO					IAML		21 04 51.5	
	comp=Z,1.3nm,0.5s							
EKA	**Eskdalemuir Ar**	**11.78**	**136**		Pn	**Pn**	**21 04 46.4**	**+0.1**
	baz=316,slow=13,SNR=8.5							
DAG	**Danmarks Havn**	**12.16**	**359**	*i*	P	**Pn**	**21 04 53.3**	**+1.9**
DAG	**Danmarks Havn**	**12.16**	**359**	*eP*		**Pn**	**21 04 53.4**	**+1.9**
NC204	**NORSAR Array S**	**13.24**	**92**		Pn	**Pn**	**21 05 06.5**	**+0.2**
ARCES	**ARCESS Array B**	**17.12**	**55**		LR	LR	21 11 18.9	
	comp=Z,28nm,18.7s,baz=225,slow=33							
CLL	**Collm**	**20.72**	**116**		P	**P**	**21 06 39.7**	**+1.1**
ECH	**Echery**	**21.17**	**129**		P	**P**	**21 06 44.6**	**+1.0**
BRG	**Berggiesshubel**	**21.43**	**115**	*eP*		**P**	**21 06 47.2**	**+0.9**
	comp=Z,41nm,2.2s							
KHC	**Kasperske Hory**	**22.69**	**118**	*eP*		**P**	**21 07 00.3**	**+0.5**
DPC	**Dobruska-Polom**	**22.77**	**113**	*eP*		**P**	**21 07 02.0**	**+1.3**
GEC2	**GERESS Array S**	**22.97**	**119**		P	**P**	**21 07 03.1**	**+0.3**
GEC2					IAmb	IAmb	21 07 18.0	
	comp=Z,12nm,1.6s							
GERES	**GERESS Array B**	**22.97**	**119**		P	**P**	**21 07 03.9**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=327,slow=9.9,SNR=3.4							
GERES	**GERESS Array B**	**22.97**	**119**		P	**P**	**21 07 02.6**	**-0.3**
OJC	**Ojcow**	**24.27**	**109**		P	**P**	**21 07 17.7**	**+2.3**
OJC					IAmb	IAmb	21 07 30.9	
	comp=Z,13nm,1.5s							
AKH	**Akhalkalaki**	**41.27**	**94**		P	**P**	**21 09 45.5**	**+1.9**
ABKAR	**Akbulak array**	**42.00**	**73**		P	**P**	**21 09 50.3**	**+1.0**
BRVK	**Borovoye**	**43.13**	**62**		P	**P**	**21 10 01.6**	**+3.1**
ILAR	**Eielson Array**	**45.67**	**332**		P	**P**	**21 10 19.9**	**+1.3**
	comp=Z,1.7nm,1.1s,baz=26,slow=6.9,SNR=7.8							
ILAR	**Eielson Array**	**45.67**	**332**		P	**P**	**21 10 19.8**	**+1.2**
IMAR	**Indian Mountai**	**45.84**	**337**		P	**P**	**21 10 21.4**	**+1.5**
ZALV	**Zalesovo Beam**	**47.63**	**51**		P	**P**	**21 10 35.4**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=335,slow=9.5,SNR=2.3							
ZALV	**Zalesovo Beam**	**47.63**	**51**		P	**P**	**21 10 34.9**	**+0.8**
KURK	**Kurchatov**	**48.12**	**58**		P	**P**	**21 10 39.5**	**+1.7**
KURK					IAmb	IAmb	21 10 41.9	
	comp=Z,3.8nm,0.9s							
KURBB	**Kurchatov Arra**	**48.16**	**58**		P	**P**	**21 10 39.2**	**+1.0**
	comp=Z,2.2nm,0.9s,baz=323,slow=7.4,SNR=9.3							
KOWA	**Kowa**	**50.98**	**163**			**P**	**21 11 01.1**	**+1.0**
KOWA					IAmb	IAmb	21 11 16.9	
	comp=Z,6.6nm,1.4s							
KKAR	**Karatay Array**	**51.28**	**70**		P	**P**	**21 11 03.9**	**+1.8**
MKAR	**Makanchi Array**	**52.73**	**58**		P	**P**	**21 11 13.6**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=311,slow=5.5,SNR=4.4							
MKAR	**Makanchi Array**	**52.73**	**58**		P	**P**	**21 11 14.0**	**+1.1**
TOA0	**Torodi Ar. Sit**	**53.16**	**156**		P	**P**	**21 11 15.8**	**-0.5**
TOA0					IAmb	IAmb	21 11 23.0	
	comp=Z,17nm,1.8s							
TORD	**Torodi Ar. Bea**	**53.16**	**156**		P	**P**	**21 11 16.2**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=338,slow=8.0,SNR=3.7							
TORD	**Torodi Ar. Bea**	**53.16**	**156**		P	**P**	**21 11 15.9**	**-0.4**
PDAR	**Pinedale Array**	**53.16**	**293**		P	**P**	**21 11 17.5**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=59,slow=8.8,SNR=5.4							
AAK	**Ala-Archa**	**53.27**	**67**		P	**P**	**21 11 18.0**	**+0.9**
AAK					IAmb	IAmb	21 11 26.4	
	comp=Z,5.8nm,1.4s							
GAR	**Garm**	**54.66**	**73**		P	**P**	**21 11 28.7**	**+1.5**
NIL	**Nilore**	**60.46**	**73**		P	**P**	**21 12 09.8**	**+1.8**
121A	**Cookes Peak, D**	**61.21**	**285**		P	**P**	**21 12 14.0**	**+0.6**
121A					IAmb	IAmb	21 12 23.4	
	comp=Z,6.1nm,1.5s							
TXAR	**Lajitas Array**	**62.27**	**280**		P	**P**	**21 12 21.7**	**+1.3**
	comp=Z,0.6nm,1.0s,baz=34,slow=4.9,SNR=3.6							
TXAR	**Lajitas Array**	**62.27**	**280**		P	**P**	**21 12 20.5**	**+0.1**
TXAR	**Lajitas Array**	**62.27**	**280**		P	**P**	**21 12 20.5**	**+0.1**

IDC ***19*** *21:14:36.7±2.3, 1.87N×126.40E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/21, Error ellipse: s-maj=199.4km s-min=26.5km az=65.0*

DJA ***19*** *21:14:43.4±1.1, 2.3N±3×12.6E±, h17km±9km, M3.4/9, MLv3.4/9*

ISC 19 21:14:43.8±1.1, 1.82N±0.08×126.51E±0.07, h47km, n10, σ1s67/11, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**140**	P	**Pn**	**21 15 06.8**	**+0.6**
TNTI				S	**Sn**	**21 15 24.4**	**+1.5**
SGSI	**Sangihe**	**2.10**	**332**	P	Pn	21 15 19.4	+3.0
SGSI				S	**Sn**	**21 15 42.5**	**+1.2**
KMSI	**Cibinong**	**2.81**	**244**	P	**Pn**	**21 15 26.1**	**-0.1**
KMSI				S	**Sn**	**21 16 00.8**	**+1.9**
GTOI	**Gorontalo**	**3.69**	**251**	P	**Pn**	**21 15 40.4**	**+2.2**
LUWI	**Luwuk**	**4.69**	**233**	P	**Pn**	**21 15 49.4**	**-2.6**
MRSI	**Marisa**	**4.75**	**254**	P	**Pn**	**21 15 53.2**	**+0.3**
WRA	**Warramunga Arr**	**22.95**	**161**	P	**P**	**21 19 43.2**	**-1.0**
	0.5nm,0.4s,baz=339,slow=11,SNR=22						
KRVT	**Keravat (AS076**	**26.22**	**103**	LR	LR	21 28 53.3	
	comp=Z,34nm,18.8s,baz=51,slow=32						
ASAR	**Alice Springs**	**26.33**	**165**	P	**P**	**21 20 15.9**	**+0.4**
	0.2nm,0.3s,baz=347,slow=13,SNR=5.1						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**21 24 37.4**	**-1.3**
	0.2nm,0.4s,baz=122,slow=7.9,SNR=4.4						

IDC 19 21:15:41.2±1.0, 31.24S×76.37E, h0km, mb4.2/8, mb1 4.3/8, mb1mx3.9/43, mbtmp4.2/8, MS3.6/2, Ms1 3.6/2, ms1mx2.9/28, Error ellipse: s-maj=29.2km s-min=23.3km az=20.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**23.75**	**350**	T	T	21 45 27.7	
	baz=172,slow=76,SNR=104						
H08S1	**Diego Carcia H**	**23.75**	**350**	T	T	21 45 31.0	
	baz=172,slow=76,SNR=52						
H08S3	**Diego Garcia H**	**23.77**	**350**	T	T	21 45 29.1	
	baz=172,slow=76,SNR=227						
H01W2	**Cape Leeuwin H**	**31.73**	**107**	T	T	21 55 16.1	
	baz=266,slow=74,SNR=102						
H01W3	**Cape Leeuwin H**	**31.73**	**107**	T	T	21 55 16.2	
	baz=266,slow=74,SNR=125						
H01W1	**Cape Leeuwin H**	**31.75**	**107**	T	T	21 55 17.2	
	baz=266,slow=74,SNR=123						
LBTB	**Lobatse**	**44.89**	**265**	LR	LR	21 38 21.5	
	comp=Z,37nm,18.7s,baz=54,slow=30						
FITZ	**Fitzroy Crossi**	**46.29**	**86**	P	P	21 24 09.2	+0.4
	3.5nm,1.0s,baz=234,slow=10,SNR=5.1						
LSZ	**Lusaka**	**46.66**	**279**	P	P	21 24 12.5	+0.5
	2.0nm,0.7s,baz=99,slow=5.2,SNR=6.2						
ASAR	**Alice Springs**	**51.13**	**96**	P	P	21 24 46.1	0.0
	3.2nm,1.0s,baz=244,slow=7.3,SNR=17						
WRA	**Warramunga Arr**	**52.96**	**92**	P	P	21 24 59.5	-0.2
	4.7nm,1.0s,baz=250,slow=7.2,SNR=18						
WRA				LR	LR	21 45 10.3	
	comp=Z,83nm,19.6s,baz=165,slow=33						
CMAR	**Chiang Mai Arr**	**53.96**	**27**	P	P	21 25 07.6	+0.7
	0.7nm,0.3s,baz=211,slow=7.8,SNR=4.1						
QSPA	**South Pole Qui**	**58.91**	**180**	P	P	21 25 41.3	-0.5
	0.9nm,0.2s,baz=283,slow=5.3,SNR=4.5						
MKAR	**Makanchi Array**	**77.85**	**4**	P	P	21 27 39.7	-0.6
	1.6nm,0.9s,baz=187,slow=6.0,SNR=11						
ZALV	**Zalesovo Beam**	**85.15**	**5**	P	P	21 28 18.6	-0.1
	2.8nm,0.9s,baz=204,slow=3.3,SNR=13						

IDC 19 21:21:21.4±16.0, 30.50S×76.86E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/34, mbtmp3.7/4, Error ellipse: s-maj=539.1km s-min=38.5km az=40.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**23.10**	**349**	T	T	21 51 05.0	
	baz=172,slow=76,SNR=52						
H08S1	**Diego Carcia H**	**23.10**	**349**	T	T	21 51 01.8	
	baz=172,slow=76,SNR=25						
H08S3	**Diego Garcia H**	**23.12**	**349**	T	T	21 51 04.9	
	baz=172,slow=76,SNR=141						
H01W2	**Cape Leeuwin H**	**31.55**	**108**	T	T	22 00 54.0	
	baz=266,slow=74,SNR=39						
H01W3	**Cape Leeuwin H**	**31.55**	**108**	T	T	22 00 52.5	
	baz=266,slow=74,SNR=51						
H01W1	**Cape Leeuwin H**	**31.57**	**108**	T	T	22 00 55.3	
	baz=266,slow=74,SNR=63						
ASAR	**Alice Springs**	**50.79**	**97**	P	P	21 30 23.5	-0.3
	0.4nm,0.9s,baz=246,slow=7.0,SNR=4.1						
WRA	**Warramunga Arr**	**52.57**	**93**	P	P	21 30 37.2	+0.1
	0.7nm,1.0s,baz=247,slow=7.4,SNR=4.7						
MKAR	**Makanchi Array**	**77.08**	**4**	P	P	21 33 16.3	0.0
	0.5nm,0.8s,baz=191,slow=4.9,SNR=4.6						
ZALV	**Zalesovo Beam**	**84.37**	**5**	P	P	21 33 55.0	0.0
	0.8nm,0.6s,baz=188,slow=5.2,SNR=3.8						

IDC ***19*** *21:30:17.8±8.5, 1.48S×13.02W, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.6/43, mbtmp4.1

MBAZ	**Motutapu North**	**1.93 291**	P		Pg	21 38 49.0	+2.6
TMVZ	**Te Maari**	**1.98 214**	P		Pg	21 38 49.2	+2.0
ETVZ	**East Tongariro**	**1.99 214**	P		Pg	21 38 50.2	+2.7
KWHZ	**Kaweka Forest**	**2.01 196**	P		Pg	21 38 47.2	-0.7
MOVZ	**Moawhango**	**2.20 209**	P		Pb	21 38 48.7	-0.8
KRHZ	**Kereru**	**2.23 195**	P		Pb	21 38 49.4	-0.6
WCZ	**Waipu Caves**	**2.73 304**	P		Pn	21 38 52.6	-0.9

IDC ***19*** *21:38:51.9±2.8, 36°.15S×178°.49E, h0km, mb3.8/2, mb1 3.9/3, mb1mx3.7/21, mbtmp3.7/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/26, Error ellipse: s-maj=61.1km s-min=31.8km az=104.0*

WEL ***19*** *21:40:23.7, 39°.5±.5°×17°.7E±°, h7km±13km, M2.7/6, ML2.9/6, MLv2.7/6, Error ellipse: s-maj=0.0km s-min=0.0km az=56.9*

ISC 19 21:38:42.0±3.6, 37°.3S±0°.3×179°.0W±0°.4, h35km, n16, σ2s24/12, East of North Island

Code	Station Name	Δ° AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**3.21 251**	P	**Pn**	**Pn**	**21 39 31.0**	**+1.1**
	baz=124,slow=3.6,SNR=0.6						
URZ			Sn	Sn	Sn	21 40 04.0	-2.9
	13nm,0.3s,baz=358,slow=23,SNR=11						
NMHZ	**Naumai**	**3.75 239**	P		Sn	21 40 23.4	+3.0
MCHZ	**McNeill Hill**	**4.00 236**	P		Sn	21 40 29.5	+3.1
KRHZ	**Kereru**	**4.32 235**	P		**Sn**	**21 40 35.9**	**+1.7**
WPHZ	**Waipukurau**	**4.51 230**	P		**Sn**	**21 40 41.9**	**+2.9**
PRHZ	**Porangahau**	**4.52 227**	P		**Sn**	**21 40 37.9**	**-1.3**
NGZ	**Ngauruhoe**	**4.63 244**	P		Sn	21 40 41.0	-1.3
DVHZ	**Dannevirke**	**4.82 230**	P		**Sn**	**21 40 44.5**	**-2.2**
BFZ	**Birch Farm**	**5.01 226**	P		**Sn**	**21 40 50.4**	**-1.0**
PRWZ	**Pori Road**	**5.09 228**	P		**Sn**	**21 40 53.0**	**-0.3**
CPWZ	**Castlepoint**	**5.19 224**	P		**Sn**	**21 40 54.9**	**-0.9**
TIWZ	**Tintock**	**5.28 227**	P		**Sn**	**21 41 00.2**	**+2.1**
DZM	**Mont Dzumac**	**19.67 316**	LR		LR	21 48 05.5	
	comp=Z,103nm,18.1s,baz=64,slow=32						
ASAR	**Alice Springs**	**42.35 275**	P		**P**	**21 46 30.8**	**-2.1**
	1.0nm,0.7s,baz=118,slow=7.8,SNR=6.9						
WRA	**Warramunga Arr**	**43.95 280**	P		**P**	**21 46 43.2**	**-2.6**
	0.7nm,0.5s,baz=120,slow=7.7,SNR=14						
FINES	**FINESS Array B**	**151.14 335**	PKPbc		**PKPab**	**21 58 41.4**	**+2.9**
	1.3nm,0.7s,baz=78,slow=3.4,SNR=6.0						

IDC ***19*** *22:02:53.1±1.4, 10°.27S×124°.24E, h0km, mb3.8/2, mb1 3.7/5, mb1mx3.5/27, mbtmp3.6/5, ML3.5/3, Error ellipse: s-maj=21.5km s-min=10.7km az=8.0*

ISC 19 22:02:56.0±1.1, 10°.4S±0°.1×124°.1E±0°.1, h27km, n6, σ1s78/9, Timor region

Code	Station Name	Δ° AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**0.46 297**	Pg	**Pb**	**Pb**	**22 03 03.8**	**-1.9**
	595nm,0.3s,baz=96,slow=0.6,SNR=198						
BATI			Lg	Lg	Lg	22 03 12.5	
	840nm,0.3s,baz=143,slow=20,SNR=16						
FITZ	**Fitzroy Crossi**	**7.79 169**	Pn	**Pn**	**Pn**	**22 04 49.5**	**+1.9**
	0.7nm,0.3s,baz=352,slow=12,SNR=37						
FITZ			Sn	**Sn**	**Sn**	**22 06 13.8**	**-1.2**
	0.9nm,0.3s,baz=249,slow=23,SNR=6.5						
WRA	**Warramunga Arr**	**13.70 135**	Pn	**Pn**	**Pn**	**22 06 09.0**	**+0.4**
	0.2nm,0.3s,baz=306,slow=13,SNR=10						
WRA			Sn	**Sn**	**Sn**	**22 08 37.8**	**-2.1**
	0.2nm,0.3s,baz=305,slow=23,SNR=6.1						
ASAR	**Alice Springs**	**16.17 146**	Pn	**Pn**	**Pn**	**22 06 42.2**	**+0.7**
	0.3nm,0.3s,baz=320,slow=12,SNR=15						
ASAR			Sn	**Sn**	**Sn**	**22 09 38.5**	**-1.7**
	0.1nm,0.3s,baz=308,slow=22,SNR=3.1						
MKAR	**Makanchi Array**	**68.07 330**	P	**P**	**P**	**22 13 54.6**	**+1.4**
	0.7nm,0.6s,baz=134,slow=6.6,SNR=8.6						
ZALV	**Zalesovo Beam**	**72.22 337**	P	**P**	**P**	**22 14 19.3**	**+0.8**
	0.2nm,0.3s,baz=123,slow=5.3,SNR=2.0						

IDC ***19*** *22:37:08.9±0.7, 24°.89N×122°.10E, h0km, mb4.2/18, mb1 4.3/20, mb1mx4.1/53, mbtmp4.2/20, ML3.2/2, MS3.8/27, Ms1 3.8/27, ms1mx3.7/37, Error ellipse: s-maj=21.9km s-min=13.7km az=75.0*

TAP ***19*** *22:37:09.3, 24°.90N×122°.03E, h12km, ML4.4, B*

NIED ***19*** *22:37:09.0, 24°.90N×121°.99E, h50km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr-0.94; Mθθ0.77; Mφφ0.18; Mrθ-0.12; Mθφ0.50; Mφr-0.32; Fault plane solution: M0 1.06000×10^16 NP1:φs48.00000°, δ54.00000°, λ-106.00000°. NP2:φs254.00000°, δ39.00000°, λ-69.00000°.*

JMA ***19*** *22:37:09.0±0.1, 24°.90N×121°.99E, h50km, M4.5*

NEIC ***19*** *22:37:09.1±1.6, 24°.90N±0°.03×122°.11E±0°.02, h8km±3km, mb4.5/42, Mwr4.5/12, Error ellipse: s-maj=4.3km s-min=2.9km az=189.0*

NEIC ***19*** *22:37:09.3, 24°.88N×122°.08E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr-0.68; Mθθ2.44; Mφφ-1.76; Mrθ-1.69; Mθφ6.04; Mφr0.38; Fault plane solution: M0 6.65000×10^15 NP1:φs189.86000°, δ74.50000°, λ-176.95000°. NP2:φs99.04000°, δ87.06000°, λ-15.52000°. Principal axes: T 6.9088, Plg9.0000°, Azm145.0000°; N -0.5606, Plg74.0000°, Azm269.0000°; P -6.3482, Plg13.0000°, Azm53.0000°;*

ASIES ***19*** *22:37:10.3, 24°.89N×122°.07E, h22km, MW4.4*

BJI ***19*** *22:37:17.9±0.0, 25°.18N×121°.51E, h22km, mB4.7/38, mb4.2/43, ML4.5/8, Ms4.5/46, Ms7 4.3/42*

ISC 19 22:37:09.4±0.8, 24°.91N±0°.02×122°.09E±0°.02, h10km±5km, n251, σ1s42/307, mb4.4/35, MS3.8/26, 27C, Taiwan region

Code	Station Name	Δ° AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.13 317**	*i*P	**Pg**	**Sg**	**22 37 12.2**	**-0.2**
	baz=342						
TWB1			*i* S		**Sg**	**22 37 14.1**	**-0.6**
	baz=342						
EGS		**0.16 245**	⇑*i*P	**Pg**	**Pg**	**22 37 12.6**	**-0.2**
	baz=239						
EGS			*i* S		**Sg**	**22 37 14.8**	**-0.4**
	baz=239						
NTC	**Toucheng**	**0.24 257**	⇑*i*P	**Pg**	**Pg**	**22 37 14.2**	**-0.2**
	baz=264						
NTC			*i* S		**Sg**	**22 37 17.3**	**-0.4**
	baz=264						
TIPB	**Shuangxi**	**0.25 285**	⇑*i*P	**Pg**	**Pg**	**22 37 14.3**	**-0.1**
	baz=291						
TIPB			*i* S		**Sg**	**22 37 17.5**	**-0.3**
	baz=291						
NWF	**Wu-fen Shan**	**0.32 300**	⇑*i*P	**Pb**	**Pb**	**22 37 16.1**	**-1.2**
	baz=298						
NWF			S		**Sb**	**22 37 20.2**	**-2.3**
	baz=298						
WFSB	**Wu-fen Shan**	**0.32 300**	⇑*i*P	**Pb**	**Pb**	**22 37 16.0**	**-1.2**
	baz=302						
WFSB			*i* S		**Sb**	**22 37 20.3**	**-2.2**
	baz=302						
ILA	**Ilan**	**0.34 245**	*i* P	**Pb**	**Pb**	**22 37 15.8**	**-1.7**
	baz=244						
ILA			*i* S		**Sg**	**22 37 20.6**	**-0.2**
	baz=244						
TWC	**Suao**	**0.37 216**	⇑*i*P	**Pg**	**Pg**	**22 37 16.2**	**-0.5**
	baz=220						
TWC			S		**Sg**	**22 37 20.7**	**-0.9**
	baz=220						
TWE	**Neicheng**	**0.43 244**	⇑*i*P	**Pb**	**Pb**	**22 37 17.2**	**-1.8**
	baz=236						
TWE			*i* S		**Sg**	**22 37 21.4**	**-2.0**
	baz=236						
TWA	**Mucha**	**0.46 279**	⇑*i*P	**Pb**	**Pb**	**22 37 18.4**	**-1.3**
	baz=282						
TWA			*i* S		**Sb**	**22 37 24.6**	**-2.0**
	baz=282						
NWRT	**Kuosheng**	**0.49 307**	⇑*i*P	**Pb**	**Pb**	**22 37 19.2**	**-0.8**
	baz=314						
NWRT			S		**Sb**	**22 37 25.2**	**-2.0**
	baz=314						
NHDH	**Xindian Distri**	**0.51 276**	P	**Pb**	**Pb**	**22 37 19.6**	**-0.8**
	baz=279						
NHDH			*i* S		**Sb**	**22 37 26.4**	**-1.6**
	baz=279						
ENAH	**Nanao**	**0.52 209**	⇑*i*P	**Pg**	**Pg**	**22 37 19.0**	**-0.6**
	baz=215						
ENAH			*e*S		**Sg**	**22 37 24.8**	**-1.7**
	baz=215						
YM01	**YM01**	**0.53 297**	⇑*i*P	**Pb**	**Pb**	**22 37 20.1**	**-0.6**
	baz=300						
YM01			*e*S		**Sb**	**22 37 26.6**	**-1.8**
	baz=300						
TAP1	**Taipei**	**0.53 284**	⇑*i*P	**Pb**	**Pb**	**22 37 20.3**	**-0.5**
	baz=287						
TAP1			*i* S		**Sb**	**22 37 26.7**	**-1.7**
	baz=287						
YM08	**YM08**	**0.53 302**	⇑*i*P	**Pb**	**Pb**	**22 37 20.0**	**-0.8**
	baz=305						
YM08			*e*S		**Sb**	**22 37 26.8**	**-1.7**
	baz=305						
YM11	**YM11**	**0.53 299**	P	**Pb**	**Pb**	**22 37 20.3**	**-0.5**
	baz=302						
YM11			*e*S		**Sn**	**22 37 29.1**	**-3.1**
	baz=302						
YM10	**YM10**	**0.54 297**	⇑*i*P	**Pb**	**Pb**	**22 37 20.4**	**-0.6**
	baz=301						
YM10			S		**Sb**	**22 37 27.3**	**-1.5**
	baz=301						
TAP	**Taipei**	**0.54 284**	⇑*i*P	**Pb**	**Pb**	**22 37 20.3**	**-0.7**
	baz=287						
TAP			*i* S		**Sb**	**22 37 27.6**	**-1.3**
	baz=287						
NWLT	**Wulai**	**0.55 256**	P	**Pb**	**Pb**	**22 37 19.4**	**-1.7**
	baz=259						
NWLT			S		**Sg**	**22 37 26.7**	**-0.6**
	baz=259						
TATO	**Taipei**	**0.55 277**	⇑*i*P	**Pb**	**Pb**	**22 37 20.0**	**-1.1**
	baz=275						
TATO			*i* S		**Sb**	**22 37 27.1**	**-1.9**
	baz=275						
TATO	**Taipei**	**0.55 277**		**Pb**	**Pb**	**22 37 20.0**	**-1.1**
TATO			Sg		**Sb**	**22 37 27.0**	**-2.1**
YM04	**YM04**	**0.56 296**	⇑*i*P	**Pb**	**Pb**	**22 37 20.6**	**-0.7**
	baz=299						
YM04			*e*S		**Sb**	**22 37 28.7**	**-0.6**
	baz=299						
YM03	**YM03**	**0.56 298**	⇑*i*P	**Pb**	**Pb**	**22 37 20.6**	**-0.8**
	baz=302						
YM03			*e*S		**Sn**	**22 37 30.1**	**-2.9**
	baz=302						
TWY	**Chenhua**	**0.57 310**	⇑*i*P	**Pn**	**Pn**	**22 37 21.2**	**-2.4**
	baz=313						
TWY			*e*S		**Sb**	**22 37 27.8**	**-1.9**
	baz=313						
ENA	**Nanau**	**0.57 213**	*e*P	**Pg**	**Pg**	**22 37 19.7**	**-0.8**
	baz=219						
ENA			*e*S		**Sg**	**22 37 27.6**	**-0.5**
	baz=219						
ANP	**Anpu**	**0.58 298**	P	**Pb**	**Pb**	**22 37 20.9**	**-0.9**
	baz=301						
ANP			S		**Sb**	**22 37 28.4**	**-1.8**
	baz=301						
NSM	**Shimen**	**0.59 310**	*e*P	**Pn**	**Pn**	**22 37 21.3**	**-2.5**
	baz=313						
NSM			*e*S		**Sn**	**22 37 30.5**	**-3.0**
	baz=313						
NDT	**Datong Townshi**	**0.61 240**	*e*P	**Pb**	**Pb**	**22 37 20.5**	**-1.6**
	baz=235						
NDT			*e*S		**Sb**	**22 37 29.5**	**-1.2**
	baz=235						
NTST	**Danshui**	**0.63 294**	⇑*i*P	**Pn**	**Pn**	**22 37 22.5**	**-1.9**
	baz=308						
NTST			*e*S		**Sb**	**22 37 30.8**	**-0.6**
	baz=308						
TWS1	**Kuangyinshan**	**0.64 287**	⇑*i*P	**Pn**	**Pn**	**22 37 22.5**	**-2.0**
	baz=300						
TWS1			*e*S		**Sb**	**22 37 30.5**	**-1.1**
	baz=300						
YHNB	**Yeheng**	**0.69 250**	⇑*i*P	**Pg**	**Pg**	**22 37 21.9**	**-0.9**
	baz=251						
YHNB			*e*S		**Sg**	**22 37 29.8**	**-2.0**
	baz=251						
YHNB	**Yeheng**	**0.69 250**		**Pg**	**Pg**	**22 37 21.9**	**-0.9**
NSK	**Sanguang**	**0.70 251**	⇑*i*P	**Pg**	**Pg**	**22 37 22.0**	**-1.0**
	baz=252						
NSK			*e*S		**Sg**	**22 37 30.8**	**-1.5**
	baz=252						
PCYT	**Pengchaiyu**	**0.72 359**	⇑*i*P	**Pn**	**Pn**	**22 37 24.2**	**-1.4**
	baz=1.0						
PCYT			*e*S		**Sn**	**22 37 35.6**	**-1.0**
	baz=1.0						
NNSB	**Datong**	**0.80 233**	*e*P	**Pb**	**Pb**	**22 37 24.2**	**-1.2**
	baz=235						
NNSB			*e*S		**Sg**	**22 37 34.3**	**-1.0**
	baz=235						
NNSH	**Datong**	**0.80 233**	*e*P	**Pb**	**Pb**	**22 37 24.5**	**-1.0**
	baz=234						
NNS	**Nan Shan**	**0.80 234**	P	**Pb**	**Pb**	**22 37 24.3**	**-1.2**
	baz=235						
NNS			*e*S		**Sb**	**22 37 35.9**	**-0.5**
	baz=235						
NCU	**National Centr**	**0.82 274**	*e*P	**Pn**	**Pn**	**22 37 25.9**	**-1.1**
	baz=277						
NCU			*e*S		**Sn**	**22 37 36.8**	**-2.4**
	baz=277						
NCUH	**Zhongli**	**0.82 274**	*e*P	**Pn**	**Pn**	**22 37 25.8**	**-1.3**
	baz=277						
NCUH			*e*S		**Sn**	**22 37 37.5**	**-1.7**
	baz=277						
NACB	**Ninganchiao**	**0.86 212**	⇑*i*P	**Pg**	**Pg**	**22 37 25.0**	**-1.0**
	baz=222						
NACB			*e*S		**Sb**	**22 37 37.2**	**-0.8**
	baz=222						
NACB	**Ninganchiao**	**0.86 212**		**Pg**	**Pg**	**22 37 24.7**	**-1.3**
NACB			Sg		**Sg**	**22 37 36.5**	**-0.7**
ETLH	**Xiulin Townshi**	**0.89 218**	*e*P	**Pg**	**Pg**	**22 37 25.8**	**-0.8**
	baz=220						
ETLH			*e*S		**Sb**	**22 37 37.9**	**-1.1**
	baz=220						
JYNG	**Yonagunijimaku**	**0.90 120**	P	**Pb**	**Pb**	**22 37 26.5**	**-0.6**
JYNG			S		**Sb**	**22 37 38.7**	**-0.5**
TWD	**Chiawan**	**0.94 209**	*e*P	**Pg**	**Pg**	**22 37 26.6**	**-0.9**
	baz=210						
TWD			*e*S		**Sg**	**22 37 38.9**	**-0.8**
	baz=210						
YOJ	**Yonaguni jima**	**0.95 118**	P	**Pg**	**Pg**	**22 37 27.0**	**-0.6**
	baz=116						
YOJ	**Yonaguni jima**	**0.95 118**	P	**Pg**	**Pg**	**22 37 27.1**	**-0.6**
YOJ			*e*S		**Sb**	**22 37 41.0**	**+0.4**
YOJ	**Yonaguni jima**	**0.95 118**		**Pg**	**Pg**	**22 37 27.1**	**-0.6**
YOJ			Sg		**Sg**	**22 37 38.4**	**-1.6**
SBCB	**Hsinchu**	**1.01 264**	P	**Pn**	**Pn**	**22 37 29.0**	**-0.6**
	baz=267						
SBCB			*e*S		**Sn**	**22 37 43.1**	**-0.8**
	baz=267						
LIOB	**Emei**	**1.01 255**	P	**Pn**	**Pn**	**22 37 29.1**	**-0.6**
	baz=259						
LIOB			*e*S		**Sn**	**22 37 43.5**	**-0.5**
	baz=259						
FUSS	**Fushou**	**1.01 230**	*e*P	**Pb**	**Pb**	**22 37 28.4**	**-0.7**
	baz=227						
FUSS			*e*S		**Sb**	**22 37 41.9**	**-0.7**
	baz=227						
HSN	**Hsinchu**	**1.02 264**	*e*P	**Pn**	**Pn**	**22 37 28.8**	**-1.0**
	baz=269						
HSN			*e*S		**Sb**	**22 37 41.6**	**-1.0**
	baz=269						
NSTT	**Nanjuang**	**1.03 255**	*e*P	**Pn**	**Pn**	**22 37 28.9**	**-0.9**
	baz=258						
NSTT			*e*S		**Sn**	**22 37 43.9**	**-0.4**
	baz=258						
HWA	**Hwalien**	**1.03 205**	*e*P	**Pg**	**Pg**	**22 37 27.9**	**-1.3**
	baz=212						
TWT	**Tachien**	**1.06 232**	P	**Pn**	**Pn**	**22 37 29.6**	**-0.8**
	baz=234						
WHF	**Hehuan Shan**	**1.07 225**	P	**Pb**	**Pb**	**22 37 29.3**	**-0.9**
	baz=219						
WHF			*e*S		**Sg**	**22 37 41.3**	**-2.7**
	baz=219						
TDCB	**Techi**	**1.07 233**	*e*P	**Pn**	**Pn**	**22 37 29.4**	**-1.2**
	baz=234						
CHGB	**Renai**	**1.19 225**	*e*P	**Pn**	**Pn**	**22 37 31.4**	**-0.9**
	baz=221						
WHP	**Taichung City**	**1.22 239**	P	**Pg**	**Pg**	**22 37 32.1**	**-0.7**
	baz=241						
NMLH	**Miaoli**	**1.24 253**	*e*P	**Pg**	**Pg**	**22 37 33.0**	**-0.1**
	baz=256						
NMLH			*e*S		**Sn**	**22 37 49.0**	**-0.5**
	baz=256						
ESL	**Shilin**	**1.24 209**	*e*P	**Pn**	**Pn**	**22 37 31.8**	**-1.0**
	baz=220						
ESL			*e*S		**Sn**	**22 37 49.4**	**-0.3**
	baz=220						
OWD	**Renai**	**1.26 221**	P	**Pg**	**Pg**	**22 37 32.7**	**-1.0**
	baz=224						
NSY	**Sanyi**	**1.30 248**	P	**Pg**	**Pg**	**22 37 34.2**	**-0.2**
	baz=252						
NSY			*e*S		**Sg**	**22 37 50.3**	**-1.1**
	baz=252						
TWQ1	**Liyutan**	**1.32 245**	P		**Pg**	**22 37 35.1**	**+0.3**
	baz=250						
TWQ1			*e*S		**Sg**	**22 37 52.5**	**+0.5**
	baz=250						
DPDB	**Guoxing**	**1.37 231**	*e*P	**Pg**	**Pg**	**22 37 35.0**	**-0.7**
	baz=240						
EGFH	**Guangfu**	**1.38 206**	P	**Pb**	**Pb**	**22 37 34.6**	**-0.6**
	baz=218						
EGFH			*e*S		**Sb**	**22 37 50.5**	**-2.3**
	baz=218						
WDJ	**Dajia District**	**1.43 247**	*e*P	**Pg**	**Pg**	**22 37 35.9**	**-1.0**
	baz=270						
WDJ			*e*S		**Sn**	**22 37 52.9**	**-1.4**
	baz=270						
SMLT	**Sun Moon Lake**	**1.49 227**	P	**Pg**	**Pg**	**22 37 37.1**	**-0.9**
	baz=222						
TCU	**Taichung**	**1.49 240**	*e*P	**Pg**	**Pg**	**22 37 37.5**	**-0.5**
	baz=244						
TCU			*e*S		**Sg**	**22 37 56.5**	**-1.0**
	baz=244						
TYC	**Yuchr**	**1.50 229**	P	**Pg**	**Pg**	**22 37 37.2**	**-1.1**
	baz=223						
TYC			*e*S		**Sn**	**22 37 55.2**	**-0.8**
	baz=223						
SSLB	**Suanglung**	**1.52 223**	*e*P	**Pb**	**Pb**	**22 37 37.0**	**-0.8**
	baz=221						
SSLB			*e*S		**Sg**	**22 37 57.1**	**-1.3**
	baz=221						
SSLB	**Suanglung**	**1.52 223**		**Pb**	**Pb**	**22 37 36.6**	**-1.2**
HGSD	**Ruisui**	**1.54 203**	P	**Pg**	**Pg**	**22 37 37.6**	**-1.3**
	baz=223						
EHY	**Hungye**	**1.56 207**	*e*P	**Pb**	**Pb**	**22 37 37.9**	**-0.6**
	baz=212						
IRIF	**Iriomote-Funau**	**1.60 111**	P	**Pn**	**Pn**	**22 37 36.2**	**-1.5**
IRIF			*e*S		**Sn**	**22 37 56.9**	**-1.5**
WCHH	**Zhanghua**	**1.62 240**	*e*P	**Pg**	**Pg**	**22 37 39.1**	**-1.4**
	baz=260						
WNT	**Mingjian**	**1.64 232**	*e*P	**Pg**	**Pg**	**22 37 40.9**	**0.0**
	baz=227						
WJS	**Zhushan**	**1.65 229**	*e*P	**Pg**	**Pg**	**22 37 41.0**	**0.0**
	baz=221						
WHYT	**Xinyi Township**	**1.65 223**	*e*P	**Pb**	**Pb**	**22 37 39.3**	**-0.6**
	baz=227						
YULB	**Yu-li**	**1.68 206**	*e*P	**Pb**	**Pb**	**22 37 38.8**	**-1.5**
	baz=210						
YULB	**Yu-li**	**1.68 206**		**Pn**	**Pn**	**22 37 38.5**	**-0.2**
EYUL	**Yuli**	**1.71 204**	*e*P	**Pb**	**Pb**	**22 37 40.2**	**-0.7**
	baz=223						
TWF1	**Yuli**	**1.71 205**	*e*P	**Pb**	**Pb**	**22 37 39.4**	**-1.6**
	baz=222						
HATJ	**Hateruma jima**	**1.78 118**	P		**Pn**	**22 37 39.4**	**-0.8**
HATJ			S		**Sn**	**22 38 01.4**	**-1.5**
ALS	**Alishan**	**1.82 220**	*e*P	**Pg**	**Pg**	**22 37 43.1**	**-1.2**
	baz=210						
CHN5	**Tsauling**	**1.83 225**	*e*P	**Pg**	**Pg**	**22 37 44.0**	**-0.6**
	baz=229						
WGK	**Gukeng**	**1.85 229**	*e*P	**Pb**	**Pb**	**22 37 42.6**	**-0.7**
	baz=251						
FULB	**Fuli**	**1.85 203**	*e*P	**Pb**	**Pb**	**22 37 42.0**	**-1.3**
	baz=221						
WDLH	**Douliu**	**1.86 230**	*e*P	**Pg**	**Pg**	**22 37 43.7**	**-1.4**
	baz=234						
JKRS	**Kuro-shima**	**1.87 111**	P	**Pn**	**Pn**	**22 37 40.6**	**-0.9**
CHKT	**Chengkung**	**1.92 200**	*e*P	**Pn**	**Pn**	**22 37 42.4**	**+0.3**
	baz=187						
JIJ	**Ishigaki jima**	**1.95 106**	P	**Pn**	**Pn**	**22 37 41.2**	**-1.3**
WTK	**Tuku**	**1.97 232**	*e*P	**Pg**	**Pg**	**22 37 45.4**	**-1.8**
	baz=253						
ELDTW	**Lidau**	**1.97 210**	*e*P	**Pb**	**Pb**	**22 37 44.1**	**-1.4**
	baz=215						
CHN2	**Minshiung**	**2.01 227**	*e*P	**Pb**	**Pb**	**22 37 45.8**	**-0.3**
	baz=249						
EDH	**Donghe**	**2.06 201**	*e*P	**Pn**	**Pn**	**22 37 43.6**	**-0.4**
	baz=190						
CHN4	**Tsaushan**	**2.07 222**	*e*P	**Pg**	**Pg**	**22 37 47.7**	**-1.4**
	baz=228						
CHY	**Chiayi**	**2.07 228**	*e*P	**Pg**	**Pg**	**22 37 47.1**	**-2.0**
	baz=249						
TPUB	**Ta-pu**	**2.08 220**	*e*P	**Pg**	**Pg**	**22 37 47.7**	**-1.7**
	baz=226						
TPUB	**Ta-pu**	**2.08 220**		**Pb**	**Pb**	**22 37 46.8**	**-0.5**
WSF	**Szhu**	**2.12 234**	*e*P	**Pb**	**Pb**	**22 37 46.9**	**-1.1**
	baz=251						
STYT	**Tauyuan**	**2.12 215**	*e*P	**Pb**	**Pb**	**22 37 47.3**	**-0.7**
	baz=208						
WTP	**Ta-pu**	**2.13 219**	*e*P	**Pb**	**Pb**	**22 37 48.1**	**-0.1**
	baz=226						
LONT	**Longtian**	**2.18 204**	*e*P	**Pn**	**Pn**	**22 37 46.2**	**+0.5**
	baz=195						
PTTC	**Pingtan**	**2.18 286**	*e*P	**Pn**	**Pn**	**22 37 44.4**	**-1.3**
	baz=284						
TWK	**Hsinying**	**2.19 222**	*e*P	**Pb**	**Pb**	**22 37 48.3**	**-0.9**
	baz=228						
SNST	**Tainan City**	**2.22 221**	*e*P	**Pb**	**Pb**	**22 37 49.6**	**-0.1**
	baz=228						
CHN1	**Nanshi**	**2.23 220**	*e*P	**Pb**	**Pb**	**22 37 49.3**	**-0.6**
	baz=227						
ICHU	**Yijhu**	**2.26 227**	*e*P	**Pg**	**Pg**	**22 37 50.5**	**-2.2**
	baz=233						
TWGBT	**Beinan**	**2.28 204**	*e*P	**Pn**	**Pn**	**22 37 47.8**	**+0.8**
	baz=196						
TWG	**Pinlang**	**2.28 204**	*e*P	**Pb**	**Pb**	**22 37 48.4**	**-2.3**
	baz=202						
TWG			*e*S		**Sn**	**22 38 14.6**	**-0.6**
	baz=202						
TWG	**Pinlang**	**2.28 204**		**Pn**	**Pn**	**22 37 46.8**	**-0.3**
SGST	**Jiashian**	**2.28 217**	*e*P	**Pb**	**Pb**	**22 37 50.6**	**0.0**
	baz=216						
SGST			*e*S		**Sg**	**22 38 20.3**	**-2.5**
	baz=216						
MATB	**Ma-tsu**	**2.30 303**	*e*P	**Pn**	**Pn**	**22 37 45.4**	**-1.9**
	baz=300						
LDUT	**Ludao**	**2.30 194**	*e*P	**Pn**	**Pn**	**22 37 46.6**	**-0.7**
	baz=187						
TTN	**Taitung**	**2.31 202**	*e*P	**Pb**	**Pb**	**22 37 50.0**	**-1.2**
	baz=209						
CHN8	**Yiju**	**2.32 228**	*e*P	**Pb**	**Pb**	**22 37 50.8**	**-0.5**
	baz=246						
SLGT	**Liugui**	**2.32 215**	*e*P	**Pb**	**Pb**	**22 37 51.2**	**-0.1**
	baz=222						
VWUC	**VWUC**	**2.40 272**	*e*P	**Pn**	**Pn**	**22 37 47.4**	**-1.3**
	baz=272						
CHN3	**Shinhua**	**2.41 221**	*e*P	**Pg**	**Pg**	**22 37 53.7**	**-1.9**
	baz=227						
SCST	**Cishan**	**2.49 216**	*

QZH	**Quanzhou**	**3.17 271**	*e*Pn		**Pn**		**22 37 58.8 -0.6**			
QZH			Sn		**Sn**		**22 38 34.3 -3.0**			
QZH			smax	smax						
	comp=N,580nm,1.3s									
QZH			smax	smax						
	comp=E,260nm,1.1s									
TWK1	**Hengchun**	**3.18 202**	*e*P		**Pn**		**22 38 00.6 +1.1**			
	baz=197									
TWKBT	**Hengchun**	**3.18 202**	*e*P		**Pn**		**22 37 59.7 +0.2**			
	baz=198									
KNM	**Kinmen**	**3.36 262**	*e*P		**Pn**		**22 38 03.2 +1.2**			
	baz=262									
KNMB	**Chin-men Tao**	**3.40 263**	*e*P		**Pn**		**22 38 00.6 -1.8**			
	baz=263									
KNMB	**Chin-men Tao**	**3.40 263**			**Pn**		**22 38 01.4 -1.0**			
AXDP	**Jialang**	**3.74 271**	*e*P		**Pn**		**22 38 06.0 -1.2**			
	baz=269									
ZPLA	**Ao Xicun**	**4.07 257**	*e*P		**Pn**		**22 38 10.4 -1.3**			
	baz=258									
NJ2	**Nanjing**	**7.66 339**	*e*Pn		**Pn**		**22 39 01.1 0.0**			
NJ2			Sn		**Sn**		**22 40 25.4 -2.5**			
NJ2			smax	smax						
	comp=N,230nm,1.8s									
NJ2			smax	smax						
	comp=E,260nm,2.0s									
NJ2			LR	LR						
	comp=N,3μm,8.5s									
NJ2			LR	LR						
	comp=E,1μm,8.1s									
NJ2			LR	LR						
	comp=Z,3μm,11.4s									
TGY	**Tagaytay City**	**10.81 186**	LR	LR			22 43 41.9			
	comp=Z,414nm,20.3s,baz=59,slow=36									
JNU	**Nakatsue**	**11.22 41**	LR	LR			22 44 57.9			
	comp=Z,314nm,18.5s,baz=250,slow=42									
QIZ	**Qiongzhong**	**12.78 245**	P		**Pn**		**22 40 10.6 -0.6**			
QIZ			S		**Sn**		**22 42 36.8 +3.2**			
QIZ			pmax	pmax						
	comp=Z,26nm,1.6s									
QIZ			LR	LR						
	comp=N,1μm,19.1s									
QIZ			LR	LR						
	comp=E,870nm,14.2s									
QIZ			LR	LR						
	comp=Z,670nm,12.7s									
KSRS	**Korea Array**	**13.46 20**	Pn		**Pn**		**22 40 21.5 +1.1**			
	comp=Z,0.1nm,0.3s,baz=205,slow=14,SNR=3.0									
KSRS			LR	LR			22 46 03.5			
	comp=Z,350nm,18.4s,baz=204,slow=40									
GYA	**Guiyang**	**13.99 280**	*e*P		**P**		**22 40 35.3 -0.7**			
GYA			S		**Sn**		**22 43 08.3 +4.8**			
GYA			pmax	pmax						
	comp=Z,4.0nm,1.0s									
GYA			pmax	pmax						
	comp=Z,140nm,4.8s									
GYA			LR	LR						
	comp=Z,620nm,6.1s									
GYA			LR	LR						
	comp=Z,1μm,8.2s									
GYA			LR	LR						
	comp=Z,1μm,7.9s									
XAN	**Xi'an**	**14.63 311**	P		**P**		**22 40 38.6 -4.3**			
XAN			pP		Pn		22 40 49.3 +13			
XAN			pmax	pmax						
	comp=Z,8.0nm,1.5s									
XAN			LR	LR						
	comp=Z,1μm,10.8s									
XAN			LR	LR						
	comp=Z,930nm,15.2s									
XAN			LR	LR						
	comp=Z,2μm,11.8s									
XAN	**Xi'an**	**14.63 311**	Pn		**Pn**		**22 40 35.5 -1.0**			
BJT	**Baijiatuau**	**15.87 343**	Pn		**Pn**		**22 40 52.7 -0.1**			
CD2	**Chengdu**	**17.26 294**	P		**P**		**22 41 12.8 +0.7**			
CD2			pmax	pmax						
	comp=Z,30nm,1.1s									
CD2			pmax	pmax						
	comp=Z,120nm,8.1s									
CD2			LR	LR						
	comp=Z,2μm,9.3s									
CD2			LR	LR						
	comp=Z,1μm,12.9s									
CD2			LR	LR						
	comp=Z,1μm,11.8s									
KMI	**Kunming**	**17.54 275**			**P**		**22 41 14.7 -0.7**			
MAT	**Matsushiro**	**18.04 46**	P		**P**		**22 41 21.4 +0.7**			
MAT			S		**S**		**22 44 47.6 0.0**			
MJAR	**Matsushiro Arr**	**18.04 46**	P		**P**		**22 41 22.6 +2.0**			
	comp=Z,0.1nm,0.3s,baz=243,slow=12,SNR=7.6									
MJAR			LR	LR			22 48 38.9			
	comp=Z,246nm,21.7s,baz=240,slow=38									
MJAR	**Matsushiro Arr**	**18.04 46**	P		**P**		**22 41 21.6 +0.9**			
DAV	**Davao City (W)**	**18.05 169**	LR		LR		22 48 27.4			
	comp=Z,345nm,19.5s,baz=350,slow=38									
HHC	**Hu-ho-hao-te**	**18.16 334**	*e*P		**P**		**22 41 25.0 +2.9**			
HHC			S		**S**		**22 44 47.8 -2.4**			
HHC			pmax	pmax						
	comp=Z,15nm,0.9s									
HHC			pmax	pmax						
	comp=Z,350nm,4.0s									
HHC			LR	LR						
	comp=Z,900nm,10.8s									
HHC			LR	LR						
	comp=Z,660nm,10.8s									
HHC			LR	LR						
	comp=Z,1μm,11.4s									
CN2	**Changchun**	**19.05 7**	*e*P		**Pn**		**22 41 32.1 -0.3**			
CN2			*e*S		**Sn**		**22 45 02.1 -3.6**			
CN2			pmax	pmax						
	comp=Z,10.0nm,1.0s									
CN2			pmax	pmax						
	comp=Z,100nm,3.0s									
CN2			LR	LR						
	comp=N,300nm,20.0s									
CN2			LR	LR						
	comp=E,1μm,20.0s									
CN2			LR	LR						
	comp=Z,600nm,12.7s									
LZH	**Lanzhou**	**19.23 310**	*e*P		**Pn**		**22 41 35.4 +0.5**			
LZH			PP		**PnPn**		**22 41 51.3 +3.5**			
LZH			sS		S		22 45 10.5 -1.5			
LZH			pmax	pmax						
	comp=Z,32nm,1.1s									
LZH			pmax	pmax						
	comp=Z,400nm,5.2s									
LZH			LR	LR						
	comp=Z,930nm,11.4s									
LZH			LR	LR						
	comp=Z,890nm,12.5s									
LZH			LR	LR						
	comp=Z,870nm,13.6s									
MDJ	**Mudanjiang**	**20.59 15**	P		Pn		22 41 48.5 -2.2			
MDJ			IAmb		IAmb		22 41 57.9			
	comp=Z,26nm,1.3s									
USA0B	**Ussuriysk Arra**	**20.87 20**	P		Pn		22 41 52.1 -1.8			
USRK	**Ussuriysk Ar.**	**20.87 20**	P		Pn		22 41 53.7 -0.3			
	comp=Z,7.8nm,0.8s,baz=213,slow=12,SNR=18									
USRK			LR		LR		22 49 58.2			
	comp=Z,168nm,18.3s,baz=186,slow=37									
USRK	**Ussuriysk Ar.**	**20.87 20**	P		Pn		22 41 52.3 -1.7			
CMAR	**Chiang Mai Arr**	**22.43 258**	P		**P**		**22 42 11.1 +2.6**			
	comp=Z,0.5nm,0.3s,baz=70,slow=8.4,SNR=5.5									
CMAR			LR		LR		22 52 17.7			
	comp=Z,189nm,19.5s,baz=105,slow=40									
CMAR	**Chiang Mai Arr**	**22.43 258**	P		**P**		**22 42 09.5 +1.0**			
GTA	**Gaotai**	**23.68 313**	⇑P		**P**		**22 42 21.6 +0.3**			
GTA			pP		sP		22 42 29.9 +4.4			
GTA			sP		pP		22 42 34.0 +10			
GTA			S		**S**		**22 46 38.3 +2.0**			
GTA			sS		sS		22 46 46.8 +5.5			
GTA			pmax	pmax						
	comp=Z,6.0nm,1.4s									
GTA			pmax	pmax						
	comp=Z,110nm,5.5s									
GTA			LR	LR						
	comp=Z,370nm,12.0s									
GTA			LR	LR						
	comp=Z,350nm,11.6s									
GTA			LR	LR						
	comp=Z,450nm,12.7s									
GUMO	**Guam**	**24.23 113**	LR		LR		22 50 08.9			
	comp=Z,152nm,20.3s,baz=300,slow=32									
SBUM	**Sibu**	**24.27 205**	P		**P**		**22 42 26.2 -0.8**			
SBUM			IAmb		IAmb		22 42 39.9			
	comp=Z,7.2nm,0.8s									
HIA	**Hailar**	**24.38 356**	P		**P**		**22 42 29.1 +1.3**			
HIA			IAmb		IAmb		22 42 44.5			
	comp=Z,7.4nm,0.9s									
ASAJ	**Asahikawa**	**25.43 36**	LR		LR		22 52 11.0			
	comp=Z,190nm,20.9s,baz=240,slow=36									
KLR	**Kul'dur**	**25.43 15**	P		**P**		**22 42 39.1 +2.0**			
	comp=Z,6.2nm,1.0s,baz=214,slow=6.4,SNR=10									
KLR			LR		LR		22 52 34.6			
	comp=Z,299nm,19.2s,baz=198,slow=36									
ULN	**Ulaanbaatar**	**25.82 336**	P		**P**		**22 42 40.6 -0.3**			
ULN			IAmb		IAmb		22 42 44.7			
	comp=Z,5.8nm,0.8s									
SONM	**Songino Array**	**26.04 335**	P		**P**		**22 42 44.1 +1.2**			
	comp=Z,10nm,0.9s,baz=144,slow=8.4,SNR=50									
SONM			LR		LR		22 53 56.7			
	comp=Z,546nm,19.9s,baz=158,slow=39									
SONM	**Songino Array**	**26.04 335**	P		**P**		**22 42 43.8 +1.0**			
SIJI	**Sorong**	**27.13 160**	LR		LR		22 52 44.8			
	comp=Z,159nm,21.3s,baz=41,slow=34									
SHL	**Shillong**	**27.30 278**	P		**P**		**22 42 55.0 +0.4**			
SHL			IAmb		IAmb		22 43 09.4			
	comp=Z,23nm,1.2s									
LSA	**Lhasa**	**27.86 287**			**P**		**22 43 02.1 +2.3**			
LSA			IAmb		IAmb		22 43 18.2			
	comp=Z,9.1nm,1.5s									
JAY	**Jayapura**	**32.70 144**	LR		LR		22 54 14.3			
	comp=Z,276nm,21.6s,baz=332,slow=31									
WMQ	**Urumqi**	**33.76 313**	*e*P		**P**		**22 43 53.6 +2.3**			
WMQ			pmax	pmax						
	comp=Z,14nm,0.9s									
WMQ			pmax	pmax						
	comp=Z,230nm,4.5s									
WMQ			LR	LR						
	comp=Z,470nm,10.9s									
WMQ			LR	LR						
	comp=Z,240nm,13.7s									
WMQ			LR	LR						
	comp=Z,460nm,19.9s									
WMQ	**Urumqi**	**33.76 313**	P		**P**		**22 43 52.1 +0.8**			
WMQ			IAmb		IAmb		22 43 57.0			
	comp=Z,6.0nm,0.9s									
MK31	**Makanchi Array**	**38.40 315**	P		**P**		**22 44 31.3 +0.3**			
MKAR	**Makanchi Array**	**38.40 315**	P		**P**		**22 44 31.8 +0.9**			
	comp=Z,2.5nm,0.8s,baz=106,slow=9.3,SNR=20									
MKAR			LR		LR		23 01 36.8			
	comp=Z,259nm,19.0s,baz=96,slow=38									
MKAR	**Makanchi Array**	**38.40 315**	P		**P**		**22 44 31.1 +0.2**			
MTN	**Manton Dam**	**38.55 166**	P		**P**		**22 44 30.9 -1.5**			
MTN			IAmb		IAmb		22 44 35.5			
	comp=Z,6.4nm,0.7s									
MAKZ	**Makanchi**	**38.61 315**	P		**P**		**22 44 33.0 +0.3**			
PETK	**Petropavlovsk-**	**38.81 34**	LR		LR		22 59 55.0			
	comp=Z,80nm,21.5s,baz=225,slow=35									
ZAA0	**Zalesovo Array**	**40.09 326**	P		**P**		**22 44 44.4 -0.5**			
ZALV	**Zalesovo Beam**	**40.09 326**	P		**P**		**22 44 45.1 +0.2**			
	comp=Z,5.5nm,0.9s,baz=117,slow=8.5,SNR=22									
ZALV			LR		LR		23 02 43.5			
	comp=Z,176nm,20.2s,baz=110,slow=38									
ZALV	**Zalesovo Beam**	**40.09 326**	P		**P**		**22 44 44.5 -0.4**			
KURK	**Kurchatov**	**42.07 319**	P		**P**		**22 45 01.6 +0.4**			
KURK			IAmb		IAmb		22 45 14.6			
	comp=Z,10.0nm,1.5s									
COEN	**Coen**	**43.77 150**	P		**P**		**22 45 15.7 +0.4**			
COEN			IAmb		IAmb		22 45 30.3			
	comp=Z,16nm,1.4s									
GAR	**Garm**	**45.54 301**	P		**P**		**22 45 30.4 +0.9**			
KK31	**Karatay Array**	**45.69 307**	P		**P**		**22 45 30.8 +0.2**			
KK31			IAmb		IAmb		22 45 35.7			
	comp=Z,5.1nm,1.4s									
KKAR	**Karatay Array**	**45.69 307**	P		**P**		**22 45 31.0 +0.4**			
WB0	**Warramunga Arr**	**45.99 164**	P		**P**		**22 45 32.2 -0.8**			
WB0			IAmb		IAmb		22 45 33.9			
	comp=Z,7.3nm,0.7s									
WRAB	**Tennant Creek**	**46.14 164**	P		**P**		**22 45 33.8 -0.4**			
WRA	**Warramunga Arr**	**46.15 164**	P		**P**		**22 45 34.3 +0.1**			
	comp=Z,5.8nm,0.5s,baz=346,slow=8.8,SNR=91									
WRA			PcP		**PcP**		**22 47 10.9 +0.7**			
	comp=Z,0.6nm,0.7s,baz=345,slow=3.5,SNR=3.8									
WRA			LR		LR		23 09 26.9			
	comp=Z,22nm,18.4s,baz=305,slow=42									
WRA	**Warramunga Arr**	**46.15 164**	P		**P**		**22 45 33.9 -0.3**			
WB2	**Warramunga Arr**	**46.15 164**	P		**P**		**22 45 33.6 -0.7**			
TIXI	**Tiksi**	**46.93 3**	P		**P**		**22 45 39.9 +0.1**			
BRVK	**Borovoye**	**47.71 320**	P		**P**		**22 45 46.5 +0.3**			
BRVK			IAmb		IAmb		22 45 53.7			
	comp=Z,6.9nm,1.0s									
NRIK	**Noril'sk**	**48.92 345**	P		**P**		**22 45 55.4 +0.1**			
	comp=Z,3.5nm,0.6s,baz=129,slow=6.0,SNR=6.0									
AS31	**Alice Springs**	**49.63 166**	P		**P**		**22 46 01.2 0.0**			
ASAR	**Alice Springs**	**49.63 166**	P		**P**		**22 46 02.4 +1.2**			
	comp=Z,1.9nm,0.7s,baz=341,slow=7.6,SNR=18									
ASAR			LR		LR		23 08 32.3			
	comp=Z,55nm,18.1s,baz=331,slow=38									
ASAR	**Alice Springs**	**49.63 166**	P		**P**		**22 46 01.3 +0.1**			
ABKAR	**Akbulak array**	**53.53 314**	P		**P**		**22 46 29.6 -0.6**			
ABKAR	**Akbulak array**	**53.53 314**	P		**P**		**22 46 30.6 +0.5**			
ABKAR			IAmb		IAmb		22 46 32.6			
	comp=Z,2.7nm,0.8s									
GEYT	**Alibeck**	**55.15 300**	P		**P**		**22 46 44.6 +2.5**			
	comp=Z,2.8nm,0.7s,baz=57,slow=5.3,SNR=4.4									
GEYT	**Alibeck**	**55.15 300**	P		**P**		**22 46 42.0 -0.2**			
GYA0B	**ALIBECK ARRAY**	**55.15 300**	P		**P**		**22 46 42.5 +0.3**			
GYA0B			IAmb		IAmb		22 46 51.6			
	comp=Z,2.9nm,0.7s									
STKA	**Stephens Creek**	**59.47 161**	P		**P**		**22 47 13.3 +0.8**			
	comp=Z,2.2nm,0.6s,baz=5.1,slow=9.4,SNR=4.7									
STKA			LR		LR		23 16 42.3			
	comp=Z,38nm,18.7s,baz=353,slow=40									
STKA	**Stephens Creek**	**59.47 161**	P		**P**		**22 47 12.4 -0.1**			
DZM	**Mont Dzumac**	**63.53 134**	*e*S		**S**		**22 56 06.3 -7.7**			
	comp=Z,104nm,25.6s									
DZM	**Mont Dzumac**	**63.53 134**	*e*LR		LR		23 06 36.4			
	comp=Z,382nm,26.1s									
KBZ	**Khabaz**	**65.67 309**	P		**P**		**22 47 55.4 +1.5**			
	comp=Z,2.7nm,0.9s,baz=53,slow=20,SNR=6.6									
KBZ			LR		LR		23 20 17.2			
	comp=Z,113nm,19.8s,baz=146,slow=39									
AKH	**Akhalkalaki**	**65.73 306**	P		**P**		**22 47 54.5 -0.1**			
KIV	**Kislovodsk**	**65.77 309**	P		**P**		**22 47 54.2 -0.6**			
BWN	**Browne**	**67.21 28**	P		**P**		**22 48 03.1 -0.4**			
MDM	**Murphy Dome**	**67.59 27**	P		**P**		**22 48 07.0 +1.1**			
BMAR	**Burnt Mountain**	**68.53 24**	P		**P**		**22 48 12.9 +1.1**			
MARD	**Mardin**	**68.76 302**	P		**P**		**22 48 13.6 -0.3**			
MARD			IAmb		IAmb		22 48 16.4			
	comp=Z,5.5nm,0.8s									
RAYN	**Ar Rayn**	**68.92 287**	P		**P**		**22 48 14.5 -0.6**			
RAYN			IAmb		IAmb		22 48 17.7			
	comp=Z,6.0nm,1.2s									
SPITS	**Spitsbergen Ar**	**68.95 348**	P		**P**		**22 48 14.8 +0.5**			
	comp=Z,4.6nm,0.8s,baz=49,slow=4.8,SNR=1.5									
ARCES	**ARCESS Array B**	**69.18 338**	LR		LR		23 23 24.7			
	comp=Z,89nm,18.1s,baz=30,slow=40									
BCAR	**Beaver Creek A**	**70.81 29**	P		**P**		**22 48 26.8 +0.9**			
FIA1	**FINESS Array S**	**71.24 330**	P		**P**		**22 48 29.7 +1.2**			
FINES	**FINESS Array B**	**71.24 330**	P		**P**		**22 48 29.8 +1.4**			
	comp=Z,2.0nm,0.7s,baz=90,slow=4.2,SNR=1.9									
FINES			LR		LR		23 23 07.3			
	comp=Z,219nm,18.4s,baz=68,slow=39									
FINES	**FINESS Array B**	**71.24 330**	P		**P**		**22 48 29.6 +1.1**			
CTGM	**Chitina Glacie**	**71.64 31**	P		**P**		**22 48 31.7 +0.5**			
CTGM			IAmb		IAmb		22 48 38.0			
	comp=Z,9.9nm,1.2s									
INK	**Inuvik**	**72.24 22**	P		**P**		**22 48 34.5 +0.1**			
INK			IAmb		IAmb		22 48 38.5			
	comp=Z,8.2nm,1.3s									
AKASG	**Malin Array Be**	**72.88 318**	P		**P**		**22 48 39.3 +0.8**			
	comp=Z,0.3nm,0.4s,baz=57,slow=6.9,SNR=4.8									
AKASG	**Malin Array Be**	**72.88 318**	P		**P**		**22 48 39.8 +1.3**			
BRTR	**Keskin Array B**	**73.41 306**	P		**P**		**22 48 43.5 +1.4**			
	comp=Z,1.8nm,0.9s,baz=125,slow=6.5,SNR=4.6									
BRTR			LR		LR		23 26 01.8			
	comp=Z,21nm,18.0s,baz=31,slow=40									
KOLS	**Kolonicke sedl**	**77.71 318**	*e*P		**P**		**22 49 05.2 -1.2**			
NC405	**NORSAR Array S**	**77.72 332**	P		**P**		**22 49 06.5 +0.3**			
NB2	**NORSAR Subarra**	**77.97 332**	P		**P**		**22 49 07.7 +0.1**			
	comp=Z,5.0nm,1.4s,baz=64,slow=5.6									
NOA	**NORSAR Array B**	**77.97 332**	P		**P**		**22 49 08.6 +0.9**			
	comp=Z,1.1nm,0.8s,baz=57,slow=5.7,SNR=5.3									
NOA			LR		LR		23 27 10.2			
	comp=Z,182nm,18.4s,baz=65,slow=38									
YKA	**Yellowknife Ar**	**81.98 23**	LR		LR		23 33 14.5			
	comp=Z,31nm,18.9s,baz=0.0,slow=41									
KMBO	**Kilima Mbogo**	**85.78 267**	P		**P**		**22 49 51.2 +1.4**			
	comp=Z,0.8nm,0.6s,baz=40,slow=6.3,SNR=5.0									
PPT	**Papeete**	**95.77 107**	LR		LR		23 24 16.7			
	comp=Z,26nm,20.2s,baz=181,slow=30									
PPT2	**Papeete2**	**95.78 107**	*e*LR		LR		23 21 29.6			
	comp=Z,118nm,28.8s									
PFO	**Pinyon Flats O**	**99.47 46**	LR		LR		23 29 07.7			
	comp=Z,29nm,19.5s,baz=258,slow=31									

REY ***19*** *22:43:17.9, 64.67N×17.39W, h1km*
NEIC ***19*** *22:43:19.4±1.8, 64.38N±0.08×17.6W±0.1, h8km±4km, mb4.4/32, Error ellipse: s-maj=11.9km s-min=8.4km az=198.0*
IDC ***19*** *22:43:20.0±0.6, 64.54N×17.57W, h0km, mb3.8/13, mb1 4.1/15, mb1mx3.9/39, mbtmp3.8/15, ML3.4/2, MS3.4/9, Ms1 3.4/9, ms1mx3.0/43, Error ellipse: s-maj=22.8km s-min=9.5km az=17.0*

ISC 19 22:43:20.1±0.4, 64°66'N±0'02×17°38'W±0'02, h10km, n140, σ2s45/153, mb4.0/39, MS3.5/5, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**2**	P	**Pg**	**22 43 20.7**	**-2.5**
	baz=4.5						
IDYN				S	**Sg**	**22 43 23.2**	**-2.2**
	baz=4.5						
IHAM	**Hamarinn**	**0.27**	**227**	P	**Pg**	**22 43 23.5**	**-2.0**
	baz=224						
IKVE	**Kverkfjoll**	**0.30**	**87**	P	**Pg**	**22 43 24.3**	**-1.9**
	baz=89						
IKVE				S	**Sg**	**22 43 28.8**	**-1.4**
	baz=89						
IHUS	**Husbondi**	**0.39**	**198**	P	**Pg**	**22 43 25.7**	**-2.1**
	baz=197						
IHUS				S	**Sg**	**22 43 31.9**	**-1.0**
	baz=197						
IVOT	**Vottur**	**0.40**	**168**	P	**Pg**	**22 43 26.0**	**-2.0**
	baz=168						
THOR	**Thorvaldshraun**	**0.41**	**47**	P	**Pg**	**22 43 25.8**	**-2.3**
	baz=49						
THOR				S	**Sg**	**22 43 31.7**	**-1.7**
	baz=49						
IKRE	**Kreppuhraun**	**0.44**	**74**	P	**Pg**	**22 43 26.5**	**-2.3**
	baz=75						
IKRE				S	**Sg**	**22 43 32.7**	**-2.0**
	baz=75						
ISKR	**Skrokkalda**	**0.45**	**257**	P	**Pg**	**22 43 26.5**	**-2.3**
	baz=256						
ISKR				S	**Sg**	**22 43 33.0**	**-1.7**
	baz=256						
IASK	**Askja**	**0.50**	**38**	P	**Pg**	**22 43 27.2**	**-2.6**
	baz=39						
IASK				S	**Sg**	**22 43 34.6**	**-1.8**
	baz=39						
IJOK	**Jokulheimar**	**0.51**	**227**	P	**Pg**	**22 43 27.5**	**-2.5**
	baz=226						
IMKO	**Mokollar**	**0.55**	**54**	P	**Pg**	**22 43 28.3**	**-2.4**
	baz=55						
IKSK	**Karasker**	**0.64**	**142**	P	**Pg**	**22 43 29.4**	**-3.0**
	baz=142						
IKSK				S	**Sg**	**22 43 38.2**	**-2.6**
	baz=142						
ISVA	**Svartarkot**	**0.68**	**4**	P	**Pg**	**22 43 30.1**	**-3.1**
	baz=4.8						
ISVA				S	**Sg**	**22 43 39.4**	**-2.7**
	baz=4.8						
IKAL	**Kalfafell**	**0.73**	**191**	P	**Pg**	**22 43 31.1**	**-3.0**
	baz=190						
IKAL				S	**Sg**	**22 43 41.9**	**-1.8**
	baz=190						
IVAT	**Vatnsfell**	**0.82**	**235**	P	**Pg**	**22 43 32.9**	**-3.0**
	baz=234						
IADA	**Aoalbol**	**0.85**	**64**	P	**Pg**	**22 43 33.1**	**-3.3**
	baz=65						
IADA				S	**Sg**	**22 43 44.9**	**-2.5**
	baz=65						
IFAG	**Fagurholsmyri**	**0.85**	**158**	P	**Pg**	**22 43 33.4**	**-3.1**
	baz=158						
IFAG				S	**Sg**	**22 43 44.8**	**-2.7**
	baz=158						
IMEL	**Melhnausar**	**0.96**	**18**	P	**Pg**	**22 43 34.9**	**-3.6**
	baz=19						
IREN	**Reynihlio**	**1.01**	**11**	P	**Pg**	**22 43 35.7**	**-3.8**
	baz=12						
IKVO	**Krokottuvotn**	**1.08**	**11**	P	**Pg**	**22 43 36.9**	**-3.9**
	baz=11						
IRJU	**Rjupnafell**	**1.19**	**209**	P	**Pb**	**22 43 39.4**	**-3.4**
	baz=209						
ISKI	**Skildingahlsh**	**1.22**	**7**	P	**Pn**	**22 43 39.1**	**-4.1**
	baz=7.0						
ISKI				S	**Sb**	**22 43 55.5**	**-3.5**
	baz=7.0						
IGHA	**Grjothals**	**1.22**	**14**	P	**Pn**	**22 43 39.0**	**-4.2**
	baz=14						
IMJO	**Mjoaskard**	**1.24**	**235**	P	**Pn**	**22 43 40.0**	**-3.5**
	baz=234						
IGRA	**Granastaoir**	**1.26**	**356**	P	**Pn**	**22 43 39.8**	**-4.0**
	baz=356						
IGRA				S	**Sb**	**22 43 56.7**	**-3.5**
	baz=356						
IGYG	**Gygjarholskot**	**1.29**	**254**	P	**Pn**	**22 43 40.5**	**-3.6**
	baz=253						
IHVO	**Lagu-Hvolar**	**1.31**	**210**	P	**Pn**	**22 43 41.3**	**-3.1**
	baz=210						
IDIM	**Dimmadalss**	**1.32**	**8**	P	**Pn**	**22 43 40.8**	**-3.7**
	baz=8.2						
IHAU	**Haukadalur**	**1.33**	**239**	P	**Pn**	**22 43 41.4**	**-3.2**
	baz=239						
IALF	**Alftagrof**	**1.42**	**215**	P	**Pn**	**22 43 43.0**	**-2.9**
	baz=214						
IHED	**Heoinshofoi**	**1.43**	**1**	P	**Pn**	**22 43 42.0**	**-4.0**
	baz=1.3						
IHED				S	**Sn**	**22 44 01.2**	**-3.5**
	baz=1.3						
IESK	**Eystri-Skogar**	**1.46**	**220**	P	**Pn**	**22 43 43.4**

BTNL	Ternell	18.73	128	P	Pn	22 47 43.4	+4.4
FINES	FINESS Array B	19.65	79	P	Pn	22 47 51.1	+1.1
	comp=Z,0.1nm,0.3s,baz=310,slow=7.1,SNR=6.7						
FINES				LR	LR	22 54 37.9	
	comp=Z,118nm,21.1s,baz=284,slow=34						
CLL	Collm	20.66	116	*eP*	P	22 47 59.0	-0.6
CLL				*e*PP	PnPn	22 48 24.0	+6.9
CLL				*e*SSS	SSS	22 52 30.0	
CLL	Collm	20.66	116	P	P	22 47 58.9	-0.6
GRA1	Grafenberg Arr	21.29	121	P	P	22 48 05.1	-1.3
GRA1				IAmb	IAmb	22 48 20.9	
	comp=Z,20nm,1.4s						
NKC	Novy Kostel	21.30	118	*eP*	P	22 48 12.1	+5.5
BRG	Berggiesshubel	21.36	115	*eP*	P	22 48 08.0	+0.8
	comp=Z,9.3nm,1.1s						
BFO	Black Forest	21.41	128	P	P	22 48 06.8	-1.0
FRB	Frobisher Bay	21.80	291	LR	LR	22 56 10.1	
	comp=Z,135nm,22.0s,baz=14,slow=35						
CHVC	Chvalec	22.42	113	*eP*	P	22 48 19.1	+0.5
OSTC	Ostas	22.51	113	*eP*	P	22 48 28.3	+8.8
KHC	Kasperske Hory	22.63	119	*eP*	P	22 48 24.0	+3.2
KHC	Kasperske Hory	22.63	119	P	P	22 48 19.5	-1.3
DPC	Dobruska-Polom	22.71	113	*eP*	P	22 48 24.1	+2.4
DAVA	Damuels	22.84	127	*eP*	P	22 48 22.8	-0.4
	comp=Z,4.8nm,0.8s						
GEC2	GERESS Array S	22.91	119	P	P	22 48 22.0	-1.8
GEC2B	GERESS ARRAY S	22.91	119	P	P	22 48 21.2	-2.6
GERES	GERESS Array B	22.91	119	P	P	22 48 25.1	+1.2
	comp=Z,1.4nm,0.8s,baz=336,slow=8.8,SNR=8.0						
GERES	GERESS Array B	22.91	119	P	P	22 48 21.8	-2.0
RETA	Reutte	22.97	125	*eP*	P	22 48 26.3	+1.8
	comp=Z,4.1nm,0.9s						
KRLC	Kraliky	23.11	113	*eP*	P	22 48 31.8	+5.9
MOTA	Moosalm	23.21	125	*eP*	P	22 48 27.9	+0.8
	comp=Z,7.3nm,1.3s						
DAVOX	Davos/Dischmat	23.27	127	P	P	22 48 30.2	+2.4
	comp=Z,2.9nm,0.8s,baz=310,slow=14,SNR=6.2						
SQTA	Sankt Quirin	23.36	125	*eP*	P	22 48 25.8	-2.7
	comp=Z,4.7nm,0.9s						
FETA	Feichten	23.36	126	*eP*	P	22 48 27.3	-1.3
	comp=Z,4.4nm,1.1s						
WATA	Walderalm	23.39	124	*eP*	P	22 48 30.1	+1.2
	comp=Z,3.8nm,0.9s						
WTTA	Wattenberg	23.47	124	*eP*	P	22 48 26.8	-2.9
	comp=Z,1.7nm,0.6s						
VRAC	Vranov	23.64	114	P	P	22 48 32.4	+1.2
	comp=Z,1.2nm,0.3s,baz=330,slow=8.4,SNR=4.8						
MORC	Moravsky Berou	23.65	112	P	P	22 48 30.8	-0.5
MORC				IAmb	IAmb	22 48 45.3	
	comp=Z,12nm,1.4s						
EUNU	Eureka	23.70	336	P	P	22 48 33.0	+1.5
EUNU				IAmb	IAmb	22 48 38.0	
	comp=Z,7.2nm,0.9s						
MOA	Molln	23.94	119	*eP*	P	22 48 35.2	+1.2
	comp=Z,5.2nm,1.6s						
OJC	Ojcow	24.21	109	P	P	22 48 35.4	-1.1
OJC				IAmb	IAmb	22 48 48.7	
	comp=Z,15nm,1.8s						
ABTA	Abfaltersbach	24.23	123	*eP*	P	22 48 36.6	-0.2
	comp=Z,3.4nm,1.0s						
CTI	Castel Tesino	24.52	125	P	P	22 48 38.6	-1.0
CTI				IAmb	IAmb	22 48 54.2	
	comp=Z,7.8nm,1.0s						
CIMO	Cimolais	24.57	124	P	P	22 48 38.7	-1.2
LANS	Liptovska Anna	24.91	111	*e*P	P	22 48 44.9	+2.0
ARSA	Arzberg	24.91	119	*eP*	P	22 48 42.9	-0.1
	comp=Z,3.7nm,0.8s						
SOKA	Soboth	25.21	120	*eP*	P	22 48 44.3	-1.4
	comp=Z,4.1nm,1.5s						
KWP	Kalwaria Pacla	25.86	106	P	P	22 48 51.5	0.0
PSZ	Piszkesteto	26.07	112	P	P	22 48 52.9	-0.6
PSZ				IAmb	IAmb	22 49 00.7	
	comp=Z,8.5nm,1.2s						
ESDC	Sonseca Array	26.23	156	P	P	22 48 55.8	+0.8
	comp=Z,1.0nm,0.8s,baz=348,slow=9.3,SNR=6.8						
ESDC	Sonseca Array	26.23	156	P	P	22 48 52.9	-2.0
AKASG	Malin Array Be	27.79	98	P	P	22 49 10.8	+2.0
	comp=Z,0.8nm,0.6s,baz=326,slow=9.6,SNR=4.2						
BURAR	Bucovina Array	28.47	106	P	P	22 49 15.5	+0.4
BRTR	Keskin Array B	38.43	105	P	P	22 50 43.2	+1.5
	comp=Z,0.9nm,0.8s,baz=0.9,slow=7.5,SNR=4.5						
CPNY	Central Park	39.88	261	P	P	22 50 51.4	-2.2
KOPT	Kop Dagi	41.07	98	P	P	22 51 03.3	-0.5
AKH	Akhalkalaki	41.20	94	P	P	22 51 04.2	-0.6
AKH				IAmb	IAmb	22 51 11.1	
	comp=Z,11nm,1.0s						
ABKAR	Akbulak array	41.94	73	P	P	22 51 11.0	+0.5
TIXI	Tiksi	42.02	15	P	P	22 51 13.2	+2.3
TIXI				IAmb	IAmb	22 51 18.3	
	comp=Z,6.5nm,1.1s						
GAZ	Gaziantep	42.08	104	P	P	22 51 11.9	+0.1
GAZ				IAmb	IAmb	22 51 15.8	
	comp=Z,5.1nm,1.0s						
BMAR	Burnt Mountain	42.92	333	P	P	22 51 20.7	+2.3
MARD	Mardin	43.46	100	P	P	22 51 23.4	+0.3
MARD				IAmb	IAmb	22 51 28.2	
	comp=Z,9.7nm,1.2s						
ILAR	Eielson Array	45.71	332	P	P	22 51 42.5	+1.9
	comp=Z,1.2nm,0.9s,baz=27,slow=6.2,SNR=9.0						
ILAR				PcP	PcP	22 53 20.2	+2.0
	comp=Z,1.2nm,1.0s,baz=353,slow=3.7,SNR=7.0						
MDM	Murphy Dome	45.81	333	P	P	22 51 43.7	+2.3
MDM				IAmb	IAmb	22 51 49.8	
	comp=Z,5.9nm,1.0s						
IMAR	Indian Mountai	45.88	337	P	P	22 51 44.6	+2.7
BCAR	Beaver Creek A	46.14	329	P	P	22 51 46.8	+2.8
KURK	Kurchatov	48.07	58	P	P	22 52 00.6	+1.4
KURK				IAmb	IAmb	22 52 04.5	
	comp=Z,3.1nm,0.9s						
KKAR	Karatay Array	51.23	70	P	P	22 52 24.3	+0.9
KKAR	Karatay Array	51.23	70	P	P	22 52 23.7	+0.3
KKAR				IAmb	IAmb	22 52 30.4	
	comp=Z,4.3nm,1.4s						
MK31	Makanchi Array	52.68	58	P	P	22 52 35.2	+1.1
MKAR	Makanchi Array	52.68	58	P	P	22 52 36.2	+2.0
	comp=Z,0.9nm,0.9s,baz=333,slow=5.5,SNR=5.8						
MKAR	Makanchi Array	52.68	58	P	P	22 52 35.4	+1.2
MCMT	McKenzie Canyo	52.77	297	P	P	22 52 35.2	+0.1
TOA0	Torodi Ar. Sit	53.12	157	P	P	22 52 36.5	-1.2
TORD	Torodi Ar. Bea	53.12	157	P	P	22 52 38.4	+0.8
	comp=Z,0.6nm,0.7s,baz=343,slow=8.5,SNR=4.2						
TORD				LR	LR	23 14 52.4	
	comp=Z,18nm,18.3s,baz=290,slow=36						
TORD	Torodi Ar. Bea	53.12	157	P	P	22 52 37.3	-0.3
PD31	Pinedale Array	53.23	293	P	P	22 52 39.3	+0.8
PD31				IAmb	IAmb	22 52 44.2	
	comp=Z,6.2nm,1.0s						
PDAR	Pinedale Array	53.23	293	P	P	22 52 39.5	+0.9
	comp=Z,5.3nm,1.0s,baz=55,slow=7.8,SNR=15						
PDAR				LR	LR	23 13 54.6	
	comp=Z,48nm,18.0s,baz=8.0,slow=34						
PDAR	Pinedale Array	53.23	293	P	P	22 52 38.4	-0.1
GAR	Garm	54.60	73	P	P	22 52 49.0	+0.5
HWUT	Hardware Ranch	55.00	294	P	P	22 52 52.3	+0.9
HWUT				IAmb	IAmb	22 52 57.3	
	comp=Z,4.5nm,0.8s						
SRU	San Rafael Swe	56.72	292	P	P	22 53 04.9	+1.2
PV02	Paradox Valley	56.77	290	P	P	22 53 04.7	+0.5
WMQ	Urumqi	57.19	56	*eP*	P	22 53 10.4	+3.5
SONM	Songino Array	59.61	40	P	P	22 53 26.3	+2.5
	comp=Z,0.9nm,0.9s,baz=308,slow=7.3,SNR=4.3						
WUAZ	Wupatki	60.16	290	P	P	22 53 29.3	+1.5
NVAR	Mina Array Bea	60.35	297	P	P	22 53 31.4	+2.3
	comp=Z,0.5nm,0.8s,baz=54,slow=4.6,SNR=3.1						
TXAR	Lajitas Array	62.34	280	P	P	22 53 43.9	+1.4
	comp=Z,1.1nm,0.9s,baz=52,slow=5.2,SNR=8.2						
TXAR				LR	LR	23 19 09.4	
	comp=Z,59nm,19.4s,baz=0.0,slow=34						
TXAR	Lajitas Array	62.34	280	P	P	22 53 43.1	+0.6
HHC	Hu-ho-hao-te	67.48	40	*eP*	P	22 54 16.8	+0.9
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,7.0s						
BOSA	Boshof	98.73	143	LR	LR	23 47 02.7	
	comp=Z,16nm,19.2s,baz=36,slow=39						

*IDC **19** 22:44:47.2±12.0, 36°.08N×70°.31E, h138km±119km, mb3.3/5, mb1 3.4/6, mb1mx3.0/42, mbtmp3.7/6, ML2.9/1, Error ellipse: s-maj=57.6km s-min=30.5km az=25.0*
*NNC **19** 22:44:59.5±2.6, 36°.89N×70°.41E, h191km±41km, mb3.0, mpv4.1, Error ellipse: s-maj=25.4km s-min=14.1km az=20.0*

ISC 19 22:44:55.4±1.2, 36°.6N±0°.1×70°.4E±0°.1, h204km, n26, σ1831/28, mb3.6/4, 4C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
AML	Almayashu	6.10	23	P	Pn		22 46 24.6	+0.4
	SNR=186							
UCH	Uchtor	6.47	28	P	Pn		22 46 29.7	+0.6
	SNR=21							
KK31	Karatay Array	6.52	0	⇑P	Pn		22 46 29.2	-0.1
	3.0nm,0.3s,baz=169,slow=9.4,SNR=103							
KK31				⇑S	S		22 47 40.5	-3.3
	1.4nm,0.2s,baz=12,slow=17,SNR=4.6							
MRKS	Merke	6.53	18	Lg	Lg		22 47 42.6	
	28nm,0.5s							
EKS2	Erkin-Say	6.60	22	P	Pn		22 46 31.3	+0.8
	SNR=33							
AAK	Ala-Archa	6.82	26	P	Pn		22 46 34.1	+0.8
	SNR=13							
AAK	Ala-Archa	6.82	26	⇓P	Pn		22 46 33.7	+0.4
	2.6nm,0.2s							
AAK				⇑S	S		22 47 49.7	-1.2
	20nm,0.7s							
KBK	Karagaybulak	7.00	28	P	Pn		22 46 36.7	+1.0
	SNR=6.0							
CHMS	Chumysh	7.22	26	P	Pn		22 46 39.0	+0.6
	SNR=10							
USP	Ospenovka	7.38	24	P	Pn		22 46 40.6	+0.2
	SNR=14							
TKM2	Tokmak 2	7.48	30	P	Pn		22 46 42.3	+0.4
	SNR=19							
TKM2	Tokmak 2	7.48	30	⇑P	Pn		22 46 41.9	0.0
	13nm,0.5s							
TKM2				⇓S	S		22 48 04.2	-2.4
	5.7nm,0.8s							
KST	Kastek	7.73	32	P	Pn		22 46 46.4	+1.2
	10nm,0.4s							
DGS	Degeres	7.82	30	P	Pn		22 46 46.6	+0.4
	2.3nm,0.4s							
KRBS	Karabastau	8.16	28	P	Pn		22 46 51.2	+0.5
	3.9nm,0.3s							
KOTS	Kotyrbulak	8.40	36	P	Pn		22 46 55.2	+1.4
	15nm,0.4s							
KTBS	Karatobe	8.58	32	P	Pn		22 46 57.8	+1.7
	1.9nm,1.2s							
MK31	Makanchi Array	13.50	37	P	Pn		22 48 00.1	+1.2
	0.3nm,0.5s,baz=214,slow=12,SNR=4.4							
MKAR	Makanchi Array	13.50	37	P	Pn		22 47 59.3	+0.5
	0.1nm,0.3s,baz=217,slow=11,SNR=3.1							
AB31	Akbulak array	14.80	332	P	P		22 48 16.8	+1.2
	0.8nm,0.3s,baz=152,slow=13,SNR=60							
AKTO	Aktyubinsk	16.49	331	⇓P	Pn		22 48 35.4	+0.2
	2.7nm,0.8s							
ZALV	Zalesovo Beam	20.04	25	P	P		22 49 14.2	+1.6
	0.8nm,0.3s,baz=216,slow=10.0,SNR=5.9							
FINES	FINESS Array B	37.17	326	P	P		22 51 47.5	+1.1
	2.0nm,0.9s,baz=120,slow=8.2,SNR=4.4							
ARCES	ARCESS Array B	40.90	338	P	P		22 52 18.9	+1.7
	4.8nm,1.0s,baz=118,slow=7.5,SNR=4.5							
TORD	Torodi Ar. Bea	65.27	268	P	P		22 55 13.7	-1.8
	0.3nm,0.5s,baz=39,slow=6.2,SNR=5.2							
WRA	Warramunga Arr	82.42	122	P	P		22 56 53.4	-1.4
	0.2nm,0.7s,baz=327,slow=4.3,SNR=1.9							

*IDC **19** 23:22:58.1±1.1, 1°.83N×126°.22E, h0km, mb4.0/7, mb1 4.0/8, mb1mx3.7/41, mbtmp3.9/8, ML3.5/1, MS2.9/3, Ms1 3.0/3, ms1mx2.5/34, Error ellipse: s-maj=117.4km s-min=16.8km az=72.0*
*DJA **19** 23:23:02.4±0.9, 2°.N±2°×12°.6E±°, h16km±8km, M3.9/13, mb4.1/2, MLv3.8/13*
*NEIC **19** 23:23:03.4±0.6, 1°.9N±0°.1×126°.4E±0°.1, h41km±9km, mb4.2/12, Error ellipse: s-maj=22.4km s-min=9.5km az=220.0*

ISC 19 23:23:04.2±0.6, 1°.89N±0°.04×126°.52E±0°.05, h47km, n40, σ1832/42, mb4.1/13, MS2.8/3, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
TNTI	Ternate	1.40	142	P	Pn		23 23 27.1	-0.2
TNTI	Ternate	1.40	142		Pn		23 23 26.8	-0.6
TNTI				Sn	Sn		23 23 45.5	+0.9
SGSI	Sangihe	2.04	331	P	Pn		23 23 34.7	-1.4
SGSI				S	Sn		23 23 59.7	-0.7
LBMI	Labuha	2.70	159	P	Pn		23 23 45.3	+0.2
KMSI	Cibinong	2.85	243	P	Pn		23 23 46.8	-0.4
KMSI				S	Sn		23 24 21.0	+0.7
GTOI	Gorontalo	3.72	250	P	Pn		23 23 59.0	-0.2
GTOI				S	Sn		23 24 44.5	+2.8
LUWI	Luwuk	4.74	232	P	Pn		23 24 13.2	0.0
LUWI				S	Sn		23 25 08.9	+2.0
MRSI	Marisa	4.78	253	P	Pn		23 24 12.9	-0.9
KCP	Kidapawan	5.28	344	⇑*i*P	Pn		23 24 25.1	+4.4
KCP				*i* S	Sn		23 25 26.1	+5.7
APSI	Ampana	5.60	240	P	Pn		23 24 25.7	+0.6
	0.1nm29nm,1.1s							
TOLI2	Tolitoli	5.78	262	Pn	Pn		23 24 25.7	-1.8
MPSI	Mapaga	6.79	257	P	Pn		23 24 40.1	-1.3
MTN	Manton Dam	15.34	163	Pn	Pn		23 26 37.1	-0.7
FITZ	Fitzroy Crossi	19.88	182	P	P		23 27 30.6	-1.2
	0.1nm,0.3s,baz=2.7,slow=11,SNR=1.9							
FITZ	Fitzroy Crossi	19.88	182	P	P		23 27 30.1	-1.6
GUMO	Guam	21.56	56	LR	LR		23 34 35.5	
	comp=Z,30nm,20.9s,baz=214,slow=32							
WB0	Warramunga Arr	22.87	161	P	P		23 28 02.7	-1.1
WB0				IAmb	IAmb		23 28 07.4	
	comp=Z,5.0nm,0.7s							
WRA	Warramunga Arr	23.01	161	P	P		23 28 04.5	-0.8
	comp=Z,4.3nm,0.5s,baz=339,slow=11,SNR=46							
WRA	Warramunga Arr	23.01	161	P	P		23 28 04.3	-1.1
KRVT	Keravat (AS076	26.23	104	LR	LR		23 37 44.6	
	comp=Z,31nm,20.9s,baz=243,slow=34							
AS31	Alice Springs	26.40	165	P	P		23 28 36.6	0.0
ASAR	Alice Springs	26.40	165	P	P		23 28 37.4	+0.8
	comp=Z,1.4nm,0.5s,baz=337,slow=9.9,SNR=17							
ASAR	Alice Springs	26.40	165	P	P		23 28 37.0	+0.5
CMAR	Chiang Mai Arr	31.65	303	LR	LR		23 43 20.6	
	comp=Z,2nm,19.1s,baz=165,slow=39							
BBOO	Buckleboo	35.67	166	P	P		23 29 57.8	-0.3
SONM	Songino Array	48.97	342	P	P		23 31 46.5	+0.4
	comp=Z,0.4nm,0.6s,baz=171,slow=10,SNR=2.4							
MK31	Makanchi Array	58.94	326	P	P		23 32 58.3	-0.5
MK31				IAmb	IAmb		23 32 60.0	
	comp=Z,3.5nm,1.5s							
MKAR	Makanchi Array	58.94	326	P	P		23 32 58.5	-0.3
	comp=Z,1.4nm,0.4s,baz=119,slow=7.8,SNR=46							
MKAR	Makanchi Array	58.94	326	P	P		23 32 58.1	-0.7
MAKZ	Makanchi	59.13	326	P	P		23 32 59.7	-0.4
MAKZ				IAmb	IAmb		23 33 01.2	
	comp=Z,1.3nm,0.6s							
ZALV	Zalesovo Beam	62.13	334	P	P		23 33 19.5	-0.9
	comp=Z,0.4nm,0.4s,baz=127,slow=9.3,SNR=2.9							
KURK	Kurchatov	63.17	328	P	P		23 33 26.8	-0.6
KKAR	Karatay Array	64.43	318	P	P		23 33 35.1	-0.8
BRVK	Borovoye	68.81	327	P	P		23 34 03.4	-0.2
BRVK				IAmb	IAmb		23 34 13.7	
	comp=Z,3.9nm,1.2s							
NRIK	Noril'sk	72.16	346	P	P		23 34 24.6	+0.9
	comp=Z,0.9nm,0.3s,baz=90,slow=6.1,SNR=4.4							
ABKAR	Akbulak array	73.44	321	P	P		23 34 31.1	-0.6
ABKAR	Akbulak array	73.44	321	P	P		23 34 31.3	-0.3
ABKAR				IAmb	IAmb		23 34 32.2	
	comp=Z,0.9nm,0.7s							
ARU	Arti	76.37	328	P	P		23 34 48.1	-0.4
ARU				IAmb	IAmb		23 34 49.0	
	comp=Z,2.7nm,0.6s							
VNDA	Vanda	81.64	173	P	P		23 35 17.8	+0.9
	comp=Z,0.3nm,0.4s,baz=309,slow=5.0,SNR=2.3							
VNDA	Vanda	81.64	173	P	P		23 35 16.8	-0.1
VNDA				IAmb	IAmb		23 35 24.1	
	comp=Z,1.6nm,1.1s							

WEL 19 23:42:49.2, 37°S.3°×17°7E±°, h8km±1km, M2.7/9, ML2.9/9, MLv2.7/9, Error ellipse: s-maj=0.0km s-min=0.0km az=143.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
WSRZ	White Island S	0.04	156	P	Pg		23 42 51.3	+0.5
WSRZ				S	Sg		23 42 52.3	+0.3
WIZ	White Island	0.05	151	P	Pg		23 42 51.4	+0.5
WHRZ	Whale Island	0.40	201	P	Pb		23 42 58.8	+0.2
HAZ	Te Kaha	0.57	119	P	Pb		23 43 01.2	-0.2
OPRZ	Ohinepanea	0.60	233	P	Pb		23 43 01.7	-0.3
MARZ	Manawahe	0.63	217	P	Pb		23 43 02.7	+0.2
RUGZ	Raukumara Rang	0.64	140	P	Pb		23 43 02.2	-0.5
MYRZ	Mayor Island	0.76	285	P	Pb		23 43 04.7	+0.1
URZ	Urewera	0.78	183	P	Pb		23 43 05.2	+0.2
OMRZ	Omania	0.88	225	P	Pb		23 43 07.0	+0.2
KARZ	Kaharoa	0.90	233	P	Pn		23 43 07.8	-0.4
MWZ	Matawai	0.90	161	P	Pb		23 43 07.4	+0.2
TWGZ	Tauwhareparae	0.95	137	P	Pn		23 43 09.3	+0.3
KMRZ	Kaimai	1.03	249	P	Pn		23 43 12.0	+2.0
RAGZ	Rawiri	1.03	169	P	Pn		23 43 10.7	+0.6
PUZ	Puketiti	1.05	124	P	Pn		23 43 11.0	+0.7
WMGZ	Waiomatatini S	1.05	109	P	Pn		23 43 11.8	+1.5
RIGZ	Rimuhau	1.31	159	P	Pg		23 43 16.0	+1.6
RAHZ	Arahi	1.44	182	P	Pg		23 43 18.5	+1.8
MKAZ	Moumakai	1.64	283	P	Pg		23 43 20.2	-0.4
BKZ	Black Stump Fm	1.76	197	P	Pg		23 43 24.0	+1.1
LREZ	Lake Rotokare	2.93	227	P	Pn		23 43 37.9	+1.8

*IDC **19** 23:55:48.4±4.0, 12°.55N×143°.83E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.4/41, mbtmp3.9/3, Error ellipse: s-maj=187.2km s-min=21.9km az=123.0*
*NEIC **19** 23:55:52.5±1.1, 12°.5N±0°.1×144°.2E±0°.2, h35km±2km, mb4.3/9, Error ellipse: s-maj=37.8km s-min=12.6km az=294.0*

ISC 19 23:55:51.6±1.0, 12°.5N±0°.1×144°.2E±0°.2, h27km, n19, σ0°65/18, mb4.2/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
GUMO	Guam	1.30	29	P	Pn	Pb	23 56 15.9	+0.5
	170nm,0.3s,baz=241,slow=13,SNR=34							
GUMO				Sn	Sn		23 56 30.2	-0.3
	1µm,0.3s,baz=53,slow=21,SNR=32							
GUMO	Guam	1.30	29			Pb	23 56 15.7	+0.3
GUMO				Sn	Sn		23 56 30.1	-0.5
PATS	Pohnpei	14.97	111	Pn	Pn		23 59 21.3	-0.2
H11N1	WAKE ISLAND Hy	22.94	69	T	T		00 24 07.2	
	baz=256,slow=75,SNR=7.8							
H11N2	WAKE ISLAND Hy	22.95	69	T	T		00 24 08.3	
	baz=256,slow=75,SNR=5.4							
H11N3	WAKE ISLAND Hy	22.96	69	T	T		00 24 08.8	
	baz=256,slow=75,SNR=9.1							
WB0	Warramunga Arr	33.44	197	P	P		00 02 29.5	+1.0
WB0				IAmb	IAmb		00 02 36.0	
	comp=Z,7.0nm,1.4s							
WB2	Warramunga Arr	33.62	197	P	P		00 02 30.1	+0.1
WB2				IAmb	IAmb		00 02 31.9	
	comp=Z,4.2nm,1.1s							
WRA	Warramunga Arr	33.62	197	P	P		00 02 31.1	+1.1
	comp=Z,1.6nm,0.8s,baz=18,slow=9.2,SNR=15							
WRA	Warramunga Arr	33.62	197	P	P		00 02 30.4	+0.4
WC3	Warramunga Arr	33.63	197	P	P		00 02 30.9	+0.9
WC3				IAmb	IAmb		00 02 32.0	
	comp=Z,3.8nm,0.9s							
FITZ	Fitzroy Crossi	35.46	211	P	P		00 02 46.1	+0.2
FITZ				IAmb	IAmb		00 02 50.3	
	comp=Z,3.0nm,1.2s							
AS31	Alice Springs	37.28	196	P	P		00 03 01.2	-0.2
ASAR	Alice Springs	37.28	196	P	P		00 03 02.5	+1.0
	comp=Z,0.6nm,0.5s,baz=21,slow=14,SNR=6.3							
ASAR	Alice Springs	37.28	196	P	P		00 03 00.5	-1.0
PSAD2	Pilbara Seismi	41.39	215	P	P		00 03 35.2	-0.6
STKA	Stephens Creek	44.14	183	P	P		00 03 58.3	+0.3
	comp=Z,2.1nm,0.5s,baz=355,slow=12,SNR=4.4							
STKA	Stephens Creek	44.14	183	P	P		00 03 57.7	-0.2
BBOO	Buckleboo	45.67	190	P	P		00 04 10.1	-0.1

*MOS **20** 00:10:41.8±1.2, 49°.40N×156°.49E, h60km, mb4.5/1, Error ellipse: s-maj=24.0km s-min=4.2km az=79.1*
MOS Felt (II) at Severo-Kuril'sk.
*KRSC **20** 00:10:46.2±2.4, 49°.84N×156°.87E, h34km±28km, ML4.5, FELT [II-III] at Severo-Kurilsk.*

ISC 20 00:10:43.8±2.0, 49°.6N±0°.1×156°.53E±0°.07, h47km±20km, n61, σ2906/80, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
SKR	Severo-Kuril's	1.15	347	*eP*	Pn		00 11 03.5	0.0
SKR				*e*S	Sn		00 11 15.8	-2.3
SKR	Severo-Kuril's	1.15	347	⇓*i*PN	Pn		00 11 03.8	+0.3
SKR				*i* S	Sn		00 11 16.1	-2.0
SKR				pmax	pmax			
	comp=Z,2µm,0.5s							
SKR				smax	smax			
	comp=E,13µm,0.6s							
SKR				smax	smax			
	comp=N,7µm,0.5s							
ALID	Alaid	1.45	335	*eP*	Pn		00 11 08.9	+1.2
ALID				*e*S	Sn		00 11 25.1	-0.6
ALID	Alaid	1.45	335	PN	Pn		00 11 08.9	+1.2
ALID				S	Sn		00 11 25.1	-0.6
PAU	Pauzhetka	1.92	5	*eP*	Pn		00 11 14.5	+0.6
PAU				*e*S	Sn		00 11 35.3	-1.5
PAU	Pauzhetka	1.92	5	PN	Pn

TUMR	**Tumrok**	**6.14**	**20**	PN	**Pn**	**00 12 14.8**	**+2.9**		
KMNR	**Kamenistaya**	**6.60**	**19**	*e*P	Pn	00 12 23.1	+4.9		
KMNR	**Kamenistaya**	**6.60**	**19**	PN	Pn	00 12 23.1	+4.9		
KBTR	**Krutoberegovo**	**7.66**	**27**	*e*P	**Pn**	**00 12 35.3**	**+2.6**		
KBTR	**Krutoberegovo**	**7.66**	**27**	PN	**Pn**	**00 12 35.3**	**+2.6**		
YSS	**Yuzh-Sakhalins**	**9.55**	**259**	*i* PN	**Pn**	**00 12 58.9**	**+0.3**		
TIXI	**Tiksi**	**25.51**	**340**	*i* P	**P**	**00 16 06.4**	**-0.8**		
OBN	**Obninsk**	**64.26**	**326**	*e*P	**P**	**00 21 12.4**	**-1.1**		
OBN				pmax	pmax				
	comp=Z,4.0nm,0.9s								

IDC ***20*** *00:14:09.9±0.9, 9°.78S×159°.53E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.7/28, mbtmp3.7/6, MS3.4/1, Ms1 3.4/1, ms1mx2.6/33, Error ellipse: s-maj=40.5km s-min=15.0km az=141.0*

ISC 20 00:14:13.4±1.0, 9°.8S±0°.2×159°.5E±0°.2, h22km, n7, σ0s82/8, mb3.6/6, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.56**	**49**	Pn	**Pb**	**00 14 24.8**	**+0.2**
	791nm,0.3s,baz=200,slow=6.7,SNR=106						
HNR				LR	LR	00 14 30.7	
	comp=Z,47nm,19.8s,baz=156,slow=39						
HNR				Sn	**Sb**	**00 14 31.7**	**-0.4**
	2µm,0.3s,baz=116,slow=23,SNR=22						
WRA	**Warramunga Arr**	**26.31**	**245**	P	**P**	**00 19 47.9**	**+0.1**
	1.2nm,0.6s,baz=72,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**28.07**	**237**	P	**P**	**00 20 02.5**	**-1.2**
	0.9nm,0.7s,baz=62,slow=9.9,SNR=7.6						
VNDA	**Vanda**	**67.71**	**179**	P	**P**	**00 25 09.3**	**+0.6**
	0.6nm,0.7s,baz=337,slow=5.6,SNR=4.3						
SONM	**Songino Array**	**74.13**	**326**	P	**P**	**00 25 48.6**	**+0.4**
	0.3nm,0.5s,baz=142,slow=7.3,SNR=2.6						
SONM				LR	LR	00 56 34.7	
	comp=Z,28nm,21.3s,baz=154,slow=34						
ILAR	**Eielson Array**	**84.38**	**20**	P	**P**	**00 26 42.9**	**-0.8**
	0.4nm,0.9s,baz=236,slow=5.2,SNR=2.9						
MKAR	**Makanchi Array**	**88.47**	**318**	P	**P**	**00 27 04.9**	**+0.7**
	0.2nm,0.7s,baz=108,slow=4.7,SNR=1.7						

WEL 20 00:20:41.8, 37°S±5°×17°7E±°, h224km±6km, M2.9/16, MLv2.9/16, Error ellipse: s-maj=0.0km s-min=0.0km az=92.5, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	**Te Kaha**	**0.97**	**126**	P	Pn	00 21 13.4	-0.4
HAZ				S	S	00 21 36.3	-2.5
RUGZ	**Raukumara Rang**	**1.05**	**138**	P	Pn	00 21 13.5	-0.9
RUGZ				S	S	00 21 36.9	-3.1
URZ	**Urewera**	**1.10**	**167**	P	Pn	00 21 14.2	-0.4
URZ				S	S	00 21 38.8	-1.5
MXZ	**Matakaoa Point**	**1.27**	**108**	P	Pn	00 21 15.8	0.0
MXZ				S	S	00 21 41.3	-1.0
MUGZ	**Murupara**	**1.29**	**181**	P	Pn	00 21 15.8	-0.1
MUGZ				S	S	00 21 41.1	-1.6
MWZ	**Matawai**	**1.29**	**153**	P	Pn	00 21 15.9	-0.1
MWZ				S	S	00 21 41.4	-1.3
MKAZ	**Moumakai**	**1.30**	**273**	P	Pn	00 21 16.8	+0.8
TWGZ	**Tauwhareparae**	**1.37**	**136**	P	Pn	00 21 17.3	+0.7
TWGZ				S	S	00 21 43.8	0.0
GRZ	**Great Barrier**	**1.42**	**311**	P	Pn	00 21 17.2	+0.2
RTZ	**Ruatahuna**	**1.43**	**174**	P	Pn	00 21 16.9	-0.2
RTZ				S	S	00 21 43.3	-1.5
WMGZ	**Waiomatatini S**	**1.44**	**116**	P	Pn	00 21 17.4	+0.4
WMGZ				S	S	00 21 43.7	-0.9
PUZ	**Puketiti**	**1.46**	**127**	P	Pn	00 21 17.3	0.0
PUZ				S	S	00 21 43.1	-1.9
MBAZ	**Motutapu North**	**1.57**	**285**	P	Pn	00 21 18.8	+0.7
MTHZ	**Maungataniwha**	**1.66**	**178**	P	Pn	00 21 18.8	-0.1
MTHZ				S	S	00 21 46.9	-1.2
RIGZ	**Rimuhau**	**1.70**	**153**	P	Pn	00 21 19.9	+0.6
RIGZ				S	S	00 21 48.0	-0.7
CNGZ	**Carnagh Statio**	**1.71**	**139**	P	Pn	00 21 18.1	-1.3
RAHZ	**Arahi**	**1.74**	**172**	P	Pn	00 21 20.1	+0.4
RAHZ				S	S	00 21 48.2	-1.1
WHHZ	**Waihua**	**1.92**	**169**	P	Pn	00 21 21.6	+0.3
WHHZ				S	S	00 21 50.9	-1.2
PRGZ	**Paritu Road**	**1.94**	**154**	P	Pn	00 21 22.4	+0.9
KNZ	**Kokohu**	**1.96**	**159**	P	Pn	00 21 21.4	-0.2
BKZ	**Black Stump Fm**	**1.99**	**187**	P	Pn	00 21 21.5	-0.5
HIZ	**Hauiti**	**2.02**	**229**	P	Pn	00 21 23.5	+1.2
ARHZ	**Aropaoanui**	**2.08**	**175**	P	Pn	00 21 23.0	+0.2
TMVZ	**Te Maari**	**2.10**	**204**	P	Pn	00 21 23.6	+0.4
ETVZ	**East Tongariro**	**2.12**	**203**	P	Pn	00 21 23.7	+0.3
WTVZ	**West Tongariro**	**2.14**	**206**	P	Pn	00 21 24.0	+0.5
MHGZ	**Mahia Peninsul**	**2.15**	**156**	P	Pn	00 21 23.8	+0.3
TWVZ	**Taurewa**	**2.16**	**209**	P	Pn	00 21 24.0	+0.3
NGZ	**Ngauruhoe**	**2.19**	**205**	P	Pn	00 21 24.9	+0.8
KWHZ	**Kaweka Forest**	**2.25**	**187**	P	Pn	00 21 24.3	-0.3
MCHZ	**McNeill Hill**	**2.25**	**182**	P	Pn	00 21 24.8	+0.2
TUVZ	**Tukino**	**2.26**	**203**	P	Pn	00 21 24.9	+0.1
FWVZ	**Far West T-bar**	**2.28**	**205**	P	Pn	00 21 25.4	+0.3
WHVZ	**Whangaehu Hut**	**2.29**	**204**	P	Pn	00 21 25.2	0.0
WCZ	**Waipu Caves**	**2.33**	**302**	P	Pn	00 21 25.9	+0.5
WNVZ	**Wahianoa**	**2.33**	**203**	P	Pn	00 21 25.4	-0.1
MOVZ	**Moawhango**	**2.36**	**200**	P	Pn	00 21 25.1	-0.6
BHHZ	**Black Hill Sta**	**2.37**	**194**	P	Pn	00 21 25.3	-0.5
PKVZ	**Pokaka**	**2.38**	**208**	P	Pn	00 21 26.4	+0.5
KRHZ	**Kereru**	**2.47**	**187**	P	Pn	00 21 26.3	-0.5
CKHZ	**Cape Kidnapper**	**2.48**	**175**	P	Pn	00 21 27.0	+0.2
VRZ	**Vera Road**	**2.51**	**219**	P	Pn	00 21 28.5	+1.3
KAHZ	**Kahuranaki**	**2.60**	**178**	P	Pn	00 21 28.0	-0.3
PNHZ	**Pukenui**	**2.76**	**189**	P	Pn	00 21 29.1	-0.9
PXZ	**Pawanui**	**2.84**	**179**	P	Pn	00 21 30.0	-0.8
WPHZ	**Waipukurau**	**2.88**	**185**	P	Pn	00 21 30.5	-0.8
TSZ	**Takapari Road**	**2.94**	**192**	P	Pn	00 21 31.3	-0.6
PRHZ	**Porangahau**	**3.08**	**182**	P	Pn	00 21 33.2	-0.2
DVHZ	**Dannevirke**	**3.14**	**189**	P	Pn	00 21 32.9	-1.3
ANWZ	**Angora Road**	**3.27**	**184**	P	Pn	00 21 35.1	-0.7
BFZ	**Birch Farm**	**3.51**	**187**	P	Pn	00 21 37.5	-1.0
MRZ	**Mangatainoka R**	**3.59**	**195**	P	Pn	00 21 37.6	-1.8
HOWZ	**Holdsworth Sta**	**3.83**	**195**	P	Pn	00 21 40.3	-2.1
OGWZ	**Otaki Gorge**	**3.83**	**199**	P	Pn	00 21 40.6	-1.8
KIW	**Kapiti Island**	**3.95**	**201**	P	Pn	00 21 41.7	-2.0
TMWZ	**Te Maipa**	**3.97**	**190**	P	Pn	00 21 42.4	-1.6
MTW	**Mount Morrison**	**4.09**	**194**	P	Pn	00 21 43.3	-2.1
CAW	**Cannon Point**	**4.13**	**198**	P	Pn	00 21 44.0	-2.0
DUWZ	**D'Urville Isla**	**4.24**	**211**	P	Pn	00 21 45.5	-1.8
TRWZ	**Traveller**	**4.29**	**191**	P	Pn	00 21 46.0	-1.9
PAWZ	**Paruwai Farm**	**4.32**	**194**	P	Pn	00 21 46.0	-2.3
MSWZ	**Moikau Station**	**4.39**	**195**	P	Pn	00 21 46.8	-2.3
TCW	**Tory Channel**	**4.46**	**205**	P	Pn	00 21 48.0	-2.0
PLWZ	**Palliser**	**4.53**	**195**	P	Pn	00 21 48.3	-2.6
TUWZ	**Tuamarina**	**4.77**	**207**	P	Pn	00 21 51.6	-2.2
QRZ	**Quartz Range**	**4.92**	**221**	P	Pn	00 21 53.5	-2.2
KHZ	**Kahutara**	**5.79**	**205**	P	Pn	00 22 04.0	-2.5
GVZ	**Greta Valley S**	**6.45**	**205**	P	Pn	00 22 12.2	-2.8
OKCZ	**Okains Bay**	**7.12**	**202**	P	Pn	00 22 20.6	-2.9
MQZ	**McQueen's Vall**	**7.23**	**205**	P	Pn	00 22 21.0	-4.0
ARCZ	**Arundel**	**7.99**	**211**	P	Pn	00 22 31.5	-3.2
ODZ	**Otahua Downs**	**9.11**	**209**	P	Pn	00 22 46.7	-2.4

IDC 20 00:22:08.9±1.9, 3°.04S×148°.00E, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.7/35, mbtmp4.1/3, MS3.3/6, Ms1 3.3/6, ms1mx2.9/37, Error ellipse: s-maj=73.4km s-min=37.9km az=136.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**7.31**	**274**	LR	LR	00 26 26.8	
	comp=Z,188nm,18.3s,baz=211,slow=35						
HNR	**Honiara**	**13.46**	**119**	LR	LR	00 30 43.8	
	comp=Z,106nm,19.1s,baz=118,slow=38						
WRA	**Warramunga Arr**	**21.45**	**217**	P	P	00 26 57.7	-1.3
	2.3nm,0.8s,baz=42,slow=11,SNR=20						
WRA				LR	LR	00 35 52.7	
	comp=Z,53nm,19.0s,baz=175,slow=38						
ASAR	**Alice Springs**	**24.63**	**212**	P	P	00 27 31.0	-0.3
	3.0nm,0.8s,baz=43,slow=7.6,SNR=26						
ASAR				LR	LR	00 38 11.7	
	comp=Z,71nm,20.8s,baz=14,slow=39						
DZM	**Mont Dzumac**	**26.05**	**138**	LR	LR	00 36 26.4	
	comp=Z,115nm,18.9s,baz=91,slow=33						
FITZ	**Fitzroy Crossi**	**26.54**	**234**	P	P	00 27 50.3	+1.7
	6.4nm,0.9s,baz=60,slow=8.4,SNR=6.9						
FITZ				LR	LR	00 39 10.1	
	comp=Z,61nm,21.8s,baz=28,slow=38						

H11S3	**WAKE ISLAND Hy**	**28.22**	**40**	T	T	00 57 25.9	
	baz=222,slow=76,SNR=760						
H11S2	**WAKE ISLAND Hy**	**28.23**	**40**	T	T	00 57 25.8	
	baz=222,slow=76,SNR=822						
H11S1	**WAKE ISLAND Hy**	**28.24**	**40**	T	T	00 57 30.0	
	baz=222,slow=76,SNR=522						
H11N1	**WAKE ISLAND Hy**	**29.25**	**39**	T	T	00 58 43.9	
	baz=221,slow=76,SNR=97						
H11N3	**WAKE ISLAND Hy**	**29.26**	**39**	T	T	00 58 45.7	
	baz=221,slow=76,SNR=305						
H11N2	**WAKE ISLAND Hy**	**29.27**	**39**	T	T	00 58 45.0	
	baz=221,slow=76,SNR=280						
TORD	**Torodi Ar. Bea**	**145.21**	**289**	PKPbc	PKPbc	00 41 47.4	-1.8
	1.0nm,0.9s,baz=55,slow=4.8,SNR=4.9						
SIV	**San Ignacio**	**145.59**	**124**	PKPbc	PKPdf	00 41 50.1	-0.3
	0.8nm,0.5s,baz=258,slow=6.7,SNR=5.5						

IDC ***20*** *00:25:50.3±0.6, 9°.11N×126°.09E, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.1/45, mbtmp4.1/15, Error ellipse: s-maj=39.1km s-min=14.1km az=80.0*
MAN ***20*** *00:25:57.1, 9°.24N×126°.39E, h36km, mb4.6, ML3.4, MS3.3*
NEIC ***20*** *00:25:58±1.3, 9°.13N±0°.08×125°.96E±0°.06, h52km±7km, mb4.4/36, Error ellipse: s-maj=14.3km s-min=3.1km az=211.0*

ISC 20 00:25:57.6±1.0, 9°.20N±0°.03×126°.38E±0°.07, h52km±9km, n82, σ1s56/88, mb4.4/31, 5C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLSP	**General Luna,**	**0.63**	**337**	*e*P	**Pn**	**00 26 09.3**	**-1.3**
GLSP				*e*S	**Sn**	**00 26 20.1**	**+0.1**
BIP	**Bislig**	**0.98**	**188**	*e*P	**Pn**	**00 26 15.8**	**+0.6**
BIP				*i* S	**Sn**	**00 26 28.2**	**+0.1**
MSLP	**Maasin**	**1.76**	**302**	*e*P	**Pn**	**00 26 25.3**	**-0.4**
MSLP				*e*S	**Sn**	**00 26 52.2**	**+5.2**
CGP	**Cagayan de Oro**	**1.82**	**246**	*e*P	**Pn**	**00 26 27.9**	**+1.3**
CGP				*e*S	**Sn**	**00 26 49.4**	**+0.8**
BUKP	**Musuan**	**1.85**	**225**	*e*P	**Pn**	**00 26 27.8**	**+0.8**
BUKP				*e*S	**Sn**	**00 26 52.0**	**+2.6**
DAV	**Davao City (W)**	**2.26**	**201**	Pn	**Pn**	**00 26 31.9**	**-0.8**
KCP	**Kidapawan**	**2.53**	**210**	*i*P	**Pn**	**00 26 37.8**	**+1.5**
KCP				*i* S	**Sn**	**00 27 08.0**	**+2.1**
LLP	**Lapu-Lapu**	**2.62**	**295**	*e*P	**Pn**	**00 26 40.2**	**+2.6**
LLP				*i* S	**Sn**	**00 27 12.1**	**+3.8**
SKMP	**Bagumbayan, Su**	**3.23**	**214**	*e*P	**Pn**	**00 26 46.3**	**+0.5**
PAGZ	**Pagadian**	**3.26**	**246**	*e*P	**Pn**	**00 26 47.1**	**+0.9**
CNP	**Catarman**	**3.69**	**333**	*e*P	**Pn**	**00 26 53.7**	**+1.4**
CNP				*e*S	**Sn**	**00 27 35.2**	**+0.7**
CNOP	**Candoni, Negro**	**3.74**	**280**	*e*P	**Pn**	**00 26 54.1**	**+1.2**
CNOP				*e*S	**Sn**	**00 27 35.6**	**-0.1**
GUIM	**Jordan**	**3.99**	**291**	*e*P	**Pn**	**00 26 57.2**	**+0.9**
GUIM				*e*S	Sn	00 27 29.3	-13
PVCP	**Virac**	**4.88**	**334**	*e*P	**Pn**	**00 27 10.2**	**+1.7**
PVCP				*e*S	**Sn**	**00 28 05.8**	**+2.1**
JCNP	**Jose Panganiba**	**6.21**	**325**	*e*P	**Pn**	**00 27 27.4**	**+0.7**
LQP	**Lukban**	**6.80**	**316**	*e*P	Pn	00 27 40.4	+5.3
TOLI2	**Tolitoli**	**9.78**	**215**	Pn	Pn	00 28 11.2	-4.5
DLV	**T Lat**	**17.80**	**280**	Pn	**Pn**	**00 29 56.7**	**-5.3**
DLV				IAmb	IAmb	00 30 02.6	
	comp=Z,37nm,1.3s						
MTN	**Manton Dam**	**22.41**	**168**	P	**P**	**00 30 52.7**	**+0.7**
KNRA	**Kununurra**	**24.83**	**175**	P	**P**	**00 31 16.2**	**+1.0**
KNRA				IAmb	IAmb	00 31 21.9	
	comp=Z,4.9nm,0.7s						
FITZ	**Fitzroy Crossi**	**27.14**	**182**	P	**P**	**00 31 34.6**	**-1.5**
	comp=Z,3.0nm,0.9s,baz=38,slow=5.6,SNR=5.3						
FITZ	**Fitzroy Crossi**	**27.14**	**182**	P	**P**	**00 31 35.5**	**-0.5**
FITZ				IAmb	IAmb	00 31 37.7	
	comp=Z,8.0nm,1.2s						
WB0	**Warramunga Arr**	**29.85**	**165**	P	**P**	**00 31 59.7**	**-0.5**
WRA	**Warramunga Arr**	**30.00**	**165**	P	**P**	**00 32 00.1**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=345,slow=9.4,SNR=9.9						
WRA	**Warramunga Arr**	**30.00**	**165**	P	**P**	**00 32 02.0**	**+0.4**
WB2	**Warramunga Arr**	**30.01**	**165**	P	**P**	**00 32 01.8**	**+0.2**
ASAR	**Alice Springs**	**33.49**	**167**	P	**P**	**00 32 31.9**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=358,slow=7.7,SNR=5.5						
ASAR	**Alice Springs**	**33.49**	**167**	P	**P**	**00 32 32.4**	**+0.2**
USRK	**Ussuriysk Ar.**	**35.20**	**7**	P	**P**	**00 32 47.7**	**+0.9**
	comp=Z,5.9nm,0.8s,baz=193,slow=7.7,SNR=9.8						
SHL	**Shillong**	**36.57**	**301**	P	**P**	**00 32 56.2**	**-2.8**
SHL				IAmb	IAmb	00 32 59.6	
	comp=Z,5.2nm,0.7s						
FORT	**Forrest**	**39.79**	**178**	P	**P**	**00 33 26.5**	**+0.8**
H11S3	**WAKE ISLAND Hy**	**40.13**	**72**	T	T	01 16 28.1	
	baz=262,slow=75,SNR=188						
H11S1	**WAKE ISLAND Hy**	**40.14**	**72**	T	T	01 16 26.8	
	baz=262,slow=75,SNR=128						
H11S2	**WAKE ISLAND Hy**	**40.15**	**72**	T	T	01 16 24.9	
	baz=262,slow=75,SNR=211						
SONM	**Songino Array**	**42.05**	**340**	P	**P**	**00 33 44.0**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=236,slow=37,SNR=2.5						
BBOO	**Buckleboo**	**42.79**	**168**	P	**P**	**00 33 51.1**	**+0.8**
BBOO				IAmb	IAmb	00 33 59.7	
	comp=Z,16nm,1.2s						
STKA	**Stephens Creek**	**43.36**	**161**	P	**P**	**00 33 54.8**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=338,slow=12,SNR=2.9						
STKA	**Stephens Creek**	**43.36**	**161**	P	**P**	**00 33 55.4**	**+0.5**
TOO	**Toolangi**	**49.85**	**160**	P	**P**	**00 34 46.4**	**+0.7**
PEA0B	**Petropavlovsk-**	**50.56**	**24**	P	**P**	**00 34 52.7**	**+1.9**
PETK	**Petropavlovsk-**	**50.56**	**24**	P	**P**	**00 34 53.1**	**+2.2**
	comp=Z,2.3nm,0.5s,baz=201,slow=2.4,SNR=5.8						
PETK	**Petropavlovsk-**	**50.56**	**24**	P	**P**	**00 34 52.9**	**+2.0**
MK31	**Makanchi Array**	**52.94**	**323**	P	**P**	**00 35 08.2**	**-0.5**
MK31				IAmb	IAmb	00 35 09.3	
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**52.94**	**323**	P	**P**	**00 35 08.7**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=124,slow=8.0,SNR=30						
MKAR				PcP	**PcP**	**00 36 17.0**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=122,slow=3.7,SNR=3.7						
MKAR	**Makanchi Array**	**52.94**	**323**	P	**P**	**00 35 08.5**	**-0.3**
MAKZ	**Makanchi**	**53.13**	**323**	P	**P**	**00 35 09.8**	**-0.3**
MAKZ				IAmb	IAmb	00 35 10.6	
	comp=Z,2.9nm,0.7s						
NIL	**Nilore**	**54.42**	**305**	P	**P**	**00 35 18.7**	**-1.1**
NIL				IAmb	IAmb	00 35 20.5	
	comp=Z,4.5nm,0.8s						
ZAA0	**Zalesovo Array**	**55.61**	**332**	P	**P**	**00 35 27.5**	**-0.5**
ZALV	**Zalesovo Beam**	**55.61**	**332**	P	**P**	**00 35 26.9**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=99,slow=9.2,SNR=5.2						
ZALV	**Zalesovo Beam**	**55.61**	**332**	P	**P**	**00 35 27.0**	**-1.0**
KURK	**Kurchatov**	**57.00**	**326**	P	**P**	**00 35 37.7**	**-0.2**
KURK				IAmb	IAmb	00 35 38.3	
	comp=Z,4.2nm,0.8s						
KKAR	**Karatay Array**	**59.08**	**315**	P	**P**	**00 35 52.0**	**-0.7**
TIXI	**Tiksi**	**62.41**	**1**	P	**P**	**00 36 15.3**	**+0.6**
TIXI				IAmb	IAmb	00 36 16.0	
	comp=Z,4.2nm,0.8s						
BRVK	**Borovoye**	**62.67**	**326**	P	**P**	**00 36 16.1**	**-0.7**
BRVK				IAmb	IAmb	00 36 17.2	
	comp=Z,3.3nm,0.8s						
ABKAR	**Akbulak array**	**67.75**	**320**	P	**P**	**00 36 49.1**	**-0.8**
ABKAR	**Akbulak array**	**67.75**	**320**	P	**P**	**00 36 48.9**	**-0.9**
ABKAR				IAmb	IAmb	00 36 50.0	
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**70.17**	**327**	P	**P**	**00 37 03.6**	**-1.1**
ARU				IAmb	IAmb	00 37 04.4	
	comp=Z,3.6nm,0.7s						
CASY	**Casey**	**76.18**	**187**	P	**P**	**00 37 40.4**	**+0.5**
IMAR	**Indian Mountai**	**77.52**	**24**	P	**P**	**00 37 49.3**	**+1.7**
CAST	**Castle Rocks**	**78.04**	**27**	P	**P**	**00 37 52.6**	**+2.1**
CAST				IAmb	IAmb	00 38 08.2	
	comp=Z,7.8nm,1.4s						
RAYN	**Ar Rayn**	**78.07**	**292**		**P**	**00 37 50.5**	**-1.0**
RAYN				IAmb	IAmb	00 37 52.4	
	comp=Z,3.0nm,1.0s						
BPAW	**Bear Paw Mtn.**	**78.56**	**26**	P	**P**	**00 37 55.2**	**+1.8**
BPAW				IAmb	IAmb	00 37 56.5	
	comp=Z,3.0nm,0.9s						
I23K	**Minto, Yukon-K**	**79.30**	**25**	P	**P**	**00 37 59.5**	**+2.1**
I23K				IAmb	IAmb	00 38 09.9	
	comp=Z,7.4nm,1.5s						
CCB	**Clear Creek Bu**	**79.95**	**26**	P	**P**	**00 38 02.3**	**+1.3**
SCM	**Sheep Creek Mo**	**80.20**	**29**	P	**P**	**00 38 04.1**	**+1.6**
ILAR	**Eielson Array**	**80.35**	**26**	P	**P**	**00 38 03.5**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=235,slow=5.0,SNR=10						
M24K	**Tolsona, Glenn**	**80.74**	**28**	P	**P**	**00 38 07.7**	**+2.4**
BMAR	**Burnt Mountain**	**81.20**	**23**	P	**P**	**00 38 10.1**	**+2.4**
K27K	**Chicken**	**82.47**	**26**	P	**P**	**00 38 16.8**	**+2.4**
K27K				IAmb	IAmb	00 38 17.7	
	comp=Z,6.5nm,1.1s						
BARN	**Barnard Glacie**	**82.97**	**29**	P	**P**	**00 38 19.3**	**+2.1**
BARN				IAmb	IAmb	00 38 35.0	

	comp=Z,5.1nm,1.1s						
CTGM	**Chitina Glacie**	**83.14**	**29**	P	**P**	**00 38 20.7**	**+2.7**
SPITS	**Spitsbergen Ar**	**85.08**	**349**	P	**P**	**00 38 26.7**	**-0.7**
	comp=Z,5.6nm,0.8s,baz=101,slow=8.0,SNR=5.2						
ARA0	**ARCESS Array S**	**85.22**	**340**	P	**P**	**00 38 28.2**	**-0.1**
ARCES	**ARCESS Array B**	**85.22**	**340**	P	**P**	**00 38 27.9**	**-0.3**
	comp=Z,6.1nm,0.7s,baz=84,slow=6.4,SNR=14						
INK	**Inuvik**	**85.23**	**22**	P	**P**	**00 38 29.4**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=354,slow=2.0,SNR=3.7						
FINES	**FINESS Array B**	**86.88**	**332**	P	**P**	**00 38 35.9**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=64,slow=4.4,SNR=6.7						
FINES	**FINESS Array B**	**86.88**	**332**	P	**P**	**00 38 36.0**	**-0.6**
CSS	**Mathiatis**	**87.28**	**305**	P	**P**	**00 38 37.9**	**-1.2**
VNDA	**Vanda**	**88.86**	**173**	P	**P**	**00 38 46.2**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=330,slow=5.8,SNR=5.2						
VNDA	**Vanda**	**88.86**	**173**	P	**P**	**00 38 46.6**	**+1.0**
VNDA				IAmb	IAmb	00 38 47.1	
	comp=Z,1.7nm,1.0s						
TORD	**Torodi Ar. Bea**	**120.76**	**291**	PKP	**PKPdf**	**00 44 44.4**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=12,slow=2.3,SNR=5.0						
TORD	**Torodi Ar. Bea**	**120.76**	**291**		**PKPdf**	**00 44 44.2**	**-0.8**

BGR ***20*** *00:26:02.4±0.0, 65°.74N×18°.38W, h10km, mb4.2*
IDC ***20*** *00:26:08.8±0.6, 64°.59N×17°.60W, h0km, mb3.9/15, mb1 4.1/18, mb1mx3.9/47, mbtmp3.9/18, ML3.1/3, MS3.3/8, Ms1 3.3/8, ms1mx2.9/48, Error ellipse: s-maj=19.0km s-min=9.6km az=12.0*
REY ***20*** *00:26:08.3, 64°.68N×17°.45W, h1km*
MOS ***20*** *00:26:08.7±0.9, 64°.60N×17°.66W, h10km, mb4.4/42, Error ellipse: s-maj=12.6km s-min=5.7km az=111.9*
NEIC ***20*** *00:26:10.3±1.2, 64°.59N±0°.07×17°.6W±0°.1, h9km±4km, mb4.5/45, Error ellipse: s-maj=10.6km s-min=7.8km az=176.0*

ISC 20 00:26:10.2±0.3, 64°.69N±0°.02×17°.48W±0°.02, h10km, n248, σ1s48/239, mb4.2/92, MS3.3/7, 10C, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.12**	**260**	P	**Pg**	**00 26 11.4**	**-1.8**
	baz=268						
IVON				S	**Sg**	**00 26 13.5**	**-1.7**
	baz=268						
IHAM	**Hamarinn**	**0.26**	**214**	P	**Pg**	**00 26 14.0**	**-1.5**
	baz=220						
IGRF	**Grimsfjall**	**0.30**	**162**	P	**Pg**	**00 26 14.3**	**-2.0**
	baz=164						
IKVE	**Kverkfjoll**	**0.35**	**92**	P	**Pg**	**00 26 15.3**	**-1.9**
	baz=90						
IHUS	**Husbondi**	**0.41**	**191**	P	**Pg**	**00 26 16.2**	**-2.0**
	baz=193						
ISKR	**Skrokkalda**	**0.41**	**251**	P	**Pg**	**00 26 16.7**	**-1.6**
	baz=254						
THOR	**Thorvaldshraun**	**0.42**	**55**	P	**Pg**	**00 26 16.7**	**-1.8**
	baz=52						
THOR				S	**Sg**	**00 26 23.0**	**-1.0**
	baz=52						
IVOT	**Vottur**	**0.45**	**163**	P	**Pg**	**00 26 16.6**	**-2.3**
	baz=164						
IKRE	**Kreppuhraun**	**0.48**	**79**	P	**Pg**	**00 26 17.2**	**-2.3**
	baz=76						
IKR

comp=Z,16nm,1.3s,baz=327,slow=11
FINES FINESS Array B 19.69 79 P **Pn** 00 30 40.0 -0.6
comp=Z,0.1nm,0.3s,baz=274,slow=7.5,SNR=4.6
FINES FINESS Array B 19.69 79 P **Pn** 00 30 40.0 -0.6
FINES FINESS Array B 19.69 79 P **Pn** 00 30 39.5 -1.1
NEUB Neuenburg 20.32 118 *eP* Pn 00 30 47.6 -0.4
comp=Z,19nm,1.1s,baz=327,slow=11
MFF Saint Martin d 20.47 144 *eP* Pn 00 30 48.0 -1.9
MFF pmax pmax
comp=Z,58nm,1.7s
CLL Collm 20.71 116 *i* P Pn 00 30 51.2 -1.4
comp=Z,10.0nm,1.2s
CLL *i* 00 30 59.3
CLL Collm 20.71 116 *i* P Pn 00 30 51.2 -1.4
CLL *i* 00 30 59.3
CLL pmax pmax
comp=Z,10.0nm,1.2s
CLL Collm 20.71 116 *eP* Pn 00 30 51.3 -1.4
comp=Z,10nm,1.2s,baz=327,slow=11
CLL Collm 20.71 116 P **P** **00 30 49.9 -0.4**
MOX Moxa 20.71 119 P Pn 00 30 51.9 -0.8
MOX Moxa 20.71 119 *eP* Pn 00 30 51.8 -0.9
comp=Z,18nm,1.6s,baz=327,slow=11
LOR Lormes 20.96 136 P Pn 00 30 53.6 -2.1
LOR pmax pmax
comp=Z,9.0nm,1.2s
CDF Champ du Feu 21.04 129 *eP* **P** **00 30 54.9 +1.0**
CDF pmax pmax
comp=Z,19nm,1.6s
PLN Plauen 21.04 118 *eP* **P** **00 30 55.1 +1.2**
comp=Z,14nm,1.3s,baz=327,slow=11
SSF Saint Saulge 21.05 137 *eP* **P** **00 30 53.8 -0.2**
SSF pmax pmax
comp=Z,12nm,1.1s
HAU Haudompre 21.08 131 *eP* **P** **00 30 55.1 +0.7**
HAU pmax pmax
comp=Z,10.0nm,1.0s
FBE Freiberg 21.15 116 *eP* **P** **00 30 56.2 +1.1**
comp=Z,14nm,1.1s,baz=327,slow=11
ECH Echery 21.17 129 P **P** **00 30 55.7 +0.4**
ECH pmax pmax
comp=Z,8.0nm,1.0s
ECH Echery 21.17 129 P **P** **00 30 55.7 +0.4**
GUNZ Gunzen 21.21 118 *eP* **P** **00 30 56.7 +0.9**
comp=Z,18nm,1.5s,baz=327,slow=11
TANN Tannenbergstha 21.22 118 *eP* **P** **00 30 56.9 +1.0**
comp=Z,53nm,1.9s,baz=327,slow=11
AVF Avril sur Loir 21.25 138 *eP* **P** **00 30 55.8 -0.3**
AVF pmax pmax
comp=Z,16nm,1.3s
WERN Wernitzgruen 21.29 118 *eP* **P** **00 30 57.6 +1.0**
comp=Z,14nm,1.2s,baz=327,slow=11
BGF Bois d'Agland 21.31 139 *eP* **P** **00 30 56.5 -0.3**
BGF pmax pmax
comp=Z,13nm,1.0s
GRF Grafenberg Arr 21.34 121 P **P** **00 30 59.1 +2.0**
GRF pmax pmax
comp=Z,9.0nm,1.3s
GRF Grafenberg Arr 21.34 121 *eP* **P** **00 30 58.3 +1.1**
comp=Z,17nm,1.3s,baz=327,slow=11
NKC Novy Kostel 21.36 118 P **P** **00 30 57.9 +0.6**
TCF Toulx Ste Croi 21.38 140 *eP* **P** **00 30 57.6 0.0**
TCF pmax pmax
comp=Z,13nm,1.0s
HINF Hinteralfeld 21.41 130 *eP* **P** **00 30 59.5 +1.5**
HINF pmax pmax
comp=Z,28nm,1.8s
BRG Berggiesshubel 21.42 115 P **P** **00 30 58.9 +1.0**
BRG pmax pmax
comp=Z,12nm,1.1s
BRG Berggiesshubel 21.42 115 *eP* **P** **00 30 59.0 +1.0**
comp=Z,10nm,1.1s,baz=327,slow=11
BFO Black Forest 21.46 127 P **P** **00 30 58.1 -0.4**
BFO pmax pmax
comp=Z,31nm,1.8s
BFO Black Forest 21.46 127 *eP* **P** **00 31 00.0 +1.6**
comp=Z,9.7nm,1.1s,baz=327,slow=11
BFO Black Forest 21.46 127 P **P** **00 30 58.1 -0.4**
BFO IAmb IAmb 00 31 13.4
comp=Z,32nm,1.8s
SMF Signal de Mont 21.52 137 *eP* **P** **00 30 58.9 -0.2**
SMF pmax pmax
comp=Z,18nm,1.5s
VSU Vasula 21.56 86 *eP* **P** **00 31 00.1 +0.7**
VSU Vasula 21.56 86 *i* P **P** **00 31 00.1 +0.7**
VSU pmax pmax
comp=Z,36nm,0.9s
RJF Les Rejaudoux 22.10 142 *eP* **P** **00 31 05.3 0.0**
RJF pmax pmax
comp=Z,13nm,1.0s
PABE Paberze 22.21 95 *eP* **P** **00 31 06.6 +0.3**
LFF La Frestale 22.24 144 *eP* **P** **00 31 07.4 +0.6**
LFF pmax pmax
comp=Z,36nm,1.6s
PRU Pruhonice 22.36 116 *eP* **P** **00 31 09.2 +1.2**
PRU Pruhonice 22.36 116 *eP* **P** **00 31 09.2 +1.2**
KSP Ksiaz 22.37 112 P **P** **00 31 09.6 +1.5**
KSP pmax pmax
comp=Z,8.0nm,1.5s
WET Wettzell 22.41 119 P **P** **00 31 09.6 +1.0**
WET pmax pmax
comp=Z,5.0nm,1.5s
WET Wettzell 22.41 119 *eP* **P** **00 31 09.6 +1.0**
comp=Z,18nm,1.8s,baz=327,slow=11
CHVC Chvalec 22.47 113 *eP* **P** **00 31 08.9 -0.4**
OSTC Ostas 22.56 113 *eP* **P** **00 31 11.3 +1.1**
CAF Calviac 22.60 142 *eP* **P** **00 31 10.4 -0.3**
CAF pmax pmax
comp=Z,11nm,1.3s
KHC Kasperske Hory 22.68 118 *ce*P **P** **00 31 11.8 +0.3**
KHC pmax pmax
comp=Z,7.0nm,0.9s
KHC Kasperske Hory 22.68 118 *eP* **P** **00 31 11.8 +0.3**
KHC Kasperske Hory 22.68 118 P **P** **00 31 12.2 +0.7**
KHC IAmb IAmb 00 31 23.3
comp=Z,15nm,1.6s
DPC Dobruska-Polom 22.77 113 *eP* **P** **00 31 12.9 +0.5**
DPC Dobruska-Polom 22.77 113 *eP* **P** **00 31 12.9 +0.5**
SUW Suwalki 22.88 98 P **P** **00 31 14.0 +0.5**
SUW pmax pmax
comp=Z,20nm,1.1s
SUW Suwalki 22.88 98 P **P** **00 31 14.0 +0.5**
SUW IAmb IAmb 00 31 15.9
comp=Z,20nm,1.1s
DAVA Damuels 22.89 126 *eP* **P** **00 31 13.8 -0.1**
comp=Z,5.1nm,1.0s
GEC2 GERESS Array S 22.96 119 *eP* **P** **00 31 15.4 +0.9**
comp=Z,18nm,1.8s,baz=327,slow=11
GEC2 GERESS Array S 22.96 119 P **P** **00 31 14.8 +0.2**
GERES GERESS Array B 22.96 119 P **P** **00 31 15.0 +0.5**
comp=Z,0.9nm,0.7s,baz=332,slow=8.3,SNR=9.4
GERES LR LR 00 39 29.3
comp=Z,67nm,20.7s,baz=344,slow=35
GERES GERESS Array B 22.96 119 P **P** **00 31 15.0 +0.5**
GERES GERESS Array B 22.96 119 P **P** **00 31 15.0 +0.5**
IZAR Zarasai 23.02 92 *eP* **P** **00 31 15.3 +0.4**
RETA Reutte 23.03 125 *eP* **P** **00 31 14.8 -0.4**
comp=Z,9.8nm,1.2s
ISAL Salakas 23.09 93 *eP* **P** **00 31 16.1 +0.5**
MOTA Moosalm 23.27 125 *eP* **P** **00 31 19.5 +1.7**
comp=Z,5.7nm,1.2s
IIGN Ignalina 23.27 93 *eP* **P** **00 31 18.2 +0.6**
TREC Trest 23.28 116 *eP* **P** **00 31 18.9 +1.2**
TREC Trest 23.28 116 *eP* **P** **00 31 18.9 +1.2**
TMCR Tamitsa 23.33 66 *eP* **P** **00 31 17.3 -0.7**
TMCR pmax pmax
comp=Z,24nm,1.5s
DAVOX Davos/Dischmat 23.33 127 LR LR 00 39 57.6
comp=Z,64nm,19.9s,baz=314,slow=36
LPL La Plagne 23.41 133 *eP* **P** **00 31 19.9 +0.6**
LPL pmax pmax
comp=Z,71nm,2.6s
SQTA Sankt Quirin 23.41 125 *eP* **P** **00 31 20.3 +1.1**
comp=Z,4.8nm,1.0s
FETA Feichten 23.42 126 *eP* **P** **00 31 22.4 +3.1**
comp=Z,4.1nm,1.2s
WATA Walderalm 23.45 124 *eP* **P** **00 31 20.1 +0.6**
comp=Z,5.9nm,1.2s
IDID Didziasalis 23.52 92 *eP* **P** **00 31 20.5 +0.5**
WTTA Wattenberg 23.53 124 *eP* **P** **00 31 20.6 +0.3**
comp=Z,11nm,1.4s
WTTA Wattenberg 23.53 124 P **P** **00 31 20.7 +0.3**
WTTA pmax pmax
comp=Z,7.0nm,1.4s
EUNU Eureka 23.65 336 P **P** **00 31 21.5 +0.4**
EUNU IAmb IAmb 00 31 27.8
comp=Z,27nm,1.6s
ORIF Oris-en-Rattie 23.69 135 *eP* **P** **00 31 22.6 +0.7**
ORIF pmax pmax
comp=Z,10.0nm,1.4s
VRAC Vranov 23.70 114 LR LR 00 39 09.4
comp=Z,20nm,21.5s,baz=265,slow=33
MORC Moravsky Berou 23.70 112 P **P** **00 31 22.3 +0.4**
MORC pmax pmax
comp=Z,13nm,1.6s
MORC Moravsky Berou 23.70 112 P **P** **00 31 22.3 +0.4**
MOA Molln 24.00 119 *eP* **P** **00 31 25.7 +1.0**
comp=Z,5.2nm,1.2s
OJC Ojcow 24.26 109 P **P** **00 31 26.7 -0.4**
OJC pmax pmax
comp=Z,23nm,1.7s
OJC Ojcow 24.26 109 P **P** **00 31 26.7 -0.4**
OJC IAmb IAmb 00 31 30.5
comp=Z,23nm,1.7s
ABTA Abfaltersbach 24.28 123 *eP* **P** **00 31 29.0 +1.5**
comp=Z,12nm,1.4s
KBA Koelnbreinsper 24.30 122 *eP* **P** **00 31 28.9 +1.2**
comp=Z,0.6nm,0.5s
CONA Conrad Observa 24.54 117 *eP* **P** **00 31 31.3 +1.6**
comp=Z,0.1nm,0.2s
CTI Castel Tesino 24.58 125 P **P** **00 31 30.3 +0.2**
CTI pmax pmax
comp=Z,10.0nm,1.5s
CTI Castel Tesino 24.58 125 P **P** **00 31 30.3 +0.2**
MYKA Terra Mystica 24.79 122 *eP* **P** **00 31 34.4 +2.4**
comp=Z,1.6nm,0.4s
ARSA Arzberg 24.97 118 *eP* **P** **00 31 35.2 +1.6**
comp=Z,2.1nm,0.7s
NIE Niedzica 25.09 109 P **P** **00 31 36.3 +1.6**
NIE pmax pmax
comp=Z,4.0nm,1.4s
OBKA Obir 25.23 121 *eP* **P** **00 31 37.4 +1.5**
comp=Z,5.5nm,1.4s
VYHS Vyhne 25.24 112 *eP* **P** **00 31 36.8 +0.8**
VYHS Vyhne 25.24 112 *eP* **P** **00 31 36.8 +0.8**
SOKA Sooth 25.27 120 *eP* **P** **00 31 36.6 +0.3**
comp=Z,3.8nm,1.0s
KLMR Klimovskoe 25.59 72 *eP* **P** **00 31 37.1 -1.9**
KLMR pmax pmax
comp=Z,21nm,1.5s
KLMR Klimovskoe 25.59 72 *eP* **P** **00 31 37.1 -1.9**
KLMR AMP 00 31 42.8
comp=Z,21nm,1.5s
KWP Kalwaria Pacla 25.91 106 P **P** **00 31 42.7 +0.7**
KWP pmax pmax
comp=Z,15nm,1.1s
KWP Kalwaria Pacla 25.91 106 P **P** **00 31 42.7 +0.7**
KWP IAmb IAmb 00 31 50.4
comp=Z,15nm,1.1s
PSZ Piszkesteto 26.12 112 P **P** **00 31 44.5 +0.4**
PSZ pmax pmax
comp=Z,5.0nm,0.9s
PSZ Piszkesteto 26.12 112 P **P** **00 31 44.5 +0.4**
ESDC Sonseca Array 26.28 156 P **P** **00 31 45.6 +0.2**
comp=Z,1.3nm,0.8s,baz=347,slow=9.3,SNR=8.1
ESDC Sonseca Array 26.28 156 P **P** **00 31 44.4 -1.1**
KOLS Kolonicke sedl 26.28 108 *eP* **P** **00 31 47.9 +2.5**
KOLS Kolonicke sedl 26.28 108 *eP* **P** **00 31 47.9 +2.5**
LVV L'vov 26.32 104 *eP* **P** **00 31 46.4 +0.7**
PAB San Pablo 26.33 157 P **P** **00 31 45.4 -0.6**
PAB pmax pmax
comp=Z,50nm,1.8s
PAB San Pablo 26.33 157 P **P** **00 31 45.4 -0.6**
RES Resolute Bay 26.45 324 LR LR 00 41 37.6
comp=Z,83nm,20.4s,baz=135,slow=35
UZH Uzhgorod 26.52 108 *eP* **P** **00 31 48.4 +0.8**
UZH *e* 00 31 53.0
MURB Monte Urbino 27.32 127 P **P** **00 31 55.4 +0.6**
AKASG Malin Array Be 27.84 98 P **P** **00 31 59.1 -0.3**
comp=Z,0.4nm,0.4s,baz=228,slow=25,SNR=1.7
OBN Obninsk 27.87 84 *ce*P **P** **00 32 00.0 +0.4**
OBN *e* 00 32 47.5
OBN *e* 00 35 15.4
OBN pmax pmax
comp=Z,14nm,1.3s
OBN Obninsk 27.87 84 P **P** **00 31 60.0 +0.4**
OBN IAmb IAmb 00 32 06.0
comp=Z,12nm,1.1s
MOS Moscow 27.91 82 *eP* **P** **00 31 57.8 -2.1**
KIRV Kirov 30.96 69 *ce*P **P** **00 32 25.8 -1.2**
KEST Kesra 33.17 138 LR LR 00 46 32.9
comp=Z,78nm,18.1s,baz=208,slow=37
NRIK Noril'sk 36.43 35 P **P** **00 33 14.7 +0.3**
comp=Z,0.9nm,0.3s,baz=344,slow=12,SNR=4.9
NRIK Noril'sk 36.43 35 *ce*P **P** **00 33 15.9 +1.5**
NRIK pmax pmax
comp=Z,3.0nm,0.9s
HRV Adam Dziewonsk 37.41 260 P **P** **00 33 22.7 -0.3**
HRV pmax pmax
comp=Z,91nm,1.8s
HRV Adam Dziewonsk 37.41 260 P **P** **00 33 22.7 -0.3**
BRTR Keskin Array B 38.48 105 P **P** **00 33 32.4 +0.2**
comp=Z,0.9nm,0.8s,baz=354,slow=12,SNR=2.1
KBZ Khabaz 39.11 92 P **P** **00 33 39.5 +2.3**
comp=Z,3.1nm,0.9s
KBZ Khabaz 39.11 92 *ce*P **P** **00 33 38.9 +1.7**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
INK Inuvik 39.82 329 P **P** **00 33 43.2 +0.3**
comp=Z,1.9nm,0.9s,baz=18,slow=7.6,SNR=3.6
KOPT Kop Dagi 41.12 98 P **P** **00 33 54.9 +0.5**
KOPT IAmb IAmb 00 33 57.6
comp=Z,17nm,1.6s
AKH Akhalkalaki 41.25 94 P **P** **00 33 56.2 +0.9**
AKH pmax pmax
comp=Z,30nm,1.3s
AKH Akhalkalaki 41.25 94 P **P** **00 33 56.2 +0.9**
ABKAR Akbulak array 41.98 73 P **P** **00 34 01.9 +1.0**
ABKAR Akbulak array 41.98 73 P **P** **00 34 01.5 +0.6**
TIXI Tiksi 42.00 15 *ce*P **P** **00 34 02.9 +2.1**
TIXI pmax pmax
comp=Z,50nm,1.3s
TIXI Tiksi 42.00 15 P **P** **00 34 02.2 +1.3**
TIXI IAmb IAmb 00 34 04.5
comp=Z,11nm,1.1s
TOLK Toolik Lake Re 42.73 336 P **P** **00 34 07.9 +1.0**
BMAR Burnt Mountain 42.87 333 P **P** **00 34 09.5 +1.4**
BRVK Borovoye 43.11 62 *ce*P **P** **00 34 11.1 +1.0**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 43.11 62 P **P** **00 34 11.2 +1.2**
TAM Tamanrasset 44.53 149 P **P** **00 34 21.0 -0.9**
TAM pmax pmax
comp=Z,4.0nm,1.3s
TAM Tamanrasset 44.53 149 P **P** **00 34 21.0 -0.9**
ILAR Eielson Array 45.66 332 P **P** **00 34 32.6 +2.3**
comp=Z,2.3nm,1.1s,baz=19,slow=5.9,SNR=13
ILAR LR LR 00 57 41.2
comp=Z,46nm,18.1s,baz=44,slow=41
ILAR Eielson Array 45.66 332 P **P** **00 34 31.5 +1.2**
IMAR Indian Mountai 45.84 337 P **P** **00 34 32.9 +1.2**
BCAR Beaver Creek A 46.09 329 P **P** **00 34 35.6 +1.8**
ZAA0 Zalesovo Array 47.61 51 P **P** **00 34 46.5 +0.8**
ZAA0 IAmb IAmb 00 34 47.9
comp=Z,6.9nm,1.4s
ZALV Zalesovo Beam 47.61 51 P **P** **00 34 46.5 +0.8**
comp=Z,1.1nm,0.7s,baz=350,slow=7.5,SNR=6.3
ZALV Zalesovo Beam 47.61 51 P **P** **00 34 46.3 +0.6**
KURK Kurchatov 48.09 58 *ce*P **P** **00 34 49.8 +0.3**
KURK pmax pmax
comp=Z,5.0nm,1.3s
KURK Kurchatov 48.09 58 P **P** **00 34 50.3 +0.8**
KURK IAmb IAmb 00 34 51.3
comp=Z,6.4nm,0.9s
GEYT Alibeck 50.42 84 P **P** **00 35 08.2 +0.7**
GCMT Greycliff 50.68 295 P **P** **00 35 10.2 +0.7**
KK31 Karatay Array 51.26 70 P **P** **00 35 15.0 +1.3**
KK31 pmax pmax
comp=Z,7.0nm,1.3s
KK31 Karatay Array 51.26 70 P **P** **00 35 15.0 +1.3**
KK31 IAmb IAmb 00 35 16.5
comp=Z,7.4nm,1.3s
KKAR Karatay Array 51.26 70 P **P** **00 35 15.2 +1.5**
KKAR Karatay Array 51.26 70 P **P** **00 35 15.2 +1.5**
KKAR Karatay Array 51.26 70 P **P** **00 35 14.9 +1.2**
KKAR IAmb IAmb 00 35 16.5
comp=Z,7.4nm,1.3s
MK31 Makanchi Array 52.70 58 P **P** **00 35 25.6 +1.1**
MK31 pmax pmax
comp=Z,4.0nm,1.3s
MK31 Makanchi Array 52.70 58 P **P** **00 35 25.6 +1.1**
MKAR Makanchi Array 52.70 58 P **P** **00 35 24.7 +0.2**
comp=Z,1.4nm,0.8s,baz=105,slow=2.8,SNR=6.6
MKAR Makanchi Array 52.70 58 *ce*P **P** **00 35 25.5 +1.0**
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 52.70 58 P **P** **00 35 25.4 +0.9**
PHWY Pilot Hill 52.76 289 P **P** **00 35 25.9 +0.6**
PHWY IAmb IAmb 00 35 27.4
comp=Z,9.2nm,1.4s
TOA0 Torodi Ar. Sit 53.16 156 P **P** **00 35 27.4 -0.7**
TOA0 IAmb IAmb 00 35 28.2
comp=Z,7.6nm,1.5s
TORD Torodi Ar. Bea 53.16 156 P **P** **00 35 26.9 -1.2**
comp=Z,2.1nm,1.0s,baz=342,slow=8.3,SNR=8.7
TORD Torodi Ar. Bea 53.16 156 P **P** **00 35 27.5 -0.6**
PD31 Pinedale Array 53.17 293 P **P** **00 35 28.5 +0.4**
PD31 IAmb IAmb 00 35 30.4
comp=Z,11nm,1.5s
PDAR Pinedale Array 53.17 293 P **P** **00 35 27.1 -1.1**
comp=Z,1.7nm,0.8s,baz=59,slow=7.5,SNR=11
PDAR Pinedale Array 53.17 293 P **P** **00 35 28.6 +0.4**
AAK Ala-Archa 53.24 67 *ce*P **P** **00 35 30.1 +1.4**
AAK pmax pmax
comp=Z,17nm,1.3s
AAK Ala-Archa 53.24 67 P **P** **00 35 30.4 +1.7**
AAK IAmb IAmb 00 35 31.7
comp=Z,6.7nm,1.1s
CHGR Chuyangaron 54.45 74 P **P** **00 35 38.8 +1.3**
GAR Garm 54.64 73 P **P** **00 35 40.1 +1.2**
DRK Karamyk 54.83 71 P **P** **00 35 42.2 +1.7**
HRA Herat 55.18 82 P **P** **00 35 44.3 +1.4**
HRA IAmb IAmb 00 35 45.4
comp=Z,13nm,1.8s
KSH Kashi 56.48 68 P P 00 35 55.9 +3.8
KSH pmax pmax
comp=Z,16nm,1.0s
KSH pmax pmax
comp=Z,190nm,3.8s
PV13 Radium Mtn., P 56.79 290 P **P** **00 35 55.1 +0.7**
PV13 IAmb IAmb 00 35 57.3
comp=Z,8.3nm,1.0s
WMQ Urumqi 57.21 56 *eP* **P** **00 35 59.8 +2.7**
WMQ pP sP 00 36 05.8 +3.6
WMQ pmax pmax
comp=Z,14nm,0.7s
WMQ pmax pmax
comp=Z,110nm,3.9s
KBL Kabul 57.92 77 P **P** **00 36 03.6 +1.2**
KBL pmax pmax
comp=Z,4.0nm,0.8s
KBL Kabul 57.92 77 P **P** **00 36 03.5 +1.2**
KBL IAmb IAmb 00 36 05.0
comp=Z,3.6nm,0.8s
SONM Songino Array 59.62 40 P **P** **00 36 14.4 +0.5**
comp=Z,1.0nm,0.8s,baz=343,slow=9.6,SNR=5.4
SONM Songino Array 59.62 40 P **P** **00 36 14.5 +0.5**
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 59.62 40 P **P** **00 36 14.5 +0.6**
NIL Nilore 60.44 74 P **P** **00 36 20.7 +1.1**
NIL pmax pmax
comp=Z,26nm,1.6s
NIL Nilore 60.44 74 P **P** **00 36 20.7 +1.1**
TXAR Lajitas Array 62.28 280 P **P** **00 36 32.4 +0.1**
comp=Z,0.9nm,0.9s,baz=77,slow=5.4,SNR=6.1
GTA Gaotai 65.28 49 *eP* **P** **00 36 53.5 +1.6**
GTA pP sP 00 36 58.3 +1.3
GTA sP pP 00 37 00.8 +5.2
GTA pmax pmax
comp=Z,3.0nm,0.9s
HHC Hu-ho-hao-te 67.49 40 *eP* P 00 37 09.6 +3.6
HHC pmax pmax
comp=Z,19nm,0.7s
HHC pmax pmax
comp=Z,76nm,6.9s
LZH Lanzhou 69.61 48 *eP* P 00 37 25.0 +5.6
LZH pP sP 00 37 26.8 +2.3
LZH sP pP 00 37 27.5 +4.4
LZH *e*PP PP 00 40 01.3 +8.6
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,67nm,8.0s
LZH LR LR
comp=N,110nm,16.2s
LZH LR LR
comp=E,130nm,16.5s
LZH LR LR
comp=Z,180nm,18.6s
ROSC El Rosal 71.94 241 P **P** **00 37 34.4 +0.4**
CD2 Chengdu 74.34 50 P **P** **00 37 48.8 +1.1**
NJ2 Nanjing 77.71 37 *eP* **P** **00 38 08.4 +1.6**
NJ2 pmax pmax
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 84.11 59 P **P** **00 38 41.8 +0.6**
comp=Z,0.6nm,0.3s,baz=322,slow=5.7,SNR=4.1
CMAR Chiang Mai Arr 84.11 59 P **P** **00 38 41.6 +0.4**
WRA Warramunga Arr 131.50 36 PKP **PKiKP** **00 45 23.7 +0.1**
comp=Z,0.5nm,1.0s,baz=228,slow=34,SNR=2.8
ASAR Alice Springs 134.94 38 PKP **PKPdf** **00 45 27.8 -1.2**
comp=Z,0.4nm,0.8s,baz=7.5,slow=3.6,SNR=5.6

IDC 20 00:39:39.4±47.0, 16°.42S×177°.74W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/34, mbtmp4.2/3, Error ellipse: s-maj=877.3km s-min=163.1km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.92**	**240**	P	P	00 47 16.1	+0.6
	1.3nm,0.5s,baz=49,slow=11,SNR=2.2						
WRA	**Warramunga Arr**	**45.55**	**258**	P	P	00 48 00.9	-0.4
	0.4nm,0.3s,baz=94,slow=7.8,SNR=22						
ASAR	**Alice Springs**	**45.83**	**253**	P	P	00 48 03.3	-0.3
	4.1nm,0.4s,baz=88,slow=8.1,SNR=61						

*JMA **20** 00:49:51.5±0.1, 36°.45N×141°.03E, h45km±1km, M3.6*
JMA Felt I J1.
*NIED **20** 00:49:51.5, 36°.45N×141°.03E, h45km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr-0.42; Mθθ0.84; Mφφ-0.42; Mrθ-1.99; Mθφ0.51; Mφr-2.42; Fault plane solution: M0 3.25000×10^14^ NP1:ϕs39.00000°, δ86.00000°, λ-103.00000°. NP2:ϕs290.00000°, δ13.00000°, λ-20.00000°.*
*IDC **20** 00:49:53.8±3.1, 36°.30N×141°.01E, h55km±28km, mb3.2/6, mb1 3.4/9, mb1mx3.3/48, mbtmp3.6/9, ML2.8/3, MS2.2/1, Ms1 2.2/1, ms1mx2.0/20 Error ellipse: s-maj=26.9km s-min=11.6km az=64.0*
ISC 20 00:49:50.9±1.4, 36°.43N±0°.04×141°.14E±0°.07, h31km±9km, n27, σ1s35/33, mb3.4/6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.46**	**258**	P	**Pb**	**00 50 00.9**	**+0.2**
JHYU				S	**Sb**	**00 50 07.5**	**+0.2**
JHO	**Hitachi**	**0.49**	**291**	P	**Pb**	**00 50 01.2**	**-0.1**
JHO				S	**Sb**	**00 50 07.7**	**-0.7**
JIHU	**Itakohorinouch**	**0.68**	**227**	P	**Pn**	**00 50 04.9**	**+0.5**
JIHU				*e*S	**Sb**	**00 50 13.8**	**+0.3**
ONAJ	**Iwakimizuishiy**	**0.72**	**338**	P	**Pn**	**00 50 04.3**	**-0.8**
ONAJ				*e*S	**Sb**	**00 50 13.1**	**-1.6**
JYT	**Yasato**	**0.79**	**255**	P	**Pn**	**00 50 05.1**	**-0.8**
JYT				*e*S	**Sb**	**00 50 14.6**	**-1.9**
JFK	**Kawauchi**	**0.95**	**347**	P	**Pn**	**00 50 07.6**	**-0.7**
JFK				*e*S	**Sn**	**00 50 18.9**	**-2.0**
JFT	**Otama**	**1.26**	**330**	P	**Pn**	**00 50 12.9**	**+0.5**
JFT				*e*S	**Sn**	**00 50 27.7**	**-0.6**
JAG	**Ashikaga**	**1.36**	**270**	P	**Pn**	**00 50 13.1**	**-0.7**
JAG				*e*S	**Sn**	**00 50 28.5**	**-2.2**
JMM	**Marumori**	**1.46**	**349**	P	**Pn**	**00 50 15.1**	**0.0**
JMM				S	**Sn**	**00 50 32.4**	**-0.7**
JFY	**Yanaizu**	**1.50**	**311**	P	**Pn**	**00 50 16.0**	**+0.2**
JKT	**Katashina**	**1.56**	**283**	P	**Pn**	**00 50 16.5**	**-0.1**
MJAR	**Matsushiro Arr**	**2.36**	**273**	P	**Pn**	**00 50 28.6**	**+1.0**
	2.2nm,0.3s,baz=99,slow=9.3,SNR=65						
MJAR				S	**Sn**	**00 50 55.1**	**-0.4**
	1.7nm,0.3s,baz=87,slow=15,SNR=8.4						
MJAR				LR	LR	00 51 41.6	
	comp=Z,52nm,20.1s,baz=150,slow=48						

MAT	**Matsushiro**	**2.37**	**274**	P	**Pn**	00 50 28.2	+0.6
MAT				S	**Sn**	00 50 53.9	-1.7
JHJ	**Hachijo jima 2**	**3.49**	**199**	P	**Pn**	00 50 42.1	-1.0
	8.7nm,0.3s,baz=36,slow=17,SNR=2.5						
JHJ				S	**Sn**	00 51 23.1	-0.2
	10nm,0.3s,baz=242,slow=21,SNR=1.7						
USRK	**Ussuriysk Ar.**	**10.43**	**321**	P	**Pn**	00 52 22.6	+4.3
	baz=86,slow=17,SNR=4.3						
SONM	**Songino Array**	**27.94**	**305**	P	**P**	00 55 40.7	+2.2
	0.7nm,0.5s,baz=114,slow=10,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**28.04**	**119**	T	T	01 25 02.0	
	baz=312,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**28.05**	**119**	T	T	01 25 02.0	
	baz=312,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**28.06**	**119**	T	T	01 25 02.0	
	baz=312,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**28.73**	**122**	T	T	01 25 52.5	
	baz=13,slow=74,SNR=38						
H11S3	**WAKE ISLAND Hy**	**28.73**	**122**	T	T	01 25 51.0	
	SNR=27						
H11S2	**WAKE ISLAND Hy**	**28.74**	**122**	T	T	01 25 51.0	
	baz=317,slow=74,SNR=25						
ZALV	**Zalesovo Beam**	**42.16**	**313**	P	**P**	00 57 39.9	-0.4
	0.3nm,0.4s,baz=90,slow=4.3,SNR=2.0						
MKAR	**Makanchi Array**	**44.25**	**303**	P	**P**	00 57 57.6	+0.2
	0.2nm,0.5s,baz=83,slow=12,SNR=2.4						
ILAR	**Eielson Array**	**50.12**	**32**	P	**P**	00 58 43.5	+0.6
	0.2nm,0.8s,baz=280,slow=5.4,SNR=1.4						
WRA	**Warramunga Arr**	**56.44**	**188**	P	**P**	00 59 28.4	-1.4
	0.4nm,0.5s,baz=5.2,slow=7.5,SNR=10						
ASAR	**Alice Springs**	**60.16**	**188**	P	**P**	00 59 54.2	-1.5
	0.2nm,0.7s,baz=17,slow=10.0,SNR=2.0						

*IDC **20** 00:53:40.8±0.9,37.10S×179.74E,h0km,mb4.3/7,*
mb1 4.5/8,mb1mx4.1/42,mbtmp4.3/8,ML4.5/1,MS3.3/2,
Ms1 3.3/2,ms1mx2.9/25,Error ellipse: s-maj=33.4km
s-min=20.7km az=26.0
*NEIC **20** 00:53:43.3±2.1,37.67S±0.08×179.98E±0.10,h35km±1km,*
mb4.5/10,Error ellipse: s-maj=15.1km s-min=10.9km
az=45.0
*WEL **20** 00:53:44.3±0.7,38.5S×18.0E×,h33km,M4.5/51,*
ML4.8/51,MLv4.5/51,Error ellipse: s-maj=0.0km
s-min=0.0km az=154.0

ISC 20 00:53:41.8±1.4, 37.75S±0.06×179.95W±0.09, h20km±9km, n178, σ1§35/184, mb4.4/10, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.30**	**267**	P	**Pn**	**00 54 04.9**	**+0.2**
WMGZ				S	**Sn**	**00 54 20.6**	**-0.9**
MXZ	**Matakaoa Point**	**1.40**	**277**	P	**Pn**	**00 54 05.0**	**-1.0**
MXZ				S	**Sn**	**00 54 20.9**	**-3.0**
MXZ	**Matakaoa Point**	**1.40**	**277**	Pn	**Pn**	**00 54 05.1**	**-0.9**
MXZ				Sn	**Sn**	**00 54 20.9**	**-3.0**
PUZ	**Puketiti**	**1.45**	**257**	P	**Pn**	**00 54 07.4**	**+0.6**
PUZ				S	**Sn**	**00 54 25.0**	**-0.4**
CNGZ	**Carnagh Statio**	**1.62**	**243**	P	**Pb**	**00 54 11.3**	**+0.3**
CNGZ				S	**Sb**	**00 54 32.2**	**+1.1**
TWGZ	**Tauwhareparae**	**1.69**	**255**	P	**Pn**	**00 54 11.1**	**+0.9**
TWGZ				S	**Sn**	**00 54 31.3**	**+0.1**
HAZ	**Te Kaha**	**1.80**	**269**	P	**Pn**	**00 54 11.8**	**+0.2**
HAZ				S	**Sn**	**00 54 32.6**	**-1.2**
TKGZ	**Te Karaka**	**1.87**	**248**	P	**Pn**	**00 54 13.9**	**+1.4**
TKGZ				S	**Sn**	**00 54 35.8**	**+0.3**
RUGZ	**Raukumara Rang**	**1.89**	**263**	P	**Pn**	**00 54 13.0**	**0.0**
RUGZ				S	**Sn**	**00 54 36.1**	**-0.2**
RIGZ	**Rimuhau**	**2.04**	**241**	P	**Pn**	**00 54 16.5**	**+1.6**
RIGZ				S	**Sn**	**00 54 41.3**	**+1.6**
PRGZ	**Paritu Road**	**2.06**	**235**	P	**Pn**	**00 54 17.2**	**+1.9**
PRGZ				S	**Sn**	**00 54 41.9**	**+1.4**
MWZ	**Matawai**	**2.07**	**253**	P	**Pn**	**00 54 15.9**	**+0.4**
MWZ				S	**Sn**	**00 54 39.9**	**-0.8**
MHGZ	**Mahia Peninsul**	**2.19**	**230**	P	**Pn**	**00 54 19.0**	**+2.0**
MHGZ				S	**Sb**	**00 54 47.0**	**-0.3**
RAGZ	**Rawiri**	**2.21**	**250**	P	**Pn**	**00 54 18.2**	**+0.9**
RAGZ				S	**Sn**	**00 54 43.9**	**-0.1**
KNZ	**Kokohu**	**2.25**	**235**	P	**Pn**	**00 54 19.3**	**+1.4**
KNZ				S	**Sn**	**00 54 46.9**	**+1.8**
URZ	**Urewera**	**2.38**	**257**	Pn	**Pn**	**00 54 20.7**	**+1.1**
	118nm,0.3s,baz=275,slow=5.3,SNR=590						
URZ				Sn	**Sn**	**00 54 46.9**	**-1.2**
	211nm,0.3s,baz=209,slow=19,SNR=22						
URZ	**Urewera**	**2.38**	**257**	P	**Pn**	**00 54 20.5**	**+1.0**
URZ	**Urewera**	**2.38**	**257**		**Pn**	**00 54 20.4**	**+0.9**
URZ				Sn	**Sn**	**00 54 47.1**	**-1.0**
WHRZ	**Whale Island**	**2.44**	**267**	P	**Pn**	**00 54 20.8**	**+0.4**
RTZ	**Ruatahuna**	**2.57**	**249**	P	**Pn**	**00 54 23.8**	**+1.5**
WHHZ	**Waihua**	**2.58**	**238**	P	**Pn**	**00 54 24.3**	**+2.0**
RAHZ	**Arahi**	**2.60**	**243**	P	**Pn**	**00 54 24.3**	**+1.6**
EDRZ	**Edgecumbe**	**2.64**	**261**	P	**Pn**	**00 54 23.9**	**+0.7**
MARZ	**Manawahe**	**2.68**	**264**	P	**Pn**	**00 54 24.4**	**+0.7**
MUGZ	**Murupara**	**2.69**	**253**	P	**Pn**	**00 54 24.7**	**+0.9**
MTHZ	**Maungataniwha**	**2.75**	**246**	P	**Pn**	**00 54 26.0**	**+1.2**
OPRZ	**Ohinepanea**	**2.77**	**267**	P	**Pn**	**00 54 24.7**	**-0.3**
ARHZ	**Aropaoanui**	**2.83**	**237**	P	**Pn**	**00 54 27.4**	**+1.6**
TARZ	**Mount Tarawera**	**2.84**	**259**	P	**Pn**	**00 54 27.1**	**+1.0**
RRHZ	**Republican Roa**	**2.85**	**247**	P	**Pn**	**00 54 26.9**	**+0.8**
NMHZ	**Naumai**	**2.88**	**241**	P	**Pn**	**00 54 28.2**	**+1.6**
OMRZ	**Omania**	**2.93**	**262**	P	**Pn**	**00 54 28.8**	**+1.6**
HLRZ	**Highlands Stat**	**2.96**	**259**	P	**Pn**	**00 54 29.6**	**+1.9**
PRRZ	**Plateau Road**	**2.98**	**254**	P	**Pn**	**00 54 28.4**	**+0.5**
CKHZ	**Cape Kidnapper**	**3.00**	**230**	P	**Pn**	**00 54 29.4**	**+1.3**
TGRZ	**Tauranga**	**3.00**	**269**	P	**Pn**	**00 54 29.3**	**+1.2**
KARZ	**Kaharoa**	**3.02**	**264**	P	**Pn**	**00 54 28.8**	**+0.3**
ALRZ	**Allen Road**	**3.03**	**253**	P	**Pn**	**00 54 29.3**	**+0.7**
HRRZ	**Handcock Road**	**3.04**	**257**	P	**Pn**	**00 54 29.6**	**+0.9**
MRHZ	**Matea Rd**	**3.05**	**248**	P	**Pn**	**00 54 29.9**	**+1.0**
HSRZ	**Hossack Road**	**3.06**	**258**	P	**Pn**	**00 54 30.1**	**+1.2**
MCHZ	**McNeill Hill**	**3.12**	**236**	P	**Pn**	**00 54 31.3**	**+1.5**
BKZ	**Black Stump Fm**	**3.13**	**242**	P	**Pn**	**00 54 31.2**	**+1.3**
BKZ	**Black Stump Fm**	**3.13**	**242**	Pn	**Pn**	**00 54 30.8**	**+0.8**
BKZ				Sn	**Sn**	**00 55 06.3**	**-0.5**
WPRZ	**Whakapapatarin**	**3.16**	**255**	P	**Pn**	**00 54 31.6**	**+1.3**
KAHZ	**Kahuranaki**	**3.21**	**230**	P	**Pn**	**00 54 32.6**	**+1.5**
KWHZ	**Kaweka Forest**	**3.29**	**238**	P	**Pn**	**00 54 33.4**	**+1.2**
PXZ	**Pawanui**	**3.37**	**227**	P	**Pn**	**00 54 33.9**	**+0.7**
KRHZ	**Kereru**	**3.44**	**236**	P	**Pn**	**00 54 35.0**	**+0.8**
RITZ	**Rihia Road**	**3.51**	**248**	P	**Pn**	**00 54 36.8**	**+1.6**
BHHZ	**Black Hill Sta**	**3.57**	**240**	P	**Pn**	**00 54 36.9**	**+0.8**
KUZ	**Kuaotunu**	**3.60**	**285**	P	**Pn**	**00 54 34.6**	**-1.7**
TOZ	**Tahuroa Road**	**3.60**	**269**	P	**Pn**	**00 54 35.9**	**-0.5**
WPHZ	**Waipukurau**	**3.64**	**230**	P	**Pn**	**00 54 37.7**	**+0.8**
PRHZ	**Porangahau**	**3.66**	**226**	P	**Pn**	**00 54 37.7**	**+0.5**
TMVZ	**Te Maari**	**3.67**	**247**	P	**Pn**	**00 54 38.0**	**+0.5**
ETVZ	**East Tongariro**	**3.67**	**247**	P	**Pn**	**00 54 38.1**	**+0.5**
PNHZ	**Pukenui**	**3.70**	**233**	P	**Pn**	**00 54 38.3**	**+0.5**
KRVZ	**Karewarewa**	**3.71**	**247**	P	**Pn**	**00 54 38.8**	**+0.8**
OTVZ	**Oturere**	**3.72**	**246**	P	**Pn**	**00 54 38.8**	**+0.6**
MOVZ	**Moawhango**	**3.75**	**243**	P	**Pn**	**00 54 39.0**	**+0.4**
WTVZ	**West Tongariro**	**3.76**	**247**	P	**Pn**	**00 54 39.4**	**+0.7**
TUVZ	**Tukino**	**3.76**	**245**	P	**Pn**	**00 54 39.7**	**+0.9**
NGZ	**Ngauruhoe**	**3.77**	**246**	P	**Pn**	**00 54 39.4**	**+0.6**
WHVZ	**Whangaehu Hut**	**3.82**	**245**	P	**Pn**	**00 54 40.0**	**+0.4**
WNVZ	**Wahianoa**	**3.83**	**244**	P	**Pn**	**00 54 40.1**	**+0.5**
DRZ	**Dome Shelter**	**3.83**	**245**	P	**Pn**	**00 54 40.6**	**+0.7**
FWVZ	**Far West T-bar**	**3.83**	**246**	P	**Pn**	**00 54 40.3**	**+0.5**
TWVZ	**Taurewa**	**3.85**	**249**	P	**Pn**	**00 54 40.7**	**+0.8**
ANWZ	**Angora Road**	**3.88**	**225**	P	**Pn**	**00 54 41.1**	**+0.9**
TSZ	**Takapari Road**	**3.93**	**233**	P	**Pn**	**00 54 41.2**	**+0.2**
MKAZ	**Moumakai**	**3.94**	**278**	P	**Pn**	**00 54 40.3**	**-0.8**
DVHZ	**Dannevirke**	**3.95**	**229**	P	**Pn**	**00 54 41.3**	**+0.1**
GRZ	**Great Barrier**	**3.97**	**291**	P	**Pn**	**00 54 40.5**	**-0.9**
PKVZ	**Pokaka**	**3.99**	**246**	P	**Pn**	**00 54 42.9**	**+1.1**
BFZ	**Birch Farm**	**4.16**	**224**	P	**Pn**	**00 54 43.9**	**-0.1**
BFZ	**Birch Farm**	**4.16**	**224**		**Pn**	**00 54 43.7**	**-0.3**
ETAZ	**East Tamaki Re**	**4.16**	**280**	P	**Pn**	**00 54 44.1**	**+0.1**
HIZ	**Hauiti**	**4.16**	**258**	P	**Pn**	**00 54 45.3**	**+1.2**
HIZ	**Hauiti**	**4.16**	**258**	Pn	**Pn**	**00 54 43.9**	**-0.3**
MBAZ	**Motutapu North**	**4.22**	**282**	P	**Pn**	**00 54 45.1**	**+0.1**
PRWZ	**Pori Road**	**4.23**	**227**	P	**Pn**	**00 54 45.9**	**+0.9**
POWZ	**Post Office Ro**	**4.25**	**230**	P	**Pn**	**00 54 45.9**	**+0.6**
ABAZ	**Army Bay**	**4.32**	**284**	P	**Pn**	**00 54 47.6**	**+1.3**
CPWZ	**Castlepoint**	**4.34**	**222**	P	**Pn**	**00 54 46.5**	**0.0**
AWAZ	**Awhitu Peninsu**	**4.36**	**277**	P	**Pn**	**00 54 47.4**	**+0.6**
VRZ	**Vera Road**	**4.37**	**250**	P	**Pn**	**00 54 48.0**	**+1.0**
WAZ	**Wanganui**	**4.43**	**242**	P	**Pn**	**00 54 49.0**	**+1.2**
WTAZ	**Waiatarua**	**4.44**	**279**	P	**Pn**	**00 54 49.2**	**+1.3**
MRZ	**Mangatainoka R**	**4.53**	**229**	P	**Pn**	**00 54 49.0**	**-0.1**
TMWZ	**Te Maipa**	**4.64**	**223**	P	**Pn**	**00 54 49.8**	**-1.0**
HOWZ	**Holdsworth Sta**	**4.71**	**227**	P	**Pn**	**00 54 51.2**	**-0.6**
OGWZ	**Otaki Gorge**	**4.87**	**230**	P	**Pn**	**00 54 53.2**	**-0.6**
MTW	**Mount Morrison**	**4.89**	**225**	P	**Pn**	**00 54 53.0**	**-1.1**
NEZ	**North Egmont**	**4.91**	**250**	P	**Pn**	**00 54 56.8**	**+2.4**
WCZ	**Waipu Caves**	**4.92**	**290**	P	**Pn**	**00 54 54.0**	**-0.6**
TRWZ	**Traveller**	**4.96**	**221**	P	**Pn**	**00 54 53.5**	**-1.5**
PKE	**Pukeiti**	**4.97**	**251**	P	**Pn**	**00 54 57.6**	**+2.4**
KHEZ	**Kahui Hut**	**4.98**	**250**	P	**Pn**	**00 54 57.4**	**+2.0**
KIW	**Kapiti Island**	**5.05**	**230**	P	**Pn**	**00 54 55.8**	**-0.6**
PAWZ	**Paruwai Farm**	**5.09**	**223**	P	**Pn**	**00 54 55.6**	**-1.3**
CAW	**Cannon Point**	**5.11**	**227**	P	**Pn**	**00 54 56.3**	**-0.8**
MSWZ	**Moikau Station**	**5.21**	**224**	P	**Pn**	**00 54 57.0**	**-1.5**
MSWZ	**Moikau Station**	**5.21**	**224**		**Pn**	**00 54 56.7**	**-1.8**
PLWZ	**Palliser**	**5.31**	**223**	P	**Pn**	**00 54 58.4**	**-1.5**
PLWZ	**Palliser**	**5.31**	**223**		**Pn**	**00 54 58.5**	**-1.4**
BHW	**Baring Head**	**5.41**	**226**	P	**Pn**	**00 55 00.2**	**-1.2**
BHW	**Baring Head**	**5.41**	**226**		**Pn**	**00 55 00.1**	**-1.2**
DUWZ	**D'Urville Isla**	**5.64**	**235**	P	**Pn**	**00 55 03.4**	**-1.1**
TCW	**Tory Channel**	**5.64**	**230**	P	**Pn**	**00 55 03.3**	**-1.2**
OUZ	**Omahuta**	**5.78**	**294**	P	**Pn**	**00 55 06.2**	**-0.1**
OUZ	**Omahuta**	**5.78**	**294**	Pn	**Pn**	**00 55 06.3**	**-0.1**
TUWZ	**Tuamarina**	**5.97**	**230**	P	**Pn**	**00 55 07.5**	**-1.5**
TUWZ	**Tuamarina**	**5.97**	**230**	Pn	**Pn**	**00 55 08.6**	**-0.4**
BSWZ	**Blackbirch Sta**	**6.19**	**228**	P	**Pn**	**00 55 10.5**	**-1.4**
BSWZ	**Blackbirch Sta**	**6.19**	**228**	Pn	**Pn**	**00 55 10.6**	**-1.4**
NNZ	**Nelson**	**6.21**	**234**	P	**Pn**	**00 55 12.0**	**-0.2**
QRZ	**Quartz Range**	**6.59**	**240**	P	**Pn**	**00 55 15.6**	**-1.8**
QRZ	**Quartz Range**	**6.59**	**240**	Pn	**Pn**	**00 55 15.3**	**-2.2**
THZ	**Tophouse**	**6.80**	**232**	P	**Pn**	**00 55 18.6**	**-1.9**
THZ	**Tophouse**	**6.80**	**232**	Pn	**Pn**	**00 55 19.0**	**-1.5**
KHZ	**Kahutara**	**6.83**	**225**	P	**Pn**	**00 55 18.4**	**-2.3**
DSZ	**Dunniston Nort**	**7.50**	**235**	P	**Pn**	**00 55 28.6**	**-1.4**
OKCZ	**Okains Bay**	**7.98**	**219**	P	**Pn**	**00 55 35.2**	**-1.3**
AKCZ	**Akaroa Harbour**	**8.16**	**219**	P	**Pn**	**00 55 38.2**	**-0.9**
MQZ	**McQueen's Vall**	**8.18**	**221**	P	**Pn**	**00 55 36.8**	**-2.3**
INZ	**Inchbonnie**	**8.24**	**230**	P	**Pn**	**00 55 37.6**	**-2.5**
OXZ	**Oxford**	**8.26**	**225**	P	**Pn**	**00 55 38.7**	**-1.6**
OXZ	**Oxford**	**8.26**	**225**		**Pn**	**00 55 40.0**	**-0.3**
WACZ	**Wakanui South**	**8.77**	**223**	P	**Pn**	**00 55 46.2**	**-1.2**
WVZ	**Waitaha Valley**	**8.87**	**230**	P	**Pn**	**00 55 48.3**	**-0.4**
RPZ	**Rata Peaks**	**9.06**	**226**	Pn	**Pn**	**00 55 50.7**	**-0.6**
	1.7nm,0.3s,baz=253,slow=11,SNR=2.1						
RPZ				Sn	**Sn**	**00 57 24.3**	**-8.3**
	9.5nm,0.3s,baz=43,slow=18,SNR=14						
RPZ	**Rata Peaks**	**9.06**	**226**	P	**Pn**	**00 55 50.0**	**-1.3**
RPZ	**Rata Peaks**	**9.06**	**226**		**Pn**	**00 55 50.4**	**-0.9**
ARCZ	**Arundel**	**9.13**	**225**	P	**Pn**	**00 55 51.2**	**-1.2**
GCSZ	**Gaunt Creek Bo**	**9.25**	**230**	P	**Pn**	**00 55 53.9**	**-0.1**
FOZ	**Fox Glacier**	**9.68**	**230**	P	**Pn**	**00 55 58.9**	**-0.9**
LBZ	**Lake Benmore**	**9.96**	**225**	P	**Pn**	**00 56 02.0**	**-1.7**
ODZ	**Otahua Downs**	**10.14**	**221**	P	**Pn**	**00 56 04.5**	**-1.7**
JCZ	**Jackson Bay**	**10.60**	**230**	P	**Pn**	**00 56 10.8**	**-1.7**
SYZ	**Scrubby Hill**	**11.93**	**219**	P	**Pn**	**00 56 30.3**	**-0.3**
DZM	**Mont Dzumac**	**19.54**	**319**	LR	LR	01 03 29.1	
	comp=Z,86nm,19.6s,baz=94,slow=31						
STKA	**Stephens Creek**	**31.95**	**269**	P	**P**	**01 00 07.5**	**+1.3**
	2.1nm,0.9s,baz=122,slow=19,SNR=2.2						
STKA				LR	LR	01 12 49.8	
	comp=Z,51nm,18.4s,baz=41,slow=36						
CTA	**Charters Tower**	**34.18**	**291**	P	**P**	**01 00 24.6**	**-1.3**
	1.9nm,0.6s,baz=96,slow=15,SNR=3.7						
CTAO	**Charters Tower**	**34.18**	**291**	P	**P**	**01 00 25.0**	**-0.8**
CTAO				IAmb	IAmb	01 00 29.3	
	comp=Z,10nm,1.2s						
COEN	**Coen**	**40.38**	**296**	P	**P**	**01 01 17.9**	**-0.5**
COEN				IAmb	IAmb	01 01 18.8	
	comp=Z,9.8nm,0.8s						
AS31	**Alice Springs**	**41.68**	**276**	P	**P**	**01 01 28.4**	**-0.7**
ASAR	**Alice Springs**	**41.68**	**276**	P	**P**	**01 01 28.6**	**-0.5**
	comp=Z,6.6nm,0.7s,baz=117,slow=7.5,SNR=8.4						
ASAR	**Alice Springs**	**41.68**	**276**	P	**P**	**01 01 28.2**	**-0.9**
FORT	**Forrest**	**43.07**	**263**	P	**P**	**01 01 40.4**	**+0.1**
WR0	**Warramunga Arr**	**43.16**	**281**	P	**P**	**01 01 40.1**	**-1.1**
WR0				IAmb	IAmb	01 01 41.3	
	comp=Z,8.5nm,1.2s						
WB2	**Warramunga Arr**	**43.32**	**281**	P	**P**	**01 01 41.8**	**-0.7**
WRA	**Warramunga Arr**	**43.33**	**281**	P	**P**	**01 01 41.2**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=121,slow=7.7,SNR=33						
WRA	**Warramunga Arr**	**43.33**	**281**	P	**P**	**01 01 41.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**51.17**	**277**	P	**P**	**01 02 43.6**	**0.0**
	comp=Z,5.9nm,0.8s,baz=158,slow=8.1,SNR=19						
FITZ	**Fitzroy Crossi**	**51.17**	**277**	P	**P**	**01 02 43.2**	**-0.5**
QSPA	**South Pole Qui**	**52.37**	**180**	P	P	01 02 59.1	+6.9
	comp=Z,3.7nm,0.9s,baz=43,slow=1.7,SNR=11						
BELA	**Belgrano 2**	**62.73**	**172**	P	**P**	**01 04 04.7**	**-0.1**
SNAA	**Sanae**	**70.86**	**179**	P	**P**	**01 04 55.8**	**-0.9**
SNAA				IAmb	IAmb	01 05 09.4	
	comp=Z,7.2nm,1.5s						
H03S2	**Juan Fernandez**	**77.78**	**123**	T	T	02 31 35.4	
	baz=231,slow=74,SNR=19						
H03S1	**Juan Fernandez**	**77.78**	**123**	T	T	02 31 35.4	
	baz=231,slow=74,SNR=20						
H03S3	**Juan Fernandez**	**77.79**	**123**	T	T	02 31 35.5	
	baz=231,slow=74,SNR=18						
H03N3	**Juan Fernandez**	**78.01**	**123**	T	T	02 32 00.1	
	baz=234,slow=72,SNR=83						
H03N2	**Juan Fernandez**	**78.01**	**123**	T	T	02 31 54.0	
	baz=234,slow=72,SNR=66						
H03N1	**Juan Fernandez**	**78.02**	**123**	T	T	02 31 59.2	
	baz=234,slow=72,SNR=95						
PLCA	**Pasa Flores**	**78.68**	**133**	P	P	01 05 49.4	+6.8
	comp=Z,2.4nm,0.9s,baz=225,slow=7.5,SNR=4.2						
MKAR	**Makanchi Array**	**121.10**	**307**	PKP	**PKiKP**	**01 12 32.5**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=96,slow=1.2,SNR=4.4						
MKAR	**Makanchi Array**	**121.10**	**307**		**PKiKP**	**01 12 32.7**	**+0.1**
H10N3	**ASCENSION HYDR**	**32.65**	**160**	T	T	03 40 08.5	
	baz=204,slow=75,SNR=5.8						
H10N1	**ASCENSION HYDR**	**32.65**	**160**	T	T	03 40 08.3	
	baz=204,slow=75,SNR=4.4						
H10N2	**ASCENSION HYDR**	**32.67**	**160**	T	T	03 40 11.4	
	baz=204,slow=75,SNR=4.6						
ARCES	**ARCESS Array B**	**145.33**	**345**	PKP	**PKPdf**	**01 13 17.7**	**+0.8**
	comp=Z,4.7nm,0.7s,baz=22,slow=3.9,SNR=15						
KBZ	**Khabaz**	**147.27**	**294**	PKPbc	**PKPab**	**01 13 24.5**	**-0.7**
DBIC	**Dimbokro**	**148.74**	**171**	PKPbc	**PKPab**	**01 13 32.2**	**+0.5**
	comp=Z,3.0nm,1.0s,baz=208,slow=3.3,SNR=3.1						
FINES	**FINESS Array B**	**151.27**	**334**	PKPbc	**PKiKP**	**01 13 33.6**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=22,slow=3.6,SNR=11						
TORD	**Torodi Ar. Bea**	**155.45**	**184**	PKPbc	PKPbc	01 13 46.7	
	comp=Z,0.3nm,0.8s,baz=130,slow=2.3,SNR=2.2						
TORD				PKPab	**PKPab**	**01 14 03.9**	**+4.2**
	comp=Z,1.7nm,0.8s,baz=181,slow=3.5,SNR=7.5						
TORD	**Torodi Ar. Bea**	**155.45**	**184**		**PKPab**	**01 14 02.9**	**+3.2**
AKASG	**Malin Array Be**	**155.59**	**311**	PKPbc	PKPdf	01 13 41.8	+8.4
	comp=Z,0.4nm,0.4s,baz=228,slow=26,SNR=1.8						

*RSNC **20** 01:04:02.9±1.9,7.95N×77.63W,h0km±7km,ML3.1,Mw3.8*
*UPA **20** 01:04:02.8±1.2,7.98N×77.55W,h7km±8km,MW4.3*

ISC 20 01:04:02.8±1.2, 7.97N±0.02×77.61W±0.02, h15km±9km, n40, σ1§42/67, 1C-5D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPD2	**Meteti**	**0.70**	**326**	↓*iP*	**Pg**	**01 04 17.1**	**+0.5**
UPD2				*eS*	**Sn**	**01 04 28.6**	**-0.3**
UPD2				*i*		01 04 40.4	
	comp=Z,1μm,0.3s						
UPD2	**Meteti**	**0.70**	**326**	↓*iP*	**Pg**	**01 04 17.1**	**+0.5**
UPD2				*eS*	**Sn**	**01 04 28.8**	**0.0**
CAPC	**Capurgana**	**0.71**	**21**	↓*iP*	**Pb**	**01 04 16.3**	**-0.8**
CAPC				*eS*	**Sg**	**01 04 26.8**	**+0.5**
CAPC				*i*		01 04 28.0	
	comp=Z,2μm,0.1s						
CAP2	**Capurgana**	**0.73**	**20**	↓*iP*	**Pb**	**01 04 16.1**	**-1.1**
CAP2				*eS*	**Sb**	**01 04 26.8**	**-0.2**
PTAC	**Punta Ardita,**	**0.83**	**193**	*eP*	**Pb**	**01 04 17.4**	**-1.7**
PTAC				*eS*	**Sb**	**01 04 29.4**	**-0.7**
LCBC	**Los crdobas,**	**1.52**	**54**	*eP*	**Pb**	**01 04 30.5**	**-0.2**
LCBC				*eS*	**Sg**	**01 04 51.9**	**0.0**
LCBC				*i*		01 05 10.2	
	comp=Z,156nm,0.4s						
DBBC	**Dabeiba**	**1.68**	**124**	*eP*	**Pn**	**01 04 31.2**	**-0.6**
DBBC				*eS*	**Sg**	**01 04 56.6**	**-0.4**
SOLC	**Bahia Solano**	**1.74**	**173**	*eP*	**Pn**	**01 04 32.6**	**+0.1**
SOLC				*eS*	**Sb**	**01 04 56.7**	**+0.5**
SOLC				*i*		01 05 11.6	
	comp=Z,168nm,0.6s						
CNTA3	**Canitas, Panam**	**1.77**	**315**	*eP*	**Pn**	**01 04 34.0**	**+1.0**
CNTA3				*eS*	**Sb**	**01 04 56.8**	**-0.4**
CHPO	**Chepo, Panama**	**1.91**	**309**	*eP*	**Pb**	**01 04 36.1**	**-1.2**
CHPO				*eS*	**Sb**	**01 05 01.4**	**+0.3**
UREC	**San Jos de Ur**	**2.07**	**96**	*eP*	**Pn**	**01 04 37.3**	**+0.1**
UREC				*eS*	**Sb**	**01 05 05.1**	**-0.7**
MOTC	**Monteria, Cord**	**2.09**	**67**	*eP*	**Pn**	**01 04 37.4**	**+0.1**
MOTC				*eS*	**Sb**	**01 05 05.0**	**-1.4**
MOTC				*i*		01 05 18.4	
	comp=Z,66nm,0.5s						
MONA	**Monteria**	**2.09**	**67**	↑↑*iP*	**Pn**	**01 04 37.5**	**0.0**
MONA				*eS*	**Sn**	**01 05 02.5**	**-0.8**
UPA	**Univ. de Panam**	**2.15**	**298**	*eP*	**Pn**	**01 04 37.6**	**-0.6**
UPA				*eS*	**Sn**	**01 05 05.1**	**+0.4**
UPA				*i*		01 05 12.6	
	comp=Z,54nm,0.6s						
UPA	**Univ. de Panam**	**2.15**	**298**	*eP*	**Pn**	**01 04 37.8**	**-0.4**
UPA				*eS*	**Sn**	**01 05 06.2**	**+1.6**
ZANG	**Zanguenga, Cho**	**2.44**	**294**	*eP*	**Pn**	**01 04 43.1**	**+0.9**
VTON	**El Valle, Cocl**	**2.56**	**285**	*eP*	**Pn**	**01 04 45.2**	**+1.3**
VTON				*eS*	**Sb**	**01 05 17.8**	**-1.9**
AZU	**Azuero**	**2.64**	**266**	*eP*	**Pn**	**01 04 45.7**	**+0.7**
AZU				*eS*	**Sn**	**01 05 18.0**	**+1.3**
AZU				*i*		01 05 28.5	
	comp=Z,232nm,0.5s						
AZU	**Azuero**	**2.64**	**266**	↓*eP*	**Pn**	**01 04 46.4**	**+1.5**
AZU				*eS*	**Sn**	**01 05 17.9**	**+1.1**
HELC	**Santa Helena**	**2.72**	**130**	*eP*	**Pn**	**01 04 47.8**	**+1.4**
HELC				*eS*	**Sb**	**01 05 21.1**	**-3.6**
HELC				*i*		01 05 34.7	
	comp=Z,39nm,0.7s						
HELC	**Santa Helena**	**2.72**	**130**	*eP*	**Pn**	**01 04 47.5**	**+1.1**
HELC				*eS*	**Sb**	**01 05 25.0**	**+0.2**
ZARC	**

SZCU	Shurtz Canyon	37.15	99	P		P		01 15 27.9	-1.8	
SRU	San Rafael Swe	37.49	95	P		P		01 15 31.0	-1.5	
TXAR	Lajitas Array	48.53	99	P		P		01 17 02.8	+1.9	
	comp=Z,0.3nm,0.5s,baz=282,slow=5.1,SNR=5.4									
TXAR	Lajitas Array	48.53	99	P		P		01 16 59.9	-1.0	
FINES	FINESS Array B	62.49	356	P		P		01 18 38.7	-0.9	
	comp=Z,0.5nm,0.4s,baz=2.2,slow=7.1,SNR=8.2									
FINES	FINESS Array B	62.49	356	P		P		01 18 38.9	-0.7	
AKASG	Malin Array Be	73.03	353	P		P		01 19 44.2	-1.3	
	comp=Z,0.9nm,0.4s,baz=6.1,slow=6.0,SNR=4.6									

*IDC **20** 01:18:08.0±1.0,21°.55S×68°.27W,h104km±11km,mb3.8/11, mb1 3.9/14,mb1mx3.8/26,mbtmp4.2/14,Error ellipse: s-maj=17.2km s-min=15.3km az=167.0*
*NEIC **20** 01:18:08.6±1.0,21°.63S±0°.04×68°.56W±0°.09,h128km±2km, Error ellipse: s-maj=11.7km s-min=6.0km az=84.0*
*GUC **20** 01:18:10.1±0.7,21°.64S×68°.49W,h120km±5km,ML4.1*
*VAO **20** 01:18:10.1±0.8,21°.47S×68°.21W,h116km,mb4.4*

ISC 20 01:18:08.4±0.6,21°.63S±0°.03×68°.48W±0°.05,h125km±6km, n108,σ1§07/134,mb4.2/14,13C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.73**	**257**	⇑*iP*			**Pn**	**01 18 29.5**	**+0.9**
PB09				*eS*			**Sn**	**01 18 44.2**	**+0.2**
PB09				IAML				01 18 48.1	
	comp=N,2μm,0.1s								
PB09	**IPOC Station P**	**0.73**	**257**				**Pn**	**01 18 28.9**	**+0.2**
LVC	**Limon Verde**	**1.05**	**202**	P			**Pn**	**01 18 32.5**	**+0.7**
	comp=N,691nm,0.3s,baz=0.6,slow=7.2,SNR=3549								
LVC				S			**Sn**	**01 18 48.9**	**-0.7**
	comp=N,193nm,0.3s,baz=204,slow=17,SNR=51								
LVC	**Limon Verde**	**1.05**	**202**	*eP*			**Pn**	**01 18 32.5**	**+0.7**
LVC				*eS*			**Sn**	**01 18 48.8**	**-0.7**
LVC	**Limon Verde**	**1.05**	**202**	Pn			**Pn**	**01 18 32.3**	**+0.6**
LVC				Sn			**Sn**	**01 18 49.4**	**-0.1**
PB01	**IPOC Station P**	**1.11**	**302**	⇑*iP*			**Pn**	**01 18 32.6**	**+0.6**
PB01				*eS*			**Sn**	**01 18 49.9**	**0.0**
PB01				IAML				01 18 51.5	
	comp=N,4μm,0.3s								
PB01	**IPOC Station P**	**1.11**	**302**				**Pn**	**01 18 31.8**	**-0.2**
PB01				Sn			**Sn**	**01 18 49.1**	**-0.8**
PB03	**IPOC Station P**	**1.26**	**250**	⇑*iP*			**Pn**	**01 18 34.2**	**+0.6**
PB03				*eS*			**Sn**	**01 18 53.0**	**+0.2**
PB03				IAML				01 18 53.7	
	comp=N,2μm,0.4s								
PB07	**IPOC Station P**	**1.31**	**266**	⇑*iP*			**Pn**	**01 18 34.8**	**+0.6**
PB07				*eS*			**Sn**	**01 18 54.1**	**+0.2**
PB07				IAML				01 18 55.6	
	comp=N,4μm,0.7s								
PB07	**IPOC Station P**	**1.31**	**266**	Pn			**Pn**	**01 18 34.1**	**-0.2**
PB07				Sn			**Sn**	**01 18 53.3**	**-0.6**
PB06	**IPOC Station P**	**1.48**	**223**	⇑*iP*			**Pn**	**01 18 36.9**	**+0.9**
PB06				*eS*			**Sn**	**01 18 58.0**	**+1.0**
PB06				IAML				01 18 59.5	
	comp=E,1μm,0.3s								
PB06	**IPOC Station P**	**1.48**	**223**				**Pn**	**01 18 35.9**	**-0.1**
PB06				Sn			**Sn**	**01 18 57.0**	**-0.1**
PB08	**IPOC Station P**	**1.61**	**337**	⇑*iP*			**Pn**	**01 18 39.5**	**+1.7**
PB08				*eS*			**Sn**	**01 19 01.7**	**+1.5**
PB08				IAML				01 19 03.8	
	comp=E,1μm,0.2s								
PB08	**IPOC Station P**	**1.61**	**337**				**Pn**	**01 18 39.0**	**+1.1**
PB08				Sn			**Sn**	**01 19 01.4**	**+1.2**
PB04	**IPOC Station P**	**1.70**	**245**	⇑*iP*			**Pn**	**01 18 39.0**	**+0.3**
PB04				*eS*			**Sn**	**01 19 00.6**	**-1.2**
PB04				IAML				01 19 07.4	
	comp=E,1μm,0.6s								
PB04	**IPOC Station P**	**1.70**	**245**				**Pn**	**01 18 38.6**	**-0.1**
PB04				Sn			**Sn**	**01 19 00.3**	**-1.5**
PATCX	**Punta Patache**	**1.76**	**297**	⇑*iP*			**Pn**	**01 18 40.2**	**+1.0**
PATCX				*eS*			**Sn**	**01 19 02.7**	**-0.1**
PATCX				IAML				01 19 06.8	
	comp=N,3μm,0.6s								
PATCX	**Punta Patache**	**1.76**	**297**				**Pn**	**01 18 39.8**	**+0.5**
PATCX				Sn			**Sn**	**01 19 01.3**	**-1.5**
PB15	**IPOC Station P**	**1.82**	**210**	⇑*iP*			**Pn**	**01 18 41.1**	**+1.0**
PB15				*eS*			**Sn**	**01 19 05.6**	**+1.2**
PB15	**IPOC Station P**	**1.82**	**210**				**Pn**	**01 18 40.0**	**-0.1**
PB15				Sn			**Sn**	**01 19 05.8**	**+1.4**
TA01	**Diego Aracena**	**1.91**	**303**	⇑*iP*			**Pn**	**01 18 41.5**	**+0.6**
TA01				*eS*			**Sn**	**01 19 05.8**	**-0.1**
TA01				IAML				01 19 07.9	
	comp=E,3μm,0.6s								
TA01				IAML				01 19 12.6	
	comp=N,1μm,0.3s								
TA01	**Diego Aracena**	**1.91**	**303**				**Pn**	**01 18 40.8**	**-0.2**
TA01				Sn			**Sn**	**01 19 05.5**	**-0.4**
PB05	**IPOC Station P**	**2.01**	**232**	⇑*iP*			**Pn**	**01 18 42.6**	**+0.3**
PB05				IAML				01 19 15.2	
	comp=E,706nm,0.6s								
TA02	**Huaiquique**	**2.06**	**311**	⇑*iP*			**Pn**	**01 18 43.1**	**+0.3**
TA02				*eS*			**Sn**	**01 19 08.7**	**-0.4**
TA02				IAML				01 19 17.7	
	comp=N,3μm,0.1s								
GO01	**Chusmiza**	**2.06**	**341**	⇓*eP*			**Pn**	**01 18 44.7**	**+1.3**
GO01				*eS*			**Sn**	**01 19 11.3**	**+1.2**
GO01				IAML				01 19 15.2	
	comp=N,3μm,0.1s								
GO01	**Chusmiza**	**2.06**	**341**				**Pn**	**01 18 43.8**	**+0.4**
PB11	**IPOC Station P**	**2.16**	**329**	⇑*iP*			**Pn**	**01 18 45.0**	**+0.7**
PB11				*eS*			**Sn**	**01 19 12.3**	**+0.6**
PB11				IAML				01 19 14.3	
	comp=N,2μm,0.4s								
PB11	**IPOC Station P**	**2.16**	**329**				**Pn**	**01 18 44.4**	**+0.1**
PB11				Sn			**Sn**	**01 19 11.2**	**-0.6**
PSGC	**Pisagua**	**2.54**	**322**	⇓*eP*			**Pn**	**01 18 48.9**	**-0.1**
PSGC				*eS*			**Sn**	**01 19 19.3**	**-0.9**
PSGC				IAML				01 19 26.6	
	comp=E,596nm,0.5s								
PSGCX	**Pisagua**	**2.54**	**322**	Pn			**Pn**	**01 18 48.8**	**-0.3**
PB10	**IPOC Station P**	**2.68**	**225**	*eP*			**Pn**	**01 18 50.5**	**-0.3**
PB10				IAML				01 19 33.8	
	comp=N,384nm,0.4s								
PB10	**IPOC Station P**	**2.68**	**225**	Pn			**Pn**	**01 18 51.1**	**+0.4**
MNMC	**Minye Minye**	**2.70**	**337**	⇓*eP*			**Pn**	**01 18 52.0**	**+0.8**
MNMC				*eS*			**Sn**	**01 19 25.3**	**+1.1**
MNMC				IAML				01 19 29.2	
	comp=E,1μm,0.6s								
MNMC	**Minye Minye**	**2.70**	**337**				**Pn**	**01 18 52.0**	**+0.8**
MNMC				Sn			**Sn**	**01 19 23.8**	**-0.3**
PB16	**IPOC Station P**	**3.42**	**343**	*eP*			**Pn**	**01 19 02.0**	**+1.1**
PB16	**IPOC Station P**	**3.42**	**343**	Pn			**Pn**	**01 19 02.1**	**+1.2**
PB14	**IPOC Station P**	**3.47**	**210**	*eP*			**Pn**	**01 19 01.4**	**+0.1**
PB14	**IPOC Station P**	**3.47**	**210**	Pn			**Pn**	**01 19 01.0**	**-0.3**
GO02	**Mina Guanaco**	**3.66**	**196**	*eP*			**Pn**	**01 19 03.8**	**0.0**
GO02	**Mina Guanaco**	**3.66**	**196**	Pn			**Pn**	**01 19 03.8**	**0.0**
AP01	**Chacalluta**	**3.69**	**331**	*eS*			**Sn**	**01 19 45.8**	**-1.1**
AC01	**Pan de Azucar**	**4.90**	**203**	Pn			**Pn**	**01 19 18.7**	**-1.3**
AC02	**Maricunga**	**5.22**	**186**				**Pn**	**01 19 24.8**	**+0.1**
LPAZ	**La Paz**	**5.32**	**4**	P			**Pn**	**01 19 28.5**	**+2.1**
	comp=E,1.9nm,0.3s,baz=190,slow=6.9,SNR=57								
LPAZ				S			**Sn**	**01 20 24.2**	**-2.8**
	baz=203,slow=14,SNR=1.7								
LPAZ	**La Paz**	**5.32**	**4**				**Pn**	**01 19 26.3**	**-0.1**
LPAZ							**Sn**	**01 20 25.2**	**-1.8**
GO03	**Copiap**	**6.15**	**195**				**Pn**	**01 19 35.3**	**-1.6**
AC05	**El Transito**	**7.36**	**192**	Pn			**Pn**	**01 19 51.2**	**-2.0**
LCO	**Las Campanas**	**7.62**	**195**				**Pn**	**01 19 53.7**	**-3.2**
SIV	**San Ignacio**	**8.98**	**53**	P			Pn	01 20 12.3	-2.9
	comp=E,23nm,0.3s,baz=239,slow=11,SNR=392								
SIV				S			Sn	01 21 46.2	-8.4
	comp=E,0.2nm,0.3s,baz=282,slow=15,SNR=1.9								
PTLB	**Pontes e Lacer**	**10.78**	**57**	*eP*			**Pn**	**01 20 36.5**	**-2.8**
CPUP	**Villa Florida**	**11.21**	**117**	P			**Pn**	**01 20 42.8**	**-2.2**
	comp=E,0.1nm,0.3s,baz=329,slow=3.0,SNR=2.0								
CPUP	**Villa Florida**	**11.21**	**117**				**Pn**	**01 20 46.4**	**+1.4**
CPUP	**Villa Florida**	**11.21**	**117**	*eP*			**Pn**	**01 20 45.8**	**+0.8**
VILB	**Vilhena**	**11.70**	**44**	*eP*			**Pn**	**01 20 49.8**	**-1.7**
ETMB	**Extrema**	**11.95**	**11**	*eP*			**Pn**	**01 20 55.1**	**+0.3**
AQDB	**Aquidauana**	**11.99**	**87**	*eP*			**Pn**	**01 20 55.3**	**+0.1**
PP1B	**Ponte de Pedra**	**13.42**	**75**	*eP*			**Pn**	**01 21 10.9**	**-3.1**
SAML	**Samuel**	**13.60**	**23**				**Pn**	**01 21 16.2**	**-0.1**
SAML	**Samuel**	**13.60**	**23**	*eP*			**Pn**	**01 21 14.2**	**-2.0**
TRCB	**Terra Rica**	**14.72**	**97**	*eP*			**Pn**	**01 21 29.0**	**-1.6**
PCMB	**Pacaembu**	**16.01**	**93**	*eP*			**Pn**	**01 21 46.2**	**-0.4**
CPSB	**Cacapava Do Su**	**16.08**	**126**	*eP*			**Pn**	**01 21 47.5**	**+0.1**
CLDB	**Colider**	**16.19**	**51**	*eP*			**Pn**	**01 21 47.7**	**-1.2**
PLTB	**Pedras Altas**	**16.67**	**130**	*eP*			**P**	**01 21 55.1**	**+0.3**
ARAG	**Araguaiana, MT**	**16.85**	**72**	*eP*			**P**	**01 21 57.0**	**+0.1**
ITRB	**Iturama**	**17.06**	**87**	*eP*			**P**	**01 21 58.5**	**-0.8**
FRTB	**Fartura**	**17.56**	**99**	*eP*			**P**	**01 22 05.5**	**+0.8**
BB19B	**Bebedouro**	**18.59**	**92**	*eP*			**P**	**01 22 16.0**	**-0.1**
SNDB	**Serra Nova Dou**	**19.03**	**62**	*eP*			**P**	**01 22 20.1**	**-0.7**
PLCA	**Paso Flores**	**19.12**	**185**	P			**Pn**	**01 22 24.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=341,slow=7.6,SNR=3.5								
PLCA	**Paso Flores**	**19.12**	**185**	P			**Pn**	**01 22 22.2**	**-1.7**
NPGB	**Novo Progresso**	**19.26**	**43**	*eP*			**P**	**01 22 22.0**	**-1.3**
IPMB	**Ipameri, GO**	**19.41**	**83**	*eP*			**P**	**01 22 24.9**	**0.0**
VAO	**Valinhos**	**19.95**	**98**	*eP*			**P**	**01 22 30.5**	**-0.3**
BDFB	**Brasilia**	**20.27**	**76**	P			**P**	**01 22 33.1**	**-1.3**
	comp=E,1.8nm,0.5s,baz=219,slow=16,SNR=4.0								
ITTB	**Itaituba**	**21.15**	**38**	*eP*			**P**	**01 22 42.0**	**-1.7**
PEXB	**Peixe**	**21.48**	**67**	*eP*			**P**	**01 22 45.9**	**-1.4**
BSCB	**Bom Sucesso**	**22.09**	**93**	*eP*			**P**	**01 22 53.8**	**+0.1**
PRPB	**Parauapebas**	**23.71**	**52**	*eP*			**P**	**01 23 08.3**	**-0.7**
SMTB	**Santa Maria do**	**23.78**	**61**	*eP*			**P**	**01 23 09.2**	**-0.5**
JANB	**Januaria**	**23.83**	**78**	*eP*			**P**	**01 23 10.2**	**-0.1**
MALB	**Monte Alegre**	**24.04**	**37**	*eP*			**P**	**01 23 11.9**	**-0.2**
SDBA	**SAO DESIDERIO**	**24.31**	**72**	*eP*			**P**	**01 23 15.1**	**+0.6**
TMAB	**Tom-Au,PA,Br**	**27.56**	**49**	*eP*			**P**	**01 23 44.6**	**+0.8**
RCBR	**Riachuelo**	**35.21**	**68**	P			**P**	**01 24 51.3**	**+0.3**
	comp=E,7.1nm,0.9s,baz=250,slow=14,SNR=2.4								
TXAR	**Lajitas Array**	**60.97**	**325**	P			**P**	**01 28 10.0**	**+1.4**
	comp=E,0.5nm,0.7s,baz=151,slow=9.2,SNR=8.1								
TXAR	**Lajitas Array**	**60.97**	**325**	P			**P**	**01 28 08.4**	**-0.2**
SNAA	**Sanae**	**62.02**	**161**	P			**P**	**01 28 17.1**	**+2.0**
	comp=E,1.2nm,0.7s,baz=261,slow=7.6,SNR=8.6								
SNAA	**Sanae**	**62.02**	**161**	P			**P**	**01 28 15.9**	**+0.8**
SNAA					IAmb	IAmb		01 28 18.1	
	comp=Z,1.9nm,0.9s								
LIC	**Lamto**	**68.04**	**74**	*eP*			**P**	**01 28 55.1**	**+0.3**
	comp=Z,7.6nm,0.5s								
TIC	**Toumodi**	**68.23**	**73**	*eP*			**P**	**01 28 57.3**	**+1.2**
KIC	**Kosan Boka**	**68.35**	**74**	*eP*			**P**	**01 28 57.6**	**+0.8**
	comp=Z,13nm,0.7s								
DBIC	**Dimbokro**	**68.39**	**73**	P			**P**	**01 28 57.3**	**+0.3**
	comp=Z,5.2nm,0.6s,baz=229,slow=7.7,SNR=7.0								
DBIC	**Dimbokro**	**68.39**	**73**	P			**P**	**01 28 57.4**	**+0.3**
SFX	**San Felipe**	**68.72**	**318**	P			**P**	**01 28 58.4**	**-0.2**
SFX					IAmb	IAmb		01 29 16.6	
	comp=Z,6.8nm,0.8s								
MVCO	**Mesa Verde**	**69.62**	**327**	P			**P**	**01 29 03.8**	**-0.6**
MVCO					IAmb	IAmb		01 29 13.7	
	comp=Z,2.8nm,0.9s								
PDAR	**Pinedale Array**	**74.42**	**330**	P			P	01 29 35.3	+2.3
	comp=Z,0.4nm,0.6s,baz=130,slow=7.2,SNR=5.3								
ULM	**Lac du Bonnet**	**75.56**	**342**	P			**P**	**01 29 40.4**	**+1.4**
	comp=Z,2.0nm,0.4s,baz=167,slow=7.2,SNR=6.3								
NVAR	**Mina Array Bea**	**75.84**	**322**	P			P	01 29 44.4	+3.2
	comp=Z,1.2nm,0.8s,baz=148,slow=5.7,SNR=5.5								
TORD	**Torodi Ar. Bea**	**77.02**	**70**	P			**P**	**01 29 48.7**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=253,slow=5.3,SNR=23								
TORD	**Torodi Ar. Bea**	**77.02**	**70**	P			**P**	**01 29 48.2**	**+0.2**
BOSA	**Boshof**	**83.03**	**118**	P			**P**	**01 30 21.8**	**+1.4**
	comp=Z,3.3nm,1.0s,baz=164,slow=22,SNR=2.0								
YKA	**Yellowknife Ar**	**91.44**	**340**	P			P	01 31 02.2	+2.2
	comp=Z,2.9nm,0.7s,baz=127,slow=5.4,SNR=16								
ASAR	**Alice Springs**	**129.98**	**207**	PKP			**PKiKP**	**01 37 06.1**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=178,slow=3.4,SNR=5.1								
ASAR	**Alice Springs**	**129.98**	**207**				**PKiKP**	**01 37 03.3**	**-1.6**
WRA	**Warramunga Arr**	**133.04**	**210**	PKP			**PKiKP**	**01 37 12.3**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=153,slow=1.8,SNR=11								
WRA	**Warramunga Arr**	**133.04**	**210**				**PKiKP**	**01 37 09.4**	**-1.8**
MKAR	**Makanchi Array**	**145.50**	**36**	PKPbc			**PKiKP**	**01 37 34.2**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=323,slow=2.9,SNR=7.3								
MKAR				pPKPbc			pPKPab	01 38 06.1	-0.4
	comp=Z,0.8nm,0.8s,baz=327,slow=2.0,SNR=4.3								

*BJI **20** 01:41:13.0±0.0,15°.62S×168°.05E,h116km,mB4.9/22, mb4.9/32*
*IDC **20** 01:41:16.3±1.9,15°.39S×167°.55E,h109km±15km, mb4.3/22,mb1 4.3/24,mb1mx4.2/38,mbtmp4.7/24,MS3.2/3, Ms1 3.2/3,ms1mx2.9/36,Error ellipse: s-maj=18.7km s-min=10.7km az=89.0*
*NEIC **20** 01:41:17.1±1.0,15°.36S±0°.09×167°.4E±0°.1,h118km±3km, mb4.7/36,Error ellipse: s-maj=14.5km s-min=12.8km az=72.0*

ISC 20 01:41:17.7±0.4,15°.40S±0°.05×167°.50E±0°.08,h124km, n117,σ1§09/118,mb4.7/39,2C,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.29**	**260**	Pn			**Pn**	**01 41 34.0**	**-1.0**
SANVU				Sn			**Sn**	**01 41 45.4**	**-2.7**
DZM	**Mont Dzumac**	**6.71**	**188**	P			**Pn**	**01 42 53.8**	**-0.1**
	46nm,0.3s,baz=31,slow=13,SNR=184								
DZM				S			**Sn**	**01 44 08.8**	**-0.2**
	29nm,0.3s,baz=139,slow=23,SNR=7.3								
DZM				LR			LR	01 45 04.0	
	comp=Z,166nm,20.2s,baz=96,slow=34								
DZM	**Mont Dzumac**	**6.71**	**188**	Pn			**Pn**	**01 42 53.3**	**-0.6**
DZM				Sn			**Sn**	**01 44 09.6**	**+0.6**
HNR	**Honiara**	**9.46**	**308**	P			**Pn**	**01 43 30.6**	**-0.3**
	46nm,0.3s,baz=166,slow=5.9,SNR=5.4								
MSVF	**Nonsavu**	**10.38**	**104**	Pn			**Pn**	**01 43 43.7**	**+0.3**
EIDS	**Eidsvold**	**18.29**	**235**				**Pn**	**01 45 23.0**	**-0.5**
EIDS					IAmb		IAmb	01 45 25.5	
	comp=Z,27nm,0.7s								
KRVT	**Keravat (AS076**	**18.79**	**304**	LR			LR	01 52 37.8	
	comp=Z,56nm,19.2s,baz=117,slow=36								
AFI	**Afiamalu**	**20.11**	**88**	LR			LR	01 51 56.3	
	comp=Z,84nm,18.4s,baz=103,slow=32								
CTA	**Charters Tower**	**20.76**	**254**	P			**P**	**01 45 50.0**	**+1.2**
	comp=Z,6.0nm,0.8s,baz=96,slow=11,SNR=7.3								
COEN	**Coen**	**23.57**	**270**	P			**P**	**01 46 16.3**	**-1.0**
HIZ	**Hauiti**	**23.92**	**166**	P			**P**	**01 46 20.9**	**+0.7**
URZ	**Urewera**	**24.32**	**161**	P			**P**	**01 46 24.0**	**+0.5**
	comp=Z,14nm,0.9s,baz=7.4,slow=7.8,SNR=4.4								
URZ	**Urewera**	**24.30**	**161**	P			**P**	**01 46 24.1**	**+0.5**
URZ					IAmb	IAmb		01 46 24.2	
	comp=Z,34nm,1.1s								
BKZ	**Black Stump Fm**	**24.96**	**163**	P			**P**	**01 46 30.1**	**+0.4**
BFZ	**Birch Farm**	**26.32**	**165**	P			**P**	**01 46 41.2**	**-0.6**
BFZ					IAmb	IAmb		01 46 44.0	
	comp=Z,44nm,1.1s								
MMPI	**Merauke**	**27.39**	**281**	P			**P**	**01 46 49.8**	**-1.9**
KHZ	**Kahutara**	**27.42**	**170**	P			**P**	**01 46 52.3**	**+0.6**
KHZ					IAmb	IAmb		01 47 11.5	
	comp=Z,21nm,1.2s								
STKA	**Stephens Creek**	**28.73**	**231**	P			**P**	**01 47 03.5**	**+0.1**
	comp=Z,4.9nm,0.6s,baz=47,slow=7.0,SNR=12								
STKA				PcP			**PcP**	**01 50 10.7**	**-0.2**
	comp=Z,5.9nm,0.7s,baz=80,slow=2.5,SNR=8.9								
STKA	**Stephens Creek**	**28.73**	**231**	P			**P**	**01 47 03.6**	**+0.1**
WR0	**Warramunga Arr**	**31.69**	**257**	P			**P**	**01 47 29.4**	**-0.4**
WB0	**Warramunga Arr**	**31.82**	**257**	P			**P**	**01 47 30.3**	**-0.6**
WRA	**Warramunga Arr**	**31.88**	**257**	P			**P**	**01 47 30.9**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=84,slow=8.5,SNR=24								
WRA				PcP			**PcP**	**01 50 18.8**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=88,slow=3.5,SNR=3.5								
WRA				ScP			**ScP**	**01 53 54.2**	**+2.7**
	comp=Z,0.8nm,0.9s,baz=81,slow=3.4,SNR=6.0								
WRA	**Warramunga Arr**	**31.88**	**257**	P			**P**	**01 47 30.4**	**-1.0**
WRA							**PcP**	**01 50 19.1**	**-0.3**
WRA				ScP			**ScP**	**01 53 54.9**	**+3.5**
AS31	**Alice Springs**	**32.64**	**250**	P			**P**	**01 47 37.3**	**-0.8**
ASAR	**Alice Springs**	**32.65**	**250**	P			**P**	**01 47 37.8**	**-0.3**
	comp=Z,4.6nm,0.4s,baz=78,slow=9.0,SNR=66								
ASAR				ScP			**ScP**	**01 53 56.0**	**+1.9**
	comp=Z,0.9nm,0.8s,baz=78,slow=3.7,SNR=6.4								
ASAR	**Alice Springs**	**32.65**	**250**	P			**P**	**01 47 36.8**	**-1.3**
BBOO	**Buckleboo**	**33.35**	**233**	P			**P**	**01 47 43.5**	**-0.5**
BBOO					IAmb	IAmb		01 47 45.5	
	comp=Z,10nm,0.7s								
KNRA	**Kununurra**	**37.28**	**264**	P			**P**	**01 48 17.2**	**-0.7**
KNRA					IAmb	IAmb		01 48 18.9	
	comp=Z,16nm,0.8s								
FORT	**Forrest**	**39.15**	**240**	P			**P**	**01 48 34.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**40.11**	**260**	P			**P**	**01 48 42.2**	**+0.7**
FITZ					IAmb	IAmb		01 48 42.6	
	comp=Z,8.9nm,0.7s								
PSA00	**Pilbara Seismi**	**45.47**	**255**	P			**P**	**01 49 24.6**	**-0.1**
PSA00					IAmb	IAmb		01 49 26.8	
	comp=Z,13nm,1.1s								
MORW	**Morawa**	**49.18**	**245**	P			**P**	**01 49 53.3**	**-0.1**
MORW					IAmb	IAmb		01 49 54.4	
	comp=Z,11nm,0.7s								
JMN	**Monobe**	**58.43**	**327**	P			**P**	**01 51 00.5**	**0.0**
MJAR	**Matsushiro Arr**	**58.59**	**333**	P			**P**	**01 51 00.8**	**-0.8**
	comp=Z,4.2nm,0.5s,baz=163,slow=8.2,SNR=9.2								
MJAR	**Matsushiro Arr**	**58.59**	**333**	P			**P**	**01 51 01.4**	**-0.2**
MAT	**Matsushiro**	**58.60**	**333**	P			**P**	**01 51 01.7**	**+0.1**
JNU	**Nakatsue**	**59.59**	**325**	P			**P**	**01 51 08.6**	**0.0**
	comp=Z,12nm,0.7s,baz=173,slow=3.0,SNR=8.7								
JNU	**Nakatsue**	**59.59**	**325**	P			**P**	**01 51 08.3**	**-0.2**
JNU					IAmb		IAmb	01 51 16.4	
	comp=Z,6.0nm,0.8s								
JHS	**Saijyo**	**59.81**	**328**	P			**P**	**01 51 09.8**	**-0.2**
VNDA	**Vanda**	**62.20**	**181**	P			**P**	**01 51 25.9**	**+0.3**
	comp=Z,3.4nm,0.5s,baz=356,slow=8.0,SNR=28								
VNDA	**Vanda**	**62.20**	**181**	P			**P**	**01 51 26.3**	**+0.7**
VNDA					IAmb		IAmb	01 51 27.3	
	comp=Z,4.1nm,0.6s								
CASY	**Casey**	**62.99**	**202**	P			**P**	**01 51 31.4**	**+0.4**
CASY					IAmb		IAmb	01 51 31.6	
	comp=Z,4.4nm,0.7s								
ASAJ	**Asahikawa**	**63.44**	**340**	P			**P**	**01 51 34.3**	**+0.1**
	comp=Z,10nm,0.7s,baz=247,slow=13,SNR=4.4								
KSRS	**Korea Array**	**64.41**	**326**	P			**P**	**01 51 41.4**	**+0.8**
	comp=Z,1.6nm,0.6s,baz=148,slow=8.0,SNR=6.4								
NJ2	**Nanjing**	**66.31**	**316**	*eP*			**P**	**01 51 55.3**	**+2.3**
NJ2					pmax	pmax			
	comp=Z,16nm,0.5s								
USA0B	**Ussuriysk Arra**	**67.58**	**333**	P			**P**	**01 52 00.9**	**+0.1**
USA0B					IAmb	IAmb		01 52 03.9	
	comp=Z,11nm,0.9s								
USRK	**Ussuriysk Ar.**	**67.58**	**333**	P			**P**	**01 52 01.9**	**+1.1**
	comp=Z,6.7nm,0.7s,baz=153,slow=6.8,SNR=14								
USRK	**Ussuriysk Ar.**	**67.58**	**333**	P			**P**	**01 52 00.6**	**-0.1**
PETK	**Petropavlovsk-**	**68.75**	**354**	P			**P**	**01 52 08.5**	**+0.6**
	comp=Z,3.9nm,0.7s,baz=132,slow=6.2,SNR=6.5								
MDJ	**Mudanjiang**	**68.97**	**332**	P			**P**	**01 52 09.4**	**-0.1**
MDJ					IAmb	IAmb		01 52 11.7	
	comp=Z,21nm,1.0s								
CN2	**Changchun**	**70.33**	**329**	*eP*			**P**	**01 52 18.8**	**+1.0**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
KLR	**Kul'dur**	**71

TORD	**Torodi Ar. Bea**	**166.06**	**263**	PKP	**PKPdf**	**02**	**01**	**08.0 -1.0**
	comp=Z,0.9nm,0.6s,baz=357,slow=1.5,SNR=13							
TORD				PKPab	**PKPab**	**02**	**02**	**09.3 -0.7**
	comp=Z,1.6nm,0.8s,baz=101,slow=4.7,SNR=7.8							
TORD	**Torodi Ar. Bea**	**166.06**	**263**		**PKPdf**	**02**	**01**	**08.2 -0.7**
TORD					**PKPab**	**02**	**02**	**08.4 -1.5**

BJI **20** *01:51:40.7±0.0, 37°.36N×141°.59E, h41km, mB5.3/72, mb5.6/83, Ms5.4/94, Ms7 5.2/88*

MOS **20** *01:51:41.2±0.8, 37°.38N×141°.55E, h38km, mb5.7/169, MS5.1/45, Error ellipse: s-maj=5.6km s-min=3.6km az=105.6*

NEIC **20** *01:51:42.2± 1.0, 37°.32N±0°.04×141°.61E±0°.07, h32km± 1km, mb5.4/414, Ms_20 5.2/249, Mwb5.5/118, Mwr5.5/28, Mww5.6, Mwc5.6(GCMT), Error ellipse: s-maj=9.7km s-min=6.6km az=86.0*

JMA **20** *01:51:43.1±0.1, 37°.34N×141°.58E, h46km±2km, M5.5 Broadband fault plane solution: P waves. NP1: φs19.00000°, δ43.00000°, λ90.00000°. NP2:φs199.00000°, δ47.00000°, λ90.00000°. Principal axes: T Plg88.0000°, Azm109.0000°; N Plg0.0000°, Azm19.0000°; P Plg2.0000°, Azm289.0000°;*

JMA Felt IV J1.

KEA **20** *01:51:43.3±0.0, 37°.20N×141°.90E, h27km, mB5.3/3, MS4.6/3*

NIED **20** *01:51:43.1, 37°.34N×141°.58E, h46km, MW5.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁷Nm; Mrr1.26; Mθθ0.06; Mφφ-1.32; Mrθ0.82; Mθφ-0.53; Mφr1.97; Fault plane solution: M₀2.54000×10¹⁷ NP1:φs22.00000°, δ74.00000°, λ92.00000°. NP2:φs194.00000°, δ17.00000°, λ82.00000°.*

IDC **20** *01:51:44.5± 1.3, 37°.38N×141°.54E, h50km± 11km, mb4.9/39, mb1 5.0/46, mb1mx4.9/54, mbtmp5.2/46, ML4.6/6, MS5.0/39, Ms1 5.0/39, ms1mx4.9/44 Error ellipse: s-maj=10.6km s-min=8.0km az=115.0*

NEIC **20** *01:51:44.1, 37°.34N×141°.54E, h43km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.47; Mθθ-0.00; Mφφ-0.47; Mrθ0.76; Mθφ-0.42; Mφr1.93; Fault plane solution: M₀2.17000×10¹⁷ NP1:φs21.45000°, δ82.21000°, λ86.14000°. NP2:φs227.88000°, δ8.69000°, λ116.18000°. Principal axes: T 2.0535, Plg53.0000°, Azm287.0000°; N 0.2190, Plg4.0000°, Azm22.0000°; P -2.2725, Plg37.0000°, Azm115.0000°;*

NEIC **20** *01:51:44.1, 37°.34N×141°.54E, h35km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.24; Mθθ-0.01; Mφφ-1.24; Mrθ0.68; Mθφ-0.72; Mφr1.39; Fault plane solution: M₀2.11000×10¹⁷ NP1:φs203.22000°, δ21.17000°, λ87.47000°. NP2:φs25.93000°, δ68.85000°, λ90.98000°. Principal axes: T 1.9239, Plg66.0000°, Azm298.0000°; N 0.3296, Plg1.0000°, Azm206.0000°; P -2.2535, Plg24.0000°, Azm115.0000°;*

BGR **20** *01:51:45.6±0.0, 37°.55N×142°.24E, h46km, mb5.4, Ms5.4*

GCMT **20** *01:51:46.2±0.1, 37°.37N±0°.01×141°.69E±0°.01, h42km, MW5.6/151, Moment Tensor Solution. s139,c263; s151,c314; Duration: 1s6 Moment tensor: Scale 10¹⁷ Nm; Mrr2.49±.04; Mθθ-0.27±.03; Mφφ-2.23±.03; Mrθ0.94±.03; Mθφ-0.80±.02; Mφr1.98±.03; Best double couple: M₀3.32800×10¹⁷ NP1:φs196.00000°, δ25.00000°, λ83.00000°. NP2:φs23.00000°, δ66.00000°, λ93.00000°. Principal axes: T 3.3210, Plg69.0000°, Azm300.0000°; N 0.0090, Plg3.0000°, Azm202.0000°; P -3.3350, Plg21.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **20** *01:51:47, 37°.34N×141°.59E, h36km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.24; Mθθ0.02; Mφφ-1.27; Mrθ0.78; Mθφ-0.22; Mφr2.25; Fault plane solution: M₀2.70000×10¹⁷ NP1:φs180.00000°, δ15.00000°, λ73.00000°. NP2:φs18.00000°, δ76.00000°, λ94.00000°. Principal axes: T 2.6821, Plg59.0000°, Azm294.0000°; N 0.0294, Plg4.0000°, Azm197.0000°; P -2.7116, Plg31.0000°, Azm104.0000°;*

NEIC **20** *01:51:47, 37°.32N×141°.77E, h47km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.42; Mθθ-0.14; Mφφ-2.28; Mrθ0.85; Mθφ-0.94; Mφr1.85; Fault plane solution: M₀3.25000×10¹⁷ NP1:φs197.00000°, δ26.00000°, λ85.00000°. NP2:φs23.00000°, δ64.00000°, λ93.00000°. Principal axes: T 3.1425, Plg70.0000°, Azm299.0000°; N 0.2058, Plg2.0000°, Azm202.0000°; P -3.3484, Plg19.0000°, Azm111.0000°;*

ISC 20 01:51:42.9±0.2, 37°.35N±0°.03×141°.62E±0°.03, h39km±2km, h39km:pP-P, n1560, σ1s42/1452, mb5.4/493, MS5.2/215, 67C-104D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JFK	**Kawauchi**	**0.60**	**272**	⇓P		**Pn**	**01 51 54.9**	**-0.1**
JFK				S		**Sn**	**01 52 02.9**	**-0.6**
JMST	**Minamisoumatoc**	**0.69**	**303**	⇓P		**Pn**	**01 51 56.2**	**-0.1**
JMST				S		**Sn**	**01 52 05.5**	**-0.3**
ONAJ	**Iwakimizuishiy**	**0.70**	**250**	⇓P		**Pn**	**01 51 56.2**	**-0.2**
ONAJ				S		**Sn**	**01 52 05.3**	**-0.8**
JMM	**Marumori**	**0.84**	**308**	⇓P		**Pn**	**01 51 58.2**	**0.0**
JMM				S		**Sn**	**01 52 09.3**	**0.0**
JMM	**Marumori**	**0.84**	**308**			**Pn**	**01 51 58.1**	**-0.1**
JMM				Sn		**Sn**	**01 52 09.3**	**0.0**
JFFD	**Fukushimafurud**	**0.89**	**253**	⇓P		**Pn**	**01 51 58.7**	**-0.2**
JFFD				eS		**Sn**	**01 52 10.3**	**-0.3**
JIKH	**Ishinomakikobu**	**0.97**	**353**	⇓P		**Pn**	**01 52 00.1**	**+0.1**
JFT	**Otama**	**1.04**	**280**	⇓P		**Pn**	**01 52 01.8**	**+0.8**
JFT				eS		**Sn**	**01 52 14.9**	**+0.6**
JHO	**Hitachi**	**1.12**	**229**	⇓P		**Pn**	**01 52 01.5**	**-0.6**
JHO				S		**Sn**	**01 52 15.5**	**-0.8**
JIO	**Ouri**	**1.12**	**349**	⇓P		**Pn**	**01 52 02.5**	**+0.4**
JIO				S		**Sn**	**01 52 15.9**	**-0.4**
JOU	**Okura**	**1.27**	**323**	⇓P		**Pn**	**01 52 04.7**	**+0.6**
JOU				eS		**Sn**	**01 52 21.0**	**+1.1**
JYAR	**Yonezawaarcadi**	**1.30**	**296**	⇓P		**Pn**	**01 52 05.2**	**+0.6**
JOFO	**Osakifurukawao**	**1.37**	**336**	⇓P		**Pn**	**01 52 06.5**	**+1.0**
JSB	**Shiboa**	**1.41**	**255**	⇓P		**Pn**	**01 52 07.0**	**+0.9**
JKMT	**Kesennumamotoy**	**1.46**	**355**	⇓P		**Pn**	**01 52 07.3**	**+0.5**
JYS	**Shirataka**	**1.51**	**306**	⇓P		**Pn**	**01 52 08.4**	**+1.0**
JFY	**Yanaizu**	**1.53**	**273**	⇓P		**Pn**	**01 52 08.4**	**+0.7**
JYT	**Yasato**	**1.60**	**226**	Pn		**Pn**	**01 52 08.4**	**-0.3**
JYT				Sn		**Sn**	**01 52 27.1**	**-1.0**
JMK	**Ichinoseki**	**1.63**	**349**	⇓P		**Pn**	**01 52 09.9**	**+0.8**
JMK				eS		**Sn**	**01 52 29.5**	**+0.7**
OFUJ	**Ofunato**	**1.73**	**1**	⇓P		**Pn**	**01 52 10.9**	**+0.5**
JYK	**Kaneyama**	**1.85**	**328**	⇓P		**Pn**	**01 52 13.2**	**+1.0**
JNS	**Sasagawa**	**1.89**	**285**	⇓P		**Pn**	**01 52 13.3**	**+0.6**
JYA	**Atsumi**	**1.95**	**310**	⇓P		**Pn**	**01 52 14.7**	**+1.2**
JAG	**Ashikaga**	**1.97**	**243**	⇓P		**Pn**	**01 52 14.0**	**+0.2**
JKT	**Katashina**	**1.99**	**254**	⇓P		**Pn**	**01 52 15.3**	**+1.2**
JHK	**Hiroka**	**2.08**	**268**	⇓P		**Pn**	**01 52 16.2**	**+0.9**
JYYZ	**Yamagatayuza**	**2.13**	**322**	⇓P		**Pn**	**01 52 17.8**	**+1.8**
JRG	**Rokugo**	**2.19**	**339**	⇓P		**Pn**	**01 52 18.3**	**+1.6**
MIYJ	**Miyakonagasawa**	**2.23**	**4**	⇓P		**Pn**	**01 52 17.7**	**+0.4**
I30JP	**ISUMI INFRASON**	**2.30**	**208**	*i*			02 02 10.0	
	baz=16,slow=316,SNR=1.3							
JIZZ	**Izumozaki**	**2.33**	**275**	P		**Pn**	**01 52 20.1**	**+1.5**
JSZI	**Iwateshizukuis**	**2.44**	**348**	⇓P		**Pn**	**01 52 21.7**	**+1.4**
JTB	**Tobi-shima**	**2.46**	**319**	⇓P		**Pn**	**01 52 21.4**	**+1.0**
JGK	**Kuni**	**2.52**	**253**	⇓P		**Pn**	**01 52 22.9**	**+1.6**
JRY	**Ryogami san**	**2.56**	**239**	⇓P		**Pn**	**01 52 22.1**	**+0.2**
JKZ	**Kuzumaki**	**2.64**	**355**	⇓P		**Pn**	**01 52 24.2**	**+1.2**
JSD	**Sado**	**2.75**	**285**	⇓P		**Pn**	**01 52 24.9**	**+0.4**
JSD	**Sado**	**2.75**	**285**	Pn		**Pn**	**01 52 24.9**	**+0.4**
JJN	**Nakama**	**2.77**	**266**	⇓P		**Pn**	**01 52 26.3**	**+1.5**
MJAR	**Matsushiro Arr**	**2.85**	**255**	P		**Pn**	**01 52 26.8**	**+0.9**
	43nm,0.3s,baz=80,slow=16,SNR=274							
MJAR				S		**Sn**	**01 52 59.6**	**+0.6**
	52nm,0.3s,baz=50,slow=12,SNR=8.1							
MJAR				LR		LR	01 53 50.5	
	comp=Z,59μm,19.4s,baz=75,slow=46							
MJAR	**Matsushiro Arr**	**2.85**	**255**	P		**Pn**	**01 52 26.4**	**+0.5**
MJAR							01 52 58.5	
MJAR	**Matsushiro Arr**	**2.85**	**255**			**Pn**	**01 52 26.4**	**+0.5**
MJAR						**Sn**	**01 52 58.5**	**-0.5**
MAJO	**Matsushiro**	**2.85**	**255**	*i* P		**Pn**	**01 52 26.7**	**+0.8**
MAJO	**Matsushiro**	**2.85**	**255**	Pn		**Pn**	**01 52 27.4**	**+1.5**
MAT	**Matsushiro**	**2.85**	**255**	P		**Pn**	**01 52 27.5**	**+1.6**
MAT				eS		**Sn**	**01 53 03.8**	**+4.8**
MAT	**Matsushiro**	**2.85**	**255**	P		**Pn**	**01 52 27.6**	**+1.6**
MJB9	**Matsu-Tunnel**	**2.85**	**255**	Pn		**Pn**	**01 52 27.8**	**+1.8**
JOD2	**Odawara 2**	**2.92**	**225**	P		**Pn**	**01 52 28.2**	**+1.3**
JAH	**Hinai**	**2.94**	**345**	⇓P		**Pn**	**01 52 29.1**	**+2.1**
JNG	**Nsakai**	**2.98**	**253**	⇓P		**Pn**	**01 52 29.3**	**+1.6**
JYN	**Shimob**	**3.10**	**234**	⇓P		**Pn**	**01 52 30.3**	**+1.0**
JNT	**Takato**	**3.17**	**243**	⇓P		**Pn**	**01 52 32.1**	**+1.8**
JIM2	**Oshima 3**	**3.17**	**215**	P		**Pn**	**01 52 31.3**	**+1.0**
JTM	**Tenmabayashi**	**3.46**	**353**	Pn		**Pn**	**01 52 36.0**	**+1.8**
JGN	**Niukaw**	**3.64**	**253**	⇓P		**Pn**	**01 52 38.8**	**+2.1**
JGF	**Kuroka**	**3.86**	**244**	⇓P		**Pn**	**01 52 42.0**	**+2.3**
JGF	**Kuroka**	**3.86**	**244**	Pn		**Pn**	**01 52 41.1**	**+1.4**
JSG	**Sagara**	**3.86**	**227**	Pn		**Pn**	**01 52 39.8**	**+0.1**
INU	**Inuyama**	**4.22**	**243**	Pn		**Pn**	**01 52 45.3**	**+0.6**
JHJ2	**Mitsune**	**4.48**	**200**	Pn		**Pn**	**01 52 48.5**	**+0.3**
JHJ	**Hachijo jima 2**	**4.48**	**200**	P		**Pn**	**01 52 48.8**	**+0.5**
	404nm,0.3s,baz=108,slow=2.1,SNR=64							
JHJ				S		**Sn**	**01 53 37.4**	**-1.8**
	584nm,0.3s,baz=290,slow=22,SNR=11							
JHJ				LR		LR	01 54 59.6	
	comp=Z,14μm,19.5s,baz=29,slow=44							
JEG	**Eigenji**	**4.77**	**244**	P		**Pn**	**01 52 55.2**	**+2.9**
ERM	**Erimo**	**4.81**	**14**	*i* P		**Pn**	**01 52 53.1**	**+0.4**
ERM	**Erimo**	**4.81**	**14**	Pn		**Pn**	**01 52 53.4**	**+0.7**
JFM	**Mihama**	**4.90**	**250**	⇓P		**Pn**	**01 52 56.7**	**+2.7**
JIE	**Ise**	**4.96**	**235**	P		**Pn**	**01 52 57.7**	**+2.8**
TSUJ	**Tsu 2**	**4.97**	**240**	P		**Pn**	**01 52 58.7**	**+3.7**
JKN2	**Miekihoku**	**5.34**	**236**	P		**Pn**	**01 53 01.6**	**+1.5**
JWT	**Wachi**	**5.43**	**250**	⇓P		**Pn**	**01 53 03.8**	**+2.5**
JWT	**Wachi**	**5.43**	**250**	Pn		**Pn**	**01 53 02.6**	**+1.3**
JEW	**Eniwo**	**5.49**	**359**	Pn		**Pn**	**01 53 02.9**	**+0.9**
JMMH	**Miemihama**	**5.76**	**234**	P		**Pn**	**01 53 08.3**	**+2.4**
JKSM	**Kasumi**	**5.88**	**255**	P		**Pn**	**01 53 10.1**	**+2.7**
JKS	**Kasai**	**5.97**	**249**	P		**Pn**	**01 53 11.2**	**+2.5**
JAD	**Aida**	**6.49**	**250**	P		**Pn**	**01 53 18.5**	**+2.6**
NMR	**Nemuro--Hokkai**	**6.78**	**26**	⇑*i* P		**Pn**	**01 53 17.9**	**-1.9**
NMR				*i* S		**Sn**	**01 54 29.2**	**-6.4**
ASAJ	**Asahikawa**	**6.80**	**6**	P		**Pn**	**01 53 20.9**	**+0.8**
	21nm,0.3s,baz=225,slow=8.5,SNR=19							
ASAJ				S		**Sn**	**01 54 34.4**	**-1.8**
	15nm,0.3s,baz=233,slow=26,SNR=2.3							
ASAJ	**Asahikawa**	**6.80**	**6**	P		**Pn**	**01 53 21.0**	**+0.9**
JKA	**Kamikawa-asahi**	**6.80**	**6**	Pn		**Pn**	**01 53 21.0**	**+1.0**
GLVR	**Golovnino**	**7.04**	**24**	*e*P		**Pn**	**01 53 23.3**	**0.0**
GLVR				eS		**Sn**	**01 54 38.4**	**-3.5**
GLVR				pmax	pmax			
	comp=Z,670nm,0.6s							
GLVR				pmax	pmax			
	comp=E,308nm,0.3s							
GLVR				pmax	pmax			
	comp=N,254nm,0.1s							
JNM	**Ikuma**	**7.17**	**258**	P		**Pn**	**01 53 29.0**	**+3.8**
JHS	**Saijyo**	**7.27**	**254**	P		**Pn**	**01 53 29.9**	**+3.3**
JHS	**Saijyo**	**7.27**	**254**	Pn		**Pn**	**01 53 26.0**	**-0.6**
JMN	**Monobe**	**7.27**	**243**	Pn		**Pn**	**01 53 26.8**	**+0.2**
GRPR	**Tuman**	**7.34**	**24**	*d* P		**Pn**	**01 53 27.9**	**+0.4**
GRPR				*i* S		**Sn**	**01 54 43.7**	**-5.9**
GRPR				pmax	pmax			
	comp=E,111nm,0.2s							
GRPR				pmax	pmax			
	comp=Z,280nm,0.2s							
GRPR				pmax	pmax			
	comp=N,127nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**7.41**	**24**	*e*P		**Pn**	**01 53 29.5**	**+1.1**
YUK				eS		**Sn**	**01 54 45.0**	**-6.2**
YUK				pmax	pmax			
	comp=Z,513nm,0.3s							
YUK				pmax	pmax			
	comp=N,82nm,0.1s							
YUK				pmax	pmax			
	comp=E,159nm,0.2s							
JHIK	**Hikimi**	**8.35**	**253**	P		Pn	01 53 46.2	+4.8
JTO	**Tosashimizu**	**8.50**	**241**	P		**Pn**	**01 53 46.2**	**+2.7**
TEY	**Ternei**	**8.56**	**335**	⇑*e*P		**Pn**	**01 53 47.1**	**+2.9**
TEY				eS		**Sn**	**01 55 24.9**	**+5.6**
TEY				pmax	pmax			
	comp=N,20nm,0.7s							
TEY				pmax	pmax			
	comp=E,20nm,0.9s							
TEY				pmax	pmax			
	comp=Z,40nm,0.8s							
KUR	**Kuril'sk**	**9.17**	**29**	*e*P		**Pn**	**01 53 55.3**	**+2.8**
KUR				eS		**Sn**	**01 55 32.4**	**-1.9**
KUR				pmax	pmax			
	comp=Z,1μm,3.5s							
KUR				pmax	pmax			
	comp=N,674nm,3.0s							
KUR				pmax	pmax			
	comp=E,697nm,3.3s							
KUR				pmax	pmax			
	comp=Z,270nm,0.5s							
KUR				pmax	pmax			
	comp=N,113nm,0.4s							
KUR				pmax	pmax			
	comp=E,82nm,0.5s							
KUR				smax	smax			
	comp=E,884nm,0.7s							
KUR				smax	smax			
	comp=N,508nm,0.5s							
KUR				MLR	MLR			
	comp=N,4μm,16.0s							
KUR				MLR	MLR			
	comp=E,6μm,16.0s							
KUR				MLR	MLR			
	comp=E,5μm,15.0s							
VLA	**Vladivostok**	**9.41**	**311**	*i* P		**Pn**	**01 53 56.6**	**+0.7**
YSS	**Yuzh-Sakhalins**	**9.63**	**5**	*c*e P		**Pn**	**01 54 00.2**	**+1.3**
YSS				pmax	pmax			
	comp=Z,69nm,0.6s							
YSS	**Yuzh-Sakhalins**	**9.63**	**5**	Pn		**Pn**	**01 53 59.4**	**+0.6**
JNU	**Nakatsue**	**9.75**	**248**	P		**Pn**	**01 54 02.7**	**+2.1**
	comp=Z,7.0nm,0.3s,baz=64,slow=5.6,SNR=61							
JNU				LR		LR	01 58 12.4	
	comp=Z,12μm,19.9s,baz=65,slow=40							
USA0B	**Ussuriysk Arra**	**10.01**	**316**	P		**Pn**	**01 54 05.9**	**+1.9**
USA0B	**Ussuriysk Arra**	**10.01**	**316**	Pn		**Pn**	**01 54 05.8**	**+1.9**
USRK	**Ussuriysk Ar.**	**10.01**	**316**	P		**Pn**	**01 54 05.8**	**+1.8**
	baz=136,slow=15,SNR=47							
USRK				LR		LR	01 57 44.0	
	comp=Z,17μm,19.5s,baz=122,slow=36							
USRK	**Ussuriysk Ar.**	**10.01**	**316**	Pn		**Pn**	**01 54 04.5**	**+0.6**
JCJ	**Chichijima**	**10.24**	**177**	Pn		**Pn**	**01 54 05.4**	**-1.8**
JTU	**Tsushima**	**10.30**	**258**	Pn		**Pn**	**01 54 09.7**	**+1.5**
KSRS	**Korea Array**	**10.90**	**275**	P		**Pn**	**01 54 20.0**	**+3.7**
	comp=Z,4.7nm,0.3s,baz=90,slow=13,SNR=192							
KSRS				LR		LR	01 58 13.9	
	comp=Z,16μm,19.3s,baz=86,slow=36							
JSU	**Suzuyama**	**10.91**	**241**	Pn		**Pn**	**01 54 16.4**	**0.0**
KSAR	**Wonju Array Be**	**10.93**	**275**	P		**Pn**	**01 54 16.7**	**0.0**
KSAR	**Wonju Array Be**	**10.93**	**275**			**Pn**	**01 54 16.7**	**0.0**
HHU	**Hamhung**	**11.32**	**287**	P		**Pn**	**01 54 25.9**	**+3.9**
HHU				pP			01 54 32.9	
HHU				S		**Sn**	**01 56 34.5**	**+7.4**
MDJ	**Mudanjiang**	**11.63**	**312**	P		**Pn**	**01 54 29.8**	**+3.6**
MDJ				sP			01 54 42.1	
MDJ				S		**Sn**	**01 56 36.9**	**+2.3**
MDJ				sS			01 56 45.3	
MDJ				pmax	pmax			
	comp=Z,48nm,1.3s							
MDJ				pmax	pmax			
	comp=Z,650nm,3.6s							
MDJ				LR	LR			
	comp=Z,7μm,18.2s							
MDJ				LR	LR			
	comp=Z,9μm,20.7s							
MDJ				LR	LR			
	comp=Z,18μm,20.5s							
MDJ	**Mudanjiang**	**11.63**	**312**			**Pn**	**01 54 26.4**	**+0.2**
UGL	**Uglegorsk**	**11.73**	**1**	*e*P		**Pn**	**01 54 26.9**	**-0.6**
UGL				pmax	pmax			
	comp=Z,78nm,1.2s							
UGL				MLR	MLR			
	comp=Z,3μm,14.0s							
UGL				MLR	MLR			
	comp=N,3μm,13.0s							
UGL				MLR	MLR			
	comp=E,3μm,13.0s							
INCN	**Inchon**	**11.92**	**275**	P		**Pn**	**01 54 30.3**	**0.0**
INCN	**Inchon**	**11.92**	**275**	Pn		**Pn**	**01 54 30.3**	**0.0**
PYS	**Pyongsong**	**12.53**	**284**	P		**Pn**	**01 54 42.2**	**+3.6**
PYAG	**Pyongyang**	**12.60**	**283**	P		**Pn**	**01 54 43.9**	**+4.4**
PYAG				pP		**P**	**01 54 47.9**	**-2.3**
PYAG				S		**Sn**	**01 57 06.3**	**+7.9**
TYV	**Tymovskoe**	**13.53**	**3**	*e*P		**Pn**	**01 54 51.3**	**-0.8**
TYV				eS		**Sn**	**01 57 21.1**	**+0.1**
TYV				pmax	pmax			
	comp=Z,12nm,0.6s							
TYV				smax	smax			
	comp=E,13nm,1.0s							
TYV				smax	smax			
	comp=E,800nm,7.6s							
SUJ	**Sinuiju**	**13.65**	**287**	P		**Pn**	**01 54 57.2**	**+3.3**
SUJ				pP		**P**	**01 55 04.2**	**+2.2**
SUJ				S		**Sn**	**01 57 31.1**	**+7.0**
KLR	**Kul'dur**	**13.87**	**332**	P		**Pn**	**01 54 57.0**	**+0.2**
	comp=E,0.8nm,0.3s,baz=124,slow=12,SNR=15							
KLR				LR		LR	02 00 17.8	
	comp=E,10μm,18.1s,baz=147,slow=37							
KLR	**Kul'dur**	**13.87**	**332**	*c*e P		**Pn**	**01 54 56.1**	**-0.6**
CN2	**Changchun**	**13.87**	**303**	*e*P		**Pn**	**01 54 57.9**	**+1.1**
CN2				PP		**PnPn**	**01 55 09.6**	**+4.9**
CN2				eS		**Sn**	**01 57 30.6**	**+1.2**
CN2				pmax	pmax			
	comp=E,30nm,1.0s							
CN2				pmax	pmax			
	comp=E,2μm,10.0s							
CN2				LR	LR			
	comp=E,4μm,15.0s							
CN2				LR	LR			
	comp=E,8μm,15.0s							
CN2				LR	LR			
	comp=E,9μm,18.0s							
GRNR	**Gornyy**	**13.92**	**346**	⇑*i* P		**Pn**	**01 54 56.8**	**-0.7**
GRNR				eS		**Sn**	**01 57 31.2**	**+0.6**
GRNR				pmax	pmax			
	comp=N,20nm,0.7s							
GRNR				pmax	pmax			
	comp=Z,30nm,0.7s							
GRNR				smax	smax			
	comp=N,8.0nm,0.8s							
SNY	**Shenyang**	**14.61**	**293**	⇑P		**Pn**	**01 55 08.3**	**+1.5**
SNY				pmax	pmax			
	comp=N,19nm,0.7s							
SNY				pmax	pmax			
	comp=N,2μm,13.5s							
SNY				LR	LR			
	comp=N,7μm,14.9s							
SNY				LR	LR			
	comp=N,13μm,19.2s							
SNY				LR	LR			
	comp=N,19μm,18.5s							
DL2	**Dalian**	**15.81**	**282**	P		**Pn**	**01 55 24.3**	**+1.7**
DL2				S		**Sn**	**01 58 18.8**	**+2.1**
DL2				pmax	pmax			
	comp=N,290nm,0.7s							
DL2				pmax	pmax			
	comp=N,2μm,7.6s							
DL2				LR	LR			
	comp=N,2μm,13.7s							
DL2				LR	LR			
	comp=N,7μm,17.7s							
DL2				LR	LR			
	comp=N,9μm,19.3s							
NKL	**Nikolayevsk**	**15.81**	**358**	*e*P		**Pn**	**01 55 23.3**	**+0.8**
NKL				pmax	pmax			
	comp=E,21nm,0.7s							
NKL				pmax	pmax			
	comp=N,8.0nm,0.5s							
NKL				pmax	pmax			
	comp=Z,39nm,1.0s							
NKL				MLR	MLR			
	comp=N,98nm,11.0s							
NKL				MLR	MLR			
	comp=E,1μm,11.0s							
NKL				MLR	MLR			
	comp=Z,2μm,15.0s							
OKH	**Okha**	**16.23**	**3**	*d*e P		**Pn**	**01 55 28.5**	**+0.7**
OKH				eS		**Sn**	**01 58 22.0**	**-4.5**
OKH				smax	smax			
	comp=E,600nm,13.8s							
SKR	**Severo-Kuril's**	**16.88**	**33**	*e*P		**P**	**01 55 43.6**	**+6.0**
SSE	**Sheshan**	**18.00**	**256**	P		**P**	**01 55 50.6**	**+0.4**
SSE				S		**Sn**	**01 59 08.9**	**-0.9**
SSE				pmax	pmax			
	comp=E,62nm,1.0s							
SSE				pmax	pmax			
	comp=E,530nm,6.9s							
SSE				LR	LR			
	comp=E,2μm,21.4s							
SSE				LR	LR			
	comp=E,3μm,20.8s							
SSE	**Sheshan**	**18.00**	**256**	lAmb	lAmb		01 55 56.3	
	comp=Z,178nm,0.9s							
ZEA	**Zeya**	**19.17**	**333**	*e*P		**P**	**01 56 01.8**	**-1.1**
ZEA				eS		**Sn**	**01 59 28.3**	**-9.4**
ZEA				pmax	pmax			
	comp=N,110nm,0.6s							
ZEA				pmax	pmax			
	comp=Z,180nm,0.6s							
ZEA				pmax	pmax			
	comp=E,200nm,11.8s							
ZEA				pmax	pmax			
	comp=N,400nm,13.4s							
ZEA				pmax	pmax			
	comp=Z,400nm,12.7s							
ZEA				smax	smax			
	comp=E,300nm,15.2s							
ZEA				smax	smax			
	comp=N,800nm,11.6s							
PEA0B	**Petropavlovsk-**	**19.33**	**30**	*c*e P		**Pn**	**01 56 05.7**	**-0.3**
PEA0B	**Petropavlovsk-**	**19.33**	**30**	P		**Pn**	**01 56 05.9**	**-0.1**
PETK	**Petropavlovsk-**	**19.33**	**30**	P		**Pn**	**01 56 06.0**	**0.0**
	comp=N,0.6nm,0.3s,baz=219,slow=8.1,SNR=23							
PETK				LR		LR	02 03 25.1	
	comp=N,2μm,21.2s,baz=220,slow=36							
PETK	**Petropavlovsk-**	**19.33**	**30**	P		**Pn**	**01 56 06.0**	**0.0**
PETK	**Petropavlovsk-**	**19.33**	**30**	P		**Pn**	**01 56 05.8**	**-0.2**
NJ2	**Nanjing**	**19.44**	**261**	⇑P		**P**	**01 56 05.3**	**-0.7**
NJ2				pP		**pP**	**01 56 12.4**	**-3.4**
NJ2				sP		**sP**	**01

TPUB	**Ta-pu**	**22.83**	**238**	P	**P**	**01 56 39.8**	**-2.8**
TWG	**Pinlang**	**22.86**	**236**	P	**P**	**01 56 41.8**	**-1.2**
TWG				IAmb	IAmb	01 56 48.1	
	comp=Z,134nm,0.8s						
MA2	**Magadan**	**23.01**	**12**	P	**P**	**01 56 44.2**	**+0.1**
	comp=Z,42nm,0.7s,baz=199,slow=8.8,SNR=14						
MA2				LR	LR	02 06 54.2	
	comp=Z,1μm,18.5s,baz=200,slow=40						
MA2	**Magadan**	**23.01**	**12**⇑	*e*P	**P**	**01 56 44.4**	**+0.3**
MA2				pmax	pmax		
	comp=Z,40nm,0.7s						
MA2	**Magadan**	**23.01**	**12**	P	**P**	**01 56 45.0**	**+0.9**
MA2				IAmb	IAmb	01 57 04.5	
	comp=Z,71nm,0.7s						
TIY	**Taiyuan**	**23.11**	**280**	*e*P	**P**	**01 56 46.6**	**+1.1**
TIY				pP	**pP**	**01 56 56.3**	**+0.7**
TIY				PP	**PnPn**	**01 57 17.1**	**+5.6**
TIY				S	**S**	**02 00 52.8**	**-1.2**
TIY				sS	**sS**	**02 01 05.8**	**-5.3**
TIY				pmax	pmax		
	comp=Z,180nm,0.8s						
TIY				LR	LR		
	comp=Z,3μm,13.5s						
TIY				LR	LR		
	comp=Z,5μm,16.2s						
TIY				LR	LR		
	comp=Z,8μm,15.6s						
QZH	**Quanzhou**	**23.20**	**244**⇑	*i*P	**P**	**01 56 44.1**	**-2.2**
QZH				S	**S**	**02 00 51.6**	**-3.8**
QZH				pmax	pmax		
	comp=Z,110nm,0.8s						
QZH				LR	LR		
	comp=Z,2μm,18.9s						
QZH				LR	LR		
	comp=Z,2μm,21.3s						
QZH				LR	LR		
	comp=Z,4μm,20.5s						
HHC	**Hu-ho-hao-te**	**23.53**	**288**	*e*P	**P**	**01 56 50.6**	**+1.0**
HHC				PP	**PnPn**	**01 57 23.3**	**+6.1**
HHC				S	**S**	**02 00 59.8**	**-1.1**
HHC				pmax	pmax		
	comp=Z,79nm,0.8s						
HHC				pmax	pmax		
	comp=Z,500nm,7.1s						
HHC				LR	LR		
	comp=Z,3μm,14.7s						
HHC				LR	LR		
	comp=Z,3μm,17.7s						
HHC				LR	LR		
	comp=Z,4μm,18.4s						
WHN	**Wuhan**	**23.57**	**261**	⇓P	**P**	**01 56 49.3**	**-0.6**
WHN				S	**S**	**02 00 52.8**	**-8.6**
WHN				pmax	pmax		
	comp=Z,430nm,0.8s						
WHN				LR	LR		
	comp=Z,10μm,15.5s						
WHN				LR	LR		
	comp=Z,6μm,12.6s						
WHN				LR	LR		
	comp=Z,16μm,21.4s						
KNMB	**Chin-men Tao**	**23.64**	**244**	P	**P**	**01 56 48.6**	**-2.0**
GUMO	**Guam**	**23.84**	**172**	LR	LR	02 06 58.0	
	comp=Z,1μm,20.0s,baz=22,slow=38						
CIT	**Chita**	**24.57**	**316**	*e*P	**P**	**01 56 57.6**	**-1.4**
CIT				*e*		01 57 08.4	
CIT				*e*		01 57 14.6	
CIT				*e*		01 57 28.2	
CIT				*e*		01 57 50.2	
CIT				pmax	pmax		
	comp=Z,334nm,2.1s						
BTO	**Baotou**	**24.71**	**287**	*e*P	**P**	**01 56 58.3**	**-2.2**
BTO				S	S	02 01 06.3	-14
YAK	**Yakutsk**	**25.80**	**347**	P	**P**	**01 57 09.8**	**-0.1**
	comp=Z,233nm,0.7s,baz=185,slow=1.1,SNR=48						
YAK				LR	LR	02 07 45.4	
	comp=Z,6μm,18.6s,baz=181,slow=37						
YAK	**Yakutsk**	**25.80**	**347***c*	*i*P	**P**	**01 57 09.4**	**-0.5**
YAK				*e**PP	**pP**	**01 57 22.5**	**+1.8**
YAK				*e*		02 00 37.3	
YAK				*e*S	**S**	**02 01 34.0**	**-2.4**
YAK				pmax	pmax		
	comp=Z,541nm,1.1s						
YAK				pmax	pmax		
	comp=N,89nm,0.9s						
YAK				pmax	pmax		
	comp=E,60nm,1.0s						
YAK				smax	smax		
	comp=E,970nm,8.4s						
YAK				smax	smax		
	comp=N,2μm,6.9s						
YAK				MLR	MLR		
	comp=Z,7μm,20.0s						
YAK				MLR	MLR		
	comp=N,3μm,15.0s						
YAK				MLR	MLR		
	comp=E,2μm,22.0s						
YAK	**Yakutsk**	**25.80**	**347**	P	**P**	**01 57 09.7**	**-0.3**
YAK				IAMs_20	IAMs_20	02 07 33.4	
	comp=Z,6μm,18.0s						
SEY	**Seymchan**	**26.45**	**11**	P	**P**	**01 57 17.0**	**+1.2**
	comp=Z,22nm,0.7s,baz=196,slow=7.1,SNR=33						
SEY				LR	LR	02 09 13.2	
	comp=Z,2μm,18.2s,baz=201,slow=40						
SEY	**Seymchan**	**26.45**	**11***d*	*i*P	**P**	**01 57 16.9**	**+1.1**
XAN	**Xi'an**	**26.69**	**273**	⇑P	**P**	**01 57 17.4**	**-1.0**
XAN				S	**S**	**02 01 41.9**	**-9.3**
XAN				pmax	pmax		
	comp=Z,280nm,0.8s						
XAN				pmax	pmax		
	comp=Z,1μm,6.3s						
XAN				LR	LR		
	comp=Z,6μm,16.2s						
XAN				LR	LR		
	comp=Z,1μm,19.5s						
XAN				LR	LR		
	comp=Z,5μm,17.6s						
XAN	**Xi'an**	**26.69**	**273**	P	**P**	**01 57 17.9**	**-0.5**
XAN				pmax	pmax		
	comp=Z,171nm,0.6s						
XAN				MLR	MLR		
	comp=Z,4μm,19.0s						
XAN	**Xi'an**	**26.69**	**273**	P	**P**	**01 57 17.9**	**-0.5**
ULN	**Ulaanbaatar**	**27.32**	**304**	P	**P**	**01 57 24.0**	**0.0**
ULN				P	**P**	**01 57 24.0**	**0.0**
ULN	**Ulaanbaatar**	**27.32**	**304***ce*	P	**P**	**01 57 24.0**	**0.0**
ULN				pmax	pmax		
	comp=Z,86nm,1.0s						
ULN	**Ulaanbaatar**	**27.32**	**304**	P	**P**	**01 57 23.3**	**-0.7**
ULN				IAmb	IAmb	01 57 27.5	
	comp=Z,70nm,0.8s						
ULN	**Ulaanbaatar**	**27.32**	**304**	IAMs_20	IAMs_20	02 08 20.9	
	comp=Z,4μm,19.0s						
BOD	**Bodaibo**	**27.35**	**327**	*e*P	**P**	**01 57 23.8**	**-0.2**
BOD				pmax	pmax		
	comp=Z,59nm,1.3s						
ENH	**Enshi**	**27.53**	**265**	P	**P**	**01 57 25.4**	**-0.5**
ENH				IAMs_20	IAMs_20	02 08 08.2	
	comp=Z,5μm,22.0s						
SONM	**Songino Array**	**27.75**	**303**	P	**P**	**01 57 27.5**	**-0.4**
	comp=Z,62nm,0.7s,baz=103,slow=8.5,SNR=136						
SONM				PcP	**PcP**	**02 00 44.0**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=131,slow=2.4,SNR=4.5						
SONM				LR	LR	02 08 46.3	
	comp=Z,4μm,19.1s,baz=92,slow=37						
SONM	**Songino Array**	**27.75**	**303**	P	**P**	**01 57 27.1**	**-0.7**
SONM					**PcP**	**02 00 43.7**	**0.0**
HKPS	**Hong Kong Po S**	**28.05**	**245**	P	**P**	**01 57 30.6**	**0.0**
HKPS				IAmb	IAmb	01 57 35.8	
	comp=Z,114nm,1.0s						
HKPS				IAMs_20	IAMs_20	02 08 50.3	
	comp=Z,4μm,20.0s						
H11N2	**WAKE ISLAND Hy**	**28.17**	**122**	T	T	02 27 04.0	
	baz=314,slow=75,SNR=558						
H11N1	**WAKE ISLAND Hy**	**28.18**	**122**	T	T	02 27 04.6	
	baz=314,slow=75,SNR=943						
H11N3	**WAKE ISLAND Hy**	**28.19**	**122**	T	T	02 27 00.4	
	baz=314,slow=75,SNR=919						
WAKE	**Wake Island**	**28.32**	**123**	IAMs_20	IAMs_20	02 06 06.4	
	comp=Z,5μm,22.0s						
PVCP	**Virac**	**28.33**	**218**	*e*P	**P**	**01 57 32.8**	**-0.3**
H11S1	**WAKE ISLAND Hy**	**28.89**	**124**	T	T	02 27 53.4	
	baz=316,slow=76,SNR=1137						
H11S3	**WAKE ISLAND Hy**	**28.89**	**124**	T	T	02 27 53.4	
	baz=316,slow=76,SNR=1059						
H11S2	**WAKE ISLAND Hy**	**28.91**	**124**	T	T	02 27 53.4	
	baz=316,slow=76,SNR=724						
LQP	**Lukban**	**29.25**	**223**⇑	*e*P	**P**	**01 57 42.1**	**+0.7**
TGY	**Tagaytay City**	**29.59**	**224**	P	**P**	**01 57 44.8**	**+0.5**
	comp=Z,262nm,0.3s,baz=44,slow=1.2,SNR=7.9						
BOAC	**Boac**	**29.63**	**222**	*e*P	**P**	**01 57 44.3**	**-0.3**
IRK	**Irkutsk**	**30.01**	**312**	*e*P	**P**	**01 57 47.8**	**+0.1**
IRK				pmax	pmax		
	comp=Z,65nm,2.4s						
LZH	**Lanzhou**	**30.18**	**279**	⇓P	**P**	**01 57 49.0**	**-0.6**
LZH				pP	pP	01 58 00.5	+0.1
LZH				PP	**PnPn**	**01 58 51.3**	**+3.4**
LZH				S	**S**	**02 02 44.3**	**-2.0**
LZH				sS	sS	02 03 02.1	-1.7
LZH				SS	**SnSn**	**02 04 24.3**	**+2.7**
LZH				pmax	pmax		
	comp=Z,170nm,1.0s						
LZH				pmax	pmax		
	comp=Z,570nm,5.2s						
LZH				LR	LR		
	comp=Z,3μm,14.1s						
LZH				LR	LR		
	comp=Z,7μm,14.6s						
LZH				LR	LR		
	comp=Z,9μm,15.2s						
ZAK	**Zakamensk**	**30.21**	**308**	*e*P	**P**	**01 57 49.7**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,50nm,0.9s						
TLY	**Talaya**	**30.25**	**310**	P	**P**	**01 57 50.0**	**+0.1**
TLY	**Talaya**	**30.25**	**310***c*	*i*P	**P**	**01 57 50.0**	**+0.1**
TLY				*e*		01 59 06.4	
TLY				*e*S	**S**	**02 02 44.4**	**-2.4**
TLY				*e*SSS	SSS	02 04 41.7	
TLY				pmax	pmax		
	comp=Z,79nm,0.6s						
TLY				MLR	MLR		
	comp=Z,13μm,18.0s						
TLY	**Talaya**	**30.25**	**310**	P	**P**	**01 57 49.4**	**-0.5**
TLY				IAmb	IAmb	01 57 52.5	
	comp=Z,44nm,0.7s						
TLY				IAMs_20	IAMs_20	02 10 23.6	
	comp=Z,6μm,18.0s						
GLSP	**General Luna,**	**30.81**	**211**	*e*P	**P**	**01 57 54.5**	**-0.5**
GYA	**Guiyang**	**31.44**	**260**	⇑P	**P**	**01 57 59.8**	**-0.9**
GYA				PP	**PP**	**01 59 08.9**	**-3.2**
GYA				PcP	**PcP**	**02 00 55.5**	**+2.1**
GYA				S	**S**	**02 02 59.8**	**-6.2**
GYA				pmax	pmax		
	comp=Z,130nm,0.9s						
GYA				LR	LR		
	comp=Z,2μm,19.2s						
GYA				LR	LR		
	comp=Z,3μm,22.1s						
GYA				LR	LR		
	comp=Z,5μm,22.3s						
GUIM	**Jordan**	**31.65**	**218**	*e*P	**P**	**01 58 03.0**	**+0.5**
BUSP	**Coron**	**31.72**	**223**	*e*P	**P**	**01 58 03.7**	**+0.7**
CD2	**Chengdu**	**31.84**	**270**	⇑*i*P	**P**	**01 58 03.0**	**-1.2**
CD2				PP	**PP**	**01 59 15.0**	**-1.4**
CD2				S	**S**	**02 03 10.4**	**-1.7**
CD2				sS	sS	02 03 32.9	+3.2
CD2				PcS	**PcS**	**02 04 38.3**	**-0.8**
CD2				pmax	pmax		
	comp=Z,110nm,1.0s						
CD2				pmax	pmax		
	comp=Z,660nm,8.6s						
CD2				LR	LR		
	comp=Z,5μm,19.4s						
CD2				LR	LR		
	comp=Z,6μm,17.3s						
CD2				LR	LR		
	comp=Z,8μm,18.4s						
MOY	**Mondy**	**31.86**	**310**	*e*P	**P**	**01 58 04.2**	**0.0**
MOY				pmax	pmax		
	comp=Z,54nm,1.5s						
CNOP	**Candoni, Negro**	**32.32**	**217**	*e*P	**P**	**01 58 06.4**	**-1.9**
ADK	**Adak**	**32.55**	**50**	IAMs_20	IAMs_20	02 08 29.5	
	comp=Z,4μm,21.0s						
GTA	**Gaotai**	**32.63**	**287**	⇑P	**P**	**01 58 11.0**	**-0.1**
GTA				pP	pP	01 58 20.9	-1.1
GTA				sP	sP	01 58 24.8	-1.9
GTA				PP	**PP**	**01 59 20.6**	**-4.6**
GTA				PcP	**PcP**	**02 00 57.4**	**+0.9**
GTA				S	**S**	**02 03 22.9**	**-1.5**
GTA				sS	sS	02 03 38.3	-3.6
GTA				SS	**SnSn**	**02 05 21.8**	**+0.7**
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA				pmax	pmax		
	comp=Z,480nm,8.4s						
GTA				LR	LR		
	comp=Z,3μm,18.2s						
GTA				LR	LR		
	comp=Z,3μm,21.4s						
GTA				LR	LR		
	comp=Z,4μm,21.1s						
ENPP	**El Nido**	**32.80**	**223**	*e*P	**P**	**01 58 11.8**	**-0.8**
BUKP	**Musuan**	**32.97**	**211**	*e*P	**P**	**01 58 12.9**	**-1.2**
QIZ	**Qiongzhong**	**33.21**	**245**	P	**P**	**01 58 16.8**	**+0.6**
QIZ				S	**S**	**02 03 35.6**	**+2.1**
QIZ				sS	**sS**	**02 03 50.0**	**-1.2**
QIZ				pmax	pmax		
	comp=Z,54nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,390nm,7.7s						
QIZ				LR	LR		
	comp=Z,2μm,18.0s						
QIZ				LR	LR		
	comp=Z,2μm,17.5s						
QIZ				LR	LR		
	comp=Z,2μm,23.0s						
QIZ	**Qiongzhong**	**33.21**	**245**	IAmb	IAmb	01 58 19.4	
	comp=Z,47nm,0.8s						
DAV	**Davao City (W)**	**33.49**	**210**	LR	LR	02 10 16.5	
	comp=Z,2μm,21.8s,baz=64,slow=33						
PAGZ	**Pagadian**	**33.72**	**214**	*e*P	**P**	**01 58 21.3**	**+0.7**
KCP	**Kidapawan**	**33.74**	**211**	⇑*i*P	**P**	**01 58 23.6**	**+2.7**
PATS	**Pohnpei**	**33.96**	**149**	IAMs_20	IAMs_20	02 09 03.8	
	comp=Z,5μm,21.0s						
ATKA	**Atka Island**	**34.12**	**50**	IAMs_20	IAMs_20	02 09 28.9	
	comp=Z,4μm,21.0s						
DDMP	**Don Marcelino,**	**34.32**	**209**	*e*P	**P**	**01 58 27.5**	**+1.7**
SKMP	**Bagumbayan, Su**	**34.41**	**211**	*e*P	**P**	**01 58 29.1**	**+2.6**
TIXI	**Tiksi**	**35.00**	**353***ce*	P	**P**	**01 58 30.3**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,55nm,0.6s						
TIXI	**Tiksi**	**35.00**	**353**	P	**P**	**01 58 30.7**	**-0.4**
TIXI				IAMs_20	IAMs_20	02 13 50.2	
	comp=Z,3μm,19.0s						
KMI	**Kunming**	**35.17**	**261**	⇓*i*P	**P**	**01 58 33.3**	**-0.1**
KMI				pP	sP	01 58 49.3	+0.2
KMI				PP	**PP**	**01 59 54.1**	**+0.5**
KMI				S	S	02 03 55.3	-8.9
KMI				SS	**SnSn**	**02 06 20.8**	**-2.4**
KMI				pmax	pmax		
	comp=Z,250nm,1.0s						
KMI				pmax	pmax		
	comp=Z,650nm,3.6s						
KMI				LR	LR		
	comp=Z,3μm,16.2s						
KMI				LR	LR		
	comp=Z,5μm,20.3s						
KMI				LR	LR		
	comp=Z,6μm,21.8s						
KMI	**Kunming**	**35.17**	**261**	P	**P**	**01 58 33.0**	**-0.4**
KMI				pmax	pmax		
	comp=Z,235nm,0.8s						
KMI				MLR	MLR		
	comp=Z,7μm,21.0s						
KMI	**Kunming**	**35.17**	**261**	P	**P**	**01 58 33.0**	**-0.4**
BATP	**Bataraza**	**35.68**	**223**	*e*P	**P**	**01 58 37.5**	**0.0**
SLVN	**Son La**	**36.27**	**255**	P	**P**	**01 58 42.5**	**-0.1**
SLVN				IAmb	IAmb	01 58 45.0	
	comp=Z,34nm,0.8s						
SLVN				IAMs_20	IAMs_20	02 14 20.2	
	comp=Z,4μm,20.0s						
SGSI	**Sangihe**	**36.61**	**208**	P	**P**	**01 58 50.0**	**+4.5**
	comp=Z,5μmcomp=Z,226nm,0.5s						
KWAJ	**Kwajalein Atol**	**36.89**	**134**	P	**P**	**01 58 47.3**	**-0.5**
KWAJ				pmax	pmax		
	comp=Z,245nm,1.1s						
KWAJ	**Kwajalein Atol**	**36.89**	**134**	P	**P**	**01 58 47.3**	**-0.5**
KWAJ	**Kwajalein Atol**	**36.89**	**134**	IAMs_20	IAMs_20	02 10 42.5	
	comp=Z,4μm,21.0s						
MYLDM	**Lahad Datu**	**38.36**	**219**	P	**P**	**01 58 60.0**	**-0.3**
MYLDM				IAMs_20	IAMs_20	02 12 35.0	
	comp=Z,2μm,20.0s						
TNTI	**Ternate**	**38.71**	**203**	P	**P**	**01 59 07.8**	**+4.6**
	comp=Z,2μmcomp=Z,92nm,0.8s						
TNTI	**Ternate**	**38.71**	**203**	P	**P**	**01 59 02.9**	**-0.3**
TNTI				IAmb	IAmb	01 59 18.9	
	comp=Z,78nm,0.9s						
NONG	**Nongkai**	**38.77**	**251**	P	**P**	**01 59 04.6**	**+0.8**
	comp=Z,12μmcomp=Z,308nm,0.8s						
MNI	**Manado**	**38.94**	**207**	P	**P**	**01 59 07.1**	**+2.0**
MNI				pmax	pmax		
	comp=Z,165nm,0.7s						
DLV	**T Lat**	**38.99**	**238**	IAmb	IAmb	01 59 20.1	
	comp=Z,76nm,0.9s						
SIJI	**Sorong**	**39.22**	**197**	P	**P**	**01 59 08.0**	**+0.5**
	comp=Z,31nm,0.5s,baz=24,slow=7.5,SNR=12						
LKP	**Lekhapani**	**39.61**	**269**	*e*P	**P**	**01 59 11.6**	**+0.9**
LBMI	**Labuha**	**40.00**	**202**	P	**P**	**01 59 16.1**	**+2.2**
	comp=Z,3μmcomp=Z,127nm,0.9s						
KMSI	**Cibinong**	**40.06**	**208**	P	**P**	**01 59 17.6**	**+3.2**
	comp=Z,363nm,0.7s						
KHON	**Khomkaen**	**40.08**	**249**	P	**P**	**01 59 15.9**	**+1.3**
	comp=Z,216nm,0.8s						
DIBR	**DIBRUGARH**	**40.30**	**270**	*e*P	**P**	**01 59 17.6**	**+1.2**
GTOI	**Gorontalo**	**40.37**	**210**	P	**P**	**01 59 16.7**	**-0.4**
	comp=Z,1μmcomp=Z,88nm,0.8s						
TNA	**Tin City**	**40.50**	**30**	P	**P**	**01 59 19.3**	**+1.8**
	baz=251						
TNA	**Tin City**	**40.50**	**30**	P	**P**	**01 59 18.8**	**+1.3**
TNA				IAmb	IAmb	01 59 32.3	
	comp=Z,68nm,1.2s						
PAYA	**Payao**	**40.50**	**255**	P	**P**	**01 59 19.6**	**+1.4**
	comp=Z,9μmcomp=Z,347nm,0.7s						
WMQ	**Urumqi**	**40.85**	**297**	P	**P**	**01 59 22.8**	**+1.9**
WMQ				pP	pP	01 59 27.9	-4.0
WMQ				sP	sP	01 59 36.6	0.0
WMQ				PcP	**PcP**	**02 01 19.3**	**-1.8**
WMQ				S	**S**	**02 05 30.9**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,210nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,1μm,4.7s						
WMQ				LR	LR		
	comp=Z,3μm,19.1s						
WMQ				LR	LR		
	comp=Z,4μm,18.3s						
WMQ				LR	LR		
	comp=Z,8μm,26.5s						
WMQ	**Urumqi**	**40.85**	**297**	P	**P**	**01 59 20.7**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,136nm,1.0s						
WMQ				MLR	MLR		
	comp=Z,4μm,20.0s						
WMQ	**Urumqi**	**40.85**	**297**	P	**P**	**01 59 20.6**	**-0.2**
WMQ	**Urumqi**	**40.85**	**297**	IAMs_20	IAMs_20	02 16 35.7	
	comp=Z,4μm,20.0s						
TOLI2	**Tolitoli**	**40.87**	**213**	P	**P**	**01 59 21.2**	**0.0**
MRSI	**Marisa**	**40.95**	**211**	P	**P**	**01 59 23.3**	**+1.5**
	comp=Z,2μmcomp=Z,134nm,1.2s						
CHAI	**Chaiyaphum**	**40.98**	**249**	P	**P**	**01 59 22.0**	**-0.1**
	comp=Z,3μmcomp=Z,163nm,0.9s						
FAKI	**Fak Fak**	**41.00**	**194**	P	P	01 59 33.6	+11
FAKI	**Fak Fak**	**41.00**	**194**	P	**P**	**01 59 22.5**	**+0.2**
FAKI				IAmb	IAmb	01 59 38.7	
	comp=Z,37nm,0.6s						
FAKI				IAMs_20	IAMs_20	02 13 25.3	
	comp=Z,3μm,20.0s						
ZIRO	**ZIRO**	**41.12**	**271**	*e*P	**P**	**01 59 24.2**	**+0.8**
MOKO	**MOKOCHONG**	**41.13**	**268**⇑	*e*P	**P**	**01 59 23.8**	**+0.3**
JORH	**JORHAT**	**41.15**	**269**	*e*P	**P**	**01 59 24.6**	**+1.1**
LAMP	**Lampang**	**41.17**	**255**	P	**P**	**01 59 24.8**	**+1.1**
	comp=Z,1μmcomp=Z,136nm,0.8s						
CM34	**Chiang Mai Arr**	**41.35**	**255**	P	**P**	**01 59 26.0**	**+0.8**
PHIT	**Phitsanulok**	**41.36**	**252**	P	**P**	**01 59 27.3**	**+2.1**
	comp=Z,170nm,1.0s						
CM35	**Chiang Mai Arr**	**41.45**	**255**	P	**P**	**01 59 26.0**	**0.0**
CM33	**Chiang Mai Arr**	**41.53**	**256**	P	**P**	**01 59 26.0**	**-0.6**
CHTO	**Chiang Mai**	**41.53**	**256**	P	**P**	**01 59 27.9**	**+1.2**
CHTO				P	**P**	**01 59 27.9**	**+1.2**
CHTO	**Chiang Mai**	**41.53**	**256**	P	**P**	**01 59 26.6**	**0.0**
CHTO				pmax	pmax		
	comp=Z,24nm,0.8s						
CHTO				MLR	MLR		
	comp=Z,3μm,20.0s						
CHTO	**Chiang Mai**	**41.53**	**256**	P	**P**	**01 59 26.6**	**0.0**
CHTO	**Chiang Mai**	**41.53**	**256**	IAMs_20	IAMs_20	02 17 32.4	
	comp=Z,3μm,20.0s						
CM36	**Chiang Mai Arr**	**41.59**	**255**	P	**P**	**01 59 27.0**	**-0.1**
CM32	**Chiang Mai Arr**	**41.70**	**255**	P	**P**	**01 59 29.0**	**+1.0**
CM09	**Chiang Mai Arr**	**41.71**	**255**	P	**P**	**01 59 29.2**	**+1.1**
	comp=Z,257nmcomp=Z,38nm,0.9s						
KOHI	**KOHIMA**	**41.73**	**268**⇑	*e*P	**P**	**01 59 27.3**	**-1.2**
KOHI				IAmb	IAmb	01 59 31.7	
	comp=Z,172nm,0.9s						
CM31	**Chiang Mai Arr**	**41.74**	**255**	P	**P**	**01 59 29.9**	**+1.6**
	comp=Z,11μmcomp=Z,933nm,0.6s						
CM31	**Chiang Mai Arr**	**41.74**	**255**	P	**P**	**01 59 28.4**	**0.0**
CMAR	**Chiang Mai Arr**	**41.74**	**255**	P	**P**	**01 59 28.6**	**+0.2**
	comp=Z,24nm,0.8s,baz=49,slow=5.9,SNR=62						
CMAR				PcP	**PcP**	**02 01 26.2**	**+1.9**
	comp=Z,6.1nm,0.6s,baz=13,slow=2.3,SNR=4.6						
CMAR				ScP	**ScP**	**02 05 11.2**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=23,slow=2.6,SNR=4.5						
CMAR				LR	LR	02 18 46.2	
	comp=Z,2μm,18.0s,baz=102,slow=39						
CMAR				PKKPbc	PKKPbc	02 23 42.3	
	comp=Z,1.0nm,0.3s,baz=290,slow=4.3,SNR=4.7						
CMAR	**Chiang Mai Arr**	**41.74**	**255**	P	**P**	**01 59 28.3**	**-0.1**
CMAR					**PcP**	**02 01 23.8**	**-0.5**
CM04	**Chiang Mai Arr**	**41.74**	**255**	P	**P**	**01 59 29.4**	**+1.0**
	comp=Z,367nmcomp=Z,54nm,0.9s						
CM01	**Chiang Mai Arr**	**41.75**	**255**	P	**P**	**01 59 29.8**	**+1.4**
	comp=Z,274nmcomp=Z,40nm,0.9s						
CM02	**Chiang Mai Arr**	**41.75**	**255**	P	**P**	**01 59 29.0**	**+0.6**
	comp=Z,304nmcomp=Z,47nm,0.8s						
CM15	**Chiang Mai Arr**	**41.76**	**255**	P	**P**	**01 59 29.8**	**+1.3**
	comp=Z,42nm,0.9s						
CM05	**Chiang Mai Arr**	**41.77**	**255**	P	**P**	**01 59 29.0**	**+0.4**
	comp=Z,265nmcomp=Z,36nm,0.8s						
SUKH	**Sukhothai**	**41.79**	**253**	P	**P**	**01 59 29.4**	**+0.7**
	comp=Z,125nm,0.9s						
CM13	**Chiang Mai Arr**	**41.79**	**255**	P	**P**	**01 59 29.8**	**+1.0**
	comp=Z,311nmcomp=Z,38nm,0.8s						
ZAA0	**Zalesovo Array**	**41.83**	**312**	P	**P**	**01 59 29.1**	**+0.5**
ZAA0				IAmb	IAmb	01 59 32.0	
	comp=Z,116nm,0.9s						
ZAA0				IAMs_20	IAMs_20	02 17 13.7	
	comp=Z,4μm,20.0s						
ZALV	**Zalesovo Beam**	**41.83**	**312**	P	**P**	**01 59 28.6**	**-0.1**
	comp=Z,59nm,0.5s,baz=88,slow=6.7,SNR=166						
ZALV				LR	LR	02 17 43.6	
	comp=Z,4μm,18.6s,baz=87,slow=37						
ZALV	**Zalesovo Beam**	**41.83**	**312**	P	**P**	**01 59 28.4**	**-0.2**
MPSI	**Mapaga**	**41.94**	**214**	P	**P**	**01 59 32.1**	**+2.1**
	comp=Z,1μmcomp=Z,34nm,0.7s						
LUWI	**Luwuk**	**42.00**	**209**	P	P	01 59 39.3	+8.9
LUWI	**Luwuk**	**42.00**	**209**	P	**P**	**01 59 30.2**	**-0.2**
LUWI				IAmb	IAmb	01 59 44.5	
	comp=Z,96nm,1.0s						
SRAK	**Srakaew**	**42.14**	**247**	P	**P**	**01 59 29.3**	**-2.3**
	comp=Z,10μmcomp=Z,1μm,0.8s						
MSAI	**Masohi**	**42.18**	**199**	P	P	01 59 38.9	+7.0
	comp=Z,3μmcomp=Z,27nm,1.4s						

LSA P P 01 59 34.6 +0.8
LSA Lhasa 42.35 275 P P 01 59 33.1 -0.7
LSA pmax pmax
comp=Z,85nm,0.9s
LSA MLR MLR
comp=Z,2µm,21.0s
LSA Lhasa 42.35 275 P P 01 59 33.1 -0.7
LSA IAmb IAmb 01 59 50.4
comp=Z,85nm,0.9s
LSA IAMs_20 IAMs_20 02 17 39.2
comp=Z,2µm,21.0s
TEZP TEZPUR 42.36 270 *eP* P 01 59 33.2 -0.1
TEZP IAmb IAmb 01 59 40.7
comp=Z,196nm,1.1s
SDPT Sand Point 42.46 46 P P 01 59 34.5 +0.7
SDPT IAmb IAmb 01 59 51.3
comp=Z,65nm,1.1s
NLAI Namlea 42.58 202 P P 01 59 40.0 +4.9
comp=Z,1µmcomp=Z,58nm,0.7s
AAI Ambon 42.70 200 P P 01 59 41.9 +5.8
comp=Z,3µmcomp=Z,137nm,0.6s
AAI Ambon 42.70 200 P P 01 59 38.0 +1.9
AAI pmax pmax
comp=Z,183nm,0.6s
NRIK Noril'sk 43.05 335 P P 01 59 38.0 -0.4
comp=Z,11nm,0.5s,baz=108,slow=9.9,SNR=18
NRIK LR LR 02 18 43.9
comp=Z,4µm,18.8s,baz=103,slow=38
NRIK Noril'sk 43.05 335 *eP* P 01 59 37.8 -0.6
NRIK pmax pmax
comp=Z,48nm,1.8s
UTHA Uthaitani 43.10 251 P P 01 59 40.6 +1.2
comp=Z,624nmcomp=Z,78nm,0.8s
RDOG Red Dog Mine 43.15 27 P P 01 59 39.8 +0.6
SILR SILCHAR 43.22 268 *eP* P 01 59 41.4 +1.1
SILR IAmb IAmb 01 59 45.5
comp=Z,411nm,0.7s
GUWA GUWAHATI 43.44 270 *eP* P 01 59 41.5 -0.5
SHL Shillong 43.58 269 *eP* P 01 59 42.9 -0.6
SHL IAmb IAmb 01 59 48.0
comp=Z,84nm,0.7s
SHL Shillong 43.58 269 P P 01 59 43.3 -0.1
SNR=36
SHL Shillong 43.58 269 P P 01 59 42.3 -1.2
SHL pmax pmax
comp=Z,105nm,0.7s
SHL MLR MLR
comp=Z,3µm,18.0s
SHL Shillong 43.58 269 P P 01 59 42.3 -1.2
SHL IAMs_20 IAMs_20 02 19 43.0
comp=Z,3µm,18.0s
PATY Pattaya 43.72 247 P P 01 59 47.7 +3.4
comp=Z,6µmcomp=Z,71nm,0.9s
SBUM Sibu 44.01 225 P P 01 59 46.2 -0.5
SBUM Sibu 44.01 225 P P 01 59 47.0 +0.3
MK31 Makanchi Array 44.09 302 *i* P P 01 59 47.3 +0.2
MK31 pmax pmax
comp=Z,111nm,0.6s
MK31 Makanchi Array 44.09 302 P P 01 59 47.5 +0.3
MKAR Makanchi Array 44.09 302 P P 01 59 47.3 +0.1
comp=Z,116nm,0.7s,baz=86,slow=9.6,SNR=287
MKAR LR LR 02 19 26.1
comp=Z,2µm,18.1s,baz=80,slow=38
MKAR Makanchi Array 44.09 302 P P 01 59 47.5 +0.3
MKAR Makanchi Array 44.09 302 P P 01 59 47.5 +0.3
SRDT SRDT 44.09 250 P P 01 59 50.6 +3.2
comp=Z,38nm,1.0s
SAIH SAIHA 44.21 265 *eP* P 01 59 47.6 -0.9
SAIH IAmb IAmb 01 59 52.6
comp=Z,321nm,1.0s
MAKZ Makanchi 44.30 302 *i* P P 01 59 49.0 +0.2
MAKZ pmax pmax
comp=Z,94nm,0.7s
MAKZ Makanchi 44.30 302 P P 01 59 49.1 +0.2
MAKZ IAMs_20 IAMs_20 02 18 41.3
comp=Z,3µm,20.0s
PHET Kaeng Krachan 44.63 248 P P 01 59 53.4 +1.6
comp=Z,2µmcomp=Z,210nm,0.7s
SEM Semipalatinsk 44.88 307 *i* P P 01 59 52.4 -1.2
comp=Z,43nm,0.9s,baz=307
SEM LR LR 02 17 30.8
comp=Z,2µm,18.7s,baz=307
SEM Semipalatinsk 44.88 307 *i* P P 01 59 52.4 -1.2
SEM pmax pmax
comp=Z,43nm,0.9s
SEM MLR MLR
comp=Z,2µm,19.0s
AGT Agartala 44.89 267 *eP* P 01 59 55.0 +1.3
TTSI Tana Toraja 45.01 212 P P 02 00 04.0 +9.3
BELO BELONIA 45.05 267 *eP* P 01 59 56.3 +1.3
SVW2 Sparrevohn 45.17 38 P P 01 59 56.0 +0.5
SVW2 IAmb IAmb 02 00 11.8
comp=Z,44nm,1.0s
MTKI Muara Teweh, K 45.43 219 P P 02 00 00.8 +2.8
SPSI Sidrap Palu 45.86 211 P P 02 00 02.2 +0.8
comp=Z,59nm,1.0s
KURK Kurchatov 45.87 308 P P 02 00 01.2 +0.1
KURK P P 02 00 01.2 +0.1
KURK Kurchatov 45.87 308 *i* P P 02 00 00.5 -0.6
KURK pmax pmax
comp=Z,245nm,0.9s
KURK Kurchatov 45.87 308 P P 02 00 01.2 +0.1
KSM Kuching 45.89 226 P P 02 00 01.3 -0.4
KSM Kuching 45.89 226 P P 02 00 03.0 +1.3
KURBB Kurchatov Arra 45.94 308 P P 02 00 01.6 -0.1
comp=Z,177nm,0.6s,baz=82,slow=7.8,SNR=532
TARA Tarawa 45.98 134 IAMs_20 IAMs_20 02 15 15.5
comp=Z,3µm,21.0s
TAPN Taplejung 46.09 274 *eP* P 02 00 04.0 +0.5
comp=Z,148nm,0.5s
A21K Barrow 46.10 23 P P 02 00 04.4 +1.8
baz=257
BNSI Bone 46.12 210 P P 02 00 05.1 +1.7
comp=Z,1µmcomp=Z,109nm,1.0s
IMAR Indian Mountai 46.29 31 P P 02 00 05.0 +0.7
OHAK Old Harbor 46.41 43 P P 02 00 06.0 +0.7
OHAK IAMs_20 IAMs_20 02 19 50.6
comp=Z,3µm,20.0s
RSO Redoubt South 46.55 38 P P 02 00 07.1 +0.5
ODAN Odare 46.56 273 *eP* P 02 00 07.5 +0.3
comp=Z,364nm,0.8s
KDAK Kodiak Island 46.75 42 P P 02 00 09.3 +1.4
KDAK pmax pmax
comp=Z,77nm,1.0s
KDAK MLR MLR
comp=Z,3µm,20.0s
KDAK Kodiak Island 46.75 42 P P 02 00 09.3 +1.4
KDAK IAMs_20 IAMs_20 02 19 01.6
comp=Z,3µm,20.0s
PPLA Purkeypile 46.81 35 P P 02 00 09.1 +0.5
PPLA IAmb IAmb 02 00 27.0
comp=Z,30nm,1.0s
KAPI Kappang 46.82 211 P P 02 00 09.0 +0.1
KAPI pmax pmax
comp=Z,98nm,1.0s
KAPI Kappang 46.82 211 P P 02 00 09.0 +0.1
SHLS Shalkode 46.84 297 *i* P P 02 00 06.3 -2.7
comp=Z,57nm,1.0s,baz=297
SHLS LR LR 02 18 33.6
comp=Z,614nm,14.1s,baz=297
SHLS Shalkode 46.84 297 *i* P P 02 00 06.3 -2.7
SHLS pmax pmax
comp=Z,57nm,1.0s
SHLS MLR MLR
comp=Z,614nm,14.0s
KBKI Kotabaru 46.86 216 P P 02 00 10.4 +1.2
comp=Z,4µmcomp=Z,47nm,0.8s
CAST Castle Rocks 46.87 34 P P 02 00 09.7 +0.9
BKSI Bulukumba 46.95 210 P P 02 00 10.9 +1.0
comp=Z,68nm,0.9s
TDK Taldyqorghan 47.12 300 *eP* P 02 00 11.2 +0.2
comp=Z,86nm,0.6s,baz=300
TDK *eS* S 02 07 01.4 +0.8
baz=300
TDK LR LR 02 17 44.2
comp=Z,3µm,18.2s,baz=300
TDK Taldyqorghan 47.12 300 *eP* P 02 00 11.2 +0.2
TDK *eS* S 02 07 01.4 +0.8
TDK pmax pmax
comp=Z,86nm,0.6s
TDK MLR MLR
comp=Z,3µm,18.0s
RAMN Ramite 47.15 274 *eP* P 02 00 12.1 +0.3
comp=Z,519nm,0.8s
GUN Gumba 47.29 275 *eP* P 02 00 13.4 +0.4
comp=Z,727nm,0.9s

KPKS Kokpek 47.31 298 *eP* P 02 00 12.4 -0.2
comp=Z,35nm,0.9s,baz=298
KPKS LR LR 02 19 16.3
comp=Z,3µm,17.4s,baz=298
KPKS Kokpek 47.31 298 *eP* P 02 00 12.4 -0.2
KPKS pmax pmax
comp=Z,35nm,0.9s
KPKS MLR MLR
comp=Z,3µm,17.0s
CNPM China Poot 47.35 40 P P 02 00 13.8 +1.1
CNPM IAmb IAmb 02 00 27.6
comp=Z,46nm,1.0s
BPAW Bear Paw Mtn. 47.37 33 P P 02 00 13.4 +0.7
KTH Kantishna Hill 47.39 34 P P 02 00 13.4 +0.4
KTH IAmb IAmb 02 00 31.5
comp=Z,48nm,1.1s
MLY Manley 47.49 32 P P 02 00 15.1 +1.3
baz=269,SNR=5.8
SUA Susitna One 47.50 37 IAmb IAmb 02 00 29.5
comp=Z,34nm,1.1s
BRLK Bradley Lake 47.51 39 P P 02 00 15.0 +1.1
BRLK IAmb IAmb 02 00 30.2
comp=Z,44nm,1.1s
JOHN Johnston Islan 47.52 102 IAMs_20 IAMs_20 02 14 59.4
comp=Z,4µm,22.0s
SATY Saty 47.61 298 *i* P P 02 00 14.9 -0.1
comp=Z,10nm,0.7s,baz=297
SATY LR LR 02 19 20.8
comp=Z,849nm,16.2s,baz=297
SATY Saty 47.61 298 *i* P P 02 00 14.9 -0.1
SATY pmax pmax
comp=Z,10.0nm,0.7s
SATY MLR MLR
comp=Z,849nm,16.0s
BBKI Banjar Baru 47.63 218 P P 02 00 15.9 +0.6
comp=Z,4µmcomp=Z,69nm,0.9s
TRF Thorofare Moun 47.68 34 P P 02 00 15.8 +0.5
CUT Chulitna 47.70 36 P P 02 00 16.5 +1.2
baz=271
PRZ Przheval'sk 47.77 297 P P 02 00 16.2 -0.2
PRZ pmax pmax
comp=Z,100nm,0.9s
PRZ Przheval'sk 47.77 297 P P 02 00 16.1 -0.2
COLD Coldfoot 47.80 29 P P 02 00 16.9 +1.0
baz=267
PKI Pulchoki 47.81 275 *eP* P 02 00 17.0 -0.1
comp=Z,138nm,0.7s
KKN Kakani 47.82 276 *eP* P 02 00 17.2 +0.2
comp=Z,297nm,0.7s
PKIN Phulchoki 47.82 275 *eP* P 02 00 17.0 -0.1
comp=Z,96nm,0.6s
TRTT Trang 47.99 243 P P 02 00 20.9 +2.7
comp=Z,59nm,1.1s
RC01 Rabbit Creek A 48.01 38 P P 02 00 19.5 +1.8
baz=273
BWN Browne 48.03 33 P P 02 00 19.2 +1.3
DMN Daman 48.04 276 *eP* P 02 00 18.9 +0.2
comp=Z,154nm,0.7s
O22K Cooper Landing 48.05 38 P P 02 00 19.8 +1.8
baz=274
I23K Minto, Yukon-K 48.08 32 P P 02 00 19.9 +1.8
baz=270
I23K Minto, Yukon-K 48.08 32 P P 02 00 18.9 +0.8
TOLK Toolik Lake Re 48.11 27 P P 02 00 19.8 +1.4
baz=266
TOLK Toolik Lake Re 48.11 27 P P 02 00 19.2 +0.7
TOLK IAmb IAmb 02 00 35.2
comp=Z,51nm,1.1s
NEA2 Nenana 48.20 33 P P 02 00 20.7 +1.5
baz=270,SNR=7.4
SEW Seward 48.21 39 P P 02 00 20.5 +1.3
SEW IAmb IAmb 02 00 35.9
comp=Z,47nm,1.0s
GKN Gorkha 48.23 276 *eP* P 02 00 20.4 +0.3
comp=Z,685nm,0.9s
PMR Palmer 48.27 37 P P 02 00 21.0 +1.3
PMR pmax pmax
comp=Z,39nm,1.0s
PMR Palmer 48.27 37 P P 02 00 20.9 +1.3
PMR IAmb IAmb 02 00 34.5
comp=Z,39nm,1.0s
MCK McKinley 48.28 34 P P 02 00 21.2 +1.4
baz=271
RND Reindeer 48.32 34 P P 02 00 20.7 +0.5
RND pmax pmax
comp=Z,52nm,1.2s
RND Reindeer 48.32 34 P P 02 00 20.7 +0.5
RND IAmb IAmb 02 00 37.6
comp=Z,52nm,1.2s
GHO Glory Hole Cre 48.36 37 P P 02 00 21.1 +0.5
GHO IAmb IAmb 02 00 39.3
comp=Z,44nm,0.8s
CHKK Chushkaly 48.39 299 *eP* P 02 00 20.9 0.0
baz=299
CHKK Chushkaly 48.39 299 *eP* P 02 00 20.9 0.0
MDOK Medeo 48.54 298 *i* P P 02 00 22.4 +0.1
baz=298
MDOK *eS* S 02 07 21.4 +0.4
baz=298
MDOK LR LR 02 19 35.3
comp=Z,3µm,19.1s,baz=298
MDOK Medeo 48.54 298 *i* P P 02 00 22.4 +0.1
MDOK *eS* S 02 07 21.4 +0.4
MDOK MLR MLR
comp=Z,3µm,19.0s
MDM Murphy Dome 48.56 32 IAmb IAmb 02 00 38.0
comp=Z,50nm,1.0s
KNK Knik Glacier 48.60 37 IAmb IAmb 02 00 38.9
comp=Z,30nm,1.0s
SML Sawmill 48.64 36 IAmb IAmb 02 00 40.4
comp=Z,41nm,0.8s
TNSS Tian-Shan 48.65 298 *eP* P 02 00 23.8 +0.4
baz=298
TNSS Tian-Shan 48.65 298 *eP* P 02 00 23.7 +0.4
TCOL CIGO, UAF Yank 48.72 32 P P 02 00 24.8 +1.8
baz=271
TCOL CIGO, UAF Yank 48.72 32 IAmb IAmb 02 00 41.7
comp=Z,22nm,0.8s
COLA College 48.72 32 *i* P P 02 00 25.2 +2.1
COLA pmax pmax
comp=Z,7.0nm,0.9s
COLA College 48.72 32 P P 02 00 24.5 +1.4
COLA IAmb IAmb 02 00 41.7
comp=Z,22nm,0.8s
DANN Dangsing 48.78 277 *eP* P 02 00 25.1 +0.7
comp=Z,1µm,0.8s
KUU Kurty 48.83 299 *eP* P 02 00 23.8 -0.6
comp=Z,56nm,0.6s,baz=299
KUU *eS* S 02 07 25.0 0.0
baz=299
KUU LR LR 02 21 15.2
comp=Z,2µm,16.3s,baz=299
KUU Kurty 48.83 299 *eP* P 02 00 23.7 -0.6
KUU *eS* S 02 07 24.9 0.0
KUU pmax pmax
comp=Z,55nm,0.6s
KUU MLR MLR
comp=Z,2µm,16.0s
POKR Poker Plat Res 48.89 32 P P 02 00 26.4 +1.9
baz=272,SNR=12
PKDT Phuket 48.92 244 P P 02 00 27.6 +2.3
SCM Sheep Creek Mo 49.11 36 IAmb IAmb 02 00 45.4
comp=Z,38nm,1.0s
KULM Kulim 49.12 240 P P 02 00 29.0 +2.2
HDA Harding Lake 49.13 33 P P 02 00 27.3 +1.0
baz=273
HDA Harding Lake 49.13 33 IAmb IAmb 02 00 41.8
comp=Z,32nm,1.2s
IL31 49.14 33 IAmb IAmb 02 00 41.3
comp=Z,39nm,1.1s
ILAR Eielson Array 49.14 33 P P 02 00 27.1 +0.8
comp=Z,11nm,0.7s,baz=268,slow=5.9,SNR=58
ILAR LR LR 02 22 15.4
comp=Z,759nm,21.3s,baz=270,slow=37
ILAR Eielson Array 49.14 33 P P 02 00 27.5 +1.1
ILAR Eielson Array 49.14 33 P P 02 00 27.5 +1.1
KOLN Koldanda 49.16 277 *eP* P 02 00 27.6 +0.3
comp=Z,341nm,0.9s
BOK Bokaro 49.21 271 *eP* P 02 00 27.7 +0.2
BOK IAmb IAmb 02 00 33.5
comp=Z,66nm,0.8s
BOK AMP 02 00 36.5
comp=Z,310nm,0.7s
IPM Ipoh 49.45 239 IAmb IAmb 02 00 44.9
comp=Z,53nm,1.0s
IPM Ipoh 49.45 239 P P 02 00 31.0 +1.7
PYUN Piuthan 49.50 277 *eP* P 02 00 30.3 +0.5

comp=Z,1µm,1.0s
EDFI Ende, Flores 49.51 206 P P 02 00 30.0 +0.2
comp=Z,472nmcomp=Z,37nm,0.8s
DGPR DIGLIPUR 49.52 254 *eP* P 02 00 30.5 +0.7
DGPR IAmb IAmb 02 00 37.5
comp=Z,123nm,0.8s
MYKOM Kota Tinggi 49.58 234 P P 02 00 31.0 +0.7
SOEI Soe 49.60 203 P P 02 00 32.1 +1.6
comp=Z,2µmcomp=Z,136nm,1.1s
HNR Honiara 49.61 156 IAMs_20 IAMs_20 02 20 14.6
comp=Z,2µm,21.0s
TKM2 Tokmak 2 49.63 298 P P 02 00 31.6 +0.9
SNR=19
M24K Tolsona, Glenn 49.63 36 P P 02 00 30.5 +0.2
baz=275
M24K Tolsona, Glenn 49.63 36 IAmb IAmb 02 00 51.1
comp=Z,48nm,1.0s
BRZS Berezniki 49.74 308 *i* P P 02 00 30.7 -0.5
comp=Z,40nm,0.6s,baz=308
BRZS *eS* S 02 07 37.5 0.0
baz=308
BRZS LR LR 02 21 07.4
comp=Z,511nm,16.6s,baz=308
BRZS Berezniki 49.74 308 *i* P P 02 00 30.7 -0.5
BRZS *eS* S 02 07 37.5 0.0
BRZS pmax pmax
comp=Z,40nm,0.6s
BRZS MLR MLR
comp=Z,511nm,17.0s
FYU Fort Yukon 49.75 30 IAmb IAmb 02 00 48.6
comp=Z,36nm,1.1s
KLU Klutina 49.81 37 IAmb IAmb 02 00 47.9
comp=Z,40nm,1.0s
BMAR Burnt Mountain 49.97 29 P P 02 00 34.0 +1.2
EYAK Cordova Ski Ar 50.00 38 P P 02 00 34.2 +1.3
EYAK IAmb IAmb 02 00 53.0
comp=Z,44nm,0.9s
EYAK IAMs_20 IAMs_20 02 22 18.4
comp=Z,2µm,21.0s
RIDG Independent Ri 50.09 34 IAMs_20 IAMs_20 02 22 28.6
comp=Z,1µm,20.0s
BTLS Baital 50.09 301 *i* P P 02 00 33.2 -0.7
comp=Z,26nm,0.6s,baz=301
BTLS *eS* S 02 07 42.3 -0.2
baz=301
BTLS LR LR 02 21 29.8
comp=Z,458nm,15.4s,baz=301
BTLS Baital 50.09 301 *i* P P 02 00 33.2 -0.7
BTLS *eS* S 02 07 42.2 -0.2
BTLS pmax pmax
comp=Z,27nm,0.6s
BTLS MLR MLR
comp=Z,458nm,15.0s
SGDS Sogindy 50.15 299 *i* P P 02 00 34.0 -0.4
comp=Z,19nm,0.7s,baz=299
SGDS Sogindy 50.15 299 *i* P P 02 00 34.0 -0.4
SGDS pmax pmax
comp=Z,19nm,0.7s
KBK Karagaybulak 50.16 298 P P 02 00 35.4 +0.7
SNR=144
CHMS Chumysh 50.20 299 P P 02 00 35.1 +0.3
SNR=30
BATI Baumata 50.22 203 LR LR 02 20 13.3
comp=Z,540nm,21.9s,baz=12,slow=34
BATI Baumata 50.22 203 P P 02 00 40.9 +5.8
comp=Z,958nmcomp=Z,104nm,0.9s
USP Ospenovka 50.29 299 P P 02 00 35.1 -0.4
SNR=58
N25K Chitina, Valde 50.43 37 P P 02 00 38.2 +1.9
baz=277
KSH Kashi 50.43 294 P P 02 00 40.8 +4.1
KSH S S 02 07 52.3 +4.7
KSH pmax pmax
comp=Z,78nm,0.8s
KSH pmax pmax
comp=Z,990nm,6.1s
KSH LR LR
comp=Z,2µm,11.2s
KSH LR LR
comp=Z,4µm,14.1s
KSH LR LR
comp=Z,4µm,15.3s
SCRK Sand Creek 50.45 33 P P 02 00 37.1 +0.6
baz=276
BVAR Borovoye Array 50.48 312 P P 02 00 36.0 -0.8
comp=Z,19nm,0.6s,baz=35,slow=24,SNR=114
BVAR Borovoye Array 50.48 312 P P 02 00 36.0 -0.8
AAK Ala-Archa 50.49 298 P P 02 00 37.5 +0.3
SNR=34
AAK Ala-Archa 50.49 298 *i* P P 02 00 37.5 +0.3
SNR=43
AAK Ala-Archa 50.49 298 P P 02 00 36.9 -0.2
AAK Ala-Archa 50.49 298 *i* P P 02 00 36.6 -0.5
AAK pmax pmax
comp=Z,107nm,0.8s
BRVK Borovoye 50.54 312 P P 02 00 37.4 +0.2
BRVK Borovoye 50.54 312 *i* P P 02 00 36.8 -0.3
BRVK pmax pmax
comp=Z,88nm,1.0s
BRVK Borovoye 50.54 312 P P 02 00 37.6 +0.5
UCH Uchtor 50.60 298 P P 02 00 39.5 +1.2
SNR=11
PBA Port Blair 50.60 253 IAMs_20 IAMs_20 02 22 20.8
comp=Z,2µm,22.0s
MENT Mentasta 50.68 35 IAmb IAmb 02 00 54.4
comp=Z,43nm,1.0s
MENT IAMs_20 IAMs_20 02 24 18.1
comp=Z,1µm,22.0s
GLB Gilahina Butte 50.82 37 IAMs_20 IAMs_20 02 21 40.1
comp=Z,2µm,22.0s
L26K Log Cabin Wild 50.84 35 P P 02 00 41.1 +1.8
baz=277
TPI Tanjungpandan 50.85 226 P P 02 00 41.3 +1.4
comp=Z,846nmcomp=Z,61nm,0.9s
MTN Manton Dam 50.89 193 IAmb IAmb 02 00 55.6
comp=Z,35nm,0.6s
EKS2 Erkin-Say 50.98 298 P P 02 00 41.2 +0.4
SNR=44
VRDI Verde Repeater 51.02 37 P P 02 00 41.9 +1.0
VRDI IAMs_20 IAMs_20 02 21 38.5
comp=Z,2µm,21.0s
COEN Coen 51.05 178 P P 02 00 41.6 +0.3
LGTI Lohaghat 51.06 280 *eP* P 02 00 41.9 +0.5
PLAI Plampang 51.08 211 P P 02 00 44.9 +3.3
comp=Z,1µmcomp=Z,106nm,0.8s
KMMI Kalianget 51.18 216 P P 02 00 44.2 +1.9
comp=Z,2µmcomp=Z,108nm,0.8s
WBSI Waikabubak, Su 51.18 209 P P 02 00 55.8 +13
MCARA McCarthy VSAT 51.21 37 IAmb IAmb 02 01 00.6
comp=Z,34nm,1.0s
MCARA IAMs_20 IAMs_20 02 22 11.3
comp=Z,2µm,22.0s
AML Almayashu 51.21 298 P P 02 00 43.8 +0.9
SNR=117
CRQM Cirque 51.25 38 IAmb IAmb 02 01 02.4
comp=Z,78nm,1.0s
PPBI Pangkal Pinang 51.26 228 P P 02 00 44.3 +1.3
comp=Z,20µmcomp=Z,28nm,0.6s
K27K Chicken 51.28 33 P P 02 00 43.8 +1.2
baz=277
TWSI Taliwang, Sumb 51.37 212 P P 02 00 43.8 +0.1
comp=Z,624nmcomp=Z,44nm,0.9s
SRBI Singaraja 51.51 214 P P 02 00 46.8 +2.0
comp=Z,2µmcomp=Z,172nm,0.7s
BCAR Beaver Creek A 51.54 34 P P 02 00 45.7 +1.2
LHMI Lhok Sumawe 51.76 243 IAMs_20 IAMs_20 02 22 46.5
comp=Z,2µm,22.0s
GRJI Gresik 51.77 218 P P 02 00 51.9 +5.1
comp=Z,131nm,0.7s
YAH Yahtse 51.99 38 IAmb IAmb 02 01 08.7
comp=Z,35nm,1.0s
RPSI Rantau Prapat 52.18 239 IAmb IAmb 02 01 06.7
comp=Z,33nm,0.7s
TABL Table Mountain 52.27 38 IAmb IAmb 02 01 01.8
comp=Z,25nm,0.7s
JAGI Jajag, Banyuwa 52.34 215 P P 02 00 54.1 +3.1
comp=Z,70nm,0.9s
JAGI Jajag, Banyuwa 52.34 215 IAmb IAmb 02 01 07.8
comp=Z,82nm,1.1s
DDI Dehra Dun 52.40 282 *eP* P 02 00 51.8 +0.4
DDI IAmb IAmb 02 00 54.6
comp=Z,69nm,0.4s
DAWY Dawson 52.45 33 IAMs_20 IAMs_20 02 23 57.7
comp=Z,2µm,22.0s
DZA Taraz 52.61 299 *eP* P 02 00 52.9 0.0
baz=299
DZA *eS* S 02 08 18.4 +1.0

baz=299
DZA LR LR 02 23 28.8
comp=Z,471nm,15.0s,baz=299
DZA Taraz 52.61 299 *e*P **P 02 00 52.8 0.0**
DZA *e*S **S 02 08 18.3 +1.0**
DZA MLR MLR
comp=Z,471nm,15.0s
SMLA Simla 52.74 284 *e*P **P 02 00 53.6 -0.3**
SMLA IAmb IAmb 02 00 59.7
comp=Z,159nm,0.7s
SMRI Semarang 52.91 220 P **P 02 00 57.7 +2.4**
comp=Z,83nm,0.8s
DHRM DHARAMSHALA 52.93 285 *e*P **P 02 00 54.8 -0.8**
DHRM IAmb IAmb 02 01 04.5
comp=Z,269nm,0.9s
KK31 Karatay Array 53.11 300 *i* P **P 02 00 55.9 -0.6**
KKAR Karatay Array 53.11 300 P **P 02 00 56.6 +0.1**
KKAR Karatay Array 53.11 300 P **P 02 00 56.6 +0.1**
KKAR Karatay Array 53.11 300 IAmb IAmb 02 01 02.5
comp=Z,102nm,1.1s
MNSI Mandailing Nat 53.12 237 P **P 02 00 58.0 +1.2**
comp=Z,38nm,0.7s
BHK Bhakra 53.20 284 *ex* **P 02 00 56.6 -0.7**
BRLS Borolday 53.60 300 *e*P **P 02 01 01.7 +1.6**
comp=Z,24nm,0.6s,baz=300
BRLS LR LR 02 24 10.3
comp=Z,201nm,14.1s,baz=300
BRLS Borolday 53.60 300 *e*P **P 02 01 01.7 +1.6**
BRLS pmax pmax
comp=Z,24nm,0.6s
BRLS MLR MLR
comp=Z,201nm,14.0s
UGM Wanagama 53.61 219 P **P 02 01 01.1 +0.7**
comp=Z,225nm,1.0s
YOGI Yogyakarta 53.64 220 P **P 02 01 01.8 +1.2**
comp=Z,2µmcomp=Z,159nm,1.4s
IUG luzhnay 53.77 299 *e*P **P 02 01 01.6 +0.1**
comp=Z,43nm,0.9s,baz=299
IUG LR LR 02 24 10.3
comp=Z,778nm,15.9s,baz=299
IUG luzhnay 53.77 299 *e*P **P 02 01 01.5 +0.1**
IUG pmax pmax
comp=Z,43nm,0.9s
IUG MLR MLR
comp=Z,778nm,16.0s
NDI New Delhi 53.78 281 *e*P **P 02 01 01.0 -0.6**
HYT Haines Junctio 53.95 37 IAmb IAmb 02 01 20.3
comp=Z,56nm,1.1s
BTK Batken 53.96 296 IAmb IAmb 02 01 19.7
comp=Z,37nm,0.8s
INK Inuvik 54.03 27 P **P 02 01 03.8 +1.0**
comp=Z,14nm,0.9s,baz=280,slow=7.1,SNR=30
INK Inuvik 54.03 27 IAmb IAmb 02 01 19.3
comp=Z,23nm,0.8s
GSI Gunungsitoli 54.11 239 IAMs_20 IAMs_20 02 26 19.9
comp=Z,1µm,20.0s
KNRA Kununurra 54.12 195 P **P 02 01 04.3 +0.3**
LEM Lembang 54.22 223 LR LR 02 25 43.8
comp=Z,382nm,18.8s,baz=25,slow=38
LEM Lembang 54.22 223 P **P 02 01 05.7 +0.7**
LEM pmax pmax
comp=Z,135nm,0.9s
NIL Nilore 54.68 288 P **P 02 01 08.7 +0.6**
NIL Nilore 54.68 288 P **P 02 01 08.1 0.0**
NIL pmax pmax
comp=Z,95nm,0.8s
NIL Nilore 54.68 288 P **P 02 01 08.1 0.0**
GAR Garm 54.71 295 P **P 02 01 08.6 +0.2**
SVE Sverdlovsk 55.02 318 *d* *i*P **P 02 01 10.8 +0.6**
SVE *e*S **S 02 08 46.8 -2.6**
SVE pmax pmax
comp=Z,202nm,0.8s
SVE MLR MLR
comp=Z,4µm,18.0s
JIS Juneau Island 56.15 39 IAmb IAmb 02 01 33.4
comp=Z,28nm,1.0s
BHPL Bhopal 56.22 275⇑ *e*P **P 02 01 18.7 -0.5**
BHPL IAmb IAmb 02 01 21.3
comp=Z,27nm,0.8s
ARU Arti 56.23 318 P **P 02 01 19.1 +0.2**
comp=Z,54nm,0.7s,baz=71,slow=4.1,SNR=104
ARU Arti 56.23 318 *c* *i*P **P 02 01 18.9 0.0**
ARU 02 02 12.3
ARU 02 03 24.0
ARU PPP PPP 02 04 36.2
ARU S **S 02 09 08.3 +2.7**
ARU pmax pmax
comp=Z,181nm,0.8s
ARU MLR MLR
comp=Z,4µm,18.0s
ARU Arti 56.23 318 P **P 02 01 19.2 +0.4**
AJM Ajmer 56.82 280 *ex* **P 02 01 23.0 -0.6**
C36M Paulatuk 57.07 25 P **P 02 01 25.5 +1.0**
baz=289,SNR=8.8
C36M Paulatuk 57.07 25 IAmb IAmb 02 01 42.2
comp=Z,29nm,0.8s
FITZ Fitzroy Crossi 57.17 198 LR LR 02 23 58.8
comp=Z,286nm,21.8s,baz=26,slow=34
WB0 Warramunga Arr 57.22 188 IAmb IAmb 02 01 38.4
comp=Z,24nm,0.7s
WB9 Warramunga Arr 57.24 188 IAMs_20 IAMs_20 02 23 32.9
comp=Z,1µm,22.0s
CTA Charters Tower 57.30 175 P **P 02 01 28.1 +1.3**
comp=Z,2.2nm,0.5s,baz=351,slow=12,SNR=3.8
WB6 Warramunga Arr 57.31 188 IAMs_20 IAMs_20 02 23 34.6
comp=Z,1µm,22.0s
WB4 Warramunga Arr 57.36 188 IAMs_20 IAMs_20 02 23 22.9
comp=Z,1µm,19.0s
WC2 Warramunga Arr 57.38 188 IAMs_20 IAMs_20 02 23 13.4
comp=Z,1µm,21.0s
WC1 Warramunga Arr 57.38 188 IAMs_20 IAMs_20 02 23 22.5
comp=Z,1µm,19.0s
WRAB Tennant Creek 57.39 188 P **P 02 01 27.1 -0.3**
WRAB pmax pmax
comp=Z,21nm,0.7s
WRAB Tennant Creek 57.39 188 P **P 02 01 27.1 -0.3**
WRAB IAmb IAmb 02 01 39.7
comp=Z,21nm,0.7s
WRAB Tennant Creek 57.39 188 IAMs_20 IAMs_20 02 23 13.6
comp=Z,1µm,21.0s
WR0 Warramunga Arr 57.39 188 IAmb IAmb 02 01 39.7
comp=Z,25nm,0.7s
WR0 IAMs_20 IAMs_20 02 24 25.8
comp=Z,967nm,18.0s
WB2 Warramunga Arr 57.40 188 IAmb IAmb 02 01 39.8
comp=Z,21nm,0.7s
WB2 IAMs_20 IAMs_20 02 24 00.9
comp=Z,1µm,21.0s
WR4 Warramunga Arr 57.40 188 IAMs_20 IAMs_20 02 24 00.9
comp=Z,1µm,22.0s
WRA Warramunga Arr 57.40 188 P **P 02 01 27.2 -0.3**
comp=Z,15nm,0.5s,baz=6.3,slow=7.3,SNR=264
WRA LR LR 02 26 04.4
comp=Z,582nm,19.0s,baz=10.0,slow=36
WRA PKP2bc 02 31 37.2
comp=Z,1.9nm,1.1s,baz=187,slow=1.9,SNR=4.6
WRA Warramunga Arr 57.40 188 P **P 02 01 27.1 -0.3**
WR3 Warramunga Arr 57.40 188 IAMs_20 IAMs_20 02 24 01.0
comp=Z,1µm,22.0s
WC3 Warramunga Arr 57.41 188 IAMs_20 IAMs_20 02 24 00.3
comp=Z,1µm,22.0s
KBL Kabul 57.46 291 P **P 02 01 28.0 -0.2**
SNR=39
KBL P **P 02 01 28.0 -0.2**
SNR=39
KBL Kabul 57.46 291 P **P 02 01 27.8 -0.4**
KBL pmax pmax
comp=Z,67nm,1.0s
KBL MLR MLR
comp=Z,2µm,20.0s
KBL Kabul 57.46 291 P **P 02 01 27.8 -0.4**
KBL IAMs_20 IAMs_20 02 27 30.6
comp=Z,2µm,20.0s
AB31 Akbulak array 57.86 310 *i* P **P 02 01 30.2 -0.3**
ABKAR Akbulak array 57.86 310 P **P 02 01 30.6 0.0**
ABKAR Akbulak array 57.86 310 IAmb IAmb 02 01 32.8
comp=Z,64nm,0.7s
DLBC Dease Lake 58.27 38 IAmb IAmb 02 01 50.4
comp=Z,34nm,0.9s
HYB Hyderabad 58.38 268 *i* P **P 02 01 34.0 -0.6**
AKTO Aktyubinsk 58.59 312 P **P 02 01 35.2 -0.4**
comp=Z,57nm,0.9s,baz=70,slow=7.8,SNR=81
KNTN Kanton 58.85 122 IAMs_20 IAMs_20 02 21 01.7
comp=Z,3µm,21.0s
ALE Alert 59.78 4 IAMs_20 IAMs_20 02 28 33.7
comp=Z,1µm,20.0s

EUNU Eureka 59.85 9 IAmb IAmb 02 01 47.4
comp=Z,33nm,1.0s
KIRV Kirov 60.10 323 P **P 02 01 46.3 +0.5**
comp=Z,198nm,0.7s,baz=243,slow=0.5,SNR=45
SPA0 Spitsbergen Ar 60.24 349 *e*P **P 02 01 47.9 +1.3**
SPITS Spitsbergen Ar 60.24 349 P **P 02 01 46.6 -0.1**
comp=Z,7.0nm,0.6s,baz=94,slow=8.4,SNR=13
KBS Kingsbay 60.37 350 P **P 02 01 49.0 +1.6**
KBS pmax pmax
comp=Z,67nm,1.2s
KBS Kingsbay 60.37 350 P **P 02 01 49.0 +1.6**
KBS Kingsbay 60.37 350 *i* P **P 02 01 48.6 +1.2**
KBS IAmb IAmb 02 01 49.4
comp=Z,96nm,1.0s
AS31 Alice Springs 61.12 188 P **P 02 01 53.5 +0.3**
ASAR Alice Springs 61.12 188 P **P 02 01 53.2 0.0**
comp=Z,8.0nm,0.7s,baz=10.0,slow=6.8,SNR=76
ASAR LR LR 02 28 02.1
comp=Z,533nm,20.4s,baz=357,slow=36
ASAR PKP2bc 02 31 17.4
comp=Z,1.0nm,0.9s,baz=179,slow=2.8,SNR=6.2
POO Poona 61.52 272 *e*P **P 02 01 55.3 -0.9**
POO IAmb IAmb 02 01 57.7
comp=Z,41nm,0.9s
PSA00 Pilbara Seismi 62.10 203 P **P 02 01 59.5 -0.2**
PSA00 Pilbara Seismi 62.10 203 P **P 02 02 00.1 +0.4**
PSA00 IAmb IAmb 02 02 01.4
comp=Z,21nm,0.9s
PSAA1 Pilbara Seismi 62.10 203 IAMs_20 IAMs_20 02 28 44.4
comp=Z,2µm,21.0s
RES Resolute Bay 62.25 15 P **P 02 02 00.7 +0.5**
comp=Z,11nm,0.7s,baz=309,slow=8.2,SNR=12
RES Resolute Bay 62.25 15 P **P 02 02 00.8 +0.6**
RES pmax pmax
comp=Z,27nm,1.1s
RES Resolute Bay 62.25 15 P **P 02 02 00.8 +0.6**
RES IAmb IAmb 02 02 15.0
comp=Z,27nm,1.1s
BHUJ Bhuj 62.35 279 *e*P **P 02 02 02.9 +1.3**
BHUJ IAmb IAmb 02 02 07.2
comp=Z,37nm,0.9s
APA Apatity 62.47 336⇓ *i*P **P 02 02 01.5 -0.2**
APA *i* 02 04 18.0
APA *i*S **S 02 10 25.0 -0.8**
APA *i*PS 02 10 45.0
APA *i* 02 11 45.0
APA *i*SSS SSS 02 17 15.0
APA pmax pmax
comp=Z,42nm,0.7s
HRA Herat 62.54 294 P **P 02 02 03.0 -0.1**
HRA IAmb IAmb 02 02 19.0
comp=Z,31nm,0.9s
HRA IAMs_20 IAMs_20 02 30 56.2
comp=Z,2µm,21.0s
TMCR Tamitsa 62.55 331 *e*P **P 02 02 01.1 -1.2**
TMCR pmax pmax
comp=Z,44nm,0.9s
PALK Pallekele 62.60 258 P **P 02 02 03.3 -0.2**
PALK pmax pmax
comp=Z,43nm,1.2s
PALK MLR MLR
comp=Z,1µm,20.0s
PALK Pallekele 62.60 258 P **P 02 02 03.3 -0.2**
PALK IAmb IAmb 02 02 20.8
comp=Z,43nm,1.1s
PALK Pallekele 62.60 258 IAMs_20 IAMs_20 02 30 13.7
comp=Z,1µm,20.0s
GOA Goa 63.21 269 *e*P **P 02 02 07.5 +0.1**
GOA IAmb IAmb 02 02 09.3
comp=Z,205nm,1.1s
YKA Yellowknife Ar 63.45 30 P **P 02 02 08.8 +0.5**
comp=Z,1.2nm,0.6s,baz=209,slow=19,SNR=13
DZM Mont Dzumac 63.56 154 *e*P P 02 02 15.4 +5.8
comp=Z,63nm,1.1s
DZM *e*S **S 02 10 42.8 +2.2**
comp=Z,664nm,27.8s
DZM Mont Dzumac 63.56 154 *e*LR LR 02 21 12.0
comp=Z,4µm,21.2s
HAMF Hammerfest 63.57 341 *e*P **P 02 02 08.8 -0.2**
KLMR Klimovskoe 63.58 328 *e*P **P 02 02 07.4 -1.8**
KLMR *e* 02 04 31.0
KLMR S **S 02 10 41.2 +1.4**
KLMR pmax pmax
comp=Z,43nm,0.8s
KLMR MLR MLR
comp=Z,598nm,17.0s
KLMR Klimovskoe 63.58 328 *e*P **P 02 02 07.4 -1.8**
KLMR *e*P **P 02 02 07.4 -1.8**
KLMR *e*P **P 02 02 07.4 -1.8**
KLMR AMP 02 02 24.6
comp=Z,43nm,0.8s
KLMR *e*PP **PP 02 04 31.1 +2.3**
KLMR S **S 02 10 41.2 +1.4**
KLMR S **S 02 10 41.2 +1.4**
KLMR LQ LQ 02 24 14.0
KLMR LQ LQ 02 24 14.0
KLMR LR LR 02 26 23.7
KLMR AMP 02 32 04.4
comp=Z,598nm,17.1s
ASHT Ashkhabad 63.64 299 IAMs_20 IAMs_20 02 32 06.0
comp=Z,1µm,18.0s
BELG Belogornoye 63.68 317 *i* P **P 02 02 09.5 -0.5**
BELG pmax pmax
comp=Z,17nm,0.9s
ARD2 ARCESS Array S 63.75 339 IAmb IAmb 02 02 13.2
comp=Z,34nm,1.1s
ARD3 ARCESS Array S 63.75 339 IAmb IAmb 02 02 12.7
comp=Z,33nm,0.8s
ARD1 ARCESS Array S 63.75 339 IAmb IAmb 02 02 13.2
comp=Z,31nm,1.0s
ARC2 ARCESS Array S 63.75 339 IAmb IAmb 02 02 12.7
comp=Z,27nm,0.9s
ARC1 ARCESS Array S 63.76 339 IAmb IAmb 02 02 13.3
comp=Z,27nm,0.9s
ARC3 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,29nm,0.9s
ARD4 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,31nm,0.9s
ARB1 ARCESS Array S 63.76 339 IAmb IAmb 02 02 13.3
comp=Z,24nm,0.8s
ARB2 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,30nm,0.9s
ARA1 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,25nm,0.9s
ARA0 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,25nm,0.8s
ARA0 ARCESS Array S 63.76 339 *e*P **P 02 02 10.7 +0.4**
ARCES ARCESS Array B 63.76 339 P **P 02 02 10.7 +0.4**
comp=Z,19nm,0.7s,baz=62,slow=7.6,SNR=22
ARCES LR LR 02 33 52.4
comp=Z,1µm,18.7s,baz=45,slow=40
ARD9 ARCESS Array S 63.76 339 IAmb IAmb 02 02 15.0
comp=Z,31nm,0.9s
ARA2 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,27nm,0.9s
ARB3 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,27nm,0.9s
ARC7 ARCESS Array S 63.76 339 IAmb IAmb 02 02 15.0
comp=Z,25nm,0.8s
ARA3 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,25nm,0.8s
ARB5 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,23nm,0.8s
ARC4 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.9
comp=Z,31nm,0.9s
ARB4 ARCESS Array S 63.76 339 IAmb IAmb 02 02 12.8
comp=Z,24nm,0.8s
ARC5 ARCESS Array S 63.77 339 IAmb IAmb 02 02 12.9
comp=Z,27nm,0.9s
ARC6 ARCESS Array S 63.77 339 IAmb IAmb 02 02 13.4
comp=Z,25nm,0.8s
ARD5 ARCESS Array S 63.77 339 IAmb IAmb 02 02 12.9
comp=Z,29nm,0.9s
ARD8 ARCESS Array S 63.77 339 IAmb IAmb 02 02 13.4
comp=Z,28nm,0.8s
ARD6 ARCESS Array S 63.77 339 IAmb IAmb 02 02 13.0
comp=Z,26nm,0.8s
ARD7 ARCESS Array S 63.77 339 IAmb IAmb 02 02 13.4
comp=Z,27nm,0.8s
GEYT Alibeck 63.83 299 P **P 02 02 11.3 0.0**
comp=Z,26nm,0.7s,baz=58,slow=3.7,SNR=35
GEYT LR LR 02 32 58.4
comp=Z,781nm,18.6s,baz=70,slow=39
GEYT Alibeck 63.83 299 P **P 02 02 11.5 +0.1**
GYA0B ALIBECK ARRAY 63.83 299 IAmb IAmb 02 02 29.7
comp=Z,35nm,0.9s

GYA0B IAMs_20 IAMs_20 02 32 30.0
comp=Z,2µm,18.0s
KTK1 Kautokeino 64.72 339 *e*P **P 02 02 17.0 +0.4**
SGF Sodankyl 64.73 337 P **P 02 02 17.5 +0.9**
SGF pmax pmax
comp=Z,77nm,1.1s
TULEG Thule 64.77 8 IAmb IAmb 02 02 34.6
comp=Z,20nm,0.9s
TULEG Thule 64.77 8 *i* P **P 02 02 16.5 -0.2**
MSF Maaselka 64.83 335 P **P 02 02 18.0 +0.6**
MSF pmax pmax
comp=Z,45nm,0.7s
TRO Tromso 65.47 341 *e*P **P 02 02 21.5 +0.1**
DAG Danmarks Havn 65.47 355 *i* P **P 02 02 21.4 +0.1**
DAG pmax pmax
comp=Z,25nm,0.7s
DAG Danmarks Havn 65.47 355 *i* P **P 02 02 21.4 +0.1**
comp=Z,25nm,0.7s
DAG Danmarks Havn 65.47 355 *i* P **P 02 02 21.5 +0.1**
DAG IAmb IAmb 02 02 23.5
comp=Z,25nm,0.7s
JOF Joensuu 65.76 332 P **P 02 02 23.6 +0.2**
JOF pmax pmax
comp=Z,30nm,1.7s
NLWA Neilton Lookou 66.38 48 P **P 02 02 28.6 +0.9**
NLWA IAmb IAmb 02 02 43.4
comp=Z,36nm,1.1s
OUL Oulu 66.38 335 P **P 02 02 27.7 +0.4**
OUL pmax pmax
comp=Z,68nm,0.8s
D03D Eldon 66.76 47 P **P 02 02 31.1 +1.0**
baz=300
B05A Bryant 66.97 46 P **P 02 02 31.7 +0.3**
baz=301
MOS Moscow 67.09 323 *e*P **P 02 02 30.4 -1.6**
MOS *e* 02 02 44.5
MOS *e*S **S 02 11 19.9 -3.1**
MOS *e* 02 11 46.5
MOS pmax pmax
comp=Z,65nm,1.1s
MOS pmax pmax
comp=Z,400nm,2.7s
MOS MLR MLR
comp=Z,1µm,19.0s
N2IH Innhavet 67.42 341 *e*P **P 02 02 34.0 +0.1**
VRH Novokhopyorsk 67.46 318 *e*P **P 02 02 33.7 -0.7**
VRH pmax pmax
comp=Z,70nm,0.6s
VRH MLR MLR
comp=Z,3µm,16.0s
E04D Cinebar 67.57 48 P **P 02 02 37.3 +2.1**
baz=301
STEI Steigen 67.62 341 *e*P **P 02 02 34.6 -0.5**
SUF Sumiainen 67.78 333 P **P 02 02 36.5 +0.3**
SUF pmax pmax
comp=Z,64nm,0.7s
LOF Lofoten 67.92 341 *e*P **P 02 02 37.9 +0.9**
N2TV Tvrnvik 67.92 341 *e*P **P 02 02 37.4 +0.4**
OBN Obninsk 67.94 323⇓ *i*P **P 02 02 37.7 +0.4**
OBN Obninsk 67.94 323 *c* *i*P **P 02 02 36.6 -0.8**
OBN *e**PP **pP 02 02 51.5 +2.5**
OBN *e* 02 03 02.4
OBN *e* 02 05 06.7
OBN *e*PPP PPP 02 06 45.1
OBN *e*S **S 02 11 32.4 -0.8**
OBN *e*SS **SS 02 15 56.0 +1.3**
OBN pmax pmax
comp=Z,39nm,0.9s
OBN MLR MLR
comp=Z,1µm,17.0s
OBN Obninsk 67.94 323 P **P 02 02 37.6 +0.2**
OBN IAMs_20 IAMs_20 02 35 37.2
comp=Z,2µm,18.0s
DBG Daneborg 67.96 355 *i* P **P 02 02 37.2 0.0**
DBG IAmb IAmb 02 02 39.1
comp=Z,7.6nm,0.9s
FAUS Fauske 68.01 340 *e*P **P 02 02 37.8 +0.2**
ARMA Armidale 68.06 171 IAmb IAmb 02 02 48.9
comp=Z,31nm,0.9s
LPSR Galich'ya Gora 68.17 320 *e*P **P 02 02 38.5 -0.3**
LPSR pmax pmax
comp=Z,70nm,0.8s
LPSR MLR MLR
comp=Z,4µm,18.0s
NBB08 Skaug oppvekst 68.18 341 *e*P **P 02 02 39.0 +0.3**
MAK Makhachkala 68.39 308 *e*P **P 02 02 39.6 -0.8**
MAK *e* 02 05 08.1
MAK *e*S **S 02 11 37.7 -1.3**
MAK *e*SS **SS 02 16 02.0 -0.3**
MAK pmax pmax
comp=Z,275nm,1.2s
MAK MLR MLR
comp=Z,1µm,15.0s
N2VA Vr.y 68.48 341 *e*P **P 02 02 40.6 0.0**
B08A Colville Reser 68.50 45 P **P 02 02 42.0 +1.0**
H04D Lebanon 68.52 50 P **P 02 02 42.0 +0.8**
baz=302
VORR Voronezh 68.53 319 P **P 02 02 40.0 -1.1**
VORR pmax pmax
comp=Z,250nm,1.2s
FINES FINESS Array B 68.61 332 P **P 02 02 41.5 +0.1**
comp=Z,33nm,0.7s,baz=50,slow=6.4,SNR=73
FINES LR LR 02 35 02.9
comp=Z,2µm,18.2s,baz=52,slow=38
FINES FINESS Array B 68.61 332 P **P 02 02 41.7 +0.2**
FINES FINESS Array B 68.61 332 P **P 02 02 41.7 +0.2**
H04A Detroit Lake 68.77 50 P **P 02 02 43.8 +0.9**
H04A IAmb IAmb 02 02 59.9
comp=Z,46nm,1.1s
VAF Ylistaro 68.78 335 P **P 02 02 42.9 +0.4**
VAF pmax pmax
comp=Z,48nm,1.0s
VSR Storozhevoye 68.80 319 *e*P **P 02 02 42.6 -0.3**
VSR pmax pmax
comp=Z,50nm,0.6s
VSR MLR MLR
comp=Z,2µm,17.0s
STKA Stephens Creek 68.87 180 P **P 02 02 44.0 +0.7**
comp=Z,6.4nm,0.8s,baz=358,slow=7.3,SNR=10.0
STKA Stephens Creek 68.87 180 P **P 02 02 44.1 +0.7**
STKA pmax pmax
comp=Z,4.0nm,0.9s
STKA Stephens Creek 68.87 180 P **P 02 02 44.1 +0.7**
K02D Willamette Mer 68.91 52 P **P 02 02 43.4 -0.4**
baz=302
FORT Forrest 68.95 192 P **P 02 02 44.5 +0.6**
G05D Wamic, OR 69.00 49 P **P 02 02 44.2 -0.1**
baz=302
I04A Tendick Farm, 69.11 50 P **P 02 02 46.3 +1.4**
baz=302
MOR8 Moi Rana 69.12 340 *e*P **P 02 02 43.6 -1.0**
KONS Konsvik 69.24 340 *e*P **P 02 02 46.6 +1.3**
GROC Groznyy 69.33 309 *e*P P 02 02 59.0 +13
GROC pmax pmax
comp=Z,50nm,0.8s
C09A Chrisman Ranch 69.39 45 IAmb IAmb 02 03 03.4
comp=Z,34nm,1.0s
I05D Terrebonne, OR 69.47 50 P **P 02 02 48.4 +1.2**
baz=302
F07A Phinny Hill Vi 69.47 48 IAmb IAmb 02 03 04.3
comp=Z,36nm,1.0s
SEKA Sheki 69.51 307 P **P 02 02 47.3 -0.2**
J04D Umpqua Nationa 69.59 51 P **P 02 02 49.9 +1.8**
baz=302
ZKTA Zakatala 69.65 307 P **P 02 02 48.2 -0.1**
LGD Lagodekhi 69.78 308 P **P 02 02 49.0 -0.1**
NEW Newport 69.78 44 P **P 02 02 50.9 +1.8**
NEW pmax pmax
comp=Z,35nm,1.2s
NEW Newport 69.78 44 P **P 02 02 50.3 +1.2**
baz=304
LKRN Lenkeran, Azer 69.80 304 P **P 02 02 49.2 0.0**
MNGR Mingechevir, A 69.81 306 P **P 02 02 49.4 +0.1**
BBOO Buckleboo 69.99 185 IAmb IAmb 02 03 06.5
comp=Z,31nm,0.9s
GOF Gofitskoye 70.01 312⇑ *i*P **P 02 02 50.8 +0.4**
GOF pmax pmax
comp=Z,70nm,0.8s
L04D Klamath Falls 70.01 52 P **P 02 02 52.1 +1.4**
baz=303
YBH Yreka Blue Hor 70.02 52 IAmb IAmb 02 03 07.5
comp=Z,25nm,1.1s
J05D Fort Rock, OR 70.10 50 P **P 02 02 52.8 +1.6**
baz=303
M02C Callahan 70.11 53 P **P 02 02 52.4 +1.2**

baz=303
VSU Vasula 70.27 330 *e*P P 02 02 52.4 +0.7
MORW Morawa 70.29 204 P P 02 02 52.6 +0.5
SUMG Summit 70.37 0 *i* P P 02 02 53.9 +1.3
SUMG pmax pmax
comp=Z,100nm,1.0s
SUMG Summit 70.37 0 P P 02 02 53.3 +0.6
SUMG IAmb IAmb 02 03 10.3
comp=Z,46nm,1.0s
SUMG Summit 70.37 0 *i* P P 02 02 53.9 +1.3
comp=Z,103nm,1.0s
SUMG Summit 70.37 0 *i* P P 02 02 54.0 +1.3
SUMG IAmb IAmb 02 02 56.6
comp=Z,103nm,1.0s
N02D Trinity Center 70.43 53 P P 02 02 55.2 +2.0
baz=303
M04C Macdoel 70.54 52 P P 02 02 54.8 +0.9
baz=303
GUDG Gudauri 70.55 309 P P 02 02 54.6 +0.5
SEAG Tbilisi Sea 70.73 308 P P 02 02 58.5 +3.6
ZEI Tsey 70.73 309 *e*P P 02 02 54.0 -1.1
ZEI pmax pmax
comp=Z,48nm,1.0s
O02D Mt. Diablo Mer 70.81 54 P P 02 02 56.5 +0.9
baz=303
KBZ Khabaz 70.82 311 P P 02 02 55.8 +0.4
comp=Z,50nm,0.9s
KBZ LR LR 02 38 49.9
comp=Z,2μm,18.5s,baz=50,slow=40
KBZ Khabaz 70.82 311 *c e*P P 02 02 55.2 -0.2
KBZ pmax pmax
comp=Z,51nm,0.9s
KIV Kislovodsk 70.83 311 ⇓P P 02 02 56.7 +1.1
KIV Kislovodsk 70.83 311 *i* P P 02 02 56.8 +1.2
SNR=23
KIV Kislovodsk 70.83 311 P P 02 02 56.6 +1.1
KIV Kislovodsk 70.83 311 *e*P P 02 02 56.0 +0.4
KIV *e*S S 02 12 08.6 +0.8
KIV *e*SS SS 02 16 43.0 +3.1
KIV pmax pmax
comp=Z,499nm,4.6s
KIV pmax pmax
comp=Z,401nm,1.0s
KIV MLR MLR
comp=Z,3μm,18.0s
KIV Kislovodsk 70.83 311 P P 02 02 55.9 +0.3
KIV IAMs_20 IAMs_20 02 37 47.8
comp=Z,1μm,19.0s
JLN Jalan Bani Buh 70.94 284 P P 02 02 57.4 +0.9
SNR=6.6
WSAR Wadi Sarin 70.95 285 P P 02 02 56.9 +0.4
comp=Z,16nm,0.9s,baz=104,slow=5.0,SNR=17
WBK Wadi Bani Khal 71.03 284 P P 02 02 57.9 +0.8
SNR=10
NSS Namsos 71.05 339 *e*P P 02 02 56.3 -0.1
WALA Waterton Lakes 71.09 42 IAmb IAmb 02 03 11.3
comp=Z,21nm,0.9s
ONI Oni 71.11 309 P P 02 02 58.4 +1.1
BIDO Bidbid 71.18 286 P P 02 02 59.1 +1.2
SNR=13
BANOM Banah 71.27 289 *i* P P 02 02 58.8 +0.4
SNR=20
BANOM Banah 71.27 289 P P 02 02 59.1 +0.6
SHME Shamm 71.32 289 *i* P P 02 02 59.1 +0.4
SNR=17
O03E Paynes Creek 71.38 53 P P 02 02 59.9 +0.9
baz=303
SMDO Samad 71.49 285 P P 02 03 01.0 +1.1
SNR=17
GDXM Geysers 71.55 55 IAMs_20 IAMs_20 02 31 58.3
comp=Z,1μm,19.0s
BMO Blue Mountains 71.59 47 IAmb IAmb 02 03 16.5
comp=Z,35nm,1.1s
MDH Madha 71.61 288 P P 02 03 00.2 -0.3
MDH Madha 71.61 288 P P 02 03 01.4 +0.9
JTMT Jette 71.65 44 IAmb IAmb 02 03 16.9
comp=Z,31nm,1.1s
GNI Garni 71.65 307 P P 02 03 02.1 +1.4
GNI Garni 71.65 307 *c e*P P 02 03 01.2 +0.5
GNI pmax pmax
comp=Z,18nm,0.8s
GNI Garni 71.65 307 P P 02 03 00.8 +0.1
GNI IAmb IAmb 02 03 20.1
comp=Z,48nm,0.9s
GNI Garni 71.65 307 IAMs_20 IAMs_20 02 36 57.9
comp=Z,2μm,19.0s
MSFE Esma-Masafi 71.68 288 *i* P P 02 03 00.8 -0.1
SNR=10
NAX Nakhchivan 71.70 306 P P 02 03 00.9 0.0
J08A Circle Bar Ran 71.74 49 IAmb IAmb 02 03 17.8
comp=Z,44nm,1.1s
AKH Akhalkalaki 71.74 308 ⇓P P 02 03 02.5 +1.3
AKH Akhalkalaki 71.74 308 P P 02 03 02.5 +1.3
BGD Bogdanovka 71.76 308 P P 02 03 02.8 +1.4
HOQ Hoqain 71.77 286 P P 02 03 02.1 +0.6
SNR=18
SCO Scoresbysund 71.81 354 *i* P P 02 03 02.5 +1.6
SCO pmax pmax
comp=Z,12nm,0.8s
SCO Scoresbysund 71.81 354 *i* P P 02 03 02.5 +1.6
comp=Z,12nm,0.8s
SCO Scoresbysund 71.81 354 *i* P P 02 03 02.5 +1.6
SCO IAmb IAmb 02 03 04.9
comp=Z,12nm,0.8s
JMDO Jabal Madar 71.83 285 P P 02 03 02.4 +0.5
SNR=11
UOSS Minazif 71.87 288 *i* P P 02 03 01.8 -0.3
SNR=12
UOSS Minazif 71.87 288 P P 02 03 02.5 +0.4
UOSS Minazif 71.87 288 P P 02 03 02.1 0.0
ARXR Arkhyz 71.89 311 ⇓*i* P P 02 03 02.8 +0.7
HATD Hatta, Dubai 71.99 288 *i* P P 02 03 03.4 +0.6
SNR=22
HATD Hatta, Dubai 71.99 288 P P 02 03 03.6 +0.8
SNR=9.4
SOHO SOHO 72.06 287 *i* P P 02 03 03.1 -0.1
SNR=23
SOHO SOHO 72.06 287 P P 02 03 03.6 +0.4
ASHO Ashiyiah 72.12 288 *i* P P 02 03 03.7 +0.1
SNR=13
ASHO Ashiyiah 72.12 288 P P 02 03 04.2 +0.6
SNR=11
WVOR Wild Horse Val 72.16 50 P P 02 03 06.0 +2.3
WVOR pmax pmax
comp=Z,41nm,1.4s
IZAR Zarasai 72.23 328 *e*P P 02 03 04.4 +0.7
NAZ Nazwa, Dubai 72.26 288 P P 02 03 04.8 +0.4
IDID Didziasalis 72.30 327 *e*P P 02 03 04.7 +0.6
BSY Bisya 72.32 285 P P 02 03 05.5 +0.7
SNR=16
MICGM Minsk 72.33 326 *e*P P 02 03 03.0 -1.3
MICGM *e*LR LR 02 33 40.0
MICGM LRM MLR 02 42 06.0
comp=Z,3.1nm,18.0s
MNK Minsk 72.33 326 *e*P P 02 03 03.0 -1.3
MSO Missoula 72.37 44 P P 02 03 05.2 +0.3
baz=306
ISAL Salakas 72.40 327 *e*P P 02 03 05.2 +0.6
FAQ Al Faqa, Dubai 72.44 288 *i* P P 02 03 05.3 -0.2
SNR=10
FAQ Al Faqa, Dubai 72.44 288 P P 02 03 05.8 +0.3
IIGN Ignalina 72.50 327 *e*P P 02 03 06.3 +1.0
ARQ Araqi 72.51 286 P P 02 03 06.9 +0.9
SNR=11
TBLU Trondheim 72.52 339 *e*P P 02 03 03.9 -1.4
BEKR Beckworth 72.53 53 IAmb IAmb 02 03 22.8
comp=Z,28nm,1.0s
NACGM Naroch 72.55 327 *e* P 02 03 05.0 -0.6
NACGM *e*LQ LQ 02 30 14.0
NACGM *e*LR LR 02 33 52.0
NACGM LRM MLR 02 37 38.0
comp=Z,3.1nm,16.0s
SLIT Slitere, Latvi 72.59 331 *e*P P 02 03 06.3 +0.6
MHTO MHTO 72.70 283 P P 02 03 07.6 +0.6
SNR=14
ALNE Al Ain 72.70 287 *i* P P 02 03 07.3 +0.2
SNR=14
ASUD Al Ashush, Dub 72.71 288 *i* P P 02 03 07.3 +0.2
SNR=18
ASUD Al Ashush, Dub 72.71 288 P P 02 03 07.8 +0.8
SOC Sochi 72.81 312 *e*P P 02 03 06.2 -1.1
SOC *e**PP **pP** 02 03 15.8 -3.3
SOC *e**SP **sP** 02 03 20.6 -3.0
SOC *e* 02 05 48.6
SOC *e*PPP PPP 02 07 28.1
SOC *e*S **S** 02 12 30.3 -0.1
SOC *e*SS **SS** 02 17 09.3 -0.7
SOC pmax pmax
comp=Z,29nm,0.6s
SOC MLR MLR
comp=Z,2μm,19.0s
PAHR Pah Rah Range 73.24 53 IAmb IAmb 02 03 26.5
comp=Z,36nm,1.1s
FFC Flin Flon 73.35 33 P P 02 03 11.4 +1.1
FFC pmax pmax
comp=Z,19nm,1.0s
FFC Flin Flon 73.35 33 P P 02 03 11.4 +1.1
PABE Paberze 73.36 328 *e*P P 02 03 11.1 +0.8
ANN Anapa 73.43 314 *e*P P 02 03 09.3 -1.7
ANN *e**PP **pP** 02 03 19.7 -3.0
ANN *e* 02 03 24.8
ANN *e* 02 05 51.3
ANN *e*PPP PPP 02 07 36.9
ANN *e*S **S** 02 12 36.1 -1.3
ANN pmax pmax
comp=Z,31nm,0.9s
ANN MLR MLR
comp=N,2μm,16.0s
ANN MLR MLR
comp=Z,1μm,16.0s
NWAO Narrogin (SRO) 73.53 201 LR LR 02 35 19.2
comp=Z,223nm,20.0s,baz=68,slow=36
CMB Columbia Colle 73.55 55 IAmb IAmb 02 03 28.2
comp=Z,33nm,1.0s
DQM DQM 73.62 283 P P 02 03 12.7 +0.2
NC303 NORSAR Array S 73.77 337 IAmb IAmb 02 03 14.9
comp=Z,64nm,1.1s
DOMB Dombas 73.81 339 *e*P P 02 03 13.4 +0.5
MOL Molde 73.82 340 *e*P P 02 03 13.8 +0.9
ICESG Greenland Ices 73.87 0 *i* P P 02 03 14.7 +1.1
ICESG IAmb IAmb 02 03 16.4
comp=Z,23nm,1.0s
EGMT Eagleton 73.92 41 P P 02 03 14.6 +0.6
baz=308
EGMT Eagleton 73.92 41 IAmb IAmb 02 03 30.7
comp=Z,38nm,1.0s
NB2 NORSAR Subarra 73.96 337 P P 02 03 14.0 +0.2
comp=Z,34nm,0.8s,baz=38,slow=5.9
NB2 NORSAR Subarra 73.96 337 P P 02 03 10.6 -3.3
NB2 pmax pmax
comp=Z,1μm,2.6s
NB2 NORSAR Subarra 73.96 337 P P 02 03 14.0 +0.2
baz=38,slow=5.9
NOA NORSAR Array B 73.96 337 P P 02 03 14.1 +0.2
comp=Z,14nm,0.7s,baz=39,slow=5.9,SNR=67
NOA LR LR 02 38 06.8
comp=Z,2μm,21.8s,baz=40,slow=38
DLMT Dillon 74.00 45 IAmb IAmb 02 03 31.4
comp=Z,72nm,1.1s
HLID Hailey 74.03 47 P P 02 03 16.4 +1.5
baz=306
HLID Hailey 74.03 47 IAMs_20 IAMs_20 02 29 46.4
comp=Z,872nm,18.0s
NC602 NORSAR Array S 74.09 337 IAmb IAmb 02 03 28.7
comp=Z,33nm,0.9s
NORES NORESS Array B 74.09 337 P P 02 03 15.0 +0.4
NORES pmax pmax
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 74.15 322 P P 02 03 15.0 -0.1
comp=Z,45nm,0.6s,baz=46,slow=6.1,SNR=82
AKASG LR LR 02 38 46.5
comp=Z,2μm,18.6s,baz=50,slow=38
AKASG Malin Array Be 74.15 322 P P 02 03 15.1 0.0
AKASG pmax pmax
comp=Z,22nm,1.0s
AKASG Malin Array Be 74.15 322 P P 02 03 15.1 0.0
AKBB Malin Array Si 74.15 322 *c e*P P 02 03 14.4 -0.7
AKBB Malin Array Si 74.15 322 IAmb IAmb 02 03 17.0
comp=Z,48nm,0.8s
KIEV Kiev 74.16 322 P P 02 03 14.0 -1.1
NAO01 NORSAR Array S 74.21 337 IAmb IAmb 02 03 31.7
comp=Z,42nm,0.8s
AKN Aaknes 74.28 340 *e*P P 02 03 16.3 +0.6
KTUT Trabzon 74.29 310 ⇓P P 02 03 16.4 +0.3
BOZ Bozeman (W) 74.40 44 P P 02 03 17.1 +0.3
baz=308
KOPT Kop Dagi 74.41 309 IAmb IAmb 02 03 32.5
comp=Z,33nm,1.0s
KOPT IAMs_20 IAMs_20 02 39 45.7
comp=Z,2μm,18.0s
LHV Little Huntoon 74.64 54 IAmb IAmb 02 03 36.0
comp=Z,64nm,1.1s
LHV IAMs_20 IAMs_20 02 29 14.0
comp=Z,809nm,19.0s
NVAR Mina Array Bea 74.67 53 P P 02 03 20.2 +1.6
comp=Z,5.0nm,0.9s,baz=286,slow=6.0,SNR=20
NVAR LR LR 02 31 28.8
comp=Z,363nm,21.4s,baz=290,slow=32
NVAR Mina Array Bea 74.67 53 P P 02 03 19.2 +0.6
SUW Suwalki 74.71 327 *e*P P 02 03 18.0 -0.3
SUW Suwalki 74.71 327 P P 02 03 18.7 +0.4
SUW pmax pmax
comp=Z,79nm,1.0s
PAGB Antelope Grade 74.96 57 IAMs_20 IAMs_20 02 28 42.6
comp=Z,918nm,21.0s
OSL Oslo 74.97 337 *e*P P 02 03 20.7 +1.1
SKAR Skarslia 75.12 338 *e*P P 02 03 21.5 +0.9
SIM Simferopol' 75.22 316 *c i*P P 02 03 21.2 -0.2
SIM *i* 02 03 33.0
SIM pmax pmax
comp=Z,55nm,0.8s
FOO Floro 75.30 340 *e*P P 02 03 23.5 +2.1
HYA Hoyanger 75.34 339 *e*P P 02 03 22.4 +0.7
TIN Tinemaha, Big 75.51 54 P P 02 03 24.6 +1.2
baz=306,SNR=7.1
KONO Kongsberg 75.55 337 *e*P P 02 03 23.3 +0.3
SFJD Kangerlussuaq 75.56 5 *e*P P 02 03 22.5 -0.4
SFJD pmax pmax
comp=Z,5.0nm,1.5s
SFJD Kangerlussuaq 75.56 5 *i* P P 02 03 22.5 -0.4
comp=Z,4.8nm,1.5s
SFJD Kangerlussuaq 75.56 5 *e*P P 02 03 22.6 -0.4
SFJD IAmb IAmb 02 03 25.6
comp=Z,4.8nm,1.5s
VES Vestal, Richgr 75.66 56 P P 02 03 25.7 +1.6
baz=306,SNR=6.8
H17A Grant Village 75.73 45 P P 02 03 27.7 +3.0
baz=309
PKM Mcpherson Peak 75.73 57 P P 02 03 25.1 +0.3
baz=306,SNR=7.8
SUE Suleh 75.82 340 *e*P P 02 03 24.5 0.0
IMW Indian Meadow 75.83 45 IAmb IAmb 02 03 42.5
comp=Z,44nm,1.0s
CWC Cottonwood Cre 75.97 55 P P 02 03 26.7 +0.6
baz=306
RLMT Red Lodge 76.00 44 P P 02 03 27.1 +0.9
baz=309
TPAW Teton Pass 76.08 46 IAmb IAmb 02 03 47.8
comp=Z,25nm,0.8s
GRAC Grapevine Rang 76.11 54 P P 02 03 28.6 +1.8
baz=306,SNR=8.0
ISA Isabella, Lake 76.17 56 P P 02 03 27.5 +0.4
baz=306,SNR=7.2
ASK Askoy 76.18 339 *e*P P 02 03 27.2 +0.7
SHAO Shalim 76.19 282 P P 02 03 27.3 -0.1
SHAO Shalim 76.19 282 P P 02 03 27.8 +0.4
SNOW Snow King Moun 76.21 46 IAmb IAmb 02 03 44.4
comp=Z,34nm,1.1s
REDW Red Top Meadow 76.21 46 IAmb IAmb 02 03 44.3
comp=Z,33nm,1.1s
BER Bergen 76.22 339 P P 02 03 27.7 +0.9
BER pmax pmax
comp=Z,52nm,0.7s
BER Bergen 76.22 339 *e*P P 02 03 28.5 +1.7
ODD1 Odda 76.23 338 *e*P P 02 03 27.8 +0.8
SORM Soroca 76.25 321 ⇑P P 02 03 27.3 0.0
SORM Soroca 76.25 321 P P 02 03 27.2 0.0
R11A Troy Canyon, C 76.44 52 P P 02 03 29.8 +1.1
baz=307,SNR=10
R11A Troy Canyon, C 76.44 52 IAmb IAmb 02 03 45.3
comp=Z,36nm,1.1s
KVT Kavak 76.49 312 P P 02 03 30.1 +1.3
DGMT Dagmar 76.49 39 P P 02 03 29.5 +0.9
baz=312
DGMT Dagmar 76.49 39 IAmb IAmb 02 03 45.2
comp=Z,74nm,1.1s
HORU Horodok 76.49 322 P P 02 03 28.8 +0.2
MPMC Manual Prospec 76.58 55 P P 02 03 30.5 +0.9
baz=306,SNR=9.1
DIKM Dikmen 76.60 312 ⇓P P 02 03 29.0 -0.4
LAO LASA Array 76.62 41 P P 02 03 31.0 +1.5
baz=311,SNR=6.1
LAO LASA Array 76.62 41 IAmb IAmb 02 03 48.3
comp=Z,44nm,1.1s
BLS5 Blasjo 76.69 338 *e*P P 02 03 30.4 +0.9
TOKA Tokat 76.69 311 IAmb IAmb 02 03 45.5
comp=Z,40nm,0.8s
TOKA IAMs_20 IAMs_20 02 42 55.1
comp=Z,939nm,19.0s
MALT Malatya 76.71 308 P P 02 03 31.3 +1.1
FURC Furnace Creek, 76.75 54 P P 02 03 32.0 +1.7
baz=307,SNR=15
KIS Kishinev 76.76 320 ⇑*i* P P 02 03 29.8 -0.3
comp=Z,290nm,3.9s
KIS Kishinev 76.76 320 *e*PcP PcP 02 03 42.0 +0.7
KIS *e*LR LR 02 34 55.0
comp=Z,1μm,18.0s
KIS Kishinev 76.76 320 *c i*P P 02 03 29.8 -0.3
KIS *e* 02 03 42.0
KIS pmax pmax
comp=Z,290nm,3.9s
KIS MLR MLR
comp=N,700nm,15.0s
KIS MLR MLR
comp=E,600nm,16.0s
LRMC Laurel Mtn Rad 76.80 55 P P 02 03 31.7 +0.9
baz=307
MILM Milestii Mici 76.82 320 ⇑P P 02 03 30.1 -0.4
TPNV Topopah Spring 76.85 54 P P 02 03 32.1 +1.0
baz=307,SNR=7.9
TPNV Topopah Spring 76.85 54 IAmb IAmb 02 03 47.5
comp=Z,59nm,1.0s
SNCC San Nicolas Is 76.89 58 IAMs_20 IAMs_20 02 29 53.8
comp=Z,2μm,21.0s
DMTO DMTO 76.89 282 P P 02 03 31.3 0.0
KMPD K-Podol'skiy 76.91 322 P P 02 03 31.0 +0.1
EDW2 Edwards Air Fo 76.95 56 P P 02 03 33.3 +1.7
baz=306,SNR=12
DUG Dugway, Tooele 77.02 49 P P 02 03 34.0 +2.1
DUG pmax pmax
comp=Z,53nm,1.1s
DUG Dugway, Tooele 77.02 49 P P 02 03 33.3 +1.3
baz=308,SNR=13
DUG Dugway, Tooele 77.02 49 IAmb IAmb 02 03 48.6
comp=Z,45nm,1.1s
BZK Bozkurt 77.14 313 ⇓P P 02 03 32.7 +0.3
KMY Karmoy 77.21 339 *e*P P 02 03 34.7 +2.3
LVV L'vov 77.22 324 *e*P P 02 03 33.6 +0.9
LVV *e**PP **pP** 02 03 46.8 +2.3
LVV *e* 02 03 53.6
LVV *e* 02 06 34.9
LVV *e*PPP PPP 02 08 21.2
LVV *e*S **S** 02 13 19.8 +0.5
LVV *e*PS **PnS** 02 14 06.4 +4.6
LVV *e*SS **SS** 02 18 25.6 +9.1
LVV MLR MLR
comp=E,2μm,17.0s
LVV MLR MLR
comp=N,2μm,16.0s
LVV MLR MLR
comp=Z,2μm,17.0s
PASC Pasadena Art C 77.24 57 IAMs_20 IAMs_20 02 30 23.1
comp=Z,2μm,22.0s
BSD Bornholm Skovb 77.25 332 ⇑*i* P P 02 03 32.7 +0.1
BSD pmax pmax
comp=Z,55nm,1.1s
BSD Bornholm Skovb 77.25 332 ⇑*i* P P 02 03 32.7 +0.1
comp=Z,55nm,1.1s
BSD Bornholm Skovb 77.25 332 ⇑*i* P P 02 03 32.8 +0.1
BSD IAmb IAmb 02 03 34.1
comp=Z,55nm,1.1s
BEL Belsk 77.27 327 *e*P P 02 03 34.2 +1.3
BEL Belsk 77.27 327 P P 02 03 34.4 +1.5
BEL pmax pmax
comp=Z,219nm,0.8s
MWC Mount Wilson 77.30 57 IAMs_20 IAMs_20 02 30 36.5
comp=Z,2μm,22.0s
BW06 Boulder Array 77.33 46 P P 02 03 34.5 +0.7
baz=309,SNR=6.7
PDAR Pinedale Array 77.33 46 P P 02 03 34.7 +1.0
comp=Z,2.5nm,0.6s,baz=285,slow=2.0,SNR=27
PDAR LR LR 02 33 48.4
comp=Z,455nm,21.6s,baz=326,slow=33
PDAR Pinedale Array 77.33 46 P P 02 03 34.4 +0.6
PRN Pahroc Range 77.34 53 IAmb IAmb 02 03 51.1
comp=Z,48nm,1.1s
SNART Snartemo 77.34 337 *e*P P 02 03 33.5 +0.3
SNART Snartemo 77.34 337 *i* P P 02 03 33.9 +0.7
GSC Goldstone, Bar 77.48 55 P P 02 03 35.6 +1.1
baz=307,SNR=7.2
BFSC Mount Baldy Ra 77.55 56 P P 02 03 36.0 +1.0
baz=307,SNR=7.5
RBK Rabkut 77.59 283 P P 02 03 34.9 -0.4
WHFO Wadi Hawf 77.69 283 P P 02 03 35.3 -0.6
COP Copenhagen 77.72 333 *i* P P 02 03 36.8 +1.5
COP pmax pmax
comp=Z,48nm,0.9s
COP Copenhagen 77.72 333 *i* P P 02 03 36.8 +1.5
comp=Z,48nm,0.9s
COP Copenhagen 77.72 333 IAmb IAmb 02 03 38.7
comp=Z,48nm,0.9s
COP Copenhagen 77.72 333 *i* P P 02 03 36.8 +1.5
COP Copenhagen 77.72 333 *i* P P 02 03 37.3 +2.0
GKP Gorka Klasztor 77.72 330 *e*P P 02 03 36.2 +0.9
GKP *e*pP **pP** 02 03 48.6 +1.4
GOET G??ttrup 77.76 336 *i* P P 02 03 37.6 +2.2
GOET G??ttrup 77.76 336 *i* P P 02 03 37.7 +2.2
KSV Kosov 77.76 322 P P 02 03 36.4 +0.6
MORS Morshin 77.76 323 P P 02 03 36.6 +0.9
SHPR Sheep Range 77.82 53 IAmb IAmb 02 03 53.9
comp=Z,43nm,1.1s
PRAR RASCA 77.84 321 ⇓P P 02 03 36.8 +0.6
BIR Birlad 77.86 320 ⇓P P 02 03 37.7 +1.3
BIR Birlad 77.86 320 P P 02 03 37.6 +1.3
ILGA Ilgaz 77.88 313 IAMs_20 IAMs_20 02 42 01.5
comp=Z,841nm,20.0s
TLCR 77.96 318 ⇓P P 02 03 37.3 +0.5
TLCR 77.96 318 P P 02 03 37.3 +0.5
KWP Kalwaria Pacla 77.97 324 *e*P P 02 03 38.0 +1.1
KWP *e*pP **sP** 02 03 52.0 -1.1
KWP Kalwaria Pacla 77.97 324 P P 02 03 38.0 +1.1
KWP pmax pmax
comp=Z,115nm,1.2s
TUQ Turquoise Moun 77.97 55 P P 02 03 38.7 +1.4
baz=307,SNR=10.0
HEC Hector,Ludlow 78.07 55 P P 02 03 39.3 +1.5
baz=307,SNR=7.3
GHRR 78.11 320 ⇓P P 02 03 39.1 +1.4
BUR08 Bucovina Ar. S 78.16 322 IAmb IAmb 02 03 41.6
comp=Z,32nm,0.9s
BURAR Bucovina Array 78.17 322 ⇓P P 02 03 39.1 +1.0
BURAR Bucovina Array 78.17 322 P P 02 03 39.1 +1.0
GAZ Gaziantep 78.17 308 IAMs_20 IAMs_20 02 41 15.4
comp=Z,1μm,21.0s
BIZ Bicaz 78.19 321 ⇓P P 02 03 38.7 +0.6
TESR Tescani 78.20 320 ⇓P P 02 03 39.0 +0.8
MUD Monsted U'grnd 78.24 335 *i* P P 02 03 39.3 +1.1
MUD pmax pmax
comp=Z,25nm,0.9s
MUD Monsted U'grnd 78.24 335 *i* P P 02 03 39.3 +1.1
comp=Z,25nm,0.9s
MUD Monsted U'grnd 78.24 335 *i* P P 02 03 39.3 +1.1
MUD IAmb IAmb 02 03 41.6
comp=Z,25nm,0.9s
MURC Murrieta 78.24 57 P P 02 03 39.9 +1.2
baz=307,SNR=6.2
NUUK Nuuk 78.25 6 *i* P P 02 03 38.3 +0.2
CFR Carcaliu 78.32 319 ⇓P P 02 03 38.5 -0.4
CFR Carcaliu 78.32 319 P P 02 03 39.2 +0.3
CFR pmax pmax
comp=Z,27nm,0.8s
TPGR Topolog 78.38 318 ⇓P P 02 03 39.2 -0.1
ABTO Aybut 78.39 283 P P 02 03 39.5 -0.3
PETR Petresti 78.43 319 ⇓P P 02 03 40.6 +1.2
ODBI Odobesti 78.49 319 ⇑P P 02 03 41.3 +1.5
GMRC Granite Mounta 78.54 55 P P 02 03 41.5 +1.1
baz=308,SNR=7.4
VRI Vrincioaia 78.59 320 ⇓P P 02 03 40.4 0.0
VRI Vrincioaia 78.59 320 P P 02 03 42.2 +1.8
VRI pmax pmax
comp=Z,64nm,1.4s
PLOR Plostina 78.64 320 ⇓P P 02 03 41.7 +1.0
PLOR Plostina 78.64 320 P P 02 03 41.7 +1.0
KOLS Kolonicke sedl 78.66 324 *e*P P 02 03 41.4 +0.7
KOLS pmax pmax
comp=Z,42nm,1.6s

KOLS Kolonicke sedl 78.66 324 eP P 02 03 41.4 +0.7
PFO Pinyon Flats O 78.72 56 P P 02 03 41.9 +0.4
baz=307
PFO Pinyon Flats O 78.72 56 IAMs_20 IAMs_20 02 30 58.4
comp=Z,2µm,21.0s
XPFO Pion Flat 78.73 56 IAMs_20 IAMs_20 02 31 22.4
comp=Z,2µm,22.0s
109C Camp Elliot, M 78.73 57 IAMs_20 IAMs_20 02 31 02.5
comp=Z,1µm,21.0s
TPFO Pinon Flats 78.73 56 P P 02 03 41.9 +0.4
baz=307
BR131 Keskin Array S 78.77 312 IAmb IAmb 02 03 56.8
comp=Z,36nm,0.9s
BRTR Keskin Array B 78.77 312 P P 02 03 41.9 +0.2
comp=Z,11nm,0.7s,baz=104,slow=3.6,SNR=29
BRTR LR LR 02 43 12.3
comp=Z,415nm,18.8s,baz=60,slow=39
BRTR Keskin Array B 78.77 312 P P 02 03 41.7 +0.1
TLBR Topalu 78.79 318 ⇓P P 02 03 40.6 -0.8
BELC Belle Mtn. Jos 78.79 56 P P 02 03 42.8 +0.9
baz=308
UZH Uzhgorod 78.87 324 eP P 02 03 43.0 +1.2
UZH e 02 03 52.2
UZH e 02 03 55.2
UZH e 02 06 45.2
UZH eS S 02 13 35.0 -2.0
UZH MLR MLR
comp=Z,400nm,16.0s
OJC Ojcow 78.87 326 eP P 02 03 42.6 +0.8
OJC Ojcow 78.87 326 IAmb IAmb 02 03 58.2
comp=Z,49nm,0.8s
OZUR 78.92 320 ⇓P P 02 03 43.9 +1.7
ARCR ARCALIA 78.96 322 ⇓P P 02 03 43.2 +0.8
BMR Baia Mare 78.97 323 ⇑P P 02 03 43.9 +1.5
TJX Tijuana 78.99 58 IAMs_20 IAMs_20 02 31 45.5
comp=Z,1µm,20.0s
CRVS Cervenica-Dubn 79.06 324 eP P 02 03 43.7 +0.8
CRVS pmax pmax
comp=Z,40nm,1.0s
CRVS Cervenica-Dubn 79.06 324 eP P 02 03 43.7 +0.8
K22A Casper 79.11 44 P P 02 03 43.7 +0.2
baz=311
BAR Barrett 79.15 57 IAMs_20 IAMs_20 02 31 48.6
comp=Z,1µm,21.0s
ULM Lac du Bonnet 79.15 33 P P 02 03 43.4 +0.1
comp=Z,4.5nm,0.7s,baz=334,slow=5.1,SNR=7.3
MDND Maddock 79.16 37 P P 02 03 44.4 +0.9
baz=315
MONP2 Monument Peak 79.19 57 P P 02 03 45.1 +1.0
baz=308,SNR=10
ISR Istrita 79.19 319 ⇓P P 02 03 43.9 +0.1
ISR Istrita 79.19 319 P P 02 03 45.2 +1.4
ISR pmax pmax
comp=Z,105nm,0.8s
BR231 Keskin MP Arra 79.20 312 IAmb IAmb 02 04 00.0
comp=Z,36nm,0.8s
ICOR Ion Corvin 79.21 318 ⇓P P 02 03 45.1 +1.3
DOPR Dopca 79.21 320 ⇓P P 02 03 45.6 +1.8
NIE Niedzica 79.22 325 eP P 02 03 45.2 +1.3
NIE epP pP 02 03 58.3 +2.6
NIE Niedzica 79.22 325 P P 02 03 45.1 +1.3
NIE pmax pmax
comp=Z,24nm,1.1s
MLR Muntele Rosu 79.25 320 ⇓P P 02 03 44.8 +0.6
MLR Muntele Rosu 79.25 320 P P 02 03 44.6 +0.4
MLR pmax pmax
comp=Z,33nm,1.1s
MLR Muntele Rosu 79.25 320 IAmb IAmb 02 03 59.6
comp=Z,37nm,1.1s
IRM Iron Mountain 79.26 55 P P 02 03 45.5 +1.2
baz=308,SNR=10
BC3 Big Chuckawall 79.36 56 P P 02 03 46.4 +1.4
baz=308
RSSD Black Hills 79.48 42 P P 02 03 47.0 +1.4
RSSD pmax pmax
comp=Z,11nm,1.0s
RSSD Black Hills 79.48 42 P P 02 03 46.5 +0.9
baz=312
RSSD Black Hills 79.48 42 P P 02 03 47.0 +1.4
LEHL Lehliu 79.49 319 ⇓P P 02 03 46.6 +1.3
SECR 79.50 319 ⇓P P 02 03 46.8 +1.4
IKP In-Ko-Pah, Jac 79.54 57 P P 02 03 47.2 +1.3
baz=308,SNR=12
SWSC Sam W. Stewart 79.57 57 P P 02 03 47.0 +1.0
baz=308,SNR=5.7
CJR Cluj-Napoca 79.59 322 ⇓P P 02 03 47.6 +1.6
CJR Cluj-Napoca 79.59 322 P P 02 03 47.5 +1.6
RMX La Rumorosa 79.59 57 IAMs_20 IAMs_20 02 31 02.0
comp=Z,1µm,21.0s
SULR 79.64 319 ⇓P P 02 03 46.7 +0.6
U15A North Rim 79.68 52 IAmb IAmb 02 04 03.9
comp=Z,48nm,1.1s
RUE Ruedersdorf 79.69 331 eP P 02 03 47.1 +0.8
RUE Ruedersdorf 79.69 331 eP P 02 03 47.0 +0.8
comp=Z,46nm,1.2s,baz=37,slow=5.2
VOIR 79.75 320 ⇑P P 02 03 47.2 +0.4
VOIR 79.75 320 P P 02 03 47.5 +0.7
VOIR pmax pmax
comp=Z,24nm,0.8s
O20A White River Ci 79.77 47 P P 02 03 48.1 +0.9
baz=311,SNR=5.1
LANS Liptovska Anna 79.79 326 eP P 02 03 48.5 +1.5
LANS e 02 04 01.5
LANS eS S 02 13 35.6 -11
LANS pmax pmax
comp=Z,20nm,1.0s
LANS Liptovska Anna 79.79 326 eP P 02 03 48.4 +1.5
LANS e 02 04 01.5
LANS eS S 02 13 35.6 -11
PDMCI Parker Dam,Lak 79.82 55 P P 02 03 48.9 +1.6
baz=308,SNR=10.0
BSEG Bad Segeberg 79.85 333 P P 02 03 47.8 +0.7
BSEG pmax pmax
comp=Z,51nm,1.0s
BSEG Bad Segeberg 79.85 333 eP P 02 03 47.8 +0.7
comp=Z,51nm,1.1s,baz=37,slow=5.2
OKC Ostrava-Krasne 79.88 327 eP P 02 03 47.9 +0.6
OKC e 02 04 01.1
OKC MLR MLR
comp=Z,2µm,16.7s
OKC Ostrava-Krasne 79.88 327 eP P 02 03 47.9 +0.6
OKC epP pP 02 04 01.1 +1.9
OKC AMS AMS 02 41 50.0
comp=Z,2µm,16.7s
KSP Ksiaz 79.92 328 eP P 02 03 48.5 +0.9
KSP epP pP 02 04 01.2 +1.8
KSP Ksiaz 79.92 328 P P 02 03 48.5 +0.9
KSP pmax pmax
comp=Z,60nm,0.8s
DRGR 79.97 322 ⇓P P 02 03 48.3 +0.3
DRGR 79.97 322 P P 02 03 48.7 +0.7
DRGR pmax pmax
comp=Z,79nm,1.0s
ARR Arges 80.01 320 ⇓P P 02 03 50.0 +1.8
PRD Provadia 80.04 317 P P 02 04 02.7 +14
ESJX Sierra Juarez 80.04 57 IAmb IAmb 02 04 04.2
comp=Z,49nm,1.0s
ESJX IAMs_20 IAMs_20 02 31 10.3
comp=Z,1µm,19.0s
GLA Glamis 80.15 56 P P 02 03 50.7 +1.5
baz=308
GLA Glamis 80.15 56 IAmb IAmb 02 04 06.2
comp=Z,43nm,1.1s
GLA IAMs_20 IAMs_20 02 32 05.0
comp=Z,2µm,22.0s
OSTC Ostas 80.17 328 eP P 02 03 49.4 +0.5
OSTC ex x 02 04 06.9
OSTC AMS AMS 02 41 50.0
comp=Z,2µm,17.2s
MORC Moravsky Berou 80.19 327 ⇓P P 02 03 50.2 +1.1
MORC Moravsky Berou 80.19 327 eP P 02 03 49.6 +0.5
MORC Moravsky Berou 80.19 327 P P 02 03 49.8 +0.7
MORC pmax pmax
comp=Z,42nm,0.9s
MORC Moravsky Berou 80.19 327 IAmb IAmb 02 03 52.8
comp=Z,39nm,1.0s
CHVC Chvalec 80.21 328 eP P 02 03 49.5 +0.3
CHVC ex x 02 04 04.9
CHVC AMS AMS 02 42 00.0
comp=Z,2µm,16.8s
RAZG Razgrad 80.27 318 ⇓P P 02 03 50.2 +0.6
DPC Dobruska-Polom 80.28 328 eP P 02 03 50.2 +0.7
DPC e 02 04 03.5
DPC MLR MLR
comp=Z,2µm,20.1s
DPC Dobruska-Polom 80.28 328 eP P 02 03 50.2 +0.7
DPC epP pP 02 04 03.5 +2.1
DPC AMS AMS 02 42 40.0
comp=Z,2µm,20.1s
KRLC Kraliky 80.29 328 eP P 02 03 50.1 +0.5
KRLC e 02 04 04.4
KRLC MLR MLR
comp=Z,2µm,18.8s
KRLC Kraliky 80.29 328 eP P 02 03 50.1 +0.5
KRLC ex x 02 04 04.4
KRLC AMS AMS 02 42 20.0
comp=Z,2µm,18.8s
UPC Upice 80.29 328 eP P 02 03 49.4 -0.2
UPC e 02 04 03.5
UPC MLR MLR
comp=Z,2µm,15.9s
UPC Upice 80.29 328 eP P 02 03 49.4 -0.2
UPC epP pP 02 04 03.5 +2.1
UPC AMS AMS 02 42 00.0
comp=Z,2µm,15.9s
LOT Lotru 80.39 321 ⇓P P 02 03 50.7 +0.3
PV23 Carpenter Ridg 80.41 49 IAmb IAmb 02 04 08.0
comp=Z,64nm,1.0s
HUMR Humele 80.41 320 ⇑P P 02 03 50.4 +0.1
PV22 Blue Mesa, Par 80.49 49 IAmb IAmb 02 04 07.7
comp=Z,47nm,1.1s
PSZ Piszkesteto 80.50 325 ⇓P P 02 03 52.2 +1.4
PSZ Piszkesteto 80.50 325 P P 02 03 51.7 +0.9
PSZ pmax pmax
comp=Z,44nm,1.0s
PSZ Piszkesteto 80.50 325 IAmb IAmb 02 04 10.2
comp=Z,43nm,1.0s
PSZ IAMs_20 IAMs_20 02 46 41.2
comp=Z,1µm,20.0s
PV04 Paradox Valley 80.51 49 IAmb IAmb 02 04 07.9
comp=Z,68nm,1.2s
DEV Deva 80.51 322 P P 02 03 52.6 +1.8
DEV pmax pmax
comp=Z,32nm,0.8s
PV19 Morning Glory 80.52 49 IAmb IAmb 02 04 07.9
comp=Z,56nm,1.0s
PV16 Nyswonger Mesa 80.56 49 IAmb IAmb 02 04 12.9
comp=Z,33nm,1.0s
COPA Copaceanca 80.56 319 ⇑P P 02 03 51.5 +0.4
VYHS Vyhne 80.56 325 eP P 02 03 51.9 +0.9
VYHS pmax pmax
comp=Z,26nm,1.0s
VYHS Vyhne 80.56 325 eP P 02 03 51.9 +0.9
AGMN Agassiz Nation 80.58 35 P P 02 03 51.3 +0.1
baz=317
AGMN Agassiz Nation 80.58 35 IAmb IAmb 02 04 06.9
comp=Z,36nm,1.1s
PV11 David Mesa, Pa 80.59 49 IAmb IAmb 02 04 09.0
comp=Z,71nm,1.1s
N23A Red Feather La 80.59 45 P P 02 03 52.9 +1.2
baz=312,SNR=6.9
N23A Red Feather La 80.59 45 IAmb IAmb 02 04 09.2
comp=Z,70nm,1.1s
PV12 Saucer Basin, 80.62 49 IAmb IAmb 02 04 11.4
comp=Z,37nm,1.1s
PV03 Paradox Valley 80.63 49 IAmb IAmb 02 04 10.6
comp=Z,42nm,1.2s
RAYN Ar Rayn 80.69 292 *i* P P 02 03 51.9 -0.3
SNR=29
RAYN Ar Rayn 80.69 292 P P 02 03 52.1 -0.1
RAYN pmax pmax
comp=Z,34nm,1.0s
RAYN MLR MLR
comp=Z,2µm,20.0s
RAYN Ar Rayn 80.69 292 P P 02 03 52.1 -0.1
RAYN IAmb IAmb 02 04 08.9
comp=Z,34nm,1.0s
PV13 Radium Mtn., P 80.71 49 IAmb IAmb 02 04 10.2
comp=Z,69nm,1.2s
PV02 Paradox Valley 80.73 49 IAmb IAmb 02 04 10.4
comp=Z,37nm,1.2s
SZH Strazhica 80.78 318 P P 02 03 52.7 +0.4
Y14A Wickenburg 80.79 54 IAmb IAmb 02 04 09.0
comp=Z,40nm,1.1s
JAVC Velka Javorina 80.81 326 eP P 02 03 54.0 +1.6
ZIMR 80.81 319 ⇑P P 02 03 52.4 -0.1
WUAZ Wupatki 80.83 52 P P 02 03 54.6 +1.7
baz=310,SNR=5.8
WUAZ Wupatki 80.83 52 IAmb IAmb 02 04 10.4
comp=Z,51nm,1.1s
SIRR Siria 80.85 323 ⇓P P 02 03 53.6 +1.0
SOCY Socotra 80.86 278 P P 02 03 52.1 -1.2
SOCY IAMs_20 IAMs_20 02 41 42.8
comp=Z,934nm,21.0s
BRG Berggiesshubel 80.86 329 *i* P P 02 03 53.1 +0.5
comp=Z,43nm,1.0s
BRG e 02 04 05.3
comp=Z,28nm,0.9s
comp=Z,3µm,20.3s
comp=N,2µm,20.4s
comp=E,1µm,20.4s
BRG Berggiesshubel 80.86 329 *i* P P 02 03 53.2 +0.5
BRG e 02 04 05.3
BRG pmax pmax
comp=Z,9.0nm,1.0s
BRG pmax pmax
comp=Z,43nm,0.9s
BRG MLR MLR
comp=N,3µm,20.4s
BRG MLR MLR
comp=E,2µm,20.4s
BRG Berggiesshubel 80.86 329 eP P 02 03 53.1 +0.5
comp=E,43nm,1.0s,baz=37,slow=5.2
PVCC Panska Ves 80.88 329 eP P 02 03 53.6 +0.9
PVCC e 02 04 00.7
PVCC MLR MLR
comp=Z,2µm,15.4s
PVCC Panska Ves 80.88 329 eP P 02 03 53.6 +0.9
PVCC epP PcP 02 04 00.7 +1.5
PVCC AMS AMS 02 42 40.0
comp=Z,2µm,15.4s
CLL Collm 80.91 330 ⇑ *i* P P 02 03 52.8 0.0
comp=Z,49nm,0.9s
CLL *i* sP pP 02 04 05.9 +1.2
CLL *i* 02 04 08.3
CLL ePP PP 02 06 55.0 -1.8
CLL eS S 02 14 05.0 +6.6
CLL ePS PnS 02 14 45.0 -3.0
CLL ePPS PPS 02 15 02.0
CLL eSS SS 02 19 12.0 +0.5
CLL eSSSS 02 25 36.0
CLL Lm MLR 02 42 00.0
comp=N,2µm,19.3s
CLL Lm MLR 02 42 00.0
comp=E,600nm,18.4s
CLL Lm MLR 02 42 00.0
comp=Z,2µm,18.6s
CLL Lmax 02 43 00.0
CLL Collm 80.91 330 ⇑ *i* P P 02 03 52.8 0.0
CLL *i* 02 04 05.9
CLL eS S 02 14 05.0 +6.6
CLL pmax pmax
comp=Z,49nm,0.9s
CLL MLR MLR
comp=Z,2µm,18.6s
CLL Collm 80.91 330 eP P 02 03 53.0 +0.2
comp=Z,55nm,1.1s,baz=37,slow=5.2
CLL Collm 80.91 330 IAmb IAmb 02 03 56.0
comp=Z,48nm,0.9s
GZR Gura Zlata 80.92 321 ⇓P P 02 03 53.3 +0.2
VRAC Vranov 80.95 327 ⇓P P 02 03 53.9 +0.8
VRAC Vranov 80.95 327 eP P 02 03 53.9 +0.8
VRAC Vranov 80.95 327 P P 02 03 54.2 +1.1
VRAC pmax pmax
comp=Z,48nm,1.0s
SPX San Pedro Mart 80.96 58 IAMs_20 IAMs_20 02 32 56.5
comp=Z,1µm,21.0s
113A Mohawk Valley, 81.02 56 IAMs_20 IAMs_20 02 32 55.1
comp=Z,1µm,20.0s
FBE Freiberg 81.06 330 eP P 02 03 54.4 +0.8
comp=Z,50nm,1.0s,baz=37,slow=5.2
VLAD Vladila 81.08 319 ⇓P P 02 03 54.2 +0.3
NRDL Niedersach Rie 81.08 332 eP P 02 03 54.1 +0.6
comp=Z,26nm,1.1s,baz=37,slow=5.2
ASSE Asse, Remlinge 81.16 332 eP P 02 03 54.4 +0.4
comp=Z,32nm,1.1s,baz=37,slow=5.2
SMOL Smolenice 81.17 326 eP P 02 03 55.7 +1.4
SMOL e 02 04 08.9
SMOL pmax pmax
comp=Z,18nm,0.9s
SMOL Smolenice 81.17 326 eP P 02 03 55.7 +1.4
SMOL e 02 04 08.9
BUD Budapest 81.22 325 P P 02 03 55.9 +1.4
BUD pmax pmax
comp=Z,29nm,1.0s
KRUC Moravsky 81.22 327 eP P 02 03 55.1 +0.6
KRUC Moravsky 81.22 327 P P 02 03 55.4 +0.9
KRUC pmax pmax
comp=Z,38nm,0.8s
PRA Prague 81.28 329 eP P 02 03 55.2 +0.4
PRA e 02 04 06.5
PRA MLR MLR
comp=Z,1µm,16.9s
PRA Prague 81.28 329 eP P 02 03 55.2 +0.4
PRA epP pP 02 04 06.5 -0.2
PRA AMS AMS 02 42 40.0
comp=Z,1µm,16.9s
PRU Pruhonice 81.30 329 eP P 02 03 54.8 -0.1
PRU e 02 04 08.8
PRU MLR MLR
comp=Z,2µm,18.6s
PRU Pruhonice 81.30 329 eP P 02 03 54.8 -0.1
PRU epP pP 02 04 08.8 +2.0
PRU AMS AMS 02 42 40.0
comp=Z,2µm,18.6s
BZS Buzias 81.34 322 ⇓P P 02 03 55.3 0.0
BZS Buzias 81.34 322 P P 02 03 55.5 +0.3
BZS pmax pmax
comp=Z,38nm,1.1s
MODS Modra-Piesok 81.35 326 eP P 02 03 55.4 +0.1
MODS e 02 04 08.4
MODS pmax pmax
comp=Z,37nm,1.0s
MODS Modra-Piesok 81.35 326 eP P 02 03 55.4 +0.1
MODS e 02 04 08.4
SFX San Felipe 81.38 58 IAMs_20 IAMs_20 02 33 23.6
comp=Z,878nm,19.0s
TREC Trest 81.43 328 eP P 02 03 55.5 -0.2
TREC e 02 04 06.2
TREC MLR MLR
comp=Z,2µm,16.8s
TREC Trest 81.43 328 eP P 02 03 55.5 -0.2
TREC epP pP 02 04 06.2 -1.4
TREC AMS AMS 02 43 10.0
comp=Z,2µm,16.8s
NEUB Neuenburg 81.47 331 eP P 02 03 56.2 +0.4
comp=Z,56nm,1.0s,baz=37,slow=5.2
HERR Herculane 81.47 321 ⇓P P 02 03 56.4 +0.5
KAC Achnashellach 81.49 343 eP P 02 03 56.6 +0.8
X16A Lo Mia Camp, P 81.49 53 IAmb IAmb 02 04 14.0
comp=Z,36nm,1.1s
CLZ Clausthal 81.50 332 eP P 02 03 56.8 +0.8
comp=Z,46nm,1.0s,baz=37,slow=5.2
ISCO Idaho Springs 81.51 46 P P 02 03 58.3 +1.6
ISCO pmax pmax
comp=Z,16nm,1.3s
ISCO Idaho Springs 81.51 46 P P 02 03 57.7 +1.1
baz=312
MVCO Mesa Verde 81.52 49 P P 02 03 57.9 +1.2
baz=311
MVCO Mesa Verde 81.52 49 IAmb IAmb 02 04 13.3
comp=Z,31nm,1.1s
ZST Bratislava 81.56 326 eP P 02 03 58.3 +2.0
ZST pmax pmax
comp=Z,56nm,1.0s
ZST Bratislava 81.56 326 eP P 02 03 58.3 +2.0
BAIL Bailesti 81.61 320 ⇓P P 02 03 57.4 +0.8
KPL Plockton 81.72 343 eP P 02 03 57.8 +0.9
BANR Banloc 81.74 322 ⇓P P 02 03 58.8 +1.4
PBCC Pribram 81.76 329 eP P 02 03 57.5 +0.1
PBCC ex x 02 04 10.7
TANN Tannenbergstha 81.82 330 eP P 02 03 58.0 +0.3
comp=Z,28nm,1.2s,baz=37,slow=5.2
DIM Dimitrovgrad 81.83 317 P P 02 03 59.1 +1.2
ISP Isparta 81.85 312 P P 02 03 58.9 +0.7
ISP pmax pmax
comp=Z,51nm,1.0s
ISP Isparta 81.85 312 IAmb IAmb 02 04 14.9
comp=Z,42nm,0.9s
ISP Isparta 81.85 312 IAMs_20 IAMs_20 02 44 29.5
comp=Z,674nm,20.0s
MPEP Malo Peshtene 81.87 319 P P 02 03 58.9 +0.8
PLN Plauen 81.88 330 eP P 02 03 58.4 +0.4
comp=Z,18nm,1.2s,baz=37,slow=5.2
MDVR Moldovita 81.89 321 ⇓P P 02 03 58.1 -0.1
GUNZ Gunzen 81.91 330 eP P 02 03 58.9 +0.7
comp=Z,22nm,1.0s,baz=37,slow=5.2
WERN Wernitzgruen 81.95 330 eP P 02 03 59.1 +0.7
comp=Z,27nm,1.1s,baz=37,slow=5.2
NKC Novy Kostel 81.96 330 eP P 02 03 58.5 0.0
NKC e 02 04 12.2
NKC MLR MLR
comp=Z,2µm,15.1s
NKC Novy Kostel 81.96 330 eP P 02 03 58.5 0.0
NKC ex x 02 04 12.2
NKC AMS AMS 02 43 50.0
comp=Z,2µm,15.1s
MOX Moxa 81.97 330 P P 02 03 59.0 +0.5
MOX pmax pmax
comp=Z,18nm,1.1s
MOX Moxa 81.97 330 eP P 02 03 58.9 +0.5
comp=Z,17nm,0.9s,baz=37,slow=5.2
MOX eL L 02 44 53.8
comp=Z,1µm,19.6s
PIX Pinacate 81.98 56 IAMs_20 IAMs_20 02 33 05.5
comp=Z,586nm,20.0s
CSS Mathiatis 82.00 308 IAmb IAmb 02 04 01.4
comp=Z,40nm,0.7s
CSS IAMs_20 IAMs_20 02 43 41.7
comp=Z,859nm,21.0s
IBBN Ibbenburen 82.08 333 eP P 02 03 59.4 +0.4
comp=Z,52nm,0.8s,baz=37,slow=5.2
INVG Invergeldie, C 82.14 342 eP P 02 04 00.5 +1.3
214A Organ Pipe Nat 82.16 56 P P 02 04 02.0 +2.1
baz=309,SNR=6.8
214A Organ Pipe Nat 82.16 56 IAMs_20 IAMs_20 02 33 05.3
comp=Z,1µm,22.0s
S22A 4UR Ranch, Cre 82.17 48 P P 02 04 01.8 +1.7
baz=312,SNR=6.1
LEF Lefka 82.17 308 ⇑P P 02 04 00.2 +0.4
F33A 5 Mile Ranch, 82.18 37 IAmb IAmb 02 04 16.1
comp=Z,62nm,1.1s
SOP Sopron 82.18 326 P P 02 04 00.1 +0.5
SOP pmax pmax
comp=Z,42nm,0.9s
PLD Plovdiv 82.24 318 P P 02 04 01.8 +1.8
MANZ Manzenberg 82.29 330 eP P 02 04 00.7 +0.5
comp=Z,26nm,0.9s,baz=37,slow=5.2
CONA Conrad Observa 82.31 327 eP P 02 04 02.2 +1.8
comp=Z,8.9nm,0.9s
MORH Mrgy, Hungar 82.33 324 ⇑ *i* P P 02 04 00.0 -0.4
Q24A Divide 82.34 46 P P 02 04 02.4 +1.3
baz=312
KHC Kasperske Hory 82.36 329 *c* eP P 02 04 00.3 -0.3
KHC pmax pmax
comp=Z,95nm,1.0s
KHC Kasperske Hory 82.36 329 eP P 02 04 00.8 +0.2
KHC epP pP 02 04 13.0 +0.5
KHC ex x 02 04 32.5
KHC AMS AMS 02 43 30.0
comp=Z,2µm,17.5s
KHC Kasperske Hory 82.36 329 IAmb IAmb 02 04 03.4
comp=Z,37nm,0.9s
KHC IAMs_20 IAMs_20 02 43 48.4
comp=Z,758nm,18.0s
ROTZ Rotzenmuhle 82.43 330 eP P 02 04 01.7 +0.8
comp=Z,24nm,0.9s,baz=37,slow=5.2
UBBA Unterbreizbach 82.46 331 eP P 02 04 01.0 +0.2
comp=Z,63nm,2.0s,baz=37,slow=5.2
RZN Rozhen 82.52 318 P P 02 04 02.8 +1.0
GEC2 GERESS Array S 82.53 328 eP P 02 04 01.9 +0.3
comp=Z,21nm,0.9s,baz=37,slow=5.2
GEC2 GERESS Array S 82.53 328 IAmb IAmb 02 04 03.8
comp=Z,20nm,0.8s
GERES GERESS Array B 82.53 328 P P 02 04 01.7 +0.1
comp=Z,15nm,0.8s,baz=39,slow=4.7,SNR=69
GERES LR LR 02 45 54.5
comp=Z,1µm,18.1s,baz=36,slow=39
FRGS Fruska Gora 82.55 323 ⇑ *i* P P 02 04 01.7 +0.1
WET Wettzell 82.64 329 P P 02 04 02.7 +0.7
WET pmax pmax
comp=Z,27nm,1.0s
WET Wettzell 82.64 329 eP P 02 04 02.7 +0.7
comp=Z,25nm,1.0s,baz=37,slow=5.2
VTS Vitosha 82.65 319 P P 02 04 03.4 +1.0
EYMN Ely 82.78 33 P P 02 04 03.1 +0.3

baz=320
PGBU Glenifferbraes 82.81 342 *e*P **P** **02 04 03.6 +1.0**
PGBU IAmb IAmb 02 04 05.0
comp=Z,59nm,1.1s
GRA1 Grafenberg Arr 82.88 330 IAmb IAmb 02 04 07.1
comp=Z,53nm,1.0s
GRF Grafenberg Arr 82.88 330 P **P** **02 04 04.3 +1.0**
GRF pmax pmax
comp=Z,53nm,0.8s
GRF Grafenberg Arr 82.88 330 *e*P **P** **02 04 04.1 +0.9**
comp=Z,97nm,1.4s,baz=37,slow=5.2
GRF *e*pP **pP** **02 04 17.5 +2.3**
GRF *e*L L 02 45 23.6
comp=Z,2µm,18.0s
EKA Eskdalemuir Ar 82.89 341 P **P** **02 04 03.4 +0.2**
EKA pmax pmax
comp=Z,2.0nm,0.9s
ELL Elmali 82.93 311 P **P** **02 04 04.1 +0.2**
SDCO Great Sand Dun 82.95 47 P **P** **02 04 05.3 +1.1**
baz=312
SDCO Great Sand Dun 82.95 47 P **P** **02 04 04.3 0.0**
SDCO IAMs_20 IAMs_20 02 38 53.5
comp=Z,685nm,18.0s
BUG Bochum--Univer 82.97 333 P **P** **02 04 04.2 +0.6**
BUG pmax pmax
comp=Z,23nm,0.8s
BUG Bochum--Univer 82.97 333 *e*P **P** **02 04 03.8 +0.2**
comp=Z,19nm,0.8s,baz=37,slow=5.2
ARSA Arzberg 82.97 326 *i* P **P** **02 04 04.4 +0.6**
comp=Z,18nm,1.2s,SNR=11
MOA Molln 83.06 327 *i* P **P** **02 04 05.0 +0.7**
comp=Z,12nm,0.9s,SNR=6.4
MMB Musomiste 83.12 318 P **P** **02 04 05.3 +0.6**
DIVS Divibare 83.23 322⇑ *i*P **P** **02 04 05.3 0.0**
DIVS Divibare 83.23 322 P **P** **02 04 05.3 0.0**
DIVS IAmb IAmb 02 04 20.0
comp=Z,27nm,0.9s
TUC Tucson 83.26 54 P **P** **02 04 05.8 +0.1**
baz=310
TUC Tucson 83.26 54 IAMs_20 IAMs_20 02 34 10.3
comp=Z,1µm,20.0s
KKB Krupnik 83.26 319 P **P** **02 04 06.1 +0.7**
AKAS Kas 83.46 311 P **P** **02 04 06.3 -0.3**
AKAS IAmb IAmb 02 04 22.6
comp=Z,33nm,0.7s
FETY Fethiye 83.50 312 P **P** **02 04 06.3 -0.4**
SRS Serrai 83.52 318 P **P** **02 04 07.1 +0.4**
SRS pmax pmax
comp=Z,42nm,1.0s
KSL Kastellorizon 83.52 311 P **P** **02 04 06.1 -0.7**
TNS Taunus Mts 83.53 332 P **P** **02 04 07.1 +0.4**
TNS pmax pmax
comp=Z,29nm,0.8s
TNS Taunus Mts 83.53 332 *e*P **P** **02 04 07.1 +0.4**
comp=Z,22nm,0.9s,baz=37,slow=5.2
ECSD EROS Data Cent 83.56 38 P **P** **02 04 07.2 +0.4**
baz=317
ECSD EROS Data Cent 83.56 38 P **P** **02 04 07.3 +0.4**
ECSD IAmb IAmb 02 04 27.1
comp=Z,31nm,1.0s
GROS Grobnik 83.58 326 *i* P **P** **02 04 07.0 0.0**
PERS Pernice 83.62 326 *i* P **P** **02 04 07.5 +0.3**
PERS *i* pP **pP** **02 04 20.3 +1.2**
SOKA Soboth 83.62 326 *i* P **P** **02 04 07.6 +0.4**
comp=Z,44nm,0.8s,SNR=34
YER Yerkesik 83.64 312 P **P** **02 04 07.7 +0.2**
BBLS Lazići 83.69 322⇑ *i*P **P** **02 04 08.2 +0.6**
GAL1 Galloway 83.71 341 *e*P **P** **02 04 07.6 +0.2**
HAPS Han Pijesak,BI 83.75 322⇑ *i*P **P** **02 04 07.9 -0.1**
AHRW Bad Neuenahr-A 83.77 333 *e*P **P** **02 04 08.2 +0.5**
comp=Z,32nm,1.2s,baz=37,slow=5.2
ZAG Zagreb 83.84 325 *e*P **P** **02 04 08.6 +0.3**
STIP Stip 83.86 319 *i* P **P** **02 04 08.1 -0.3**
SOH Sokhos 83.86 318 P **P** **02 04 09.0 +0.5**
SOH pmax pmax
comp=Z,15nm,0.9s
KNT Kendrikon 83.86 318 P **P** **02 04 09.3 +0.8**
KNT pmax pmax
comp=Z,34nm,1.0s
GOLS Golise 83.87 325 *i* P **P** **02 04 08.4 0.0**
BFZ Birch Farm 83.89 154 IAMs_20 IAMs_20 02 34 32.4
comp=Z,1µm,22.0s
RUDO Rudo 83.89 322 *e*P **P** **02 04 08.5 -0.1**
OBKA Obir 83.97 326 *e*P **P** **02 04 09.3 +0.2**
comp=Z,15nm,0.8s
T25A Trinidad 84.00 47 P **P** **02 04 11.0 +1.5**
baz=313,SNR=6.3
T25A Trinidad 84.00 47 P **P** **02 04 09.4 -0.1**
T25A IAmb IAmb 02 04 26.0
comp=Z,40nm,0.9s
KBA Koelnbreinsper 84.05 327 *i* P **P** **02 04 10.0 +0.4**
comp=Z,18nm,0.7s,SNR=12
KBA Koelnbreinsper 84.05 327 P **P** **02 04 10.1 +0.6**
KBA pmax pmax
comp=Z,44nm,0.8s
BEBN Eben Emael 84.06 334 P **P** **02 04 09.4 +0.1**
BTNL Ternell 84.08 333 P **P** **02 04 09.7 +0.3**
CRES Cresnjev 84.09 325⇑ *i*P **P** **02 04 09.2 -0.3**
PLE Pljevlja 84.09 322⇓ *i*P **P** **02 04 10.4 +0.7**
MEM Membach 84.10 333 P **P** **02 04 09.5 +0.1**
comp=Z,22nm,1.2s
MEM x x 02 04 22.2
MEM Membach 84.10 333 P **P** **02 04 10.0 +0.5**
MEM pmax pmax
comp=Z,33nm,0.9s
BLY Banja Luka 84.10 324⇑ *i*P **P** **02 04 09.6 0.0**
PMOR Pomariorio Ree 84.15 114 *e*T T 03 36 23.8
comp=Z,40nm,0.2s
IVA Berane 84.18 321⇑ *i*P **P** **02 04 10.7 +0.6**
LBWR Ladybower, Pea 84.20 339 *e*P **P** **02 04 10.4 +0.5**
LBWR IAmb IAmb 02 04 12.5
comp=Z,47nm,0.8s
ANMO Albuquerque 84.25 50 *ce*P **P** **02 04 11.6 +0.8**
ANMO pmax pmax
comp=Z,13nm,1.7s
ANMO Albuquerque 84.25 50 P **P** **02 04 12.6 +1.8**
baz=312
ANMO Albuquerque 84.25 50 P **P** **02 04 11.3 +0.5**
ANMO IAmb IAmb 02 04 28.3
comp=Z,43nm,1.1s
BODT Bodrum 84.26 313 P **P** **02 04 10.7 +0.1**
GRG Griva 84.27 318 P **P** **02 04 11.1 +0.5**
GRG pmax pmax
comp=Z,37nm,1.0s
GRG Griva 84.27 318 P **P** **02 04 11.5 +0.9**
MYKA Terra Mystica 84.27 327 *i* P **P** **02 04 10.3 -0.2**
comp=Z,16nm,0.7s,SNR=7.8
SPMN Marine on St. 84.27 35 P **P** **02 04 11.3 +0.9**
baz=319
BSTI Sart Tilman 84.28 334 P **P** **02 04 12.0 +1.6**
BHOU Houvegnez 84.31 333 P **P** **02 04 12.1 +1.5**
PAIG Paliouri 84.32 317 P **P** **02 04 10.8 0.0**
PAIG pmax pmax
comp=Z,56nm,0.8s
LJU Ljubljana 84.34 326 *i* P **P** **02 04 10.7 -0.2**
LJU *i* pP **pP** **02 04 22.8 0.0**
LJU Ljubljana 84.34 326⇑ *i*P **P** **02 04 10.6 -0.2**
ARG Arkhangelos 84.35 312 P **P** **02 04 11.9 +0.9**
ARG pmax pmax
comp=Z,107nm,0.9s
MGRS Mrkonjic Grad 84.40 324 *e*P P 02 04 25.8 +15
STU Stuttgart 84.41 331 P **P** **02 04 11.3 +0.2**
STU pmax pmax
comp=Z,40nm,0.8s
STU MLR MLR
comp=Z,1µm,18.0s
STU Stuttgart 84.41 331 *e*P **P** **02 04 11.7 +0.5**
comp=Z,57nm,1.1s,baz=37,slow=5.2
STU Stuttgart 84.41 331 P **P** **02 04 11.3 +0.2**
STU IAMs_20 IAMs_20 02 44 53.7
comp=Z,1µm,18.0s
UPM Unac-Piva 84.43 322 *e*P **P** **02 04 11.6 +0.1**
UPM Unac-Piva 84.43 322 *e*P **P** **02 04 11.1 -0.4**
PRED Cave del Predi 84.45 327 P **P** **02 04 11.2 -0.3**
PRED IAmb IAmb 02 04 26.5
comp=Z,18nm,0.8s
LENM Lemitar 84.46 51 P **P** **02 04 11.8 -0.1**
BGNE Belgrade 84.47 41 P **P** **02 04 11.9 +0.3**
baz=316
BCLA Clavier 84.51 334 P **P** **02 04 11.6 0.0**
BCLA x x 02 04 24.7
UCC Uccle 84.52 334 P **P** **02 04 11.9 +0.3**
UCC pmax pmax
comp=Z,16nm,1.0s
UCC MLR MLR
comp=Z,2µm,21.0s
UCC Uccle 84.52 334 P **P** **02 04 11.8 +0.3**
WATA Walderalm 84.60 328 *e*P **P** **02 04 13.1 +0.9**
comp=Z,19nm,0.9s
GBRS Gornja Briga 84.60 326 *i* P **P** **02 04 12.1 -0.1**
BGES Gesves 84.62 334 P **P** **02 04 12.9 +0.8**
CEY Cerknica 84.62 326⇑ *i*P **P** **02 04 11.6 -0.6**
PPT Papeete 84.63 117 LR LR 02 36 34.3
comp=Z,1µm,19.3s,baz=304,slow=32
WTTA Wattenberg 84.63 328 *e*P **P** **02 04 12.8 +0.3**
comp=Z,11nm,0.8s
WTTA Wattenberg 84.63 328 P **P** **02 04 12.7 +0.2**
WTTA pmax pmax
comp=Z,18nm,1.1s
PPT2 Papeete2 84.64 117 *e*S **S** **02 14 40.0 +2.6**
comp=Z,1µm,32.8s
PPT2 Papeete2 84.64 117 *e*LR LR 02 30 49.2
comp=Z,4µm,30.0s,baz=309
PPT2 Papeete2 84.64 117 *e*T T 03 37 02.0
comp=Z,5.6nm,0.3s
JAVS Javornik 84.66 326 *i* P **P** **02 04 11.8 -0.8**
CWF Charnwood Fore 84.66 338 *e*P **P** **02 04 12.6 +0.3**
CWF IAmb IAmb 02 04 14.5
comp=Z,18nm,0.8s
ABTA Abfaltersbach 84.67 328 *i* P **P** **02 04 11.9 -0.6**
comp=Z,18nm,1.0s,SNR=10
PAE Paea 84.69 117 *e*T T 03 37 04.5
comp=Z,2.6nm,0.4s
NKME Niksic 84.72 321 *e*P **P** **02 04 12.5 -0.4**
PHP Peshkopia 84.77 320 P **P** **02 04 13.1 0.0**
MOTA Moosalm 84.79 329 *i* P **P** **02 04 13.1 -0.1**
comp=Z,24nm,0.9s,SNR=9.0
SNF Seneffe 84.79 334 P **P** **02 04 13.5 +0.5**
comp=Z,32nm,1.1s
BMRD Maredsous 84.80 334 P **P** **02 04 12.8 -0.2**
RETA Reutte 84.82 329 *i* P **P** **02 04 13.1 -0.1**
comp=Z,41nm,0.8s,SNR=23
PDG Podgorica 84.82 321⇓ P **P** **02 04 13.9 +0.6**
PDG Podgorica 84.82 321⇑ *i*P **P** **02 04 13.3 0.0**
PDG Podgorica 84.82 321 P **P** **02 04 13.2 0.0**
TTG Podgorica 84.82 321⇑ *i*P **P** **02 04 12.9 -0.4**
BRY Bratogost 84.83 322⇑ *i*P **P** **02 04 12.1 -1.4**
BRY Bratogost 84.83 322⇑ *i*P **P** **02 04 13.0 -0.5**
WLF Walferdange 84.83 333 P **P** **02 04 14.7 +1.5**
WLF Walferdange 84.83 333 P **P** **02 04 13.6 +0.4**
WLF pmax pmax
comp=Z,12nm,1.1s
WLF Walferdange 84.83 333 P **P** **02 04 13.6 +0.4**
WLF IAMs_20 IAMs_20 02 49 05.7
comp=Z,1µm,20.0s
LIT Litokhoron 84.83 318 P **P** **02 04 13.5 +0.1**
LIT pmax pmax
comp=Z,83nm,0.8s
LIT Litokhoron 84.83 318 P **P** **02 04 13.5 +0.1**
LIT Litokhoron 84.83 318 P **P** **02 04 13.0 -0.4**
319A Douglas 84.84 54 P **P** **02 04 13.7 0.0**
319A IAMs_20 IAMs_20 02 35 10.1
comp=Z,1µm,21.0s
SQTA Sankt Quirin 84.84 329 *e*P **P** **02 04 13.4 -0.1**
comp=Z,12nm,0.7s
CEME Cevo 84.91 321 *e*P **P** **02 04 13.5 -0.3**
RIY Rijeka 84.91 326 *e*P **P** **02 04 12.6 -1.1**
I37A Lemond, Waseca 84.91 36 P **P** **02 04 14.1 +0.3**
UBR Ueberruh 84.93 329 *e*P **P** **02 04 13.8 0.0**
comp=Z,20nm,1.1s,baz=37,slow=5.2
FNA Florina 84.94 319 P **P** **02 04 14.0 0.0**
FNA pmax pmax
comp=Z,26nm,0.9s
FNA Florina 84.94 319 P **P** **02 04 14.0 0.0**
FNA IAmb IAmb 02 04 16.6
comp=Z,26nm,0.9s
FNA Florina 84.94 319 P **P** **02 04 13.3 -0.7**
GIVF Givet 84.94 334 *e*P **P** **02 04 14.0 +0.2**
GIVF pmax pmax
comp=Z,11nm,0.9s
STAL STALIGIAL 84.97 327 P **P** **02 04 13.3 -0.7**
STAL IAmb IAmb 02 04 30.9
comp=Z,30nm,0.8s
SCHQ Schefferville 84.99 16 P **P** **02 04 13.7 -0.2**
comp=Z,15nm,0.7s,baz=347,slow=5.8,SNR=16
SCHQ LR LR 02 44 14.7
comp=Z,662nm,21.1s,baz=328,slow=37
OHR Ohrid 85.00 319 *i* P **P** **02 04 14.5 +0.2**
OHR Ohrid 85.00 319 P **P** **02 04 15.4 +1.1**
OHR pmax pmax
comp=Z,114nm,1.1s
DOU Dourbes 85.03 334 P **P** **02 04 14.3 +0.2**
DOU Dourbes 85.03 334 P **P** **02 04 14.7 +0.5**
DOU pmax pmax
comp=Z,19nm,1.1s
121A Cookes Peak, D 85.03 53 P **P** **02 04 16.1 +1.3**
baz=312,SNR=5.1
121A Cookes Peak, D 85.03 53 P **P** **02 04 14.7 -0.1**
121A IAmb IAmb 02 04 31.6
comp=Z,43nm,1.1s
DRME Dracevica, Mon 85.04 321⇓ *i*P **P** **02 04 15.2 +0.8**
DRME Dracevica, Mon 85.04 321⇑ *i*P **P** **02 04 14.6 +0.2**
CIMO Cimolais 85.04 327 P **P** **02 04 13.7 -0.7**
CIMO IAmb IAmb 02 04 27.4
comp=Z,15nm,0.9s
WLF1 Llynfaes 85.04 340 *e*P **P** **02 04 15.4 +1.3**
WLF1 IAmb IAmb 02 04 16.2
comp=Z,68nm,1.0s
KZN Kozani 85.07 318 P **P** **02 04 14.8 +0.1**
FOEL Foel Wylfa 85.07 339 *e*P **P** **02 04 15.0 +0.6**
BUM Brajici-Budva 85.10 321⇓ *i*P **P** **02 04 14.8 0.0**
BFO Black Forest 85.11 331 P **P** **02 04 15.1 +0.4**
BFO pmax pmax
comp=Z,46nm,0.8s
BFO Black Forest 85.11 331 *e*P **P** **02 04 15.0 +0.4**
comp=Z,52nm,0.9s,baz=37,slow=5.2
BFO Black Forest 85.11 331 P **P** **02 04 15.1 +0.4**
YLL Llanberis 85.11 340 *e*P **P** **02 04 15.2 +0.7**
ULC Ulcinj 85.17 321⇓ *i*P **P** **02 04 15.0 -0.1**
HCY Herceg Novi 85.19 322 *e*P **P** **02 04 14.7 -0.4**
BAIF Baives 85.20 334 *e*P **P** **02 04 15.4 +0.4**
BAIF pmax pmax
comp=Z,13nm,0.8s
FETA Feichten 85.20 329 *i* P **P** **02 04 15.2 -0.1**
comp=Z,22nm,0.8s,SNR=15
LLW Llanuwychllyn 85.24 340 *e*P **P** **02 04 14.9 -0.3**
STON Ston 85.26 322⇑ *i*P **P** **02 04 12.8 -2.6**
HSIG 85.27 57 IAMs_20 IAMs_20 02 35 30.6
comp=Z,1µm,21.0s
APE Apeiranthos 85.28 314⇓ P **P** **02 04 15.2 -0.6**
TIR Tirane 85.31 320 P **P** **02 04 15.9 +0.1**
TIR pmax pmax
comp=Z,48nm,0.8s
TIR MLR MLR
comp=Z,4µm,18.0s
TIR Tirane 85.31 320 P **P** **02 04 15.8 +0.1**
DAVA Damuels 85.34 329 *i* P **P** **02 04 16.0 0.0**
comp=Z,54nm,0.9s,SNR=28
KARP Karpathos 85.38 312 P **P** **02 04 16.3 0.0**
CDF Champ du Feu 85.45 331 *e*P **P** **02 04 16.8 +0.4**
CDF pmax pmax
comp=Z,32nm,0.8s
SRIG Santa Rosalia 85.48 59 IAMs_20 IAMs_20 02 35 51.5
comp=Z,1µm,20.0s
CBKS Cedar Bluff 85.48 43 IAMs_20 IAMs_20 02 34 26.3
comp=Z,923nm,19.0s
SLE Schleitheim 85.51 330 P **P** **02 04 17.0 +0.3**
SLE pmax pmax
comp=Z,17nm,1.0s
ATAL Atalanti 85.55 316 P **P** **02 04 15.5 -1.5**
CTI Castel Tesino 85.59 328 P **P** **02 04 16.7 -0.5**
CTI pmax pmax
comp=Z,15nm,0.7s
CTI Castel Tesino 85.59 328 P **P** **02 04 16.7 -0.5**
CTI IAmb IAmb 02 04 33.9
comp=Z,15nm,0.7s
LKR Lokris 85.59 316 P **P** **02 04 15.9 -1.3**
ECH Echery 85.65 331 P **P** **02 04 17.6 +0.2**
ECH pmax pmax
comp=Z,34nm,0.9s
ECH MLR MLR
comp=Z,1µm,20.0s
ECH Echery 85.65 331 P **P** **02 04 17.6 +0.2**
ECH IAmb IAmb 02 04 19.5
comp=Z,34nm,0.9s
ECH IAMs_20 IAMs_20 02 46 31.4
comp=Z,1µm,20.0s
AGG Agios Georgios 85.69 317 P **P** **02 04 17.3 -0.5**
AGG pmax pmax
comp=Z,24nm,0.7s
AGG Agios Georgios 85.69 317 P **P** **02 04 17.3 -0.5**
AGG IAmb IAmb 02 04 32.9
comp=Z,24nm,0.7s
AGG Agios Georgios 85.69 317 P **P** **02 04 17.8 0.0**
AXAR Agios Charalam 85.70 317 P **P** **02 04 19.0 +1.2**
STRD Stroud 85.76 338 *e*P **P** **02 04 18.2 +0.5**
STRD IAmb IAmb 02 04 20.8
comp=Z,98nm,0.7s
HMNX Herstmonceux 85.80 327 *e*P **P** **02 04 18.9 +0.9**
HMNX IAmb IAmb 02 04 20.8
comp=Z,134nm,0.7s
LSK Leskovik 85.80 319 P **P** **02 04 18.7 +0.4**
MAKR Makrakomi, Fth 85.81 317 P **P** **02 04 18.7 +0.4**
MCH1 Michaelchurch 85.81 339 *e*P **P** **02 04 18.4 +0.4**
MCH1 IAmb IAmb 02 04 21.2
comp=Z,54nm,0.8s
SWN1 Swindon 85.89 338 *e*P **P** **02 04 19.6 +1.2**
SWN1 IAmb IAmb 02 04 20.5
comp=Z,150nm,1.1s
WOL Wolverton 85.89 338 *e*P **P** **02 04 19.2 +0.8**
MONM Monmouth 85.89 339 *e*P **P** **02 04 18.7 +0.3**
MONM IAmb IAmb 02 04 21.6
comp=Z,75nm,0.9s
MEH Mehetia 85.91 116 *e*T T 03 38 36.3
comp=Z,58nm,0.3s
JAN Janina 86.03 318 P **P** **02 04 21.2 +1.8**
TAOE Nuku Hiva Isla 86.08 104 *e*S **S** **02 14 54.2 +2.3**
comp=Z,388nm,27.0s
TAOE Nuku Hiva Isla 86.08 104 *e*LR LR 02 31 37.7
comp=Z,3µm,23.5s,baz=316
HINF Hinteralfeld 86.10 331 *e*P **P** **02 04 19.6 0.0**
HINF pmax pmax
comp=Z,15nm,0.9s
TEOL Teolo 86.12 327 P **P** **02 04 19.9 +0.2**
TEOL IAmb IAmb 02 04 36.5
comp=Z,25nm,0.8s
HAU Haudompre 86.14 332 *e*P **P** **02 04 19.9 +0.1**
HAU pmax pmax
comp=Z,19nm,0.7s
N35A Tabor 86.17 40 P **P** **02 04 20.4 +0.4**
TUE Stuetta 86.21 329 P **P** **02 04 20.4 0.0**
TUE IAmb IAmb 02 04 34.9
comp=Z,31nm,1.1s
ANX Ano Chora 86.22 317 P **P** **02 04 20.2 -0.3**
ZKR Zakros 86.24 312 P **P** **02 04 21.6 +1.1**
STIA Sitia Lasithi 86.25 312 P **P** **02 04 21.6 +1.1**
SERG Sergoula 86.28 317 P **P** **02 04 21.6 +0.9**
GUR Goura 86.46 316 P **P** **02 04 22.1 +0.4**
NPS Neapolis 86.49 313 P **P** **02 04 21.1 -0.6**
MATQ Matagami 86.58 24 P **P** **02 04 22.4 +0.5**
baz=330
SCIA State Center 86.59 38 P **P** **02 04 22.7 +0.6**
baz=319
PDO Prodromos 86.62 317 P **P** **02 04 22.1 -0.2**
LAST Lasithi 86.64 313 P **P** **02 04 23.8 +1.2**
HRKL Herakleio 86.75 313 P **P** **02 04 23.4 +0.4**
LKD2 Lefkada island 86.76 318 P **P** **02 04 23.5 +0.5**
NYDR Nydri-Lefkada 86.80 318 P **P** **02 04 22.5 -0.6**
DRO Drossia 86.80 317 P **P** **02 04 20.9 -2.3**
IDI Anoyia 86.89 313⇓ P **P** **02 04 23.4 -0.4**
IDI Anoyia 86.89 313 P **P** **02 04 23.1 -0.7**
IDI IAMs_20 IAMs_20 02 47 55.1
comp=Z,970nm,20.0s
IDI Anoyia 86.89 313 P **P** **02 04 24.9 +1.1**
MNTX Cornudas Mount 87.10 52 P **P** **02 04 24.9 +0.1**
baz=313,SNR=5.6
SENIN Lac Senin/Sane 87.12 330 P **P** **02 04 24.8 0.0**
SENIN IAMs_20 IAMs_20 02 47 47.3
comp=Z,1µm,18.0s
MSTX Muleshoe 87.15 49 P **P** **02 04 25.1 0.0**
baz=314
AMTX Amarillo 87.16 47 P **P** **02 04 25.9 +0.8**
baz=315
AMTX Amarillo 87.16 47 P **P** **02 04 25.2 +0.1**
VAM Vamos 87.21 313 P **P** **02 04 25.6 +0.4**
ZCCA Zocca 87.22 327 P **P** **02 04 25.2 0.0**
ZCCA IAmb IAmb 02 04 44.3
comp=Z,15nm,0.9s
JFWS Jewell Farm 87.23 35 P **P** **02 04 25.2 +0.1**
baz=321
ITM Ithomi 87.24 316 P **P** **02 04 25.0 -0.4**
ITM IAMs_20 IAMs_20 02 49 52.0
comp=Z,941nm,19.0s
IMMV Iera Moni Meta 87.30 314 P **P** **02 04 27.2 +1.5**
CABF La Chapelle 87.39 331 *e*P **P** **02 04 26.9 +0.9**
CABF pmax pmax
comp=Z,25nm,1.3s
MURB Monte Urbino 87.40 325 P **P** **02 04 26.1 0.0**
MURB IAmb IAmb 02 04 29.1
comp=Z,24nm,0.7s
LSQQ Lebel-sur-Quev 87.40 24 P **P** **02 04 26.1 +0.3**
baz=330
NRCA Norcia 87.46 325 P **P** **02 04 26.5 0.0**
NRCA IAmb IAmb 02 04 28.8
comp=Z,25nm,0.7s
CHGQ Chibougamau 87.47 22 P **P** **02 04 26.5 +0.2**
baz=332
CLF Chambon-Foret 87.60 334 P **P** **02 04 27.1 +0.3**
CLF IAmb IAmb 02 04 30.5
comp=Z,34nm,1.0s
VLC Villacollemand 87.63 327 IAMs_20 IAMs_20 02 49 07.9
comp=Z,1µm,19.0s
LOR Lormes 87.67 333 P **P** **02 04 27.9 +0.6**
LOR pmax pmax
comp=Z,26nm,1.0s
AQU L'Aquila 87.70 324 P **P** **02 04 27.6 +0.1**
AQU pmax pmax
comp=Z,35nm,0.8s
AQU L'Aquila 87.70 324⇑ *i*P **P** **02 04 27.6 +0.1**
AQU L'Aquila 87.70 324 P **P** **02 04 27.6 +0.1**
AQU IAMs_20 IAMs_20 02 50 16.9
comp=Z,1µm,20.0s
KS21 Milan North St 87.72 43 IAMs_20 IAMs_20 02 39 15.4
comp=Z,1µm,19.0s
INTR Introdacqua 87.74 324 P **P** **02 04 27.5 -0.2**
OSSC Osservatorio P 87.76 326 P **P** **02 04 27.8 +0.1**
OSSC IAmb IAmb 02 04 29.9
comp=Z,18nm,1.2s
KS20 Mayfield South 87.82 43 IAMs_20 IAMs_20 02 38 41.1
comp=Z,1µm,22.0s
FLN La Foliniere 87.89 336 *e*P **P** **02 04 28.6 +0.4**
FLN pmax pmax
comp=Z,16nm,0.7s
LDF La Druitiere 87.92 336 *e*P **P** **02 04 28.7 +0.3**
LDF pmax pmax
comp=Z,25nm,1.0s
SSF Saint Saulge 87.98 333 *e*P **P** **02 04 29.1 +0.4**
SSF pmax pmax
comp=Z,16nm,0.8s
LPL La Plagne 88.04 330 *e*P **P** **02 04 28.3 -1.0**
LPL pmax pmax
comp=Z,12nm,0.8s
JSA Saint Aubin 88.05 337 *e*P **P** **02 04 30.1 +1.2**
JSA IAmb IAmb 02 04 32.5
comp=Z,66nm,0.9s
LPG La Plagne 88.05 330 *e*P **P** **02 04 28.5 -0.9**
LPG pmax pmax
comp=Z,12nm,0.7s
VLDQ Val d'Or 88.06 25 P **P** **02 04 28.7 -0.4**
GLMI Grayling 88.16 31 P **P** **02 04 30.9 +1.3**
baz=325
GLMI Grayling 88.16 31 P **P** **02 04 30.0 +0.4**
P38A Dawn 88.16 39 P **P** **02 04 30.0 +0.3**
SMF Signal de Mont 88.21 332 *e*P **P** **02 04 30.2 +0.4**
SMF pmax pmax
comp=Z,15nm,1.0s
LATE Laterza 88.23 325 P **P** **02 04 29.9 -0.1**
GRR Gorron 88.34 336 *e*P **P** **02 04 31.0 +0.7**
GRR pmax pmax
comp=Z,25nm,0.7s
BNI Bardonecchia 88.45 330 P **P** **02 04 31.2 0.0**
BNI pmax pmax
comp=Z,6.0nm,0.6s
BNI Bardonecchia 88.45 330 P **P** **02 04 31.1 0.0**
TIP Timpagrande 88.51 320⇓ P **P** **02 04 31.3 -0.2**
TIP Timpagrande 88.51 320 P **P** **02 04 31.3 -0.2**
TIP IAmb IAmb 02 04 38.3
comp=Z,19nm,0.7s
CASP Castiglione de 88.51 326 IAMs_20 IAMs_20 02 48 27.3
comp=Z,799nm,19.0s
TBI Tubuai 88.55 121 *e*S **S** **02 15 16.9 +2.0**
comp=Z,551nm,26.8s
TBI Tubuai 88.55 121 *e*LR LR 02 32 44.6
comp=Z,3µm,23.5s,baz=313
TBI Tubuai 88.55 121 *e*T T 03 41 56.2

comp=Z,81nm,0.3s
N41A Harden Midland 88.65 37 P **P** **02 04 32.3 +0.3**
MBDF Montbardon 88.68 330 *eP* **P** **02 04 31.3 -0.9**
MBDF pmax pmax
comp=Z,10.0nm,0.7s
ORIF Oris-en-Rattie 88.88 330 *eP* **P** **02 04 33.2 +0.1**
ORIF pmax pmax
comp=Z,11nm,1.4s
WMOK Wichita Mounta 88.94 46 P **P** **02 04 33.7 +0.2**
baz=316,SNR=5.0
P40A Paris 88.98 39 P **P** **02 04 33.7 +0.2**
SGMF Saint Gilles 89.00 337 *eP* **P** **02 04 34.1 +0.7**
SGMF pmax pmax
comp=Z,26nm,0.9s
SSB Saint Sauveur 89.09 331 P **P** **02 04 34.1 +0.1**
SSB pmax pmax
comp=Z,6.0nm,0.9s
SSB Saint Sauveur 89.09 331 P **P** **02 04 34.1 +0.1**
TCF Toulx Ste Croi 89.11 333 *eP* **P** **02 04 34.7 +0.6**
TCF pmax pmax
comp=Z,23nm,1.4s
SBF Sospel 89.12 329 *eP* **P** **02 04 34.1 -0.1**
SBF pmax pmax
comp=Z,23nm,0.8s
VIVF Saint-Julien-l 89.40 331 *eP* **P** **02 04 35.7 +0.2**
VIVF pmax pmax
comp=Z,21nm,1.2s
QUIF Quistinic 89.48 337 *eP* **P** **02 04 36.2 +0.5**
QUIF pmax pmax
comp=Z,97nm,1.5s
HDIL Hopedale 89.51 36 P **P** **02 04 37.1 +1.1**
baz=322
PGF Pioggiola 89.53 327 *eP* **P** **02 04 36.7 +0.5**
PGF pmax pmax
comp=Z,31nm,1.1s
CEL Celeste 89.64 320 P **P** **02 04 36.5 -0.3**
MFF Saint Martin d 89.66 335 *eP* **P** **02 04 37.2 +0.6**
MFF pmax pmax
comp=Z,13nm,0.7s
D55A Sainte-Anne-du 89.67 24 P **P** **02 04 37.1 +0.5**
baz=331
FRF La Foret Royal 89.69 329 *eP* **P** **02 04 36.4 -0.4**
FRF pmax pmax
comp=Z,8.0nm,0.9s
ALGO Algonquin Park 89.72 26 P **P** **02 04 34.8 -2.1**
baz=330
S39A Bolivar 89.73 40 P **P** **02 04 37.0 -0.2**
S39A IAmb IAmb 02 04 52.2
comp=Z,35nm,1.1s
TUL1 Leonard 89.75 43 P **P** **02 04 37.6 +0.3**
baz=318
TX31 Lajitas Ar. Si 89.80 52 P **P** **02 04 37.5 -0.1**
TX32 Lajitas Array 89.80 52 P **P** **02 04 37.8 +0.1**
TX32 IAmb IAmb 02 04 53.9
comp=Z,16nm,0.9s
TXAR Lajitas Array 89.80 52 P **P** **02 04 38.5 +0.8**
comp=Z,2.7nm,0.5s,baz=302,slow=2.6,SNR=51
TXAR PKKPbc **PKKPbc** **02 22 11.5 +2.7**
comp=Z,0.4nm,0.9s,baz=138,slow=6.3,SNR=3.8
TXAR LR LR 02 38 39.9
comp=Z,656nm,21.9s,baz=0.0,slow=31
TXAR Lajitas Array 89.80 52 P **P** **02 04 38.2 +0.5**
R40A Maddies Statio 89.81 39 P **P** **02 04 37.7 +0.3**
R40A IAmb IAmb 02 04 53.8
comp=Z,34nm,1.1s
D56A ZEC Mazanza, M 89.88 24 P **P** **02 04 38.4 +0.7**
baz=332
LMR La Mourre 89.94 329 *eP* **P** **02 04 37.6 -0.3**
LMR pmax pmax
comp=Z,11nm,0.9s
ABTX Abilene, Hawle 89.95 48 P **P** **02 04 39.4 +1.1**
baz=316
ABTX Abilene, Hawle 89.95 48 P **P** **02 04 38.4 +0.2**
ATD Arta Tunnel 89.95 284 IAMs_20 IAMs_20 02 49 20.7
comp=Z,736nm,22.0s
E55A Montcerf-Lytto 89.97 25 P **P** **02 04 39.1 +1.0**
baz=331
HPIG 90.14 55 IAMs_20 IAMs_20 02 36 46.6
comp=Z,1μm,21.0s
RJF Les Rejaudoux 90.20 333 *eP* **P** **02 04 38.8 -0.4**
RJF pmax pmax
comp=Z,16nm,0.9s
E56A St. Veronique 90.24 24 P **P** **02 04 39.2 0.0**
baz=332
CAF Calviac 90.33 333 *eP* **P** **02 04 40.8 +1.0**
CAF pmax pmax
comp=Z,16nm,0.9s
D58A Chemin du LacG 90.43 23 P **P** **02 04 39.1 -1.1**
baz=333
CCM Cathedral Cave 90.51 39 P **P** **02 04 41.3 +0.5**
CCM pmax pmax
comp=Z,47nm,1.1s
CCM Cathedral Cave 90.51 39 P **P** **02 04 41.0 +0.3**
baz=321
CCM Cathedral Cave 90.51 39 P **P** **02 04 41.2 +0.5**
E57A Chemin Saint G 90.64 24 P **P** **02 04 39.6 -1.7**
baz=332
LFF La Frestale 90.79 333 *eP* **P** **02 04 42.7 +0.8**
LFF pmax pmax
comp=Z,18nm,0.8s
Z35A Perchaven, San 90.83 46 P **P** **02 04 42.5 +0.2**
E58A La Victoria 90.95 23 P **P** **02 04 42.6 -0.1**
baz=333
U40A Yellville 90.99 41 P **P** **02 04 43.6 +0.6**
baz=320
U40A Yellville 90.99 41 P **P** **02 04 43.0 0.0**
D60A Saint Jean D'O 91.19 22 P **P** **02 04 44.7 +1.0**
baz=335
MTLF Montolieu 91.62 332 P **P** **02 04 44.1 -1.7**
MTLF pmax pmax
comp=Z,17nm,1.2s
WHTX Lake Whitney, 91.69 47 P **P** **02 04 47.7 +1.4**
baz=317
H06N1 SOCORRO T-PHAS 91.80 65 T T 03 46 54.2
SNR=8.6
H06E1 SOCORRO T-PHAS 91.90 65 T T 03 46 53.6
SNR=6.1
H06S1 SOCORRO T 91.90 65 T T 03 46 59.9
SNR=7.7
MIAR Mount Ida 91.97 43 P **P** **02 04 48.4 +0.8**
MIAR pmax pmax
comp=Z,71nm,1.0s
MIAR Mount Ida 91.97 43 P **P** **02 04 48.2 +0.6**
baz=315
F61A St Evariste 92.01 22 P **P** **02 04 47.2 -0.4**
baz=335
G59A Clarenceville 92.14 24 P **P** **02 04 49.1 +1.0**
baz=333
W41B Gary Mavity, V 92.20 41 P **P** **02 04 49.2 +0.6**
baz=320
H58A Gabriels 92.39 25 P **P** **02 04 49.5 +0.1**
baz=332
X40A Basin Creek Fa 92.42 42 P **P** **02 04 51.0 +1.4**
baz=320
P49A Miami Univ. Ec 92.43 34 P **P** **02 04 51.1 +1.5**
baz=325
G61A St-Isidore-de- 92.47 23 P **P** **02 04 50.4 +0.7**
baz=334
EPF Esparros 92.59 333 *eP* **P** **02 04 51.3 +1.0**
EPF pmax pmax
comp=Z,17nm,1.5s
GNAR Gosnell 92.75 40 IAMs_20 IAMs_20 02 39 17.3
comp=Z,469nm,18.0s
G62A West of Eustis 92.84 22 P **P** **02 04 51.5 +0.1**
baz=335
H61A Lyndonville 93.02 23 P **P** **02 04 52.6 +0.4**
baz=334
ETSF Etsaut 93.03 333 *eP* **P** **02 04 54.1 +1.7**
ETSF pmax pmax
comp=Z,8.0nm,0.8s
SJPF Ste Jean 93.08 334 *eP* **P** **02 04 55.3 +2.7**
SJPF pmax pmax
comp=Z,15nm,1.1s
J59A Piesco 93.13 25 P **P** **02 04 52.9 +0.1**
baz=332
H62A Milan 93.23 23 P **P** **02 04 53.6 +0.4**
baz=334
N54A Moraine State 93.25 30 P **P** **02 04 53.5 +0.2**
baz=328
G64A Maxfield 93.32 21 P **P** **02 04 54.3 +0.7**
baz=336
WVT Waverly 93.71 38 P **P** **02 04 56.1 +0.5**
baz=323
O54A Avella 93.75 31 P **P** **02 04 55.3 -0.4**
baz=328
N56A West Decatur 93.96 29 P **P** **02 04 56.8 +0.1**
baz=329
M57A Sunshine Farm, 94.04 28 P **P** **02 04 57.7 +0.7**
baz=330
N57A Milroy 94.38 29 P **P** **02 04 57.9 -0.6**
baz=330
Q53A Leroy 94.39 32 P **P** **02 04 58.0 -0.6**
baz=327
MCWV Mont Chateau 94.41 31 P **P** **02 04 58.9 +0.1**
baz=328
FURI Furi 94.79 285 IAMs_20 IAMs_20 02 55 43.9
comp=Z,576nm,20.0s
KEST Kesra 94.87 323 P **P** **02 05 00.3 -0.7**
comp=Z,9.3nm,1.0s,baz=5.9,slow=1.5,SNR=7.1
KEST PP **PP** **02 08 53.4 +4.1**
comp=Z,6.0nm,0.9s,baz=345,slow=4.1,SNR=4.6
KEST LR LR 02 53 26.8
comp=Z,1μm,18.6s,baz=352,slow=39
KEST Kesra 94.87 323 IAmb IAmb 02 05 02.5
comp=Z,11nm,1.0s
Q55A Buckhannon 94.88 31 P **P** **02 05 01.0 +0.1**
baz=328
ZAIG Zacatecas 95.03 57 IAMs_20 IAMs_20 02 40 47.4
comp=Z,933nm,20.0s
SWET Sewanee 95.37 37 IAMs_20 IAMs_20 02 40 20.5
comp=Z,1μm,21.0s
R55A Marlinton 95.46 32 P **P** **02 05 03.9 +0.3**
baz=328
T55A Pulaski 96.16 33 P **P** **02 05 06.9 0.0**
baz=327
BLA Blacksburg 96.24 33 P **P** **02 05 06.7 -0.5**
baz=328
ESDC Sonseca Array 97.08 334 P **P** **02 05 09.4 -1.5**
comp=Z,3.6nm,0.9s,baz=11,slow=4.3,SNR=15
ESDC LR LR 02 53 35.5
comp=Z,2μm,20.7s,baz=20,slow=38
ESDC Sonseca Array 97.08 334 P **P** **02 05 11.2 +0.2**
UNM Universidad Na 99.69 57 IAMs_20 IAMs_20 02 44 52.7
comp=Z,734nm,20.0s
KMBO Kilima Mbogo 102.10 278 P **Pdif** **02 05 34.5 +0.5**
comp=Z,0.5nm,0.4s,baz=28,slow=12,SNR=3.7
KMBO Kilima Mbogo 102.10 278 IAMs_20 IAMs_20 02 52 36.8
comp=Z,548nm,22.0s
MBAR Mbarara 106.88 282 IAMs_20 IAMs_20 02 58 26.4
comp=Z,1μm,22.0s
TAM Tamanrasset 107.29 318 IAMs_20 IAMs_20 02 58 33.9
comp=Z,675nm,22.0s
SNET Serv Nac Est T 110.30 53 IAMs_20 IAMs_20 02 50 04.6
comp=Z,518nm,22.0s
VNDA Vanda 115.28 175 PKP **PKPdf** **02 10 18.9 0.0**
comp=Z,1.0nm,1.0s,baz=323,slow=4.1,SNR=3.8
VNDA PKKP **PKKPdf** **02 21 17.0 -3.1**
comp=Z,1.0nm,1.0s,baz=183,slow=2.5,SNR=3.9
TORD Torodi Ar. Bea 117.23 315 PKP **PKPdf** **02 10 23.3 -1.2**
comp=Z,2.0nm,0.6s,baz=19,slow=1.8,SNR=21
TORD PKKP PKKPab 02 21 03.0 +8.8
comp=Z,1.2nm,0.9s,baz=231,slow=3.6,SNR=5.3
TORD Torodi Ar. Bea 117.23 315 **PKPdf** **02 10 23.8 -0.6**
LSZ Lusaka 117.65 272 PKIKP **PKPdf** **02 10 25.3 0.0**
LSZ Lusaka 117.65 272 PKPdf **PKPdf** **02 10 25.3 0.0**
LSZ Lusaka 117.65 272 IAMs_20 IAMs_20 03 04 18.3
comp=Z,564nm,20.0s
SJG San Juan 118.94 30 IAMs_20 IAMs_20 03 04 38.2
comp=Z,425nm,21.0s
KOWA Kowa 119.14 321 PKPdf **PKPdf** **02 10 28.1 0.0**
MAW Mawson 119.90 206 PKP **PKiKP** **02 10 28.0 +0.1**
comp=Z,2.5nm,0.9s,baz=320,slow=4.8,SNR=3.8
PTBC PUERTO BERRIO 124.86 45 *eP* **PKPdf** **02 10 37.8 -1.4**
SDV Santo Domingo 124.97 40 *eP* PKiKP 02 10 51.9 +12
SDV Santo Domingo 124.97 40 **PKPdf** **02 10 39.4 -0.2**
SDV Santo Domingo 124.97 40 IAMs_20 IAMs_20 03 12 39.1
comp=Z,394nm,20.0s
YOTC Yotoco, Valle 125.81 49 *eP* **PKPdf** **02 10 37.0 -4.2**
TOLC Tolima 125.94 48 *eP* **PKiKP** **02 10 42.0 0.0**
RUSC La Rusia 126.16 45 *eP* **PKPdf** **02 10 40.9 -1.4**
DBIC Dimbokro 126.17 317 PKP **PKPdf** **02 10 41.3 -0.4**
comp=Z,6.8nm,0.7s,baz=56,slow=3.1,SNR=11
DBIC PP **PP** **02 12 33.6 -1.7**
comp=Z,8.3nm,1.0s,baz=34,slow=9.8,SNR=3.2
TIC Toumodi 126.28 317 *eP* **PKPdf** **02 10 41.4 -0.5**
KIC Kosan Boka 126.37 317 *eP* **PKiKP** **02 10 43.2 +0.7**
comp=Z,34nm,1.1s
LIC Lamto 126.64 317 *eP* **PKPdf** **02 10 42.6 0.0**
comp=Z,16nm,0.5s
POPC Popayan, Colom 126.74 51 *eP* **PKPdf** **02 10 41.9 -1.1**
BOSA Boshof 126.80 260 PKP **PKiKP** **02 10 42.9 -0.1**
comp=Z,9.0nm,0.9s,baz=105,slow=1.7,SNR=9.6
PRAC Prado 126.89 48 *eP* **PKPdf** **02 10 41.5 -1.6**
QSPA South Pole Qui 127.09 180 PKPdf **PKPdf** **02 10 42.0 +0.2**
QSPA South Pole Qui 127.09 180 IAMs_20 IAMs_20 03 02 35.6
comp=Z,311nm,21.0s
SOTA Rioblanco 127.10 51 *eP* **PKiKP** **02 10 48.3 +3.7**
TOSP Speyside 127.32 28 IAMs_20 IAMs_20 02 58 26.0
comp=Z,631nm,22.0s
OTAV Otavalo 127.39 54 *eP* **PKPdf** **02 10 43.8 -0.8**
OTAV Otavalo 127.39 54 IAMs_20 IAMs_20 02 57 33.7
comp=Z,422nm,20.0s
OTAV Otavalo 127.39 54 *eP* **PKiKP** **02 10 45.2 +0.1**
TSUM Tsumeb 128.25 274 PKPdf **PKPdf** **02 10 45.4 -0.2**
TSUM Tsumeb 128.25 274 IAMs_20 IAMs_20 03 14 23.0
comp=Z,419nm,20.0s
SYO Syowa Base 128.56 207 *ep*PKPdf pPKPdf 02 10 56.3 -0.5
PTLC Puerto Leguiza 129.75 51 *eP* **PKiKP** **02 10 49.2 -0.1**
CZSB Cruzeiro do Su 137.13 55 *eP* **PKiKP** **02 11 03.6 -0.6**
SNAA Sanae 141.10 197 PKPdf PKPdf 02 10 59.5 -8.4
SNAA Sanae 141.10 197 IAMs_20 IAMs_20 03 12 30.5
comp=Z,318nm,22.0s
VNA2 Neumayer--Watz 142.67 196 PKPdf **PKPdf** **02 11 06.7 -4.0**
VNA3 Neumayer Olymp 142.91 195 PKPdf **PKPdf** **02 11 07.2 -3.9**
VNA1 Neumayer--Stat 143.07 196 PKPdf PKPbc 02 11 08.4 +0.1
SAML Samuel 143.90 45 PKIKP **PKPdf** **02 11 14.7 +0.2**
SAML Samuel 143.90 45 **PKPdf** **02 11 14.7 +0.2**
SAML Samuel 143.90 45 IAMs_20 IAMs_20 03 04 38.2
comp=Z,396nm,19.0s
NPGB Novo Progresso 146.11 31 *eP* **PKPab** **02 11 19.8 -0.1**
LPAZ La Paz 146.39 59 PKPbc **PKPab** **02 11 21.4 -0.3**
comp=Z,7.8nm,0.5s,baz=343,slow=2.3,SNR=43
LPAZ La Paz 146.39 59 *eP* **PKPbc** **02 11 20.4 -0.4**
H03N2 Juan Fernandez 146.89 96 T T 04 55 37.0
baz=290,slow=74,SNR=230
H03N3 Juan Fernandez 146.90 96 T T 04 55 40.3
baz=218,slow=74,SNR=292
H03N1 Juan Fernandez 146.91 96 T T 04 55 35.1
SNR=258
H03S2 Juan Fernandez 147.02 96 T T 04 55 47.6
SNR=8
H03S3 Juan Fernandez 147.03 96 T T 04 55 47.5
H03S1 Juan Fernandez 147.04 96 T T 04 55 47.5
PRPB Parauapebas 147.26 21 *eP* **PKPdf** **02 11 20.6 +0.3**
RCBR Riachuelo 148.54 355 PKIKP **PKPdf** **02 11 22.5 0.0**
RCBR Riachuelo 148.54 355 **PKPdf** **02 11 22.5 0.0**
RCBR Riachuelo 148.54 355 *eP* **PKPdf** **02 11 23.6 +1.1**
PMSA Palmer Station 148.61 159 *eP* **PKPdf** **02 11 21.6 +0.8**
VILB Vilhena 148.84 44 *eP* **PKPdf** **02 11 24.4 +1.5**
CLDB Colider 149.33 35 *eP* **PKPbc** **02 11 26.0 -2.0**
LVC Limon Verde 149.91 69 PKP2 **PKPbc** **02 11 29.2 -0.5**
LVC Limon Verde 149.91 69 **PKPbc** **02 11 29.2 -0.5**
LVC Limon Verde 149.91 69 *eP* **PKPdf** **02 11 26.8 +2.0**
SMTB Santa Maria do 150.44 19 *eP* **PKPbc** **02 11 29.5 -1.3**
PTLB Pontes e Lacer 151.46 46 *eP* **PKPdf** **02 11 29.3 +2.5**
GO03 Copiap 151.53 79 **PKiKP** **02 11 33.5 +0.1**
LCO Las Campanas 151.80 82 PKIKP **PKiKP** **02 11 34.3 0.0**
LCO Las Campanas 151.80 82 **PKiKP** **02 11 34.3 0.0**
SNDB Serra Nova Dou 152.20 28 *eP* **PKPdf** **02 11 31.3 +3.2**
PEXB Peixe 153.33 22 *eP* **PKPdf** **02 11 32.7 +2.9**
SDBA SAO DESIDERIO 154.48 15 *eP* **PKPdf** **02 11 33.5 +2.0**
PLCA Paso Flores 154.86 108 PKPab **PKPab** **02 11 54.4 -0.9**
comp=Z,2.2nm,0.7s,baz=9.9,slow=3.2,SNR=4.3
NAN01 Guarapari, ES 160.51 5 *eP* **PKPdf** **02 11 41.4 +2.6**
CPUP Villa Florida 160.54 61 PKPab **PKPab** **02 12 20.0 -0.1**
comp=Z,1.5nm,0.8s,baz=93,slow=15,SNR=2.2

*IPEC **20** 02:01:22.4±0.2, 48°.18N×15°.46E, h1km±1km, ML0.4/7, Error ellipse: s-maj=1.2km s-min=0.8km az=176.0*
VIE 20 02:01:22.3±0.5, 48°.20N×15°.48E, h9km±10km, ml1.7/3, Error ellipse: s-maj=2.4km s-min=1.1km az=74.0 10 km W of Sankt Plten, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.38**	**137**	*e*Pg	Pg	02 01 30.2	+0.4
	0.7nm,0.2s						
ARSA	**Arzberg**	**0.95**	**178**	Pg	Pg	02 01 40.5	-0.1
	0.4nm,0.2s						
KRUC	**Moravsky**	**1.05**	**35**	*e*PG	Pn	02 01 43.1	-0.1
KRUC				*e*SG	Sg	02 01 56.1	-0.1
	baz=216						
KRUC				*e*Sg	Sg	02 01 56.1	-0.1
	0.5nm,0.1s,baz=216						
VRAC	**Vranov**	**1.33**	**33**	*e*SG	Sn	02 02 04.9	+0.1
VRAC	**Vranov**	**1.33**	**33**	*e*Sg	Sn	02 02 04.8	0.0
	0.6nm,0.1s,baz=214						

*IDC **20** 02:10:51.1±3.1, 27°.87N×54°.25E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.4/41, mbtmp3.9/4, Error ellipse: s-maj=76.9km s-min=33.4km az=144.0*
*THR **20** 02:10:53.9±0.3, 27°.98N×54°.20E, h14km±6km, ML3.2*
*TEH **20** 02:10:54.1, 28°.03N×54°.34E, h10km, ML3.3*
ISC 20 02:10:56.0±0.9, 27°.96N±0°.06×54°.20E±0°.05, h26km, n30, σ1§12/32, mb4.0/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.33**	**152**	*e*Pg	**Pb**	**02 11 01.7**	**-1.9**
LAR1				*e*		02 11 13.7	
JHRM	**Jahrom**	**0.78**	**315**	*e*		02 11 34.3	
JHRM				*e*Pg	**Pb**	**02 11 09.3**	**-1.7**
LMD1	**Lamerd**	**1.11**	**236**	*e*Pg	**Pb**	**02 11 18.3**	**+1.7**
LMD1				*e*		02 11 48.4	
QIR1	**Qir**	**1.15**	**297**	*e*Pg	**Pb**	**02 11 18.0**	**+0.8**
QIR1				*e*		02 11 39.9	
BNDS	**Bandar-Abbas**	**1.83**	**107**	*e*Pn	**Pn**	**02 11 27.1**	**+1.1**
BNDS	**Bandar-Abbas**	**1.83**	**107**	*e*Pn	**Pn**	**02 11 27.1**	**+1.1**
GENO	**Geno**	**1.83**	**107**	*e*Pn	**Pn**	**02 11 26.2**	**+0.2**
GENO				*e*		02 12 13.3	
NGRK	**Negar Kerman**	**2.78**	**52**	*e*Pn	**Pn**	**02 11 40.3**	**+1.0**
KRBR	**Kerman**	**3.02**	**47**	*e*Pn	**Pn**	**02 11 43.4**	**+1.0**
KRBR				*e*Sg	**Sb**	**02 12 27.8**	**+2.1**
KRBR				IAML		02 12 30.5	
	comp=N,60nm,0.6s						
KRBR	**Kerman**	**3.02**	**47**	*e*Pn	**Pn**	**02 11 43.4**	**+1.0**
KHGB	**Koh Gabri**	**3.12**	**39**	*e*Pn	**Pn**	**02 11 44.7**	**+0.9**
KHGB				*e*		02 12 34.3	
IMEH	**Mehriz**	**3.44**	**6**	*e*Pn	**Pn**	**02 11 49.5**	**+1.3**
CHMN	**Cheshme madani**	**3.49**	**56**	*e*Pn	**Pn**	**02 11 50.8**	**+1.9**
KLNJ	**Kolanjah**	**3.80**	**324**	*e*Pn	**Pn**	**02 11 53.3**	**+0.1**
KLNJ				*e*		02 12 41.8	
IBAF	**Bafgh**	**3.81**	**18**	*e*Pn	**Pn**	**02 11 53.8**	**+0.6**
ISAD	**Sadrabad**	**3.97**	**354**	*e*Pn	**Pn**	**02 11 56.6**	**+1.1**
IRAM	**Rameshеh**	**4.15**	**338**	*e*Pn	**Pn**	**02 11 59.1**	**+1.2**
ICHK	**Chekchek**	**4.28**	**2**	*e*Pn	**Pn**	**02 12 00.2**	**+0.5**
YZKH	**Yazd**	**4.43**	**4**	*e*Pn	**Pn**	**02 12 02.8**	**+1.1**
YZKH	**Yazd**	**4.43**	**4**	*e*Pn	**Pn**	**02 12 02.8**	**+1.1**
NASN	**Na'in**	**4.97**	**346**	*e*Pn	**Pn**	**02 12 10.3**	**+1.0**
NASN				*e*S	**Sn**	**02 13 06.1**	**-0.1**
NASN	**Na'in**	**4.97**	**346**	*e*Pn	**Pn**	**02 12 10.3**	**+1.0**
ANAR	**Anarak**	**5.23**	**356**	*e*Pn	**Pn**	**02 12 13.5**	**+0.8**
IPIR	**Pirpir**	**5.51**	**330**	*e*Pn	**Pn**	**02 12 16.5**	**-0.2**
IKLH	**Kolahrood**	**5.80**	**338**	*e*Pn	**Pn**	**02 12 20.8**	**+0.1**
HSAM	**Samen**	**7.87**	**324**	*e*Pn	**Pn**	**02 12 48.0**	**-1.0**
MKAR	**Makanchi Array**	**28.95**	**42**	P	**P**	**02 16 52.4**	**-0.8**
	comp=N,0.2nm,0.5s,baz=243,slow=6.3,SNR=1.6						
FINES	**NESS Array B**	**38.38**	**339**	P	**P**	**02 18 14.3**	**-0.5**
	comp=N,9.9nm,1.3s,baz=152,slow=9.7,SNR=3.9						
ARCES	**ARCESS Array B**	**44.81**	**346**	P	**P**	**02 19 07.2**	**-0.1**
	comp=N,2.8nm,0.9s,baz=148,slow=8.6,SNR=1.7						
TORD	**Torodi Ar. Bea**	**50.96**	**264**	P	**P**	**02 19 55.0**	**-0.8**
	comp=N,0.6nm,0.6s,baz=59,slow=8.1,SNR=8.8						

*IDC **20** 02:38:30.5±1.0, 1°.94N×126°.66E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/31, mbtmp3.6/7, ML3.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/35, Error ellipse: s-maj=78.3km s-min=18.7km az=74.0*
*DJA **20** 02:38:34.3±0.6, 2°.N±4°×12°.6E±°, h78km±16km, M3.7/7, MLv3.7/7*
*NEIC **20** 02:38:36.1±1.1, 1°.81N±0°.05×126°.4E±0°.1, h43km±12km, mb4.0/12, Error ellipse: s-maj=18.3km s-min=7.0km az=88.0*
ISC 20 02:38:36.6±0.6, 1°.74N±0°.07×126°.31E±0°.09, h47km, n26, σ0§87/27, mb3.9/12, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**132**	P	**Pn**	**02 38 58.7**	**-1.4**
TNTI	**Ternate**	**1.43**	**132**	Pn	**Pn**	**02 38 59.6**	**-0.5**
TNTI				Sn	**Sn**	**02 39 17.7**	**0.0**
SGSI	**Sangihe**	**2.09**	**338**	P	**Pn**	**02 39 09.3**	**+0.2**
SGSI				S	**Sn**	**02 39 33.5**	**-0.4**
GTOI	**Gorontalo**	**3.48**	**252**	P	Pn	02 39 36.3	+8.1
MRSI	**Marisa**	**4.54**	**254**	P	**Pn**	**02 39 41.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**19.72**	**182**	P	**Pn**	**02 43 04.0**	**-0.2**
	0.1nm,0.3s,baz=359,slow=13,SNR=1.2						
FITZ				LR	LR	02 51 34.2	
	comp=Z,107nm,18.5s,baz=324,slow=39						
FITZ	**Fitzroy Crossi**	**19.72**	**182**	P	**P**	**02 43 02.9**	**+0.6**
TPUB	**Ta-pu**	**22.13**	**346**	P	**P**	**02 43 26.8**	**-1.5**
WB0	**Warramunga Arr**	**22.80**	**160**	P	**P**	**02 43 36.1**	**+0.6**
WB0				IAmb	IAmb	02 43 44.1	
	comp=Z,6.5nm,1.1s						
WRAB	**Tennant Creek**	**22.94**	**160**	P	**P**	**02 43 37.4**	**+0.5**
WRAB				IAmb	IAmb	02 43 44.0	
	comp=Z,4.0nm,0.7s						
WRA	**Warramunga Arr**	**22.94**	**160**	P	**P**	**02 43 36.2**	**-0.7**
	comp=Z,1.3nm,0.5s,baz=340,slow=11,SNR=28						
WRA	**Warramunga Arr**	**22.94**	**160**	P	**P**	**02 43 36.6**	**-0.3**
WB2	**Warramunga Arr**	**22.95**	**160**	P	**P**	**02 43 36.7**	**-0.3**
WB2				IAmb	IAmb	02 43 44.1	
	comp=Z,3.8nm,0.7s						
WC3	**Warramunga Arr**	**22.97**	**160**	P	**P**	**02 43 37.6**	**+0.4**
WC3				IAmb	IAmb	02 43 44.6	
	comp=Z,5.0nm,0.8s						
WR0	**Warramunga Arr**	**23.03**	**160**	P	**P**	**02 43 37.7**	**-0.1**
ASAR	**Alice Springs**	**26.31**	**164**	P	**P**	**02 44 10.3**	**+2.2**
	comp=Z,0.4nm,0.4s,baz=351,slow=15,SNR=11						
ASAR	**Alice Springs**	**26.31**	**164**	P	**P**	**02 44 09.2**	**+1.1**
ARMA	**Armidale**	**40.06**	**145**	P	**P**	**02 46 07.5**	**-0.1**
ARMA				IAmb	IAmb	02 46 26.6	
	comp=Z,1.9nm,0.8s						
SONM	**Songino Array**	**49.05**	**342**	P	**P**	**02 47 19.5**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=164,slow=8.9,SNR=3.4						
SONM	**Songino Array**	**49.05**	**342**	P	**P**	**02 47 19.0**	**0.0**
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**02 48 31.5**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=124,slow=7.9,SNR=13						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**02 48 31.3**	**+0.1**
KURK	**Kurchatov**	**63.19**	**328**	P	**P**	**02 48 59.6**	**-0.2**
ABKAR	**Akbulak array**	**73.42**	**321**	P	**P**	**02 50 04.3**	**+0.4**
ABKAR				IAmb	IAmb	02 50 05.9	
	comp=Z,1.0nm,0.8s						
VNDA	**Vanda**	**81.52**	**173**	P	**P**	**02 50 50.1**	**+1.5**
	comp=Z,0.3nm,0.4s,baz=333,slow=2.7,SNR=2.7						
ILAR	**Eielson Array**	**87.07**	**25**	P	**P**	**02 51 15.9**	**-1.1**
	comp=Z,0.3nm,0.9s,baz=262,slow=5.2,SNR=1.3						

*NEIC **20** 02:52:01.9±1.3, 7°.56N±0°.09×94°.4E±0°.1, h35km±2km, mb4.4/23, Error ellipse: s-maj=21.0km s-min=12.5km az=234.0*
*NDI **20** 02:52:04.1±3.0, 7°.41N×94°.20E, h35km, mb4.4(NEIC)*
*IDC **20** 02:52:11.4±5.8, 7°.74N×94°.57E, h117km±52km, mb3.6/15, mb1 3.7/16, mb1mx3.5/49, mbtmp4.0/16, MS3.5/1, Ms1 3.5/1, ms1mx2.8/45, Error ellipse: s-maj=27.4km s-min=14.6km az=55.0*
ISC 20 02:52:00.9±0.4, 7°.51N±0°.05×94°.39E±0°.06, h24km, n69, σ1§29/70, mb4.2/24, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.68**	**223**	*i*Pg	**Pb**	**02 52 13.7**	**-0.4**
CMBY				*i* x	**Pb**	**02 52 13.7**	**-0.4**
	baz=33,slow=3.0						
CMBY				*i* Sg	**Sb**	**02 52 23.3**	**+0.3**
LHMI	**Lhok Sumawe**	**3.41**	**132**	Pn	**Pn**	**02 52 54.6**	**+2.0**
LHMI				Sn	**Sn**	**02 53 32.4**	**+0.2**
DGPR	**DIGLIPUR**	**5.81**	**346**	*e*P	**Pn**	**02 53 29.5**	**+3.8**
DGPR				*e*P	**Sb**	**02 54 53.3**	**+2.5**
RPSI	**Rantau Prapat**	**6.58**	**136**		**Pn**	**02 53 39.8**	**+3.5**
KULM	**Kulim**	**6.60**	**109**		**Pn**	**02 53 36.7**	**+0.2**
KULM				Sn	**Sn**	**02 54 50.3**	**-0.8**
IPM	**Ipoh**	**7.25**	**114**		**Pn**	**02 53 45.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**11.75**	**22**	P	**Pn**	**02 54 51.0**	**+3.9**
	0.6nm,0.3s,baz=151,slow=32,SNR=1.6						
CMAR	**Chiang Mai Arr**	**11.75**	**22**		**Pn**	**02 54 48.4**	**+1.3**
LEM	**Lembang**	**19.41**	**137**	LR	LR	03 04 05.7	
	comp=Z,138nm,20.7s,baz=217,slow=37						

RAMN	**Ramite**	**20.70**	**340**	*eP*		Pn	02 56 40.8	-1.4
	42nm,0.8s							
TAPN	**Taplejung**	**20.72**	**343**	*eP*		**P**	**02 56 40.2**	**+0.1**
	18nm,0.4s							
PKI	**Pulchoki**	**21.69**	**338**	*eP*		**P**	**02 56 51.1**	**+0.6**
GUN	**Gumba**	**21.83**	**339**	*eP*		**P**	**02 56 51.1**	**-0.9**
LSA	**Lhasa**	**22.28**	**353**	P		P	**02 56 55.8**	**-1.2**
LSA				IAmb		IAmb	02 57 06.1	
	comp=Z,11nm,0.9s							
GKN	**Gorkha**	**22.37**	**337**	*eP*		**P**	**02 56 56.9**	**-0.8**
KOLN	**Koldanda**	**22.59**	**334**	*eP*		**P**	**02 56 59.7**	**-0.4**
	comp=Z,12nm,0.6s							
DANN	**Dangsing**	**23.03**	**335**	*eP*		**P**	**02 57 04.0**	**-0.8**
PYUN	**Piuthan**	**23.14**	**334**	*eP*		**P**	**02 57 06.4**	**+0.6**
H08S3	**Diego Garcia H**	**26.52**	**236**	T		T	03 24 10.8	
	baz=55,slow=75,SNR=196							
H08S2	**Diego Garcia H**	**26.52**	**236**	T		T	03 24 10.1	
	baz=55,slow=75,SNR=133							
H08S1	**Diego Carcia H**	**26.54**	**236**	T		T	03 24 10.8	
	baz=55,slow=75,SNR=53							
NIL	**Nilore**	**32.53**	**326**	P		**P**	**02 58 29.1**	**-1.1**
SOEI	**Soe**	**34.35**	**120**	P		**P**	**02 58 46.4**	**0.0**
CHGR	**Chuyangaron**	**38.46**	**328**	P		**P**	**02 59 20.1**	**-1.0**
BTK	**Batken**	**38.67**	**331**	P		**P**	**02 59 20.7**	**-2.1**
BTK				IAmb		IAmb	02 59 32.2	
	comp=Z,5.9nm,0.8s							
AAK	**Ala-Archa**	**39.14**	**337**	P		**P**	**02 59 25.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**39.99**	**130**	P		**P**	**02 59 34.5**	**+0.5**
MK31	**Makanchi Array**	**40.49**	**347**	P		**P**	**02 59 37.3**	**-0.6**
MKAR	**Makanchi Array**	**40.49**	**347**	P		**P**	**02 59 37.2**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=168,slow=7.8,SNR=16							
MKAR	**Makanchi Array**	**40.49**	**347**	P		**P**	**02 59 36.6**	**-1.3**
MAKZ	**Makanchi**	**40.58**	**347**	P		**P**	**02 59 38.0**	**-0.5**
KKAR	**Karatay Array**	**41.20**	**333**	P		**P**	**02 59 43.4**	**-0.4**
KKAR	**Karatay Array**	**41.20**	**333**	P		**P**	**02 59 42.8**	**-0.9**
KKAR				IAmb		IAmb	02 59 44.6	
	comp=Z,2.4nm,1.1s							
SONM	**Songino Array**	**41.46**	**12**	P		**P**	**02 59 45.0**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=190,slow=7.7,SNR=5.4							
SONM	**Songino Array**	**41.46**	**12**	P		**P**	**02 59 45.5**	**-0.5**
ASHT	**Ashkhabad**	**44.46**	**318**	P		**P**	**03 00 10.0**	**-0.3**
GEYT	**Alibeck**	**44.63**	**318**	P		**P**	**03 00 11.5**	**-0.2**
	comp=Z,3.2nm,0.6s,baz=139,slow=7.0,SNR=5.1							
GEYT	**Alibeck**	**44.63**	**318**	P		**P**	**03 00 11.3**	**-0.4**
KURBB	**Kurchatov Arra**	**44.96**	**346**	P		**P**	**03 00 13.6**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=165,slow=7.0,SNR=33							
KURK	**Kurchatov**	**45.02**	**346**	P		**P**	**03 00 13.5**	**-1.0**
KURK				IAmb		IAmb	03 00 16.7	
	comp=Z,5.9nm,1.0s							
ZAA0	**Zalesovo Array**	**46.95**	**352**	P		**P**	**03 00 28.4**	**-1.2**
ZAA0				IAmb		IAmb	03 00 37.4	
	comp=Z,5.1nm,0.8s							
ZALV	**Zalesovo Beam**	**46.95**	**352**	P		**P**	**03 00 29.0**	**-0.6**
	comp=Z,2.7nm,0.5s,baz=185,slow=7.1,SNR=12							
ZALV	**Zalesovo Beam**	**46.95**	**352**	P		**P**	**03 00 28.1**	**-1.5**
WRA	**Warramunga Arr**	**47.85**	**125**	P		**P**	**03 00 37.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=306,slow=8.4,SNR=8.3							
WRA	**Warramunga Arr**	**47.85**	**125**	P		**P**	**03 00 36.5**	**-0.8**
WB2	**Warramunga Arr**	**47.86**	**125**	P		**P**	**03 00 36.0**	**-1.2**
WB2				IAmb		IAmb	03 00 53.0	
	comp=Z,3.2nm,1.1s							
WR0	**Warramunga Arr**	**48.02**	**125**	P		**P**	**03 00 37.1**	**-1.4**
WR0				IAmb		IAmb	03 00 44.2	
	comp=Z,2.6nm,1.1s							
RAYN	**Ar Rayn**	**49.46**	**294**	P		**P**	**03 00 49.9**	**+0.2**
RAYN				IAmb		IAmb	03 00 54.0	
	comp=Z,3.5nm,0.9s							
ASAR	**Alice Springs**	**49.49**	**130**	P		**P**	**03 00 50.4**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=310,slow=7.3,SNR=7.1							
ASAR				PcP		**PcP**	**03 02 11.8**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=318,slow=4.2,SNR=4.8							
ASAR	**Alice Springs**	**49.49**	**130**	P		**P**	**03 00 48.6**	**-1.2**
ABKAR	**Akbulak array**	**50.66**	**331**	P		**P**	**03 00 58.2**	**-0.1**
ABKAR				IAmb		IAmb	03 01 06.1	
	comp=Z,2.3nm,0.8s							
ABKAR	**Akbulak array**	**50.66**	**331**	P		**P**	**03 00 57.8**	**-0.5**
AKTO	**Aktyubinsk**	**52.38**	**331**	P		**P**	**03 01 10.9**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=98,slow=7.1,SNR=2.7							
KMBO	**Kilima Mbogo**	**57.63**	**264**	P		**P**	**03 01 53.1**	**+3.2**
	comp=Z,1.4nm,0.7s,baz=46,slow=5.5,SNR=5.1							
TIXI	**Tiksi**	**67.54**	**11**	P		**P**	**03 02 53.7**	**-1.1**
FINES	**FINESS Array B**	**73.14**	**332**	P		**P**	**03 03 28.2**	**-1.1**
	comp=Z,3.4nm,0.9s,baz=86,slow=6.3,SNR=8.1							
BOSA	**Boshof**	**75.60**	**238**	P		**P**	**03 03 44.9**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=16,slow=7.4,SNR=2.0							
GERES	**GERESS Array B**	**78.26**	**318**	P		**P**	**03 03 57.7**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=92,slow=4.1,SNR=7.3							
GERES	**GERESS Array B**	**78.26**	**318**	P		**P**	**03 03 57.9**	**-1.1**
CLL	**Collm**	**78.80**	**321**	*eP*		**P**	**03 04 03.0**	**+1.3**
CLL				*e*			03 04 07.0	
CIMO	**Cimolais**	**79.06**	**316**	P		**P**	**03 04 02.1**	**-1.3**
CIMO				IAmb		IAmb	03 04 05.5	
	comp=Z,5.1nm,1.0s							
NB2	**NORSAR Subarra**	**80.17**	**331**	P		**P**	**03 04 07.2**	**-1.9**
	comp=Z,5.4nm,1.4s,baz=92,slow=5.9							
NOA	**NORSAR Array B**	**80.17**	**331**	P		**P**	**03 04 07.5**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=92,slow=5.7,SNR=4.3							
TORD	**Torodi Ar. Bea**	**90.92**	**283**	P		**P**	**03 05 03.5**	**0.0**
	comp=Z,0.5nm,0.8s,baz=64,slow=5.0,SNR=3.5							
TORD	**Torodi Ar. Bea**	**90.92**	**283**	P		**P**	**03 05 02.9**	**-0.6**
ESDC	**Sonseca Array**	**91.64**	**310**	P		**P**	**03 05 06.5**	**0.0**
	comp=Z,0.6nm,0.6s,baz=53,slow=4.0,SNR=3.4							
PLCA	**Paso Flores**	**144.29**	**200**	PKP		**PKPab**	**03 11 33.2**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=360,slow=0.7,SNR=4.1							
PLCA	**Paso Flores**	**144.29**	**200**			**PKPab**	**03 11 33.5**	**+0.2**
CPUP	**Villa Florida**	**147.24**	**232**	PKPbc		**PKPdf**	**03 11 40.6**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=114,slow=9.2,SNR=3.6							

VAO ***20*** *02:55:39.2±1.3,21.°67S×69.°02W,h10km,mb4.7*
SJA ***20*** *02:55:49.5±0.8,21.°80S×68.°79W,h117km±4km,ML4.4, MW4.1*
NEIC ***20*** *02:55:50.2±1.5,21.°78S±0.°03×68.°74W±0.°08,h100km±4km, Error ellipse: s-maj=11.5km s-min=4.3km az=78.0*
IDC ***20*** *02:55:50.8±0.5,21.°88S×68.°61W,h101km±5km, mb3.9/12, mb1 4.0/15,mb1mx3.9/23,mbtmp4.2/15,MS3.7/1, Ms1 3.7/1,ms1mx3.0/24,Error ellipse: s-maj=16.3km s-min=11.0km az=107.0*
GUC ***20*** *02:55:51.3±0.8,21.°81S×68.°76W,h105km±5km,ML4.3*

ISC 20 02:55:50.2±0.5,21.°77S±0.°03×68.°75W±0.°04,h102km±4km, n130,σ1§76/178,mb4.3/12,13C-2D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.46**	**267**	⇑*iP*		**Pn**	**02 56 07.0**	**+0.9**
PB09				*i* S		**Sn**	**02 56 19.2**	**+1.2**
PB09				IAML			02 56 22.2	
	comp=E,8μm,0.4s							
PB09	**IPOC Station P**	**0.46**	**267**			**Pn**	**02 56 06.3**	**+0.2**
PB09				Sn		**Sn**	**02 56 17.8**	**-0.2**
PB09	**IPOC Station P**	**0.46**	**267**	*eP*		**Pn**	**02 56 07.0**	**+0.9**
PB09				*eS*		**Sn**	**02 56 19.7**	**+1.7**
PB09				IAML			02 56 21.6	
	comp=Z,7μm,0.5s							
LVC	**Limon Verde**	**0.85**	**190**	P		**Pn**	**02 56 10.3**	**+0.7**
	comp=Z,1μm,0.3s,baz=14,slow=8.3,SNR=2176							
LVC				S		**Sn**	**02 56 24.1**	**0.0**
	comp=Z,2μm,0.3s,baz=200,slow=17,SNR=44							
LVC	**Limon Verde**	**0.85**	**190**	⇓*eP*		**Pn**	**02 56 10.2**	**+0.7**
LVC				*eS*		**Sn**	**02 56 24.0**	**-0.2**
LVC	**Limon Verde**	**0.85**	**190**	Pn		**Pn**	**02 56 10.0**	**+0.3**
LVC						**Sn**	**02 56 23.7**	**-0.5**
LVC	**Limon Verde**	**0.85**	**190**	*eP*		**Pn**	**02 56 10.2**	**+0.5**
LVC				*eS*		**Sn**	**02 56 26.9**	**+2.8**
PB03	**IPOC Station P**	**0.97**	**253**	⇑*iP*		**Pn**	**02 56 11.4**	**+0.8**
PB03				*eS*		**Sn**	**02 56 26.6**	**+0.5**
PB03				IAML			02 56 27.3	
	comp=N,12μm,0.4s							
PB03	**IPOC Station P**	**0.97**	**253**	*eP*		**Pn**	**02 56 11.5**	**+0.8**
PB03				*eS*		**Sn**	**02 56 27.0**	**+1.0**
PB03				IAML			02 56 27.1	
	comp=Z,6μm,0.7s							
PB01	**IPOC Station P**	**1.00**	**316**	⇓*eP*		**Pn**	**02 56 11.8**	**+0.9**
PB01				*eS*		**Sn**	**02 56 27.2**	**+0.8**
PB01	**IPOC Station P**	**1.00**	**316**			**Pn**	**02 56 11.8**	**+0.9**
PB01				Sn		**Sn**	**02 56 26.2**	**-0.2**
PB01	**IPOC Station P**	**1.00**	**316**	*eP*		**Pn**	**02 56 11.8**	**+0.9**
PB01				*eS*		**Sn**	**02 56 29.1**	**+2.7**
PB07	**IPOC Station P**	**1.06**	**272**	⇑*iP*		**Pn**	**02 56 12.3**	**+0.7**
PB07				*eS*		**Sn**	**02 56 28.2**	**+0.5**
PB07				IAML			02 56 32.4	
	comp=E,7μm,0.4s							
PB07	**IPOC Station P**	**1.06**	**272**	Pn		**Pn**	**02 56 11.7**	**+0.1**
PB07	**IPOC Station P**	**1.06**	**272**	*eP*		**Pn**	**02 56 12.2**	**+0.6**
PB07				*eS*		**Sn**	**02 56 29.6**	**+1.9**
PB07				IAML			02 56 32.5	
	comp=Z,5μm,0.4s							
PB06	**IPOC Station P**	**1.20**	**219**	⇑*iP*		**Pn**	**02 56 14.0**	**+0.8**
PB06				*eS*		**Sn**	**02 56 31.2**	**+0.7**
PB06				IAML			02 56 35.0	
	comp=N,7μm,0.2s							
PB06	**IPOC Station P**	**1.20**	**219**			**Pn**	**02 56 13.4**	**+0.2**
PB06				Sn		**Sn**	**02 56 30.3**	**-0.3**
PB06	**IPOC Station P**	**1.20**	**219**	*eP*		**Pn**	**02 56 14.0**	**+0.8**
PB06				*eS*		**Sn**	**02 56 31.8**	**+1.2**
PB06				IAML			02 56 35.9	
	comp=Z,4μm,0.2s							
PB04	**IPOC Station P**	**1.42**	**246**	⇑*iP*		**Pn**	**02 56 16.3**	**+0.6**
PB04				*eS*		**Sn**	**02 56 35.1**	**+0.1**
PB04				IAML			02 56 42.7	
	comp=E,6μm,0.2s							
PB04	**IPOC Station P**	**1.42**	**246**			**Pn**	**02 56 15.9**	**+0.2**
PB04	**IPOC Station P**	**1.42**	**246**	*eS*		**Pn**	**02 56 16.2**	**+0.6**
PB04				*eP*		**Pn**	**02 56 16.3**	**+0.6**
PB04				*eS*		**Sn**	**02 56 16.3**	**+0.6**
PB04				IAML			02 56 38.0	
	comp=Z,5μm,0.6s							
PB15	**IPOC Station P**	**1.58**	**205**	⇑*iP*		**Pn**	**02 56 18.6**	**+0.9**
PB15				*eS*		**Sn**	**02 56 39.1**	**+0.5**
PB15	**IPOC Station P**	**1.58**	**205**			**Pn**	**02 56 18.5**	**+0.7**
PB15	**IPOC Station P**	**1.58**	**205**	*eP*		**Pn**	**02 56 18.6**	**+0.9**
PB15				*eS*		**Sn**	**02 56 40.6**	**+2.0**
PATCX	**Punta Patache**	**1.62**	**306**	⇑*iP*		**Pn**	**02 56 19.1**	**+1.0**
PATCX				*eS*		**Sn**	**02 56 40.0**	**+0.8**
PATCX				IAML			02 56 46.6	
	comp=N,5μm,0.4s							
PATCX	**Punta Patache**	**1.62**	**306**			**Pn**	**02 56 18.6**	**+0.5**
PATCX	**Punta Patache**	**1.62**	**306**	*eP*		**Pn**	**02 56 19.1**	**+1.0**
PB08	**IPOC Station P**	**1.67**	**347**	*eP*		**Pn**	**02 56 20.7**	**+1.7**
PB08				*eS*		**Sn**	**02 56 43.3**	**+2.4**
PB08	**IPOC Station P**	**1.67**	**347**			**Pn**	**02 56 21.2**	**+2.2**
PB08				Sn		**Sn**	**02 56 41.1**	**+2.3**
PB08	**IPOC Station P**	**1.67**	**347**	*eP*		**Pn**	**02 56 21.3**	**+2.2**
PB08				*eS*		**Sn**	**02 56 44.8**	**+4.0**
PB05	**IPOC Station P**	**1.73**	**231**	⇑*iP*		**Pn**	**02 56 19.8**	**+0.4**
PB05				*eS*		**Sn**	**02 56 42.2**	**+0.5**
PB05				IAML			02 56 52.9	
	comp=E,4μm,0.4s							
PB05	**IPOC Station P**	**1.73**	**231**	*eP*		**Pn**	**02 56 19.9**	**+0.4**
PB05				*eS*		**Sn**	**02 56 43.7**	**+2.0**
PB05				IAML			02 56 46.9	
	comp=Z,3μm,0.4s							
TA01	**Diego Aracena**	**1.80**	**312**	⇑*iP*		**Pn**	**02 56 21.0**	**+0.8**
TA01				*eS*		**Sn**	**02 56 44.0**	**+0.8**
TA01				IAML			02 56 48.7	
	comp=N,4μm,0.5s							
TA01	**Diego Aracena**	**1.80**	**312**			**Pn**	**02 56 21.1**	**+0.8**
TA01				Sn		**Sn**	**02 56 43.1**	**0.0**
TA02	**Huaiquique**	**1.98**	**319**	⇑*iP*		**Pn**	**02 56 23.4**	**+0.8**
TA02				*eS*		**Sn**	**02 56 47.8**	**+0.6**
TA02				IAML			02 56 56.6	
	comp=N,3μm,0.3s							
GO01	**Chusmiza**	**2.13**	**349**	⇑*iP*		**Pn**	**02 56 27.1**	**+2.0**
GO01				*eS*		**Sn**	**02 56 53.2**	**+1.6**
GO01				IAML			02 57 01.4	
	comp=N,2μm,0.3s							
GO01	**Chusmiza**	**2.13**	**349**			**Pn**	**02 56 27.0**	**+2.0**
GO01				Sn		**Sn**	**02 56 51.8**	**+0.2**
PB11	**IPOC Station P**	**2.17**	**337**	*eP*		**Pn**	**02 56 26.4**	**+1.2**
PB11				*eS*		**Sn**	**02 56 52.1**	**0.0**
PB11				IAML			02 56 57.8	
	comp=N,3μm,0.8s							
PB11	**IPOC Station P**	**2.17**	**337**			**Pn**	**02 56 26.1**	**+0.8**
PB11	**IPOC Station P**	**2.17**	**337**	*eP*		**Pn**	**02 56 26.6**	**+1.3**
PB11				*eS*		**Sn**	**02 56 54.6**	**+2.6**
PB10	**IPOC Station P**	**2.41**	**224**	⇑*eP*		**Pn**	**02 56 28.6**	**+0.4**
PB10				*eS*		**Sn**	**02 56 55.9**	**-1.3**
PB10				IAML			02 57 09.4	
	comp=E,2μm,0.3s							
PB10	**IPOC Station P**	**2.41**	**224**	Pn		**Pn**	**02 56 28.6**	**+0.4**
PB10	**IPOC Station P**	**2.41**	**224**	*eP*		**Pn**	**02 56 28.8**	**+0.7**
PB10				*eS*		**Sn**	**02 56 55.6**	**-1.6**
PB10				IAML			02 57 08.5	
	comp=Z,1μm,0.6s							
PSGC	**Pisagua**	**2.52**	**329**	*eP*		**Pn**	**02 56 29.7**	**0.0**
PSGC				*i* S		**Sn**	**02 56 56.4**	**-3.6**
PSGC				IAML			02 57 10.4	
	comp=E,736nm,0.3s							
PSGCX	**Pisagua**	**2.52**	**329**	Pn		**Pn**	**02 56 29.7**	**0.0**
PSGCX	**Pisagua**	**2.52**	**329**	*eP*		**Pn**	**02 56 29.9**	**+0.2**
MNMC	**Minye Minye**	**2.75**	**343**			**Pn**	**02 56 34.0**	**+1.1**
MNMCX	**Minye Minye**	**2.75**	**343**	*eP*		**Pn**	**02 56 34.2**	**+1.2**
YJA	**Yavi**	**3.03**	**98**	*eP*		**Pn**	**02 56 39.8**	**+3.1**
YJA				*eS*		**Sn**	**02 57 20.1**	**+7.5**
PB14	**IPOC Station P**	**3.22**	**208**	Pn		**Pn**	**02 56 38.7**	**-0.6**
PB14	**IPOC Station P**	**3.22**	**208**	*eP*		**Pn**	**02 56 39.2**	**-0.1**
PB14				*eS*		**Sn**	**02 57 24.3**	**+7.2**
PB14				IAML			02 57 27.0	
	comp=Z,2μm,0.8s							
GO02	**Mina Guanaco**	**3.46**	**193**	Pn		**Pn**	**02 56 42.1**	**-0.3**
PB16	**IPOC Station P**	**3.49**	**348**	Pn		**Pn**	**02 56 44.9**	**+1.8**
PB16				Sn		**Sn**	**02 57 24.0**	**+0.1**
PB16	**IPOC Station P**	**3.49**	**348**	*eP*		**Pn**	**02 56 45.8**	**+2.6**
PB16				*eS*		**Sn**	**02 57 30.6**	**+6.6**
AP01	**Chacalluta**	**3.70**	**336**	Pn		**Pn**	**02 56 45.8**	**+0.4**
AC01	**Pan de Azucar**	**4.67**	**201**	*eP*		**Pn**	**02 56 56.6**	**-2.0**
AC01				*eS*		**Sn**	**02 57 48.6**	**-3.0**
AC01	**Pan de Azucar**	**4.67**	**201**	Pn		**Pn**	**02 56 56.7**	**-1.8**
AC02	**Maricunga**	**5.05**	**184**			**Pn**	**02 57 04.1**	**0.0**
AC02				Sn		**Sn**	**02 58 00.5**	**-1.0**
LPAZ	**La Paz**	**5.49**	**6**	P		**Pn**	**02 57 12.8**	**+2.7**
	comp=Z,9.4nm,0.3s,baz=202,slow=5.0,SNR=149							
LPAZ				S		**Sn**	**02 58 10.6**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=241,slow=13,SNR=1.7							
LPAZ	**La Paz**	**5.49**	**6**	Pn		**Pn**	**02 57 11.1**	**+1.0**
GO03	**Copiap**	**5.95**	**193**			**Pn**	**02 57 13.9**	**-2.1**
GO03	**Copiap**	**5.95**	**193**	*eP*		**Pn**	**02 57 15.7**	**-0.2**
GO03				*eS*		**Sn**	**02 58 21.2**	**-1.6**
AC04	**Llanos de Chal**	**6.74**	**198**	Pn		**Pn**	**02 57 22.4**	**-4.2**
AC05	**El Transito**	**7.17**	**191**	Pn		**Pn**	**02 57 29.9**	**-2.7**
LCO	**Las Campanas**	**7.42**	**193**			**Pn**	**02 57 31.9**	**-4.2**
CO01	**Juntas del Tor**	**8.26**	**188**	Pn		**Pn**	**02 57 46.9**	**-0.6**
GO04	**Tololo Observa**	**8.57**	**192**			**Pn**	**02 57 48.2**	**-3.4**
CO03	**El Pedregal**	**9.20**	**191**			**Pn**	**02 57 56.9**	**-3.1**
SIV	**San Ignacio**	**9.26**	**53**	P		**Pn**	**02 57 58.9**	**-2.1**
	comp=Z,10nm,0.3s,baz=248,slow=12,SNR=201							
SIV				S		**Sn**	**02 59 36.5**	**-6.9**
	comp=Z,7nm,0.3s,baz=127,slow=23,SNR=1.1							
CPUP	**Villa Florida**	**11.38**	**116**	P		**Pn**	**02 58 28.8**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=251,slow=18,SNR=3.6							
CPUP	**Villa Florida**	**11.38**	**116**	*eP*		**Pn**	**02 58 27.4**	**-2.1**
VILB	**Vilhena**	**11.97**	**44**	*eP*		Pn	02 58 31.1	-6.5
ETMB	**Extrema**	**12.13**	**12**	*eP*		Pn	02 58 32.2	-7.5
AQDB	**Aquidauana**	**12.24**	**86**	*eP*		**Pn**	**02 58 37.5**	**-3.7**
NNA	**Nana**	**12.43**	**320**	LR		LR	03 03 14.0	
	comp=Z,391nm,21.2s,baz=308,slow=35							
SAML	**Samuel**	**13.83**	**24**	Pn		**Pn**	**02 59 02.9**	**+0.9**
TRCB	**Terra Rica**	**14.95**	**97**	*eP*		**Pn**	**02 59 15.1**	**-1.2**
CPSB	**Cacapava Do Su**	**16.20**	**125**	*eP*		**Pn**	**02 59 29.9**	**-2.0**
PCMB	**Pacaembu**	**16.25**	**93**	*eP*		**Pn**	**02 59 31.7**	**-1.0**
CLDB	**Colider**	**16.48**	**51**	*eP*		**Pn**	**02 59 32.2**	**-3.2**
ARAG	**Araguaiana, MT**	**17.13**	**72**	*eP*		**Pn**	**02 59 41.8**	**-1.6**
ITRB	**Iturama**	**17.32**	**87**	*eP*		**P**	**02 59 45.3**	**-0.3**
FRTB	**Fartura**	**17.79**	**99**	*eP*		**P**	**02 59 50.3**	**-0.4**
CNLB	**Canela**	**17.80**	**119**	*eP*		**P**	**02 59 50.9**	**0.0**
BB19B	**Bebedouro**	**18.84**	**92**	*eP*		**P**	**03 00 01.5**	**-0.8**
PLCA	**Paso Flores**	**18.96**	**184**	P		**P**	**03 00 03.4**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=359,slow=11,SNR=6.2							
PLCA	**Paso Flores**	**18.96**	**184**	P		**P**	**03 00 03.5**	**-0.1**
SNDB	**Serra Nova Dou**	**19.32**	**63**	*eP*		**P**	**03 00 06.3**	**-1.2**
NPGB	**Novo Progresso**	**19.53**	**43**	*eP*		**P**	**03 00 08.1**	**-1.7**
IPMB	**Ipameri, GO**	**19.67**	**83**	*eP*		**P**	**03 00 10.1**	**-1.4**
PET01	**Itanhaem-SP**	**19.92**	**101**	*eP*		**P**	**03 00 12.8**	**-1.1**
BDFB	**Brasilia**	**20.55**	**76**	P		**P**	**03 00 19.2**	**-1.8**
	comp=Z,2.6nm,0.4s,baz=258,slow=9.7,SNR=8.4							
BDFB	**Brasilia**	**20.55**	**76**	P		**P**	**03 00 19.6**	**-1.4**
BDFB				IAmb		IAmb	03 00 22.2	
	comp=Z,7.6nm,0.9s							
LL01	**San Ignacio de**	**20.78**	**188**	P		**P**	**03 00 22.6**	**-0.4**
LL01				IAmb		IAmb	03 00 24.1	
	comp=Z,14nm,0.8s							
PARB	**Paraibuna**	**21.41**	**99**	*eP*		**P**	**03 00 29.5**	**-0.6**
ITTB	**Itaituba**	**21.42**	**38**	*eP*		**P**	**03 00 28.1**	**-2.0**
PEXB	**Peixe**	**21.77**	**67**	*eP*		**P**	**03 00 32.3**	**-1.6**
BSCB	**Bom Sucesso**	**22.33**	**92**	*eP*		**P**	**03 00 38.9**	**-1.0**
MCPB	**Macapa, AP**	**26.79**	**40**	*eP*		**P**	**03 01 21.8**	**+0.9**
RCBR	**Riachuelo**	**35.50**	**68**	P		**P**	**03 02 36.9**	**-0.5**
	comp=Z,4.6nm,0.7s,baz=250,slow=12,SNR=5.8							
RCBR	**Riachuelo**	**35.50**	**68**	P		**P**	**03 02 37.0**	**-0.5**
RCBR				IAmb		IAmb	03 02 41.0	
	comp=Z,7.1nm,0.9s							
PMSA	**Palmer Station**	**43.10**	**177**	P		**P**	**03 03 39.8**	**0.0**
	comp=Z,9.6nm,1.0s,baz=351,slow=8.3,SNR=5.2							
PMSA	**Palmer Station**	**43.10**	**177**	P		**P**	**03 03 40.3**	**+0.4**
VNA3	**Neumayer Olymp**	**59.77**	**161**	P		**P**	**03 05 45.1**	**+0.9**
VNA2	**Neumayer--Watz**	**60.34**	**161**	P		**P**	**03 05 48.8**	**+0.8**
	baz=282,slow=6.0							
TXAR	**Lajitas Array**	**60.94**	**325**	P		**P**	**03 05 54.0**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=155,slow=9.1,SNR=9.1							
TXAR	**Lajitas Array**	**60.94**	**325**	P		**P**	**03 05 52.7**	**-0.1**
SNAA	**Sanae**	**61.97**	**161**	P		**P**	**03 05 59.9**	**+0.8**
QSPA	**South Pole Qui**	**68.42**	**180**	P		**P**	**03 06 41.0**	**+0.1**
QSPA				IAmb		IAmb	03 06 43.3	
	comp=Z,4.1nm,0.6s							
DBIC	**Dimbokro**	**68.67**	**73**	P		**P**	**03 06 42.6**	**-0.5**
	comp=Z,5.7nm,0.8s,baz=202,slow=3.2,SNR=7.7							
DBIC	**Dimbokro**	**68.67**	**73**	P		**P**	**03 06 42.8**	**-0.4**
DBIC				IAmb		IAmb	03 06 43.7	
	comp=Z,6.5nm,0.8s							
KNB	**Kanab**	**71.73**	**324**	P		**P**	**03 07 02.4**	**+0.8**
PDAR	**Pinedale Array**	**74.42**	**330**	P		**P**	**03 07 19.5**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=133,slow=6.3,SNR=2.1							
PDAR				pP		**pP**	**03 07 45.4**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=134,slow=8.4,SNR=2.4							
NVAR	**Mina Array Bea**	**75.80**	**322**	P		**P**	**03 07 26.0**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=162,slow=7.9,SNR=6.4							
NVAR	**Mina Array Bea**	**75.80**	**322**	P		**P**	**03 07 24.8**	**-0.6**
SYO	**Syowa Base**	**76.19**	**159**	⇑*eP*		**P**	**03 07 26.2**	**-0.7**
VNDA	**Vanda**	**76.61**	**190**	P		**P**	**03 07 30.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=41,slow=6.0,SNR=4.0							
TORD	**Torodi Ar. Bea**	**77.30**	**70

WB0					IAmb	IAmb	03 13 07.8	
	comp=Z,7.3nm,0.6s							
WRAB	**Tennant Creek**	**22.98**	**161**	P	**P**		**03 13 05.5**	**-1.4**
WRAB					IAmb	IAmb	03 13 13.4	
	comp=Z,12nm,0.6s							
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**		**03 13 06.3**	**-0.7**
	comp=Z,4.3nm,0.5s,baz=341,slow=11,SNR=64							
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**		**03 13 04.8**	**-2.2**
WB2	**Warramunga Arr**	**22.98**	**161**	P	**P**		**03 13 06.4**	**-0.7**
WB2					IAmb	IAmb	03 13 13.4	
	comp=Z,13nm,0.7s							
WR0	**Warramunga Arr**	**23.06**	**161**	P	**P**		**03 13 06.8**	**-1.0**
WR0					IAmb	IAmb	03 13 11.8	
	comp=Z,5.1nm,0.8s							
AS31	**Alice Springs**	**26.37**	**165**		**P**		**03 13 36.9**	**-1.3**
ASAR	**Alice Springs**	**26.37**	**165**	P	**P**		**03 13 39.1**	**+0.9**
	comp=Z,1.9nm,0.5s,baz=350,slow=15,SNR=29							
ASAR				PcP		**PcP**	**03 17 01.2**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=18,slow=3.2,SNR=2.6							
ASAR	**Alice Springs**	**26.37**	**165**		**P**		**03 13 37.4**	**-0.8**
KSRS	**Korea Array**	**35.43**	**2**	P	**P**		**03 14 56.6**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=341,slow=20,SNR=1.9							
MJAR	**Matsushiro Arr**	**36.14**	**16**	P	**P**		**03 15 05.0**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=171,slow=8.6,SNR=3.5							
MJAR	**Matsushiro Arr**	**36.14**	**16**	P	**P**		**03 15 02.5**	**-1.5**
STKA	**Stephens Creek**	**36.47**	**158**	P	**P**		**03 15 07.0**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=219,slow=16,SNR=2.2							
STKA	**Stephens Creek**	**36.47**	**158**	P	**P**		**03 15 05.9**	**-1.0**
USRK	**Ussuriysk Ar.**	**42.42**	**6**	P	**P**		**03 15 57.6**	**+1.4**
	comp=Z,2.4nm,0.8s,baz=208,slow=11,SNR=3.8							
SONM	**Songino Array**	**49.00**	**342**	P	**P**		**03 16 48.3**	**0.0**
	comp=Z,0.7nm,0.5s,baz=163,slow=9.9,SNR=5.7							
PETK	**Petropavlovsk-**	**57.20**	**22**	P	**P**		**03 17 49.6**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=186,slow=4.8,SNR=2.9							
MK31	**Makanchi Array**	**58.99**	**326**	P	**P**		**03 18 00.8**	**-0.3**
MK31					IAmb	IAmb	03 18 06.1	
	comp=Z,1.7nm,0.9s							
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**		**03 18 00.9**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=121,slow=8.0,SNR=46							
MKAR				PcP		**PcP**	**03 18 49.4**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=124,slow=6.0,SNR=4.0							
MAKZ	**Makanchi**	**59.17**	**326**	P	**P**		**03 18 02.0**	**-0.3**
ZALV	**Zalesovo Beam**	**62.16**	**334**	P	**P**		**03 18 21.8**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=137,slow=13,SNR=2.3							
KURK	**Kurchatov**	**63.22**	**328**		**P**		**03 18 28.9**	**-0.7**
KKAR	**Karatay Array**	**64.48**	**318**	P	**P**		**03 18 37.3**	**-0.8**
NRIK	**Noril'sk**	**72.18**	**346**	P	**P**		**03 19 26.1**	**+0.4**
	comp=Z,3.7nm,0.7s,baz=121,slow=7.2,SNR=5.0							
VNDA	**Vanda**	**81.62**	**173**	P	**P**		**03 20 19.9**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=306,slow=8.0,SNR=7.5							
ILAR	**Eielson Array**	**86.84**	**25**	P	**P**		**03 20 45.5**	**0.0**
	comp=Z,0.2nm,0.5s,baz=251,slow=4.7,SNR=4.7							
ARCES	**ARCESS Array B**	**92.12**	**340**	P	**P**		**03 21 09.8**	**-0.5**
	comp=Z,5.0nm,1.0s,baz=74,slow=6.7,SNR=2.0							
FINES	**FINESS Array B**	**93.38**	**332**	P	**P**		**03 21 13.9**	**-2.2**
	comp=Z,1.7nm,0.8s,baz=53,slow=9.8,SNR=5.8							
FINES	**FINESS Array B**	**93.38**	**332**	P	**P**		**03 21 15.4**	**-0.8**
DLBC	**Dease Lake**	**95.41**	**31**	LR	LR		04 01 44.0	
	comp=Z,85nm,20.8s,baz=284,slow=34							
SCHQ	**Schefferville**	**122.41**	**9**	PKP		**PKiKP**	**03 26 57.0**	**+0.5**
	comp=Z,4.7nm,0.8s,baz=231,slow=18,SNR=1.7							
TXAR	**Lajitas Array**	**122.84**	**53**	PKP		**PKiKP**	**03 26 58.2**	**0.0**
	comp=Z,0.1nm,0.6s,baz=111,slow=19,SNR=2.1							
TORD	**Torodi Ar. Bea**	**123.32**	**287**	PKP		**PKiKP**	**03 26 59.3**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=50,slow=3.0,SNR=1.9							

JMA 20 03:32:06.5±0.2, 25°03'N×123°34'E, h118km±3km, M2.0, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.64**	**208**	P	Pn	03 32 25.3	+0.1
YOJ				S	Sn	03 32 39.7	+0.5
JISG	**Ishigakijimahi**	**0.99**	**116**	P	Pn	03 32 28.5	+0.3
JISG				*e*S	Sn	03 32 45.6	+1.0
JIJ	**Ishigaki jima**	**0.99**	**132**	P	Pn	03 32 28.2	0.0
JIJ				S	Sn	03 32 44.2	-0.4
JKRS	**Kuro-shima**	**1.00**	**142**	P	Pn	03 32 28.5	+0.2
JKRS				S	Sn	03 32 45.2	+0.4
HATJ	**Hateruma jima**	**1.06**	**156**	P	Pn	03 32 29.4	+0.5
HATJ				*e*S	Sn	03 32 46.9	+1.0
JTJ	**Tarama**	**1.30**	**107**	P	Pn	03 32 32.0	+0.6
JTJ				S	Sn	03 32 51.7	+1.3
JIRB	**Irabujima**	**1.68**	**96**	S	Sn	03 32 58.6	+0.4
JMJ2	**Miyako jima3**	**1.83**	**99**	P	Pn	03 32 38.7	+1.0
JMJ2				*e*S	Sn	03 33 02.4	+0.9

TAP 20 03:32:45.3, 24°13N×121°60E, h6km, ML1.3, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.04**	**349**	P	Pg	03 32 46.4	-0.2
	baz=350						
NACB				S	Sg	03 32 47.1	-0.4
	baz=350						
TWD	**Chiawan**	**0.05**	**187**	P	Pg	03 32 47.0	+0.3
	baz=178						
TWD				S	Sg	03 32 48.2	+0.4
	baz=178						
ETLH	**Xiulin Townshi**	**0.13**	**303**	*e*P	Pg	03 32 48.2	+0.1
	baz=303						
ETLH				*e*S	Sg	03 32 51.3	+1.4
	baz=303						
ENA	**Nanau**	**0.32**	**23**	*e*P	Pg	03 32 52.0	+0.5
	baz=26						

*IDC **20** 03:46:51.4±0.8, 52°.41N×168°.47W, h0km, mb4.2/23, mb1 4.4/24, mb1mx4.2/47, mbtmp4.2/24, ML3.3/1, MS3.5/4, Ms1 3.6/4, ms1mx3.1/43, Error ellipse: s-maj=21.9km s-min=13.6km az=171.0*

*AEIC **20** 03:46:54±1.3, 52°.28N±0°.04×168°.24W±0°.06, h16km±4km, ML3.6, mb4.2/30(NEIC), Error ellipse: s-maj=6.9km s-min=4.6km az=142.0*

*NEIC **20** 03:46:55.0±1.4, 52°.24N±0°.04×168°.24W±0°.06, h29km±2km, Error ellipse: s-maj=6.5km s-min=5.3km az=167.0*

ISC 20 03:46:55.9±0.5, 52°29N±0°.06×168°23W±0°.04, h31km, n132, σ1§14/130, mb4.4/38, MS3.4/4, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.78**	**331**		**Sn**	**03 47 22.2**	**+0.9**
NIKH	**Nikolski High**	**0.78**	**331**	Pg	**Pn**	**03 47 09.4**	**-1.4**
NIKH	**Nikolski High**	**0.78**	**331**	Sn	**Sn**	**03 47 22.7**	**+1.3**
OKSP	**Okmok Steeple**	**0.96**	**358**		**Pn**	**03 47 12.3**	**-1.0**
OKFG	**Magazine Ridge**	**1.14**	**10**		**Pn**	**03 47 15.1**	**-0.6**
OKFG					**Sb**	**03 47 31.7**	**+0.2**
MAPS	**Pakushin South**	**1.71**	**27**		**Pn**	**03 47 24.0**	**+0.5**
MGOD	**Makushin Gods**	**1.72**	**28**		**Pn**	**03 47 23.2**	**-0.5**
MGOD					**Sn**	**03 47 45.5**	**+1.0**
MREP	**Makushin Rep't**	**1.77**	**30**		**Pn**	**03 47 24.0**	**-0.3**
MSW	**Makushin Switc**	**1.85**	**28**		**Pn**	**03 47 25.4**	**0.0**
MSW					**Sn**	**03 47 49.4**	**+1.7**
MNAT	**Makushin Natee**	**1.85**	**30**		**Pn**	**03 47 25.2**	**-0.3**
UNV	**Unalaska Valle**	**1.88**	**33**	Pn	**Pn**	**03 47 25.4**	**-0.4**
UNV	**Unalaska Valle**	**1.88**	**33**		**Sb**	**03 47 50.2**	**-2.2**
AKRB	**Akutan Reef Bi**	**2.26**	**34**		**Pn**	**03 47 31.7**	**+0.7**
AKBBA	**Akutan Broad B**	**2.28**	**36**		**Pn**	**03 47 31.7**	**+0.3**
AKGG	**Akutan Green G**	**2.34**	**34**		**Pn**	**03 47 32.9**	**+0.8**
AKUT	**Akutan**	**2.37**	**38**		**Pn**	**03 47 32.7**	**+0.2**
WESP	**Westdahl Peak**	**3.05**	**42**		**Pn**	**03 47 43.2**	**+1.2**
WESP					**Sn**	**03 48 18.8**	**+1.3**
WECS	**Westdahl Cape**	**3.05**	**41**		**Pn**	**03 47 43.0**	**+1.0**
KOFP	**Korovin Flat P**	**3.60**	**272**		**Pn**	**03 47 50.5**	**+0.9**
KOKL	**Mount Kliuchef**	**3.66**	**273**		**Pn**	**03 47 51.2**	**+0.8**
ATKA	**Atka Island**	**3.67**	**271**		**Pn**	**03 47 49.8**	**-0.6**
ATKA	**Atka Island**	**3.67**	**271**		**Sn**	**03 48 33.3**	**+0.9**
GSMY	**Great Sitkin M**	**4.82**	**270**		**Pn**	**03 48 06.8**	**+0.5**
GSTD	**Great Sitkin T**	**4.88**	**270**		**Pn**	**03 48 07.3**	**+0.2**
SPIA	**Saint Paul Isl**	**5.03**	**347**		**Pn**	**03 48 10.8**	**+1.7**
ADAG	**Mount Adagdak**	**5.16**	**270**		**Pn**	**03 48 11.5**	**+0.5**
ADK	**Adak**	**5.23**	**269**		**Pn**	**03 48 12.5**	**+0.7**
SDPT	**Sand Point**	**5.52**	**53**		**Pn**	**03 48 17.4**	**+1.5**
TASE	**Tanaga Southea**	**6.07**	**270**		**Pn**	**03 48 24.8**	**+1.4**
AMKA	**Amchitka**	**7.78**	**268**		**Pn**	**03 48 47.4**	**+0.5**
KTH	**Kantishna Hill**	**14.49**	**32**		**Pn**	**03 50 18.3**	**-0.3**
SCM	**Sheep Creek Mo**	**14.78**	**42**		**Pn**	**03 50 19.9**	**-2.7**
BPAW	**Bear Paw Mtn.**	**14.85**	**31**	Pn	**Pn**	**03 50 23.0**	**-0.5**
BWN	**Browne**	**15.39**	**32**	Pn	**Pn**	**03 50 30.3**	**-0.2**
BWN					**Sn**	**03 53 21.7**	**+2.0**
M24K	**Tolsona, Glenn**	**15.39**	**42**	Pn	**Pn**	**03 50 29.1**	**-1.5**
IMAR	**Indian Mountai**	**15.55**	**22**	Pn	**Pn**	**03 50 32.6**	**+0.1**
I23K	**Minto, Yukon-K**	**16.09**	**30**	Pn	**Pn**	**03 50 39.1**	**-0.4**
I23K				IAmb	IAmb	03 50 44.2	
	comp=Z,11nm,1.0s						
GLB	**Gilahina Butte**	**16.10**	**46**	Pn	**Pn**	**03 50 37.8**	**-1.8**
GLB				IAmb	IAmb	03 50 56.5	
	comp=Z,6.4nm,0.7s						
PAX	**Paxson**	**16.11**	**40**	Pn	**Pn**	**03 50 38.7**	**-1.1**
CRQM	**Cirque**	**16.14**	**49**	Pn	**Pn**	**03 50 39.0**	**-1.4**
CRQM				IAmb	IAmb	03 50 49.3	
	comp=Z,23nm,0.8s						
CCB	**Clear Creek Bu**	**16.25**	**32**	P	**Pn**	**03 50 40.4**	**-1.1**
TGL	**Tana Glacier**	**16.28**	**49**	Pn	**Pn**	**03 50 41.6**	**-0.5**
TGL				IAmb	IAmb	03 50 48.3	
	comp=Z,32nm,1.0s						
MDM	**Murphy Dome**	**16.31**	**31**	Pn	**Pn**	**03 50 42.2**	**-0.2**
MCARA	**McCarthy VSAT**	**16.42**	**46**	Pn	**Pn**	**03 50 43.3**	**-0.5**
MCARA				IAmb	IAmb	03 51 02.3	
	comp=Z,17nm,0.8s						
ISLE	**Juniper Island**	**16.46**	**49**	Pn	**Pn**	**03 50 43.4**	**-1.0**
ISLE				IAmb	IAmb	03 50 57.4	
	comp=Z,31nm,1.1s						
ILAR	**Eielson Array**	**16.63**	**33**	Pn	**Pn**	**03 50 43.6**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=237,slow=11,SNR=12						
ILAR	**Eielson Array**	**16.63**	**33**		**Pn**	**03 50 44.9**	**-1.5**
YAH	**Yahtse**	**16.67**	**51**	Pn	**Pn**	**03 50 46.8**	**-0.3**
BARN	**Barnard Glacie**	**16.93**	**48**	Pn	**Pn**	**03 50 49.5**	**-0.8**
BARN				IAmb	IAmb	03 50 55.1	
	comp=Z,11nm,1.0s						
TABL	**Table Mountain**	**16.98**	**51**	Pn	**Pn**	**03 50 50.5**	**-0.5**
TABL				IAmb	IAmb	03 50 56.8	
	comp=Z,18nm,1.0s						
CTGM	**Chitina Glacie**	**17.05**	**49**	Pn	**Pn**	**03 50 51.4**	**-0.4**
CTGM				IAmb	IAmb	03 51 09.3	
	comp=Z,17nm,0.7s						
COLD	**Coldfoot**	**17.40**	**24**	Pn	**Pn**	**03 50 55.8**	**-0.2**
BCAR	**Beaver Creek A**	**17.64**	**42**	Pn	**Pn**	**03 50 56.7**	**-2.3**
EGAK	**Eagle**	**18.67**	**38**	P	**P**	**03 51 10.8**	**-0.2**
HYT	**Haines Junctio**	**18.81**	**51**	P	**P**	**03 51 12.4**	**-0.3**
HYT				IAmb	IAmb	03 51 31.3	
	comp=Z,16nm,0.8s						
DAWY	**Dawson**	**19.03**	**41**	P	**P**	**03 51 14.8**	**-0.3**
DAWY				IAmb	IAmb	03 51 17.5	
	comp=Z,7.2nm,0.9s						
BMAR	**Burnt Mountain**	**19.07**	**28**	P	**P**	**03 51 15.0**	**-0.4**
SKAG	**Skagway**	**19.64**	**56**	P	**P**	**03 51 21.2**	**-0.4**
SKAG				IAmb	IAmb	03 51 39.1	
	comp=Z,8.8nm,0.7s						
WHY	**Whitehorse**	**20.04**	**52**		**P**	**03 51 25.8**	**-0.3**
WHY				IAmb	IAmb	03 51 31.4	
	comp=Z,20nm,1.1s						
PEA0B	**Petropavlovsk-**	**20.55**	**286**	P	**P**	**03 51 31.2**	**-0.4**
PETK	**Petropavlovsk-**	**20.55**	**286**	P	**P**	**03 51 30.5**	**-1.1**
	comp=Z,12nm,0.5s,baz=84,slow=13,SNR=26						
PETK	**Petropavlovsk-**	**20.55**	**286**	P	**P**	**03 51 31.5**	**-0.1**
DLBC	**Dease Lake**	**22.33**	**59**	P	**P**	**03 51 54.1**	**+3.4**
	comp=Z,1.5nm,0.6s,baz=251,slow=16,SNR=3.2						
INK	**Inuvik**	**23.03**	**33**	P	**P**	**03 51 56.4**	**-1.5**
	comp=Z,8.2nm,1.0s,baz=234,slow=9.2,SNR=19						
INK	**Inuvik**	**23.03**	**33**	P	**P**	**03 51 56.5**	**-1.5**
INK				IAmb	IAmb	03 52 00.3	
	comp=Z,8.5nm,0.9s						
SEY	**Seymchan**	**23.23**	**313**	P	**P**	**03 51 57.5**	**-2.5**
	comp=Z,4.3nm,0.8s,baz=86,slow=9.2,SNR=7.8						
MA2	**Magadan**	**23.76**	**304**	LR	LR	04 01 03.0	
	comp=Z,84nm,18.5s,baz=99,slow=36						
NVAR	**Mina Array Bea**	**36.97**	**92**	P	**P**	**03 54 05.0**	**+2.7**
	comp=Z,1.0nm,0.8s,baz=289,slow=7.2,SNR=4.2						
NVAR	**Mina Array Bea**	**36.97**	**92**	P	**P**	**03 54 02.0**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**37.84**	**220**	T	T	04 34 53.6	
	baz=24,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	**37.84**	**220**	T	T	04 34 54.5	
	baz=24,slow=76,SNR=28						
H11N1	**WAKE ISLAND Hy**	**37.85**	**220**	T	T	04 34 54.5	
	baz=24,slow=76,SNR=21						
H11S1	**WAKE ISLAND Hy**	**39.02**	**220**	T	T	04 36 14.2	
	baz=24,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**39.03**	**220**	T	T	04 36 26.4	
	baz=24,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**39.03**	**220**	T	T	04 36 22.0	
	baz=24,slow=76,SNR=23						
PDAR	**Pinedale Array**	**39.73**	**80**	P	**P**	**03 54 27.0**	**+1.4**
	comp=Z,1.4nm,1.0s,baz=339,slow=3.7,SNR=6.5						
PDAR	**Pinedale Array**	**39.73**	**80**	P	**P**	**03 54 25.3**	**-0.3**
MJAR	**Matsushiro Arr**	**40.39**	**269**	P	**P**	**03 54 29.7**	**-1.1**
	comp=Z,3.1nm,0.9s,baz=51,slow=8.0,SNR=6.7						
MAT	**Matsushiro**	**40.39**	**269**	P	**P**	**03 54 29.9**	**-0.9**
O20A	**White River Ci**	**42.08**	**82**	P	**P**	**03 54 44.5**	**-0.5**
CN2	**Changchun**	**43.70**	**286**	*e*P	**P**	**03 54 56.6**	**-1.1**
KSRS	**Korea Array**	**46.10**	**278**	P	**P**	**03 55 16.6**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=50,slow=7.7,SNR=16						
KSRS				LR	LR	04 11 30.0	
	comp=Z,43nm,21.9s,baz=135,slow=32						
KSAR	**Wonju Array Be**	**46.14**	**278**	P	**P**	**03 55 17.0**	**-0.2**
SONM	**Songino Array**	**51.94**	**301**	P	**P**	**03 56 00.4**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=50,slow=7.5,SNR=9.4						
SONM	**Songino Array**	**51.94**	**301**	P	**P**	**03 56 00.6**	**-1.0**
TX31	**Lajitas Ar. Si**	**52.05**	**90**	P	**P**	**03 56 02.5**	**-0.1**
TX32	**Lajitas Array**	**52.05**	**90**	P	**P**	**03 56 02.5**	**-0.2**
TXAR	**Lajitas Array**	**52.05**	**90**	P	**P**	**03 56 04.0**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=295,slow=5.9,SNR=9.8						
TXAR	**Lajitas Array**	**52.05**	**90**	P	**P**	**03 56 02.4**	**-0.2**
HHC	**Hu-ho-hao-te**	**53.60**	**292**	*e*P	**P**	**03 56 15.8**	**+1.8**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,6.4s						
ZALV	**Zalesovo Beam**	**57.95**	**318**	P	**P**	**03 56 42.8**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=32,slow=8.5,SNR=1.2						
ARCES	**ARCESS Array B**	**58.07**	**354**	P	**P**	**03 56 45.9**	**+0.5**
	comp=Z,5.3nm,1.0s,baz=30,slow=9.3,SNR=2.0						
XAN	**Xi'an**	**59.79**	**288**	P	**P**	**03 56 57.9**	**0.0**
XAN				pP	pwP	03 57 26.5	+15
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	**Lanzhou**	**61.26**	**293**	*e*P	**P**	**03 57 09.3**	**+1.2**
LZH				pP	sP	03 57 19.6	-0.1
LZH				sP	pwP	03 57 23.5	+2.2
LZH				*e*PP	**PP**	**03 59 26.1**	**+3.3**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,86nm,7.4s						
WMQ	**Urumqi**	**64.13**	**309**	*e*P	**P**	**03 57 29.8**	**+2.8**
BRVK	**Borovoye**	**64.18**	**325**	P	**P**	**03 57 27.3**	**+0.2**
MKAR	**Makanchi Array**	**64.36**	**314**	P	**P**	**03 57 27.5**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=44,slow=6.6,SNR=12						
FINES	**FINESS Array B**	**66.04**	**353**	P	**P**	**03 57 37.7**	**-1.3**
	comp=Z,6.3nm,0.9s,baz=12,slow=9.8,SNR=11						
FINES	**FINESS Array B**	**66.04**	**353**	P	**P**	**03 57 38.5**	**-0.5**
NB2	**NORSAR Subarra**	**67.02**	**0**	P	**P**	**03 57 44.9**	**-0.4**
	comp=Z,3.1nm,1.0s,baz=1.2,slow=6.9						
NOA	**NORSAR Array B**	**67.02**	**0**	P	**P**	**03 57 44.6**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=1.1,slow=6.4,SNR=9.4						
PPT	**Papeete**	**71.43**	**161**	LR	LR	04 21 59.0	
	comp=Z,98nm,20.2s,baz=145,slow=29						
AKASG	**Malin Array Be**	**76.33**	**349**	P	**P**	**03 58 40.6**	**-0.7**
	comp=Z,2.8nm,0.5s,baz=15,slow=5.8,SNR=8.6						
AKASG	**Malin Array Be**	**76.33**	**349**	P	**P**	**03 58 41.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**77.31**	**284**	P	**P**	**03 58 47.5**	**+0.1**
	comp=Z,2.5nm,0.6s,baz=29,slow=6.1,SNR=9.8						
CMAR				LR	LR	04 36 48.5	
	comp=Z,21nm,19.1s,baz=180,slow=39						
CMAR	**Chiang Mai Arr**	**77.31**	**284**	P	**P**	**03 58 47.1**	**-0.3**
LANS	**Liptovska Anna**	**78.72**	**355**	*e*P	**P**	**03 58 56.5**	**+1.6**
GERES	**GERESS Array B**	**79.23**	**359**	P	**P**	**03 58 58.0**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=4.3,slow=5.4,SNR=9.0						
GERES	**GERESS Array B**	**79.23**	**359**	P	**P**	**03 58 55.4**	**-2.3**
VYHS	**Vyhne**	**79.41**	**355**	*e*P	**P**	**03 58 59.6**	**+1.0**
MODS	**Modra-Piesok**	**79.60**	**356**	*e*P	**P**	**03 58 59.9**	**+0.3**
CONA	**Conrad Observa**	**80.10**	**357**	*e*P	**P**	**03 59 01.7**	**-0.7**
	comp=Z,3.5nm,0.6s						
MOA	**Molln**	**80.22**	**358**	*e*P	**P**	**03 59 03.1**	**+0.2**
	comp=Z,4.3nm,1.6s						
RETA	**Reutte**	**80.60**	**1**	*e*P	**P**	**03 59 04.9**	**-0.2**
	comp=Z,3.6nm,1.1s						
KBZ	**Khabaz**	**80.65**	**338**	P	**P**	**03 59 06.2**	**+0.9**
	comp=Z,4.1nm,0.9s,baz=236,slow=24,SNR=6.6						
MOTA	**Moosalm**	**80.74**	**0**	*e*P	**P**	**03 59 05.2**	**-0.7**
	comp=Z,7.8nm,1.1s						
ARSA	**Arzberg**	**80.78**	**357**	*e*P	**P**	**03 59 05.1**	**-0.9**
	comp=Z,3.9nm,0.9s						
WTTA	**Wattenberg**	**80.82**	**0**	*e*P	**P**	**03 59 05.2**	**-1.3**
	comp=Z,5.8nm,0.9s						
SQTA	**Sankt Quirin**	**80.87**	**0**	*e*P	**P**	**03 59 06.0**	**-0.6**
	comp=Z,7.9nm,1.0s						
KBA	**Koelnbreinsper**	**81.00**	**359**	*e*P	**P**	**03 59 06.7**	**-0.7**
	comp=Z,9.4nm,0.9s						
FETA	**Feichten**	**81.06**	**1**	*e*P	**P**	**03 59 07.2**	**-0.5**
	comp=Z,7.7nm,1.0s						
ABTA	**Abfaltersbach**	**81.34**	**359**	*e*P	**P**	**03 59 08.5**	**-0.6**
	comp=Z,6.5nm,1.2s						
SOKA	**Soboth**	**81.37**	**358**	*e*P	**P**	**03 59 09.1**	**-0.2**
	comp=Z,7.3nm,1.0s						
GEYT	**Alibeck**	**81.50**	**325**	P	**P**	**03 59 10.3**	**+0.3**
	comp=Z,12nm,1.1s,baz=343,slow=4.6,SNR=6.9						
GEYT	**Alibeck**	**81.50**	**325**	P	**P**	**03 59 10.6**	**+0.5**
OBKA	**Obir**	**81.55**	**358**	*e*P	**P**	**03 59 08.9**	**-1.3**
	comp=Z,5.9nm,1.2s						
BRTR	**Keskin Array B**	**86.40**	**343**	P	**P**	**03 59 35.8**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=306,slow=38,SNR=4.7						
BRTR	**Keskin Array B**	**86.40**	**343**	P	**P**	**03 59 35.1**	**-0.1**
ESDC	**Sonseca Array**	**87.39**	**12**	P	**P**	**03 59 38.8**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=341,slow=4.8,SNR=9.1						
WRA	**Warramunga Arr**	**87.50**	**233**	P	**P**	**03 59 39.1**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=33,slow=6.0,SNR=4.6						
WRA	**Warramunga Arr**	**87.50**	**233**	P	**P**	**03 59 40.1**	**-0.3**
ASAR	**Alice Springs**	**90.88**	**231**	P	**P**	**03 59 55.0**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=25,slow=4.6,SNR=5.4						

*SOME **20** 03:53:28.8, 41°.00N×69°.80E, h0km*

*KRNET **20** 03:53:30.1±0.1, 41°.09N×69°.73E, h9km, mb2.8*

*NNC **20** 03:53:32.7±2.4, 41°.00N×69°.98E, h0km, mb3.3, mpv2.9, Error ellipse: s-maj=19.1km s-min=14.4km az=12.0*

ISC 20 03:53:31.7±0.9, 41°01N±0°.03×69°73E±0°.04, h10km, n18, σ2§18/31, 19C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent**	**0.45**	**314**	⇑*i*P	**Pg**	**03 53 38.0**	**-2.6**
	baz=6.0						
TAS				⇑*i*S	**Sg**	**03 53 44.2**	**-2.4**
	baz=6.0						
IUG	**Iuzhnay**	**1.16**	**11**	*e*P	**Pn**	**03 53 54.6**	**+0.6**
	81nm,0.3s						
IUG				*e*S	**Sn**	**03 54 13.5**	**+3.5**
	40nm,0.5s						
TRKS	**Terek-Say**	**1.18**	**64**	⇑*i*P	**Pb**	**03 53 52.0**	**-2.3**
	baz=71						
TRKS				⇑*i*S	**Sg**	**03 54 07.9**	**-1.9**
	baz=71						
BTK	**Batken**	**1.26**	**139**	⇑*i*P	**Pn**	**03 53 55.4**	**-0.1**
	baz=41						
BTK				⇑*i*S	**Sg**	**03 54 13.9**	**+1.6**
	baz=41						
CHM	**Chimkent**	**1.31**	**356**	*e*P	**Pg**	**03 53 57.5**	**+0.6**
	3.0nm,0.3s						
CHM				*e*S	**Sn**	**03 54 18.5**	**+4.9**
	318nm,0.4s						
KK31	**Karatay Array**	**2.17**	**15**	⇓Pn	**Pb**	**03 54 10.2**	**-0.8**
	2.5nm,0.3s,baz=204,slow=15,SNR=74				

KMSI	**Cibinong**	**2.47 244**	P	Pg	04 54 47.8	+8.8
GTOI	**Gorontalo**	**3.35 252**	P	**Pg**	**04 54 56.2**	**+0.4**
MRSI	**Marisa**	**4.42 254**	P	**Pb**	**04 55 11.2**	**+1.9**
	0.1nm31nm,0.5s						
SKMP	**Bagumbayan, Su**	**5.09 341**	*e*P	**Pn**	**04 55 09.4**	**+1.4**
SKMP			*e*S	**Sn**	**04 56 04.1**	**-2.7**
KCP	**Kidapawan**	**5.42 348**⇑	*e*P	Pb	04 55 20.1	-6.3
TOLI2	**Tolitoli**	**5.44 264**	Pn	**Pn**	**04 55 12.5**	**-0.3**
SIJI	**Sorong**	**5.66 116**	LR	LR	04 57 52.5	
	comp=Z,136nm,21.0s,baz=132,slow=43						
BUKP	**Musuan**	**6.27 350**	*e*P	**Pn**	**04 55 27.9**	**+3.7**
BUKP			*e*S	**Sn**	**04 56 37.3**	**+1.3**
FITZ	**Fitzroy Crossi**	**19.65 182**	P	**Pn**	**04 58 23.6**	**+1.6**
	0.9nm,0.7s,baz=360,slow=12,SNR=1.9						
FITZ	**Fitzroy Crossi**	**19.65 182**	P	**P**	**04 58 20.9**	**+0.2**
WB0	**Warramunga Arr**	**22.77 160**	P	**P**	**04 58 54.9**	**+0.5**
WB0			IAmb	IAmb	04 59 04.8	
	comp=Z,3.4nm,0.7s						
WRAB	**Tennant Creek**	**22.91 160**	P	**P**	**04 58 55.9**	**+0.1**
WRAB			IAmb	IAmb	04 58 58.9	
	comp=Z,5.4nm,0.8s						
WRA	**Warramunga Arr**	**22.92 160**	P	**P**	**04 58 56.5**	**+0.6**
	comp=Z,4.2nm,0.7s,baz=339,slow=11,SNR=43						
WRA	**Warramunga Arr**	**22.92 160**	P	**P**	**04 58 56.2**	**+0.3**
WB2	**Warramunga Arr**	**22.92 160**	P	**P**	**04 58 56.0**	**+0.1**
WR0	**Warramunga Arr**	**23.00 160**	P	**P**	**04 58 56.9**	**+0.1**
WR0			IAmb	IAmb	04 58 59.5	
	comp=Z,3.6nm,0.7s						
MBWA	**Marble Bar**	**23.56 195**	P	**P**	**04 59 01.6**	**-0.7**
ASAR	**Alice Springs**	**26.28 164**	P	**P**	**04 59 30.3**	**+2.9**
	comp=Z,1.9nm,0.8s,baz=346,slow=12,SNR=16						
ASAR	**Alice Springs**	**26.28 164**	P	**P**	**04 59 27.4**	**0.0**
CMAR	**Chiang Mai Arr**	**31.51 304**	LR	LR	05 15 25.2	
	comp=Z,14nm,18.1s,baz=110,slow=41						
ULN	**Ulaanbaatar**	**48.91 343**	P	P	05 02 31.6	-6.3
ULN			IAmb	IAmb	05 02 39.1	
	comp=Z,1.1nm,0.6s						
SONM	**Songino Array**	**49.08 342**	P	**P**	**05 02 35.5**	**-3.7**
	comp=Z,0.3nm,0.6s,baz=142,slow=7.3,SNR=1.7						
SONM	**Songino Array**	**49.08 342**	P	**P**	**05 02 35.3**	**-3.9**
MKAR	**Makanchi Array**	**58.95 326**	P	**P**	**05 03 49.9**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=127,slow=8.4,SNR=3.3						

SSNC 20 05:26:22.7±0.4, 20°24′N×76°31′W, h5km, ML0.6, MW1.8, 1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCC	**Rio Carpintero**	**0.63**	**113**	*e*P	Pg	05 26 33.7	-1.1
RCC				⇓*e*S	Sg	05 26 42.2	-0.8
RCC				IAML		05 26 42.6	
	comp=E,4.2nm,0.1s						
RCC				IAML		05 26 42.6	
	comp=N,2.8nm,0.1s						
RCC	**Rio Carpintero**	**0.63**	**113**	*e*P	Pn	05 26 42.3	+4.0
RCC				*e*S	Sn	05 26 51.1	+2.4
RCC				IAML		05 26 52.7	
	comp=E,8.4nm,0.1s						
RCC				IAML		05 26 52.9	
	comp=N,6.3nm,0.1s						
LMGC	**Las Mercedes**	**0.67**	**255**	*e*P	Pg	05 26 34.5	-1.1
LMGC				*e*S	Sg	05 26 43.4	-1.0
LMGC	**Las Mercedes**	**0.67**	**255**	*e*P	Pn	05 26 42.9	+4.1
LMGC				*e*S	Sn	05 26 52.0	+2.3
LMGC				IAML		05 26 53.9	
	comp=N,66nm,0.1s						
LMGC				IAML		05 26 54.0	
	comp=E,19nm,0.1s						
GTMO	**Guantanamo**	**1.11**	**98**	*e*P	Pg	05 26 42.9	-1.2
GTMO	**Guantanamo**	**1.11**	**98**	*e*P	Pn	05 26 51.5	+6.5
GTMO				*e*S	Sn	05 27 07.3	+6.6
GTMO				IAML		05 27 08.4	
	comp=E,20nm,0.3s						
GTMO				IAML		05 27 08.6	
	comp=N,15nm,0.2s						

IDC 20 05:30:44.6±5.4, 8°31′S×155°91′E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/25, mbtmp3.9/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/34, Error ellipse: s-maj=94.4km s-min=73.8km az=180.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**17.03**	**145**	LR	LR	05 39 36.7	
	comp=Z,133nm,18.8s,baz=5.0,slow=31						
WRA	**Warramunga Arr**	**23.87**	**239**	P	P	05 35 59.6	-0.4
	1.7nm,0.8s,baz=65,slow=9.7,SNR=14						
ASAR	**Alice Springs**	**26.03**	**232**	P	P	05 36 19.9	+0.2
	1.9nm,0.9s,baz=63,slow=9.5,SNR=14						
STKA	**Stephens Creek**	**26.97**	**208**	P	P	05 36 28.2	+0.1
	1.5nm,0.6s,baz=17,slow=11,SNR=3.9						

WEL 20 05:34:10.9, 43°S±1°×17°2E±°, h10km±2km, M2.6/13, ML2.7/13, MLv2.6/13, Error ellipse: s-maj=0.0km s-min=0.0km az=115.9, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OXZ	**Oxford**	**0.18**	**236**	P	Pg	05 34 16.3	+1.6
OXZ				S	Sg	05 34 19.8	+2.3
AMCZ	**Amberley**	**0.30**	**81**	P	Pb	05 34 18.1	-0.3
AMCZ				S	Sb	05 34 22.6	-0.9
LTZ	**Lake Taylor**	**0.44**	**3**	P	Pb	05 34 20.3	-0.5
LTZ				S	Sb	05 34 26.5	-1.0
RACZ	**Rakaia**	**0.51**	**189**	P	Pb	05 34 22.8	+0.9
RACZ				S	Sb	05 34 30.7	+1.3
MQZ	**McQueen's Vall**	**0.57**	**148**	P	Pb	05 34 23.2	+0.2
MQZ				S	Sb	05 34 31.2	+0.1
MHCZ	**Mount Hutt**	**0.58**	**238**	P	Pb	05 34 24.1	+0.8
MHCZ				S	Sb	05 34 32.6	+1.0
GVZ	**Greta Valley S**	**0.63**	**66**	P	Pb	05 34 24.5	+0.4
GVZ				S	Sb	05 34 33.7	+0.7
INZ	**Inchbonnie**	**0.77**	**310**	P	Pb	05 34 26.9	+0.5
OKCZ	**Okains Bay**	**0.78**	**130**	P	Pb	05 34 27.2	+0.6
OKCZ				S	Sb	05 34 38.4	+1.2
WACZ	**Wakanui South**	**0.78**	**202**	P	Pn	05 34 28.3	+0.3
AKCZ	**Akaroa Harbour**	**0.81**	**144**	P	Pb	05 34 27.6	+0.5
RPZ	**Rata Peaks**	**1.00**	**240**	P	Pn	05 34 31.6	+0.6
ARCZ	**Arundel**	**1.06**	**227**	P	Pn	05 34 32.3	+0.4
KHZ	**Kahutara**	**1.25**	**50**	P	Pn	05 34 34.4	0.0
GCSZ	**Gaunt Creek Bo**	**1.40**	**266**	P	Pg	05 34 39.7	+1.9
DSZ	**Denniston Nort**	**1.51**	**347**	P	Pg	05 34 40.0	+0.1
THZ	**Tophouse**	**1.54**	**19**	P	Pn	05 34 38.8	+0.4
FOZ	**Fox Glacier**	**1.80**	**259**	P	Pb	05 34 44.5	+0.6
LBZ	**Lake Benmore**	**1.89**	**231**	P	Pg	05 34 48.9	+1.8
ODZ	**Otahua Downs**	**2.15**	**212**	P	Pn	05 34 46.7	-0.2
DREZ	**Durham Road**	**4.29**	**21**	P	Pn	05 35 18.6	+2.3

*VAO **20** 05:39:58.5±0.5, 6°97′N×72°42′W, h10km, mb4.6*
*IDC **20** 05:40:09.5±0.6, 6°77′N×72°95′W, h157km±6km, mb3.8/18, mb1 4.1/24, mb1mx4.0/32, mbtmp4.4/24, MS2.4/1, Ms1 2.4/1, ms1mx2.2/28, Error ellipse: s-maj=9.8km s-min=6.8km az=129.0*
*UPA **20** 05:40:09.6±3.9, 7°06′N×73°27′W, h0km±52km, MW4.7*
*RSNC **20** 05:40:10.3±1.3, 6°82′N×73°17′W, h154km±4km, ML4.4, Mw4.7, Fault plane solution: NP1:φs140.00000°, δ60.00000°, λ,-126.00000°.*
*NEIC **20** 05:40:10.6±1.4, 6°71′N±0°07×72°94′W±0°08, h169km±6km, mb4.7/241, Error ellipse: s-maj=13.5km s-min=8.7km az=128.0*

ISC 20 05:40:09.1±0.5, 6°84′N±0°03×73°08′W±0°03, h153km±5km, n507, σ1§88/513, mb4.7/119, 20C-14D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**203**	⇑*i*P	**Pn**	**05 40 31.0**	**+0.8**
BARC				*e*S	**Sn**	**05 40 46.3**	**0.0**
BARC				*i*		05 40 47.3	
	comp=Z,8μm,0.3s						
PAMC	**Pamplona, Colo**	**0.62**	**37**	⇓*i*P	**Pn**	**05 40 33.9**	**+1.8**
PAMC				*i*		05 40 53.5	
	comp=Z,4μm,0.4s						
BRRC	**Barranca, Sant**	**0.68**	**293**	⇓*i*P	**Pn**	**05 40 32.8**	**+1.0**
BRRC				*e*S	**Sn**	**05 40 49.8**	**+0.6**
BRRC				*i*		05 40 53.2	
	comp=Z,8μm,0.3s						
RUSC	**La Rusia**	**0.94**	**180**	⇓*i*P	**Pn**	**05 40 35.0**	**+0.6**
RUSC				*e*S	**Sn**	**05 40 53.8**	**+0.3**
RUSC				*i*		05 40 56.5	
	comp=Z,2μm,0.2s						
TAMC	**Tame, Arauca**	**1.34**	**107**	⇑*i*P	**Pn**	**05 40 39.5**	**+2.2**
TAMC				*e*S	**Sn**	**05 41 01.1**	**+2.1**
TAMC				*i*		05 41 02.0	
	comp=Z,3μm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.40**	**258**	⇓*i*P	**Pn**	**05 40 37.4**	**-0.5**
PTBC				*e*S	**Sn**	**05 40 58.6**	**-1.3**
PTBC				*i*		05 41 06.1	
	comp=Z,4μm,0.3s						
OCAC	**Ocana**	**1.41**	**350**	⇑*e*P	**Pn**	**05 40 39.0**	**+0.9**
OCAC				*e*S	**Sn**	**05 41 01.1**	**+0.7**
OCAC				*i*		05 41 05.5	
	comp=Z,3μm,0.3s						
SPBC	**San Pablo de B**	**1.54**	**220**	⇓*e*P	**Pn**	**05 40 39.7**	**+0.3**
SPBC				*e*S	**Sn**	**05 41 01.6**	**-1.1**
SPBC				*i*		05 41 07.0	
	comp=Z,6μm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.88**	**290**	⇑*i*P	**Pn**	**05 40 43.0**	**-0.1**
ZARC				*e*S	**Sn**	**05 41 08.2**	**-0.9**
ZARC				*i*		05 41 15.0	
	comp=Z,4μm,0.3s						
NORC	**Norcasia**	**2.19**	**235**	*e*P	**Pn**	**05 40 46.8**	**+0.1**
NORC				*e*S	**Sn**	**05 41 14.2**	**-1.4**
NORC				*i*		05 41 24.8	
	comp=Z,3μm,0.6s						
CHIC	**Chingaza**	**2.29**	**197**	⇓*i*P	**Pn**	**05 40 48.9**	**+0.6**
CHIC				*e*S	**Sn**	**05 41 18.0**	**-0.5**
CHIC				*i*		05 41 22.5	
	comp=Z,3μm,0.7s						
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**05 40 50.8**	**+1.9**
	comp=Z,525nm,0.3s,baz=78,slow=8.8,SNR=872						
ROSC				S	**Sn**	**05 41 20.7**	**+1.2**
	comp=Z,1μm,0.3s,baz=85,slow=21,SNR=8.5						
ROSC				LR	LR	05 41 26.0	
	comp=Z,80nm,21.0s,baz=252,slow=32						
ROSC	**El Rosal**	**2.34**	**212**	⇓*i*P	**Pn**	**05 40 50.7**	**+1.9**
ROSC				*e*S	**Sn**	**05 41 21.2**	**+1.7**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	*i* P	**Pn**	**05 40 53.4**	**+2.4**
HELC	**Santa Helena**	**2.52**	**255**	⇑*e*P	**Pn**	**05 40 50.3**	**-0.6**
HELC				*e*S	**Sn**	**05 41 24.1**	**+0.9**
HELC				*i*		05 41 29.6	
	comp=Z,3μm,0.4s						
HELC	**Santa Helena**	**2.52**	**255**	*e*P	**Pn**	**05 40 51.7**	**+0.8**
HELC				*e*S	**Sn**	**05 41 23.4**	**+0.2**
UREC	**San Jos de Ur**	**2.60**	**291**	⇑*e*P	**Pn**	**05 40 50.4**	**-1.2**
UREC				*e*S	**Sn**	**05 41 20.1**	**-4.2**
UREC				*i*		05 41 33.2	
	comp=Z,2μm,0.2s						
PTGC	**Puerto Gaitan,**	**2.79**	**160**	⇓*i*P	**Pn**	**05 40 54.2**	**+0.2**
PTGC				*e*S	**Sn**	**05 41 27.6**	**-1.2**
PTGC				*i*		05 41 29.6	
	comp=Z,1μm,0.6s						
RREF	**El Recreo**	**2.97**	**230**	*e*P	**Pn**	**05 40 53.4**	**-3.5**
RREF				*e*S	**Sn**	**05 41 27.8**	**-5.8**
RREF				*i*		05 41 39.2	
	comp=Z,3μm,0.3s						
CBOC	**Ciudad Bolivar**	**3.07**	**252**	⇑*i*P	**Pn**	**05 40 58.2**	**+0.5**
CBOC				*e*S	**Sn**	**05 41 34.4**	**-0.9**
CBOC				*i*		05 41 51.9	
	comp=Z,668nm,0.5s						
DBBC	**Dabeiba**	**3.11**	**273**	⇑*i*P	**Pn**	**05 40 58.2**	**+0.1**
DBBC				*e*S	**Sn**	**05 41 33.9**	**-2.2**
SDV	**Santo Domingo**	**3.16**	**50**	P	**Pn**	**05 41 00.5**	**+1.7**
	comp=Z,366nm,0.3s,baz=186,slow=9.0,SNR=672						
SDV				S	**Sn**	**05 41 37.0**	**-0.3**
	comp=Z,200nm,0.3s,baz=258,slow=16,SNR=13						
SDV	**Santo Domingo**	**3.16**	**50**	*i* P	**Pn**	**05 41 00.5**	**+1.7**
SDV				*e*S	**Sn**	**05 41 35.3**	**-2.1**
SDV				*i*		05 41 41.2	
	comp=Z,523nm,0.3s						
SDV	**Santo Domingo**	**3.16**	**50**	Pn	**Pn**	**05 41 00.6**	**+1.7**
SDV				Sn	**Sn**	**05 41 38.3**	**+1.0**
TOLC	**Tolima**	**3.16**	**225**	*e*P	**Pn**	**05 40 59.1**	**+0.1**
TOLC				*e*S	**Sn**	**05 41 38.7**	**+1.1**
MONA	**Monteria**	**3.20**	**307**	*e*P	**Pn**	**05 40 57.9**	**-1.2**
MONA				*e*S	**Sn**	**05 41 35.2**	**-2.7**
MOTC	**Monteria, Cord**	**3.21**	**307**	⇑*i*P	**Pn**	**05 40 57.9**	**-1.3**
MOTC				*e*S	**Sn**	**05 41 36.6**	**-1.4**
MOTC				*i*		05 41 38.5	
	comp=Z,931nm,0.4s						
ARGC	**Ariguani, Magd**	**3.21**	**339**	⇓*i*P	**Pn**	**05 41 01.1**	**+1.8**
ARGC				*e*S	**Sn**	**05 41 39.3**	**+1.0**
ARGC				*i*		05 41 46.8	
	comp=Z,715nm,0.6s						
ANIL	**Santa Ana**	**3.29**	**225**	*e*P	**Pn**	**05 41 01.1**	**+0.6**
ANIL				*e*S	**Sn**	**05 41 41.3**	**+0.9**
ANIL				*i*		05 41 51.2	
	comp=Z,507nm,0.3s						
PRAC	**Prado**	**3.59**	**210**	*e*P	**Pn**	**05 41 03.9**	**-0.3**
ORTC	**Ortega, Tolima**	**3.63**	**217**	*e*P	**Pn**	**05 41 04.9**	**+0.2**
ORTC				*e*S	**Sn**	**05 41 47.2**	**-0.5**
ORTC				*i*		05 41 55.0	
	comp=Z,1μm,0.6s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P	**Pn**	**05 41 04.6**	**-0.7**
SJCC				*e*S	**Sn**	**05 41 44.4**	**-4.6**
SJCC				*i*		05 41 53.9	
	comp=Z,527nm,0.4s						
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P	**Pn**	**05 41 04.7**	**-0.7**
SJCC				*e*S	**Sn**	**05 41 45.6**	**-3.5**
PLMC	**San Jos del P**	**3.72**	**239**	*e*P	**Pn**	**05 41 05.7**	**-0.2**
PLMC				*i*		05 41 59.8	
	comp=Z,480nm,0.6s						
LCBC	**Los crdobas,**	**3.83**	**302**	*e*P	**Pn**	**05 41 06.2**	**-1.0**
LCBC				*e*S	**Sn**	**05 41 50.2**	**-2.1**
LCBC				*i*		05 41 56.5	
	comp=Z,822nm,0.2s						
GUVC	**San Jose del G**	**4.29**	**174**	⇓*e*P	**Pn**	**05 41 12.9**	**-0.5**
GUVC				*e*S	**Sn**	**05 42 00.7**	**-2.7**
GUVC				*i*		05 42 06.4	
	comp=Z,860nm,0.2s						
YOTC	**Yotoco, Valle**	**4.32**	**229**	⇑*i*P	**Pn**	**05 41 13.1**	**-0.6**
YOTC				*e*S	Sn	05 41 52.4	-12
SOLC	**Bahia Solano**	**4.35**	**262**	*e*P	**Pn**	**05 41 13.7**	**-0.3**
SOLC				*e*S	**Sn**	**05 42 03.9**	**-0.6**
SMRC	**Santa Marta, M**	**4.44**	**345**	*e*P	**Pn**	**05 41 16.0**	**+0.8**
SMRC				*e*S	**Sn**	**05 42 02.2**	**-4.6**
SMRC				*i*		05 42 08.3	
	comp=Z,427nm,0.3s						
CAPC	**Capurgana**	**4.59**	**293**	*e*P	**Pn**	**05 41 15.1**	**-2.1**
CAPC				*e*S	Sn	05 42 00.8	-10
CAPC				*i*		05 42 16.8	
	comp=Z,280nm,0.3s						
CAP2	**Capurgana**	**4.61**	**293**	*e*P	**Pn**	**05 41 15.5**	**-1.9**
CAP2				*e*S	**Sn**	**05 42 05.8**	**-4.9**
PIZC	**Pizarro, Choco**	**4.65**	**247**	*e*P	**Pn**	**05 41 18.1**	**+0.1**
PIZC				*i*		05 42 26.3	
	comp=Z,283nm,0.6s						
PTAC	**Punta Ardita,**	**4.71**	**274**	*e*P	**Pn**	**05 41 17.9**	**-0.8**
PTAC				*e*S	**Sn**	**05 42 10.1**	**-2.9**
PTAC				*i*		05 42 21.1	
	comp=Z,541nm,0.3s						
MACC	**Macarena, Meta**	**4.73**	**189**	⇓*i*P	**Pn**	**05 41 17.9**	**-1.2**
MACC				*e*S	**Sn**	**05 42 07.8**	**-5.8**
MACC				*i*		05 42 15.8	
	comp=Z,531nm,0.7s						
BETC	**Betania**	**4.76**	**210**	*e*P	**Pn**	**05 41 18.6**	**-0.9**
BETC				*e*S	Sn	05 42 04.7	-10
MARP	**Paez Belalcaza**	**4.90**	**216**	*e*P	**Pn**	**05 41 21.5**	**-0.1**
MARP				*e*S	**Sn**	**05 42 13.5**	**-4.5**
MARP				*i*		05 42 22.8	
	comp=Z,112nm,0.5s						
URIC	**Uribia, Colomb**	**4.95**	**12**	⇑*e*P	**Pn**	**05 41 21.4**	**-0.5**
URIC				*e*S	**Sn**	**05 42 14.0**	**-4.7**
URIC				*i*		05 42 24.0	
	comp=Z,133nm,0.5s						
URIC				*i*		05 42 24.0	
	comp=Z,133nm,0.5s						
MALC	**Bahia Malaga**	**5.08**	**237**	*e*P	**Pn**	**05 41 24.1**	**+0.3**
MALC				*e*P	**Pn**	**05 41 24.1**	**+0.3**
MALC				*e*S	**Sn**	**05 42 25.5**	**+3.5**
MALC				*e*S	**Sn**	**05 42 25.5**	**+3.5**
MALC				*i*		05 42 36.9	
	comp=Z,229nm,0.8s						
MALC				*i*		05 42 36.9	
	comp=Z,229nm,0.8s						
UPD2	**Meteti**	**5.18**	**289**	*e*P	**Pn**	**05 41 23.6**	**-1.4**
UPD2				*e*S	**Sn**	**05 42 21.3**	**-2.8**
GARC	**Garzon, Huila**	**5.21**	**208**	⇓*e*P	**Pn**	**05 41 25.1**	**-0.5**
GARC				⇓*e*P	**Pn**	**05 41 25.1**	**-0.5**
GARC				*e*S	**Sn**	**05 42 20.9**	**-4.5**
GARC				*e*S	**Sn**	**05 42 20.9**	**-4.5**
GARC				*i*		05 42 27.0	
	comp=Z,554nm,0.2s						
GARC				*i*		05 42 27.0	
	comp=Z,554nm,0.2s						
PCON	**Cinco Dias**	**5.57**	**217**	⇑*e*P	**Pn**	**05 41 31.7**	**+1.0**
PCON				⇑*e*P	**Pn**	**05 41 31.7**	**+1.0**
PCON				*i*		05 43 05.8	
	comp=Z,174nm,0.4s						
PCON				*i*		05 43 05.8	
	comp=Z,174nm,0.4s						
POPC	**Popayan, Colom**	**5.58**	**220**	⇑*e*P	**Pn**	**05 41 30.5**	**0.0**
POPC				⇑*e*P	**Pn**	**05 41 30.5**	**0.0**
FLOC	**Florencia**	**5.82**	**206**	⇑*i*P	**Pn**	**05 41 33.6**	**0.0**
FLOC				⇑*i*P	**Pn**	**05 41 33.6**	**0.0**
FLOC				*e*S	**Sn**	**05 42 39.2**	**-0.4**
FLOC				*e*S	**Sn**	**05 42 39.2**	**-0.4**
FLOC				*i*		05 42 43.9	
	comp=Z,197nm,0.5s						
FLOC				*i*		05 42 43.9	
	comp=Z,197nm,0.5s						
SOTA	**Rioblanco**	**5.85**	**217**	*e*P	**Pn**	**05 41 34.6**	**+0.2**
SOTA				*e*P	**Pn**	**05 41 34.6**	**+0.2**
SOTA				*e*S	Sn	05 42 31.6	-9.4
SOTA				*e*S	Sn	05 42 31.6	-9.4
BBAC	**Balboa, Cauca**	**6.34**	**221**	*e*P	**Pn**	**05 41 40.0**	**-0.6**
BBAC				*e*P	**Pn**	**05 41 40.0**	**-0.6**
BBAC				*e*S	**Sn**	**05 42 50.5**	**-1.7**
BBAC				*e*S	**Sn**	**05 42 50.5**	**-1.7**
BBAC				*i*		05 42 59.3	
	comp=Z,70nm,0.4s						
BBAC				*i*		05 42 59.3	
	comp=Z,70nm,0.4s						
CRUC	**La Cruz**	**6.51**	**217**	*e*P	**Pn**	**05 41 45.4**	**+2.5**
CRUC				*e*P	**Pn**	**05 41 45.4**	**+2.5**
UPA	**Univ. de Panam**	**6.74**	**289**	*e*P	**Pn**	**05 41 42.6**	**-3.1**
PTLC	**Puerto Leguiza**	**6.84**	**195**	*e*P	**Pn**	**05 41 49.6**	**+2.5**
PTLC				*e*P	**Pn**	**05 41 49.6**	**+2.5**
PTLC				*e*S	Sn	05 43 21.7	+18
PTLC				*e*S	Sn	05 43 21.7	+18
PTLC				*i*		05 43 50.3	
	comp=Z,156nm,0.6s						
PTLC				*i*		05 43 50.3	
	comp=Z,156nm,0.6s						
GCUF	**Volcan Galeras**	**7.02**	**218**	*e*P	**Pn**	**05 41 49.4**	**-0.5**
GCUF				*e*P	**Pn**	**05 41 49.4**	**-0.5**
GCUF				*e*S	**Sn**	**05 43 06.7**	**-2.2**
GCUF				*e*S	**Sn**	**05 43 06.7**	**-2.2**
PUAC	**Puerto Asis, P**	**7.16**	**209**	*e*P	**Pn**	**05 41 50.5**	**-0.8**
PUAC				*e*P	**Pn**	**05 41 50.5**	**-0.8**
PUAC				*e*S	Sn	05 43 26.0	+14
PUAC				*e*S	Sn	05 43 26.0	+14
PUAC				*i*		05 44 01.5	
	comp=Z,62nm,0.6s						
PUAC				*i*		05 44 01.5	
	comp=Z,62nm,0.6s						
CUSE	**Cuicocha Este**	**8.39**	**219**	*e*P	**Pn**	**05 42 08.4**	**+0.3**
CUSE				*e*P	**Pn**	**05 42 08.4**	**+0.3**
CUSE				*e*S	**Sn**	**05 43 40.1**	**-1.6**
CUSE				*e*S	**Sn**	**05 43 40.1**	**-1.6**
OTAV	**Otavalo**	**8.47**	**219**	*e*P	**Pn**	**05 42 07.7**	**-1.5**
OTAV				*e*P	**Pn**	**05 42 07.7**	**-1.5**
OTAV				*e*S	**Sn**	**05 43 47.6**	**+3.8**
OTAV				*e*S	**Sn**	**05 43 47.6**	**+3.8**
OTAV	**Otavalo**	**8.47**	**219**	Pn	**Pn**	**05 42 09.1**	**-0.2**
OTAV	**Otavalo**	**8.47**	**219**	*e*P	**Pn**	**05 42 08.2**	**-1.1**
PAC1	**Pacto, Paraso**	**8.67**	**221**	*e*P	**Pn**	**05 42 11.8**	**+0.2**
PAC1				*e*P	**Pn**	**05 42 11.8**	**+0.2**
PAC1				*e*S	**Sn**	**05 43 46.5**	**-1.7**
PAC1				*e*S	**Sn**	**05 43 46.5**	**-1.7**
PAC1				*i*		05 43 50.8	
	comp=Z,26nm,0.3s						
PAC1				*i*		05 43 50.8	
	comp=Z,26nm,0.3s						
PCRV	**Puerto La Cruz**	**8.98**	**68**	P	**Pn**	**05 42 15.0**	**-0.7**
	comp=Z,6.3nm,0.3s,baz=248,slow=1.1,SNR=20						
PCRV				S	**Sn**	**05 43 53.9**	**-1.7**
	comp=Z,3.1nm,0.3s,baz=203,slow=13,SNR=1.3						
PLCV	**Puerto La Cruz**	**9.02**	**68**		**Pn**	**05 42 15.0**	**-1.2**
HDC	**Heredia**	**11.36**	**287**		**Pn**	**05 42 49.3**	**+2.2**
PCJ	**Portland Cotta**	**11.54**	**340**	*i* P	**Pn**	**05 42 52.6**	**+3.2**
HOJ	**Hope**	**11.66**	**342**	*i* P	**Pn**	**05 42 54.0**	**+3.1**
CMJ	**Castle Mountai**	**11.68**	**344**	*i* P	**Pn**	**05 42 53.8**	**+2.7**
STH	**Stony Hill**	**11.74**	**342**	*i* P	**Pn**	**05 42 54.6**	**+2.6**
MCJ	**Malvern**	**11.90**	**338**	⇓*i*P	**Pn**	**05 42 57.2**	**+3.1**
MCJ				*i* S	**Sn**	**05 44 58.4**	**-7.4**
BNJ	**Bonny Gate**	**12.02**	**342**	*i* P	**Pn**	**05 42 58.3**	**+2.7**
MTDJ	**Mount Denham**	**12.12**	**339**	Pn	**P**	**05 43 00.5**	**-2.7**
BBJ	**Bamboo Saint A**	**12.18**	**341**	*i* P	**P**	**05 43 01.4**	**-2.4**
BBJ				*i* S	**Sn**	**05 45 05.8**	**-6.6**
JTS	**Las Juntas de**	**12.23**	**287**	P	**Pn**	**05 43 01.2**	**+2.8**
	comp=Z,0.7nm,0.3s,baz=101,slow=22,SNR=6.4						
JTS				S	**Sn**	**05 45 15.6**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=53,slow=12,SNR=2.3						
JTS	**Las Juntas de**	**12.23**	**287**	Pn	**P**	**05 43 02.0**	**-2.4**
ACON	**Acoyapa**	**12.97**

X59A **McDuffie Farm,** 28.06 350 P P 05 45 48.3 +2.1
baz=168
GOGA **Godfrey** 28.14 341 P P 05 45 49.2 +2.4
baz=158
GOGA **Godfrey** 28.14 341 P P 05 45 49.7 +2.8
X58A **Rowland** 28.18 349 P P 05 45 49.2 +2.0
baz=167
X57A **Johnson Farm,** 28.24 348 P P 05 45 49.7 +2.0
baz=165
W60A **Pink Hill** 28.40 352 P P 05 45 50.8 +1.6
baz=170
X56A **White Oak** 28.48 346 P P 05 45 51.8 +1.9
baz=163
HODGE **Hodges** 28.55 344 IAmb IAmb 05 45 53.6
comp=Z,9.9nm,0.6s
X55A **Gracelyn & Ava** 28.61 345 P P 05 45 53.2 +2.2
baz=162
W58A **Raeford** 28.61 349 P P 05 45 53.4 +2.3
baz=167
Z51A **Franklin** 28.64 339 P P 05 45 53.2 +1.9
Y52A **Lilburn** 28.75 341 P P 05 45 54.8 +2.5
Y52A IAmb IAmb 05 45 55.1
comp=Z,12nm,0.6s
X54A **Belton** 28.88 344 P P 05 45 55.4 +2.0
baz=160
W57A **Gilead** 28.89 348 P P 05 45 55.2 +1.8
baz=166
W56A **Indian Trail** 28.99 347 P P 05 45 56.5 +2.1
baz=164
V60A **Jim Taylor Roa** 29.04 353 P P 05 45 57.1 +2.3
baz=171
LRAL **Lakeview Retre** 29.09 335 P P 05 45 57.5 +2.1
baz=150,SNR=5.7
LRAL **Lakeview Retre** 29.09 335 P P 05 45 58.0 +2.7
LRAL IAmb IAmb 05 45 58.6
comp=Z,20nm,1.1s
KMSC **Kings Mountain** 29.17 346 P P 05 45 58.3 +2.3
baz=163
KMSC **Kings Mountain** 29.17 346 P P 05 45 58.3 +2.3
KMSC IAmb IAmb 05 46 12.6
comp=Z,15nm,1.4s
V59A **Middlesex** 29.17 351 P P 05 45 58.0 +2.0
baz=169
W54A **Cherokee Point** 29.33 345 P P 05 45 60.0 +2.6
baz=161
V58A **Windy Hill, Pi** 29.34 350 P P 05 45 59.3 +1.8
baz=168
BG3 **Lake Jocassee** 29.45 343 IAmb IAmb 05 46 03.2
comp=Z,10.0nm,1.2s
344A **Westbrook Farm** 29.53 328 P P 05 46 02.0 +2.8
V57A **Coltrane Farms** 29.55 349 P P 05 46 01.6 +2.2
baz=166
Y49A **Blount Mountai** 29.58 337 P P 05 46 01.9 +2.3
Y49A IAmb IAmb 05 46 02.7
comp=Z,18nm,0.8s
V56A **Mocksville** 29.62 348 P P 05 46 02.3 +2.3
baz=165
U59A **Littleton** 29.69 352 P P 05 46 01.8 +1.3
baz=170
U60A **Pendleton** 29.73 353 P P 05 46 03.1 +2.2
baz=172
SMTB **Santa Maria do** 29.81 121 eP P 05 46 02.6 +0.6
V55A **Taylorsville** 29.82 347 P P 05 46 04.1 +2.3
baz=163
V55A **Taylorsville** 29.82 347 P P 05 46 04.5 +2.7
V55A IAmb IAmb 05 46 04.7
comp=Z,8.4nm,0.8s
U58A **Oxford** 29.84 351 P P 05 46 03.9 +2.1
baz=169
W52A **Murphy** 29.84 342 IAmb IAmb 05 46 05.4
comp=Z,23nm,0.9s
FPAL **Fort Paine** 29.89 339 IAmb IAmb 05 46 05.4
comp=Z,17nm,1.0s
V54A **Nebo** 29.93 345 P P 05 46 05.7 +3.0
baz=162
U57A **Blanch** 30.00 350 P P 05 46 05.2 +1.9
baz=167
VBMS **Vicksburg** 30.03 329 P P 05 46 05.7 +2.1
baz=144
U56A **King** 30.12 348 P P 05 46 06.7 +2.3
baz=165
T59A **Double "B" Far** 30.27 353 P P 05 46 07.7 +2.1
baz=171
X48A **Hartselle** 30.35 337 IAmb IAmb 05 46 09.5
comp=Z,20nm,0.8s
CPCT **Cooper Cave** 30.35 341 IAmb IAmb 05 46 09.4
comp=Z,11nm,0.7s
T58A **Grand View Acr** 30.38 351 P P 05 46 08.4 +1.8
baz=169,SNR=5.2
W50A **Signal Mountai** 30.38 340 IAmb IAmb 05 46 10.1
comp=Z,17nm,0.9s
T57A **Hurt** 30.54 350 P P 05 46 10.2 +2.1
baz=168
U54A **Nelsons Funny** 30.60 346 P P 05 46 11.1 +2.4
baz=163,SNR=8.6
SWET **Sewanee** 30.61 339 IAmb IAmb 05 46 11.8
comp=Z,13nm,1.1s
T56A **Rocky Mt** 30.71 349 P P 05 46 11.8 +2.2
baz=166
ARAG **Araguaiana, MT** 30.75 137 eP P 05 46 09.4 -0.7
T55A **Pulaski** 30.94 348 P P 05 46 13.1 +1.5
baz=165
BLA **Blacksburg** 30.96 349 P P 05 46 13.9 +2.0
baz=166
S58A **Poland Farm, P** 30.96 352 P P 05 46 13.5 +1.7
baz=170
S59A **Mechanicsville** 31.02 354 P P 05 46 14.1 +1.9
baz=172
T54A **Tazewell** 31.06 347 P P 05 46 15.1 +2.3
baz=163,SNR=5.3
TZTN **Tazewell** 31.07 344 P P 05 46 15.3 +2.5
baz=159
T53A **Wise** 31.22 345 P P 05 46 16.5 +2.4
baz=162
PLAL **Pickwick Lake** 31.23 336 P P 05 46 16.0 +1.9
PLAL IAmb IAmb 05 46 17.1
comp=Z,22nm,0.8s
S57A **Dark Hollow, R** 31.24 351 P P 05 46 16.4 +2.2
baz=168
OXF **Oxford** 31.39 334 P P 05 46 17.0 +1.5
baz=148
R59A **King George, V** 31.43 354 P P 05 46 18.4 +2.5
baz=172
S55A **Lewisburg** 31.52 349 P P 05 46 19.2 +2.5
baz=166
CLTN **Cedars of Leba** 31.54 339 IAmb IAmb 05 46 20.0
comp=Z,31nm,1.3s
R58A **Rapidan** 31.63 353 P P 05 46 19.8 +2.2
baz=170
S54A **Dingess, Beckl** 31.71 348 P P 05 46 20.7 +2.3
baz=164
U49A **Red Boiling Sp** 31.73 340 IAmb IAmb 05 46 21.4
comp=Z,26nm,1.4s
T50A **Nancy** 31.90 342 IAmb IAmb 05 46 23.2
comp=Z,17nm,1.1s
R56A **Bull Pasture M** 31.94 351 P P 05 46 23.0 +2.5
baz=168
R55A **Marlinton** 31.94 349 P P 05 46 23.2 +2.8
baz=166
NATX **Nacogdoches** 31.95 324 P P 05 46 22.5 +2.0
baz=136
NATX **Nacogdoches** 31.95 324 P P 05 46 22.6 +2.1
R54A **Victor** 32.01 348 P P 05 46 24.3 +3.3
baz=165
Z41A **Richland Creek** 32.03 328 P P 05 46 23.5 +2.3
baz=141
WVT **Waverly** 32.13 337 P P 05 46 24.2 +2.2
baz=152
WVT **Waverly** 32.13 337 P P 05 46 23.7 +1.7
R53A **Hurricane** 32.36 347 P P 05 46 26.9 +2.9
baz=163
Q57A **Strasburg** 32.41 352 P P 05 46 27.1 +2.7
baz=170
Q56A **Snyder Ridge,** 32.53 351 P P 05 46 28.6 +3.2
baz=168
Q55A **Buckhannon** 32.63 350 P P 05 46 29.6 +3.2
baz=167
P58A **Pank, Wackersv** 32.73 354 P P 05 46 29.9 +2.7
baz=172
Q54A **Coxs Mills** 32.76 349 P P 05 46 30.1 +2.6
baz=166
Q53A **Leroy** 32.77 348 P P 05 46 29.8 +2.2
baz=164
P60A **Greenville** 32.91 356 P P 05 46 31.2 +2.5
baz=175
R50A **Paris** 32.92 344 IAmb IAmb 05 46 32.3
comp=Z,21nm,0.8s
P56A **Dayton Farm, R** 32.93 352 P P 05 46 31.3 +2.4
baz=169
X40A **Basin Creek Fa** 33.00 329 P P 05 46 31.0 +1.4
baz=142,SNR=6.5
X40A **Basin Creek Fa** 33.00 329 P P 05 46 31.1 +1.4
X40A IAmb IAmb 05 46 31.6
comp=Z,14nm,0.9s
Q52A **Bidwell** 33.04 347 P P 05 46 32.2 +2.3
baz=163
435B **Jarrell** 33.09 319 P P 05 46 32.0 +1.6
baz=131
435B **Jarrell** 33.09 319 IAmb IAmb 05 46 32.5
comp=Z,18nm,0.8s
W41B **Gary Mavity, V** 33.26 331 P P 05 46 33.3 +1.5
baz=144
O58A **Lewisberry** 33.32 355 P P 05 46 34.5 +2.2
baz=173
P53A **Whipple** 33.35 348 P P 05 46 35.1 +2.5
baz=165
Q51A **Peebles** 33.35 345 IAmb IAmb 05 46 35.9
comp=Z,18nm,0.8s
WHAR **Wooly Hollow** 33.37 331 P P 05 46 34.4 +1.5
WHAR IAmb IAmb 05 46 35.9
comp=Z,17nm,0.9s
BDFB **Brasilia** 33.40 132 P P 05 46 32.2 -1.2
comp=Z,4.5nm,0.5s,baz=289,slow=8.0,SNR=12
MIAR **Mount Ida** 33.43 328 P P 05 46 34.5 +1.1
baz=141
WCI **Wyandotte Cave** 33.46 341 P P 05 46 35.6 +2.1
baz=156
WCI **Wyandotte Cave** 33.46 341 P P 05 46 35.8 +2.2
WCI IAmb IAmb 05 46 36.3
comp=Z,22nm,0.7s
LCAR **Lake Charles** 33.47 333 P P 05 46 35.5 +1.8
LCAR IAmb IAmb 05 46 35.5
comp=Z,16nm,0.9s
O57A **Amberson** 33.48 354 P P 05 46 35.9 +2.2
baz=172
O56A **Blue Knob Stat** 33.64 352 P P 05 46 37.5 +2.3
baz=170
P52A **Corning** 33.65 347 P P 05 46 37.4 +2.2
baz=164,SNR=5.5
LUPA **Lehigh Univers** 33.67 357 IAmb IAmb 05 46 39.0
comp=Z,22nm,1.0s
P51A **Williamsport** 33.72 346 P P 05 46 37.9 +2.2
baz=162
FCAR **Ozark Folk Cen** 33.77 332 IAmb IAmb 05 46 38.0
comp=Z,22nm,1.0s
WHTX **Lake Whitney,** 33.81 321 P P 05 46 37.8 +1.2
baz=133
WHTX **Lake Whitney,** 33.81 321 IAmb IAmb 05 46 38.8
comp=Z,9.8nm,0.8s
O54A **Avella** 33.84 350 P P 05 46 39.6 +2.8
baz=167
SDBA **SAO DESIDERIO** 33.91 124 eP P 05 46 37.8 -0.1
SSPA **Standing Stone** 33.92 353 P P 05 46 40.2 +2.7
baz=171
N60A **Cedar Hill Far** 33.93 357 P P 05 46 39.9 +2.3
baz=176
N57A **Milroy** 34.01 354 P P 05 46 40.9 +2.7
baz=172
N58A **Sunbury** 34.01 355 P P 05 46 40.8 +2.6
baz=173
N59A **State Game Lan** 34.02 356 P P 05 46 40.9 +2.5
baz=175
W39A **Magazine** 34.04 329 P P 05 46 40.1 +1.4
baz=141,SNR=6.5
W39A **Magazine** 34.04 329 IAmb IAmb 05 46 41.0
comp=Z,16nm,0.8s
O52A **Adamsville** 34.05 348 P P 05 46 41.0 +2.4
baz=164
O53A **New Philadelph** 34.05 349 P P 05 46 41.3 +2.6
baz=165
O51A **Pataskala** 34.24 347 P P 05 46 43.3 +2.9
baz=163
N56A **West Decatur** 34.25 353 P P 05 46 42.8 +2.4
baz=171
M61A **Granite Spring** 34.33 359 P P 05 46 42.7 +1.7
baz=179
M60A **Port Jervis** 34.37 358 P P 05 46 43.4 +2.0
baz=177
ACSO **Alum Creek Sta** 34.41 347 P P 05 46 43.9 +2.1
baz=162
M62A **Hamden** 34.45 0 P P 05 46 43.9 +1.8
baz=180
U40A **Yellville** 34.50 331 P P 05 46 43.9 +1.3
baz=144,SNR=30
M58A **Price's Panora** 34.52 356 P P 05 46 45.1 +2.4
baz=174
N54A **Moraine State** 34.53 351 P P 05 46 45.2 +2.5
baz=168
OLIL **Olney** 34.53 339 P P 05 46 44.4 +1.6
M57A **Sunshine Farm,** 34.54 355 P P 05 46 45.5 +2.7
baz=173
Z35A **Perchaven, San** 34.60 323 IAmb IAmb 05 46 45.7
comp=Z,25nm,0.8s
M59A **Waymart** 34.62 357 P P 05 46 45.1 +1.6
baz=176
FVM **French Village** 34.77 336 P P 05 46 46.5 +1.6
M56A **Emporium** 34.79 353 P P 05 46 47.5 +2.4
baz=171
MGMO **Mountain Grove** 34.87 333 IAmb IAmb 05 46 47.4
comp=Z,14nm,0.8s
HHAR **Hobbs** 34.97 330 P P 05 46 47.2 +0.6
HHAR IAmb IAmb 05 46 47.6
comp=Z,7.4nm,0.6s
M54A **Oil Creek Stat** 35.02 351 P P 05 46 49.3 +2.3
baz=168
CCM **Cathedral Cave** 35.17 335 P P 05 46 50.0 +1.7
baz=148
CCM **Cathedral Cave** 35.17 335 P P 05 46 49.5 +1.2
L57A **Andrews Acres** 35.17 355 P P 05 46 50.0 +1.7
baz=173
L61A **Hillsdale 1, H** 35.21 359 P P 05 46 51.4 +2.8
baz=179
M51A **Elyria** 35.29 348 P P 05 46 51.3 +2.0
baz=164
BINY **Binghamton** 35.31 356 P P 05 46 51.7 +2.2
baz=175
U38A **Gravette** 35.32 330 IAmb IAmb 05 46 50.8
comp=Z,14nm,1.0s
L56A **Greenwood** 35.37 354 P P 05 46 52.3 +2.2
baz=172
ABTX **Abilene, Hawle** 35.61 320 P P 05 46 53.2 +1.0
baz=130,SNR=6.9
ABTX **Abilene, Hawle** 35.61 320 IAmb IAmb 05 46 54.2
comp=Z,18nm,0.9s
K60A **Five Rivers En** 35.64 359 P P 05 46 54.3 +2.1
baz=178
TUL1 **Leonard** 35.64 327 P P 05 46 52.9 +0.6
baz=139
TUL1 **Leonard** 35.64 327 IAmb IAmb 05 46 53.3
comp=Z,16nm,0.8s
SFIN **Lafayette** 35.68 342 P P 05 46 54.1 +1.6
baz=156,SNR=8.5
S39A **Bolivar** 35.80 332 IAmb IAmb 05 46 55.9
comp=Z,9.2nm,0.7s
P43A **Skaggs, Pawnee** 35.85 338 IAmb IAmb 05 46 55.9
comp=Z,24nm,0.8s
K57A **Scipio Center** 35.87 356 P P 05 46 56.2 +1.9
baz=174
OK030 **Cody Creek RV** 36.19 326 IAmb IAmb 05 46 58.4
comp=Z,35nm,1.3s
OK031 **S. Brethren Rd** 36.24 326 IAmb IAmb 05 46 58.3
comp=Z,20nm,0.6s
QUOK **Quay** 36.33 327 IAmb IAmb 05 46 59.2
comp=Z,21nm,0.7s
J61A **Chester** 36.36 1 P P 05 47 00.8 +2.4
baz=181
OK029 **Liberty Lake** 36.47 326 IAmb IAmb 05 47 00.7
comp=Z,28nm,1.2s
TX31 **Lajitas Ar. Si** 36.48 312 P P 05 47 00.8 +1.0
TX31 IAmb IAmb 05 47 01.7
comp=Z,14nm,0.8s
TX32 **Lajitas Array** 36.48 312 P P 05 47 00.8 +1.0
TXAR **Lajitas Array** 36.48 312 P P 05 47 00.7 +1.0
comp=Z,3.9nm,0.6s,baz=128,slow=9.0,SNR=45
TXAR PcP PcP 05 49 22.0 +1.6
comp=Z,2.1nm,0.8s,baz=134,slow=5.5,SNR=8.0
WMOK **Wichita Mounta** 36.49 323 P P 05 46 59.7 +0.1
baz=134,SNR=8.3
WMOK **Wichita Mounta** 36.49 323 IAmb IAmb 05 47 00.6
comp=Z,8.2nm,0.8s
J59A **Piesco** 36.50 358 P P 05 47 02.3 +2.8
baz=177
J57A **Williamstown** 36.51 356 P P 05 47 01.8 +2.2
baz=175
AAM **Ann Arbor** 36.54 347 P P 05 47 02.7 +2.8
baz=162
HDIL **Hopedale** 36.57 339 P P 05 47 00.5 +0.4
baz=152,SNR=5.6
I58A **Old Forge** 36.74 358 P P 05 47 03.5 +1.9
baz=177
T35A **Sooner Cattle** 36.78 328 IAmb IAmb 05 47 03.4
comp=Z,18nm,1.0s
I63A **Otisfield** 37.13 3 P P 05 47 05.7 +0.9
baz=184
H58A **Gabriels** 37.44 359 P P 05 47 09.3 +1.8
baz=178
I51A **Listowel** 37.47 351 P P 05 47 09.1 +1.4
baz=167
H57A **Richville** 37.53 357 P P 05 47 10.3 +2.1
baz=176
H60A **Morristown** 37.57 0 P P 05 47 10.8 +2.1
baz=180
U32A **Winter Ranch,** 37.76 325 IAmb IAmb 05 47 12.2
comp=Z,36nm,1.2s
G60A **Masonville** 38.11 1 P P 05 47 14.8 +1.7
baz=181
G57A **Newington** 38.15 358 P P 05 47 15.4 +2.0
baz=177
G58A **Ormstown** 38.17 359 P P 05 47 15.5 +2.0
baz=178
G63A **Kingsbury** 38.24 4 P P 05 47 17.1 +2.9
baz=185
G62A **West of Eustis** 38.29 3 P P 05 47 17.1 +2.4
baz=184
AMTX **Amarillo** 38.36 321 P P 05 47 17.2 +1.7
baz=130
AMTX **Amarillo** 38.36 321 IAmb IAmb 05 47 17.6
comp=Z,30nm,0.9s
PKME **Peaks-Kenny Pk** 38.42 4 P P 05 47 17.9 +2.3
baz=186
KSU1 **Kansas State U** 38.49 330 P P 05 47 16.5 +0.1
baz=140,SNR=5.6
KSU1 **Kansas State U** 38.49 330 IAmb IAmb 05 47 17.2
comp=Z,22nm,0.8s
MSTX **Muleshoe** 38.49 319 P P 05 47 17.6 +0.9
baz=128
MSTX **Muleshoe** 38.49 319 IAmb IAmb 05 47 18.7
comp=Z,14nm,0.9s
MNTX **Cornudas Mount** 38.99 314 P P 05 47 21.9 +1.2
baz=123,SNR=23
MNTX **Cornudas Mount** 38.99 314 P P 05 47 21.9 +1.2
MNTX IAmb IAmb 05 47 23.4
comp=Z,13nm,0.9s
JFWS **Jewell Farm** 38.99 340 P P 05 47 21.1 +0.6
baz=152,SNR=6.5
F60A **Warwick** 38.99 1 P P 05 47 21.9 +1.5
baz=182
GDU01 **Guandu, BA** 39.03 122 eP P 05 47 20.7 -0.5
ALGO **Algonquin Park** 39.20 355 P P 05 47 23.6 +1.5
baz=172
SCIA **State Center** 39.23 336 P P 05 47 23.8 +1.3
baz=147
N35A **Tabor** 39.41 333 IAmb IAmb 05 47 24.6
comp=Z,16nm,0.7s
E57A **Chemin Saint G** 39.43 359 P P 05 47 26.0 +1.9
baz=178
E55A **Montcerf-Lytto** 39.55 357 P P 05 47 26.8 +1.8
baz=175
E62A **Clayton Lake** 39.75 4 P P 05 47 27.8 +1.1
baz=185
CBKS **Cedar Bluff** 39.90 327 P P 05 47 28.9 +0.7
baz=136
D55A **Sainte-Anne-du** 40.08 357 P P 05 47 31.4 +2.0
baz=176
D56A **ZEC Mazanza, M** 40.09 358 P P 05 47 31.5 +2.0
baz=177
D58A **Chemin du LacG** 40.11 0 P P 05 47 31.4 +1.8
baz=180
D63A **Stockholm** 40.27 5 P P 05 47 33.3 +2.3
baz=187
D61A **St Aubert, Com** 40.29 3 P P 05 47 33.6 +2.4
baz=184
LATQ **La Tuque** 40.40 0 P P 05 47 34.5 +2.5
baz=180
BGNE **Belgrade** 41.02 331 P P 05 47 38.2 +0.9
baz=140
RIB01 **Linhares ES** 41.38 130 eP P 05 47 39.9 -0.6
T25A **Trinidad** 41.50 321 P P 05 47 43.6 +2.1
baz=129
ANMO **Albuquerque** 41.53 317 P P 05 47 43.6 +1.8
baz=125
ANMO **Albuquerque** 41.53 317 P P 05 47 43.5 +1.8
KSCO **Kaye Shedlock'** 41.65 325 P P 05 47 43.9 +1.3
baz=133
KSCO **Kaye Shedlock'** 41.65 325 IAmb IAmb 05 47 44.6
comp=Z,10nm,0.7s
ECSD **EROS Data Cent** 42.15 334 P P 05 47 46.9 +0.5
baz=144,SNR=9.7
ECSD **EROS Data Cent** 42.15 334 P P 05 47 46.4 0.0
ECSD IAmb IAmb 05 47 47.5
comp=Z,16nm,1.0s
LSQQ **Lebel-sur-Quev** 42.20 356 P P 05 47 47.8 +1.1
baz=174
SDCO **Great Sand Dun** 42.56 321 P P 05 47 52.1 +1.9
baz=128,SNR=15
CHGQ **Chibougamau** 42.94 359 P P 05 47 54.4 +1.8
baz=178
MATQ **Matagami** 42.94 356 P P 05 47 54.5 +1.8
baz=173
Q24A **Divide** 43.10 323 P P 05 47 56.1 +1.5
baz=130
TUC **Tucson** 43.27 311 P P 05 47 56.8 +1.1
baz=118
TUC **Tucson** 43.27 311 P P 05 47 57.1 +1.4
S22A **4UR Ranch, Cre** 43.40 320 P P 05 47 58.9 +2.0
baz=127,SNR=10
S22A **4UR Ranch, Cre** 43.40 320 IAmb IAmb 05 48 00.0
comp=Z,15nm,1.2s
F33A **5 Mile Ranch** 43.73 337 IAmb IAmb 05 48 00.1
comp=Z,20nm,1.1s
SUSD **Miller** 43.74 333 P P 05 47 59.5 +0.3
baz=141,SNR=12
EYMN **Ely** 43.86 342 P P 05 48 00.8 +0.7
baz=153,SNR=6.1
W18A **Petrified Fore** 43.88 315 P P 05 48 03.1 +2.4
baz=121
ISCO **Idaho Springs** 43.91 323 P P 05 48 02.6 +1.6
baz=130,SNR=10
ISCO **Idaho Springs** 43.91 323 IAmb IAmb 05 48 03.8
comp=Z,12nm,0.9s
MVCO **Mesa Verde** 44.17 318 P P 05 48 04.4 +1.4
baz=124,SNR=6.0
MVCO **Mesa Verde** 44.17 318 IAmb IAmb 05 48 06.1
comp=Z,21nm,1.5s
214A **Organ Pipe Nat** 44.65 309 P P 05 48 08.2 +1.6
baz=116,SNR=5.7
PV15 **Paradox Valley** 44.80 320 IAmb IAmb 05 48 11.1
comp=Z,29nm,1.0s
N23A **Red Feather La** 44.81 324 P P 05 48 09.8 +1.8
baz=130,SNR=8.7
N23A **Red Feather La** 44.81 324 IAmb IAmb 05 48 11.5
comp=Z,19nm,0.7s
PV13 **Radium Mtn., P** 44.91 319 IAmb IAmb 05 48 11.6
comp=Z,18nm,1.1s
B35A **Bob, Littlefor** 44.94 341 IAmb IAmb 05 48 09.8
comp=Z,15nm,0.8s
PV07 **Paradox Valley** 44.96 320 IAmb IAmb 05 48 12.1
comp=Z,19nm,0.7s
PV12 **Saucer Basin,** 44.99 319 IAmb IAmb 05 48 11.9
comp=Z,27nm,1.3s
PV18 **Skein Mesa, Pa** 45.02 319 IAmb IAmb 05 48 14.2
comp=Z,13nm,0.9s
PV11 **David Mesa, Pa** 45.03 319 IAmb IAmb 05 48 15.8
comp=Z,14nm,0.9s
PV16 **Nysworngor Mesa** 45.06 319 IAmb IAmb 05 48 14.2
comp=Z,16nm,1.2s
PV17 **East Wray Mesa** 45.07 319 IAmb IAmb 05 48 14.4
comp=Z,19nm,1.2s
WUAZ **Wupatki** 45.24 315 P P 05 48 13.1 +1.7
baz=120,SNR=20
WUAZ **Wupatki** 45.24 315 IAmb IAmb 05 48 14.8
comp=Z,24nm,0.9s
AGMN **Agassiz Nation** 45.62 339 P P 05 48 14.7 +0.7
baz=147,SNR=5.7
AGMN **Agassiz Nation** 45.62 339 IAmb IAmb 05 48 15.4
comp=Z,17nm,0.7s
Y14A **Wickenburg** 45.67 312 IAmb IAmb 05 48 17.1
comp=Z,9.8nm,0.8s
O20A **White River Ci** 45.71 322 P P 05 48 16.9 +1.8
baz=127,SNR=5.1
RSSD **Black Hills** 45.94 329 P P 05 48 18.2 +1.3
baz=135
K22A **Casper** 46.28 326 P P 05 48 21.3 +1.9
baz=131

U15A	North Rim	46.33	315	IAmb	IAmb	05 48 23.2
	comp=Z,17nm,1.1s					
GLA	Glamis	46.65	310	P	P	05 48 24.2 +1.8
	baz=115					
PDMCI	Parker Dam,Lak	46.67	312	P	P	05 48 23.5 +1.0
	baz=116					
MDND	Maddock	46.69	336	P	P	05 48 23.3 +0.9
	baz=142,SNR=6.2					
ULM	Lac du Bonnet	47.28	340	P	P	05 48 27.1 +0.2
	comp=Z,19nm,0.5s,baz=147,slow=7.3,SNR=46					
ULM	Lac du Bonnet	47.28	340	IAmb	IAmb	05 48 28.0
	comp=Z,22nm,0.6s					
SWSC	Sam W. Stewart	47.35	309	P	P	05 48 29.2 +1.4
	baz=114					
IRM	Iron Mountain	47.36	311	P	P	05 48 29.6 +1.7
	baz=115					
BC3	Big Chuckawall	47.38	310	P	P	05 48 29.4 +1.3
	baz=115					
PLCA	Paso Flores	47.40	177	P	P	05 48 26.4 -1.6
	comp=Z,0.6nm,0.6s,baz=208,slow=12,SNR=1.4					
IKP	In-Ko-Pah, Jac	47.48	309	P	P	05 48 30.7 +1.8
	baz=113					
MONP2	Monument Peak	47.81	309	P	P	05 48 32.9 +1.3
	baz=113					
BELC	Belle Mtn. Jos	47.94	310	P	P	05 48 33.5 +1.1
	baz=114					
GMRC	Granite Mounta	48.01	311	P	P	05 48 34.1 +1.1
	baz=115					
BW06	Boulder Array	48.09	324	P	P	05 48 34.6 +1.0
	baz=128,SNR=8.0					
BW06	Boulder Array	48.09	324	IAmb	IAmb	05 48 35.2
	comp=Z,14nm,1.2s					
PD31	Pinedale Array	48.09	324	IAmb	IAmb	05 48 35.2
	comp=Z,14nm,1.3s					
PDAR	Pinedale Array	48.09	324	P	P	05 48 34.3 +0.7
	comp=Z,2.8nm,0.5s,baz=127,slow=8.7,SNR=28					
PDAR				PcP	PcP	05 49 58.5 -0.4
	comp=Z,0.8nm,0.7s,baz=148,slow=5.3,SNR=2.9					
PDAR	Pinedale Array	48.09	324	P	P	05 48 34.2 +0.6
SCHQ	Schefferville	48.12	5	P	P	05 48 33.9 +0.6
	comp=Z,14nm,0.8s,baz=176,slow=6.8,SNR=10					
SCHQ	Schefferville	48.12	5	IAmb	IAmb	05 48 35.3
	comp=Z,39nm,1.1s					
TPFO	Pinon Flats	48.12	310	P	P	05 48 35.6 +1.8
	baz=114					
TUQ	Turquoise Moun	48.48	312	P	P	05 48 38.1 +1.4
	baz=116,SNR=5.8					
DUG	Dugway, Tooele	48.62	319	P	P	05 48 39.1 +1.5
	baz=122,SNR=6.7					
BBRC	Big Bear Solar	48.74	310	P	P	05 48 39.9 +1.2
	baz=114					
LAO	LASA Array	48.84	330	P	P	05 48 40.0 +1.0
	baz=134					
SHOC	Shoshone, Teco	48.94	313	P	P	05 48 41.6 +1.6
	baz=116					
GSC	Goldstone, Bar	49.08	312	P	P	05 48 42.6 +1.5
	baz=115,SNR=5.9					
DGMT	Dagmar	49.15	333	P	P	05 48 43.1 +1.8
	baz=137					
REDW	Red Top Meadow	49.20	324	IAmb	IAmb	05 48 44.1
	comp=Z,14nm,0.8s					
SNOW	Snow King Moun	49.20	324	IAmb	IAmb	05 48 44.9
	comp=Z,18nm,1.1s					
TPAW	Teton Pass	49.34	324	IAmb	IAmb	05 48 45.5
	comp=Z,8.4nm,0.8s					
TPNV	Topopah Spring	49.38	314	P	P	05 48 45.4 +1.9
	baz=117,SNR=8.4					
RLMT	Red Lodge	49.39	327	P	P	05 48 44.4 +1.0
	baz=130					
SCI2	San Clemente I	49.50	308	P	P	05 48 46.2 +2.0
	baz=112					
R11A	Troy Canyon, C	49.56	316	P	P	05 48 46.4 +1.6
	baz=118,SNR=12					
FURC	Furnace Creek,	49.62	313	P	P	05 48 47.0 +2.0
	baz=116					
H17A	Grant Village	49.66	325	P	P	05 48 46.8 +1.2
	baz=128					
EDW2	Edwards Air Fo	49.80	311	P	P	05 48 47.6 +1.0
	baz=114					
MPMC	Manual Prospec	49.90	312	P	P	05 48 48.2 +0.8
	baz=115					
ISA	Isabella, Lake	50.47	311	P	P	05 48 52.5 +0.9
	baz=114					
CWC	Cottonwood Cre	50.49	312	P	P	05 48 53.6 +1.7
	baz=115					
ARVC	Arvin	50.53	310	P	P	05 48 53.8 +1.9
	baz=113					
BOZ	Bozeman (W)	50.99	326	P	P	05 48 56.7 +1.3
	baz=127,SNR=6.9					
VES	Vestal, Richgr	51.00	311	P	P	05 48 57.2 +1.8
	baz=113					
DLMT	Dillon	51.39	325	IAmb	IAmb	05 49 00.4
	comp=Z,12nm,1.4s					
HLID	Hailey	51.45	322	P	P	05 49 00.5 +1.6
	baz=123,SNR=10					
SMMC	Simmler	51.48	310	P	P	05 49 01.0 +1.9
	baz=112					
NVAR	Mina Array Bea	51.50	315	P	P	05 49 00.6 +1.2
	comp=Z,3.3nm,0.8s,baz=126,slow=6.9,SNR=22					
NVAR				PcP	PcP	05 50 12.6 +1.1
	comp=Z,1.1nm,0.6s,baz=130,slow=4.4,SNR=5.3					
EGMT	Eagleton	51.51	329	P	P	05 49 00.6 +1.5
	baz=131					
MFID	Camas Ranch	52.24	321	P	P	05 49 05.8 +1.1
MFID				IAmb	IAmb	05 49 07.5
	comp=Z,10nm,0.7s					
PNTR	Pine Nut	52.70	315	IAmb	IAmb	05 49 32.7
	comp=Z,11nm,1.0s					
MSO	Missoula	53.01	326	P	P	05 49 11.3 +1.1
	baz=126					
PLID	Pearl Lake	53.23	323	P	P	05 49 12.9 +0.9
PLID				IAmb	IAmb	05 49 13.9
	comp=Z,11nm,1.1s					
WVOR	Wild Horse Val	53.54	319	P	P	05 49 15.6 +1.4
WVOR				IAmb	IAmb	05 49 17.7
	comp=Z,14nm,1.1s					
BEKR	Beckworth	53.56	315	P	P	05 49 15.9 +1.4
JTMT	Jette	53.73	327	P	P	05 49 17.3 +1.7
JTMT				IAmb	IAmb	05 49 17.9
	comp=Z,11nm,0.9s					
J08A	Circle Bar Ran	53.88	320	P	P	05 49 17.8 +1.1
ORV	Oroville	54.23	315	P	P	05 49 20.5 +1.3
ORV				IAmb	IAmb	05 49 21.5
	comp=Z,7.7nm,1.1s					
F10A	Beach Ranch, E	54.43	323	IAmb	IAmb	05 49 21.6
	comp=Z,7.8nm,0.6s					
O03E	Paynes Creek	54.74	315	P	P	05 49 23.4 +0.5
	baz=114					
I07A	Izee	54.88	320	P	P	05 49 25.0 +1.1
I07A				IAmb	IAmb	05 49 26.4
	comp=Z,7.8nm,0.9s					
G08A	Pilot Rock	55.13	322	P	P	05 49 27.1 +1.4
G08A				IAmb	IAmb	05 49 27.6
	comp=Z,16nm,1.0s					
M04C	Macdoel	55.38	317	P	P	05 49 28.5 +1.0
	baz=115					
O02D	Mt. Diablo Mer	55.39	315	P	P	05 49 27.3 -0.3
	baz=113					
NEW	Newport	55.60	326	P	P	05 49 29.4 +0.5
	baz=123					
J05D	Fort Rock, OR	55.63	319	P	P	05 49 30.7 +1.4
	baz=116,SNR=5.9					
K04D	Chiloquin, OR	55.68	318	P	P	05 49 30.8 +1.1
	baz=116					
L04D	Klamath Falls	55.88	317	P	P	05 49 32.0 +0.9
	baz=115					
YBH	Yreka Blue Hor	55.95	317	P	P	05 49 31.3 -0.3
C09A	Chrisman Ranch	56.00	325	IAmb	IAmb	05 49 33.6
	comp=Z,12nm,0.7s					
KMRM	Mail Ridge	56.05	314	P	P	05 49 34.2 +1.9
KHMM	Horse Mountain	56.32	315	P	P	05 49 35.8 +1.6
I04A	Tendick Farm,	56.62	319	P	P	05 49 37.1 +0.9
	baz=116					
H04A	Detroit Lake	56.86	320	IAmb	IAmb	05 49 42.2
	comp=Z,12nm,0.9s					
B08A	Colville Reser	56.90	325	P	P	05 49 38.7 +0.6
B08A				IAmb	IAmb	05 49 39.7
	comp=Z,11nm,1.0s					
K02D	Willamette Mer	56.99	317	P	P	05 49 40.3 +1.4
	baz=114					
LTY	Liberty	57.13	323	IAmb	IAmb	05 49 41.7
	comp=Z,6.6nm,0.7s					
J01E	Myrtle Point	57.36	318	P	P	05 49 43.3 +1.9
	baz=114					
B05A	Bryant	58.45	324	P	P	05 49 49.3 +0.5
	baz=118					
D03D	Eldon	58.71	323	P	P	05 49 51.2 +0.5
	baz=117					

A04D	Lummi Island	59.03	324	P	P	05 49 53.6 +0.8
	baz=118					
YKA	Yellowknife Ar	63.26	340	P	P	05 50 21.6 +0.5
	comp=Z,9.2nm,0.5s,baz=129,slow=7.6,SNR=49					
ICESG	Greenland Ices	65.92	13	*i* P		05 50 38.9 +0.3
DLBC	Dease Lake	67.33	331	IAmb	IAmb	05 50 49.4
	comp=Z,5.0nm,0.7s					
DBIC	Dimbokro	67.69	86	P	P	05 50 49.7 -0.8
	comp=Z,24nm,0.8s,baz=259,slow=5.4,SNR=11					
SUMG	Summit	68.96	11	P	P	05 50 57.9 +0.2
SUMG				IAmb	IAmb	05 50 59.3
	comp=Z,15nm,0.8s					
SUMG	Summit	68.96	11	*i* P	P	05 50 58.0 +0.2
	comp=Z,41nm,0.8s					
SUMG	Summit	68.96	11	*i* P	P	05 50 58.1 +0.3
SUMG				IAmb	IAmb	05 50 59.6
	comp=Z,41nm,0.8s					
INK	Inuvik	73.03	340	P	P	05 51 22.6 +0.8
TORD	Torodi Ar. Bea	73.69	78	P	P	05 51 25.2 -1.5
	comp=Z,0.4nm,0.3s,baz=286,slow=6.6,SNR=12					
BCAR	Beaver Creek A	74.36	334	P	P	05 51 31.4 +1.6
EGAK	Eagle	74.59	336	IAmb	IAmb	05 51 32.9
	comp=Z,15nm,1.4s					
K27K	Chicken	74.75	335	P	P	05 51 33.8 +1.8
	baz=106					
L26K	Log Cabin Wild	75.04	334	P	P	05 51 35.3 +1.6
	baz=105					
N25K	Chitina, Valde	75.26	332	P	P	05 51 36.7 +1.7
	baz=103					
DOT	Dot Lake	75.50	334	IAmb	IAmb	05 51 38.7
	comp=Z,10nm,0.7s					
SCRK	Sand Creek	75.55	335	P	P	05 51 38.1 +1.4
	baz=104					
DAG	Danmarks Havn	75.63	11⇑	*i* P	P	05 51 36.9 +0.2
	comp=Z,3.9nm,0.8s					
DAG	Danmarks Havn	75.63	11⇑	*i* P	P	05 51 37.0 +0.2
DAG				IAmb	IAmb	05 51 37.8
	comp=Z,3.9nm,0.8s					
RIDG	Independent Ri	75.87	334	IAmb	IAmb	05 51 40.8
	comp=Z,17nm,1.1s					
M24K	Tolsona, Glenn	76.10	332	P	P	05 51 40.9 +1.1
	baz=102					
PRP	Porcupine Dome	76.56	336	P	P	05 51 43.5 +1.1
BMAR	Burnt Mountain	76.66	338	P	P	05 51 43.7 +0.9
HDA	Harding Lake	76.91	335	P	P	05 51 45.0 +0.8
	baz=102					
HDA	Harding Lake	76.91	335	IAmb	IAmb	05 51 45.9
	comp=Z,6.0nm,0.7s					
ILAR	Eielson Array	76.96	335	P	P	05 51 45.0 +0.5
	comp=Z,2.2nm,0.8s,baz=106,slow=4.5,SNR=25					
ILAR				PP	PP	05 54 39.3 -0.3
	comp=Z,0.5nm,0.9s,baz=96,slow=6.4,SNR=3.5					
POKR	Poker Plat Res	77.26	335	P	P	05 51 47.6 +1.5
	baz=101					
GHO	Glory Hole Cre	77.32	332	IAmb	IAmb	05 51 48.9
	comp=Z,18nm,0.9s					
RND	Reindeer	77.56	333	IAmb	IAmb	05 51 50.3
	comp=Z,14nm,0.8s					
MCK	McKinley	77.65	334	P	P	05 51 49.3 +1.0
	baz=100					
NEA2	Nenana	77.85	335	P	P	05 51 50.2 +0.8
	baz=100					
CUT	Chulitna	78.04	332	P	P	05 51 51.0 +0.5
	baz=98					
I23K	Minto, Yukon-K	78.07	335	P	P	05 51 51.2 +0.6
	baz=100					
CAPN	Captain Cook N	78.24	331	P	P	05 51 52.4 +0.8
	baz=97					
HOM	Homer	78.35	329	P	P	05 51 52.5 +0.3
	baz=96					
MLY	Manley	78.62	335	P	P	05 51 54.2 +0.5
	baz=98					
COLD	Coldfoot	78.75	337	P	P	05 51 56.0 +1.7
	baz=99					
TOLK	Toolik Lake Re	78.75	339	P	P	05 51 55.7 +1.3
	baz=100					
CAST	Castle Rocks	79.00	333	P	P	05 51 56.5 +0.8
CAST				IAmb	IAmb	05 51 57.2
	comp=Z,8.3nm,0.9s					
NB2	NORSAR Subarra	81.29	29	P	P	05 52 08.8 +0.7
	comp=Z,0.4nm,0.5s,baz=268,slow=5.3					
NOA	NORSAR Array B	81.29	29	P	P	05 52 08.9 +0.8
	comp=Z,0.4nm,0.4s,baz=267,slow=5.3,SNR=4.6					
GERES	GERESS Array B	82.78	42	P	P	05 52 15.8 -0.4
	comp=Z,0.1nm,0.3s,baz=245,slow=3.8,SNR=1.8					
OJC	Ojow	86.64	40	IAmb	IAmb	05 52 41.7
	comp=Z,8.7nm,0.5s					
ARCES	ARCESS Array B	86.64	20	P	P	05 52 35.0 0.0
	comp=Z,2.3nm,0.8s,baz=278,slow=4.1,SNR=17					
FINES	FINESS Array B	88.40	28	P	P	05 52 43.7 +0.2
	comp=Z,1.8nm,0.9s,baz=256,slow=5.6,SNR=1.6					
ZALV	Zalesovo Beam	116.64	14	PKP	PKiKP	05 58 35.2 +0.2
	comp=Z,1.3nm,0.3s,baz=338,slow=1.5,SNR=5.3					
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	05 58 45.9 -0.3
	comp=Z,0.6nm,0.3s,baz=303,slow=2.4,SNR=19					
SONM	Songino Array	125.56	0	PKP	PKPdf	05 58 52.8 +0.3
	comp=Z,0.5nm,0.5s,baz=278,slow=1.2,SNR=6.6					
LZH	Lanzhou	137.20	4	⇑PKP	PKPdf	05 59 14.3 -0.6
LZH				pPKP	pPKPdf	05 59 57.5 +1.3
LZH				sPKP		06 00 14.3
ASAR	Alice Springs	149.16	234	PKP	PKPdf	05 59 36.0 0.0
	comp=Z,2.6nm,0.8s,baz=116,slow=3.0,SNR=18					
ASAR				PKPbc	PKPbc	05 59 39.8 -0.5
	comp=Z,2.5nm,0.6s,baz=118,slow=3.3,SNR=12					
ASAR	Alice Springs	149.16	234		PKPdf	05 59 34.1 -1.9
ASAR				PKPbc	PKPbc	05 59 39.8 -0.5
ASAR				PKPab	PKiKP	05 59 43.1 +1.6
WRA	Warramunga Arr	150.38	241	PKP	PKPdf	05 59 37.5 -0.5
	comp=Z,0.4nm,0.6s,baz=108,slow=2.7,SNR=4.0					
WRA				PKPbc	PKPbc	05 59 42.8 -0.5
	comp=Z,2.0nm,0.4s,baz=107,slow=2.8,SNR=86					
WRA	Warramunga Arr	150.38	241		PKPdf	05 59 38.1 +0.1
WRA				PKPbc	PKPbc	05 59 43.0 -0.3
CMAR	Chiang Mai Arr	153.66	17	PKPbc	PKiKP	05 59 51.3 +0.5
	comp=Z,1.3nm,0.5s,baz=325,slow=2.7,SNR=4.1					

TAP **20** *05:52:40.8,24.˚87N×122.˚45E,h7km,ML3.1,C*
JMA **20** *05:52:40.4±0.2,24.˚83N×122.˚43E,h4km±4km,M2.6*

ISC 20 05:52:40.7±1.1,24.˚85N±0.˚03×122.˚45E±0.˚02,h6km±10km, n48,σ0°48/89,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.45	291	P		Pg		05 52 49.3	-0.1
	baz=288								
TWB1				S		Sg		05 52 55.3	0.0
	baz=288								
NTC	Toucheng	0.56	270	*e*P		Pg		05 52 52.2	+0.6
	baz=268								
NTC				*e*S		Sg		05 52 58.6	-0.4
	baz=268								
TIPB	Shuangxi	0.58	282	P		Pg		05 52 52.2	+0.3
	baz=280								
TIPB				S		Sg		05 53 00.0	+0.5
	baz=280								
TWC	Suao	0.60	246	*e*P		Pg		05 52 52.0	-0.2
	baz=244								
TWC				*e*S		Sg		05 53 01.3	+1.3
	baz=244								
JYNG	Yonagunijimaku	0.60	131	P		Pg		05 52 52.2	-0.1
JYNG				*e*S		Sg		05 53 00.2	+0.1
YOJ	Yonaguni jima	0.64	127	P		Pg		05 52 53.0	0.0
	baz=128								
YOJ				S		Sg		05 53 01.6	+0.2
	baz=128								
YOJ	Yonaguni jima	0.64	127	P		Pg		05 52 53.0	0.0
YOJ				S		Sg		05 53 01.6	+0.2
NWF	Wu-fen Shan	0.65	290	P		Pg		05 52 53.5	+0.3
	baz=288								
NWF				S		Sg		05 53 01.8	+0.2
	baz=288								
WFSB	Wu-fen Shan	0.65	290	P		Pg		05 52 53.5	+0.3
	baz=288								
WFSB				S		Sg		05 53 01.7	+0.1
	baz=288								
ENAH	Nanao	0.71	236	*e*P		Pg		05 52 54.4	+0.1
	baz=234								
ENAH				*e*S		Sg		05 53 04.6	+1.0
	baz=234								
TWE	Neicheng	0.72	260	P		Pg		05 52 54.5	-0.2
	baz=257								
TWE				S		Sg		05 53 04.7	+0.6
	baz=257								
ENA	Nanau	0.77	237	P		Pg		05 52 55.6	0.0
	baz=235								
ENA				*e*S		Sg		05 53 06.1	+0.5
	baz=235								
TWA	Mucha	0.80	279	*e*P		Pb		05 52 56.9	-0.2
	baz=277								
TWA				*e*S		Sg		05 53 06.9	+0.4
	baz=277								
NHDH	Xindian Distri	0.85	278	*e*P		Pg		05 52 56.9	-0.2
	baz=276								
NHDH				*e*S		Sg		05 53 08.1	+0.1
	baz=276								
PCYT	Pengchaiyu	0.85	336	*e*P		Pg		05 52 56.5	-0.5
	baz=335								
YM08	YM08	0.85	293	*e*P		Pg		05 52 57.0	-0.1
	baz=292								
YM01	YM01	0.85	290	*e*P		Pg		05 52 56.5	-0.6
	baz=288								
YM01				*e*S		Sg		05 53 08.4	+0.3
	baz=288								
YM11	YM11	0.85	292	*e*P		Pb		05 52 58.2	+0.1
	baz=290								
YM11				*e*S		Sg		05 53 08.0	-0.3
	baz=290								
YM10	YM10	0.86	291	*e*P		Pg		05 52 56.9	-0.4
	baz=289								
YM10				*e*S		Sb		05 53 10.2	+0.1
	baz=289								
NWLT	Wulai	0.86	265	*e*P		Pg		05 52 57.1	-0.3
	baz=263								
NWLT				*e*S		Sg		05 53 08.9	+0.3
	baz=263								
TWY	Chenhua	0.88	299	P		Pg		05 52 57.9	+0.2
	baz=297								
TWY				*e*S		Sg		05 53 09.3	+0.2
	baz=297								
TATO	Taipei	0.88	278	*e*P		Pg		05 52 57.2	-0.5
	baz=276								
TATO				*e*S		Sg		05 53 07.9	-1.3
	baz=276								
YM04	YM04	0.88	290	*e*P		Pg		05 52 57.3	-0.4
	baz=288								
YM04				*e*S		Sg		05 53 09.6	+0.5
	baz=288								
NDT	Datong Townshi	0.89	254	*e*P		Pg		05 52 58.0	+0.2
	baz=252								
NDT				*e*S		Sg		05 53 09.8	+0.4
	baz=252								
YHNB	Yeheng	0.99	260	*e*P		Pg		05 52 59.2	-0.7
	baz=258								
YHNB				*e*S		Sg		05 53 12.6	-0.1
	baz=258								
NSK	Sanguang	1.01	260	*e*P		Pg		05 52 59.6	-0.5
	baz=258								
NSK				*e*S		Sg		05 53 12.5	-0.7
	baz=258								
NACB	Ninganchiao	1.03	229	*e*P		Pg		05 52 59.6	-0.9
	baz=228								
NACB				*e*S		Sg		05 53 13.4	-0.5
	baz=228								
NNSB	Datong	1.06	247	*e*P		Pg		05 53 00.8	-0.3
	baz=245								
NNSH	Datong	1.06	247	*e*P		Pg		05 53 00.3	-0.8
	baz=245								
NNSH				*e*S		Sg		05 53 14.7	-0.1
	baz=245								
NNS	Nan Shan	1.06	248	*e*P		Pg		05 53 00.7	-0.5
	baz=246								
NNS				*e*S		Sg		05 53 14.6	-0.3
	baz=246								
ETLH	Xiulin Townshi	1.09	234	*e*P		Pg		05 53 01.1	-0.6
	baz=233								
ETLH				*e*S		Sb		05 53 17.1	+0.4
	baz=233								
TWD	Chiawan	1.09	226	*e*P		Pg		05 53 01.1	-0.7
	baz=224								
TWD				*e*S		Sb		05 53 17.3	+0.7
	baz=224								
FUSS	Fushou	1.25	242	*e*P		Pg		05 53 04.7	-0.1
	baz=240								
FUSS				*e*S		Sb		05 53 21.6	+0.1
	baz=240								
IRIF	Iriomote-Funau	1.27	114	P		Pn		05 53 04.9	-0.2
WHF	Hehuan Shan	1.29	237	P		Pn		05 53 04.4	-1.3
	baz=236								
WHF				*e*S		Sg		05 53 22.2	-0.1
	baz=236								
TDCB	Techi	1.32	243	*e*P		Pn		05 53 05.1	-0.8
	baz=242								
TDCB				*e*S		Sb		05 53 22.7	-0.6
	baz=242								
NSTT	Nanjuang	1.34	261	*e*P		Pn		05 53 05.7	-0.3
	baz=259								
NSTT				*e*S		Sn		05 53 24.7	+0.6
	baz=259								
CHGB	Renai	1.41	236	P		Pn		05 53 06.9	-0.2
	baz=235								
CHGB				*e*S		Sb		05 53 26.2	+0.3
	baz=235								
OWD	Renai	1.47	233	*e*P		Pn		05 53 07.6	-0.3
	baz=231								
OWD				*e*S		Sb		05 53 27.8	+0.3
	baz=231								
WHP	Taichung City	1.48	248	*e*P		Pn		05 53 08.1	0.0
	baz=246								
WHP				*e*S		Sb		05 53 28.2	+0.2
	baz=246								
JKRS	Kuro-shima	1.54	113	P		Pn		05 53 08.5	-0.3
HGSD	Ruisui	1.65	215	*e*P		Pn		05 53 09.5	-0.8
	baz=214								
EHY	Hungye	1.69	218	*e*P		Pn		05 53 11.2	+0.3
	baz=217								
EHY				*e*S		Sn		05 53 33.4	+0.5
	baz=217								
SMLT	Sun Moon Lake	1.71	236	*e*P		Pn		05 53 12.0	+0.8
	baz=235								
SSLB	Suanglung	1.73	233	P		Pn		05 53 11.4	0.0
	baz=231								
SSLB				*e*S		Sn		05 53 34.0	+0.2
	baz=231								
TYC	Yuchr	1.73	237	*e*P		Pn		05 53 12.3	+0.9
	baz=236								
TYC				*e*S		Sb		05 53 34.8	-0.2
	baz=236								
ALS	Alishan	2.01	229	*e*P		Pn		05 53 15.6	0.0
	baz=227								
ALS				*e*S		Sb		05 53 43.6	+0.3
	baz=227								
CHN5	Tsauling	2.04	233	*e*P		Pb		05 53 18.1	-0.3
	baz=232								
CHN5				*e*S		Sb		05 53 44.5	+0.4
	baz=232								

IDC **20** *06:00:30.1±1.5,19.˚61S×173.˚02W,h0km,mb4.0/6, mb1 4.3/8,mb1mx4.0/41,mbtmp4.2/8,ML4.0/2,MS2.7/2, Ms1 2.7/2,ms1mx2.5/37,Error ellipse: s-maj=45.2km s-min=28.0km az=161.0*

ISC 20 06:00:33.9±1.0,19.˚75±0.˚2×173.˚0W±0.˚1,h26km,n9, σ0°59/8,mb4.0/5,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAR	Rarotonga	12.44	99	Pn		Pn		06 03 29.2	-0.2
	4.4nm,0.3s,baz=235,slow=22,SNR=2.4								
RAR				Sn		Sn		06 05 38.2	-9.0
	1.1nm,0.3s,baz=133,slow=11,SNR=2.3								
RAR				LR		LR		06 08 04.8	
	comp=Z,37nm,18.1s,baz=266,slow=36								
DZM	Mont Dzumac	19.40	259	P		P		06 04 58.6	+0.4
	0.7nm,0.3s,baz=94,slow=17,SNR=6.4								
URZ	Urewera	20.41	203	P		P		06 05 09.4	+0.4
	6.5nm,0.9s,baz=45,slow=8.8,SNR=2.0								
URZ				S		S		06 08 39.0	-17
	11nm,1.1s,baz=41,slow=14,SNR=2.3								
PPT	Papeete	22.25	88	LR		LR		06 13 50.4	
	comp=Z,18nm,18.5s,baz=201,slow=36								
C

mb1 3.5/5,mb1mx3.2/37,mbtmp3.6/5,ML2.9/2,MS3.7/1, Ms1 3.7/1,ms1mx2.6/18,Error ellipse: s-maj=77.2km s-min=30.0km az=143.0

ISC 20 06:03:46.7±1.4,**6.4S**±0.1×**146.7E**±0.2,**h100**km,**n7,** σ0.9**4/7,mb3.5/3,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.03**	**172**	P	**Pn**	**06 04 32.8**	**0.0**
	15nm,0.3s,baz=316,slow=4.9,SNR=7.9						
PMG				S	**Sn**	**06 05 08.2**	**-0.1**
	5.9nm,0.3s,baz=359,slow=15,SNR=3.3						
PMG				LR	LR	06 05 38.7	
	comp=Z,32nm,19.4s,baz=188,slow=37						
WRA	**Warramunga Arr**	**18.07**	**221**	P	**Pn**	**06 07 50.5**	**-0.8**
	0.2nm,0.3s,baz=38,slow=11,SNR=11						
ASAR	**Alice Springs**	**21.15**	**214**	P	**P**	**06 08 25.1**	**+1.3**
	0.8nm,0.6s,baz=54,slow=8.7,SNR=7.2						
FITZ	**Fitzroy Crossi**	**23.63**	**239**	P	**P**	**06 08 48.5**	**-0.5**
	2.4nm,0.8s,baz=64,slow=10.0,SNR=5.9						
RAR	**Rarotonga**	**53.74**	**112**	LR	LR	06 30 44.2	
	comp=Z,64nm,20.2s,baz=254,slow=30						
ILAR	**Eielson Array**	**85.94**	**23**	P	**P**	**06 16 14.9**	**-0.4**
	0.3nm,0.6s,baz=246,slow=4.4,SNR=6.5						
TORD	**Torodi Ar. Bea**	**144.92**	**284**	PKPbc	**PKPdf**	**06 23 14.1**	**+0.9**
	1.0nm,0.7s,baz=77,slow=3.8,SNR=4.7						

*BGR **20** 06:05:34.5±0.0,4°.84N×95°.01E,h33km,mb4.9*
*BJI **20** 06:05:37.7±0.0,6°.99N×94°.05E,h5km,mB4.8/40, mb4.8/53,Ms4.5/45,Ms7 4.2/33*
*NEIC **20** 06:05:46.0±1.6,7°.43N±0°.08×94°.33E±0°.09,h27km±3km, mb5.0/93,Error ellipse: s-maj=13.2km s-min=10.3km az=59.0*
*IDC **20** 06:05:47.3±5.6,7°.51N×94°.43E,h33km±42km,mb4.5/34, mb1 4.6/35,mb1mx4.5/47,mbtmp4.7/35,ML4.7/1,MS3.9/36, Ms1 3.9/36,ms1mx3.8/50,Error ellipse: s-maj=13.5km s-min=9.2km az=52.0*
*GCMT **20** 06:05:47.0±0.4,7°.49N±0°.02×94°.42E±0°.02,h19km±1km, MW4.8/75,Moment Tensor Solution. s11,c12; s75,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.22±.19; $M_{\theta\theta}$-1.16±.10; $M_{\phi\phi}$2.37±.13; $M_{r\theta}$-0.16±.24; $M_{\theta\phi}$0.39±.08; $M_{\phi r}$-0.71±.21; Best double couple: $M_0$1.97400×10^{16} NP1:ϕ_s161.00000°,δ39.00000°,λ-127.00000°. NP2: ϕ_s25.00000°,δ60.00000°,λ-64.00000°. Principal axes: T 2.5530, Plg11.0000°, Azm96.0000°; N -1.1690, Plg22.0000°, Azm191.0000°; P -1.3940, Plg65.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **20** 06:05:49.8±1.8,7°.N±3°×9°.5E±°,h13km±16km,M4.9/13, mb4.8/13,mB5.5/7,MLv4.8/5,Mw(mB)5.0/7*
*KLM **20** 06:05:50.0,7°.36N×94°.51E,h36km,mb4.9*

ISC 20 06:05:44.7±0.6,**7.38N**±0°.04×**94.33E**±0°.04,**h15**km±3km, **h15**km:**pP-P,n400,**σ1**9**71**/398,**mb4.9**/112,**MS4.0**/44, **12C-11D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.54**	**228**	*e*P	**Pb**	**06 05 57.0**	**+1.2**
CMBY				*i* Sg	**Sb**	**06 06 05.6**	**+2.1**
CMBY				IAML		06 06 09.8	
	comp=N,55μm,0.5s						
CMBY				IAML		06 06 11.0	
	comp=E,61μm,0.4s						
LHMI	**Lhok Sumawe**	**3.37**	**129**	P	**Pn**	**06 06 37.9**	**+1.2**
LHMI	**Lhok Sumawe**	**3.37**	**129**	Pn	**Pn**	**06 06 37.9**	**+1.2**
PKDT	**Phuket**	**4.00**	**82**	P	**Pn**	**06 06 45.7**	**+0.2**
SURT	**Suratani**	**4.69**	**70**	P	**Pn**	**06 06 57.4**	**+2.4**
KCSI	**Kotacane, Aceh**	**5.14**	**138**	P	**Pn**	**06 07 02.5**	**+1.4**
TRTT	**Trang**	**5.33**	**85**	P	**Pn**	**06 07 04.0**	**+0.2**
	comp=E,2.4nmcomp=E,6μmcomp=E,618nm,1.1s						
DGPR	**DIGLIPUR**	**5.93**	**347**	*e*P	**Pn**	**06 07 15.6**	**+3.6**
DGPR				*e*S	**Sn**	**06 08 26.5**	**+6.9**
RPSI	**Rantau Prapat**	**6.52**	**135**	Pn	**Pn**	**06 07 21.7**	**+1.5**
KULM	**Kulim**	**6.61**	**108**	Pn	**Pn**	**06 07 21.9**	**-0.6**
KULM	**Kulim**	**6.61**	**108**	P	**Pn**	**06 07 21.0**	**-0.4**
GSI	**Gunungsitoli**	**6.85**	**152**	P	Pb	06 07 48.2	+4.8
IPM	**Ipoh**	**7.25**	**113**	Pn	**Pn**	**06 07 28.7**	**-1.5**
IPM	**Ipoh**	**7.25**	**113**	P	**Pn**	**06 07 29.0**	**-1.2**
PHET	**Kaeng Krachan**	**7.58**	**43**	P	Pn	**06 07 36.5**	**+1.9**
	comp=E,0.4nmcomp=E,2μmcomp=E,99nm,1.0s						
SRDT	**SRDT**	**8.37**	**34**	P	Pn	06 07 49.1	+3.5
	comp=E,0.2nmcomp=E,11μmcomp=E,45nm,0.6s						
MNSI	**Mandailing Nat**	**8.38**	**141**	P	**Pn**	**06 07 47.6**	**+2.0**
	comp=E,38nm,0.6s						
UTHA	**Uthaitani**	**9.55**	**31**	P	**Pn**	**06 08 04.0**	**+2.3**
	comp=E,395nmcomp=E,47nm,0.8s						
BKNI	**Bangkinang**	**9.69**	**136**	P	**Pn**	**06 08 05.9**	**+2.3**
	comp=E,4μmcomp=E,118nm,1.0s						
BKNI	**Bangkinang**	**9.69**	**136**	Pn	**Pn**	**06 08 04.5**	**+0.9**
SRAK	**Srakaew**	**10.04**	**48**	P	Pn	06 08 18.5	+10
SDSI	**Sungai Dareh**	**10.88**	**139**	P	**Pn**	**06 08 20.1**	**+0.2**
	comp=E,2μmcomp=E,32nm,1.0s						
MYKOM	**Kota Tinggi**	**10.99**	**120**	Pn	**Pn**	**06 08 22.0**	**+0.5**
SUKH	**Sukhothai**	**11.29**	**27**	P	Pn	06 08 29.0	+3.4
	comp=E,24nm,0.8s						
CHAI	**Chaiyaphum**	**11.31**	**41**	P	Pn	06 08 29.8	+3.9
	comp=E,38nm,0.7s						
PHIT	**Phitsanulok**	**11.42**	**31**	P	Pn	06 08 31.0	+3.7
	comp=E,4μmcomp=E,198nm,0.8s						
CM05	**Chiang Mai Arr**	**11.84**	**22**	P	Pn	06 08 37.0	+3.8
	comp=E,185nmcomp=E,24nm,1.0s						
CM13	**Chiang Mai Arr**	**11.85**	**22**	P	Pn	06 08 37.0	+3.8
	comp=E,165nmcomp=E,24nm,0.9s						
CM04	**Chiang Mai Arr**	**11.85**	**22**	P	Pn	06 08 38.0	+4.7
	comp=E,236nmcomp=E,27nm,1.1s						
CM01	**Chiang Mai Arr**	**11.87**	**22**	P	Pn	06 08 37.0	+3.5
	comp=E,511nmcomp=E,28nm,0.8s						
CM02	**Chiang Mai Arr**	**11.87**	**22**	P	Pn	06 08 38.1	+4.5
	comp=E,222nmcomp=E,30nm,1.0s						
CM15	**Chiang Mai Arr**	**11.88**	**22**	P	**Pn**	**06 08 37.0**	**+3.3**
	comp=E,601nmcomp=E,20nm,0.7s						
CM31	**Chiang Mai Arr**	**11.89**	**22**	P	Pn	06 08 38.6	+4.8
	comp=E,691nm,0.6s						
CM31	**Chiang Mai Arr**	**11.89**	**22**	Pn	**Pn**	**06 08 37.0**	**+3.2**
CMAR	**Chiang Mai Arr**	**11.89**	**22**	Pn	**Pn**	**06 08 34.3**	**+0.4**
	comp=E,1.4nm,0.3s,baz=212,slow=14,SNR=27						
CMAR				LR	LR	06 13 08.9	
	comp=E,582nm,18.3s,baz=251,slow=38						
CMAR	**Chiang Mai Arr**	**11.89**	**22**	Pn	**Pn**	**06 08 34.0**	**+0.2**
CM09	**Chiang Mai Arr**	**11.90**	**22**	P	Pn	06 08 38.6	+4.7
	comp=E,192nmcomp=E,30nm,1.0s						
UTTA	**Uttaradit**	**11.96**	**30**	P	**Pn**	**06 08 37.4**	**+2.7**
	comp=E,354nmcomp=E,51nm,0.8s						
CM36	**Chiang Mai Arr**	**12.01**	**22**	P	Pn	06 08 39.0	+3.6
CM32	**Chiang Mai Arr**	**12.04**	**21**	P	Pn	06 08 45.0	+9.2
CM35	**Chiang Mai Arr**	**12.17**	**22**	P	**Pn**	**06 08 41.0**	**+3.3**
LAMP	**Lampang**	**12.22**	**24**	P	**P**	**06 08 54.0**	**+3.2**
CHTO	**Chiang Mai**	**12.22**	**21**	Pn	**Pn**	**06 08 41.2**	**+2.9**
CMMT	**Chiang Mai**	**12.22**	**21**	P	Pn	06 08 41.9	+3.6
	comp=E,13nm,1.1s						
CM33	**Chiang Mai Arr**	**12.22**	**21**	P	Pn	06 08 42.0	+3.6
CM34	**Chiang Mai Arr**	**12.33**	**22**	P	P	06 08 46.0	-6.0
PAYA	**Payao**	**13.07**	**24**	P	**P**	**06 08 57.4**	**-2.8**
	comp=E,4μmcomp=E,379nm,1.0s						
NONG	**Nongkai**	**13.66**	**38**	P	**P**	**06 09 06.2**	**-0.6**
	comp=E,39nm,1.6s						
KSI	**Kapahiang**	**13.71**	**143**	P	P	06 09 15.9	+8.5
LHSI	**Lahat**	**14.42**	**140**	P	**Pn**	**06 09 08.1**	**-0.4**
	comp=E,2μmcomp=E,82nm,1.1s						
CHLP	**Challavanipeta**	**14.91**	**319**	*e*P	**Pn**	**06 09 13.8**	**-1.2**
SAIH	**SAIHA**	**15.08**	**355**	*e*P	**Pn**	**06 09 18.6**	**+1.1**
PPBI	**Pangkal Pinang**	**15.12**	**128**	P	**P**	**06 09 20.1**	**-2.9**
	comp=E,30nm,0.9s						
LWLI	**Liwa**	**15.68**	**141**	P	P	06 09 38.6	+9.2
PVM	**Polavaram**	**15.81**	**310**	*e*P	**Pn**	**06 09 26.6**	**-0.3**
KLSI		**15.86**	**139**	P	**Pn**	**06 09 26.8**	**-0.7**
	comp=E,7.5nm,1.4s						
MYLAV	**Mylavaram**	**16.30**	**306**	*e*P	**Pn**	**06 09 32.7**	**-0.5**
KASI	**Kota Agung**	**16.34**	**141**	P	P	06 09 46.4	+10
ADKI	**Addanki**	**16.38**	**302**	*e*P	**Pn**	**06 09 33.5**	**-0.7**
AGT	**Agartala**	**16.68**	**350**	*e*P	**P**	**06 09 39.7**	**-0.5**
SLVN	**Son La**	**16.68**	**33**	P	**P**	**06 09 41.0**	**+0.6**
KSM	**Kuching**	**16.97**	**109**	P	**P**	**06 09 42.5**	**-1.1**
KSM				IAmb	IAmb	06 09 54.1	
	comp=Z,90nm,1.1s						
GGR	**Gangavaram**	**17.25**	**308**	*e*P	**Pn**	**06 09 44.5**	**-0.7**
NJS	**Nagarjunasagar**	**17.29**	**303**	*e*P	**P**	**06 09 47.2**	**+0.2**
IMP	**Imphal**	**17.36**	**359**	*e*P	**P**	**06 09 47.0**	**-1.0**
IMP				IAmb	IAmb	06 09 53.0	
	comp=Z,48nm,1.2s						
IMP				*e*S	**S**	**06 13 05.1**	**-3.1**
SILR	**SILCHAR**	**17.37**	**355**	*e*P	**P**	**06 09 48.2**	**+0.3**
CUPL	**Choutuppal**	**17.98**	**305**	*e*P	**P**	**06 09 54.0**	**-0.8**
BOK	**Bokaro**	**18.23**	**335**	*e*P	**P**	**06 09 56.9**	**-0.5**
BOK				IAmb	IAmb	06 10 05.8	
	comp=Z,72nm,1.1s						
BOK				*e*S	**S**	**06 13 25.0**	**-0.7**
SHL	**Shillong**	**18.24**	**353**	*e*P	**Pn**	**06 09 56.2**	**-1.3**
SHL	**Shillong**	**18.24**	**353**	P	**Pn**	**06 09 54.6**	**-3.0**
KOHI	**KOHIMA**	**18.24**	**359**	*e*P	**P**	**06 09 56.5**	**-1.2**
KOHI				IAmb	IAmb	06 10 01.3	
	comp=Z,46nm,0.7s						
HYB	**Hyderabad**	**18.34**	**304**	*i* P	**P**	**06 09 59.0**	**+0.2**
HYB				*e*S	**Sn**	**06 13 21.0**	**-2.5**
HYBB	**Hyderabad (bro**	**18.34**	**304**	*e*P	**Pn**	**06 09 57.0**	**-1.8**
URV	**Uravakonda**	**18.35**	**296**	*e*P	**P**	**06 09 57.9**	**-1.0**
SBUM	**Sibu**	**18.48**	**104**		**Pn**	**06 10 00.7**	**+0.3**
SBUM	**Sibu**	**18.48**	**104**	P	**Pn**	**06 10 03.0**	**+2.6**
RPR	**Rampur**	**18.55**	**309**	*e*P	**Pn**	**06 10 01.8**	**+0.6**
GUWA	**GUWAHATI**	**18.88**	**353**	⇑*e*P	**Pn**	**06 10 04.9**	**-0.3**
GUWA				*e*S	**S**	**06 13 40.4**	**+1.5**
GUWA				IAML		06 13 50.8	
	comp=E,12nm,1.4s						
GUWA				IAML		06 13 51.2	
	comp=N,7.9nm,1.2s						
QIZ	**Qiongzhong**	**19.01**	**51**	P	**P**	**06 10 05.0**	**-1.1**
QIZ				S	**Sn**	**06 13 38.1**	**-1.5**
QIZ				sS	**sS**	**06 13 46.3**	**-1.1**
QIZ				LR	LR		
	comp=N,2μm,12.8s						
QIZ				LR	LR		
	comp=N,960nm,14.2s						
QIZ				LR	LR		
	comp=N,610nm,13.7s						
LEM	**Lembang**	**19.36**	**136**	LR	LR	06 18 48.7	
	comp=N,754nm,18.1s,baz=282,slow=40						
KMI	**Kunming**	**19.39**	**24**	⇓*e*P	**Pn**	**06 10 15.3**	**+3.7**
KMI				S	**S**	**06 13 49.9**	**+0.3**
KMI				sS	pS	06 14 01.5	-2.7
KMI				SS	**SnSn**	**06 14 15.9**	**+12**
KMI				pmax	pmax		
	comp=N,44nm,0.8s						
KMI				pmax	pmax		
	comp=N,140nm,3.5s						
KMI				LR	LR		
	comp=N,500nm,13.3s						
KMI				LR	LR		
	comp=N,650nm,12.4s						
KMI				LR	LR		
	comp=N,530nm,15.8s						
LKP	**Lekhapani**	**19.90**	**4**	*e*P	**Pn**	**06 10 16.7**	**-0.7**
LKP				IAmb	IAmb	06 10 21.5	
	comp=Z,114nm,0.6s						
KLRI	**Killari**	**20.28**	**303**	*e*P	Pn	06 10 20.7	-1.3
ODAN	**Odare**	**20.47**	**342**	*e*P	**P**	**06 10 21.5**	**-0.7**
	comp=Z,75nm,0.7s						
GTK	**Tadong**	**20.57**	**345**	*e*P	**P**	**06 10 22.5**	**-0.6**
GTK				IAmb	IAmb	06 10 29.1	
	comp=Z,48nm,0.8s						
GTK				*e*S	**S**	**06 14 05.4**	**-7.5**
RAMN	**Ramite**	**20.80**	**340**	*e*P	**P**	**06 10 26.0**	**+0.1**
	comp=Z,184nm,0.8s						
TAPN	**Taplejung**	**20.83**	**343**	*e*P	**P**	**06 10 25.2**	**-1.0**
	comp=Z,208nm,1.0s						
SMRI	**Semarang**	**21.53**	**131**	P	**P**	**06 10 36.0**	**+2.5**
SMRI				IAmb	IAmb	06 10 39.8	
	comp=Z,75nm,0.8s						
KKM	**Kota Kinabalu**	**21.77**	**92**	P	**P**	**06 10 35.7**	**-0.5**
KKM				IAmb	IAmb	06 11 16.7	
	comp=Z,115nm,1.6s						
PKI	**Pulchoki**	**21.79**	**338**	*e*P	**P**	**06 10 35.8**	**-0.8**
	comp=Z,123nm,1.0s						
PKIN	**Phulchoki**	**21.80**	**338**	*e*P	**P**	**06 10 35.8**	**-0.8**
	comp=Z,120nm,1.0s						
GUN	**Gumba**	**21.93**	**340**	*e*P	**P**	**06 10 36.9**	**-1.2**
	comp=Z,134nm,0.7s						
DMN	**Daman**	**21.94**	**338**	*e*P	**P**	**06 10 37.5**	**-0.6**
	comp=Z,76nm,0.8s						
KAD	**Karad**	**21.99**	**299**	⇓*i* P	**P**	**06 10 39.7**	**+1.2**
KKN	**Kakani**	**22.04**	**338**	*e*P	**P**	**06 10 38.2**	**-0.9**
	comp=Z,70nm,0.8s						
GYA	**Guiyang**	**22.31**	**30**	⇓P	**P**	**06 10 43.9**	**+2.0**
GYA				PP	pwP	06 11 16.1	+28
GYA				S	**S**	**06 14 47.5**	**+0.4**
GYA				SS	**SnSn**	**06 15 25.8**	**+11**
GYA				pmax	pmax		
	comp=Z,25nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=Z,830nm,13.0s						
GYA				LR	LR		
	comp=Z,520nm,12.2s						
LSA	**Lhasa**	**22.41**	**353**	P	**P**	**06 10 42.4**	**-0.9**
LSA				pmax	pmax		
	comp=Z,190nm,0.7s						
LSA	**Lhasa**	**22.41**	**353**	P	**P**	**06 10 42.3**	**-0.9**
LSA				IAmb	IAmb	06 10 46.4	
	comp=Z,61nm,0.7s						
GKN	**Gorkha**	**22.47**	**337**	*e*P	**P**	**06 10 42.9**	**-0.8**
	comp=Z,84nm,0.7s						
BHPL	**Bhopal**	**22.64**	**316**	*e*P	**P**	**06 10 45.0**	**-0.5**
BHPL				IAmb	IAmb	06 10 55.1	
	comp=Z,56nm,1.2s						
KOLN	**Koldanda**	**22.69**	**335**	*e*P	**P**	**06 10 45.3**	**-0.7**
	comp=Z,258nm,1.2s						
DANN	**Dangsing**	**23.13**	**336**	*e*P	**P**	**06 10 49.9**	**-0.8**
	comp=Z,113nm,0.8s						
PYUN	**Piuthan**	**23.24**	**334**	*e*P	**P**	**06 10 51.5**	**-0.2**
	comp=Z,303nm,1.2s						
MYLDM	**Lahad Datu**	**24.12**	**94**	P	**P**	**06 11 02.4**	**+2.2**
MYLDM				IAmb	IAmb	06 11 12.9	
	comp=Z,101nm,1.1s						
CD2	**Chengdu**	**25.02**	**19**	P	**P**	**06 11 09.1**	**+0.8**
CD2				S	**S**	**06 15 31.8**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,160nm,5.3s						
CD2				LR	LR		
	comp=Z,980nm,11.2s						
CD2				LR	LR		
	comp=Z,410nm,11.6s						
H08S3	**Diego Garcia H**	**26.40**	**236**	T	T	06 37 57.3	
	baz=55,slow=76,SNR=923						
H08S2	**Diego Garcia H**	**26.40**	**236**	T	T	06 37 57.4	
	baz=55,slow=76,SNR=487						
H08S1	**Diego Garcia H**	**26.41**	**236**	T	T	06 37 58.7	
	baz=55,slow=76,SNR=138						
ENH	**Enshi**	**26.85**	**30**	P	**P**	**06 11 25.2**	**+0.4**
ENH				IAmb	IAmb	06 11 38.3	
	comp=Z,50nm,1.4s						
TOLI2	**Tolitoli**	**27.09**	**102**	P	**P**	**06 11 27.1**	**0.0**
KAPI	**Kappang**	**28.20**	**115**	P	**P**	**06 11 37.0**	**0.0**
	comp=Z,8.3nm,0.4s,baz=302,slow=12,SNR=5.5						
KAPI				LR	LR	06 22 48.3	
	comp=Z,287nm,20.9s,baz=288,slow=36						
KAPI	**Kappang**	**28.20**	**115**	P	**P**	**06 11 36.5**	**-0.5**
WHN	**Wuhan**	**29.72**	**37**	⇓P	**P**	**06 11 52.3**	**+1.9**
XAN	**Xi'an**	**29.76**	**25**	P	**P**	**06 11 51.0**	**+0.2**
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
XAN				LR	LR		
	comp=Z,910nm,15.2s						
XAN				LR	LR		
	comp=Z,770nm,15.2s						
XAN	**Xi'an**	**29.76**	**25**	P	**P**	**06 11 50.5**	**-0.3**
LZH	**Lanzhou**	**29.87**	**16**	*e*P	P	06 11 56.3	+4.4
LZH				pP	pwP	06 12 01.0	+2.2
LZH				sP	sP	06 12 03.4	+6.1
LZH				sS	sS	06 17 02.8	+7.7
LZH				SS	**ScP**	**06 18 28.0**	**-8.7**
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,5.0s						
LZH				LR	LR		
	comp=Z,500nm,11.4s						
LZH				LR	LR		
	comp=Z,560nm,15.2s						
DAV	**Davao City (W)**	**31.00**	**89**	LR	LR	06 26 15.6	
	comp=Z,176nm,18.2s,baz=304,slow=40						
GTA	**Gaotai**	**32.27**	**8**	⇑P	**P**	**06 12 13.3**	**+0.3**
GTA				pP	sP	06 12 16.8	-1.6
GTA				sP	pwP	06 12 19.3	-0.6
GTA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,37nm,6.4s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,170nm,16.4s						
NIL	**Nilore**	**32.61**	**326**	P	**P**	**06 12 15.0**	**-0.9**
NJ2	**Nanjing**	**33.53**	**40**	*e*P	**P**	**06 12 24.5**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,470nm,14.2s						
NJ2				LR	LR		
	comp=Z,560nm,17.1s						
BATI	**Baumata**	**34.03**	**121**	LR	LR	06 26 35.8	
	comp=Z,627nm,21.5s,baz=297,slow=37						
SOEI	**Soe**	**34.33**	**119**	P	**P**	**06 12 31.0**	**-0.2**
SOEI				IAmb	IAmb	06 12 39.0	
	comp=Z,24nm,1.1s						
KBL	**Kabul**	**35.68**	**323**	P	**P**	**06 12 42.0**	**-0.8**
KBL				IAmb	IAmb	06 12 43.4	
	comp=Z,14nm,1.0s						
KSH	**Kashi**	**36.00**	**336**	P	**P**	**06 12 42.9**	**-2.4**
KSH				S	**S**	**06 18 28.3**	**+4.6**
KSH				pmax	pmax		
	comp=Z,22nm,0.6s						
KSH				pmax	pmax		
	comp=Z,120nm,4.0s						
KSH				LR	LR		
	comp=Z,280nm,5.7s						
KSH				LR	LR		
	comp=Z,380nm,6.2s						
JLN	**Jalan Bani Buh**	**36.70**	**297**	P	**P**	**06 12 54.3**	**+2.9**
	SNR=7.1						
JLN				P	**P**	**06 12 54.3**	**+2.9**
	SNR=7.1						
HHC	**Hu-ho-hao-te**	**36.70**	**22**	*e*P	**P**	**06 12 50.8**	**-0.5**
HHC				pmax	pmax		
	comp=Z,12nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=Z,310nm,12.6s						
HHC				LR	LR		
	comp=Z,180nm,12.8s						
WMQ	**Urumqi**	**36.76**	**352**	*e*P	**P**	**06 12 52.3**	**+0.6**
WMQ				pP	pwP	06 12 57.4	-1.3
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.7s						
WMQ				LR	LR		
	comp=Z,640nm,22.3s						
WMQ				LR	LR		
	comp=Z,270nm,20.5s						
WBK	**Wadi Bani Khal**	**37.23**	**298**	P	**P**	**06 12 58.6**	**+2.7**
WBK				P	**P**	**06 12 58.6**	**+2.7**
WSAR	**Wadi Sarin**	**37.73**	**299**	LR	LR	06 29 16.0	
	comp=Z,148nm,18.5s,baz=123,slow=37						
SIJI	**Sorong**	**37.74**	**101**	P	**P**	**06 13 00.6**	**+0.2**
	comp=Z,7.7nm,0.5s,baz=309,slow=7.7,SNR=6.0						
BJT	**Baijiatuau**	**37.93**	**28**	P	**P**	**06 12 59.0**	**-2.6**
BJT				IAmb	IAmb	06 13 10.7	
	comp=Z,23nm,1.3s						
SHLS	**Shalkode**	**37.96**	**342**	*e*P	**P**	**06 13 00.9**	**-1.0**
	comp=Z,11nm,1.0s,baz=343						
SHLS				*i* S	**S**	**06 18 50.9**	**-2.6**
	baz=343						
PSA00	**Pilbara Seismi**	**38.14**	**140**	P	**P**	**06 13 03.4**	**-0.2**
PSA00				IAmb	IAmb	06 13 04.1	
	comp=Z,13nm,0.7s						
PSA00	**Pilbara Seismi**	**38.14**	**140**	P	**P**	**06 13 04.1**	**+0.6**
PSA00				IAmb	IAmb	06 13 05.0	
	comp=Z,7.6nm,0.7s						
SMDO	**Samad**	**38.18**	**298**	P	**P**	**06 13 06.9**	**+2.9**
	SNR=5.7						
SMDO				P	**P**	**06 13 06.9**	**+2.9**
	SNR=5.7						
GAR	**Garm**	**38.20**	**329**	P	**P**	**06 13 02.9**	**-1.1**
GAR				IAmb	IAmb	06 13 03.9	
	comp=Z,44nm,0.9s						
SATY	**Saty**	**38.20**	**341**	*e*P	**P**	**06 13 03.8**	**-0.2**
	baz=341						
BIDO	**Bidbid**	**38.26**	**299**	P	**P**	**06 13 07.7**	**+3.1**
	SNR=7.8						
KPKS	**Kokpek**	**38.48**	**342**	*e*P	**P**	**06 13 05.7**	**-0.6**
	comp=Z,7.6nm,1.1s,baz=342						
CHGR	**Chuyangaron**	**38.54**	**328**	P	**P**	**06 13 05.4**	**-1.4**
TNSS	**Tian-Shan**	**38.67**	**339**	*e*P	**P**	**06 13 07.6**	**-0.7**
	baz=340						
MDOK	**Medeo**	**38.75**	**340**	*e*P	**P**	**06 13 08.4**	**-0.2**
	baz=340						
MDOK				*i* S	**S**	**06 19 04.5**	**-1.0**
	baz=340						
MDOK				*e*S	**S**	**06 19 04.6**	**-1.0**
	baz=340						
MDOK				LR	LR	06 30 36.5	
	comp=Z,88nm,13.9s,baz=340						
BTK	**Batken**	**38.76**	**331**	P	**P**	**06 13 08.8**	**+0.2**
BTK				IAmb	IAmb	06 13 11.3	
	comp=Z,33nm,1.0s						
BSY	**Bisya**	**38.83**	**297**	P	**P**	**06 13 12.5**	**+3.0**
	SNR=7.5						
BSY				P	**P**	**06 13 12.5**	**+3.0**
	SNR=7.5						
HOQ	**Hoqain**	**38.99**	**299**	P	**P**	**06 13 13.5**	**+2.8**
	SNR=12						
HOQ				P	**P**	**06 13 13.5**	**+2.8**
	SNR=12						
TKM2	**Tokmak 2**	**39.06**	**338**	P	**P**	**06 13 10.7**	**-0.6**
	SNR=6.4						
KBK	**Karagaybulak**	**39.08**	**337**	P	**P**	**06 13 11.9**	**+0.5**
	SNR=9.5						
AML	**Almayashu**	**39.13**	**335**	P	**P**	**06 13 12.1**	**0.0**
	SNR=21						
AAK	**Ala-Archa**	**39.23**	**337**	P	**P**	**06 13 13.5**	**+0.8**

KSAR	**Wonju Array Be**	42.68	40	P		**P**	**06 13 41.3**	**+0.3**
KSRS	**Korea Array**	42.72	40	P		**P**	**06 13 40.0**	**-1.3**
	comp=Z,3.9nm,0.9s,baz=228,slow=9.6,SNR=13							
KSRS				LR		LR	06 33 19.8	
	comp=Z,161nm,18.6s,baz=228,slow=39							
SEM	**Semipalatinsk**	44.47	347	*eP*		**P**	**06 13 54.4**	**-1.1**
	baz=347							
GEYT	**Alibeck**	44.69	318	P		**P**	**06 13 57.6**	**+0.4**
	comp=Z,27nm,0.6s,baz=158,slow=9.3,SNR=33							
GEYT				PcP		**PcP**	**06 15 38.9**	**-0.8**
	comp=Z,4.7nm,0.6s,baz=120,slow=6.0,SNR=3.7							
GEYT				LR		LR	06 36 02.8	
	comp=Z,175nm,18.5s,baz=115,slow=41							
GEYT	**Alibeck**	44.69	318	P		**P**	**06 13 57.3**	**0.0**
GYA0B	**ALIBECK ARRAY**	44.69	318	P		**P**	**06 13 57.3**	**0.0**
TLY	**Talaya**	44.83	8	LR		LR	06 33 57.8	
	comp=Z,82nm,21.4s,baz=150,slow=38							
KURBB	**Kurchatov Arra**	45.07	346	PcP		**PcP**	**06 15 40.0**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=158,slow=3.1,SNR=7.2							
KURK	**Kurchatov**	45.13	346	P		**P**	**06 14 00.1**	**-0.4**
KURK				P		**P**	**06 14 00.1**	**-0.4**
KURK	**Kurchatov**	45.13	346	P		**P**	**06 14 00.2**	**-0.3**
CN2	**Changchun**	45.35	32	*eP*		P	06 14 08.3	+6.0
CN2				*eS*		**S**	**06 20 50.1**	**+7.4**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CN2				LR		LR		
	comp=N,300nm,12.0s							
CN2				LR		LR		
	comp=E,300nm,12.0s							
CN2				LR		LR		
	comp=Z,300nm,15.0s							
NWAO	**Narrogin (SRO)**	45.62	153	P		**P**	**06 14 05.3**	**+0.7**
	comp=Z,12nm,0.9s,baz=347,slow=7.2,SNR=5.7							
BRZS	**Berezniki**	46.17	341	*eP*		**P**	**06 14 08.2**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=341							
BRZS				*i* S		**S**	**06 20 53.1**	**-1.2**
	baz=341							
ZAA0	**Zalesovo Array**	47.07	352	P		**P**	**06 14 15.5**	**-0.2**
ZAA0				IAmb		IAmb	06 14 24.1	
	comp=Z,36nm,1.1s							
ZALV	**Zalesovo Beam**	47.07	352	P		**P**	**06 14 15.3**	**-0.3**
	comp=Z,17nm,0.7s,baz=174,slow=7.9,SNR=79							
ZALV				PcP		**PcP**	**06 15 46.6**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=158,slow=1.6,SNR=1.5							
ZALV				LR		LR	06 38 41.0	
	comp=Z,129nm,18.7s,baz=156,slow=42							
JAY	**Jayapura**	47.30	100	LR		LR	06 37 31.9	
	comp=Z,51nm,18.1s,baz=200,slow=40							
WB0	**Warramunga Arr**	47.78	125	P		**P**	**06 14 20.6**	**-1.2**
WB0				IAmb		IAmb	06 14 22.4	
	comp=Z,8.9nm,0.6s							
WRA	**Warramunga Arr**	47.82	125	P		**P**	**06 14 21.5**	**-0.6**
	comp=Z,4.1nm,0.5s,baz=306,slow=8.3,SNR=106							
WRA				PcP		**PcP**	**06 15 50.8**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=311,slow=2.9,SNR=14							
WRA				LR		LR	06 36 27.1	
	comp=Z,175nm,20.1s,baz=290,slow=38							
WRA	**Warramunga Arr**	47.82	125	P		**P**	**06 14 20.8**	**-1.3**
WRAB	**Tennant Creek**	47.83	125	P		**P**	**06 14 21.0**	**-1.1**
WRAB				IAmb		IAmb	06 14 23.5	
	comp=Z,12nm,1.1s							
WB2	**Warramunga Arr**	47.83	125	P		**P**	**06 14 21.6**	**-0.5**
WB2				IAmb		IAmb	06 14 23.5	
	comp=Z,19nm,1.2s							
WC3	**Warramunga Arr**	47.86	125	P		**P**	**06 14 21.3**	**-1.0**
WC3				IAmb		IAmb	06 14 23.7	
	comp=Z,13nm,1.0s							
WR0	**Warramunga Arr**	47.99	125	P		**P**	**06 14 22.0**	**-1.4**
WR0				IAmb		IAmb	06 14 24.9	
	comp=Z,22nm,1.3s							
JGF	**Kuroka**	48.33	48	P		**P**	**06 14 25.0**	**-0.9**
JGF				IAmb		IAmb	06 14 27.7	
	comp=Z,12nm,1.0s							
USRK	**Ussuriysk Ar.**	49.20	35	P		**P**	**06 14 31.9**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=216,slow=14,SNR=2.6							
USRK				LR		LR	06 36 08.9	
	comp=Z,114nm,18.2s,baz=206,slow=37							
USRK	**Ussuriysk Ar.**	49.20	35	P		**P**	**06 14 30.9**	**-1.4**
MJAR	**Matsushiro Arr**	49.35	47	P		**P**	**06 14 33.0**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=238,slow=7.3,SNR=6.7							
MJAR				LR		LR	06 36 06.4	
	comp=Z,97nm,20.0s,baz=150,slow=37							
MJAR	**Matsushiro Arr**	49.35	47	P		**P**	**06 14 36.3**	**+2.6**
ASAR	**Alice Springs**	49.45	130	P		**P**	**06 14 34.0**	**-0.6**
	comp=Z,4.4nm,0.5s,baz=301,slow=7.9,SNR=56							
ASAR				PcP		**PcP**	**06 15 56.9**	**+0.1**
	comp=Z,5.7nm,0.6s,baz=312,slow=3.4,SNR=20							
ASAR				LR		LR	06 37 47.8	
	comp=Z,151nm,20.7s,baz=300,slow=39							
ASAR	**Alice Springs**	49.45	130	P		**P**	**06 14 33.7**	**-0.9**
AS31	**Alice Springs**	49.45	130	P		**P**	**06 14 34.0**	**-0.6**
RAYN	**Ar Rayn**	49.46	295	P		**P**	**06 14 35.8**	**+1.0**
BRVK	**Borovoye**	49.58	341	P		**P**	**06 14 34.3**	**-0.7**
BRVK				P		**P**	**06 14 34.3**	**-0.7**
BRVK	**Borovoye**	49.58	341	P		**P**	**06 14 34.3**	**-0.7**
BRVK				IAmb		IAmb	06 14 41.0	
	comp=Z,17nm,0.9s							
FORT	**Forrest**	49.84	141	P		**P**	**06 14 37.5**	**+0.1**
GUMO	**Guam**	50.00	79	LR		LR	06 32 11.0	
	comp=Z,60nm,21.6s,baz=249,slow=32							
ABKAR	**Akbulak array**	50.75	331	P		**P**	**06 14 43.3**	**-0.7**
OPO	**Ambohidratompo**	53.16	240	P		**P**	**06 15 05.2**	**+2.5**
	comp=Z,3.7nm,0.5s,baz=66,slow=5.1,SNR=7.4							
ABPO	**Ambohimpanom**	53.32	240	P		**P**	**06 15 07.0**	**+3.1**
GNI	**Garni**	54.92	315	LR		LR	06 40 39.0	
	comp=Z,32nm,21.7s,baz=98,slow=38							
GNI	**Garni**	54.92	315	P		**P**	**06 15 14.8**	**-0.5**
PMG	**Port Moresby**	55.21	107	P		**P**	**06 15 16.7**	**-0.7**
	comp=Z,12nm,0.6s,baz=293,slow=7.7,SNR=2.1							
ARU	**Arti**	56.42	337	P		**P**	**06 15 24.3**	**-1.2**
ARU				IAmb		IAmb	06 15 25.8	
	comp=Z,24nm,0.9s							
KMBO	**Kilima Mbogo**	57.56	264	P		**P**	**06 15 37.2**	**+2.6**
	comp=Z,16nm,0.8s,baz=62,slow=9.6,SNR=41							
KMBO				LR		LR	06 38 20.7	
	comp=Z,140nm,18.2s,baz=92,slow=34							
KMBO	**Kilima Mbogo**	57.56	264	P		**P**	**06 15 37.0**	**+2.4**
KMBO				IAmb		IAmb	06 15 37.9	
	comp=Z,16nm,0.8s							
KBZ	**Khabaz**	57.58	318	P		**P**	**06 15 32.8**	**-1.1**
	comp=Z,4.9nm,0.9s,baz=236,slow=24,SNR=7.3							
KBZ				PcP		**PcP**	**06 15 27.6**	**+0.4**
	comp=Z,5.8nm,0.8s,baz=56,slow=24,SNR=7.8							
KIV	**Kislovodsk**	57.81	318	P		**P**	**06 15 34.4**	**-1.3**
KIV				IAmb		IAmb	06 15 51.6	
	comp=Z,10nm,0.6s							
CTA	**Charters Tower**	57.90	119	PcP		**PcP**	**06 16 29.1**	**+0.2**
	comp=Z,2.2nm,0.5s,baz=302,slow=7.5,SNR=5.5							
LODK	**Lodwar**	58.80	270	P		**P**	**06 15 44.8**	**+1.7**
	SNR=6.3							
STKA	**Stephens Creek**	59.63	134	P		**P**	**06 15 47.8**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=318,slow=7.5,SNR=12							
STKA				LR		LR	06 44 38.2	
	comp=Z,118nm,19.3s,baz=300,slow=39							
YAK	**Yakutsk**	60.40	18	P		**P**	**06 15 52.5**	**-0.6**
KIRV	**Kirov**	61.54	335	LR		LR	06 44 10.8	
	comp=Z,3μm,21.7s,baz=257,slow=38							
NRIK	**Noril'sk**	62.04	357	P		**P**	**06 16 03.9**	**-0.3**
	comp=Z,5.9nm,0.6s,baz=147,slow=6.3,SNR=10							
NRIK				LR		LR	06 48 04.0	
	comp=Z,105nm,18.8s,baz=200,slow=41							
BR131	**Keskin Array S**	62.89	311	P		**P**	**06 16 08.7**	**-1.9**
BRTR	**Keskin Array B**	62.89	311	P		**P**	**06 16 08.8**	**-1.9**
	comp=Z,5.2nm,0.6s,baz=127,slow=7.4,SNR=16							
BRTR				LR		LR	06 46 24.6	
	comp=Z,39nm,20.9s,baz=113,slow=39							
BRTR	**Keskin Array B**	62.89	311	P		**P**	**06 16 08.3**	**-2.4**
ANTO	**Ankara**	63.56	311	P		**P**	**06 16 12.6**	**-2.4**
ELL	**Elmali**	65.17	307	P		**P**	**06 16 24.4**	**-1.3**
OBN	**Obninsk**	65.90	328	P		**P**	**06 16 28.8**	**-1.0**
KLMR	**Klimovskoe**	66.98	334	*eP*		**P**	**06 16 34.9**	**-1.7**
KLMR				AMP			06 16 43.6	
	comp=Z,51nm,1.5s							
TIXI	**Tiksi**	67.68	11	P		**P**	**06 16 39.8**	**-1.1**
PETK	**Petropavlovsk-**	68.30	35	LR		LR	06 47 45.4	
	comp=Z,60nm,21.6s,baz=230,slow=37							
SORM	**Soroca**	68.58	319	⇑P		**P**	**06 16 45.3**	**-1.7**
AKASG	**Malin Array Be**	68.66	322	P		**P**	**06 16 45.4**	**-2.0**
	comp=Z,2.0nm,0.7s,baz=89,slow=4.9,SNR=17							
AKASG				LR		LR	06 51 23.8	
	comp=Z,51nm,19.5s,baz=285,slow=40							
AKASG	**Malin Array Be**	68.66	322	P		**P**	**06 16 45.1**	**-2.3**
AKBB	**Malin Array Si**	68.66	322	P		**P**	**06 16 45.2**	**-2.2**
IDI	**Anoyia**	69.00	305	⇓P		**P**	**06 16 47.7**	**-2.3**
IDI	**Anoyia**	69.00	305	P		**P**	**06 16 48.7**	**-1.2**
IDI				IAmb		IAmb	06 16 50.3	
	comp=Z,16nm,0.6s							
VRI	**Vrincioaia**	69.19	316	⇓P		**P**	**06 16 49.9**	**-1.0**
PLOR	**Plostina**	69.24	316	⇓P		**P**	**06 16 49.9**	**-1.3**
LSZ	**Lusaka**	69.28	251	P		**P**	**06 16 53.2**	**+1.2**
	comp=Z,7.7nm,0.7s,baz=68,slow=6.1,SNR=15							
LSZ	**Lusaka**	69.28	251	P		**P**	**06 16 53.1**	**+1.0**
LSZ				IAmb		IAmb	06 16 54.1	
	comp=Z,8.0nm,0.7s							
TESR	**Tescani**	69.37	317	⇓P		**P**	**06 16 50.2**	**-1.7**
MLR	**Muntele Rosu**	69.66	316	⇓P		**P**	**06 16 52.0**	**-1.9**
MLR	**Muntele Rosu**	69.66	316	P		**P**	**06 16 53.4**	**-0.5**
BIZ	**Bicaz**	69.82	317	⇑P		**P**	**06 16 53.6**	**-1.1**
DOPR	**Dopca**	70.12	316	⇑P		**P**	**06 16 54.9**	**-1.7**
VOIR		70.27	316	⇑P		**P**	**06 16 55.8**	**-1.8**
BURAR	**Bucovina Array**	70.54	318	⇑P		**P**	**06 16 58.1**	**-1.1**
BURAR	**Bucovina Array**	70.54	318	P		**P**	**06 16 58.1**	**-1.1**
ARR	**Arges**	70.54	315	⇓P		**P**	**06 16 58.0**	**-1.2**
BUR08	**Bucovina Ar. S**	70.56	318	P		**P**	**06 16 58.6**	**-0.7**
BUR08				IAmb		IAmb	06 17 15.3	
	comp=Z,14nm,1.3s							
IDID	**Didziasalis**	71.29	326	*eP*		**P**	**06 17 03.0**	**-0.4**
IIGN	**Ignalina**	71.58	326	*eP*		**P**	**06 17 04.5**	**-0.7**
IZAR	**Zarasai**	71.67	326	*eP*		**P**	**06 17 05.3**	**-0.4**
ISAL	**Salakas**	71.69	326	*eP*		**P**	**06 17 05.7**	**-0.2**
HERR	**Herculane**	72.03	315	⇑P		**P**	**06 17 06.5**	**-1.7**
VSU	**Vasula**	72.11	329	*eP*		**P**	**06 17 07.7**	**-0.6**
KWP	**Kalwaria Pacla**	72.53	320	P		**P**	**06 17 09.8**	**-1.3**
KWP				IAmb		IAmb	06 17 11.2	
	comp=Z,12nm,0.9s							
BZS	**Buzias**	72.68	315	⇓P		**P**	**06 17 10.3**	**-1.7**
KOLS	**Kolonicke sedl**	72.70	319	*eP*		**P**	**06 17 11.6**	**-0.5**
SIRR	**Siria**	72.73	316	⇑P		**P**	**06 17 11.1**	**-1.3**
PABE	**Paberze**	72.87	326	*eP*		**P**	**06 17 12.2**	**-0.7**
SUW	**Suwalki**	73.02	324	P		**P**	**06 17 12.1**	**-1.7**
SUW				IAmb		IAmb	06 17 13.2	
	comp=Z,27nm,0.8s							
CRVS	**Cervenica-Dubn**	73.22	319	*eP*		**P**	**06 17 15.0**	**-0.2**
FIA1	**FINESS Array S**	73.23	332	P		**P**	**06 17 14.4**	**-0.6**
FIA1				IAmb		IAmb	06 17 15.2	
	comp=Z,21nm,0.8s							
FINES	**FINESS Array B**	73.23	332	P		**P**	**06 17 14.3**	**-0.7**
	comp=Z,16nm,0.6s,baz=99,slow=5.3,SNR=52							
FINES				LR		LR	06 53 45.1	
	comp=Z,88nm,18.9s,baz=112,slow=39							
FINES	**FINESS Array B**	73.23	332	P		**P**	**06 17 13.9**	**-1.1**
PBUR	**Paburge**	74.10	326	*eP*		**P**	**06 17 19.8**	**-0.3**
LBTB	**Lobatse**	74.17	242	P		**P**	**06 17 23.0**	**+1.7**
LBTB				IAmb		IAmb	06 17 23.5	
	comp=Z,11nm,0.8s							
OJC	**Ojcow**	74.47	320	P		**P**	**06 17 21.8**	**-0.7**
OJC				IAmb		IAmb	06 17 22.6	
	comp=Z,12nm,0.7s							
VYHS	**Vyhne**	74.90	318	*eP*		**P**	**06 17 23.2**	**-1.8**
BOSA	**Boshof**	75.48	238	P		**P**	**06 17 29.6**	**+0.7**
	comp=Z,12nm,0.7s,baz=88,slow=4.8,SNR=28							
BOSA				LR		LR	06 46 15.7	
	comp=Z,78nm,20.4s,baz=58,slow=32							
BOSA	**Boshof**	75.48	238	P		**P**	**06 17 30.3**	**+1.4**
BOSA				IAmb		IAmb	06 17 30.8	
	comp=Z,12nm,0.7s							
JAVC	**Velka Javorina**	75.70	318	*eP*		**P**	**06 17 29.9**	**+0.2**
ARA0	**ARCESS Array S**	75.79	340	*eP*		**P**	**06 17 29.5**	**-0.3**
ARCES	**ARCESS Array B**	75.79	340	P		**P**	**06 17 29.3**	**-0.5**
	comp=Z,4.5nm,0.9s,baz=103,slow=5.5,SNR=10							
ARCES				LR		LR	06 53 39.6	
	comp=Z,147nm,20.4s,baz=80,slow=38							
MORC	**Moravsky Berou**	75.87	319	⇑P		**P**	**06 17 30.6**	**-0.1**
MORC	**Moravsky Berou**	75.87	319	*eP*		**P**	**06 17 30.1**	**-0.5**
MORC	**Moravsky Berou**	75.87	319	P		**P**	**06 17 29.9**	**-0.8**
MODS	**Modra-Piesok**	75.92	318	*eP*		**P**	**06 17 29.4**	**-1.5**
ZST	**Bratislava**	76.02	318	*eP*		**P**	**06 17 31.4**	**-0.1**
KRLC	**Kraliky**	76.39	320	*eP*		**P**	**06 17 32.8**	**-0.8**
KRLC				*ep*P		**sP**	**06 17 39.3**	**+0.1**
KTK1	**Kautokeino**	76.42	339	*eP*		**P**	**06 17 33.5**	**+0.2**
KOGS	**Kog**	76.48	316	*i* P		**P**	**06 17 33.2**	**-0.9**
KRUC	**Moravsky**	76.56	319	*eP*		**P**	**06 17 33.9**	**-0.6**
DPC	**Dobruska-Polom**	76.70	320	*eP*		**P**	**06 17 35.4**	**0.0**
DPC				*ep*P		**sP**	**06 17 40.8**	**-0.2**
GCIS	**Gornji Cirnik**	76.88	315	*i* P		**P**	**06 17 33.9**	**-2.5**
CHVC	**Chvalec**	76.89	320	*eP*		**P**	**06 17 36.1**	**-0.3**
BOJS	**Bojanci**	77.12	315	*i* P		**P**	**06 17 36.9**	**-0.8**
SOKA	**Soboth**	77.33	316	*eP*		**P**	**06 17 38.1**	**-0.9**
	comp=Z,11nm,1.1s							
LJU	**Ljubljana**	77.65	315	*eP*		**P**	**06 17 40.3**	**-0.4**
OBKA	**Obir**	77.66	316	*eP*		**P**	**06 17 40.2**	**-0.7**
	comp=Z,6.9nm,0.9s							
MOA	**Molln**	77.90	317	*eP*		**P**	**06 17 41.4**	**-0.7**
	comp=Z,5.0nm,0.9s							
BSD	**Bornholm Skovb**	77.93	325	*i* P		P	06 17 47.3	+5.3
BSD	**Bornholm Skovb**	77.93	325	*i* P		P	06 17 47.4	+5.3
MAW	**Mawson**	78.09	192	P		**P**	**06 17 43.8**	**+1.2**
	comp=Z,6.2nm,0.6s,baz=32,slow=3.9,SNR=13							
MAW				LR		LR	06 47 43.5	
	comp=Z,48nm,18.3s,baz=52,slow=32							
MAW	**Mawson**	78.09	192	P		**P**	**06 17 42.6**	**0.0**
VOJS	**Vojsko**	78.10	315	*i* P		**P**	**06 17 42.3**	**-1.1**
PBCC	**Pribram**	78.16	319	*eP*		**P**	**06 17 43.5**	**0.0**
PBCC				*ep*P		**sP**	**06 17 48.0**	**-1.1**
BRG	**Berggiesshubel**	78.25	320	*eP*		**P**	**06 17 43.6**	**-0.3**
	comp=Z,5.1nm,0.9s,baz=92,slow=5.2							
MYKA	**Terra Mystica**	78.29	316	*eP*		**P**	**06 17 42.9**	**-1.5**
	comp=Z,4.6nm,0.8s							
GEC2	**GERESS Array S**	78.32	318	*eP*		**P**	**06 17 44.1**	**-0.4**
	comp=Z,8.5nm,0.8s,baz=92,slow=5.2							
GEC2	**GERESS Array S**	78.32	318	P		**P**	**06 17 43.8**	**-0.7**
GEC2				IAmb		IAmb	06 17 44.9	
	comp=Z,8.4nm,0.8s							
GERES	**GERESS Array B**	78.32	318	P		**P**	**06 17 43.8**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=86,slow=5.5,SNR=43							
GERES				LR		LR	06 57 55.9	
	comp=Z,41nm,18.2s,baz=39,slow=40							
PRED	**Cave del Predi**	78.33	316	P		**P**	**06 17 43.7**	**-0.9**
PRED				IAmb		IAmb	06 17 45.1	
	comp=Z,13nm,0.9s							
KHC	**Kasperske Hory**	78.41	319	*eP*		**P**	**06 17 44.2**	**-0.7**
KHC				*ep*P		**sP**	**06 17 50.0**	**-0.6**
KHC	**Kasperske Hory**	78.41	319	P		**P**	**06 17 43.9**	**-1.0**
KBA	**Koelnbreinsper**	78.50	316	*eP*		**P**	**06 17 44.5**	**-1.1**
	comp=Z,3.5nm,0.6s							
FBE	**Freiberg**	78.63	320	*eP*		**P**	**06 17 46.0**	**+0.1**
	comp=Z,16nm,1.1s,baz=92,slow=5.2							
ZOU	**Zoufplan**	78.75	316	P		**P**	**06 17 46.0**	**-1.0**
CLL	**Collm**	78.86	321	*i* P		**P**	**06 17 47.0**	**-0.3**
WET	**Wettzell**	78.87	319	*eP*		**P**	**06 17 47.0**	**-0.5**
	comp=Z,8.4nm,1.1s,baz=92,slow=5.2							
STAL	**STALIGIAL**	78.92	316	P		**P**	**06 17 46.7**	**-1.1**
FAUS	**Fauske**	79.02	337	*eP*		**P**	**06 17 47.2**	**-0.6**
ABTA	**Abfaltersbach**	79.07	316	*eP*		**P**	**06 17 47.8**	**-0.8**
	comp=Z,1.7nm,0.5s							
STEI	**Steigen**	79.10	338	*eP*		**P**	**06 17 47.8**	**-0.4**
CIMO	**Cimolais**	79.11	316	P		**P**	**06 17 48.0**	**-0.8**
CIMO				IAmb		IAmb	06 17 49.4	
	comp=Z,22nm,0.9s							
TANN	**Tannenbergstha**	79.18	320	*eP*		**P**	**06 17 48.5**	**-0.6**
	comp=Z,6.6nm,1.1s,baz=92,slow=5.2							
MOR8	**Moi Rana**	79.20	336	*eP*		**P**	**06 17 47.6**	**-1.3**
ROTZ	**Rotzenmuhle**	79.33	319	*eP*		**P**	**06 17 49.7**	**-0.2**
	comp=Z,6.5nm,0.9s,baz=92,slow=5.2							
MANZ	**Manzenberg**	79.39	319	*eP*		**P**	**06 17 50.2**	**0.0**
	comp=Z,11nm,1.2s,baz=92,slow=5.2							
CTI	**Castel Tesino**	79.66	315	P		**P**	**06 17 51.0**	**-0.9**
CTI				IAmb		IAmb	06 17 52.2	
	comp=Z,12nm,0.8s							
WTTA	**Wattenberg**	79.67	317	*eP*		**P**	**06 17 50.7**	**-1.3**
	comp=Z,13nm,1.0s							
WATA	**Walderalm**	79.71	317	*eP*		**P**	**06 17 50.6**	**-1.6**
	comp=Z,5.4nm,0.6s							
LOF	**Lofoten**	79.76	338	*eP*		**P**	**06 17 52.0**	**+0.2**
SQTA	**Sankt Quirin**	79.96	317	*eP*		**P**	**06 17 52.5**	**-1.1**
	comp=Z,8.1nm,0.6s							
GRF	**Grafenberg Arr**	79.96	319	*eP*		**P**	**06 17 53.2**	**-0.2**
	comp=Z,8.9nm,0.8s,baz=92,slow=5.2							
NC405	**NORSAR Array S**	80.01	331	P		**P**	**06 17 52.5**	**-0.8**
MOTA	**Moosalm**	80.03	317	*eP*		**P**	**06 17 52.6**	**-1.3**
	comp=Z,12nm,1.0s							
NC602	**NORSAR Array S**	80.08	330	P		**P**	**06 17 52.4**	**-1.4**
NSS	**Namsos**	80.09	334	*eP*		**P**	**06 17 52.8**	**-0.9**
NC303	**NORSAR Array S**	80.19	331	P		**P**	**06 17 53.7**	**-0.6**
NB201	**NORSAR Array S**	80.22	331	P		**P**	**06 17 53.5**	**-0.9**
NB2	**NORSAR Subarra**	80.25	331	P		**P**	**06 17 53.4**	**-1.3**
	comp=Z,7.3nm,0.7s,baz=96,slow=5.1							
NB2	**NORSAR Subarra**	80.25	331	P		**P**	**06 17 53.4**	**-1.3**
	baz=96,slow=5.1							
NOA	**NORSAR Array B**	80.25	331	P		**P**	**06 17 53.4**	**-1.3**
	comp=Z,6.4nm,0.7s,baz=93,slow=5.7,SNR=41							
NOA				LR		LR	06 57 12.6	
	comp=Z,53nm,19.1s,baz=215,slow=38							
RETA	**Reutte**	80.27	317	*eP*		**P**	**06 17 54.0**	**-1.2**
	comp=Z,9.1nm,0.6s							
FETA	**Feichten**	80.29	316	*eP*		**P**	**06 17 54.5**	**-0.8**
	comp=Z,4.4nm,0.6s							
SPA0	**Spitsbergen Ar**	80.36	348	*eP*		**P**	**06 17 54.6**	**-0.4**
NAO01	**NORSAR Array S**	80.41	330	P		**P**	**06 17 53.9**	**-1.6**
NAO01				IAmb		IAmb	06 17 55.3	
	comp=Z,21nm,0.9s							
NAO01	**NORSAR Array S**	80.41	330	*eP*		**P**	**06 17 54.5**	**-1.0**
NBO00	**NORSAR Array S**	80.47	331	P		**P**	**06 17 55.0**	**-0.8**
NC204	**NORSAR Array S**	80.48	331	P		**P**	**06 17 54.4**	**-1.6**
NC204				IAmb		IAmb	06 18 02.0	
	comp=Z,17nm,0.9s							
CLZ	**Clausthal**	80.51	321	*eP*		**P**	**06 17 55.7**	**-0.6**
	comp=Z,22nm,1.6s,baz=92,slow=5.2							
BSEG	**Bad Segeberg**	80.56	323	*eP*		**P**	**06 17 56.3**	**-0.1**
	comp=Z,20nm,1.1s,baz=92,slow=5.2							
NRDL	**Niedersach Rie**	80.68	322	*eP*		**P**	**06 17 56.8**	**-0.2**
	comp=Z,21nm,1.5s,baz=92,slow=5.2							
DAVA	**Damuels**	80.87	317	*eP*		**P**	**06 17 57.6**	**-0.9**
	comp=Z,5.0nm,0.8s							
TUE	**Stuetta**	81.25	316	P		**P**	**06 17 59.8**	**-0.8**
TUE				IAmb		IAmb	06 18 09.3	
	comp=Z,16nm,1.1s							
DOMB	**Dombas**	81.31	332	*eP*		**P**	**06 18 00.1**	**-0.2**
VSL	**Villasalto**	81.47	309	P		**P**	**06 17 59.2**	**-2.5**
VSL				IAmb		IAmb	06 19 22.4	
	comp=Z,17nm,1.3s							
SKAR	**Skarslia**	81.67	330	*eP*		**P**	**06 18 01.4**	**-0.9**
KEST	**Kesra**	81.68	305	P		**P**	**06 18 02.8**	**-0.1**
	comp=Z,5.3nm,0.7s,baz=34,slow=2.6,SNR=7.9							
KEST				LR		LR	06 59 25.1	
	comp=Z,40nm,19.2s,baz=313,slow=39							
BFO	**Black Forest**	81.89	318	*eP*		**P**	**06 18 02.4**	**-1.2**
	comp=Z,6.3nm,1.0s,baz=92,slow=5.2							
MOL	**Molde**	82.02	332	*eP*		**P**	**06 18 04.1**	**+0.1**
IBBN	**Ibbenburen**	82.12	322	*eP*		**P**	**06 18 04.3**	**-0.5**
	comp=Z,19nm,1.1s,baz=92,slow=5.2							
ODD1	**Odda**	82.52	329	*eP*		**P**	**06 18 05.2**	**-1.6**
BLS5	**Blasjo**	82.62	329	*eP*		**P**	**06 18 07.5**	**+0.3**
SENIN	**Lac Senin/Sane**	82.67	316	P		**P**	**06 18 07.5**	**-0.6**
BNI	**Bardonecchia**	83.18	314	P		**P**	**06 18 09.2**	**-1.5**
KMY	**Karmoy**	83.25	329	*eP*		**P**	**06 18 10

LRV	Little Rabbit	0.58	126		Pg	06 21 38.5	+0.4
JRSC	Jasper Ridge	0.81	322		Pg	06 21 42.7	+0.2
PMPB	Monarch Peak	0.85	130		Pg	06 21 43.4	+0.3
WENL	Wente Vineyard	0.86	352		Pb	06 21 44.2	+0.5
PAPM	Alder Peak	0.88	167		Pb	06 21 44.8	+0.8
CMCM	Mills College	1.11	336		Pb	06 21 47.3	-0.6
SMCB	Saint Mary's C	1.14	339		Pb	06 21 48.2	-0.3
PKD	Bear Valley Ra	1.19	133		Pn	06 21 48.7	-0.6
BDM	Black Diamond	1.20	350		Pg	06 21 50.7	+0.8
BKS	Berkeley--Byer	1.22	336		Pn	06 21 48.7	-1.0
BL67	Building 67, L	1.22	335		Pn	06 21 49.0	-0.8
BRK	Berkeley--Havi	1.22	335		Pn	06 21 48.7	-1.0
VAK	Adit at Lawren	1.22	335		Pn	06 21 48.8	-1.0
BRIB	Briones	1.23	339		Pn	06 21 49.3	-0.6
RAMR	Ramage Ranch	1.28	152		Pn	06 21 50.4	-0.1
HERB	Hercules	1.35	337		Pn	06 21 50.9	-0.6
FARB	Farallon Islan	1.45	310		Pn	06 21 52.3	-0.5
TCHL	Shandon	1.45	138		Pn	06 21 52.9	0.0
PAGB	Antelope Grade	1.51	133		Pn	06 21 53.5	-0.2
THIS	South End of C	1.52	133		Pn	06 21 54.1	+0.2
TRAM	Private Proper	1.53	135		Pn	06 21 53.9	-0.1
TSCN	Private Proper	1.59	140		Pn	06 21 54.9	+0.1
CMB	Columbia Colle	1.59	37		Pn	06 21 54.1	-0.8
CMB	Columbia Colle	1.59	37		Pn	06 21 54.4	-0.5
MCCM	Marconi Confer	1.71	324		Pn	06 21 55.8	-0.7
MCCM	Marconi Confer	1.71	324	Pn	Pn	06 21 55.7	-0.8
CVS	Carmenet Viney	1.71	337		Pn	06 21 55.6	-1.0
VOG	Valley Oaks Go	1.84	103	P	Pn	06 21 57.6	-0.7
	baz=286						
VOG				S	Sb	06 22 22.5	-0.9
	baz=286						
SMMC	Simmler	1.95	138	P	Pn	06 21 59.6	-0.2
	baz=321,SNR=48						
SMMC				S	Sn	06 22 24.5	+0.3
	baz=321						
PMLM	Mount Lospe	2.04	156		Pn	06 22 01.0	+0.1
HELL	Mitchell Peak,	2.08	92		Pn	06 22 01.0	-0.6
FTR	Fort Ross	2.14	325		Pn	06 22 01.9	-0.5
GCRM	Castle Rock Sp	2.19	337		Pn	06 22 02.0	-1.1
MDPB	Devils Postpil	2.19	66		Pn	06 22 04.1	+0.8
MRDM	Red Cones	2.19	67		Pn	06 22 04.3	+0.9
MNRC	McLaughlin Min	2.21	343		Pn	06 22 03.2	-0.2
AFDM	Forest Hills D	2.23	13		Pn	06 22 03.7	0.0
VES	Vestal, Richgr	2.23	114	P	Pn	06 22 03.2	-0.4
	baz=297,SNR=32						
VES				S	Sn	06 22 32.1	+0.9
	baz=297						
OMMB	Old Mammoth Mi	2.24	67	Pn	Pn	06 22 05.0	+0.9
GDXM	Geysers	2.25	335		Pn	06 22 03.0	-0.9
MDCM	Deadman Creek	2.25	65		Pn	06 22 05.2	+1.0
GSGM	Seigler Mounta	2.27	338		Pn	06 22 03.9	-0.2
MLAC	Mammoth, Mammo	2.37	68	P	Pn	06 22 07.3	+1.5
	baz=250,SNR=68						
MLAC				S	Sb	06 22 37.1	-1.9
	baz=250						
PKM	Mcpherson Peak	2.37	142	P	Pn	06 22 05.6	-0.1
	baz=325						
PKM				S	Sn	06 22 34.6	-0.3
	baz=325						
MDRNC	Doe Ridge	2.37	68		Pn	06 22 07.4	+1.5
WAKR	Walker	2.44	44		Pn	06 22 05.5	-1.2
SUTB	Sutter Butte	2.46	357		Pn	06 22 06.0	-0.8
MTUM	Tungsten Hills	2.50	76		Pn	06 22 09.0	+1.5
HOPS	Hopland Field	2.51	333	Pn	Pn	06 22 06.8	-0.7
RUBR	Rubicon Trail	2.55	26		Pn	06 22 08.4	+0.1
ISA	Isabella, Lake	2.76	113	P	Pn	06 22 11.1	+0.2
	baz=296,SNR=102						
ISA	Isabella, Lake	2.76	113	Pn	Pn	06 22 11.7	+0.8
ARVC	Arvin	2.78	125	P	Pn	06 22 11.2	0.0
	baz=308,SNR=16						
ORV	Oroville	2.78	2		Pn	06 22 12.1	+0.8
ORV	Oroville	2.78	2		Pn	06 22 12.5	+1.2
PNTR	Pine Nut	2.81	34		Pn	06 22 13.6	+1.8
CWC	Cottonwood Cre	2.85	96	P	Pn	06 22 13.4	+1.1
	baz=279						
VCNR	Virginia City	2.96	31		Pn	06 22 14.5	+0.7
RYN	Ryan	3.07	52		Pn	06 22 16.5	+1.2
OSI	Osito Audit: C	3.18	132	P	Pn	06 22 15.6	-1.1
	baz=315						
SCZ2	Santa Cruz Isl	3.20	149	P	Pn	06 22 16.4	-0.6
	baz=332						
NV11	Mina Array Sit	3.20	58		Pn	06 22 17.6	+0.4
BEKR	Beckworth	3.25	17	Pn	Pn	06 22 18.5	+0.8
KCPM	Cahto Peak	3.30	332	Pn	Pn	06 22 19.4	+0.9
MPMC	Manual Prospec	3.39	101	P	Pn	06 22 20.0	+0.2
	baz=284						
PAHR	Pah Rah Range	3.42	30		Pn	06 22 21.4	+1.3
EDW2	Edwards Air Fo	3.48	122	P	Pn	06 22 21.1	+0.2
	baz=305						
O03E	Paynes Creek	3.52	358	P	Pn	06 22 23.1	+1.6
	baz=176						
PASC	Pasadena Art C	3.81	132	Pn	Pn	06 22 25.5	+0.2
KMRM	Mail Ridge	3.82	335	Pn	Pn	06 22 26.7	+1.1
MWC	Mount Wilson	3.85	130		Pn	06 22 26.0	0.0
BFSC	Mount Baldy Ra	4.09	127	P	Pn	06 22 29.3	0.0
	baz=310,SNR=7.1						
GSC	Goldstone, Bar	4.15	109	P	Pn	06 22 30.2	+0.1
	baz=293,SNR=13						
GSC	Goldstone, Bar	4.15	109	Pn	Pn	06 22 30.5	+0.4
CIS	Catalina Islan	4.25	141	P	Pn	06 22 30.9	-0.6
	baz=324						
CIS				S	Sn	06 23 19.7	-1.5
	baz=324						
TPNV	Topopah Spring	4.30	86	P	Pn	06 22 33.4	+1.2
	baz=270						
TPNV	Topopah Spring	4.30	86	Pn	Pn	06 22 34.0	+1.8
KHMM	Horse Mountain	4.42	339	Pn	Pn	06 22 35.8	+1.9
HEC	Hector,Ludlow	4.70	113	P	Pn	06 22 37.2	-0.4
	baz=297,SNR=19						
KRMB	Red Mountain	5.08	340	Pn	Pn	06 22 43.9	+1.1
SHPR	Sheep Range	5.19	91	Pn	Pn	06 22 44.7	+0.2
GMRC	Granite Mounta	5.22	111	P	Pn	06 22 44.1	-0.8
	baz=295,SNR=8.4						
PFO	Pinyon Flats O	5.26	125	P	Pn	06 22 45.0	-0.4
	baz=309						
PFO	Pinyon Flats O	5.26	125		Pn	06 22 45.4	0.0
BELC	Belle Mtn. Jos	5.35	119	P	Pn	06 22 46.4	-0.2
	baz=304						
MONP2	Monument Peak	5.75	131	P	Pn	06 22 51.7	-0.5
	baz=314						
BAR	Barrett	5.75	134		Pn	06 22 51.9	-0.2
IRM	Iron Mountain	5.88	114	P	Pn	06 22 53.6	-0.2
	baz=299						
CBX	Cerro Bola	6.03	136	Pn	Pn	06 22 56.4	+0.5
ESJX	Sierra Juarez	6.66	134	Pn	Pn	06 23 05.5	+0.8

ANF ***20*** *06:26:47.7±1.7,36.°70N×121.°66W,h7km±14km, ML4.7/40, Error ellipse: s-maj=4.4km s-min=2.2km az=63.0*

NEIC ***20*** *06:26:48.8±2.0,36.°73N±0.°03×121.°61W±0.°04,h16km±3km, Error ellipse: s-maj=5.8km s-min=2.8km az=54.0*

IDC ***20*** *06:26:49.1±0.9,36.84N×121.°32W,h0km, mb4.0/5, mb1 4.1/12,mb1mx3.9/47,mbtmp3.9/12,ML4.0/7,MS3.6/15, Ms1 3.6/15,ms1mx3.3/49,Error ellipse: s-maj=12.4km s-min=8.9km az=57.0*

NCEDC ***20*** *06:26:49.3±2.7,36.°81N±0.°02×121.°54W±0.°03,h7km±5km, Mwr4.2/6,Error ellipse: s-maj=4.3km s-min=2.1km az=55.0*

NEIC ***20*** *06:26:49.3,36.°81N×121.°53W,h5km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}0.22; $M_{\theta\theta}$-2.77; $M_{\phi\phi}$2.55; $M_{r\theta}$-0.50; $M_{\theta\phi}$-0.19; $M_{\phi r}$-0.65; Fault plane solution: M_o2.80000×10^{15} NP1:ϕ_s223.51000°, δ86.74000°, λ17.30000°. NP2:ϕ_s132.50000°, δ72.73000°, λ176.59000°. Principal axes: T 2.7254, Plg14.0000°, Azm89.0000°; N 0.1431, Plg72.0000°, Azm234.0000°; P -2.8685, Plg10.0000°, Azm357.0000°;*

ISC 20 06:26:49.1±0.7,36.°78N±0.°02×121.°60W±0.°03,h6km±4km, n199,σ1°$35/195,mb4.0/7,MS3.7/6,Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAO	San Andreas Ge	0.12	96		Sg	06 26 52.6	-0.8
SAO	San Andreas Ge	0.12	96	Pg	Pg	06 26 51.2	-0.5
HCOM	Corn Cob Canyo	0.14	322		Pg	06 26 53.0	+1.0
SCZ	Santa Cruz	0.24	138		Pg	06 26 53.8	0.0
SCZ					Sg	06 26 57.2	+0.3
HFEM	San Felipe	0.26	38		Pg	06 26 54.1	-0.1
PACP	Pacheco Peak	0.34	47		Pg	06 26 55.7	-0.1
PACP					Sg	06 27 00.5	+0.2
GHS	Gilroy Hot Spr	0.34	21		Pg	06 26 55.8	0.0
BSMM	Soledad Missio	0.42	161		Pg	06 26 57.9	+0.7
MOBB	Monterey Bay O	0.46	259		Pb	06 27 00.1	+0.5
SCCB	Santa Clara Co	0.55	338		Pb	06 27 00.4	-0.8
MHC	Mount Hamilton	0.56	357		Pg	06 27 00.7	+0.7
LRV	Little Rabbit	0.59	127		Pg	06 27 00.2	-0.1
JRSC	Jasper Ridge	0.81	321		Pg	06 27 04.4	-0.2
WENL	Wente Vineyard	0.85	352		Pb	06 27 05.9	-0.4
PMPB	Monarch Peak	0.85	131		Pg	06 27 05.0	-0.5
PAPM	Alder Peak	0.88	167		Pg	06 27 06.4	+0.4
C055	Cottonwood Ave	0.97	335		Pg	06 27 07.0	-0.7
CMCM	Mills College	1.10	336		Pg	06 27 08.9	-1.4
SMCB	Saint Mary's C	1.14	339		Pg	06 27 09.8	-1.1
PKD	Bear Valley Ra	1.19	134		Pg	06 27 10.4	-1.5
BDM	Black Diamond	1.19	350		Pg	06 27 10.4	-1.6
BKS	Berkeley--Byer	1.21	335		Pg	06 27 10.3	-2.0
BL67	Building 67, L	1.21	335		Pg	06 27 10.3	-2.1
BRK	Berkeley--Havi	1.21	334		Pg	06 27 10.2	-2.1
VAK	Adit at Lawren	1.21	335		Pg	06 27 10.4	-2.0
BL88	Building 88, L	1.22	335		Pg	06 27 10.6	-1.8
BRIB	Briones	1.22	339		Pg	06 27 10.8	-1.7
RAMR	Ramage Ranch	1.28	152		Pn	06 27 12.1	-1.5
HERB	Hercules	1.34	337		Pn	06 27 12.4	-1.9
FARB	Farallon Islan	1.45	310		Pn	06 27 14.1	-1.8
TCHL	Shandon	1.46	138		Pn	06 27 14.7	-1.3
PAGB	Antelope Grade	1.51	133		Pn	06 27 15.2	-1.5
THIS	South End of C	1.53	133		Pn	06 27 15.6	-1.4
TRAM	Private Proper	1.54	135		Pn	06 27 15.5	-1.7
CMB	Columbia Colle	1.58	37		Pn	06 27 15.8	-2.0
CMB	Columbia Colle	1.58	37		Pn	06 27 15.9	-1.9
TSCN	Private Proper	1.59	140		Pn	06 27 16.5	-1.4
MCCM	Marconi Confer	1.70	324	Pn	Pn	06 27 16.6	-2.7
CVS	Carmenet Viney	1.71	337		Pn	06 27 17.2	-2.3
VOG	Valley Oaks Go	1.84	104	P	Pn	06 27 19.3	-2.0
	baz=286,SNR=98						
VOG				S	Sn	06 27 44.6	-0.3
	baz=286						
SMMC	Simmler	1.96	138	P	Pn	06 27 21.3	-1.6
	baz=321,SNR=562						
PMLM	Mount Lospe	2.04	157		Pn	06 27 22.5	-1.6
HELL	Mitchell Peak,	2.07	92		Pn	06 27 22.8	-1.8
FTR	Fort Ross	2.14	325		Pn	06 27 22.7	-2.7
GCRM	Castle Rock Sp	2.18	336		Pn	06 27 23.7	-2.3
MDPB	Devils Postpil	2.19	66		Pn	06 27 25.6	-0.6
MRDM	Red Cones	2.19	67		Pn	06 27 25.9	-0.4
MNRC	McLaughlin Min	2.20	343		Pn	06 27 24.8	-1.5
AFDM	Forest Hills D	2.22	13	Pn	Pn	06 27 25.4	-1.2
VES	Vestal, Richgr	2.24	114	P	Pn	06 27 25.0	-1.6
	baz=297,SNR=295						
GDXM	Geysers	2.24	335		Pn	06 27 24.2	-2.5
OMMB	Old Mammoth Mi	2.24	67		Pn	06 27 26.8	-0.2
MDCM	Deadman Creek	2.24	65		Pn	06 27 26.9	-0.2
GSGM	Seigler Mounta	2.26	337		Pn	06 27 25.4	-1.6
MLAC	Mammoth, Mammo	2.37	68	P	Pn	06 27 28.8	+0.1
	baz=250,SNR=293						
MDRNC	Doe Ridge	2.37	68		Pn	06 27 29.1	+0.3
PKM	Mcpherson Peak	2.38	142	P	Pn	06 27 27.2	-1.7
	baz=324						
WAKR	Walker	2.43	44		Pn	06 27 29.1	-0.5
SUTB	Sutter Butte	2.45	357		Pn	06 27 27.2	-2.4
MTUM	Tungsten Hills	2.50	76		Pn	06 27 30.7	+0.3
HOPS	Hopland Field	2.50	333	Pn	Pn	06 27 28.2	-2.1
RUBR	Rubicon Trail	2.54	26		Pn	06 27 31.3	+0.2
TIN	Tinemaha, Big	2.71	83	P	Pn	06 27 33.5	+0.1
	baz=266,SNR=369						
ISA	Isabella, Lake	2.76	113	P	Pn	06 27 32.8	-1.3
	baz=296,SNR=1000						
ISA	Isabella, Lake	2.76	113	Pn	Pn	06 27 33.0	-1.0
ORV	Oroville	2.77	2	Pn	Pn	06 27 34.1	0.0
ARVC	Arvin	2.79	125	P	Pn	06 27 32.8	-1.5
	baz=308,SNR=156						
SBC	Santa Barbara	2.79	146	P	Pn	06 27 33.2	-1.1
	baz=328,SNR=22						
PNTR	Pine Nut	2.80	34		Pn	06 27 34.9	+0.3
CWC	Cottonwood Cre	2.85	96	P	Pn	06 27 35.0	-0.3
	baz=278						
LHV	Little Huntoon	2.87	58		Pn	06 27 35.2	-0.1
VCNR	Virginia City	2.95	31		Pn	06 27 35.9	-0.8
RYN	Ryan	3.06	52		Pn	06 27 37.0	-1.2
NVAR	Mina Array Bea	3.09	57	Pn	Pn	06 27 38.7	0.0
	6.3nm,0.3s,baz=243,slow=15,SNR=31						
NVAR				Lg	Lg	06 28 18.5	
	63nm,0.3s,baz=221,slow=17,SNR=4.7						
NVAR				LR	LR	06 29 04.0	
	comp=Z,708nm,21.3s,baz=240,slow=45						
NVAR	Mina Array Bea	3.09	57	Pn	Pn	06 27 38.1	-0.6
OSI	Osito Audit: C	3.18	132	P	Pn	06 27 38.5	-1.3
	baz=315,SNR=47						
OSI	Osito Audit: C	3.18	132		Pn	06 27 38.0	-1.8
SCZ2	Santa Cruz Isl	3.21	149	P	Pn	06 27 38.1	-2.0
	baz=332,SNR=24						
BEKR	Beckworth	3.23	17	Pn	Pn	06 27 39.6	-1.0
KCPM	Cahto Peak	3.30	332		Pn	06 27 39.9	-1.5
MPMC	Manual Prospec	3.39	101	P	Pn	06 27 41.7	-1.1
	baz=284,SNR=209						
GRAC	Grapevine Rang	3.40	85	P	Pn	06 27 41.9	-0.9
	baz=268,SNR=93						
LRMC	Laurel Mtn Rad	3.43	111	P	Pn	06 27 41.9	-1.3
	baz=294,SNR=32						
EDW2	Edwards Air Fo	3.49	122	P	Pn	06 27 42.8	-1.2
	baz=305						
O03E	Paynes Creek	3.52	357	P	Pn	06 27 43.1	-1.3
	baz=176,SNR=21						
O02D	Mt. Diablo Mer	3.52	345	P	Pn	06 27 43.9	-0.5
	baz=163						
DECC	Green Verdugo	3.67	132	P	Pn	06 27 45.0	-1.4
	baz=315,SNR=9.5						
PASC	Pasadena Art C	3.81	132	Pn	Pn	06 27 47.1	-1.2
KMRM	Mail Ridge	3.82	335	Pn	Pn	06 27 48.0	-0.5
FURC	Furnace Creek,	3.82	93	P	Pn	06 27 47.2	-1.3
	baz=277,SNR=41						
MWC	Mount Wilson	3.85	130		Pn	06 27 47.8	-1.3
WDC	Whiskeytown Da	3.87	349	Pn	Pn	06 27 47.8	-1.4
SNCC	San Nicolas Is	3.91	154	P	Pn	06 27 47.8	-2.0
	baz=336,SNR=7.9						
SNCC	San Nicolas Is	3.91	154		Pn	06 27 48.7	-1.1
FMP	Fort Macarthur	4.08	138	P	Pn	06 27 50.8	-1.3
	baz=320						
BFSC	Mount Baldy Ra	4.09	127	P	Pn	06 27 50.7	-1.6
	baz=310,SNR=118						
GSC	Goldstone, Bar	4.16	109	P	Pn	06 27 51.8	-1.4
	baz=293,SNR=108						
GSC	Goldstone, Bar	4.16	109	Pn	Pn	06 27 52.0	-1.2
RRX	Edison Barstow	4.19	116	P	Pn	06 27 53.0	-0.7
	baz=299,SNR=13						
CIS	Catalina Islan	4.26	141	P	Pn	06 27 52.3	-2.3
	baz=324,SNR=23						
N02D	Trinity Center	4.28	349	P	Pn	06 27 54.3	-0.6
	baz=167						
TPNV	Topopah Spring	4.29	86	P	Pn	06 27 55.0	-0.2
	baz=270,SNR=201						
TPNV	Topopah Spring	4.29	86	Pn	Pn	06 27 55.9	+0.7
SHOC	Shoshone, Teco	4.39	100	P	Pn	06 27 55.2	-1.1
	baz=284,SNR=92						
KHMM	Horse Mountain	4.42	339		Pn	06 27 56.3	-0.5
JCC	Jacoby Creek,	4.46	336	Pn	Pn	06 27 56.9	-0.3
SCI2	San Clemente I	4.54	146	P	Pn	06 27 56.7	-1.7
	baz=328,SNR=15						
BBRC	Big Bear Solar	4.57	122	P	Pn	06 27 57.3	-1.7
	baz=305,SNR=25						
HEC	Hector,Ludlow	4.70	113	P	Pn	06 27 59.1	-1.6
	baz=297,SNR=216						
TUQ	Turquoise Moun	4.79	105	P	Pn	06 28 00.5	-1.4
	baz=288,SNR=71						
MURC	Murrieta	4.80	130	P	Pn	06 28 00.1	-1.9
	baz=313,SNR=25						
M04C	Macdoel	5.00	358	P	Pn	06 28 05.9	+1.1
	baz=177						
YBH	Yreka Blue Hor	5.02	350	Pn	Pn	06 28 07.5	+2.4
	0.6nm,0.3s,baz=150,slow=9.8,SNR=13						
YBH				Sn	Sn	06 29 06.0	+2.5
	baz=184,slow=17,SNR=1.4						
YBH				LR	LR	06 30 11.4	
	comp=Z,471nm,19.0s,baz=184,slow=40						
YBH	Yreka Blue Hor	5.02	350		Pn	06 28 05.6	+0.5
R11A	Troy Canyon, C	5.03	70	P	Pn	06 28 04.4	-0.9
	baz=254,SNR=28						
R11A	Troy Canyon, C	5.03	70	Pn	Pn	06 28 05.1	-0.2
KRMB	Red Mountain	5.07	340		Pn	06 28 05.5	-0.2
SHPR	Sheep Range	5.19	91	Pn	Pn	06 28 07.7	+0.3
GMRC	Granite Mounta	5.22	111	P	Pn	06 28 05.8	-2.1
	baz=295,SNR=87						
PFO	Pinyon Flats O	5.26	125	Pn	Pn	06 28 07.1	-1.3
	8.5nm,0.3s,baz=294,slow=12,SNR=34						
PFO				Sn	Sn	06 29 09.4	-0.1
	0.8nm,0.3s,baz=325,slow=12,SNR=1.5						
PFO				LR	LR	06 30 29.4	
	comp=Z,378nm,18.3s,baz=320,slow=43						
PFO	Pinyon Flats O	5.26	125	P	Pn	06 28 07.0	-1.4
	baz=309,SNR=49						
PFO	Pinyon Flats O	5.26	125	Pn	Pn	06 28 07.4	-1.0
PRN	Pahroc Range	5.27	81	Pn	Pn	06 28 09.1	+0.5
BELC	Belle Mtn. Jos	5.35	120	P	Pn	06 28 07.6	-2.0
	baz=303,SNR=41						
109C	Camp Elliot, M	5.36	135	P	Pn	06 28 07.7	-1.9
	baz=318,SNR=10						
109C	Camp Elliot, M	5.36	135		Pn	06 28 08.0	-1.6
L04D	Klamath Falls	5.46	354	P	Pn	06 28 10.5	-0.6
	baz=174						
L02E	Cave Junction	5.59	345	P	Pn	06 28 13.8	+1.0
	baz=163						
MONP2	Monument Peak	5.76	131	P	Pn	06 28 13.6	-1.7
	baz=314,SNR=29						
BAR	Barrett	5.76	134		Pn	06 28 13.7	-1.5
KBO	Bosley Butte	5.79	340	Pn	Pn	06 28 15.1	-0.6
TKX	Tecate	5.88	134		Pn	06 28 14.6	-2.2
IRM	Iron Mountain	5.88	114	P	Pn	06 28 14.7	-2.1
	baz=299,SNR=33						
BC3	Big Chuckawall	5.92	120	P	Pn	06 28 15.0	-2.5
	baz=304,SNR=32						
NEE2	Needles Airpor	6.02	107	P	Pn	06 28 16.9	-1.8
	baz=292						
CBX	Cerro Bola	6.03	136	Pn	Pn	06 28 17.7	-1.3
SWSC	Sam W. Stewart	6.11	127	P	Pn	06 28 18.2	-1.7
	baz=311						
IKP	In-Ko-Pah, Jac	6.11	131	P	Pn	06 28 19.6	-0.5
	baz=314,SNR=7.7						
SPR3	Spring Creek 3	6.16	67	Pn	Pn	06 28 22.4	+1.5
ELK	Elko	6.36	50	Pn	Pn	06 28 22.9	-0.6
	2.3nm,0.3s,baz=250,slow=11,SNR=33						
ELK				Lg	Lg	06 30 00.9	
	1.8nm,0.3s,baz=46,slow=16,SNR=3.1						
ELK				LR	LR	06 31 21.0	
	comp=Z,174nm,21.4s,baz=230,slow=44						
CCX	Cicese	6.38	139	Pn	Pn	06 28 23.7	+0.1
KEBM	Edson Butte	6.44	342	Pn	Pn	06 28 23.1	-1.4
W13A	Hualapai Mount	6.48	103	Pn	Pn	06 28 24.1	-1.1
PDMCI	Parker Dam,Lak	6.56	110	P	Pn	06 28 24.6	-1.6
	baz=295						
CCUT	Cedar City	6.62	81	Pn	Pn	06 28 28.8	+1.6
ESJX	Sierra Juarez	6.67	134		Pn	06 28 26.7	-1.1
GLA	Glamis	6.69	122	P	Pn	06 28 25.9	-2.1
	baz=306,SNR=19						
GLA	Glamis	6.69	122		Pn	06 28 25.9	-2.1
LCMT	Little Creek M	6.70	86		Pn	06 28 29.1	+0.9
SZCU	Shurtz Canyon	6.84	81		Pn	06 28 31.5	+1.2
KNB	Kanab	7.04	85		Pn	06 28 34.4	+1.6
Y14A	Wickenburg	7.57	109		Pn	06 28 38.8	-1.3
113A	Mohawk Valley,	7.58	120	Pn	Pn	06 28 36.9	-3.3
SPX	San Pedro Mart	7.67	137	Pn	Pn	06 28 41.8	+0.2
DUG	Dugway, Tooele	7.69	61	P	Pn	06 28 41.6	-0.2
	baz=246						
WUAZ	Wupatki	8.37	96	P	Pn	06 28 51.6	+0.5
	baz=282						
X16A	Lo Mia Camp, P	8.60	103		Pn	06 28 54.6	+0.3
214A	Organ Pipe Nat	8.71	121	P	Pn	06 28 54.1	-1.6
	baz=306						
TUC	Tucson	9.97	113	P	Pn	06 29 12.0	-1.0
	baz=300						
TUC	Tucson	9.97	113	Pn	Pn	06 29 12.4	-0.6
PDAR	Pinedale Array	11.03	53	Pn	Pn	06 29 26.8	-0.7
	0.3nm,0.3s,baz=179,slow=34,SNR=1.7						
PDAR				Lg	Lg	06 32 27.1	
	0.2nm,0.3s,baz=208,slow=18,SNR=1.5						
PDAR				LR	LR	06 33 33.1	
	comp=Z,279nm,19.8s,baz=242,slow=37						
319A	Douglas	11.54	114		Pn	06 29 35.1	+0.5
NEW	Newport	11.94	15	Pn	Pn	06 29 41.5	+1.6
	0.1nm,0.3s,baz=123,slow=14,SNR=3.8						
NEW				LR	LR	06 33 46.4	
	comp=Z,228nm,20.7s,baz=240,slow=35						
121A	Cookes Peak, D	12.14	106	P	Pn	06 29 43.4	+0.7
	baz=294						
ANMO	Albuquerque	12.42	94	Pn	Pn	06 29 49.2	+2.5
	0.2nm,0.3s,baz=284,slow=13,SNR=7.8						
ANMO				Lg	Lg	06 33 18.3	
	0.1nm,0.3s,baz=133,slow=18,SNR=1.1						
ANMO				LR	LR	06 34 52.5	
	comp=Z,390nm,18.1s,baz=282,slow=40						
ANMO	Albuquerque	12.42	94	P	Pn	06 29 45.6	-1.1
	baz=283						
MNTX	Cornudas Mount	14.34	106	P	Pn	06 30 12.2	-0.5
	baz=295						
MSTX	Muleshoe	15.61	95	P	Pn	06 30 29.5

mb1 4.2/9,mb1mx3.8/34,mbtmp4.5/9,Error ellipse: s-maj=34.0km s-min=21.3km az=148.0

ISC 20 06:33:03.0±0.6, 19.7S±0.1×175.43W±0.08, h150km, n34, σ1§77/36, mb4.4/15, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.23**	**85**		**Pn**	**06 34 18.1**	**-1.3**
RAR	**Rarotonga**	**14.76**	**99**	P	**P**	**06 36 28.2**	**+1.6**
	1.1nm,0.3s,baz=325,slow=5.8,SNR=2.0						
RAR				S	Sn	06 38 57.1	-11
	0.4nm,0.3s,baz=144,slow=18,SNR=1.4						
DZM	**Mont Dzumac**	**17.11**	**259**	P	**Pn**	**06 36 57.4**	**+4.0**
	2.4nm,0.3s,baz=78,slow=23,SNR=22						
URZ	**Urewera**	**19.64**	**198**	P	**P**	**06 37 19.5**	**-0.5**
	1.7nm,0.3s,baz=265,slow=4.1,SNR=9.2						
URZ				S	**S**	**06 40 46.4**	**-7.1**
	0.4nm,0.3s,baz=129,slow=22,SNR=1.6						
RPZ	**Rata Peaks**	**26.53**	**202**	P	**P**	**06 38 27.4**	**+0.8**
	16nm,1.0s,baz=3.0,slow=4.1,SNR=5.4						
CTAO	**Charters Tower**	**35.98**	**263**	P	**P**	**06 39 50.0**	**+0.3**
COEN	**Coen**	**39.95**	**272**	P	**P**	**06 40 23.3**	**+0.3**
COEN				IAmb	IAmb	06 40 23.7	
	comp=Z,7.0nm,0.7s						
WR0	**Warramunga Arr**	**46.92**	**261**	P	**P**	**06 41 17.6**	**-1.3**
WR0				IAmb	IAmb	06 41 19.9	
	comp=Z,3.8nm,0.5s						
AS31	**Alice Springs**	**47.06**	**256**	P	**P**	**06 41 20.1**	**+0.1**
ASAR	**Alice Springs**	**47.06**	**256**	P	**P**	**06 41 19.3**	**-0.6**
	comp=Z,9.0nm,0.5s,baz=92,slow=8.5,SNR=132						
ASAR				PcP	**PcP**	**06 42 49.3**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=91,slow=4.6,SNR=2.2						
ASAR	**Alice Springs**	**47.06**	**256**	P	**P**	**06 41 18.7**	**-1.2**
WB0	**Warramunga Arr**	**47.09**	**261**	P	**P**	**06 41 18.3**	**-1.8**
WB0				IAmb	IAmb	06 41 21.3	
	comp=Z,5.0nm,0.6s						
WB2	**Warramunga Arr**	**47.10**	**261**	P	**P**	**06 41 19.0**	**-1.3**
WB2				IAmb	IAmb	06 41 20.7	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**47.10**	**261**	P	**P**	**06 41 18.8**	**-1.5**
WRAB				IAmb	IAmb	06 41 20.6	
	comp=Z,10nm,1.3s						
WRA	**Warramunga Arr**	**47.11**	**261**	P	**P**	**06 41 19.0**	**-1.3**
	comp=Z,2.5nm,0.3s,baz=93,slow=6.0,SNR=205						
WRA	**Warramunga Arr**	**47.11**	**261**	P	**P**	**06 41 18.8**	**-1.5**
MTN	**Manton Dam**	**51.58**	**269**	P	**P**	**06 41 53.3**	**-1.0**
MTN				IAmb	IAmb	06 41 59.4	
	comp=Z,11nm,1.2s						
FORT	**Forrest**	**51.84**	**246**	P	**P**	**06 41 54.8**	**-1.2**
KNRA	**Kununurra**	**53.13**	**265**	P	**P**	**06 42 05.2**	**-0.4**
FAKI	**Fak Fak**	**53.68**	**281**	P	**P**	**06 42 09.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**55.53**	**261**	P	**P**	**06 42 22.8**	**-0.3**
VNDA	**Vanda**	**58.98**	**186**	P	**P**	**06 42 48.9**	**+2.6**
QSPA	**South Pole Qui**	**70.42**	**180**	P	**P**	**06 44 02.4**	**+1.7**
MJAR	**Matsushiro Arr**	**70.99**	**322**	P	**P**	**06 44 03.2**	**-1.2**
	comp=Z,4.0nm,0.5s,baz=159,slow=5.7,SNR=11						
KSRS	**Korea Array**	**77.88**	**317**	P	**P**	**06 44 43.7**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=126,slow=7.9,SNR=5.6						
NVAR	**Mina Array Bea**	**78.77**	**42**	P	**P**	**06 44 48.8**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=227,slow=7.6,SNR=4.2						
BELA	**Belgrano 2**	**80.08**	**172**	P	**P**	**06 44 56.0**	**+0.4**
BPAW	**Bear Paw Mtn.**	**85.61**	**11**	P	**P**	**06 45 23.0**	**-1.1**
BPAW				IAmb	IAmb	06 45 33.2	
	comp=Z,10nm,1.4s						
SNAA	**Sanae**	**88.77**	**178**	P	**P**	**06 45 39.6**	**+0.2**
SNAA	**Sanae**	**88.77**	**178**	P	**P**	**06 45 40.0**	**+0.6**
SNAA				IAmb	IAmb	06 45 51.9	
	comp=Z,6.5nm,1.5s						
VNA3	**Neumayer Olymp**	**88.81**	**175**	P	**P**	**06 45 39.8**	**+0.2**
VNA2	**Neumayer--Watz**	**89.28**	**176**	P	**P**	**06 45 42.3**	**+0.6**
	baz=200,slow=3.7						
CMAR	**Chiang Mai Arr**	**92.12**	**289**	P	**P**	**06 45 56.2**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=132,slow=2.7,SNR=5.2						
ARCES	**ARCESS Array B**	**128.50**	**351**	PKP	**PKPdf**	**06 51 50.4**	**-1.0**
	comp=Z,7.4nm,1.0s,baz=54,slow=4.7,SNR=2.0						

*TEH **20** 07:03:56.3,32.62N×47.96E,h10km, ML3.0*
*ISN **20** 07:03:56.6±0.9,32.64N×47.92E,h14km±6km, ML2.8*

ISC 20 07:03:57.3±0.9, 32.56N±0.05×47.93E±0.04, h15km, n30, σ1§31/32, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.97**	**356**	*e*Pg	**Pb**	**07 04 14.0**	**-1.8**
IKFM				*e*		07 04 30.0	
IKMR	**Kamar-syah**	**1.03**	**22**	*e*Pg	**Pb**	**07 04 15.2**	**-1.7**
IKMR				*e*		07 04 34.0	
IDOB	**Doab**	**1.24**	**10**	*e*Pg	**Pn**	**07 04 19.3**	**-1.1**
AHWZ	**Ahwaz**	**1.37**	**153**	*e*Pg	**Pg**	**07 04 23.6**	**-0.1**
IKOM	**Komasi**	**1.65**	**348**	*e*Pg	**Pn**	**07 04 26.8**	**+0.9**
IKOM				*e*		07 04 55.9	
HSAM	**Samen**	**1.74**	**19**	*e*Pg	**Pn**	**07 04 28.3**	**+1.0**
HSAM				*e*		07 04 31.0	
IBDR	**Badra**	**1.77**	**289**	*e*Pg	**Pn**	**07 04 28.0**	**+0.6**
IBDR				*e*Sg	**Sb**	**07 04 51.0**	**-0.5**
IBDR				AML	AML	07 04 56.8	
	comp=N,77nm,0.5s						
IBDR				AML	AML	07 05 05.2	
	comp=E,62nm,0.6s						
KCHF	**Cheshme Sefid,**	**1.87**	**337**	*e*Pg	**Pb**	**07 04 30.7**	**-0.6**
KCHF				*e*		07 05 04.1	
IBZA	**Bozab**	**1.91**	**358**	*e*Pn	**Pb**	**07 04 31.3**	**-0.7**
IBZA				*e*		07 05 00.6	
KER	**Kermanshah**	**1.94**	**340**	*e*Pg	**Pb**	**07 04 32.7**	**+0.2**
IGHG	**Ghaleghazi**	**2.10**	**328**	*e*Pn	**Pb**	**07 04 35.3**	**0.0**
IGHG				*e*		07 05 18.4	
IVIS	**Veis**	**2.16**	**336**	*e*	Sg	07 05 16.3	+9.5
NSR	**Nassriya**	**2.17**	**225**	*e*Pn	**Pn**	**07 04 34.0**	**+1.1**
NSR				*e*Sn	**Sb**	**07 05 01.0**	**-1.9**
NSR				AML	AML	07 05 07.6	
	comp=E,561nm,0.4s						
IALM	**Almabolaq**	**2.31**	**5**	*e*Pn	**Pb**	**07 04 37.9**	**-0.9**
ILIN	**Lien**	**2.49**	**341**	*e*Pn	**Pb**	**07 04 40.0**	**-1.9**
ILIN				*e*		07 05 24.0	
IDHR	**Dehrash**	**2.49**	**329**	*e*Pn	**Pn**	**07 04 39.2**	**+1.6**
IDHR				*e*		07 05 18.5	
IPIR	**Pirpir**	**2.50**	**86**	*e*Pn	**Pn**	**07 04 39.5**	**+1.7**
HSRG	**Sareghieh**	**2.69**	**6**	*e*Pn	**Pn**	**07 04 42.7**	**+2.3**
HSRG				*e*		07 05 26.6	
BHD	**Baghdad**	**3.07**	**284**	*e*Pn	**Pn**	**07 04 46.0**	**+0.7**
BHD				*e*Sn	**Sn**	**07 05 23.0**	**+1.3**
BHD				AML	AML	07 05 30.0	
	comp=E,18nm,0.8s						
IKLH	**Kolahrood**	**3.16**	**75**	*e*Pn	**Pn**	**07 04 48.8**	**+2.0**
IKLH				*e*		07 04 50.0	
QAM	**Ghamsar**	**3.18**	**67**	*e*Pn	**Pn**	**07 04 47.9**	**+0.9**
IRAZ	**Razeghan**	**3.29**	**30**	*e*Pn	**Pn**	**07 04 50.2**	**+1.6**
QABG	**Abgarm-Qazvin**	**3.43**	**23**	*e*Pn	**Pn**	**07 04 52.0**	**+1.5**
IQOM	**Qom**	**3.47**	**48**	*e*Pn	**Pn**	**07 04 51.2**	**+0.1**
IGAR	**Gharneh**	**3.48**	**91**	*e*Pn	**Pn**	**07 04 52.3**	**+1.1**
IGAR				*e*		07 05 00.6	
KLNJ	**Kolanjah**	**3.48**	**115**	*e*Pn	**Pn**	**07 04 51.9**	**+0.6**
KLNJ				*e*		07 06 06.5	
IZEF	**Zefreh**	**3.73**	**84**	*e*Pn	**Pn**	**07 04 55.9**	**+1.3**
KRSH	**Karshahi**	**3.80**	**67**	*e*Pn	**Pn**	**07 04 56.5**	**+1.0**
IVRN	**Varamin**	**3.99**	**51**	*e*Pn	**Pn**	**07 04 59.3**	**+1.2**
QSDN	**Sirdan**	**4.07**	**14**	*e*Pn	**Pn**	**07 05 00.4**	**+1.1**

*TEH **20** 07:06:20.2,32.60N×47.92E,h10km, ML2.9*
*ISN **20** 07:06:21.0±1.1,32.60N×47.88E,h14km±8km, ML2.5*

ISC 20 07:06:21.6±1.2, 32.65N±0.06×47.90E±0.05, h15km, n11, σ1§07/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.87**	**357**	*e*Pg	**Pb**	**07 06 37.8**	**-0.7**
IKFM				*e*		07 06 42.4	
IKMR	**Kamar-syah**	**0.95**	**25**	*e*Pg	**Pb**	**07 06 39.1**	**-0.8**
IKMR				*e*Sg	**Sn**	**07 06 54.5**	**+0.7**
IKMR				*e*		07 06 58.1	
IDOB	**Doab**	**1.16**	**11**	*e*Pg	**Pn**	**07 06 43.2**	**-0.3**
IDOB				*e*		07 07 05.9	
IKOM	**Komasi**	**1.56**	**348**	*e*Pg	**Pg**	**07 06 50.9**	**-0.7**
IKOM				*e*		07 07 19.9	
HSAM	**Samen**	**1.66**	**20**	*e*Pn	**Pb**	**07 06 52.4**	**+0.2**
HSAM				*e*		07 06 55.1	
IBDR	**Badra**	**1.72**	**286**	*e*Pg	**Pn**	**07 06 52.0**	**+0.9**
IBDR				*e*Sg	**Sb**	**07 07 15.0**	**+0.6**
IBDR				AML	AML	07 07 17.8	
	comp=N,58nm,0.5s						
IBDR				AML	AML	07 07 22.8	
	comp=E,56nm,0.2s						
IBZA	**Bozab**	**1.81**	**359**	*e*Pn	**Pb**	**07 06 54.4**	**-0.3**
IBZA				*e*		07 07 24.7	
NSR	**Nassriya**	**2.22**	**223**	*e*Pn	**Pn**	**07 06 58.0**	**+0.1**
NSR				*e*Sn	**Sn**	**07 07 24.0**	**-1.0**
IDHR	**Dehrash**	**2.40**	**329**	*e*Pn	**Pb**	**07 07 03.0**	**-1.7**
IDHR				*e*		07 07 42.6	
IPIR	**Pirpir**	**2.52**	**88**	*e*		07 07 04.4	
IPIR				*e*Pn	**Pn**	**07 07 03.3**	**+0.9**
BHD	**Baghdad**	**3.02**	**283**	*e*Pn	**Pn**	**07 07 10.0**	**+1.0**
BHD				*e*Sn	**Sn**	**07 07 47.0**	**+2.1**

WEL 20 07:09:32.1,38°S±3°×17°9E±°, h14km±2km, M3.6/22, ML3.9/22, MLv3.6/22, Error ellipse: s-maj=0.0km s-min=0.0km az=60.3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.14**	**288**	P	Pb	07 09 36.4	-0.1
WMGZ				S	Sb	07 09 39.4	0.0
PUZ	**Puketiti**	**0.33**	**230**	P	Pb	07 09 39.9	+0.1
PUZ				S	Sb	07 09 45.0	0.0
MXZ	**Matakaoa Point**	**0.37**	**324**	P	Pb	07 09 40.3	-0.1
MXZ				S	Sb	07 09 46.1	+0.1
TWGZ	**Tauwhareparae**	**0.57**	**236**	P	Pb	07 09 44.6	+0.7
TWGZ				S	Sb	07 09 53.3	+1.5
HAZ	**Te Kaha**	**0.64**	**279**	P	Pg	07 09 44.1	-0.5
HAZ				S	Sg	07 09 52.2	-0.9
CNGZ	**Carnagh Statio**	**0.69**	**205**	P	Pn	07 09 47.8	+0.3
CNGZ				S	Sn	07 10 01.1	+3.2
RUGZ	**Raukumara Rang**	**0.72**	**261**	P	Pg	07 09 46.0	-0.3
TKGZ	**Te Karaka**	**0.82**	**225**	P	Pn	07 09 48.9	-0.3
TKGZ				S	Sn	07 10 02.4	+1.3
MWZ	**Matawai**	**0.95**	**240**	P	Pb	07 09 50.5	0.0
MWZ				S	Sn	07 10 04.2	-0.3
RIGZ	**Rimuhau**	**1.06**	**217**	P	Pb	07 09 52.2	-0.1
RAGZ	**Rawiri**	**1.11**	**235**	P	Pb	07 09 53.0	-0.2
RAGZ				S	Sn	07 10 09.7	+1.2
WIZ	**White Island**	**1.15**	**286**	P	Pn	07 09 52.2	-1.6
PRGZ	**Paritu Road**	**1.19**	**207**	P	Pn	07 09 53.8	-0.6
URZ	**Urewera**	**1.23**	**251**	P	Pb	07 09 55.0	-0.1
WHRZ	**Whale Island**	**1.27**	**270**	P	Pb	07 09 55.9	+0.1
KNZ	**Kokohu**	**1.36**	**211**	P	Pn	07 09 55.4	-1.2
MHGZ	**Mahia Peninsul**	**1.39**	**202**	P	Pn	07 09 56.5	-0.7
RTZ	**Ruatahuna**	**1.47**	**239**	P	Pb	07 09 58.7	-0.5
EDRZ	**Edgecumbe**	**1.48**	**260**	P	Pn	07 09 58.8	+0.5
MARZ	**Manawahe**	**1.51**	**265**	P	Pn	07 09 59.3	+0.5
MUGZ	**Murupara**	**1.55**	**246**	P	Pn	07 09 59.9	+0.5
RAHZ	**Arahi**	**1.58**	**228**	P	Pn	07 10 00.1	+0.4
OPRZ	**Ohinepanea**	**1.60**	**270**	P	Pn	07 09 59.5	-0.5
WHHZ	**Waihua**	**1.61**	**221**	P	Pn	07 10 00.8	+0.6
TARZ	**Mount Tarawera**	**1.68**	**256**	P	Pb	07 10 03.2	+0.4
MTHZ	**Maungataniwha**	**1.69**	**234**	P	Pn	07 10 01.2	0.0
RRRZ	**Republican Roa**	**1.70**	**253**	P	Pg	07 10 05.2	+0.4
HLRZ	**Highlands Stat**	**1.80**	**257**	P	Pg	07 10 07.2	+0.5
PRRZ	**Plateau Road**	**1.84**	**249**	P	Pn	07 10 03.5	+0.3
TGRZ	**Tauranga**	**1.84**	**273**	P	Pn	07 10 02.3	-1.0
NMHZ	**Naumai**	**1.86**	**228**	P	Pn	07 10 04.1	+0.4
ARHZ	**Aropaoanui**	**1.87**	**221**	P	Pn	07 10 04.0	+0.3
HRRZ	**Handcock Road**	**1.89**	**253**	P	Pg	07 10 07.5	-0.8
ALRZ	**Allen Road**	**1.90**	**248**	P	Pn	07 10 04.5	+0.4
HSRZ	**Hossack Road**	**1.90**	**256**	P	Pg	07 10 09.2	+0.6
BKZ	**Black Stump Fm**	**2.09**	**231**	P	Pn	07 10 06.5	-0.3
CKHZ	**Cape Kidnapper**	**2.15**	**213**	P	Pn	07 10 06.0	-1.4
MCHZ	**McNeill Hill**	**2.16**	**222**	P	Pn	07 10 07.0	-0.7
KAHZ	**Kahuranaki**	**2.34**	**214**	P	Pn	07 10 08.5	-1.8
TOZ	**Tahuroa Road**	**2.44**	**272**	P	Pn	07 10 10.9	-0.7
KRHZ	**Kereru**	**2.48**	**223**	P	Pn	07 10 10.9	-1.2
KUZ	**Kuaotunu**	**2.54**	**295**	P	Pn	07 10 11.9	-0.9
PXZ	**Pawanui**	**2.55**	**211**	P	Pn	07 10 11.2	-1.8
BHHZ	**Black Hill Sta**	**2.55**	**230**	P	Pn	07 10 12.2	-1.0
TMVZ	**Te Maari**	**2.58**	**240**	P	Pn	07 10 13.3	-0.3
ETVZ	**East Tongariro**	**2.59**	**240**	P	Pn	07 10 13.3	-0.4
NGZ	**Ngauruhoe**	**2.68**	**240**	P	Pn	07 10 14.6	-0.4
MOVZ	**Moawhango**	**2.70**	**234**	P	Pn	07 10 14.4	-0.8
FWVZ	**Far West T-bar**	**2.75**	**239**	P	Pn	07 10 15.7	-0.3
WNVZ	**Wahianoa**	**2.76**	**237**	P	Pn	07 10 15.7	-0.3
PNHZ	**Pukenui**	**2.77**	**221**	P	Pn	07 10 14.1	-2.0
MKAZ	**Moumakai**	**2.82**	**284**	P	Pn	07 10 16.5	-0.3
MTVZ	**Mangateitei**	**2.87**	**237**	P	Pb	07 10 20.5	-2.7
WIAZ	**Waiheke Island**	**2.95**	**290**	P	Pn	07 10 18.8	+0.3
GRZ	**Great Barrier**	**2.97**	**302**	P	Pn	07 10 18.7	-0.1
TSZ	**Takapari Road**	**3.00**	**222**	P	Pn	07 10 16.9	-2.3
ETAZ	**East Tamaki Re**	**3.04**	**286**	P	Pn	07 10 20.0	+0.1
MBAZ	**Motutapu North**	**3.13**	**289**	P	Pn	07 10 21.2	+0.2
AWAZ	**Awhitu Peninsu**	**3.23**	**283**	P	Pn	07 10 23.4	+1.0
BFZ	**Birch Farm**	**3.35**	**212**	P	Pn	07 10 22.5	-1.6
RVAZ	**Riverhead Bore**	**3.37**	**288**	P	Pn	07 10 24.7	+0.4
MRZ	**Mangatainoka R**	**3.64**	**219**	P	Pn	07 10 25.4	-2.6
NEZ	**North Egmont**	**3.79**	**247**	P	Pn	07 10 31.1	+1.0
KHEZ	**Kahui Hut**	**3.85**	**247**	P	Pn	07 10 31.9	+0.9
WCZ	**Waipu Caves**	**3.90**	**298**	P	Pn	07 10 31.1	-0.4
OUZ	**Omahuta**	**4.80**	**302**	P	Pn	07 10 45.2	+1.2
CTZ	**Chatham Island**	**6.91**	**150**	P	Pn	07 11 13.2	+0.3

*NEIC **20** 07:29:20.3±1.2, 60.17N±0.03×153.01W±0.09, h133km±4km, Error ellipse: s-maj=6.1km s-min=4.9km az=84.0*
*AEIC **20** 07:29:21±1.3, 60.16N±0.04×152.99W±0.08, h127km±4km, ML3.3, Error ellipse: s-maj=5.6km s-min=5.4km az=137.0*
*ANF **20** 07:29:22.5±0.7, 60.26N×152.71W, h129km±6km, ML3.7/13, Error ellipse: s-maj=6.7km s-min=6.4km az=80.0*

ISC 20 07:29:20.5±1.0, 60.18N±0.04×152.95W±0.04, h134km±6km, n180, σ0§95/209, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIM	**Iliamna**	**0.10**	**183**		**Pn**	**07 29 38.2**	**-0.6**
ILIM					**Sn**	**07 29 51.5**	**-1.1**
IVE	**Iliamna Volcan**	**0.17**	**192**		**Pn**	**07 29 38.3**	**-0.7**
IVE					**Sn**	**07 29 52.4**	**-0.5**
ILS	**Iliamna Low So**	**0.23**	**195**		**Pn**	**07 29 38.3**	**-0.8**
RED	**Redoubt Volcan**	**0.26**	**20**		**Pn**	**07 29 38.7**	**-0.5**
RSO	**Redoubt South**	**0.30**	**19**		**Pn**	**07 29 39.0**	**-0.5**
RDWB	**Redoubt West**	**0.32**	**10**		**Pn**	**07 29 38.8**	**-0.6**
RDWB					**Sn**	**07 29 52.5**	**-1.3**
RDN	**Redoubt North**	**0.35**	**15**		**Pn**	**07 29 39.1**	**-0.4**
RDJH	**Redoubt Jeurge**	**0.42**	**10**		**Pn**	**07 29 39.3**	**-0.6**
RDJH					**Sn**	**07 29 54.2**	**-0.3**
OPT	**Oil Point**	**0.55**	**195**		**Pn**	**07 29 40.0**	**-0.4**
OPT					**Sn**	**07 29 54.8**	**-0.6**
AUL	**Augustine Lava**	**0.84**	**197**		**Pn**	**07 29 42.2**	**-0.2**
AU22	**Augustine Moun**	**0.84**	**195**		**Pn**	**07 29 42.1**	**-0.3**
AU22					**Sn**	**07 29 57.9**	**-1.1**
HOM	**Homer**	**0.84**	**128**	P	**Pn**	**07 29 42.6**	**+0.2**
	baz=308,SNR=14						
HOM				S	**Sn**	**07 29 59.2**	**+0.2**
	baz=308						
HOM	**Homer**	**0.84**	**128**		**Pn**	**07 29 42.6**	**+0.2**
HOM					**Sn**	**07 29 59.0**	**+0.1**
AUP	**Augustine Pinn**	**0.85**	**197**		**Pn**	**07 29 42.4**	**-0.2**
AUH	**Augustine H**	**0.85**	**197**		**Pn**	**07 29 42.4**	**-0.3**
AUCH	**Augustine Cone**	**0.86**	**197**		**Pn**	**07 29 42.2**	**-0.4**
CAPN	**Captain Cook N**	**1.07**	**56**	P	**Pn**	**07 29 46.0**	**+1.6**
	baz=237						
CAPN	**Captain Cook N**	**1.07**	**56**		**Pn**	**07 29 45.9**	**+1.6**
CNPM	**China Poot**	**1.08**	**126**		**Pn**	**07 29 44.5**	**-0.1**
CNPM					**Sn**	**07 30 02.3**	**-0.6**
SPCR	**Spurr Chakacha**	**1.09**	**19**		**Pn**	**07 29 44.7**	**0.0**
BRLK	**Bradley Lake**	**1.12**	**111**		**Pn**	**07 29 44.8**	**-0.1**
BRLK					**Sn**	**07 30 02.5**	**-1.0**
SPBG	**Spurr Blockage**	**1.12**	**14**		**Pn**	**07 29 45.4**	**+0.3**
SPBG					**Sn**	**07 30 03.9**	**+0.2**
SPCP	**Crater Peak Br**	**1.16**	**19**		**Pn**	**07 29 45.7**	**+0.3**
BRSE	**Bradley Lake S**	**1.19**	**111**		**Pn**	**07 29 45.7**	**0.0**
BRSE					**Sn**	**07 30 03.8**	**-1.0**
SPNN	**North Nagishla**	**1.20**	**6**		**Pn**	**07 29 46.0**	**+0.1**
SPNN					**Sn**	**07 30 05.0**	**-0.2**
SPCG	**Spurr Capps Gl**	**1.21**	**22**		**Pn**	**07 29 46.0**	**+0.1**
SLKM	**Skilak Lake**	**1.40**	**75**		**Pn**	**07 29 47.3**	**-0.5**
SLKM					**Sn**	**07 30 07.5**	**-1.0**
STLK	**Strandline Lak**	**1.43**	**22**		**Pn**	**07 29 48.5**	**+0.3**
SVW2	**Sparrevohn**	**1.59**	**307**		**Pn**	**07 29 49.4**	**-0.6**
SVW2					**Sn**	**07 30 10.7**	**-1.7**
O22K	**Cooper Landing**	**1.63**	**78**	P	**Pn**	**07 29 50.1**	**-0.2**
	baz=260,SNR=18						
O22K				S	**Sn**	**07 30 11.8**	**-1.3**
	baz=260						
O22K	**Cooper Landing**	**1.63**	**78**		**Pn**	**07 29 50.2**	**-0.1**
O22K					**Sn**	**07 30 12.4**	**-0.7**
FIS	**Fire Island**	**1.66**	**53**		**Pn**	**07 29 51.7**	**+1.1**
SUA	**Susitna One**	**1.68**	**39**		**Pn**	**07 29 51.4**	**+0.4**
SUA					**Sn**	**07 30 14.9**	**+0.5**
KAPH	**Katmai Pasha**	**1.74**	**205**		**Pn**	**07 29 51.4**	**-0.3**
SEW	**Seward**	**1.75**	**91**		**Pn**	**07 29 51.3**	**-0.4**
RC01	**Rabbit Creek A**	**1.83**	**59**	P	**Pn**	**07 29 52.4**	**-0.3**
	baz=241,SNR=12						
RC01				S	**Sn**	**07 30 16.3**	**-0.9**
	baz=241						
RC01	**Rabbit Creek A**	**1.83**	**59**		**Pn**	**07 29 52.3**	**-0.3**
KARR	**Katmai Rainbow**	**1.91**	**209**		**Pn**	**07 29 53.5**	**-0.1**
SKT	**Skwentna**	**1.93**	**20**		**Pn**	**07 29 54.0**	**0.0**
SKT					**Sn**	**07 30 19.9**	**+0.4**
KAKN	**Katmai Knife C**	**2.18**	**211**		**Pn**	**07 29 56.5**	**-0.4**
KAKN					**Sn**	**07 30 23.1**	**-1.7**
KCG	**Knife Ck. Glac**	**2.18**	**212**		**Pn**	**07 29 56.7**	**-0.3**
KBM	**Katmai Bkd Mtn**	**2.23**	**212**		**Pn**	**07 29 57.7**	**+0.1**
KABU	**Katmai Buttres**	**2.26**	**213**		**Pn**	**07 29 57.9**	**-0.1**
PMR	**Palmer**	**2.34**	**51**		**Pn**	**07 29 58.0**	**-0.9**
PMR					**Sn**	**07 30 26.6**	**-1.7**
PWL	**Port Wells**	**2.38**	**71**		**Pn**	**07 29 58.4**	**-1.0**
KDAK	**Kodiak Island**	**2.41**	**175**		**Pn**	**07 29 58.2**	**-1.5**
KNK	**Knik Glacier**	**2.52**	**59**		**Pn**	**07 30 00.4**	**-0.8**
GHO	**Glory Hole Cre**	**2.53**	**49**		**Pn**	**07 30 00.5**	**-0.8**
CUT	**Chulitna**	**2.58**	**29**	P	**Pn**	**07 30 01.9**	**+0.1**
	baz=212,SNR=12						
CUT				S	**Sn**	**07 30 33.2**	**-0.5**
	baz=212						
CUT	**Chulitna**	**2.58**	**29**		**Pn**	**07 30 02.6**	**+0.8**
CUT					**Sn**	**07 30 33.5**	**-0.1**
PPLA	**Purkeypile**	**2.75**	**7**		**Pn**	**07 30 05.1**	**+0.9**
SML	**Sawmill**	**2.78**	**52**		**Pn**	**07 30 03.6**	**-0.8**
OHAK	**Old Harbor**	**2.97**	**184**		**Pn**	**07 30 04.8**	**-2.0**
GLI	**Glacier Island**	**2.98**	**74**		**Pn**	**07 30 06.8**	**-0.1**
TT01	**Tatalina**	**3.11**	**333**		**Pn**	**07 30 08.4**	**-0.2**
TTA	**Tatalina**	**3.13**	**333**		**Pn**	**07 30 08.5**	**-0.4**
SCM	**Sheep Creek Mo**	**3.20**	**56**		**Pn**	**07 30 09.5**	**-0.4**
HUR	**Hurricane**	**3.22**	**28**		**Pn**	**07 30 10.0**	**-0.1**
FID	**Port Fidalgo**	**3.25**	**77**		**Pn**	**07 30 09.8**	**-0.7**
CAST	**Castle Rocks**	**3.28**	**7**		**Pn**	**07 30 11.5**	**+0.7**
WAT7	**Susitna Watana**	**3.31**	**35**		**Pn**	**07 30 11.2**	**-0.1**
VMT	**TAPS Ti Valdez**	**3.37**	**72**		**Sn**	**07 30 49.9**	**-1.8**
WAT1	**Susitna Watana**	**3.39**	**36**		**Pn**	**07 30 12.2**	**-0.1**
Q23K	**Middleton Isla**	**3.42**	**100**	S	**Sn**	**07 30 52.4**	**-0.5**
	baz=285						
Q23K	**Middleton Isla**	**3.42**	**100**		**Pn**	**07 30 13.0**	**+0.4**
MID	**Middleton Isla**	**3.42**	**100**		**Pn**	**07 30 13.2**	**+0.5**
WAT6	**Susitna Watana**	**3.48**	**44**		**Pn**	**07 30 13.1**	**-0.5**
WAT2	**Susitna Watana**	**3.49**	**35**		**Pn**	**07 30 13.5**	**-0.1**
TRF	**Thorofare Moun**	**3.52**	**20**		**Pn**	**07 30 14.1**	**0.0**
KTH	**Kantishna Hill**	**3.52**	**15**		**Pn**	**07 30 14.5**	**+0.5**
EYAK	**Cordova Ski Ar**	**3.59**	**81**		**Pn**	**07 30 15.0**	**+0.1**
DIV	**Divide**	**3.66

DT1	Dutton Round H	7.13	229			Pn	07 31 02.2	0.0
EGAK	Eagle	7.14	45			Pn	07 31 01.8	-0.5
COLD	Coldfoot	7.18	9	P		Pn	07 31 03.1	+0.4
	baz=191							
COLD	Coldfoot	7.18	9			Pn	07 31 02.4	-0.4
YUK7	Dusty Glacier	7.35	81			Pn	07 31 05.5	+0.2
DAWY	Dawson	7.45	53			Pn	07 31 06.8	+0.4
YUK5	Granite Creek	7.48	76			Pn	07 31 07.2	+0.3
HYT	Haines Junctio	7.65	78			Pn	07 31 09.4	+0.1
BM03	Burnt Mountain	8.14	23			Pn	07 31 14.9	-0.8
BMAR	Burnt Mountain	8.16	23	Pn		Pn	07 31 16.1	+0.2
PLBC	Pleasant Camp	8.39	88			Pn	07 31 20.4	+1.4
TOLK	Toolik Lake Re	8.62	8	P		Pn	07 31 22.6	+0.5
	baz=191							
TOLK	Toolik Lake Re	8.62	8			Pn	07 31 23.5	+1.5
SKAG	Skagway	8.90	87	Pn		Pn	07 31 28.8	+2.9
WHY	Whitehorse	8.95	79			Pn	07 31 26.6	-0.1
AKUT	Akutan	9.22	235	Pn		Pn	07 31 30.9	+0.7
BESE	Bessie Mountai	9.37	92	Pn		Pn	07 31 35.2	+3.0
JIS	Juneau Island	9.70	93	Pn		Pn	07 31 39.7	+3.2
UNV	Unalaska Valle	9.73	235	Pn		Pn	07 31 36.4	-0.6
CRAG	Craig	11.55	105	Pn		Pn	07 32 03.9	+2.7
INK	Inuvik	11.68	38	Pn		Pn	07 32 05.5	+2.8
DLBC	Dease Lake	11.82	88	Pn		Pn	07 32 07.9	+3.1

*REY **20** 07:44:15.3, 64˚.67N×17˚.46W, h7km*
*IDC **20** 07:44:15.2±0.7, 64˚.64N×17˚.59W, h0km, mb3.8/11, mb1 4.0/14, mb1mx3.8/42, mbtmp3.8/14, ML3.2/3, Error ellipse: s-maj=20.8km s-min=10.9km az=8.0*
*NEIC **20** 07:44:17.3±1.5, 64˚.6N±0˚.1×17˚.68W±0˚.09, h8km±4km, mb4.4/18, Error ellipse: s-maj=15.1km s-min=5.4km az=182.0*

ISC 20 07:44:16.7±0.4, **64˚69N**±0˚.02×**17˚46W**±0˚.02, **h10**km, **n91**, σ2$**05**/102, **mb4.1**/23, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.11**	**23**	P	**Pg**	**07 44 18.2**	**-1.3**
	baz=18						
IDYN				S	**Sg**	**07 44 20.8**	**-0.7**
	baz=18						
IVON	**Vonarskard**	**0.13**	**262**	P	**Pg**	**07 44 18.0**	**-1.8**
	baz=270						
IVON				S	**Sg**	**07 44 20.4**	**-1.5**
	baz=270						
IHAM	**Hamarinn**	**0.26**	**216**	P	**Pg**	**07 44 20.3**	**-1.9**
	baz=219						
IGRF	**Grimsfjall**	**0.30**	**163**	P	**Pg**	**07 44 20.8**	**-2.0**
	baz=163						
IKVE	**Kverkfjoll**	**0.34**	**92**	P	**Pg**	**07 44 21.8**	**-1.8**
	baz=89						
IKVE				S	**Sg**	**07 44 26.6**	**-1.5**
	baz=89						
IHUS	**Husbondi**	**0.41**	**192**	P	**Pg**	**07 44 22.9**	**-1.9**
	baz=193						
ISKR	**Skrokkalda**	**0.42**	**252**	P	**Pg**	**07 44 22.9**	**-2.0**
	baz=255						
IKRE	**Kreppuhraun**	**0.47**	**78**	P	**Pg**	**07 44 23.9**	**-2.1**
	baz=76						
IKRE				S	**Sg**	**07 44 30.7**	**-1.5**
	baz=76						
IJOK	**Jokulheimar**	**0.50**	**221**	P	**Pg**	**07 44 24.4**	**-2.0**
	baz=223						
IASK	**Askja**	**0.50**	**44**	P	**Pg**	**07 44 24.7**	**-1.9**
	baz=42						
ISVA	**Svartarkot**	**0.66**	**8**	P	**Pg**	**07 44 27.5**	**-1.9**
	baz=7.3						
ISVA				S	**Sg**	**07 44 37.2**	**-0.8**
	baz=7.3						
IIEY	**Innrieyrar**	**0.66**	**206**	P	**Pg**	**07 44 27.0**	**-2.6**
	baz=207						
IKSK	**Karasker**	**0.68**	**141**	P	**Pg**	**07 44 26.8**	**-3.2**
	baz=140						
IKAL	**Kalfafell**	**0.75**	**188**	P	**Pg**	**07 44 28.5**	**-2.7**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.75**	**80**	P	**Pg**	**07 44 28.6**	**-2.7**
	baz=79						
IVSH				S	**Sg**	**07 44 39.0**	**-2.1**
	baz=79						
IVAT	**Vatnsfell**	**0.81**	**232**	P	**Pg**	**07 44 29.6**	**-2.7**
	baz=233						
IADA	**Aoalbol**	**0.87**	**67**	P	**Pg**	**07 44 30.6**	**-2.9**
	baz=66						
IFAG	**Fagurholsmyri**	**0.89**	**156**	P	**Pg**	**07 44 30.7**	**-3.2**
	baz=156						
IHVE	**Hveravellir**	**0.92**	**282**	P	**Pg**	**07 44 31.3**	**-3.1**
	baz=283						
IMEL	**Melhnausar**	**0.95**	**21**	P	**Pg**	**07 44 32.2**	**-2.7**
	baz=20						
IREN	**Reynihlio**	**0.99**	**14**	P	**Pg**	**07 44 32.9**	**-2.9**
	baz=13						
IKVO	**Krokottuvotn**	**1.06**	**13**	P	**Pg**	**07 44 34.0**	**-3.0**
	baz=13						
ISNB	**Snabyli**	**1.09**	**209**	P	**Pg**	**07 44 34.3**	**-3.3**
	baz=209						
IGRS	**Grimsstaoir**	**1.11**	**30**	P	**Pg**	**07 44 34.8**	**-3.2**
	baz=30						
IGRS				S	**Sg**	**07 44 50.7**	**-1.6**
	baz=30						
ISKI	**Skildingahlsh**	**1.20**	**9**	P	**Pb**	**07 44 36.5**	**-3.0**
	baz=8.4						
ISKI				S	**Sb**	**07 44 53.3**	**-1.7**
	baz=8.4						
IRJU	**Rjupnafell**	**1.20**	**207**	P	**Pb**	**07 44 36.3**	**-3.2**
	baz=207						
IGHA	**Grjothals**	**1.21**	**16**	P	**Pn**	**07 44 36.3**	**-3.4**
	baz=16						
IMJO	**Mjoaskard**	**1.23**	**233**	P	**Pn**	**07 44 37.1**	**-2.9**
	baz=233						
IGRA	**Granastaoir**	**1.23**	**358**	P	**Pn**	**07 44 36.8**	**-3.2**
	baz=358						
IGRA				S	**Sb**	**07 44 53.9**	**-2.1**
	baz=358						
IDIM	**Dimmadalss**	**1.29**	**10**	P	**Pn**	**07 44 37.8**	**-3.0**
	baz=9.4						
IHLA	**Hella**	**1.32**	**343**	P	**Pn**	**07 44 38.3**	**-2.8**
	baz=343						
IHLA				S	**Sb**	**07 44 56.3**	**-2.1**
	baz=343						
IHED	**Heoinshofoi**	**1.40**	**3**	P	**Pn**	**07 44 39.4**	**-2.8**
	baz=2.4						
IHED				S	**Sn**	**07 44 58.5**	**-2.2**
	baz=2.4						
IBRE	**Brettingsstaoi**	**1.45**	**353**	P	**Pn**	**07 44 40.3**	**-2.7**
	baz=353						
IBRE				S	**Sn**	**07 45 00.4**	**-1.6**
	baz=353						
IESK	**Eystri-Skogar**	**1.46**	**218**	P	**Pn**	**07 44 40.7**	**-2.4**
	baz=218						
ISIG	**Siglufjorour**	**1.57**	**338**	P	**Pn**	**07 44 42.2**	**-2.4**
	baz=338						
IASM	**Asmuli**	**1.62**	**239**	P	**Pn**	**07 44 43.1**	**-2.2**
	baz=240						
BORG	**Borgarnes**	**1.66**	**274**	Pg	**Pn**	**07 44 43.6**	**-2.3**
	14nm,0.3s,baz=102,slow=9.4,SNR=40						
BORG				Lg	Lg	07 45 06.2	
	7.4nm,0.3s,baz=39,slow=11,SNR=3.0						
BORG	**Borgarnes**	**1.66**	**274**		**Pn**	**07 44 43.4**	**-2.5**
BORG				Sn	**Sn**	**07 45 05.9**	**-1.2**
IKRO	**Krokur**	**1.70**	**251**	P	**Pn**	**07 44 43.8**	**-2.5**
	baz=252						
ISOL	**Solvholt**	**1.70**	**245**	P	**Pn**	**07 44 44.0**	**-2.4**
	baz=245						
ILEI	**Leirhofn**	**1.77**	**13**	P	**Pn**	**07 44 45.1**	**-2.3**
	baz=13						
SCO	**Scoresbysund**	**6.07**	**346**	Pn	**Pn**	**07 45 46.6**	**+0.3**
EKB	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**07 47 04.3**	**+0.1**
EKA	**Eskdalemuir Ar**	**11.77**	**136**	Pn	**Pn**	**07 47 04.7**	**+0.3**
	baz=323,slow=14,SNR=6.5						
NOA	**NORSAR Array B**	**13.52**	**92**	Pn	**Pn**	**07 47 26.0**	**-2.4**
	0.0nm,0.3s,baz=296,slow=14,SNR=2.7						
FINES	**FINESS Array B**	**19.68**	**79**	P	**Pn**	**07 48 45.9**	**-1.1**
	0.2nm,0.3s,baz=306,slow=4.7,SNR=3.0						
FINES	**FINESS Array B**	**19.68**	**79**	P	**Pn**	**07 48 47.3**	**+0.3**
CLL	**Collm**	**20.70**	**116**	*e*P	Pn	07 48 57.0	-2.1
	comp=Z,6.0nm,1.1s						
CLL	**Collm**	**20.70**	**116**	P	Pn	07 48 57.7	-1.3
CLL				IAmb	IAmb	07 49 00.6	
	comp=Z,11nm,1.4s						
BRG	**Berggiesshubel**	**21.41**	**115**	*e*(P)	**P**	**07 49 05.3**	**+0.9**
	comp=Z,8.6nm,1.0s						
BFO	**Black Forest**	**21.45**	**127**	P	**P**	**07 49 05.8**	**+0.9**
CHVC	**Chvalec**	**22.46**	**113**	*e*P	**P**	**07 49 18.5**	**+2.8**
KHC	**Kasperske Hory**	**22.67**	**119**	*e*P	**P**	**07 49 20.3**	**+2.3**
KHC	**Kasperske Hory**	**22.67**	**119**	P	**P**	**07 49 19.4**	**+1.4**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P	**P**	**07 49 20.1**	**+1.3**
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**07 49 21.6**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=330,slow=7.8,SNR=6.5						
GERES	**GERESS Array B**	**22.95**	**119**	P	**P**	**07 49 21.4**	**+0.5**
LANS	**Liptovska Anna**	**24.96**	**111**	*e*P	**P**	**07 49 41.8**	**+1.8**
ESDC	**Sonseca Array**	**26.27**	**156**	P	**P**	**07 49 52.1**	**+0.2**
	comp=Z,1.6nm,1.0s,baz=338,slow=9.9,SNR=5.5						
NRIK	**Noril'sk**	**36.43**	**35**	P	**P**	**07 51 22.4**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=0.0,slow=4.5,SNR=3.9						
ABKAR	**Akbulak array**	**41.97**	**73**	P	**P**	**07 52 08.4**	**+1.1**
ABKAR	**Akbulak array**	**41.97**	**73**	P	**P**	**07 52 08.4**	**+1.1**
TIXI	**Tiksi**	**42.00**	**15**	P	**P**	**07 52 09.4**	**+2.0**
TIXI				IAmb	IAmb	07 52 10.9	
	comp=Z,8.0nm,1.1s						
ILAR	**Eielson Array**	**45.67**	**332**	P	**P**	**07 52 37.3**	**+0.4**
	comp=Z,1.5nm,1.0s,baz=22,slow=6.4,SNR=9.1						
ILAR				PcP	**PcP**	**07 54 15.2**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=351,slow=2.3,SNR=5.1						
ILAR	**Eielson Array**	**45.67**	**332**	P	**P**	**07 52 38.0**	**+1.1**
IMAR	**Indian Mountai**	**45.84**	**337**	P	**P**	**07 52 40.6**	**+2.4**
P48A	**Milroy**	**45.86**	**271**	P	**P**	**07 52 40.1**	**+1.4**
CNNC	**Cliffs of the**	**46.19**	**261**	P	**P**	**07 52 43.4**	**+2.1**
ZALV	**Zalesovo Beam**	**47.61**	**51**	P	**P**	**07 52 51.6**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=321,slow=13,SNR=1.8						
KURK	**Kurchatov**	**48.09**	**58**	P	**P**	**07 52 57.0**	**+1.0**
KURK				IAmb	IAmb	07 52 58.5	
	comp=Z,3.2nm,0.8s						
T47A	**Sharon Grove**	**48.65**	**270**	P	**P**	**07 53 01.9**	**+1.4**
KK31	**Karatay Array**	**51.25**	**70**	P	**P**	**07 53 22.4**	**+2.2**
KK31				IAmb	IAmb	07 53 22.9	
	comp=Z,1.7nm,0.9s						
KKAR	**Karatay Array**	**51.25**	**70**	P	**P**	**07 53 22.0**	**+1.8**
MKAR	**Makanchi Array**	**52.70**	**58**	P	**P**	**07 53 30.4**	**-0.6**
	comp=Z,1.2nm,1.0s,baz=314,slow=6.1,SNR=5.0						
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	**P**	**07 53 34.0**	**-0.6**
	comp=Z,1.4nm,1.0s,baz=348,slow=8.8,SNR=4.6						
PD31	**Pinedale Array**	**53.18**	**293**	P	**P**	**07 53 35.5**	**+0.7**
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**07 53 34.5**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=54,slow=7.5,SNR=8.1						
PDAR	**Pinedale Array**	**53.18**	**293**	P	**P**	**07 53 35.4**	**+0.6**
AAK	**Ala-Archa**	**53.24**	**67**	P	**P**	**07 53 37.3**	**+2.2**
AAK				IAmb	IAmb	07 53 38.5	
	comp=Z,2.9nm,0.9s						
BTK	**Batken**	**53.94**	**72**	P	**P**	**07 53 41.9**	**+1.7**
BTK				IAmb	IAmb	07 53 43.1	
	comp=Z,6.7nm,1.0s						
GAR	**Garm**	**54.63**	**73**	P	**P**	**07 53 47.1**	**+1.8**
PV13	**Radium Mtn., P**	**56.80**	**290**	P	**P**	**07 54 02.3**	**+1.3**
PV13				IAmb	IAmb	07 54 03.1	
	comp=Z,5.4nm,0.9s						
WMQ	**Urumqi**	**57.20**	**56**	*e*P	P	07 54 08.1	+4.5
SONM	**Songino Array**	**59.61**	**40**	P	**P**	**07 54 20.9**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=328,slow=5.1,SNR=2.8						
U15A	**North Rim**	**59.69**	**291**	P	**P**	**07 54 22.4**	**+1.1**
U15A				IAmb	IAmb	07 54 23.4	
	comp=Z,3.5nm,1.1s						
NIL	**Nilore**	**60.43**	**74**	P	**P**	**07 54 28.1**	**+2.0**
NIL				IAmb	IAmb	07 54 29.4	
	comp=Z,9.3nm,1.0s						
TXAR	**Lajitas Array**	**62.30**	**280**	P	**P**	**07 54 38.6**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=29,slow=2.9,SNR=5.9						
GTA	**Gaotai**	**65.27**	**49**	*e*P	P	07 55 02.4	+4.0
GTA				pP	sP	07 55 07.3	+3.8
GTA				sP	pP	07 55 09.6	+7.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**67.48**	**40**	*e*P	**P**	**07 55 15.3**	**+2.8**
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,58nm,7.0s						
LZH	**Lanzhou**	**69.60**	**48**	*e*P	**P**	**07 55 26.3**	**+0.4**
LZH				pP	pP	07 55 28.5	-1.1
LZH				sP	sP	07 55 29.8	-1.2
LZH				*e*PP	**PP**	**07 58 02.5**	**+3.4**
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,7.9s						
LZH				LR	LR		
	comp=N,52nm,16.2s						
LZH				LR	LR		
	comp=E,65nm,16.3s						
LZH				LR	LR		
	comp=Z,100nm,18.4s						
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P	**P**	**07 56 48.7**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=321,slow=7.4,SNR=4.4						

*IDC **20** 07:48:31.0±0.8, 64˚.56N×17˚.49W, h0km, mb3.7/9, mb1 3.9/11, mb1mx3.7/42, mbtmp3.7/11, ML3.3/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/55, Error ellipse: s-maj=22.9km s-min=14.6km az=21.0*
*REY **20** 07:48:30.2, 64˚.66N×17˚.40W, h9km*
*NEIC **20** 07:48:31.9±3.0, 64˚.64N±0˚.05×17˚.5W±0˚.1, h10km±1km, mb4.2/3, Error ellipse: s-maj=11.2km s-min=7.3km az=70.0*

ISC 20 07:48:31.4±0.5, **64˚66N**±0˚.02×**17˚38W**±0˚.03, **h10**km, **n60**, σ2$**05**/63, **mb3.8**/11, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**2**	P	**Pg**	**07 48 33.2**	**-1.4**
	baz=6.7						
IDYN				S	**Sg**	**07 48 35.8**	**-1.0**
	baz=6.7						
IVON	**Vonarskard**	**0.16**	**274**	P	**Pg**	**07 48 33.5**	**-1.6**
	baz=274						
IGRF	**Grimsfjall**	**0.26**	**169**	P	**Pg**	**07 48 35.5**	**-1.3**
	baz=167						
IHAM	**Hamarinn**	**0.27**	**227**	P	**Pg**	**07 48 35.3**	**-1.5**
	baz=225						
IKVE	**Kverkfjoll**	**0.30**	**87**	P	**Pg**	**07 48 36.5**	**-1.0**
	baz=87						
IHUS	**Husbondi**	**0.39**	**198**	P	**Pg**	**07 48 37.6**	**-1.5**
	baz=197						
IHUS				S	**Sg**	**07 48 42.9**	**-1.3**
	baz=197						
IVOT	**Vottur**	**0.40**	**168**	P	**Pg**	**07 48 37.8**	**-1.5**
	baz=166						
IKRE	**Kreppuhraun**	**0.44**	**74**	P	**Pg**	**07 48 38.7**	**-1.5**
	baz=74						
IKRE				S	**Sg**	**07 48 45.5**	**-0.5**
	baz=74						
ISKR	**Skrokkalda**	**0.45**	**257**	P	**Pg**	**07 48 38.5**	**-1.7**
	baz=257						
IASK	**Askja**	**0.50**	**38**	P	**Pg**	**07 48 39.5**	**-1.7**
	baz=39						
IJOK	**Jokulheimar**	**0.51**	**227**	P	**Pg**	**07 48 39.3**	**-1.9**
	baz=226						
IKSK	**Karasker**	**0.64**	**142**	P	**Pg**	**07 48 41.1**	**-2.6**
	baz=141						
IKSK				S	**Sg**	**07 48 50.5**	**-1.7**
	baz=141						
IIEY	**Innrieyrar**	**0.66**	**210**	P	**Pg**	**07 48 42.1**	**-2.0**
	baz=209						
ISVA	**Svartarkot**	**0.68**	**4**	P	**Pg**	**07 48 42.4**	**-2.1**
	baz=5.2						
IVSH	**V-Sauoahnukur**	**0.72**	**78**	P	**Pg**	**07 48 43.3**	**-2.1**
	baz=78						
IKAL	**Kalfafell**	**0.73**	**191**	P	**Pg**	**07 48 43.2**	**-2.3**
	baz=190						
IVAT	**Vatnsfell**	**0.82**	**235**	P	**Pg**	**07 48 44.8**	**-2.4**
	baz=235						
IADA	**Aoalbol**	**0.85**	**64**	P	**Pg**	**07 48 45.3**	**-2.5**
	baz=65						
IFAG	**Fagurholsmyri**	**0.85**	**158**	P	**Pg**	**07 48 45.5**	**-2.3**
	baz=157						
IMEL	**Melhnausar**	**0.96**	**18**	P	**Pg**	**07 48 47.0**	**-2.9**
	baz=19						
IREN	**Reynihlio**	**1.01**	**11**	P	**Pg**	**07 48 47.8**	**-3.0**
	baz=12						
IKVO	**Krokottuvotn**	**1.08**	**11**	P	**Pg**	**07 48 48.9**	**-3.2**
	baz=12						
ISNB	**Snabyli**	**1.08**	**211**	P	**Pg**	**07 48 49.4**	**-2.8**
	baz=211						
IGRS	**Grimsstaoir**	**1.11**	**28**	P	**Pb**	**07 48 49.7**	**-3.0**
	baz=28						
IFED	**Fedgar**	**1.19**	**239**	P	**Pb**	**07 48 51.6**	**-2.5**
	baz=238						
IRJU	**Rjupnafell**	**1.19**	**209**	P	**Pb**	**07 48 51.5**	**-2.6**
	baz=208						
ISKI	**Skildingahlsh**	**1.22**	**7**	P	**Pn**	**07 48 51.3**	**-3.2**
	baz=7.2						
IGHA	**Grjothals**	**1.22**	**14**	P	**Pn**	**07 48 51.3**	**-3.3**
	baz=14						
IMJO	**Mjoaskard**	**1.24**	**235**	P	**Pn**	**07 48 52.2**	**-2.7**
	baz=234						
IGRA	**Granastaoir**	**1.26**	**356**	P	**Pn**	**07 48 51.9**	**-3.2**
	baz=357						
IGYG	**Gygjarholskot**	**1.29**	**254**	P	**Pn**	**07 48 52.3**	**-3.1**
	baz=254						
IHVO	**Lagu-Hvolar**	**1.31**	**210**	P	**Pn**	**07 48 53.4**	**-2.3**
	baz=210						
IDIM	**Dimmadalss**	**1.32**	**8**	P	**Pn**	**07 48 52.8**	**-3.0**
	baz=8.4						
IHAU	**Haukadalur**	**1.32**	**239**	P	**Pn**	**07 48 53.4**	**-2.5**
	baz=239						
IHLA	**Hella**	**1.35**	**342**	P	**Pn**	**07 48 53.5**	**-2.9**
	baz=343						
BORG	**Borgarnes**	**1.70**	**275**	Pg	**Pn**	**07 48 59.3**	**-1.8**
	17nm,0.3s,baz=99,slow=8.4,SNR=24						
BORG				Lg	Lg	07 49 25.1	
	9.0nm,0.3s,baz=259,slow=19,SNR=7.3						
BORG	**Borgarnes**	**1.70**	**275**	Pn	**Pn**	**07 48 59.7**	**-1.3**
BORG				Sn	**Sb**	**07 49 22.9**	**-1.2**
SCO	**Scoresbysund**	**6.10**	**345**		**Pn**	**07 50 02.1**	**+0.6**
EKA	**Eskdalemuir Ar**	**11.72**	**136**	Pn	**Pn**	**07 51 18.6**	**+0.1**
	baz=323,slow=14,SNR=5.3						
NC204	**NORSAR Array S**	**13.18**	**92**	Pn	**Pn**	**07 51 37.5**	**-0.9**
NOA	**NORSAR Array B**	**13.48**	**92**	Pn	**Pn**	**07 51 41.1**	**-1.4**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.9						
NOA				LR	LR	07 57 45.1	
	comp=Z,28nm,18.6s,baz=295,slow=41						
CLL	**Collm**	**20.66**	**116**	*e*P	Pn	07 53 12.0	-1.2
BRG	**Berggiesshubel**	**21.36**	**115**	*e*(P)	**P**	**07 53 20.3**	**+1.7**
	9.2nm,1.2s						
GEC2	**GERESS Array S**	**22.91**	**119**	P	**P**	**07 53 35.4**	**+0.2**
GEC2				IAmb	IAmb	07 53 50.7	
	comp=Z,8.2nm,1.3s						
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**07 53 35.5**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=350,slow=10.0,SNR=2.0						
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**07 53 35.0**	**-0.2**
SCHQ	**Schefferville**	**26.09**	**271**	LR	LR	08 03 32.3	
	comp=Z,105nm,19.5s,baz=36,slow=35						
ESDC	**Sonseca Array**	**26.23**	**156**	P	**P**	**07 54 07.5**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=346,slow=9.8,SNR=4.6						
NRIK	**Noril'sk**	**36.43**	**35**	P	**P**	**07 55 37.5**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=308,slow=6.0,SNR=3.8						
ILAR	**Eielson Array**	**45.71**	**332**	P	**P**	**07 56 54.7**	**+2.7**
	comp=Z,2.3nm,1.1s,baz=35,slow=4.5,SNR=9.5						
ILAR				PcP	**PcP**	**07 58 30.6**	**+1.1**
	comp=Z,0.7nm,1.0s,baz=28,slow=3.0,SNR=4.2						
ILAR	**Eielson Array**	**45.71**	**332**	P	**P**	**07 56 53.6**	**+1.6**
EIL	**Elat**	**47.67**	**111**	LR	LR	08 20 28.8	
	comp=Z,20nm,18.1s,baz=290,slow=40						
KURK	**Kurchatov**	**48.07**	**58**	P	**P**	**07 57 11.4**	**+0.9**
KURK				IAmb	IAmb	07 57 14.5	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**07 57 46.4**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=339,slow=6.5,SNR=5.2						
TORD	**Torodi Ar. Bea**	**53.12**	**157**	P	**P**	**07 57 49.5**	**+0.5**
	comp=Z,1.0nm,1.0s,baz=342,slow=8.8,SNR=4.3						
TORD	**Torodi Ar. Bea**	**53.12**	**157**	P	**P**	**07 57 50.5**	**+1.6**
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**07 57 51.1**	**+1.3**
	comp=Z,1.6nm,0.9s,baz=51,slow=7.8,SNR=6.3						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**07 57 51.6**	**+1.8**
SONM	**Songino Array**	**59.61**	**40**	P	**P**	**07 58 37.0**	**+1.9**
	comp=Z,0.6nm,0.8s,baz=324,slow=7.1,SNR=2.5						
TXAR	**Lajitas Array**	**62.34**	**280**	P	**P**	**07 58 55.4**	**+1.6**
	comp=Z,0.5nm,1.0s,baz=46,slow=7.3,SNR=3.7						

*SJA **20** 07:49:44.7±0.7, 22˚.99S×66˚.55W, h270km±9km, ML4.3, MW4.0*
*IDC **20** 07:49:45.1±1.2, 22˚.93S×66˚.32W, h221km±13km, mb3.6/3, mb1 3.6/8, mb1mx3.4/32, mbtmp4.1/8, Error ellipse: s-maj=23.4km s-min=17.2km az=146.0*
*VAO **20** 07:49:45.8±0.6, 22˚.99S×66˚.93W, h300km, mb4.2*
*NEIC **20** 07:49:46.2±1.9, 22˚.91S±0˚.07×66˚.9W±0˚.2, h294km±12km, Error ellipse: s-maj=26.2km s-min=9.8km az=96.0*
*GUC **20** 07:49:47.2±0.5, 22˚.84S×66˚.77W, h266km±8km, ML4.4*

ISC 20 07:49:45.7±0.6, **22˚87S**±0˚.04×**66˚.81W**±0˚.08, **h277**km±9km, **n106**, σ1$**24**/151, **16C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.96**	**277**	P	**Pn**	**07 50 31.1**	**+0.7**
	121nm,0.3s,baz=99,slow=5.4,SNR=800						
LVC				S	**S**	**07 51 04.5**	**-1.4**
	32nm,0.3s,baz=246,slow=20,SNR=23						
LVC	**Limon Verde**	**1.96**	**277**	*e*P	**Pn**	**07 50 31.2**	**+0.7**
LVC				*i* S	**S**	**07 51 04.4**	**-1.6**
LVC	**Limon Verde**	**1.96**	**277**	*e*P	**Pn**	**07 50 31.2**	**+0.7**
LVC				*e*S	**S**	**07 51 05.7**	**-0.3**
LVC				IAML		07 51 17.4	
	comp=Z,59nm,0.2s						
LVC	**Limon Verde**	**1.96**	**277**	*e*P	**Pn**	**07 50 31.4**	**+0.9**
PB15	**IPOC Station P**	**2.47**	**262**	⇑*i*P	**Pn**	**07 50 36.1**	**+1.2**
PB15				*i* S	**S**	**07 51 13.7**	**-0.3**
PB15	**IPOC Station P**	**2.47**	**262**		**Pn**	**07 50 36.1**	**+1.2**
PB15				S	**S**	**07 51 13.3**	**-0.6**
PB15	**IPOC Station P**	**2.47**	**262**	*e*P	**Pn**	**07 50 36.1**	**+1.2**
PB15				*e*S	**S**	**07 51 14.0**	**0.0**
PB15			

PB08				IAML			07 51 35.6	
	comp=Z,146nm,0.3s							
PB10	**IPOC Station P**	**3.50**	**259**	⇑*iP*	**Pn**		**07 50 47.0**	**+1.8**
PB10				*i* S	**S**		**07 51 31.8**	**-0.8**
PB10	**IPOC Station P**	**3.50**	**259**	Pn	**Pn**		**07 50 47.1**	**+1.8**
PB10	**IPOC Station P**	**3.50**	**259**	*eP*	**Pn**		**07 50 47.0**	**+1.8**
PB10				*eS*	**S**		**07 51 32.3**	**-0.4**
PB10				IAML			07 51 35.5	
	comp=Z,226nm,0.2s							
PATCX	**Punta Patache**	**3.72**	**303**	*eP*	**Pn**		**07 50 48.8**	**+1.1**
PATCX				*i* S	**S**		**07 51 36.0**	**-1.1**
PATCX	**Punta Patache**	**3.72**	**303**		**Pn**		**07 50 48.9**	**+1.2**
PB14	**IPOC Station P**	**3.73**	**241**	Pn	**Pn**		**07 50 49.3**	**+1.4**
PB14	**IPOC Station P**	**3.73**	**241**	*eS*	**S**		**07 51 37.4**	**-0.2**
PB14				IAML			07 51 40.5	
	comp=Z,406nm,0.3s							
TA01	**Diego Aracena**	**3.88**	**306**	⇑*iP*	**Pn**		**07 50 50.4**	**+0.9**
TA01				*i* S	**S**		**07 51 39.0**	**-1.4**
TA01	**Diego Aracena**	**3.88**	**306**		**Pn**		**07 50 50.4**	**+0.9**
GO01	**Chusmiza**	**3.89**	**325**	⇑*iP*	**Pn**		**07 50 51.5**	**+1.5**
GO01				*i* S	**S**		**07 51 41.4**	**+0.1**
GO01	**Chusmiza**	**3.89**	**325**		**Pn**		**07 50 51.4**	**+1.4**
TA02	**Huaiquique**	**4.03**	**309**	*eP*	**Pn**		**07 50 51.6**	**+0.5**
TA02				*i* S	**S**		**07 51 40.5**	**-2.9**
PB11	**IPOC Station P**	**4.08**	**319**	⇑*iP*	**Pn**		**07 50 52.6**	**+0.8**
PB11				*i* S	**S**		**07 51 43.0**	**-1.6**
PB11	**IPOC Station P**	**4.08**	**319**		**Pn**		**07 50 52.6**	**+0.8**
PB11	**IPOC Station P**	**4.08**	**319**	*eP*	**Pn**		**07 50 52.8**	**+1.0**
PB11				*eS*	**S**		**07 51 44.6**	**0.0**
PB11				IAML			07 51 46.0	
	comp=Z,307nm,0.2s							
AC02	**Maricunga**	**4.47**	**208**		**Pn**		**07 50 57.4**	**+0.7**
PSGC	**Pisagua**	**4.49**	**316**	*eP*	**Pn**		**07 50 56.8**	**+0.3**
PSGC				*i* S	**S**		**07 51 50.5**	**-2.7**
PSGCX	**Pisagua**	**4.49**	**316**	Pn	**Pn**		**07 50 57.1**	**+0.6**
PSGCX				S	**S**		**07 51 50.8**	**-2.4**
PSGCX	**Pisagua**	**4.49**	**316**	*eP*	**Pn**		**07 50 56.8**	**+0.3**
PSGCX				*eS*	**S**		**07 51 51.7**	**-1.5**
PSGCX				IAML			07 51 56.8	
	comp=Z,168nm,0.3s							
MNMC	**Minye Minye**	**4.54**	**325**	⇑*iP*	**Pn**		**07 50 58.7**	**+1.4**
MNMC				*i* S	**S**		**07 51 53.1**	**-1.4**
MNMC	**Minye Minye**	**4.54**	**325**		**Pn**		**07 50 58.7**	**+1.4**
MNMC				S	**S**		**07 51 52.8**	**-1.8**
MNMCX	**Minye Minye**	**4.54**	**325**	*eP*	**Pn**		**07 50 58.7**	**+1.4**
MNMCX				*eS*	**S**		**07 51 53.6**	**-1.0**
MNMCX				IAML			07 51 56.9	
	comp=Z,432nm,0.2s							
AC01	**Pan de Azucar**	**4.75**	**226**	Pn	**Pn**		**07 50 59.9**	**+0.5**
AC01				S	**S**		**07 51 56.8**	**-1.5**
PB16	**IPOC Station P**	**5.17**	**330**	⇑*iP*	**Pn**		**07 51 07.1**	**+2.0**
PB16				*i* S	**S**		**07 52 08.1**	**-0.5**
PB16	**IPOC Station P**	**5.17**	**330**	Pn	**Pn**		**07 51 07.1**	**+2.0**
PB16				S	**S**		**07 52 08.4**	**-0.2**
PB16	**IPOC Station P**	**5.17**	**330**	*eP*	**Pn**		**07 51 07.0**	**+2.0**
PB16				*eS*	**S**		**07 52 08.7**	**+0.1**
PB16				IAML			07 52 12.7	
	comp=Z,54nm,0.9s							
GO03	**Copiap**	**5.63**	**213**		**Pn**		**07 51 09.7**	**-0.2**
GO03	**Copiap**	**5.63**	**213**	*eP*	**Pn**		**07 51 09.9**	**0.0**
GO03				*eS*	**S**		**07 52 15.3**	**-2.3**
AC04	**Llanos de Chal**	**6.56**	**215**	Pn	**Pn**		**07 51 20.8**	**-0.4**
LPAZ	**La Paz**	**6.67**	**349**	P	**Pn**		**07 51 25.7**	**+2.4**
	comp=Z,1.3nm,0.3s,baz=142,slow=6.3,SNR=40							
LPAZ				S	**S**		**07 52 39.8**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=275,slow=18,SNR=4.5							
LPAZ	**La Paz**	**6.67**	**349**	Pn	**Pn**		**07 51 25.1**	**+1.8**
LPAZ	**La Paz**	**6.67**	**349**	*eP*	**Pn**		**07 51 25.3**	**+2.0**
AC05	**El Transito**	**6.71**	**207**	Pn	**Pn**		**07 51 23.3**	**+0.2**
LCO	**Las Campanas**	**7.04**	**209**	Pn	**Pn**		**07 51 27.4**	**-0.1**
CO01	**Juntas del Tor**	**7.66**	**202**	Pn	**Pn**		**07 51 36.5**	**+1.5**
GO04	**Tololo Observa**	**8.10**	**205**	Pn	**Pn**		**07 51 40.4**	**-0.1**
CO03	**El Pedregal**	**8.66**	**203**	Pn	**Pn**		**07 51 47.3**	**0.0**
SIV	**San Ignacio**	**8.72**	**39**	P	**Pn**		**07 51 45.5**	**-2.7**
	comp=Z,1.7nm,0.3s,baz=234,slow=9.6,SNR=50							
SIV				S	S		07 53 16.1	-12
	baz=190,slow=6.5,SNR=3.1							
CO02	**Combarbal**	**9.10**	**203**	Pn	**Pn**		**07 51 53.5**	**+0.7**
PTGB	**Pitanga**	**13.62**	**101**	*eP*	**Pn**		**07 52 46.4**	**-2.2**
ITAB	**Concordia**	**13.99**	**111**	*eP*	**P**		**07 52 53.0**	**+0.2**
CPSB	**Cacapava Do Su**	**14.11**	**125**	*eP*	**P**		**07 52 54.1**	**0.0**
SAML	**Samuel**	**14.28**	**15**		**P**		**07 52 54.3**	**+1.8**
PCMB	**Pacaembu**	**14.45**	**88**	*eP*	**Pn**		**07 52 58.8**	**+0.3**
ITRB	**Iturama**	**15.65**	**81**	*eP*	**P**		**07 53 11.4**	**+0.1**
ARAG	**Araguaiana, MT**	**15.84**	**66**	*eP*	**P**		**07 53 14.2**	**+0.8**
FRTB	**Fartura**	**15.88**	**95**	*eP*	**P**		**07 53 13.7**	**0.0**
CLDB	**Colider**	**15.91**	**43**	*eP*	**P**		**07 53 13.6**	**-0.5**
BB19B	**Bebedouro**	**17.05**	**87**	*eP*	**P**		**07 53 26.9**	**+0.3**
PLCA	**Paso Flores**	**18.09**	**189**	P	**Pn**		**07 53 41.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=10,SNR=2.0							
PLCA	**Paso Flores**	**18.09**	**189**	P	**Pn**		**07 53 39.6**	**-1.3**
PLCA				IAmb	IAmb		07 53 43.2	
	comp=Z,5.5nm,1.4s							
IPMB	**Ipameri, GO**	**18.09**	**78**	*eP*	**P**		**07 53 38.0**	**+0.2**
VAO	**Valinhos**	**18.28**	**94**	*eP*	**P**		**07 53 39.4**	**-0.5**
SNDB	**Serra Nova Dou**	**18.33**	**58**	*eP*	**P**		**07 53 39.8**	**-0.6**
BDFB	**Brasilia**	**18.34**	**71**	P	**P**		**07 53 47.5**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=239,slow=12,SNR=21							
BDFB	**Brasilia**	**19.14**	**71**	P	**P**		**07 53 48.9**	**-0.2**
NPGB	**Novo Progresso**	**19.21**	**37**	*eP*	**P**		**07 53 49.3**	**-0.5**
ITTB	**Itaituba**	**21.29**	**32**	*eP*	**P**		**07 54 11.3**	**+0.1**
VAS01	**Vassouras-RJ**	**21.58**	**93**	*eP*	**P**		**07 54 13.2**	**-0.7**
JANB	**Januaria**	**22.63**	**74**	*eP*	**P**		**07 54 23.5**	**0.0**
SMTB	**Santa Maria do**	**23.11**	**56**	*eP*	**P**		**07 54 28.4**	**+0.6**
SDBA	**SAO DESIDERIO**	**23.29**	**67**	*eP*	**P**		**07 54 29.4**	**-0.1**
PRPB	**Parauapebas**	**23.33**	**47**	*eP*	**P**		**07 54 29.8**	**+0.1**
MALB	**Monte Alegre**	**24.18**	**32**	*eP*	**P**		**07 54 37.4**	**-0.1**
SJMB	**Sao Joao De Ma**	**24.30**	**85**	*eP*	**P**		**07 54 38.6**	**0.0**
RIB01	**Linhares ES**	**24.89**	**87**	*eP*	**P**		**07 54 44.0**	**+0.2**
NAN01	**Guarapari, ES**	**25.49**	**84**	*eP*	**P**		**07 54 49.0**	**-0.3**
GDU01	**Guandu, BA**	**27.37**	**75**	*eP*	**P**		**07 55 05.8**	**-0.3**
MDP	**Montagnes des**	**31.06**	**28**	P	**P**		**07 55 40.5**	**+2.0**
	comp=Z,14nm,0.8s,baz=200,slow=13,SNR=8.2							
NBMO	**Morrinhos-CE**	**32.41**	**57**	*eP*	**P**		**07 55 50.5**	**+0.3**
LRAL	**Lakeview Retre**	**58.84**	**340**	P	**P**		**07 59 12.7**	**-2.8**
LRAL				IAmb	IAmb		07 59 26.7	
	comp=Z,8.1nm,1.2s							
SNAA	**Sanae**	**60.35**	**161**	P	**P**		**07 59 25.1**	**-0.4**
TXAR	**Lajitas Array**	**62.87**	**324**	P	P		07 59 49.6	+6.9
	comp=Z,0.3nm,0.7s,baz=147,slow=7.9,SNR=4.7							
TORD	**Torodi Ar. Bea**	**76.00**	**69**	P	**P**		**08 01 05.3**	**+2.3**
	comp=Z,0.8nm,0.4s,baz=260,slow=6.0,SNR=15							
MKAR	**Makanchi Array**	**115.54**	**39**	PKPbc	**PKiKP**		**08 08 57.4**	**+2.4**
	comp=Z,1.0nm,0.6s,baz=302,slow=3.5,SNR=8.4							

IDC 20 07:57:25.1±2.0, 18°92S×65°47E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/57, mbtmp3.8/5, Error ellipse: s-maj=61.4km s-min=37.0km az=114.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**13.12**	**32**	T	T	08 13 58.4	
	baz=210,slow=76,SNR=62						
H08S2	**Diego Garcia H**	**13.13**	**32**	T	T	08 13 59.9	
	baz=210,slow=76,SNR=40						
H08S3	**Diego Garcia H**	**13.14**	**32**	T	T	08 13 59.5	
	baz=210,slow=76,SNR=114						
ASAR	**Alice Springs**	**63.41**	**108**	P	P	08 07 56.9	-0.1
	1.0nm,0.7s,baz=266,slow=5.8,SNR=7.3						
WRA	**Warramunga Arr**	**64.51**	**104**	P	P	08 08 04.3	0.0
	1.5nm,0.8s,baz=262,slow=5.4,SNR=7.9						
QSPA	**South Pole Qui**	**71.18**	**180**	P	P	08 08 45.7	0.0
	1.6nm,1.0s,baz=260,slow=2.9,SNR=5.1						
VNDA	**Vanda**	**73.04**	**167**	P	P	08 08 56.5	+0.1
	0.5nm,0.8s,baz=273,slow=5.5,SNR=3.8						
SONM	**Songino Array**	**75.90**	**27**	P	P	08 09 13.6	+0.1
	0.5nm,0.6s,baz=209,slow=5.0,SNR=2.9						

*IDC **20** 08:00:44.1±1.1, 1.°82N×126.°73E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/46, mbtmp3.9/7, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/36, Error ellipse: s-maj=116.1km s-min=17.4km az=72.0*

*DJA **20** 08:00:49.7±1.3, 2.°N±3.°×12.°6E±.°, h30km±12km, M4.0/7, MLv4.0/7*

*NEIC **20** 08:00:50.1±1.1, 1.°8N±0.°1×126.°61E±0.°10, h44km±11km, mb4.0/13, Error ellipse: s-maj=20.0km s-min=10.6km az=211.0*

ISC 20 08:00:50.8±0.6, 1.°69N±0.°05×126.°52E±0.°06, h47km, n33, σ1°16/34, mb4.0/12, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.25**	**137**	P	**Pn**	**08 01 11.4**	**-0.5**
TNTI				S	**Sn**	**08 01 27.3**	**-0.3**
TNTI	**Ternate**	**1.25**	**137**		**Pn**	**08 01 11.3**	**-0.6**
SGSI	**Sangihe**	**2.21**	**333**	P	**Pn**	**08 01 23.8**	**-1.3**
SGSI				S	**Sn**	**08 01 51.0**	**-0.3**
LBMI	**Labuha**	**2.52**	**157**	S	**Sn**	**08 01 59.3**	**+0.6**
KMSI	**Cibinong**	**2.77**	**246**	P	**Pn**	**08 01 31.5**	**-1.3**
GTOI	**Gorontalo**	**3.66**	**253**	P	**Pn**	**08 01 46.4**	**+1.4**
LUWI	**Luwuk**	**4.63**	**234**	Pn	**Pn**	**08 01 59.8**	**+1.6**
MRSI	**Marisa**	**4.73**	**255**	P	**Pn**	**08 01 58.2**	**-1.5**
KCP	**Kidapawan**	**5.47**	**345**	‖*eP*	**Pn**	**08 02 13.2**	**+3.3**
TOLI2	**Tolitoli**	**5.76**	**264**		**Pn**	**08 02 14.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.69**	**182**	P	**P**	**08 05 16.9**	**+0.6**
	0.1nm,0.3s,baz=5.7,slow=7.5,SNR=2.8						
FITZ	**Fitzroy Crossi**	**19.69**	**182**	P	**P**	**08 05 16.8**	**+0.6**
LEM	**Lembang**	**20.68**	**246**	LR	LR	08 13 08.0	
	comp=Z,91nm,20.9s,baz=268,slow=36						
WB0	**Warramunga Arr**	**22.68**	**160**	P	**P**	**08 05 48.8**	**+0.2**
WB0				IAmb	IAmb	08 05 53.2	
	comp=Z,3.9nm,0.7s						
WRAB	**Tennant Creek**	**22.82**	**161**	P	**P**	**08 05 49.1**	**-1.0**
WRAB				IAmb	IAmb	08 05 56.7	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**08 05 48.7**	**-1.4**
	comp=Z,1.9nm,0.6s,baz=339,slow=11,SNR=38						
WRA	**Warramunga Arr**	**22.83**	**161**	P	**P**	**08 05 49.0**	**-1.1**
WB2	**Warramunga Arr**	**22.83**	**161**	P	**P**	**08 05 50.2**	**+0.1**
WB2				IAmb	IAmb	08 05 56.4	
	comp=Z,4.8nm,0.8s						
WR0	**Warramunga Arr**	**22.91**	**160**	P	**P**	**08 05 51.5**	**+0.5**
WR0				IAmb	IAmb	08 06 01.4	
	comp=Z,5.4nm,1.1s						
AS31	**Alice Springs**	**26.21**	**165**	P	**P**	**08 06 21.3**	**-0.2**
ASAR	**Alice Springs**	**26.21**	**165**	P	**P**	**08 06 21.9**	**+0.4**
	comp=Z,0.7nm,0.5s,baz=346,slow=7.5,SNR=16						
ASAR	**Alice Springs**	**26.21**	**165**	P	**P**	**08 06 21.4**	**0.0**
CMAR	**Chiang Mai Arr**	**31.76**	**303**	P	**P**	**08 07 11.9**	**+1.0**
BBOO	**Buckleboo**	**35.48**	**166**	P	**P**	**08 07 45.1**	**+2.1**
SONM	**Songino Array**	**49.15**	**342**	P	**P**	**08 09 33.0**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=163,slow=5.6,SNR=3.4						
MK31	**Makanchi Array**	**59.11**	**326**	P	**P**	**08 10 46.1**	**-0.5**
MKAR	**Makanchi Array**	**59.11**	**326**	P	**P**	**08 10 46.0**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=120,slow=8.3,SNR=29						
ZALV	**Zalesovo Beam**	**62.30**	**334**	P	**P**	**08 11 08.6**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=142,slow=4.9,SNR=1.7						
KURK	**Kurchatov**	**63.34**	**328**	P	**P**	**08 11 14.8**	**-0.3**
KK31	**Karatay Array**	**64.58**	**318**	P	**P**	**08 11 21.6**	**-1.8**
KK31				IAmb	IAmb	08 11 47.7	
	comp=Z,1.4nm,1.1s						
KKAR	**Karatay Array**	**64.58**	**318**	P	**P**	**08 11 21.6**	**-1.8**
KKAR				IAmb	IAmb	08 11 47.7	
	comp=Z,1.4nm,1.1s						
NRIK	**Noril'sk**	**72.34**	**346**	P	**P**	**08 12 11.3**	**0.0**
	comp=Z,1.4nm,0.4s,baz=130,slow=7.2,SNR=4.8						
ABKAR	**Akbulak array**	**73.59**	**321**	P	**P**	**08 12 18.6**	**-0.6**

*GCMT **20** 08:04:32.0±0.4, 18.°78S±0.°04×65.°49E±0.°03, h14km±1km, MW4.7/67, Moment Tensor Solution. s20,c24; s67,c84; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=1.38±.13; Mθθ=0.33±.08; Mφφ=1.05±.09; Mrθ=0.03±.19; Mrφ=-0.72±.06; Mθφ=-0.27±.18; Best double couple: M=1.46600×10^16^ NP1:φs=143.00000°, δ=40.00000°, λ=-98.00000°. NP2: φs=334.00000°, δ=50.00000°, λ=-83.00000°. Principal axes: T 1.5190, Plg=5.0000°, Azm=59.0000°; N -0.1030, Plg=5.0000°, Azm=149.0000°; P -1.4130, Plg=83.0000°, Azm=287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 20 08:04:27.3±1.2, 18.°88S×65.°75E, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.8/70, mbtmp4.0/9, MS3.8/9, Ms1 3.8/9, ms1mx3.5/40 Error ellipse: s-maj=41.0km s-min=22.1km az=80.0, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**12.94**	**31**	T	T	08 20 59.6	
	baz=210,slow=76,SNR=43						
H08S2	**Diego Garcia H**	**12.95**	**31**	T	T	08 20 57.6	
	baz=210,slow=76,SNR=51						
H08S3	**Diego Garcia H**	**12.96**	**31**	T	T	08 21 00.6	
	baz=210,slow=76,SNR=79						
BOSA	**Boshof**	**38.15**	**248**	LR	LR	08 24 50.6	
	comp=Z,136nm,18.4s,baz=63,slow=32						
LEM	**Lembang**	**42.43**	**79**	LR	LR	08 26 20.9	
	comp=Z,181nm,21.0s,baz=178,slow=31						
MAW	**Mawson**	**48.74**	**181**	LR	LR	08 28 30.3	
	comp=Z,109nm,21.7s,baz=56,slow=30						
CMAR	**Chiang Mai Arr**	**49.39**	**43**	LR	LR	08 30 54.3	
	comp=Z,112nm,21.1s,baz=250,slow=32						
FITZ	**Fitzroy Crossi**	**56.56**	**100**	P	P	08 14 12.0	-0.1
	2.4nm,0.9s,baz=240,slow=7.6,SNR=3.6						
ASAR	**Alice Springs**	**63.17**	**107**	P	P	08 14 57.8	+0.2
	1.7nm,0.8s,baz=269,slow=5.9,SNR=14						
WRA	**Warramunga Arr**	**64.27**	**104**	P	P	08 15 04.7	-0.1
	2.3nm,0.9s,baz=262,slow=5.7,SNR=16						
BRTR	**Keskin Array B**	**65.56**	**333**	LR	LR	08 42 24.8	
	comp=Z,10nm,21.1s,baz=154,slow=35						
MKAR	**Makanchi Array**	**67.05**	**12**	P	P	08 15 22.1	-0.1
	0.3nm,0.7s,baz=160,slow=4.6,SNR=3.9						
KURBB	**Kurchatov Arra**	**70.11**	**9**	P	P	08 15 42.4	+1.2
	0.9nm,0.7s,baz=208,slow=6.6,SNR=5.5						
TORD	**Torodi Ar. Bea**	**70.69**	**292**	LR	LR	08 45 58.3	
	comp=Z,74nm,18.2s,baz=325,slow=35						
QSPA	**South Pole Qui**	**71.22**	**180**	P	P	08 15 47.9	-0.2
	3.2nm,1.1s,baz=262,slow=4.5,SNR=5.8						
VNDA	**Vanda**	**73.02**	**167**	P	P	08 15 58.9	+0.3
	1.0nm,0.9s,baz=271,slow=7.7,SNR=5.5						
VNDA				LR	LR	08 43 18.1	
	comp=Z,47nm,19.5s,baz=206,slow=32						
DBIC	**Dimbokro**	**74.02**	**283**	LR	LR	08 45 50.3	
	comp=Z,91nm,21.0s,baz=102,slow=34						
ZALV	**Zalesovo Beam**	**74.36**	**12**	P	P	08 16 05.3	-1.2
	1.0nm,0.3s,baz=217,slow=6.9,SNR=3.3						
JAY	**Jayapura**	**74.96**	**87**	LR	LR	08 47 31.1	
	comp=Z,473nm,19.8s,baz=268,slow=34						
SONM	**Songino Array**	**75.74**	**27**	P	P	08 16 14.7	-0.1
	1.1nm,0.8s,baz=218,slow=6.6,SNR=5.6						

WEL 20 08:05:55.4, 39°S±3.°×17°5E±.°, h201km±3km, M3.5/114, MLv3.5/114, Error ellipse: s-maj=0.0km s-min=0.0km az=119.2, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.03**	**79**	P	Pn	08 06 21.0	-0.6
VRZ				S	S	08 06 40.2	-1.8
DREZ	**Durham Road**	**0.41**	**262**	P	Pn	08 06 22.1	-0.1
DREZ				S	S	08 06 42.4	-0.7
PREZ	**Palmer Road**	**0.48**	**244**	P	Pn	08 06 22.5	0.0
PREZ				S	S	08 06 43.2	-0.5
NEZ	**North Egmont**	**0.51**	**254**	P	Pn	08 06 22.6	0.0
NEZ				S	S	08 06 43.0	-0.9
PKVZ	**Pokaka**	**0.51**	**108**	P	Pn	08 06 22.5	-0.1
PKVZ				S	S	08 06 42.3	-1.5
TWVZ	**Taurewa**	**0.56**	**84**	P	Pn	08 06 22.7	-0.3
KHEZ	**Kahui Hut**	**0.57**	**253**	P	Pn	08 06 22.6	-0.3
PKE	**Pukeiti**	**0.57**	**263**	P	Pn	08 06 22.8	0.0
HIZ	**Hauiti**	**0.62**	**10**	P	Pn	08 06 22.7	-0.4
HIZ				S	S	08 06 43.3	-1.3
MTVZ	**Mangateitei**	**0.64**	**114**	P	Pn	08 06 23.2	0.0
MTVZ				S	S	08 06 43.3	-1.5
WAZ	**Wanganui**	**0.66**	**162**	P	Pn	08 06 23.3	+0.1
WAZ				S	S	08 06 43.5	-1.5
FWVZ	**Far West T-bar**	**0.66**	**101**	P	Pn	08 06 23.4	-0.1
FWVZ				S	S	08 06 43.7	-1.6
DRZ	**Dome Shelter**	**0.67**	**103**	P	Pn	08 06 23.9	+0.3
WTVZ	**West Tongariro**	**0.68**	**89**	P	Pn	08 06 23.5	0.0
NBEZ	**Newall Road No**	**0.68**	**258**	P	Pn	08 06 23.1	-0.1
NGZ	**Ngauruhoe**	**0.69**	**94**	P	Pn	08 06 23.5	0.0
WHVZ	**Whangaehu Hut**	**0.69**	**103**	P	Pn	08 06 23.9	+0.2
WNVZ	**Wahianoa**	**0.71**	**106**	P	Pn	08 06 23.8	+0.2
WNVZ				S	S	08 06 43.8	-1.7
NMEZ	**Namu Road**	**0.71**	**246**	P	Pn	08 06 23.3	-0.1
NMEZ				S	S	08 06 44.6	-0.6
KRVZ	**Karewarewa**	**0.72**	**87**	P	Pn	08 06 23.7	+0.1
KRVZ				S	S	08 06 44.3	-1.2
OTVZ	**Oturere**	**0.73**	**93**	P	Pn	08 06 24.1	+0.3
TUVZ	**Tukino**	**0.74**	**101**	P	Pn	08 06 24.1	+0.3
TMVZ	**Te Maari**	**0.77**	**89**	P	Pn	08 06 24.4	+0.5
ETVZ	**East Tongariro**	**0.77**	**91**	P	Pn	08 06 24.2	+0.3
MOVZ	**Moawhango**	**0.85**	**109**	P	Pn	08 06 24.1	-0.2
MOVZ					S	08 06 43.8	-2.8
RATZ	**Rangitukua**	**0.86**	**73**	P	Pn	08 06 24.4	0.0
WATZ	**Wairara**	**0.90**	**62**	P	Pn	08 06 24.8	+0.2
RITZ	**Rihia Road**	**0.90**	**81**	P	Pn	08 06 25.0	+0.5
TLZ	**Tolley Road**	**1.02**	**39**	P	Pn	08 06 25.3	-0.1
KUTZ	**Kaahu Road**	**1.07**	**54**	P	Pn	08 06 26.0	+0.3
BHHZ	**Black Hill Sta**	**1.10**	**109**	P	Pn	08 06 25.7	-0.2
OHWZ	**Ohakea**	**1.17**	**157**	P	Pn	08 06 26.9	+0.6
WPRZ	**Whakapapatarin**	**1.28**	**62**	P	Pn	08 06 27.4	+0.1
TSZ	**Takapari Road**	**1.33**	**134**	P	Pn	08 06 27.8	+0.1
KWHZ	**Kaweka Forest**	**1.35**	**103**	P	Pn	08 06 28.4	+0.5
MRHZ	**Matea Rd**	**1.35**	**78**	P	Pn	08 06 27.5	-0.4
KRHZ	**Kereru**	**1.38**	**112**	P	Pn	08 06 28.2	+0.1
BKZ	**Black Stump Fm**	**1.38**	**92**	P	Pn	08 06 28.0	-0.1
PNHZ	**Pukenui**	**1.39**	**125**	P	Pn	08 06 28.2	0.0
ALRZ	**Allen Road**	**1.39**	**66**	P	Pn	08 06 28.2	0.0
HSRZ	**Hossack Road**	**1.45**	**56**	P	Pn	08 06 28.9	+0.2
PRRZ	**Plateau Road**	**1.45**	**65**	P	Pn	08 06 28.5	-0.1
TOZ	**Tahuroa Road**	**1.52**	**24**	P	Pn	08 06 29.4	+0.1
MCHZ	**McNeill Hill**	**1.56**	**102**	P	Pn	08 06 30.5	+0.9
RRRZ	**Republican Roa**	**1.61**	**61**	P	Pn	08 06 29.5	-0.7
DVHZ	**Dannevirke**	**1.61**	**137**	P	Pn	08 06 30.0	-0.2
NMHZ	**Naumai**	**1.62**	**89**	P	Pn	08 06 31.2	+0.9
WPHZ	**Waipukurau**	**1.62**	**126**	P	Pn	08 06 30.4	+0.2
KARZ	**Kaharoa**	**1.63**	**48**	P	Pn	08 06 30.7	+0.3
OMRZ	**Omania**	**1.65**	**52**	P	Pn	08 06 30.7	+0.2
MRZ	**Mangatainoka R**	**1.67**	**157**	P	Pn	08 06 30.1	-0.5
MTHZ	**Maungataniwha**	**1.68**	**81**	P	Pn	08 06 30.3	-0.2
PRWZ	**Pori Road**	**1.72**	**146**	P	Pn	08 06 31.1	+0.1
OGWZ	**Otaki Gorge**	**1.72**	**169**	P	Pn	08 06 30.7	-0.4
MUGZ	**Murupara**	**1.73**	**68**	P	Pn	08 06 30.7	-0.6
KIW	**Kapiti Island**	**1.73**	**175**	P	Pn	08 06 30.5	-0.8
ARHZ	**Aropaoanui**	**1.77**	**95**	P	Pn	08 06 32.1	+0.5
DUWZ	**D'Urville Isla**	**1.78**	**200**	P	Pn	08 06 30.7	-1.0
KAHZ	**Kahuranaki**	**1.80**	**112**	P	Pn	08 06 32.4	+0.5
RTZ	**Ruatahuna**	**1.84**	**74**	P	Pn	08 06 32.0	-0.3
TGRZ	**Tauranga**	**1.85**	**41**	P	Pn	08 06 32.9	+0.5
RAHZ	**Arahi**	**1.85**	**84**	P	Pn	08 06 32.8	+0.3
PRHZ	**Porangahau**	**1.86**	**128**	P	Pn	08 06 32.6	+0.1
HOWZ	**Holdsworth Sta**	**1.87**	**161**	P	Pn	08 06 31.8	-0.7
PXZ	**Pawanui**	**1.88**	**119**	P	Pn	08 06 32.9	+0.2
ANWZ	**Angora Road**	**1.90**	**135**	P	Pn	08 06 33.0	+0.2
CKHZ	**Cape Kidnapper**	**1.90**	**107**	P	Pn	08 06 33.4

WNVZ	**Wahianoa**	**4.61**	**28**	P	Pn	08 25 35.7	+1.2
KRHZ	**Kereru**	**4.64**	**37**	P	Pn	08 25 32.1	-2.6
TUVZ	**Tukino**	**4.68**	**28**	P	Pn	08 25 36.1	+0.6
BKZ	**Black Stump Fm**	**5.09**	**35**	P	Pn	08 25 38.7	-2.2
MTHZ	**Maungataniwha**	**5.50**	**35**	P	Pn	08 25 52.8	+6.2

SOME ***20*** *08:27:42.7, 42°.88N × 77°.05E, h5km*
NNC ***20*** *08:27:42.2 ± 0.2, 42°.86N × 77°.07E, h0km, mb2.2, mpv2.5, Error ellipse: s-maj=1.4km s-min=1.2km az=155.0*

ISC 20 08:27:42.3 ±1.6, **42°.86N** ±0°.06 × **77°.06E** ±0°.03, **h3**km ± 13km, **n13**, σ 0**s24**/25, **5C-2D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**0.20**	**336**	⇑*e*P	**Pg**	**08 27 46.3**	**0.0**
	5.7nm,0.1s						
TNSS				*e*S	**Sg**	**08 27 48.9**	**-0.1**
	18nm,0.1s						
TNSS	**Tian-Shan**	**0.20**	**336**	P	**Pg**	**08 27 46.3**	**0.0**
	5.7nm,0.1s						
TNSS				S	**Sg**	**08 27 48.9**	**-0.1**
	18nm,0.1s						
MDOK	**Medeo**	**0.31**	**359**	*e*P	**Pg**	**08 27 48.3**	**0.0**
	1.7nm,0.1s						
MDOK				*e*S	**Sg**	**08 27 52.3**	**-0.1**
	12nm,0.3s						
MDOK	**Medeo**	**0.31**	**359**	Pg	**Pg**	**08 27 48.3**	**0.0**
	1.7nm,0.1s						
MDOK				Lg	Lg	08 27 52.3	
	12nm,0.3s						
KNDC	**Almaty**	**0.37**	**350**	⇑P	**Pg**	**08 27 49.3**	**-0.1**
	19nm,0.5s						
KNDC				⇓S	**Sg**	**08 27 54.5**	**+0.3**
	29nm,0.4s						
KOTS	**Kotyrbulak**	**0.38**	**6**	*e*P	**Pg**	**08 27 49.9**	**+0.2**
	3.7nm,0.2s						
KOTS				*e*S	**Sg**	**08 27 55.1**	**+0.4**
	16nm,0.2s						
KOTS	**Kotyrbulak**	**0.38**	**6**	P	**Pg**	**08 27 49.9**	**+0.2**
	3.7nm,0.2s						
KOTS				S	**Sg**	**08 27 55.1**	**+0.4**
	16nm,0.2s						
SATY	**Saty**	**1.01**	**78**	*e*P	**Pg**	**08 28 01.6**	**-0.1**
	3.0nm,0.1s						
SATY				*e*S	**Sg**	**08 28 15.1**	**+0.3**
	1.6nm,0.1s						
SATY	**Saty**	**1.01**	**78**	P	**Pg**	**08 28 01.6**	**-0.1**
	3.0nm,0.1s						
SATY				S	**Sg**	**08 28 15.1**	**+0.3**
	1.6nm,0.1s						
TKM2	**Tokmak 2**	**1.07**	**274**	⇓P	**Pg**	**08 28 03.0**	**+0.1**
TKM2				⇑S	**Sb**	**08 28 18.0**	**-0.1**
	0.5nm,0.4s						
MNBS	**Baschi**	**1.57**	**38**	*e*P	**Pb**	**08 28 11.6**	**-0.4**
	0.2nm,0.1s						
MNBS				*e*S	**Sg**	**08 28 32.4**	**-0.2**
	1.2nm,0.1s						
MNBS	**Baschi**	**1.57**	**38**	P	**Pn**	**08 28 11.3**	**+0.1**
	0.2nm,0.1s						
MNBS				S	**Sg**	**08 28 32.4**	**-0.2**
	1.2nm,0.1s						
PDGK	**Podgornoye**	**1.84**	**74**	⇑P	**Pn**	**08 28 14.9**	**0.0**
	0.4nm,0.4s						
PDGK				⇑S	**Sn**	**08 28 39.3**	**+0.4**
	2.8nm,1.1s						

KRNET 20 08:27:44.4 ±0.1, **42°.63N** × **74°.48E, h14**km, **mb1.3, 10C, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**0.02**	**48**	⇑*i*P		Pg	08 27 46.6	-0.5
	baz=48						
AAK				⇑*i*S		Sg	08 27 48.0	-0.9
	baz=48						
FRU1	**Bishkek**	**0.21**	**31**	⇑*i*P		Pg	08 27 49.1	-0.1
	baz=31						
FRU1				⇑*i*S		Sg	08 27 52.4	-0.1
	baz=31						
UCH	**Uchtor**	**0.40**	**176**	⇑*i*P		Pg	08 27 52.4	-0.2
	baz=76						
UCH				⇑*i*S		Sg	08 27 58.1	0.0
	baz=76						
EKS2	**Erkin-Say**	**0.52**	**274**	⇑*i*P		Pg	08 27 54.3	-0.3
	baz=74						
EKS2				⇑*i*S		Sg	08 28 01.9	+0.3
	baz=74						
ARLS	**Aral**	**0.77**	**189**	⇑*i*P		Pg	08 27 58.9	-0.5
	baz=88						
ARLS				⇑*i*S		Sg	08 28 09.5	-0.1
	baz=88						

BJI ***20*** *08:35:22.5 ± 0.0, 0°.53N × 128°.27E, h5km, mB5.0/34, mb4.8/45, Ms4.3/14, Ms7 4.0/15*
IDC ***20*** *08:35:27.2 ± 0.5, 1°.08N × 127°.88E, h0km, mb4.5/22, mb1 4.7/24, mb1mx4.5/36, mbtmp4.5/24, ML4.1/2, MS3.7/24, Ms1 3.7/24, ms1mx3.7/34, Error ellipse: s-maj=20.4km s-min=9.6km az=79.0*
DJA ***20*** *08:35:30.9 ± 0.3, 1°.N ± 3° × 12°.8E ± °, h10km, M4.7/18, mB5.2/14, mb5.1/18, MLv4.8/16, Mw(mB)4.6/14*
GCMT ***20*** *08:35:31.2 ± 0.3, 1°.16N ± 0°.01 × 127°.98E ± 0°.02, h26km ± 1km, MW4.9/84, Moment Tensor Solution. s35,c45; s84,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.27±.18; $M_{\theta\theta}$=3.19±.11; $M_{\phi\phi}$=-1.92±.14; $M_{r\theta}$=0.95±.19; $M_{r\phi}$=-1.23±.10; $M_{\theta\phi}$=-0.32±.28; Best double couple: M=2.94400×10^{16} NP1: ϕ_s=148.00000°, δ=87.00000°, λ=13.00000°. NP2: ϕ_s=57.00000°, δ=77.00000°, λ=177.00000°. Principal axes: T 3.6740, Plg11.0000°, Azm13.0000°; N -1.4600, Plg76.0000°, Azm159.0000°; P -2.2140, Plg7.0000°, Azm282.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***20*** *08:35:32.2 ± 2.4, 0°.97N ± 0°.07 × 127°.83E ± 0°.04, h38km ± 6km, mb4.8/61 Error ellipse: s-maj=10.6km s-min=6.4km az=181.0*

ISC 20 08:35:30.9 ±0.3, **1°.02N** ±0°.03 × **127°.89E** ±0°.04, **h23**km, **n216**, σ **1s59**/210, **mb4.8**/59, **MS3.8**/26, **5C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.57**	**245**	P	**Pb**	**08 35 41.1**	**-1.2**
TNTI	**Ternate**	**0.57**	**245**		**Pb**	**08 35 40.8**	**-1.5**
TNTI				Sn	**Sb**	**08 35 50.1**	**0.0**
LBMI	**Labuha**	**1.69**	**193**	P	**Pn**	**08 35 59.9**	**+0.9**
LBMI				S	**Sn**	**08 36 22.6**	**+2.6**
SGSI	**Sangihe**	**3.54**	**318**	P	**Pn**	**08 36 31.2**	**-1.7**
SIJI	**Sorong**	**3.87**	**119**	Pn	**Pn**	**08 36 29.5**	**+0.5**
	16nm,0.3s,baz=320,slow=8.7,SNR=68						
SIJI				Sn	**Sn**	**08 37 14.7**	**+1.0**
	5.6nm,0.3s,baz=27,slow=22,SNR=6.1						
SIJI				LR	LR	08 37 48.2	
	comp=Z,1μm,20.6s,baz=200,slow=36						
KMSI	**Cibinong**	**3.93**	**264**	P	**Pn**	**08 36 31.2**	**+1.4**
NLAI	**Namlea**	**4.30**	**191**	P	**Pn**	**08 36 35.5**	**+0.6**
MSAI	**Masohi**	**4.46**	**166**	P	**Pn**	**08 36 38.7**	**+1.6**
AAI	**Ambon**	**4.68**	**176**	P	**Pn**	**08 36 42.5**	**+2.3**
GTOI	**Gorontalo**	**4.89**	**266**	P	**Pn**	**08 36 46.8**	**+3.8**
	0.3nm1μm95nm,0.6s						
DDMP	**Don Marcelino,**	**5.50**	**337**	*e*P	**Pn**	**08 36 52.0**	**+0.6**
LUWI	**Luwuk**	**5.51**	**248**	P	**Pn**	**08 36 55.5**	**+4.0**
	1.4nm3μm222nm,0.9s						
LUWI	**Luwuk**	**5.51**	**248**	Pn	**Pn**	**08 36 53.6**	**+2.1**
LUWI				Sn	**Sn**	**08 37 52.9**	**-1.3**
FAKI	**Fak Fak**	**5.86**	**132**	P	**Pn**	**08 36 56.5**	**+0.1**
	0.6nm995nm101nn,0.9s						
FAKI	**Fak Fak**	**5.86**	**132**	Pn	**Pn**	**08 36 56.7**	**+0.3**
FAKI				Sn	**Sn**	**08 38 00.8**	**-2.1**
BNDI	**Bandanaira**	**5.86**	**160**	P	Pn	08 37 03.1	+6.7
MRSI	**Marisa**	**5.97**	**265**	P	**Pn**	**08 37 00.0**	**+2.1**
	0.4nm1μm154nm,0.7s						
MATI	**Mati**	**6.11**	**345**	*e*P	Pn	08 37 04.9	+5.1
SKMP	**Bagumbayan, Su**	**6.40**	**329**	*e*P	**Pn**	**08 37 03.6**	**-0.2**
APSI	**Ampana**	**6.53**	**253**	P	**Pn**	**08 37 07.0**	**+1.5**
	0.5nm1μm141nm,0.6s						
KCP	**Kidapawan**	**6.57**	**335**	⇑*i*P	**Pn**	**08 37 08.0**	**+1.8**
TOLI2	**Tolitoli**	**7.10**	**271**	Pn	**Pn**	**08 37 14.2**	**+0.7**
MPSI	**Mapaga**	**8.02**	**265**	P	**Pn**	**08 37 27.3**	**+1.3**
	783nm35nm,0.9s						
PAGZ	**Pagadian**	**8.13**	**327**	*e*P	Pn	08 37 35.5	+7.9
BAKI	**Biak**	**8.51**	**105**	P	**Pn**	**08 37 36.3**	**+3.5**
	2μm203nm,1.1s						
GLSP	**General Luna,**	**8.88**	**349**	*e*P	Pn	08 37 46.9	+9.0
TTSI	**Tana Toraja**	**9.02**	**243**	P	**Pn**	**08 37 39.3**	**-0.5**
	2μm148nm,0.9s						
I39PW	**PALAU INFRASON**	**9.27**	**46**	*i*			
	baz=226,slow=312,SNR=1.8					09 32 00.0	
BNSI	**Bone**	**9.46**	**235**	P	**Pn**	**08 37 46.0**	**+0.2**
	747nm77nn,0.6s						
SPSI	**Sidrap Palu**	**9.50**	**239**	P	**Pn**	**08 37 47.5**	**+1.1**
	2μm187nm,0.6s						
BKSI	**Bulukumba**	**9.99**	**231**	P	**Pn**	**08 37 56.3**	**+3.2**
KAPI	**Kappang**	**10.10**	**234**	Pn	**Pn**	**08 37 56.7**	**+2.1**
	2.7nm,0.3s,baz=62,slow=3.9,SNR=5.9						
KAPI				Sn	**Sn**	**08 39 45.7**	**-1.5**
	1.2nm,0.3s,baz=144,slow=22,SNR=1.2						
KAPI				LR	LR	08 41 54.4	
	comp=Z,594nm,20.3s,baz=54,slow=38						
KAPI	**Kappang**	**10.10**	**234**		**Pn**	**08 37 56.5**	**+1.9**
MYLDM	**Lahad Datu**	**10.24**	**294**	Pn	**Pn**	**08 37 58.1**	**+1.6**
SOEI	**Soe**	**11.29**	**199**	P	Pn	08 38 23.5	+12
SOEI	**Soe**	**11.29**	**199**	Pn	**Pn**	**08 38 10.4**	**-0.7**
EDFI	**Ende, Flores**	**11.50**	**212**	P	**Pn**	**08 38 16.1**	**+2.2**
BATI	**Baumata**	**11.92**	**201**	Pn	**Pn**	**08 38 22.2**	**+2.7**
	2.6nm,0.3s,baz=34,slow=16,SNR=3.6						
WBSI	**Waikabubak, Su**	**13.55**	**218**	P	**P**	**08 38 51.0**	**+0.2**
BBKI	**Banjar Baru**	**13.78**	**251**	P	**P**	**08 38 53.7**	**+0.4**
PLAI	**Plampang**	**14.04**	**226**	P	**P**	**08 38 58.9**	**+2.7**
MTN	**Manton Dam**	**14.14**	**167**	Pn	**Pn**	**08 38 47.6**	**-2.3**
KDU	**Kakadu**	**14.36**	**162**	P	**Pn**	**08 38 50.4**	**-2.4**
	baz=14,SNR=4.6						
LQP	**Lukban**	**14.45**	**335**	⇑*e*P	**P**	**08 39 01.3**	**+0.5**
TWSI	**Taliwang, Sumb**	**14.63**	**228**	P	**P**	**08 39 03.7**	**+0.9**
SRBI	**Singaraja**	**15.54**	**234**	P	**P**	**08 39 15.6**	**+2.8**
SBUM	**Sibu**	**15.72**	**275**	Pn	**Pn**	**08 39 10.6**	**-0.5**
KMMI	**Kalianget**	**16.04**	**240**	P	**P**	**08 39 21.9**	**+3.5**
	2μm198nm,1.0s						
ABJI	**Asem Bagus**	**16.19**	**237**	P	**P**	**08 39 23.9**	**+3.9**
KNRA	**Kununurra**	**16.61**	**177**	P	**Pn**	**08 39 21.2**	**-1.2**
	baz=17,SNR=9.6						
KNRA	**Kununurra**	**16.61**	**177**	P	**Pn**	**08 39 20.9**	**-1.5**
JAGI	**Jajag, Banyuwa**	**16.62**	**235**	P	**P**	**08 39 28.3**	**+3.4**
	1μm136nm,1.0s						
JAGI	**Jajag, Banyuwa**	**16.62**	**235**	P	**Pn**	**08 39 20.5**	**-2.1**
JAGI				IAmb	IAmb	08 39 29.7	
	comp=Z,121nm,1.0s						
GMJI	**Gumukmas**	**17.10**	**237**	P	**P**	**08 39 34.7**	**+4.5**
	comp=Z,76nm,0.9s						
KSM	**Kuching**	**17.58**	**272**	P	**Pn**	**08 39 33.9**	**-0.7**
PWJI	**Pagerwojo**	**18.38**	**240**	P	**P**	**08 39 45.8**	**+1.5**
WOJI	**Wonogiri, Jawa**	**19.07**	**242**	P	Pn	08 40 03.5	+11
FITZ	**Fitzroy Crossi**	**19.12**	**187**	P	**P**	**08 39 52.4**	**0.0**
	comp=Z,0.3nm,0.3s,baz=25,slow=12,SNR=13						
FITZ	**Fitzroy Crossi**	**19.12**	**187**	P	**P**	**08 39 53.3**	**+0.8**
	baz=19,SNR=10						
FITZ	**Fitzroy Crossi**	**19.12**	**187**	P	**P**	**08 39 52.4**	**0.0**
UGM	**Wanagama**	**19.45**	**243**	P	**P**	**08 39 53.3**	**-2.8**
KPJI	**Karang Pucung**	**20.65**	**246**	P	**P**	**08 40 11.2**	**+2.1**
	comp=Z,1μmcomp=Z,183nm,1.0s						
COEN	**Coen**	**21.23**	**135**	P	**P**	**08 40 14.9**	**-0.6**
WB0	**Warramunga Arr**	**21.62**	**163**	P	**P**	**08 40 19.8**	**+0.2**
WB0				IAmb	IAmb	08 40 29.3	
	comp=Z,50nm,0.9s						
LEM	**Lembang**	**21.68**	**249**	P	**P**	**08 40 21.4**	**+1.0**
	comp=Z,21nm,0.4s,baz=160,slow=15,SNR=4.6						
CISI	**Cisompet, Garu**	**21.76**	**247**	P	**P**	**08 40 21.5**	**+0.4**
	comp=Z,79nm,0.8s						
CISI	**Cisompet, Garu**	**21.76**	**247**	P	**P**	**08 40 20.0**	**-1.1**
WRAB	**Tennant Creek**	**21.77**	**163**	P	**P**	**08 40 20.9**	**-0.2**
WRAB				IAmb	IAmb	08 40 27.2	
	comp=Z,39nm,0.8s						
WRA	**Warramunga Arr**	**21.77**	**163**	P	**P**	**08 40 21.5**	**+0.3**
	comp=Z,28nm,0.6s,baz=341,slow=11,SNR=108						
WRA	**Warramunga Arr**	**21.77**	**163**	P	**P**	**08 40 21.7**	**+0.5**
WB2	**Warramunga Arr**	**21.77**	**163**	P	**P**	**08 40 21.8**	**+0.6**
WB2				IAmb	IAmb	08 40 27.3	
	comp=Z,46nm,0.8s						
WR0	**Warramunga Arr**	**21.85**	**163**	P	**P**	**08 40 22.3**	**+0.3**
WR0				IAmb	IAmb	08 40 28.0	
	comp=Z,36nm,0.8s						
PPBI	**Pangkal Pinang**	**21.97**	**262**	P	**P**	**08 40 26.7**	**+3.3**
TWG	**Pinlang**	**22.66**	**343**	P	**P**	**08 40 33.7**	**+3.0**
SSLB	**Suanglung**	**23.61**	**344**	P	**P**	**08 40 40.9**	**+0.5**
PSA00	**Pilbara Seismi**	**23.79**	**199**	P	**P**	**08 40 41.4**	**-0.6**
PSA00				IAmb	IAmb	08 40 43.0	
	comp=Z,39nm,0.8s						
PSA00	**Pilbara Seismi**	**23.79**	**199**	P	**P**	**08 40 41.6**	**-0.5**
PSA00				IAmb	IAmb	08 40 43.1	
	comp=Z,20nm,0.8s						
NACB	**Ninganchiao**	**23.81**	**346**	P	**P**	**08 40 39.0**	**-3.2**
QIS	**Mount Isa**	**24.32**	**152**	P	**P**	**08 40 47.4**	**+0.3**
	baz=24,SNR=24						
KRVT	**Keravat (AS076**	**24.70**	**103**	LR	LR	08 49 18.5	
	comp=Z,398nm,20.4s,baz=287,slow=34						
AS31	**Alice Springs**	**25.22**	**167**	P	**P**	**08 40 56.0**	**+0.8**
ASAR	**Alice Springs**	**25.23**	**167**	P	**P**	**08 40 55.8**	**+0.5**
	comp=Z,50nm,0.9s,baz=346,slow=9.9,SNR=95						
ASAR				S	**S**	**08 45 23.9**	**+4.3**
	comp=Z,0.8nm,0.9s,baz=352,slow=21,SNR=2.9						
ASAR				LR	LR	08 50 45.0	
	comp=Z,226nm,20.7s,baz=346,slow=36						
ASAR	**Alice Springs**	**25.23**	**167**	P	**P**	**08 40 55.5**	**+0.3**
WRKA	**Warakurna**	**25.91**	**179**	P	**P**	**08 41 02.3**	**+1.0**
	baz=26,SNR=52						
GIRL	**Giralia**	**27.02**	**209**	P	**P**	**08 41 12.9**	**+1.5**
	baz=27,SNR=4.0						
CTA	**Charters Tower**	**27.64**	**140**	P	**P**	**08 41 21.1**	**+4.0**
	comp=Z,2.5nm,0.7s,baz=320,slow=8.2,SNR=3.6						
MEEK	**Meekatharra**	**28.91**	**197**	P	**P**	**08 41 27.8**	**-0.5**
	baz=29,SNR=11						
RPSI	**Rantau Prapat**	**28.99**	**274**	P	**P**	**08 41 28.5**	**-0.7**
FORT	**Forrest**	**31.62**	**180**	P	**P**	**08 41 52.3**	**+0.1**
	baz=32,SNR=17						
FORT	**Forrest**	**31.62**	**180**	P	**P**	**08 41 50.9**	**-1.3**
MORW	**Morawa**	**31.99**	**200**	P	**P**	**08 41 54.6**	**-0.9**
NJ2	**Nanjing**	**32.02**	**345**	*e*P	**P**	**08 41 57.8**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
WHN	**Wuhan**	**32.05**	**338**	⇑P	**P**	**08 41 58.5**	**+2.5**
KMBL	**Kambalda**	**32.71**	**190**	P	**P**	**08 42 02.0**	**+0.2**
	baz=33,SNR=12						
BLDU	**Ballidu**	**33.21**	**198**	P	**P**	**08 42 05.9**	**-0.2**
	baz=33,SNR=5.7						
CMAR	**Chiang Mai Arr**	**33.27**	**303**	P	**P**	**08 42 07.2**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=113,slow=6.9,SNR=7.4						
CMAR				LR	LR	08 56 55.0	
	comp=Z,62nm,19.1s,baz=168,slow=39						
CMAR	**Chiang Mai Arr**	**33.27**	**303**	P	**P**	**08 42 05.3**	**-1.6**
KLBR	**Kellerberrin**	**33.83**	**196**	P	**P**	**08 42 12.2**	**+0.7**
	baz=34,SNR=5.9						
KMI	**Kunming**	**34.12**	**317**	⇑*e*P	P	08 42 20.1	+5.7
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,98nm,4.4s						
KMI				LR	LR		
	comp=Z,280nm,20.2s						
KMI				LR	LR		
	comp=Z,250nm,25.4s						
KMI				LR	LR		
	comp=Z,150nm,23.8s						
BBOO	**Buckleboo**	**34.52**	**168**	P	**P**	**08 42 19.0**	**+1.5**
	baz=35,SNR=21						
BBOO	**Buckleboo**	**34.52**	**168**	P	**P**	**08 42 18.0**	**+0.5**
MUN	**Mundaring**	**34.63**	**198**	P	**P**	**08 42 17.9**	**-0.6**
	baz=35,SNR=3.9						
JWT	**Wachi**	**34.80**	**11**	P	**P**	**08 42 19.4**	**-0.6**
JWT				IAmb	IAmb	08 42 31.2	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**35.20**	**160**	P	**P**	**08 42 24.9**	**+1.4**
	comp=Z,20nm,0.8s,baz=332,slow=8.4,SNR=34						
STKA				LR	LR	09 00 19.2	
	comp=Z,164nm,20.4s,baz=327,slow=42						
STKA	**Stephens Creek**	**35.20**	**160**	P	**P**	**08 42 24.4**	**+1.0**
	baz=35,SNR=25						
STKA	**Stephens Creek**	**35.20**	**160**	P	**P**	**08 42 23.6**	**+0.1**
NWAO	**Narrogin (SRO)**	**35.23**	**196**	P	**P**	**08 42 24.2**	**+0.6**
	comp=Z,12nm,0.8s,baz=22,slow=7.9,SNR=7.4						
NWAO	**Narrogin (SRO)**	**35.23**	**196**	P	**P**	**08 42 24.0**	**+0.4**
	baz=35,SNR=4.9						
NWAO	**Narrogin (SRO)**	**35.23**	**196**	P	**P**	**08 42 23.0**	**-0.7**
NWAO				IAmb	IAmb	08 42 30.3	
	comp=Z,19nm,1.1s						
KSRS	**Korea Array**	**36.26**	**0**	P	**P**	**08 42 32.2**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=179,slow=11,SNR=12						
KSRS				LR	LR	08 56 44.4	
	comp=Z,107nm,21.9s,baz=186,slow=35						
MAJO	**Matsushiro**	**36.62**	**14**	P	**P**	**08 42 33.9**	**-1.6**
MAJO				IAmb	IAmb	08 42 47.0	
	comp=Z,7.1nm,0.7s						
MAT	**Matsushiro**	**36.62**	**14**	P	**P**	**08 42 33.4**	**-2.1**
MAT				S	**S**	**08 48 19.8**	**+2.6**
MJAR	**Matsushiro Arr**	**36.62**	**14**	P	**P**	**08 42 33.6**	**-1.9**
	comp=Z,5.0nm,0.8s,baz=186,slow=9.4,SNR=11						
MJAR				LR	LR	08 56 57.9	
	comp=Z,240nm,19.4s,baz=200,slow=35						
MJAR	**Matsushiro Arr**	**36.62**	**14**	P	**P**	**08 42 32.5**	**-3.0**
XAN	**Xi'an**	**37.34**	**334**	P	**P**	**08 42 42.4**	**+0.7**
XAN				S	S	08 48 37.8	+9.4
XAN				pmax	pmax		
	comp=Z,25nm,1.0s						
XAN				pmax	pmax		
	comp=Z,210nm,3.6s						
XAN				LR	LR		
	comp=Z,220nm,15.2s						
XAN				LR	LR		
	comp=Z,190nm,14.1s						
XAN	**Xi'an**	**37.34**	**334**	P	**P**	**08 42 41.3**	**-0.4**
XAN				IAmb	IAmb	08 42 50.3	
	comp=Z,18nm,0.9s						
CD2	**Chengdu**	**37.50**	**325**	P	**P**	**08 42 46.6**	**+3.4**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
JMM	**Marumori**	**38.55**	**16**	P	**P**	**08 42 51.2**	**-0.6**
JMM				IAmb	IAmb	08 43 19.7	
	comp=Z,11nm,0.9s						
ARPS	**Mount Arapiles**	**39.77**	**162**	P	**P**	**08 43 04.2**	**+2.2**
	baz=40,SNR=12						
BJT	**Baijiatuau**	**40.26**	**346**	P	**P**	**08 43 06.1**	**0.0**
BJT				IAmb	IAmb	08 43 07.7	
	comp=Z,19nm,1.0s						
LZH	**Lanzhou**	**41.41**	**330**	*e*P	**P**	**08 43 18.5**	**+2.6**
LZH				pP	pP	08 43 23.9	+1.0
LZH				sP	sP	08 43 27.3	+1.6
LZH				S	**S**	**08 49 30.8**	**+1.0**
LZH				sS	sS	08 49 42.3	+0.9
LZH				SS	**SS**	**08 52 32.3**	**-2.1**
	comp=Z,51nm,1.3s						
LZH				pmax	pmax		
	comp=Z,260nm,5.7s						
LZH				LR	LR		
	comp=Z,560nm,13.7s						
LZH				LR	LR		
	comp=Z,730nm,16.5s						
H11S3	**WAKE ISLAND Hy**	**41.84**	**63**	T	T	09 27 40.5	
	baz=250,slow=75,SNR=8.6						
H11S2	**WAKE ISLAND Hy**	**41.85**	**63**	T	T	09 27 38.5	
	baz=250,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**41.85**	**63**	T	T	09 27 40.3	
	baz=250,slow=75,SNR=12						
HHC	**Hu-ho-hao-te**	**42.32**	**342**	*e*P	**P**	**08 43 24.3**	**+1.2**
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,45nm,6.0s						
SHL	**Shillong**	**42.43**	**308**	P	**P**	**08 43 24.5**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**42.45**	**61**	T	T	09 27 54.0	
	baz=248,slow=75,SNR=15						
H11N2	**WAKE ISLAND Hy**	**42.46**	**61**	T	T	09 28 00.5	
	baz=248,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**42.47**	**61**	T	T	09 27 55.5	
	baz=248,slow=75,SNR=9.3						
CN2	**Changchun**	**42.65**	**357**	*e*P	**P**	**08 43 26.1**	**+0.5**
USA0B	**Ussuriysk Arra**	**43.15**	**4**	P	**P**	**08 43 28.6**	**-1.1**
USRK	**Ussuriysk Ar.**	**43.15**	**4**	P	**P**	**08 43 29.4**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=187,slow=5.4,SNR=6.5						
USRK				LR	LR	08 59 43.0	
	comp=Z,78nm,21.2s,baz=144,slow=34						
USRK	**Ussuriysk Ar.**	**43.15**	**4**	P	**P**	**08 43 28.0**	**-1.6**
LSA	**Lhasa**	**45.10**	**313**	P	**P**	**08 43 46.2**	**+0.1**
LSA				IAmb	IAmb	08 43 57.0	
	comp=Z,9.5nm,0.9s						
GTA	**Gaotai**	**46.00**	**330**	*e*P	**P**	**08 43 53.9**	**+1.2**
GTA				pP	pP	08 44 00.9	+1.1
GTA				sP	sP	08 44 04.0	+1.4
GTA				S	**S**	**08 50 41.6**	**+4.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,44nm,6.0s						
GTA				LR	LR		
	comp=Z,110nm,18.9s						
GTA				LR	LR		
	comp=Z,190nm,20.0s						
GTA				LR	LR		
	comp=Z,130nm,18.5s						
TAPN	**Taplejung**	**46.56**	**308**	*e*P	**P**	**08 43 58.4**	**+0.9**
	comp=Z,11nm,0.4s						
ODAN	**Odare**	**46.59**	**307**	*e*P	**P**	**08 43 58.4**	**+0.7**
	comp=Z,21nm,0.7s						
RAMN	**Ramite**	**47.27**	**307**	*e*P	**P**	**08 44 03.3**	**+0.3**
KLR	**Kul'dur**	**48.14**	**3**	P	**P**	**08 44 08.3**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=284,slow=3.7,SNR=6.5						
GUN	**Gumba**	**48.26**	**307**	*e*P	**P**	**08 44 11.4**	**+0.6**
	comp=Z,40nm,0.7s						
PKI	**Pulchoki**	**48.49**	**307**	*e*P	**P**	**

AAK	**Ala-Archa**	**63.13 318**	P	**P**	**08 45 56.7**	**-0.5**
AAK			IAmb	IAmb	08 46 11.1	
	comp=Z,7.2nm,1.2s					
ZAA0	**Zalesovo Array**	**63.51 333**	P	**P**	**08 45 57.8**	**-1.4**
ZAA0			IAmb	IAmb	08 46 06.6	
	comp=Z,7.0nm,1.1s					
ZALV	**Zalesovo Beam**	**63.51 333**	P	**P**	**08 45 57.9**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=116,slow=6.8,SNR=7.8					
ZALV			LR	LR	09 14 31.2	
	comp=Z,74nm,21.4s,baz=30,slow=37					
ZALV	**Zalesovo Beam**	**63.51 333**	P	**P**	**08 45 57.5**	**-1.6**
KBL	**Kabul**	**64.09 308**	P	**P**	**08 46 03.4**	**-0.3**
KBL			IAmb	IAmb	08 46 05.8	
	comp=Z,9.1nm,0.7s					
BTLS	**Baital**	**64.49 321**	*e*P	**P**	**08 46 06.5**	**+0.7**
	baz=321					
GAR	**Garm**	**64.60 313**	P	**P**	**08 46 07.0**	**+0.2**
BTK	**Batken**	**64.63 315**	P	**P**	**08 46 07.2**	**+0.2**
BTK			IAmb	IAmb	08 46 15.7	
	comp=Z,12nm,1.1s					
KURK	**Kurchatov**	**64.63 328**	P	**P**	**08 46 06.8**	**+0.2**
CHGR	**Chuyangaron**	**65.33 313**	P	**P**	**08 46 10.8**	**-0.8**
CHGR			IAmb	IAmb	08 46 34.7	
	comp=Z,14nm,0.9s					
IUG	**Iuzhnay**	**65.96 316**	*e*P	**P**	**08 46 16.1**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=316					
KK31	**Karatay Array**	**65.99 318**	P	**P**	**08 46 12.9**	**-2.8**
KK31			IAmb	IAmb	08 46 17.4	
	comp=Z,6.0nm,0.9s					
KKAR	**Karatay Array**	**65.99 318**	P	**P**	**08 46 13.6**	**-2.1**
KKAR			IAmb	IAmb	08 46 17.4	
	comp=Z,6.0nm,0.9s					
BRZS	**Berezniki**	**67.56 325**	*e*P	**P**	**08 46 25.6**	**+0.1**
	baz=325					
CASY	**Casey**	**68.29 187**	P	**P**	**08 46 28.6**	**-1.1**
CASY			IAmb	IAmb	08 46 36.1	
	comp=Z,14nm,1.4s					
HRA	**Herat**	**69.45 306**	P	**P**	**08 46 37.2**	**-0.8**
BRVK	**Borovoye**	**70.28 327**	P	**P**	**08 46 41.6**	**-0.8**
BRVK			IAmb	IAmb	08 46 43.7	
	comp=Z,8.9nm,0.8s					
TIXI	**Tiksi**	**70.53 0**	P	**P**	**08 46 42.7**	**-0.7**
NRIK	**Noril'sk**	**73.32 346**	P	**P**	**08 46 59.9**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=132,slow=4.9,SNR=6.4					
NRIK			LR	LR	09 22 14.6	
	comp=Z,72nm,20.6s,baz=197,slow=38					
GEYT	**Alibeck**	**73.49 309**	P	**P**	**08 47 02.0**	**0.0**
	comp=Z,2.8nm,0.6s,baz=145,slow=5.4,SNR=5.2					
GEYT			LR	LR	09 24 03.6	
	comp=Z,20nm,18.9s,baz=165,slow=40					
GEYT	**Alibeck**	**73.49 309**	P	**P**	**08 47 02.3**	**+0.4**
ABKAR	**Akbulak array**	**74.97 321**	P	**P**	**08 47 09.4**	**-0.9**
ABKAR	**Akbulak array**	**74.97 321**	P	**P**	**08 47 09.3**	**-1.0**
VNDA	**Vanda**	**80.61 173**	P	**P**	**08 47 41.1**	**0.0**
	comp=Z,4.3nm,0.9s,baz=314,slow=6.2,SNR=27					
VNDA			LR	LR	09 22 52.2	
	comp=Z,44nm,19.1s,baz=334,slow=35					
VNDA	**Vanda**	**80.61 173**	P	**P**	**08 47 41.2**	**0.0**
MAW	**Mawson**	**81.63 201**	P	**P**	**08 47 45.6**	**-1.1**
	comp=Z,4.5nm,0.9s,baz=46,slow=9.7,SNR=4.2					
MAW			LR	LR	09 20 52.4	
	comp=Z,38nm,21.6s,baz=62,slow=33					
RAYN	**Ar Rayn**	**82.61 293**	P	**P**	**08 47 51.4**	**-1.5**
RAYN			IAmb	IAmb	08 48 06.0	
	comp=Z,5.5nm,0.8s					
PPT	**Papeete**	**83.19 108**	LR	LR	09 22 04.9	
	comp=Z,38nm,20.3s,baz=228,slow=34					
GEVA	**Gevas**	**85.31 308**	P	**P**	**08 48 06.2**	**-0.4**
GEVA			IAmb	IAmb	08 48 23.9	
	comp=Z,8.8nm,0.7s					
KBZ	**Khabaz**	**85.67 314**	P	**P**	**08 48 08.0**	**0.0**
	comp=Z,3.1nm,1.0s,baz=236,slow=23,SNR=3.9					
KBZ			LR	LR	09 32 36.6	
	comp=Z,11nm,18.6s,baz=142,slow=40					
ILAR	**Eielson Array**	**87.04 25**	P	**P**	**08 48 13.2**	**-1.1**
	comp=Z,0.6nm,0.9s,baz=306,slow=5.4,SNR=2.9					
ILAR			LR	LR	09 19 34.6	
	comp=Z,98nm,21.6s,baz=296,slow=30					
BCAR	**Beaver Creek A**	**89.25 27**	P	**P**	**08 48 23.6**	**-1.3**
SYO	**Syowa Base**	**90.33 201**‖	*e*P	**P**	**08 48 28.1**	**-1.6**
SYO	**Syowa Base**	**90.33 201**‖	*e*PcP	**P**	**08 48 30.0**	**+0.3**
INK	**Inuvik**	**92.24 22**	LR	LR	09 31 48.8	
	comp=Z,34nm,18.8s,baz=203,slow=37					
BRTR	**Keskin Array B**	**92.63 310**	LR	LR	09 39 38.0	
	comp=Z,9.8nm,18.1s,baz=49,slow=42					
ARCES	**ARCESS Array B**	**93.37 340**	P	**P**	**08 48 43.1**	**-0.8**
	comp=Z,4.6nm,0.9s,baz=78,slow=7.6,SNR=4.2					
ARCES			LR	LR	09 37 08.0	
	comp=Z,37nm,18.8s,baz=235,slow=40					
FINES	**FINESS Array B**	**94.75 332**	LR	LR	09 35 13.9	
	comp=Z,72nm,18.9s,baz=66,slow=38					
CLL	**Collm**	**104.50 324**	*e*PKiKP	**PKiKP**	**08 53 48.0**	**-2.3**
CLL			*e*PP	**PP**	**08 53 52.0**	**-1.0**
TORD	**Torodi Ar. Bea**	**124.83 287**	PKP	**PKPdf**	**08 54 28.4**	**-1.6**
	comp=Z,1.3nm,0.8s,baz=40,slow=2.1,SNR=9.0					
TORD	**Torodi Ar. Bea**	**124.83 287**		**PKPdf**	**08 54 28.6**	**-1.4**
CPUP	**Villa Florida**	**154.34 169**	PKPbc	**PKPbc**	**08 55 28.6**	**-1.5**
	comp=Z,4.0nm,1.0s,baz=2.8,slow=5.8,SNR=4.0					
CPUP	**Villa Florida**	**154.34 169**	PKPdf	**PKPdf**	**08 55 18.5**	**-3.3**
CPUP				**pPKPdf**	**08 55 28.3**	**-1.4**
LPAZ	**La Paz**	**158.10 135**	PKPab	**PKPab**	**08 56 02.7**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=218,slow=5.9,SNR=5.4					

*JMA **20** 08:37:44.5±0.3, 32°.22N×138°.36E, h401km, M3.5*
*IDC **20** 08:37:53.1±0.8, 32°.54N×138°.02E, h343km±7km, mb3.0/8, mb1 3.2/11, mb1mx3.0/43, mbtmp3.7/11, Error ellipse: s-maj=18.1km s-min=16.4km az=55.0*

ISC 20 08:37:54.0±0.8, 32°.79N±0°.09×138°.12E±0°.08, h350km, n28, σ1$, 63/33, mb3.2/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TTO1	**TONANKAI O.B.S**	**1.39**	**307**	P		**Pn**	**08 38 40.6**	**-0.6**
JHJ	**Hachijo jima 2**	**1.44**	**76**	P		**Pn**	**08 38 41.5**	**-0.3**
	12nm,0.3s,baz=79,slow=23,SNR=6.5							
JHJ				S		**S**	**08 39 20.1**	**0.0**
	17nm,0.3s,baz=106,slow=22,SNR=5.2							
JIE	**Ise**	**1.99**	**324**	P		**Pn**	**08 38 44.6**	**-0.6**
HMMJ	**Hamamatsu 2**	**2.09**	**351**	P		**Pn**	**08 38 45.6**	**-0.3**
JKN2	**Miekihoku**	**2.11**	**314**	P		**Pn**	**08 38 45.1**	**-1.0**
JTNC	**Tanabenakahech**	**2.34**	**297**	P		**Pn**	**08 38 46.4**	**-1.4**
JWY	**Kouya**	**2.55**	**305**	P		**Pn**	**08 38 48.9**	**-0.6**
JOD2	**Odawara 2**	**2.60**	**18**	P		**Pn**	**08 38 49.3**	**-0.5**
JYN	**Shimob**	**2.73**	**7**	P		**Pn**	**08 38 51.3**	**+0.3**
BSO3	**Boso 3**	**2.83**	**44**	P		**Pn**	**08 38 49.4**	**-2.1**
BSO3				*e*S		**S**	**08 39 35.6**	**-2.2**
BSO1	**Boso 1**	**3.02**	**51**	P		**Pn**	**08 38 50.7**	**-2.2**
BSO1				*e*S		**S**	**08 39 37.8**	**-2.6**
JHU	**Hanno**	**3.20**	**17**	P		**Pn**	**08 38 54.3**	**-0.9**
JHU				*e*S		**S**	**08 39 41.2**	**-3.2**
JAI	**Aioi**	**3.23**	**289**	P		**Pn**	**08 38 54.0**	**-1.5**
JRY	**Ryogami san**	**3.28**	**11**	P		**Pn**	**08 38 55.9**	**-0.1**
JWT	**Wachi**	**3.36**	**119**	P		**Pn**	**08 38 56.2**	**-0.4**
JMN	**Monobe**	**3.67**	**286**	P		**Pn**	**08 38 58.5**	**-1.3**
MJAR	**Matsushiro Arr**	**3.75**	**1**	P		**Pn**	**08 39 00.1**	**-0.3**
	0.1nm,0.3s,baz=179,slow=10,SNR=6.6							
JAG	**Ashikaga**	**3.79**	**17**	P		**Pn**	**08 38 59.3**	**-1.5**
JAG				*e*S		**S**	**08 39 50.4**	**-4.3**
KSRS	**Korea Array**	**9.56**	**302**	P		**Pn**	**08 40 07.0**	**+0.4**
	0.4nm,0.3s,baz=120,slow=12,SNR=8.0							
USRK	**Ussuriysk Ar.**	**12.36**	**339**	P		**Pn**	**08 40 40.9**	**+1.0**
	baz=167,slow=9.4,SNR=4.4							
PETK	**Petropavlovsk-**	**24.71**	**29**	P		**P**	**08 42 46.0**	**+1.6**
	1.1nm,0.5s,baz=224,slow=7.4,SNR=6.1							
SONM	**Songino Array**	**28.24**	**312**	P		**P**	**08 43 17.5**	**+1.5**
	1.1nm,0.7s,baz=122,slow=9.3,SNR=4.6							
ZALV	**Zalesovo Beam**	**42.92**	**316**	P		**P**	**08 45 19.1**	**-0.2**
	0.4nm,0.4s,baz=98,slow=8.9,SNR=1.7							
MKAR	**Makanchi Array**	**44.22**	**305**	P		**P**	**08 45 29.7**	**0.0**
	0.6nm,0.5s,baz=90,slow=11,SNR=6.8							
WRA	**Warramunga Arr**	**52.56**	**184**	P		**P**	**08 46 30.2**	**-2.6**
	0.3nm,0.3s,baz=360,slow=7.6,SNR=8.8							
ILAR	**Eielson Array**	**54.52**	**31**	P		**P**	**08 46 47.5**	**+1.1**
	0.5nm,0.7s,baz=278,slow=5.7,SNR=8.8							
NVAR	**Mina Array Bea**	**79.73**	**51**	P		**P**	**08 49 25.7**	**+1.6**
	0.3nm,0.6s,baz=296,slow=4.9,SNR=2.4							
TXAR	**Lajitas Array**	**94.88**	**51**	P		**P**	**08 50 38.6**	**+1.3**
	0.2nm,0.7s,baz=259,slow=1.8,SNR=1.8							

*IDC **20** 08:52:26.7±1.7, 0°.38N×126°.01E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/30, mbtmp3.9/3, Error ellipse: s-maj=165.8km s-min=23.8km az=65.0*

*NEIC **20** 08:52:30.0±1.0, 0°.5N±0°.2×126°.07E±0°.08, h40km±13km, mb4.0/7, Error ellipse: s-maj=22.5km s-min=11.1km az=167.0*
*DJA **20** 08:52:30.2±1.6, 1°.N±6°×12°.6E±°, h10km±15km, M3.4/7, MLv3.4/7*

ISC 20 08:52:32.3±0.9, 0°.5N±0°.1×126°.24E±0°.06, h44km, n17, σ1$02/17, mb3.9/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.16**	**77**	P		**Pn**	**08 52 51.6**	**-0.5**
TNTI				S		**Sn**	**08 53 07.7**	**+0.9**
TNTI	**Ternate**	**1.16**	**77**			**Pn**	**08 52 51.9**	**-0.2**
LBMI	**Labuha**	**1.70**	**132**	P		**Pn**	**08 53 00.2**	**+0.7**
KMSI	**Cibinong**	**2.26**	**272**	P		**Pn**	**08 53 07.2**	**+0.1**
LUWI	**Luwuk**	**3.79**	**246**	Pn		Pn	08 53 23.7	-4.5
WB0	**Warramunga Arr**	**21.68**	**159**	P		**P**	**08 57 18.4**	**-1.0**
WB0				IAmb		IAmb	08 57 24.3	
	comp=Z,5.0nm,0.7s							
WRAB	**Tennant Creek**	**21.82**	**159**	P		**P**	**08 57 20.2**	**-0.7**
WRAB				IAmb		IAmb	08 57 24.4	
	comp=Z,7.3nm,0.7s							
WRA	**Warramunga Arr**	**21.82**	**159**	P		**P**	**08 57 19.8**	**-1.2**
	comp=Z,5.3nm,0.8s,baz=336,slow=12,SNR=56							
WRA	**Warramunga Arr**	**21.82**	**159**	P		**P**	**08 57 19.1**	**-1.9**
WB2	**Warramunga Arr**	**21.83**	**159**	P		**P**	**08 57 19.7**	**-1.4**
WR0	**Warramunga Arr**	**21.91**	**159**	P		**P**	**08 57 20.6**	**-1.3**
WR0				IAmb		IAmb	08 57 28.8	
	comp=Z,5.0nm,1.1s							
AS31	**Alice Springs**	**25.16**	**163**	P		**P**	**08 57 54.4**	**+0.7**
ASAR	**Alice Springs**	**25.16**	**163**	P		**P**	**08 57 53.9**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=347,slow=13,SNR=51							
ASAR	**Alice Springs**	**25.16**	**163**	P		**P**	**08 57 54.3**	**+0.7**
MKAR	**Makanchi Array**	**59.93**	**327**	P		**P**	**09 02 34.7**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=126,slow=6.6,SNR=5.3							
MKAR				PcP		**PcP**	**09 03 20.5**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=131,slow=4.1,SNR=1.8							
MKAR	**Makanchi Array**	**59.93**	**327**	P		P	09 02 30.4	-3.6
ABKAR	**Akbulak array**	**74.33**	**321**	P		**P**	**09 04 04.4**	**-0.8**
ABKAR				IAmb		IAmb	09 04 19.4	
	comp=Z,2.4nm,1.4s							

*IDC **20** 08:57:51.8±2.0, 7°.47S×128°.79E, h157km±27km, mb2.9/1, mb1 3.5/6, mb1mx3.2/31, mbtmp3.9/6, Error ellipse: s-maj=25.4km s-min=18.9km az=120.0*

ISC 20 08:57:50.4±0.9, 7°.60S±0°.06×128°.96E±0°.10, h131km, n6, σ2$74/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BATI	**Baumata**	**5.83**	**243**	P		**Pn**	**08 59 16.1**	**+1.3**
	10nm,0.3s,baz=42,slow=4.2,SNR=2.4							
BATI				S		**Sn**	**09 00 20.9**	**+0.3**
	15nm,0.3s,baz=6.6,slow=23,SNR=9.0							
SIJI	**Sorong**	**7.07**	**19**	P		**Pn**	**08 59 32.3**	**+0.9**
	2.4nm,0.3s,baz=238,slow=23,SNR=22							
SIJI				S		**Sn**	**09 00 49.0**	**-1.5**
	0.5nm,0.3s,baz=209,slow=23,SNR=1.5							
FITZ	**Fitzroy Crossi**	**10.92**	**197**	P		**Pn**	**09 00 23.6**	**+0.5**
	1.2nm,0.3s,baz=15,slow=10.0,SNR=46							
FITZ				S		**Sn**	**09 02 19.3**	**-4.2**
	0.3nm,0.3s,baz=88,slow=20,SNR=2.0							
WRA	**Warramunga Arr**	**13.33**	**157**	P		**Pn**	**09 00 56.9**	**+2.3**
	0.4nm,0.3s,baz=338,slow=13,SNR=27							
WRA				S		**Sn**	**09 03 18.6**	**-3.2**
	0.5nm,0.3s,baz=333,slow=22,SNR=8.1							
ASAR	**Alice Springs**	**16.67**	**164**	P		**P**	**09 01 39.9**	**+3.4**
	0.4nm,0.3s,baz=337,slow=9.6,SNR=40							
ASAR				S		**Sn**	**09 04 41.0**	**-1.1**
	0.1nm,0.3s,baz=322,slow=18,SNR=4.7							
MKAR	**Makanchi Array**	**68.16**	**327**	P		**P**	**09 08 33.6**	**-2.9**
	0.2nm,0.6s,baz=120,slow=8.5,SNR=2.3							

IDC 20 09:14:14.8±2.0, 1°.69N×126°.36E, h0km, mb3.1/3, mb1 3.4/4, mb1mx3.3/39, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=121.6km s-min=26.4km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.67**	**182**	P		P	09 18 45.4	-0.2
	0.1nm,0.3s,baz=338,slow=11,SNR=2.4							
WRA	**Warramunga Arr**	**22.88**	**160**	P		P	09 19 19.8	-0.4
	0.2nm,0.5s,baz=339,slow=11,SNR=12							
ASAR	**Alice Springs**	**26.25**	**164**	P		P	09 19 52.5	+0.7
	0.2nm,0.4s,baz=345,slow=9.6,SNR=2.3							
MKAR	**Makanchi Array**	**59.02**	**326**	P		P	09 24 16.4	-0.1
	0.2nm,0.5s,baz=128,slow=9.7,SNR=3.7							

IDC 20 09:18:16.9±1.3, 1°.65N×126°.31E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/50, mbtmp3.7/5, Error ellipse: s-maj=137.2km s-min=19.3km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.86**	**160**	P		P	09 23 21.8	-0.3
	1.3nm,0.6s,baz=339,slow=11,SNR=12							
ASAR	**Alice Springs**	**26.23**	**164**	P		P	09 23 54.1	+0.3
	0.3nm,0.4s,baz=344,slow=7.1,SNR=8.5							
SONM	**Songino Array**	**49.13**	**342**	P		P	09 27 06.4	0.0
	0.4nm,0.7s,baz=172,slow=11,SNR=2.3							
MKAR	**Makanchi Array**	**59.02**	**326**	P		P	09 28 18.5	-0.1
	0.5nm,0.4s,baz=118,slow=8.7,SNR=11							
KURBB	**Kurchatov Arra**	**63.26**	**328**	P		P	09 28 47.2	0.0
	0.9nm,0.5s,baz=130,slow=6.2,SNR=13							

*BER **20** 09:19:53.8±4.7, 69°.79N×30°.36E, h0km, ML1.9, ML2.5(NAO), Suspected explosion*
*NAO **20** 09:19:53.4±1.3, 69°.70N×30°.26E, ML2.5*
*HEL **20** 09:19:55.8±0.2, 69°.65N×30°.17E, h0km, ML2.1, Suspected explosion*
*KOLA **20** 09:19:56.6, 69°.55N×29°.76E, h0km*
*UPP **20** 09:20:00.9±3.1, 69°.41N×29°.23E, h1km, ML1.8, Suspected explosion*

ISC 20 09:19:55.3±1.2, 69°.62N±0°.06×30°.03E±0°.04, h0km, n34, σ0$95/52, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KEV	**Kevo**	**1.07**	**279**	*e*P		**Pg**	**09 20 15.6**	**-0.1**
KEV				*e*S		**Sg**	**09 20 29.3**	**-0.2**
ARA0	**ARCESS Array S**	**1.59**	**269**	Pg		**Pn**	**09 20 24.7**	**0.0**
	baz=81,slow=16							
ARA0				Lg		Lg	09 20 45.4	
	baz=92,slow=22							
ARA0				Rg		Rg	09 20 55.6	
	baz=76,slow=37							
ARA0	**ARCESS Array S**	**1.59**	**269**	*e*P		**Pn**	**09 20 25.0**	**+0.3**
ARA0				*e*S		**Sb**	**09 20 46.2**	**+0.1**
ARA0	**ARCESS Array S**	**1.59**	**269**	Pg		**Pn**	**09 20 24.7**	**0.0**
	baz=81,slow=16							
ARA0				Sg		**Sn**	**09 20 45.4**	**-0.6**
	baz=92,slow=22							
ARA0				IAML			09 20 49.3	
	comp=Z,32nm,0.2s							
VRF	**Varrio**	**1.89**	**185**	*e*P		**Pn**	**09 20 29.6**	**+0.9**
VRF				*e*S		**Sn**	**09 20 53.6**	**+0.4**
VRF				MSG			09 20 56.2	
	comp=Z,14nm,0.1s							
APA0	**Apatity Array**	**2.29**	**150**	P		**Pn**	**09 20 34.8**	**+0.5**
APA0				S		**Sn**	**09 21 03.4**	**+0.1**
APA0	**Apatity Array**	**2.29**	**150**	Pn		**Pn**	**09 20 34.2**	**-0.1**
	baz=323,slow=14							
APA0				Pg		**Pb**	**09 20 36.5**	**-1.0**
	baz=354,slow=22							
APA0				Lg		Lg	09 21 04.0	
	baz=335,slow=22							
APA0	**Apatity Array**	**2.29**	**150**	Pn		**Pn**	**09 20 34.2**	**-0.1**
	baz=323,slow=14							
APA0				Pg		**Pb**	**09 20 36.5**	**-1.0**
	baz=354,slow=22							
APA0				Sg		**Sn**	**09 21 04.0**	**+0.8**
	baz=335,slow=22							
HAMF	**Hammerfest**	**2.40**	**298**	Pn		**Pn**	**09 20 36.6**	**+0.8**
HAMF				Lg		Lg	09 21 09.4	
HAMF	**Hammerfest**	**2.40**	**298**	*e*P		**Pn**	**09 20 36.5**	**+0.8**
HAMF				*e*S		**Sn**	**09 21 06.9**	**+1.1**
HAMF	**Hammerfest**	**2.40**	**298**	*e*Pg		**Pn**	**09 20 36.0**	**+0.2**
HAMF				*e*Sg		**Sn**	**09 21 05.3**	**-0.5**
HAMF				IAML			09 21 11.6	
	comp=Z,9.1nm,0.2s							
APA	**Apatity**	**2.40**	**147**	P		**Pn**	**09 20 36.7**	**+0.9**
APA				S		**Sn**	**09 21 06.5**	**+0.7**
LVZ	**Lovozero**	**2.41**	**134**	*e*S		**Sn**	**09 21 06.1**	**-0.1**
KTK1	**Kautokeino**	**2.49**	**259**	*e*P		**Pn**	**09 20 38.0**	**+1.0**
KTK1				*e*S		**Sn**	**09 21 07.0**	**-1.0**
KTK1				IAML			09 21 14.7	
	comp=Z,7.7nm,0.3s							
SGF	**Sodankyl**	**2.54**	**212**	*e*P		**Pn**	**09 20 38.8**	**+1.1**
SGF				*e*S		**Sn**	**09 21 10.9**	**+1.6**
SGF				MSG			09 21 14.7	
	comp=Z,5.6nm,0.1s							
LANU	**Lannavaara**	**3.32**	**245**	*e*P		**Pn**	**09 20 49.2**	**+0.8**
LANU				*e*S		**Sn**	**09 21 29.3**	**+0.9**
KIF	**Kilpisjarvi**	**3.33**	**264**	Pn		Pn	**09 20 49.4**	**+0.8**
KIF				Sn		**Sn**	**09 21 29.3**	**+0.5**
KIF	**Kilpisjarvi**	**3.33**	**264**	*e*P		**Pn**	**09 20 49.6**	**+1.0**
KIF				*e*S		**Sn**	**09 21 29.7**	**+0.8**
KIF				MSG			09 21 42.6	
	comp=Z,4.4nm,0.2s							
KIF	**Kilpisjarvi**	**3.33**	**264**	*e*P		**Pn**	**09 20 49.7**	**+1.1**
KIF				*e*Pg		**Pb**	**09 20 56.3**	**+1.1**
KIF				*e*S		**Sn**	**09 21 26.9**	**-1.9**
RNF	**Rovaniemi**	**3.38**	**208**	MSG			09 21 45.9	
	comp=Z,6.8nm,0.2s							
PAJU	**Pajala**	**3.66**	**228**	P		**Pn**	**09 20 53.7**	**+0.6**
MASU	**Masugnsbyn**	**3.67**	**237**	P		**Pn**	**09 20 53.0**	**-0.1**
KOVU	**Salmi**	**3.83**	**253**	P		**Pn**	**09 20 56.4**	**+1.0**
KOVU				S		**Sn**	**09 21 38.7**	**-2.5**
TRO	**Tromso**	**3.88**	**275**	*e*P		**Pn**	**09 20 55.2**	**-1.0**
RATU	**Laukkuluspa**	**4.21**	**250**	P		**Pn**	**09 21 01.1**	**+0.5**
ERTU	**Ertsjaerv**	**4.25**	**227**	P		**Pn**	**09 21 01.9**	**+0.7**
KALU	**Kalix**	**4.55**	**217**	P		**Pn**	**09 21 05.8**	**+0.6**
SALU	**Saltoluokta**	**4.80**	**248**	*e*P		**Pn**	**09 21 09.7**	**+1.0**
SALU				*e*S		**Sn**	**09 22 03.7**	**-1.2**
HARU	**Harads**	**4.87**	**229**	P		**Pn**	**09 21 09.5**	**-0.1**
SJUU	**Sjulsmark**	**5.24**	**222**	P		**Pn**	**09 21 14.4**	**-0.3**
LILU	**Lilltraesk**	**5.85**	**227**	P		**Pn**	**09 21 22.1**	**-1.0**
FAUS	**Fauske**	**5.86**	**254**	*e*P		**Pn**	**09 21 24.6**	**+1.3**
FAUS				*e*S		**Sn**	**09 22 28.8**	**-2.3**
FAUS				IAML			09 22 59.0	
	comp=Z,2.6nm,0.8s							
SPA0	**Spitsbergen Ar**	**9.36**	**343**	Pn		Pn	09 22 05.6	-5.5
	baz=153,slow=18							
SPA0	**Spitsbergen Ar**	**9.36**	**343**	Pn		Pn	09 22 05.6	-5.5
	baz=153,slow=18							

*IDC **20** 09:25:06.6±1.6, 19°.61N×120°.98E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/62, mbtmp3.5/4, MS3.2/1, Ms1 3.2/1, ms1mx2.4/41, Error ellipse: s-maj=176.1km s-min=22.1km az=67.0*

ISC 20 09:25:08.0±1.2, 19°.5N±0°.5×120°.8E±0°.9, h10km, n5, σ0$79/6, mb3.5/4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CVP	**Callao Caves**	**2.05**	**153**‖	*e*P		**Pg**	**09 25 46.6**	**-0.8**
CVP				*i* S		**Sg**	**09 26 14.8**	**+0.8**
SONM	**Songino Array**	**30.57**	**341**	P		**P**	**09 31 22.3**	**+0.3**
	0.2nm,0.3s,baz=148,slow=9.6,SNR=2.1							
WRA	**Warramunga Arr**	**41.41**	**161**	P		**P**	**09 32 54.6**	**-0.3**
	0.4nm,0.5s,baz=342,slow=9.0,SNR=11							
WRA				LR		LR	09 53 13.7	
	comp=Z,29nm,18.4s,baz=260,slow=41							
ASAR	**Alice Springs**	**44.80**	**163**	P		**P**	**09 33 23.0**	**+0.7**
	0.3nm,0.4s,baz=343,slow=7.0,SNR=11							
KURBB	**Kurchatov Arra**	**45.53**	**323**	P		**P**	**09 33 27.5**	**-0.2**
	0.9nm,0.8s,baz=122,slow=7.7,SNR=4.7							

*IDC **20** 09:50:30.4±0.6, 23°.34N×100°.49E, h0km, mb4.0/16, mb1 4.1/17, mb1mx3.9/58, mbtmp4.0/17, ML4.0/1, MS3.8/32, Ms1 3.8/32, ms1mx3.7/56, Error ellipse: s-maj=21.6km s-min=12.6km az=70.0*
*BJI **20** 09:50:30.6±0.0, 23°.32N×100°.48E, h8km, mB4.3/9, mb4.3/17, ML4.6/12, Ms4.5/20, Ms7 4.2/16*
*NEIC **20** 09:50:32.5±2.1, 23°.33N±0°.04×100°.50E±0°.07, h15km±5km, mb4.5/24, Error ellipse: s-maj=9.8km s-min=6.4km az=100.0*

ISC 20 09:50:31.7±0.4, 23°.29N±0°.04×100°.38E±0°.05, h10km, n91, σ1$65/80, mb4.3/26, MS3.9/31, 1D, Yunnan

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

LZH				LR	LR			
	comp=N,1μm,10.3s							
LZH				LR	LR			
	comp=Z,1μm,14.1s							
GTA	**Gaotai**	**16.08**	**358**	*eP*	**P**	**09 54 21.0**	**-0.4**
GTA				pP	sP	09 54 25.8	-0.2
GTA				sP	pP	09 54 28.4	+3.9
GTA				S	**S**	**09 57 24.4**	**-5.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s							
GTA				pmax	pmax			
	comp=Z,79nm,6.0s							
GTA				LR	LR			
	comp=N,980nm,10.9s							
GTA				LR	LR			
	comp=Z,830nm,10.2s							
NJ2	**Nanjing**	**18.52**	**58**	*eP*	**Pn**	**09 54 54.1**	**+5.7**
NJ2				pmax	pmax			
	comp=Z,7.0nm,0.5s							
NJ2				LR	LR			
	comp=N,750nm,9.0s							
NJ2				LR	LR			
	comp=E,880nm,9.5s							
NJ2				LR	LR			
	comp=Z,1μm,11.4s							
BTO	**Baotou**	**19.08**	**23**	*eP*	**P**	**09 54 52.9**	**-1.6**
RPSI	**Rantau Prapat**	**20.52**	**184**		**P**	**09 55 09.7**	**-0.6**
RPSI				IAmb	IAmb	09 55 14.8		
	comp=Z,19nm,1.2s							
BJT	**Baijiatuau**	**21.36**	**35**	P	**P**	**09 55 18.2**	**-1.0**
BJT				IAmb	IAmb	09 55 22.4		
	comp=Z,42nm,1.4s							
WMQ	**Urumqi**	**22.99**	**336**	*eP*	**P**	**09 55 35.9**	**-0.7**
WMQ	**Urumqi**	**22.99**	**336**	P	**P**	**09 55 37.3**	**+0.7**
WMQ				IAmb	IAmb	09 55 55.9		
	comp=Z,13nm,1.0s							
SBUM	**Sibu**	**23.68**	**149**	P	**P**	**09 55 44.1**	**+0.4**
SBUM				IAmb	IAmb	09 55 47.6		
	comp=Z,28nm,1.5s							
KSM	**Kuching**	**23.73**	**155**	P	**P**	**09 55 44.8**	**+0.6**
KSM				IAmb	IAmb	09 56 00.9		
	comp=Z,9.4nm,0.9s							
SONM	**Songino Array**	**24.96**	**10**	P	**P**	**09 55 54.9**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=187,slow=9.0,SNR=11							
SONM				LR	LR	10 06 42.7		
	comp=Z,228nm,21.8s,baz=186,slow=39							
SONM	**Songino Array**	**24.96**	**10**	P	**P**	**09 55 53.8**	**-1.6**
ULN	**Ulaanbaatar**	**25.09**	**11**	P	**P**	**09 55 57.1**	**+0.5**
NIL	**Nilore**	**25.92**	**300**	P	**P**	**09 56 02.7**	**-1.4**
NIL				IAmb	IAmb	09 56 07.5		
	comp=Z,14nm,1.1s							
KSRS	**Korea Array**	**27.52**	**53**	LR	LR	10 08 26.4		
	comp=Z,279nm,19.4s,baz=243,slow=39							
MK31	**Makanchi Array**	**27.60**	**333**	P	**P**	**09 56 18.9**	**-0.3**
MKAR	**Makanchi Array**	**27.60**	**333**	P	**P**	**09 56 19.9**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=140,slow=9.8,SNR=20							
MKAR				LR	LR	10 08 57.5		
	comp=Z,168nm,21.6s,baz=134,slow=40							
MKAR	**Makanchi Array**	**27.60**	**333**	P	**P**	**09 56 19.0**	**-0.2**
MAKZ	**Makanchi**	**27.75**	**332**	P	**P**	**09 56 21.1**	**+0.7**
TLY	**Talaya**	**28.45**	**4**	LR	LR	10 08 52.8		
	comp=Z,317nm,19.8s,baz=172,slow=39							
AAK	**Ala-Archa**	**28.87**	**318**	P	**P**	**09 56 31.9**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=167,slow=14,SNR=2.1							
GAR	**Garm**	**29.95**	**309**	P	**P**	**09 56 39.5**	**-0.7**
BTK	**Batken**	**30.02**	**311**	P	**P**	**09 56 41.3**	**+0.4**
BTK				IAmb	IAmb	09 56 43.0		
	comp=Z,10nm,1.4s							
LEM	**Lembang**	**30.76**	**166**	LR	LR	10 10 41.0		
	comp=Z,182nm,19.6s,baz=236,slow=39							
KURBB	**Kurchatov Arra**	**32.15**	**334**	P	**P**	**09 56 59.0**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=137,slow=10.0,SNR=8.3							
KURK	**Kurchatov**	**32.18**	**334**		**P**	**09 56 59.2**	**-0.4**
ZAA0	**Zalesovo Array**	**32.78**	**343**	P	**P**	**09 57 04.6**	**-0.3**
ZAA0				IAmb	IAmb	09 57 15.3		
	comp=Z,5.9nm,1.1s							
ZALV	**Zalesovo Beam**	**32.78**	**343**	P	**P**	**09 57 04.3**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=163,slow=11,SNR=7.2							
ZALV				LR	LR	10 11 18.2		
	comp=Z,182nm,18.7s,baz=156,slow=38							
ZALV	**Zalesovo Beam**	**32.78**	**343**	P	**P**	**09 57 03.8**	**-1.1**
USRK	**Ussuriysk Ar.**	**33.24**	**43**	P	**P**	**09 57 07.7**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=239,slow=7.9,SNR=2.6							
USRK				LR	LR	10 12 24.5		
	comp=Z,300nm,18.6s,baz=212,slow=40							
KLR	**Kul'dur**	**35.75**	**36**	LR	LR	10 13 45.5		
	comp=Z,163nm,20.2s,baz=230,slow=39							
JHJ	**Hachijo jima 2**	**35.90**	**65**	LR	LR	10 12 02.9		
	comp=Z,105nm,20.1s,baz=22,slow=36							
GEYT	**Alibeck**	**38.85**	**302**	P	**P**	**09 57 58.3**	**+1.1**
	comp=Z,1.4nm,0.6s,baz=160,slow=14,SNR=3.8							
GEYT				LR	LR	10 17 34.1		
	comp=Z,107nm,19.0s,baz=215,slow=42							
GEYT	**Alibeck**	**38.85**	**302**	P	**P**	**09 57 57.4**	**+0.2**
ASAJ	**Asahikawa**	**40.25**	**49**	P	**P**	**09 58 09.0**	**+0.3**
	comp=Z,7.1nm,0.9s,baz=262,slow=14,SNR=2.6							
ASAJ				LR	LR	10 14 54.9		
	comp=Z,124nm,20.6s,baz=314,slow=36							
SOEI	**Soe**	**40.31**	**142**	P	**P**	**09 58 08.0**	**-1.6**
ABKAR	**Akbulak array**	**40.93**	**320**	P	**P**	**09 58 13.6**	**-0.6**
ABKAR	**Akbulak array**	**40.93**	**320**	P	**P**	**09 58 13.2**	**-1.1**
GUMO	**Guam**	**43.14**	**95**	LR	LR	10 16 32.2		
	comp=Z,42nm,18.9s,baz=336,slow=36							
YAK	**Yakutsk**	**43.55**	**20**	LR	LR	10 16 13.3		
	comp=Z,128nm,18.6s,baz=264,slow=36							
NRIK	**Noril'sk**	**46.70**	**354**	P	**P**	**09 59 02.3**	**+1.9**
	comp=Z,2.4nm,0.7s,baz=121,slow=5.9,SNR=2.7							
FITZ	**Fitzroy Crossi**	**47.97**	**147**	LR	LR	10 20 44.2		
	comp=Z,74nm,21.4s,baz=312,slow=38							
KBZ	**Khabaz**	**51.02**	**308**	LR	LR	10 25 39.4		
	comp=Z,91nm,20.4s,baz=148,slow=41							
PETK	**Petropavlovsk-**	**52.19**	**40**	LR	LR	10 24 49.6		
	comp=Z,159nm,18.2s,baz=248,slow=40							
WB0	**Warramunga Arr**	**54.15**	**139**	P	**P**	**09 59 57.7**	**+0.3**
WB0				IAmb	IAmb	09 59 58.5		
	comp=Z,3.7nm,0.8s							
WRA	**Warramunga Arr**	**54.26**	**140**	P	**P**	**09 59 58.2**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=330,slow=7.9,SNR=41							
WRA				LR	LR	10 25 57.5		
	comp=Z,102nm,18.9s,baz=295,slow=39							
WRA	**Warramunga Arr**	**54.26**	**140**	P	**P**	**09 59 58.5**	**+0.4**
WRAB	**Tennant Creek**	**54.26**	**140**	P	**P**	**09 59 58.8**	**+0.7**
WB2	**Warramunga Arr**	**54.26**	**140**	P	**P**	**09 59 58.4**	**+0.2**
WR0	**Warramunga Arr**	**54.39**	**139**	P	**P**	**09 59 59.0**	**-0.1**
WR0				IAmb	IAmb	10 00 00.4		
	comp=Z,4.1nm,0.8s							
ASAR	**Alice Springs**	**56.91**	**143**	P	**P**	**10 00 16.3**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=322,slow=6.7,SNR=33							
ASAR				PcP	**PcP**	**10 01 13.4**	**+0.8**	
	comp=Z,1.0nm,1.0s,baz=333,slow=4.1,SNR=4.1							
ASAR				LR	LR	10 28 11.2		
	comp=Z,68nm,18.1s,baz=331,slow=40							
ASAR	**Alice Springs**	**56.91**	**143**	P	**P**	**10 00 16.9**	**-0.3**
BRTR	**Keskin Array B**	**57.98**	**303**	LR	LR	10 30 00.3		
	comp=Z,22nm,19.7s,baz=144,slow=41							
AKASG	**Malin Array Be**	**60.51**	**316**	P	**P**	**10 00 41.2**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=74,slow=7.1,SNR=6.5							
AKASG				LR	LR	10 29 46.2		
	comp=Z,80nm,19.2s,baz=60,slow=39							
FINES	**FINESS Array B**	**62.33**	**329**	LR	LR	10 30 46.0		
	comp=Z,101nm,20.0s,baz=80,slow=39							
ARCES	**ARCESS Array B**	**63.10**	**338**	LR	LR	10 30 18.3		
	comp=Z,124nm,18.6s,baz=55,slow=38							
ABPO	**Ambohimpanom**	**66.78**	**235**	P	**P**	**10 01 23.5**	**-0.4**
ABPO				IAmb	IAmb	10 01 40.6		
	comp=Z,3.6nm,1.0s							
STKA	**Stephens Creek**	**67.55**	**143**	P	**P**	**10 01 29.4**	**+1.0**
	comp=Z,2.5nm,0.7s,baz=310,slow=7.3,SNR=5.0							
STKA				LR	LR	10 33 40.7		
	comp=Z,76nm,18.2s,baz=356,slow=38							
NOA	**NORSAR Array B**	**69.51**	**329**	P	**P**	**10 01 39.8**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=82,slow=6.2,SNR=2.2							
NOA				LR	LR	10 34 57.4		
	comp=Z,123nm,18.2s,baz=75,slow=38							
GERES	**GERESS Array B**	**70.71**	**316**	P	**P**	**10 01 49.4**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=81,slow=8.4,SNR=5.3							
GERES				LR	LR	10 36 13.3		
	comp=Z,90nm,18.7s,baz=72,slow=39							
ILAR	**Eielson Array**	**78.29**	**24**	P	**P**	**10 02 31.4**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=293,slow=7.7,SNR=2.1							
PMR	**Palmer**	**78.97**	**27**	P	**P**	**10 02 36.5**	**+1.1**
SFJD	**Kangerlussuaq**	**87.39**	**349**	LR	LR	10 45 37.5		
	comp=Z,164nm,18.8s,baz=11,slow=38							
DLBC	**Dease Lake**	**88.50**	**24**	LR	LR	10 46 24.9		
	comp=Z,158nm,18.7s,baz=336,slow=38							
BOSA	**Boshof**	**88.84**	**238**	LR	LR	10 37 53.4		
	comp=Z,36nm,19.7s,baz=31,slow=32							
BBB	**Bella Bella**	**93.75**	**28**	LR	LR	10 47 02.1		
	comp=Z,21nm,20.5s,baz=279,slow=36							
SUR	**Sutherland**	**93.94**	**237**	LR	LR	10 41 15.7		
	comp=Z,48nm,21.6s,baz=52,slow=32							
MAW	**Mawson**	**94.80**	**194**	LR	LR	10 43 57.2		
	comp=Z,36nm,18.8s,baz=40,slow=34							

*IDC **20** 09:56:47.7±1.7, 1°.73N×126°.40E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/48, mbtmp3.9/4, Error ellipse: s-maj=171.6km s-min=20.6km az=66.0*
*DJA **20** 09:56:49.6±1.0, 1°.1N±10°×12°.6E±°, h123km±11km, M3.8/6, MLv3.8/6*

ISC 20 09:56:53.3±1.1, 1°.26N±0°.10×126°.36E±0°.08, h10km, n10, σ0°44/7, mb3.9/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.12**	**115**	P		**Pb**	**09 57 14.2**	**-0.5**
TNTI				S		**Sn**	**09 57 31.0**	**+0.6**
KMSI	**Cibinong**	**2.47**	**254**	P		Pn	09 57 28.4	-5.2
KMSI	**Cibinong**	**2.47**	**254**	P		**Pg**	**09 57 40.6**	**-0.1**
SGSI	**Sangihe**	**2.55**	**341**	P		**Pb**	**09 57 39.0**	**-0.2**
SGSI	**Sangihe**	**2.55**	**341**	P		**Pb**	**09 57 39.0**	**-0.2**
GTOI	**Gorontalo**	**3.40**	**260**	P		Pn	09 57 38.2	-8.2
WRA	**Warramunga Arr**	**22.47**	**160**	P		**P**	**10 01 53.3**	**+0.4**
	1.2nm,0.4s,baz=339,slow=11,SNR=14							
ASAR	**Alice Springs**	**25.84**	**164**	P		**P**	**10 02 25.1**	**0.0**
	0.4nm,0.5s,baz=344,slow=7.2,SNR=7.9							
MKAR	**Makanchi Array**	**59.38**	**326**	P		P	10 06 49.2	-6.7
	0.7nm,0.4s,baz=114,slow=8.4,SNR=9.5							
KURBB	**Kurchatov Arra**	**63.62**	**328**	P		P	10 07 18.2	-6.2
	1.7nm,0.5s,baz=128,slow=6.3,SNR=8.1							

DJA 20 09:57:50.2±0.9, 10°S±5°×117°E±°, h25km±7km, M3.9/6, MLv3.9/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.76**	**25**	P		Pb	09 58 05.0	+0.2
PLAI				S		Sn	09 58 16.2	+0.2
TWSI	**Taliwang, Sumb**	**0.96**	**324**	P		Pn	09 58 07.4	-0.7
TWSI				S		Sb	09 58 20.1	-0.3
WBSI	**Waikabubak, Su**	**1.92**	**94**	P		Pn	09 58 19.4	-1.9
WBSI	**Waikabubak, Su**	**1.92**	**94**	P		Pn	09 58 19.3	-2.0
DNP	**Denpasar**	**2.37**	**291**	P		Pb	09 58 30.9	-1.2
DNP				S		Sn	09 58 56.1	+0.4
SRBI	**Singaraja**	**2.63**	**303**	P		Pn	09 58 31.8	+0.7
SRBI				S		Sn	09 59 02.0	-0.3
SRBI	**Singaraja**	**2.63**	**303**	P		Pn	09 58 29.5	-1.6
JAGI	**Jajag, Banyuwa**	**3.42**	**287**	P		Pn	09 58 43.2	+1.2
JAGI	**Jajag, Banyuwa**	**3.42**	**287**	P		Pn	09 58 36.0	-6.0

*NEIC **20** 10:06:15.4±1.9, 36°.78N±0°.05×141°.12E±0°.09, h47km±6km, mb4.2/12, Error ellipse: s-maj=11.7km s-min=6.9km az=114.0*
*JMA **20** 10:06:16.0±0.1, 36°.81N×140°.99E, h53km±1km, M3.9*
JMA Felt II J1.
*NIED **20** 10:06:16.1, 36°.81N×140°.99E, h53km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.05; Mθθ-0.38; Mφφ-0.67; Mrθ0.31; Mrφ-0.47; Mθφ0.24; Fault plane solution: M₀1.10000×10¹⁵ NP1:φs42.00000°, δ55.00000°, λ96.00000°. NP2:φs211.00000°, δ35.00000°, λ81.00000°.*
*IDC **20** 10:06:19.3±1.7, 36°.72N×140°.89E, h81km±16km, mb3.7/15, mb1 3.9/19, mb1mx3.7/55, mbtmp4.0/19 Error ellipse: s-maj=15.3km s-min=10.1km az=68.0*

ISC 20 10:06:15.6±0.8, 36°.80N±0°.04×141°.06E±0°.06, h49km±7km, n79, σ1°23/87, mb4.1/21, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.36**	**325**	P		**Pn**	**10 06 25.5**	**+0.1**
ONAJ				S		**Sn**	**10 06 32.1**	**-0.3**
JHO	**Hitachi**	**0.44**	**244**	P		**Pn**	**10 06 26.3**	**+0.2**
JHO				S		**Sn**	**10 06 33.3**	**-0.3**
JFFD	**Fukushimafurud**	**0.49**	**306**	P		**Pn**	**10 06 26.8**	**+0.1**
JFFD				S		**Sn**	**10 06 34.1**	**-0.6**
JFK	**Kawauchi**	**0.58**	**345**	P		**Pn**	**10 06 27.8**	**-0.1**
JFK				S		**Sn**	**10 06 36.2**	**-0.5**
JHYU	**Hitachinakayam**	**0.60**	**220**	P		**Pn**	**10 06 28.1**	**+0.1**
JHYU				S		**Sn**	**10 06 36.6**	**-0.3**
JYT	**Yasato**	**0.90**	**231**	Pn		**Pn**	**10 06 31.9**	**-0.1**
JFT	**Otama**	**0.92**	**321**	P		**Pn**	**10 06 32.6**	**+0.4**
JFT				S		**Sn**	**10 06 44.5**	**+0.1**
JSB	**Shiboa**	**0.93**	**281**	P		**Pn**	**10 06 32.4**	**0.0**
JSB				S		**Sn**	**10 06 44.0**	**-0.7**
JMM	**Marumori**	**1.08**	**349**	P		**Pn**	**10 06 34.4**	**0.0**
JMM	**Marumori**	**1.08**	**349**			**Pn**	**10 06 34.7**	**+0.3**
JFY	**Yanaizu**	**1.24**	**300**	P		**Pn**	**10 06 36.4**	**-0.2**
JAG	**Ashikaga**	**1.34**	**254**	P		**Pn**	**10 06 37.8**	**-0.2**
JAG				eS		**Sn**	**10 06 53.8**	**-0.9**
MJAR	**Matsushiro Arr**	**2.31**	**264**	P		**Pn**	**10 06 51.5**	**+0.4**
	6.1nm,0.3s,baz=69,slow=13,SNR=223							
MJAR				S		**Sn**	**10 07 20.1**	**+1.8**
	10nm,0.3s,baz=100,slow=28,SNR=8.2							
MJAR	**Matsushiro Arr**	**2.31**	**264**			**Pn**	**10 06 51.2**	**+0.1**
MAJO	**Matsushiro**	**2.31**	**264**			**Pn**	**10 06 52.2**	**+1.1**
MAT	**Matsushiro**	**2.31**	**264**	P		**Pn**	**10 06 52.1**	**+0.9**
MAT				*eS*		**Sn**	**10 07 19.1**	**+0.8**
MJB9	**Matsu-Tunnel**	**2.31**	**264**			**Pn**	**10 06 52.3**	**+1.1**
JSD	**Sado**	**2.55**	**300**			**Pn**	**10 06 54.0**	**-0.4**
JGF	**Kuroka**	**3.22**	**249**			**Pn**	**10 07 05.9**	**+2.2**
INU	**Inuyama**	**3.58**	**247**			**Pn**	**10 07 10.5**	**+1.9**
JHJ2	**Mitsune**	**3.82**	**196**	Pn		**Pn**	**10 07 12.9**	**+1.0**
JHJ	**Hachijo jima 2**	**3.82**	**196**	P		**Pn**	**10 07 12.7**	**+0.8**
	42nm,0.3s,baz=42,slow=16,SNR=28							
JHJ				S		**Sn**	**10 07 56.6**	**+1.0**
	75nm,0.3s,baz=38,slow=9.3,SNR=8.3							
JTM	**Tenmabayashi**	**3.98**	**0**			**Pn**	**10 07 15.8**	**+1.7**
JWT	**Wachi**	**4.83**	**253**			**Pn**	**10 07 27.8**	**+2.1**
ERM	**Erimo**	**5.45**	**17**	Pn		**Pn**	**10 07 34.1**	**-0.1**
ERM						**Sn**	**10 08 36.0**	**+0.4**
JEW	**Eniwo**	**6.04**	**3**	Pn		**Pn**	**10 07 42.7**	**+0.4**
JMN	**Monobe**	**6.62**	**245**	Pn		**Pn**	**10 07 50.7**	**+0.3**
JHS	**Saijyo**	**6.69**	**257**	Pn		**Pn**	**10 07 53.3**	**+2.0**
ASAJ	**Asahikawa**	**7.40**	**9**	P		**Pn**	**10 08 00.1**	**-0.8**
	2.5nm,0.3s,baz=227,slow=10,SNR=25							
ASAJ				S		**Sn**	**10 09 23.6**	**+0.1**
	0.6nm,0.3s,baz=306,slow=19,SNR=2.6							
JKA	**Kamikawa-asahi**	**7.40**	**9**			**Pn**	**10 08 00.1**	**-0.8**
JKA						**Sn**	**10 09 23.6**	**+0.1**
JCJ	**Chichijima**	**9.72**	**174**	Pn		**Pn**	**10 08 31.4**	**-1.4**
USA0B	**Ussuriysk Arra**	**10.11**	**320**			**Pn**	**10 08 42.2**	**+4.2**
USRK	**Ussuriysk Ar.**	**10.11**	**320**	P		**Pn**	**10 08 41.9**	**+3.9**
	baz=133,slow=13,SNR=33							
KSRS	**Korea Array**	**10.51**	**277**	P		**Pn**	**10 08 46.6**	**+3.1**
	0.3nm,0.3s,baz=90,slow=14,SNR=6.2							
KSAR	**Wonju Array Be**	**10.54**	**277**	Pn		**Pn**	**10 08 44.4**	**+0.4**
PETK	**Petropavlovsk-**	**20.03**	**30**	P		Pn	10 10 48.0	+1.7
	3.0nm,1.0s,baz=214,slow=3.0,SNR=4.3							
SONM	**Songino Array**	**27.68**	**304**	P		**P**	**10 11 59.4**	**+0.5**
	3.3nm,0.6s,baz=103,slow=8.6,SNR=20							
H11N2	**WAKE ISLAND Hy**	**28.28**	**120**	T		T	10 42 09.1	
	baz=312,slow=75,SNR=77							
H11N1	**WAKE ISLAND Hy**	**28.29**	**120**	T		T	10 42 09.6	
	baz=312,slow=75,SNR=88							
H11N3	**WAKE ISLAND Hy**	**28.30**	**120**	T		T	10 42 10.2	
	baz=312,slow=75,SNR=62							
H11S1	**WAKE ISLAND Hy**	**28.98**	**122**	T		T	10 42 55.1	
	baz=314,slow=76,SNR=140							
H11S3	**WAKE ISLAND Hy**	**28.98**	**122**	T		T	10 42 57.4	
	baz=314,slow=76,SNR=95							
H11S2	**WAKE ISLAND Hy**	**28.99**	**122**	T		T	10 42 59.4	
	baz=314,slow=76,SNR=93							
ZALV	**Zalesovo Beam**	**41.86**	**313**	P		**P**	**10 14 00.0**	**-0.6**
	1.4nm,0.4s,baz=80,slow=8.1,SNR=6.9							
ZALV				PcP		**PcP**	**10 15 55.4**	**-0.2**
	0.4nm,0.3s,baz=116,slow=5.0,SNR=2.4							
ZALV	**Zalesovo Beam**	**41.86**	**313**	P		**P**	**10 14 00.3**	**-0.3**
MK31	**Makanchi Array**	**44.00**	**302**	P		**P**	**10 14 18.1**	**+0.1**
MKAR	**Makanchi Array**	**44.00**	**302**	P		**P**	**10 14 17.6**	**-0.5**
	0.9nm,0.7s,baz=87,slow=10,SNR=7.4							
KURK	**Kurchatov**	**45.85**	**308**	P		**P**	**10 14 33.7**	**+1.1**
KURK					IAmb	IAmb	10 14 34.4	
	comp=Z,4.1nm,1.0s							
KURBB	**Kurchatov Arra**	**45.92**	**308**	P		**P**	**10 14 32.4**	**-0.8**
	comp=Z,1.7nm,0.4s,baz=82,slow=7.9,SNR=13							
KURBB				PcP		**PcP**	**10 16 08.6**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=87,slow=7.8,SNR=1.2							
MDM	**Murphy Dome**	**49.26**	**32**	P		**P**	**10 15 00.4**	**+1.5**
MDM				IAmb		IAmb	10 15 01.5	
	comp=Z,2.3nm,1.0s							
ILAR	**Eielson Array**	**49.84**	**32**	P		**P**	**10 15 04.2**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=272,slow=7.0,SNR=11							
ILAR				PcP		**PcP**	**10 16 23.2**	**0.0**
	comp=Z,0.4nm,0.6s,baz=293,slow=3.7,SNR=4.6							
ILAR	**Eielson Array**	**49.84**	**32**	P		**P**	**10 15 03.0**	**-0.4**
K27K	**Chicken**	**51.99**	**33**	P		**P**	**10 15 21.2**	**+1.7**
K27K				IAmb		IAmb	10 15 21.9	
	comp=Z,1.9nm,1.0s							
KK31	**Karatay Array**	**52.99**	**300**	Pn		**P**	**10 15 22.6**	**-4.7**
	comp=Z,0.2nm,0.3s,baz=203,slow=16,SNR=8.3							
KK31				⇓Lg		Lg	10 15 55.5	
	comp=Z,0.4nm,0.3s,baz=199,slow=30,SNR=6.2							
INK	**Inuvik**	**54.72**	**27**	P		**P**	**10 15 40.6**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=275,slow=5.8,SNR=5.7							
INK	**Inuvik**	**54.72**	**27**	P		**P**	**10 15 40.1**	**+0.7**
WB0	**Warramunga Arr**	**56.61**	**188**	P		**P**	**10 15 53.7**	**+0.2**
WRAB	**Tennant Creek**	**56.78**	**188**	P		**P**	**10 15 54.5**	**-0.3**
WRAB				IAmb		IAmb	10 16 07.3	
	comp=Z,4.9nm,1.3s							
WR0	**Warramunga Arr**	**56.79**	**187**	P		**P**	**10 15 54.6**	**-0.1**
WB2	**Warramunga Arr**	**56.79**	**188**	P		**P**	**10 15 54.5**	**-0.3**
WB2				IAmb		IAmb	10 16 02.4	
	comp=Z,3.9nm,1.4s							
WRA	**Warramunga Arr**	**56.79**	**188**	P		**P**	**10 15 54.6**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=4.8,slow=7.5,SNR=46							
WRA				PcP		**PcP**	**10 16 51.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=0.9,slow=4.4,SNR=1.9							
WRA	**Warramunga Arr**	**56.79**	**188**	P		**P**	**10 15 53.8**	**-1.0**
ABKAR	**Akbulak array**	**57.87**	**310**	P		**P**	**10 16 01.3**	**-0.9**
ABKAR				IAmb		IAmb	10 16 06.2	
	comp=Z,1.6nm,0.9s							
ABKAR	**Akbulak array**	**57.87**	**310**	P		**P**	**10 16 01.6**	**-0.6**
ASAR	**Alice Springs**	**60.52**	**188**	P		**P**	**10 16 20.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=3.0,slow=7.0,SNR=13							
ASAR	**Alice Springs**	**60.52**	**188**	P		**P**	**10 16 20.7**	**0.0**
FINES	**FINESS Array B**	**68.89**	**332**	P		**P**	**10 17 14.4**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=339,slow=7.4,SNR=4.5							
NB2	**NORSAR Subarra**	**74.29**	**337**	P		**P**	**10 17 46.7**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=40,slow=5.6							
NOA	**NORSAR Array B**	**74.29**	**337**	P		**P**	**10 17 47.1**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=40,slow=5.7,SNR=3.8							
AKASG	**Malin Array Be**	**74.31**	**322**	P		**P**	**10 17 46.7**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=46,slow=5.9,SNR=4.1							
NVAR	**Mina Array Bea**	**75.36**	**53**	P		**P**	**10 17 56.1**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=283,slow=4.9,SNR=6.6							
PDAR	**Pinedale Array**	**78.03**	**45**	P		**P**	**10 18 10.3**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=276,slow=1.9,SNR=4.8							
PDAR	**Pinedale Array**	**78.03**	**45**	P		**P**	**10 18 09.2**	**0.0**
PSUT	**Pine Spring**	**78.10**	**51**	P		**P**	**10 18 10.0**	**+0.4**
TXAR	**Lajitas Array**	**90.49**	**52**	P		**P**	**10 19 13.9**	**+1.5**
	comp=Z,1.2nm,0.8s,baz=306,slow=3.6,SNR=16							
LPAZ	**La Paz**	**147.06**	**59**	PKPbc		**PKPbc**	**10 25 54.0**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=336,slow=1.8,SNR=16							
H03N2	**Juan Fernandez**	**147.28**	**96**	T		T	13 10 48.8	
	baz=291,slow=76,SNR=5.2							
H03N3	**Juan Fernandez**	**147.29**	**96**	T		T	13 10 51.7	
	baz=291,slow=76,SNR=7.5							
H03N1

4.1nm,0.3s

*IDC **20** 10:25:28.1±2.5,32°.86N×87°.51W,h0km,mb3.6/1, mb1 4.0/4,mb1mx3.6/39,mbtmp3.7/4,ML4.0/3,MS3.3/6, Ms1 3.3/6,ms1mx2.9/44,Error ellipse: s-maj=30.1km s-min=27.9km az=59.0*

*NEIC **20** 10:25:31.5±1.4,32°.94N±0°.04×88°.03W±0°.04,h5km±2km, Mwr3.8/74,Error ellipse: s-maj=7.1km s-min=5.4km az=192.0*

*ANF **20** 10:25:31.4±0.7,32°.97N×88°.02W,h13km±5km,ML4.8/16, Error ellipse: s-maj=2.9km s-min=1.4km az=171.0*

*NEIC **20** 10:25:31.5,32°.95N×88°.02W,h5km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.25; $M_{\theta\theta}$=4.80; $M_{\phi\phi}$=-4.55; $M_{r\theta}$=0.38; $M_{\theta\phi}$=2.87; $M_{r\phi}$=0.48; Fault plane solution: M_o=5.52000×10^{14} NP1:ϕ_s=29.22000°, δ=89.40000°,λ=173.73000°. NP2:ϕ_s=119.28000°,δ=83.73000°, λ=0.60000°. Principal axes: T 5.6519, Plg5.0000°, Azm344.0000°; N -0.2687, Plg84.0000°, Azm204.0000°; P -5.3832, Plg4.0000°, Azm74.0000°;*

ISC 20 10:25:31.0±1.1,32°.93N±0°.03×88°.02W±0°.03,h9km±8km, n208,σ1s01/218,MS3.1/5,Mississippi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
Z47A	**Carrollton**	**0.27**	**351**		**Pg**	**10 25 36.5**	**0.0**
Z47A				Sg	**Sg**	**10 25 40.7**	**+0.6**
LRAL	**Lakeview Retre**	**0.86**	**83**	P	**Pg**	**10 25 47.4**	**-0.3**
	baz=265						
LRAL				S	**Sg**	**10 25 59.6**	**+0.6**
	baz=265						
LRAL	**Lakeview Retre**	**0.86**	**83**	Pg	**Pg**	**10 25 47.5**	**-0.3**
146A	**Union**	**0.92**	**252**		**Pg**	**10 25 48.3**	**-0.5**
146A				Sg	**Sg**	**10 26 01.8**	**+1.0**
Y45A	**Yeager Farm, C**	**1.58**	**307**		**Pn**	**10 25 59.7**	**+0.6**
Y45A				Sn	**Sn**	**10 26 20.8**	**+1.1**
Y49A	**Blount Mountai**	**1.63**	**55**		**Pn**	**10 26 00.6**	**+0.7**
Y49A				Sn	**Sb**	**10 26 22.6**	**+0.7**
X48A	**Hartselle**	**1.72**	**28**	Pn	**Pn**	**10 26 01.4**	**+0.3**
X48A				Sn	**Sn**	**10 26 24.2**	**+1.0**
250A	**Grady**	**1.76**	**122**		**Pb**	**10 26 03.5**	**0.0**
BRAL	**Brewton**	**1.94**	**155**	P	**Pn**	**10 26 05.1**	**+0.9**
	baz=336						
BRAL				Sb	**Sb**	**10 26 32.1**	**+1.2**
	baz=336						
BRAL	**Brewton**	**1.94**	**155**		**Pn**	**10 26 05.3**	**+1.1**
OXF	**Oxford**	**1.95**	**324**	P	**Pn**	**10 26 05.2**	**+0.9**
	baz=143						
OXF				Sb	**Sb**	**10 26 31.7**	**+0.5**
	baz=143						
OXF	**Oxford**	**1.95**	**324**	Pn	**Pn**	**10 26 05.5**	**+1.1**
346A	**Big Creek Wild**	**1.97**	**219**		**Pn**	**10 26 05.7**	**+1.2**
PLAL	**Pickwick Lake**	**2.04**	**359**		**Pn**	**10 26 06.7**	**+1.1**
VBMS	**Vicksburg**	**2.23**	**252**	P	**Pn**	**10 26 09.5**	**+1.5**
	baz=70						
VBMS				Sb	**Sb**	**10 26 40.0**	**+0.9**
	baz=70						
VBMS	**Vicksburg**	**2.23**	**252**		**Pn**	**10 26 09.6**	**+1.5**
Z51A	**Franklin**	**2.42**	**80**		**Pn**	**10 26 12.7**	**+1.9**
W45A	**Hickory Valley**	**2.42**	**337**		**Pn**	**10 26 12.6**	**+1.8**
FPAL	**Fort Paine**	**2.57**	**51**		**Pn**	**10 26 14.0**	**+1.2**
MET	**Memphis--Engin**	**2.70**	**324**	Pn	**Pn**	**10 26 15.6**	**+1.0**
344A	**Westbrook Farm**	**2.73**	**238**	Pn	**Pn**	**10 26 16.6**	**+1.6**
143A	**Socs Landing,**	**2.86**	**266**		**Pn**	**10 26 17.4**	**+0.6**
SWET	**Sewanee**	**2.86**	**37**	Pn	**Pn**	**10 26 17.9**	**+1.0**
V48A	**Smith Brothers**	**2.97**	**19**		**Pn**	**10 26 19.3**	**+1.0**
352A	**Blakely**	**3.00**	**118**		**Pn**	**10 26 19.5**	**+0.8**
451A	**Vernon**	**3.02**	**139**		**Pn**	**10 26 19.7**	**+0.8**
X51A	**Calhoun**	**3.10**	**57**	Pn	**Pn**	**10 26 21.5**	**+1.4**
HALT	**Halls**	**3.16**	**340**		**Pn**	**10 26 22.2**	**+1.3**
W50A	**Signal Mountai**	**3.19**	**44**		**Pn**	**10 26 22.5**	**+1.2**
WVT	**Waverly**	**3.19**	**3**	P	**Pn**	**10 26 21.9**	**+0.5**
	baz=183						
WVT	**Waverly**	**3.19**	**3**	Pn	**Pn**	**10 26 22.0**	**+0.6**
LPAR	**Lepanto**	**3.26**	**325**		**Pn**	**10 26 23.7**	**+1.3**
CCAR	**Cane Creek**	**3.29**	**288**		**Pn**	**10 26 24.4**	**+1.8**
HBAR	**Harrisburg**	**3.41**	**321**		**Pn**	**10 26 25.6**	**+1.2**
CLTN	**Cedars of Leba**	**3.44**	**23**		**Pn**	**10 26 26.8**	**+2.0**
GNAR	**Gosnell**	**3.44**	**332**		**Pn**	**10 26 26.0**	**+1.2**
GLAT	**Glass**	**3.49**	**343**		**Pn**	**10 26 26.2**	**+0.8**
PEBM	**Pemiscott Bayo**	**3.52**	**335**		**Pn**	**10 26 27.2**	**+1.4**
HICK	**Hickman**	**3.73**	**345**		**Pn**	**10 26 29.6**	**+0.8**
PENMO	**Penman**	**3.75**	**340**	Pn	**Pn**	**10 26 29.9**	**+0.9**
GOGA	**Godfrey**	**3.85**	**82**	P	**Pn**	**10 26 31.3**	**+1.0**
	baz=264						
GOGA				S	**Sn**	**10 27 16.3**	**+0.6**
	baz=264						
GOGA	**Godfrey**	**3.85**	**82**	Pn	**Pn**	**10 26 31.8**	**+1.5**
HENM	**Henderson Moun**	**3.96**	**343**		**Pn**	**10 26 32.7**	**+0.8**
342A	**Flagon Creek P**	**3.97**	**248**	Pn	**Pn**	**10 26 33.4**	**+1.4**
Z41A	**Richland Creek**	**4.03**	**276**	P	**Pn**	**10 26 33.5**	**+0.6**
	baz=93						
TIGA	**Tifton**	**4.04**	**110**	P	**Pn**	**10 26 33.4**	**+0.4**
	baz=293						
LCAR	**Lake Charles**	**4.06**	**321**		**Pn**	**10 26 33.5**	**+0.3**
553A	**Crawfordville**	**4.11**	**131**	Pn	Pn	10 26 38.9	+5.0
W41B	**Gary Mavity, V**	**4.16**	**304**	P	**Pn**	**10 26 35.4**	**+0.8**
	baz=121						
W41B				S	**Sn**	**10 27 22.7**	**-0.7**
	baz=121						
WHAR	**Wooly Hollow**	**4.25**	**305**	Pn	**Pn**	**10 26 37.3**	**+1.4**
X40A	**Basin Creek Fa**	**4.30**	**292**	P	**Pn**	**10 26 37.7**	**+1.1**
	baz=110						
X40A				S	**Sn**	**10 27 27.4**	**+0.6**
	baz=110						
PBMO	**Poplar Bluff**	**4.32**	**333**	Pn	**Pn**	**10 26 37.2**	**+0.4**
WLAR	**White Oak Lake**	**4.33**	**281**	Pn	**Pn**	**10 26 37.9**	**+0.9**
FCAR	**Ozark Folk Cen**	**4.49**	**312**		**Pn**	**10 26 39.8**	**+0.5**
BG3	**Lake Jocassee**	**4.70**	**63**		**Pn**	**10 26 43.7**	**+1.6**
MIAR	**Mount Ida**	**4.90**	**291**	P	**Pn**	**10 26 44.9**	**0.0**
	baz=108						
MIAR				S	**Sn**	**10 27 40.3**	**-1.3**
	baz=108						
X54A	**Belton**	**4.97**	**70**	P	**Pn**	**10 26 46.2**	**+0.4**
	baz=253						
HODGE	**Hodges**	**4.98**	**73**		**Pn**	**10 26 46.1**	**+0.2**
USIN	**University of**	**5.03**	**3**	Pn	**Pn**	**10 26 48.2**	**+1.6**
V53A	**Saluda**	**5.10**	**56**		**Pn**	**10 26 48.5**	**+0.9**
TZTN	**Tazewell**	**5.15**	**44**	P	**Pn**	**10 26 48.7**	**+0.4**
	baz=227						
U40A	**Yellville**	**5.25**	**312**	P	**Pn**	**10 26 49.6**	**0.0**
	baz=129						
U40A	**Yellville**	**5.25**	**312**	Pn	**Pn**	**10 26 50.4**	**+0.8**
W39A	**Magazine**	**5.29**	**297**	P	**Pn**	**10 26 50.1**	**0.0**
	baz=114						
W39A				S	**Sn**	**10 27 50.6**	**-0.7**
	baz=114						
W39A	**Magazine**	**5.29**	**297**	Pn	**Pn**	**10 26 52.6**	**+2.4**
W54A	**Cherokee Point**	**5.30**	**65**	P	**Pn**	**10 26 51.5**	**+1.2**
	baz=248						
WCI	**Wyandotte Cave**	**5.47**	**14**	P	**Pn**	**10 26 52.8**	**+0.1**
	baz=195						
WCI				S	**Sn**	**10 27 55.4**	**-0.3**
	baz=195						
WCI	**Wyandotte Cave**	**5.47**	**14**	Pn	**Pn**	**10 26 54.2**	**+1.6**
X55A	**Gracelyn & Ava**	**5.54**	**72**	P	**Pn**	**10 26 53.9**	**+0.3**
	baz=256						
Z56A	**Williston**	**5.59**	**84**	P	**Pn**	**10 26 54.2**	**-0.2**
	baz=268						
Z56A				S	**Sn**	**10 27 58.8**	**0.0**
	baz=268						
Y56A	**Pelion**	**5.68**	**80**	P	**Pn**	**10 26 55.9**	**+0.3**
	baz=263						
Y56A				S	**Sn**	**10 28 01.2**	**+0.3**
	baz=263						
NATX	**Nacogdoches**	**5.74**	**260**	P	**Pn**	**10 26 56.7**	**+0.3**
	baz=76						
NATX				S	**Sn**	**10 28 02.7**	**+0.3**
	baz=76						
NATX	**Nacogdoches**	**5.74**	**260**		**Pn**	**10 26 57.2**	**+0.8**
CCM	**Cathedral Cave**	**5.75**	**334**	P	**Pn**	**10 26 56.8**	**+0.3**
	baz=152						
CCM	**Cathedral Cave**	**5.75**	**334**	Pn	**Pn**	**10 26 57.2**	**+0.7**
V54A	**Nebo**	**5.77**	**59**	P	**Pn**	**10 26 57.6**	**+0.8**
	baz=242						
656A	**Willston**	**5.89**	**126**		**Pn**	**10 27 00.1**	**+1.6**
HHAR	**Hobbs**	**5.91**	**306**		**Pn**	**10 26 59.5**	**+0.7**
157A	**Early Branch**	**5.92**	**91**	P	**Pn**	**10 26 59.4**	**+0.6**
	baz=274						
SLM	**Saint Louis**	**5.97**	**343**		**Pn**	**10 27 00.3**	**+0.8**
KMSC	**Kings Mountain**	**5.97**	**67**	P	**Pn**	**10 26 59.8**	**+0.3**
	baz=250						
257A	**Skidaway Islan**	**5.99**	**97**	Pn	**Pn**	**10 27 01.0**	**+1.2**
Q44A	**Meyer Farm, Va**	**6.01**	**353**	Pn	**Pn**	**10 27 00.7**	**+0.6**
X56A	**White Oak**	**6.03**	**73**	P	**Pn**	**10 27 00.2**	**-0.1**
	baz=257						
T53A	**Wise**	**6.05**	**47**	P	**Pn**	**10 27 01.1**	**+0.4**
	baz=230,SNR=47						
Z57A	**Bowman**	**6.15**	**85**	P	**Pn**	**10 27 01.8**	**-0.2**
	baz=269						
U54A	**Nelsons Funny**	**6.23**	**53**	P	**Pn**	**10 27 03.0**	**-0.2**
	baz=237,SNR=44						
V55A	**Taylorsville**	**6.33**	**61**	P	**Pn**	**10 27 04.8**	**+0.2**
	baz=245,SNR=18						
X37A	**Clayton**	**6.34**	**287**	Pn	**Pn**	**10 27 06.2**	**+1.6**
BLO	**Bloomington**	**6.34**	**11**	Pn	**Pn**	**10 27 06.9**	**+2.3**
R40A	**Maddies Statio**	**6.37**	**328**	Pn	**Pn**	**10 27 05.7**	**+0.7**
Y57A	**Sumter**	**6.47**	**78**	P	**Pn**	**10 27 05.9**	**-0.5**
	baz=263						
W56A	**Indian Trail**	**6.55**	**68**	P	**Pn**	**10 27 07.2**	**-0.4**
	baz=253						
RGRS	**Roger Stewart**	**6.58**	**88**	Pn	**Pn**	**10 27 09.4**	**+1.5**
NHSC	**New Hope**	**6.59**	**86**	Pn	**Pn**	**10 27 08.5**	**+0.5**
T54A	**Tazewell**	**6.70**	**50**	P	**Pn**	**10 27 09.1**	**-0.6**
	baz=234,SNR=37						
S53A	**Williamson**	**6.76**	**44**	P	**Pn**	**10 27 10.2**	**-0.2**
	baz=227,SNR=31						
X57A	**Johnson Farm,**	**6.78**	**75**	P	**Pn**	**10 27 10.4**	**-0.2**
	baz=259						
V56A	**Mocksville**	**6.85**	**63**	P	**Pn**	**10 27 11.9**	**+0.3**
	baz=247,SNR=26						
W57A	**Gilead**	**7.02**	**69**	P	**Pn**	**10 27 13.4**	**-0.6**
	baz=254						
Y58A	**Scranton**	**7.05**	**80**	P	**Pn**	**10 27 13.9**	**-0.5**
	baz=264						
Y58A	**Scranton**	**7.05**	**80**	Pn	**Pn**	**10 27 14.5**	**+0.1**
P49A	**Miami Univ. Ec**	**7.11**	**21**	P	**Pn**	**10 27 15.1**	**0.0**
	baz=203						
P49A	**Miami Univ. Ec**	**7.11**	**21**	Pn	**Pn**	**10 27 15.6**	**+0.4**
U56A	**King**	**7.16**	**59**	P	**Pn**	**10 27 15.4**	**-0.5**
	baz=244,SNR=6.8						
T55A	**Pulaski**	**7.25**	**53**	P	**Pn**	**10 27 16.6**	**-0.6**
	baz=237,SNR=20						
R53A	**Hurricane**	**7.31**	**41**	P	**Pn**	**10 27 17.2**	**-0.7**
	baz=224,SNR=12						
S54A	**Dingess, Beckl**	**7.32**	**47**	P	**Pn**	**10 27 17.7**	**-0.5**
	baz=230,SNR=7.6						
P40A	**Paris**	**7.34**	**335**	Pn	**Pn**	**10 27 19.7**	**+1.4**
X58A	**Rowland**	**7.41**	**75**	P	**Pn**	**10 27 18.8**	**-0.5**
	baz=260						
V57A	**Coltrane Farms**	**7.42**	**64**	P	**Pn**	**10 27 19.2**	**-0.3**
	baz=249,SNR=17						
SFIN	**Lafayette**	**7.47**	**5**	P	**Pn**	**10 27 19.9**	**-0.2**
	baz=186						
BLA	**Blacksburg**	**7.55**	**53**	P	**Pn**	**10 27 21.0**	**-0.2**
	baz=238						
W58A	**Raeford**	**7.59**	**72**	P	**Pn**	**10 27 21.0**	**-0.7**
	baz=257						
Q52A	**Bidwell**	**7.61**	**36**	P	**Pn**	**10 27 21.2**	**-0.8**
	baz=220						
P51A	**Williamsport**	**7.67**	**30**	P	**Pn**	**10 27 21.6**	**-1.2**
	baz=213						
Y59A	**Loris**	**7.72**	**80**	P	**Pn**	**10 27 22.2**	**-1.3**
	baz=265						
T56A	**Rocky Mt**	**7.72**	**56**	P	**Pn**	**10 27 22.8**	**-0.8**
	baz=240,SNR=7.0						
R54A	**Victor**	**7.76**	**46**	P	**Pn**	**10 27 23.7**	**-0.4**
	baz=230,SNR=20						
S55A	**Lewisburg**	**7.81**	**50**	P	**Pn**	**10 27 24.3**	**-0.6**
	baz=234,SNR=26						
V58A	**Windy Hill, Pi**	**7.90**	**66**	P	**Pn**	**10 27 25.5**	**-0.5**
	baz=251						
Q53A	**Leroy**	**7.92**	**40**	P	**Pn**	**10 27 25.9**	**-0.4**
	baz=224,SNR=17						
U57A	**Blanch**	**7.96**	**62**	P	**Pn**	**10 27 26.4**	**-0.5**
	baz=246						
X59A	**McDuffie Farm,**	**8.01**	**76**	P	**Pn**	**10 27 26.8**	**-0.8**
	baz=261						
WHTX	**Lake Whitney,**	**8.03**	**266**	P	**Pn**	**10 27 26.6**	**-1.2**
	baz=81						
P52A	**Corning**	**8.20**	**34**	P	**Pn**	**10 27 29.0**	**-1.2**
	baz=217						
T57A	**Hurt**	**8.26**	**58**	P	**Pn**	**10 27 30.7**	**-0.3**
	baz=243						
R55A	**Marlinton**	**8.36**	**48**	P	**Pn**	**10 27 32.0**	**-0.4**
	baz=233,SNR=32						
S56A	**Natural Bridge**	**8.37**	**53**	P	**Pn**	**10 27 31.5**	**-1.1**
	baz=238						
Q54A	**Coxs Mills**	**8.39**	**42**	P	**Pn**	**10 27 32.4**	**-0.4**
	baz=226						
435B	**Jarrell**	**8.41**	**258**	P	**Pn**	**10 27 32.0**	**-1.1**
	baz=73						
O51A	**Pataskala**	**8.41**	**30**	P	**Pn**	**10 27 33.1**	**0.0**
	baz=213						
P53A	**Whipple**	**8.45**	**37**	P	**Pn**	**10 27 33.5**	**-0.1**
	baz=221						
U58A	**Oxford**	**8.53**	**64**	P	**Pn**	**10 27 34.2**	**-0.5**
	baz=249						
V59A	**Middlesex**	**8.57**	**68**	P	**Pn**	**10 27 34.6**	**-0.6**
	baz=254,SNR=5.7						
T58A	**Grand View Acr**	**8.76**	**60**	P	**Pn**	**10 27 37.3**	**-0.5**
	baz=246						
Q55A	**Buckhannon**	**8.83**	**45**	P	**Pn**	**10 27 38.2**	**-0.6**
	baz=229,SNR=9.9						
S57A	**Dark Hollow, R**	**8.83**	**54**	P	**Pn**	**10 27 38.8**	**0.0**
	baz=240,SNR=9.5						
R56A	**Bull Pasture M**	**8.88**	**50**	P	**Pn**	**10 27 39.0**	**-0.6**
	baz=235,SNR=13						
U59A	**Littleton**	**9.09**	**65**	P	**Pn**	**10 27 41.8**	**-0.5**
	baz=251						
O53A	**New Philadelph**	**9.12**	**35**	P	**Pn**	**10 27 42.8**	**0.0**
	baz=219						
WMOK	**Wichita Mounta**	**9.13**	**284**	P	**Pn**	**10 27 42.6**	**-0.4**
	baz=98						
KSU1	**Kansas State U**	**9.29**	**314**	P	**Pn**	**10 27 43.8**	**-1.3**
	baz=129						
V60A	**Jim Taylor Roa**	**9.33**	**69**	P	**Pn**	**10 27 45.0**	**-0.6**
	baz=256						
S58A	**Poland Farm, P**	**9.39**	**57**	P	**Pn**	**10 27 46.2**	**-0.3**
	baz=243,SNR=6.1						
Q56A	**Snyder Ridge,**	**9.40**	**47**	P	**Pn**	**10 27 46.1**	**-0.5**
	baz=232,SNR=15						
R57A	**Stanardsville**	**9.40**	**53**	P	**Pn**	**10 27 46.0**	**-0.6**
	baz=238,SNR=13						
MCWV	**Mont Chateau**	**9.41**	**42**	P	**Pn**	**10 27 45.9**	**-0.8**
	baz=227						
T59A	**Double "B" Far**	**9.49**	**62**	P	**Pn**	**10 27 46.6**	**-1.1**
	baz=248						
O54A	**Avella**	**9.49**	**38**	P	**Pn**	**10 27 47.5**	**-0.4**
	baz=223,SNR=16						
U60A	**Pendleton**	**9.61**	**65**	P	**Pn**	**10 27 48.6**	**-0.9**
	baz=252						
R58B	**Mineral**	**9.67**	**56**	P	**Pn**	**10 27 49.6**	**-0.7**
	baz=242						
R58A	**Rapidan**	**9.75**	**54**	P	**Pn**	**10 27 50.5**	**-0.9**
	baz=240						
Q57A	**Strasburg**	**9.88**	**49**	P	**Pn**	**10 27 52.3**	**-0.9**
	baz=235						
P56A	**Dayton Farm, R**	**9.90**	**46**	P	**Pn**	**10 27 52.7**	**-0.7**
	baz=231						
S59A	**Mechanicsville**	**9.99**	**58**	P	**Pn**	**10 27 53.7**	**-1.0**
	baz=244						
JFWS	**Jewell Farm**	**10.12**	**351**	P	**Pn**	**10 27 55.4**	**-1.0**
	baz=234						
JFWS	**Jewell Farm**	**10.12**	**351**		**Pn**	**10 27 55.5**	**-0.9**
CBN	**Corbin Frederi**	**10.14**	**56**	P	**Pn**	**10 27 55.8**	**-0.9**
	baz=242						
T60A	**Surry**	**10.16**	**62**	P	**Pn**	**10 27 56.1**	**-0.8**
	baz=249						
N54A	**Moraine State**	**10.27**	**36**	P	**Pn**	**10 27 57.7**	**-0.8**
	baz=221						
Q58A	**Fox Den Farm,**	**10.30**	**52**	P	**Pn**	**10 27 58.6**	**-0.4**
	baz=238						
JCT	**Junction City**	**10.33**	**259**	P	**Pn**	**10 27 58.6**	**-0.9**
	baz=73						
P57A	**Homestead Farm**	**10.39**	**48**	P	**Pn**	**10 27 59.4**	**-0.8**
	baz=234						
O56A	**Blue Knob Stat**	**10.55**	**43**	P	**Pn**	**10 28 00.9**	**-1.4**
	baz=229						
O56A	**Blue Knob Stat**	**10.55**	**43**		**Pn**	**10 28 01.6**	**-0.7**
833A	**Chaparral WMA,**	**10.82**	**248**	P	**Pn**	**10 28 03.5**	**-2.6**
	baz=62						
O57A	**Amberson**	**11.06**	**46**	P	**Pn**	**10 28 08.4**	**-1.0**
	baz=232						
I40A	**Norwalk**	**11.13**	**350**		**Pn**	**10 28 09.3**	**-1.0**
N56A	**West Decatur**	**11.13**	**42**	P	**Pn**	**10 28 09.5**	**-0.9**
	baz=227						
CBKS	**Cedar Bluff**	**11.17**	**305**	P	**Pn**	**10 28 09.8**	**-1.0**
	baz=118						
CBKS	**Cedar Bluff**	**11.17**	**305**		**Pn**	**10 28 10.9**	**+0.1**
SSPA	**Standing Stone**	**11.18**	**44**	P	**Pn**	**10 28 09.5**	**-1.4**
	baz=230						
SSPA	**Standing Stone**	**11.18**	**44**		**Pn**	**10 28 09.8**	**-1.1**
M55A	**Ridgway**	**11.26**	**38**	Pn	**Pn**	**10 28 11.3**	**-0.8**
O58A	**Lewisberry**	**11.45**	**48**	P	**Pn**	**10 28 13.5**	**-1.2**
	baz=235						
N57A	**Milroy**	**11.45**	**44**	P	**Pn**	**10 28 13.5**	**-1.2**
	baz=230						
M56A	**Emporium**	**11.58**	**40**	P	**Pn**	**10 28 15.6**	**-0.9**
	baz=226						
M56A	**Emporium**	**11.58**	**40**	Pn	**Pn**	**10 28 15.2**	**-1.4**
BGNE	**Belgrade**	**11.69**	**319**		**Pn**	**10 28 18.6**	**+0.6**
M57A	**Sunshine Farm,**	**12.07**	**43**	P	**Pn**	**10 28 21.4**	**-1.8**
	baz=229						
M57A	**Sunshine Farm,**	**12.07**	**43**		**Pn**	**10 28 21.7**	**-1.5**
MSTX	**Muleshoe**	**12.37**	**279**		**Pn**	**10 28 29.2**	**+1.8**
G40A	**Rib Lake**	**12.43**	**353**	Pn	**Pn**	**10 28 26.8**	**-1.3**
M58A	**Price's Panora**	**12.48**	**44**	P	**Pn**	**10 28 26.9**	**-1.9**
	baz=231						
N59A	**State Game Lan**	**12.62**	**47**	P	**Pn**	**10 28 29.3**	**-1.4**
	baz=235						
N59A	**State Game Lan**	**12.62**	**47**	Pn	**Pn**	**10 28 28.7**	**-2.0**
ECSD	**EROS Data Cent**	**12.71**	**331**	P	**Pn**	**10 28 30.6**	**-1.3**
	baz=145						
ECSD	**EROS Data Cent**	**12.71**	**331**	Pn	**Pn**	**10 28 31.5**	**-0.4**
SPMN	**Marine on St.**	**12.82**	**345**	P	**Pn**	**10 28 32.1**	**-1.3**
	baz=162						
SPMN	**Marine on St.**	**12.82**	**345**	Pn	**Pn**	**10 28 32.4**	**-1.0**
K57A	**Scipio Center**	**13.34**	**40**	P	**Pn**	**10 28 39.1**	**-1.4**
	baz=227,SNR=6.7						
SADO	**Sadowa**	**13.68**	**28**	Lg	Lg	10 32 25.7	
	1.6nm,0.3s,baz=129,slow=21,SNR=1.8						
TXAR	**Lajitas Array**	**13.87**	**259**	Pn	**Pn**	**10 28 47.5**	**-0.5**
	0.2nm,0.3s,baz=83,slow=13,SNR=10.0						
TX32	**Lajitas Array**	**13.87**	**259**		**Pn**	**10 28 51.4**	**+3.4**
SUSD	**Miller**	**14.30**	**327**		**Pn**	**10 28 51.6**	**-2.0**
MNTX	**Cornudas Mount**	**14.74**	**270**	P	**Pn**	**10 28 58.0**	**-1.7**
	baz=80						
MNTX	**Cornudas Mount**	**14.74**	**270**	Pn	**Pn**	**10 28 58.9**	**-0.8**
SDCO	**Great Sand Dun**	**15.05**	**293**	Pn	**Pn**	**10 29 04.6**	**+0.5**
ANMO	**Albuquerque**	**15.44**	**283**	Lg	Lg	10 33 47.6	
	0.1nm,0.3s,baz=340,slow=15,SNR=2.8						
ULM	**Lac du Bonnet**	**18.25**	**344**	P	**Pn**	**10 29 43.0**	**-1.5**
	0.9nm,0.3s,baz=160,slow=12,SNR=12						
ULM				Lg	Lg	10 34 56.2	
	0.1nm,0.3s,baz=155,slow=17,SNR=4.0						
ULM				LR	LR	10 36 40.2	
	comp=Z,116nm,19.8s,baz=110,slow=36						
PDAR	**Pinedale Array**	**19.59**	**306**	P	**Pn**	**10 30 02.5**	**+1.6**
	0.3nm,0.3s,baz=92,slow=12,SNR=4.4						
PDAR				Lg	Lg	10 35 56.9	
	0.2nm,0.3s,baz=116,slow=29,SNR=4.3						
LPIG	**La Paz**	**21.44**	**251**	LR	LR	10 40 01.4	
	comp=Z,50nm,18.0s,baz=360,slow=40						
PFO	**Pinyon Flats O**	**23.76**	**279**	LR	LR	10 41 30.8	
	comp=Z,56nm,18.3s,baz=26,slow=40						
SDV	**Santo Domingo**	**28.83**	**142**	LR	LR	10 44 55.1	
	comp=Z,30nm,18.4s,baz=272,slow=41						
FRB	**Frobisher Bay**	**33.15**	**16**	LR	LR	10 46 39.3	
	comp=Z,223nm,20.6s,baz=263,slow=38						
ATAH	**Atahualpa**	**40.89**	**165**	LR	LR	10 49 20.8	
	comp=Z,29nm,21.6s,baz=17,slow=35						
ILAR	**Eielson Array**	**47.53**	**330**	P	**P**	**10 34 07.6**	**+1.3**
	0.7nm,0.8s,baz=113,slow=6.2,SNR=9.2						

*IDC **20** 10:35:06.4±1.4,10°.66S×41°.28E,h0km,mb3.6/3, mb1 3.8/5,mb1mx3.5/43,mbtmp3.8/5,ML4.1/2,MS3.3/5, Ms1 3.3/5,ms1mx2.9/39,Error ellipse: s-maj=39.2km s-min=24.5km az=43.0*

ISC 20 10:35:08.0±0.9,10°.70S±0°.08×41°.13E±0°.09,h10km,n11, σ2s29/11,mb3.6/3,MS3.2/3,Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOND	**Kondoa**	**7.81**	**317**	*i* S	**Sn**	**10 38 31.6**	**+1.0**
OPO	**Ambohidratompo**	**9.78**	**144**	Pn	**Pn**	**10 37 29.7**	**+0.7**
	2.0nm,0.3s,baz=318,slow=14,SNR=14						
OPO				Sn	**Sn**	**10 39 17.7**	**-1.3**
	4.6nm,0.3s,baz=72,slow=9.6,SNR=3.5						
KMBO	**Kilima Mbogo**	**10.26**	**338**	Pn	**Pn**	**10 37 37.2**	**+1.6**
	1.4nm,0.3s,baz=146,slow=16,SNR=7.0						
KMBO				Sn	**Sn**	**10 39 27.1**	**-3.8**
	2.4nm,0.3s,baz=225,slow=21,SNR=6.8						
LSZ	**Lusaka**	**13.40**	**249**	Pn	**Pn**	**10 38 20.3**	**+1.8**
	8.5nm,0.3s,baz=75,slow=13,SNR=44						
LSZ				Sn	**Sn**	**10 40 44.0**	**-3.8**
	5.6nm,0.3s,baz=343,slow=17,SNR=5.8						
LSZ				LR	LR	10 43 56.9	
	comp=Z,171nm,19.2s,baz=100,slow=39						
MBAR	**Mbarara**	**14.39**	**314**	LR	LR	10 44 25.4	
	comp=Z,71nm

PXZ	**Pawanui**	**3.50**	**223**	P	Pn	10 36 43.6	-1.2
KRHZ	**Kereru**	**3.54**	**231**	P	Pn	10 36 44.4	-0.9
TOZ	**Tahuroa Road**	**3.54**	**265**	P	Pn	10 36 45.0	-0.3
BHHZ	**Black Hill Sta**	**3.65**	**236**	P	Pn	10 36 46.5	-0.4
TMVZ	**Te Maari**	**3.71**	**243**	P	Pn	10 36 47.9	+0.1
ETVZ	**East Tongariro**	**3.72**	**242**	P	Pn	10 36 48.2	+0.3
WPHZ	**Waipukurau**	**3.76**	**226**	P	Pn	10 36 46.9	-1.5
GRZ	**Great Barrier**	**3.81**	**288**	P	Pn	10 36 49.0	0.0
PNHZ	**Pukenui**	**3.81**	**229**	P	Pn	10 36 47.8	-1.2
MOVZ	**Moawhango**	**3.81**	**238**	P	Pn	10 36 48.9	-0.2
NGZ	**Ngauruhoe**	**3.81**	**242**	P	Pn	10 36 48.6	-0.6
TUVZ	**Tukino**	**3.81**	**241**	P	Pn	10 36 49.5	+0.3
MKAZ	**Moumakai**	**3.84**	**274**	P	Pn	10 36 49.3	-0.1
WHVZ	**Whangaehu Hut**	**3.87**	**244**	P	Pn	10 36 49.9	-0.2
FWVZ	**Far West T-bar**	**3.88**	**242**	P	Pn	10 36 50.0	-0.2
WNVZ	**Wahianoa**	**3.88**	**240**	P	Pn	10 36 49.4	-0.7
WIAZ	**Waiheke Island**	**3.91**	**279**	P	Pn	10 36 50.8	+0.5
TSZ	**Takapari Road**	**4.04**	**229**	P	Pn	10 36 50.5	-1.7
ETAZ	**East Tamaki Re**	**4.04**	**276**	P	Pn	10 36 52.8	+0.6
MBAZ	**Motutapu North**	**4.10**	**279**	P	Pn	10 36 54.0	+1.1
HIZ	**Hauiti**	**4.15**	**254**	P	Pn	10 36 54.6	+0.9
BFZ	**Birch Farm**	**4.30**	**221**	P	Pn	10 36 53.6	-2.1
RVAZ	**Riverhead Bore**	**4.35**	**278**	P	Pn	10 36 57.3	+0.8
PRWZ	**Pori Road**	**4.36**	**224**	P	Pn	10 36 55.2	-1.4
POWZ	**Post Office Ro**	**4.36**	**227**	P	Pn	10 36 56.7	0.0
VRZ	**Vera Road**	**4.40**	**247**	P	Pn	10 36 57.2	+0.1
WAZ	**Wanganui**	**4.50**	**238**	P	Pn	10 36 58.1	-0.4
MRZ	**Mangatainoka R**	**4.65**	**226**	P	Pn	10 36 58.7	-1.8
WCZ	**Waipu Caves**	**4.76**	**287**	P	Pn	10 37 02.5	+0.5
TMWZ	**Te Maipa**	**4.79**	**220**	P	Pn	10 36 59.9	-2.7
HOWZ	**Holdsworth Sta**	**4.84**	**224**	P	Pn	10 37 00.9	-2.3
NEZ	**North Egmont**	**4.93**	**247**	P	Pn	10 37 06.0	+1.5
OGWZ	**Otaki Gorge**	**4.99**	**227**	P	Pn	10 37 02.7	-2.5
PKE	**Pukeiti**	**4.99**	**248**	P	Pn	10 37 08.1	+2.9
KHEZ	**Kahui Hut**	**5.00**	**247**	P	Pn	10 37 07.1	+1.6
MTW	**Mount Morrison**	**5.03**	**222**	P	Pn	10 37 03.1	-2.7
TRWZ	**Traveller**	**5.11**	**219**	P	Pn	10 37 04.2	-2.8
KIW	**Kapiti Island**	**5.17**	**228**	P	Pn	10 37 05.7	-2.0
PAWZ	**Paruwai Farm**	**5.23**	**221**	P	Pn	10 37 05.9	-2.7
CAW	**Cannon Point**	**5.24**	**225**	P	Pn	10 37 06.1	-2.5
OUZ	**Omahuta**	**5.60**	**292**	P	Pn	10 37 14.6	+0.9
QRZ	**Quartz Range**	**6.66**	**238**	P	Pn	10 37 25.7	-2.5
CTZ	**Chatham Island**	**6.77**	**158**	P	Pn	10 37 32.8	+3.2

IDC 20 10:37:38.2±1.5, 1°25S×126°98E, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.2/40, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=37.1km s-min=25.4km az=54.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.30**	**85**	Pn	Pn	10 38 46.9	+1.9
	2.0nm,0.3s,baz=270,slow=20,SNR=2.6						
SIJI				Sn	Sn	10 39 36.2	+0.3
	0.9nm,0.3s,baz=274,slow=22,SNR=1.6						
WRA	**Warramunga Arr**	**19.92**	**159**	P	P	10 42 11.0	-0.7
	0.1nm,0.3s,baz=341,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**23.27**	**164**	P	P	10 42 47.6	0.0
	0.2nm,0.4s,baz=344,slow=12,SNR=5.4						
MKAR	**Makanchi Array**	**61.80**	**327**	P	P	10 47 58.8	-0.1
	0.4nm,0.3s,baz=128,slow=8.0,SNR=6.6						

IDC 20 10:54:16.6±1.8, 1.72N×126°48E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/47, mbtmp3.5/4, MS3.1/2, Ms1 3.1/2, ms1mx2.5/27, Error ellipse: s-maj=168.7km s-min=21.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.43**	**118**	LR	LR	10 57 48.6	
	comp=Z,43nm,19.1s,baz=238,slow=39						
WRA	**Warramunga Arr**	**22.86**	**161**	P	P	10 59 21.8	-0.1
	1.4nm,0.6s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.24**	**164**	P	P	10 59 53.8	+0.1
	0.3nm,0.7s,baz=343,slow=11,SNR=6.2						
MKAR	**Makanchi Array**	**59.06**	**326**	P	P	11 04 18.4	-0.3
	0.3nm,0.4s,baz=122,slow=8.3,SNR=5.4						
KURBB	**Kurchatov Arra**	**63.30**	**328**	P	P	11 04 47.4	+0.1
	0.3nm,0.3s,baz=131,slow=6.0,SNR=4.8						
ARU	**Arti**	**76.50**	**328**	LR	LR	11 41 43.5	
	comp=Z,48nm,18.2s,baz=280,slow=37						

*GCG **20** 10:54:13.4±0.7, 15°.34N×90°.29W, h0km, MD3.5*
*SNET **20** 10:54:17.5±0.9, 13°.86N×90°.80W, h71km±13km, ML3.2*
ISC 20 10:54:17.8±2.7, 13°.6N±0°.2×90°.9W±0°.1, h35km, n11, σ0°63/13, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.85**	**17**	*e*P	**Pn**	**10 54 34.1**	**+0.5**
FUG	**Fuego 3**	**0.87**	**2**	*e*P	**Pn**	**10 54 33.5**	**-0.3**
NUBE	**Las Nubes**	**1.11**	**73**	*i* P	**Pn**	**10 54 36.3**	**-0.7**
NUBE				*e*S	**Sn**	**10 54 51.0**	**-0.1**
NUBE				IAML		10 54 52.6	
	comp=Z,206nm,0.4s						
NBG	**Las Nubes**	**1.13**	**27**	*e*P	Pn	10 54 29.4	-8.0
CEVE	**Cerro Verde**	**1.24**	**78**	*e*P	**Pn**	**10 54 38.4**	**-0.4**
CEVE				*e*S	**Sn**	**10 54 55.0**	**+0.5**
CEVE				IAML		10 54 57.0	
	comp=Z,1μm,0.3s						
STG3	**Santiaguito 3,**	**1.32**	**329**	*e*P	**Pn**	**10 54 39.7**	**-0.3**
LALI	**Alcalda de L**	**1.51**	**93**	*e*P	**Pn**	**10 54 42.7**	**+0.3**
TACO	**Tacachico**	**1.52**	**75**	*e*P	**Pn**	**10 54 41.2**	**-1.4**
UEES	**Universidad Ev**	**1.59**	**85**	*e*P	**Pn**	**10 54 43.5**	**0.0**
COEG	**Centro de Oper**	**1.93**	**88**	*e*P	**Pn**	**10 54 48.1**	**-0.2**
COEG				*e*S	**Sn**	**10 55 12.0**	**+0.6**
COEB	**Comit de Eme**	**2.27**	**92**	IAML		10 54 53.1	
	comp=Z,114nm,0.3s						
COEB				*e*S	**Sn**	**10 55 20.5**	**+0.6**

*IDC **20** 11:01:49.2±1.2, 29°.6N×69°.96E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.3/47, mbtmp3.5/7, ML3.3/2, MS3.7/1, Ms1 3.7/1, ms1mx2.4/56, Error ellipse: s-maj=35.0km s-min=25.7km az=93.0*
ISC 20 11:01:51.2±1.2, 29.7N±0°.1×70°.1E±0°.1, h10km, n9, σ1s66/9, mb3.7/5, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AJM	**Ajmer**	**5.13**	**127**	*e*P	**Pn**	**11 03 10.0**	**+1.7**
AJM				*i* S	**Sg**	**11 04 34.0**	**-2.2**
AAK	**Ala-Archa**	**13.43**	**14**	Pn	**Pn**	**11 05 01.2**	**-0.9**
	0.3nm,0.3s,baz=207,slow=16,SNR=4.4						
MKAR	**Makanchi Array**	**19.58**	**26**	P	**Pn**	**11 06 19.5**	**-1.2**
	0.1nm,0.3s,baz=208,slow=12,SNR=2.1						
KURBB	**Kurchatov Arra**	**21.89**	**15**	P	**P**	**11 06 43.2**	**-1.0**
	0.5nm,0.3s,baz=205,slow=10.0,SNR=6.2						
SONM	**Songino Array**	**33.25**	**47**	P	**P**	**11 08 31.0**	**+2.2**
	0.3nm,0.4s,baz=239,slow=10.0,SNR=1.8						
JNU	**Nakatsue**	**51.39**	**70**	LR	LR	11 34 32.0	
	comp=Z,72nm,21.2s,baz=264,slow=38						
TORD	**Torodi Ar. Bea**	**64.93**	**271**	P	**P**	**11 12 30.7**	**-0.7**
	0.5nm,1.0s,baz=46,slow=8.3,SNR=2.4						
WRA	**Warramunga Arr**	**79.13**	**120**	P	**P**	**11 13 56.1**	**-0.3**
	0.6nm,0.7s,baz=319,slow=5.4,SNR=15						
ASAR	**Alice Springs**	**81.06**	**124**	P	**P**	**11 14 06.8**	**0.0**
	0.5nm,0.5s,baz=308,slow=5.7,SNR=16						

*TIR **20** 11:02:37.7, 41°.06N×20°.15E, h12km±2km, Md3.1*
*BEO **20** 11:02:38.2±0.5, 40°.95N×20°.06E, h0km, ML2.7/14*
*ATH **20** 11:02:38.0, 41°.27N×20°.28E, h24km±3km, ML2.6/3, Error ellipse: s-maj=8.8km s-min=1.1km az=17.0*
*PDG **20** 11:02:39.5±0.2, 41°.14N×20°.13E, h4km, ML2.8/13, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*SKO **20** 11:02:39.4, 41°.17N×20°.17E, h17km*
*THE **20** 11:02:39.9, 41°.12N×20°.15E, h0km±4km, ML2.5/3, Error ellipse: s-maj=4.4km s-min=1.3km az=63.0*
ISC 20 11:02:39.5±1.0, 41°.13N±0°.02×20°.16E±0°.02, h12km±8km, n57, σ1s28/95, 2C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.31**	**315**	*e*Pg	**Pg**	**11 02 45.4**	**-0.5**
TIR				*e*Sg	**Sb**	**11 02 51.2**	**-0.9**
TIR	**Tirane**	**0.31**	**315**	P	**Pg**	**11 02 45.4**	**-0.5**
TIR				S	**Sb**	**11 02 50.7**	**-1.3**
TIR				AML	AML	11 02 53.2	
	comp=N,5659μm,0.4s						
TIR				AML	AML	11 02 54.3	
	comp=E,4962μm,0.3s						
TIR	**Tirane**	**0.31**	**315**	P	**Pg**	**11 02 45.3**	**-0.5**
	baz=324						
TIR				S	**Sb**	**11 02 50.8**	**-1.3**
	baz=324						
TIR	**Tirane**	**0.31**	**315**	P	**Pg**	**11 02 45.4**	**-0.5**
TIR				S	**Sg**	**11 02 50.4**	**+0.3**
	comp=E,1μm,0.3s						
OHR	**Ohrid**	**0.48**	**92**	*i* Pg	**Pg**	**11 02 48.1**	**-0.9**
OHR				*i* Sg	**Sb**	**11 02 57.2**	**+0.1**
OHR				*e*Lg	Lg	11 02 57.3	
	comp=N,787nm,0.4s						
OHR				*e*Lg	Lg	11 02 57.5	
	comp=E,610nm,0.5s						
PHP	**Peshkopia**	**0.60**	**21**	P	**Pg**	**11 02 50.8**	**-0.4**
	baz=19						
PHP				S	**Sb**	**11 03 01.1**	**+0.7**
	baz=19						
PHP	**Peshkopia**	**0.60**	**21**	P	**Pg**	**11 02 50.8**	**-0.4**
PHP				S	**Sb**	**11 03 01.1**	**+0.7**
PUK	**Puka**	**0.94**	**348**	P	**Pb**	**11 02 57.2**	**-0.5**
	baz=350						
PUK				S	**Sn**	**11 03 12.4**	**+0.5**
	baz=350						
NEST	**Nestorio**	**0.98**	**136**	P	**Pb**	**11 02 57.7**	**-0.7**
NEST				AML	AML	11 03 18.8	
	comp=E,292μm,0.4s						
NEST				AML	AML	11 03 23.3	
	comp=N,356μm,0.7s						
NEST	**Nestorio**	**0.98**	**136**	P	**Pb**	**11 02 57.9**	**-0.6**
FNA	**Florina**	**0.98**	**110**	P	**Pb**	**11 02 56.7**	**-1.8**
FNA				AML	AML	11 03 16.8	
	comp=N,807μm,0.3s						
FNA				AML	AML	11 03 23.0	
	comp=E,697μm,0.4s						
FNA	**Florina**	**0.98**	**110**	P	**Pb**	**11 02 57.3**	**-1.2**
FNA				S	**Sn**	**11 03 14.0**	**+0.9**
	comp=E,375nm,0.4s						
LSK	**Leskovik**	**1.03**	**161**	P	**Pb**	**11 02 57.2**	**-2.2**
	baz=159						
ULC	**Ulcinj**	**1.08**	**321**	*e*Pg	**Pb**	**11 02 58.9**	**-1.3**
ULC				*i* Sg	**Sn**	**11 03 15.7**	**+0.2**
BCI	**Bajram Curri**	**1.24**	**357**	P	**Pn**	**11 03 02.0**	**-0.7**
	baz=358						
SRN	**Sarande**	**1.25**	**186**	P	**Pn**	**11 03 00.7**	**-2.1**
	baz=186						
SRN				S	**Sb**	**11 03 18.7**	**-0.4**
	baz=186						
SRN	**Sarande**	**1.25**	**186**	P	**Pb**	**11 03 03.1**	**+0.1**
SKO	**Skopje**	**1.28**	**48**	*e*Pn	**Pg**	**11 03 04.3**	**+0.2**
SKO				*e*Sg	**Sg**	**11 03 24.3**	**+3.6**
SKO	**Skopje**	**1.28**	**48**	*i* Pg	**Pn**	**11 03 01.9**	**-1.3**
DRME	**Dracevica, Mon**	**1.29**	**326**	*e*Pg	**Pn**	**11 03 02.6**	**-0.7**
DRME				*i* Sg	**Sg**	**11 03 22.4**	**+1.5**
KASA	**Kassiopi**	**1.39**	**187**	P	**Pg**	**11 03 06.3**	**+0.2**
KEK	**Kerkira**	**1.44**	**191**	P	**Pb**	**11 03 06.6**	**+0.4**
KEK	**Kerkira**	**1.44**	**191**	P	**Pb**	**11 03 06.6**	**+0.4**
KEK				S	**Sg**	**11 03 28.0**	**+2.2**
	comp=E,150nm,0.7s						
PDG	**Podgorica**	**1.47**	**333**	*e*Pg	**Pg**	**11 03 07.3**	**-0.4**
PDG				*e*Sg	**Sg**	**11 03 28.7**	**+2.0**
TTG	**Podgorica**	**1.47**	**333**	*e*Pg	**Pg**	**11 03 06.2**	**-0.5**
TTG				*e*Sg	**Sg**	**11 03 28.8**	**+2.0**
PVY	**Plav**	**1.47**	**354**	*e*Pg	**Pb**	**11 03 06.4**	**-0.5**
PVY				*i* Sg	**Sg**	**11 03 29.6**	**+2.6**
KPRO	**Kipourio**	**1.49**	**142**	P	**Pn**	**11 03 06.1**	**0.0**
BUM	**Brajici-Budva**	**1.51**	**321**	*e*Pg	**Pb**	**11 03 06.9**	**-0.5**
BUM				*i* Sg	**Sg**	**11 03 30.2**	**+2.2**
CEME	**Cevo**	**1.69**	**327**	*e*Pn	**Pb**	**11 03 10.3**	**-0.3**
CEME				*i* Sn	**Sg**	**11 03 35.1**	**+1.1**
IVA	**Berane**	**1.75**	**354**	*e*Pn	**Pb**	**11 03 11.6**	**-0.1**
IVA				*e*Sn	**Sg**	**11 03 36.6**	**+0.7**
KOME	**Kolasin**	**1.79**	**345**	*e*Pn	**Pb**	**11 03 12.0**	**-0.2**
KOME				*e*Sn	**Sg**	**11 03 37.4**	**+0.4**
HCY	**Herceg Novi**	**1.81**	**317**	⇑*i*Pn	**Pb**	**11 03 12.1**	**-0.5**
HCY				*i* Sn	**Sg**	**11 03 38.1**	**+0.3**
NKME	**Niksic**	**1.87**	**332**	⇓*i*Pn	**Pb**	**11 03 13.1**	**-0.5**
NKME				*e*Sn	**Sg**	**11 03 39.4**	**-0.2**
NKY	**Niksic**	**1.90**	**333**	⇓*i*Pn	**Pb**	**11 03 12.9**	**-1.2**
NKY				*i* Sn	**Sg**	**11 03 39.9**	**-0.6**
TREB	**Trebinje**	**2.08**	**320**	*e*Pn	**Pb**	**11 03 15.5**	**-1.7**
SJES	**Sjenica**	**2.14**	**356**	*e*Pn	**Pb**	**11 03 18.6**	**+0.4**
SJES				*e*Sn	**Sb**	**11 03 45.7**	**+1.0**
BRY	**Bratogost**	**2.15**	**326**	⇓*i*Pn	**Pb**	**11 03 16.5**	**-1.9**
BRY				*i* Sn	**Sb**	**11 03 45.9**	**+0.9**
BOSS	**Bosilegrad**	**2.21**	**51**	*e*Pn	**Pb**	**11 03 18.1**	**-1.3**
SELS	**Selova**	**2.21**	**19**	*e*Pn	**Pb**	**11 03 17.8**	**-1.6**
SELS				*e*Sn	**Sg**	**11 03 49.7**	**-0.8**
UPM	**Unac-Piva**	**2.27**	**336**	⇑*i*Pn	**Pb**	**11 03 18.6**	**-2.0**
UPM				*i* Sn	**Sb**	**11 03 49.0**	**+0.2**
PLE	**Pljevlja**	**2.27**	**346**	*e*Pn	**Pb**	**11 03 18.9**	**-1.7**
PLE				*i* Sn	**Sb**	**11 03 49.3**	**+0.6**
IVAS	**Ivanjica**	**2.45**	**360**	*e*Pn	**Pb**	**11 03 22.3**	**-1.2**
IVAS				*e*Sn	**Sb**	**11 03 54.9**	**+1.3**
STON	**Ston**	**2.53**	**314**	*e*Pn	**Pn**	**11 03 21.5**	**+1.2**
STON				*e*Sn	**Sb**	**11 03 53.7**	**-2.2**
STON	**Ston**	**2.53**	**314**	*e*Pn	**Pn**	**11 03 21.3**	**+1.0**
BOVS	**Bovan**	**2.76**	**24**	*e*Pn	**Pb**	**11 03 26.4**	**-2.3**
BOVS				*e*Sn	**Sb**	**11 04 02.5**	**+0.1**
BBLS	**Lazići**	**2.79**	**349**	*e*Pn	**Pb**	**11 03 26.9**	**-2.5**
BBLS				*e*Sn	**Sb**	**11 04 02.5**	**-1.1**
ZAPS	**Zavoj**	**2.83**	**40**	*e*Pn	**Pb**	**11 03 28.0**	**-1.9**
ZAPS				*e*Sn	**Sb**	**11 04 02.7**	**-1.7**
LSTV	**Lastovo**	**2.94**	**305**	*e*Pn	**Pn**	**11 03 25.9**	**0.0**
DIVS	**Divibare**	**2.97**	**358**	*e*Pn	**Pb**	**11 03 29.2**	**-3.2**
HAPS	**Han Pijesak,Bl**	**3.09**	**344**	*e*Pn	**Pn**	**11 03 30.5**	**+2.3**
ZAGS	**Zajecar**	**3.09**	**29**	*e*Pn	**Pn**	**11 03 30.3**	**+2.2**
MAKA	**Makarska**	**3.18**	**314**	*e*Pn	**Pn**	**11 03 30.0**	**+0.7**
RICI	**Ricice**	**3.26**	**318**	*e*Pn	**Pn**	**11 03 30.9**	**+0.5**
KIJV	**Kijevo**	**4.00**	**317**	*e*Pn	**Pn**	**11 03 41.6**	**+1.1**
KIJV				Sn	**Sn**	**11 04 27.7**	**+0.4**
ZIRJ	**Zirje**	**4.19**	**309**	*e*Pn	**Pn**	**11 03 42.8**	**-0.4**
ZIRJ				Sn	**Sn**	**11 04 32.5**	**+0.4**
MORI	**Morici**	**4.28**	**311**	*e*Pn	**Pn**	**11 03 44.7**	**+0.3**
MORI				Sn	**Sn**	**11 04 34.2**	**-0.1**
DUGI	**Dugi Otok**	**4.73**	**309**	*e*Pn	**Pn**	**11 03 51.2**	**+0.6**
DUGI				Sn	**Sn**	**11 04 46.7**	**+1.2**

*NNC **20** 11:45:30.7±0.7, 42°.40N×78°.42E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=5.5km s-min=2.4km az=164.0*
*SOME **20** 11:45:30.5, 42°.37N×78°.40E, h15km*
*KRNET **20** 11:45:31.1±0.1, 42°.38N×78°.40E, h17km, mb3.4*
ISC 20 11:45:31.9±1.0, 42°.40N±0°.04×78°.34E±0°.02, h13km±4km, n72, σ1s48/136, 29C-18D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.09**	**29**	⇑*i*P	**Pb**	**11 45 34.5**	**-0.5**
	baz=8.0						
PRZ				⇑*i*S	**Sb**	**11 45 36.9**	**-0.3**
	baz=8.0						
ANVS	**Anan'yevo**	**0.62**	**308**	⇓*i*P	**Pg**	**11 45 43.9**	**-0.2**
	baz=7.0						
ANVS				⇓*i*S	**Sg**	**11 45 53.2**	**+0.8**
	baz=7.0						
SATY	**Saty**	**0.66**	**4**	⇓*e*P	**Pg**	**11 45 43.8**	**-0.9**
	baz=1.0						
SATY				⇓*e*S	**Sg**	**11 45 52.9**	**-0.5**
	baz=1.0						
SATY	**Saty**	**0.66**	**4**	⇓*e*P	**Pg**	**11 45 43.8**	**-0.9**
	43nm,0.1s						
SATY				*e*S	**Sg**	**11 45 52.9**	**-0.5**
	145nm,0.2s						
SATY	**Saty**	**0.66**	**4**	P	**Pg**	**11 45 43.8**	**-0.9**
	43nm,0.1s						
SATY				S	**Sg**	**11 45 52.9**	**-0.5**
	145nm,0.2s						
ZHN	**Zhinishke**	**0.77**	**5**	*e*P	**Pg**	**11 45 45.7**	**-1.1**
	baz=2.0						
ZHN				*e*S	**Sg**	**11 45 56.3**	**-0.6**
	baz=2.0						
ZHN	**Zhinishke**	**0.77**	**5**	*e*P	**Pg**	**11 45 45.7**	**-1.1**
	47nm,0.2s						
ZHN				*e*S	**Sg**	**11 45 56.3**	**-0.6**
	67nm,0.2s						
ZHN	**Zhinishke**	**0.77**	**5**	P	**Pg**	**11 45 45.7**	**-1.1**
	15nm,0.2s						
ZHN				S	**Sg**	**11 45 56.3**	**-0.6**
	67nm,0.2s						
UZB	**Uzynbulak**	**0.90**	**34**	⇓*e*P	**Pb**	**11 45 47.5**	**-1.9**
	baz=31						
UZB				⇓*e*S	**Sb**	**11 45 59.5**	**-1.9**
	baz=31						
UZB	**Uzynbulak**	**0.90**	**34**	⇓*e*P	**Pb**	**11 45 47.5**	**-1.9**
	11nm,0.1s						
UZB				*e*S	**Sb**	**11 45 59.4**	**-1.9**
	92nm,0.2s						
UZB	**Uzynbulak**	**0.90**	**34**	P	**Pb**	**11 45 47.5**	**-1.9**
	11nm,0.1s						
UZB				S	**Sb**	**11 45 59.4**	**-1.9**
	92nm,0.2s						
KDJ	**Kajisay**	**0.90**	**253**	⇓*i*P	**Pb**	**11 45 48.0**	**-1.5**
	baz=55						
KDJ				⇓*i*S	**Sb**	**11 46 00.4**	**-1.1**
	baz=55						
KPKS	**Kokpek**	**1.09**	**13**	*e*P	**Pb**	**11 45 51.5**	**-1.2**
	baz=11						
KPKS				*e*S	**Sg**	**11 46 06.2**	**-1.0**
	baz=11						
KPKS	**Kokpek**	**1.09**	**13**	*e*P	**Pb**	**11 45 51.5**	**-1.2**
	47nm,0.1s						
KPKS				*e*S	**Sg**	**11 46 06.2**	**-1.0**
	106nm,0.3s						
KURS	**Kuram**	**1.09**	**354**	⇓*e*P	**Pb**	**11 45 51.8**	**-0.9**
	baz=52						
KURS				⇓*e*S	**Sg**	**11 46 06.9**	**-0.3**
	baz=52						
KURS	**Kuram**	**1.09**	**354**	⇓*e*P	**Pb**	**11 45 51.8**	**-0.9**
	7.9nm,0.1s						
KURS				*e*S	**Sg**	**11 46 06.8**	**-0.3**
	7.6nm,0.2s						
KURS	**Kuram**	**1.09**	**354**	P	**Pb**	**11 45 51.8**	**-0.9**
	7.9nm,0.1s						
KURS				S	**Sg**	**11 46 06.8**	**-0.3**
	7.6nm,0.2s						
SHLS	**Shalkode**	**1.12**	**47**	*e*P	**Pg**	**11 45 55.9**	**+2.5**
	baz=54						
SHLS				*e*S	**Sn**	**11 46 14.2**	**+5.5**
	baz=54						
SHLS	**Shalkode**	**1.12**	**47**	*e*P	**Pg**	**11 45 55.9**	**+2.5**
	12nm,0.2s						
SHLS				*e*S	**Sn**	**11 46 14.2**	**+5.5**
	61nm,0.3s						
SHLS	**Shalkode**	**1.12**	**47**	P	**Pg**	**11 45 55.9**	**+2.5**
	12nm,0.2s						
SHLS				S	**Sn**	**11 46 14.2**	**+5.5**
	61nm,0.3s						
TNSS	**Tian-Shan**	**1.21**	**302**	*e*P	**Pn**	**11 45 54.2**	**-0.6**
	baz=2.0						
TNSS				*e*S	**Sg**	**11 46 11.3**	**+0.4**
	baz=2.0						
TNSS	**Tian-Shan**	**1.21**	**302**	*e*P	**Pn**	**11 45 54.2**	**-0.6**
	13nm,0.1s						
TNSS				*e*S	**Sg**	**11 46 11.3**	**+0.4**
	37nm,0.2s						
TNSS	**Tian-Shan**	**1.21**	**302**	P	**Pn**	**11 45 54.2**	**-0.6**
	13nm,0.1s						
TNSS				S	**Sg**	**11 46 11.3**	**+0.4**
	37nm,0.2s						
MDOK	**Medeo**	**1.22**	**309**	⇑*e*P	**Pb**	**11 45 54.3**	**-0.5**
	baz=9.0						
MDOK				⇑*e*S	**Sn**	**11 46 11.1**	**-0.1**
	baz=9.0						
MDOK	**Medeo**	**1.22**	**309**	⇑*e*P	**Pb**	**11 45 54.3**	**-0.5**
	28nm,0.2s						
MDOK				*e*S	**Sn**	**11 46 11.1**	**-0.1**
	46nm,0.3s						
MDOK	**Medeo**	**1.22**	**309**	Pg	**Pb**	**11 45 54.3**	**-0.5**
	28nm,0.2s						
MDOK				Lg	Lg	11 46 11.1	
	46nm,0.3s						
KOTS	**Kotyrbulak**	**1.23**	**313**	⇓*e*P	**Pb**	**11 45 54.6**	**-0.4**
	baz=13						
KOTS				⇓*e*S	**Sg**	**11 46 11.8**	**+0.4**
	baz=13						
KOTS	**Kotyrbulak**	**1.23**	**313**	⇓*e*P	**Pb**	**11 45 54.6**	**-0.4**
	107nm,0.2s						
KOTS				*e*S	**Sg**	**11 46 11.8**	**+0.4**
	65nm,0.3s						
KOTS	**Kotyrbulak**	**1.23**	**313**	P	**Pb**	**11 45 54.6**	**-0.4**
	107nm,0.2s						
KOTS				S	**Sg**	**11 46 11.8**	**+0.4**
	65nm,0.3s						
PDGK	**Podgornoye**	**1.25**	**42**	P	**Pn**	**11 45 53.6**	**-1.7**
	2.4nm,0.2s						
PDGK				S	**Sn**	**11 46 10.1**	**-2.0**
	13nm,0.3s						
PDGK	**Podgornoye**	**1.25**	**42**	⇑P	**Pn**	**11 45 53.5**	**-1.7**
	1.3nm,0.2s						
PDGK				⇑S	**Sb**	**11 46 09.8**	**-1.8**
	14nm,0.5s						
IZV	**Izvestkoviy**	**1.42**	**297**	*e*P	**Pb**	**11 45 58.2**	**-0.1**
	baz=97						
IZV				*e*S	**Sg**	**11 46 18.0**	**+0.4**
	baz=97						
IZV	**Izvestko

ARXS				*e*S		**Sg**	**11 46 30.2**	**-1.1**
	15nm,0.2s							
ARXS	**Arharly**	**1.85**	**349**	P		**Pb**	**11 46 05.5**	**-0.1**
	53nm,0.3s							
ARXS				S		**Sg**	**11 46 30.2**	**-1.1**
	15nm,0.2s							
KST	**Kastek**	**1.86**	**291**	*e*P		**Pb**	**11 46 06.1**	**+0.3**
	16nm,0.1s							
KST				*e*S		**Sg**	**11 46 31.3**	**-0.5**
	50nm,0.4s							
KST	**Kastek**	**1.86**	**291**	P		**Pb**	**11 46 06.1**	**+0.3**
	16nm,0.1s							
KST				S		**Sg**	**11 46 31.3**	**-0.5**
	50nm,0.4s							
DGS	**Degeres**	**2.07**	**295**	*e*P		**Pb**	**11 46 09.6**	**+0.3**
	12nm,0.3s							
DGS				*e*S		**Sg**	**11 46 37.3**	**-1.0**
	25nm,0.2s							
DGS	**Degeres**	**2.07**	**295**	Pg		**Pb**	**11 46 09.6**	**+0.3**
	12nm,0.3s							
DGS				Lg		Lg	11 46 37.3	
	25nm,0.2s							
TKM2	**Tokmak 2**	**2.09**	**285**	⇑*e*P		**Pb**	**11 46 08.7**	**-1.0**
	baz=86							
TKM2				⇑*i*S		**Sb**	**11 46 35.7**	**+0.1**
	baz=86							
TKM2	**Tokmak 2**	**2.09**	**285**	⇑Pg		**Pb**	**11 46 09.5**	**-0.2**
	4.7nm,0.6s							
TKM2				⇑Lg		Lg	11 46 38.1	
	22nm,0.5s							
KRBS	**Karabastau**	**2.34**	**304**	*e*P		**Pb**	**11 46 13.9**	**0.0**
	8.7nm,0.2s							
KRBS				*e*S		**Sb**	**11 46 44.9**	**+2.1**
	38nm,0.3s							
KRBS	**Karabastau**	**2.34**	**304**	Pg		**Pb**	**11 46 13.9**	**0.0**
	8.7nm,0.2s							
KRBS				Lg		Lg	11 46 44.9	
	38nm,0.3s							
KBK	**Karagaybulak**	**2.52**	**277**	⇑*i*P		**Pb**	**11 46 14.8**	**-2.2**
	baz=77							
KBK				⇑*i*S		**Sb**	**11 46 46.6**	**-1.4**
	baz=77							
CHMS	**Chumysh**	**2.71**	**284**	⇑*e*P		**Pb**	**11 46 17.4**	**-2.8**
	baz=84							
CHMS				⇑*i*S		**Sb**	**11 46 50.5**	**-2.9**
	baz=84							
UCH	**Uchtor**	**2.84**	**268**	⇑*i*P		**Pb**	**11 46 19.8**	**-2.9**
	baz=68							
UCH				⇑*i*S		**Sb**	**11 46 54.6**	**-3.0**
	baz=68							
AAK	**Ala-Archa**	**2.85**	**276**	⇓*i*P		**Pb**	**11 46 19.7**	**-3.0**
	baz=76							
AAK				⇓*i*S		**Sb**	**11 46 54.4**	**-3.2**
	baz=76							
AAK	**Ala-Archa**	**2.85**	**276**	⇑Pg		**Pb**	**11 46 23.9**	**+1.2**
	2.2nm,0.7s							
AAK				⇑Lg		Lg	11 47 00.8	
	5.0nm,0.4s							
SGDS	**Sogindy**	**2.92**	**292**	Pg		**Pb**	**11 46 24.1**	**+0.3**
	1.6nm,0.2s							
SGDS				Lg		Lg	11 47 02.4	
	13nm,0.4s							
KAPS	**Kapalarasan**	**2.97**	**14**	*e*P		**Pb**	**11 46 24.5**	**-0.3**
	2.3nm,0.2s							
KAPS				*e*S		**Sb**	**11 47 03.0**	**+2.0**
	11nm,0.3s							
KAPS	**Kapalarasan**	**2.97**	**14**	Pg		**Pb**	**11 46 24.5**	**-0.3**
	2.3nm,0.2s							
KAPS				Lg		Lg	11 47 03.0	
	11nm,0.3s							
EKS2	**Erkin-Say**	**3.38**	**276**	⇑*i*P		**Pn**	**11 46 26.9**	**+2.5**
	baz=76							
EKS2				⇑*e*S		**Sn**	**11 47 07.2**	**+2.7**
	baz=76							
MRKS	**Merke**	**3.79**	**277**	*e*P		**Pb**	**11 46 40.3**	**+1.6**
	2.1nm,0.2s							
MRKS				*e*S		**Sg**	**11 47 29.9**	**-3.7**
	4.9nm,0.3s							
MRKS	**Merke**	**3.79**	**277**	Pg		**Pb**	**11 46 40.3**	**+1.6**
	2.1nm,0.2s							
MRKS				Lg		Lg	11 47 29.9	
	4.9nm,0.3s							
MK31	**Makanchi Array**	**5.22**	**31**	⇑Pn		**Pn**	**11 46 50.4**	**+0.8**
	0.3nm,0.2s,baz=210,slow=15,SNR=6.2							
MK31				⇑Sn		**Sn**	**11 47 49.7**	**+0.1**
	0.2nm,0.3s							
MK31				⇑Lg		Lg	11 48 13.8	
	1.2nm,0.6s,baz=213,slow=27,SNR=3.9							

LVSN 20 11:45:55.5±8.2, 59°30N×27°93E, h0km±90km, ML1.7, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSU	**Vasula**	**1.05**	**217**	*e*S	Sg	11 46 28.8	-0.3
MEF	**Metsahovi**	**2.01**	**299**	*e*P	Pn	11 46 29.2	-1.4
MEF				*e*S	Sn	11 46 56.8	+0.4
RAF	**Rauma**	**3.53**	**302**	*e*S	Sb	11 47 40.6	-1.5
RAF				AML	AML	11 47 41.8	
	comp=E,4.1nm,0.6s						
RAF				AML	AML	11 47 41.9	
	comp=N,9.3nm,0.5s						
RAF				AML	AML	11 47 52.1	
	comp=Z,2.7nm,0.6s						

HEL 20 11:46:19.6±0.3, 60°36N×24°88E, h0km, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUR	**Nurmijrvi**	**0.19**	**323**	PG	Pg	11 46 22.6	-0.5
NUR				SG	Sg	11 46 25.3	-0.3
MEF	**Metsahovi**	**0.28**	**239**	PG	Pg	11 46 24.8	-0.2
MEF				SG	Sg	11 46 28.6	+0.1
PVF	**Pernaja**	**0.52**	**69**	PG	Pg	11 46 28.3	-1.3
	baz=251						
PVF				SG	Sg	11 46 36.2	-0.1
FIA0	**FINESS Array S**	**1.23**	**28**	PN	Pn	11 46 44.3	+0.2
FIA0				SN	Sn	11 47 03.5	+2.1

*IDC **20** 11:58:16.5±0.8, 11°80N×143°77E, h0km, mb4.1/17, mb1 4.3/18, mb1mx4.1/42, mbtmp4.1/18, ML4.2/1, MS3.3/10, Ms1 3.4/10, ms1mx3.1/42, Error ellipse: s-maj=24.3km s-min=15.4km az=107.0*

*NEIC **20** 11:58:22.1±1.4, 11°75N±0°10×143°8E±0°1, h38km±9km, mb4.5/27, Error ellipse: s-maj=20.2km s-min=14.3km az=92.0*

ISC 20 11:58:20.4±0.6, 11°78N±0°08×143°83E±0°10, h26km, n55, σ0°99/51, mb4.5/29, MS3.3/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.06**	**29**	Pn	**Pn**	**11 58 54.4**	**+0.9**
	81nm,0.3s,baz=193,slow=12,SNR=71						
GUMO				Sn	**Sb**	**11 59 21.1**	**-1.4**
	114nm,0.3s,baz=190,slow=22,SNR=10						
GUMO	**Guam**	**2.06**	**29**	Pn	**Pn**	**11 58 54.7**	**+1.2**
PATS	**Pohnpei**	**15.11**	**108**	Pn	**Pn**	**12 01 50.3**	**-2.0**
KRVT	**Keravat (AS076**	**17.94**	**153**	LR	LR	12 08 24.3	
	comp=Z,67nm,18.7s,baz=8.6,slow=34						
JNU	**Nakatsue**	**24.34**	**333**	P	**P**	**12 03 34.4**	**-1.9**
	8.0nm,0.8s,baz=114,slow=7.8,SNR=4.4						
JNU	**Nakatsue**	**24.34**	**333**	IAmb	IAmb	12 03 35.6	
	comp=Z,30nm,1.5s						
SSLB	**Suanglung**	**24.80**	**302**	P	**P**	**12 03 41.0**	**+0.5**
MJAR	**Matsushiro Arr**	**25.17**	**349**	P	**P**	**12 03 43.1**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=82,slow=9.1,SNR=2.5						
MJAR				LR	LR	12 13 08.0	
	comp=Z,89nm,18.1s,baz=205,slow=36						
HNR	**Honiara**	**26.47**	**142**	LR	LR	12 15 06.4	
	comp=Z,62nm,18.4s,baz=7.0,slow=38						
KSRS	**Korea Array**	**29.28**	**334**	P	**P**	**12 04 18.5**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=157,slow=9.9,SNR=2.3						
KSRS				LR	LR	12 15 52.5	
	comp=Z,38nm,18.9s,baz=170,slow=36						
WB0	**Warramunga Arr**	**32.70**	**197**	P	**P**	**12 04 50.4**	**-0.5**
WB0				IAmb	IAmb	12 04 53.4	
	comp=Z,10nm,1.5s						
WR0	**Warramunga Arr**	**32.84**	**196**	P	**P**	**12 04 51.8**	**-0.4**
WR0				IAmb	IAmb	12 05 07.9	
	comp=Z,7.4nm,1.4s						
WRAB	**Tennant Creek**	**32.87**	**197**	P	**P**	**12 04 52.2**	**-0.2**
WB2	**Warramunga Arr**	**32.88**	**197**	P	**P**	**12 04 52.0**	**-0.5**
WRA	**Warramunga Arr**	**32.88**	**197**	P	**P**	**12 04 51.9**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=20,slow=9.6,SNR=25						
WRA				LR	LR	12 18 15.9	
	comp=Z,106nm,18.9s,baz=115,slow=36						
WRA	**Warramunga Arr**	**32.88**	**197**	IAmb	IAmb	12 04 52.8	
	comp=Z,0.1nm,0.7s						
AS31	**Alice Springs**	**36.54**	**195**	P	**P**	**12 05 25.0**	**+0.8**
ASAR	**Alice Springs**	**36.54**	**195**	P	**P**	**12 05 23.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=20,slow=11,SNR=16						
ASAR				LR	LR	12 20 21.9	
	comp=Z,70nm,18.5s,baz=10.0,slow=36						
PETK	**Petropavlovsk-**	**42.70**	**12**	P	**P**	**12 06 14.9**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=181,slow=7.2,SNR=1.8						
PETK				LR	LR	12 23 12.4	
	comp=Z,48nm,19.8s,baz=238,slow=35						
CM31	**Chiang Mai Arr**	**43.75**	**284**	P	**P**	**12 06 24.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**43.75**	**284**	P	**P**	**12 06 24.8**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=84,slow=6.7,SNR=9.6						
CMAR				LR	LR	12 23 51.1	
	comp=Z,18nm,19.8s,baz=150,slow=35						
CMAR	**Chiang Mai Arr**	**43.75**	**284**	P	**P**	**12 06 24.2**	**0.0**
BBOO	**Buckleboo**	**44.96**	**189**	P	**P**	**12 06 33.1**	**-0.3**
SONM	**Songino Array**	**47.64**	**326**	P	**P**	**12 06 54.4**	**-0.2**
SONM				LR	LR	12 27 08.2	
	comp=Z,56nm,19.9s,baz=159,slow=36						
SONM	**Songino Array**	**47.64**	**326**	P	**P**	**12 06 54.6**	**0.0**
YAK	**Yakutsk**	**51.21**	**351**	LR	LR	12 28 28.3	
	comp=Z,26nm,19.2s,baz=100,slow=35						
MK31	**Makanchi Array**	**62.10**	**317**	P	**P**	**12 08 39.2**	**0.0**
MKAR	**Makanchi Array**	**62.10**	**317**	P	**P**	**12 08 39.3**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=97,slow=8.7,SNR=12						
MAKZ	**Makanchi**	**62.31**	**317**	P	**P**	**12 08 41.1**	**+0.5**
MAKZ				IAmb	IAmb	12 08 42.0	
	comp=Z,5.4nm,1.1s						
ZALV	**Zalesovo Beam**	**62.51**	**325**	P	**P**	**12 08 41.5**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=96,slow=6.9,SNR=6.7						
ZALV	**Zalesovo Beam**	**62.51**	**325**	P	**P**	**12 08 40.6**	**-1.1**
KURK	**Kurchatov**	**65.32**	**321**	P	**P**	**12 09 00.1**	**-0.2**
NRIK	**Noril'sk**	**67.51**	**341**	P	**P**	**12 09 13.3**	**-0.6**
	comp=Z,4.2nm,0.7s,baz=111,slow=7.6,SNR=4.5						
KK31	**Karatay Array**	**69.88**	**312**	P	**P**	**12 09 28.9**	**-0.4**
KK31				IAmb	IAmb	12 09 30.5	
	comp=Z,5.3nm,0.9s						
KKAR	**Karatay Array**	**69.88**	**312**	P	**P**	**12 09 28.9**	**-0.4**
KKAR				IAmb	IAmb	12 09 30.5	
	comp=Z,5.3nm,0.9s						
KKAR	**Karatay Array**	**69.88**	**312**	P	**P**	**12 09 27.7**	**-1.6**
GAR	**Garm**	**69.90**	**307**	P	**P**	**12 09 29.1**	**-0.5**
COLD	**Coldfoot**	**70.00**	**22**	P	**P**	**12 09 30.2**	**+0.7**
COLD				IAmb	IAmb	12 09 44.8	
	comp=Z,4.4nm,1.0s						
IL31		**70.63**	**25**	P	**P**	**12 09 32.7**	**-0.6**
IL31				IAmb	IAmb	12 09 33.9	
	comp=Z,3.8nm,1.1s						
ILAR	**Eielson Array**	**70.63**	**25**	P	**P**	**12 09 32.1**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=252,slow=5.6,SNR=14						
ILAR	**Eielson Array**	**70.63**	**25**	P	**P**	**12 09 31.3**	**-2.1**
TOLK	**Toolik Lake Re**	**70.66**	**21**	P	**P**	**12 09 34.5**	**+0.9**
TOLK				IAmb	IAmb	12 09 36.0	
	comp=Z,7.2nm,1.0s						
BRVK	**Borovoye**	**70.79**	**322**	P	**P**	**12 09 35.0**	**+0.4**
BRVK				IAmb	IAmb	12 09 35.7	
	comp=Z,6.5nm,0.7s						
DOT	**Dot Lake**	**71.59**	**27**	P	**P**	**12 09 40.2**	**+0.9**
DOT				IAmb	IAmb	12 09 51.9	
	comp=Z,6.1nm,1.3s						
BMAR	**Burnt Mountain**	**72.15**	**23**	P	**P**	**12 09 43.7**	**+1.1**
WHY	**Whitehorse**	**75.55**	**30**	P	**P**	**12 10 03.7**	**+1.0**
WHY				IAmb	IAmb	12 10 17.7	
	comp=Z,4.9nm,1.1s						
INK	**Inuvik**	**76.41**	**22**	P	**P**	**12 10 07.7**	**+0.4**
ABKAR	**Akbulak array**	**77.20**	**318**	P	**P**	**12 10 11.7**	**-0.5**
ABKAR				IAmb	IAmb	12 10 12.8	
	comp=Z,3.7nm,0.7s						
ABKAR	**Akbulak array**	**77.20**	**318**	P	**P**	**12 10 12.1**	**0.0**
DLBC	**Dease Lake**	**78.04**	**32**	P	**P**	**12 10 18.5**	**+1.7**
GEYT	**Alibeck**	**79.51**	**307**	P	**P**	**12 10 26.7**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=91,slow=12,SNR=1.7						
YKA	**Yellowknife Ar**	**84.92**	**27**	P	**P**	**12 10 54.0**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=292,slow=4.0,SNR=4.7						
ARCES	**ARCESS Array B**	**88.48**	**342**	P	**P**	**12 11 10.5**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=64,slow=5.5,SNR=8.0						
NVAR	**Mina Array Bea**	**88.84**	**51**	P	**P**	**12 11 14.8**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=269,slow=6.2,SNR=7.8						
FINES	**FINESS Array B**	**92.36**	**335**	P	**P**	**12 11 27.5**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=98,slow=5.8,SNR=3.9						

WEL 20 12:02:39.9, 38°S±7°×18°0W±°, h25km±21km, M3.4/17, ML3.7/17, MLv3.4/17, Error ellipse: s-maj=0.0km s-min=0.0km az=7.3, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.33**	**263**	P	Pn	12 03 03.1	+0.3
MXZ	**Matakaoa Point**	**1.41**	**274**	P	Pn	12 03 03.5	-0.5
MXZ				S	Sn	12 03 21.2	-0.6
PUZ	**Puketiti**	**1.50**	**254**	P	Pn	12 03 05.6	+0.4
PUZ				S	Sn	12 03 24.4	+0.4
CNGZ	**Carnagh Statio**	**1.69**	**240**	P	Pb	12 03 09.8	-0.5
CNGZ				S	Sb	12 03 33.4	+2.3
TWGZ	**Tauwhareparae**	**1.74**	**252**	P	Pn	12 03 09.3	+0.8
TWGZ				S	Sn	12 03 31.0	+1.1
HAZ	**Te Kaha**	**1.82**	**266**	P	Pn	12 03 10.1	+0.4
HAZ				S	Sn	12 03 32.3	+0.3
TKGZ	**Te Karaka**	**1.92**	**246**	P	Pn	12 03 11.9	+0.9
TKGZ				S	Sn	12 03 34.4	0.0
RUGZ	**Raukumara Rang**	**1.93**	**260**	P	Pn	12 03 11.7	+0.5
RUGZ				S	Sn	12 03 36.1	+1.4
RIGZ	**Rimuhau**	**2.10**	**240**	P	Pn	12 03 15.0	+1.5
RIGZ				S	Sn	12 03 40.7	+1.8
MWZ	**Matawai**	**2.12**	**251**	P	Pn	12 03 14.1	+0.3
MWZ				S	Sn	12 03 39.0	-0.4
PRGZ	**Paritu Road**	**2.14**	**233**	P	Pn	12 03 15.5	+1.5
PRGZ				S	Sb	12 03 42.1	-1.9
MHGZ	**Mahia Peninsul**	**2.26**	**228**	P	Pn	12 03 17.3	+1.6
MHGZ				S	Sb	12 03 45.9	-1.8
KNZ	**Kokohu**	**2.33**	**234**	P	Pn	12 03 17.3	+0.8
KNZ				S	Sn	12 03 45.5	+1.2
URZ	**Urewera**	**2.42**	**255**	P	Pn	12 03 18.9	+1.0
URZ				S	Sn	12 03 47.1	+0.4
WHRZ	**Whale Island**	**2.47**	**265**	P	Pn	12 03 19.8	+1.2
WHRZ				S	Sn	12 03 48.5	+0.6
RTZ	**Ruatahuna**	**2.62**	**248**	P	Pn	12 03 21.9	+1.2
RTZ				S	Sn	12 03 52.3	+0.5
MUZZ	**Murupara**	**2.73**	**252**	P	Pn	12 03 23.1	+0.9
MTHZ	**Maungataniwha**	**2.81**	**244**	P	Pn	12 03 24.2	+0.9
MTHZ				S	Sn	12 03 57.0	+0.5
RRRZ	**Republican Roa**	**2.90**	**255**	P	Pn	12 03 24.8	+0.3
ARHZ	**Aropaoanui**	**2.90**	**236**	P	Pn	12 03 26.5	+2.1
NMHZ	**Naumai**	**2.94**	**240**	P	Pn	12 03 26.4	+1.3
PRRZ	**Plateau Road**	**3.03**	**253**	P	Pn	12 03 26.5	+0.3
BKZ	**Black Stump Fm**	**3.19**	**241**	P	Pn	12 03 29.4	+0.9
KAHZ	**Kahuranaki**	**3.29**	**229**	P	Pn	12 03 32.1	+2.3
KRHZ	**Kereru**	**3.51**	**235**	P	Pn	12 03 33.6	+0.7
KUZ	**Kuaotunu**	**3.60**	**283**	P	Pn	12 03 33.1	-1.0
BHHZ	**Black Hill Sta**	**3.64**	**239**	P	Pn	12 03 35.4	+0.7
MKAZ	**Moumakai**	**3.96**	**277**	P	Pn	12 03 38.6	-0.4
HIZ	**Hauiti**	**4.21**	**257**	P	Pn	12 03 43.7	+1.2
WCZ	**Waipu Caves**	**4.91**	**289**	P	Pn	12 03 52.3	+0.2
PREZ	**Palmer Road**	**4.94**	**248**	P	Pb	12 03 59.3	-6.4
OUZ	**Omahuta**	**5.77**	**293**	P	Pn	12 04 04.5	+0.6
BSWZ	**Blackbirch Sta**	**6.26**	**228**	P	Pn	12 04 17.6	+6.9
NNZ	**Nelson**	**6.28**	**234**	P	Pn	12 04 11.8	+0.9
CTZ	**Chatham Island**	**6.56**	**159**	P	Pn	12 04 19.7	+5.0
KHZ	**Kahutara**	**6.91**	**225**	P	Pn	12 04 19.3	-0.1

*ATH **20** 12:11:42.7, 39°32N×23°95E, h23km±1km, ML2.5/5, Error ellipse: s-maj=1.6km s-min=1.0km az=225.0*

*THE **20** 12:11:43.7, 39°34N×23°95E, h14km, ML2.2/10, Error ellipse: s-maj=0.9km s-min=0.5km az=108.0*

ISC 20 12:11:43.3±1.0, 39°32N±0°02×23°96E±0°03, h18km±3km, n35, σ0°44/53, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.16**	**202**	P	**Pg**	**12 11 47.7**	**0.0**
AOS				S	**Sg**	**12 11 50.9**	**0.0**
AOS				AML	AML	12 11 51.2	
	comp=N,4582µm,0.2s						
AOS				AML	AML	12 11 51.2	
	comp=E,5822µm,0.3s						
AOS	**Alonnisos**	**0.16**	**202**	P	**Pg**	**12 11 47.5**	**-0.3**
AOS				S	**Sg**	**12 11 50.8**	**0.0**
	comp=E,3µm,0.2s						
ALNA	**Alonissos**	**0.19**	**203**	P	**Pg**	**12 11 48.0**	**-0.1**
ALNA				S	**Sg**	**12 11 51.2**	**-0.2**
ALNA				AML	AML	12 11 51.6	
	comp=E,5704µm,0.3s						
ALNA				AML	AML	12 11 51.8	
	comp=N,3637µm,0.4s						
NEO	**Neokhori**	**0.57**	**269**	P	**Pg**	**12 11 54.6**	**-0.1**
NEO				S	**Sb**	**12 12 02.1**	**-0.4**
NEO				AML	AML	12 12 04.9	
	comp=N,1293µm,0.2s						
NEO				AML	AML	12 12 05.1	
	comp=E,1299µm,0.3s						
NEO	**Neokhori**	**0.57**	**269**	P	**Pg**	**12 11 55.2**	**+0.5**
NEO				S	**Sg**	**12 12 03.0**	**+0.6**
	comp=E,640nm,0.3s						
XOR	**Xorichti**	**0.60**	**274**	P	**Pg**	**12 11 55.3**	**+0.1**
XOR				S	**Sg**	**12 12 03.5**	**+0.3**
	comp=E,455nm,0.2s						
SKY	**Skiros Island**	**0.64**	**134**	P	**Pn**	**12 11 57.0**	**-0.4**
SKY				S	**Sg**	**12 12 05.3**	**+0.8**
	comp=E,608nm,0.2s						
PAIG	**Paliouri**	**0.64**	**340**	P	**Pg**	**12 11 55.8**	**-0.2**
PAIG	**Paliouri**	**0.64**	**340**	P	**Pg**	**12 11 55.8**	**-0.2**
PAIG				S	**Sg**	**12 12 05.4**	**+0.8**
	comp=E,128nm,0.4s						
KYMI	**Kymi, Euboea I**	**0.70**	**171**	P	**Pg**	**12 11 57.2**	**+0.1**
KYMI				S	**Sb**	**12 12 06.2**	**+0.1**
KYMI	**Kymi, Euboea I**	**0.70**	**171**	P	**Pg**	**12 11 57.4**	**+0.4**
KYMI				S	**Sn**	**12 12 08.2**	**-0.3**
	comp=E,68nm,0.4s						
VOL2	**Volos**	**0.78**	**274**	P	**Pn**	**12 11 59.7**	**+0.3**
VOL2				S	**Sn**	**12 12 10.1**	**-0.5**
ATAL	**Atalanti**	**0.96**	**230**	P	**Pn**	**12 12 01.5**	**-0.3**
ATAL				S	**Sg**	**12 12 14.4**	**-0.3**
ATAL	**Atalanti**	**0.96**	**230**	P	**Pn**	**12 12 01.6**	**-0.3**
ATAL				S	**Sn**	**12 12 15.7**	**+0.6**
	comp=E,98nm,0.4s						
LKR	**Lokris**	**1.00**	**228**	P	**Pn**	**12 12 02.2**	**-0.2**
LKR				AML	AML	12 12 17.5	
	comp=E,263µm,0.3s						
LKR				AML	AML	12 12 18.2	
	comp=N,222µm,0.4s						
LKR	**Lokris**	**1.00**	**228**	P	**Pn**	**12 12 02.2**	**-0.2**
LKR				S	**Sn**	**12 12 16.6**	**+0.5**
	comp=N,120nm,0.3s						
OUR	**Ouranopolis**	**1.01**	**1**	P	**Pn**	**12 12 02.2**	**-0.2**
OUR				AML	AML	12 12 16.4	
	comp=N,294µm,0.5s						
OUR				AML	AML	12 12 17.2	
	comp=E,252µm,0.4s						
OUR	**Ouranopolis**	**1.01**	**1**	P	**Pn**	**12 12 02.3**	**-0.2**
OUR				S	**Sg**	**12 12 16.1**	**-0.1**
	comp=E,140nm,0.5s						
PLG	**Polygyros**	**1.12**	**340**	P	**Pn**	**12 12 03.2**	**-1.0**
AXAR	**Agios Charalam**	**1.16**	**242**	P	**Pb**	**12 12 04.6**	**-0.2**
AXAR	**Agios Charalam**	**1.16**	**242**	P	**Pb**	**12 12 04.5**	**-0.2**
VIL2	**Platees**	**1.23**	**206**	P	**Pb**	**12 12 06.5**	**+0.4**
DION	**Dionisos Attik**	**1.24**	**181**	P	**Pb**	**12 12 06.0**	**-0.2**
DION				S	**Sn**	**12 12 22.5**	**+0.5**
PTL	**Penteli**	**1.27**	**183**	P	**Pg**	**12 12 07.4**	**-0.5**
AGG	**Agios Georgios**	**1.30**	**257**	P	**Pn**	**12 12 06.3**	**-0.3**
AGG				S	**Sg**	**12 12 26.2**	**+0.7**
AGG	**Agios Georgios**	**1.30**	**257**	P	**Pn**	**12 12 06.3**	**-0.3**
AGG				S	**Sb**	**12 12 24.0**	**+0.4**
	comp=E,48nm,0.6s						
KARY	**Karystos**	**1.34**	**164**	P	**Pb**	**12 12 07.9**	**0.0**
ATHU	**Athens Univers**	**1.36**	**186**	P	**Pg**	**12 12 09.1**	**-0.5**
DSF	**Desfina**	**1.44**	**231**	P	**Pb**	**12 12 09.0**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.45**	**258**	P	**Pb**	**12 12 10.2**	**+0.3**
VLY	**Voula,Athens**	**1.47**	**185**	P	**Pb**	**12 12 09.6**	**-0.5**
LTK	**Loutraki**	**1.51**	**211**	P	**Pn**	**12 12 09.7**	**+0.3**
LOUT	**Loutraki**	**1.54**	**210**	P	**Pb**	**12 12 10.6**	**-0.7**
SMTH	**Samothraki Isl**	**1.67**	**46**	P	**Pn**	**12 12 12.3**	**+0.8**
KLV	**Kalavryta, Ach**	**1.91**	**229**	P	**Pn**	**12 12 15.4**	**+0.5**

*SKO **20** 12:13:23.6, 41°97N×23°11E, h34km*

*SOF **20** 12:13:24.7, 41°96N×23°17E, h14km, MD3.2*

*ATH **20** 12:13:25.7, 41°87N×23°17E, h27km±1km, ML2.7/10, Error ellipse: s-maj=2.8km s-min=1.4km az=167.0*

*THE **20** 12:13:26.7, 41°84N×23°17E, h7km, ML2.5/7, Error ellipse: s-maj=1.5km s-min=0.8km az=172.0*

*BEO **20** 12:13:28.8±0.8, 42°15N×23°04E, h13km±3km, ML2.3/9*

ISC 20 12:13:24.9±0.9, 41°93N±0°02×23°12E±0°03, h12km±7km, n44, σ1°16/66, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.07**	**200**	Pg	**Pg**	**12 13 28.3**	**+0.9**
MMB	**Musomiste**	**0.57**	**127**	Pg	**Pg**	**12 13 36.5**	**+0.4**
VTS	**Vitosha**	**0.69**	**7**	Pg	**Pg**	**12 13 37.8**	**-0.5**
BOSS	**Bosilegrad**	**0.73**	**320**	*e*Pg	**Pg**	**12 13 38.7**	**-0.4**
BOSS				*e*Sg	**Sg**	**12 13 48.5**	**-0.3**
STIP	**Stip**	**0.74**	**251**	*i* Pg	Pg	12 13 35.4	-3.8
STIP				*i* Sg	**Sg**	**12 13 42.6**	**-6.2**
KNT	**Kendrikon**	**0.79

	comp=E,653μm,0.3s							
KAVA	**Kavala**		**1.41**	**131**	P	**Pn**	**12 13 50.2**	**-0.1**
KAVA					S	**Sn**	**12 14 09.0**	**+0.2**
	comp=E,242nm,0.3s							
MPEP	**Malo Peshtene**		**1.49**	**18**	P	**Pn**	**12 13 51.9**	**+0.3**
MPEP	**Malo Peshtene**		**1.49**	**18**	Pg	**Pb**	**12 13 52.9**	**+0.3**
PLG	**Polygyros**		**1.58**	**171**	P	**Pn**	**12 13 53.0**	**+0.2**
PLG	**Polygyros**		**1.58**	**171**	P	**Pn**	**12 13 53.0**	**+0.2**
OUR	**Ouranopolis**		**1.73**	**157**	P	**Pn**	**12 13 54.4**	**-0.3**
OUR					AML	AML	12 14 20.2	
	comp=E,467μm,0.3s							
OUR					AML	AML	12 14 21.1	
	comp=N,569μm,0.3s							
OUR	**Ouranopolis**		**1.73**	**157**	P	**Pn**	**12 13 54.5**	**-0.3**
THAS	**Thassos island**		**1.79**	**137**	P	**Pn**	**12 13 55.3**	**-0.4**
THAS					AML	AML	12 14 23.4	
	comp=E,281μm,0.3s							
THAS					AML	AML	12 14 23.4	
	comp=N,311μm,0.3s							
THAS	**Thassos island**		**1.79**	**137**	P	**Pn**	**12 13 55.3**	**-0.4**
SELS	**Selova**		**1.96**	**312**	*e*Pg	**Pb**	**12 14 01.0**	**+0.5**
SELS					*e*Sg	**Sb**	**12 14 24.8**	**-0.1**
RDO	**Rodhopi**		**1.98**	**113**	P	**Pn**	**12 13 59.3**	**+1.1**
RDO					AML	AML	12 14 30.3	
	comp=E,257μm,0.3s							
RDO					AML	AML	12 14 30.9	
	comp=N,264μm,0.2s							
RDO	**Rodhopi**		**1.98**	**113**	P	**Pn**	**12 13 59.3**	**+1.1**
ZAGS	**Zajecar**		**1.99**	**341**	*e*Pn	**Pn**	**12 13 57.7**	**-0.6**
ZAGS					*e*Sg	**Sb**	**12 14 24.7**	**-1.0**
SMTH	**Samothraki Isl**		**2.33**	**128**	P	**Pn**	**12 14 03.5**	**+0.3**
SMTH	**Samothraki Isl**		**2.33**	**128**	P	**Pn**	**12 14 03.5**	**+0.3**
ALN	**Alexandroupoli**		**2.43**	**114**	P	**Pn**	**12 14 04.7**	**+0.2**
ALN	**Alexandroupoli**		**2.43**	**114**	P	**Pn**	**12 14 04.7**	**+0.2**
GRUS	**Gruza**		**2.63**	**319**	*e*Pg	**Pb**	**12 14 11.9**	**-0.1**
GRUS					*e*Sg	**Sb**	**12 14 45.4**	**+1.1**
IVAS	**Ivanjica**		**2.73**	**308**	*e*Pn	**Pn**	**12 14 11.4**	**+2.8**
IVAS					*e*Sn	**Sn**	**12 14 42.3**	**+0.7**
DIVS	**Divibare**		**3.15**	**314**	*e*Pn	**Pn**	**12 14 14.4**	**0.0**
DIVS					*e*Sg	**Sb**	**12 15 02.7**	**+3.4**
BBLS	**Lazići**		**3.34**	**307**	*e*Pg	**Pb**	**12 14 26.5**	**+2.4**
BBLS					*e*Sg	**Sg**	**12 15 10.1**	**-2.1**

*IDC **20** 12:18:50.1±1.4,23°.32N×100°.50E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/59, mbtmp3.3/4, ML3.4/1, Error ellipse: s-maj=36.8km s-min=18.3km az=94.0*
*BJI **20** 12:18:51.4±0.0,23°.32N×100°.49E, h7km, mb3.6/1, ML3.8/4, Ms3.4/2, Ms7 3.3/2*

ISC 20 12:18:52.3±0.8,23°.34N±0°.05×99°.9E±0°.1, h10km, n20, σ2§32/23, mb3.3/3, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAYA	**Payao**	**3.96**	**180**	Pg	**Pb**	**12 20 04.4**	**+2.2**
CM34	**Chiang Mai Arr**	**4.52**	**189**	Pg	**Pg**	**12 20 17.9**	**-0.9**
CM33	**Chiang Mai Arr**	**4.58**	**191**	Pg	**Pg**	**12 20 18.6**	**-1.5**
CMMT	**Chiang Mai**	**4.59**	**191**	Pg	**Pg**	**12 20 18.7**	**-1.5**
CM35	**Chiang Mai Arr**	**4.69**	**188**	Pg	**Pg**	**12 20 21.0**	**-1.2**
LAMP	**Lampang**	**4.80**	**183**	Pg	**Pg**	**12 20 22.2**	**-2.0**
CM36	**Chiang Mai Arr**	**4.85**	**189**	Pg	**Pg**	**12 20 23.1**	**-2.2**
CMAR	**Chiang Mai Arr**	**4.94**	**190**	Pn	**Pn**	**12 20 07.0**	**+0.5**
	0.4nm,0.3s,baz=16,slow=12,SNR=5.9						
CMAR				Pg	**Pg**	**12 20 23.9**	**-2.9**
	1.9nm,0.3s,baz=6.3,slow=17,SNR=37						
CMAR				Lg	Lg	12 21 29.1	
	3.1nm,0.3s,baz=14,slow=28,SNR=13						
CM09	**Chiang Mai Arr**	**4.94**	**190**	Pg	**Pg**	**12 20 26.0**	**-1.0**
CM15	**Chiang Mai Arr**	**4.94**	**190**	Pg	**Pg**	**12 20 24.1**	**-2.9**
CM02	**Chiang Mai Arr**	**4.96**	**190**	Pg	**Pg**	**12 20 24.6**	**-2.7**
CM01	**Chiang Mai Arr**	**4.97**	**190**	Pg	**Pg**	**12 20 25.0**	**-2.5**
UTTA	**Uttaradit**	**5.61**	**173**	Pg	**Pb**	**12 20 33.6**	**+3.3**
NONG	**Nongkai**	**6.08**	**149**	P	**Pb**	**12 20 42.0**	**+3.6**
	7μm21nm,1.1s						
CD2	**Chengdu**	**8.30**	**24**	Pg	**Pg**	**12 21 31.3**	**+0.2**
CD2				Sn	**Sn**	**12 22 25.4**	**-1.2**
CD2				Sg	**Sg**	**12 23 17.5**	**-1.1**
CD2				smax	smax		
	comp=N,40nm,1.5s						
CD2				smax	smax		
	comp=E,40nm,1.6s						
GTA	**Gaotai**	**16.02**	**360**	*e*P	**P**	**12 22 44.6**	**+3.3**
GTA				pP	sP	12 22 48.8	+2.5
GTA				sP	pP	12 22 51.3	+6.6
GTA				pmax	pmax		
	comp=E,2.0nm,0.7s						
GTA				LR	LR		
	comp=E,84nm,13.1s						
GTA				LR	LR		
	comp=E,75nm,12.0s						
WMQ	**Urumqi**	**22.76**	**337**	*e*P	**P**	**12 23 55.5**	**+0.7**
SONM	**Songino Array**	**24.99**	**10**	P	**P**	**12 24 15.2**	**-1.1**
	comp=E,0.4nm,0.6s,baz=186,slow=9.6,SNR=2.2						
MKAR	**Makanchi Array**	**27.34**	**333**	P	**P**	**12 24 39.0**	**+1.6**
	comp=E,0.3nm,0.5s,baz=136,slow=9.1,SNR=4.0						
WRA	**Warramunga Arr**	**54.60**	**139**	P	**P**	**12 28 17.5**	**-3.7**
	comp=E,0.4nm,0.6s,baz=330,slow=8.1,SNR=2.7						

*IDC **20** 12:20:51.6±0.7, 1°.79N×126°.19E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/45, mbtmp3.9/10, ML3.5/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/45, Error ellipse: s-maj=53.0km s-min=14.8km az=76.0*
*NEIC **20** 12:20:56.0±1.1, 1°.87N±0°.10×126°.47E±0°.09, h33km±6km, mb4.2/18, Error ellipse: s-maj=16.8km s-min=8.7km az=217.0*
*DJA **20** 12:20:56.4±3.3,2°.N±5°×12°.7E±°, h20km±33km, M4.1/8, mb4.7/1, MLv3.9/8*

ISC 20 12:20:57.9±0.5, 1°.84N±0°.04×126°.44E±0°.08, h47km, n57, σ1§63/62, mb4.1/17, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**139**	P	**Pn**	**12 21 20.0**	**-1.2**
TNTI	**Ternate**	**1.41**	**139**		**Pn**	**12 21 20.3**	**-0.9**
SGSI	**Sangihe**	**2.04**	**334**	P	**Pn**	**12 21 29.6**	**-0.2**
KMSI	**Cibinong**	**2.76**	**243**	P	**Pn**	**12 21 41.1**	**+1.5**
GTOI	**Gorontalo**	**3.63**	**251**	P	**Pn**	**12 21 53.4**	**+1.9**
DDMP	**Don Marcelino,**	**4.29**	**350**	*e*P	**Pn**	**12 22 00.4**	**-0.4**
DDMP				*e*S	**Sn**	**12 22 44.6**	**-5.0**
LUWI	**Luwuk**	**4.65**	**232**	Pn	**Pn**	**12 22 02.6**	**-3.0**
MRSI	**Marisa**	**4.69**	**253**	P	**Pn**	**12 22 07.4**	**+1.2**
SKMP	**Bagumbayan, Su**	**5.01**	**338**	*e*P	**Pn**	**12 22 10.4**	**-0.3**
SKMP				*e*S	**Sn**	**12 23 07.7**	**+0.4**
KCP	**Kidapawan**	**5.30**	**345**	*e*P	**Pn**	**12 22 17.8**	**+3.1**
KCP				*i* S	**Sn**	**12 23 22.9**	**+8.3**
SIJI	**Sorong**	**5.53**	**119**	LR	LR	12 25 00.9	
	comp=Z,92nm,18.8s,baz=169,slow=44						
TOLI2	**Tolitoli**	**5.70**	**263**	Pn	**Pn**	**12 22 19.4**	**-0.6**
BUKP	**Musuan**	**6.15**	**347**	*e*P	**Pn**	**12 22 26.6**	**+0.4**
PAGZ	**Pagadian**	**6.70**	**333**	*e*P	**Pn**	**12 22 33.6**	**-0.1**
PAGZ				*e*S	**Sn**	**12 23 45.6**	**-3.1**
MYLDM	**Lahad Datu**	**8.59**	**293**	Pn	**Pn**	**12 22 58.4**	**-1.2**
KNRA	**Kununurra**	**17.56**	**173**		**P**	**12 24 59.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**19.83**	**182**	P	**P**	**12 25 24.4**	**-0.4**
	0.1nm,0.3s,baz=17,slow=14,SNR=1.6						
FITZ	**Fitzroy Crossi**	**19.83**	**182**	P	**P**	**12 25 23.1**	**-1.7**
GUMO	**Guam**	**21.65**	**56**	LR	LR	12 33 03.1	
	comp=Z,15nm,19.8s,baz=145,slow=33						
TPUB	**Ta-pu**	**22.06**	**346**	P	**P**	**12 25 47.9**	**-1.0**
WB0	**Warramunga Arr**	**22.85**	**160**	P	**P**	**12 25 56.2**	**-1.2**
WB0				IAmb	IAmb	12 26 03.3	
	comp=Z,7.1nm,1.1s						
WRAB	**Tennant Creek**	**22.99**	**161**	P	**P**	**12 25 58.0**	**-0.8**
WRAB				IAmb	IAmb	12 26 01.9	
	comp=Z,5.2nm,0.8s						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**12 25 57.6**	**-1.2**
	comp=Z,3.5nm,0.6s,baz=339,slow=11,SNR=38						
WRA				PcP	**PcP**	**12 29 48.0**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=333,slow=2.2,SNR=2.1						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**12 25 57.7**	**-1.1**
WB2	**Warramunga Arr**	**23.00**	**161**	P	**P**	**12 25 57.5**	**-1.3**
WB2				IAmb	IAmb	12 26 05.4	
	comp=Z,6.0nm,0.8s						
WC3	**Warramunga Arr**	**23.02**	**161**	P	**P**	**12 25 59.0**	**-0.1**
WC3				IAmb	IAmb	12 26 05.6	
	comp=Z,6.2nm,0.8s						
WR0	**Warramunga Arr**	**23.08**	**160**	P	**P**	**12 25 59.6**	**-0.1**
AS31	**Alice Springs**	**26.38**	**164**	P	**P**	**12 26 29.1**	**-0.9**
ASAR	**Alice Springs**	**26.38**	**164**	P	**P**	**12 26 30.3**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=343,slow=11,SNR=16						
ASAR				PcP	**PcP**	**12 29 55.3**	**+0.3**

	comp=Z,0.3nm,0.6s,baz=354,slow=2.3,SNR=2.5							
FORT	**Forrest**		**32.48**	**177**	P	**P**	**12 27 25.7**	**+1.8**
KSRS	**Korea Array**		**35.47**	**2**	P	**P**	**12 27 50.8**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=178,slow=9.3,SNR=2.7							
STKA	**Stephens Creek**		**36.49**	**158**	P	**P**	**12 27 59.6**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=344,slow=7.4,SNR=2.9							
STKA	**Stephens Creek**		**36.49**	**158**	P	**P**	**12 27 58.5**	**-0.2**
KLR	**Kul'dur**		**47.43**	**5**	P	**P**	**12 29 28.0**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=180,slow=8.1,SNR=2.6							
SONM	**Songino Array**		**48.99**	**342**	P	**P**	**12 29 39.9**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=168,slow=7.4,SNR=4.9							
SONM	**Songino Array**		**48.99**	**342**	P	**P**	**12 29 38.8**	**-1.1**
MSVF	**Nonsavu**		**54.42**	**113**	P	**P**	**12 30 20.1**	**-0.8**
PETK	**Petropavlovsk-**		**57.28**	**22**	P	**P**	**12 30 42.1**	**+1.4**
	comp=Z,4.3nm,1.0s,baz=193,slow=6.1,SNR=4.6							
MK31	**Makanchi Array**		**58.94**	**326**	P	**P**	**12 30 51.5**	**-0.9**
MK31					IAmb	IAmb	12 30 52.8	
	comp=Z,2.9nm,1.4s							
MKAR	**Makanchi Array**		**58.94**	**326**	P	**P**	**12 30 52.3**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=126,slow=8.6,SNR=22							
MKAR					PcP	**PcP**	**12 31 41.4**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=120,slow=4.5,SNR=4.4							
MKAR	**Makanchi Array**		**58.94**	**326**	P	**P**	**12 30 52.0**	**-0.5**
ZALV	**Zalesovo Beam**		**62.13**	**334**	P	**P**	**12 31 13.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=126,slow=7.3,SNR=1.6							
KURK	**Kurchatov**		**63.17**	**328**	P	**P**	**12 31 20.6**	**-0.3**
KURK					IAmb	IAmb	12 31 21.5	
	comp=Z,4.7nm,0.6s							
KKAR	**Karatay Array**		**64.41**	**318**	P	**P**	**12 31 29.2**	**-0.2**
BILL	**Bilibino**		**71.44**	**15**	P	**P**	**12 32 12.5**	**-0.5**
AB06	**Akbulak array**		**73.41**	**321**	P	**P**	**12 32 25.2**	**+0.1**
AB07	**Akbulak array**		**73.41**	**321**	P	**P**	**12 32 24.9**	**-0.2**
AB02	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 25.3**	**+0.1**
AB03	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 24.5**	**-0.7**
AB01	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 25.4**	**+0.3**
AB31	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 25.2**	**0.0**
AB31					IAmb	IAmb	12 32 27.1	
	comp=Z,1.4nm,0.6s							
ABKAR	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 25.0**	**-0.2**
ABKAR	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 24.9**	**-0.3**
ABKAR					IAmb	IAmb	12 32 27.0	
	comp=Z,1.4nm,0.6s							
AB04	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 25.2**	**0.0**
AB08	**Akbulak array**		**73.42**	**321**	P	**P**	**12 32 25.2**	**0.0**
AB05	**Akbulak array**		**73.43**	**321**	P	**P**	**12 32 25.1**	**-0.2**
AB09	**Akbulak array**		**73.44**	**321**	P	**P**	**12 32 25.1**	**-0.2**

IDC 20 12:39:21.9±1.9, 55°.08N×164°.29E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.1/49, mbtmp3.1/3, ML1.7/1, Error ellipse: s-maj=156.8km s-min=25.6km az=152.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**4.35**	**246**	Pn	Pn	12 40 30.2	+1.0
	0.2nm,0.3s,baz=76,slow=18,SNR=14						
PETK				Sn	Sn	12 41 18.7	-1.8
	0.2nm,0.3s,baz=110,slow=19,SNR=4.9						
ILAR	**Eielson Array**	**25.66**	**48**	P	P	12 44 52.6	-0.3
	0.4nm,0.7s,baz=256,slow=8.9,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	**35.34**	**176**	T	T	13 24 59.4	
	baz=359,slow=76,SNR=4.9						
H11N3	**WAKE ISLAND Hy**	**35.36**	**176**	T	T	13 24 57.3	
	baz=359,slow=76,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**35.36**	**176**	T	T	13 24 51.8	
	baz=359,slow=76,SNR=4.1						
TXAR	**Lajitas Array**	**67.62**	**71**	P	P	12 50 20.6	+0.2
	0.1nm,0.5s,baz=301,slow=4.6,SNR=1.8						

JMA 20 12:39:43.9, 24°.64N×123°.60E, h0km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.33**	**159**	P	Pg	12 39 50.7	+0.5
IRIF				S	Sg	12 39 55.6	+1.2
JKRS	**Kuro-shima**	**0.55**	**137**	P	Pg	12 39 55.0	+0.6
JKRS				S	Sg	12 40 02.8	+1.3
YOJ	**Yonaguni jima**	**0.56**	**252**	P	Pg	12 39 55.5	+0.8
YOJ				*e*S	Sg	12 40 03.4	+1.3
JIJ	**Ishigaki jima**	**0.57**	**119**	P	Pg	12 39 55.2	+0.4
JIJ				S	Sg	12 40 03.2	+1.1
HATJ	**Hateruma jima**	**0.61**	**162**	*e*S	Sg	12 40 04.6	+1.1
JISG	**Ishigakijimahi**	**0.65**	**95**	P	Pg	12 39 56.9	+0.5
JISG				S	Sg	12 40 06.2	+1.4
JTJ	**Tarama**	**1.00**	**90**	S	Sb	12 40 17.1	-0.8

TAP 20 12:40:12.4, 24°.46N×121°.78E, h18km±1km, ML1.5, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.03**	**103**	P	Pg	12 40 16.1	+0.6
	baz=102						
ENAH				S	Sg	12 40 18.5	+0.9
	baz=102						
ENA	**Nanau**	**0.04**	**227**	P	Pg	12 40 16.3	+0.7
	baz=218						
ENA				S	Sg	12 40 18.4	+0.7
	baz=218						
TWC	**Suao**	**0.17**	**24**	*i* P	Pg	12 40 17.4	+0.6
	baz=27						
TWC				*i* S	Sg	12 40 20.3	+0.5
	baz=27						
NDT	**Datong Townshi**	**0.28**	**301**	*i* P	Pb	12 40 19.8	+0.9
	baz=301						
NDT				S	Sb	12 40 24.2	+0.9
	baz=301						
TWE	**Neicheng**	**0.28**	**340**	P	Pb	12 40 19.9	+0.9
	baz=342						
TWE				S	Sb	12 40 23.8	+0.5
	baz=342						
NACB	**Ninganchiao**	**0.33**	**210**	P	Pb	12 40 19.7	0.0
	baz=210						
NACB				S	Sb	12 40 24.8	+0.1
	baz=210						
NNSH	**Datong**	**0.36**	**266**	P	Pb	12 40 21.0	+0.7
	baz=265						
NNSH				S	Sb	12 40 26.2	+0.5
	baz=265						
NNSB	**Datong**	**0.36**	**266**	P	Pb	12 40 21.0	+0.7
	baz=265						
NNSB				S	Sb	12 40 26.5	+0.8
	baz=265						
ETLH	**Xiulin Townshi**	**0.36**	**227**	P	Pb	12 40 20.5	+0.1
	baz=227						
ETLH				S	Sb	12 40 25.9	0.0
	baz=227						
NNS	**Nan Shan**	**0.37**	**267**	S	Sb	12 40 26.5	+0.6
	baz=266						
NWLT	**Wulai**	**0.40**	**322**	P	Pb	12 40 21.6	+0.6
	baz=322						
NWLT				S	Sb	12 40 27.4	+0.5
	baz=322						
TWD	**Chiawan**	**0.41**	**204**	*e*P	Pb	12 40 21.1	0.0
	baz=202						
TWD				*e*S	Sb	12 40 27.5	+0.4
	baz=202						
YHNB	**Yeheng**	**0.42**	**300**	P	Pb	12 40 22.1	+0.7
	baz=300						
YHNB				S	Sb	12 40 28.0	+0.5
	baz=300						
NSK	**Sanguang**	**0.44**	**300**	*e*S	Sb	12 40 28.7	+0.7
	baz=300						
TIPB	**Shuangxi**	**0.52**	**5**	*e*P	Pb	12 40 23.4	+0.4
	baz=5.0						
TIPB				S	Sb	12 40 30.4	+0.3
	baz=5.0						
FUSS	**Fushou**	**0.53**	**247**	P	Pb	12 40 24.0	+0.7
	baz=246						
FUSS				S	Sb	12 40 32.0	+1.4
	baz=246						
WHF	**Hehuan Shan**	**0.56**	**236**	P	Pb	12 40 24.1	+0.1
	baz=235						
WHF				S	Sb	12 40 32.6	+0.8
	baz=235						
TWT	**Tachien**	**0.58**	**250**	*e*S	Sn	12 40 34.0	-1.2
	baz=249						
TDCB	**Techi**	**0.60**	**250**	P	Pg	12 40 24.0	-0.3
	baz=250						
TDCB				S	Sb	12 40 33.6	+1.0
	baz=250						
CHGB	**Renai**	**0.68**	**234**	*e*P	Pb	12 40 26.3	+0.5
	baz=234						
CHGB				*e*S	Sb	12 40 36.2	+1.3
	baz=234						
OWD	**Renai**	**0.74**	**228**	P	Pg	12 40 27.2	+0.3
	baz=227						
OWD				S	Sg	12 40 37.9	+1.1
	baz=227						
WHP	**Taichung City**	**0.78**	**257**	*e*P	Pn	12 40 28.7	+0.2
	baz=256						
WHP				S	Sg	12 40 38.8	+0.9
	baz=256						

*NNC **20** 12:56:31.2±8.0, 36°.66N×69°.70E, h0km, mb4.2, mpv4.1, Error ellipse: s-maj=72.0km s-min=50.3km az=154.0*
*IDC **20** 12:56:32.0±5.1, 36°.13N×70°.35E, h196km±39km, mb3.2/5, mb1 3.2/10, mb1mx2.9/59, mbtmp3.7/10, Error ellipse: s-maj=60.6km s-min=23.2km az=150.0*

ISC 20 12:56:36.0±0.7, 36°.46N±0°.06×70°.19E±0°.08, h213km, n28, σ1§45/33, mb3.4/4, 5C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.98**	**151**	P	**Pn**	**12 57 27.5**	**+1.1**
CEP				S	**S**	**12 58 06.0**	**+0.6**
THW	**Thamme Wali**	**3.88**	**160**	P	**Pn**	**12 57 37.6**	**+0.8**
SARP	**Sargodha**	**4.97**	**155**	P	**Pn**	**12 57 50.8**	**+0.4**
THN	**Thein Dam**	**6.08**	**130**	*e*P	**Pn**	**12 58 07.5**	**+3.0**
THN				*e*S	**S**	**12 59 10.5**	**-4.0**
AML	**Almayashu**	**6.28**	**25**	P	**Pn**	**12 58 06.8**	**-0.5**
	SNR=172						
KK31	**Karatay Array**	**6.64**	**2**	⇓P	**Pn**	**12 58 08.4**	**-3.2**
	3.8nm,0.3s,baz=200,slow=16,SNR=70						
KK31				⇑S	**S**	**12 59 25.6**	**-1.9**
	14nm,0.7s,baz=193,slow=22						
UCH	**Uchtor**	**6.66**	**29**	P	**Pn**	**12 58 12.0**	**-0.3**
	SNR=16						
EKS2	**Erkin-Say**	**6.78**	**23**	P	**Pn**	**12 58 13.6**	**0.0**
	SNR=24						
AAK	**Ala-Archa**	**7.01**	**27**	P	**Pn**	**12 58 16.3**	**-0.1**
	SNR=20						
AAK	**Ala-Archa**	**7.01**	**27**	⇑P	**Pn**	**12 58 16.1**	**-0.3**
	9.7nm,0.6s						
AAK				⇑S	**S**	**12 59 35.3**	**-1.1**
	14nm,0.5s						
KBK	**Karagaybulak**	**7.20**	**29**	P	**Pn**	**12 58 18.9**	**0.0**
	SNR=8.4						
CHMS	**Chumysh**	**7.42**	**27**	P	**Pn**	**12 58 21.1**	**-0.5**
	SNR=8.5						
ULHL	**Ulahol**	**7.44**	**37**	P	**Pn**	**12 58 22.1**	**0.0**
	SNR=9.0						
USP	**Ospenovka**	**7.56**	**25**	P	**Pn**	**12 58 23.7**	**+0.2**
	SNR=9.9						
TKM2	**Tokmak 2**	**7.68**	**31**	P	**Pn**	**12 58 24.8**	**-0.4**
	SNR=18						
TKM2	**Tokmak 2**	**7.68**	**31**	⇓P	**Pn**	**12 58 24.6**	**-0.6**
	3.7nm,0.3s						
TKM2				⇑S	**S**	**12 59 52.7**	**+0.4**
	9.5nm,1.1s						
GEYT	**Alibeck**	**9.74**	**282**	P	**Pn**	**12 58 50.5**	**-1.2**
	0.3nm,0.3s,baz=94,slow=13,SNR=2.7						
MKAR	**Makanchi Array**	**13.71**	**37**	P	**Pn**	**12 59 40.8**	**-1.0**
	0.3nm,0.3s,baz=228,slow=13,SNR=14						
AB31	**Akbulak array**	**14.81**	**333**	⇑P	**P**	**12 59 57.5**	**+1.7**
	0.6nm,0.4s,baz=145,slow=12,SNR=25						
KURBB	**Kurchatov Arra**	**15.38**	**20**	P	**P**	**13 00 00.9**	**-1.1**
	0.1nm,0.3s,baz=210,slow=11,SNR=10						
AKTO	**Aktyubinsk**	**16.50**	**332**	P	**Pn**	**13 00 16.1**	**+0.6**
	0.3nm,0.3s,baz=149,slow=9.6,SNR=5.1						
AKTO	**Aktyubinsk**	**16.50**	**332**	⇓P	**Pn**	**13 00 18.4**	**+3.0**
	1.6nm,0.7s						
BVAR	**Borovoye Array**	**16.56**	**0**	P	**Pn**	**13 00 16.8**	**+0.6**
	0.5nm,0.3s,baz=120,slow=8.9,SNR=8.1						
ZALV	**Zalesovo Beam**	**20.23**	**26**	P	**P**	**13 00 54.6**	**0.0**
	1.2nm,0.4s,baz=219,slow=12,SNR=5.2						
ARCES	**ARCESS Array B**	**40.93**	**338**	P	**P**	**13 03 58.0**	**+0.8**
	2.7nm,0.9s,baz=106,slow=6.7,SNR=4.2						
HFS	**Hagfors**	**42.69**	**322**	P	**P**	**13 04 11.8**	**+0.2**
	0.7nm,0.6s,baz=96,slow=10,SNR=1.6						
NOA	**NORSAR Array B**	**44.02**	**323**	P	**P**	**13 04 21.5**	**-0.7**
	0.5nm,0.7s,baz=96,slow=7.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**65.06**	**268**	P	**P**	**13 06 52.8**	**-1.1**
	0.2nm,0.3s,baz=52,slow=6.0,SNR=2.1						

*IDC **20** 12:58:30.4±1.4, 4°.50S×150°.85E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/34, mbtmp3.5/3, Error ellipse: s-maj=58.2km s-min=11.2km az=163.0*

ISC 20 12:58:35.2±1.3, 4°.6S±0°.3×151°.1E±0°.2, h35km, n6, σ1§49/8, mb3.3/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.01**	**74**	Pg	**Pn**	**12 58 53.5**	**+0.7**
	197nm,0.3s,baz=195,slow=5.3,SNR=327						
KRVT				Lg	Lg	12 59 09.2	
	594nm,0.3s,baz=99,slow=19,SNR=20						
PMG	**Port Moresby**	**6.16**	**219**	Pn	**Pn**	**13 00 05.1**	**+1.3**
	0.9nm,0.3s,baz=56,slow=11,SNR=1.4						
PMG				Sn

WRA	**Warramunga Arr**	**52.87**	**92**	P		**P**	**13 26 39.1**	**+1.3**
	comp=Z,6.1nm,0.8s,baz=247,slow=7.2,SNR=28							
WRA				LR		LR	13 47 30.3	
	comp=Z,109nm,19.3s,baz=245,slow=34							
WRA	**Warramunga Arr**	**52.87**	**92**	P		**P**	**13 26 36.7**	**-1.1**
WB2	**Warramunga Arr**	**52.88**	**92**	P		**P**	**13 26 38.1**	**+0.2**
WB2				IAmb		IAmb	13 26 40.5	
	comp=Z,10nm,1.1s							
WRAB	**Tennant Creek**	**52.88**	**92**	P		**P**	**13 26 36.8**	**-1.1**
WRAB				IAmb		IAmb	13 26 40.6	
	comp=Z,9.5nm,1.0s							
MBAR	**Mbarara**	**52.93**	**296**	P		**P**	**13 26 36.6**	**-1.8**
WB0	**Warramunga Arr**	**52.99**	**92**	P		**P**	**13 26 36.8**	**-1.9**
WR0	**Warramunga Arr**	**53.03**	**92**	P		**P**	**13 26 39.2**	**+0.1**
WR0				IAmb		IAmb	13 26 41.6	
	comp=Z,9.9nm,0.9s							
MTN	**Manton Dam**	**53.33**	**83**	P		**P**	**13 26 40.3**	**-0.9**
CMAR	**Chiang Mai Arr**	**53.97**	**27**	P		**P**	**13 26 47.0**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=212,slow=7.5,SNR=6.7							
SNAA	**Sanae**	**57.28**	**202**	P		**P**	**13 27 08.9**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=88,slow=8.4,SNR=4.3							
VNDA	**Vanda**	**58.70**	**165**	P		**P**	**13 27 19.3**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=272,slow=7.6,SNR=5.2							
VNDA				LR		LR	13 50 04.6	
	comp=Z,58nm,18.1s,baz=260,slow=33							
VNDA	**Vanda**	**58.70**	**165**	P		**P**	**13 27 19.1**	**+0.3**
QSPA	**South Pole Qui**	**58.85**	**180**	P		**P**	**13 27 20.6**	**+0.4**
	comp=Z,3.7nm,0.8s,baz=283,slow=2.9,SNR=15							
QSPA	**South Pole Qui**	**58.85**	**180**	P		**P**	**13 27 20.4**	**+0.2**
QSPA				IAmb		IAmb	13 27 22.0	
	comp=Z,4.4nm,0.9s							
MKAR	**Makanchi Array**	**77.90**	**4**	P		**P**	**13 29 18.9**	**-0.4**
	comp=Z,2.3nm,0.8s,baz=185,slow=6.7,SNR=13							
BRTR	**Keskin Array B**	**81.08**	**328**	P		**P**	**13 29 37.0**	**0.0**
	comp=Z,0.7nm,0.4s,baz=155,slow=7.9,SNR=2.2							
SONM	**Songino Array**	**83.23**	**20**	P		**P**	**13 29 48.6**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=228,slow=3.9,SNR=5.1							
TORD	**Torodi Ar. Bea**	**84.14**	**289**	P		**P**	**13 29 53.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=110,slow=5.4,SNR=3.4							
TORD				LR		LR	14 04 48.1	
	comp=Z,56nm,19.6s,baz=305,slow=34							
ZALV	**Zalesovo Beam**	**85.20**	**5**	P		**P**	**13 29 57.3**	**-0.3**
	comp=Z,3.4nm,0.7s,baz=204,slow=3.3,SNR=15							
KEST	**Kesra**	**91.71**	**311**	LR		LR	14 08 06.0	
	comp=Z,25nm,21.5s,baz=283,slow=33							
ULM	**Lac du Bonnet**	**160.22**	**345**	PKP		**PKPdf**	**13 37 18.9**	**-2.0**
	comp=Z,4.5nm,1.0s,baz=188,slow=4.7,SNR=3.5							
NVAR	**Mina Array Bea**	**165.94**	**56**	PKPab		**PKPab**	**13 38 27.9**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=300,slow=6.4,SNR=3.9							

TAP ***20*** *13:23:41.0,24.89N×122.46E,h16km,ML3.3,C*
JMA ***20*** *13:23:40.8±0.1,24.88N×122.51E,h47km±2km,M2.8*
ISC 20 13:23:39.8±1.1,24.93N±0.03×122.52E±0.02,h14km±8km, n99,σ0.97/157, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.49**	**279**	*i* P	**Pb**	**13 23 50.2**	**+0.1**
	baz=285						
TWB1				*i* S	**Sb**	**13 23 56.6**	**-0.6**
	baz=285						
EGS		**0.54**	**261**	*i* P	**Pb**	**13 23 51.0**	**0.0**
	baz=253						
EGS				*e*S	**Sb**	**13 23 58.4**	**-0.3**
	baz=253						
JYNG	**Yonagunijimaku**	**0.61**	**141**	P	**Pb**	**13 23 52.9**	**+0.6**
NTC	**Toucheng**	**0.63**	**263**	P	**Pb**	**13 23 53.2**	**+0.6**
	baz=278						
NTC				*e*S	**Sb**	**13 24 02.0**	**+0.7**
	baz=278						
TIPB	**Shuangxi**	**0.63**	**274**	*i* P	**Pb**	**13 23 53.1**	**+0.5**
	baz=278						
TIPB				*i* S	**Sb**	**13 24 01.4**	**+0.1**
	baz=278						
YOJ	**Yonaguni jima**	**0.64**	**136**	P	**Pb**	**13 23 53.6**	**+0.8**
	baz=121						
YOJ	**Yonaguni jima**	**0.64**	**136**	P	**Pg**	**13 23 53.3**	**+0.9**
YOJ				*e*S	**Sg**	**13 24 02.2**	**+1.3**
NWF	**Wu-fen Shan**	**0.69**	**282**	*i* P	**Pn**	**13 23 54.6**	**-0.5**
	baz=286						
NWF				*i* S	**Sb**	**13 24 03.1**	**+0.2**
	baz=286						
WFSB	**Wu-fen Shan**	**0.69**	**282**	P	**Pn**	**13 23 54.3**	**-0.8**
	baz=286						
WFSB				S	**Sb**	**13 24 03.3**	**+0.4**
	baz=286						
TWC	**Suao**	**0.69**	**243**	*i* P	**Pg**	**13 23 53.0**	**-0.2**
	baz=242						
TWC				S	**Sg**	**13 24 01.8**	**-0.5**
	baz=242						
ILA	**Ilan**	**0.72**	**257**	P	**Pn**	**13 23 55.3**	**-0.2**
	baz=258						
ILA				*e*S	**Sn**	**13 24 05.3**	**-1.0**
	baz=258						
ENAH	**Nanao**	**0.80**	**234**	P	**Pg**	**13 23 55.4**	**0.0**
	baz=233						
ENAH				S	**Sg**	**13 24 05.6**	**-0.3**
	baz=233						
TWE	**Neicheng**	**0.80**	**255**	*i* P	**Pg**	**13 23 55.4**	**0.0**
	baz=256						
TWE				S	**Sg**	**13 24 05.8**	**-0.2**
	baz=256						
PCYT	**Pengchaiyu**	**0.81**	**330**	*i* P	**Pn**	**13 23 57.5**	**+0.7**
	baz=318						
NWRT	**Kuosheng**	**0.83**	**289**	*e*S	**Sn**	**13 24 08.5**	**-0.5**
	baz=293						
TWA	**Mucha**	**0.85**	**274**	*i* P	**Pb**	**13 23 56.7**	**+0.3**
	baz=276						
TWA				*e*S	**Sn**	**13 24 08.5**	**-1.2**
	baz=276						
ENA	**Nanau**	**0.87**	**235**	*i* P	**Pg**	**13 23 56.3**	**-0.3**
	baz=234						
ENA				*e*S	**Sg**	**13 24 07.0**	**-1.0**
	baz=234						
YM08	**YM08**	**0.88**	**287**	P	**Pn**	**13 23 57.7**	**-0.1**
	baz=291						
YM01	**YM01**	**0.89**	**284**	P	**Pn**	**13 23 57.6**	**-0.3**
	baz=287						
YM01				*e*S	**Sb**	**13 24 09.3**	**+0.5**
	baz=287						
YM11	**YM11**	**0.89**	**286**	P	**Pn**	**13 23 58.5**	**+0.5**
	baz=273						
YM11				*e*S	**Sn**	**13 24 10.1**	**-0.7**
	baz=273						
YM05	**YM05**	**0.90**	**285**	P	**Pn**	**13 23 58.2**	**+0.2**
	baz=289						
YM10	**YM10**	**0.90**	**285**	P	**Pn**	**13 23 58.3**	**+0.2**
	baz=287						
YM10				*e*S	**Sb**	**13 24 09.5**	**+0.4**
	baz=287						
TWY	**Chenhua**	**0.90**	**293**	*i* P	**Pn**	**13 23 58.7**	**+0.7**
	baz=296						
TWY				S	**Sn**	**13 24 10.8**	**-0.1**
	baz=296						
NHDH	**Xindian Distri**	**0.91**	**272**	P	**Pn**	**13 23 57.9**	**-0.2**
	baz=274						
NHDH				S	**Sb**	**13 24 09.1**	**-0.1**
	baz=274						
TAP1	**Taipei**	**0.91**	**277**	*e*S	**Sn**	**13 24 10.6**	**-0.5**
	baz=279						
NSM	**Shimen**	**0.92**	**293**	*e*S	**Sn**	**13 24 11.2**	**0.0**
	baz=296						
YM04	**YM04**	**0.92**	**284**	P	**Pn**	**13 23 58.1**	**-0.2**
	baz=287						
YM04				*e*S	**Sn**	**13 24 10.9**	**-0.5**
	baz=287						
YM03	**YM03**	**0.93**	**286**	P	**Pn**	**13 23 58.7**	**+0.3**
	baz=289						
NWLT	**Wulai**	**0.94**	**261**	*i* P	**Pg**	**13 23 58.2**	**+0.3**
	baz=262						
NWLT				S	**Sb**	**13 24 10.2**	**+0.1**
	baz=262						
ANP	**Anpu**	**0.94**	**286**	*i* P	**Pn**	**13 23 59.1**	**+0.4**
	baz=289						
NDT	**Datong Townshi**	**0.97**	**251**	*i* P	**Pg**	**13 23 58.8**	**+0.2**
	baz=251						
NDT				S	**Sb**	**13 24 11.0**	**-0.2**
	baz=251						
NTST	**Danshui**	**1.00**	**284**	P	**Pn**	**13 23 59.7**	**+0.3**
	baz=286						
NTST				S	**Sn**	**13 24 13.4**	**+0.1**
	baz=286						
TWS1	**Kuangyinshan**	**1.02**	**280**	P	**Pg**	**13 23 59.4**	**0.0**
	baz=283						
YHNB	**Yeheng**	**1.07**	**256**	P	**Pb**	**13 24 00.0**	**-0.2**
	baz=241						
YHNB				S	**Sb**	**13 24 13.7**	**-0.4**
	baz=241						
NSK	**Sanguang**	**1.09**	**257**	*i* P	**Pb**	**13 24 00.3**	**-0.1**
	baz=272						
NACB	**Ninganchiao**	**1.13**	**228**	P	**Pb**	**13 24 00.5**	**-0.6**
	baz=239						
NACB				*e*S	**Sb**	**13 24 14.9**	**-0.8**
	baz=239						
NNSB	**Datong**	**1.15**	**245**	P	**Pb**	**13 24 01.2**	**-0.3**
	baz=233						
NNSB				S	**Sb**	**13 24 15.5**	**-0.9**
	baz=233						
NNSH	**Datong**	**1.15**	**245**	*i* P	**Pb**	**13 24 01.1**	**-0.4**
	baz=245						
NNSH				S	**Sb**	**13 24 16.0**	**-0.3**
	baz=245						
NNS	**Nan Shan**	**1.15**	**245**	*i* P	**Pb**	**13 24 01.3**	**-0.3**
	baz=234						
NNS				S	**Sb**	**13 24 15.6**	**-0.8**
	baz=234						
ETLH	**Xiulin Townshi**	**1.19**	**233**	P	**Pn**	**13 24 01.9**	**-0.1**
	baz=232						
ETLH				*e*S	**Sb**	**13 24 17.3**	**-0.2**
	baz=232						
TWD	**Chiawan**	**1.19**	**225**	*i* P	**Pn**	**13 24 02.2**	**+0.2**
	baz=223						
TWD				*e*S	**Sg**	**13 24 18.4**	**0.0**
	baz=223						
NCUH	**Zhongli**	**1.21**	**272**	P	**Pg**	**13 24 04.3**	**+1.1**
	baz=274						
IRIF	**Iriomote-Funau**	**1.25**	**118**	P	**Pn**	**13 24 02.0**	**-0.8**
IRIF				*e*S	**Sb**	**13 24 17.8**	**-1.3**
FUSS	**Fushou**	**1.35**	**240**	*i* P	**Pb**	**13 24 05.0**	**+0.1**
	baz=239						
FUSS				*e*S	**Sb**	**13 24 21.7**	**-0.4**
	baz=239						
WHF	**Hehuan Shan**	**1.39**	**236**	*i* P	**Pb**	**13 24 05.7**	**0.0**
	baz=235						
LIOB	**Emei**	**1.40**	**259**	P	**Pn**	**13 24 05.3**	**+0.4**
	baz=259						
LIOB				*e*S	**Sb**	**13 24 23.3**	**-0.1**
	baz=259						
TWT	**Tachien**	**1.40**	**242**	*i* P	**Pb**	**13 24 05.7**	**-0.1**
	baz=241						
TWT				*e*S	**Sn**	**13 24 23.1**	**-0.2**
	baz=241						
SBCB	**Hsinchu**	**1.40**	**265**	*e*P	**Pb**	**13 24 05.7**	**0.0**
	baz=282						
TDCB	**Techi**	**1.41**	**242**	P	**Pb**	**13 24 05.9**	**-0.1**
	baz=241						
TDCB				S	**Sn**	**13 24 23.1**	**-0.6**
	baz=241						
NSTT	**Nanjuang**	**1.41**	**258**	*i* P	**Pg**	**13 24 06.5**	**-0.5**
	baz=258						
NSTT				S	**Sn**	**13 24 23.3**	**-0.2**
	baz=258						
ESL	**Shilin**	**1.49**	**222**	*i* P	**Pn**	**13 24 06.2**	**+0.1**
	baz=221						
CHGB	**Renai**	**1.50**	**235**	P	**Pb**	**13 24 07.8**	**+0.2**
	baz=217						
JKRS	**Kuro-shima**	**1.52**	**117**	P	**Pn**	**13 24 05.7**	**-0.8**
OWD	**Renai**	**1.56**	**232**	P	**Pb**	**13 24 08.5**	**-0.1**
	baz=213						
OWD				S	**Sn**	**13 24 27.5**	**+0.1**
	baz=213						
WHP	**Taichung City**	**1.57**	**246**	*i* P	**Pb**	**13 24 09.3**	**+0.5**
	baz=246						
WHP				*e*S	**Sb**	**13 24 28.4**	**-0.1**
	baz=246						
EGFH	**Guangfu**	**1.60**	**219**	*e*P	**Pn**	**13 24 07.6**	**-0.1**
	baz=201						
NMLH	**Miaoli**	**1.62**	**256**	*e*P	**Pb**	**13 24 10.1**	**+0.6**
	baz=271						
NSY	**Sanyi**	**1.68**	**253**	*e*P	**Pg**	**13 24 11.5**	**-0.5**
	baz=252						
NSY				*e*S	**Sb**	**13 24 31.8**	**+0.2**
	baz=252						
TWQ1	**Liyutan**	**1.69**	**250**	P	**Pb**	**13 24 11.3**	**+0.6**
	baz=250						
DPDB	**Guoxing**	**1.71**	**239**	P	**Pb**	**13 24 11.5**	**+0.6**
	baz=239						
HGSD	**Ruisui**	**1.75**	**215**	P	**Pn**	**13 24 10.5**	**+0.8**
	baz=199						
EHY	**Hungye**	**1.79**	**218**	*i* P	**Pn**	**13 24 10.0**	**-0.3**
	baz=217						
WDJ	**Dajia District**	**1.81**	**252**	*e*P	**Pb**	**13 24 12.4**	**-0.3**
	baz=251						
WDJ				*e*S	**Sb**	**13 24 34.3**	**-0.9**
	baz=251						
SMLT	**Sun Moon Lake**	**1.81**	**235**	*i* P	**Pb**	**13 24 12.6**	**-0.1**
	baz=219						
SMLT				*e*S	**Sb**	**13 24 36.3**	**+1.0**
	baz=219						
SSLB	**Suanglung**	**1.83**	**232**	P	**Pb**	**13 24 12.2**	**-0.8**
	baz=215						
SSLB				*e*S	**Sn**	**13 24 34.6**	**+0.9**
	baz=215						
TYC	**Yuchr**	**1.83**	**236**	*i* P	**Pb**	**13 24 13.2**	**+0.2**
	baz=219						
TYC				S	**Sn**	**13 24 34.6**	**+0.9**
	baz=219						
TCU	**Taichung**	**1.85**	**246**	*e*P	**Pb**	**13 24 13.2**	**-0.2**
	baz=245						
YULB	**Yu-li**	**1.90**	**216**	P	**Pn**	**13 24 10.9**	**-0.9**
	baz=215						
EYUL	**Yuli**	**1.92**	**215**	P	**Pn**	**13 24 12.3**	**+0.3**
	baz=214						
EYUL				*e*S	**Sn**	**13 24 35.4**	**-0.6**
	baz=214						
TWF1	**Yuli**	**1.93**	**216**	*i* P	**Pn**	**13 24 11.6**	**-0.6**
	baz=214						
WHYT	**Xinyi Township**	**1.96**	**231**	*e*P	**Pb**	**13 24 14.9**	**-0.3**
	baz=217						
WJS	**Zhushan**	**1.97**	**236**	*i* P	**Pb**	**13 24 16.0**	**+0.6**
	baz=218						
WJS				*e*S	**Sb**	**13 24 40.9**	**+0.9**
	baz=218						
WNT	**Mingjian**	**1.98**	**238**	*e*P	**Pb**	**13 24 15.6**	**0.0**
	baz=256						
WNT				*e*S	**Sb**	**13 24 41.0**	**+1.0**
	baz=256						
FULB	**Fuli**	**2.06**	**213**	*i* P	**Pn**	**13 24 15.0**	**+1.1**
	baz=197						
ALS	**Alishan**	**2.11**	**228**	*i* P	**Pn**	**13 24 16.4**	**+1.4**
	baz=212						
ALS				S	**Sb**	**13 24 43.0**	**-1.1**
	baz=212						
CHN5	**Tsauling**	**2.14**	**232**	*i* P	**Pb**	**13 24 17.9**	**-0.5**
	baz=214						
CHN5				S	**Sb**	**13 24 44.5**	**-0.4**
	baz=214						
WDLH	**Douliu**	**2.19**	**236**	*i* P	**Pb**	**13 24 18.1**	**-1.1**
	baz=251						
WDLH				*e*S	**Sb**	**13 24 46.3**	**+0.1**
	baz=251						
ELDTW	**Lidau**	**2.21**	**219**	*i* P	**Pn**	**13 24 16.2**	**+0.1**
	baz=204						
EDH	**Donghe**	**2.24**	**210**	P	**Pn**	**13 24 15.6**	**-0.9**
	baz=196						
EDH				S	**Sn**	**13 24 41.8**	**-2.2**
	baz=196						
TPUB	**Ta-pu**	**2.37**	**227**	P	**Pb**	**13 24 20.8**	**-1.4**
	baz=211						
TPUB				S	**Sn**	**13 24 49.0**	**+1.9**
	baz=211						
STYT	**Tauyuan**	**2.39**	**223**	*i* P	**Pn**	**13 24 19.6**	**+1.1**
	baz=208						
STYT				*e*S	**Sn**	**13 24 49.1**	**+1.5**
	baz=208						
WTP	**Ta-pu**	**2.42**	**227**	*i* P	**Pn**	**13 24 20.4**	**+1.4**
	baz=210						
WTP				*e*S	**Sn**	**13 24 50.5**	**+2.1**
	baz=210						
LDUT	**Ludao**	**2.44**	**203**	*e*P	**Pn**	**13 24 18.3**	**-0.9**
	baz=202						
LDUT				*e*S	**Sn**	**13 24 46.3**	**-2.6**
	baz=202						
TWK	**Hsinying**	**2.49**	**229**	*i* P	**Pb**	**13 24 22.4**	**-1.9**
	baz=212						
CHN1	**Nanshi**	**2.52**	**227**	*i* P	**Pb**	**13 24 23.1**	**-1.7**
	baz=226						
CHN1				*e*S	**Sb**	**13 24 53.8**	**-1.8**
	baz=226						
SGST	**Jiashian**	**2.55**	**224**	P	**Pn**	**13 24 21.9**	**+1.1**
	baz=208						
SLGT	**Liugui**	**2.58**	**222**	P	**Pn**	**13 24 23.7**	**+2.5**
	baz=221						
SLGT				*e*S	**Sn**	**13 24 53.6**	**+1.3**
	baz=221						
MATB	**Ma-tsu**	**2.63**	**298**	*e*P	**Pb**	**13 24 24.6**	**-2.0**
	baz=298						
ECL	**Taimali**	**2.73**	**212**	*e*P	**Pn**	**13 24 23.3**	**+0.1**
	baz=211						
SCST	**Cishan**	**2.75**	**223**	*e*P	**Pn**	**13 24 25.0**	**+1.5**
	baz=222						
SSD	**Sandimen**	**2.78**	**219**	P	**Pn**	**13 24 25.9**	**+2.0**
	baz=218						
TSMG	**Majia**	**2.80**	**218**	P	**Pn**	**13 24 25.5**	**+1.3**
	baz=204						
TSMG				S	**Sn**	**13 25 00.3**	**+2.5**
	baz=204						
MASBT	**Mashibuluo**	**2.88**	**217**	P	**Pn**	**13 24 27.5**	**+2.2**
	baz=204						
MASBT				S	**Sn**	**13 25 02.1**	**+2.3**
	baz=204						
XPSS	**Dashiqiu**	**2.90**	**314**	*e*P	**Pb**	**13 24 28.4**	**-2.8**
	baz=315						
EAST	**Anshuo**	**2.96**	**212**	*e*P	**Pn**	**13 24 26.6**	**+0.1**
	baz=210						
EAST				*e*S	**Sn**	**13 24 59.9**	**-2.0**
	baz=210						
LYJJ	**Jianjiangzhen**	**2.97**	**304**	*e*P	**Pn**	**13 24 28.4**	**+2.0**
	baz=304						
SCZT	**Fangliau**	**3.08**	**215**	*e*P	**Pn**	**13 24 29.6**	**+1.5**
	baz=201						
SLIU	**Shizi**	**3.13**	**211**	*e*P	**Pn**	**13 24 29.9**	**+1.2**
	baz=199						
MHZQ	**Yeshan**	**3.36**	**291**	*e*P	**Pn**	**13 24 35.2**	**+3.3**
	baz=290						

IDC 20 13:34:50.4±17.0, 30.27S×77.06E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/52, mbtmp3.7/3, Error ellipse: s-maj=612.3km s-min=51.1km az=39.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**22.91**	**348**	T	T	14 04 36.1	
	baz=172,slow=76,SNR=20						
H08S1	**Diego Carcia H**	**22.91**	**348**	T	T	14 04 32.7	
	baz=172,slow=76,SNR=14						
H08S3	**Diego Garcia H**	**22.93**	**348**	T	T	14 04 37.5	
	baz=172,slow=76,SNR=32						
H01W2	**Cape Leeuwin H**	**31.46**	**108**	T	T	14 14 22.7	
	baz=265,slow=74,SNR=20						
H01W3	**Cape Leeuwin H**	**31.46**	**108**	T	T	14 14 23.9	
	baz=265,slow=74,SNR=18						
H01W1	**Cape Leeuwin H**	**31.48**	**108**	T	T	14 14 24.0	
	baz=265,slow=74,SNR=18						
ASAR	**Alice Springs**	**50.65**	**97**	P	P	13 43 51.5	-0.2
	0.4nm,0.8s,baz=252,slow=6.2,SNR=3.0						
WRA	**Warramunga Arr**	**52.41**	**93**	P	P	13 44 04.8	-0.1
	0.9nm,0.9s,baz=249,slow=6.5,SNR=6.9						
ZALV	**Zalesovo Beam**	**84.13**	**5**	P	P	13 47 22.9	+0.1
	0.7nm,0.3s,baz=193,slow=5.4,SNR=2.1						

IDC 20 13:48:47.5±19.0, 48.92S×108.71E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.6/42, mbtmp3.5/3, MS3.3/4, Ms1 3.2/4, ms1mx2.9/20, Error ellipse: s-maj=630.4km s-min=28.8km az=104.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.57**	**18**	T	T	14 07 31.8	
	baz=193,slow=74,SNR=43						
H01W1	**Cape Leeuwin H**	**14.58**	**18**	T	T	14 07 24.9	
	baz=193,slow=74,SNR=40						
H01W3	**Cape Leeuwin H**	**14.59**	**18**	T	T	14 07 26.7	
	baz=193,slow=74,SNR=38						
STKA	**Stephens Creek**	**29.98**	**68**	LR	LR	14 04 40.3	
	comp=Z,44nm,20.7s,baz=210,slow=32						
ASAR	**Alice Springs**	**32.09**	**47**	P	P	13 55 15.9	-0.3
	0.2nm,0.8s,baz=210,slow=7.8,SNR=9.1						
ASAR				LR	LR	14 07 47.5	
	comp=Z,35nm,18.9s,baz=186,slow=36						
FITZ	**Fitzroy Crossi**	**33.67**	**30**	LR	LR	14 07 09.2	
	comp=Z,58nm,20.4s,baz=41,slow=33						
VNDA	**Vanda**	**34.95**	**162**	P	P	13 55 40.5	-0.1
	0.7nm,0.6s,baz=287,slow=11,SNR=10						
WRA	**Warramunga Arr**	**35.48**	**45**	P	P	13 55 46.0	+0.3
	0.6nm,0.8s,baz=208,slow=8.0,SNR=4.7						
WRA				LR	LR	14 09 05.7	
	comp=Z,48nm,18.6s,baz=145,slow=34						

WEL 20 14:00:25.6±1.0, 38.°S±9'×18.°0E±°, h33km, M3.8/23, ML4.2/23, MLv3.8/23, Error ellipse: s-maj=0.0km s-min=0.0km az=169.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.24**	**257**	P	Pn	14 00 46.4	-0.2
WMGZ				S	Sb	14 01 03.9	-0.2
MXZ	**Matakaoa Point**	**1.30**	**269**	P	Pn	14 00 46.8	-0.5
MXZ				S	Sn	14 01 03.9	+0.3
PUZ	**Puketiti**	**1.43**	**248**	P	Pn	14 00 48.9	-0.4
PUZ				S	Sn	14 01 07.0	+0.1
CNGZ	**Carnagh Statio**	**1.66**	**235**	P	Pn	14 00 52.8	+0.5
TWGZ	**Tauwhareparae**	**1.67**	**247**	P	Pn	14 00 52.7	+0.1
TWGZ				S	Sn	14 01 14.5	+1.6
HAZ	**Te Kaha**	**1.73**	**262**	P	Pn	14 00 53.4	+0.1
HAZ				S	Sn	14 01 14.9	+0.8
RUGZ	**Raukumara Rang**	**1.84**	**256**	P	Pn	14 00 54.7	-0.2
TKGZ	**Te Karaka**	**1.88**	**241**	P	Pn	14 00 55.2	-0.1
TKGZ				S	Sn	14 01 18.7	+0.8
MWZ	**Matawai**	**2.06**	**247**	P	Pn	14 00 57.3	-0.6
MWZ				S	Sn	14 01 22.4	-0.1
RIGZ	**Rimuhau**	**2.07**	**235**	P	Pn	14 00 58.0	0.0
RIGZ				S	Sn	14 01 23.7	+1.0
PRGZ	**Paritu Road**	**2.12**	**229**	P	Pn	14 00 58.5	-0.3
RAGZ	**Rawiri**	**2.21**	**244**	P	Pn	14 01 00.4	+0.4
MHGZ	**Mahia Peninsul**	**2.26**	**224**	P	Pn	14 01 00.4	-0.3
KNZ	**Kokohu**	**2.31**	**230**	P	Pn	14 01 00.6	-0.7
URZ	**Urewera**	**2.35**	**252**	P	Pn	14 01 02.2	+0.4
WHRZ	**Whale Island**	**2.37**	**262**	P	Pn	14 01 02.8	+0.7
RTZ	**Ruatahuna**	**2.57**	**245**	P	Pn	14 01 05.2	+0.2
EDRZ	**Edgecumbe**	**2.59**	**257**	P	Pn	14 01 06.0	+0.8
WHHZ	**Waihua**	**2.62**	**234**	P	Pn	14 01 05.9	+0.3
MARZ	**Manawahe**	**2.62**	**259**	P	Pn	14 01 05.9	+0.2
RAHZ	**Arahi**	**2.63**	**238**	P	Pn	14 01 05.8	0.0
MUGZ	**Murupara**	**2.67**	**249**	P	Pn	14 01 06.4	+0.1
OPRZ	**Ohinepanea**	**2.70**	**263**	P	Pn	14 01 06.4	-0.3
MTHZ	**Maungataniwha**	**2.77**	**241**	P	Pn	14 01 07.5	-0.1
TARZ	**Mount Tarawera**	**2.80**	**255**	P	Pn	14 01 08.7	+0.6
RRRZ	**Republican Roa**	**2.82**	**253**	P	Pn	14 01 08.8	+0.4
ARHZ	**Aropaoanui**	**2.88**	**233**	P	Pn	14 01 09.0	-0.1
NMHZ	**Naumai**	**2.91**	**237**	P	Pn	14 01 09.7	+0.1
TGRZ	**Tauranga**	**2.93**	**265**	P	Pn	14 01 09.9	+0.1
PRRZ	**Plateau Road**	**2.96**	**250**	P	Pn	14 01 09.9	-0.3
KARZ	**Kaharoa**	**2.97**	**260**	P	Pn	14 01 10.4	0.0

BFZ	**Birch Farm**	**4.25 221**	P	Pn	14 01 26.4	-1.5
PRWZ	**Pori Road**	**4.31 225**	P	Pn	14 01 27.1	-1.6
RVAZ	**Riverhead Bore**	**4.35 279**	P	Pn	14 01 30.3	+0.9
VRZ	**Vera Road**	**4.37 247**	P	Pn	14 01 29.6	0.0
MRZ	**Mangatainoka R**	**4.60 226**	P	Pn	14 01 30.9	-1.8
TMWZ	**Te Maipa**	**4.74 220**	P	Pn	14 01 32.8	-2.0
WCZ	**Waipu Caves**	**4.77 288**	P	Pn	14 01 35.8	+0.6
HOWZ	**Holdsworth Sta**	**4.79 224**	P	Pn	14 01 32.8	-2.7
KHEZ	**Kahui Hut**	**4.97 248**	P	Pn	14 01 39.5	+1.5
KIW	**Kapiti Island**	**5.12 228**	P	Pn	14 01 37.2	-2.7
OUZ	**Omahuta**	**5.62 293**	P	Pn	14 01 47.8	+1.0
DUWZ	**D'Urville Isla**	**5.69 233**	P	Pn	14 01 45.8	-2.0
TCW	**Tory Channel**	**5.71 228**	P	Pn	14 01 46.8	-1.2
TUWZ	**Tuamarina**	**6.04 228**	P	Pn	14 01 50.9	-1.7
QRZ	**Quartz Range**	**6.62 238**	P	Pn	14 01 58.3	-2.3
CTZ	**Chatham Island**	**6.71 158**	P	Pn	14 02 03.1	+1.4
THZ	**Tophouse**	**6.87 230**	P	Pn	14 02 01.2	-2.7
LTZ	**Lake Taylor**	**7.86 226**	P	Pn	14 02 16.0	-1.6

IDC 20 14:03:25.9±11.0, 17.18S×179.05W, h551km±126km, mb2.8/6, mb1 3.1/6, mb1mx2.8/33, mbtmp3.7/6, Error ellipse: s-maj=140.2km s-min=33.1km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.17**	**259**	P	P	14 10 45.9	-0.6
	0.2nm,0.2s,baz=96,slow=8.0,SNR=15						
ASAR	**Alice Springs**	**44.40**	**254**	P	P	14 10 48.4	+0.1
	2.0nm,0.5s,baz=88,slow=7.7,SNR=54						
ASAR				PcP	PcP	14 12 19.6	-0.5
	0.2nm,0.5s,baz=103,slow=4.3,SNR=4.6						
FITZ	**Fitzroy Crossi**	**52.55**	**260**	P	P	14 11 49.1	+0.3
	1.0nm,0.6s,baz=83,slow=8.1,SNR=1.5						
NVAR	**Mina Array Bea**	**79.33**	**44**	P	P	14 14 35.8	+0.7
	0.2nm,0.6s,baz=219,slow=7.0,SNR=1.9						
ILAR	**Eielson Array**	**85.32**	**13**	P	P	14 15 03.9	-0.6
	0.2nm,0.5s,baz=218,slow=5.8,SNR=2.3						
PDAR	**Pinedale Array**	**87.25**	**44**	P	P	14 15 14.0	-0.4
	0.2nm,0.4s,baz=229,slow=3.5,SNR=2.5						

MEX 20 14:45:20.3±1.2, 18.17N×103.18W, h8km±10km, MD3.4, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.20**	**307**	*e*P	Pg	14 45 23.6	-0.7
MMIG				*e*S	Sg	14 45 27.1	0.0
MMIG	**Aquila**	**0.20**	**307**	*e*P	Pg	14 45 23.6	-0.7
	baz=200,slow=10						
MMIG				*e*S	Sg	14 45 27.1	0.0
COIG	**Colima**	**1.12**	**334**	*e*P	Pg	14 45 38.3	-3.5
COIG				*e*S	Sg	14 45 52.8	-3.5
COIG	**Colima**	**1.12**	**334**	*e*P	Pn	14 45 44.1	+1.7
R15V		**1.25**	**323**	*e*P	Pn	14 45 40.0	-4.3
R15V				*e*S	Sb	14 45 56.8	-3.9
R15V		**1.25**	**323**	*e*P	Pn	14 45 38.9	-5.4

IDC 20 14:46:03.2±7.8, 19.77S×177.67W, h506km±79km, mb3.1/6, mb1 3.4/6, mb1mx3.1/39, mbtmp4.0/6, Error ellipse: s-maj=82.5km s-min=33.9km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.39**	**243**	P	P	14 52 41.0	+0.3
	0.6nm,0.4s,baz=117,slow=13,SNR=3.9						
ASAR	**Alice Springs**	**44.99**	**256**	P	P	14 53 33.1	-0.1
	4.2nm,0.7s,baz=96,slow=7.9,SNR=72						
ASAR				PcP	PcP	14 55 03.2	-0.5
	0.6nm,0.4s,baz=108,slow=4.0,SNR=9.4						
WRA	**Warramunga Arr**	**45.02**	**261**	P	P	14 53 32.9	-0.5
	1.3nm,0.3s,baz=96,slow=7.5,SNR=84						
WRA				PcP	PcP	14 55 03.0	-0.9
	0.7nm,0.9s,baz=92,slow=3.2,SNR=4.6						
TXAR	**Lajitas Array**	**86.40**	**57**	P	P	14 57 52.6	+0.6
	0.1nm,0.6s,baz=229,slow=5.2,SNR=2.0						
ILAR	**Eielson Array**	**87.54**	**13**	P	P	14 57 55.6	-0.8
	0.4nm,0.7s,baz=225,slow=4.9,SNR=5.2						
CMAR	**Chiang Mai Arr**	**90.17**	**289**	P	P	14 58 11.2	+1.5
	0.5nm,0.3s,baz=116,slow=3.1,SNR=5.7						
ARCES	**ARCESS Array B**	**128.26**	**350**	PKP	PKPdf	15 04 10.4	-0.7
	2.8nm,0.9s,baz=46,slow=3.9,SNR=1.5						
AKASG	**Malin Array Be**	**142.53**	**332**	PKhKP	PKPpre	15 04 33.8	
	0.6nm,0.4s,baz=46,slow=4.0,SNR=2.5						
GERES	**GERESS Array B**	**149.58**	**345**	PKPbc	PKPbc	15 04 54.9	-0.3
	0.5nm,0.4s,baz=22,slow=3.5,SNR=5.2						

*IDC **20** 14:50:30.0±0.7, 38.62N×144.42E, h0km, mb3.9/16, mb1 4.1/21, mb1mx3.9/51, mbtmp4.0/21, ML3.6/5, MS3.3/8, Ms1 3.3/8, ms1mx2.8/54, Error ellipse: s-maj=17.9km s-min=14.9km az=114.0*

*NEIC **20** 14:50:32.1±2.5, 38.69N±0.08×144.5E±0.2, h24km±4km, mb4.4/3, Error ellipse: s-maj=21.2km s-min=8.0km az=117.0*

*JMA **20** 14:50:33.8±0.2, 38.76N×144.20E, h49km, M4.0*

*NIED **20** 14:50:33.8, 38.76N×144.20E, h49km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}=0.94; $M_{\theta\theta}$=0.08; $M_{\phi\phi}$=0.86; $M_{r\theta}$=0.33; $M_{\theta\phi}$=0.25; $M_{\phi r}$=0.64; Fault plane solution: M_0=1.18000×10^{15} NP1: ϕ_s=203.00000°, δ=64.00000°, λ=-84.00000°. NP2: ϕ_s=10.00000°, δ=27.00000°, λ=-101.00000°.*

ISC 20 14:50:34.3±0.7, 38.75N±0.05×144.29E±0.07, h29km, n75, σ2.911/83, mb3.9/17, MS3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.07**	**280**	P	**Pn**	**14 51 06.2**	**-0.9**
OFUJ				*e*S	**Sn**	**14 51 29.8**	**-2.2**
MIYJ	**Miyakonagasawa**	**2.09**	**294**	P	**Pn**	**14 51 06.3**	**-1.1**
MIYJ				*e*S	**Sn**	**14 51 30.6**	**-1.9**
JKMT	**Kesennumamotoy**	**2.20**	**273**	P	**Pn**	**14 51 08.0**	**-0.9**
JKMT				*e*S	**Sn**	**14 51 33.0**	**-2.2**
JTH	**Tanohata**	**2.23**	**303**	P	**Pn**	**14 51 08.2**	**-1.1**
JTH				*e*S	**Sn**	**14 51 33.9**	**-1.9**
JMK	**Ichinoseki**	**2.41**	**276**	P	**Pn**	**14 51 11.2**	**-0.5**
JOM	**Ohasama**	**2.44**	**288**	P	**Pn**	**14 51 11.6**	**-0.6**
JOM				*e*S	**Sn**	**14 51 39.7**	**-1.4**
JANG	**Nango**	**2.69**	**308**	P	**Pn**	**14 51 14.1**	**-1.6**
JMM	**Marumori**	**2.89**	**253**		**Pn**	**14 51 17.1**	**-1.2**
JYK	**Kaneyama**	**3.08**	**274**	P	**Pn**	**14 51 20.8**	**-0.1**
JTM	**Tenmabayashi**	**3.21**	**310**	Pn	**Pn**	**14 51 22.1**	**-0.7**
JFT	**Otama**	**3.35**	**250**	P	**Pn**	**14 51 24.5**	**-0.2**
JFT				*e*S	**Sn**	**14 52 02.4**	**-1.2**
ERM	**Erimo**	**3.38**	**345**	Pn	**Pn**	**14 51 24.5**	**-0.5**
JOT	**Ohata**	**3.62**	**318**	P	**Pn**	**14 51 27.6**	**-0.8**
JOT				*e*S	**Sn**	**14 52 07.1**	**-3.1**
JNBK	**Urakawa-nobuka**	**3.72**	**342**	P	**Pn**	**14 51 29.1**	**-0.7**
JNBK				*e*S	**Sn**	**14 52 10.7**	**-1.9**
JCH	**Churui**	**3.93**	**350**	P	**Pn**	**14 51 31.0**	**-1.6**
JCH				*e*S	**Sn**	**14 52 13.4**	**-4.3**
JKB	**Kayabe**	**4.00**	**323**	P	**Pn**	**14 51 33.7**	**0.0**
JKB				*e*S	**Sn**	**14 52 16.0**	**-3.6**
JYT	**Yasato**	**4.12**	**234**	Pn	**Pn**	**14 51 33.9**	**-1.3**
JEW	**Eniwo**	**4.62**	**333**	Pn	**Pn**	**14 51 43.1**	**+1.0**
NEM2	**Nemuro 2**	**4.74**	**13**	P	**Pn**	**14 51 40.9**	**-2.9**
NEM2				*e*S	**Sn**	**14 52 30.8**	**-7.0**
JSD	**Sado**	**4.79**	**263**		**Pn**	**14 51 44.1**	**-0.4**
BSO1	**Boso 1**	**4.88**	**214**	P	**Pn**	**14 51 43.2**	**-2.0**
JOSM	**Okushiri--Mats**	**4.96**	**314**	P	**Pn**	**14 51 46.4**	**-0.4**
JRY	**Ryogami san**	**5.08**	**239**	P	**Pn**	**14 51 47.6**	**-1.0**
JRY				*e*S	**Sn**	**14 52 43.1**	**-3.2**
JTKR	**Abashiri--Toko**	**5.23**	**357**	P	**Pn**	**14 51 48.8**	**-1.7**
JTKR				*e*S	**Sn**	**14 52 44.6**	**-5.1**
MJAR	**Matsushiro Arr**	**5.30**	**247**	Pn	**Pn**	**14 51 51.5**	**-0.1**
	0.8nm,0.3s,baz=59,slow=12,SNR=37						
MJAR				Sn	**Sn**	**14 52 53.6**	**+1.8**
	0.0nm,0.3s,baz=51,slow=22,SNR=1.4						
MJAR	**Matsushiro Arr**	**5.30**	**247**	Pn	**Pn**	**14 51 51.9**	**+0.3**
MAJO	**Matsushiro**	**5.31**	**247**	Pn	**Pn**	**14 51 52.3**	**+0.7**
MAT	**Matsushiro**	**5.31**	**247**	P	**Pn**	**14 51 52.1**	**+0.5**
MAT				*e*S	**Sn**	**14 52 49.6**	**-2.2**
JHR	**Hokuryu**	**5.35**	**340**	P	**Pn**	**14 51 53.0**	**+0.8**
JHR				*e*S	**Sn**	**14 52 51.2**	**-1.6**
JOD2	**Odawara 2**	**5.42**	**232**	P	**Pn**	**14 51 51.9**	**-1.4**
JOD2				*e*S	**Sn**	**14 52 49.5**	**-5.2**
JKA	**Kamikawa-asahi**	**5.51**	**347**		**Pn**	**14 51 54.2**	**-0.2**
ASAJ	**Asahikawa**	**5.51**	**347**	Pn	**Pn**	**14 51 53.8**	**-0.6**
	3.2nm,0.3s,baz=189,slow=17,SNR=29						
ASAJ				Sn	**Sn**	**14 52 53.9**	**-2.9**
	1.6nm,0.3s,baz=209,slow=19,SNR=1.8						
JGF	**Kuroka**	**6.37**	**243**	Pn	**Pn**	**14 52 06.9**	**+0.8**
JHJ	**Hachijo jima 2**	**6.70**	**214**	Pn	**Pn**	**14 52 08.4**	**-2.4**
	15nm,0.3s,baz=52,slow=19,SNR=6.4						
JHJ				Sn	**Sn**	**14 53 18.5**	**-7.6**
	16nm,0.3s,baz=105,slow=20,SNR=1.8						
INU	**Inuyama**	**6.73**	**242**		**Pn**	**14 52 11.5**	**+0.3**
JWT	**Wachi**	**7.91**	**247**		**Pn**	**14 52 27.5**	**+0.2**
YSS	**Yuzh-Sakhalins**	**8.28**	**353**	Pn	**Pn**	**14 52 30.6**	**-1.8**
JHS	**Saijyo**	**9.70**	**251**	Pn	**Pn**	**14 52 49.2**	**-2.8**
USRK	**Ussuriysk Ar.**	**10.71**	**304**	Pn	**Pn**	**14 53 07.8**	**+2.1**
	baz=115,slow=13,SNR=6.9						
USRK				LR	LR	14 57 42.9	
	comp=Z,99nm,18.1s,baz=158,slow=40						
JNU	**Nakatsue**	**12.23**	**247**	LR	LR	14 59 20.1	
	comp=Z,166nm,18.0s,baz=12,slow=43						
KSRS	**Korea Array**	**12.96**	**269**	Pn	**Pn**	**14 53 39.0**	**+2.5**
	0.2nm,0.3s,baz=80,slow=14,SNR=3.5						
KSRS				LR	LR	14 58 10.9	
	comp=Z,68nm,21.4s,baz=126,slow=35						
KSAR	**Wonju Array Be**	**12.99**	**269**	Pn	**Pn**	**14 53 36.9**	**0.0**
KLR	**Kul'dur**	**13.81**	**323**	LR	LR	14 59 08.6	
	comp=Z,38nm,18.1s,baz=129,slow=37						
SEY	**Seymchan**	**24.71**	**9**	P	**P**	**14 55 53.0**	**+0.4**
	3.0nm,0.3s,baz=194,slow=11,SNR=20						
YAK	**Yakutsk**	**24.98**	**344**	P	**P**	**14 55 57.4**	**+2.3**
	2.6nm,0.6s,baz=222,slow=6.2,SNR=1.9						
H11N2	**WAKE ISLAND Hy**	**27.23**	**128**	T	T	15 24 45.9	
	baz=319,slow=73,SNR=4.8						
H11N1	**WAKE ISLAND Hy**	**27.23**	**128**	T	T	15 24 41.9	
	baz=319,slow=73,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**27.24**	**128**	T	T	15 24 37.5	
	baz=319,slow=73,SNR=5.1						
H11S1	**WAKE ISLAND Hy**	**28.04**	**130**	T	T	15 25 50.0	
	baz=322						
H11S3	**WAKE ISLAND Hy**	**28.04**	**130**	T	T	15 25 45.5	
	baz=322						
H11S2	**WAKE ISLAND Hy**	**28.05**	**130**	T	T	15 25 45.9	
	baz=322						
SONM	**Songino Array**	**28.79**	**301**	P	**P**	**14 56 32.6**	**+2.8**
	1.2nm,0.8s,baz=96,slow=9.9,SNR=4.0						
SONM				LR	LR	15 06 51.4	
	comp=Z,52nm,21.3s,baz=158,slow=34						
ZALV	**Zalesovo Beam**	**42.48**	**311**	P	**P**	**14 58 27.1**	**+0.5**
	0.6nm,0.3s,baz=88,slow=7.7,SNR=2.1						
MKAR	**Makanchi Array**	**45.16**	**301**	P	**P**	**14 58 49.1**	**+0.8**
	0.6nm,0.7s,baz=76,slow=8.0,SNR=4.4						
KURK	**Kurchatov**	**46.69**	**307**	P	**P**	**14 59 01.8**	**+1.6**
KURK				IAmb	IAmb	14 59 10.6	
	comp=Z,3.1nm,0.7s						
KURBB	**Kurchatov Arra**	**46.76**	**307**	P	**P**	**14 59 01.2**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=81,slow=8.2,SNR=9.1						
ILAR	**Eielson Array**	**46.82**	**33**	P	**P**	**14 59 01.3**	**+0.2**
	comp=Z,1.2nm,1.0s,baz=258,slow=5.8,SNR=5.8						
INK	**Inuvik**	**51.82**	**28**	P	**P**	**14 59 40.1**	**+1.0**
	comp=Z,2.4nm,0.6s,baz=300,slow=6.2,SNR=13						
INK	**Inuvik**	**51.82**	**28**	P	**P**	**14 59 39.8**	**+0.7**
INK				IAmb	IAmb	15 00 13.1	
	comp=Z,7.3nm,1.4s						
WRA	**Warramunga Arr**	**59.12**	**191**	P	**P**	**15 00 31.2**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=12,slow=7.3,SNR=17						
WRA	**Warramunga Arr**	**59.12**	**191**	P	**P**	**15 00 29.8**	**-2.3**
ASAR	**Alice Springs**	**62.84**	**191**	P	**P**	**15 00 56.8**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=15,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**62.84**	**191**	P	**P**	**15 00 54.6**	**-2.8**
FINES	**FINESS Array B**	**68.34**	**333**	P	**P**	**15 01 33.3**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=64,slow=13,SNR=2.3						
FINES	**FINESS Array B**	**68.34**	**333**	P	**P**	**15 01 31.9**	**-0.6**
KVAR	**Kislovodsk Arr**	**71.48**	**312**	LR	LR	15 35 57.8	
	comp=Z,90nm,20.3s,baz=95,slow=38						
KBZ	**Khabaz**	**71.50**	**311**	LR	LR	15 37 08.0	
	comp=Z,28nm,18.2s,baz=104,slow=39						
NVAR	**Mina Array Bea**	**72.14**	**55**	P	**P**	**15 01 56.7**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=282,slow=6.9,SNR=6.4						
GNI	**Garni**	**72.49**	**308**	LR	LR	15 36 58.8	
	comp=Z,17nm,18.5s,baz=2.5,slow=38						
NB2	**NORSAR Subarra**	**73.47**	**338**	P	**P**	**15 02 04.1**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=38,slow=6.2						
NOA	**NORSAR Array B**	**73.47**	**338**	P	**P**	**15 02 04.1**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=37,slow=6.0,SNR=3.9						
AKASG	**Malin Array Be**	**74.31**	**323**	P	**P**	**15 02 09.8**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=47,slow=6.0,SNR=1.8						
PDAR	**Pinedale Array**	**74.84**	**47**	P	**P**	**15 02 12.8**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=290,slow=2.0,SNR=5.5						
TXAR	**Lajitas Array**	**87.27**	**54**	P	**P**	**15 03 19.1**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=282,slow=5.4,SNR=2.1						
SIV	**San Ignacio**	**148.24**	**52**	PKPbc	**PKiKP**	**15 10 18.4**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=333,slow=2.3,SNR=6.3						

IDC 20 14:56:02.6±2.3, 1.93N×126.88E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/32, mbtmp3.3/3, Error ellipse: s-maj=183.8km s-min=27.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.94**	**162**	P	P	15 01 08.1	-0.6
	0.5nm,0.6s,baz=340,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.35**	**165**	P	P	15 01 41.2	+0.6
	0.3nm,0.8s,baz=359,slow=8.6,SNR=10						
MKAR	**Makanchi Array**	**59.11**	**326**	P	P	15 06 04.8	-0.2
	0.2nm,0.3s,baz=121,slow=8.0,SNR=2.2						

*IDC **20** 15:10:12.5±3.2, 5.53S×151.98E, h60km±21km, mb3.5/5, mb1 3.7/6, mb1mx3.4/29, mbtmp3.8/6, ML1.8/1, Error ellipse: s-maj=60.6km s-min=11.0km az=118.0*

ISC 20 15:10:10.3±1.5, 5.65S±0.1×152.2E±0.2, h45km, n8, σ1.910/10, mb3.6/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.30**	**352**	P	**Pn**	**15 10 32.3**	**+0.3**
	175nm,0.3s,baz=142,slow=0.9,SNR=641						
KRVT				S	**Sn**	**15 10 49.2**	**+1.0**
	183nm,0.3s,baz=287,slow=23,SNR=9.1						
KRVT				LR	LR	15 10 49.7	
	comp=Z,40nm,20.2s,baz=216,slow=30						
PMG	**Port Moresby**	**6.27**	**233**	P	**Pn**	**15 11 42.3**	**+1.9**
	1.3nm,0.3s,baz=342,slow=16,SNR=3.0						
PMG				S	**Sn**	**15 12 49.8**	**-1.0**
	3.4nm,0.3s,baz=142,slow=21,SNR=7.7						
WRA	**Warramunga Arr**	**22.48**	**229**	P	**P**	**15 15 05.3**	**-0.7**
	1.7nm,0.6s,baz=52,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**25.16**	**223**	P	**P**	**15 15 32.1**	**+0.4**
	1.8nm,0.6s,baz=58,slow=8.8,SNR=17						
FITZ	**Fitzroy Crossi**	**28.76**	**242**	P	**P**	**15 16 03.0**	**-1.0**
	0.7nm,0.3s,baz=53,slow=9.2,SNR=1.6						
SONM	**Songino Array**	**66.69**	**328**	P	**P**	**15 20 56.0**	**-0.7**
	0.3nm,0.4s,baz=137,slow=7.4,SNR=3.1						
ILAR	**Eielson Array**	**83.12**	**22**	P	**P**	**15 22 31.6**	**+0.4**
	0.4nm,0.9s,baz=256,slow=5.4,SNR=1.7						
TORD	**Torodi Ar. Bea**	**149.98**	**287**	PKPbc	**PKPbc**	**15 29 56.5**	**-0.5**
	1.5nm,0.6s,baz=71,slow=3.3,SNR=7.9						

*TAP **20** 15:29:33.6, 25.03N×122.43E, h153km, ML3.0, C*

*JMA **20** 15:29:33.2±0.2, 24.97N×122.38E, h157km±2km, M2.2*

ISC 20 15:29:34.1±2.1, 24.99N±0.08×122.40E±0.03, h150km±12km, n56, σ0.966/102, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.38**	**273**	P	**Pn**	**15 29 55.0**	**+0.2**
	baz=267						
TWB1				*e*S	**Sn**	**15 30 10.9**	**+0.4**
	baz=267						
TIPB	**Shuangxi**	**0.52**	**268**	P	**Pn**	**15 29 55.5**	**0.0**
	baz=253						
TIPB				S	**Sn**	**15 30 11.7**	**-0.1**
	baz=253						
TWC	**Suao**	**0.63**	**233**	*e*P	**Pn**	**15 29 55.4**	**-0.7**
	baz=237						
TWC				*e*S	**Sn**	**15 30 11.9**	**-0.9**
	baz=237						
TWE	**Neicheng**	**0.72**	**248**	P	**Pn**	**15 29 56.8**	**+0.1**
	baz=251						
TWE				S	**Sn**	**15 30 13.7**	**-0.2**
	baz=251						
JYNG	**Yonagunijimaku**	**0.73**	**137**	P	**Pn**	**15 29 56.7**	**-0.1**
JYNG				*e*S	**Sn**	**15 30 15.2**	**+1.2**
TWA	**Mucha**	**0.74**	**270**	*e*S	**Sn**	**15 30 13.8**	**-0.3**
	baz=260						
YOJ	**Yonaguni jima**	**0.76**	**133**	*e*P	**Pn**	**15 29 57.5**	**+0.5**
	baz=144						
YOJ				*e*S	**Sn**	**15 30 14.4**	**0.0**
	baz=144						
YM01	**YM01**	**0.77**	**282**	*e*S	**Sn**	**15 30 14.2**	**-0.4**
	baz=274						
ENA	**Nanau**	**0.82**	**227**	*i* P	**Pn**	**15 29 58.1**	**+0.7**
	baz=221						
ENA				*i* S	**Sn**	**15 30 15.4**	**+0.2**
	baz=221						
TATO	**Taipei**	**0.83**	**269**	*e*S	**Sn**	**15 30 14.8**	**-0.4**
	baz=264						
NWLT	**Wulai**	**0.84**	**256**	P	**Pn**	**15 29 56.8**	**-0.8**
	baz=256						
NWLT				*i* S	**Sn**	**15 30 14.5**	**-1.0**
	baz=256						
NDT	**Datong Townshi**	**0.89**	**245**	*i* P	**Pn**	**15 29 58.8**	**+0.8**
	baz=243						
NDT				S	**Sn**	**15 30 16.6**	**+0.4**
	baz=243						
YHNB	**Yeheng**	**0.98**	**251**	P	**Pn**	**15 29 58.7**	**-0.1**
	baz=243						
YHNB				S	**Sn**	**15 30 16.7**	**-0.9**
	baz=243						
NSK	**Sanguang**	**1.00**	**252**	*i* P	**Pn**	**15 29 58.8**	**-0.1**
	baz=243						
NSK				*i* S	**Sn**	**15 30 17.9**	**+0.1**
	baz=243						
NNSB	**Datong**	**1.08**	**239**	P	**Pn**	**15 30 00.1**	**+0.4**
	baz=244						
NNSB				S	**Sn**	**15 30 19.2**	**0.0**
	baz=244						
NNSH	**Datong**	**1.08**	**239**	*i* P	**Pn**	**15 30 00.2**	**+0.5**
	baz=243						
NNSH				S	**Sn**	**15 30 19.3**	**+0.1**
	baz=243						
NNS	**Nan Shan**	**1.08**	**240**	*i* P	**Pn**	**15 30 00.3**	**+0.6**
	baz=244						
NNS				S	**Sn**	**15 30 19.1**	**-0.1**
	baz=244						
NACB	**Ninganchiao**	**1.09**	**222**	P	**Pn**	**15 29 59.7**	**0.0**
	baz=218						
NACB				S	**Sn**	**15 30 19.1**	**0.0**
	baz=218						
ETLH	**Xiulin Townshi**	**1.14**	**227**	P	**Pn**	**15 30 00.4**	**+0.2**
	baz=235						
ETLH				S	**Sn**	**15 30 20.3**	**+0.2**
	baz=235						
TWD	**Chiawan**	**1.16**	**219**	*e*P	**Pn**	**15 30 00.4**	**+0.1**
	baz=217						
TWD				*i* S	**Sn**	**15 30 20.4**	**+0.1**
	baz=217						
FUSS	**Fushou**	**1.29**	**235**	*i* P	**Pn**	**15 30 02.3**	**+0.5**
	baz=229						
FUSS				S	**Sn**	**15 30 23.3**	**+0.5**
	baz=229						
LIOB	**Emei**	**1.30**	**255**	*i* P	**Pn**	**15 30 01.8**	**+0.1**
	baz=248						
LIOB				S	**Sn**	**15 30 22.3**	**-0.4**
	baz=248						
NSTT	**Nanjuang**	**1.32**	**255**	*i* P	**Pn**	**15 30 01.7**	**-0.1**
	baz=247						
NSTT				S	**Sn**	**15 30 21.5**	**-1.4**
	baz=247						
WHF	**Hehuan Shan**	**1.33**	**231**	*i* P	**Pn**	**15 30 02.8**	**+0.4**
	baz=230						
WHF				*i* S	**Sn**	**15 30 23.8**	**-0.2**
	baz=230						
TWT	**Tachien**	**1.33**	**237**	*i* P	**Pn**	**15 30 03.3**	**+1.1**
	baz=240						
TWT				S	**Sn**	**15 30 23.6**	**0.0**
	baz=240						
TDCB	**Techi**	**1.35**	**237**	P	**Pn**	**15 30 03.1**	**+0.9**
	baz=241						
TDCB				S	**Sn**	**15 30 23.8**	**+0.1**
	baz=241						
IRIF	**Iriomote-Funau**	**1.37**	**118**	P	**Pn**	**15 30 02.2**	**-0.1**
IRIF				S	**Sn**	**15 30 24.6**	**+0.7**
CHGB	**Renai**	**1.45**	**231**	P	**Pn**	**15 30 04.5**	**+1.1**
	baz=230						
CHGB				S	**Sn**	**15 30 26.4**	**+0.7**
	baz=230						
ESL	**Shilin**	**1.47**	**217**	P	**Pn**	**15 30 02.5**	**-0.8**
	baz=216						
ESL				S	**Sn**	**15 30 24.4**	**-1.2**
	baz=216						
WHP	**Taichung City**	**1.50**	**242**	P	**Pn**	**15 30 04.4**	**+0.6**
	baz=247						
WHP				S	**Sn**	**15 30 26.2**	**-0.2**
	baz=247						
OWD	**Renai**	**1.52**	**228**	P	**Pn**	**15 30 03.5**	**-0.5**
	baz=224						
OWD				S	**Sn**	**15 30 27.6**	**+0.7**
	baz=224						
EGFH	**Guangfu**	**1.59**	**214**	*e*S	**Sn**	**15 30 27.2**	**-0.7**
	baz=224						
JKRS	**Kuro-shima**	**1.64**	**117**	P	**Pn**	**15 30 05.7**	**+0.5**

	baz=219							
SLGT				S	**Sn**	15 30 48.8	**+0.7**
	baz=219							

IDC 20 15:36:58.5±2.8, 7°05S×132°01E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.4/20, mbtmp3.4/3, ML3.4/2, Error ellipse: s-maj=141.1km s-min=27.3km az=75.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.02**	**170**	Pn	Pn	15 40 06.0	+1.1
	0.2nm,0.3s,baz=352,slow=11,SNR=13						
WRA				Sn	Sn	15 42 30.0	-0.6
	0.5nm,0.3s,baz=351,slow=23,SNR=7.0						
ASAR	**Alice Springs**	**16.63**	**174**	Pn	Pn	15 40 53.8	+0.7
	0.2nm,0.3s,baz=347,slow=9.2,SNR=23						
ASAR				Sn	Sn	15 43 57.1	-1.4
	0.2nm,0.3s,baz=352,slow=12,SNR=5.0						
MKAR	**Makanchi Array**	**69.37**	**326**	P	P	15 48 08.0	-0.1
	0.2nm,0.6s,baz=133,slow=6.8,SNR=1.9						

*IDC **20** 15:41:28.2±3.3, 35°.93N×141°.46E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/42, mbtmp3.3/4, ML2.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.5/32, Error ellipse: s-maj=83.8km s-min=26.6km az=45.0*
*JMA **20** 15:41:29.5±0.1, 36°.52N×141°.56E, h52km±4km, M2.8*
ISC 20 15:41:26.5±2.3, 36°.51N±0°.06×141°.55E±0°.08, h12km±14km, n17, σ1§26/16, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.79**	**258**	P	**Pn**	**15 41 44.9**	**+1.4**
JHYU				*e*S	**Sn**	**15 41 55.4**	**+0.2**
JHO	**Hitachi**	**0.80**	**278**	P	**Pn**	**15 41 44.6**	**+1.1**
JHO				*e*S	**Sn**	**15 41 55.7**	**+0.4**
ONAJ	**Iwakimizuishiy**	**0.84**	**315**	P	**Pn**	**15 41 44.9**	**+0.7**
CHOJ	**Chosi**	**0.98**	**215**	P	**Pn**	**15 41 47.3**	**+1.3**
JFT	**Otama**	**1.40**	**316**	P	**Pg**	**15 41 54.0**	**+0.6**
JMM	**Marumori**	**1.48**	**336**	P	**Pb**	**15 41 53.9**	**-0.1**
JIO	**Ouri**	**1.95**	**355**	P	**Pn**	**15 41 59.6**	**+0.2**
JIO				S	**Sn**	**15 42 23.6**	**-0.1**
MJAR	**Matsushiro Arr**	**2.69**	**272**	Pn	**Pb**	**15 42 12.2**	**-2.4**
	0.7nm,0.3s,baz=1.8,slow=12,SNR=31						
MJAR				Sn	**Sb**	**15 42 46.8**	**-0.8**
	0.3nm,0.3s,baz=343,slow=28,SNR=4.9						
MAT	**Matsushiro**	**2.69**	**272**	P	**Pb**	**15 42 13.1**	**-1.5**
MAT				S	**Sn**	**15 42 43.7**	**+1.6**
H11N2	**WAKE ISLAND Hy**	**27.79**	**120**	T	T	16 16 33.6	
	baz=313,slow=75,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**27.80**	**120**	T	T	16 16 38.0	
	baz=313,slow=75,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**27.81**	**120**	T	T	16 16 42.3	
	baz=313,slow=75,SNR=3.7						
SONM	**Songino Array**	**28.17**	**305**	P	P	15 47 24.8	+6.1
	0.7nm,0.7s,baz=106,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**56.56**	**188**	P	**P**	**15 51 07.5**	**-1.4**
	0.4nm,0.9s,baz=5.3,slow=7.4,SNR=2.2						
ARU	**Arti**	**56.83**	**319**	LR	LR	16 15 39.3	
	comp=Z,10nm,18.5s,baz=250,slow=36						
ASAR	**Alice Springs**	**60.28**	**188**	P	**P**	**15 51 35.4**	**+0.5**
	0.2nm,0.9s,baz=21,slow=13,SNR=1.4						
KIRV	**Kirov**	**60.73**	**323**	LR	LR	16 18 16.2	
	comp=Z,38nm,19.4s,baz=257,slow=36						

*IDC **20** 15:54:41.4±2.1, 18°.06S×175°.53W, h217km±20km, mb3.8/11, mb1 4.0/13, mb1mx3.7/42, mbtmp4.4/13, Error ellipse: s-maj=16.9km s-min=13.0km az=136.0*
*NEIC **20** 15:54:42.9±1.8, 18°.04S±0°.10×175°.45W±0°.09, h232km±6km, mb4.7/39, Error ellipse: s-maj=14.5km s-min=12.6km az=191.0*
ISC 20 15:54:44.9±0.5, 18°.16S±0°.08×175°.37W±0°.06, h254km, n63, σ1§37/65, mb4.5/28, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.24**	**101**		**Pn**	**15 56 02.7**	**-1.1**
NIUE				S	**S**	**15 57 03.5**	**-3.2**
AFI	**Afiamalu**	**5.46**	**40**	P	Pn	15 56 02.1	-4.5
	50nm,0.3s,baz=194,slow=2.8,SNR=115						
AFI				S	S	15 57 00.0	-12
	59nm,0.3s,baz=70,slow=20,SNR=9.7						
MSVF	**Nonsavu**	**6.28**	**273**		**Pn**	**15 56 19.8**	**+3.1**
FUNA	**Funafuti**	**10.94**	**330**	Pn	**Pn**	**15 57 13.3**	**-2.0**
SANVU	**Saraoutou**	**16.90**	**277**		**Pn**	**15 58 27.0**	**-0.6**
SANVU				IAmb	IAmb	15 58 39.9	
	comp=Z,27nm,0.7s						
DZM	**Mont Dzumac**	**17.51**	**254**	P	**P**	**15 58 31.5**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=71,slow=20,SNR=8.0						
DZM	**Mont Dzumac**	**17.51**	**254**	P	**Pn**	**15 58 35.1**	**+0.3**
DZM				IAmb	IAmb	15 58 36.1	
	comp=Z,37nm,1.0s						
MXZ	**Matakaoa Point**	**20.11**	**195**	P	**P**	**15 59 01.6**	**+1.8**
URZ	**Urewera**	**21.07**	**197**	P	**P**	**15 59 09.5**	**-0.4**
	comp=Z,5.6nm,0.3s,baz=261,slow=3.5,SNR=17						
URZ				S	**S**	**16 02 44.0**	**-3.5**
	comp=Z,3.9nm,0.8s,baz=253,slow=11,SNR=1.0						
URZ	**Urewera**	**21.07**	**197**	P	**P**	**15 59 09.1**	**-0.7**
URZ				IAmb	IAmb	15 59 27.4	
	comp=Z,100nm,2.0s						
URZ					**S**	**16 02 45.8**	**-1.7**
PPTF	**Pamatai, Papee**	**24.56**	**93**	P	**P**	**15 59 43.6**	**+1.5**
HNR	**Honiara**	**25.47**	**287**	P	**P**	**15 59 52.4**	**+2.2**
RPZ	**Rata Peaks**	**27.93**	**201**	P	**P**	**16 00 11.6**	**-0.2**
	comp=Z,2.7nm,0.4s,baz=54,slow=17,SNR=0.9						
EIDS	**Eidsvold**	**31.91**	**251**	P	**P**	**16 00 47.6**	**+0.5**
ARMA	**Armidale**	**32.34**	**242**	P	**P**	**16 00 50.3**	**-0.5**
ARMA				IAmb	IAmb	16 01 54.5	
	comp=Z,60nm,1.9s						
CTA	**Charters Tower**	**36.26**	**261**	P	**P**	**16 01 22.2**	**-2.2**
	comp=Z,3.7nm,0.5s,baz=88,slow=11,SNR=9.6						
CTAO	**Charters Tower**	**36.26**	**261**	P	**P**	**16 01 23.7**	**-0.7**
PMG	**Port Moresby**	**37.35**	**278**	P	**P**	**16 01 33.4**	**-0.3**
PMG				IAmb	IAmb	16 01 36.0	
	comp=Z,20nm,0.9s						
TOO	**Toolangi**	**39.28**	**232**	P	**P**	**16 01 49.6**	**+0.1**
TOO				IAmb	IAmb	16 01 59.7	
	comp=Z,26nm,1.4s						
COEN	**Coen**	**40.00**	**270**	P	**P**	**16 01 55.1**	**-0.4**
TAU	**Tasmania Unive**	**40.02**	**224**	P	**P**	**16 01 56.2**	**+0.9**
TAU				IAmb	IAmb	16 02 12.6	
	comp=Z,204nm,2.0s						
STKA	**Stephens Creek**	**41.05**	**242**	P	**P**	**16 02 01.9**	**-2.1**
	comp=Z,9.0nm,0.9s,baz=95,slow=9.5,SNR=13						
STKA	**Stephens Creek**	**41.05**	**242**	P	**P**	**16 02 04.5**	**+0.5**
BBOO	**Buckleboo**	**45.82**	**242**	P	**P**	**16 02 42.0**	**0.0**
BBOO				IAmb	IAmb	16 02 42.7	
	comp=Z,24nm,0.7s						
WR0	**Warramunga Arr**	**47.24**	**259**	P	**P**	**16 02 52.5**	**-0.6**
WB0	**Warramunga Arr**	**47.40**	**260**	P	**P**	**16 02 53.8**	**-0.5**
WB0				IAmb	IAmb	16 02 54.8	
	comp=Z,12nm,0.5s						
WB2	**Warramunga Arr**	**47.42**	**259**	P	**P**	**16 02 53.9**	**-0.6**
WB2				IAmb	IAmb	16 02 54.7	
	comp=Z,12nm,0.5s						
WRAB	**Tennant Creek**	**47.42**	**259**	P	**P**	**16 02 53.7**	**-0.7**
WRAB				IAmb	IAmb	16 02 54.7	
	comp=Z,9.1nm,0.5s						
WRA	**Warramunga Arr**	**47.43**	**259**	P	**P**	**16 02 53.8**	**-0.8**
	comp=Z,6.2nm,0.4s,baz=98,slow=6.4,SNR=370						
WRA	**Warramunga Arr**	**47.43**	**259**	P	**P**	**16 02 53.7**	**-0.8**
AS31	**Alice Springs**	**47.50**	**254**	P	**P**	**16 02 54.9**	**-0.3**
ASAR	**Alice Springs**	**47.51**	**254**	P	**P**	**16 02 55.0**	**-0.2**
	comp=Z,52nm,0.7s,baz=96,slow=7.2,SNR=1090						
ASAR				S	**S**	**16 09 27.6**	**-2.8**
	comp=Z,1.1nm,0.9s,baz=93,slow=14,SNR=7.7						
ASAR	**Alice Springs**	**47.51**	**254**	P	**P**	**16 02 54.4**	**-0.7**
MTN	**Manton Dam**	**51.68**	**268**	P	**P**	**16 03 25.9**	**-0.7**
MTN				IAmb	IAmb	16 03 26.4	
	comp=Z,19nm,0.8s						
FORT	**Forrest**	**52.51**	**245**	P	**P**	**16 03 31.9**	**-0.7**
FORT				IAmb	IAmb	16 04 37.0	
	comp=Z,20nm,0.9s						
SAUI	**Saumlaki**	**52.76**	**274**	P	**P**	**16 03 31.8**	**-2.7**
KNRA	**Kununurra**	**53.34**	**264**	P	**P**	**16 03 38.1**	**-0.6**
KNRA				IAmb	IAmb	16 03 39.1	
	comp=Z,21nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.84**	**260**	P	**P**	**16 03 56.4**	**-0.2**
SOEI	**Soe**	**58.96**	**269**		**P**	**16 04 18.9**	**+0.3**
SOEI				IAmb	IAmb	16 04 20.7	
	comp=Z,30nm,0.7s						
VNDA	**Vanda**	**60.45**	**186**	P	**P**	**16 04 29.2**	**+1.7**
	comp=Z,2.1nm,1.1s,baz=12,slow=6.7,SNR=14						
VNDA	**Vanda**	**60.45**	**186**	P	**P**	**16 04 30.2**	**+2.7**
PSA00	**Pilbara Seismi**	**60.64**	**255**	P	**P**	**16 04 29.5**	**-0.2**
PSA00				IAmb	IAmb	16 04 30.2	
	comp=Z,22nm,1.2s						
MMRI	**Maumere**	**61.19**	**270**	P	**P**	**16 04 33.1**	**-0.4**
MMRI				IAmb	IAmb	16 04 48.5	
	comp=Z,31nm,1.0s						
MORW	**Morawa**	**63.02**	**246**	P	**P**	**16 04 45.9**	**+0.4**
MORW				IAmb	IAmb	16 06 32.7	
	comp=Z,15nm,1.1s						
QSPA	**South Pole Qui**	**71.89**	**180**	P	**P**	**16 05 41.3**	**+0.9**
	comp=Z,5.8nm,0.8s,baz=19,slow=0.6,SNR=26						
QSPA	**South Pole Qui**	**71.89**	**180**	P	**P**	**16 05 41.9**	**+1.6**
JHS	**Saijyo**	**72.01**	**317**	P	**P**	**16 05 39.1**	**-2.2**
JHS				IAmb	IAmb	16 05 46.0	
	comp=Z,13nm,1.2s						
UGM	**Wanagama**	**72.53**	**267**	P	**P**	**16 05 45.1**	**+0.2**
CISI	**Cisompet, Garu**	**75.20**	**267**	P	**P**	**16 05 59.4**	**-1.0**
KMRM	**Mail Ridge**	**75.39**	**38**	P	**P**	**16 06 02.4**	**+1.5**
NVAR	**Mina Array Bea**	**77.63**	**42**	P	**P**	**16 06 14.5**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=223,slow=9.2,SNR=5.3						
NVAR	**Mina Array Bea**	**77.63**	**42**	P	**P**	**16 06 12.8**	**-0.8**
RAGM	**Ragged Mountai**	**82.12**	**15**	P	**P**	**16 06 39.3**	**+2.4**
TXAR	**Lajitas Array**	**83.71**	**57**	P	**P**	**16 06 46.7**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=210,slow=7.2,SNR=3.7						
TXAR	**Lajitas Array**	**83.71**	**57**	P	**P**	**16 06 46.2**	**+0.3**
SNAA	**Sanae**	**90.25**	**178**	P	**P**	**16 07 17.0**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=164,slow=6.4,SNR=3.5						
SNAA	**Sanae**	**90.25**	**178**	IAmb	IAmb	16 07 27.2	
	comp=Z,14nm,1.8s						
CMAR	**Chiang Mai Arr**	**91.70**	**289**	P	**P**	**16 07 24.0**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=105,slow=3.1,SNR=5.8						
CMAR	**Chiang Mai Arr**	**91.70**	**289**	P	**P**	**16 07 24.7**	**+0.5**
ARCES	**ARCESS Array B**	**127.05**	**351**	PKP	**PKPdf**	**16 13 17.9**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=8.5,slow=1.8,SNR=1.4						
BRTR	**Keskin Array B**	**146.98**	**317**	PKPbc	**PKPbc**	**16 13 58.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=40,slow=2.5,SNR=2.6						
BRTR	**Keskin Array B**	**146.98**	**317**		**PKPbc**	**16 13 58.0**	**-0.1**
GERES	**GERESS Array B**	**148.52**	**348**	PKPbc	**PKPbc**	**16 14 01.9**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=12,slow=5.0,SNR=1.9						

*IDC **20** 15:58:54.9±5.4, 16°.90N×100°.71W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.6/39, mbtmp3.5/3, ML3.3/1, MS3.3/1, Ms1 3.2/1, ms1mx2.7/32, Error ellipse: s-maj=139.4km s-min=58.7km az=89.0*
*MEX **20** 15:59:02.2±0.8, 17°.33N×101°.19W, h12km±3km, MD4.2*
ISC 20 15:58:59.2±2.1, 17°.28N±0°.09×101°.15W±0°.04, h13km±17km, n18, σ1§38/23, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.44**	**317**	*e*P	**Pb**	**15 59 09.0**	**+0.1**
ZIIG				*e*S	**Sb**	**15 59 15.2**	**-0.3**
CAIG	**El Cayaco**	**0.88**	**105**	*e*P	**Pb**	**15 59 16.6**	**+0.4**
ARIG	**Puente Sto Nin**	**1.25**	**37**	*e*P	**Pn**	**15 59 21.6**	**-0.9**
ACP2	**Acapulco**	**1.27**	**108**	*e*P	**Pb**	**15 59 23.6**	**+0.5**
ACP2				*i* S	**Sg**	**15 59 39.2**	**-1.1**
MEIG	**Mezcala**	**1.59**	**66**	*e*P	**Pn**	**15 59 27.6**	**+0.4**
MEIG				*i* S	**Sn**	**15 59 46.3**	**-1.5**
PLIG	**Platanillo**	**1.92**	**55**	*e*P	**Pn**	**15 59 31.9**	**+0.2**
PLIG				*e*S	**Sn**	**15 59 53.5**	**-2.3**
MMIG	**Aquila**	**2.32**	**296**	*e*P	**Pn**	**15 59 36.2**	**-0.9**
MMIG				*i* S	**Sn**	**16 00 03.3**	**-2.3**
MOIG	**Morelia**	**2.38**	**359**	*e*P	**Pn**	**15 59 40.4**	**+2.2**
TLIG	**Tlapa**	**2.48**	**83**	*e*P	**Pn**	**15 59 39.3**	**-0.2**
TLIG				*i* S	**Sn**	**16 00 09.0**	**-0.8**
YAIG	**Yautepec**	**2.53**	**51**	*i* P	**Pn**	**15 59 39.9**	**-0.3**
YAIG				*i* S	**Sn**	**16 00 09.1**	**-1.8**
ACIG	**Acambay**	**2.94**	**24**	*i* P	**Pn**	**15 59 45.6**	**-0.3**
ACIG				*i* S	**Sn**	**16 00 20.0**	**-1.2**
HLIG	**Huajuapan de L**	**3.24**	**80**	*e*P	**Pn**	**15 59 50.1**	**+0.2**
HLIG				*i* S	**Sn**	**16 00 28.0**	**-0.5**
TXAR	**Lajitas Array**	**12.22**	**350**	Pn	Pn	16 02 00.6	+7.5
	0.0nm,0.3s,baz=166,slow=13,SNR=4.3						
TXAR				Lg	Lg	16 05 34.0	
	0.0nm,0.3s,baz=164,slow=31,SNR=3.7						
TXAR				LR	LR	16 07 09.6	
	comp=Z,119nm,19.6s,baz=0.0,slow=39						
NVAR	**Mina Array Bea**	**25.87**	**328**	P	**P**	**16 04 33.0**	**+2.0**
	2.5nm,0.9s,baz=147,slow=10,SNR=15						
PDAR	**Pinedale Array**	**26.39**	**346**	P	**P**	**16 04 38.0**	**+2.3**
	0.2nm,0.4s,baz=157,slow=9.3,SNR=0.9						
H03N2	**Juan Fernandez**	**54.72**	**157**	T	T	17 07 17.9	
	baz=335,slow=77,SNR=13						
H03N1	**Juan Fernandez**	**54.72**	**157**	T	T	17 07 20.5	
	baz=335,slow=77,SNR=15						
H03N3	**Juan Fernandez**	**54.73**	**157**	T	T	17 07 19.6	
	baz=335,slow=77,SNR=16						

*NNC **20** 16:04:05.1±2.2, 35°.45N×68°.23E, h0km, mb4.1, mpv3.9, Error ellipse: s-maj=18.2km s-min=12.8km az=175.0*
*IDC **20** 16:04:26.1±6.0, 36°.64N×70°.18E, h0km, mb3.4/2, mb1 3.8/8, mb1mx3.5/58, mbtmp3.8/8, ML3.8/5, MS3.0/3, Ms1 2.9/3, ms1mx2.4/39, Error ellipse: s-maj=89.2km s-min=23.6km az=160.0*
ISC 20 16:04:04.1±2.4, 35°.3N±0°.2×68°.12E±0°.07, h10km, n20, σ1§80/22, MS3.0/3, 3C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**8.02**	**13**	P	**Pn**	**16 06 01.4**	**+0.7**
	1.5nm,0.4s,baz=195,slow=15,SNR=37						
KK31				⇑S	**Sn**	**16 07 31.5**	**0.0**
	19nm,0.7s,baz=187,slow=27,SNR=6.5						
AML	**Almayashu**	**8.10**	**31**	P	**Pn**	**16 06 01.0**	**-1.2**
	SNR=28						
GEYT	**Alibeck**	**8.46**	**291**	Pn	**Pg**	**16 06 47.3**	**+1.3**
	0.8nm,0.3s,baz=106,slow=11,SNR=4.6						
GEYT				Sn	**Sg**	**16 08 32.3**	**-3.2**
	0.6nm,0.3s,baz=85,slow=19,SNR=2.0						
AAK	**Ala-Archa**	**8.86**	**32**	Pn	**Pn**	**16 06 11.5**	**-0.8**
	3.5nm,0.3s,baz=206,slow=9.1,SNR=44						
AAK				Sn	Sn	16 07 20.2	-32
	0.9nm,0.3s,baz=354,slow=1.2,SNR=1.3						
AAK				Lg	Lg	16 07 50.6	
	1.1nm,0.3s,baz=312,slow=5.3,SNR=3.6						
AAK	**Ala-Archa**	**8.86**	**32**	P	**Pn**	**16 06 11.7**	**-0.6**
	SNR=10						
AAK	**Ala-Archa**	**8.86**	**32**	⇑P	**Pn**	**16 06 11.4**	**-0.8**
	3.2nm,0.3s						
AAK				⇓S	**Sn**	**16 07 51.4**	**-0.8**
	15nm,0.8s						
CHMS	**Chumysh**	**9.26**	**32**	P	**Pn**	**16 06 16.9**	**-0.8**
	SNR=6.3						
USP	**Ospenovka**	**9.38**	**30**	P	**Pn**	**16 06 18.2**	**-1.0**
	SNR=7.3						
TKM2	**Tokmak 2**	**9.58**	**35**	P	**Pn**	**16 06 21.3**	**-0.9**
	SNR=7.3						
TKM2	**Tokmak 2**	**9.58**	**35**	⇓P	**Pn**	**16 06 21.0**	**-1.3**
	2.0nm,0.3s						
TKM2				⇓S	**Sn**	**16 08 10.3**	**+0.3**
	7.1nm,0.8s						
AB31	**Akbulak array**	**15.20**	**339**	P	**Pn**	**16 07 41.0**	**+2.4**
	0.5nm,0.3s,baz=159,slow=12,SNR=34						
AB31				⇓S	**Sn**	**16 10 27.3**	**+0.3**
	0.9nm,0.5s,baz=163,slow=22,SNR=4.0						
MKAR	**Makanchi Array**	**15.67**	**39**	Pn	**Pn**	**16 07 40.8**	**-4.2**
	1.4nm,0.3s,baz=223,slow=12,SNR=1.7						
AKTO	**Aktyubinsk**	**16.83**	**337**	Pn	P	16 08 13.9	+12
	0.2nm,0.3s,baz=138,slow=13,SNR=3.5						
AKTO	**Aktyubinsk**	**16.83**	**337**	⇓P	**Pn**	**16 08 00.2**	**+0.6**
	3.6nm,0.5s						
AKTO				⇑S	**Sn**	**16 11 06.7**	**+0.2**
	2.5nm,1.0s						
KURBB	**Kurchatov Arra**	**17.09**	**23**	Pn	**Pn**	**16 07 59.2**	**-3.7**
	0.1nm,0.3s,baz=212,slow=10,SNR=3.4						
BVAR	**Borovoye Array**	**17.81**	**4**	Pn	**Pn**	**16 08 12.9**	**+1.0**
	0.0nm,0.3s,baz=174,slow=16,SNR=1.3						
KBZ	**Khabaz**	**21.14**	**301**	P	P	16 09 21.3	+32
	1.7nm,0.7s,baz=100,slow=6.1,SNR=2.5						
KBZ				LR	LR	16 20 06.4	
	comp=Z,27nm,18.9s,baz=142,slow=43						
ZALV	**Zalesovo Beam**	**22.02**	**27**	P	**P**	**16 09 00.0**	**+1.6**
	0.8nm,0.3s,baz=227,slow=11,SNR=5.8						
KLR	**Kul'dur**	**47.74**	**53**	LR	LR	16 33 29.0	
	comp=Z,14nm,18.3s,baz=298,slow=38						
GUMO	**Guam**	**71.55**	**86**	LR	LR	16 47 55.4	
	comp=Z,13nm,21.1s,baz=52,slow=37						

*BGR **20** 16:08:28.1±0.0, 24°.08S×179°.19W, h33km*
*IDC **20** 16:09:30.5±1.1, 23°.31S×179°.08E, h559km±11km, mb3.9/28, mb1 4.1/30, mb1mx3.9/48, mbtmp4.8/30, Error ellipse: s-maj=10.8km s-min=10.1km az=151.0*
*NEIC **20** 16:09:31.4±1.9, 23°.29S±0°.07×179°.04E±0°.07, h568km±5km, mb4.7/139, Error ellipse: s-maj=12.2km s-min=5.4km az=222.0*
ISC 20 16:09:29.7±0.3, 23°.40S±0°.05×179°.14E±0°.05, h555km, n314, σ1§65/337, mb4.6/85, 11C-4D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.72**	**350**	P	**P**	**16 11 05.5**	**-0.9**
RAO	**Raoul Island**	**6.40**	**156**	P	**P**	**16 11 14.2**	**+2.1**
	59nm,0.3s,baz=71,slow=12,SNR=6.9						
RAO	**Raoul Island**	**6.40**	**156**	P	**P**	**16 11 14.6**	**+2.5**
GLKZ	**Green Lake**	**6.41**	**156**	P	**P**	**16 11 14.6**	**+2.4**
GLKZ				S	**S**	**16 12 38.0**	**+1.8**
NIUE	**Niue**	**11.06**	**69**	P	**P**	**16 11 57.7**	**-0.9**
	baz=11,SNR=5.6						
NIUE	**Niue**	**11.06**	**69**	P	**P**	**16 11 57.8**	**-0.9**
NIUE				S	**S**	**16 14 03.8**	**+2.6**
DZM	**Mont Dzumac**	**11.79**	**274**	P	**P**	**16 12 06.9**	**+0.7**
	3.1nm,0.3s,baz=76,slow=18,SNR=15						
DZM	**Mont Dzumac**	**11.79**	**274**	P	**P**	**16 12 06.2**	**-0.1**
OUZ	**Omahuta**	**12.73**	**201**	P	**P**	**16 12 19.0**	**+3.3**
OUZ	**Omahuta**	**12.73**	**201**	P	**P**	**16 12 18.8**	**+3.2**
AFI	**Afiamalu**	**12.77**	**44**	P	**P**	**16 12 12.1**	**-4.3**
	4.1nm,0.3s,baz=38,slow=3.5,SNR=7.2						
AFI				S	S	16 14 21.9	-12
	1.1nm,0.3s,baz=221,slow=23,SNR=2.2						
AFI	**Afiamalu**	**12.77**	**44**	P	**P**	**16 12 12.3**	**-4.1**
WCZ	**Waipu Caves**	**13.17**	**197**	P	**P**	**16 12 21.0**	**+0.8**
MXZ	**Matakaoa Point**	**14.14**	**183**	P	**P**	**16 12 29.4**	**-0.7**
MXZ				S	**S**	**16 14 54.3**	**-4.3**
MXZ	**Matakaoa Point**	**14.14**	**183**	P	**P**	**16 12 29.9**	**-0.2**
HAZ	**Te Kaha**	**14.36**	**184**	P	**P**	**16 12 31.4**	**-1.0**
HAZ				S	**S**	**16 14 57.5**	**-5.3**
WMGZ	**Waiomatatini S**	**14.39**	**182**	P	**P**	**16 12 31.8**	**-0.9**
WMGZ				S	**S**	**16 14 57.5**	**-5.9**
OPRZ	**Ohinepanea**	**14.57**	**188**	P	**P**	**16 12 37.4**	**+2.8**
RUGZ	**Raukumara Rang**	**14.58**	**185**	P	**P**	**16 12 34.7**	**0.0**
RUGZ				S	**S**	**16 15 00.7**	**-6.4**
PUZ	**Puketiti**	**14.65**	**183**	P	**P**	**16 12 34.2**	**-1.2**
PUZ				S	**S**	**16 15 02.8**	**-5.4**
TWGZ	**Tauwhareparae**	**14.77**	**184**	P	**P**	**16 12 35.8**	**-0.8**
TWGZ				S	**S**	**16 15 07.0**	**-3.4**
FUNA	**Funafuti**	**14.79**	**0**	P	**P**	**16 12 35.3**	**-1.8**
URZ	**Urewera**	**14.92**	**186**	P	**P**	**16 12 36.1**	**-1.9**
	9.7nm,0.3s,baz=338,slow=2.1,SNR=35						
URZ				S	**S**	**16 15 06.3**	**-6.7**
	0.6nm,0.3s,baz=194,slow=22,SNR=3.2						
URZ	**Urewera**	**14.92**	**186**	P	**P**	**16 12 36.0**	**-2.0**
URZ				S	**S**	**16 15 06.9**	**-6.2**
URZ	**Urewera**	**14.92**	**186**	P	**P**	**16 12 35.7**	**-2.3**
MWZ	**Matawai**	**14.96**	**185**	P	**P**	**16 12 36.9**	**-1.6**
MWZ				S	**S**	**16 15 09.2**	**-4.6**
TKGZ	**Te Karaka**	**15.04**	**184**	P	**P**	**16 12 39.5**	**+0.3**
TKGZ				S	**S**	**16 15 11.6**	**-3.6**
RAGZ	**Rawiri**	**15.12**	**185**	P	**P**	**16 12 39.7**	**-0.5**
MUGZ	**Murupara**	**15.17**	**187**	P	**P**	**16 12 40.7**	**+0.1**
RIGZ	**Rimuhau**	**15.31**	**184**	P	**P**	**16 12 40.6**	**-1.5**
RIGZ				S	**S**	**16 15 17.4**	**-2.6**
HIZ	**Hauiti**	**15.51**	**193**	P	**P**	**16 12 46.2**	**+2.2**
PRGZ	**Paritu Road**	**15.52**	**184**	P	**P**	**16 12 44.4**	**+0.2**
RAHZ	**Arahi**	**15.57**	**186**	P	**P**	**16 12 44.4**	**-0.3**
RAHZ				S	**S**	**16 15 22.4**	**-2.0**
BKZ	**Black Stump Fm**	**15.88**	**188**		**P**	**16 12 45.7**	**-2.2**
BKZ				IAmb	IAmb	16 12 53.5	
	comp=Z,18nm,1.0s						
QRZ	**Quartz Range**	**18.25**	**196**	P	**P**	**16 13 11.0**	**+1.6**
SNZO	**South Karori**	**18.25**	**191**	P	**P**	**16 13 10.6**	**+1.2**
BHW	**Baring Head**	**18.32**	**190**	P	**P**	**16 13 10.0**	**0.0**
THZ	**Tophouse**	**19.04**	**194**	P	**P**	**16 13 17.4**	**+0.7**
THZ				IAmb	IAmb	16 13 22.0	
	comp=Z,33nm,1.1s						
LHI	**Lord Howe Isla**	**19.55**

WB2 Warramunga Arr 41.64 266 P P 16 16 29.5 -0.8
WB2 IAmb IAmb 16 16 30.7
comp=Z,37nm,0.8s
WB2 **ScP 16 21 14.7 +3.1**
WB0 Warramunga Arr 41.64 266 P P 16 16 29.9 -0.4
WB0 IAmb IAmb 16 16 30.7
comp=Z,37nm,0.7s
WB0 ScP **ScP 16 21 13.6 +2.0**
WRAB Tennant Creek 41.65 266 P P 16 16 29.7 -0.6
WRAB IAmb IAmb 16 16 30.7
comp=Z,28nm,0.8s
WRA Warramunga Ar 41.65 266 P P 16 16 29.7 -0.7
comp=Z,27nm,0.7s,baz=96,slow=8.4,SNR=618
WRA ScP **ScP 16 21 13.6 +1.9**
comp=Z,3.9nm,0.9s,baz=97,slow=4.2,SNR=14
WRA S S **16 22 02.6 -4.8**
comp=Z,2.6nm,1.0s,baz=96,slow=15,SNR=8.2
WRA Warramunga Ar 41.65 266 P P 16 16 28.9 -1.4
WRA **ScP 16 21 13.9 +2.2**
WRA S **16 22 03.9 -3.6**
JAY Jayapura 42.59 293 P P 16 16 37.4 -0.4
comp=Z,11nm,0.5s,baz=145,slow=4.5,SNR=9.1
WAKE Wake Island 44.13 343 P P 16 16 49.6 +0.1
KDU Kakadu 45.46 275 P P 16 16 59.3 -0.6
baz=46,SNR=23
FORT Forrest 45.75 249 P P 16 17 01.8 -0.1
baz=46,SNR=36
FORT Forrest 45.75 249 P P 16 17 01.9 -0.1
WRKA Warakurna 46.18 257 P P 16 17 05.3 0.0
baz=46,SNR=36
MTN Manton Dam 46.63 274 P P 16 17 07.9 -0.8
baz=47,SNR=18
MTN Manton Dam 46.63 274 P P 16 17 08.0 -0.8
MTN IAmb IAmb 16 17 10.2
comp=Z,62nm,1.7s
KNRA Kununurra 47.90 270 P P 16 17 18.3 0.0
baz=48,SNR=28
KNRA Kununurra 47.90 270 P P 16 17 18.3 0.0
KHLU Kahalu`u 49.18 32 P P 16 17 27.8 +0.1
AIN Ainahou 49.21 32 P P 16 17 28.0 -0.1
MLOA Mauna Loa Obse 49.29 32 P P 16 17 28.8 -0.2
HUH Hualalai 49.29 32 P P 16 17 28.8 0.0
MLH Mauna Loa 49.34 32 P P 16 17 29.4 +0.3
HMH Humu'ula Sheep 49.39 32 P P 16 17 30.0 +0.4
HPAH Hawaii Prepara 49.65 32 P P 16 17 31.5 +0.3
FAKI Fak Fak 49.68 287 P P 16 17 30.9 -0.7
FAKI IAmb IAmb 16 17 50.6
comp=Z,35nm,1.4s
FITZ Fitzroy Crossi 50.08 265 P P 16 17 34.5 +0.2
comp=Z,5.9nm,0.4s,baz=112,slow=7.0
FITZ Fitzroy Crossi 50.08 265 P P 16 17 34.6 +0.2
baz=50,SNR=46
FITZ Fitzroy Crossi 50.08 265 P P 16 17 34.7 +0.2
FITZ IAmb IAmb 16 17 35.7
comp=Z,9.0nm,0.6s
FITZ PcP **PcP 16 18 41.9 -2.1**
SIJI Sorong 51.53 289 P P 16 17 44.7 -0.2
comp=Z,22nm,0.5s,baz=78,slow=6.4,SNR=5.4
SOEI Soe 54.02 275 P P 16 18 01.5 -1.3
comp=Z,43nm,0.8s
SOEI Soe 54.02 275 P P 16 18 04.0 +1.2
SOEI IAmb IAmb 16 18 19.8
comp=Z,33nm,0.8s
KLBR Kellerberrin 54.46 247 P P 16 18 05.5 0.0
baz=55,SNR=5.2
PSA00 Pilbara Seismi 54.48 260 P P 16 18 05.5 -0.3
PSA00 IAmb IAmb 16 18 06.3
comp=Z,46nm,1.7s
MEEK Meekatharra 54.50 253 P P 16 18 05.6 -0.4
baz=55,SNR=4.1
NWAO Narrogin (SRO) 54.73 245 P P 16 18 07.4 -0.1
NWAO IAmb IAmb 16 18 21.8
comp=Z,42nm,1.3s
NWAO Narrogin (SRO) 54.73 245 P P 16 18 07.5 +0.1
NWAO IAmb IAmb 16 18 21.8
comp=Z,34nm,1.3s
VNDA Vanda 54.82 185 P P 16 18 08.2 +0.9
comp=Z,0.3nm,0.7s,baz=352,slow=8.0,SNR=4.7
VNDA Vanda 54.82 185 P P 16 18 09.3 +2.0
VNDA PcP **PcP 16 19 01.9 +1.0**
BLDU Ballidu 55.48 248 P P 16 18 12.5 -0.2
baz=56,SNR=13
MUN Mundaring 55.71 246 P P 16 18 14.6 +0.4
baz=56,SNR=4.2
MORW Morawa 56.31 250 P P 16 18 18.4 -0.1
baz=56,SNR=4.9
MORW Morawa 56.31 250 P P 16 18 18.3 -0.1
MORW IAmb IAmb 16 18 24.0
comp=Z,32nm,1.6s
GIRL Giralia 59.26 257 P P 16 18 39.9 +1.4
TOLI2 Tolitoli 61.69 285 P P 16 18 53.7 -1.0
JAGI Jajag, Banyuwa 63.76 272 P P 16 19 07.0 -1.1
JAGI IAmb IAmb 16 19 08.8
comp=Z,51nm,1.2s
RPN Rapa Nui 63.99 110 P P 16 19 11.0 +1.7
QSPA South Pole Qui 66.69 180 P P 16 19 27.3 +1.6
comp=Z,3.3nm,0.7s,baz=308,slow=0.5,SNR=28
QSPA South Pole Qui 66.69 180 P P 16 19 27.4 +1.8
UGM Wanagama 67.30 271 P P 16 19 30.6 +0.3
KKM Kota Kinabalu 68.00 287 P P 16 19 34.6 +0.1
LEM Lembang 70.38 271 P P 16 19 49.5 +0.6
comp=Z,8.3nm,0.4s,baz=122,slow=23,SNR=4.3
MJAR Matsushiro Arr 71.04 326 P P 16 19 51.6 -0.5
comp=Z,4.2nm,0.7s,baz=160,slow=5.5,SNR=11
MJAR Matsushiro Arr 71.04 326 P P 16 19 52.4 +0.4
MAJO Matsushiro 71.04 326 P P 16 19 51.8 -0.3
JSD Sado 72.17 327 P P 16 19 59.2 +0.6
JSD IAmb IAmb 16 20 19.7
comp=Z,23nm,1.6s
JNU Nakatsue 72.63 319 P P 16 20 01.1 -0.3
comp=Z,14nm,1.0s,baz=83,slow=8.9,SNR=3.5
JNU Nakatsue 72.63 319 P P 16 20 02.2 +0.8
JNU IAmb IAmb 16 20 17.9
comp=Z,75nm,1.4s
AMKA Amchitka 74.44 0 P P 16 20 11.0 -0.2
ADK Adak 75.04 3 P P 16 20 14.3 -0.2
JKA Kamikawa-asahi 75.06 334 IAmb IAmb 16 20 21.2
comp=Z,49nm,1.5s
ASAJ Asahikawa 75.06 334 P P 16 20 16.0 +1.1
comp=Z,6.7nm,0.7s,baz=108,slow=5.7,SNR=5.2
ATKA Atka Island 75.50 4 P P 16 20 16.5 -0.5
ATKA IAmb IAmb 16 20 17.3
comp=Z,46nm,0.8s
NIKH Nikolski High 76.76 7 P P 16 20 23.6 -0.4
BELA Belgrano 2 77.03 173 P P 16 20 26.0 +0.6
YSS Yuzh-Sakhalins 77.35 335 P P 16 20 29.0 +1.7
YSS IAmb IAmb 16 20 56.7
comp=Z,23nm,1.3s
KSRS Korea Array 77.36 321 P P 16 20 28.2 +0.5
comp=Z,1.7nm,0.8s,baz=153,slow=6.4,SNR=5.7
UNV Unalaska Valle 77.91 9 P P 16 20 29.4 -0.9
UNV IAmb IAmb 16 20 42.2
comp=Z,88nm,1.6s
MAW Mawson 77.94 201 P P 16 20 30.0 -0.4
comp=Z,3.2nm,0.6s,baz=113,slow=9.6,SNR=4.6
MAW Mawson 77.94 201 P P 16 20 30.5 +0.1
PET Petropavlovsk 78.16 348 P P 16 20 31.4 -0.1
PET IAmb IAmb 16 20 56.1
comp=Z,37nm,1.3s
AKUT Akutan 78.30 9 P P 16 20 31.6 -0.7
PEA0B Petropavlovsk- 78.43 347 P P 16 20 33.3 +0.3
PEA0B IAmb IAmb 16 20 34.1
comp=Z,16nm,0.8s
PETK Petropavlovsk- 78.43 347 P P 16 20 33.1 +0.1
comp=Z,16nm,0.9s,baz=116,slow=7.7,SNR=30
PETK Petropavlovsk- 78.43 347 P P 16 20 33.4 +0.3
NJ2 Nanjing 79.73 311 eP P 16 20 41.3 +0.8
NJ2 pmax pmax
comp=Z,14nm,0.5s
USRK Ussuriysk Ar. 79.92 328 P P 16 20 41.0 -0.1
comp=Z,4.6nm,0.9s,baz=131,slow=3.9,SNR=9.1
USRK Ussuriysk Ar. 79.92 328 P P 16 20 41.7 +0.6
SAO San Andreas Ge 81.94 44 P P 16 20 54.0 +2.2
SAO IAmb IAmb 16 21 20.2
comp=Z,36nm,1.6s
CBX Cerro Bola 82.61 50 P P 16 20 57.2 +1.8
GSI Gunungsitoli 82.77 275 P P 16 20 57.3 +0.8
ESJX Sierra Juarez 82.95 51 P P 16 20 58.0 +0.8
CN2 Changchun 83.02 324 eP P 16 20 57.8 +0.8
CN2 pmax pmax
comp=Z,10.0nm,0.9s
KHMM Horse Mountain 83.06 40 P 16 20 59.6 +2.0
KHMM IAmb IAmb 16 21 25.5
comp=Z,27nm,1.3s
SLBS Sierra La Lagu 83.24 61 P P 16 21 00.5 +1.8
SLBS IAmb IAmb 16 21 01.3
comp=Z,9.6nm,0.8s
ISA Isabella, Lake 83.25 47 P P 16 20 59.4 +1.0
ISA IAmb IAmb 16 21 00.5
comp=Z,12nm,0.9s
KRMB Red Mountain 83.37 39 P P 16 21 00.6 +1.6
CMB Columbia Colle 83.38 44 P P 16 20 59.8 +0.8
AFDM Forest Hills D 83.56 43 P P 16 21 00.7 +0.9
WDC Whiskeytown Da 83.59 41 P P 16 21 01.4 +1.5
WDC IAmb IAmb 16 21 21.3
comp=Z,18nm,1.6s
ORV Oroville 83.59 42 P P 16 21 00.8 +0.8
KLR Kul'dur 83.71 331 P P 16 21 00.5 +0.1
comp=Z,1.8nm,0.7s,baz=115,slow=1.1,SNR=5.9
MDPB Devils Postpil 83.98 45 P P 16 21 03.4 +1.1
YBH Yreka Blue Hor 84.20 40 P P 16 21 04.4 +1.4
comp=Z,5.5nm,0.9s,baz=145,slow=1.1,SNR=7.1
YBH Yreka Blue Hor 84.20 40 P P 16 21 04.8 +1.7
YBH IAmb IAmb 16 21 17.3
comp=Z,22nm,1.6s
WAKR Walker 84.26 44 P P 16 21 04.9 +1.3
GLA Glamis 84.31 50 P P 16 21 04.9 +1.2
GLA IAmb IAmb 16 21 06.3
comp=Z,14nm,0.9s
BEKR Beckworth 84.48 42 P P 16 21 05.4 +0.8
PNTR Pine Nut 84.50 43 IAmb IAmb 16 21 06.7
comp=Z,9.3nm,0.8s
PIX Pinacate 84.50 52 P P 16 21 05.8 +1.1
RYN Ryan 84.92 44 P P 16 21 07.0 +0.3
NVAR Mina Array Bea 84.94 44 P P 16 21 07.5 +0.6
comp=Z,2.6nm,0.7s,baz=225,slow=8.8,SNR=20
SNAA Sanae 85.18 179 P P 16 21 07.4 0.0
214A Organ Pipe Nat 85.18 172 P P 16 21 09.3 +1.3
VNA3 Neumayer Olymp 85.42 177 P P 16 21 07.7 -0.8
H04A Detroit Lake 86.33 38 P P 16 21 13.8 +0.7
H04A IAmb IAmb 16 21 15.0
comp=Z,23nm,1.2s
WVOR Wild Horse Val 87.05 41 IAmb IAmb 16 21 18.8
comp=Z,7.7nm,0.8s
319A Douglas 87.49 54 IAmb IAmb 16 21 22.1
comp=Z,10.0nm,0.8s
I07A Izee 87.50 39 IAmb IAmb 16 21 21.0
comp=Z,9.5nm,0.9s
LCMT Little Creek M 87.51 48 P P 16 21 19.9 +0.8
J08A Circle Bar Ran 87.68 40 IAmb IAmb 16 21 21.6
comp=Z,23nm,1.3s
U15A North Rim 87.86 49 IAmb IAmb 16 21 23.3
comp=Z,8.5nm,0.8s
G08A Pilot Rock 88.52 39 P P 16 21 24.5 +1.0
G08A IAmb IAmb 16 21 25.5
comp=Z,23nm,1.6s
CMAR Chiang Mai Arr 88.61 291 P P 16 21 24.9 +0.5
comp=Z,0.3nm,0.3s,baz=162,slow=2.7,SNR=5.4
SEY Seymchan 88.61 348 P P 16 21 23.6 +0.3
comp=Z,8.4nm,0.8s,baz=156,slow=5.3,SNR=24
GHO Glory Hole Cre 88.66 15 IAmb IAmb 16 21 24.9
comp=Z,26nm,0.9s
HAWA Hanford 88.85 37 P P 16 21 26.0 +1.1
HAWA IAmb IAmb 16 21 26.5
comp=Z,9.5nm,0.8s
MFID Camas Ranch 89.30 41 IAmb IAmb 16 21 29.0
comp=Z,8.2nm,0.9s
CAST Castle Rocks 89.45 13 IAmb IAmb 16 21 27.2
comp=Z,1.1nm,0.9s
HHC Hu-ho-hao-te 89.51 315 eP P 16 21 28.1 -0.1
HHC pmax pmax
comp=Z,16nm,1.2s
HHC pmax pmax
comp=Z,61nm,6.4s
D08A Wollman Farm, 89.58 37 IAmb IAmb 16 21 30.1
comp=Z,7.7nm,1.1s
TRF Thorofare Moun 89.84 13 IAmb IAmb 16 21 45.9
comp=Z,40nm,1.7s
F10A Beach Ranch, E 89.91 39 IAmb IAmb 16 21 31.1
comp=Z,6.8nm,0.9s
BARN Barnard Glacie 89.92 18 IAmb IAmb 16 21 31.7
comp=Z,32nm,1.3s
RND Reindeer 90.11 14 IAmb IAmb 16 21 30.9
comp=Z,26nm,1.3s
SRU San Rafael Swe 90.43 47 P P 16 21 33.5 +0.8
MNTX Cornudas Mount 90.58 56 IAmb IAmb 16 21 35.2
comp=Z,4.1nm,0.8s
TX31 Lajitas Ar. Si 90.84 58 IAmb IAmb 16 21 36.5
comp=Z,11nm,0.9s
TXAR Lajitas Array 90.84 58 P P 16 21 35.3 +0.7
comp=Z,2.5nm,0.8s,baz=212,slow=6.6,SNR=22
TXAR Lajitas Array 90.84 58 P P 16 21 35.9 +1.3
BCAR Beaver Creek A 91.53 17 P P 16 21 36.6 -0.4
IL31 91.73 14 IAmb IAmb 16 21 46.0
comp=Z,16nm,1.8s
ILAR Eielson Array 91.73 14 P P 16 21 36.6 -1.1
comp=Z,1.0nm,0.5s,baz=233,slow=5.4,SNR=29
LZH Lanzhou 92.44 308 ⇑P P 16 21 42.8 +0.8
LZH pP pwP 16 23 46.3 -1.5
LZH sP sP 16 24 41.3 +3.8
LZH PP PP **16 25 38.0 +4.8**
LZH pmax pmax
comp=Z,20nm,1.4s
LZH pmax pmax
comp=Z,120nm,6.3s
PD31 Pinedale Array 92.88 44 IAmb IAmb 16 21 48.6
comp=Z,6.6nm,1.6s
PDAR Pinedale Array 92.88 44 P P 16 21 43.9 +0.1
comp=Z,1.0nm,0.7s,baz=199,slow=3.2,SNR=9.7
SMCO Snowmass 92.88 48 IAmb IAmb 16 21 47.4
comp=Z,3.1nm,0.8s
INK Inuvik 97.76 16 P Pdif 16 22 04.3 -0.6
comp=Z,1.2nm,0.6s,baz=243,slow=6.3,SNR=3.3
INK Inuvik 97.76 16 IAmb IAmb 16 22 05.0
comp=Z,2.8nm,0.9s
MKAR Makanchi Array 111.23 313 PKiKP PKiKP 16 26 58.9 -1.7
comp=Z,0.4nm,0.4s,baz=97,slow=2.6,SNR=8.5
KURK Kurchatov 114.29 317 PKPdf 16 27 05.5 -0.8
KURBB Kurchatov Arra 114.34 317 PKiKP PKPdf 16 27 05.5 -0.9
comp=Z,1.3nm,0.6s,baz=103,slow=2.1,SNR=11
KK31 Karatay Array 118.93 308 PKPdf 16 27 15.2 -0.4
KKAR Karatay Array 118.93 308 PKPdf 16 27 15.2 -0.4
BVAR Borovoye Array 119.54 319 PKP PKPdf 16 27 15.2 -1.1
comp=Z,1.6nm,0.4s,baz=147,slow=3.0,SNR=20
SPA0 Spitsbergen Ar 124.56 356 ePKPdf PKPdf 16 27 25.2 -0.1
ABKAR Akbulak array 126.29 315 PKPdf 16 27 29.2 -0.2
GEYT Alibeck 128.03 301 PKP PKPdf 16 27 32.2 -0.9
comp=Z,2.6nm,0.7s,baz=268,slow=4.3,SNR=3.7
ARA0 ARCESS Array S 131.23 348 ePKPdf PKPdf 16 27 38.9 +0.6
ARCES ARCESS Array B 131.23 348 PKP PKPdf 16 27 37.3 -0.9
comp=Z,2.5nm,0.5s,baz=57,slow=1.0,SNR=18
ARCES SKPbc **SKPbc 16 30 10.1 -1.5**
comp=Z,3.1nm,0.8s,baz=50,slow=4.8,SNR=4.5
KTK1 Kautokeino 132.10 349 ePKPdf PKPdf 16 27 39.9 0.0
TRO Tromso 132.26 351 ePKPdf PKPdf 16 27 40.3 +0.2
FINES FINESS Array B 137.72 341 PKhKP PKPpre 16 27 38.2
comp=Z,0.9nm,0.6s,baz=14,slow=3.0,SNR=1.9
FINES PKP **PKPdf 16 27 50.1 -0.4**
comp=Z,1.5nm,0.4s,baz=13,slow=1.6,SNR=3.2
FINES SKPbc **SKPbc 16 30 30.8 -1.6**
comp=Z,2.2nm,0.8s,baz=57,slow=5.1,SNR=4.6
NSS Namsos 138.02 352 e PKPdf 16 27 44.3 -6.6
DOMB Dombas 140.78 353 e PKPdf 16 27 49.9 -6.2
NB2 NORSAR Subarra1 141.46 351 PKP PKPdf 16 27 52.0 -5.4
comp=Z,1.8nm,0.6s,baz=14,slow=3.1
NB2 NORSAR Subarra1 141.46 351 PKPab PKPdf 16 27 52.0 -5.4
comp=Z,1.8nm,0.6s,baz=14,slow=3.1
NOA NORSAR Array B 141.46 351 PKhKP PKPpre 16 27 52.5
comp=Z,2.5nm,0.6s,baz=16,slow=4.7,SNR=20
NC602 NORSAR Array S 141.70 350 ePKPdf PKPdf 16 27 52.8 -4.9
SUE Sulen 142.16 356 ePKPdf PKPdf 16 27 55.0 -3.5
SKAR Skjerstla 142.20 353 ePKPdf PKPdf 16 27 55.4 -3.3
ASK Askoy 142.70 355 ePKPdf PKPdf 16 27 57.8 -1.7
BER Bergen 142.78 355 ePKPdf PKPdf 16 27 57.0 -2.6
KONO Kongsberg 143.03 351 PKPdf 16 27 57.8 -2.3
KONO Kongsberg 143.03 351 ePKPdf PKPdf 16 27 57.8 -2.3
ODD1 Odda 143.13 354 ePKPbc PKPab 16 27 58.2 0.0
BLS5 Blasjo 143.63 354 ePKPbc PKPab 16 28 00.0 -0.1
KMY Karmoy 143.95 355 ePKPbc PKPbc 16 28 00.8 -0.2
AKASG Malin Array Be 144.12 327 PKP PKPbc 16 28 01.3 -0.6
comp=Z,7.2nm,0.5s,baz=43,slow=3.1,SNR=24
SUW Suwalki 144.48 336 PKPbc 16 28 02.5 -0.4
HOMB Homborsund 144.51 351 ePKPbc PKPbc 16 28 02.9 +0.1
SNART Snartemo 144.61 353 ePKPdf PKPbc 16 28 03.2 0.0
BRTR Keskin Array B 146.65 307 PKPbc PKPbc 16 28 09.1 -0.7
comp=Z,2.9nm,0.7s,baz=114,slow=2.6,SNR=8.8
BRTR Keskin Array B 146.65 307 PKPbc 16 28 08.9 -0.9
KWP Kalwaria Pacla 147.94 331 PKPbc 16 28 12.8 +0.1
BURAR Bucovina Array 148.11 326 ⇓P PKiKP 16 28 14.7 +0.1
BURAR Bucovina Array 148.11 326 PKiKP 16 28 14.4 -0.2
BSEG Bad Segeberg 148.36 347 ePKPbc PKPbc 16 28 14.0 +0.4
baz=21,slow=2.3
BSEG ePKPab **PKPab 16 28 19.2 +0.3**
baz=20,slow=4.3
KOLS Kolonicke sedl 148.65 330 ePKP PKiKP 16 28 15.6 +0.1
KOLS e 16 28 20.1
CRVS Cervenica-Dubn 149.03 331 ePKP PKPbc 16 28 15.6 +0.2
OKC Ostrava-Krasne 149.69 335⇑ePKP PKiKP 16 28 17.5 -0.1
LANS Liptovska Anna 149.71 333 ePKP PKiKP 16 28 18.4 +0.7
LANS e 16 28 24.4
NRDL Niedersach Rie 149.76 347 ePKPbc PKPbc 16 28 17.2 +0.3
baz=21,slow=2.3
OSTC Ostas 149.80 338⇑ePKP PKiKP 16 28 17.8 -0.1
OSTC ePKPAB **PKPab 16 28 26.0 +1.0**
CHVC Chvalec 149.83 338⇑ePKP PKPbc 16 28 17.3 0.0
CHVC ePKPAB **PKPab 16 28 24.8 -0.4**
UPC Upice 149.91 338⇑ePKP PKPbc 16 28 17.5 +0.1
DPC Dobruska-Polom 149.94 338⇑ePKP PKPbc 16 28 17.6 0.0
DPC ePKPAB **PKPab 16 28 26.0 +0.3**
MORC Moravsky Berou 149.97 336 ⇓P PKPbc 16 28 18.1 +0.4
MORC Moravsky Berou 149.97 336 ePKP PKPbc 16 28 17.9 +0.2
MORC e 16 28 26.2
MORC Moravsky Berou 149.97 336 PKPbc 16 28 17.9 +0.2
ASSE Asse, Remlinge 149.97 346 ePKPbc PKPbc 16 28 17.8 +0.4
baz=21,slow=2.3
ASSE ePKPab **PKPab 16 28 25.7 +0.2**
baz=20,slow=4.3
KRLC Kraliky 150.00 337⇑ePKP PKPbc 16 28 17.8 +0.1
KRLC ePKPAB **PKPab 16 28 26.3 +0.3**
CLL Collm 150.14 342⇓*i* PKPbc **PKPbc 16 28 18.2 +0.3**
comp=Z,30nm,0.9s
CLL *i* PKPac 16 28 26.5
CLL Collm 150.14 342 ePKPbc PKPbc 16 28 18.3 +0.3
baz=21,slow=2.3
CLL ePKPab **PKPab 16 28 26.6 +0.2**
baz=20,slow=4.3
BRG Berggiesshubel 150.26 341 *i* PKP **PKiKP 16 28 18.6 -0.1**
comp=Z,20nm,0.6s
BRG Berggiesshubel 150.26 341 ePKPbc PKiKP 16 28 18.7 -0.1
baz=21,slow=2.3
BRG ePKPab **PKPab 16 28 27.4 +0.5**
baz=20,slow=4.3
CLZ Clausthal 150.31 346 ePKPbc PKiKP 16 28 19.0 +0.1
baz=21,slow=2.3
CLZ ePKPab **PKPab 16 28 27.5 +0.3**
baz=20,slow=4.3
PVCC Panska Ves 150.37 340⇑ePKP PKiKP 16 28 19.0 0.0
FBE Freiberg 150.39 342 ePKPbc PKiKP 16 28 19.3 +0.3
baz=21,slow=2.3
FBE ePKPab **PKPab 16 28 28.1 +0.7**
baz=20,slow=4.3
IBBN Ibbenburen 150.39 349 ePKPbc PKPbc 16 28 18.8 +0.3
baz=21,slow=2.3
IBBN ePKPab **PKPab 16 28 27.5 +0.1**
baz=20,slow=4.3
VYHS Vyhne 150.48 333 ePKP PKPbc 16 28 19.1 +0.3
NEUB Neuenburg 150.56 344 ePKPbc PKiKP 16 28 19.3 0.0
baz=21,slow=2.3
NEUB ePKPab **PKPab 16 28 28.4 +0.3**
baz=20,slow=4.3
JAVC Velka Javorina 150.66 335 ePKP PKiKP 16 28 20.7 +0.9
JAVC *e* 16 28 30.4
VRAC Vranov 150.71 336 ⇓P PKPbc 16 28 19.7 +0.3
VRAC Vranov 150.71 336 ePKP PKPbc 16 28 19.6 +0.3
VRAC *e* 16 28 29.6
PRU Pruhonice 150.84 339⇑ePKP PKPbc 16 28 19.7 +0.1
KRUC Moravsky 150.99 336 ePKP PKPbc 16 28 20.0 0.0
KRUC *e* 16 28 30.6
TANN Tannenbergstha 151.09 342 ePKPbc PKiKP 16 28 20.6 0.0
baz=21,slow=2.3
TANN ePKPab **PKPab 16 28 31.0 +0.5**
baz=20,slow=4.3
MOX Moxa 151.12 343 ePKPbc PKPbc 16 28 20.5 +0.3
baz=21,slow=2.3
MOX ePKPab **PKPab 16 28 30.7 +0.2**
baz=20,slow=4.3
PLN Plauen 151.12 343 ePKPbc PKPbc 16 28 20.5 +0.3
baz=21,slow=2.3
GUNZ Gunzen 151.18 342 ePKPbc PKiKP 16 28 20.9 +0.1
baz=21,slow=2.3
GUNZ ePKPab **PKPab 16 28 31.4 +0.6**
baz=20,slow=4.3
MODS Modra-Piesok 151.21 334 ePKP PKPbc 16 28 20.2 -0.3
WERN Wernitzgruen 151.23 342 ePKPab PKPab 16 28 31.8 +0.7
baz=20,slow=4.3
NKC Novy Kostel 151.26 342⇑ePKP PKiKP 16 28 21.1 +0.2
UBBA Unterbreizbach 151.35 346 ePKPbc PKPbc 16 28 20.8 +0.2
baz=21,slow=2.3
MANZ Manzenberg 151.58 342 ePKPbc PKiKP 16 28 21.6 +0.1
baz=21,slow=2.3
ROTZ Rotzenmuhle 151.75 342 ePKPbc PKPbc 16 28 21.9 +0.2
baz=21,slow=2.3
ROTZ ePKPab **PKPab 16 28 34.0 +0.8**
baz=20,slow=4.3
KHC Kasperske Hory 151.90 340⇑ePKP PKPbc 16 28 22.0 -0.1
KHC ePKPAB **PKPab 16 28 33.5 -0.4**
KHC Kasperske Hory 151.90 340 PKPbc 16 28 22.3 +0.2
KHC PKPab **PKPab 16 28 34.2 +0.3**
GRF Grafenberg Arr 152.09 343 ePKPbc PKPbc 16 28 22.6 +0.2
baz=21,slow=2.3
GRF ePKPab **PKPab 16 28 35.0 +0.3**
baz=20,slow=4.3
WET Wettzell 152.11 341 ePKPab PKPab 16 28 35.6 +0.8
baz=20,slow=4.3
GEC2 GERESS Array S 152.11 339 ePKPbc PKPbc 16 28 22.7 +0.1
baz=21,slow=2.3
GERES GERESS Array B 152.11 339 PKPbc PKPbc 16 28 22.6 0.0
comp=Z,1.7nm,0.5s,baz=33,slow=3.2,SNR=19
GERES PKPab **PKPab 16 28 34.8 -0.1**
comp=Z,1.4nm,0.7s,baz=33,slow=5.1,SNR=7.7
CONA Conrad Observa 152.12 336 eP PKiKP 16 28 22.9 +0.1
comp=Z,4.0nm,0.7s
CONA *eP* **PKPab 16 28 34.8 -0.2**
comp=Z,5.2nm,0.7s
TNS Taunus Mts 152.25 347 ePKPbc PKiKP 16 28 23.1 +0.1
baz=21,slow=2.3
TNS ePKPab **PKPab 16 28 35.5 +0.1**
baz=20,slow=4.3
STU Stuttgart 153.45 345 ePKPab PKPab 16 28 40.8 +0.3
baz=20,slow=4.3
SOKA Soboth 153.47 335 eP PKPab 16 28 40.9 +0.1
comp=Z,3.6nm,1.0s
BFO Black Forest 154.06 346 ePKPab PKPab 16 28 43.2 0.0
baz=20,slow=4.3
WATA Walderalm 154.11 340 eP PKPab 16 28 44.0 +0.4
comp=Z,4.1nm,0.5s
WTTA Wattenerg 154.16 340 eP PKPab 16 28 44.4 +0.6
comp=Z,6.9nm,0.7s
RETA Reutte 154.22 342 eP PKPab 16 28 44.4 +0.5
comp=Z,6.2nm,1.1s
MOTA Moosalm 154.25 341 eP PKPab 16 28 44.9 +0.8
comp=Z,5.5nm,1.0s
SQTA Sankt Quirin 154.33 341 eP PKPab 16 28 45.2 +0.8
comp=Z,3.9nm,0.8s
DAVA Damuels 154.65 343 eP PKPdf 16 28 18.7 -0.5
comp=Z,6.8nm,1.1s
DAVA *eP* **PKPab 16 28 46.5 +0.7**
comp=Z,8.5nm,1.1s
FETA Feichten 154.65 341 eP PKPdf 16 28 18.8 -0.4
comp=Z,3.4nm,1.0s
FETA *eP* **PKiKP 16 28 27.9 -0.3**
comp=Z,4.5nm,1.3s
ESDC Sonseca Array 163.56 8 PKPab PKPab 16 29 23.9 -0.9
comp=Z,2.3nm,0.9s,baz=335,slow=3.8,SNR=6.3
TORD Torodi Ar. Bea 169.52 194 PKP PKPdf 16 28 33.9 -0.6
comp=Z,2.6nm,1.1s,baz=92,slow=0.3,SNR=5.8
TORD PKPab **PKPab 16 29 51.0 -0.6**
comp=Z,1.4nm,0.8s,baz=166,slow=2.3,SNR=5.4
TORD Torodi Ar. Bea 169.52 194 PKPdf 16 28 34.1 -0.4

DDA **20** *16:17:54.1,37.31N×42.60E,h7km±2km,ML2.2*
ISK **20** *16:17:54.7,37.36N×42.53E,h7km,ML2.6/13*
ISC 20 16:17:55.7±1.2**,37.37N**±0.05×**42.60E**±0.03**,h8**km±9km,
n24,σ1**9**41**/32,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIRT	**Sirnak**	**0.18**	**317**	PG	**Pg**	**16 17 58.6**	**-1.0**
SIRN	**Sirnak**	**0.20**	**311**	*i* P	**Pg**	**16 17 58.8**	**-1.0**
SIRN				*i* S	**Sg**	**16 18 03.3**	**+0.8**
SIRN				IAML		16 18 04.0	
	comp=N,714nm,0.4s						
CUKT	**Cukurca**	**0.81**	**98**	PG	**Pg**	**16 18 11.7**	**+0.3**
CUKT				SG	**Sb**	**16 18 24.1**	**+0.7**
CUKT	**Cukurca**	**0.81**	**98**	*i* P	**Pg**	**16 18 09.9**	**-1.5**

SRTM	**Siirt_Merkez**	**0.82**	**320**	*i* P	**Pg**	**16 18 11.1**	**-0.5**
SRTM				*i* S	**Sn**	**16 18 27.1**	**+0.9**
SRTM				IAML		16 18 30.0	
	comp=E,105nm,0.5s						
SRTM				IAML		16 18 37.0	
	comp=N,84nm,0.6s						
HAKT	**HAKKARI**	**0.90**	**77**	*i* P	**Pg**	**16 18 11.4**	**-1.7**
AKDM	**Akdamar-Van**	**1.01**	**17**	PG	**Pg**	**16 18 14.0**	**-1.1**
AKDM				SG	**Sn**	**16 18 29.7**	**-1.2**
BLIS	**Bitlis-Merkez**	**1.11**	**340**	*i* P	**Pg**	**16 18 16.8**	**-0.4**
BTMN	**Batman**	**1.18**	**297**	*i* P	**Pn**	**16 18 18.1**	**-0.5**
BTMN				*i* S	**Sn**	**16 18 36.9**	**+2.0**
GURO	**Guroymak-BITLI**	**1.27**	**339**	PN	**Pn**	**16 18 19.2**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.36**	**306**	PN	**Pn**	**16 18 20.2**	**-0.9**
SVAN	**Silvan-Diyarba**	**1.36**	**306**	*i* P	**Pb**	**16 18 21.0**	**-0.5**
SVAN				*i* S	**Sg**	**16 18 42.9**	**+3.4**
SVAN				IAML		16 18 43.0	
	comp=E,30nm,0.4s						
YOVA	**Hakkari_Yksek**	**1.36**	**80**	*i* P	**Pn**	**16 18 20.1**	**-1.2**
YOVA				*i* S	**Sg**	**16 18 44.0**	**+4.4**
YOVA				IAML		16 18 44.0	
	comp=N,52nm,0.5s						
YOVA				IAML		16 18 44.0	
	comp=E,61nm,0.5s						
VANB	**Van**	**1.38**	**27**	PN	**Pn**	**16 18 20.3**	**-1.1**
MARD	**Mardin**	**1.45**	**268**	*i* P	**Pn**	**16 18 21.9**	**-0.5**
MARD				*i* S	**Sg**	**16 18 42.7**	**+0.3**
MUSM	**Mu-Merkez**	**1.60**	**328**	*i* P	**Pb**	**16 18 24.8**	**-1.0**
MAZI	**Mazidag**	**1.72**	**274**	PN	**Pn**	**16 18 25.2**	**-0.9**
DYBB	**Diyarbakir**	**2.04**	**287**	PN	**Pn**	**16 18 29.6**	**-0.8**
BNGB	**Bingl**	**2.22**	**318**	PN	**Pn**	**16 18 32.6**	**-0.4**
AGRB	**Hanur-Agry**	**2.23**	**8**	PN	**Pn**	**16 18 33.2**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.79**	**292**	PN	**Pn**	**16 18 40.1**	**-0.9**
PTK	**Pertek**	**2.95**	**302**	PN	**Pn**	**16 18 42.8**	**-0.3**
URFA	**Urfa**	**3.01**	**273**	PN	**Pn**	**16 18 43.4**	**-0.4**
MALT	**Malatya**	**3.44**	**287**	PN	**Pn**	**16 18 49.2**	**-0.5**

*IDC **20** 16:23:17.6±3.5, 13°.65N×91°.97W, h0km, mb3.5/2, mb1 3.9/4, mb1mx3.6/37, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=237.0km s-min=42.8km az=47.0*
*GCG **20** 16:23:30.0±0.5, 14°.39N×91°.70W, h50km±9km, MD3.6*
ISC 20 16:23:27.8±1.6, **14°.2N**±0°.2×**91°.89W**±0°.07, **h54**km, **n11,**
σ1=**77**/13, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.40**	**52**	*e*P		**Pn**		**16 23 37.9**	**-0.4**
STG3	**Santiaguito 3,**	**0.60**	**31**	*i* P		**Pn**		**16 23 40.4**	**-0.3**
STG3				*e*S		**Sn**		**16 23 48.1**	**-2.0**
FUG	**Fuego 3**	**1.05**	**76**	*i* P		**Pn**		**16 23 44.9**	**-1.6**
PCG	**Pacaya**	**1.26**	**81**	*e*P		**Pn**		**16 23 49.2**	**-0.1**
NBG	**Las Nubes**	**1.55**	**75**	*e*P		**Pn**		**16 23 53.3**	**0.0**
MRL	**Marmol**	**2.31**	**67**	*e*P		**Pn**		**16 24 04.7**	**+1.0**
CMIG	**Matias Romero**	**4.08**	**315**	Pn		**Pn**		**16 24 25.0**	**-2.6**
	1.0nm,0.3s,baz=140,slow=15,SNR=16								
CMIG				Sn		**Sn**		**16 25 17.9**	**+3.8**
	3.3nm,0.3s,baz=89,slow=18,SNR=2.9								
TXAR	**Lajitas Array**	**18.60**	**326**	P		**Pn**		**16 27 41.9**	**+0.4**
	0.1nm,0.3s,baz=152,slow=14,SNR=7.9								
NVAR	**Mina Array Bea**	**33.59**	**321**	P		**P**		**16 30 04.1**	**+1.0**
	0.7nm,0.8s,baz=132,slow=11,SNR=4.2								
ILAR	**Eielson Array**	**62.71**	**337**	P		**P**		**16 33 46.7**	**-0.1**
	0.4nm,0.8s,baz=157,slow=5.5,SNR=4.3								
CMAR	**Chiang Mai Arr**	**145.84**	**341**	PKPbc		**PKPdf**		**16 43 00.3**	**-1.2**
	1.1nm,0.7s,baz=332,slow=2.7,SNR=10								

*BJI **20** 16:25:34.5±0.0, 36°.29N×78°.28E, h119km, mb3.9/1*
*NNC **20** 16:25:37.6±7.0, 36°.73N×78°.80E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=110.3km s-min=53.0km az=95.0*
ISC 20 16:25:37.6±5.0, **36°.4N**±0°.3×**79°.4E**±0°.6, **h100**km, **n4,**
σ0=**43**/6, **2C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**6.97**	**1**	⇓P		**Pn**		**16 27 16.8**	**-0.3**
	3.2nm,0.4s								
PDGK				⇑S		**Sn**		**16 28 35.3**	**+0.5**
	5.2nm,0.4s								
WMQ	**Urumqi**	**9.80**	**38**	*e*P		Pn		16 28 02.5	+7.0
MAKZ	**Makanchi**	**10.63**	**10**	⇓P		**Pn**		**16 28 06.6**	**-0.1**
	3.7nm,1.0s								
MAKZ				⇑S		**Sn**		**16 30 03.4**	**-0.2**
	1.4nm,0.6s								
MK31	**Makanchi Array**	**10.66**	**11**	P		**Pn**		**16 28 07.5**	**+0.4**
	1.0nm,0.6s,baz=204,slow=13,SNR=29								
MK31				⇓S		**Sn**		**16 30 04.1**	**-0.2**
	1.7nm,0.6s,baz=198,slow=24,SNR=4.8								

*ATH **20** 16:26:22.2, 38°.65N×23°.36E, h24km±1km, ML3.5/21, Error ellipse: s-maj=1.0km s-min=0.6km az=291.0*
*THE **20** 16:26:22.9, 38°.65N×23°.36E, h6km±1km, ML3.5/18, Error ellipse: s-maj=1.3km s-min=0.4km az=201.0*
*ISK **20** 16:26:22.5, 38°.69N×23°.36E, h18km, ML3.3/21*
ISC 20 16:26:22.7±0.9, **38°.66N**±0°.02×**23°.34E**±0°.02, **h18**km±4km,
n152, σ0=**99**/193, **7C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	**0.25**	**278**	P		**Pg**		**16 26 28.5**	**0.0**
ATAL				S		**Sb**		**16 26 33.1**	**+0.4**
ATAL				AML		AML		16 26 33.4	
	comp=E,26648μm,0.3s								
ATAL				AML		AML		16 26 34.1	
	comp=N,22528μm,0.3s								
ATAL	**Atalanti**	**0.25**	**278**	P		**Pg**		**16 26 28.5**	**0.0**
ATAL				S		**Sb**		**16 26 33.2**	**+0.5**
	comp=N,12μm,0.3s								
LKR	**Lokris**	**0.27**	**269**	P		**Pg**		**16 26 28.5**	**-0.2**
LKR				AML		AML		16 26 34.3	
	comp=E,27659μm,0.2s								
LKR				AML		AML		16 26 34.4	
	comp=N,21758μm,0.2s								
LKR	**Lokris**	**0.27**	**269**	P		**Pg**		**16 26 28.5**	**-0.2**
LKR				S		**Sg**		**16 26 32.8**	**0.0**
	comp=N,12μm,0.2s								
VIL2	**Platees**	**0.45**	**187**	P		**Pb**		**16 26 32.2**	**+0.1**
VIL2				S		**Sb**		**16 26 39.8**	**+1.3**
VIL2				AML		AML		16 26 40.7	
	comp=E,56491μm,0.5s								
VIL2				AML		AML		16 26 43.0	
	comp=N,17604μm,0.5s								
VILL	**Villia**	**0.49**	**183**	P		**Pg**		**16 26 32.2**	**-0.5**
VILL				S		**Sb**		**16 26 39.8**	**0.0**
	comp=N,21μm,0.5s								
AXAR	**Agios Charalam**	**0.55**	**282**	P		**Pg**		**16 26 33.6**	**0.0**
AXAR				S		**Sb**		**16 26 42.4**	**+1.2**
AXAR				AML		AML		16 26 42.8	
	comp=N,47626μm,0.4s								
AXAR				AML		AML		16 26 44.3	
	comp=E,27689μm,0.2s								
AXAR	**Agios Charalam**	**0.55**	**282**	P		**Pg**		**16 26 33.6**	**0.0**
AXAR				S		**Sb**		**16 26 42.4**	**+1.2**
	comp=E,18μm,0.3s								
KYMI	**Kymi, Euboea I**	**0.59**	**92**	P		**Pg**		**16 26 33.8**	**-0.7**
KYMI				S		**Sg**		**16 26 42.3**	**-0.2**
KYMI				AML		AML		16 26 43.7	
	comp=N,6840μm,0.5s								
KYMI				AML		AML		16 26 47.4	
	comp=E,5871μm,0.4s								
KYMI	**Kymi, Euboea I**	**0.59**	**92**	P		**Pg**		**16 26 33.8**	**-0.7**
KYMI				S		**Sg**		**16 26 42.3**	**-0.2**
	comp=E,3μm,0.4s								
ALNA	**Alonissos**	**0.64**	**40**	P		**Pb**		**16 26 34.9**	**-0.4**
ALNA				S		**Sg**		**16 26 43.9**	**+0.1**
ALNA				AML		AML		16 26 44.5	
	comp=E,12791μm,0.5s								
ALNA				AML		AML		16 26 44.6	
	comp=N,7652μm,0.4s								
NEO	**Neokhori**	**0.65**	**352**	P		**Pg**		**16 26 35.9**	**+0.2**
NEO				S		**Sg**		**16 26 44.6**	**+0.2**
NEO				AML		AML		16 26 47.9	
	comp=E,12862μm,0.4s								
NEO				AML		AML		16 26 48.2	
	comp=N,13839μm,0.4s								
NEO	**Neokhori**	**0.65**	**352**	P		**Pg**		**16 26 35.9**	**+0.2**
NEO				S		**Sg**		**16 26 44.6**	**+0.2**
	comp=N,7μm,0.4s								
AOS	**Alonnisos**	**0.66**	**39**	P		**Pb**		**16 26 35.1**	**-0.6**
AOS				S		**Sb**		**16 26 44.3**	**-0.3**
AOS				AML		AML		16 26 44.9	
	comp=E,5806μm,0.5s								
AOS				AML		AML		16 26 45.5	
	comp=N,6437μm,0.3s								
AOS	**Alonnisos**	**0.66**	**39**	PG		**Pb**		**16 26 35.4**	**-0.3**
AOS				SG		**Sb**		**16 26 44.2**	**-0.3**
AOS	**Alonnisos**	**0.66**	**39**	P		**Pb**		**16 26 35.1**	**-0.6**
AOS				S		**Sb**		**16 26 44.3**	**-0.3**
	comp=N,3μm,0.4s								
DSF	**Desfina**	**0.69**	**249**	P		**Pb**		**16 26 35.2**	**-0.9**
DSF	**Desfina**	**0.69**	**249**	P		**Pb**		**16 26 35.2**	**-0.9**
DLFA	**Delphi**	**0.69**	**255**	P		**Pb**		**16 26 35.5**	**-0.6**
LTK	**Loutraki**	**0.70**	**205**	P		**Pb**		**16 26 36.1**	**-0.3**
LTK				S		**Sg**		**16 26 46.4**	**+0.7**
LTK				AML		AML		16 26 48.5	
	comp=E,11784μm,0.5s								
LTK				AML		AML		16 26 52.3	
	comp=N,9616μm,0.3s								
LTK	**Loutraki**	**0.70**	**205**	P		**Pb**		**16 26 36.1**	**-0.3**
LTK				S		**Sg**		**16 26 46.5**	**+0.7**
	comp=N,6μm,0.4s								
XOR	**Xorichti**	**0.72**	**351**	P		**Pg**		**16 26 36.9**	**+0.1**
XOR				AML		AML		16 26 50.0	
	comp=E,5764μm,0.7s								
XOR				AML		AML		16 26 51.6	
	comp=N,3972μm,0.5s								
XOR	**Xorichti**	**0.72**	**351**	P		**Pg**		**16 26 36.9**	**+0.1**
XOR				S		**Sg**		**16 26 46.8**	**+0.4**
	comp=N,2μm,0.5s								
LOUT	**Loutraki**	**0.73**	**203**	P		**Pb**		**16 26 36.5**	**-0.4**
LOUT				S		**Sn**		**16 26 47.7**	**-1.1**
	comp=N,5μm,0.2s								
PTL	**Penteli**	**0.73**	**146**	P		**Pb**		**16 26 36.6**	**-0.4**
PTL				S		**Sg**		**16 26 47.3**	**+0.5**
PTL				AML		AML		16 26 49.6	
	comp=E,3696μm,0.5s								
PTL				AML		AML		16 26 49.7	
	comp=N,4953μm,0.4s								
PTL	**Penteli**	**0.73**	**146**	P		**Pb**		**16 26 36.6**	**-0.4**
PTL				S		**Sg**		**16 26 47.3**	**+0.5**
	comp=N,2μm,0.4s								
DION	**Dionisos Attik**	**0.74**	**141**	P		**Pb**		**16 26 36.8**	**-0.3**
DION				S		**Sg**		**16 26 47.6**	**+0.5**
DION				AML		AML		16 26 50.1	
	comp=N,20283μm,0.4s								
DION				AML		AML		16 26 51.4	
	comp=E,16260μm,0.4s								
DION	**Dionisos Attik**	**0.74**	**141**	P		**Pb**		**16 26 36.8**	**-0.3**
DION				S		**Sg**		**16 26 47.6**	**+0.5**
	comp=E,9μm,0.4s								
ATH	**Athens Observa**	**0.74**	**157**	P		**Pb**		**16 26 36.8**	**-0.3**
ATH				AML		AML		16 26 50.9	
	comp=N,8891μm,0.4s								
ATH				AML		AML		16 26 51.1	
	comp=E,10073μm,0.3s								
ATH	**Athens Observa**	**0.74**	**157**	P		**Pb**		**16 26 36.8**	**-0.3**
VOL2	**Volos**	**0.77**	**337**	P		**Pn**		**16 26 40.5**	**+1.9**
THAL	**Thalero**	**0.82**	**221**	P		**Pb**		**16 26 38.4**	**0.0**
THAL				AML		AML		16 26 54.5	
	comp=N,20255μm,0.3s								
THAL				AML		AML		16 26 57.0	
	comp=E,15360μm,0.3s								
THAL	**Thalero**	**0.82**	**221**	P		**Pb**		**16 26 38.4**	**0.0**
AGG	**Agios Georgios**	**0.87**	**295**	P		**Pg**		**16 26 39.8**	**+0.1**
AGG				S		**Sn**		**16 26 52.1**	**-0.2**
AGG				AML		AML		16 26 55.9	
	comp=N,2653μm,0.4s								
AGG				AML		AML		16 26 56.5	
	comp=E,3310μm,0.5s								
AGG	**Agios Georgios**	**0.87**	**295**	PG		**Pg**		**16 26 39.7**	**+0.1**
AGG				SG		**Sn**		**16 26 52.1**	**-0.2**
AGG	**Agios Georgios**	**0.87**	**295**	P		**Pg**		**16 26 39.8**	**+0.1**
AGG				S		**Sn**		**16 26 52.1**	**-0.2**
	comp=E,1μm,0.4s								
VLY	**Voula,Athens**	**0.88**	**156**	P		**Pb**		**16 26 39.1**	**-0.3**
VLY				S		**Sg**		**16 26 51.3**	**-0.1**
VLY				AML		AML		16 26 53.4	
	comp=E,9102μm,0.3s								
VLY				AML		AML		16 26 54.8	
	comp=N,5846μm,0.5s								
VLY	**Voula,Athens**	**0.88**	**156**	P		**Pb**		**16 26 39.1**	**-0.3**
VLY				S		**Sg**		**16 26 51.3**	**-0.1**
	comp=N,4μm,0.4s								
SKY	**Skiros Island**	**0.97**	**77**	P		**Pb**		**16 26 40.7**	**-0.2**
SKY	**Skiros Island**	**0.97**	**77**	P		**Pb**		**16 26 40.8**	**-0.2**
SKY				S		**Sn**		**16 26 55.4**	**+0.7**
	comp=N,4μm,0.3s								
KALE	**Kalithea**	**0.98**	**255**	P		**Pb**		**16 26 40.5**	**-0.7**
KALE	**Kalithea**	**0.98**	**255**	P		**Pb**		**16 26 40.5**	**-0.7**
MAKR	**Makrakomi, Fth**	**1.01**	**291**	P		**Pn**		**16 26 42.1**	**+0.1**
MAKR				AML		AML		16 26 58.1	
	comp=N,1028μm,0.5s								
MAKR				AML		AML		16 27 05.2	
	comp=E,972μm,0.4s								
MAKR	**Makrakomi, Fth**	**1.01**	**291**	P		**Pn**		**16 26 42.1**	**+0.1**
SERG	**Sergoula**	**1.04**	**257**	P		**Pb**		**16 26 41.4**	**-0.7**
SERG	**Sergoula**	**1.04**	**257**	P		**Pb**		**16 26 41.4**	**-0.7**
EPID	**Epidavros**	**1.06**	**190**	P		**Pn**		**16 26 42.7**	**+0.1**
EPID	**Epidavros**	**1.06**	**190**	P		**Pn**		**16 26 42.7**	**+0.1**
KARY	**Karystos**	**1.06**	**126**	P		**Pb**		**16 26 42.4**	**-0.2**
KARY				S		**Sn**		**16 26 56.5**	**-0.5**
KARY				AML		AML		16 26 59.1	
	comp=N,4042μm,0.4s								
KARY				AML		AML		16 26 59.3	
	comp=E,3726μm,0.4s								
KARY	**Karystos**	**1.06**	**126**	P		**Pb**		**16 26 42.4**	**-0.2**
KARY				S		**Sg**		**16 26 57.0**	**-0.3**
	comp=E,2μm,0.4s								
GUR	**Goura**	**1.07**	**228**	P		**Pn**		**16 26 42.7**	**-0.1**
GUR				S		**Sg**		**16 26 58.2**	**+0.8**
GUR				AML		AML		16 26 59.3	
	comp=E,13834μm,0.6s								
GUR				AML		AML		16 27 02.5	
	comp=N,15595μm,0.4s								
GUR	**Goura**	**1.07**	**228**	P		**Pn**		**16 26 42.7**	**-0.1**
GUR				S		**Sg**		**16 26 58.2**	**+0.8**
	comp=N,8μm,0.5s								
ANX	**Ano Chora**	**1.11**	**267**	P		**Pn**		**16 26 43.2**	**-0.3**
ANX	**Ano Chora**	**1.11**	**267**	P		**Pn**		**16 26 43.2**	**-0.3**
KLV	**Kalavryta, Ach**	**1.12**	**237**	P		**Pb**		**16 26 43.7**	**+0.1**
KLV				AML		AML		16 27 01.8	
	comp=N,1296μm,0.6s								
KLV				AML		AML		16 27 02.8	
	comp=E,1242μm,0.3s								
KLV	**Kalavryta, Ach**	**1.12**	**237**	P		**Pb**		**16 26 43.7**	**+0.1**
KLV				S		**Sg**		**16 26 59.6**	**+0.5**
	comp=E,650nm,0.4s								
EFP	**Efpalio**	**1.15**	**259**	P		**Pn**		**16 26 43.6**	**-0.3**
EFP	**Efpalio**	**1.15**	**259**	P		**Pn**		**16 26 43.6**	**-0.3**
EVR	**Evrytania**	**1.23**	**283**	P		**Pg**		**16 26 46.2**	**-0.2**
EVR	**Evrytania**	**1.23**	**283**	P		**Pg**		**16 26 46.2**	**-0.2**
KRND	**KRANIDI**	**1.28**	**187**	P		**Pb**		**16 26 46.4**	**+0.1**
KRND	**KRANIDI**	**1.28**	**187**	P		**Pb**		**16 26 46.4**	**+0.1**
PAIG	**Paliouri**	**1.29**	**12**	P		**Pb**		**16 26 46.2**	**-0.3**
PAIG	**Paliouri**	**1.29**	**12**	P		**Pb**		**16 26 46.2**	**-0.3**
YDRA	**Hydra**	**1.31**	**176**	P		**Pb**		**16 26 47.0**	**+0.2**
THL	**Klokotos Trika**	**1.37**	**312**	P		**Pb**		**16 26 48.2**	**+0.3**
THL				AML		AML		16 27 13.2	
	comp=E,521μm,0.7s								
THL				AML		AML		16 27 13.4	
	comp=N,448μm,0.7s								
THL	**Klokotos Trika**	**1.37**	**312**	P		**Pb**		**16 26 48.2**	**+0.3**
TRIP	**Tripoli**	**1.41**	**217**	P		**Pb**		**16 26 48.9**	**+0.4**
TRIP	**Tripoli**	**1.41**	**217**	P		**Pb**		**16 26 48.9**	**+0.4**
DRO	**Drossia**	**1.46**	**242**	P		**Pb**		**16 26 49.7**	**+0.3**
DRO	**Drossia**	**1.46**	**242**	P		**Pb**		**16 26 49.7**	**+0.3**
VLX	**Vlachokerasia**	**1.49**	**211**	P		**Pb**		**16 26 49.6**	**-0.3**
VLX	**Vlachokerasia**	**1.49**	**211**	P		**Pb**		**16 26 49.6**	**-0.3**
LIT	**Litokhoron**	**1.58**	**336**	P		**Pn**		**16 26 50.7**	**+0.8**
LIT	**Litokhoron**	**1.58**	**336**	P		**Pn**		**16 26 50.7**	**+0.8**
RLS	**Riolos of Patr**	**1.59**	**248**	P		**Pb**		**16 26 51.9**	**+0.3**
AMT	**Artemida-Makis**	**1.71**	**229**	P		**Pb**		**16 26 52.8**	**-0.7**
AMT	**Artemida-Makis**	**1.71**	**229**	P		**Pb**		**16 26 52.9**	**-0.7**
PLG	**Polygyros**	**1.72**	**3**	P		**Pn**		**16 26 52.2**	**+0.5**
PLG	**Polygyros**	**1.72**	**3**	P		**Pn**		**16 26 52.2**	**+0.5**
OUR	**Ouranopolis**	**1.75**	**16**	P		**Pn**		**16 26 52.8**	**+0.7**
OUR	**Ouranopolis**	**1.75**	**16**	PN		**Pn**		**16 26 52.5**	**+0.4**
OUR				SN		**Sn**		**16 27 13.8**	**-0.1**
OUR	**Ouranopolis**	**1.75**	**16**	P		**Pn**		**16 26 52.8**	**+0.7**
TNSA	**Tinos**	**1.82**	**127**	P		**Pn**		**16 26 53.7**	**+0.6**
ITM	**Ithomi**	**1.85**	**218**	P		**Pb**		**16 26 56.0**	**0.0**
HORT	**Hortiatis**	**1.95**	**355**	P		**Pn**		**16 26 55.9**	**+0.9**
HORT	**Hortiatis**	**1.95**	**355**	PN		**Pn**		**16 26 55.4**	**+0.5**
HORT				SN		**Sn**		**16 27 18.9**	**-0.1**
HORT	**Hortiatis**	**1.95**	**355**	P		**Pn**		**16 26 55.9**	**+0.9**
VLI	**Veliai**	**1.96**	**190**	P		**Pn**		**16 26 55.9**	**+0.8**
VLI	**Veliai**	**1.96**	**190**	P		**Pn**		**16 26 55.9**	**+0.8**
KPRO	**Kipourio**	**2.01**	**311**	P		**Pb**		**16 26 58.1**	**-0.7**
SIGR	**SIGRI**	**2.04**	**73**	P		**Pn**		**16 26 56.4**	**+0.3**
SIGR	**SIGRI**	**2.04**	**73**	PN		**Pn**		**16 26 57.0**	**+0.9**
SIGR	**SIGRI**	**2.04**	**73**	P		**Pn**		**16 26 56.4**	**+0.3**
KZN	**Kozani**	**2.05**	**324**	P		**Pb**		**16 26 58.1**	**-1.3**
MHLA	**Plaka, Milos I**	**2.09**	**156**	P		**Pn**		**16 26 57.5**	**+0.7**
MHLO	**Agia Marina, M**	**2.14**	**157**	P		**Pn**		**16 26 58.0**	**+0.5**
MHLO	**Agia Marina, M**	**2.14**	**157**	P		**Pn**		**16 26 58.0**	**+0.5**
SOH	**Sokhos**	**2.16**	**0**	P		**Pn**		**16 26 59.1**	**+1.2**
PYL	**PYLOS**	**2.17**	**216**	P		**Pb**		**16 27 00.4**	**-1.0**
PENT	**Pentalofos**	**2.30**	**313**	P		**Pb**		**16 27 02.4**	**-1.3**
APE	**Apeiranthos**	**2.35**	**132**	P		**Pn**		**16 27 01.1**	**+0.7**
APE	**Apeiranthos**	**2.35**	**132**	PN		**Pn**		**16 27 01.3**	**+0.9**
GRG	**Griva**	**2.41**	**343**	PN		**Pn**		**16 27 01.7**	**+0.5**
KTHA	**Kythira Island**	**2.41**	**185**	P		**Pn**		**16 27 02.1**	**+0.9**
BOZC	**Bozcaada**	**2.41**	**60**	PN		**Pn**		**16 27 02.1**	**+0.8**
SRS	**Serrai**	**2.46**	**4**	P		**Pn**		**16 27 02.7**	**+0.7**
NEST	**Nestorio**	**2.49**	**315**	P		**Pb**		**16 27 04.9**	**-2.1**
GADA	**Gvkgeada**	**2.50**	**51**	PN		**Pn**		**16 27 02.8**	**+0.3**
KNT	**Kendrikon**	**2.52**	**352**	P		**Pn**		**16 27 04.4**	**+1.6**
KNT	**Kendrikon**	**2.52**	**352**	PN		**Pn**		**16 27 03.6**	**+0.8**
URLA	**Izmir**	**2.57**	**96**	PN		**Pn**		**16 27 04.6**	**+1.1**
EZN	**Ezine**	**2.59**	**62**	PN		**Pn**		**16 27 04.6**	**+0.9**
FNA	**Florina**	**2.61**	**325**	P		**Pn**		**16 27 06.2**	**+2.2**
ANKY	**Antikythira Is**	**2.79**	**181**	P		**Pn**		**16 27 07.5**	**+1.1**
DKL	**Dikili**	**2.81**	**80**	PN		**Pn**		**16 27 08.1**	**+1.4**
GELI	**Tayfur-Gelibol**	**2.98**	**53**	PN		**Pn**		**16 27 09.9**	**+0.8**
ANAF	**Anafi Island**	**3.00**	**139**	P		**Pn**		**16 27 10.4**	**+1.0**
ENEZ	**Enez**	**3.00**	**45**	PN		**Pn**		**16 27 10.7**	**+1.4**
RDO	**Rodhopi**	**3.00**	**34**	PN		**Pn**		**16 27 09.9**	**+0.5**
ALN	**Alexandroupoli**	**3.06**	**42**	PN		**Pn**		**16 27 10.8**	**+0.7**
LPK	**Lapseki**	**3.15**	**56**	PN		**Pn**		**16 27 12.1**	**+0.7**
STIP	**Stip**	**3.16**	**344**	*i* Pn		**Pn**		**16 27 13.0**	**+1.4**
ERIK	**Erikli-Kesan**	**3.17**	**50**	PN		**Pn**		**16 27 12.9**	**+1.3**
BODT	**Bodrum**	**3.52**	**116**	PN		**Pn**		**16 27 17.8**	**+1.3**
UKOP	**Uzunkopru-Edir**	**3.54**	**45**	PN		**Pn**		**16 27 18.7**	**+2.0**
RKY	**Sarkoy-Tekirda**	**3.59**	**54**	PN		**Pn**		**16 27 18.3**	**+0.8**
MRMT	**Marmara Adasi**	**3.82**	**58**	PN		**Pn**		**16 27 21.7**	**+1.1**
EDRB	**Edirne**	**4.11**	**38**	PN		**Pn**		**16 27 25.9**	**+1.3**
TVSB	**Tavsanli**	**4.83**	**79**	PN		**Pn**		**16 27 36.4**	**+1.8**
PDG	**Podgorica**	**4.89**	**322**	P		**Pn**		**16 27 32.4**	**-2.9**
TIP	**Timpagrande**	**5.16**	**278**	⇑P		**Pn**		**16 27 41.9**	**+2.8**
HUMR	**Humele**	**5.99**	**11**	⇑P		**Pn**		**16 27 51.6**	**+1.2**
STON	**Ston**	**6.00**	**316**	*e*Pn		**Pn**		**16 27 52.4**	**+1.8**
STON				Sn		**Sn**		**16 28 58.4**	**-0.5**
MDVR	**Moldovita**	**6.24**	**349**	⇑P		**Pn**		**16 27 52.8**	**-1.1**
HERR	**Herculane**	**6.26**	**354**	⇑P		**Pn**		**16 27 53.1**	**-0.9**
LSTV	**Lastovo**	**6.39**	**312**	*e*Pn		**Pn**		**16 27 57.9**	**+1.9**
LSTV				Sn		**Sn**		**16 29 06.4**	**-2.0**
MAKA	**Makarska**	**6.65**	**316**	Sn		**Sn**		**16 29 14.2**	**-0.6**
RICI	**Ricice**	**6.73**	**318**	*e*Pn		**Pn**		**16 28 01.7**	**+1.0**
RICI				Sn		**Sn**		**16 29 16.9**	**0.0**
GZR	**Gura Zlata**	**6.74**	**357**	⇓P		**Pn**		**16 27 59.9**	**-0.9**
ARR	**Arges**	**6.77**	**8**	⇓P		**Pn**		**16 28 02.4**	**+1.1**
VOIR		**6.89**	**10**	⇓P		**Pn**		**16 28 04.6**	**+1.8**
BZS	**Buzias**	**7.07**	**350**	⇓P		**Pn**		**16 28 03.9**	**-1.4**
**CFR

	baz=7.0								
IKSK	**Karasker**	**0.67**	**140**	P		**Pg**	**16 47 25.6**	**-2.5**
	baz=140								
IKAL	**Kalfafell**	**0.74**	**188**	P		**Pg**	**16 47 27.5**	**-1.8**
	baz=188								
IVSH	**V-Sauoahnukur**	**0.76**	**79**	P		**Pg**	**16 47 27.4**	**-2.3**
	baz=79								
IVSH				S		**Sg**	**16 47 37.7**	**-1.8**
	baz=79								
IVAT	**Vatnsfell**	**0.80**	**233**	P		**Pg**	**16 47 28.6**	**-2.0**
	baz=233								
IADA	**Aoalbol**	**0.88**	**66**	P		**Pg**	**16 47 29.4**	**-2.6**
	baz=66								
IADA				S		**Sg**	**16 47 41.3**	**-2.0**
	baz=66								
IFAG	**Fagurholsmyri**	**0.88**	**156**	P		**Pg**	**16 47 29.5**	**-2.5**
	baz=156								
IHVE	**Hveravellir**	**0.92**	**283**	P		**Pg**	**16 47 30.3**	**-2.6**
	baz=283								
IMEL	**Melhnausar**	**0.96**	**20**	P		**Pg**	**16 47 31.1**	**-2.5**
	baz=20								
IREN	**Reynihlio**	**1.00**	**13**	P		**Pg**	**16 47 31.8**	**-2.6**
	baz=13								
IKVO	**Krokottuvotn**	**1.07**	**13**	P		**Pg**	**16 47 32.9**	**-2.8**
	baz=13								
ISNB	**Snabyli**	**1.07**	**209**	P		**Pg**	**16 47 33.1**	**-2.6**
	baz=209								
IGRS	**Grimsstaoir**	**1.12**	**30**	P		**Pb**	**16 47 33.8**	**-2.8**
	baz=29								
IFED	**Fedgar**	**1.17**	**237**	P		**Pb**	**16 47 35.0**	**-2.4**
	baz=237								
IRJU	**Rjupnafell**	**1.19**	**207**	P		**Pb**	**16 47 35.1**	**-2.6**
	baz=207								
ISKI	**Skildingahlsh**	**1.21**	**8**	P		**Pn**	**16 47 35.3**	**-2.8**
	baz=8.2								
IGHA	**Grjothals**	**1.22**	**16**	P		**Pn**	**16 47 35.1**	**-3.1**
	baz=15								
IGRA	**Granastaoir**	**1.25**	**358**	P		**Pn**	**16 47 35.6**	**-3.0**
	baz=358								
IGRA				S		**Sb**	**16 47 53.0**	**-1.8**
	baz=358								
IGYG	**Gygjarholskot**	**1.26**	**253**	P		**Pn**	**16 47 36.2**	**-2.5**
	baz=253								
IHVO	**Lagu-Hvolar**	**1.31**	**208**	P		**Pn**	**16 47 37.2**	**-2.2**
	baz=209								
IDIM	**Dimmadalss**	**1.31**	**10**	P		**Pn**	**16 47 36.8**	**-2.7**
	baz=9.3								
BORG	**Borgarnes**	**1.66**	**274**	Pg		**Pn**	**16 47 42.4**	**-1.9**
	8.0nm,0.3s,baz=86,slow=9.9,SNR=23								
BORG				Lg		Lg	16 48 06.8		
	8.5nm,0.3s,baz=233,slow=22,SNR=7.9								
SCO	**Scoresbysund**	**6.08**	**346**			**Pn**	**16 48 44.3**	**-0.6**
SCO	**Scoresbysund**	**6.08**	**346**	*e*		Pn	16 48 39.5	-5.3
	baz=167,slow=10								
SCO				*i* P		**Pn**	**16 48 45.3**	**+0.4**
SCO				*i* S		**Sn**	**16 49 58.5**	**+4.1**
SCO				IAML			16 50 05.1		
	comp=Z,0.5nm,0.4s								
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn		**Pn**	**16 50 03.3**	**+0.6**
	baz=328,slow=13,SNR=6.0								
NC204	**NORSAR Array S**	**13.21**	**92**	Pn		**Pn**	**16 50 23.6**	**+1.0**
HFS	**Hagfors**	**15.03**	**93**	Pn		**P**	**16 50 50.2**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=302,slow=8.2,SNR=1.8								
ARD5	**ARCESS Array S**	**17.10**	**55**	P		**P**		**16 51 17.9**	**+2.3**
ARD5				IAmb		IAmb		16 51 32.9	
	comp=Z,49nm,1.4s								
CLL	**Collm**	**20.69**	**116**	*e*P		Pn		16 51 57.0	-0.4
BRG	**Berggiesshubel**	**21.40**	**115**	*e*(P)		**P**		**16 52 04.5**	**+1.9**
	comp=Z,8.2nm,1.1s								
BFO	**Black Forest**	**21.44**	**127**	P		**P**		**16 52 03.8**	**+0.6**
KHC	**Kasperske Hory**	**22.66**	**118**	P		**P**		**16 52 18.6**	**+2.4**
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**		**16 52 19.8**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=313,slow=8.7,SNR=5.2								
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**		**16 52 21.1**	**+1.8**
ZOU	**Zoufplan**	**24.59**	**123**	P		**P**		**16 52 37.2**	**+1.9**
ZOU				IAmb		IAmb		16 52 51.1	
	comp=Z,20nm,1.9s								
PRED	**Cave del Predi**	**24.91**	**122**	P		**P**		**16 52 40.5**	**+2.5**
PRED				IAmb		IAmb		16 52 45.4	
	comp=Z,16nm,2.0s								
TIXI	**Tiksi**	**42.02**	**15**	P		**P**		**16 55 08.7**	**+2.8**
TIXI				IAmb		IAmb		16 55 13.7	
	comp=Z,4.7nm,0.6s								
N51A	**Ashland**	**43.35**	**269**	P		**P**		**16 55 16.6**	**-0.5**
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**		**16 55 35.4**	**-0.1**
	comp=Z,1.5nm,1.1s,baz=29,slow=6.2,SNR=5.5								
KURK	**Kurchatov**	**48.09**	**58**	P		**P**		**16 55 55.9**	**+1.4**
KURK				IAmb		IAmb		16 55 56.5	
	comp=Z,3.1nm,1.0s								
KURBB	**Kurchatov Arra**	**48.14**	**58**	P		**P**		**16 55 55.2**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=321,slow=7.2,SNR=11								
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**		**16 56 33.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=58,slow=7.6,SNR=5.1								
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**		**16 56 33.3**	**0.0**
BTK	**Batken**	**53.94**	**72**	P		**P**		**16 56 40.8**	**+2.1**
BTK				IAmb		IAmb		16 56 43.9	
	comp=Z,5.1nm,1.1s								
GAR	**Garm**	**54.63**	**73**	P		**P**		**16 56 45.8**	**+2.1**
TXAR	**Lajitas Array**	**62.30**	**280**	P		**P**		**16 57 37.8**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=38,slow=4.6,SNR=3.3								

JMA 20 17:03:33.7±0.1, 24°.97N×123°.56E, h26km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.65**	**166**	P		Pb	17 03 46.1	-0.4
IRIF				*e*S		Sb	17 03 55.1	-0.1
YOJ	**Yonaguni jima**	**0.71**	**225**	*e*S		Sb	17 03 56.3	-0.6
JISG	**Ishigakijimahi**	**0.78**	**119**	*e*S		Sb	17 03 58.6	-0.3
JIJ	**Ishigaki jima**	**0.80**	**139**	P		Pb	17 03 48.6	-0.5
JIJ				*e*S		Sb	17 03 58.6	-0.9
JKRS	**Kuro-shima**	**0.84**	**151**	*e*S		Sb	17 04 00.6	+0.2
HATJ	**Hateruma jima**	**0.94**	**166**	S		Sb	17 04 03.4	+0.1

TAP 20 17:03:55.1, 24°.43N×122°.08E, h16km, ML2.3, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ENAH	**Nanao**	**0.25**	**274**	P		Pg	17 04 00.9	+0.3
	baz=280							
ENAH				S		Sb	17 04 05.0	-0.4
	baz=280							
TWC	**Suao**	**0.28**	**310**	P		Pg	17 04 01.1	+0.1
	baz=305							
TWC				*e*S		Sg	17 04 05.2	0.0
	baz=305							
ENA	**Nanau**	**0.31**	**269**	P		Pg	17 04 01.7	0.0
	baz=278							
ENA				S		Sg	17 04 06.4	+0.2
	baz=278							
EGS		**0.43**	**342**	*e*P		Pb	17 04 04.3	-0.1
	baz=343							
EGS				*e*S		Sg	17 04 10.1	+0.3
	baz=343							
ILA	**Ilan**	**0.45**	**317**	*e*P		Pb	17 04 04.7	-0.1
	baz=312							
ILA				*e*S		Sb	17 04 11.5	+0.3
	baz=312							
TWE	**Neicheng**	**0.47**	**307**	P		Pb	17 04 04.9	-0.2
	baz=308							
TWE				S		Sg	17 04 11.5	+0.4
	baz=308							
NTC	**Toucheng**	**0.48**	**331**	P		Pb	17 04 05.2	0.0
	baz=340							
NTC				*e*S		Sb	17 04 12.5	+0.4
	baz=340							
NACB	**Ninganchiao**	**0.52**	**240**	P		Pg	17 04 05.3	-0.1
	baz=239							
NACB				S		Sb	17 04 12.8	-0.3
	baz=239							
NDT	**Datong Townshi**	**0.55**	**288**	P		Pb	17 04 06.3	0.0
	baz=288							
NDT				S		Sb	17 04 14.0	0.0
	baz=288							
TWD	**Chiawan**	**0.57**	**232**	*e*P		Pb	17 04 06.7	-0.1
	baz=236							
TWD				S		Sb	17 04 14.8	+0.3
	baz=236							
TIPB	**Shuangxi**	**0.58**	**336**	*e*P		Pb	17 04 07.0	-0.1
	baz=337							
TIPB				S		Sg	17 04 14.5	0.0
	baz=337							
ETLH	**Xiulin Townshi**	**0.59**	**248**	*e*P		Pb	17 04 07.4	+0.2
	baz=255							
ETLH				*e*S		Sb	17 04 16.0	+0.6
	baz=255							
NWLT	**Wulai**	**0.63**	**303**	P		Pb	17 04 08.1	+0.2
	baz=296							
NWLT				S		Sb	17 04 16.3	-0.1
	baz=296							
NNSB	**Datong**	**0.64**	**270**	*e*P		Pg	17 04 07.8	+0.1
	baz=269							
NNSB				*e*S		Sg	17 04 16.3	+0.1
	baz=269							
NNSH	**Datong**	**0.64**	**270**	*e*P		Pg	17 04 07.5	-0.2
	baz=270							
NNSH				*e*S		Sb	17 04 16.6	-0.2
	baz=270							
NNS	**Nan Shan**	**0.65**	**271**	*e*P		Pb	17 04 08.1	-0.1
	baz=270							
NNS				*e*S		Sg	17 04 16.7	+0.1
	baz=270							
YHNB	**Yeheng**	**0.69**	**290**	*e*P		Pb	17 04 08.8	0.0
	baz=290							
YHNB				*e*S		Sb	17 04 18.2	+0.1
	baz=290							
NWF	**Wu-fen Shan**	**0.69**	**337**	*e*S		Sb	17 04 19.1	+0.8
	baz=337							
WFSB	**Wu-fen Shan**	**0.69**	**337**	*e*S		Sn	17 04 19.8	-1.0
	baz=337							
NSK	**Sanguang**	**0.70**	**290**	*e*P		Pb	17 04 09.2	+0.1
	baz=295							
NSK				S		Sb	17 04 18.5	-0.1
	baz=295							
TWA	**Mucha**	**0.71**	**320**	*e*S		Sb	17 04 19.8	+1.1
	baz=321							
NHDH	**Xindian Distri**	**0.73**	**316**	*e*P		Pn	17 04 10.3	-0.5
	baz=316							
FUSS	**Fushou**	**0.79**	**257**	*e*P		Pb	17 04 10.6	0.0
	baz=264							
FUSS				*e*S		Sb	17 04 21.6	+0.4
	baz=264							
WHF	**Hehuan Shan**	**0.80**	**249**	P		Pg	17 04 10.7	-0.1
	baz=256							
WHF				*e*S		Sg	17 04 21.5	0.0
	baz=256							
YM01	**YM01**	**0.85**	**327**	*e*P		Pn	17 04 12.5	0.0
	baz=327							
YM01				*e*S		Sg	17 04 23.3	+0.4
	baz=327							
ESL	**Shilin**	**0.86**	**224**	*e*P		Pg	17 04 11.9	+0.1
	baz=222							
TDCB	**Techi**	**0.86**	**258**	*e*P		Pb	17 04 11.8	-0.1
	baz=257							
TDCB				*e*S		Sg	17 04 23.6	+0.2
	baz=257							
YM10	**YM10**	**0.86**	**327**	*e*P		Pn	17 04 14.0	+1.2
	baz=327							
YM10				*e*S		Sg	17 04 23.4	+0.1
	baz=327							
YM11	**YM11**	**0.86**	**328**	*e*S		Sn	17 04 24.9	-0.2
	baz=328							
YM05	**YM05**	**0.87**	**327**	*e*P		Pn	17 04 13.4	+0.6
	baz=328							
YM05				*e*S		Sn	17 04 24.4	-0.8
	baz=328							
YM04	**YM04**	**0.87**	**325**	*e*P		Pn	17 04 13.1	+0.3
	baz=326							
YM04				*e*S		Sn	17 04 24.6	-0.6
	baz=326							
YM08	**YM08**	**0.88**	**329**	*e*S		Sg	17 04 23.6	-0.1
	baz=323							
TWS1	**Kuangyinshan**	**0.90**	**318**	*e*S		Sn	17 04 26.7	+0.8
	baz=319							
CHGB	**Renai**	**0.91**	**246**	*e*P		Pg	17 04 13.0	+0.2
	baz=250							
CHGB				*e*S		Sn	17 04 26.0	-0.4
	baz=250							
OWD	**Renai**	**0.96**	**240**	*e*P		Pb	17 04 13.3	-0.1
	baz=244							
OWD				S		Sn	17 04 27.9	+0.5
	baz=244							
EGFH	**Guangfu**	**0.97**	**218**	*e*P		Pb	17 04 13.7	+0.1
	baz=199							
EGFH				*e*S		Sn	17 04 28.2	+0.6
	baz=199							
NCUH	**Zhongli**	**0.97**	**303**	P		Pg	17 04 14.1	+0.1
	baz=303							
NCUH				*e*S		Sn	17 04 27.6	-0.1
	baz=303							
LIOB	**Emei**	**0.99**	**283**	*e*P		Pn	17 04 15.1	+0.5
	baz=282							
LIOB				*e*S		Sg	17 04 27.7	+0.3
	baz=282							
NSTT	**Nanjuang**	**1.00**	**282**	*e*P		Pn	17 04 15.1	+0.4
	baz=281							
NSTT				*e*S		Sg	17 04 27.8	0.0
	baz=281							
WHP	**Taichung City**	**1.05**	**262**	*e*P		Pg	17 04 16.1	+0.7
	baz=269							
WHP				*e*S		Sg	17 04 29.2	0.0
	baz=269							
DPDB	**Guoxing**	**1.13**	**250**	*e*P		Pg	17 04 17.0	0.0
	baz=256							
SSLB	**Suanglung**	**1.22**	**238**	*e*P		Pg	17 04 18.6	0.0
	baz=237							
SSLB				*e*S		Sg	17 04 35.4	+0.9
	baz=237							
TYC	**Yuchr**	**1.24**	**245**	*e*S		Sg	17 04 35.3	+0.1
	baz=250							

NEIC ***20*** *17:10:18.7±1.3, 5°.47S±0°.08×29°.55E±0°.10, h10km±1km, mb4.3/12, Error ellipse: s-maj=18.1km s-min=11.9km az=123.0*

IDC ***20*** *17:10:18.3±0.8, 5°.44S×29°.45E, h0km, mb3.9/10, mb1 4.1/15, mb1mx3.9/37, mbtmp4.1/15, ML3.9/3, MS3.5/14, Ms1 3.5/14, ms1mx3.3/33, Error ellipse: s-maj=22.6km s-min=15.9km az=106.0*

ISC 20 17:10:20.8±4.7, 5°.55S×29°.65E, h20km, n20, ML4.5, 1C, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSMZ	**Kasama**	**4.85**	**161**	*i* P		**Pn**	**17 11 32.3**	**-0.6**
KSMZ				*i*			17 11 33.0	
	baz=58,slow=16							
KSMZ				*i* S		**Sn**	**17 12 31.1**	**+2.4**
MBAR	**Mbarara**	**5.03**	**12**	Pn		**Pn**	**17 11 34.9**	**-0.4**
	4.6nm,0.3s,baz=221,slow=20,SNR=8.2							
MBAR				Sn		**Sn**		**17 12 31.8**	**-1.3**
	89nm,0.3s,baz=123,slow=15,SNR=6.4							
MBAR				Lg		Lg	17 12 49.2		
	105nm,0.3s,baz=234,slow=17,SNR=6.4							
MBAR				LR		LR	17 13 45.3		
	comp=Z,308nm,19.8s,baz=178,slow=42							
MBAR	**Mbarara**	**5.03**	**12**	Pn		**Pn**	**17 11 34.4**	**-0.9**
MBAR	**Mbarara**	**5.03**	**12**	*e*P		**Pn**	**17 11 37.1**	**+1.7**
MBAR				*e*S		**Sb**	**17 12 48.3**	**-0.2**
KOND	**Kondoa**	**6.15**	**84**	*i* P		**Pn**	**17 11 51.7**	**+1.0**
KOND				*i* S		**Sn**	**17 12 59.2**	**-1.4**
NG56	**Ngoile bomas**	**6.24**	**67**	*i* P		**Pn**	**17 11 53.2**	**+1.2**
NG56				*i* S		**Sn**	**17 13 01.7**	**-1.1**
NG56				IAML			17 14 09.3		
	comp=Z,2μm,0.6s								
TEBE	**Entebbe**	**6.24**	**27**	*i* P		**Pn**	**17 11 55.2**	**+3.3**
TEBE				*i* S		**Sn**	**17 13 03.0**	**+0.3**
PR62	**Oldupai Boma**	**6.25**	**66**	*i* P		**Pn**	**17 11 52.8**	**+0.7**
PR62				*i* S		**Sn**	**17 13 01.1**	**-2.0**
PR62				IAML			17 13 45.1		
	comp=Z,2μm,0.8s								
NG54	**Nasera Bomas**	**6.34**	**64**	*i* P		**Pn**	**17 11 53.9**	**+0.4**
NG54				*i* S		**Sn**	**17 13 03.0**	**-2.5**
NG54				IAML			17 13 57.5		
	comp=Z,604nm,0.8s								
PR63	**Meshili Boma**	**6.37**	**67**	*i* P		**Pn**	**17 11 54.5**	**+0.7**
PR63				*i* S		**Sn**	**17 13 04.3**	**-1.7**
LBB	**Lubumbashi**	**6.42**	**199**	*i* P		**Pn**	**17 11 55.9**	**+1.5**
LBB				*i* S		**Sn**	**17 13 04.9**	**-2.3**
LL66	**Piyaya bomas**	**6.51**	**64**	*i* P		**Pn**	**17 11 55.9**	**+0.2**
LL22	**Malambo SS**	**6.65**	**63**	*i* P		**Pn**	**17 11 57.7**	**+0.1**
LL23	**Sali PS**	**6.83**	**62**	*i* P		**Pn**	**17 12 00.7**	**+0.5**
PR31	**Engaruka Boma**	**6.89**	**68**	*i* P		**Pn**	**17 12 02.3**	**+1.4**
LL24	**Masusu PS**	**6.95**	**62**	*i* P		**Pn**	**17 12 01.7**	**0.0**
LN34	**Lwondulwo boma**	**6.96**	**67**	*i* P		**Pn**	**17 12 03.0**	**+1.1**
PR33	**Engutoto Boma**	**7.01**	**68**	*i* P		**Pn**	**17 12 03.5**	**+1.0**
PR32	**Iloiriento PS**	**7.03**	**68**	*i* P		**Pn**	**17 12 04.2**	**+1.2**
LN15	**Lekule Girls S**	**7.13**	**66**	*i* P		**Pn**	**17 12 04.5**	**+0.3**
LN14	**Matela PS**	**7.42**	**66**	*i* P		**Pn**	**17 12 08.2**	**0.0**
KEN2	**Magadi Soda Va**	**7.54**	**62**	*i* P		**Pn**	**17 12 08.7**	**-1.1**
KMBO	**Kilima Mbogo**	**8.76**	**60**	Pn		**Pn**	**17 12 27.7**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=221,slow=14,SNR=11								
KMBO				Sn		**Sn**	**17 14 00.8**	**-4.3**
	comp=Z,8.4nm,0.3s,baz=171,slow=12,SNR=12								
KMBO				Lg		Lg	17 14 54.6		
	comp=Z,17nm,0.3s,baz=156,slow=19,SNR=4.1								
KMBO	**Kilima Mbogo**	**8.76**	**60**	Pn		**Pn**		**17 12 26.1**	**-0.7**
KMBO	**Kilima Mbogo**	**8.76**	**60**	*i* P		**Pn**		**17 12 26.7**	**-0.1**
LSZ	**Lusaka**	**9.78**	**188**	Pn		**Pn**		**17 12 41.9**	**+1.4**
	comp=Z,4.0nm,0.3s,baz=16,slow=6.2,SNR=60								
LSZ				Sn		**Sn**		**17 14 25.2**	**-4.7**
	comp=Z,2.0nm,0.3s,baz=311,slow=17,SNR=3.8								
LSZ				Lg		Lg		17 15 23.2	
	comp=Z,4.5nm,0.3s,baz=56,slow=11,SNR=3.5								
LSZ				LR		LR		17 16 37.5	
	comp=Z,323nm,19.4s,baz=7.5,slow=38								
LSZ	**Lusaka**	**9.78**	**188**	Pn		**Pn**		**17 12 41.6**	**+1.0**
LSZ	**Lusaka**	**9.78**	**188**	*i* P		**Pn**		**17 12 42.2**	**+1.6**
MATP	**Matopo**	**14.83**	**184**	Pn		**Pn**		**17 13 47.5**	**-2.3**
	comp=Z,1.0nm,0.3s,baz=360,slow=14,SNR=16								
MATP				Sn		**Sn**		**17 16 33.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=8.5,slow=10,SNR=2.9								
MATP				Lg		Lg		17 18 01.5	
	comp=Z,0.5nm,0.3s,baz=111,slow=9.3,SNR=2.8								
MATP				LR		LR		17 20 00.3	
	comp=Z,152nm,19.5s,baz=5.0,slow=39								
TSUM	**Tsumeb**	**17.96**	**220**	P		**Pn**		**17 14 29.2**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=36,slow=10,SNR=5.4								
TSUM				S		Sn		17 17 33.3	-16
	comp=Z,0.5nm,0.3s,baz=284,slow=12,SNR=3.3								
TSUM				Lg		Lg		17 19 39.0	
	comp=Z,0.7nm,0.3s,baz=110,slow=22,SNR=1.5								
TSUM				LR		LR		17 21 31.5	
	comp=Z,73nm,18.7s,baz=140,slow=38								
TSUM	**Tsumeb**	**17.96**	**220**	P		**Pn**		**17 14 28.7**	**-0.9**
LBTB	**Lobatse**	**19.75**	**191**	P		**Pn**		**17 14 50.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=5.2,slow=12,SNR=11								
LBTB				Lg		Lg		17 20 38.1	
	comp=Z,0.1nm,0.3s,baz=354,slow=20,SNR=1.6								
LBTB				LR		LR		17 22 36.0	
	comp=Z,188nm,18.4s,baz=11,slow=37								
LBTB	**Lobatse**	**19.75**	**191**			**P**		**17 14 50.1**	**+0.5**
ATD	**Arta Tunnel**	**21.45**	**38**	LR		LR		17 23 07.0	
	comp=Z,69nm,20.4s,baz=57,slow=36								
OPO	**Ambohidratompo**	**21.45**	**129**	LR		LR		17 23 03.9	
	comp=Z,90nm,18.5s,baz=152,slow=35								
BOSA	**Boshof**	**23.32**	**190**	P		**P**		**17 15 29.2**	**+1.3**
	comp=Z,5.3nm,0.6s,baz=8.0,slow=9.5,SNR=19								
BOSA				LR		LR		17 24 07.7	
	comp=Z,88nm,19.2s,baz=41,slow=36								
BOSA	**Boshof**	**23.32**	**190**	P		**P**		**17 15 27.5**	**-0.4**
BOSA				IAmb		IAmb		17 15 42.1	
	comp=Z,14nm,1.1s								
SUR	**Sutherland**	**27.95**	**196**	LR		LR		17 27 52.3	
	comp=Z,112nm,20.8s,baz=15,slow=38								
TOA0	**Torodi Ar. Sit**	**33.41**	**304**	P		**P**		**17 16 56.7**	**-1.7**
TORD	**Torodi Ar. Bea**	**33.41**	**304**	P		**P**		**17 16 56.5**	**-1.9**
	comp=Z,6.8nm,0.7s,baz=116,slow=7.9,SNR=47								
TORD				LR		LR		17 31 32.8	
	comp=Z,200nm,20.3s,baz=100,slow=38								
TORD	**Torodi Ar. Bea**	**33.41**	**304**	P		**P**		**17 16 56.3**	**-2.2**
DBIC	**Dimbokro**	**36.52**	**289**	P		**P**		**17 17 23.4**	**-2.0**
	comp=Z,1.6nm,0.5s,baz=299,slow=11,SNR=1.5								
DBIC				LR		LR		17 31 49.3	
	comp=Z,127nm,19.7s,baz=78,slow=36								
KOWA	**Kowa**	**38.88**	**301**	P		**P**		**17 17 43.6**	**-1.7**
	comp=Z,1.2nm,0.5s,baz=127,slow=9.4,SNR=5.0								
KOWA	**Kowa**	**38.88**	**301**	P		**P**		**17 17 43.5**	**-1.8**
KOWA				IAmb		IAmb		17 17 45.5	
	comp=Z,6.0nm,1.1s								
BRTR	**Keskin Array B**	**45.20**	**4**	P		**P**		**17 18 36.5**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=180,slow=9.2,SNR=2.8								
ESDC	**Sonseca Array**	**54.64**	**328**	LR		LR		17 45 20.5	
	comp=Z,87nm,19.0s,baz=240,slow=39								
GERES	**GERESS Array B**	**55.93**	**347**	P		**P**		**17 19 58.2**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=158,slow=8.0,SNR=6.0								
KK31	**Karatay Array**	**60.92**	**33**	P		**P**		**17 20 31.8**	**-0.6**
KK31				IAmb		IAmb		17 20 35.5	
	comp=Z,3.3nm,1.5s								
KKAR	**Karatay Array**	**60.92**	**33**	P		**P**		**17 20 31.9**	**-0.6**
KKAR				IAmb		IAmb		17 20 35.5	
	comp=Z,3.3nm,1.5s								
KKAR	**Karatay Array**	**60.92**	**33**	P		**P**		**17 20 31.4**	**-1.0**
SYO	**Syowa Base**	**63.72**	**176**	*e*P		**P**		**17 20 52.3**	**+1.7**
FINES	**FINESS Array B**	**66.85**	**358**	P		**P**		**17 21 11.5**	**+0.4**
	comp=Z,1.2nm,0.6s,baz=164,slow=6.8,SNR=1.4								
NOA	**NORSAR Array B**	**67.93**	**350**	P		**P**		**17 21 17.4**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=163,slow=5.8,SNR=2.0								
NOA				LR		LR		17 53 55.9	
	comp=Z,15nm,18.4s,baz=230,slow=39								
MK31	**Makanchi Array**	**69.80**	**36**	P		**P**		**17 21 29.1**	**-0.8**
MK31				IAmb		IAmb		17 21 31.1	
	comp=Z,1.7nm,0.8s								
MKAR	**Makanchi Array**	**69.80**	**36**	P		**P**		**17 21 30.2**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=240,slow=6.0,SNR=9.0								
MKAR	**Makanchi Array**	**69.80**	**36**	P		**P**		**17 21 29.8**	**-0.1**
WMQ	**Urumqi**	**71.63**	**40**	*e*P		**P**		**17 21 42.5**	**+1.3**
CMAR	**Chiang Mai Arr**	**72.31**	**69**	P		**P**		**17 21 47.4**	**+1.7**
	comp=Z,0.3n

	baz=305							
TDCB	**Techi**	**0.29**	**305**	P	**Pn**	**17 30 13.1**	**-0.1**
	baz=305							
TDCB				S	**Sn**	**17 30 21.3**	**+0.6**
	baz=305							
NNSB	**Datong**	**0.34**	**354**	P	**Pn**	**17 30 13.7**	**+0.1**
	baz=353							
NNSB				*e*S	**Sn**	**17 30 22.3**	**+1.0**
	baz=353							
NNSH	**Datong**	**0.34**	**354**	*e*P	**Pn**	**17 30 13.7**	**+0.1**
	baz=353							
NNSH				*e*S	**Sn**	**17 30 22.8**	**+1.4**
	baz=353							
NNS	**Nan Shan**	**0.35**	**353**	*e*P	**Pn**	**17 30 13.9**	**+0.2**
	baz=353							
NNS				S	**Sn**	**17 30 22.8**	**+1.3**
	baz=353							
EGFH	**Guangfu**	**0.42**	**179**	*e*P	**Pn**	**17 30 12.6**	**-1.5**
	baz=180							
EGFH				*e*S	**Sn**	**17 30 22.6**	**+0.4**
	baz=180							
ENA	**Nanau**	**0.45**	**41**	*e*P	**Pn**	**17 30 14.3**	**-0.1**
	baz=40							
ENA				*e*S	**Sn**	**17 30 24.1**	**+1.3**
	baz=40							
DPDB	**Guoxing**	**0.46**	**263**	P	**Pn**	**17 30 14.5**	**0.0**
	baz=264							
DPDB				*e*S	**Sn**	**17 30 23.8**	**+0.8**
	baz=264							
WHP	**Taichung City**	**0.47**	**294**	*i* P	**Pn**	**17 30 14.3**	**-0.5**
	baz=294							
WHP				S	**Sn**	**17 30 23.2**	**-0.2**
	baz=294							
ENAH	**Nanao**	**0.51**	**45**	P	**Pn**	**17 30 15.8**	**+0.8**
	baz=43							
ENAH				*e*S	**Sn**	**17 30 23.9**	**+0.2**
	baz=43							
SMLT	**Sun Moon Lake**	**0.52**	**247**	P	**Pn**	**17 30 15.2**	**0.0**
	baz=247							
SMLT				S	**Sn**	**17 30 25.2**	**+1.0**
	baz=247							
NDT	**Datong Townshi**	**0.52**	**9**	*e*P	**Pn**	**17 30 15.7**	**+0.5**
	baz=8.0							
NDT				S	**Sn**	**17 30 25.5**	**+1.4**
	baz=8.0							
TYC	**Yuchr**	**0.55**	**251**	P	**Pn**	**17 30 15.3**	**-0.2**
	baz=251							
TYC				*e*S	**Sn**	**17 30 24.1**	**-0.4**
	baz=251							
YHNB	**Yeheng**	**0.58**	**356**	*i* P	**Pn**	**17 30 16.2**	**+0.2**
	baz=355							
EHY	**Hungye**	**0.58**	**189**	P	**Pn**	**17 30 15.4**	**-0.5**
	baz=188							
EHY				*e*S	**Sn**	**17 30 25.7**	**+0.4**
	baz=188							
NSK	**Sanguang**	**0.59**	**354**	*e*P	**Pn**	**17 30 16.4**	**+0.4**
	baz=354							
NSK				*e*S	**Sn**	**17 30 25.2**	**-0.3**
	baz=354							
HGSD	**Ruisui**	**0.59**	**180**	*i* P	**Pn**	**17 30 15.4**	**-0.6**
	baz=180							
TWQ1	**Liyutan**	**0.65**	**294**	*e*P	**Pn**	**17 30 15.7**	**-0.9**
	baz=294							
TWQ1				*e*S	**Sn**	**17 30 26.3**	**-0.3**
	baz=294							
WHYT	**Xinyi Township**	**0.65**	**233**	P	**Pn**	**17 30 16.9**	**+0.2**
	baz=234							
WHYT				*e*S	**Sn**	**17 30 26.7**	**0.0**
	baz=234							
TWC	**Suao**	**0.65**	**37**	P	**Pn**	**17 30 16.7**	**+0.1**
	baz=36							
TWC				*e*S	**Sn**	**17 30 27.1**	**+0.5**
	baz=36							
NSTT	**Nanjuang**	**0.66**	**325**	P	**Pn**	**17 30 16.1**	**-0.7**
	baz=325							
NSTT				*e*S	**Sn**	**17 30 26.6**	**-0.3**
	baz=325							
LIOB	**Emei**	**0.67**	**327**	P	**Pn**	**17 30 16.2**	**-0.6**
	baz=326							
LIOB				*e*S	**Sn**	**17 30 26.2**	**-0.8**
	baz=326							
TWE	**Neicheng**	**0.67**	**20**	*i* P	**Pn**	**17 30 16.8**	**0.0**
	baz=20							
TCU	**Taichung**	**0.68**	**275**	*i* P	**Pn**	**17 30 16.4**	**-0.6**
	baz=275							
NSY	**Sanyi**	**0.69**	**299**	P	**Pn**	**17 30 16.4**	**-0.6**
	baz=299							
NSY				S	**Sn**	**17 30 27.0**	**-0.4**
	baz=299							
WJS	**Zhushan**	**0.69**	**248**	P	**Pn**	**17 30 16.8**	**-0.2**
	baz=248							
NWLT	**Wulai**	**0.69**	**6**	P	**Pn**	**17 30 17.5**	**+0.3**
	baz=5.0							
NWLT				*e*S	**Sn**	**17 30 27.6**	**0.0**
	baz=5.0							
YULB	**Yu-li**	**0.70**	**189**	P	**Pn**	**17 30 15.5**	**-1.8**
	baz=189							
WNT	**Mingjian**	**0.70**	**253**	P	**Pn**	**17 30 17.2**	**-0.1**
	baz=253							
WNT				*e*S	**Sn**	**17 30 27.6**	**-0.1**
	baz=253							
NMLH	**Miaoli**	**0.73**	**308**	*e*P	**Pn**	**17 30 16.7**	**-0.8**
	baz=308							
NMLH				*e*S	**Sn**	**17 30 27.8**	**-0.5**
	baz=308							
TWF1	**Yuli**	**0.74**	**189**	P	**Pn**	**17 30 17.9**	**+0.2**
	baz=188							
TWF1				*e*S	**Sn**	**17 30 29.1**	**+0.6**
	baz=188							
EYUL	**Yuli**	**0.74**	**187**	P	**Pn**	**17 30 18.0**	**+0.3**
	baz=187							
EYUL				*e*S	**Sn**	**17 30 28.9**	**+0.3**
	baz=187							
WDJ	**Dajia District**	**0.76**	**290**	*i* P	**Pn**	**17 30 17.0**	**-0.9**
	baz=290							
WCHH	**Zhanghua**	**0.79**	**270**	*i* P	**Pn**	**17 30 17.5**	**-0.8**
	baz=270							
ALS	**Alishan**	**0.81**	**225**	P	**Pn**	**17 30 18.9**	**+0.2**
	baz=224							
ALS				*e*S	**Sn**	**17 30 30.2**	**-0.2**
	baz=224							
SBCB	**Hsinchu**	**0.81**	**331**	*e*P	**Pn**	**17 30 18.4**	**-0.1**
	baz=330							
SBCB				*e*S	**Sn**	**17 30 30.0**	**0.0**
	baz=330							
CHN5	**Tsauling**	**0.84**	**234**	P	**Pn**	**17 30 18.9**	**-0.1**
	baz=235							
CHN5				*e*S	**Sn**	**17 30 30.2**	**-0.6**
	baz=235							
NHDH	**Xindian Distri**	**0.88**	**6**	P	**Pn**	**17 30 19.6**	**+0.2**
	baz=5.0							
WGK	**Gukeng**	**0.88**	**243**	P	**Pn**	**17 30 19.6**	**+0.2**
	baz=243							
WGK				*e*S	**Sn**	**17 30 31.8**	**+0.1**
	baz=243							
TATO	**Taipei**	**0.89**	**4**	*e*P	**Pn**	**17 30 19.6**	**+0.1**
	baz=4.0							
FULB	**Fuli**	**0.89**	**188**	P	**Pn**	**17 30 20.2**	**+0.6**
	baz=188							
TWA	**Mucha**	**0.90**	**9**	P	**Pn**	**17 30 20.0**	**+0.2**
	baz=9.0							
TWA				*e*S	**Sn**	**17 30 32.5**	**+0.3**
	baz=9.0							
NCUH	**Zhongli**	**0.90**	**346**	P	**Pn**	**17 30 20.0**	**+0.2**
	baz=345							
TIPB	**Shuangxi**	**0.95**	**23**	P	**Pn**	**17 30 21.1**	**+0.6**
	baz=22							
TIPB				S	**Sn**	**17 30 33.3**	**-0.1**
	baz=22							
ELDTW	**Lidau**	**0.97**	**203**	P	**Pn**	**17 30 20.4**	**-0.2**
	baz=202							
RLNB	**Erlin**	**0.99**	**259**	P	**Pn**	**17 30 20.2**	**-0.6**
	baz=259							
TWS1	**Kuangyinshan**	**1.01**	**360**	P	**Pn**	**17 30 21.1**	**0.0**
	baz=359							
TWS1				*e*S	**Sn**	**17 30 35.0**	**+0.4**
	baz=359							
WTK	**Tuku**	**1.02**	**247**	*e*P	**Pn**	**17 30 21.5**	**+0.2**
	baz=247							
WTK				*e*S	**Sn**	**17 30 35.3**	**+0.3**
	baz=247							
CHN2	**Minshiung**	**1.03**	**238**	*e*P	**Pn**	**17 30 21.1**	**-0.2**
	baz=238							
CHN2				*e*S	**Sn**	**17 30 35.6**	**+0.7**
	baz=238							
WFSB	**Wu-fen Shan**	**1.03**	**18**	*e*P	**Pn**	**17 30 21.7**	**+0.3**
	baz=17							
WFSB				*e*S	**Sn**	**17 30 35.8**	**+0.7**
	baz=17							
TPUB	**Ta-pu**	**1.07**	**223**	P	**Pn**	**17 30 22.4**	**+0.5**
	baz=223							
YM04	**YM04**	**1.07**	**6**	P	**Pn**	**17 30 21.6**	**-0.3**
	baz=5.0							
YM10	**YM10**	**1.07**	**7**	*e*P	**Pn**	**17 30 22.2**	**+0.2**
	baz=6.0							
YM10				S	**Sn**	**17 30 36.0**	**-0.2**
	baz=6.0							
NTST	**Danshui**	**1.07**	**1**	P	**Pn**	**17 30 22.2**	**+0.3**
	baz=1.0							
NTST				*e*S	**Sn**	**17 30 36.5**	**+0.4**
	baz=1.0							
YM05	**YM05**	**1.08**	**7**	P	**Pn**	**17 30 21.9**	**-0.2**
	baz=6.0							
YM11	**YM11**	**1.08**	**7**	P	**Pn**	**17 30 22.2**	**+0.1**
	baz=6.0							
CHY	**Chiayi**	**1.08**	**237**	P	**Pn**	**17 30 22.6**	**+0.6**
	baz=237							
CHY				*e*S	**Sn**	**17 30 36.6**	**+0.3**
	baz=237							
YM03	**YM03**	**1.09**	**6**	P	**Pn**	**17 30 22.0**	**-0.3**
	baz=5.0							
YM03				*e*S	**Sn**	**17 30 36.6**	**0.0**
	baz=5.0							
STYT	**Tauyuan**	**1.10**	**214**	P	**Pn**	**17 30 23.1**	**+0.7**
	baz=213							
STYT				*e*S	**Sn**	**17 30 37.4**	**+0.5**
	baz=213							
YM08	**YM08**	**1.11**	**8**	*e*P	**Pn**	**17 30 21.8**	**-0.6**
	baz=7.0							
YM08				*e*S	**Sn**	**17 30 37.2**	**+0.4**
	baz=7.0							
EDH	**Donghe**	**1.11**	**186**	*e*P	**Pn**	**17 30 23.0**	**+0.6**
	baz=185							
EDH				*e*S	**Sn**	**17 30 38.0**	**+0.9**
	baz=185							
WTP	**Ta-pu**	**1.12**	**222**	P	**Pn**	**17 30 23.2**	**+0.6**
	baz=221							
WTP				*e*S	**Sn**	**17 30 37.6**	**+0.4**
	baz=221							
TWK	**Hsinying**	**1.18**	**227**	P	**Pn**	**17 30 23.9**	**+0.5**
	baz=226							
TWK				*e*S	**Sn**	**17 30 39.0**	**+0.3**
	baz=226							
WSF	**Szhu**	**1.19**	**248**	P	**Pn**	**17 30 23.1**	**-0.3**
	baz=248							
WSF				S	**Sn**	**17 30 38.3**	**-0.3**
	baz=248							
LONT	**Longtian**	**1.21**	**193**	P	**Pn**	**17 30 24.4**	**+0.7**
	baz=193							
LONT				*e*S	**Sn**	**17 30 40.0**	**+0.9**
	baz=193							
CHN1	**Nanshi**	**1.22**	**223**	P	**Pn**	**17 30 24.2**	**+0.3**
	baz=222							
CHN1				*e*S	**Sn**	**17 30 40.0**	**+0.5**
	baz=222							
SGST	**Jiashian**	**1.26**	**218**	P	**Pn**	**17 30 25.0**	**+0.5**
	baz=217							
SGST				*e*S	**Sn**	**17 30 41.1**	**+0.6**
	baz=217							
ICHU	**Yijhu**	**1.27**	**236**	P	**Pn**	**17 30 25.7**	**+1.2**
	baz=235							
ICHU				*e*S	**Sn**	**17 30 41.2**	**+0.5**
	baz=235							
TWGBT	**Beinan**	**1.30**	**194**	*e*P	**Pn**	**17 30 25.2**	**+0.2**
	baz=194							
TWGBT				*e*S	**Sn**	**17 30 43.5**	**+2.1**
	baz=194							
CHN8	**Yiju**	**1.33**	**237**	P	**Pn**	**17 30 25.4**	**+0.1**
	baz=236							
CHN8				*e*S	**Sn**	**17 30 42.4**	**+0.3**
	baz=236							
LDUT	**Ludao**	**1.41**	**178**	*e*P	**Pn**	**17 30 25.5**	**-0.9**
	baz=178							
LDUT				*e*S	**Sn**	**17 30 43.2**	**-0.8**
	baz=178							
JYNG	**Yonaguni jima**	**1.44**	**75**	P	**Pn**	**17 30 26.6**	**-0.1**
JYNG				*e*S	**Sn**	**17 30 44.6**	**-0.1**
YOJ	**Yonaguni jima**	**1.50**	**75**	P	**Pn**	**17 30 27.5**	**-0.1**
YOJ				S	**Sn**	**17 30 46.1**	**-0.1**
MASBT	**Mashibuluo**	**1.64**	**206**	P	**Pn**	**17 30 30.9**	**+1.5**
	baz=206							
PNG	**Penghu**	**1.79**	**254**	*e*P	**Pn**	**17 30 30.0**	**-1.4**
	baz=253							
LAY	**Lan-yu**	**2.04**	**177**	*e*P	**Pn**	**17 30 33.9**	**-1.1**
	baz=176							
LAY				*e*S	**Sn**	**17 30 58.7**	**-0.7**
	baz=176							
IRIF	**Iriomote-Funau**	**2.12**	**83**	P	**Pn**	**17 30 35.8**	**-0.2**
IRIF				*e*S	**Sn**	**17 31 01.5**	**+0.2**
HATJ	**Hateruma jima**	**2.18**	**90**	*e*S	**Sn**	**17 31 02.8**	**+0.1**
JKRS	**Kuro-shima**	**2.37**	**86**	P	**Pn**	**17 30 39.8**	**+0.4**
JKRS				S	**Sn**	**17 31 07.7**	**+0.4**
JIJ	**Ishigaki jima**	**2.50**	**83**	P	**Pn**	**17 30 40.8**	**-0.4**
JIJ				*e*S	**Sn**	**17 31 09.4**	**-1.1**
JISG	**Ishigakijimahi**	**2.68**	**79**	P	**Pn**	**17 30 43.4**	**-0.3**
JISG				*e*S	**Sn**	**17 31 13.9**	**-1.1**
JTJ	**Tarama**	**3.04**	**79**	P	**Pn**	**17 30 48.8**	**+0.2**
JTJ				*e*S	**Sn**	**17 31 23.4**	**-0.4**

BYKL 20 17:36:15.7±0.3, 56.06N×113.88E, h6^{km}±9^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.19**	**288**	⇑*i*		Pg	Pg	17 36 19.3	-0.2
SVKR				*e*		Sg	Sg	17 36 22.8	+0.8
SVKR					Pmax				
	1μm,0.2s								
SVKR					Smax				
	6μm,0.3s								
UKT	**Uakit**	**0.59**	**194**	*e*	Pg	Pg		17 36 25.6	-1.4
UKT					Pmax				
	40nm,0.2s								
UKT					Smax				
	309nm,0.5s								
NLYR	**Nelyaty**	**1.10**	**66**	*e*	Pg	Pg		17 36 34.9	-2.0
NLYR				*e*	Pb	Pb		17 36 37.2	0.0
NLYR				*e*	Sg	Sg		17 36 49.7	-1.5
NLYR					max				
	78nm,0.6s								
NLYR					Smax				
	112nm,0.8s								
KMO	**Kumora**	**1.52**	**265**	*e*	Pg	Pb		17 36 43.9	-0.3
KMO				*e*	Sg	Sb		17 37 04.0	+0.3
KMO					Pmax				
	68nm,0.4s								
KMO					Smax				
	226nm,0.8s								
BOD	**Bodaibo**	**1.77**	**2**	*e*	Pg	Pn		17 36 47.3	+0.5
BOD				*e*	Sg	Sb		17 37 10.8	0.0
BOD					Pmax				
	18nm,0.2s								
BOD					Smax				
	145nm,0.8s								
YLYR	**Ulyunkhan**	**1.95**	**234**	*e*	Pg	Pn		17 36 50.1	+0.8
YLYR				*e*	Sg	Sb		17 37 16.2	0.0
YLYR					Pmax				
	19nm,0.4s								
YLYR					Smax				
	121nm,0.2s								
NIZ	**Nizh Angarsk**	**2.46**	**265**	*e*	Sg	Sb		17 37 31.8	+1.0
NIZ					Smax				
	80nm,0.8s								
CRS	**Chara**	**2.58**	**69**	*e*	Pg	Pb		17 37 02.0	-0.3
CRS				*e*	Sg	Sb		17 37 35.4	+1.2
CRS					Pmax				
	68nm,0.8s								
CRS					Smax				
	52nm,1.1s								
TUP	**Tupik**	**3.84**	**113**	*e*	Pn	Pn		17 37 15.1	-0.3
TUP				*e*	Pg	Pb		17 37 25.0	+1.1
TUP				*e*	Sg	Sg		17 38 15.7	-3.3
TUP					Pmax				
	14nm,0.6s								
TUP					Smax				
	56nm,0.8s								

BYKL 20 17:36:23.1±0.2, 56.06N×113.88E, h9^{km}±5^{km}, 1C, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.19**	**288**	*e*	Pg	Pg		17 36 26.8	-0.3
SVKR				*e*	Sg	Sg		17 36 30.1	+0.3
SVKR					Pmax				
	2μm,0.2s								
SVKR					Smax				
	15μm,0.5s								
UKT	**Uakit**	**0.59**	**194**	*e*	Pg	Pg		17 36 33.5	-1.0
UKT				*e*	Sg	Sg		17 36 41.1	-1.2
UKT					Pmax				
	178nm,0.4s								
UKT					Smax				
	496nm,0.9s								
UKT	**Uakit**	**0.59**	**194**	*e*	Sg	Pg		17 36 33.3	-1.2
NLYR	**Nelyaty**	**1.10**	**66**	*e*	Pg	Pg		17 36 42.4	-1.9
NLYR				*e*	Pb	Pn		17 36 45.0	+0.2
NLYR				*e*	Sg	Sg		17 36 58.1	-0.5
NLYR				*e*	Sb	Sn		17 37 01.7	+1.5
NLYR					max				
	197nm,0.3s								
NLYR					max				
	390nm,0.9s								
KMO	**Kumora**	**1.52**	**265**	*e*	Pg	Pn		17 36 50.3	-0.1
KMO				*e*				17 36 52.0	
KMO				*e*	Sg	Sb		17 37 11.0	+0.3
KMO				*e*	Sb	Sg		17 37 13.3	+1.5
KMO					max				
	121nm,0.5s								
KMO					max				
	689nm,1.1s								
BOD	**Bodaibo**	**1.77**	**2**	*e*	Pg	Pn		17 36 54.6	+0.8
BOD				*e*	Sg	Sb		17 37 18.1	+0.3
BOD					Pmax				
	48nm,0.2s								
BOD					Smax				
	249nm,0.4s								
YLYR	**Ulyunkhan**	**1.95**	**234**	*e*	Pg	Pb		17 36 57.8	-1.0
YLYR				*e*	Sg	Sb		17 37 24.2	+1.0
YLYR					Pmax				
	21nm,0.3s								
YLYR					Smax				
	188nm,0.4s								
NIZ	**Nizh Angarsk**	**2.46**	**265**	*e*	Pg	Pb		17 37 07.6	+0.2
NIZ				*e*	Sg	Sb		17 37 39.6	+1.8
NIZ					Pmax				
	14nm,0.6s								
NIZ					Smax				
	172nm,0.6s								
CRS	**Chara**	**2.58**	**69**	*e*	Pg	Pb		17 37 09.7	+0.2
CRS				*e*	Sg	Sb		17 37 43.3	+2.1
CRS					Pmax				
	184nm,0.9s								
CRS					Smax				
	131nm,0.8s								
SYVR	**Suvo**	**3.29**	**225**	*e*	Pg	Pb		17 37 21.6	0.0
SYVR				*e*				17 37 31.0	
SYVR				*e*	Sg	Sb		17 38 05.0	+3.3
SYVR					Pmax				
	11nm,0.6s								
SYVR					Smax				
	98nm,1.9s								
TUP	**Tupik**	**3.84**	**113**	⇑*i*	Pn	Pn		17 37 22.6	+0.2
TUP				*e*	Pg	Pb		17 37 31.3	+0.3
TUP				*e*	Sn	Sn		17 38 06.1	-1.6
TUP				*e*	Sg	Sg		17 38 22.2	-4.2
TUP				*e*	SgSg	SbSb		17 38 26.5	+3.7
TUP					Pmax				
	9.0nm,0.5s								
TUP					max				
	132nm,0.9s								
MXMB	**Maximikha**	**4.09**	**229**	*e*	Sg	Sg		17 38 30.0	-4.4
YKLR	**Yuktali**	**4.36**	**80**	*e*	Pg	Pb		17 37 40.8	+1.0
YKLR				*e*	Sg	Sg		17 38 38.6	-4.4
OGRR	**Ongureny**	**4.37**	**239**	*e*	Pn	Pn		17 37 29.5	0.0
OGRR				*e*	Pg	Pb		17 37 41.7	+1.8
OGRR				*e*	Sn	Sn		17 38 20.0	-0.5
OGRR				*e*	Sg	Sg		17 38 39.0	-4.1
OGRR					Smax				
	53nm,1.4s								
KELR	**Kotokel**	**4.73**	**228**	*e*	Pg	Pb		17 37 48.0	+1.8
KELR				*e*	Sg	Sg		17 38 49.2	-5.8
TRG	**Tyrgan**	**5.50**	**236**	*e*	Sg	Sg		17 39 13.1	-6.5
UUDB	**Ulan-Yde**	**5.58**	**224**	*e*	Pg	Pb		17 38 02.8	+2.2
UUDB				*e*				17 38 54.1	
UUDB				*e*	Sg	Sb		17 39 14.6	+7.1
UUDB					Pmax				
	1.0nm,0.2s								
UUDB					Smax				
	62nm,1.3s								
FFNB	**Fofonovo**	**5.81**	**229**	*e*	Sg	Sg		17 39 23.8	-5.5
HRMR	**Khuramsha**	**6.04**	**226**	*e*	Pg	Pb		17 38 11.2	+2.7
HRMR				*e*				17 38 16.4	
HRMR				*e*	Sg	Sg		17 39 29.5	-7.4
HRMR					max				
	13nm,0.8s								
HRMR					Smax				
	104nm,0.9s								
CLNS	**Chul'man**	**6.16**	**78**	*e*	Sg	Sg		17 39 33.8	-6.8
KPC	**Khapcheranga**	**6.43**	**189**	*e*	Pg	Pb		17 38 19.3	+4.2
KPC				*e*	Sg	Sg		17 39 42.3	-7.1
KPC					Pmax				
	1.0nm,0.5s								
KPC					Smax				
	32nm,1.8s								
ARS	**Arshan**	**7.92**	**243**	*e*	Pg	Pb		17 38 45.9	+5.4
ARS				*e*	Sg	Sg		17 40 28.3	-8.8
ARS					Pmax				
	1.0nm,0.1s								
ARS					Smax				
	45nm,0.7s								
MOY	**Mondy**	**8.79**	**245**	*e*	Sg	Sg		17 40 55.4	-10
MOY					Smax				
	25nm,1.8s								
ORL	**Orlik**	**8.95**	**253**	*e*	Pg	Pg		17 39 05.3	-9.0
ORL				*e*	Sg	Sg		17 41 00.8	-9.2
ORL					Smax				
	16nm,1.7s								

*IDC **20** 17:47:18.5±1.4, 23.80S×175.37W, h0^{km}, mb4.0/5, mb1 4.3/8, mb1mx4.1/29, mbtmp4.2/8, ML3.7/3, MS3.2/5, Ms1 3.2/5, ms1mx2.9/35, Error ellipse: s-maj=48.6km s-min=21.2km az=146.0*

*NEIC **20** 17:47:22.3±1.2, 24.1S±0.2×175.2W±0.2, h39^{km}±14^{km}, mb4.5/14, Error ellipse: s-maj=38.2km s-min=15.8km az=209.0*

ISC 20 17:47:20.6±0.6, 24.17S±0.09×175.18W±0.09, h24^{km}, n38, σ1^{s}67/31, mb4.4/13, MS3.2/5, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**9.00**	**314**				**Pn**	**17 49 29.5**	**+0.3**
AFI	**Afiamalu**	**10.70**	**18**			Pn	**Pn**	**17 49 47.9**	**-4.5**
	1.5nm,0.3s,baz=164,slow=18,SNR=1.8								
AFI						Sn	Sn	17 51 36.0	-16
	1.4nm,0.3s,baz=65,slow=20,SNR=1.2								
RAR	**Rarotonga**	**14.52**	**81**			Pn	**Pn**	**17 50 45.9**	**+1.3**
	1.3nm,0.3s,baz=248,slow=18,SNR=3.6								
RAR						Sn	Sn	17 53 13.0	-12
	0.8nm,0.3s,baz=148,slow=15,SNR=0.8								
RAR						LR	LR	17 56 16.8	
	comp=Z,81nm,18.5s,baz=288,slow=37								
RAR	**Rarotonga**	**14.52**	**81**				**Pn**	**17 50 45.2**	**+0.5**
URZ	**Urewera**	**15.51**	**203**			Pn	**P**	**17 51 01.6**	**-0.3**
	0.2nm,0.3s,baz=8.1,slow=7.1,SNR=2.0								
URZ						Sn	**Sn**	**17 53 43.4**	**-5.4**
	0.3nm,0.3s,baz=24,slow=16,SNR=1.5								
DZM	**Mont Dzumac**	**17.03**	**273**	*e*		LR	LR	17 55 03.1	
	comp=Z,80nm,22.4s								
DZM	**Mont Dzumac**	**17.03**	**273**			LR	LR	17 55 30.9	
	comp=Z,82nm,18.6s,baz=42,slow=29								
TBI	**Tubuai**	**23.55**	**93**	*e*		LR	LR	17 58 41.5	
	comp=Z,103nm,26.5s								
PPT2	**Papeete2**	**24.78**	**80**	*e*		LR	LR	17 59 02.7	
	comp=Z,90nm,22.5s								
PPT	**Papeete**	**24.79**	**80**			LR	LR	18 00 41.1	
	comp=Z,60nm,20.7s,baz=206,slow=32								
HNR	**Honiara**	**27.89**	**297**			LR	LR	18 03 57.0	
	comp=Z,60nm,18.3s,baz=130,slow=36								
CTA	**Charters Tower**	**35.88**	**269**			P	**P**	**17 54 19.1**	**+0.1**
	baz=99,slow=7.8								
STKA	**Stephens Creek**	**38.72**	**249**			P	**P**	**17 54 44.8**	**+1.8**
	0.9nm,0.5s,baz=70,slow=9.4,SNR=4.5								
STKA						LR	LR	18 09 13.7	
	comp=Z,28nm,18.6s,baz=34,slow=34								
STKA	**Stephens Creek**	**38.72**	**249**			P	**P**	**17 54 42.3**	**-0.7**
COEN	**Coen**	**40.52**

COEN					IAmb	IAmb	17 55 23.5	
	comp=Z,10nm,1.2s							
BBOO	**Buckleboo**	**43.40**	**247**	P	**P**		**17 55 21.0**	**-0.5**
BBOO					IAmb	IAmb	17 55 49.3	
	comp=Z,24nm,1.4s							
AS31	**Alice Springs**	**46.33**	**260**	P	**P**		**17 55 44.6**	**-0.4**
ASAR	**Alice Springs**	**46.33**	**260**	P	**P**		**17 55 45.2**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=89,slow=6.9,SNR=34							
ASAR					PcP	**PcP**	**17 57 22.4**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=114,slow=3.7,SNR=1.8							
ASAR	**Alice Springs**	**46.33**	**260**	P	**P**		**17 55 44.3**	**-0.7**
WR0	**Warramunga Arr**	**46.59**	**265**	P	**P**		**17 55 46.8**	**-0.3**
WB2	**Warramunga Arr**	**46.77**	**265**	P	**P**		**17 55 47.3**	**-1.2**
WB2					IAmb	IAmb	17 55 48.9	
	comp=Z,5.9nm,1.1s							
WRAB	**Tennant Creek**	**46.77**	**265**	P	**P**		**17 55 47.5**	**-0.9**
WRAB					IAmb	IAmb	17 55 48.5	
	comp=Z,3.8nm,0.8s							
WB0	**Warramunga Arr**	**46.77**	**265**	P	**P**		**17 55 47.6**	**-0.9**
WB0					IAmb	IAmb	17 55 48.9	
	comp=Z,5.3nm,0.8s							
WRA	**Warramunga Arr**	**46.78**	**265**	P	**P**		**17 55 47.9**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=98,slow=8.4,SNR=64							
WRA	**Warramunga Arr**	**46.78**	**265**	P	**P**		**17 55 47.2**	**-1.3**
FORT	**Forrest**	**50.34**	**249**	P	**P**		**17 56 16.0**	**+0.2**
KNRA	**Kununurra**	**53.09**	**268**	P	**P**		**17 56 36.5**	**0.0**
FITZ	**Fitzroy Crossi**	**55.19**	**264**	P	**P**		**17 56 51.6**	**-0.2**
FITZ					IAmb	IAmb	17 56 53.7	
	comp=Z,3.1nm,0.8s							
MORW	**Morawa**	**60.91**	**249**	P	**P**		**17 57 31.7**	**-0.1**
QSPA	**South Pole Qui**	**65.92**	**180**	P	**P**		**17 58 05.0**	**+0.5**
QSPA					IAmb	IAmb	17 58 26.5	
	comp=Z,5.7nm,1.1s							
PETK	**Petropavlovsk-**	**80.48**	**344**	P	**P**		**17 59 30.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=118,slow=6.3,SNR=5.1							
H03S2	**Juan Fernandez**	**81.79**	**123**	T	T		19 31 37.1	
	baz=247							
H03S1	**Juan Fernandez**	**81.80**	**123**	T	T		19 31 07.6	
	baz=247							
H03S3	**Juan Fernandez**	**81.81**	**123**	T	T		19 31 29.9	
	baz=247							
NVAR	**Mina Array Bea**	**81.95**	**42**	P	**P**		**17 59 39.6**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=207,slow=7.7,SNR=2.5							
CMAR	**Chiang Mai Arr**	**93.77**	**288**	P	**P**		**18 00 39.0**	**+2.9**
	comp=Z,1.9nm,0.9s,baz=133,slow=3.5,SNR=14							
AKASG	**Malin Array Be**	**147.47**	**331**	PKPbc	**PKPbc**		**18 07 02.3**	**0.0**
	comp=Z,1.6nm,0.6s,baz=44,slow=4.3,SNR=9.8							
CLL	**Collm**	**152.18**	**349**	*e*PKPbc	**PKPbc**		**18 07 13.0**	**-0.9**

IDC ***20*** *17:57:10.9±2.9, 16.7S×168.9E, h0km, mb4.3/2, mb1 4.5/3, mb1mx3.7/32, mbtmp4.2/3, ML3.7/1, Error ellipse: s-maj=64.2km s-min=37.7km az=111.0*

NEIC ***20*** *17:57:34.8±1.1, 18.9S±0.1×169.2E±0.1, h218km±6km, mb4.2/9, Error ellipse: s-maj=20.1km s-min=14.8km az=117.0*

ISC 20 17:57:32.9±2.5, 18.9S±0.1×169.3E±0.3, h200km, n17, σ1§25/17, mb4.1/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.96**	**329**			**Pn**	**17 58 35.8**	**+1.6**
DZM	**Mont Dzumac**	**4.19**	**220**	Pn		**Pn**	**17 58 38.6**	**+1.4**
	2.3nm,0.3s,baz=23,slow=12,SNR=39							
DZM				Sn		Sn	17 59 43.7	+16
	1.5nm,0.3s,baz=41,slow=22,SNR=1.8							
DZM	**Mont Dzumac**	**4.19**	**220**			**Pn**	**17 58 38.8**	**+1.6**
WR0	**Warramunga Arr**	**32.80**	**262**	P		**P**	**18 03 46.3**	**-1.4**
WR0				IAmb		IAmb	18 03 57.8	
	comp=Z,6.0nm,1.4s							
WB0	**Warramunga Arr**	**32.96**	**263**	P		**P**	**18 03 47.7**	**-1.3**
WB0				IAmb		IAmb	18 03 48.7	
	comp=Z,4.8nm,1.1s							
WB2	**Warramunga Arr**	**32.98**	**262**	P		**P**	**18 03 47.6**	**-1.6**
WB2				IAmb		IAmb	18 03 52.9	
	comp=Z,7.9nm,1.5s							
WRAB	**Tennant Creek**	**32.99**	**262**	P		**P**	**18 03 47.8**	**-1.4**
WRA	**Warramunga Arr**	**32.99**	**262**	P		**P**	**18 03 47.9**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=89,slow=8.2,SNR=29							
WRA	**Warramunga Arr**	**32.99**	**262**	P		**P**	**18 03 47.8**	**-1.5**
AS31	**Alice Springs**	**33.31**	**255**	P		**P**	**18 03 51.4**	**-0.6**
AS31				IAmb		IAmb	18 03 51.9	
	comp=Z,4.5nm,0.3s							
ASAR	**Alice Springs**	**33.31**	**255**	P		**P**	**18 03 51.4**	**-0.7**
	comp=Z,4.5nm,0.4s,baz=81,slow=8.7,SNR=228							
ASAR	**Alice Springs**	**33.31**	**255**	P		**P**	**18 03 51.3**	**-0.7**
MTN	**Manton Dam**	**37.18**	**274**	P		**P**	**18 04 24.3**	**-0.8**
KNRA	**Kununurra**	**38.82**	**268**	P		**P**	**18 04 38.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.37**	**264**	P		**P**	**18 04 59.6**	**-0.1**
ARCES	**ARCESS Array B**	**124.72**	**345**	PKP		**PKPdf**	**18 16 07.6**	**-0.4**
	comp=Z,5.5nm,1.0s,baz=64,slow=2.1,SNR=2.1							
ARCES	**ARCESS Array B**	**124.72**	**345**			**PKPdf**	**18 16 07.6**	**-0.4**

MOS ***20*** *18:14:34.7±1.0, 23.41N×93.56E, h41km, mb6.2/139, MS5.1/81, Error ellipse: s-maj=5.6km s-min=2.9km az=121.1*

BJI ***20*** *18:14:35.6±0.0, 23.56N×93.47E, h51km, mB5.6/58, mb5.5/72, ML5.5/4, Ms5.5/91, Ms7 5.2/83*

BGR ***20*** *18:14:36.7±0.0, 22.36N×93.26E, h60km±2km, mb6.3, mB_BB6.4*

NEIC ***20*** *18:14:37.7, 23.52N×93.52E, h51km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-1.87; Mθθ-0.83; Mϕϕ2.70; Mrθ-1.92; Mθϕ 1.11; Mϕr-0.62; Fault plane solution: M0 3.3300×10^17 NP1:ϕs48.04000°, δ67.22000°, λ-52.04000°. NP2:ϕs164.43000°, δ43.37000°, λ-145.68000°. Principal axes: T 3.2994, Plg14.0000°, Azm111.0000°; N 0.0508, Plg35.0000°, Azm211.0000°; P -3.3502, Plg52.0000°, Azm3.0000°;*

NEIC ***20*** *18:14:37.8±1.6, 23.51N±0.06×93.52E±0.08, h49km±1km, mb6.0/350, Ms_20 5.1/221, Mwb5.6/40, Mwc5.7(GCMT) Error ellipse: s-maj=13.1km s-min=9.3km az=232.0*

NDI ***20*** *18:14:38.5±2.7, 23.55N×93.45E, h33km, mb5.8, ML5.9, mb6.0(NEIC)*

IDC ***20*** *18:14:39.5±1.4, 23.54N×93.59E, h60km±12km, mb5.4/38, mb1 5.4/39, mb1mx5.4/40, mbtmp5.6/39, MS4.9/37, Ms1 4.9/37, ms1mx4.9/38, Error ellipse: s-maj=10.3km s-min=8.6km az=40.0*

GCMT ***20*** *18:14:39.8±0.1, 23.49N±0.01×93.46E±0.01, h35km, MW5.7/155, Moment Tensor Solution. s137,c251; s155,c316; Duration: 1§7 Moment tensor: Scale 10^17 Nm; Mrr-1.87±.04; Mθθ-1.84±.04; Mϕϕ 3.71±.04; Mrθ-2.07±.06; Mϕϕ 1.37±.03; Mϕr-0.07±.05; Best double couple: M0 4.06100×10^17 NP1:ϕs157.00000°, δ56.00000°, λ-150.00000°. NP2:ϕs49.00000°, δ66.00000°, λ-37.00000°. Principal axes: T 4.0840, Plg6.0000°, Azm105.0000°; N -0.0470, Plg46.0000°, Azm201.0000°; P -4.0370, Plg43.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***20*** *18:14:41, 23.53N×93.48E, h36km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-1.64; Mθθ-2.16; Mϕϕ 3.80; Mrθ-2.06; Mθϕ 1.54; Mϕr0.08; Fault plane solution: M0 4.19000×10^17 NP1:ϕs156.00000°, δ60.00000°, λ-153.00000°. NP2:ϕs52.00000°, δ67.00000°, λ-33.00000°. Principal axes: T 4.2062, Plg4.0000°, Azm105.0000°; N -0.0414, Plg51.0000°, Azm200.0000°; P -4.1648, Plg39.0000°, Azm11.0000°;*

ISC 20 18:14:37.7±0.3, 23.53N±0.02×93.52E±0.02, h49km±2km, h49km:pP-P, n1995, σ1§37/2185, mb5.9/504, MS5.2/225, 55C-226D, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**1.15**	**206**	*e*P		**Pn**	**18 14 58.6**	**+1.1**
SAIH				*e*S		**Sn**	**18 15 14.5**	**+2.3**
SAIH				IAML			18 15 17.8	
	comp=N,138μm,0.5s							
SAIH				IAML			18 15 18.0	
	comp=E,268μm,0.5s							
SILR	**SILCHAR**	**1.41**	**332**	*e*P		**Pn**	**18 15 02.3**	**+1.4**
SILR				IAmb		IAmb	18 15 15.3	
	comp=Z,30μm,0.7s							
BELO	**BELONIA**	**1.93**	**262**	*e*P		**Pn**	**18 15 09.2**	**+1.2**
BELO				*e*S		**Sn**	**18 15 30.7**	**-0.3**
BELO				AMP			18 15 52.2	
	comp=N,2272μm,1.0s							
AGT	**Agartala**	**2.11**	**280**	*e*P		**Pn**	**18 15 11.2**	**+0.7**
AGT				*e*S		**Sn**	**18 15 35.9**	**+0.3**
AGT				*e*S		**Sn**	**18 15 36.1**	**+0.5**
AGT				AMP			18 15 45.5	
	comp=N,771μm,0.5s							
KOHI	**KOHIMA**	**2.25**	**14**	*e*P		**Pn**	**18 15 14.4**	**+1.9**
KOHI				*e*S		**Sn**	**18 15 41.7**	**+2.6**
SHL	**Shillong**	**2.52**	**324**	*e*P		**Pn**	**18 15 17.9**	**+1.7**
SHL	**Shillong**	**2.52**	**324**	P		**Pn**	**18 15 15.6**	**-0.6**
	SNR=4598							
SHL	**Shillong**	**2.52**	**324**	P		**Pn**	**18 15 15.4**	**-0.9**
SHL	**Shillong**	**2.52**	**324**	Pn		**Pn**	**18 15 15.4**	**-0.9**
MOKO	**MOKOCHONG**	**2.92**	**18**	*e*P		**Pn**	**18 15 23.8**	**+1.9**
MOKO				*e*S		**Sn**	**18 15 58.2**	**+2.4**
MOKO				IAML			18 16 01.0	
	comp=E,47μm,0.5s							
MOKO				IAML			18 16 02.1	
	comp=N,34μm,0.5s							
GUWA	**GUWAHATI**	**3.13**	**328**	*e*P		**Pn**	**18 15 23.6**	**-0.9**
TEZP	**TEZPUR**	**3.14**	**348**	*e*P		**Pn**	**18 15 24.3**	**-0.3**
TEZP				IAmb		IAmb	18 15 43.9	
	comp=Z,3μm,0.7s							
JORH	**JORHAT**	**3.27**	**12**	*e*P		**Pn**	**18 15 27.2**	**+0.8**
ZIRO	**ZIRO**	**3.99**	**4**	*e*P		**Pn**	**18 15 36.9**	**+0.4**
ZIRO				IAmb		IAmb	18 15 37.6	
	comp=Z,2μm,0.7s							
ZIRO				*e*S		**Sn**	**18 16 20.7**	**-1.4**
ZIRO				IAML			18 16 22.9	
	comp=E,108μm,0.6s							
ZIRO				IAML			18 16 23.0	
	comp=N,70μm,0.4s							
DIBR	**DIBRUGARH**	**4.12**	**17**	*e*P		**Pn**	**18 15 39.0**	**+0.9**
LKP	**Lekhapani**	**4.33**	**29**	*e*P		**Pn**	**18 15 42.4**	**+1.4**
LKP				AMP			18 16 34.5	
	comp=N,334μm,0.9s							
GTK	**Tadong**	**5.83**	**311**	*e*P		**Pn**	**18 16 02.3**	**+0.5**
GTK				*e*S		**Sn**	**18 17 03.3**	**-4.1**
ODAN	**Odare**	**6.47**	**302**	*e*P		**Pn**	**18 16 10.5**	**0.0**
	comp=N,488nm,0.3s							
TAPN	**Taplejung**	**6.49**	**307**	*e*P		**Pn**	**18 16 10.8**	**0.0**
	comp=N,1μm,0.7s							
LSA	**Lhasa**	**6.50**	**341**	P		**Pn**	**18 16 13.9**	**+2.7**
LSA				S		**Sn**	**18 17 22.5**	**-1.8**
LSA				pmax		pmax		
	comp=N,2μm,0.7s							
LSA				LR		LR		
	comp=N,58μm,9.6s							
LSA				LR		LR		
	comp=N,152μm,6.4s							
LSA				LR		LR		
	comp=N,97μm,11.0s							
LSA	**Lhasa**	**6.50**	**341**	P		**Pn**	**18 16 12.7**	**+1.5**
LSA	**Lhasa**	**6.50**	**341**	P		**Pn**	**18 16 12.8**	**+1.6**
LSA				P		**Pn**	**18 16 12.8**	**+1.6**
LSA				S		**Sn**	**18 17 22.3**	**-1.9**
LSA				S		**Sn**	**18 17 22.3**	**-1.9**
LSA	**Lhasa**	**6.50**	**341**	P		**Pn**	**18 16 12.3**	**+1.1**
LSA	**Lhasa**	**6.50**	**341**	Pn		**Pn**	**18 16 12.3**	**+1.1**
CM33	**Chiang Mai Arr**	**6.90**	**132**	P		**Pn**	**18 16 16.0**	**-0.3**
CHTO	**Chiang Mai**	**6.90**	**132**	P		**Pn**	**18 16 16.4**	**+0.1**
CHTO				P		**Pn**	**18 16 16.4**	**+0.1**
CHTO	**Chiang Mai**	**6.90**	**132**	P		**Pn**	**18 16 16.0**	**-0.3**
CHTO	**Chiang Mai**	**6.90**	**132**	Pn		**Pn**	**18 16 16.0**	**-0.3**
CMMT	**Chiang Mai**	**6.90**	**132**	P		**Pn**	**18 16 16.0**	**-0.3**
	comp=N,2.8nmcomp=N,3μmcomp=N,281nm,1.3s							
CM32	**Chiang Mai Arr**	**6.95**	**133**	P		**Pn**	**18 16 17.0**	**+0.1**
BOK	**Bokaro**	**7.00**	**274**	*e*P		**Pn**	**18 16 17.0**	**-0.7**
BOK				*e*S		**Sn**	**18 17 30.7**	**-5.4**
BOK				IAML			18 17 34.9	
	comp=E,3μm,0.7s							
BOK				IAML			18 17 35.3	
	comp=N,5μm,0.6s							
CM34	**Chiang Mai Arr**	**7.02**	**131**	P		**Pn**	**18 16 18.0**	**+0.1**
RAMN	**Ramite**	**7.13**	**300**	*e*P		**Pn**	**18 16 19.6**	**-0.1**
CM35	**Chiang Mai Arr**	**7.14**	**132**	P		**Pn**	**18 16 19.9**	**+0.4**
CM15	**Chiang Mai Arr**	**7.14**	**134**	P		**Pn**	**18 16 20.0**	**+0.4**
	comp=N,2.7nmcomp=N,5μmcomp=N,577nm,0.9s							
CM31	**Chiang Mai Arr**	**7.15**	**134**	P		**Pn**	**18 16 20.5**	**+0.8**
	comp=N,77nmcomp=N,184μmcomp=N,13μm,0.5s							
CM31	**Chiang Mai Arr**	**7.15**	**134**			**Pn**	**18 16 19.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**7.15**	**134**	P		**Pn**	**18 16 22.1**	**+2.4**
	comp=N,60nm,0.3s,baz=312,slow=12,SNR=1298							
CMAR				LR		LR	18 20 01.9	
	comp=N,12μm,19.0s,baz=350,slow=45							
CMAR				ScP		**ScP**	**18 26 32.6**	**+0.2**
	comp=N,0.1nm,0.3s,baz=311,slow=2.0,SNR=4.5							
CMAR				PKiKP		**PKiKP**	**18 31 06.2**	**-0.2**
	comp=N,0.1nm,0.3s,baz=267,slow=1.7,SNR=6.7							
CMAR				P3KPbc			18 54 00.1	
	comp=N,0.0nm,0.3s,baz=255,slow=1.8,SNR=2.0							
CMAR	**Chiang Mai Arr**	**7.15**	**134**	Pn		**Pn**	**18 16 19.9**	**+0.2**
CM13	**Chiang Mai Arr**	**7.15**	**134**	P		**Pn**	**18 16 20.4**	**+0.7**
	comp=N,211nmcomp=N,213nmcomp=N,5μmcomp=N,472nm,0.8s							
CM02	**Chiang Mai Arr**	**7.17**	**134**	P		**Pn**	**18 16 20.6**	**+0.7**
	comp=N,3.3nmcomp=N,337nmcomp=N,9μmcomp=N,740nm,0.8s							
CM01	**Chiang Mai Arr**	**7.19**	**134**	P		**Pn**	**18 16 21.0**	**+0.8**
	comp=N,3.7nmcomp=N,8μmcomp=N,826nm,0.8s							
CM09	**Chiang Mai Arr**	**7.19**	**134**	P		**Pn**	**18 16 21.0**	**+0.7**
	comp=N,4.6nmcomp=N,7μmcomp=N,783nm,0.8s							
CM05	**Chiang Mai Arr**	**7.19**	**134**	P		**Pn**	**18 16 20.9**	**+0.7**
	comp=N,2.3nmcomp=N,191nmcomp=N,5μmcomp=N,432nm,0.9s							
CM36	**Chiang Mai Arr**	**7.21**	**133**	P		**Pn**	**18 16 21.0**	**+0.5**
CM04	**Chiang Mai Arr**	**7.21**	**134**	P		**Pn**	**18 16 21.3**	**+0.7**
	comp=N,2.9nmcomp=N,6μmcomp=N,635nm,0.7s							
PAYA	**Payao**	**7.22**	**124**	P		**Pn**	**18 16 21.4**	**+0.7**
	comp=N,52nmcomp=N,118μmcomp=N,15μm,0.8s							
LAMP	**Lampang**	**7.58**	**130**	P		**Pn**	**18 16 27.0**	**+1.5**
	comp=N,3.9nmcomp=N,7μmcomp=N,904nm,0.8s							
GUN	**Gumba**	**8.15**	**304**	*e*P		**Pn**	**18 16 33.2**	**-0.6**
	comp=N,802nm,0.5s							
NANT	**Nan**	**8.19**	**124**	P		**Pn**	**18 16 33.5**	**-0.4**
	comp=N,24nmcomp=N,56μmcomp=N,6μm,0.8s							
SUKH	**Sukhothai**	**8.30**	**135**	P		**Pn**	**18 16 37.2**	**+1.7**
	comp=N,2.7nmcomp=N,8μmcomp=N,769nm,0.9s							
PKI	**Pulchoki**	**8.36**	**300**	*e*P		**Pn**	**18 16 35.8**	**-0.7**
	comp=N,1μm,0.6s							
PKIN	**Phulchoki**	**8.37**	**300**	*e*P		**Pn**	**18 16 36.0**	**-0.6**
	comp=N,2μm,0.4s							
KMI	**Kunming**	**8.56**	**77**	*i*P		Pn	18 16 44.3	+5.1
KMI				S		Sn	18 18 23.8	+9.3
KMI				pmax		pmax		
	comp=N,2μm,4.6s							
KMI				LR		LR		
	comp=N,27μm,13.9s							
KMI				LR		LR		
	comp=N,22μm,16.7s							
KMI				LR		LR		
	comp=N,27μm,17.0s							
KKN	**Kakani**	**8.56**	**301**	*e*P		**Pn**	**18 16 38.1**	**-1.1**
	comp=N,618nm,0.5s							
DMN	**Daman**	**8.62**	**300**	*e*P		**Pn**	**18 16 38.9**	**-1.1**
UTTA	**Uttaradit**	**8.74**	**130**	P		**Pn**	**18 16 42.6**	**+1.1**
	comp=N,1.6nmcomp=N,6μmcomp=N,245nm,0.5s							
PHIT	**Phitsanulok**	**9.03**	**133**	P		**Pn**	**18 16 47.3**	**+1.8**
	comp=N,9.9nmcomp=N,27μmcomp=N,3μm,0.8s							
GKN	**Gorkha**	**9.16**	**301**	*e*P		**Pn**	**18 16 46.4**	**-1.0**
UTHA	**Uthaitani**	**9.70**	**144**	P		**Pn**	**18 16 56.0**	**+1.4**
	comp=N,6μmcomp=N,704nm,1.1s							
SLVN	**Son La**	**9.85**	**101**	Pn		**Pn**	**18 16 56.2**	**-0.5**
KOLN	**Koldanda**	**9.90**	**297**	*e*P		**Pn**	**18 16 55.3**	**-2.2**
	comp=N,1μm,0.7s							
DANN	**Dangsing**	**10.01**	**301**	*e*P		**Pn**	**18 16 56.6**	**-2.5**
	comp=N,1μm,0.7s							
CHLP	**Challavanipeta**	**10.15**	**242**	*e*P		**Pn**	**18 16 58.1**	**-2.7**
CHLP				IVMs_BB		IVMs_BB	18 21 02.0	
	comp=Z,5μm,10.3s							
DGPR	**DIGLIPUR**	**10.31**	**183**	*e*P		**Pn**	**18 17 02.5**	**-0.5**
NONG	**Nongkai**	**10.52**	**119**	P		**Pn**	**18 17 08.7**	**+2.9**
	comp=Z,9μmcomp=Z,427nm,1.1s							
PYUN	**Piuthan**	**10.52**	**298**	*e*P		**Pn**	**18 17 03.4**	**-2.6**
	comp=Z,853nm,0.5s							
SRDT	**SRDT**	**10.55**	**149**	P		**Pn**	**18 17 07.0**	**+0.7**
	comp=Z,99nm,1.0s							
CHAI	**Chaiyaphum**	**11.00**	**132**	P		**Pn**	**18 17 15.8**	**+3.4**
	comp=Z,4μmcomp=Z,402nm,0.8s							
KHON	**Khomkaen**	**11.30**	**128**	P		**Pn**	**18 17 18.8**	**+2.3**
	comp=Z,3μmcomp=Z,357nm,0.9s							
CD2	**Chengdu**	**11.70**	**49**	P		**Pn**	**18 17 23.8**	**+1.8**
CD2				PP		**PnPn**	**18 17 35.4**	**+5.4**
CD2				sP			18 17 38.6	
CD2				S		**Sn**	**18 19 35.0**	**+3.8**
CD2				SS		**SnSn**	**18 19 48.8**	**+5.1**
CD2				pmax		pmax		
	comp=Z,150nm,0.9s							
CD2				LR		LR		
	comp=Z,16μm,12.3s							
CD2				LR		LR		
	comp=Z,15μm,10.8s							
CD2				LR		LR		
	comp=Z,12μm,14.2s							
PBA	**Port Blair**	**11.83**	**184**	*e*P		Pn	18 17 24.7	+0.9
PBA	**Port Blair**	**11.83**	**184**	P		Pn	18 17 25.0	+1.2
	SNR=6.0							
PBA				S		Sn	18 19 32.4	-2.1
PBA	**Port Blair**	**11.83**	**184**			Pn	18 17 23.6	-0.2
PHET	**Kaeng Krachan**	**12.05**	**150**	P		**Pn**	**18 17 28.5**	**+1.7**
	comp=Z,2μmcomp=Z,182nm,0.8s							
GYA	**Guiyang**	**12.27**	**74**	∥P		**Pn**	**18 17 30.3**	**+0.4**
GYA				pP		P	18 17 41.8	+0.9
GYA				S		**Sn**	**18 19 46.3**	**+1.0**
GYA				SS		**S**	**18 20 06.8**	**-4.7**
GYA				pmax		pmax		
	comp=Z,36nm,1.0s							
GYA				LR		LR		
	comp=Z,12μm,7.6s							
GYA				LR		LR		
	comp=Z,9μm,7.4s							
GYA				LR		LR		
	comp=Z,12μm,16.5s							
PATY	**Pattaya**	**12.64**	**145**	P		**Pn**	**18 17 38.0**	**+3.1**
	comp=Z,3μmcomp=Z,296nm,1.0s							
PVM	**Polavaram**	**12.78**	**243**	*e*P		**Pn**	**18 17 35.4**	**-1.4**
PVM				IVMs_BB		IVMs_BB	18 22 21.3	
	comp=Z,6μm,6.7s							
GGR	**Gangavaram**	**13.69**	**248**	*e*P		**Pn**	**18 17 46.3**	**-3.0**
GGR				IVmBBB			18 17 58.1	
	comp=Z,2μm,1.2s							
GGR				IVMs_BB		IVMs_BB	18 23 39.4	
	comp=Z,4μm,3.7s							
MYLAV	**Mylavaram**	**13.85**	**243**	*e*P		**Pn**	**18 17 49.2**	**-2.1**
MYLAV				IVmB_BB			18 18 11.4	
	comp=Z,3μm,2.0s							
MYLAV				IVMs_BB		IVMs_BB	18 22 45.5	
	comp=Z,4μm,7.4s							
UBPT	**Khong Chiam**	**13.94**	**124**	P		**Pn**	**18 17 52.6**	**+0.1**
	comp=Z,4μmcomp=Z,185nm,1.1s							
UBPT	**Khong Chiam**	**13.94**	**124**			**Pn**	**18 17 52.3**	**-0.3**
RPR	**Rampur**	**14.06**	**253**	*e*P		**Pn**	**18 17 50.2**	**-3.9**
RPR				IVmB_BB			18 18 11.8	
	comp=Z,1μm,1.2s							
RPR				IVMs_BB		IVMs_BB	18 23 48.8	
	comp=Z,4μm,4.0s							
BHPL	**Bhopal**	**14.79**	**272**	*e*P		**Pn**	**18 17 59.1**	**-4.7**
BHPL				*e*S		Sn	18 20 31.8	-15
BHPL				IAML			18 20 42.5	
	comp=N,442nm,0.7s							
BHPL				IAML			18 20 42.8	
	comp=E,237nm,0.4s							
ADKI	**Addanki**	**14.87**	**242**	*e*P		**Pn**	**18 18 02.6**	**-2.4**
ADKI				IVmB_BB			18 18 14.2	
	comp=Z,2μm,2.3s							
ADKI				IVMs_BB		IVMs_BB	18 23 30.0	
	comp=Z,2μm,9.5s							
CUPL	**Choutuppal**	**15.02**	**248**	*e*P		**Pn**	**18 18 03.3**	**-3.6**
CUPL				IVmB_BB			18 18 24.7	
	comp=Z,3μm,2.1s							
CUPL				IVMsBB			18 24 18.2	
	comp=Z,4μm,4.4s							
NJS	**Nagarjunasagar**	**15.05**	**245**	*e*P		**Pn**	**18 18 03.8**	**-3.4**
NJS				IVmB_BB			18 18 23.3	
	comp=Z,1μm,4.0s							
NJS				IVMs_BB		IVMs_BB	18 24 04.4	
	comp=Z,5μm,8.1s							
HYB	**Hyderabad**	**15.28**	**249**	*i* P		**Pn**	**18 18 06.0**	**-4.3**
	comp=Z,380nm,1.0s							
HYB				*e*S		**S**	**18 21 07.0**	**-6.1**
HYBB	**Hyderabad (bro**	**15.28**	**249**	*e*P		**Pn**	**18 18 06.6**	**-3.7**
HYBB				IVmB_BB			18 18 28.4	
	comp=Z,2μm,1.6s							
HYBB				IVMs_BB		IVMs_BB	18 24 06.7	
	comp=Z,4μm,7.8s							
SURT	**Suratani**	**15.35**	**160**	P		**P**	**18 18 15.5**	**+0.5**
	comp=Z,90nmcomp=Z,11nm,1.1s							
DDI	**Dehra Dun**	**15.36**	**299**	*e*P		**Pn**	**18 18 06.4**	**-4.9**
DDI				*e*S		Sn	18 20 45.1	-15
LZH	**Lanzhou**	**15.38**	**33**	⇑P		**Pn**	**18 18 10.0**	**-1.6**
LZH				pP		P	18 18 19.6	+4.2
LZH				sP		pP	18 18 26.1	-0.9
LZH				S		**Sn**	**18 21 02.8**	**+1.9**
LZH				sS		S	18 21 13.1	-1.9
LZH				SS		**SnSn**	**18 21 18.8**	**+4.5**
LZH				LR		LR		
	comp=Z,18μm,10.8s							
LZH				LR		LR		
	comp=Z,22μm,12.5s							
LZH				LR		LR		
	comp=Z,22μm,14.6s							
ENH	**Enshi**	**15.74**	**61**	Pn		**Pn**	**18 18 13.7**	**-2.5**
ENH				IAmb		IAmb	18 18 35.4	

GZH Guangzhou 18.21 87 P **Pn** **18 18 49.3 +2.3**
GZH S **S** **18 22 13.6 +0.9**
GZH pmax pmax
comp=Z,760nm,3.5s
GZH LR LR
comp=Z,22μm,9.0s
GZH LR LR
comp=Z,10μm,9.1s
DLV T Lat 18.31 126 **Pn** **18 18 48.5 +0.2**
LHMI Lhok Sumawe 18.49 169 P **Pn** **18 18 51.6 +1.2**
comp=Z,12μmcomp=Z,14μmcomp=Z,598nm,1.7s
LHMI Lhok Sumawe 18.49 169 **Pn** **18 18 50.9 +0.5**
LHMI IAmb IAmb 18 19 21.0
comp=Z,1μm,1.3s
POO Poona 19.02 259 *eP* **P** **18 18 55.9 +0.2**
POO IAmb IAmb 18 19 00.1
comp=Z,121nm,0.6s
POO eS Sn 18 22 10.7 -18
HKPS Hong Kong Po S 19.04 90 **P** **18 18 56.2 +0.4**
KULM Kulim 19.39 158 P **P** **18 19 00.1 +0.4**
KULM Kulim 19.39 158 P **P** **18 19 00.0 +0.4**
WHN Wuhan 19.81 65 P **P** **18 19 04.6 +0.5**
WHN S **S** **18 22 42.8 -1.9**
WHN pmax pmax
comp=Z,350nm,0.8s
WHN LR LR
comp=Z,12μm,9.3s
WHN LR LR
comp=Z,10μm,14.5s
WHN LR LR
comp=Z,15μm,26.3s
GOA Goa 20.20 250 *eP* **P** **18 19 09.3 +0.8**
SARP Sargodha 20.24 299 P **P** **18 19 08.4 -0.4**
IPM Ipoh 20.28 158 P **P** **18 19 08.2 -1.1**
IPM Ipoh 20.28 158 P **P** **18 19 08.0 -1.3**
PALK Pallekele 20.32 219 P Pn 18 19 13.8 +1.5
PALK S **S** **18 22 55.5 +0.4**
PALK Pallekele 20.32 219 P **P** **18 19 10.5 +0.7**
PALK pmax pmax
comp=Z,177nm,1.2s
PALK MLR MLR
comp=Z,3μm,22.0s
PALK Pallekele 20.32 219 **P** **18 19 10.5 +0.7**
NIL Nilore 20.42 304 P **P** **18 19 11.4 +0.5**
NIL Nilore 20.42 304 P **P** **18 19 11.3 +0.5**
NIL pmax pmax
comp=Z,754nm,0.9s
NIL Nilore 20.42 304 P **P** **18 19 11.3 +0.4**
NIL IAmb IAmb 18 19 13.0
comp=Z,754nm,0.8s
WMQ Urumqi 20.80 348 P Pn 18 19 16.8 -0.9
WMQ pP sP 18 19 29.8 -3.1
WMQ sP pP 18 19 37.3 +11
WMQ S **S** **18 23 02.0 -2.3**
WMQ sS sS 18 23 20.0 -3.4
WMQ ScP **ScP** **18 26 55.9 +0.9**
WMQ pmax pmax
comp=Z,2μm,1.1s
WMQ pmax pmax
comp=Z,6μm,3.7s
WMQ LR LR
comp=Z,9μm,12.1s
WMQ LR LR
comp=Z,13μm,19.3s
WMQ LR LR
comp=Z,19μm,23.5s
WMQ Urumqi 20.80 348 P Pn 18 19 16.3 -1.4
WMQ pmax pmax
comp=Z,999nm,0.9s
WMQ Urumqi 20.80 348 P Pn 18 19 16.3 -1.4
WMQ IAmb IAmb 18 19 17.7
comp=Z,999nm,0.9s
THW Thamme Wali 21.27 301 P **P** **18 19 19.7 -0.3**
TIY Taiyuan 21.50 45 *eP* **P** **18 19 21.6 -0.8**
TIY S **S** **18 23 11.1 -7.2**
TIY SS **SnSn** **18 23 52.6 +8.3**
TIY pmax pmax
comp=Z,100nm,1.0s
TIY pmax pmax
comp=Z,520nm,3.6s
TIY LR LR
comp=Z,3μm,9.7s
TIY LR LR
comp=Z,3μm,13.7s
TIY LR LR
comp=Z,4μm,14.5s
CEP Cherat 21.52 303 ⇓P **P** **18 19 22.4 -0.3**
KSH Kashi 21.80 321 ⇓*iP* **P** **18 19 25.9 +0.3**
KSH pP pP 18 19 38.0 +0.6
KSH S **S** **18 23 19.8 -4.3**
KSH sS Sn 18 23 37.5 +1.8
KSH pmax pmax
comp=Z,720nm,1.2s
KSH LR LR
comp=Z,6μm,8.2s
KSH LR LR
comp=Z,9μm,9.1s
KSH LR LR
comp=Z,4μm,9.0s
BHUJ Bhuj 21.91 274 *eP* **P** **18 19 28.5 +1.7**
BTO Baotou 21.97 35 *eP* **P** **18 19 26.6 -0.8**
BTO S **S** **18 23 21.3 -6.0**
GSI Gunungsitoli 22.44 169 P **P** **18 19 31.1 -1.5**
comp=Z,6μmcomp=Z,5μmcomp=Z,296nm,0.7s
GSI Gunungsitoli 22.44 169 P **P** **18 19 31.3 -1.3**
GSI IAmb IAmb 18 19 45.0
comp=Z,883nm,1.5s
KNMB Chin-men Tao 22.73 83 IAMs_20 IAMs_20 18 28 06.0
comp=Z,5μm,21.0s
SHLS Shalkode 22.77 333 ⇓*iP* **P** **18 19 34.8 -1.2**
comp=Z,490nm,1.0s,baz=333
SHLS LR LR 18 29 24.0
comp=Z,614nm,9.0s,baz=333
SHLS Shalkode 22.77 333*d iP* **P** **18 19 34.8 -1.2**
SHLS pmax pmax
comp=Z,490nm,1.0s
SHLS MLR MLR
comp=Z,614nm,9.0s
PDGK Podgornoye 22.90 333 P **P** **18 19 37.9 +0.6**
QZH Quanzhou 22.90 81 ⇑*iP* **P** **18 19 37.1 -0.3**
QZH S **S** **18 23 43.8 +0.1**
QZH pmax pmax
comp=Z,51nm,1.2s
QZH pmax pmax
comp=Z,1μm,3.5s
QZH LR LR
comp=Z,16μm,12.3s
QZH LR LR
comp=Z,2μm,6.2s
QZH LR LR
comp=Z,10μm,12.3s
HHC Hu-ho-hao-te 22.98 37 *eP* **P** **18 19 38.8 +0.7**
HHC PP **PnPn** **18 20 09.8 +5.4**
HHC S **S** **18 23 42.3 -2.6**
HHC SS **SnSn** **18 24 28.3 +7.9**
HHC pmax pmax
comp=Z,160nm,1.6s
HHC pmax pmax
comp=Z,2μm,6.1s
HHC LR LR
comp=Z,7μm,16.1s
HHC LR LR
comp=Z,8μm,17.6s
HHC LR LR
comp=Z,5μm,15.7s
KDJ Kajisay 23.00 328 P **P** **18 19 39.9 +1.4**
KDJ pmax pmax
comp=Z,377nm,0.9s
KDJ Kajisay 23.00 328 P **P** **18 19 39.9 +1.4**
KDJ IAmb IAmb 18 19 42.4
comp=Z,377nm,0.8s
SATY Saty 23.15 331 *iP* **P** **18 19 41.0 +1.2**
comp=Z,1μm,2.2s,baz=331
SATY *iS* **S** **18 23 50.0 +2.2**
baz=331
SATY LR LR 18 29 15.2
comp=Z,950nm,13.5s,baz=331
SATY Saty 23.15 331 *iP* **P** **18 19 41.0 +1.2**
SATY *iS* **S** **18 23 50.0 +2.2**
SATY pmax pmax
comp=Z,1μm,2.2s
SATY MLR MLR
comp=Z,950nm,13.0s
ZHN Zhinishke 23.22 331 *eP* **P** **18 19 41.7 +1.1**
baz=331
ZHN *eS* **S** **18 23 51.2 +2.2**
baz=331
ZHN Zhinishke 23.22 331 *eP* **P** **18 19 41.6 +1.1**
ZHN *eS* **S** **18 23 51.2 +2.2**
KPKS Kokpek 23.35 332 ⇓*iP* **P** **18 19 42.6 +0.7**
comp=Z,1μm,2.5s,baz=332
KPKS Kokpek 23.35 332*d iP* **P** **18 19 42.5 +0.7**
KPKS pmax pmax
comp=Z,1μm,2.5s
MNSI Mandailing Nat 23.35 165 P **P** **18 19 40.2 -1.7**
comp=Z,3μmcomp=Z,3μmcomp=Z,257nm,0.7s
ULHL Ulahol 23.56 327 P **P** **18 19 45.7 +1.8**
SNR=9.8
TNSS Tian-Shan 23.80 329 ⇓*iP* **P** **18 19 48.0 +1.5**
baz=328
TNSS Tian-Shan 23.80 329*d iP* **P** **18 19 47.9 +1.5**
MYKOM Kota Tinggi 23.82 154 P **P** **18 19 46.3 0.0**
MYKOM IAmb IAmb 18 20 01.9
comp=Z,722nm,1.7s
MYKOM Kota Tinggi 23.82 154 P **P** **18 19 47.0 +0.7**
MDOK Medeo 23.85 329 *iP* **P** **18 19 48.4 +1.8**
baz=329
MDOK eS **S** **18 24 01.8 +2.6**
baz=329
MDOK Medeo 23.85 329 *iP* **P** **18 19 48.4 +1.8**
MDOK eS **S** **18 24 01.8 +2.6**
BOOM Boomskoye usch 23.89 327 P **P** **18 19 47.9 +1.0**
BOOM pmax pmax
comp=Z,1μm,1.5s
BOOM Boomskoye usch 23.89 327 P **P** **18 19 47.9 +1.0**
BOOM IAmb IAmb 18 20 12.7
comp=Z,1μm,1.5s
NJ2 Nanjing 23.92 64 ⇓*iP* **P** **18 19 46.6 -0.5**
NJ2 pP **pP** **18 19 57.3 -2.8**
NJ2 sP **sP** **18 20 00.9 -5.3**
NJ2 S **S** **18 23 57.4 -2.9**
NJ2 sS **sS** **18 24 21.6 -0.5**
NJ2 pmax pmax
comp=Z,98nm,0.8s
NJ2 pmax pmax
comp=Z,4μm,9.9s
NJ2 LR LR
comp=Z,10μm,12.8s
NJ2 LR LR
comp=Z,4μm,10.0s
NJ2 LR LR
comp=Z,6μm,7.6s
AAA Alma-Ata 23.95 329 *eP* **P** **18 19 49.7 +2.3**
comp=Z,3μm,1.7s,baz=329
AAA *eS* **S** **18 24 04.0 +3.3**
baz=329
AAA LR LR 18 29 28.2
comp=Z,2μm,13.9s,baz=329
AAA Alma-Ata 23.95 329 *eP* **P** **18 19 49.6 +2.3**
AAA *eS* **S** **18 24 04.0 +3.3**
AAA pmax pmax
comp=Z,3μm,1.7s
AAA MLR MLR
comp=Z,2μm,14.0s
TIA Tai'an 23.98 53 P **P** **18 19 47.4 -0.3**
TIA S **S** **18 24 00.0 -1.2**
TIA pmax pmax
comp=Z,110nm,0.9s
TIA LR LR
comp=Z,4μm,12.8s
TIA LR LR
comp=Z,5μm,14.9s
TIA LR LR
comp=Z,4μm,11.4s
KBL Kabul 23.99 303 P **P** **18 19 49.1 +1.1**
SNR=229
KBL S **S** **18 23 59.3 -2.4**
KBL Kabul 23.99 303 P **P** **18 19 48.6 +0.6**
KBL pmax pmax
comp=Z,619nm,1.1s
KBL Kabul 23.99 303 P **P** **18 19 48.6 +0.6**
KBL IAmb IAmb 18 20 09.3
comp=Z,619nm,1.1s
BKNI Bangkinang 24.19 161 P **P** **18 19 48.9 -0.8**
comp=Z,3μmcomp=Z,5μmcomp=Z,218nm,0.8s
BKNI Bangkinang 24.19 161 P **P** **18 19 48.5 -1.2**
BKNI IAmb IAmb 18 20 03.9
comp=Z,264nm,0.9s
TKM2 Tokmak 2 24.38 327 P **P** **18 19 52.9 +1.5**
SNR=365
TKM2 Tokmak 2 24.38 327 P **P** **18 19 53.1 +1.6**
CHKK Chushkaly 24.41 330 ⇓*iP* **P** **18 19 52.8 +1.3**
baz=330
CHKK Chushkaly 24.41 330*d iP* **P** **18 19 52.8 +1.3**
UCH Uchtor 24.45 324 P **P** **18 19 54.1 +1.7**
SNR=95
KBK Karagaybulak 24.52 326 P **P** **18 19 54.6 +1.9**
SNR=219
TDK Taldyorghan 24.71 334 *iP* **P** **18 19 55.3 +1.0**
comp=Z,698nm,1.6s,baz=334
TDK *eS* **S** **18 24 14.9 +2.1**
baz=334
TDK Taldyqorghan 24.71 334 *iP* **P** **18 19 55.2 +1.0**
TDK *eS* **S** **18 24 14.9 +2.1**
TDK pmax pmax
comp=Z,698nm,1.6s
KUU Kurty 24.74 329 ⇓*iP* **P** **18 19 55.5 +1.0**
comp=Z,616nm,1.4s,baz=329
KUU *eS* **S** **18 24 15.2 +1.9**
baz=329
KUU LR LR 18 29 47.1
comp=Z,893nm,10.3s,baz=329
KUU Kurty 24.74 329*d iP* **P** **18 19 55.5 +1.0**
KUU *eS* **S** **18 24 15.2 +1.9**
KUU pmax pmax
comp=Z,616nm,1.4s
KUU MLR MLR
comp=Z,893nm,10.0s
AAK Ala-Archa 24.74 325 P **P** **18 19 57.0 +2.3**
comp=Z,247nm,0.8s,baz=142,slow=6.9,SNR=552
AAK Ala-Archa 24.74 325 P **P** **18 19 56.8 +2.0**
SNR=283
AAK Ala-Archa 24.74 325 *iP* **P** **18 19 56.7 +2.0**
SNR=104
AAK Ala-Archa 24.74 325 P **P** **18 19 57.0 +2.3**
AAK P **P** **18 19 57.0 +2.3**
AAK S **S** **18 24 15.8 +2.2**
AAK S **S** **18 24 15.8 +2.2**
AAK Ala-Archa 24.74 325*d iP* **P** **18 19 56.6 +1.9**
AAK pmax pmax
comp=Z,869nm,1.0s
AAK MLR MLR
comp=Z,9μm,13.0s
FRU1 Bishkek 24.79 325 P **P** **18 19 57.3 +2.2**
FRU1 pmax pmax
comp=Z,496nm,0.9s
FRU1 Bishkek 24.79 325 P **P** **18 19 57.3 +2.2**
FRU1 IAmb IAmb 18 19 59.2
comp=Z,496nm,0.9s
AML Almayashu 24.83 323 P **P** **18 19 57.7 +1.9**
SNR=17
ZSN Zaisan 24.86 346 ⇓*iP* **P** **18 19 57.4 +1.8**
comp=Z,157nm,0.9s,baz=346
ZSN Zaisan 24.86 346*d iP* **P** **18 19 57.3 +1.8**
ZSN pmax pmax
comp=Z,157nm,0.9s
CHMS Chumysh 24.86 326 P **P** **18 19 56.9 +1.2**
SNR=226
TPUB Ta-pu 24.87 85 P **P** **18 19 55.9 +0.1**
MK31 Makanchi Array 24.91 341*d iP* **P** **18 19 56.8 +0.8**
MK31 Makanchi Array 24.91 341 P **P** **18 19 57.2 +1.2**
MK31 IAmb IAmb 18 19 59.7
comp=Z,918nm,1.6s
MKAR Makanchi Array 24.91 341 P **P** **18 19 57.0 +0.9**
comp=Z,265nm,0.7s,baz=153,slow=8.2,SNR=1140
MKAR PKiKP **PKiKP** **18 31 10.9 -1.0**
comp=Z,1.2nm,0.7s,baz=207,slow=3.5,SNR=5.5
MKAR LR LR 18 31 48.8
comp=Z,4μm,21.1s,baz=154,slow=41
MKAR P3KPbc 18 52 55.4
comp=Z,0.3nm,0.7s,baz=337,slow=3.3,SNR=1.2
MKAR Makanchi Array 24.91 341 P **P** **18 19 57.0 +0.9**
MKAR Makanchi Array 24.91 341 P **P** **18 19 55.9 -0.2**
MAKZ Makanchi 25.02 341 P **P** **18 19 57.7 +0.7**
MAKZ pmax pmax
comp=Z,221nm,0.8s
MAKZ MLR MLR
comp=Z,2μm,19.0s
MAKZ Makanchi 25.02 341 P **P** **18 19 57.7 +0.7**
MAKZ IAmb IAmb 18 20 00.1
comp=Z,221nm,0.8s
GAR Garm 25.02 313 P **P** **18 19 58.0 +0.7**
SSLB Suanglung 25.12 84 P **P** **18 19 58.7 +0.5**
EKS2 Erkin-Say 25.14 324 P **P** **18 20 00.3 +2.0**
SNR=222
USP Ospenovka 25.18 326 P **P** **18 19 59.9 +1.3**
SNR=300
BJT Baijiatuau 25.21 44 P **P** **18 19 59.0 +0.2**
BJT pmax pmax
comp=Z,148nm,1.2s
BJT Baijiatuau 25.21 44 P **P** **18 19 59.0 +0.2**
RGRI Rengat 25.23 159 P **P** **18 20 01.0 +1.8**
comp=Z,438nm,0.8s
SGDS Sogindy 25.25 326 ⇓*iP* **P** **18 20 00.7 +1.4**
comp=Z,198nm,1.8s,baz=326
SGDS *eS* **S** **18 24 23.9 +2.4**
baz=326
SGDS Sogindy 25.25 326*d iP* **P** **18 20 00.6 +1.4**
SGDS *eS* **S** **18 24 23.9 +2.4**
SGDS pmax pmax
comp=Z,198nm,1.8s
BTK Batken 25.27 316 P **P** **18 20 00.8 +1.4**
BTK pmax pmax
comp=Z,2μm,1.5s
BTK MLR MLR
comp=Z,3μm,22.0s
BTK Batken 25.27 316 P **P** **18 20 00.8 +1.4**
SISI Saibi 25.29 167 P **P** **18 20 01.7 +2.0**
comp=Z,11μmcomp=Z,746nm,1.5s
TWG Pinlang 25.32 86 P **P** **18 20 00.9 +0.9**
TWG IAMs_20 IAMs_20 18 31 03.9
comp=Z,4μm,19.0s
YHNB Yeheng 25.44 82 P **P** **18 20 01.7 +0.6**
YHNB IAMs_20 IAMs_20 18 30 18.7
comp=Z,6μm,20.0s
YULB Yu-li 25.47 85 P **P** **18 20 02.0 +0.7**
SDSI Sungai Dareh 25.50 161 P **P** **18 19 59.6 -2.0**
comp=Z,1μmcomp=Z,68nm,0.7s
CHGR Chuyangaron 25.64 312 P **P** **18 20 03.3 +0.5**
CHGR IAmb IAmb 18 20 18.7
comp=Z,554nm,0.9s
SSE Sheshan 25.66 67 P **P** **18 20 02.4 -0.6**
SSE sP **pP** **18 20 17.3 +1.3**
SSE S **S** **18 24 25.3 -2.8**
SSE pmax pmax
comp=Z,84nm,1.1s
SSE pmax pmax
comp=Z,270nm,3.5s
SSE LR LR
comp=Z,2μm,15.6s
SSE Sheshan 25.66 67 P **P** **18 20 02.4 -0.6**
SSE IAmb IAmb 18 20 18.7
comp=Z,334nm,1.0s
SSE Sheshan 25.66 67 IAMs_20 IAMs_20 18 31 28.8
comp=Z,7μm,20.0s
NACB Ninganchiao 25.67 83 P **P** **18 20 04.0 +0.9**
SONM Songino Array 26.34 20 P **P** **18 20 10.5 +1.4**
comp=Z,392nm,1.0s,baz=204,slow=10,SNR=381
SONM PcP **PcP** **18 23 34.9 +0.9**
comp=Z,9.6nm,0.8s,baz=190,slow=4.1,SNR=4.4
SONM ScP **ScP** **18 27 08.1 -1.8**
comp=Z,25nm,1.0s,baz=161,slow=3.1,SNR=11
SONM PKiKP **PKiKP** **18 31 11.9 -1.0**
comp=Z,1.1nm,0.7s,baz=179,slow=3.4,SNR=4.2
SONM LR LR 18 32 01.9
comp=Z,3μm,18.2s,baz=204,slow=40
SONM Songino Array 26.34 20 P **P** **18 20 10.6 +1.5**
SONM pmax pmax
comp=Z,384nm,1.1s
SONM Songino Array 26.34 20 P **P** **18 20 10.6 +1.5**
APYP Conner 26.51 97 *eP* P 18 19 57.0 -14
SMPP San Manuel, Pa 26.55 101 *eP* **P** **18 20 10.8 -0.3**
ULN Ulaanbaatar 26.57 21 P **P** **18 20 12.5 +1.2**
ULN P **P** **18 20 12.5 +1.2**
ULN S **S** **18 24 44.8 +2.3**
ULN S **S** **18 24 44.8 +2.3**
ULN Ulaanbaatar 26.57 21*d iP* **P** **18 20 12.3 +1.1**
ULN pmax pmax
comp=Z,433nm,1.0s
ULN MLR MLR
comp=Z,2μm,16.0s
ULN Ulaanbaatar 26.57 21 P **P** **18 20 12.2 +0.9**
ULN IAmb IAmb 18 20 16.0
comp=Z,406nm,1.1s
KRJI Kerinci 26.61 162 P **P** **18 20 11.8 0.0**
comp=Z,2μmcomp=Z,7μmcomp=Z,442nm,1.2s
DZA Taraz 26.65 322 ⇓*iP* **P** **18 20 13.0 +1.2**
baz=322
DZA Taraz 26.65 322*d iP* **P** **18 20 13.0 +1.2**
BTLS Baital 26.69 328 ⇓*iP* **P** **18 20 13.2 +1.1**
comp=Z,118nm,1.0s,baz=328
BTLS *eS* **S** **18 24 46.3 +2.2**
baz=328
BTLS Baital 26.69 328*d iP* **P** **18 20 13.2 +1.1**
BTLS *eS* **S** **18 24 46.3 +2.2**
BTLS pmax pmax
comp=Z,118nm,1.0s
YOJ Yonaguni jima 26.94 82 IAMs_20 IAMs_20 18 32 07.4
comp=Z,6μm,19.0s
IUG luzhnay 26.95 319 ⇓*iP* **P** **18 20 16.4 +1.7**
comp=Z,159nm,0.8s,baz=319
IUG *eS* **S** **18 24 50.1 +1.6**
baz=319
IUG luzhnay 26.95 319*d iP* **P** **18 20 16.3 +1.7**
IUG *eS* **S** **18 24 50.9 +2.4**
IUG pmax pmax
comp=Z,159nm,0.8s
LUBP Lubang 27.09 106 *eP* **P** **18 20 17.6 +1.6**
SGCP Mt. Cagua 27.14 96 *eP* **P** **18 20 15.7 -0.7**
KK31 Karatay Array 27.25 321 *iP* **P** **18 20 17.8 +0.5**
KK31 Karatay Array 27.25 321 P **P** **18 20 17.7 +0.5**
KK31 IAmb IAmb 18 20 56.5
comp=Z,574nm,2.0s
KKAR Karatay Array 27.25 321 P **P** **18 20 17.6 +0.4**
KKAR pmax pmax
comp=Z,575nm,2.0s
KKAR Karatay Array 27.25 321 P **P** **18 20 17.6 +0.4**
KKAR IAmb IAmb 18 20 56.5
comp=Z,574nm,2.0s
KSM Kuching 27.31 141 P **P** **18 20 18.6 +0.7**
KSM Kuching 27.31 141 P **P** **18 20 19.0 +1.1**
CAUP Cauayan 27.32 99 *eP* **P** **18 20 22.8 +4.8**
BALP Baler 27.50 101 *eP* **P** **18 20 19.8 +0.2**
ENPP El Nido 27.54 112 *eP* **P** **18 20 17.4 -2.6**
BRLS Borolday 27.59 321 *eP* **P** **18 20 20.5 +0.1**
baz=320
BRLS Borolday 27.59 321 *eP* **P** **18 20 20.4 +0.1**
SBUM Sibu 27.69 136 P **P** **18 20 21.8 +0.4**
SBUM Sibu 27.69 136 P **P** **18 20 22.0 +0.6**
BUSP Coron 27.82 110 *eP* **P** **18 20 21.9 -0.6**
ZAK Zakamensk 27.86 13 *eP* **P** **18 20 23.9 +1.2**
ZAK pmax pmax
comp=Z,152nm,1.2s
KKM Kota Kinabalu 27.91 125 P **P** **18 20 24.6 +1.1**
LQP Lukban 28.08 104 ⇑*eP* **P** **18 20 25.1 0.0**
PPBI Pangkal Pinang 28.34 153 P **P** **18 20 27.3 +0.2**
comp=Z,1μmcomp=Z,80nm,1.6s
DL2 Dalian 28.36 51 ⇓P **P** **18 20 27.4 +0.3**
DL2 PP **PnPn** **18 21 16.3 -1.6**
DL2 S **S** **18 25 09.6 -0.9**
DL2 sS **sS** **18 25 28.6 -4.0**
DL2 ScS **ScS** **18 31 06.8 -2.1**
DL2 pmax pmax
comp=Z,160nm,1.0s
DL2 pmax pmax
comp=Z,630nm,4.7s
DL2 LR LR
comp=Z,4μm,19.1s
DL2 LR LR
comp=Z,3μm,19.4s
DL2 LR LR
comp=Z,4μm,14.9s
SJMP San Jose 28.41 108 *eP* **P** **18 20 28.4 +0.7**
KSI Kapahiang 28.43 161 P **P** **18 20 26.4 -1.6**
comp=Z,2μmcomp=Z,122nm,0.9s
KSI Kapahiang 28.43 161 P **P** **18 20 26.9 -1.1**
KSI pmax pmax
comp=Z,122nm,0.9s
BOAC Boac 28.61 105 *eP* **P** **18 20 29.7 +0.1**
MOY Mondy 28.68 10 *eP* **P** **18 20 31.3 +1.4**
MOY pmax pmax
comp=Z,162nm,2.5s
SEM Semipalatinsk 28.76 342 ⇓*iP* **P** **18 20 31.1 +0.3**
comp=Z,196nm,1.9s,baz=342
SEM Semipalatinsk 28.76 342*d iP* **P** **18 20 31.1 +0.3**
SEM pmax pmax

comp=Z,196nm,1.9s
LHSI Lahat 28.89 159 P P 18 20 33.5 +1.5
comp=Z,2μmcomp=Z,76nm,0.8s
JCNP Jose Panganiba 29.04 103 eP P 18 20 31.8 -1.6
CUYO Cuyo Island 29.07 111 eP P 18 20 52.8 +19
TLY Talaya 29.17 13 P P 18 20 36.0 +1.8
comp=Z,26nm,0.9s,baz=191,slow=8.7,SNR=13
TLY Talaya 29.17 13 P P 18 20 36.8 +2.6
TLY P P **18 20 36.8 +2.6**
TLY Talaya 29.17 13 d iP P 18 20 36.4 +2.2
TLY pmax pmax
comp=Z,76nm,1.3s
TLY MLR MLR
comp=Z,4μm,20.0s
TLY Talaya 29.17 13 P P 18 20 35.9 +1.7
TLY IAMs_20 IAMs_20 18 33 46.3
comp=Z,4μm,20.0s
MNAI Manna 29.21 160 IAMs_20 IAMs_20 18 34 18.4
comp=Z,4μm,19.0s
OTRP Odiongan 29.24 107 eP P 18 20 34.8 -0.4
HRA Herat 29.32 299 P P 18 20 36.4 +0.4
KURBB Kurchatov Arra 29.45 340 P P 18 20 37.4 +0.7
comp=Z,102nm,0.9s,baz=153,slow=8.4,SNR=619
KURBB PcP **PcP 18 23 42.0 +0.6**
comp=Z,25nm,0.9s,baz=164,slow=2.2,SNR=6.0
KURBB P3KPbc 18 52 40.6
comp=Z,1.0nm,1.0s,baz=329,slow=4.8,SNR=5.5
KURBB Kurchatov Arra 29.45 340 P P 18 20 37.0 +0.3
KURK Kurchatov 29.51 341 P P 18 20 38.2 +1.0
KURK P P **18 20 38.2 +1.0**
KURK S **S 18 25 27.9 -0.3**
KURK S **S 18 25 27.9 -0.3**
KURK Kurchatov 29.51 341 ceP P 18 20 38.0 +0.8
KURK pmax pmax
comp=Z,450nm,2.1s
KURK MLR MLR
comp=Z,4μm,24.0s
KURK Kurchatov 29.51 341 P P 18 20 37.8 +0.7
KURK Kurchatov 29.51 341 IAMs_20 IAMs_20 18 33 47.3
comp=Z,4μm,18.0s
TPI Tanjungpandan 29.53 150 P P 18 20 38.4 +0.7
comp=Z,1μmcomp=Z,116nm,1.4s
IRK Irkutsk 29.83 13 eP P 18 20 41.7 +1.7
IRK *e* 18 20 56.6
IRK pmax pmax
comp=Z,281nm,1.9s
OTUK Ortayu 29.85 331 P P 18 20 41.2 +0.9
KLSI 30.11 157 P P 18 20 41.5 -1.3
comp=Z,474nmcomp=Z,36nm,1.1s
LWLI Liwa 30.18 159 P P 18 20 41.7 -1.9
comp=Z,181nm,0.7s
MYLDM Lahad Datu 30.20 123 P P 18 20 45.2 +1.5
MYLDM IAmb IAmb 18 21 26.4
comp=Z,202nm,1.2s
MYLDM IAMs_20 IAMs_20 18 33 42.0
comp=Z,8μm,22.0s
GUIM Jordan 30.53 110 eP P 18 20 45.3 -1.3
PVCP Virac 30.61 103 eP P 18 20 45.5 -1.8
KASI Kota Agung 30.80 158 P P 18 20 46.0 -2.9
comp=Z,1μmcomp=Z,116nm,0.8s
BLSI Bandar Lampung 30.92 157 P P 18 20 48.7 -1.3
comp=Z,79nm,0.7s
CNOP Candoni, Negro 30.96 111 eP P 18 20 49.8 -0.6
SNY Shenyang 30.97 47 ||P P 18 20 49.8 -0.4
SNY S **S 18 25 49.0 -2.3**
SNY pmax pmax
comp=Z,110nm,1.2s
SNY pmax pmax
comp=Z,450nm,3.5s
SNY LR LR
comp=Z,3μm,15.0s
SNY LR LR
comp=Z,2μm,19.2s
SNY LR LR
comp=Z,3μm,24.9s
BRZS Berezniki 31.03 334 ||i P P 18 20 51.9 +1.3
comp=Z,111nm,0.8s,baz=333
BRZS *e*S **S 18 25 54.5 +2.3**
baz=333
BRZS Berezniki 31.03 334 d iP P 18 20 51.9 +1.3
BRZS *e*S **S 18 25 54.4 +2.3**
BRZS pmax pmax
comp=Z,111nm,0.8s
ZAA0 Zalesovo Array 31.08 350 P P 18 20 52.0 +1.0
ZAA0 IAmb IAmb 18 20 53.5
comp=Z,256nm,0.8s
ZALV Zalesovo Beam 31.08 350 P P 18 20 52.3 +1.3
comp=Z,258nm,0.7s,baz=168,slow=8.0,SNR=792
ZALV LR LR 18 33 45.0
comp=Z,1μm,19.6s,baz=170,slow=37
ZALV P3KPbc 18 52 32.6
comp=Z,0.8nm,0.6s,baz=282,slow=2.8,SNR=5.0
PYAG Pyongyang 31.40 53 P P 18 20 53.5 -0.5
PYAG sP **sP 18 21 14.4 +1.1**
PYAG S **S 18 25 54.4 -3.7**
JLN Jalan Bani Buh 31.43 274 P P 18 20 55.9 +1.4
SNR=14
JLN S **S 18 25 59.2 +0.3**
PYS Pyongsong 31.54 53 P P 18 20 54.6 -0.6
INCN Inchon 31.56 56 P P 18 20 54.3 -1.2
INCN pmax pmax
comp=Z,74nm,0.8s
INCN MLR MLR
comp=Z,3μm,22.0s
INCN Inchon 31.56 56 P P 18 20 54.3 -1.2
INCN Inchon 31.56 56 IAMs_20 IAMs_20 18 35 07.5
comp=Z,3μm,22.0s
WBK Wadi Bani Khal 31.76 275 P P 18 20 59.1 +1.7
SNR=6.9
TJN Taejon 31.83 58 d iP P 18 20 56.1 -1.7
MTKI Muara Teweh, K 31.99 137 P P 18 20 59.6 +0.1
comp=Z,840nmcomp=Z,50nm,0.9s
OCLP Ormoc 32.09 107 eP P 18 20 59.9 -0.4
CIT Chita 32.33 23 eP P 18 21 03.4 +1.3
CIT *e* 18 21 18.9
CIT pmax pmax
comp=Z,417nm,1.3s
BIDO Bidbid 32.40 277 P P 18 21 04.4 +1.3
SNR=17
BIDO S **S 18 26 13.2 -1.0**
KS19 Wonju Array Si 32.51 57 P P 18 21 02.2 -1.6
SMDO Samad 32.53 276 P P 18 21 05.8 +1.4
SNR=20
SMDO S **S 18 26 15.4 -1.0**
KSRS Korea Array 32.54 57 P P 18 21 02.3 -1.7
comp=Z,18nm,0.7s,baz=245,slow=7.9,SNR=68
KSRS PcP **PcP 18 23 50.2 +0.4**
comp=Z,7.3nm,0.7s,baz=269,slow=2.3,SNR=6.5
KSRS S **S 18 26 11.8 -4.1**
comp=Z,15nm,1.1s,baz=259,slow=15,SNR=9.5
KSRS ScP **ScP 18 27 28.8 -0.9**
comp=Z,9.9nm,1.0s,baz=250,slow=3.8,SNR=8.3
KSRS LR LR 18 36 08.5
comp=Z,2μm,18.7s,baz=256,slow=40
DBJI Dramaga 32.57 155 P P 18 21 02.7 -1.8
comp=Z,2μmcomp=Z,106nm,1.3s
JMDO Jabal Madar 32.59 275 P P 18 21 06.1 +1.4
SNR=9.2
JMDO P P **18 21 06.1 +1.4**
SNR=9.2
JMDO S **S 18 26 16.5 -0.6**
JMDO *S* **S 18 26 16.5 -0.6**
PAGZ Pagadian 32.60 114 eP P 18 21 05.3 +0.5
MSLP Maasin 32.73 109 eP P 18 21 10.4 +4.4
SKJI Sukabumi 32.91 156 P P 18 21 07.9 +0.4
comp=Z,2μmcomp=Z,198nm,1.2s
HIA Hailar 32.93 32 P P 18 21 08.5 +1.1
HIA pmax pmax
comp=Z,523nm,1.1s
HIA MLR MLR
comp=Z,6μm,22.0s
HIA Hailar 32.93 32 P P 18 21 08.5 +1.1
HIA Hailar 32.93 32 IAMs_20 IAMs_20 18 36 26.1
comp=Z,7μm,22.0s
MHTO MHTO 32.95 273 P P 18 21 09.1 +1.2
SNR=14
MHTO S **S 18 26 21.5 -1.3**
HHU Hamhung 32.98 52 P P 18 21 07.2 -0.7
HHU pP pP 18 21 11.9 -9.3
HHU S **S 18 26 18.9 -3.9**
JTU Tsushima 33.07 62 P P 18 21 07.1 -1.7
JTU IAMs_20 IAMs_20 18 35 44.8
comp=Z,4μm,22.0s
CN2 Changchun 33.09 45 eP P 18 21 08.6 -0.2
CN2 PcP **PcP 18 23 51.4 +0.2**
CN2 *e*S **S 18 26 22.8 -1.6**
CN2 ScP **ScP 18 27 29.6 -1.9**
CN2 pmax pmax
comp=Z,80nm,1.1s
CN2 pmax pmax
comp=Z,500nm,4.0s
CN2 LR LR
comp=Z,2μm,10.0s
CN2 LR LR
comp=Z,1μm,10.0s
CN2 LR LR
comp=Z,2μm,11.0s
HOQ Hoqain 33.14 277 P P 18 21 10.7 +1.2
SNR=22
BSY Bisya 33.35 276 P P 18 21 13.0 +1.6
SNR=19
GEYT Alibeck 33.43 304 P P 18 21 13.6 +1.7
comp=Z,58nm,1.0s,baz=117,slow=8.5,SNR=91
GEYT PcP **PcP 18 23 53.5 +1.1**
comp=Z,25nm,0.8s,baz=124,slow=2.1,SNR=7.5
GEYT ScP **ScP 18 27 32.9 0.0**
comp=Z,11nm,1.0s,baz=100,slow=6.5,SNR=3.8
GEYT LR LR 18 38 19.4
comp=Z,4μm,19.1s,baz=215,slow=42
GEYT Alibeck 33.43 304 P P **18 21 13.2 +1.3**
GEYT **PcP 18 23 52.0 -0.3**
GYA0B ALIBECK ARRAY 33.43 304 P P 18 21 13.4 +1.5
GYA0B IAmb IAmb 18 21 15.1
comp=Z,248nm,1.4s
BKB Balikpapan 33.53 134 IAMs_20 IAMs_20 18 35 31.1
comp=Z,3μm,22.0s
DQM DQM 33.56 271 P P 18 21 15.3 +2.1
SNR=6.0
DQM S **S 18 26 32.2 -0.1**
JSU Suzuyama 33.58 68 P P 18 21 12.2 -1.1
JSU IAMs_20 IAMs_20 18 35 29.4
comp=Z,6μm,21.0s
SOHO SOHO 33.78 279 i P P 18 21 13.2 -1.8
SNR=5.3
SOHO SOHO 33.78 279 P P 18 21 16.4 +1.3
BANOM Banah 33.82 282 P P 18 21 15.9 +0.5
BANOM Banah 33.82 282 P P 18 21 17.0 +1.6
ARQ Araqi 33.89 277 P P 18 21 17.6 +1.6
SNR=12
ARQ S **S 18 26 35.4 -1.9**
CISI Cisompet, Garu 33.91 154 IAMs_20 IAMs_20 18 37 11.0
comp=Z,4μm,19.0s
BBKI Banjar Baru 33.94 139 P P 18 21 17.3 +0.9
comp=Z,132nm,0.9s
UOSS Minazif 33.99 280 P P 18 21 15.0 -1.8
UOSS Minazif 33.99 280 P P 18 21 17.4 +0.5
UOSS Minazif 33.99 280 P P 18 21 16.7 -0.2
GLSP General Luna, 33.99 108 eP P 18 21 15.3 -1.6
BUKP Musuan 34.00 112 eP P 18 21 17.9 +0.8
HATD Hatta, Dubai 34.07 280 i P P 18 21 18.8 +1.3
SNR=7.6
HATD Hatta, Dubai 34.07 280 P P 18 21 19.3 +1.7
SNR=8.4
HATD S **S 18 26 39.0 -1.0**
JNU Nakatsue 34.09 65 P P 18 21 17.0 -0.7
JNU IAMs_20 IAMs_20 18 35 35.9
comp=Z,5μm,21.0s
ASHO Ashiyiah 34.15 280 i P P 18 21 19.5 +1.2
SNR=17
ASHO Ashiyiah 34.15 280 P P 18 21 20.0 +1.8
SNR=16
KPJI Karang Pucung 34.17 152 P P 18 21 18.8 +0.4
comp=Z,2μmcomp=Z,222nm,1.2s
SKMP Bagumbayan, Su 34.28 115 eP P 18 21 19.1 -0.4
BVAR Borovoye Array 34.29 335 P P 18 21 19.2 +0.1
comp=Z,12nm,0.6s,baz=221,slow=31,SNR=83
BRVK Borovoye 34.36 335 P P 18 21 21.4 +1.7
BRVK Borovoye 34.36 335 d iP P 18 21 20.3 +0.6
BRVK pmax pmax
comp=Z,192nm,1.7s
BRVK MLR MLR
comp=Z,5μm,22.0s
BRVK Borovoye 34.36 335 P P 18 21 20.6 +0.9
BRVK IAmb IAmb 18 21 22.0
comp=Z,331nm,1.6s
BRVK Borovoye 34.36 335 IAMs_20 IAMs_20 18 37 06.6
comp=Z,5μm,19.0s
MPSI Mapaga 34.45 128 P P 18 21 21.8 +0.9
comp=Z,1μmcomp=Z,743nmcomp=Z,34nm,1.4s
NAZ Nazwa, Dubai 34.48 280 P P 18 21 21.7 +0.6
NAZ Nazwa, Dubai 34.48 280 P P 18 21 22.3 +1.3
KCP Kidapawan 34.48 113 ||i P P 18 21 22.7 +1.5
ALNE Al Ain 34.50 279 P P 18 21 22.2 +0.9
FAQ Al Faqa, Dubai 34.56 280 P P 18 21 22.3 +0.5
FAQ Al Faqa, Dubai 34.56 280 P P 18 21 24.4 +2.6
SNR=5.8
TOLI2 Tolitoli 34.58 126 P P 18 21 22.0 0.0
SMRI Semarang 34.60 149 P P 18 21 23.9 +1.8
comp=Z,6μmcomp=Z,371nm,0.9s
SMRI Semarang 34.60 149 P P 18 21 21.5 -0.6
SMRI IAmb IAmb 18 21 52.7
comp=Z,291nm,0.9s
SMRI IAMs_20 IAMs_20 18 34 40.3
comp=Z,3μm,20.0s
KBKI Kotabaru 34.62 137 P P 18 21 22.7 +0.4
comp=Z,1μmcomp=Z,68nm,0.9s
ASUD Al Ashush, Dub 34.81 280 P P 18 21 24.8 +0.8
ASUD Al Ashush, Dub 34.81 280 P P 18 21 25.6 +1.6
DAV Davao City (W) 34.86 113 IAMs_20 IAMs_20 18 35 27.3
comp=Z,3μm,22.0s
DDMP Don Marcelino, 35.48 114 eP P 18 21 29.7 -0.1
GRJI Gresik 35.48 146 P P 18 21 30.9 +1.2
comp=Z,707nmcomp=Z,78nm,0.8s
MATI Mati 35.50 112 eP P 18 21 32.0 +2.1
SHAO Shalim 35.78 268 i P P 18 21 33.8 +1.4
SNR=6.7
SHAO Shalim 35.78 268 P P 18 21 34.6 +2.2
XMIS Christmas Isla 35.82 159 P P 18 21 31.9 -0.8
XMIS IAmb IAmb 18 21 46.7
comp=Z,236nm,1.0s
MRSI Marisa 35.86 126 P P 18 21 34.3 +1.3
comp=Z,2μmcomp=Z,2μmcomp=Z,145nm,0.8s
PWJI Pagerwojo 36.09 148 P P 18 21 34.9 -0.1
comp=Z,26μmcomp=Z,54nm,0.9s
MDJ Mudanjiang 36.13 45 P P 18 21 34.8 -0.2
MDJ pP pP 18 21 44.3 -4.0
MDJ sP sP 18 21 48.8 -5.4
MDJ S **S 18 27 09.5 -1.7**
MDJ PcS **PcS 18 27 50.8 +3.3**
MDJ pmax pmax
comp=Z,160nm,1.3s
MDJ LR LR
comp=Z,2μm,15.2s
MDJ LR LR
comp=Z,1μm,13.7s
MDJ LR LR
comp=Z,2μm,18.8s
MDJ Mudanjiang 36.13 45 P P 18 21 34.7 -0.4
MDJ IAmb IAmb 18 21 36.3
comp=Z,201nm,1.2s
JHS Saijyo 36.17 62 P P 18 21 35.2 -0.4
JHS IAMs_20 IAMs_20 18 38 00.8
comp=Z,3μm,21.0s
KMMI Kalianget 36.37 144 P P 18 21 38.5 +1.2
comp=Z,3μmcomp=Z,225nm,0.8s
DMTO DMTO 36.48 268 P P 18 21 40.7 +2.3
DMTO P **P 18 21 40.7 +2.3**
GTOI Gorontalo 36.56 124 P P 18 21 38.1 -0.9
comp=Z,1μmcomp=Z,109nm,1.1s
APSI Ampana 36.58 128 P P 18 21 40.2 +1.1
comp=Z,1μmcomp=Z,91nm,0.9s
JMN Monobe 36.65 65 P P 18 21 38.8 -1.0
JMN IAmb IAmb 18 21 55.2
comp=Z,197nm,1.3s
SGSI Sangihe 36.67 118 P P 18 21 39.8 -0.2
comp=Z,182nm,0.7s
BLJI Banyuglugur 36.76 145 P P 18 21 48.0 +7.4
AB31 Akbulak array 36.78 323 P P 18 21 41.7 +1.2
ABKAR Akbulak array 36.78 323 P P 18 21 41.6 +1.0
ABKAR IAmb IAmb 18 21 42.6
comp=Z,156nm,0.7s
ABKAR Akbulak array 36.78 323 P P 18 21 40.7 +0.1
TTSI Tana Toraja 36.80 132 P P 18 21 42.6 +1.6
comp=Z,2μmcomp=Z,102nm,1.1s
DGAR Diego Garcia 37.01 216 IAMs_20 IAMs_20 18 34 48.2
comp=Z,3μm,22.0s
VLA Vladivostok 37.13 49 d iP P 18 21 43.3 -0.2
VLA pmax pmax
comp=Z,463nm,1.3s
VLA MLR MLR
comp=Z,3μm,20.0s
GMJI Gumukmas 37.13 146 P P 18 21 53.3 +10
RBK Rabkut 37.22 268 P P 18 21 46.7 +2.0
SNR=10.0
BOD Bodaibo 37.30 18 eP P 18 21 45.7 +0.9
BOD pmax pmax
comp=Z,189nm,1.7s
KMSI Cibinong 37.34 123 P P 18 21 46.8 +1.2
comp=Z,4μmcomp=Z,461nm,0.9s
SPSI Sidrap Palu 37.44 133 P P 18 21 47.5 +1.0
comp=Z,2μmcomp=Z,2μmcomp=Z,91nm,1.5s
MNI Manado 37.46 121 P P 18 21 48.2 +1.5
MNI pmax pmax
comp=Z,354nm,1.0s
LUWI Luwuk 37.49 127 P P 18 21 47.3 +0.4
comp=Z,5μmcomp=Z,471nm,1.3s
LUWI Luwuk 37.49 127 P P 18 21 47.3 +0.4
WHFO Wadi Hawf 37.51 269 P P 18 21 48.4 +1.2
SNR=6.0
USA0B Ussuriysk Arra 37.56 47 d iP P 18 21 47.2 0.0
USA0B Ussuriysk Arra 37.56 47 P P 18 21 47.4 +0.2
USA0B IAmb IAmb 18 21 48.7
comp=Z,269nm,1.2s
USA0B IAMs_20 IAMs_20 18 38 16.7
comp=Z,2μm,22.0s
USRK Ussuriysk Ar. 37.56 47 P P 18 21 47.2 0.0
comp=Z,109nm,1.0s,baz=250,slow=8.0,SNR=121
USRK PcP **PcP 18 24 04.0 -0.3**
comp=Z,4.2nm,0.5s,baz=250,slow=2.0,SNR=5.1
USRK LR LR 18 38 28.2
comp=Z,2μm,21.2s,baz=245,slow=38
USRK Ussuriysk Ar. 37.56 47 P P 18 21 46.2 -1.0
JAGI Jajag, Banyuwa 37.66 145 P P 18 21 55.6 +7.3
JAGI Jajag, Banyuwa 37.66 145 P P 18 21 48.5 +0.2
SRBI Singaraja 37.91 143 P P 18 21 51.9 +1.5
comp=Z,2μmcomp=Z,178nm,1.4s
BNSI Bone 37.99 134 P P 18 21 51.3 +0.2
comp=Z,1μmcomp=Z,54nm,1.4s
JWT Wachi 38.06 62 P P 18 21 51.5 -0.1
JWT IAmb IAmb 18 21 54.7
comp=Z,254nm,1.9s
JWT IAMs_20 IAMs_20 18 38 37.9
comp=Z,3μm,20.0s
ABTO Aybut 38.10 268 P P 18 21 53.4 +1.3
SNR=6.8
KAPI Kappang 38.21 135 P P 18 21 53.5 +0.6
comp=Z,16nm,0.8s,baz=338,slow=8.7,SNR=8.6
KAPI LR LR 18 39 49.8
comp=Z,2μm,21.0s,baz=326,slow=40
KAPI Kappang 38.21 135 P P 18 21 52.3 -0.7
AKTO Aktyubinsk 38.46 323 P P 18 21 55.8 +1.0
comp=Z,91nm,0.8s,baz=120,slow=8.8,SNR=296
BKSI Bulukumba 38.68 134 P P 18 21 56.8 -0.1
comp=Z,711nmcomp=Z,44nm,0.8s
SOCY Socotra 39.16 260 P P 18 22 01.0 0.0
SOCY IAmb IAmb 18 22 16.6
comp=Z,182nm,1.3s
TWSI Taliwang, Sumb 39.37 142 P P 18 22 03.9 +1.2
comp=Z,678nmcomp=Z,42nm,1.1s
INU Inuyama 39.38 62 P P 18 22 02.1 -0.6
INU IAmb IAmb 18 22 03.8
comp=Z,171nm,0.9s
INU IAMs_20 IAMs_20 18 39 20.2
comp=Z,3μm,22.0s
ZEA Zeya 39.39 31 deP P 18 22 03.8 +1.3
ZEA *e**SP **sP 18 22 21.5 -0.2**
ZEA *e* 18 23 35.4
ZEA *e*S **S 18 28 02.3 +1.9**
ZEA pmax pmax
comp=E,70nm,1.1s
ZEA pmax pmax
comp=N,80nm,1.4s
ZEA pmax pmax
comp=Z,130nm,1.2s
ZEA pmax pmax
comp=E,300nm,7.2s
ZEA pmax pmax
comp=Z,400nm,5.2s
ZEA smax smax
comp=E,400nm,12.0s
KLR Kul'dur 39.43 40 P P 18 22 03.3 +0.5
comp=E,237nm,1.0s,baz=254,slow=8.7,SNR=365
KLR Kul'dur 39.43 40 d iP P 18 22 03.2 +0.4
BSSI Bau Bau, Buton 39.54 135 P P 18 22 03.7 -0.4
comp=E,504nmcomp=E,26nm,0.7s
JGF Kuroka 39.68 62 P P 18 22 03.7 -1.5
JGF IAMs_20 IAMs_20 18 39 28.4
comp=Z,2μm,20.0s
TNTI Ternate 39.87 120 P P 18 22 06.1 -0.8
comp=Z,1μmcomp=Z,102nm,0.9s
TNTI Ternate 39.87 120 P P 18 22 06.3 -0.5
PLAI Plampang 39.96 141 P P 18 22 07.2 -0.4
comp=Z,1μmcomp=Z,95nm,0.9s
JSG Sagara 40.28 64 IAMs_20 IAMs_20 18 38 43.8
comp=Z,4μm,21.0s
MJB9 Matsu-Tunnel 40.46 61 P P 18 22 10.1 -1.5
MJB9 IAmb IAmb 18 23 00.9
comp=Z,258nm,0.8s
MAJO Matsushiro 40.46 61 c iP P 18 22 10.8 -0.8
MAJO pmax pmax
comp=Z,214nm,1.1s
MAJO MLR MLR
comp=Z,3μm,24.0s
MAJO Matsushiro 40.46 61 P P 18 22 10.9 -0.8
MAJO IAmb IAmb 18 22 12.4
comp=Z,174nm,1.0s
MAJO Matsushiro 40.46 61 IAMs_20 IAMs_20 18 40 40.4
comp=Z,2μm,20.0s
MAT Matsushiro 40.46 61 P P 18 22 10.5 -1.1
MAT S **S 18 28 14.3 -2.6**
MJAR Matsushiro Arr 40.46 61 P P 18 22 11.4 -0.2
comp=Z,117nm,1.0s,baz=274,slow=9.0,SNR=202
MJAR ScP **ScP 18 27 57.2 -1.9**
comp=Z,29nm,1.2s,baz=268,slow=4.1,SNR=11
MJAR LR LR 18 41 01.5
comp=Z,2μm,19.4s,baz=245,slow=39
MJAR Matsushiro Arr 40.46 61 P P 18 22 11.0 -0.6
JSD Sado 40.68 59 P P 18 22 12.2 -1.2
JSD IAmb IAmb 18 22 13.7
comp=Z,155nm,0.9s
SVE Sverdlovsk 40.95 333 c iP P 18 22 16.8 +1.5
SVE *e*S **S 18 28 24.0 +0.5**
SVE *e* 18 31 31.6
SVE pmax pmax
comp=Z,541nm,1.4s
SVE MLR MLR
comp=Z,3μm,14.0s
TEY Ternei 40.95 48 ||eP P 18 22 15.3 -0.2
TEY *e*S **S 18 28 23.0 -0.9**
TEY pmax pmax
comp=Z,900nm,3.6s
TEY pmax pmax
comp=E,40nm,1.2s
TEY pmax pmax
comp=N,20nm,1.3s
TEY pmax pmax
comp=Z,120nm,1.3s
TEY MLR MLR
comp=E,2μm,22.0s
TEY MLR MLR
comp=N,3μm,15.0s
TEY MLR MLR
comp=Z,2μm,22.0s
WBSI Waikabubak, Su 41.56 140 P P 18 22 20.1 -0.7
comp=Z,2μmcomp=Z,155nm,0.8s
ARU Arti 41.59 331 P P 18 22 21.2 +0.7
comp=Z,26nm,0.5s,baz=141,slow=4.7,SNR=166
ARU Arti 41.59 331 d iP P 18 22 21.0 +0.5
ARU pmax pmax
comp=Z,375nm,1.7s
ARU MLR MLR
comp=Z,4μm,21.0s
ARU Arti 41.59 331 P P 18 22 21.1 +0.5
ARU IAmb IAmb 18 22 23.0
comp=Z,984nm,1.9s
ARU IAMs_20 IAMs_20 18 41 41.8
comp=Z,4μm,18.0s
JYT Yasato 42.03 61 P P 18 22 21.9 -2.5
WSI Waingapu 42.12 139 P P 18 22 26.3 +0.9
comp=Z,16μmcomp=Z,365nm,0.6s
NLAI Namlea 42.17 125 P P 18 22 26.7 +0.9
comp=Z,2μmcomp=Z,139nm,0.7s
EDFI Ende, Flores 42.28 136 P P 18 22 24.5 -2.3
comp=Z,548nmcomp=Z,46nm,0.8s
MAK Makhachkala 42.48 309 eP P 18 22 26.6 -1.4
MAK *e* 18 24 04.3
MAK *e*S **S 18 28 47.2 +0.6**

MAK eSS SS 18 31 59.8 +2.5
MAK pmax pmax
comp=Z,481nm,1.7s
MAK MLR MLR
comp=Z,3μm,18.0s
MMRI Maumere 42.55 135 P P 18 22 27.9 -0.9
comp=Z,2μmcomp=Z,93nm,0.5s
MMRI Maumere 42.55 135 P P 18 22 27.7 -1.2
JMM Marumori 42.65 59 P P 18 22 28.5 -0.9
JMM IAmb IAmb 18 22 33.4
comp=Z,144nm,0.8s
GRNR Gornyy 42.81 39⇓ iP P 18 22 31.5 +0.9
GRNR eS S 18 28 56.5 +5.2
GRNR pmax pmax
comp=E,140nm,0.8s
GRNR pmax pmax
comp=N,60nm,1.0s
GRNR pmax pmax
comp=Z,360nm,0.9s
GRNR smax smax
comp=N,9.0nm,0.9s
GRNR MLR MLR
comp=E,510nm,12.0s
GRNR MLR MLR
comp=N,590nm,11.0s
GRNR MLR MLR
comp=Z,890nm,14.0s
LGD Lagodekhi 43.19 307 P P 18 22 34.7 +0.9
JTM Tenmabayashi 43.22 55 P P 18 22 33.0 -1.0
JTM IAmb IAmb 18 22 35.2
comp=Z,195nm,1.0s
JTM IAMs_20 IAMs_20 18 41 17.7
comp=Z,2μm,21.0s
MSAI Masohi 43.63 123 P P 18 22 38.3 +0.7
comp=Z,578nmcomp=Z,47nm,0.8s
GROC Groznyy 43.76 309 eP P 18 22 39.6 +1.3
GROC e*SP pP 18 22 52.5 +0.7
GROC e 18 24 25.4
GROC eS S 18 29 12.3 +7.0
GROC pmax pmax
comp=Z,206nm,0.8s
JEW Eniwo 43.84 52 P P 18 22 39.3 +0.3
JEW IAmb IAmb 18 22 40.1
comp=Z,397nm,1.3s
JEW IAMs_20 IAMs_20 18 41 35.7
comp=Z,2μm,21.0s
RAYN Ar Rayn 43.86 280 P P 18 22 40.0 +0.5
RAYN Ar Rayn 43.86 280 P P 18 22 39.5 0.0
RAYN pmax pmax
comp=Z,156nm,1.3s
RAYN Ar Rayn 43.86 280 P P 18 22 39.5 0.0
SlJI Sorong 43.97 118 LR LR 18 41 50.4
comp=Z,377nm,22.0s,baz=306,slow=37
GNI Garni 44.07 304 P P 18 22 42.8 +1.8
GNI Garni 44.07 304 P P 18 22 42.9 +1.8
GNI Garni 44.07 304 d iP P 18 22 42.7 +1.6
GNI pmax pmax
comp=Z,181nm,1.7s
GNI MLR MLR
comp=Z,991nm,24.0s
GNI Garni 44.07 304 P P 18 22 42.9 +1.8
SEAG Tbilisi Sea 44.24 306 P P 18 22 43.9 +1.6
GUDG Gudauri 44.59 307 P P 18 22 46.9 +1.6
BATI Baumata 44.65 135 LR LR 18 44 38.1
comp=Z,2μm,21.3s,baz=313,slow=40
BATI Baumata 44.65 135 P P 18 22 44.5 -1.3
comp=Z,1μmcomp=Z,108nm,0.7s
SOEI Soe 44.70 134 P P 18 22 44.9 -1.4
comp=Z,4μmcomp=Z,400nm,0.9s
SOEI Soe 44.70 134 P P 18 22 45.0 -1.3
SOEI IAmb IAmb 18 23 24.1
comp=Z,323nm,0.9s
ASAJ Asahikawa 44.89 50 P P 18 22 47.7 +0.3
comp=Z,54nm,0.6s,baz=250,slow=5.2,SNR=46
JKA Kamikawa-asahi 44.90 50 P P 18 22 47.4 0.0
ERM Erimo 44.95 53 d iP P 18 22 47.9 0.0
ERM pmax pmax
comp=Z,143nm,1.7s
ERM MLR MLR
comp=Z,2μm,24.0s
ERM Erimo 44.95 53 P P 18 22 48.1 +0.2
ERM IAMs_20 IAMs_20 18 43 56.3
comp=Z,1μm,18.0s
JEM Erimo 44.95 53 P P 18 22 47.8 -0.1
JEM IAMs_20 IAMs_20 18 43 56.6
comp=Z,1μm,18.0s
ZEI Tsey 45.06 308 eP P 18 22 47.6 -1.4
ZEI pmax pmax
comp=Z,395nm,1.4s
BGD Bogdanovka 45.07 305 P P 18 22 51.3 +2.2
BNDI Bandanaira 45.13 123 P P 18 22 48.9 -0.7
comp=Z,2μmcomp=Z,4μmcomp=Z,484nm,0.9s
BELG Belogornoye 45.16 322 d iP P 18 22 49.8 +0.5
BELG pmax pmax
comp=Z,85nm,1.0s
BELG MLR MLR
comp=Z,539nm,20.0s
GEVA Gevas 45.19 301 P P 18 22 50.4 +0.3
ONI Oni 45.35 307 P P 18 22 53.2 +2.0
KARS Kars 45.38 304 P P 18 22 53.6 +2.1
YSS Yuzh-Sakhalins 45.59 47 K iP P 18 22 53.2 +0.4
YSS e 18 24 44.2
YSS eS S 18 29 26.6 -5.2
YSS eSS ScS 18 32 36.5 -8.3
YSS pmax pmax
comp=Z,290nm,1.0s
YSS pmax pmax
comp=N,50nm,0.8s
YSS pmax pmax
comp=Z,700nm,4.7s
YSS pmax pmax
comp=E,300nm,3.2s
YSS smax smax
comp=N,800nm,4.2s
YSS smax smax
comp=E,400nm,4.2s
YSS MLR MLR
comp=Z,2μm,16.0s
YSS MLR MLR
comp=E,1μm,14.0s
YSS Yuzh-Sakhalins 45.59 47 P P 18 22 53.3 +0.4
YSS IAmb IAmb 18 22 55.3
comp=Z,315nm,1.0s
YSS IAMs_20 IAMs_20 18 43 12.2
comp=Z,3μm,22.0s
YAK Yakutsk 45.62 23 P P 18 22 53.5 +0.6
comp=Z,101nm,0.8s,baz=224,slow=3.8,SNR=156
YAK Yakutsk 45.62 23 d iP P 18 22 53.4 +0.6
YAK e*PP sP 18 23 09.1 -3.3
YAK e 18 24 39.8
YAK ePPP PPP 18 25 17.6
YAK eS S 18 29 29.7 -2.0
YAK e 18 32 38.2
YAK pmax pmax
comp=Z,463nm,1.3s
YAK pmax pmax
comp=N,175nm,1.3s
YAK pmax pmax
comp=E,217nm,1.4s
YAK pmax pmax
comp=Z,292nm,2.1s
YAK pmax pmax
comp=E,342nm,2.4s
YAK pmax pmax
comp=N,212nm,1.6s
YAK smax smax
comp=E,481nm,3.5s
YAK smax smax
comp=N,549nm,3.0s
YAK MLR MLR
comp=Z,1μm,21.0s
YAK Yakutsk 45.62 23 P P 18 22 53.5 +0.6
YAK IAMs_20 IAMs_20 18 42 50.3
comp=Z,2μm,22.0s
KBZ Khabaz 45.93 309 P P 18 22 56.3 +0.7
comp=Z,37nm,1.0s,baz=114,slow=6.6,SNR=55
KBZ LR LR 18 45 53.6
comp=Z,2μm,21.4s,baz=95,slow=41
KBZ Khabaz 45.93 309 d iP P 18 22 55.9 +0.3
KBZ pmax pmax
comp=Z,45nm,0.9s
KBZ MLR MLR
comp=Z,3μm,21.0s
NRIK Noril'sk 45.96 357 P P 18 22 56.8 +1.3
comp=Z,198nm,0.7s,baz=157,slow=6.1,SNR=355
NRIK LR LR 18 46 16.1
comp=Z,618nm,21.9s,baz=180,slow=41
NRIK Noril'sk 45.96 357 d iP P 18 22 56.6 +1.1
NRIK pmax pmax
comp=Z,499nm,1.2s
NRIK MLR MLR
comp=Z,2μm,23.0s
FAKI Fak Fak 45.97 120 P P 18 22 55.3 -1.0
comp=Z,2μmcomp=Z,288nm,0.9s
FAKI Fak Fak 45.97 120 P P 18 22 55.8 -0.5
FAKI IAmb IAmb 18 23 11.6
comp=Z,200nm,0.8s
GOF Gofitskoye 46.05 311⇑ iP P 18 22 57.6 +1.0
GOF eS S 18 29 36.4 -2.1
GOF pmax pmax
comp=Z,281nm,1.1s
GOF smax smax
comp=N,79nm,1.1s
GOF smax smax
comp=E,84nm,1.4s
KIV Kislovodsk 46.12 309 ⇑P P 18 22 58.9 +1.7
KIV Kislovodsk 46.12 309 i P P 18 22 58.2 +1.0
SNR=49
KIV Kislovodsk 46.12 309 P P 18 22 58.4 +1.2
KIV P P 18 22 58.4 +1.2
KIV Kislovodsk 46.12 309 eP P 18 22 58.1 +0.9
KIV e 18 24 47.5
KIV eS S 18 29 41.1 +1.5
KIV pmax pmax
comp=Z,492nm,1.1s
KIV pmax pmax
comp=Z,279nm,4.3s
KIV MLR MLR
comp=Z,4μm,16.0s
KIV Kislovodsk 46.12 309 P P 18 22 57.8 +0.6
KIV IAmb IAmb 18 22 59.6
comp=Z,121nm,0.8s
KIV IAMs_20 IAMs_20 18 45 21.9
comp=Z,2μm,22.0s
TYV Tymovskoe 46.56 41 eP P 18 23 01.0 +0.6
TYV eS S 18 29 48.1 +2.6
TYV pmax pmax
comp=Z,600nm,2.4s
TYV pmax pmax
comp=Z,151nm,1.2s
TYV smax smax
comp=E,45nm,1.8s
TYV smax smax
comp=E,300nm,2.6s
KIRV Kirov 46.89 330 d iP P 18 23 03.8 +0.9
MARD Mardin 46.95 300 P P 18 23 04.9 +1.0
MARD IAmb IAmb 18 23 06.0
comp=Z,287nm,1.5s
YUK Yuzh-Kuril'sk 47.20 51 d iP P 18 23 04.9 -0.6
YUK e 18 24 50.6
YUK ePPP PPP 18 25 44.9
YUK eS S 18 29 46.3 -8.6
YUK eSS SS 18 33 19.3 -3.2
YUK pmax pmax
comp=Z,330nm,1.2s
YUK pmax pmax
comp=E,46nm,1.5s
YUK pmax pmax
comp=N,53nm,0.5s
KOPT Kop Dagi 47.30 303 P P 18 23 06.5 -0.2
KTUT Trabzon 47.92 305 ⇑P P 18 23 12.6 +1.4
SOC Sochi 48.20 308 d iP P 18 23 13.1 -0.2
SOC e*PP pP 18 23 27.4 +0.5
SOC eS S 18 30 09.5 +0.4
SOC eSS SS 18 33 40.3 +1.6
SOC eSSS SSS 18 34 53.8
SOC pmax pmax
comp=Z,155nm,0.7s
SOC MLR MLR
comp=Z,2μm,22.0s
VRH Novokhopyorsk 48.27 319 eP P 18 23 13.5 -0.2
VRH eS S 18 30 06.0 -3.8
VRH pmax pmax
comp=Z,490nm,1.0s
VRH pmax pmax
comp=Z,650nm,1.0s
VRH smax smax
comp=N,380nm,1.7s
VRH MLR MLR
comp=Z,5μm,19.0s
KUR Kuril'sk 48.78 50 d iP P 18 23 18.0 +0.3
MALT Malatya 48.83 301 P P 18 23 19.6 +1.2
GUMO Guam 49.45 92 LR LR 18 44 05.0
comp=Z,2μm,21.1s,baz=277,slow=36
ATD Arta Tunnel 49.54 265 P P 18 23 24.6 +0.6
VORD Divnogorie 49.70 318 eP P 18 23 24.2 -0.5
VORD eS S 18 30 27.4 -2.5
VORD pmax pmax
comp=Z,150nm,0.9s
VORD pmax pmax
comp=Z,370nm,1.4s
VORD smax smax
comp=E,710nm,2.6s
GAZ Gaziantep 49.80 300 P P 18 23 26.1 +0.3
GAZ IAmb IAmb 18 23 27.9
comp=Z,100nm,1.0s
VSR Storozhevoye 49.83 318 eP P 18 23 25.3 -0.4
VSR eS S 18 30 28.4 -3.4
VSR pmax pmax
comp=Z,360nm,1.6s
VSR pmax pmax
comp=Z,400nm,1.4s
VSR smax smax
comp=N,420nm,1.5s
VSR MLR MLR
comp=Z,3μm,20.0s
VORR Voronezh 49.91 319 P P 18 23 26.0 -0.2
VORR pmax pmax
comp=Z,300nm,1.6s
ANN Anapa 49.96 309 eP P 18 23 26.0 -0.7
ANN e*PP pP 18 23 39.4 -1.0
ANN e 18 24 43.6
ANN e 18 25 22.9
ANN eS S 18 30 33.9 +0.2
ANN eSSS SSS 18 35 34.1
ANN pmax pmax
comp=Z,73nm,0.8s
ANN MLR MLR
comp=Z,2μm,21.0s
ANN MLR MLR
comp=N,3μm,24.0s
GIRL Giralia 50.12 155 P P 18 23 29.5 +1.4
baz=50,SNR=5.3
LPSR Galich'ya Gora 50.29 320 eP P 18 23 29.4 +0.3
LPSR eS S 18 30 36.0 -2.1
LPSR pmax pmax
comp=Z,350nm,0.7s
LPSR pmax pmax
comp=Z,380nm,0.7s
LPSR smax smax
comp=N,100nm,1.3s
LPSR MLR MLR
comp=Z,1μm,14.0s
KVT Kavak 50.73 305 P P 18 23 34.1 +1.4
SMPI Sarmi 50.74 114 P P 18 23 34.1 +1.0
comp=Z,1μmcomp=Z,61nm,1.2s
HWQ Hawqa 50.94 296 eP P 18 23 35.2 +0.7
BHL Bhannes 51.21 295 eP P 18 23 37.7 +1.2
QRWL Qaraoun 51.22 295 eP P 18 23 37.3 +0.7
DQRL Deir Qamar 51.30 295 eP P 18 23 38.4 +1.2
DIKM Dikmen 51.34 305 ⇓P P 18 23 38.4 +1.1
MTN Manton Dam 51.58 131 P P 18 23 38.2 -1.0
baz=52,SNR=14
MTN Manton Dam 51.58 131 P P 18 23 38.2 -1.0
PSA00 Pilbara Seismi 51.64 148 P P 18 23 39.4 -0.1
PSA00 IAmb IAmb 18 23 54.6
comp=Z,127nm,0.9s
PSAC3 Pilbara Seismi 51.67 148 IAMs_20 IAMs_20 18 43 19.8
comp=Z,1μm,22.0s
MOS Moscow 51.80 323 eP P 18 23 36.3 -4.1
MOS e 18 25 41.2
MOS eS S 18 30 54.1 -4.8
MOS e 18 31 20.2
MOS pmax pmax
comp=Z,1μm,2.0s
MOS pmax pmax
comp=Z,454nm,1.5s
MOS smax smax
comp=E,2μm,4.5s
MOS smax smax
comp=N,2μm,4.6s
MOS MLR MLR
comp=Z,1μm,19.0s
FITZ Fitzroy Crossi 51.92 140 P P 18 23 41.7 0.0
baz=52,SNR=90
FITZ Fitzroy Crossi 51.92 140 P P 18 23 41.5 -0.2
FITZ IAmb IAmb 18 23 58.9
comp=Z,93nm,1.0s
KNRA Kununurra 52.01 135 P P 18 23 42.1 -0.3
baz=52,SNR=161
KNRA Kununurra 52.01 135 P P 18 23 42.5 0.0
KNRA IAmb IAmb 18 24 07.4
comp=Z,136nm,0.8s
TIXI Tiksi 52.15 13 i P P 18 23 43.0 +0.3
TIXI pmax pmax
comp=Z,3μm,1.2s
TIXI Tiksi 52.15 13 P P 18 23 43.0 +0.3
TIXI IAMs_20 IAMs_20 18 47 17.5
comp=Z,1μm,22.0s
OBN Obninsk 52.23 322 ⇑P P 18 23 44.2 +0.6
OBN Obninsk 52.23 322 d iP P 18 23 43.6 0.0
OBN e*PP pP 18 23 57.2 -0.2
OBN e*SP sP 18 24 04.3 +1.1
OBN e 18 24 54.9
OBN e 18 25 40.6
OBN ePPP PPP 18 26 46.5
OBN i S S 18 31 02.4 -2.4
OBN eSS SS 18 34 45.5 +3.0
OBN pmax pmax
comp=Z,540nm,1.7s
OBN MLR MLR
comp=Z,2μm,21.0s
OBN Obninsk 52.23 322 P P 18 23 43.1 -0.5
OBN IAMs_20 IAMs_20 18 50 02.5
comp=Z,2μm,21.0s
BZK Bozkurt 52.29 306 ⇑P P 18 23 45.7 +1.5
GENI Genyem 52.29 113 P P 18 23 44.7 0.0
comp=Z,2μmcomp=Z,4μmcomp=Z,225nm,1.4s
SIM Simferopol' 52.32 309 d iP P 18 23 44.0 -0.5
SIM i *PP pP 18 23 59.0 +0.7
SIM pmax pmax
comp=Z,128nm,1.3s
KLMR Klimovskoe 52.39 330 d iP P 18 23 45.2 +0.6
KLMR S S 18 31 05.0 -1.8
KLMR pmax pmax
comp=Z,1μm,1.7s
KLMR pmax pmax
comp=Z,575nm,1.4s
KLMR MLR MLR
comp=Z,938nm,14.0s
KLMR Klimovskoe 52.39 330 ⇓iP P 18 23 45.3 +0.6
KLMR ⇓iP P 18 23 45.3 +0.6
KLMR ⇓iP P 18 23 45.3 +0.6
KLMR AMP 18 23 47.0
comp=Z,1μm,1.7s
KLMR AMP 18 23 47.4
KLMR S S 18 31 05.1 -1.8
KLMR S S 18 31 05.1 -1.8
KLMR LR LR 18 36 47.3
KLMR AMP 18 48 45.6
comp=Z,938nm,14.3s
KDU Kakadu 52.41 129 P P 18 23 44.4 -1.1
baz=52,SNR=28
ILGA Ilgaz 52.49 305 P P 18 23 45.5 -0.6
ILGA IAmb IAmb 18 23 48.6
comp=Z,263nm,1.2s
BR131 Keskin Array S 52.56 303 P P 18 23 46.6 0.0
BR131 pmax pmax
comp=Z,115nm,1.9s
BR131 Keskin Array S 52.56 303 P P 18 23 46.6 0.0
BRTR Keskin Array B 52.56 303 P P 18 23 46.7 +0.2
comp=Z,13nm,0.7s,baz=108,slow=7.7,SNR=39
BRTR PcP PcP 18 24 54.2 -2.1
comp=Z,12nm,0.8s,baz=96,slow=4.3,SNR=3.5
BRTR LR LR 18 51 55.0
comp=Z,540nm,21.3s,baz=118,slow=42
BRTR Keskin Array B 52.56 303 P P 18 23 45.5 -1.1
JAY Jayapura 52.70 113 P P 18 23 55.7 +7.9
CSS Mathiatis 53.04 297 P P 18 23 50.0 0.0
BR231 Keskin MP Arra 53.23 303 P P 18 23 50.8 -0.6
BR231 IAmb IAmb 18 23 53.0
comp=Z,69nm,0.8s
LEF Lefka 53.39 297 ⇓P P 18 23 53.6 +1.1
MA2 Magadan 53.53 32 ceP P 18 23 53.8 +0.7
MA2 pmax pmax
comp=Z,275nm,1.0s
MA2 MLR MLR
comp=Z,2μm,20.0s
MA2 Magadan 53.53 32 P P 18 23 53.3 +0.2
MA2 IAmb IAmb 18 23 54.7
comp=Z,278nm,1.0s
MA2 IAMs_20 IAMs_20 18 48 40.7
comp=Z,3μm,21.0s
TMCR Tamitsa 54.22 334 eP P 18 23 56.9 -1.1
TMCR eS S 18 31 31.4 -0.1
TMCR pmax pmax
comp=Z,377nm,1.0s
MDUB Mudurnu 54.42 304 P P 18 24 00.5 +0.4
ISP Isparta 55.08 301 P P 18 24 04.3 -0.7
ISP pmax pmax
comp=Z,75nm,0.9s
ISP Isparta 55.08 301 P P 18 24 04.3 -0.7
SEY Seymchan 55.24 28 d iP P 18 24 05.9 +0.4
MEEK Meekatharra 55.46 153 P P 18 24 08.0 +0.4
baz=56,SNR=36
ELL Elmali 55.66 299 P P 18 24 09.1 0.0
ELL pmax pmax
comp=Z,1μm,1.1s
ELL Elmali 55.66 299 P P 18 24 09.1 0.0
AKASG Malin Array Be 55.98 316 P P 18 24 10.8 -0.2
comp=Z,45nm,0.6s,baz=81,slow=6.4,SNR=372
AKASG LR LR 18 52 16.0
comp=Z,2μm,21.2s,baz=90,slow=40
AKASG Malin Array Be 55.98 316 P P 18 24 10.1 -0.9
AKBB Malin Array Si 55.98 316 d iP P 18 24 10.7 -0.3
AKBB pmax pmax
comp=Z,136nm,0.8s
AKBB MLR MLR
comp=Z,3μm,21.0s
AKBB Malin Array Si 55.98 316 P P 18 24 10.2 -0.8
AKBB IAmb IAmb 18 24 11.8
comp=Z,144nm,0.8s
AKBB IAMs_20 IAMs_20 18 51 43.7
comp=Z,3μm,21.0s
KIEV Kiev 55.99 316 P P 18 24 09.0 -2.1
ISK Istanbul-Kandi 56.02 305 P P 18 24 11.5 +0.1
TLCR 56.08 310 ⇑P P 18 24 12.2 +0.4
TLCR 56.08 310 P P 18 24 12.2 +0.4
KIS Kishinev 56.09 312 ⇓iP P 18 24 11.6 -0.3
comp=Z,400nm,1.4s
KIS Kishinev 56.09 312 i PcP PcP 18 24 59.0 -10
KIS Kishinev 56.09 312 ePP PP 18 26 14.0 -3.1
KIS Kishinev 56.09 312 d iP P 18 24 11.6 -0.3
KIS i 18 25 16.0
KIS e 18 26 14.0
KIS i S S 18 31 53.0 -4.2
KIS pmax pmax
comp=Z,400nm,1.4s
MILM Milestii Mici 56.09 312 ⇑P P 18 24 13.0 +1.1
PEA0B Petropavlovsk- 56.10 41 d iP P 18 24 11.8 -0.1
PEA0B Petropavlovsk- 56.10 41 P P 18 24 12.1 +0.2
PEA0B IAmb IAmb 18 24 13.8
comp=Z,144nm,1.0s
PEA0B IAMs_20 IAMs_20 18 49 21.9
comp=Z,1μm,20.0s
PETK Petropavlovsk- 56.10 41 P P 18 24 12.1 +0.2
comp=Z,103nm,1.0s,baz=211,slow=2.6,SNR=50
PETK LR LR 18 49 32.5
comp=Z,1μm,20.9s,baz=261,slow=37
PETK Petropavlovsk- 56.10 41 P P 18 24 11.4 -0.4
EFOR EFORIE 56.23 308 ⇑P P 18 24 14.0 +1.1
TPGR Topolog 56.37 309 ⇓P P 18 24 14.4 +0.4
TIRR Tirgusor 56.38 309 ⇓P P 18 24 14.2 +0.2
TIRR Tirgusor 56.38 309 P P 18 24 14.5 +0.6
TIRR pmax pmax
comp=Z,252nm,1.2s
TIRR Tirgusor 56.38 309 IAMs_20 IAMs_20 18 52 35.5
comp=Z,2μm,21.0s
SORM Soroca 56.43 313 ⇓P P 18 24 14.1 -0.2
SORM Soroca 56.43 313 P P 18 24 14.0 -0.2
KULA Kula-Manisa 56.49 302 P P 18 24 14.8 -0.2
PUL Pulkovo 56.51 327 eP P 18 24 14.4 -0.2
PUL Pulkovo 56.51 327 ⇑iP P 18 24 15.9 +1.3
PUL pmax pmax
comp=Z,398nm,1.4s

PUL MLR MLR
comp=Z,3μm,21.0s
PSN Preselentsi 56.56 308 *i* P **P 18 24 16.3 +1.0**
CFR Carcaliu 56.56 310 ⇑P **P 18 24 15.6 +0.3**
CFR Carcaliu 56.56 310 P **P 18 24 15.8 +0.6**
CFR pmax pmax
comp=Z,112nm,1.4s
MANT Manisa 56.57 302 P **P 18 24 15.6 -0.2**
MANT IAmb IAmb 18 24 16.8
comp=Z,287nm,1.2s
MORW Morawa 56.61 156 P **P 18 24 16.1 +0.4**
baz=57,SNR=20
MORW Morawa 56.61 156 P **P 18 24 16.0 +0.4**
MORW IAmb IAmb 18 24 31.1
comp=Z,206nm,1.1s
TLBR Topalu 56.64 309 ⇓P **P 18 24 16.8 +1.0**
PET Petropavlovsk 56.67 41 *e*P **P 18 24 15.5 -0.3**
PET *e**PP **pP 18 24 28.7 -1.1**
PET *e*S **S 18 32 02.4 -2.1**
PET pmax pmax
comp=Z,900nm,6.0s
PET pmax pmax
comp=Z,400nm,6.8s
PET pmax pmax
comp=Z,224nm,1.1s
PET MLR MLR
comp=Z,1μm,16.0s
PET MLR MLR
comp=Z,1μm,14.0s
PET Petropavlovsk 56.67 41 P **P 18 24 15.0 -0.9**
PET IAmb IAmb 18 24 17.7
comp=Z,188nm,1.1s
JOF Joensuu 56.71 331 P **P 18 24 16.9 +0.9**
JOF pmax pmax
comp=Z,370nm,1.1s
HARR Harsova 56.72 309 ⇑P **P 18 24 17.3 +0.9**
HARR Harsova 56.72 309 P **P 18 24 17.2 +0.9**
VARL Varlezi 56.76 310 ⇑P **P 18 24 18.0 +1.3**
VASR Vaslui 56.80 311 ⇑P **P 18 24 17.7 +0.8**
ICOR Ion Corvin 56.82 308 ⇑P **P 18 24 18.1 +0.9**
LVZ Lovozero 56.84 337*d* *i*P **P 18 24 17.4 +0.5**
LVZ pmax pmax
comp=Z,427nm,1.3s
LVZ MLR MLR
comp=Z,2μm,19.0s
LVZ Lovozero 56.84 337 P **P 18 24 17.3 +0.5**
LVZ IAMs_20 IAMs_20 18 51 24.9
comp=Z,3μm,21.0s
YER Yerkesik 56.92 300 P **P 18 24 18.3 +0.3**
YER Yerkesik 56.92 300 P **P 18 24 16.8 -1.2**
MICGM Minsk 57.09 321 ⇓*i*P **P 18 24 18.0 -0.8**
MICGM PM 18 24 20.0
comp=Z,1.2nm,1.5s
MICGM *e*pP **pP 18 24 35.0 +2.2**
MICGM *e*PP **PP 18 26 33.0 +7.2**
MICGM *e*PPP PPP 18 27 50.0
MICGM *e*S **S 18 32 08.0 -2.2**
MICGM *e*LR LR 18 47 26.0
MICGM LRM MLR 18 53 18.0
comp=Z,2.6nm,16.0s
MNK Minsk 57.09 321 ⇓*i*P **P 18 24 18.0 -0.8**
MNK *e* 18 26 33.0
MNK *e*S **S 18 32 08.0 -2.2**
MNK pmax pmax
comp=Z,1μm,1.5s
MNK MLR MLR
comp=Z,2μm,16.0s
ARG Arkhangelos 57.14 299 P **P 18 24 19.8 +0.3**
ARG pmax pmax
comp=Z,86nm,1.2s
AMRR Amara 57.14 309 ⇑P **P 18 24 20.8 +1.5**
APA Apatity 57.17 337 ⇓*i*P **P 18 24 18.8 -0.4**
APA *i* 18 24 37.1
APA *i* PPP PPP 18 27 48.4
APA *i* S **S 18 32 08.0 -2.9**
APA *i* PS PKiKP 18 32 23.0 +43
APA pmax pmax
comp=Z,112nm,0.8s
VRI Vrincioaia 57.54 310 ⇓P **P 18 24 23.6 +1.4**
VRI Vrincioaia 57.54 310 P **P 18 24 23.3 +1.1**
VRI pmax pmax
comp=Z,350nm,1.4s
BISRR Bisoca 57.56 310 ⇓P **P 18 24 24.8 +2.4**
TESR Tescani 57.58 311 ⇑P **P 18 24 23.0 +0.5**
PLOR Plostina 57.60 310 ⇑P **P 18 24 24.2 +1.5**
PLOR Plostina 57.60 310 P **P 18 24 24.1 +1.5**
RER Riviere de l'E 57.68 223 P **P 18 24 23.3 -0.2**
RER IAmb IAmb 18 24 40.8
comp=Z,309nm,1.7s
ISR Istrita 57.69 310 ⇑P **P 18 24 24.8 +1.5**
ISR Istrita 57.69 310 P **P 18 24 25.4 +2.1**
ISR pmax pmax
comp=Z,242nm,1.4s
KMPD K-Podol'skiy 57.70 314 P **P 18 24 24.0 +0.8**
HORU Horodok 57.73 314 P **P 18 24 23.4 0.0**
NACGM Naroch 57.76 321 *e*P **P 18 24 23.0 -0.6**
NACGM PM 18 24 24.0
comp=Z,0.8nm,1.0s
NACGM *e*PP PP 18 26 49.0 +17
NACGM *e*PPP PPP 18 28 14.0
NACGM *e*S **S 18 32 16.0 -2.9**
NACGM *e*SS SS 18 36 40.0 +30
NACGM *e*SSS SSS 18 38 21.0
NACGM *e*LQ LQ 18 44 50.0
NACGM *e*LR LR 18 48 54.0
NACGM LRM MLR 18 53 44.0
comp=Z,2.8nm,19.0s
RAZG Razgrad 57.78 308 ⇓P **P 18 24 24.8 +0.8**
IDID Didziasalis 57.82 322 *e*P **P 18 24 24.3 +0.4**
PRAR RASCA 57.86 312 ⇑P **P 18 24 24.8 +0.4**
SULR 57.91 309 ⇓P **P 18 24 26.2 +1.4**
BIZ Bicaz 57.95 312 ⇑P **P 18 24 25.7 +0.7**
SMG Samos 58.00 301 P **P 18 24 26.0 +0.4**
KARP Karpathos 58.00 298 P **P 18 24 25.4 -0.3**
KARP Karpathos 58.00 298 P **P 18 24 24.6 -1.0**
MLR Muntele Rosu 58.10 310 ⇓P **P 18 24 27.3 +1.0**
MLR Muntele Rosu 58.10 310 P **P 18 24 26.5 +0.2**
MLR Muntele Rosu 58.10 310 P **P 18 24 26.5 +0.2**
IIGN Ignalina 58.12 322 *e*P **P 18 24 26.1 +0.1**
SGRR Singureni 58.13 309 ⇑P **P 18 24 27.6 +1.3**
IZAR Zarasai 58.14 322 *e*P **P 18 24 25.6 -0.5**
VSU Vasula 58.14 325 *e*P **P 18 24 26.1 0.0**
VSU Vasula 58.14 325*d* *i*P **P 18 24 26.3 +0.2**
VSU pmax pmax
comp=Z,719nm,1.4s
VSU MLR MLR
comp=Z,6μm,21.0s
EZN Ezine 58.18 303 P **P 18 24 27.5 +0.7**
EZN Ezine 58.18 303 P **P 18 24 25.3 -1.5**
MANU Manus Island 58.19 108 P **P 18 24 27.0 -0.1**
ISAL Salakas 58.19 322 *e*P **P 18 24 26.4 -0.2**
OZUR 58.19 311 ⇑P **P 18 24 27.9 +1.1**
SZH Strazhica 58.22 307 *i*P **P 18 24 27.5 +0.5**
ENEZ Enez 58.23 304 P **P 18 24 26.6 -0.5**
BLDU Ballidu 58.25 156 P **P 18 24 27.0 -0.2**
baz=58,SNR=24
ALN Alexandroupoli 58.30 305 P **P 18 24 28.1 +0.5**
ALN pmax pmax
comp=Z,493nm,1.6s
ALN Alexandroupoli 58.30 305 P **P 18 24 28.1 +0.5**
ALN Alexandroupoli 58.30 305 P **P 18 24 27.3 -0.3**
MSF Maaselka 58.38 334 P **P 18 24 28.4 +0.7**
MSF pmax pmax
comp=Z,256nm,1.3s
DOPR Dopca 58.47 311 ⇑P **P 18 24 29.4 +0.7**
BURAR Bucovina Array 58.54 313 ⇑P **P 18 24 29.7 +0.4**
BURAR Bucovina Array 58.54 313 P **P 18 24 29.7 +0.4**
BURAR Bucovina Array 58.54 313 P **P 18 24 28.8 -0.5**
BUR08 Bucovina Ar. S 58.55 313 P **P 18 24 29.6 +0.2**
DIM Dimitrovgrad 58.59 306 *i*P **P 18 24 30.5 +0.9**
KSV Kosov 58.63 313 P **P 18 24 29.8 0.0**
WB0 Warramunga Arr 58.66 134 P **P 18 24 30.0 -0.3**
WB0 IAmb IAmb 18 24 47.3
comp=Z,97nm,0.8s
RDO Rodhopi 58.66 305 P **P 18 24 28.6 -1.5**
COPA Copaceanca 58.68 308 ⇑P **P 18 24 31.2 +1.0**
VOIR 58.73 310 ⇓P **P 18 24 30.8 +0.2**
VOIR 58.73 310 P **P 18 24 30.9 +0.2**
VOIR pmax pmax
comp=Z,54nm,0.9s
MTUR Matau 58.73 310 ⇑P **P 18 24 32.0 +1.3**
WRA Warramunga Arr 58.74 134 P **P 18 24 30.8 -0.1**
comp=Z,72nm,0.8s,baz=322,slow=7.3,SNR=467

WRA ScP **ScP 18 29 14.0 -2.7**
comp=Z,2.8nm,0.7s,baz=322,slow=5.0,SNR=3.1
WRA S **S 18 32 28.2 -4.4**
comp=Z,5.6nm,0.9s,baz=308,slow=14,SNR=12
WRA LR LR 18 53 29.8
comp=Z,505nm,20.9s,baz=325,slow=40
WRA PKPPKP **P'P'df 18 54 01.0 -3.6**
comp=Z,1.8nm,1.1s,baz=176,slow=2.2,SNR=6.4
WRA Warramunga Arr 58.74 134 P **P 18 24 30.4 -0.5**
WRAB Tennant Creek 58.74 134*c* *i*P **P 18 24 31.0 +0.1**
WRAB pmax pmax
comp=Z,125nm,1.0s
WRAB MLR MLR
comp=Z,705nm,20.0s
WRAB Tennant Creek 58.74 134 P **P 18 24 30.7 -0.2**
WRAB IAmb IAmb 18 24 51.8
comp=Z,106nm,0.8s
WC2 Warramunga Arr 58.75 134 IAMs_20 IAMs_20 18 52 57.4
comp=Z,886nm,19.0s
WB2 Warramunga Arr 58.75 134 P **P 18 24 30.8 -0.1**
WB2 IAmb IAmb 18 24 47.0
comp=Z,102nm,0.8s
WB2 IAMs_20 IAMs_20 18 53 07.5
comp=Z,1μm,21.0s
WB1 Warramunga Ar. 58.76 134 IAMs_20 IAMs_20 18 53 09.7
comp=Z,1μm,21.0s
WC3 Warramunga Arr 58.78 134 IAMs_20 IAMs_20 18 53 09.1
comp=Z,1μm,20.0s
WR3 Warramunga Arr 58.78 134 IAMs_20 IAMs_20 18 53 08.9
comp=Z,982nm,21.0s
STFAR Stefanesti-Arg 58.82 309 ⇑P **P 18 24 31.5 +0.3**
HUMR Humele 58.83 309 ⇑P **P 18 24 31.9 +0.7**
FIA1 FINESS Array S 58.85 329 P **P 18 24 31.4 +0.4**
FIA1 IAmb IAmb 18 24 32.7
comp=Z,125nm,0.8s
FINES FINESS Array B 58.85 329 P **P 18 24 31.4 +0.4**
comp=Z,72nm,0.7s,baz=101,slow=9.9,SNR=194
FINES LR LR 18 52 42.7
comp=Z,3μm,20.3s,baz=102,slow=39
FINES FINESS Array B 58.85 329 P **P 18 24 30.8 -0.2**
WRKA Warakurna 58.88 143 P **P 18 24 32.1 +0.3**
baz=59,SNR=312
WR0 Warramunga Arr 58.89 134 P **P 18 24 31.4 -0.5**
WR0 IAmb IAmb 18 24 49.1
comp=Z,95nm,0.7s
SUF Sumiainen 59.00 330 P **P 18 24 32.9 +0.9**
SUF pmax pmax
comp=Z,420nm,1.0s
ANAF Anafi Island 59.01 299 P **P 18 24 31.2 -1.4**
ARR Arges 59.03 310 ⇓P **P 18 24 33.9 +1.2**
APE Apeiranthos 59.11 300 ⇑P **P 18 24 33.3 -0.1**
APE Apeiranthos 59.11 300 P **P 18 24 33.3 -0.1**
ARCR ARCALIA 59.14 312 ⇑P **P 18 24 34.7 +1.4**
PLD Plovdiv 59.20 306 P **P 18 24 34.6 +0.8**
PLD Plovdiv 59.20 306 *i*P **P 18 24 34.4 +0.6**
RZN Rozhen 59.23 306 *i*P **P 18 24 34.4 +0.1**
THR8 Santorini-Mono 59.24 299 P **P 18 24 33.2 -1.0**
THR7 Fira-Santorini 59.28 299 P **P 18 24 34.2 -0.3**
LVV L'vov 59.29 315 *e*P **P 18 24 34.5 +0.2**
LVV *e* 18 25 22.1
LVV *e* 18 26 47.5
LVV *e*PPP PPP 18 28 20.2
LVV *e*S **S 18 32 36.4 -2.6**
LVV *e*PS **PnS 18 33 03.5 +6.6**
LVV *e* 18 34 23.7
LVV *e*SS **SS 18 36 36.0 +2.2**
LVV MLR MLR
comp=N,500nm,22.0s
LVV MLR MLR
comp=E,1μm,22.0s
LVV MLR MLR
comp=Z,1μm,22.0s
NPS Neapolis 59.29 298 P **P 18 24 34.9 +0.3**
THR3 Thira Island, 59.30 299 P **P 18 24 34.2 -0.4**
THR6 Thira Island, 59.31 299 P **P 18 24 34.5 -0.2**
THR5 Thira Island, 59.34 299 P **P 18 24 34.3 -0.6**
MORS Morshin 59.39 314 P **P 18 24 35.8 +0.8**
PABE Paberze 59.41 322 *e*P **P 18 24 35.1 +0.1**
LAST Lasithi 59.42 298 P **P 18 24 35.9 -0.4**
KAVA Kavala 59.45 305 P **P 18 24 35.8 +0.3**
LODK Lodwar 59.54 260 P **P 18 24 38.4 +1.7**
SNR=46
PGB Panagyurishte 59.56 307 *i*P **P 18 24 37.8 +1.4**
LOT Lotru 59.63 310 ⇑P **P 18 24 37.6 +0.8**
CJR Cluj-Napoca 59.68 312 ⇓P **P 18 24 38.3 +1.2**
SGF Sodankyl 59.69 336 P **P 18 24 37.8 +1.0**
SGF pmax pmax
comp=Z,457nm,1.0s
BMR Baia Mare 59.70 313 ⇑P **P 18 24 38.6 +1.4**
KIBK Kibwezi 59.76 252 P **P 18 24 38.4 +0.3**
SNR=15
MPEP Malo Peshtene 59.81 308 *i*P **P 18 24 38.7 +0.7**
SUW Suwalki 59.82 320 *i*P **P 18 24 37.8 -0.1**
SUW *e*S **S 18 32 43.2 -2.4**
SUW Suwalki 59.82 320 P **P 18 24 36.9 -0.9**
SUW pmax pmax
comp=Z,308nm,0.9s
SUW MLR MLR
comp=Z,4μm,21.0s
SUW Suwalki 59.82 320 P **P 18 24 36.9 -0.9**
IDI Anoyia 59.88 298 ⇑P **P 18 24 38.6 0.0**
IDI Anoyia 59.88 298 P **P 18 24 38.1 -0.6**
IDI IAmb IAmb 18 24 39.9
comp=Z,100nm,0.8s
IDI Anoyia 59.88 298 P **P 18 24 38.4 -0.3**
KMBO Kilima Mbogo 59.88 254 P **P 18 24 41.1 +2.0**
comp=Z,13nm,0.7s,baz=53,slow=9.2,SNR=46
KMBO LR LR 18 51 18.1
comp=Z,921nm,20.9s,baz=70,slow=37
KMBO Kilima Mbogo 59.88 254 *i*P **P 18 24 39.9 +0.7**
SNR=14
KMBO Kilima Mbogo 59.88 254 P **P 18 24 38.7 -0.5**
NVR Nevrokopi 59.90 305 P **P 18 24 38.3 -0.4**
MMB Musomiste 59.98 306 *i*P **P 18 24 39.1 -0.1**
KEV Kevo 60.03 338 P **P 18 24 39.8 +0.7**
KEV pmax pmax
comp=Z,168nm,0.8s
KEV MLR MLR
comp=Z,2μm,21.0s
KEV Kevo 60.03 338 P **P 18 24 39.8 +0.7**
KEV IAmb IAmb 18 24 41.2
comp=Z,168nm,0.8s
KEV IAMs_20 IAMs_20 18 53 03.4
comp=Z,2μm,21.0s
BAIL Bailesti 60.04 308 ⇑P **P 18 24 40.8 +1.3**
TRSU Trosnyk 60.05 313 P **P 18 24 40.7 +1.2**
SRE Strehaia 60.09 309 ⇓P **P 18 24 40.1 +0.1**
SRE Strehaia 60.09 309 P **P 18 24 40.0 +0.1**
SRS Serrai 60.13 305 P **P 18 24 40.3 0.0**
SRS pmax pmax
comp=Z,76nm,1.7s
KWP Kalwaria Pacla 60.15 315 *i*P **P 18 24 41.0 +0.7**
KWP *e*S **S 18 32 49.2 -0.9**
KWP Kalwaria Pacla 60.15 315 P **P 18 24 40.5 +0.2**
KWP pmax pmax
comp=Z,566nm,1.1s
KWP MLR MLR
comp=Z,2μm,22.0s
KWP Kalwaria Pacla 60.15 315 P **P 18 24 40.5 +0.2**
KWP IAMs_20 IAMs_20 18 54 09.1
comp=Z,2μm,22.0s
PAIG Paliouri 60.20 304 P **P 18 24 41.4 +0.7**
PAIG pmax pmax
comp=Z,197nm,1.1s
PAIG Paliouri 60.20 304 P **P 18 24 41.4 +0.7**
DEV Deva 60.21 311 ⇓P **P 18 24 42.2 +1.5**
DEV Deva 60.21 311 P **P 18 24 42.0 +1.3**
DEV pmax pmax
comp=Z,336nm,1.4s
VTS Vitosha 60.24 307 *i*P **P 18 24 41.7 +0.5**
DRGR 60.28 312 ⇓P **P 18 24 42.3 +1.0**
DRGR 60.28 312 P **P 18 24 42.3 +1.0**
DRGR pmax pmax
comp=Z,578nm,1.2s
PLG Polygyros 60.32 304 P **P 18 24 41.6 0.0**
GZR Gura Zlata 60.33 310 ⇑P **P 18 24 42.3 +0.6**
SOH Sokhos 60.34 305 P **P 18 24 42.2 +0.4**
SOH pmax pmax
comp=Z,43nm,1.6s
VLY Voula,Athens 60.38 301 P **P 18 24 41.2 -0.8**
VAM Vamos 60.41 298 P **P 18 24 42.7 +0.4**
SLIT Slitere, Latvi 60.43 324 *e*P **P 18 24 40.3 -1.6**
KKB Krupnik 60.43 306 *i*P **P 18 24 43.0 +0.7**
KOLS Kolonicke sedl 60.46 314 *e*P **P 18 24 42.9 +0.5**

KOLS pmax pmax
comp=Z,32nm,1.0s
KOLS Kolonicke sedl 60.46 314 *e*P **P 18 24 42.9 +0.5**
UZH Uzhgorod 60.46 314 *e*P **P 18 24 42.2 -0.2**
UZH *e* 18 24 55.6
UZH *e* 18 25 03.2
UZH *e* 18 25 22.4
UZH *e*S **S 18 32 53.2 -0.9**
ARD3 ARCESS Array S 60.48 338 P **P 18 24 43.1 +0.9**
ARD4 ARCESS Array S 60.49 338 P **P 18 24 42.8 +0.6**
ARC3 ARCESS Array S 60.49 338 P **P 18 24 42.9 +0.6**
ARD2 ARCESS Array S 60.49 338 P **P 18 24 42.5 +0.2**
ARC2 ARCESS Array S 60.49 338 P **P 18 24 42.9 +0.6**
ARD5 ARCESS Array S 60.49 338 P **P 18 24 42.5 +0.2**
ARC4 ARCESS Array S 60.49 338 P **P 18 24 42.5 +0.2**
ARB2 ARCESS Array S 60.50 338 P **P 18 24 42.4 +0.1**
ARB3 ARCESS Array S 60.50 338 P **P 18 24 42.4 +0.1**
ARA2 ARCESS Array S 60.50 338 P **P 18 24 42.0 -0.3**
ARA0 ARCESS Array S 60.50 338 P **P 18 24 42.0 -0.3**
ARA0 ARCESS Array S 60.50 338 ⇓*i*P **P 18 24 43.3 +1.0**
ARA1 ARCESS Array S 60.50 338 P **P 18 24 42.1 -0.2**
ARB1 ARCESS Array S 60.50 338 P **P 18 24 42.6 +0.4**
ARCES ARCESS Array B 60.50 338 P **P 18 24 43.3 +1.0**
comp=Z,74nm,0.7s,baz=97,slow=8.2,SNR=191
ARCES LR LR 18 53 59.5
comp=Z,2μm,19.1s,baz=100,slow=39
ARA3 ARCESS Array S 60.50 338 P **P 18 24 42.4 +0.1**
ARC1 ARCESS Array S 60.50 338 P **P 18 24 42.4 +0.1**
ARB4 ARCESS Array S 60.50 338 P **P 18 24 42.5 +0.2**
ARC5 ARCESS Array S 60.50 338 P **P 18 24 42.7 +0.4**
ARD1 ARCESS Array S 60.50 338 P **P 18 24 42.7 +0.4**
ARB5 ARCESS Array S 60.50 338 P **P 18 24 42.4 +0.1**
ARD6 ARCESS Array S 60.50 338 P **P 18 24 42.9 +0.6**
ARC7 ARCESS Array S 60.50 338 P **P 18 24 43.0 +0.7**
ARC7 IAmb IAmb 18 24 44.0
comp=Z,111nm,0.8s
ARC6 ARCESS Array S 60.50 338 P **P 18 24 43.0 +0.6**
ARD9 ARCESS Array S 60.51 338 P **P 18 24 42.6 +0.2**
ARD9 IAmb IAmb 18 24 44.0
comp=Z,111nm,0.8s
ARD7 ARCESS Array S 60.51 338 P **P 18 24 43.1 +0.8**
ARD7 IAmb IAmb 18 24 44.0
comp=Z,124nm,0.8s
ARD8 ARCESS Array S 60.51 338 P **P 18 24 43.1 +0.8**
NWAO Narrogin (SRO) 60.53 157 P P 18 24 55.8 +13
NWAO Narrogin (SRO) 60.53 157 P **P 18 24 42.2 -0.7**
NWAO pmax pmax
comp=Z,164nm,1.1s
NWAO MLR MLR
comp=Z,1μm,21.0s
NWAO Narrogin (SRO) 60.53 157 P **P 18 24 42.0 -0.9**
NWAO IAmb IAmb 18 24 57.5
comp=Z,225nm,1.1s
NWAO Narrogin (SRO) 60.53 157 P **P 18 24 42.2 -0.7**
NWAO IAmb IAmb 18 24 57.5
comp=Z,164nm,1.1s
NWAO IAMs_20 IAMs_20 18 51 11.3
comp=Z,961nm,21.0s
HORT Hortiatis 60.56 305 P **P 18 24 43.1 -0.2**
PBUR Paburge 60.58 322 *e*P **P 18 24 43.2 +0.2**
IMMV Iera Moni Meta 60.58 299 P **P 18 24 44.0 +0.6**
VAF Ylistaro 60.62 330 P **P 18 24 44.2 +1.0**
VAF pmax pmax
comp=Z,567nm,1.1s
HERR Herculane 60.63 309 ⇑P **P 18 24 44.7 +1.1**
KNT Kendrikon 60.65 305 P **P 18 24 43.7 -0.1**
KNT pmax pmax
comp=Z,119nm,1.4s
KNT Kendrikon 60.65 305 P **P 18 24 43.5 -0.3**
THE Thessaloniki 60.66 305 P **P 18 24 43.8 0.0**
THE pmax pmax
comp=Z,84nm,1.3s
VILL Villia 60.71 302 P **P 18 24 42.7 -1.6**
RODP Rodopos 60.75 299 P **P 18 24 45.6 +1.1**
KMBL Kambalda 60.97 152 P **P 18 24 45.9 0.0**
baz=61,SNR=11
CRVS Cervenica-Dubn 61.00 314 *e*P **P 18 24 46.5 +0.5**
CRVS pmax pmax
comp=Z,240nm,1.2s
CRVS Cervenica-Dubn 61.00 314 *e*P **P 18 24 46.5 +0.5**
GRG Griva 61.04 305 P **P 18 24 46.5 0.0**
GRG pmax pmax
comp=Z,260nm,1.2s
GRG Griva 61.04 305 P **P 18 24 46.1 -0.4**
SIRR Siria 61.04 311 ⇑P **P 18 24 47.7 +1.3**
STIP Stip 61.12 306 *i*P **P 18 24 45.5 -1.4**
BZS Buzias 61.13 310 ⇑P **P 18 24 47.4 +0.5**
BZS Buzias 61.13 310 P **P 18 24 47.3 +0.3**
BZS pmax pmax
comp=Z,138nm,1.5s
MDVR Moldovita 61.13 309 ⇓P **P 18 24 47.8 +0.7**
AS31 Alice Springs 61.15 137 P **P 18 24 47.4 +0.1**
ASAR Alice Springs 61.15 137 P **P 18 24 48.0 +0.7**
comp=Z,112nm,0.6s,baz=319,slow=6.8,SNR=1731
ASAR S **S 18 33 00.3 -3.1**
comp=Z,6.5nm,1.0s,baz=311,slow=13,SNR=13
ASAR PKP2bc 18 54 08.1
comp=Z,3.8nm,0.9s,baz=130,slow=2.6,SNR=12
ASAR LR LR 18 55 07.8
comp=Z,336nm,19.4s,baz=314,slow=40
ASAR Alice Springs 61.15 137 P **P 18 24 48.0 +0.7**
ASAR Alice Springs 61.15 137 P **P 18 24 47.7 +0.3**
KTK1 Kautokeino 61.19 337 ⇓*i*P **P 18 24 47.9 +0.9**
COEN Coen 61.20 122 P **P 18 24 48.7 +0.9**
baz=61,SNR=8.5
COEN Coen 61.20 122 P **P 18 24 46.7 -1.1**
VLI Veliai 61.22 300 P **P 18 24 45.8 -1.9**
BEL Belsk 61.29 318 *i*P **P 18 24 48.6 +0.7**
BEL *e*S **S 18 33 04.0 -0.5**
BEL Belsk 61.29 318 P **P 18 24 48.8 +0.9**
BEL pmax pmax
comp=Z,781nm,1.0s
HAMF Hammerfest 61.33 339 ⇓*i*P **P 18 24 49.1 +1.3**
AGG Agios Georgios 61.35 303 P **P 18 24 47.0 -1.6**
AGG pmax pmax
comp=Z,346nm,1.5s
AGG Agios Georgios 61.35 303 P **P 18 24 47.0 -1.6**
AGG Agios Georgios 61.35 303 P **P 18 24 47.4 -1.2**
BANR Banloc 61.49 310 ⇑P **P 18 24 50.3 +1.0**
GUR Goura 61.50 302 P **P 18 24 47.9 -1.8**
MAKR Makrakomi, Fth 61.51 303 P **P 18 24 48.8 -0.9**
THL Klokotos Trika 61.52 303 P **P 18 24 48.4 -1.3**
VLX Vlachokerasia 61.56 301 P **P 18 24 48.7 -1.4**
KZN Kozani 61.60 304 P **P 18 24 49.8 -0.6**
TRIP Tripoli 61.62 301 P **P 18 24 49.2 -1.3**
KLV Kalavryta, Ach 61.63 302 P **P 18 24 48.9 -1.7**
SKO Skopje 61.64 306 *i*P **P 18 24 50.2 -0.3**
KECS Kecovo 61.67 314 *e*P **P 18 24 51.2 +0.6**
KECS pmax pmax
comp=Z,45nm,1.3s
KECS Kecovo 61.67 314 *e*P **P 18 24 51.2 +0.6**
NIE Niedzica 61.73 315 *i*P **P 18 24 52.4 +1.4**
NIE *e*S **S 18 33 11.4 +1.1**
NIE Niedzica 61.73 315 P **P 18 24 52.2 +1.2**
NIE pmax pmax
comp=Z,136nm,1.1s
ANX Ano Chora 61.73 302 P **P 18 24 49.8 -1.5**
EVR Evrytania 61.77 303 P **P 18 24 50.3 -1.2**
PMG Port Moresby 61.80 116*d* *e*P **P 18 24 52.9 +1.0**
PMG pmax pmax
comp=Z,113nm,1.3s
PMG MLR MLR
comp=Z,308nm,20.0s
PMG Port Moresby 61.80 116 P **P 18 24 51.8 -0.1**
PMG IAmb IAmb 18 25 16.8
comp=Z,110nm,0.9s
FNA Florina 61.84 305 P **P 18 24 50.8 -1.1**
FNA pmax pmax
comp=Z,114nm,0.8s
FNA Florina 61.84 305 P **P 18 24 50.8 -1.1**
FNA IAmb IAmb 18 24 52.4
comp=Z,114nm,0.8s
FNA Florina 61.84 305 P **P 18 24 51.2 -0.7**
ABPO Ambohimpanom 61.87 231 P **P 18 24 52.3 -0.2**
ABPO pmax pmax
comp=Z,41nm,1.1s
ABPO MLR MLR
comp=Z,1μm,19.0s
ABPO Ambohimpanom 61.87 231 P **P 18 24 52.3 -0.2**
ABPO IAMs_20 IAMs_20 18 51 09.2
comp=Z,982nm,19.0s
ITM Ithomi 61.94 301 P **P 18 24 51.4 -1.2**
BILL Bilibino 61.95 24*c* *i*P **P 18 24 52.8 +0.7**

BILL pmax pmax
comp=Z,2µm,1.7s
BILL Bilibino 61.95 24 P **P** **18 24 52.9 +0.7**
BILL IAMs_20 IAMs_20 18 55 03.0
comp=Z,2µm,19.0s
OJC Ojcow 62.00 316 *i* P **P** **18 24 53.1 +0.3**
OJC *eS* **S** **18 33 12.3 -1.3**
OJC Ojcow 62.00 316 P **P** **18 24 52.9 +0.2**
OJC pmax pmax
comp=Z,73nm,0.9s
OJC Ojcow 62.00 316 P **P** **18 24 52.9 +0.2**
OJC IAmb IAmb 18 24 55.4
comp=Z,73nm,0.9s
PSZ Piszkesteto 62.11 313 ⇑P **P** **18 24 54.4 +0.8**
PSZ Piszkesteto 62.11 313 P **P** **18 24 53.4 -0.2**
PSZ pmax pmax
comp=Z,99nm,1.1s
PSZ Piszkesteto 62.11 313 P **P** **18 24 53.4 -0.2**
PSZ IAmb IAmb 18 24 55.5
comp=Z,100nm,1.1s
NEST Nestorio 62.13 305 P **P** **18 24 53.1 -0.9**
OHR Ohrid 62.23 305 *i* P **P** **18 24 53.6 -0.9**
LANS Liptovska Anna 62.29 315 *eP* **P** **18 24 56.0 +1.2**
LANS Liptovska Anna 62.29 315 *eP* **P** **18 24 56.0 +1.2**
PDO Prodromos 62.30 303 P **P** **18 24 53.7 -1.3**
HOPEN Hopen 62.30 346 ⇓*i*P **P** **18 24 55.7 +1.4**
PHP Peshkopia 62.41 306 P **P** **18 24 54.6 -1.1**
DIVS Divibare 62.43 309 ⇓*i*P **P** **18 24 56.1 +0.2**
DIVS Divibare 62.43 309 P **P** **18 24 55.4 -0.5**
FRGS Fruska Gora 62.44 310 ⇓*i*P **P** **18 24 56.1 +0.3**
LSK Leskovik 62.51 304 P **P** **18 24 55.6 -0.9**
PVY Plav 62.65 307 ⇓*i*P **P** **18 24 55.9 -1.5**
IVA Berane 62.66 307 ⇑*i*P **P** **18 24 57.1 -0.3**
TEKS Tekeris 62.71 309 ⇓*i*P **P** **18 24 58.2 +0.6**
BUD Budapest 62.74 313 P **P** **18 24 58.5 +0.8**
BUD pmax pmax
comp=Z,68nm,1.4s
QIS Mount Isa 62.74 131 P **P** **18 24 58.5 +0.4**
baz=63,SNR=24
VYHS Vyhne 62.76 314 *eP* **P** **18 24 58.3 +0.4**
VYHS Vyhne 62.76 314 *eP* **P** **18 24 58.3 +0.4**
TRO Tromso 62.79 338 ⇓*i*P **P** **18 24 58.1 +0.5**
BBLS Lazići 62.88 309 ⇓*i*P **P** **18 24 59.5 +0.6**
TIR Tirane 62.89 306 P **P** **18 24 57.7 -1.1**
TIR pmax pmax
comp=Z,130nm,0.8s
TIR MLR MLR
comp=Z,700nm,22.0s
TIR Tirane 62.89 306 P **P** **18 24 57.7 -1.1**
TIR IAmb IAmb 18 25 19.3
comp=Z,130nm,0.8s
KOME Kolasin 62.94 307 ⇓*i*P **P** **18 24 54.6 -4.7**
RUDO Rudo 62.94 308 *eP* **P** **18 24 59.2 0.0**
PLE Pljevlja 62.96 308 ⇑*i*P **P** **18 24 58.4 -1.1**
OKC Ostrava-Krasne 63.09 315 *eP* **P** **18 25 00.5 +0.5**
OKC *e* 18 25 16.5
OKC *eS* **S** **18 33 26.9 -0.4**
OKC MLR MLR
comp=Z,1µm,17.5s
OKC Ostrava-Krasne 63.09 315 *eP* **P** **18 25 00.5 +0.5**
OKC *epP* **pP** **18 25 16.5 +2.3**
OKC *eS* **S** **18 33 26.9 -0.4**
OKC AMS AMS 18 54 50.0
comp=Z,1µm,17.5s
SRO2 Moca 63.13 313 *eP* **P** **18 25 00.0 -0.3**
MORH Mrgy, Hungar 63.13 311 ⇓*i*P **P** **18 25 00.5 +0.1**
HAPS Han Pijesak,BI 63.18 309 ⇓*i*P **P** **18 25 00.2 -0.7**
SRO Srobarova 63.18 313 *eP* **P** **18 25 01.7 +1.1**
SRO pmax pmax
comp=Z,131nm,0.9s
SRO Srobarova 63.18 313 *eP* **P** **18 25 01.7 +1.1**
PDG Podgorica 63.19 307 ⇓P **P** **18 25 00.6 -0.1**
PDG Podgorica 63.19 307 ⇓*i*P **P** **18 25 00.5 -0.3**
PDG Podgorica 63.19 307 P **P** **18 25 00.3 -0.5**
PDG IAmb IAmb 18 25 01.5
comp=Z,103nm,0.8s
TTG Podgorica 63.19 307 ⇑*i*P **P** **18 25 00.5 -0.3**
ULC Ulcinj 63.26 306 ⇓*i*P **P** **18 25 00.6 -0.7**
DRME Dracevica, Mon 63.27 307 ⇓*i*P **P** **18 25 00.9 -0.5**
DRME Dracevica, Mon 63.27 307 ⇓*i*P **P** **18 25 01.1 -0.3**
UPM Unac-Piva 63.33 308 ⇑*i*P **P** **18 25 01.2 -0.8**
UPM Unac-Piva 63.33 308 *eP* **P** **18 25 02.3 +0.3**
FORT Forrest 63.35 147 P **P** **18 25 02.4 +0.6**
baz=64,SNR=12
FORT Forrest 63.35 147 P **P** **18 25 02.0 +0.2**
FORT IAmb IAmb 18 25 28.7
comp=Z,98nm,0.8s
NKME Niksic 63.36 307 ⇓*i*P **P** **18 25 00.9 -1.1**
BJO1 Bjornoya 63.37 343 *eP* **P** **18 25 02.0 +0.6**
GKP Gorka Klasztor 63.38 319 *i* P **P** **18 25 02.0 +0.2**
GKP *eS* **S** **18 33 30.1 -0.6**
RABL Rabaul 63.41 108 P **P** **18 25 03.1 +0.4**
RABL IAmb IAmb 18 25 28.3
comp=Z,189nm,1.2s
CEME Cevo 63.41 307 ⇓*i*P **P** **18 25 02.0 -0.4**
BUM Brajici-Budva 63.47 307 ⇓*i*P **P** **18 25 02.3 -0.5**
MORC Moravsky Berou 63.49 315 ⇓*i*P **P** **18 25 03.4 +0.7**
MORC *eS* **S** **18 33 30.8 -1.5**
MORC Moravsky Berou 63.49 315 P **P** **18 25 03.0 +0.3**
MORC pmax pmax
comp=Z,102nm,0.9s
MORC MLR MLR
comp=Z,1µm,22.0s
MORC Moravsky Berou 63.49 315 P **P** **18 25 03.0 +0.3**
MORC IAmb IAmb 18 25 04.7
comp=Z,102nm,0.9s
MORC IAMs_20 IAMs_20 18 56 01.3
comp=Z,1µm,22.0s
JAVC Velka Javorina 63.50 314 ⇓*i*P **P** **18 25 04.2 +1.4**
JAVC *eS* **S** **18 33 32.8 +0.3**
BRY Bratogost 63.64 308 ⇓*i*P **P** **18 25 03.1 -0.9**
BRY Bratogost 63.64 308 ⇓*i*P **P** **18 25 03.8 -0.2**
SMOL Smolenice 63.69 314 *eP* **P** **18 25 04.6 +0.5**
SMOL pmax pmax
comp=Z,25nm,1.1s
SMOL Smolenice 63.69 314 *eP* **P** **18 25 04.6 +0.5**
HCY Herceg Novi 63.74 307 *eP* **P** **18 25 04.3 -0.2**
N2IH Innhavet 63.76 336 ⇓*i*P **P** **18 25 04.7 +0.6**
TREB Trebinje 63.80 307 ⇓*i*P **P** **18 25 04.4 -0.5**
MODS Modra-Piesok 63.81 314 *eP* **P** **18 25 04.2 -0.6**
MODS pmax pmax
comp=Z,87nm,1.2s
MODS Modra-Piesok 63.81 314 *eP* **P** **18 25 04.2 -0.6**
MODS *e*PPP PPP 18 29 13.0
N2ST Straumen 63.87 335 ⇓*i*P **P** **18 25 05.3 +0.4**
KRLC Kraliky 63.95 316 *eP* **P** **18 25 06.2 +0.5**
KRLC *e* 18 25 22.0
KRLC *eS* **S** **18 33 32.1 -5.9**
KRLC MLR MLR
comp=Z,1µm,22.0s
KRLC Kraliky 63.95 316 *eP* **P** **18 25 06.2 +0.5**
KRLC *epP* **pP** **18 25 22.0 +2.1**
KRLC *eS* **S** **18 33 32.1 -5.9**
KRLC AMS AMS 18 54 40.0
comp=Z,1µm,22.0s
ZST Bratislava 63.95 314 *eP* **P** **18 25 06.3 +0.6**
ZST pmax pmax
comp=Z,143nm,0.8s
ZST Bratislava 63.95 314 *eP* **P** **18 25 06.2 +0.6**
FAUS Fauske 63.99 335 ⇓*i*P **P** **18 25 06.1 +0.5**
STEI Steigen 64.02 336 ⇓*i*P **P** **18 25 06.2 +0.4**
N2TV Tvrnvik 64.06 335 ⇓*i*P **P** **18 25 06.5 +0.4**
SCTE Santa Cesarea 64.14 305 P **P** **18 25 06.6 -0.5**
SCTE IAmb IAmb 18 25 07.1
comp=Z,186nm,1.0s
VRAC Vranov 64.15 315 ⇓P **P** **18 25 08.2 +1.1**
VRAC Vranov 64.15 315 ⇓*i*P **P** **18 25 07.9 +0.8**
VRAC *eS* **S** **18 33 39.5 -1.0**
KSP Ksiaz 64.17 317 *i* P **P** **18 25 08.1 +0.9**
KSP *eS* **S** **18 33 36.4 -4.3**
KSP Ksiaz 64.17 317 P **P** **18 25 08.1 +0.9**
KSP pmax pmax
comp=Z,186nm,1.2s
PATS Pohnpei 64.21 94 P **P** **18 25 08.9 +0.9**
baz=64,SNR=5.8
PATS Pohnpei 64.21 94 P **P** **18 25 07.7 -0.3**
DPC Dobruska-Polom 64.21 316 *eP* **P** **18 25 08.2 +0.7**
DPC *e* 18 25 24.2
DPC *eS* **S** **18 33 32.8 -8.5**
DPC MLR MLR
comp=Z,2µm,17.5s
DPC Dobruska-Polom 64.21 316 *eP* **P** **18 25 08.2 +0.7**
DPC *epP* **sP** **18 25 24.2 -3.2**
DPC *eS* **S** **18 33 32.8 -8.5**
DPC AMS AMS 18 55 50.0
comp=Z,2µm,17.5s
OSTC Ostas 64.25 316 *eP* **P** **18 25 08.5 +0.8**
OSTC *eS* **S** **18 33 35.0 -6.8**
OSTC AMS AMS 18 55 50.0
comp=Z,2µm,23.6s
STON Ston 64.25 308 ⇓*i*P **P** **18 25 06.7 -1.1**
KRUC Moravsky 64.31 315 ⇓*i*P **P** **18 25 08.8 +0.7**
KRUC *eS* **S** **18 33 41.5 -1.0**
MORB Moi Rana 64.32 334 ⇓*i*P **P** **18 25 07.6 -0.3**
BLY Banja Luka 64.34 310 ⇓*i*P **P** **18 25 08.9 +0.5**
CHVC Chvalec 64.35 316 *eP* **P** **18 25 09.2 +0.8**
CHVC AMS AMS 18 56 00.0
comp=Z,2µm,20.3s
SOP Sopron 64.37 313 P **P** **18 25 09.1 +0.6**
SOP pmax pmax
comp=Z,145nm,1.3s
BEHE Becsehely 64.38 312 ⇓*i*P **P** **18 25 12.4 +3.8**
UPC Upice 64.39 316 *eP* **P** **18 25 09.3 +0.7**
UPC MLR MLR
comp=Z,2µm,18.4s
UPC Upice 64.39 316 *eP* **P** **18 25 09.3 +0.7**
UPC *eS* S 18 33 33.3 -10
UPC AMS AMS 18 56 00.0
comp=Z,2µm,18.4s
MGRS Mrkonjic Grad 64.46 309 *eP* P 18 25 24.0 +15
SPA0 Spitsbergen Ar 64.50 347 P **P** **18 25 09.2 +0.3**
SPA0 IAmb IAmb 18 25 11.1
comp=Z,178nm,1.3s
SPA0 Spitsbergen Ar 64.50 347 ⇓*i*P **P** **18 25 09.4 +0.5**
SPITS Spitsbergen Ar 64.50 347 LR LR 18 57 09.8
comp=Z,904nm,18.2s,baz=70,slow=40
SPITS Spitsbergen Ar 64.50 347 P **P** **18 25 09.6 +0.7**
SPITS pmax pmax
comp=Z,5.0nm,0.4s
HSPB Hornsund (broa 64.54 346 ⇓*i*P **P** **18 25 09.9 +0.8**
BSD Bornholm Skovb 64.59 321 ⇓*i*P **P** **18 25 09.2 -0.5**
BSD pmax pmax
comp=Z,51nm,0.8s
BSD Bornholm Skovb 64.59 321 ⇓*i*P **P** **18 25 09.2 -0.5**
comp=Z,51nm,0.8s
BSD Bornholm Skovb 64.59 321 ⇓*i*P **P** **18 25 09.3 -0.5**
BSD IAmb IAmb 18 25 10.1
comp=Z,51nm,0.8s
MTSU Mount Surprise 64.60 125 P **P** **18 25 11.3 +0.9**
baz=65,SNR=25
LOF Lofoten 64.67 336 ⇓*i*P **P** **18 25 09.9 -0.1**
KOGS Kog 64.75 312 *i* P **P** **18 25 11.3 +0.3**
KOGS *e* 18 25 27.7
CONA Conrad Observa 64.81 313 *i* P **P** **18 25 12.0 +0.6**
comp=Z,104nm,0.9s,SNR=83
KONS Konsvik 64.85 334 ⇓*i*P **P** **18 25 11.4 +0.2**
N2SV S_rv¥gen 64.87 336 ⇓*i*P **P** **18 25 11.1 -0.3**
TREC Trest 64.87 315 *eP* **P** **18 25 12.4 +0.6**
TREC MLR MLR
comp=Z,2µm,21.1s
TREC Trest 64.87 315 *eP* **P** **18 25 12.4 +0.6**
TREC *ex* x 18 33 39.7
TREC AMS AMS 18 55 50.0
comp=Z,2µm,21.1s
STOK Stokkvaagen 64.89 334 *eP* **P** **18 25 12.0 +0.5**
N2VA Vr_y 64.99 335 ⇓*i*P **P** **18 25 11.5 -0.7**
ARSA Arzberg 65.13 313 *i* P **P** **18 25 14.0 +0.5**
comp=Z,51nm,0.7s,SNR=41
N2RO R_st 65.22 335 ⇓*i*P **P** **18 25 13.2 -0.4**
PVCC Panska Ves 65.30 316 *eP* **P** **18 25 15.2 +0.7**
PVCC *e* 18 25 31.6
PVCC *eS* **S** **18 33 56.3 +1.7**
PVCC MLR MLR
comp=Z,2µm,18.7s
PVCC Panska Ves 65.30 316 *eP* **P** **18 25 15.2 +0.7**
PVCC *epP* **sP** **18 25 31.6 -2.8**
PVCC *eS* **S** **18 33 56.3 +1.7**
PVCC AMS AMS 18 56 30.0
comp=Z,2µm,18.7s
CRES Cresnjev 65.39 311 ⇓*i*P **P** **18 25 15.8 +0.6**
PRU Pruhonice 65.39 316 *eP* **P** **18 25 15.4 +0.3**
PRU *e* 18 25 31.6
PRU *eS* **S** **18 33 51.9 -3.8**
PRU MLR MLR
comp=Z,2µm,25.1s
PRU Pruhonice 65.39 316 *eP* **P** **18 25 15.4 +0.3**
PRU *epP* **pP** **18 25 31.6 +2.3**
PRU *eS* **S** **18 33 51.9 -3.8**
PRU AMS AMS 18 55 30.0
comp=Z,2µm,25.1s
NSS Namsos 65.40 332 ⇓*i*P **P** **18 25 14.8 0.0**
MBAR Mbarara 65.44 258 P **P** **18 25 17.7 +1.6**
MBAR Mbarara 65.44 258 *ce*P **P** **18 25 17.0 +0.8**
MBAR *e* 18 25 31.6
MBAR pmax pmax
comp=Z,89nm,1.7s
MBAR Mbarara 65.44 258 P **P** **18 25 16.6 +0.4**
MBAR Mbarara 65.44 258 IAMs_20 IAMs_20 18 54 02.8
comp=Z,2µm,21.0s
PRA Prague 65.45 316 *eP* **P** **18 25 16.8 +1.4**
PRA *eS* **S** **18 33 54.3 -2.1**
PRA MLR MLR
comp=Z,900nm,17.2s
PRA Prague 65.45 316 *eP* **P** **18 25 16.8 +1.4**
PRA *eS* **S** **18 33 54.3 -2.1**
PRA AMS AMS 18 56 40.0
comp=Z,900nm,17.2s
KBS Kingsbay 65.45 348 IAMs_20 IAMs_20 18 59 21.3
comp=Z,2µm,21.0s
KBS Kingsbay 65.45 348 ⇓*i*P **P** **18 25 15.2 +0.2**
PERS Pernice 65.49 312 *eP* **P** **18 25 16.2 +0.3**
PERS *e*PcP **PcP** **18 25 43.2 -4.2**
RUE Ruedersdorf 65.54 319 *eP* **P** **18 25 16.4 +0.5**
RUE Ruedersdorf 65.54 319 *eP* **P** **18 25 16.9 +0.9**
comp=Z,422nm,1.4s,baz=81,slow=6.3
RUE *epP* **sP** **18 25 33.5 -2.3**
baz=81,slow=6.3
SOKA Soboth 65.54 312 *i* P **P** **18 25 16.8 +0.5**
comp=Z,68nm,0.8s,SNR=49
RGN Rugen 65.56 321 *eP* **P** **18 25 16.4 +0.4**
RGN Rugen 65.56 321 *eP* **P** **18 25 17.2 +1.1**
comp=Z,394nm,1.5s,baz=81,slow=6.3
RGN *epP* **sP** **18 25 33.4 -2.6**
baz=81,slow=6.3
RGN Rugen 65.56 321 P **P** **18 25 16.9 +0.8**
BOJS Bojanci 65.58 311 *eP* **P** **18 25 16.8 +0.4**
BOJS *eS* **S** **18 33 57.1 -1.0**
TIP Timpagrande 65.60 304 ⇓P **P** **18 25 16.6 -0.2**
TIP Timpagrande 65.60 304 P **P** **18 25 16.6 -0.2**
TIP IAmb IAmb 18 25 17.9
comp=Z,189nm,1.5s
BRG Berggiesshubel 65.65 317 ⇓*i*P **P** **18 25 17.6 +0.9**
comp=Z,112nm,0.8s
BRG *i* 18 25 34.2
comp=Z,2.0nm,1.7s
comp=Z,3µm,18.4s
comp=N,930nm,23.7s
comp=E,2µm,23.7s
BRG Berggiesshubel 65.65 317 ⇓*i*P **P** **18 25 17.6 +0.9**
BRG *i* 18 25 34.2
BRG MLR MLR
comp=Z,2µm,18.4s
BRG MLR MLR
comp=N,3µm,23.7s
BRG MLR MLR
comp=E,930nm,23.7s
BRG Berggiesshubel 65.65 317 *eP* **P** **18 25 17.7 +0.9**
comp=E,311nm,1.7s,baz=81,slow=6.3
BRG *epP* **sP** **18 25 34.2 -2.5**
baz=81,slow=6.3
NC405 NORSAR Array S 65.76 328 P **P** **18 25 17.3 0.0**
PBCC Pribram 65.78 316 *eP* **P** **18 25 18.1 +0.5**
SGRT San Giovanni R 65.87 307 P **P** **18 25 17.6 -0.9**
SGRT IAmb IAmb 18 25 19.2
comp=Z,77nm,0.9s
MOA Molln 65.88 314 *i* P **P** **18 25 18.8 +0.4**
comp=Z,99nm,0.6s,SNR=77
NC602 NORSAR Array S 65.88 328 P **P** **18 25 17.9 -0.1**
NORES NORESS Array B 65.88 328 P **P** **18 25 18.0 0.0**
NORES pmax pmax
comp=Z,44nm,0.5s
OBKA Obir 65.90 312 *i* P **P** **18 25 19.1 +0.5**
comp=Z,72nm,0.9s,SNR=45
NC303 NORSAR Array S 65.92 328 P **P** **18 25 18.3 0.0**
COP Copenhagen 65.94 322 *i* P **P** **18 25 19.0 +0.5**
COP pmax pmax
comp=Z,170nm,1.4s
COP Copenhagen 65.94 322 *i* P **P** **18 25 19.0 +0.5**
comp=Z,170nm,1.4s
COP Copenhagen 65.94 322 *i* P **P** **18 25 19.0 +0.5**
COP IAmb IAmb 18 25 20.3
comp=Z,170nm,1.4s
NB201 NORSAR Array S 65.97 328 P **P** **18 25 18.5 -0.2**
NB201 IAmb IAmb 18 25 19.4
comp=Z,221nm,1.0s
LJU Ljubljana 65.99 312 *i* P **P** **18 25 19.5 +0.5**
LJU *e* 18 25 35.5
LJU *i* PcP **PcP** **18 25 46.8 -2.6**
LJU *i* S **S** **18 34 02.0 -1.2**
LJU Ljubljana 65.99 312 ⇓*i*P **P** **18 25 19.8 +0.8**
NB2 NORSAR Subarra 66.01 328 P **P** **18 25 18.7 -0.2**
comp=Z,126nm,0.7s,baz=84,slow=6.5
NB2 NORSAR Subarra 66.01 328 P **P** **18 25 18.7 -0.2**
baz=84,slow=6.5
NOA NORSAR Array B 66.01 328 P **P** **18 25 18.6 -0.3**
comp=Z,71nm,0.6s,baz=86,slow=6.3,SNR=446
NOA LR LR 18 57 04.7
comp=Z,2µm,20.3s,baz=95,slow=38
FBE Freiberg 66.01 317 *eP* **P** **18 25 20.2 +1.1**
comp=Z,438nm,1.5s,baz=81,slow=6.3
FBE *epP* **sP** **18 25 36.6 -2.3**
baz=81,slow=6.3
SMY Shemya 66.02 41 P **P** **18 25 20.1 +1.1**
SMY pmax pmax
comp=Z,430nm,1.1s
SMY Shemya 66.02 41 P **P** **18 25 20.1 +1.1**
FOMA Nahampoana Res 66.03 226 P **P** **18 25 20.0 +0.5**
GEC2 GERESS Array S 66.10 315 *eP* **P** **18 25 20.6 +0.8**
comp=Z,166nm,0.7s,baz=81,slow=6.3
GEC2 *epP* **pP** **18 25 36.4 +2.3**
baz=81,slow=6.3
GEC2 GERESS Array S 66.10 315 P **P** **18 25 20.0 +0.2**
GEC2 IAmb IAmb 18 25 21.1
comp=Z,132nm,0.7s
GERES GERESS Array B 66.10 315 P **P** **18 25 20.5 +0.7**
comp=Z,96nm,0.6s,baz=76,slow=6.4,SNR=841
GERES LR LR 18 58 03.9
comp=Z,1µm,19.9s,baz=80,slow=39
CEY Cerknica 66.11 311 ⇓*i*P **P** **18 25 20.1 +0.2**
KHC Kasperske Hory 66.13 315 *di*P **P** **18 25 20.5 +0.5**
KHC pmax pmax
comp=Z,226nm,1.3s
KHC MLR MLR
comp=Z,4µm,24.0s
KHC Kasperske Hory 66.13 315 *eP* **P** **18 25 20.4 +0.5**
KHC *ex* x 18 25 35.3
KHC *eS* **S** **18 34 03.5 -1.4**
KHC AMS AMS 18 56 20.0
comp=Z,2µm,26.3s
KHC Kasperske Hory 66.13 315 P **P** **18 25 20.1 +0.1**
KHC IAmb IAmb 18 25 21.8
comp=Z,178nm,1.5s
RIY Rijeka 66.14 311 ⇓*i*P **P** **18 25 19.8 -0.2**
CLL Collm 66.18 317 ⇓*i*P **P** **18 25 20.3 +0.2**
comp=Z,133nm,1.3s
CLL *e*Pmax 18 25 23.0
CLL *i* pP **sP** **18 25 37.0 -3.0**
comp=Z,134nm,1.5s
CLL *i* 18 25 44.6
CLL *i* PcP **PcP** **18 25 49.0 -1.1**
CLL *e*PP **PP** **18 27 47.0 +1.0**
CLL *es*PP 18 28 03.0
CLL *e*(sPPP) 18 29 47.0
CLL *eS* **S** **18 34 02.0 -3.2**
CLL *e*PPS PPS 18 34 36.0
CLL *e*ScS **ScS** **18 35 15.0 +2.6**
CLL *e*SS **SS** **18 38 24.0 +2.7**
CLL *e* 18 39 42.0
CLL *e*SSS SSS 18 41 30.0
CLL *e*SSSS 18 42 30.0
CLL *e*PKPPKPd **P'P'df** **18 53 57.0 -1.0**
CLL *ep*PKPPKPd 18 54 15.0
CLL Lmax 18 57 00.0
CLL LmV 18 58 00.0
comp=Z,3µm,22.0s
CLL Collm 66.18 317 ⇓*i*P **P** **18 25 20.3 +0.2**
CLL *i* *PP **sP** **18 25 37.0 -3.0**
CLL *eS* **S** **18 34 02.0 -3.2**
CLL pmax pmax
comp=Z,133nm,1.3s
CLL Collm 66.18 317 *eP* **P** **18 25 20.5 +0.4**
comp=Z,132nm,1.3s,baz=81,slow=6.3
CLL *epP* **sP** **18 25 37.0 -3.0**
baz=81,slow=6.3
CLL Collm 66.18 317 P **P** **18 25 19.6 -0.5**
CLL IAmb IAmb 18 25 21.8
comp=Z,137nm,1.3s
NAO01 NORSAR Array S 66.19 328 P **P** **18 25 19.9 -0.1**
NAO01 IAmb IAmb 18 25 20.6
comp=Z,198nm,0.8s
NAO01 NORSAR Array S 66.19 328 ⇓*i*P **P** **18 25 19.9 -0.1**
NC204 NORSAR Array S 66.20 328 P **P** **18 25 20.1 -0.1**
NBO00 NORSAR Array S 66.22 328 P **P** **18 25 20.1 -0.2**
TBLU Trondheim 66.25 331 ⇓*i*P **P** **18 25 20.3 -0.1**
JAVS Javornik 66.33 311 *i* S **S** **18 34 06.8 -0.8**
OSL Oslo 66.36 327 ⇓*i*P **P** **18 25 21.8 +0.7**
SKDS Skadanscina 66.43 311 *eP* **P** **18 25 21.3 -0.6**
SKDS *eS* **S** **18 34 06.3 -2.3**
SKDS *e* 18 34 23.5
VOJS Vojsko 66.44 312 *i* P **P** **18 25 22.0 0.0**
VOJS *i* 18 25 38.5
VOJS *eS* **S** **18 34 07.5 -1.3**
CEL Celeste 66.45 303 P **P** **18 25 22.4 +0.2**
CEL IAmb IAmb 18 25 23.7
comp=Z,219nm,1.0s
MYKA Terra Mystica 66.50 312 *i* P **P** **18 25 22.4 0.0**
comp=Z,30nm,1.1s,SNR=10
CADS Cadrg 66.50 312 *eP* **P** **18 25 22.0 -0.4**
CADS *i* S **S** **18 34 07.3 -2.2**
PRED Cave del Predi 66.58 312 P **P** **18 25 22.5 -0.4**
WET Wettzell 66.59 315 P **P** **18 25 23.7 +0.9**
WET pmax pmax
comp=Z,131nm,1.7s
WET Wettzell 66.59 315 *eP* **P** **18 25 23.7 +0.9**
comp=Z,106nm,0.9s,baz=81,slow=6.3
WET *epP* **sP** **18 25 40.2 -2.6**
baz=81,slow=6.3
KBA Koelnbreinsper 66.62 313 *i* P **P** **18 25 23.2 -0.1**
comp=Z,41nm,0.6s,SNR=25
KBA Koelnbreinsper 66.62 313 P **P** **18 25 23.2 -0.1**
KBA pmax pmax
comp=Z,81nm,1.1s
TANN Tannenbergstha 66.65 316 *eP* **P** **18 25 24.0 +0.7**
comp=Z,631nm,1.8s,baz=81,slow=6.3
TANN *epP* **sP** **18 25 40.5 -2.7**
baz=81,slow=6.3
NKC Novy Kostel 66.69 316 *eP* **P** **18 25 24.1 +0.6**
NKC *eS* **S** **18 34 10.1 -1.5**
NKC MLR MLR
comp=Z,2µm,17.2s
NKC smax smax
comp=N,9.0nm,1.2s
NKC Novy Kostel 66.69 316 *eP* **P** **18 25 24.1 +0.6**
NKC *eS* **S** **18 34 10.1 -1.5**
NKC AMS AMS 18 57 20.0
comp=N,2µm,17.2s
WERN Wernitzgruen 66.72 316 *eP* **P** **18 25 24.7 +1.0**
comp=N,294nm,1.8s,baz=81,slow=6.3
WERN *epP* **sP** **18 25 40.9 -2.8**
baz=81,slow=6.3
GUNZ Gunzen 66.74 316 *eP* **P** **18 25 24.8 +1.0**
comp=N,136nm,0.9s,baz=81,slow=6.3
GUNZ *epP* **sP** **18 25 40.9 -2.8**
baz=81,slow=6.3
PLN Plauen 66.83 317 *eP* **P** **18 25 25.1 +0.8**
comp=N,292nm,1.8s,baz=81,slow=6.3
PLN *epP* **sP** **18 25 41.6 -2.7**
baz=81,slow=6.3
PAOL Paolisi 66.88 306 P **P** **18 25 24.0 -0.9**
ROTZ Rotzenmuhle 66.92 316 *eP* **P** **18 25 26.2 +1.4**
comp=N,537nm,1.7s,baz=81,slow=6.3
ROTZ *epP* **sP** **18 25 42.6 -2.3**
baz=81,slow=6.3
DOMB Dombas 66.93 329 ⇓*i*P **P** **18 25 25.2 +0.4**
MANZ Manzenberg 66.94 316 *eP* **P** **18 25 26.2 +1.1**
comp=N,293nm,1.5s,baz=81,slow=6.3
MANZ *epP* **sP** **18 25 42.6 -2.5**
baz=81,slow=6.3
NEUB Neuenburg 66.95 317 *eP* **P** **18 25 25.8 +0.8**
comp=N,465nm,1.6s,baz=81,slow=6.3
NEUB *epP* **sP** **18 25 42.5 -2.6**
baz=81,slow=6.3
KONO Kongsberg 66.96 327 P **P** **18 25 25.0 0.0**

KONO pmax pmax
comp=Z,299nm,1.5s
KONO Kongsberg 66.96 327 P P 18 25 25.0 0.0
KONO IAmb IAmb 18 25 26.5
comp=Z,299nm,1.5s
KONO Kongsberg 66.96 327⇓*i*P P 18 25 25.2 +0.3
ZOU Zoufplan 66.96 312 P P 18 25 24.8 -0.7
ZOU IAmb IAmb 18 25 26.4
comp=Z,147nm,1.6s
MOX Moxa 67.14 317 P P 18 25 27.1 +0.8
MOX pmax pmax
comp=Z,113nm,1.5s
MOX Moxa 67.14 317 *e*P P 18 25 27.1 +0.8
comp=Z,111nm,1.1s,baz=81,slow=6.3
MOX *e*pP **sP 18 25 43.6 -2.7**
baz=81,slow=6.3
INTR Introdacqua 67.17 307 P P 18 25 25.7 -1.0
INTR IAmb IAmb 18 26 23.4
comp=Z,101nm,1.0s
STAL STALIGIAL 67.20 312 P P 18 25 26.3 -0.5
ABTA Abfaltersbach 67.24 313 *i* P P 18 25 26.5 -0.6
comp=Z,26nm,0.8s,SNR=39
CTA Charters Tower 67.24 126 P P 18 25 28.2 +0.9
CTA pmax pmax
comp=Z,83nm,1.2s
CTAO Charters Tower 67.24 126 P P 18 25 27.5 +0.2
CTAO pmax pmax
comp=Z,80nm,1.1s
CTAO Charters Tower 67.24 126 P P 18 25 27.5 +0.2
CIMO Cimolais 67.37 312 P P 18 25 27.2 -0.6
CIMO IAmb IAmb 18 25 28.7
comp=Z,295nm,1.4s
CIMO IAMs_20 IAMs_20 18 59 09.5
comp=Z,2µm,22.0s
BSEG Bad Segeberg 67.40 321 P P 18 25 29.1 +1.3
BSEG pmax pmax
comp=Z,217nm,1.3s
BSEG Bad Segeberg 67.40 321 *e*P P 18 25 29.1 +1.3
comp=Z,417nm,1.6s,baz=81,slow=6.3
BSEG *e*pP **sP 18 25 45.2 -2.5**
baz=81,slow=6.3
SKAR Skarslia 67.47 328⇓*i*P P 18 25 29.2 +1.0
AQU L'Aquila 67.47 308 P P 18 25 28.7 +0.1
AQU pmax pmax
comp=Z,197nm,1.1s
AQU L'Aquila 67.47 308⇓*i*P P 18 25 28.9 +0.3
AQU L'Aquila 67.47 308 P P 18 25 28.7 +0.1
AQU IAmb IAmb 18 25 52.5
comp=Z,197nm,1.1s
ASSE Asse, Remlinge 67.48 319 *e*P P 18 25 28.9 +0.6
comp=Z,237nm,1.7s,baz=81,slow=6.3
ASSE *e*pP **sP 18 25 45.1 -3.2**
baz=81,slow=6.3
GOET G??ttrup 67.53 324⇓*i*P P 18 25 29.9 +1.4
comp=Z,489nm,1.1s
GOET G??ttrup 67.53 324⇓*i*P P 18 25 29.9 +1.4
GOET IAmb IAmb 18 25 30.7
comp=Z,490nm,1.1s
WAKE Wake Island 67.55 78 P P 18 25 28.9 -0.5
WAKE IAmb IAmb 18 25 32.2
comp=Z,122nm,0.8s
GRA1 Grafenberg Arr 67.56 316 P P 18 25 28.7 -0.3
GRF Grafenberg Arr 67.56 316 P P 18 25 28.7 -0.3
GRF pmax pmax
comp=Z,583nm,1.7s
GRF MLR MLR
comp=Z,2µm,22.0s
GRF Grafenberg Arr 67.56 316 *e*P P 18 25 30.2 +1.2
comp=Z,480nm,1.6s,baz=81,slow=6.3
GRF *e*pP **sP 18 25 46.5 -2.5**
baz=81,slow=6.3
MOL Molde 67.56 330⇓*i*P P 18 25 29.6 +0.9
NRCA Norcia 67.58 308 P P 18 25 29.1 -0.2
NRCA IAmb IAmb 18 25 31.6
comp=Z,230nm,1.1s
MUD Monsted U'grnd 67.64 323⇓*i*P P 18 25 30.4 +1.1
MUD pmax pmax
comp=Z,430nm,1.5s
MUD Monsted U'grnd 67.64 323⇓*i*P P 18 25 30.4 +1.1
comp=Z,427nm,1.5s
MUD Monsted U'grnd 67.64 323⇓*i*P P 18 25 30.4 +1.1
MUD IAmb IAmb 18 25 31.4
comp=Z,427nm,1.5s
CLZ Clausthal 67.71 318 *e*P P 18 25 30.9 +1.0
comp=Z,478nm,1.6s,baz=81,slow=6.3
CLZ *e*pP **sP 18 25 47.6 -2.2**
baz=81,slow=6.3
HOMB Homborsund 67.72 325⇓*i*P P 18 25 30.1 +0.3
HOMB Homborsund 67.72 325⇓*i*P P 18 25 30.1 +0.3
HOMB IAmb IAmb 18 25 31.1
comp=Z,68nm,1.0s
WTTA Wattenberg 67.73 313 *i* P P 18 25 29.9 -0.4
comp=Z,104nm,0.8s,SNR=63
WTTA Wattenberg 67.73 313 P P 18 25 30.1 -0.2
WTTA pmax pmax
comp=Z,164nm,1.2s
NRDL Niedersach Rie 67.76 319 *e*P P 18 25 31.3 +1.3
comp=Z,462nm,1.4s,baz=81,slow=6.3
NRDL *e*pP **sP 18 25 47.6 -2.4**
baz=81,slow=6.3
WATA Walderalm 67.76 313 *i* P P 18 25 29.9 -0.5
comp=Z,70nm,0.8s,SNR=42
SKMB Sankelmark Bun 67.78 321 *e*P P 18 25 31.7 +1.5
comp=Z,492nm,1.6s,baz=81,slow=6.3
SKMB *e*pP **sP 18 25 48.0 -2.1**
baz=81,slow=6.3
AKN Aaknes 67.87 330⇓*i*P P 18 25 31.2 +0.5
MURB Monte Urbino 67.91 309 P P 18 25 31.6 +0.2
CTI Castel Tesino 67.96 312 P P 18 25 31.4 -0.3
CTI pmax pmax
comp=Z,60nm,0.8s
CTI MLR MLR
comp=Z,1µm,22.0s
CTI Castel Tesino 67.96 312 P P 18 25 31.4 -0.3
CTI IAMs_20 IAMs_20 18 59 27.9
comp=Z,1µm,22.0s
SQTA Sankt Quirin 68.03 313 *i* P P 18 25 31.8 -0.3
comp=Z,87nm,0.6s,SNR=54
MOTA Moosalm 68.07 313 *i* P P 18 25 32.0 -0.5
comp=Z,163nm,1.0s,SNR=59
TEOL Teolo 68.08 311 P P 18 25 31.9 -0.5
TEOL IAmb IAmb 18 25 33.6
comp=Z,171nm,0.9s
UBBA Unterbreizbach 68.12 317 *e*P P 18 25 33.0 +0.6
comp=Z,170nm,1.4s,baz=81,slow=6.3
UBBA *e*pP **sP 18 25 49.4 -3.0**
baz=81,slow=6.3
RETA Reutte 68.27 314 *i* P P 18 25 33.5 -0.1
comp=Z,118nm,0.7s,SNR=72
SNART Snartemo 68.38 326⇓*i*P P 18 25 34.6 +0.7
SNART Snartemo 68.38 326⇓*i*P P 18 25 34.6 +0.7
FETA Feichten 68.39 313 *i* P P 18 25 34.3 -0.1
comp=Z,92nm,0.9s,SNR=51
ODD1 Odda 68.41 327⇓*i*P P 18 25 34.8 +0.6
HYA Hoyanger 68.41 329⇓*i*P P 18 25 34.4 +0.4
CORL Corleone 68.52 303 P P 18 25 34.5 -0.8
LATE Laterza 68.57 308 P P 18 25 34.5 -1.0
LATE IAmb IAmb 18 25 36.0
comp=Z,149nm,1.4s
BLS5 Blasjo 68.58 327⇓*i*P P 18 25 35.9 +0.7
CLTB Caltabellotta 68.66 303 P P 18 25 35.5 -0.7
UBR Ueberruh 68.67 314 *e*P P 18 25 36.2 +0.1
comp=Z,106nm,0.8s,baz=81,slow=6.3
UBR *e*pP **pP 18 25 52.5 +2.2**
baz=81,slow=6.3
OSSC Osservatorio P 68.77 309 P P 18 25 36.0 -0.6
ZCCA Zocca 68.78 310 P P 18 25 37.9 +1.1
ZCCA IAmb IAmb 18 25 43.3
comp=Z,149nm,0.9s
SALO Salr 68.82 312 P P 18 25 37.6 +0.6
FOO Floro 68.88 329⇓*i*P P 18 25 37.4 +0.4
DAVA Damuels 68.90 314 *i* P P 18 25 37.7 +0.1
comp=Z,137nm,0.9s,SNR=80
BER Bergen 68.96 328 P P 18 25 38.3 +0.8
BER pmax pmax
comp=Z,162nm,1.2s
BER Bergen 68.96 328⇓*i*P P 18 25 38.1 +0.6
ASK Askoy 69.01 328⇓*i*P P 18 25 38.3 +0.5
STU Stuttgart 69.04 315 P P 18 25 38.8 +0.6
STU pmax pmax
comp=Z,174nm,1.0s
STU MLR MLR
comp=Z,2µm,19.0s
STU Stuttgart 69.04 315 *e*P P 18 25 39.1 +0.8
comp=Z,173nm,0.9s,baz=81,slow=6.3
STU *e*pP **sP 18 25 55.3 -3.0**
baz=81,slow=6.3
STU Stuttgart 69.04 315 *e*P P 18 25 38.8 +0.6
STU IAmb IAmb 18 25 40.1
comp=Z,174nm,1.0s
STU IAMs_20 IAMs_20 19 00 05.3
comp=Z,2µm,19.0s
SUE Sulen 69.11 329⇓*i*P P 18 25 38.8 +0.4
PRMA PARMA 69.15 311 P P 18 25 40.0 +1.1
PRMA IAmb IAmb 18 25 41.5
comp=Z,484nm,1.7s
BBOO Buckleboo 69.18 142 P P 18 25 39.2 0.0
baz=69,SNR=27
BBOO Buckleboo 69.18 142 P P 18 25 38.7 -0.5
BBOO IAmb IAmb 18 25 54.2
comp=Z,113nm,0.8s
BBOO IAMs_20 IAMs_20 18 55 43.6
comp=Z,1µm,22.0s
CASP Castiglione de 69.20 309 P P 18 25 38.3 -1.1
CASP IAMs_20 IAMs_20 19 00 48.9
comp=Z,786nm,20.0s
IBBN Ibbenburen 69.21 319 *e*P P 18 25 40.0 +0.8
comp=Z,431nm,1.6s,baz=81,slow=6.3
IBBN *e*pP **sP 18 25 56.3 -3.0**
baz=81,slow=6.3
TNS Taunus Mts 69.21 317 P P 18 25 40.0 +0.6
TNS pmax pmax
comp=Z,171nm,1.1s
TNS Taunus Mts 69.21 317 *e*P P 18 25 40.0 +0.6
comp=Z,192nm,1.2s,baz=81,slow=6.3
TNS *e*pP **sP 18 25 56.4 -3.0**
baz=81,slow=6.3
KMY Karmoy 69.23 327⇓*i*P P 18 25 39.8 +0.6
VLC Villacollemand 69.23 310 P P 18 25 39.5 -0.1
VLC IAmb IAmb 18 25 49.3
comp=Z,101nm,0.9s
VLC IAMs_20 IAMs_20 19 01 22.6
comp=Z,2µm,22.0s
AMKA Amchitka 69.41 42 P P 18 25 40.6 +0.2
TUE Stuetta 69.43 313 P P 18 25 40.4 -0.6
TUE IAmb IAmb 18 25 42.5
comp=Z,597nm,2.0s
TUE IAMs_20 IAMs_20 19 00 21.8
comp=Z,2µm,21.0s
KTD Kalmit 69.64 316 P P 18 25 42.6 +0.6
BUG Bochum--Univer 69.69 318 P P 18 25 43.1 +0.9
BUG pmax pmax
comp=Z,149nm,1.7s
BUG Bochum--Univer 69.69 318 *e*P P 18 25 43.0 +0.9
comp=Z,328nm,1.5s,baz=81,slow=6.3
BUG *e*pP **sP 18 25 59.1 -3.0**
baz=81,slow=6.3
BFO Black Forest 69.70 315 P P 18 25 42.1 -0.3
BFO pmax pmax
comp=Z,45nm,1.0s
BFO MLR MLR
comp=Z,2µm,19.0s
BFO Black Forest 69.70 315 *e*P P 18 25 42.5 +0.1
comp=Z,102nm,1.6s,baz=81,slow=6.3
BFO Black Forest 69.70 315 P P 18 25 42.0 -0.3
BFO IAMs_20 IAMs_20 19 00 35.6
comp=Z,2µm,19.0s
SLE Schleitheim 69.72 314 P P 18 25 42.6 +0.1
SLE pmax pmax
comp=Z,132nm,1.4s
MSSA Maissana 69.81 310 P P 18 25 41.8 -1.4
MSSA IAmb IAmb 18 25 44.2
comp=Z,245nm,1.4s
QLP Quilpie 69.89 132 P P 18 25 44.7 +0.9
baz=70,SNR=20
AHRW Bad Neuenahr-A 70.00 317 *e*P P 18 25 45.1 +1.0
comp=Z,198nm,1.4s,baz=81,slow=6.3
AHRW *e*pP **sP 18 26 01.4 -2.8**
baz=81,slow=6.3
CDF Champ du Feu 70.36 315 *e*P P 18 25 45.7 -0.8
CDF pmax pmax
comp=Z,162nm,1.2s
ECH Echery 70.48 315 P P 18 25 47.0 -0.2
ECH pmax pmax
comp=Z,37nm,0.9s
ECH MLR MLR
comp=Z,1µm,22.0s
ECH Echery 70.48 315 P P 18 25 47.0 -0.2
ECH IAMs_20 IAMs_20 19 00 03.5
comp=Z,1µm,22.0s
BTNL Ternell 70.58 318 P P 18 25 48.4 +0.7
BTNL PcP **pP 18 26 03.1 +1.0**
MOF Molkenrain 70.59 315 P P 18 25 48.4 +0.5
PGF Pioggiola 70.60 309 P P 18 25 48.5 +0.4
PGF pmax pmax
comp=Z,186nm,1.3s
MEM Membach 70.65 318 P P 18 25 48.6 +0.5
MEM PcP **pP 18 26 03.2 +0.7**
MEM Membach 70.65 318 P P 18 25 48.8 +0.7
MEM pmax pmax
comp=Z,124nm,1.2s
BHOU Houvegnez 70.71 317 P P 18 25 49.4 +0.9
BHOU PcP **pP 18 26 05.2 +2.3**
HINF Hinteralfeld 70.78 315 *e*P P 18 25 48.0 -1.0
HINF pmax pmax
comp=Z,275nm,1.7s
WLF Walferdange 70.78 317 P P 18 25 50.3 +1.4
WLF PcP **sP 18 26 05.9 -3.1**
WLF Walferdange 70.78 317 P P 18 25 49.8 +0.9
WLF pmax pmax
comp=Z,534nm,1.2s
WLF MLR MLR
comp=Z,2µm,21.0s
WLF Walferdange 70.78 317 *e*P P 18 25 50.5 +1.5
comp=Z,649nm,1.3s,baz=81,slow=6.3
WLF *e*pP **sP 18 26 06.7 -2.3**
baz=81,slow=6.3
WLF Walferdange 70.78 317 P P 18 25 49.8 +0.9
WLF IAMs_20 IAMs_20 19 01 05.3
comp=Z,2µm,21.0s
BEBN Eben Emael 70.81 318 P P 18 25 49.4 +0.4
BEBN PcP **pP 18 26 05.6 +2.2**
SENIN Lac Senin/Sane 70.84 313 P P 18 25 49.6 0.0
SENIN IAmb IAmb 18 25 52.1
comp=Z,95nm,0.8s
SENIN IAMs_20 IAMs_20 19 01 12.9
comp=Z,1µm,21.0s
BSTI Sart Tilman 70.93 318 P P 18 25 50.6 +0.8
BSTI PcP **pP 18 26 06.5 +2.3**
HAU Haudompre 71.06 315 *e*P P 18 25 49.8 -0.9
HAU pmax pmax
comp=Z,89nm,0.9s
VSL Villasalto 71.10 306 P P 18 25 50.9 -0.2
VSL IAmb IAmb 18 25 52.8
comp=Z,130nm,1.0s
BCLA Clavier 71.13 317 P P 18 25 50.9 -0.1
comp=Z,96nm,1.6s
BCLA PcP **sP 18 26 07.8 -3.3**
GAMB Gambell 71.23 28 P P 18 25 51.3 0.0
GAMB IAmb IAmb 18 25 52.7
comp=Z,95nm,0.8s
RCHB Rochefort 71.24 317 P P 18 25 52.1 +0.4
RCHB PcP **pP 18 26 07.1 +1.1**
SAOF Saorge 71.26 311 P P 18 25 52.5 +0.5
SAOF pmax pmax
comp=Z,144nm,0.9s
HTT Hallett 71.26 141 P P 18 25 52.1 +0.1
baz=71,SNR=8.5
BGES Gesves 71.28 317 P P 18 25 52.4 +0.5
BGES PcP **pP 18 26 08.3 +2.0**
SBF Sospel 71.37 310 *e*P P 18 25 51.9 -0.8
SBF pmax pmax
comp=Z,129nm,1.0s
LPG La Plagne 71.42 312 *e*P P 18 25 52.8 -0.5
LPG pmax pmax
comp=Z,135nm,0.9s
LPL La Plagne 71.43 312 *e*P P 18 25 52.7 -0.5
LPL pmax pmax
comp=Z,151nm,0.8s
BMRD Maredsous 71.49 317 P P 18 25 53.7 +0.5
comp=Z,72nm,1.5s
BMRD PcP **pP 18 26 08.2 +0.6**
GIVF Givet 71.51 317 *e*P P 18 25 52.9 -0.4
GIVF pmax pmax
comp=Z,158nm,1.2s
ISO Isola 71.56 311 P P 18 25 53.9 +0.1
ISO pmax pmax
comp=Z,114nm,1.1s
CABF La Chapelle 71.58 313 *e*P P 18 25 53.3 -0.7
CABF pmax pmax
comp=Z,172nm,1.2s
BNI Bardonecchia 71.59 312 P P 18 25 53.3 -0.8
BNI pmax pmax
comp=Z,198nm,1.5s
BNI MLR MLR
comp=Z,1µm,22.0s
BNI Bardonecchia 71.59 312 P P 18 25 53.3 -0.8
BNI IAmb IAmb 18 25 55.4
comp=Z,198nm,1.5s
BNI IAMs_20 IAMs_20 19 01 52.9
comp=Z,1µm,22.0s
UCC Uccle 71.62 318 P P 18 25 54.2 +0.2
UCC PcP **pP 18 26 10.3 +2.0**
UCC Uccle 71.62 318 P P 18 25 53.9 0.0
UCC pmax pmax
comp=Z,262nm,1.9s
UCC MLR MLR
comp=Z,2µm,22.0s
UCC Uccle 71.62 318 P P 18 25 53.9 0.0
UCC IAmb IAmb 18 25 55.4
comp=Z,262nm,1.9s
DOU Dourbes 71.65 317 P P 18 25 54.3 +0.2
comp=Z,59nm,1.5s
DOU PcP **pP 18 26 10.0 +1.4**
DOU Dourbes 71.65 317 P P 18 25 54.8 +0.6
DOU pmax pmax
comp=Z,89nm,1.4s
SNF Seneffe 71.74 318 P P 18 25 55.1 +0.5
SNF PcP **pP 18 26 09.9 +0.8**
STKA Stephens Creek 71.75 138 P P 18 25 55.2 +0.3
comp=Z,13nm,0.3s,baz=339,slow=5.5,SNR=99
STKA LR 19 01 10.5
comp=Z,779nm,21.0s,baz=312,slow=39
STKA Stephens Creek 71.75 138 P P 18 25 55.0 +0.1
baz=72,SNR=85
STKA Stephens Creek 71.75 138 P P 18 25 54.8 -0.2
BAIF Baives 71.90 317 *e*P P 18 25 55.4 -0.3
BAIF pmax pmax
comp=Z,229nm,1.3s
FRF La Foret Royal 72.00 310 *e*P P 18 25 55.6 -0.8
FRF pmax pmax
comp=Z,177nm,1.0s
KEST Kesra 72.15 302 P P 18 25 58.1 +0.6
comp=Z,133nm,1.1s,baz=6.8,slow=1.0,SNR=83
KEST LR LR 19 03 20.4
comp=Z,254nm,21.7s,baz=3.5,slow=40
KEST Kesra 72.15 302 P P 18 25 57.7 +0.2
KEST IAmb IAmb 18 25 59.5
comp=Z,218nm,1.1s
DAG Danmarks Havn 72.15 347⇓*i*P P 18 25 56.2 -0.4
DAG pmax pmax
comp=Z,120nm,1.3s
DAG Danmarks Havn 72.15 347⇓*i*P P 18 25 56.2 -0.4
comp=Z,119nm,1.3s
DAG Danmarks Havn 72.15 347⇓*i*P P 18 25 56.3 -0.4
DAG IAmb IAmb 18 25 57.6
comp=Z,119nm,1.3s
LMR La Mourre 72.16 310 *e*P P 18 25 56.7 -0.6
LMR pmax pmax
comp=Z,156nm,1.1s
ORIF Oris-en-Rattie 72.17 312 P P 18 25 57.5 0.0
ORIF pmax pmax
comp=Z,68nm,1.2s
LRW Lerwick 72.18 328⇓*e*P P 18 25 57.6 +0.5
LRW IAmb IAmb 18 25 58.4
comp=Z,59nm,0.8s
TNA Tin City 72.29 26 P P 18 25 58.7 +1.1
baz=288
WAL1 Walls 72.36 329⇓*i*P P 18 25 58.7 +0.5
HNR Honiara 72.69 109 P P 18 26 00.8 -0.1
HNR pmax pmax
comp=Z,129nm,0.9s
HNR MLR MLR
comp=Z,400nm,21.0s
HNR Honiara 72.69 109 P P 18 26 00.8 -0.1
HNR IAmb IAmb 18 26 27.9
comp=Z,130nm,0.9s
LOR Lormes 72.88 315 P P 18 26 01.7 +0.1
LOR pmax pmax
comp=Z,91nm,1.9s
RMQ Roma 72.97 130 P P 18 26 04.0 +1.7
baz=73,SNR=46
SSB Saint Sauveur 72.98 312 P P 18 26 01.9 -0.4
SSB pmax pmax
comp=Z,112nm,1.1s
SSB Saint Sauveur 72.98 312 P P 18 26 01.9 -0.4
VIVF Saint-Julien-l 73.01 312 *e*P P 18 26 01.7 -0.7
VIVF pmax pmax
comp=Z,130nm,1.1s
SMF Signal de Mont 73.07 314 *e*P P 18 26 01.8 -0.9
SMF pmax pmax
comp=Z,183nm,1.0s
ATKA Atka Island 73.12 40 P P 18 26 03.0 +0.2
RDOG Red Dog Mine 73.33 22 P P 18 26 04.4 +0.6
RDOG IAmb IAmb 18 26 06.1
comp=Z,267nm,1.5s
RDOG IAMs_20 IAMs_20 19 02 36.7
comp=Z,1µm,21.0s
WACR West Acre 73.33 321⇓*e*P P 18 26 04.3 +0.2
WACR IAmb IAmb 18 26 05.5
comp=Z,419nm,1.0s
WACR IAMs_20 IAMs_20 19 03 23.9
comp=Z,4µm,19.0s
AVF Avril sur Loir 73.35 314 *e*P P 18 26 03.5 -0.8
AVF pmax pmax
comp=Z,308nm,1.4s
CMAH Djebel Manchou 73.38 303 P P 18 26 05.2 +0.4
ELSH Elham, Standar 73.49 319⇓*e*P P 18 26 05.5 +0.5
ELSH IAmb IAmb 18 26 06.4
comp=Z,300nm,1.0s
ELSH IAMs_20 IAMs_20 19 00 58.9
comp=Z,3µm,22.8s
ANM Nome 73.64 26 P P 18 26 06.6 +0.9
ANM pmax pmax
comp=Z,169nm,1.2s
ANM MLR MLR
comp=Z,2µm,19.0s
ANM Nome 73.64 26 P P 18 26 06.6 +0.9
ANM IAmb IAmb 18 26 08.2
comp=Z,169nm,1.2s
DBG Daneborg 73.66 345 *i* P P 18 26 05.5 -0.1
DBG IAmb IAmb 18 26 06.6
comp=Z,61nm,1.2s
LMK Market Rasen 73.66 322⇓*e*P P 18 26 06.9 +0.9
LMK IAmb IAmb 18 26 07.7
comp=Z,390nm,1.0s
CLF Chambon-Foret 73.70 316 P P 18 26 06.4 +0.1
CAEH 'Ain El Ouahch 73.77 303 P P 18 26 06.8 -0.2
DRUM Mains of Drumt 73.78 325⇓*e*P P 18 26 07.2 +0.5
DRUM IAmb IAmb 18 26 08.2
comp=Z,230nm,1.2s
MLA1 Latheron 73.80 327⇓*i*P P 18 26 07.4 +0.7
EIDS Eidsvold 73.96 127 P P 18 26 09.1 +0.9
baz=74,SNR=39
EIDS Eidsvold 73.96 127 P P 18 26 08.6 +0.4
MCD Coleburn Disti 73.97 326⇓*i*P P 18 26 08.7 +0.9
CKFL Kef-Lekhel 73.99 303 P P 18 26 08.2 -0.2
EBL Broad Law 74.44 324⇓*i*P P 18 26 11.2 +0.7
CWF Charnwood Fore 74.44 321⇓*e*P P 18 26 10.5 -0.1
CWF IAmb IAmb 18 26 11.1
comp=Z,46nm,0.7s
CWF IAMs_20 IAMs_20 19 04 08.6
comp=Z,3µm,19.3s
EDI Edinburgh 74.47 325⇓*e*P P 18 26 10.9 +0.2
EDI IAmb IAmb 18 26 12.2
comp=Z,213nm,1.0s
LBWR Ladybower, Pea 74.47 322⇓*e*P P 18 26 11.0 +0.3
LBWR IAmb IAmb 18 26 12.3
comp=Z,148nm,1.0s
LSZ Lusaka 74.59 245 *i* P P 18 26 12.8 +0.6
LSZ Lusaka 74.59 245 P P 18 26 12.1 0.0
LSZ pmax pmax

comp=Z,95nm,0.9s
LSZ MLR MLR

comp=Z,1µm,21.0s
LSZ Lusaka 74.59 245 P **P** **18 26 12.1 0.0**
LSZ IAmb IAmb 18 26 41.6

comp=Z,95nm,0.8s
LSZ Lusaka 74.59 245 IAMs_20 IAMs_20 18 57 49.3

comp=Z,1µm,21.0s
LSZ Lusaka 74.59 245 *i* P **P** **18 26 12.8 +0.6**
DFRA Djebel Bou Aff 74.59 303 P **P** **18 26 12.5 +0.6**
EKA Eskdalemuir Ar 74.65 324 P **P** **18 26 11.6 -0.1**
ESK Eskdalemuir 74.68 324⇓*eP* **P** **18 26 12.3 +0.5**
ESK IAmb IAmb 18 26 13.0

comp=Z,103nm,0.8s
ESK Eskdalemuir 74.68 324 P **P** **18 26 12.4 +0.5**
ESK pmax pmax

comp=Z,127nm,1.0s
ESK MLR MLR

comp=Z,2µm,20.0s
ESK Eskdalemuir 74.68 324 P **P** **18 26 12.4 +0.5**
ESK IAmb IAmb 18 26 13.6

comp=Z,127nm,1.0s
ESK IAMs_20 IAMs_20 19 04 30.9

comp=Z,2µm,20.0s
INVG Invergeldie, C 74.76 325 *eP* **P** **18 26 12.6 +0.3**
INVG IAmb IAmb 18 26 13.7

comp=Z,232nm,1.7s
CAF Calviac 74.76 313 *eP* **P** **18 26 12.4 -0.3**
CAF pmax pmax

comp=Z,108nm,1.0s
MAHO Mahon 74.76 307 *eP* **P** **18 26 09.9 -2.7**
MAHO *eS* **S** **18 35 48.0 +2.3**
LINV Loch Inver, As 74.77 327⇓*eP* **P** **18 26 12.9 +0.6**
LINV IAmb IAmb 18 26 14.2

comp=Z,202nm,1.4s
STNC Stoke 74.85 322⇓*eP* **P** **18 26 13.3 +0.4**
STNC IAmb IAmb 18 26 14.8

comp=Z,260nm,1.3s
WOL Wolverton 74.85 320⇓*eP* **P** **18 26 13.6 +0.7**
CKHR Kef el Ahmar 75.03 303 P **P** **18 26 14.9 +0.4**
KAC Achnashellach 75.04 326⇓*iP* **P** **18 26 14.4 +0.5**
SET Setif 75.06 303 P **P** **18 26 11.0 -3.6**
SWN1 Swindon 75.12 320 *eP* **P** **18 26 15.1 +0.5**
SWN1 IAmb IAmb 18 26 15.9

comp=Z,92nm,0.8s
SWN1 IAMs_20 IAMs_20 19 03 39.9

comp=Z,4µm,26.2s
PGBU Glenifferbraes 75.20 325⇓*eP* **P** **18 26 15.5 +0.7**
PGBU IAmb IAmb 18 26 16.7

comp=Z,120nm,0.9s
FLN La Foliniere 75.21 317 *eP* **P** **18 26 14.3 -0.8**
FLN pmax pmax

comp=Z,267nm,1.6s
STRD Stroud 75.25 320⇓*eP* **P** **18 26 15.6 +0.3**
STRD IAmb IAmb 18 26 16.5

comp=Z,147nm,0.8s
STRD IAMs_20 IAMs_20 19 04 42.9

comp=Z,4µm,18.6s
KPL Plockton 75.27 326⇓*eP* **P** **18 26 15.7 +0.4**
KPL IAmb IAmb 18 26 16.8

comp=Z,114nm,1.2s
KPL IAMs_20 IAMs_20 19 01 48.7

comp=Z,2µm,18.3s
NEWG New Galloway 75.30 324⇓*eP* **P** **18 26 16.2 +0.7**
NEWG IAmb IAmb 18 26 17.2

comp=Z,187nm,1.4s
ARPS Mount Arapiles 75.31 142 P **P** **18 26 16.3 +0.6**
baz=75,SNR=21
HLM1 Long Mynd 75.42 321 *eP* **P** **18 26 16.8 +0.6**
HLM1 IAmb IAmb 18 26 17.9

comp=Z,501nm,1.9s
HLM1 IAMs_20 IAMs_20 19 04 50.0

comp=Z,3µm,20.3s
FOEL Foel Wylfa 75.48 322⇓*eP* **P** **18 26 17.1 +0.5**
FOEL IAmb IAmb 18 26 18.4

comp=Z,181nm,1.1s
SBD1 Bryn Du 75.51 322⇓*eP* P 18 26 26.0 +9.2
LAWE Loch Awe, Argy 75.52 325⇓*eP* **P** **18 26 17.5 +0.8**
LAWE IAmb IAmb 18 26 18.1

comp=Z,104nm,0.8s
GRR Gorron 75.57 317 *eP* **P** **18 26 16.4 -0.8**
GRR pmax pmax

comp=Z,81nm,0.8s
MONM Monmouth 75.61 320⇓*eP* **P** **18 26 17.6 +0.3**
MONM IAmb IAmb 18 26 18.5

comp=Z,416nm,1.8s
MONM IAMs_20 IAMs_20 19 04 42.5

comp=Z,4µm,17.9s
GAL1 Galloway 75.64 324⇓*eP* **P** **18 26 18.0 +0.6**
GAL1 IAmb IAmb 18 26 18.7

comp=Z,79nm,0.9s
LFF La Frestale 75.65 313 *eP* **P** **18 26 17.5 -0.2**
LFF pmax pmax

comp=Z,79nm,0.6s
MCH1 Michaelchurch 75.67 321⇓*eP* **P** **18 26 17.7 0.0**
MCH1 IAmb IAmb 18 26 18.9

comp=Z,470nm,1.9s
MCH1 IAMs_20 IAMs_20 19 05 05.3

comp=Z,4µm,19.4s
MFF Saint Martin d 75.70 315 *eP* **P** **18 26 17.2 -0.8**
MFF pmax pmax

comp=Z,104nm,1.1s
IOMK Kirk Michael 75.78 323⇓*eP* **P** **18 26 19.1 +0.9**
IOMK IAmb IAmb 18 26 19.6

comp=Z,277nm,1.0s
WIM Isle of Man 75.87 323⇓*eP* **P** **18 26 19.7 +0.9**
WME Mynydd Eilian 75.93 322 *eP* **P** **18 26 19.5 +0.4**
YLL Llanberis 75.95 322⇓*eP* **P** **18 26 19.9 +0.6**
WLF1 Llynfaes 76.02 322⇓*eP* **P** **18 26 20.1 +0.5**
WLF1 IAmb IAmb 18 26 21.4

comp=Z,727nm,1.5s
WPS Cemaes, Angles 76.04 322⇓*eP* **P** **18 26 20.0 +0.3**
WPS IAmb IAmb 18 26 21.5

comp=Z,144nm,1.1s
SCO Scoresbysund 76.04 342⇓*iP* **P** **18 26 20.7 +1.3**
SCO pmax pmax

comp=Z,82nm,1.2s
SCO Scoresbysund 76.04 342 P **P** **18 26 20.2 +0.8**
SCO Scoresbysund 76.04 342⇓*iP* **P** **18 26 20.7 +1.3**

comp=Z,82nm,1.2s
SCO Scoresbysund 76.04 342⇓*iP* **P** **18 26 20.7 +1.3**
SCO IAmb IAmb 18 26 21.9

comp=Z,82nm,1.2s
JSA Saint Aubin 76.12 318⇓*eP* **P** **18 26 20.4 +0.1**
JSA IAmb IAmb 18 26 21.4

comp=Z,86nm,0.8s
JSA IAMs_20 IAMs_20 19 04 16.1

comp=Z,2µm,24.9s
YRC Rhoscolyn 76.13 322⇓*iP* **P** **18 26 20.7 +0.4**
CLGH Cloghs, Cushen 76.32 324⇓*eP* **P** **18 26 22.0 +0.7**
CLGH IAmb IAmb 18 26 23.1

comp=Z,130nm,1.4s
EUNU Eureka 76.62 360 P **P** **18 26 23.9 +1.2**
SGMF Saint Gilles 76.68 317 *eP* **P** **18 26 21.7 -1.8**
SGMF pmax pmax

comp=Z,113nm,0.8s
BLWY Bulawayo 76.72 241 *iP* **P** **18 26 24.7 +0.4**
BLWY Bulawayo 76.72 241 *iP* **P** **18 26 24.7 +0.4**
DYA Yadsworthy 76.76 319 IAMs_20 IAMs_20 19 04 52.9

comp=Z,3µm,20.4s
HTL Hartland 76.89 320⇓*eP* **P** **18 26 25.1 +0.5**
HTL IAmb IAmb 18 26 26.1

comp=Z,545nm,1.9s
IDGL Inch Island, C 77.07 325 *eP* **P** **18 26 25.7 +0.2**
DSB Dublin 77.14 323 IAMs_20 IAMs_20 18 49 22.3

comp=Z,1µm,21.0s
QUIF Quistinic 77.18 317 *eP* **P** **18 26 25.5 -0.8**
QUIF pmax pmax

comp=Z,208nm,1.6s
ARMA Armidale 77.36 131 P **P** **18 26 29.4 +1.8**
baz=77,SNR=19
ARMA Armidale 77.36 131 P **P** **18 26 29.1 +1.4**
ARMA IAmb IAmb 18 26 44.6

comp=Z,93nm,1.1s
ARMA IAMs_20 IAMs_20 19 03 14.3

comp=Z,816nm,20.0s
TOLK Toolik Lake Re 77.45 20 P **P** **18 26 29.0 +1.5**
baz=303,SNR=105
TOLK Toolik Lake Re 77.45 20 P **P** **18 26 28.9 +1.3**
TOLK IAmb IAmb 18 26 30.4

comp=Z,255nm,1.0s
SJPF Ste Jean 77.60 312 *eP* **P** **18 26 29.0 +0.2**
SJPF pmax pmax

comp=Z,110nm,1.2s
YNG Young 77.61 136 P **P** **18 26 29.6 +0.8**

baz=78,SNR=7.1
CCA1 Carnmenellis 77.62 319⇓*eP* **P** **18 26 29.1 +0.3**
CCA1 IAmb IAmb 18 26 29.7

comp=Z,63nm,0.8s
CCA1 IAMs_20 IAMs_20 19 05 17.8

comp=Z,3µm,20.8s
TOO Toolangi 77.98 140 P **P** **18 26 32.2 +1.4**
baz=78,SNR=12
TOO Toolangi 77.98 140 P **P** **18 26 32.0 +1.2**
TOO pmax pmax

comp=Z,62nm,0.9s
TOO MLR MLR

comp=Z,900nm,20.0s
TOO Toolangi 77.98 140 P **P** **18 26 32.0 +1.2**
TOO IAMs_20 IAMs_20 19 04 43.6

comp=Z,852nm,20.0s
COLD Coldfoot 78.03 21 P **P** **18 26 32.0 +1.3**
baz=303,SNR=40
COLD Coldfoot 78.03 21 P **P** **18 26 31.8 +1.1**
COLD IAmb IAmb 18 26 33.5

comp=Z,140nm,1.2s
TTA Tatalina 78.10 26 P **P** **18 26 32.1 +0.8**
TTA pmax pmax

comp=Z,118nm,1.2s
TTA MLR MLR

comp=Z,2µm,21.0s
TTA Tatalina 78.10 26 P **P** **18 26 32.1 +0.8**
TTA IAmb IAmb 18 26 33.7

comp=Z,118nm,1.2s
MGCD Mangrove Creek 78.69 134 P **P** **18 26 36.5 +1.7**
baz=79,SNR=4.7
SUMG Summit 78.84 347 *iP* **P** **18 26 35.9 +0.3**
SUMG pmax pmax

comp=Z,290nm,1.2s
SUMG Summit 78.84 347 P **P** **18 26 35.6 0.0**
SUMG Summit 78.84 347 *iP* **P** **18 26 35.9 +0.3**

comp=Z,287nm,1.2s
SUMG Summit 78.84 347 *iP* **P** **18 26 35.9 +0.3**
SUMG IAmb IAmb 18 26 36.4

comp=Z,288nm,1.2s
BORG Borgarnes 78.86 337 P **P** **18 26 36.9 +1.6**
BORG pmax pmax

comp=Z,123nm,1.3s
BORG Borgarnes 78.86 337 P **P** **18 26 36.9 +1.6**
CNB Canberra Magne 78.87 136 P **P** **18 26 36.6 +0.8**
baz=79,SNR=36
MLY Manley 79.03 23 P **P** **18 26 37.7 +1.4**
baz=303,SNR=104
SVW2 Sparrevohn 79.17 28 P **P** **18 26 38.1 +1.0**
SVW2 IAmb IAmb 18 26 39.8

comp=Z,274nm,1.3s
CRZF Crozet Islands 79.19 208 P **P** **18 26 37.8 +0.6**
CRZF IAmb IAmb 18 26 38.8

comp=Z,176nm,1.3s
CAST Castle Rocks 79.40 25 P **P** **18 26 39.3 +1.0**
CART Cartagena 79.42 306 *eP* P 18 26 32.1 -6.8
CART *eS* S 18 36 18.9 -17
CART Cartagena 79.42 306 P **P** **18 26 38.5 -0.4**
CART IAmb IAmb 18 26 40.5

comp=Z,163nm,1.0s
BPAW Bear Paw Mtn. 79.45 24 P **P** **18 26 39.3 +0.8**
BPAW IAmb IAmb 18 26 40.9

comp=Z,120nm,0.9s
I23K Minto, Yukon-K 79.46 22 P **P** **18 26 39.6 +1.1**
baz=304,SNR=33
I23K Minto, Yukon-K 79.46 22 P **P** **18 26 39.5 +1.0**
I23K IAmb IAmb 18 26 41.3

comp=Z,260nm,1.4s
TAM Tamanrasset 79.48 290 P **P** **18 26 40.4 +0.7**
TAM pmax pmax

comp=Z,112nm,1.7s
TAM MLR MLR

comp=Z,1µm,19.0s
TAM Tamanrasset 79.48 290 P **P** **18 26 40.4 +0.7**
TAM IAMs_20 IAMs_20 19 05 57.5

comp=Z,1µm,19.0s
TULEG Thule 79.57 356 P **P** **18 26 38.8 -0.2**
TULEG IAmb IAmb 18 26 58.5

comp=Z,511nm,2.0s
TULEG Thule 79.57 356 *iP* **P** **18 26 38.8 -0.2**
TULEG IAmb IAmb 18 26 39.6

comp=Z,55nm,0.8s
PPLA Purkeypile 79.63 25 P **P** **18 26 40.5 +0.7**
KTH Kantishna Hill 79.77 24 P **P** **18 26 40.5 +0.1**
NEA2 Nenana 79.87 23 P **P** **18 26 41.8 +0.9**
baz=304,SNR=22
MDM Murphy Dome 79.96 22 P **P** **18 26 42.1 +0.8**
BWN Browne 79.97 23 P **P** **18 26 41.9 +0.6**
BWN IAmb IAmb 18 26 44.8

comp=Z,363nm,1.1s
FYU Fort Yukon 80.01 20 P **P** **18 26 42.9 +1.4**
UCM Universidad Co 80.03 310 *eP* P 18 26 48.3 +6.1
UCM *eS* S 18 36 58.2 +15
TRF Thorofare Moun 80.06 24 P **P** **18 26 42.7 +0.6**
TCOL CIGO, UAF Yank 80.14 22 P **P** **18 26 43.1 +0.9**
baz=305,SNR=23
TCOL CIGO, UAF Yank 80.14 22 P **P** **18 26 42.9 +0.7**
TCOL IAmb IAmb 18 26 44.5

comp=Z,223nm,1.1s
COLA College 80.14 22*d iP* **P** **18 26 43.4 +1.2**
COLA pmax pmax

comp=Z,266nm,1.2s
COLA MLR MLR

comp=Z,730nm,17.0s
COLA College 80.14 22 P **P** **18 26 43.1 +0.8**
COLA IAmb IAmb 18 26 44.4

comp=Z,221nm,1.1s
POKR Poker Plat Res 80.14 22 P **P** **18 26 43.7 +1.4**
baz=306,SNR=113
POKR Poker Plat Res 80.14 22 P **P** **18 26 43.4 +1.1**
CNBA Chernabura Isl 80.25 34 P **P** **18 26 42.8 -0.2**
CNBA IAmb IAmb 18 26 43.8

comp=Z,184nm,1.0s
CCB Clear Creek Bu 80.29 23 P **P** **18 26 42.8 -0.3**
WRH Wood River Hil 80.29 23 P **P** **18 26 42.8 -0.3**
SKT Skwentna 80.38 26 P **P** **18 26 43.8 +0.2**
SKT IAmb IAmb 18 26 45.2

comp=Z,398nm,1.2s
MCK McKinley 80.41 24 P **P** **18 26 44.4 +0.6**
baz=304,SNR=70

IL31 80.54 22 P **P** **18 26 43.7 -0.6**
IL31 IAmb IAmb 18 26 46.4

comp=Z,208nm,1.2s
ILAR Eielson Array 80.54 22 P **P** **18 26 44.2 -0.2**
comp=Z,73nm,0.9s,baz=289,slow=4.6,SNR=356
ILAR PP **PP** **18 29 46.8 -0.9**
comp=Z,13nm,0.9s,baz=300,slow=5.6,SNR=4.1
ILAR PKKPbc **PKKPbc** **18 45 24.4 -1.8**
comp=Z,1.0nm,0.7s,baz=145,slow=1.8,SNR=7.1
ILAR PKPPKP **P'P'df** **18 53 27.9 -4.5**
comp=Z,3.1nm,1.2s,baz=222,slow=1.8,SNR=4.7
ILAR LR LR 19 07 18.6

comp=Z,901nm,18.6s,baz=316,slow=39
ILAR Eielson Array 80.54 22 P **P** **18 26 43.8 -0.6**
RND Reindeer 80.62 24 P **P** **18 26 44.8 -0.2**
RND pmax pmax

comp=Z,312nm,1.2s
RND Reindeer 80.62 24 P **P** **18 26 44.8 -0.2**
RND IAmb IAmb 18 26 46.5

comp=Z,312nm,1.2s
CUT Chulitna 80.65 25 P **P** **18 26 45.4 +0.4**
baz=304
RSO Redoubt South 80.69 27 P **P** **18 26 45.9 +0.3**
HDA Harding Lake 80.73 23 P **P** **18 26 45.2 -0.3**
baz=306,SNR=38
HDA Harding Lake 80.73 23 P **P** **18 26 44.7 -0.7**
HDA IAmb IAmb 18 26 46.3

comp=Z,124nm,1.2s
ES08 SONSECA Array 80.75 309 IAMs_20 IAMs_20 19 08 44.8
comp=Z,873nm,19.0s
ES18 SONSECA Array 80.76 309 IAMs_20 IAMs_20 19 06 56.1
comp=Z,1µm,21.0s
ESBB Sonseca Array 80.78 309 P **P** **18 26 46.8 +0.5**
ESDC Sonseca Array 80.78 309 P **P** **18 26 46.8 +0.4**
comp=Z,43nm,1.0s,baz=54,slow=5.1,SNR=116
ESDC LR LR 19 08 43.4
comp=Z,571nm,20.6s,baz=45,slow=40
ES05 SONSECA Array 80.79 309 IAMs_20 IAMs_20 18 50 17.8
comp=Z,738nm,18.0s
SUA Susitna One 80.98 26 P **P** **18 26 47.4 +0.4**
SUA IAmb IAmb 18 26 48.6

comp=Z,269nm,1.1s
PAB San Pablo 81.11 309 P **P** **18 26 48.4 +0.3**
PAB pmax pmax

comp=Z,82nm,1.2s
PAB San Pablo 81.11 309 P **P** **18 26 48.4 +0.3**

DHY Denali Highway 81.36 24 P **P** **18 26 49.0 0.0**
GHO Glory Hole Cre 81.53 25 P **P** **18 26 50.3 +0.5**
GHO IAmb IAmb 18 26 54.7

comp=Z,129nm,1.0s
PMR Palmer 81.55 25 P **P** **18 26 50.0 +0.2**
PMR pmax pmax

comp=Z,312nm,1.2s
PMR MLR MLR

comp=Z,2µm,20.0s
PMR Palmer 81.55 25 P **P** **18 26 50.0 +0.2**
PMR IAmb IAmb 18 26 51.5

comp=Z,312nm,1.2s
RC01 Rabbit Creek A 81.59 26 P **P** **18 26 50.4 +0.3**
baz=304,SNR=22
LBTB Lobatse 81.60 238 *i* P **P** **18 26 51.8 +1.0**
LBTB Lobatse 81.60 238 P **P** **18 26 50.9 0.0**
LBTB pmax pmax

comp=Z,54nm,0.8s
LBTB Lobatse 81.60 238 P **P** **18 26 50.9 0.0**
LBTB Lobatse 81.60 238 *i* P **P** **18 26 51.8 +1.0**
ICESG Greenland Ices 81.66 345⇓*iP* **P** **18 26 51.2 +0.5**
ICESG IAmb IAmb 18 26 52.1

comp=Z,309nm,1.3s
SML Sawmill 81.74 25 P **P** **18 26 51.5 +0.6**
SML pmax pmax

comp=Z,573nm,1.2s
SML Sawmill 81.74 25 P **P** **18 26 51.5 +0.6**
SANVU Saraoutou 81.74 111 P **P** **18 26 51.8 +0.2**
SANVU IAmb IAmb 18 26 53.6

comp=Z,106nm,1.0s
UPNV Upernavik 81.78 351 *i* P **P** **18 26 51.1 +0.3**
UPNV IAmb IAmb 18 26 51.9

comp=Z,55nm,0.7s
CNPM China Poot 81.83 28 P **P** **18 26 51.7 +0.3**
CNPM IAmb IAmb 18 26 54.2

comp=Z,143nm,1.2s
BRLK Bradley Lake 81.85 27 P **P** **18 26 51.1 -0.4**
RES Resolute Bay 81.87 2 P **P** **18 26 51.9 +0.6**
RES pmax pmax

comp=Z,190nm,1.2s
RES Resolute Bay 81.87 2 P **P** **18 26 51.9 +0.6**
RES IAmb IAmb 18 26 53.6

comp=Z,190nm,1.1s
RIDG Independent Ri 81.87 22 P **P** **18 26 51.6 0.0**
RIDG IAmb IAmb 18 26 53.2

comp=Z,240nm,1.0s
PBRG Braganca 81.87 312 *eP* **P** **18 26 52.6 +0.6**
comp=Z,99nm,1.5s
KNK Knik Glacier 81.91 25 P **P** **18 26 52.5 +0.7**
KNK IAmb IAmb 18 26 53.9

comp=Z,259nm,1.1s
O22K Cooper Landing 81.94 27 P **P** **18 26 51.9 +0.1**
baz=304,SNR=7.3
O22K Cooper Landing 81.94 27 P **P** **18 26 52.0 +0.1**
SCRK Sand Creek 82.02 22 P **P** **18 26 53.5 +1.0**
baz=309,SNR=206
SCM Sheep Creek Mo 82.11 25 P **P** **18 26 53.4 +0.5**
SCM pmax pmax

comp=Z,280nm,1.1s
SCM Sheep Creek Mo 82.11 25 P **P** **18 26 53.4 +0.5**
SCM IAmb IAmb 18 26 55.3

comp=Z,280nm,1.1s
PAX Paxson 82.12 23 P **P** **18 26 53.2 +0.2**
PAX pmax pmax

comp=Z,108nm,0.9s
PAX Paxson 82.12 23 P **P** **18 26 53.2 +0.2**
PAX IAmb IAmb 18 26 56.8

comp=Z,108nm,0.9s
OHAK Old Harbor 82.16 30 P **P** **18 26 53.4 +0.3**
OHAK IAmb IAmb 18 26 54.5

comp=Z,368nm,1.4s
KDAK Kodiak Island 82.18 30 P **P** **18 26 53.8 +0.6**
KDAK pmax pmax

comp=Z,575nm,1.6s
KDAK Kodiak Island 82.18 30 P **P** **18 26 53.8 +0.6**
INK Inuvik 82.18 16 LR LR 19 09 32.5
comp=Z,609nm,20.7s,baz=292,slow=40
INK Inuvik 82.18 16 P **P** **18 26 53.9 +0.9**
INK pmax pmax

comp=Z,406nm,1.3s
INK Inuvik 82.18 16 P **P** **18 26 53.9 +0.9**
DOT Dot Lake 82.20 22 P **P** **18 26 53.3 0.0**
DOT IAmb IAmb 18 26 55.1

comp=Z,97nm,1.0s
SEW Seward 82.26 27 P **P** **18 26 53.9 +0.4**
SEW IAmb IAmb 18 26 55.1

comp=Z,248nm,1.2s
MVO Moncorvo 82.33 312 *eP* **P** **18 26 54.7 +0.2**
comp=Z,191nm,1.6s
M24K Tolsona, Glenn 82.38 24 P **P** **18 26 56.0 +1.7**
baz=307,SNR=46
M24K Tolsona, Glenn 82.38 24 P **P** **18 26 55.5 +1.2**
EGAK Eagle 82.45 21 P **P** **18 26 55.2 +0.7**
EGAK IAmb IAmb 18 26 56.8

comp=Z,192nm,1.2s
TAU Tasmania Unive 82.59 143 P **P** **18 26 56.0 +0.6**
TAU pmax pmax

comp=Z,60nm,0.9s
TAU Tasmania Unive 82.59 143 P **P** **18 26 56.0 +0.6**
K27K Chicken 82.64 21 P **P** **18 26 57.4 +1.9**
baz=310
K27K Chicken 82.64 21 P **P** **18 26 57.0 +1.5**
PVRL Vila Real 82.76 312 *eP* **P** **18 26 57.6 +0.9**
comp=Z,96nm,1.6s
GLI Glacier Island 82.76 25 P **P** **18 26 56.5 +0.3**
GLI IAmb IAmb 18 26 58.0

comp=Z,196nm,1.3s
MENT Mentasta 82.77 23 P **P** **18 26 56.6 +0.3**
MENT IAmb IAmb 18 27 00.1

comp=Z,229nm,1.4s
MENT IAMs_20 IAMs_20 19 08 07.3

comp=Z,1µm,19.0s
POLO Lamas de Olo 82.77 312 *eP* **P** **18 26 57.7 +0.9**
comp=Z,66nm,1.4s
PGAV Gavieira, Arco 82.84 313 *eP* **P** **18 26 57.9 +0.7**
comp=Z,110nm,1.5s
L26K Log Cabin Wild 82.85 23 P **P** **18 26 58.1 +1.4**
baz=309,SNR=56
KLU Klutina 82.85 25 P **P** **18 26 57.8 +1.0**
LIJA Lijar 82.92 307 *eP* **P** **18 26 56.5 -1.1**
MTE Manteigas 83.01 311 *eP* **P** **18 26 59.1 +1.1**
comp=Z,182nm,1.5s
MTE Manteigas 83.01 311 P **P** **18 26 58.5 +0.5**
MTE IAmb IAmb 18 27 00.3

comp=Z,122nm,1.0s
FID Port Fidalgo 83.08 25 P **P** **18 26 58.9 +1.0**
PVIS Viseu 83.12 311 *eP* **P** **18 26 59.5 +1.0**
comp=Z,157nm,1.5s
PCBR Castelo Branco 83.19 310 *eP* **P** **18 26 59.9 +1.0**
comp=Z,155nm,1.5s
N25K Chitina, Valde 83.28 24 P **P** **18 27 00.7 +1.7**
baz=308,SNR=97
N25K Chitina, Valde 83.28 24 P **P** **18 27 00.3 +1.3**
HIN Hinchinbrook I 83.29 26 P **P** **18 27 00.1 +1.1**
PMRV Marv??o 83.31 310 *eP* **P** **18 27 00.2 +0.7**
comp=Z,89nm,1.6s
EYAK Cordova Ski Ar 83.49 25 P **P** **18 27 01.4 +1.5**
DAWY Dawson 83.50 21 P **P** **18 27 00.6 +0.6**
DAWY IAmb IAmb 18 27 02.2

comp=Z,140nm,1.4s
C36M Paulatuk 83.50 13 P **P** **18 27 00.5 +0.7**
baz=326
C36M Paulatuk 83.50 13 P **P** **18 27 00.2 +0.4**
GLB Gilahina Butte 83.68 24 P **P** **18 27 02.1 +1.1**
GLB IAmb IAmb 18 27 04.3

comp=Z,246nm,1.1s
COI Coimbra 83.69 311 P **P** **18 27 02.4 +1.0**
COI pmax pmax

comp=Z,214nm,1.6s
COI Coimbra 83.69 311 P **P** **18 27 02.4 +1.0**
COI IAmb IAmb 18 27 04.2

comp=Z,214nm,1.6s
BOSA Boshof 83.70 235 P **P** **18 27 02.1 +0.4**
comp=Z,27nm,0.9s,baz=60,slow=4.2,SNR=29
BOSA LR LR 19 00 50.3
comp=Z,533nm,21.7s,baz=58,slow=33
BOSA Boshof 83.70 235 *i* P **P** **18 27 02.3 +0.6**
BOSA Boshof 83.70 235 P **P** **18 27 01.9 +0.2**
BOSA IAmb IAmb 18 27 31.1

comp=Z,170nm,1.4s
BOSA Boshof 83.70 235 *i* P **P** **18 27 02.3 +0.6**
VRDI Verde Repeater 83.95 24 P **P** **18 27 03.5 +1.0**
VRDI IAmb IAmb 18 27 05.2

comp=Z,246nm,1.2s
MCARA McCarthy VSAT 84.01 24 P **P** **18 27 03.9 +1.3**

RAGM Ragged Mountai 84.01 25 P **P** 18 27 03.9 +1.2
PMTG Montargil 84.05 310 *e*P **P** 18 27 03.8 +0.5
comp=Z,132nm,1.3s
EVO Evora 84.13 309 *e*P **P** 18 27 04.2 +0.5
comp=Z,146nm,1.4s
DZM Mont Dzumac 84.16 117 *e*P **P** 18 27 04.4 +0.3
comp=Z,168nm,1.2s
DZM epP **pP** 18 27 18.3 -0.5
comp=Z,159nm,1.5s
DZM Mont Dzumac 84.16 117 *e*S **S** 18 37 25.5 -0.3
comp=Z,367nm,26.4s
DZM Mont Dzumac 84.16 117 *e*LR LR 18 53 38.9
comp=Z,2µm,27.6s
DZM Mont Dzumac 84.16 117 P **P** 18 27 05.7 +1.6
HMT Hamilton 84.20 25 P **P** 18 27 05.0 +1.4
PBEJ Beja 84.24 309 *e*P **P** 18 27 05.1 +0.8
comp=Z,161nm,1.5s
CRQM Cirque 84.37 24 P **P** 18 27 05.8 +1.1
PVAQ Vaqueiros 84.40 308 *e*P **P** 18 27 06.0 +0.9
comp=Z,170nm,1.3s
PVAQ Vaqueiros 84.40 308 P **P** 18 27 05.3 +0.2
PVAQ IAmb IAmb 18 27 07.0
comp=Z,168nm,1.2s
KAIM Kayak Island 84.40 25 P **P** 18 27 06.6 +2.0
BALM Baldy 84.49 24 P **P** 18 27 06.6 +1.4
BALM pmax pmax
comp=Z,246nm,1.1s
BALM Baldy 84.49 24 P **P** 18 27 06.6 +1.4
BALM IAmb IAmb 18 27 08.1
comp=Z,246nm,1.1s
TGL Tana Glacier 84.49 24 P **P** 18 27 06.3 +1.1
PCVE Castro Verde 84.53 309 *e*P **P** 18 27 06.8 +1.1
comp=Z,79nm,1.4s
SUCK Suckling Hills 84.56 25 P **P** 18 27 07.4 +1.9
SUCK IAmb IAmb 18 27 09.2
comp=Z,244nm,1.1s
PNCL Nicolau / Gran 84.67 309 *e*P **P** 18 27 07.7 +1.3
comp=Z,188nm,1.3s
BARN Barnard Glacie 84.72 24 P **P** 18 27 08.1 +1.6
BARN IAmb IAmb 18 27 09.6
comp=Z,208nm,1.2s
ISLE Juniper Island 84.77 24 P **P** 18 27 07.9 +1.2
PMAFR Mafra 84.84 310 *e*P **P** 18 27 08.4 +1.1
comp=Z,242nm,1.4s
CTGM Chitina Glacie 84.91 24 P **P** 18 27 08.8 +1.5
PTEO Sao Teotonio 85.06 309 *e*P **P** 18 27 09.8 +1.4
comp=Z,214nm,1.4s
MORF Marmelete 85.11 309 *e*P **P** 18 27 08.3 -0.4
MORF AMb AMB 18 27 12.6
comp=Z,218nm,1.3s
MORF Marmelete 85.11 309 *e*P **P** 18 27 09.0 +0.3
comp=Z,218nm,1.3s
YAH Yahtse 85.15 24 P **P** 18 27 10.4 +1.7
MESA MESA 85.19 24 P **P** 18 27 10.6 +1.7
PFVI Vila Bisbo 85.31 308 *e*P **P** 18 27 10.9 +1.2
comp=Z,263nm,1.4s
PFVI Vila Bisbo 85.31 308 P **P** 18 27 10.7 +1.0
PFVI IAmb IAmb 18 27 11.9
comp=Z,124nm,0.9s
TABL Table Mountain 85.32 24 P **P** 18 27 10.4 +0.9
TABL IAmb IAmb 18 27 25.8
comp=Z,92nm,1.0s
TSUM Tsumeb 85.36 247 P **P** 18 27 10.9 +0.7
TSUM Tsumeb 85.36 247 IAMs_20 IAMs_20 19 05 54.5
comp=Z,830nm,20.0s
SFJD Kangerlussuaq 85.83 347 *i* P **P** 18 27 11.2 -0.4
SFJD Kangerlussuaq 85.83 347 *i* P **P** 18 27 11.2 -0.4
SFJD Kangerlussuaq 85.83 347 *i* P **P** 18 27 11.2 -0.4
PCA Pinnacle 85.88 24 P **P** 18 27 13.6 +1.5
BCPM Bancas Point 86.21 24 P **P** 18 27 15.2 +1.5
HYT Haines Junctio 86.38 22 P **P** 18 27 15.9 +1.2
HYT IAmb IAmb 18 27 17.4
comp=Z,113nm,1.1s
TOC2 Torodi Ar. Sit 86.46 283 IAMs_20 IAMs_20 19 06 47.4
comp=Z,1µm,22.0s
TOB3 Torodi Ar. Sit 86.48 283 IAMs_20 IAMs_20 19 06 36.5
comp=Z,1µm,22.0s
TOB1 Torodi Ar. Sit 86.49 283 IAMs_20 IAMs_20 19 06 37.5
comp=Z,1µm,22.0s
TOA0 Torodi Ar. Sit 86.49 283 P **P** 18 27 16.8 +0.9
TOA0 IAmb IAmb 18 27 18.3
comp=Z,162nm,1.2s
TOA0 IAMs_20 IAMs_20 19 06 37.6
comp=Z,1µm,22.0s
TORD Torodi Ar. Bea 86.49 283 P **P** 18 27 16.9 +1.0
comp=Z,68nm,1.1s,baz=66,slow=3.2,SNR=211
TORD PKKPbc **PKKPbc** 18 45 11.9 +0.6
comp=Z,1.1nm,0.5s,baz=302,slow=1.9,SNR=17
TORD LR LR 19 07 45.4
comp=Z,857nm,21.9s,baz=35,slow=37
TORD Torodi Ar. Bea 86.49 283 P **P** 18 27 16.0 +0.1
TOA3 Torodi Ar. Sit 86.49 283 IAMs_20 IAMs_20 19 06 37.7
comp=Z,1µm,22.0s
TOC4 Torodi Ar. Sit 86.50 283 IAMs_20 IAMs_20 19 06 36.7
comp=Z,1µm,22.0s
TOC7 Torodi Ar. Sit 86.50 283 IAMs_20 IAMs_20 19 08 17.8
comp=Z,1µm,20.0s
TOB4 Torodi Ar. Sit 86.50 283 IAMs_20 IAMs_20 19 08 17.4
comp=Z,1µm,20.0s
WHY Whitehorse 87.40 22 P **P** 18 27 20.2 +0.6
WHY IAmb IAmb 18 27 21.9
comp=Z,123nm,1.4s
SKAG Skagway 88.12 23 P **P** 18 27 24.0 +1.2
NUUK Nuuk 88.47 346 *i* P **P** 18 27 24.4 -0.1
NUUK IAmb IAmb 18 27 25.4
comp=Z,57nm,0.8s
SUR Sutherland 88.90 234 IAMs_20 IAMs_20 19 06 04.0
comp=Z,1µm,20.0s
BESE Bessie Mountai 88.92 23 P **P** 18 27 28.4 +1.6
BESE IAmb IAmb 18 27 29.9
comp=Z,141nm,1.2s
JIS Juneau Island 89.32 23 P **P** 18 27 29.7 +1.2
JIS IAmb IAmb 18 27 31.7
comp=Z,102nm,1.1s
NRS Narsarsuaq 89.33 341 *i* P **P** 18 27 28.1 -0.4
NRS pmax pmax
comp=Z,40nm,0.7s
NRS Narsarsuaq 89.33 341 *i* P **P** 18 27 28.1 -0.4
comp=Z,40nm,0.7s
NRS Narsarsuaq 89.33 341 *i* P **P** 18 27 28.1 -0.4
NRS IAmb IAmb 18 27 29.7
comp=Z,40nm,0.7s
SIT Sitka 89.86 24 P **P** 18 27 32.5 +1.4
SIT pmax pmax
comp=Z,107nm,1.2s
SIT Sitka 89.86 24 P **P** 18 27 32.5 +1.4
SIT IAmb IAmb 18 27 34.3
comp=Z,107nm,1.2s
CASY Casey 90.46 173 P **P** 18 27 33.2 -0.2
DLBC Dease Lake 90.70 21 LR LR 19 13 34.9
comp=Z,1µm,18.4s,baz=306,slow=39
DLBC Dease Lake 90.70 21 P **P** 18 27 36.5 +1.4
DLBC IAmb IAmb 18 27 38.5
comp=Z,145nm,1.4s
KOWA Kowa 91.02 286 P **P** 18 27 38.4 +1.1
KOWA IAmb IAmb 18 27 39.8
comp=Z,84nm,0.9s
YKA Yellowknife Ar 91.39 13 P **P** 18 27 38.5 +0.3
comp=Z,21nm,0.6s,baz=343,slow=4.9,SNR=58
YKA PP **PP** 18 31 14.5 -0.8
comp=Z,4.8nm,0.7s,baz=340,slow=7.7,SNR=4.5
YKA PKKPbc **PKKPdf** 18 44 58.1 +2.2
comp=Z,1.3nm,0.6s,baz=145,slow=2.8,SNR=5.8
YKA LR LR 19 13 08.9
comp=Z,515nm,20.5s,baz=0.0,slow=38
WRAK Wrangell Islan 91.44 24 P **P** 18 27 40.1 +1.7
WRAK IAmb IAmb 18 27 41.2
comp=Z,71nm,1.1s
CRAG Craig 91.86 24 P **P** 18 27 42.2 +1.8
CRAG IAmb IAmb 18 27 43.2
comp=Z,104nm,1.2s
MAW Mawson 93.67 191 P **P** 18 27 48.9 +0.7
comp=Z,13nm,1.1s,baz=83,slow=3.6,SNR=5.9
MAW PKKPbc **PKKPdf** 18 44 52.6 -2.5
comp=Z,3.3nm,0.6s,baz=46,slow=14,SNR=2.8
MAW LR LR 19 05 48.0
comp=Z,161nm,20.4s,baz=39,slow=33
MAW Mawson 93.67 191 P **P** 18 27 48.4 +0.1
DIB Dawson Inlet, 93.81 26 P **P** 18 27 49.4 -0.1
DIB IAmb IAmb 18 27 50.6
comp=Z,194nm,1.9s
DBIC Dimbokro 94.99 279 P **P** 18 27 56.3 +0.6
comp=Z,48nm,1.1s,baz=58,slow=5.0,SNR=22
DBIC LR LR 19 16 17.6
comp=Z,426nm,18.8s,baz=46,slow=39
DBIC Dimbokro 94.99 279 P **P** 18 27 55.9 +0.2
DBIC IAmb IAmb 18 27 57.4
comp=Z,87nm,1.2s
KIC Kosan Boka 95.02 279 *e*P **P** 18 27 55.5 -0.3
comp=Z,180nm,1.4s
TIC Toumodi 95.15 279 *e*P **P** 18 27 56.3 -0.1
LIC Lamto 95.33 279 *e*P **P** 18 27 57.4 +0.2
comp=Z,137nm,1.5s
BBB Bella Bella 96.29 24 LR LR 19 16 22.3
comp=Z,396nm,18.4s,baz=324,slow=38
FCC Fort Churchill 97.78 4 P **P** 18 28 06.6 -0.8
FCC pmax pmax
comp=Z,94nm,1.4s
FCC Fort Churchill 97.78 4 P **P** 18 28 06.6 -0.8
FCC IAmb IAmb 18 28 08.8
comp=Z,94nm,1.4s
MXZ Matakaoa Point 100.06 127 IAMs_20 IAMs_20 19 12 47.6
comp=Z,795nm,21.0s
SCHQ Schefferville 100.16 349 PP **PP** 18 32 22.8 -0.4
comp=Z,23nm,1.1s,baz=5.7,slow=9.2,SNR=4.3
I02D Swisshome 104.49 27 P **Pdif** 18 28 37.1 -0.5
baz=325
I03D Drain, OR 105.03 27 P **Pdif** 18 28 38.7 -1.3
baz=325
MSO Missoula 105.70 19 P **PKiKP** 18 32 55.1 -0.8
baz=334
ULM Lac du Bonnet 106.08 6 PP **PP** 18 33 06.5 -0.8
comp=Z,14nm,1.0s,baz=352,slow=9.0,SNR=5.3
MATQ Matagami 106.62 354 P **PKiKP** 18 32 56.7 -0.7
baz=8.4
VNDA Vanda 108.28 168 Pdiff **Pdif** 18 28 54.6 +1.0
comp=Z,0.3nm,0.8s,baz=261,slow=4.1,SNR=2.1
VNDA PKiKP **PKiKP** 18 32 59.2 -0.3
comp=Z,1.6nm,0.9s,baz=286,slow=5.9,SNR=5.1
E64A Bridgewater 108.36 347 P **PKiKP** 18 33 00.6 -0.1
baz=18
G65A Princeton 109.46 346 P **PKiKP** 18 33 02.6 -0.2
baz=18
E56A St. Veronique 109.49 352 P **PKiKP** 18 33 02.8 0.0
baz=11
G61A St-Isidore-de- 110.18 349 P **PKiKP** 18 33 04.7 +0.5
baz=15
BW06 Boulder Array 110.68 18 P **PKiKP** 18 33 05.7 +0.2
baz=337
PDAR Pinedale Array 110.68 18 PKiKP **PKiKP** 18 33 05.5 0.0
comp=Z,3.8nm,0.8s,baz=42,slow=2.4,SNR=14
PDAR PKKPbc **PKKPbc** 18 44 02.1 -3.0
comp=Z,0.4nm,0.6s,baz=122,slow=1.9,SNR=4.1
PDAR Pinedale Array 110.68 18 PKiKP **PKiKP** 18 33 04.5 -1.0
H62A Milan 110.79 348 P **PKiKP** 18 33 06.1 +0.8
baz=15
I64A Boothbay 111.12 347 P **PKiKP** 18 33 05.9 0.0
baz=16
HWUT Hardware Ranch 111.15 20 IAMs_20 IAMs_20 19 23 51.7
comp=Z,741nm,20.0s
NVAR Mina Array Bea 111.52 26 Pdiff **Pdif** 18 29 03.3 -6.1
comp=Z,0.8nm,0.6s,baz=79,slow=32,SNR=5.4
NVAR PKiKP **PKiKP** 18 33 08.5 +1.3
comp=Z,4.7nm,0.7s,baz=300,slow=2.1,SNR=15
NVAR PKKPbc **PKKPbc** 18 44 00.8 -1.4
comp=Z,0.7nm,0.6s,baz=166,slow=4.7,SNR=5.6
LHV Little Huntoon 111.59 27 IAMs_20 IAMs_20 19 19 50.8
comp=Z,712nm,20.0s
I59A Olmsteadville 112.01 350 P **PKiKP** 18 33 08.3 +0.6
baz=12
DUG Dugway, Tooele 112.02 22 P **PKiKP** 18 33 08.2 +0.3
baz=334
DUG Dugway, Tooele 112.02 22 IAMs_20 IAMs_20 19 21 46.8
comp=Z,567nm,19.0s
ECSD EROS Data Cent 112.42 8 P **PKiKP** 18 33 08.6 +0.1
baz=350,SNR=5.9
J59A Piesco 112.43 351 P **PKiKP** 18 33 08.6 +0.1
baz=12
J60A Lant Hill Farm 112.48 350 P **PKiKP** 18 33 09.4 +0.8
baz=13
SPR3 Spring Creek 3 112.55 23 IAMs_20 IAMs_20 19 23 47.8
comp=Z,594nm,21.0s
R11A Troy Canyon, C 112.66 24 P **PKiKP** 18 33 10.1 +0.8
baz=331
I51A Listowel 112.81 356 P **PKiKP** 18 33 09.6 +0.4
baz=5.4
PHWY Pilot Hill 113.14 15 IAMs_20 IAMs_20 19 21 22.4
comp=Z,581nm,19.0s
CWC Cottonwood Cre 113.30 27 P **PKiKP** 18 33 11.7 +1.2
baz=328
QSPA South Pole Qui 113.34 180 PKKPbc PKKPbc 18 43 55.4 -1.8
comp=Z,9.7nm,0.9s,baz=136,slow=1.8,SNR=5.9
QSPA South Pole Qui 113.34 180 IAMs_20 IAMs_20 19 16 38.0
comp=Z,376nm,19.0s
N23A Red Feather La 113.40 16 P **PKiKP** 18 33 10.2 -0.6
baz=341
O20A White River Ci 113.49 18 P **PKiKP** 18 33 11.0 +0.2
baz=338
TPNV Topaah Spring 113.62 26 P **PKiKP** 18 33 11.4 +0.2
baz=330
PRN Pahroc Range 113.69 25 IAMs_20 IAMs_20 19 16 44.2
comp=Z,632nm,20.0s
FURC Furnace Creek, 113.79 26 P **PKiKP** 18 33 12.4 +1.2
baz=330
ISA Isabella, Lake 113.79 28 P **PKiKP** 18 33 12.3 +0.9
baz=328
PKM Mcpherson Peak 113.85 30 P **PKiKP** 18 33 12.1 +0.5
baz=327
MPMC Manual Prospec 113.88 27 P **PKiKP** 18 33 12.5 +0.7
baz=329,SNR=5.8
BINY Binghamton 113.89 351 P **PKiKP** 18 33 11.8 +0.5
baz=10
L58A Harry Jones Me 114.02 351 P PKPdf 18 33 11.8 +0.2
baz=11
SNAA Sanae 114.13 200 PKiKP PKPdf 18 33 10.7 -0.1
L56A Greenwood 114.15 353 P PKPdf 18 33 12.3 +0.5
baz=8.9
L57A Andrews Acres 114.19 352 P PKPdf 18 33 12.2 +0.2
baz=9.7
LRMC Laurel Mtn Rad 114.29 28 P **PKiKP** 18 33 12.4 0.0
baz=329
SHPR Sheep Range 114.43 25 IAMs_20 IAMs_20 19 21 47.1
comp=Z,715nm,19.0s
M59A Waymart 114.45 351 P PKPdf 18 33 13.0 +0.6
baz=11
ISCO Idaho Springs 114.52 16 P **PKiKP** 18 33 12.6 -0.4
EDW2 Edwards Air Fo 114.66 28 P PKPdf 18 33 13.6 +0.5
baz=328
PAL Palisades 114.74 350 P PKPdf 18 33 13.2 +0.3
baz=13
M58A Price's Panora 114.76 352 P PKPdf 18 33 13.2 +0.2
baz=10
GSC Goldstone, Bar 114.81 27 P PKPdf 18 33 14.1 +0.7
baz=329
M56A Emporium 114.86 353 P PKPdf 18 33 13.6 +0.4
baz=8.4
M57A Sunshine Farm, 114.88 352 P **PKiKP** 18 33 13.3 0.0
baz=9.4
PV07 Paradox Valley 114.94 19 IAMs_20 IAMs_20 19 11 58.0
comp=Z,592nm,21.0s
PV19 Morning Glory 114.96 19 IAMs_20 IAMs_20 19 25 47.6
comp=Z,795nm,21.0s
M54A Oil Creek Stat 114.99 354 P **PKiKP** 18 33 13.1 -0.3
baz=6.9
N60A Cedar Hill Far 115.06 350 P **PKPdf** 18 33 14.0 +0.5
baz=12
N59A State Game Lan 115.12 351 P **PKPdf** 18 33 13.9 +0.2
baz=11
N58A Sunbury 115.32 352 P **PKiKP** 18 33 13.7 -0.3
baz=9.9
BFSC Mount Baldy Ra 115.35 28 P **PKPdf** 18 33 15.3 +0.7
baz=328
HEC Hector Ludlow 115.41 27 P **PKPdf** 18 33 14.8 +0.3
baz=330
N57A Milroy 115.51 352 P **PKPdf** 18 33 14.6 +0.1
baz=9.1
N54A Moraine State 115.56 355 P **PKiKP** 18 33 14.4 -0.2
baz=6.6
U15A North Rim 115.57 23 PKiKP **PKPdf** 18 33 16.1 +1.1
VNA2 Neumayer--Watz 115.60 201 PKiKP **PKPdf** 18 33 14.0 +0.4
baz=89,slow=2.5
O60A Telford 115.65 351 P **PKPdf** 18 33 14.9 +0.2
baz=11
SSPA Standing Stone 115.67 353 P **PKPdf** 18 33 15.1 +0.4
baz=8.7
GMRC Granite Mounta 115.73 26 P **PKPdf** 18 33 16.1 +0.9
baz=330
N51A Ashland 115.77 357 IAMs_20 IAMs_20 19 25 58.4
comp=Z,853nm,21.0s
VNA1 Neumayer--Stat 115.90 201 PKiKP **PKPdf** 18 33 14.5 +0.4
KSCO Kaye Shedlock' 115.97 14 P **PKPdf** 18 33 15.9 +0.3
baz=344
KSCO Kaye Shedlock' 115.97 14 **PKiKP** 18 33 14.7 -0.9
O58A Lewisberry 116.05 352 P **PKPdf** 18 33 16.0 +0.5
baz=9.7
O57A Amberson 116.06 352 P **PKPdf** 18 33 16.0 +0.4
baz=9.0
MURC Murrieta 116.10 28 P **PKPdf** 18 33 16.3 +0.5
baz=329
O56A Blue Knob Stat 116.11 353 P **PKPdf** 18 33 16.2 +0.5
baz=8.1
S22A 4UR Ranch, Cre 116.11 18 P **PKPdf** 18 33 16.4 +0.3
baz=339
S22A 4UR Ranch, Cre 116.11 18 **PKPdf** 18 33 16.6 +0.5
MVCO Mesa Verde 116.12 19 P **PKPdf** 18 33 16.2 +0.2
baz=338
W13A Hualapai Mount 116.16 25 PKPdf **PKPdf** 18 33 16.6 +0.5
P60A Greenville 116.18 351 P **PKPdf** 18 33 16.3 +0.6
baz=11
BELC Belle Mtn. Jos 116.27 27 P **PKPdf** 18 33 16.6 +0.3
baz=330
VNA3 Neumayer Olymp 116.32 201 PKiKP **PKPdf** 18 33 14.6 -0.3
O53A New Philadelph 116.36 356 P **PKPdf** 18 33 16.2 +0.1
baz=5.4
O54A Avella 116.36 355 P **PKPdf** 18 33 16.4 +0.2
baz=6.2
PFO Pinyon Flats O 116.41 28 P **PKiKP** 18 33 17.1 +0.6
baz=329
TPFO Pinon Flats 116.41 28 P **PKiKP** 18 33 17.0 +0.4
baz=329
SDCO Great Sand Dun 116.48 17 P **PKPdf** 18 33 16.8 0.0
baz=341,SNR=6.0
SDCO Great Sand Dun 116.48 17 **PKPdf** 18 33 16.2 -0.6
IRM Iron Mountain 116.48 26 P **PKiKP** 18 33 17.6 +1.0
baz=331,SNR=5.5
ACSO Alum Creek Sta 116.48 357 P **PKPdf** 18 33 16.0 -0.4
baz=3.6
P59A Jarrettsville 116.49 351 P **PKPdf** 18 33 16.4 0.0
baz=10
O52A Adamsville 116.54 356 P **PKPdf** 18 33 15.9 -0.6
baz=4.8
O51A Pataskala 116.55 357 P **PKPdf** 18 33 16.3 -0.2
baz=4.0
WUAZ Wupatki 116.72 23 PKPdf **PKPdf** 18 33 14.5 -2.7
P58A Pank, Wackersv 116.73 352 P **PKiKP** 18 33 17.0 +0.2
baz=9.4
PDMCI Parker Dam,Lak 116.76 25 P **PKiKP** 18 33 17.8 +0.8
baz=332,SNR=7.9
BC3 Big Chuckawall 116.79 27 P **PKiKP** 18 33 18.3 +1.0
baz=330
P57A Homestead Farm 116.82 353 P **PKiKP** 18 33 17.5 +0.5
baz=8.7
P38A Dawn 116.83 6 **PKPdf** 18 33 16.6 -0.4
P56A Dayton Farm, R 116.89 353 P **PKPdf** 18 33 17.1 0.0
baz=7.8
KSU1 Kansas State U 116.98 9 P **PKPdf** 18 33 17.1 -0.2
baz=350
KSU1 Kansas State U 116.98 9 **PKPdf** 18 33 17.0 -0.3
P52A Corning 117.03 356 P **PKiKP** 18 33 17.6 +0.1
baz=4.5
MONP2 Monument Peak 117.04 28 P **PKiKP** 18 33 18.8 +0.9
baz=329
P40A Paris 117.05 5 **PKPdf** 18 33 16.8 -0.7
P53A Whipple 117.13 356 P **PKiKP** 18 33 17.8 +0.2
baz=5.2
P46A Rosedale 117.18 1 **PKPdf** 18 33 17.3 -0.4
P51A Williamsport 117.24 357 P **PKPdf** 18 33 17.6 -0.2
baz=3.5
P49A Miami Univ. Ec 117.24 358 P **PKPdf** 18 33 17.5 -0.3
baz=1.8
SWSC Sam W. Stewart 117.26 28 P **PKiKP** 18 33 19.1 +1.0
baz=330
Q57A Strasburg 117.31 353 P **PKPdf** 18 33 17.9 -0.1
baz=8.3
Q58A Fox Den Farm, 117.31 352 P **PKiKP** 18 33 18.5 +0.6
baz=9.1
R32A Long Quarter, 117.31 11 **PKPdf** 18 33 18.1 0.0
P48A Milroy 117.33 359 **PKPdf** 18 33 17.4 -0.6
T25A Trinidad 117.33 16 P **PKPdf** 18 33 18.3 -0.1
baz=342,SNR=7.9
T25A Trinidad 117.33 16 **PKPdf** 18 33 18.4 0.0
IKP In-Ko-Pah, Jac 117.38 28 P **PKiKP** 18 33 19.4 +1.0
baz=329,SNR=6.4
Q56A Snyder Ridge, 117.39 354 P **PKiKP** 18 33 18.7 +0.6
baz=7.5
CBX Cerro Bola 117.43 29 **PKiKP** 18 33 19.5 +1.0
Q55A Buckhannon 117.52 354 P **PKPdf** 18 33 18.3 -0.1
baz=6.6
Y14A Wickenburg 117.52 25 **PKiKP** 18 33 18.7 +0.1
GLA Glamis 117.58 27 PKiKP **PKPdf** 18 33 18.0 -0.7
GLA Glamis 117.58 27 P **PKiKP** 18 33 19.8 +1.1
baz=331,SNR=5.8
GLA Glamis 117.58 27 **PKPdf** 18 33 18.0 -0.7
Q54A Coxs Mills 117.59 355 P **PKPdf** 18 33 18.2 -0.3
baz=5.8
W18A Petrified Fore 117.64 21 P **PKiKP** 18 33 19.9 +0.9
baz=336,SNR=20
W18A Petrified Fore 117.64 21 **PKiKP** 18 33 20.1 +1.1
X16A Lo Mia Camp, P 117.68 23 **PKPdf** 18 33 18.2 -0.9
UABX UABC, Campus Mt 117.68 27 IAMs_20 IAMs_20 19 14 29.2
comp=Z,668nm,20.0s
Q52A Bidwell 117.71 356 P **PKiKP** 18 33 18.9 +0.1
baz=4.3
Q53A Leroy 117.77 356 P **PKiKP** 18 33 19.0 +0.1
baz=5.1
CPBX Cerro Prieto 117.92 27 IAMs_20 IAMs_20 19 07 00.3
comp=Z,505nm,20.0s
R58A Rapidan 117.99 352 P **PKiKP** 18 33 19.4 +0.1
baz=8.8
ESJX Sierra Juarez 118.00 28 **PKiKP** 18 33 20.5 +0.8
R56A Bull Pasture M 118.03 354 P **PKiKP** 18 33 19.8 +0.3
baz=7.3,SNR=7.7
R57A Stanardsville 118.05 353 P **PKiKP** 18 33 19.8 +0.4
baz=8.2
X18A Snowflake 118.10 22 **PKiKP** 18 33 20.7 +0.8
113A Mohawk Valley, 118.25 26 **PKPdf** 18 33 19.5 -0.5
R40A Maddies Statio 118.27 5 **PKPdf** 18 33 19.4 -0.5
R58B Mineral 118.30 352 P **PKiKP** 18 33 20.0 +0.1
baz=8.9
R53A Hurricane 118.32 356 P **PKPdf** 18 33 19.8 -0.1
baz=4.7
S60A Water View 118.39 351 P **PKPdf** 18 33 19.6 -0.4
baz=10
R54A Victor 118.40 355 P **PKPdf** 18 33 19.6 -0.6
baz=5.7
S59A Mechanicsville 118.43 352 P **PKPdf** 18 33 19.9 -0.2
baz=9.6
R50A Paris 118.48 358 **PKiKP** 18 33 20.3 +0.1
R49A Shelbyville 118.49 359 **PKPdf** 18 33 19.7 -0.6
WCI Wyandotte Cave 118.57 360 P **PKPdf** 18 33 19.9 -0.5
baz=0.2
CCM Cathedral Cave 118.58 4 PKiKP **PKPdf** 18 33 19.8 -0.6
CCM Cathedral Cave 118.58 4 P **PKPdf** 18 33 20.4 0.0
baz=355
CCM Cathedral Cave 118.58 4 **PKPdf** 18 33 19.8 -0.6
S57A Dark Hollow, R 118.63 353 P **PKiKP** 18 33 20.9 +0.3
baz=7.8,SNR=5.2
S57A Dark Hollow, R 118.63 353 **PKiKP** 18 33 20.9 +0.3
S58A Poland Farm, P 118.67 352 P **PKiKP** 18 33 20.7 +0.1
baz=8.8
KS20 Mayfield South 118.67 10 **PKPdf** 18 33 20.7 0.0
FVM French Village 118.70 4 PKiKP **PKPdf** 18 33 20.2 -0.5
FVM French Village 118.70 4 **PKPdf** 18 33 20.2 -0.5
S39A Bolivar 118.77 6 **PKPdf** 18 33 20.2 -0.6
S55A Lewisburg 118.77 355 P **PKPdf** 18 33 20.5 -0.4
baz=6.2
S56A Natural Bridge 118.77 354 P **PKiKP** 18 33 21.1 +0.2
baz=7.2
ANMO Albuquerque 118.83 19 PKKPbc PKKPbc 18 43 35.4 -1.6
comp=Z,0.9nm,0.5s,baz=148,slow=9.9,SNR=3.1
ANMO Albuquerque 118.83 19 PKiKP **PKiKP** 18 33 21.8 +0.5
ANMO Albuquerque 118.83 19 P **PKiKP** 18 33 21.9 +0.6
baz=339
ANMO Albuquerque 118.83 19 **PKiKP** 18 33 21.8 +0.5
T60A Surry 118.96 351 P **PKiKP** 18 33 21.6 +0.4
baz=10
S53A Williamson 118.98 356 P **PKiKP** 18 33 21.6 +0.3
baz=4.5
S51A Beattyville 119.10 357 **PKPdf** 18 33 21.1 -0.4
T35A Sooner Cattle 119.14 9 **PKPdf** 18 33 21.6 0.0
T59A Double "B" Far 119.24 352 P **PKiKP** 18 33 22.5 +0.8
baz=9.4
T59A Double "B" Far 119.24 352 **PKPdf** 18 33 21.8 +0.1
CROK Carrier 119.31 11 **PKPdf** 18 33 21.9 0.0
SFX San Felipe 119.31 28 **PKPdf** 18 33 21.6 -0.3
SFX IAMs_20 IAMs_20 19 35 07.3
comp=Z,456nm,20.0s
BLA Blacksburg 119.32 354 P **PKPdf** 18 33 21.2 -0.7
baz=6.3

214A	Organ Pipe Nat	119.35	26	P		PKiKP	18 33 22.9	+0.7	
	baz=332,SNR=7.5								
214A	Organ Pipe Nat	119.35	26			PKiKP	18 33 22.8	+0.7	
T58A	Grand View Acr	119.39	353	P		PKPdf	18 33 22.1	+0.1	
	baz=8.3								
MGMO	Mountain Grove	119.40	5			PKPdf	18 33 21.8	-0.3	
LENM	Lemitar	119.40	19			PKiKP	18 33 23.7	+1.3	
T57A	Hurt	119.41	353	P		PKiKP	18 33 22.3	+0.1	
	baz=7.6								
T57A	Hurt	119.41	353			PKiKP	18 33 22.2	+0.1	
T55A	Pulaski	119.44	355	P		PKPdf	18 33 22.1	0.0	
	baz=6.0								
T56A	Rocky Mt	119.46	354	P		PKPdf	18 33 21.8	-0.4	
	baz=6.8								
Y22D	IRIS PASSCAL I	119.50	19	P		PKiKP	18 33 22.9	+0.3	
	baz=338								
BNM	Barren Site	119.52	19			PKiKP	18 33 23.1	+0.4	
T54A	Tazewell	119.56	355	P		PKPdf	18 33 21.7	-0.8	
	baz=5.2								
T42A	Van Buren	119.61	4			PKPdf	18 33 21.4	-1.0	
T53A	Wise	119.70	356	P		PKPdf	18 33 22.3	-0.4	
	baz=4.2								
T50A	Nancy	119.76	358			PKPdf	18 33 21.8	-0.9	
T47A	Sharon Grove	119.81	1			PKPdf	18 33 22.3	-0.5	
TUC	Tucson	119.81	24	PKiKP		PKiKP	18 33 24.0	+0.8	
TUC	Tucson	119.81	24	P		PKiKP	18 33 24.3	+1.2	
	baz=334								
TUC	Tucson	119.81	24			PKiKP	18 33 24.0	+0.8	
QUOK	Quay	119.84	10			PKPdf	18 33 22.9	0.0	
U38A	Gravette	119.89	7			PKPdf	18 33 21.7	-1.4	
PBMO	Poplar Bluff	119.90	4			PKPdf	18 33 22.6	-0.4	
U58A	Oxford	119.93	353	P		PKiKP	18 33 23.6	+0.4	
	baz=8.4								
U57A	Blanch	119.98	353	P		PKiKP	18 33 23.3	0.0	
	baz=7.5								
OK031	S. Brethren Rd	120.03	10			PKiKP	18 33 23.8	+0.4	
OK030	Cody Creek RV	120.07	10			PKiKP	18 33 23.6	+0.1	
OK029	Liberty Lake	120.09	10			PKPdf	18 33 23.4	-0.1	
HHAR	Hobbs	120.10	7			PKPdf	18 33 23.0	-0.5	
U54A	Nelsons Funny	120.11	356	P		PKPdf	18 33 23.5	0.0	
	baz=4.9								
U40A	Yellville	120.13	6	P		PKPdf	18 33 23.1	-0.4	
	baz=353								
U40A	Yellville	120.13	6			PKPdf	18 33 22.2	-1.3	
U56A	King	120.17	354	P		PKPdf	18 33 23.4	-0.1	
	baz=6.5								
TZTN	Tazewell	120.19	357	P		PKPdf	18 33 23.3	-0.3	
	baz=3.1								
TZTN	Tazewell	120.19	357			PKPdf	18 33 23.4	-0.2	
TUL1	Leonard	120.23	9	P		PKPdf	18 33 23.6	-0.1	
	baz=350								
U49A	Red Boiling Sp	120.28	359			PKPdf	18 33 23.0	-0.7	
V62A	Hyde County Ai	120.39	350	P		PKPdf	18 33 24.0	+0.1	
	baz=11								
V59A	Middlesex	120.52	352	P		PKPdf	18 33 23.9	-0.3	
	baz=8.8								
BELA	Belgrano 2	120.52	191			PKPdf	18 33 22.4	-0.5	
LCAR	Lake Charles	120.56	4			PKPdf	18 33 23.9	-0.4	
V57A	Coltrane Farms	120.57	354	P		PKPdf	18 33 24.1	-0.2	
	baz=7.1,SNR=5.5								
V58A	Windy Hill, Pi	120.59	353	P		PKiKP	18 33 24.5	+0.1	
	baz=7.8								
FNO	Franklin	120.62	10			PKPdf	18 33 24.4	-0.1	
WVT	Waverly	120.65	1	PKiKP		PKPdf	18 33 24.3	-0.2	
WVT				MLR		MLR			
	comp=Z,2μm,21.0s								
WVT	Waverly	120.65	1	P		PKPdf	18 33 24.3	-0.2	
	baz=359								
WVT	Waverly	120.65	1			PKPdf	18 33 24.3	-0.2	
121A	Cookes Peak, D	120.65	21	P		PKiKP	18 33 25.9	+0.9	
	baz=337								
121A	Cookes Peak, D	120.65	21			PKiKP	18 33 25.6	+0.6	
FCAR	Ozark Folk Cen	120.66	5			PKPdf	18 33 23.2	-1.3	
CLTN	Cedars of Leba	120.70	360			PKPdf	18 33 23.9	-0.7	
V56A	Mocksville	120.71	354	P		PKPdf	18 33 24.6	0.0	
	baz=6.4								
V55A	Taylorsville	120.73	355	P		PKPdf	18 33 24.5	-0.2	
	baz=5.6								
V55A	Taylorsville	120.73	355			PKPdf	18 33 24.2	-0.5	
MSTX	Muleshoe	120.75	16	P		PKPdf	18 33 24.4	-0.4	
	baz=343								
MSTX	Muleshoe	120.75	16			PKPdf	18 33 24.2	-0.7	
V54A	Nebo	120.86	356	P		PKPdf	18 33 24.9	-0.1	
	baz=4.8								
WMOK	Wichita Mounta	120.89	12	PKiKP		PKPdf	18 33 24.5	-0.5	
WMOK	Wichita Mounta	120.89	12	P		PKPdf	18 33 24.9	-0.1	
	baz=347								
WMOK	Wichita Mounta	120.89	12			PKPdf	18 33 24.5	-0.5	
V52A	Sevierville	120.89	357			PKPdf	18 33 24.6	-0.3	
W61A	Ground Anchor	120.92	351	P		PKiKP	18 33 25.5	+0.4	
	baz=10								
V51A	Loudon	120.96	358			PKPdf	18 33 24.6	-0.5	
PPT2	Papeete2	121.02	97	eSS		SS	18 51 27.2	+1.9	
	comp=Z,357nm,27.8s								
PPT2	Papeete2	121.02	97	eLR		LR	19 10 46.9		
	comp=Z,1μm,25.5s								
V53A	Saluda	121.02	357			PKPdf	18 33 25.0	-0.3	
V48A	Smith Brothers	121.05	0			PKPdf	18 33 24.8	-0.5	
TKL	Tuckaleechee C	121.08	357	PKiKP		PKPdf	18 33 25.3	0.0	
TKL	Tuckaleechee C	121.08	357			PKPdf	18 33 25.3	0.0	
W60A	Pink Hill	121.15	352	P		PKPdf	18 33 25.4	-0.1	
	baz=9.4								
W39A	Magazine	121.19	7	P		PKPdf	18 33 25.4	-0.2	
	baz=352								
W39A	Magazine	121.19	7			PKPdf	18 33 25.3	-0.2	
319A	Douglas	121.20	23	PKPdf		PKiKP	18 33 26.8	+0.8	
WHAR	Wooly Hollow	121.24	6			PKPdf	18 33 25.3	-0.3	
CPCT	Cooper Cave	121.31	358			PKPdf	18 33 26.0	+0.1	
W57A	Gilead	121.32	354	P		PKPdf	18 33 25.8	+0.1	
	baz=6.9								
W57A	Gilead	121.32	354			PKPdf	18 33 25.7	0.0	
CPRX	Cap Rock	121.36	17			PKiKP	18 33 26.8	+0.5	
W41B	Gary Mavity, V	121.36	6	P		PKPdf	18 33 25.9	0.0	
	baz=354								
W41B	Gary Mavity, V	121.36	6			PKPdf	18 33 25.1	-0.7	
W58A	Raeford	121.37	353	P		PKiKP	18 33 26.0	0.0	
	baz=7.8								
W56A	Indian Trail	121.39	354	P		PKPdf	18 33 25.7	-0.2	
	baz=6.3								
KMSC	Kings Mountain	121.45	355	P		PKPdf	18 33 25.9	-0.2	
	baz=5.5,SNR=6.0								
KMSC	Kings Mountain	121.45	355			PKPdf	18 33 26.1	+0.1	
W54A	Cherokee Point	121.56	356	P		PKPdf	18 33 26.4	+0.1	
	baz=4.6								
SWET	Sewanee	121.57	359			PKPdf	18 33 25.8	-0.5	
W45A	Hickory Valley	121.58	3			PKPdf	18 33 26.2	-0.1	
W50A	Signal Mountai	121.58	359			PKPdf	18 33 25.9	-0.4	
W52A	Murphy	121.65	358			PKPdf	18 33 26.2	-0.2	
X60A	Albert Glenn T	121.65	352	P		PKiKP	18 33 26.6	+0.1	
	baz=9.1								
BG3	Lake Jocassee	121.70	357			PKiKP	18 33 26.9	+0.2	
UALR	University of	121.75	6			PKPdf	18 33 26.7	+0.1	
PLAL	Pickwick Lake	121.79	2			PKPdf	18 33 25.5	-1.1	
PAULI	Pauline	121.80	355			PKPdf	18 33 26.2	-0.5	
X58A	Rowland	121.84	353	P		PKiKP	18 33 27.3	+0.4	
	baz=7.7								
MIAR	Mount Ida	121.85	7	PKiKP		PKiKP	18 33 27.0	0.0	
MIAR	Mount Ida	121.85	7	P		PKiKP	18 33 26.9	0.0	
	baz=352								
MIAR	Mount Ida	121.85	7			PKiKP	18 33 27.0	0.0	
BIRD	Birdtown, Kers	121.86	354			PKPdf	18 33 26.2	-0.6	
X40A	Basin Creek Fa	121.99	6	P		PKiKP	18 33 27.5	+0.2	
	baz=353								
X40A	Basin Creek Fa	121.99	6			PKiKP	18 33 27.3	0.0	
GDL2	Guadalupe Moun	122.01	18			PKPdf	18 33 27.5	+0.1	
X56A	White Oak	122.07	355	P		PKPdf	18 33 27.1	-0.1	
	baz=5.9								
X54A	Belton	122.11	356	P		PKPdf	18 33 27.3	0.0	
	baz=4.4,SNR=7.9								
X43A	Marvell	122.12	4	P		PKPdf	18 33 27.2	-0.1	
	baz=355								
X55A	Gracelyn & Ava	122.14	355	P		PKPdf	18 33 26.9	-0.4	
	baz=5.2								
MNTX	Cornudas Mount	122.18	19	P		PKiKP	18 33 28.6	+0.9	
	baz=340								
MNTX	Cornudas Mount	122.18	19			PKiKP	18 33 27.9	+0.2	
X51A	Calhoun	122.20	358			PKPdf	18 33 27.6	+0.1	
OXF	Oxford	122.21	3	P		PKiKP	18 33 27.7	0.0	
	baz=357								
Y60A	Bolivia	122.25	352	P		PKiKP	18 33 27.8	+0.1	
	baz=8.9								
X48A	Hartselle	122.34	1			PKPdf	18 33 26.7	-1.0	
Y59A	Loris	122.34	353	P		PKiKP	18 33 27.9	0.0	
	baz=8.2								
Y57A	Sumter	122.48	354	P		PKPdf	18 33 28.0	0.0	
	baz=6.6								
Z35A	Perchaven, San	122.53	11			PKiKP	18 33 28.3	0.0	
TBI	Tubuai	122.66	103	eLR		LR	19 11 30.2		
	comp=Z,1μm,28.2s								
HSIG		122.69	26			PKiKP	18 33 29.0	+0.3	
WLAR	White Oak Lake	122.75	7			PKiKP	18 33 28.9	+0.1	
ABTX	Abilene, Hawle	122.76	13	P		PKiKP	18 33 29.2	+0.3	
	baz=346								
ABTX	Abilene, Hawle	122.76	13			PKiKP	18 33 28.9	0.0	
Y45A	Yeager Farm, C	122.85	3			PKiKP	18 33 29.1	+0.1	
Y52A	Lilburn	122.88	358			PKPdf	18 33 29.0	+0.2	
Y49A	Blount Mountai	122.93	360			PKPdf	18 33 28.4	-0.5	
Z58A	St. Stephen	123.10	353	P		PKiKP	18 33 29.5	0.0	
	baz=7.3								
Z41A	Richland Creek	123.21	6	P		PKiKP	18 33 29.7	0.0	
	baz=353								
Z57A	Bowman	123.22	354	P		PKiKP	18 33 29.9	+0.2	
	baz=6.3								
GOGA	Godfrey	123.30	357	PKiKP		PKiKP	18 33 30.1	+0.2	
GOGA	Godfrey	123.30	357	P		PKPdf	18 33 29.8	+0.1	
	baz=3.3,SNR=6.4								
GOGA	Godfrey	123.30	357			PKiKP	18 33 30.1	+0.2	
Z51A	Franklin	123.46	359			PKiKP	18 33 30.2	+0.1	
Z47A	Carrollton	123.57	2			PKPdf	18 33 29.8	-0.4	
LRAL	Lakeview Retre	123.75	1	P		PKPdf	18 33 30.2	-0.3	
	baz=359								
LRAL	Lakeview Retre	123.75	1			PKPdf	18 33 29.6	-0.9	
WHTX	Lake Whitney,	123.80	11	P		PKiKP	18 33 31.0	+0.1	
	baz=348								
157A	Early Branch	123.86	354	P		PKPdf	18 33 30.8	+0.1	
	baz=6.0								
143A	Socs Landing,	123.89	5			PKPdf	18 33 30.4	-0.4	
152A	Waverly Hall	124.09	358			PKiKP	18 33 31.6	+0.1	
146A	Union	124.09	3			PKiKP	18 33 31.7	+0.3	
VBMS	Vicksburg	124.43	4	P		PKiKP	18 33 32.5	+0.4	
	baz=356								
NATX	Nacogdoches	124.47	8	P		PKPdf	18 33 31.5	-0.4	
	baz=351								
JCT	Junction City	124.80	14	PKiKP		PKPdf	18 33 32.8	+0.2	
JCT	Junction City	124.80	14	P		PKiKP	18 33 33.2	+0.3	
	baz=345								
JCT	Junction City	124.80	14			PKPdf	18 33 32.8	+0.2	
TX31	Lajitas Ar. Si	124.90	18			PKPdf	18 33 33.0	+0.1	
TX32	Lajitas Array	124.90	18			PKPdf	18 33 33.0	+0.1	
TXAR	Lajitas Array	124.90	18	PKP		PKiKP	18 33 33.5	+0.2	
	comp=Z,21nm,0.8s,baz=118,slow=0.4,SNR=112								
TXAR	Lajitas Array	124.90	18	PKPdf		PKPdf	18 33 32.3	-0.7	
435B	Jarrell	124.96	12	P		PKiKP	18 33 33.1	-0.1	
	baz=348								
435B	Jarrell	124.96	12			PKPdf	18 33 32.7	-0.2	
342A	Flagon Creek P	125.12	6			PKiKP	18 33 34.7	+1.2	
344A	Westbrook Farm	125.18	4			PKiKP	18 33 34.4	+0.7	
HKT	Hockley	126.07	10	PKiKP		PKPdf	18 33 35.2	+0.3	
HKT	Hockley	126.07	10			PKPdf	18 33 35.2	+0.3	
451A	Vernon	126.16	359			PKPdf	18 33 36.2	+0.6	
TAOE	Nuku Hiva Isla	126.73	83	eLR		LR	19 13 23.4		
	comp=Z,869nm,27.1s								
833A	Chaparral WMA,	126.97	14	P		PKiKP	18 33 37.5	+0.2	
	baz=345,SNR=9.6								
833A	Chaparral WMA,	126.97	14			PKiKP	18 33 37.5	+0.2	
RCBR	Riachuelo	128.31	282	eP		PKiKP	18 33 41.6	+1.3	
NBMO	Morrinhos-CE	130.86	287	eP		PKPdf	18 33 44.5	0.0	
ZAIG	Zacatecas	131.39	20			PKiKP	18 33 47.4	+0.8	
ZAIG					IAMs_20	IAMs_20	19 43 08.8		
	comp=Z,516nm,21.0s								
ROSB	Rosrio	134.21	290	eP		PKPdf	18 33 51.3	+0.5	
GDU01	Guandu, BA	134.67	274	eP		PKiKP	18 33 52.4	-0.7	
TEIG	Tepich	136.47	2			PKPdf	18 33 55.6	+0.7	
RIB01	Linhares ES	137.03	266	eP		PKiKP	18 33 57.2	-0.5	
TMAB	Tom-Au,PA,Br	137.32	294	eP		PKiKP	18 33 58.0	-0.5	
TLIG	Tlapa	137.49	17			PKPdf	18 33 57.6	+0.6	
SJMB	Sao Joao De Ma	137.61	268	eP		PKPdf	18 33 57.8	+0.9	
CMIG	Matias Romero	138.80	12	PKP		PKPdf	18 33 59.0	-0.2	
	comp=Z,8.9nm,0.7s,baz=18,slow=6.6,SNR=7.3								
PETF	Flores	139.66	5			PKPdf	18 34 00.4	-0.5	
VAS01	Vassouras-RJ	140.44	263	eP		PKiKP	18 34 03.6	-1.1	
PRPB	Parauapebas	140.75	290	eP		PKPdf	18 34 03.8	+0.8	
MAN01	Angra dos Reis	141.02	262	eP		PKPdf	18 34 04.5	+1.3	
MTO3	Montecristo	142.20	5		IAMs_20	IAMs_20	19 51 45.4		
	comp=Z,437nm,20.0s								
PARB	Paraibuna	142.60	262	eP		PKPdf	18 34 07.6	+1.6	
TGUH	Tegucigalpa,Un	142.64	1	IAMs_20		IAMs_20	19 46 46.9		
	comp=Z,408nm,21.0s								
BDFB	Brasilia	143.01	275	PKP		PKPdf	18 34 05.0	-2.0	
	comp=Z,7.0nm,0.4s,baz=132,slow=3.6,SNR=10								
BDFB	Brasilia	143.01	275	PKiKP		PKPdf	18 34 05.0	-2.0	
BDFB	Brasilia	143.01	275	PKPdf		PKPdf	18 34 05.0	-2.0	
VAO	Valinhos	143.77	263	eP		PKPdf	18 34 07.9	-0.2	
IPMB	Ipameri, GO	143.87	271	eP		PKPbc	18 34 06.4	+0.2	
PET01	Itanhaem-SP	144.23	261	eP		PKPdf	18 34 08.6	-0.1	
SDV	Santo Domingo	144.25	332	PKP		PKPbc	18 34 07.8	+0.2	
	comp=Z,259nm,0.7s,baz=35,slow=2.5,SNR=23								
SDV	Santo Domingo	144.25	332	eP		PKPab	18 34 07.2	0.0	
SDV	Santo Domingo	144.25	332	PKPdf		PKPab	18 34 06.9	-0.3	
SDV	Santo Domingo	144.25	332	IAMs_20		IAMs_20	19 42 19.1		
	comp=Z,383nm,20.0s								
SPB	Sao Paulo	144.28	262			PKPdf	18 34 08.3	-0.5	
SPB	Sao Paulo	144.28	262	eP		PKPdf	18 34 09.8	+1.0	
ESPN	Las Esperanzas	144.43	356			PKPbc	18 34 08.2	+0.3	
SNDB	Serra Nova Dou	144.67	283	eP		PKPdf	18 34 09.7	-0.1	
ACON	Acoyapa	144.70	358			PKPbc	18 34 08.9	+0.2	
ARGC	Ariguani, Magd	144.73	339	eP		PKPdf	18 34 09.8	-0.2	
ITTB	Itaituba	144.75	298	eP		PKPdf	18 34 09.8	-0.2	
BB19B	Bebedouro	144.87	266	eP		PKPdf	18 34 10.7	+0.7	
SJCC	San Jacinto, C	144.99	340	eP		PKPdf	18 34 10.2	-0.2	
MG01	Puerto William	145.64	199			PKPab	18 34 11.2	+0.3	
TIJ01	Guaruva-PR	145.90	259	eP		PKPab	18 34 13.2	+0.2	
OCAC	Ocana	145.91	336	eP		PKPbc	18 34 12.6	-0.2	
NPGB	Novo Progresso	145.92	294	eP		PKPab	18 34 13.2	0.0	
USHA	Ushuaia	145.96	199	PKPbc		PKPab	18 34 12.6	+0.5	
	comp=Z,133nm,0.9s,baz=113,slow=4.4,SNR=8.1								
FRTB	Fartura	146.19	263	eP		PKPab	18 34 13.8	-0.3	
MOTC	Monteria, Cord	146.19	341	eP		PKPab	18 34 14.0	-0.1	
ITRB	Iturama	146.26	269	eP		PKPbc	18 34 13.8	+0.2	
LCBC	Los crdobas,	146.33	342	eP		PKPab	18 34 14.9	+0.2	
JTS	Las Juntas de	146.35	357	PKiKP		PKPdf	18 34 11.9	-0.9	
JTS				MLR		MLR			
	comp=Z,500nm,20.0s								
JTS	Las Juntas de	146.35	357			PKPdf	18 34 11.9	-0.9	
JTS					IAMs_20	IAMs_20	19 41 25.5		
	comp=Z,539nm,20.0s								
PAMC	Pamplona, Colo	146.49	335	eP		PKPbc	18 34 14.6	-0.4	
ARAG	Araguaiana, MT	146.50	277	eP		PKPbc	18 34 14.2	-0.1	
BRRC	Barranca, Sant	147.09	336	eP		PKPbc	18 34 15.6	-0.5	
ZARC	Zaragoza, Cauc	147.14	338	eP		PKPbc	18 34 15.3	-0.9	
BARC	Barichara	147.37	335	eP		PKPdf	18 34 15.3	+0.5	
PCMB	Pacaembu	147.47	266	eP		PKPbc	18 34 15.7	-1.2	
CNLB	Canela	147.66	252	eP		PKPdf	18 34 15.9	+1.3	
PTBC	PUERTO BERRIO	147.89	337	eP		PKPdf	18 34 15.8	+0.5	
RUSC	La Rusia	147.97	334	eP		PKPdf	18 34 16.0	0.0	
DBBC	Dabeiba	148.02	340	eP		PKPbc	18 34 17.8	-1.0	
CLDB	Colider	148.19	288	eP		PKPdf	18 34 15.6	-0.2	
SPBC	San Pablo de B	148.57	336	eP		PKPdf	18 34 16.8	+0.3	
HELC	Santa Helena	148.58	339	eP		PKPbc	18 34 21.1	+0.6	
PTGB	Pitanga	148.62	261	eP		PKPdf	18 34 17.2	+0.9	
ITAB	Concordia	148.81	256	eP		PKPdf	18 34 17.5	+1.1	
TRCB	Terra Rica	148.91	265	eP		PKPdf	18 34 17.2	+0.4	
NORC	Norcasia	148.94	337	eP		PKPdf	18 34 17.9	+0.8	
CBOC	Ciudad Bolivar	149.05	339	eP		PKPbc	18 34 20.7	-0.8	
PTGC	Puerto Gaitan,	149.09	331	eP		PKPbc	18 34 21.2	-0.2	
CHIC	Chingaza	149.37	334	eP		PKPdf	18 34 18.5	+0.3	
ROSC	El Rosal	149.41	336	PKPbc		PKiKP	18 34 24.2	+0.3	
	comp=Z,310nm,0.8s,baz=107,slow=3.8,SNR=37								
ROSC	El Rosal	149.41	336	eP		PKiKP	18 34 23.8	0.0	
ROSC	El Rosal	149.41	336			PKPdf	18 34 19.8	+1.5	
VILC	Villavicencio,	149.83	334	eP		PKPbc	18 34 22.7	-0.7	
PLTB	Pedras Altas	149.83	247	eP		PKPdf	18 34 18.7	+0.7	
CPSB	Cacapava Do Su	149.84	250	eP		PKPdf	18 34 19.1	+1.2	
PP1B	Ponte de Pedra	149.87	275	eP		PKPdf	18 34 19.6	+1.2	
TOLC	Tolima	150.01	337	eP		PKiKP	18 34 25.1	+0.1	
PLMC	San Jos del P	150.04	339	eP		PKPdf	18 34 18.8	-0.1	
ANIL	Santa Ana	150.13	337	eP		PKPbc	18 34 24.8	+0.5	
GO09	Cerro Castillo	150.22	198			PKPbc	18 34 22.6	-0.5	
PIZC	Pizarro, Choco	150.31	341	eP		PKiKP	18 34 25.7	+0.5	
ORTC	Ortega, Tolima	150.61	337	eP		PKPdf	18 34 20.3	+0.6	
ORTC						PKPbc	18 34 24.4	-0.8	
YOTC	Yotoco, Valle	150.92	339	eP		PKPdf	18 34 20.7	+0.4	
MALC	Bahia Malaga	151.21	341	eP		PKiKP	18 34 28.4	+1.3	
AQDB	Aquidauana	151.33	270	eP		PKPdf	18 34 21.2	+0.7	
MACC	Macarena, Meta	151.67	333	eP		PKPbc	18 34 26.7	-0.9	
BETC	Betania	151.82	336	eP		PKPbc	18 34 28.2	+0.2	
MARP	Paez Belalcaza	151.85	337	eP		PKPdf	18 34 23.8	+1.8	
MAPC	Malpelo	152.22	350	eP		PKiKP	18 34 29.4	+0.3	
GARC	Garzon, Huila	152.29	336	eP		PKPdf	18 34 23.6	+1.1	
POPC	Popayan, Colom	152.38	338	eP		PKPdf	18 34 22.8	+0.1	
PCON	Cinco Dias	152.49	338	eP		PKPdf	18 34 24.8	+1.5	
ITQB	Itaqui	152.66	251	eP		PKPdf	18 34 22.8	+0.6	
SOTA	Rioblanco	152.74	338	eP		PKiKP	18 34 30.9	0.0	
FLOC	Florencia	152.91	336	eP		PKPbc	18 34 30.5	+0.1	
VILB	Vilhena	152.96	288	eP		PKPdf	18 34 24.0	+0.8	
PTLB	Pontes e Lacer	153.04	282	eP		PKPdf	18 34 23.7	+0.5	
BBAC	Balboa, Cauca	153.06	339	eP		PKPbc	18 34 31.0	0.0	
SAML	Samuel	153.41	299	PKiKP		PKPdf	18 34 24.2	+0.4	
SAML				MLR		MLR			
	comp=Z,800nm,22.0s								
SAML	Samuel	153.41	299			PKPdf	18 34 24.2	+0.4	
SAML	Samuel	153.41	299	eP		PKPdf	18 34 24.4	+0.6	
CPUP	Villa Florida	153.44	258	PKP		PKPdf	18 34 24.1	+0.6	
	comp=Z,23nm,1.1s,baz=52,slow=3.5,SNR=21								
CPUP				PKPbc		PKPbc	18 34 31.0	-0.2	
	comp=Z,37nm,0.9s,baz=83,slow=2.1,SNR=30								
CPUP				PKPab		sPKPdf	18 34 44.3	0.0	
	comp=Z,21nm,0.7s,baz=79,slow=1.6,SNR=6.9								
CPUP	Villa Florida	153.44	258			PKPdf	18 34 23.3	-0.2	
CPUP	Villa Florida	153.44	258	eP		PKPdf	18 34 23.9	+0.3	
GCUF	Volcan Galeras	153.84	339	eP		PKPdf	18 34 26.4	+1.3	
SIV	San Ignacio	154.97	283	PKP		PKPdf	18 34 26.2	+0.2	
	comp=Z,9.8nm,1.1s,baz=87,slow=1.6,SNR=19								
SIV				PKPbc		PKPbc	18 34 34.5	-0.2	
	comp=Z,13nm,0.9s,baz=86,slow=2.9,SNR=18								
SIV				PKPab		PKPab	18 34 51.2	+0.9	
	comp=Z,14nm,0.6s,baz=106,slow=6.0,SNR=15								
OTAV	Otavalo	155.12	341	PKiKP		PKPdf	18 34 27.7	+0.9	
OTAV				MLR		MLR			
	comp=Z,500nm,21.0s								
OTAV	Otavalo	155.12	341			PKPdf	18 34 27.7	+0.9	
OTAV	Otavalo	155.12	341	IAMs_20		IAMs_20	19 49 44.5		
	comp=Z,537nm,21.0s								
OTAV	Otavalo	155.12	341	eP		PKPdf	18 34 27.7	+0.9	
ETMB	Extrema	156.32	302	eP		PKPdf	18 34 28.3	+0.5	
PLCA	Paso Flores	158.24	214	PKP		PKPdf	18 34 30.6	+1.0	
	comp=Z,14nm,1.1s,baz=130,slow=1.1,SNR=18								
PLCA				PKPab		PKPab	18 35 01.9	-1.8	
	comp=Z,17nm,1.0s,ba

KEF4					S	Sn	18 22 40.0	+0.3	
	comp=N,848nm,0.2s								
KEF5	**Kardakata, Kep**	**1.10**	**343**		P	Pb	18 22 24.2	-0.5	
KEF5					S	Sn	18 22 40.0	+0.1	
KEF5	**Kardakata, Kep**	**1.10**	**343**		P	Pb	18 22 24.2	-0.5	
KEF5					S	Sn	18 22 40.0	+0.1	
	comp=N,382nm,0.3s								
TRIP	**Tripoli**	**1.15**	**75**		P	Pn	18 22 25.8	+0.1	
TRIP	**Tripoli**	**1.15**	**75**		P	Pn	18 22 25.8	+0.1	
VLX	**Vlachokerasia**	**1.21**	**83**		P	Pg	18 22 27.1	0.0	
VLX	**Vlachokerasia**	**1.21**	**83**		P	Pg	18 22 27.1	-0.1	
FSK	**Fiskardo**	**1.25**	**349**		P	Pn	18 22 27.0	-0.1	
FSK					S	Sg	18 22 44.8	+0.4	
FSK	**Fiskardo**	**1.25**	**349**		P	Pn	18 22 27.0	0.0	
FSK					S	Sg	18 22 44.8	+0.5	
	comp=N,115nm,0.8s								
KLV	**Kalavryta, Ach**	**1.30**	**51**		P	Pb	18 22 28.2	0.0	
KLV	**Kalavryta, Ach**	**1.30**	**51**		P	Pb	18 22 28.2	0.0	
GUR	**Goura**	**1.36**	**58**		P	Pn	18 22 28.7	0.0	
GUR	**Goura**	**1.36**	**58**		P	Pb	18 22 29.2	-0.1	
PDO	**Prodromos**	**1.39**	**10**		P	Pb	18 22 30.1	+0.4	
PDO					AML	AML	18 22 53.1		
	comp=E,182μm,0.3s								
PDO					AML	AML	18 22 54.1		
	comp=N,294μm,0.3s								
PDO	**Prodromos**	**1.39**	**10**		P	Pb	18 22 30.1	+0.4	
EVGl	**Lefkada island**	**1.40**	**353**		P	Pb	18 22 29.9	+0.1	
EVGl	**Lefkada island**	**1.40**	**353**		P	Pb	18 22 29.9	0.0	
EFP	**Efpalio**	**1.45**	**34**		P	Pg	18 22 31.5	-0.2	
EFP	**Efpalio**	**1.45**	**34**		P	Pg	18 22 31.5	-0.2	
SERG	**Sergoula**	**1.51**	**38**		P	Pb	18 22 32.2	+0.5	
SERG	**Sergoula**	**1.51**	**38**		P	Pb	18 22 32.2	+0.5	
KALE	**Kalithea**	**1.54**	**40**		P	Pb	18 22 31.8	-0.4	
KALE	**Kalithea**	**1.54**	**40**		P	Pb	18 22 31.8	-0.4	
LKD2	**Lefkada island**	**1.57**	**354**		P	Pg	18 22 34.0	0.0	
ANX	**Ano Chora**	**1.59**	**31**		P	Pb	18 22 33.4	+0.2	
ANX	**Ano Chora**	**1.59**	**31**		P	Pb	18 22 33.4	+0.2	
DSF	**Desfina**	**1.76**	**47**		P	Pb	18 22 36.3	+0.2	
MAKR	**Makrakomi, Fth**	**2.04**	**29**		P	Pb	18 22 40.6	-0.1	
AGG	**Agios Georgios**	**2.13**	**32**		P	Pb	18 22 41.1	-1.2	

RSNC 20 18:27:06.5±1.1, 4°.19N × 76°.92W, h10km±6km, ML2.3, 2C, Colombia

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
MALC	**Bahia Malaga**	**0.45**	**248**	⇑ *i*	P	Pg	18 27 14.1	-1.3
MALC					*eS*	Sg	18 27 21.7	+0.3
MALC					*i*		18 27 22.9	
	comp=Z,490nm,0.2s							
YOTC	**Yotoco, Valle**	**0.60**	**109**	⇑ *i*	P	Pg	18 27 16.8	-1.4
YOTC					*eS*	Sg	18 27 26.2	0.0
YOTC					*i*		18 27 26.9	
	comp=Z,253nm,0.2s							
PLMC	**San Jos del P**	**0.95**	**41**		*e*P	Pg	18 27 23.5	-1.3
ANIL	**Santa Ana**	**1.54**	**79**		*e*P	Pn	18 27 33.5	-0.8
ANIL					*eS*	Sn	18 27 53.2	-1.3
ANIL					*i*		18 28 08.4	
	comp=N,11nm,0.4s							
TOLC	**Tolima**	**1.64**	**76**		*e*P	Pn	18 27 34.1	-1.6
TOLC					*i*		18 28 04.2	
	comp=Z,27nm,0.3s							
MARP	**Paez Belalcaza**	**1.64**	**144**		*e*P	Pn	18 27 31.5	-4.3
POPC	**Popayan, Colom**	**1.65**	**172**		*e*P	Pn	18 27 29.9	-5.9
POPC					*eS*	Sn	18 27 47.9	-9.4
POPC					*i*		18 27 50.7	
	comp=Z,38nm,0.2s							
ORTC	**Ortega, Tolima**	**1.69**	**99**		*e*P	Pn	18 27 35.0	-1.2
ORTC					*i*		18 27 35.6	
	comp=Z,18nm,0.6s							
ORTC					*eS*	Sn	18 27 57.1	-0.8
PCON	**Cinco Dias**	**1.92**	**164**		*e*P	Pn	18 27 55.6	-4.2
PCON					*eS*	Sn	18 27 57.3	-7.0
PCON					*i*		18 28 04.4	
	comp=Z,30nm,0.7s							
SOTA	**Rioblanco**	**2.06**	**171**		*e*P	Pn	18 27 36.9	-4.7
SOTA					*eS*	Sn	18 27 59.1	-8.6
BBAC	**Balboa, Cauca**	**2.17**	**189**		*e*P	Pn	18 27 37.9	-5.1
BBAC					*i*		18 28 10.9	
	comp=Z,14nm,0.3s							

IDC 20 18:36:08.6±6.3, 23°.46N × 93°.77E, h102km±46km, mb2.9/3, mb1 3.1/4, mb1mx2.9/42, mbtmp3.2/4, Error ellipse: s-maj=193.9km s-min=26.0km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.94**	**135**		P	Pn	18 37 47.7	0.0
	0.2nm,0.3s,baz=314,slow=14,SNR=4.3							
MKAR	**Makanchi Array**	**25.05**	**341**		P	P	18 41 23.3	0.0
	0.2nm,0.6s,baz=156,slow=7.9,SNR=1.3							
WRA	**Warramunga Arr**	**58.53**	**134**		P	P	18 45 56.2	+1.6
	0.5nm,0.9s,baz=323,slow=7.2,SNR=3.2							
ASAR	**Alice Springs**	**60.94**	**137**		P	P	18 46 09.9	-1.2
	0.1nm,0.5s,baz=311,slow=6.4,SNR=5.8							

WEL 20 19:11:23.4±1.5, 35°.S±26°.×17°.9E±2°.8, h249km±29km, M3.7/18, mB4.0/5, ML4.1/18, MLv4.0/18, Mw(mB)3.1/5, Error ellipse: s-maj=0.0km s-min=0.0km az=131.8, South of Kermadec Islands

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.09**	**190**		P	Pn	19 12 16.6	0.0
MXZ					S	S	19 12 56.7	-2.2
WMGZ	**Waiomatatini S**	**3.33**	**188**		P	Pn	19 12 18.2	-1.1
WMGZ					S	S	19 13 04.4	+0.8
HAZ	**Te Kaha**	**3.37**	**196**		P	Pn	19 12 19.8	0.0
HAZ					S	S	19 13 05.6	+1.0
PUZ	**Puketiti**	**3.59**	**189**		P	Pn	19 12 23.3	+1.0
RUGZ	**Raukumara Rang**	**3.60**	**197**		P	Pn	19 12 22.9	+0.5
MWZ	**Matawai**	**3.98**	**197**		P	Pn	19 12 27.3	+0.5
MWZ					S	S	19 13 18.3	+1.0
CNGZ	**Carnagh Statio**	**4.01**	**189**		P	Pn	19 12 27.9	+0.8
URZ	**Urewera**	**4.03**	**201**		P	Pn	19 12 27.7	+0.4
MUGZ	**Murupara**	**4.33**	**204**		P	Pn	19 12 30.8	-0.2
PRGZ	**Paritu Road**	**4.48**	**191**		P	Pn	19 12 34.2	+1.4
MTHZ	**Maungataniwha**	**4.65**	**201**		P	Pn	19 12 34.8	-0.1
MTHZ					S	S	19 13 33.0	+1.2
MHGZ	**Mahia Peninsul**	**4.70**	**190**		P	Pn	19 12 36.1	+0.7
NMHZ	**Naumai**	**4.89**	**200**		P	Pn	19 12 38.5	+0.7
ARHZ	**Aropaoanui**	**5.00**	**198**		P	Pn	19 12 38.7	-0.2
CKHZ	**Cape Kidnapper**	**5.35**	**196**		P	Pn	19 12 43.1	-0.2
NGZ	**Ngauruhoe**	**5.38**	**209**		P	Pn	19 12 44.6	+0.7
FWVZ	**Far West T-bar**	**5.47**	**209**		P	Pn	19 12 45.3	+0.3
BHHZ	**Black Hill Sta**	**5.48**	**204**		P	Pn	19 12 44.2	-0.8
WNVZ	**Wahianoa**	**5.51**	**208**		P	Pn	19 12 45.1	-0.4
MOVZ	**Moawhango**	**5.52**	**207**		P	Pn	19 12 44.8	-0.8
KRHZ	**Kereru**	**5.52**	**201**		P	Pn	19 12 44.5	-1.0
KAHZ	**Kahuranaki**	**5.53**	**197**		P	Pn	19 12 45.5	0.0
PNHZ	**Pukenui**	**5.82**	**202**		P	Pn	19 12 47.6	-1.6
TSZ	**Takapari Road**	**6.03**	**203**		P	Pn	19 12 50.2	-1.6

*PRE **20** 19:30:08.8±0.9, 26°.36S × 27°.77E, h2km, ML2.6*
*EAF **20** 19:30:10.3±1.0, 26°.41S × 27°.88E, h1km±13km, MD4.0*
*BUL **20** 19:30:11.0±1.1, 26°.42S × 27°.95E, h19km±18km, MD4.0*
ISC 20 19:30:08.7±1.7, 26°.32S±0°.05 × 27°.78E±0°.05, h2km±14km, n12, σ1§32/24, South Africa

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.71**	**212**		*e*P	**Pg**	**19 30 22.2**	**0.0**
PRYS					*eS*	**Sg**	**19 30 31.1**	**-0.4**
PRYS					AML	AML	19 30 40.4	
	comp=Z,321nm,0.7s							
KSR	**Koster**	**0.92**	**300**		*e*P	**Pb**	**19 30 27.0**	**-0.4**
KSR					*eS*	**Sb**	**19 30 40.0**	**-0.2**
KSR					AML	AML	19 30 46.3	
	comp=Z,299nm,0.5s							
SWZ	**Schweizer**	**2.35**	**248**		*e*P	**Pn**	**19 30 48.6**	**+0.3**
SWZ					*eS*	**Sn**	**19 31 18.0**	**+0.2**
SWZ					AML	AML	19 31 22.2	
	comp=Z,105nm,0.4s							
LBTB	**Lobatse**	**2.36**	**303**	*i*	P	**Pb**	**19 30 50.9**	**-1.1**
LBTB				*i*	S	**Sb**	**19 31 22.0**	**+0.5**
LBTB	**Lobatse**	**2.36**	**303**	*e*	P	**Pn**	**19 30 49.6**	**+1.1**
LBTB				*e*	S	**Sn**	**19 31 18.3**	**+0.2**
LBTB					AML	AML	19 31 22.7	
	comp=Z,83nm,0.6s							
LBTB	**Lobatse**	**2.36**	**303**	*i*	P	**Pb**	**19 30 50.9**	**-1.1**
LBTB				*i*	S	**Sb**	**19 31 22.0**	**+0.5**
BOSA	**Boshof**	**3.20**	**224**	*i*	P	**Pn**	**19 31 01.5**	**+1.5**
BOSA				*i*	S	**Sn**	**19 31 38.5**	**-0.3**
BOSA	**Boshof**	**3.20**	**224**	*e*	P	**Pn**	**19 31 00.7**	**+0.7**
BOSA				*e*	S	**Sn**	**19 31 37.4**	**-1.4**
BOSA					AML	AML	19 31 49.8	
	comp=Z,16nm,0.5s							
BOSA	**Boshof**	**3.20**	**224**	*i*	P	**Pn**	**19 31 01.5**	**+1.5**
BOSA				*i*	S	**Sn**	**19 31 38.5**	**-0.3**
MOPA	**Mopani**	**4.31**	**50**	*e*	P	**Pn**	**19 31 15.8**	**+0.5**
MOPA				*e*	S	**Sn**	**19 32 06.1**	**-0.1**
MOPA					AML	AML	19 32 25.6	
	comp=Z,8.1nm,0.7s							
BLWY	**Bulawayo**	**6.20**	**7**	*i*	P	**Pn**	**19 31 43.8**	**+2.5**
BLWY				*i*	S	**Sn**	**19 32 50.6**	**-2.3**
BLWY	**Bulawayo**	**6.20**	**7**	*i*	P	**Pn**	**19 31 43.8**	**+2.5**
BLWY				*i*	S	**Sn**	**19 32 50.6**	**-2.3**

*MOS **20** 19:46:21.2±1.1, 52°.13N × 133°.80E, h7km, mb3.9/3, Error ellipse: s-maj=22.1km s-min=10.6km az=97.9*
MOS Felt (III-IV) at Sofiysk.
*SKHL **20** 19:46:23.3±0.2, 52°.07N × 133°.89E, h11km, mb4.5/8*
SKHL Felt (III-IV) at Sofiysk.
ISC 20 19:46:23.7±0.6, 52°.14N±0°.03 × 133°.74E±0°.04, h10km, n19, σ1§64/37, mb3.7/3, 2C-2D, Southeastern Siberia

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**1.05**	**333**	⇓ *i*	Pg	**Pg**	**19 46 43.8**	**-0.1**
EKMR					AMB	AMB	19 46 44.7	
	148nm,0.3s							
EKMR					*e*Sg	**Sb**	**19 46 58.7**	**+0.9**
EKMR					A	A	19 46 59.4	
	1μm,0.3s							
GRNR	**Gornyy**	**2.17**	**128**		*e*Pn	**Pn**	**19 46 56.8**	**-3.0**
GRNR					*e*Pg	**Pn**	**19 47 00.2**	**+0.4**
GRNR					AMB	AMB	19 47 01.1	
	89nm,0.2s							
GRNR					Pg	**Pg**	**19 47 04.8**	**-0.4**
GRNR					*e*Sg	**Sn**	**19 47 27.4**	**+0.7**
GRNR					A	A	19 47 30.4	
	710nm,0.3s							
GRNR					A	A	19 47 30.4	
	770nm,0.3s							
GRNR	**Gornyy**	**2.17**	**128**	⇓ *i*	P	**Pn**	**19 47 00.2**	**+0.4**
GRNR					*e*S	**Sn**	**19 47 26.3**	**-0.4**
GRNR					pmax	pmax		
	comp=N,20nm,0.3s							
GRNR					pmax	pmax		
	comp=E,30nm,0.3s							
GRNR					pmax	pmax		
	comp=Z,30nm,0.3s							
GRNR					smax	smax		
	comp=N,150nm,0.4s							
KLR	**Kul'dur**	**3.17**	**204**		*e*Pn	**Pn**	**19 47 13.6**	**0.0**
KLR					*e*Pg	**Pb**	**19 47 20.0**	**-0.1**
KLR					*e*Sg	**Sg**	**19 48 02.1**	**-3.4**
KLR	**Kul'dur**	**3.17**	**204**	*c*	P	**Pn**	**19 47 13.6**	**0.0**
KLR					*i* S	**Sn**	**19 47 50.9**	**-0.6**
KLR					pmax	pmax		
	comp=Z,8.0nm,0.3s							
KHBR	**Khabarovsk**	**3.76**	**167**		*e*Pg	**Pb**	**19 47 31.7**	**+1.6**
KHBR					AMB	AMB	19 47 32.6	
	comp=Z,35nm,0.4s							
KHBR					*e*Sg	**Sb**	**19 48 18.4**	**+2.6**
KHBR					A	A	19 48 19.1	
	comp=Z,334nm,0.7s							
BMKR	**Bomnak**	**3.90**	**313**		*e*Pn	**Pn**	**19 47 25.0**	**+1.4**
BMKR					Pn	**Pb**	**19 47 29.0**	**-3.5**
BMKR					*e*Pg	**Pg**	**19 47 36.0**	**-2.4**
BMKR					AMB	AMB	19 47 41.2	
	comp=Z,40nm,0.4s							
BMKR					*e*Sn	**Sn**	**19 48 12.0**	**+2.6**
BMKR					*e*Sg	**Sg**	**19 48 29.0**	**+0.1**
BMKR					A	A	19 48 34.1	
	comp=Z,90nm,0.5s							
BMKR					A	A	19 48 34.1	
	comp=Z,80nm,0.5s							
ZEA	**Zeya**	**4.24**	**295**		*e*Pn	**Pn**	**19 47 29.7**	**+1.4**
ZEA					*e*Pg	**Pb**	**19 47 41.9**	**+3.6**
ZEA					AMB	AMB	19 47 45.7	
	comp=Z,34nm,0.6s							
ZEA					*e*Sn	**Sn**	**19 48 18.8**	**+1.0**
ZEA					*e*Sg	**Sg**	**19 48 38.3**	**-1.4**
ZEA					A	A	19 48 39.3	
	comp=Z,140nm,0.7s							
ZEA					A	A	19 48 39.3	
	comp=Z,54nm,0.7s							
ZEA	**Zeya**	**4.24**	**295**		*e*P	**Pn**	**19 47 29.9**	**+1.6**
ZEA					*e*S	**Sn**	**19 48 18.5**	**+0.7**
ZEA					pmax	pmax		
	comp=E,10.0nm,0.4s							
ZEA					pmax	pmax		
	comp=N,10.0nm,0.6s							
ZEA					pmax	pmax		
	comp=Z,10.0nm,0.6s							
ZEA					smax	smax		
	comp=E,20nm,0.5s							
ZEA					smax	smax		
	comp=N,50nm,0.7s							
KROS	**Kirovskiy**	**4.67**	**302**	⇑ *i*	Pn	**Pn**	**19 47 35.9**	**+1.8**
KROS					AMB	AMB	19 47 36.7	
	comp=N,24nm,0.5s							
KROS					*e*Sg	**Sg**	**19 48 51.8**	**-1.6**
KROS					A	A	19 48 55.8	
	comp=N,60nm,0.5s							
KROS					A	A	19 48 55.8	
	comp=N,60nm,0.5s							
YSS	**Yuzh-Sakhalins**	**7.83**	**128**		*e*P	**Pn**	**19 48 17.8**	**+0.3**
USA0B	**Ussuriysk Arra**	**8.03**	**189**		*i* P	**Pn**	**19 48 20.4**	**+0.1**
VLA	**Vladivostok**	**9.11**	**189**		*i* P	**Pn**	**19 48 34.7**	**-0.4**
YAK	**Yakutsk**	**10.16**	**349**		*i* P	**Pn**	**19 48 50.3**	**+0.9**
YAK					pmax	pmax		
	comp=Z,4.0nm,0.3s							
SEY	**Seymchan**	**14.67**	**35**		*i* P	**Pn**	**19 49 49.6**	**-1.4**
NRIK	**Noril'sk**	**27.42**	**326**		*i* P	**P**	**19 52 09.5**	**+0.5**
NRIK					pmax	pmax		
	comp=Z,2.0nm,1.0s							
KURK	**Kurchatov**	**33.70**	**290**		*i* P	**P**	**19 53 04.1**	**-0.5**
KURK					pmax	pmax		
	comp=Z,1.0nm,1.1s							
BRVK	**Borovoye**	**37.43**	**297**		*i* P	**P**	**19 53 37.6**	**+1.0**
BRVK					pmax	pmax		
	comp=Z,1.0nm,0.9s							
AAK	**Ala-Archa**	**40.18**	**281**		*i* P	**P**	**19 53 58.9**	**-1.1**

*IDC **20** 19:52:48.5±16.0, 41°.09N × 142°.32E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/53, mbtmp3.7/5, Error ellipse: s-maj=398.5km s-min=40.5km az=170.0*
*JMA **20** 19:52:59.5±0.1, 41°.57N × 142°.07E, h66km±3km, M3.3 Broadband fault plane solution: P waves. NP1: φs146.00000°, δ14.00000°, λ29.00000°. NP2: φs28.00000°, δ83.00000°, λ102.00000°. Principal axes: T Plg50.0000°, Azm311.0000°; N Plg12.0000°, Azm206.0000°; P Plg37.0000°, Azm107.0000°;*
JMA Felt I J1.
*NEIC **20** 19:53:00.1±0.7, 41°.57N±0°.06 × 142°.01E±0°.05, h61km±11km, mb4.1/3 Error ellipse: s-maj=8.5km s-min=5.3km az=156.0*
ISC 20 19:52:60.0±0.9, 41°.56N±0°.03 × 142°.07E±0°.04, h63km±8km, n46, σ0§63/55, mb3.9/8, 2C-11D, Hokkaido region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.63**	**242**	⇓	P	**Pn**	**19 53 13.7**	**+0.2**
JAHD					*eS*	**Sn**	**19 53 24.1**	**+0.7**
JARK	**Aomorirokkasho**	**0.77**	**224**	⇓	P	**Pn**	**19 53 15.0**	**-0.1**
JARK					*eS*	**Sn**	**19 53 26.0**	**-0.3**
JOT	**Ohata**	**0.79**	**257**	⇓	P	**Pn**	**19 53 15.2**	**-0.2**
JOT					*eS*	**Sn**	**19 53 27.1**	**+0.3**
JKB	**Kayabe**	**0.84**	**293**		P	**Pn**	**19 53 15.5**	**-0.6**
JKB					*eS*	**Sn**	**19 53 27.9**	**-0.1**
JNBK	**Urakawa-nobuka**	**0.88**	**35**		P	**Pn**	**19 53 15.7**	**-0.9**
JSHD	**Hidakashinhida**	**0.90**	**19**	⇓	P	**Pn**	**19 53 16.9**	**+0.1**
JSHD					*eS*	**Sn**	**19 53 30.4**	**+1.1**
ERM	**Erimo**	**0.93**	**60**			**Pn**	**19 53 16.7**	**-0.5**
JEM	**Erimo**	**0.93**	**60**	⇑	P	**Pn**	**19 53 16.6**	**-0.6**
JEM					*eS*	**Sn**	**19 53 29.3**	**-0.7**
JIAM	**Iburiatsuma**	**1.07**	**354**	⇓	P	**Pn**	**19 53 19.4**	**+0.4**
JIAM					*eS*	**Sn**	**19 53 34.7**	**+1.6**
JTM	**Tenmabayashi**	**1.08**	**225**	⇓	P	**Pn**	**19 53 19.4**	**+0.3**
JTM					*eS*	**Sn**	**19 53 33.6**	**+0.2**
JTM	**Tenmabayashi**	**1.08**	**225**			**Pn**	**19 53 19.5**	**+0.3**
JNB	**Noboribetsu**	**1.19**	**320**	⇓	P	**Pn**	**19 53 19.8**	**-0.8**
JNB					*eS*	**Sn**	**19 53 35.2**	**-0.8**
JBT2	**Biratori 2**	**1.24**	**10**		P	**Pn**	**19 53 21.0**	**-0.2**
JBT2					*eS*	**Sn**	**19 53 38.0**	**+0.9**
JSR	**Shiriuchi**	**1.24**	**269**		P	**Pn**	**19 53 21.2**	**0.0**
JANG	**Nango**	**1.26**	**200**	⇑	P	**Pn**	**19 53 21.4**	**-0.1**
JANG					*eS*	**Sn**	**19 53 37.1**	**-0.5**
JEW	**Eniwo**	**1.36**	**340**	⇓	P	**Pn**	**19 53 22.9**	**0.0**
JEW					*eS*	**Sn**	**19 53 39.6**	**-0.4**
JEW	**Eniwo**	**1.36**	**340**			**Pn**	**19 53 22.9**	**0.0**
JEW					Sn	**Sn**	**19 53 38.2**	**-1.8**
JYM2	**Yakumo 2**	**1.39**	**294**	⇓	P	**Pn**	**19 53 23.4**	**+0.2**
JCH	**Churui**	**1.43**	**42**	⇓	P	**Pn**	**19 53 23.9**	**+0.2**
JCH					*eS*	**Sn**	**19 53 42.5**	**+1.0**
JOMM	**Oshimamatsumae**	**1.55**	**269**	⇓	P	**Pn**	**19 53 25.3**	**0.0**
JFR	**Furan**	**1.65**	**13**		P	**Pn**	**19 53 26.4**	**-0.3**
JOSM	**Okushiri--Mats**	**2.01**	**286**		P	**Pn**	**19 53 31.1**	**-0.5**
JAR	**Ashorobuto**	**2.14**	**35**		P	**Pn**	**19 53 33.3**	**-0.1**
JAR					*eS*	**Sn**	**19 53 58.1**	**-0.8**
JKA	**Kamikawa-asahi**	**2.58**	**8**			**Pn**	**19 53 40.3**	**+0.9**
JMM	**Marumori**	**3.82**	**195**		Pn	**Pn**	**19 53 56.2**	**0.0**
JSD	**Sado**	**4.58**	**221**		Pn	**Pn**	**19 54 06.6**	**-0.1**
H11N2	**WAKE ISLAND Hy**	**30.30**	**128**		T	T	20 31 35.6	
	baz=322,slow=75,SNR=11							
H11N1	**WAKE ISLAND Hy**	**30.31**	**128**		T	T	20 31 37.0	
	baz=322,slow=75,SNR=19							
H11N3	**WAKE ISLAND Hy**	**30.32**	**128**		T	T	20 31 39.7	
	baz=322,slow=75,SNR=15							
H11S1	**WAKE ISLAND Hy**	**31.14**	**130**		T	T	20 32 35.2	
	baz=323,slow=76,SNR=15							
H11S3	**WAKE ISLAND Hy**	**31.14**	**130**		T	T	20 32 40.0	
	baz=323,slow=76,SNR=17							
H11S2	**WAKE ISLAND Hy**	**31.16**	**130**		T	T	20 32 41.2	
	baz=323,slow=76,SNR=11							
ZALV	**Zalesovo Beam**	**39.37**	**308**		P	**P**	**20 00 23.2**	**+0.1**
	0.6nm,0.4s,baz=74,slow=11,SNR=2.2							
MKAR	**Makanchi Array**	**42.29**	**298**		P	**P**	**20 00 47.0**	**-0.2**
	0.5nm,0.6s,baz=77,slow=8.8,SNR=3.0							
MKAR	**Makanchi Array**	**42.29**	**298**		P	**P**	**20 00 47.8**	**+0.6**
MAKZ	**Makanchi**	**42.50**	**298**		P	**P**	**20 00 48.6**	**-0.3**
MAKZ					IAmb	IAmb	20 01 13.8	
	comp=Z,4.6nm,1.2s							
IMAR	**Indian Mountai**	**42.54**	**33**		P	**P**	**20 00 49.6**	**+0.6**
COLD	**Coldfoot**	**43.99**	**31**		P	**P**	**20 00 59.5**	**-1.1**
COLD					IAmb	IAmb	20 01 25.7	
	comp=Z,3.0nm,1.2s							
ILAR	**Eielson Array**	**45.44**	**35**		P	**P**	**20 01 11.1**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=275,slow=5.2,SNR=4.6							
ILAR	**Eielson Array**	**45.44**	**35**		P	**P**	**20 01 12.7**	**+0.5**
INK	**Inuvik**	**50.15**	**29**		P	**P**	**20 01 49.3**	**+0.8**
INK					IAmb	IAmb	20 01 55.3	
	comp=Z,3.3nm,1.0s							
KKAR	**Karatay Array**	**51.40**	**297**		P	**P**	**20 01 58.4**	**0.0**
ABKAR	**Akbulak array**	**55.48**	**308**		P	**P**	**20 02 28.0**	**-0.1**
FINES	**FINESS Array B**	**65.07**	**332**		P	**P**	**20 03 33.4**	**0.0**
	comp=Z,1.4nm,0.8s,baz=54,slow=7.1,SNR=4.9							
FINES	**FINESS Array B**	**65.07**	**332**		P	**P**	**20 03 33.6**	**+0.3**
NOA	**NORSAR Array B**	**70.22**	**337**		P	**P**	**20 04 05.9**	**0.0**
	comp=Z,0.3nm,0.6s,baz=51,slow=5.2,SNR=1.7							

IDC 20 20:07:25.1±5.0, 23°.92N × 94°.35E, h80km±42km, mb3.1/3, mb1 3.2/4, mb1mx2.8/56, mbtmp3.3/4, ML3.4/1, Error ellipse: s-maj=173.8km s-min=23.3km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.92**	**141**		P	Pn	20 09 04.0	0.0
	0.2nm,0.3s,baz=315,slow=14,SNR=5.0							
MKAR	**Makanchi Array**	**24.79**	**340**		P	P	20 12 39.5	0.0
	0.3nm,0.4s,baz=162,slow=10.0,SNR=7.7							
WRA	**Warramunga Arr**	**58.48**	**135**		P	P	20 17 12.8	-0.3
	0.3nm,0.9s,baz=325,slow=7.0,SNR=2.2							
ASAR	**Alice Springs**	**60.93**	**138**		P	P	20 17 30.1	+0.1
	0.3nm,0.5s,baz=318,slow=6.9,SNR=6.0							

*IDC **20** 20:08:50.1±4.8, 36°.20N × 70°.97E, h198km±49km, mb3.2/5, mb1 3.2/10, mb1mx2.9/57, mbtmp3.8/10, MS2.8/2, Ms1 2.8/2, ms1mx2.5/25, Error ellipse: s-maj=53.4km s-min=34.2km az=124.0*
*NEIC **20** 20:08:55.0±1.9, 36°.61N±0°.08 × 70°.9E±0°.1, h220km±8km, mb4.5/20, Error ellipse: s-maj=12.7km s-min=11.2km az=73.0*
ISC 20 20:08:54.3±0.8, 36°.75N±0°.07 × 70°.70E±0°.09, h200km, n48, σ1§51/47, mb4.5/14, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
CHGR	**Chuyangaron**	**2.26**	**328**			**Pn**	**20 09 39.0**	**+3.3**
GAR	**Garm**	**2.27**	**352**			**Pn**	**20 09 39.0**	**+3.3**
KBL	**Kabul**	**2.58

comp=Z,1.0nm,0.4s,baz=116,slow=8.1,SNR=14
ARA3 ARCESS Array S 40.83 338 P P 20 16 16.9 +1.1
ARB1 ARCESS Array S 40.83 338 P P 20 16 16.7 +0.8
NC303 NORSAR Array S 43.98 323 P P 20 16 42.1 +0.8
NB201 NORSAR Array S 44.00 323 P P 20 16 41.8 +0.3
NB201 IAmb IAmb 20 16 47.5
comp=Z,15nm,1.2s
NOA NORSAR Array B 44.04 323 P P 20 16 41.8 0.0
comp=Z,0.3nm,0.5s,baz=97,slow=7.7,SNR=2.1
NC204 NORSAR Array S 44.28 323 P P 20 16 43.9 +0.1
NC204 IAmb IAmb 20 16 47.9
comp=Z,23nm,1.4s
TIXI Tiksi 45.64 22 P P 20 16 53.7 -0.5
SPITS Spitsbergen Ar 47.20 347 LR LR 20 39 14.6
comp=Z,18nm,18.9s,baz=65,slow=38
KBS Kingsbay 48.32 347 P P 20 17 15.8 +0.9
TORD Torodi Ar. Bea 65.48 268 P P 20 19 13.6 -2.7
comp=Z,0.4nm,0.4s,baz=46,slow=5.7,SNR=9.6
RES Resolute Bay 68.44 356 P P 20 19 33.3 -0.6
TOLK Toolik Lake Re 70.75 15 P P 20 19 47.9 -0.3

*REY **20** 20:28:36.8, 64.67°N × 17.47°W, h10km*
*NEIC **20** 20:28:38.4 ± 1.2, 64.51°N ± 0.09 × 17.8°W ± 0.2, h8km ± 6km, mb4.6/11, Error ellipse: s-maj=14.5km s-min=6.1km az=214.0*
*IDC **20** 20:28:38.9 ± 1.1, 64.42°N × 17.73°W, h0km, mb3.5/5, mb1 3.9/7, mb1mx3.5/40, mbtmp3.6/7, ML3.2/2, MS3.4/11, Ms1 3.5/11, ms1mx3.1/49, Error ellipse: s-maj=42.3km s-min=20.2km az=43.0*
ISC 20 20:28:38.7 ± 0.6, 64°66N ± 0.02 × 17°38W ± 0.03, h10km, n59, σ2s39/61, mb3.9/10, MS3.7/5, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals** baz=6.5	**0.13**	**2**	P	**Pg**	**20 28 39.5**	**-2.2**
IDYN	baz=6.5			S	**Sg**	**20 28 42.0**	**-2.0**
IVON	**Vonarskard** baz=270	**0.16**	**274**	P	**Pg**	**20 28 40.1**	**-2.2**
IDJK	**Dyngjujokull** baz=158	**0.17**	**159**	P	**Pg**	**20 28 40.8**	**-1.6**
IURH	**Urdarhals** baz=36	**0.19**	**32**	P	**Pg**	**20 28 40.7**	**-2.0**
IGRF	**Grimsfjall** baz=168	**0.26**	**170**	P	**Pg**	**20 28 42.3**	**-1.8**
IKVE	**Kverkfjoll** baz=89	**0.30**	**87**	P	**Pg**	**20 28 43.2**	**-1.6**
IHUS	**Husbondi** baz=196	**0.39**	**198**	P	**Pg**	**20 28 44.4**	**-2.0**
IVOT	**Vottur** baz=167	**0.40**	**168**	P	**Pg**	**20 28 44.3**	**-2.3**
THOR	**Thorvaldshraun** baz=50	**0.41**	**48**	P	**Pg**	**20 28 44.4**	**-2.2**
IKRE	**Kreppuhraun** baz=75	**0.44**	**74**	P	**Pg**	**20 28 45.0**	**-2.4**
IKRE	baz=75			S	**Sg**	**20 28 52.0**	**-1.2**
ISKR	**Skrokkalda** baz=255	**0.45**	**257**	P	**Pg**	**20 28 45.1**	**-2.3**
IASK	**Askja** baz=40	**0.50**	**38**	P	**Pg**	**20 28 45.9**	**-2.5**
IJOK	**Jokulheimar** baz=225	**0.51**	**227**	P	**Pg**	**20 28 46.1**	**-2.4**
IMKO	**Mokollar** baz=56	**0.55**	**54**	P	**Pg**	**20 28 46.7**	**-2.5**
IMKO	baz=56			S	**Sg**	**20 28 54.8**	**-1.7**
IKSK	**Karasker** baz=142	**0.64**	**142**	P	**Pg**	**20 28 47.8**	**-3.3**
IKSK	baz=142			S	**Sg**	**20 28 57.2**	**-2.2**
IIEY	**Innrieyrar** baz=209	**0.66**	**210**	P	**Pg**	**20 28 48.5**	**-2.8**
ISVA	**Svartarkot** baz=5.2	**0.68**	**4**	P	**Pg**	**20 28 48.7**	**-3.0**
ISVA	baz=5.2			S	**Sg**	**20 28 57.9**	**-2.8**
IVSH	**V-Sauoahnukur** baz=79	**0.72**	**78**	P	**Pg**	**20 28 49.6**	**-3.0**
IVSH	baz=79			S	**Sg**	**20 28 59.9**	**-2.1**
IKAL	**Kalfafell** baz=190	**0.73**	**191**	P	**Pg**	**20 28 49.7**	**-3.0**
IKAL	baz=190			S	**Sg**	**20 28 60.0**	**-2.3**
IVAT	**Vatnsfell** baz=234	**0.82**	**235**	P	**Pg**	**20 28 51.6**	**-2.9**
IADA	**Aoalbol** baz=65	**0.85**	**64**	P	**Pg**	**20 28 51.6**	**-3.4**
IFAG	**Fagurholsmyri** baz=158	**0.85**	**158**	P	**Pg**	**20 28 52.0**	**-3.1**
IFAG	baz=158			S	**Sg**	**20 29 03.7**	**-2.4**
IMEL	**Melhnausar** baz=19	**0.96**	**18**	P	**Pg**	**20 28 53.4**	**-3.8**
IREN	**Reynihlio** baz=12	**1.01**	**11**	P	**Pg**	**20 28 54.2**	**-3.8**
ISNB	**Snabyli** baz=210	**1.08**	**211**	P	**Pg**	**20 28 56.2**	**-3.2**
IGRS	**Grimsstaoir** baz=28	**1.11**	**28**	P	**Pb**	**20 28 56.1**	**-3.9**
BORG	**Borgarnes**	**1.70**	**275**		**Pn**	**20 29 05.9**	**-2.4**
SCO	**Scoresbysund**	**6.10**	**345**		**Pn**	**20 30 10.0**	**+1.3**
SCO	**Scoresbysund** baz=157,slow=8.6	**6.10**	**345**	*e*	**Pn**	**20 30 06.5**	**-2.2**
SCO				*i* P	**Pn**	**20 30 10.0**	**+1.3**
SCO				*i* S	**Sn**	**20 31 22.6**	**+4.1**
SCO	comp=Z,1.2nm,0.4s			IAML		20 31 33.5	
JMIC	**Jan Mayen** comp=Z,128nm,20.0s,baz=248,slow=33	**7.17**	**24**	LR	LR	20 32 41.8	
EKA	**Eskdalemuir Ar** baz=323,slow=13,SNR=10	**11.72**	**136**	Pn	**Pn**	**20 31 25.4**	**-0.3**
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=1.8	**13.48**	**92**	Pn	**Pn**	**20 31 47.7**	**-2.0**
NOA	comp=Z,58nm,21.5s,baz=295,slow=38			LR	LR	20 37 14.1	
SFJD	**Kangerlussuaq** comp=Z,363nm,18.7s,baz=128,slow=36	**13.71**	**295**	LR	LR	20 36 53.3	
HFS	**Hagfors** comp=Z,55nm,21.0s,baz=262,slow=38	**14.99**	**93**	LR	LR	20 38 10.2	
ARA1	**ARCESS Array S**	**17.08**	**55**	Pn	**P**	**20 32 40.1**	**+1.2**
ARA1	comp=Z,154nm,1.9s			IAmb	IAmb	20 32 49.7	
ARB1	**ARCESS Array S**	**17.08**	**55**	Pn	**P**	**20 32 40.1**	**+1.2**
ARB1	comp=Z,140nm,1.9s			IAmb	IAmb	20 32 49.7	
ARCES	**ARCESS Array B** comp=Z,82nm,19.1s,baz=290,slow=33	**17.08**	**55**	LR	LR	20 38 09.6	
FINES	**FINESS Array B** comp=Z,0.0nm,0.3s,baz=304,slow=9.9,SNR=3.8	**19.65**	**79**	P	**Pn**	**20 33 10.8**	**+2.3**
FINES	comp=Z,78nm,20.1s,baz=284,slow=35			LR	LR	20 40 19.0	
FINES	**FINESS Array B**	**19.65**	**79**	P	**Pn**	**20 33 10.2**	**+1.6**
CLL	**Collm**	**20.66**	**116**	P	Pn	20 33 18.4	-2.1
BRG	**Berggiesshubel** comp=Z,4.1nm,0.9s	**21.36**	**115**	*e*P	**P**	**20 33 26.5**	**+0.7**
BRG	comp=Z,18nm,1.8s			*e*		20 33 37.8	
KHC	**Kasperske Hory**	**22.63**	**119**	*e*P	**P**	**20 33 42.5**	**+3.1**
KHC	**Kasperske Hory**	**22.63**	**119**	P	**P**	**20 33 41.9**	**+2.4**
KHC	comp=Z,16nm,1.8s			IAmb	IAmb	20 33 55.8	
DPC	**Dobruska-Polom**	**22.71**	**113**	*e*P	**P**	**20 33 43.0**	**+2.7**
GEC2	**GERESS Array S**	**22.91**	**119**	P	**P**	**20 33 44.1**	**+1.7**
GERES	**GERESS Array B** comp=Z,0.6nm,0.7s,baz=313,slow=9.3,SNR=4.4	**22.91**	**119**	P	**P**	**20 33 44.0**	**+1.5**
GERES	comp=Z,109nm,18.6s,baz=300,slow=37			LR	LR	20 42 49.5	
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**20 33 43.7**	**+1.3**
MTE	**Manteigas**	**24.97**	**162**	P	**P**	**20 34 01.7**	**-0.4**
MTE	comp=Z,40nm,1.5s			IAmb	IAmb	20 34 13.6	
PSZ	**Piszkesteto**	**26.07**	**112**	P	**P**	**20 34 12.9**	**+0.8**
PSZ	comp=Z,7.2nm,1.0s			IAmb	IAmb	20 34 17.8	
ESDC	**Sonseca Array** comp=Z,1.2nm,0.9s,baz=353,slow=9.1,SNR=5.1	**26.23**	**156**	P	**P**	**20 34 14.9**	**+1.3**
AGG	**Agios Georgios**	**34.52**	**119**	P	**P**	**20 35 28.9**	**+2.1**
KARP	**Karpathos**	**39.41**	**116**	P	**P**	**20 36 08.0**	**-0.4**
ILAR	**Eielson Array** comp=Z,0.9nm,1.1s,baz=0.0,slow=5.4,SNR=4.4	**45.71**	**332**	P	**P**	**20 37 02.6**	**+3.4**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.8s,baz=333,slow=11,SNR=3.1	**53.12**	**157**	P	**P**	**20 37 56.3**	**0.0**
PDAR	**Pinedale Array** comp=Z,1.4nm,0.9s,baz=32,slow=7.0,SNR=6.4	**53.23**	**293**	P	**P**	**20 37 57.9**	**+0.8**
PDAR	comp=Z,65nm,18.1s,baz=44,slow=36			LR	LR	21 00 36.7	
GAR	**Garm**	**54.60**	**73**	P	**P**	**20 38 08.5**	**+1.4**
GAR	comp=Z,11nm,1.2s			IAmb	IAmb	20 38 11.0	
ANMO	**Albuquerque** comp=Z,56nm,18.9s,baz=44,slow=38	**58.64**	**286**	LR	LR	21 05 20.6	
PFO	**Pinyon Flats O** comp=Z,68nm,18.8s,baz=295,slow=35	**63.85**	**293**	LR	LR	21 06 15.1	
CMAR	**Chiang Mai Arr** comp=Z,67nm,20.2s,baz=132,slow=36	**84.09**	**59**	LR	LR	21 19 00.6	

*TEH **20** 20:35:12.2, 31.51°N × 49.65°E, h13km, ML3.2*
*IDC **20** 20:35:12.0 ± 3.7, 31.73°N × 49.10°E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.4/42, mbtmp3.8/5, ML3.4/1, Error ellipse: s-maj=77.2km s-min=35.8km az=137.0*
ISC 20 20:35:13.8 ± 0.9, 31°46N ± 0.08 × 49°57E ± 0.05, h25km, n34, σ1s36/35, mb3.9/4, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHWZ	**Ahwaz**	**0.80**	**261**	*e*Pg	**Pb**	**20 35 29.2**	**+0.1**
AHWZ				*e*Sg	**Sb**	**20 35 42.2**	**+2.6**
ROKH	**ROKH**	**1.53**	**54**	*e*Pg	**Pn**	**20 35 40.0**	**+0.3**
ROKH				*e*		20 36 03.3	
IPIR	**Pirpir**	**1.66**	**42**	*e*Pg	**Pn**	**20 35 42.8**	**+1.2**
IPIR				*e*		20 36 08.3	
KLNJ	**Kolanjah**	**1.79**	**104**	*e*Pg	**Pn**	**20 35 44.0**	**+0.6**
KLNJ				*e*		20 36 15.1	
IKMR	**Kamar-syah**	**2.29**	**334**	*e*Pn	**Pn**	**20 35 50.8**	**+0.9**
IGAR	**Gharneh**	**2.30**	**65**	*e*Pg	**Pn**	**20 35 53.0**	**+2.6**
IGAR				*e*		20 36 27.9	
IRAM	**Ramesheh**	**2.42**	**81**	*e*Pn	**Pn**	**20 35 53.2**	**+1.1**
IRAM				*e*		20 35 58.7	
IKLH	**Kolahrood**	**2.52**	**42**	*e*Pn	**Pn**	**20 35 54.7**	**+1.3**
IKLH				*e*		20 36 36.8	
IKFM	**Kafar-mosalman**	**2.52**	**325**	*e*Pn	**Pn**	**20 35 54.5**	**+1.3**
IKFM				*e*		20 36 50.3	
IDOB	**Doab**	**2.60**	**334**	*e*Pn	**Pn**	**20 35 55.2**	**+0.7**
IZEF	**Zefreh**	**2.74**	**58**	*e*Pn	**Pn**	**20 35 57.6**	**+1.1**
QAM	**Ghamsar**	**2.78**	**34**	*e*Pn	**Pn**	**20 35 57.7**	**+0.7**
HSAM	**Samen**	**2.86**	**344**	*e*Pn	**Pn**	**20 35 59.2**	**+1.0**
HSAM				*e*		20 36 18.7	
IKOM	**Komasi**	**3.22**	**328**	*e*Pn	**Pn**	**20 36 04.4**	**+1.5**
IKOM				*e*		20 37 24.2	
ISAD	**Sadrabad**	**3.54**	**82**	*e*Pn	**Pn**	**20 36 08.7**	**+1.3**
IALM	**Almabolaq**	**3.59**	**341**	*e*Pn	**Pn**	**20 36 09.2**	**+1.0**
IQOM	**Qom**	**3.60**	**20**	*e*Pn	**Pn**	**20 36 09.5**	**+1.2**
ANAR	**Anarak**	**3.92**	**63**	*e*Pn	**Pn**	**20 36 13.7**	**+1.1**
HSRG	**Sareghieh**	**3.92**	**344**	*e*Pn	**Pn**	**20 36 14.2**	**+1.4**
HSRG				*e*		20 37 05.1	
IRAZ	**Razeghan**	**3.95**	**4**	*e*Pn	**Pn**	**20 36 14.4**	**+1.4**
IVRN	**Varamin**	**3.96**	**27**	*e*Pn	**Pn**	**20 36 13.9**	**+0.8**
ILIN	**Lien**	**4.08**	**328**	*e*Pn	**Pn**	**20 36 15.3**	**+0.4**
ILIN				*e*		20 37 07.9	
IDHR	**Dehrash**	**4.19**	**321**	*e*Pn	**Pn**	**20 36 17.2**	**+0.8**
IDHR				*e*		20 37 07.2	
IMEH	**Mehriz**	**4.31**	**90**	*e*Pn	**Pn**	**20 36 18.7**	**+0.7**
IFIR	**Firoozkooh**	**4.95**	**32**	*e*Pn	**Pn**	**20 36 27.9**	**+1.1**
QALM	**Alamut, Qazvin**	**5.04**	**10**	*e*Pn	**Pn**	**20 36 29.4**	**+1.3**
QSDN	**Sirdan**	**5.04**	**356**	*e*Pn	**Pn**	**20 36 28.2**	**+0.1**
ISHM	**Shahmirzad**	**5.33**	**35**	*e*Pn	**Pn**	**20 36 33.4**	**+1.3**
IANJ	**Anjilo**	**5.40**	**41**	*e*Pn	**Pn**	**20 36 34.4**	**+1.4**
GEYT	**Alibeck**	**9.54**	**45**	Pn	**Pn**	**20 37 32.4**	**+2.7**
FINES	0.4nm,0.3s,baz=181,slow=7.1,SNR=2.6 **FINESS Array B** 1.0nm,0.6s,baz=138,slow=8.9,SNR=5.4	**33.69**	**340**	P	**P**	**20 41 51.0**	**-1.5**
HFS	**Hagfors** 1.4nm,0.8s,baz=134,slow=8.2,SNR=5.0	**37.23**	**331**	P	**P**	**20 42 21.4**	**-1.6**
ARCES	**ARCESS Array B** 3.9nm,1.1s,baz=145,slow=9.7,SNR=1.5	**40.48**	**347**	P	**P**	**20 42 48.8**	**-1.3**
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=61,slow=8.7,SNR=2.4	**47.49**	**259**	P	**P**	**20 43 46.3**	**-0.8**

*REY **20** 20:55:04.4, 64.67°N × 17.44°W, h1km*
*IDC **20** 20:55:05.3 ± 1.6, 64.59°N × 17.18°W, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/50, mbtmp3.4/6, ML2.1/1, Error ellipse: s-maj=40.4km s-min=26.3km az=65.0*
ISC 20 20:55:05.0 ± 0.6, 64°66N ± 0.02 × 17°44W ± 0.03, h10km, n51, σ1s58/62, mb3.6/6, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARD	**Bardarbunga** baz=187	**0.02**	**191**	P	**Pg**	**20 55 05.2**	**-1.9**
IDYN	**Dyngjuhals** baz=14	**0.13**	**13**	P	**Pg**	**20 55 07.5**	**-0.7**
IDYN	baz=14			S	**Sg**	**20 55 10.2**	**-0.2**
IVON	**Vonarskard** baz=273	**0.14**	**275**	P	**Pg**	**20 55 07.6**	**-0.6**
IURH	**Urdarhals** baz=39	**0.20**	**38**	P	**Pg**	**20 55 08.8**	**-0.5**
IURH	baz=39			S	**Sg**	**20 55 12.6**	**+0.5**
IHAM	**Hamarinn** baz=222	**0.25**	**223**	P	**Pg**	**20 55 09.6**	**-0.5**
IHAM	baz=222			S	**Sg**	**20 55 13.1**	**-0.4**
IKVE	**Kverkfjoll** baz=88	**0.33**	**87**	P	**Pg**	**20 55 11.2**	**-0.3**
IHUS	**Husbondi** baz=194	**0.38**	**195**	P	**Pg**	**20 55 12.3**	**-0.2**
IHUS	baz=194			S	**Sb**	**20 55 18.0**	**-1.8**
IVOT	**Vottur** baz=164	**0.41**	**164**	P	**Pg**	**20 55 12.6**	**-0.5**
ISKR	**Skrokkalda** baz=256	**0.42**	**256**	P	**Pg**	**20 55 12.5**	**-0.7**
THOR	**Thorvaldshraun** baz=50	**0.42**	**50**	P	**Pg**	**20 55 12.7**	**-0.6**
THOR	baz=50			S	**Sg**	**20 55 19.0**	**+0.1**
IKRE	**Kreppuhraun** baz=75	**0.47**	**74**	P	**Pg**	**20 55 13.3**	**-0.8**
IKRE	baz=75			S	**Sg**	**20 55 20.2**	**-0.1**
IJOK	**Jokulheimar** baz=224	**0.49**	**225**	P	**Pg**	**20 55 13.8**	**-0.6**
IASK	**Askja** baz=41	**0.52**	**40**	P	**Pg**	**20 55 14.1**	**-0.9**
IASK	baz=41			S	**Sg**	**20 55 21.0**	**-0.9**
IMKO	**Mokollar** baz=56	**0.57**	**55**	P	**Pg**	**20 55 15.1**	**-0.8**
IMKO	baz=56			S	**Sg**	**20 55 22.9**	**-0.6**
IIEY	**Innrieyrar** baz=208	**0.64**	**208**	P	**Pg**	**20 55 16.5**	**-0.9**
IKSK	**Karasker** baz=140	**0.65**	**140**	P	**Pg**	**20 55 16.1**	**-1.5**
IKSK	baz=140			S	**Sg**	**20 55 25.3**	**-0.9**
ISVA	**Svartarkot** baz=5.6	**0.68**	**6**	P	**Pg**	**20 55 16.9**	**-1.3**
IKAL	**Kalfafell** baz=189	**0.73**	**189**	P	**Pg**	**20 55 17.9**	**-1.0**
IVSH	**V-Sauoahnukur** baz=78	**0.75**	**78**	P	**Pg**	**20 55 18.0**	**-1.4**
IVSH	baz=78			S	**Sg**	**20 55 28.2**	**-0.9**
IVAT	**Vatnsfell** baz=234	**0.80**	**234**	P	**Pg**	**20 55 19.2**	**-1.2**
IADA	**Aoalbol** baz=65	**0.87**	**65**	P	**Pg**	**20 55 19.9**	**-1.8**
IHVE	**Hveravellir** baz=284	**0.94**	**284**	P	**Pg**	**20 55 20.8**	**-2.2**
IMEL	**Melhnausar** baz=20	**0.97**	**20**	P	**Pg**	**20 55 21.5**	**-2.1**
IREN	**Reynihlio** baz=13	**1.01**	**13**	P	**Pg**	**20 55 22.4**	**-2.1**
ISNB	**Snabyli** baz=210	**1.07**	**210**	P	**Pg**	**20 55 23.5**	**-1.9**
IKVO	**Krokottuvotn** baz=12	**1.08**	**12**	P	**Pg**	**20 55 23.4**	**-2.3**
IGRS	**Grimsstaoir** baz=29	**1.13**	**29**	P	**Pb**	**20 55 24.2**	**-2.3**
IRJU	**Rjupnafell** baz=208	**1.18**	**208**	P	**Pb**	**20 55 25.6**	**-1.8**
IMJO	**Mjoaskard** baz=234	**1.22**	**234**	P	**Pn**	**20 55 26.3**	**-1.8**
ISKI	**Skildingahlsh** baz=8.0	**1.23**	**8**	P	**Pn**	**20 55 25.8**	**-2.4**
IGHA	**Grjothals** baz=15	**1.23**	**15**	P	**Pn**	**20 55 25.7**	**-2.5**
IGRA	**Granastaoir** baz=357	**1.26**	**357**	P	**Pn**	**20 55 26.2**	**-2.4**
IHVO	**Lagu-Hvolar** baz=209	**1.30**	**209**	P	**Pn**	**20 55 27.7**	**-1.4**
IHAU	**Haukadalur** baz=239	**1.30**	**239**	P	**Pn**	**20 55 27.4**	**-1.8**
IDIM	**Dimmadalss** baz=9.1	**1.32**	**9**	P	**Pn**	**20 55 27.3**	**-2.2**
IHLA	**Hella** baz=343	**1.35**	**343**	P	**Pn**	**20 55 27.9**	**-1.9**
IALF	**Alftagrof** baz=214	**1.41**	**214**	P	**Pn**	**20 55 29.2**	**-1.3**
IESK	**Eystri-Skogar** baz=218	**1.45**	**219**	P	**Pn**	**20 55 29.8**	**-1.3**
ISAU	**Saurbar** baz=244	**1.46**	**244**	P	**Pn**	**20 55 29.5**	**-1.9**
IBRE	**Brettingsstaoi** baz=352	**1.48**	**353**	P	**Pn**	**20 55 29.8**	**-1.8**
ISIG	**Siglufjorour** baz=338	**1.60**	**338**	P	**Pn**	**20 55 31.7**	**-1.6**
ILEI	**Leirhofn** baz=12	**1.80**	**12**	P	**Pn**	**20 55 34.6**	**-1.4**
IHRN	**Hraun** baz=323	**1.84**	**323**	P	**Pn**	**20 55 35.0**	**-1.5**
SCO	**Scoresbysund** baz=171,slow=8.6	**6.09**	**346**	*e*	Pn	20 56 28.9	-6.0
SCO				*i* P	**Pn**	**20 56 36.0**	**+1.1**
SCO				*i* S	**Sn**	**20 57 48.8**	**+4.1**
SCO	comp=Z,1.5nm,0.4s			IAML		20 58 31.3	
NOA	**NORSAR Array B** comp=Z,0.0nm,0.3s,baz=299,slow=12,SNR=2.7	**13.51**	**92**	Pn	**Pn**	**20 58 15.8**	**-0.6**
BRG	**Berggiesshubel** comp=Z,5.2nm,1.1s	**21.39**	**115**	*e*(P)	**P**	**20 59 55.0**	**+2.7**
GERES	**GERESS Array B** comp=Z,0.5nm,0.7s,baz=336,slow=8.9,SNR=4.3	**22.93**	**119**	P	**P**	**21 00 09.2**	**+0.2**
ESDC	**Sonseca Array** comp=Z,0.6nm,0.7s,baz=338,slow=8.8,SNR=2.4	**26.24**	**156**	P	**P**	**21 00 40.9**	**+1.0**
ILAR	**Eielson Array** comp=Z,0.6nm,1.0s,baz=40,slow=4.7,SNR=3.5	**45.70**	**332**	P	**P**	**21 03 28.3**	**+2.9**
KURBB	**Kurchatov Arra** comp=Z,0.7nm,0.6s,baz=323,slow=7.0,SNR=12	**48.13**	**58**	P	**P**	**21 03 45.8**	**+1.2**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,1.0s,baz=354,slow=9.6,SNR=3.3	**53.13**	**156**	P	**P**	**21 04 23.6**	**+1.0**

IDC 20 21:01:17.2 ± 5.3, 23°68N × 93°91E, h72km ± 44km, mb3.2/4, mb1 3.3/5, mb1mx3.0/33, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=138.1km s-min=20.2km az=62.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.2nm,0.3s,baz=312,slow=13,SNR=6.2	**7.00**	**137**	P	Pn	21 02 57.1	0.0
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=154,slow=9.7,SNR=6.9	**24.89**	**341**	P	P	21 06 33.0	-0.1
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=181,slow=8.6,SNR=2.0	**30.99**	**350**	P	P	21 07 27.7	+0.1
WRA	**Warramunga Arr** 0.3nm,0.9s,baz=322,slow=7.4,SNR=5.0	**58.59**	**134**	P	P	21 11 06.4	-0.4
ASAR	**Alice Springs** 0.3nm,0.5s,baz=318,slow=7.0,SNR=4.1	**61.01**	**138**	P	P	21 11 23.8	+0.4

*SOME **20** 21:43:54.5, 43.23°N × 78.58E, h5km*
*NNC **20** 21:43:54.8 ± 0.4, 43.19°N × 78.62E, h0km, mb2.8, mpv2.5, Error ellipse: s-maj=7.2km s-min=2.1km az=169.0*
ISC 20 21:43:55.0 ± 1.1, 43°23N ± 0.04 × 78°60E ± 0.03, h4km ± 11km, n9, σ0s31/17, 5C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZHN	**Zhinishke** 6.2nm,0.1s	**0.13**	**243**	*e*P	**Pg**	**21 43 57.5**	**-0.2**
ZHN	6.7nm,0.1s			*e*S	**Sg**	**21 43 59.7**	**+0.2**
ZHN	**Zhinishke** 11nm,0.1s	**0.13**	**243**	P	**Pg**	**21 43 57.5**	**-0.2**
ZHN	6.7nm,0.1s			S	**Sg**	**21 43 59.7**	**+0.2**
SATY	**Saty** 4.5nm,0.1s	**0.22**	**220**	*e*P	**Pg**	**21 43 59.0**	**-0.3**
SATY	49nm,0.1s			*e*S	**Sg**	**21 44 02.3**	**+0.1**
SATY	**Saty** 4.5nm,0.1s	**0.22**	**220**	P	**Pg**	**21 43 59.0**	**-0.3**
SATY	49nm,0.1s			S	**Sg**	**21 44 02.4**	**+0.3**
KPKS	**Kokpek** 1.5nm,0.1s	**0.25**	**15**	*e*P	**Pg**	**21 43 59.5**	**-0.3**
KPKS	3.9nm,0.1s			*e*S	**Sg**	**21 44 03.3**	**+0.2**
UZB	**Uzynbulak** 0.9nm,0.1s	**0.32**	**104**	*e*P	**Pg**	**21 44 01.0**	**-0.2**
UZB	9.1nm,0.1s			*e*S	**Sg**	**21 44 05.4**	**-0.1**
PDGK	**Podgornoye** 4.7nm,1.2s	**0.66**	**81**	⇓P	**Pg**	**21 44 07.6**	**-0.1**
PDGK	7.1nm,1.4s			⇑S	**Sg**	**21 44 16.5**	**+0.2**
KNDC	**Almaty** 4.9nm,0.5s	**1.19**	**270**	⇑P	**Pb**	**21 44 18.1**	**-0.1**
KNDC	7.6nm,0.6s			⇑S	**Sn**	**21 44 34.7**	**-0.5**
TKM2	**Tokmak 2** 6.6nm,1.4s	**2.22**	**263**	⇑Pg	**Pn**	**21 44 33.3**	**+0.5**
TKM2	5.6nm,1.5s			⇑Lg	Lg	21 45 02.1	

*IDC **20** 21:46:18.2 ± 2.1, 20.66°S × 177.83W, h483km ± 23km, mb3.5/10, mb1 3.8/13, mb1mx3.6/28, mbtmp4.4/13, Error ellipse: s-maj=20.9km s-min=14.8km az=144.0*
*NEIC **20** 21:46:18.7 ± 1.5, 20.7°S ± 0.1 × 177.7W ± 0.1, h502km ± 2km, mb4.5/47, Error ellipse: s-maj=16.7km s-min=14.4km az=116.0*
ISC 20 21:46:19.0 ± 0.5, 20°73S ± 0.08 × 177°76W ± 0.08, h500km, n80, σ1s00/78, mb4.4/32, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.96**	**306**	P	**P**	**21 47 46.9**	**+1.1**
NIUE	**Niue**	**7.55**	**79**	P	**P**	**21 48 11.0**	**+0.2**
RAO	**Raoul Island**	**8.49**	**181**	P	**P**	**21 48 18.6**	**-1.7**
AFI	**Afiamalu** 17nm,0.3s,baz=278,slow=0.5,SNR=10	**8.86**	**41**	P	**P**	**21 48 22.8**	**-1.7**
AFI	6.7nm,0.3s,baz=85,slow=21,SNR=3.4			S	S	21 50 00.0	-7.6
AFI	**Afiamalu**	**8.86**	**41**	P	**P**	**21 48 22.9**	**-1.7**
AFI	1.3nm,0.3s,baz=86,slow=17,SNR=12			S	S	21 50 01.1	-6.5
DZM	**Mont Dzumac**	**14.78**	**262**	P	**P**	**21 49 27.1**	**+0.1**
DZM	**Mont Dzumac**	**14.78**	**262**	P	**P**	**21 49 26.6**	**-0.5**
SANVU	**Saraoutou**	**15.23**	**288**	P	**P**	**21 49 32.2**	**+0.5**
OUZ	**Omahuta**	**16.32**	**206**	P	**P**	**21 49 42.8**	**0.0**
URZ	**Urewera** 1.3nm,0.3s,baz=201,slow=12,SNR=2.8	**18.03**	**193**	P	**P**	**21 49 58.8**	**-0.6**
URZ	**Urewera** comp=Z,7.9nm,0.6s	**18.03**	**193**	IAmb	IAmb	21 49 59.1	
SNZO	**South Karori**	**21.49**	**196**	P	**P**	**21 50 28.9**	**-2.0**
BHW	**Baring Head**	**21.54**	**195**	P	**P**	**21 50 31.3**	**-0.1**
PLWZ	**Palliser**	**21.60**	**194**	P	**P**	**21 50 30.2**	**-1.8**
QRZ	**Quartz Range**	**21.67**	**200**	P	**P**	**21 50 32.4**	**-0.2**
QRZ	comp=Z,10nm,0.8s			IAmb	IAmb	21 50 34.0	
NNZ	**Nelson**	**21.77**	**198**	P	**P**	**21 50 33.1**	**-0.4**
BSWZ	**Blackbirch Sta**	**22.09**	**197**	P	**P**	**21 50 37.0**	**+0.6**
THZ	**Tophouse**	**22.41**	**199**	P	**P**	**21 50 39.0**	**-0.3**
THZ	comp=Z,9.4nm,1.1s			IAmb	IAmb	21 50 40.0	
KHZ	**Kahutara**	**22.83**	**197**	P	**P**	**21 50 42.2**	**-0.7**
KHZ	comp=Z,11nm,1.0s			IAmb	IA

ARMA	**Armidale**	**29.18**	**244**	P	**P**	**21 51 39.8**	**+0.4**
ARMA				IAmb	IAmb	21 51 41.9	
	comp=Z,7.2nm,0.8s						
RABL	**Rabaul**	**33.55**	**295**	P	**P**	**21 52 17.1**	**+0.2**
CTA	**Charters Tower**	**33.70**	**265**	P	**P**	**21 52 18.4**	**+0.2**
	comp=Z,29nm,0.5s,baz=92,slow=10,SNR=54						
CTAO	**Charters Tower**	**33.70**	**265**		**P**	**21 52 18.3**	**+0.2**
PMG	**Port Moresby**	**35.62**	**283**	P	**P**	**21 52 34.5**	**+0.2**
PMG				IAmb	IAmb	21 52 35.2	
	comp=Z,11nm,0.7s						
TOO	**Toolangi**	**35.95**	**234**	P	**P**	**21 52 35.4**	**-1.4**
COEN	**Coen**	**37.83**	**274**	P	**P**	**21 52 52.7**	**+0.2**
COEN				IAmb	IAmb	21 52 53.9	
	comp=Z,12nm,0.8s						
STKA	**Stephens Creek**	**37.90**	**244**	P	**P**	**21 52 52.4**	**-0.5**
	comp=Z,6.9nm,0.8s,baz=65,slow=7.3,SNR=13						
STKA	**Stephens Creek**	**37.90**	**244**	P	**P**	**21 52 53.3**	**+0.4**
BBOO	**Buckleboo**	**42.65**	**244**	P	**P**	**21 53 30.4**	**-0.6**
BBOO				IAmb	IAmb	21 53 30.9	
	comp=Z,7.8nm,0.7s						
WR0	**Warramunga Arr**	**44.61**	**262**		**P**	**21 53 45.8**	**-0.6**
WR0				IAmb	IAmb	21 53 47.2	
	comp=Z,8.3nm,0.8s						
AS31	**Alice Springs**	**44.69**	**257**		**P**	**21 53 46.8**	**-0.2**
ASAR	**Alice Springs**	**44.69**	**257**	P	**P**	**21 53 46.8**	**-0.3**
	comp=Z,13nm,0.8s,baz=93,slow=8.1,SNR=102						
ASAR				PcP	**pP**	**21 55 19.1**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=96,slow=4.2,SNR=4.8						
ASAR	**Alice Springs**	**44.69**	**257**	P	**P**	**21 53 46.1**	**-0.9**
WB0	**Warramunga Arr**	**44.78**	**262**		**P**	**21 53 46.9**	**-0.9**
WB0				IAmb	IAmb	21 53 47.7	
	comp=Z,15nm,0.7s						
WB2	**Warramunga Arr**	**44.78**	**262**		**P**	**21 53 47.1**	**-0.7**
WB2				IAmb	IAmb	21 53 47.9	
	comp=Z,20nm,0.9s						
WRAB	**Tennant Creek**	**44.79**	**262**	P	**P**	**21 53 47.0**	**-0.9**
WRAB				IAmb	IAmb	21 53 47.9	
	comp=Z,15nm,0.9s						
WRA	**Warramunga Arr**	**44.80**	**262**	P	**P**	**21 53 47.1**	**-0.8**
	comp=Z,6.0nm,0.5s,baz=96,slow=8.2,SNR=74						
WRA	**Warramunga Arr**	**44.80**	**262**	P	**P**	**21 53 47.0**	**-0.9**
MTN	**Manton Dam**	**49.39**	**271**	P	**P**	**21 54 22.2**	**-0.4**
MTN				IAmb	IAmb	21 54 23.0	
	comp=Z,19nm,0.8s						
FORT	**Forrest**	**49.41**	**247**	P	**P**	**21 54 22.2**	**-0.4**
FORT				IAmb	IAmb	21 54 22.5	
	comp=Z,19nm,0.7s						
KNRA	**Kununurra**	**50.87**	**266**	P	**P**	**21 54 33.2**	**-0.3**
KNRA				IAmb	IAmb	21 54 34.0	
	comp=Z,9.5nm,0.8s						
FITZ	**Fitzroy Crossi**	**53.23**	**262**	P	**P**	**21 54 50.4**	**0.0**
SOEI	**Soe**	**56.74**	**272**	P	**P**	**21 55 14.4**	**-0.9**
SOEI				IAmb	IAmb	21 55 17.5	
	comp=Z,24nm,0.9s						
VNDA	**Vanda**	**57.70**	**185**	P	**P**	**21 55 22.6**	**+2.0**
	comp=Z,0.4nm,0.7s,baz=354,slow=7.2,SNR=5.3						
VNDA	**Vanda**	**57.70**	**185**	P	**P**	**21 55 22.3**	**+1.6**
PSA00	**Pilbara Seismi**	**57.84**	**257**	P	**P**	**21 55 21.8**	**-0.8**
PSA00				IAmb	IAmb	21 55 22.7	
	comp=Z,12nm,0.8s						
NWAO	**Narrogin (SRO)**	**58.47**	**243**	P	**P**	**21 55 26.4**	**-0.3**
MORW	**Morawa**	**59.95**	**248**	P	**P**	**21 55 36.0**	**-0.8**
MORW				IAmb	IAmb	21 55 36.9	
	comp=Z,13nm,1.0s						
CASY	**Casey**	**63.85**	**205**	P	**P**	**21 56 01.5**	**0.0**
MJAR	**Matsushiro Arr**	**70.53**	**324**	P	**P**	**21 56 43.5**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=156,slow=5.6,SNR=6.6						
MJAR	**Matsushiro Arr**	**70.53**	**324**	IAmb	IAmb	21 56 44.5	
	comp=Z,1.6nm,0.6s						
TPUB	**Ta-pu**	**74.29**	**303**	P	**P**	**21 57 04.3**	**-0.8**
TPUB				IAmb	IAmb	21 57 09.7	
	comp=Z,29nm,1.1s						
JTU	**Tsushima**	**74.44**	**317**	P	**P**	**21 57 04.5**	**-1.2**
JTU				IAmb	IAmb	21 57 04.9	
	comp=Z,17nm,1.1s						
UNV	**Unalaska Valle**	**74.90**	**7**	P	**P**	**21 57 07.1**	**-0.6**
UNV				IAmb	IAmb	21 57 25.3	
	comp=Z,11nm,1.1s						
BELA	**Belgrano 2**	**79.30**	**173**	P	**P**	**21 57 31.8**	**+0.2**
TXAR	**Lajitas Array**	**86.99**	**57**	P	**P**	**21 58 13.3**	**+2.3**
	comp=Z,0.1nm,0.6s,baz=190,slow=4.6,SNR=1.8						
TXAR	**Lajitas Array**	**86.99**	**57**	P	**P**	**21 58 12.2**	**+1.1**
PV03	**Paradox Valley**	**87.23**	**47**	P	**P**	21 58 06.8	-5.4
PV03				IAmb	IAmb	21 58 07.8	
	comp=Z,10nm,0.9s						
PV15	**Paradox Valley**	**87.53**	**47**	P	**P**	**21 58 12.0**	**-1.6**
SNAA	**Sanae**	**87.78**	**178**	P	**P**	**21 58 13.9**	**-0.1**
RDMU	**Red Mountain**	**87.88**	**45**	P	**P**	**21 58 14.4**	**-0.8**
CCB	**Clear Creek Bu**	**88.19**	**12**	P	**P**	**21 58 15.3**	**-0.4**
IMAR	**Indian Mountai**	**88.34**	**10**	P	**P**	**21 58 16.9**	**+0.5**
ILAR	**Eielson Array**	**88.49**	**13**	P	**P**	**21 58 16.9**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=212,slow=5.5,SNR=4.7						
PDAR	**Pinedale Array**	**88.97**	**43**	P	**P**	**21 58 21.4**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=224,slow=3.8,SNR=2.4						
CMAR	**Chiang Mai Arr**	**90.41**	**289**	P	**P**	**21 58 27.9**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=124,slow=3.2,SNR=6.9						
MKAR	**Makanchi Array**	**111.52**	**313**	PKiKP	**PKiKP**	**22 03 55.1**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=223,slow=3.0,SNR=4.3						
MKAR	**Makanchi Array**	**111.52**	**313**		**PKiKP**	**22 03 55.6**	**-0.5**
ARCES	**ARCESS Array B**	**129.19**	**350**	PKP	**PKPdf**	**22 04 28.8**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=348,slow=1.3,SNR=3.8						
AKASG	**Malin Array Be**	**143.32**	**331**	PKhKP	PKPpre	22 04 53.3	
	comp=Z,1.1nm,0.4s,baz=41,slow=4.6,SNR=11						
BRTR	**Keskin Array B**	**147.16**	**312**	PKPbc	**PKPdf**	**22 05 06.0**	**+3.1**
	comp=Z,0.9nm,0.5s,baz=129,slow=3.7,SNR=3.8						
CLL	**Collm**	**148.34**	**347**	∥ PKPbc	**PKPbc**	**22 05 08.9**	**+0.5**
	comp=Z,4.0nm,0.8s						
GERES	**GERESS Array B**	**150.48**	**345**	PKPbc	**PKPbc**	**22 05 14.2**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=45,slow=2.1,SNR=6.9						
TORD	**Torodi Ar. Bea**	**172.44**	**176**	PKP	**PKPdf**	**22 05 30.5**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=293,slow=1.1,SNR=3.2						
TORD				PKPab	**PKPab**	**22 06 59.2**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=151,slow=3.3,SNR=1.6						

WEL 20 22:15:40.5,39°S±2°×17°6E±°,h143km±4km,M2.8/41,MLv2.8/41,Error ellipse: s-maj=0.0km s-min=0.0km az=90.8,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMVZ	**Te Maari**	**0.33**	**195**	P	Pn	22 16 00.3	-0.1
ETVZ	**East Tongariro**	**0.35**	**193**	P	Pn	22 16 00.3	-0.2
WTVZ	**West Tongariro**	**0.37**	**209**	P	Pn	22 16 00.5	-0.1
TWVZ	**Taurewa**	**0.40**	**227**	P	Pn	22 16 00.7	0.0
NGZ	**Ngauruhoe**	**0.42**	**203**	P	Pn	22 16 00.9	+0.1
FWVZ	**Far West T-bar**	**0.50**	**204**	P	Pn	22 16 01.5	+0.2
WHVZ	**Whangaehu Hut**	**0.52**	**200**	P	Pn	22 16 01.5	+0.1
WNVZ	**Wahianoa**	**0.56**	**197**	P	Pn	22 16 01.6	+0.1
MOVZ	**Moawhango**	**0.61**	**184**	P	Pn	22 16 01.4	-0.3
PKVZ	**Pokaka**	**0.61**	**216**	P	Pn	22 16 02.2	+0.4
BKZ	**Black Stump Fm**	**0.65**	**125**	P	Pn	22 16 01.1	-0.8
MTVZ	**Mangateitei**	**0.65**	**204**	P	Pn	22 16 02.4	+0.4
BHHZ	**Black Hill Sta**	**0.72**	**165**	P	Pn	22 16 02.0	-0.4
MTHZ	**Maungataniwha**	**0.80**	**95**	P	Pn	22 16 02.4	-0.6
MUGZ	**Murupara**	**0.81**	**67**	P	Pn	22 16 02.4	-0.7
OMRZ	**Omania**	**0.81**	**33**	P	Pn	22 16 03.5	+0.3
VRZ	**Vera Road**	**0.89**	**248**	P	Pn	22 16 05.2	+1.6
RTZ	**Ruatahuna**	**0.93**	**79**	P	Pn	22 16 03.7	-0.4
MCHZ	**McNeill Hill**	**0.94**	**134**	P	Pn	22 16 04.6	+0.5
KRHZ	**Kereru**	**0.95**	**153**	P	Pn	22 16 04.2	0.0
ARHZ	**Aropaoanui**	**1.03**	**117**	P	Pn	22 16 05.1	+0.3
URZ	**Urewera**	**1.15**	**63**	P	Pn	22 16 05.6	-0.3
WAZ	**Wanganui**	**1.16**	**214**	P	Pn	22 16 07.7	+1.7
PNHZ	**Pukenui**	**1.16**	**165**	P	Pn	22 16 06.4	+0.4
SNGZ	**Shannon Statio**	**1.19**	**90**	P	Pn	22 16 08.3	+1.9
TSZ	**Takapari Road**	**1.27**	**175**	P	Pn	22 16 07.4	+0.3
LREZ	**Lake Rotokare**	**1.28**	**238**	P	Pn	22 16 09.7	+2.5
KAHZ	**Kahuranaki**	**1.30**	**141**	P	Pn	22 16 08.1	+0.6
CKHZ	**Cape Kidnapper**	**1.31**	**132**	P	Pn	22 16 08.0	+0.6
WPHZ	**Waipukurau**	**1.36**	**159**	P	Pn	22 16 08.5	+0.5
MWZ	**Matawai**	**1.42**	**72**	P	Pn	22 16 08.8	+0.1
NEZ	**North Egmont**	**1.42**	**250**	P	Pn	22 16 11.9	+3.2
KHEZ	**Kahui Hut**	**1.49**	**250**	P	Pn	22 16 12.6	+3.2
RIGZ	**Rimuhau**	**1.52**	**87**	P	Pn	22 16 10.6	+0.8
DVHZ	**Dannevirke**	**1.53**	**170**	P	Pn	22 16 10.2	+0.4
TKGZ	**Te Karaka**	**1.63**	**78**	P	Pn	22 16 12.0	+1.1
MHGZ	**Mahia Peninsul**	**1.67**	**103**	P	Pn	22 16 12.0	+0.7
RUGZ	**Raukumara Rang**	**1.68**	**61**	P	Pn	22 16 11.7	+0.1
ANWZ	**Angora Road**	**1.74**	**163**	P	Pn	22 16 13.0	+0.8
TWGZ	**Tauwhareparae**	**1.81**	**71**	P	Pn	22 16 14.2	+1.2
HAZ	**Te Kaha**	**1.86**	**57**	P	Pn	22 16 14.0	+0.4
MRZ	**Mangatainoka R**	**1.87**	**186**	P	Pn	22 16 14.3	+0.6
PUZ	**Puketiti**	**2.05**	**70**	P	Pn	22 16 16.6	+0.8
OGWZ	**Otaki Gorge**	**2.08**	**194**	P	Pn	22 16 17.0	+0.9
HOWZ	**Holdsworth Sta**	**2.11**	**186**	P	Pn	22 16 17.0	+0.5
KIW	**Kapiti Island**	**2.18**	**198**	P	Pn	22 16 18.0	+0.7
WMGZ	**Waiomatatini S**	**2.27**	**65**	P	Pn	22 16 19.1	+0.8
MXZ	**Matakaoa Point**	**2.32**	**59**	P	Pn	22 16 20.4	+1.4
MTW	**Mount Morrison**	**2.37**	**186**	P	Pn	22 16 20.0	+0.3
CAW	**Cannon Point**	**2.38**	**194**	P	Pn	22 16 20.4	+0.6
DUWZ	**D'Urville Isla**	**2.48**	**215**	P	Pn	22 16 22.1	+1.1
MSWZ	**Moikau Station**	**2.66**	**189**	P	Pn	22 16 23.2	+0.1
TCW	**Tory Channel**	**2.69**	**206**	P	Pn	22 16 24.2	+0.7
PLWZ	**Palliser**	**2.81**	**189**	P	Pn	22 16 25.1	0.0
TUWZ	**Tuamarina**	**3.00**	**208**	P	Pn	22 16 28.3	+0.8
QRZ	**Quartz Range**	**3.24**	**230**	P	Pn	22 16 32.2	+1.6
THZ	**Tophouse**	**3.71**	**216**	P	Pn	22 16 37.7	+1.0
KHZ	**Kahutara**	**4.01**	**205**	P	Pn	22 16 40.8	+0.2
GVZ	**Greta Valley S**	**4.67**	**206**	P	Pn	22 16 49.0	-0.3
AKCZ	**Akaroa Harbour**	**5.53**	**202**	P	Pn	22 16 59.8	-0.9

TAP ***20*** *22:26:05.1,24°.91N×122°.09E,h14km,ML3.0,C*
JMA ***20*** *22:26:05.7±0.1,24°.84N×122°.08E,h3km,M2.8*
ISC 20 22:26:05.6±0.9,24°.89N±0°.02×122°.10E±0°.02,h12km±6km, n79,σ0°.55/96,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=319	**0.15**	**319**	∥ *i* P	**Pg**	**22 26 09.0**	**-0.2**
TWB1				*i* S	**Sg**	**22 26 11.3**	**-0.5**
	baz=319						
EGS		**0.16**	**253**	P	**Pg**	**22 26 09.3**	**0.0**
EGS				S	**Sg**	**22 26 12.7**	**+0.8**
	baz=241						
NTC	**Toucheng** baz=264	**0.25**	**262**	P	**Pg**	**22 26 10.8**	**0.0**
NTC				S	**Sg**	**22 26 14.4**	**0.0**
	baz=264						
TIPB	**Shuangxi** baz=286	**0.26**	**288**	*i* P	**Pg**	**22 26 11.1**	**0.0**
TIPB				*i* S	**Sg**	**22 26 14.6**	**-0.2**
	baz=286						
NWF	**Wu-fen Shan** baz=300	**0.34**	**302**	*i* P	**Pg**	**22 26 12.8**	**+0.3**
NWF				*eS*	**Sg**	**22 26 16.9**	**-0.3**
	baz=300						
WFSB	**Wu-fen Shan** baz=300	**0.34**	**302**	*i* P	**Pg**	**22 26 12.8**	**+0.3**
WFSB				*eS*	**Sg**	**22 26 17.2**	**+0.1**
	baz=300						
TWC	**Suao** baz=219	**0.36**	**219**	*eP*	**Pg**	**22 26 12.7**	**-0.1**
TWC				*eS*	**Sb**	**22 26 19.7**	**+0.1**
	baz=219						
TWE	**Neicheng** baz=243	**0.43**	**247**	*eP*	**Pg**	**22 26 14.0**	**-0.1**
TWE				*eS*	**Sb**	**22 26 20.3**	**-1.2**
	baz=243						
TWA	**Mucha** baz=280	**0.48**	**281**	P	**Pb**	**22 26 15.3**	**-0.6**
TWA				S	**Sb**	**22 26 21.8**	**-1.1**
	baz=280						
NWRT	**Kuosheng** baz=306	**0.51**	**308**	*eP*	**Pb**	**22 26 15.9**	**-0.4**
ENAH	**Nanao** baz=207	**0.51**	**211**	*eP*	**Pb**	**22 26 17.3**	**+0.8**
ENAH				*eS*	**Sb**	**22 26 24.3**	**+0.4**
	baz=207						
NHDH	**Xindian Distri** baz=267	**0.53**	**278**	*eP*	**Pn**	**22 26 19.1**	**+0.2**
YM01	**YM01** baz=298	**0.55**	**298**	P	**Pb**	**22 26 16.9**	**-0.2**
YM01				*eS*	**Sg**	**22 26 23.7**	**+0.2**
	baz=298						
YM08	**YM08** baz=302	**0.55**	**303**	P	**Pb**	**22 26 16.7**	**-0.5**
YM11	**YM11** baz=299	**0.55**	**300**	P	**Pb**	**22 26 17.1**	**-0.1**
NWLT	**Wulai** baz=259	**0.56**	**258**	*eP*	**Pg**	**22 26 16.2**	**-0.3**
NWLT				*eS*	**Sg**	**22 26 23.6**	**-0.3**
	baz=259						
YM10	**YM10** baz=297	**0.56**	**298**	P	**Pb**	**22 26 17.1**	**-0.2**
YM05	**YM05** baz=298	**0.56**	**299**	P	**Pb**	**22 26 17.0**	**-0.3**
TATO	**Taipei** baz=279	**0.56**	**279**	*eP*	**Pb**	**22 26 16.8**	**-0.5**
TATO				*eS*	**Sb**	**22 26 24.5**	**-0.9**
	baz=279						
ENA	**Nanau** baz=216	**0.57**	**215**	*eP*	**Pg**	**22 26 16.3**	**-0.4**
ENA				*eS*	**Sb**	**22 26 25.5**	**+0.1**
	baz=216						
YM04	**YM04** baz=296	**0.57**	**297**	P	**Pb**	**22 26 17.2**	**-0.3**
YM03	**YM03** baz=298	**0.58**	**299**	*eP*	**Pb**	**22 26 17.4**	**-0.4**
TWY	**Chenhua** baz=310	**0.59**	**310**	*eP*	**Pb**	**22 26 17.9**	**0.0**
ANP	**Anpu** baz=298	**0.60**	**299**	P	**Pg**	**22 26 17.6**	**+0.2**
NDT	**Datong Townshi** baz=239	**0.61**	**242**	*eP*	**Pg**	**22 26 17.3**	**-0.1**
NDT				*eS*	**Sb**	**22 26 27.1**	**+0.5**
	baz=239						
NTST	**Danshui** baz=293	**0.65**	**295**	*eP*	**Pb**	**22 26 18.6**	**-0.2**
TWS1	**Kuangyinshan** baz=287	**0.65**	**289**	*eP*	**Pb**	**22 26 19.2**	**+0.3**
YHNB	**Yeheng** baz=258	**0.70**	**252**	*eP*	**Pg**	**22 26 18.5**	**-0.6**
NSK	**Sanguang** baz=250	**0.71**	**253**	*eP*	**Pg**	**22 26 18.8**	**-0.6**
PCYT	**Pengchaiyu** baz=8.0	**0.73**	**358**	*eP*	**Pb**	**22 26 20.8**	**+0.5**
NNSB	**Datong** baz=246	**0.80**	**235**	*eP*	**Pb**	**22 26 21.0**	**-0.5**
NNSH	**Datong** baz=244	**0.80**	**235**	*eP*	**Pb**	**22 26 21.2**	**-0.2**
NNS	**Nan Shan** baz=246	**0.80**	**236**	*eP*	**Pb**	**22 26 21.3**	**-0.2**
NCUH	**Zhongli** baz=275	**0.83**	**275**	*eP*	**Pb**	**22 26 22.6**	**+0.6**
NACB	**Ninganchiao** baz=208	**0.85**	**213**	*eP*	**Pb**	**22 26 22.0**	**-0.3**
JYNG	**Yonagunijimaku**	**0.88**	**120**	P	**Pg**	**22 26 22.7**	**0.0**
JYNG				*eS*	**Sg**	**22 26 34.3**	**+0.1**
ETLH	**Xiulin Townshi** baz=215	**0.89**	**220**	*eP*	**Pb**	**22 26 22.9**	**0.0**
TWD	**Chiawan** baz=198	**0.93**	**210**	*eP*	**Pb**	**22 26 23.8**	**+0.2**
YOJ	**Yonaguni jima** baz=117	**0.93**	**117**	*eP*	**Pg**	**22 26 22.7**	**-0.8**
YOJ	**Yonaguni jima**	**0.93**	**117**	P	**Pg**	**22 26 23.6**	**0.0**
FUSS	**Fushou** baz=241	**1.01**	**231**	*eP*	**Pb**	**22 26 24.9**	**-0.2**
FUSS				*eS*	**Sn**	**22 26 40.5**	**+0.4**
	baz=241						
LIOB	**Emei** baz=256	**1.02**	**256**	*eP*	**Pn**	**22 26 25.6**	**0.0**
NSTT	**Nanjuang** baz=255	**1.03**	**256**	*eP*	**Pn**	**22 26 26.3**	**+0.5**
TWT	**Tachien** baz=218	**1.05**	**233**	*eP*	**Pn**	**22 26 26.2**	**-0.1**
WHF	**Hehuan Shan** baz=222	**1.06**	**226**	*eP*	**Pb**	**22 26 26.2**	**0.0**
TDCB	**Techi** baz=218	**1.07**	**234**	*eP*	**Pb**	**22 26 26.1**	**0.0**
CHGB	**Renai** baz=222	**1.18**	**226**	*eP*	**Pn**	**22 26 28.2**	**0.0**
WHP	**Taichung City** baz=254	**1.22**	**240**	*eP*	**Pn**	**22 26 30.0**	**+1.5**
ESL	**Shilin** baz=214	**1.23**	**210**	*eP*	**Pg**	**22 26 29.1**	**-0.2**
OWD	**Renai** baz=219	**1.26**	**222**	*eP*	**Pg**	**22 26 29.6**	**-0.2**
NSY	**Sanyi** baz=267	**1.31**	**249**	*eP*	**Pg**	**22 26 31.1**	**+0.3**
TWQ1	**Liyutan** baz=265	**1.32**	**246**	*eP*	**Pg**	**22 26 32.4**	**+1.3**
DPDB	**Guoxing** baz=219	**1.37**	**232**	*eP*	**Pg**	**22 26 32.5**	**+0.6**
SMLT	**Sun Moon Lake** baz=215	**1.49**	**228**	*eP*	**Pg**	**22 26 34.9**	**+0.7**
TYC	**Yuchr** baz=217	**1.50**	**229**	*eP*	**Pg**	**22 26 34.5**	**0.0**
HGSD	**Ruisui** baz=215	**1.52**	**204**	*eP*	**Pg**	**22 26 34.7**	**-0.1**
EHY	**Hungye** baz=198	**1.55**	**207**	*eP*	**Pb**	**22 26 34.2**	**-0.1**
IRIF	**Iriomote-Funau**	**1.58**	**110**	*eS*	**Sg**	**22 26 56.0**	**-0.5**
YULB	**Yu-li** baz=197	**1.66**	**206**	*eP*	**Pb**	**22 26 35.8**	**-0.3**
TWF1	**Yuli** baz=196	**1.70**	**206**	*eP*	**Pg**	**22 26 37.8**	**-0.4**
ALS	**Alishan** baz=194	**1.81**	**221**	*eP*	**Pg**	**22 26 40.6**	**+0.2**
CHN5	**Tsauling** baz=222	**1.83**	**226**	*eP*	**Pg**	**22 26 40.7**	**0.0**
FULB	**Fuli** baz=213	**1.84**	**204**	*eP*	**Pb**	**22 26 39.1**	**-0.1**
JKRS	**Kuro-shima**	**1.85**	**110**	P	**Pn**	**22 26 38.5**	**+1.3**
JIJ	**Ishigaki jima**	**1.93**	**105**	P	**Pb**	**22 26 40.0**	**-0.7**
ELDTW	**Lidau** baz=186	**1.96**	**211**	*eP*	**Pb**	**22 26 41.0**	**-0.3**
JISG	**Ishigakijimahi**	**2.03**	**98**	P	**Pb**	**22 26 42.0**	**-0.4**
CHN4	**Tsaushan** baz=218	**2.06**	**222**	*eP*	**Pg**	**22 26 45.1**	**-0.1**
TPUB	**Ta-pu** baz=217	**2.08**	**221**	*eP*	**Pb**	**22 26 43.4**	**+0.2**
STYT	**Tauyuan** baz=209	**2.12**	**216**	*eP*	**Pb**	**22 26 44.5**	**+0.6**
WTP	**Ta-pu** baz=238	**2.13**	**220**	*eP*	**Pg**	**22 26 45.4**	**-1.1**
TWK	**Hsinying** baz=218	**2.19**	**223**	*eP*	**Pg**	**22 26 46.5**	**-1.1**
CHN1	**Nanshi** baz=217	**2.23**	**221**	*eP*	**Pg**	**22 26 46.9**	**-1.4**
SGST	**Jiashian** baz=214	**2.27**	**218**	*eP*	**Pb**	**22 26 46.9**	**+0.3**
SLGT	**Liugui** baz=211	**2.31**	**215**	*eP*	**Pb**	**22 26 47.7**	**+0.5**
MATB	**Ma-tsu** baz=304	**2.32**	**303**	*eP*	**Pn**	**22 26 44.5**	**+1.0**
VWUC	**VWUC** baz=275	**2.41**	**273**	*eP*	**Pn**	**22 26 43.3**	**-1.5**
XPSS	**Dashiqiu** baz=322	**2.66**	**320**	*eP*	**Pn**	**22 26 48.8**	**+0.6**
LYJJ	**Jianjiangzhen** baz=310	**2.68**	**309**	*eP*	**Pn**	**22 26 48.8**	**+0.3**

IDC 20 22:32:51.0±8.7,3°.01N×122°.99E,h605km±153km,mb2.5/4, mb1 2.7/5,mb1mx2.4/31,mbtmp3.6/5,Error ellipse: s-maj=198.6km s-min=20.1km az=73.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**9.13**	**115**	P	P	22 35 01.3	-0.1
	1.1nm,0.3s,baz=288,slow=9.6,SNR=2.1						
WRA	**Warramunga Arr**	**25.39**	**154**	P	P	22 37 32.3	-0.3
	0.8nm,0.4s,baz=336,slow=10.0,SNR=18						
ASAR	**Alice Springs**	**28.57**	**159**	P	P	22 38 00.8	+0.5
	0.2nm,0.3s,baz=341,slow=9.2,SNR=4.3						
SONM	**Songino Array**	**46.89**	**345**	P	P	22 40 28.8	+0.4
	0.3nm,0.6s,baz=160,slow=6.8,SNR=3.9						
MKAR	**Makanchi Array**	**56.08**	**327**	P	P	22 41 33.8	-0.4
	0.2nm,0.3s,baz=120,slow=8.3,SNR=5.8						

WEL 20 22:37:16.9,40°S±3°×17°4E±°,h208km±4km,M3.5/89, MLv3.5/89,Error ellipse: s-maj=0.0km s-min=0.0km az=12.1,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LREZ	**Lake Rotokare**	**0.10**	**29**	P	Pn	22 37 44.2	+0.1
LREZ				S	S	22 38 05.4	+0.1
PREZ	**Palmer Road**	**0.25**	**327**	P	Pn	22 37 44.4	0.0
NEZ	**North Egmont**	**0.34**	**326**	P	Pn	22 37 44.5	-0.1
NEZ				S	S	22 38 06.1	0.0
KHEZ	**Kahui Hut**	**0.36**	**316**	P	Pn	22 37 44.5	-0.2
DREZ	**Durham Road**	**0.38**	**344**	P	Pn	22 37 44.2	-0.4
NMEZ	**Namu Road**	**0.38**	**291**	P	Pn	22 37 44.5	-0.1
PKE	**Pukeiti**	**0.45**	**323**	P	Pn	22 37 44.7	-0.1
NBEZ	**Newall Road No**	**0.46**	**308**	P	Pn	22 37 44.7	-0.1
VRZ	**Vera Road**	**0.54**	**38**	P	Pn	22 37 44.3	-0.8
VRZ				S	S	22 38 05.7	-1.2
WAZ	**Wanganui**	**0.54**	**112**	P	Pn	22 37 45.9	+0.8
WAZ				S	S	22 38 07.0	0.0
PKVZ	**Pokaka**	**0.82**	**72**	P	Pn	22 37 46.3	-0.3
PKVZ				S	S	22 38 08.3	-1.0
MTVZ	**Mangateitei**	**0.89**	**80**	P	Pn	22 37 46.9	0.0
MTVZ				S	S	22 38 08.8	-1.3
TWVZ	**Taurewa**	**0.98**	**61**	P	Pn	22 37 46.9	-0.6
FWVZ	**Far West T-bar**	**0.99**	**73**	P	Pn	22 37 47.5	-0.2
FWVZ				S	S	22 38 09.7	-1.7
DRZ	**Dome Shelter**	**0.99**	**74**	P	Pn	22 37 48.0	+0.1
WNVZ	**Wahianoa**	**1.00**	**77**	P	Pn	22 37 47.8	0.0
WHVZ	**Whangaehu Hut**	**1.01**	**75**	P	Pn	22 37 47.8	0.0
NGZ	**Ngauruhoe**	**1.05**	**69**	P	Pn	22 37 48.0	0.0
NGZ				S	S	22 38 10.8	-1.1
TUVZ	**Tukino**	**1.06**	**75**	P	Pn	22 37 48.3	+0.2
WTVZ	**West Tongariro**	**1.06**	**66**	P	Pn	22 37 47.8	-0.3
OTVZ	**Oturere**	**1.10**	**70**	P	Pn	22 37 48.6	+0.2
OTVZ				S	S	22 38 12.1	-0.5
MOVZ	**Moawhango**	**1.11**	**83**	P	Pn	22 37 48.0	-0.3
MOVZ				S	S	22 38 09.9	-2.6
**K

KNZ	Kokohu	2.64	80	P		Pn	22 38 02.5	-0.4
MWZ	Matawai	2.77	65	P		Pn	22 38 03.0	-1.4
RIGZ	Rimuhau	2.79	73	P		Pn	22 38 04.1	-0.6
MHGZ	Mahia Peninsul	2.80	83	P		Pn	22 38 04.7	+0.1
PRGZ	Paritu Road	2.83	78	P		Pn	22 38 04.6	-0.4
DSZ	Denniston Nort	2.92	221	P		Pn	22 38 04.6	-1.4
KHZ	Kahutara	2.92	192	P		Pn	22 38 05.8	-0.1
TKGZ	Te Karaka	2.95	69	P		Pn	22 38 05.8	-0.6
KUZ	Kuaotunu	3.01	22	P		Pn	22 38 06.2	-0.9
RUGZ	Raukumara Rang	3.06	60	P		Pn	22 38 05.4	-2.4
TWGZ	Tauwhareparae	3.16	65	P		Pn	22 38 08.6	-0.3
CNGZ	Carnagh Statio	3.20	72	P		Pn	22 38 09.0	-0.3
HAZ	Te Kaha	3.24	57	P		Pn	22 38 07.4	-2.4
PUZ	Puketiti	3.40	65	P		Pn	22 38 10.0	-1.7
GVZ	Greta Valley S	3.55	196	P		Pn	22 38 12.0	-1.4
LTZ	Lake Taylor	3.58	205	P		Pn	22 38 12.6	-1.2
WMGZ	Waiomatatini S	3.63	63	P		Pn	22 38 12.6	-1.9
MXZ	Matakaoa Point	3.69	59	P		Pn	22 38 13.5	-1.7
AMCZ	Amberley	3.84	199	P		Pn	22 38 15.6	-1.3
INZ	Inchbonnie	3.85	214	P		Pn	22 38 15.3	-1.7
OXZ	Oxford	4.15	204	P		Pn	22 38 18.9	-1.8
OKCZ	Okains Bay	4.28	193	P		Pn	22 38 20.9	-1.5
MQZ	McQueen's Vall	4.34	196	P		Pn	22 38 20.6	-2.5
WVZ	Waitaha Valley	4.44	216	P		Pn	22 38 22.9	-1.5
AKCZ	Akaroa Harbour	4.45	193	P		Pn	22 38 22.6	-1.8
RACZ	Rakaia	4.49	201	P		Pn	22 38 23.2	-1.7
MHCZ	Mount Hutt	4.49	207	P		Pn	22 38 22.8	-2.2
WACZ	Wakanui South	4.77	202	P		Pn	22 38 26.5	-2.0
RPZ	Rata Peaks	4.83	210	P		Pn	22 38 27.0	-2.3
ARCZ	Arundel	4.99	207	P		Pn	22 38 29.0	-2.3
FOZ	Fox Glacier	5.23	219	P		Pn	22 38 32.5	-1.8
LBZ	Lake Benmore	5.74	211	P		Pn	22 38 38.7	-2.2
JCZ	Jackson Bay	6.13	221	P		Pn	22 38 43.6	-2.4
ODZ	Otahua Downs	6.13	205	P		Pn	22 38 43.8	-2.0
SYZ	Scrubby Hill	7.95	207	P		Pn	22 39 07.5	-1.8

*NDI **20** 22:45:23.1±1.8, 23°.56N×93°.55E, h33km, ML3.9, mb4.1(NEIC)*
*NEIC **20** 22:45:24.2±1.1, 23°.5N±0°.1×93°.5E±0°.1, h64km±10km, mb4.1/20, Error ellipse: s-maj=22.3km s-min=10.1km az=52.0*
*IDC **20** 22:45:25.6±4.1, 23°.51N×93°.52E, h75km±37km, mb3.6/9, mb1 3.8/10, mb1mx3.4/40, mbtmp3.9/10, ML4.4/1, MS2.7/1, Ms1 2.9/1, ms1mx2.5/38, Error ellipse: s-maj=36.4km s-min=15.0km az=63.0*

ISC 20 22:45:23.1±0.5, 23°.60N±0°.04×93°.41E±0°.05, h51km, n75, σ1s57/89, mb4.1/17, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**1.17**	**199**	*e*P	**Pn**	**22 45 43.6**	**+0.3**
SAIH				IAmb	IAmb	22 45 44.2	
	comp=Z,2μm,0.4s						
SAIH				*e*S	**Sn**	**22 45 59.5**	**+1.2**
SAIH				IAML		22 46 02.6	
	comp=N,5μm,0.6s						
SAIH				IAML		22 46 02.9	
	comp=E,5μm,0.4s						
SILR	**SILCHAR**	**1.30**	**335**	*e*P	**Pn**	**22 45 48.3**	**+3.4**
SILR				IAmb	IAmb	22 45 52.0	
	comp=Z,592nm,0.5s						
BELO	**BELONIA**	**1.83**	**259**	*e*P	**Pn**	**22 45 56.0**	**+3.8**
BELO				*e*S	**Sn**	**22 46 17.2**	**+3.0**
AGT	**Agartala**	**2.00**	**279**	*ex*	Pn	22 46 01.5	+7.1
AGT				*e*S	Sn	22 46 28.9	+11
AGT				IAML		22 46 30.6	
	comp=E,834nm,0.3s						
AGT				IAML		22 46 31.5	
	comp=N,1μm,0.4s						
KOHI	**KOHIMA**	**2.21**	**17**	*e*P	**Pn**	**22 45 58.6**	**+1.1**
KOHI				IAmb	IAmb	22 45 59.6	
	comp=Z,653nm,0.5s						
KOHI				*e*S	**Sn**	**22 46 25.8**	**+2.2**
KOHI				IAML		22 46 29.8	
	comp=E,1μm,0.7s						
KOHI				IAML		22 46 29.9	
	comp=N,659nm,0.5s						
SHL	**Shillong**	**2.40**	**325**	*e*P	**Pn**	**22 46 02.2**	**+2.0**
SHL				IAmb	IAmb	22 46 05.6	
	comp=Z,103nm,0.5s						
SHL	**Shillong**	**2.40**	**325**	Pn	Pn	**22 46 00.3**	**+0.2**
MOKO	**MOKOCHONG**	**2.89**	**20**	*e*P	**Pn**	**22 46 08.2**	**+1.3**
MOKO				*e*S	**Sn**	**22 46 39.9**	**-0.5**
MOKO				IAML		22 46 50.2	
	comp=E,389nm,0.5s						
MOKO				IAML		22 46 50.3	
	comp=N,500nm,0.6s						
GUWA	**GUWAHATI**	**3.02**	**329**	*e*P	**Pn**	**22 46 09.8**	**+1.4**
GUWA				*e*S	**Sn**	**22 46 41.7**	**-1.5**
TEZP	**TEZPUR**	**3.05**	**350**	*e*P	**Pn**	**22 46 08.7**	**-0.2**
TEZP				IAmb	IAmb	22 46 20.9	
	comp=Z,37nm,0.7s						
TEZP				*e*S	**Sn**	**22 46 43.5**	**-0.7**
TEZP				IAML		22 46 45.2	
	comp=N,583nm,0.2s						
ZIRO	**ZIRO**	**3.93**	**6**	*e*P	**Pn**	**22 46 21.2**	**+0.1**
ZIRO				IAmb	IAmb	22 46 24.1	
	comp=Z,63nm,0.3s						
ZIRO				*e*S	**Sn**	**22 47 04.8**	**-1.2**
ZIRO				IAML		22 47 06.5	
	comp=E,2μm,0.5s						
ZIRO				IAML		22 47 09.4	
	comp=N,2μm,0.5s						
TAWA	**Tawang**	**4.21**	**341**	*e*P	**Pn**	**22 46 26.2**	**+1.1**
TAWA				IAmb	IAmb	22 46 27.6	
	comp=Z,48nm,0.3s						
TAWA				*e*S	**Sn**	**22 47 13.2**	**-0.1**
TAWA				IAML		22 47 15.2	
	comp=N,845nm,0.5s						
TAWA				IAML		22 47 15.4	
	comp=E,962nm,0.3s						
GTK	**Tadong**	**5.71**	**311**	*e*P	**Pn**	**22 46 46.8**	**+1.3**
GTK				IAML		22 47 54.1	
	comp=N,59nm,0.3s						
GTK				IAML		22 47 54.5	
	comp=E,45nm,0.4s						
ODAN	**Odare**	**6.34**	**302**	*e*Pn	**Pn**	**22 46 55.0**	**+0.8**
ODAN				*e*Sn	**Sn**	**22 48 04.6**	**-0.9**
	comp=E,174nm,0.5s						
TAPN	**Taplejung**	**6.36**	**307**	*e*Pn	**Pn**	**22 46 55.6**	**+1.1**
LSA	**Lhasa**	**6.40**	**342**	Pn	**Pn**	**22 46 57.7**	**+2.4**
BOK	**Bokaro**	**6.90**	**273**	*e*P	**Pn**	**22 47 02.4**	**+0.8**
BOK				*e*S	**Sn**	**22 48 15.8**	**-3.0**
BOK				IAML		22 48 19.5	
	comp=N,82nm,0.5s						
RAMN	**Ramite**	**7.00**	**300**	*e*Pn	**Pn**	**22 47 04.2**	**+0.8**
RAMN				*e*Sn	**Sn**	**22 48 20.3**	**-1.5**
	comp=N,87nm,0.7s						
CM33	**Chiang Mai Arr**	**7.02**	**132**	P	**Pn**	**22 47 03.0**	**-0.4**
CHTO	**Chiang Mai**	**7.03**	**132**	Pn	**Pn**	**22 47 02.7**	**-0.8**
CMMT	**Chiang Mai**	**7.03**	**132**	P	**Pn**	**22 47 03.0**	**-0.5**
CM32	**Chiang Mai Arr**	**7.07**	**133**	P	**Pn**	**22 47 03.0**	**-1.1**
CM35	**Chiang Mai Arr**	**7.26**	**131**	P	**Pn**	**22 47 03.0**	**-0.7**
CM15	**Chiang Mai Arr**	**7.26**	**134**	P	Pn	22 47 13.8	+7.1
CM31	**Chiang Mai Arr**	**7.27**	**134**	P	**Pn**	**22 47 06.0**	**-0.9**
CM31	**Chiang Mai Arr**	**7.27**	**134**	Pn	**Pn**	**22 47 06.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**7.27**	**134**	P	**Pn**	**22 47 06.7**	**-0.2**
	comp=N,1.8nm,0.3s,baz=312,slow=13,SNR=38						
CMAR				LR	LR	22 50 45.7	
	comp=N,56nm,18.0s,baz=320,slow=45						
CM13	**Chiang Mai Arr**	**7.28**	**134**	P	**Pn**	**22 47 06.0**	**-0.9**
CM02	**Chiang Mai Arr**	**7.29**	**134**	P	**Pn**	**22 47 07.0**	**-0.1**
CM01	**Chiang Mai Arr**	**7.31**	**134**	P	**Pn**	**22 47 07.0**	**-0.4**
CM05	**Chiang Mai Arr**	**7.32**	**134**	P	**Pn**	**22 47 07.2**	**-0.2**
CM09	**Chiang Mai Arr**	**7.32**	**133**	P	**Pn**	**22 47 07.5**	**+0.1**
CM04	**Chiang Mai Arr**	**7.34**	**134**	P	**Pn**	**22 47 07.8**	**0.0**
PAYA	**Payao**	**7.35**	**124**	P	**Pn**	**22 47 07.7**	**-0.8**
GUN	**Gumba**	**8.03**	**304**	*e*Pn	**Pn**	**22 47 17.7**	**+0.2**
GUN				*e*Sn	**Sn**	**22 48 45.7**	**-1.4**
	comp=N,59nm,0.4s						
PKI	**Pulchoki**	**8.23**	**300**	*e*Pn	**Pn**	**22 47 20.3**	**+0.1**
PKI				*e*Sn	**Sn**	**22 48 49.8**	**-2.2**
	comp=N,36nm,0.5s						
PKIN	**Phulchoki**	**8.24**	**300**	*e*Pn	**Pn**	**22 47 20.4**	**+0.1**
PKIN				*e*Sn	**Sn**	**22 48 49.8**	**-2.4**
	comp=N,27nm,0.3s						
NANT	**Nan**	**8.31**	**124**	P	**Pn**	**22 47 19.5**	**-1.6**
SUKH	**Sukhothai**	**8.43**	**135**	P	**Pn**	**22 47 23.4**	**+0.8**
KKN	**Kakani**	**8.43**	**301**	*e*Pn	**Pn**	**22 47 22.7**	**-0.2**
DMN	**Daman**	**8.49**	**300**	*e*Pn	**Pn**	**22 47 23.4**	**-0.3**
GKN	**Gorkha**	**9.04**	**301**	*e*Pn	**Pn**	**22 47 30.9**	**-0.2**
GKN				*e*Sn	**Sn**	**22 49 07.7**	**-3.8**
	comp=N,48nm,0.3s						
PHIT	**Phitsanulok**	**9.16**	**133**	P	**Pn**	**22 47 33.5**	**+0.9**
KOLN	**Koldanda**	**9.77**	**297**	*e*Pn	**Pn**	**22 47 40.0**	**-1.2**
KOLN				*e*Sn	**Sn**	**22 49 24.2**	**-5.4**
	comp=N,56nm,0.5s						
PYUN	**Piuthan**	**10.39**	**298**	*e*Pn	**Pn**	**22 47 48.1**	**-1.6**
PYUN				*e*Sn	**Sn**	**22 49 40.7**	**-4.2**
	comp=N,67nm,0.4s						
ENH	**Enshi**	**15.80**	**62**	Pn	**Pn**	**22 49 03.4**	**+1.1**
ENH				IAmb	IAmb	22 49 08.9	
	comp=Z,10nm,0.8s						
NIL	**Nilore**	**20.30**	**304**	P	**P**	**22 49 55.6**	**+0.8**
WMQ	**Urumqi**	**20.71**	**348**	P	Pn	22 50 01.7	-0.3
WMQ				IAmb	IAmb	22 50 18.2	
	comp=Z,7.9nm,0.7s						
RPSI	**Rantau Prapat**	**21.46**	**165**	P	**P**	**22 50 06.8**	**-0.5**
RPSI				IAmb	IAmb	22 50 10.9	
	comp=Z,7.0nm,1.0s						
KBL	**Kabul**	**23.86**	**303**		**P**	**22 50 33.2**	**+1.1**
KBL				IAmb	IAmb	22 50 47.5	
	comp=Z,6.3nm,0.9s						
MK31	**Makanchi Array**	**24.81**	**342**	P	**P**	**22 50 41.9**	**+1.5**
MKAR	**Makanchi Array**	**24.81**	**342**	P	**P**	**22 50 42.2**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=156,slow=10,SNR=13						
MKAR	**Makanchi Array**	**24.81**	**342**	P	**P**	**22 50 41.3**	**+0.9**
GAR	**Garm**	**24.90**	**313**	P	**P**	**22 50 42.2**	**+0.8**
BTK	**Batken**	**25.14**	**316**	P	**P**	**22 50 44.0**	**+0.5**
BTK				IAmb	IAmb	22 50 57.5	
	comp=Z,6.6nm,0.8s						
CHGR	**Chuyangaron**	**25.51**	**312**	P	**P**	**22 50 48.0**	**+1.1**
CHGR				IAmb	IAmb	22 51 02.7	
	comp=Z,5.5nm,0.7s						
NACB	**Ninganchiao**	**25.77**	**83**	P	**P**	**22 50 48.6**	**-0.6**
SONM	**Songino Array**	**26.31**	**20**	P	**P**	**22 50 55.1**	**+1.1**
	comp=Z,2.6nm,0.8s,baz=201,slow=11,SNR=12						
SONM	**Songino Array**	**26.31**	**20**	P	**P**	**22 50 54.8**	**+0.8**
ULN	**Ulaanbaatar**	**26.55**	**21**	P	**P**	**22 50 57.0**	**+0.7**
ULN				IAmb	IAmb	22 51 00.6	
	comp=Z,3.5nm,0.6s						
KKAR	**Karatay Array**	**27.13**	**321**	P	**P**	**22 51 03.2**	**+1.8**
KKAR	**Karatay Array**	**27.13**	**321**	P	**P**	**22 51 02.9**	**+1.6**
KKAR				IAmb	IAmb	22 51 05.8	
	comp=Z,1.7nm,1.1s						
SBUM	**Sibu**	**27.82**	**136**	P	**P**	**22 51 04.5**	**-3.3**
ZAA0	**Zalesovo Array**	**30.99**	**350**	P	**P**	**22 51 36.6**	**+1.1**
ZALV	**Zalesovo Beam**	**30.99**	**350**	P	**P**	**22 51 36.6**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=167,slow=7.2,SNR=7.6						
ABKAR	**Akbulak array**	**36.66**	**323**	P	**P**	**22 52 26.2**	**+1.4**
ABKAR	**Akbulak array**	**36.66**	**323**	P	**P**	**22 52 26.2**	**+1.4**
ABKAR				IAmb	IAmb	22 52 29.0	
	comp=Z,1.6nm,0.6s						
KLR	**Kul'dur**	**39.44**	**40**	P	**P**	**22 52 48.4**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=251,slow=12,SNR=5.7						
WB0	**Warramunga Arr**	**58.78**	**134**	P	**P**	**22 55 14.9**	**-1.5**
WB0				IAmb	IAmb	22 55 29.1	
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**58.87**	**134**	P	**P**	**22 55 15.8**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=322,slow=7.5,SNR=15						
AS31	**Alice Springs**	**61.27**	**137**	P	**P**	**22 55 31.9**	**-1.4**
AS31				IAmb	IAmb	22 55 35.0	
	comp=Z,0.8nm,0.8s						
ASAR	**Alice Springs**	**61.27**	**137**	P	**P**	**22 55 32.8**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=319,slow=7.0,SNR=17						
NOA	**NORSAR Array B**	**65.89**	**328**	P	**P**	**22 56 03.9**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=94,slow=5.4,SNR=1.6						
GERES	**GERESS Array B**	**65.97**	**315**	P	**P**	**22 56 04.9**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=90,slow=5.9,SNR=5.4						
ILAR	**Eielson Array**	**80.51**	**22**	P	**P**	**22 57 28.4**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=292,slow=5.0,SNR=7.6						

*IDC **20** 22:57:58.5±0.5, 6°.40N×58°.82E, h0km, mb4.3/27, mb1 4.4/28, mb1mx4.3/44, mbtmp4.3/28, ML3.5/1, MS3.3/11, Ms1 3.3/11, ms1mx3.0/44, Error ellipse: s-maj=13.6km s-min=12.0km az=143.0*
*NEIC **20** 22:57:59.8±1.4, 6°.36N±0°.09×58°.74E±0°.09, h10km±1km, mb4.6/69, Error ellipse: s-maj=16.0km s-min=14.1km az=149.0*

ISC 20 22:57:60.0±0.5, 6°.35N±0°.08×58°.78E±0°.06, h10km, n172, σ0s84/164, mb4.6/76, MS3.3/12, 6C-9D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**7.49**	**321**		**Pn**	**22 59 51.3**	**+1.9**
ATD	**Arta Tunnel**	**16.56**	**289**	Pn	**Pn**	**23 01 53.4**	**+0.8**
	0.2nm,0.3s,baz=277,slow=20,SNR=3.0						
ATD				LR	LR	23 07 23.9	
	comp=Z,86nm,20.3s,baz=55,slow=34						
ATD	**Arta Tunnel**	**16.56**	**289**	P	**Pn**	**23 01 52.1**	**-0.4**
WSAR	**Wadi Sarin**	**16.79**	**360**	Pn	**P**	**23 01 57.9**	**+0.3**
	0.2nm,0.3s,baz=192,slow=12,SNR=5.7						
WSAR				LR	LR	23 07 14.7	
	comp=Z,50nm,19.5s,baz=190,slow=33						
UOSS	**Minazif**	**18.66**	**353**	P	**Pn**	**23 02 18.2**	**-0.3**
UOSS				IAmb	IAmb	23 02 30.4	
	comp=Z,35nm,1.4s						
RAYN	**Ar Rayn**	**21.32**	**325**	P	**P**	**23 02 46.5**	**-0.8**
RAYN				IAmb	IAmb	23 02 47.5	
	comp=Z,13nm,0.8s						
KMBO	**Kilima Mbogo**	**22.74**	**252**	P	**P**	**23 03 03.9**	**+1.2**
	comp=Z,12nm,0.8s,baz=51,slow=12,SNR=33						
KMBO				LR	LR	23 10 47.5	
	comp=Z,99nm,21.7s,baz=91,slow=34						
KMBO	**Kilima Mbogo**	**22.74**	**252**	P	**P**	**23 03 01.9**	**-0.9**
KMBO				IAmb	IAmb	23 03 06.2	
	comp=Z,10nm,0.8s						
OPO	**Ambohidratompo**	**27.27**	**205**	P	**P**	**23 03 46.1**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=310,slow=20,SNR=1.7						
OPO				LR	LR	23 12 02.4	
	comp=Z,56nm,20.8s,baz=184,slow=31						
ABPO	**Ambohimpanom**	**27.66**	**204**	P	**P**	**23 03 47.8**	**-0.6**
ABPO				IAmb	IAmb	23 04 02.9	
	comp=Z,13nm,1.4s						
HRA	**Herat**	**28.08**	**6**	P	**P**	**23 03 51.8**	**-0.3**
MBAR	**Mbarara**	**28.83**	**257**	LR	LR	23 15 19.8	
	comp=Z,32nm,18.5s,baz=50,slow=36						
GEVA	**Gevas**	**34.87**	**338**	P	**P**	**23 04 50.4**	**-1.3**
GEVA				IAmb	IAmb	23 04 57.9	
	comp=Z,8.7nm,0.9s						
MARD	**Mardin**	**34.92**	**335**	P	**P**	**23 04 51.4**	**-0.8**
MARD				IAmb	IAmb	23 04 55.2	
	comp=Z,5.3nm,0.7s						
BTK	**Batken**	**35.26**	**16**	P	**P**	**23 04 55.5**	**+0.5**
GNI	**Garni**	**35.94**	**342**	P	**P**	**23 05 00.7**	**-0.2**
GNI				IAmb	IAmb	23 05 03.7	
	comp=Z,10nm,0.8s						
GAZ	**Gaziantep**	**36.45**	**330**	P	**P**	**23 05 05.2**	**0.0**
GAZ				IAmb	IAmb	23 05 20.3	
	comp=Z,13nm,1.2s						
LSZ	**Lusaka**	**37.16**	**234**	P	**P**	**23 05 11.7**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=53,slow=8.2,SNR=5.7						
LSZ	**Lusaka**	**37.16**	**234**	IAmb	IAmb	23 05 13.7	
	comp=Z,2.4nm,0.8s						
KK31	**Karatay Array**	**38.04**	**14**	P	**P**	**23 05 18.5**	**-0.1**
KKAR	**Karatay Array**	**38.04**	**14**	P	**P**	**23 05 18.9**	**+0.3**
LSA	**Lhasa**	**38.32**	**49**	P	**P**	**23 05 21.4**	**-0.3**
AAK	**Ala-Archa**	**38.72**	**19**	LR	LR	23 20 44.0	
	comp=Z,49nm,20.8s,baz=208,slow=35						
KBZ	**Khabaz**	**39.76**	**342**	P	**P**	**23 05 34.0**	**+1.1**
	comp=Z,7.1nm,0.8s,baz=164,slow=7.1,SNR=16						
MATP	**Matopo**	**39.92**	**227**	P	**P**	**23 05 35.4**	**+0.7**
	comp=Z,6.9nm,0.8s,baz=45,slow=9.7,SNR=15						
KIV	**Kislovodsk**	**40.03**	**342**	P	**P**	**23 05 35.6**	**+0.3**
BRTR	**Keskin Array B**	**40.19**	**329**	P	**P**	**23 05 37.7**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=150,slow=10.0,SNR=8.6						
BRTR	**Keskin Array B**	**40.19**	**329**	P	**P**	**23 05 36.9**	**+0.1**
BR131	**Keskin Array S**	**40.20**	**329**	P	**P**	**23 05 36.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**40.92**	**69**	P	**P**	**23 05 43.2**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=261,slow=8.5,SNR=5.5						
CMAR	**Chiang Mai Arr**	**40.92**	**69**	P	**P**	**23 05 42.1**	**-0.8**
MDUB	**Mudurnu**	**42.00**	**328**	P	**P**	**23 05 50.9**	**-0.8**
ABKAR	**Akbulak array**	**42.77**	**1**	P	**P**	**23 05 58.5**	**+0.9**
ABKAR				IAmb	IAmb	23 06 05.7	
	comp=Z,8.3nm,0.8s						
ABKAR	**Akbulak array**	**42.77**	**1**	P	**P**	**23 05 57.9**	**+0.3**
AKTO	**Aktyubinsk**	**43.94**	**359**	LR	LR	23 25 23.3	
	comp=Z,28nm,20.4s,baz=140,slow=38						
LBTB	**Lobatse**	**44.88**	**225**	P	**P**	**23 06 15.8**	**+0.7**
	comp=Z,9.4nm,0.9s,baz=34,slow=9.6,SNR=9.7						
LBTB	**Lobatse**	**44.88**	**225**	P	**P**	**23 06 15.2**	**+0.1**
MAKZ	**Makanchi**	**44.98**	**23**	P	**P**	**23 06 14.2**	**-1.3**
MKAR	**Makanchi Array**	**45.09**	**23**	P	**P**	**23 06 16.4**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=210,slow=8.4,SNR=4.1						
WMQ	**Urumqi**	**45.12**	**30**	*e*P	**P**	**23 06 18.3**	**+1.6**
ALN	**Alexandroupoli**	**45.13**	**325**	P	**P**	**23 06 16.8**	**+0.1**
KURK	**Kurchatov**	**47.22**	**17**	P	**P**	**23 06 33.0**	**+0.1**
BOSA	**Boshof**	**47.45**	**221**	P	**P**	**23 06 35.9**	**+0.6**
	comp=Z,11nm,0.9s,baz=57,slow=8.7,SNR=12						
BOSA				LR	LR	23 24 20.2	
	comp=Z,40nm,20.6s,baz=30,slow=33						
BOSA	**Boshof**	**47.45**	**221**	P	**P**	**23 06 34.9**	**-0.4**
BRVK	**Borovoye**	**47.51**	**9**	P	**P**	**23 06 35.9**	**+0.7**
FNA	**Florina**	**47.85**	**322**	P	**P**	**23 06 36.5**	**-1.7**
VRI	**Vrincioaia**	**48.15**	**330**	⇓P	**P**	**23 06 41.4**	**+1.1**
PLOR	**Plostina**	**48.17**	**330**	⇓P	**P**	**23 06 40.4**	**-0.1**
MLR	**Muntele Rosu**	**48.28**	**329**	⇓P	**P**	**23 06 41.4**	**0.0**
TESR	**Tescani**	**48.64**	**331**	⇓P	**P**	**23 06 44.8**	**+0.7**
VOIR		**48.70**	**329**	⇓P	**P**	**23 06 45.4**	**+0.7**
OZUR		**48.78**	**330**	⇓P	**P**	**23 06 45.9**	**+0.7**
ARR	**Arges**	**48.87**	**328**	⇓P	**P**	**23 06 46.4**	**+0.5**
DOPR	**Dopca**	**48.89**	**329**	⇑P	**P**	**23 06 46.4**	**+0.4**
SORM	**Soroca**	**49.03**	**333**	⇑P	**P**	**23 06 46.7**	**-0.3**
GTA	**Gaotai**	**49.44**	**42**	*e*P	**P**	**23 06 50.5**	**0.0**
GTA				pP	sP	23 06 54.5	+1.2
GTA				sP	pwP	23 06 58.0	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HERR	**Herculane**	**49.74**	**326**	⇓P	**P**	**23 06 53.1**	**+0.6**
GZR	**Gura Zlata**	**49.87**	**327**	⇑P	**P**	**23 06 54.7**	**+1.1**
ARU	**Arti**	**49.95**	**360**	P	**P**	**23 06 53.6**	**-0.3**
ARU				IAmb	IAmb	23 06 56.0	
	comp=Z,4.6nm,0.8s						
MDVR	**Moldovita**	**50.06**	**326**	⇑P	**P**	**23 06 55.2**	**+0.1**
BURAR	**Bucovina Array**	**50.12**	**331**	⇑P	**P**	**23 06 56.6**	**+1.1**
BURAR	**Bucovina Array**	**50.12**	**331**	P	**P**	**23 06 55.4**	**-0.1**
BUR08	**Bucovina Ar. S**	**50.14**	**331**	P	**P**	**23 06 55.4**	**-0.4**
BUR08				IAmb	IAmb	23 06 58.5	
	comp=Z,3.9nm,0.9s						
ARCR	**ARCALIA**	**50.17**	**330**	⇓P	**P**	**23 06 56.9**	**+1.1**
LEM	**Lembang**	**50.45**	**104**	LR	LR	23 23 34.4	
	comp=Z,82nm,19.6s,baz=332,slow=30						
AKASG	**Malin Array Be**	**50.61**	**336**	P	**P**	**23 06 58.1**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=135,slow=7.1,SNR=6.2						
AKASG	**Malin Array Be**	**50.61**	**336**	IAmb	IAmb	23 07 00.5	
	comp=Z,0.8nm,0.8s						
DIVS	**Divibare**	**50.63**	**324**	P	**P**	**23 06 59.3**	**-0.1**
DIVS				IAmb	IAmb	23 07 02.7	
	comp=Z,4.8nm,1.0s						
BZS	**Buzias**	**50.64**	**327**	⇑P	**P**	**23 06 59.8**	**+0.5**
LZH	**Lanzhou**	**50.72**	**48**	*e*P	**P**	**23 07 02.1**	**+1.7**
LZH				pP	pwP	23 07 05.3	-1.8
LZH				sP	sP	23 07 06.8	+3.6
LZH				*e*PP	**PP**	**23 08 59.5**	**+3.0**
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,6.9s						
LZH				LR	LR		
	comp=N,150nm,14.8s						
LZH				LR	LR		
	comp=E,170nm,15.0s						
LZH				LR	LR		
	comp=Z,260nm,17.2s						
QIZ	**Qiongzhong**	**51.20**	**71**	P	**P**	**23 07 03.3**	**-0.7**
QIZ				S	**S**	**23 14 22.8**	**0.0**
QIZ				LR	LR		
	comp=N,320nm,11.8s						
QIZ				LR	LR		
	comp=E,340nm,17.2s						
QIZ				LR	LR		
	comp=Z,370nm,10.6s						
ZALV	**Zalesovo Beam**	**51.94**	**19**	P	**P**	**23 07 08.6**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=231,slow=7.3,SNR=14						
ZALV				LR	LR	23 28 39.6	
	comp=Z,24nm,21.1s,baz=39,slow=36						
ZALV	**Zalesovo Beam**	**51.94**	**19**	P	**P**	**23 07 08.8**	**-0.2**
SGRT	**San Giovanni R**	**51.94**	**320**	P	**P**	**23 07 08.3**	**-1.0**
KOLS	**Kolonicke sedl**

CTI	**Castel Tesino**	**56.65**	**322**	IAmb	IAmb	23 07 44.5	
	comp=Z,5.9nm,0.7s						
GERES	**GERESS Array B**	**56.90**	**326**	P	**P**	**23 07 44.1**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=124,slow=6.6,SNR=5.1						
PRU	**Pruhonice**	**57.08**	**328**	*e*P	**P**	**23 07 46.1**	**-0.3**
KHC	**Kasperske Hory**	**57.12**	**326**	*e*P	**P**	**23 07 45.5**	**-1.3**
WTTA	**Wattenberg**	**57.26**	**324**	*e*P	**P**	**23 07 47.6**	**-0.3**
	comp=Z,9.9nm,0.6s						
WATA	**Walderalm**	**57.33**	**324**	*i* P	**P**	**23 07 47.4**	**-1.0**
	comp=Z,10nm,0.9s						
SQTA	**Sankt Quirin**	**57.49**	**323**	*i* P	**P**	**23 07 49.0**	**-0.5**
	comp=Z,12nm,0.6s,SNR=10						
PBUR	**Paburge**	**57.49**	**336**	*e*P	**P**	**23 07 48.3**	**-0.9**
MOTA	**Moosalm**	**57.61**	**323**	*i* P	**P**	**23 07 49.7**	**-0.7**
	comp=Z,11nm,0.7s,SNR=14						
FETA	**Feichten**	**57.68**	**323**	*e*P	**P**	**23 07 50.7**	**-0.2**
	comp=Z,7.2nm,0.9s						
SONM	**Songino Array**	**57.82**	**36**	P	**P**	**23 07 52.4**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=234,slow=6.0,SNR=6.8						
SONM	**Songino Array**	**57.82**	**36**	P	**P**	**23 07 52.3**	**+0.5**
RETA	**Reutte**	**57.88**	**323**	*i* P	**P**	**23 07 51.4**	**-0.8**
	comp=Z,4.7nm,0.6s,SNR=8.3						
HHC	**Hu-ho-hao-te**	**58.16**	**45**	*e*P	**P**	**23 07 56.6**	**+2.3**
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,84nm,6.7s						
TUE	**Stuetta**	**58.26**	**322**	P	**P**	**23 07 55.9**	**+0.8**
TUE				IAmb	IAmb	23 08 04.3	
	comp=Z,3.6nm,0.7s						
DAVA	**Damuels**	**58.31**	**323**	*e*P	**P**	**23 07 55.1**	**-0.2**
	comp=Z,4.9nm,0.5s						
NKC	**Novy Kostel**	**58.34**	**327**	*e*P	**P**	**23 07 55.8**	**+0.5**
CLL	**Collm**	**58.62**	**328**	*e*P	**P**	**23 07 57.0**	**-0.2**
SENIN	**Lac Senin/Sane**	**59.48**	**321**	P	**P**	**23 08 02.8**	**-0.7**
SENIN				IAmb	IAmb	23 08 09.4	
	comp=Z,8.4nm,1.2s						
BFO	**Black Forest**	**59.73**	**323**	P	**P**	**23 08 05.2**	**+0.2**
FINES	**FINESS Array B**	**60.12**	**343**	P	**P**	**23 08 07.0**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=126,slow=9.7,SNR=7.9						
ECH	**Echery**	**60.37**	**323**	P	**P**	**23 08 09.6**	**+0.2**
ECH				IAmb	IAmb	23 08 10.1	
	comp=Z,6.3nm,0.9s						
NJ2	**Nanjing**	**61.37**	**57**	*e*P	**P**	**23 08 16.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KOWA	**Kowa**	**62.13**	**283**	P	**P**	**23 08 21.8**	**-0.1**
KIC	**Kosan Boka**	**63.09**	**274**	*e*P	**P**	**23 08 29.0**	**+0.7**
	comp=Z,60nm,1.4s						
DBIC	**Dimbokro**	**63.19**	**274**	P	**P**	**23 08 29.6**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=64,slow=7.2,SNR=5.8						
DBIC				LR	LR	23 34 58.4	
	comp=Z,48nm,19.4s,baz=335,slow=35						
TIC	**Toumodi**	**63.35**	**274**	*e*P	**P**	**23 08 30.3**	**+0.2**
LIC	**Lamto**	**63.39**	**274**	*e*P	**P**	**23 08 31.0**	**+0.7**
	comp=Z,24nm,0.9s						
NB2	**NORSAR Subarra**	**65.02**	**337**	P	**P**	**23 08 38.8**	**-1.4**
	comp=Z,3.7nm,1.2s,baz=126,slow=6.9						
NOA	**NORSAR Array B**	**65.02**	**337**	P	**P**	**23 08 38.8**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=117,slow=7.3,SNR=3.5						
ESBB	**Sonseca Array**	**65.09**	**311**	P	**P**	**23 08 40.0**	**-1.1**
ESDC	**Sonseca Array**	**65.09**	**311**	P	**P**	**23 08 41.2**	**+0.1**
	comp=Z,7.7nm,0.7s,baz=89,slow=5.3,SNR=54						
ESDC	**Sonseca Array**	**65.09**	**311**	P	**P**	**23 08 40.7**	**-0.4**
ARCES	**ARCESS Array B**	**66.73**	**348**	P	**P**	**23 08 50.6**	**-0.4**
	comp=Z,6.2nm,0.9s,baz=153,slow=8.2,SNR=12						
KSRS	**Korea Array**	**69.62**	**52**	P	**P**	**23 09 09.1**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=261,slow=6.6,SNR=7.8						
FITZ	**Fitzroy Crossi**	**70.27**	**112**	P	**P**	**23 09 14.7**	**+0.6**
	comp=Z,3.1nm,0.9s,baz=293,slow=7.7,SNR=3.9						
FITZ	**Fitzroy Crossi**	**70.27**	**112**	IAmb	IAmb	23 09 15.5	
	comp=Z,4.4nm,0.9s						
MJAR	**Matsushiro Arr**	**77.76**	**54**	P	**P**	**23 09 57.2**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=262,slow=6.0,SNR=1.7						
WRA	**Warramunga Arr**	**78.70**	**112**	P	**P**	**23 10 03.0**	**-0.1**
	comp=Z,8.7nm,0.9s,baz=288,slow=4.4,SNR=48						
WRA	**Warramunga Arr**	**78.70**	**112**	P	**P**	**23 10 03.2**	**+0.1**
WRAB	**Tennant Creek**	**78.71**	**112**	P	**P**	**23 10 03.6**	**+0.4**
WB0	**Warramunga Arr**	**78.72**	**112**	P	**P**	**23 10 03.4**	**+0.2**
WB0				IAmb	IAmb	23 10 04.1	
	comp=Z,8.1nm,0.9s						
WR0	**Warramunga Arr**	**78.89**	**112**	P	**P**	**23 10 04.3**	**+0.1**
ASAR	**Alice Springs**	**79.04**	**115**	P	**P**	**23 10 04.8**	**-0.1**
	comp=Z,6.8nm,0.9s,baz=283,slow=5.3,SNR=43						
ASAR	**Alice Springs**	**79.04**	**115**	P	**P**	**23 10 04.5**	**-0.5**
CTA	**Charters Tower**	**89.79**	**110**	P	**P**	**23 10 58.5**	**-1.0**
	comp=Z,5.0nm,0.8s,baz=0.0,slow=1.0						
NVAR	**Mina Array Bea**	**135.37**	**357**	PKP	**PKiKP**	**23 17 21.9**	**-0.6**
	comp=Z,1.7nm,0.9s,baz=5.0,slow=0.4,SNR=7.4						
NVAR	**Mina Array Bea**	**135.37**	**357**		**PKiKP**	**23 17 22.8**	**+0.3**
TXAR	**Lajitas Array**	**140.71**	**335**	PKhKP	PKPpre	23 17 23.7	
	comp=Z,0.6nm,0.9s,baz=58,slow=3.1,SNR=4.4						
TXAR				PKP	pPKPdf	23 17 32.4	-0.7
	comp=Z,0.5nm,0.8s,baz=103,slow=1.3,SNR=5.8						
TXAR	**Lajitas Array**	**140.71**	**335**	PKPdf	**PKPdf**	**23 17 31.8**	**+0.9**

*IDC **20** 22:59:43.0±2.3, 1°.37S×77°.75W, h144km±22km, mb3.6/11, mb1 3.8/15, mb1mx3.7/31, mbtmp4.1/15, Error ellipse: s-maj=23.4km s-min=12.3km az=58.0*
*NEIC **20** 22:59:44.2±1.6, 1°.46S±0°.07×77°.8W±0°.1, h158km±1km, mb4.2/54, Error ellipse: s-maj=18.2km s-min=9.9km az=74.0*
*VAO **20** 22:59:45.0±0.4, 1°.61S×77°.81W, h143km±4km, mb4.1*
ISC 20 22:59:43.1±0.4, **1°.63S**±0°.05×**78°.06W**±0°.07, **h150**km, **n124,** σ**1**§**46**/126, **mb4.2**/27, **Ecuador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTAV	**Otavalo**	**1.90**	**348**	*e*P	**Pn**	**23 00 18.7**	**+1.1**
OTAV	**Otavalo**	**1.90**	**348**	Pn	**Pn**	**23 00 18.9**	**+1.4**
OTAV	**Otavalo**	**1.90**	**348**	*e*P	**Pn**	**23 00 19.0**	**+1.4**
CUSE	**Cuicocha Este**	**1.95**	**350**	*e*P	**Pn**	**23 00 19.9**	**+1.7**
PAC1	**Pacto, Paraso**	**2.02**	**339**	*e*P	**Pn**	**23 00 19.8**	**+1.1**
PUAC	**Puerto Asis, P**	**2.63**	**35**	*e*P	**Pn**	**23 00 27.4**	**+1.6**
GCUF	**Volcan Galeras**	**2.92**	**14**	*e*P	**Pn**	**23 00 32.0**	**+2.0**
BBAC	**Balboa, Cauca**	**3.72**	**13**	*e*P	**Pn**	**23 00 40.4**	**+0.5**
BBAC				*e*S	**Sn**	**23 01 24.8**	**+0.8**
BBAC				*i*		23 01 33.5	
	comp=Z,47nm,0.3s						
PTLC	**Puerto Leguiza**	**3.72**	**61**	*e*P	**Pn**	**23 00 39.1**	**-0.7**
FLOC	**Florencia**	**4.00**	**37**	*e*P	**Pn**	**23 00 44.1**	**+0.7**
SOTA	**Rioblanco**	**4.01**	**21**	*e*P	**Pn**	**23 00 45.9**	**+1.9**
PCON	**Cinco Dias**	**4.27**	**23**	*e*P	**Pn**	**23 00 49.1**	**+1.6**
POPC	**Popayan, Colom**	**4.37**	**18**	*e*P	**Pn**	**23 00 48.9**	**+0.5**
GARC	**Garzon, Huila**	**4.58**	**34**	*e*P	**Pn**	**23 00 52.5**	**+1.2**
MARP	**Paez Belalcaza**	**4.92**	**25**	*e*P	**Pn**	**23 00 57.1**	**+1.3**
MARP				*e*P	**Pn**	**23 00 57.5**	**+1.7**
ATAH	**Atahualpa**	**5.48**	**183**	P	**Pn**	**23 01 06.3**	**+3.0**
	comp=Z,6.7nm,0.3s,baz=17,slow=12,SNR=32						
ATAH				S	**Sn**	**23 02 02.0**	**-3.9**
	comp=Z,5.3nm,0.3s,baz=33,slow=8.9,SNR=5.8						
YOTC	**Yotoco, Valle**	**5.83**	**17**	*e*P	**Pn**	**23 01 05.4**	**-2.4**
ORTC	**Ortega, Tolima**	**6.18**	**27**	*e*P	**Pn**	**23 01 13.2**	**+0.8**
PLMC	**San Jos del P**	**6.73**	**15**	*e*P	**Pn**	**23 01 17.0**	**-2.7**
TOLC	**Tolima**	**6.75**	**24**	*e*P	**Pn**	**23 01 19.0**	**-1.3**
VILC	**Villavicencio,**	**7.18**	**37**	*e*P	**Pn**	**23 01 26.8**	**+1.0**
ROSC	**El Rosal**	**7.43**	**30**	Pn	**Pn**	**23 01 27.2**	**-2.2**
CZSB	**Cruzeiro do Su**	**8.07**	**139**	*e*P	**Pn**	**23 01 38.0**	**+0.4**
RUSC	**La Rusia**	**8.97**	**34**	*e*P	**Pn**	**23 01 51.5**	**+1.5**
ZARC	**Zaragoza, Cauc**	**9.61**	**19**	*e*P	**Pn**	**23 01 56.0**	**-2.0**
NNA	**Nana**	**10.36**	**173**	P	**Pn**	**23 02 08.0**	**-0.1**
	comp=Z,1.5nm,0.3s,baz=330,slow=14,SNR=1.9						
NNA				S	**Sn**	**23 03 55.3**	**-7.5**
	comp=Z,4.2nm,0.3s,baz=292,slow=21,SNR=4.5						
NNA	**Nana**	**10.36**	**173**		**Pn**	**23 02 10.4**	**+2.4**
SDV	**Santo Domingo**	**12.80**	**35**	P	Pn	23 02 34.7	-5.3
	comp=Z,0.5nm,0.3s,baz=347,slow=12,SNR=1.4						
SDV	**Santo Domingo**	**12.80**	**35**	Pn	**Pn**	**23 02 37.1**	**-2.9**
SDV	**Santo Domingo**	**12.80**	**35**	*e*P	**Pn**	**23 02 40.1**	**0.0**
JTS	**Las Juntas de**	**13.69**	**330**	P	**Pn**	**23 02 50.0**	**-1.2**
	baz=24,slow=20,SNR=1.8						
ETMB	**Extrema**	**14.31**	**125**	*e*P	**Pn**	**23 02 56.5**	**-2.6**
ESPN	**Las Esperanzas**	**15.07**	**336**	Pn	**Pn**	**23 03 08.2**	**-0.3**
ESPN				IAmb	IAmb	23 03 11.8	
	comp=Z,11nm,0.9s						
SAML	**Samuel**	**16.49**	**117**	P	**P**	**23 03 25.4**	**-0.5**
SAML				IAmb	IAmb	23 03 27.5	
	comp=Z,5.3nm,0.6s						
SAML	**Samuel**	**16.49**	**117**	*e*P	**P**	**23 03 25.1**	**-0.9**
MACA	**Manacapuru-AM**	**17.43**	**95**	*e*P	**P**	**23 03 36.3**	**0.0**
LPAZ	**La Paz**	**17.55**	**147**	P	**Pn**	**23 03 39.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=333,slow=12,SNR=7.1						
LPAZ	**La Paz**	**17.55**	**147**		**Pn**	**23 03 40.4**	**+1.1**
LPAZ	**La Paz**	**17.55**	**147**	*e*P	**P**	**23 03 38.9**	**+0.7**
PB16	**IPOC Station P**	**18.60**	**154**	P	**P**	**23 03 50.6**	**+0.9**
PB16				IAmb	IAmb	23 03 56.6	
	comp=Z,5.2nm,0.7s						
MNMC	**Minye Minye**	**19.27**	**155**	P	**P**	**23 03 57.5**	**+0.9**
MNMC				IAmb	IAmb	23 04 06.2	
	comp=Z,12nm,0.8s						
MTO3	**Montecristo**	**19.46**	**325**	P	**P**	**23 03 59.1**	**+0.5**
PSGCX	**Pisagua**	**19.47**	**157**	P	**Pn**	**23 04 03.8**	**+2.3**
PSGCX				IAmb	IAmb	23 04 08.7	
	comp=Z,5.7nm,0.6s						
PB11	**IPOC Station P**	**19.81**	**156**	P	**P**	**23 04 00.1**	**-2.1**
PB11				IAmb	IAmb	23 04 14.4	
	comp=Z,13nm,1.1s						
GO01	**Chusmiza**	**19.92**	**155**	P	**P**	**23 04 00.2**	**-3.6**
GO01				IAmb	IAmb	23 04 12.9	
	comp=Z,6.7nm,0.6s						
VILB	**Vilhena**	**20.96**	**123**	*e*P	**P**	**23 04 15.2**	**+0.6**
FSCY	**Frank Sound, G**	**21.04**	**352**	P	**P**	**23 04 13.3**	**-1.9**
SIV	**San Ignacio**	**22.00**	**131**	P	**P**	**23 04 25.9**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=302,slow=10,SNR=7.3						
ITTB	**Itaituba**	**22.46**	**97**	*e*P	**P**	**23 04 29.8**	**-0.3**
LVC	**Limon Verde**	**22.67**	**158**	*e*P	**P**	**23 04 33.9**	**+1.6**
PDPR	**Patillas Dam,**	**22.84**	**31**	P	**P**	**23 04 30.7**	**-2.8**
PDPR				IAmb	IAmb	23 04 33.4	
	comp=Z,13nm,1.0s						
PTLB	**Pontes e Lacer**	**23.17**	**127**	*e*P	**P**	**23 04 37.5**	**+0.9**
NPGB	**Novo Progresso**	**23.26**	**104**	*e*P	**P**	**23 04 37.2**	**-0.3**
MALB	**Monte Alegre**	**23.79**	**91**	*e*P	**P**	**23 04 42.6**	**+0.4**
CLDB	**Colider**	**23.94**	**113**	*e*P	**P**	**23 04 43.1**	**-0.5**
CMIG	**Matias Romero**	**24.93**	**319**	P	**P**	**23 04 53.3**	**+0.8**
	comp=Z,5.5nm,0.7s,baz=137,slow=4.8,SNR=5.0						
MCPB	**Macapa, AP**	**26.03**	**88**	*e*P	**P**	**23 05 03.6**	**+1.0**
PP1B	**Ponte de Pedra**	**27.76**	**126**	*e*P	**P**	**23 05 19.2**	**+1.1**
SNDB	**Serra Nova Dou**	**28.46**	**112**	*e*P	**P**	**23 05 25.1**	**+0.8**
AQDB	**Aquidauana**	**28.77**	**132**	*e*P	**P**	**23 05 28.5**	**+1.6**
ROSB	**Rosrio**	**33.93**	**93**	*e*P	**P**	**23 06 12.7**	**+0.3**
ITQB	**Itaqui**	**34.54**	**146**	*e*P	**P**	**23 06 18.7**	**+1.3**
JANB	**Januaria**	**35.88**	**114**	*e*P	**P**	**23 06 29.7**	**+0.6**
TXAR	**Lajitas Array**	**39.34**	**323**	P	**P**	**23 06 59.2**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=147,slow=8.3,SNR=11						
TXAR				PcP	**PcP**	**23 09 04.8**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=152,slow=6.7,SNR=5.5						
PLCA	**Paso Flores**	**39.51**	**171**	P	**P**	**23 07 01.4**	**+2.1**
	comp=Z,2.1nm,0.9s,baz=329,slow=9.2,SNR=6.2						
PLCA	**Paso Flores**	**39.51**	**171**	IAmb	IAmb	23 07 02.1	
	comp=Z,2.6nm,0.8s						
PLCA	**Paso Flores**	**39.51**	**171**	*e*P	**P**	**23 07 01.1**	**+1.9**
NAN01	**Guarapari, ES**	**40.58**	**116**	*e*P	**P**	**23 07 09.1**	**+0.9**
ANMO	**Albuquerque**	**45.07**	**327**	P	**P**	**23 07 45.0**	**+0.5**
ANMO				IAmb	IAmb	23 07 46.8	
	comp=Z,5.7nm,0.8s						
JFWS	**Jewell Farm**	**45.68**	**347**	P	**P**	**23 07 46.9**	**-2.0**
PLVO	**Plevna**	**46.47**	**1**	P	**P**	**23 07 54.5**	**-0.6**
SDCO	**Great Sand Dun**	**46.68**	**330**	P	**P**	**23 07 58.5**	**+1.3**
SDCO				IAmb	IAmb	23 07 59.3	
	comp=Z,5.5nm,0.8s						
214A	**Organ Pipe Nat**	**46.90**	**318**	P	**P**	**23 07 58.0**	**-0.7**
214A				IAmb	IAmb	23 08 01.0	
	comp=Z,7.0nm,1.1s						
ECSD	**EROS Data Cent**	**48.13**	**342**	P	**P**	**23 08 07.5**	**-0.4**
ISCO	**Idaho Springs**	**48.34**	**332**	P	**P**	**23 08 10.3**	**+0.4**
E43A	**Lone Tree Farm**	**48.45**	**352**	P	**P**	**23 08 10.2**	**-0.1**
PV13	**Radium Mtn., P**	**48.72**	**328**	P	**P**	**23 08 13.6**	**+0.8**
PV13				IAmb	IAmb	23 08 14.7	
	comp=Z,7.6nm,0.9s						
PV03	**Paradox Valley**	**48.80**	**328**	P	**P**	**23 08 14.3**	**+0.9**
PV03				IAmb	IAmb	23 08 15.2	
	comp=Z,7.0nm,1.0s						
PV17	**East Wray Mesa**	**48.88**	**328**	P	**P**	**23 08 14.9**	**+0.9**
PV17				IAmb	IAmb	23 08 15.7	
	comp=Z,5.1nm,0.9s						
AGMN	**Agassiz Nation**	**52.09**	**345**	P	**P**	**23 08 36.9**	**-0.7**
TPNV	**Topopah Spring**	**52.23**	**321**	IAmb	IAmb	23 08 41.8	
	comp=Z,4.5nm,0.9s						
TCUT	**Toone Canyon**	**52.24**	**328**	P	**P**	**23 08 40.6**	**+1.4**
SPR3	**Spring Creek 3**	**52.39**	**324**	P	**P**	**23 08 40.3**	**-0.2**
PDAR	**Pinedale Array**	**52.52**	**331**	P	**P**	**23 08 41.5**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=111,slow=6.7,SNR=4.5						
SPUT	**South Promonto**	**52.92**	**328**	P	**P**	**23 08 44.9**	**+0.8**
ULM	**Lac du Bonnet**	**53.89**	**346**	P	**P**	**23 08 49.1**	**-1.7**
	comp=Z,3.8nm,0.4s,baz=157,slow=9.1,SNR=9.6						
ULM	**Lac du Bonnet**	**53.89**	**346**	P	**P**	**23 08 49.2**	**-1.5**
ULM				IAmb	IAmb	23 08 49.9	
	comp=Z,2.8nm,0.6s						
IMW	**Indian Meadow**	**54.03**	**331**	P	**P**	**23 08 52.7**	**+0.4**
IMW				IAmb	IAmb	23 08 54.8	
	comp=Z,2.7nm,0.8s						
NVAR	**Mina Array Bea**	**54.42**	**321**	P	**P**	**23 08 56.1**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=123,slow=6.2,SNR=5.8						
NVAR				PcP	**PcP**	**23 09 57.5**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=132,slow=5.2,SNR=2.7						
YHH	**Holmes Hill**	**54.65**	**332**	P	**P**	**23 08 57.5**	**+0.7**
YHL	**Hebgen Lake**	**54.86**	**332**	P	**P**	**23 08 59.5**	**+1.3**
ORV	**Oroville**	**57.10**	**321**	P	**P**	**23 09 15.2**	**+1.3**
GDXM	**Geysers**	**57.51**	**319**	P	**P**	**23 09 16.6**	**-0.3**
MOD	**Modoc Plateau**	**57.75**	**324**	P	**P**	**23 09 19.4**	**+0.8**
I07A	**Izee**	**58.64**	**326**	P	**P**	**23 09 25.8**	**+1.0**
I07A				IAmb	IAmb	23 09 27.5	
	comp=Z,4.2nm,1.1s						
G08A	**Pilot Rock**	**59.11**	**327**	P	**P**	**23 09 28.9**	**+0.9**
PINE	**Pine Mountain**	**59.27**	**325**	P	**P**	**23 09 30.3**	**+1.1**
PINE				IAmb	IAmb	23 09 31.7	
	comp=Z,4.4nm,0.8s						
YKA	**Yellowknife Ar**	**69.64**	**343**	P	**P**	**23 10 35.0**	**-0.9**
	comp=Z,9.9nm,0.6s,baz=145,slow=6.4,SNR=5.4						
DBIC	**Dimbokro**	**73.52**	**83**	P	**P**	**23 10 59.2**	**-0.9**
	comp=Z,6.0nm,1.0s,baz=257,slow=5.7,SNR=2.3						
KOWA	**Kowa**	**74.98**	**75**	P	**P**	**23 11 07.8**	**-0.8**
KOWA				IAmb	IAmb	23 11 09.1	
	comp=Z,4.1nm,0.8s						
SUMG	**Summit**	**78.17**	**11**	P	**P**	**23 11 26.1**	**+0.2**
K27K	**Chicken**	**80.36**	**336**	P	**P**	**23 11 38.0**	**+0.6**
TOA0	**Torodi Ar. Sit**	**80.40**	**76**	P	**P**	**23 11 37.1**	**-1.5**
TORD	**Torodi Ar. Bea**	**80.40**	**76**	P	**P**	**23 11 37.2**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=283,slow=5.5,SNR=15						
TORD	**Torodi Ar. Bea**	**80.40**	**76**	IAmb	IAmb	23 11 38.1	
	comp=Z,0.9nm,1.0s						
IL31		**82.58**	**336**	P	**P**	**23 11 49.0**	**0.0**
ILAR	**Eielson Array**	**82.58**	**336**	P	**P**	**23 11 48.7**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=152,slow=4.5,SNR=19						
BMAR	**Burnt Mountain**	**82.66**	**339**	P	**P**	**23 11 50.4**	**+0.9**
RND	**Reindeer**	**82.95**	**335**	P	**P**	**23 11 51.8**	**+0.7**
RND				IAmb	IAmb	23 11 53.7	
	comp=Z,4.8nm,1.0s						
MDM	**Murphy Dome**	**83.18**	**336**	P	**P**	**23 11 51.8**	**-0.4**
MDM				IAmb	IAmb	23 11 52.7	
	comp=Z,2.9nm,0.5s						
I23K	**Minto, Yukon-K**	**83.69**	**336**	P	**P**	**23 11 54.4**	**-0.4**
I23K				IAmb	IAmb	23 11 55.8	
	comp=Z,2.5nm,0.6s						
SKT	**Skwentna**	**83.72**	**333**	P	**P**	**23 11 54.7**	**-0.3**
SKT				IAmb	IAmb	23 11 55.4	
	comp=Z,4.5nm,0.7s						
KTH	**Kantishna Hill**	**83.88**	**335**	P	**P**	**23 11 55.5**	**-0.4**
PPLA	**Purkeypile**	**84.25**	**334**	P	**P**	**23 11 57.6**	**-0.3**
CAST	**Castle Rocks**	**84.34**	**334**	P	**P**	**23 11 57.8**	**-0.4**
COLD	**Coldfoot**	**84.64**	**338**	P	**P**	**23 12 00.3**	**+0.8**
IMAR	**Indian Mountai**	**85.68**	**337**	P	**P**	**23 12 04.6**	**-0.1**
ZALV	**Zalesovo Beam**	**125.98**	**12**	PKP	**PKPdf**	**23 18 27.2**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=327,slow=2.4,SNR=3.2						
MKAR	**Makanchi Array**	**131.86**	**18**	PKP	**PKPdf**	**23 18 38.5**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=308,slow=2.7,SNR=7.6						
SONM	**Songino Array**	**133.81**	**356**	PKP	**PKPdf**	**23 18 43.3**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=46,slow=4.2,SNR=1.8						
ASAR	**Alice Springs**	**140.02**	**229**	PKhKP	PKPpre	23 18 47.6	
	comp=Z,0.7nm,0.7s,baz=131,slow=3.7,SNR=5.4						
ASAR				PKP	**PKPdf**	**23 18 54.5**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=114,slow=2.2,SNR=5.3						
WRA	**Warramunga Arr**	**141.67**	**234**	PKhKP	PKPpre	23 18 51.9	
	comp=Z,0.6nm,0.6s,baz=120,slow=2.1,SNR=8.5						
WRA				PKP	**PKPdf**	**23 18 57.2**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=116,slow=2.1,SNR=13						
FITZ	**Fitzroy Crossi**	**149.53**	**229**	PKPbc	**PKPbc**	**23 19 15.9**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=182,slow=5.1,SNR=7.1						
CMAR	**Chiang Mai Arr**	**163.02**	**10**	PKPab	**PKPab**	**23 20 17.8**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=324,slow=5.6,SNR=4.1						

*IDC **20** 23:16:11.9±0.8, 27°.18N×103°.53E, h0km, mb3.6/12, mb1 3.8/13, mb1mx3.7/47, mbtmp3.6/13, ML4.1/1, MS3.3/5, Ms1 3.3/5, ms1mx2.8/43, Error ellipse: s-maj=25.6km s-min=16.1km az=70.0*

*NEIC **20** 23:16:12.5±2.0, 27°.04N±0°.06×103°.36E±0°.10, h10km±2km, mb4.1/12, Error ellipse: s-maj=14.9km s-min=10.3km az=111.0*
*BJI **20** 23:16:12.6±0.0, 27°.06N×103°.14E, h12km, mB3.9/1, mb4.0/6, ML3.9/17*
ISC 20 23:16:13.1±0.5, **27°.07N**±0°.04×**103°.31E**±0°.04, **h10**km, **n48,** σ**1**§**66**/53, **mb3.8**/16, **MS3.2**/5, **1C-1D, Yunnan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.00**	**195**	*e*Pn	**Pb**	**23 16 49.3**	**-0.5**
KMI				Sg	**Sg**	**23 17 16.9**	**-0.7**
KMI				smax	smax		
	comp=N,340nm,1.4s						
KMI				smax	smax		
	comp=E,330nm,1.0s						
KMI	**Kunming**	**2.00**	**195**	Pn	**Pn**	**23 16 48.4**	**+1.2**
GYA	**Guiyang**	**3.06**	**101**	Pn	**Pb**	**23 17 06.0**	**-1.8**
GYA				Sn	**Sb**	**23 17 45.5**	**+0.3**
GYA				Sg	**Sg**	**23 17 55.4**	**+3.9**
GYA				smax	smax		
	comp=N,480nm,1.1s						
GYA				smax	smax		
	comp=E,430nm,0.8s						
CD2	**Chengdu**	**3.85**	**6**	*i* Pn	**Pn**	**23 17 15.3**	**+2.9**
CD2				Pg	**Pg**	**23 17 25.9**	**-0.9**
CD2				Sn	**Sn**	**23 18 00.1**	**+2.4**
CD2				Sg	**Sg**	**23 18 17.4**	**+0.7**
CD2				smax	smax		
	comp=N,440nm,0.9s						
CD2				smax	smax		
	comp=E,660nm,0.9s						
SLVN	**Son La**	**5.74**	**174**	Pn	**Pn**	**23 17 39.4**	**+1.0**
ENH	**Enshi**	**6.29**	**58**	Pn	**Pn**	**23 17 47.2**	**+1.2**
XAN	**Xi'an**	**8.46**	**33**	Pn	**Pn**	**23 18 17.3**	**+1.5**
XAN				S	**Sn**	**23 19 47.6**	**-3.9**
XAN				smax	smax		
	comp=N,140nm,1.2s						
XAN				smax	smax		
	comp=E,110nm,1.3s						
XAN	**Xi'an**	**8.46**	**33**	Pn	**Pn**	**23 18 15.6**	**-0.2**
LZH	**Lanzhou**	**9.00**	**3**	*e*P	**Pn**	**23 18 25.1**	**+1.8**
LZH				PP	**PnPn**	**23 18 33.8**	**+2.6**
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
CHTO	**Chiang Mai**	**9.15**	**207**	Pn	**Pn**	**23 18 24.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**9.47**	**206**	Pn	**Pn**	**23 18 33.4**	**+3.7**
	0.5nm,0.3s

COEN					IAmb	IAmb	23 27 34.9	
	comp=Z,4.7nm,1.0s							
BBOO	**Buckleboo**	**48.43**	**240**		P	**P**	**23 28 15.0**	**-0.9**
WR0	**Warramunga Arr**	**49.23**	**257**		P	**P**	**23 28 20.8**	**-1.4**
WR0					IAmb	IAmb	23 28 39.9	
	comp=Z,2.5nm,1.1s							
WB0	**Warramunga Arr**	**49.38**	**257**		P	**P**	**23 28 21.8**	**-1.5**
WB0					IAmb	IAmb	23 28 23.6	
	comp=Z,1.9nm,0.8s							
WB2	**Warramunga Arr**	**49.41**	**257**		P	**P**	**23 28 21.9**	**-1.7**
WRA	**Warramunga Arr**	**49.42**	**257**		P	**P**	**23 28 22.4**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=91,slow=7.3,SNR=21							
WRA					PcP	**PcP**	**23 29 44.4**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=99,slow=3.5,SNR=1.7							
WRA	**Warramunga Arr**	**49.42**	**257**		IAmb	IAmb	23 28 23.9	
	comp=Z,0.2nm,0.8s							
AS31	**Alice Springs**	**49.69**	**252**		P	**P**	**23 28 25.4**	**-0.3**
ASAR	**Alice Springs**	**49.69**	**252**		P	**P**	**23 28 25.1**	**-0.6**
	comp=Z,3.9nm,0.5s,baz=88,slow=7.8,SNR=45							
ASAR	**Alice Springs**	**49.69**	**252**		P	**P**	**23 28 24.7**	**-1.0**
FITZ	**Fitzroy Crossi**	**57.78**	**258**		P	**P**	**23 29 24.7**	**0.0**
VNDA	**Vanda**	**63.31**	**186**		P	**P**	**23 30 00.2**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=7.4,slow=6.5,SNR=4.3							
VNDA	**Vanda**	**63.31**	**186**		P	**P**	**23 30 03.0**	**+1.7**
QSPA	**South Pole Qui**	**74.62**	**180**		P	**P**	**23 31 13.7**	**+1.9**
QSPA					IAmb	IAmb	23 31 14.3	
	comp=Z,4.5nm,0.9s							
ILAR	**Eielson Array**	**82.55**	**11**		P	**P**	**23 31 55.7**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=231,slow=4.7,SNR=1.4							

NIED ***20*** *23:55:48.0, 48.07N × 155.03E, h30 km, MW4.5, Moment Tensor Solution. s2 Moment tensor: Scale 10^15 Nm; Mrr3.84; Mθθ-3.08; Mφφ-0.76; Mrθ-3.55; Mθφ-1.94; Mφr-0.18; Fault plane solution: M0 5.37000 × 10^15 NP1: φs 258.00000°, δ 66.00000°, λ 105.00000°. NP2: φs 44.00000°, δ 28.00000°, λ 59.00000°.*

SKHL ***20*** *23:55:52.2 ± 0.6, 48.01N × 154.82E, h79 km ± 9 km, mb4.9/6*

KRSC ***20*** *23:55:52.5 ± 2.3, 48.11N × 156.06E, h16 km ± 35 km, ML4.9*

MOS ***20*** *23:55:54.2 ± 0.9, 48.37N × 154.29E, h82 km, mb4.4/9, Error ellipse: s-maj=10.5km s-min=3.8km az=69.4*

NEIC ***20*** *23:55:55.1 ± 1.8, 48.30N ± 0.10 × 154.2E ± 0.1, h74 km ± 3 km, mb4.5/61, Error ellipse: s-maj=17.5km s-min=9.3km az=133.0*

IDC ***20*** *23:55:57.1 ± 2.2, 48.33N × 154.14E, h91 km ± 19 km, mb3.7/19, mb1 3.9/26, mb1mx3.8/47, mbtmp4.1/26, MS3.4/15, Ms1 3.4/15, ms1mx3.2/48, Error ellipse: s-maj=16.9km s-min=10.9km az=138.0*

ISC 20 23:55:55.0 ± 0.5, 48.26N ± 0.06 × 154.39E ± 0.06, h79 km, n222, σ 1.5 s 54/237, mb 4.4/51, 5C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
SKR	**Severo-Kuril's**	**2.68**	**24**	*e*P	**Pn**	**23 56 34.8**	**-1.1**
SKR				*e*S	**Sn**	**23 57 06.7**	**-0.6**
SKR	**Severo-Kuril's**	**2.68**	**24**	*e*P	**Pn**	**23 56 34.6**	**-1.3**
SKR				AMB	AMB	23 56 35.6	
	500nm,0.7s						
SKR				*e*S	**Sn**	**23 57 06.0**	**-1.3**
SKR				A	A	23 57 09.9	
	410nm,0.2s						
SKR				A	A	23 57 09.9	
	380nm,0.2s						
SKR	**Severo-Kuril's**	**2.68**	**24**	*e*PN	**Pn**	**23 56 31.4**	**-4.5**
SKR				*e*S	**Sn**	**23 57 00.3**	**-7.0**
SKR				smax	smax		
	comp=N,444nm,0.5s						
SKR				smax	smax		
	comp=E,425nm,0.6s						
ALID	**Alaid**	**2.72**	**16**	*e*P	**Pn**	**23 56 36.0**	**-0.7**
ALID	**Alaid**	**2.72**	**16**	PN	**Pn**	**23 56 36.0**	**-0.7**
PAU	**Pauzhetka**	**3.58**	**25**	*e*P	**Pn**	**23 56 47.7**	**-0.4**
PAU				*e*S	**Sn**	**23 57 28.7**	**-0.4**
PAU	**Pauzhetka**	**3.58**	**25**	*e*P	**Pn**	**23 56 47.2**	**-0.9**
PAU				AMB	AMB	23 56 50.9	
	comp=E,104nm,0.4s						
PAU				*e*S	**Sn**	**23 57 28.9**	**-0.2**
PAU				A	A	23 57 35.2	
	comp=E,135nm,0.4s						
PAU				A	A	23 57 35.2	
	comp=E,450nm,0.4s						
PAU	**Pauzhetka**	**3.58**	**25**	PN	**Pn**	**23 56 47.7**	**-0.4**
PAU				S	**Sn**	**23 57 28.7**	**-0.4**
KDTR	**Khodutka, Kamc**	**4.28**	**32**	*e*P	**Pn**	**23 56 55.6**	**-2.0**
KDTR				*e*S	**Sn**	**23 57 42.9**	**-3.3**
KDTR	**Khodutka, Kamc**	**4.28**	**32**	PN	**Pn**	**23 56 55.6**	**-2.0**
KDTR				S	**Sn**	**23 57 42.9**	**-3.3**
MIPR	**Malaya Ipel'ka**	**4.30**	**20**	*e*P	**Pn**	**23 56 58.2**	**+0.2**
MIPR	**Malaya Ipel'ka**	**4.30**	**20**	PN	**Pn**	**23 56 58.2**	**+0.2**
ASAK	**Asacha**	**4.70**	**27**	*e*P	**Pn**	**23 57 03.5**	**0.0**
ASAK	**Asacha**	**4.70**	**27**	PN	**Pn**	**23 57 03.5**	**0.0**
MTVR	**Mutnovka**	**4.88**	**28**	*e*P	**Pn**	**23 57 05.1**	**-0.8**
MTVR				*e*S	**Sn**	**23 58 00.5**	**-0.6**
MTVR	**Mutnovka**	**4.88**	**28**	PN	**Pn**	**23 57 05.1**	**-0.8**
MTVR				S	**Sn**	**23 58 00.5**	**-0.6**
GRL	**Gorelyy**	**4.90**	**27**	*e*P	**Pn**	**23 57 06.1**	**-0.2**
GRL	**Gorelyy**	**4.90**	**27**	PN	**Pn**	**23 57 06.1**	**-0.2**
RUS	**Russkaya**	**4.95**	**31**	*e*P	**Pn**	**23 57 04.8**	**-1.9**
RUS				*e*S	**Sn**	**23 57 58.8**	**-3.7**
RUS	**Russkaya**	**4.95**	**31**	*e*P	**Pn**	**23 57 04.8**	**-1.9**
RUS	**Russkaya**	**4.95**	**31**	PN	**Pn**	**23 57 04.8**	**-1.9**
RUS				S	**Sn**	**23 57 58.8**	**-3.7**
KRMR	**Karymshinskiy**	**5.16**	**26**	*e*P	**Pn**	**23 57 11.6**	**+2.0**
KRMR	**Karymshinskiy**	**5.16**	**26**	PN	**Pn**	**23 57 11.6**	**+2.0**
PEA0B	**Petropavlovsk-**	**5.29**	**22**	ǁ*e*PN	**Pn**	**23 57 12.1**	**+0.6**
PEA0B	**Petropavlovsk-**	**5.29**	**22**		**Pn**	**23 57 12.0**	**+0.5**
PETK	**Petropavlovsk-**	**5.29**	**22**	P	**Pn**	**23 57 12.3**	**+0.8**
	comp=E,3.8nm,0.3s,baz=182,slow=11,SNR=84						
PETK				S	**Sn**	**23 58 05.8**	**-5.2**
	comp=E,0.5nm,0.3s,baz=116,slow=17,SNR=1.1						
PETK				LR	LR	23 59 32.9	
	comp=E,186nm,18.6s,baz=200,slow=41						
PETK	**Petropavlovsk-**	**5.29**	**22**	PN	**Pn**	**23 57 11.7**	**+0.2**
PETK	**Petropavlovsk-**	**5.29**	**22**	Pn	**Pn**	**23 57 11.7**	**+0.2**
KUR	**Kuril'sk**	**5.41**	**238**	*e*P	**Pn**	**23 57 12.8**	**-0.2**
KUR				AMB	AMB	23 57 20.0	
	comp=E,106nm,0.7s						
KUR				*e*S	**Sn**	**23 58 12.3**	**-1.5**
KUR				A	A	23 58 19.5	
	comp=E,100nm,0.6s						
KUR				A	A	23 58 19.5	
	comp=E,130nm,0.6s						
KUR	**Kuril'sk**	**5.41**	**238**	ǁ*e*PN	**Pn**	**23 57 15.1**	**+2.1**
PET	**Petropavlovsk**	**5.49**	**28**	*e*P	**Pn**	**23 57 14.6**	**+0.5**
PET				AMB	AMB	23 57 26.9	
	comp=E,176nm,0.5s						
PET				*e*S	**Sn**	**23 58 15.3**	**-0.5**
PET				A	A	23 58 21.5	
	comp=E,160nm,0.6s						
PET				A	A	23 58 21.5	
	comp=E,280nm,0.6s						
PET	**Petropavlovsk**	**5.49**	**28**	*e*PN	**Pn**	**23 57 14.9**	**+0.8**
PET				*e*S	**Sn**	**23 58 15.8**	**0.0**
PET				smax	smax		
	comp=N,157nm,0.5s						
PET				smax	smax		
	comp=E,277nm,0.7s						
PET	**Petropavlovsk**	**5.49**	**28**	Pn	**Pn**	**23 57 13.8**	**-0.3**
DALK	**Dalny**	**5.53**	**29**	*e*P	**Pn**	**23 57 14.7**	**+0.1**
DALK				*e*S	**Sn**	**23 58 15.3**	**-1.4**
DALK	**Dalny**	**5.53**	**29**	PN	**Pn**	**23 57 14.7**	**+0.1**
DALK				S	**Sn**	**23 58 15.3**	**-1.4**
UGLR	**Uglovaya**	**5.70**	**28**	*e*P	**Pn**	**23 57 17.2**	**+0.1**
UGLR	**Uglovaya**	**5.70**	**28**	PN	**Pn**	**23 57 17.2**	**+0.1**
KOK	**Koryaka**	**5.72**	**27**	*e*P	**Pn**	**23 57 17.9**	**+0.6**
KOK	**Koryaka**	**5.72**	**27**	*e*P	**Pn**	**23 57 17.9**	**+0.6**
KOK	**Koryaka**	**5.72**	**27**	PN	**Pn**	**23 57 17.9**	**+0.6**
AVH	**Avacha**	**5.72**	**27**	*e*P	**Pn**	**23 57 18.9**	**+1.5**
AVH	**Avacha**	**5.72**	**27**	PN	**Pn**	**23 57 18.9**	**+1.5**
SMAR	**Somma**	**5.74**	**28**	*e*P	**Pn**	**23 57 18.5**	**+0.8**
SMAR	**Somma**	**5.74**	**28**	PN	**Pn**	**23 57 18.5**	**+0.8**
KRER	**Koryakskii**	**5.76**	**27**	*e*P	**Pn**	**23 57 18.3**	**+0.3**
KRER				*e*S	**Sn**	**23 58 23.8**	**+1.1**
KRER	**Koryakskii**	**5.76**	**27**	PN	**Pn**	**23 57 18.3**	**+0.3**
KRER				S	**Sn**	**23 58 23.8**	**+1.1**
KRX	**Arik**	**5.78**	**26**	*e*P	**Pn**	**23 57 18.7**	**+0.5**
KRX	**Arik**	**5.78**	**26**	PN	**Pn**	**23 57 18.7**	**+0.5**
SDLR	**Sedlovina**	**5.78**	**28**	*e*P	**Pn**	**23 57 17.5**	**-0.7**
SDLR	**Sedlovina**	**5.78**	**28**	PN	**Pn**	**23 57 17.5**	**-0.7**
NLC	**Nalytchevo**	**5.84**	**31**	*e*P	**Pn**	**23 57 17.0**	**-1.9**
NLC				*e*S	**Sn**	**23 58 19.0**	**-5.3**
NLC	**Nalytchevo**	**5.84**	**31**	PN	**Pn**	**23 57 17.0**	**-1.9**
GNL	**Ganaly**	**5.89**	**21**	*e*P	**Pn**	**23 57 21.2**	**+1.5**
GNL	**Ganaly**	**5.89**	**21**	PN	**Pn**	**23 57 21.2**	**+1.5**
SPN	**Mys Shipunski**	**6.03**	**34**	*e*P	**Pn**	**23 57 20.0**	**-1.4**
SPN				*e*S	**Sn**	**23 58 26.1**	**-2.8**
SPN	**Mys Shipunski**	**6.03**	**34**	PN	**Pn**	**23 57 20.0**	**-1.4**
SPN				S	**Sn**	**23 58 26.1**	**-2.8**
KZV	**Kizimen**	**7.78**	**26**	*e*P	**Pn**	**23 57 47.4**	**+1.9**
KZV	**Kizimen**	**7.78**	**26**	PN	**Pn**	**23 57 47.4**	**+1.9**
MKZ	**Mys Kozlova**	**7.80**	**33**	*e*P	**Pn**	**23 57 43.0**	**-2.6**
MKZ				*e*S	**Sn**	**23 59 05.7**	**-6.5**
MKZ	**Mys Kozlova**	**7.80**	**33**	PN	**Pn**	**23 57 43.0**	**-2.6**
TUMR	**Tumrok**	**7.89**	**25**	*e*P	**Pn**	**23 57 47.2**	**+0.3**
TUMR	**Tumrok**	**7.89**	**25**	PN	**Pn**	**23 57 48.7**	**+1.8**
TUMD	**Tumrok D**	**7.89**	**26**	*e*P	**Pn**	**23 57 48.7**	**+1.8**
YSS	**Yuzh-Sakhalins**	**7.97**	**265**	*e*P	**Pn**	**23 57 48.6**	**+0.6**
YSS				AMB	AMB	23 57 49.0	
	comp=E,50nm,0.7s						
YSS	**Yuzh-Sakhalins**	**7.97**	**265**	ǁ*e*PN	**Pn**	**23 57 48.7**	**+0.7**
YSS	**Yuzh-Sakhalins**	**7.97**	**265**		**Pn**	**23 57 45.8**	**-2.2**
ZLN	**Zelenaya**	**8.71**	**24**	*e*P	**Pn**	**23 57 58.6**	**+0.4**
ZLN	**Zelenaya**	**8.71**	**24**	PN	**Pn**	**23 57 58.6**	**+0.4**
JKA	**Kamikawa-asahi**	**9.16**	**248**	*e*P	**Pn**	**23 58 05.4**	**+1.1**
JKA	**Kamikawa-asahi**	**9.16**	**248**	Pn	**Pn**	**23 58 05.4**	**+1.1**
ASAJ	**Asahikawa**	**9.16**	**248**	P	**Pn**	**23 58 04.9**	**+0.6**
	comp=E,2.6nm,0.3s,baz=74,slow=13,SNR=21						
ASAJ				LR	LR	00 01 23.6	
	comp=E,71nm,19.0s,baz=25,slow=36						
ASAJ	**Asahikawa**	**9.16**	**248**	PN	**Pn**	**23 58 05.4**	**+1.1**
SRKR	**Sorokina**	**9.37**	**24**	*e*P	**Pn**	**23 58 08.1**	**+1.0**
JEM	**Erimo**	**10.09**	**236**		Pn	23 58 05.6	-11
ERM	**Erimo**	**10.09**	**236**	ǁ*e*PN	**Pn**	**23 58 14.3**	**-2.6**
ERM	**Erimo**	**10.09**	**236**	Pn	**Pn**	**23 58 14.3**	**-2.6**
MA2	**Magadan**	**11.54**	**351**	P	**Pn**	**23 58 36.8**	**+0.2**
	comp=E,4.8nm,0.3s,baz=154,slow=18,SNR=3.1						
MA2				LR	LR	00 03 24.1	
	comp=E,98nm,18.3s,baz=173,slow=39						
MA2	**Magadan**	**11.54**	**351**	*e*P	**Pn**	**23 58 37.1**	**+0.6**
MA2	**Magadan**	**11.54**	**351**	ǁ*e*PN	**Pn**	**23 58 37.1**	**+0.6**
MA2				pmax	pmax		
	comp=Z,45nm,2.3s						
MA2	**Magadan**	**11.54**	**351**		**Pn**	**23 58 35.9**	**-0.6**
JTM	**Tenmabayashi**	**12.08**	**237**	Pn	**Pn**	**23 58 44.2**	**+0.2**
EKMR	**Ekimchan**	**14.40**	**298**	*e*P	**Pn**	**23 59 15.0**	**+0.2**
EKMR				AMB	AMB	23 59 23.0	
	comp=Z,9.0nm,0.7s						
SEY	**Seymchan**	**14.75**	**356**	P	**P**	**23 59 21.5**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=173,slow=13,SNR=3.6						
SEY	**Seymchan**	**14.75**	**356**	ǁ*e*P	**P**	**23 59 21.7**	**-1.5**
KLR	**Kul'dur**	**14.96**	**282**		**Pn**	**23 59 21.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=73,slow=14,SNR=3.8						
KLR	**Kul'dur**	**14.96**	**282**	ǁ*e*P	**P**	**23 59 24.5**	**-1.1**
JSD	**Sado**	**15.55**	**235**	Pn	**Pn**	**23 59 29.8**	**+0.3**
JSD				IAmb	IAmb	23 59 32.7	
	comp=Z,17nm,0.9s						
JYT	**Yasato**	**15.93**	**226**		**Pn**	**23 59 35.1**	**+0.8**
JYT				IAmb	IAmb	23 59 38.1	
	comp=Z,31nm,1.1s						
USA0B	**Ussuriysk Arra**	**16.01**	**264**	P	**Pn**	**23 59 34.7**	**-0.5**
USA0B				pmax	pmax		
	comp=Z,4.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**16.01**	**264**	Pn	**Pn**	**23 59 34.6**	**-0.5**
USRK	**Ussuriysk Ar.**	**16.01**	**264**	P	**Pn**	**23 59 34.8**	**-0.4**
	baz=87,slow=14,SNR=6.3						
MJA0	**Matsu Arr-Jizo**	**16.67**	**231**	*e*P	**P**	**23 59 45.0**	**+0.4**
MAJO	**Matsushiro**	**16.69**	**231**	ǁ*e*P	**Pn**	**23 59 44.8**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,15nm,1.2s						
MAJO	**Matsushiro**	**16.69**	**231**	Pn	**Pn**	**23 59 42.4**	**-1.4**
MJAR	**Matsushiro Arr**	**16.69**	**231**	P	**Pn**	**23 59 44.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=8.7						
MJAR				LR	LR	00 06 22.9	
	comp=Z,29nm,18.0s,baz=205,slow=38						
BMKR	**Bomnak**	**17.11**	**302**	*e*P	**Pn**	**23 59 48.0**	**-0.8**
BMKR				AMB	AMB	23 59 54.0	
	comp=Z,5.0nm,0.5s						
JGF	**Kuroka**	**17.85**	**231**	P	**P**	**23 59 57.7**	**0.0**
INU	**Inuyama**	**18.22**	**231**	P	**P**	**00 00 00.1**	**-1.6**
ADK	**Adak**	**18.86**	**68**	P	**Pn**	**00 00 11.4**	**+1.5**
ADK				pmax	pmax		
	comp=Z,61nm,1.2s						
ADK	**Adak**	**18.86**	**68**		**Pn**	**00 00 11.4**	**+1.5**
JWT	**Wachi**	**19.13**	**234**	P	**P**	**00 00 10.2**	**-1.4**
YAK	**Yakutsk**	**19.57**	**324**	P	**P**	**00 00 16.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=8.8,slow=1.9,SNR=4.7						
YAK	**Yakutsk**	**19.57**	**324**	*e*P	**Pn**	**00 00 18.5**	**+0.4**
YAK	**Yakutsk**	**19.57**	**324**	ǁ*e*P	**Pn**	**00 00 18.6**	**+0.4**
YAK				pmax	pmax		
	comp=Z,19nm,0.7s						
YAK	**Yakutsk**	**19.57**	**324**	P	**P**	**00 00 15.6**	**-0.6**
YAK				IAmb	IAmb	00 00 21.6	
	comp=Z,22nm,0.8s						
CN2	**Changchun**	**20.52**	**268**	*e*P	**P**	**00 00 23.5**	**-3.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JHS	**Saijyo**	**20.61**	**238**	P	**P**	**00 00 26.9**	**-0.8**
KSRS	**Korea Array**	**22.09**	**251**	P	**P**	**00 00 43.3**	**-0.2**
	comp=Z,8.1nm,0.7s,baz=46,slow=10,SNR=20						
KSRS				LR	LR	00 08 54.1	
	comp=Z,51nm,18.9s,baz=93,slow=35						
KS19	**Wonju Array Si**	**22.10**	**251**	P	**P**	**00 00 42.7**	**-0.9**
KS19				IAmb	IAmb	00 00 45.9	
	comp=Z,17nm,0.9s						
KSAR	**Wonju Array Be**	**22.13**	**251**	P	**P**	**00 00 42.9**	**-1.0**
KSAR	**Wonju Array Be**	**22.13**	**251**	P	**P**	**00 00 42.9**	**-1.0**
JTU	**Tsushima**	**23.10**	**243**	P	**P**	**00 00 54.3**	**+0.3**
JTU				IAmb	IAmb	00 01 09.2	
	comp=Z,22nm,1.1s						
UNV	**Unalaska Valle**	**24.97**	**62**	P	**P**	**00 01 09.3**	**-1.5**
H11N2	**WAKE ISLAND Hy**	**30.20**	**156**	T	T	00 33 35.5	
	baz=343,slow=76,SNR=344						
H11N1	**WAKE ISLAND Hy**	**30.22**	**156**	T	T	00 33 32.7	
	baz=343,slow=76						
H11N3	**WAKE ISLAND Hy**	**30.22**	**156**	T	T	00 33 34.9	
	baz=343,slow=76,SNR=377						
H11S1	**WAKE ISLAND Hy**	**31.32**	**157**	T	T	00 34 58.8	
	baz=344,slow=76,SNR=2911						
H11S3	**WAKE ISLAND Hy**	**31.33**	**157**	T	T	00 35 01.1	
	baz=344,slow=76,SNR=2361						
H11S2	**WAKE ISLAND Hy**	**31.34**	**157**	T	T	00 34 59.1	
	baz=344,slow=76,SNR=1910						
SONM	**Songino Array**	**31.68**	**288**	P	**P**	**00 02 10.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=68,slow=8.4,SNR=3.0						
SONM				PcP	**PcP**	**00 05 00.9**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=114,slow=1.9,SNR=4.8						
SONM				LR	LR	00 16 07.0	
	comp=Z,70nm,18.2s,baz=9.5,slow=38						
IMAR	**Indian Mountai**	**32.04**	**37**	P	**P**	**00 02 14.6**	**+0.9**
SKT	**Skwentna**	**32.77**	**45**	P	**P**	**00 02 20.4**	**+0.4**
SKT				IAmb	IAmb	00 02 35.9	
	comp=Z,11nm,1.2s						
CNPM	**China Poot**	**33.03**	**49**	P	**P**	**00 02 24.6**	**+2.3**
CNPM				IAmb	IAmb	00 02 25.5	
	comp=Z,11nm,1.2s						
KTH	**Kantishna Hill**	**33.06**	**42**	P	**P**	**00 02 23.9**	**+1.3**
BRLK	**Bradley Lake**	**33.18**	**49**	P	**P**	**00 02 23.9**	**+0.2**
COLD	**Coldfoot**	**33.60**	**35**	P	**P**	**00 02 26.6**	**-0.6**
RND	**Reindeer**	**33.99**	**42**	P	**P**	**00 02 31.4**	**+0.7**
RND				pmax	pmax		
	comp=Z,11nm,1.1s						
RND	**Reindeer**	**33.99**	**42**	P	**P**	**00 02 31.4**	**+0.7**
RND				IAmb	IAmb	00 02 32.8	
	comp=Z,11nm,1.1s						
TOLK	**Toolik Lake Re**	**34.01**	**33**	P	**P**	**00 02 32.4**	**+1.6**
TOLK				IAmb	IAmb	00 02 32.9	
	comp=Z,4.9nm,1.0s						
MDM	**Murphy Dome**	**34.26**	**40**	P	**P**	**00 02 34.5**	**+1.5**
MDM				IAmb	IAmb	00 02 39.1	
	comp=Z,9.6nm,1.3s						
SML	**Sawmill**	**34.29**	**45**	P	**P**	**00 02 35.3**	**+2.0**
COLA	**College**	**34.42**	**40**	ǁ*e*P	**P**	**00 02 36.7**	**+2.4**
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CCB	**Clear Creek Bu**	**34.44**	**40**	P	**P**	**00 02 36.1**	**+1.6**
POKR	**Poker Plat Res**	**34.60**	**39**	P	**P**	**00 02 37.7**	**+1.7**
POKR				IAmb	IAmb	00 02 39.6	
	comp=Z,6.9nm,0.9s						
IL31		**34.83**	**40**	P	**P**	**00 02 40.0**	**+2.1**
ILAR	**Eielson Array**	**34.83**	**40**	P	**P**	**00 02 38.7**	**+0.8**
	comp=Z,1.7nm,1.0s,baz=251,slow=9.3,SNR=7.5						
ILAR	**Eielson Array**	**34.83**	**40**	P	**P**	**00 02 39.7**	**+1.8**
IL18	**Eielson Array**	**34.88**	**40**	P	**P**	**00 02 40.2**	**+1.9**
YHNB	**Yeheng**	**35.05**	**240**	P	**P**	**00 02 38.5**	**-1.8**
M24K	**Tolsona, Glenn**	**35.28**	**45**	P	**P**	**00 02 43.3**	**+1.5**
N25K	**Chitina, Valde**	**36.08**	**45**	P	**P**	**00 02 50.0**	**+1.3**
K27K	**Chicken**	**36.96**	**41**	P	**P**	**00 02 58.2**	**+2.1**
K27K				IAmb	IAmb	00 02 59.1	
	comp=Z,4.6nm,0.9s						
TGL	**Tana Glacier**	**37.05**	**46**	P	**P**	**00 02 58.3**	**+1.3**
TGL				IAmb	IAmb	00 03 00.0	
	comp=Z,6.6nm,0.9s						
BALM	**Baldy**	**37.24**	**46**	P	**P**	**00 03 00.0**	**+1.5**
BALM				IAmb	IAmb	00 03 01.6	
	comp=Z,5.2nm,1.0s						
EGAK	**Eagle**	**37.28**	**40**	P	**P**	**00 02 59.3**	**+0.5**
BARN	**Barnard Glacie**	**37.56**	**46**	P	**P**	**00 03 03.7**	**+2.3**
YAH	**Yahtse**	**37.65**	**47**	P	**P**	**00 03 04.0**	**+1.9**
YAH				IAmb	IAmb	00 03 14.1	
	comp=Z,10nm,1.1s						
CTGM	**Chitina Glacie**	**37.73**	**46**	P	**P**	**00 03 04.2**	**+1.4**
TABL	**Table Mountain**	**37.92**	**47**	P	**P**	**00 03 05.5**	**+1.0**
PCA	**Pinnacle**	**38.43**	**47**	P	**P**	**00 03 11.1**	**+2.5**
HYT	**Haines Junctio**	**39.59**	**46**	P	**P**	**00 03 20.4**	**+2.0**
HYT				IAmb	IAmb	00 03 32.4	
	comp=Z,9.2nm,1.5s						
WHY	**Whitehorse**	**40.88**	**45**	P	**P**	**00 03 31.6**	**+2.6**
WHY				IAmb	IAmb	00 03 33.0	
	comp=Z,5.4nm,1.1s						
ZALV	**Zalesovo Beam**	**42.45**	**305**	P	**P**	**00 03 40.8**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=76,slow=6.1,SNR=1.7						
ZALV				PcP	**PcP**	**00 05 33.6**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=90,slow=1.5,SNR=8.5						
ZALV				LR	LR	00 22 17.9	
	comp=Z,37nm,18.3s,baz=34,slow=37						
GYA	**Guiyang**	**42.89**	**257**	*e*P	**P**	**00 03 45.4**	**-0.3**
GYA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
C36M	**Paulatuk**	**43.08**	**31**	P	**P**	**00 03 48.2**	**+1.6**
C36M				IAmb	IAmb	00 03 49.6	
	comp=Z,10.0nm,1.1s						
MK31	**Makanchi Array**	**47.03**	**297**	P	**P**	**00 04 17.3**	**-0.9**
MK31				pmax	pmax		
	comp=Z,5.0nm,1.5s						
MK31	**Makanchi Array**	**47.03**	**297**	P	**P**	**00 04 17.3**	**-0.9**
MK31				IAmb	IAmb	00 04 31.2	
	comp=Z,5.4nm,1.5s						
MKAR	**Makanchi Array**	**47.03**	**297**	P	**P**	**00 04 16.8**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=65,slow=6.5,SNR=10						
MKAR				LR	LR	00 25 31.6	
	comp=Z,70nm,18.5s,baz=34,slow=38						
MKAR	**Makanchi Array**	**47.03**	**297**	*e*P	**P**	**00 04 17.7**	**-0.5**
MKAR	**Makanchi Array**	**47.03**	**297**	P	**P**	**00 04 17.7**	**-0.5**
MKAR	**Makanchi Array**	**47.03**	**297**	P	**P**	**00 04 17.7**	**-0.5**
MAKZ	**Makanchi**	**47.21**	**297**	P	**P**	**00 04 18.8**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MAKZ	**Makanchi**	**47.21**	**297**	P	**P**	**00 04 18.8**	**-0.8**
MAKZ				IAmb	IAmb	00 04 29.1	
	comp=Z,6.4nm,1.1s						
KURK	**Kurchatov**	**47.26**	**303**	*e*P	**P**	**00 04 19.8**	**-0.1**
KURK	**Kurchatov**	**47.26**	**303**	ǁ*e*P	**P**	**00 04 19.9**	**0.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	**Kurchatov**	**47.26**	**303**	P	**P**	**00 04 18.3**	**-1.6**
KURK				IAmb	IAmb	00 04 29.9	
	comp=Z,5.8nm,1.5s						
EUNU	**Eureka**	**47.48**	**12**	P	**P**	**00 04 22.2**	**+0.9**
EUNU				IAmb	IAmb	00 04 23.8	
	comp=Z,5.4nm,1.1s						

comp=Z,3.2nm,0.7s
ATD Arta Tunnel 95.32 294 LR LR 00 56 34.7
comp=Z,26nm,18.4s,baz=6.0,slow=38
MDT Midelt 97.13 342 LR LR 00 58 17.8
comp=Z,49nm,18.4s,baz=250,slow=39
TORD Torodi Ar. Bea 114.22 331 PKP **PKiKP 00 14 25.3 -0.3**
comp=Z,0.5nm,0.6s,baz=18,slow=2.1,SNR=8.4
VNDA Vanda 125.59 178 PKP **PKPdf 00 14 44.3 -1.1**
comp=Z,0.5nm,0.8s,baz=337,slow=2.8,SNR=3.6
H03N2 Juan Fernandez 137.89 90 T T 02 48 22.2
baz=310,slow=77,SNR=78
H03N1 Juan Fernandez 137.90 90 T T 02 48 23.6
baz=310,slow=87,SNR=87
H03N3 Juan Fernandez 137.90 90 T T 02 48 25.7
baz=310,slow=77,SNR=103
PLCA Paso Flores 147.46 94 PKPbc **PKPbc 00 15 29.4 0.0**
comp=Z,1.0nm,0.8s,baz=310,slow=7.9,SNR=2.2

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*IDC **20** 23:56:00.6±0.8,0.″18S×29.″56E,h0km,mb3.9/8, mb1 4.1/10,mb1mx3.7/40,mbtmp4.0/10,ML4.2/2,MS3.4/7, Ms1 3.3/7,ms1mx3.0/37,Error ellipse: s-maj=22.2km s-min=11.1km az=25.0*
*NEIC **20** 23:56:01.6±1.9,0.″24S±0.″09×29.″53E±0.″09,h10km±1km, mb4.4/14,Error ellipse: s-maj=15.9km s-min=14.8km az=265.0*
ISC 20 23:56:01.3±2.1,0.″37S×29.″62E,h10km±30km,n30,ML4.4, 1C,Zaire

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**1.15**	**101**			Pg	**Pg**	**23 56 25.5**	**+2.1**
	2μm,0.3s,baz=301,slow=19,SNR=1961								
MBAR						Lg	Lg	23 56 40.0	
	baz=319,slow=19								
MBAR	**Mbarara**	**1.15**	**101**	*eP*		**Pg**	**Pg**	**23 56 25.6**	**+2.2**
MBAR				*eS*			**Sb**	**23 56 40.0**	**+1.7**
MBAR	**Mbarara**	**1.15**	**101**	↑*iP*		**Pg**	**Pg**	**23 56 25.6**	**+2.1**
MBAR					IAML			23 56 44.0	
	comp=Z,24μm,0.2s								
TEBE	**Entebbe**	**2.89**	**82**	*i*	P	**Pn**		**23 56 47.7**	**+0.1**
TEBE				*i*	S	**Sn**		**23 57 23.1**	**+0.7**
LL65	**Arash bomas**	**6.16**	**109**	*i*	P	**Pn**		**23 57 33.9**	**+1.2**
LL65				*i*	S	**Sn**		**23 58 40.3**	**-3.1**
LL65					IAML			23 59 26.9	
	comp=Z,431nm,1.0s								
LL21	**Loliondo SS**	**6.17**	**106**	*i*	P	**Pn**		**23 57 33.9**	**+1.1**
LL21				*i*	S	**Sn**		**23 58 39.2**	**-4.4**
LL21					IAML			23 59 19.3	
	comp=Z,361nm,0.6s								
PR61	**Kiloki Boma**	**6.19**	**115**	*i*	P	**Pn**		**23 57 34.0**	**+1.0**
PR61				*i*	S	**Sn**		**23 58 40.8**	**-3.2**
PR61					IAML			23 59 27.8	
	comp=Z,619nm,0.8s								
NG54	**Nasera Bomas**	**6.20**	**112**	*i*	P	**Pn**		**23 57 34.7**	**+1.5**
NG54				*i*	S	**Sn**		**23 58 38.4**	**-6.0**
NG54					IAML			23 59 22.5	
	comp=Z,395nm,1.4s								
LL66	**Piyaya bomas**	**6.27**	**111**	*i*	P	**Pn**		**23 57 35.6**	**+1.4**
LL66				*i*	S	**Sn**		**23 58 41.9**	**-4.2**
LL66					IAML			23 59 30.5	
	comp=Z,530nm,0.8s								
PR62	**Oldupai Boma**	**6.31**	**114**	*i*	P	**Pn**		**23 57 35.9**	**+1.2**
PR62				*i*	S	Sn		23 58 39.7	-7.3
PR62					IAML			23 59 30.1	
	comp=Z,2μm,0.5s								
LL22	**Malambo SS**	**6.35**	**110**	*i*	P	**Pn**		**23 57 36.7**	**+1.6**
LL22				*i*	S	**Sn**		**23 58 44.5**	**-3.4**
LL22					IAML			23 59 28.8	
	comp=Z,1μm,1.0s								
LL23	**Sali PS**	**6.37**	**108**	*i*	P	**Pn**		**23 57 36.7**	**+1.3**
LL23				*i*	S	**Sn**		**23 58 44.7**	**-3.6**
LL23					IAML			23 59 27.9	
	comp=Z,411nm,0.8s								
NG56	**Ngoile bomas**	**6.39**	**115**	*i*	P	**Pn**		**23 57 37.3**	**+1.5**
NG56				*i*	S	**Sn**		**23 58 42.3**	**-6.7**
NG56					IAML			23 59 42.0	
	comp=Z,1μm,0.7s								
PR63	**Meshili Boma**	**6.44**	**114**	*i*	P	**Pn**		**23 57 37.7**	**+1.3**
PR63				*i*	S	**Sn**		**23 58 45.1**	**-5.0**
PR63					IAML			23 59 42.4	
	comp=Z,946nm,0.8s								
LL24	**Masusu PS**	**6.47**	**107**	*i*	P	**Pn**		**23 57 38.2**	**+1.4**
LL24				*i*	S	**Sn**		**23 58 46.5**	**-4.3**
LL24					IAML			23 59 32.4	
	comp=Z,773nm,0.8s								
KEN4	**Ngurumani**	**6.59**	**102**	*i*	P	**Pn**		**23 57 40.2**	**+1.8**
PR52	**Alailelai Boma**	**6.60**	**113**	*i*	P	**Pn**		**23 57 40.5**	**+1.6**
LN25	**Lake Natron SS**	**6.62**	**109**	*i*	P	**Pn**		**23 57 40.3**	**+1.5**
LN26	**Engaresero PS**	**6.64**	**110**	*i*	P	**Pn**		**23 57 40.5**	**+1.3**
NG55	**Lemala Gate**	**6.66**	**114**	*i*	P	**Pn**		**23 57 41.3**	**+1.7**
MW44	**Karatu Welwel**	**6.73**	**116**	*i*	P	**Pn**		**23 57 41.9**	**+1.5**
LN35	**Magadini PS**	**6.77**	**109**	*i*	P	**Pn**		**23 57 42.2**	**+1.3**
KEN2	**Magadi Soda Va**	**6.84**	**103**	*i*	P	**Pn**		**23 57 44.5**	**+2.6**
LN34	**Lwondulwo boma**	**6.85**	**110**	*i*	P	**Pn**		**23 57 43.8**	**+1.8**
PR31	**Engaruka Boma**	**6.91**	**112**	*i*	P	**Pn**		**23 57 44.4**	**+1.6**
LN15	**Lekule Girls S**	**6.94**	**109**	*i*	P	**Pn**		**23 57 44.6**	**+1.3**
LN14	**Matela PS**	**7.10**	**107**	*i*	P	**Pn**		**23 57 47.3**	**+1.8**
PR11	**Kitumbeine SS**	**7.11**	**110**	*i*	P	**Pn**		**23 57 47.0**	**+1.3**
LN16	**Kitarini PS**	**7.20**	**108**	*i*	P	**Pn**		**23 57 48.6**	**+1.6**
MW41	**Ole Sokoine**	**7.39**	**113**	*i*	P	**Pn**		**23 57 51.2**	**+1.6**
LN46	**New Vision PS**	**7.53**	**110**	*i*	P	**Pn**		**23 57 52.4**	**+1.0**
KOND	**Kondoa**	**7.64**	**126**	*i*	P	**Pn**		**23 57 54.0**	**+1.1**
KOND				*i*	S	**Sn**		**23 59 15.3**	**-4.4**
KMBO	**Kilima Mbogo**	**7.67**	**96**	Pn		**Pn**		**23 57 56.9**	**+3.5**
	comp=Z,2.5nm,0.3s,baz=277,slow=17,SNR=21								
KMBO					Sn		**Sn**	**23 59 19.4**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=227,slow=23,SNR=1.8								
KMBO					Lg		Lg	00 00 01.9	
	comp=Z,6.4nm,0.3s,baz=212,slow=15,SNR=10								
KMBO	**Kilima Mbogo**	**7.67**	**96**				**Pn**	**23 57 55.3**	**+1.8**
KMBO	**Kilima Mbogo**	**7.67**	**96**	*i*	P		**Pn**	**23 57 56.2**	**+2.8**
LSZ	**Lusaka**	**14.88**	**185**	Pn			**Pn**	**23 59 33.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=1.5,slow=9.4,SNR=15								
LSZ					Lg		Lg	00 03 52.5	
	comp=Z,0.2nm,0.3s,baz=97,slow=23,SNR=7.2								
LSZ					LR		LR	00 05 41.8	
	comp=Z,166nm,20.0s,baz=14,slow=39								
ATD	**Arta Tunnel**	**17.68**	**48**	Pn			**Pn**	**00 00 07.6**	**-0.4**
MATP	**Matopo**	**19.96**	**183**	P			**Pn**	**00 00 37.5**	**+1.9**
	comp=Z,2.9nm,0.9s,baz=355,slow=12,SNR=5.7								
MATP					Lg		Lg	00 06 29.9	
	comp=Z,2.9nm,0.8s,baz=86,slow=19,SNR=2.0								
MATP					LR		LR	00 08 49.1	
	comp=Z,144nm,20.8s,baz=9.0,slow=38								
TSUM	**Tsumeb**	**22.12**	**212**	P			**P**	**00 00 58.5**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=63,slow=11,SNR=2.5								
TSUM					Lg		Lg	00 07 34.9	
	comp=Z,5.0nm,0.8s,baz=348,slow=4.1,SNR=4.9								
TSUM	**Tsumeb**	**22.12**	**212**	P			**P**	**00 00 57.5**	**+0.1**
LBTB	**Lobatse**	**24.80**	**189**	P			**P**	**00 01 26.7**	**+2.9**
	comp=Z,2.7nm,1.0s,baz=40,slow=7.9,SNR=1.9								
LBTB					Lg		Lg	00 08 60.0	
	comp=Z,1.8nm,0.7s,baz=303,slow=22,SNR=1.5								
LBTB					LR		LR	00 10 09.0	
	comp=Z,41nm,21.9s,baz=10.0,slow=34								
LBTB	**Lobatse**	**24.80**	**189**	P			**P**	**00 01 23.8**	**0.0**
LBTB					IAmb		IAmb	00 01 38.4	
	comp=Z,5.0nm,0.9s								
OPO	**Ambohidratompo**	**25.00**	**137**	LR			LR	00 09 59.2	
	comp=Z,54nm,19.8s,baz=236,slow=33								
BOSA	**Boshof**	**28.39**	**188**	LR			LR	00 11 47.5	
	comp=Z,36nm,21.2s,baz=20,slow=33								
FOMA	**Nahampoana Res**	**29.67**	**147**	P			**P**	**00 02 06.6**	**-0.8**
TOA0	**Torodi Ar. Sit**	**30.77**	**297**	P			**P**	**00 02 17.1**	**-0.2**
TOA0					IAmb		IAmb	00 02 17.7	
	comp=Z,8.0nm,0.8s								
TORD	**Torodi Ar. Bea**	**30.77**	**297**	P			**P**	**00 02 16.9**	**-0.3**
	comp=Z,8.3nm,0.7s,baz=104,slow=7.9,SNR=61								
TORD					Lg		Lg	00 11 51.4	
	comp=Z,0.1nm,0.4s,baz=12,slow=13,SNR=1.4								
TORD					LR		LR	00 14 51.5	
	comp=Z,121nm,18.7s,baz=300,slow=37								
TORD	**Torodi Ar. Bea**	**30.77**	**297**	P			**P**	**00 02 16.8**	**-0.5**
DBIC	**Dimbokro**	**35.10**	**282**	P			**P**	**00 02 55.6**	**+0.4**
DBIC					LR		LR	00 17 32.3	
	comp=Z,82nm,18.5s,baz=12,slow=37								
DBIC	**Dimbokro**	**35.10**	**282**	P			**P**	**00 02 54.9**	**-0.3**
DBIC					IAmb		IAmb	00 03 03.9	
	comp=Z,6.6nm,1.1s								
KOWA	**Kowa**	**36.41**	**295**	P			**P**	**00 03 05.7**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=109,slow=9.0,SNR=6.0								
KOWA	**Kowa**	**36.41**	**295**	IAmb			IAmb	00 03 17.0	
	comp=Z,2.6nm,0.8s								
ISP	**Isparta**	**38.02**	**1**	P			**P**	**00 03 19.9**	**0.0**
ITM	**Ithomi**	**38.04**	**350**	P			**P**	**00 03 17.7**	**-2.3**
ITM					IAmb		IAmb	00 03 35.1	
	comp=Z,22nm,1.2s								
AGG	**Agios Georgios**	**39.77**	**351**	P			**P**	**00 03 35.2**	**+0.7**
AGG					IAmb		IAmb	00 03 36.8	
	comp=Z,9.0nm,1.2s								
ZCCA	**Zocca**	**47.52**	**342**	P			**P**	**00 04 35.7**	**-1.2**
ZCCA					IAmb		IAmb	00 04 44.9	
	comp=Z,5.8nm,1.0s								
BURAR	**Bucovina Array**	**47.95**	**356**	P			**P**	**00 04 40.1**	**-0.1**
ESDC	**Sonseca Array**	**50.29**	**326**	P			**P**	**00 04 58.0**	**-0.2**
	comp=Z,1.9nm,1.0s,baz=141,slow=8.4,SNR=6.7								
GERES	**GERESS Array B**	**50.92**	**347**	P			**P**	**00 05 01.4**	**-1.5**
	comp=Z,0.6nm,0.8s,baz=140,slow=6.9,SNR=5.8								
KHC	**Kasperske Hory**	**51.22**	**347**	*eP*			**P**	**00 05 04.4**	**-0.6**
ABKAR	**Akbulak array**	**55.90**	**24**	P			**P**	**00 05 38.5**	**-0.8**
ABKAR	**Akbulak array**	**55.90**	**24**	P			**P**	**00 05 38.4**	**-0.9**
MKAR	**Makanchi Array**	**65.68**	**37**	P			**P**	**00 06 47.2**	**+1.2**
KEV	**Kevo**	**70.02**	**359**	P			**P**	**00 07 11.7**	**-1.3**

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*IDC **21** 00:14:34.1±5.0,30.″30S×178.″29W,h0km,mb3.5/2, mb1 3.8/2,mb1mx3.6/18,mbtmp3.5/2,Error ellipse: s-maj=302.9km s-min=70.5km az=167.0*
*NEIC **21** 00:15:21.6±1.9,33.″47S±0.″09×179.″5W±0.″1,h436km±10km, mb4.5/13,Error ellipse: s-maj=18.5km s-min=9.1km az=58.0*
ISC 21 00:15:22.1±0.8,33.″5S±0.″1×179.″4W±0.″1,h450km,n22, σ1§74/22,mb4.3/8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.40**	**17**	P		P	**P**	**00 16 38.9**	**-2.0**
HIZ	**Hauiti**	**6.86**	**221**	P		P	**P**	**00 17 02.7**	**-2.4**
PLWZ	**Palliser**	**9.12**	**206**	P		P	**P**	**00 17 29.0**	**-0.6**
QRZ	**Quartz Range**	**9.76**	**219**	P		P	**P**	**00 17 36.7**	**+0.3**
LBZ	**Lake Benmore**	**13.57**	**214**	P		P	**P**	**00 18 18.7**	**+1.0**
ODZ	**Otahua Downs**	**13.88**	**211**	P		P	**P**	**00 18 16.9**	**-4.1**
NIUE	**Niue**	**16.65**	**33**	P		P	**P**	**00 18 50.6**	**-0.2**
BBOO	**Buckleboo**	**37.10**	**258**	P		P	**P**	**00 21 52.7**	**0.0**
BBOO					IAmb		IAmb	00 22 11.1	
	comp=Z,4.8nm,0.9s								
ASAR	**Alice Springs**	**41.88**	**271**	P		P	**P**	**00 22 34.1**	**+2.5**
	comp=Z,0.3nm,0.6s,baz=110,slow=7.1,SNR=2.2								
WB2	**Warramunga Arr**	**43.14**	**276**	P		P	**P**	**00 22 42.0**	**+0.4**
WRA	**Warramunga Arr**	**43.15**	**276**	P		P	**P**	**00 22 42.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=111,slow=8.1,SNR=12								
WRA	**Warramunga Arr**	**43.15**	**276**	P		P	**P**	**00 22 42.8**	**+1.1**
WB0	**Warramunga Arr**	**43.19**	**276**	P		P	**P**	**00 22 42.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**51.27**	**273**	P		P	**P**	**00 23 42.4**	**-0.7**
JMM	**Marumori**	**80.08**	**329**	P		P	**P**	**00 26 44.9**	**+1.2**
NACB	**Ninganchiao**	**80.26**	**307**	P		P	**P**	**00 26 46.8**	**+1.8**
NACB					IAmb		IAmb	00 26 59.3	
	comp=Z,25nm,0.9s								
YHNB	**Yeheng**	**80.74**	**308**	P		P	**P**	**00 26 44.4**	**-3.3**
YHNB					IAmb		IAmb	00 26 45.6	
	comp=Z,26nm,1.0s								
EFI	**East Falkland**	**80.84**	**147**	P		P	**P**	**00 26 49.1**	**+1.4**
EFI					IAmb		IAmb	00 26 50.0	
	comp=Z,24nm,0.9s								
JHS	**Saijyo**	**81.38**	**322**	P		P	**P**	**00 26 51.0**	**+0.3**
JHS					IAmb		IAmb	00 26 54.2	
	comp=Z,9.5nm,1.0s								
ATKA	**Atka Island**	**85.44**	**3**	P		P	**P**	**00 27 11.4**	**+0.9**
BAR	**Barrett**	**88.39**	**49**	P		P	**P**	**00 27 24.9**	**-0.1**
BAR					IAmb		IAmb	00 27 43.7	
	comp=Z,3.7nm,1.0s								
FINES	**FINESS Array B**	**147.58**	**337**	PKP			**PKPdf**	**00 34 12.0**	**+1.4**
	comp=Z,3.0nm,1.0s,baz=64,slow=3.5,SNR=4.5								

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*IDC **21** 00:25:09.4±2.9,20.″89S×175.″46W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.7/33,mbtmp4.0/3,MS3.4/7,Ms1 3.4/7, ms1mx3.0/44,Error ellipse: s-maj=220.9km s-min=58.5km az=165.0*
*NEIC **21** 00:25:16.7±1.2,21.″30S±0.″10×174.″2W±0.″1,h158km±9km, mb4.2/18,Error ellipse: s-maj=15.9km s-min=12.0km az=140.0*
ISC 21 00:25:15.8±0.6,21.″34S±0.″09×174.″19W±0.″07,h150km, n43,σ0§98/31,mb4.1/9,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.59**	**61**	Pn		**Pn**	**Pn**	**00 26 24.8**	**+0.8**
NIUE					Sn		**Sn**	**00 27 17.0**	**+0.1**
AFI	**Afiamalu**	**7.74**	**18**	Pn		**Pn**	**Pn**	**00 27 05.7**	**-0.2**
MSVF	**Nonsavu**	**8.15**	**295**				**Pn**	**00 27 11.7**	**+0.3**
RAR	**Rarotonga**	**13.44**	**92**	Pn		**Pn**	**Pn**	**00 28 21.1**	**+0.4**
MXZ	**Matakaoa Point**	**17.42**	**200**	P		P	**P**	**00 29 08.9**	**+0.2**
DZM	**Mont Dzumac**	**18.01**	**264**	*e*LR		LR	LR	00 33 45.7	
	comp=Z,274nm,23.1s								
DZM	**Mont Dzumac**	**18.01**	**264**	LR		LR	LR	00 33 30.3	
	comp=Z,79nm,19.3s,baz=88,slow=30								
DZM	**Mont Dzumac**	**18.01**	**264**	P		P	**P**	**00 29 15.1**	**-0.3**
DZM					IAmb		IAmb	00 29 33.6	
	comp=Z,6.4nm,1.0s								
SANVU	**Saraoutou**	**18.60**	**285**	P		P	**P**	**00 29 22.1**	**+0.4**
KNTN	**Kanton**	**18.61**	**8**	P		P	**P**	**00 29 21.6**	**-0.2**
KNTN					IAmb		IAmb	00 29 28.1	
	comp=Z,26nm,0.9s								
PLWZ	**Palliser**	**22.05**	**201**	P		P	**P**	**00 29 59.2**	**+0.7**
TBI	**Tubuai**	**22.95**	**100**	*e*LR		LR	LR	00 35 34.5	
	comp=Z,139nm,25.8s								
THZ	**Tophouse**	**23.09**	**205**	P		P	**P**	**00 30 09.8**	**+1.5**
THZ					IAmb		IAmb	00 30 25.1	
	comp=Z,12nm,1.0s								
PAE	**Paea**	**23.48**	**85**	*e*T		T		00 53 06.2	
	comp=Z,3.4nm,0.2s								
PPT2	**Papeete2**	**23.50**	**85**	*e*LR		LR		00 35 58.3	
	comp=Z,147nm,26.0s								
PPT	**Papeete**	**23.50**	**85**	LR		LR		00 37 39.8	
	comp=Z,62nm,20.3s,baz=211,slow=30								
LBZ	**Lake Benmore**	**26.37**	**206**	P		P	**P**	**00 30 38.6**	**+0.5**
TAOE	**Nuku Hiva Isla**	**35.04**	**74**	*e*LR		LR		00 40 13.6	
	comp=Z,136nm,27.2s								
KRVT	**Keravat (AS076**	**36.90**	**293**	LR		LR		00 45 39.2	
	comp=Z,44nm,20.7s,baz=59,slow=34								
CTA	**Charters Tower**	**36.95**	**265**	P		P	**P**	**00 32 12.6**	**+1.8**
	comp=Z,1.4nm,0.4s,baz=94,slow=13,SNR=5.4								
CTAO	**Charters Tower**	**36.95**	**265**	P		P	**P**	**00 32 11.1**	**+0.3**
CTAO					IAmb		IAmb	00 32 29.1	
	comp=Z,3.5nm,0.9s								
JOHN	**Johnston Islan**	**38.11**	**7**	P		P	**P**	**00 32 20.1**	**-0.3**
TOO	**Toolangi**	**38.33**	**236**	P		P	**P**	**00 32 22.2**	**0.0**
TOO					IAmb		IAmb	00 32 30.7	
	comp=Z,3.4nm,0.8s								
BBOO	**Buckleboo**	**45.38**	**245**	P		P	**P**	**00 33 18.9**	**-0.6**
AS31	**Alice Springs**	**47.80**	**257**	P		P	**P**	**00 33 39.5**	**+1.1**
ASAR	**Alice Springs**	**47.80**	**257**	P		P	**P**	**00 33 39.9**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=89,slow=8.8,SNR=9.6								
ASAR					PcP		PcP	00 35 13.7	+8.6
	comp=Z,0.6nm,0.9s,baz=116,slow=4.2,SNR=3.1								
ASAR	**Alice Springs**	**47.80**	**257**	P		P	**P**	**00 33 39.0**	**+0.5**
WR0	**Warramunga Arr**	**47.82**	**262**	P		P	**P**	**00 33 38.9**	**+0.3**
WC3	**Warramunga Arr**	**47.98**	**262**	P		P	**P**	**00 33 40.2**	**+0.4**
WB0	**Warramunga Arr**	**47.99**	**262**	P		P	**P**	**00 33 41.0**	**+1.1**
WB0					IAmb		IAmb	00 33 46.8	
	comp=Z,2.5nm,0.8s								
WB2	**Warramunga Arr**	**48.00**	**262**	P		P	**P**	**00 33 41.5**	**+1.5**
WRAB	**Tennant Creek**	**48.00**	**262**	P		P	**P**	**00 33 38.7**	**-1.3**
WRAB					IAmb		IAmb	00 33 39.2	
	comp=Z,4.7nm,0.7s								
WRA	**Warramunga Arr**	**48.01**	**262**	P		P	**P**	**00 33 41.3**	**+1.2**
	comp=Z,1.6nm,0.8s,baz=97,slow=8.2,SNR=15								
WRA					PcP		PcP	00 35 14.8	+8.9
	comp=Z,0.4nm,0.8s,baz=87,slow=4.8,SNR=3.0								
WRA	**Warramunga Arr**	**48.01**	**262**	P		P	**P**	**00 33 40.6**	**+0.5**
FORT	**Forrest**	**52.24**	**247**	P		P	**P**	**00 34 09.8**	**-2.0**
FITZ	**Fitzroy Crossi**	**56.44**	**262**	P		P	**P**	**00 34 43.1**	**+0.8**
FITZ					IAmb		IAmb	00 34 59.4	
	comp=Z,2.9nm,1.1s								
VNDA	**Vanda**	**57.42**	**186**	P		P	**P**	**00 34 46.5**	**-1.7**
RPN	**Rapa Nui**	**58.86**	**110**	LR		LR		00 54 52.7	
	comp=Z,29nm,19.8s,baz=267,slow=30								
LPIG	**La Paz**	**76.81**	**57**	LR		LR		01 08 16.6	
	comp=Z,33nm,18.3s,baz=207,slow=33								
YBH	**Yreka Blue Hor**	**78.78**	**37**	LR		LR		01 05 08.6	
	comp=Z,22nm,18.9s,baz=260,slow=30								
ANMO	**Albuquerque**	**85.19**	**50**	LR		LR		01 08 46.6	
	comp=Z,47nm,18.1s,baz=313,slow=30								
CRQM	**Cirque**	**85.58**	**15**	P		P	**P**	**00 37 36.1**	**-0.9**
CRQM					IAmb		IAmb	00 37 45.0	
	comp=Z,11nm,1.1s								
AKASG	**Malin Array Be**	**145.41**	**334**	PKP			PKiKP	00 44 47.6	+7.8
	comp=Z,0.8nm,0.5s,baz=38,slow=4.0,SNR=7.3								

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*DDA **21** 00:42:44.5,37.″13N×28.″75E,h7km±2km,ML3.2*
*ATH **21** 00:42:44.8,37.″18N×28.″71E,h5km±2km,ML3.4/5,Error ellipse: s-maj=3.0km s-min=1.1km az=133.0*
*IDC **21** 00:42:44.5±1.1,37.″03N×28.″84E,h0km,mb3.8/2, mb1 3.8/9,mb1mx3.5/59,mbtmp3.7/9,ML3.6/7,Error ellipse: s-maj=18.1km s-min=17.3km az=151.0*
*ISK **21** 00:42:44.6,37.″12N×28.″76E,h4km,ML3.5/28*
*NIC **21** 00:42:44.4±0.0,37.″14N×28.″79E,h0km±2km,Ml3.6/3*
*THE **21** 00:42:44.9,37.″10N×28.″82E,h0km,ML3.3/6,Error ellipse: s-maj=1.0km s-min=0.6km az=60.0*
*GII **21** 00:42:50.2±0.0,36.″81N×29.″10E,h7km*
ISC 21 00:42:45.4±1.0,37.″12N±0.″02×28.″75E±0.″02,h9km±8km, n122,σ1§30/154,3C-1D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DALY	**Dalyan (Mula)**	**0.31**	**194**	PG		**Pg**	**Pg**	**00 42 51.6**	**+0.1**
DALY	**Dalyan (Mula)**	**0.31**	**194**	*i*	P	**Pg**	**Pg**	**00 42 51.7**	**+0.2**
YER	**Yerkesik**	**0.37**	**273**	PG		**Pg**	**Pg**	**00 42 52.8**	**+0.1**
YER				SG		**Sb**	**Sb**	**00 42 58.6**	**-1.5**
YER	**Yerkesik**	**0.37**	**273**	P		**Pb**	**Pb**	**00 42 53.2**	**-1.0**
TAVA	**DENIZLI_Tavas**	**0.38**	**21**	*i*	P	**Pg**	**Pg**	**00 42 51.7**	**-1.1**
TAVA					IAML			00 42 58.0	
	comp=N,2μm,0.2s								
TAVA					IAML			00 43 00.0	
	comp=E,3μm,0.3s								
CAME	**Cameli-Denizli**	**0.48**	**111**	PG		**Pg**	**Pg**	**00 42 53.8**	**-0.9**
CAME				SG		**Sg**	**Sg**	**00 43 01.5**	**+0.4**
TURN	**Turunc**	**0.53**	**230**	PG		**Pg**	**Pg**	**00 42 55.1**	**-0.5**
TURN	**Turunc**	**0.53**	**230**	*i*	P	**Pg**	**Pg**	**00 42 55.3**	**-0.3**
FETY	**Fethiye**	**0.55**	**150**	PG		**Pg**	**Pg**	**00 42 55.4**	**-0.7**
FETY	**Fethiye**	**0.55**	**150**	*i*	P	**Pg**	**Pg**	**00 42 55.7**	**-0.4**
FETY	**Fethiye**	**0.55**	**150**	P		**Pg**	**Pg**	**00 42 55.4**	**-0.7**
FETY				S		**Sg**	**Sg**	**00 43 04.1**	**+0.8**
MRSB	**Marmaris-Mugla**	**0.59**	**228**	PG		**Pg**	**Pg**	**00 42 57.0**	**+0.1**
GOLH	**Golhisar**	**0.66**	**79**	*i*	P	**Pg**	**Pg**	**00 42 57.0**	**-1.2**
GOLH				*i*	S	**Sb**	**Sb**	**00 43 08.1**	**-0.5**
GOLH					IAML			00 43 15.0	
	comp=N,1μm,0.5s								
MLSB	**Milas**	**0.79**	**283**	PG		**Pb**	**Pb**	**00 43 01.1**	**-0.3**
AYDN	**Tasoluk**	**0.88**	**309**	*i*	P	**Pg**	**Pg**	**00 43 02.2**	**-0.1**
AYDN				*i*	S	**Sb**	**Sb**	**00 43 14.2**	**-0.6**
AYDN					IAML			00 43 19.0	
	comp=E,1μm,0.3s								
AYDN					IAML			00 43 19.0	
	comp=N,1μm,0.5s								
DATC	**Datca-Mugla**	**0.94**	**248**	PG		**Pb**	**Pb**	**00 43 03.9**	**+0.1**
ELL	**Elmali**	**1.00**	**111**	PG		**Pg**	**Pg**	**00 43 04.6**	**-0.1**
ELL	**Elmali**	**1.00**	**111**	P		**Pg**	**Pg**	**00 43 03.5**	**-1.2**
ARG	**Arkhangelos**	**1.03**	**209**	P		**Pg**	**Pg**	**00 43 04.9**	**-0.2**
ARG				S		**Sn**	**Sn**	**00 43 19.5**	**-0.9**
ARG					AML		AML	00 43 27.1	
	comp=E,3007μm,0.4s								
ARG					AML		AML	00 43 27.9	
	comp=N,3019μm,0.3s								
ARG	**Arkhangelos**	**1.03**	**209**	PG		**Pg**	**Pg**	**00 43 04.9**

	comp=N,1.2nm,0.6s						
KARP	**Karpathos**	**2.02**	**220**	P	**Pn**	**00 43 18.7**	**-1.0**
KARP				S	**Sn**	**00 43 45.2**	**+0.2**
	comp=N,495nm,0.6s						
SHUT	**Suhut-Afyon**	**2.03**	**44**	PN	**Pn**	**00 43 20.5**	**+0.7**
URLA	**Izmir**	**2.11**	**307**	PN	**Pn**	**00 43 21.6**	**+0.7**
AMGA	**Amorgos Island**	**2.30**	**264**	P	**Pn**	**00 43 24.1**	**+0.6**
TVSB	**Tavsanli**	**2.40**	**13**	PN	**Pn**	**00 43 25.2**	**+0.3**
DKL	**Dikili**	**2.43**	**324**	PN	**Pn**	**00 43 25.9**	**+0.6**
APE	**Apeiranthos**	**2.57**	**270**	P	**Pn**	**00 43 28.1**	**+0.8**
APE	**Apeiranthos**	**2.57**	**270**	P	**Pn**	**00 43 27.9**	**+0.6**
ZKR	**Zakros**	**2.86**	**226**	P	**Pb**	**00 43 34.9**	**-1.7**
ZKR	**Zakros**	**2.86**	**226**	P	**Pn**	**00 43 30.7**	**-0.5**
ZKR				S	**Sn**	**00 44 06.0**	**+0.3**
	comp=N,175nm,0.6s						
PRK	**Paraskevi**	**2.88**	**318**	P	**Pn**	**00 43 33.0**	**+1.5**
PRK	**Paraskevi**	**2.88**	**318**	P	**Pn**	**00 43 32.0**	**+0.5**
SIGR	**SIGRI**	**3.09**	**313**	P	**Pn**	**00 43 36.5**	**+2.2**
NPS	**Neapolis**	**3.14**	**235**	P	**Pn**	**00 43 37.2**	**+2.3**
LAST	**Lasithi**	**3.29**	**235**	P	**Pn**	**00 43 38.7**	**+1.7**
AKMS	**Akamas**	**3.58**	**125**	P	**Pn**	**00 43 41.8**	**+0.7**
AKMS				AML	AML	00 44 24.0	
	comp=N,0.3nm,0.8s						
AKMS				AML	AML	00 44 32.2	
	comp=N,0.3nm,1.0s						
IDI	**Anoyia**	**3.61**	**241**	Pn	**Pn**	**00 43 42.9**	**+1.4**
	comp=N,4.3nm,0.3s,baz=326,slow=5.9,SNR=51						
IDI				Sn	**Sn**	**00 44 26.8**	**+2.5**
	comp=N,9.1nm,0.3s,baz=280,slow=22,SNR=7.5						
IDI	**Anoyia**	**3.61**	**241**	P	**Pn**	**00 43 42.9**	**+1.4**
SIVA	**Sivas**	**3.81**	**238**	P	**Pn**	**00 43 47.9**	**+3.7**
NATA	**Nata**	**3.88**	**126**	P	**Pn**	**00 43 45.8**	**+0.6**
LIA	**Limnos Island**	**3.94**	**316**	P	**Pn**	**00 43 47.1**	**+1.1**
VLY	**Voula,Athens**	**4.01**	**282**	P	**Pn**	**00 43 48.5**	**+1.6**
SZAC	**Souni**	**4.10**	**124**	P	**Pn**	**00 43 48.3**	**0.0**
SZAC				AML	AML	00 44 43.9	
	comp=N,0.3nm,0.9s						
SZAC				AML	AML	00 44 44.7	
	comp=N,0.2nm,0.4s						
OSC1	**CSNet OBS 1**	**4.16**	**149**	P	**Pn**	**00 43 49.3**	**+0.3**
SMTH	**Samothraki Isl**	**4.19**	**324**	P	**Pn**	**00 43 50.1**	**+0.7**
CSS	**Mathiatis**	**4.29**	**119**	⇑P	**Pn**	**00 43 51.5**	**+0.7**
ALN	**Alexandroupoli**	**4.32**	**332**	P	**Pn**	**00 43 51.9**	**+0.7**
ASGA	**Asgata**	**4.33**	**121**	P	**Pn**	**00 43 51.9**	**+0.5**
BRTR	**Keskin Array B**	**4.64**	**54**	Pn	**Pn**	**00 43 57.0**	**+1.2**
	comp=N,4.4nm,0.3s,baz=239,slow=17,SNR=120						
BRTR				Sn	**Sn**	**00 44 51.8**	**+1.8**
	comp=N,0.9nm,0.3s,baz=270,slow=39,SNR=11						
OSC2	**CSNet OBS 4**	**4.96**	**143**	P	**Pn**	**00 44 01.1**	**+1.1**
HNTI	**Hanita**	**6.63**	**125**	Pn	**Pn**	**00 44 22.9**	**-0.1**
MMC7	**Mount Meron ar**	**6.81**	**125**	Pn	**Pn**	**00 44 24.8**	**-0.7**
OFRI	**`Ofer**	**6.81**	**129**	Pn	**Pn**	**00 44 25.4**	**-0.1**
MMA0B	**Mount Meron ar**	**6.82**	**125**	Pn	**Pn**	**00 44 24.9**	**-0.8**
MMAI	**Mount Meron Ar**	**6.82**	**125**	Pn	**Pn**	**00 44 24.9**	**-0.8**
	comp=N,6.7nm,0.3s,baz=312,slow=12,SNR=75						
MMAI				Sn	**Sn**	**00 45 42.0**	**-1.4**
	comp=N,2.2nm,0.3s,baz=306,slow=15,SNR=5.6						
BLGI	**Bet Lehem HaGe**	**6.87**	**128**	Pn	**Pn**	**00 44 26.8**	**+0.6**
GEM	**Giv'at Ha'Em**	**6.88**	**122**	Pn	**Pn**	**00 44 25.7**	**-0.6**
NATI	**Neve Ativ**	**6.89**	**122**	Pn	**Pn**	**00 44 25.9**	**-0.7**
MMLI	**Mount Malkishu**	**7.21**	**128**	Pn	**Pn**	**00 44 31.1**	**+0.2**
HMDT	**Nahal Hemdat**	**7.40**	**129**	Pn	**Pn**	**00 44 33.4**	**-0.1**
HMDT				Sn	**Sn**	**00 45 54.3**	**-3.2**
KZIT	**Kziot**	**7.77**	**141**	Pn	**Pn**	**00 44 37.9**	**-0.7**
DSI	**Dead Sea**	**7.79**	**133**	Pn	**Pn**	**00 44 38.8**	**-0.1**
YTIR	**Yattir**	**7.79**	**136**	Pn	**Pn**	**00 44 39.8**	**+0.8**
GHAJ	**Ghor Haditha**	**8.09**	**134**	Pn	**Pn**	**00 44 43.4**	**+0.4**
ASF	**Jabal al Asfar**	**8.33**	**124**	Pn	**Pn**	**00 44 46.5**	**+0.1**
	comp=N,0.1nm,0.3s,baz=321,slow=6.5,SNR=1.7						
ZFRI	**Zfri**	**8.45**	**139**	Pn	**Pn**	**00 44 48.2**	**+0.2**
PRNI	**Paran**	**8.52**	**141**	Pn	**Pn**	**00 44 48.9**	**-0.1**
KRMI	**Paran Flat**	**8.57**	**143**	Pn	**Pn**	**00 44 49.7**	**0.0**
MLR	**Muntele Rosu**	**8.63**	**347**	Pn	**Pn**	**00 44 54.0**	**+3.5**
	comp=N,0.2nm,0.3s,baz=177,slow=17,SNR=2.6						
MLR				Sn	**Sn**	**00 46 26.0**	**-1.9**
	comp=N,0.1nm,0.3s,baz=166,slow=22,SNR=1.3						
HRFI	**Mount Harif**	**8.79**	**142**	Pn	**Pn**	**00 44 52.8**	**+0.1**
MBRI	**Mt Berech**	**8.93**	**143**	Pn	**Pn**	**00 44 54.9**	**+0.2**
EIL	**Elat**	**9.05**	**143**	Pn	**Pn**	**00 44 55.0**	**-1.3**
	comp=N,1.3nm,0.3s,baz=248,slow=2.6,SNR=15						
EIL				Sn	**Sn**	**00 46 32.5**	**-5.8**
	comp=N,0.6nm,0.3s,baz=108,slow=3.2,SNR=2.4						
EIL	**Elat**	**9.05**	**143**	Pn	**Pn**	**00 44 56.0**	**-0.3**
EIL				Sn	**Sn**	**00 46 32.8**	**-5.5**
GERES	**GERESS Array B**	**16.05**	**322**	Pn	**P**	**00 46 34.5**	**-0.2**
	comp=N,0.0nm,0.3s,baz=125,slow=10.0,SNR=2.8						
FINES	**FINESS Array B**	**24.41**	**357**	P	**P**	**00 48 05.2**	**+1.3**
	comp=N,4.1nm,1.1s,baz=161,slow=12,SNR=4.0						
TORD	**Torodi Ar. Bea**	**33.97**	**232**	P	**P**	**00 49 29.2**	**-0.1**
	comp=N,0.6nm,0.4s,baz=36,slow=8.9,SNR=11						

*IDC **21** 00:42:41.6±2.4, 0.˚98N×127.˚66E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/44, mbtmp3.6/3, Error ellipse: s-maj=178.4km s-min=28.3km az=67.0*
*NEIC **21** 00:42:46.4±1.9, 0.˚7N±0.˚1×127.˚73E±0.˚08, h30km±10km, mb4.1/11, Error ellipse: s-maj=16.1km s-min=10.3km az=202.0*

ISC 21 00:42:46.5±0.8, **0.˚71N**±0.˚10×**127.˚69E**±0.˚09, **h35**km, **n18, σ1§52/17, mb3.9/9, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.33**	**281**	Pg	**Pn**	**00 42 54.5**	**-0.3**
FAKI	**Fak Fak**	**5.81**	**128**	Pn	**Pn**	**00 44 09.6**	**-0.8**
DAV	**Davao City (W)**	**6.66**	**342**	Pn	**Pn**	**00 44 22.7**	**+0.8**
SAUI	**Saumlaki**	**9.36**	**157**	Pn	**Pn**	**00 44 59.1**	**+0.1**
COEN	**Coen**	**21.16**	**134**	P	**P**	**00 47 28.4**	**-0.5**
COEN				IAmb	IAmb	00 47 39.6	
	comp=Z,5.1nm,1.0s						
WB0	**Warramunga Arr**	**21.39**	**162**	P	**P**	**00 47 30.4**	**-0.9**
WB0				IAmb	IAmb	00 47 33.8	
	comp=Z,5.5nm,1.1s						
WRA	**Warramunga Arr**	**21.54**	**163**	P	**P**	**00 47 34.6**	**+1.8**
	comp=Z,1.0nm,0.7s,baz=342,slow=10,SNR=8.3						
WRA	**Warramunga Arr**	**21.54**	**163**	IAmb	IAmb	00 47 39.9	
	comp=Z,0.1nm,0.8s						
WB2	**Warramunga Arr**	**21.54**	**163**	P	**P**	**00 47 34.4**	**+1.5**
WC3	**Warramunga Arr**	**21.56**	**163**	P	**P**	**00 47 34.4**	**+1.3**
WC3				IAmb	IAmb	00 47 35.7	
	comp=Z,2.3nm,0.8s						
WR0	**Warramunga Arr**	**21.61**	**162**	P	**P**	**00 47 35.6**	**+1.9**
PSAB1	**Pilbara Seismi**	**23.44**	**199**	P	**P**	**00 47 52.4**	**-0.4**
PSAB1				IAmb	IAmb	00 48 09.2	
	comp=Z,7.0nm,0.9s						
ASAR	**Alice Springs**	**24.97**	**166**	P	**P**	**00 48 10.1**	**+3.1**
	comp=Z,1.2nm,0.7s,baz=345,slow=8.9,SNR=13						
BBOO	**Buckleboo**	**34.27**	**167**	P	**P**	**00 49 26.9**	**-2.4**
BBOO				IAmb	IAmb	00 49 27.5	
	comp=Z,6.4nm,1.1s						
NWAO	**Narrogin (SRO)**	**34.88**	**195**	P	**P**	**00 49 35.3**	**+0.6**
NWAO				IAmb	IAmb	00 49 45.9	
	comp=Z,8.8nm,1.1s						
FOZ	**Fox Glacier**	**57.93**	**145**	P	**P**	**00 52 36.1**	**+0.8**
QRZ	**Quartz Range**	**57.99**	**141**	P	**P**	**00 52 36.8**	**+0.9**
MKAR	**Makanchi Array**	**60.57**	**326**	P	**P**	**00 52 52.3**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=109,slow=8.0,SNR=2.3						

*BJI **21** 00:50:48.5±0.0, 1.˚35N×126.˚50E, h72km, mB4.9/40, mb4.9/56, Ms4.3/18, Ms7 4.0/19*
*NEIC **21** 00:50:49.8±2.2, 1.˚83N±0.˚06×126.˚42E±0.˚06, h35km±1km, mb4.9/107, Error ellipse: s-maj=11.2km s-min=8.5km az=46.0*
*KLM **21** 00:50:52.0, 1.˚97N×126.˚58E, h74km, mb4.9*
*IDC **21** 00:50:53.1±1.5, 1.˚80N×126.˚32E, h65km±13km, mb4.3/29, mb1 4.4/35, mb1mx4.3/47, mbtmp4.6/35, MS3.5/22, Ms1 3.5/22, ms1mx3.4/31, Error ellipse: s-maj=15.1km s-min=7.1km az=78.0*
*GCMT **21** 00:50:53.8±0.3, 1.˚94N±0.˚02×126.˚33E±0.˚03, h59km±2km, MW4.9/68, Moment Tensor Solution. s29,c32; s68,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.18±.16; $M_{\theta\theta}$0.32±.13; $M_{\phi\phi}$-2.50±.14; $M_{r\theta}$0.24±.07; $M_{\theta\phi}$-2.22±.15; $M_{\phi r}$0.54±.11; Best double couple: $M_0$3.01100×10^{16} NP1:ψ_s213.00000°, δ39.00000°, λ96.00000°. NP2: ϕ_s25.00000°, δ51.00000°, λ85.00000°. Principal axes: T 2.2420, Plg83.0000°, Azm263.0000°; N 1.5340, Plg4.0000°, Azm28.0000°; P -3.7790, Plg6.0000°, Azm119.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function DJA **21** 00:50:54.1±0.2, 2.˚N±2.˚×12.˚6E±.˚, h62km±2km, M4.7/45, mb4.8/45, mB5.2/19, MLv4.8/17, Mw(mB)4.7/19, Mwp4.9/1*

ISC 21 00:50:53.2±0.8, **1.˚83N**±0.˚04×**126.˚44E**±0.˚05, **h67**km±7km, **n256, σ1§36/257, mb4.8**/103, **3C-3D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**138**	P	**Pn**	**00 51 16.4**	**-0.4**
TNTI	**Ternate**	**1.40**	**138**	Pn	**Pn**	**00 51 16.5**	**-0.2**
SGSI	**Sangihe**	**2.06**	**334**	P	**Pn**	**00 51 24.8**	**-0.8**
SGSI				S	**Sn**	**00 51 51.1**	**+0.8**
LBMI	**Labuha**	**2.67**	**157**	P	**Pn**	**00 51 36.6**	**+2.7**
KMSI	**Cibinong**	**2.75**	**243**	P	**Pn**	**00 51 36.4**	**+1.4**
GTOI	**Gorontalo**	**3.62**	**251**	P	**Pn**	**00 51 48.0**	**+1.1**
LUWI	**Luwuk**	**4.64**	**232**	P	**Pn**	**00 52 02.9**	**+2.0**
LUWI	**Luwuk**	**4.64**	**232**	Pn	**Pn**	**00 52 02.3**	**+1.4**
MRSI	**Marisa**	**4.69**	**253**	P	**Pn**	**00 52 03.1**	**+1.6**
NLAI	**Namlea**	**5.07**	**173**	P	**Pn**	**00 52 07.0**	**+0.2**
	0.4nm2µm66nm,1.0s						
DAV	**Davao City (W)**	**5.28**	**351**	P	**Pn**	**00 52 10.0**	**+0.4**
	baz=135,slow=5.7,SNR=1.4						
DAV				S	**Sn**	**00 53 10.7**	**+1.6**
	100nm,0.3s,baz=348,slow=11,SNR=3.6						
KCP	**Kidapawan**	**5.32**	**345**	⇑*e*P	Pn	00 52 15.4	+5.2
APSI	**Ampana**	**5.51**	**240**	P	**Pn**	**00 52 15.8**	**+3.1**
	2.6nm4µm454nm,0.8s						
SIJI	**Sorong**	**5.52**	**119**	P	**Pn**	**00 52 14.9**	**+2.0**
	1.8nm,0.3s,baz=324,slow=8.6,SNR=11						
TOLI2	**Tolitoli**	**5.70**	**263**	Pn	**Pn**	**00 52 15.1**	**-0.2**
MSAI	**Masohi**	**5.71**	**154**	P	**Pn**	**00 52 18.4**	**+2.9**
	0.1nm28nm,1.2s						
MPSI	**Mapaga**	**6.70**	**257**	P	**Pn**	**00 52 31.3**	**+2.2**
	0.5nm1µm145nm,1.1s						
FAKI	**Fak Fak**	**7.48**	**129**	P	**Pn**	**00 52 40.0**	**+0.3**
	0.1nm521nm36nm,1.0s						
FAKI	**Fak Fak**	**7.48**	**129**	Pn	**Pn**	**00 52 40.8**	**+1.0**
TTSI	**Tana Toraja**	**8.20**	**234**	P	**Pn**	**00 52 50.9**	**+1.4**
	1µm123nm,1.0s						
MYLDM	**Lahad Datu**	**8.60**	**293**	Pn	**Pn**	**00 52 56.2**	**+1.3**
SPSI	**Sidrap Palu**	**8.80**	**229**	P	**Pn**	**00 52 58.6**	**+0.8**
	2µm52nm,1.0s						
BNSI	**Bone**	**8.85**	**226**	P	**Pn**	**00 52 59.9**	**+1.5**
	62nm,1.1s						
BKSI	**Bulukumba**	**9.50**	**222**	P	**Pn**	**00 53 08.2**	**+0.9**
	48nm,0.8s						
KAPI	**Kappang**	**9.53**	**224**	P	**Pn**	**00 53 07.0**	**-0.7**
	4.5nm,0.3s,baz=85,slow=4.0,SNR=7.7						
KAPI				S	**Sn**	**00 54 51.0**	**-2.3**
	1.2nm,0.3s,baz=252,slow=20,SNR=1.2						
KAPI	**Kappang**	**9.53**	**224**	Pn	**Pn**	**00 53 08.3**	**+0.6**
BKIB	**Balikpapan**	**10.02**	**252**	Pn	**Pn**	**00 53 13.0**	**-1.5**
SPMM	**Sapulut**	**10.36**	**286**	P	**Pn**	**00 53 20.0**	**+0.9**
KKM	**Kota Kinabalu**	**11.03**	**293**	Pn	**Pn**	**00 53 29.6**	**+1.3**
EDFI	**Ende, Flores**	**11.52**	**204**	P	**Pn**	**00 53 35.0**	**-0.1**
	11nm,0.8s						
SOEI	**Soe**	**11.71**	**191**	P	**Pn**	**00 53 41.3**	**+3.7**
	882nm56nm,0.8s						
SOEI	**Soe**	**11.71**	**191**	Pn	**Pn**	**00 53 39.8**	**+2.2**
BATI	**Baumata**	**12.27**	**193**	P	**Pn**	**00 53 45.5**	**+0.3**
	4.9nm,0.3s,baz=67,slow=7.7,SNR=1.5						
BATI				LR	LR	00 59 00.6	
	comp=Z,189nm,20.5s,baz=340,slow=40						
BBKI	**Banjar Baru**	**12.73**	**246**	P	**Pn**	**00 53 55.9**	**+4.5**
	26nm,0.9s						
LQP	**Lukban**	**13.13**	**339**	⇑*e*P	**Pn**	**00 53 57.5**	**+0.4**
PLAI	**Plampang**	**13.66**	**219**	P	**P**	**00 54 08.4**	**-2.1**
	57nm,1.4s						
SBUM	**Sibu**	**14.22**	**273**		**P**	**00 54 14.7**	**-2.1**
SBUM	**Sibu**	**14.22**	**273**	P	**P**	**00 54 16.0**	**-0.8**
GENI	**Genyem**	**14.41**	**108**	P	**Pn**	**00 54 15.2**	**+1.3**
	3µm209nm,0.9s						
JAY	**Jayapura**	**14.90**	**107**	P	**P**	**00 54 22.6**	**-1.7**
	2.3nm,0.3s,baz=276,slow=5.3,SNR=17						
JAY				LR	LR	00 59 44.2	
	comp=Z,142nm,21.8s,baz=352,slow=35						
JAY	**Jayapura**	**14.90**	**107**	P	**Pn**	**00 54 19.0**	**-1.3**
	388nm43nm,0.8s						
SRBI	**Singaraja**	**14.91**	**229**	P	**P**	**00 54 23.2**	**-1.2**
	56nm,1.2s						
MTN	**Manton Dam**	**15.30**	**162**	Pn	**Pn**	**00 54 24.2**	**-1.2**
JAGI	**Jajag, Banyuwa**	**15.96**	**230**		**Pn**	**00 54 33.5**	**-0.2**
JAGI				IAmb	IAmb	00 54 46.8	
	comp=Z,72nm,1.0s						
KSM	**Kuching**	**16.13**	**269**	P	**Pn**	**00 54 36.2**	**+0.3**
KSM	**Kuching**	**16.13**	**269**	P	**P**	**00 54 40.0**	**+2.0**
KNRA	**Kununurra**	**17.54**	**173**	P	**Pn**	**00 54 52.7**	**-0.7**
KNRA				IAmb	IAmb	00 54 55.5	
	comp=Z,48nm,0.8s						
PWJI	**Pagerwojo**	**17.57**	**236**	P	**P**	**00 54 55.6**	**+1.7**
	comp=Z,31nm,1.2s						
WOJI	**Wonogiri, Jawa**	**18.21**	**238**	P	**P**	**00 55 01.1**	**+0.1**
	comp=Z,51nm,1.5s						
SMRI	**Semarang**	**18.24**	**241**		**P**	**00 54 58.8**	**-2.5**
SMRI				IAmb	IAmb	00 55 05.6	
	comp=Z,32nm,0.5s						
UGM	**Wanagama**	**18.59**	**238**	P	**P**	**00 55 02.4**	**-2.8**
TPI	**Tanjungpandan**	**19.32**	**256**	P	**Pn**	**00 55 17.3**	**+2.4**
	comp=Z,426nmcomp=Z,8.9nm,1.2s						
KPJI	**Karang Pucung**	**19.70**	**242**	P	**P**	**00 55 17.7**	**+0.5**
	comp=Z,53nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P	**P**	**00 55 17.9**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=13,slow=8.9,SNR=23						
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P	**P**	**00 55 18.3**	**-0.1**
LEM	**Lembang**	**20.66**	**245**	LR	LR	01 05 43.0	
	comp=Z,106nm,18.8s,baz=3.5,slow=43						
PPBI	**Pangkal Pinang**	**20.68**	**259**	P	**P**	**00 55 29.3**	**+1.4**
	comp=Z,16µmcomp=Z,24nm,0.8s						
TWG	**Pinlang**	**21.51**	**346**	P	**P**	**00 55 33.5**	**-3.2**
TWG				IAmb	IAmb	00 55 36.1	
	comp=Z,38nm,0.7s						
YULB	**Yu-li**	**22.01**	**347**	P	**P**	**00 55 39.0**	**-3.1**
YULB				IAmb	IAmb	00 55 41.3	
	comp=Z,30nm,0.7s						
TPUB	**Ta-pu**	**22.08**	**346**	P	**P**	**00 55 41.1**	**-1.8**
TPUB				IAmb	IAmb	00 55 42.2	
	comp=Z,62nm,0.9s						
SSLB	**Suanglung**	**22.47**	**347**	IAmb	IAmb	00 55 47.3	
	comp=Z,36nm,0.8s						
MYKOM	**Kota Tinggi**	**22.58**	**270**	P	**P**	**00 55 47.3**	**-1.0**
MYKOM				IAmb	IAmb	00 55 54.7	
	comp=Z,34nm,1.0s						
KLSI		**22.63**	**253**	P	**P**	**00 55 50.0**	**+1.1**
	comp=Z,8.7nm,0.8s						
YOJ	**Yonaguni jima**	**22.75**	**352**	P	**P**	**00 55 49.1**	**-0.8**
COEN	**Coen**	**22.83**	**134**	P	**P**	**00 55 50.3**	**-0.6**
WB0	**Warramunga Arr**	**22.83**	**160**	IAmb	IAmb	00 55 52.4	
	comp=Z,46nm,0.9s						
WB0					**S**	**00 59 55.6**	**+0.2**
WRAB	**Tennant Creek**	**22.98**	**161**	P	**P**	**00 55 52.0**	**-0.4**
WRAB				IAmb	IAmb	00 55 53.4	
	comp=Z,37nm,0.9s						
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**00 55 51.5**	**-0.9**
	comp=Z,31nm,0.9s,baz=340,slow=11,SNR=164						
WRA				PcP	**PcP**	**00 59 41.2**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=320,slow=2.0,SNR=5.1						
WRA				S	**S**	**00 59 58.8**	**+1.1**
	comp=Z,3.3nm,1.0s,baz=332,slow=21,SNR=4.9						
WRA				LR	LR	01 06 17.4	
	comp=Z,85nm,21.7s,baz=10.0,slow=40						
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**00 55 51.5**	**-0.9**
WB2	**Warramunga Arr**	**22.98**	**161**	IAmb	IAmb	00 55 53.5	
	comp=Z,41nm,0.9s						
WR0	**Warramunga Arr**	**23.06**	**160**	IAmb	IAmb	00 55 59.5	
	comp=Z,28nm,0.9s						
YHNB	**Yeheng**	**23.23**	**348**	P	**P**	**00 55 53.8**	**-1.1**
YHNB				IAmb	IAmb	00 55 58.1	
	comp=Z,29nm,0.9s						
PMG	**Port Moresby**	**23.46**	**119**	P	**P**	**00 55 57.4**	**+0.3**
	comp=Z,16nm,0.8s,baz=316,slow=8.0,SNR=3.7						
PMG				LR	LR	01 07 54.1	
	comp=Z,131nm,18.9s,baz=280,slow=43						
PMG	**Port Moresby**	**23.46**	**119**	P	**P**	**00 55 57.3**	**+0.2**
QIZ	**Qiongzhong**	**23.59**	**318**	P	**P**	**00 55 58.6**	**+0.4**
QIZ				S	**S**	**01 00 10.3**	**+2.6**
KNMB	**Chin-men Tao**	**23.81**	**342**	P	**P**	**00 56 00.5**	**+0.4**
KNMB				IAmb	IAmb	00 56 04.5	
	comp=Z,51nm,0.9s						
PSA00	**Pilbara Seismi**	**24.13**	**195**	P	**P**	**00 56 02.7**	**-0.3**
SDSI	**Sungai Dareh**	**25.16**	**264**	P	**P**	**00 56 15.2**	**+2.7**
	comp=Z,5µmcomp=Z,24nm,1.2s						
IPM	**Ipoh**	**25.51**	**277**	P	**P**	**00 56 14.8**	**-0.9**
IPM	**Ipoh**	**25.51**	**277**	P	**P**	**00 56 16.0**	**+0.3**
KULM	**Kulim**	**25.96**	**278**	P	**P**	**00 56 19.3**	**-0.5**
KRVT	**Keravat (AS076**	**26.29**	**103**	LR	LR	01 06 00.4	
	comp=Z,178nm,18.8s,baz=275,slow=34						
ASAR	**Alice Springs**	**26.36**	**164**	P	**P**	**00 56 23.1**	**-0.1**
	comp=Z,9.4nm,0.6s,baz=348,slow=13,SNR=44						
ASAR				PcP	**PcP**	**00 59 48.5**	**+0.8**
	comp=Z,2.6nm,0.6s,baz=352,slow=2.6,SNR=7.0						
ASAR				S	**S**	**01 00 52.9**	**+1.1**
	comp=Z,2.1nm,1.0s,baz=345,slow=17,SNR=5.0						
RPSI	**Rantau Prapat**	**27.51**	**272**	P	**P**	**00 56 31.8**	**-1.8**
CHAI	**Chaiyaphum**	**27.86**	**302**	P	**P**	**00 56 39.0**	**+2.2**
	comp=Z,25nm,0.8s						
NONG	**Nongkai**	**27.98**	**307**	P	**P**	**00 56 39.9**	**+2.1**
	comp=Z,12µmcomp=Z,17nm,0.8s						
GSI	**Gunungsitoli**	**28.86**	**269**	P	**P**	**00 56 44.9**	**-0.8**
GSI				IAmb	IAmb	00 56 47.0	
	comp=Z,18nm,0.9s						
CTA	**Charters Tower**	**29.19**	**139**	P	**P**	**00 56 48.6**	**0.0**
	comp=Z,1.8nm,0.6s,baz=295,slow=12,SNR=2.1						
CTA				LR	LR	01 10 56.4	
	comp=Z,95nm,21.8s,baz=84,slow=41						
CTAO	**Charters Tower**	**29.19**	**139**	P	**P**	**00 56 49.1**	**+0.5**
CTAO				IAmb	IAmb	00 56 55.9	
	comp=Z,15nm,1.0s						
SLVN	**Son La**	**29.29**	**313**	P	**P**	**00 56 49.1**	**-0.5**
PHIT	**Phitsanulok**	**29.79**	**302**	P	**P**	**00 56 58.1**	**+4.2**
	comp=Z,39nm,0.7s						
UTTA	**Uttaradit**	**29.94**	**304**	P	**P**	**00 56 58.5**	**+3.3**
	comp=Z,11nm,0.9s						
NANT	**Nan**	**30.34**	**305**	P	**P**	**00 57 00.4**	**+1.6**
	comp=Z,111nm,0.6s						
SUKH	**Sukhothai**	**30.59**	**302**	P	**P**	**00 57 04.3**	**+3.4**
	comp=Z,17nm,0.7s						
NJ2	**Nanjing**	**30.91**	**347**	*e*P	**P**	**00 57 05.6**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
GYA	**Guiyang**	**31.00**	**324**	⇓P	**P**	**00 57 04.6**	**0.0**
GYA				pP	sP	00 57 24.5	-3.7
GYA				PcP	**PcP**	**01 00 00.5**	**+1.1**
GYA				S	**S**	**01 01 56.9**	**-8.0**
GYA				sS	sS	01 02 34.1	+2.0
GYA				pmax	pmax		
	comp=Z,13nm,1.0s						
GYA				LR	LR		
	comp=Z,120nm,15.3s						
JNU	**Nakatsue**	**31.41**	**7**	P	**P**	**00 57 08.1**	**0.0**
	comp=Z,15nm,0.9s,baz=129,slow=9.8,SNR=4.5						
JNU	**Nakatsue**	**31.41**	**7**	IAmb	IAmb	00 57 17.8	
	comp=Z,21nm,1.0s						
CM09	**Chiang Mai Arr**	**31.58**	**303**	P	**P**	00 57 16.1	+6.4
	comp=Z,6.3nm,0.8s						
CM05	**Chiang Mai Arr**	**31.59**	**303**	P	**P**	00 57 15.0	+5.1
	comp=Z,3.3nm,0.9s						
CM02	**Chiang Mai Arr**	**31.61**	**303**	P	**P**	00 57 15.9	+5.9
	comp=Z,5.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**00 57 10.0**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=118,slow=8.1,SNR=11						
CMAR				PcP	**PcP**	**01 00 02.1**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=181,slow=2.3,SNR=6.5						
CMAR				LR	LR	01 11 02.7	
	comp=Z,69nm,18.1s,baz=172,slow=38						
CMAR	**Chiang Mai Arr**	**31.62**	**303**	P	**P**	**00 57 10.6**	**+0.5**
CM34	**Chiang Mai Arr**	**31.64**	**304**	P	**P**	**00 57 11.0**	**+0.8**
CHTO	**Chiang

LZH					pmax	pmax			
	comp=Z,100nm,5.6s								
LZH					LR	LR			
	comp=Z,370nm,13.5s								
LZH					LR	LR			
	comp=Z,370nm,13.6s								
LZH					LR	LR			
	comp=Z,480nm,16.5s								
ARMA	**Armidale**	**40.06**	**145**		P	**P**	**00 58 22.6**	**+0.4**	
ARMA					IAmb	IAmb	00 58 26.5		
	comp=Z,25nm,0.9s								
SHL	**Shillong**	**40.79**	**308**		P	**P**	**00 58 27.5**	**-1.0**	
SHL					IAmb	IAmb	00 58 29.1		
	comp=Z,35nm,1.1s								
JTM	**Tenmabayashi**	**40.98**	**17**		P	**P**	**00 58 29.3**	**-0.2**	
JTM					IAmb	IAmb	00 58 31.9		
	comp=Z,23nm,0.7s								
HHC	**Hu-ho-hao-te**	**41.11**	**343**	*eP*		**P**	**00 58 31.0**	**+0.2**	
HHC					pmax	pmax			
	comp=Z,12nm,1.0s								
HHC					pmax	pmax			
	comp=Z,94nm,5.2s								
USA0B	**Ussuriysk Arra**	**42.48**	**6**		P	**P**	**00 58 41.9**	**+0.2**	
USRK	**Ussuriysk Ar.**	**42.48**	**6**		P	**P**	**00 58 42.1**	**+0.4**	
	comp=Z,11nm,1.0s,baz=190,slow=7.0,SNR=10								
USRK					LR	LR	01 17 52.7		
	comp=Z,20nm,18.8s,baz=177,slow=38								
H11S3	**WAKE ISLAND Hy**	**42.78**	**65**		T	T	01 45 51.5		
	baz=252,slow=74								
H11S2	**WAKE ISLAND Hy**	**42.80**	**65**		T	T	01 45 36.6		
	baz=252,slow=74								
H11S1	**WAKE ISLAND Hy**	**42.80**	**65**		T	T	01 45 53.9		
	baz=252								
LSA	**Lhasa**	**43.49**	**313**		P	**P**	**00 58 49.8**	**-1.0**	
ASAJ	**Asahikawa**	**44.49**	**17**		P	**P**	**00 58 58.5**	**+0.7**	
	comp=Z,14nm,0.6s,baz=208,slow=16,SNR=7.0								
GTA	**Gaotai**	**44.59**	**330**		P	**P**	**00 58 58.4**	**-0.5**	
GTA					pP	pP	00 59 14.3	-1.0	
GTA					sP	sP	00 59 21.1	-1.8	
GTA					PcP	**PP**	**01 00 43.1**	**-1.0**	
GTA					pmax	pmax			
	comp=Z,4.0nm,0.8s								
GTA					pmax	pmax			
	comp=Z,64nm,7.6s								
GTA					LR	LR			
	comp=Z,120nm,17.1s								
GTA					LR	LR			
	comp=Z,98nm,19.6s								
GTA					LR	LR			
	comp=Z,170nm,20.0s								
TAPN	**Taplejung**	**44.93**	**308**	*eP*		**P**	**00 59 01.6**	**-0.4**	
ODAN	**Odare**	**44.96**	**307**	*eP*		**P**	**00 59 01.7**	**-0.5**	
RAMN	**Ramite**	**45.63**	**307**	*eP*		**P**	**00 59 07.1**	**-0.4**	
DZM	**Mont Dzumac**	**45.71**	**124**	P		**P**	**00 59 08.9**	**+0.9**	
	comp=Z,8.5nm,0.9s,baz=189,slow=20,SNR=4.4								
DZM	**Mont Dzumac**	**45.71**	**124**	P		**P**	**00 59 07.6**	**-0.4**	
DZM					IAmb	IAmb	00 59 12.3		
	comp=Z,13nm,1.0s								
GUN	**Gumba**	**46.63**	**308**	*eP*		**P**	**00 59 14.9**	**-0.6**	
	comp=Z,46nm,1.0s								
PKI	**Pulchoki**	**46.85**	**307**	*eP*		**P**	**00 59 16.2**	**-1.0**	
PKIN	**Phulchoki**	**46.86**	**307**	*eP*		**P**	**00 59 16.1**	**-1.2**	
KKN	**Kakani**	**47.05**	**307**	*eP*		**P**	**00 59 17.7**	**-0.9**	
DMN	**Daman**	**47.11**	**307**	*eP*		**P**	**00 59 18.5**	**-0.7**	
	comp=Z,44nm,1.2s								
YSS	**Yuzh-Sakhalins**	**47.14**	**15**		P	**P**	**00 59 18.7**	**0.0**	
YSS					IAmb	IAmb	00 59 33.2		
	comp=Z,15nm,0.9s								
KLR	**Kul'dur**	**47.45**	**5**	P		**P**	**00 59 20.9**	**-0.2**	
	comp=Z,7.3nm,1.0s,baz=210,slow=4.1,SNR=16								
HIA	**Hailar**	**47.61**	**354**		P	**P**	**00 59 23.2**	**+0.8**	
HIA					IAmb	IAmb	00 59 25.6		
	comp=Z,17nm,1.1s								
GKN	**Gorkha**	**47.65**	**307**	*eP*		**P**	**00 59 22.2**	**-1.1**	
	comp=Z,70nm,1.3s								
KOLN	**Koldanda**	**48.39**	**306**	*eP*		**P**	**00 59 28.0**	**-1.0**	
	comp=Z,44nm,0.8s								
DANN	**Dangsing**	**48.50**	**307**	*eP*		**P**	**00 59 29.1**	**-0.9**	
	comp=Z,60nm,0.9s								
ULN	**Ulaanbaatar**	**48.83**	**343**	P		**P**	**00 59 31.6**	**-0.4**	
SONM	**Songino Array**	**49.01**	**342**	P		**P**	**00 59 33.0**	**-0.3**	
	comp=Z,2.6nm,0.7s,baz=158,slow=9.0,SNR=13								
SONM					PcP	**PcP**	**01 00 57.5**	**+1.1**	
	comp=Z,3.1nm,0.8s,baz=160,slow=4.2,SNR=6.8								
SONM					LR	LR	01 23 17.8		
	comp=Z,95nm,18.4s,baz=172,slow=40								
SONM	**Songino Array**	**49.01**	**342**	P		**P**	**00 59 33.2**	**-0.1**	
PYUN	**Piuthan**	**49.01**	**306**	*eP*		**P**	**00 59 32.9**	**-0.9**	
	comp=Z,52nm,0.9s								
HYB	**Hyderabad**	**49.51**	**291**	*i* P		P	00 59 31.0	-6.5	
TLY	**Talaya**	**53.24**	**342**	P		**P**	**01 00 04.8**	**-0.1**	
WMQ	**Urumqi**	**54.12**	**326**	*eP*		**P**	**01 00 13.0**	**+1.5**	
WMQ					PcP	**PcP**	**01 01 16.3**	**+0.8**	
WMQ					pmax	pmax			
	comp=Z,31nm,1.3s								
WMQ					pmax	pmax			
	comp=Z,29nm,4.5s								
WMQ					LR	LR			
	comp=Z,7.0nm,4.9s								
WMQ					LR	LR			
	comp=Z,28nm,8.3s								
WMQ	**Urumqi**	**54.12**	**326**	P		**P**	**01 00 10.3**	**-1.1**	
WMQ					IAmb	IAmb	01 00 13.7		
	comp=Z,17nm,0.9s								
MSVF	**Nonsavu**	**54.41**	**113**	P		**P**	**01 00 13.1**	**-0.9**	
PETK	**Petropavlovsk-**	**57.29**	**22**	P		**P**	**01 00 35.3**	**+1.3**	
	comp=Z,6.6nm,0.7s,baz=180,slow=4.3,SNR=10								
PETK					LR	LR	01 24 39.4		
	comp=Z,14nm,20.6s,baz=208,slow=35								
PETK	**Petropavlovsk-**	**57.29**	**22**	P		**P**	**01 00 34.7**	**+0.8**	
ZSN	**Zaisan**	**57.95**	**328**	*eP*		**P**	**01 00 38.5**	**-0.1**	
SHLS	**Shalkode**	**58.63**	**321**	*eP*		**P**	**01 00 41.3**	**-2.3**	
	comp=Z,11nm,1.0s								
NIL	**Nilore**	**58.87**	**309**	P		**P**	**01 00 45.0**	**-0.4**	
NIL					IAmb	IAmb	01 00 46.2		
	comp=Z,9.1nm,1.0s								
MK31	**Makanchi Array**	**58.95**	**326**	P		**P**	**01 00 45.7**	**0.0**	
MK31					IAmb	IAmb	01 00 49.5		
	comp=Z,9.8nm,0.9s								
MKAR	**Makanchi Array**	**58.95**	**326**	P		**P**	**01 00 45.4**	**-0.3**	
	comp=Z,7.1nm,0.5s,baz=120,slow=8.3,SNR=46								
MKAR					LR	LR	01 28 07.5		
	comp=Z,69nm,18.2s,baz=108,slow=38								
MKAR	**Makanchi Array**	**58.95**	**326**	P		**P**	**01 00 45.1**	**-0.6**	
MAKZ	**Makanchi**	**59.14**	**326**	P		**P**	**01 00 47.2**	**+0.2**	
KSH	**Kashi**	**59.19**	**316**	P		**P**	**01 00 48.8**	**+1.2**	
KSH					PcP	**PcP**	**01 01 37.4**	**+1.9**	
KSH					pmax	pmax			
	comp=Z,21nm,0.8s								
KSH					pmax	pmax			
	comp=Z,320nm,5.4s								
SATY	**Saty**	**59.24**	**321**	*eP*		**P**	**01 00 47.3**	**-0.6**	
	comp=Z,14nm,0.9s								
KPKS	**Kokpek**	**59.27**	**321**	*eP*		**P**	**01 00 47.3**	**-0.8**	
	comp=Z,11nm,1.0s								
FOZ	**Fox Glacier**	**59.56**	**145**	P		**P**	**01 00 49.2**	**-0.6**	
YAK	**Yakutsk**	**60.11**	**2**	P		**P**	**01 00 54.2**	**+0.9**	
MDOK	**Medeo**	**60.16**	**320**	*eP*		**P**	**01 00 54.5**	**+0.2**	
TNSS	**Tian-Shan**	**60.16**	**320**	*eP*		**P**	**01 00 53.9**	**-0.6**	
TDK	**Taldyqorghan**	**60.23**	**323**	*eP*		**P**	**01 00 54.0**	**-0.6**	
	comp=Z,11nm,0.7s								
AAA	**Alma-Ata**	**60.27**	**320**	*eP*		**P**	**01 00 53.7**	**-1.2**	
	comp=Z,37nm,1.3s								
CHKK	**Chushkaly**	**60.53**	**321**	*eP*		**P**	**01 00 55.5**	**-1.1**	
TUWZ	**Tuamarina**	**60.87**	**141**	P		**P**	**01 00 57.5**	**-1.3**	
KUU	**Kurty**	**60.96**	**321**	*eP*		**P**	**01 00 58.4**	**-1.1**	
	comp=Z,28nm,1.1s								
PLWZ	**Palliser**	**61.77**	**140**	P		**P**	**01 01 03.9**	**-1.1**	
ZALV	**Zalesovo Beam**	**62.15**	**334**	P		**P**	**01 01 05.9**	**-1.3**	
	comp=Z,1.8nm,0.5s,baz=134,slow=6.4,SNR=6.9								
ZALV					LR	LR	01 29 28.8		
	comp=Z,32nm,19.9s,baz=187,slow=37								
MCQ	**Macquarie Isla**	**62.23**	**159**	P		**P**	**01 01 06.2**	**-1.5**	
KBL	**Kabul**	**62.45**	**308**	P		**P**	**01 01 09.0**	**-1.0**	
KBL					IAmb	IAmb	01 01 11.4		
	comp=Z,9.1nm,1.0s								
BTK	**Batken**	**63.03**	**315**		IAmb	IAmb	01 01 15.8		
	comp=Z,8.9nm,1.0s								
AFI	**Afiamalu**	**63.17**	**106**	P		**P**	**01 01 13.6**	**-1.3**	
KURK	**Kurchatov**	**63.19**	**328**	P		**P**	**01 01 14.0**	**-0.3**	
IUG	**Iuzhnay**	**64.38**	**317**	*eP*		**P**	**01 01 21.4**	**-1.0**	
KK31	**Karatay Array**	**64.43**	**318**		IAmb	IAmb	01 01 24.5		
	comp=Z,7.7nm,1.1s								
KKAR	**Karatay Array**	**64.43**	**318**	P		**P**	**01 01 21.0**	**-1.6**	
KKAR	**Karatay Array**	**64.43**	**318**		IAmb	IAmb	01 01 24.5		
	comp=Z,7.7nm,1.1s								
BRZS	**Berezniki**	**66.07**	**325**	*eP*		**P**	**01 01 32.4**	**-0.7**	
	comp=Z,3.9nm,1.2s								
HRA	**Herat**	**67.81**	**306**	P		**P**	**01 01 44.2**	**-0.5**	
BRVK	**Borovoye**	**68.83**	**327**	P		**P**	**01 01 49.4**	**-1.0**	
BRVK					IAmb	IAmb	01 01 53.4		
	comp=Z,9.6nm,0.8s								
CASY	**Casey**	**68.90**	**187**	P		**P**	**01 01 49.9**	**-0.6**	
CASY					IAmb	IAmb	01 01 52.6		
	comp=Z,5.0nm,0.7s								
TIXI	**Tiksi**	**69.74**	**1**	P		**P**	**01 01 55.8**	**+0.1**	
TIXI					IAmb	IAmb	01 01 56.8		
	comp=Z,10.0nm,0.8s								
NRIK	**Noril'sk**	**72.20**	**346**	P		**P**	**01 02 11.1**	**+0.4**	
	comp=Z,14nm,0.8s,baz=131,slow=5.7,SNR=40								
NRIK					LR	LR	01 36 32.2		
	comp=Z,41nm,18.0s,baz=199,slow=38								
ABKAR	**Akbulak array**	**73.44**	**321**	P		**P**	**01 02 17.8**	**-0.5**	
ABKAR	**Akbulak array**	**73.44**	**321**		IAmb	IAmb	01 02 19.2		
	comp=Z,5.0nm,0.8s								
ARU	**Arti**	**76.38**	**328**	P		**P**	**01 02 34.4**	**-0.8**	
ARU					IAmb	IAmb	01 02 35.4		
	comp=Z,10nm,0.7s								
RAYN	**Ar Rayn**	**80.96**	**293**	P		**P**	**01 03 01.4**	**+0.3**	
VNDA	**Vanda**	**81.59**	**173**	P		**P**	**01 03 04.1**	**+0.9**	
	comp=Z,3.6nm,0.7s,baz=315,slow=5.9,SNR=33								
VNDA	**Vanda**	**81.59**	**173**	P		**P**	**01 03 04.2**	**+0.9**	
MAW	**Mawson**	**81.88**	**200**	P		**P**	**01 03 05.1**	**+0.2**	
	comp=Z,4.0nm,0.9s,baz=24,slow=8.0,SNR=3.7								
TTA	**Tatalina**	**82.72**	**27**	P		**P**	**01 03 10.3**	**+0.7**	
AKH	**Akhalkalaki**	**83.50**	**311**	P		**P**	**01 03 14.1**	**-0.1**	
KBZ	**Khabaz**	**84.07**	**314**	P		**P**	**01 03 16.2**	**-0.6**	
	comp=Z,2.2nm,0.7s,baz=156,slow=5.7,SNR=5.6								
A21K	**Barrow**	**84.11**	**18**	P		**P**	**01 03 17.6**	**+1.3**	
IMAR	**Indian Mountai**	**84.19**	**24**	P		**P**	**01 03 17.4**	**+0.5**	
KIV	**Kislovodsk**	**84.23**	**314**	P		**P**	**01 03 17.5**	**-0.3**	
KIV					IAmb	IAmb	01 03 22.8		
	comp=Z,7.9nm,0.9s								
PPT	**Papeete**	**84.81**	**108**	LR		LR	01 42 07.9		
	comp=Z,14nm,18.1s,baz=7.0,slow=36								
SUA	**Susitna One**	**84.96**	**29**	P		**P**	**01 03 20.5**	**-0.6**	
PMR	**Palmer**	**85.75**	**29**	P		**P**	**01 03 24.4**	**-0.4**	
COLD	**Coldfoot**	**85.75**	**23**	P		**P**	**01 03 24.1**	**-0.6**	
COLD					IAmb	IAmb	01 03 29.0		
	comp=Z,11nm,1.0s								
I23K	**Minto, Yukon-K**	**85.91**	**25**	P		**P**	**01 03 26.2**	**+0.7**	
I23K					IAmb	IAmb	01 03 28.0		
	comp=Z,5.0nm,0.7s								
KNK	**Knik Glacier**	**86.06**	**29**	P		**P**	**01 03 26.6**	**+0.2**	
TOLK	**Toolik Lake Re**	**86.11**	**21**	P		**P**	**01 03 26.2**	**-0.4**	
TOLK					IAmb	IAmb	01 03 29.8		
	comp=Z,5.9nm,0.8s								
MDM	**Murphy Dome**	**86.37**	**25**	P		**P**	**01 03 27.2**	**-0.7**	
MDM					IAmb	IAmb	01 03 32.7		
	comp=Z,5.6nm,1.0s								
CCB	**Clear Creek Bu**	**86.54**	**25**	P		**P**	**01 03 28.7**	**+0.1**	
CCB					IAmb	IAmb	01 03 29.7		
	comp=Z,6.4nm,1.0s								
KLMR	**Klimovskoe**	**86.91**	**331**	*eP*		**P**	**01 03 29.1**	**-1.4**	
KLMR					AMP		01 03 33.2		
	comp=Z,17nm,1.0s								
ILAR	**Eielson Array**	**86.94**	**25**	P		**P**	**01 03 29.5**	**-1.1**	
	comp=Z,1.2nm,0.7s,baz=242,slow=5.3,SNR=12								
BMAR	**Burnt Mountain**	**87.94**	**23**	P		**P**	**01 03 37.0**	**+1.6**	
OBN	**Obninsk**	**88.44**	**325**	P		**P**	**01 03 37.1**	**-0.8**	
K27K	**Chicken**	**89.03**	**26**	P		**P**	**01 03 41.4**	**+0.8**	
KMBO	**Kilima Mbogo**	**89.22**	**269**	P		**P**	**01 03 41.6**	**-1.2**	
	comp=Z,0.4nm,0.3s,baz=37,slow=20,SNR=2.2								
KMBO	**Kilima Mbogo**	**89.22**	**269**	P		**P**	**01 03 42.6**	**-0.3**	
DAWY	**Dawson**	**90.20**	**26**	P		**P**	**01 03 46.1**	**0.0**	
DAWY					IAmb	IAmb	01 03 48.4		
	comp=Z,7.4nm,1.1s								
BRTR	**Keskin Array B**	**91.00**	**310**	P		**P**	**01 03 48.5**	**-2.0**	
	comp=Z,1.3nm,0.9s,baz=45,slow=13,SNR=2.5								
BRTR					LR	LR	01 50 07.3		
	comp=Z,17nm,20.9s,baz=92,slow=39								
INK	**Inuvik**	**92.03**	**21**	P		**P**	**01 03 54.5**	**0.0**	
	comp=Z,3.3nm,0.8s,baz=262,slow=6.0,SNR=4.2								
ARD1	**ARCESS Array S**	**92.12**	**340**	P		**P**	**01 03 54.6**	**-0.3**	
ARCES	**ARCESS Array B**	**92.12**	**340**	P		**P**	**01 03 53.0**	**-1.9**	
	comp=Z,7.9nm,0.8s,baz=62,slow=5.6,SNR=6.0								
ARCES					LR	LR	01 49 30.7		
	comp=Z,22nm,19.8s,baz=150,slow=38								
WHY	**Whitehorse**	**92.68**	**29**	P		**P**	**01 03 58.4**	**+0.6**	
WHY					IAmb	IAmb	01 04 00.7		
	comp=Z,7.1nm,0.9s								
AKASG	**Malin Array Be**	**93.18**	**321**	P		**P**	**01 03 59.6**	**-0.5**	
	comp=Z,0.4nm,0.4s,baz=59,slow=3.7,SNR=2.2								
AKASG					LR	LR	01 49 13.2		
	comp=Z,30nm,21.9s,baz=295,slow=38								
FINES	**FINESS Array B**	**93.36**	**332**	P		**P**	**01 04 00.7**	**0.0**	
	comp=Z,1.3nm,0.7s,baz=113,slow=5.0,SNR=3.8								
FINES					LR	LR	01 49 18.8		
	comp=Z,39nm,19.3s,baz=58,slow=38								
DLBC	**Dease Lake**	**95.52**	**31**	P		**P**	**01 04 12.1**	**+1.3**	
	comp=Z,2.2nm,0.9s,baz=346,slow=5.5,SNR=3.4								
BURAR	**Bucovina Array**	**96.22**	**318**	P		**P**	**01 04 14.8**	**+0.5**	
BUR08	**Bucovina Ar. S**	**96.22**	**318**	P		**P**	**01 04 14.9**	**+0.6**	
BUR08					IAmb	IAmb	01 04 21.5		
	comp=Z,3.6nm,0.8s								
NOA	**NORSAR Array B**	**100.35**	**333**	P		**Pdif**	**01 04 31.4**	**-1.1**	
	comp=Z,0.9nm,0.9s,baz=71,slow=4.3,SNR=3.9								
SCHQ	**Schefferville**	**122.48**	**9**	PKP		**PKiKP**	**01 09 41.9**	**+0.8**	
	comp=Z,8.2nm,0.9s,baz=259,slow=2.7,SNR=3.5								
TXAR	**Lajitas Array**	**122.98**	**53**	PKP		**PKiKP**	**01 09 44.0**	**+1.0**	
	comp=Z,0.7nm,0.8s,baz=207,slow=1.3,SNR=8.1								
TORD	**Torodi Ar. Bea**	**123.21**	**287**	PKP		**PKiKP**	**01 09 43.9**	**+0.2**	
	comp=Z,2.0nm,0.8s,baz=42,slow=2.1,SNR=14								
TORD					PKKPab	**PKKPab**	**01 19 35.3**	**+1.2**	
	comp=Z,1.2nm,0.8s,baz=254,slow=3.5,SNR=5.9								
TORD	**Torodi Ar. Bea**	**123.21**	**287**	PKPdf		**PKiKP**	**01 09 44.2**	**+0.6**	
TKL	**Tuckaleechee C**	**133.24**	**34**	PKP		**PKiKP**	**01 10 03.3**	**+0.1**	
	comp=Z,5.5nm,0.9s,baz=179,slow=8.2,SNR=4.4								
PLCA	**Paso Flores**	**138.33**	**160**	PKP		**PKPdf**	**01 10 12.5**	**+1.1**	
	comp=Z,1.6nm,0.9s,baz=0.1,slow=4.3,SNR=4.6								
LPAZ	**La Paz**	**159.69**	**136**	PKP		**PKPdf**	**01 10 47.5**	**+1.3**	
	comp=Z,1.2nm,0.6s,baz=308,slow=2.5,SNR=5.4								
LPAZ	**La Paz**	**159.69**	**136**			**PKPdf**	**01 10 49.0**	**+2.8**	

*DDA **21** 01:04:09.9,38°.74N×40°.02E,h7km±2km, MW3.5*
*ISK **21** 01:04:09.1,38°.76N×39°.99E,h1km, ML3.5/29*

ISC 21 01:04:10.2±1.1,38.73N±0°.02×40.00E±0°.02,h7km±10km, n47,σ1s38/56,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HANI	**Diyarbakir_Han**	**0.45**	**135**	*i* P		**Pg**		**01 04 18.9**	**+0.1**
HANI				*i* S		**Sb**		**01 04 25.5**	**-1.7**
HANI				IAML				01 04 28.0	
	comp=N,3μm,0.5s								
HANI				IAML				01 04 35.0	
	comp=E,3μm,0.9s								
PTK	**Pertek**	**0.50**	**289**	PG		**Pg**		**01 04 19.6**	**-0.3**
PTK				SG		**Sg**		**01 04 27.1**	**+0.6**
TNCL	**Tunceli-Merkez**	**0.52**	**317**	*i* P		**Pg**		**01 04 19.9**	**-0.4**
TNCL				*i* S		**Sb**		**01 04 28.2**	**-1.4**
BNGB	**Bingl**	**0.59**	**64**	PG		**Pg**		**01 04 21.1**	**-0.6**
BNGB				SG		**Sb**		**01 04 30.3**	**-1.3**
SVRC	**Sivrice-ELAZID**	**0.65**	**237**	PG		**Pg**		**01 04 22.7**	**0.0**
SVRC				SG		**Sb**		**01 04 32.8**	**-0.3**
DYBB	**Diyarbakir**	**0.78**	**172**	PG		**Pb**		**01 04 25.7**	**-0.5**
YEDI	**Yedisu-Bingol**	**0.82**	**31**	PG		**Pg**		**01 04 25.4**	**-0.7**
ELZG	**Elazig**	**0.83**	**254**	*i* P		**Pg**		**01 04 24.7**	**-1.4**
ERZN	**Erzincan**	**0.88**	**346**	PG		**Pg**		**01 04 26.5**	**-0.7**
KARO	**Karliova-Bingo**	**1.00**	**54**	PG		**Pg**		**01 04 28.9**	**-0.6**
EUZM	**Uzumlu**	**1.00**	**347**	*i* P		**Pg**		**01 04 29.0**	**-0.5**
EUZM				*i* S		**Sg**		**01 04 41.9**	**-0.7**
EUZM				IAML				01 04 45.0	
	comp=E,514nm,0.5s								
REFA	**Refahiye_ERZN**	**1.17**	**305**	*i* P		Pn		01 04 38.4	+5.3
REFA				IAML				01 05 00.0	
	comp=E,273nm,0.5s								
REFA				IAML				01 05 04.0	
	comp=N,245nm,0.5s								
MUSM	**Mu-Merkez**	**1.18**	**90**	*i* P		**Pb**		**01 04 31.7**	**-1.4**
MUSM				*i* S		**Sn**		**01 04 50.2**	**+0.5**
MUSM				IAML				01 04 54.0	
	comp=N,350nm,1.3s								
MUSM				IAML				01 04 54.0	
	comp=E,413nm,0.7s								
VRTB	**Varto-Mus**	**1.22**	**69**	PN		**Pb**		**01 04 32.6**	**-1.0**
VRTB	**Varto-Mus**	**1.22**	**69**	*i* P		**Pb**		**01 04 32.5**	**-1.1**
VRTB				*i* S		**Sn**		**01 04 53.0**	**+2.5**
VRTB				IAML				01 05 07.0	
	comp=N,678nm,1.0s								
VRTB				IAML				01 05 15.0	
	comp=E,611nm,0.9s								
KEMA	**Kemaliye**	**1.29**	**295**	*i* P		**Pn**		**01 04 33.2**	**-1.5**
MALT	**Malatya**	**1.30**	**252**	PN		**Pn**		**01 04 33.3**	**-1.5**
BTMN	**Batman**	**1.30**	**130**	*i* P		**Pg**		**01 04 34.8**	**-0.5**
BTMN				*i* S		**Sg**		**01 04 53.3**	**+1.1**
BTMN				IAML				01 04 54.0	
	comp=E,1μm,0.4s								
BTMN				IAML				01 04 59.0	
	comp=N,1μm,0.5s								
ILIC	**ilic-Erzincan**	**1.33**	**303**	PN		**Pn**		**01 04 33.6**	**-1.6**
KOPT	**Kop Dagi**	**1.34**	**17**	*i* P		**Pn**		**01 04 34.8**	**-0.9**
KOPT				*i* S		**Sg**		**01 04 59.1**	**+5.7**
KOPT				IAML				01 05 01.0	
	comp=N,197nm,0.7s								
KOPT				IAML				01 05 08.0	
	comp=E,258nm,0.8s								
ARPR	**Arapgir-MALATY**	**1.35**	**286**	PN		**Pg**		**01 04 35.7**	**-0.3**
EMRE	**Erzurum,Aziziy**	**1.50**	**30**	*i* P		**Pg**		**01 04 40.0**	**+0.9**
KELT	**Kelkit**	**1.53**	**338**	*i* P		**Pb**		**01 04 38.3**	**-0.7**
BAYB	**BAYBURT**	**1.54**	**7**	*i* P		**Pg**		**01 04 39.9**	**+0.1**
MARD	**Mardin**	**1.54**	**156**	*i* P		**Pb**		**01 04 38.3**	**-0.9**
URFA	**Urfa**	**1.59**	**216**	PN		**Pb**		**01 04 39.4**	**-0.5**
GURO	**Guroymak-BITLI**	**1.60**	**96**	PN		**Pb**		**01 04 39.3**	**-0.9**
BAYT	**Aydintepe-Bayb**	**1.67**	**4**	PN		**Pb**		**01 04 39.7**	**-0.3**
SRTM	**Siirt_Merkez**	**1.68**	**115**	*i* P		**Pb**		**01 04 40.7**	**-0.9**
SRTM				IAML				01 05 09.0	
	comp=N,658nm,0.5s								
SRTM				IAML				01 05 10.0	
	comp=E,732nm,0.4s								
BLIS	**Bitlis-Merkez**	**1.69**	**100**	*i* P		**Pb**		**01 04 40.9**	**-0.8**
BLIS				IAML				01 05 11.0	
	comp=N,338nm,0.5s								
BLIS				IAML				01 05 13.0	
	comp=E,280nm,0.5s								
KRIK	**Erzurum-spir**	**1.76**	**24**	*i* P		**Pg**		**01 04 43.1**	**-0.8**
KOPR	**Koprukoy-ERZUR**	**1.91**	**48**	PN		**Pb**		**01 04 43.6**	**-1.9**
MLAZ	**Malazgirt-MUS**	**2.03**	**78**	PN		**Pb**		**01 04 45.9**	**-1.6**
KTUT	**Trabzon**	**2.26**	**356**	PN		**Pn**		**01 04 48.7**	**+0.7**
SIRT	**Sirnak**	**2.28**	**122**	PN		**Pb**		**01 04 49.8**	**-2.0**
TUTA	**Tutak**	**2.29**	**72**	*i* P		**Sn**		**01 05 17.8**	**+0.6**
AKDM	**Akdamar-Van**	**2.37**	**99**	PN		**Pb**		**01 04 50.9**	**-2.5**
ESPY	**Espiye-Giresun**	**2.39**	**336**	PN		**Pn**		**01 04 50.5**	**+0.7**
CHOM	**Cayeli-Rize**	**2.44**	**14**	PN		**Pn**		**01 04 51.2**	**+0.8**
AGRB	**Hanur-Agry**	**2.48**	**69**	PN		**Pn**		**01 04 51.9**	**+0.8**
SVSK	**Karacayir**	**2.61**	**298**	PN		**Pn**		**01 04 53.7**	**+1.0**
RSDY	**Resadiye-TOKAT**	**2.65**	**310**	PN		**Pn**		**01 04 54.2**	**+0.8**
GAZ	**Gaziantep**	**2.70**	**236**	PN		**Pn**		**01 04 55.5**	**+1.5**
SARI	**SarD1z-Kayseri**	**2.82**	**265**	PN		**Pn**		**01 04 57.1**	**+1.2**
TOKT	**Tokat**	**3.11**	**302**	PN		**Pn**		**01 05 00.9**	**+1.2**
BNN	**Bunyan**	**3.25**	**273**	PN		**Pn**		**01 05 02.9**	**+1.3**
KOZT	**Kozan**	**3.52**	**251**	PN		**Pn**		**01

EGS		**0.10**	**253**	*i* P	**Pg**	**02 15 34.9**	**-0.1**
	baz=251							
EGS				S	**Sg**	**02 15 37.0**	**-0.1**
	baz=251							
TWB1	**Santiao Chiao**	**0.14**	**342**	*i* P	**Pg**	**02 15 35.3**	**-0.3**
	baz=347							
TWB1				S	**Sg**	**02 15 37.8**	**-0.2**
	baz=347							
NTC	**Toucheng**	**0.19**	**264**	P	**Pg**	**02 15 36.4**	**+0.1**
	baz=265							
NTC				S	**Sg**	**02 15 39.4**	**+0.2**
	baz=265							
TIPB	**Shuangxi**	**0.21**	**297**	P	**Pg**	**02 15 37.1**	**+0.3**
	baz=298							
TIPB				*e*S	**Sg**	**02 15 40.1**	**+0.2**
	baz=298							
ILA	**Ilan**	**0.28**	**248**	*e*P	**Pg**	**02 15 37.8**	**-0.2**
	baz=247							
ILA				S	**Sb**	**02 15 43.5**	**-0.4**
	baz=247							
NWF	**Wu-fen Shan**	**0.30**	**310**	*e*P	**Pb**	**02 15 38.9**	**-0.6**
	baz=311							
NWF				S	**Sb**	**02 15 44.2**	**-0.3**
	baz=311							
WFSB	**Wu-fen Shan**	**0.30**	**310**	P	**Pb**	**02 15 38.9**	**-0.6**
	baz=311							
WFSB				S	**Sb**	**02 15 44.3**	**-0.2**
	baz=311							
TWC	**Suao**	**0.31**	**213**	*e*P	**Pb**	**02 15 39.0**	**-0.7**
	baz=210							
TWC				S	**Sb**	**02 15 44.2**	**-0.5**
	baz=210							
TWE	**Neicheng**	**0.37**	**246**	P	**Pg**	**02 15 39.5**	**0.0**
	baz=244							
TWE				S	**Sb**	**02 15 45.1**	**-1.2**
	baz=244							
TWA	**Mucha**	**0.42**	**285**	P	**Pb**	**02 15 41.1**	**-0.5**
	baz=285							
TWA				S	**Sb**	**02 15 47.6**	**-0.4**
	baz=285							
ENAH	**Nanao**	**0.47**	**206**	*e*P	**Pb**	**02 15 41.6**	**-0.8**
	baz=205							
ENAH				*e*S	**Sg**	**02 15 47.9**	**+0.2**
	baz=205							
NHDH	**Xindian Distri**	**0.47**	**281**	S	**Sb**	**02 15 48.3**	**-1.0**
	baz=281							
NWRT	**Kuosheng**	**0.47**	**314**	P	**Pb**	**02 15 42.3**	**-0.1**
	baz=314							
NWRT				S	**Sb**	**02 15 49.5**	**+0.2**
	baz=314							
NWLT	**Wulai**	**0.49**	**259**	*e*P	**Pg**	**02 15 41.8**	**-0.1**
	baz=259							
NWLT				S	**Sg**	**02 15 48.5**	**+0.1**
	baz=259							
YM01	**YM01**	**0.50**	**303**	P	**Pb**	**02 15 43.0**	**0.0**
	baz=303							
YM01				S	**Sb**	**02 15 50.2**	**0.0**
	baz=303							
TAP	**Taipei**	**0.51**	**289**	*e*S	**Sb**	**02 15 50.3**	**0.0**
	baz=289							
YM11	**YM11**	**0.51**	**305**	P	**Pb**	**02 15 43.3**	**+0.2**
	baz=305							
YM08	**YM08**	**0.51**	**308**	P	**Pb**	**02 15 42.9**	**-0.2**
	baz=308							
YM08				*e*S	**Sg**	**02 15 49.5**	**+0.5**
	baz=308							
YM10	**YM10**	**0.51**	**303**	P	**Pb**	**02 15 43.1**	**-0.1**
	baz=303							
YM05	**YM05**	**0.52**	**304**	P	**Pb**	**02 15 43.2**	**0.0**
	baz=304							
YM05				*e*S	**Sg**	**02 15 49.1**	**0.0**
	baz=304							
ENA	**Nanau**	**0.52**	**211**	P	**Pb**	**02 15 43.2**	**0.0**
	baz=210							
ENA				S	**Sb**	**02 15 50.9**	**+0.3**
	baz=210							
YM04	**YM04**	**0.53**	**302**	P	**Pb**	**02 15 43.4**	**-0.1**
	baz=302							
YM04				*e*S	**Sb**	**02 15 52.0**	**+0.9**
	baz=302							
YM03	**YM03**	**0.54**	**304**	*e*P	**Pb**	**02 15 43.0**	**-0.7**
	baz=304							
NDT	**Datong Townshi**	**0.55**	**240**	*e*P	**Pb**	**02 15 43.8**	**+0.1**
	baz=240							
NDT				*e*S	**Sb**	**02 15 50.6**	**-0.9**
	baz=240							
ANP	**Anpu**	**0.56**	**304**	*e*S	**Sg**	**02 15 50.8**	**+0.1**
	baz=304							
TWY	**Chenhua**	**0.56**	**315**	P	**Pb**	**02 15 43.7**	**-0.3**
	baz=316							
TWY				S	**Sn**	**02 15 54.1**	**-1.1**
	baz=316							
NTST	**Danshui**	**0.61**	**299**	*e*P	**Pb**	**02 15 44.5**	**-0.1**
	baz=299							
NTST				*e*S	**Sb**	**02 15 53.3**	**+0.1**
	baz=299							
YHNB	**Yeheng**	**0.63**	**251**	P	**Pg**	**02 15 44.2**	**-0.3**
	baz=251							
YHNB				*e*S	**Sb**	**02 15 54.8**	**+0.8**
	baz=251							
NSK	**Sanguang**	**0.65**	**252**	P	**Pg**	**02 15 44.7**	**-0.1**
	baz=252							
NSK				S	**Sb**	**02 15 54.6**	**+0.2**
	baz=252							
NNS	**Nan Shan**	**0.74**	**235**	*e*P	**Pn**	**02 15 48.3**	**-0.2**
	baz=233							
NNS				*e*S	**Sb**	**02 15 58.6**	**+1.4**
	baz=233							
NNSB	**Datong**	**0.74**	**233**	*e*P	**Pb**	**02 15 47.4**	**+0.3**
	baz=233							
NNSB				S	**Sb**	**02 15 58.0**	**+0.8**
	baz=233							
NNSH	**Datong**	**0.74**	**233**	*e*P	**Pb**	**02 15 46.5**	**-0.5**
	baz=233							
NNSH				*e*S	**Sb**	**02 15 57.7**	**+0.5**
	baz=233							
PCYT	**Pengchaiyu**	**0.75**	**2**	*e*P	**Pb**	**02 15 47.4**	**+0.2**
	baz=3.0							
PCYT				S	**Sb**	**02 15 58.4**	**+0.9**
	baz=3.0							
NCU	**National Centr**	**0.78**	**277**	*e*P	**Pn**	**02 15 48.9**	**0.0**
	baz=277							
NCU				S	**Sn**	**02 16 00.1**	**-0.4**
	baz=277							
NCUH	**Zhongli**	**0.78**	**277**	*e*P	**Pn**	**02 15 48.8**	**-0.2**
	baz=277							
NCUH				*e*S	**Sn**	**02 16 00.0**	**-0.5**
	baz=277							
NACB	**Ninganchiao**	**0.81**	**210**	P	**Pb**	**02 15 47.8**	**-0.3**
	baz=209							
NACB				S	**Sb**	**02 15 58.4**	**-0.5**
	baz=209							
ETLH	**Xiulin Townshi**	**0.83**	**217**	P	**Pg**	**02 15 48.1**	**-0.2**
	baz=217							
ETLH				S	**Sb**	**02 16 00.1**	**+0.3**
	baz=217							
TWD	**Chiawan**	**0.89**	**207**	P	**Pb**	**02 15 49.4**	**-0.1**
	baz=206							
TWD				*e*S	**Sb**	**02 16 02.0**	**+0.8**
	baz=206							
JYNG	**Yonagunijimaku**	**0.93**	**117**	P	**Pg**	**02 15 49.8**	**-0.3**
JYNG				S	**Sg**	**02 16 02.0**	**-0.2**
FUSS	**Fushou**	**0.95**	**229**	*e*P	**Pn**	**02 15 51.9**	**+0.3**
	baz=229							
FUSS				*e*S	**Sb**	**02 16 03.1**	**-0.3**
	baz=229							
LIOB	**Emei**	**0.95**	**256**	*e*P	**Pn**	**02 15 51.2**	**-0.2**
	baz=256							
LIOB				*e*S	**Sn**	**02 16 05.2**	**+0.3**
	baz=256							
NSTT	**Nanjuang**	**0.97**	**256**	*e*P	**Pn**	**02 15 52.5**	**+0.9**
	baz=255							
NSTT				S	**Sn**	**02 16 06.5**	**+1.2**
	baz=255							
YOJ	**Yonaguni jima**	**0.98**	**115**	*e*P	**Pb**	**02 15 51.3**	**+0.3**
	baz=114							
YOJ				S	**Sb**	**02 16 04.2**	**+0.3**
	baz=114							
YOJ	**Yonaguni jima**	**0.98**	**115**	P	**Pg**	**02 15 50.5**	**-0.5**
YOJ				*e*S	**Sg**	**02 16 03.2**	**-0.6**
TWT	**Tachien**	**1.00**	**232**	*e*P	**Pn**	**02 15 53.3**	**+1.2**
	baz=232							
TDCB	**Techi**	**1.01**	**232**	*e*P	**Pb**	**02 15 51.9**	**+0.2**
	baz=232							
TDCB				*e*S	**Sn**	**02 16 06.3**	**-0.2**
	baz=232							
WHF	**Hehuan Shan**	**1.01**	**224**	*e*P	**Pb**	**02 15 51.5**	**-0.3**
	baz=223							
WHF				S	**Sb**	**02 16 05.9**	**+0.7**
	baz=223							
CHGB	**Renai**	**1.13**	**224**	P	**Pb**	**02 15 53.8**	**0.0**
	baz=224							
CHGB				*e*S	**Sn**	**02 16 10.0**	**+0.5**
	baz=224							
OWD	**Renai**	**1.21**	**221**	*e*P	**Pg**	**02 15 54.8**	**-0.6**
	baz=220							
OWD				*e*S	**Sn**	**02 16 12.3**	**+1.0**
	baz=220							
TYC	**Yuchr**	**1.45**	**228**	*e*P	**Pn**	**02 15 58.2**	**+0.1**
	baz=227							
TYC				*e*S	**Sg**	**02 16 18.2**	**-0.5**
	baz=227							
IRIF	**Iriomote-Funau**	**1.63**	**109**	P	**Pn**	**02 16 00.5**	**-0.2**
JKRS	**Kuro-shima**	**1.91**	**109**	P	**Pn**	**02 16 04.3**	**-0.1**
JIJ	**Ishigaki jima**	**1.98**	**104**	P	**Pn**	**02 16 06.3**	**+0.8**

WEL 21 02:16:40.1±1.0, 38°S±7°×18°0E±°, h33km, M3.3/12, ML3.6/12, MLv3.3/12, Error ellipse: s-maj=0.0km s-min=0.0km az=18.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.22**	**268**	P	Pn	02 17 00.1	-0.8
MXZ	**Matakaoa Point**	**1.33**	**279**	P	Pn	02 17 01.4	-0.9
PUZ	**Puketiti**	**1.37**	**258**	S	Sn	02 17 20.5	+0.5
CNGZ	**Carnagh Statio**	**1.54**	**243**	P	Pn	02 17 06.5	+1.0
TWGZ	**Tauwhareparae**	**1.61**	**255**	P	Pn	02 17 06.5	+0.3
TWGZ				S	Sn	02 17 26.7	+0.8
HAZ	**Te Kaha**	**1.72**	**270**	P	Pn	02 17 07.3	-0.4
RUGZ	**Raukumara Rang**	**1.81**	**264**	P	Pn	02 17 08.5	-0.5
RIGZ	**Rimuhau**	**1.96**	**241**	P	Pn	02 17 11.4	+0.5
RIGZ				S	Sn	02 17 36.2	+1.8
PRGZ	**Paritu Road**	**1.98**	**235**	P	Pn	02 17 12.0	+0.7
PRGZ				S	Sn	02 17 36.7	+1.6
MWZ	**Matawai**	**1.99**	**253**	P	Pn	02 17 11.1	-0.4
MWZ				S	Sn	02 17 34.6	-0.8
MHGZ	**Mahia Peninsul**	**2.11**	**229**	P	Pn	02 17 13.9	+0.8
RAGZ	**Rawiri**	**2.12**	**250**	P	Pn	02 17 14.9	+1.6
RAGZ				S	Sn	02 17 39.1	+0.4
KNZ	**Kokohu**	**2.18**	**235**	P	Pn	02 17 14.2	+0.3
URZ	**Urewera**	**2.30**	**257**	P	Pn	02 17 16.2	+0.6
URZ				S	Sn	02 17 43.2	+0.4
WHRZ	**Whale Island**	**2.36**	**267**	P	Pn	02 17 17.2	+0.6
RTZ	**Ruatahuna**	**2.49**	**250**	P	Pn	02 17 19.2	+0.9
WHHZ	**Waihua**	**2.50**	**238**	P	Pn	02 17 18.9	+0.6
WHHZ				S	Sn	02 17 49.0	+1.4
MUGZ	**Murupara**	**2.61**	**254**	P	Pn	02 17 19.9	+0.1
MUGZ				S	Sn	02 17 49.2	-1.1
MTHZ	**Maungataniwha**	**2.67**	**246**	P	Pn	02 17 21.4	+0.6
OPRZ	**Ohinepanea**	**2.69**	**268**	P	Pn	02 17 20.8	-0.3
ARHZ	**Aropaoanui**	**2.75**	**237**	P	Pn	02 17 22.9	+1.1
TARZ	**Mount Tarawera**	**2.76**	**260**	P	Pn	02 17 22.1	0.0
CKHZ	**Cape Kidnapper**	**2.92**	**229**	P	Pn	02 17 24.3	+0.1
ALRZ	**Allen Road**	**2.95**	**254**	P	Pn	02 17 24.7	0.0
MCHZ	**McNeill Hill**	**3.04**	**236**	P	Pn	02 17 26.2	+0.3
BKZ	**Black Stump Fm**	**3.05**	**242**	P	Pn	02 17 26.4	+0.4
KRHZ	**Kereru**	**3.36**	**235**	P	Pn	02 17 29.9	-0.4
BHHZ	**Black Hill Sta**	**3.49**	**240**	P	Pn	02 17 32.2	+0.1
KUZ	**Kuaotunu**	**3.54**	**286**	P	Pn	02 17 31.3	-1.4
WPHZ	**Waipukurau**	**3.56**	**229**	P	Pn	02 17 33.2	+0.2
PNHZ	**Pukenui**	**3.62**	**233**	P	Pn	02 17 33.4	-0.5
MOVZ	**Moawhango**	**3.67**	**243**	P	Pn	02 17 34.8	+0.3
FWVZ	**Far West T-bar**	**3.75**	**246**	P	Pn	02 17 36.4	+0.6
MKAZ	**Moumakai**	**3.88**	**279**	P	Pn	02 17 36.7	-0.7
HIZ	**Hauiti**	**4.09**	**258**	P	Pn	02 17 40.6	+0.3
MBAZ	**Motutapu North**	**4.16**	**283**	P	Pn	02 17 40.9	-0.3
HOWZ	**Holdsworth Sta**	**4.64**	**227**	P	Pn	02 17 46.5	-1.3
CTZ	**Chatham Island**	**6.48**	**157**	P	Pn	02 18 16.2	+3.1
CTZ				S	Sn	02 19 23.4	-2.5

REY ***21*** *02:18:39.2, 64°.65N×17°.50W, h1km*
IDC ***21*** *02:18:40.8±0.8, 64°.58N×17°.52W, h0km, mb3.9/9, mb1 4.0/12, mb1mx3.7/42, mbtmp3.8/12, ML2.6/2, MS3.1/12, Ms1 3.2/12, ms1mx2.9/52, Error ellipse: s-maj=26.5km s-min=15.3km az=37.0*
MOS ***21*** *02:18:40.2±1.5, 64°.57N×17°.58W, h10km, mb4.6/21, Error ellipse: s-maj=14.8km s-min=8.5km az=111.4*
NEIC ***21*** *02:18:40.4±1.6, 64°.53N±0°.03×17°.7W±0°.1, h6km±4km, mb4.5/38, Error ellipse: s-maj=8.3km s-min=4.1km az=101.0*

ISC 21 02:18:40.4±0.8, 64°.67N±0°.02×17°.55W±0°.02, h2km±4km, n184, σ1‡97/177, mb4.4/51, MS3.1/7, 5C-7D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARD	**Bardarbunga**	**0.05**	**122**	P	**Pg**	**02 18 39.9**	**-1.5**
	baz=122						
IVON	**Vonarskard**	**0.09**	**274**	P	**Pg**	**02 18 42.2**	**+0.1**
	baz=280						
IVON				S	**Sg**	**02 18 44.4**	**+1.1**
	baz=280						
IDYN	**Dyngjuhals**	**0.15**	**32**	P	**Pg**	**02 18 43.0**	**-0.2**
	baz=23						
IDYN				S	**Sg**	**02 18 45.6**	**+0.4**
	baz=23						
IDJK	**Dyngjujokull**	**0.21**	**140**	P	**Pg**	**02 18 43.8**	**-0.6**
	baz=143						
IHAM	**Hamarinn**	**0.22**	**212**	P	**Pg**	**02 18 44.2**	**-0.5**
	baz=219						
IKVE	**Kverkfjoll**	**0.38**	**88**	P	**Pg**	**02 18 46.8**	**-0.8**
	baz=86						
IHUS	**Husbondi**	**0.38**	**187**	P	**Pg**	**02 18 46.7**	**-0.8**
	baz=191						
ISKR	**Skrokkalda**	**0.38**	**254**	P	**Pg**	**02 18 47.1**	**-0.5**
	baz=256						
IVOT	**Vottur**	**0.43**	**158**	P	**Pg**	**02 18 47.4**	**-1.2**
	baz=160						
IJOK	**Jokulheimar**	**0.46**	**220**	P	**Pg**	**02 18 48.3**	**-0.8**
	baz=223						
THOR	**Thorvaldshraun**	**0.46**	**54**	P	**Pg**	**02 18 48.1**	**-1.1**
	baz=51						
THOR				S	**Sg**	**02 18 55.0**	**-0.1**
	baz=51						
IKRE	**Kreppuhraun**	**0.51**	**76**	P	**Pg**	**02 18 48.7**	**-1.5**
	baz=74						
IASK	**Askja**	**0.55**	**45**	P	**Pg**	**02 18 49.4**	**-1.4**
	baz=42						
IMKO	**Mokollar**	**0.60**	**58**	P	**Pg**	**02 18 50.4**	**-1.5**
	baz=56						
IMKO				S	**Sg**	**02 18 59.4**	**-0.4**
	baz=56						
IIEY	**Innrieyrar**	**0.63**	**204**	P	**Pg**	**02 18 50.8**	**-1.5**
	baz=206						
ISVA	**Svartarkot**	**0.68**	**10**	P	**Pg**	**02 18 52.0**	**-1.4**
	baz=8.5						
IKSK	**Karasker**	**0.69**	**137**	P	**Pg**	**02 18 51.3**	**-2.2**
	baz=138						
IKAL	**Kalfafell**	**0.72**	**185**	P	**Pg**	**02 18 51.9**	**-2.3**
	baz=187						
IVAT	**Vatnsfell**	**0.77**	**232**	P	**Pg**	**02 18 53.5**	**-1.5**
	baz=233						
IVSH	**V-Sauoahnukur**	**0.79**	**79**	P	**Pg**	**02 18 53.4**	**-2.2**
	baz=78						
IFAG	**Fagurholsmyri**	**0.89**	**153**	P	**Pg**	**02 18 55.2**	**-2.1**
	baz=154						
IHVE	**Hveravellir**	**0.89**	**284**	P	**Pg**	**02 18 55.4**	**-2.0**
	baz=285						
IADA	**Aoalbol**	**0.91**	**66**	P	**Pg**	**02 18 55.3**	**-2.5**
	baz=65						
IMEL	**Melhnausar**	**0.98**	**22**	P	**Pg**	**02 18 56.8**	**-2.3**
	baz=21						
IREN	**Reynihlio**	**1.02**	**15**	P	**Pg**	**02 18 57.6**	**-2.3**
	baz=14						
ISNB	**Snabyli**	**1.05**	**207**	P	**Pg**	**02 18 58.0**	**-2.5**
	baz=209						
IKVO	**Krokottuvotn**	**1.09**	**15**	P	**Pg**	**02 18 58.6**	**-2.6**
	baz=14						
IGRS	**Grimsstaoir**	**1.15**	**31**	P	**Pg**	**02 18 59.6**	**-2.7**
	baz=30						
IRJU	**Rjupnafell**	**1.16**	**206**	P	**Pg**	**02 19 00.2**	**-2.4**
	baz=207						
IGYG	**Gygjarholskot**	**1.22**	**253**	P	**Pg**	**02 19 01.1**	**-2.6**
	baz=254						
ISKI	**Skildingahlsh**	**1.23**	**10**	P	**Pg**	**02 19 01.0**	**-2.8**
	baz=9.0						
IGHA	**Grjothals**	**1.24**	**17**	P	**Pg**	**02 19 01.1**	**-2.9**
	baz=16						
IGRA	**Granastaoir**	**1.26**	**359**	P	**Pg**	**02 19 01.4**	**-3.0**
	baz=358						
IDIM	**Dimmadalss**	**1.32**	**11**	P	**Pg**	**02 19 02.4**	**-3.3**
	baz=10.0						
IHLA	**Hella**	**1.33**	**345**	P	**Pg**	**02 19 02.9**	**-3.0**
	baz=344						
ISAU	**Saurbar**	**1.42**	**243**	P	**Pn**	**02 19 04.2**	**-3.0**
	baz=244						
IHED	**Heoinshofoi**	**1.42**	**4**	P	**Pn**	**02 19 03.9**	**-3.3**
	baz=3.1						
IMID	**Miomork**	**1.44**	**226**	P	**Pn**	**02 19 05.3**	**-2.1**
	baz=227						
IBRE	**Brettingsstaoi**	**1.47**	**354**	P	**Pn**	**02 19 04.8**	**-3.1**
	baz=354						
ISIG	**Siglufjorour**	**1.58**	**339**	P	**Pn**	**02 19 06.5**	**-2.8**
	baz=339						
BORG	**Borgarnes**	**1.62**	**275**	P	**Pn**	**02 19 07.6**	**-2.4**
BORG						02 19 30.5	
BORG	**Borgarnes**	**1.62**	**275**	Pn	**Pn**	**02 19 07.6**	**-2.4**
BORG				Sn	**Sn**	**02 19 30.4**	**-1.0**
IKRO	**Krokur**	**1.65**	**251**	P	**Pn**	**02 19 07.9**	**-2.5**
	baz=252						
ISOL	**Solvholt**	**1.66**	**245**	P	**Pn**	**02 19 07.9**	**-2.5**
	baz=246						
IHEI	**Heioarbar**	**1.67**	**255**	P	**Pn**	**02 19 08.1**	**-2.5**
	baz=256						
ILEI	**Leirhofn**	**1.80**	**14**	P	**Pn**	**02 19 09.9**	**-2.5**
	baz=13						
IHRN	**Hraun**	**1.81**	**325**	P	**Pn**	**02 19 09.9**	**-2.6**
	baz=324						
SCO	**Scoresbysund**	**6.08**	**346**	*e*	**Pn**	**02 20 07.5**	**-3.6**
	baz=166,slow=9.3						
SCO				*i* P	**Pn**	**02 20 10.9**	**-0.2**
SCO				*i* S	**Sn**	**02 21 23.6**	**+2.5**
SCO				IAML		02 21 33.3	
	comp=Z,1.6nm,0.5s						
JMIC	**Jan Mayen**	**7.20**	**24**	LR	LR	02 22 33.7	
	comp=Z,98nm,20.4s,baz=202,slow=32						
EKA	**Eskdalemuir Ar**	**11.78**	**136**	Pn	**Pn**	**02 21 29.3**	**+0.1**
	baz=319,slow=13,SNR=19						
ESK	**Eskdalemuir**	**11.78**	**136**	P	**Pn**	**02 21 29.7**	**+0.6**
ESK	**Eskdalemuir**	**11.78**	**136**		**Pn**	**02 21 29.7**	**+0.6**
DAG	**Danmarks Havn**	**12.17**	**359**	*e*P	Pn	02 21 42.2	+7.7
DAG	**Danmarks Havn**	**12.17**	**359**	*i* P	Pn	02 21 42.2	+7.7
DAG	**Danmarks Havn**	**12.17**	**359**	*e*P	Pn	02 21 42.2	+7.8
NC204	**NORSAR Array S**	**13.25**	**92**	Pn	**Pn**	**02 21 49.5**	**+0.2**
NBO00	**NORSAR Array S**	**13.37**	**93**	Pn	**Pn**	**02 21 50.1**	**-0.9**
NC303	**NORSAR Array S**	**13.54**	**91**	Pn	**Pn**	**02 21 52.2**	**-1.0**
NOA	**NORSAR Array B**	**13.55**	**92**	Pn	**Pn**	**02 21 51.0**	**-2.4**
	comp=Z,0.0nm,0.3s,baz=326,slow=18,SNR=2.2						
NOA				LR	LR	02 26 56.4	
	comp=Z,36nm,20.3s,baz=290,slow=37						
SFJD	**Kangerlussuaq**	**13.65**	**295**	LR	LR	02 25 52.4	
	comp=Z,150nm,18.4s,baz=62,slow=32						
HFS	**Hagfors**	**15.07**	**93**	Pn	**P**	**02 22 16.6**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=178,slow=40,SNR=5.1						
HFS				LR	LR	02 27 59.2	
	comp=Z,55nm,18.2s,baz=253,slow=37						
ARCES	**ARCESS Array B**	**17.14**	**55**	LR	LR	02 28 44.6	
	comp=Z,35nm,18.0s,baz=175,slow=35						
UCC	**Uccle**	**18.02**	**130**	P	**Pn**	**02 22 51.1**	**-0.5**
UCC				pmax	pmax		
	comp=Z,8.0nm,0.6s						
UCC	**Uccle**	**18.02**	**130**		**Pn**	**02 22 51.1**	**-0.5**
FINES	**FINESS Array B**	**19.73**	**79**	P	**P**	**02 23 10.7**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=317,slow=16,SNR=2.0						
FINES				LR	LR	02 29 31.0	
	comp=Z,38nm,21.3s,baz=325,slow=33						
NEUB	**Neuenburg**	**20.33**	**118**	*e*P	Pn	02 23 18.3	-1.2
	comp=Z,27nm,1.5s,baz=325,slow=10						
MOX	**Moxa**	**20.72**	**119**	*e*P	Pn	02 23 22.7	-1.4
	baz=325,slow=10						
CLL	**Collm**	**20.73**	**116**	*i* P	Pn	02 23 24.2	+0.1
	comp=Z,13nm,1.2s						
CLL				*e*S	**S**	**02 27 12.0**	**-1.6**
CLL	**Collm**	**20.73**	**116**	*i* P	Pn	02 23 24.2	+0.1
CLL				*e*S	**S**	**02 27 12.0**	**-1.6**
CLL				pmax	pmax		
	comp=Z,13nm,1.2s						
CLL	**Collm**	**20.73**	**116**	P	**P**	**02 23 21.7**	**0.0**
PLN	**Plauen**	**21.06**	**118**	*e*P	**P**	**02 23 25.9**	**+0.5**
	comp=Z,24nm,1.4s,baz=325,slow=10						
FBE	**Freiberg**	**21.17**	**116**	*e*P	**P**	**02 23 24.7**	**-1.8**
	comp=Z,16nm,1.1s,baz=325,slow=10						
ECH	**Echery**	**21.17**	**129**	P	**P**	**02 23 25.1**	**-1.6**
ECH				pmax	pmax		
	comp=Z,12nm,1.3s						
ECH	**Echery**	**21.17**	**129**	P	**P**	**02 23 25.1**	**-1.6**
GUNZ	**Gunzen**	**21.22**	**118**	*e*P	**P**	**02 23 27.9**	**+0.7**
	comp=Z,35nm,1.7s,baz=325,slow=10						
TANN	**Tannenbergstha**	**21.23**	**118**	*e*P	**P**	**02 23 27.7**	**+0.4**
	comp=Z,33nm,1.3s,baz=325,slow=10						
GRA1	**Grafenberg Arr**	**21.35**	**121**	P	**P**	**02 23 27.2**	**-1.4**
GRA1				IAmb	IAmb	02 23 43.7	
	comp=Z,19nm,1.2s						
GRF	**Grafenberg Arr**	**21.35**	**121**	P	**P**	**02 23 27.2**	**-1.4**
GRF				pmax	pmax		
	comp=Z,19nm,1.2s						
GRF	**Grafenberg Arr**	**21.35**	**121**	*e*P	**P**	**02 23 29.4**	**+0.8**
	comp=Z,79nm,2.2s,baz=325,slow=10						
NKC	**Novy Kostel**	**21.37**	**118**	*e*P	**P**	**02 23 32.5**	**+3.7**
NKC	**Novy Kostel**	**21.37**	**118**	*e*P	**P**	**02 23 32.5**	**+3.7**
STU	**Stuttgart**	**21.39**	**125**	P	**P**	**02 23 28.6**	**-0.4**
STU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STU	**Stuttgart**	**21.39**	**125**	P	**P**	**02 23 28.6**	**-0.4**
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P	**P**	**02 23 31.0**	**+1.6**
	comp=Z,15nm,1.5s						
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P	**P**	**02 23 31.0**	**+1.6**
BRG				pmax	pmax		
	comp=Z,15nm,1.5s						
BRG	**Berggiesshubel**	**21.43**	**115**	*e*P	**P**	**02 23 30.0**	**+0.6**
	comp=Z,37nm,1.8s,baz=325,slow=10						
MANZ	**Manzenberg**	**21.44**	**119**	*e*P	**P**	**02 23 30.1**	**+0.6**
	comp=Z,21nm,1.6s,baz=325,slow=10						
BFO	**Black Forest**	**21.47**	**127**	IAmb	IAmb	02 23 43.1	
	comp=Z,37nm,1.8s						
VSU	**Vasula**	**21.59**	**86**	*e*P	**P**	**02 23 33.0**	**+2.0**
VSU				pmax	pmax		
	comp=Z,23nm,0.8s						
PRU	**Pruhonice**	**22.37**	**116**	*e*P	**P**	**02 23 45.7**	**+6.2**
PRU	**Pruhonice**	**22.37**	**116**	*e*P	**P**	**02 23 45.7**	**+6.2**
CHVC	**Chvalec**	**22.49**	**113**	*e*P	**P**	**02 23 42.3**	**+1.5**
OSTC	**Ostas**	**22.58**	**113**	*e*P	**P**

	comp=Z,0.9nm,0.8s,baz=351,slow=9.0,SNR=7.4							
ESDC					LR	LR	02 33 41.8	
	comp=Z,36nm,19.6s,baz=205,slow=34							
ESDC	**Sonseca Array**	**26.26**	**156**		P	**P**	**02 24 15.0**	**-1.8**
KOLS	**Kolonicke sedl**	**26.30**	**108**	*eP*		**P**	**02 24 19.1**	**+2.1**
KOLS	**Kolonicke sedl**	**26.30**	**108**	*eP*		**P**	**02 24 19.1**	**+2.1**
RES	**Resolute Bay**	**26.45**	**324**		LR	LR	02 35 14.3	
	comp=Z,52nm,18.8s,baz=94,slow=38							
AKASG	**Malin Array Be**	**27.86**	**98**		P	**P**	**02 24 30.6**	**-0.4**
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.9s							
AKASG	**Malin Array Be**	**27.86**	**98**		P	**P**	**02 24 30.6**	**-0.4**
OBN	**Obninsk**	**27.90**	**84**⇑	*eP*		**P**	**02 24 31.1**	**-0.2**
OBN					pmax	pmax		
	comp=Z,15nm,1.7s							
OBN					MLR	MLR		
	comp=Z,29nm,13.0s							
KIRV	**Kirov**	**31.00**	**69**⇓	*eP*		**P**	**02 24 59.3**	**+0.6**
PMOZ	**Porto Moniz, M**	**31.87**	**179**		P	**P**	**02 25 04.4**	**-2.3**
NRIK	**Noril'sk**	**36.47**	**35**⇓	*eP*		**P**	**02 25 49.6**	**+3.5**
NRIK					pmax	pmax		
	comp=Z,5.0nm,1.4s							
BRTR	**Keskin Array B**	**38.50**	**105**		P	**P**	**02 26 03.0**	**-0.8**
BRTR	**Keskin Array B**	**38.50**	**105**		P	**P**	**02 26 03.0**	**-0.8**
KIV	**Kislovodsk**	**38.86**	**92**	*eP*		**P**	**02 26 08.7**	**+1.9**
KIV					pmax	pmax		
	comp=Z,15nm,1.0s							
KBZ	**Khabaz**	**39.14**	**92**⇑	*eP*		**P**	**02 26 10.9**	**+2.0**
KBZ					pmax	pmax		
	comp=Z,4.0nm,1.2s							
PSUB	**Penn St. - Bra**	**41.16**	**262**		P	**P**	**02 26 24.4**	**-1.3**
ABKAR	**Akbulak array**	**42.01**	**73**		P	**P**	**02 26 33.5**	**+0.9**
TIXI	**Tiksi**	**42.04**	**15**⇑	*eP*		**P**	**02 26 34.7**	**+2.2**
TIXI					pmax	pmax		
	comp=Z,35nm,1.3s							
TIXI	**Tiksi**	**42.04**	**15**		P	**P**	**02 26 33.5**	**+0.9**
TIXI					IAmb	IAmb	02 26 38.0	
	comp=Z,24nm,1.8s							
GNI	**Garni**	**42.85**	**94**		LR	LR	02 45 09.3	
	comp=Z,23nm,18.3s,baz=23,slow=37							
BMAR	**Burnt Mountain**	**42.88**	**333**		P	**P**	**02 26 41.7**	**+2.2**
BRVK	**Borovoye**	**43.15**	**62**⇓	*eP*		**P**	**02 26 42.4**	**+0.6**
BRVK					pmax	pmax		
	comp=Z,3.0nm,1.2s							
IL31		**45.67**	**332**		P	**P**	**02 27 02.5**	**+0.7**
ILAR	**Eielson Array**	**45.67**	**332**		P	**P**	**02 27 04.2**	**+2.3**
	comp=Z,3.0nm,1.1s,baz=31,slow=5.5,SNR=13							
ILAR					PcP	**PcP**	**02 28 38.5**	**-1.2**
	comp=Z,1.1nm,1.1s,baz=26,slow=2.6,SNR=4.4							
ILAR	**Eielson Array**	**45.67**	**332**		P	**P**	**02 27 01.3**	**-0.6**
COLA	**College**	**45.77**	**333**⇓	*eP*		**P**	**02 27 05.3**	**+2.7**
COLA					pmax	pmax		
	comp=Z,20nm,3.0s							
IMAR	**Indian Mountai**	**45.85**	**337**		P	**P**	**02 27 02.6**	**-0.6**
DOT	**Dot Lake**	**46.08**	**330**		P	**P**	**02 27 04.8**	**-0.3**
BCAR	**Beaver Creek A**	**46.09**	**328**		P	**P**	**02 27 07.0**	**+1.7**
BILL	**Bilibino**	**47.55**	**358**⇓	*eP*		**P**	**02 27 13.3**	**-3.2**
BILL					pmax	pmax		
	comp=Z,20nm,1.6s							
ZAA0	**Zalesovo Array**	**47.65**	**51**		P	**P**	**02 27 18.3**	**+0.9**
ZAA0					IAmb	IAmb	02 27 20.7	
	comp=Z,3.3nm,1.1s							
ZALV	**Zalesovo Beam**	**47.65**	**51**		P	**P**	**02 27 18.9**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=335,slow=6.7,SNR=4.5							
ZALV	**Zalesovo Beam**	**47.65**	**51**		P	**P**	**02 27 16.8**	**-0.7**
ZALV						**sP**	**02 27 20.0**	**+1.3**
KURK	**Kurchatov**	**48.13**	**58**⇓	*eP*		**P**	**02 27 21.3**	**+0.1**
KURK					pmax	pmax		
	comp=Z,5.0nm,1.3s							
KURK	**Kurchatov**	**48.13**	**58**		P	**P**	**02 27 20.9**	**-0.3**
KURK					IAmb	IAmb	02 27 26.1	
	comp=Z,4.7nm,1.1s							
JSC	**Jenkinsville**	**48.40**	**263**		P	**P**	**02 27 23.6**	**+0.1**
JSC					pmax	pmax		
	comp=Z,21nm,1.0s							
JSC	**Jenkinsville**	**48.40**	**263**		P	**P**	**02 27 23.6**	**+0.1**
EGMT	**Eagleton**	**48.85**	**297**		P	**P**	**02 27 26.4**	**-0.6**
LPAR	**Lepanto**	**51.16**	**272**		P	**P**	**02 27 43.0**	**-1.5**
YAK	**Yakutsk**	**51.28**	**19**⇓	*eP*		**P**	**02 27 46.7**	**+1.7**
YAK					pmax	pmax		
	comp=Z,13nm,0.5s							
TORD	**Torodi Ar. Bea**	**53.15**	**156**		P	**P**	**02 27 59.1**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=341,slow=9.3,SNR=6.1							
TORD	**Torodi Ar. Bea**	**53.15**	**156**		P	**P**	**02 27 57.7**	**-1.8**
BW06	**Boulder Array**	**53.16**	**293**		P	**P**	**02 27 59.9**	**+0.3**
BW06					IAmb	IAmb	02 28 02.6	
	comp=Z,5.2nm,1.1s							
PD31	**Pinedale Array**	**53.16**	**293**		P	**P**	**02 27 59.7**	**+0.1**
PD31					IAmb	IAmb	02 28 02.6	
	comp=Z,5.2nm,1.1s							
PDAR	**Pinedale Array**	**53.16**	**293**		P	**P**	**02 27 59.7**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=52,slow=5.8,SNR=12							
PDAR	**Pinedale Array**	**53.16**	**293**		P	**P**	**02 27 58.8**	**-0.8**
AAK	**Ala-Archa**	**53.28**	**67**⇑	*eP*		**P**	**02 28 00.5**	**+0.1**
AAK					pmax	pmax		
	comp=Z,20nm,1.5s							
BTK	**Batken**	**53.98**	**72**		P	**P**	**02 28 05.6**	**+0.1**
BTK					pmax	pmax		
	comp=Z,22nm,1.7s							
BTK	**Batken**	**53.98**	**72**		P	**P**	**02 28 05.6**	**+0.1**
CHGR	**Chuyangaron**	**54.48**	**74**		P	**P**	**02 28 09.2**	**+0.1**
GAR	**Garm**	**54.67**	**73**		P	**P**	**02 28 1.4**	**-0.1**
HRA	**Herat**	**55.21**	**82**		P	**P**	**02 28 13.8**	**-0.9**
HRA					IAmb	IAmb	02 28 21.5	
	comp=Z,7.5nm,1.6s							
WMQ	**Urumqi**	**57.25**	**56**	*eP*		**P**	**02 28 31.8**	**+2.9**
MSTX	**Muleshoe**	**57.87**	**282**		P	**P**	**02 28 32.7**	**-0.7**
MSTX					IAmb	IAmb	02 28 57.3	
	comp=Z,12nm,1.4s							
DBIC	**Dimbokro**	**58.60**	**165**		P	**P**	**02 28 38.6**	**+0.1**
	comp=Z,5.1nm,1.0s,baz=208,slow=3.7,SNR=3.1							
ZEA	**Zeya**	**58.85**	**24**	*eP*		P	02 28 33.1	-6.7
ZEA					pmax	pmax		
	comp=Z,10.0nm,1.1s							
LENM	**Lemitar**	**59.46**	**286**		P	**P**	**02 28 43.6**	**-0.9**
NVAR	**Mina Array Bea**	**60.28**	**297**		LR	LR	02 55 08.3	
	comp=Z,91nm,19.2s,baz=14,slow=36							
NIL	**Nilore**	**60.47**	**73**		P	**P**	**02 28 51.6**	**+0.3**
NIL					pmax	pmax		
	comp=Z,9.0nm,1.2s							
NIL	**Nilore**	**60.47**	**73**		P	**P**	**02 28 51.6**	**+0.3**
X16A	**Lo Mia Camp, P**	**61.07**	**290**		IAmb	IAmb	02 28 59.8	
	comp=Z,3.8nm,1.1s							
TXAR	**Lajitas Array**	**62.26**	**280**		P	**P**	**02 29 05.2**	**+1.6**
	comp=Z,1.1nm,1.0s,baz=347,slow=9.0,SNR=5.4							
HHC	**Hu-ho-hao-te**	**67.52**	**40**	*eP*		**P**	**02 29 40.6**	**+2.9**
HHC					pmax	pmax		
	comp=Z,16nm,1.1s							
HHC					pmax	pmax		
	comp=Z,77nm,5.4s							
BJT	**Baijiatuan**	**69.52**	**36**		P	**P**	**02 29 51.8**	**+1.7**
BJT					pmax	pmax		
	comp=Z,6.0nm,0.6s							
BJT	**Baijiatuan**	**69.52**	**36**		P	**P**	**02 29 51.8**	**+1.7**
LZH	**Lanzhou**	**69.64**	**48**	*eP*		**P**	**02 29 50.0**	**-1.1**
LZH					pP	sP	02 29 52.1	-0.3
LZH					sP	pP	02 29 53.3	+1.3
LZH					*e*PP	**PP**	**02 32 26.5**	**+2.1**
LZH					pmax	pmax		
	comp=Z,26nm,1.3s							
LZH					pmax	pmax		
	comp=Z,130nm,7.0s							
JTS	**Las Juntas de**	**71.16**	**254**		LR	LR	03 00 01.4	
	comp=Z,24nm,19.7s,baz=146,slow=35							

*IDC **21** 02:26:48.2±2.9, 37.°02S×179.°30E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/35, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=74.6km s-min=31.7km az=138.0*
*WEL **21** 02:26:49.0±0.7, 38.°5±6.°×18.°0E±.°, h33km, M4.1/59, ML4.4/25, MLv4.1/59, Error ellipse: s-maj=0.0km s-min=0.0km az=14.0*

ISC 21 02:26:45.9±3.5, 37.°68S±0.°07×179.°96E±0.°07, h11km±21km, n73, σ1°04/92, mb3.8/3, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.23**	**263**	P	**Pn**	**02 27 09.0**	**0.0**
WMGZ				S	**Sn**	**02 27 26.2**	**+0.6**
MXZ	**Matakaoa Point**	**1.32**	**275**	P	**Pn**	**02 27 09.5**	**-0.7**
MXZ				S	**Sn**	**02 27 27.0**	**-0.8**
PUZ	**Puketiti**	**1.40**	**254**	P	**Pn**	**02 27 11.5**	**+0.1**
PUZ				S	**Sb**	**02 27 30.2**	**+0.2**
CNGZ	**Carnagh Statio**	**1.60**	**240**	P	**Pb**	**02 27 15.4**	**0.0**
TWGZ	**Tauwhareparae**	**1.64**	**252**	P	**Pn**	**02 27 15.4**	**+0.7**
TWGZ				S	**Sn**	**02 27 36.0**	**+0.2**
HAZ	**Te Kaha**	**1.73**	**267**	P	**Pn**	**02 27 16.1**	**+0.3**
HAZ				S	**Sn**	**02 27 36.7**	**-1.2**
RUGZ	**Raukumara Rang**	**1.83**	**261**	P	**Pn**	**02 27 17.4**	**+0.1**
TKGZ	**Te Karaka**	**1.83**	**245**	P	**Pb**	**02 27 19.2**	**-0.1**
TKGZ				S	**Sn**	**02 27 40.2**	**-0.2**
RIGZ	**Rimuhau**	**2.01**	**239**	P	**Pn**	**02 27 20.6**	**+0.8**
RIGZ				S	**Sn**	**02 27 45.5**	**+0.5**
MWZ	**Matawai**	**2.03**	**251**	P	**Pn**	**02 27 19.9**	**-0.1**
MWZ				S	**Sn**	**02 27 44.4**	**-1.0**
PRGZ	**Paritu Road**	**2.05**	**232**	P	**Pn**	**02 27 21.0**	**+0.7**
RAGZ	**Rawiri**	**2.17**	**247**	P	**Pn**	**02 27 23.3**	**+1.3**
RAGZ				S	**Sn**	**02 27 47.8**	**-1.1**
MHGZ	**Mahia Peninsul**	**2.18**	**227**	P	**Pn**	**02 27 22.8**	**+0.7**
MHGZ				S	**Sn**	**02 27 50.2**	**+1.1**
KNZ	**Kokohu**	**2.24**	**233**	P	**Pn**	**02 27 23.0**	**+0.2**
KNZ				S	**Sn**	**02 27 50.2**	**-0.3**
URZ	**Urewera**	**2.33**	**255**	Pn	**Pn**	**02 27 24.8**	**+0.8**
	29nm,0.3s,baz=37,slow=1.8,SNR=96						
URZ				Sn	**Sn**	**02 27 51.8**	**-0.8**
	80nm,0.3s,baz=261,slow=12,SNR=6.8						
URZ	**Urewera**	**2.33**	**255**	P	**Pn**	**02 27 24.9**	**+0.8**
URZ				S	**Sn**	**02 27 51.3**	**-1.3**
SNGZ	**Shannon Statio**	**2.34**	**241**	P	**Pn**	**02 27 25.0**	**+0.7**
SNGZ				S	**Sn**	**02 27 52.1**	**-0.9**
WHRZ	**Whale Island**	**2.37**	**265**	P	**Pn**	**02 27 25.3**	**+0.6**
RTZ	**Ruatahuna**	**2.53**	**248**	P	**Pn**	**02 27 27.9**	**+1.0**
RTZ				S	**Sn**	**02 27 57.6**	**-0.1**
WHHZ	**Waihua**	**2.56**	**236**	P	**Pn**	**02 27 27.8**	**+0.6**
WHHZ				S	**Sn**	**02 27 59.3**	**+1.1**
RAHZ	**Arahi**	**2.58**	**241**	P	**Pn**	**02 27 28.4**	**+0.9**
RAHZ				S	**Sn**	**02 27 58.5**	**-0.3**
MUGZ	**Murupara**	**2.64**	**252**	P	**Pn**	**02 27 28.9**	**+0.5**
MUGZ				S	**Sn**	**02 27 58.8**	**-1.7**
OPRZ	**Ohinepanea**	**2.71**	**266**	P	**Pn**	**02 27 28.9**	**-0.3**
MTHZ	**Maungataniwha**	**2.72**	**244**	P	**Pn**	**02 27 30.2**	**+0.7**
TARZ	**Mount Tarawera**	**2.79**	**258**	P	**Pn**	**02 27 31.2**	**+0.7**
RRRZ	**Republican Roa**	**2.80**	**255**	P	**Pn**	**02 27 32.4**	**+1.8**
ARHZ	**Aropaoanui**	**2.81**	**235**	P	**Pn**	**02 27 31.8**	**+1.1**
NMHZ	**Naumai**	**2.85**	**239**	P	**Pn**	**02 27 32.3**	**+0.9**
KARZ	**Kaharoa**	**2.96**	**262**	P	**Pn**	**02 27 33.2**	**+0.3**
ALRZ	**Allen Road**	**2.99**	**252**	P	**Pn**	**02 27 33.7**	**+0.6**
CKHZ	**Cape Kidnapper**	**3.00**	**228**	P	**Pn**	**02 27 33.0**	**-0.2**
BKZ	**Black Stump Fm**	**3.10**	**240**	P	**Pn**	**02 27 35.2**	**+0.4**
MCHZ	**McNeill Hill**	**3.10**	**235**	P	**Pn**	**02 27 35.1**	**+0.3**
KAHZ	**Kahuranaki**	**3.20**	**228**	P	**Pn**	**02 27 36.5**	**+0.3**
KWHZ	**Kaweka Forest**	**3.27**	**237**	P	**Pn**	**02 27 37.7**	**+0.5**
KRHZ	**Kereru**	**3.43**	**234**	P	**Pn**	**02 27 39.4**	**+0.2**
RITZ	**Rihia Road**	**3.48**	**247**	P	**Pn**	**02 27 42.3**	**+2.4**
KUZ	**Kuaotunu**	**3.51**	**284**	P	**Pn**	**02 27 39.1**	**-1.2**
TOZ	**Tahuroa Road**	**3.54**	**268**	P	**Pn**	**02 27 40.4**	**-0.3**
BHHZ	**Black Hill Sta**	**3.55**	**238**	P	**Pn**	**02 27 41.2**	**+0.3**
WPHZ	**Waipukurau**	**3.63**	**228**	P	**Pn**	**02 27 41.8**	**-0.2**
TMVZ	**Te Maari**	**3.64**	**246**	P	**Pn**	**02 27 42.6**	**+0.4**
ETVZ	**East Tongariro**	**3.64**	**245**	P	**Pn**	**02 27 42.7**	**+0.5**
PNHZ	**Pukenui**	**3.69**	**232**	P	**Pn**	**02 27 42.4**	**-0.4**
MOVZ	**Moawhango**	**3.72**	**241**	P	**Pn**	**02 27 43.9**	**+0.6**
NGZ	**Ngauruhoe**	**3.73**	**245**	P	**Pn**	**02 27 44.3**	**+0.7**
WHVZ	**Whangaehu Hut**	**3.79**	**244**	P	**Pn**	**02 27 45.9**	**+1.5**
WNVZ	**Wahianoa**	**3.80**	**243**	P	**Pn**	**02 27 45.0**	**+0.6**
FWVZ	**Far West T-bar**	**3.80**	**244**	P	**Pn**	**02 27 44.7**	**+0.2**
MKAZ	**Moumakai**	**3.87**	**277**	P	**Pn**	**02 27 44.9**	**-0.3**
TSZ	**Takapari Road**	**3.92**	**232**	P	**Pn**	**02 27 45.6**	**-0.4**
DVHZ	**Daimevirke**	**3.94**	**227**	P	**Pn**	**02 27 45.6**	**-0.7**
HIZ	**Hauiti**	**4.11**	**257**	P	**Pn**	**02 27 49.6**	**+0.9**
MBAZ	**Motutapu North**	**4.14**	**281**	P	**Pn**	**02 27 49.4**	**+0.4**
BFZ	**Birch Farm**	**4.16**	**223**	P	**Pn**	**02 27 47.6**	**-1.7**
PRWZ	**Pori Road**	**4.22**	**226**	P	**Pn**	**02 27 49.8**	**-0.4**
POWZ	**Post Office Ro**	**4.24**	**229**	P	**Pn**	**02 27 50.8**	**+0.4**
WAZ	**Wanganui**	**4.41**	**241**	P	**Pn**	**02 27 55.2**	**+2.5**
MRZ	**Mangatainoka R**	**4.52**	**228**	P	**Pn**	**02 27 53.2**	**-1.0**
HOWZ	**Holdsworth Sta**	**4.71**	**226**	P	**Pn**	**02 27 55.2**	**-1.7**
WCZ	**Waipu Caves**	**4.83**	**289**	P	**Pn**	**02 27 58.6**	**+0.1**
OGWZ	**Otaki Gorge**	**4.86**	**228**	P	**Pn**	**02 27 57.5**	**-1.3**
PKE	**Pukeiti**	**4.93**	**250**	P	**Pn**	**02 28 02.3**	**+2.4**
KHEZ	**Kahui Hut**	**4.94**	**249**	P	**Pn**	**02 28 02.4**	**+2.4**
TCW	**Tory Channel**	**5.64**	**230**	P	**Pn**	**02 28 08.2**	**-1.3**
OUZ	**Omahuta**	**5.69**	**294**	P	**Pn**	**02 28 10.9**	**+0.6**
QRZ	**Quartz Range**	**6.57**	**239**	P	**Pn**	**02 28 20.6**	**-1.7**
CTZ	**Chatham Island**	**6.58**	**158**	P	**Pn**	**02 28 35.9**	**+3.0**
CTZ				S	**Sn**	**02 29 36.1**	**-1.3**
ASAR	**Alice Springs**	**41.60**	**276**	P	**P**	**02 34 33.5**	**-0.5**
	1.8nm,0.9s,baz=119,slow=6.8,SNR=13						
WRA	**Warramunga Arr**	**43.25**	**281**	P	**P**	**02 34 46.2**	**-1.2**
	0.8nm,0.4s,baz=120,slow=7.7,SNR=12						
FITZ	**Fitzroy Crossi**	**51.09**	**277**	P	**P**	**02 35 47.7**	**-0.9**
	0.9nm,0.7s,baz=169,slow=8.6,SNR=5.0						
ARCES	**ARCESS Array B**	**145.25**	**345**	PKP	**PKPdf**	**02 46 23.4**	**+1.0**
	2.2nm,0.8s,baz=62,slow=2.1,SNR=1.9						
FINES	**FINESS Array B**	**151.18**	**334**	PKPbc	**PKiKP**	**02 46 40.7**	**+2.0**
	1.9nm,0.9s,baz=27,slow=4.7,SNR=3.6						

*IDC **21** 02:29:45.6±1.1, 0.°77S×127.°47E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.6/45, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=36.2km s-min=20.3km az=54.0*
*DJA **21** 02:29:49.5±0.5, 1.°5S×2.°1×127.°7E±.°, h13km±4km, M4.1/13, mB4.8/2, mb4.6/3, MLv3.9/13, Mw(mB)4.1/2*
*NEIC **21** 02:29:50.4±2.1, 0.°83S±0.°09×127.°43E±0.°08, h40km±10km, mb4.1/5, Error ellipse: s-maj=13.5km s-min=9.8km az=211.0*

ISC 21 02:29:47.5±0.7, 0.°84S±0.°04×127.°54E±0.°05, h10km, n26, σ1°66/35, mb4.2/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**0.20**	**350**	P	**Pg**	**02 29 52.4**	**+0.7**
LBMI				Pg	**Pg**	**02 29 52.3**	**+0.6**
LBMI				Sg	**Sg**	**02 29 54.9**	**+0.3**
LBMI				S	**Sg**	**02 29 55.1**	**+0.5**
TNTI	**Ternate**	**1.61**	**354**	P	**Pn**	**02 30 16.1**	**+0.2**
TNTI				S	**Sn**	**02 30 36.8**	**0.0**
TNTI	**Ternate**	**1.61**	**354**		**Pn**	**02 30 16.4**	**+0.5**
NLAI	**Namlea**	**2.42**	**190**	P	**Pn**	**02 30 28.5**	**+1.3**
NLAI				S	**Sb**	**02 31 00.7**	**-0.4**
MSAI	**Masohi**	**2.85**	**151**	P	**Pb**	**02 30 37.8**	**-0.7**
MSAI				S	**Sb**	**02 31 12.4**	**-1.1**
AAI	**Ambon**	**2.91**	**167**	P	**Pb**	**02 30 38.2**	**-1.2**
SIJI	**Sorong**	**3.73**	**90**	Pn	**Pn**	**02 30 46.6**	**+1.5**
	11nm,0.3s,baz=278,slow=9.5,SNR=13						
SIJI				Sn	**Sn**	**02 31 31.7**	**+2.5**
	2.3nm,0.3s,baz=217,slow=20,SNR=2.6						
KMSI	**Cibinong**	**3.82**	**292**	P	**Pn**	**02 30 48.0**	**+1.6**
KMSI				S	**Sn**	**02 31 29.9**	**-1.5**
GTOI	**Gorontalo**	**4.76**	**288**	P	Pn	02 31 03.7	+4.4
GTOI				S	**Sn**	**02 31 59.7**	**+5.2**
LUWI	**Luwuk**	**4.77**	**268**	P	**Pn**	**02 30 58.7**	**-0.7**
LUWI				S	**Sn**	**02 31 55.5**	**+0.7**
LUWI	**Luwuk**	**4.77**	**268**	Pn	**Pn**	**02 30 57.6**	**-1.8**
SGSI	**Sangihe**	**4.92**	**336**	P	**Pn**	**02 31 03.1**	**+1.5**
FAKI	**Fak Fak**	**5.14**	**114**	P	**Pn**	**02 31 06.5**	**+1.9**
	0.1nm19nm,0.9s						
FAKI	**Fak Fak**	**5.14**	**114**		**Pn**	**02 31 05.2**	**+0.6**
APSI	**Ampana**	**5.89**	**269**	P	**Pn**	**02 31 16.0**	**+1.2**
	0.2nm660nm40nm,0.5s						
APSI				S	**Sn**	**02 32 21.7**	**-0.7**
	0.2nm660nm40nm,0.5s						
TOLI2	**Tolitoli**	**7.03**	**286**	Pn	**Pn**	**02 31 29.4**	**-1.1**
SPSI	**Sidrap Palu**	**8.36**	**248**	P	**Pn**	**02 31 52.0**	**+3.2**
SOEI	**Soe**	**9.44**	**200**	P	Pn	02 31 49.0	-15
WB0	**Warramunga Arr**	**19.97**	**161**	P	**P**	**02 34 18.9**	**-1.2**
WB0				IAmb	IAmb	02 34 25.2	
	comp=Z,3.6nm,0.9s						
WRA	**Warramunga Arr**	**20.12**	**161**	P	**P**	**02 34 21.9**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=343,slow=12,SNR=18						
AS31	**Alice Springs**	**23.52**	**165**	P	**P**	**02 34 58.4**	**+0.5**
ASAR	**Alice Springs**	**23.52**	**165**	P	**P**	**02 34 58.5**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=343,slow=11,SNR=28						
MK31	**Makanchi Array**	**61.76**	**326**	P	**P**	**02 40 03.9**	**-2.5**
MK31				IAmb	IAmb	02 41 29.7	
	comp=Z,4.2nm,1.2s						
MKAR	**Makanchi Array**	**61.76**	**326**	P	**P**	**02 40 06.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=114,slow=7.7,SNR=14						
KURBB	**Kurchatov Arra**	**66.01**	**328**	P	**P**	**02 40 32.1**	**-2.1**
	comp=Z,0.7nm,0.2s,baz=126,slow=6.1,SNR=5.0						
KURK	**Kurchatov**	**66.01**	**328**	P	**P**	**02 40 32.1**	**-2.1**

*IDC **21** 02:34:19.0±5.3, 36.°37N×71.°35E, h161km±51km, mb3.4/4, mb1 3.3/10, mb1mx3.0/37, mbtmp3.8/10, Error ellipse: s-maj=57.4km s-min=37.6km az=128.0*
*NNC **21** 02:34:26.1±8.2, 37.°07N×71.°14E, h164km±95km, mb2.9, mpv3.7, Error ellipse: s-maj=69.3km s-min=44.2km az=20.0*

ISC 21 02:34:21.1±1.5, 36.°8N±0.°1×71.°1E±0.°1, h150km, n15, σ1°42/20, mb3.6/4, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.35**	**356**	⇓P	**Pn**	**02 35 54.6**	**+2.1**
	2.2nm,0.2s,baz=173,slow=12,SNR=128						
KK31				⇑S	**Sn**	**02 37 03.3**	**-0.7**
	9.2nm,0.6s,baz=181,slow=22,SNR=14						
AAK	**Ala-Archa**	**6.42**	**23**	P	**Pn**	**02 35 55.0**	**+1.5**
	2.2nm,0.3s,baz=184,slow=5.7,SNR=23						
AAK				S	**Sn**	**02 37 04.2**	**-1.7**
	0.9nm,0.3s,baz=149,slow=21,SNR=11						
TKM2	**Tokmak 2**	**7.05**	**28**	⇓P	**Pn**	**02 36 03.0**	**+1.0**
	4.5nm,1.1s						
TKM2				⇓S	**Sn**	**02 37 18.5**	**-2.6**
	12nm,1.1s						
MKAR	**Makanchi Array**	**13.03**	**36**	P	**Pn**	**02 37 22.4**	**+1.9**
	0.1nm,0.3s,baz=216,slow=8.9,SNR=5.8						
KURBB	**Kurchatov Arra**	**14.85**	**19**	P	**P**	**02 37 45.6**	**+0.2**
	0.1nm,0.3s,baz=208,slow=11,SNR=4.4						
AB31	**Akbulak array**	**14.90**	**330**	⇑P	**Pn**	**02 37 44.5**	**+0.4**
	0.6nm,0.6s,baz=147,slow=13,SNR=15						
AB31				⇑S	**Sn**	**02 40 28.9**	**-0.5**
	0.3nm,0.4s,baz=159,slow=22,SNR=6.0						
BVAR	**Borovoye Array**	**16.27**	**358**	P	**Pn**	**02 38 00.9**	**0.0**
	0.3nm,0.3s,baz=111,slow=8.1,SNR=3.5						
AKTO	**Aktyubinsk**	**16.60**	**330**	P	**Pn**	**02 38 07.2**	**+2.3**
	0.5nm,0.3s,baz=131,slow=11,SNR=8.0						
AKTO	**Aktyubinsk**	**16.60**	**330**	⇑P	**Pn**	**02 38 06.0**	**+1.1**
	4.4nm,1.1s						
AKTO				⇑S	**S**	**02 41 08.5**	**-0.8**
	2.5nm,1.1s						
ZALV	**Zalesovo Beam**	**19.64**	**25**	P	**P**	**02 38 37.3**	**-0.6**
	0.3nm,0.3s,baz=214,slow=9.5,SNR=3.3						
FINES	**FINESS Array B**	**37.32**	**326**	P	**P**	**02 41 18.8**	**+0.4**
	2.7nm,1.1s,baz=133,slow=13,SNR=3.5						
ARCES	**ARCESS Array B**	**40.94**	**337**	P	**P**	**02 41 48.9**	**+0.5**
	4.1nm,0.9s,baz=121,slow=9.6,SNR=3.6						
NB2	**NORSAR Subarra**	**44.23**	**323**	P	**P**	**02 42 15.2**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.23**	**323**	P	**P**	**02 42 15.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=96,slow=7.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**65.81**	**269**	P	**P**	**02 44 48.4**	**-2.2**
	comp=Z,0.2nm,0.5s,baz=50,slow=6.2,SNR=4.1						

*IDC **21** 03:02:08.2±1.9, 38.°49N×142.°73E, h26km±6km, mb3.7/5, mb1 3.7/7, mb1mx3.4/67, mbtmp3.7/7, ML2.8/2, MS2.7/2, Ms1 2.7/2, ms1mx2.3/56, Error ellipse: s-maj=46.9km s-min=19.8km az=78.0*
*NIED **21** 03:02:09.5, 38.°43N×142.°18E, h30km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.92; $M_{\

ASAR	**Alice Springs**	**16.92**	**162**	P	**P**	**03 08 40.2**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=340,slow=9.6,SNR=9.4						
ASAR				S	**Sn**	**03 11 45.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=342,slow=26,SNR=5.5						
ASAR	**Alice Springs**	**16.92**	**162**	P	**Pn**	**03 08 35.8**	**-2.0**
NWAO	**Narrogin (SRO)**	**27.27**	**201**	P	**P**	**03 10 22.6**	**+0.5**
NIL	**Nilore**	**66.29**	**312**	P	**P**	**03 15 23.6**	**-1.4**
MKAR	**Makanchi Array**	**67.76**	**328**	P	**P**	**03 15 34.6**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=136,slow=7.7,SNR=6.6						
ZAA0	**Zalesovo Array**	**71.33**	**335**	P	**P**	**03 15 55.6**	**-0.2**
ZAA0				IAmb	IAmb	03 16 39.8	
	comp=Z,8.3nm,1.8s						
ZALV	**Zalesovo Beam**	**71.33**	**335**	P	**P**	**03 15 55.1**	**-0.6**
KURBB	**Kurchatov Arra**	**72.09**	**329**	P	**P**	**03 16 01.2**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=136,slow=5.3,SNR=3.7						
KURK	**Kurchatov**	**72.10**	**329**	P	**P**	**03 16 01.2**	**+0.7**
KURK	**Kurchatov**	**72.10**	**329**	IAmb	IAmb	03 16 10.6	
	comp=Z,18nm,2.0s						
BVAR	**Borovoye Array**	**77.62**	**328**	P	**P**	**03 16 32.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=227,slow=30,SNR=7.2						

WEL 21 03:11:02.9±1.2,**36°S**±10°×**18°0E**±1°2,**h152**km±21km,
M3.8/18,**ML4.0**/12,**MLv3.8**/18,**Error ellipse:**
s-maj=0.0km s-min=0.0km az=52.6,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.28**	**210**	P	Pn	03 11 40.6	-0.8
MXZ				S	Sn	03 12 10.7	-0.4
WMGZ	**Waiomatatini S**	**2.46**	**205**	P	Pn	03 11 43.8	+0.2
WMGZ				S	Sn	03 12 17.1	+1.9
HAZ	**Te Kaha**	**2.67**	**215**	P	Pn	03 11 46.1	-0.1
HAZ				S	Sn	03 12 18.9	-0.7
PUZ	**Puketiti**	**2.75**	**205**	P	Pn	03 11 46.9	-0.2
PUZ				S	Sn	03 12 21.8	+0.4
RUGZ	**Raukumara Rang**	**2.89**	**214**	P	Pn	03 11 48.7	-0.3
RUGZ				S	Sn	03 12 26.0	+1.3
TWGZ	**Tauwhareparae**	**2.94**	**208**	P	Pn	03 11 49.7	+0.1
CNGZ	**Carnagh Statio**	**3.14**	**202**	P	Pn	03 11 52.1	+0.1
TKGZ	**Te Karaka**	**3.22**	**207**	P	Pn	03 11 54.2	+1.1
MWZ	**Matawai**	**3.26**	**212**	P	Pn	03 11 53.3	-0.4
URZ	**Urewera**	**3.39**	**217**	P	Pn	03 11 54.9	-0.4
URZ				S	Sn	03 12 34.5	-1.5
OPRZ	**Ohinepanea**	**3.40**	**228**	P	Pn	03 11 54.3	-1.1
KUZ	**Kuaotunu**	**3.44**	**249**	P	Pn	03 11 54.7	-1.3
RAGZ	**Rawiri**	**3.44**	**212**	P	Pn	03 11 56.0	0.0
RIGZ	**Rimuhau**	**3.48**	**206**	P	Pn	03 11 56.8	+0.2
PRGZ	**Paritu Road**	**3.64**	**203**	P	Pn	03 11 58.4	-0.1
SNGZ	**Shannon Statio**	**3.71**	**210**	P	Pn	03 12 00.6	+1.1
RAHZ	**Arahi**	**3.93**	**212**	P	Pn	03 12 03.4	+1.1
RAHZ				S	Sn	03 12 50.3	+1.8
MTHZ	**Maungataniwha**	**3.99**	**214**	P	Pn	03 12 03.5	+0.4
MTHZ				S	Sn	03 12 49.8	-0.1
WHHZ	**Waihua**	**4.01**	**209**	P	Pn	03 12 04.7	+1.4
WHHZ				S	Sn	03 12 52.3	+2.0
TOZ	**Tahuroa Road**	**4.01**	**237**	P	Pn	03 12 03.3	-0.1
NMHZ	**Naumai**	**4.21**	**213**	S	Sn	03 12 57.0	+2.0
ARHZ	**Aropaoanui**	**4.26**	**210**	P	Pn	03 12 06.6	0.0
WCZ	**Waipu Caves**	**4.39**	**264**	P	Pn	03 12 05.4	-2.9
CTZ	**Chatham Island**	**8.61**	**162**	S	Sn	03 14 39.0	-0.9

*IDC **21** 03:11:28.3±4.7,20°.85S×169°.24E,h72km±50km,mb3.5/5,*
mb1 3.8/6,mb1mx3.4/47,mbtmp3.8/6,ML3.4/1,MS2.6/1,
Ms1 2.6/1,ms1mx2.2/34,Error ellipse: s-maj=144.0km
s-min=31.3km az=161.0

ISC 21 03:11:24.5±1.5,**20°.4S**±0°.4×**169°.2E**±0°.3,**h31**km,**n8**,
σ1§**13**/9,**mb3.8**/5,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.06**	**238**	P	**Pn**	**03 12 11.4**	**+0.6**
	5.4nm,0.3s,baz=93,slow=12,SNR=73						
DZM				S	**Sn**	**03 12 46.1**	**-0.4**
	31nm,0.3s,baz=290,slow=22,SNR=12						
DZM				LR	LR	03 13 13.4	
	comp=Z,92nm,18.1s,baz=197,slow=37						
CTA	**Charters Tower**	**21.55**	**267**	P	**P**	**03 16 13.1**	**+1.6**
	1.1nm,0.4s,baz=84,slow=14,SNR=3.6						
WRA	**Warramunga Arr**	**32.71**	**265**	P	**P**	**03 17 53.0**	**-1.6**
	0.4nm,0.6s,baz=93,slow=8.4,SNR=12						
ASAR	**Alice Springs**	**32.84**	**258**	P	**P**	**03 17 55.3**	**-0.4**
	1.6nm,0.7s,baz=83,slow=9.1,SNR=17						
NVAR	**Mina Array Bea**	**89.60**	**48**	P	**P**	**03 24 19.9**	**+0.4**
	0.5nm,0.7s,baz=230,slow=7.0,SNR=4.0						
ILAR	**Eielson Array**	**91.38**	**17**	P	**P**	**03 24 27.4**	**+0.5**
	0.4nm,0.8s,baz=226,slow=6.2,SNR=3.0						
ARCES	**ARCESS Array B**	**126.22**	**345**	PKP	**PKPdf**	**03 30 22.2**	**-1.1**
	8.7nm,1.2s,baz=70,slow=1.1,SNR=1.7						
GERES	**GERESS Array B**	**145.54**	**331**	PKPbc	**PKPdf**	**03 30 59.0**	**-0.7**
	1.3nm,0.7s,baz=35,slow=4.9,SNR=9.6						

WEL 21 03:13:58.8±0.8,**38°S**±6°×**18°0W**±°,**h33**km,**M3.4**/24,
ML3.7/24,**MLv3.4**/24,**Error ellipse: s-maj=0.0km**
s-min=0.0km az=13.2,East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.29**	**263**	P	Pn	03 14 20.1	-0.4
WMGZ				S	Sn	03 14 37.5	+0.8
MXZ	**Matakaoa Point**	**1.38**	**274**	P	Pn	03 14 20.9	-0.9
MXZ				S	Sn	03 14 38.7	-0.2
PUZ	**Puketiti**	**1.46**	**254**	P	Pn	03 14 22.5	-0.4
PUZ				S	Sn	03 14 41.4	+0.4
CNGZ	**Carnagh Statio**	**1.65**	**240**	P	Pn	03 14 26.3	+0.8
TWGZ	**Tauwhareparae**	**1.70**	**252**	P	Pn	03 14 26.3	+0.1
TWGZ				S	Sn	03 14 47.6	+0.8
HAZ	**Te Kaha**	**1.79**	**267**	P	Pn	03 14 27.3	-0.1
HAZ				S	Sn	03 14 48.7	-0.2
RUGZ	**Raukumara Rang**	**1.89**	**261**	P	Pn	03 14 28.5	-0.4
RIGZ	**Rimuhau**	**2.06**	**240**	P	Pn	03 14 31.4	+0.2
RIGZ				S	Sn	03 14 57.6	+1.8
MWZ	**Matawai**	**2.09**	**251**	P	Pn	03 14 31.0	-0.5
MWZ				S	Sn	03 14 56.5	+0.1
PRGZ	**Paritu Road**	**2.10**	**233**	P	Pn	03 14 32.0	+0.3
MHGZ	**Mahia Peninsul**	**2.23**	**228**	P	Pn	03 14 33.7	+0.3
KNZ	**Kokohu**	**2.29**	**234**	P	Pn	03 14 34.0	-0.2
URZ	**Urewera**	**2.38**	**255**	P	Pn	03 14 36.0	+0.5
URZ				S	Sn	03 15 03.7	+0.1
SNGZ	**Shannon Statio**	**2.39**	**242**	P	Pn	03 14 36.0	+0.3
SNGZ				S	Sn	03 15 04.3	+0.4
WHRZ	**Whale Island**	**2.43**	**265**	P	Pn	03 14 36.6	+0.4
RTZ	**Ruatahuna**	**2.58**	**248**	P	Pn	03 14 38.9	+0.5
RTZ				S	Sn	03 15 09.6	+0.9
WHHZ	**Waihua**	**2.61**	**237**	P	Pn	03 14 39.4	+0.8
WHHZ				S	Sn	03 15 11.1	+2.0
MUGZ	**Murupara**	**2.70**	**252**	P	Pn	03 14 39.8	0.0
MUGZ				S	Sn	03 15 10.8	-0.6
MTHZ	**Maungataniwha**	**2.77**	**244**	P	Pn	03 14 41.3	+0.3
MTHZ				S	Sn	03 15 13.7	+0.4
TARZ	**Mount Tarawera**	**2.85**	**258**	P	Pn	03 14 42.2	+0.2
ARHZ	**Aropaoanui**	**2.86**	**236**	P	Pn	03 14 42.8	+0.6
ARHZ				S	Sn	03 15 16.6	+1.2
NMHZ	**Naumai**	**2.91**	**240**	P	Pn	03 14 43.2	+0.4
NMHZ				S	Sn	03 15 17.4	+0.8
CKHZ	**Cape Kidnapper**	**3.04**	**229**	P	Pn	03 14 44.5	-0.1
CKHZ				S	Sn	03 15 20.1	+0.2
BKZ	**Black Stump Fm**	**3.15**	**241**	P	Pn	03 14 46.2	0.0
BKZ				S	Sn	03 15 23.1	+0.3
MCHZ	**McNeill Hill**	**3.15**	**235**	P	Pn	03 14 46.5	+0.3
MCHZ				S	Sn	03 15 23.9	+1.3
KAHZ	**Kahuranaki**	**3.25**	**229**	P	Pn	03 14 47.3	-0.2
KRHZ	**Kereru**	**3.48**	**235**	P	Pn	03 14 49.8	-0.8
BHHZ	**Black Hill Sta**	**3.60**	**239**	P	Pn	03 14 52.5	+0.1
PNHZ	**Pukenui**	**3.73**	**232**	P	Pn	03 14 53.3	-0.9
MOVZ	**Moawhango**	**3.77**	**242**	P	Pn	03 14 55.6	+0.8
TUVZ	**Tukino**	**3.79**	**244**	P	Pn	03 14 56.0	+1.0
MRZ	**Mangatainoka R**	**4.57**	**228**	P	Pn	03 15 03.9	-1.7
CTZ	**Chatham Island**	**6.56**	**158**	P	Pn	03 15 35.3	+2.4
CTZ				S	Sn	03 16 44.3	-2.2

DJA 21 03:15:09.5±0.7,**3°S**±2°×**12°9E**±°,**h29**km±7km,**M4.0**/10,
mb4.3/1,**MLv3.8**/10,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.80**	**223**	P	Pn	03 15 23.5	-1.3
MSAI				S	Sn	03 15 35.6	-0.1

AAI	**Ambon**	**1.57**	**234**	P	Pn	03 15 35.5	0.0
BNDI	**Bandanaira**	**1.80**	**166**	P	Pn	03 15 38.8	+0.1
BNDI				S	Sn	03 16 01.2	+0.6
NLAI	**Namlea**	**2.41**	**259**	P	Pn	03 15 47.8	+0.7
NLAI				S	Sn	03 16 15.6	-0.1
FAKI	**Fak Fak**	**2.78**	**93**	P	Pn	03 15 51.5	-0.6
LBMI	**Labuha**	**2.88**	**317**	P	Pn	03 15 53.0	-0.5
LBMI				S	Sn	03 16 27.9	+0.6
RKPI	**Ransiki, Papua**	**4.87**	**75**	P	Pn	03 16 21.7	+0.9
RKPI				S	Sn	03 17 15.5	-0.7
APSI	**Ampana**	**8.03**	**283**	P	Pn	03 17 04.2	-0.1
KCSI	**Kotacane, Aceh**	**32.29**	**281**	P	P	03 21 34.6	-1.6
	12nm,1.1s						

*IDC **21** 03:15:24.4±0.6,33°.06N×101°.43E,h0km,mb4.2/25,*
mb1 4.3/27,mb1mx4.2/57,mbtmp4.2/27,ML4.2/2,MS4.1/7,
Ms1 4.2/7,ms1mx3.7/55,Error ellipse: s-maj=16.8km
s-min=12.7km az=21.0
*BJI **21** 03:15:25.6±0.0,33°.04N×101°.42E,h19km,mB4.6/22,*
mb4.6/36,ML4.3/23,Ms4.5/47,Ms7 4.3/42
*NEIC **21** 03:15:26.8±1.5,33°.08N±0°.08×101°.33E±0°.08,h10km±1km,*
mb4.6/51,Error ellipse: s-maj=13.7km s-min=11.5km
az=178.0
*MOS **21** 03:15:27.6±1.0,33°.03N×101°.39E,h30km,mb4.8/29,Error*
ellipse: s-maj=7.4km s-min=4.7km az=125.8

ISC 21 03:15:27.2±0.3,**33°.15N**±0°.03×**101°.34E**±0°.03,**h10**km,**n239**,
σ1§**70**/259,**mb4.5**/58,**MS4.2**/6,**15C-12D,Qinghai**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**3.03**	**137**	P	**Pn**	**03 16 15.3**	**0.0**
CD2				S	**Sn**	**03 16 53.0**	**+1.3**
CD2				Sg	**Sg**	**03 17 04.5**	**-0.1**
CD2				smax	smax		
	comp=N,2μm,1.3s						
CD2				smax	smax		
	comp=E,1μm,0.9s						
LZH	**Lanzhou**	**3.58**	**34**	⇑Pn	**Pn**	**03 16 24.3**	**+1.3**
LZH				Pg	**Pg**	**03 16 33.3**	**-2.6**
LZH				Sn	**Sn**	**03 17 07.4**	**+1.9**
LZH				Sg	**Sg**	**03 17 20.6**	**-1.7**
LZH				smax	smax		
	comp=N,2μm,1.1s						
LZH				smax	smax		
	comp=E,1μm,1.3s						
LZH				LR	LR		
	comp=N,12μm,6.0s						
LZH				LR	LR		
	comp=E,15μm,5.7s						
LZH				LR	LR		
	comp=Z,5μm,7.6s						
GTA	**Gaotai**	**6.37**	**349**	Pn	**Pn**	**03 16 56.8**	**-4.5**
GTA				Sg	**Sg**	**03 18 54.9**	**+3.2**
GTA				smax	smax		
	comp=N,63nm,1.7s						
GTA				smax	smax		
	comp=E,130nm,1.5s						
GTA				LR	LR		
	comp=N,1μm,11.3s						
GTA				LR	LR		
	comp=E,1μm,9.5s						
GTA				LR	LR		
	comp=Z,2μm,10.2s						
XAN	**Xi'an**	**6.38**	**80**	Pn	**Pn**	**03 16 59.3**	**-2.1**
XAN				Pg	**Pb**	**03 17 22.1**	**+3.7**
XAN				Sg	**Sg**	**03 18 47.9**	**-4.3**
XAN				smax	smax		
	comp=N,220nm,1.6s						
XAN				smax	smax		
	comp=E,180nm,1.3s						
XAN				LR	LR		
	comp=N,3μm,5.7s						
XAN				LR	LR		
	comp=E,3μm,6.1s						
XAN				LR	LR		
	comp=Z,3μm,8.4s						
XAN	**Xi'an**	**6.38**	**80**	P	**Pn**	**03 17 00.6**	**-0.8**
XAN	**Xi'an**	**6.38**	**80**	Pn	**Pn**	**03 17 00.6**	**-0.8**
ENH	**Enshi**	**7.51**	**110**	Pn	**Pn**	**03 17 15.8**	**-1.0**
KMI	**Kunming**	**8.09**	**171**	⇓*e*P	Pn	03 17 31.5	+6.5
KMI				pP	Pb	03 17 36.6	-11
KMI				S	**Sg**	**03 19 49.8**	**+2.9**
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,4.0s						
KMI				LR	LR		
	comp=N,1μm,7.0s						
KMI				LR	LR		
	comp=E,2μm,10.2s						
KMI				LR	LR		
	comp=Z,2μm,7.9s						
GYA	**Guiyang**	**8.11**	**144**	P	**Pn**	**03 17 25.4**	**+0.2**
GYA				S	**Sn**	**03 18 59.8**	**+2.8**
GYA				smax	smax		
	comp=Z,73nm,1.2s						
GYA				smax	smax		
	comp=Z,120nm,1.6s						
GYA				LR	LR		
	comp=Z,650nm,5.8s						
GYA				LR	LR		
	comp=Z,960nm,5.5s						
GYA				LR	LR		
	comp=Z,700nm,6.2s						
LSA	**Lhasa**	**9.36**	**251**	P	**Pn**	**03 17 43.3**	**+0.6**
LSA				pP		03 17 46.0	
LSA				S	**Sn**	**03 19 33.1**	**+4.8**
LSA				pmax	pmax		
	comp=Z,19nm,0.7s						
LSA				LR	LR		
	comp=Z,2μm,6.1s						
LSA				LR	LR		
	comp=Z,390nm,4.3s						
LSA				LR	LR		
	comp=Z,2μm,5.7s						
LSA	**Lhasa**	**9.36**	**251**	P	**Pn**	**03 17 43.5**	**+0.9**
LSA	**Lhasa**	**9.36**	**251**	Pn	**Pn**	**03 17 43.5**	**+0.9**
BTO	**Baotou**	**10.18**	**41**	*e*P	**Pn**	**03 17 52.8**	**-0.6**
BTO				S	**Sn**	**03 19 56.3**	**+8.6**
SHL	**Shillong**	**11.18**	**230**	P	**Pn**	**03 18 04.9**	**-2.5**
SHL	**Shillong**	**11.18**	**230**	Pn	**Pn**	**03 18 04.8**	**-2.5**
HHC	**Hu-ho-hao-te**	**11.21**	**44**	*e*P	**Pn**	**03 18 07.8**	**+0.2**
HHC				pP		03 18 11.1	
HHC				sP		03 18 14.3	
HHC				S	**Sn**	**03 20 15.1**	**+2.1**
HHC				sS		03 20 20.3	
HHC				pmax	pmax		
	comp=Z,46nm,1.1s						
HHC				pmax	pmax		
	comp=Z,66nm,4.6s						
HHC				LR	LR		
	comp=Z,1μm,7.4s						
HHC				LR	LR		
	comp=Z,3μm,8.7s						
HHC				LR	LR		
	comp=Z,2μm,12.7s						
TAPN	**Taplejung**	**13.12**	**247**	*e*P	**Pn**	**03 18 32.2**	**-1.8**
	comp=Z,32nm,0.4s						
ODAN	**Odare**	**13.61**	**246**	*e*P	**Pn**	**03 18 38.2**	**-2.4**
	comp=Z,79nm,0.6s						
BJI	**Beijing**	**13.75**	**56**	P	**Pn**	**03 18 42.6**	**+0.5**
BJI				S	**Sn**	**03 21 17.9**	**+3.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJI				LR	LR		
	comp=Z,2μm,7.5s						
BJI				LR	LR		
	comp=Z,940nm,7.9s						
BJI				LR	LR		
	comp=Z,510nm,19.9s						
PAYA	**Payao**	**13.79**	**186**	P	**P**	**03 18 53.1**	**+1.6**
	comp=Z,179nm,1.2s						
RAMN	**Ramite**	**14.18**	**248**	*e*P	**Pn**	**03 18 45.7**	**-2.7**
	comp=Z,93nm,0.9s						
GUN	**Gumba**	**14.31**	**253**	*e*P	**Pn**	**03 18 46.9**	**-3.3**
CM34	**Chiang Mai Arr**	**14.37**	**188**	P	**Pn**	**03 18 52.0**	**+1.2**
CM33	**Chiang Mai Arr**	**14.43**	**189**	P	**Pn**	**03 18 52.0**	**+0.4**
CHTO	**Chiang Mai**	**14.44**	**189**	P	**Pn**	**03 18 51.5**	**-0.2**
CHTO	**Chiang Mai**	**14.44**	**189**	Pn	**Pn**	**03 18 51.5**	**-0.2**
CM35	**Chiang Mai Arr**	**14.54**	**188**	P	**Pn**	**03 18 54.0**	**+0.8**
CM32	**Chiang Mai Arr**	**14.61**	**189**	P	**Pn**	**03 18 56.7**	**+2.7**
LAMP	**Lampang**	**14.65**	**186**	P	**P**	**03 19 00.3**	**-0.6**
	comp=Z,22nm,0.9s						

CM36	**Chiang Mai Arr**	**14.71**	**188**	P	**Pn**	**03 18 55.0**	**-0.4**
CM31	**Chiang Mai Arr**	**14.79**	**189**	Pn	**Pn**	**03 18 56.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**14.79**	**189**	Pn	**Pn**	**03 18 55.1**	**-1.4**
	comp=Z,0.8nm,0.3s,baz=2.2,slow=12,SNR=29						
CMAR				LR	LR	03 25 01.2	
	comp=Z,922nm,18.5s,baz=44,slow=39						
CM09	**Chiang Mai Arr**	**14.79**	**189**	P	**Pn**	**03 18 57.8**	**+1.2**
	comp=Z,134nmcomp=Z,11nm,1.3s						
CM15	**Chiang Mai Arr**	**14.79**	**189**	P	**Pn**	**03 18 58.0**	**+1.4**
	comp=Z,12nm,1.5s						
CM02	**Chiang Mai Arr**	**14.81**	**189**	P	**Pn**	**03 18 57.9**	**+1.1**
	comp=Z,158nmcomp=Z,16nm,1.1s						
CM01	**Chiang Mai Arr**	**14.82**	**189**	P	**Pn**	**03 18 58.0**	**+1.0**
	comp=Z,284nmcomp=Z,9.0nm,1.3s						
CM13	**Chiang Mai Arr**	**14.83**	**189**	P	**Pn**	**03 18 58.6**	**+1.6**
	comp=Z,104nmcomp=Z,12nm,1.2s						
PKI	**Pulchoki**	**14.83**	**252**	*e*P	**Pn**	**03 18 54.4**	**-3.0**
	comp=Z,12nm,0.4s						
CM04	**Chiang Mai Arr**	**14.84**	**189**	P	**Pn**	**03 18 58.4**	**+1.2**
	comp=Z,13nm,0.9s						
PKIN	**Phulchoki**	**14.84**	**252**	*e*P	**Pn**	**03 18 54.4**	**-3.0**
	comp=Z,30nm,0.4s						
KKN	**Kakani**	**14.84**	**253**	*e*P	**Pn**	**03 18 53.7**	**-3.7**
CM05	**Chiang Mai Arr**	**14.84**	**189**	P	**Pn**	**03 18 58.2**	**+1.0**
	comp=Z,109nmcomp=Z,9.0nm,1.4s						
DMN	**Daman**	**15.06**	**253**	*e*P	**Pn**	**03 18 57.1**	**-3.2**
	comp=Z,33nm,0.5s						
WMQ	**Urumqi**	**15.07**	**319**	*e*P	**P**	**03 19 03.5**	**-2.1**
WMQ				PP	**sP**	**03 19 13.9**	**+2.4**
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.8s						
WMQ				LR	LR		
	comp=Z,390nm,8.5s						
WMQ				LR	LR		
	comp=Z,420nm,9.7s						
WMQ				LR	LR		
	comp=Z,1μm,20.1s						
SONM	**Songino Array**	**15.16**	**13**	Pn	**Pn**	**03 19 00.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=195,slow=15,SNR=22						
SONM				LR	LR	03 25 31.4	
	comp=Z,431nm,18.2s,baz=192,slow=40						
GKN	**Gorkha**	**15.27**	**255**	*e*P	**Pn**	**03 18 59.3**	**-3.8**
	comp=Z,232nm,1.1s						
ULN	**Ulaanbaatar**	**15.32**	**15**	⇓*e*P	**Pn**	**03 19 03.2**	**-0.4**
ULN				pmax	pmax		
	comp=Z,16nm,0.9s						
ULN	**Ulaanbaatar**	**15.32**	**15**	Pn	**Pn**	**03 19 03.4**	**-0.2**
UTTA	**Uttaradit**	**15.36**	**183**	P	**Pn**	**03 19 05.6**	**+1.6**
	comp=Z,354nmcomp=Z,31nm,1.1s						
SUKH	**Sukhothai**	**15.68**	**186**	P	**P**	**03 19 13.0**	**+0.7**
	comp=Z,24nm,1.3s						
DANN	**Dangsing**	**15.85**	**257**	*e*P	**Pn**	**03 19 06.7**	**-4.1**
	comp=Z,153nm,0.7s						
PHIT	**Phitsanulok**	**15.91**	**183**	P	**P**	**03 19 17.0**	**+2.0**
	comp=Z,63nm,1.2s						
QIZ	**Qiongzhong**	**15.99**	**149**	P	**Pn**	**03 19 12.3**	**0.0**
QIZ				S	**Sn**	**03 22 10.8**	**+1.2**
QIZ				LR	LR		
	comp=Z,570nm,14.2s						
QIZ				LR	LR		
	comp=Z,750nm,15.9s						
KOLN	**Koldanda**	**16.21**	**255**	*e*P	**Pn**	**03 19 11.4**	**-3.9**
	comp=Z,188nm,0.9s						
PYUN	**Piuthan**	**16.58**	**257**	*e*P	**Pn**	**03 19 16.0**	**-4.0**
	comp=Z,462nm,1.1s						
KHON	**Khonkaen**	**16.79**	**175**	P	**P**	**03 19 25.8**	**+1.1**
SSE	**Sheshan**	**16.93**	**92**	P	**Pn**	**03 19 23.0**	**-1.3**
SSE				S	**Sn**	**03 22 28.3**	**-4.2**
SSE				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,68nm,3.6s						
SSE				LR	LR		
	comp=Z,290nm,8.6s						
SSE				LR	LR		
	comp=Z,350nm,10.6s						
ZAK	**Zakamensk**	**17.28**	**4**	*e*P	**P**	**03 19 30.5**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
UTHA	**Uthaitani**	**17.60**	**186**	P	**P**	**03 19 35.2**	**+1.6**
UBPT	**Khong Chiam**	**18.18**	**167**	P	**P**	**03 19 41.7**	**+1.6**
UBPT	**Khong Chiam**	**18.18**	**167**		**Pn**	**03 19 38.6**	**-1.2**
TLY	**Talaya**	**18.60**	**4**	LR	LR	03 27 36.4	
	comp=Z,430nm,19.1s,baz=176,slow=39						
ZSN	**Zaisan**	**18.97**	**324**	*e*P	**Pn**	**03 19 51.3**	**+2.0**
ZSN				LR	LR	03 26 39.1	
	comp=Z,64nm,8.3s						
ZSN	**Zaisan**	**18.97**	**324**	*e*P	**Pn**	**03 19 51.3**	**+2.0**
ZSN				MLR	MLR		
	comp=Z,64nm,8.0s						
SNY	**Shenyang**	**19.61**	**57**	⇑P	**Pn**	**03 19 56.9**	**-0.1**
SNY				S	**Sn**	**03 23 37.3**	**+0.1**
SNY				pmax	pmax		
	comp=Z,22nm,1.2s						
SNY				pmax	pmax		
	comp=Z,110nm,4.7s						
SNY				LR	LR		
	comp=Z,370nm,8.8s						
SNY				LR	LR		
	comp=Z,510nm,10.1s						
SNY				LR	LR		
	comp=Z,630nm,10.2s						
SHLS	**Shalkode**	**19.85**	**307**	*e*P	**P**	**03 19 55.9**	**-2.5**
	comp=Z,9.6nm,0.9s						
SHLS				*e*S	**S**	**03 23 38.1**	**-3.9**
SHLS	**Shalkode**	**19.85**	**307**	*e*P	**P**	**03 19 55.9**	**-2.5**
SHLS				*e*S	**S**	**03 23 38.0**	**-3.9**
SHLS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PDGK	**Podgornoye**	**19.90**	**307**	P	**P**	**03 19 58.7**	**-0.2**
MK31	**Makanchi Array**	**19.91**	**319**	⇓*e*P	**Pn**	**03 20 00.1**	**-0.4**
MK31	**Makanchi Array**	**19.91**	**319**	P	**P**	**03 19 58.3**	**-0.5**
MKAR	**Makanchi Array**	**19.91**	**319**	P	**P**	**03 19 59.5**	**+0.6**
	comp=Z,10nm,0.8s,baz=123,slow=13,SNR=32						
MKAR				LR	LR	03 28 33.6	
	comp=Z,641nm,19.2

CN2 ePP PnPn 03 20 41.3 +3.8
CN2 eS S 03 24 09.4 -6.8
CN2 eSS SnSn 03 24 44.0 +4.2
CN2 pmax pmax
comp=Z,60nm,0.9s
CN2 LR LR
comp=Z,580nm,9.0s
CN2 LR LR
comp=Z,640nm,9.0s
CN2 LR LR
comp=Z,480nm,9.0s
TJN Taejon 21.60 74 *c iP* **P 03 20 18.1 +0.9**
CHKK Chushkaly 21.78 306 *eP* **P 03 20 19.1 -0.1**
CHKK Chushkaly 21.78 306 *eP* **P 03 20 19.0 -0.1**
KS19 Wonju Array Si 22.04 71 P **P 03 20 22.8 +0.8**
KS19 IAmb IAmb 03 20 24.9
comp=Z,22nm,0.9s
KSAR Wonju Array Be 22.05 71 P **P 03 20 23.6 +1.5**
KSAR Wonju Array Be 22.05 71 P **P 03 20 23.6 +1.5**
KSRS Korea Array 22.08 71 P **P 03 20 22.2 -0.1**
comp=Z,17nm,1.1s,baz=252,slow=8.2,SNR=35
KUU Kurty 22.23 306 *eP* **P 03 20 25.1 +1.1**
comp=Z,5.8nm,0.8s
KUU LR LR 03 29 20.1
comp=Z,88nm,9.3s
KUU Kurty 22.23 306 *eP* **P 03 20 25.1 +1.1**
KUU pmax pmax
comp=Z,6.0nm,0.8s
KUU MLR MLR
comp=Z,88nm,9.0s
TKM2 Tokmak 2 22.43 303 P **P 03 20 28.5 +2.2**
AAK Ala-Archa 23.13 302 P **P 03 20 34.5 +0.9**
comp=Z,4.4nm,0.5s,baz=133,slow=6.8,SNR=9.2
AAK LR LR 03 31 02.6
comp=Z,553nm,19.9s,baz=103,slow=40
AAK Ala-Archa 23.13 302 *c iP* **P 03 20 35.2 +1.6**
AAK pmax pmax
comp=Z,20nm,0.8s
SEM Semipalatinsk 23.21 324 *eP* **P 03 20 34.7 +0.2**
comp=Z,4.9nm,1.1s
SEM Semipalatinsk 23.21 324 *eP* **P 03 20 34.6 +0.2**
SEM pmax pmax
comp=Z,5.0nm,1.1s
SGDS Sogindy 23.26 304 *eP* **P 03 20 34.8 -0.2**
SGDS Sogindy 23.26 304 *eP* **P 03 20 34.7 -0.2**
JTU Tsushima 23.32 79 P **P 03 20 35.7 +0.3**
NIL Nilore 23.43 279 P **P 03 20 35.7 -0.9**
NIL pmax pmax
comp=Z,14nm,0.6s
NIL Nilore 23.43 279 P **P 03 20 35.7 -0.9**
NIL IAmb IAmb 03 20 36.1
comp=Z,14nm,0.6s
ZAA0 Zalesovo Array 23.88 335 P **P 03 20 40.5 -0.3**
ZAA0 IAmb IAmb 03 20 49.3
comp=Z,21nm,1.1s
ZALV Zalesovo Beam 23.88 335 P **P 03 20 40.1 -0.6**
comp=Z,7.2nm,0.8s,baz=132,slow=10,SNR=16
ZALV LR LR 03 30 26.0
comp=Z,409nm,19.9s,baz=145,slow=38
ZALV Zalesovo Beam 23.88 335 *i P* **P 03 20 40.0 -0.7**
ZALV pmax pmax
comp=Z,8.0nm,0.8s
BTLS Baital 24.17 307 *eP* **P 03 20 43.0 -0.5**
comp=Z,3.2nm,0.8s
BTLS LR LR 03 29 48.7
comp=Z,16nm,9.9s
BTLS Baital 24.17 307 *eP* **P 03 20 43.0 -0.5**
BTLS pmax pmax
comp=Z,3.0nm,0.8s
BTLS MLR MLR
comp=Z,16nm,10.0s
KURBB Kurchatov Arra 24.20 323 P **P 03 20 43.6 -0.1**
comp=Z,9.1nm,0.7s,baz=129,slow=9.9,SNR=69
KURBB PcP **PcP 03 24 22.1 -1.9**
comp=Z,0.8nm,0.4s,baz=120,slow=1.9,SNR=7.1
KURBB Kurchatov Arra 24.20 323 P **P 03 20 43.0 -0.8**
KURK Kurchatov 24.21 323 *de* **P 03 20 43.2 -0.7**
KURK pmax pmax
comp=Z,10.0nm,0.7s
KURK Kurchatov 24.21 323 P **P 03 20 43.6 -0.2**
KURK IAmb IAmb 03 20 47.6
comp=Z,9.4nm,0.7s
BTK Batken 25.38 295 P **P 03 20 54.8 +0.1**
BTK pmax pmax
comp=Z,9.0nm,1.1s
BTK Batken 25.38 295 P **P 03 20 54.8 +0.1**
DZA Taraz 25.45 301 *eP* **P 03 20 55.0 -0.2**
DZA Taraz 25.45 301 *eP* **P 03 20 55.0 -0.2**
GAR Garm 25.67 292 P **P 03 20 57.5 +0.1**
GAR IAmb IAmb 03 21 09.1
comp=Z,17nm,0.9s
KK31 Karatay Array 26.08 301 P **P 03 21 01.0 0.0**
KK31 Karatay Array 26.08 301 P **P 03 21 01.1 +0.1**
KKAR Karatay Array 26.08 301 P **P 03 21 01.0 0.0**
KKAR pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 26.08 301 P **P 03 21 01.5 +0.5**
KKAR Karatay Array 26.08 301 P **P 03 21 01.0 0.0**
USRK Ussuriysk Ar. 26.20 56 P **P 03 21 01.9 -0.1**
comp=Z,2.4nm,0.8s,baz=238,slow=11,SNR=4.3
USRK Ussuriysk Ar. 26.20 56 P **P 03 21 01.7 -0.3**
USRK Ussuriysk Ar. 26.20 56 P **P 03 21 01.6 -0.3**
IUG luzhnay 26.25 299 *eP* **P 03 21 02.6 0.0**
IUG luzhnay 26.25 299 *eP* **P 03 21 02.6 0.0**
CHGR Chuyangaron 26.56 291 P **P 03 21 05.5 +0.1**
CHGR IAmb IAmb 03 21 37.6
comp=Z,14nm,1.0s
KBL Kabul 26.81 282 P **P 03 21 07.5 -0.3**
KBL pmax pmax
comp=Z,28nm,0.8s
KBL Kabul 26.81 282 P **P 03 21 07.5 -0.3**
BRZS Berezniki 27.02 317 *eP* **P 03 21 09.9 +0.5**
BRZS Berezniki 27.02 317 *eP* **P 03 21 09.9 +0.5**
KLR Kul'dur 27.71 46 P **P 03 21 14.4 -1.1**
comp=Z,7.9nm,1.0s,baz=261,slow=11,SNR=16
KLR Kul'dur 27.71 46 *de* **P 03 21 16.0 +0.5**
BVAR Borovoye Array 29.74 321 P **P 03 21 32.6 -1.0**
comp=Z,0.7nm,0.5s,baz=145,slow=48,SNR=5.0
BRVK Borovoye 29.81 321 ⇑ *eP* **P 03 21 37.2 +3.0**
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 29.81 321 P **P 03 21 34.2 0.0**
BRVK IAmb IAmb 03 21 37.0
comp=Z,16nm,1.9s
MJAR Matsushiro Arr 30.33 73 P **P 03 21 38.0 -0.9**
comp=Z,1.9nm,0.8s,baz=278,slow=9.7,SNR=6.7
MJAR Matsushiro Arr 30.33 73 IAmb IAmb 03 21 39.6
comp=Z,5.2nm,1.5s
MYLDM Lahad Datu 32.09 146 P **P 03 21 55.6 +1.0**
SBUM Sibu 32.20 159 P **P 03 21 55.2 -0.3**
MNSI Mandailing Nat 32.23 183 P **P** 03 21 46.1 -10
BKNI Bangkinang 32.65 181 P **P 03 21 57.8 -1.7**
YAK Yakutsk 34.10 24 ⇓ *eP* **P 03 22 12.8 +1.2**
YAK pmax pmax
comp=Z,9.0nm,0.5s
YAK Yakutsk 34.10 24 P **P 03 22 12.4 +0.7**
YSS Yuzh-Sakhalins 34.16 54 ⇑ *eP* **P 03 22 12.8 +0.4**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS Yuzh-Sakhalins 34.16 54 P **P 03 22 12.4 0.0**
AB31 Akbulak array 34.57 310 *i P* **P 03 22 16.0 +0.1**
ABKAR Akbulak array 34.57 310 P **P 03 22 15.7 -0.2**
GEYT Alibeck 35.26 290 P **P 03 22 23.1 +1.0**
comp=Z,4.7nm,0.8s,baz=52,slow=9.6,SNR=4.8
GEYT Alibeck 35.26 290 IAmb IAmb 03 22 23.9
comp=Z,4.9nm,0.8s
AKTO Aktyubinsk 36.03 312 P **P 03 22 28.8 +0.3**
TOLI2 Tolitoli 36.73 146 P **P 03 22 34.0 -0.8**
TOLI2 IAmb IAmb 03 22 35.7
comp=Z,21nm,1.6s
NRIK Noril'sk 37.06 352 P **P 03 22 38.3 +1.3**
comp=Z,2.2nm,0.6s,baz=146,slow=6.1,SNR=4.2
NRIK Noril'sk 37.06 352 ⇑ *eP* **P 03 22 38.1 +1.1**
NRIK pmax pmax
comp=Z,5.0nm,0.8s
ARU Arti 37.38 322 *c iP* **P 03 22 41.5 +1.6**
ARU 03 24 04.1
ARU S **S 03 28 32.9 +5.1**
ARU pmax pmax
comp=Z,12nm,0.8s
ARU Arti 37.38 322 P **P 03 22 40.0 0.0**
ARU IAmb IAmb 03 22 42.9
comp=Z,11nm,0.7s
TTSI Tana Toraja 40.02 151 P **P 03 23 03.4 +1.0**
SPSI Sidrap Palu 40.83 151 P **P 03 23 09.8 +0.7**

KIRV Kirov 42.73 323 ⇓ *eP* **P 03 23 24.8 +0.6**
AKH Akhalkalaki 46.02 298 P **P 03 23 50.6 -0.5**
AKH pmax pmax
comp=Z,35nm,1.2s
AKH Akhalkalaki 46.02 298 P **P 03 23 50.6 -0.5**
KBZ Khabaz 46.12 301 P **P 03 23 50.8 -0.8**
comp=Z,1.6nm,0.7s,baz=325,slow=13,SNR=2.7
KBZ Khabaz 46.12 301 ⇓ *eP* **P 03 23 51.9 +0.3**
KBZ pmax pmax
comp=Z,9.0nm,1.6s
KIV Kislovodsk 46.24 301 *eP* **P 03 23 55.3 +2.6**
KIV pmax pmax
comp=Z,16nm,1.0s
KIV Kislovodsk 46.24 301 P **P 03 23 53.0 +0.3**
KIV IAmb IAmb 03 24 09.4
comp=Z,8.8nm,1.0s
VSR Storozhevoye 47.98 312 *eP* **P 03 24 06.4 +0.4**
VSR pmax pmax
comp=Z,10.0nm,1.2s
KLMR Klimovskoe 48.05 325 *eP* **P 03 24 06.8 +0.4**
KLMR pmax pmax
comp=Z,17nm,1.2s
KLMR Klimovskoe 48.05 325 *eP* **P 03 24 06.8 +0.4**
KLMR AMP 03 24 22.3
comp=Z,17nm,1.2s
LPSR Galich'ya Gora 48.07 313 *eP* **P 03 24 07.1 +0.4**
LPSR pmax pmax
comp=Z,8.0nm,0.6s
MARD Mardin 48.91 293 P **P 03 24 13.9 +0.3**
MARD IAmb IAmb 03 24 16.0
comp=Z,5.8nm,0.8s
RAYN Ar Rayn 49.58 274 P **P 03 24 17.9 -0.9**
RAYN pmax pmax
comp=Z,8.0nm,1.5s
RAYN Ar Rayn 49.58 274 P **P 03 24 17.9 -0.9**
RAYN IAmb IAmb 03 24 18.9
comp=Z,8.0nm,1.4s
BILL Bilibino 50.36 26 ⇓ *eP* **P 03 24 24.8 +0.8**
BILL pmax pmax
comp=Z,25nm,2.0s
BILL MLR MLR
comp=Z,478nm,15.0s
BR131 Keskin Array S 53.71 298 P **P 03 24 49.3 -0.3**
BR131 pmax pmax
comp=Z,8.0nm,1.0s
BR131 Keskin Array S 53.71 298 P **P 03 24 49.3 -0.3**
BR131 IAmb IAmb 03 24 55.3
comp=Z,8.3nm,1.0s
BRTR Keskin Array B 53.71 298 P **P 03 24 49.0 -0.6**
comp=Z,2.8nm,0.8s,baz=110,slow=4.8,SNR=11
BRTR Keskin Array B 53.71 298 *i P* **P 03 24 49.4 -0.2**
BRTR pmax pmax
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 53.71 298 P **P 03 24 48.7 -0.8**
AKASG Malin Array Be 54.28 312 P **P 03 24 52.4 -1.0**
comp=Z,2.8nm,0.6s,baz=63,slow=7.2,SNR=7.4
BR231 Keskin MP Arra 54.32 298 P **P 03 24 54.3 +0.4**
BR231 IAmb IAmb 03 24 59.3
comp=Z,9.3nm,0.9s
ARCES ARCESS Array B 54.43 335 P **P 03 24 54.3 +0.1**
comp=Z,2.2nm,0.8s,baz=61,slow=7.5,SNR=6.2
VSU Vasula 54.55 322 ⇓ *eP* **P 03 24 55.7 +0.6**
VSU pmax pmax
comp=Z,22nm,0.7s
FINES FINESS Array B 54.56 325 P **P 03 24 54.5 -0.7**
comp=Z,3.2nm,0.7s,baz=82,slow=6.7,SNR=9.8
FINES FINESS Array B 54.56 325 *i P* **P 03 24 54.7 -0.5**
FINES pmax pmax
comp=Z,3.0nm,0.7s
SORM Soroca 55.36 309 ⇑ P **P 03 25 00.0 -1.2**
ISP Isparta 56.59 296 P **P 03 25 09.8 -0.6**
ISP pmax pmax
comp=Z,11nm,0.7s
ISP Isparta 56.59 296 P **P 03 25 09.8 -0.6**
SPITS Spitsbergen Ar 56.79 346 LR LR 03 53 01.3
comp=Z,232nm,19.5s,baz=65,slow=40
BURAR Bucovina Array 57.53 309 P **P 03 25 16.7 -0.2**
MLR Muntele Rosu 57.62 306 ⇑ P **P 03 25 20.2 +2.6**
DOPR Dopca 57.86 307 ⇑ P **P 03 25 19.1 0.0**
VOIR 58.24 306 ⇑ P **P 03 25 20.9 -0.9**
LOT Lotru 59.09 307 ⇑ P **P 03 25 27.4 -0.4**
UZH Uzhgorod 59.14 311 *eP* P 03 25 34.7 +6.8
UZH *i* 03 25 39.4
UZH *e* 03 25 50.1
NC405 NORSAR Array S 61.42 326 P **P 03 25 42.6 -0.8**
WRAB Tennant Creek 61.48 144 ⇓ *eP* **P 03 25 41.9 -2.3**
WRAB pmax pmax
comp=Z,27nm,4.0s
WRAB Tennant Creek 61.48 144 P **P 03 25 44.0 -0.2**
WRA Warramunga Arr 61.48 144 P **P 03 25 41.4 -2.8**
comp=Z,1.5nm,0.8s,baz=339,slow=7.3,SNR=8.3
WB2 Warramunga Arr 61.49 144 P **P 03 25 44.0 -0.3**
NC602 NORSAR Array S 61.61 326 P **P 03 25 44.2 -0.4**
NB2 NORSAR Subarra 61.67 326 P **P 03 25 43.6 -1.5**
comp=Z,2.8nm,0.8s,baz=74,slow=6.9
NOA NORSAR Array B 61.67 326 P **P 03 25 43.3 -1.8**
comp=Z,2.6nm,0.8s,baz=74,slow=6.7,SNR=14
MORC Moravsky Berou 61.77 313 ⇑ P **P 03 25 45.9 -0.1**
MORC Moravsky Berou 61.77 313 P **P 03 25 45.5 -0.4**
MORC **P 03 25 45.8 -0.1**
MORC IAmb IAmb 03 25 47.9
comp=Z,3.6nm,0.9s
NC204 NORSAR Array S 61.81 327 P **P 03 25 44.8 -1.3**
DPC Dobruska-Polom 62.32 314 *eP* **P 03 25 49.4 -0.3**
DPC Dobruska-Polom 62.32 314 *eP* **P 03 25 49.4 -0.3**
FURI Furi 62.34 262 P **P 03 25 50.5 -0.1**
CHVC Chvalec 62.40 314 *eP* **P 03 25 49.0 -1.2**
CLL Collm 63.97 316 *eP* **P 03 26 00.0 -0.5**
CLL *e* 03 26 09.0
CLL Collm 63.97 316 *eP* **P 03 26 00.0 -0.5**
CLL *e* 03 26 09.0
KHC Kasperske Hory 64.42 313 *eP* **P 03 26 02.4 -1.1**
KHC Kasperske Hory 64.42 313 *eP* **P 03 26 02.4 -1.1**
GERES GERESS Array B 64.44 313 P **P 03 26 03.5 -0.4**
comp=Z,1.0nm,0.8s,baz=63,slow=6.1,SNR=7.2
GERES GERESS Array B 64.44 313 P **P 03 26 03.2 -0.6**
ASAR Alice Springs 64.46 147 P **P 03 26 01.8 -2.3**
comp=Z,0.7nm,0.7s,baz=326,slow=6.3,SNR=5.7
CIMO Cimolais 66.21 311 P **P 03 26 15.0 -0.2**
BMAR Burnt Mountain 68.29 22 P **P 03 26 27.8 -0.2**
FORT Forrest 68.42 155 P **P 03 26 28.4 -0.7**
TCOL CIGO, UAF Yank 68.59 25 P **P 03 26 30.5 +0.6**
COLA College 68.60 25 ⇑ *eP* **P 03 26 29.6 -0.3**
COLA pmax pmax
comp=Z,16nm,1.5s
POKR Poker Plat Res 68.61 25 P **P 03 26 30.2 +0.1**
IL31 69.00 25 P **P 03 26 32.3 -0.1**
ILAR Eielson Array 69.00 25 P **P 03 26 30.7 -1.8**
comp=Z,2.6nm,1.1s,baz=286,slow=5.8,SNR=12
ILAR Eielson Array 69.00 25 P **P 03 26 31.8 -0.7**
ILAR Eielson Array 69.00 25 P **P 03 26 31.8 -0.7**
KMBO Kilima Mbogo 69.15 254 P **P 03 26 35.6 +1.1**
comp=Z,5.8nm,0.8s,baz=49,slow=10,SNR=17
KMBO Kilima Mbogo 69.15 254 P **P 03 26 33.9 -0.6**
KMBO pmax pmax
comp=Z,7.0nm,0.9s
KMBO Kilima Mbogo 69.15 254 P **P 03 26 33.9 -0.6**
INK Inuvik 70.99 19 P **P 03 26 43.9 -0.7**
comp=Z,1.4nm,0.6s,baz=354,slow=9.2,SNR=2.4
CART Cartagena 79.16 308 P **P 03 27 30.8 -1.5**
ESDC Sonseca Array 79.91 311 P **P 03 27 35.5 -0.9**
comp=Z,0.5nm,0.7s,baz=38,slow=6.2,SNR=5.0
TORD Torodi Ar. Bea 90.80 286 P **P 03 28 29.7 -1.5**
comp=Z,1.5nm,0.8s,baz=59,slow=3.5,SNR=8.2
TORD Torodi Ar. Bea 90.80 286 P **P 03 28 30.2 -1.0**
BDFB Brasilia 147.27 295 PKPbc **PKPdf 03 35 08.5 -0.8**
comp=Z,2.7nm,0.7s,baz=39,slow=6.5,SNR=3.4

JMA 21 03:26:32.8±0.9, 20.86N×121.60E, h0km, M3.9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**3.78**	**32**	P		P	Pn	03 27 34.8	+2.5
HATJ				*e*	S		Sn	03 28 17.6	+0.1
JYNG	**Yonagunijimaku**	**3.78**	**19**	P		P	Pn	03 27 34.4	+2.0
JYNG				S			Sn	03 28 19.2	+1.6
IRIF	**Iriomote-Funau**	**3.98**	**29**	P		P	Pn	03 27 37.2	+2.1
IRIF				*e*	S		Sn	03 28 24.7	+2.2
JKRS	**Kuro-shima**	**4.03**	**33**	P		P	Pn	03 27 37.6	+1.8
JKRS				S			Sn	03 28 23.8	0.0
JIJ	**Ishigaki jima**	**4.20**	**33**	P		P	Pn	03 27 39.9	+1.7
JIJ				S			Sn	03 28 26.9	-1.1
JISG	**Ishigakijimahi**	**4.47**	**33**	P		P	Pn	03 27 43.4	+1.5
JISG				*e*	S		Sn	03 28 34.6	-0.1
JTJ	**Tarama**	**4.73**	**37**	P		P	Pn	03 27 47.0	+1.6
JTJ				*e*	S		Sn	03 28 40.3	-0.6
JIRB	**Irabujima**	**5.14**	**39**	*e*	S		Sn	03 28 50.6	-0.6

*BGR **21** 03:29:04.8±0.0, 19.06N×120.19E, h33km±1km, mb5.8, Ms5.6*
*BJI **21** 03:29:08.6±0.0, 20.55N×120.10E, h10km, mB5.7/71, mb5.2/79, Ms5.9/92, Ms7 5.7/86*
*MAN **21** 03:29:10.8, 20.75N×119.92E, h32km, MS6.2*
MAN Intensity III - Calayan Island; Laoag City; Intensity II - Vigan, Ilocos Sur; Basco, Batanes.
*IDC **21** 03:29:10.8±0.3, 20.57N×120.12E, h0km, mb5.1/47, mb1 5.2/50, mb1mx5.1/56, mbtmp5.2/50, ML4.6/3, MS5.1/34, Ms1 5.1/34, ms1mx5.0/42, Error ellipse: s-maj=9.5km s-min=6.9km az=70.0*
*MOS **21** 03:29:11.4±0.9, 20.62N×120.12E, h14km, mb5.8/82, MS5.3/58, Error ellipse: s-maj=5.8km s-min=3.5km az=110.0*
*NEIC **21** 03:29:11.4±1.6, 20.65N±0.05×120.07E±0.07, h4km±1km, mb5.9/294, Ms_20 5.4/255, Mwb5.7/46, Mww5.8, Mwc5.8(GCMT), Error ellipse: s-maj=10.4km s-min=9.0km az=107.0*
*JMA **21** 03:29:12.6±0.2, 20.80N×120.32E, h0km, M5.5*
*NEIC **21** 03:29:12.3, 20.63N×120.09E, h4km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=3.14; Mθθ=0.74; Mφφ=2.40; Mrθ=1.25; Mθφ=-0.85; Mφr=-3.57; Fault plane solution: Mo=4.81000×10^17 NP1:φs339.95000°, δ71.03000°, λ=-88.48000°. NP2:φs155.30000°, δ19.02000°, λ=-94.40000°. Principal axes: T 4.6071, Plg26.0000°, Azm69.0000°; N 0.3860, Plg1.0000°, Azm159.0000°; P -4.9932, Plg64.0000°, Azm252.0000°;*
*NIED **21** 03:29:12.6, 20.80N×120.32E, h0km, MW5.8, Moment Tensor Solution. s3 Moment tensor: Scale 10^17Nm; Mrr=4.30; Mθθ=1.95; Mφφ=2.35; Mrθ=2.20; Mθφ=-1.53; Mφr=-1.47; Fault plane solution: Mo=4.79000×10^17 NP1: φs311.00000°, δ62.00000°, λ=-96.00000°. NP2: φs144.00000°, δ29.00000°, λ=-79.00000°.*
*GCMT **21** 03:29:14.4±0.1, 20.63N×120.00E, h15km, MW5.8/166, Moment Tensor Solution. s141, c303; s166, c548; Duration: 1s9 Moment tensor: Scale 10^17Nm; Mrr=5.67±.04; Mθθ=1.05±.03; Mφφ=4.61±.04; Mrθ=1.14±.07; Mθφ=-2.62±.03; Mφr=1.59±.07; Best double couple: Mo=6.15800×10^17 NP1:φs316.00000°, δ43.00000°, λ=-114.00000°. NP2:φs168.00000°, δ52.00000°, λ=-69.00000°. Principal axes: T 6.0650, Plg4.0000°, Azm243.0000°; N 0.1760, Plg16.0000°, Azm335.0000°; P -6.2510, Plg73.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **21** 03:29:15, 20.59N×120.03E, h14km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=5.92; Mθθ=1.05; Mφφ=4.87; Mrθ=0.49; Mθφ=-2.75; Mφr=0.68; Fault plane solution: Mo=6.18000×10^17 NP1:φs325.00000°, δ44.00000°, λ=-101.00000°. NP2:φs160.00000°, δ47.00000°, λ=-80.00000°. Principal axes: T 6.3198, Plg2.0000°, Azm243.0000°; N -0.2883, Plg8.0000°, Azm333.0000°; P -6.0315, Plg82.0000°, Azm140.0000°;*
*NEIC **21** 03:29:18, 20.58N×120.15E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=6.40; Mθθ=2.03; Mφφ=4.37; Mrθ=-0.37; Mθφ=-1.84; Mφr=2.68; Fault plane solution: Mo=6.54000×10^17 NP1:φs326.00000°, δ34.00000°, λ=-101.00000°. NP2:φs159.00000°, δ57.00000°, λ=-82.00000°. Principal axes: T 5.9129, Plg12.0000°, Azm244.0000°; N 1.1167, Plg6.0000°, Azm335.0000°; P -7.0296, Plg77.0000°, Azm92.0000°;*

ISC 21 03:29:13.7±0.3, 20.61N±0.02×120.14E±0.03, h19km±1km, h20km:pP-P,n1195,σ1966/1194, mb5.7/329, MS5.3/214, 57C-77D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**2.37**	**21**				**Pn**	**03 29 50.9**	**-0.7**
SIPP	**Brgy, Tapao**	**2.69**	**174**	⇑ *i*	P		**Pn**	**03 29 55.9**	**0.0**
SIPP				*i*	S		**Sg**	**03 30 40.0**	**-0.1**
TPUB	**Ta-pu**	**2.72**	**10**	P	n		**Pn**	**03 29 54.8**	**-1.6**
YULB	**Yu-li**	**2.97**	**21**				**Pn**	**03 29 58.8**	**-1.1**
SSLB	**Suanglung**	**3.25**	**13**	P	n		**Pn**	**03 30 02.7**	**-1.1**
CVP	**Callao Caves**	**3.30**	**151**	⇓ *i*	P		**Pn**	**03 30 05.0**	**+0.8**
CVP				*i*	S		**Sn**	**03 30 43.4**	**+0.4**
NACB	**Ninganchiao**	**3.80**	**20**				**Pn**	**03 30 10.1**	**-1.1**
KNMB	**Chin-men Tao**	**4.17**	**337**				**Pn**	**03 30 13.8**	**-2.4**
YHNB	**Yeheng**	**4.20**	**16**	P	n		**Pn**	**03 30 16.2**	**-0.6**
TATO	**Taipei**	**4.52**	**16**				**Pn**	**03 30 20.8**	**-0.3**
QZH	**Quanzhou**	**4.55**	**342**	P	n		**Pn**	**03 30 18.8**	**-2.7**
QZH				Sn			**Sn**	**03 31 07.9**	**-5.9**
QZH				LR			LR		
	comp=N,45μm,9.4s								
QZH				LR			LR		
	comp=E,54μm,12.4s								
QZH				LR			LR		
	comp=Z,52μm,13.2s								
JYNG	**Yonagunijimaku**	**4.62**	**34**	P			**Pn**	**03 30 22.9**	**+0.4**
JYNG				*e*	S		**Sn**	**03 31 14.4**	**-1.3**
YOJ	**Yonaguni jima**	**4.67**	**34**	P			**Pn**	**03 30 23.7**	**+0.6**
YOJ				S			**Sn**	**03 31 14.9**	**-1.8**
YOJ	**Yonaguni jima**	**4.67**	**34**	P			**Pn**	**03 30 22.7**	**-0.4**
YOJ	**Yonaguni jima**	**4.67**	**34**				**Pn**	**03 30 22.7**	**-0.4**
HATJ	**Hateruma jima**	**4.83**	**44**	P			**Pn**	**03 30 25.7**	**+0.4**
HATJ				*e*	S		**Sn**	**03 31 18.8**	**-1.9**
IRIF	**Iriomote-Funau**	**4.98**	**41**	P			**Pn**	**03 30 27.4**	**0.0**
IRIF				*e*	S		**Sn**	**03 31 22.9**	**-1.6**
JKRS	**Kuro-shima**	**5.09**	**44**	P			**Pn**	**03 30 29.0**	**+0.1**
JKRS				*e*	S		**Sn**	**03 31 25.8**	**-1.3**
JIJ	**Ishigaki jima**	**5.26**	**44**	P			**Pn**	**03 30 30.6**	**-0.7**
JIJ				S			**Sn**	**03 31 28.2**	**-3.3**
JISG	**Ishigakijimahi**	**5.53**	**43**	P			**Pn**	**03 30 34.1**	**-0.8**
JISG				S			**Sn**	**03 31 36.1**	**-1.9**
HKC	**Hong Kong Obse**	**5.81**	**288**	⇑ P			**Pn**	**03 30 36.0**	**-2.8**
JTJ	**Tarama**	**5.82**	**46**	P			**Pn**	**03 30 39.1**	**+0.1**
JTJ				S			**Sn**	**03 31 42.6**	**-2.6**
HKPS	**Hong Kong Po S**	**5.83**	**288**	Pn			**Pn**	**03 30 36.2**	**-2.8**
JIRB	**Irabujima**	**6.26**	**47**	P			**Pn**	**03 30 44.5**	**-0.6**
JIRB				S			**Sn**	**03 31 53.4**	**-2.8**
JMJ2	**Miyako jima3**	**6.32**	**48**	P			**Pn**	**03 30 45.7**	**-0.1**
JMJ2				S			**Sn**	**03 31 55.6**	**-1.8**
JIKM	**Ikemajima**	**6.38**	**47**	P			**Pn**	**03 30 46.2**	**-0.4**
JIKM				S			**Sn**	**03 31 56.2**	**-2.8**
JOGS	**Gusukube**	**6.38**	**49**	P			**Pn**	**03 30 47.3**	**+0.6**
JOGS				*e*	S		**Sn**	**03 31 57.2**	**-1.9**
TGY	**Tagaytay City**	**6.51**	**173**	Pn			**Pn**	**03 30 49.7**	**+1.1**
	34nm,0.3s,baz=131,slow=9.3,SNR=1.4								
TGY				Sn			**Sn**	**03 32 05.2**	**+2.8**
	156nm,0.3s,baz=139,slow=19,SNR=1.4								
TGY				LR			LR	03 33 35.4	
	comp=Z,25μm,18.5s,baz=344,slow=41								
LQP	**Lukban**	**6.59**	**168**	⇑ *eP*			**Pn**	**03 30 50.3**	**+0.4**
GZH	**Guangzhou**	**6.78**	**293**	Pn			**Pn**	**03 30 48.8**	**-3.3**
GZH				Sn			**Sn**	**03 32 03.9**	**-4.9**
GQP	**Guinayangan**	**7.02**	**161**	⇓ *eP*			**Pn**	**03 30 58.2**	**+2.7**
GQP				*e*	S		**Sn**	**03 32 14.4**	**-0.4**
PGP	**Puerto Galera**	**7.11**	**174**	⇓ *eP*			**Pn**	**03 30 59.7**	**+2.9**
JKE	**Kume jima 2**	**8.34**	**46**	P			**Pn**	**03 31 12.5**	**-1.1**
JAGN	**Aguni-jima**	**8.82**	**46**	P			**Pn**	**03 31 18.8**	**-1.4**
JNTH	**Nagotoyohara**	**9.32**	**49**	P			**Pn**	**03 31 27.0**	**0.0**
JIH	**Iheya**	**9.60**	**47**	P			**Pn**	**03 31 30.4**	**-0.5**
JOW	**Kunigami**	**9.69**	**49**	P			**Pn**	**03 31 31.5**	**-0.6**
QIZ	**Qiongzhong**	**9.82**	**263**	P			**Pn**	**03 31 31.8**	**-2.1**
QIZ				S			**Sn**	**03 33 22.4**	**-1.3**
QIZ				pmax		pmax			
	comp=Z,59nm,0.6s								
QIZ				LR		LR			
	comp=N,16μm,9.4s								
QIZ				LR		LR			
	comp=E,33μm,11.1s								
QIZ				LR		LR			
	comp=Z,34μm,9.8s								
QIZ	**Qiongzhong**	**9.82**	**263**	Pn			**Pn**	**03 31 31.8**	**-2.1**
JYRO	**Yoronjima**	**9.93**	**48**	P			**Pn**	**03 31 35.0**	**-0.4**
JOKE	**Okinoerabujima**	**10.22**	**47**	P			**Pn**	**03 31 37.0**	**-2.5**
SSE	**Sheshan**	**10.49**	**5**	P			**Pn**	**03 31 41.9**	**-1.1**
SSE				S			**Sn**	**03 33 35.9**	**-4.1**

SSE pmax pmax
comp=Z,13nm,0.5s
SSE pmax pmax
comp=Z,350nm,3.5s
SSE LR LR
comp=N,9μm,11.7s
SSE LR LR
comp=E,3μm,13.9s
JTK Tokunoshima 10.76 47 P **Pn 03 31 45.1 -1.6**
WHN Wuhan 11.19 333 ⇓P **Pn 03 31 51.0 -1.6**
WHN S **Sn 03 33 55.8 -1.4**
WHN pmax pmax
comp=Z,80nm,0.7s
WHN LR LR
comp=N,36μm,10.0s
WHN LR LR
comp=E,69μm,13.1s
WHN LR LR
comp=Z,94μm,15.0s
JAMN Amaminishikomi 11.20 46 P **Pn 03 31 49.2 -3.6**
JMZ Minamidaito 2 11.43 61 P **Pn 03 31 56.5 +0.5**
JMZ Minamidaito 2 11.43 61 **Pn 03 31 57.5 +1.6**
NJ2 Nanjing 11.46 354 *e*P **Pn 03 31 54.9 -1.4**
NJ2 pP 03 31 57.0
NJ2 sP 03 32 01.8
NJ2 S **Sn 03 34 03.4 -0.4**
NJ2 pmax pmax
comp=Z,14nm,0.5s
NJ2 pmax pmax
comp=Z,910nm,6.1s
NJ2 LR LR
comp=N,26μm,11.8s
NJ2 LR LR
comp=E,37μm,17.0s
NJ2 LR LR
comp=Z,28μm,17.5s
JKDJ Kitadaitoujima 11.55 60 P **Pn 03 31 55.3 -2.3**
JAM Amami Oshima 11.60 46 P **Pn 03 31 54.9 -3.3**
JTAJ Takarajima 11.83 42 P **Pn 03 31 59.1 -2.3**
CGP Cagayan de Oro 12.86 159 ⇓*e*P **Pn 03 32 19.9 +4.3**
ENH Enshi 13.60 317 Pn **Pn 03 32 28.3 +2.7**
GYA Guiyang 13.66 298 ⇑P **Pn 03 32 24.8 -1.8**
GYA S **Sn 03 35 04.4 +6.5**
GYA pmax pmax
comp=Z,17nm,1.0s
GYA pmax pmax
comp=Z,320nm,3.5s
GYA LR LR
comp=N,28μm,12.8s
GYA LR LR
comp=E,32μm,12.3s
GYA LR LR
comp=Z,42μm,13.0s
DLV T Lat 14.11 234 Pn **Pn 03 32 33.2 +0.3**
JFU Fukue jima 2 14.25 31 P **Pn 03 32 35.5 +1.0**
JSU Suzuyama 14.26 38 Pn **Pn 03 32 34.8 +0.1**
DAV Davao City (W) 14.45 158 Pn **Pn 03 32 40.1 +2.8**
15nm,0.3s,baz=13,slow=8.9,SNR=6.4
DAV LR LR 03 38 46.8
comp=Z,15μm,20.4s,baz=328,slow=40
DAV Davao City (W) 14.45 158 ⇑*e*P **Pn 03 32 40.5 +3.1**
UBPT Khong Chiam 14.93 252 P **Pn 03 32 44.8 +1.0**
4μm108nm,2.0s
UBPT Khong Chiam 14.93 252 Pn **Pn 03 32 42.6 -1.2**
KKM Kota Kinabalu 14.97 195 Pn **Pn 03 32 44.7 +0.2**
SLVN Son La 15.18 276 **Pn 03 32 44.9 -2.4**
MYLDM Lahad Datu 15.42 186 Pn **Pn 03 32 52.0 +1.8**
MYLDM IAmb IAmb 03 33 17.4
comp=Z,640nm,1.2s
JNU Nakatsue 15.71 35 Pn **Pn 03 32 54.2 +0.2**
comp=Z,1.6nm,0.3s,baz=202,slow=6.0,SNR=28
JNU Sn **S 03 35 56.4 -6.0**
comp=Z,0.3nm,0.3s,baz=191,slow=19,SNR=1.4
JNU LR LR 03 39 32.2
comp=Z,5μm,19.4s,baz=248,slow=40
JNU Nakatsue 15.71 35 IAmb IAmb 03 33 10.5
comp=Z,501nm,0.9s
TIA Tai'an 15.77 351 P **Pn 03 32 55.8 +1.0**
TIA S **Sn 03 35 55.9 +6.8**
TIA pmax pmax
comp=Z,77nm,2.2s
TIA pmax pmax
comp=Z,3μm,6.1s
TIA LR LR
comp=Z,18μm,17.1s
TIA LR LR
comp=Z,25μm,16.1s
TIA LR LR
comp=Z,20μm,13.1s
JTU Tsushima 16.10 29 P **Pn 03 32 59.6 +0.6**
JTU Tsushima 16.10 29 Pn **Pn 03 32 57.8 -1.2**
NONG Nongkai 16.24 264 P **P 03 33 02.7 -1.2**
comp=Z,235nm,1.7s
KMI Kunming 16.65 289 ⇑*e*P **Pn 03 33 04.1 -2.2**
KMI pP pP 03 33 11.3 -1.7
KMI sP sP 03 33 12.6 -2.3
KMI PP **pwP 03 33 18.9 +1.1**
KMI S **Sn 03 36 10.3 -0.6**
KMI sS S 03 36 17.9 -4.2
KMI SS **SnSn 03 36 30.5 +6.4**
KMI pmax pmax
comp=Z,12nm,0.5s
KMI pmax pmax
comp=Z,1μm,4.9s
KMI LR LR
comp=Z,23μm,14.3s
KMI LR LR
comp=Z,17μm,19.0s
KMI LR LR
comp=Z,18μm,13.4s
XAN Xi'an 16.67 326 P **Pn 03 33 05.8 -0.5**
XAN pP P 03 33 09.8 +1.2
XAN S **S 03 36 18.1 -3.9**
XAN pmax pmax
comp=Z,100nm,1.2s
XAN pmax pmax
comp=Z,2μm,3.9s
XAN LR LR
comp=Z,42μm,13.0s
XAN LR LR
comp=Z,23μm,13.0s
XAN LR LR
comp=Z,44μm,10.8s
XAN Xi'an 16.67 326 P **Pn 03 33 05.2 -1.1**
XAN pmax pmax
comp=Z,144nm,1.2s
XAN Xi'an 16.67 326 Pn **Pn 03 33 05.2 -1.1**
TJN Taejon 16.94 20 *c*P **Pn 03 33 09.5 -0.1**
KHON Khomkaen 16.96 258 P **P 03 33 11.6 -0.3**
comp=Z,130nm,1.5s
SGSI Sangihe 17.62 162 P **P 03 33 19.6 +0.5**
comp=Z,4μmcomp=Z,233nm,0.8s
INCN Inchon 17.74 17 P **Pn 03 33 18.2 -1.4**
INCN pmax pmax
comp=Z,155nm,1.3s
INCN Inchon 17.74 17 Pn **Pn 03 33 18.2 -1.4**
CHAI Chaiyaphum 17.86 258 P **Pn 03 33 21.0 -0.3**
comp=Z,2μmcomp=Z,80nm,1.0s
JMN Monobe 17.87 40 **Pn 03 33 20.5 -0.8**
CD2 Chengdu 17.95 308 ⇓*i*P **Pn 03 33 20.3 -2.0**
CD2 PP **PnPn 03 33 36.8 +3.4**
CD2 S **Sn 03 36 37.8 -4.3**
CD2 SS **SnSn 03 37 03.3 +7.4**
CD2 PcP **PcP 03 37 59.5 +1.8**
CD2 pmax pmax
comp=Z,110nm,0.8s
CD2 pmax pmax
comp=Z,980nm,6.1s
CD2 LR LR
comp=Z,52μm,17.5s
CD2 LR LR
comp=Z,42μm,12.2s
CD2 LR LR
comp=Z,50μm,13.5s
KSAR Wonju Array Be 18.08 20 P **Pn 03 33 23.6 -0.1**
KSAR Wonju Array Be 18.08 20 P **Pn 03 33 23.6 -0.1**
KSRS Korea Array 18.10 20 P **P 03 33 24.1 -0.2**
comp=Z,1.3nm,0.3s,baz=203,slow=11,SNR=80
KSRS S **Sn 03 36 43.8 -1.7**
comp=Z,0.3nm,0.3s,baz=183,slow=12,SNR=2.4
KSRS LR LR 03 40 52.2
comp=Z,5μm,20.9s,baz=200,slow=39
KS19 Wonju Array Si 18.13 20 **Pn 03 33 23.4 -1.0**
DL2 Dalian 18.28 4 P **P 03 33 26.3 0.0**
DL2 S **Sn 03 36 51.8 +1.9**

DL2 pmax pmax
comp=Z,150nm,1.1s
DL2 pmax pmax
comp=Z,5μm,4.6s
DL2 LR LR
comp=Z,16μm,16.5s
DL2 LR LR
comp=Z,14μm,14.1s
DL2 LR LR
comp=Z,16μm,13.3s
TIY Taiyuan 18.31 340 *e*P **P 03 33 29.0 +2.2**
TIY S **Sn 03 36 47.0 -3.8**
TIY SS **SnSn 03 37 10.3 +5.5**
TIY pmax pmax
comp=Z,21nm,0.7s
TIY pmax pmax
comp=Z,4μm,5.7s
TIY LR LR
comp=Z,21μm,16.0s
TIY LR LR
comp=Z,12μm,13.8s
TIY LR LR
comp=Z,15μm,18.9s
SRAK Srakaew 18.47 252 P **P 03 33 24.0 -4.6**
comp=Z,17μmcomp=Z,980nm,1.3s
PHIT Phitsanulok 18.97 263 P **Pn 03 33 35.8 +1.0**
comp=Z,5μmcomp=Z,312nm,1.1s
PAYA Payao 19.09 270 **Pn 03 33 37.5 +1.2**
comp=Z,18μmcomp=Z,911nm,0.8s
TOLI2 Tolitoli 19.39 178 P **P 03 33 38.9 +0.3**
LAMP Lampang 19.44 267 P **Pn 03 33 43.0 +2.6**
comp=Z,1μmcomp=Z,53nm,0.8s
SBUM Sibu 19.63 204 P **P 03 33 41.1 -0.2**
SBUM IAmb IAmb 03 33 54.7
comp=Z,689nm,1.2s
BJT Baijiatuao 19.65 351 P **Pn 03 33 42.0 -0.7**
BJT pmax pmax
comp=Z,259nm,1.2s
BJT Baijiatuao 19.65 351 P **Pn 03 33 42.0 -0.7**
BJI Beijing 19.67 351 P **Pn 03 33 42.3 -0.6**
BJI S **S 03 37 22.3 -0.2**
BJI pmax pmax
comp=Z,58nm,0.9s
BJI pmax pmax
comp=Z,1μm,5.3s
BJI LR LR
comp=Z,4μm,14.3s
BJI LR LR
comp=Z,16μm,18.0s
BJI LR LR
comp=Z,7μm,18.0s
CM34 Chiang Mai Arr 19.84 269 P **P 03 33 44.0 +0.4**
JWT Wachi 19.85 39 P **Pn 03 33 44.9 -0.3**
JWT Wachi 19.85 39 IAmb IAmb 03 33 52.7
comp=Z,397nm,1.1s
CM35 Chiang Mai Arr 19.86 268 P **P 03 33 44.0 +0.2**
CM36 Chiang Mai Arr 19.94 268 P **P 03 33 45.0 +0.3**
CM33 Chiang Mai Arr 20.03 269 P **P 03 33 46.0 +0.3**
CHTO Chiang Mai 20.04 269 P **P 03 33 46.2 +0.5**
CHTO pmax pmax
comp=Z,189nm,1.5s
CHTO Chiang Mai 20.04 269 P **P 03 33 46.2 +0.5**
GTOI Gorontalo 20.05 172 P **P 03 33 45.2 -0.6**
comp=Z,5μmcomp=Z,223nm,2.2s
CM09 Chiang Mai Arr 20.05 267 P Pn 03 33 47.3 -0.4
comp=Z,584nmcomp=Z,52nm,0.9s
CM04 Chiang Mai Arr 20.07 267 P Pn 03 33 47.0 -0.9
comp=Z,581nmcomp=Z,58nm,1.4s
JIE Ise 20.07 43 P Pn 03 33 47.9 +0.1
CM01 Chiang Mai Arr 20.08 267 P **P 03 33 47.0 +0.8**
comp=Z,575nmcomp=Z,56nm,1.6s
MRSI Marisa 20.08 175 P Pn 03 33 48.6 +0.5
comp=Z,10μmcomp=Z,8μmcomp=Z,414nm,1.4s
CM02 Chiang Mai Arr 20.09 267 P Pn 03 33 47.8 -0.5
comp=Z,498nmcomp=Z,52nm,0.9s
CM31 Chiang Mai Arr 20.09 268 P Pn 03 33 48.0 -0.3
comp=Z,22μmcomp=Z,1μm,1.0s
CM31 Chiang Mai Arr 20.09 268 P **P 03 33 46.4 +0.1**
CMAR Chiang Mai Arr 20.09 268 P **P 03 33 46.8 +0.4**
comp=Z,12nm,0.7s,baz=75,slow=9.1,SNR=71
CMAR S **S 03 37 31.9 +0.5**
comp=Z,1.3nm,0.3s,baz=77,slow=8.4,SNR=1.4
CMAR PcP **PcP 03 38 02.1 +0.6**
comp=Z,4.0nm,0.5s,baz=67,slow=0.6,SNR=7.3
CMAR LR LR 03 41 12.7
comp=Z,4μm,19.9s,baz=120,slow=36
CMAR Chiang Mai Arr 20.09 268 P **P 03 33 44.2 -2.2**
CM05 Chiang Mai Arr 20.10 267 P Pn 03 33 47.8 -0.5
comp=Z,485nmcomp=Z,44nm,0.9s
CM15 Chiang Mai Arr 20.11 268 P Pn 03 33 48.0 -0.5
comp=Z,611nmcomp=Z,62nm,0.9s
CM13 Chiang Mai Arr 20.13 267 P Pn 03 33 47.9 -0.8
comp=Z,471nmcomp=Z,46nm,0.9s
MPSI Mapaga 20.15 181 P **P 03 33 47.5 +0.6**
comp=Z,11μmcomp=Z,5μmcomp=Z,216nm,1.7s
CM32 Chiang Mai Arr 20.15 268 P Pn 03 33 48.7 -0.2
KMSI Cibinong 20.26 169 P Pn 03 33 51.5 +1.4
comp=Z,766nmcomp=Z,9μmcomp=Z,500nm,1.1s
UTHA Uthaitani 20.30 259 P Pn 03 33 49.9 -0.7
comp=Z,2μmcomp=Z,145nm,1.0s
INU Inuyama 20.88 42 P **P 03 33 54.9 +0.2**
INU IAmb IAmb 03 34 01.8
comp=Z,414nm,0.9s
TNTI Ternate 20.94 159 P **P 03 33 55.3 -0.2**
comp=Z,5μmcomp=Z,6μmcomp=Z,361nm,1.9s
TNTI Ternate 20.94 159 P **P 03 33 54.8 -0.8**
LZH Lanzhou 21.01 321 ⇓P **P 03 33 57.4 +1.0**
LZH pP sP 03 34 01.3 -1.4
LZH sP pwP 03 34 05.3 -0.3
LZH *e*S **S 03 37 46.0 -3.8**
LZH sS sS 03 37 56.5 -0.5
LZH SS **SnSn 03 38 17.6 +6.4**
LZH pmax pmax
comp=Z,170nm,1.2s
LZH pmax pmax
comp=Z,2μm,6.2s
LZH LR LR
comp=Z,26μm,13.0s
LZH LR LR
comp=Z,16μm,12.5s
LZH LR LR
comp=Z,19μm,15.7s
PHET Kaeng Krachan 21.06 252 P **P 03 33 59.0 +2.1**
comp=Z,2μmcomp=Z,136nm,0.9s
JCJ Chichijima 21.16 68 IAmb IAmb 03 34 11.4
comp=Z,605nm,1.0s
JGF Kuroka 21.25 42 P **P 03 34 00.3 +1.5**
JGF Kuroka 21.25 42 P **P 03 33 57.9 -0.9**
JGF IAmb IAmb 03 34 06.2
comp=Z,561nm,0.9s
KSM Kuching 21.30 208 P **P 03 33 59.3 -0.2**
KSM IAmb IAmb 03 34 16.4
comp=Z,578nm,1.5s
SNY Shenyang 21.36 7 ⇑P **P 03 34 00.4 +0.6**
SNY S **S 03 37 56.3 +0.2**
SNY pmax pmax
comp=Z,94nm,2.5s
SNY pmax pmax
comp=Z,2μm,4.1s
SNY LR LR
comp=Z,12μm,14.3s
SNY LR LR
comp=Z,14μm,13.3s
SNY LR LR
comp=Z,22μm,14.6s
APSI Ampana 21.44 176 P **P 03 34 03.0 +2.2**
comp=Z,7μmcomp=Z,672nm,1.4s
JHJ Hachijo jima 2 21.46 50 P **P 03 34 00.8 -0.2**
comp=Z,333nm,0.8s,baz=101,slow=16,SNR=2.7
HHC Hu-ho-hao-te 21.46 342 *e*P **P 03 34 01.5 +0.4**
HHC pP pP 03 34 05.6 +0.2
HHC sP pwP 03 34 08.5 -1.9
HHC S **S 03 37 53.8 -4.6**
HHC pmax pmax
comp=Z,42nm,1.1s
HHC pmax pmax
comp=Z,2μm,5.4s
HHC LR LR
comp=Z,23μm,13.5s
HHC LR LR
comp=Z,16μm,14.1s
HHC LR LR
comp=Z,27μm,13.6s
JHJ2 Mitsune 21.48 51 P **P 03 34 02.5 +1.3**
JGN Niukaw 21.63 40 P **P 03 34 04.2 +1.3**
LUWI Luwuk 21.67 173 P **P 03 34 04.3 +1.0**
comp=Z,11μmcomp=Z,13μmcomp=Z,1μm,1.1s
LUWI Luwuk 21.67 173 P **P 03 34 03.3 0.0**
BTO Baotou 21.72 339 *e*P **P 03 34 02.8 -1.1**
BTO S **S 03 37 59.3 -4.3**
BKB Balikpapan 21.96 189 P **P 03 34 07.7 +1.2**
comp=Z,17μmcomp=Z,10μmcomp=Z,633nm,1.2s
BKB Balikpapan 21.96 189 P **P 03 34 06.0 -0.5**
BKB IAmb IAmb 03 34 13.9
comp=Z,714nm,1.1s
BKB IAMs_20 IAMs_20 03 42 49.9
comp=Z,9μm,21.0s
MTKI Muara Teweh, K 22.02 194 P **P 03 34 09.3 +2.2**
comp=Z,6μmcomp=Z,7μmcomp=Z,210nm,1.7s
LBMI Labuha 22.31 160 P **P 03 34 10.9 +0.7**
comp=Z,15μmcomp=Z,778nm,1.4s
MAJO Matsushiro 22.39 41 *c i*P **P 03 34 09.8 -1.1**
MAJO pmax pmax
comp=Z,478nm,1.4s
MAJO MLR MLR
comp=Z,6μm,19.0s
MAJO Matsushiro 22.39 41 P **P 03 34 10.7 -0.2**
MAJO IAmb IAmb 03 34 20.1
comp=Z,605nm,1.4s
MAT Matsushiro 22.39 41 P **P 03 34 11.2 +0.3**
MAT S **S 03 38 17.8 +1.7**
MAT Matsushiro 22.39 41 P **P 03 34 11.2 +0.3**
MJB9 Matsu-Tunnel 22.39 41 IAmb IAmb 03 34 19.5
comp=Z,310nm,1.0s
MJAR Matsushiro Arr 22.39 41 P **P 03 34 11.3 +0.4**
comp=Z,69nm,0.7s,baz=228,slow=9.0,SNR=44
MJAR S **S 03 38 17.3 +1.2**
comp=Z,3.2nm,0.9s,baz=232,slow=6.0,SNR=2.2
MJAR Matsushiro Arr 22.39 41 P **P 03 34 10.7 -0.2**
JRY Ryogami san 22.49 43 P **P 03 34 12.6 +0.5**
LKP Lekhapani 23.16 292 *e*P **P 03 34 18.6 -0.5**
LKP IAmb IAmb 03 34 32.8
comp=Z,122nm,0.5s
JSD Sado 23.41 38 P **P 03 34 20.4 -1.1**
JSD IAmb IAmb 03 34 34.7
comp=Z,162nm,0.8s
TRTT Trang 23.50 240 P **P 03 34 23.9 +1.3**
TTSI Tana Toraja 23.51 181 P **P 03 34 24.5 +1.9**
comp=Z,8μmcomp=Z,4μmcomp=Z,284nm,1.1s
CN2 Changchun 23.55 10 *e*P **P 03 34 21.1 -1.7**
CN2 *e*PP **PnPn 03 34 53.4 +3.5**
CN2 *e*S **S 03 38 32.8 -3.1**
CN2 *e*SS **SnSn 03 39 20.3 +7.3**
CN2 pmax pmax
comp=Z,90nm,1.5s
CN2 pmax pmax
comp=Z,3μm,5.0s
SURT Suratani 23.63 244 P **P 03 34 28.1 +4.3**
comp=Z,74nmcomp=Z,9.3nm,1.1s
SIJI Sorong 23.96 152 P **P 03 34 27.3 +0.2**
comp=Z,254nm,0.9s,baz=334,slow=11,SNR=196
SIJI S **S 03 38 43.0 +0.1**
comp=Z,6.2nm,0.8s,baz=221,slow=20,SNR=1.2
DIBR DIBRUGARH 24.01 291 ⇑*e*P **P 03 34 25.9 -1.4**
KBKI Kotabaru 24.07 190 P **P 03 34 30.1 +2.1**
comp=Z,84nm,1.4s
MOKO MOKOCHONG 24.16 289 *e*P **P 03 34 27.4 -1.6**
KULM Kulim 24.29 234 P **P 03 34 29.7 -0.4**
SPSI Sidrap Palu 24.42 181 P **P 03 34 31.9 +0.7**
comp=Z,7μmcomp=Z,5μmcomp=Z,175nm,1.1s
KOHI KOHIMA 24.45 287 ⇑*e*P **P 03 34 29.8 -1.9**
KOHI IAmb IAmb 03 34 42.3
comp=Z,144nm,1.3s
BBKI Banjar Baru 24.48 193 P **P 03 34 33.0 +1.2**
comp=Z,6μmcomp=Z,6μmcomp=Z,298nm,1.7s
IMP Imphal 24.51 285 *e*P **P 03 34 31.2 -0.9**
IMP IAmb IAmb 03 34 43.2
comp=Z,98nm,1.1s
VLA Vladivostok 24.51 21 *c i*P **P 03 34 33.5 +1.7**
VLA pmax pmax
comp=Z,574nm,2.1s
VLA MLR MLR
comp=Z,7μm,17.0s
IPM Ipoh 24.55 232 P **P 03 34 31.0 -1.4**
PKDT Phuket 24.58 242 P **P 03 34 34.0 +1.3**
GUMO Guam 24.62 103 P **P 03 34 34.0 +0.9**
comp=Z,366nm,1.0s,baz=191,slow=6.7,SNR=12
GUMO LR LR 03 43 47.0
comp=Z,3μm,20.2s,baz=280,slow=36
GUMO Guam 24.62 103 P **P 03 34 34.0 +0.9**
GUMO Guam 24.62 103 P **P 03 34 32.5 -0.6**
JYA Atsumi 24.63 39 P **P 03 34 33.4 +0.4**
NLAI Namlea 24.66 163 P **P 03 34 35.0 +1.6**
comp=Z,11μmcomp=Z,822nm,1.1s
TPRI Tanjung Pinang 24.81 220 P **P 03 34 39.5 +4.7**
JMM Marumori 24.82 42 IAmb IAmb 03 34 48.9
comp=Z,182nm,1.0s
BNSI Bone 24.85 180 P **P 03 34 37.0 +1.9**
comp=Z,5μmcomp=Z,254nm,1.7s
ZIRO ZIRO 24.94 291 *e*P **P 03 34 36.8 +0.6**
ZIRO IAmb IAmb 03 34 48.4
comp=Z,207nm,0.8s
MDJ Mudanjiang 25.20 16 P **P 03 34 38.6 +0.6**
MDJ pP sP 03 34 43.3 -1.3
MDJ S **S 03 39 03.9 +1.6**
MDJ sS sS 03 39 10.8 +0.7
MDJ pmax pmax
comp=Z,300nm,1.1s
MDJ pmax pmax
comp=Z,4μm,4.0s
MDJ LR LR
comp=Z,14μm,15.0s
MDJ LR LR
comp=Z,12μm,15.0s
MDJ LR LR
comp=Z,20μm,15.7s
MDJ Mudanjiang 25.20 16 P **P 03 34 38.2 +0.2**
SAIH SAIHA 25.31 279 *e*P **P 03 34 40.0 +0.5**
MSAI Masohi 25.32 159 P **P 03 34 41.0 +1.6**
comp=Z,3μmcomp=Z,235nm,1.2s
AAI Ambon 25.40 161 P **P 03 34 41.5 +1.4**
comp=Z,8μmcomp=Z,9μmcomp=Z,614nm,0.9s
KAPI Kappang 25.46 181 P **P 03 34 41.2 +0.6**
comp=Z,34nm,0.7s,baz=359,slow=5.7,SNR=26
KAPI S **S 03 39 04.9 -2.1**
comp=Z,39nm,0.6s,baz=198,slow=19,SNR=13
KAPI LR LR 03 44 59.0
comp=Z,4μm,20.6s,baz=2.5,slow=37
KAPI Kappang 25.46 181 P **P 03 34 40.6 -0.1**
KAPI IAmb IAmb 03 34 54.6
comp=Z,232nm,1.1s
USA0B Ussuriysk Arra 25.51 20 P **P 03 34 40.5 -0.3**
USA0B pmax pmax
comp=Z,81nm,1.1s
USA0B Ussuriysk Arra 25.51 20 P **P 03 34 40.5 -0.3**
USRK Ussuriysk Ar. 25.51 20 P **P 03 34 41.6 +0.7**
comp=Z,38nm,0.8s,baz=204,slow=7.5,SNR=33
USRK S **S 03 39 07.3 0.0**
comp=Z,1.7nm,0.7s,baz=214,slow=31,SNR=2.5
USRK LR LR 03 44 44.0
comp=Z,3μm,21.9s,baz=190,slow=36
SILR SILCHAR 25.54 285 *e*P **P 03 34 42.1 +0.7**
SILR IAmb IAmb 03 34 54.4
comp=Z,282nm,0.8s
GTA Gaotai 25.61 321 ⇓P **P 03 34 42.3 +0.3**
GTA pP pP 03 34 46.4 -0.3
GTA sP sP 03 34 49.5 +1.0
GTA PcP **PcP 03 38 13.3 +0.6**
GTA S **S 03 39 13.3 +4.0**
GTA sS sS 03 39 20.8 +3.9
GTA pmax pmax
comp=Z,1μm,6.7s
GTA LR LR
comp=Z,13μm,15.3s
GTA LR LR
comp=Z,9μm,13.1s
GTA LR LR
comp=Z,11μm,13.4s
TEZP TEZPUR 25.73 289 *e*P **P 03 34 41.4 -1.6**
BKSI Bulukumba 25.77 180 P **P 03 34 45.2 +1.8**
comp=Z,6μmcomp=Z,2μmcomp=Z,137nm,1.1s
RKPI Ransiki, Papua 25.93 146 P **P 03 34 44.7 -0.2**
comp=Z,9μmcomp=Z,366nm,0.9s
FAKI Fak Fak 26.22 152 P **P 03 34 48.0 +0.4**
comp=Z,6μmcomp=Z,5μmcomp=Z,259nm,0.8s
FAKI Fak Fak 26.22 152 P **P 03 34 47.0 -0.6**
TPI Tanjungpandan 26.25 209 P **P 03 34 49.8 +2.0**
comp=Z,3μmcomp=Z,122nm,1.8s
SHL Shillong 26.43 286 *e*P **P 03 34 50.4 +0.8**
SHL IAmb IAmb 03 35 16.9
comp=Z,78nm,1.1s
SHL Shillong 26.43 286 P **P 03 34 49.1 -0.6**

SHL pmax pmax
comp=Z,92nm,1.0s
SHL MLR MLR
comp=Z,5μm,19.0s
SHL Shillong 26.43 286 P **P** **03 34 49.0 -0.6**
PPBI Pangkal Pinang 26.46 213 P **P** **03 34 50.9 +1.1**
comp=Z,5μmcomp=Z,152nm,1.1s
BSSI Bau Bau, Buton 26.58 179 P **P** **03 34 54.2 +3.4**
comp=Z,4μmcomp=Z,3μmcomp=Z,159nm,1.7s
GUWA GUWAHATI 26.66 287 *eP* **P** **03 34 51.6 +0.1**
GUWA IAmb IAmb 03 35 03.0
comp=Z,117nm,1.4s
TAWA Tawang 26.69 291 *eP* **P** **03 34 53.7 +1.5**
TAWA IAmb IAmb 03 35 05.3
comp=Z,583nm,1.5s
BAKI Biak 26.72 142 P P 03 34 59.9 +7.8
BELO BELONIA 26.73 281 *eP* **P** **03 34 52.5 +0.3**
BNDI Bandanaira 26.75 158 P **P** **03 34 55.8 +3.5**
comp=Z,6μmcomp=Z,13μmcomp=Z,744nm,1.4s
JTM Tenmabayashi 26.87 37 P **P** **03 34 52.5 -0.7**
JTM Tenmabayashi 26.87 37 IAmb IAmb 03 35 04.6
comp=Z,589nm,1.6s
JTM IAMs_20 IAMs_20 03 47 21.7
comp=Z,7μm,18.0s
AGT Agartala 26.92 282 *eP* **P** **03 34 55.7 +1.8**
RGRI Rengat 27.15 222 P P 03 35 10.3 +14
LHMI Lhok Sumawe 27.22 239 P P 03 35 09.0 +12
LHMI Lhok Sumawe 27.22 239 P **P** **03 34 57.0 +0.4**
LHMI IAmb IAmb 03 35 06.0
comp=Z,260nm,1.1s
RPSI Rantau Prapat 27.29 232 IAMs_20 IAMs_20 03 45 28.8
comp=Z,6μm,18.0s
BKNI Bangkinang 27.48 225 P **P** **03 35 02.0 +3.1**
comp=Z,6μmcomp=Z,5μmcomp=Z,384nm,1.0s
BKNI Bangkinang 27.48 225 P **P** **03 34 58.3 -0.6**
BKNI IAmb IAmb 03 35 10.3
comp=Z,283nm,0.9s
KCSI Kotacane, Aceh 27.62 235 P **P** **03 35 01.6 +1.4**
comp=Z,2μmcomp=Z,57nm,0.9s
LSA Lhasa 27.70 295 P **P** **03 35 02.3 +1.0**
LSA pP **sP** **03 35 07.3 -0.7**
LSA pmax pmax
comp=Z,81nm,0.9s
LSA LR LR
comp=Z,7μm,12.8s
LSA LR LR
comp=Z,18μm,12.8s
LSA LR LR
comp=Z,10μm,11.4s
LSA Lhasa 27.70 295 P **P** **03 35 01.5 +0.2**
LSA pmax pmax
comp=Z,277nm,2.0s
LSA MLR MLR
comp=Z,4μm,20.0s
LSA Lhasa 27.70 295 P **P** **03 35 01.5 +0.2**
LSA IAmb IAmb 03 35 16.7
comp=Z,277nm,2.0s
MNSI Mandailing Nat 28.13 228 P **P** **03 35 04.8 0.0**
comp=Z,18μmcomp=Z,253nm,1.1s
KMMI Kalianget 28.14 193 P P 03 35 14.4 +10
SDSI Sungai Dareh 28.18 223 P **P** **03 35 05.7 +0.6**
comp=Z,2μmcomp=Z,122nm,1.1s
GRJI Gresik 28.37 196 P P 03 35 15.3 +8.5
JEW Eniwo 28.48 34 IAmb IAmb 03 35 22.8
comp=Z,311nm,1.0s
JEW IAMs_20 IAMs_20 03 48 13.1
comp=Z,9μm,18.0s
ABJI Asem Bagus 28.82 192 P P 03 35 05.9 -4.9
comp=Z,2μmcomp=Z,62nm,1.1s
ERM Erimo 28.86 37‖ *eP* **P** **03 35 13.1 +2.2**
ERM pmax pmax
comp=Z,85nm,1.6s
ERM MLR MLR
comp=Z,4μm,18.0s
SMPI Sarmi 28.91 139 P **P** **03 35 12.1 +0.5**
comp=Z,2μmcomp=Z,6μmcomp=Z,74nm,1.4s
SRBI Singaraja 28.92 190 P **P** **03 35 12.5 +0.8**
comp=Z,6μmcomp=Z,50nm,1.3s
KRJI Kerinci 29.05 221 P **P** **03 35 15.0 +2.0**
comp=Z,7μmcomp=Z,22μmcomp=Z,1μm,1.0s
SMRI Semarang 29.09 200 P **P** **03 35 13.7 +0.4**
comp=Z,4μmcomp=Z,77nm,1.2s
SMRI Semarang 29.09 200 P **P** **03 35 13.6 +0.4**
SMRI IAmb IAmb 03 35 57.2
comp=Z,247nm,1.4s
MMRI Maumere 29.13 176 P **P** **03 35 15.3 +1.7**
comp=Z,6μmcomp=Z,5μmcomp=Z,261nm,1.5s
ULN Ulaanbaatar 29.18 342 *d iP* **P** **03 35 14.2 +0.2**
ULN pmax pmax
comp=Z,61nm,1.7s
ULN MLR MLR
comp=Z,10μm,16.0s
ULN Ulaanbaatar 29.18 342 P **P** **03 35 13.3 -0.7**
ULN Ulaanbaatar 29.18 342 IAMs_20 IAMs_20 03 47 41.7
comp=Z,7μm,18.0s
EDFI Ende, Flores 29.21 177 P **P** **03 35 14.2 -0.2**
comp=Z,3μmcomp=Z,2μmcomp=Z,156nm,1.4s
GSI Gunungsitoli 29.22 232 P **P** **03 35 14.3 -0.1**
comp=Z,5μmcomp=Z,59nm,0.7s
GSI Gunungsitoli 29.22 232 P **P** **03 35 14.0 -0.4**
LHSI Lahat 29.25 216 P **P** **03 35 15.8 +1.1**
comp=Z,4μmcomp=Z,81nm,1.0s
TWSI Taliwang, Sumb 29.34 187 P **P** **03 35 16.3 +0.9**
comp=Z,1μmcomp=Z,70nm,1.5s
KLSI 29.34 213 P **P** **03 35 17.2 +1.7**
comp=Z,889nmcomp=Z,50nm,1.0s
PLAI Plampang 29.34 185 P **P** **03 35 14.9 -0.6**
comp=Z,4μmcomp=Z,4μmcomp=Z,216nm,1.5s
SONM Songino Array 29.35 341 P **P** **03 35 15.7 +0.2**
comp=Z,15nm,1.0s,baz=160,slow=9.8,SNR=30
SONM LR LR 03 47 58.3
comp=Z,5μm,18.3s,baz=180,slow=38
SONM Songino Array 29.35 341 P **P** **03 35 15.2 -0.2**
GMJI Gumukmas 29.44 194 P P 03 35 25.4 +9.0
JAGI Jajag, Banyuwa 29.49 192 P P 03 35 30.4 +14
JAGI Jajag, Banyuwa 29.49 192 P **P** **03 35 17.7 +0.9**
JAGI IAmb IAmb 03 36 00.6
comp=Z,307nm,1.9s
GTK Tadong 29.53 289‖ *eP* **P** **03 35 17.5 +0.2**
GTK IAmb IAmb 03 35 28.6
comp=Z,131nm,1.2s
PWJI Pagerwojo 29.61 197 P **P** **03 35 22.1 +4.3**
comp=Z,13μmcomp=Z,74nm,0.9s
KSI Kapahiang 29.62 217 P P 03 35 23.3 +5.2
comp=Z,14μmcomp=Z,133nm,0.8s
WOJI Wonogiri, Jawa 29.68 199 P **P** **03 35 22.8 +4.3**
comp=Z,107nm,1.7s
KPJI Karang Pucung 29.87 203 P P 03 35 27.1 +6.9
LEM Lembang 29.91 206 P **P** **03 35 21.3 +0.6**
comp=Z,30nm,0.7s,baz=252,slow=20,SNR=2.7
LEM S **S** **03 40 17.1 -0.4**
comp=Z,9.4nm,0.3s,baz=288,slow=20,SNR=1.3
LWLI Liwa 29.96 214 P **P** **03 35 23.7 +2.5**
comp=Z,9μmcomp=Z,195nm,0.8s
ASAJ Asahikawa 29.97 33 P **P** **03 35 21.4 +0.5**
comp=Z,45nm,1.1s,baz=228,slow=9.2,SNR=18
ASAJ LR LR 03 49 38.9
comp=Z,4μm,18.1s,baz=242,slow=41
ASAJ Asahikawa 29.97 33 P **P** **03 35 21.6 +0.8**
ASAJ pmax pmax
comp=Z,78nm,0.8s
ASAJ MLR MLR
comp=Z,4μm,19.0s
JKA Kamikawa-asahi 29.97 33 P **P** **03 35 21.6 +0.7**
MNAI Manna 30.00 216 P **P** **03 35 22.1 +0.7**
MNAI IAmb IAmb 03 35 41.8
comp=Z,282nm,1.1s
SISI Saibi 30.00 226 P **P** **03 35 25.1 +3.7**
comp=Z,2μmcomp=Z,174nm,1.0s
DBJI Dramaga 30.03 207 P P 03 35 29.6 +8.0
KLR Kul'dur 30.03 15 P **P** **03 35 22.2 +0.9**
comp=Z,21nm,0.9s,baz=220,slow=8.0,SNR=37
KLR PcP **PcP** **03 38 22.8 -0.2**
comp=Z,3.1nm,0.5s,baz=193,slow=6.1,SNR=5.3
KLR S **S** **03 40 12.9 -5.5**
comp=Z,1.7nm,0.9s,baz=193,slow=11,SNR=1.5
KLR LR LR 03 48 08.1
comp=Z,6μm,20.4s,baz=196,slow=38
KLR Kul'dur 30.03 15 *de* **P** **P** **03 35 21.5 +0.2**
WBSI Waikabubak, Su 30.07 181 P P 03 35 28.9 +7.0
KASI Kota Agung 30.17 212 P P 03 35 29.0 +6.1
comp=Z,1μmcomp=Z,75nm,0.9s
GENI Genyem 30.28 137 P P 03 35 31.2 +7.3
TAPN Taplejung 30.32 289 *eP* **P** **03 35 25.7 +1.2**
comp=Z,185nm,1.2s
SOEI Soe 30.44 172 P **P** **03 35 24.5 -0.9**
comp=Z,3μmcomp=Z,168nm,1.0s
SOEI Soe 30.44 172 IAmb IAmb 03 36 00.6
comp=Z,165nm,0.9s
SAUI Saumlaki 30.46 158 P **P** **03 35 24.5 -0.8**
CISI Cisompet, Garu 30.50 205 P P 03 35 34.1 +8.3
CISI Cisompet, Garu 30.50 205 P **P** **03 35 26.0 +0.2**
CISI IAmb IAmb 03 35 36.5
comp=Z,123nm,1.1s
ODAN Odare 30.56 288 *eP* **P** **03 35 27.3 +0.7**
JAY Jayapura 30.57 136 P **P** **03 35 29.8 +3.3**
comp=Z,14nm,0.8s,baz=102,slow=5.9,SNR=3.8
BATI Baumata 30.82 173 P **P** **03 35 27.1 -1.4**
comp=Z,236nm,0.8s,baz=180,slow=1.2,SNR=23
BATI LR LR 03 49 21.2
comp=Z,2μm,21.0s,baz=352,slow=39
BATI Baumata 30.82 173 P **P** **03 35 28.1 -0.4**
comp=Z,2μmcomp=Z,220nm,0.9s
RAMN Ramite 31.27 288 *eP* **P** **03 35 33.6 +0.8**
comp=Z,104nm,0.8s
YUK Yuzh-Kuril'sk 31.67 37 *c iP* **P** **03 35 40.0 +4.2**
YUK *e* 03 36 47.6
YUK *e*PPP PPP 03 37 03.0
YUK *i* S **S** **03 40 45.5 +1.3**
YUK *e*SS **SnSn** **03 42 31.9 +0.9**
YUK pmax pmax
comp=Z,489nm,1.4s
YUK pmax pmax
comp=N,200nm,0.9s
YUK MLR MLR
comp=Z,3μm,17.0s
YUK MLR MLR
comp=E,2μm,13.0s
CIT Chita 31.77 352 *eP* **P** **03 35 37.3 +0.6**
CIT *e* 03 36 39.4
CIT *e* 03 37 04.1
CIT pmax pmax
comp=Z,172nm,2.5s
BOK Bokaro 31.83 282 *eP* **P** **03 35 38.8 +1.3**
BOK IAmb IAmb 03 35 50.3
comp=Z,86nm,1.3s
GUN Gumba 31.99 290 *eP* **P** **03 35 39.8 +0.5**
comp=Z,139nm,0.8s
YSS Yuzh-Sakhalins 32.08 30‖ *eP* **P** **03 35 41.5 +2.1**
YSS *e**SP **sP** **03 35 46.8 +0.7**
YSS *e* 03 36 44.0
YSS *e*PPP PPP 03 37 01.2
YSS *e*S **S** **03 40 52.5 +1.9**
YSS *e*SSS SSS 03 43 05.2
YSS 03 46 13.0
YSS pmax pmax
comp=Z,60nm,1.0s
YSS pmax pmax
comp=Z,1μm,3.6s
YSS pmax pmax
comp=N,600nm,4.0s
YSS pmax pmax
comp=E,500nm,4.1s
YSS smax smax
comp=N,700nm,6.8s
YSS smax smax
comp=E,700nm,5.8s
YSS MLR MLR
comp=Z,4μm,16.0s
YSS MLR MLR
comp=N,3μm,18.0s
YSS MLR MLR
comp=E,1μm,16.0s
YSS Yuzh-Sakhalins 32.08 30 P **P** **03 35 39.5 +0.1**
YSS IAmb IAmb 03 35 56.4
comp=Z,88nm,0.8s
PKI Pulchoki 32.38 289 *eP* **P** **03 35 42.5 -0.2**
comp=Z,63nm,1.0s
PKIN Phulchoki 32.39 289 *eP* **P** **03 35 42.9 +0.2**
KKN Kakani 32.51 290 *eP* **P** **03 35 44.0 +0.3**
comp=Z,66nm,0.8s
ZAK Zakamensk 32.57 340 *eP* **P** **03 35 43.3 -0.5**
ZAK *e* 03 38 24.7
ZAK pmax pmax
comp=Z,19nm,1.1s
ZAK pmax pmax
comp=Z,16nm,1.5s
DMN Daman 32.65 289 *eP* **P** **03 35 45.3 +0.3**
comp=Z,79nm,0.9s
GRNR Gornyy 32.72 19‖ *i P* **P** **03 35 46.1 +1.1**
GRNR *e* 03 36 55.9
GRNR *e*S **S** **03 41 06.3 +5.7**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR smax smax
comp=N,5.0nm,0.6s
GRNR MLR MLR
comp=E,2μm,12.0s
GRNR MLR MLR
comp=N,4μm,14.0s
GRNR MLR MLR
comp=Z,5μm,14.0s
GKN Gorkha 33.10 290 *eP* **P** **03 35 48.4 -0.4**
ZEA Zeya 33.52 8 *eP* **P** **03 35 53.0 +1.1**
ZEA *e* 03 37 12.3
ZEA *e*S **S** **03 41 18.7 +5.9**
ZEA *e*SS **SS** **03 43 37.1 -0.6**
ZEA pmax pmax
comp=N,600nm,4.0s
ZEA pmax pmax
comp=Z,800nm,5.1s
ZEA pmax pmax
comp=E,30nm,1.5s
ZEA pmax pmax
comp=N,70nm,1.1s
ZEA pmax pmax
comp=Z,100nm,1.1s
ZEA pmax pmax
comp=Z,500nm,4.2s
ZEA smax smax
comp=N,2μm,12.0s
ZEA MLR MLR
comp=E,3μm,16.0s
ZEA MLR MLR
comp=N,9μm,14.0s
ZEA MLR MLR
comp=Z,9μm,14.0s
KUR Kuril'sk 33.54 37 *eP* **P** **03 35 53.0 +0.8**
KUR PPP PPP 03 37 08.5
KUR *i* S **S** **03 41 11.7 -1.6**
KUR pmax pmax
comp=Z,2μm,3.8s
KUR pmax pmax
comp=Z,326nm,1.4s
KUR MLR MLR
comp=N,4μm,17.0s
KUR MLR MLR
comp=Z,3μm,17.0s
KUR MLR MLR
comp=E,3μm,18.0s
TLY Talaya 33.59 341 P **P** **03 35 55.9 +3.4**
comp=E,5.5nm,0.6s,baz=159,slow=9.9,SNR=6.4
TLY Talaya 33.59 341 *d iP* **P** **03 35 52.2 -0.4**
TLY *e* 03 37 00.5
TLY *e* 03 38 40.8
TLY *e*S **S** **03 41 13.9 -0.1**
TLY *e*SS **SnSn** **03 43 20.2 +2.7**
TLY *e*SSS SSS 03 43 41.3
TLY pmax pmax
comp=Z,58nm,0.8s
TLY MLR MLR
comp=Z,12μm,10.0s
TLY Talaya 33.59 341 P **P** **03 35 52.5 -0.1**
TLY IAMs_20 IAMs_20 03 51 31.8
comp=Z,9μm,19.0s
DANN Dangsing 33.90 290 *eP* **P** **03 35 55.7 -0.2**
comp=Z,73nm,0.8s
IRK Irkutsk 33.90 342 *eP* **P** **03 35 55.4 +0.1**
IRK pmax pmax
comp=Z,140nm,2.4s
KOLN Koldanda 33.99 289 *eP* **P** **03 35 56.7 +0.1**
comp=Z,116nm,0.9s
CHLP Challavanipeta 34.02 273 *eP* **P** **03 35 58.4 +1.7**
CHLP IVmBBB 03 36 08.0
comp=Z,494nm,1.7s
CHLP IVMs_BB IVMs_BB 03 55 47.7
comp=Z,1μm,13.5s
MOY Mondy 34.42 339 *eP* **P** **03 36 01.0 +1.1**
MOY pmax pmax
comp=Z,212nm,2.4s
PYUN Piuthan 34.55 290 *eP* **P** **03 36 01.7 +0.2**
comp=Z,52nm,0.6s
MANU Manus Island 34.91 127 P **P** **03 36 04.6 +0.2**
MTN Manton Dam 34.95 161 IAmb IAmb 03 36 17.5
comp=Z,88nm,0.8s
TYV Tymovskoe 35.01 25 *eP* **P** **03 36 05.2 +0.4**
TYV *eS* **S** **03 41 39.4 +3.5**
TYV pmax pmax
comp=Z,25nm,1.5s
TYV pmax pmax
comp=Z,1μm,5.0s
TYV smax smax
comp=N,12nm,1.5s
TYV smax smax
comp=E,1μm,8.1s
TYV MLR MLR
comp=Z,3μm,15.0s
WMQ Urumqi 35.55 318 *eP* **P** **03 36 11.0 +1.3**
WMQ sP pwP 03 36 21.5 +2.2
WMQ S **S** **03 41 47.3 +2.8**
WMQ sS sS 03 41 51.3 -1.1
WMQ PcS **PcS** **03 42 25.4 -0.3**
WMQ pmax pmax
comp=Z,35nm,2.1s
WMQ pmax pmax
comp=Z,930nm,5.9s
WMQ LR LR
comp=Z,13μm,12.5s
WMQ LR LR
comp=Z,8μm,12.5s
WMQ LR LR
comp=Z,6μm,19.3s
WMQ Urumqi 35.55 318 IAMs_20 IAMs_20 03 50 53.8
comp=Z,5μm,19.0s
PVM Polavaram 36.53 271 *eP* **P** **03 36 19.3 +1.0**
PVM IVmB_BB 03 36 33.2
comp=Z,367nm,3.6s
PVM IVMs_BB IVMs_BB 03 55 27.2
comp=Z,1μm,16.6s
KNRA Kununurra 37.04 166 P **P** **03 36 21.7 -0.8**
KNRA IAmb IAmb 03 36 23.0
comp=Z,214nm,1.1s
BOD Bodaibo 37.44 355 *eP* **P** **03 36 25.5 0.0**
BOD pmax pmax
comp=Z,35nm,1.7s
MYLAV Mylavaram 37.56 271 *eP* **P** **03 36 27.2 +0.1**
MYLAV IVmB_BB 03 36 44.2
comp=Z,358nm,3.5s
MYLAV IVMs_BB IVMs_BB 03 56 08.8
comp=Z,1μm,15.0s
GGR Gangavaram 37.75 273 *eP* **P** **03 36 28.9 +0.1**
GGR IVmB_BB 03 36 47.2
comp=Z,384nm,2.2s
GGR IVMs_BB IVMs_BB 03 56 41.9
comp=Z,771nm,12.5s
ADKI Addanki 38.38 270 *eP* **P** **03 36 34.8 +0.8**
ADKI IVmB_BB 03 36 51.8
comp=Z,392nm,2.8s
ADKI IVMs_BB IVMs_BB 03 58 05.2
comp=Z,712nm,15.4s
RPR Rampur 38.42 275 *eP* **P** **03 36 34.4 +0.1**
FITZ Fitzroy Crossi 38.84 172 P **P** **03 36 36.0 -1.7**
comp=Z,20nm,0.9s,baz=360,slow=6.0,SNR=33
FITZ S **S** **03 42 26.1 -8.6**
comp=Z,2.8nm,1.0s,baz=259,slow=19,SNR=1.2
FITZ Fitzroy Crossi 38.84 172 P **P** **03 36 36.6 -1.2**
NJS Nagarjunasagar 38.84 271 *eP* **P** **03 36 38.7 +0.7**
NJS IVmBBB 03 36 48.5
comp=Z,323nm,2.3s
NJS IVMs_BB IVMs_BB 03 57 28.1
comp=Z,887nm,14.6s
DDI Dehra Dun 39.02 293‖ *eP* **P** **03 36 40.7 +1.4**
CUPL Choutuppal 39.05 272 *eP* **P** **03 36 38.9 -0.8**
CUPL IVmBBB 03 36 50.4
comp=Z,357nm,1.8s
CUPL IVMs_BB IVMs_BB 03 58 28.8
comp=Z,990nm,13.0s
ZSN Zaisan 39.10 322 *eP* **P** **03 36 39.9 +0.1**
ZSN *eS* **S** **03 42 40.5 +2.1**
ZSN Zaisan 39.10 322 *eP* **P** **03 36 39.8 +0.1**
ZSN *eS* **S** **03 42 40.5 +2.1**
HYB Hyderabad 39.37 273 *i P* **P** **03 36 41.0 -1.4**
HYB *es*P **pP** **03 36 44.0 -3.2**
HYB *eS* **S** **03 42 44.0 +0.9**
HYB Hyderabad 39.37 273 *eP* **P** **03 36 40.9 -1.5**
HYB IAmb IAmb 03 36 53.3
comp=Z,116nm,1.8s
HYBB Hyderabad (bro 39.37 273 *eP* **P** **03 36 42.8 +0.4**
HYBB IVmB_BB 03 36 54.0
comp=Z,428nm,6.7s
HYBB IVMs_BB IVMs_BB 03 58 36.8
comp=Z,1μm,13.1s
PATS Pohnpei 39.41 105 P **P** **03 36 42.5 -0.1**
PATS IAmb IAmb 03 36 48.7
comp=Z,574nm,1.3s
BHPL Bhopal 39.61 282 *eP* **P** **03 36 44.8 +0.5**
BHPL IAmb IAmb 03 36 54.8
comp=Z,108nm,1.4s
SMLA Simla 39.85 294 *eP* **P** **03 36 47.2 +1.1**
SMLA IAmb IAmb 03 36 57.3
comp=Z,208nm,1.1s
RABL Rabaul 39.94 125 P **P** **03 36 47.7 +0.6**
PMG Port Moresby 39.95 136 P **P** **03 36 47.4 +0.4**
comp=Z,82nm,1.0s,baz=342,slow=7.6,SNR=22
PMG S **S** **03 42 48.7 -2.8**
comp=Z,5.5nm,0.2s,baz=75,slow=18,SNR=1.5
PMG Port Moresby 39.95 136 *d iP* **P** **03 36 46.9 -0.1**
PMG pmax pmax
comp=Z,209nm,1.3s
PMG MLR MLR
comp=Z,1μm,17.0s
PMG Port Moresby 39.95 136 P **P** **03 36 47.6 +0.6**
MK31 Makanchi Array 40.32 319 *d iP* **P** **03 36 50.0 +0.1**
MK31 Makanchi Array 40.32 319 P **P** **03 36 49.8 -0.1**
MKAR Makanchi Array 40.32 319 P **P** **03 36 50.8 +0.9**
comp=Z,17nm,0.8s,baz=114,slow=9.0,SNR=66
MKAR LR LR 03 55 36.4
comp=Z,4μm,18.9s,baz=109,slow=39
MKAR Makanchi Array 40.32 319 P **P** **03 36 50.3 +0.4**
PALK Pallekele 40.38 257 P **P** **03 36 52.0 +1.2**
PALK pmax pmax
comp=Z,136nm,1.7s
PALK Pallekele 40.38 257 P **P** **03 36 52.0 +1.2**
MAKZ Makanchi 40.52 319 P **P** **03 36 51.0 -0.5**
MAKZ Makanchi 40.52 319 P **P** **03 36 50.8 -0.7**
MAKZ IAMs_20 IAMs_20 03 55 21.6
comp=Z,6μm,18.0s
SHLS Shalkode 40.68 313 *eP* **P** **03 36 51.7 -1.3**
comp=Z,26nm,2.1s
SHLS *eS* **S** **03 43 00.7 -1.7**
SHLS LR LR 03 53 51.4
comp=Z,1μm,12.0s
SHLS Shalkode 40.68 313 *eP* **P** **03 36 51.7 -1.3**
SHLS *eS* **S** **03 43 00.6 -1.7**
SHLS pmax pmax
comp=Z,26nm,2.1s
SHLS MLR MLR
comp=Z,1μm,12.0s
DHRM DHARAMSHALA 40.68 296 *eP* **P** **03 36 53.6 +0.2**
DHRM IAmb IAmb 03 37 04.0
comp=Z,80nm,0.7s
KLRI Killari 41.08 274 *eP* **P** **03 36 57.0 +0.4**
KLRI IVmBBB 03 37 14.6
comp=Z,540nm,2.0s
KLRI IVMs_BB IVMs_BB 03 58 36.8
comp=Z,1μm,13.4s
URV Uravakonda 41.13 269 *eP* **P** **03 36 57.6 +0.6**
URV IVmB_BB 03 37 12.0
comp=Z,364nm,4.0s
URV IVMs_BB IVMs_BB 03 59 45.0
comp=Z,690nm,11.9s
COEN Coen 41.14 145 P **P** **03 36 56.4 -0.5**
SKR Severo-Kuril's 41.22 35 *eP* **P** **03 36 55.2 -1.9**
SKR *e* 03 38 41.6
SKR *e*PPP PPP 03 39 07.3
SKR *eS* **S** **03 43 07.2 -2.6**
SKR pmax pmax
comp=Z,400nm,10.7s
SKR MLR MLR
comp=Z,2μm,20.0s
KPKS Kokpek 41.32 313 *eP* **P** **03 36 59.1 +0.8**
KPKS Kokpek 41.32 313 *eP* **P** **03 36 59.1 +0.8**
JMU Jammu 41.90 296‖ *eP* **P** **03 37 03.3 +0.2**
YAK Yakutsk 41.92 7 P **P** **03 37 02.3 -0.4**
comp=Z,17nm,0.4s,baz=188,slow=4.5,SNR=10
YAK LR LR 03 56 34.8
comp=Z,3μm,18.4s,baz=190,slow=39

YAK	**Yakutsk**	**41.92**	**7**	*eP*	**P**	**03 37 02.9**	**+0.2**
YAK				*e**PP	**pwP**	**03 37 10.6**	**-1.9**
YAK				*e*		03 38 44.8	
YAK				*e*		03 38 54.6	
YAK				*e*S	**S**	**03 43 19.3**	**-0.6**
YAK				*e*SSS	SSS	03 47 00.2	
YAK				pmax	pmax		
	comp=Z,72nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,45nm,1.1s						
YAK				pmax	pmax		
	comp=Z,230nm,2.5s						
YAK				pmax	pmax		
	comp=N,162nm,2.2s						
YAK				pmax	pmax		
	comp=E,22nm,1.5s						
YAK				smax	smax		
	comp=N,925nm,3.8s						
YAK				smax	smax		
	comp=E,270nm,3.0s						
YAK				MLR	MLR		
	comp=Z,14µm,15.0s						
YAK				MLR	MLR		
	comp=N,8µm,14.0s						
YAK				MLR	MLR		
	comp=E,4µm,14.0s						
YAK	**Yakutsk**	**41.92**	**7**	P	**P**	**03 37 02.9**	**+0.2**
YAK				IAmb	IAmb	03 37 15.9	
	comp=Z,140nm,0.7s						
YAK				IAMs_20	IAMs_20	03 56 48.6	
	comp=Z,4µm,18.0s						
PSA00	**Pilbara Seismi**	**41.92**	**180**	P	**P**	**03 37 02.1**	**-1.1**
PSA00	**Pilbara Seismi**	**41.92**	**180**	P	**P**	**03 37 01.9**	**-1.3**
PSA00				IAmb	IAmb	03 37 10.0	
	comp=Z,45nm,0.8s						
KDJ	**Kajisay**	**41.94**	**311**	IAMs_20	IAMs_20	03 54 20.3	
	comp=Z,7µm,22.0s						
TDK	**Taldyqorghan**	**42.05**	**315**	*eP*	**P**	**03 37 05.5**	**+1.4**
TDK				*e*S	**S**	**03 43 25.7**	**+3.2**
TDK	**Taldyqorghan**	**42.05**	**315**	*eP*	**P**	**03 37 05.5**	**+1.4**
TDK				*e*S	**S**	**03 43 25.6**	**+3.2**
KSH	**Kashi**	**42.14**	**307** ⇓	*iP*	**P**	**03 37 08.4**	**+3.3**
KSH				sP	pwP	03 37 13.3	-1.3
KSH				S	**S**	**03 43 27.3**	**+3.2**
KSH				SS	**SS**	**03 46 26.5**	**-5.4**
KSH				pmax	pmax		
	comp=Z,36nm,0.8s						
KSH				pmax	pmax		
	comp=Z,3µm,7.2s						
KSH				LR	LR		
	comp=Z,6µm,13.1s						
KSH				LR	LR		
	comp=Z,11µm,15.1s						
KSH				LR	LR		
	comp=Z,5µm,16.8s						
MDOK	**Medeo**	**42.35**	**312**	*eP*	**P**	**03 37 08.1**	**+1.3**
	comp=Z,253nm,2.4s						
MDOK				*e*S	**S**	**03 43 30.1**	**+2.9**
MDOK				LR	LR	03 55 13.7	
	comp=Z,4µm,13.6s						
MDOK	**Medeo**	**42.35**	**312**	*eP*	**P**	**03 37 08.1**	**+1.3**
MDOK				*e*S	**S**	**03 43 30.1**	**+2.9**
MDOK				pmax	pmax		
	comp=Z,253nm,2.4s						
MDOK				MLR	MLR		
	comp=Z,4µm,14.0s						
TNSS	**Tian-Shan**	**42.38**	**312**	*eP*	**P**	**03 37 09.2**	**+1.9**
TNSS	**Tian-Shan**	**42.38**	**312**	*eP*	**P**	**03 37 09.2**	**+1.9**
AAA	**Alma-Ata**	**42.46**	**312**	*eP*	**P**	**03 37 09.1**	**+1.6**
AAA				*e*S	**S**	**03 43 32.0**	**+3.4**
AAA				LR	LR	03 55 18.9	
	comp=Z,3µm,13.5s						
AAA	**Alma-Ata**	**42.46**	**312**	*eP*	**P**	**03 37 09.1**	**+1.6**
AAA				*e*S	**S**	**03 43 32.0**	**+3.4**
AAA				MLR	MLR		
	comp=Z,3µm,14.0s						
WB0	**Warramunga Arr**	**42.48**	**160**	IAmb	IAmb	03 37 19.8	
	comp=Z,282nm,0.8s						
CHKK	**Chushkaly**	**42.61**	**313**	*eP*	**P**	**03 37 10.0**	**+1.2**
CHKK	**Chushkaly**	**42.61**	**313**	*eP*	**P**	**03 37 09.9**	**+1.2**
WRAB	**Tennant Creek**	**42.62**	**160**	*diP*	**P**	**03 37 07.7**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,524nm,1.5s						
WRAB				MLR	MLR		
	comp=Z,968nm,16.0s						
WRAB	**Tennant Creek**	**42.62**	**160**	P	**P**	**03 37 08.2**	**-0.8**
WRA	**Warramunga Arr**	**42.63**	**160**	P	**P**	**03 37 08.2**	**-0.8**
	comp=Z,154nm,0.7s,baz=342,slow=9.1,SNR=713						
WRA				PcP	**PcP**	**03 39 02.7**	**+1.6**
	comp=Z,8.9nm,0.8s,baz=344,slow=3.7,SNR=1.8						
WRA				S	S	03 43 21.5	-10
	comp=Z,5.4nm,1.2s,baz=340,slow=13,SNR=3.8						
WR0	**Warramunga Arr**	**42.71**	**160**	IAmb	IAmb	03 37 21.8	
	comp=Z,249nm,0.9s						
ZAA0	**Zalesovo Array**	**42.77**	**330**	P	**P**	**03 37 08.8**	**-1.1**
ZAA0				IAMs_20	IAMs_20	03 55 45.2	
	comp=Z,4µm,21.0s						
ZALV	**Zalesovo Beam**	**42.77**	**330**	P	**P**	**03 37 09.6**	**-0.2**
	comp=Z,23nm,0.7s,baz=116,slow=7.3,SNR=62						
ZALV				PcP	**PcP**	**03 39 00.1**	**-0.9**
	comp=Z,7.4nm,0.6s,baz=135,slow=3.6,SNR=2.1						
ZALV				S	**S**	**03 43 33.0**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=356,slow=19,SNR=1.3						
ZALV				LR	LR	03 55 56.1	
	comp=Z,3µm,19.2s,baz=130,slow=38						
ZALV	**Zalesovo Beam**	**42.77**	**330**	P	**P**	**03 37 08.9**	**-0.9**
BOOM	**Boomskoye usch**	**42.93**	**311**	IAMs_20	IAMs_20	03 55 03.5	
	comp=Z,6µm,21.0s						
KUU	**Kurty**	**43.07**	**313**	*eP*	**P**	**03 37 13.5**	**+1.0**
	comp=Z,64nm,1.9s						
KUU				*e*S	**S**	**03 43 40.2**	**+2.8**
KUU	**Kurty**	**43.07**	**313**	*eP*	**P**	**03 37 13.4**	**+1.0**
KUU				*e*S	**S**	**03 43 40.2**	**+2.8**
KUU				pmax	pmax		
	comp=Z,64nm,1.9s						
SEM	**Semipalatinsk**	**43.21**	**323**	*eP*	**P**	**03 37 13.6**	**-0.2**
SEM	**Semipalatinsk**	**43.21**	**323**	*eP*	**P**	**03 37 13.6**	**-0.2**
TKM2	**Tokmak 2**	**43.29**	**311**	P	**P**	**03 37 12.2**	**-2.3**
NIL	**Nilore**	**43.36**	**298**	P	**P**	**03 37 14.3**	**-0.7**
NIL				pmax	pmax		
	comp=Z,94nm,0.9s						
NIL				MLR	MLR		
	comp=Z,5µm,20.0s						
NIL	**Nilore**	**43.36**	**298**	P	**P**	**03 37 14.2**	**-0.7**
NIL	**Nilore**	**43.36**	**298**	IAMs_20	IAMs_20	03 56 09.2	
	comp=Z,5µm,20.0s						
PEA0B	**Petropavlovsk-**	**43.38**	**32**	P	**P**	**03 37 15.0**	**+0.3**
PEA0B				pmax	pmax		
	comp=Z,199nm,1.8s						
PEA0B				MLR	MLR		
	comp=Z,2µm,18.0s						
PEA0B	**Petropavlovsk-**	**43.38**	**32**	P	**P**	**03 37 15.0**	**+0.3**
PETK	**Petropavlovsk-**	**43.38**	**32**	P	**P**	**03 37 15.3**	**+0.5**
	comp=Z,17nm,1.0s,baz=218,slow=6.6,SNR=4.3						
PETK				LR	LR	03 56 11.0	
	comp=Z,1µm,20.5s,baz=219,slow=37						
PETK	**Petropavlovsk-**	**43.38**	**32**	P	**P**	**03 37 14.8**	**+0.1**
POO	**Poona**	**43.56**	**276**	*eP*	**P**	**03 37 16.2**	**-0.5**
WAKE	**Wake Island**	**43.63**	**83**	P	**P**	**03 37 17.5**	**+0.3**
H11N1	**WAKE ISLAND Hy**	**43.78**	**83**	T	T	04 23 31.2	
	baz=277,slow=75,SNR=53						
H11N2	**WAKE ISLAND Hy**	**43.78**	**83**	T	T	04 23 30.8	
	baz=277,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy**	**43.80**	**83**	T	T	04 23 29.9	
	baz=277,slow=75,SNR=42						
H11S3	**WAKE ISLAND Hy**	**43.80**	**84**	T	T	04 23 28.5	
	baz=281,slow=75,SNR=39						
H11S1	**WAKE ISLAND Hy**	**43.81**	**84**	T	T	04 23 34.8	
	baz=281,slow=75,SNR=46						
PET	**Petropavlovsk**	**43.81**	**33**	*eP*	**P**	**03 37 18.1**	**-0.1**
PET				*e*S	**S**	**03 43 47.6**	**-0.4**
PET				pmax	pmax		
	comp=Z,400nm,12.8s						
PET				pmax	pmax		
	comp=Z,161nm,1.4s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET				MLR	MLR		
	comp=Z,2µm,18.0s						
PET	**Petropavlovsk**	**43.81**	**33**	P	**P**	**03 37 18.2**	**0.0**
PET				IAmb	IAmb	03 37 33.9	
	comp=Z,240nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**43.82**	**84**	T	T	04 23 34.8	
	baz=281,slow=75,SNR=52						

AAK	**Ala-Archa**	**43.99**	**311**	P	**P**	**03 37 21.5**	**+1.4**
	comp=Z,5.8nm,0.8s,baz=123,slow=4.7,SNR=13						
AAK	**Ala-Archa**	**43.99**	**311**	*diP*	**P**	**03 37 21.1**	**+1.0**
AAK				pmax	pmax		
	comp=Z,148nm,2.5s						
AAK				MLR	MLR		
	comp=Z,18µm,15.0s						
SGDS	**Sogindy**	**44.12**	**312**	*eP*	**P**	**03 37 21.7**	**+0.6**
	comp=Z,11nm,2.1s						
SGDS				*e*S	**S**	**03 43 55.1**	**+2.1**
SGDS	**Sogindy**	**44.12**	**312**	*eP*	**P**	**03 37 21.6**	**+0.6**
SGDS				*e*S	**S**	**03 43 55.1**	**+2.1**
SGDS				pmax	pmax		
	comp=Z,11nm,2.1s						
GOA	**Goa**	**44.22**	**271**	*eP*	**P**	**03 37 23.4**	**+1.4**
KURK	**Kurchatov**	**44.28**	**323**	*diP*	**P**	**03 37 22.1**	**+0.1**
KURK				pmax	pmax		
	comp=Z,160nm,2.5s						
KURK				MLR	MLR		
	comp=Z,4µm,15.0s						
KURK	**Kurchatov**	**44.28**	**323**	P	**P**	**03 37 21.7**	**-0.3**
KURK				IAmb	IAmb	03 37 34.7	
	comp=Z,226nm,1.6s						
KURBB	**Kurchatov Arra**	**44.28**	**323**	P	**P**	**03 37 22.3**	**+0.2**
	comp=Z,20nm,0.7s,baz=124,slow=7.6,SNR=121						
KURBB	**Kurchatov Arra**	**44.28**	**323**	P	**P**	**03 37 22.1**	**0.0**
MA2	**Magadan**	**44.65**	**22**	P	**P**	**03 37 25.5**	**+0.7**
	comp=Z,40nm,1.1s,baz=296,slow=9.9,SNR=4.7						
MA2				S	**S**	**03 43 55.2**	**-4.8**
	comp=Z,4.2nm,0.3s,baz=8.3,slow=16,SNR=2.1						
MA2				LR	LR	03 58 21.1	
	comp=Z,3µm,18.2s,baz=228,slow=39						
MA2	**Magadan**	**44.65**	**22**	*de*P	**P**	**03 37 25.2**	**+0.4**
MA2				pmax	pmax		
	comp=Z,98nm,1.3s						
MA2				MLR	MLR		
	comp=Z,2µm,16.0s						
MA2	**Magadan**	**44.65**	**22**	P	**P**	**03 37 25.0**	**+0.2**
MA2				IAmb	IAmb	03 37 27.5	
	comp=Z,124nm,1.3s						
MA2				IAMs_20	IAMs_20	03 57 30.7	
	comp=Z,3µm,20.0s						
BTLS	**Baital**	**44.98**	**314**	*eP*	**P**	**03 37 27.9**	**+0.2**
	comp=Z,14nm,1.7s						
BTLS				*e*S	**S**	**03 44 07.1**	**+1.8**
BTLS	**Baital**	**44.98**	**314**	*eP*	**P**	**03 37 27.9**	**+0.2**
BTLS				*e*S	**S**	**03 44 07.0**	**+1.8**
BTLS				pmax	pmax		
	comp=Z,14nm,1.7s						
AS31	**Alice Springs**	**46.00**	**162**	P	**P**	**03 37 36.0**	**0.0**
ASAR	**Alice Springs**	**46.00**	**162**	P	**P**	**03 37 35.2**	**-0.8**
	comp=Z,46nm,1.0s,baz=335,slow=6.3,SNR=163						
ASAR				S	**S**	**03 44 17.2**	**-3.1**
	comp=Z,1.2nm,1.0s,baz=337,slow=9.1,SNR=1.4						
ASAR				LR	LR	04 00 54.8	
	comp=Z,745nm,18.1s,baz=349,slow=41						
ASAR	**Alice Springs**	**46.00**	**162**	P	**P**	**03 37 34.4**	**-1.6**
BTK	**Batken**	**46.14**	**306**	P	**P**	**03 37 36.9**	**-0.2**
BTK				pmax	pmax		
	comp=Z,112nm,1.6s						
BTK				MLR	MLR		
	comp=Z,4µm,21.0s						
BTK	**Batken**	**46.14**	**306**	P	**P**	**03 37 36.9**	**-0.2**
BTK				IAmb	IAmb	03 37 49.5	
	comp=Z,112nm,1.6s						
BTK				IAMs_20	IAMs_20	03 56 55.8	
	comp=Z,4µm,21.0s						
DZA	**Taraz**	**46.32**	**310**	*eP*	**P**	**03 37 39.6**	**+1.1**
DZA				*e*S	**S**	**03 44 27.6**	**+2.9**
DZA	**Taraz**	**46.32**	**310**	*eP*	**P**	**03 37 39.5**	**+1.1**
DZA				*e*S	**S**	**03 44 27.6**	**+2.9**
GAR	**Garm**	**46.35**	**305**	IAmb	IAmb	03 37 50.9	
	comp=Z,140nm,1.1s						
BHUJ	**Bhuj**	**46.72**	**283**	IAmb	IAmb	03 37 53.4	
	comp=Z,228nm,1.6s						
KBL	**Kabul**	**46.91**	**298**	P	**P**	**03 37 43.3**	**-0.1**
KBL				pmax	pmax		
	comp=Z,203nm,1.9s						
KBL				MLR	MLR		
	comp=Z,6µm,22.0s						
KBL	**Kabul**	**46.91**	**298**	P	**P**	**03 37 43.3**	**-0.1**
KBL				IAmb	IAmb	03 37 56.3	
	comp=Z,203nm,1.9s						
KBL				IAMs_20	IAMs_20	03 58 45.5	
	comp=Z,6µm,22.0s						
KK31	**Karatay Array**	**46.95**	**310**	*iP*	**P**	**03 37 44.4**	**+1.1**
KK31	**Karatay Array**	**46.95**	**310**	P	**P**	**03 37 43.3**	**-0.1**
KK31				IAmb	IAmb	03 37 55.6	
	comp=Z,131nm,1.6s						
KKAR	**Karatay Array**	**46.95**	**310**	P	**P**	**03 37 43.5**	**+0.2**
KKAR	**Karatay Array**	**46.95**	**310**	P	**P**	**03 37 43.5**	**+0.2**
KKAR	**Karatay Array**	**46.95**	**310**	IAmb	IAmb	03 37 55.5	
	comp=Z,131nm,1.6s						
IUG	**Iuzhnay**	**47.10**	**309**	*eP*	**P**	**03 37 44.7**	**+0.1**
IUG				*e*S	**S**	**03 44 38.1**	**+2.0**
IUG				LR	LR	03 57 23.0	
	comp=Z,328nm,11.8s						
IUG	**Iuzhnay**	**47.10**	**309**	*eP*	**P**	**03 37 44.7**	**+0.1**
IUG				*e*S	**S**	**03 44 38.0**	**+2.0**
IUG				MLR	MLR		
	comp=Z,328nm,12.0s						
CHGR	**Chuyangaron**	**47.20**	**304**	P	**P**	**03 37 45.5**	**+0.1**
CHGR				IAmb	IAmb	03 37 57.2	
	comp=Z,76nm,1.0s						
BRZS	**Berezniki**	**47.46**	**320**	*eP*	**P**	**03 37 46.9**	**-0.3**
BRZS				*e*S	**S**	**03 44 42.2**	**+1.3**
BRZS	**Berezniki**	**47.46**	**320**	*eP*	**P**	**03 37 46.9**	**-0.3**
BRZS				*e*S	**S**	**03 44 42.1**	**+1.3**
TAS	**Tashkent**	**47.49**	**308**	P	**P**	**03 37 47.5**	**-0.1**
TAS				pmax	pmax		
	comp=Z,280nm,1.6s						
TAS	**Tashkent**	**47.49**	**308**	P	**P**	**03 37 47.5**	**-0.1**
SEY	**Seymchan**	**47.66**	**19**	P	**P**	**03 37 49.4**	**+1.0**
	comp=Z,22nm,1.1s,baz=220,slow=6.2,SNR=16						
SEY				S	**S**	**03 44 43.5**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=263,slow=19,SNR=1.9						
SEY				LR	LR	03 58 53.6	
	comp=Z,2µm,19.8s,baz=219,slow=37						
SEY	**Seymchan**	**47.66**	**19** ⇓	*iP*	**P**	**03 37 48.5**	**0.0**
CTA	**Charters Tower**	**47.84**	**146**	P	**P**	**03 37 51.4**	**+0.9**
	comp=Z,160nm,0.8s,baz=330,slow=10,SNR=207						
CTA				S	**S**	**03 44 47.8**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=172,slow=18,SNR=1.2						
CTAO	**Charters Tower**	**47.84**	**146**	P	**P**	**03 37 51.3**	**+0.9**
CTAO				pmax	pmax		
	comp=Z,436nm,1.1s						
CTAO	**Charters Tower**	**47.84**	**146**	P	**P**	**03 37 51.3**	**+0.9**
BRVK	**Borovoye**	**49.95**	**323**	*diP*	**P**	**03 38 06.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,140nm,2.5s						
BRVK				MLR	MLR		
	comp=Z,4µm,15.0s						
BRVK	**Borovoye**	**49.95**	**323**	P	**P**	**03 38 06.2**	**0.0**
BRVK				IAmb	IAmb	03 38 19.1	
	comp=Z,368nm,2.0s						
BRVK	**Borovoye**	**49.95**	**323**	IAMs_20	IAMs_20	03 59 25.0	
	comp=Z,4µm,18.0s						
FORT	**Forrest**	**51.65**	**171**	P	**P**	**03 38 19.3**	**+0.1**
FORT				IAmb	IAmb	03 38 33.0	
	comp=Z,148nm,0.9s						
HRA	**Herat**	**52.52**	**298**	IAMs_20	IAMs_20	04 02 49.1	
	comp=Z,3µm,20.0s						
NRIK	**Noril'sk**	**52.61**	**346**	P	**P**	**03 38 26.4**	**+0.5**
	comp=Z,40nm,0.7s,baz=135,slow=7.5,SNR=50						
NRIK				LR	LR	04 01 50.1	
	comp=Z,2µm,18.8s,baz=154,slow=37						
NRIK	**Noril'sk**	**52.61**	**346**	*diP*	**P**	**03 38 26.0**	**+0.1**
NRIK				pmax	pmax		
	comp=Z,248nm,2.0s						
NRIK				MLR	MLR		
	comp=Z,9µm,15.0s						
NWAO	**Narrogin (SRO)**	**53.30**	**183**	P	**P**	**03 38 30.5**	**-1.0**
	comp=Z,25nm,0.7s,baz=8.1,slow=8.2,SNR=11						
NWAO	**Narrogin (SRO)**	**53.30**	**183**	P	**P**	**03 38 31.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**53.30**	**183**	P	**P**	**03 38 31.3**	**-0.1**
NWAO				IAmb	IAmb	03 38 41.6	
	comp=Z,92nm,1.0s						
EIDS	**Eidsvold**	**54.70**	**145**	P	**P**	**03 38 42.5**	**+0.6**
EIDS				IAmb	IAmb	03 38 53.6	
	comp=Z,66nm,0.8s						
TARA	**Tarawa**	**54.92**	**103**	P	**P**	**03 38 44.5**	**+0.7**
BBOO	**Buckleboo**	**55.25**	**164**	P	**P**	**03 38 45.8**	**+0.1**
AB31	**Akbulak array**	**55.29**	**316**	*iP*	**P**	**03 38 45.8**	**-0.1**
ABKAR	**Akbulak array**	**55.29**	**316**	P	**P**	**03 38 45.6**	**-0.2**
BILL	**Bilibino**	**55.36**	**19** ⇓	*iP*	**P**	**03 38 46.8**	**+0.7**

BILL				*PP	**pP**	**03 38 50.0**	**-1.0**
BILL				*e**SP	**sP**	**03 38 52.0**	**-0.9**
BILL				*e*		03 40 58.9	
BILL				pmax	pmax		
	comp=Z,753nm,2.5s						
BILL				MLR	MLR		
	comp=Z,2µm,17.0s						
BILL	**Bilibino**	**55.36**	**19**	IAMs_20	IAMs_20	04 04 08.8	
	comp=Z,3µm,19.0s						
ASHT	**Ashkhabad**	**55.62**	**302**	IAMs_20	IAMs_20	04 04 25.9	
	comp=Z,3µm,18.0s						
GEYT	**Alibeck**	**55.83**	**302**	P	**P**	**03 38 51.4**	**+1.4**
	comp=Z,22nm,1.1s,baz=192,slow=5.9,SNR=15						
GEYT				LR	LR	04 04 42.9	
	comp=Z,2µm,18.2s,baz=85,slow=38						
GEYT	**Alibeck**	**55.83**	**302**	P	**P**	**03 38 51.7**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**55.83**	**302**	P	**P**	**03 38 50.1**	**+0.2**
GYA0B				IAMs_20	IAMs_20	04 04 31.5	
	comp=Z,3µm,18.0s						
STKA	**Stephens Creek**	**56.09**	**158**	P	**P**	**03 38 51.7**	**0.0**
	comp=Z,35nm,0.8s,baz=336,slow=7.1,SNR=78						
STKA	**Stephens Creek**	**56.09**	**158**	P	**P**	**03 38 51.5**	**-0.2**
JLN	**Jalan Bani Buh**	**56.23**	**283**	P	**P**	**03 38 54.5**	**+1.4**
	SNR=7.9						
JLN				P	**P**	**03 38 54.5**	**+1.4**
	SNR=7.9						
SVE	**Sverdlovsk**	**56.38**	**325**	*eP*	**P**	**03 38 55.2**	**+1.6**
SVE				*e*S	**S**	**03 46 43.9**	**+0.8**
SVE				pmax	pmax		
	comp=Z,239nm,1.8s						
SVE				MLR	MLR		
	comp=Z,4µm,14.0s						
WBK	**Wadi Bani Khal**	**56.55**	**284**	P	**P**	**03 38 57.1**	**+1.7**
WBK				P	**P**	**03 38 57.1**	**+1.7**
WSAR	**Wadi Sarin**	**56.75**	**285**	P	**P**	**03 38 58.3**	**+1.6**
	comp=Z,12nm,1.1s,baz=104,slow=10.0,SNR=6.6						
BIDO	**Bidbid**	**57.16**	**285**	P	**P**	**03 39 01.5**	**+1.9**
	SNR=13						
BIDO				P	**P**	**03 39 01.5**	**+1.9**
	SNR=13						
SMDO	**Samad**	**57.31**	**285**	P	**P**	**03 39 02.6**	**+1.8**
	SNR=9.1						
SMDO				P	**P**	**03 39 02.6**	**+1.8**
	SNR=9.1						
JMDO	**Jabal Madar**	**57.38**	**284**	P	**P**	**03 39 02.6**	**+1.4**
JMDO				P	**P**	**03 39 02.6**	**+1.4**
ARU	**Arti**	**57.41**	**325**	*diP*	**P**	**03 39 00.5**	**-0.3**
ARU						03 39 55.5	
ARU						03 41 10.2	
ARU				PPP	PPP	03 42 26.7	
ARU				S	**S**	**03 46 59.5**	**+2.8**
ARU						03 48 44.9	
ARU				SS	**SS**	**03 50 46.0**	**-0.1**
ARU				pmax	pmax		
	comp=Z,153nm,1.9s						
ARU				MLR	MLR		
	comp=Z,5µm,15.0s						
ARU	**Arti**	**57.41**	**325**	P	**P**	**03 39 00.7**	**-0.2**
ARU				IAMs_20	IAMs_20	04 05 24.3	
	comp=Z,3µm,22.0s						
MHTO	**MHTO**	**57.78**	**282**	P	**P**	**03 39 04.8**	**+0.8**
MHTO				P	**P**	**03 39 04.8**	**+0.8**
HOQ	**Hoqain**	**57.88**	**285**	P	**P**	**03 39 06.3**	**+1.5**
BSY	**Bisya**	**58.13**	**285**	P	**P**	**03 39 07.9**	**+1.3**
BSY				P	**P**	**03 39 07.9**	**+1.3**
DQM	**DQM**	**58.39**	**281**	P	**P**	**03 39 09.0**	**+0.7**
DQM				P	**P**	**03 39 09.0**	**+0.7**
DQM				P	**P**	**03 39 09.0**	**+0.7**
SANVU	**Saraoutou**	**58.48**	**124**	IAmb	IAmb	03 39 22.7	
	comp=Z,156nm,1.1s						
SOHO	**SOHO**	**58.48**	**286**	P	**P**	**03 39 10.0**	**+1.1**
SOHO				P	**P**	**03 39 10.0**	**+1.1**
SOHO				P	**P**	**03 39 10.0**	**+1.1**
MDH	**Madha**	**58.50**	**288**	P	**P**	**03 39 10.0**	**+1.0**
ARQ	**Araqi**	**58.64**	**285**	P	**P**	**03 39 11.6**	**+1.6**
ARQ				P	**P**	**03 39 11.6**	**+1.6**
UOSS	**Minazif**	**58.64**	**287**	P	**P**	**03 39 11.5**	**+1.5**
UOSS				P	**P**	**03 39 11.5**	**+1.5**
UOSS	**Minazif**	**58.64**	**287**	IAMs_20	IAMs_20	04 06 56.5	
	comp=Z,2µm,21.0s						
HATD	**Hatta, Dubai**	**58.73**	**287**	P	**P**	**03 39 12.2**	**+1.6**
HATD				P	**P**	**03 39 12.2**	**+1.6**
ASHO	**Ashiyiah**	**58.82**	**287**	P	**P**	**03 39 12.9**	**+1.7**
	SNR=6.4						
ASHO				P	**P**	**03 39 12.9**	**+1.7**
	SNR=6.4						
ARMA	**Armidale**	**59.08**	**148**	P	**P**	**03 39 13.6**	**+0.6**
ARMA				IAmb	IAmb	03 39 25.5	
	comp=Z,278nm,1.9s						
NAZ	**Nazwa, Dubai**	**59.12**	**287**	P	**P**	**03 39 14.8**	**+1.5**
NAZ				P	**P**	**03 39 14.8**	**+1.5**
ASUD	**Al Ashush, Dub**	**59.48**	**287**	P	**P**	**03 39 18.2**	**+2.3**
ASUD				P	**P**	**03 39 18.2**	**+2.3**
AJN	**Ajban**	**59.80**	**287**	P	**P**	**03 39 19.3**	**+1.3**
AJN				P	**P**	**03 39 19.3**	**+1.3**
SHAO	**Shalim**	**60.58**	**280**	P	**P**	**03 39 24.3**	**+0.8**
SHAO				P	**P**	**03 39 24.3**	**+0.8**
DMTO	**DMTO**	**61.28**	**279**	P	**P**	**03 39 28.9**	**+0.7**
DMTO				P	**P**	**03 39 28.9**	**+0.7**
DZM	**Mont Dzumac**	**61.99**	**131**	*eP*	**P**	**03 39 32.1**	**-0.9**
	comp=Z,132nm,1.1s						
DZM	**Mont Dzumac**	**61.99**	**131**	*e*LR	LR	03 57 55.1	
	comp=Z,2µm,22.6s						
DZM	**Mont Dzumac**	**61.99**	**131**	P	**P**	**03 39 33.9**	**+0.9**
	comp=Z,24nm,0.7s,baz=238,slow=8.4,SNR=13						
DZM	**Mont Dzumac**	**61.99**	**131**	P	**P**	**03 39 33.6**	**+0.7**
DZM				IAmb	IAmb	03 39 45.0	
	comp=Z,91nm,1.2s						
RBK	**Rabkut**	**62.02**	**279**	P	**P**	**03 39 34.2**	**+0.8**
RBK				P	**P**	**03 39 34.2**	**+0.8**
WHFO	**Wadi Hawf**	**62.32**	**280**	P	**P**	**03 39 35.3**	**0.0**
WHFO				P	**P**	**03 39 35.3**	**0.0**
WHFO				P	**P**	**03 39 35.3**	**0.0**
TOO	**Toolangi**	**62.60**	**157**	P	**P**	**03 39 37.0**	**+0.3**
TOO				pmax	pmax		
	comp=Z,67nm,0.8s						
TOO	**Toolangi**	**62.60**	**157**	P	**P**	**03 39 37.0**	**+0.3**
TOO				IAmb	IAmb

GOF pmax pmax
comp=Z,108nm,1.8s
AKH Akhalkalaki 66.84 307 ⇑P **P 03 40 07.1 +2.4**
AKH Akhalkalaki 66.84 307 IAMs_20 IAMs_20 04 13 56.3
comp=Z,3μm,18.0s
KBZ Khabaz 66.98 310 P **P 03 40 06.5 +1.2**
comp=Z,10nm,0.9s,baz=124,slow=4.6,SNR=15
KBZ LR LR 04 12 33.6
comp=Z,2μm,18.1s,baz=72,slow=39
KBZ Khabaz 66.98 310*d* iP **P 03 40 05.3 0.0**
KBZ pmax pmax
comp=Z,89nm,2.8s
KBZ MLR MLR
comp=Z,2μm,18.0s
VRH Novokhopyorsk 67.03 318 *e*P **P 03 40 05.1 -0.3**
VRH *e**SP **pwP 03 40 15.5 +0.1**
VRH pmax pmax
comp=Z,70nm,1.4s
KIV Kislovodsk 67.11 310 ⇓P **P 03 40 08.1 +1.9**
KIV Kislovodsk 67.11 310 *e*P **P 03 40 06.4 +0.2**
KIV *e*S **S 03 49 01.5 +1.9**
KIV pmax pmax
comp=Z,62nm,0.9s
KIV pmax pmax
comp=Z,779nm,4.6s
KIV MLR MLR
comp=Z,5μm,17.0s
KIV Kislovodsk 67.11 310 P **P 03 40 06.5 +0.2**
KIV IAMs_20 IAMs_20 04 13 32.3
comp=Z,2μm,18.0s
GEVA Gevas 67.62 304 IAmb IAmb 03 40 22.0
comp=Z,152nm,1.7s
KLMR Klimovskoe 67.68 329 *e*P **P 03 40 07.5 -1.8**
KLMR *e*S **S 03 49 05.8 +0.2**
KLMR pmax pmax
comp=Z,200nm,1.4s
KLMR MLR MLR
comp=Z,3μm,14.0s
KLMR Klimovskoe 67.68 329 *e*P **P 03 40 07.6 -1.8**
KLMR AMP 03 40 21.2
comp=Z,200nm,1.4s
KLMR *e*S **S 03 49 05.9 +0.3**
KLMR *e*S **S 03 49 05.9 +0.3**
KLMR LQ LQ 04 05 02.2
KLMR LQ LQ 04 05 02.2
KLMR LR LR 04 09 38.4
KLMR AMP 04 12 10.4
comp=Z,3μm,14.1s
TAU Tasmania Unive 67.98 159 P **P 03 40 12.6 +1.3**
TAU pmax pmax
comp=Z,197nm,1.6s
TAU Tasmania Unive 67.98 159 P **P 03 40 12.6 +1.3**
TAU IAmb IAmb 03 40 13.6
comp=Z,197nm,1.6s
TMCR Tamitsa 68.23 332 *e*P **P 03 40 11.2 -1.5**
TMCR pmax pmax
comp=Z,28nm,0.6s
MSVF Nonsavu 68.38 120 P **P 03 40 15.7 +1.2**
MSVF pmax pmax
comp=Z,113nm,1.2s
MSVF Nonsavu 68.38 120 P **P 03 40 15.7 +1.2**
MSVF IAmb IAmb 03 40 23.1
comp=Z,113nm,1.2s
A21K Barrow 68.48 20 P **P 03 40 14.1 -0.1**
baz=271
A21K Barrow 68.48 20 IAMs_20 IAMs_20 04 09 33.7
comp=Z,2μm,22.0s
RAYN Ar Rayn 68.49 288 P **P 03 40 15.2 0.0**
RAYN pmax pmax
comp=Z,82nm,1.2s
RAYN MLR MLR
comp=Z,2μm,21.0s
RAYN Ar Rayn 68.49 288 P **P 03 40 15.2 0.0**
RAYN IAmb IAmb 03 40 27.6
comp=Z,82nm,1.1s
RAYN IAMs_20 IAMs_20 04 14 54.0
comp=Z,2μm,21.0s
VORD Divnogorie 68.58 318 *e*P **P 03 40 14.7 -0.5**
VORD *e**SP **pwP 03 40 25.6 +0.4**
VORD pmax pmax
comp=Z,50nm,1.4s
LPSR Galich'ya Gora 68.62 320 *e*P **P 03 40 14.9 -0.5**
LPSR *e**SP **pwP 03 40 25.1 -0.3**
LPSR pmax pmax
comp=Z,60nm,1.0s
VSR Storozhevoye 68.63 318 *e*P **P 03 40 14.9 -0.6**
VSR *e**SP **pwP 03 40 25.2 -0.3**
VSR pmax pmax
comp=Z,50nm,1.2s
MOS Moscow 69.05 323 *e*P **P 03 40 14.6 -3.4**
MOS *e* 03 40 37.4
MOS *e* 03 42 47.8
MOS *e*S **S 03 49 18.5 -3.6**
MOS *e* 03 50 12.7
MOS *e*SS **SS 03 53 47.8 +0.2**
MOS pmax pmax
comp=Z,195nm,1.8s
MOS pmax pmax
comp=Z,600nm,2.4s
MOS MLR MLR
comp=E,2μm,16.0s
MOS MLR MLR
comp=Z,3μm,16.0s
TTA Tatalina 69.08 29 P **P 03 40 18.7 +0.5**
TTA pmax pmax
comp=Z,211nm,1.6s
TTA MLR MLR
comp=Z,1μm,19.0s
TTA Tatalina 69.08 29 P **P 03 40 18.7 +0.5**
SOC Sochi 69.29 310 *e*P **P 03 40 18.2 -1.6**
SOC *e*PPP PPP 03 44 29.4
SOC *e*S **S 03 49 27.8 +2.4**
SOC *e*SS **SS 03 53 51.7 -0.2**
SOC pmax pmax
comp=Z,37nm,1.2s
SOC MLR MLR
comp=Z,2μm,18.0s
KOPT Kop Dagi 69.30 306 IAMs_20 IAMs_20 04 13 52.6
comp=Z,2μm,20.0s
LVZ Lovozero 69.41 336*de*P **P 03 40 19.7 -0.4**
LVZ pmax pmax
comp=Z,136nm,1.5s
LVZ MLR MLR
comp=Z,2μm,15.0s
LVZ Lovozero 69.41 336 IAMs_20 IAMs_20 04 16 26.2
comp=Z,2μm,20.0s
MARD Mardin 69.57 303 P **P 03 40 21.9 +0.1**
OBN Obninsk 69.72 323*d* iP **P 03 40 21.4 -0.8**
OBN *e**PP **pP 03 40 25.5 -1.7**
OBN *e**SP **sP 03 40 29.9 +0.9**
OBN *e* 03 40 46.6
OBN *e*S **S 03 49 26.3 -3.7**
OBN *e* 03 50 23.2
OBN pmax pmax
comp=Z,229nm,2.5s
OBN MLR MLR
comp=Z,2μm,15.0s
OBN Obninsk 69.72 323 P **P 03 40 22.0 -0.2**
OBN IAMs_20 IAMs_20 04 15 11.8
comp=Z,2μm,22.0s
IMAR Indian Mountai 69.80 26 P **P 03 40 23.3 +0.8**
APA Apatity 69.91 336 ⇓*i* P **P 03 40 22.8 -0.3**
APA *i* 03 40 46.0
APA *i* 03 50 11.0
APA *i* SS SS 03 53 58.0 -2.3
APA pmax pmax
comp=Z,18nm,0.8s
APA MLR MLR
comp=Z,3μm,15.0s
KNTN Kanton 70.64 101 IAMs_20 IAMs_20 04 02 47.8
comp=Z,2μm,20.0s
SII Sitkinak Islan 70.70 36 P **P 03 40 29.7 +1.4**
ANN Anapa 70.71 312 *e*P **P 03 40 28.0 -0.4**
ANN *e* 03 40 47.3
ANN *e*S **S 03 49 42.6 +0.7**
ANN pmax pmax
comp=Z,94nm,1.6s
ANN MLR MLR
comp=Z,2μm,13.0s
ANN MLR MLR
comp=N,4μm,15.0s
COLD Coldfoot 71.07 24 P **P 03 40 31.0 +0.8**
baz=278,SNR=18
COLD Coldfoot 71.07 24 IAmb IAmb 03 40 43.2
comp=Z,191nm,1.7s

OHAK Old Harbor 71.09 35 IAmb IAmb 03 40 38.0
comp=Z,121nm,1.0s
TOLK Toolik Lake Re 71.11 23 P **P 03 40 31.2 +0.7**
baz=278,SNR=24
TOLK Toolik Lake Re 71.11 23 IAmb IAmb 03 40 38.7
comp=Z,51nm,0.9s
TOLK IAMs_20 IAMs_20 04 12 29.1
comp=Z,1μm,21.0s
MLY Manley 71.16 27 P **P 03 40 31.7 +0.8**
baz=278,SNR=18
KTH Kantishna Hill 71.30 28 IAmb IAmb 03 40 43.9
comp=Z,97nm,1.1s
KDAK Kodiak Island 71.38 34 P **P 03 40 33.3 +1.0**
KDAK pmax pmax
comp=Z,690nm,1.7s
KDAK Kodiak Island 71.38 34 P **P 03 40 33.3 +1.0**
TRF Thorofare Moun 71.60 28 IAmb IAmb 03 40 47.7
comp=Z,158nm,1.4s
CAPN Captain Cook N 71.63 31 P **P 03 40 33.7 0.0**
baz=279
I23K Minto, Yukon-K 71.72 26 P **P 03 40 34.9 +0.7**
baz=280,SNR=19
I23K Minto, Yukon-K 71.72 26 IAmb IAmb 03 40 52.4
comp=Z,201nm,1.6s
CUT Chulitna 71.78 29 P **P 03 40 34.4 -0.2**
baz=280,SNR=14
BRLK Bradley Lake 71.93 32 IAmb IAmb 03 40 43.7
comp=Z,148nm,1.0s
KEV Kevo 71.93 339 IAMs_20 IAMs_20 04 15 50.8
comp=Z,2μm,20.0s
NEA2 Nenana 71.94 27 P **P 03 40 35.2 -0.4**
baz=280,SNR=20
MCK McKinley 72.14 28 P **P 03 40 36.6 -0.2**
baz=280,SNR=34
RC01 Rabbit Creek A 72.25 31 P **P 03 40 37.1 -0.4**
baz=280
TOKA Tokat 72.27 307 P **P 03 40 38.4 +0.4**
PUL Pulkovo 72.34 328 *e*P **P 03 40 38.9 +0.9**
PUL Pulkovo 72.34 328 ⇓*e*P **P 03 40 39.3 +1.3**
PUL pmax pmax
comp=Z,49nm,0.8s
PUL MLR MLR
comp=Z,7μm,16.0s
O22K Cooper Landing 72.37 31 P **P 03 40 37.1 -1.0**
baz=281
WRH Wood River Hil 72.38 27 IAmb IAmb 03 40 55.8
comp=Z,154nm,1.4s
GAZ Gaziantep 72.39 304 IAmb IAmb 03 40 51.2
comp=Z,104nm,1.5s
GAZ IAMs_20 IAMs_20 04 17 41.3
comp=Z,1μm,19.0s
TCOL CIGO, UAF Yank 72.40 27 P **P 03 40 37.3 -0.9**
baz=281
TCOL CIGO, UAF Yank 72.40 27 IAmb IAmb 03 40 51.6
comp=Z,196nm,1.6s
COLA College 72.40 27*c* iP **P 03 40 39.2 +1.0**
COLA pmax pmax
comp=Z,75nm,1.8s
COLA MLR MLR
comp=Z,760nm,17.0s
COLA College 72.40 27 P **P 03 40 39.5 +1.3**
COLA IAmb IAmb 03 40 51.6
comp=Z,193nm,1.6s
PMR Palmer 72.45 30 IAmb IAmb 03 40 45.9
comp=Z,89nm,1.0s
CCB Clear Creek Bu 72.46 27 IAmb IAmb 03 40 51.1
comp=Z,116nm,1.6s
CCB IAMs_20 IAMs_20 04 15 54.2
comp=Z,1μm,18.0s
ARA0 ARCESS Array S 72.49 338 *e*P **P 03 40 38.6 -0.1**
ARCES ARCESS Array B 72.49 338 P **P 03 40 39.6 +0.9**
comp=Z,13nm,0.8s,baz=65,slow=5.3,SNR=8.4
ARCES LR LR 04 16 46.3
comp=Z,1μm,18.5s,baz=50,slow=39
GHO Glory Hole Cre 72.51 30 IAmb IAmb 03 40 51.6
comp=Z,127nm,1.2s
POKR Poker Plat Res 72.53 26 P **P 03 40 39.3 +0.2**
baz=281,SNR=20
POKR Poker Plat Res 72.53 26 IAmb IAmb 03 40 52.3
comp=Z,227nm,1.5s
SPA0 Spitsbergen Ar 72.76 348 *e*P **P 03 40 41.1 +0.8**
ILAR Eielson Array 72.83 27 P **P 03 40 40.4 -0.4**
comp=Z,6.0nm,0.8s,baz=267,slow=4.1,SNR=49
ILAR PP **PP 03 43 29.3 +6.7**
comp=Z,2.6nm,1.0s,baz=282,slow=7.9,SNR=4.2
ILAR LR LR 04 15 49.4
comp=Z,744nm,18.9s,baz=317,slow=38
ILAR Eielson Array 72.83 27 P **P 03 40 40.2 -0.6**
HDA Harding Lake 72.87 27 P **P 03 40 39.7 -1.4**
baz=282,SNR=20
HDA Harding Lake 72.87 27 IAmb IAmb 03 40 52.9
comp=Z,160nm,1.4s
DHY Denali Highway 72.96 28 IAmb IAmb 03 40 54.5
comp=Z,158nm,1.6s
FYU Fort Yukon 73.11 25 IAMs_20 IAMs_20 04 17 51.3
comp=Z,1μm,20.0s
BMAR Burnt Mountain 73.17 24 P **P 03 40 44.3 +1.4**
PRP Porcupine Dome 73.23 26 IAmb IAmb 03 40 56.6
comp=Z,124nm,1.5s
PRP IAMs_20 IAMs_20 04 15 50.4
comp=Z,1μm,18.0s
KTK1 Kautokeino 73.39 338 *e*P **P 03 40 44.1 0.0**
M24K Tolsona, Glenn 73.71 29 P **P 03 40 47.4 +1.2**
baz=283,SNR=14
PAX Paxson 73.83 28 IAmb IAmb 03 40 59.0
comp=Z,171nm,1.4s
KLU Klutina 73.97 30 IAmb IAmb 03 40 55.8
comp=Z,104nm,1.0s
FIA1 FINESS Array S 74.04 330 P **P 03 40 48.1 +0.1**
FIA1 IAmb IAmb 03 41 00.4
comp=Z,142nm,1.2s
FINES FINESS Array B 74.04 330 P **P 03 40 48.0 0.0**
comp=Z,28nm,0.8s,baz=74,slow=6.9,SNR=48
FINES LR LR 04 16 07.4
comp=Z,4μm,18.1s,baz=84,slow=38
FINES FINESS Array B 74.04 330 *i* P **P 03 40 48.0 0.0**
FINES pmax pmax
comp=Z,28nm,0.8s
FINES FINESS Array B 74.04 330 P **P 03 40 47.8 -0.3**
HWQ Hawqa 74.06 301 *e*P **P 03 40 49.2 +0.4**
ILGA Ilgaz 74.15 308 IAMs_20 IAMs_20 04 18 46.8
comp=Z,1μm,18.0s
SCRK Sand Creek 74.23 27 P **P 03 40 49.1 -0.2**
baz=285,SNR=15
ATD Arta Tunnel 74.25 277 IAmb IAmb 03 41 03.0
comp=Z,302nm,1.8s
DOT Dot Lake 74.28 27 IAmb IAmb 03 41 01.8
comp=Z,143nm,1.4s
BHL Bhannes 74.39 301 *e*P **P 03 40 51.0 +0.3**
VSU Vasula 74.43 327 *e*P **P 03 40 51.4 +1.0**
VSU Vasula 74.43 327*d* iP **P 03 40 50.0 -0.3**
VSU pmax pmax
comp=Z,243nm,1.3s
BR131 Keskin Array S 74.53 307 P **P 03 40 51.3 -0.2**
BR131 pmax pmax
comp=Z,72nm,1.9s
BR131 Keskin Array S 74.53 307 P **P 03 40 51.3 -0.2**
BRTR Keskin Array B 74.53 307 P **P 03 40 51.7 +0.2**
comp=Z,3.6nm,0.5s,baz=104,slow=5.3,SNR=11
BRTR LR LR 04 19 57.0
comp=Z,427nm,18.2s,baz=80,slow=41
BRTR Keskin Array B 74.53 307 *i* P **P 03 40 52.0 +0.5**
BRTR pmax pmax
comp=Z,4.0nm,0.5s
BRTR Keskin Array B 74.53 307 P **P 03 40 51.4 0.0**
N25K Chitina, Valde 74.56 30 P **P 03 40 51.7 +0.5**
baz=285,SNR=14
N25K Chitina, Valde 74.56 30 IAmb IAmb 03 41 03.6
comp=Z,143nm,1.3s
MENT Mentasta 74.61 28 IAmb IAmb 03 41 04.8
comp=Z,117nm,1.2s
MENT IAMs_20 IAMs_20 04 18 22.2
comp=Z,1μm,18.0s
TRO Tromso 74.69 339 *e*P **P 03 40 51.5 -0.2**
L26K Log Cabin Wild 74.76 28 P **P 03 40 52.7 +0.5**
baz=285
MICGM Minsk 74.77 323 ⇑*i* P **P 03 40 52.0 -0.4**
MICGM PM 03 40 53.0
comp=Z,0.2nm,2.0s
MICGM *e*PP **PP 03 43 32.0 -7.3**
MICGM *e*S **S 03 50 26.0 -1.9**
MNK Minsk 74.77 323 ⇑*i* P **P 03 40 52.0 -0.4**
MNK *e*S **S 03 50 26.0 -1.9**
MNK pmax pmax
comp=Z,240nm,2.0s
AKASG Malin Array Be 74.90 319 P **P 03 40 52.4 -0.8**
comp=Z,19nm,0.9s,baz=60,slow=5.9,SNR=41

AKASG LR LR 04 16 03.4
comp=Z,2μm,18.5s,baz=50,slow=38
AKBB Malin Array Si 74.90 319*d* iP **P 03 40 52.4 -0.8**
AKBB pmax pmax
comp=Z,81nm,2.2s
AKBB MLR MLR
comp=Z,2μm,18.0s
AKBB Malin Array Si 74.90 319 IAMs_20 IAMs_20 04 15 53.1
comp=Z,2μm,20.0s
GLB Gilahina Butte 74.97 30 IAmb IAmb 03 41 06.5
comp=Z,257nm,1.4s
GLB IAMs_20 IAMs_20 04 20 03.6
comp=Z,1μm,20.0s
K27K Chicken 75.03 27 P **P 03 40 54.4 +0.6**
baz=286
BR231 Keskin MP Arra 75.14 307 P **P 03 40 54.4 -0.6**
AFI Afiamalu 75.17 111 P **P 03 40 55.4 0.0**
AFI pmax pmax
comp=Z,283nm,1.6s
AFI Afiamalu 75.17 111 P **P 03 40 55.4 0.0**
AFI IAmb IAmb 03 41 08.4
comp=Z,283nm,1.6s
OUZ Omahuta 75.18 137 P **P 03 40 54.7 -0.2**
VRDI Verde Repeater 75.19 30 IAMs_20 IAMs_20 04 08 31.5
comp=Z,1μm,20.0s
EGAK Eagle 75.20 26 IAmb IAmb 03 41 02.8
comp=Z,72nm,1.0s
IDID Didziasalis 75.21 324 *e*P **P 03 40 55.7 +0.8**
NACGM Naroch 75.29 323 *e*P **P 03 40 55.0 -0.4**
NACGM *e*S **S 03 50 32.0 -1.7**
NACGM *e*LQ LQ 04 09 48.0
NACGM *e*LR LR 04 15 50.0
NACGM LRM MLR 04 21 29.0
MCARA McCarthy VSAT 75.35 30 IAmb IAmb 03 41 17.4
comp=Z,113nm,1.0s
IZAR Zarasai 75.37 324 *e*P **P 03 40 56.1 +0.3**
BCAR Beaver Creek A 75.43 28 P **P 03 40 55.8 -0.3**
CRQM Cirque 75.47 30 IAmb IAmb 03 41 04.6
comp=Z,179nm,1.2s
CRQM IAMs_20 IAMs_20 04 13 19.5
comp=Z,2μm,22.0s
ISAL Salakas 75.48 324 *e*P **P 03 40 57.2 +0.7**
IIGN Ignalina 75.48 324 *e*P **P 03 40 57.3 +0.8**
TGL Tana Glacier 75.61 30 IAmb IAmb 03 41 09.2
comp=Z,175nm,1.4s
BALM Baldy 75.76 30 IAmb IAmb 03 41 10.2
comp=Z,129nm,1.4s
ISLE Juniper Island 75.89 30 IAMs_20 IAMs_20 04 14 41.0
comp=Z,1μm,22.0s
CSS Mathiatis 75.97 302 P **P 03 40 59.8 +0.1**
CSS IAmb IAmb 03 41 11.5
comp=Z,56nm,0.9s
BARN Barnard Glacie 76.07 30 IAmb IAmb 03 41 18.7
comp=Z,101nm,1.0s
KIS Kishinev 76.10 315 ⇓*i* P **P 03 41 00.0 -0.2**
comp=Z,300nm,5.8s
KIS Kishinev 76.10 315*d* iP **P 03 41 00.0 -0.2**
KIS *e*S **S 03 50 46.0 +3.1**
KIS *e*PS **PnS 03 51 20.0 -0.8**
KIS pmax pmax
comp=Z,300nm,5.8s
SORM Soroca 76.10 316 ⇓P **P 03 41 00.9 +0.7**
DAWY Dawson 76.15 26 IAmb IAmb 03 41 08.6
comp=Z,97nm,1.1s
DAWY IAMs_20 IAMs_20 04 17 01.7
comp=Z,2μm,20.0s
LEF Lefka 76.28 303 ⇓P **P 03 41 02.4 +1.0**
STEI Steigen 76.53 338 *e*P **P 03 41 02.4 +0.2**
TLCR 76.58 313 ⇓P **P 03 41 03.2 +0.3**
PABE Paberze 76.68 324 *e*P **P 03 41 04.1 +0.8**
FAUS Fauske 76.72 337 *e*P **P 03 41 03.3 0.0**
INK Inuvik 76.89 21 P **P 03 41 04.8 +0.5**
comp=Z,29nm,1.0s,baz=283,slow=6.7,SNR=19
INK Inuvik 76.89 21 IAmb IAmb 03 41 17.1
comp=Z,204nm,1.4s
SLIT Slitere, Latvi 76.93 327 *e*P **P 03 41 04.4 -0.3**
TPGR Topolog 76.94 313 ⇑P **P 03 41 06.1 +1.1**
CFR Carcaliu 77.05 314 ⇑P **P 03 41 06.3 +0.8**
BCPM Bancas Point 77.37 30 P **P 03 41 08.5 +1.3**
BCPM IAmb IAmb 03 43 51.3
comp=Z,97nm,0.9s
ISP Isparta 77.37 306 P **P 03 41 07.6 -0.1**
ISP pmax pmax
comp=Z,76nm,1.1s
ISP Isparta 77.37 306 P **P 03 41 07.6 -0.1**
ISP IAmb IAmb 03 41 18.6
comp=Z,76nm,1.1s
MOR8 Moi Rana 77.48 336 *e*P **P 03 41 06.9 -0.8**
SUW Suwalki 77.56 323 *e*P **P 03 41 07.8 -0.5**
SUW *e*PcP **pwP 03 41 18.0 -0.3**
SUW *e*S **S 03 50 56.7 -1.9**
SUW Suwalki 77.56 323 IAMs_20 IAMs_20 04 21 35.6
comp=Z,2μm,18.0s
ICOR Ion Corvin 77.57 313 ⇑P **P 03 41 09.9 +1.3**
ODBI Odobesti 77.61 314 ⇑P **P 03 41 09.5 +0.8**
PBUR Paburge 77.62 325 *e*P **P 03 41 09.2 +0.7**
PRAR RASCĂ 77.69 316 ⇓P **P 03 41 10.1 +0.9**
VRI Vrincioaia 77.80 314 ⇓P **P 03 41 11.1 +1.3**
KONS Konsvik 77.84 337 *e*P **P 03 41 10.5 +0.9**
PLOR Plostina 77.86 314 ⇓P **P 03 41 11.2 +1.0**
BIZ Bicaz 77.90 316 ⇑P **P 03 41 10.6 +0.3**
BISRR Bisoca 77.90 314 ⇑P **P 03 41 11.8 +1.3**
PRD Provadia 78.12 312 *i* P **P 03 41 12.1 +0.5**
ISR Istrita 78.14 314 ⇑P **P 03 41 12.3 +0.5**
BURAR Bucovina Array 78.27 316 ⇑P **P 03 41 12.8 +0.3**
BURAR Bucovina Array 78.27 316 P **P 03 41 12.0 -0.6**
BUR08 Bucovina Ar. S 78.28 317 IAmb IAmb 03 41 24.4
comp=Z,145nm,1.9s
LVV L'vov 78.35 319 *e*P **P 03 41 11.6 -1.2**
MLR Muntele Rosu 78.44 314 ⇑P **P 03 41 14.2 +0.7**
RAZG Razgrad 78.63 312 ⇓P **P 03 41 16.0 +1.5**
DOPR Dopca 78.66 315 ⇑P **P 03 41 15.1 +0.4**
MANT Manisa 78.66 307 P **P 03 41 14.7 -0.3**
SGRR Singureni 78.80 313 ⇑P **P 03 41 16.5 +1.1**
JMB Yambol 78.91 311 *i* P **P 03 41 16.0 0.0**
FURI Furi 78.98 275 P **P 03 41 17.4 +0.1**
FURI Furi 78.98 275 IAMs_20 IAMs_20 04 10 51.9
comp=Z,1μm,19.0s
EDRB Edirne 78.98 311 P **P 03 41 13.0 -3.4**
ARCR ARCALIA 79.00 316 ⇑P **P 03 41 17.9 +1.5**
VOIR 79.05 314 ⇑P **P 03 41 17.4 +0.6**
NSS Namsos 79.10 335 *e*P **P 03 41 16.3 -0.3**
SZH Strazhica 79.12 312 *i* P **P 03 41 17.3 +0.1**
LBZ Lake Benmore 79.20 146 IAmb IAmb 03 41 19.8
comp=Z,302nm,1.7s
RPZ Rata Peaks 79.20 145 P **P 03 41 18.3 +0.9**
comp=Z,57nm,1.1s,baz=313,slow=5.3,SNR=8.1
RPZ Rata Peaks 79.20 145 IAmb IAmb 03 41 29.0
comp=Z,101nm,1.1s
KWP Kalwaria Pacla 79.22 319 *e*P **P 03 41 17.8 +0.2**
KWP *e*L L 04 18 13.2
comp=Z,3μm,21.4s
LTZ Lake Taylor 79.25 144 IAmb IAmb 03 41 29.1
comp=Z,163nm,1.5s
URZ Urewera 79.27 138 P **P 03 41 17.6 -0.2**
comp=Z,11nm,0.9s,baz=58,slow=4.6,SNR=3.7
YER Yerkesik 79.28 306 P **P 03 41 18.0 -0.2**
WHY Whitehorse 79.32 29 IAmb IAmb 03 41 30.8
comp=Z,253nm,1.4s
COPA Copaceanca 79.34 313 ⇑P **P 03 41 19.0 +0.7**
ARR Arges 79.35 314 ⇓P **P 03 41 18.8 +0.3**
BMR Baia Mare 79.36 317 ⇑P **P 03 41 19.7 +1.3**
HUMR Humele 79.38 314 ⇑P **P 03 41 19.0 +0.4**
ZIMR 79.39 313 ⇑P **P 03 41 18.9 +0.3**
C36M Paulatuk 79.48 19 P **P 03 41 17.8 -0.8**
baz=301
C36M Paulatuk 79.48 19 IAmb IAmb 03 41 26.6
comp=Z,93nm,1.1s
SKAG Skagway 79.58 30 IAmb IAmb 03 41 36.2
comp=Z,153nm,1.1s
CJR Cluj-Napoca 79.60 316 ⇓P **P 03 41 20.6 +0.8**
BEL Belsk 79.63 322 *e*P **P 03 41 20.1 +0.4**
BEL *e*PcP **pwP 03 41 28.9 -0.9**
BEL *e*L L 04 20 07.4
comp=Z,3μm,16.7s
KOLS Kolonicke sedl 79.72 318 *e*P **P 03 41 20.5 +0.2**
KOLS pmax pmax
comp=Z,52nm,1.8s
KOLS Kolonicke sedl 79.72 318 *e*P **P 03 41 20.5 +0.2**
DAG Danmarks Havn 79.74 351 *i* P **P 03 41 19.0 -0.9**
DAG pmax pmax
comp=Z,33nm,1.1s
DAG Danmarks Havn 79.74 351 *i* P **P 03 41 19.0 -0.9**
comp=Z,33nm,1.1s

DAG Danmarks Havn 79.74 351 *i* P **P** **03 41 19.0 -0.9**
DAG IAmb IAmb 03 41 21.8
comp=Z,33nm,1.1s
ENEZ Enez 79.75 310 P **P** **03 41 17.3 -3.3**
DIM Dimitrovgrad 79.78 311 *i* P **P** **03 41 21.1 +0.3**
UZH Uzhgorod 79.81 318⇑ *i* P **P** **03 41 21.2 +0.4**
UZH *e* 03 41 25.3
UZH *i* 03 41 29.5
UZH *e* 03 46 06.8
UZH *i* S **S** **03 51 23.6 +0.7**
UZH *i* 03 52 02.2
LOT Lotru 79.90 315⇑ P **P** **03 41 22.4 +0.9**
EZN Ezine 79.91 309 P **P** **03 41 20.3 -1.2**
KDZ Kurdzhali 79.99 311 *i* P **P** **03 41 22.4 +0.5**
RDO Rodhopi 80.06 310 P **P** **03 41 20.8 -1.5**
PRK Paraskevi 80.13 308 P **P** **03 41 21.3 -1.4**
DRGR 80.16 316⇑ P **P** **03 41 23.2 +0.4**
BESE Bessie Mountai 80.16 31 P **P** **03 41 22.7 +0.2**
BESE IAmb IAmb 03 41 36.2
comp=Z,226nm,1.4s
CRVS Cervenica-Dubn 80.23 319 *e*P **P** **03 41 23.7 +0.6**
CRVS *e* 03 41 34.1
CRVS pmax pmax
comp=Z,253nm,1.6s
CRVS Cervenica-Dubn 80.23 319 *e*P **P** **03 41 23.7 +0.6**
CRVS *e* 03 41 34.1
SMTH Samothraki Isl 80.28 310 P **P** **03 41 21.8 -1.7**
NISR Nisiros 80.32 305 P P 03 41 30.8 +7.0
TBLU Trondheim 80.34 334 *e*P **P** **03 41 23.2 -0.1**
PLD Plovdiv 80.35 311 *i* P **P** **03 41 23.7 -0.1**
RZN Rozhen 80.47 311 *i* P **P** **03 41 25.0 +0.2**
JIS Juneau Island 80.50 31 IAmb IAmb 03 41 41.2
comp=Z,166nm,1.3s
SIT Sitka 80.53 32 IAmb IAmb 03 41 33.3
comp=Z,128nm,1.0s
PGB Panagyurishte 80.58 312 *i* P **P** **03 41 25.4 +0.2**
GZR Gura Zlata 80.58 315⇑ P **P** **03 41 25.5 +0.4**
MPEP Malo Peshtene 80.61 313 *i* P **P** **03 41 25.6 +0.4**
KARP Karpathos 80.63 304 P **P** **03 41 25.7 +0.2**
KARP IAmb IAmb 03 41 37.7
comp=Z,234nm,1.1s
KARP IAMs_20 IAMs_20 04 23 55.6
comp=Z,1μm,18.0s
BAIL Bailesti 80.66 313⇓ P **P** **03 41 27.0 +1.6**
NC405 NORSAR Array S 80.67 332 IAmb IAmb 03 41 37.2
comp=Z,148nm,0.9s
LIA Limnos Island 80.72 309 P **P** **03 41 24.8 -1.0**
NIE Niedzica 80.77 319 *e*P **P** **03 41 26.6 +0.6**
NIE *e*PP **PP** **03 44 29.9 +0.1**
NIE *e*S **S** **03 51 32.3 -0.7**
NIE *e*L L 04 19 26.4
comp=Z,2μm,20.4s
OJC Ojcow 80.79 320 *e*P **P** **03 41 26.1 0.0**
OJC *e*S **S** **03 51 31.4 -1.8**
THAS Thassos island 80.82 310 P P 03 41 20.5 -5.9
PUNG Punghina 80.85 314⇑ P **P** **03 41 26.6 +0.1**
NB201 NORSAR Array S 80.88 332 IAmb IAmb 03 41 38.3
comp=Z,115nm,1.1s
NC602 NORSAR Array S 80.91 332 IAmb IAmb 03 41 37.6
comp=Z,195nm,1.4s
NB2 NORSAR Subarra 80.92 332 P **P** **03 41 25.6 -1.0**
comp=Z,54nm,1.0s,baz=65,slow=5.6
NB2 NORSAR Subarra 80.92 332 P **P** **03 41 25.6 -1.0**
baz=65,slow=5.6
NOA NORSAR Array B 80.92 332 P **P** **03 41 26.1 -0.5**
comp=Z,8.2nm,0.8s,baz=75,slow=5.9,SNR=42
NOA LR LR 04 21 47.4
comp=Z,5μm,18.4s,baz=75,slow=39
KECS Kecovo 80.99 318 *e*P **P** **03 41 27.9 +0.8**
KECS pmax pmax
comp=Z,32nm,1.3s
KECS Kecovo 80.99 318 *e*P **P** **03 41 27.9 +0.8**
HERR Herculane 80.99 314⇑ P **P** **03 41 27.6 +0.3**
SIRR Siria 81.02 316⇓ P **P** **03 41 27.7 +0.3**
GKP Gorka Klasztor 81.14 324 *e*P **P** **03 41 27.4 -0.3**
GKP *e*PcP **PcP** **03 41 33.6 -0.5**
GKP *e*L L 04 20 28.8
comp=Z,5μm,17.7s
NAO01 NORSAR Array S 81.15 332 P **P** **03 41 27.7 -0.1**
NAO01 IAmb IAmb 03 41 38.9
comp=Z,263nm,1.7s
NAO01 NORSAR Array S 81.15 332 *e*P **P** **03 41 26.7 -1.1**
VTS Vitosha 81.20 312 *i* P **P** **03 41 28.9 +0.3**
MMB Musomiste 81.20 311 *i* P **P** **03 41 28.0 -0.5**
BZS Buzias 81.27 315⇑ P **P** **03 41 28.6 -0.1**
LANS Liptovska Anna 81.37 319 *e*P **P** **03 41 29.9 +0.7**
LANS pmax pmax
comp=Z,19nm,1.2s
LANS Liptovska Anna 81.37 319 *e*P **P** **03 41 29.9 +0.7**
LANS *e* 03 41 42.0
DOMB Dombas 81.38 334 *e*P **P** **03 41 28.9 -0.1**
OPO Ambohidratompo 81.39 247 P **P** **03 41 29.9 0.0**
comp=Z,25nm,1.1s,baz=61,slow=7.4,SNR=6.3
MDVR Moldovita 81.50 315⇑ P **P** **03 41 30.2 +0.3**
ABPO Ambohimpanom 81.54 246 P **P** **03 41 30.3 -0.5**
ABPO pmax pmax
comp=Z,85nm,1.3s
ABPO Ambohimpanom 81.54 246 P **P** **03 41 30.2 -0.5**
ABPO IAmb IAmb 03 41 42.0
comp=Z,85nm,1.2s
ABPO IAMs_20 IAMs_20 04 14 43.4
comp=Z,1μm,20.0s
PSZ Piszkesteto 81.56 318⇑ P **P** **03 41 31.2 +0.9**
PSZ Piszkesteto 81.56 318 IAMs_20 IAMs_20 04 23 44.2
comp=Z,1μm,18.0s
KKB Krupnik 81.56 311 *i* P **P** **03 41 30.2 -0.2**
OSL Oslo 81.63 331 *e*P **P** **03 41 30.5 +0.2**
BSD Bornholm Skovb 81.66 326⇓ *i* P **P** **03 41 30.4 -0.1**
BSD pmax pmax
comp=Z,69nm,1.3s
BSD MLR MLR
comp=Z,7μm,15.0s
BSD Bornholm Skovb 81.66 326⇓ *i*P **P** **03 41 30.4 -0.1**
comp=Z,69nm,1.3s
comp=Z,7μm,15.0s
BSD Bornholm Skovb 81.66 326⇓ *i*P **P** **03 41 30.4 -0.1**
BSD IAmb IAmb 03 41 31.5
comp=Z,69nm,1.3s
BSD IAMs_20 IAMs_20 04 20 34.2
comp=Z,7μm,14.9s
MOL Molde 81.75 334 *e*P **P** **03 41 31.2 +0.3**
OKC Ostrava-Krasne 81.92 320 *e*P **P** **03 41 32.1 +0.1**
OKC *e*S **S** **03 51 43.0 -1.9**
OKC MLR MLR
comp=Z,2μm,13.2s
OKC Ostrava-Krasne 81.92 320 *e*P **P** **03 41 32.1 +0.1**
OKC *e*S **S** **03 51 43.0 -1.9**
OKC AMS AMS 04 22 30.0
comp=Z,2μm,13.2s
DBG Daneborg 81.93 350 *i* P **P** **03 41 31.1 -0.5**
HORT Hortiatis 81.99 310 P **P** **03 41 30.0 -2.7**
VYHS Vyhne 82.00 319 *e*P **P** **03 41 33.1 +0.6**
VYHS *e* 03 41 43.1
VYHS pmax pmax
comp=Z,130nm,1.6s
VYHS Vyhne 82.00 319 *e*P **P** **03 41 33.1 +0.6**
VYHS *e* 03 41 43.0
VAY Valandovo 82.11 311 *i* P **P** **03 41 33.3 +0.1**
XMAS Kiritimati 82.19 91 P **P** **03 41 34.7 +0.6**
STIP Stip 82.25 312 *i* P **P** **03 41 32.4 -1.6**
KONO Kongsberg 82.27 331 *d i*P **P** **03 41 33.1 -0.6**
KONO pmax pmax
comp=Z,24nm,1.7s
KONO Kongsberg 82.27 331 P **P** **03 41 33.1 -0.6**
KONO Kongsberg 82.27 331 *e*P **P** **03 41 32.5 -1.1**
MORC Moravsky Berou 82.30 320⇑ P **P** **03 41 34.6 +0.5**
MORC Moravsky Berou 82.30 320⇓ *i*P **P** **03 41 34.1 0.0**
MORC Moravsky Berou 82.30 320 IAmb IAmb 03 41 47.5
comp=Z,120nm,2.0s
MORC IAMs_20 IAMs_20 04 19 16.8
comp=Z,2μm,20.0s
RES Resolute Bay 82.33 9 IAmb IAmb 03 41 46.2
comp=Z,158nm,1.6s
SKAR Skarslia 82.35 333 *e*P **P** **03 41 34.6 +0.4**
GRG Griva 82.36 311 P P 03 41 28.9 -5.7
IDI Anoyia 82.47 305⇑ P **P** **03 41 36.1 +0.8**
IDI Anoyia 82.47 305 P P **03 41 32.5 -2.8**
DLBC Dease Lake 82.51 30 P **P** **03 41 36.4 +1.3**
comp=Z,15nm,1.1s,baz=296,slow=5.0,SNR=14
DLBC Dease Lake 82.51 30 P **P** **03 41 35.1 +0.1**
DLBC IAmb IAmb 03 41 48.2
comp=Z,156nm,1.4s
JAVC Velka Javorina 82.58 319⇓ *i*P **P** **03 41 36.9 +1.3**

FRGS Fruska Gora 82.62 315⇓ *i*P **P** **03 41 35.7 -0.2**
KRLC Kraliky 82.64 321 *e*P **P** **03 41 36.0 +0.1**
KRLC *e* 03 41 46.1
KRLC MLR MLR
comp=Z,3μm,14.7s
KRLC Kraliky 82.64 321 *e*P **P** **03 41 36.0 +0.1**
KRLC *ex* x 03 41 46.1
KRLC *ex* x 03 51 32.4
KRLC AMS AMS 04 21 50.0
comp=Z,3μm,14.7s
SKO Skopje 82.68 312 *i* P **P** **03 41 37.1 +0.9**
COP Copenhagen 82.70 327 *i* P **P** **03 41 34.8 -1.2**
COP MLR MLR
comp=Z,5μm,15.0s
COP Copenhagen 82.70 327 *i* P **P** **03 41 34.8 -1.2**
comp=Z,5μm,15.0s
COP Copenhagen 82.70 327 *i* P **P** **03 41 34.8 -1.2**
COP IAMs_20 IAMs_20 04 21 05.2
comp=Z,5μm,15.4s
RGN Rugen 82.74 326 *e*P **P** **03 41 37.2 +1.0**
OSTC Ostas 82.78 321 *e*P **P** **03 41 36.8 +0.2**
OSTC *e*S SKSac 03 51 43.0 -14
OSTC AMS AMS 04 22 40.0
comp=Z,2μm,14.1s
DPC Dobruska-Polom 82.80 321 *e*P **P** **03 41 37.2 +0.5**
DPC *e* 03 41 47.1
DPC *e*S **S** **03 51 49.3 -4.7**
DPC MLR MLR
comp=Z,2μm,16.1s
DPC Dobruska-Polom 82.80 321 *e*P **P** **03 41 37.2 +0.5**
DPC *ex* x 03 41 47.1
DPC *e*S **S** **03 51 49.3 -4.7**
DPC AMS AMS 04 22 00.0
comp=Z,2μm,16.1s
CHVC Chvalec 82.86 321 *e*P **P** **03 41 37.2 +0.2**
CHVC *ex* x 03 41 41.4
CHVC AMS AMS 04 26 20.0
comp=Z,2μm,14.3s
SMOL Smolenice 82.86 319 *e*P **P** **03 41 38.7 +1.7**
SMOL Smolenice 82.86 319 *e*P **P** **03 41 38.6 +1.6**
DIVS Divibare 82.89 314⇓ *i*P **P** **03 41 36.6 -0.8**
DIVS Divibare 82.89 314 IAmb IAmb 03 41 49.0
comp=Z,229nm,2.0s
DIVS IAMs_20 IAMs_20 04 24 15.8
comp=Z,1μm,19.0s
UPC Upice 82.92 321 *e*P **P** **03 41 38.4 +1.1**
UPC *e*S **S** **03 51 49.3 -5.8**
UPC MLR MLR
comp=Z,3μm,13.5s
UPC Upice 82.92 321 *e*P **P** **03 41 38.4 +1.1**
UPC *ex* x 03 51 49.3
UPC AMS AMS 04 26 30.0
comp=Z,3μm,13.5s
VAM Vamos 82.96 305 P **P** **03 41 34.6 -3.2**
MORH Mrgy, Hungar 82.98 317⇓ *i*P **P** **03 41 37.6 -0.1**
MODS Modra-Piesok 83.01 319 *e*P **P** **03 41 37.4 -0.4**
MODS *e* 03 41 47.9
MODS pmax pmax
comp=Z,104nm,1.8s
MODS Modra-Piesok 83.01 319 *e*P **P** **03 41 37.4 -0.4**
MODS *e* 03 41 47.9
TEKS Tekeris 83.03 315⇓ *i*P P 03 41 47.8 +10
KZN Kozani 83.04 310 P P 03 41 32.2 -6.0
VRAC Vranov 83.06 320⇑ P **P** **03 41 39.1 +1.1**
VRAC Vranov 83.06 320⇓ *i*P **P** **03 41 38.5 +0.5**
AGG Agios Georgios 83.09 309 IAmb IAmb 03 41 48.8
comp=Z,55nm,1.0s
IMMV Iera Moni Meta 83.11 305 P P 03 41 32.0 -6.5
FNA Florina 83.15 311 P P 03 41 26.1 -13
DSF Desfina 83.17 308 P **P** **03 41 40.6 +1.7**
ZST Bratislava 83.19 319 *e*P **P** **03 41 39.6 +0.9**
ZST Bratislava 83.19 319 *e*P **P** **03 41 39.6 +0.9**
KRUC Moravsky 83.27 320⇓ *i*P **P** **03 41 39.4 +0.3**
RUE Ruedersdorf 83.37 324 *e*P **P** **03 41 40.0 +0.5**
RUE Ruedersdorf 83.37 324 *e*P **P** **03 41 40.0 +0.5**
comp=Z,162nm,1.6s,baz=64,slow=4.8
BBLS Lazići 83.37 314⇓ *i*P **P** **03 41 39.6 -0.2**
KIBK Kibwezi 83.42 265 P **P** **03 41 42.6 +2.0**
SNR=21
OHR Ohrid 83.44 311 *i* P **P** **03 41 39.7 -0.5**
KPRO Kipourio 83.46 310 P P 03 41 33.8 -6.6
VLI Veliai 83.46 307 P P 03 41 34.4 -5.9
PHP Peshkopia 83.48 312 P P 03 41 34.5 -5.9
ANX Ano Chora 83.55 309 P **P** **03 41 38.0 -2.9**
HAPS Han Pijesak,BI 83.59 315⇑ *i*P **P** **03 41 39.9 -1.1**
TREC Trest 83.72 320 *e*P **P** **03 41 42.0 +0.5**
TREC *e*S **S** **03 51 55.7 -7.7**
TREC MLR MLR
comp=Z,3μm,14.5s
TREC Trest 83.72 320 *e*P **P** **03 41 42.0 +0.5**
TREC *ex* x 03 51 55.7
TREC AMS AMS 04 22 30.0
comp=Z,3μm,14.5s
KMBO Kilima Mbogo 83.73 266 P **P** **03 41 44.1 +1.7**
comp=Z,11nm,1.1s,baz=99,slow=4.7,SNR=26
KMBO Kilima Mbogo 83.73 266 P **P** **03 41 44.6 +2.2**
KMBO Kilima Mbogo 83.73 266 P **P** **03 41 42.2 -0.2**
KMBO pmax pmax
comp=Z,89nm,1.4s
KMBO Kilima Mbogo 83.73 266 P **P** **03 41 42.2 -0.2**
KMBO IAmb IAmb 03 41 55.2
comp=Z,89nm,1.4s
KMBO Kilima Mbogo 83.73 266 IAMs_20 IAMs_20 04 13 38.0
comp=Z,1μm,20.0s
PVCC Panska Ves 83.75 322 *e*P **P** **03 41 42.7 +1.2**
PVCC *e* 03 41 52.0
PVCC *e*S **S** **03 52 02.0 -1.5**
PVCC MLR MLR
comp=Z,2μm,14.4s
PVCC Panska Ves 83.75 322 *e*P **P** **03 41 42.7 +1.2**
PVCC *ex* x 03 41 52.0
PVCC *e*S **S** **03 52 02.0 -1.5**
PVCC AMS AMS 04 27 10.0
comp=Z,2μm,14.4s
LODK Lodwar 83.92 271 P **P** **03 41 45.3 +2.2**
SNR=25
DRO Drossia 83.93 308 P **P** **03 41 42.1 -0.7**
BRG Berggiesshubel 83.97 322⇑ *i*P **P** **03 41 42.7 +0.1**
comp=Z,93nm,1.6s
BRG *i* PCP **pP** **03 41 48.0 +0.2**
comp=Z,41nm,1.6s
BRG Berggiesshubel 83.97 322 S **S** **03 52 06.0 +0.3**
BRG SS SS 03 57 16.0 -17
comp=N,1μm,17.4s
comp=E,2μm,12.1s
comp=Z,3μm,15.4s
BRG Berggiesshubel 83.97 322⇑ *i*P **P** **03 41 42.7 +0.1**
BRG *i* 03 41 48.0
BRG S **S** **03 52 06.0 +0.3**
BRG pmax pmax
comp=Z,93nm,1.6s
BRG pmax pmax
comp=Z,41nm,1.6s
BRG MLR MLR
comp=N,1μm,17.4s
BRG MLR MLR
comp=E,2μm,12.1s
BRG MLR MLR
comp=Z,3μm,15.4s
BRG Berggiesshubel 83.97 322 *e*P **P** **03 41 42.7 +0.1**
comp=Z,93nm,1.6s,baz=64,slow=4.8
PRU Pruhonice 83.99 321 *e*P **P** **03 41 43.6 +0.8**
PRU *e* 03 41 47.9
PRU *e*S **S** **03 52 04.1 -1.9**
PRU MLR MLR
comp=Z,3μm,16.0s
PRU Pruhonice 83.99 321 *e*P **P** **03 41 43.6 +0.8**
PRU *ex* x 03 41 47.9
PRU *e*S **S** **03 52 04.1 -1.9**
PRU AMS AMS 04 23 20.0
comp=Z,3μm,16.0s
TIR Tirane 84.00 312⇓ P **P** **03 41 43.2 +0.2**
TIR Tirane 84.00 312 IAMs_20 IAMs_20 04 21 38.4
comp=Z,2μm,22.0s
PDG Podgorica 84.02 313⇑ P **P** **03 41 43.8 +0.7**
PDG Podgorica 84.02 313⇓ *i*P **P** **03 41 42.5 -0.5**
PDG Podgorica 84.02 313 IAMs_20 IAMs_20 04 25 05.5
comp=Z,1μm,20.0s
PRA Prague 84.02 321 *e*P **P** **03 41 44.1 +1.2**
PRA *e* 03 41 47.7
PRA *e*S **S** **03 52 06.2 -0.1**
PRA MLR MLR
comp=Z,1μm,14.5s
PRA Prague 84.02 321 *e*P **P** **03 41 44.1 +1.2**
PRA *ex* x 03 41 47.7
PRA *e*S **S** **03 52 06.2 -0.1**
PRA AMS AMS 04 23 20.0
comp=Z,1μm,14.5s
CONA Conrad Observa 84.06 319 *i* P **P** **03 41 44.5 +1.3**
SNR=16
BEHE Becsehely 84.08 317⇓ *i*P **P** **03 41 45.8 +2.5**
DRME Dracevica, Mon 84.16 313 *e*P **P** **03 41 42.8 -1.0**
FBE Freiberg 84.28 322 *e*P **P** **03 41 44.8 +0.5**
comp=Z,104nm,1.4s,baz=64,slow=4.8
CLL Collm 84.31 323⇓ *i*P **P** **03 41 44.1 -0.3**
comp=Z,79nm,1.4s
CLL *i* 03 41 54.4
comp=Z,339nm,1.9s
CLL *e*S **S** **03 52 06.0 -3.1**
CLL *e* 03 52 53.0
CLL *e*PS **PnS** **03 53 12.0 +8.6**
CLL *e*SS **SS** **03 57 42.0 +3.9**
CLL *e* 04 01 48.0
CLL *e*SSSS 04 03 42.0
CLL Collm 84.31 323⇓ *i*P **P** **03 41 44.1 -0.3**
CLL *i* 03 41 54.4
CLL *e*S **S** **03 52 06.0 -3.1**
CLL pmax pmax
comp=Z,79nm,1.4s
CLL Collm 84.31 323 *e*P **P** **03 41 44.3 -0.1**
comp=Z,79nm,1.4s,baz=64,slow=4.8
CLL Collm 84.31 323 IAMs_20 IAMs_20 04 25 57.8
comp=Z,2μm,20.0s
BRY Bratogost 84.33 314 *e*P **P** **03 41 44.4 -0.4**
KOGS Kog 84.42 318⇓ *i*P **P** **03 41 45.0 0.0**
KOGS *e*SKSac **SKSac** **03 52 08.6 +0.6**
KOGS *e* 03 53 02.5
BLY Banja Luka 84.50 316⇓ *i*P **P** **03 41 45.6 +0.1**
TREB Trebinje 84.52 314 *e*P **P** **03 41 45.1 -0.5**
HCY Herceg Novi 84.53 313 *e*P **P** **03 41 45.6 -0.1**
ARSA Arzberg 84.54 319 *i* P **P** **03 41 46.5 +0.8**
SNR=14
BSEG Bad Segeberg 84.59 326 *e*P **P** **03 41 46.3 +0.7**
comp=Z,62nm,1.4s,baz=64,slow=4.8
SKMB Sankelmark Bun 84.67 327 *e*P **P** **03 41 46.5 +0.4**
comp=Z,111nm,1.2s,baz=64,slow=4.8
MGRS Mrkonjic Grad 84.70 315 *e*P P 03 42 01.1 +15
PSDA Pessada-Kefalo 84.70 309 P P 03 41 32.5 -14
STON Ston 84.90 314⇓ *i*P **P** **03 41 46.5 -1.0**
KHC Kasperske Hory 84.93 321 *e*P **P** **03 41 47.2 -0.4**
KHC *e* 03 41 52.6
KHC *e*S **SKSac** **03 52 08.3 -2.9**
KHC MLR MLR
comp=Z,4μm,14.4s
KHC Kasperske Hory 84.93 321 *e*P **P** **03 41 47.2 -0.4**
KHC *ex* x 03 41 52.6
KHC *ex* x 03 41 57.4
KHC *e*SKS **SKSac** **03 52 08.3 -2.9**
KHC AMS AMS 04 23 20.0
comp=Z,4μm,14.4s
KHC Kasperske Hory 84.93 321 IAmb IAmb 03 41 59.8
comp=Z,78nm,1.8s
KHC IAMs_20 IAMs_20 04 23 29.2
comp=Z,1μm,18.0s
GEC2 GERESS Array S 84.98 321 *e*P **P** **03 41 48.1 +0.2**
comp=Z,60nm,1.4s,baz=64,slow=4.8
GERES GERESS Array B 84.98 321 P **P** **03 41 48.0 +0.2**
comp=Z,11nm,0.9s,baz=57,slow=5.1,SNR=54
GERES PKPPKP **P'P'df** **04 08 01.6 -3.8**
comp=Z,0.1nm,0.3s,baz=289,slow=4.1,SNR=5.0
GERES LR LR 04 23 05.1
comp=Z,3μm,18.1s,baz=76,slow=38
GERES GERESS Array B 84.98 321 P **P** **03 41 47.1 -0.8**
TANN Tannenbergstha 85.01 322 *e*P **P** **03 41 47.6 -0.4**
comp=Z,137nm,1.6s,baz=64,slow=4.8
MOA Molln 85.06 319 *i* P **P** **03 41 49.6 +1.3**
SNR=19
SOKA Soboth 85.09 318 *i* P **P** **03 41 48.4 -0.1**
SNR=20
NKC Novy Kostel 85.10 322 *e*P **P** **03 41 48.5 +0.1**
NKC MLR MLR
comp=Z,2μm,14.4s
NKC Novy Kostel 85.10 322 *e*P **P** **03 41 48.5 +0.1**
NKC *e*S SKSac 03 51 53.5 -19
NKC AMS AMS 04 27 30.0
comp=Z,2μm,14.4s
GUNZ Gunzen 85.11 322 *e*P **P** **03 41 48.9 +0.4**
comp=Z,59nm,1.3s,baz=64,slow=4.8
WERN Wernitzgruen 85.12 322 *e*P **P** **03 41 48.6 +0.1**
comp=Z,56nm,1.4s,baz=64,slow=4.8
PLN Plauen 85.16 322 *e*P **P** **03 41 48.4 -0.2**
comp=Z,345nm,2.6s,baz=64,slow=4.8
CRES Cresnjev 85.18 317⇓ *i*P **P** **03 41 49.1 +0.2**
ASSE Asse, Remlinge 85.24 324 *e*P **P** **03 41 49.0 +0.1**
comp=Z,437nm,2.6s,baz=64,slow=4.8
WET Wettzell 85.33 321 *e*P **P** **03 41 49.6 0.0**
comp=Z,281nm,2.5s,baz=64,slow=4.8
SCO Scoresbysund 85.35 348 *i* P **P** **03 41 49.6 +0.5**
SCO Scoresbysund 85.35 348 IAmb IAmb 03 42 01.3
comp=Z,186nm,1.9s
SCO Scoresbysund 85.35 348 *i* P **P** **03 41 49.6 +0.5**
SCO Scoresbysund 85.35 348 *e*P **P** **03 41 49.7 +0.5**
SCO *i* P **P** **03 41 49.7 +0.5**
NRDL Niedersach Rie 85.37 325 *e*P **P** **03 41 50.1 +0.5**
comp=Z,438nm,2.4s,baz=64,slow=4.8
MOX Moxa 85.39 323 *e*P **P** **03 41 49.7 -0.1**
comp=Z,328nm,2.6s,baz=64,slow=4.8
MOX *e*L L 04 21 21.4
comp=Z,2μm,18.8s
MANZ Manzenberg 85.41 322 *e*P **P** **03 41 50.3 +0.3**
comp=Z,366nm,2.6s,baz=64,slow=4.8
ROTZ Rotzenmuhle 85.45 322 *e*P **P** **03 41 50.6 +0.5**
comp=Z,71nm,1.4s,baz=64,slow=4.8
OBKA Obir 85.46 318 *i* P **P** **03 41 51.1 +0.7**
SNR=14
CLZ Clausthal 85.53 324 *e*P **P** **03 41 51.3 +0.7**
comp=Z,91nm,1.5s,baz=64,slow=4.8
LJU Ljubljana 85.67 318⇓ *i*P **P** **03 41 51.2 -0.1**
LJU *e* 03 42 01.5
LJU *e*PP **PP** **03 45 09.8 -0.2**
LJU *e*SKSac **SKSac** **03 52 17.5 +1.5**
LJU *e* 03 53 15.5
LJU Ljubljana 85.67 318⇓ *i*P **P** **03 41 50.8 -0.5**
CEY Cerknica 85.87 317⇓ *i*P **P** **03 41 52.3 0.0**
SUMG Summit 85.94 354 *i* P **P** **03 41 52.0 -0.6**
SUMG pmax pmax
comp=Z,340nm,1.7s
SUMG Summit 85.94 354 P **P** **03 41 51.9 -0.6**
SUMG IAmb IAmb 03 42 03.6
comp=Z,102nm,1.4s
SUMG Summit 85.94 354 *i* P **P** **03 41 52.0 -0.6**
comp=Z,336nm,1.7s
SUMG Summit 85.94 354 *i* P **P** **03 41 52.0 -0.6**
SUMG IAmb IAmb 03 41 55.4
comp=Z,337nm,1.7s
MYKA Terra Mystica 85.97 319 *i* P **P** **03 41 53.2 +0.3**
SNR=7.7
RJOB Jochberg 86.01 320 *e*P **P** **03 41 52.1 -0.9**
comp=Z,48nm,1.5s,baz=64,slow=4.8
RIY Rijeka 86.01 317⇓ *i*P **P** **03 41 52.5 -0.5**
GRF Grafenberg Arr 86.05 322 *e*P **P** **03 41 53.5 +0.3**
comp=Z,140nm,1.9s,baz=64,slow=4.8
GRF *e*L L 04 25 15.2
comp=Z,2μm,18.0s
CADS Cadrg 86.09 318⇓ *i*P **P** **03 41 52.5 -0.9**
CADS *i* 03 42 03.0
CADS *e*PP **PP** **03 45 12.6 -0.8**
UBBA Unterbreizbach 86.22 323 *e*P **P** **03 41 53.8 0.0**
comp=Z,181nm,2.2s,baz=64,slow=4.8
ZOU Zoufplan 86.42 319 IAmb IAmb 03 42 11.0
comp=Z,76nm,1.4s
ZOU IAMs_20 IAMs_20 04 26 53.8
comp=Z,1μm,20.0s
ABTA Abfaltersbach 86.62 319 *i* P **P** **03 41 56.0 -0.1**
SNR=12
YKA Yellowknife Ar 86.63 22 P **P** **03 41 55.7 0.0**
comp=Z,25nm,0.8s,baz=321,slow=3.9,SNR=41
YKA LR LR 04 24 51.6
comp=Z,733nm,18.9s,baz=0.0,slow=38
SGRT San Giovanni R 86.68 313 IAMs_20 IAMs_20 04 25 21.1
comp=Z,1μm,22.0s
IBBN Ibbenburen 86.72 325 *e*P **P** **03 41 56.6 +0.2**
comp=Z,139nm,1.9s,baz=64,slow=4.8
CIMO Cimolais 86.86 319 IAmb IAmb 03 42 08.2
comp=Z,119nm,1.6s
CIMO IAMs_20 IAMs_20 04 21 29.4
comp=Z,2μm,21.0s
CASY Casey 86.92 184 P **P** **03 41 57.1 +0.4**
CASY IAmb IAmb 03 42 08.3

WTTA **Wattenberg** 86.92 320 *i* P P 03 41 58.2 +0.5
SNR=16
WATA **Walderalm** 86.92 320 *i* P P 03 41 57.8 +0.1
SNR=7.6
TIP **Timpagrande** 87.04 311 ⇓P P 03 41 59.5 +1.2
TIP **Timpagrande** 87.04 311 IAMs_20 IAMs_20 04 24 30.8
comp=Z,1µm,22.0s
SQTA **Sankt Quirin** 87.20 320 *i* P P 03 41 59.3 +0.4
SNR=10
MOTA **Moosalm** 87.21 320 *i* P P 03 41 59.3 +0.3
SNR=7.9
TNS **Taunus Mts** 87.38 323 *e*P P 03 41 59.5 -0.1
comp=Z,432nm,3.2s,baz=64,slow=4.8
CTI **Castel Tesino** 87.47 319 IAmb IAmb 03 42 11.5
comp=Z,67nm,1.4s
CTI IAMs_20 IAMs_20 04 28 11.6
comp=Z,1µm,18.0s
FETA **Feichten** 87.58 320 *i* P P 03 42 01.4 +0.5
SNR=12
UBR **Ueberruh** 87.65 321 *e*P P 03 42 00.3 -0.8
comp=Z,91nm,1.8s,baz=64,slow=4.8
STU **Stuttgart** 87.66 322 P P 03 42 01.6 +0.6
STU pmax pmax
comp=Z,21nm,1.0s
STU **Stuttgart** 87.66 322 P P 03 42 01.6 +0.6
PAOL **Paolisi** 87.79 313 IAMs_20 IAMs_20 04 23 59.5
comp=Z,936nm,19.0s
INTR **Introdacqua** 87.82 314 IAmb IAmb 03 42 09.7
comp=Z,80nm,1.6s
INTR IAMs_20 IAMs_20 04 29 03.1
comp=Z,1µm,18.0s
DAVA **Damuels** 87.97 320 *i* P P 03 42 03.3 +0.6
SNR=6.0
NRCA **Norcia** 87.98 315 IAMs_20 IAMs_20 04 22 37.4
comp=Z,1µm,21.0s
AHRW **Bad Neuenahr-A** 87.98 324 *e*P P 03 42 02.9 +0.5
baz=64,slow=4.8
AQU **L'Aquila** 88.00 315 ⇓*i*P P 03 42 02.5 -0.3
AQU **L'Aquila** 88.00 315 IAmb IAmb 03 42 14.9
comp=Z,131nm,1.5s
AQU IAMs_20 IAMs_20 04 25 51.9
comp=Z,2µm,20.0s
CEL **Celeste** 88.04 310 IAMs_20 IAMs_20 04 27 12.2
comp=Z,956nm,19.0s
BFO **Black Forest** 88.38 322 P P 03 42 04.2 -0.3
BFO pmax pmax
comp=Z,46nm,1.5s
BFO MLR MLR
comp=Z,2µm,20.0s
BFO **Black Forest** 88.38 322 *e*P P 03 42 03.8 -0.7
comp=Z,99nm,2.2s,baz=64,slow=4.8
BFO **Black Forest** 88.38 322 P P 03 42 04.2 -0.3
BFO IAMs_20 IAMs_20 04 22 41.4
comp=Z,2µm,20.0s
BTNL **Ternell** 88.48 324 PcP P 03 42 05.3 +0.4
BTNL x x 03 42 14.8
MEM **Membach** 88.53 324 PcP P 03 42 05.5 +0.4
MEM x x 03 42 15.4
RAR **Rarotonga** 88.59 113 P P 03 42 06.7 +0.9
RAR pmax pmax
comp=Z,158nm,1.7s
RAR **Rarotonga** 88.59 113 P P 03 42 06.7 +0.9
RAR IAmb IAmb 03 42 08.2
comp=Z,158nm,1.6s
BEBN **Eben Emael** 88.61 325 PcP P 03 42 05.1 -0.3
BEBN x x 03 42 13.5
BHOU **Houvegnez** 88.67 324 PcP P 03 42 05.8 0.0
BHOU x x 03 42 16.0
ZCCA **Zocca** 88.67 317 IAMs_20 IAMs_20 04 26 35.6
comp=Z,2µm,20.0s
BSTI **Sart Tilman** 88.78 325 PcP PcP 03 42 07.0 -0.8
BSTI x x 03 42 16.3
OSSC **Osservatorio P** 88.89 317 IAmb IAmb 03 42 18.4
comp=Z,194nm,2.0s
PRMA **PARMA** 88.90 318 IAMs_20 IAMs_20 04 29 00.5
comp=Z,1µm,18.0s
WLF **Walferdange** 88.94 324 PcP P 03 42 07.5 +0.4
WLF x x 03 42 17.6
WLF **Walferdange** 88.94 324 IAmb IAmb 03 42 18.4
comp=Z,59nm,1.2s
BCLA **Clavier** 89.01 325 PcP P 03 42 07.7 +0.3
VLC **Villacollemand** 89.14 317 IAMs_20 IAMs_20 04 26 59.9
comp=Z,2µm,19.0s
RCHB **Rochefort** 89.19 324 PcP P 03 42 08.4 +0.3
UCC **Uccle** 89.32 325 PcP P 03 42 08.7 -0.1
BMRD **Maredsous** 89.37 325 PcP PcP 03 42 09.6 -0.8
BMRD x x 03 42 18.6
ICESG **Greenland Ices** 89.37 353 *e*P P 03 42 12.9 +3.8
SNF **Seneffe** 89.52 325 PcP P 03 42 09.8 +0.1
SNF x x 03 42 21.2
DOU **Dourbes** 89.57 324 PcP P 03 42 10.3 +0.3
MBAR **Mbarara** 89.65 269 P P 03 42 09.7 -1.5
MBAR pmax pmax
comp=Z,6.0nm,0.8s
MBAR **Mbarara** 89.65 269 P P 03 42 09.7 -1.5
MBAR **Mbarara** 89.65 269 IAMs_20 IAMs_20 04 28 40.7
comp=Z,1µm,18.0s
SENIN **Lac Senin/Sane** 89.97 320 IAmb IAmb 03 42 24.0
comp=Z,91nm,1.5s
CLTB **Caltabellotta** 90.24 311 IAmb IAmb 03 42 25.9
comp=Z,70nm,1.5s
BNI **Bardonecchia** 91.01 319 P P 03 42 17.0 0.0
BNI pmax pmax
comp=Z,151nm,1.6s
BNI MLR MLR
comp=Z,3µm,22.0s
BNI **Bardonecchia** 91.01 319 P P 03 42 17.0 0.0
BNI IAmb IAmb 03 42 28.6
comp=Z,151nm,1.6s
D03D **Eldon** 91.64 37 P P 03 42 19.3 -0.3
baz=303
B06A **Marblemount** 91.99 36 P P 03 42 22.1 +0.9
B06A IAmb IAmb 03 42 39.3
comp=Z,47nm,1.1s
SSB **Saint Sauveur** 92.18 320 IAMs_20 IAMs_20 04 29 34.0
comp=Z,2µm,21.0s
B08A **Colville Reser** 93.25 35 IAmb IAmb 03 42 40.5
comp=Z,44nm,1.2s
H04A **Detroit Lake** 93.74 39 IAmb IAmb 03 42 41.7
comp=Z,52nm,1.5s
KEST **Kesra** 93.85 310 P P 03 42 30.7 +0.5
comp=Z,8.7nm,0.9s,baz=28,slow=0.7,SNR=8.8
KEST LR LR 04 30 14.4
comp=Z,586nm,21.3s,baz=356,slow=39
KEST **Kesra** 93.85 310 P P 03 42 30.0 -0.2
KEST IAmb IAmb 03 42 42.1
comp=Z,91nm,1.6s
E07A **Sunnyside** 94.02 37 IAmb IAmb 03 42 44.3
comp=Z,42nm,1.3s
I04A **Tendick Farm,** 94.09 40 P P 03 42 32.4 +1.2
baz=304
L02E **Cave Junction** 94.25 42 P P 03 42 31.6 -0.3
baz=303
F07A **Phinny Hill Vi** 94.36 37 P P 03 42 33.5 +1.3
I05D **Terrebonne, OR** 94.43 39 P P 03 42 32.9 +0.2
baz=305
NEW **Newport** 94.48 34 P P 03 42 31.8 -1.1
baz=308
J04D **Umpqua Nationa** 94.58 40 P P 03 42 32.8 -0.8
baz=304
PINE **Pine Mountain** 94.98 40 IAmb IAmb 03 42 49.1
comp=Z,66nm,1.3s
L04D **Klamath Falls** 95.03 41 P P 03 42 35.7 +0.1
baz=304
YBH **Yreka Blue Hor** 95.05 42 P P 03 42 35.2 -0.4
comp=Z,5.4nm,1.3s,baz=16,slow=1.3,SNR=4.2
J05D **Fort Rock, OR** 95.09 40 P P 03 42 35.8 -0.1
baz=305
M02C **Callahan** 95.14 42 P P 03 42 35.7 -0.3
baz=303
K04D **Chiloquin, OR** 95.14 41 P P 03 42 35.5 -0.6
baz=304
N02D **Trinity Center** 95.46 43 P P 03 42 37.9 +0.4
baz=303
M04C **Macdoel** 95.56 42 P P 03 42 37.7 -0.3
baz=304
K05A **Summer Lake** 95.61 40 P P 03 42 38.9 +0.6
K05A IAmb IAmb 03 43 18.7
comp=Z,109nm,1.8s
WALA **Waterton Lakes** 95.64 32 IAmb IAmb 03 42 59.9
comp=Z,104nm,1.9s
FCC **Fort Churchill** 96.03 17 P P 03 42 40.4 +0.9
FCC pmax pmax
comp=Z,165nm,2.0s
FCC **Fort Churchill** 96.03 17 P P 03 42 40.4 +0.9

PPT **Papeete** 96.28 106 LR LR 04 17 43.2
comp=Z,286nm,21.1s,baz=282,slow=30
PPT2 **Papeete2** 96.29 106 *e*S S 03 53 55.4 -5.6
comp=Z,1µm,25.0s
PPT2 *e*SP SP 03 55 18.0 -2.4
comp=Z,844nm,33.8s
PPT2 *e*SS SS 04 00 34.7 +0.7
comp=Z,826nm,27.5s
PPT2 **Papeete2** 96.29 106 *e*LR LR 04 13 48.0
comp=Z,2µm,26.5s,baz=287
JTMT **Jette** 96.30 34 IAmb IAmb 03 42 53.5
comp=Z,45nm,1.7s
O03E **Paynes Creek** 96.41 43 P P 03 42 40.8 -1.0
baz=304
MOD **Modoc Plateau** 96.44 41 P P 03 42 42.2 +0.2
FFC **Flin Flon** 96.78 23 P P 03 42 43.1 0.0
FFC pmax pmax
comp=Z,19nm,1.0s
FFC **Flin Flon** 96.78 23 P P 03 42 43.1 0.0
FFC IAmb IAmb 03 42 51.7
comp=Z,19nm,0.9s
ORV **Oroville** 97.01 43 P P 03 42 44.2 -0.3
ORV pmax pmax
comp=Z,13nm,1.1s
ORV **Oroville** 97.01 43 P P 03 42 44.2 -0.3
LSZ **Lusaka** 97.03 256 P P 03 42 44.0 -1.1
LSZ pmax pmax
comp=Z,28nm,1.4s
LSZ MLR MLR
comp=Z,1µm,18.0s
LSZ **Lusaka** 97.03 256 P P 03 42 44.0 -1.1
LSZ IAmb IAmb 03 42 55.4
comp=Z,28nm,1.4s
LSZ **Lusaka** 97.03 256 IAMs_20 IAMs_20 04 26 27.7
comp=Z,1µm,18.0s
MSO **Missoula** 97.06 34 P Pdif 03 42 44.8 0.0
baz=310
WVOR **Wild Horse Val** 97.14 40 IAmb IAmb 03 42 58.5
comp=Z,49nm,1.9s
MAW **Mawson** 97.42 199 LR LR 04 24 32.6
comp=Z,244nm,18.0s,baz=50,slow=34
BEKR **Beckworth** 97.57 43 IAmb IAmb 03 43 02.6
comp=Z,20nm,1.1s
AFDM **Forest Hills D** 97.69 44 IAmb IAmb 03 42 59.9
comp=Z,30nm,1.4s
TBI **Tubuai** 98.27 112 *e*SKSac SKSac 03 53 25.2 -2.4
comp=Z,168nm,22.2s
TBI *e*S S 03 54 13.0 -4.6
comp=Z,599nm,25.8s
TBI *e*SP SP 03 55 39.1 -2.7
comp=Z,369nm,37.0s
TBI *e*SS SS 04 01 00.0 -1.7
comp=Z,381nm,34.0s
TBI *e*LQ LQ 04 10 30.5
comp=Z,1µm,31.2s
TBI *e*LR LR 04 14 41.0
comp=Z,1µm,32.0s
CMB **Columbia Colle** 98.59 44 IAmb IAmb 03 43 07.1
comp=Z,19nm,1.0s
DLMT **Dillon** 98.73 35 IAmb IAmb 03 43 10.4
comp=Z,44nm,1.6s
HLID **Hailey** 98.90 37 P Pdif 03 42 53.4 +0.3
baz=310
PMPB **Monarch Peak** 99.33 46 IAMs_20 IAMs_20 04 17 53.8
comp=Z,973nm,22.0s
RYN **Ryan** 99.44 43 P **Pdif** 03 42 55.5 -0.2
KVN **Kaiserville** 99.46 42 IAmb IAmb 03 43 08.7
comp=Z,37nm,1.6s
NVAR **Mina Array Bea** 99.70 43 P **Pdif** 03 42 58.1 +1.3
comp=Z,1.0nm,0.5s,baz=308,slow=3.6,SNR=4.0
NVAR LR LR 04 24 27.2
comp=Z,246nm,19.4s,baz=320,slow=33
CART **Cartagena** 99.92 316 IAMs_20 IAMs_20 04 35 32.4
comp=Z,1µm,19.0s
LKWY **Lake** 100.42 34 IAMs_20 IAMs_20 04 31 25.3
comp=Z,1µm,20.0s
H17A **Grant Village** 100.44 34 IAMs_20 IAMs_20 04 31 15.9
comp=Z,1µm,19.0s
ESDC **Sonseca Array** 100.54 319 PP PP 03 47 12.7 +6.1
comp=Z,1.9nm,1.0s,baz=57,slow=7.9,SNR=5.9
ES12 **SONSECA Array** 100.55 319 IAMs_20 IAMs_20 04 36 52.6
comp=Z,1µm,20.0s
ES16 **SONSECA Array** 100.55 319 IAMs_20 IAMs_20 04 36 47.7
comp=Z,1µm,20.0s
ES13 **SONSECA Array** 100.56 319 IAMs_20 IAMs_20 04 36 31.8
comp=Z,1µm,20.0s
ES14 **SONSECA Array** 100.57 319 IAMs_20 IAMs_20 04 36 48.2
comp=Z,2µm,21.0s
VNDA **Vanda** 100.92 172 P **Pdif** 03 43 01.1 +0.2
comp=Z,1.3nm,1.0s,baz=301,slow=7.0,SNR=6.8
VNDA PP PP 03 47 07.9 -1.4
comp=Z,3.3nm,1.0s,baz=319,slow=8.4,SNR=6.2
VNDA PKKPbc **PKKPbc** 03 59 14.2 -1.9
comp=Z,1.2nm,0.9s,baz=132,slow=1.9,SNR=8.8
VNDA **Vanda** 100.92 172 Pdif **Pdif** 03 43 02.3 +1.3
BGU **Big Grassy Mou** 101.37 38 Pdif **Pdif** 03 43 05.1 +0.9
PDAR **Pinedale Array** 102.09 35 P **Pdif** 03 43 11.0 +3.6
comp=Z,0.2nm,0.4s,baz=343,slow=1.9,SNR=2.3
PDAR PKiKP **PKiKP** 03 47 29.0 -0.8
comp=Z,1.4nm,1.0s,baz=298,slow=1.9,SNR=3.2
PDAR PKKPbc **PKKPbc** 03 59 10.4 -1.3
comp=Z,0.3nm,0.7s,baz=126,slow=1.2,SNR=3.8
SFS **San Fernando** 103.92 318 IAMs_20 IAMs_20 04 39 04.9
comp=Z,1µm,20.0s
RSSD **Black Hills** 103.95 31 IAMs_20 IAMs_20 04 35 16.4
comp=Z,849nm,20.0s
TJX **Tijuana** 103.99 47 IAMs_20 IAMs_20 04 17 39.2
comp=Z,749nm,18.0s
PV07 **Paradox Valley** 105.55 38 IAMs_20 IAMs_20 04 40 36.4
comp=Z,694nm,20.0s
SYO **Syowa Base** 105.72 202⇑*e*X PKiKP 03 47 43.8 +8.7
WUAZ **Wupatki** 105.86 42 IAMs_20 IAMs_20 04 21 08.0
comp=Z,741nm,20.0s
MVCO **Mesa Verde** 106.47 39 IAMs_20 IAMs_20 04 36 56.9
comp=Z,704nm,21.0s
W18A **Petrified Fore** 107.13 41 IAMs_20 IAMs_20 04 36 44.8
comp=Z,892nm,21.0s
TSUM **Tsumeb** 107.87 256 IAMs_20 IAMs_20 04 30 53.6
comp=Z,856nm,20.0s
SPMN **Marine on St.** 107.94 24 IAMs_20 IAMs_20 04 29 05.2
comp=Z,902nm,19.0s
TORD **Torodi Ar. Bea** 110.83 294 PKiKP **PKiKP** 03 47 45.3 -1.1
comp=Z,1.8nm,0.8s,baz=33,slow=3.1,SNR=9.1
TORD PKKPbc **PKKPbc** 03 58 45.2 +1.5
comp=Z,1.6nm,0.7s,baz=283,slow=2.8,SNR=9.0
TORD PKKPab **PKKPab** 03 58 55.5 +0.1
comp=Z,4.2nm,1.0s,baz=272,slow=4.0,SNR=12
KS21 **Milan North St** 112.29 32 IAMs_20 IAMs_20 04 26 52.2
comp=Z,754nm,18.0s
KS20 **Mayfield South** 112.39 32 IAMs_20 IAMs_20 04 42 16.8
comp=Z,911nm,19.0s
OK030 **Cody Creek RV** 113.79 32 IAMs_20 IAMs_20 04 42 25.0
comp=Z,848nm,21.0s
S39A **Bolivar** 114.01 29 IAMs_20 IAMs_20 04 41 26.4
comp=Z,1µm,18.0s
NCB **Newcomb** 114.40 11 IAMs_20 IAMs_20 04 39 07.0
comp=Z,1µm,22.0s
TXAR **Lajitas Array** 114.82 42 PKP **PKiKP** 03 47 53.3 -0.5
comp=Z,1.6nm,0.7s,baz=259,slow=0.8,SNR=16
TXAR **Lajitas Array** 114.82 42 **PKiKP** 03 47 53.5 -0.4
NVL **N'lazarevskaya** 115.32 200 *i* PKiKP **PKiKP** 03 47 52.8 -0.4
NVL *e*SS SS 04 04 46.7 -4.2
NVL pmax pmax
comp=Z,12nm,1.0s
NVL MLR MLR
comp=Z,319nm,19.0s
T42A **Van Buren** 115.55 27 IAMs_20 IAMs_20 04 39 34.8
comp=Z,843nm,20.0s
Z35A **Perchaven, San** 115.58 34 IAMs_20 IAMs_20 04 42 46.6
comp=Z,774nm,19.0s
P48A **Milroy** 115.64 22 IAMs_20 IAMs_20 04 36 08.7
comp=Z,1µm,20.0s
S44A **Carbondale** 115.75 26 IAMs_20 IAMs_20 04 36 58.0
comp=Z,823nm,20.0s
JCT **Junction City** 116.33 38 PKPdf **PKPdf** 03 47 56.0 -0.7
JCT **PKiKP** 03 47 56.5 -0.1
P51A **Williamsport** 116.41 20 IAMs_20 IAMs_20 04 38 59.9
comp=Z,1µm,19.0s
SNAA **Sanae** 119.55 198 PKPdf **PKPdf** 03 48 00.1 -1.4
SNAA **Sanae** 119.55 198 PKP **PKPdf** 03 48 00.1 -1.4
comp=Z,1.8nm,0.5s,baz=195,slow=5.8,SNR=16
SNAA PKKPbc **PKKPab** 03 58 11.7 -1.7
comp=Z,2.1nm,0.9s,baz=270,slow=4.0,SNR=4.8
SNAA **Sanae** 119.55 198 PKiKP **PKPdf** 03 48 00.9 -0.6
SNAA **Sanae** 119.55 198 PKPdf **PKPdf** 03 48 00.9 -0.6
DBIC **Dimbokro** 119.56 291 PKP **PKPdf** 03 48 01.8 -1.3
comp=Z,3.2nm,0.8s,baz=70,slow=4.5,SNR=3.6

KIC **Kosan Boka** 119.60 290 *e*P **PKPdf** 03 48 01.8 -1.4
comp=Z,3.3nm,0.6s
TIC **Toumodi** 119.71 291 *e*P **PKPdf** 03 48 01.9 -1.6
LIC **Lamto** 119.92 290 *e*P **PKPdf** 03 48 00.3 -3.5
comp=Z,3.0nm,0.4s
T60A **Surry** 120.40 16 IAMs_20 IAMs_20 04 45 42.1
comp=Z,1µm,20.0s
BG3 **Lake Jocassee** 120.52 22 IAMs_20 IAMs_20 04 42 56.9
comp=Z,814nm,20.0s
VNA2 **Neumayer--Watz** 121.20 198 PKPdf **PKPdf** 03 48 04.0 -0.6
W57A **Gilead** 121.34 19 IAMs_20 IAMs_20 04 43 06.4
comp=Z,982nm,21.0s
BELA **Belgrano 2** 121.41 186 PKPdf **PKPdf** 03 48 04.1 -0.8
VNA1 **Neumayer--Stat** 121.59 198 PKPdf **PKiKP** 03 48 05.4 0.0
BIRD **Birdtown, Kers** 121.67 20 IAMs_20 IAMs_20 04 42 18.0
comp=Z,1µm,22.0s
VNA3 **Neumayer Olymp** 121.67 197 PKPdf **PKPdf** 03 48 04.5 -1.1
JSC **Jenkinsville** 121.74 21 IAMs_20 IAMs_20 04 43 59.0
comp=Z,644nm,20.0s
Y57A **Sumter** 122.27 20 IAMs_20 IAMs_20 04 42 33.9
comp=Z,1µm,21.0s
Z56A **Williston** 122.57 21 IAMs_20 IAMs_20 04 47 36.2
comp=Z,937nm,20.0s
Y58A **Scranton** 122.60 20 IAMs_20 IAMs_20 04 43 42.7
comp=Z,1µm,21.0s
Y59A **Loris** 122.77 19 IAMs_20 IAMs_20 04 43 02.0
comp=Z,1µm,22.0s
Y60A **Bolivia** 122.95 18 IAMs_20 IAMs_20 04 42 43.7
comp=Z,1µm,21.0s
NHSC **New Hope** 123.17 20 IAMs_20 IAMs_20 04 45 36.9
comp=Z,1µm,21.0s
UNM **Universidad Na** 124.70 47 IAMs_20 IAMs_20 04 32 28.9
comp=Z,957nm,20.0s
656A **Willston** 125.72 24 IAMs_20 IAMs_20 04 46 37.8
comp=Z,1µm,20.0s
CCIG **Comitan** 131.54 43 IAMs_20 IAMs_20 04 49 35.7
comp=Z,640nm,22.0s
ESQI **Esquipulas** 134.61 42 IAMs_20 IAMs_20 04 55 39.7
comp=Z,511nm,19.0s
MTO3 **Montecristo** 134.72 42 IAMs_20 IAMs_20 04 55 54.6
comp=Z,481nm,22.0s
TGUH **Tegucigalpa,Un** 136.27 40 IAMs_20 IAMs_20 05 01 43.4
comp=Z,438nm,19.0s
JTS **Las Juntas de** 140.61 41 IAMs_20 IAMs_20 05 03 16.5
comp=Z,458nm,20.0s
SJG **San Juan** 141.03 10 IAMs_20 IAMs_20 04 52 19.8
comp=Z,630nm,22.0s
USHA **Ushuaia** 145.22 171 PKPbc **PKPdf** 03 48 50.4 +0.7
comp=Z,42nm,1.0s,baz=198,slow=5.5,SNR=1.7
URIC **Uribia, Colomb** 145.75 21 *e*P **PKPdf** 03 48 50.7 -1.2
SJCC **San Jacinto, C** 146.15 28 *e*P **PKPdf** 03 48 49.2 -3.5
CAPC **Capurgana** 146.23 32 *e*P **PKPdf** 03 48 50.4 -2.4
LCBC **Los crdobas,** 146.52 31 *e*P **PKPdf** 03 48 51.3 -2.0
ARGC **Ariguani, Magd** 146.58 26 *e*P **PKPdf** 03 48 52.1 -1.3
MOTC **Monteria, Cord** 146.92 30 *e*P **PKPdf** 03 48 48.1 -5.8
MAPC **Malpelo** 147.54 44 *e*P **PKPbc** 03 48 56.7 -0.9
UREC **San Jos de Ur** 147.88 30 *e*P **PKPdf** 03 48 53.2 -2.4
DBBC **Dabeiba** 148.19 32 *e*P **PKPdf** 03 48 56.4 +0.2
SOLC **Bahia Solano** 148.25 35 *e*P **PKPdf** 03 48 56.3 +0.2
ZARC **Zaragoza, Cauc** 148.42 29 *e*P **PKPdf** 03 48 53.7 -2.7
OCAC **Ocana** 148.43 26 *e*P **PKPbc** 03 48 58.9 -1.2
SDV **Santo Domingo** 148.84 21 *e*P **PKPdf** 03 48 54.8 -2.6
SDV **Santo Domingo** 148.84 21 **PKPdf** 03 48 57.9 +0.5
SDV **Santo Domingo** 148.84 21 IAMs_20 IAMs_20 05 00 37.0
comp=Z,567nm,22.0s
SDV **Santo Domingo** 148.84 21 *e*P **PKPdf** 03 48 57.4 0.0
EFI **East Falkland** 148.96 182 PKP2 **PKPbc** 03 48 59.6 -0.5
EFI **East Falkland** 148.96 182 **PKPbc** 03 48 59.6 -0.5
HELC **Santa Helena** 149.24 32 *e*P **PKPdf** 03 48 53.7 -4.5
BRRC **Barranca, Sant** 149.28 28 *e*P **PKPdf** 03 48 56.0 -1.9
CBOC **Ciudad Bolivar** 149.28 33 *e*P **PKPdf** 03 48 55.4 -2.7
PIZC **Pizarro, Choco** 149.32 36 *e*P **PKPdf** 03 48 58.7 +0.8
PTBC **PUERTO BERRIO** 149.45 30 *e*P **PKPdf** 03 48 54.2 -3.9
PAMC **Pamplona, Colo** 149.50 26 *e*P **PKPdf** 03 48 58.7 -0.1
PLMC **San Jos del P** 149.95 34 *e*P **PKPdf** 03 48 57.2 -1.8
BARC **Barichara** 149.97 27 *e*P **PKPdf** 03 48 59.6 +0.3
NORC **Norcasia** 150.10 31 *e*P **PKPdf** 03 48 58.1 -1.1
MALC **Bahia Malaga** 150.12 37 *e*P **PKPdf** 03 48 55.5 -3.7
SPBC **San Pablo de B** 150.41 30 *e*P **PKPdf** 03 48 58.1 -1.6
RUSC **La Rusia** 150.64 28 *e*P **PKPdf** 03 48 58.2 -2.4
TAMC **Tame, Arauca** 150.68 25 *e*P **PKPbc** 03 49 04.7 -0.8
YOTC **Yotoco, Valle** 150.69 35 *e*P **PKPdf** 03 48 58.1 -2.1
TOLC **Tolima** 150.72 33 *e*P **PKPdf** 03 49 00.1 -0.5
ANIL **Santa Ana** 150.76 33 *e*P **PKPdf** 03 48 59.0 -1.5
ROSC **El Rosal** 151.00 31 PKP **PKPdf** 03 49 02.4 +1.3
comp=Z,24nm,0.8s,baz=43,slow=3.6,SNR=7.4
ROSC PKPbc **sPKPdf** 03 49 07.5 -0.6
comp=Z,33nm,0.9s,baz=64,slow=2.5,SNR=29
ROSC **El Rosal** 151.00 31 *e*P **PKPdf** 03 49 00.0 -1.0
TUMC **Tumaco** 151.04 42 *e*P **PKPdf** 03 48 59.5 -1.1
ORTC **Ortega, Tolima** 151.34 33 *e*P **PKPdf** 03 48 58.7 -3.0
CHIC **Chinigaza** 151.46 30 *e*P **PKPdf** 03 48 57.4 -4.4
POPC **Popayan, Colom** 151.70 38 *e*P **PKPdf** 03 49 00.1 -1.8
BBAC **Balboa, Cauca** 151.79 39 *e*P **PKPdf** 03 48 57.9 -4.1
MARP **Paez Belalcaza** 151.85 36 *e*P **PKPdf** 03 49 02.6 +0.4
VILC **Villavicencio,** 151.93 30 *e*P **PKPbc** 03 49 06.9 -1.7
PCON **Cinco Dias** 152.03 37 *e*P **PKPdf** 03 49 02.1 -0.8
SOTA **Rioblanco** 152.07 38 *e*P **PKPdf** 03 49 02.8 0.0
PAC1 **Pacto, Paraso** 152.19 44 *e*P **PKPdf** 03 49 01.2 -1.3
BETC **Betania** 152.27 35 *e*P **PKPbc** 03 49 08.8 -0.5
GCUF **Volcan Galeras** 152.36 40 *e*P **PKPdf** 03 48 60.0 -3.3
CUSE **Cuicocha Este** 152.41 43 *e*P **PKPdf** 03 49 01.4 -1.8
OTAV **Otavalo** 152.43 44 *e*P **PKPdf** 03 48 57.8 -5.5
OTAV **Otavalo** 152.43 44 PKIKP **PKPdf** 03 49 04.9 +1.6
OTAV **Otavalo** 152.43 44 **PKPdf** 03 49 04.9 +1.6
OTAV **Otavalo** 152.43 44 *e*P **PKPdf** 03 49 04.1 +0.8
RCBR **Riachuelo** 152.50 299 PKPbc **PKPbc** 03 49 09.5 -0.3
comp=Z,11nm,0.8s,baz=27,slow=4.9,SNR=7.2
RCBR PKPab **PKPab** 03 49 19.7 -0.3
comp=Z,12nm,1.0s,baz=74,slow=3.1,SNR=5.4
RCBR **Riachuelo** 152.50 299 *e*P **PKPdf** 03 49 04.3 +1.5
GARC **Garzon, Huila** 152.65 36 *e*P **PKPdf** 03 49 00.7 -2.7
FLOC **Florencia** 153.06 37 *e*P **PKPdf** 03 49 01.4 -2.3
MDP **Montagnes des** 153.49 344 PKPbc **PKPbc** 03 49 11.7 -0.2
comp=Z,17nm,1.0s,baz=18,slow=4.4,SNR=1.9
MDP PKPab **PKPab** 03 49 23.7 -0.2
comp=Z,25nm,1.1s,baz=13,slow=4.5,SNR=3.1
MACC **Macarena, Meta** 153.56 33 *e*P **PKPdf** 03 49 00.2 -4.2
PTLC **Puerto Leguiza** 154.70 37 *e*P **PKPdf** 03 48 59.4 -6.6
LL01 **San Ignacio de** 155.85 157 IAMs_20 IAMs_20 04 51 45.3
comp=Z,359nm,20.0s
ATAH **Atahualpa** 157.61 56 PKP **PKPdf** 03 49 10.9 +0.7
comp=Z,3.7nm,0.9s,baz=317,slow=1.9,SNR=9.5
ATAH PKPab **PKPab** 03 49 40.9 -1.3
comp=Z,6.4nm,0.7s,baz=72,slow=7.5,SNR=4.0
PLCA **Paso Flores** 157.97 158 PKP **PKPdf** 03 49 10.4 +0.9
comp=Z,2.0nm,1.0s,baz=229,slow=12,SNR=3.2
PLCA PKPab **PKPab** 03 49 40.9 -1.7
comp=Z,8.3nm,0.9s,baz=167,slow=3.9,SNR=4.8
PLCA **Paso Flores** 157.97 158 PKIKP **PKPdf** 03 49 09.1 -0.4
PLCA 03 49 43.7
PLCA **Paso Flores** 157.97 158 PKPdf **PKPdf** 03 49 09.1 -0.4
PLCA PKPab **PKPab** 03 49 43.7 +1.1
LC01 **Cunco** 159.03 153 PKPdf **PKPdf** 03 49 11.0 +0.2
LC01 **PKPab** 03 49 48.3 +1.1
GDU01 **Guandu, BA** 159.46 286 *e*P **PKPdf** 03 49 12.9 +1.0
NNA **Nana** 161.60 65 PKP **PKPdf** 03 49 15.2 +0.9
comp=Z,4.6nm,0.5s,baz=18,slow=6.4,SNR=1.6
ITTB **Itaituba** 163.37 345 *e*P **PKPdf** 03 49 18.1 +2.0
NPGB **Novo Progresso** 165.83 341 *e*P **PKPdf** 03 49 20.8 +2.6
BSCB **Bom Sucesso** 165.88 266 *e*P **PKPdf** 03 49 19.4 +1.2
CO03 **El Pedregal** 165.90 138 PKPdf **PKPdf** 03 49 18.6 +0.6
CO03 **PKPab** 03 50 18.2 +0.6
ETMB **Extrema** 167.65 31 *e*P **PKPdf** 03 49 20.4 +0.8
BDFB **Brasilia** 167.71 292 PKP **PKPdf** 03 49 19.3 -0.5
comp=Z,3.7nm,0.9s,baz=57,slow=8.1,SNR=3.9
BDFB **Brasilia** 167.71 292 **PKPdf** 03 49 19.2 -0.5
BDFB PKPab **PKPab** 03 50 25.5 -0.6
SAML **Samuel** 167.97 16 PKIKP **PKPdf** 03 49 19.7 -0.1
SAML 03 50 25.8
SAML **Samuel** 167.97 16 **PKPdf** 03 49 19.7 -0.1
SAML **PKPab** 03 50 25.8 -1.1
IPMB **Ipameri, GO** 168.70 281 *e*P **PKPdf** 03 49 21.7 +1.5
LPAZ **La Paz** 171.05 63 PKP **PKPdf** 03 49 23.0 +0.6
comp=Z,7.9nm,1.1s,baz=44,slow=2.3,SNR=28
LPAZ PKPab **PKPab** 03 50 40.5 -1.0
comp=Z,4.1nm,1.1s,baz=236,slow=3.6,SNR=1.1
LPAZ **La Paz** 171.05 63 **PKPdf** 03 49 23.4 +1.0
LPAZ **La Paz** 171.05 63 *e*P **PKPdf** 03 49 23.1 +0.7
LVC **Limon Verde** 171.35 105 PKP **PKPdf** 03 49 22.9 +0.9
comp=Z,4.9nm,0.9s,baz=121,slow=2.1,SNR=8.1
LVC PKPab **PKPab** 03 50 43.3 +0.8
comp=Z,10nm,1.1s,baz=243,slow=5.1,SNR=6.4
LVC **Limon Verde** 171.35 105 PKIKP **PKPdf** 03 49 22.5 +0.5

LVC	**Limon Verde**	**171.35**	**105**		**PKPdf**	**03 49 22.5**	**+0.5**
LVC	**Limon Verde**	**171.35**	**105**	*eP*	**PKPdf**	**03 49 23.0**	**+0.9**
PCMB	**Pacaembu**	**171.91**	**261**	*eP*	**PKPdf**	**03 49 22.1**	**+0.2**
VILB	**Vilhena**	**172.38**	**3**	*eP*	**PKPdf**	**03 49 23.2**	**+0.9**
CPUP	**Villa Florida**	**173.85**	**202**	PKP	**PKPdf**	**03 49 21.9**	**-0.7**
	comp=Z,4.5nm,1.1s,baz=122,slow=1.2,SNR=5.1						
CPUP				PKPab	**PKPab**	**03 50 51.9**	**-0.8**
	comp=Z,4.2nm,1.1s,baz=150,slow=8.1,SNR=2.5						
CPUP	**Villa Florida**	**173.85**	**202**		**PKPdf**	**03 49 22.6**	**+0.1**
SIV	**San Ignacio**	**175.27**	**14**	PKP	**PKPdf**	**03 49 23.0**	**-0.3**
	comp=Z,7.6nm,1.0s,baz=31,slow=0.2,SNR=26						
SIV				PKPab	**PKPab**	**03 50 58.3**	**-0.9**
	comp=Z,4.3nm,1.0s,baz=34,slow=3.8,SNR=1.5						
AQDB	**Aquidauana**	**176.10**	**271**	*eP*	**PKPdf**	**03 49 24.0**	**+0.7**

VAO ***21*** *03:34:23.2±0.9, 24°.30S×67°.76W, h251km±9km, mb4.0*
IDC ***21*** *03:34:24.9±1.2, 24°.00S×67°.01W, h176km±17km, mb3.5/3, mb1 3.5/9, mb1mx3.3/37, mbtmp4.0/9, Error ellipse: s-maj=21.7km s-min=17.6km az=132.0*
GUC ***21*** *03:34:25.2±0.7, 24°.14S×67°.53W, h224km±9km, ML4.1*
ISC 21 03:34:24.8±0.7, 24°.16S±0°.05×67°.36W±0°.09, h201km±11km, n42, σ1§36/58, mb3.6/3, 11C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.10**	**317**	P			**Pn**	**03 35 05.3**	**+0.4**
	76nm,0.3s,baz=136,slow=6.0,SNR=498								
LVC				S			**S**	**03 35 35.4**	**0.0**
	48nm,0.3s,baz=22,slow=23,SNR=14								
LVC	**Limon Verde**	**2.10**	**317**	↓*iP*			**Pn**	**03 35 05.3**	**+0.4**
LVC				*i* S			**S**	**03 35 36.1**	**+0.8**
LVC	**Limon Verde**	**2.10**	**317**	*eP*			**Pn**	**03 35 05.2**	**+0.4**
PB15	**IPOC Station P**	**2.16**	**296**	↑*iP*			**Pn**	**03 35 06.0**	**+0.7**
PB15				*i* S			**S**	**03 35 37.1**	**+1.1**
GO02	**Mina Guanaco**	**2.27**	**243**	↑*iP*			**Pn**	**03 35 06.5**	**+0.1**
GO02				*i* S			**S**	**03 35 38.6**	**+0.3**
PB06	**IPOC Station P**	**2.50**	**305**	↑*iP*			**Pn**	**03 35 09.6**	**+0.7**
PB06				*i* S			**S**	**03 35 42.7**	**+0.2**
PB06					IAML			03 35 44.7	
	comp=E,384nm,0.1s								
PB14	**IPOC Station P**	**2.82**	**260**	↑*eP*			**Pn**	**03 35 12.6**	**-0.1**
PB14				*i* S			**S**	**03 35 49.0**	**-0.3**
PB14					IAML			03 35 50.6	
	comp=E,179nm,0.7s								
PB05	**IPOC Station P**	**2.92**	**296**	↑*iP*			**Pn**	**03 35 14.0**	**+0.4**
PB05				*i* S			**S**	**03 35 50.4**	**-0.8**
PB05					IAML			03 35 56.6	
	comp=E,188nm,0.3s								
PB09	**IPOC Station P**	**2.92**	**323**	↑*iP*			**Pn**	**03 35 14.7**	**+0.9**
PB09				*i* S			**S**	**03 35 52.4**	**+1.0**
PB10	**IPOC Station P**	**3.00**	**282**	*eP*			**Pn**	**03 35 15.1**	**+0.7**
PB10				*e*S			**S**	**03 35 52.3**	**-0.3**
PB10					IAML			03 35 56.1	
	comp=E,291nm,0.3s								
PB03	**IPOC Station P**	**3.05**	**313**	↑*iP*			**Pn**	**03 35 15.6**	**+0.4**
PB03				*i* S			**S**	**03 35 53.7**	**-0.3**
PB03					IAML			03 35 56.7	
	comp=N,415nm,0.3s								
PB04	**IPOC Station P**	**3.15**	**305**	↑*iP*			**Pn**	**03 35 16.7**	**+0.3**
PB04				*i* S			**S**	**03 35 55.8**	**-0.3**
PB04					IAML			03 35 58.4	
	comp=N,412nm,0.2s								
PB07	**IPOC Station P**	**3.36**	**316**	↑*iP*			**Pn**	**03 35 19.3**	**+0.3**
PB07				*e*S			**S**	**03 36 00.1**	**-0.6**
AC01	**Pan de Azucar**	**3.54**	**235**	*eP*			**Pn**	**03 35 20.0**	**-1.0**
AC01				*i* S			**S**	**03 36 02.5**	**-1.9**
PB01	**IPOC Station P**	**3.67**	**327**	↑*iP*			**Pn**	**03 35 22.5**	**-0.2**
PB01				*i* S			**S**	**03 36 07.0**	**-0.5**
PATCX	**Punta Patache**	**4.21**	**322**	*eP*			**Pn**	**03 35 28.8**	**-0.6**
PATCX				*e*S			**S**	**03 36 17.5**	**-2.0**
GO03	**Copiap**	**4.29**	**217**	*eP*			**Pn**	**03 35 28.6**	**-1.7**
GO03				*e*S			**S**	**03 36 18.7**	**-2.6**
PB08	**IPOC Station P**	**4.33**	**337**	↑*eP*			**Pn**	**03 35 31.5**	**+0.3**
PB08				*i* S			**S**	**03 36 23.5**	**+0.7**
LPAZ	**La Paz**	**7.87**	**355**	P			**Pn**	**03 36 17.2**	**+0.3**
	comp=N,2.3nm,0.3s,baz=146,slow=5.0,SNR=55								
LPAZ				S			**S**	**03 37 43.0**	**-3.0**
	baz=68,slow=19,SNR=1.7								
LPAZ	**La Paz**	**7.87**	**355**	*eP*			**Pn**	**03 36 17.2**	**+0.3**
CPUP	**Villa Florida**	**9.33**	**105**	P			Pn	03 36 31.3	-4.0
	comp=N,0.1nm,0.3s,baz=254,slow=13,SNR=2.3								
SIV	**San Ignacio**	**10.04**	**37**	P			**Pn**	**03 36 41.3**	**-3.4**
	comp=N,0.8nm,0.3s,baz=247,slow=8.6,SNR=25								
PTLB	**Pontes e Lacer**	**11.61**	**43**	*eP*			**Pn**	**03 37 06.8**	**+2.0**
TRCB	**Terra Rica**	**13.58**	**87**	*eP*			**Pn**	**03 37 31.0**	**+1.5**
CPSB	**Cacapava Do Su**	**13.85**	**120**	*eP*			**Pn**	**03 37 32.7**	**-0.1**
PTGB	**Pitanga**	**13.94**	**95**	*eP*			**Pn**	**03 37 35.4**	**+1.3**
FRTB	**Fartura**	**16.31**	**91**	*eP*			**P**	**03 38 01.8**	**-0.4**
PLCA	**Paso Flores**	**16.74**	**188**	P			**Pn**	**03 38 09.3**	**+1.4**
	comp=N,0.1nm,0.3s,baz=349,slow=12,SNR=2.0								
ARAG	**Araguaiana, MT**	**16.85**	**63**	*eP*			**P**	**03 38 08.4**	**+0.4**
CLDB	**Colider**	**17.19**	**42**	*eP*			**P**	**03 38 09.3**	**-2.5**
VAO	**Valinhos**	**18.73**	**91**	*eP*			**P**	**03 38 26.5**	**-2.1**
IPMB	**Ipameri, GO**	**18.88**	**75**	*eP*			**P**	**03 38 29.0**	**-1.3**
BDFB	**Brasilia**	**20.05**	**69**	P			**P**	**03 38 41.2**	**-1.6**
	comp=N,1.1nm,0.3s,baz=239,slow=10,SNR=16								
PEXB	**Peixe**	**21.68**	**60**	*eP*			**P**	**03 38 57.2**	**-2.8**
JANB	**Januaria**	**23.49**	**72**	*eP*			**P**	**03 39 14.6**	**-2.1**
SMTB	**Santa Maria do**	**24.25**	**54**	*eP*			**P**	**03 39 21.8**	**-1.7**
SDBA	**SAO DESIDERIO**	**24.27**	**65**	*eP*			**P**	**03 39 22.4**	**-1.4**
GDU01	**Guandu, BA**	**28.20**	**73**	*eP*			**P**	**03 39 56.5**	**-2.4**
SNAA	**Sanae**	**59.31**	**161**	P			P	03 44 09.4	+4.3
	comp=N,0.5nm,0.6s,baz=302,slow=9.5,SNR=3.9								
TORD	**Torodi Ar. Bea**	**76.93**	**69**	P			**P**	**03 45 56.0**	**+0.5**
	comp=N,0.7nm,0.5s,baz=267,slow=6.0,SNR=8.8								
BOSA	**Boshof**	**80.95**	**117**	P			**P**	**03 46 18.4**	**+1.0**
	comp=N,2.6nm,1.0s,baz=247,slow=5.0,SNR=5.6								
WRA	**Warramunga Arr**	**131.34**	**208**	PKP			**PKiKP**	**03 53 16.6**	**+1.9**
	comp=N,0.3nm,0.6s,baz=163,slow=1.6,SNR=6.8								

GUC ***21*** *03:54:08.2±0.6, 19°.08S×69°.47W, h96km±2km, ML3.8*
IDC ***21*** *03:54:09.6±2.5, 19°.07S×69°.31W, h120km±18km, mb3.4/3, mb1 3.6/6, mb1mx3.3/27, mbtmp3.9/6, Error ellipse: s-maj=50.3km s-min=19.9km az=112.0*
VAO ***21*** *03:54:11.6±0.8, 18°.89S×69°.33W, h144km±7km, mb4.0*
ISC 21 03:54:07.1±0.7, 19°.09S±0°.04×69°.49W±0°.08, h103km±7km, n50, σ1§23/54, 8C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	**0.10**	**246**	↑*iP*			**Pn**	**03 54 21.7**	**-0.1**
MNMC				*i* S			**Sn**	**03 54 32.2**	**-0.6**
MNMC					IAML			03 54 34.5	
	comp=E,9μm,0.2s								
PB11	**IPOC Station P**	**0.69**	**193**	↑*iP*			**Pn**	**03 54 24.9**	**-0.1**
PB11				*i* S			**Sn**	**03 54 38.0**	**-0.3**
PB11					IAML			03 54 39.1	
	comp=E,5μm,0.2s								
PB16	**IPOC Station P**	**0.75**	**359**	↓*iP*			**Pn**	**03 54 26.6**	**+0.7**
PB16				*i* S			**Sn**	**03 54 40.8**	**+0.8**
PB16					IAML			03 54 42.6	
	comp=E,1μm,0.2s								
PSGC	**Pisagua**	**0.78**	**229**	↑*iP*			**Pn**	**03 54 25.4**	**-0.3**
PSGC				*i* S			**Sn**	**03 54 38.9**	**-0.8**
PSGC					IAML			03 54 40.4	
	comp=N,2μm,0.6s								
AP01	**Chacalluta**	**1.07**	**311**	↑*eP*			**Pn**	**03 54 28.8**	**+0.2**
AP01				*i* S			**Sn**	**03 54 44.9**	**+0.1**
AP01					IAML			03 54 45.9	
	comp=E,5μm,0.5s								
PB08	**IPOC Station P**	**1.10**	**163**	↑*iP*			**Pn**	**03 54 30.0**	**+0.7**
PB08				*i* S			**Sn**	**03 54 46.5**	**+0.7**
PB08					IAML			03 54 47.9	
	comp=N,2μm,0.3s								
TA02	**Huaiquique**	**1.32**	**207**	*eP*			**Pn**	**03 54 31.3**	**-0.1**
TA02				*i* S			**Sn**	**03 54 49.6**	**-0.1**
TA02					IAML			03 54 53.0	
	comp=N,4μm,0.1s								
TA01	**Diego Aracena**	**1.61**	**204**	↑*iP*			**Pn**	**03 54 34.8**	**-0.1**
TA01				*i* S			**Sn**	**03 54 55.1**	**-0.8**
TA01					IAML			03 55 00.2	
	comp=N,1μm,0.2s								
PATCX	**Punta Patache**	**1.83**	**200**	↑*iP*			**Pn**	**03 54 38.0**	**+0.2**
PATCX				*i* S			**Sn**	**03 55 01.6**	**+0.5**
PATCX					IAML			03 55 08.7	
	comp=E,996nm,0.7s								
PB01	**IPOC Station P**	**1.94**	**180**	↑*iP*			**Pn**	**03 54 39.6**	**+0.3**
PB01				*i* S			**Sn**	**03 55 04.2**	**+0.5**
PB01					IAML			03 55 06.8	
	comp=E,843nm,0.4s								

PB07	**IPOC Station P**	**2.65**	**188**	*eP*			**Pn**	**03 54 49.1**	**+0.6**
PB07				*i* S			**Sn**	**03 55 18.4**	**-1.9**
PB07					IAML			03 55 28.9	
	comp=N,536nm,0.4s								
PB09	**IPOC Station P**	**2.71**	**175**	*eP*			**Pn**	**03 54 50.0**	**+0.8**
PB09				*e*S			**Sn**	**03 55 22.5**	**+1.0**
PB09					IAML			03 55 30.5	
	comp=E,220nm,0.3s								
PB03	**IPOC Station P**	**2.96**	**185**	*eP*			**Pn**	**03 54 53.2**	**+0.6**
PB03				*e*S			**Sn**	**03 55 25.3**	**-2.2**
PB03					IAML			03 55 37.7	
	comp=E,280nm,0.6s								
LPAZ	**La Paz**	**3.07**	**25**	P			**Pn**	**03 54 57.3**	**+2.8**
	comp=E,4.6nm,0.3s,baz=202,slow=7.0,SNR=136								
LPAZ	**La Paz**	**3.07**	**25**	*eP*			**Pn**	**03 54 57.2**	**+2.7**
LVC	**Limon Verde**	**3.55**	**171**	P			**Pn**	**03 55 01.7**	**+1.1**
	comp=E,4.2nm,0.3s,baz=4.5,slow=9.5,SNR=32								
LVC				S			**Sn**	**03 55 41.6**	**-0.3**
	comp=E,16nm,0.3s,baz=234,slow=20,SNR=26								
SIV	**San Ignacio**	**8.60**	**70**	P			**Pn**	**03 56 07.5**	**-1.4**
	comp=E,3.1nm,0.3s,baz=269,slow=9.6,SNR=43								
ETMB	**Extrema**	**9.75**	**19**	*eP*			**Pn**	**03 56 25.0**	**+0.5**
VILB	**Vilhena**	**10.82**	**57**	*eP*			**Pn**	**03 56 38.7**	**-0.3**
SAML	**Samuel**	**11.79**	**32**	*eP*			**Pn**	**03 56 52.8**	**+0.7**
CLDB	**Colider**	**15.54**	**60**	*eP*			**Pn**	**03 57 39.9**	**-0.7**
ITQB	**Itaqui**	**15.75**	**134**	*eP*			**P**	**03 57 45.7**	**+0.7**
H03N1	**Juan Fernandez**	**16.59**	**209**	T		T		04 14 12.4	
	baz=33,slow=72,SNR=8.6								
H03N2	**Juan Fernandez**	**16.60**	**209**	T		T		04 14 12.1	
	baz=33,slow=72,SNR=7.4								
H03N3	**Juan Fernandez**	**16.61**	**209**	T		T		04 14 11.2	
	baz=33,slow=72,SNR=7.9								
PTGB	**Pitanga**	**17.11**	**112**	*eP*			**P**	**03 58 01.6**	**+1.4**
ITAB	**Concordia**	**17.89**	**120**	*eP*			**Pn**	**03 58 10.0**	**+0.6**
MACA	**Manacapuru-AM**	**18.02**	**30**	*eP*			**P**	**03 58 08.7**	**-1.5**
ITRB	**Iturama**	**18.06**	**95**	*eP*			**Pn**	**03 58 11.2**	**-0.4**
NPGB	**Novo Progresso**	**18.23**	**51**	*eP*			**P**	**03 58 11.2**	**-1.3**
SNDB	**Serra Nova Dou**	**18.90**	**71**	*eP*			**P**	**03 58 18.8**	**-1.0**
FRTB	**Fartura**	**19.05**	**106**	*eP*			**Pn**	**03 58 21.8**	**-1.5**
BB19B	**Bebedouro**	**19.79**	**99**	*eP*			**P**	**03 58 29.1**	**-0.4**
ITTB	**Itaituba**	**19.86**	**44**	*eP*			**P**	**03 58 29.0**	**-1.3**
IPMB	**Ipameri, GO**	**20.21**	**90**	*eP*			**P**	**03 58 33.8**	**-0.2**
BDFB	**Brasilia**	**20.78**	**84**	P			Pn	03 58 41.3	-2.3
	comp=E,3.9nm,0.4s,baz=253,slow=9.3,SNR=13								
PLCA	**Paso Flores**	**21.59**	**182**	P			**P**	**03 58 51.7**	**+3.0**
	comp=E,1.2nm,0.5s,baz=345,slow=16,SNR=3.3								
PLCA	**Paso Flores**	**21.59**	**182**	*eP*			**P**	**03 58 51.9**	**+3.3**
MALB	**Monte Alegre**	**22.71**	**43**	*eP*			**P**	**03 58 57.9**	**-2.6**
SMTB	**Santa Maria do**	**23.53**	**67**	*eP*			**P**	**03 59 08.3**	**-0.1**
JANB	**Januaria**	**24.39**	**84**	*eP*			**P**	**03 59 15.3**	**-0.8**
SDBA	**SAO DESIDERIO**	**24.56**	**78**	*eP*			**P**	**03 59 17.4**	**-0.3**
NAN01	**Guarapari, ES**	**27.87**	**92**	*eP*			**P**	**03 59 46.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**77.08**	**71**	P			**P**	**04 05 48.5**	**-1.2**
	comp=E,1.5nm,0.5s,baz=252,slow=5.4,SNR=15								
H11S2	**WAKE ISLAND Hyl**	**27.00**	**279**	T		T		06 32 35.3	
	baz=101,slow=74,SNR=12								
H11S1	**WAKE ISLAND Hyl**	**27.00**	**279**	T		T		06 32 30.2	
	baz=101,slow=74,SNR=14								
H11N3	**WAKE ISLAND Hyl**	**27.01**	**281**	T		T		06 32 25.9	
	baz=101								
H11S3	**WAKE ISLAND Hyl**	**27.01**	**279**	T		T		06 32 36.4	
	baz=101,slow=74,SNR=11								
H11N2	**WAKE ISLAND Hyl**	**27.03**	**281**	T		T		06 32 24.2	
	baz=101								
H11N1	**WAKE ISLAND Hyl**	**27.03**	**281**	T		T		06 32 24.2	
	baz=101								

IDC ***21*** *04:01:05.0±0.9, 13°.08N×124°.86E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/42, mbtmp3.9/7, ML4.7/1, Error ellipse: s-maj=46.4km s-min=16.1km az=69.0*
ISC 21 04:01:10.8±0.9, 13°.12N±0°.08×124°.8E±0°.1, h41km, n11, σ0§84/13, mb3.8/7, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**2.39**	**289**	↑*eP*			**Pn**	**04 01 48.1**	**+0.6**
GQP				*e*S			**Sn**	**04 02 14.2**	**-1.5**
LLP	**Lapu-Lapu**	**2.90**	**196**	*eP*			**Pn**	**04 01 54.6**	**+0.1**
LLP				*e*S			**Sn**	**04 02 29.3**	**+1.2**
LQP	**Lukban**	**3.30**	**288**	↑*eP*			**Pn**	**04 02 01.0**	**+0.9**
TGY	**Tagaytay City**	**3.86**	**285**	Pn			**Pn**	**04 02 07.8**	**+0.1**
	57nm,0.3s,baz=207,slow=6.8,SNR=1.8								
KSRS	**Korea Array**	**24.39**	**6**	P			**P**	**04 06 25.6**	**+0.4**
	1.3nm,0.7s,baz=193,slow=11,SNR=4.2								
WRA	**Warramunga Arr**	**34.18**	**164**	P			**P**	**04 07 51.8**	**-0.6**
	0.7nm,0.6s,baz=340,slow=9.3,SNR=14								
ASAR	**Alice Springs**	**37.64**	**166**	P			**P**	**04 08 20.9**	**-1.1**
	1.9nm,0.5s,baz=341,slow=7.1,SNR=28								
SONM	**Songino Array**	**37.85**	**340**	P			**P**	**04 08 24.2**	**+0.5**
	0.9nm,0.8s,baz=157,slow=9.7,SNR=5.3								
STKA	**Stephens Creek**	**47.56**	**161**	P			**P**	**04 09 42.1**	**-0.3**
	1.0nm,0.5s,baz=325,slow=11,SNR=1.7								
MKAR	**Makanchi Array**	**48.89**	**322**	P			**P**	**04 09 53.0**	**+0.4**
	0.4nm,0.6s,baz=106,slow=11,SNR=2.9								
ZALV	**Zalesovo Beam**	**51.44**	**331**	P			**P**	**04 10 11.6**	**-0.1**
	1.6nm,0.5s,baz=115,slow=8.5,SNR=7.2								

IDC ***21*** *04:06:10.4±0.6, 6°.13N×126°.97E, h0km, mb4.2/15, mb1 4.3/16, mb1mx4.1/35, mbtmp4.2/16, ML4.4/1, Error ellipse: s-maj=34.7km s-min=11.9km az=81.0*
DJA ***21*** *04:06:13.1±0.6, 6°.N±6°×12°.7E±°, h10km, M4.7/15, mb4.7/15, mB5.4/3, MLv4.7/9, Mw(mB)4.9/3*
NEIC ***21*** *04:06:17.8±1.4, 6°.06N±0°.04×127°.02E±0°.06, h53km±8km, mb4.5/31, Error ellipse: s-maj=10.5km s-min=2.5km az=120.0*
MAN ***21*** *04:06:18.4, 6°.17N×127°.18E, h20km, mb4.9, ML3.8, MS3.8*
ISC 21 04:06:20.7±0.4, 6°.05N±0°.06×127°.12E±0°.07, h83km, n76, σ1§69/81, mb4.4/27, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.83**	**304**	Pn			**Pn**	**04 06 47.4**	**-3.1**
	168nm,0.3s,baz=139,slow=2.2,SNR=7.1								
DAV				Sn			**Sn**	**04 07 17.0**	**+3.9**
	112nm,0.3s,baz=273,slow=22,SNR=7.7								
KCP	**Kidapawan**	**2.23**	**295**	↑*iP*			**Pn**	**04 06 54.6**	**-1.2**
KCP				*i* S			**Sn**	**04 07 30.3**	**+7.6**
SGSI	**Sangihe**	**2.83**	**214**	P			**Pn**	**04 07 02.1**	**-1.7**
CGP	**Cagayan de Oro**	**3.39**	**315**	↓*eP*			**Pn**	**04 07 11.5**	**+0.1**
CGP				*e*S			**Sn**	**04 07 51.1**	**+0.6**
TNTI	**Ternate**	**5.25**	**177**	P			**Pn**	**04 07 36.4**	**-0.3**
	0.2nm38nm,0.8s								
TNTI	**Ternate**	**5.25**	**177**	Pn			**Pn**	**04 07 34.8**	**-1.9**
KMSI	**Cibinong**	**6.27**	**210**	P			**Pn**	**04 07 52.4**	**+1.7**
	0.6nm116nm,0.6s								
LBMI	**Labuha**	**6.65**	**177**	P			**Pn**	**04 07 54.7**	**-1.2**
	0.3nm73nm,0.7s								
GTOI	**Gorontalo**	**6.76**	**217**	P			**Pn**	**04 07 56.1**	**-1.2**
	0.1nm17nm,0.6s								
MRSI	**Marisa**	**7.57**	**223**	P			**Pn**	**04 08 08.7**	**+0.3**
	0.3nm84nm,0.6s								
TOLI2	**Tolitoli**	**8.00**	**232**	Pn			**Pn**	**04 08 10.1**	**-4.2**
SIJI	**Sorong**	**8.02**	**149**	Pn			Pn	04 08 09.3	-5.3
	4.4nm,0.3s,baz=354,slow=11,SNR=6.7								
LUWI	**Luwuk**	**8.27**	**212**	P			**Pn**	**04 08 17.9**	**-0.1**
	1μm72nm,0.8s								
LUWI	**Luwuk**	**8.27**	**212**	Pn			**Pn**	**04 08 14.3**	**-3.6**
APSI	**Ampana**	**8.81**	**218**	P			**Pn**	**04 08 24.8**	**-0.5**
	33nm,0.9s								
MPSI	**Mapaga**	**9.17**	**232**	P			**Pn**	**04 08 27.4**	**-2.8**
	7.9nm,0.7s								
NLAI	**Namlea**	**9.22**	**180**	P			**Pn**	**04 08 28.6**	**-2.4**
	1μm30nm,0.4s								
TTSI	**Tana Toraja**	**11.61**	**219**	P			**Pn**	**04 09 05.1**	**+1.7**
	17nm,0.9s								
KAPI	**Kappang**	**13.22**	**214**	Pn			**Pn**	**04 09 22.4**	**-2.8**
SOEI	**Soe**	**15.95**	**190**	Pn			**Pn**	**04 09 58.0**	**-2.5**
KSM	**Kuching**	**17.37**	**256**				**Pn**	**04 10 15.1**	**-2.9**
QIZ	**Qiongzhong**	**21.20**	**309**	P			**P**	**04 10 58.3**	**-1.5**
QIZ				S			**S**	**04 14 51.5**	**+0.4**
QIZ					LR	LR			
	comp=N,580nm,13.1s								
QIZ					LR	LR			
	comp=E,410nm,10.8s								
QIZ					LR	LR			
	comp=Z,490nm,10.2s								
KNRA	**Kununurra**	**21.65**	**176**	P			**P**	**04 11 04.6**	**+0.1**
KNRA					IAmb	IAmb		04 11 19.1	
	comp=Z,18nm,0.9s								
MANU	**Manus Island**	**21.76**	**111**	P			**P**	**04 11 06.5**	**+0.8**
FITZ	**Fitzroy Crossi**	**24.04**	**183**	P			**P**	**04 11 29.4**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=22,slow=6.8,SNR=12								

FITZ				PcP		**PcP**		**04 15 09.7**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=315,slow=2.9,SNR=2.5								
SDSI	**Sungai Dareh**	**26.57**	**256**	P		**P**		04 11 39.2	-12
WB0	**Warramunga Arr**	**26.63**	**165**	P		**P**		**04 11 53.0**	**+1.2**
WB0				IAmb		IAmb		04 12 08.5	
	comp=Z,8.1nm,0.7s								
WRAB	**Tennant Creek**	**26.78**	**165**	P		**P**		**04 11 53.9**	**+0.8**
WRAB				IAmb		IAmb		04 12 09.7	
	comp=Z,30nm,1.9s								
WRA	**Warramunga Arr**	**26.79**	**165**	P		**P**		**04 11 52.6**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=350,slow=10.0,SNR=17								
WRA	**Warramunga Arr**	**26.79**	**165**	P		**P**		**04 11 53.3**	**+0.1**
WB2	**Warramunga Arr**	**26.79**	**165**	P		**P**		**04 11 55.7**	**+2.6**
WB2				IAmb		IAmb		04 12 10.1	
	comp=Z,6.2nm,0.7s								
ASAR	**Alice Springs**	**30.27**	**168**	P		**P**		**04 12 23.9**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=353,slow=7.5,SNR=22								
ASAR				PcP		**PcP**		**04 15 24.5**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=348,slow=2.4,SNR=10								
ASAR	**Alice Springs**	**30.27**	**168**	P		**P**		**04 12 23.2**	**-0.9**
INU	**Inuyama**	**30.55**	**16**	P		**P**		**04 12 26.1**	**-0.4**
MJAR	**Matsushiro Arr**	**32.01**	**17**	P		**P**		**04 12 38.3**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=190,slow=8.8,SNR=4.8								
JMM	**Marumori**	**34.03**	**20**	P		**P**		**04 12 57.0**	**+0.2**
LZH	**Lanzhou**	**36.74**	**328**	*eP*		**P**		**04 13 20.3**	**0.0**
LZH				*e*PP		**PnPn**		**04 14 46.3**	**-0.1**
LZH				pmax		pmax			
	comp=Z,19nm,1.3s								
LZH				pmax		pmax			
	comp=Z,65nm,5.4s								
LZH				LR		LR			
	comp=N,210nm,13.0s								
LZH				LR		LR			
	comp=E,220nm,13.2s								
LZH				LR		LR			
	comp=Z,310nm,16.3s								
HHC	**Hu-ho-hao-te**	**37.34**	**340**	*eP*		**P**		**04 13 26.5**	**+1.2**
HHC				pmax		pmax			
	comp=Z,16nm,1.0s								
HHC				pmax		pmax			
	comp=Z,500nm,5.2s								
USRK	**Ussuriysk Ar.**	**38.24**	**6**	P		**P**		**04 13 32.0**	**-0.6**
	comp=Z,3.1nm,0.9s,baz=175,slow=6.5,SNR=3.5								
SHL	**Shillong**	**38.87**	**304**	P		**P**		**04 13 38.0**	**-0.4**
SHL				IAmb		IAmb		04 13 39.3	
	comp=Z,5.4nm,0.9s								
STKA	**Stephens Creek**	**40.16**	**161**	P		**P**		**04 13 49.3**	**+0.5**
	comp=Z,5.0nm,0.5s,baz=333,slow=9.3,SNR=18								
STKA	**Stephens Creek**	**40.16**	**161**	P		**P**		**04 13 49.5**	**+0.7**
ASAJ	**Asahikawa**	**40.28**	**17**	P		**P**		**04 13 49.6**	**-0.1**

az=259.0

*IDC **21** 04:28:27.1±1.2,30˙65N× 131˙13E, h0km,mb3.9/11, mb1 4.0/11,mb1mx3.8/34,mbtmp3.9/11,ML2.4/1,Error ellipse: s-maj=42.9km s-min=17.4km az=78.0*

*JMA **21** 04:28:29.9±0.2,30˙63N× 131˙57E, h30km±3km, M3.7*

ISC 21 04:28:30.6±1.2,**30˙64N**±0˙05×**131˙50E**±0˙06,**h33**km±5km, **n49**,σ1**920/56**,**mb4.1**/15,**Kyushu**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.45**	**272**	P	**Pb**	**04 28 40.0**	**-0.3**
JTN				*eS*	**Sb**	**04 28 47.8**	**+0.7**
JMTN	**Minamitane**	**0.57**	**245**	P	**Pb**	**04 28 42.3**	**0.0**
JMTN				*eS*	**Sn**	**04 28 51.7**	**+1.1**
JTSR	**Tashiro 2**	**0.72**	**317**	P	**Pn**	**04 28 44.2**	**-0.2**
JTSR				S	**Sn**	**04 28 55.5**	**+1.2**
JNAR	**Kushima--Naru**	**0.90**	**348**	P	**Pb**	**04 28 47.4**	**-0.4**
JNAR				*eS*	**Sb**	**04 29 00.3**	**+0.8**
JYAK	**Yakushimahirau**	**0.94**	**245**	P	**Pn**	**04 28 47.4**	**-0.1**
JYAK				*eS*	**Sb**	**04 29 01.5**	**+0.8**
JNKG	**Nichinankitago**	**1.02**	**354**	P	**Pb**	**04 28 49.0**	**-0.8**
JNKG				*eS*	**Sn**	**04 29 02.1**	**+0.3**
JKC	**Kuchinoerabu**	**1.14**	**261**	P	**Pn**	**04 28 50.7**	**+0.6**
JKC				*eS*	**Sb**	**04 29 07.7**	**+1.5**
JSU	**Suzuyama**	**1.24**	**314**	P	**Pn**	**04 28 51.5**	**-0.1**
JSU	**Suzuyama**	**1.24**	**314**		**Pn**	**04 28 51.7**	**+0.1**
JTZ	**Takazaki**	**1.30**	**345**	P	**Pn**	**04 28 52.9**	**+0.4**
JTZ				S	**Sb**	**04 29 10.5**	**-0.4**
JNU	**Nakatsue**	**2.53**	**348**	Pn	**Pn**	**04 29 09.9**	**+0.6**
	1.5nm,0.3s,baz=359,slow=20,SNR=10						
JNU				Sn	**Sn**	**04 29 39.0**	**0.0**
	10.0nm,0.3s,baz=236,slow=7.6,SNR=7.3						
JMN	**Monobe**	**3.68**	**33**	Pn	**Pn**	**04 29 25.4**	**+0.2**
JHS	**Saijyo**	**4.55**	**17**	Pn	**Pn**	**04 29 37.3**	**+0.1**
JMZ	**Minamidaito 2**	**4.81**	**183**	Pn	**Pn**	**04 29 38.8**	**-2.0**
JWT	**Wachi**	**5.67**	**34**		**Pn**	**04 29 52.8**	**+0.3**
INU	**Inuyama**	**6.60**	**43**	Pn	**Pn**	**04 30 05.0**	**-0.2**
JGF	**Kuroka**	**6.97**	**43**	Pn	**Pn**	**04 30 10.5**	**+0.1**
MJAR	**Matsushiro Arr**	**8.12**	**42**	Pn	**Pn**	**04 30 26.0**	**-0.1**
BJT	**Baijiatuau**	**15.60**	**311**	Pn	**Pn**	**04 32 06.1**	**-1.8**
KLR	**Kul'dur**	**18.57**	**1**	P	**Pn**	**04 32 50.6**	**+5.7**
	0.0nm,0.3s,baz=173,slow=18,SNR=2.3						
ENH	**Enshi**	**18.98**	**274**	P	**P**	**04 32 48.2**	**-1.1**
ENH				IAmb	IAmb	04 32 57.3	
	comp=Z,8.0nm,0.6s						
HIA	**Hailar**	**20.62**	**338**	P	**P**	**04 33 06.5**	**-0.5**
HIA				IAmb	IAmb	04 33 06.7	
	comp=Z,4.9nm,0.4s						
ULN	**Ulaanbaatar**	**25.41**	**320**	P	**P**	**04 33 55.1**	**0.0**
ULN				IAmb	IAmb	04 33 56.6	
	comp=Z,3.9nm,1.1s						
SONM	**Songino Array**	**25.76**	**319**	P	**P**	**04 33 57.8**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=122,slow=9.0,SNR=7.0						
SONM	**Songino Array**	**25.76**	**319**	P	**P**	**04 33 57.4**	**-1.0**
CHTO	**Chiang Mai**	**31.71**	**256**	P	**P**	**04 34 51.2**	**-0.3**
CHTO				IAmb	IAmb	04 34 52.3	
	comp=Z,2.8nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.88**	**255**	P	**P**	**04 34 52.5**	**-0.5**
	comp=Z,1.7nm,0.3s,baz=57,slow=6.6,SNR=5.9						
SHL	**Shillong**	**35.18**	**272**	P	**P**	**04 35 20.7**	**-1.1**
MKAR	**Makanchi Array**	**40.94**	**307**	P	**P**	**04 36 09.0**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=111,slow=6.6,SNR=3.6						
KURK	**Kurchatov**	**43.77**	**313**	P	**P**	**04 36 31.4**	**-1.5**
KURK	**Kurchatov**	**43.77**	**313**	IAmb	IAmb	04 36 33.0	
	comp=Z,2.6nm,0.9s						
KURBB	**Kurchatov Arra**	**43.81**	**313**	P	**P**	**04 36 31.4**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=93,slow=8.1,SNR=7.4						
BRVK	**Borovoye**	**49.09**	**316**	P	**P**	**04 37 14.7**	**+0.1**
BRVK				IAmb	IAmb	04 37 15.2	
	comp=Z,2.5nm,0.9s						
KK31	**Karatay Array**	**49.35**	**302**	P	**P**	**04 37 16.0**	**-0.7**
KK31				IAmb	IAmb	04 37 17.5	
	comp=Z,2.5nm,1.1s						
KKAR	**Karatay Array**	**49.35**	**302**	P	**P**	**04 37 16.8**	**+0.1**
WRA	**Warramunga Arr**	**50.37**	**177**	P	**P**	**04 37 25.6**	**+1.1**
	comp=Z,0.7nm,0.9s,baz=354,slow=8.2,SNR=4.4						
WB2	**Warramunga Arr**	**50.37**	**177**	P	**P**	**04 37 24.4**	**-0.2**
AS31	**Alice Springs**	**54.05**	**177**	P	**P**	**04 37 50.8**	**-1.1**
ASAR	**Alice Springs**	**54.05**	**177**	P	**P**	**04 37 53.5**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=1.1,slow=6.3,SNR=5.1						
ASAR	**Alice Springs**	**54.05**	**177**	P	**P**	**04 37 51.1**	**-0.8**
ABKAR	**Akbulak array**	**55.82**	**311**	P	**P**	**04 38 04.0**	**-0.5**
KBZ	**Khabaz**	**68.62**	**309**	P	**P**	**04 39 31.3**	**+1.0**
	comp=Z,2.8nm,0.9s,baz=171,slow=8.0,SNR=4.4						
FINES	**FINESS Array B**	**70.45**	**331**	P	**P**	**04 39 41.5**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=103,slow=6.3,SNR=3.2						
AKASG	**Malin Array Be**	**74.04**	**320**	P	**P**	**04 40 02.3**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=47,slow=6.2,SNR=6.7						
AKASG	**Malin Array Be**	**74.04**	**320**	IAmb	IAmb	04 40 11.6	
	comp=Z,1.5nm,1.4s						
RAYN	**Ar Rayn**	**75.13**	**289**	P	**P**	**04 40 09.5**	**-0.4**
BRTR	**Keskin Array B**	**76.59**	**308**	P	**P**	**04 40 18.6**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=104,slow=4.0,SNR=5.7						
BRTR	**Keskin Array B**	**76.59**	**308**	P	**P**	**04 40 17.7**	**-0.4**
NOA	**NORSAR Array B**	**76.61**	**334**	P	**P**	**04 40 20.4**	**+2.7**
	comp=Z,0.3nm,0.6s,baz=50,slow=5.7,SNR=2.7						

*IDC **21** 04:28:46.7±0.7,30˙66N× 131˙29E, h0km,mb4.1/17, mb1 4.2/19,mb1mx4.1/35,mbtmp4.0/19,ML3.1/2,MS4.0/1, Ms1 4.0/1,ms1mx3.2/35,Error ellipse: s-maj=22.1km s-min=14.4km az=75.0*

*NEIC **21** 04:28:49.4±1.4,30˙63N±0˙06×131˙33E±0˙08, h19km±4km, mb4.4/23,Error ellipse: s-maj=10.4km s-min=7.7km az=67.0*

*JMA **21** 04:28:50.0±0.3,30˙61N× 131˙60E, h27km±4km, M3.8*

ISC 21 04:28:51.0±0.5,**30˙64N**±0˙04×**131˙42E**±0˙05,**h31**km,**n78**, σ1**903/80**,**mb4.3**/29,**Kyushu**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.38**	**272**	P	**Pn**	**04 29 00.6**	**+0.2**
JTN				*eS*	**Sn**	**04 29 08.0**	**+1.3**
JMTN	**Minamitane**	**0.51**	**241**	P	**Pn**	**04 29 02.7**	**+0.5**
JMTN				*eS*	**Sn**	**04 29 11.9**	**+2.0**
JTSR	**Tashiro 2**	**0.68**	**321**	P	**Pn**	**04 29 04.8**	**+0.3**
JTSR				*eS*	**Sn**	**04 29 15.8**	**+1.8**
JYAK	**Yakushimahirau**	**0.89**	**243**	P	**Pb**	**04 29 07.0**	**-0.9**
JNAR	**Kushima--Naru**	**0.89**	**352**	*eS*	**Sb**	**04 29 20.9**	**+1.4**
JNKG	**Nichinankitago**	**1.02**	**358**	*eS*	**Sb**	**04 29 23.9**	**+0.8**
JKC	**Kuchinoerabu**	**1.07**	**261**	*eS*	**Sb**	**04 29 27.9**	**+3.2**
JSU	**Suzuyama**	**1.19**	**316**	Pn	**Pn**	**04 29 11.2**	**-0.4**
JTZ	**Takazaki**	**1.28**	**347**	*eS*	**Sb**	**04 29 31.1**	**+0.3**
JNU	**Nakatsue**	**2.51**	**350**	Pn	**Pn**	**04 29 30.4**	**+0.7**
	6.5nm,0.3s,baz=163,slow=5.4,SNR=15						
JNU				Sn	**Sn**	**04 30 00.5**	**+1.2**
	13nm,0.3s,baz=40,slow=3.9,SNR=5.3						
JMN	**Monobe**	**3.71**	**33**	Pn	**Pn**	**04 29 46.1**	**-0.1**
JTU	**Tsushima**	**4.23**	**337**	Pn	**Pn**	**04 29 52.7**	**-0.6**
JHS	**Saijyo**	**4.57**	**18**	Pn	**Pn**	**04 29 59.4**	**+1.4**
JMZ	**Minamidaito 2**	**4.81**	**182**	Pn	**Pn**	**04 30 00.9**	**-0.4**
JWT	**Wachi**	**5.71**	**35**	Pn	**Pn**	**04 30 13.3**	**-0.3**
INU	**Inuyama**	**6.64**	**44**		**Pn**	**04 30 27.2**	**+0.8**
JSG	**Sagara**	**6.98**	**53**	Pn	**Pn**	**04 30 31.7**	**+0.7**
JGF	**Kuroka**	**7.01**	**44**		**Pn**	**04 30 31.5**	**-0.1**
KSRS	**Korea Array**	**7.39**	**338**	Pn	Pn	04 30 42.2	+5.6
	0.4nm,0.3s,baz=153,slow=16,SNR=3.4						
KSAR	**Wonju Array Be**	**7.39**	**338**	Pn	**Pn**	**04 30 35.9**	**-0.8**
MAJO	**Matsushiro**	**8.16**	**42**	Pn	**Pn**	**04 30 47.6**	**+0.3**
MJAR	**Matsushiro Arr**	**8.16**	**42**	Pn	**Pn**	**04 30 46.9**	**-0.4**
	0.3nm,0.3s,baz=242,slow=14,SNR=8.7						
BJT	**Baijiatuau**	**15.55**	**311**	Pn	**Pn**	**04 32 26.8**	**-1.2**
BJT				IAmb	IAmb	04 32 46.1	
	comp=Z,13nm,1.0s						
ENH	**Enshi**	**18.91**	**274**	P	**P**	**04 33 07.7**	**-1.6**
ENH				IAmb	IAmb	04 33 17.6	
	comp=Z,17nm,0.7s						
HIA	**Hailar**	**20.60**	**338**	P	**P**	**04 33 27.7**	**+0.3**
ULN	**Ulaanbaatar**	**25.37**	**320**	P	**P**	**04 34 15.7**	**+0.2**
ULN				IAmb	IAmb	04 34 27.6	
	comp=Z,14nm,1.3s						
SONM	**Songino Array**	**25.72**	**319**	P	**P**	**04 34 18.3**	**-0.3**
	comp=Z,3.8nm,0.9s,baz=140,slow=8.6,SNR=11						
SONM	**Songino Array**	**25.72**	**319**	P	**P**	**04 34 18.2**	**-0.4**
CHTO	**Chiang Mai**	**31.65**	**256**	P	**P**	**04 34 10.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**31.82**	**255**	P	**P**	**04 34 12.5**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=55,slow=6.4,SNR=5.9						
CMAR	**Chiang Mai Arr**	**31.82**	**255**	P	**P**	**04 34 11.5**	**-1.6**
H11N2	**WAKE ISLAND Hy**	**33.76**	**100**	T	T	05 11 15.7	
	baz=296,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**33.76**	**100**	T	T	05 11 18.5	
	baz=296,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**33.78**	**100**	T	T	05 11 20.5	
	baz=296,slow=75,SNR=23						
SHL	**Shillong**	**35.12**	**272**	P	**P**	**04 35 40.5**	**-1.4**
SHL				IAmb	IAmb	04 35 42.5	
	comp=Z,8.2nm,0.9s						
ZAA0	**Zalesovo Array**	**40.62**	**319**	P	**P**	**04 36 26.8**	**-1.0**
ZALV	**Zalesovo Beam**	**40.62**	**319**	P	**P**	**04 36 26.9**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=90,slow=6.1,SNR=1.5						
ZALV				PcP	**PcP**	**04 38 28.2**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=93,slow=5.8,SNR=1.9						
ZALV	**Zalesovo Beam**	**40.62**	**319**	P	**P**	**04 36 26.8**	**-1.0**
SOEI	**Soe**	**40.75**	**191**	P	**P**	**04 36 28.4**	**-1.0**
MKAR	**Makanchi Array**	**40.89**	**307**	P	**P**	**04 36 29.8**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=92,slow=10,SNR=5.1						
MKAR				PcP	**PcP**	**04 38 29.1**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=83,slow=3.9,SNR=3.5						
MKAR				LR	LR	04 55 56.8	
	comp=Z,202nm,18.6s,baz=66,slow=40						
KURK	**Kurchatov**	**43.72**	**313**	P	**P**	**04 36 52.7**	**-0.5**
KURK				IAmb	IAmb	04 37 04.5	
	comp=Z,5.9nm,1.0s						
KURBB	**Kurchatov Arra**	**43.77**	**313**	P	**P**	**04 36 52.7**	**-0.8**
	comp=Z,1.8nm,0.6s,baz=98,slow=8.7,SNR=9.1						
BRVK	**Borovoye**	**49.05**	**316**	P	**P**	**04 37 34.7**	**-0.2**
KK31	**Karatay Array**	**49.29**	**302**	P	**P**	**04 37 37.3**	**+0.3**
KK31				IAmb	IAmb	04 37 37.6	
	comp=Z,4.6nm,1.1s						
KKAR	**Karatay Array**	**49.29**	**302**	P	**P**	**04 37 37.0**	**0.0**
GAR	**Garm**	**50.03**	**297**	P	**P**	**04 37 42.8**	**-0.1**
WRA	**Warramunga Arr**	**50.37**	**176**	P	**P**	**04 37 45.7**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=354,slow=8.5,SNR=15						
WB2	**Warramunga Arr**	**50.37**	**176**	P	**P**	**04 37 45.6**	**+0.3**
WB2				IAmb	IAmb	04 37 48.2	
	comp=Z,3.2nm,0.8s						
CHGR	**Chuyangaron**	**50.98**	**297**	P	**P**	**04 37 50.1**	**+0.1**
AS31	**Alice Springs**	**54.05**	**177**	P	**P**	**04 38 13.1**	**+0.5**
ASAR	**Alice Springs**	**54.05**	**177**	P	**P**	**04 38 13.4**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=0.8,slow=8.8,SNR=5.3						
ASAR	**Alice Springs**	**54.05**	**177**	P	**P**	**04 38 12.4**	**-0.3**
ABKAR	**Akbulak array**	**55.77**	**311**		**P**	**04 38 23.9**	**-0.9**
ILAR	**Eielson Array**	**59.23**	**30**	P	**P**	**04 38 50.0**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=268,slow=6.1,SNR=5.3						
STKA	**Stephens Creek**	**62.92**	**170**	P	**P**	**04 39 15.2**	**+0.9**
	comp=Z,2.2nm,0.6s,baz=358,slow=9.1,SNR=7.0						
KBZ	**Khabaz**	**68.57**	**309**	P	**P**	**04 39 52.3**	**+1.6**
	comp=Z,4.0nm,0.8s,baz=134,slow=1.7,SNR=4.6						
FINES	**FINESS Array B**	**70.42**	**331**	P	**P**	**04 40 01.2**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=78,slow=6.0,SNR=11						
MARD	**Mardin**	**72.64**	**303**	P	**P**	**04 40 16.4**	**+0.5**
AKASG	**Malin Array Be**	**74.00**	**320**	P	**P**	**04 40 22.2**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=53,slow=6.3,SNR=6.7						
AKASG	**Malin Array Be**	**74.00**	**320**	P	**P**	**04 40 23.0**	**-0.4**
RAYN	**Ar Rayn**	**75.07**	**289**	P	**P**	**04 40 30.7**	**+0.4**
RAYN				IAmb	IAmb	04 40 32.0	
	comp=Z,5.6nm,0.9s						
BR131	**Keskin Array S**	**76.54**	**308**	P	**P**	**04 40 38.3**	**-0.2**
BRTR	**Keskin Array B**	**76.54**	**308**	P	**P**	**04 40 39.2**	**+0.7**
	comp=Z,4.1nm,0.8s,baz=102,slow=5.2,SNR=8.8						
BRTR	**Keskin Array B**	**76.54**	**308**	P	**P**	**04 40 38.4**	**0.0**
NB2	**NORSAR Subarra**	**76.58**	**334**	P	**P**	**04 40 38.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=48,slow=5.6						
NOA	**NORSAR Array B**	**76.58**	**334**	P	**P**	**04 40 38.3**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=50,slow=5.6,SNR=7.0						
CONA	**Conrad Observa**	**82.81**	**322**	*eP*	**P**	**04 41 14.6**	**+2.4**
	comp=Z,3.4nm,0.8s						
GERES	**GERESS Array B**	**83.34**	**324**	P	**P**	**04 41 16.2**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=44,slow=6.5,SNR=4.0						
ARSA	**Arzberg**	**83.41**	**322**	*eP*	**P**	**04 41 17.7**	**+2.4**
	comp=Z,1.3nm,0.8s						
SOKA	**Soboth**	**84.03**	**322**	*eP*	**P**	**04 41 21.0**	**+2.4**
	comp=Z,3.4nm,0.7s						
OBKA	**Obir**	**84.39**	**322**	*eP*	**P**	**04 41 21.9**	**+1.5**
	comp=Z,3.4nm,0.7s						
MYKA	**Terra Mystica**	**84.80**	**322**	*eP*	**P**	**04 41 23.3**	**+0.9**
	comp=Z,3.2nm,0.5s						
ZOU	**Zoufplan**	**85.20**	**322**	P	**P**	**04 41 24.6**	**0.0**
ABTA	**Abfaltersbach**	**85.31**	**323**	*eP*	**P**	**04 41 25.9**	**+0.8**
	comp=Z,3.7nm,0.8s						
NVAR	**Mina Array Bea**	**85.45**	**48**	P	**P**	**04 41 27.1**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=304,slow=5.0,SNR=5.2						
NVAR	**Mina Array Bea**	**85.45**	**48**	P	**P**	**04 41 26.3**	**+0.2**
STAL	**STALIGIAL**	**85.53**	**322**	P	**P**	**04 41 26.6**	**+0.5**
PDAR	**Pinedale Array**	**87.98**	**40**	P	**P**	**04 41 39.5**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=0.0,slow=2.1,SNR=3.9						

*JMA **21** 04:51:13.6±0.3,32˚58N× 142˚06E, h0km, M3.9*

*IDC **21** 04:51:15.3±2.6,31˚50N× 140˚37E, h0km,mb3.4/3, mb1 3.6/3,mb1mx3.3/33,mbtmp3.4/3,Error ellipse: s-maj=122.4km s-min=19.0km az=78.0*

ISC 21 04:51:14.5±1.4,**32˚32N**±0˙09×**142˚1E**±0˙1,**h39**km,**n9**, σ2**917/11**,**mb3.5/3**,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.99**	**275**	P	**Pn**	**04 51 48.5**	**+2.9**
JHCJ	**Hachijojimakas**	**2.09**	**292**	S	**Sn**	**04 52 13.8**	**+2.0**
JHJ	**Hachijo jima 2**	**2.12**	**293**	Pn	**Pn**	**04 51 45.6**	**-1.8**
	12nm,0.3s,baz=75,slow=16,SNR=4.4						
JHJ				Sn	**Sn**	**04 52 08.4**	**-4.1**
	16nm,0.3s,baz=72,slow=18,SNR=3.4						
BSO1	**Boso 1**	**2.52**	**338**	P	**Pn**	**04 51 53.2**	**+0.8**
BSO3	**Boso 3**	**2.82**	**332**	P	**Pn**	**04 51 57.5**	**+0.8**
JFT	**Otama**	**5.39**	**345**	P	**Pn**	**04 52 32.5**	**+0.1**
JFT				*eS*	**Sn**	**04 53 33.1**	**-0.1**
MKAR	**Makanchi Array**	**47.23**	**306**	P	**P**	**04 59 44.9**	**+1.3**
	0.3nm,0.6s,baz=86,slow=10,SNR=3.7						
WRA	**Warramunga Arr**	**52.49**	**189**	P	**P**	**05 00 22.3**	**-1.4**
	0.2nm,0.4s,baz=3.7,slow=7.6,SNR=13						
ASAR	**Alice Springs**	**56.22**	**189**	P	**P**	**05 00 49.9**	**-0.8**
	0.2nm,0.6s,baz=16,slow=11,SNR=2.4						

INET 21 04:56:31.9,9˚55N×83˚91W,h15km,MW3.7,Costa Rica

*JMA **21** 04:57:27.9±0.2,30˚28N× 139˚00E, h449km, M3.8*

*IDC **21** 04:57:28.8±0.8,30˚24N× 138˚67E, h422km±8km, mb3.5/22, mb1 3.7/29,mb1mx3.6/44,mbtmp4.3/29,Error ellipse: s-maj=11.7km s-min=10.2km az=116.0*

*NEIC **21** 04:57:29.1±1.1,30˚24N±0˙07×138˚66E±0˙1, h425km±6km, mb4.2/92,Error ellipse: s-maj=16.8km s-min=9.8km az=103.0*

ISC 21 04:57:31.0±0.5,**30˚35N**±0˙07×**138˚71E**±0˙07,**h450**km, **n161**,σ1**965/148**,**mb4.2/69**,**2C-2D**,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**2.30**	**23**	P	**P**	**04 58 31.0**	**-2.1**
JAOM				*eS*	**S**	**04 59 19.6**	**-4.1**
JHJ	**Hachijo jima 2**	**2.91**	**18**	P	**P**	**04 58 34.9**	**-2.4**
	72nm,0.3s,baz=64,slow=22,SNR=13						
JHJ				S	**S**	**04 59 26.1**	**-5.0**
	135nm,0.3s,baz=80,slow=22,SNR=8.5						
JHJ2	**Mitsune**	**2.91**	**19**	P	**P**	**04 58 34.7**	**-2.5**
JHJ2				*eS*	**S**	**04 59 26.0**	**-5.2**
JHJ2	**Mitsune**	**2.91**	**19**	P	**P**	**04 58 34.5**	**-2.7**
JHJ2					**S**	**04 59 27.8**	**-3.4**
TK02	**Tokai 2**	**3.68**	**348**	P	**P**	**04 58 42.8**	**-0.2**
JTNC	**Tanabenakahech**	**4.34**	**324**	P	**P**	**04 58 48.3**	**-0.8**
JIE	**Ise**	**4.37**	**338**	P	**P**	**04 58 49.2**	**-0.1**
JKN2	**Miekihoku**	**4.39**	**333**	P	**P**	**04 58 48.7**	**-0.8**
CBIJ	**Chichi jima**	**4.45**	**136**	P	P	04 58 45.4	-4.9
CBIJ				*eS*	S	04 59 45.3	-9.4
JCJ	**Chichijima**	**4.45**	**136**	P	P	04 58 45.3	-5.0
BSO3	**Boso 3**	**4.70**	**18**	P	**P**	**04 58 49.0**	**-3.0**
BSO3				S	**S**	**04 59 53.2**	**-5.0**
BSO1	**Boso 1**	**4.70**	**23**	P	**P**	**04 58 49.9**	**-1.9**
BSO1				*eS*	**S**	**04 59 53.7**	**-4.1**
JOD2	**Odawara 2**	**4.91**	**4**	P	**P**	**04 58 51.5**	**-2.9**
JNY	**Yasuok**	**5.05**	**352**	P	**P**	**04 58 54.8**	**-0.9**
INU	**Inuyama**	**5.19**	**345**	P	**P**	**04 58 55.4**	**-1.6**
JWT	**Wachi**	**5.65**	**331**		**P**	**04 59 00.5**	**-1.1**
JRY	**Ryogami san**	**5.66**	**2**	P	**P**	**04 58 59.5**	**-2.2**
JRY				S	**S**	**05 00 10.3**	**-5.6**
JAG	**Ashikaga**	**6.09**	**6**	P	**P**	**04 59 02.7**	**-3.4**
MJAR	**Matsushiro Arr**	**6.19**	**356**	P	**P**	**04 59 04.8**	**-2.3**
	0.2nm,0.3s,baz=174,slow=11,SNR=6.4						
MAJO	**Matsushiro**	**6.19**	**356**	P	**P**	**04 59 06.2**	**-0.9**
MAT	**Matsushiro**	**6.19**	**356**	P	**P**	**04 59 04.9**	**-2.2**
MAT				*eS*	**S**	**05 00 22.6**	**-3.2**
JHS	**Saijyo**	**6.61**	**316**	P	**P**	**04 59 11.3**	**-0.2**
JHS	**Saijyo**	**6.61**	**316**		**P**	**04 59 11.1**	**-0.4**
JNU	**Nakatsue**	**7.22**	**295**	P	**P**	**04 59 17.4**	**-0.5**
	1.0nm,0.3s,baz=54,slow=4.7,SNR=8.5						
JNU	**Nakatsue**	**7.22**	**295**	P	**P**	**04 59 16.9**	**-1.1**
JFK	**Kawauchi**	**7.23**	**14**	P	**P**	**04 59 16.0**	**-2.0**
JMM	**Marumori**	**7.70**	**12**	P	**P**	**04 59 22.6**	**-0.3**
JMK	**Ichinoseki**	**8.83**	**13**	P	**P**	**04 59 34.5**	**-0.7**
JTU	**Tsushima**	**8.90**	**300**	P	**P**	**04 59 35.8**	**-0.2**
JTU	**Tsushima**	**8.90**	**300**	P	**P**	**04 59 35.3**	**-0.7**
JTM	**Tenmabayashi**	**10.59**	**10**	P	**P**	**04 59 54.2**	**-0.2**
KSRS	**Korea Array**	**11.42**	**311**	P	**P**	**05 00 03.4**	**0.0**
	2.5nm,0.3s,baz=124,slow=11,SNR=64						
KSAR	**Wonju Array Be**	**11.44**	**311**	P	**P**	**05 00 02.7**	**-0.8**
KS19	**Wonju Array Si**	**11.48**	**311**	P	**P**	**05 00 02.9**	**-1.2**
ASAJ	**Asahikawa**	**14.09**	**12**	P	**P**	**05 00 31.7**	**-0.4**
	2.0nm,0.3s,baz=134,slow=8.1,SNR=4.4						
USRK	**Ussuriysk Ar.**	**14.82**	**341**	P	**P**	**05 00 39.9**	**0.0**
	baz=162,slow=8.5,SNR=8.1						
USRK	**Ussuriysk Ar.**	**14.82**	**341**	P	**P**	**05 00 39.7**	**-0.2**
KLR	**Kul'dur**	**19.59**	**346**	P	**P**	**05 01 29.2**	**+0.9**
	0.5nm,0.3s,baz=154,slow=7.6,SNR=21						
BJT	**Baijiatuau**	**20.75**	**304**	P	**P**	**05 01 38.8**	**-0.3**
HHC	**Hu-ho-hao-te**	**24.34**	**303**	*eP*	**P**	**05 02 12.8**	**+1.2**
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,86nm,5.4s						
ENH	**Enshi**	**25.20**	**277**	P	**P**	**05 02 18.1**	**-1.2**
XAN	**Xi'an**	**25.43**	**286**	P	**P**	**05 02 20.5**	**-0.7**
XAN				pmax	pmax		
	comp=Z,56nm,0.7s						
XAN				LR	LR		
	comp=N,190nm,13.0s						
XAN				LR	LR		
	comp=E,620nm,16.3s						
XAN				LR	LR		
	comp=Z,900nm,16.5s						
XAN	**Xi'an**	**25.43**	**286**	P	**P**	**05 02 20.6**	**-0.7**
GYA	**Guiyang**	**28.40**	**270**	⇑P	**P**	**05 02 46.9**	**-0.7**
GYA				PcP	**PcP**	**05 05 49.8**	**+3.5**
GYA				S	S	05 06 51.5	-11
GYA				sS	sS	05 09 17.8	-9.2
GYA				pmax	pmax		
	comp=Z,21nm,0.7s						
GYA				LR	LR		
	comp=Z,280nm,17.0s						
LZH	**Lanzhou**	**29.62**	**290**	⇓P	**P**	**05 02 57.4**	**-0.8**
LZH				pP	pP	05 04 14.0	-1.8
LZH				sP	sP	05 05 02.9	-4.9
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				pmax	pmax		
	comp=Z,76nm,5.0s						
ULN	**Ulaanbaatar**	**29.87**	**315**	P	**P**	**05 03 00.5**	**+0.2**
ULN				IAmb	IAmb	05 03 01.4	
	comp=Z,14nm,1.4s						
SONM	**Songino Array**	**30.26**	**314**	P	**P**	**05 03 03.4**	**-0.2**
	comp=Z,1.8nm,0.4s,baz=127,slow=8.8,SNR=20						
SONM	**

KKAR	Karatay Array	54.73	304	P	P	05 06 16.2	-0.4	
KKAR				IAmb	IAmb	05 06 17.5		
	comp=Z,9.4nm,0.8s							
KKAR	Karatay Array	54.73	304	P	P	05 06 16.6	0.0	
NIL	Nilore	54.77	292	P	P	05 06 17.9	+0.8	
RND	Reindeer	55.51	31	P	P	05 06 22.5	+0.7	
RND				IAmb	IAmb	05 06 23.2		
	comp=Z,12nm,0.6s							
GAR	Garm	55.73	299	P	P	05 06 23.6	-0.3	
GAR				IAmb	IAmb	05 06 24.5		
	comp=Z,11nm,0.7s							
MDM	Murphy Dome	55.80	29	IAmb	IAmb	05 06 26.1		
	comp=Z,24nm,1.4s							
POKR	Poker Flat Res	56.14	29	IAmb	IAmb	05 06 28.7		
	comp=Z,7.1nm,0.7s							
HDA	Harding Lake	56.35	30	IAmb	IAmb	05 06 28.6		
	comp=Z,7.8nm,0.8s							
IL31		56.37	30	P	P	05 06 28.0	+0.3	
IL31				IAmb	IAmb	05 06 29.6		
	comp=Z,27nm,1.9s							
ILAR	Eielson Array	56.37	30	P	P	05 06 27.9	+0.2	
	comp=Z,1.9nm,0.6s,baz=257,slow=4.8,SNR=37							
CHGR	Chuyangaron	56.69	299	P	P	05 06 30.3	-0.2	
BMAR	Burnt Mountain	57.29	27	P	P	05 06 36.2	+2.1	
DOT	Dot Lake	57.65	31	P	P	05 06 37.3	+0.7	
MENT	Mentasta	57.85	32	IAmb	IAmb	05 06 41.1		
	comp=Z,8.7nm,0.6s							
BCAR	Beaver Creek A	58.72	32	P	P	05 06 44.5	+0.6	
ARU	Arti	59.99	321	P	P	05 06 51.6	-0.8	
ABKAR	Akbulak array	60.65	312	P	P	05 06 57.0	0.0	
ABKAR				IAmb	IAmb	05 06 57.6		
	comp=Z,6.7nm,0.7s							
HYT	Haines Junctio	61.05	34	P	P	05 07 01.1	+1.5	
HYT				IAmb	IAmb	05 07 02.5		
	comp=Z,6.0nm,0.8s							
INK	Inuvik	61.37	25	P	P	05 07 02.2	+0.8	
	comp=Z,2.0nm,0.5s,baz=294,slow=5.6,SNR=7.2							
INK	Inuvik	61.37	25	IAmb	IAmb	05 07 03.2		
	comp=Z,11nm,1.4s							
WHY	Whitehorse	62.34	34	P	P	05 07 09.6	+1.5	
WHY				IAmb	IAmb	05 07 10.7		
	comp=Z,5.2nm,0.8s							
JIS	Juneau Island	63.16	36	P	P	05 07 15.5	+2.3	
HRA	Herat	63.26	296	P	P	05 07 14.7	0.0	
HRA				IAmb	IAmb	05 08 05.9		
	comp=Z,3.3nm,0.5s							
ARCES	ARCESS Array B	69.46	340	P	P	05 07 53.4	+1.0	
	comp=Z,5.2nm,0.9s,baz=69,slow=6.6,SNR=15							
YKA	Yellowknife Ar	70.73	28	P	P	05 08 00.1	0.0	
	comp=Z,2.5nm,0.7s,baz=300,slow=6.0,SNR=8.9							
KBZ	Khabaz	73.57	311	P	P	05 08 17.4	+0.3	
	comp=Z,4.3nm,0.8s,baz=70,slow=2.8,SNR=8.0							
FINES	FINESS Array B	73.68	332	P	P	05 08 17.3	0.0	
	comp=Z,0.5nm,0.3s,baz=69,slow=4.3,SNR=8.8							
B08A	Colville Reser	75.22	42	IAmb	IAmb	05 08 29.0		
	comp=Z,7.7nm,1.0s							
C09A	Chrisman Ranch	76.11	43	IAmb	IAmb	05 08 33.2		
	comp=Z,5.4nm,0.7s							
E09A	Wood Farm, Sta	76.83	44	IAmb	IAmb	05 08 37.9		
	comp=Z,7.8nm,1.2s							
MARD	Mardin	77.97	306	P	P	05 08 42.3	+0.4	
AKASG	Malin Array Be	78.19	322	P	P	05 08 42.6	0.0	
	comp=Z,0.8nm,0.3s,baz=53,slow=5.6,SNR=4.7							
BEKR	Beckworth	78.77	50	IAmb	IAmb	05 08 48.2		
	comp=Z,4.4nm,0.9s							
NB2	NORSAR Subarra	79.45	337	P	P	05 08 49.2	0.0	
	comp=Z,0.3nm,0.5s,baz=43,slow=5.3							
NOA	NORSAR Array B	79.45	337	P	P	05 08 49.3	+0.1	
	comp=Z,0.2nm,0.5s,baz=39,slow=5.7,SNR=3.8							
CMB	Columbia Colle	79.67	52	IAmb	IAmb	05 08 52.6		
	comp=Z,3.8nm,0.6s							
LRM	Limekiln Ridge	80.55	42	P	P	05 08 56.9	+1.3	
HLID	Hailey	80.63	45	IAmb	IAmb	05 10 28.2		
	comp=Z,14nm,2.0s							
KVN	Kaiserville	80.69	50	IAmb	IAmb	05 08 58.7		
	comp=Z,5.4nm,1.1s							
DLMT	Dillon	80.73	43	IAmb	IAmb	05 08 58.7		
	comp=Z,5.8nm,0.8s							
EGMT	Eagleton	80.82	39	P	P	05 08 58.2	+1.4	
NVAR	Mina Array Bea	80.88	51	P	P	05 08 59.1	+1.7	
	comp=Z,2.1nm,0.7s,baz=292,slow=5.8,SNR=19							
NVAR	Mina Array Bea	80.88	51	P	P	05 08 58.7	+1.3	
RAYN	Ar Rayn	81.07	292	P	P	05 08 58.7	+0.2	
BOZ	Bozeman (W)	81.16	42	IAmb	IAmb	05 09 00.8		
	comp=Z,4.5nm,0.7s							
BR131	Keskin Array S	81.56	311	P	P	05 09 01.2	+0.4	
BRTR	Keskin Array B	81.56	311	P	P	05 09 01.1	+0.3	
	comp=Z,1.9nm,0.7s,baz=76,slow=5.2,SNR=6.1							
BURAR	Bucovina Array	82.12	321	P	P	05 09 04.3	+0.8	
IMW	Indian Meadow	82.53	43	IAmb	IAmb	05 09 08.9		
	comp=Z,3.6nm,0.8s							
FLWY	Flagg Ranch	82.57	43	IAmb	IAmb	05 09 09.8		
	comp=Z,5.7nm,0.9s							
TPAW	Teton Pass	82.76	43	IAmb	IAmb	05 09 09.8		
	comp=Z,3.5nm,0.7s							
TPNV	Topopah Spring	83.04	51	P	P	05 09 09.6	+1.1	
DUG	Dugway, Tooele	83.50	47	IAmb	IAmb	05 09 13.0		
	comp=Z,4.5nm,0.7s							
GSC	Goldstone, Bar	83.55	53	IAmb	IAmb	05 09 13.2		
	comp=Z,6.8nm,0.9s							
PRN	Pahroc Range	83.60	50	IAmb	IAmb	05 09 14.2		
	comp=Z,5.7nm,1.1s							
PD31	Pinedale Array	84.01	43	IAmb	IAmb	05 10 56.6		
	comp=Z,8.1nm,1.7s							
PDAR	Pinedale Array	84.01	43	P	P	05 09 14.2	+1.0	
	comp=Z,1.7nm,0.8s,baz=283,slow=2.4,SNR=15							
PDAR	Pinedale Array	84.01	43	P	P	05 09 13.9	+0.6	
PFO	Pinyon Flats O	84.70	54	P	P	05 09 17.7	+0.9	
ANMO	Albuquerque	90.67	48	P	P	05 09 46.0	+1.0	
ANMO				IAmb	IAmb	05 09 47.5		
	comp=Z,2.4nm,0.8s							
TXAR	Lajitas Array	96.03	51	P	P	05 10 11.2	+1.7	
	comp=Z,0.5nm,0.6s,baz=300,slow=3.0,SNR=10							
LPAZ	La Paz	151.75	66	PKPbc	PKiKP	05 16 36.9	+1.5	
	comp=Z,1.0nm,0.4s,baz=272,slow=2.7,SNR=4.9							

*IDC **21** 05:00:50.8±0.7,30.°65N×131.°18E, h0km, mb3.9/16, mb1 4.1/18, mb1mx4.0/39, mbtmp3.9/18, ML2.9/3, MS3.6/10, Ms1 3.6/10, ms1mx3.3/39, Error ellipse: s-maj=24.8km s-min=14.3km az=75.0*

*NEIC **21** 05:00:50.2±1.4, 30.°41N±0.°05×131.°52E±0.°09, h8km±4km, mb4.4/12, Error ellipse: s-maj=10.9km s-min=7.3km az=81.0*

*NIED **21** 05:00:55.3, 30.°64N×131.°51E, h35km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr2.54; Mθθ0.32; Mφφ -2.87; Mrθ0.06; Mθφ -1.11; Mφr1.85; Fault plane solution: M0 3.43000×10^15^ NP1:φs 7.00000°, δ62.00000°, λ79.00000°. NP2:φs 210.00000°, δ30.00000°, λ110.00000°.*

*JMA **21** 05:00:55.2±0.1, 30.°64N×131.°51E, h35km±1km, M4.0*

JMA Felt I J1.

ISC 21 05:00:54.7±1.3, 30.°60N±0.°04×131.°53E±0.°05, h32km±8km, n68, σ1$21/67, mb4.0/21, MS3.7/5, 9C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTN	Tanegashima 3	0.48	277	⇓P	Pb	05 01 04.7	-0.2
JTN				*eS*	Sb	05 01 12.2	+0.3
JMTN	Minamitane	0.58	250	⇑P	Pn	05 01 07.1	+0.4
JMTN				S	Sb	05 01 15.3	+0.7
JTSR	Tashiro 2	0.77	317	⇑P	Pn	05 01 09.0	-0.4
JTSR				S	Sn	05 01 19.5	-0.5
JYAK	Yakushimahirau	0.95	248	⇑P	Pn	05 01 12.1	+0.3
JYAK				S	Sn	05 01 24.6	+0.3
JNAR	Kushima--Naru	0.95	347	⇑P	Pn	05 01 11.9	0.0
JNAR				S	Sb	05 01 24.1	-1.0
JNKG	Nichinankitago	1.07	353	P	Pn	05 01 13.7	+0.2
JNKG				S	Sb	05 01 27.2	-1.2
JKC	Kuchinoerabu	1.16	264	⇑P	Pn	05 01 15.0	+0.3
JKC				S	Sn	05 01 29.9	+0.4
JSU	Suzuyama	1.29	315	⇑P	Pn	05 01 16.3	-0.3
JSU	Suzuyama	1.29	315	Pn	Pn	05 01 16.3	-0.3
JSU				Sn	Sb	05 01 35.8	+1.0
JTZ	Takazaki	1.36	344	⇑P	Pn	05 01 17.8	+0.4
JTZ				*eS*	Sn	05 01 34.2	-0.1
JNN	Nakanoshima	1.62	243	P	Pn	05 01 21.9	+0.9
JTSN	Tsuno	1.65	359	⇑P	Pn	05 01 21.4	0.0
JZO	Okuchi	1.73	333	⇑P	Pn	05 01 22.8	+0.1
JNU	Nakatsue	2.58	348	Pn	Pn	05 01 34.2	-0.1
	2.5nm,0.3s,baz=0.5,slow=15,SNR=16						
JNU				Sn	Sn	05 02 04.6	0.0
	21nm,0.3s,baz=16,slow=7.3,SNR=7.6						
JNU				LR	LR	05 02 21.7	
	comp=Z,231nm,18.2s,baz=178,slow=37						
JNU	Nakatsue	2.58	348	Pn	Pn	05 01 34.9	+0.6
JMN	Monobe	3.70	32	Pn	Pn	05 01 50.4	+0.6
JTU	Tsushima	4.31	336		Pn	05 01 58.4	+0.4
JHS	Saijyo	4.59	16	Pn	Pn	05 02 02.9	+1.0
JMZ	Minamidaito 2	4.77	183	Pn	Pn	05 01 59.9	-4.4
JWT	Wachi	5.69	34		Pn	05 02 17.3	+0.2
INU	Inuyama	6.61	43		Pn	05 02 29.4	-0.2
JGF	Kuroka	6.99	43		Pn	05 02 33.9	-0.9
JHJ	Hachijo jima 2	7.46	68	LR	LR	05 05 33.5	
	comp=Z,262nm,18.7s,baz=280,slow=36						
KSRS	Korea Array	7.47	337	Pn	Pn	05 02 44.4	+3.0
	0.5nm,0.3s,baz=155,slow=15,SNR=3.8						
MJAR	Matsushiro Arr	8.13	41	Pn	Pn	05 02 52.5	+2.0
	0.2nm,0.3s,baz=187,slow=10,SNR=6.5						
MJAR	Matsushiro Arr	8.13	41		Pn	05 02 50.5	-0.1
USRK	Ussuriysk Ar.	13.59	1	LR	LR	05 09 15.5	
	comp=Z,176nm,20.3s,baz=235,slow=37						
ASAJ	Asahikawa	16.09	30	LR	LR	05 11 04.7	
	comp=Z,269nm,18.5s,baz=212,slow=38						
KLR	Kul'dur	18.61	0	P	Pn	05 05 10.7	+0.9
	0.1nm,0.3s,baz=176,slow=14,SNR=2.6						
KLR				LR	LR	05 12 56.9	
	comp=Z,170nm,18.2s,baz=171,slow=39						
GUMO	Guam	20.92	141	LR	LR	05 12 42.0	
	comp=Z,120nm,20.3s,baz=328,slow=34						
ULN	Ulaanbaatar	25.46	320	P	P	05 06 20.5	+0.6
ULN				IAmb	IAmb	05 06 31.9	
	comp=Z,10.0nm,1.2s						
SONM	Songino Array	25.82	319	P	P	05 06 22.2	-0.9
	comp=Z,1.7nm,0.7s,baz=138,slow=9.4,SNR=8.0						
SONM				LR	LR	05 17 49.1	
	comp=Z,198nm,18.6s,baz=160,slow=40						
SONM	Songino Array	25.82	319	P	P	05 06 22.9	-0.2
CHTO	Chiang Mai	31.73	256	P	P	05 07 14.8	-1.0
CHTO				IAmb	IAmb	05 07 16.6	
	comp=Z,4.7nm,0.7s						
H11N2	WAKE ISLAND Hy	33.66	100	T	T	05 43 23.8	
	baz=296,slow=75,SNR=65						
H11N1	WAKE ISLAND Hy	33.66	100	T	T	05 43 24.1	
	baz=296,slow=75,SNR=38						
H11N3	WAKE ISLAND Hy	33.68	100	T	T	05 43 25.1	
	baz=296,slow=75,SNR=46						
SHL	Shillong	35.21	272	P	P	05 07 44.8	-1.5
ZALV	Zalesovo Beam	40.72	319	P	P	05 08 29.7	-2.5
	comp=Z,0.8nm,0.4s,baz=98,slow=6.1,SNR=3.7						
ZALV	Zalesovo Beam	40.72	319	P	P	05 08 31.1	-1.1
MKAR	Makanchi Array	40.99	308	P	P	05 08 33.4	-1.3
	comp=Z,0.9nm,0.7s,baz=96,slow=11,SNR=3.9						
MKAR				LR	LR	05 27 05.4	
	comp=Z,104nm,18.3s,baz=56,slow=39						
MKAR	Makanchi Array	40.99	308	P	P	05 08 34.2	-0.4
KURBB	Kurchatov Arra	43.87	313	P	P	05 08 56.6	-1.3
	comp=Z,1.1nm,0.4s,baz=99,slow=8.9,SNR=5.2						
NRIK	Noril'sk	46.08	340	LR	LR	05 30 34.5	
	comp=Z,135nm,18.9s,baz=15,slow=39						
KNRA	Kununurra	46.08	184	P	P	05 09 12.0	-3.7
BRVK	Borovoye	49.15	316	P	P	05 09 38.5	-0.8
BRVK				IAmb	IAmb	05 09 40.2	
	comp=Z,3.6nm,0.8s						
KK31	Karatay Array	49.40	302	P	P	05 09 42.3	+0.9
KK31				IAmb	IAmb	05 09 42.7	
	comp=Z,2.2nm,0.9s						
KKAR	Karatay Array	49.40	302	P	P	05 09 42.4	+0.9
WRA	Warramunga Arr	50.32	177	P	P	05 09 49.9	+1.4
	comp=Z,1.0nm,0.6s,baz=355,slow=8.1,SNR=10						
WRA	Warramunga Arr	50.32	177	P	P	05 09 46.4	-2.1
WR0	Warramunga Arr	50.35	176	P	P	05 09 46.9	-1.8
WR0				IAmb	IAmb	05 10 07.9	
	comp=Z,6.3nm,1.1s						
ASAR	Alice Springs	54.00	177	P	P	05 10 17.2	+1.4
	comp=Z,0.9nm,0.6s,baz=11,slow=13,SNR=12						
ASAR	Alice Springs	54.00	177	P	P	05 10 13.0	-2.9
ABKAR	Akbulak array	55.87	311	P	P	05 10 28.4	-0.8
ILAR	Eielson Array	59.23	30	P	P	05 10 53.9	+1.3
	comp=Z,0.3nm,0.6s,baz=281,slow=6.3,SNR=4.2						
STKA	Stephens Creek	62.86	170	P	P	05 11 19.5	+2.0
	comp=Z,1.1nm,0.7s,baz=340,slow=8.1,SNR=4.8						
STKA	Stephens Creek	62.86	170	P	P	05 11 14.9	-2.6
ARCES	ARCESS Array B	67.02	338	LR	LR	05 46 50.5	
	comp=Z,78nm,18.5s,baz=275,slow=41						
KBZ	Khabaz	68.67	309	P	P	05 11 55.4	+0.5
	comp=Z,6.4nm,1.0s,baz=165,slow=0.8,SNR=7.0						
FINES	FINESS Array B	70.50	331	P	P	05 12 03.9	-2.0
	comp=Z,0.9nm,0.5s,baz=70,slow=6.0,SNR=9.0						
AKASG	Malin Array Be	74.10	320	P	P	05 12 26.4	-1.2
	comp=Z,0.6nm,0.3s,baz=56,slow=6.6,SNR=6.9						
AKASG	Malin Array Be	74.10	320	P	P	05 12 27.8	+0.1
BRTR	Keskin Array B	76.64	308	P	P	05 12 43.4	+0.7
	comp=Z,3.9nm,0.9s,baz=64,slow=9.8,SNR=7.8						
NB2	NORSAR Subarra	76.67	334	P	P	05 12 42.3	+0.1
	comp=Z,0.3nm,0.6s,baz=48,slow=5.6						
NOA	NORSAR Array B	76.67	334	P	P	05 12 41.4	-0.8
	comp=Z,0.4nm,0.5s,baz=48,slow=5.6,SNR=4.6						
GERES	GERESS Array B	83.44	324	P	P	05 13 20.6	+1.5
	comp=Z,0.3nm,0.5s,baz=23,slow=6.4,SNR=2.3						
NVAR	Mina Array Bea	85.41	48	P	P	05 13 31.6	+2.1
	comp=Z,0.4nm,0.5s,baz=300,slow=5.1,SNR=4.3						
PDAR	Pinedale Array	87.96	40	P	P	05 13 44.2	+2.4
	comp=Z,0.4nm,0.7s,baz=270,slow=0.9,SNR=3.0						

*IDC **21** 05:27:06.7±0.8, 1.°91N×126.°45E, h0km, mb4.1/9, mb1 4.2/10, mb1mx4.0/37, mbtmp4.1/10, ML3.9/1, MS3.4/2, Ms1 3.5/2, ms1mx2.6/43, Error ellipse: s-maj=61.0km s-min=15.4km az=75.0*

*NEIC **21** 05:27:11.3±1.9, 1.°97N±0.°03×126.°56E±0.°05, h35km±2km, mb4.3/13, Error ellipse: s-maj=9.4km s-min=4.3km az=108.0*

*DJA **21** 05:27:12.5±1.7, 2.°N±4.°×12.°6E±.°, h20km±17km, M4.1/10, mB4.7/1, mb4.2/2, MLv4.1/10, Mw(mB)3.9/1*

ISC 21 05:27:12.9±0.6, 1.°97N±0.°05×126.°56E±0.°05, h47km, n41, σ1$34/41, mb4.2/14, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.44	146	P	Pn	05 27 36.2	-0.4
TNTI	Ternate	1.44	146		Pn	05 27 35.8	-0.8
TNTI				Sn	Sn	05 27 51.7	-2.6
SGSI	Sangihe	1.99	329	P	Pn	05 27 43.9	-0.2
LBMI	Labuha	2.76	160	P	Pn	05 27 57.4	+2.7
KMSI	Cibinong	2.93	242	P	Pn	05 27 57.5	+0.5
KMSI				S	Sn	05 28 30.6	-0.4
GTOI	Gorontalo	3.79	250	P	Pn	05 28 09.0	+0.2
LUWI	Luwuk	4.83	232	Pn	Pn	05 28 22.8	-0.4
LUWI					Sn	05 29 17.7	-0.1
MRSI	Marisa	4.85	252	P	Pn	05 28 24.0	+0.6
KCP	Kidapawan	5.21	344	⇑eP	Pn	05 28 34.9	+6.5
APSI	Ampana	5.69	240	P	Pn	05 28 35.1	+0.2
	0.2nm601nm49nm,1.1s						
TOLI2	Tolitoli	5.84	262		Pn	05 28 34.3	-2.7
MPSI	Mapaga	6.86	256	P	Pn	05 28 51.4	+0.4
WSI	Waingapu	13.14	208	P	Pn	05 30 20.9	+3.9
MTN	Manton Dam	15.40	163	Pn	Pn	05 30 45.9	-1.4
SMRI	Semarang	18.42	241	P	P	05 31 23.2	-1.3
SMRI				IAmb	IAmb	05 31 34.3	
	comp=Z,36nm,1.0s						
FITZ	Fitzroy Crossi	19.96	183	P	P	05 31 39.4	-1.9
	comp=Z,0.3nm,0.3s,baz=359,slow=5.5,SNR=7.1						
FITZ	Fitzroy Crossi	19.96	183	P	P	05 31 39.6	-1.8
WB0	Warramunga Arr	22.93	161	P	P	05 32 11.8	-1.4
WB0				IAmb	IAmb	05 32 16.9	
	comp=Z,6.7nm,0.5s						
WRAB	Tennant Creek	23.07	161	P	P	05 32 13.5	-1.2
WRAB				IAmb	IAmb	05 32 22.4	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	23.08	161	P	P	05 32 13.3	-1.4
	comp=Z,2.9nm,0.3s,baz=339,slow=11,SNR=104						
WB2	Warramunga Arr	23.08	161	P	P	05 32 13.7	-1.0
WB2				IAmb	IAmb	05 32 22.4	
	comp=Z,6.7nm,0.9s						
AS31	Alice Springs	26.47	165	P	P	05 32 45.3	-0.5
ASAR	Alice Springs	26.47	165	P	P	05 32 45.6	-0.2
	comp=Z,1.2nm,0.4s,baz=346,slow=11,SNR=18						
ASAR	Alice Springs	26.47	165	P	P	05 32 46.1	+0.2
GSI	Gunungsitoli	28.98	269	P	P	05 33 09.2	+0.8
CMAR	Chiang Mai Arr	31.65	303	LR	LR	05 46 20.5	
	comp=Z,30nm,20.4s,baz=190,slow=36						
BBOO	Buckleboo	35.74	166	P	P	05 34 07.1	-0.2
STKA	Stephens Creek	36.56	158	P	P	05 34 14.5	+0.1
	comp=Z,1.1nm,0.3s,baz=329,slow=11,SNR=3.4						
SONM	Songino Array	49.90	342	P	P	05 35 54.9	+0.6
	comp=Z,0.2nm,0.4s,baz=153,slow=7.6,SNR=2.8						
TLY	Talaya	53.14	342	LR	LR	06 00 19.4	
	comp=Z,75nm,18.7s,baz=44,slow=38						
PETK	Petropavlovsk-	57.11	22	P	P	05 36 55.0	+0.5
	comp=Z,2.7nm,0.8s,baz=190,slow=0.9,SNR=4.5						
MK31	Makanchi Array	58.90	326	P	P	05 37 06.7	-0.6
MK31				IAmb	IAmb	05 37 29.8	
	comp=Z,2.1nm,1.1s						
MKAR	Makanchi Array	58.90	326	P	P	05 37 06.8	-0.4
	comp=Z,1.1nm,0.4s,baz=122,slow=7.7,SNR=31						
MKAR	Makanchi Array	58.90	326	P	P	05 37 07.0	-0.2
KURK	Kurchatov	63.13	328	P	P	05 37 35.7	-0.1
KURK				IAmb	IAmb	05 37 37.9	
	comp=Z,3.2nm,0.5s						
NRIK	Noril'sk	72.09	346	P	P	05 38 33.0	+1.0
	comp=Z,1.0nm,0.3s,baz=108,slow=3.2,SNR=1.9						
ABKAR	Akbulak array	73.40	321	P	P	05 38 40.5	+0.4
VNDA	Vanda	81.72	173	P	P	05 39 27.1	+1.1
	comp=Z,0.6nm,0.6s,baz=318,slow=3.1,SNR=3.0						
VNDA	Vanda	81.72	173	P	P	05 39 26.0	0.0
VNDA				IAmb	IAmb	05 39 54.2	
	comp=Z,3.3nm,1.4s						
KOPT	Kop Dagi	85.72	310	P	P	05 39 45.4	-2.2
ARCES	ARCESS Array B	92.03	340	P	P	05 40 18.5	+1.9
	comp=Z,3.0nm,1.0s,baz=91,slow=6.3,SNR=1.7						

NNC 21 05:29:36.2±10.0, 37.°83N×71.°71E, h239km±126km, mb2.4, mpv3.5, 3C-3D, Error ellipse: s-maj=109.4km s-min=57.6km az=10.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.35	351	⇓P	Pn	05 30 56.5	+0.6
	1.8nm,0.3s,baz=175,slow=14,SNR=25						
KK31				⇑S	S	05 31 59.1	-0.3
	24nm,0.5s,baz=165,slow=22,SNR=34						
TKM2	Tokmak 2	5.89	29	⇑P	Pn	05 31 01.0	-1.9
	5.4nm,0.8s						
TKM2				⇓S	S	05 32 14.2	+2.1
	6.7nm,1.0s						
AB31	Akbulak array	14.24	327	⇑P	P	05 32 49.4	+1.4
	0.5nm,0.5s,baz=136,slow=13,SNR=16						
AB31				⇓S	S	05 35 24.1	-0.7
	1.3nm,0.5s,baz=151,slow=22,SNR=7.2						

*IDC **21** 05:47:41.2±11.0, 30.°54N×131.°10E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/51, mbtmp3.8/7, MS3.6/3, Ms1 3.6/3, ms1mx2.9/44, Error ellipse: s-maj=634.3km s-min=22.0km az=65.0*

*NEIC **21** 05:47:41.4±2.0, 30.°51N±0.°09×131.°46E±0.°07, h10km±2km, mb4.5/9, Error ellipse: s-maj=15.1km s-min=9.4km az=200.0*

*JMA **21** 05:47:44.0±0.2, 30.°62N×131.°57E, h33km±2km, M3.3*

ISC 21 05:47:44.1±1.6, 30.°60N±0.°04×131.°48E±0.°06, h27km±11km, n41, σ1$92/48, mb4.3/12, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTN	Tanegashima 3	0.43	277	P	Pn	05 47 54.1	-0.4
JTN				S	Sn	05 48 01.8	+0.2
JMTN	Minamitane	0.54	248	P	Pn	05 47 56.4	+0.4
JMTN				*eS*	Sn	05 48 05.8	+1.6
JTSR	Tashiro 2	0.74	320	P	Pb	05 47 58.3	0.0
JTSR				S	Sn	05 48 09.5	+0.3
JYAK	Yakushimahirau	0.91	247	P	Pn	05 48 01.5	+0.4
JYAK				S	Sn	05 48 15.4	+2.0
JNAR	Kushima--Naru	0.94	349	P	Pb	05 48 01.1	-0.6
JNAR				S	Sn	05 48 14.7	+0.7
JNKG	Nichinankitago	1.06	355	P	Pn	05 48 03.2	0.0
JNKG				S	Sb	05 48 17.2	0.0
JKC	Kuchinoerabu	1.11	263	P	Pb	05 48 04.7	0.0
JKC				S	Sn	05 48 20.3	+1.9
JSU	Suzuyama	1.26	316	P	Pn	05 48 05.8	-0.1
JSU	Suzuyama	1.26	316		Pn	05 48 06.0	0.0
JSU				Sn	Sb	05 48 24.2	+1.3
JTZ	Takazaki	1.34	346	P	Pn	05 48 07.0	0.0
JTZ				S	Sn	05 48 24.9	+1.0
JNN	Nakanoshima	1.58	242	P	Pb	05 48 11.4	-1.2
JTSN	Tsuno	1.64	1	P	Pn	05 48 10.9	-0.2
JTSN				S	Sn	05 48 31.7	+0.4
JNU	Nakatsue	2.56	349	Pn	Pn	05 48 24.8	+0.9
JMN	Monobe	3.72	33	Pn	Pn	05 48 40.2	+0.4
JTU	Tsushima	4.29	336	Pn	Pn	05 48 48.2	+0.6
JHS	Saijyo	4.59	17	Pn	Pn	05 48 53.8	+1.9
JWT

comp=Z,95nm,18.2s,baz=104,slow=37
CTA Charters Tower 17.32 180 Pn **P** 06 00 08.4 +1.0
0.4nm,0.3s,baz=342,slow=14,SNR=4.5
CTAO Charters Tower 17.32 180 **P** 06 00 08.6 +1.1
MTN Manton Dam 18.13 235 P **Pn** 06 00 16.3 +0.2
MTN IAmb IAmb 06 00 25.0
comp=Z,20nm,0.9s
WB0 Warramunga Arr 20.62 214 P **P** 06 00 45.2 +1.5
WB0 IAmb IAmb 06 00 47.1
comp=Z,49nm,1.1s
WB2 Warramunga Arr 20.79 213 P **P** 06 00 45.8 +0.4
WB2 IAmb IAmb 06 00 48.5
comp=Z,38nm,0.8s
WRA Warramunga Arr 20.79 213 P **P** 06 00 46.6 +1.0
comp=Z,0.9nm,0.3s,baz=37,slow=12,SNR=95
WRA LR LR 06 09 37.1
comp=Z,157nm,19.3s,baz=70,slow=41
KNRA Kununurra 21.61 232 P **P** 06 00 52.5 -1.9
SOEI Soe 23.03 251 P **P** 06 01 11.5 +1.9
comp=Z,44nm,0.8s
SOEI **Soe 23.03 251** P **P** 06 01 07.6 -2.0
SOEI IAmb IAmb 06 01 24.6
comp=Z,26nm,0.6s
AS31 Alice Springs 24.10 209 P **P** 06 01 19.8 -0.2
ASAR Alice Springs 24.10 209 P **P** 06 01 21.3 +1.3
comp=Z,14nm,0.9s,baz=40,slow=9.0,SNR=105
ASAR LR LR 06 11 58.0
comp=Z,174nm,18.1s,baz=29,slow=41
ASAR Alice Springs 24.10 209 P **P** 06 01 20.0 0.0
FITZ Fitzroy Crossi 25.44 231 P **P** 06 01 35.0 +2.8
comp=Z,15nm,0.7s,baz=46,slow=7.9,SNR=32
FITZ LR LR 06 11 52.3
comp=Z,218nm,21.4s,baz=66,slow=38
FITZ Fitzroy Crossi 25.44 231 **P** 06 01 32.4 +0.2
FITZ IAmb IAmb 06 01 41.3
comp=Z,22nm,0.9s
BNSI Bone 26.23 265 P **P** 06 01 42.3 +2.8
comp=Z,17nm,1.1s
TTSI Tana Toraja 26.48 269 P **P** 06 01 48.3 +6.6
DZM Mont Dzumac 27.46 136 LR LR 06 11 20.9
comp=Z,248nm,18.8s,baz=218,slow=33
MYLDM Lahad Datu 28.88 286 P **P** 06 02 00.9 -2.2
MYLDM IAmb IAmb 06 02 05.4
comp=Z,10nm,1.3s
STKA Stephens Creek 29.40 188 P P 06 02 14.3 +6.7
comp=Z,4.8nm,0.8s,baz=0.7,slow=8.4,SNR=9.3
STKA Stephens Creek 29.40 188 P **P** 06 02 08.5 +0.9
BBOO Buckleboo 31.51 197 P **P** 06 02 26.4 +0.2
BBOO IAmb IAmb 06 02 33.4
comp=Z,3.1nm,1.1s
PSA00 Pilbara Seismi 31.89 232 P **P** 06 02 26.7 -3.1
FORT Forrest 32.88 210 P **P** 06 02 38.3 0.0
GIRL Giralia 36.93 235 P **P** 06 03 11.2 -2.1
MJAR Matsushiro Arr 39.73 350 LR LR 06 17 30.0
comp=Z,24nm,21.4s,baz=210,slow=32
KSRS Korea Array 43.42 339 LR LR 06 21 10.5
comp=Z,63nm,19.1s,baz=156,slow=34
KHZ Kahutara 46.46 152 P **P** 06 04 30.9 -0.2
KHZ IAmb IAmb 06 04 37.0
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 51.14 296 P P 06 05 18.9 +11
comp=Z,0.7nm,0.3s,baz=123,slow=6.6,SNR=5.2
LZH Lanzhou 55.27 318 *e*P **P** 06 05 37.8 -0.1
LZH pP **pP** 06 05 41.0 0.0
LZH sP **sP** 06 05 42.5 +0.4
LZH *e*PP **PP** 06 07 43.1 +1.5
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,110nm,5.2s
LZH LR LR
comp=N,260nm,14.6s
LZH LR LR
comp=E,270nm,14.8s
LZH LR LR
comp=Z,370nm,17.1s
SONM Songino Array 61.19 330 P P 06 06 31.6 +13
comp=Z,0.7nm,0.7s,baz=153,slow=7.9,SNR=3.9
SONM LR LR 06 32 36.1
comp=Z,93nm,20.5s,baz=172,slow=35
TLY Talaya 65.10 332 LR LR 06 34 16.0
comp=Z,54nm,19.0s,baz=116,slow=35
WMQ Urumqi 69.85 319 *e*P **P** 06 07 14.4 -0.7
MKAR Makanchi Array 74.52 320 P P 06 07 54.4 +11
comp=Z,1.3nm,1.0s,baz=108,slow=7.9,SNR=6.6
VNDA Vanda 75.26 177 P P 06 07 53.5 +6.8
comp=Z,0.4nm,0.6s,baz=310,slow=6.4,SNR=3.6
ZALV Zalesovo Beam 75.85 328 P P 06 08 04.7 +14
comp=Z,0.8nm,0.5s,baz=65,slow=6.8,SNR=3.1
ZALV LR LR 06 40 11.1
comp=Z,66nm,22.0s,baz=54,slow=35
ZALV Zalesovo Beam 75.85 328 **P** 06 07 48.6 -1.8
AAK Ala-Archa 78.54 314 LR LR 06 42 16.7
comp=Z,48nm,20.6s,baz=92,slow=35
ILAR Eielson Array 82.69 23 P P 06 08 44.8 +17
comp=Z,1.3nm,0.9s,baz=251,slow=5.3,SNR=9.2
QSPA South Pole Qui 87.29 180 P **P** 06 08 48.3 -2.6
QSPA IAmb IAmb 06 09 06.4
comp=Z,1.4nm,1.1s
NVAR Mina Array Bea 95.85 52 LR LR 06 43 35.0
comp=Z,42nm,21.2s,baz=264,slow=29
YKA Yellowknife Ar 96.14 27 LR LR 06 53 34.7
comp=Z,15nm,19.2s,baz=0.0,slow=35
TORD Torodi Ar. Bea 143.51 289 PKP PKiKP 06 15 52.0 +8.5
comp=Z,0.6nm,0.6s,baz=92,slow=2.8,SNR=3.9

IDC 21 06:28:06.8±3.1, 36°.85S×179°.58E, *h*0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/24, mbtmpg3.5/3, ML3.6/1, Error ellipse: s-maj=85.4km s-min=41.6km az=140.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**2.41**	**234**	Pn	Pn	06 28 46.5	-1.1
	13nm,0.3s,baz=189,slow=2.0,SNR=53						
URZ				Sn	Sn	06 29 13.6	-4.2
	27nm,0.3s,baz=123,slow=23,SNR=19						
ASAR	**Alice Springs**	**41.21**	**275**	P	P	06 35 53.9	+0.4
	0.6nm,0.6s,baz=124,slow=8.1,SNR=9.7						
WRA	**Warramunga Arr**	**42.79**	**280**	P	P	06 36 06.3	-0.1
	0.2nm,0.4s,baz=120,slow=7.7,SNR=7.7						
FINES	**FINESS Array B**	**150.30**	**334**	PKPbc	PKPbc	06 47 58.5	-0.5
	1.8nm,0.8s,baz=8.5,slow=2.8,SNR=3.2						

*CNRM **21** 06:37:36.1±0.5,36°.16N×8°.37W, h0km, Error ellipse: s-maj=7.8km s-min=3.0km az=79.0*
*MDD **21** 06:37:40.8±1.2,36°.26N×8°.48W, h17km±9km, mbLg2.5/14, Error ellipse: s-maj=15.9km s-min=6.4km az=43.0, PRXIMO*
*IGIL **21** 06:37:40.7,36°.17N×8°.57W, h30km, ML2.4*
*SFS **21** 06:37:41.0,36°.31N×8°.40W, h13km, ML2.5, GOLFO DE CADIZ*
*INMG **21** 06:37:41.1±1.3,36°.16N×8°.57W, h31km, ML2.2, Error ellipse: s-maj=5.1km s-min=3.0km az=64.0*

ISC 21 06:37:38.3±1.8, 36°.19N±0°.05×8°.50W±0°.05, h32km±14km, n66, σ1s83/109, 2C-5D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.98**	**345**	P	**Pn**	**06 37 57.1**	**+1.3**
	0.9nm,0.1s,SNR=17						
PFVI				S	**Sb**	**06 38 09.5**	**+0.1**
	75nm,0.1s,SNR=11						
PFVI	**Vila Bisbo**	**0.98**	**345**	P	**Pn**	**06 37 57.2**	**+1.3**
PFVI				S	**Sb**	**06 38 09.8**	**+0.4**
PFVI	**Vila Bisbo**	**0.98**	**345**	*e*P	**Pn**	**06 37 57.1**	**+1.3**
PFVI				*e*S	**Sb**	**06 38 09.5**	**+0.1**
PFVI				A	A	06 38 10.4	
	25nm,0.1s						
MORF	**Marmelete**	**1.13**	**354**	*e*P	**Pn**	**06 37 59.3**	**+1.4**
MORF				*e*S	**Sn**	**06 38 12.8**	**+0.5**
MORF				AML	AML	06 38 14.1	
	comp=N,64nm,0.2s						
MORF	**Marmelete**	**1.13**	**354**	P	**Pn**	**06 37 59.3**	**+1.4**
MORF				S	**Sb**	**06 38 13.3**	**-0.3**
	comp=N,56nm,0.1s						
MORF	**Marmelete**	**1.13**	**354**	⇓*e*P	**Pn**	**06 37 59.3**	**+1.4**
MORF				*e*S	**Sb**	**06 38 13.3**	**-0.3**
MORF				A	A	06 38 14.4	
	comp=N,56nm,0.1s						
PBDV	**Barranco-do-Ve**	**1.15**	**23**	P	**Pn**	**06 38 00.2**	**+2.0**
PBDV				S	**Sb**	**06 38 15.1**	**+0.7**
	comp=N,7.0nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.15**	**23**	*e*P	**Pn**	**06 38 00.2**	**+2.0**
PBDV				*e*S	**Sb**	**06 38 15.1**	**+0.7**
PBDV				A	A	06 38 16.8	
	comp=N,7.0nm,0.2s						
PTEO	**Sao Teotonio**	**1.37**	**353**	P	**Pn**	**06 38 02.6**	**+1.5**
PTEO				S	**Sb**	**06 38 19.3**	**-1.2**
	comp=N,5.8nm,0.2s						
PTEO	**Sao Teotonio**	**1.37**	**353**	⇓*e*P	**Pn**	**06 38 02.6**	**+1.5**
PTEO				*e*S	**Sb**	**06 38 19.3**	**-1.2**
PTEO				A	A	06 38 22.5	
	comp=N,12nm,0.2s						
PVAQ	**Vaqueiros**	**1.37**	**27**	P	**Pn**	**06 38 03.0**	**+1.8**
PVAQ				S	**Sb**	**06 38 20.1**	**-0.4**
	comp=N,9.4nm,0.5s						
PVAQ	**Vaqueiros**	**1.37**	**27**	P	**Pn**	**06 38 02.6**	**+1.4**
PVAQ				S	**Sb**	**06 38 19.7**	**-0.9**
PVAQ	**Vaqueiros**	**1.37**	**27**	⇑*e*P	**Pn**	**06 38 03.0**	**+1.8**
PVAQ				*e*S	**Sb**	**06 38 20.1**	**-0.4**
PVAQ				A	A	06 38 23.1	
	comp=N,9.4nm,0.5s						
PCVE	**Castro Verde**	**1.49**	**14**	P	**Pn**	**06 38 05.0**	**+2.2**
PCVE				S	**Sb**	**06 38 22.6**	**-1.4**
	comp=N,9.0nm,0.2s						
PCVE	**Castro Verde**	**1.49**	**14**	*e*P	**Pn**	**06 38 05.0**	**+2.2**
PCVE				*e*S	**Sb**	**06 38 22.6**	**-1.4**
PCVE				A	A	06 38 25.3	
	comp=N,9.0nm,0.2s						
EGRO	**El Granado**	**1.58**	**31**	P	**Pn**	**06 38 06.1**	**+2.1**
	comp=N,28nm,0.1s,SNR=69						
EGRO				S	**Sn**	**06 38 24.4**	**+1.1**
	comp=N,15nm,0.1s,SNR=5.5						
PBEJ	**Beja**	**1.91**	**15**	P	**Pn**	**06 38 10.3**	**+1.7**
PBEJ				S	**Sn**	**06 38 32.3**	**+0.8**
	comp=N,3.6nm,0.1s						
PBEJ	**Beja**	**1.91**	**15**	*e*Pn	**Pn**	**06 38 10.3**	**+1.7**
PBEJ				*e*Sn	**Sn**	**06 38 32.3**	**+0.8**
PBEJ				A	A	06 38 34.8	
	comp=N,7.1nm,0.1s						
PNCL	**Nicolau / Gran**	**1.92**	**359**	P	**Pn**	**06 38 10.3**	**+1.5**
PNCL				S	**Sn**	**06 38 32.2**	**+0.4**
	comp=N,14nm,0.3s						
PNCL	**Nicolau / Gran**	**1.92**	**359**	*e*Pn	**Pn**	**06 38 10.3**	**+1.5**
PNCL				*e*Sn	**Sn**	**06 38 32.2**	**+0.4**
PNCL				A	A	06 38 33.1	
	comp=N,14nm,0.3s						
EMIN	**Mina Concepcio**	**2.16**	**42**	⇑P	**Pn**	**06 38 13.6**	**+1.7**
	comp=N,1.9nm,0.1s,SNR=18						
EMIN				S	**Sn**	**06 38 37.3**	**-0.3**
	comp=N,2.4nm,0.2s,SNR=9.1						
ESPR	**Espera**	**2.24**	**71**	P	**Pn**	**06 38 15.6**	**+2.5**
	comp=N,4.1nm,0.2s,SNR=7.9						
ESPR				S	**Sn**	**06 38 40.7**	**+1.1**
	comp=N,12nm,0.2s,SNR=7.9						
PBAR	**Barrancos**	**2.31**	**30**	P	**Pn**	**06 38 17.1**	**+3.1**
PBAR	**Barrancos**	**2.31**	**30**	*e*Pn	**Pn**	**06 38 17.1**	**+3.1**
EVO	**Evora**	**2.38**	**9**	P	**Pn**	**06 38 17.4**	**+2.4**
EVO				S	**Sn**	**06 38 43.0**	**0.0**
	comp=N,11nm,0.1s						
EVO	**Evora**	**2.38**	**9**	*e*P	Pn	06 38 10.1	-4.9
EVO				*e*S	**Sn**	**06 38 42.3**	**-0.7**
EVO	**Evora**	**2.38**	**9**	*e*Pn	**Pn**	**06 38 17.4**	**+2.4**
EVO				*e*Sn	**Sn**	**06 38 43.0**	**0.0**
EVO				A	A	06 38 44.5	
	comp=N,11nm,0.1s						
PMAFR	**Mafra**	**2.83**	**348**	P	**Pn**	**06 38 23.4**	**+2.0**
	comp=N,1.7nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**06 38 55.2**	**+0.9**
	comp=N,12nm,0.2s,SNR=7.7						
PMAFR	**Mafra**	**2.83**	**348**	*e*Pn	**Pn**	**06 38 23.3**	**+2.0**
PMAFR				*e*Sn	**Sn**	**06 38 54.3**	**0.0**
PMAFR				A	A	06 38 58.2	
	comp=N,10nm,0.3s						
PMTG	**Montargil**	**2.89**	**4**	P	**Pn**	**06 38 23.9**	**+1.9**
PMTG				S	**Sn**	**06 38 55.1**	**-0.5**
	comp=N,6.7nm,0.2s						
PMTG	**Montargil**	**2.89**	**4**	*e*Pn	**Pn**	**06 38 23.9**	**+1.9**
PMTG				*e*Sn	**Sn**	**06 38 55.1**	**-0.5**
PMTG				A	A	06 38 58.4	
	comp=N,6.7nm,0.2s						
HORN	**Hornachuelos**	**3.08**	**56**	P	**Pn**	**06 38 25.7**	**+1.0**
ECAB	**El Cabril**	**3.10**	**52**	⇓P	**Pn**	**06 38 27.0**	**+2.0**
	comp=N,2.9nm,0.1s,SNR=18						
ECAB				S	**Sn**	**06 38 59.4**	**-1.7**
	comp=N,1.3nm,0.2s,SNR=6.1						
ZHG	**ZHG**	**3.13**	**150**	P	**Pn**	**06 38 26.2**	**+0.7**
PSBE	**So Bento**	**3.33**	**356**	*e*Pn	**Pn**	**06 38 30.8**	**+2.6**
PSBE				*e*Sn	**Sn**	**06 39 07.3**	**+0.7**
PMRV	**Marv??o**	**3.36**	**15**	P	**Pn**	**06 38 30.1**	**+1.6**
PMRV				S	**Sn**	**06 39 07.5**	**+0.3**
	comp=N,3.0nm,0.3s						
PMRV	**Marv??o**	**3.36**	**15**	⇓*e*Pn	**Pn**	**06 38 30.1**	**+1.6**
PMRV				*e*Sn	**Sn**	**06 39 07.5**	**+0.3**
PMRV				A	A	06 39 08.2	
	comp=N,3.0nm,0.3s						
EADA	**Adamuz**	**3.71**	**57**	⇓P	**Pn**	**06 38 35.3**	**+2.0**
	comp=N,0.9nm,0.1s,SNR=18						
EADA				S	**Sn**	**06 39 15.5**	**-0.5**
	comp=N,7.6nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**3.74**	**12**	P	**Pn**	**06 38 35.5**	**+1.8**
PCBR				S	**Sn**	**06 39 15.9**	**-0.7**
	comp=N,2.2nm,0.4s						
PCBR	**Castelo Branco**	**3.74**	**12**	*e*Pn	**Pn**	**06 38 35.5**	**+1.8**
PCBR				*e*Sn	**Sn**	**06 39 15.9**	**-0.7**
PCBR				A	A	06 39 17.9	
	comp=N,4.4nm,0.4s						
PCAS	**Casmilo, Conde**	**3.86**	**0**	S	**Sn**	**06 39 13.7**	**-6.0**
	comp=N,3.6nm,0.8s						
PCAS	**Casmilo, Conde**	**3.86**	**0**	*e*Sn	**Sn**	**06 39 13.7**	**-6.0**
PCAS				A	A	06 39 15.0	
	comp=N,3.6nm,0.8s						
ELGU	**Los Guajares,**	**3.99**	**79**	S	**Sn**	**06 39 23.1**	**+0.3**
	comp=N,1.8nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**4.20**	**74**	S	**Sn**	**06 39 28.9**	**+0.9**
	comp=N,2.5nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**4.28**	**10**	P	**Pn**	**06 38 43.5**	**+2.3**
MTE				S	**Sn**	**06 39 29.1**	**-0.9**
	comp=N,2.5nm,0.3s						
MTE	**Manteigas**	**4.28**	**10**	*e*Pn	**Pn**	**06 38 43.5**	**+2.3**
MTE				*e*Sn	**Sn**	**06 39 29.1**	**-0.9**
MTE				A	A	06 39 31.1	
	comp=N,4.9nm,0.3s						
MD31	**MD31**	**4.53**	**136**	P	**Pn**	**06 38 45.2**	**+0.6**
PVIS	**Viseu**	**4.55**	**6**	S	**Sn**	**06 39 36.7**	**0.0**
	comp=N,1.3nm,0.1s						
PVIS	**Viseu**	**4.55**	**6**	*e*Sn	**Sn**	**06 39 36.7**	**0.0**
PVIS				A	A	06 39 38.1	
	comp=N,2.6nm,0.1s						
EQES	**Quesada**	**4.64**	**68**	S	**Sn**	**06 39 39.2**	**+0.2**
	comp=N,0.8nm,0.3s,SNR=7.9						
MDT	**Midelt**	**4.65**	**135**	P	**Pn**	**06 38 47.2**	**+0.8**
PAB	**San Pablo**	**4.70**	**43**	P	**Pn**	**06 38 49.0**	**+2.0**
	comp=N,0.2nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**06 39 37.0**	**-3.4**
	comp=N,0.9nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**5.00**	**44**	P	**Pn**	**06 38 52.8**	**+1.7**
	comp=N,1.1nm,0.1s,baz=230,slow=13,SNR=4.7						
ESDC				S	**Sn**	**06 39 43.7**	**-4.2**
	comp=N,1.1nm,0.3s,baz=228,slow=23,SNR=7.9						
MVO	**Moncorvo**	**5.11**	**13**	S	**Sn**	**06 39 49.5**	**-0.9**
	comp=N,6.3nm,0.4s,SNR=7.9						
MVO	**Moncorvo**	**5.11**	**13**	*e*Sn	**Sn**	**06 39 48.8**	**-1.6**
SESP	**Santiago Espad**	**5.14**	**66**	S	**Sn**	**06 39 49.0**	**-2.3**
	comp=N,1.2nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.21**	**6**	S	**Sn**	**06 39 51.6**	**-1.5**
	comp=N,2.0nm,0.9s						
POLO	**Lamas de Olo**	**5.21**	**6**	*e*Sn	**Sn**	**06 39 51.6**	**-1.5**
POLO				A	A	06 39 52.9	
	comp=N,2.0nm,0.9s						
OUZM	**OUZ**	**5.46**	**164**	P	**Pn**	**06 38 58.5**	**+1.0**
ELOB	**Lobios**	**5.69**	**3**	P	**Pn**	**06 39 02.2**	**+1.7**
	comp=N,0.5nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**06 40 02.0**	**-2.7**
	comp=N,1.2nm,0.2s,SNR=7.5						
PGAV	**Gavieira, Arco**	**5.78**	**2**	P	**Pn**	**06 39 04.1**	**+2.3**
PGAV				S	**Sn**	**06 40 04.7**	**-2.3**
PGAV	**Gavieira, Arco**	**5.78**	**2**	*e*Pn	**Pn**	**06 39 04.1**	**+2.3**
PGAV				*e*Sn	**Sn**	**06 40 04.7**	**-2.3**
ECAL	**Calabor**	**5.91**	**13**	S	**Sn**	**06 40 09.0**	**-1.3**
	comp=N,2.8nm,0.3s,SNR=7.9						
TZRR	**Tazzarine**	**5.92**	**155**	P	Pn	06 39 03.7	-0.1
ETOB	**Tobarra**	**6.06**	**64**	P	**Pn**	**06 39 07.0**	**+1.3**
	comp=N,0.2nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**06 40 11.7**	**-2.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
ETOR	**Torete**	**6.85**	**46**	P	**Pn**	**06 39 18.8**	**+2.2**
	comp=N,2.6nm,0.1s,SNR=7.9						
ETOR				S	**Sn**	**06 40 29.7**	**-3.8**
	comp=N,1.7nm,0.2s,SNR=7.9						

IDC 21 06:44:27.5±3.6, 12°.20S×73°.98W, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.5/21, mbtmpg3.5/3, ML3.8/1, Error ellipse: s-maj=154.0km s-min=31.2km az=38.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**6.98**	**126**	Pn	Pn	06 46 11.6	-0.1
	0.9nm,0.3s,baz=310,slow=10.0,SNR=12						
TXAR	**Lajitas Array**	**50.25**	**326**	P	P	06 53 25.7	-0.1
	0.1nm,0.5s,baz=136,slow=9.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**79.16**	**74**	P	P	06 56 34.9	+0.1
	1.4nm,0.8s,baz=261,slow=4.9,SNR=5.8						

*SKO **21** 06:44:51.0,41°.49N×20°.77E, h15km*
*TIR **21** 06:44:50.6,41°.47N×20°.77E, h6km±3km, Md2.7, Ml2.1*
*BEO **21** 06:44:53.5±0.5,41°.53N×20°.85E, h0km, ML2.0/7*

ISC 21 06:44:51.6±1.1, 41°.49N±0°.02×20°.78E±0°.02, h1km±12km, n20, σ1s04/36, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.32**	**308**	P	**Pg**	**06 44 57.2**	**-0.6**
	baz=312						
PHP				S	**Sg**	**06 45 02.2**	**+0.2**
	baz=312						
OHR	**Ohrid**	**0.37**	**177**	*i* Pg	**Pg**	**06 44 59.0**	**+0.2**
OHR				*i* Sg	**Sg**	**06 45 04.6**	**+0.9**
OHR				*e*Lg	Lg	06 45 05.3	
	comp=N,126nm,1.0s						
OHR				*e*Lg	Lg	06 45 06.2	
	comp=E,156nm,0.6s						
SKO	**Skopje**	**0.69**	**45**	*e*Pg	**Pg**	**06 45 04.7**	**-0.3**
SKO				*e*Sg	**Sg**	**06 45 13.9**	**-0.1**
SKO	**Skopje**	**0.69**	**45**	*i* Pg	**Pg**	**06 45 05.2**	**+0.2**
SKO				*i* Sg	**Sg**	**06 45 14.2**	**+0.2**
TIR	**Tirane**	**0.70**	**259**	*e*Pg	**Pb**	**06 45 07.1**	**+0.5**
TIR				*e*Sg	**Sb**	**06 45 17.1**	**+0.4**
TIR	**Tirane**	**0.70**	**259**	P	**Pg**	**06 45 04.4**	**-0.6**
	baz=260						
TIR				S	**Sg**	**06 45 14.6**	**+0.5**
	baz=260						
FNA	**Florina**	**0.83**	**147**	P	**Pg**	**06 45 07.2**	**-0.5**
	baz=145						
FNA				S	**Sg**	**06 45 19.3**	**+0.9**
	baz=145						
PUK	**Puka**	**0.86**	**310**	P	**Pg**	**06 45 07.3**	**-0.9**
	baz=312						
PUK				S	**Sb**	**06 45 21.0**	**-0.6**
	baz=312						
PUK				AMP			
	comp=N,0.3nm,0.4s,baz=312						
BCI	**Bajram Curri**	**1.03**	**329**	P	**Pg**	**06 45 11.3**	**-0.1**
	baz=331						
STIP	**Stip**	**1.08**	**78**	*i* Pg	**Pn**	**06 45 15.1**	**+1.2**
LSK	**Leskovik**	**1.34**	**186**	P	**Pn**	**06 45 16.9**	**-0.6**
	baz=186						
PDG	**Podgorica**	**1.48**	**310**	*e*Pg	**Pg**	**06 45 20.1**	**+0.2**
PDG				*e*Sg	**Sg**	**06 45 41.1**	**+2.0**
BOSS	**Bosilegrad**	**1.62**	**51**	*e*Pg	**Pb**	**06 45 21.8**	**-0.6**
BOSS				*e*Sg	**Sb**	**06 45 42.9**	**-0.4**
SRN	**Sarande**	**1.71**	**200**	P	**Pb**	**06 45 22.7**	**-1.1**
	baz=201						
SRN				S	**Sg**	**06 45 47.0**	**+0.5**
	baz=201						
SJES	**Sjenica**	**1.87**	**342**	*e*Pg	**Pg**	**06 45 27.9**	**+0.4**
SJES				*e*Sg	**Sg**	**06 45 51.9**	**+0.1**
IVAS	**Ivanjica**	**2.14**	**348**	*e*Pg	**Pb**	**06 45 30.8**	**-0.4**
IVAS				*e*Sg	**Sg**	**06 45 59.6**	**-0.8**
TREB	**Trebinje**	**2.19**	**305**	*e*Pn	**Pb**	**06 45 31.4**	**-0.6**
TREB				*e*Sn	**Sb**	**06 46 00.5**	**+1.0**
ZAPS	**Zavoj**	**2.26**	**37**	*e*Pg	**Pb**	**06 45 32.7**	**-0.5**
STON	**Ston**	**2.67**	**302**	*e*Pn	**Pn**	**06 45 36.9**	**+1.1**
STON				Sn	**Sn**	**06 46 09.2**	**+0.5**
LSTV	**Lastovo**	**3.16**	**295**	*e*Pn	**Pn**	**06 45 43.7**	**+1.2**
LSTV				Sn	**Sb**	**06 46 23.5**	**-4.1**

ATH 21 06:46:08.7, 38°.23N×20°.43E, h11km±2km, ML1.6/1, Error ellipse: s-maj=2.5km s-min=1.3km az=230.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**352**	P	Pg	06 46 10.8	+0.1
KEF4				S	Sg	06 46 12.4	+0.2
KEF5	**Kardakata, Kep**	**0.06**	**34**	P	Pg	06 46 10.9	-0.1
KEF5				S	Sg	06 46 12.4	-0.3
KEF3	**Kipouria, Keph**	**0.07**	**246**	P	Pg	06 46 11.1	0.0
KEF3				S	Sg	06 46 12.7	-0.2
VLS	**Valsamata**	**0.14**	**113**	P	Pg	06 46 12.0	0.0
VLS				S	Sg	06 46 14.5	+0.1
VLS				AML	AML	06 46 14.8	
	comp=E,1143μm,0.1s						
VLS				AML	AML	06 46 14.8	
	comp=N,386μm,0.1s						
FSK	**Fiskardo**	**0.25**	**25**	P	Pg	06 46 13.7	-0.2
FSK				S	Sg	06 46 17.7	+0.3
EVGI	**Lefkada island**	**0.43**	**25**	P	Pg	06 46 17.0	-0.2
EVGI				S	Sg	06 46 23.7	+0.8

*IDC **21** 07:35:12.4±2.9,53°.73N×91°.38E, h0km, mb1 3.6/3, mb1mx3.2/64, mbtmpg3.6/3, ML3.0/3, Error ellipse: s-maj=32.4km s-min=24.7km az=11.0*
*NNC **21** 07:35:12.3±9.1,53°.56N×91°.11E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=72.6km s-min=63.2km az=15.0, Suspected Mining explosion.*

ISC 21 07:35:16.4±4.1, 53°.7N±0°.1×90°.8E±0°.2, h0km, n9, σ1s58/10, 3C-5D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.52**	**276**	⇓Pg	**Pb**	**07 36 18.1**	**-1.4**
	4.1nm,0.8s						
ZAA0				⇑Lg	Lg	07 37 09.9	
	16nm,0.8s						
ZALV	**Zalesovo Beam**	**3.52**	**276**	Pn	**Pn**	**07 36 13.9**	**+1.6**
	0.6nm,0.3s,baz=90,slow=13,SNR=3.7						
ZALV				Lg	Lg	07 37 08.7	
	4.5nm,0.3s,baz=90,slow=26,SNR=9.4						
KURK	**Kurchatov**	**8.04**	**253**	⇓Pn	**Pn**	**07 37 13.3**	**-1.0**
	4.8nm,0.9s						
KURK				⇑Sn	**Sn**	**07 38 48.0**	**+2.2**
	13nm,0.9s						
KURK				⇓Lg	Lg	07 39 33.9	
	48nm,1.0s						
TLY	**Talaya**	**8.09**	**99**	Lg	Lg	07 39 16.7	
	0.0nm,0.3s,baz=216,slow=21,SNR=5.8						
KURBB	**Kurchatov Arra**	**8.13**	**252**	Pn	**Pn**	**07 37 15.9**	**+0.3**
	0.5nm,0.3s

ISC 21 07:37:21.6±1.7,**5°9N**±0°3×**127°0E**±0°3,**h10**km,**n6,σ0°09**/5, **mb3.4**/4,**1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.24**	**301**	*e*P	**Pg**	**07 38 04.6**	**0.0**
WRA	**Warramunga Arr**	**26.63**	**164**	P	**P**	**07 43 00.7**	**+0.1**
	0.2nm,0.4s,baz=343,slow=10,SNR=6.8						
ASAR	**Alice Springs**	**30.10**	**167**	P	**P**	**07 43 31.5**	**0.0**
	0.1nm,0.4s,baz=343,slow=8.7,SNR=1.8						
MKAR	**Makanchi Array**	**56.00**	**324**	P	**P**	**07 47 00.4**	**0.0**
	0.2nm,0.3s,baz=120,slow=7.1,SNR=6.2						
YAK	**Yakutsk**	**56.09**	**2**	LR	LR	08 11 50.4	
	comp=Z,23nm,20.4s,baz=113,slow=37						
KURBB	**Kurchatov Array**	**60.13**	**327**	P	**P**	**07 47 29.3**	**0.0**
	0.3nm,0.3s,baz=123,slow=7.2,SNR=3.7						

*ATH **21** 07:39:28.8,38°.39N×20°.45E,h14km±2km,ML2.5/6,Error ellipse: s-maj=2.5km s-min=0.7km az=253.0*
*THE **21** 07:39:28.9,38°.39N×20°.46E,h13km,ML2.6/8,Error ellipse: s-maj=1.0km s-min=0.3km az=277.0*

ISC 21 07:39:28.1±0.8,**38°40N**±0°02×**20°41E**±0°03,**h17**km±5km, **n34,σ0°64**/61,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF5	**Kardakata, Kep**	**0.13**	**159**	P	**Pg**	**07 39 31.9**	**0.0**
KEF5				S	**Sg**	**07 39 34.1**	**-0.4**
KEF5	**Kardakata, Kep**	**0.13**	**159**	P	**Pg**	**07 39 31.9**	**0.0**
KEF5				S	**Sg**	**07 39 34.2**	**-0.3**
	11μm,0.2s						
FSK	**Fiskardo**	**0.14**	**63**	P	**Pg**	**07 39 31.7**	**-0.3**
FSK				AML	AML	07 39 33.9	
	comp=N,5281μm,0.3s						
FSK				S	**Sg**	**07 39 33.9**	**-0.7**
FSK				AML	AML	07 39 34.2	
	comp=E,15190μm,0.3s						
FSK	**Fiskardo**	**0.14**	**63**	P	**Pg**	**07 39 31.7**	**-0.3**
FSK				S	**Sg**	**07 39 34.0**	**-0.7**
	comp=E,5μm,0.3s						
KEF4	**Livadi, Kephal**	**0.14**	**175**	P	**Pg**	**07 39 32.3**	**+0.2**
KEF4				S	**Sg**	**07 39 35.2**	**+0.5**
KEF4	**Livadi, Kephal**	**0.14**	**175**	P	**Pg**	**07 39 32.3**	**+0.2**
KEF4				S	**Sg**	**07 39 35.0**	**+0.3**
DMLN	**Damoulianata-K**	**0.16**	**190**	P	**Pg**	**07 39 32.7**	**+0.3**
LXRA	**Lixouri, Kepha**	**0.20**	**174**	P	**Pg**	**07 39 33.4**	**+0.5**
LXRA				S	**Sb**	**07 39 37.0**	**+0.3**
KEF3	**Kipouria, Keph**	**0.20**	**194**	P	**Pg**	**07 39 33.0**	**+0.1**
KEF3				S	**Sg**	**07 39 36.2**	**+0.1**
KEF3	**Kipouria, Keph**	**0.20**	**194**	P	**Pg**	**07 39 32.9**	**0.0**
ARGA	**Argostoli. Kep**	**0.23**	**166**	P	**Pg**	**07 39 33.6**	**+0.2**
ARGA				S	**Sg**	**07 39 37.3**	**+0.4**
VLS	**Valsamata**	**0.26**	**147**	P	**Pg**	**07 39 33.8**	**-0.1**
VLS				S	**Sg**	**07 39 37.8**	**-0.1**
VLS				AML	AML	07 39 37.9	
	comp=E,5363μm,0.2s						
VLS				AML	AML	07 39 39.0	
	comp=N,4252μm,0.2s						
VLS	**Valsamata**	**0.26**	**147**	P	**Pg**	**07 39 33.8**	**-0.1**
VLS				S	**Sg**	**07 39 37.8**	**-0.1**
	comp=N,2μm,0.2s						
EVGI	**Lefkada island**	**0.29**	**41**	P	**Pg**	**07 39 34.8**	**+0.2**
EVGI				S	**Sg**	**07 39 39.3**	**+0.5**
EVGI	**Lefkada island**	**0.29**	**41**	P	**Pg**	**07 39 34.7**	**+0.2**
EVGI				S	**Sg**	**07 39 39.4**	**+0.5**
PSDA	**Pessada-Kefalo**	**0.32**	**154**	P	**Pg**	**07 39 34.9**	**0.0**
PSDA				S	**Sb**	**07 39 39.9**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.32**	**154**	P	**Pg**	**07 39 34.8**	**0.0**
PSDA				S	**Sb**	**07 39 39.9**	**-0.2**
LKD2	**Lefkada island**	**0.44**	**26**	P	**Pg**	**07 39 37.2**	**+0.2**
LKD2				S	**Sb**	**07 39 44.0**	**+0.3**
LKD2				AML	AML	07 39 45.4	
	comp=E,781μm,0.4s						
LKD2				AML	AML	07 39 45.8	
	comp=N,653μm,0.2s						
LKD2	**Lefkada island**	**0.44**	**26**	P	**Pg**	**07 39 37.2**	**+0.2**
TSLK	**Tsoukalades, L**	**0.47**	**24**	P	**Pg**	**07 39 38.0**	**+0.5**
TSLK				S	**Sb**	**07 39 45.1**	**+0.5**
TSLK				AML	AML	07 39 47.7	
	comp=N,896μm,0.4s						
TSLK				AML	AML	07 39 48.7	
	comp=E,975μm,0.4s						
TSLK	**Tsoukalades, L**	**0.47**	**24**	P	**Pg**	**07 39 37.9**	**+0.4**
TSLK				S	**Sb**	**07 39 45.1**	**+0.5**
	comp=E,460nm,0.3s						
VLMS	**Volimes, Zakyn**	**0.56**	**159**	P	**Pg**	**07 39 39.1**	**-0.1**
VLMS				S	**Sb**	**07 39 47.8**	**+0.7**
VLMS				AML	AML	07 39 50.7	
	comp=E,1678μm,0.2s						
VLMS				AML	AML	07 39 51.9	
	comp=N,2128μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.56**	**159**	P	**Pg**	**07 39 39.1**	**-0.1**
VLMS				S	**Sb**	**07 39 47.3**	**+0.2**
	comp=N,952nm,0.2s						
PDO	**Prodromos**	**0.64**	**72**	P	**Pg**	**07 39 40.6**	**-0.2**
PDO				S	**Sb**	**07 39 50.1**	**+0.6**
PDO				AML	AML	07 39 54.2	
	comp=E,877μm,0.6s						
PDO				AML	AML	07 39 54.5	
	comp=N,928μm,0.3s						
PDO	**Prodromos**	**0.64**	**72**	P	**Pg**	**07 39 40.4**	**-0.3**
DRO	**Drossia**	**1.12**	**113**	P	**Pb**	**07 39 49.0**	**0.0**
DRO				S	**Sg**	**07 40 04.0**	**-0.4**
	comp=N,225nm,0.4s						
EFP	**Efpalio**	**1.18**	**88**	P	**Pb**	**07 39 49.7**	**-0.3**
ANX	**Ano Chora**	**1.20**	**80**	P	**Pb**	**07 39 50.1**	**-0.4**
ANX				S	**Sn**	**07 40 06.8**	**+0.6**
	comp=N,410nm,0.5s						
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pn**	**07 39 52.4**	**+0.3**
KLV	**Kalavryta, Ach**	**1.42**	**104**	P	**Pn**	**07 39 53.0**	**-0.2**
KLV				S	**Sn**	**07 40 11.8**	**+0.4**
GUR	**Goura**	**1.59**	**106**	P	**Pn**	**07 39 56.0**	**+0.4**
GUR				S	**Sn**	**07 40 15.6**	**-0.2**
	comp=N,160nm,0.4s						
STON	**Ston**	**4.92**	**336**	Sn	**Sn**	**07 41 35.2**	**-2.5**
LSTV	**Lastovo**	**5.12**	**330**	*e*Pn	**Pn**	**07 40 44.8**	**+0.8**
LSTV				Sn	**Sn**	**07 41 40.1**	**-2.6**
MORI	**Morici**	**6.51**	**328**	*e*Pn	**Pn**	**07 41 04.6**	**+1.5**
MORI				Sn	**Sn**	**07 42 16.2**	**-0.8**

*REY **21** 07:41:44.6,64°.61N×17°.44W,h11km*
*IDC **21** 07:41:46.7±0.7,64°.61N×17°.43W,h0km,mb3.9/11, mb1 4.1/13,mb1mx3.8/48,mbtmp3.9/13,ML3.3/2,MS3.4/15, Ms1 3.4/15,ms1mx3.1/47,Error ellipse: s-maj=23.1km s-min=15.0km az=21.0*
*NEIC **21** 07:41:46.9±2.1,64°.49N±0°.08×17°.7W±0°.1,h13km±4km, mb4.4/27,Error ellipse: s-maj=11.7km s-min=6.7km az=164.0*

ISC 21 07:41:46.4±0.4,**64°61N**±0°02×**17°46W**±0°02,**h10**km,**n112, σ2°36**/109,**mb4.1**/24,**MS3.4**/10,**Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDJK	**Dyngjujokull**	**0.14**	**138**	P	**Pg**	**07 41 47.8**	**-2.0**
	baz=141						
IVON	**Vonarskard**	**0.14**	**296**	P	**Pg**	**07 41 47.7**	**-2.0**
	baz=294						
IDYN	**Dyngjuhals**	**0.18**	**12**	P	**Pg**	**07 41 48.2**	**-2.2**
	baz=10						
IHAM	**Hamarinn**	**0.20**	**230**	P	**Pg**	**07 41 48.9**	**-1.9**
	baz=231						
IGRF	**Grimsfjall**	**0.22**	**158**	P	**Pg**	**07 41 49.0**	**-2.0**
	baz=160						
IKVE	**Kverkfjoll**	**0.34**	**78**	P	**Pg**	**07 41 51.3**	**-2.0**
	baz=79						
IVOT	**Vottur**	**0.36**	**161**	P	**Pg**	**07 41 51.3**	**-2.3**
	baz=162						
ISKR	**Skrokkalda**	**0.40**	**263**	P	**Pg**	**07 41 52.3**	**-2.1**
	baz=263						
IJOK	**Jokulheimar**	**0.45**	**229**	P	**Pg**	**07 41 52.9**	**-2.3**
	baz=229						
IJOK				S	**Sg**	**07 41 59.3**	**-1.7**
	baz=229						
THOR	**Thorvaldshraun**	**0.47**	**46**	P	**Pg**	**07 41 53.2**	**-2.3**
	baz=45						
THOR				S	**Sg**	**07 41 59.6**	**-2.1**
	baz=45						
IKRE	**Kreppuhraun**	**0.49**	**69**	P	**Pg**	**07 41 53.5**	**-2.6**
	baz=69						
IKRE				S	**Sg**	**07 41 59.8**	**-2.7**
	baz=69						
IASK	**Askja**	**0.56**	**38**	P	**Pg**	**07 41 54.6**	**-2.8**
	baz=37						
IIEY	**Innrieyrar**	**0.59**	**210**	P	**Pg**	**07 41 55.4**	**-2.5**
	baz=210						
IMKO	**Mokollar**	**0.60**	**52**	P	**Pg**	**07 41 55.3**	**-2.9**
	baz=52						
IKSK	**Karasker**	**0.62**	**136**	P	**Pg**	**07 41 55.2**	**-3.2**
	baz=137						
IKAL	**Kalfafell**	**0.67**	**189**	P	**Pg**	**07 41 56.6**	**-2.8**
	baz=189						
IKAL				S	**Sg**	**07 42 06.7**	**-1.5**
	baz=189						
ISVA	**Svartarkot**	**0.73**	**7**	P	**Pg**	**07 41 57.4**	**-3.2**
	baz=6.2						
IVAT	**Vatnsfell**	**0.76**	**237**	P	**Pg**	**07 41 58.3**	**-2.8**
	baz=237						
IVSH	**V-Sauoahnukur**	**0.77**	**74**	P	**Pg**	**07 41 58.1**	**-3.2**
	baz=74						
IFAG	**Fagurholsmyri**	**0.82**	**154**	P	**Pg**	**07 41 58.8**	**-3.3**
	baz=155						
IADA	**Aoalbol**	**0.90**	**62**	P	**Pg**	**07 41 59.8**	**-4.0**
	baz=62						
IHVE	**Hveravellir**	**0.94**	**287**	P	**Pg**	**07 42 01.0**	**-3.6**
	baz=287						
ISNB	**Snabyli**	**1.02**	**211**	P	**Pg**	**07 42 02.6**	**-3.4**
	baz=211						
IMEL	**Melhnausar**	**1.02**	**19**	P	**Pg**	**07 42 02.4**	**-3.7**
	baz=19						
IREN	**Reynihlio**	**1.07**	**12**	P	**Pg**	**07 42 02.9**	**-4.0**
	baz=12						
IRJU	**Rjupnafell**	**1.13**	**209**	P	**Pb**	**07 42 04.6**	**-3.4**
	baz=209						
IKVO	**Krokottuvotn**	**1.14**	**12**	P	**Pb**	**07 42 04.5**	**-3.6**
	baz=12						
IGRS	**Grimsstaoir**	**1.18**	**28**	P	**Pb**	**07 42 04.8**	**-4.0**
	baz=28						
IMJO	**Mjoaskard**	**1.18**	**236**	P	**Pb**	**07 42 05.5**	**-3.4**
	baz=236						
IGYG	**Gygjarholskot**	**1.24**	**256**	P	**Pn**	**07 42 06.0**	**-3.7**
	baz=256						
IHAU	**Haukadalur**	**1.27**	**241**	P	**Pn**	**07 42 06.7**	**-3.5**
	baz=241						
IGHA	**Grjothals**	**1.28**	**15**	P	**Pn**	**07 42 06.4**	**-4.0**
	baz=15						
IGRA	**Granastaoir**	**1.31**	**358**	P	**Pn**	**07 42 06.8**	**-4.0**
	baz=358						
IALF	**Alftagrof**	**1.36**	**215**	P	**Pn**	**07 42 08.2**	**-3.2**
	baz=215						
IDIM	**Dimmadalss**	**1.38**	**9**	P	**Pn**	**07 42 08.2**	**-3.5**
	baz=8.8						
IHLA	**Hella**	**1.40**	**344**	P	**Pn**	**07 42 08.4**	**-3.5**
	baz=344						
IMID	**Miomork**	**1.43**	**229**	P	**Pn**	**07 42 09.5**	**-2.8**
	baz=229						
ISAU	**Saurbar**	**1.43**	**246**	P	**Pn**	**07 42 09.0**	**-3.4**
	baz=246						
IHED	**Heoinshofoi**	**1.48**	**2**	P	**Pn**	**07 42 09.5**	**-3.6**
	baz=2.1						
IBRE	**Brettingsstaoi**	**1.53**	**353**	P	**Pn**	**07 42 10.3**	**-3.4**
	baz=353						
IASM	**Asmuli**	**1.59**	**242**	P	**Pn**	**07 42 11.8**	**-2.7**
	baz=242						
ISIG	**Siglufjorour**	**1.65**	**339**	P	**Pn**	**07 42 12.3**	**-3.0**
	baz=339						
ISOL	**Solvholt**	**1.67**	**247**	P	**Pn**	**07 42 13.0**	**-2.6**
	baz=247						
BORG	**Borgarnes**	**1.67**	**276**		**Pn**	**07 42 13.7**	**-1.9**
BORG				Sn	**Sn**	**07 42 33.5**	**-3.6**
IKRO	**Krokur**	**1.68**	**254**	P	**Pn**	**07 42 12.8**	**-2.9**
	baz=254						
IHEI	**Heioarbar**	**1.69**	**258**	P	**Pn**	**07 42 13.1**	**-2.9**
	baz=258						
IHRN	**Hraun**	**1.88**	**325**	P	**Pn**	**07 42 15.5**	**-2.9**
	baz=324						
SCO	**Scoresbysund**	**6.14**	**346**		**Pn**	**07 43 17.3**	**+0.2**
SCO				Sn	**Sn**	**07 44 28.0**	**+0.8**
SCO	**Scoresbysund**	**6.14**	**346**	*e*	Pn	07 43 07.4	-10
	baz=167,slow=6.5						
SCO				*i* P	**Pn**	**07 43 17.0**	**0.0**
SCO				*i* S	**Sn**	**07 44 31.7**	**+4.5**
SCO				IAML		07 44 41.9	
	comp=Z,1.7nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.71**	**136**	Pn	**Pn**	**07 44 33.0**	**-0.3**
	baz=321,slow=13,SNR=8.6						
ESK	**Eskdalemuir**	**11.71**	**136**	Pn	**Pn**	**07 44 32.8**	**-0.5**
DAG	**Danmarks Havn**	**12.23**	**359**	*i* P	Pn	07 44 45.1	+4.8
DAG	**Danmarks Havn**	**12.23**	**359**	*e*P	Pn	07 44 45.1	+4.8
NC204	**NORSAR Array S**	**13.21**	**92**	Pn	**Pn**	**07 44 54.8**	**+0.9**
NOA	**NORSAR Array B**	**13.51**	**92**	Pn	**Pn**	**07 44 55.9**	**-2.0**
	comp=Z,0.0nm,0.3s,baz=298,slow=13,SNR=2.7						
NOA				LR	LR	07 50 14.3	
	comp=Z,49nm,18.6s,baz=300,slow=38						
SFJD	**Kangerlussuaq**	**13.71**	**295**	LR	LR	07 49 49.3	
	comp=Z,188nm,19.7s,baz=70,slow=35						
HFS	**Hagfors**	**15.03**	**93**	Pn	**P**	**07 45 24.3**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=353,slow=10,SNR=5.8						
HFS				LR	LR	07 51 00.9	
	comp=Z,79nm,18.6s,baz=258,slow=37						
ARCES	**ARCESS Array B**	**17.14**	**54**	LR	LR	07 51 34.9	
	comp=Z,45nm,19.3s,baz=305,slow=34						
KEV	**Kevo**	**17.64**	**54**	P	**P**	**07 45 52.7**	**-0.1**
KEV				IAmb	IAmb	07 46 17.5	
	comp=Z,36nm,1.4s						
FINES	**FINESS Array B**	**19.70**	**79**	LR	LR	07 53 30.4	
	comp=Z,44nm,21.4s,baz=306,slow=36						
FINES	**FINESS Array B**	**19.70**	**79**	P	**P**	**07 46 13.6**	**-1.8**
ECH	**Echery**	**21.10**	**129**	P	**P**	**07 46 30.3**	**-0.5**
GRA1	**Grafenberg Arr**	**21.29**	**121**	P	**P**	**07 46 33.1**	**+0.3**
GRA1				IAmb	IAmb	07 46 36.7	
	comp=Z,37nm,1.5s						
BRG	**Berggiesshubel**	**21.37**	**115**	*e*P	**P**	**07 46 36.6**	**+3.0**
	comp=Z,14nm,1.1s						
BRG				S	Sn	07 50 38.0	-0.2
	comp=N,112nm,15.5s						
	comp=E,149nm,11.8s						
	comp=Z,182nm,15.8s						
BFO	**Black Forest**	**21.40**	**127**	P	**P**	**07 46 34.5**	**+0.5**
BFO				IAmb	IAmb	07 46 38.1	
	comp=Z,8.9nm,1.0s						
FRB	**Frobisher Bay**	**21.79**	**291**	LR	LR	07 54 48.9	
	comp=Z,138nm,18.4s,baz=70,slow=36						
KHC	**Kasperske Hory**	**22.63**	**118**	P	**P**	**07 46 48.4**	**+1.2**
GERES	**GERESS Array B**	**22.91**	**119**	P	**P**	**07 46 50.4**	**+0.2**
DAVOX	**Davos/Dischmat**	**23.27**	**127**	LR	LR	07 57 10.8	
	comp=Z,108nm,18.4s,baz=267,slow=40						
VRAC	**Vranov**	**23.66**	**11**	LR	LR	07 57 29.8	
	comp=Z,95nm,18.3s,baz=332,slow=40						
MORC	**Moravsky Berou**	**23.66**	**112**	P	**P**	**07 46 58.5**	**+0.8**
MORC				IAmb	IAmb	07 47 10.2	
	comp=Z,9.1nm,1.4s						
CTI	**Castel Tesino**	**24.52**	**125**	P	**P**	**07 47 04.9**	**-0.9**
CTI				IAmb	IAmb	07 47 20.2	
	comp=Z,5.7nm,1.0s						
CIMO	**Cimolais**	**24.57**	**124**	P	**P**	**07 47 05.9**	**-0.3**
CIMO				IAmb	IAmb	07 47 13.5	
	comp=Z,4.7nm,0.9s						
SCHQ	**Schefferville**	**26.06**	**272**	P	**P**	**07 47 22.6**	**+3.1**
	comp=Z,5.3nm,0.8s,baz=45,slow=13,SNR=3.7						
SCHQ	**Schefferville**	**26.06**	**272**	P	**P**	**07 47 19.1**	**-0.4**
SCHQ				IAmb	IAmb	07 47 24.4	
	comp=Z,15nm,1.1s						
PSZ	**Piszkesteto**	**26.08**	**112**	P	**P**	**07 47 20.5**	**+0.6**
PSZ				IAmb	IAmb	07 47 26.2	
	comp=Z,12nm,1.2s						
ESDC	**Sonseca Array**	**26.20**	**156**	P	**P**	**07 47 22.4**	**+1.5**
	comp=Z,1.6nm,0.9s,baz=352,slow=9.9,SNR=5.6						
ESDC				LR	LR	07 57 28.8	
	comp=Z,96nm,18.0s,baz=325,slow=36						
RES	**Resolute Bay**	**26.52**	**324**	LR	LR	07 56 50.0	
	comp=Z,69nm,18.8s,baz=252,slow=34						
NRIK	**Noril'sk**	**36.49**	**35**	P	**P**	**07 48 53.2**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=308,slow=5.6,SNR=4.3						
BRTR	**Keskin Array B**	**38.45**	**105**	P	**P**	**07 49 09.3**	**+1.1**
	comp=Z,1.4nm,0.8s,baz=298,slow=2.7,SNR=5.3						
KBZ	**Khabaz**	**39.09**	**92**	LR	LR	08 05 16.6	
	comp=Z,40nm,19.7s,baz=8.5,slow=36						
YKA	**Yellowknife Ar**	**39.26**	**313**	LR	LR	08 05 04.4	
	comp=Z,55nm,18.4s,baz=0.0,slow=36						
AKTO	**Aktyubinsk**	**40.29**	**73**	P	**P**	**07 49 26.1**	**+2.9**
	comp=Z,0.7nm,0.3s,baz=271,slow=9.5,SNR=5.2						
AKTO				LR	LR	08 05 26.8	
	comp=Z,41nm,18.6s,baz=336,slow=35						
ABKAR	**Akbulak array**	**41.99**	**73**	P	**P**	**07 49 37.5**	**+0.2**
BRVK	**Borovoye**	**43.14**	**62**	P	**P**	**07 49 47.5**	**+1.0**
MARD	**Mardin**	**43.48**	**100**	P	**P**	**07 49 49.5**	**-0.1**
RDOG	**Red Dog Mine**	**45.36**	**343**	P	**P**	**07 50 05.6**	**+1.5**
ILAR	**Eielson Array**	**45.74**	**332**	P	**P**	**07 50 07.3**	**+0.2**
	comp=Z,2.2nm,1.1s,baz=19,slow=6.8,SNR=5.3						
ILAR				PcP	**PcP**	**07 51 46.1**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=16,slow=4.7,SNR=7.5						
ILAR	**Eielson Array**	**45.74**	**332**	P	**P**	**07 50 08.9**	**+1.7**
KURK	**Kurchatov**	**48.13**	**58**	P	**P**	**07 50 26.9**	**+1.0**
KURK				IAmb	IAmb	07 50 30.4	
	comp=Z,5.7nm,1.1s						
JIS	**Juneau Island**	**48.48**	**321**	P	**P**	**07 50 29.4**	**+0.8**
EGMT	**Eagleton**	**48.92**	**297**	P	**P**	**07 50 32.3**	**+0.1**
WRAK	**Wrangell Islan**	**49.51**	**318**	P	**P**	**07 50 38.0**	**+1.5**
RLMT	**Red Lodge**	**51.13**	**295**	P	**P**	**07 50 50.2**	**+1.0**
RLMT				IAmb	IAmb	07 51 18.9	
	comp=Z,5.4nm,0.7s						
KKAR	**Karatay Array**	**51.28**	**70**	P	**P**	**07 50 51.6**	**+1.5**
KKAR				IAmb	IAmb	07 50 55.6	
	comp=Z,7.4nm,1.4s						
MK31	**Makanchi Array**	**52.74**	**58**	P	**P**	**07 51 02.3**	**+1.4**
MKAR	**Makanchi Array**	**52.74**	**58**	P	**P**	**07 51 03.2**	**+2.3**
	comp=Z,1.8nm,1.1s,baz=305,slow=6.3,SNR=7.1						
MKAR	**Makanchi Array**	**52.74**	**58**	P	**P**	**07 51 01.8**	**+0.9**
PHWY	**Pilot Hill**	**52.80**	**289**	P	**P**	**07 51 02.7**	**+0.9**
PHWY				IAmb	IAmb	07 51 13.1	
	comp=Z,4.8nm,1.3s						
TORD	**Torodi Ar. Bea**	**53.08**	**156**	P	**P**	**07 51 05.7**	**+2.0**
	comp=Z,1.2nm,0.8s,baz=340,slow=7.7,SNR=6.0						
PD31	**Pinedale Array**	**53.22**	**293**	P	**P**	**07 51 05.5**	**+0.8**
PDAR	**Pinedale Array**	**53.22**	**293**	P	**P**	**07 51 05.2**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=57,slow=5.9,SNR=12						
PDAR				LR	LR	08 13 13.7	
	comp=Z,55nm,18.2s,baz=356,slow=36						
PDAR	**Pinedale Array**	**53.22**	**293**	P	**P**	**07 51 05.8**	**+1.0**
BTK	**Batken**	**53.96**	**72**	P	**P**	**07 51 11.0**	**+1.0**
BTK				IAmb	IAmb	07 51 13.9	
	comp=Z,4.4nm,0.9s						
NATX	**Nacogdoches**	**56.36**	**274**	P	**P**	**07 51 27.9**	**+0.5**
PV12	**Saucer Basin,**	**56.69**	**290**	P	**P**	**07 51 28.8**	**-1.1**
PV12				IAmb	IAmb	07 51 33.0	
	comp=Z,7.8nm,1.3s						
MSU	**Marysvale**	**57.88**	**293**	P	**P**	**07 51 36.8**	**-1.5**
BANI	**BANI**	**58.00**	**243**	P	**P**	**07 51 37.4**	**-1.8**
NVAR	**Mina Array Bea**	**60.34**	**297**	P	**P**	**07 51 58.6**	**+3.3**
	comp=Z,0.2nm,0.4s,baz=70,slow=4.9,SNR=3.9						
NVAR				LR	LR	08 17 54.7	
	comp=Z,73nm,18.2s,baz=42,slow=36						
NVAR	**Mina Array Bea**	**60.34**	**297**	P	**P**	**07 51 55.4**	**0.0**
TXAR	**Lajitas Array**	**62.31**	**280**	P	**P**	**07 52 11.2**	**+2.5**
	comp=Z,0.8nm,0.9s,baz=42,slow=4.4,SNR=7.6						
TXAR	**Lajitas Array**	**62.31**	**280**	P	**P**	**07 52 09.2**	**+0.5**

*IDC **21** 07:51:49.1±0.8,36°.91N×144°.39E,h0km,mb3.8/10, mb1 4.1/16,mb1mx3.9/52,mbtmp3.9/16,ML3.6/6,MS3.0/5, Ms1 3.0/5,ms1mx2.6/38,Error ellipse: s-maj=20.1km s-min=16.8km az=101.0*
*NEIC **21** 07:51:53.7±1.8,37°.09N±0°.07×144°.09E±0°.10,h35km±2km, mb4.1/9,Error ellipse: s-maj=13.6km s-min=12.0km az=125.0*
*NIED **21** 07:51:54.2,37°.10N×143°.97E,h57km,MW3.9,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-5.10; $M_{\theta\theta}$3.08; $M_{\phi\phi}$2.01; $M_{r\theta}$1.52; $M_{\theta\phi}$4.25; $M_{\phi r}$3.63; Fault plane solution: $M_0$7.23000×10^{14} NP1: ϕ_s211.00000°,δ63.00000°,λ-110.00000°. NP2: ϕ_s69.00000°,δ33.00000°,λ-57.00000°.*
*JMA **21** 07:51:54.1±0.2,37°.10N×143°.97E,h57km,M3.9*

ISC 21 07:51:53.6±0.7,**37°09N**±0°05×**144°11E**±0°06,**h35**km,**n75,** σ1°**72**/78,**mb4.0**/14,**MS3.1**/3,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.42**	**301**	P	**Pn**	**07 52 31.0**	**+0.3**
JIKH				*e*S	**Sn**	**07 52 58.3**	**-0.8**
JIO	**Ouri**	**2.57**	**303**	P	**Pn**	**07 52 33.3**	**+0.6**
JIO				*e*S	**Sn**	**07 53 02.1**	**-0.7**
JFK	**Kawauchi**	**2.59**	**277**	P	**Pn**	**07 52 33.2**	**+0.1**
JFK				*e*S	**Sn**	**07 53 02.3**	**-1.1**
JMST	**Minamisoumatoc**	**2.64**	**285**	P	**Pn**	**07 52 33.8**	**+0.1**
JMST				*e*S	**Sn**	**07 53 03.5**	**-0.9**
ONAJ	**Iwakimizuishiy**	**2.65**	**271**	P	**Pn**	**07 52 34.1**	**+0.3**
ONAJ				*e*S	**Sn**	**07 53 03.8**	**-0.9**
JKMT	**Kesennumamotoy**	**2.70**	**310**	P	**Pn**	**07 52 34.8**	**+0.4**
JKMT				*e*S	**Sn**	**07 53 05.1**	**-0.7**
JMM	**Marumori**	**2.75**	**287**		**Pn**	**07 52 35.8**	**+0.7**
JMM				Sn	**Sn**	**07 53 06.6**	**-0.5**
JMK	**Ichinoseki**	**2.94**	**310**	P	**Pn**	**07 52 38.2**	**+0.4**
JMK				*e*S	**Sn**	**07 53 11.3**	**-0.5**
JFT	**Otama**	**3.04**	**279**	P	**Pn**	**07 52 40.3**	**+1.2**
JOM	**Ohasama**	**3.25**	**318**	P	**Pn**	**07 52 42.7**	**+0.7**
JOM				S	**Sn**	**07 53 19.3**	**-0.2**
JYT	**Yasato**	**3.26**	**256**	Pn	**Pn**	**07 52 43.1**	**+0.9**
JYK	**Kaneyama**	**3.48**	**303**	P	**Pn**	**07 52 46.3**	**+1.1**
BSO1	**Boso 1**	**3.52**	**227**	P	**Pn**	**07 52 44.4**	**-0.9**
JRY	**Ryogami san**	**4.33**	**257**	P	**Pn**	**07 52 57.1**	**+0.2**
JRY				*e*S	**Sn**	**07 53 43.5**	**-2.6**
JTM	**Tenmabayashi**	**4

CHTO				IAmb	IAmb	08 00 07.2	
	comp=Z,3.6nm,1.1s						
MK31	**Makanchi Array**	**45.91**	**303**	P	**P**	**08 00 12.8**	**+0.1**
MKAR	**Makanchi Array**	**45.91**	**303**	P	P	08 00 15.8	+3.1
	comp=Z,0.4nm,0.8s,baz=80,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**45.91**	**303**	P	**P**	**08 00 12.6**	**-0.1**
KURBB	**Kurchatov Arra**	**47.66**	**308**	P	P	08 00 30.1	+3.9
	comp=Z,0.6nm,0.5s,baz=83,slow=8.2,SNR=4.3						
DHY	**Denali Highway**	**48.09**	**35**	P	**P**	**08 00 29.6**	**0.0**
DHY				IAmb	IAmb	08 00 46.5	
	comp=Z,3.5nm,1.1s						
ILAR	**Eielson Array**	**48.29**	**32**	P	**P**	**08 00 32.4**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=262,slow=6.2,SNR=12						
ILAR	**Eielson Array**	**48.29**	**32**	P	**P**	**08 00 31.5**	**+0.6**
KKAR	**Karatay Array**	**54.95**	**301**	P	**P**	**08 01 21.9**	**+0.9**
WB0	**Warramunga Arr**	**57.29**	**191**	P	**P**	**08 01 37.7**	**-0.2**
WB2	**Warramunga Arr**	**57.47**	**191**	P	**P**	**08 01 38.8**	**-0.4**
WRA	**Warramunga Arr**	**57.47**	**191**	P	**P**	**08 01 38.8**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=9.5,slow=7.1,SNR=25						
WRA	**Warramunga Arr**	**57.47**	**191**	P	**P**	**08 01 38.2**	**-0.9**
ABKAR	**Akbulak array**	**59.54**	**311**	P	**P**	**08 01 54.1**	**+0.8**
AS31	**Alice Springs**	**61.19**	**191**	P	**P**	**08 02 04.9**	**0.0**
ASAR	**Alice Springs**	**61.19**	**191**	P	**P**	**08 02 04.8**	**0.0**
	comp=Z,0.9nm,0.8s,baz=16,slow=11,SNR=10						
ASAR	**Alice Springs**	**61.19**	**191**	P	**P**	**08 02 04.6**	**-0.2**
RES	**Resolute Bay**	**62.00**	**15**	P	**P**	**08 02 08.7**	**-0.9**
RES				IAmb	IAmb	08 02 37.1	
	comp=Z,1.1nm,0.8s						
FINES	**FINESS Array B**	**69.75**	**333**	LR	LR	08 38 01.0	
	comp=Z,22nm,19.8s,baz=22,slow=40						
NVAR	**Mina Array Bea**	**73.22**	**54**	P	**P**	**08 03 21.3**	**0.0**
	comp=Z,0.6nm,0.6s,baz=290,slow=6.9,SNR=4.5						
NVAR	**Mina Array Bea**	**73.22**	**54**	P	**P**	**08 03 22.1**	**+0.8**
NB2	**NORSAR Subarra**	**74.94**	**338**	P	**P**	**08 03 33.1**	**+2.3**
	comp=Z,0.6nm,0.5s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**74.94**	**338**	P	**P**	**08 03 33.0**	**+2.2**
	comp=Z,0.8nm,0.6s,baz=37,slow=5.9,SNR=4.6						
TXAR	**Lajitas Array**	**88.36**	**54**	P	**P**	**08 04 43.0**	**+0.9**
	comp=Z,0.2nm,0.8s,baz=304,slow=2.0,SNR=3.9						
TXAR	**Lajitas Array**	**88.36**	**54**	P	**P**	**08 04 42.4**	**+0.2**

*IDC **21** 07:53:47.0±16.0, 16.°98S×168.°51E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.7/34, mbtmp3.9/5, ML4.2/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/32, Error ellipse: s-maj=261.5km s-min=54.7km az=67.0*

*NEIC **21** 07:53:59.2±1.6, 17.°62S±0.°06×168.°1E±0.°2, h73km±21km, mb4.3/7, Error ellipse: s-maj=28.2km s-min=8.2km az=83.0*

ISC 21 07:53:54.8±1.8, 17.°55S±0.°07×168.°1E±0.°3, h27km, n18, σ1§66/14, mb4.2/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.26**	**337**			**Pb**	**Sb**	**07 54 35.1**	**+0.1**
SANVU						Sn	Sb	**07 55 01.2**	**-1.3**
DZM	**Mont Dzumac**	**4.77**	**199**	Pn		Pn	**Pn**	**07 55 07.6**	**+2.6**
	8.4nm,0.3s,baz=299,slow=7.8,SNR=93								
DZM						Sn	**Sn**	**07 55 56.4**	**-3.1**
	5.0nm,0.3s,baz=139,slow=24,SNR=6.7								
DZM				LR		LR	LR	07 56 44.7	
	comp=Z,159nm,18.1s,baz=228,slow=33								
HNR	**Honiara**	**11.31**	**314**	LR		LR	LR	08 00 00.8	
	comp=Z,53nm,21.1s,baz=124,slow=33								
LHI	**Lord Howe Isla**	**16.15**	**209**				**P**	**07 57 41.7**	**-1.3**
AFI	**Afiamalu**	**19.70**	**82**	LR		LR	LR	08 04 46.9	
	comp=Z,55nm,20.0s,baz=90,slow=34								
KRVT	**Keravat (AS076**	**20.52**	**308**	LR		LR	LR	08 06 29.0	
	comp=Z,65nm,18.4s,baz=171,slow=37								
CTA	**Charters Tower**	**20.84**	**260**	P		Pn		07 58 35.6	-1.6
	1.9nm,0.6s,baz=90,slow=14,SNR=4.5								
URZ	**Urewera**	**22.09**	**161**	LR		LR	LR	08 05 50.8	
	comp=Z,96nm,19.3s,baz=213,slow=32								
URZ	**Urewera**	**22.09**	**161**	P		**P**	**P**	**07 58 46.7**	**-1.2**
URZ				IAmb		IAmb	IAmb	07 59 06.8	
	comp=Z,33nm,1.3s								
STKA	**Stephens Creek**	**27.90**	**234**	P		**P**	**P**	**07 59 45.5**	**+2.9**
	comp=Z,5.6nm,0.8s,baz=54,slow=9.7,SNR=12								
STKA	**Stephens Creek**	**27.90**	**234**	P		**P**	**P**	**07 59 41.9**	**-0.7**
STKA				IAmb		IAmb	IAmb	07 59 46.3	
	comp=Z,1.1nm,0.7s								
WB0	**Warramunga Arr**	**31.99**	**261**	P		P	**P**	**08 00 19.5**	**+0.4**
WB0				IAmb		IAmb	IAmb	08 00 34.2	
	comp=Z,7.5nm,1.4s								
WB2	**Warramunga Arr**	**32.02**	**260**	P		P	**P**	**08 00 19.6**	**+0.2**
WB2				IAmb		IAmb	IAmb	08 00 29.4	
	comp=Z,6.5nm,1.2s								
WRA	**Warramunga Arr**	**32.04**	**260**	P		P	**P**	**08 00 19.5**	**0.0**
	comp=Z,0.5nm,0.9s,baz=87,slow=8.9,SNR=4.9								
AS31	**Alice Springs**	**32.53**	**253**	P		P	**P**	**08 00 24.1**	**+0.2**
ASAR	**Alice Springs**	**32.53**	**253**	P		P	**P**	**08 00 24.4**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=76,slow=8.6,SNR=11								
FITZ	**Fitzroy Crossi**	**40.37**	**263**	P		P	**P**	**08 01 30.4**	**-0.3**
FITZ				IAmb		IAmb	IAmb	08 01 34.6	
	comp=Z,7.2nm,1.4s								
YNE	**Yellowstone No**	**96.64**	**45**			pP		08 07 42.1	+11

IDC 21 08:28:34.2±2.9, 33.°65S×179.°26W, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.6/27, mbtmp3.5/3, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/16, Error ellipse: s-maj=69.2km s-min=44.7km az=121.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**5.46**	**212**	Pn		Pn		08 29 57.0	+0.2
	2.0nm,0.3s,baz=252,slow=5.4,SNR=19								
URZ				Sn		Sn		08 30 56.3	-4.0
	1.9nm,0.3s,baz=34,slow=23,SNR=7.5								
ASAR	**Alice Springs**	**41.99**	**271**	P		P		08 36 27.2	-0.1
	0.4nm,0.7s,baz=115,slow=7.7,SNR=5.5								
WRA	**Warramunga Arr**	**43.27**	**276**	P		P		08 36 37.6	-0.2
	0.4nm,0.7s,baz=118,slow=7.7,SNR=7.6								
WRA				LR		LR		08 54 37.5	
	comp=Z,35nm,18.5s,baz=225,slow=36								
FINES	**FINESS Array B**	**147.78**	**337**	PKPbc		PKPbc		08 48 19.5	-0.7
	2.0nm,1.0s,baz=90,slow=4.2,SNR=3.2								

*UPA **21** 08:40:41.5±1.8, 7.°34N×78.°39W, h10km±9km, MW3.8*
*RSNC **21** 08:40:42.0±1.3, 7.°36N×78.°40W, h11km±7km, ML2.9*

ISC 21 08:40:41.1±1.4, 7.°33N±0.°04×78.°40W±0.°03, h13km±11km, n20, σ0§80/36, 2C-1D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.62**	**107**	*eP*		**Pg**		**08 40 53.0**	**-0.2**
PTAC				*eS*		**Sg**		**08 41 01.4**	**0.0**
PTAC	**Punta Ardita,**	**0.62**	**107**	*eP*		**Pg**		**08 40 53.0**	**-0.2**
PTAC				*eS*		**Sg**		**08 41 01.4**	**0.0**
UPD2	**Meteti**	**1.27**	**18**	*eP*		**Pn**		**08 41 04.4**	**0.0**
UPD2				*eS*		**Sb**		**08 41 20.5**	**-0.4**
UPD2				*i*				08 41 24.8	
	comp=Z,492nm,0.5s								
UPD2	**Meteti**	**1.27**	**18**	*iP*		**Pn**		**08 41 04.5**	**0.0**
UPD2				*i*	S	**Sb**		**08 41 21.2**	**+0.2**
SOLC	**Bahia Solano**	**1.48**	**138**	*eP*		**Pn**		**08 41 07.1**	**-0.3**
SOLC				*eS*		**Sb**		**08 41 28.1**	**+1.0**
SOLC				*i*				08 41 37.4	
	comp=Z,74nm,0.4s								
SOLC	**Bahia Solano**	**1.48**	**138**	*eP*		**Pn**		**08 41 07.1**	**-0.3**
SOLC				*eS*		**Sb**		**08 41 28.1**	**+1.0**
CAPC	**Capurgana**	**1.66**	**39**	*eP*		**Pn**		**08 41 09.6**	**-0.3**
CAPC				*eS*		**Sn**		**08 41 30.5**	**-0.6**
CAPC				*i*				08 41 32.1	
	comp=Z,112nm,0.4s								
CAP2	**Capurgana**	**1.67**	**38**	*eP*		**Pn**		**08 41 10.1**	**+0.1**
CAP2				*i*	S	**Sn**		**08 41 30.8**	**-0.4**
AZU	**Azuero**	**1.91**	**284**	*eP*		**Pn**		**08 41 13.5**	**+0.2**
AZU				*eS*		**Sn**		**08 41 37.0**	**-0.2**
CNTA3	**Canitas, Panam**	**1.93**	**346**	*eP*		**Pn**		**08 41 14.4**	**+0.7**
CNTA3				*eS*		**Sn**		**08 41 37.9**	**0.0**
CHPO	**Chepo, Panama**	**1.96**	**339**	*eP*		**Pn**		**08 41 14.4**	**+0.5**
CHPO				*eS*		**Sb**		**08 41 42.1**	**+1.3**
UPA	**Univ. de Panam**	**1.98**	**326**	*eP*		**Pn**		**08 41 13.0**	**-1.3**
UPA				*eS*		**Sn**		**08 41 39.1**	**+0.1**
UPA				*i*				08 41 48.6	
	comp=Z,50nm,0.5s								
UPA	**Univ. de Panam**	**1.98**	**326**	*iP*		**Pn**		**08 41 13.3**	**-1.0**
UPA				*i*	S	**Sn**		**08 41 39.8**	**+0.8**
CHOR3	**La Chorrera**	**2.06**	**319**	*eP*		**Pn**		**08 41 14.4**	**-0.9**
CHOR3				*eS*		**Sn**		**08 41 40.6**	**-0.3**
CHIT3	**Chitre**	**2.09**	**287**	*eS*		**Sb**		**08 41 45.9**	**+1.1**
VTON	**El Valle, Cocl**	**2.12**	**307**	*eS*		**Sb**		**08 41 44.9**	**-0.7**
ZANG	**Zanguenga, Cho**	**2.17**	**318**	*eP*		**Pn**		**08 41 17.7**	**+0.8**
MIRA3	**Miramar, Colon**	**2.41**	**338**	*eS*		**Sn**		**08 41 49.6**	**0.0**
CACAO	**El Cacao, Vera**	**2.44**	**270**	*eP*		**Pn**		**08 41 20.0**	**-0.5**
CACAO				*eS*		**Sn**		**08 41 47.7**	**-2.5**
GMAL	**Guarumal, Vera**	**2.84**	**279**	*eP*		**Pn**		**08 41 27.3**	**+1.2**
GMAL				*eS*		**Sn**		**08 42 00.1**	**-0.1**

*MOS **21** 08:58:03.9±0.9, 36.°53N×71.°07E, h235km, mb5.3/79, MS4.2/7, Error ellipse: s-maj=4.3km s-min=3.0km az=91.8*

*NEIC **21** 08:58:05.0±1.7, 36.°52N±0.°06×71.°01E±0.°08, h235km±4km, mb5.2/170, Error ellipse: s-maj=9.3km s-min=8.2km az=100.0*

*BGR **21** 08:58:04.2±0.0, 36.°06N×70.°83E, h33km, mb5.7*

*IDC **21** 08:58:05.7±0.3, 36.°48N×71.°07E, h242km±2km, mb4.8/40, mb1 4.9/47, mb1mx4.8/51, mbtmp5.4/47, Error ellipse: s-maj=7.0km s-min=5.4km az=180.0*

*BJI **21** 08:58:05.2±0.0, 36.°70N×71.°18E, h235km, mB5.0/50, mb5.3/74*

*GCMT **21** 08:58:05.0±0.2, 36.°51N±0.°01×70.°89E±0.°01, h237km±1km, MW5.2/140, Moment Tensor Solution. s82,c120; s140,c229; Duration: 1§0 Moment tensor: Scale 10^17 Nm; Mrr0.71±.01; Mθθ-0.25±.02; Mφφ-0.45±.02; Mrθ-0.23±.01; Mrφ0.27±.02; Mθφ0.63±.01; Best double couple: M0:0.95200×10^17 NP1:∅§138.00000°, δ23.00000°, λ75.00000°. NP2:∅§335.00000°, δ68.00000°, λ97.00000°. Principal axes: T 0.9910, Plg67.0000°, Azm257.0000°; N -0.0790, Plg6.0000°, Azm152.0000°; P -0.9130, Plg22.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NNC **21** 08:58:05.4±1.9, 36.°74N×70.°94E, h216km±18km, mb5.2, mpv6.3 Error ellipse: s-maj=17.6km s-min=9.8km az=165.0*

*SOME **21** 08:58:14.6, 37.°17N×71.°17E, h10km*

ISC 21 08:58:04.9±0.2, 36.°52N±0.°03×71.°03E±0.°02, h234km±1km, h234km:pP-P, n1156, σ1§50/1336, mb5.2/327, 79C-92D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.54**	**347**				**Pn**	**08 58 50.8**	**-0.7**
GAR						S	**S**	**08 59 25.9**	**-2.2**
KBL	**Kabul**	**2.56**	**220**			P	**Pn**	**08 58 51.0**	**-0.9**
	SNR=3044								
KBL						S	**S**	**08 59 26.5**	**-2.2**
KBL	**Kabul**	**2.56**	**220**			PN	**Pn**	**08 58 50.8**	**-1.1**
KBL						S	**S**	**08 59 26.7**	**-1.9**
KBL	**Kabul**	**2.56**	**220**				**Pn**	**08 58 50.8**	**-1.1**
KBL						S	**S**	**08 59 26.7**	**-1.9**
CHGR	**Chuyangaron**	**2.59**	**326**				**Pn**	**08 58 51.1**	**-0.9**
CEP	**Cherat**	**2.79**	**165**		↑P		**Pn**	**08 58 53.9**	**-0.4**
CEP						S	**S**	**08 59 31.0**	**-2.0**
DRK	**Karamyk**	**3.01**	**11**				**Pn**	**08 58 56.8**	**0.0**
DRK						S	**S**	**08 59 36.7**	**-1.0**
NIL	**Nilore**	**3.40**	**147**	P		P	**Pn**	**08 59 01.2**	**+0.2**
NIL	**Nilore**	**3.40**	**147**	PN		**Pn**	**Pn**	**08 59 01.2**	**+0.2**
NIL	**Nilore**	**3.40**	**147**	Pn		**Pn**	**Pn**	**08 59 01.2**	**+0.2**
BTK	**Batken**	**3.53**	**357**	Pn		**Pn**	**Pn**	**08 59 02.9**	**+0.5**
BTK						S	**S**	**08 59 46.4**	**-1.5**
THW	**Thamme Wali**	**3.77**	**171**	P		P	**Pn**	**08 59 04.8**	**-0.5**
SARP	**Sargodha**	**4.79**	**163**	P		P	**Pn**	**08 59 16.3**	**-1.3**
KSH	**Kashi**	**4.92**	**51**	*i*	P	Pn		08 59 13.8	-5.4
KSH						S	S	09 00 03.4	-15
KSH					smax	smax			
	comp=N,52μm,0.7s								
KSH					smax	smax			
	comp=E,60μm,0.7s								
IUG	**Iuzhnay**	**5.67**	**352**	*eP*		**Pn**	**Pn**	**08 59 28.2**	**-0.4**
IUG	**Iuzhnay**	**5.67**	**352**	*eP*	N	**Pn**	**Pn**	**08 59 28.1**	**-0.4**
CHM	**Chimkent**	**5.89**	**350**	*eP*		**Pn**	**Pn**	**08 59 34.0**	**+2.8**
	592nm,0.4s								
CHM				*eS*		**S**	**S**	**09 00 35.1**	**-4.9**
	9μm,0.5s								
CHM	**Chimkent**	**5.89**	**350**	*eP*	N	**Pn**	**Pn**	**08 59 34.0**	**+2.8**
AML	**Almayashu**	**5.97**	**19**	P		P	**Pn**	**08 59 32.0**	**-0.6**
	SNR=8184								
DHRM	**DHARAMSHALA**	**6.10**	**133**	*eP*			**Pn**	**08 59 33.3**	**-0.8**
DHRM						IAmb	IAmb	08 59 40.2	
	comp=Z,2μm,0.6s								
DHRM				*eS*		**S**	**S**	**09 00 41.2**	**-4.0**
UCH	**Uchtor**	**6.30**	**24**	P		P	**Pn**	**08 59 36.5**	**-0.3**
	SNR=1596								
DZA	**Taraz**	**6.36**	**2**	*eP*		P	**Pn**	**08 59 39.8**	**+2.6**
	comp=Z,3μm,0.4s								
DZA				*eS*		**S**	**S**	**09 00 46.0**	**-4.9**
	comp=Z,15μm,0.5s								
DZA	**Taraz**	**6.36**	**2**	*eP*		**Pn**	**Pn**	**08 59 37.0**	**-0.2**
DZA	**Taraz**	**6.36**	**2**	*eP*	N	**Pn**	**Pn**	**08 59 39.8**	**+2.6**
MRKS	**Merke**	**6.44**	**15**	*eP*		**Pn**	**Pn**	**08 59 41.2**	**+3.0**
	comp=Z,1μm,0.4s								
MRKS				*eS*		**S**	**S**	**09 00 48.5**	**-4.3**
	comp=Z,6μm,0.8s								
MRKS	**Merke**	**6.44**	**15**	*eP*	N	**Pn**	**Pn**	**08 59 41.3**	**+3.0**
EKS2	**Erkin-Say**	**6.49**	**18**	P		P	**Pn**	**08 59 38.5**	**-0.3**
	SNR=1142								
BRLS	**Borolday**	**6.56**	**352**	*eP*		P	**Pn**	**08 59 36.1**	**-3.7**
	comp=Z,95nm,0.4s								
BRLS	**Borolday**	**6.56**	**352**	*eP*	N	**Pn**	**Pn**	**08 59 36.0**	**-3.7**
BRLS					pmax	pmax			
	comp=Z,95nm,0.4s								
KK31	**Karatay Array**	**6.58**	**357**		↓P	**Pn**	**Pn**	**08 59 39.8**	**-0.2**
	comp=Z,102nm,0.2s,baz=177,slow=12,SNR=1773								
KK31					↓S	**S**	**S**	**09 00 51.5**	**-4.5**
	comp=Z,2μm,0.5s,baz=181,slow=20,SNR=17								
KK31	**Karatay Array**	**6.58**	**357**	*eP*	N	**Pn**	**Pn**	**08 59 39.6**	**-0.4**
KK31	**Karatay Array**	**6.58**	**357**	Pn		**Pn**	**Pn**	**08 59 39.3**	**-0.7**
KKAR	**Karatay Array**	**6.58**	**357**	PN		**Pn**	**Pn**	**08 59 39.6**	**-0.4**
KKAR	**Karatay Array**	**6.58**	**357**	Pn		**Pn**	**Pn**	**08 59 39.6**	**-0.4**
AAK	**Ala-Archa**	**6.67**	**23**	P		P	**Pn**	**08 59 40.9**	**-0.3**
	comp=Z,492nm,0.3s,baz=180,slow=5.3,SNR=4107								
AAK						S	**S**	**09 00 54.9**	**-3.2**
	comp=Z,370nm,0.3s,baz=332,slow=23,SNR=23								
AAK	**Ala-Archa**	**6.67**	**23**	P		P	**Pn**	**08 59 41.2**	**+0.1**
AAK						S	**S**	**09 00 56.2**	**-1.9**
AAK	**Ala-Archa**	**6.67**	**23**	*de*	PN	P	**Pn**	**08 59 40.7**	**-0.5**
AAK					pmax	pmax			
	comp=Z,5μm,0.6s								
KBK	**Karagaybulak**	**6.83**	**25**	P		P	**Pn**	**08 59 43.2**	**-0.1**
	SNR=1087								
FRU1	**Bishkek**	**6.86**	**23**	PN		**Pn**	**Pn**	**08 59 43.6**	**0.0**
FRU1	**Bishkek**	**6.86**	**23**	Pn		**Pn**	**Pn**	**08 59 43.6**	**0.0**
ULHL	**Ulahol**	**7.00**	**34**	P		P	**Pn**	**08 59 44.6**	**-0.8**
	SNR=167								
BOOM	**Boomskoye usch**	**7.06**	**31**	PN		**Pn**	**Pn**	**08 59 46.0**	**-0.3**
BOOM	**Boomskoye usch**	**7.06**	**31**	Pn		**Pn**	**Pn**	**08 59 46.0**	**-0.3**
CHMS	**Chumysh**	**7.07**	**23**	P		P	**Pn**	**08 59 45.4**	**-0.8**
	SNR=654								
USP	**Ospenovka**	**7.24**	**21**	P		P	**Pn**	**08 59 47.1**	**-1.3**
	SNR=604								
TKM2	**Tokmak 2**	**7.29**	**27**	P		P	**Pn**	**08 59 48.7**	**-0.5**
	SNR=909								
TKM2	**Tokmak 2**	**7.29**	**27**		↓P	P	**Pn**	**08 59 48.7**	**-0.5**
	comp=Z,3μm,0.6s								
TKM2					↑S	**S**	**S**	**09 01 09.1**	**-3.7**
	comp=Z,5μm,1.1s								
TKM2	**Tokmak 2**	**7.29**	**27**	PN		**Pn**	**Pn**	**08 59 48.7**	**-0.5**
TKM2				S		**S**	**S**	**09 01 09.0**	**-3.7**
SMLA	**Simla**	**7.42**	**135**	*eP*		**Pn**	**Pn**	**08 59 49.8**	**-0.9**
SMLA						IAmb	IAmb	08 59 50.4	
	comp=Z,1μm,0.5s								
SMLA				*eS*		**S**	**S**	**09 01 07.1**	**-8.4**
SGDS	**Sogindy**	**7.45**	**21**	*iP*		**Pn**	**Pn**	**08 59 49.8**	**-1.3**
SGDS	**Sogindy**	**7.45**	**21**	*i*	PN	**Pn**	**Pn**	**08 59 49.7**	**-1.3**
HRA	**Herat**	**7.48**	**256**	Pn		**Pn**	**Pn**	**08 59 50.8**	**-0.8**
KST	**Kastek**	**7.54**	**29**	*eP*		**Pn**	**Pn**	**08 59 56.2**	**+4.0**
	comp=Z,978nm,0.5s								
KST				*eS*		**S**	**S**	**09 01 15.0**	**-3.3**
	comp=Z,2μm,0.9s								
KST	**Kastek**	**7.54**	**29**	*ePN*		**Pn**	**Pn**	**08 59 56.2**	**+4.0**
KST				*eS*		**S**	**S**	**09 01 15.0**	**-3.3**
TNSS	**Tian-Shan**	**7.94**	**33**	*iP*		**Pn**	**Pn**	**08 59 57.0**	**-0.6**
TNSS	**Tian-Shan**	**7.94**	**33**	*i*	PN	**Pn**	**Pn**	**08 59 57.0**	**-0.6**
AAA	**Alma-Ata**	**8.06**	**32**	*iP*		**Pn**	**Pn**	**08 59 59.3**	**+0.3**
AAA	**Alma-Ata**	**8.06**	**32**	*d*	PN	**Pn**	**Pn**	**08 59 59.2**	**+0.3**
MDOK	**Medeo**	**8.09**	**33**	*i*	P	**Pn**	**Pn**	**08 59 58.9**	**-0.4**
MDOK	**Medeo**	**8.09**	**33**	*i*	PN	**Pn**	**Pn**	**08 59 58.8**	**-0.4**
KNDC	**Almaty**	**8.09**	**32**	↑P		**Pn**	**Pn**	**08 59 59.4**	**+0.2**
	comp=Z,3μm,0.7s								
KNDC					↓S	**S**	**S**	**09 01 28.2**	**-3.0**
	comp=Z,7μm,1.1s								
KNDC	**Almaty**	**8.09**	**32**	PN		**Pn**	**Pn**	**08 59 59.4**	**+0.2**
KKR	**Kurukshetra**	**8.14**	**142**	*eP*		P	Pn	08 59 52.4	-7.6
PRZ	**Przheval'sk**	**8.24**	**41**	PN		**Pn**	**Pn**	**09 00 00.5**	**-0.7**
PRZ	**Przheval'sk**	**8.24**	**41**	Pn		**Pn**	**Pn**	**09 00 00.5**	**-0.7**
KUU	**Kurty**	**8.40**	**27**	*iP*		P	**Pn**	**09 00 01.4**	**-1.9**
	comp=Z,254nm,0.9s								
KUU	**Kurty**	**8.40**	**27**	*d*	*iPN*	**Pn**	**Pn**	**09 00 01.3**	**-1.9**
KUU					pmax	pmax			
	comp=Z,254nm,0.9s								
DDI	**Dehra Dun**	**8.53**	**134**	*eP*		P	**Pn**	**09 00 04.0**	**-1.0**
DDI					IAmb	IAmb	IAmb	09 00 05.6	
	comp=Z,633nm,0.4s								
CHKK	**Chushkaly**	**8.62**	**30**	*iP*		P	**Pn**	**09 00 04.5**	**-1.5**
CHKK	**Chushkaly**	**8.62**	**30**	*i*	PN	**Pn**	**Pn**	**09 00 04.5**	**-1.5**
SATY	**Saty**	**8.65**	**39**	↓	*iPN*	**Pn**	**Pn**	**09 00 05.1**	**-1.3**
	comp=Z,195nm,1.2s								
SATY	**Saty**	**8.65**	**39**	*d*	*iPN*	**Pn**	**Pn**	**09 00 05.1**	**-1.3**
SATY					pmax	pmax			
	comp=Z,195nm,1.2s								
ZHN	**Zhinishke**	**8.74**	**38**	*eP*		**Pn**	**Pn**	**09 00 07.3**	**-0.3**
ZHN	**Zhinishke**	**8.74**	**38**	*ePN*		**Pn**	**Pn**	**09 00 07.3**	**-0.3**
KPKS	**Kokpek**	**9.08**	**38**	↓	*iP*	**Pn**	**Pn**	**09 00 10.9**	**-1.0**
KPKS	**Kokpek**	**9.08**	**38**	*d*	*iP*	**Pn**	**Pn**	**09 00 10.9**	**-1.0**
SHLS	**Shalkode**	**9.27**	**42**	↓	*iP*	**Pn**	**Pn**	**09 00 16.0**	**+1.7**
	comp=Z,261nm,0.6s								
SHLS	**Shalkode**	**9.27**	**42**	*d*	*iP*	**Pn**	**Pn**	**09 00 16.0**	**+1.7**
SHLS					pmax	pmax			
	comp=Z,261nm,0.6s								
PDGK	**Podgornoye**	**9.40**	**41**	⇑	P	**Pn**	**Pn**	**09 00 13.8**	**-2.2**
	comp=Z,758nm,1.1s								
PDGK					⇓S	**S**	**S**	**09 01 57.4**	**-4.5**
	comp=Z,1μm,1.0s								
PDGK	**Podgornoye**	**9.40**	**41**	P		**Pn**	**Pn**	**09 00 13.8**	**-2.2**
PDGK				S		**S**	**S**	**09 01 57.3**	**-4.5**
JASL	**Jaisalmer**	**9.57**	**181**	*eP*		**Pn**	**Pn**	**09 00 16.2**	**-2.1**
SONA	**Sohna**	**9.71**	**146**	*eP*		**Pn**	**Pn**	**09 00 17.8**	**-2.1**
SONA				*ex*		x	x	09 01 12.2	
TDK	**Taldyqorghan**	**10.15**	**31**	*eP*		**Pn**	**Pn**	**09 00 24.2**	**-1.2**
TDK	**Taldyqorghan**	**10.15**	**31**	*eP*		**Pn**	**Pn**	**09 00 24.2**	**-1.2**
GEYT	**Alibeck**	**10.39**	**282**	P		P	**Pn**	**09 00 26.0**	**-2.6**
	comp=Z,11nm,0.3s,baz=109,slow=11,SNR=110								
GYA0	**ALIBECK ARRAY**	**10.39**	**282**	P		P	**Pn**	**09 00 26.1**	**-2.5**
GYA0				S		S	**S**	**09 02 22.0**	**-3.2**
GYA0B	**ALIBECK ARRAY**	**10.39**	**282**	⇓	P	P	**Pn**	**09 00 26.1**	**-2.4**
GYA0B				⇑	S	S	**S**	**09 02 22.1**	**-3.1**
GYA0B	**ALIBECK ARRAY**	**10.39**	**282**	P		Pn	**Pn**	**09 00 26.3**	**-2.3**
OTUK	**Ortayu**	**11.75**	**4**	⇓	P	P	**Pn**	**09 00 44.6**	**-1.1**
	comp=Z,633nm,0.9s								
OTUK					⇑S		**S**	**09 02 51.5**	**-4.3**
	comp=Z,479nm,0.8s								
OTUK	**Ortayu**	**11.75**	**4**	P		P	**Pn**	**09 00 44.5**	**-1.1**
OTUK

AKTO **Aktyubinsk** 16.77 330 P **Pn** 09 01 46.0 -0.6
TAPN **Taplejung** 16.84 118 *e*P **Pn** 09 01 47.7 -0.2
comp=Z,1μm,0.9s
MDH **Madha** 16.86 233 *i* P **P** 09 01 45.1 -1.0
SNR=7.4
MDH **Madha** 16.86 233 P **P** 09 01 45.4 -0.7
SNR=6.1
MDH S **S** 09 04 45.2 -4.8
MSFE **Esma-Masafi** 16.90 233 *i* P **P** 09 01 47.2 +0.5
SNR=22
ODAN **Odare** 16.91 120 *e*P **Pn** 09 01 48.5 -0.2
comp=Z,776nm,0.6s
WSAR **Wadi Sarin** 17.03 222 P **P** 09 01 48.7 +0.7
comp=Z,3.4nm,0.3s,baz=83,slow=5.2,SNR=35
BIDO **Bidbid** 17.09 224 P **Pn** 09 01 51.4 +0.8
UOSS **Minazif** 17.17 232 *i* P **P** 09 01 48.4 -1.1
SNR=21
UOSS **Minazif** 17.17 232 P **P** 09 01 50.1 +0.6
UOSS S **S** 09 04 55.6 -0.6
UOSS **Minazif** 17.17 232 P **P** 09 01 49.9 +0.4
UOSS IAmb IAmb 09 01 51.2
comp=Z,79nm,0.8s
HATD **Hatta, Dubai** 17.30 232 *i* P **P** 09 01 51.1 +0.2
SNR=32
HATD **Hatta, Dubai** 17.30 232 P **P** 09 01 51.9 +1.0
SNR=11
HATD S **S** 09 04 57.0 -1.9
WBK **Wadi Bani Khal** 17.36 220 P **Pn** 09 01 53.1 -0.7
SNR=10
WBK S **S** 09 05 01.7 +1.6
ASHO **Ashiyiah** 17.45 232 *i* P **P** 09 01 53.0 +0.4
SNR=28
ASHO **Ashiyiah** 17.45 232 P **P** 09 01 53.4 +0.9
SNR=32
ASHO S **S** 09 04 59.1 -2.7
NAZ **Nazwa, Dubai** 17.48 233 *i* P **P** 09 01 53.3 +0.4
SNR=16
NAZ **Nazwa, Dubai** 17.48 233 P **P** 09 01 53.8 +0.9
SNR=11
NAZ S **S** 09 05 01.0 -1.4
GTK **Tadong** 17.49 117 *e*P **Pn** 09 01 54.6 -0.8
GTK IAmb IAmb 09 01 58.0
comp=Z,286nm,0.5s
SMDO **Samad** 17.50 223 P **Pn** 09 01 54.4 -1.0
SNR=13
SMDO S **S** 09 05 05.3 +2.5
HOQ **Hoqain** 17.50 226 P **Pn** 09 01 54.8 -0.6
HOQ S **S** 09 05 05.5 +2.5
JLN **Jalan Bani Buh** 17.52 218 P **Pn** 09 01 55.6 0.0
SNR=30
JLN S **S** 09 05 07.2 +4.0
SOHO **SOHO** 17.55 229 P **Pn** 09 01 55.1 -0.9
SOHO S **S** 09 05 04.2 +0.4
FAQ **Al Faqa, Dubai** 17.70 233 *i* P **P** 09 01 55.2 -0.1
SNR=9.3
FAQ **Al Faqa, Dubai** 17.70 233 P **P** 09 01 55.4 +0.1
FAQ S **S** 09 05 06.6 -0.1
ASUD **Al Ashush, Dub** 17.95 233 *i* P **P** 09 01 58.5 +0.5
SNR=23
ASUD **Al Ashush, Dub** 17.95 233 P **Pn** 09 01 59.5 -1.1
SNR=5.8
ASUD S **S** 09 05 09.3 -2.5
JMDO **Jabal Madar** 18.02 222 P **Pn** 09 02 01.1 -0.4
SNR=20
JMDO S **S** 09 05 15.0 +1.9
BOK **Bokaro** 18.03 131 *e*P **P** 09 01 59.0 +0.1
BOK IAmb IAmb 09 02 01.2
comp=Z,168nm,0.4s
ALNE **Al Ain** 18.09 231 *i* P **P** 09 01 59.5 -0.1
SNR=59
POO **Poona** 18.10 171 *e*P **P** 09 02 00.8 +1.1
POO IAmb IAmb 09 02 06.1
comp=Z,145nm,0.7s
ARQ **Araqi** 18.16 228 P **Pn** 09 02 01.8 -1.4
SNR=9.7
ARQ S **S** 09 05 15.0 -0.9
LSA **Lhasa** 18.16 106 P **Pn** 09 02 03.1 -0.5
LSA pP **P** 09 02 07.0 +6.2
LSA S **S** 09 05 14.3 -2.4
LSA pmax pmax
comp=Z,1μm,1.3s
LSA LR LR
comp=Z,620nm,8.5s
LSA LR LR
comp=Z,630nm,6.4s
LSA LR LR
comp=Z,2μm,11.4s
LSA **Lhasa** 18.16 106 P **Pn** 09 02 03.5 -0.2
LSA **Lhasa** 18.16 106 P **Pn** 09 02 02.8 -0.8
LSA pmax pmax
comp=Z,280nm,1.0s
LSA **Lhasa** 18.16 106 P **Pn** 09 02 02.8 -0.8
AJN **Ajban** 18.22 234 *i* P **P** 09 02 00.6 -0.3
SNR=13
AJN **Ajban** 18.22 234 P **P** 09 02 01.1 +0.2
SNR=7.6
AJN S **S** 09 05 14.7 -2.4
BSY **Bisya** 18.22 225 P **Pn** 09 02 03.0 -0.9
SNR=13
MAK **Makhachkala** 19.16 297 *d* iP **P** 09 02 09.7 -1.2
MAK *e*S **S** 09 05 35.2 -0.1
MAK MLR MLR
comp=Z,466nm,12.0s
MHTO **MHTO** 19.22 220 P **Pn** 09 02 14.0 -1.7
SNR=36
ZAA0 **Zalesovo Array** 19.88 24 ⇓P **P** 09 02 18.2 -0.2
comp=Z,71nm,0.7s
ZAA0 **Zalesovo Array** 19.88 24 P **P** 09 02 18.1 -0.4
ZALV **Zalesovo Beam** 19.88 24 P **P** 09 02 18.2 -0.2
comp=Z,127nm,0.3s,baz=215,slow=11,SNR=619
ZALV S **S** 09 05 47.2 -1.9
comp=Z,3.8nm,0.3s,baz=211,slow=19,SNR=6.2
ZALV **Zalesovo Beam** 19.88 24 *i* P **P** 09 02 18.2 -0.2
ZALV pmax pmax
comp=Z,369nm,0.4s
HYB **Hyderabad** 20.16 159 *i* P **P** 09 02 21.0 -0.9
HYB *e*sP **sP** 09 03 30.0 +0.6
HYB *e*S **S** 09 05 56.0 +0.9
MZR **Muzera** 20.29 233 *i* P **P** 09 02 22.0 -1.2
SNR=25
MZR **Muzera** 20.29 233 P **P** 09 02 22.5 -0.7
SNR=9.7
DQM **DQM** 20.32 219 P **P** 09 02 25.1 +1.6
SNR=22
GUWA **GUWAHATI** 20.39 115 *e*P **P** 09 02 24.3 +0.1
GUWA IAmb IAmb 09 02 33.1
comp=Z,118nm,0.8s
GROC **Groznyy** 20.44 297 *e*P **P** 09 02 25.5 +1.0
GROC *e**SP **sP** 09 03 33.0 +0.6
GROC pmax pmax
comp=Z,336nm,0.8s
SHL **Shillong** 20.90 116 *e*P **P** 09 02 29.3 -0.4
SHL IAmb IAmb 09 02 37.5
comp=Z,248nm,0.8s
SHL **Shillong** 20.90 116 P **P** 09 02 29.7 0.0
SNR=121
SHL **Shillong** 20.90 116 P **P** 09 02 29.1 -0.6
SHL pmax pmax
comp=Z,318nm,0.8s
SHL **Shillong** 20.90 116 P **P** 09 02 29.1 -0.6
GNI **Garni** 20.91 288 P **P** 09 02 29.2 -0.5
comp=Z,186nm,1.1s,baz=150,slow=4.2,SNR=50
GNI **Garni** 20.91 288 *e*P **P** 09 02 28.7 -1.0
GNI **Garni** 20.91 288 P Pn 09 02 33.9 -2.0
GNI **Garni** 20.91 288 *de*P **P** 09 02 29.8 +0.1
GNI pmax pmax
comp=Z,341nm,1.3s
GNI **Garni** 20.91 288 P **P** 09 02 30.2 +0.5
TEZP **TEZPUR** 20.97 112 *e*P **P** 09 02 29.2 -1.1
GOA **Goa** 21.09 172 *e*P **P** 09 02 32.9 +1.3
GOA IAmb IAmb 09 02 35.3
comp=Z,124nm,0.9s
ZIRO **ZIRO** 21.29 108 *e*P **P** 09 02 33.8 +0.1
SVE **Sverdlovsk** 21.48 344 *de*P **P** 09 02 36.1 +1.1
SVE *e*S **S** 09 06 19.4 +2.5
SVE pmax pmax
comp=Z,74nm,0.8s
AGT **Agartala** 21.49 120 *e*P **P** 09 02 37.1 +1.7
AGT *e*S **S** 09 06 19.9 +2.2
CLDR **Caldiran** 21.54 285 *e*P **P** 09 02 37.8 +1.7
ARU **Arti** 21.62 341 P **P** 09 02 36.9 +0.7
comp=Z,55nm,0.7s,baz=156,slow=6.7,SNR=93
ARU S **S** 09 06 21.5 +2.3
comp=Z,3.9nm,0.5s,baz=352,slow=19,SNR=1.3
ARU **Arti** 21.62 341 *c* iP **P** 09 02 37.0 +0.7
ARU S **S** 09 06 22.1 +3.0
ARU pmax pmax
comp=Z,205nm,0.9s
ARU **Arti** 21.62 341 P **P** 09 02 37.0 +0.7
ZEI **Tsey** 21.75 295 *e*P **P** 09 02 38.0 0.0
ZEI pmax pmax
comp=Z,65nm,0.7s
AKH **Akhalkalaki** 21.91 291 *e*P **P** 09 02 42.0 +2.5
AKH **Akhalkalaki** 21.91 291 P **P** 09 02 41.5 +2.0
AKH pmax pmax
comp=Z,693nm,0.8s
AKH **Akhalkalaki** 21.91 291 P **P** 09 02 41.5 +2.0
VANB **Van** 21.98 284 *e*P **P** 09 02 42.0 +1.9
JORH **JORHAT** 22.00 110 *e*P **P** 09 02 41.6 +1.4
SILR **SILCHAR** 22.03 116 *e*P **P** 09 02 42.6 +2.1
BELO **BELONIA** 22.04 121 *e*P **P** 09 02 42.7 +2.1
BELO *e*S **S** 09 06 29.5 +2.9
DIBR **DIBRUGARH** 22.13 107 *e*P **P** 09 02 42.1 +0.7
DIBR IAmb IAmb 09 02 44.0
comp=Z,749nm,1.1s
AGRB **Hanur-Agry** 22.25 286 *e*P **P** 09 02 45.1 +2.4
GEVA **Gevas** 22.25 283 P **P** 09 02 43.9 +1.2
AKDM **Akdamar-Van** 22.32 283 *e*P **P** 09 02 45.2 +1.9
MOKO **MOKOCHONG** 22.43 110 *e*P **P** 09 02 45.6 +1.3
MOKO IAmb IAmb 09 02 47.6
comp=Z,268nm,0.7s
KOHI **KOHIMA** 22.45 112 *e*P **P** 09 02 45.7 +1.1
KOHI IAmb IAmb 09 02 50.3
comp=Z,213nm,0.9s
KOHI *e*S **S** 09 06 34.0 +0.6
KBZ **Khabaz** 22.61 297 P **P** 09 02 46.4 +0.8
comp=Z,58nm,0.8s,baz=125,slow=8.4,SNR=88
KBZ **Khabaz** 22.61 297 *ce*P **P** 09 02 45.7 +0.1
KBZ pmax pmax
comp=Z,78nm,0.9s
GOF **Gofitskoye** 22.75 301 ⇑*i*P **P** 09 02 48.2 +1.3
GOF pmax pmax
comp=Z,272nm,0.9s
KVAR **Kislovodsk Arr** 22.79 298 P **P** 09 02 49.1 +1.7
comp=Z,20nm,0.7s,baz=252,slow=20,SNR=23
KIV **Kislovodsk** 22.80 298 *i* P **P** 09 02 48.4 +0.9
SNR=8.2
KIV **Kislovodsk** 22.80 298 *e*P **P** 09 02 48.3 +0.9
KIV **Kislovodsk** 22.80 298 P **P** 09 02 48.1 +0.7
KIV **Kislovodsk** 22.80 298 *e*P **P** 09 02 48.0 +0.5
KIV *e**SP **sP** 09 03 57.8 -0.4
KIV *e*S **S** 09 06 40.3 +1.7
KIV pmax pmax
comp=Z,307nm,1.0s
KIV pmax pmax
comp=Z,182nm,3.8s
KIV MLR MLR
comp=Z,577nm,14.0s
KIV **Kislovodsk** 22.80 298 P **P** 09 02 47.9 +0.5
KIV IAmb IAmb 09 02 51.8
comp=Z,76nm,0.7s
GTA **Gaotai** 22.84 74 ⇓P **P** 09 02 49.8 +1.9
GTA pP pP 09 03 29.9 -0.1
GTA sP sP 09 03 58.4 -1.9
GTA S **S** 09 06 42.3 +2.8
GTA SS SS 09 07 50.1 -34
GTA ScS **ScS** 09 13 29.9 -2.6
GTA pmax pmax
comp=Z,370nm,0.8s
GTA pmax pmax
comp=Z,1μm,5.5s
GTA LR LR
comp=Z,310nm,12.4s
GTA LR LR
comp=Z,400nm,12.7s
GTA LR LR
comp=Z,290nm,13.8s
IMP **Imphal** 22.84 114 *e*P **P** 09 02 50.0 +1.9
IMP IAmb IAmb 09 02 52.4
comp=Z,86nm,0.9s
BELG **Belogornoye** 22.88 321 *c* iP **P** 09 02 48.0 0.0
BELG pmax pmax
comp=Z,178nm,0.9s
SHAO **Shalim** 22.90 220 *i* P **P** 09 02 50.0 +1.5
SNR=20
SHAO **Shalim** 22.90 220 P **P** 09 02 50.3 +1.8
LKP **Lekhapani** 22.92 106 *e*P **P** 09 02 50.0 +1.4
LKP IAmb IAmb 09 02 52.0
comp=Z,463nm,0.8s
VRTB **Varto-Mus** 23.45 285 *e*P **P** 09 02 56.8 +3.2
DMTO **DMTO** 23.51 221 P **P** 09 02 55.2 +1.2
SAIH **SAIHA** 23.61 120 *e*P **P** 09 02 57.2 +2.2
SAIH IAmb IAmb 09 02 59.2
comp=Z,209nm,0.5s
SVAN **Silvan-Diyarba** 23.73 283 *e*P **P** 09 02 58.1 +2.2
WHFO **Wadi Hawf** 23.99 224 P **P** 09 02 58.5 +0.1
SNR=11
BNGB **Bingl** 24.07 285 *e*P **P** 09 03 01.5 +2.4
RBK **Rabkut** 24.09 223 P **P** 09 02 59.6 +0.2
SNR=6.3
RBK S **S** 09 06 59.8 +0.2
YEDI **Yedisu-Bingol** 24.15 286 *e*P **P** 09 03 02.4 +2.5
MARD **Mardin** 24.15 281 P **P** 09 03 01.6 +1.7
MARD IAmb IAmb 09 03 03.0
comp=Z,102nm,0.8s
KOPT **Kop Dagi** 24.16 288 P **P** 09 02 58.6 -1.5
KOPT IAmb IAmb 09 03 07.1
comp=Z,124nm,1.3s
DYBB **Diyarbakir** 24.58 283 *e*P **P** 09 03 05.9 +2.2
ABTO **Aybut** 24.71 224 P **P** 09 03 05.9 +0.9
SNR=7.7
SOC **Sochi** 24.88 296 *e*P **P** 09 03 04.9 -1.3
SOC *e**PP **pP** 09 03 47.3 -3.6
SOC *e**SP **sP** 09 04 17.2 -2.2
SOC *e*S **S** 09 07 10.9 -0.7
SOC pmax pmax
comp=Z,42nm,0.8s
PTK **Pertek** 25.08 285 *e*P **P** 09 03 10.2 +1.9
VRH **Novokhopyorsk** 25.51 314 *e*P **P** 09 03 11.6 -0.1
VRH pmax pmax
comp=Z,90nm,1.0s
RAYN **Ar Rayn** 25.53 247 *i* P **P** 09 03 12.2 -0.1
SNR=87
RAYN **Ar Rayn** 25.53 247 P **P** 09 03 11.8 -0.5
RAYN pmax pmax
comp=Z,69nm,0.9s
RAYN **Ar Rayn** 25.53 247 P **P** 09 03 11.8 -0.5
RAYN IAmb IAmb 09 03 13.7
comp=Z,69nm,0.9s
MALT **Malatya** 25.88 284 *e*P **P** 09 03 17.6 +2.2
MOY **Mondy** 26.07 45 *e*P **P** 09 03 18.6 +1.6
MOY pmax pmax
comp=Z,113nm,2.1s
KIRV **Kirov** 26.23 334 P **P** 09 03 19.1 +1.0
comp=Z,196nm,0.6s,baz=126,slow=1.5,SNR=58
KIRV pP **pP** 09 04 05.8 +1.2
comp=Z,100nm,0.7s,baz=145,slow=4.7,SNR=5.0
KIRV **Kirov** 26.23 334 *ce*P **P** 09 03 19.2 +1.1
LZH **Lanzhou** 26.38 81 ⇓P **P** 09 03 21.8 +1.8
LZH pP pP 09 04 08.3 +0.8
LZH sP sP 09 04 35.1 0.0
LZH S **S** 09 07 34.4 -1.4
LZH sS sS 09 08 58.8 -1.9
LZH SS SS 09 09 08.0 -29
LZH ScP **ScP** 09 09 55.5 -1.0
LZH pmax pmax
comp=Z,110nm,1.1s
LZH pmax pmax
comp=Z,320nm,4.6s
LZH LR LR
comp=Z,610nm,11.4s
LZH LR LR
comp=Z,460nm,11.9s
LZH LR LR
comp=Z,420nm,14.1s
ANN **Anapa** 26.64 299 *e*P **P** 09 03 22.4 +0.4
ANN *e**PP **pP** 09 04 11.5 +3.2
ANN *e*S **S** 09 07 42.4 +3.1
ANN pmax pmax
comp=Z,91nm,0.7s
VORD **Divnogorie** 26.84 313 *e*P **P** 09 03 24.2 +0.6
VORD pmax pmax
comp=Z,30nm,0.7s
ZAK **Zakamensk** 26.96 49 *e*P **P** 09 03 25.5 +0.6
ZAK *e* 09 04 12.3
ZAK pmax pmax
comp=Z,51nm,1.1s
ZAK pmax pmax
comp=Z,54nm,1.2s
GAZ **Gaziantep** 26.99 282 P **P** 09 03 27.1 +1.8
GAZ IAmb IAmb 09 03 28.5
comp=Z,86nm,0.9s
VSR **Storozhevoye** 27.00 313 *e*P **P** 09 03 25.2 +0.1
VSR pmax pmax
comp=Z,130nm,1.4s
VORR **Voronezh** 27.14 314 *e*P **P** 09 03 27.0 +0.7
VORR pmax pmax
comp=Z,300nm,1.2s
TOKA **Tokat** 27.23 289 P **P** 09 03 28.5 +1.2
TOKA IAmb IAmb 09 03 31.1
comp=Z,31nm,0.8s
SARI **SarD1z-Kayseri** 27.44 284 *e*P **P** 09 03 31.2 +1.8
TLY **Talaya** 27.61 46 P **P** 09 03 32.7 +2.2
comp=Z,24nm,0.7s,baz=241,slow=8.1,SNR=20
TLY **Talaya** 27.61 46 *d* iP **P** 09 03 32.3 +1.8
TLY *e* 09 04 16.6
TLY pmax pmax
comp=Z,134nm,1.4s
TLY **Talaya** 27.61 46 P **P** 09 03 31.8 +1.3
TLY IAmb IAmb 09 03 33.2
comp=Z,27nm,0.7s
LPSR **Galich'ya Gora** 27.65 316 *e*P **P** 09 03 31.6 +0.8
LPSR pmax pmax
comp=Z,130nm,1.0s
CD2 **Chengdu** 27.71 92 ⇓*i*P **P** 09 03 33.3 +1.6
CD2 pP pP 09 04 20.5 +1.5
CD2 PP **PnPn** 09 04 35.1 +3.3
CD2 S **S** 09 07 59.3 +2.8
CD2 sS sS 09 09 18.8 -3.0
CD2 SS ScP 09 09 39.5 -21
CD2 pmax pmax
comp=Z,240nm,1.0s
CD2 pmax pmax
comp=Z,170nm,5.1s
KOZT **Kozan** 28.03 283 *e*P **P** 09 03 35.9 +1.4
IRK **Irkutsk** 28.17 46 *e*P **P** 09 03 37.0 +1.5
IRK pmax pmax
comp=Z,121nm,1.9s
SONM **Songino Array** 28.30 55 P **P** 09 03 38.1 +1.3
comp=Z,41nm,0.6s,baz=255,slow=9.8,SNR=200
SONM pP **pP** 09 04 26.3 +1.7
comp=Z,29nm,0.9s,baz=253,slow=9.4,SNR=4.8
SONM P3KPbc 09 35 52.0
comp=Z,2.5nm,0.7s,baz=102,slow=3.9,SNR=9.1
SONM **Songino Array** 28.30 55 P **P** 09 03 36.9 0.0
CMRD **Camardi-Nigde** 28.66 283 *e*P **P** 09 03 42.8 +2.7
KARA **Karaisali** 28.68 282 *e*P **P** 09 03 42.1 +2.0
SOCY **Socotra** 28.68 217 P **P** 09 03 39.2 -1.2
SOCY IAmb IAmb 09 03 40.3
comp=Z,74nm,1.2s
ULN **Ulaanbaatar** 28.75 55 *ce*P **P** 09 03 41.9 +1.1
ULN pmax pmax
comp=Z,113nm,1.7s
ULN **Ulaanbaatar** 28.75 55 P **P** 09 03 42.2 +1.4
ULN IAmb IAmb 09 03 42.7
comp=Z,44nm,0.7s
BZK **Bozkurt** 29.03 292 ⇑P **P** 09 03 45.4 +2.3
KMI **Kunming** 29.38 104 ⇑*i*P **P** 09 03 48.0 +1.3
KMI PP **PP** 09 04 55.8 -2.3
KMI S **S** 09 08 25.8 +2.6
KMI sS sS 09 09 41.3 -7.3
KMI SS **ScP** 09 10 13.8 +7.8
KMI pmax pmax
comp=Z,39nm,0.7s
KMI pmax pmax
comp=Z,150nm,4.4s
KMI LR LR
comp=Z,230nm,8.8s
KMI LR LR
comp=Z,170nm,7.7s
KMI LR LR
comp=Z,170nm,10.4s
YAYX **Yaylak** 29.40 286 *e*P **P** 09 03 48.0 +1.3
BR131 **Keskin Array S** 29.45 288 *c* iP **P** 09 03 47.5 +0.4
BR131 **Keskin Array S** 29.45 288 P **P** 09 03 47.5 +0.4
BR131 IAmb IAmb 09 03 50.0
comp=Z,74nm,0.8s
BRTR **Keskin Array B** 29.45 288 P **P** 09 03 48.3 +1.2
comp=Z,38nm,0.7s,baz=97,slow=8.2,SNR=92
BRTR pP **pP** 09 04 35.1 +1.3
comp=Z,9.4nm,0.7s,baz=112,slow=8.5,SNR=2.8
BRTR **Keskin Array B** 29.45 288 *e*P **P** 09 03 47.8 +0.7
BRTR **Keskin Array B** 29.45 288 P **P** 09 03 48.2 +1.1
MOS **Moscow** 29.66 321 *e*P **P** 09 03 48.0 -0.5
MOS pmax pmax
comp=Z,201nm,1.2s
MOS pmax pmax
comp=Z,300nm,1.3s
AFSR **Afar-Bala (An** 29.91 287 *e*P **P** 09 03 51.9 +0.8
OBN **Obninsk** 29.93 319 P **P** 09 03 52.0 +1.1
comp=Z,19nm,0.5s,baz=67,slow=2.9,SNR=26
OBN **Obninsk** 29.93 319 *c* iP **P** 09 03 51.9 +0.9
OBN *e**SP **sP** 09 05 05.6 +0.6
OBN *e*S **S** 09 08 31.9 +1.3
OBN *e**SS **sS** 09 09 58.5 +2.4
OBN pmax pmax
comp=Z,239nm,1.3s
OBN MLR MLR
comp=Z,153nm,19.0s
OBN **Obninsk** 29.93 319 P **P** 09 03 51.8 +0.9
BR231 **Keskin MP Arra** 30.10 288 P **P** 09 03 54.4 +1.6
BR231 IAmb IAmb 09 03 55.6
comp=Z,87nm,1.2s
CM33 **Chiang Mai Arr** 30.21 118 P **P** 09 03 55.0 +1.2
CHTO **Chiang Mai** 30.21 118 P **P** 09 03 54.8 +0.9
CHTO pmax pmax
comp=Z,30nm,1.5s
CHTO **Chiang Mai** 30.21 118 P **P** 09 03 54.8 +0.9
CMMT **Chiang Mai** 30.22 118 P **P** 09 03 55.5 +1.6
comp=Z,238nmcomp=Z,9.0nm,1.3s
CM32 **Chiang Mai Arr** 30.25 119 P **P** 09 03 56.0 +1.8
CM34 **Chiang Mai Arr** 30.33 118 P **P** 09 03 56.0 +1.1
PALK **Pallekele** 30.43 161 P **P** 09 03 57.5 +1.7
PALK **Pallekele** 30.43 161 P **P** 09 03 57.1 +1.3
PALK pmax pmax
comp=Z,43nm,1.0s
PALK **Pallekele** 30.43 161 P **P** 09 03 57.1 +1.3
PALK IAmb IAmb 09 03 57.8
comp=Z,43nm,0.9s
CM15 **Chiang Mai Arr** 30.44 119 P **P** 09 03 58.0 +2.2
comp=Z,27nm,1.0s
CM13 **Chiang Mai Arr** 30.45 119 P **P** 09 03 57.6 +1.7
comp=Z,217nmcomp=Z,21nm,0.9s
CM31 **Chiang Mai Arr** 30.45 119 P **P** 09 03 58.2 +2.3
comp=Z,443nm,0.5s
CMAR **Chiang Mai Arr** 30.45 119 P **P** 09 03 56.6 +0.7
comp=Z,13nm,0.8s,baz=302,slow=8.1,SNR=63
CMAR pP **pP** 09 04 43.2 -0.5
comp=Z,6.0nm,0.6s,baz=315,slow=10,SNR=2.5
CMAR ScP **ScP** 09 10 07.5 -1.7
comp=Z,7.9nm,0.8s,baz=294,slow=4.7,SNR=7.5
CMAR **Chiang Mai Arr** 30.45 119 P **P** 09 03 56.4 +0.5
CM35 **Chiang Mai Arr** 30.45 118 P **P** 09 03 58.0 +2.1
CM02 **Chiang Mai Arr** 30.46 119 P **P** 09 03 57.6 +1.5
comp=Z,252nmcomp=Z,32nm,1.0s
CM01 **Chiang Mai Arr** 30.48 119 P **P** 09 03 58.0 +1.8
comp=Z,309nmcomp=Z,16nm,0.9s
CM05 **Chiang Mai Arr** 30.49 119 P **P** 09 03 57.0 +0.7
comp=Z,232nmcomp=Z,17nm,0.9s
CM09 **Chiang Mai Arr** 30.49 119 P **P** 09 03 57.0 +0.7
comp=Z,256nmcomp=Z,32nm,0.9s
CM04 **Chiang Mai Arr** 30.51 119 P **P** 09 03 58.1 +1.7
comp=Z,230nmcomp=Z,27nm,1.1s
CSS **Mathiatis** 30.51 278 P **P** 09 03 56.5 +0.2
CSS IAmb IAmb 09 03 58.9
comp=Z,31nm,0.7s
CM36 **Chiang Mai Arr** 30.52 118 P **P** 09 03 57.0 +0.5
PAYA **Payao** 30.52 116 P **P** 09 03 57.3 +0.8
comp=Z,5μmcomp=Z,218nm,0.9s
BTO **Baotou** 30.59 70 *e*P **P** 09 03 56.8 -0.3
LADK **Ladik-KONYA** 30.63 285 *e*P **P** 09 03 58.6 +1.1
KONT **Konya--Tatoy** 30.67 284 *e*P **P** 09 03 59.3 +1.5
LEF **Lefka** 30.82 279 ⇑P **P** 09 04 00.3 +1.2
EIL **Elat** 30.86 268 P **P** 09 04 00.1 +0.7
comp=Z,37nm,0.9s,baz=30,slow=3.3,SNR=25
EIL **Elat** 30.86 268 *e*P **P** 09 04 00.5 +1.1
LAMP **Lampang** 30.89 118 P **P** 09 04 01.0 +1.1
comp=Z,2μmcomp=Z,53nm,1.0s
KIZT **Kizilcal** 30.90 286 *e*P **P** 09 04 00.4 +0.5
XAN **Xi'an** 30.90 83 P **P** 09 04 00.3 +0.5
XAN S **S** 09 08 41.5 -4.9
XAN pmax pmax
comp=Z,210nm,0.7s
XAN LR LR

comp=Z,460nm,12.6s
XAN LR LR
comp=Z,220nm,13.0s
XAN LR LR
comp=Z,330nm,13.0s
XAN Xi'an 30.90 83 P **P** **09 04 00.1 +0.3**
XAN pmax pmax
comp=Z,145nm,0.8s
XAN Xi'an 30.90 83 P **P** **09 04 00.1 +0.3**
SEYD Seydisehir-KON 31.17 284 *eP* **P** **09 04 03.7 +1.5**
MDUB Mudurnu 31.24 290 P **P** **09 04 03.5 +0.7**
CIFT Cifteler, Eski 31.47 287 *eP* **P** **09 04 04.4 -0.4**
KLMR Klimovskoe 31.47 331 *eP* **P** **09 03 59.8 -4.6**
KLMR pmax pmax
comp=Z,159nm,1.3s
KLMR Klimovskoe 31.47 331 *eP* **P** **09 03 59.8 -4.6**
KLMR AMP 09 04 06.6
comp=Z,159nm,1.3s
NANT Nan 31.48 116 P **P** **09 04 04.6 -0.3**
comp=Z,437nm,0.9s
SUKH Sukhothai 31.58 119 P **P** **09 04 07.3 +1.5**
comp=Z,100nm,0.9s
HHC Hu-ho-hao-te 31.73 70 *eP* **P** **09 04 08.8 +1.7**
HHC pP pP 09 04 54.4 -1.1
HHC sP sP 09 05 19.8 -3.4
HHC S **S** **09 09 01.4 +2.1**
HHC sS sS 09 10 21.8 -3.2
HHC SS **SS** **09 11 11.6 -10**
HHC pmax pmax
comp=Z,60nm,1.1s
HHC pmax pmax
comp=Z,220nm,5.2s
GYA Guiyang 31.84 98 ⇓P **P** **09 04 09.0 +0.8**
GYA pP pP 09 04 56.6 +0.1
GYA PP **PP** **09 05 29.9 +4.7**
GYA PcP **PcP** **09 06 53.3 +0.2**
GYA S **S** **09 09 00.8 -0.6**
GYA ScP **ScP** **09 10 12.3 -1.7**
GYA sS sS 09 10 21.3 -5.8
GYA pmax pmax
comp=Z,110nm,0.9s
GYA pmax pmax
comp=Z,130nm,3.5s
GYA LR LR
comp=Z,190nm,9.9s
GYA LR LR
comp=Z,130nm,8.0s
GYA LR LR
comp=Z,160nm,9.1s
SHUT Suhut-Afyon 31.98 286 *eP* **P** **09 04 10.4 +1.1**
UTTA Uttaradit 32.06 118 P **P** **09 04 11.1 +1.1**
comp=Z,645nmcomp=Z,82nm,0.8s
PURM Purcari 32.07 301 ⇑P **P** **09 04 12.0 +2.2**
SLVN Son La 32.33 109 P **P** **09 04 13.5 +1.1**
SLVN IAmb IAmb 09 04 15.2
comp=Z,60nm,1.4s
PHIT Phitsanulok 32.33 119 P **P** **09 04 14.4 +2.0**
comp=Z,171nm,1.1s
KORT Korkueli 32.42 283 *eP* **P** **09 04 13.3 +0.2**
ENH Enshi 32.55 90 P **P** **09 04 14.3 +0.1**
TVSB Tavsanli 32.69 288 *eP* **P** **09 04 15.8 +0.4**
UTHA Uthaitani 32.78 122 P **P** **09 04 18.5 +2.3**
comp=Z,458nmcomp=Z,56nm,0.9s
ISK Istanbul-Kandi 32.79 291 *eP* **P** **09 04 16.9 +0.8**
ELL Elmali 32.82 283 P **P** **09 04 17.3 +0.8**
ELL pmax pmax
comp=Z,1μm,0.7s
ELL Elmali 32.82 283 P **P** **09 04 17.3 +0.8**
MILM Milestii Mici 32.82 302 ⇑P **P** **09 04 17.4 +1.1**
KIS Kishinev 32.82 302 ⇑*iP* **P** **09 04 16.6 +0.3**
comp=Z,180nm,1.4s
KIS *i* pP pP 09 04 55.0 -8.6
KIS Kishinev 32.82 302 *i* PP PP 09 05 30.0 -5.5
KIS Kishinev 32.82 302 *ci* P **P** **09 04 16.6 +0.3**
KIS *i* 09 05 30.0
KIS pmax pmax
comp=Z,180nm,1.4s
TIY Taiyuan 32.85 75 *eP* **P** **09 04 18.6 +1.8**
TIY sP **sP** **09 05 33.3 +0.6**
TIY PP **PP** **09 05 38.5 +2.4**
TIY S **S** **09 09 18.8 +2.2**
TIY pmax pmax
comp=Z,97nm,0.9s
AKASG Malin Array Be 32.95 309 P **P** **09 04 17.4 +0.1**
comp=Z,48nm,0.6s,baz=80,slow=7.0,SNR=79
AKASG Malin Array Be 32.95 309 P **P** **09 04 17.2 -0.2**
AKBB Malin Array Si 32.95 309 *ceP* **P** **09 04 17.9 +0.6**
AKBB Malin Array Si 32.95 309 P **P** **09 04 17.8 +0.5**
TPGR Topolog 33.05 298 ⇑P **P** **09 04 19.4 +1.1**
AKAS Kas 33.17 282 *eP* **P** **09 04 18.9 -0.7**
AKAS Kas 33.17 282 P **P** **09 04 19.4 -0.2**
AKAS IAmb IAmb 09 04 21.1
comp=Z,64nm,0.8s
SORM Soroca 33.21 304 ⇓P **P** **09 04 20.3 +0.7**
CFR Carcaliu 33.25 299 ⇑P **P** **09 04 21.1 +1.1**
CAME Cameli-Denizli 33.25 283 *eP* **P** **09 04 20.3 0.0**
KULA Kula-Manisa 33.45 286 *eP* **P** **09 04 22.5 +0.5**
MANT Manisa 33.53 286 P **P** **09 04 23.7 +0.9**
CIT Chita 33.62 49 *eP* **P** **09 04 24.2 +1.0**
CIT *e* 09 05 13.3
CIT *e* 09 05 43.0
CIT *e* 09 05 46.7
CIT pmax pmax
comp=Z,255nm,1.5s
NONG Nongkai 33.73 114 P **P** **09 04 25.2 +0.7**
comp=Z,7μmcomp=Z,82nm,1.0s
TMCR Tamitsa 34.03 335 *eP* **P** **09 04 25.9 -0.6**
TMCR pmax pmax
comp=Z,67nm,0.6s
NRIK Noril'sk 34.10 10 P **P** **09 04 28.8 +1.7**
comp=Z,110nm,0.7s,baz=202,slow=5.7,SNR=195
NRIK Noril'sk 34.10 10 *ceP* **P** **09 04 28.3 +1.3**
NRIK pmax pmax
comp=Z,97nm,0.9s
AYDB Zeytinkoy-Aydi 34.15 286 *eP* **P** **09 04 28.2 +0.2**
VRI Vrincioaia 34.23 300 ⇓P **P** **09 04 30.4 +1.9**
PLOR Plostina 34.29 300 ⇓P **P** **09 04 30.9 +1.9**
TESR Tescani 34.29 301 ⇓P **P** **09 04 29.8 +0.8**
CHAI Chaiyaphum 34.31 119 P **P** **09 04 30.9 +1.5**
comp=Z,478nmcomp=Z,41nm,0.9s
ARG Arkhangelos 34.34 283 P **P** **09 04 30.2 +0.7**
MLSB Milas 34.37 285 *eP* **P** **09 04 30.8 +1.0**
ISR Istrita 34.37 299 ⇓P **P** **09 04 32.4 +2.6**
MICGM Minsk 34.50 315 ⇓*eP* **P** **09 04 30.0 -0.6**
MICGM PM 09 04 31.0
comp=Z,0.4nm,1.0s
MNK Minsk 34.50 315 ⇓⇓*eP* **P** **09 04 30.0 -0.6**
MNK pmax pmax
comp=Z,370nm,1.0s
PRAR RASCA 34.60 302 ⇑P **P** **09 04 32.6 +1.0**
BIZ Bicaz 34.67 302 ⇑P **P** **09 04 33.8 +1.5**
MLR Muntele Rosu 34.79 299 P **P** **09 04 35.2 +1.8**
comp=Z,108nm,0.9s,baz=95,slow=1.9,SNR=60
MLR Muntele Rosu 34.79 299 ⇑P **P** **09 04 36.0 +2.6**
PHET Kaeng Krachan 34.80 125 P **P** **09 04 37.0 +3.3**
comp=Z,624nmcomp=Z,60nm,0.6s
OZUR 34.89 300 ⇑P **P** **09 04 36.3 +2.2**
PUL Pulkovo 34.91 325 *ceP* **P** **09 04 35.4 +1.4**
PUL pmax pmax
comp=Z,111nm,1.0s
SMG Samos 35.02 286 P **P** **09 04 36.2 +0.9**
ALN Alexandroupoli 35.08 291 *eP* **P** **09 04 36.1 +0.4**
ALN Alexandroupoli 35.08 291 P **P** **09 04 36.3 +0.5**
ALN pmax pmax
comp=Z,100nm,1.5s
ALN Alexandroupoli 35.08 291 P **P** **09 04 36.3 +0.5**
ALN IAmb IAmb 09 04 38.1
comp=Z,100nm,1.5s
ALN Alexandroupoli 35.08 291 P **P** **09 04 36.7 +1.0**
DOPR Dopca 35.17 300 ⇑P **P** **09 04 38.4 +1.8**
NACGM Naroch 35.21 316 *e* **P** **09 04 36.0 -0.7**
KARP Karpathos 35.26 282 *eP* **P** **09 04 38.5 +1.1**
KARP Karpathos 35.26 282 P **P** **09 04 38.1 +0.6**
BURAR Bucovina Array 35.29 303 ⇓P **P** **09 04 38.8 +1.2**
BURAR Bucovina Array 35.29 303 P **P** **09 04 37.9 +0.3**
BUR08 Bucovina Ar. S 35.30 303 P **P** **09 04 38.0 +0.3**
BOD Bodaibo 35.32 39 ⇑*iP* **P** **09 04 37.7 +0.1**
BOD pmax pmax
comp=Z,68nm,1.2s
BJT Baijiatuau 35.33 70 P **P** **09 04 39.4 +1.5**
BJT pmax pmax
comp=Z,32nm,1.0s
BJT Baijiatuau 35.33 70 P **P** **09 04 39.4 +1.5**
BJI Beijing 35.33 70 P **P** **09 04 39.0 +1.1**
BJI sP **sP** **09 05 51.9 -2.4**
BJI PcP **PcP** **09 07 03.1 +0.5**
BJI S **S** **09 09 55.0 +0.7**
BJI ScP **ScP** **09 10 25.3 -0.6**
BJI ScS **ScS** **09 14 29.4 -1.3**
BJI pmax pmax
comp=Z,24nm,1.3s
IDID Didziasalis 35.33 316 *eP* **P** **09 04 38.0 +0.3**
COPA Copaceanca 35.36 297 ⇑P **P** **09 04 40.5 +2.4**
VOIR 35.42 299 ⇑P **P** **09 04 39.8 +1.1**
SMTH Samothraki Isl 35.52 291 P **P** **09 04 40.5 +0.9**
ATD Arta Tunnel 35.55 233 P **P** **09 04 41.8 +1.6**
ATD IAmb IAmb 09 04 43.4
comp=Z,88nm,1.0s
IIGN Ignalina 35.63 316 *eP* **P** **09 04 40.3 +0.1**
SRAK Srakaew 35.65 121 P P 09 04 47.0 +6.2
comp=Z,180nm,1.1s
IZAR Zarasai 35.70 317 *eP* **P** **09 04 41.2 +0.3**
ARR Arges 35.72 299 ⇑P **P** **09 04 42.8 +1.5**
ISAL Salakas 35.73 317 *eP* **P** **09 04 41.5 +0.4**
ARCR ARCALIA 35.87 302 ⇓P **P** **09 04 45.2 +2.8**
LVV L'vov 36.16 307 *eP* **P** **09 04 45.6 +0.7**
APE Apeiranthos 36.17 285 ⇓P **P** **09 04 45.6 +0.5**
VSU Vasula 36.18 322 *eP* **P** **09 04 44.6 -0.2**
VSU Vasula 36.18 322 *ci* P **P** **09 04 45.0 +0.2**
VSU pmax pmax
comp=Z,159nm,0.9s
LOT Lotru 36.32 299 ⇑P **P** **09 04 48.3 +1.9**
WHN Wuhan 36.37 87 ⇑*iP* **P** **09 04 48.5 +1.7**
WHN S **S** **09 10 13.1 +2.7**
WHN pmax pmax
comp=Z,260nm,1.2s
WHN pmax pmax
comp=Z,260nm,7.7s
CJR Cluj-Napoca 36.39 301 ⇓P **P** **09 04 49.2 +2.3**
BMR Baia Mare 36.45 303 ⇓P **P** **09 04 49.9 +2.5**
MPEP Malo Peshtene 36.49 296 *iP* **P** **09 04 49.2 +1.4**
LAST Lasithi 36.69 282 P P 09 04 40.0 -10
MMB Musomiste 36.71 293 *iP* **P** **09 04 49.2 -0.5**
TIA Tai'an 36.84 76 P **P** **09 04 52.1 +1.3**
TIA pP **pP** **09 05 40.8 +0.9**
TIA PP **PnPn** **09 06 24.0 +0.7**
TIA S **S** **09 10 19.6 +2.1**
TIA pmax pmax
comp=Z,65nm,1.3s
TIA LR LR
comp=Z,100nm,6.7s
TIA LR LR
comp=Z,210nm,9.2s
DEV Deva 36.91 300 ⇑P **P** **09 04 53.7 +2.5**
PABE Paberze 36.91 316 *eP* **P** **09 04 51.5 +0.4**
HRKL Herakleio 36.94 282 P P 09 05 00.6 +0.0
VTS Vitosha 36.94 295 *iP* **P** **09 04 52.2 +0.5**
DRGR 37.00 302 ⇑P **P** **09 04 53.6 +1.5**
KWP Kalwaria Pacla 37.01 306 *eP* **P** **09 04 53.5 +1.4**
KWP *es*P **sP** **09 06 07.6 +0.5**
GZR Gura Zlata 37.02 299 ⇑P **P** **09 04 53.8 +1.5**
PLG Polygyros 37.11 291 P P 09 04 43.0 -10
SUW Suwalki 37.12 314 *eP* **P** **09 04 53.1 +0.3**
SUW *e*PP **PP** **09 06 23.7 +1.2**
IDI Anoyia 37.12 282 P **P** **09 04 53.0 -0.3**
comp=Z,64nm,0.7s,baz=45,slow=11,SNR=38
IDI Anoyia 37.12 282 ⇓P **P** **09 04 52.9 -0.3**
IDI Anoyia 37.12 282 *eP* **P** **09 04 52.9 -0.3**
IDI Anoyia 37.12 282 P **P** **09 04 52.9 -0.3**
IDI IAmb IAmb 09 04 55.0
comp=Z,74nm,0.7s
IDI Anoyia 37.12 282 P P 09 04 41.0 -12
KKB Krupnik 37.15 293 *iP* **P** **09 04 53.1 -0.2**
DION Dionisos Attik 37.18 287 P P 09 04 46.0 -7.6
PTL Penteli 37.24 287 P **P** **09 04 49.8 -4.3**
HIA Hailar 37.26 54 P **P** **09 04 55.1 +0.9**
HIA pmax pmax
comp=Z,26nm,0.8s
HIA Hailar 37.26 54 P **P** **09 04 55.1 +0.9**
UZH Uzhgorod 37.26 305 ⇓*iP* **P** **09 04 54.9 +0.8**
UZH *i* S **S** **09 10 24.3 +0.8**
KOLS Kolonicke sedl 37.28 305 *eP* **P** **09 04 55.7 +1.4**
KOLS pmax pmax
comp=Z,39nm,0.9s
KOLS Kolonicke sedl 37.28 305 *eP* **P** **09 04 55.6 +1.3**
KOLS *e*PP **PnPn** **09 06 28.4 +0.1**
HERR Herculane 37.31 298 ⇑P **P** **09 04 55.5 +0.9**
VLY Voula,Athens 37.34 287 P P 09 04 46.4 -8.5
LVZ Lovozero 37.44 338 *ceP* **P** **09 04 56.6 +1.2**
LVZ pmax pmax
comp=Z,64nm,1.0s
FIA1 FINESS Array S 37.48 326 P **P** **09 04 55.9 +0.2**
FIA1 IAmb IAmb 09 04 57.6
comp=Z,68nm,0.8s
FINES FINESS Array B 37.48 326 P **P** **09 04 56.2 +0.5**
comp=Z,58nm,0.7s,baz=107,slow=10,SNR=134
FINES pP **pP** **09 05 45.2 +1.3**
comp=Z,20nm,0.8s,baz=90,slow=7.6,SNR=2.8
FINES FINESS Array B 37.48 326 P **P** **09 04 55.5 -0.2**
APA Apatity 37.62 337 ⇓*iP* **P** **09 04 57.5 +0.6**
APA *i* *PP **pP** **09 05 45.2 -0.3**
APA *i* S **S** **09 10 31.0 +2.6**
APA *i* SS **SS** **09 13 20.0 -3.8**
APA pmax pmax
comp=Z,31nm,0.7s
APA MLR MLR
comp=Z,800nm,21.0s
VAM Vamos 37.63 283 P P 09 04 49.6 -7.8
SIRR Siria 37.75 301 ⇑P **P** **09 05 00.8 +2.6**
ATAL Atalanti 37.75 288 P P 09 04 49.8 -8.6
IMMV Iera Moni Meta 37.78 283 *eP* **P** **09 04 59.4 +0.7**
IMMV Iera Moni Meta 37.78 283 P P 09 04 45.6 -13
CRVS Cervenica-Dubn 37.81 305 *eP* **P** **09 05 00.2 +1.4**
CRVS pmax pmax
comp=Z,39nm,1.1s
CRVS Cervenica-Dubn 37.81 305 *eP* **P** **09 05 00.1 +1.3**
MDVR Moldovita 37.82 298 ⇓P **P** **09 05 00.2 +1.3**
GVDS Gavdos 37.87 282 *eP* **P** **09 04 59.7 +0.3**
GVDS Gavdos 37.87 282 P P 09 04 46.7 -13
GVD Gavdhos 37.87 282 *eP* **P** **09 04 59.6 +0.1**
GVD Gavdhos 37.87 282 P P **09 04 59.5 +0.1**
PBUR Paburge 38.14 317 *eP* **P** **09 05 01.7 +0.4**
QIZ Qiongzhong 38.20 107 P **P** **09 05 02.6 +0.2**
QIZ S **S** **09 10 39.0 +0.7**
QIZ LR LR
comp=Z,210nm,13.4s
QIZ LR LR
comp=Z,240nm,8.2s
QIZ LR LR
comp=Z,140nm,11.4s
AGG Agios Georgios 38.21 289 P **P** **09 05 02.2 0.0**
AGG pmax pmax
comp=Z,109nm,1.4s
AGG Agios Georgios 38.21 289 P **P** **09 05 02.2 0.0**
AGG IAmb IAmb 09 05 03.5
comp=Z,109nm,1.4s
SLIT Slitere, Latvi 38.25 319 *eP* **P** **09 05 02.0 -0.2**
BEL Belsk 38.34 310 *eP* **P** **09 05 04.4 +1.4**
BEL *e*PcP **PcP** **09 07 12.0 +0.5**
THL Klokotos Trika 38.34 290 P P 09 04 48.7 -15
GUR Goura 38.44 287 P P 09 04 52.1 -12
KECS Kecovo 38.47 304 *eP* **P** **09 05 05.8 +1.6**
KECS pmax pmax
comp=Z,15nm,0.8s
KECS Kecovo 38.47 304 *eP* **P** **09 05 05.8 +1.6**
KALE Kalithea 38.49 288 P P 09 04 54.5 -10
TRIZ Trizonia 38.55 288 P P 09 04 55.0 -10
NIE Niedzica 38.58 306 *eP* **P** **09 05 07.1 +2.0**
NIE *es*P **sP** **09 06 21.3 +1.1**
NIE *e*PcP **PcP** **09 07 12.3 -0.1**
TRIP Tripoli 38.59 287 P P 09 04 58.2 -7.3
FNA Florina 38.59 292 P **P** **09 05 05.6 +0.2**
FNA pmax pmax
comp=Z,35nm,0.7s
FNA Florina 38.59 292 P **P** **09 05 05.6 +0.2**
FNA IAmb IAmb 09 05 07.4
comp=Z,35nm,0.7s
FNA Florina 38.59 292 P P 09 04 54.5 -11
ANX Ano Chora 38.62 288 P P 09 04 59.8 -5.9
EVR Evrytania 38.63 289 P P 09 04 59.1 -6.7
EFP Efpalio 38.66 288 P **P** **09 05 02.6 -3.3**
PSZ Piszkesteto 38.88 303 ⇑P **P** **09 05 09.3 +1.6**
PSZ Piszkesteto 38.88 303 P **P** **09 05 08.5 +0.8**
PSZ pmax pmax
comp=Z,38nm,0.8s
PSZ Piszkesteto 38.88 303 P **P** **09 05 08.5 +0.8**
PSZ IAmb IAmb 09 05 10.4
comp=Z,38nm,0.8s
PENT Pentalofos 38.88 291 P P 09 05 00.1 -7.8
OJC Ojcow 38.91 307 *eP* **P** **09 05 08.6 +0.8**
OJC *es*P **sP** **09 06 23.7 +0.7**
OJC Ojcow 38.91 307 P **P** **09 05 08.5 +0.7**
OJC pmax pmax
comp=Z,76nm,0.9s
OJC Ojcow 38.91 307 P **P** **09 05 08.5 +0.7**
OJC IAmb IAmb 09 05 09.8
comp=Z,76nm,0.9s
DIVS Divibare 39.11 297 ⇑*iP* **P** **09 05 10.4 +0.7**
DIVS Divibare 39.11 297 P P **09 05 08.8 -0.9**
DIVS IAmb IAmb 09 05 11.9
comp=Z,49nm,1.1s
LANS Liptovska Anna 39.13 305 *eP* **P** **09 05 11.9 +2.2**
LANS pmax pmax
comp=Z,15nm,0.8s
LANS Liptovska Anna 39.13 305 *eP* **P** **09 05 11.9 +2.2**
FRGS Fruska Gora 39.13 299 ⇑*iP* **P** **09 05 10.4 +0.7**
PDO Prodromos 39.18 289 P P 09 05 04.9 -5.3
LSK Leskovik 39.29 291 P P 09 05 04.3 -7.0
TEKS Tekeris 39.39 298 *eP* **P** **09 05 12.9 +1.0**
NJ2 Nanjing 39.45 82 ⇓P **P** **09 05 13.9 +1.4**
NJ2 S **S** **09 10 59.3 +2.7**
NJ2 pmax pmax
comp=Z,36nm,0.9s
NJ2 pmax pmax
comp=Z,130nm,4.2s
NJ2 LR LR
comp=Z,150nm,7.9s
NJ2 LR LR
comp=Z,180nm,5.1s
NJ2 LR LR
comp=Z,270nm,8.3s
LKD2 Lefkada island 39.53 289 P P 09 05 03.6 -10
VYHS Vyhne 39.56 304 *eP* **P** **09 05 14.3 +1.0**
VYHS pmax pmax
comp=Z,67nm,1.4s
VYHS Vyhne 39.56 304 *eP* **P** **09 05 14.3 +1.0**
BBLS Lazići 39.56 297 ⇑*iP* **P** **09 05 13.8 +0.4**
RUDO Rudo 39.62 297 *eP* **P** 09 05 20.8 +7.0
MORH Mrgy, Hungar 39.84 301 ⇑*iP* **P** **09 05 16.0 +0.5**
PDG Podgorica 39.88 295 ⇑P **P** **09 05 16.9 +0.9**
PDG Podgorica 39.88 295 *eP* **P** **09 05 15.9 0.0**
OKC Ostrava-Krasne 39.97 307 *eP* **P** **09 05 17.5 +0.9**
OKC Ostrava-Krasne 39.97 307 *eP* **P** **09 05 17.5 +0.9**
DRME Dracevica, Mon 39.97 295 *eP* **P** **09 05 14.7 -2.0**
UPM Unac-Piva 40.02 296 *eP* **P** **09 05 18.7 +1.4**
JAVC Velka Javorina 40.32 305 ⇓*iP* **P** **09 05 22.0 +2.5**
BRY Bratogost 40.33 296 *eP* **P** **09 05 20.6 +0.8**
MORC Moravsky Berou 40.37 306 ⇑P **P** **09 05 21.5 +1.6**
MORC Moravsky Berou 40.37 306 ⇓*iP* **P** **09 05 21.3 +1.4**
MORC Moravsky Berou 40.37 306 P **P** **09 05 20.3 +0.4**
MORC pmax pmax
comp=Z,66nm,0.8s
MORC Moravsky Berou 40.37 306 P **P** **09 05 20.3 +0.4**
MORC IAmb IAmb 09 05 22.4
comp=Z,66nm,0.8s
HCY Herceg Novi 40.44 295 *eP* **P** **09 05 21.0 +0.5**
TREB Trebinje 40.49 296 *eP* **P** **09 05 20.5 -0.5**
SMOL Smolenice 40.50 304 *eP* **P** **09 05 22.5 +1.6**
SMOL pmax pmax
comp=Z,19nm,0.8s
SMOL Smolenice 40.50 304 *eP* **P** **09 05 22.5 +1.6**
GKP Gorka Klasztor 40.57 312 *eP* **P** **09 05 22.5 +1.1**
MODS Modra-Piesok 40.60 304 *eP* **P** **09 05 21.9 +0.1**
MODS pmax pmax
comp=Z,58nm,1.2s
MODS Modra-Piesok 40.60 304 *eP* **P** **09 05 21.9 +0.1**
ZST Bratislava 40.73 304 *eP* **P** **09 05 24.1 +1.3**
ZST pmax pmax
comp=Z,74nm,1.0s
ZST Bratislava 40.73 304 *eP* **P** **09 05 24.1 +1.3**
ZST *e*PP **PP** **09 07 02.9 +1.1**
KRLC Kraliky 40.85 307 *eP* **P** **09 05 25.0 +1.2**
KRLC Kraliky 40.85 307 *eP* **P** **09 05 25.0 +1.2**
STON Ston 40.94 296 ⇑*iP* **P** **09 05 24.3 -0.3**
TPTI 40.94 138 P **P** **09 05 25.5 +0.6**
comp=Z,439nmcomp=Z,35nm,1.0s
VRAC Vranov 41.00 306 P **P** **09 05 26.1 +1.0**
comp=Z,72nm,0.8s,baz=90,slow=8.4,SNR=63
VRAC pP **pP** **09 06 16.4 +2.5**
comp=Z,13nm,0.8s,baz=323,slow=18,SNR=2.5
VRAC Vranov 41.00 306 ⇑P **P** **09 05 27.2 +2.1**
VRAC Vranov 41.00 306 ⇓*iP* **P** **09 05 26.8 +1.8**
BLY Banja Luka 41.03 299 ⇑*iP* **P** **09 05 26.1 +0.8**
BEHE Becsehely 41.10 301 ⇑*iP* **P** **09 05 29.0 +3.1**
ARA0 ARCESS Array S 41.13 338 ⇓*iP* **P** **09 05 27.3 +1.5**
ARCES ARCESS Array B 41.13 338 P **P** **09 05 26.6 +0.9**
comp=Z,44nm,0.5s,baz=111,slow=7.7,SNR=239
ARCES pP **pP** **09 06 16.4 +1.2**
comp=Z,18nm,0.7s,baz=108,slow=7.8,SNR=3.1
DPC Dobruska-Polom 41.13 307 *eP* **P** **09 05 27.8 +1.7**
DPC Dobruska-Polom 41.13 307 *eP* **P** **09 05 27.8 +1.7**
KSP Ksiaz 41.14 308 *eP* **P** **09 05 27.1 +1.0**
KSP *es*P **sP** **09 06 41.5 -0.1**
KSP *e*PP **PP** **09 07 06.2 +0.1**
KRUC Moravsky 41.15 305 ⇓*iP* **P** **09 05 27.9 +1.7**
OSTC Ostas 41.20 308 *eP* **P** **09 05 27.4 +0.8**
KULM Kulim 41.27 132 P **P** **09 05 29.0 +1.4**
CHVC Chvalec 41.30 308 *eP* **P** **09 05 29.1 +1.7**
UPC Upice 41.33 308 *eP* **P** **09 05 29.3 +1.6**
UPC Upice 41.33 308 *eP* **P** **09 05 29.3 +1.6**
KOGS Kog 41.47 301 ⇑*iP* **P** **09 05 29.3 +0.4**
comp=Z,131nm,1.0s
KOGS *e*PcP **PcP** **09 07 22.0 +0.2**
KOGS *ep*PcP 09 08 17.6
CN2 Changchun 41.58 63 *eP* **P** **09 05 28.6 -1.1**
CN2 *es*P sP 09 06 40.8 -6.0
CN2 *e*PP **PP** **09 07 10.3 -0.6**
CN2 *e*S **S** **09 11 26.3 -1.5**
CN2 *es*S sS 09 12 49.1 -7.0
CN2 *e*SS **SS** **09 14 33.5 -8.8**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,120nm,5.0s
CN2 LR LR
comp=Z,280nm,13.0s
CN2 LR LR
comp=Z,240nm,13.0s
CN2 LR LR
comp=Z,230nm,14.0s
CONA Conrad Observa 41.58 304 *i* P **P** **09 05 31.4 +1.5**
comp=Z,120nm,0.9s,SNR=77
KTK1 Kautokeino 41.60 336 ⇓*iP* **P** **09 05 30.2 +0.6**
ARSA Arzberg 41.88 303 *i* P **P** **09 05 33.0 +0.9**
comp=Z,34nm,1.1s,SNR=14
BSD Bornholm Skovb 42.01 315 ⇑*iP* **P** **09 05 32.6 -0.4**
BSD pmax pmax
comp=Z,78nm,0.8s
BSD Bornholm Skovb 42.01 315 ⇑*iP* **P** **09 05 32.6 -0.4**
comp=Z,78nm,0.8s
BSD Bornholm Skovb 42.01 315 *i* P **P** **09 05 32.0 -1.0**
BSD *i* P **P** **09 05 32.5 -0.4**
BSD ⇑*iP* **P** **09 05 32.6 -0.4**
BSD IAmb IAmb 09 05 33.7
comp=Z,78nm,0.8s
ZEA Zeya 42.04 48 *de*P **P** **09 05 35.2 +1.9**
ZEA *e* 09 06 23.3
ZEA pmax pmax
comp=N,30nm,0.8s
ZEA pmax pmax
comp=E,30nm,0.8s
ZEA pmax pmax
comp=Z,70nm,0.8s
ZEA MLR MLR
comp=Z,200nm,12.0s
CRES Cresnjev 42.09 301 ⇑*iP* **P** **09 05 34.5 +0.6**
IPM Ipoh 42.14 132 P **P** **09 05 33.8 -0.8**
IPM Ipoh 42.14 132 P **P** **09 05 35.0 +0.4**
HAMF Hammerfest 42.21 339 *eP* **P** **09 05 36.0 +1.5**
PVCC Panska Ves 42.25 308 *eP* **P** **09 05 36.4 +1.3**
PVCC Panska Ves 42.25 308 *eP* **P** **09 05 36.4 +1.3**
SOKA Soboth 42.27 302 *i* P **P** **09 05 36.9 +1.4**
comp=Z,107nm,0.8s,SNR=72
BOJS Bojanci 42.28 300 ⇑*iP* **P** **09 05 36.0 +0.7**
comp=Z,94nm,1.2s
BOJS *ep*P **pP** **09 06 27.8 +3.2**
BOJS *es*P **sP** **09 06 51.0 -0.2**
BOJS *e*PcP **PcP** **09 07 24.8 +0.3**
PSI Prapat 42.28 136 P **P** **09 05 34.8 -1.1**

PSI pmax pmax
comp=Z,38nm,1.1s
PRU Pruhonice 42.30 307 *e*P **P** **09 05 37.0 +1.5**
PRU Pruhonice 42.30 307 *e*P **P** **09 05 37.0 +1.5**
PRA Prague 42.36 307 *e*P **P** **09 05 37.9 +1.9**
PRA Prague 42.36 307 *e*P **P** **09 05 37.9 +1.9**
RPSI Rantau Prapat 42.37 136 P **P** **09 05 34.8 -1.7**
TIP Timpagrande 42.40 291 ⇑P **P** **09 05 36.4 -0.2**
TIP Timpagrande 42.40 291 P **P** **09 05 36.0 -0.5**
TIP IAmb IAmb 09 05 38.5
comp=Z,140nm,1.4s
SGRT San Giovanni R 42.58 295 P **P** **09 05 37.7 -0.3**
SGRT IAmb IAmb 09 05 39.3
comp=Z,64nm,0.8s
BRG Berggiesshubel 42.63 308 *i* P **P** **09 05 39.3 +1.2**
comp=Z,118nm,0.8s
BRG *i* pP **pP** **09 06 28.0 +0.7**
comp=Z,22nm,0.8s
BRG sP **sP** **09 06 50.0 -3.8**
BRG S **S** **09 11 44.0 +1.1**
BRG Berggiesshubel 42.63 308 *i* P **P** **09 05 39.3 +1.2**
BRG *i* *PP **pP** **09 06 28.0 +0.7**
BRG S **S** **09 11 44.0 +1.1**
BRG pmax pmax
comp=Z,118nm,0.8s
BRG pmax pmax
comp=Z,22nm,0.8s
BRG Berggiesshubel 42.63 308 *e*P **P** **09 05 39.9 +1.8**
comp=Z,118nm,0.8s,baz=86,slow=7.9
OBKA Obir 42.63 302 *i* P **P** **09 05 39.5 +1.2**
comp=Z,44nm,1.0s,SNR=16
MOA Molln 42.66 304 *e*P **P** **09 05 39.3 +0.9**
comp=Z,90nm,0.9s,SNR=43
RUE Ruedersdorf 42.66 311 *e*P **P** **09 05 38.5 +0.1**
RUE Ruedersdorf 42.66 311 *e*P **P** **09 05 39.5 +1.1**
comp=Z,122nm,0.8s,baz=86,slow=7.9
PBCC Pribram 42.67 306 *e*P **P** **09 05 39.7 +1.2**
LJU Ljubljana 42.70 301 ⇑*i*P **P** **09 05 39.9 +1.1**
LJU *e* 09 05 46.9
LJU *e*pP **pP** **09 06 31.7 +3.5**
LJU *i* sP **sP** **09 06 54.8 +0.2**
LJU *e*PcP **PcP** **09 07 25.2 -0.7**
LJU Ljubljana 42.70 301 ⇑*i*P **P** **09 05 39.9 +1.1**
GSI Gunungsitoli 42.80 139 P **P** **09 05 41.8 +1.9**
comp=Z,140nm,0.7s
GSI Gunungsitoli 42.80 139 P **P** **09 05 40.5 +0.6**
GSI IAmb IAmb 09 05 49.3
comp=Z,108nm,0.8s
CEY Cerknica 42.82 301 ⇑*i*P **P** **09 05 40.4 +0.6**
RIY Rijeka 42.84 300 *e*P **P** **09 05 39.6 -0.3**
RGN Rugen 42.92 314 *e*P **P** **09 05 39.7 -0.6**
RGN Rugen 42.92 314 *e*P **P** **09 05 42.4 +2.1**
comp=Z,329nm,0.9s,baz=86,slow=7.9
RGN Rugen 42.92 314 P **P** **09 05 40.9 +0.6**
GEC2 GERESS Array S 42.93 305 *e*P **P** **09 05 42.0 +1.3**
comp=Z,32nm,1.0s,baz=86,slow=7.9
GEC2 GERESS Array S 42.93 305 P **P** **09 05 41.0 +0.3**
GERES GERESS Array B 42.93 305 P **P** **09 05 42.0 +1.3**
comp=Z,14nm,0.7s,baz=87,slow=8.1,SNR=80
GERES pP **pP** **09 06 32.1 +2.1**
comp=Z,2.1nm,0.6s,baz=116,slow=7.8,SNR=2.0
GERES ScP **ScP** **09 10 54.2 -1.0**
comp=Z,1.6nm,0.7s,baz=95,slow=3.3,SNR=2.9
GERES GERESS Array B 42.93 305 P **P** **09 05 40.6 -0.2**
KHC Kasperske Hory 42.99 306 *ce*P **P** **09 05 41.8 +0.7**
KHC pmax pmax
comp=Z,60nm,1.0s
KHC Kasperske Hory 42.99 306 *e*P **P** **09 05 42.0 +0.9**
KHC *ex* x 09 05 53.0
KHC Kasperske Hory 42.99 306 P **P** **09 05 41.4 +0.3**
FBE Freiberg 42.99 308 *e*P **P** **09 05 43.1 +2.1**
comp=Z,141nm,0.8s,baz=86,slow=7.9
HFS Hagfors 43.06 322 P **P** **09 05 41.6 +0.2**
comp=Z,84nm,0.6s,baz=99,slow=9.2,SNR=186
HFS pP **pP** **09 06 32.9 +2.1**
comp=Z,23nm,0.6s,baz=99,slow=9.2,SNR=2.6
CLL Collm 43.19 309 ⇓*i*P **P** **09 05 43.5 +0.9**
comp=Z,69nm,0.8s
CLL *e*sP **sP** **09 06 58.0 -0.4**
CLL *e*PP **PcP** **09 07 24.0 -3.4**
CLL *e*PPP PPP 09 08 09.0
CLL *i* 09 08 41.9
CLL *e*S **S** **09 11 50.0 -1.2**
CLL *e*sS **sS** **09 13 16.0 -4.0**
CLL *e*SS **ScS** **09 15 16.0 -0.7**
CLL *e*sSS 09 16 24.0
CLL Collm 43.19 309 ⇓*i*P **P** **09 05 43.5 +0.9**
CLL *e**SP **sP** **09 06 58.0 -0.4**
CLL *e*S **S** **09 11 50.0 -1.2**
CLL *e**SS **sS** **09 13 16.0 -4.0**
CLL pmax pmax
comp=Z,69nm,0.8s
CLL Collm 43.19 309 *e*P **P** **09 05 43.8 +1.2**
comp=Z,69nm,0.8s,baz=86,slow=7.9
CLL Collm 43.19 309 P **P** **09 05 43.1 +0.4**
CLL IAmb IAmb 09 05 44.5
comp=Z,56nm,0.8s
MYKA Terra Mystica 43.23 302 *i* P **P** **09 05 43.9 +0.8**
comp=Z,30nm,0.8s,SNR=14
TRO Tromso 43.26 336 *e*P **P** **09 05 43.7 +0.9**
CEL Celeste 43.29 290 P **P** **09 05 43.3 -0.3**
CEL IAmb IAmb 09 05 45.3
comp=Z,139nm,1.4s
PRED Cave del Predi 43.31 302 P **P** **09 05 44.7 +0.9**
PRED IAmb IAmb 09 05 45.6
comp=Z,53nm,0.9s
KBA Koelnbreinsper 43.37 303 *i* P **P** **09 05 45.0 +0.6**
comp=Z,9.3nm,0.5s,SNR=18
COP Copenhagen 43.44 315 *i* P **P** **09 05 45.5 +1.0**
COP pmax pmax
comp=Z,120nm,0.9s
COP Copenhagen 43.44 315 *i* P **P** **09 05 45.5 +1.0**
comp=Z,119nm,0.9s
COP Copenhagen 43.44 315 IAmb IAmb 09 05 47.2
comp=Z,119nm,0.9s
COP Copenhagen 43.44 315 *i* P **P** **09 05 45.5 +1.0**
PAOL Paolisi 43.60 294 P **P** **09 05 45.8 -0.3**
PAOL IAmb IAmb 09 05 47.7
comp=Z,59nm,1.0s
TANN Tannenbergstha 43.60 308 *e*P **P** **09 05 47.6 +1.7**
comp=Z,110nm,1.0s,baz=86,slow=7.9
NKC Novy Kostel 43.62 307 *e*P **P** **09 05 47.4 +1.3**
NKC Novy Kostel 43.62 307 *e*P **P** **09 05 47.4 +1.3**
RJOB Jochberg 43.66 304 *e*P **P** **09 05 46.6 +0.1**
comp=Z,56nm,0.8s,baz=86,slow=7.9
WERN Wernitzgruen 43.66 307 *e*P **P** **09 05 48.3 +1.8**
comp=Z,32nm,0.9s,baz=86,slow=7.9
N2ST Straumen 43.67 332 *e*P **P** **09 05 46.8 +0.6**
GUNZ Gunzen 43.69 308 *e*P **P** **09 05 48.4 +1.8**
comp=Z,66nm,0.9s,baz=86,slow=7.9
ZOU Zoufplan 43.70 302 P **P** **09 05 47.1 +0.1**
ZOU IAmb IAmb 09 05 48.6
comp=Z,86nm,1.4s
N2IH Innhavet 43.72 333 ⇓*i*P **P** **09 05 47.9 +1.3**
PLN Plauen 43.79 308 *e*P **P** **09 05 49.0 +1.6**
comp=Z,51nm,0.8s,baz=86,slow=7.9
FAUS Fauske 43.79 332 ⇓*i*P **P** **09 05 48.4 +1.3**
MOR8 Moi Rana 43.81 331 *e*P **P** **09 05 47.5 +0.2**
ROTZ Rotzenmuhle 43.82 307 *e*P **P** **09 05 49.6 +1.9**
comp=Z,80nm,1.1s,baz=86,slow=7.9
MANZ Manzenberg 43.86 307 *e*P **P** **09 05 50.0 +1.9**
comp=Z,72nm,0.9s,baz=86,slow=7.9
INTR Introdacqua 43.86 295 P **P** **09 05 48.1 -0.1**
N2TV T¥rnvik 43.90 333 *e*P **P** **09 05 48.9 +0.9**
STAL STALIGIAL 43.92 302 P **P** **09 05 48.6 +0.1**
YAK Yakutsk 43.93 35 *d*iP **P** **09 05 48.4 +0.1**
YAK *e**PP **pP** **09 06 40.1 +1.1**
YAK *e* 09 07 31.8
YAK *e*S **S** **09 12 01.8 +0.3**
YAK *e**SS **sS** **09 13 25.6 -5.0**
YAK *e*SS **ScS** **09 15 14.5 -6.5**
YAK pmax pmax
comp=Z,86nm,0.9s
YAK pmax pmax
comp=N,12nm,1.2s
YAK pmax pmax
comp=E,27nm,1.1s
YAK pmax pmax
comp=Z,27nm,0.6s
YAK pmax pmax
comp=N,31nm,1.2s
YAK pmax pmax
comp=E,14nm,0.9s
YAK smax smax
comp=E,238nm,1.6s
YAK smax smax
comp=N,202nm,1.6s
YAK Yakutsk 43.93 35 P **P** **09 05 47.8 -0.6**
YAK IAmb IAmb 09 05 49.5
comp=Z,74nm,0.7s
STEI Steigen 43.96 333 ⇓*i*P **P** **09 05 49.8 +1.3**
NEUB Neuenburg 43.97 309 *e*P **P** **09 05 50.2 +1.4**
comp=Z,154nm,0.8s,baz=86,slow=7.9
ABTA Abfaltersbach 43.98 302 *i* P **P** **09 05 49.4 +0.3**
comp=Z,34nm,0.9s,SNR=15
CIMO Cimolais 44.10 302 P **P** **09 05 50.5 +0.5**
CIMO IAmb IAmb 09 05 51.9
comp=Z,102nm,0.8s
MOX Moxa 44.12 308 *e*P **P** **09 05 51.7 +1.7**
comp=Z,65nm,0.8s,baz=86,slow=7.9
NC405 NORSAR Array S 44.14 323 P **P** **09 05 49.9 -0.1**
NBB17 Glomfjord B¥r 44.15 332 *e*P **P** **09 05 50.7 +0.8**
NC602 NORSAR Array S 44.19 323 P **P** **09 05 50.4 +0.1**
NC602 IAmb IAmb 09 05 52.5
comp=Z,163nm,1.1s
NRCA Norcia 44.26 297 P **P** **09 05 51.8 +0.4**
NBB30 Finnes 44.27 332 ⇓*i*P **P** **09 05 52.1 +1.2**
MNSI Mandailing Nat 44.30 137 P **P** **09 05 52.3 +0.5**
comp=Z,9µmcomp=Z,88nm,0.6s
NC303 NORSAR Array S 44.32 323 P **P** **09 05 51.6 +0.2**
NB201 NORSAR Array S 44.34 323 P **P** **09 05 51.3 -0.3**
MDJ Mudanjiang 44.37 61 P **P** **09 05 52.4 +0.3**
MDJ S **S** **09 12 07.8 -0.6**
MDJ pmax pmax
comp=Z,14nm,1.1s
MDJ pmax pmax
comp=Z,170nm,3.4s
NB2 NORSAR Subarra 44.37 323 P **P** **09 05 51.8 -0.1**
comp=Z,116nm,0.8s,baz=97,slow=7.9
NB2 NORSAR Subarra 44.37 323 P **P** **09 05 51.8 -0.1**
baz=97,slow=7.9
NOA NORSAR Array B 44.37 323 P **P** **09 05 51.6 -0.3**
comp=Z,71nm,0.7s,baz=97,slow=7.7,SNR=378
NOA pP **pP** **09 06 42.9 +1.1**
comp=Z,17nm,0.8s,baz=96,slow=7.9,SNR=3.0
NOA PP **PP** **09 07 39.1 -1.2**
comp=Z,17nm,0.8s,baz=94,slow=9.5,SNR=4.5
KONS Konsvik 44.40 331 ⇓*i*P **P** **09 05 52.9 +0.9**
STOK Stokkvaagen 44.40 331 *e*P **P** **09 05 52.5 +0.6**
GRA1 Grafenberg Arr 44.46 307 P **P** **09 05 53.5 +0.7**
GRA1 IAmb IAmb 09 05 55.7
comp=Z,76nm,0.8s
GRF Grafenberg Arr 44.46 307 P **P** **09 05 53.5 +0.7**
GRF pmax pmax
comp=Z,76nm,0.8s
GRF Grafenberg Arr 44.46 307 *e*P **P** **09 05 55.0 +2.2**
comp=Z,88nm,0.9s,baz=86,slow=7.9
NSS Namsos 44.49 328 ⇓*i*P **P** **09 05 53.3 +0.6**
WTTA Wattenberg 44.50 303 *i* P **P** **09 05 53.4 +0.1**
comp=Z,96nm,1.1s,SNR=31
NAO01 NORSAR Array S 44.52 323 ⇓*i*P **P** **09 05 53.4 +0.4**
OSL Oslo 44.53 321 *e*P **P** **09 05 54.0 +0.9**
WATA Walderalm 44.53 303 *i* P **P** **09 05 53.0 -0.5**
comp=Z,44nm,0.8s,SNR=18
SSLB Suanglung 44.55 92 P **P** **09 05 55.1 +1.3**
SSLB IAmb IAmb 09 05 56.6
comp=Z,54nm,0.7s
ASSE Asse, Remlinge 44.59 310 *e*P **P** **09 05 54.8 +1.2**
comp=Z,27nm,0.9s,baz=86,slow=7.9
NBO00 NORSAR Array S 44.59 323 P **P** **09 05 53.1 -0.4**
MURB Monte Urbino 44.59 297 P **P** **09 05 54.9 +0.9**
NC204 NORSAR Array S 44.61 323 P **P** **09 05 53.6 -0.3**
VAE Valguarnera 44.63 289 P **P** **09 05 55.9 +1.6**
comp=Z,34nm,0.5s,baz=30,slow=4.5,SNR=6.8
LOF Lofoten 44.63 333 *e*P **P** **09 05 54.3 +0.6**
CTI Castel Tesino 44.68 302 P **P** **09 05 54.9 +0.2**
CTI pmax pmax
comp=Z,71nm,0.7s
CTI Castel Tesino 44.68 302 P **P** **09 05 54.9 +0.2**
CTI IAmb IAmb 09 05 56.1
comp=Z,71nm,0.7s
BSEG Bad Segeberg 44.69 313 *e*P **P** **09 05 56.3 +1.9**
comp=Z,155nm,0.8s,baz=86,slow=7.9
N2SV S¸rv¥gen 44.77 333 *e*P **P** **09 05 55.1 +0.3**
TEOL Teolo 44.79 301 P **P** **09 05 55.3 -0.1**
TEOL IAmb IAmb 09 05 57.5
comp=Z,86nm,0.8s
CLZ Clausthal 44.79 310 *e*P **P** **09 05 56.9 +1.6**
comp=Z,81nm,0.9s,baz=86,slow=7.9
KS19 Wonju Array Si 44.79 71 P **P** **09 05 56.1 +0.6**
SQTA Sankt Quirin 44.80 303 *e*P **P** **09 05 55.4 -0.1**
comp=Z,33nm,0.7s,SNR=24
KSAR Wonju Array Be 44.83 71 P **P** **09 05 56.5 +0.8**
KSAR Wonju Array Be 44.83 71 P **P** **09 05 56.5 +0.8**
N2VA Vr¸y 44.83 333 *e*P **P** **09 05 55.4 +0.1**
MOTA Moosalm 44.85 303 *e*P **P** **09 05 55.6 -0.4**
comp=Z,74nm,0.8s,SNR=21
KSRS Korea Array 44.85 71 P **P** **09 05 56.0 +0.1**
comp=Z,7.5nm,0.5s,baz=272,slow=7.1,SNR=48
KSRS pP **pP** **09 06 47.4 +0.4**
comp=Z,14nm,1.0s,baz=278,slow=7.4,SNR=4.4
KSRS ScP **ScP** **09 11 00.9 -2.2**
comp=Z,5.7nm,0.9s,baz=285,slow=3.9,SNR=7.6
NRDL Niedersach Rie 44.90 311 *e*P **P** **09 05 58.0 +1.9**
comp=Z,108nm,0.8s,baz=86,slow=7.9
HOPEN Hopen 44.98 346 *e*P **P** **09 05 58.5 +2.1**
N2RO R¸st 45.01 332 ⇓*i*P **P** **09 05 57.1 +0.3**
TBLU Trondheim 45.05 326 *e*P **P** **09 05 57.2 0.0**
RETA Reutte 45.05 304 *e*P **P** **09 05 57.5 0.0**
comp=Z,37nm,1.0s,SNR=13
KONO Kongsberg 45.08 321 *ce*P **P** **09 05 58.1 +0.7**
KONO pmax pmax
comp=Z,146nm,1.3s
KONO Kongsberg 45.08 321 P **P** **09 05 57.4 0.0**
KONO IAmb IAmb 09 05 59.5
comp=Z,84nm,0.8s
KONO Kongsberg 45.08 321 *e*P **P** **09 05 57.7 +0.3**
KLR Kul'dur 45.11 54 *ce*P **P** **09 05 58.3 +0.5**
KLR pmax pmax
comp=Z,6.0nm,0.5s
UBBA Unterbreizbach 45.12 308 *e*P **P** **09 05 59.3 +1.6**
comp=Z,44nm,0.6s,baz=86,slow=7.9
FETA Feichten 45.15 303 *i* P **P** **09 05 58.2 -0.2**
comp=Z,63nm,0.9s,SNR=26
SKMB Sankelmark Bun 45.17 314 *e*P **P** **09 06 00.6 +2.5**
comp=Z,154nm,0.9s,baz=86,slow=7.9
GOET G??ttrup 45.23 317 *i* P **P** **09 06 00.4 +1.8**
comp=Z,398nm,0.9s
GOET G??ttrup 45.23 317 *i* P **P** **09 06 00.5 +1.8**
GOET IAmb IAmb 09 06 01.5
comp=Z,399nm,0.9s
BJO1 Bjornoya 45.25 343 *e*P **P** **09 06 00.3 +1.7**
LATE Laterza 45.25 297 P **P** **09 05 58.9 -0.2**
MUD Monsted U'grnd 45.27 316 ⇑*i*P **P** **09 05 59.8 +0.9**
MUD pmax pmax
comp=Z,110nm,1.2s
MUD Monsted U'grnd 45.27 316 ⇑*i*P **P** **09 05 59.8 +0.9**
comp=Z,110nm,1.2s
MUD Monsted U'grnd 45.27 316 IAmb IAmb 09 06 01.6
comp=Z,111nm,1.2s
MUD Monsted U'grnd 45.27 316 ⇑*i*P **P** **09 05 59.8 +0.9**
CORL Corleone 45.35 290 P **P** **09 05 59.7 -0.3**
OSSC Osservatorio P 45.45 298 P **P** **09 06 00.9 +0.3**
OSSC IAmb IAmb 09 06 02.0
comp=Z,132nm,1.5s
UBR Ueberruh 45.46 304 *e*P **P** **09 06 01.8 +1.1**
comp=Z,106nm,0.8s,baz=86,slow=7.9
DOMB Dombas 45.49 324 ⇓*i*P **P** **09 06 01.6 +1.0**
CLTB Caltabellotta 45.51 290 P **P** **09 06 00.7 -0.6**
CLTB IAmb IAmb 09 06 02.1
comp=Z,69nm,0.8s
SALO Salr 45.53 301 P **P** **09 06 01.8 +0.6**
HOMB Homborsund 45.61 319 ⇓*i*P **P** **09 06 02.8 +1.2**
HOMB Homborsund 45.61 319 *i* P **P** **09 06 01.7 +0.1**
DAVA Damuels 45.68 304 *i* P **P** **09 06 02.3 -0.2**
comp=Z,196nm,0.7s,SNR=74
DAVOX Davos/Dischmat 45.77 303 P **P** **09 06 02.8 -0.4**
comp=Z,63nm,0.7s,baz=103,slow=7.0,SNR=86
SKAR Skarslia 45.77 322 *e*P **P** **09 06 03.8 +0.9**
STU Stuttgart 45.90 306 P **P** **09 06 04.2 +0.2**
STU pmax pmax
comp=Z,76nm,0.7s
STU Stuttgart 45.90 306 *e*P **P** **09 06 05.6 +1.5**
comp=Z,92nm,0.8s,baz=86,slow=7.9
STU Stuttgart 45.90 306 P **P** **09 06 04.2 +0.2**
STU IAmb IAmb 09 06 06.2
comp=Z,76nm,0.7s
VLC Villacollemand 45.92 299 P **P** **09 06 04.8 +0.5**
VLC IAmb IAmb 09 06 06.9
comp=Z,66nm,0.9s
MYKOM Kota Tinggi 45.98 131 P **P** **09 06 05.5 +0.6**
MYKOM Kota Tinggi 45.98 131 P **P** **09 06 06.0 +1.0**
HLG Helgoland 46.11 313 *e*P **P** **09 06 07.5 +2.0**
comp=Z,167nm,0.8s,baz=86,slow=7.9
USRK Ussuriysk Ar. 46.14 61 P **P** **09 06 06.0 +0.1**
comp=Z,4.2nm,0.7s,baz=276,slow=6.9,SNR=10
USRK pP **pP** **09 06 58.8 +1.6**
comp=Z,4.6nm,0.6s,baz=285,slow=9.6,SNR=3.5
USRK PP **PP** **09 07 59.8 +2.3**
comp=Z,2.8nm,0.6s,baz=286,slow=6.9,SNR=6.2
USRK Ussuriysk Ar. 46.14 61 P **P** **09 06 05.7 -0.3**
TNS Taunus Mts 46.18 308 *e*P **P** **09 06 07.7 +1.5**
comp=Z,56nm,1.1s,baz=86,slow=7.9
TUE Stuetta 46.18 303 P **P** **09 06 06.9 +0.4**
MOL Molde 46.23 325 ⇓*i*P **P** **09 06 08.1 +1.7**
SNART Snartemo 46.30 319 ⇓*i*P **P** **09 06 08.1 +1.1**
SNART Snartemo 46.30 319 *i* P **P** **09 06 07.5 +0.6**
VLA Vladivostok 46.30 62 *i* P **P** **09 06 07.6 +0.4**
VLA pmax pmax
comp=Z,40nm,0.7s
IBBN Ibbenburen 46.36 311 *e*P **P** **09 06 09.2 +1.7**
comp=Z,198nm,0.8s,baz=86,slow=7.9
AKN Aaknes 46.46 324 ⇓*i*P **P** **09 06 09.3 +1.1**
LODK Lodwar 46.50 233 P **P** **09 06 10.4 +1.3**
SNR=22
MSSA Maissana 46.50 300 P **P** **09 06 08.4 -0.4**
MSSA IAmb IAmb 09 06 10.1
comp=Z,66nm,0.8s
BFO Black Forest 46.54 305 *e*P **P** **09 06 09.8 +0.7**
comp=Z,44nm,1.1s,baz=86,slow=7.9
ODD1 Odda 46.59 321 ⇓*i*P **P** **09 06 10.6 +1.4**
BLS5 Blasjo 46.68 321 ⇓*i*P **P** **09 06 11.7 +1.8**
SDSI Sungai Dareh 46.76 136 P **P** **09 06 10.6 -0.4**
BUG Bochum-Univer 46.76 310 *e*P **P** **09 06 12.2 +1.6**
comp=Z,111nm,0.9s,baz=86,slow=7.9
HYA Hoyanger 46.82 323 ⇓*i*P **P** **09 06 12.2 +1.3**
AHRW Bad Neuenahr-A 47.00 308 *e*P **P** **09 06 14.2 +1.7**
comp=Z,92nm,1.0s,baz=86,slow=7.9
HSPB Hornsund (broa 47.12 345 *e*P **P** **09 06 14.5 +1.5**
HSPB Hornsund (broa 47.12 345 ⇓*i*P **P** **09 06 15.4 +2.4**
BER Bergen 47.23 322 ⇓*e*P **P** **09 06 15.3 +1.1**
KMY Karmoy 47.30 320 ⇓*i*P **P** **09 06 16.1 +1.4**
ASK Askoy 47.30 322 ⇓*i*P **P** **09 06 15.7 +1.0**
ECH Echery 47.33 305 P **P** **09 06 15.0 -0.1**
ECH pmax pmax
comp=Z,32nm,0.9s
ECH Echery 47.33 305 P **P** **09 06 15.0 -0.1**
FOO Floro 47.37 324 ⇓*i*P **P** **09 06 16.2 +1.1**
SPA0 Spitsbergen Ar 47.47 347 ⇓*i*P **P** **09 06 17.7 +1.9**
SUE Sulen 47.51 323 *e*P **P** **09 06 16.5 +0.2**
BTNL Ternell 47.59 309 P **P** **09 06 18.4 +1.3**
comp=Z,72nm,1.0s
SENIN Lac Senin/Sane 47.59 303 P **P** **09 06 16.6 -0.8**
SENIN IAmb IAmb 09 06 18.6
comp=Z,92nm,0.7s
MEM Membach 47.66 309 P **P** **09 06 18.1 +0.5**
BHOU Houvegnez 47.71 308 P **P** **09 06 18.8 +0.9**
WLF Walferdange 47.73 307 P **P** **09 06 20.0 +1.9**
comp=Z,118nm,1.0s
WLF pP **pP** **09 07 10.9 +2.5**
WLF sP **sP** **09 07 34.4 -0.2**
WLF Walferdange 47.73 307 *e*P **P** **09 06 20.1 +1.9**
comp=Z,150nm,0.8s,baz=86,slow=7.9
KRJI Kerinci 47.73 137 P **P** **09 06 18.0 -0.7**
comp=Z,10µmcomp=Z,297nm,0.9s
GRNR Gornyy 47.88 51 ⇓*i*P **P** **09 06 20.6 +1.3**
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR MLR MLR
comp=E,600nm,19.0s
GRNR MLR MLR
comp=N,350nm,18.0s
GRNR MLR MLR
comp=Z,210nm,18.0s
BSTI Sart Tilman 47.95 309 P **P** **09 06 21.0 +1.2**
BCLA Clavier 48.14 308 P **P** **09 06 22.4 +1.1**
BCLA PcP **PcP** **09 07 43.9 -0.9**
DSRI Dabo 48.21 132 P **P** **09 06 23.2 +1.0**
comp=Z,44nm,1.1s
RCHB Rochefort 48.23 308 P **P** **09 06 23.1 +1.2**
BGES Gesves 48.28 308 P **P** **09 06 23.4 +1.0**
BGES PcP **PcP** **09 07 45.5 +0.2**
BNI Bardonecchia 48.30 301 P **P** **09 06 22.8 0.0**
BNI pmax pmax
comp=Z,45nm,0.8s
BNI Bardonecchia 48.30 301 P **P** **09 06 22.8 0.0**
BMRD Maredsous 48.50 308 P **P** **09 06 25.3 +1.4**
KBS Kingsbay 48.59 347 ⇓*i*P **P** **09 06 26.2 +1.9**
KBS Kingsbay 48.59 347 *i* P **P** **09 06 26.2 +1.9**
KBS IAmb IAmb 09 06 26.7
comp=Z,322nm,1.1s
DOU Dourbes 48.64 308 P **P** **09 06 25.1 0.0**
comp=Z,50nm,1.1s
SNF Seneffe 48.77 309 P **P** **09 06 27.4 +1.4**
comp=Z,95nm,1.1s
KMBO Kilima Mbogo 48.86 228 P **P** **09 06 28.9 +1.5**
comp=Z,15nm,0.6s,baz=25,slow=9.8,SNR=27
KMBO Kilima Mbogo 48.86 228 *i* P **P** **09 06 28.7 +1.2**
SNR=12
KMBO Kilima Mbogo 48.86 228 P **P** **09 06 28.7 +1.2**
KMBO Kilima Mbogo 48.86 228 P **P** **09 06 28.2 +0.7**
KEST Kesra 49.05 288 P **P** **09 06 29.1 +0.6**
comp=Z,56nm,0.6s,baz=309,slow=0.5,SNR=61
KEST Kesra 49.05 288 P **P** **09 06 29.5 +1.0**
KEST IAmb IAmb 09 06 30.7
comp=Z,81nm,0.8s
KIBK Kibwezi 49.38 226 P **P** **09 06 32.8 +1.6**
SNR=17
KSI Kapahiang 49.65 137 P **P** **09 06 32.6 -0.6**
comp=Z,194nm,0.8s
SSB Saint Sauveur 49.72 302 P **P** **09 06 33.7 +0.3**
SSB pmax pmax
comp=Z,66nm,0.7s
SSB Saint Sauveur 49.72 302 P **P** **09 06 33.7 +0.3**
SSB IAmb IAmb 09 06 34.9
comp=Z,66nm,0.7s
KSM Kuching 50.33 125 P **P** **09 06 40.0 +1.8**
PPBI Pangkal Pinang 50.48 132 P **P** **09 06 39.8 +0.4**
comp=Z,28nm,1.1s
LRW Lerwick 50.49 322 *e*P **P** **09 06 39.2 +0.5**
LRW IAmb IAmb 09 06 40.7
comp=Z,142nm,0.8s
CLF Chambon-Foret 50.58 306 P **P** **09 06 39.4 -0.2**
CLF IAmb IAmb 09 06 41.0
comp=Z,84nm,0.8s
WACR West Acre 50.60 312 *e*P **P** **09 06 40.0 +0.3**
WACR IAmb IAmb 09 06 41.4
comp=Z,505nm,0.8s
ELSH Elham, Standar 50.60 310 *e*P **P** **09 06 40.2 +0.4**
ELSH IAmb IAmb 09 06 41.4
comp=Z,338nm,0.7s
SBUM Sibu 50.89 122 P **P** **09 06 44.0 +1.6**
LMK Market Rasen 51.03 313 *e*P **P** **09 06 43.5 +0.6**
LMK IAmb IAmb 09 06 44.2
comp=Z,149nm,0.7s
JWT Wachi 51.26 71 P **P** **09 06 45.7 +0.7**
KLSI 51.70 135 P **P** **09 06 45.6 -2.8**
comp=Z,13nm,1.1s
EDMD Edmundbyers 51.71 315 *e*P **P** **09 06 48.1 +0.1**
EDMD IAmb IAmb 09 06 49.2
comp=Z,157nm,0.7s
TYV Tymovskoe 51.74 50 *e*P **P** **09 06 46.7 -1.5**
TYV pmax pmax
comp=Z,200nm,4.2s
TYV pmax pmax
comp=Z,18nm,0.9s
MLA1 Latheron 51.85 320 *e*P **P** **09 06 49.5 +0.6**
LBWR Ladybower, Pea 51.86 313 *e*P **P** **09 06 49.4 +0.3**
LBWR IAmb IAmb 09 06 50.1
comp=Z,82nm,0.8s
ESY Stoneypath 51.87 317 *e*P **P** **09 06 49.2 +0.1**
MCD Coleburn Disti 51.92 319 *e*P **P** **09 06 49.9 +0.5**
WOL Wolverton 52.02 311 *e*P **P** **09 06 50.8 +0.6**
EBL Broad Law 52.13 317 *e*P **P** **09 06 51.5 +0.4**
EDI Edinburgh 52.18 317 *e*P **P** **09 06 51.9 +0.5**
EDI IAmb IAmb 09 06 52.6
comp=Z,117nm,0.8s
EKA Eskdalemuir Ar 52.28 316 P **P** **09 06 52.3 +0.1**
comp=Z,60nm,0.7s,baz=91,slow=7.5,SNR=122
EKA pP **pP** **09 07 46.1 +2.6**
comp=Z,19nm,0.9s,baz=90,slow=7.8,SNR=3.9
ESK Eskdalemuir 52.31 316 *e*P **P** **09 06 52.5 +0.1**
ESK IAmb IAmb 09 06 53.5
comp=Z,71nm,0.9s
ESK Eskdalemuir 52.31 316 P **P** **09 06 52.8 +0.4**

ESK pmax pmax
comp=Z,66nm,0.8s
ESK Eskdalemuir 52.31 316 P **P** **09 06 52.8 +0.4**
ESK IAmb IAmb 09 06 53.7
comp=Z,66nm,0.8s
KESW Keswick, Cumbr 52.41 315 *eP* **P** **09 06 53.4 +0.3**
KESW IAmb IAmb 09 06 54.5
comp=Z,116nm,0.7s
JSD Sado 52.43 67 P **P** **09 06 53.4 -0.1**
JSD **pP** **09 07 45.3 -0.5**
INU Inuyama 52.47 70 P **P** **09 06 53.0 -0.8**
INU pP **pP** **09 07 45.7 -0.6**
MBAR Mbarara 52.54 235 P **P** **09 06 55.3 +0.6**
MBAR Mbarara 52.54 235 *c iP* **P** **09 06 55.0 +0.2**
MBAR pmax pmax
comp=Z,40nm,0.8s
MBAR Mbarara 52.54 235 P **P** **09 06 54.6 -0.2**
MBAR IAmb IAmb 09 06 56.5
comp=Z,63nm,0.7s
INVG Invergeldie, C 52.56 317 *eP* **P** **09 06 54.5 +0.4**
INVG IAmb IAmb 09 06 55.2
comp=Z,71nm,0.9s
HLM1 Long Mynd 52.73 312 *eP* **P** **09 06 55.9 +0.3**
HLM1 IAmb IAmb 09 06 56.6
comp=Z,63nm,0.8s
EAB Aberfoyle 52.77 317 *eP* **P** **09 06 56.2 +0.5**
YSS Yuzh-Sakhalins 52.79 55 ⇑ *iP* **P** **09 06 56.8 +0.8**
YSS *e**PP **pP** **09 07 49.2 +0.7**
YSS *e**SP **sP** **09 08 14.3 -0.7**
YSS *e*S **S** **09 14 03.4 -2.4**
YSS *e*SS **SS** **09 17 46.0 -1.4**
YSS pmax pmax
comp=Z,50nm,0.9s
YSS MLR MLR
comp=E,200nm,16.0s
YSS MLR MLR
comp=Z,300nm,16.0s
YSS Yuzh-Sakhalins 52.79 55 P **P** **09 06 56.9 +0.8**
YSS IAmb IAmb 09 06 57.5
comp=Z,44nm,0.9s
YSS **pP** **09 07 48.9 +0.4**
LINV Loch Inver, As 52.84 320 *eP* **P** **09 06 57.1 +1.0**
LINV IAmb IAmb 09 06 58.2
comp=Z,157nm,1.0s
MONM Monmouth 52.85 312 *eP* **P** **09 06 55.9 -0.5**
MONM IAmb IAmb 09 06 57.1
comp=Z,283nm,1.4s
MAJO Matsushiro 52.92 68 P **P** **09 06 57.3 +0.1**
MAJO *PP **pP** **09 07 49.3 -0.4**
MAJO pmax pmax
comp=Z,12nm,0.7s
MAJO Matsushiro 52.92 68 P **P** **09 06 57.3 +0.1**
MAJO **pP** **09 07 49.3 -0.4**
MAT Matsushiro 52.92 68 P **P** **09 06 56.5 -0.7**
MAT S **S** **09 14 09.0 +1.1**
MJAR Matsushiro Arr 52.92 68 P **P** **09 06 57.1 -0.1**
comp=Z,7.0nm,0.7s,baz=290,slow=8.9,SNR=19
MJAR pP **pP** **09 07 50.1 +0.5**
comp=Z,17nm,0.9s,baz=290,slow=9.2,SNR=6.3
MJAR sP **sP** **09 08 17.9 +1.9**
comp=Z,12nm,0.8s,baz=291,slow=10.0,SNR=3.3
MJAR ScP **ScP** **09 11 35.7 -1.9**
comp=Z,7.5nm,1.1s,baz=298,slow=4.2,SNR=5.6
MJAR Matsushiro Arr 52.92 68 P **P** **09 06 56.5 -0.8**
MCH1 Michaelchurch 52.93 312 *eP* **P** **09 06 56.8 -0.2**
MCH1 IAmb IAmb 09 06 57.9
comp=Z,238nm,0.7s
NEWG New Galloway 52.93 316 *eP* **P** **09 06 57.3 +0.4**
NEWG IAmb IAmb 09 06 58.3
comp=Z,178nm,0.7s
KAC Achnashellach 53.02 319 *eP* **P** **09 06 57.6 +0.2**
LLW Llanuwychllyn 53.12 313 *eP* **P** **09 06 58.2 -0.1**
LLW IAmb IAmb 09 06 59.5
comp=Z,38nm,0.7s
KPL Plockton 53.23 319 *eP* **P** **09 06 59.2 +0.2**
KPL IAmb IAmb 09 07 00.3
comp=Z,107nm,0.8s
IOMK Kirk Michael 53.31 315 *eP* **P** **09 07 00.1 +0.4**
IOMK IAmb IAmb 09 07 01.1
comp=Z,347nm,0.7s
LAWE Loch Awe, Argy 53.33 317 *eP* **P** **09 07 00.5 +0.8**
LAWE IAmb IAmb 09 07 01.2
comp=Z,109nm,0.8s
YLL Llanberis 53.35 313 *eP* **P** **09 07 00.3 +0.4**
WIM Isle of Man 53.40 315 *eP* **P** **09 07 01.1 +0.8**
MYLDM Lahad Datu 53.46 114 P **P** **09 07 03.0 +1.7**
MYLDM IAmb IAmb 09 07 20.5
comp=Z,64nm,1.5s
WPS Cemaes, Angles 53.48 314 *eP* **P** **09 07 01.8 +0.9**
WPS IAmb IAmb 09 07 02.0
comp=Z,63nm,0.8s
SBV Sambava 53.55 206 P **P** **09 07 02.9 +1.0**
SNR=6.5
YRC Rhoscolyn 53.56 314 *eP* **P** **09 07 01.8 +0.4**
LEWI Lewis, Hebride 53.70 320 *eP* **P** **09 07 02.8 +0.3**
LEWI IAmb IAmb 09 07 04.1
comp=Z,57nm,0.8s
MA2 Magadan 54.33 38 *ceP* **P** **09 07 07.9 +0.9**
MA2 pmax pmax
comp=Z,53nm,1.2s
JMM Marumori 54.36 66 P **P** **09 07 07.2 -0.3**
JMM **pP** **09 07 59.1 -1.1**
SEY Seymchan 54.38 34 *i* P **P** **09 07 08.2 +0.9**
JYT Yasato 54.53 68 P **P** **09 07 08.2 -0.5**
JYT IAmb IAmb 09 07 08.9
comp=Z,69nm,1.2s
JYT pP **pP** **09 08 01.4 0.0**
DAG Danmarks Havn 54.71 344 ⇑ *iP* **P** **09 07 10.6 +1.2**
DAG *i* 09 08 02.8
DAG Danmarks Havn 54.71 344 ⇑ *iP* **P** **09 07 10.6 +1.2**
DAG *i* 09 08 02.8
DAG Danmarks Havn 54.71 344 ⇑ *iP* **P** **09 07 10.6 +1.2**
DAG IAmb IAmb 09 07 11.4
comp=Z,74nm,0.8s
DAG *i* 09 08 02.8
CCA1 Carnmenellis 54.76 310 *eP* **P** **09 07 10.3 +0.1**
CCA1 IAmb IAmb 09 07 11.0
comp=Z,120nm,0.7s
DBG Daneborg 55.57 341 *i* P **P** **09 07 17.3 +1.7**
DBG IAmb IAmb 09 07 18.5
comp=Z,25nm,0.9s
CART Cartagena 56.13 294 P **P** **09 07 20.4 +0.3**
BBKI Banjar Baru 57.00 125 P **P** **09 07 28.2 +1.7**
comp=Z,35nm,1.0s
SCO Scoresbysund 57.04 336 P **P** **09 07 28.2 +2.2**
SCO pmax pmax
comp=Z,24nm,1.1s
SCO Scoresbysund 57.04 336 P **P** **09 07 28.2 +2.2**
SCO Scoresbysund 57.04 336 *i* P **P** **09 07 28.0 +2.0**
comp=Z,23nm,1.1s
SCO Scoresbysund 57.04 336 *i* P **P** **09 07 28.0 +2.0**
SCO IAmb IAmb 09 07 29.4
comp=Z,23nm,1.1s
ESBB Sonseca Array 57.46 298 P **P** **09 07 29.1 -0.5**
ESBB IAmb IAmb 09 07 30.7
comp=Z,53nm,0.8s
ESDC Sonseca Array 57.47 298 P **P** **09 07 29.8 +0.2**
comp=Z,47nm,0.7s,baz=59,slow=7.3,SNR=257
ESDC pP **pP** **09 08 24.3 +2.3**
comp=Z,5.8nm,0.8s,baz=54,slow=8.1,SNR=2.7
ESDC sP **sP** **09 08 52.3 +4.6**
comp=Z,7.9nm,0.8s,baz=59,slow=7.1,SNR=2.9
ESDC Sonseca Array 57.47 298 P **P** **09 07 29.3 -0.2**
ESDC **PcP** **09 08 20.4 -0.1**
TAM Tamanrasset 57.56 276 P **P** **09 07 29.7 -0.8**
TAM pmax pmax
comp=Z,14nm,1.0s
TAM Tamanrasset 57.56 276 P **P** **09 07 29.7 -0.8**
KBKI Kotabaru 57.77 123 P P 09 07 42.0 +10
MPSI Mapaga 57.77 117 P **P** **09 07 34.5 +2.6**
comp=Z,809nmcomp=Z,28nm,1.2s
PAB San Pablo 57.79 298 P **P** **09 07 31.6 -0.3**
PAB pmax pmax
comp=Z,126nm,1.5s
PAB San Pablo 57.79 298 P **P** **09 07 31.6 -0.3**
PAB IAmb IAmb 09 07 33.1
comp=Z,126nm,1.5s
BILL Bilibino 58.58 26 *c iP* **P** **09 07 37.8 +1.1**
BILL *e**PP **pP** **09 08 31.4 +1.3**
BILL *SP **sP** **09 08 54.0 -2.2**
BILL *e* 09 09 49.4
BILL pmax pmax
comp=Z,163nm,1.3s
BILL MLR MLR

comp=Z,176nm,17.0s
PBRG Braganca 58.59 301 *eP* **P** **09 07 37.6 +0.3**
comp=Z,53nm,2.0s
MVO Moncorvo 59.04 301 *eP* **P** **09 07 41.1 +0.7**
comp=Z,68nm,1.1s
MRSI Marisa 59.15 115 P **P** **09 07 43.7 +2.3**
comp=Z,1µmcomp=Z,72nm,1.2s
RER Riviere de l'E 59.16 197 P **P** **09 07 42.8 +1.5**
RER Riviere de l'E 59.16 197 P **P** **09 07 41.6 +0.3**
PVRL Vila Real 59.47 301 *eP* **P** **09 07 43.8 +0.4**
comp=Z,39nm,1.1s
POLO Lamas de Olo 59.49 301 *eP* **P** **09 07 43.4 -0.1**
comp=Z,16nm,1.4s
PCAB Cabril 59.51 301 *eP* **P** **09 07 44.8 +1.2**
comp=Z,118nm,1.1s
PGAV Gavieira, Arco 59.58 302 *eP* **P** **09 07 44.8 +0.7**
comp=Z,90nm,0.8s
ABPO Ambohimpanom 59.65 206 P **P** **09 07 44.9 +0.1**
ABPO pmax pmax
comp=Z,60nm,1.0s
ABPO Ambohimpanom 59.65 206 P **P** **09 07 44.9 +0.1**
ABPO IAmb IAmb 09 07 46.8
comp=Z,60nm,0.9s
MTE Manteigas 59.70 300 *eP* **P** **09 07 45.9 +0.9**
comp=Z,129nm,1.2s
MTE Manteigas 59.70 300 P **P** **09 07 45.2 +0.2**
PVIS Viseu 59.82 300 *eP* **P** **09 07 46.5 +0.7**
comp=Z,110nm,1.0s
PCBR Castelo Branco 59.89 299 *eP* **P** **09 07 47.3 +1.2**
comp=Z,34nm,1.6s
APSI Ampana 59.89 117 P **P** **09 07 46.9 +0.4**
comp=Z,601nmcomp=Z,54nm,1.3s
PETK Petropavlovsk- 59.94 44 P **P** **09 07 45.9 -0.3**
comp=Z,4.1nm,0.6s,baz=342,slow=2.8,SNR=11
PETK pP **pP** **09 08 41.5 +1.2**
comp=Z,2.8nm,0.6s,baz=332,slow=2.9,SNR=2.2
PMRV Marv??o 59.99 299 *eP* **P** **09 07 47.5 +0.6**
comp=Z,66nm,1.7s
TTSI Tana Toraja 60.09 120 P **P** **09 07 49.6 +1.8**
comp=Z,22nm,0.9s
COI Coimbra 60.39 300 P **P** **09 07 49.2 -0.3**
COI pmax pmax
comp=Z,104nm,0.7s
COI Coimbra 60.39 300 *eP* **P** **09 07 50.2 +0.7**
comp=Z,118nm,0.7s
COI Coimbra 60.39 300 P **P** **09 07 49.2 -0.3**
PET Petropavlovsk 60.50 44 *eP* **P** **09 07 54.3 +4.3**
PET *e**PP **pP** **09 08 48.0 +4.0**
PET *eS* **S** **09 15 49.8 +3.3**
PET pmax pmax
comp=Z,100nm,10.4s
PMTG Montargil 60.73 299 *eP* **P** **09 07 52.2 +0.3**
comp=Z,45nm,1.2s
EVO Evora 60.81 298 *eP* **P** **09 07 52.7 +0.3**
comp=Z,81nm,1.8s
PBEJ Beja 60.92 298 *eP* **P** **09 07 53.6 +0.5**
comp=Z,44nm,1.6s
PSBE Sc Bento 60.95 299 *eP* **P** **09 07 54.3 +1.0**
comp=Z,136nm,1.3s
SUMG Summit 61.05 341 *i* P **P** **09 07 55.2 +1.3**
SUMG pmax pmax
comp=Z,180nm,0.9s
SUMG Summit 61.05 341 *i* P **P** **09 07 55.2 +1.3**
comp=Z,179nm,0.9s
SUMG Summit 61.05 341 *i* P **P** **09 07 55.2 +1.3**
SUMG IAmb IAmb 09 07 56.4
comp=Z,179nm,0.9s
PVAQ Vaqueiros 61.08 297 *eP* **P** **09 07 54.6 +0.4**
comp=Z,116nm,1.5s
PVAQ Vaqueiros 61.08 297 P **P** **09 07 54.5 +0.4**
PVAQ IAmb IAmb 09 07 55.5
comp=Z,59nm,0.8s
PCVE Castro Verde 61.21 297 *eP* **P** **09 07 55.5 +0.4**
comp=Z,65nm,1.9s
PBDV Barranco-do-Ve 61.30 297 *eP* **P** **09 07 56.4 +0.7**
comp=Z,144nm,1.1s
PNCL Nicolau / Gran 61.35 298 *eP* **P** **09 07 56.9 +0.9**
comp=Z,82nm,1.6s
PMAFR Mafra 61.53 299 *eP* **P** **09 07 58.3 +1.1**
comp=Z,298nm,1.8s
PTEO Sao Teotonio 61.74 297 *eP* **P** **09 07 59.3 +0.7**
comp=Z,138nm,1.4s
PFVI Vila Bisbo 61.99 297 *eP* **P** **09 08 00.9 +0.6**
VOI Vohitsoka 62.46 205 P **P** **09 08 05.0 +1.4**
SNR=11
TNTI Ternate 62.98 111 P P 09 08 13.5 +6.4
EUNU Eureka 62.98 356 P **P** **09 08 07.2 +0.9**
ICESG Greenland Ices 63.19 338 *i* P **P** **09 08 09.9 +1.8**
ICESG IAmb IAmb 09 08 10.4
comp=Z,80nm,1.1s
ANGG Ammassalik, Gr 64.40 334 *i* P **P** **09 08 16.2 +0.7**
TULEG Thule 64.42 350 *i* P **P** **09 08 15.7 +0.2**
TULEG *i* 09 09 11.1
WBSI Waikabubak, Su 64.59 125 P **P** **09 08 17.6 0.0**
comp=Z,80nm,1.2s
FOMA Nahampoana Res 65.24 204 P **P** **09 08 22.5 +1.1**
SNR=6.0
FOMA Nahampoana Res 65.24 204 P **P** **09 08 21.4 -0.1**
EDFI Ende, Flores 65.47 123 P **P** **09 08 23.1 -0.2**
comp=Z,1µmcomp=Z,8.3nm,0.7s
LSZ Lusaka 65.49 226 P **P** **09 08 23.9 +0.5**
LSZ Lusaka 65.49 226 P **P** **09 08 22.9 -0.5**
LSZ pmax pmax
comp=Z,80nm,0.8s
LSZ Lusaka 65.49 226 P **P** **09 08 22.9 -0.5**
TOA0 Torodi Ar. Sit 65.74 269 P **P** **09 08 22.9 -2.1**
TORD Torodi Ar. Bea 65.74 269 P **P** **09 08 23.4 -1.6**
comp=Z,79nm,0.7s,baz=40,slow=5.8,SNR=407
TORD pP **pP** **09 09 19.1 -0.3**
comp=Z,15nm,0.7s,baz=42,slow=6.2,SNR=2.2
BASI Baing, Sumba 65.80 125 P P 09 08 33.9 +8.6
ILULI Ilulissat 66.39 341 *i* P **P** **09 08 28.8 +0.6**
ILULI pmax pmax
comp=Z,130nm,1.1s
ILULI Ilulissat 66.39 341 *i* P **P** **09 08 28.8 +0.6**
comp=Z,133nm,1.1s
ILULI Ilulissat 66.39 341 *i* P **P** **09 08 28.9 +0.6**
ILULI IAmb IAmb 09 08 30.0
comp=Z,133nm,1.1s
SFJD Kangerlussuaq 67.74 339 *i* P **P** **09 08 37.2 +0.5**
SFJD Kangerlussuaq 67.74 339 P **P** **09 08 37.1 +0.3**
SFJD IAmb IAmb 09 08 38.4
comp=Z,63nm,1.0s
SFJD Kangerlussuaq 67.74 339 *i* P **P** **09 08 37.2 +0.5**
SFJD Kangerlussuaq 67.74 339 *i* P **P** **09 08 37.3 +0.5**
BATI Baumata 67.86 122 P **P** **09 08 38.6 +0.3**
comp=Z,35nm,0.8s
SOEI Soe 67.95 122 P **P** **09 08 39.8 +0.8**
comp=Z,1µmcomp=Z,95nm,1.0s
SOEI Soe 67.95 122 P **P** **09 08 38.1 -0.9**
SOEI IAmb IAmb 09 08 49.4
comp=Z,54nm,0.9s
KOWA Kowa 69.59 273 P **P** **09 08 48.3 -0.7**
NRS Narsarsuaq 69.86 332 *i* P **P** **09 08 51.0 +1.1**
NRS pmax pmax
comp=Z,72nm,1.0s
NRS Narsarsuaq 69.86 332 *i* P **P** **09 08 51.0 +1.1**
comp=Z,72nm,1.0s
NRS Narsarsuaq 69.86 332 *i* P **P** **09 08 51.0 +1.1**
NRS IAmb IAmb 09 08 51.5
comp=Z,72nm,1.0s
NUUK Nuuk 70.01 337 *i* P **P** **09 08 51.4 +0.7**
TOLK Toolik Lake Re 70.89 15 P **P** **09 08 57.0 +0.9**
baz=326
TOLK Toolik Lake Re 70.89 15 P **P** **09 08 56.8 +0.7**
SAUI Saumlaki 71.71 115 P **P** **09 09 00.7 -1.0**
comp=Z,7µmcomp=Z,178nm,0.6s
SAUI Saumlaki 71.71 115 P **P** **09 09 02.8 +1.1**
SAUI **pP** **09 09 58.4 +0.7**
COLD Coldfoot 71.94 16 P **P** **09 09 03.2 +0.9**
baz=326,SNR=13
COLD Coldfoot 71.94 16 P **P** **09 09 03.2 +0.9**
COLD pP **pP** **09 09 58.2 +0.1**
IMAR Indian Mountai 72.14 18 P **P** **09 09 03.6 0.0**
BMAR Burnt Mountain 72.91 14 P **P** **09 09 08.5 +0.4**
MBWA Marble Bar 73.53 133 P **P** **09 09 12.7 +0.4**
MLY Manley 73.65 17 P **P** **09 09 13.1 +0.6**
baz=326
C36M Paulatuk 73.85 6 P **P** **09 09 14.0 +0.6**
baz=347
I23K Minto, Yukon-K 73.87 17 P **P** **09 09 14.6 +0.9**
baz=327,SNR=5.1
INK Inuvik 73.88 9 P **P** **09 09 13.6 0.0**
INK pmax pmax
comp=Z,24nm,0.6s
INK Inuvik 73.88 9 P **P** **09 09 13.6 0.0**

INK IAmb IAmb 09 09 22.1
comp=Z,24nm,0.6s
PSA00 Pilbara Seismi 73.92 133 P **P** **09 09 14.2 -0.3**
PSA00 IAmb IAmb 09 09 15.2
comp=Z,35nm,0.9s
PSA00 **pP** **09 10 09.7 -0.8**
TTA Tatalina 73.99 20 P **P** **09 09 15.6 +1.1**
TTA *PP **pP** **09 10 11.4 +1.0**
TTA pmax pmax
comp=Z,8.0nm,0.8s
TTA Tatalina 73.99 20 P **P** **09 09 15.6 +1.1**
TTA **pP** **09 10 11.4 +1.0**
MDM Murphy Dome 74.29 16 P **P** **09 09 17.6 +1.5**
MDM pP **pP** **09 10 12.6 +0.5**
POKR Poker Plat Res 74.33 16 P **P** **09 09 17.1 +0.8**
baz=329,SNR=14
POKR Poker Plat Res 74.33 16 P **P** **09 09 16.9 +0.5**
POKR IAmb IAmb 09 09 19.2
comp=Z,38nm,1.3s
NEA2 Nenana 74.41 17 P **P** **09 09 17.3 +0.5**
baz=328,SNR=16
TCOL CIGO, UAF Yank 74.44 16 P **P** **09 09 17.2 +0.3**
baz=328,SNR=6.2
TCOL CIGO, UAF Yank 74.44 16 P **P** **09 09 17.2 +0.3**
TCOL IAmb IAmb 09 09 22.2
comp=Z,28nm,0.8s
COLA College 74.45 16 P **P** **09 09 17.0 +0.1**
COLA *PP **pP** **09 10 13.6 +0.6**
COLA pmax pmax
comp=Z,30nm,0.8s
COLA College 74.45 16 P **P** **09 09 17.0 +0.1**
COLA IAmb IAmb 09 09 22.2
comp=Z,30nm,0.8s
COLA **pP** **09 10 13.6 +0.6**
CCB Clear Creek Bu 74.65 16 P **P** **09 09 18.4 +0.2**
LBTB Lobatse 74.71 222 P **P** **09 09 19.3 +0.2**
LBTB pmax pmax
comp=Z,95nm,0.7s
LBTB Lobatse 74.71 222 P **P** **09 09 19.3 +0.2**
DBIC Dimbokro 74.72 267 P **P** **09 09 17.9 -1.5**
comp=Z,19nm,0.6s,baz=30,slow=6.7,SNR=38
DBIC pP **pP** **09 10 15.4 +0.3**
comp=Z,8.9nm,0.8s,baz=25,slow=9.0,SNR=2.8
WRH Wood River Hil 74.74 16 P **P** **09 09 18.1 -0.5**
IL31 74.75 16 P **P** **09 09 18.6 0.0**
ILAR Eielson Array 74.75 16 P **P** **09 09 18.6 -0.1**
comp=Z,4.6nm,0.6s,baz=298,slow=4.4,SNR=66
ILAR pP **pP** **09 10 14.7 -0.1**
comp=Z,32nm,1.1s,baz=315,slow=4.8,SNR=14
KIC Kosan Boka 74.81 267 *e*PKP2 pP 09 10 14.6 -1.0
comp=Z,80nm,1.4s
KIC Kosan Boka 74.81 267 *eP* **P** **09 09 18.4 -1.5**
comp=Z,97nm,0.9s
KTH Kantishna Hill 74.83 18 P **P** **09 09 19.6 +0.3**
TIC Toumodi 74.87 267 *e*PKP2 pP 09 10 14.9 -1.1
TIC Toumodi 74.87 267 *eP* **P** **09 09 18.6 -1.7**
FITZ Fitzroy Crossi 74.89 127 P **P** **09 09 19.5 -0.6**
FITZ IAmb IAmb 09 09 21.7
comp=Z,35nm,1.1s
MTN Manton Dam 74.89 119 P **P** **09 09 20.4 +0.2**
TSUM Tsumeb 74.95 232 P **P** **09 09 20.6 0.0**
TSUM IAmb IAmb 09 09 22.0
comp=Z,59nm,0.8s
HDA Harding Lake 75.05 16 P **P** **09 09 20.4 0.0**
baz=329
LIC Lamto 75.12 267 *e*PKP2 pP 09 10 15.8 -1.6
comp=Z,36nm,1.0s
LIC Lamto 75.12 267 *eP* **P** **09 09 20.0 -1.7**
comp=Z,128nm,1.0s
MCK McKinley 75.17 17 P **P** **09 09 21.1 -0.1**
baz=328,SNR=6.1
KNRA Kununurra 75.22 123 P **P** **09 09 21.2 -0.9**
KNRA IAmb IAmb 09 09 23.6
comp=Z,70nm,0.8s
RND Reindeer 75.47 17 P **P** **09 09 22.7 -0.2**
RND pmax pmax
comp=Z,33nm,1.4s
RND Reindeer 75.47 17 P **P** **09 09 22.7 -0.2**
CUT Chulitna 75.96 18 P **P** **09 09 25.8 +0.2**
baz=327
SCRK Sand Creek 76.07 15 P **P** **09 09 26.7 +0.3**
baz=332,SNR=9.4
K27K Chicken 76.41 14 P **P** **09 09 29.2 +1.0**
baz=333
DAWY Dawson 76.89 13 P **P** **09 09 31.2 +0.3**
L26K Log Cabin Wild 77.04 15 P **P** **09 09 32.4 +0.6**
baz=332
RC01 Rabbit Creek A 77.21 19 P **P** **09 09 32.9 +0.2**
baz=327
M24K Tolsona, Glenn 77.22 17 P **P** **09 09 33.9 +1.1**
baz=330,SNR=5.1
BCAR Beaver Creek A 77.33 15 P **P** **09 09 34.0 +0.6**
MORW Morawa 77.75 141 P **P** **09 09 34.9 -1.2**
MORW IAmb IAmb 09 09 36.3
comp=Z,104nm,1.5s
BOSA Boshof 77.78 220 P **P** **09 09 35.9 -0.4**
comp=Z,64nm,0.8s,baz=25,slow=4.4,SNR=78
BOSA Boshof 77.78 220 P **P** **09 09 36.3 0.0**
BOSA pmax pmax
comp=Z,96nm,1.0s
BOSA Boshof 77.78 220 P **P** **09 09 36.3 0.0**
N25K Chitina, Valde 78.02 17 P **P** **09 09 38.0 +0.8**
baz=331
HYT Haines Junctio 80.22 14 P **P** **09 09 47.3 -1.9**
YKA Yellowknife Ar 81.22 3 P **P** **09 09 54.7 +0.5**
comp=Z,26nm,0.8s,baz=358,slow=5.3,SNR=66
YKA pP **pP** **09 10 51.4 +0.2**
comp=Z,10nm,0.7s,baz=4.1,slow=4.9,SNR=4.3
YKA PKKPbc **PKKPbc** **09 28 25.7 -2.4**
comp=Z,0.9nm,0.6s,baz=140,slow=2.6,SNR=5.2
NWAO Narrogin (SRO) 81.47 142 P **P** **09 09 55.2 -0.7**
WB0 Warramunga Arr 81.90 122 P **P** **09 09 56.9 -1.6**
WRA Warramunga Arr 81.98 122 P **P** **09 09 57.6 -1.2**
comp=Z,23nm,0.7s,baz=324,slow=5.0,SNR=234
WRA pP **pP** **09 10 55.2 -0.6**
comp=Z,12nm,0.8s,baz=323,slow=5.0,SNR=4.7
WRA PKKPbc **PKKPbc** **09 28 27.0 +0.5**
comp=Z,1.9nm,0.8s,baz=134,slow=2.1,SNR=16
WRA Warramunga Arr 81.98 122 P **P** **09 09 57.3 -1.6**
WRA pmax pmax
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 81.98 122 P **P** **09 09 57.3 -1.6**
WRAB Tennant Creek 81.99 122 P **P** **09 09 57.8 -1.1**
WRAB pmax pmax
comp=Z,38nm,0.9s
WRAB Tennant Creek 81.99 122 P **P** **09 09 57.8 -1.1**
WRAB IAmb IAmb 09 09 59.5
comp=Z,38nm,0.9s
SCHQ Schefferville 82.08 337 P **P** **09 09 58.8 -0.1**
comp=Z,23nm,0.7s,baz=30,slow=5.6,SNR=26
SUR Sutherland 83.09 221 P **P** **09 10 05.7 +1.2**
DLBC Dease Lake 83.77 11 P **P** **09 10 07.5 -0.1**
AS31 Alice Springs 84.25 125 P **P** **09 10 08.8 -1.6**
ASAR Alice Springs 84.25 125 P **P** **09 10 09.1 -1.4**
comp=Z,26nm,0.7s,baz=311,slow=5.0,SNR=298
ASAR pP **pP** **09 11 07.0 -0.7**
comp=Z,9.1nm,0.7s,baz=318,slow=5.0,SNR=4.7
ASAR PKKPbc **PKKPbc** **09 28 21.6 +0.1**
comp=Z,0.7nm,0.6s,baz=125,slow=2.7,SNR=12
ASAR PKPPKP **P'P'df** **09 36 24.8 -1.4**
comp=Z,0.6nm,0.8s,baz=141,slow=3.5,SNR=5.1
FORT Forrest 85.67 134 P **P** **09 10 16.1 -1.1**
CHGQ Chibougamau 88.66 338 P **P** **09 10 32.0 +0.6**
baz=27
FFC Flin Flon 88.92 356 P **P** **09 10 32.9 +0.4**
FFC pmax pmax
comp=Z,41nm,0.8s
FFC Flin Flon 88.92 356 P **P** **09 10 32.9 +0.4**
FFC IAmb IAmb 09 10 34.3
comp=Z,40nm,0.8s
D63A Stockholm 89.10 333 P **P** **09 10 34.1 +0.5**
baz=32
D62A Allapoint, All 89.40 334 P **P** **09 10 35.8 +0.8**
baz=31
MATQ Matagami 89.72 340 P **P** **09 10 37.2 +0.8**
baz=25,SNR=5.9
E63A Oxbow 89.74 333 P **P** **09 10 37.4 +0.9**
baz=32
E62A Clayton Lake 89.97 334 P **P** **09 10 38.7 +1.1**
baz=31
LSQQ Lebel-sur-Quev 90.17 340 P **P** **09 10 39.4 +0.9**
baz=25
LATQ La Tuque 90.40 336 P **P** **09 10 40.3 +0.7**
baz=28
D59A Saint-Raymond 90.42 336 P **P** **09 10 41.1 +1.4**
baz=29

CTAO	**Charters Tower**	**90.53**	**115**	P	**P**	**09 10 39.1**	**-1.4**
CTAO				pmax	pmax			
	comp=Z,19nm,1.1s							
CTAO	**Charters Tower**	**90.53**	**115**	P	**P**	**09 10 39.1**	**-1.4**
CTAO				IAmb	IAmb	09 10 40.8		
	comp=Z,19nm,1.1s							
D58A	**Chemin du LacG**	**90.69**	**336**	P	**P**	**09 10 42.2**	**+1.3**
	baz=28							
E60A	**Ste Agathe de**	**90.85**	**335**	P	**P**	**09 10 43.1**	**+1.4**
	baz=29							
PKME	**Peaks-Kenny Pk**	**91.05**	**333**	P	**P**	**09 10 43.7**	**+1.1**
	baz=31							
VLDQ	**Val d'Or**	**91.17**	**339**	P	**P**	**09 10 42.5**	**-0.6**
VLDQ				IAmb	IAmb	09 10 45.2		
	comp=Z,33nm,0.9s							
G63A	**Kingsbury**	**91.29**	**333**	P	**P**	**09 10 45.2**	**+1.4**
	baz=31							
D56A	**ZEC Mazanza, M**	**91.33**	**337**	P	**P**	**09 10 44.7**	**+0.8**
	baz=27							
F60A	**Warwick**	**91.37**	**335**	P	**P**	**09 10 45.2**	**+1.1**
	baz=29							
E58A	**La Victoria**	**91.45**	**336**	P	**P**	**09 10 45.6**	**+1.1**
	baz=28							
H64A	**Troy**	**91.56**	**333**	P	**P**	**09 10 45.6**	**+0.6**
	baz=31							
D55A	**Sainte-Anne-du**	**91.57**	**338**	P	**P**	**09 10 45.6**	**+0.6**
	baz=26							
E57A	**Chemin Saint G**	**91.70**	**337**	P	**P**	**09 10 46.3**	**+0.6**
	baz=27							
F59A	**Saint Guilaume**	**91.75**	**336**	P	**P**	**09 10 46.4**	**+0.6**
	baz=28							
G61A	**St-Isidore-de-**	**91.82**	**335**	P	**P**	**09 10 47.8**	**+1.5**
	baz=29							
E55A	**Montcerf-Lytto**	**92.26**	**338**	P	**P**	**09 10 49.3**	**+1.1**
	baz=26							
G59A	**Clarenceville**	**92.56**	**335**	P	**P**	**09 10 50.1**	**+0.5**
	baz=28							
ULM	**Lac du Bonnet**	**92.83**	**352**	P	**P**	**09 10 50.6**	**-0.1**
	comp=Z,20nm,0.7s,baz=14,slow=5.4,SNR=23							
ULM				pP	**pP**	**09 11 48.7**	**0.0**
	comp=Z,5.4nm,0.8s,baz=354,slow=7.5,SNR=3.2							
ULM	**Lac du Bonnet**	**92.83**	**352**	P	**P**	**09 10 49.9**	**-0.8**
ULM				IAmb	IAmb	09 10 52.1		
	comp=Z,28nm,0.9s							
ALGO	**Algonquin Park**	**93.30**	**339**	P	**P**	**09 10 53.2**	**+0.3**
	baz=24							
LONY	**Lake Ozonia**	**93.43**	**336**	P	**P**	**09 10 54.6**	**+1.0**
	baz=27							
G54A	**Lake Saint Pet**	**93.82**	**339**	P	**P**	**09 10 55.7**	**+0.3**
	baz=24							
H57A	**Richville**	**93.83**	**337**	P	**P**	**09 10 56.0**	**+0.5**
	baz=26							
J61A	**Chester**	**93.87**	**334**	P	**P**	**09 10 56.7**	**+1.0**
	baz=29							
K63A	**Dunstable**	**94.08**	**333**	P	**P**	**09 10 57.8**	**+1.2**
	baz=29							
I58A	**Old Forge**	**94.39**	**336**	P	**P**	**09 10 58.7**	**+0.6**
	baz=27							
J59A	**Piesco**	**94.44**	**336**	P	**P**	**09 10 59.1**	**+0.8**
	baz=27							
EYMN	**Ely**	**94.47**	**348**	P	**P**	**09 10 58.7**	**+0.3**
	baz=14,SNR=7.6							
EYMN	**Ely**	**94.47**	**348**	P	**P**	**09 10 58.1**	**-0.2**
EYMN				IAmb	IAmb	09 11 00.2		
	comp=Z,26nm,0.9s							
WALA	**Waterton Lakes**	**94.68**	**3**	P	**P**	**09 10 57.7**	**-1.7**
WALA				IAmb	IAmb	09 11 01.4		
	comp=Z,12nm,0.8s							
K61A	**Williamstown**	**94.72**	**334**	P	**P**	**09 11 00.7**	**+1.1**
	baz=28							
AGMN	**Agassiz Nation**	**94.75**	**351**	P	**P**	**09 10 59.8**	**+0.2**
	baz=11,SNR=8.7							
AGMN	**Agassiz Nation**	**94.75**	**351**	P	**P**	**09 10 58.9**	**-0.6**
AGMN				IAmb	IAmb	09 11 01.3		
	comp=Z,24nm,1.0s							
B05A	**Bryant**	**94.78**	**9**	P	**P**	**09 11 00.4**	**+0.7**
	baz=350							
STKA	**Stephens Creek**	**94.79**	**126**	P	**P**	**09 10 58.8**	**-1.0**
	comp=Z,2.8nm,0.7s,baz=330,slow=5.4,SNR=6.5							
B08A	**Colville Reser**	**94.99**	**7**	P	**P**	**09 10 59.1**	**-1.6**
K59A	**Cooperstown**	**95.17**	**336**	P	**P**	**09 11 02.5**	**+0.9**
	baz=27							
DGMT	**Dagmar**	**95.27**	**357**	P	**P**	**09 11 02.9**	**+0.9**
	baz=3.9							
DGMT	**Dagmar**	**95.27**	**357**	P	**P**	**09 11 01.8**	**-0.2**
NEW	**Newport**	**95.27**	**5**	P	**P**	**09 11 02.8**	**+0.7**
	baz=353							
D03D	**Eldon**	**95.37**	**10**	P	**P**	**09 11 03.9**	**+1.5**
	baz=349							
MDND	**Maddock**	**95.59**	**354**	P	**P**	**09 11 03.5**	**+0.1**
	baz=7.6							
MDND	**Maddock**	**95.59**	**354**	P	**P**	**09 11 02.8**	**-0.7**
EGMT	**Eagleton**	**95.82**	**1**	P	**P**	**09 11 05.1**	**+0.5**
	baz=359,SNR=5.8							
EGMT	**Eagleton**	**95.82**	**1**	P	**P**	**09 11 04.3**	**-0.3**
EGMT				IAmb	IAmb	09 11 06.9		
	comp=Z,13nm,0.8s							
BINY	**Binghamton**	**96.06**	**336**	P	**P**	**09 11 05.9**	**+0.2**
	baz=26							
GLMI	**Grayling**	**96.08**	**343**	P	**P**	**09 11 06.0**	**+0.2**
	baz=20							
L56A	**Greenwood**	**96.62**	**337**	P	**P**	**09 11 08.4**	**+0.2**
	baz=25							
G40A	**Rib Lake**	**96.83**	**347**	P	**P**	**09 11 08.2**	**-1.0**
G40A				IAmb	IAmb	09 11 10.3		
	comp=Z,14nm,0.8s							
MSO	**Missoula**	**96.90**	**3**	P	**P**	**09 11 09.8**	**+0.2**
	baz=356							
HRY	**Holter Researc**	**97.10**	**2**	P	Pdif	09 11 10.8	+0.3
LAO	**LASA Array**	**97.13**	**358**	P	Pdif	09 11 11.9	+1.4
	baz=2.2,SNR=5.8							
LAO	**LASA Array**	**97.13**	**358**	P	**P**	**09 11 09.5**	**-1.0**
M57A	**Sunshine Farm,**	**97.20**	**336**	P	Pdif	09 11 10.9	0.0
	baz=25							
GCMT	**Greycliff**	**98.06**	**0**	P	Pdif	09 11 15.5	+0.7
AAM	**Ann Arbor**	**98.21**	**341**	P	**P**	**09 11 14.2**	**-1.1**
	baz=20							
BOZ	**Bozeman (W)**	**98.22**	**2**	P	Pdif	09 11 15.7	+0.1
	baz=358							
YNE	**Yellowstone No**	**98.84**	**1**	P	Pdif	09 11 17.4	-1.0
JFWS	**Jewell Farm**	**99.11**	**346**	P	**Pdif**	**09 11 19.5**	**+0.1**
	baz=15							
I04A	**Tendick Farm,**	**99.13**	**10**	P	**Pdif**	**09 11 19.1**	**-0.4**
	baz=349							
ECSD	**EROS Data Cent**	**99.33**	**351**	P	**Pdif**	**09 11 20.6**	**+0.2**
	baz=10.0							
BW06	**Boulder Array**	**101.08**	**0**	P	**Pdif**	**09 11 28.0**	**-0.4**
	baz=360							
PDAR	**Pinedale Array**	**101.08**	**0**	P	**Pdif**	**09 11 28.8**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=41,slow=4.1,SNR=9.1							
PDAR				PKKPbc	**PKKPbc**	**09 27 35.1**	**-3.1**
	comp=Z,0.5nm,0.7s,baz=151,slow=3.9,SNR=4.6							
NVAR	**Mina Array Bea**	**104.92**	**8**	Pdiff	**Pdif**	**09 11 47.6**	**+2.0**
	comp=Z,0.2nm,0.4s,baz=343,slow=4.6,SNR=3.6							
NVAR				PKKPbc	**PKKPbc**	**09 27 26.4**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=188,slow=5.5,SNR=5.7							
BELC	**Belle Mtn. Jos**	**109.53**	**6**	P	**PKiKP**	**09 16 08.4**	**+0.5**
	baz=354							
MNTX	**Cornudas Mount**	**112.05**	**357**	P	**PKiKP**	**09 16 12.0**	**-0.5**
	baz=3.1							
TXAR	**Lajitas Array**	**114.30**	**355**	PKP	PKPdf	09 16 17.4	+0.4
	comp=Z,0.4nm,0.5s,baz=50,slow=2.5,SNR=8.2							
TXAR				PP	**PP**	**09 17 16.7**	**+1.9**
	comp=Z,0.6nm,0.9s,baz=28,slow=8.4,SNR=2.8							
TXAR				PKKPbc	**PKKPbc**	**09 26 56.4**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=183,slow=5.7,SNR=12							
SNAA	**Sanae**	**119.43**	**200**	PKPdf	**PKPdf**	**09 16 24.7**	**-0.7**
VNA2	**Neumayer--Watz**	**120.43**	**202**	PKPdf	**PKPdf**	**09 16 27.0**	**-0.2**
VNA1	**Neumayer--Stat**	**120.58**	**202**	PKPdf	**PKPdf**	**09 16 26.8**	**-0.6**
VNA3	**Neumayer Olymp**	**121.24**	**202**	PKPdf	**PKPdf**	**09 16 27.7**	**-1.0**
ITTB	**Itaituba**	**121.70**	**290**	*eP*	**PKPdf**	**09 16 31.3**	**-0.1**
SDV	**Santo Domingo**	**122.23**	**314**	PKP	**PKPdf**	**09 16 32.1**	**-0.6**
	comp=Z,8.8nm,0.9s,baz=345,slow=20,SNR=5.3							
SDV	**Santo Domingo**	**122.23**	**314**	*eP*	**PKPdf**	**09 16 32.3**	**-0.4**
BDFB	**Brasilia**	**122.38**	**274**	PKP	**PKPdf**	**09 16 32.3**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=90,slow=6.1,SNR=3.0							
URZ	**Urewera**	**122.76**	**116**	PKP	**PKPdf**	**09 16 29.8**	**-2.8**
	comp=Z,12nm,0.6s,baz=66,slow=3.0,SNR=7.6							
SJCC	**San Jacinto, C**	**123.94**	**319**	*eP*	**PKiKP**	**09 16 36.0**	**-0.1**
MACA	**Manacapuru-AM**	**124.58**	**295**	*eP*	**PKPdf**	**09 16 37.0**	**+0.1**
CMIG	**Matias Romero**	**125.04**	**343**	PKP	**PKPdf**	**09 16 37.0**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=72,slow=2.0,SNR=4.2							
MOTC	**Monteria, Cord**	**125.14**	**318**	*eP*	**PKPdf**	**09 16 38.2**	**+0.2**
BRRC	**Barranca, Sant**	**125.44**	**315**	*eP*	**PKPdf**	**09 16 37.8**	**-0.8**
ARAG	**Araguaiana, MT**	**125.46**	**277**	*eP*	**PKiKP**	**09 16 38.8**	**-0.1**
VNDA	**Vanda**	**125.52**	**165**	PKP	**PKPdf**	**09 16 36.1**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=298,slow=4.4,SNR=19							
ZARC	**Zaragoza, Cauc**	**125.77**	**317**	*eP*	**PKPdf**	**09 16 38.7**	**-0.6**
UREC	**San Jos de Ur**	**125.92**	**318**	*eP*	**PKPdf**	**09 16 38.7**	**-0.8**
RUSC	**La Rusia**	**126.07**	**314**	*eP*	**PKPdf**	**09 16 38.7**	**-1.7**
PET01	**Itanhaem-SP**	**126.22**	**265**	*eP*	**PKiKP**	**09 16 41.0**	**+0.8**
QSPA	**South Pole Qui**	**126.32**	**180**	PKPdf	**PKPdf**	**09 16 37.7**	**-1.0**
PTBC	**PUERTO BERRIO**	**126.33**	**316**	*eP*	**PKPdf**	**09 16 39.0**	**-1.4**
ITRB	**Iturama**	**126.43**	**271**	*eP*	**PKiKP**	**09 16 41.3**	**+0.6**
SPBC	**San Pablo de B**	**126.83**	**315**	*eP*	**PKPdf**	**09 16 41.1**	**-0.3**
DBBC	**Dabeiba**	**126.90**	**318**	*eP*	**PKiKP**	**09 16 41.9**	**-0.2**
HELC	**Santa Helena**	**127.21**	**317**	*eP*	**PKPdf**	**09 16 42.5**	**0.0**
NORC	**Norcasia**	**127.36**	**315**	*eP*	**PKPdf**	**09 16 42.3**	**0.0**
CHIC	**Chingaza**	**127.46**	**314**	*eP*	**PKPdf**	**09 16 41.9**	**-1.1**
FRTB	**Fartura**	**127.61**	**267**	*eP*	**PKiKP**	**09 16 43.2**	**+0.2**
ROSC	**El Rosal**	**127.64**	**314**	PKP	**PKiKP**	**09 16 44.5**	**+0.7**
	comp=Z,34nm,0.8s,baz=95,slow=6.1,SNR=15							
ROSC	**El Rosal**	**127.64**	**314**	*eP*	**PKPdf**	**09 16 42.2**	**-1.1**
CBOC	**Ciudad Bolivar**	**127.75**	**317**	*eP*	**PKPdf**	**09 16 42.7**	**-0.5**
VILC	**Villavicencio,**	**127.86**	**313**	*eP*	**PKPdf**	**09 16 43.2**	**-0.2**
PCMB	**Pacaembu**	**128.12**	**270**	*eP*	**PKiKP**	**09 16 44.3**	**+0.2**
TOLC	**Tolima**	**128.41**	**315**	*eP*	**PKPdf**	**09 16 44.9**	**+0.1**
PLMC	**San Jos del P**	**128.69**	**316**	*eP*	**PKPdf**	**09 16 44.4**	**-0.5**
ORTC	**Ortega, Tolima**	**128.92**	**315**	*eP*	**PKPdf**	**09 16 42.9**	**-2.4**
YOTC	**Yotoco, Valle**	**129.49**	**316**	*eP*	**PKPdf**	**09 16 45.7**	**-0.8**
MACC	**Macarena, Meta**	**129.52**	**312**	*eP*	**PKPdf**	**09 16 44.1**	**-2.3**
TRCB	**Terra Rica**	**129.81**	**269**	*eP*	**PKPdf**	**09 16 46.7**	**0.0**
PTGB	**Pitanga**	**130.27**	**267**	*eP*	**PKiKP**	**09 16 48.4**	**0.0**
SAML	**Samuel**	**130.28**	**292**	*eP*	**PKPdf**	**09 16 47.0**	**-0.8**
SAML	**Samuel**	**130.28**	**292**	PKIKP	**PKPdf**	**09 16 47.8**	**0.0**
SAML	**Samuel**	**130.28**	**292**		**PKPdf**	**09 16 47.8**	**0.0**
SAML	**Samuel**	**130.28**	**292**	*eP*	**PKiKP**	**09 16 48.3**	**-0.3**
VILB	**Vilhena**	**130.50**	**285**	*eP*	**PKiKP**	**09 16 49.4**	**+0.3**
POPC	**Popayan, Colom**	**130.85**	**315**	*eP*	**PKPdf**	**09 16 49.1**	**-0.1**
PCON	**Cinco Dias**	**130.87**	**315**	*eP*	**PKPdf**	**09 16 50.1**	**+0.5**
FLOC	**Florencia**	**131.04**	**313**	*eP*	**PKPdf**	**09 16 47.2**	**-2.2**
BBAC	**Balboa, Cauca**	**131.60**	**315**	*eP*	**PKPdf**	**09 16 49.4**	**-1.2**
PTLC	**Puerto Leguiza**	**131.66**	**311**	*eP*	**PKPdf**	**09 16 48.7**	**-1.8**
GCUF	**Volcan Galeras**	**132.31**	**315**	*eP*	**PKPdf**	**09 16 46.6**	**-5.7**
SIV	**San Ignacio**	**132.97**	**283**	PKP	**PKPdf**	**09 16 52.5**	**-0.3**
	comp=Z,4.7nm,0.7s,baz=110,slow=4.6,SNR=8.5							
ETMB	**Extrema**	**133.10**	**294**	*eP*	**PKPdf**	**09 16 52.5**	**-0.6**
CPUP	**Villa Florida**	**135.24**	**268**	PKP	**PKPdf**	**09 16 56.0**	**-0.7**
	comp=Z,13nm,0.7s,baz=61,slow=2.3,SNR=31							
CPUP				pPKP	**pPKPdf**	**09 17 57.4**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=52,slow=6.8,SNR=3.1							
CPUP				SKPbc	**SKPbc**	**09 20 03.1**	**-2.2**
	comp=Z,5.9nm,1.1s,baz=22,slow=3.8,SNR=4.0							
CPUP	**Villa Florida**	**135.24**	**268**	PKPdf	**PKPdf**	**09 16 56.3**	**-0.5**
ITQB	**Itaqui**	**136.06**	**263**	*eP*	**PKiKP**	**09 16 59.6**	**-0.2**
LPAZ	**La Paz**	**138.62**	**288**	PKP	**PKPdf**	**09 17 03.9**	**-0.2**
	comp=Z,9.3nm,1.1s,baz=28,slow=2.9,SNR=13							
LPAZ				PP	**PP**	**09 19 55.0**	**-2.6**
	comp=Z,3.2nm,1.1s,baz=48,slow=11,SNR=4.2							
LPAZ	**La Paz**	**138.62**	**288**	*eP*	**PKPdf**	**09 17 03.7**	**-0.4**
LPAZ	**La Paz**	**138.62**	**288**	*eP*	**PKPdf**	**09 17 04.7**	**+0.7**
ATAH	**Atahualpa**	**139.58**	**309**	PP	PP	09 20 01.9	-0.7
	comp=Z,4.7nm,0.6s,baz=351,slow=5.0,SNR=3.5							
PB09	**IPOC Station P**	**142.61**	**282**		**PKPdf**	**09 17 11.2**	**+0.6**
LVC	**Limon Verde**	**142.77**	**281**	PKhKP	PKPpre	09 17 07.3		
	baz=65,slow=2.6							
LVC				SKPbc	**SKPbc**	**09 20 26.3**	**-0.4**
	comp=Z,9.0nm,0.8s,baz=148,slow=2.4,SNR=4.1							
LVC	**Limon Verde**	**142.77**	**281**	*eP*	**PKPdf**	**09 17 12.1**	**+1.1**
GO02	**Mina Guanaco**	**144.56**	**277**		**PKPab**	**09 17 13.3**	**0.0**
PLCA	**Paso Flores**	**149.85**	**250**	PKP	**PKPdf**	**09 17 22.6**	**+0.5**
	comp=Z,18nm,1.1s,baz=186,slow=0.5,SNR=12							
PLCA				PKPbc	**PKiKP**	**09 17 27.8**	**-0.2**
	comp=Z,55nm,0.8s,baz=145,slow=5.8,SNR=88							
PLCA	**Paso Flores**	**149.85**	**250**	PKHKP	PKPpre	09 17 22.3		
PLCA	**Paso Flores**	**149.85**	**250**	PKPdf	**PKPdf**	**09 17 22.3**	**+0.2**
PLCA	**Paso Flores**	**149.85**	**250**	*eP*	**PKPdf**	**09 17 23.6**	**+1.5**
BI02	**San Fabin de**	**149.86**	**258**	PKPdf	**PKPdf**	**09 17 21.9**	**-0.3**
BI03	**Tigo**	**151.27**	**258**		**PKPbc**	**09 17 30.6**	**+0.1**

HEL 21 09:03:34.2±0.1, 60.79N×21.26E, h0km, ML1.4, ML0.9 (UPP), Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAF	**Rauma**	**0.34**	**46**	*eP*		Pg	09 03 39.8	-0.9
RAF				*eS*		Sg	09 03 44.3	-0.9
AAL	**Aland**	**0.88**	**226**	*eP*		Pg	09 03 49.8	-1.2
AAL				*eS*		Sg	09 04 01.2	-1.1
GRAU	**Graesoe**	**1.42**	**253**	*eP*		Pn	09 03 59.0	-2.2
MEF	**Metsahovi**	**1.65**	**109**	*eP*		Pn	09 04 03.4	-1.0
MEF				*eS*		Sn	09 04 24.9	-1.5
MEF				MSG			09 04 29.7	
	comp=Z,2.7nm,0.1s							
NUR	**Nurmijrvi**	**1.69**	**98**	*eP*		Pn	09 04 04.6	-0.3
NUR				*eS*		Sn	09 04 26.0	-1.3
NUR				MSG			09 04 30.8	
	comp=Z,2.4nm,0.1s							
NRTU	**Norrtaelje**	**1.72**	**231**	*eP*		Pn	09 04 04.3	-1.1
IGGU	**Iggoen**	**1.93**	**274**	*eP*		Pn	09 04 08.4	+0.1
ARNU	**Arnoeviken**	**2.08**	**298**	*eP*		Pn	09 04 10.7	+0.4
KEF	**Keuruu**	**2.22**	**50**	*e*PB		Pn	09 04 13.0	+0.8
KEF				*e*SG		Sb	09 04 42.1	-1.0
KEF				MSG			09 04 44.3	
	comp=Z,0.9nm,0.1s							
PVF	**Pernaja**	**2.28**	**94**	*e*PB		Pn	09 04 14.0	+1.0
PVF				*e*SB		Sb	09 04 43.4	-1.5
VAF	**Ylistaro**	**2.36**	**16**	*e*PB		Pn	09 04 15.5	+1.3
VAF				*e*SB		Sb	09 04 45.8	-1.4
FIA0	**FINESS Array S**	**2.43**	**72**	*e*PB		Pn	09 04 16.2	+1.1
FIA0				*e*SG		Sb	09 04 48.4	-0.7
HEMU	**Hemsoen**	**2.44**	**322**	*e*PB		Pn	09 04 16.2	+1.0
HEMU				*e*SB		Sb	09 04 47.9	-1.5

*KRNET **21** 09:07:45.1±0.1, 40.92N×69.54E, mb2.8*
ISC 21 09:07:45.7±2.1, 40.94N±0.06×69.7E±0.1, h10km, n6, σ1.1 23/10, 10C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BTK	**Batken**	**1.22**	**136**	⇓*i*P		**Pn**	**09 08 09.0**	**+0.2**
	baz=31							
BTK				⇓*i*S		**Sn**	**09 08 26.5**	**+1.1**
	baz=31							
TRKS	**Terek-Say**	**1.23**	**61**	⇑*i*P		**Pg**	**09 08 09.8**	**+0.5**
	baz=66							
TRKS				⇑*i*S		**Sn**	**09 08 27.9**	**+2.1**
	baz=66							
DRK	**Karamyk**	**2.16**	**132**	⇑*i*P		**Pb**	**09 08 23.9**	**-1.2**
	baz=29							
DRK				⇑*i*S		**Sb**	**09 08 52.5**	**+0.5**
	baz=29							
KK31	**Karatay Array**	**2.25**	**15**	⇑Pg		**Pb**	**09 08 25.6**	**-0.7**
	12nm,0.8s,baz=191,slow=17,SNR=54							
KK31				⇑Lg		Lg	09 09 07.8	
	1.8nm,0.2s,baz=199,slow=29,SNR=5.3							
ARSB	**Arslanbob**	**2.50**	**80**	⇑*i*P		**Pb**	**09 08 29.4**	**-1.3**
	baz=80							
ARSB				⇑*i*S		**Sb**	**09 09 01.4**	**-0.2**
	baz=80							
TKM2	**Tokmak 2**	**4.81**	**64**	⇑Pn		Pn	09 08 44.7	-14
	27nm,1.1s							
TKM2				⇑Sn		**Sn**	**09 09 53.5**	**-0.9**
	17nm,0.9s							

IDC 21 09:15:39.5±5.2, 9.34S×156.51E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/37, mbtmp3.4/3, Error ellipse: s-maj=145.3km s-min=36.5km az=117.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**23.87**	**241**	P		P	09 20 54.3	-0.5
	0.8nm,1.0s,baz=67,slow=9.6,SNR=3.3							
ASAR	**Alice Springs**	**25.88**	**234**	P		P	09 21 13.6	+0.3
	0.5nm,0.9s,baz=66,slow=9.7,SNR=2.6							
SONM	**Songino Array**	**72.10**	**327**	P		P	09 27 06.0	+0.1
	0.2nm,0.4s,baz=117,slow=5.0,SNR=2.3							

IDC 21 09:35:22.9±14.0, 18.56S×167.24E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.6/21, mbtmp3.6/4, ML3.0/1, Error ellipse: s-maj=241.0km s-min=39.6km az=72.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**3.58**	**192**	Pn		Pn	09 36 19.3	-0.5
	1.3nm,0.3s,baz=158,slow=19,SNR=2.5							
DZM				Sn		Sn	09 37 02.5	-0.3
	3.1nm,0.3s,baz=306,slow=23,SNR=5.6							
STKA	**Stephens Creek**	**26.64**	**235**	P		P	09 41 04.7	+1.2
	1.7nm,0.7s,baz=39,slow=6.5,SNR=4.1							
WRA	**Warramunga Arr**	**31.07**	**262**	P		P	09 41 42.4	-0.7
	0.3nm,0.7s,baz=91,slow=8.8,SNR=5.7							
ASAR	**Alice Springs**	**31.47**	**255**	P		P	09 41 46.5	-0.1
	0.9nm,0.6s,baz=81,slow=8.9,SNR=15							

IDC 21 09:56:51.8±7.3, 18.67S×178.26W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/35, mbtmp3.6/3, Error ellipse: s-maj=318.0km s-min=39.1km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**44.64**	**260**	P		P	10 05 06.8	+0.3
	0.2nm,0.3s,baz=97,slow=7.5,SNR=7.9							
ASAR	**Alice Springs**	**44.73**	**255**	P		P	10 05 06.8	-0.5
	0.7nm,0.4s,baz=84,slow=8.6,SNR=19							
ILAR	**Eielson Array**	**86.60**	**13**	P		P	10 09 36.5	0.0
	0.2nm,0.4s,baz=211,slow=6.3,SNR=4.2							

*IDC **21** 09:57:56.4±0.8, 4.55S×36.03E, h0km, mb4.0/11, mb1 4.2/15, mb1mx4.0/46, mbtmp4.0/15, ML4.2/5, MS3.2/5, Ms1 3.2/5, ms1mx3.1/63, Error ellipse: s-maj=22.6km s-min=15.8km az=101.0*
*NEIC **21** 09:57:57.0±2.1, 4.55S±0.1×35.9E±0.1, h10km±2km, mb4.4/2, Error ellipse: s-maj=29.0km s-min=10.5km az=315.0*

ISC 21 09:57:56.5±2.2, 4.51S×35.91E, h4km±6km, n31, ML4.5, 1C, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KOND	**Kondoa**	**0.42**	**196**	*i* P		**Pb**	**09 58 06.8**	**+0.2**
KOND				*i* S		**Sb**	**09 58 13.1**	**-0.2**
MW44	**Karatu Welwel**	**1.18**	**348**	*i* P		**Pb**	**09 58 19.4**	**-0.1**
MW44				*i* S		**Sn**	**09 58 35.4**	**-1.1**
MW44				IAML			09 58 40.8	
	comp=Z,10μm,0.2s							
NG55	**Lemala Gate**	**1.37**	**351**	*i* P		**Pg**	**09 58 23.0**	**+0.2**
NG55				*i* S		**Sn**	**09 58 41.0**	**-0.5**
NG55				IAML			09 58 47.1	
	comp=Z,9μm,0.4s							
MW41	**Ole Sokoine**	**1.38**	**23**	⇑*i*P		**Pn**	**09 58 22.4**	**-0.3**
MW41				*i* S		**Sb**	**09 58 40.2**	**-0.8**
MW41				IAML			09 58 47.7	
	comp=Z,25μm,0.3s							
NG56	**Ngoile bomas**	**1.48**	**340**	*i* P		**Pg**	**09 58 24.8**	**-0.2**
PR52	**Alailelai Boma**	**1.55**	**352**	*i* P		**Pb**	**09 58 25.7**	**-0.2**
PR52				*i* S		**Sg**	**09 58 46.2**	**-0.2**
PR63	**Meshili Boma**	**1.55**	**345**	*i* P		**Pg**	**09 58 26.1**	**-0.2**
PR63				*i* S		**Sg**	**09 58 45.8**	**-0.7**
PR63				IAML			09 58 47.1	
	comp=Z,6μm,0.3s							
PR31	**Engaruka Boma**	**1.58**	**5**	*i* P		**Pn**	**09 58 25.2**	**-0.2**
PR31				*i* S		**Sb**	**09 58 46.0**	**-0.4**
PR62	**Oldupai Boma**	**1.60**	**341**	*i* P		**Pb**	**09 58 26.3**	**-0.4**
PR32	**Iloiriento PS**	**1.64**	**10**	*i* P		**Pn**	**09 58 26.3**	**0.0**
PR53	**Nayobi Boma**	**1.64**	**358**	*i* P		**Pb**	**09 58 27.5**	**0.0**
PR33	**Engutoto Boma**	**1.67**	**8**	*i* P		**Pn**	**09 58 26.5**	**-0.2**
PR61	**Kiloki Boma**	**1.67**	**337**	*i* P		**P

mb4.0/9, Error ellipse: s-maj=34.9km s-min=11.4km az=243.0

DJA ***21*** *10:00:15.2±1.0, 2˚N±3˚×12˚7E±˚, h12km±10km, M4.0/9, mb4.4/1, MLv3.8/9*

ISC 21 10:00:16.3±0.9, 1˚97N±0˚07×127˚1E±0˚1, h35km, n23, σ1ᵗ13/24, mb3.9/8, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.23**	**167**	P	**Pn**	**10 00 37.8**	**+0.8**
TNTI				S	**Sn**	**10 00 54.1**	**+1.8**
TNTI	**Ternate**	**1.23**	**167**		**Pn**	**10 00 36.3**	**-0.7**
SGSI	**Sangihe**	**2.31**	**318**	P	**Pn**	**10 00 51.5**	**-0.4**
KMSI	**Cibinong**	**3.40**	**246**	P	**Pn**	**10 01 06.2**	**-0.7**
GTOI	**Gorontalo**	**4.29**	**252**	P	**Pn**	**10 01 17.5**	**-1.6**
MRSI	**Marisa**	**5.35**	**254**	P	**Pn**	**10 01 33.6**	**-0.2**
MYLDM	**Lahad Datu**	**9.14**	**291**		**Pn**	**10 02 27.7**	**+1.9**
FITZ	**Fitzroy Crossi**	**20.00**	**184**	P	**P**	**10 04 45.7**	**-0.3**
	0.1nm,0.3s,baz=0.0,slow=7.1,SNR=2.5						
FITZ	**Fitzroy Crossi**	**20.00**	**184**	P	**P**	**10 04 45.5**	**-0.5**
WB0	**Warramunga Arr**	**22.76**	**162**	P	**P**	**10 05 15.3**	**-0.6**
WB0				IAmb	IAmb	10 05 22.6	
	comp=Z,9.5nm,1.4s						
WRAB	**Tennant Creek**	**22.91**	**162**	P	**P**	**10 05 16.6**	**-0.8**
WRAB				IAmb	IAmb	10 05 43.1	
	comp=Z,4.9nm,1.0s						
WRA	**Warramunga Arr**	**22.91**	**162**	P	**P**	**10 05 16.4**	**-1.0**
	comp=Z,1.9nm,0.5s,baz=340,slow=11,SNR=28						
WRA	**Warramunga Arr**	**22.91**	**162**	P	**P**	**10 05 17.0**	**-0.4**
WB2	**Warramunga Arr**	**22.92**	**162**	P	**P**	**10 05 16.7**	**-0.7**
WR0	**Warramunga Arr**	**22.99**	**162**	P	**P**	**10 05 17.8**	**-0.4**
WR0				IAmb	IAmb	10 05 40.0	
	comp=Z,3.6nm,0.9s						
AS31	**Alice Springs**	**26.33**	**166**	P	**P**	**10 05 49.6**	**+0.4**
ASAR	**Alice Springs**	**26.33**	**166**	P	**P**	**10 05 49.2**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=346,slow=10,SNR=10						
ASAR	**Alice Springs**	**26.33**	**166**	P	**P**	**10 05 51.4**	**+2.2**
SONM	**Songino Array**	**49.07**	**342**	P	**P**	**10 09 01.5**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=151,slow=9.1,SNR=2.5						
MK31	**Makanchi Array**	**59.20**	**326**	P	**P**	**10 10 11.9**	**-2.1**
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**10 10 13.8**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=133,slow=7.5,SNR=5.4						
MKAR	**Makanchi Array**	**59.20**	**326**	P	**P**	**10 10 13.6**	**-0.4**
ABKAR	**Akbulak array**	**73.73**	**321**	P	**P**	**10 11 45.5**	**-1.3**
ABKAR				IAmb	IAmb	10 12 22.6	
	comp=Z,3.0nm,1.6s						

NNC 21 10:02:16.5±1.8, 51˚82N×75˚32E, h0km, mb3.5, mpv3.1, 7C-2D, Error ellipse: s-maj=19.5km s-min=9.4km az=3.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**2.35**	**119**	⇑Pn	Pn	10 02 57.8	+1.5
KURBB	10nm,0.7s,baz=309,slow=18						
				⇓Sn	Sn	10 03 26.2	+0.4
	115nm,0.6s,baz=310,slow=28						
KURK	**Kurchatov**	**2.35**	**117**	⇓Pn	Pn	10 02 57.2	+0.8
KURK	4.7nm,0.5s						
				⇑Sn	Sn	10 03 26.8	+0.9
	22nm,0.6s						
BRZS	**Berezniki**	**2.48**	**223**	Pg	Pn	10 02 59.9	+1.7
BRZS	12nm,0.5s						
				Lg	Lg	10 03 31.4	
	50nm,0.5s						
BRVK	**Borovoye**	**3.32**	**294**	⇑Pg	Pg	10 03 18.2	-1.9
BRVK	4.8nm,0.8s						
				⇑Lg	Lg	10 04 01.6	
	18nm,0.7s						
SEM	**Semipalatinsk**	**3.42**	**113**	Pg	Pg	10 03 26.5	+4.6
SEM	3.1nm,0.1s						
				Lg	Lg	10 04 16.9	
	66nm,0.1s						
OTUK	**Ortayu**	**4.06**	**209**	Pg	Pb	10 03 30.2	+1.4
OTUK	0.9nm,0.6s						
				Lg	Lg	10 04 23.2	
	4.8nm,0.6s						
OTUK	**Ortayu**	**4.06**	**209**	⇑Pg	Pb	10 03 31.5	+2.6
OTUK	2.4nm,0.7s						
				⇑Lg	Lg	10 04 27.8	
	20nm,0.9s						
MK31	**Makanchi Array**	**6.79**	**135**	⇑Lg	Lg	10 05 52.2	
	18nm,1.1s,baz=318,slow=28,SNR=11						

MOS ***21*** *10:10:17.1±0.9, 2˚27N×127˚00E, h29km, mb6.6/98, MS6.1/67, Error ellipse: s-maj=6.1km s-min=3.6km az=113.4*

NEIC ***21*** *10:10:19.6±2.4, 2˚30N±0˚05×127˚06E±0˚04, h35km±1km, mb6.5/357, Ms_20 6.3/905, Mwc6.5/59, Mww6.5, Mwc6.6(GCMT), Error ellipse: s-maj=9.2km s-min=6.5km az=188.0*

BJI ***21*** *10:10:19.2±0.0, 2˚30N×127˚15E, h40km, mB6.3/83, mb6.3/84, Ms6.5/98, Ms7 6.2/92*

IDC ***21*** *10:10:19.4±1.2, 2˚27N×126˚99E, h27km±7km, mb6.0/58, mb1 6.0/59, mb1mx5.9/61, mbtmp6.1/59, ML5.3/1, MS5.9/40, Ms1 5.9/40, ms1mx5.7/62, Error ellipse: s-maj=8.8km s-min=6.9km az=66.0*

DJA ***21*** *10:10:23.0±0.2, 2˚N±2˚×12˚7E±˚, h60km±3km, M6.5/90, mB6.7/88, mb6.3/90, MLv6.4/18, Mw(mB)6.6/88, Mwp6.4/84*

KLM ***21*** *10:10:23.0, 2˚36N×127˚12E, h59km, mb6.4*

GCMT ***21*** *10:10:24.6±0.0, 2˚60N×127˚08E, h30km, MW6.5/172, Moment Tensor Solution. s172,c432; s164,c668; Duration: 4s5 Moment tensor: Scale 10¹⁹Nm; Mrr0.71±.00; Mθθ-0.04±.00; Mϕϕ-0.67±.00; Mrθ-0.29±.01; Mθϕ0.29±.00; Mrϕ0.05±.01; Best double couple: M₀0.80800×10¹⁹ NP1:ϕs177.00000°, δ42.00000°, λ118.00000°. NP2:ϕs321.00000°, δ54.00000°, λ67.00000°. Principal axes: T 0.8140, Plg70.0000°, Azm175.0000°; N -0.0110, Plg19.0000°, Azm335.0000°; P -0.8020, Plg6.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s. Triangular moment-rate function*

NEIC ***21*** *10:10:25, 2˚59N×127˚10E, h30km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr7.30; Mθθ-0.25; Mϕϕ-7.05; Mrθ-2.79; Mθϕ3.25; Mϕr1.11; Fault plane solution: M₀8.43000×10¹⁸ NP1:ϕs175.00000°, δ40.00000°, λ116.00000°. NP2:ϕs322.00000°, δ55.00000°, λ70.00000°. Principal axes: T 8.2192, Plg72.0000°, Azm180.0000°; N 0.4114, Plg16.0000°, Azm334.0000°; P -8.6306, Plg8.0000°, Azm66.0000°;*

NEIC ***21*** *10:10:26, 2˚53N×126˚98E, h36km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr6.26; Mθθ0.29; Mϕϕ-6.55; Mrθ-2.52; Mθϕ2.18; Mϕr3.42; Fault plane solution: M₀7.99000×10¹⁸ NP1:ϕs177.00000°, δ31.00000°, λ111.00000°. NP2:ϕs332.00000°, δ61.00000°, λ78.00000°. Principal axes: T 7.6495, Plg71.0000°, Azm215.0000°; N 0.6510, Plg11.0000°, Azm338.0000°; P -8.3005, Plg16.0000°, Azm71.0000°;*

NEIC ***21*** *10:10:37.7, 2˚71N×127˚45E, h10km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr5.57; Mθθ-0.00; Mϕϕ-5.56; Mrθ-3.07; Mθϕ2.42; Mϕr2.83; Fault plane solution: M₀7.36000×10¹⁸ NP1:ϕs176.52000°, δ31.40000°, λ118.82000°. NP2:ϕs323.72000°, δ62.84000°, λ73.60000°. Principal axes: T 7.1501, Plg68.0000°, Azm202.0000°; N 0.4116, Plg15.0000°, Azm331.0000°; P -7.5617, Plg16.0000°, Azm66.0000°;*

ISC 21 10:10:20.8±0.3, 2˚27N±0˚02×127˚03E±0˚03, h45km±2km, h45km:pP-P, n2658, σ1ᵗ74/2725, mb6.4/380, MS6.3/606, 176C-27D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.53**	**167**	P	**Pn**	**10 10 44.6**	**-1.0**
TNTI	**Ternate**	**1.53**	**167**	Pn	**Pn**	**10 10 45.1**	**-0.6**
TNTI				Sn	**Sn**	**10 11 04.2**	**-0.1**
SGSI	**Sangihe**	**2.06**	**313**	P	**Pn**	**10 10 53.1**	**+0.2**
KMSI	**Cibinong**	**3.48**	**241**	P	**Pn**	**10 11 16.5**	**+4.0**
GTOI	**Gorontalo**	**4.33**	**248**	P	**Pn**	**10 11 27.3**	**+3.1**
DAV	**Davao City (W)**	**4.98**	**343**	Pn	**Pn**	**10 11 35.7**	**+2.6**
	292nm,0.3s,baz=141,slow=1.8,SNR=81						
DAV				Sn	Sn	10 12 38.5	+9.0
	448nm,0.3s,baz=61,slow=19,SNR=1.4						
DAV				T	T	10 16 33.1	
	312nm,0.3s,baz=81,slow=16,SNR=3.5						
DAV	**Davao City (W)**	**4.98**	**343**		**Pn**	**10 11 34.1**	**+0.9**
DAV				Sn	**Sn**	**10 12 21.9**	**-7.6**
DAV	**Davao City (W)**	**4.98**	**343**	⇑eP	**Pn**	**10 11 35.1**	**+1.9**
KCP	**Kidapawan**	**5.09**	**338**	⇑iP	**Pn**	**10 11 37.9**	**+3.2**
KCP				*i*	Sn	10 12 42.1	+10
SIJI	**Sorong**	**5.26**	**126**	Pn	**Pn**	**10 11 38.1**	**+1.2**
	110nm,0.3s,baz=323,slow=12,SNR=138						
SIJI				Sn	**Sn**	**10 12 39.9**	**+3.5**
	baz=345,slow=20,SNR=1.1						
SIJI				LR	LR	10 14 08.2	
	comp=Z,623μm,19.9s,baz=293,slow=43						
LUWI	**Luwuk**	**5.38**	**232**	P	**Pn**	**10 11 42.8**	**+4.2**
	86nm584μm333μm18μm,2.0s						
LUWI	**Luwuk**	**5.38**	**232**	Pn	**Pn**	**10 11 41.7**	**+3.1**
MRSI	**Marisa**	**5.39**	**251**	P	**Pn**	**10 11 42.2**	**+3.5**
	47nm708μm165μm13μm,1.0s						
NLAI	**Namlea**	**5.47**	**179**	P	**Pn**	**10 11 40.4**	**+0.6**
	18nm139μm38μm3μm,0.9s						
MSAI	**Masohi**	**5.89**	**161**	P	**Pn**	**10 11 49.6**	**+4.0**
	4.8nm102μm17μm879nm,0.6s						
BIP	**Bislig**	**5.97**	**353**	⇑eP	**Pn**	**10 11 49.5**	**+2.9**
BIP				*e*S	**Sn**	**10 12 59.9**	**+6.2**
AAI	**Ambon**	**6.03**	**169**	P	**Pn**	**10 11 50.0**	**+2.5**
	13nm261μm55μm3μm,0.6s						
APSI	**Ampana**	**6.24**	**240**	P	**Pn**	**10 11 54.6**	**+4.2**
	56nm339μm263μm12μm,1.6s						
TOLI2	**Tolitoli**	**6.35**	**260**	Pn	**Pn**	**10 11 52.9**	**+0.9**
CGP	**Cagayan de Oro**	**6.57**	**339**	⇓eP	**Pn**	**10 11 57.7**	**+2.8**
ZCP	**Zamboanga City**	**6.77**	**313**	⇓iP	**Pn**	**10 11 58.3**	**+0.6**
ZCP				*i*	Sn	**10 13 10.7**	**-2.8**
BNDI	**Bandanaira**	**7.33**	**157**	P	**Pn**	**10 12 08.7**	**+3.3**
	47nm262μm175μm10μm,1.6s						
FAKI	**Fak Fak**	**7.33**	**135**	P	**Pn**	**10 12 07.2**	**+1.8**
	6.3nm600μm41μm2μm,0.9s						
FAKI	**Fak Fak**	**7.33**	**135**	Pn	**Pn**	**10 12 06.6**	**+1.2**
MPSI	**Mapaga**	**7.38**	**255**	P	**Pn**	**10 12 10.5**	**+4.4**
	14nm618μm86μm3μm,1.0s						
KDI	**Kendari**	**7.60**	**215**	P	**Pn**	**10 12 10.1**	**+1.1**
	13nm54μm3μm,0.8s						
LLP	**Lapu-Lapu**	**8.55**	**339**	⇑eP	**Pn**	**10 12 23.6**	**+1.4**
TTSI	**Tana Toraja**	**8.94**	**234**	P	**Pn**	**10 12 28.9**	**+1.5**
	380μm49μm2μm,1.1s						
MYLDM	**Lahad Datu**	**8.99**	**289**	Pn	**Pn**	**10 12 30.8**	**+2.7**
I39PW	**PALAU INFRASON**	**9.13**	**55**	Pn	**Pn**	**10 12 31.2**	**+1.2**
I39PW	baz=223,slow=15,SNR=1.7						
				i		10 57 10.0	
	baz=230,slow=314,SNR=0.5						
SPSI	**Sidrap Palu**	**9.54**	**230**	P	**Pn**	**10 12 39.4**	**+3.7**
	358μm48μm2μm,0.8s						
BNSI	**Bone**	**9.58**	**226**	P	**Pn**	**10 12 37.8**	**+1.6**
	320μm52μm1μm,1.1s						
BAKI	**Biak**	**9.70**	**111**	P	**Pn**	**10 12 42.3**	**+4.4**
	47μm91μm8μm,1.2s						
SMKI	**Samarinda**	**10.18**	**255**	P	Pn	10 12 50.2	+5.7
	358μm54μm2μm,1.1s						
BKSI	**Bulukumba**	**10.22**	**222**	P	**Pn**	**10 12 46.7**	**+1.7**
	278μm25μm1μm,0.9s						
KAPI	**Kappang**	**10.26**	**225**	Pn	**Pn**	**10 12 47.8**	**+2.3**
	12nm,0.3s,baz=5.4,slow=7.1,SNR=38						
KAPI				Sn	**Sn**	**10 14 42.9**	**+3.7**
	8.7nm,0.3s,baz=241,slow=19,SNR=1.1						
KAPI	**Kappang**	**10.26**	**225**	P	**Pn**	**10 12 48.0**	**+2.5**
KAPI				P	Pn	**10 12 48.0**	**+2.5**
KAPI	**Kappang**	**10.26**	**225**	P	**Pn**	**10 12 46.4**	**+0.9**
KAPI	**Kappang**	**10.26**	**225**		**Pn**	**10 12 46.4**	**+0.9**
BSSI	**Bau Bau, Buton**	**10.61**	**218**	P	**Pn**	**10 12 51.9**	**+1.6**
	131μm20μm951nm,0.9s						
BKB	**Balikpapan**	**10.72**	**251**	P	Pn	10 12 57.6	+5.8
	369μm61μm926nm,1.5s						
BKB	**Balikpapan**	**10.72**	**251**	Pn	**Pn**	**10 12 53.1**	**+1.3**
SPMM	**Sapulut**	**10.82**	**283**	P	Pn	10 12 59.0	+5.8
SAUI	**Saumlaki**	**11.04**	**157**	P	**Pn**	**10 12 57.5**	**+1.3**
	136μm38μm3μm,1.1s						
SAUI	**Saumlaki**	**11.04**	**157**		**Pn**	**10 12 56.9**	**+0.7**
KKM	**Kota Kinabalu**	**11.42**	**289**	Pn	**Pn**	**10 13 04.3**	**+2.8**
MMRI	**Maumere**	**11.84**	**204**	P	**Pn**	**10 13 10.7**	**+3.5**
	139μm36μm1μm,1.1s						
MMRI	**Maumere**	**11.84**	**204**		**Pn**	**10 13 07.8**	**+0.7**
EDFI	**Ende, Flores**	**12.17**	**206**	P	**Pn**	**10 13 12.9**	**+1.1**
	88μm13μm735nm,0.7s						
KBKI	**Kotabaru**	**12.19**	**243**	P	**Pn**	**10 13 15.3**	**+3.4**
	3μm9μm738nm,1.0s						
SOEI	**Soe**	**12.26**	**193**	P	**Pn**	**10 13 17.5**	**+4.5**
	137μm84μm4μm,1.0s						
SOEI	**Soe**	**12.26**	**193**	Pn	**Pn**	**10 13 16.8**	**+3.8**
SMPI	**Sarmi**	**12.42**	**110**	P	**Pn**	**10 13 19.0**	**+3.9**
	213μm36μm766nm,1.2s						
MTKI	**Muara Teweh, K**	**12.54**	**255**	P	**Pn**	**10 13 21.1**	**+4.3**
	163μm39μm869nm,1.4s						
PGP	**Puerto Galera**	**12.68**	**332**	⇓eP	**P**	**10 13 28.1**	**-0.7**
BATI	**Baumata**	**12.84**	**195**	Pn	**Pn**	**10 13 23.9**	**+3.0**
	7.9nm,0.3s,baz=193,slow=0.7,SNR=15						
BATI	**Baumata**	**12.84**	**195**	P	**Pn**	**10 13 25.1**	**+4.3**
	87μm29μm1μm,1.1s						
LQP	**Lukban**	**12.96**	**336**	⇑eP	**Pn**	**10 13 24.2**	**+1.6**
TGY	**Tayabas City**	**13.21**	**333**	Pn	**Pn**	**10 13 29.4**	**+3.5**
	83nm,0.3s,baz=220,slow=2.9,SNR=12						
BBKI	**Banjar Baru**	**13.45**	**245**	P	**Pn**	**10 13 32.9**	**+3.8**
	153μm54μm753nm,0.8s						
WSI	**Waingapu**	**13.63**	**209**	P	**P**	**10 13 37.9**	**-1.4**
	3μm,0.9s						
BASI	**Baing, Sumba**	**13.97**	**207**	P	**Pn**	**10 13 38.6**	**+2.3**
	82μm43μm2μm,1.7s						
GENI	**Genyem**	**13.99**	**110**	P	**P**	**10 13 40.2**	**-3.2**
	31μm7μm5μm5μm,1.1s						
WBSI	**Waikabubak, Su**	**14.07**	**213**	P	**Pn**	**10 13 39.6**	**+2.0**
	153μm48μm3μm,0.8s						
PLAI	**Plampang**	**14.38**	**220**	P	**P**	**10 13 45.0**	**-2.7**
	172μm68μm4μm,1.2s						
JAY	**Jayapura**	**14.47**	**109**	Pn	**Pn**	**10 13 45.4**	**+2.4**
	4.9nm,0.3s,baz=240,slow=5.6,SNR=32						
JAY				LR	LR	10 19 20.9	
	comp=Z,101μm,20.7s,baz=293,slow=37						
JAY	**Jayapura**	**14.47**	**109**	P	**P**	**10 13 46.6**	**-2.2**
	146μm13μm613nm,0.9s						
SBUM	**Sibu**	**14.80**	**271**		**P**	**10 13 50.0**	**-2.4**
SBUM	**Sibu**	**14.80**	**271**	P	**P**	**10 13 51.0**	**-1.4**
TWSI	**Taliwang, Sumb**	**14.90**	**223**	P	**P**	**10 13 52.6**	**-0.9**
	108μm31μm2μm,1.0s						
MTN	**Manton Dam**	**15.56**	**165**	P	**Pn**	**10 13 55.6**	**-1.6**
	baz=16,SNR=661						
MTN	**Manton Dam**	**15.56**	**165**	Pn	**Pn**	**10 13 54.5**	**-2.7**
SRBI	**Singaraja**	**15.64**	**229**	P	**P**	**10 14 02.2**	**+0.4**
	178μm62μm3μm,0.9s						
KDU	**Kakau**	**15.81**	**160**	P	**Pn**	**10 13 58.2**	**-2.3**
	baz=16,SNR=241						
KMMI	**Kalianget**	**15.99**	**235**	P	**P**	**10 14 05.8**	**+0.2**
	167μm74μm6μm,1.0s						
DNP	**Denpasar**	**16.04**	**227**	P	**P**	**10 14 08.9**	**+2.8**
	175μm177μm11μm,1.8s						
PBKI	**Pangkalan Bun**	**16.13**	**252**	P	**P**	**10 14 07.2**	**0.0**
	148μm47μm3μm,1.0s						
CVP	**Callao Caves**	**16.17**	**342**	⇓eP	**Pn**	**10 14 05.3**	**+0.3**
ABJI	**Asem Bagus**	**16.22**	**232**	P	**P**	**10 14 09.2**	**+1.1**
	160μm48μm2μm,1.0s						
BLJI	**Banyuglugur**	**16.69**	**233**	P	**P**	**10 14 14.3**	**+0.9**
	158μm64μm5μm,1.0s						
JAGI	**Jajag, Banyuwa**	**16.70**	**230**	P	**P**	**10 14 15.9**	**+2.4**
	156μm63μm4μm,1.1s						
JAGI	**Jajag, Banyuwa**	**16.70**	**230**		**P**	**10 14 12.6**	**-0.8**
JAGI				IAmb	IAmb	10 14 20.7	
	comp=Z,5μm,1.1s						
KSM	**Kuching**	**16.73**	**268**	P	**P**	**10 14 14.7**	**+0.8**
KSM				IAmb	IAmb	10 14 27.9	
	comp=Z,4μm,1.4s						
KSM	**Kuching**	**16.73**	**268**	P	**P**	**10 14 15.0**	**+1.1**
MMPI	**Merauke**	**17.06**	**129**	P	**P**	**10 14 21.0**	**+3.5**
	comp=Z,123μmcomp=Z,57μmcomp=Z,2μm,0.8s						
GMJI	**Gumukmas**	**17.13**	**232**	P	**P**	**10 14 21.0**	**+2.8**
	comp=Z,158μmcomp=Z,55μmcomp=Z,4μm,1.1s						
GRJI	**Gresik**	**17.15**	**238**	P	**P**	**10 14 20.7**	**+2.2**
	comp=Z,3μmcomp=Z,8μmcomp=Z,785nm,1.0s						
TBJI	**Tambak Boyo**	**17.64**	**239**	P	**P**	**10 14 27.1**	**+3.2**
	comp=Z,83μmcomp=Z,34μmcomp=Z,1μm,0.9s						
KNRA	**Kununurra**	**17.91**	**175**	P	**Pn**	**10 14 25.4**	**-1.4**
	baz=18,SNR=456						
KNRA	**Kununurra**	**17.91**	**175**	P	**Pn**	**10 14 25.0**	**-1.7**
PWJI	**Pagerwojo**	**18.31**	**236**	P	**Pn**	**10 14 32.2**	**+0.6**
	comp=Z,131μmcomp=Z,41μmcomp=Z,2μm,0.8s						
WOJI	**Wonogiri, Jawa**	**18.95**	**238**	P	**Pn**	**10 14 40.0**	**+0.7**
	comp=Z,77μmcomp=Z,16μmcomp=Z,1μm,1.1s						
SMRI	**Semarang**	**18.97**	**241**	P	**Pn**	**10 14 42.5**	**+2.9**
	comp=Z,149μmcomp=Z,42μmcomp=Z,2μm,1.0s						
SMRI	**Semarang**	**18.97**	**241**	P	**P**	**10 14 36.9**	**-1.6**
UGM	**Wanagama**	**19.32**	**238**	P	**Pn**	**10 14 45.4**	**+1.5**
	comp=Z,154μmcomp=Z,37μmcomp=Z,2μm,0.9s						
UGM	**Wanagama**	**19.32**	**238**	P	**P**	**10 14 41.5**	**-1.0**
YOGI	**Yogyakarta**	**19.47**	**239**	P	**Pn**	**10 14 45.3**	**-0.3**
	comp=Z,62μmcomp=Z,21μmcomp=Z,2μm,1.1s						
TPI	**Tanjungpandan**	**20.00**	**256**	P	**P**	**10 14 50.2**	**+0.3**
	comp=Z,128μmcomp=Z,28μmcomp=Z,780nm,1.3s						
FITZ	**Fitzroy Crossi**	**20.29**	**184**	P	**P**	**10 14 52.1**	**-0.7**
	comp=Z,256nm,0.8s,baz=16,slow=10,SNR=182						
FITZ				S	**S**	**10 18 32.8**	**-5.2**
	comp=Z,181nm,1.1s,baz=138,slow=23,SNR=4.2						
FITZ	**Fitzroy Crossi**	**20.29**	**184**	P	**P**	**10 14 51.6**	**-1.2**
	baz=20,SNR=293						
FITZ	**Fitzroy Crossi**	**20.29**	**184**	P	**P**	**10 14 51.5**	**-1.4**
KPJI	**Karang Pucung**	**20.43**	**242**	P	**P**	**10 14 53.7**	**-0.7**
	comp=Z,146μmcomp=Z,31μmcomp=Z,1μm,0.7s						
JCJI	**Jatiwangi**	**20.65**	**245**	P	Pn	10 15 00.6	+1.0
	comp=Z,114μmcomp=Z,33μmcomp=Z,991nm,1.4s						
DLV	**T Lat**	**20.74**	**298**	P	**P**	**10 14 58.0**	**0.0**
MANU	**Manus Island**	**20.78**	**102**	P	**P**	**10 14 58.4**	**+0.1**
GUMO	**Guam**	**20.92**	**57**	P	**P**	**10 14 58.8**	**-0.9**
	comp=Z,491nm,1.0s,baz=166,slow=9.0,SNR=18						
GUMO	**Guam**	**20.92**	**57**	P	**P**	**10 14 59.1**	**-0.6**
GUMO				pmax	pmax		
	comp=Z,2μm,1.0s						
GUMO				MLR	MLR		
	comp=Z,66μm,21.0s						
GUMO	**Guam**	**20.92**	**57**	P	**P**	**10 14 59.1**	**-0.6**
GUMO				IAmb	IAmb	10 15 23.7	
	comp=Z,2μm,1.0s						
TWG	**Pinlang**	**21.23**	**345**	P	**P**	**10 14 59.2**	**-3.8**
TWG				IAmb	IAmb	10 15 04.1	
	comp=Z,1μm,0.7s						
PPBI	**Pangkal Pinang**	**21.35**	**258**	P	**P**	**10 15 04.6**	**+0.2**
	comp=Z,121μmcomp=Z,29μmcomp=Z,1μm,1.0s						
LEM	**Lembang**	**21.38**	**245**	P	**P**	**10 15 04.3**	**-0.6**
	comp=Z,422nm,0.9s,baz=56,slow=7.4,SNR=27						
LEM				S	**S**	**10 19 01.6**	**+1.5**
	comp=Z,75nm,0.8s,baz=353,slow=22,SNR=1.8						
CISI	**Cisompet, Garu**	**21.51**	**243**	P	**P**	**10 15 06.9**	**+0.7**
	comp=Z,92μmcomp=Z,29μmcomp=Z,979nm,1.0s						
CISI	**Cisompet, Garu**	**21.51**	**243**	P	**P**	**10 15 03.9**	**-2.3**
YULB	**Yu-li**	**21.72**	**346**	P	**P**	**10 15 05.2**	**-3.0**
YULB				IAmb	IAmb	10 15 28.3	
	comp=Z,2μm,1.4s						
TPUB	**Ta-pu**	**21.81**	**344**	P	**P**	**10 15 06.4**	**-2.8**
CBJI	**Citeko**	**21.92**	**247**	P	**P**	**10 15 11.5**	**+1.0**
	comp=Z,96μmcomp=Z,41μmcomp=Z,1μm,0.9s						
TNG	**Tangerang**	**22.02**	**248**	P	P	10 15 20.6	+9.1
DBJI	**Dramaga**	**22.06**	**246**	P	**P**	**10 15 13.6**	**+1.5**
	comp=Z,25μmcomp=Z,486nm,0.7s						
SSLB	**Suanglung**	**22.18**	**345**	P	**P**	**10 15 10.2**	**-3.1**
SSLB				IAmb	IAmb	10 15 17.8	
	comp=Z,1μm,0.8s						
NACB	**Ninganchiao**	**22.40**	**347**	P	**P**	**10 15 12.5**	**-3.0**
YOJ	**Yonaguni jima**	**22.40**	**350**	P	**P**	**10 15 13.0**	**-2.6**
YOJ				pmax	pmax		
	comp=Z,2μm,0.7s						
YOJ	**Yonaguni jima**	**22.40**	**350**	P	**P**	**10 15 12.9**	**-2.6**
YOJ				IAmb	IAmb	10 15 21.2	
	comp=Z,2μm,0.7s						
SKJI	**Sukabumi**	**22.42**	**246**	P	**P**	**10 15 17.7**	**+1.8**
	comp=Z,68μmcomp=Z,31μmcomp=Z,880nm,0.7s						
SBJI	**Serang**	**22.47**	**248**	P	**P**	**10 15 20.6**	**+4.1**
	comp=Z,98μmcomp=Z,39μmcomp=Z,3μm,1.5s						
TPRI	**Tanjung Pinang**	**22.54**	**267**	P	**P**	**10 15 18.1**	**+0.9**
	comp=Z,104μmcomp=Z,1μm,1.9s						
DSRI	**Dabo**	**22.61**	**263**	P	**P**	**10 15 19.6**	**+1.6**
	comp=Z,70μmcomp=Z,16μmcomp=Z,545nm,1.9s						
COEN	**Coen**	**22.72**	**136**	P	**P**	**10 15 18.1**	**-1.0**
	baz=23,SNR=35						
COEN	**Coen**	**22.72**	**136**	P	**P**	**10 15 16.7**	**-2.4**
PMBI	**Palembang**	**22.84**	**257**	P	**P**	**10 15 25.4**	**+5.0**
	comp=Z,44μmcomp=Z,2μm,2.0s						
PMBI	**Palembang**	**22.84**	**257**	P	**P**	**10 15 22.6**	**+2.3**
PMBI				IAmb	IAmb	10 15 31.2	
	comp=Z,2μm,1.1s						
YHNB	**Yeheng**	**22.93**	**347**	P	**P**	**10 15 18.9**	**-2.3**
YHNB				IAmb	IAmb	10 15 32.4	
	comp=Z,1μm,0.8s						
WB0	**Warramunga Arr**	**23.06**	**162**	P	**P**	**10 15 20.8**	**-1.7**
WB0				IAmb	IAmb	10 15 29.0	
	comp=

comp=Z,90μmcomp=Z,30μmcomp=Z,1μm,1.8s
GZH Guangzhou 24.58 328 P **P** **10 15 39.5 +2.8**
GZH S **S** **10 19 59.9 +5.1**
GZH pmax pmax
comp=Z,18μm,2.7s
GZH LR LR
comp=Z,50μm,28.6s
GZH LR LR
comp=Z,34μm,26.9s
PSAD1 Pilbara Seismi 24.61 196 P **P** **10 15 36.7 -0.3**
PSAD1 IAmb IAmb 10 15 39.7
comp=Z,2μm,1.3s
PSAC1 Pilbara Seismi 24.69 196 P **P** **10 15 37.3 -0.5**
PSA00 Pilbara Seismi 24.72 196 P **P** **10 15 37.7 -0.3**
PSA00 IAmb IAmb 10 15 40.7
comp=Z,3μm,1.2s
XMIS Christmas Isla 24.77 239 P **P** **10 15 37.8 -0.7**
XMIS IAmb IAmb 10 15 43.0
comp=Z,1μm,1.0s
MNAI Manna 24.94 255 P **P** **10 15 44.2 +4.0**
comp=Z,94μmcomp=Z,51μmcomp=Z,2μm,1.1s
MNAI Manna 24.94 255 P **P** **10 15 39.3 -0.8**
KSI Kapahiang 25.12 257 P **P** **10 15 43.7 +1.8**
comp=Z,65μmcomp=Z,36μmcomp=Z,1μm,1.5s
SDSI Sungai Dareh 25.80 263 P **P** **10 15 48.2 +0.3**
comp=Z,73μmcomp=Z,11μmcomp=Z,404nm,1.1s
KRVT Keravat (AS076 25.82 105 P **P** **10 15 48.0 -0.1**
comp=Z,1μm,1.1s,baz=113,slow=2.9,SNR=48
KRVT PcP **PcP** **10 19 17.9 +0.9**
comp=Z,117nm,1.0s,baz=225,slow=1.4,SNR=1.7
KRVT S **S** **10 20 22.3 +7.5**
comp=Z,29nm,0.3s,baz=83,slow=22,SNR=7.7
KRVT LR LR 10 25 10.2
comp=Z,93μm,19.4s,baz=270,slow=34
QIS Mount Isa 25.82 152 P **P** **10 15 47.3 -0.8**
baz=26,SNR=438
RABL Rabaul 25.92 104 P **P** **10 15 48.3 -0.8**
RABL IAmb IAmb 10 15 51.8
comp=Z,771nm,0.7s
RABL IAMs_20 IAMs_20 10 25 03.3
comp=Z,91μm,21.0s
KRJI Kerinci 25.93 261 P **P** **10 15 53.3 +4.1**
comp=Z,86μmcomp=Z,89μmcomp=Z,3μm,1.6s
IPM Ipoh 26.05 276 P **P** **10 15 49.4 -0.9**
IPM IAmb IAmb 10 15 58.0
comp=Z,2μm,1.5s
IPM Ipoh 26.05 276 P **P** **10 15 50.0 -0.2**
BKNI Bangkinang 26.05 266 P **P** **10 15 51.9 +1.6**
comp=Z,80μmcomp=Z,23μmcomp=Z,1μm,1.4s
BKNI Bangkinang 26.05 266 P **P** **10 15 50.5 +0.2**
BKNI IAmb IAmb 10 15 58.7
comp=Z,1μm,1.0s
MTSU Mount Surprise 26.48 141 P **P** **10 15 53.5 -0.5**
baz=26,SNR=274
KULM Kulim 26.49 277 P **P** **10 15 52.9 -1.2**
KULM Kulim 26.49 277 P **P** **10 15 53.0 -1.2**
AS31 Alice Springs 26.63 166 P **P** **10 15 54.5 -0.9**
ASAR Alice Springs 26.64 166 P **P** **10 15 54.6 -0.8**
comp=Z,170nm,0.7s,baz=348,slow=7.3,SNR=556
ASAR PcP **PcP** **10 19 19.9 +1.2**
comp=Z,220nm,0.7s,baz=346,slow=2.2,SNR=17
ASAR S **S** **10 20 24.7 -2.8**
comp=Z,34nm,1.1s,baz=346,slow=15,SNR=2.6
ASAR ScP **ScP** **10 22 56.0 +0.7**
comp=Z,39nm,0.8s,baz=350,slow=3.2,SNR=6.2
ASAR ScS **ScS** **10 26 43.2 -2.8**
comp=Z,3.8nm,0.9s,baz=350,slow=5.0,SNR=2.8
ASAR LR LR 10 28 40.3
comp=Z,38μm,18.9s,baz=344,slow=41
ASAR P3KPbc 10 48 33.0
comp=Z,3.8nm,0.7s,baz=158,slow=4.4,SNR=24
ASAR Alice Springs 26.64 166 P **P** **10 15 54.2 -1.2**
WRKA Warakurna 27.17 177 P **P** **10 15 59.2 -1.0**
baz=27,SNR=581
SRAK Srakaew 27.31 297 P **P** **10 15 56.0 -5.5**
comp=Z,44μmcomp=Z,6μm,1.0s
MNSI Mandailing Nat 27.48 267 P **P** **10 16 02.9 -0.2**
comp=Z,55μmcomp=Z,14μmcomp=Z,740nm,1.8s
GIRL Giralia 27.73 206 P **P** **10 16 06.5 +1.3**
baz=28,SNR=35
GIRL Giralia 27.73 206 P **P** **10 16 05.5 +0.3**
TRTT Trang 27.78 282 P **P** **10 16 06.4 +0.6**
comp=Z,9μmcomp=Z,218nm,1.7s
PATY Pattaya 27.98 294 P **P** **10 16 11.2 +3.7**
comp=Z,178nm,1.0s
RPSI Rantau Prapat 28.08 271 P **P** **10 16 07.3 -1.2**
RPSI IAmb IAmb 10 16 30.0
comp=Z,1μm,1.4s
PSI Prapat 28.08 272 P **P** **10 16 08.3 -0.3**
comp=Z,168nm,0.8s,baz=182,slow=0.6,SNR=70
PSI PcP **PcP** **10 19 24.0 +1.5**
comp=Z,117nm,0.9s,baz=180,slow=4.0,SNR=4.9
PSI S **S** **10 20 48.3 -2.5**
comp=Z,13nm,0.9s,baz=360,slow=22,SNR=5.6
PSI LR LR 10 28 34.6
comp=Z,29μm,21.9s,baz=90,slow=39
PSI PKPPKP **P'P'df** **10 50 25.1 -4.7**
comp=Z,2.8nm,0.4s,baz=181,slow=4.7,SNR=6.4
CHAI Chaiyaphum 28.14 300 P **P** **10 16 07.9 -1.0**
comp=Z,7μmcomp=Z,853nm,0.9s
SISI Saibi 28.16 263 P **P** **10 16 11.6 +2.4**
NONG Nongkai 28.20 305 P **P** **10 16 08.9 -0.5**
comp=Z,11μmcomp=Z,704nm,1.0s
JCJ Chichijima 28.64 29 P **P** **10 16 12.6 -0.7**
JCJ IAmb IAmb 10 16 16.8
comp=Z,958nm,0.9s
SURT Suratani 28.86 284 P **P** **10 16 18.2 +2.9**
comp=Z,79nmcomp=Z,8.2nm,1.2s
PHET Kaeng Krachan 29.11 293 P **P** **10 16 18.2 +0.6**
comp=Z,3μmcomp=Z,271nm,1.0s
PKDT Phuket 29.11 282 P **P** **10 16 17.9 +0.2**
comp=Z,38μmcomp=Z,8μmcomp=Z,365nm,0.7s
CTA Charters Tower 29.15 141 P **P** **10 16 17.9 0.0**
comp=Z,234nm,1.1s,baz=323,slow=11,SNR=69
CTA PcP **PcP** **10 19 25.4 +0.6**
comp=Z,99nm,0.9s,baz=302,slow=1.8,SNR=4.0
CTA ScP **ScP** **10 23 05.7 +2.6**
comp=Z,38nm,0.9s,baz=35,slow=19,SNR=3.6
CTAO Charters Tower 29.15 141 P **P** **10 16 17.3 -0.6**
CTAO pmax pmax
comp=Z,447nm,1.3s
CTAO MLR MLR
comp=Z,73μm,18.0s
CTAO Charters Tower 29.15 141 P **P** **10 16 17.3 -0.6**
CTAO Charters Tower 29.15 141 IAMs_20 IAMs_20 10 30 07.2
comp=Z,73μm,18.0s
SSE Sheshan 29.20 350 P **P** **10 16 19.5 +1.4**
SSE S **S** **10 21 07.5 -0.1**
SSE pmax pmax
comp=Z,260nm,1.1s
SSE pmax pmax
comp=Z,5μm,3.9s
SSE LR LR
comp=Z,7μm,16.0s
SSE LR LR
comp=Z,10μm,14.9s
JSU Suzuyama 29.26 6 P **P** **10 16 18.2 -0.6**
SLVN Son La 29.43 312 P **P** **10 16 20.4 0.0**
SLVN IAmb IAmb 10 16 43.6
comp=Z,2μm,2.0s
GSI Gunungsitoli 29.46 269 P **P** **10 16 18.6 -2.1**
GSI IAMs_20 IAMs_20 10 23 27.0
comp=Z,58μm,19.0s
MEEK Meekatharra 29.87 195 P **P** **10 16 23.8 -0.4**
baz=30,SNR=453
PHIT Phitsanulok 30.06 301 P **P** **10 16 25.0 -1.0**
comp=Z,18μmcomp=Z,2μm,0.7s
LHMI Lhok Sumawe 30.16 276 P **P** **10 16 25.2 -1.7**
UTTA Uttaradit 30.20 302 P **P** **10 16 26.9 -0.2**
comp=Z,5μmcomp=Z,479nm,1.0s
UTHA Uthaitani 30.22 298 P **P** **10 16 26.9 -0.5**
comp=Z,4μmcomp=Z,520nm,0.9s
NANT Nan 30.57 304 P **P** **10 16 30.0 -0.5**
comp=Z,57μmcomp=Z,5μm,1.0s
WHN Wuhan 30.58 338⇑*i*P **P** **10 16 31.8 +1.4**
WHN S **S** **10 21 30.6 +1.3**
WHN pmax pmax
comp=Z,200nm,1.0s
WHN pmax pmax
comp=Z,6μm,4.4s
WHN LR LR
comp=Z,178μm,24.5s
WHN LR LR
comp=Z,94μm,20.1s
WHN LR LR
comp=Z,325μm,25.7s
NJ2 Nanjing 30.61 346⇑*i*P **P** **10 16 31.8 +1.2**
NJ2 pP **pP** **10 16 41.3 -0.6**
NJ2 sP **sP** **10 16 50.4 +3.4**
NJ2 S **S** **10 21 31.3 +1.6**
NJ2 pmax pmax
comp=Z,320nm,1.0s
NJ2 pmax pmax
comp=Z,4μm,3.8s
NJ2 LR LR
comp=Z,38μm,24.6s
NJ2 LR LR
comp=Z,17μm,17.1s
NJ2 LR LR
comp=Z,49μm,24.1s
SUKH Sukhothai 30.86 301 P **P** **10 16 32.9 -0.2**
comp=Z,6μmcomp=Z,739nm,0.7s
JNU Nakatsue 30.90 6 P **P** **10 16 33.0 -0.3**
comp=Z,570nm,0.8s,baz=200,slow=2.5,SNR=114
JNU Nakatsue 30.90 6 P **P** **10 16 33.1 -0.1**
JNU IAmb IAmb 10 16 38.0
comp=Z,580nm,0.8s
GYA Guiyang 31.00 323⇓P **P** **10 16 34.5 +0.2**
GYA PcP **PcP** **10 19 31.8 +2.1**
GYA S **S** **10 21 37.9 +1.7**
GYA ScP **ScP** **10 23 11.8 +2.7**
GYA ScS **ScS** **10 27 07.9 +1.6**
GYA pmax pmax
comp=Z,180nm,1.2s
GYA pmax pmax
comp=Z,3μm,5.1s
GYA LR LR
comp=Z,24μm,21.3s
GYA LR LR
comp=Z,28μm,27.6s
GYA LR LR
comp=Z,51μm,34.8s
LAMP Lampang 31.33 303 P **P** **10 16 37.7 +0.5**
comp=Z,4μmcomp=Z,519nm,0.9s
PATS Pohnpei 31.50 81 P **P** **10 16 38.5 -0.2**
baz=32,SNR=5.9
PATS Pohnpei 31.50 81 P **P** **10 16 37.3 -1.5**
PATS IAmb IAmb 10 17 08.8
comp=Z,1μm,1.9s
PAYA Payao 31.53 304 P **P** **10 16 39.2 +0.2**
comp=Z,38μmcomp=Z,3μm,1.2s
CM36 Chiang Mai Arr 31.78 302 P **P** **10 16 40.0 -1.2**
CM35 Chiang Mai Arr 31.80 303 P **P** **10 16 40.0 -1.4**
CM04 Chiang Mai Arr 31.82 302 P **P** **10 16 42.0 +0.5**
comp=Z,2μmcomp=Z,255nm,1.0s
CM09 Chiang Mai Arr 31.84 302 P **P** **10 16 42.3 +0.6**
comp=Z,2μmcomp=Z,278nm,1.0s
CM01 Chiang Mai Arr 31.85 302 P **P** **10 16 42.2 +0.5**
comp=Z,2μmcomp=Z,312nm,1.1s
CM05 Chiang Mai Arr 31.86 302 P **P** **10 16 42.0 +0.2**
comp=Z,216nmcomp=Z,2μmcomp=Z,234nm,1.0s
CM02 Chiang Mai Arr 31.87 302 P **P** **10 16 42.0 +0.1**
comp=Z,238nmcomp=Z,2μmcomp=Z,298nm,0.9s
CM31 Chiang Mai Arr 31.88 302 P **P** **10 16 43.0 +0.9**
comp=Z,56μmcomp=Z,6μm,0.9s
CM31 Chiang Mai Arr 31.88 302 P **P** **10 16 41.3 -0.7**
CMAR Chiang Mai Arr 31.88 302 P **P** **10 16 43.3 +1.2**
comp=Z,102nm,0.8s,baz=123,slow=7.4,SNR=316
CMAR PcP **PcP** **10 19 34.8 +2.7**
comp=Z,50nm,0.9s,baz=177,slow=1.1,SNR=8.1
CMAR ScP **ScP** **10 23 14.1 +2.0**
comp=Z,14nm,1.0s,baz=149,slow=1.8,SNR=5.4
CMAR PKiKP **PKiKP** **10 27 01.5 +0.6**
comp=Z,3.6nm,0.8s,baz=248,slow=1.5,SNR=4.4
CMAR LR LR 10 31 50.5
comp=Z,29μm,18.2s,baz=158,slow=40
CMAR P3KPbc 10 48 18.0
comp=Z,2.1nm,0.9s,baz=292,slow=6.0,SNR=13
CMAR P3KP 10 49 42.2
comp=Z,4.3nm,1.1s,baz=235,slow=4.1,SNR=4.1
CMAR Chiang Mai Arr 31.88 302 P **P** **10 16 41.5 -0.6**
CM34 Chiang Mai Arr 31.89 303 P **P** **10 16 41.0 -1.1**
CM15 Chiang Mai Arr 31.89 302 P **P** **10 16 43.0 +0.8**
comp=Z,219nmcomp=Z,2μmcomp=Z,275nm,0.8s
CM13 Chiang Mai Arr 31.90 302 P **P** **10 16 42.6 +0.4**
comp=Z,2μmcomp=Z,248nm,0.9s
JMN Monobe 31.94 11 P **P** **10 16 43.2 +0.7**
JMN IAmb IAmb 10 16 48.4
comp=Z,582nm,0.9s
CMMT Chiang Mai 32.04 303 P **P** **10 16 43.0 -0.5**
comp=Z,5μmcomp=Z,256nm,0.9s
CM33 Chiang Mai Arr 32.04 303 P **P** **10 16 42.0 -1.5**
CHTO Chiang Mai 32.04 303 P **P** **10 16 44.4 +0.9**
CHTO P **P** **10 16 44.4 +0.9**
CHTO Chiang Mai 32.04 303 P **P** **10 16 42.9 -0.6**
CHTO pmax pmax
comp=Z,1μm,1.6s
CHTO MLR MLR
comp=Z,27μm,19.0s
CHTO Chiang Mai 32.04 303 P **P** **10 16 42.9 -0.6**
CHTO Chiang Mai 32.04 303 IAmb IAmb 10 16 48.5
comp=Z,1μm,1.6s
CM32 Chiang Mai Arr 32.05 302 P **P** **10 16 43.0 -0.5**
JTU Tsushima 32.16 4 P **P** **10 16 43.8 -0.5**
ENH Enshi 32.44 331 P **P** **10 16 46.1 -0.7**
ENH IAmb IAmb 10 16 52.9
comp=Z,644nm,1.0s
ENH IAMs_20 IAMs_20 10 30 51.8
comp=Z,46μm,21.0s
KMI Kunming 32.63 316⇑*i*P **P** **10 16 49.3 +0.5**
KMI pP pP 10 16 57.5 -2.6
KMI sP sP 10 17 07.8 +2.6
KMI PP **PP** **10 18 03.3 +0.2**
KMI S **S** **10 22 02.1 +0.2**
KMI sS sS 10 22 22.4 +1.4
KMI pmax pmax
comp=Z,4μm,3.8s
KMI LR LR
comp=Z,30μm,21.0s
KMI LR LR
comp=Z,36μm,21.9s
KMI LR LR
comp=Z,80μm,24.6s
KMI Kunming 32.63 316 P **P** **10 16 48.7 0.0**
KMI pmax pmax
comp=Z,1μm,1.4s
KMI MLR MLR
comp=Z,37μm,21.0s
KMI Kunming 32.63 316 P **P** **10 16 48.7 0.0**
KMI IAmb IAmb 10 16 55.2
comp=Z,1μm,1.4s
FORT Forrest 32.88 178 P **P** **10 16 49.7 -0.9**
baz=33,SNR=92
FORT Forrest 32.88 178 P **P** **10 16 49.4 -1.2**
MORW Morawa 32.89 198 P **P** **10 16 50.5 -0.2**
baz=33,SNR=192
MORW Morawa 32.89 198 P **P** **10 16 50.4 -0.3**
MORW IAmb IAmb 10 16 53.3
comp=Z,868nm,0.9s
JHJ Hachijo jima 2 32.94 20 P **P** **10 16 50.7 -0.4**
comp=Z,219nm,0.5s,baz=89,slow=20,SNR=5.7
JHJ PcP **PcP** **10 19 36.8 +2.2**
comp=Z,120nm,0.6s,baz=81,slow=19,SNR=2.4
JHJ2 Mitsune 32.94 20 P **P** **10 16 50.2 -0.9**
JHJ2 IAmb IAmb 10 17 13.7
comp=Z,662nm,1.1s
JHS Saijyo 33.05 9 P **P** **10 16 53.0 +0.9**
JHS IAmb IAmb 10 17 00.2
comp=Z,543nm,1.0s
QLP Quilpie 33.15 151 P **P** **10 16 52.5 -0.6**
baz=33,SNR=60
COCO West Island 33.26 244 P **P** **10 16 53.7 -0.4**
COCO pmax pmax
comp=Z,457nm,0.8s
COCO MLR MLR
comp=Z,29μm,22.0s
COCO West Island 33.26 244 P **P** **10 16 53.7 -0.4**
COCO IAmb IAmb 10 17 01.5
comp=Z,457nm,0.8s
JWT Wachi 33.76 12 P **P** **10 16 58.7 +0.5**
JWT IAmb IAmb 10 17 01.8
comp=Z,762nm,0.9s
KMBL Kambalda 33.81 188 P **P** **10 16 58.2 -0.5**
baz=34,SNR=124
JSG Sagara 33.87 17 P **P** **10 16 58.6 -0.6**
JSG IAMs_20 IAMs_20 10 31 54.2
comp=Z,45μm,20.0s
TJN Taejon 33.94 0*ce*P **P** **10 17 00.4 +0.7**
BLDU Ballidu 34.15 196 P **P** **10 17 01.2 -0.4**
baz=34,SNR=134
INU Inuyama 34.20 15 P **P** **10 17 01.1 -0.9**
INU IAmb IAmb 10 17 05.2
comp=Z,800nm,0.9s
JGF Kuroka 34.52 15 P **P** **10 17 03.2 -1.6**
HNR Honiara 34.79 110 LR LR 10 30 20.0
comp=Z,12μm,21.6s,baz=286,slow=34
HNR Honiara 34.79 110 P **P** **10 17 05.7 -1.8**
HNR pmax pmax
comp=Z,311nm,0.7s
HNR MLR MLR
comp=Z,28μm,22.0s
HNR Honiara 34.79 110 P **P** **10 17 05.7 -1.8**
HNR IAmb IAmb 10 17 06.9
comp=Z,311nm,0.7s
KLBR Kellerberrin 34.81 194 P **P** **10 17 07.1 -0.3**
baz=35,SNR=257
TIA Tai'an 34.99 346 P **P** **10 17 09.3 +0.4**
TIA S S 10 22 28.8 -9.1
TIA pmax pmax
comp=Z,380nm,1.1s
TIA pmax pmax
comp=Z,8μm,8.4s
TIA LR LR
comp=Z,18μm,17.8s
TIA LR LR
comp=Z,16μm,21.0s
TIA LR LR
comp=Z,39μm,23.0s
KSAR Wonju Array Be 35.01 1 P **P** **10 17 10.2 +1.2**
KSAR Wonju Array Be 35.01 1 P **P** **10 17 10.2 +1.2**
KSRS Korea Array 35.02 1 P **P** **10 17 09.9 +0.8**
comp=Z,418nm,0.9s,baz=178,slow=9.9,SNR=264
KSRS PcP **PcP** **10 19 41.9 +1.4**
comp=Z,26nm,0.7s,baz=194,slow=2.5,SNR=6.0
KSRS S **S** **10 22 40.8 +2.6**
comp=Z,2.0nm,0.9s,baz=200,slow=21,SNR=1.1
KSRS ScP **ScP** **10 23 23.9 +1.3**
comp=Z,19nm,1.1s,baz=182,slow=3.4,SNR=7.2
KSRS LR LR 10 38 12.8
comp=Z,3μm,18.1s,baz=190,slow=48
KSRS P3KPbc 10 48 01.6
comp=Z,4.0nm,0.9s,baz=354,slow=5.0,SNR=12
INCN Inchon 35.04 359 P **P** **10 17 10.7 +1.3**
INCN P **P** **10 17 10.7 +1.3**
INCN P **P** **10 17 10.7 +1.3**
INCN Inchon 35.04 359 P **P** **10 17 09.1 -0.3**
INCN pmax pmax
comp=Z,222nm,0.7s
INCN MLR MLR
comp=Z,26μm,21.0s
INCN Inchon 35.04 359 P **P** **10 17 09.1 -0.3**
KS19 Wonju Array Si 35.07 1 P **P** **10 17 10.0 +0.5**
KS19 IAmb IAmb 10 17 13.2
comp=Z,484nm,0.9s
PBA Port Blair 35.25 287 P P 10 17 10.9 -0.5
DGPR DIGLIPUR 35.43 290⇑*e*P **P** **10 17 11.7 -1.2**
RMQ Roma 35.47 145 P **P** **10 17 12.6 -0.5**
baz=36,SNR=38
MUN Mundaring 35.58 196 P **P** **10 17 13.8 -0.2**
baz=36,SNR=86
MJAR Matsushiro Arr 35.63 16 P **P** **10 17 13.7 -0.7**
comp=Z,218nm,0.9s,baz=178,slow=8.8,SNR=214
MJAR PcP **PcP** **10 19 43.7 +1.3**
comp=Z,39nm,0.9s,baz=163,slow=2.8,SNR=3.5
MJAR S **S** **10 22 46.0 -1.7**
comp=Z,13nm,1.2s,baz=197,slow=11,SNR=2.7
MJAR ScP **ScP** **10 23 26.6 +1.7**
comp=Z,58nm,1.1s,baz=208,slow=3.8,SNR=12
MJAR LR LR 10 33 12.3
comp=Z,20μm,18.6s,baz=200,slow=38
MJAR P3KPbc 10 47 59.7
comp=Z,9.0nm,1.0s,baz=356,slow=4.9,SNR=16
MJAR PKP2ab 10 51 57.2
comp=Z,3.6nm,1.1s,baz=2.3,slow=6.3,SNR=4.6
MJAR Matsushiro Arr 35.63 16 P **P** **10 17 12.7 -1.8**
MAJO Matsushiro 35.63 16*c i*P **P** **10 17 13.0 -1.4**
MAJO pmax pmax
comp=Z,107nm,0.6s
MAJO Matsushiro 35.63 16 P **P** **10 17 13.4 -1.0**
MAJO IAmb IAmb 10 17 18.1
comp=Z,645nm,1.0s
MAJO Matsushiro 35.63 16 IAMs_20 IAMs_20 10 33 02.8
comp=Z,39μm,20.0s
MAT Matsushiro 35.63 16 P **P** **10 17 13.1 -1.3**
MAT S **S** **10 22 44.4 -3.3**
MJB9 Matsu-Tunnel 35.63 16 P **P** **10 17 13.3 -1.2**
MJB9 IAmb IAmb 10 17 18.1
comp=Z,699nm,0.9s
MJB9 IAMs_20 IAMs_20 10 33 03.8
comp=Z,41μm,20.0s
XAN Xi'an 35.85 334 P **P** **10 17 15.3 -1.0**
XAN pP pP 10 17 26.9 -0.8
XAN S S 10 22 41.6 -10
XAN pmax pmax
comp=Z,720nm,1.1s
XAN pmax pmax
comp=Z,5μm,8.8s
XAN LR LR
comp=Z,29μm,28.2s
XAN LR LR
comp=Z,23μm,29.3s
XAN LR LR
comp=Z,61μm,32.5s
XAN Xi'an 35.85 334 P **P** **10 17 15.0 -1.3**
XAN pmax pmax
comp=Z,942nm,1.2s
XAN MLR MLR
comp=Z,32μm,21.0s
XAN Xi'an 35.85 334 P **P** **10 17 15.0 -1.3**
XAN IAmb IAmb 10 17 22.2
comp=Z,942nm,1.2s
JYT Yasato 35.92 18 P **P** **10 17 13.9 -2.9**
BBOO Buckleboo 35.92 167 P **P** **10 17 15.7 -1.2**
baz=36,SNR=396
BBOO Buckleboo 35.92 167 P **P** **10 17 15.6 -1.4**
BBOO IAmb IAmb 10 17 18.4
comp=Z,801nm,1.0s
CD2 Chengdu 36.00 325⇑*i*P **P** **10 17 16.8 -0.9**
CD2 pP pwP 10 17 30.9 -1.3
CD2 sP sP 10 17 33.8 -0.4
CD2 PcP **PcP** **10 19 45.4 +1.8**
CD2 S **S** **10 22 56.0 +2.5**
CD2 SS **SnSn** **10 25 23.4 +2.4**
CD2 pmax pmax
comp=Z,710nm,1.0s
CD2 pmax pmax
comp=Z,5μm,7.7s
CD2 LR LR
comp=Z,66μm,28.2s
CD2 LR LR
comp=Z,77μm,34.5s
CD2 LR LR
comp=Z,71μm,36.3s
EIDS Eidsvold 36.03 141 P **P** **10 17 16.8 -1.2**
baz=36,SNR=138
EIDS Eidsvold 36.03 141 P **P** **10 17 17.0 -1.0**
EIDS IAmb IAmb 10 17 20.4
comp=Z,376nm,0.8s
EIDS IAMs_20 IAMs_20 10 34 44.5
comp=Z,52μm,19.0s
NWAO Narrogin (SRO) 36.21 194 P **P** **10 17 19.3 -0.1**
comp=Z,408nm,0.7s,baz=18,slow=9.1,SNR=4.0
NWAO PcP **PcP** **10 19 45.8 +1.7**
comp=Z,212nm,0.8s,baz=2.4,slow=4.5,SNR=3.6
NWAO S **S** **10 22 55.5 -1.1**
comp=Z,67nm,1.0s,baz=234,slow=17,SNR=2.0
NWAO Narrogin (SRO) 36.21 194 P **P** **10 17 19.4 0.0**
baz=36,SNR=220
NWAO Narrogin (SRO) 36.21 194 P **P** **10 17 19.0 -0.4**
NWAO **PcP** **10 19 45.5 +1.3**
PYAG Pyongyang 36.63 358 P **P** **10 17 24.7 +1.9**
PYAG S **S** **10 23 08.2 +5.5**
STKA Stephens Creek 36.67 159 P **P** **10 17 23.1 -0.2**
comp=Z,2μm,0.8s,baz=332,slow=8.8,SNR=475
STKA PcP **PcP** **10 19 46.1 +0.6**
comp=Z,253nm,1.0s,baz=13,slow=4.2,SNR=3.9
STKA S **S** **10 23 00.3 -3.3**
comp=Z,39nm,1.1s,baz=130,slow=18,SNR=2.2
STKA P3KPbc 10 47 54.1
comp=Z,1.9nm,0.9s,baz=190,slow=9.5,SNR=3.1
STKA Stephens Creek 36.67 159 P **P** **10 17 22.8 -0.5**
baz=37,SNR=1000
STKA Stephens Creek 36.67 159 P **P** **10 17 22.8 -0.5**
STKA IAmb IAmb 10 17 25.5
comp=Z,415nm,0.8s
STKA **PcP** **10 19 45.7 +0.2**
DL2 Dalian 36.80 353 P **P** **10 17 24.9 +0.6**
DL2 PcP **PcP** **10 19 48.3 +2.6**
DL2 S **S** **10 23 07.3 +2.0**

DL2 pmax pmax
comp=Z,1μm,1.0s
DL2 pmax pmax
comp=Z,9μm,8.4s
DL2 LR LR
comp=Z,13μm,18.6s
DL2 LR LR
comp=Z,34μm,16.2s
DL2 LR LR
comp=Z,38μm,20.9s
PYS Pyongsong 36.82 358 P P 10 17 26.5 +2.0
JSD Sado 37.06 15 P P 10 17 25.2 -1.3
JSD IAmb IAmb 10 17 28.7
comp=Z,854nm,1.0s
HTT Hallett 37.24 163 P P 10 17 27.5 -0.7
baz=37,SNR=140
HHU Hamhung 37.48 1 P P 10 17 32.0 +1.9
HHU S S 10 23 19.6 +3.9
JMM Marumori 37.61 18 P P 10 17 30.8 -0.4
SUJ Sinuiju 37.73 357 P P 10 17 33.6 +1.5
SUJ S S 10 23 21.9 +2.5
TIY Taiyuan 37.73 341 *e*P P 10 17 33.5 +1.1
TIY pP **pP 10 17 44.4 +0.6**
TIY S S 10 23 21.6 +1.8
TIY sS **sS 10 23 39.6 +0.5**
TIY pmax pmax
comp=Z,230nm,1.0s
TIY pmax pmax
comp=Z,5μm,4.9s
TIY LR LR
comp=Z,38μm,24.6s
TIY LR LR
comp=Z,8μm,12.8s
TIY LR LR
comp=Z,90μm,30.6s
CMSA Cobar Meteorol 38.01 154 P P 10 17 34.1 -0.6
baz=38,SNR=527
SAIH SAIHA 38.67 304 *e*P P 10 17 39.8 -0.8
SAIH IAmb IAmb 10 17 48.1
comp=Z,737nm,0.7s
BJT Baijiatuau 38.85 347 P P 10 17 42.2 +0.6
BJT pmax pmax
comp=Z,3μm,1.4s
BJT Baijiatuau 38.85 347 P P 10 17 42.2 +0.6
BJI Beijing 38.87 347 P P 10 17 42.5 +0.8
BJI PP **PP 10 19 10.3 -1.2**
BJI S S 10 23 35.9 -0.7
BJI pmax pmax
comp=Z,10μm,4.0s
BJI LR LR
comp=Z,14μm,10.3s
BJI LR LR
comp=Z,8μm,16.5s
BJI LR LR
comp=Z,28μm,27.5s
LKP Lekhapani 38.88 313 *e*P P 10 17 41.8 -0.3
LKP IAmb IAmb 10 17 48.9
comp=Z,594nm,0.9s
H01W3 Cape Leeuwin H 38.89 197 P P 10 17 43.5 +1.8
baz=31,slow=5.8,SNR=22
H01W1 Cape Leeuwin H 38.89 197 P P 10 17 43.8 +2.1
baz=31,slow=5.8,SNR=24
H01W2 Cape Leeuwin H 38.91 197 P P 10 17 43.9 +2.1
baz=31,slow=5.8,SNR=20
IMP Imphal 39.00 308⇑ *e*P P 10 17 42.4 -0.8
IMP IAmb IAmb 10 17 47.6
comp=Z,212nm,0.9s
KOHI KOHIMA 39.32 309 *e*P P 10 17 44.4 -1.6
KOHI IAmb IAmb 10 17 50.6
comp=Z,955nm,1.2s
MOKO MOKOCHONG 39.32 310⇑ *e*P P 10 17 45.2 -0.8
MOKO IAmb IAmb 10 17 49.7
comp=Z,323nm,0.6s
SNY Shenyang 39.50 356 ⇑P P 10 17 47.8 +0.8
SNY pmax pmax
comp=Z,420nm,1.8s
SNY pmax pmax
comp=Z,7μm,8.5s
SNY LR LR
comp=Z,20μm,19.8s
SNY LR LR
comp=Z,18μm,21.6s
SNY LR LR
comp=Z,28μm,21.9s
DIBR DIBRUGARH 39.65 312 *e*P P 10 17 47.3 -1.2
JORH JORHAT 39.75 311⇑ *e*P P 10 17 48.7 -0.6
JORH IAmb IAmb 10 17 54.7
comp=Z,907nm,0.9s
SILR SILCHAR 39.88 307 *e*P P 10 17 51.0 +0.5
SILR IAmb IAmb 10 17 57.2
comp=Z,3μm,1.5s
LZH Lanzhou 39.91 330 ⇑P P 10 17 50.9 +0.2
LZH pP pP 10 18 01.5 -0.8
LZH sP sP 10 18 06.8 -0.6
LZH PP **PnPn 10 19 30.1 +3.4**
LZH PcP **PcP 10 19 57.3 +1.5**
LZH ScP **ScP 10 23 43.1 +1.8**
LZH PcS **PcS 10 23 47.8 +1.7**
LZH S S 10 23 53.5 +0.7
LZH sS sS 10 24 17.4 +5.2
LZH SS **SS 10 26 46.4 -4.4**
LZH pmax pmax
comp=Z,650nm,1.1s
LZH pmax pmax
comp=Z,6μm,5.6s
LZH LR LR
comp=Z,46μm,16.3s
LZH LR LR
comp=Z,78μm,15.3s
LZH LR LR
comp=Z,118μm,17.5s
ARMA Armidale 40.09 146 P P 10 17 51.8 -0.4
baz=40,SNR=268
ARMA Armidale 40.09 146 P P 10 17 52.0 -0.2
ARMA IAmb IAmb 10 17 55.5
comp=Z,750nm,0.9s
BELO BELONIA 40.28 304 *e*P P 10 17 54.1 +0.3
JTM Tenmabayashi 40.39 17 P P 10 17 54.8 +0.4
ZIRO ZIRO 40.47 312 *e*P P 10 17 55.2 -0.3
ZIRO IAmb IAmb 10 17 59.7
comp=Z,584nm,1.0s
AGT Agartala 40.72 305 *e*P P 10 17 58.1 +0.7
TEZP TEZPUR 40.79 310 *e*P P 10 17 57.0 -0.9
TEZP IAmb IAmb 10 18 05.3
comp=Z,548nm,1.5s
HHC Hu-ho-hao-te 40.87 342 *e*P P 10 17 59.6 +1.1
HHC pP pP 10 18 09.4 -0.7
HHC sP pwP 10 18 13.4 +0.1
HHC S S 10 24 05.9 -1.0
HHC sS sS 10 24 24.3 -2.0
HHC pmax pmax
comp=Z,300nm,1.5s
HHC pmax pmax
comp=Z,10μm,6.7s
HHC LR LR
comp=Z,39μm,27.3s
HHC LR LR
comp=Z,21μm,25.7s
HHC LR LR
comp=Z,75μm,26.3s
KWAJ Kwajalein Atol 40.88 79 IAMs_20 IAMs_20 10 32 42.4
comp=Z,39μm,21.0s
VLA Vladivostok 40.90 5 *i*P P 10 17 59.7 +1.1
VLA pmax pmax
comp=Z,281nm,0.9s
VLA MLR MLR
comp=Z,14μm,23.0s
SHL Shillong 40.99 308 *e*P P 10 17 59.5 -0.4
SHL IAmb IAmb 10 18 03.7
comp=Z,441nm,0.7s
SHL Shillong 40.99 308 P P 10 17 58.9 -0.9
SHL pmax pmax
comp=Z,1μm,1.2s
SHL MLR MLR
comp=Z,14μm,22.0s
SHL Shillong 40.99 308 P P 10 17 58.9 -0.9
SHL IAmb IAmb 10 18 07.5
comp=Z,1μm,1.2s
BTO Baotou 41.15 340 *e*P P 10 18 01.3 +0.5
BTO S S 10 24 05.4 -5.6
ARPS Mount Arapiles 41.22 162 P P 10 18 01.1 -0.2
baz=41,SNR=332
CN2 Changchun 41.38 358 *e*P P 10 18 02.3 -0.2
CN2 *e*PP **PnPn 10 19 41.8 -1.9**
CN2 *e*S S 10 24 13.8 -0.3
CN2 *e*SS **SS 10 27 14.3 -5.2**
CN2 pmax pmax
comp=Z,170nm,1.8s
CN2 pmax pmax
comp=Z,6μm,8.0s
CN2 LR LR
comp=Z,9μm,18.0s
CN2 LR LR
comp=Z,18μm,18.0s
CN2 LR LR
comp=Z,19μm,19.0s
GUWA GUWAHATI 41.44 308⇑ *e*P P 10 18 02.7 -0.6
GUWA IAmb IAmb 10 18 05.7
comp=Z,234nm,0.8s
YNG Young 41.56 153 P P 10 18 04.4 +0.3
baz=42,SNR=168
MGCD Mangrove Creek 41.98 149 P P 10 18 08.9 +1.3
baz=42,SNR=27
USA0B Ussuriysk Arra 41.98 5*c i*P P 10 18 08.1 +0.7
USA0B Ussuriysk Arra 41.98 5 P P 10 18 07.6 +0.2
USA0B IAmb IAmb 10 18 12.1
comp=Z,549nm,0.9s
USRK Ussuriysk Ar. 41.98 5 P P 10 18 08.2 +0.8
comp=Z,554nm,0.9s,baz=186,slow=6.2,SNR=277
USRK PcP **PcP 10 20 03.7 +1.6**
comp=Z,35nm,0.8s,baz=200,slow=4.0,SNR=1.8
USRK S S 10 24 27.0 +4.0
comp=Z,4.0nm,0.9s,baz=203,slow=14,SNR=5.3
USRK LR LR 10 35 10.5
comp=Z,6μm,21.1s,baz=163,slow=36
USRK PKPPKP **P'P'df 10 50 04.9 -7.6**
comp=Z,1.8nm,0.9s,baz=225,slow=2.2,SNR=4.2
USRK PKP2ab 10 51 28.4
comp=Z,3.7nm,0.9s,baz=29,slow=4.4,SNR=5.9
USRK Ussuriysk Ar. 41.98 5 P P 10 18 08.0 +0.6
H11S3 WAKE ISLAND Hy 42.06 65 P P 10 18 09.3 +1.0
H11S3 T T 11 03 08.2
baz=252,slow=75,SNR=144
H11S2 WAKE ISLAND Hy 42.07 65 P P 10 18 09.4 +1.0
H11S2 T T 11 03 09.3
baz=252,slow=75,SNR=134
H11S1 WAKE ISLAND Hy 42.08 65 P P 10 18 09.4 +1.0
H11S1 T T 11 03 08.3
baz=252,slow=75,SNR=135
ERM Erimo 42.13 18*ce*P P 10 18 09.2 +0.5
ERM pmax pmax
comp=Z,317nm,1.0s
ERM Erimo 42.13 18 P P 10 18 09.2 +0.5
MDJ Mudanjiang 42.23 3 P P 10 18 10.4 +0.9
MDJ pP pP 10 18 18.8 -2.3
MDJ sP pwP 10 18 23.8 -0.5
MDJ S S **10 24 30.5 +3.8**
MDJ sS sS 10 24 47.8 +1.7
MDJ pmax pmax
comp=Z,7μm,6.8s
MDJ LR LR
comp=Z,16μm,24.2s
MDJ LR LR
comp=Z,19μm,27.1s
MDJ LR LR
comp=Z,41μm,24.2s
MDJ Mudanjiang 42.23 3 P P 10 18 10.2 +0.8
MDJ IAmb IAmb 10 18 16.2
comp=Z,811nm,1.0s
WAKE Wake Island 42.27 64 P P 10 18 11.2 +1.0
JEW Eniwo 42.40 16 P P 10 18 09.7 -1.2
JEW IAMs_20 IAMs_20 10 37 50.9
comp=Z,41μm,21.0s
RIV Riverview 42.50 150 P P 10 18 13.0 +1.2
baz=42,SNR=20
H11N1 WAKE ISLAND Hy 42.62 63 P P 10 18 14.0 +1.2
H11N1 T T 11 03 38.8
baz=250,slow=75,SNR=180
H11N2 WAKE ISLAND Hy 42.63 63 P P 10 18 14.1 +1.2
H11N2 T T 11 03 41.4
baz=250,slow=75,SNR=104
H11N3 WAKE ISLAND Hy 42.64 63 P P 10 18 14.2 +1.2
H11N3 T T 11 03 52.1
baz=250,slow=75,SNR=165
CNB Canberra Magne 42.84 153 P P 10 18 15.0 +0.3
baz=43,SNR=114
TOO Toolangi 43.18 158 P P 10 18 17.9 +0.6
baz=43,SNR=209
TOO Toolangi 43.18 158 P P 10 18 17.7 +0.4
TOO pmax pmax
comp=Z,2μm,1.7s
TOO MLR MLR
comp=Z,34μm,18.0s
TOO Toolangi 43.18 158 P P 10 18 17.7 +0.4
TOO IAmb IAmb 10 18 20.5
comp=Z,2μm,1.7s
TOO IAMs_20 IAMs_20 10 38 30.1
comp=Z,34μm,18.0s
TEY Ternei 43.42 10⇑ *i*P P 10 18 19.8 +0.8
TEY *i*S S 10 24 43.9 -0.2
TEY pmax pmax
comp=N,70nm,1.2s
TEY pmax pmax
comp=E,10.0nm,0.7s
TEY pmax pmax
comp=Z,130nm,1.2s
TEY pmax pmax
comp=N,3μm,4.9s
TEY pmax pmax
comp=E,800nm,5.2s
TEY pmax pmax
comp=Z,5μm,4.5s
TEY smax smax
comp=N,17μm,13.0s
TEY smax smax
comp=E,10μm,9.8s
TEY MLR MLR
comp=E,3μm,13.0s
TEY MLR MLR
comp=N,15μm,19.0s
TEY MLR MLR
comp=Z,18μm,21.0s
SANVU Saraoutou 43.46 115 P P 10 18 18.3 -1.6
LSA Lhasa 43.63 312 P P 10 18 21.9 +0.2
LSA S S 10 24 50.0 +1.3
LSA pmax pmax
comp=Z,730nm,0.9s
LSA LR LR
comp=Z,57μm,35.6s
LSA LR LR
comp=Z,52μm,24.2s
LSA LR LR
comp=Z,200μm,39.9s
LSA Lhasa 43.63 312 P P 10 18 21.8 +0.2
LSA Lhasa 43.63 312 P P 10 18 21.9 +0.2
LSA pmax pmax
comp=Z,295nm,0.7s
LSA Lhasa 43.63 312 P P 10 18 21.9 +0.2
ASAJ Asahikawa 43.90 16 P P 10 18 24.1 +1.2
comp=Z,240nm,0.8s,baz=237,slow=13,SNR=69
ASAJ ScP **ScP 10 23 59.5 +2.8**
comp=Z,34nm,1.1s,baz=243,slow=4.5,SNR=4.5
ASAJ S S 10 24 55.4 +4.2
comp=Z,33nm,1.2s,baz=162,slow=20,SNR=2.7
JKA Kamikawa-asahi 43.90 16 P P 10 18 23.4 +0.5
JKA IAMs_20 IAMs_20 10 38 51.5
comp=Z,34μm,20.0s
GTK Tadong 44.41 308⇑ *e*P P 10 18 27.6 +0.1
GTK IAmb IAmb 10 18 35.6
comp=Z,672nm,1.2s
GTA Gaotai 44.50 330 ⇑P P 10 18 27.9 -0.1
GTA pP pP 10 18 37.4 -2.3
GTA sP pwP 10 18 41.8 -1.2
GTA PcP **PP 10 20 11.8 -0.7**
GTA ScP **ScP 10 24 01.0 +1.5**
GTA PcS **PcS 10 24 03.8 -0.5**
GTA S S **10 24 59.4 -0.9**
GTA sS sS 10 25 17.3 -2.6
GTA SS SS 10 28 09.4 -12
GTA ScS **ScS 10 28 22.9 +0.4**
GTA pmax pmax
comp=Z,4μm,7.6s
GTA LR LR
comp=Z,46μm,24.7s
GTA LR LR
comp=Z,43μm,24.4s
GTA LR LR
comp=Z,94μm,24.4s
YUK Yuzh-Kuril'sk 44.82 19*c i*P P 10 18 31.3 +1.0
YUK *e* 10 20 22.9
YUK PPP PPP 10 21 00.9
YUK *i*S **S 10 25 04.1 -0.4**
YUK pmax pmax
comp=N,1μm,1.1s
YUK pmax pmax
comp=Z,1μm,1.1s
YUK pmax pmax
comp=E,579nm,0.8s
YUK pmax pmax
comp=Z,1μm,3.3s
CHLP Challavanipeta 45.08 294 *e*P P 10 18 32.5 -0.3
CHLP IVmB_BB 10 18 39.2
comp=Z,3μm,2.8s
CHLP IVMs_BB IVMs_BB 10 37 16.9
comp=Z,7μm,24.2s
TAPN Taplejung 45.13 307 *e*P P 10 18 33.7 +0.3
ODAN Odare 45.16 307 *e*P P 10 18 33.8 +0.1
BOK Bokaro 45.17 302 *e*P P 10 18 33.8 +0.4
BOK IAmb IAmb 10 18 38.3
comp=Z,1μm,2.0s
LHI Lord Howe Isla 45.34 140 IAMs_20 IAMs_20 10 40 16.0
comp=Z,30μm,18.0s
DZM Mont Dzumac 45.46 124 *e*P P 10 18 36.3 +0.4
comp=Z,612nm,1.1s
DZM *e*S S 10 25 10.9 -3.8
comp=Z,41μm,28.4s
DZM *e*LR LR 10 31 06.5
comp=Z,80μm,25.9s
DZM Mont Dzumac 45.46 124 P P 10 18 36.0 +0.1
comp=Z,282nm,1.1s,baz=286,slow=7.4
DZM LR LR 10 38 08.7
comp=Z,13μm,21.5s,baz=298,slow=37
DZM Mont Dzumac 45.46 124 P P 10 18 35.6 -0.3
RAMN Ramite 45.84 306 *e*P P 10 18 39.0 0.0
comp=Z,910nm,1.0s
TARA Tarawa 45.88 90 IAMs_20 IAMs_20 10 36 11.9
comp=Z,24μm,19.0s
PALK Pallekele 46.41 278 P P 10 18 43.0 -0.5
PALK pmax pmax
comp=Z,696nm,1.8s
PALK MLR MLR
comp=Z,15μm,21.0s
PALK Pallekele 46.41 278 P P 10 18 43.0 -0.5
PALK IAmb IAmb 10 19 05.0
comp=Z,696nm,1.8s
KUR Kuril'sk 46.55 20*c i*P P 10 18 45.1 +1.2
KUR PPP PPP 10 21 19.6
KUR *i*S S 10 25 29.2 -0.2
KUR SS SS 10 28 51.3 -4.7
KUR pmax pmax
comp=Z,1μm,1.4s
KUR pmax pmax
comp=N,578nm,1.5s
KUR pmax pmax
comp=E,177nm,1.5s
KUR pmax pmax
comp=Z,10μm,8.9s
KUR pmax pmax
comp=N,5μm,8.5s
KUR pmax pmax
comp=E,4μm,6.1s
KUR MLR MLR
comp=Z,12μm,22.0s
KUR MLR MLR
comp=N,10μm,23.0s
KUR MLR MLR
comp=E,8μm,17.0s
YSS Yuzh-Sakhalins 46.56 15*ce*P P 10 18 44.2 +0.2
YSS *e**PP **pP 10 18 57.1 +1.3**
YSS *e* 10 20 34.0
YSS *e*PPP PPP 10 21 13.9
YSS *e*S S 10 25 28.1 -1.5
YSS *e*SS **ScS 10 28 33.3 -1.8**
YSS pmax pmax
comp=Z,4μm,9.9s
YSS pmax pmax
comp=N,2μm,10.7s
YSS pmax pmax
comp=E,900nm,10.4s
YSS pmax pmax
comp=Z,350nm,1.6s
YSS pmax pmax
comp=N,3μm,9.6s
YSS pmax pmax
comp=Z,5μm,9.6s
YSS pmax pmax
comp=E,1μm,8.8s
YSS MLR MLR
comp=Z,15μm,21.0s
YSS MLR MLR
comp=N,11μm,19.0s
YSS MLR MLR
comp=E,4μm,17.0s
YSS Yuzh-Sakhalins 46.56 15 P P 10 18 43.5 -0.5
YSS IAmb IAmb 10 19 03.7
comp=Z,559nm,1.0s
GUN Gumba 46.83 307 *e*P P 10 18 46.3 -0.6
comp=Z,1μm,0.8s
KLR Kul'dur 46.96 4 P P 10 18 47.8 +0.7
comp=Z,434nm,0.9s,baz=203,slow=5.5,SNR=272
KLR PKP2ab 10 51 04.1
comp=Z,5.9nm,1.1s,baz=333,slow=6.9,SNR=4.7
KLR Kul'dur 46.96 4*ce*P P 10 18 47.1 0.0
KLR pmax pmax
comp=Z,561nm,0.9s
KLR MLR MLR
comp=Z,27μm,22.0s
PVM Polavaram 47.00 292 *e*P P 10 18 47.5 -0.4
PVM IVmBBB 10 19 09.4
comp=Z,3μm,2.1s
PVM IVMs_BB IVMs_BB 10 36 26.5
comp=Z,8μm,28.0s
PKI Pulchoki 47.06 306 *e*P P 10 18 48.4 -0.3
comp=Z,365nm,0.8s
PKIN Phulchoki 47.08 306 *e*P P 10 18 48.4 -0.3
HIA Hailar 47.23 354 P P 10 18 50.3 +1.0
HIA pmax pmax
comp=Z,615nm,1.3s
HIA Hailar 47.23 354 P P 10 18 50.3 +1.0
HIA IAmb IAmb 10 19 09.7
comp=Z,615nm,1.3s
KKN Kakani 47.26 307 *e*P P 10 18 49.5 -0.6
comp=Z,675nm,1.0s
DMN Daman 47.32 306 *e*P P 10 18 50.6 -0.1
comp=Z,560nm,0.9s
MDRS Chennai 47.50 286⇑ *e*P P 10 18 52.4 +0.5
MYLAV Mylavaram 47.81 291 *e*P P 10 18 53.9 -0.4
MYLAV IVmBBB 10 18 58.7
comp=Z,3μm,2.1s
MYLAV IVMs_BB IVMs_BB 10 36 35.6
comp=Z,7μm,26.4s
GKN Gorkha 47.86 306 *e*P P 10 18 54.6 -0.1
comp=Z,1μm,1.1s
MOO Moorlands 48.10 160 P P 10 18 56.6 +0.6
baz=48,SNR=39
SKHT Srikalahasti 48.12 286 *e*P P 10 18 55.8 -0.9
SKHT IVmB_BB 10 19 03.4
comp=Z,2μm,1.3s
SKHT IVMs_BB IVMs_BB 10 39 33.4
comp=Z,5μm,22.6s
ADKI Addanki 48.26 289 *e*P P 10 18 57.1 -0.6
ADKI IVmB_BB 10 19 04.0
comp=Z,2μm,2.7s
ADKI IVMs_BB IVMs_BB 10 36 46.6
comp=Z,4μm,30.1s
GGR Gangavaram 48.45 292 *e*P P 10 18 58.4 -0.9
GGR IVmB_BB 10 19 20.4
comp=Z,3μm,1.9s
GGR IVMs_BB IVMs_BB 10 38 57.0
comp=Z,6μm,25.7s
TAU Tasmania Unive 48.56 160 P P 10 18 58.4 -1.1
TAU pmax pmax
comp=Z,221nm,1.0s
TAU MLR MLR
comp=Z,30μm,21.0s
TAU Tasmania Unive 48.56 160 P P 10 18 58.4 -1.1
TAU Tasmania Unive 48.56 160 IAMs_20 IAMs_20 10 41 33.4
comp=Z,30μm,21.0s
ULN Ulaanbaatar 48.59 342 P P 10 19 02.3 +2.3
ULN Ulaanbaatar 48.59 342*ce*P P 10 19 00.8 +0.8
ULN pmax pmax
comp=Z,862nm,1.0s
ULN MLR MLR
comp=Z,62μm,26.0s
ULN Ulaanbaatar 48.59 342 P P 10 19 00.8 +0.8
KOLN Koldanda 48.61 306 *e*P P 10 19 00.0 -0.5
comp=Z,1μm,0.8s

DANN	**Dangsing**	**48.71**	**306**	*e*P		**P**	**10 19 00.7**	**-0.7**
	comp=Z,1μm,0.8s								
SONM	**Songino Array**	**48.77**	**342**	P		**P**	**10 19 02.6**	**+1.3**
	comp=Z,393nm,0.8s,baz=156,slow=5.6,SNR=562								
SONM				PcP		**PcP**	**10 20 26.5**	**+0.8**
	comp=Z,116nm,1.0s,baz=161,slow=4.0,SNR=4.2								
SONM				ScP		**ScP**	**10 24 18.4**	**+1.2**
	comp=Z,13nm,0.9s,baz=149,slow=3.8,SNR=3.2								
SONM				LR		LR	10 41 50.3		
	comp=Z,13μm,20.1s,baz=156,slow=39								
SONM				PKPPKP		P'P'df	10 49 52.2	-12	
	comp=Z,3.4nm,1.1s,baz=232,slow=2.0,SNR=5.4								
SONM				P4KPbc			10 56 38.8		
	comp=Z,1.2nm,0.8s,baz=156,slow=4.7,SNR=4.3								
SONM	**Songino Array**	**48.77**	**342**	P		**P**	**10 19 02.0**	**+0.7**
GRNR	**Gornyy**	**48.97**	**8** ⇑	*i*P		**P**	**10 19 03.6**	**+0.9**
GRNR				*e*			10 20 54.1		
GRNR				*e*S		**S**	**10 26 08.7**	**+5.0**
GRNR				pmax		pmax			
	comp=N,80nm,1.1s								
GRNR				pmax		pmax			
	comp=Z,150nm,1.1s								
GRNR				smax		smax			
	comp=N,20nm,0.9s								
GRNR				MLR		MLR			
	comp=E,2μm,15.0s								
GRNR				MLR		MLR			
	comp=N,7μm,19.0s								
GRNR				MLR		MLR			
	comp=Z,10μm,20.0s								
NJS	**Nagarjunasagar**	**49.02**	**290**	*e*P		**P**	**10 19 02.4**	**-1.2**
NJS				IVmB_BB			10 19 04.6		
	comp=Z,2μm,2.7s								
NJS				IVMs_BB		IVMs_BB	10 37 23.3		
	comp=Z,5μm,31.1s								
PYUN	**Piuthan**	**49.23**	**306**	*e*P		**P**	**10 19 05.0**	**-0.3**
	comp=Z,2μm,1.0s								
CUPL	**Choutuppal**	**49.53**	**291**	*e*P		**P**	**10 19 06.6**	**-0.9**
CUPL				IVmBBB			10 19 26.4		
	comp=Z,3μm,1.6s								
CUPL				IVMs_BB		IVMs_BB	10 39 42.2		
	comp=Z,6μm,24.6s								
RPR	**Rampur**	**49.53**	**293**	*e*P		**P**	**10 19 06.7**	**-0.8**
RPR				IVmB_BB			10 19 25.9		
	comp=Z,3μm,1.5s								
RPR				IVMs_BB		IVMs_BB	10 39 39.4		
	comp=Z,5μm,26.2s								
HYB	**Hyderabad**	**49.90**	**291**	*i* P		**P**	**10 19 09.0**	**-1.4**
HYB				*e*PcP		**PcP**	**10 20 29.0**	**-1.4**
HYB				*e*PP		PP	10 21 54.0	+48	
HYB				*e*S		**S**	**10 26 16.0**	**-1.7**
HYB				*e*LR		LR			
	comp=Z,42nm,28.0s								
HYBB	**Hyderabad (bro**	**49.90**	**291**	*e*P		**P**	**10 19 09.5**	**-0.9**
HYBB				IVmB_BB			10 19 28.3		
	comp=Z,4μm,1.4s								
HYBB				IVMs_BB		IVMs_BB	10 39 52.6		
	comp=Z,7μm,25.6s								
NFK	**Norfolk Island**	**50.04**	**132**	P		**P**	**10 19 11.9**	**+0.7**
	baz=50,SNR=15								
TYV	**Tymovskoe**	**50.19**	**13**	*e*P		**P**	**10 19 12.8**	**+0.9**
TYV				*e*S		**S**	**10 26 24.5**	**+3.9**
TYV				pmax		pmax			
	comp=Z,5μm,4.8s								
TYV				pmax		pmax			
	comp=Z,127nm,1.0s								
TYV				smax		smax			
	comp=E,45nm,2.6s								
TYV				smax		smax			
	comp=N,11μm,9.9s								
URV	**Uravakonda**	**50.66**	**287**	*e*P		**P**	**10 19 15.5**	**-0.7**
URV				IVmBBB			10 19 19.3		
	comp=Z,1μm,1.1s								
URV				IVmB_BB			10 19 19.4		
	comp=Z,1μm,1.1s								
URV				IVMs_BB		IVMs_BB	10 41 00.8		
	comp=Z,4μm,23.0s								
CIT	**Chita**	**50.85**	**349**	*e*P		**P**	**10 19 18.6**	**+1.7**
CIT				*e*			10 19 32.2		
CIT				*e*			10 20 34.8		
CIT				*e*			10 26 28.0		
CIT				pmax		pmax			
	comp=Z,2μm,2.6s								
ZEA	**Zeya**	**51.30**	**0**	*ce*P		**P**	**10 19 20.5**	**+0.3**
ZEA				*e*			10 20 38.4		
ZEA				*e*			10 21 20.4		
ZEA				*e*S		**S**	**10 26 34.5**	**-1.4**
ZEA				pmax		pmax			
	comp=E,40nm,1.1s								
ZEA				pmax		pmax			
	comp=N,80nm,1.0s								
ZEA				pmax		pmax			
	comp=Z,140nm,0.8s								
ZEA				pmax		pmax			
	comp=N,1μm,5.7s								
ZEA				pmax		pmax			
	comp=Z,2μm,6.6s								
ZEA				pmax		pmax			
	comp=N,1μm,7.7s								
ZEA				pmax		pmax			
	comp=Z,2μm,8.7s								
ZEA				smax		smax			
	comp=N,1μm,6.1s								
ZEA				MLR		MLR			
	comp=N,9μm,21.0s								
ZEA				MLR		MLR			
	comp=Z,9μm,22.0s								
KLRI	**Killari**	**51.86**	**291**	*e*P		**P**	**10 19 23.7**	**-1.4**
KLRI				IVmB_BB			10 19 42.8		
	comp=Z,4μm,1.4s								
KLRI				IVMs_BB		IVMs_BB	10 38 55.9		
	comp=Z,9μm,28.2s								
NKL	**Nikolayevsk**	**51.96**	**10**	*e*P		**P**	**10 19 25.0**	**-0.1**
NKL				*e*			10 20 34.4		
NKL				*e*S		**S**	**10 26 48.3**	**+3.4**
NKL				pmax		pmax			
	comp=E,86nm,0.8s								
NKL				pmax		pmax			
	comp=N,6.0nm,1.0s								
NKL				pmax		pmax			
	comp=Z,387nm,1.1s								
NKL				pmax		pmax			
	comp=Z,1μm,3.5s								
NKL				smax		smax			
	comp=E,145nm,4.3s								
NKL				smax		smax			
	comp=N,18nm,2.4s								
ZAK	**Zakamensk**	**51.99**	**341**	*e*P		**P**	**10 19 26.3**	**+0.7**
ZAK				*e*			10 20 39.0		
ZAK				pmax		pmax			
	comp=Z,312nm,1.6s								
BHPL	**Bhopal**	**52.34**	**298**	*e*P		**P**	**10 19 27.6**	**-1.0**
BHPL				IAmb		IAmb	10 19 36.3		
	comp=Z,259nm,0.8s								
TLY	**Talaya**	**53.00**	**342**	P		**P**	**10 19 34.3**	**+1.4**
	comp=Z,322nm,0.8s,baz=170,slow=6.3,SNR=146								
TLY				S		**S**	**10 27 05.4**	**+6.0**
	comp=Z,20nm,1.2s,baz=275,slow=19,SNR=3.3								
TLY				LR		LR	10 44 54.4		
	comp=Z,7μm,21.0s,baz=144,slow=39								
TLY				PKPPKP		**P'P'df**	**10 49 59.1**	**+0.6**	
	comp=Z,3.4nm,0.9s,baz=221,slow=3.9,SNR=4.2								
TLY				PKP2bc			10 50 15.0		
	comp=Z,1.0nm,0.3s,baz=196,slow=6.8,SNR=3.7								
TLY	**Talaya**	**53.00**	**342**	P		**P**	**10 19 35.6**	**+2.6**
TLY				P		**P**	**10 19 35.6**	**+2.6**
TLY	**Talaya**	**53.00**	**342**	*c i*P		**P**	**10 19 34.1**	**+1.1**
TLY				*e*			10 20 41.3		
TLY				*e*			10 21 36.5		
TLY				*e*S		**S**	**10 27 02.4**	**+3.0**
TLY				*e*SS		**SS**	**10 30 33.4**	**-5.7**
TLY				pmax		pmax			
	comp=Z,2μm,1.1s								
TLY				MLR		MLR			
	comp=Z,20μm,16.0s								
TLY	**Talaya**	**53.00**	**342**	P		**P**	**10 19 34.4**	**+1.4**
TLY				IAmb		IAmb	10 19 37.1		
	comp=Z,528nm,0.9s								
FUNA	**Funafuti**	**53.10**	**102**	P		**P**	**10 19 33.4**	**-0.9**
FUNA				IAmb		IAmb	10 19 36.3		
	comp=Z,477nm,0.9s								
FUNA				IAMs_20		IAMs_20	10 41 40.5		
	comp=Z,25μm,19.0s								
IRK	**Irkutsk**	**53.30**	**343**	*e*P		**P**	**10 19 36.3**	**+1.2**
IRK				*e*S		**S**	**10 27 04.3**	**+0.8**
MOY	**Mondy**	**53.85**	**340**	*e*P		**P**	**10 19 41.0**	**+1.7**
MOY				pmax		pmax			
	comp=Z,3μm,2.7s								
GOA	**Goa**	**54.02**	**287** ⇑	*e*P		**P**	**10 19 40.6**	**-0.4**
GOA				IAmb		IAmb	10 19 44.9		
	comp=Z,289nm,1.0s								
MSVF	**Nonsavu**	**54.04**	**114**	P		**P**	**10 19 41.5**	**+0.2**
MSVF				pmax		pmax			
	comp=Z,598nm,1.0s								
MSVF				MLR		MLR			
	comp=Z,22μm,20.0s								
MSVF	**Nonsavu**	**54.04**	**114**	P		**P**	**10 19 41.5**	**+0.2**
MSVF				IAmb		IAmb	10 19 44.8		
	comp=Z,598nm,1.0s								
MSVF	**Nonsavu**	**54.04**	**114**	IAMs_20		IAMs_20	10 45 01.8		
	comp=Z,22μm,20.0s								
DDI	**Dehra Dun**	**54.06**	**306**	*e*P		**P**	**10 19 40.5**	**-0.7**
DDI				IAmb		IAmb	10 20 00.8		
	comp=Z,574nm,1.0s								
WMQ	**Urumqi**	**54.09**	**325**	P		**P**	**10 19 42.8**	**+1.7**
WMQ				sP		sP	10 20 03.8	+5.8	
WMQ				PcP		**PcP**	**10 20 46.6**	**+1.0**
WMQ				PP		**PP**	**10 21 47.4**	**+4.3**
WMQ				ScP		**ScP**	**10 24 34.9**	**-5.3**
WMQ				S		**S**	**10 27 13.8**	**-0.7**
WMQ				pmax		pmax			
	comp=Z,260nm,1.5s								
WMQ				pmax		pmax			
	comp=Z,8μm,4.9s								
WMQ				LR		LR			
	comp=Z,55μm,29.0s								
WMQ				LR		LR			
	comp=Z,45μm,27.7s								
WMQ				LR		LR			
	comp=Z,86μm,26.3s								
WMQ	**Urumqi**	**54.09**	**325**	P		**P**	**10 19 41.2**	**+0.1**
WMQ				pmax		pmax			
	comp=Z,399nm,1.0s								
WMQ				MLR		MLR			
	comp=Z,24μm,21.0s								
WMQ	**Urumqi**	**54.09**	**325**	P		**P**	**10 19 41.2**	**+0.1**
WMQ				IAmb		IAmb	10 20 06.9		
	comp=Z,399nm,1.0s								
WMQ	**Urumqi**	**54.09**	**325**	IAMs_20		IAMs_20	10 46 33.7		
	comp=Z,23μm,21.0s								
SKR	**Severo-Kuril's**	**54.14**	**22**	*c i*P		**P**	**10 19 41.5**	**+0.3**
SKR				*e*PPP		PPP	10 21 40.8		
SKR				*e*S		**S**	**10 27 11.9**	**-2.8**
SKR				pmax		pmax			
	comp=Z,97nm,1.1s								
SKR				pmax		pmax			
	comp=Z,3μm,4.3s								
SKR				MLR		MLR			
	comp=Z,4μm,19.0s								
SKR				MLR		MLR			
	comp=Z,4μm,17.0s								
POO	**Poona**	**54.51**	**291**	*e*P		**P**	**10 19 43.4**	**-1.2**
POO				IAmb		IAmb	10 19 49.6		
	comp=Z,212nm,0.9s								
SMLA	**Simla**	**55.07**	**307**	*e*P		**P**	**10 19 48.7**	**+0.3**
SMLA				IAmb		IAmb	10 20 03.6		
	comp=Z,671nm,1.2s								
H08S2	**Diego Garcia H**	**55.29**	**259**	P		**P**	**10 19 51.3**	**+1.4**
	baz=47,slow=9.7,SNR=60								
H08S3	**Diego Garcia H**	**55.30**	**259**	P		**P**	**10 19 50.2**	**+0.2**
	baz=47,slow=9.7,SNR=68								
DGAR	**Diego Garcia**	**55.30**	**259**	P		**P**	**10 19 50.9**	**+0.6**
DGAR				pmax		pmax			
	comp=Z,854nm,1.2s								
DGAR	**Diego Garcia**	**55.30**	**259**	P		**P**	**10 19 50.9**	**+0.6**
H08S1	**Diego Garcia H**	**55.31**	**259**	P		**P**	**10 19 50.8**	**+0.7**
	baz=47,slow=9.7,SNR=33								
DHRM	**DHARAMSHALA**	**56.16**	**308** ⇑	*e*P		**P**	**10 19 56.1**	**-0.5**
DHRM				IAmb		IAmb	10 20 05.7		
	comp=Z,522nm,0.5s								
BOD	**Bodaibo**	**56.34**	**352** ⇓	*i*P		**P**	**10 19 57.3**	**+0.3**
BOD				pmax		pmax			
	comp=Z,858nm,1.8s								
PEA0B	**Petropavlovsk-**	**56.66**	**22**	*ce*P		**P**	**10 20 00.1**	**+0.7**
PEA0B	**Petropavlovsk-**	**56.66**	**22**	P		**P**	**10 20 00.1**	**+0.7**
PEA0B				IAmb		IAmb	10 20 21.3		
	comp=Z,893nm,1.6s								
PETK	**Petropavlovsk-**	**56.66**	**22**	P		**P**	**10 20 00.3**	**+0.9**
	comp=Z,128nm,0.7s,baz=196,slow=2.4,SNR=80								
PETK				ScP		**ScP**	**10 24 54.1**	**+2.9**	
	comp=Z,10nm,0.9s,baz=300,slow=1.2,SNR=4.2								
PETK				LR		LR	10 47 06.0		
	comp=Z,5μm,18.7s,baz=211,slow=39								
PETK				PKPPKP		**P'P'df**	**10 49 54.3**	**+1.0**	
	comp=Z,12nm,1.0s,baz=116,slow=3.4,SNR=4.6								
PETK	**Petropavlovsk-**	**56.66**	**22**	P		**P**	**10 19 57.6**	**-1.8**
PET	**Petropavlovsk**	**56.95**	**22**	*c i*P		**P**	**10 20 01.5**	**+0.1**
PET				*e*S		**S**	**10 27 51.7**	**-0.5**
PET				*e*SS		**SS**	**10 31 41.5**	**+0.2**
PET							10 34 02.1		
PET				pmax		pmax			
	comp=Z,4μm,14.1s								
PET				pmax		pmax			
	comp=Z,424nm,1.1s								
PET				pmax		pmax			
	comp=Z,4μm,15.0s								
PET				smax		smax			
	comp=N,8μm,13.2s								
PET				MLR		MLR			
	comp=Z,12μm,19.0s								
PET	**Petropavlovsk**	**56.95**	**22**	P		**P**	**10 20 01.4**	**+0.1**
PET				IAmb		IAmb	10 20 23.1		
	comp=Z,1μm,1.8s								
OUZ	**Omahuta**	**57.32**	**135**	P		**P**	**10 20 03.7**	**-0.6**
OUZ	**Omahuta**	**57.32**	**135**	P		**P**	**10 20 04.9**	**+0.5**
OUZ				IAMs_20		IAMs_20	10 48 25.4		
	comp=Z,25μm,18.0s								
ZSN	**Zaisan**	**57.89**	**327**	*i* P		**P**	**10 20 08.0**	**-0.3**
	comp=Z,77nm,1.9s								
ZSN				*e*S		**S**	**10 28 06.0**	**+1.2**
ZSN	**Zaisan**	**57.89**	**327**	*i* P		**P**	**10 20 07.9**	**-0.3**
ZSN				*e*S		**S**	**10 28 06.0**	**+1.2**
ZSN				pmax		pmax			
	comp=Z,77nm,1.9s								
WCZ	**Waipu Caves**	**58.21**	**135**	P		**P**	**10 20 10.2**	**-0.4**
SHLS	**Shalkode**	**58.66**	**321**	*e*P		**P**	**10 20 12.1**	**-1.8**
	comp=Z,114nm,0.9s								
SHLS				*i* S		**S**	**10 28 13.1**	**-2.1**
	comp=Z,431nm,5.0s								
SHLS				LR		LR	10 45 17.3		
	comp=Z,1μm,14.4s								
SHLS	**Shalkode**	**58.66**	**321**	*e*P		**P**	**10 20 12.0**	**-1.8**
SHLS				*i* S		**S**	**10 28 13.1**	**-2.1**
SHLS				pmax		pmax			
	comp=Z,114nm,0.9s								
SHLS				MLR		MLR			
	comp=Z,1μm,14.0s								
PDGK	**Podgornoye**	**58.73**	**321**	P		**P**	**10 20 14.0**	**-0.3**
WTAZ	**Waiatarua**	**58.87**	**136**	P		**P**	**10 20 16.7**	**+1.5**
MIDW	**Midway**	**58.89**	**58**	P		**P**	**10 20 14.9**	**-0.6**
MK31	**Makanchi Array**	**58.92**	**326**	*e*P		**P**	**10 20 15.2**	**-0.2**
MK31	**Makanchi Array**	**58.92**	**326**	P		**P**	**10 20 15.5**	**+0.1**
MK31				IAmb		IAmb	10 20 20.2		
	comp=Z,332nm,1.1s								
MKAR	**Makanchi Array**	**58.92**	**326**	P		**P**	**10 20 15.7**	**+0.3**
	comp=Z,191nm,0.6s,baz=119,slow=7.5,SNR=400								
MKAR				ScP		**ScP**	**10 25 05.7**	**+4.3**	
	comp=Z,6.2nm,0.7s,baz=123,slow=5.3,SNR=2.2								
MKAR				S		**S**	**10 28 14.1**	**-4.2**	
	comp=Z,3.6nm,1.0s,baz=146,slow=13,SNR=1.7								
MKAR				LR		LR	10 48 27.8		
	comp=Z,14μm,19.3s,baz=96,slow=39								
MKAR				PKPPKP		P'P'df	10 49 40.1	-10	
	comp=Z,7.2nm,0.8s,baz=272,slow=3.0,SNR=17								
MKAR				P4KPbc			10 57 23.8		
	comp=Z,1.6nm,0.7s,baz=141,slow=4.1,SNR=6.4								
MKAR	**Makanchi Array**	**58.92**	**326**	*ce*P		**P**	**10 20 15.3**	**-0.1**
MKAR				pmax		pmax			
	comp=Z,191nm,0.6s								
PRZ	**Przheval'sk**	**59.00**	**320**	P		**P**	**10 20 17.7**	**+1.4**
PRZ				pmax		pmax			
	comp=Z,496nm,1.1s								
PRZ				MLR		MLR			
	comp=Z,19μm,21.0s								
PRZ	**Przheval'sk**	**59.00**	**320**	P		**P**	**10 20 17.7**	**+1.4**
PRZ				IAmb		IAmb	10 20 41.0		
	comp=Z,496nm,1.1s								
PRZ				IAMs_20		IAMs_20	10 48 33.2		
	comp=Z,19μm,21.0s								
NIL	**Nilore**	**59.05**	**308**	P		**P**	**10 20 16.8**	**+0.2**
NIL	**Nilore**	**59.05**	**308**	P		**P**	**10 20 16.1**	**-0.5**
NIL				pmax		pmax			
	comp=Z,322nm,0.9s								
NIL				MLR		MLR			
	comp=Z,10μm,22.0s								
NIL	**Nilore**	**59.05**	**308**	P		**P**	**10 20 16.1**	**-0.5**
NIL				IAmb		IAmb	10 20 39.4		
	comp=Z,322nm,0.9s								
MAKZ	**Makanchi**	**59.10**	**325**	P		**P**	**10 20 16.7**	**0.0**
MAKZ	**Makanchi**	**59.10**	**325**	P		**P**	**10 20 16.6**	**0.0**
MAKZ				IAmb		IAmb	10 20 21.4		
	comp=Z,569nm,1.1s								
MAKZ				IAMs_20		IAMs_20	10 48 15.8		
	comp=Z,22μm,22.0s								
GRZ	**Great Barrier**	**59.15**	**135**	P		**P**	**10 20 15.7**	**-1.4**
BHUJ	**Bhuj**	**59.28**	**296**	*e*P		**P**	**10 20 18.0**	**-0.2**
BHUJ				IAmb		IAmb	10 20 23.1		
	comp=Z,352nm,1.0s								
SATY	**Saty**	**59.28**	**320**	*i* P		**P**	**10 20 18.4**	**+0.2**
	comp=Z,76nm,0.7s								
SATY				*i* S		**S**	**10 28 24.8**	**+1.4**
SATY	**Saty**	**59.28**	**320**	*i* P		**P**	**10 20 18.3**	**+0.2**
SATY				*i* S		**S**	**10 28 24.7**	**+1.4**
SATY				pmax		pmax			
	comp=Z,76nm,0.7s								
KSH	**Kashi**	**59.29**	**316** ⇑	*i*P		**P**	**10 20 19.5**	**+1.3**
KSH				sP		sP	10 20 37.6	+2.3	
KSH				S		**S**	**10 28 24.5**	**+1.0**
KSH				sS		sS	10 28 45.6	+1.6	
KSH				pmax		pmax			
	comp=Z,190nm,0.8s								
KSH				pmax		pmax			
	comp=Z,9μm,4.5s								
KSH				LR		LR			
	comp=Z,20μm,18.9s								
KSH				LR		LR			
	comp=Z,5μm,12.2s								
KSH				LR		LR			
	comp=Z,40μm,28.3s								
KPKS	**Kokpek**	**59.30**	**321**	*i* P		**P**	**10 20 18.2**	**-0.1**
	comp=Z,129nm,0.7s								
KPKS	**Kokpek**	**59.30**	**321**	*i* P		**P**	**10 20 18.1**	**-0.1**
KPKS				pmax		pmax			
	comp=Z,129nm,0.7s								
MKAZ	**Moumakai**	**59.37**	**136**	P		**P**	**10 20 18.4**	**-0.2**
PYZ	**Puysegur Point**	**59.58**	**149**	P		**P**	**10 20 18.3**	**-1.6**
PYZ				IAmb		IAmb	10 20 21.8		
	comp=Z,382nm,1.2s								
PYZ				IAMs_20		IAMs_20	10 47 16.0		
	comp=Z,25μm,21.0s								
KUZ	**Kuaotunu**	**59.58**	**136**	P		**P**	**10 20 18.3**	**-1.7**
FOZ	**Fox Glacier**	**59.58**	**145**	P		**P**	**10 20 20.2**	**+0.3**
FOZ				IAmb		IAmb	10 20 22.2		
	comp=Z,351nm,1.0s								
QRZ	**Quartz Range**	**59.61**	**141**	P		**P**	**10 20 19.2**	**-1.0**
QRZ	**Quartz Range**	**59.61**	**141**	P		**P**	**10 20 20.5**	**+0.3**
QRZ				IAmb		IAmb	10 20 22.5		
	comp=Z,332nm,0.8s								
YAK	**Yakutsk**	**59.65**	**1**	P		**P**	**10 20 20.4**	**+0.3**
	comp=Z,944nm,0.8s,baz=356,slow=1.8,SNR=59								
YAK				LR		LR	10 45 01.8		
	comp=Z,12μm,21.7s,baz=178,slow=35								
YAK				PKPPKP		**P'P'df**	**10 49 48.7**	**+0.6**	
	comp=Z,9.2nm,0.6s,baz=217,slow=1.1,SNR=8.0								
YAK				PKP2bc			10 49 59.0		
	comp=Z,46nm,0.9s,baz=188,slow=2.5,SNR=12								
YAK	**Yakutsk**	**59.65**	**1**	*c i*P		**P**	**10 20 20.4**	**+0.3**
YAK				*e**PP		**pP**	**10 20 29.1**	**-3.1**
YAK				*e*			10 22 32.3		
YAK				*e*S		**S**	**10 28 27.1**	**0.0**
YAK				*e*			10 30 06.2		
YAK				pmax		pmax			
	comp=E,69nm,0.9s								
YAK				pmax		pmax			
	comp=Z,2μm,0.9s								
YAK				pmax		pmax			
	comp=N,303nm,0.9s								
YAK				pmax		pmax			
	comp=Z,244nm,1.3s								
YAK				smax		smax			
	comp=N,3μm,3.3s								
YAK				smax		smax			
	comp=E,2μm,4.1s								
YAK	**Yakutsk**	**59.65**	**1**	P		**P**	**10 20 20.6**	**+0.6**
DSZ	**Denniston Nort**	**59.69**	**142**	P		**P**	**10 20 20.5**	**-0.3**
KHEZ	**Kahui Hut**	**59.73**	**139**	P		**P**	**10 20 23.4**	**+2.3**
NEZ	**North Egmont**	**59.77**	**139**	P		**P**	**10 20 24.0**	**+2.6**
MLZ	**Mavora Lakes**	**59.80**	**148**	P		**P**	**10 20 20.5**	**-1.0**
HIZ	**Hauiti**	**59.87**	**138**	P		**P**	**10 20 23.3**	**+1.2**
HIZ	**Hauiti**	**59.87**	**138**	P		**P**	**10 20 22.8**	**+0.7**
HIZ				IAmb		IAmb	10 20 24.9		
	comp=Z,420nm,1.1s								
HIZ				IAMs_20		IAMs_20	10 49 16.0		
	comp=Z,16μm,18.0s								
TOZ	**Tahuroa Road**	**59.91**	**137**	P		**P**	**10 20 22.7**	**+0.3**
WKZ	**Wanaka**	**59.94**	**147**	P		**P**	**10 20 22.8**	**+0.3**
WKZ				IAmb		IAmb	10 20 32.8		
	comp=Z,336nm,1.1s								
MA2	**Magadan**	**60.04**	**14**	P		**P**	**10 20 24.0**	**+1.1**
	comp=Z,165nm,0.9s,baz=187,slow=8.2,SNR=25								
MA2				LR		LR	10 46 12.3		
	comp=Z,8μm,21.1s,baz=204,slow=36								
MA2	**Magadan**	**60.04**	**14**	*ce*P		**P**	**10 20 23.7**	**+0.9**
MA2				pmax		pmax			
	comp=Z,594nm,1.7s								
MA2				MLR		MLR			
	comp=Z,16μm,21.0s								
MA2	**Magadan**	**60.04**	**14**	P		**P**	**10 20 23.9**	**+1.1**
MA2				IAMs_20		IAMs_20	10 42 43.5		
	comp=Z,25μm,22.0s								
WHZ	**Wether Hill Ro**	**60.05**	**148**	P		**P**	**10 20 22.6**	**-0.5**
WHZ				IAmb		IAmb	10 20 24.4		
	comp=Z,468nm,1.1s								
LREZ	**Lake Rotokare**	**60.07**	**139**	P		**P**	**10 20 25.6**	**+2.2**
VRZ	**Vera Road**	**60.13**	**138**	P		**P**	**10 20 25.0**	**+1.2**
MDOK	**Medeo**	**60.20**	**320**	*e*P		**P**	**10 20 24.6**	**+0.1**
MDOK				*i* S		**S**	**10 28 36.6**	**+1.4**
	comp=Z,5μm,11.7s								
MDOK	**Medeo**	**60.20**	**320**	*e*P		**P**	**10 20 24.5**	**+0.1**
MDOK				*i* S		**S**	**10 28 36.6**	**+1.4**
TNSS	**Tian-Shan**	**60.21**	**320**	*i* P		**P**	**10 20 25.1**	**+0.2**
TNSS	**Tian-Shan**	**60.21**	**320**	*i* P		**P**	**10 20 25.0**	**+0.2**
TDK	**Taldyqorghan**	**60.24**	**322**	*e*P		**P**	**10 20 24.7**	**+0.1**
	comp=Z,141nm,0.8s								
TDK				*e*S		**S**	**10 28 36.9**	**+1.4**
TDK	**Taldyqorghan**	**60.24**	**322**	*e*P		**P**	**10 20 24.6**	**+0.1**
TDK				*e*S		**S**	**10 28 36.8**	**+1.4**
TDK				pmax		pmax			
	comp=Z,141nm,0.8s								
ULHL	**Ulahol**	**60.30**	**319**	P		**P**	**10 20 26

OPRZ Ohinepanea 60.70 136 P **P** **10 20 29.4 +1.7**
OMRZ Omania 60.70 137 P **P** **10 20 29.8 +2.0**
KRVZ Karewarewa 60.70 138 P **P** **10 20 27.5 -0.3**
NGZ Ngauruhoe 60.71 138 P **P** **10 20 29.1 +1.1**
FWVZ Far West T-bar 60.72 138 P **P** **10 20 29.0 +0.9**
DRZ Dome Shelter 60.74 138 P **P** **10 20 29.0 +0.6**
OXZ Oxford 60.75 144 P **P** **10 20 27.0 -1.0**
OXZ IAmb IAmb 10 20 29.1
comp=Z,240nm,0.7s
OXZ IAMs_20 IAMs_20 10 49 31.0
comp=Z,23µm,19.0s
WHVZ Whangaehu Hut 60.76 138 P **P** **10 20 30.0 +1.5**
WPRZ Whakapapatarin 60.76 137 P **P** **10 20 30.4 +2.2**
HRRZ Handcock Road 60.78 137 P **P** **10 20 30.5 +2.2**
RITZ Rihia Road 60.78 138 P **P** **10 20 30.5 +2.1**
WNVZ Wahianoa 60.79 138 P **P** **10 20 30.2 +1.7**
TUVZ Tukino 60.80 138 P **P** **10 20 29.5 +0.9**
TUWZ Tuamarina 60.83 141 P **P** **10 20 27.4 -1.1**
ALRZ Allen Road 60.90 137 P **P** **10 20 29.9 +0.7**
PRRZ Plateau Road 60.91 137 P **P** **10 20 30.6 +1.5**
TCW Tory Channel 60.92 141 P **P** **10 20 28.3 -0.9**
MOVZ Moawhango 60.93 138 P **P** **10 20 29.2 -0.2**
BSWZ Blackbirch Sta 60.95 141 P **P** **10 20 28.0 -1.3**
ODZ Otahua Downs 60.98 146 P **P** **10 20 28.5 -1.0**
ODZ IAmb IAmb 10 20 31.1
comp=Z,259nm,1.1s
KUU Kurty 61.00 320 *i* P **P** **10 20 29.7 0.0**
comp=Z,208nm,1.0s
KUU *e*S **S** **10 28 46.2 +1.1**
comp=Z,607nm,5.0s
KUU LR LR 10 46 09.5
comp=Z,5µm,20.5s
KUU Kurty 61.00 320 *i* P **P** **10 20 29.6 -0.1**
KUU *e*S **S** **10 28 46.2 +1.1**
KUU pmax pmax
comp=Z,208nm,1.0s
KUU MLR MLR
comp=Z,5µm,20.0s
TKM2 Tokmak 2 61.03 319 P **P** **10 20 30.5 +0.2**
SNR=90
TKM2 Tokmak 2 61.03 319 P **P** **10 20 30.4 +0.2**
OHWZ Ohakea 61.06 139 P P 10 20 24.1 -6.1
MRHZ Matea Rd 61.09 137 P **P** **10 20 30.4 0.0**
KHZ Kahutara 61.13 142 P **P** **10 20 29.0 -1.6**
KHZ IAmb IAmb 10 20 31.3
comp=Z,290nm,0.8s
KIW Kapiti Island 61.14 140 P **P** **10 20 30.9 +0.2**
MUGZ Murupara 61.15 137 P **P** **10 20 32.0 +1.1**
BHHZ Black Hill Sta 61.18 138 P **P** **10 20 30.8 -0.3**
RAO Raoul Island 61.24 125 LR LR 10 44 59.6
comp=Z,10µm,21.3s,baz=298,slow=34
RAO Raoul Island 61.24 125 P **P** **10 20 31.0 -0.6**
RAO pmax pmax
comp=Z,515nm,1.1s
RAO Raoul Island 61.24 125 P **P** **10 20 31.0 -0.6**
RAO IAmb IAmb 10 20 33.0
comp=Z,515nm,1.1s
SNZO South Karori 61.25 141 P **P** **10 20 29.9 -1.4**
SNZO IAmb IAmb 10 20 34.9
comp=Z,377nm,0.9s
URZ Urewera 61.28 136 LR LR 10 48 18.3
comp=Z,9µm,18.0s,baz=315,slow=37
URZ PKP2bc 10 49 57.4
comp=Z,8.2nm,0.9s,baz=17,slow=2.7,SNR=3.8
URZ Urewera 61.28 136 P **P** **10 20 31.0 -0.7**
URZ Urewera 61.28 136 P **P** **10 20 30.4 -1.2**
URZ IAmb IAmb 10 20 55.1
comp=Z,437nm,1.4s
OGWZ Otaki Gorge 61.28 140 P **P** **10 20 31.4 -0.3**
BKZ Black Stump Fm 61.31 138 P **P** **10 20 30.6 -1.3**
BKZ IAmb IAmb 10 20 37.2
comp=Z,347nm,1.0s
MQZ McQueen's Vall 61.33 144 P **P** **10 20 31.4 -0.6**
MQZ IAmb IAmb 10 20 34.3
comp=Z,364nm,0.9s
KBK Karagaybulak 61.34 318 P **P** **10 20 32.8 +0.5**
SNR=42
RTZ Ruatahuna 61.37 137 P **P** **10 20 32.7 +0.3**
CAW Cannon Point 61.37 140 P **P** **10 20 31.3 -0.9**
MTHZ Maungataniwha 61.39 137 P **P** **10 20 32.0 -0.5**
KWHZ Kaweka Forest 61.39 138 P **P** **10 20 33.9 +1.4**
TSZ Takapari Road 61.41 139 P **P** **10 20 32.1 -0.4**
BHW Baring Head 61.41 141 P **P** **10 20 30.1 -2.4**
KNTN Kanton 61.43 94 P **P** **10 20 34.0 +0.8**
KNTN IAMs_20 IAMs_20 10 45 47.3
comp=Z,18µm,21.0s
UCH Uchtor 61.45 318 P **P** **10 20 35.2 +1.8**
SNR=64
KRHZ Kereru 61.46 138 P **P** **10 20 32.8 -0.2**
MRZ Mangatainoka R 61.47 140 P **P** **10 20 32.0 -0.9**
NMHZ Naumai 61.48 137 P **P** **10 20 34.5 +1.3**
PNHZ Pukenui 61.49 139 P **P** **10 20 32.8 -0.4**
MCHZ McNeill Hill 61.58 138 P **P** **10 20 34.2 +0.5**
RAHZ Arahi 61.58 137 P **P** **10 20 33.7 -0.1**
MWZ Matawai 61.60 136 P **P** **10 20 33.3 -0.7**
CHMS Chumysh 61.62 319 P **P** **10 20 34.0 0.0**
SNR=34
AAK Ala-Archa 61.64 318 P **P** **10 20 34.7 +0.5**
AAK comp=Z,52nm,0.7s,baz=122,slow=3.6,SNR=39
PKPPKP P'P'df 10 49 34.2 -13
AAK comp=Z,6.0nm,1.0s,baz=227,slow=11,SNR=3.8
LR LR 10 51 15.1
AAK comp=Z,12µm,21.8s,baz=100,slow=40
AAK Ala-Archa 61.64 318 *i* P **P** **10 20 35.2 +1.0**
SNR=43
AAK Ala-Archa 61.64 318 P **P** **10 20 35.6 +1.3**
AAK Ala-Archa 61.64 318 *ce*P **P** **10 20 34.0 -0.3**
AAK pmax pmax
comp=Z,1µm,2.1s
AAK Ala-Archa 61.64 318 P **P** **10 20 34.8 +0.5**
AAK Ala-Archa 61.64 318 IAMs_20 IAMs_20 10 50 18.1
comp=Z,14µm,20.0s
MSWZ Moikau Station 61.65 140 P **P** **10 20 33.4 -0.7**
MSWZ Moikau Station 61.65 140 P **P** **10 20 32.4 -1.8**
DVHZ Dannevirke 61.66 139 P **P** **10 20 34.7 +0.4**
PRWZ Pori Road 61.67 139 P **P** **10 20 33.9 -0.4**
MTW Mount Morrison 61.68 140 P **P** **10 20 33.6 -0.7**
SNGZ Shannon Statio 61.69 137 P **P** **10 20 34.3 -0.2**
ARHZ Aropaoanui 61.69 138 P **P** **10 20 34.3 -0.2**
WPHZ Waipukurau 61.72 139 P **P** **10 20 34.9 +0.2**
PLWZ Palliser 61.74 141 P **P** **10 20 33.9 -0.9**
PLWZ Palliser 61.74 141 P **P** **10 20 34.1 -0.7**
PAWZ Paruwai Farm 61.75 140 P **P** **10 20 34.8 0.0**
MXZ Matakaoa Point 61.78 135 P **P** **10 20 34.8 -0.2**
KAHZ Kahuranaki 61.88 138 P **P** **10 20 35.9 +0.2**
TMWZ Te Maipa 61.90 140 P **P** **10 20 35.0 -0.9**
SGDS Sogindy 61.90 319 *i* P **P** **10 20 35.5 -0.5**
comp=Z,26nm,1.0s
SGDS *i*S **S** **10 28 57.2 +0.4**
comp=Z,135nm,4.4s
SGDS Sogindy 61.90 319 *i* P **P** **10 20 35.4 -0.5**
SGDS *i*S **S** **10 28 57.1 +0.4**
USP Ospenovka 61.91 319 P **P** **10 20 36.0 0.0**
SNR=93
BFZ Birch Farm 61.91 139 P **P** **10 20 35.9 0.0**
BFZ Birch Farm 61.91 139 P **P** **10 20 35.1 -0.8**
BFZ IAmb IAmb 10 20 36.6
comp=Z,459nm,1.4s
TRWZ Traveller 61.92 140 P **P** **10 20 36.0 0.0**
RIGZ Rimuhau 61.94 137 P **P** **10 20 36.3 +0.1**
CKHZ Cape Kidnapper 61.95 138 P **P** **10 20 36.3 +0.2**
AML Almayashu 61.96 317 P **P** **10 20 39.1 +2.4**
SNR=12
PXZ Pawanui 61.99 138 P **P** **10 20 35.9 -0.5**
ZAA0 Zalesovo Array 62.02 333 P **P** **10 20 35.8 -0.6**
ZALV Zalesovo Beam 62.02 333 P **P** **10 20 36.6 +0.3**
comp=Z,416nm,0.8s,baz=120,slow=6.0,SNR=528
ZALV S **S** **10 28 57.7 +0.1**
comp=Z,5.5nm,0.7s,baz=123,slow=7.8,SNR=4.9
ZALV PKPPKP **P'P'df** **10 49 42.0 -3.2**
comp=Z,8.9nm,0.9s,baz=336,slow=3.3,SNR=10
ZALV PKP2bc 10 49 50.7
comp=Z,71nm,1.0s,baz=286,slow=3.4,SNR=28
ZALV LR LR 10 50 54.5
comp=Z,7µm,20.6s,baz=131,slow=39
ZALV P4KPbc 10 57 36.6
comp=Z,1.1nm,0.6s,baz=85,slow=3.0,SNR=5.5
SEM Semipalatinsk 62.09 328 *i* P **P** **10 20 36.7 -0.6**
SEM LR LR 10 47 30.9
comp=Z,2µm,16.8s
SEM Semipalatinsk 62.09 328 *i* P **P** **10 20 36.6 -0.6**
SEM MLR MLR
comp=Z,2µm,17.0s
EKS2 Erkin-Say 62.12 318 P **P** **10 20 38.1 +0.6**
SNR=65
CNGZ Carnagh Statio 62.14 136 P **P** **10 20 37.0 -0.5**
DRK Karamyk 62.23 314 P **P** **10 20 38.8 +0.3**
DRK IAmb IAmb 10 20 52.4
comp=Z,110nm,0.5s
MCQ Macquarie Isla 62.44 160 P **P** **10 20 39.9 +0.9**
baz=62,SNR=32
MCQ Macquarie Isla 62.44 160 P **P** **10 20 39.5 +0.4**
MCQ pmax pmax
comp=Z,934nm,1.0s
MCQ MLR MLR
comp=Z,12µm,19.0s
MCQ Macquarie Isla 62.44 160 P **P** **10 20 39.5 +0.4**
KBL Kabul 62.65 308 P **P** **10 20 41.0 -0.3**
SNR=96
KBL P **P** **10 20 41.0 -0.3**
SNR=96
KBL Kabul 62.65 308 P **P** **10 20 40.4 -0.8**
KBL pmax pmax
comp=Z,164nm,0.8s
KBL MLR MLR
comp=Z,10µm,22.0s
KBL Kabul 62.65 308 P **P** **10 20 40.4 -0.8**
AFI Afiamalu 62.73 107 LR LR 10 46 47.7
comp=Z,10µm,19.3s,baz=273,slow=35
AFI Afiamalu 62.73 107 P **P** **10 20 41.6 -0.3**
AFI pmax pmax
comp=Z,619nm,1.2s
AFI Afiamalu 62.73 107 P **P** **10 20 41.6 -0.3**
AFI IAmb IAmb 10 20 45.3
comp=Z,619nm,1.2s
BTLS Baital 62.98 321 *i* P **P** **10 20 42.7 -0.3**
comp=Z,55nm,1.1s
BTLS *e*S **S** **10 29 10.9 +0.7**
BTLS Baital 62.98 321 *i* P **P** **10 20 42.7 -0.3**
BTLS *e*S **S** **10 29 10.8 +0.7**
BTLS pmax pmax
comp=Z,55nm,1.1s
KURBB Kurchatov Arra 63.12 328 P **P** **10 20 43.9 +0.1**
comp=Z,414nm,1.0s,baz=126,slow=5.5,SNR=332
KURBB PKPPKP P'P'df 10 49 30.9 -13
comp=Z,12nm,0.9s,baz=278,slow=3.7,SNR=19
KURK Kurchatov 63.13 328 P **P** **10 20 45.5 +1.7**
KURK P **P** **10 20 45.5 +1.7**
KURK P **P** **10 20 45.5 +1.7**
KURK Kurchatov 63.13 328 *ce*P **P** **10 20 43.9 +0.1**
KURK pmax pmax
comp=Z,1µm,1.1s
KURK Kurchatov 63.13 328 P **P** **10 20 44.0 +0.2**
GAR Garm 63.13 313 P **P** **10 20 43.8 -0.4**
BTK Batken 63.15 314 P **P** **10 20 44.3 0.0**
BTK pmax pmax
comp=Z,636nm,1.4s
BTK MLR MLR
comp=Z,9µm,21.0s
BTK Batken 63.15 314 P **P** **10 20 44.3 0.0**
BTK IAmb IAmb 10 20 54.7
comp=Z,636nm,1.4s
SEY Seymchan 63.38 13 P **P** **10 20 46.8 +1.5**
comp=Z,208nm,1.0s,baz=212,slow=6.0,SNR=126
SEY LR LR 10 47 42.9
comp=Z,6µm,21.2s,baz=204,slow=35
SEY PKPPKP **P'P'df** **10 49 42.4 0.0**
comp=Z,17nm,1.0s,baz=316,slow=5.5,SNR=5.4
SEY Seymchan 63.38 13 *c* P **P** **10 20 46.0 +0.8**
SMY Shemya 63.57 30 P **P** **10 20 45.9 -0.7**
SMY pmax pmax
comp=Z,854nm,1.2s
SMY MLR MLR
comp=Z,9µm,21.0s
SMY Shemya 63.57 30 P **P** **10 20 45.9 -0.7**
CHGR Chuyangaron 63.86 312 P **P** **10 20 48.9 -0.1**
CHGR IAmb IAmb 10 21 10.9
comp=Z,332nm,0.7s
CHGR IAMs_20 IAMs_20 10 50 22.3
comp=Z,19µm,22.0s
DZA Taraz 63.86 317 *e*P **P** **10 20 48.5 -0.4**
comp=Z,74nm,0.9s
DZA *e*S **S** **10 29 22.1 +0.8**
DZA Taraz 63.86 317 *e*P **P** **10 20 48.5 -0.4**
DZA *e*S **S** **10 29 22.0 +0.8**
DZA pmax pmax
comp=Z,74nm,0.9s
JOHN Johnston Islan 63.94 73 P **P** **10 20 50.8 +1.0**
JOHN Johnston Islan 63.94 73 IAMs_20 IAMs_20 10 47 00.2
comp=Z,22µm,21.0s
IUG Iuzhnay 64.47 316 *i* P **P** **10 20 53.1 +0.1**
comp=Z,72nm,0.7s
IUG *e*S **S** **10 29 30.3 +1.4**
IUG Iuzhnay 64.47 316 *i* P **P** **10 20 53.1 +0.1**
IUG *e*S **S** **10 29 30.3 +1.4**
IUG pmax pmax
comp=Z,72nm,0.7s
KK06 Karatay Array 64.49 317 P **P** **10 20 53.0 0.0**
KK05 Karatay Array 64.50 317 P **P** **10 20 53.2 +0.2**
KK31 Karatay Array 64.50 317 P **P** **10 20 52.8 -0.3**
KK31 pmax pmax
comp=Z,272nm,1.2s
KK31 Karatay Array 64.50 317 P **P** **10 20 52.8 -0.3**
KKAR Karatay Array 64.50 317 P **P** **10 20 52.8 -0.3**
KKAR pmax pmax
comp=Z,272nm,1.2s
KKAR Karatay Array 64.50 317 P **P** **10 20 52.8 -0.3**
BRLS Borolday 64.93 317 *e*P **P** **10 20 55.6 -0.3**
comp=Z,78nm,0.9s
BRLS Borolday 64.93 317 *e*P **P** **10 20 55.5 -0.3**
BRLS pmax pmax
comp=Z,78nm,0.9s
NIUE Niue 65.44 112 P **P** **10 20 58.3 -1.2**
baz=65,SNR=10
NIUE Niue 65.44 112 P **P** **10 20 59.0 -0.6**
NIUE IAmb IAmb 10 21 01.9
comp=Z,603nm,1.0s
OTUK Ortayu 65.46 323 P **P** **10 20 59.5 +0.3**
AMKA Amchitka 65.55 33 P **P** **10 20 59.8 +0.2**
BRZS Berezniki 66.05 325 *i* P **P** **10 21 03.0 +0.1**
comp=Z,158nm,1.0s
BRZS *e*S **S** **10 29 49.2 +1.5**
BRZS Berezniki 66.05 325 *i* P **P** **10 21 03.0 +0.1**
BRZS *e*S **S** **10 29 49.2 +1.5**
BRZS pmax pmax
comp=Z,158nm,1.0s
ADK Adak 68.00 34 P **P** **10 21 15.3 +0.1**
ADK pmax pmax
comp=Z,428nm,1.0s
ADK MLR MLR
comp=Z,11µm,20.0s
ADK Adak 68.00 34 P **P** **10 21 15.3 +0.1**
ADK IAmb IAmb 10 21 39.1
comp=Z,428nm,1.0s
HRA Herat 68.03 306 P **P** **10 21 15.5 -0.6**
HRA IAmb IAmb 10 21 19.3
comp=Z,1µm,2.0s
HRA IAMs_20 IAMs_20 10 53 01.9
comp=Z,16µm,22.0s
JLN Jalan Bani Buh 68.44 293 P **P** **10 21 18.4 -0.3**
SNR=27
JLN P **P** **10 21 18.4 -0.3**
SNR=27
JLN P **P** **10 21 18.4 -0.3**
SNR=27
BVAR Borovoye Array 68.70 327 P **P** **10 21 20.2 +0.6**
comp=Z,283nm,0.8s,baz=105,slow=5.1,SNR=252
BRVK Borovoye 68.77 327 P **P** **10 21 22.0 +1.9**
BRVK P **P** **10 21 22.0 +1.9**
BRVK Borovoye 68.77 327 *ce*P **P** **10 21 20.1 0.0**
BRVK pmax pmax
comp=Z,2µm,0.9s
BRVK Borovoye 68.77 327 P **P** **10 21 20.5 +0.5**
WBK Wadi Bani Khal 68.90 293 P **P** **10 21 21.5 0.0**
SNR=20
WSAR Wadi Sarin 69.28 294 P **P** **10 21 23.3 -0.6**
comp=Z,30nm,0.8s,baz=129,slow=5.0,SNR=18
CASY Casey 69.41 187 P **P** **10 21 24.1 +0.4**
ATKA Atka Island 69.52 34 P **P** **10 21 25.0 +0.2**
MHTO MHTO 69.66 291 P **P** **10 21 26.2 0.0**
SNR=98
MHTO P **P** **10 21 26.2 0.0**
SNR=98
MHTO P **P** **10 21 26.2 0.0**
SNR=98
JMDO Jabal Madar 69.67 293 P **P** **10 21 26.5 +0.2**
SNR=36
JMDO P **P** **10 21 26.5 +0.2**
SNR=36
BIDO Bidbid 69.77 294 P **P** **10 21 27.4 +0.6**
SNR=28
SMDO Samad 69.79 294 P **P** **10 21 27.1 0.0**
SNR=20
SMDO P **P** **10 21 27.1 0.0**
SNR=20
SMDO P **P** **10 21 27.1 0.0**
SNR=20
DQM DQM 69.96 290 P **P** **10 21 28.4 +0.4**
SNR=65
DQM P **P** **10 21 28.4 +0.4**
SNR=65
HOQ Hoqain 70.52 294 P **P** **10 21 31.9 +0.4**
SNR=22
BSY Bisya 70.54 293 P **P** **10 21 31.8 +0.2**
SNR=56
PAF Port-aux-Franc 70.86 215 P **P** **10 21 34.1 +1.2**
PAF pmax pmax
comp=Z,760nm,1.5s
PAF Port-aux-Franc 70.86 215 P **P** **10 21 34.1 +1.2**
PAF IAmb IAmb 10 21 37.8
comp=Z,760nm,1.5s
BILL Bilibino 70.88 15 *d* iP **P** **10 21 33.4 +0.7**
BILL *i* *SP **pP** **10 21 43.7 -1.4**
BILL *i* 10 21 49.7
BILL *e* 10 24 14.6
BILL *e*PPP PPP 10 25 56.4
BILL pmax pmax
comp=Z,1µm,2.8s
BILL MLR MLR
comp=Z,17µm,22.0s
BILL Bilibino 70.88 15 P **P** **10 21 33.4 +0.7**
BILL IAMs_20 IAMs_20 10 56 13.7
comp=Z,18µm,22.0s
ARQ Araqi 71.22 294 P **P** **10 21 36.0 +0.3**
SNR=84
ARQ P **P** **10 21 36.0 +0.3**
SNR=84
SOHO SOHO 71.29 295 *i* P **P** **10 21 36.0 -0.1**
SNR=96
SOHO SOHO 71.29 295 P **P** **10 21 36.4 +0.3**
SHAO Shalim 71.62 288 *i* P **P** **10 21 38.1 -0.2**
SNR=10.0
SHAO Shalim 71.62 288 P **P** **10 21 38.0 -0.2**
SNR=26
MDH Madha 71.63 296 *i* P **P** **10 21 37.4 -0.7**
SNR=12
MDH Madha 71.63 296 P **P** **10 21 37.3 -0.8**
SNR=7.8
UOSS Minazif 71.67 295 *i* P **P** **10 21 38.3 -0.2**
SNR=6.3
UOSS Minazif 71.67 295 P **P** **10 21 38.1 -0.4**
UOSS Minazif 71.67 295 P **P** **10 21 38.0 -0.4**
BANOM Banah 71.70 296 *i* P **P** **10 21 38.6 0.0**
SNR=14
BANOM Banah 71.70 296 P **P** **10 21 39.0 +0.4**
SNR=19
HATD Hatta, Dubai 71.73 295 *i* P **P** **10 21 38.6 -0.2**
SNR=85
HATD Hatta, Dubai 71.73 295 P **P** **10 21 39.2 +0.5**
SNR=62
MSFE Esma-Masafi 71.76 296 *i* P **P** **10 21 38.8 -0.2**
SNR=60
ASHO Ashiyiah 71.78 295 *i* P **P** **10 21 39.1 0.0**
SNR=63
ASHO Ashiyiah 71.78 295 P **P** **10 21 40.0 +0.9**
SNR=50
ASHT Ashkhabad 71.83 309 P **P** **10 21 41.8 +2.7**
ASHT pmax pmax
comp=Z,3µm,1.9s
ASHT Ashkhabad 71.83 309 P **P** **10 21 41.8 +2.7**
SHME Shamm 71.85 297 *i* P **P** **10 21 39.7 +0.2**
SNR=35
NRIK Noril'sk 71.91 346 P **P** **10 21 39.2 +0.3**
comp=Z,188nm,0.7s,baz=133,slow=6.2,SNR=203
NRIK S **S** **10 30 57.0 +0.6**
comp=Z,10nm,0.9s,baz=7.9,slow=21,SNR=8.3
NRIK PKP2bc 10 49 23.2
comp=Z,4.8nm,0.7s,baz=283,slow=3.1,SNR=7.9
NRIK LR LR 10 57 53.0
comp=Z,14µm,18.5s,baz=142,slow=40
NRIK Noril'sk 71.91 346 *ce*P **P** **10 21 39.0 +0.1**
NRIK pmax pmax
comp=Z,764nm,1.5s
NRIK MLR MLR
comp=Z,28µm,22.0s
ALNE Al Ain 71.99 294 *i* P **P** **10 21 40.6 +0.2**
SNR=125
GYB1 ALIBECK ARRAY 72.03 309 P **P** **10 21 40.8 +0.4**
GYB1 IAmb IAmb 10 21 44.3
comp=Z,1µm,1.8s
GYA2 ALIBECK ARRAY 72.04 309 P **P** **10 21 41.8 +1.4**
GYA2 IAmb IAmb 10 21 44.3
comp=Z,457nm,1.1s
GYA1 ALIBECK ARRAY 72.04 309 P **P** **10 21 40.9 +0.5**
GEYT Alibeck 72.04 309 P **P** **10 21 41.5 +1.1**
comp=Z,170nm,0.9s,baz=151,slow=3.4,SNR=147
GEYT Alibeck 72.04 309 P **P** **10 21 42.0 +1.5**
GYA0 ALIBECK ARRAY 72.04 309 P **P** **10 21 42.0 +1.6**
GYA0 pmax pmax
comp=Z,554nm,1.3s
GYA0 ALIBECK ARRAY 72.04 309 P **P** **10 21 42.0 +1.6**
GYA0 IAmb IAmb 10 21 44.4
comp=Z,554nm,1.2s
GYA0B ALIBECK ARRAY 72.04 309 P **P** **10 21 41.8 +1.4**
GYA0B IAmb IAmb 10 21 44.4
comp=Z,519nm,1.2s
GYA3 ALIBECK ARRAY 72.04 309 P **P** **10 21 41.0 +0.6**
GYA3 IAmb IAmb 10 21 44.4
comp=Z,418nm,1.1s
NAZ Nazwa, Dubai 72.17 295 *i* P **P** **10 21 41.6 +0.2**
SNR=51
NAZ Nazwa, Dubai 72.17 295 P **P** **10 21 43.0 +1.6**
SNR=38
FAQ Al Faqa, Dubai 72.21 295 *i* P **P** **10 21 41.3 -0.3**
SNR=52
FAQ Al Faqa, Dubai 72.21 295 P **P** **10 21 41.1 -0.5**
SNR=28
UMQ Umm Al-Quwin 72.22 296 *i* P **P** **10 21 42.7 +1.0**
SNR=13
UMQ Umm Al-Quwin 72.22 296 P **P** **10 21 43.0 +1.3**
SNR=14
DMTO DMTO 72.25 288 P **P** **10 21 42.5 +0.5**
SNR=22
ASUD Al Ashush, Dub 72.43 295 *i* P **P** **10 21 43.6 +0.6**
SNR=89
ASUD Al Ashush, Dub 72.43 295 P **P** **10 21 43.9 +1.0**
SNR=50
ASUD P **P** **10 21 43.9 +1.0**
SNR=50
AJN Ajban 72.74 295 *i* P **P** **10 21 44.7 -0.1**
SNR=43
AJN Ajban 72.74 295 P **P** **10 21 45.2 +0.5**
SNR=39
NIKH Nikolski High 72.83 35 P **P** **10 21 46.0 +1.3**
NIKH IAmb IAmb 10 21 52.7
comp=Z,371nm,1.0s
RBK Rabkut 72.94 288 P **P** **10 21 46.2 0.0**
SNR=40
SOCY Socotra 72.95 282 P **P** **10 21 46.2 -0.1**
SNR=20
SOCY Socotra 72.95 282 IAMs_20 IAMs_20 10 53 50.7
comp=Z,14µm,21.0s
WHFO Wadi Hawf 73.38 288 P **P** **10 21 48.4 -0.3**
SNR=50
RER Riviere de l'E 73.43 247 P **P** **10 21 51.1 +2.1**
SNR=15
RER Riviere de l'E 73.43 247 P **P** **10 21 50.2 +1.2**
RER IAmb IAmb 10 21 56.8
comp=Z,700nm,1.1s
RER IAMs_20 IAMs_20 10 52 27.7
comp=Z,18µm,22.0s
AB06 Akbulak array 73.45 321 P **P** **10 21 48.9 +0.5**
AB31 Akbulak array 73.46 321 *i* P **P** **10 21 48.8 +0.2**
ABKAR Akbulak array 73.46 321 P **P** **10 21 48.9 +0.3**
AB04 Akbulak array 73.47 321 P **P** **10 21 48.9 +0.3**
SPIA Saint Paul Isl 73.59 30 IAMs_20 IAMs_20 10 47 51.2
comp=Z,17µm,22.0s
ABTO Aybut 73.80 287 P **P** **10 21 51.6 +0.4**
SNR=51
MZR Muzera 73.98 293 *i* P **P** **10 21 52.9 +0.8**
SNR=64
MZR Muzera 73.98 293 P **P** **10 21 53.1 +0.9**
SNR=30
UNV Unalaska Valle 74.45 34 P **P** **10 21 55.1 +1.0**
UNV IAmb IAmb 10 22 05.0
comp=Z,366nm,0.9s

UNV IAMs_20 IAMs_20 10 48 42.9
comp=Z,19µm,22.0s
AKUT Akutan 74.95 34 P **P** **10 21 58.0 +1.0**
AKUT IAMs_20 IAMs_20 10 48 57.1
comp=Z,19µm,22.0s
AKTO Aktyubinsk 74.98 322 P **P** **10 21 58.3 +0.9**
comp=Z,769nm,0.8s,baz=104,slow=7.2,SNR=497
AKTO PKPPKP P'P'df 10 49 09.1 -15
comp=Z,3.7nm,0.9s,baz=92,slow=0.5,SNR=6.9
AKTO LR LR 10 59 10.2
comp=Z,11µm,20.8s,baz=103,slow=39
KIP Kipapa 75.17 69 *ce*P **P** **10 22 00.0 +1.0**
KIP pmax pmax
comp=Z,342nm,1.0s
KIP Kipapa 75.17 69 P **P** **10 21 59.9 +0.8**
KIP IAmb IAmb 10 22 02.7
comp=Z,324nm,1.0s
KIP Kipapa 75.17 69 IAMs_20 IAMs_20 10 52 31.7
comp=Z,15µm,22.0s
HON Honolulu 75.18 69 P **P** **10 22 00.7 +1.6**
HON pmax pmax
comp=Z,1µm,1.0s
HON Honolulu 75.18 69 P **P** **10 22 00.7 +1.6**
HON IAMs_20 IAMs_20 10 53 36.9
comp=Z,13µm,19.0s
OPA Opana 75.19 68 P **P** **10 21 59.9 +0.7**
OPA pmax pmax
comp=Z,503nm,1.1s
OPA Opana 75.19 68 P **P** **10 21 59.9 +0.7**
OPA IAmb IAmb 10 22 10.3
comp=Z,503nm,1.1s
OPA IAMs_20 IAMs_20 10 53 38.1
comp=Z,14µm,20.0s
RAR Rarotonga 75.20 113 LR LR 10 52 12.9
comp=Z,5µm,21.9s,baz=268,slow=33
RAR Rarotonga 75.20 113 P **P** **10 21 59.6 +0.4**
RAR pmax pmax
comp=Z,164nm,1.1s
RAR Rarotonga 75.20 113 P **P** **10 21 59.6 +0.4**
SVE Sverdlovsk 75.35 329 *d* iP **P** **10 21 59.7 +0.3**
SVE *e* 10 24 43.5
SVE *e* 10 26 42.8
SVE *e*S **S** **10 31 34.2 -1.5**
SVE pmax pmax
comp=Z,1µm,1.0s
SVE MLR MLR
comp=Z,13µm,24.0s
XMAS Kiritimati 75.46 88 P **P** **10 21 59.6 -1.3**
GAMB Gambell 75.60 24 P **P** **10 22 01.4 +0.8**
ARU Arti 76.32 328 P **P** **10 22 04.7 -0.3**
comp=Z,147nm,0.8s,baz=114,slow=3.0,SNR=268
ARU PKKP **PKKPdf** **10 41 03.9 -3.3**
comp=Z,0.7nm,0.3s,baz=334,slow=5.3,SNR=3.5
ARU PKKPbc **PKKPbc** **10 41 19.5 -1.2**
comp=Z,1.7nm,0.6s,baz=199,slow=6.0,SNR=5.8
ARU PKPPKP P'P'df 10 49 11.5 -10
comp=Z,1.5nm,0.6s,baz=294,slow=3.8,SNR=8.5
ARU LR LR 10 58 47.7
comp=Z,11µm,20.3s,baz=104,slow=38
ARU Arti 76.32 328 *d* iP **P** **10 22 04.5 -0.4**
ARU 10 22 19.6
ARU 10 24 52.6
ARU PPP PPP 10 26 38.5
ARU *e*S **S** **10 31 46.1 -0.3**
ARU SS **SS** **10 36 38.1 -3.0**
ARU SSS SSS 10 39 59.2
ARU pmax pmax
comp=Z,750nm,1.0s
ARU MLR MLR
comp=Z,19µm,22.0s
ARU Arti 76.32 328 P **P** **10 22 04.6 -0.4**
ARU IAmb IAmb 10 22 06.6
comp=Z,556nm,0.9s
FALS False Pass 76.47 34 P **P** **10 22 03.6 -2.2**
HLK Haleakala 76.78 69 P **P** **10 22 07.3 -1.2**
HLK IAmb IAmb 10 22 12.3
comp=Z,745nm,1.3s
HLK IAMs_20 IAMs_20 10 53 18.4
comp=Z,18µm,21.0s
KKH Kailua Kona 76.95 70 P **P** **10 22 08.7 -0.5**
KKH Kailua Kona 76.95 70 P **P** **10 22 08.7 -0.5**
KHLU Kahalu`u 77.07 71 P **P** **10 22 09.6 -0.4**
KHLU IAmb IAmb 10 22 13.5
comp=Z,684nm,1.2s
KHLU IAMs_20 IAMs_20 10 55 04.0
comp=Z,13µm,19.0s
HUH Hualalai 77.12 70 P **P** **10 22 08.2 -2.4**
HUH IAmb IAmb 10 22 14.1
comp=Z,1µm,1.8s
HPAH Hawaii Prepara 77.27 70 P **P** **10 22 10.1 -1.0**
HPAH IAmb IAmb 10 22 14.4
comp=Z,726nm,1.3s
HPAH IAMs_20 IAMs_20 10 54 14.3
comp=Z,17µm,21.0s
MWH Moku'aweowe 77.34 71 P **P** **10 22 10.3 -1.7**
MWH IAmb IAmb 10 22 15.4
comp=Z,717nm,1.1s
MLOA Mauna Loa Obse 77.36 71 P **P** **10 22 10.5 -1.6**
MLOA IAMs_20 IAMs_20 10 51 13.8
comp=Z,17µm,22.0s
POHA Pohakuloa 77.41 70 P **P** **10 22 11.0 -1.1**
POHA Pohakuloa 77.41 70 IAMs_20 IAMs_20 10 55 05.1
comp=Z,16µm,19.0s
HMH Humu'ula Sheep 77.45 71 P **P** **10 22 13.6 +1.2**
AIN Ainahou 77.47 71 P **P** **10 22 12.8 +0.5**
MLH Mauna Loa 77.54 71 P **P** **10 22 12.6 -0.3**
HLP Hilina Pali 77.61 71 P **P** **10 22 12.7 -0.3**
HLP IAmb IAmb 10 22 42.8
comp=Z,456nm,1.0s
WRMHI West Rim 77.62 71 P **P** **10 22 14.0 +0.8**
SDHHI Sand Hill 77.62 71 P **P** **10 22 13.7 +0.5**
UWE Uwekahuna 77.63 71 P **P** **10 22 14.4 +1.2**
OBL Observatory Le 77.63 71 P **P** **10 22 13.8 +0.6**
NPH North Pit 77.64 71 P **P** **10 22 15.2 +1.9**
NPH IAmb IAmb 10 22 16.6
comp=Z,492nm,1.0s
UWB Uwekahuna B 77.64 71 P **P** **10 22 15.0 +1.8**
UWB IAmb IAmb 10 22 16.7
comp=Z,736nm,1.1s
RSD Rainshed 77.64 71 P **P** **10 22 14.4 +1.1**
RIM Rim 77.64 71 P **P** **10 22 14.8 +1.5**
KKO Keanakako`i 77.65 71 P **P** **10 22 14.0 +0.7**
HATHI Halema'uma'u T 77.66 71 P **P** **10 22 14.0 +0.7**
BYL Byron's Ledge 77.66 71 P **P** **10 22 15.0 +1.7**
BYL IAmb IAmb 10 22 16.8
comp=Z,704nm,1.0s
PUH Pauahi 77.70 71 P **P** **10 22 14.7 +1.1**
TNA Tin City 77.81 23 P **P** **10 22 14.0 +1.0**
baz=248
TNA S **S** **10 32 04.9 +2.7**
baz=248
TNA Tin City 77.81 23 P **P** **10 22 13.6 +0.6**
SBV Sambava 78.01 256 P **P** **10 22 17.1 +1.9**
SNR=48
SDPT Sand Point 78.23 34 P **P** **10 22 15.2 -0.4**
ANM Nome 78.47 24 P **P** **10 22 17.7 +0.9**
ANM pmax pmax
comp=Z,158nm,1.0s
ANM Nome 78.47 24 P **P** **10 22 17.7 +0.9**
CNBA Chernabura Isl 78.61 34 P **P** **10 22 17.6 -0.1**
CHGN Chignik 79.57 33 P **P** **10 22 24.2 +1.3**
CHGN IAmb IAmb 10 22 41.4
comp=Z,384nm,1.0s
RDOG Red Dog Mine 80.53 21 P **P** **10 22 28.9 +0.9**
MAK Makhachkala 80.79 313 *e*P **P** **10 22 28.5 -1.3**
MAK *e* 10 25 31.5
MAK *e*PPP PPP 10 27 23.5
MAK *e*S **S** **10 32 33.1 -1.6**
MAK *e*SS **SS** **10 37 47.4 -1.4**
MAK *e*SSS SSS 10 41 16.7
MAK pmax pmax
comp=Z,1µm,1.6s
CHIR Chirikof Islan 81.02 34 P **P** **10 22 32.3 +1.5**
CHIR IAMs_20 IAMs_20 10 51 11.8
comp=Z,17µm,22.0s
OPO Ambohidratompo 81.10 251 S **S** **10 32 40.8 +1.6**
comp=Z,2.1nm,0.9s,baz=190,slow=20,SNR=8.1
ABPO Ambohimpanom 81.11 250 P **P** **10 22 32.3 +0.1**
ABPO pmax pmax
comp=Z,825nm,1.7s
ABPO MLR MLR
comp=Z,9µm,21.0s
ABPO Ambohimpanom 81.11 250 P **P** **10 22 32.3 +0.1**
ABPO IAmb IAmb 10 22 55.4
comp=Z,825nm,1.6s

RAYN Ar Rayn 81.33 293 *i* P **P** **10 22 34.2 +1.0**
SNR=180
RAYN Ar Rayn 81.33 293 P **P** **10 22 33.1 -0.1**
RAYN pmax pmax
comp=Z,834nm,1.0s
RAYN MLR MLR
comp=Z,15µm,21.0s
RAYN Ar Rayn 81.33 293 P **P** **10 22 33.1 -0.1**
RAYN IAMs_20 IAMs_20 11 02 17.1
comp=Z,15µm,21.0s
KIRV Kirov 81.62 329 P **P** **10 22 33.8 0.0**
comp=Z,251nm,0.6s,baz=106,slow=3.8,SNR=107
KIRV S **S** **10 32 40.2 -2.4**
comp=Z,7.4nm,0.6s,baz=214,slow=22,SNR=8.8
KIRV PKKPbc **PKKPbc** **10 41 07.6 -1.3**
comp=Z,12nm,0.6s,baz=246,slow=3.1,SNR=4.6
KIRV PKPPKP **P'P'df** **10 49 09.2 -2.2**
comp=Z,4.5nm,0.4s,baz=14,slow=5.9,SNR=5.5
KIRV LR LR 11 02 25.5
comp=Z,10µm,21.2s,baz=92,slow=38
KIRV Kirov 81.62 329 *ce*P **P** **10 22 33.3 -0.5**
BELG Belogornoye 81.74 323 *c* iP **P** **10 22 34.6 0.0**
BELG pmax pmax
comp=Z,171nm,1.1s
VOI Vohitsoka 81.79 248 P **P** **10 22 37.1 +1.4**
SNR=32
SVW2 Sparrevohn 81.93 29 P **P** **10 22 37.0 +1.5**
SII Sitkinak Islan 81.93 33 P **P** **10 22 35.7 +0.1**
SII IAmb IAmb 10 22 38.8
comp=Z,629nm,0.9s
FOMA Nahampoana Res 81.94 245 P **P** **10 22 38.5 +2.2**
SNR=18
FOMA Nahampoana Res 81.94 245 P **P** **10 22 35.0 -1.3**
VNDA Vanda 81.95 173 P **P** **10 22 35.6 +0.4**
comp=Z,501nm,0.8s,baz=318,slow=6.0,SNR=483
VNDA S **S** **10 32 45.9 +0.5**
comp=Z,1.1nm,0.9s,baz=76,slow=17,SNR=1.2
VNDA PKKP **PKKPdf** **10 40 59.4 +0.6**
comp=Z,1.3nm,0.8s,baz=245,slow=5.5,SNR=3.7
VNDA PKKPbc **PKKPbc** **10 41 08.0 -1.0**
comp=Z,3.6nm,0.8s,baz=251,slow=3.2,SNR=9.9
VNDA PKPPKP **P'P'df** **10 49 02.6 -6.5**
comp=Z,1.3nm,1.0s,baz=252,slow=2.4,SNR=4.7
VNDA LR LR 10 57 03.4
comp=Z,6µm,21.6s,baz=326,slow=34
VNDA Vanda 81.95 173 P **P** **10 22 34.8 -0.5**
VNDA IAmb IAmb 10 22 37.4
comp=Z,494nm,0.8s
GROC Groznyy 82.06 313 *e*P **P** **10 22 36.8 +0.3**
GROC *e*S **S** **10 32 46.9 -0.9**
GROC pmax pmax
comp=Z,653nm,1.0s
TTA Tatalina 82.06 27 P **P** **10 22 37.2 +1.0**
TTA pmax pmax
comp=Z,292nm,1.0s
TTA MLR MLR
comp=Z,9µm,21.0s
TTA Tatalina 82.06 27 P **P** **10 22 37.2 +1.0**
MAW Mawson 82.50 200 P **P** **10 22 39.0 +0.7**
comp=Z,279nm,0.9s,baz=66,slow=6.3,SNR=182
MAW PKKPbc **PKKPbc** **10 41 05.6 -1.8**
comp=Z,5.5nm,0.9s,baz=277,slow=8.5,SNR=4.6
MAW LR LR 11 00 49.2
comp=Z,3µm,18.5s,baz=66,slow=37
MAW Mawson 82.50 200 P **P** **10 22 38.9 +0.7**
baz=82,SNR=202
MAW Mawson 82.50 200 P **P** **10 22 39.0 +0.7**
MAW Mawson 82.50 200 P **P** **10 22 38.8 +0.6**
OHAK Old Harbor 82.51 33 P **P** **10 22 40.0 +1.4**
GNI Garni 82.64 310 P **P** **10 22 42.1 +2.2**
comp=Z,198nm,1.2s,baz=185,slow=3.1,SNR=51
GNI S **S** **10 33 00.6 +6.2**
comp=Z,5.9nm,0.4s,baz=143,slow=20,SNR=1.5
GNI PKKPbc **PKKPbc** **10 41 06.7 +0.7**
comp=Z,12nm,0.7s,baz=113,slow=10,SNR=3.2
GNI Garni 82.64 310 P **P** **10 22 40.7 +0.9**
GNI Garni 82.64 310 *e*P **P** **10 22 40.3 +0.4**
GNI Garni 82.64 310 P **P** **10 22 42.5 +2.6**
GNI Garni 82.64 310 *i* P **P** **10 22 40.8 +0.9**
GNI pmax pmax
comp=Z,1µm,2.0s
GNI Garni 82.64 310 P **P** **10 22 41.5 +1.6**
KDAK Kodiak Island 82.96 32 P **P** **10 22 41.9 +1.0**
KDAK pmax pmax
comp=Z,623nm,0.9s
KDAK Kodiak Island 82.96 32 P **P** **10 22 41.9 +1.0**
TASB TASBURUN-IGDIR 83.02 310 *e*P **P** **10 22 42.9 +1.2**
RSO Redoubt South 83.20 29 P **P** **10 22 42.8 +0.4**
CLDR Caldiran 83.23 309 *e*P **P** **10 22 44.4 +1.4**
CUKT Cukurca 83.39 307 *e*P **P** **10 22 44.3 +0.5**
ZEI Tsey 83.42 313 *e*P **P** **10 22 41.1 -2.8**
ZEI pmax pmax
comp=Z,811nm,1.3s
A21K Barrow 83.50 18 P **P** **10 22 45.0 +1.6**
baz=258,SNR=15
A21K S **S** **10 33 03.7 +2.3**
baz=258
A21K Barrow 83.50 18 P **P** **10 22 43.1 -0.3**
IMAR Indian Mountai 83.55 24 P **P** **10 22 44.8 +1.0**
VANB Van 83.62 308 *e*P **P** **10 22 45.8 +0.9**
AKH Akhalkalaki 83.66 311 ⇑P **P** **10 22 47.0 +1.9**
AKH Akhalkalaki 83.66 311 *e*P **P** **10 22 46.8 +1.7**
AKH Akhalkalaki 83.66 311 P **P** **10 22 46.3 +1.2**
AKH pmax pmax
comp=Z,903nm,1.2s
AKH Akhalkalaki 83.66 311 P **P** **10 22 46.3 +1.2**
HOM Homer 83.66 30 P **P** **10 22 45.5 +1.0**
baz=264
PPLA Purkeypile 83.78 27 P **P** **10 22 45.4 +0.1**
CNPM China Poot 83.85 30 P **P** **10 22 46.3 +0.8**
CNPM IAmb IAmb 10 22 50.3
comp=Z,516nm,1.0s
ATD Arta Tunnel 83.85 281 P **P** **10 22 48.4 +1.9**
comp=Z,434nm,0.9s,baz=65,slow=1.8,SNR=112
ATD Arta Tunnel 83.85 281 P **P** **10 22 47.6 +1.1**
GEVA Gevas 83.87 308 P **P** **10 22 47.3 +1.1**
CAST Castle Rocks 83.89 27 P **P** **10 22 46.1 +0.4**
CAST IAmb IAmb 10 22 50.4
comp=Z,250nm,0.9s
AKDM Akdamar-Van 83.93 308 *e*P **P** **10 22 47.9 +1.3**
KARS Kars 83.94 310 *e*P **P** **10 22 48.1 +1.6**
AGRB Hanur-Agry 83.96 309 *e*P **P** **10 22 48.2 +1.4**
SKT Skwentna 83.98 28 P **P** **10 22 45.6 -0.5**
SKT IAmb IAmb 10 22 50.3
comp=Z,432nm,0.9s
SKT IAMs_20 IAMs_20 10 55 54.5
comp=Z,10µm,22.0s
CAPN Captain Cook N 84.02 29 P **P** **10 22 45.4 -0.8**
baz=264
BRLK Bradley Lake 84.05 30 P **P** **10 22 46.7 +0.1**
BRLK IAMs_20 IAMs_20 10 53 42.4
comp=Z,12µm,22.0s
GOF Gofitskoye 84.15 315 ⇑*e*P **P** **10 22 47.3 0.0**
GOF *e*S **S** **10 33 09.1 +0.1**
GOF pmax pmax
comp=Z,559nm,1.3s
GOF smax smax
comp=E,57nm,1.5s
GOF smax smax
comp=N,85nm,1.0s
KBZ Khabaz 84.19 314 P **P** **10 22 48.0 +0.5**
comp=N,115nm,1.1s,baz=84,slow=1.7,SNR=64
KBZ S **S** **10 33 06.4 -3.0**
comp=N,2.4nm,0.8s,baz=193,slow=18,SNR=1.5
KBZ PKP2bc 10 48 59.5
comp=N,4.4nm,1.1s,baz=305,slow=6.0,SNR=3.8
KBZ PKPPKP **P'P'df** **10 49 11.7 +4.1**
comp=N,4.0nm,0.9s,baz=182,slow=5.2,SNR=3.5
KBZ LR LR 11 07 14.7
comp=N,4µm,18.5s,baz=67,slow=41
KBZ Khabaz 84.19 314 *ce*P **P** **10 22 47.6 +0.1**
KBZ pmax pmax
comp=Z,614nm,1.9s
KBZ MLR MLR
comp=Z,13µm,27.0s
MLAZ Malazgirt-MUS 84.29 309 *e*P **P** **10 22 49.3 +0.9**
SUA Susitna One 84.29 29 P **P** **10 22 47.4 -0.5**
KVAR Kislovodsk Arr 84.35 314 P **P** **10 22 50.9 +2.4**
comp=Z,31nm,0.9s,baz=73,slow=20,SNR=5.3
KIV Kislovodsk 84.36 314 ⇑P **P** **10 22 50.0 +1.5**
KIV Kislovodsk 84.36 314 *i* P **P** **10 22 48.7 +0.2**
SNR=112
KIV Kislovodsk 84.36 314 *e*P **P** **10 22 48.9 +0.4**
KIV Kislovodsk 84.36 314 P **P** **10 22 50.0 +1.5**
KIV Kislovodsk 84.36 314 *e*P **P** **10 22 48.4 -0.1**

KIV *e* 10 33 08.1
KIV pmax pmax
comp=Z,7µm,4.7s
KIV pmax pmax
comp=Z,765nm,1.1s
KIV MLR MLR
comp=Z,25µm,19.0s
KIV Kislovodsk 84.36 314 P **P** **10 22 48.7 +0.2**
PPT Papeete 84.38 108 P **P** **10 22 50.8 +1.7**
comp=Z,220nm,1.1s,baz=341,slow=6.0,SNR=8.6
PPT LR LR 10 57 48.9
comp=Z,4µm,19.2s,baz=271,slow=34
PPT2 Papeete2 84.39 108 *e*P **P** **10 22 51.3 +2.2**
comp=Z,235nm,1.2s
PPT2 Papeete2 84.39 108 *e*S **S** **10 33 11.0 -1.5**
comp=Z,62µm,34.2s
PPT2 Papeete2 84.39 108 *e*LQ LQ 10 45 33.0
comp=Z,47µm,43.2s
PPT2 *e*LR LR 10 49 05.5
comp=Z,29µm,27.8s
PAE Paea 84.39 108 *e*P **P** **10 22 50.9 +1.9**
comp=Z,34nm,1.1s
PPTF Pamatai, Papee 84.40 108 P **P** **10 22 50.0 +0.8**
PPTF IAmb IAmb 10 22 52.8
comp=Z,268nm,1.1s
KTH Kantishna Hill 84.43 26 P **P** **10 22 48.5 +0.1**
KTH IAmb IAmb 10 23 08.2
comp=Z,614nm,1.3s
BPAW Bear Paw Mtn. 84.46 26 P **P** **10 22 48.6 +0.1**
SENK Senkaya-Erzuru 84.49 310 *e*P **P** **10 22 50.9 +1.5**
TIAR Tiarei 84.60 108 *e*P **P** **10 22 52.0 +1.8**
comp=Z,67nm,1.0s
CUT Chulitna 84.61 28 P **P** **10 22 48.9 -0.4**
baz=265,SNR=21
MLY Manley 84.67 25 P **P** **10 22 50.3 +0.7**
baz=264,SNR=60
MLY S **S** **10 33 14.5 +1.1**
baz=264
GURO Guroymak-BITLI 84.68 308 *e*P **P** **10 22 51.9 +1.6**
O22K Cooper Landing 84.70 30 P **P** **10 22 49.7 0.0**
baz=265,SNR=39
O22K S **S** **10 33 12.2 -1.6**
baz=265
O22K Cooper Landing 84.70 30 IAMs_20 IAMs_20 11 00 39.7
comp=Z,10µm,21.0s
TRF Thorofare Moun 84.70 27 IAMs_20 IAMs_20 10 54 01.6
comp=Z,13µm,22.0s
TVO Taravao 84.71 108 *e*P **P** **10 22 52.8 +2.1**
comp=Z,110nm,1.2s
RC01 Rabbit Creek A 84.74 29 P **P** **10 22 49.5 -0.5**
baz=265,SNR=110
RC01 S **S** **10 33 13.0 -1.2**
baz=265
SEW Seward 84.80 30 IAMs_20 IAMs_20 10 53 59.5
comp=Z,12µm,22.0s
TBI Tubuai 84.93 114 *e*P **P** **10 22 53.5 +1.8**
comp=Z,634nm,1.1s
TBI Tubuai 84.93 114 *e*S **S** **10 33 17.4 -0.2**
comp=Z,20µm,38.8s
TBI Tubuai 84.93 114 *e*LQ LQ 10 45 47.5
comp=Z,28µm,43.0s
TBI *e*LR LR 10 49 22.7
comp=Z,28µm,31.0s
BATM Batumi 85.01 311 ⇓P **P** **10 22 52.5 +0.7**
BATM Batumi 85.01 311 *e*P **P** **10 22 52.5 +0.7**
COLD Coldfoot 85.11 23 P **P** **10 22 52.6 +0.9**
baz=264,SNR=134
COLD S **S** **10 33 19.0 +1.3**
baz=264
COLD Coldfoot 85.11 23 IAmb IAmb 10 23 14.9
comp=Z,208nm,0.9s
BWN Browne 85.13 26 IAmb IAmb 10 23 22.5
comp=Z,497nm,1.1s
VRTB Varto-Mus 85.14 309 *e*P **P** **10 22 54.7 +2.0**
GHO Glory Hole Cre 85.19 28 IAmb IAmb 10 23 09.5
comp=Z,525nm,1.1s
I23K Minto, Yukon-K 85.26 25 P **P** **10 22 53.1 +0.7**
baz=265,SNR=61
I23K S **S** **10 33 19.4 +0.2**
baz=265
I23K Minto, Yukon-K 85.26 25 IAmb IAmb 10 23 18.2
comp=Z,420nm,1.3s
VRH Novokhopyorsk 85.30 321 *e*P **P** **10 22 52.3 -0.6**
VRH *e*S **S** **10 33 17.5 -2.6**
VRH pmax pmax
comp=Z,1µm,1.7s
VRH pmax pmax
comp=Z,2µm,1.4s
VRH smax smax
comp=N,2µm,1.5s
VRH MLR MLR
comp=Z,21µm,26.0s
MCK McKinley 85.33 26 P **P** **10 22 52.9 0.0**
baz=266,SNR=61
MCK S **S** **10 33 17.8 -2.2**
baz=266
NEA2 Nenana 85.34 25 P **P** **10 22 52.7 -0.2**
baz=265,SNR=36
NEA2 S **S** **10 33 20.1 0.0**
baz=265
RND Reindeer 85.34 27 P **P** **10 22 52.5 -0.5**
RND pmax pmax
comp=Z,296nm,1.0s
RND Reindeer 85.34 27 P **P** **10 22 52.5 -0.5**
RND IAmb IAmb 10 23 09.1
comp=Z,296nm,1.0s
RND IAMs_20 IAMs_20 10 56 28.4
comp=Z,10µm,22.0s
KNK Knik Glacier 85.38 29 IAMs_20 IAMs_20 10 54 38.8
comp=Z,9µm,21.0s
KARO Karliova-Bingo 85.46 309 *e*P **P** **10 22 55.7 +1.4**
SML Sawmill 85.47 28 IAMs_20 IAMs_20 11 02 33.0
comp=Z,9µm,21.0s
TOLK Toolik Lake Re 85.48 21 P **P** **10 22 54.5 +0.9**
baz=265,SNR=101
TOLK S **S** **10 33 22.1 +0.6**
baz=265
TOLK Toolik Lake Re 85.48 21 IAmb IAmb 10 23 18.0
comp=Z,236nm,1.1s
TEND Ethiopian Broa 85.65 282 *e*P **P** **10 22 58.0 +2.5**
TEND *e*S **S** **10 33 26.6 +1.5**
BNGB Bingl 85.74 309 *e*P **P** **10 22 56.9 +1.3**
WRH Wood River Hil 85.75 26 IAMs_20 IAMs_20 11 02 48.3
comp=Z,9µm,21.0s
PMOR Pomariorio Ree 85.83 105 *e*P **P** **10 22 58.3 +2.0**
comp=Z,482nm,1.2s
MEH Mehetia 85.84 108 *e*P **P** **10 22 57.9 +1.5**
comp=Z,64nm,1.1s
YEDI Yedisu-Bingol 85.85 309 *e*P **P** **10 22 57.5 +1.3**
TCOL CIGO, UAF Yank 85.87 25 P **P** **10 22 54.9 -0.6**
baz=266,SNR=10
TCOL S **S** **10 33 24.0 -1.2**
baz=266
TCOL CIGO, UAF Yank 85.87 25 P **P** **10 22 54.7 -0.8**
COLA College 85.88 25 P **P** **10 22 55.0 -0.5**
COLA pmax pmax
comp=Z,137nm,1.3s
COLA College 85.88 25 P **P** **10 22 55.0 -0.5**
CCB Clear Creek Bu 85.88 25 IAMs_20 IAMs_20 11 02 50.8
comp=Z,9µm,22.0s
MAZI Mazidag 85.92 307 *e*P **P** **10 22 57.2 +0.7**
SCM Sheep Creek Mo 85.95 28 IAMs_20 IAMs_20 11 01 13.6
comp=Z,11µm,22.0s
DHY Denali Highway 85.99 27 P **P** **10 22 56.2 -0.2**
DHY IAmb IAmb 10 23 15.5
comp=Z,455nm,1.7s
DHY IAMs_20 IAMs_20 10 57 31.8
comp=Z,11µm,22.0s
POKR Poker Plat Res 86.07 25 P **P** **10 22 55.6 -0.9**
baz=267,SNR=10
POKR S **S** **10 33 26.8 -0.4**
baz=267
VAH Vaihoa 86.10 105 *e*P **P** **10 22 59.3 +1.7**
comp=Z,261nm,1.2s
DYBB Diyarbakir 86.16 308 *e*P **P** **10 22 58.7 +1.0**
HDA Harding Lake 86.24 26 P **P** **10 22 56.7 -0.7**
baz=267,SNR=26
HDA S **S** **10 33 26.4 -2.5**
baz=267
HDA S **S** **10 33 26.4 -2.5**
baz=267
IL31 86.28 25 P **P** **10 22 56.5 -1.0**
ILAR Eielson Array 86.28 25 P **P** **10 22 57.3 -0.3**
comp=Z,27nm,0.7s,baz=231,slow=5.3,SNR=131
ILAR PP **PP** **10 26 17.1 -1.6**
comp=Z,6.6nm,0.9s,baz=260,slow=6.7,SNR=2.5
ILAR S **SKSac** **10 33 18.7 -1.3**

	comp=Z,1.1nm,0.9s,baz=253,slow=5.8,SNR=1.3									
ILAR					PKKP	**PKKPdf**	**10 40 49.5**	**-1.4**		
	comp=Z,0.9nm,0.8s,baz=329,slow=0.4,SNR=4.7									
ILAR					PKKPbc	**PKKPbc**	**10 40 56.8**	**-1.4**		
	comp=Z,14nm,1.0s,baz=51,slow=1.8,SNR=21									
ILAR					PKPPKP	**P'P'df**	**10 48 55.9**	**-6.7**		
	comp=Z,5.2nm,1.1s,baz=97,slow=0.6,SNR=8.7									
ILAR	**Eielson Array**	**86.28**	**25**		P	**P**	**10 22 56.3**	**-1.3**		
HIN	**Hinchinbrook I**	**86.29**	**30**		P	**P**	**10 22 57.9**	**+0.2**		
HIN					IAmb	IAmb	10 23 06.0			
	comp=Z,291nm,0.8s									
HIN					IAMs_20	IAMs_20	11 01 49.7			
	comp=Z,11μm,22.0s									
FID	**Port Fidalgo**	**86.31**	**29**		IAMs_20	IAMs_20	10 54 57.8			
	comp=Z,9μm,22.0s									
Q23K	**Middleton Isla**	**86.33**	**31**		P	**P**	**10 22 58.2**	**+0.3**		
	baz=268									
KTUT	**Trabzon**	**86.46**	**311**	⇑	P	**P**	**10 23 00.7**	**+1.8**		
KTUT	**Trabzon**	**86.46**	**311**	*e*	P	**P**	**10 22 59.6**	**+0.7**		
ERZN	**Erzincan**	**86.49**	**309**	*e*	P	**P**	**10 23 00.5**	**+1.2**		
SOC	**Sochi**	**86.50**	**313**	*c*	*i* P	**P**	**10 22 57.3**	**-1.8**		
SOC					*e*		10 26 18.5			
SOC					*e* PPP	PPP	10 28 12.8			
SOC					*i* S	**SKSac**	**10 33 20.7**	**-1.5**		
SOC					*e* SSS	SSS	10 42 50.5			
SOC					pmax	pmax				
	comp=Z,399nm,1.0s									
SOC					MLR	MLR				
	comp=Z,9μm,22.0s									
M24K	**Tolsona, Glenn**	**86.50**	**28**		P	**P**	**10 22 59.2**	**+0.4**		
	baz=268,SNR=32									
M24K					S	**S**	**10 33 34.6**	**+2.9**		
	baz=268									
M24K	**Tolsona, Glenn**	**86.50**	**28**		P	**P**	**10 22 59.4**	**+0.6**		
M24K					IAMs_20	IAMs_20	11 01 30.3			
	comp=Z,11μm,22.0s									
KLU	**Klutina**	**86.60**	**29**		IAMs_20	IAMs_20	10 55 02.0			
	comp=Z,10μm,22.0s									
EYAK	**Cordova Ski Ar**	**86.67**	**30**		P	**P**	**10 22 59.8**	**+0.3**		
EYAK					IAmb	IAmb	10 23 18.2			
	comp=Z,860nm,2.0s									
PTK	**Pertek**	**86.75**	**309**	*e*	P	**P**	**10 23 01.9**	**+1.2**		
KLMR	**Klimovskoe**	**86.82**	**331**	*c*	*i* P	**P**	**10 22 59.1**	**-1.1**		
KLMR					*e* S	**SKSac**	**10 33 22.8**	**-0.5**		
KLMR					pmax	pmax				
	comp=Z,906nm,1.4s									
KLMR					MLR	MLR				
	comp=Z,6μm,23.0s									
KLMR	**Klimovskoe**	**86.82**	**331**	⇑	*i* P	**P**	**10 22 59.1**	**-1.1**		
KLMR					*i* P	**P**	**10 22 59.1**	**-1.1**		
KLMR				⇓	*i* P	**P**	**10 22 59.1**	**-1.1**		
KLMR					AMP		10 23 08.2			
	comp=Z,906nm,1.4s									
KLMR					*e* S	**SKSac**	**10 33 22.8**	**-0.5**		
KLMR					*e* S	**SKSac**	**10 33 22.8**	**-0.5**		
KLMR					LQ	LQ	10 55 09.4			
KLMR					LQ	LQ	10 55 09.4			
KLMR					LR	LR	11 00 43.2			
KLMR					AMP		11 03 31.8			
	comp=Z,6μm,23.1s									
SVRC	**Sivrice-ELAZID**	**86.82**	**308**	*e*	P	**P**	**10 23 02.1**	**+1.1**		
VORD	**Divnogorie**	**86.82**	**321**	*e*	P	**P**	**10 23 00.3**	**-0.2**		
VORD					*e* S	**S**	**10 33 33.4**	**-1.6**		
VORD					pmax	pmax				
	comp=Z,440nm,0.9s									
VORD					pmax	pmax				
	comp=Z,540nm,1.2s									
VORD					smax	smax				
	comp=N,1μm,2.4s									
PAX	**Paxson**	**86.85**	**27**		P	**P**	**10 23 00.5**	**0.0**		
PAX					pmax	pmax				
	comp=Z,142nm,1.0s									
PAX	**Paxson**	**86.85**	**27**		P	**P**	**10 23 00.5**	**0.0**		
VORR	**Voronezh**	**86.88**	**321**	⇓	*i* P	**P**	**10 22 59.0**	**-1.7**		
VORR					pmax	pmax				
	comp=Z,1μm,1.4s									
VSR	**Storozhevoye**	**86.90**	**321**		*e* P	**P**	**10 23 00.2**	**-0.7**		
VSR					*e* S	**S**	**10 33 33.9**	**-1.9**		
VSR					pmax	pmax				
	comp=Z,600nm,1.1s									
VSR					pmax	pmax				
	comp=Z,2μm,2.0s									
VSR					smax	smax				
	comp=N,820nm,1.8s									
VSR					MLR	MLR				
	comp=Z,7μm,26.0s									
ANKE	**Ethiopia-Afar**	**86.96**	**279**		*e* P	**P**	**10 23 07.1**	**+4.7**		
ANKE					*e* S	**S**	**10 33 45.1**	**+6.5**		
FYU	**Fort Yukon**	**87.03**	**24**		IAmb	IAmb	10 23 25.9			
	comp=Z,638nm,1.8s									
LPSR	**Galich'ya Gora**	**87.06**	**322**		*e* P	**P**	**10 23 01.4**	**-0.2**		
LPSR					*e* S	**S**	**10 33 33.9**	**-3.3**		
LPSR					pmax	pmax				
	comp=Z,340nm,0.8s									
LPSR					pmax	pmax				
	comp=Z,980nm,1.4s									
LPSR					smax	smax				
	comp=E,2μm,2.5s									
RIDG	**Independent Ri**	**87.14**	**26**		P	**P**	**10 23 02.5**	**+0.6**		
RIDG					IAMs_20	IAMs_20	10 58 21.2			
	comp=Z,9μm,20.0s									
RAGM	**Ragged Mountai**	**87.19**	**30**		IAMs_20	IAMs_20	10 57 38.7			
	comp=Z,13μm,22.0s									
URFA	**Urfa**	**87.21**	**307**		*e* P	**P**	**10 23 03.6**	**+0.8**		
N25K	**Chitina, Valde**	**87.24**	**29**		P	**P**	**10 23 02.5**	**0.0**		
	baz=270,SNR=28									
N25K					S	**S**	**10 33 40.4**	**+1.5**		
	baz=270									
ESPY	**Espiye-Giresun**	**87.24**	**311**		*e* P	**P**	**10 23 02.1**	**-0.7**		
BMAR	**Burnt Mountain**	**87.30**	**23**		P	**P**	**10 23 03.0**	**+0.5**		
KAIM	**Kayak Island**	**87.32**	**30**		IAmb	IAmb	10 23 12.3			
	comp=Z,358nm,0.9s									
ILIC	**ilic-Erzincan**	**87.38**	**309**		*e* P	**P**	**10 23 04.5**	**+0.8**		
HMT	**Hamilton**	**87.40**	**30**		IAmb	IAmb	10 23 20.6			
	comp=Z,682nm,1.8s									
HMT					IAMs_20	IAMs_20	10 57 44.1			
	comp=Z,15μm,22.0s									
DOT	**Dot Lake**	**87.49**	**27**		P	**P**	**10 23 02.7**	**-0.8**		
DOT					IAMs_20	IAMs_20	10 57 48.4			
	comp=Z,15μm,22.0s									
MALT	**Malatya**	**87.51**	**308**		*e* P	**P**	**10 23 05.2**	**+0.9**		
SCRK	**Sand Creek**	**87.53**	**26**		P	**P**	**10 23 03.5**	**-0.3**		
	baz=270,SNR=24									
SCRK					S	**S**	**10 33 43.6**	**+2.0**		
	baz=270									
TMCR	**Tamitsa**	**87.53**	**334**		*e* P	**P**	**10 23 02.4**	**-1.2**		
TMCR					*e* S	**SKSac**	**10 33 27.0**	**-0.6**		
TMCR					pmax	pmax				
	comp=Z,267nm,1.0s									
GLB	**Gilahina Butte**	**87.62**	**29**		IAmb	IAmb	10 23 24.6			
	comp=Z,212nm,1.1s									
MENT	**Mentasta**	**87.65**	**27**		P	**P**	**10 23 04.7**	**+0.4**		
VRDI	**Verde Repeater**	**87.79**	**29**		IAMs_20	IAMs_20	10 55 57.4			
	comp=Z,10μm,21.0s									
MOS	**Moscow**	**87.80**	**326**		*e* P	**P**	**10 23 03.0**	**-2.1**		
MOS					*e*		10 33 28.7			
MOS					*e* S	**S**	**10 33 40.7**	**-3.6**		
MOS					*e* PS	**PnS**	**10 34 40.6**	**-10**		
MOS					pmax	pmax				
	comp=Z,435nm,1.3s									
MOS					MLR	MLR				
	comp=N,9μm,24.0s									
MOS					MLR	MLR				
	comp=E,10μm,24.0s									
MOS					MLR	MLR				
	comp=Z,16μm,24.0s									
L26K	**Log Cabin Wild**	**87.82**	**27**		P	**P**	**10 23 05.7**	**+0.6**		
	baz=271,SNR=53									
L26K					S	**S**	**10 33 46.0**	**+1.7**		
	baz=271									
AAE	**Adis Abeba**	**87.94**	**279**		*i* P	**P**	**10 23 08.6**	**+1.6**		
AAE					*i* S	**S**	**10 33 43.0**	**-4.8**		
AAE	**Adis Abeba**	**87.94**	**279**		*i* P	**P**	**10 23 08.6**	**+1.6**		
AAE					*i* S	**S**	**10 33 43.0**	**-4.8**		
MCARA	**McCarthy VSAT**	**88.00**	**29**		P	**P**	**10 23 06.0**	**+0.1**		
MCARA					IAmb	IAmb	10 23 31.7			
	comp=Z,143nm,0.9s									
FURI	**Furi**	**88.03**	**279**		IAMs_20	IAMs_20	11 04 27.1			
	comp=Z,12μm,22.0s									
TGL	**Tana Glacier**	**88.10**	**29**		P	**P**	**10 23 05.9**	**-0.7**		
TGL					IAmb	IAmb	10 23 45.3			
	comp=Z,190nm,1.1s									
ANN	**Anapa**	**88.13**	**315**	*c*	*i* P	**P**	**10 23 07.2**	**+0.3**		
ANN					*e* PP	**pP**	**10 23 15.1**	**-4.5**		
ANN					*e*		10 26 34.7			
ANN					*e*		10 33 46.1			
ANN					pmax	pmax				
	comp=Z,648nm,1.4s									
ANN					pmax	pmax				
	comp=Z,2μm,2.0s									
ANN					MLR	MLR				
	comp=N,23μm,25.0s									
ANN					MLR	MLR				
	comp=Z,20μm,25.0s									
RSDY	**Resadiye-TOKAT**	**88.32**	**310**		*e* P	**P**	**10 23 08.4**	**+0.4**		
ISLE	**Juniper Island**	**88.35**	**30**		IAmb	IAmb	10 23 28.5			
	comp=Z,169nm,1.1s									
ISLE					IAMs_20	IAMs_20	11 03 16.2			
	comp=Z,9μm,22.0s									
K27K	**Chicken**	**88.37**	**26**		P	**P**	**10 23 08.4**	**+0.7**		
	baz=272									
K27K					S	**S**	**10 33 51.4**	**+2.0**		
	baz=272									
K27K	**Chicken**	**88.37**	**26**		P	**P**	**10 23 08.5**	**+0.9**		
K27K					IAmb	IAmb	10 23 13.7			
	comp=Z,193nm,0.8s									
OBN	**Obninsk**	**88.42**	**325**		P	**P**	**10 23 07.3**	**-0.7**		
	comp=Z,39nm,0.8s,baz=47,slow=1.8,SNR=63									
OBN					S	**SKSac**	**10 33 30.0**	**-3.2**		
	comp=Z,5.7nm,0.4s,baz=143,slow=20,SNR=1.5									
OBN	**Obninsk**	**88.42**	**325**	⇑	P	**P**	**10 23 07.4**	**-0.7**		
OBN	**Obninsk**	**88.42**	**325**	*ce*	P	**P**	**10 23 07.3**	**-0.7**		
OBN					*e* SP	**pP**	**10 23 16.9**	**-3.8**		
OBN					*i* S	**SKSac**	**10 33 32.4**	**-0.9**		
OBN					*i*		10 33 47.8			
OBN					*i* PS	**PnS**	**10 34 50.8**	**-7.1**		
OBN					pmax	pmax				
	comp=Z,676nm,1.6s									
OBN					MLR	MLR				
	comp=Z,18μm,24.0s									
OBN	**Obninsk**	**88.42**	**325**		P	**P**	**10 23 07.9**	**-0.1**		
GAZ	**Gaziantep**	**88.50**	**307**	*e*	P	**P**	**10 23 09.5**	**+0.6**		
GAZ	**Gaziantep**	**88.50**	**307**		P	**P**	**10 23 09.6**	**+0.6**		
DILA	**Dilla**	**88.50**	**276**	*e*	P	**P**	**10 23 11.5**	**+2.0**		
DILA					*e* S	**S**	**10 33 49.1**	**-3.8**		
BCAR	**Beaver Creek A**	**88.53**	**27**		P	**P**	**10 23 08.6**	**+0.1**		
MESA	**MESA**	**88.56**	**30**		P	**P**	**10 23 09.7**	**+0.8**		
SVSK	**Karacayir**	**88.58**	**310**	*e*	P	**P**	**10 23 10.0**	**+0.9**		
YAH	**Yahtse**	**88.65**	**30**		P	**P**	**10 23 08.4**	**-0.9**		
BARN	**Barnard Glacie**	**88.67**	**29**		P	**P**	**10 23 09.1**	**-0.3**		
BARN					IAmb	IAmb	10 23 15.2			
	comp=Z,252nm,1.2s									
EGAK	**Eagle**	**88.74**	**25**		P	**P**	**10 23 09.7**	**+0.4**		
LVZ	**Lovozero**	**88.81**	**338**	*ce*	P	**P**	**10 23 07.5**	**-2.2**		
LVZ					pmax	pmax				
	comp=Z,315nm,1.7s									
LVZ					MLR	MLR				
	comp=Z,32μm,25.0s									
CTGM	**Chitina Glacie**	**88.83**	**29**		P	**P**	**10 23 10.4**	**+0.3**		
CTGM					IAmb	IAmb	10 23 23.2			
	comp=Z,186nm,1.0s									
TOKT	**Tokat**	**88.92**	**310**	*e*	P	**P**	**10 23 10.9**	**+0.1**		
KIBK	**Kibwezi**	**89.08**	**268**		P	**P**	**10 23 13.4**	**+1.3**		
	SNR=113									
SARI	**SarD1z-Kayseri**	**89.09**	**308**	*e*	P	**P**	**10 23 12.3**	**+0.5**		
KVT	**Kavak**	**89.27**	**311**	*e*	P	**P**	**10 23 13.1**	**+0.7**		
APA	**Apatity**	**89.31**	**337**	⇓	*i* P	**P**	**10 23 10.4**	**-1.5**		
APA					*i*		10 26 46.0			
APA					*i* PPP	PPP	10 28 42.0			
APA					*i*		10 33 38.0			
APA					*i* S	**S**	**10 33 56.0**	**-2.0**		
PCA	**Pinnacle**	**89.41**	**30**		P	**P**	**10 23 13.4**	**+0.7**		
BNN	**Bunyan**	**89.52**	**309**	*e*	P	**P**	**10 23 13.6**	**-0.2**		
DAWY	**Dawson**	**89.55**	**26**		IAMs_20	IAMs_20	11 07 01.7			
	comp=Z,9μm,22.0s									
KOZT	**Kozan**	**89.59**	**307**	*e*	P	**P**	**10 23 14.1**	**+0.1**		
HWQ	**Hawqa**	**89.63**	**304**	*e*	P	**P**	**10 23 14.8**	**+0.4**		
CEYT	**Ceyhan**	**89.67**	**307**	*e*	P	**P**	**10 23 14.4**	**+0.1**		
KMBO	**Kilima Mbogo**	**89.82**	**269**		P	**P**	**10 23 18.4**	**+2.5**		
	comp=Z,87nm,1.0s,baz=65,slow=5.8,SNR=118									
KMBO					LR	LR	11 05 00.3			
	comp=Z,4μm,18.3s,baz=80,slow=36									
KMBO	**Kilima Mbogo**	**89.82**	**269**	*i*	P	**P**	**10 23 17.3**	**+1.4**		
	SNR=82									
KMBO	**Kilima Mbogo**	**89.82**	**269**		P	**P**	**10 23 17.1**	**+1.2**		
KMBO					P	**P**	**10 23 17.1**	**+1.2**		
KMBO	**Kilima Mbogo**	**89.82**	**269**		P	**P**	**10 23 16.6**	**+0.7**		
KMBO					pmax	pmax				
	comp=Z,407nm,1.4s									
KMBO	**Kilima Mbogo**	**89.82**	**269**		P	**P**	**10 23 16.6**	**+0.7**		
KMBO					IAmb	IAmb	10 23 27.6			
	comp=Z,407nm,1.4s									
DIKM	**Dikmen**	**89.83**	**311**	*e*	P	**P**	**10 23 13.7**	**-1.3**		
SHBL	**Chebaa**	**89.84**	**303**	*e*	P	**P**	**10 23 15.2**	**-0.2**		
BHL	**Bhannes**	**89.89**	**304**	*e*	P	**P**	**10 23 15.8**	**+0.3**		
MMAI	**Mount Meron Ar**	**90.14**	**303**		P	**P**	**10 23 17.6**	**+0.9**		
	comp=Z,65nm,0.9s,baz=87,slow=5.1,SNR=46									
MMAI					PKKPbc	**PKKPbc**	**10 40 48.5**	**+0.9**		
	comp=Z,0.7nm,0.2s,baz=146,slow=8.0,SNR=5.1									
KARA	**Karaisali**	**90.22**	**307**	*e*	P	**P**	**10 23 15.6**	**-1.3**		
CMRD	**Camardi-Nigde**	**90.25**	**308**	*e*	P	**P**	**10 23 18.4**	**+1.2**		
CORM	**Corum**	**90.39**	**310**	*e*	P	**P**	**10 23 17.1**	**-0.7**		
SIM	**Simferopol'**	**90.48**	**315**	*c*	*i* P	**P**	**10 23 17.6**	**-0.3**		
SIM					*e* S	**S**	**10 34 08.0**	**-1.8**		
SIM					pmax	pmax				
	comp=Z,234nm,0.6s									
HOPEN	**Hopen**	**90.61**	**347**		*e* P	**P**	**10 23 16.8**	**-1.1**		
HOPEN					IVmB_BB		10 23 19.1			
	comp=Z,4μm,2.1s									
HOPEN					*e* PP	**PP**	**10 26 52.8**	**-0.2**		
HOPEN					*e* SKSac	**SKSac**	**10 33 40.6**	**-4.8**		
HOPEN					IVMs_BB	IVMs_BB	11 01 00.0			
	comp=Z,4μm,3.3s									
EIL	**Elat**	**90.70**	**300**		S	S	10 33 59.5	-13		
	comp=Z,1.8nm,0.7s,baz=176,slow=15,SNR=1.5									
EIL					PKKPbc	PKKPbc	10 40 46.4	+0.4		
	comp=Z,8.3nm,1.0s,baz=6.3,slow=9.2,SNR=3.3									
EIL	**Elat**	**90.70**	**300**	*e*	P	**P**	**10 23 19.9**	**+0.6**		
HYT	**Haines Junctio**	**90.71**	**29**		IAMs_20	IAMs_20	11 05 56.5			
	comp=Z,8μm,21.0s									
BZK	**Bozkurt**	**90.75**	**312**	⇑	P	**P**	**10 23 20.1**	**+0.9**		
BZK	**Bozkurt**	**90.75**	**312**	*e*	P	**P**	**10 23 18.8**	**-0.5**		
YAYX	**Yaylak**	**91.10**	**309**	*e*	P	**P**	**10 23 20.3**	**-0.8**		
CANT	**Cankiri**	**91.13**	**311**	*e*	P	**P**	**10 23 21.1**	**-0.1**		
SILI	**Silifke-Mersin**	**91.17**	**306**	*e*	P	**P**	**10 23 19.4**	**-1.9**		
BR131	**Keskin Array S**	**91.18**	**310**	*c*	*i* P	**P**	**10 23 20.1**	**-1.4**		
BR131	**Keskin Array S**	**91.18**	**310**		P	**P**	**10 23 20.3**	**-1.2**		
BRTR	**Keskin Array B**	**91.18**	**310**		P	**P**	**10 23 21.0**	**-0.5**		
	comp=Z,7.0nm,0.5s,baz=114,slow=5.5,SNR=31									
BRTR					PP	**PP**	**10 26 58.1**	**-0.7**		
	comp=Z,6.3nm,0.7s,baz=95,slow=8.0,SNR=2.8									
BRTR					PKKPbc	**PKKPbc**	**10 40 45.4**	**0.0**		
	comp=Z,6.0nm,0.9s,baz=204,slow=2.7,SNR=10									
BRTR					PKPPKP	**P'P'df**	**10 48 52.0**	**-3.0**		
	comp=Z,2.0nm,0.8s,baz=186,slow=4.8,SNR=4.6									
BRTR					LR	LR	11 11 34.1			
	comp=Z,2μm,20.6s,baz=98,slow=40									
BRTR	**Keskin Array B**	**91.18**	**310**	*e*	P	**P**	**10 23 20.3**	**-1.2**		
BRTR	**Keskin Array B**	**91.18**	**310**		P	**P**	**10 23 20.1**	**-1.4**		
SYO	**Syowa Base**	**91.18**	**201**	⇓	*i* P	**P**	**10 23 19.4**	**-1.2**		
SYO	**Syowa Base**	**91.18**	**201**	⇓	*i* PcP	**P**	**10 23 20.5**	**-0.1**		
SYO	**Syowa Base**	**91.18**	**201**	⇓	*i* pP	pP	10 23 31.4	-2.0		
YESY	**Yesilyurt**	**91.23**	**308**	*e*	P	**P**	**10 23 21.4**	**-0.3**		
SERE	**Serefiikochisa**	**91.29**	**309**	*e*	P	**P**	**10 23 21.4**	**-0.6**		
KEBE	**Keben-Mersin**	**91.34**	**306**	*e*	P	**P**	**10 23 22.0**	**-0.2**		
KEV	**Kevo**	**91.36**	**340**		P	**P**	**10 23 20.3**	**-1.1**		
KEV					pmax	pmax				
	comp=Z,105nm,0.9s									
KEV	**Kevo**	**91.36**	**340**		P	**P**	**10 23 20.3**	**-1.1**		
KEV					IAMs_20	IAMs_20	11 10 15.7			
	comp=Z,10μm,22.0s									
IKL	**Isikli**	**91.37**	**306**	*e*	P	**P**	**10 23 21.9**	**-0.4**		
SULT	**Sultanhani-AKS**	**91.38**	**308**	*e*	P	**P**	**10 23 22.0**	**-0.4**		
INK	**Inuvik**	**91.40**	**22**		P	**P**	**10 23 21.4**	**-0.2**		
	comp=Z,71nm,1.1s,baz=276,slow=5.5,SNR=48									
INK					PKKPbc	**PKKPdf**	**10 40 40.2**	**-1.7**		
	comp=Z,20nm,0.8s,baz=134,slow=5.0,SNR=13									
INK					LR	LR	11 04 48.8			
	comp=Z,4μm,21.8s,baz=268,slow=36									
INK	**Inuvik**	**91.40**	**22**		P	**P**	**10 23 21.5**	**-0.2**		
INK					pmax	pmax				
	comp=Z,84nm,1.0s									
INK	**Inuvik**	**91.40**	**22**		P	**P**	**10 23 21.5**	**-0.2**		
PUL	**Pulkovo**	**91.44**	**330**	*ce*	P	**P**	**10 23 22.6**	**+0.6**		
PUL					pmax	pmax				
	comp=Z,264nm,0.4s									
PUL					MLR	MLR				
	comp=Z,26μm,24.0s									
AKKU	**Akkuyu-Mersin**	**91.49**	**306**		*e* P	**P**	**10 23 21.9**	**-0.9**		
LODK	**Lodwar**	**91.53**	**273**		P	**P**	**10 23 25.2**	**+1.6**		
	SNR=32									
TEVE	**Tevekalti-Mers**	**91.56**	**306**	*e*	P	**P**	**10 23 23.3**	**+0.1**		
AFSR	**Afar-Bala (An**	**91.64**	**309**	*e*	P	**P**	**10 23 23.1**	**-0.5**		
KURC	**Kurucasile-Bar**	**91.70**	**312**	*e*	P	**P**	**10 23 23.5**	**-0.2**		
BERE	**Bereket-Mersin**	**91.74**	**306**	*e*	P	**P**	**10 23 23.8**	**-0.4**		
CSS	**Mathiatis**	**91.75**	**305**	*e*	P	**P**	**10 23 23.5**	**-0.6**		
CSS	**Mathiatis**	**91.75**	**305**		P	**P**	**10 23 23.6**	**-0.4**		
CSS					IAmb	IAmb	10 23 31.6			
	comp=Z,220nm,0.9s									
LOD	**Lodumlu**	**91.84**	**310**	*e*	P	**P**	**10 23 23.1**	**-1.4**		
TEKE	**Tekeli-Mersin**	**91.84**	**306**	*e*	P	**P**	**10 23 23.8**	**-0.7**		
ARD3	**ARCESS Array S**	**91.90**	**340**		P	**P**	**10 23 23.0**	**-1.0**		
ARD3					IAmb	IAmb	10 23 24.9			
	comp=Z,214nm,0.9s									
ARD2	**ARCESS Array S**	**91.90**	**340**		P	**P**	**10 23 22.6**	**-1.4**		
ARD2					IAmb	IAmb	10 23 25.0			
	comp=Z,226nm,0.9s									
ARD4	**ARCESS Array S**	**91.90**	**340**		P	**P**	**10 23 22.6**	**-1.4**		
ARD4					IAmb	IAmb	10 23 25.4			
	comp=Z,212nm,0.8s									
ARC2	**ARCESS Array S**	**91.91**	**340**		P	**P**	**10 23 23.2**	**-0.9**		
ARC2					IAmb	IAmb	10 23 25.0			
	comp=Z,223nm,0.8s									
ARC3	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,203nm,0.8s									
ARB1	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,229nm,0.8s									
ARB3	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.0			
	comp=Z,202nm,0.8s									
ARC1	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,226nm,0.8s									
ARA0	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,217nm,0.8s									
ARA0	**ARCESS Array S**	**91.91**	**340**	*e*	P	**P**	**10 23 23.5**	**-0.5**		
ARA1	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,218nm,0.8s									
ARA2	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,211nm,0.8s									
ARC4	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.0			
	comp=Z,202nm,0.8s									
ARCES	**ARCESS Array B**	**91.91**	**340**		P	**P**	**10 23 23.1**	**-1.0**		
	comp=Z,178nm,0.8s,baz=76,slow=5.1,SNR=146									
ARCES					PP	**PP**	**10 27 04.6**	**+1.1**		
	comp=Z,14nm,0.9s,baz=105,slow=10,SNR=2.7									
ARCES					PKiKP	**PKiKP**	**10 28 16.3**	**+2.0**		
	comp=Z,13nm,1.0s,baz=90,slow=1.8,SNR=3.9									
ARCES					PKKPbc	**PKKPdf**	**10 40 42.0**	**+0.9**		
	comp=Z,5.2nm,0.7s,baz=254,slow=2.8,SNR=11									
ARCES					LR	LR	11 11 02.8			
	comp=Z,6μm,19.0s,baz=55,slow=40									
ARD5	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.0			
	comp=Z,191nm,0.8s									
ARA3	**ARCESS Array S**	**91.91**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,205nm,0.8s									
ARB4	**ARCESS Array S**	**91.92**	**340**		P	**P**	**10 23 23.1**	**-1.0**		
ARB4					IAmb	IAmb	10 23 25.5			
	comp=Z,202nm,0.8s									
ARB5	**ARCESS Array S**	**91.92**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,212nm,0.8s									
ARC5	**ARCESS Array S**	**91.92**	**340**		IAmb	IAmb	10 23 25.5			
	comp=Z,199nm,0.8s									
ARC7	**ARCESS Array S**	**91.92**	**340**		IAmb	IAmb	10 23 25.5		

comp=Z,19µm,27.4s
TAOE Nuku Hiva Isla 93.13 99 *e*LQ LQ 10 49 14.0
comp=Z,8µm,29.7s
TAOE *e*LR LR 10 53 12.2
comp=Z,21µm,26.4s
TAOE Nuku Hiva Isla 93.13 99 IAMs_20 IAMs_20 11 02 51.4
comp=Z,12µm,21.0s
CIFT Ciftеler, Eski 93.19 309 *e*P **P** **10 23 29.7 -1.0**
AKASG Malin Array Be 93.21 321 P **P** **10 23 29.5 -0.9**
comp=Z,71nm,0.8s,baz=65,slow=4.7,SNR=59
AKASG S **SKSac** **10 34 01.6 +0.6**
comp=Z,0.2nm,0.3s,baz=69,slow=6.3,SNR=1.4
AKASG PKKPbc **PKKPdf** **10 40 37.4 -1.0**
comp=Z,2.2nm,0.6s,baz=268,slow=3.1,SNR=8.8
AKASG LR LR 11 08 57.7
comp=Z,6µm,21.9s,baz=45,slow=38
AKASG Malin Array Be 93.21 321 P **P** **10 23 28.6 -1.8**
AKBB Malin Array Si 93.21 321 *e*P **P** **10 23 28.9 -1.5**
AKBB Malin Array Si 93.21 321 P **P** **10 23 29.4 -1.0**
FIA1 FINESS Array S 93.25 332 P **P** **10 23 30.1 -0.2**
FINES FINESS Array B 93.25 332 P **P** **10 23 29.6 -0.8**
comp=Z,38nm,0.9s,baz=92,slow=5.7,SNR=60
FINES PKKPbc **PKKPdf** **10 40 38.2 -0.4**
comp=Z,7.4nm,1.0s,baz=26,slow=4.9,SNR=6.6
FINES PKKP **PKKPbc** **10 40 43.2 +2.6**
comp=Z,3.1nm,0.7s,baz=207,slow=3.8,SNR=5.3
FINES FINESS Array B 93.25 332 *i* P **P** **10 23 30.0 -0.4**
FINES pmax pmax
comp=Z,38nm,0.9s
FINES FINESS Array B 93.25 332 P **P** **10 23 28.2 -2.2**
SRCK Saricakaya, És 93.46 310 *e*P **P** **10 23 29.2 -2.7**
VSU Vasula 93.46 329 *e*P **P** **10 23 31.5 +0.1**
VSU Vasula 93.46 329 *i* P **P** **10 23 29.3 -2.1**
VSU pmax pmax
comp=Z,194nm,1.0s
MICGM Minsk 93.48 325⇑ *e*P **P** **10 23 28.0 -3.6**
MICGM ⇑ *e*P **PcP** **10 23 31.0 -1.1**
MICGM PM 10 23 33.0
comp=Z,0.4nm,1.0s
MICGM PM 10 23 38.0
comp=Z,3.4nm,6.0s
MICGM *e*PP **PP** **10 27 14.0 -2.2**
MICGM *e*PPP PPP 10 29 08.0
MICGM *e*S **S** **10 34 29.0 -7.3**
MICGM SM 10 34 42.0
comp=E,7.5nm,4.0s
MICGM *e*PS **PS** **10 35 48.0 -7.2**
MICGM *e*SS **SS** **10 41 04.0 +10**
MICGM *e*SSS SSS 10 44 22.0
MICGM *e*LQ LQ 10 55 14.0
MICGM *e*LR LR 11 00 44.0
MICGM LRM MLR 11 07 20.0
comp=Z,14nm,20.0s
MICGM LRM MLR 11 07 20.0
comp=Z,8.6nm,20.0s
MICGM LRM MLR 11 07 22.0
comp=E,12nm,20.0s
MICGM LRM MLR 11 07 24.0
comp=E,9.4nm,20.0s
MNK Minsk 93.48 325⇑ *e*P **P** **10 23 28.0 -3.6**
MNK *e* 10 27 14.0
MNK *e*S SKSac 10 34 29.0 +27
MNK *e* 10 35 48.0
MNK *e* 10 41 04.0
MNK pmax pmax
comp=Z,370nm,1.0s
MNK pmax pmax
comp=Z,3µm,6.0s
MNK smax smax
comp=E,11µm,4.0s
MNK smax smax
comp=E,8µm,4.0s
MNK MLR MLR
comp=Z,14µm,20.0s
MNK MLR MLR
comp=Z,9µm,20.0s
MNK MLR MLR
comp=E,12µm,20.0s
MNK MLR MLR
comp=E,9µm,20.0s
GULT Gulveren 93.50 311 *e*P **P** **10 23 32.2 0.0**
SAUV Serdivan-Sakar 93.61 311 *e*P **P** **10 23 31.9 -0.6**
SHUT Suhut-Afyon 93.67 309 *e*P **P** **10 23 32.1 -0.9**
BCK Bucak 93.75 308 *e*P **P** **10 23 31.2 -2.1**
ISP Isparta 93.77 308 *e*P **P** **10 23 31.7 -1.8**
ISP Isparta 93.77 308 IAmb IAmb 10 23 54.6
comp=Z,208nm,1.3s
KIS Kishinev 93.96 317⇑ *i*P **P** **10 23 32.0 -2.0**
comp=Z,1µm,8.2s
KIS Kishinev 93.96 317 *e*PP PP 10 27 17.0 -3.2
KIS *e*SKS **SKSac** **10 34 04.0 -1.3**
KIS *e*SKKS **SKKSac** **10 34 23.0 -2.8**
KIS *e*S **S** **10 34 36.0 -4.9**
comp=Z,2µm,16.0s
KIS Kishinev 93.96 317 *e*PS PS 10 36 01.0 +0.2
KIS *e*LQ LQ 10 55 24.0
comp=Z,6µm,41.0s
KIS *e*LR LR 11 06 04.0
comp=Z,6µm,25.0s
KIS Kishinev 93.96 317 *c i*P **P** **10 23 32.0 -2.0**
KIS *e* 10 27 17.0
KIS *e* 10 34 04.0
KIS *e*S **S** **10 34 36.0 -4.9**
KIS *e*PS **PS** **10 36 01.0 +0.2**
KIS pmax pmax
comp=Z,1µm,8.2s
KIS pmax pmax
comp=N,2µm,16.0s
MILM Milestii Mici 93.97 317⇑ *i*P **P** **10 23 34.0 0.0**
KORT Korkueli 93.98 307 *e*P **P** **10 23 33.2 -1.3**
IDID Didziasalis 94.00 326 *e*P **P** **10 23 34.1 +0.2**
CAVI Cavuskoy 94.04 310 *e*P **P** **10 23 33.6 -1.0**
NACGM Naroch 94.05 325 *e*P **P** **10 23 33.0 -1.2**
NACGM *e*P **P** **10 23 33.0 -1.2**
NACGM *e*PP **PP** **10 27 18.0 -2.6**
NACGM *e*PPP PPP 10 29 06.0
NACGM *e*SKS S 10 34 06.0 -35
NACGM *e*S **ScS** **10 34 42.0 -0.6**
NACGM *e*PS PS 10 35 46.0 -15
NACGM *e*SS **SS** **10 41 02.0 +0.4**
NACGM *e*SSS SSS 10 44 32.0
NACGM *e*LQ LQ 10 55 00.0
NACGM *e*LR LR 11 00 46.0
NACGM LRM MLR 11 05 00.0
comp=Z,33nm,30.0s
ADVT Abdulvahap 94.09 311 *e*P **P** **10 23 33.6 -1.2**
SORM Soroca 94.12 318⇓ *i*P **P** **10 23 35.0 +0.3**
TRO Tromso 94.12 341⇑ *i*P **P** **10 23 33.8 -0.4**
TRO IVmB_BB 10 23 34.1
comp=Z,3µm,2.9s
TRO *e*PP **PP** **10 27 22.3 +1.6**
TRO *e*SKSac **SKSac** **10 34 06.7 +1.5**
TRO *e*SS **SS** **10 41 04.8 +2.9**
TRO IVMs_BB IVMs_BB 11 06 23.1
comp=Z,4µm,27.1s
TLCR 94.19 315⇑ P **P** **10 23 35.6 +0.5**
IZAR Zarasai 94.20 326 *e*P **P** **10 23 34.9 0.0**
IIGN Ignalina 94.28 326 *e*P **P** **10 23 35.1 -0.1**
ISAL Salakas 94.30 326 *e*P **P** **10 23 35.3 0.0**
ELL Elmali 94.36 307 *e*P **P** **10 23 35.4 -0.8**
ELL Elmali 94.36 307 P **P** **10 23 36.0 -0.2**
ELL pmax pmax
comp=Z,2µm,1.9s
ELL Elmali 94.36 307 P **P** **10 23 36.0 -0.2**
TVSB Tavsanli 94.42 310 *e*P **P** **10 23 35.6 -0.8**
C36M Paulatuk 94.47 20 P **P** **10 23 35.6 -0.2**
baz=288,SNR=60
C36M Paulatuk 94.47 20 P **P** **10 23 35.1 -0.7**
C36M IAmb IAmb 10 23 59.6
comp=Z,185nm,1.1s
H02S1 DAWSON INLET T 94.47 36 P **P** **10 23 37.2 +1.0**
GEDZ Gediz 94.50 309 *e*P **P** **10 23 35.7 -1.1**
GEMT Gemlik 94.51 311 *e*P **P** **10 23 35.9 -0.8**
TPGR Topolog 94.52 315⇑ P **P** **10 23 37.3 +0.7**
KLYT Kilyos 94.52 311 *e*P **P** **10 23 36.0 -0.7**
KAVV Kandilli-Istan 94.53 311 *e*P **P** **10 23 34.8 -1.9**
ISK Istanbul-Kandi 94.53 311 *e*P **P** **10 23 35.4 -1.3**
TIRR Tirgusor 94.57 315⇑ P **P** **10 23 37.5 +0.6**
AKAS Kas 94.66 306 *e*P **P** **10 23 34.2 -3.4**
CFR Carcaliu 94.67 315⇑ P **P** **10 23 37.8 +0.6**
VASR Vaslui 94.70 317⇑ P **P** **10 23 38.3 +0.9**
BGKT Bogazkoy 94.73 311 *e*P **P** **10 23 36.3 -1.3**
ARMT Armutlu 94.74 311 *e*P **P** **10 23 36.5 -1.3**
MDNY Mudanya-Bursa 94.75 311 *e*P **P** **10 23 37.4 -0.3**

TLBR Topalu 94.82 315⇑ P **P** **10 23 38.8 +0.8**
CAME Cameli-Denizli 94.83 307 *e*P **P** **10 23 37.3 -1.1**
SIMA Simav-Kutahya 94.83 309 *e*P **P** **10 23 37.1 -1.2**
DLBC Dease Lake 94.83 31 P **P** **10 23 38.6 +0.8**
comp=Z,77nm,0.9s,baz=281,slow=3.7,SNR=87
DLBC Dease Lake 94.83 31 P **P** **10 23 37.9 +0.1**
DLBC IAmb IAmb 10 23 42.6
comp=Z,154nm,1.2s
CTKS Kestanelik-??a 94.93 312 *e*P **P** **10 23 37.0 -1.5**
FETY Fethiye 95.03 307 *e*P **P** **10 23 37.9 -1.3**
ICOR Ion Corvin 95.06 314⇑ P **P** **10 23 40.1 +1.0**
KULA Kula-Manisa 95.15 309 *e*P **P** **10 23 38.9 -0.8**
SLVT Silivri 95.15 312 *e*P **P** **10 23 39.8 +0.2**
ALE Alert 95.19 1 IAMs_20 IAMs_20 11 11 07.2
comp=Z,8µm,20.0s
ODBI Odobesti 95.34 316⇑ P **P** **10 23 41.4 +1.1**
DALY Dalyan (Mula) 95.36 307 *e*P **P** **10 23 40.1 -0.5**
PRD Provadia 95.47 314 *i* P **P** **10 23 41.2 +0.2**
TESR Tescani 95.50 317⇑ P **P** **10 23 41.3 +0.2**
CRLT Corlu 95.52 311 *e*P **P** **10 23 40.7 -0.6**
PABE Paberze 95.52 326 *e*P **P** **10 23 41.4 +0.5**
EDC Edincik 95.53 311 *e*P **P** **10 23 40.4 -0.9**
VRI Vrincioaia 95.55 316⇑ P **P** **10 23 42.0 +0.7**
VRI Vrincioaia 95.55 316⇑ P **PKKPbc** **10 40 34.0 0.0**
VRI Vrincioaia 95.55 316 *e*P **P** **10 23 41.2 -0.1**
PHSR Pinarhisar 95.61 312 *e*P **P** **10 23 41.3 -0.4**
BALB Balikesir 95.61 310 *e*P **P** **10 23 40.7 -1.0**
PLOR Plostina 95.61 316⇑ P **P** **10 23 42.5 +0.9**
BISRR Bisoca 95.61 316⇑ P **P** **10 23 42.9 +1.2**
YER Yerkesik 95.61 307 *e*P **P** **10 23 41.9 0.0**
PRAR RASCA 95.65 318⇑ P **P** **10 23 42.8 +1.1**
TURN Turunc 95.69 307 *e*P **P** **10 23 41.3 -0.8**
MRMT Marmara Adasi 95.69 311 *e*P **P** **10 23 40.4 -1.8**
N2IH Innhavet 95.70 339⇑ *i*P **P** **10 23 41.0 -0.4**
ISR Istrita 95.80 316⇑ P **P** **10 23 43.3 +0.8**
BIZ Bicaz 95.80 317⇓ P **P** **10 23 42.4 0.0**
AYDB Zeytinkoy-Aydi 95.82 308 *e*P **P** **10 23 42.2 -0.7**
ARG Arkhangelos 95.85 307 *e*P **P** **10 23 42.2 -0.7**
MAR4 Marsite Statio 95.89 311 *e*P **P** **10 23 42.1 -1.0**
MAR2 Marsite Statio 95.89 311 *e*P **P** **10 23 42.4 -0.5**
NEHR Nehoiu 95.92 316⇓ P **P** **10 23 43.7 +0.7**
STEI Steigen 95.95 339⇑ *i*P **P** **10 23 42.0 -0.6**
STEI IVmB_BB 10 23 42.8
comp=Z,2µm,1.0s
STEI *e*PP **PP** **10 27 31.2 -3.7**
STEI *e*SKSac **SKSac** **10 34 13.6 -1.4**
STEI IVMs_BB IVMs_BB 11 05 36.0
comp=Z,6µm,28.1s
MLSB Milas 95.99 308 *e*P **P** **10 23 44.9 +1.3**
RKY Sarkoy-Tekirda 96.00 311 *e*P **P** **10 23 42.7 -0.8**
RAZG Razgrad 96.06 314⇑ P **P** **10 23 44.2 +0.5**
SULR 96.07 315⇓ P **P** **10 23 44.5 +0.9**
EUNU Eureka 96.10 6 P **P** **10 23 43.5 +0.3**
N2TV TVrnvik 96.13 339⇑ *i*P **P** **10 23 43.1 -0.3**
FAUS Fauske 96.14 339⇑ *i*P **P** **10 23 43.1 -0.4**
FAUS IVmB_BB 10 23 43.5
comp=Z,2µm,1.6s
FAUS *e*PP **PP** **10 27 38.4 +2.0**
FAUS *e*SKSac **SKSac** **10 34 16.1 +0.1**
FAUS *e*SS **SS** **10 41 31.3 +0.7**
FAUS IVMs_BB IVMs_BB 11 07 16.7
comp=Z,7µm,29.6s
SECR 96.14 316⇑ P **P** **10 23 45.4 +1.3**
EDRB Edirne 96.15 312 *e*P **P** **10 23 43.6 -0.6**
EDRB Edirne 96.15 312 P **P** **10 23 43.5 -0.6**
MLR Muntele Rosu 96.15 316 P **P** **10 23 43.9 -0.3**
comp=Z,43nm,0.8s,baz=321,slow=2.5,SNR=38
MLR S **SKSac** **10 34 15.8 -1.6**
comp=Z,25nm,1.2s,baz=164,slow=20,SNR=6.9
MLR PKKPbc **PKKPbc** **10 40 29.6 -3.0**
comp=Z,7.0nm,0.9s,baz=304,slow=1.4,SNR=4.0
MLR Muntele Rosu 96.15 316⇓ P **P** **10 23 44.0 -0.3**
MLR Muntele Rosu 96.15 316⇓ P **PKKPbc** **10 40 29.3 -3.3**
MLR Muntele Rosu 96.15 316 P **P** **10 23 42.4 -1.8**
MLR IAmb IAmb 10 24 12.2
comp=Z,104nm,0.9s
JMB Yambol 96.18 313 *i* P **P** **10 23 43.8 -0.4**
SUW Suwalki 96.28 325 *e*P **P** **10 23 44.5 +0.1**
SUW *e*SKSac **SKSac** **10 34 18.2 +0.8**
SUW *e*SP **SP** **10 36 18.5 -1.3**
SUW *e*SS **SS** **10 41 29.7 -3.7**
SUW *e*L L 11 05 58.2
comp=Z,19µm,30.0s
SUW Suwalki 96.28 325 P **P** **10 23 42.9 -1.5**
SUW pmax pmax
comp=Z,396nm,1.1s
SUW Suwalki 96.28 325 P **P** **10 23 42.9 -1.5**
SUW IAMs_20 IAMs_20 11 12 28.1
comp=Z,10µm,21.0s
BURAR Bucovina Array 96.28 318 P **P** **10 23 44.4 -0.3**
BUR08 Bucovina Ar. S 96.29 318 P **P** **10 23 44.2 -0.6**
BUR08 IAmb IAmb 10 23 58.0
comp=Z,90nm,0.9s
MBAR Mbarara 96.31 270 P **P** **10 23 46.9 +1.2**
MBAR P **P** **10 23 46.9 +1.2**
MBAR Mbarara 96.31 270 *i* P **P** **10 23 45.7 0.0**
MBAR pmax pmax
comp=Z,23nm,1.0s
MBAR Mbarara 96.31 270 P **P** **10 23 44.4 -1.3**
LPK Lapseki 96.36 311 *e*P **P** **10 23 44.4 -0.7**
GCAM G?zelcaml? 96.37 308 *e*P **P** **10 23 44.6 -0.6**
BODT Bodrum 96.39 307 *e*P **P** **10 23 45.3 -0.1**
BODT Bodrum 96.39 307 P **P** **10 23 47.2 +1.8**
BLCB Balcova 96.42 309 *e*P **P** **10 23 45.8 +0.4**
BLCB Balcova 96.42 309 P **P** **10 23 46.3 +0.9**
DKL Dikili 96.43 310 *e*P **P** **10 23 44.5 -0.9**
DOPR Dopca 96.46 317⇓ P **P** **10 23 45.2 -0.2**
LOF Lofoten 96.47 340⇑ P **P** **10 23 44.2 +0.9**
LOF *e*PP **PP** **10 27 41.4 +2.5**
LOF *e*SKSac **SKSac** **10 34 18.2 +0.5**
LOF *e*SS **SS** **10 41 39.0 +3.7**
LOF IVMs_BB IVMs_BB 11 05 50.3
comp=Z,4µm,30.0s
ERIK Erikli-Kesan 96.50 311 *e*P **P** **10 23 44.5 -1.2**
PBUR Paburge 96.52 327 *e*P **P** **10 23 44.8 -0.7**
SZH Strazhica 96.52 314 *i* P **P** **10 23 44.2 -1.6**
GELI Tayfur-Gelibol 96.57 311 *e*P **P** **10 23 44.9 -1.1**
LVV L'vov 96.64 321 *e*P **P** **10 23 45.1 -1.1**
LVV *e**PP **pwP** **10 24 02.1 0.0**
LVV *e* 10 27 47.1
LVV *e*PPP PPP 10 29 46.4
LVV *e* 10 34 16.2
LVV *e*S **S** **10 34 58.1 -5.9**
LVV *e*PS **PS** **10 36 25.6 -4.5**
LVV *e*SS **SS** **10 41 48.0 +9.3**
LVV pmax pmax
comp=Z,100nm,1.4s
KARP Karpathos 96.71 306 *e*P **P** **10 23 46.3 -0.6**
KARP Karpathos 96.71 306 P **P** **10 23 46.8 -0.1**
N2SV S_rvÿgen 96.75 340⇑ *i*P **P** **10 23 45.6 -0.6**
ENEZ Enez 96.76 311 *e*P **P** **10 23 45.8 -1.1**
EZN Ezine 96.77 310 *e*P **P** **10 23 46.0 -0.9**
EZN Ezine 96.77 310 P **P** **10 23 47.4 +0.5**
VOIR 96.78 316⇑ P **P** **10 23 47.1 0.0**
VOIR 96.78 316⇑ P **PKKPbc** **10 40 27.3 -3.5**
ALN Alexandroupoli 96.82 311 *e*P **P** **10 23 45.7 -1.4**
ALN Alexandroupoli 96.82 311 P **P** **10 23 46.9 -0.3**
ALN pmax pmax
comp=Z,88nm,1.3s
ALN Alexandroupoli 96.82 311 P **P** **10 23 46.9 -0.3**
ALN Alexandroupoli 96.82 311 P **P** **10 23 47.6 +0.5**
NBB30 Finnes 96.85 339⇑ *i*P **P** **10 23 46.1 -0.6**
MOR8 Moi Rana 96.89 338⇑ *i*P **P** **10 23 45.5 -1.4**
MOR8 IVmB_BB 10 23 46.2
comp=Z,1µm,1.7s
MOR8 *e*PP **PP** **10 27 42.6 +0.3**
MOR8 *e*SKSac **SKSac** **10 34 18.2 -1.9**
MOR8 *e*SS **SS** **10 41 39.4 -2.0**
MOR8 IVMs_BB IVMs_BB 11 07 36.7
comp=Z,8µm,26.1s
COPA Copaceanca 96.89 315⇑ P **P** **10 23 47.7 +0.3**
N2VA Vr_y 96.95 339⇑ *i*P **P** **10 23 46.4 -0.7**
ARCR ARCALIA 96.96 318⇑ P **P** **10 23 48.5 +0.8**
BOZC Bozcaada 96.97 310 *e*P **P** **10 23 46.4 -1.5**
GADA Gvkgeada 97.04 311 *e*P **P** **10 23 46.7 -1.5**
ARR Arges 97.08 316⇑ P Pdif 10 23 49.0 +0.6
ARR Arges 97.08 316⇑ P **PKKPbc** **10 40 26.6 -3.3**
RDO Rodhopi 97.16 312 *e*P **P** **10 23 47.2 -1.5**
RDO Rodhopi 97.16 312 P **P** **10 23 47.6 -1.1**
KDZ Kurdzhali 97.16 312 *e*P **P** **10 23 47.8 -0.9**
N2RO R_st 97.21 339⇑ *i*P **P** **10 23 47.8 -0.6**

KONS Konsvik 97.26 338 *e*P **P** **10 23 48.0 -0.5**
SMTH Samothraki Isl 97.27 311 P **P** **10 23 47.1 -2.2**
BBB Bella Bella 97.28 37 P Pdif 10 23 50.2 +1.1
comp=Z,51nm,0.9s,baz=271,slow=3.2,SNR=5.6
BBB Bella Bella 97.28 37 IAMs_20 IAMs_20 11 05 23.9
comp=Z,9µm,22.0s
STOK Stokkvaagen 97.36 338 *e*P **P** **10 23 48.6 -0.4**
STOK *e*SKSac **SKSac** **10 34 22.8 +0.4**
BMR Baia Mare 97.41 319⇑ P Pdif 10 23 50.4 +0.6
VLAD Vladila 97.49 315⇑ P Pdif 10 23 51.1 +0.9
KWP Kalwaria Pacla 97.52 321 *e*P Pdif 10 23 51.0 +0.8
KWP *e*SP SP 10 36 34.7 +1.1
KWP *e*L L 11 11 09.3
comp=Z,14µm,25.0s
KWP Kalwaria Pacla 97.52 321 P **P** **10 23 50.0 -0.2**
KWP pmax pmax
comp=Z,167nm,1.1s
KWP Kalwaria Pacla 97.52 321 P **P** **10 23 50.0 -0.2**
KWP IAmb IAmb 10 24 03.6
comp=Z,167nm,1.1s
CJR Cluj-Napoca 97.54 318⇑ P Pdif 10 23 51.6 +1.1
ZKR Zakros 97.54 306 *e*P **P** **10 23 49.6 -1.0**
PLD Plovdiv 97.61 313 *e*P **P** **10 23 49.7 -1.0**
PLD Plovdiv 97.61 313 *i* P **P** **10 23 49.8 -1.0**
STIA Sitia Lasithi 97.63 306 P Pdif 10 23 52.4 +1.4
LOT Lotru 97.67 316⇓ P Pdif 10 23 51.7 +0.5
LOT Lotru 97.67 316 *e*P **P** **10 23 50.7 -0.4**
RZN Rozhen 97.67 312 *i* P **P** **10 23 49.8 -1.5**
APE Apeiranthos 97.80 308 *e*P **P** **10 23 49.5 -2.3**
KOLS Kolonicke sedl 97.95 320 *e*S **S** **10 35 15.6 +0.3**
UZH Uzhgorod 98.00 320⇓ *i*P Pdif 10 23 53.1 +0.8
UZH *e* 10 24 01.5
UZH *i* 10 24 04.9
UZH *e* 10 27 56.6
UZH *e* 10 29 53.7
UZH *i* 10 34 27.5
UZH *i* S **S** **10 35 12.3 -3.4**
UZH *i* 10 36 40.9
UZH MLR MLR
comp=N,2µm,20.0s
UZH MLR MLR
comp=E,2µm,20.0s
UZH MLR MLR
comp=Z,700nm,20.0s
MPEP Malo Peshtene 98.08 314 *i* P **P** **10 23 52.8 0.0**
DRGR 98.12 318⇑ P Pdif 10 23 53.4 +0.4
DEV Deva 98.17 317⇑ P Pdif 10 23 54.4 +1.2
BEL Belsk 98.19 323 *e*Pdif **P** **10 23 52.9 -0.2**
BEL *e*SP SP 10 36 37.8 -2.9
BEL *e*L L 11 10 11.3
comp=Z,22µm,26.6s
SRE Strehaia 98.21 316⇑ P Pdif 10 23 54.6 +1.1
GZR Gura Zlata 98.36 316⇑ P Pdif 10 23 54.7 +0.5
GZR Gura Zlata 98.36 316⇑ P **PKKPbc** **10 40 26.5 +0.1**
MMB Musomiste 98.42 312 *i* P **P** **10 23 51.1 -3.3**
OUR Ouranopolis 98.46 311 *e*P **P** **10 23 53.7 -0.8**
CRVS Cervenica-Dubn 98.48 320 *e*P Pdif 10 23 54.7 +0.2
CRVS *e*S **S** **10 35 17.9 -1.9**
CRVS Cervenica-Dubn 98.48 320 *e*PDIFF Pdif 10 23 54.6 +0.1
NSS Namsos 98.48 337⇑ *i*P **P** **10 23 53.3 -0.8**
NSS IVmB_BB 10 23 54.0
comp=Z,612nm,1.6s
NSS *e*PP **PP** **10 27 50.9 -3.6**
NSS *e*SKSac **SKSac** **10 34 27.8 -0.4**
NSS *e*SS **SS** **10 42 09.4 +5.7**
NSS IVMs_BB IVMs_BB 11 10 02.7
comp=Z,9µm,24.3s
IDI Anoyia 98.59 306 S **SKSac** **10 34 25.2 -5.0**
comp=Z,10nm,1.0s,baz=28,slow=7.8,SNR=3.4
IDI PKKPbc PKKPbc 10 40 26.2 +0.8
comp=Z,30nm,0.9s,baz=295,slow=6.4,SNR=5.0
IDI Anoyia 98.59 306 *e*P **P** **10 23 54.2 -1.2**
IDI Anoyia 98.59 306 P **P** **10 23 54.6 -0.7**
VTS Vitosha 98.59 314 *i* P **P** **10 23 54.5 -0.8**
SRS Serrai 98.61 312 P **P** **10 23 55.0 -0.3**
HERR Herculane 98.72 316⇓ P Pdif 10 23 56.1 +0.4
DAG Danmarks Havn 98.73 352 *i* P **P** **10 23 54.1 -0.9**
DAG pmax pmax
comp=Z,130nm,0.8s
DAG Danmarks Havn 98.73 352 *i* P **P** **10 23 54.1 -0.9**
comp=Z,132nm,0.8s
DAG Danmarks Havn 98.73 352 *i* P **P** **10 23 54.1 -0.9**
DAG IAmb IAmb 10 23 55.7
comp=Z,132nm,0.8s
PAIG Paliouri 98.76 311 P Pdif 10 23 57.5 +1.6
MATP Matopo 98.78 250 PKKPbc PKKPbc 10 40 24.1 -0.4
comp=Z,5.1nm,1.0s,baz=276,slow=3.4,SNR=3.7
SOH Sokhos 98.84 312 P **P** **10 23 54.7 -1.6**
KKB Krupnik 98.84 313 *i* P **P** **10 23 54.1 -2.2**
DION Dionisos Attik 98.89 309 P P 10 23 48.0 -8.6
SIRR Siria 98.94 317⇑ P Pdif 10 23 57.0 +0.4
HORT Hortiatis 99.07 312 *e*P **Pdif** **10 23 55.7 -1.7**
ATH Athens Observa 99.08 309 P **Pdif** **10 23 56.5 -0.9**
NIE Niedzica 99.09 321 *e*Pdif **Pdif** **10 23 58.6 +1.3**
BZS Buzias 99.11 317⇑ P **Pdif** **10 23 58.0 +0.6**
BZS Buzias 99.11 317⇓ P **PKKPbc** **10 40 24.8 +0.6**
LSZ Lusaka 99.12 255 P **Pdif** **10 23 59.2 +0.9**
LSZ Lusaka 99.12 255 P **Pdif** **10 23 57.3 -0.9**
LSZ pmax pmax
comp=Z,75nm,1.1s
LSZ MLR MLR
comp=Z,10µm,21.0s
LSZ Lusaka 99.12 255 P **Pdif** **10 23 57.3 -0.9**
LSZ Lusaka 99.12 255 IAMs_20 IAMs_20 11 09 52.4
comp=Z,10µm,21.0s
RES Resolute Bay 99.18 10 P **Pdif** **10 23 57.4 +0.3**
comp=Z,85nm,0.7s,baz=298,slow=5.4,SNR=108
RES PKKPbc **PKKPbc** **10 40 22.9 -2.0**
comp=Z,8.2nm,0.8s,baz=160,slow=6.2,SNR=7.6
RES Resolute Bay 99.18 10 P **Pdif** **10 23 56.6 -0.5**
RES IAmb IAmb 10 23 59.5
comp=Z,98nm,0.8s
RES IAMs_20 IAMs_20 11 05 24.7
comp=Z,7µm,22.0s
KECS Kecovo 99.20 320 *e*P **Pdif** **10 23 58.0 +0.3**
KECS Kecovo 99.20 320 *e*PDIFF **Pdif** **10 23 58.0 +0.3**
OJC Ojcow 99.21 322 *e*Pdif **Pdif** **10 23 58.2 +0.5**
OJC *e*PP **PP** **10 28 03.5 +3.0**
OJC *e*SKSac **SKSac** **10 34 33.9 +1.4**
OJC *e*SP **SP** **10 36 48.9 -2.8**
OJC *e*L L 11 07 22.5
comp=Z,17µm,35.0s
OJC Ojcow 99.21 322 P **Pdif** **10 23 56.9 -0.8**
OJC pmax pmax
comp=Z,45nm,1.0s
OJC Ojcow 99.21 322 P **Pdif** **10 23 56.9 -0.8**
NEO Neokhori 99.22 310 P **Pdif** **10 24 02.8 +4.8**
MDVR Moldovita 99.23 316⇑ P **Pdif** **10 23 57.8 -0.2**
IMMV Iera Moni Meta 99.29 306 *e*P **Pdif** **10 23 58.1 -0.3**
GVDS Gavdos 99.30 306 *e*P **Pdif** **10 23 56.9 -1.6**
GVD Gavdhos 99.31 306 *e*P **Pdif** **10 23 58.5 0.0**
VAY Valandovo 99.33 312 *i* P **Pdif** **10 23 58.0 -0.4**
HFS Hagfors 99.44 332 PKKPbc PKKPbc 10 40 21.2 -2.6
comp=Z,3.0nm,0.7s,baz=189,slow=8.7,SNR=5.0
GRG Griva 99.52 312 *e*P **Pdif** **10 23 57.9 -1.5**
STIP Stip 99.53 313 *i* P **Pdif** **10 23 57.8 -1.6**
KRND KRANIDI 99.62 308 P **Pdif** **10 23 58.6 -1.2**
LIT Litokhoron 99.62 311 P **Pdif** **10 23 58.9 -0.9**
LANS Liptovska Anna 99.69 321 *e*P **Pdif** **10 24 01.5 +1.6**
LANS Liptovska Anna 99.69 321 *e*PDIFF **Pdif** **10 24 01.5 +1.6**
TBLU Trondheim 99.70 336⇑ P **Pdif** **10 23 58.9 -0.7**
TBLU *e*SP SP 10 36 56.3 0.0
PSZ Piszkesteto 99.72 319⇑ P **Pdif** **10 23 59.8 -0.4**
ANKY Antikythira Is 99.77 307 P **Pdif** **10 23 58.7 -1.8**
GKP Gorka Klasztor 99.89 325 *e*Pdif **Pdif** **10 24 01.2 +0.6**
GKP *e*PP **PP** **10 28 05.1 -0.5**
GKP *e*SP SP 10 36 54.1 -4.7
GKP *e*L L 11 14 42.8
comp=Z,19µm,23.6s
KTHA Kythira Island 99.89 307 *e*P **Pdif** **10 24 00.4 -0.7**
DSF Desfina 99.92 309 P **Pdif** **10 24 00.3 -0.9**
AGG Agios Georgios 99.95 310 P **Pdif** **10 23 59.6 -1.7**
GUR Goura 100.15 309 P **Pdif** **10 23 58.6 -3.7**
NC602 NORSAR Array S 100.20 333 *e*Pdif **Pdif** **10 23 59.2 -2.7**
NC602 IVmB_BB 10 24 01.9
comp=Z,973nm,4.5s
NC602 *e*PP **PP** **10 28 05.6 -2.1**
NC602 *e*SKSac **SKSac** **10 34 30.8 -6.2**
NC602 *e*SS **SS** **10 42 33.0 +5.1**
NC602 IVMs_BB IVMs_BB 11 09 08.0
comp=Z,7µm,29.7s
NB2 NORSAR Subarra 100.22 334 P **Pdif** **10 24 00.4 -1.6**
comp=Z,88nm,1.1s,baz=66,slow=4.6

NB2 NORSAR Subarra 100.22 334 P **Pdif** **10 24 00.4 -1.6**
baz=66,slow=4.6
NOA NORSAR Array B 100.22 334 P **Pdif** **10 24 00.7 -1.3**
comp=Z,31nm,0.8s,baz=66,slow=4.5,SNR=95
NOA PP **PP** **10 28 03.8 -4.1**
comp=Z,7.0nm,0.7s,baz=74,slow=8.7,SNR=3.9
NOA PKKPbc **PKKPbc** **10 40 19.1 -2.6**
comp=Z,9.5nm,1.0s,baz=254,slow=2.2,SNR=26
NVL N'lazarevskaya 100.26 198 *e*P **Pdif** **10 24 03.7 +1.8**
NVL *e*S **SKSac** **10 34 39.6 +2.8**
NVL *e*SS SS 10 42 41.4 +13
NVL pmax pmax
comp=Z,67nm,1.0s
VYHS Vyhne 100.26 320 *e*P **Pdif** **10 24 02.2 -0.3**
VYHS Vyhne 100.26 320 *e*PDIFF **Pdif** **10 24 02.2 -0.3**
SERG Sergoula 100.28 310 P **Pdif** **10 24 02.0 -0.8**
OKC Ostrava-Krasne 100.33 321 *e*P **Pdif** **10 24 01.0 -1.7**
OKC MLR MLR
comp=Z,10µm,26.7s
OKC Ostrava-Krasne 100.33 321 *e*PDIFF **Pdif** **10 24 01.0 -1.7**
OKC AMS AMS 11 11 00.0
comp=Z,10µm,26.7s
ANX Ano Chora 100.35 310 P **Pdif** **10 24 02.4 -0.8**
EVR Evrytania 100.37 310 P **Pdif** **10 23 57.5 -5.8**
EFP Efpalio 100.39 310 P **Pdif** **10 24 01.6 -1.6**
NAO01 NORSAR Array S 100.44 333⇑ *i*P **Pdif** **10 24 02.5 -0.5**
DIVS Divibare 100.58 316 IAMs_20 IAMs_20 11 14 34.8
comp=Z,10µm,22.0s
BSD Bornholm Skovb 100.60 327 *i* P **Pdif** **10 24 03.9 +0.2**
BSD pmax pmax
comp=Z,65nm,1.1s
BSD Bornholm Skovb 100.60 327 *i* P **Pdif** **10 24 03.9 +0.2**
comp=Z,65nm,1.1s
BSD Bornholm Skovb 100.60 327 *i* P **Pdif** **10 24 03.9 +0.2**
BSD IAmb IAmb 10 24 04.2
comp=Z,65nm,1.1s
ITM Ithomi 100.62 308 *e*P **Pdif** **10 24 03.0 -1.3**
DRO Drossia 100.64 309 P **Pdif** **10 24 05.1 +0.7**
YKA Yellowknife Ar 100.69 25 P **Pdif** **10 24 05.1 +1.1**
comp=Z,27nm,1.0s,baz=301,slow=4.8,SNR=31
YKA PP **PP** **10 28 11.8 +0.5**
comp=Z,4.5nm,0.9s,baz=297,slow=6.7,SNR=2.3
YKA PKiKP **PKiKP** **10 28 30.9 +1.1**
comp=Z,4.4nm,0.6s,baz=308,slow=0.7,SNR=17
YKA PKKPbc **PKKPbc** **10 40 18.0 -2.3**
comp=Z,12nm,0.8s,baz=109,slow=2.8,SNR=18
DOMB Dombas 100.73 335⇑ *i*P **Pdif** **10 24 04.2 0.0**
DOMB IVmB_BB 10 24 04.8
comp=Z,703nm,2.0s
DOMB *e*PP **PP** **10 28 13.2 +1.5**
DOMB *e*SKSac **SKSac** **10 34 36.7 -2.8**
DOMB *e*SS **SS** **10 42 38.9 +3.6**
DOMB IVMs_BB IVMs_BB 11 08 07.1
comp=Z,8µm,28.8s
MORC Moravsky Berou 100.73 322⇑ P **Pdif** **10 24 04.5 -0.1**
MORC Moravsky Berou 100.73 322⇑ *i*PDIFF **Pdif** **10 24 05.4 +0.9**
MORC *e*SKS **SKSac** **10 34 41.4 +1.3**
TULEG Thule 100.78 4 IAMs_20 IAMs_20 11 07 18.7
comp=Z,10µm,22.0s
OSL Oslo 100.89 333⇑ *i*P **Pdif** **10 24 04.0 -1.0**
OSL *e*PP **PP** **10 28 08.0 -4.9**
OSL *e*SKSac **SKSac** **10 34 37.5 -2.7**
OSL *e*SS **SS** **10 42 41.5 +3.9**
OSL IVMs_BB IVMs_BB 11 09 29.5
comp=Z,6µm,28.0s
JAVC Velka Javorina 100.91 321⇑ *i*PDIFF **Pdif** **10 24 07.3 +1.9**
JAVC *e*SKS **SKSac** **10 34 44.1 +3.1**
PDO Prodromos 100.92 310 P **Pdif** **10 24 04.3 -1.3**
DBG Daneborg 101.00 351 *i* P **Pdif** **10 24 06.0 +0.9**
DBG IAmb IAmb 10 24 06.3
comp=Z,78nm,1.0s
PGC Sidney 101.07 40 IAMs_20 IAMs_20 11 00 20.2
comp=Z,11µm,22.0s
KRLC Kraliky 101.11 322 *e*P **Pdif** **10 24 06.0 -0.3**
KRLC *e* 10 28 15.6
KRLC MLR MLR
comp=Z,10µm,21.0s
KRLC Kraliky 101.11 322 *e*PDIFF **Pdif** **10 24 06.0 -0.3**
KRLC *e*PP **PP** **10 28 15.6 +0.6**
KRLC *e*PKKP **PKKPbc** **10 40 16.0 -2.8**
KRLC AMS AMS 11 18 10.0
comp=Z,10µm,21.0s
MOL Molde 101.12 336⇑ *i*P **Pdif** **10 24 06.2 +0.3**
MOL IVmB_BB 10 24 07.1
comp=Z,1µm,2.8s
MOL *e*PP **PP** **10 28 15.9 +1.3**
MOL *e*SKSac **SKSac** **10 34 39.9 -1.4**
MOL IVMs_BB IVMs_BB 11 08 01.4
comp=Z,7µm,34.2s
NLWA Neilton Lookou 101.14 41 IAMs_20 IAMs_20 11 05 25.4
comp=Z,7µm,21.0s
KSP Ksiaz 101.18 323 *e*Pdif **Pdif** **10 24 07.7 +1.3**
KSP *e*PP **PP** **10 28 16.1 +0.7**
KSP *e*SKSac **SKSac** **10 34 42.9 +0.7**
KSP *e*SP **SP** **10 37 09.4 -3.4**
KSP *e*L L 11 11 54.0
comp=Z,19µm,26.8s
LKD2 Lefkada island 101.28 310 P **Pdif** **10 23 57.2 -10**
DPC Dobruska-Polom 101.31 322 *e*P **Pdif** **10 24 07.7 +0.6**
DPC *e* 10 28 15.6
DPC MLR MLR
comp=Z,16µm,25.4s
DPC Dobruska-Polom 101.31 322 *e*PDIFF **Pdif** **10 24 07.7 +0.6**
DPC *e*PP **PP** **10 28 15.6 -0.9**
DPC *e*PKKP **PKKPbc** **10 40 18.3 +0.1**
DPC AMS AMS 11 11 50.0
comp=Z,16µm,25.4s
OSTC Ostas 101.31 323 *e*PDIFF **Pdif** **10 24 07.8 +0.7**
OSTC *e*PP **PP** **10 28 10.0 -6.5**
OSTC *e*PKKP **PKKPbc** **10 40 17.4 -0.8**
OSTC AMS AMS 11 11 50.0
comp=Z,22µm,26.0s
JMIC Jan Mayen 101.33 346 *e*Pdif **Pdif** **10 24 05.8 -0.9**
JMIC *e*PP **PP** **10 28 19.6 +3.6**
JMIC *e*SKSac **SKSac** **10 34 39.9 -2.2**
JMIC IVMs_BB IVMs_BB 11 07 16.8
comp=Z,4µm,29.6s
CHVC Chvalec 101.40 323 *e*PDIFF **Pdif** **10 24 07.9 +0.4**
CHVC *e*PP **PP** **10 28 15.6 -1.5**
CHVC AMS AMS 11 11 40.0
comp=Z,21µm,25.8s
BOSA Boshof 101.42 241 P **Pdif** **10 24 08.8 +0.6**
comp=Z,12nm,1.0s,baz=118,slow=5.7,SNR=6.2
BOSA PP **PP** **10 28 17.3 -1.0**
comp=Z,11nm,1.0s,baz=98,slow=11,SNR=3.5
BOSA PKiKP **PKiKP** **10 28 33.7 +1.3**
comp=Z,11nm,0.9s,baz=128,slow=6.5,SNR=4.5
BOSA PKKPbc **PKKPbc** **10 40 17.7 +0.4**
comp=Z,5.2nm,0.9s,baz=292,slow=1.2,SNR=3.4
BOSA Boshof 101.42 241 **Pdif** **10 24 07.2 -1.0**
UPC Upice 101.45 323 *e*P **Pdif** **10 24 08.7 +1.0**
UPC MLR MLR
comp=Z,22µm,25.7s
UPC Upice 101.45 323 *e*PDIFF **Pdif** **10 24 08.7 +1.0**
UPC *e*PP **PP** **10 28 11.9 -5.6**
UPC AMS AMS 11 12 00.0
comp=Z,22µm,25.7s
VRAC Vranov 101.46 321⇑ P **Pdif** **10 24 08.3 +0.6**
VRAC Vranov 101.46 321⇑ *i*PDIFF **Pdif** **10 24 09.0 +1.2**
VRAC *e*SKS **SKSac** **10 34 45.4 +1.8**
A04D Lummi Island 101.52 39 P **Pdif** **10 24 08.5 +0.5**
baz=287
AKN Aaknes 101.53 336⇑ *i*P **Pdif** **10 24 08.4 +0.6**
AKN IVmB_BB 10 24 09.1
comp=Z,767nm,1.6s
AKN *e*PP **PP** **10 28 18.5 +0.8**
AKN *e*SKSac **SKSac** **10 34 38.2 -5.2**
AKN IVMs_BB IVMs_BB 11 11 17.6
comp=Z,7µm,27.2s
KONO Kongsberg 101.53 333 *i* P **Pdif** **10 24 07.2 -0.6**
KONO pmax pmax
comp=Z,28nm,1.1s
KONO Kongsberg 101.53 333⇑ *e*Pdif **Pdif** **10 24 07.5 -0.2**
KONO IVmBBB 10 24 08.2
comp=Z,623nm,2.0s
KONO *e*PP **PP** **10 28 19.1 +1.4**
KONO *e*SKSac **SKSac** **10 34 42.7 -0.7**
KONO IVMs_BB IVMs_BB 11 09 47.7
comp=Z,6µm,29.4s
SRN Sarande 101.54 311 P **Pdif** **10 23 56.4 -12**
E03A Lebam 101.58 42 IAMs_20 IAMs_20 11 07 57.9
comp=Z,8µm,20.0s
D03D Eldon 101.61 41 P **Pdif** **10 24 09.3 +0.8**
baz=286,SNR=21

KRUC Moravsky 101.65 321⇑ *i*PDIFF **Pdif** **10 24 09.7 +1.1**
KRUC *e*SKS **SKSac** **10 34 47.0 +2.5**
RGN Rugen 101.66 327 *e*P **Pdif** **10 24 09.9 +1.5**
SKAR Skarslia 101.66 334⇑ *i*P **Pdif** **10 24 08.7 +0.3**
SKAR IVmB_BB 10 24 09.5
comp=Z,908nm,4.4s
SKAR *e*PP **PP** **10 28 22.2 +3.5**
SKAR *e*SKSac **SKSac** **10 34 44.0 -0.2**
SKAR *e*SP **SP** **10 37 16.2 -1.2**
SKAR *e*SS **SS** **10 42 55.3 +7.0**
SKAR IVMs_BB IVMs_BB 11 10 06.7
comp=Z,7µm,29.6s
D04E Lakebay 101.92 41 P **Pdif** **10 24 09.8 0.0**
baz=287
KEBM Edson Butte 102.01 45 IAMs_20 IAMs_20 11 01 03.7
comp=Z,8µm,22.0s
I02D Swisshome 102.03 44 P **Pdif** **10 24 10.5 +0.1**
baz=285
B05A Bryant 102.04 40 P **Pdif** **10 24 10.3 0.0**
baz=287,SNR=16
F04D Rainier, OR 102.07 42 P **Pdif** **10 24 11.0 +0.4**
baz=286
RUE Ruedersdorf 102.13 325 *e*P **Pdif** **10 24 12.1 +1.5**
RUE Ruedersdorf 102.13 325 *e*Pdiff **Pdif** **10 24 12.1 +1.5**
G03D McMinnville, O 102.14 43 P **Pdif** **10 24 11.6 +0.7**
baz=286
TREC Trest 102.15 321 *e*P **Pdif** **10 24 10.8 -0.1**
TREC *e* 10 28 17.5
TREC Trest 102.15 321 *e*PDIFF **Pdif** **10 24 10.8 -0.1**
TREC *e*PP **PP** **10 28 17.5 -5.3**
TREC AMS AMS 11 11 50.0
comp=Z,19µm,28.9s
J01E Myrtle Point 102.22 45 P **Pdif** **10 24 11.5 +0.3**
baz=285
E04D Cinebar 102.23 41 P **Pdif** **10 24 11.3 +0.1**
baz=287
KBO Bosley Butte 102.25 46 IAMs_20 IAMs_20 11 07 15.1
comp=Z,8µm,22.0s
PVCC Panska Ves 102.32 323 *e*P **Pdif** **10 24 09.4 -2.1**
PVCC *e* 10 28 19.4
PVCC MLR MLR
comp=Z,19µm,25.9s
PVCC Panska Ves 102.32 323 *e*PDIFF **Pdif** **10 24 09.4 -2.1**
PVCC *e*PP **PP** **10 28 19.4 -4.6**
PVCC AMS AMS 11 12 30.0
comp=Z,19µm,25.9s
CONA Conrad Observa 102.33 320 *e*P **Pdif** **10 24 12.7 +0.9**
comp=Z,21nm,1.5s
CONA *i* P **PKKPbc** **10 40 14.8 -0.4**
comp=Z,14nm,1.2s,SNR=5.3
B06A Marblemount 102.35 39 IAMs_20 IAMs_20 11 06 47.2
comp=Z,7µm,20.0s
HYA Hoyanger 102.35 335 *e*Pdif **Pdif** **10 24 11.8 +0.4**
HYA *e*PP **PP** **10 28 23.8 -0.1**
HYA *e*SKSac **SKSac** **10 34 44.0 -3.2**
I03D Drain, OR 102.49 44 P **Pdif** **10 24 13.3 +0.8**
baz=285
PRU Pruhonice 102.51 322 *e*P **Pdif** **10 24 13.7 +1.3**
PRU MLR MLR
comp=Z,17µm,26.5s
PRU Pruhonice 102.51 322 *e*PDIFF **Pdif** **10 24 13.7 +1.3**
PRU *ex* x 10 28 11.9
PRU AMS AMS 11 12 30.0
comp=Z,17µm,26.5s
KOGS Kog 102.52 319 *e*Pdiff **Pdif** **10 24 12.0 -0.5**
KOGS *e* 10 27 23.2
KOGS *e*PP **PP** **10 28 26.2 +0.6**
KOGS *e* 10 31 08.8
KOGS *e*SKSac **SKSac** **10 34 48.6 0.0**
KOGS *e*Sdiff **Sdif** **10 35 56.1 +2.5**
KOGS *e*SP **SP** **10 37 22.7 -4.5**
KOGS *e* 10 38 49.5
K02D Willamette Mer 102.53 45 P **Pdif** **10 24 13.1 +0.3**
baz=285
PRA Prague 102.55 322 *e*P **Pdif** **10 24 11.8 -0.8**
PRA MLR MLR
comp=Z,9µm,27.0s
PRA Prague 102.55 322 *e*PDIFF **Pdif** **10 24 11.8 -0.8**
PRA *ex* x 10 27 45.6
PRA AMS AMS 11 12 40.0
comp=Z,9µm,27.0s
BRG Berggiesshubel 102.58 323 *e*PDIFF **Pdif** **10 24 12.3 -0.4**
comp=Z,41nm,1.1s
BRG Berggiesshubel 102.58 323 PKP **PKiKP** **10 28 32.0 -1.7**
BRG SKS 10 34 46.0
BRG SDIFF 10 37 25.0
BRG SS **SS** **10 43 00.0 -1.5**
comp=N,9µm,29.5s
comp=E,15µm,31.8s
comp=Z,17µm,29.0s
BRG Berggiesshubel 102.58 323 *e*P **Pdif** **10 24 12.3 -0.4**
BRG pmax pmax
comp=Z,41nm,1.1s
BRG Berggiesshubel 102.58 323 *e*Pdiff **Pdif** **10 24 13.8 +1.1**
FOO Floro 102.62 335⇑ *e*Pdif **Pdif** **10 24 12.2 -0.4**
FOO IVmB_BB 10 24 13.6
comp=Z,716nm,2.2s
FOO *e*SKSac **SKSac** **10 34 47.6 -0.9**
FOO *e*SS **SS** **10 42 57.8 -3.5**
FOO IVMs_BB IVMs_BB 11 12 05.3
comp=Z,7µm,23.2s
HOMB Homborsund 102.64 332⇑ *i*P **Pdif** **10 24 12.4 -0.3**
HOMB IVmB_BB 10 24 13.1
comp=Z,574nm,1.8s
HOMB *e*PP **PP** **10 28 26.6 +0.6**
HOMB *e*SKSac **SKSac** **10 34 46.3 -2.4**
HOMB IVMs_BB IVMs_BB 11 10 07.7
comp=Z,4µm,27.0s
KRMB Red Mountain 102.65 47 IAMs_20 IAMs_20 11 08 00.9
comp=Z,10µm,21.0s
H04D Lebanon 102.69 43 P **Pdif** **10 24 13.7 +0.4**
baz=286
L02E Cave Junction 102.71 46 P **Pdif** **10 24 13.5 0.0**
baz=285
JCC Jacoby Creek, 102.74 47 IAMs_20 IAMs_20 11 01 02.2
comp=Z,7µm,21.0s
ARSA Arzberg 102.75 319 *e*P **Pdif** **10 24 13.8 +0.2**
comp=Z,21nm,1.8s
ARSA *e*P **PKKPbc** **10 40 08.4 -5.4**
comp=Z,14nm,1.2s
ODD1 Odda 102.76 334 *e*Pdif **Pdif** **10 24 13.7 +0.3**
ODD1 *e*PP **PP** **10 28 25.0 -1.9**
ODD1 *e*SKSac **SKSac** **10 34 49.3 0.0**
C06D Leavenworth 102.91 40 P **Pdif** **10 24 14.8 +0.5**
baz=288
FBE Freiberg 102.92 324 *e*Pdiff **Pdif** **10 24 15.5 +1.4**
KHMM Horse Mountain 102.94 47 IAMs_20 IAMs_20 11 10 26.6
comp=Z,11µm,22.0s
CLL Collm 102.99 324 *i* Pdif **Pdif** **10 24 14.5 0.0**
comp=Z,62nm,1.7s
CLL *i* 10 24 21.6
comp=Z,38nm,1.2s
CLL *e* 10 27 52.0
CLL *e* 10 28 15.0
CLL *e*PP **PP** **10 28 30.0 +1.1**
CLL *i* sPP 10 28 42.6
comp=Z,91nm,1.7s
CLL *e*SKSac **SKSac** **10 34 55.0 +4.3**
CLL *e*SKKSac **SKKSac** **10 35 38.0 +6.9**
CLL *e*Sdif **Sdif** **10 35 58.0 +0.6**
CLL *e*(SP) 10 37 23.0
CLL *e*PKKPbc **PKKPbc** **10 40 13.0 -0.2**
comp=Z,11nm,1.2s
CLL *e*sPKKPdf 10 40 34.0
comp=Z,15nm,1.2s
CLL *e*SS **SS** **10 43 04.0 -3.1**
CLL *e* 10 44 06.0
CLL *e* 10 45 00.0
CLL *e* 10 49 42.0
CLL *e*SSSS 10 50 36.0
CLL Lmax 11 12 00.0
CLL Collm 102.99 324 *i* P **Pdif** **10 24 14.5 0.0**
CLL *e* 10 34 55.0
CLL *e*S **Sdif** **10 35 58.0 +0.6**
CLL pmax pmax
comp=Z,62nm,1.7s
CLL Collm 102.99 324 *e*Pdiff **Pdif** **10 24 15.3 +0.8**
CLL Collm 102.99 324 IAMs_20 IAMs_20 11 17 53.6
comp=Z,9µm,21.0s
SUE Sulen 103.01 335 *e*Pdif **Pdif** **10 24 13.8 -0.5**
SUE IVmB_BB 10 24 15.7
comp=Z,728nm,1.4s
SUE *e*PP **PP** **10 28 28.9 +0.2**
SUE *e*SKSac **SKSac** **10 34 50.1 -0.1**

SUE *e*SS **SS** **10 43 10.3 +3.7**
SUE IVMs_BB IVMs_BB 11 09 12.1
comp=Z,6µm,28.5s
HUMO Hull Mountain 103.06 45 IAMs_20 IAMs_20 11 10 36.4
comp=Z,7µm,22.0s
BLS5 Blasjo 103.06 333⇑ *i*P **Pdif** **10 24 15.3 +0.6**
BLS5 IVmB_BB 10 24 15.8
comp=Z,530nm,1.4s
BLS5 *e*PP **PP** **10 28 29.9 +0.6**
BLS5 *e*SKSac **SKSac** **10 34 54.0 +3.3**
BLS5 *e*SS **SS** **10 43 08.4 +0.8**
BLS5 IVMs_BB IVMs_BB 11 10 46.4
comp=Z,6µm,31.5s
MUD Monsted U'grnd 103.09 330 *i* P **Pdif** **10 24 15.0 +0.2**
MUD Monsted U'grnd 103.09 330 *i* P **Pdif** **10 24 15.0 +0.2**
MUD Monsted U'grnd 103.09 330 *i* P **Pdif** **10 24 15.0 +0.2**
BER Bergen 103.10 334 *e*Pdif **Pdif** **10 24 14.5 -0.2**
BER *e*PP **PP** **10 28 31.6 +2.2**
BER *e*SKSac **SKSac** **10 34 51.8 +1.1**
BER IVMs_BB IVMs_BB 11 09 16.6
comp=Z,6µm,32.5s
ASK Askoy 103.11 334 *e*Pdif **Pdif** **10 24 16.2 +1.4**
ASK *e*PP **PP** **10 28 28.1 -1.4**
ASK *e*SKSac **SKSac** **10 34 50.4 -0.4**
I04A Tendick Farm, 103.12 44 P **Pdif** **10 24 15.1 -0.2**
baz=286,SNR=7.3
F05D White Salmon 103.16 42 P **Pdif** **10 24 16.6 +1.2**
baz=287
SNART Snartemo 103.22 332 *e*Pdif **Pdif** **10 24 13.4 -1.9**
SNART *e*SKSac **SKSac** **10 34 50.3 -1.1**
SNART *e*SP **SP** **10 37 32.6 -1.3**
CRES Cresnjev 103.22 318 *e*Pdiff **Pdif** **10 24 15.3 -0.4**
CRES *i* SKSac **SKSac** **10 34 52.6 +0.6**
CRES *e*Sdiff **Sdif** **10 36 04.6 +5.0**
CRES *e* 10 38 14.8
SOKA Soboth 103.25 319 *e*P **Pdif** **10 24 15.9 +0.1**
comp=Z,8.5nm,0.9s
SOKA *e*P **PKKPbc** **10 40 12.0 -0.4**
comp=Z,4.5nm,0.8s
KCPM Cahto Peak 103.35 48 IAMs_20 IAMs_20 11 10 44.5
comp=Z,10µm,21.0s
MOA Molln 103.38 320 *i* P **Pdif** **10 24 16.5 +0.1**
comp=Z,39nm,1.4s,SNR=11
MOA *e*P **PKKPbc** **10 40 11.7 -0.4**
comp=Z,14nm,0.8s
KHC Kasperske Hory 103.39 322 *e*P **Pdif** **10 24 16.7 +0.3**
KHC *e* 10 28 28.8
KHC MLR MLR
comp=Z,17µm,26.4s
KHC Kasperske Hory 103.39 322 *e*PDIFF **Pdif** **10 24 16.7 +0.3**
KHC *e*pP **pPdif** **10 24 29.0 -0.1**
KHC *e*PP **PP** **10 28 28.8 -3.3**
KHC *e*PKKP **PKKPbc** **10 40 10.7 -1.4**
KHC AMS AMS 11 12 40.0
comp=Z,17µm,26.4s
GEC2 GERESS Array S 103.41 321 *e*Pdiff **Pdif** **10 24 17.5 +0.9**
GERES GERESS Array B 103.41 321 Pdiff **Pdif** **10 24 17.4 +0.9**
comp=Z,5.0nm,0.9s,baz=59,slow=5.1,SNR=25
GERES PKiKP **PKiKP** **10 28 36.2 +0.8**
comp=Z,11nm,0.8s,baz=57,slow=4.9,SNR=6.7
GERES PKKPbc **PKKPbc** **10 40 11.4 -0.6**
comp=Z,5.4nm,1.0s,baz=222,slow=1.8,SNR=8.7
GERES PKPPKP **P'P'df** **10 48 30.4 -0.8**
comp=Z,1.0nm,0.8s,baz=304,slow=0.4,SNR=4.1
GERES GERESS Array B 103.41 321 P **Pdif** **10 24 15.8 -0.7**
GERES GERESS Array B 103.41 321 **Pdif** **10 24 15.8 -0.7**
G05D Wamic, OR 103.45 42 P **Pdif** **10 24 17.2 +0.4**
baz=287
M02C Callahan 103.45 47 P **Pdif** **10 24 17.5 +0.6**
baz=285
YBH Yreka Blue Hor 103.47 46 Pdiff **Pdif** **10 24 18.6 +1.7**
comp=Z,9.4nm,0.8s,baz=254,slow=4.9,SNR=15
YBH PKiKP **PKiKP** **10 28 37.4 +1.7**
comp=Z,8.5nm,0.9s,baz=281,slow=3.3,SNR=5.2
YBH Yreka Blue Hor 103.47 46 **Pdif** **10 24 18.7 +1.7**
J04D Umpqua Nationa 103.48 45 P **Pdif** **10 24 17.6 +0.5**
baz=286
BSEG Bad Segeberg 103.52 327 *e*Pdiff **Pdif** **10 24 18.0 +1.3**
OBKA Obir 103.62 319 *e*P **Pdif** **10 24 17.6 0.0**
comp=Z,18nm,1.8s
OBKA *e*P **PKKPbc** **10 40 11.3 -0.1**
comp=Z,9.7nm,0.9s
TANN Tannenbergstha 103.62 323 *e*Pdiff **Pdif** **10 24 18.4 +1.0**
L04D Klamath Falls 103.63 46 P **Pdif** **10 24 19.6 +1.8**
baz=286
N02D Trinity Center 103.67 47 P **Pdif** **10 24 18.9 +1.0**
baz=285
NKC Novy Kostel 103.70 323 *e*P **Pdif** **10 24 18.5 +0.8**
NKC Novy Kostel 103.70 323 *e*PDIFF **Pdif** **10 24 18.5 +0.8**
NKC *e*PP **PP** **10 28 26.9 -7.4**
NKC AMS AMS 11 09 50.0
comp=Z,19µm,30.0s
I05D Terrebonne, OR 103.70 43 P **Pdif** **10 24 19.3 +1.4**
baz=287,SNR=6.5
KMY Karmoy 103.71 333 *e*Pdif **Pdif** **10 24 17.6 +0.1**
KMY *e*PP **PKiKP** **10 28 37.1 +1.7**
KMY *e*SKSac **SKSac** **10 34 49.3 -4.3**
KMY *e*SS **SS** **10 43 17.5 +1.1**
GUNZ Gunzen 103.72 323 *e*Pdiff **Pdif** **10 24 19.1 +1.2**
WERN Wernitzgruen 103.72 323 *e*Pdiff **Pdif** **10 24 19.1 +1.2**
NEUB Neuenburg 103.74 324 *e*Pdiff **Pdif** **10 24 19.0 +1.1**
B08A Colville Reser 103.76 39 IAMs_20 IAMs_20 11 07 32.5
comp=Z,9µm,22.0s
LJU Ljubljana 103.78 319 *i* Pdiff **Pdif** **10 24 18.4 +0.3**
LJU *e*PP **PKiKP** **10 28 36.3 +0.3**
LJU *e* 10 31 18.7
LJU *e*SS **SKSac** **10 34 54.6 0.0**
LJU *e* 10 38 17.6
LJU *e* 10 44 01.3
PLN Plauen 103.78 323 *e*Pdiff **Pdif** **10 24 19.1 +1.0**
WET Wettzell 103.82 322 *e*Pdiff **Pdif** **10 24 19.7 +1.4**
SNAA Sanae 103.89 194 P **Pdif** **10 24 19.9 +1.7**
SNAA Sanae 103.89 194 PKKPbc PKKPbc 10 40 09.2 -2.1
comp=Z,7.5nm,1.0s,baz=281,slow=3.1,SNR=7.8
SNAA PKPPKP **P'P'df** 10 48 18.5 -10
comp=Z,1.2nm,0.8s,baz=171,slow=2.3,SNR=3.8
SNAA Sanae 103.89 194 IAMs_20 IAMs_20 11 16 07.3
comp=Z,7µm,21.0s
WDC Whiskeytown Da 103.89 47 IAMs_20 IAMs_20 11 15 11.8
comp=Z,7µm,20.0s
K04D Chiloquin, OR 103.91 45 P **Pdif** **10 24 19.5 +0.6**
baz=286
HOPS Hopland Field 103.91 49 IAMs_20 IAMs_20 11 08 05.3
comp=Z,8µm,20.0s
MANZ Manzenberg 103.99 323 *e*Pdiff **Pdif** **10 24 20.5 +1.5**
ROTZ Rotzenmuhle 104.01 323 *e*Pdiff **Pdif** **10 24 20.5 +1.4**
E07A Sunnyside 104.02 41 IAMs_20 IAMs_20 11 07 19.4
comp=Z,9µm,22.0s
ASSE Asse, Remlinge 104.03 325 *e*Pdiff **Pdif** **10 24 20.4 +1.3**
MOX Moxa 104.05 324 *e*Pdiff **Pdif** **10 24 20.4 +1.2**
MOX *e*L L 11 19 22.3
comp=Z,9µm,22.0s
M04C Macdoel 104.08 46 P **Pdif** **10 24 19.8 0.0**
baz=286,SNR=8.9
J05D Fort Rock, OR 104.08 44 P **Pdif** **10 24 20.2 +0.4**
baz=287,SNR=17
PINE Pine Mountain 104.14 44 IAMs_20 IAMs_20 11 05 54.9
comp=Z,8µm,21.0s
TIP Timpagrande 104.14 311⇑ P **Pdif** **10 24 21.0 +1.0**
TIP Timpagrande 104.14 311 IAMs_20 IAMs_20 11 16 47.5
comp=Z,7µm,22.0s
GDXM Geysers 104.16 49 IAMs_20 IAMs_20 11 08 13.0
comp=Z,10µm,20.0s
MYKA Terra Mystica 104.17 319 *e*P **PKKPbc** **10 40 09.3 -0.3**
comp=Z,9.7nm,0.7s
F07A Phinny Hill Vi 104.18 42 IAMs_20 IAMs_20 11 09 20.8
comp=Z,9µm,19.0s
NRDL Niedersach Rie 104.21 326 *e*Pdiff **Pdif** **10 24 21.4 +1.6**
KBA Koelnbreinsper 104.22 320 P **Pdif** **10 24 20.6 +0.3**
comp=Z,7.7nm,1.1s
KBA *e*P **PKKPbc** **10 40 09.0 -0.7**
comp=Z,13nm,1.5s
HAWA Hanford 104.28 41 IAMs_20 IAMs_20 11 07 28.4
comp=Z,9µm,22.0s
CLZ Clausthal 104.32 325 *e*Pdiff **Pdif** **10 24 21.9 +1.5**
RJOB Jochberg 104.35 321 *e*Pdiff **Pdif** **10 24 20.3 -0.4**
D08A Wollman Farm, 104.46 40 IAMs_20 IAMs_20 11 09 18.0
comp=Z,8µm,21.0s
K05A Summer Lake 104.48 45 IAMs_20 IAMs_20 11 02 48.2
comp=Z,9µm,22.0s
O03E Paynes Creek 104.51 47 P **Pdif** **10 24 22.2 +0.6**
baz=286
SCO Scoresbysund 104.52 350 *i* P **Pdif** **10 24 22.4 +1.6**
SCO pmax pmax
comp=Z,26nm,1.1s

SCO **Scoresbysund** 104.52 350 IAMs_20 IAMs_20 11 18 26.0
comp=Z,8µm,21.0s
SCO **Scoresbysund** 104.52 350 *i* P **Pdif** **10 24 22.4 +1.6**
comp=Z,26nm,1.1s
SCO **Scoresbysund** 104.52 350 *i* P **Pdif** **10 24 22.5 +1.6**
SCO IAmb IAmb 10 24 22.9
comp=Z,26nm,1.1s
E08A **Dider Farm, El** 104.56 41 IAMs_20 IAMs_20 11 09 56.7
comp=Z,10µm,21.0s
C09A **Chrisman Ranch** 104.62 39 IAMs_20 IAMs_20 11 08 09.2
comp=Z,9µm,22.0s
GRA1 **Grafenberg Arr** 104.63 323 IAMs_20 IAMs_20 11 15 21.1
comp=Z,8µm,22.0s
GRF **Grafenberg Arr** 104.63 323 *e*L L 11 15 20.8
comp=Z,8µm,22.0s
ZOU **Zoufplan** 104.63 319 IAMs_20 IAMs_20 11 21 53.5
comp=Z,7µm,22.0s
ABTA **Abfaltersbach** 104.87 320 *e*P **Pdif** **10 24 23.0 -0.1**
ABTA *e*P **PKKPbc** **10 40 07.3 -0.3**
comp=Z,16nm,0.9s
ABTA *e*P **PKKPab** **10 40 26.4 +1.3**
comp=Z,40nm,1.5s
SUR **Sutherland** 104.90 237 PKKPbc PKKPbc 10 40 08.1 +0.9
comp=Z,12nm,0.8s,baz=23,slow=1.1,SNR=7.6
SUR **Sutherland** 104.90 237 IAMs_20 IAMs_20 11 11 23.5
comp=Z,10µm,22.0s
UBBA **Unterbreizbach** 104.93 324 *e*Pdif **Pdif** **10 24 24.2 +1.2**
ORV **Oroville** 104.94 48 IAMs_20 IAMs_20 11 02 04.5
comp=Z,7µm,22.0s
I07A **Izee** 105.04 43 IAMs_20 IAMs_20 11 06 44.6
comp=Z,9µm,21.0s
CIMO **Cimolais** 105.06 319 IAMs_20 IAMs_20 11 22 06.8
comp=Z,11µm,22.0s
E09A **Wood Farm, Sta** 105.14 40 IAMs_20 IAMs_20 11 10 26.2
comp=Z,9µm,21.0s
MOD **Modoc Plateau** 105.14 46 IAMs_20 IAMs_20 11 09 01.7
comp=Z,7µm,21.0s
NEW **Newport** 105.18 39 Pdiff **Pdif** **10 24 24.9 +0.5**
comp=Z,15nm,0.8s,baz=267,slow=3.4,SNR=34
NEW PKiKP **PKiKP** **10 28 40.0 +1.4**
comp=Z,8.1nm,0.9s,baz=289,slow=2.5,SNR=5.2
NEW **Newport** 105.18 39 P **Pdif** **10 24 24.9 +0.5**
NEW MLR MLR
comp=Z,9µm,22.0s
NEW **Newport** 105.18 39 P **PKiKP** **10 28 38.8 +0.2**
baz=291
NEW **Newport** 105.18 39 IAMs_20 IAMs_20 11 11 50.9
comp=Z,9µm,22.0s
WTTA **Wattenberg** 105.25 320 *e*P **Pdif** **10 24 25.3 +0.4**
comp=Z,38nm,1.5s
WTTA *e*P **PKKPbc** **10 40 06.7 +0.1**
comp=Z,11nm,0.9s
WTTA *e*P **PKKPab** **10 40 24.4 +1.0**
comp=Z,63nm,1.1s
WATA **Walderalm** 105.26 320 *e*P **Pdif** **10 24 25.2 +0.3**
comp=Z,13nm,0.9s
WATA *e*P **PKKPbc** **10 40 06.1 -0.4**
comp=Z,6.5nm,0.6s
WATA *e*P **PKKPab** **10 40 23.8 +0.5**
comp=Z,33nm,1.0s
VNA2 **Neumayer--Watz** 105.49 194 P **Pdif** **10 24 27.6 +2.4**
VNA2 **Neumayer--Watz** 105.49 194 PKiKP **PKiKP** **10 28 40.6 +2.1**
AFDM **Forest Hills D** 105.50 49 IAMs_20 IAMs_20 11 09 44.4
comp=Z,6µm,21.0s
SQTA **Sankt Oswald** 105.54 320 *e*P **Pdif** **10 24 26.5 +0.4**
comp=Z,36nm,1.5s
SQTA *e*P **PKKPbc** **10 40 05.2 -0.4**
comp=Z,14nm,0.8s
SQTA *e*P **PKKPab** **10 40 22.8 +0.7**
comp=Z,58nm,1.1s
MOTA **Moosalm** 105.56 321 *e*P **Pdif** **10 24 26.6 +0.4**
comp=Z,17nm,1.1s
MOTA *e*P **PKKPbc** **10 40 05.3 -0.3**
comp=Z,14nm,0.8s
MOTA *e*P **PKKPab** **10 40 22.5 +0.4**
comp=Z,42nm,1.2s
IBBN **Ibbenburen** 105.60 326 *e*Pdiff **Pdif** **10 24 27.5 +1.4**
CTI **Castel Tesino** 105.67 319 IAMs_20 IAMs_20 11 22 34.0
comp=Z,8µm,22.0s
BEKR **Beckworth** 105.70 48 IAMs_20 IAMs_20 11 09 36.8
comp=Z,11µm,21.0s
RETA **Reutte** 105.72 321 *e*P **PKKPbc** **10 40 05.9 +0.9**
comp=Z,7.8nm,0.9s
RETA *e*P **PKKPab** **10 40 20.9 -0.3**
comp=Z,28nm,1.2s
VNA3 **Neumayer Olymp** 105.81 193 P **Pdif** **10 24 29.0 +2.3**
VNA1 **Neumayer--Stat** 105.89 194 P **Pdif** **10 24 28.7 +1.8**
FETA **Feichten** 105.92 320 *e*P **Pdif** **10 24 27.8 -0.1**
comp=Z,22nm,1.1s
FETA *e*P **PKKPbc** **10 40 04.4 -0.2**
comp=Z,18nm,1.0s
FETA *e*P **PKKPab** **10 40 21.5 +1.0**
comp=Z,24nm,1.0s
F10A **Beach Ranch, E** 105.93 41 IAMs_20 IAMs_20 11 10 48.0
comp=Z,9µm,21.0s
LRW **Lerwick** 105.98 336 *e*P **Pdif** **10 24 21.8 -5.8**
LRW IAMs_20 IAMs_20 11 10 28.9
comp=Z,25µm,32.0s
J08A **Circle Bar Ran** 105.98 44 IAMs_20 IAMs_20 11 03 41.5
comp=Z,10µm,22.0s
TNS **Taunus Mts** 106.08 324 *e*Pdiff **Pdif** **10 24 29.5 +1.1**
RUBR **Rubicon Trail** 106.08 48 IAMs_20 IAMs_20 11 02 37.7
comp=Z,6µm,22.0s
CMB **Columbia Colle** 106.19 49 IAMs_20 IAMs_20 11 04 59.8
comp=Z,7µm,22.0s
STU **Stuttgart** 106.21 322 IAMs_20 IAMs_20 11 16 16.9
comp=Z,9µm,21.0s
DAVA **Damuels** 106.36 321 *e*P **Pdif** **10 24 37.1 +7.3**
comp=Z,17nm,1.3s
DAVA *e*P **PKKPbc** **10 40 03.1 -0.1**
comp=Z,16nm,1.2s
DAVA *e*P **PKKPab** **10 40 19.4 +0.9**
comp=Z,27nm,1.1s
VAE **Valguarnera** 106.37 310 PKPPKP 10 48 21.5
comp=Z,32nm,0.4s,baz=68,slow=3.8,SNR=6.0
PAHR **Pah Rah Range** 106.46 47 IAMs_20 IAMs_20 11 09 59.7
comp=Z,10µm,21.0s
DAVOX **Davos/Dischmat** 106.55 320 PP **PP** **10 28 57.4 +1.7**
comp=Z,21nm,0.9s,baz=66,slow=10.0,SNR=2.6
DAVOX PKKPbc **PKKPbc** **10 40 03.1 +0.5**
comp=Z,5.5nm,0.8s,baz=238,slow=5.2,SNR=4.4
DAVOX PKKPab **PKKPab** **10 40 18.6 +0.9**
comp=Z,23nm,0.9s,baz=301,slow=5.7,SNR=14
WAKR **Walker** 106.78 49 IAMs_20 IAMs_20 11 08 16.1
comp=Z,7µm,21.0s
OSSC **Osservatorio P** 106.81 317 IAMs_20 IAMs_20 11 22 09.4
comp=Z,9µm,22.0s
WALA **Waterton Lakes** 106.83 37 IAMs_20 IAMs_20 11 09 18.6
comp=Z,11µm,22.0s
BFO **Black Forest** 106.91 322 IAMs_20 IAMs_20 11 16 37.6
comp=Z,6µm,20.0s
PAGB **Antelope Grade** 106.92 52 IAMs_20 IAMs_20 11 10 15.4
comp=Z,10µm,21.0s
TUE **Stuetta** 107.00 320 IAMs_20 IAMs_20 11 18 01.1
comp=Z,10µm,21.0s
JTMT **Jette** 107.14 38 IAMs_20 IAMs_20 11 13 11.7
comp=Z,6µm,22.0s
SMMC **Simmler** 107.24 52 P **PKiKP** **10 28 41.8 -1.0**
baz=286
MDPB **Devils Postpil** 107.30 49 IAMs_20 IAMs_20 11 05 33.1
comp=Z,7µm,20.0s
MLAC **Mammoth, Mammt** 107.48 49 P **PKiKP** **10 28 42.3 -1.2**
baz=287
PKM **Mcpherson Peak** 107.49 52 P **PKiKP** **10 28 44.3 +0.8**
baz=286,SNR=5.5
LHV **Little Huntoon** 107.55 49 IAMs_20 IAMs_20 11 05 34.7
comp=Z,7µm,22.0s
KVN **Kaiserville** 107.61 48 IAMs_20 IAMs_20 11 03 39.1
comp=Z,8µm,22.0s
NVAR **Mina Array Bea** 107.65 49 Pdiff **Pdif** **10 24 37.9 +2.0**
comp=Z,8.0nm,0.8s,baz=264,slow=5.7,SNR=45
NVAR PKiKP **PKiKP** **10 28 45.4 +1.7**
comp=Z,7.5nm,0.8s,baz=239,slow=1.4,SNR=11
NVAR PP **PP** **10 29 06.3 +2.1**
comp=Z,10.0nm,1.1s,baz=266,slow=6.1,SNR=4.5
NVAR PKKPbc **PKKPbc** **10 40 00.8 +1.8**
comp=Z,6.2nm,0.8s,baz=144,slow=3.9,SNR=13
NVAR PKKPab **PKKPab** **10 40 14.0 +1.1**
comp=Z,9.9nm,0.8s,baz=131,slow=5.0,SNR=9.7
NVAR **Mina Array Bea** 107.65 49 **PKiKP** **10 28 45.2 +1.5**
WLF **Walferdange** 107.66 324 IAMs_20 IAMs_20 11 21 14.0
comp=Z,9µm,22.0s
ECH **Echery** 107.67 323 IAMs_20 IAMs_20 11 19 02.7
comp=Z,7µm,21.0s
SBC **Santa Barbara** 107.69 53 P **PKiKP** **10 28 44.0 +0.4**
baz=286
MSO **Missoula** 107.72 39 P **PKiKP** **10 28 41.4 -2.1**
baz=294
MSO **Missoula** 107.72 39 IAMs_20 IAMs_20 11 10 25.1
comp=Z,9µm,21.0s
MFID **Camas Ranch** 107.77 43 IAMs_20 IAMs_20 11 08 10.9
comp=Z,7µm,22.0s
VES **Vestal, Richgr** 107.81 51 P **PKiKP** **10 28 44.6 +0.8**
baz=286
SCZ2 **Santa Cruz Isl** 107.87 53 P **PKiKP** **10 28 44.4 +0.5**
baz=286
BIGH **Upper Bighouse** 108.08 335 *e*P **Pdif** **10 24 29.3 -7.6**
BIGH IAMs_20 IAMs_20 11 11 28.5
comp=Z,20µm,33.3s
TIN **Tinemaha, Big** 108.11 50 P **PKiKP** **10 28 43.9 -0.6**
baz=287
SNCC **San Nicolas Is** 108.16 54 P **PKiKP** **10 28 45.3 +0.8**
baz=285
SNCC **San Nicolas Is** 108.16 54 IAMs_20 IAMs_20 11 08 38.3
comp=Z,9µm,22.0s
UCC **Uccle** 108.17 326 IAMs_20 IAMs_20 11 16 33.5
comp=Z,9µm,22.0s
ARVC **Arvin** 108.20 52 P **PKiKP** **10 28 45.3 +0.8**
baz=286
ISA **Isabella, Lake** 108.33 51 P **PKiKP** **10 28 44.7 -0.1**
baz=287
ISA **Isabella, Lake** 108.33 51 IAMs_20 IAMs_20 11 11 09.6
comp=Z,9µm,21.0s
SENIN **Lac Senin/Sane** 108.35 321 IAMs_20 IAMs_20 11 19 00.7
comp=Z,9µm,22.0s
CWC **Cottonwood Cre** 108.41 50 P **PKiKP** **10 28 44.9 -0.2**
baz=287
DRUM **Mains of Drumt** 108.41 334 *e*P **Pdif** **10 24 30.7 -7.8**
DRUM IAMs_20 IAMs_20 11 13 40.4
comp=Z,33µm,28.9s
OSI **Osito Audit: C** 108.43 52 P **PKiKP** **10 28 45.7 +0.7**
baz=286
ILULI **Iliesat** 108.65 359 IAMs_20 IAMs_20 11 12 21.8
comp=Z,7µm,19.0s
HLID **Hailey** 108.67 42 P **PKiKP** **10 28 46.2 +0.8**
baz=292
HLID **Hailey** 108.67 42 IAMs_20 IAMs_20 11 05 17.8
comp=Z,9µm,22.0s
GRAC **Grapevine Rang** 108.79 50 P **PKiKP** **10 28 43.8 -1.8**
baz=288
LINV **Loch Inver, As** 108.83 335 *e*P **Pdif** **10 24 34.4 -5.9**
LINV IAMs_20 IAMs_20 11 15 09.7
comp=Z,21µm,28.8s
DECC **Green Verdugo** 108.84 53 P **PKiKP** **10 28 43.1 -2.7**
baz=286
EDW2 **Edwards Air Fo** 108.93 52 P **PKiKP** **10 28 46.7 +0.7**
baz=287,SNR=12
MPMC **Manual Prospec** 108.98 51 P **PKiKP** **10 28 46.9 +0.7**
baz=288,SNR=7.3
LRMC **Laurel Mtn Rad** 109.00 51 P **PKiKP** **10 28 47.7 +1.5**
baz=287,SNR=5.6
CIS **Catalina Islan** 109.01 54 P **PKiKP** **10 28 47.3 +1.2**
baz=286
GDLE **Glaisdale, N Y** 109.05 331 *e*P **Pdif** **10 24 34.5 -6.8**
GDLE IAMs_20 IAMs_20 11 13 03.8
comp=Z,17µm,29.0s
TSUM **Tsumeb** 109.10 251 PKKPab PKKPab 10 40 04.4 -1.6
comp=Z,1.0nm,0.3s,baz=289,slow=2.1,SNR=3.2
TSUM **Tsumeb** 109.10 251 IAMs_20 IAMs_20 11 13 28.7
comp=Z,8µm,21.0s
ELK **Elko** 109.13 45 IAMs_20 IAMs_20 11 04 41.1
comp=Z,10µm,22.0s
DLMT **Dillon** 109.16 40 IAMs_20 IAMs_20 11 12 52.5
comp=Z,6µm,20.0s
BORG **Borgarnes** 109.23 346 IAMs_20 IAMs_20 11 16 47.6
comp=Z,10µm,22.0s
WACR **West Acre** 109.23 329 *e*P **Pdif** **10 24 36.2 -6.0**
WACR IAMs_20 IAMs_20 11 21 10.7
comp=Z,22µm,23.1s
EDI **Edinburgh** 109.31 333 *e*P **Pdif** **10 24 36.3 -6.1**
EDI IAMs_20 IAMs_20 11 14 08.5
comp=Z,32µm,27.9s
LMK **Market Rasen** 109.33 330 *e*P **Pdif** **10 24 36.2 -6.4**
LMK IAMs_20 IAMs_20 11 17 36.3
comp=Z,21µm,23.5s
FURC **Furnace Creek,** 109.34 50 P **PKiKP** **10 28 48.3 +1.7**
baz=288,SNR=6.6
EDMD **Edmundbyers** 109.37 332 *e*P **Pdif** **10 24 35.5 -7.4**
EDMD IAMs_20 IAMs_20 11 14 15.4
comp=Z,16µm,27.7s
BFSC **Mount Baldy Ra** 109.38 53 P **PKiKP** **10 28 47.8 +0.9**
baz=287,SNR=7.0
LEWI **Lewis, Hebride** 109.52 336 *e*P **Pdif** **10 24 38.4 -5.0**
LEWI IAMs_20 IAMs_20 11 15 29.1
comp=Z,23µm,28.3s
KPL **Plockton** 109.53 335 *e*P **Pdif** **10 24 34.4 -9.0**
KPL IAMs_20 IAMs_20 11 12 11.8
comp=Z,21µm,29.2s
EKA **Eskdalemuir Ar** 109.64 332 PKiKP **PKiKP** **10 28 48.1 +1.5**
comp=Z,2.3nm,0.5s,baz=12,slow=3.6,SNR=2.6
EKA PP **PP** **10 29 20.5 +2.9**
comp=Z,15nm,0.9s,baz=58,slow=7.9,SNR=4.6
EKA PKKPbc **PKKPbc** **10 39 50.7 -2.2**
comp=Z,6.7nm,0.9s,baz=230,slow=5.2,SNR=5.6
EKA PKKPab **PKKPab** **10 40 03.3 -0.3**
comp=Z,18nm,0.9s,baz=232,slow=4.0,SNR=12
EKA PKPPKP **P'P'df** **10 48 15.5 -3.2**
comp=Z,1.9nm,0.5s,baz=312,slow=8.9,SNR=5.7
TPNV **Topopah Spring** 109.66 49 P **PKiKP** **10 28 48.0 +0.6**
baz=289
TPNV **Topopah Spring** 109.66 49 IAMs_20 IAMs_20 11 14 42.5
comp=Z,8µm,19.0s
ESK **Eskdalemuir** 109.67 332 *e*P **Pdif** **10 24 39.6 -4.5**
ESK IAMs_20 IAMs_20 11 14 19.8
comp=Z,29µm,28.9s
BOZ **Bozeman (W)** 109.69 40 P **PKiKP** **10 28 45.9 -1.3**
baz=295
BOZ **Bozeman (W)** 109.69 40 IAMs_20 IAMs_20 11 12 34.3
comp=Z,8µm,22.0s
R11A **Troy Canyon, C** 109.70 48 P **PKiKP** **10 28 47.5 +0.1**
baz=290,SNR=8.9
RRX **Edison Barstow** 109.72 52 P **PKiKP** **10 28 48.2 +0.8**
baz=288
GSC **Goldstone, Bar** 109.74 51 P **PKiKP** **10 28 48.4 +0.8**
baz=288,SNR=8.3
EGMT **Eagleton** 109.77 37 P **PKiKP** **10 28 44.8 -2.4**
baz=297
EGMT **Eagleton** 109.77 37 IAMs_20 IAMs_20 11 11 50.3
comp=Z,8µm,21.0s
ELSH **Elham, Standar** 109.78 327 *e*P **Pdif** **10 24 39.3 -5.4**
ELSH IAMs_20 IAMs_20 11 16 24.0
comp=Z,22µm,26.3s
MURC **Murrieta** 109.94 53 P **PKiKP** **10 28 48.6 +0.8**
baz=287,SNR=8.6
BBRC **Big Bear Solar** 109.96 52 P **PKiKP** **10 28 48.9 +0.7**
baz=287
PGBU **Glenifferbraes** 109.96 333 *e*P **Pdif** **10 24 39.0 -6.4**
PGBU IAMs_20 IAMs_20 11 14 24.8
comp=Z,30µm,30.4s
SHOC **Shoshone, Teco** 109.97 51 P **PKiKP** **10 28 49.2 +1.4**
baz=288,SNR=10
KESW **Keswick, Cumbr** 110.05 332 *e*P **Pdif** **10 24 40.0 -5.8**
KESW IAMs_20 IAMs_20 11 13 20.2
comp=Z,21µm,28.9s
LBWR **Ladybower, Pea** 110.06 330 *e*P **Pdif** **10 24 40.0 -5.9**
LBWR IAMs_20 IAMs_20 11 17 42.3
comp=Z,16µm,26.3s
LAWE **Loch Awe, Argy** 110.09 334 *e*P **Pdif** **10 24 40.3 -5.7**
LAWE IAMs_20 IAMs_20 11 12 27.7
comp=Z,24µm,30.1s
109C **Camp Elliot, M** 110.21 54 P **PKiKP** **10 28 48.7 +0.3**
baz=287
109C **Camp Elliot, M** 110.21 54 IAMs_20 IAMs_20 11 12 03.6
comp=Z,7µm,20.0s
CWF **Charnwood Fore** 110.22 329 *e*P **Pdif** **10 24 40.8 -5.8**
CWF IAMs_20 IAMs_20 11 18 13.3
comp=Z,21µm,23.8s
HEC **Hector,Ludlow** 110.25 52 P **PKiKP** **10 28 50.2 +1.7**
baz=288,SNR=6.2
NEWG **New Galloway** 110.27 333 *e*P **Pdif** **10 24 41.0 -5.7**
NEWG IAMs_20 IAMs_20 11 14 36.5
comp=Z,32µm,28.3s
HMNX **Herstmonceux** 110.36 327 *e*P **Pdif** **10 24 41.8 -5.5**
HMNX IAMs_20 IAMs_20 11 18 10.4
comp=Z,26µm,24.0s
TJX **Tijuana** 110.36 54 IAMs_20 IAMs_20 11 17 27.6
comp=Z,9µm,21.0s
FFC **Flin Flon** 110.37 28 IAMs_20 IAMs_20 11 22 31.4
comp=Z,6µm,21.0s
TUQ **Turquoise Moun** 110.38 51 P **PKiKP** **10 28 50.5 +1.7**
baz=288,SNR=5.2
SPR3 **Spring Creek 3** 110.40 47 IAMs_20 IAMs_20 11 07 36.8
comp=Z,10µm,22.0s
PRN **Pahroc Range** 110.41 49 IAMs_20 IAMs_20 11 11 55.4
comp=Z,7µm,21.0s
PFO **Pinyon Flats O** 110.52 53 Pdiff **Pdif** **10 24 50.0 +1.5**
comp=Z,3.4nm,0.9s,baz=320,slow=7.9,SNR=2.4
PFO PKiKP **PKiKP** **10 28 51.3 +2.2**
comp=Z,40nm,1.0s,baz=260,slow=1.1,SNR=22
PFO PP **PP** **10 29 26.3 +1.2**
comp=Z,7.4nm,0.8s,baz=288,slow=7.5,SNR=4.5
PFO **Pinyon Flats O** 110.52 53 *i* PKiKP **PKiKP** **10 28 48.3 -0.8**
PFO **Pinyon Flats O** 110.52 53 P **PKiKP** **10 28 51.0 +1.9**
baz=287,SNR=12
PFO **Pinyon Flats O** 110.52 53 PKiKP **PKiKP** **10 28 48.3 -0.8**
PFO **Pinyon Flats O** 110.52 53 IAMs_20 IAMs_20 11 12 25.8
comp=Z,9µm,20.0s
XPFO **Pion Flat** 110.52 53 IAMs_20 IAMs_20 11 12 25.8
comp=Z,9µm,20.0s
TPFO **Pinon Flats** 110.52 53 P **PKiKP** **10 28 50.9 +1.8**
baz=287,SNR=14
BAR **Barrett** 110.62 54 IAMs_20 IAMs_20 11 17 47.5
comp=Z,8µm,20.0s
GAL1 **Galloway** 110.64 333 *e*P **Pdif** **10 24 42.0 -6.4**
GAL1 IAMs_20 IAMs_20 11 14 47.0
comp=Z,31µm,28.4s
CLF **Chambon-Foret** 110.69 324 IAMs_20 IAMs_20 11 21 48.4
comp=Z,8µm,21.0s
TKX **Tecate** 110.70 54 IAMs_20 IAMs_20 11 17 48.7
comp=Z,8µm,20.0s
MONP2 **Monument Peak** 110.76 54 P **PKiKP** **10 28 51.5 +1.9**
baz=287,SNR=13
BELC **Belle Mtn. Jos** 110.77 52 P **PKiKP** **10 28 51.3 +1.8**
baz=288,SNR=23
KEST **Kesra** 110.78 310 Pdiff **Pdif** **10 24 50.7 +1.0**
comp=Z,1.1nm,0.5s,baz=96,slow=8.2,SNR=1.3
KEST PKiKP **PKiKP** **10 28 51.8 +2.3**
comp=Z,14nm,0.9s,baz=138,slow=2.9,SNR=5.1
KEST PP **PP** **10 29 27.4 +0.6**
comp=Z,15nm,0.8s,baz=330,slow=4.4,SNR=4.7
KEST PKKPbc **PKKPbc** **10 39 49.7 +1.0**
comp=Z,9.1nm,0.9s,baz=204,slow=2.5,SNR=6.0
GMRC **Granite Mounta** 110.79 51 P **PKiKP** **10 28 51.6 +2.0**
baz=288,SNR=18
IMW **Indian Meadow** 110.85 41 IAMs_20 IAMs_20 11 10 20.2
comp=Z,9µm,22.0s
CCX **Cicese** 110.86 55 IAMs_20 IAMs_20 11 11 59.9
comp=Z,7µm,20.0s
H17A **Grant Village** 110.87 40 P **PKiKP** **10 28 50.3 +0.7**
baz=296
FLWY **Flagg Ranch** 110.93 41 IAMs_20 IAMs_20 11 13 50.2
comp=Z,9µm,21.0s
IOMK **Kirk Michael** 110.94 332 *e*P **Pdif** **10 24 43.1 -6.6**
IOMK IAMs_20 IAMs_20 11 14 57.3
comp=Z,58µm,28.8s
WOL **Wolverton** 110.96 328 *e*P **Pdif** **10 24 44.0 -5.9**
WOL IAMs_20 IAMs_20 11 18 22.2
comp=Z,22µm,25.5s
TPAW **Teton Pass** 111.01 41 IAMs_20 IAMs_20 11 03 50.6
comp=Z,8µm,22.0s
DUG **Dugway, Tooele** 111.05 45 P **PKiKP** **10 28 50.7 +0.7**
baz=292
DUG **Dugway, Tooele** 111.05 45 IAMs_20 IAMs_20 11 05 51.0
comp=Z,9µm,22.0s
IKP **In-Ko-Pah, Jac** 111.08 54 P **PKiKP** **10 28 52.2 +2.0**
baz=287,SNR=12
FOEL **Foel Wylfa** 111.08 330 *e*P **Pdif** **10 24 45.1 -5.3**
FOEL IAMs_20 IAMs_20 11 18 11.1
comp=Z,15µm,26.4s
RMX **La Rumorosa** 111.12 54 IAMs_20 IAMs_20 11 18 03.2
comp=Z,10µm,21.0s
REDW **Red Top Meadow** 111.13 41 IAMs_20 IAMs_20 11 03 55.2
comp=Z,7µm,22.0s
CLGH **Cloghs, Cushen** 111.14 333 *e*P **Pdif** **10 24 45.0 -5.7**
CLGH IAMs_20 IAMs_20 11 12 57.7
comp=Z,23µm,29.8s
SWN1 **Swindon** 111.15 329 *e*P **Pdif** **10 24 43.6 -7.2**
SWN1 IAMs_20 IAMs_20 11 16 20.4
comp=Z,13µm,25.0s
SNOW **Snow King Moun** 111.15 41 IAMs_20 IAMs_20 11 10 19.3
comp=Z,8µm,21.0s
STRD **Stroud** 111.19 329 *e*P **Pdif** **10 24 46.2 -4.8**
STRD IAMs_20 IAMs_20 11 18 19.4
comp=Z,15µm,25.7s
SWSC **Sam W. Stewart** 111.25 53 P **PKiKP** **10 28 51.4 +1.1**
baz=288,SNR=9.6
BC3 **Big Chuckawall** 111.31 53 P **PKiKP** **10 28 51.9 +1.3**
baz=288,SNR=16
RLMT **Red Lodge** 111.39 39 P **PKiKP** **10 28 50.8 +0.3**
baz=297
RLMT **Red Lodge** 111.39 39 IAMs_20 IAMs_20 11 14 26.4
comp=Z,7µm,21.0s
IRM **Iron Mountain** 111.39 52 P **PKiKP** **10 28 51.7 +1.1**
baz=288,SNR=15
ESJX **Sierra Juarez** 111.40 54 IAMs_20 IAMs_20 11 12 18.3
comp=Z,7µm,20.0s
WPS **Cemaes, Angles** 111.42 331 *e*P **Pdif** **10 24 45.6 -6.3**
WPS IAMs_20 IAMs_20 11 13 00.4
comp=Z,19µm,32.2s
WLF1 **Llynfaes** 111.44 331 *e*P **Pdif** **10 24 46.3 -5.7**
WLF1 IAMs_20 IAMs_20 11 13 01.4
comp=Z,39µm,33.5s
MONM **Monmouth** 111.49 329 *e*P **Pdif** **10 24 46.7 -5.5**
MONM IAMs_20 IAMs_20 11 19 03.6
comp=Z,14µm,22.7s
MCH1 **Michaelchurch** 111.50 329 *e*P **Pdif** **10 24 46.8 -5.5**
MCH1 IAMs_20 IAMs_20 11 19 03.7
comp=Z,19µm,25.1s
NEE2 **Needles Airpor** 111.61 51 P **PKiKP** **10 28 50.9 -0.1**
baz=289
UABX **UABC, Campus M** 111.63 54 IAMs_20 IAMs_20 11 17 35.0
comp=Z,6µm,20.0s
GLA **Glamis** 111.99 53 P **PKiKP** **10 28 52.6 +0.8**
baz=288,SNR=6.9
GLA **Glamis** 111.99 53 IAMs_20 IAMs_20 11 13 20.7
comp=Z,9µm,20.0s
W13A **Hualapai Mount** 112.07 51 IAMs_20 IAMs_20 11 15 50.5
comp=Z,8µm,20.0s
PDMCI **Parker Dam, Lak** 112.13 52 P **PKiKP** **10 28 53.5 +1.5**
baz=289,SNR=6.4
BW06 **Boulder Array** 112.24 42 P **PKiKP** **10 28 52.9 +0.7**
baz=296
BW06 **Boulder Array** 112.24 42 IAMs_20 IAMs_20 11 11 16.2
comp=Z,9µm,22.0s
PDAR **Pinedale Array** 112.24 42 Pdiff **Pdif** **10 24 56.1 -0.1**
comp=Z,0.9nm,0.8s,baz=311,slow=3.5,SNR=4.7
PDAR PKiKP **PKiKP** **10 28 53.0 +0.7**
comp=Z,4.8nm,0.7s,baz=188,slow=2.2,SNR=13
PDAR PKKPbc **PKKPbc** **10 39 41.9 -2.4**
comp=Z,9.2nm,0.8s,baz=120,slow=5.4,SNR=20
PDAR PKKPab **PKKPab** **10 39 52.4 0.0**
comp=Z,14nm,0.8s,baz=112,slow=6.5,SNR=13
PDAR SKKPbc SKKPbc 10 43 31.1 +5.7
comp=Z,0.7nm,1.0s,baz=166,slow=36,SNR=1.9
PDAR PKPPKP **P'P'df** **10 48 11.6 -3.2**
comp=Z,0.9nm,0.9s,baz=219,slow=1.2,SNR=4.0
DSB **Dublin** 112.41 332 IAMs_20 IAMs_20 11 19 07.9
comp=Z,8µm,21.0s
LAO **LASA Array** 112.52 37 P **PKiKP** **10 28 53.0 +0.5**
baz=300
LAO **LASA Array** 112.52 37 IAMs_20 IAMs_20 11 06 53.9
comp=Z,6µm,20.0s
JSA **Saint Aubin** 112.62 327 *e*P **Pdif** **10 24 51.8 -5.5**
JSA IAMs_20 IAMs_20 11 19 05.2
comp=Z,24µm,26.9s
DGMT **Dagmar** 112.77 34 IAMs_20 IAMs_20 11 16 52.4
comp=Z,7µm,22.0s
DYA **Yadsworthy** 112.87 328 *e*P **Pdif** **10 24 53.1 -5.3**
DYA IAMs_20 IAMs_20 11 17 07.3
comp=Z,12µm,27.8s
113A **Mohawk Valley,** 112.93 53 IAMs_20 IAMs_20 11 16 23.4
comp=Z,6µm,19.0s
MAHO **Mahon** 113.01 315 PP **PP** **10 29 41.8 -0.6**
PIX **Pinacate** 113.56 54 IAMs_20 IAMs_20 11 13 43.2
comp=Z,6µm,20.0s
CCA1 **Carnmenellis** 113.69 329 *e*P **Pdif** **10 24 49.4 -13**
CCA1 IAMs_20 IAMs_20 11 19 56.7
comp=Z,15µm,24.5s
WUAZ **Wupatki** 113.85 49 P **PKiKP** **10 28 57.3 +1.9**
baz=292,SNR=20
214A **Organ Pipe Nat** 113.95 54 P **PKiKP** **10 28 56.2 +0.7**
baz=289,SNR=11
214A **Organ Pipe Nat** 113.95 54 IAMs_20 IAMs_20 11 16 25.7
comp=Z,7µm,19.0s
X16A **Lo Mia Camp, P** 114.19 51 IAMs_20 IAMs_20 11 17 15.7
comp=Z,9µm,20.0s
O20A **White River Ci** 114.28 44 P **PKiKP** **10 28 57.2 +1.0**
baz=296,SNR=9.9
O20A **White River Ci** 114.28 44 IAMs_20 IAMs_20 11 12 33.2
comp=Z,8µm,21.0s
K22A **Casper** 114.29 41 P **PKiKP** **10 28 56.4 +0.3**
baz=298

PV18	**Skein Mesa, Pa**	**114.61**	**46**	IAMs_20	IAMs_20	11 18 00.1			
	comp=Z,8µm,20.0s								
PV03	**Paradox Valley**	**114.65**	**46**	IAMs_20	IAMs_20	11 18 01.2			
	comp=Z,8µm,20.0s								
PV07	**Paradox Valley**	**114.71**	**46**	IAMs_20	IAMs_20	11 18 49.0			
	comp=Z,8µm,20.0s								
PV01	**Paradox Valley**	**114.89**	**46**	IAMs_20	IAMs_20	11 18 52.8			
	comp=Z,8µm,19.0s								
RSSD	**Black Hills**	**115.15**	**38**	P	**PKiKP**	**10 28 57.1**	**-0.6**		
	baz=301								
RSSD	**Black Hills**	**115.15**	**38**	IAMs_20	IAMs_20	11 13 35.6			
	comp=Z,6µm,22.0s								
W18A	**Petrified Fore**	**115.24**	**49**	P	**PKPdf**	**10 28 59.8**	**+1.7**		
	baz=293,SNR=23								
W18A	**Petrified Fore**	**115.24**	**49**	IAMs_20	IAMs_20	11 18 00.3			
	comp=Z,8µm,21.0s								
MVCO	**Mesa Verde**	**115.33**	**47**	P	**PKPdf**	**10 28 59.8**	**+1.4**		
	baz=294,SNR=30								
MVCO	**Mesa Verde**	**115.33**	**47**		**PKiKP**	**10 28 56.3**	**-2.0**		
TUC	**Tucson**	**115.45**	**53**	PKIKP	**PKiKP**	**10 28 57.1**	**-1.4**		
TUC	**Tucson**	**115.45**	**53**	P	**PKPdf**	**10 28 58.6**	**+0.2**		
	baz=291								
TUC	**Tucson**	**115.45**	**53**		**PKiKP**	**10 28 57.0**	**-1.4**		
TUC	**Tucson**	**115.45**	**53**	IAMs_20	IAMs_20	11 12 29.3			
	comp=Z,7µm,22.0s								
N23A	**Red Feather La**	**115.50**	**42**	P	**PKPdf**	**10 28 59.7**	**+1.1**		
	baz=298,SNR=7.2								
N23A	**Red Feather La**	**115.50**	**42**		**PKiKP**	**10 28 56.5**	**-2.1**		
N23A				IAMs_20	IAMs_20	11 20 28.3			
	comp=Z,6µm,19.0s								
SMCO	**Snowmass**	**115.58**	**44**		**PKiKP**	**10 28 58.0**	**-1.0**		
SMCO				IAMs_20	IAMs_20	11 09 42.6			
	comp=Z,7µm,22.0s								
PHWY	**Pilot Hill**	**115.63**	**42**		**PKiKP**	**10 28 55.5**	**-3.4**		
PHWY				IAMs_20	IAMs_20	11 10 46.8			
	comp=Z,6µm,21.0s								
MDND	**Maddock**	**115.66**	**33**	P	**PKPdf**	**10 28 58.5**	**+0.2**		
	baz=306								
MDND	**Maddock**	**115.66**	**33**		**PKiKP**	**10 28 57.3**	**-1.0**		
MDND				IAMs_20	IAMs_20	11 19 10.8			
	comp=Z,8µm,22.0s								
E28A	**Huff**	**115.80**	**35**		**PKPdf**	**10 28 59.2**	**+0.6**		
E28A				IAMs_20	IAMs_20	11 22 28.5			
	comp=Z,6µm,22.0s								
SRIG	**Santa Rosalia**	**115.87**	**58**		**PKPdf**	**10 28 57.0**	**-2.2**		
ULM	**Lac du Bonnet**	**116.08**	**29**	PKP	**PKiKP**	**10 28 59.0**	**0.0**		
	comp=Z,39nm,0.7s,baz=308,slow=2.0,SNR=47								
ULM				PKKPbc	**PKKPbc**	**10 39 30.6**	**-0.6**		
	comp=Z,25nm,0.8s,baz=111,slow=2.9,SNR=16								
ULM				PKKPab	**PKKPab**	**10 39 34.7**	**-0.4**		
	comp=Z,25nm,0.8s,baz=121,slow=4.2,SNR=14								
ULM	**Lac du Bonnet**	**116.08**	**29**		**PKiKP**	**10 28 57.9**	**-1.1**		
ULM				IAMs_20	IAMs_20	11 24 00.6			
	comp=Z,5µm,21.0s								
ISCO	**Idaho Springs**	**116.23**	**43**	P	**PKiKP**	**10 29 01.1**	**+1.0**		
	baz=298,SNR=28								
ISCO	**Idaho Springs**	**116.23**	**43**	IAMs_20	IAMs_20	11 17 24.9			
	comp=Z,9µm,22.0s								
S22A	**4UR Ranch, Cre**	**116.31**	**46**	P	**PKiKP**	**10 29 01.8**	**+1.6**		
	baz=296,SNR=25								
S22A	**4UR Ranch, Cre**	**116.31**	**46**		**PKPdf**	**10 28 59.4**	**-0.8**		
HSIG		**116.42**	**56**	IAMs_20	IAMs_20	11 12 00.4			
	comp=Z,9µm,22.0s								
NRS	**Narsarsuaq**	**116.48**	**356**	PKIKP	**PKPdf**	**10 28 58.8**	**-0.6**		
NRS				MLR	MLR				
	comp=Z,12µm,22.0s								
NRS	**Narsarsuaq**	**116.48**	**356**		**PKPdf**	**10 28 58.8**	**-0.6**		
Q24A	**Divide**	**116.94**	**44**	P	**PKiKP**	**10 29 02.0**	**+0.5**		
	baz=298,SNR=11								
Q24A	**Divide**	**116.94**	**44**		**PKPdf**	**10 29 01.3**	**-0.2**		
319A	**Douglas**	**116.98**	**53**		**PKiKP**	**10 29 02.2**	**+0.7**		
PMSA	**Palmer Station**	**117.11**	**175**	PKKPbc	PKKPbc	10 39 27.6	-0.2		
	comp=Z,13nm,0.9s,baz=45,slow=2.9,SNR=2.0								
PMSA	**Palmer Station**	**117.11**	**175**	IAMs_20	IAMs_20	11 17 14.4			
	comp=Z,8µm,21.0s								
SDCO	**Great Sand Dun**	**117.25**	**45**	P	**PKiKP**	**10 29 03.4**	**+1.3**		
	baz=297,SNR=34								
SDCO	**Great Sand Dun**	**117.25**	**45**		**PKiKP**	**10 29 02.6**	**+0.5**		
AGMN	**Agassiz Nation**	**117.36**	**31**	P	**PKiKP**	**10 29 01.7**	**+0.1**		
	baz=310								
AGMN	**Agassiz Nation**	**117.36**	**31**	IAMs_20	IAMs_20	11 15 38.4			
	comp=Z,5µm,22.0s								
D32A	**Dogwood Acres,**	**117.49**	**32**	IAMs_20	IAMs_20	11 22 13.0			
	comp=Z,6µm,20.0s								
CART	**Cartagena**	**117.72**	**315**	PP	PP	10 30 16.2	+0.7		
CART	**Cartagena**	**117.72**	**315**	PS	PS	10 39 50.1	-11		
121A	**Cookes Peak, D**	**117.73**	**51**	P	**PKiKP**	**10 29 04.3**	**+1.2**		
	baz=293,SNR=29								
121A	**Cookes Peak, D**	**117.73**	**51**	IAMs_20	IAMs_20	11 18 58.4			
	comp=Z,7µm,19.0s								
ANMO	**Albuquerque**	**117.77**	**48***c*	*i*PKIKP	**PKiKP**	**10 29 04.3**	**+1.2**		
ANMO				pmax	pmax				
	comp=Z,104nm,1.3s								
ANMO	**Albuquerque**	**117.77**	**48**	P	**PKiKP**	**10 29 04.2**	**+1.1**		
	baz=295								
ANMO	**Albuquerque**	**117.77**	**48**		**PKiKP**	**10 29 03.2**	**+0.1**		
ANMO	**Albuquerque**	**117.77**	**48**	IAMs_20	IAMs_20	11 16 21.2			
	comp=Z,5µm,21.0s								
Y22D	**IRIS PASSCAL I**	**117.78**	**49**	P	**PKiKP**	**10 29 04.1**	**+1.1**		
	baz=294,SNR=10.0								
TAM	**Tamanrasset**	**117.82**	**297**	IAMs_20	IAMs_20	11 20 29.3			
	comp=Z,6µm,22.0s								
UCM	**Universidad Co**	**117.94**	**319**	PP	PP	10 30 19.4	+2.4		
SUSD	**Miller**	**118.03**	**36**	P	**PKPdf**	**10 29 02.8**	**-0.2**		
	baz=306,SNR=9.5								
SUSD	**Miller**	**118.03**	**36**		**PKPdf**	**10 29 02.9**	**-0.2**		
SUSD				IAMs_20	IAMs_20	11 24 15.5			
	comp=Z,6µm,20.0s								
T25A	**Trinidad**	**118.30**	**45**	P	**PKiKP**	**10 29 04.6**	**+0.6**		
	baz=298,SNR=43								
T25A	**Trinidad**	**118.30**	**45**		**PKiKP**	**10 29 04.6**	**+0.6**		
T25A				IAMs_20	IAMs_20	11 20 27.8			
	comp=Z,7µm,22.0s								
B35A	**Bob, Littlefor**	**118.39**	**30**	IAMs_20	IAMs_20	11 24 16.6			
	comp=Z,6µm,22.0s								
KSCO	**Kaye Shedlock'**	**118.64**	**43**	P	**PKiKP**	**10 29 04.7**	**+0.1**		
	baz=300,SNR=16								
KSCO	**Kaye Shedlock'**	**118.64**	**43**	IAMs_20	IAMs_20	11 18 54.5			
	comp=Z,7µm,21.0s								
ES19	**SONSECA Array**	**118.69**	**318**	IAMs_20	IAMs_20	11 26 20.5			
	comp=Z,8µm,22.0s								
F33A	**5 Mile Ranch,**	**118.69**	**33**	IAMs_20	IAMs_20	11 17 22.8			
	comp=Z,7µm,22.0s								
ES18	**SONSECA Array**	**118.71**	**318**	IAMs_20	IAMs_20	11 31 30.2			
	comp=Z,6µm,22.0s								
ES02	**SONSECA Array**	**118.72**	**318**	IAMs_20	IAMs_20	11 23 26.4			
	comp=Z,6µm,22.0s								
ES03	**SONSECA Array**	**118.73**	**318**	IAMs_20	IAMs_20	11 26 19.5			
	comp=Z,8µm,22.0s								
ES11	**SONSECA Array**	**118.73**	**318**	IAMs_20	IAMs_20	11 23 27.5			
	comp=Z,7µm,22.0s								
ES07	**SONSECA Array**	**118.73**	**318**	IAMs_20	IAMs_20	11 24 50.6			
	comp=Z,6µm,22.0s								
ES01	**SONSECA Array**	**118.73**	**318**	IAMs_20	IAMs_20	11 26 31.2			
	comp=Z,6µm,22.0s								
ES06	**SONSECA Array**	**118.73**	**318**	IAMs_20	IAMs_20	11 26 30.2			
	comp=Z,6µm,21.0s								
ES04	**SONSECA Array**	**118.74**	**318**	IAMs_20	IAMs_20	11 26 30.3			
	comp=Z,6µm,22.0s								
ESBB	**Sonseca Array**	**118.74**	**318**		**PKiKP**	**10 29 04.9**	**+0.3**		
ESBB				IAMs_20	IAMs_20	11 24 51.2			
	comp=Z,6µm,22.0s								
ESDC	**Sonseca Array**	**118.74**	**318**	PKP	**PKiKP**	**10 29 05.3**	**+0.7**		
	comp=Z,5.7nm,1.0s,baz=24,slow=3.5,SNR=11								
ESDC				PP	**PP**	**10 30 27.7**	**+5.1**		
	comp=Z,11nm,1.0s,baz=45,slow=7.7,SNR=6.1								
ESDC				PKKPab	**PKKPbc**	**10 39 22.5**	**+1.0**		
	comp=Z,5.0nm,1.0s,baz=246,slow=4.0,SNR=9.8								
ESDC	**Sonseca Array**	**118.74**	**318**		**PKPdf**	**10 29 03.5**	**-1.1**		
ES05	**SONSECA Array**	**118.75**	**318**	IAMs_20	IAMs_20	11 24 49.2			
	comp=Z,7µm,22.0s								
ES12	**SONSECA Array**	**118.75**	**318**	IAMs_20	IAMs_20	11 23 29.3			
	comp=Z,6µm,22.0s								
ES14	**SONSECA Array**	**118.77**	**318**	IAMs_20	IAMs_20	11 31 10.7			
	comp=Z,5µm,21.0s								
ES15	**SONSECA Array**	**118.77**	**318**	IAMs_20	IAMs_20	11 24 50.7			
	comp=Z,6µm,22.0s								
SLBS	**Sierra La Lagu**	**118.92**	**61**		**PKiKP**	**10 29 05.7**	**+0.3**		
EPT	**El Paso**	**119.02**	**52**	IAMs_20	IAMs_20	11 22 22.7			
	comp=Z,5µm,20.0s								
PAB	**San Pablo**	**119.06**	**318**	PKIKP	**PKPdf**	**10 29 04.9**	**-0.3**		
PAB	**San Pablo**	**119.06**	**318**		**PKPdf**	**10 29 04.9**	**-0.3**		
PAB	**San Pablo**	**119.06**	**318**	IAMs_20	IAMs_20	11 30 27.6			
	comp=Z,6µm,21.0s								
K31A	**O'Neill**	**119.19**	**37**		**PKPdf**	**10 29 04.8**	**-0.5**		
K31A				IAMs_20	IAMs_20	11 17 05.6			
	comp=Z,7µm,20.0s								
H06S1	**SOCORRO T**	**119.30**	**67**	PKP	**PKiKP**	**10 29 07.7**	**+1.6**		
H06E1	**SOCORRO T-PHAS**	**119.32**	**67**	PKP	**PKiKP**	**10 29 06.9**	**+0.7**		
PBRG	**Braganca**	**119.39**	**322**	*e*PKPdf	**PKiKP**	**10 29 06.7**	**+0.9**		
PBRG	**Braganca**	**119.39**	**322**	*e*PP	PP	10 30 29.7	+2.8		
EYMN	**Ely**	**119.76**	**29**	P	**PKPdf**	**10 29 06.2**	**0.0**		
	baz=314,SNR=15								
EYMN	**Ely**	**119.76**	**29**		**PKPdf**	**10 29 05.9**	**-0.3**		
EYMN	**Ely**	**119.76**	**29**	IAMs_20	IAMs_20	11 27 44.9			
	comp=Z,6µm,22.0s								
ECSD	**EROS Data Cent**	**119.80**	**35**	P	**PKPdf**	**10 29 06.2**	**-0.2**		
	baz=307,SNR=70								
ECSD	**EROS Data Cent**	**119.80**	**35**		**PKPdf**	**10 29 06.4**	**-0.1**		
ECSD	**EROS Data Cent**	**119.80**	**35**	IAMs_20	IAMs_20	11 24 46.5			
	comp=Z,7µm,21.0s								
MVO	**Moncorvo**	**119.92**	**321**	*e*PKPdf	**PKiKP**	**10 29 07.6**	**+0.7**		
MVO	**Moncorvo**	**119.92**	**321**	*e*LQ	LQ	11 07 16.2			
MVO				*e*LR	LR	11 13 43.5			
	comp=Z,6µm,22.0s								
MNTX	**Cornudas Mount**	**119.93**	**51**	P	**PKiKP**	**10 29 07.1**	**0.0**		
	baz=294,SNR=158								
MNTX	**Cornudas Mount**	**119.93**	**51**		**PKiKP**	**10 29 07.5**	**+0.3**		
MNTX				IAMs_20	IAMs_20	11 19 51.7			
	comp=Z,8µm,20.0s								
F36A	**Milaca**	**120.16**	**32**		**PKPdf**	**10 29 06.0**	**-1.0**		
F36A				IAMs_20	IAMs_20	11 17 10.5			
	comp=Z,7µm,22.0s								
PCAB	**Cabril**	**120.23**	**322**	*e*PKPdf	**PKiKP**	**10 29 08.1**	**+0.7**		
PGAV	**Gavieira, Arco**	**120.23**	**323**	*e*PKPdf	**PKiKP**	**10 29 08.1**	**+0.6**		
PGAV	**Gavieira, Arco**	**120.23**	**323**	*e*PP	PP	10 30 34.9	+2.2		
PGAV	**Gavieira, Arco**	**120.23**	**323**	*e*LR	LR	11 10 25.1			
	comp=Z,6µm,22.0s								
BGNE	**Belgrade**	**120.26**	**38**	P	**PKPdf**	**10 29 06.9**	**-0.5**		
	baz=305								
BGNE	**Belgrade**	**120.26**	**38**		**PKPdf**	**10 29 06.8**	**-0.5**		
BGNE				IAMs_20	IAMs_20	11 21 08.9			
	comp=Z,6µm,22.0s								
POLO	**Lamas de Olo**	**120.28**	**322**	*e*PKPdf	**PKiKP**	**10 29 08.3**	**+0.7**		
POLO	**Lamas de Olo**	**120.28**	**322**	*e*PP	PP	10 30 34.2	+1.1		
PVRL	**Vila Real**	**120.29**	**322**	*e*PKPdf	**PKiKP**	**10 29 08.6**	**+1.0**		
FIGM	**Figuig**	**120.30**	**310**	P	**PKiKP**	**10 29 09.5**	**+1.5**		
	SNR=11								
EMAL	**Malaga-Limoner**	**120.52**	**316**	PP	PP	10 30 34.3	-0.5		
EMAL	**Malaga-Limoner**	**120.52**	**316**	PS	PS	10 40 20.5	-6.1		
E38A	**The Farm, Brul**	**120.66**	**30**	IAMs_20	IAMs_20	11 26 49.8			
	comp=Z,8µm,22.0s								
CBKS	**Cedar Bluff**	**120.67**	**41**	P	**PKPdf**	**10 29 08.2**	**-0.1**		
	baz=302,SNR=31								
MTE	**Manteigas**	**120.67**	**321**	*e*PKPdf	**PKiKP**	**10 29 09.4**	**+1.0**		
MTE	**Manteigas**	**120.67**	**321**	*e*PP	PP	10 30 39.4	+3.6		
MTE	**Manteigas**	**120.67**	**321**	*e*LQ	LQ	11 06 40.4			
MTE				*e*LR	LR	11 14 26.1			
	comp=Z,6µm,22.0s								
MTE	**Manteigas**	**120.67**	**321**		**PKiKP**	**10 29 09.2**	**+0.8**		
MTE				IAMs_20	IAMs_20	11 32 55.3			
	comp=Z,5µm,22.0s								
PVIS	**Viseu**	**120.72**	**321**	*e*PKPdf	**PKiKP**	**10 29 09.6**	**+1.2**		
CLNB	**Carlsbad**	**120.86**	**50**		**PKiKP**	**10 29 09.2**	**+0.2**		
MSTX	**Muleshoe**	**120.94**	**48**	P	**PKPdf**	**10 29 09.0**	**0.0**		
	baz=297,SNR=105								
MSTX	**Muleshoe**	**120.94**	**48**		**PKiKP**	**10 29 09.3**	**+0.1**		
PCBR	**Castelo Branco**	**120.94**	**320**	*e*PKPdf	**PKiKP**	**10 29 09.5**	**+0.7**		
SPMN	**Marine on St.**	**120.96**	**32**	P	**PKPdf**	**10 29 08.4**	**-0.2**		
	baz=312,SNR=25								
SPMN	**Marine on St.**	**120.96**	**32**	IAMs_20	IAMs_20	11 18 59.8			
	comp=Z,6µm,20.0s								
L34A	**Svendsen Farm,**	**121.01**	**37**		**PKPdf**	**10 29 07.6**	**-1.2**		
L34A				IAMs_20	IAMs_20	11 19 45.6			
	comp=Z,9µm,22.0s								
N33A	**J Bar K, Exete**	**121.07**	**38**		**PKPdf**	**10 29 08.2**	**-0.8**		
N33A				IAMs_20	IAMs_20	11 21 00.5			
	comp=Z,7µm,22.0s								
PMRV	**Marv??o**	**121.12**	**320**	*e*PKPdf	**PKiKP**	**10 29 10.6**	**+1.4**		
PMRV	**Marv??o**	**121.12**	**320**	*e*LQ	LQ	11 13 12.1			
PMRV				*e*LR	LR	11 17 43.3			
	comp=Z,5µm,22.0s								
PVLZ	**Peæn de**	**121.20**	**314**	PP	PP	10 30 35.4	-4.2		
AMTX	**Amarillo**	**121.31**	**46**	P	**PKiKP**	**10 29 10.0**	**+0.1**		
	baz=299								
AMTX	**Amarillo**	**121.31**	**46**		**PKiKP**	**10 29 09.8**	**0.0**		
AMTX				IAMs_20	IAMs_20	11 18 24.6			
	comp=Z,8µm,22.0s								
COI	**Coimbra**	**121.33**	**321**	IAMs_20	IAMs_20	11 29 47.2			
	comp=Z,5µm,22.0s								
I37A	**Lemond, Waseca**	**121.43**	**33**	IAMs_20	IAMs_20	11 24 26.5			
	comp=Z,7µm,21.0s								
CEU	**Ceuta**	**121.61**	**315**	PP	PP	10 30 43.1	+0.9		
PMTG	**Montargil**	**121.86**	**320**	*e*PKPdf	**PKiKP**	**10 29 11.9**	**+1.3**		
PMTG	**Montargil**	**121.86**	**320**	*e*PP	PP	10 30 47.1	+3.3		
SFS	**San Fernando**	**121.90**	**316**	PP	PP	10 30 45.0	+0.8		
SCHQ	**Schefferville**	**121.95**	**9**	PKP	**PKiKP**	**10 29 10.9**	**+0.5**		
	comp=Z,21nm,0.5s,baz=17,slow=3.1,SNR=21								
SCHQ				PP	**PP**	**10 30 44.5**	**+1.0**		
	comp=Z,27nm,1.1s,baz=1.4,slow=11,SNR=2.6								
SCHQ				PKKPbc	**PKKPab**	**10 39 08.0**	**-1.4**		
	comp=Z,35nm,0.9s,baz=161,slow=2.6,SNR=15								
SCHQ	**Schefferville**	**121.95**	**9**	IAMs_20	IAMs_20	11 20 22.5			
	comp=Z,7µm,22.0s								
CHEFC	**Chefchaouen**	**121.98**	**314**	P	**PKiKP**	**10 29 12.9**	**+1.8**		
	SNR=5.8								
EVO	**Evora**	**122.02**	**319**	PP	PP	10 30 47.3	+2.4		
EVO	**Evora**	**122.02**	**319**	*e*PKPdf	**PKiKP**	**10 29 12.6**	**+1.6**		
N35A	**Tabor**	**122.11**	**37**	IAMs_20	IAMs_20	11 21 39.9			
	comp=Z,8µm,22.0s								
PBEJ	**Beja**	**122.20**	**319**	*e*PKPdf	**PKiKP**	**10 29 11.9**	**+0.5**		
TXAR	**Lajitas Array**	**122.24**	**53**	Pdiff	**Pdif**	**10 25 47.9**	**+7.2**		
	comp=Z,0.2nm,0.6s,baz=284,slow=4.5,SNR=2.0								
TXAR				PKP	**PKiKP**	**10 29 12.1**	**+0.2**		
	comp=Z,45nm,0.8s,baz=239,slow=1.0,SNR=150								
TXAR				PKKPbc	**PKKPab**	**10 39 09.0**	**+0.5**		
	comp=Z,14nm,1.0s,baz=124,slow=4.4,SNR=28								
TXAR				SKKPbc	SKKPbc	10 43 00.7	+7.1		
	comp=Z,13nm,1.2s,baz=134,slow=3.6,SNR=5.6								
TXAR	**Lajitas Array**	**122.24**	**53**		**PKPdf**	**10 29 11.4**	**-0.2**		
G40A	**Rib Lake**	**122.27**	**30**	IAMs_20	IAMs_20	11 27 37.4			
	comp=Z,8µm,22.0s								
PVAQ	**Vaqueiros**	**122.44**	**318**	*e*PKPdf	**PKiKP**	**10 29 13.4**	**+1.6**		
PVAQ	**Vaqueiros**	**122.44**	**318**	*e*LQ	LQ	11 10 26.6			
PVAQ				*e*LR	LR	11 18 15.8			
	comp=Z,6µm,24.0s								
PVAQ	**Vaqueiros**	**122.44**	**318**	IAMs_20	IAMs_20	11 30 42.9			
	comp=Z,7µm,22.0s								
PCVE	**Castro Verde**	**122.53**	**318**	*e*PKPdf	**PKiKP**	**10 29 12.6**	**+0.6**		
MDT	**Midelt**	**122.54**	**312**	PKKPbc	PKKPbc	10 39 04.3	-2.8		
	comp=Z,6.6nm,0.9s,baz=214,slow=3.6,SNR=4.2								
MDT	**Midelt**	**122.54**	**312**	P	**PKiKP**	**10 29 14.2**	**+1.8**		
	SNR=5.9								
KSU1	**Kansas State U**	**122.54**	**40**	P	**PKiKP**	**10 29 12.0**	**0.0**		
	baz=305,SNR=61								
KSU1	**Kansas State U**	**122.54**	**40**		**PKPdf**	**10 29 11.4**	**-0.4**		
KSU1	**Kansas State U**	**122.54**	**40**	IAMs_20	IAMs_20	11 21 28.6			
	comp=Z,8µm,22.0s								
PNCL	**Nicolau / Gran**	**122.59**	**319**	*e*PKPdf	**PKiKP**	**10 29 13.6**	**+1.5**		
IFR	**Ifrane**	**122.59**	**313**	PP	PP	10 30 51.0	+1.6		
IFR	**Ifrane**	**122.59**	**313**	PS	PS	10 40 38.7	-6.9		
LIS	**Lisbon**	**122.65**	**320**	*e*PP	PP	10 30 48.9	-0.3		
LIS				AMS	AMS	11 23 45.6			
	comp=E,6µm,20.9s								
K38A	**Parkersburg**	**122.67**	**34**	IAMs_20	IAMs_20	11 19 31.3			
	comp=Z,6µm,22.0s								
KAN05	**Bluff City Nor**	**122.83**	**42**		**PKPdf**	**10 29 12.5**	**0.0**		
ARF	**Arif**	**122.87**	**310**	P	**PKiKP**	**10 29 15.0**	**+2.0**		
	SNR=6.8								
SCIA	**State Center**	**122.90**	**35**	P	**PKPdf**	**10 29 12.3**	**-0.1**		
	baz=310								
SCIA	**State Center**	**122.90**	**35**		**PKPdf**	**10 29 11.9**	**-0.5**		
SCIA				IAMs_20	IAMs_20	11 13 00.4			
	comp=Z,6µm,22.0s								
F42A	**Maple Grove Fa**	**122.94**	**29**	IAMs_20	IAMs_20	11 28 18.9			
	comp=Z,8µm,22.0s								
KS20	**Mayfield South**	**122.98**	**42**		**PKPdf**	**10 29 12.1**	**-0.6**		
KS20				IAMs_20	IAMs_20	11 15 04.3			
	comp=Z,8µm,22.0s								
GC02	**Grant County #**	**122.98**	**42**		**PKPdf**	**10 29 12.1**	**-0.7**		
KAN09	**Caldwell North**	**122.99**	**42**		**PKiKP**	**10 29 13.2**	**+0.2**		
I40A	**Norwalk**	**123.01**	**32**		**PKPdf**	**10 29 11.9**	**-0.7**		
I40A				IAMs_20	IAMs_20	11 22 04.1			
	comp=Z,7µm,22.0s								
E43A	**Lone Tree Farm**	**123.02**	**28**		**PKiKP**	**10 29 12.8**	**+0.1**		
E43A				IAMs_20	IAMs_20	11 16 33.0			
	comp=Z,9µm,22.0s								
PTEO	**Sao Teotonio**	**123.03**	**319**	*e*PKPdf	**PKiKP**	**10 29 14.1**	**+1.1**		
MORF	**Marmelete**	**123.11**	**318**	*e*PKPdf	**PKPdf**	**10 29 11.9**	**-1.1**		
MORF				*e*PP	**PP**	**10 30 52.0**	**-0.5**		
MORF				AMS	AMS	11 29 12.4			
	comp=Z,7µm,18.9s								
MORF	**Marmelete**	**123.11**	**318**	*e*PKIKP	**PKPdf**	**10 29 11.9**	**-1.1**		
MORF				*e*		10 30 52.0			
MORF	**Marmelete**	**123.11**	**318**	*e*PKPdf	**PKiKP**	**10 29 15.3**	**+2.0**		
PFVI	**Vila Bisbo**	**123.33**	**318**	*e*PKPdf	**PKiKP**	**10 29 15.1**	**+1.5**		
PFVI	**Vila Bisbo**	**123.33**	**318**	IAMs_20	IAMs_20	11 31 06.4			
	comp=Z,8µm,22.0s								
WMOK	**Wichita Mounta**	**123.45**	**45**	P	**PKPdf**	**10 29 13.8**	**0.0**		
	baz=301,SNR=42								
N38A	**Joes South For**	**123.59**	**36**	IAMs_20	IAMs_20	11 18 23.9			
	comp=Z,6µm,20.0s								
TOC1	**Torodi Ar. Sit**	**123.64**	**287**	IAMs_20	IAMs_20	11 29 38.3			
	comp=Z,5µm,20.0s								
TOA0	**Torodi Ar. Sit**	**123.65**	**287**		**PKPdf**	**10 29 13.1**	**-1.4**		
TORD	**Torodi Ar. Bea**	**123.65**	**287**	PKP	**PKPdf**	**10 29 14.2**	**-0.3**		
	comp=Z,70nm,0.7s,baz=42,slow=1.9,SNR=128								
TORD				PKKPbc	**PKKPab**	**10 39 03.3**	**+0.9**		
	comp=Z,15nm,0.8s,baz=269,slow=3.1,SNR=19								
TORD	**Torodi Ar. Bea**	**123.65**	**287**		**PKPdf**	**10 29 13.8**	**-0.8**		
TOC5	**Torodi Ar. Sit**	**123.67**	**287**	IAMs_20	IAMs_20	11 29 39.2			
	comp=Z,5µm,22.0s								
ZHG	**ZHG**	**123.73**	**313**	P	**PKiKP**	**10 29 16.3**	**+1.7**		
	SNR=14								
BCOK	**Bluff Creek, N**	**123.79**	**44**		**PKPdf**	**10 29 13.6**	**-0.7**		
OK029	**Liberty Lake**	**123.82**	**43**		**PKiKP**	**10 29 15.3**	**+0.7**		
JFWS	**Jewell Farm**	**123.88**	**32**	PKIKP	**PKPdf**	**10 29 12.9**	**-1.4**		
JFWS				MLR	MLR				
	comp=Z,6µm,20.0s								
JFWS	**Jewell Farm**	**123.88**	**32**	P	**PKPdf**	**10 29 14.0**	**-0.2**		
	baz=313								
JFWS	**Jewell Farm**	**123.88**	**32**		**PKPdf**	**10 29 12.9**	**-1.4**		
JFWS	**Jewell Farm**	**

baz=328,SNR=9.3
LATQ La Tuque 127.59 17 P PKiKP 10 29 21.8 +0.1
baz=335,SNR=11
E56A St. Veronique 127.64 19 P PKiKP 10 29 21.8 -0.1
baz=332,SNR=10
AAM Ann Arbor 127.67 29 PKIKP PKPdf 10 29 21.3 -0.2
AAM Ann Arbor 127.67 29 P PKiKP 10 29 22.3 +0.2
baz=320,SNR=8.1
AAM Ann Arbor 127.67 29 PKPdf 10 29 21.3 -0.2
W41B Gary Mavity, V 127.67 41 P PKPdf 10 29 21.8 0.0
baz=307,SNR=7.9
SADO Sadowa 127.67 23 PKiKP 10 29 21.9 -0.1
SADO IAMs_20 IAMs_20 11 29 42.7
comp=Z,6µm,22.0s
I51A Listowel 127.69 25 P PKiKP 10 29 21.9 -0.2
baz=324,SNR=6.0
X40A Basin Creek Fa 127.69 42 P PKiKP 10 29 22.4 0.0
baz=306,SNR=9.7
N47A Urbana 127.72 31 IAMs_20 IAMs_20 11 23 51.5
comp=Z,6µm,22.0s
K50A Casco 127.79 27 IAMs_20 IAMs_20 11 30 58.1
comp=Z,6µm,21.0s
P46A Rosedale 127.81 33 IAMs_20 IAMs_20 11 28 33.3
comp=Z,5µm,21.0s
D58A Chemin du LacG 127.82 17 P PKiKP 10 29 22.0 -0.2
baz=334,SNR=17
LCAR Lake Charles 127.83 39 IAMs_20 IAMs_20 11 27 14.3
comp=Z,5µm,20.0s
PBMO Poplar Bluff 127.83 38 IAMs_20 IAMs_20 11 28 49.4
comp=Z,8µm,21.0s
UALR University of 127.84 41 PKiKP 10 29 23.0 +0.4
OLIL Olney 127.92 35 IAMs_20 IAMs_20 11 17 15.4
comp=Z,8µm,22.0s
S44A Carbondale 127.95 37 IAMs_20 IAMs_20 11 29 08.3
comp=Z,6µm,22.0s
NATX Nacogdoches 127.95 46 P PKPdf 10 29 22.6 +0.2
baz=303,SNR=12
NATX Nacogdoches 127.95 46 PKiKP 10 29 23.4 +0.5
HKT Hockley 128.03 49 *i* PKIKP PKiKP 10 29 23.3 +0.2
HKT Hockley 128.03 49 PKiKP 10 29 23.6 +0.5
E57A Chemin Saint G 128.04 19 P PKPdf 10 29 22.4 +0.2
baz=333
H53A Bobcaygeon 128.06 23 P PKPdf 10 29 22.4 +0.2
baz=327,SNR=11
D59A Saint-Raymond 128.20 16 P PKiKP 10 29 22.9 -0.1
baz=336
E58A La Victoria 128.35 18 P PKPdf 10 29 22.9 +0.2
baz=334,SNR=12
F57A Harrington 128.40 19 P PKiKP 10 29 23.4 0.0
baz=332
Z41A Richland Creek 128.42 43 P PKPdf 10 29 23.5 +0.3
baz=305,SNR=24
HBAR Harrisburg 128.46 40 IAMs_20 IAMs_20 11 25 30.2
comp=Z,5µm,22.0s
D61A St Aubert, Com 128.46 15 P PKiKP 10 29 23.5 0.0
baz=338,SNR=5.3
DELO Deloro Mine 128.48 22 IAMs_20 IAMs_20 11 21 01.8
comp=Z,8µm,22.0s
E59A St. Maurice 128.48 17 P PKiKP 10 29 23.7 +0.1
baz=335
D60A Saint Jean D'O 128.53 16 P PKiKP 10 29 23.5 -0.1
baz=337
PENMO Penman 128.54 38 IAMs_20 IAMs_20 11 28 01.0
comp=Z,6µm,21.0s
GNAR Gosnell 128.61 39 PKiKP 10 29 24.7 +0.6
GNAR IAMs_20 IAMs_20 11 31 24.9
comp=Z,5µm,21.0s
PEBM Pemiscott Bayo 128.61 38 PKPdf 10 29 23.7 +0.2
PEBM IAMs_20 IAMs_20 11 28 03.0
comp=Z,5µm,22.0s
F58A St-Lin Laurent 128.63 19 P PKPdf 10 29 23.4 +0.1
baz=333
M50A Fremont 128.65 29 IAMs_20 IAMs_20 11 26 35.0
comp=Z,5µm,21.0s
LPAR Lepanto 128.66 39 IAMs_20 IAMs_20 11 27 47.4
comp=Z,5µm,21.0s
HICK Hickman 128.72 38 IAMs_20 IAMs_20 11 29 01.9
comp=Z,7µm,20.0s
CCAR Cane Creek 128.73 42 IAMs_20 IAMs_20 11 31 03.7
comp=Z,8µm,21.0s
KOWA Kowa 128.74 291 PKKPbc 10 38 42.9
comp=Z,5.4nm,0.8s,baz=284,slow=5.6,SNR=4.3
KOWA Kowa 128.74 291 PKPdf 10 29 23.2 -1.1
LNXT Lenox 128.85 38 IAMs_20 IAMs_20 11 30 20.2
comp=Z,5µm,21.0s
D62A Allapoint, All 128.86 14 P PKPdf 10 29 23.9 +0.2
baz=339,SNR=7.3
GLAT Glass 128.86 38 IAMs_20 IAMs_20 11 23 14.6
comp=Z,6µm,21.0s
P48A Milroy 128.89 32 IAMs_20 IAMs_20 11 30 12.7
comp=Z,7µm,21.0s
E60A Ste Agathe de 128.89 16 P PKiKP 10 29 24.1 -0.3
baz=336
G57A Newington 128.92 20 P PKPdf 10 29 23.6 -0.2
baz=331,SNR=11
X43A Marvell 128.96 41 P PKiKP 10 29 25.1 +0.2
baz=308,SNR=8.6
X43A Marvell 128.96 41 PKPdf 10 29 23.8 -0.4
F59A Saint Guilaume 128.97 18 P PKiKP 10 29 24.4 -0.2
baz=334
H09W1 TRISTAN DA CUN 129.05 222 PKP PKiKP 10 29 25.5 +0.6
HALT Halls 129.06 38 IAMs_20 IAMs_20 11 33 01.0
comp=Z,5µm,20.0s
E61A Lac Etchemin 129.10 16 P PKiKP 10 29 24.9 0.0
baz=337,SNR=12
F60A Warwick 129.11 17 P PKPdf 10 29 24.1 0.0
baz=335,SNR=9.7
M51A Elyria 129.12 28 P PKPdf 10 29 24.4 +0.1
baz=321,SNR=5.8
D63A Stockholm 129.12 13 P PKPdf 10 29 24.2 0.0
baz=340
E62A Clayton Lake 129.17 15 P PKPdf 10 29 23.6 -0.7
baz=338,SNR=5.5
E62A Clayton Lake 129.17 15 IAMs_20 IAMs_20 11 30 24.8
comp=Z,6µm,21.0s
MET Memphis--Engin 129.19 39 IAMs_20 IAMs_20 11 24 08.6
comp=Z,7µm,21.0s
G58A Ormstown 129.19 19 P PKPdf 10 29 24.7 +0.4
baz=332
P49A Miami Univ. Ec 129.21 32 P PKPdf 10 29 24.5 -0.1
baz=317,SNR=24
P49A Miami Univ. Ec 129.21 32 IAMs_20 IAMs_20 11 35 03.1
comp=Z,7µm,21.0s
WCI Wyandotte Cave 129.29 34 P PKPdf 10 29 24.7 -0.1
baz=315
M52A Chesterland 129.34 27 PKPdf 10 29 23.3 -1.5
H57A Richville 129.34 21 P PKPdf 10 29 24.9 +0.3
baz=330,SNR=8.1
F61A St Evariste 129.38 16 P PKPdf 10 29 25.0 +0.3
baz=336,SNR=7.1
LONY Lake Ozonia 129.48 20 P PKPdf 10 29 24.9 -0.1
baz=332,SNR=6.1
PQI Presque Isle 129.49 13 IAMs_20 IAMs_20 11 30 07.1
comp=Z,5µm,21.0s
ERPA Erie 129.49 26 P PKPdf 10 29 25.2 +0.2
baz=324,SNR=5.4
L53A Girard 129.51 26 P PKPdf 10 29 24.9 -0.1
baz=324
G59A Clarenceville 129.54 19 P PKPdf 10 29 25.1 +0.1
baz=334
ACSO Alum Creek Sta 129.57 30 P PKPdf 10 29 25.2 -0.1
baz=320,SNR=29
ACSO Alum Creek Sta 129.57 30 IAMs_20 IAMs_20 11 28 45.6
comp=Z,5µm,22.0s
FRNY Flat Rock 129.62 19 IAMs_20 IAMs_20 11 32 45.0
comp=Z,6µm,22.0s
E63A Oxbow 129.63 14 P PKPdf 10 29 25.1 0.0
baz=340,SNR=9.1
W45A Hickory Valley 129.64 39 IAMs_20 IAMs_20 11 23 38.4
comp=Z,8µm,22.0s
T47A Sharon Grove 129.69 36 IAMs_20 IAMs_20 11 38 37.3
comp=Z,7µm,21.0s
I57A Carthage 129.70 21 P PKPdf 10 29 25.4 0.0
baz=330,SNR=7.9
M53A WI Miller and 129.73 27 P PKPdf 10 29 25.6 +0.1
baz=323,SNR=13
M53A WI Miller and 129.73 27 IAMs_20 IAMs_20 11 23 08.5
comp=Z,8µm,22.0s
H59A Cadyville 129.76 19 P PKiKP 10 29 26.2 -0.1
baz=333,SNR=7.5
E64A Bridgewater 129.77 13 P PKiKP 10 29 25.8 -0.3
baz=341,SNR=5.1
G60A Masonville 129.78 18 P PKiKP 10 29 26.0 -0.3
baz=334
H58A Gabriels 129.80 20 P PKPdf 10 29 25.6 0.0
baz=332,SNR=9.6
ALLY Alegheny Colle 129.80 26 PKPdf 10 29 25.9 +0.2
ALLY IAMs_20 IAMs_20 11 19 05.3
comp=Z,7µm,21.0s
J56A Wolcott 129.82 23 P PKPdf 10 29 25.7 +0.2
baz=328
J56A Wolcott 129.82 23 PKPdf 10 29 25.2 -0.4
J56A IAMs_20 IAMs_20 11 30 14.4
comp=Z,5µm,20.0s
O51A Pataskala 129.83 30 P PKPdf 10 29 25.8 0.0
baz=330,SNR=29
WVT Waverly 129.84 37 P PKPdf 10 29 25.7 -0.1
baz=312
WVNY West Valley, N 129.85 25 PKPdf 10 29 26.1 +0.4
WVNY IAMs_20 IAMs_20 11 19 16.4
comp=Z,7µm,20.0s
G61A St-Isidore-de- 129.86 17 P PKPdf 10 29 25.8 +0.2
baz=336
MMNY Mt. Morris Dam 129.87 24 PKiKP 10 29 26.3 -0.2
R49A Shelbyville 129.87 33 IAMs_20 IAMs_20 11 24 07.7
comp=Z,8µm,22.0s
OXF Oxford 129.91 40 P PKPdf 10 29 26.0 0.0
baz=309,SNR=14
OXF Oxford 129.91 40 IAMs_20 IAMs_20 11 26 20.6
comp=Z,7µm,22.0s
J57A Williamstown 130.03 22 P PKPdf 10 29 25.9 -0.1
baz=329,SNR=7.4
J57A Williamstown 130.03 22 IAMs_20 IAMs_20 11 36 14.0
comp=Z,7µm,20.0s
P51A Williamsport 130.10 30 P PKPdf 10 29 26.1 -0.2
baz=319,SNR=18
P51A Williamsport 130.10 30 IAMs_20 IAMs_20 11 24 32.7
comp=Z,5µm,21.0s
K56A Middlesex 130.13 23 P PKPdf 10 29 26.1 -0.2
baz=328
M54A Oil Creek Stat 130.13 26 P PKPdf 10 29 26.0 -0.3
baz=324,SNR=18
M54A Oil Creek Stat 130.13 26 IAMs_20 IAMs_20 11 36 49.9
comp=Z,7µm,22.0s
F63A Nahmakanta, Br 130.13 15 P PKiKP 10 29 26.9 0.0
baz=339
H60A Morristown 130.16 18 P PKPdf 10 29 26.2 0.0
baz=334
I58A Old Forge 130.16 21 P PKPdf 10 29 25.9 -0.4
baz=331,SNR=8.2
F64A Sherman 130.17 14 P PKPdf 10 29 26.1 0.0
baz=340
F64A Sherman 130.17 14 IAMs_20 IAMs_20 11 31 46.1
comp=Z,7µm,22.0s
NCB Newcomb 130.18 20 IAMs_20 IAMs_20 11 22 44.6
comp=Z,6µm,22.0s
G62A West of Eustis 130.20 16 P PKPdf 10 29 26.7 +0.4
baz=337
G62A West of Eustis 130.20 16 IAMs_20 IAMs_20 11 24 16.1
comp=Z,7µm,22.0s
O52A Adamsville 130.23 29 P PKPdf 10 29 26.4 -0.1
baz=321,SNR=19
O52A Adamsville 130.23 29 IAMs_20 IAMs_20 11 34 34.7
comp=Z,6µm,22.0s
Q51A Peebles 130.30 31 IAMs_20 IAMs_20 11 19 21.9
comp=Z,8µm,22.0s
J58A Remsen 130.34 21 P PKPdf 10 29 26.7 +0.1
baz=330,SNR=14
J58A Remsen 130.34 21 IAMs_20 IAMs_20 11 26 16.0
comp=Z,7µm,21.0s
VT1 Waterbury 130.34 19 IAMs_20 IAMs_20 11 27 23.2
comp=Z,6µm,22.0s
K57A Scipio Center 130.41 23 P PKPdf 10 29 26.7 0.0
baz=328,SNR=11
H61A Lyndonville 130.42 18 P PKPdf 10 29 26.7 0.0
baz=335,SNR=6.8
O53A New Philadelph 130.42 28 P PKPdf 10 29 27.1 +0.3
baz=322,SNR=19
O53A New Philadelph 130.42 28 IAMs_20 IAMs_20 11 32 29.8
comp=Z,6µm,22.0s
N54A Moraine State 130.42 27 P PKPdf 10 29 26.7 -0.2
baz=324,SNR=16
N54A Moraine State 130.42 27 IAMs_20 IAMs_20 11 28 42.8
comp=Z,6µm,20.0s
PLAL Pickwick Lake 130.45 38 IAMs_20 IAMs_20 11 28 46.7
comp=Z,6µm,22.0s
I59A Olmsteadville 130.45 20 P PKPdf 10 29 27.0 +0.2
baz=332,SNR=13
P52A Corning 130.45 30 P PKPdf 10 29 26.9 0.0
baz=320,SNR=24
P52A Corning 130.45 30 IAMs_20 IAMs_20 11 26 01.8
comp=Z,5µm,22.0s
PKME Peaks-Kenny Pk 130.49 15 P PKiKP 10 29 27.2 -0.4
baz=338
L56A Greenwood 130.50 24 P PKPdf 10 29 27.0 0.0
baz=327,SNR=8.5
L56A Greenwood 130.50 24 IAMs_20 IAMs_20 11 19 50.6
comp=Z,7µm,22.0s
J59A Piesco 130.52 21 P PKPdf 10 29 27.2 +0.2
baz=331,SNR=15
J59A Piesco 130.52 21 IAMs_20 IAMs_20 11 30 36.9
comp=Z,6µm,21.0s
G63A Kingsbury 130.55 15 P PKPdf 10 29 27.2 +0.2
baz=338,SNR=5.7
M55A Ridgway 130.55 25 IAMs_20 IAMs_20 11 32 42.0
comp=Z,6µm,22.0s
EFI East Falkland 130.58 176 *c i* PKIKP PKiKP 10 29 28.1 +0.5
EFI pmax pmax
comp=Z,405nm,1.7s
EFI East Falkland 130.58 176 PKiKP 10 29 27.4 -0.2
VBMS Vicksburg 130.59 43 P PKPdf 10 29 27.7 +0.4
baz=307,SNR=16
I60A Shoreham 130.60 19 P PKPdf 10 29 27.4 +0.4
baz=333,SNR=12
H62A Milan 130.61 17 P PKPdf 10 29 27.2 +0.1
baz=336
H62A Milan 130.61 17 IAMs_20 IAMs_20 11 25 34.0
comp=Z,5µm,21.0s
G64A Mayfield 130.64 15 P PKiKP 10 29 27.6 -0.3
baz=339
LBNH Lisbon 130.68 18 P PKiKP 10 29 28.0 -0.2
baz=335
V48A Smith Brothers 130.71 37 IAMs_20 IAMs_20 11 33 17.3
comp=Z,7µm,21.0s
K58A Earlville 130.72 22 P PKiKP 10 29 28.0 -0.3
baz=330,SNR=11
K58A Earlville 130.72 22 IAMs_20 IAMs_20 11 33 02.1
comp=Z,5µm,21.0s
CLTN Cedars of Leba 130.76 36 IAMs_20 IAMs_20 11 29 33.6
comp=Z,6µm,20.0s
M56A Emporium 130.79 25 P PKPdf 10 29 27.9 +0.4
baz=326,SNR=16
M56A Emporium 130.79 25 IAMs_20 IAMs_20 11 19 38.2
comp=Z,7µm,22.0s
U49A Red Boiling Sp 130.79 35 IAMs_20 IAMs_20 11 28 36.3
comp=Z,6µm,21.0s
H63A New Sharon 130.85 16 P PKPdf 10 29 27.5 0.0
baz=337
O54A Avella 130.87 28 P PKiKP 10 29 28.2 -0.4
baz=323,SNR=20
I61A Oroboro, Fairl 130.87 18 P PKPdf 10 29 28.0 +0.4
baz=334
ACCN Adirondack Com 130.88 20 IAMs_20 IAMs_20 11 28 30.4
comp=Z,7µm,22.0s
Q52A Bidwell 130.90 30 P PKPdf 10 29 27.9 +0.1
baz=320,SNR=27
L57A Andrews Acres 130.90 24 P PKPdf 10 29 27.7 -0.1
baz=328,SNR=8.7
P53A Whipple 130.93 29 P PKPdf 10 29 28.0 +0.1
baz=321,SNR=27
P53A Whipple 130.93 29 IAMs_20 IAMs_20 11 29 32.4
comp=Z,7µm,22.0s
TLIG Tlapa 130.93 64 IAMs_20 IAMs_20 11 20 40.6
comp=Z,6µm,22.0s
G65A Princeton 130.98 14 P PKPdf 10 29 27.3 -0.4
baz=341
G65A Princeton 130.98 14 IAMs_20 IAMs_20 11 38 09.6
comp=Z,6µm,19.0s
K59A Cooperstown 131.00 21 P PKPdf 10 29 27.7 -0.2
baz=330,SNR=6.5
HNH Hanover 131.05 19 IAMs_20 IAMs_20 11 27 44.7
comp=Z,6µm,22.0s
BINY Binghamton 131.07 23 P PKPdf 10 29 28.3 +0.3
baz=329,SNR=9.6
H64A Troy 131.09 15 P PKPdf 10 29 27.6 -0.3
baz=338
J60A Lant Hill Farm 131.09 20 P PKiKP 10 29 28.6 -0.4
baz=332,SNR=6.7
KIC Kosan Boka 131.09 280 *e* PKIKP PKiKP 10 29 30.0 +0.2
comp=Z,184nm,1.0s
DBIC Dimbokro 131.16 281 PKhKP PKPpre 10 29 13.6
comp=Z,2.2nm,0.5s,baz=128,slow=4.6,SNR=3.0
DBIC PKP PKiKP 10 29 29.6 -0.2
comp=Z,53nm,0.7s,baz=78,slow=2.2,SNR=32
DBIC SKPbc SKPab 10 32 51.7 +1.2
comp=Z,64nm,1.2s,baz=92,slow=21,SNR=11
DBIC Dimbokro 131.16 281 PKPdf 10 29 28.8 -0.1
I62A Tamworth 131.19 18 P PKPdf 10 29 28.6 +0.4
baz=335
I62A Tamworth 131.19 18 IAMs_20 IAMs_20 11 25 02.4
comp=Z,6µm,21.0s
N56A West Decatur 131.21 26 P PKPdf 10 29 28.8 +0.4
baz=326,SNR=17
L58A Harry Jones Me 131.26 23 P PKPdf 10 29 28.2 -0.2
baz=325,SNR=6.9
I63A Otisfield 131.26 17 P PKiKP 10 29 28.8 -0.4
baz=336
I63A Otisfield 131.26 17 IAMs_20 IAMs_20 11 30 13.1
comp=Z,5µm,21.0s
J61A Chester 131.29 19 P PKPdf 10 29 28.3 -0.1
baz=334
H65A Eastbrook 131.29 14 P PKPdf 10 29 28.7 +0.4
baz=340
146A Union 131.31 41 IAMs_20 IAMs_20 11 21 44.0
comp=Z,7µm,22.0s
TIC Toumodi 131.32 281 *e* PKIKP PKiKP 10 29 30.4 +0.2
M57A Sunshine Farm, 131.35 24 P PKPdf 10 29 28.2 -0.4
baz=327,SNR=7.8
Q53A Leroy 131.35 30 P PKPdf 10 29 28.5 -0.1
baz=321,SNR=12
LIC Lamto 131.40 280 *e* PKIKP PKiKP 10 29 30.5 +0.1
comp=Z,130nm,0.8s
PMOZ Porto Moniz, M 131.41 319 *e* PKPdf PKiKP 10 29 32.2 +2.2
PMOZ Porto Moniz, M 131.41 319 *e* LR LR 11 24 32.1
comp=Z,3µm,20.0s
H66A Whiting 131.43 14 P PKiKP 10 29 29.2 -0.3
baz=341
X48A Hartselle 131.44 38 IAMs_20 IAMs_20 11 28 22.8
comp=Z,7µm,20.0s
L59A Walton 131.44 22 P PKPdf 10 29 28.8 0.0
baz=330
L59A Walton 131.44 22 IAMs_20 IAMs_20 11 26 13.2
comp=Z,8µm,22.0s
EMMW East Machias 131.47 14 IAMs_20 IAMs_20 11 34 15.6
comp=Z,5µm,22.0s
K60A Five Rivers En 131.49 21 P PKPdf 10 29 29.2 +0.4
baz=332,SNR=5.9
MCWV Mont Chateau 131.53 28 P PKPdf 10 29 29.4 +0.5
baz=323,SNR=8.9
R53A Hurricane 131.54 31 P PKPdf 10 29 29.3 +0.3
baz=320,SNR=16
SHEL Horse Pasture 131.57 251 IAMs_20 IAMs_20 11 26 36.0
comp=Z,6µm,21.0s
M58A Price's Panora 131.59 24 P PKPdf 10 29 28.8 -0.2
baz=328,SNR=7.0
Q54A Coxs Mills 131.59 29 P PKiKP 10 29 29.8 -0.3
baz=321,SNR=19
Q54A Coxs Mills 131.59 29 IAMs_20 IAMs_20 11 34 44.9
comp=Z,6µm,21.0s
SWET Sewanee 131.59 37 IAMs_20 IAMs_20 11 28 31.8
comp=Z,6µm,21.0s
Z47A Carrollton 131.60 40 IAMs_20 IAMs_20 11 25 54.5
comp=Z,6µm,20.0s
SSPA Standing Stone 131.61 25 P PKPdf 10 29 29.5 +0.4
baz=326
SSPA Standing Stone 131.61 25 PKPdf 10 29 29.6 +0.5
SSPA Standing Stone 131.61 25 IAMs_20 IAMs_20 11 38 32.1
comp=Z,5µm,21.0s
O56A Blue Knob Stat 131.62 26 P PKPdf 10 29 28.8 -0.4
baz=325
O56A Blue Knob Stat 131.62 26 IAMs_20 IAMs_20 11 31 35.4
comp=Z,6µm,20.0s
J62A Henniker 131.63 18 P PKiKP 10 29 29.7 -0.3
baz=334
I64A Boothbay 131.65 16 P PKPdf 10 29 28.3 -0.7
baz=338
K61A Williamstown 131.65 20 P PKPdf 10 29 29.3 +0.2
baz=332,SNR=6.9
N57A Milroy 131.66 25 P PKPdf 10 29 29.3 +0.1
baz=326,SNR=14
KSPA Keystone Colle 131.71 23 PKPdf 10 29 29.3 0.0
J63A Strafford 131.81 18 P PKiKP 10 29 30.3 -0.1
baz=335
M59A Waymart 131.85 23 P PKPdf 10 29 29.7 +0.1
baz=329,SNR=6.4
L60A Shokan 131.91 21 P PKiKP 10 29 30.5 -0.1
baz=331
N58A Sunbury 131.94 24 P PKiKP 10 29 30.3 -0.4
baz=327,SNR=11
S53A Williamson 131.94 31 P PKPdf 10 29 29.8 -0.1
baz=319,SNR=20
Q55A Buckhannon 131.95 29 P PKPdf 10 29 29.6 -0.2
baz=322,SNR=22
L61A Hillsdale 1, H 131.97 21 P PKPdf 10 29 30.0 +0.3
baz=332
W50A Signal Mountai 131.97 36 IAMs_20 IAMs_20 11 34 30.8
comp=Z,5µm,21.0s
K62A Royalston 132.00 19 P PKiKP 10 29 31.2 +0.4
baz=334
K62A Royalston 132.00 19 PKiKP 10 29 30.9 +0.1
TZTN Tazewell 132.02 33 P PKPdf 10 29 30.0 0.0
baz=317,SNR=12
L61B Northampton 132.05 20 P PKiKP 10 29 30.8 -0.1
baz=333
O57A Amberson 132.07 26 P PKPdf 10 29 29.6 -0.4
baz=326,SNR=9.6
P56A Dayton Farm, R 132.12 27 P PKPdf 10 29 30.1 0.0
baz=324,SNR=16
R54A Victor 132.14 30 P PKPdf 10 29 30.0 -0.2
baz=321,SNR=15
K63A Dunstable 132.21 18 P PKiKP 10 29 31.1 -0.1
baz=335
Y49A Blount Mountai 132.22 38 IAMs_20 IAMs_20 11 25 05.6
comp=Z,7µm,22.0s
FPAL Fort Paine 132.25 37 IAMs_20 IAMs_20 11 30 10.2
comp=Z,6µm,20.0s
T53A Wise 132.25 32 P PKPdf 10 29 30.6 +0.1
baz=318,SNR=8.8
N59A State Game Lan 132.25 23 P PKPdf 10 29 30.6 +0.3
baz=328,SNR=6.9
CPCT Cooper Cave 132.26 35 IAMs_20 IAMs_20 11 34 40.2
comp=Z,5µm,21.0s
S54A Dingess, Beckl 132.27 31 P PKiKP 10 29 31.0 -0.5
baz=320,SNR=16
QUA2 Belchertown 132.31 19 IAMs_20 IAMs_20 11 26 26.1
comp=Z,7µm,22.0s
Q56A Snyder Ridge, 132.33 28 P PKPdf 10 29 30.7 +0.2
baz=323,SNR=8.8
Q56A Snyder Ridge, 132.33 28 PKPpre PKPpre 10 29 17.2
Q56A PKPdf 10 29 30.5 0.0
Q56A IAMs_20 IAMs_20 11 28 40.3
comp=Z,7µm,21.0s
M60A Port Jervis 132.34 22 P PKiKP 10 29 31.1 -0.5
baz=330
HRV Adam Dziewonsk 132.36 19 PKIKP PKiKP 10 29 31.9 +0.4
HRV MLR MLR
comp=Z,9µm,22.0s
HRV Adam Dziewonsk 132.36 19 P PKPdf 10 29 30.9 +0.4
baz=334
HRV Adam Dziewonsk 132.36 19 PKiKP 10 29 31.9 +0.4
LRAL Lakeview Retre 132.40 40 P PKPdf 10 29 30.9 +0.1
baz=311
KSCT Kent School, K 132.41 21 IAMs_20 IAMs_20 11 25 37.8
comp=Z,7µm,22.0s
PAGS Pennsylvania G 132.45 25 IAMs_20 IAMs_20 11 29 32.1
comp=Z,7µm,22.0s
O58A Lewisberry 132.45 25 P PKPdf 10 29 31.0 +0.3
baz=327,SNR=15
R55A Marlinton 132.49 29 P PKiKP 10 29 31.6 -0.5
baz=322,SNR=7.0
R55A Marlinton 132.49 29 IAMs_20 IAMs_20 11 30 52.6
comp=Z,6µm,21.0s
P57A Homestead Farm 132.51 26 P PKPdf 10 29 31.0 +0.2
baz=325,SNR=9.0
P57A Homestead Farm 132.51 26 IAMs_20 IAMs_20 11 32 12.8
comp=Z,8µm,22.0s
TKL Tuckalechee C 132.54 34 SKPbc SKPab 10 32 55.8 0.0
comp=Z,36nm,1.0s,baz=302,slow=2.6,SNR=3.8
N60A Cedar Hill Far 132.56 23 P PKiKP 10 29 31.4 -0.5
baz=329,SNR=5.2
ODNJ Ogdensburg 132.56 22 IAMs_20 IAMs_20 11 26 45.9
comp=Z,6µm,22.0s
O59A Robesonia 132.60 24 P PKiKP 10 29 31.6 -0.5
baz=328,SNR=9.2
TRNY Table Rock, Ra 132.65 22 IAMs_20 IAMs_20 11 26 25.2
comp=Z,7µm,22.0s
M61A Granite Spring 132.67 21 P PKiKP 10 29 31.9 -0.3
baz=331,SNR=7.9
X51A Calhoun 132.68 36 IAMs_20 IAMs_20 11 37 26.6
comp=Z,5µm,20.0s
Q57A Strasburg 132.69 27 P PKPdf 10 29 31.5 +0.3
baz=324,SNR=7.5
T54A Tazewell 132.70 31 P PKPdf 10 29 31.6 +0.3
baz=320,SNR=9.1

S55A	Lewisburg baz=321	132.70	30	P		PKPdf	10 29 31.4	+0.1
R56A	Bull Pasture M baz=323,SNR=16	132.74	28	P		PKPdf	10 29 31.5	+0.1
CMLA	Cha da Macela comp=Z,5µm,21.0s	132.75	330	IAMs_20	IAMs_20		11 35 53.3	
P58A	Pank, Wackersv baz=326,SNR=12	132.81	26	P		PKPdf	10 29 31.1	-0.2
W52A	Murphy comp=Z,7µm,20.0s	132.85	35	IAMs_20	IAMs_20		11 33 54.0	
M62A	Hamden baz=332	132.87	20	P		PKPdf	10 29 31.1	-0.3
PAL	Palisades baz=331	132.89	22	P		PKiKP	10 29 32.7	+0.1
PAL	Palisades comp=Z,5µm,20.0s	132.89	22	IAMs_20	IAMs_20		11 33 43.5	
O60A	Telford baz=329	132.91	23	P		PKiKP	10 29 32.5	-0.2
BRNJ	Basking Ridge comp=Z,6µm,22.0s	132.92	22	IAMs_20	IAMs_20		11 37 44.5	
L63A	North Scituate baz=334	132.93	19	P		PKiKP	10 29 32.5	-0.1
WSPT	Westport, CT comp=Z,6µm,22.0s	132.96	21	IAMs_20	IAMs_20		11 33 17.2	
N61A	South Mountain baz=330	132.96	22	P		PKiKP	10 29 32.4	-0.4
YLE	Yale comp=Z,7µm,22.0s	132.97	21	IAMs_20	IAMs_20		11 24 52.5	
U54A	Nelsons Funny baz=319,SNR=6.0	132.98	32	P		PKPdf	10 29 32.0	+0.1
U54A	Nelsons Funny comp=Z,7µm,22.0s	132.98	32	IAMs_20	IAMs_20		11 33 10.9	
T55A	Pulaski baz=320,SNR=6.7	133.06	31	P		PKPdf	10 29 32.0	0.0
V53A	Saluda comp=Z,7µm,22.0s	133.07	34	IAMs_20	IAMs_20		11 31 48.5	
SDMD	Soldier's Deli	133.08	25			PKiKP	10 29 33.0	0.0
P59A	Jarrettsville baz=327,SNR=5.6	133.09	25	P		PKPdf	10 29 31.9	0.0
Q58A	Fox Den Farm, baz=325,SNR=12	133.10	27	P		PKPdf	10 29 32.0	+0.1
L64A	Middleborough baz=335	133.11	18	P		PKPdf	10 29 31.1	-0.8
N62A	Caumsett State baz=331	133.11	21	P		PKPdf	10 29 32.2	+0.3
WUPA	West Chester U comp=Z,6µm,22.0s	133.16	24	IAMs_20	IAMs_20		11 23 20.8	
BLA	Blacksburg baz=321,SNR=11	133.17	30	P		PKPdf	10 29 31.8	-0.4
BLA	Blacksburg comp=Z,7µm,22.0s	133.17	30	IAMs_20	IAMs_20		11 32 29.9	
M63A	Gales Ferry baz=333	133.19	20	P		PKPdf	10 29 32.3	+0.3
S56A	Natural Bridge baz=322	133.23	29	P		PKPdf	10 29 31.7	-0.6
R57A	Stanardsville baz=324,SNR=7.6	133.24	28	P		PKPdf	10 29 32.0	-0.2
P60A	Greenville baz=328	133.25	24	P		PKPdf	10 29 32.2	0.0
M64A	Tiverton baz=335	133.34	19	P		PKiKP	10 29 32.9	-0.6
O61A	Allentown baz=330	133.44	23	P		PKPdf	10 29 33.0	+0.5
V54A	Nebo baz=318,SNR=12	133.46	33	P		PKPdf	10 29 32.4	-0.4
S57A	Dark Hollow, R baz=323,SNR=6.7	133.46	29	P		PKPdf	10 29 32.6	-0.1
S57A	Dark Hollow, R comp=Z,7µm,20.0s	133.46	29	IAMs_20	IAMs_20		11 34 45.4	
R58A	Rapidan baz=324,SNR=6.1	133.48	27	P		PKPdf	10 29 32.7	+0.1
BG3	Lake Jocassee comp=Z,6µm,22.0s	133.49	34	IAMs_20	IAMs_20		11 27 01.8	
M65A	Busby, Falmout baz=335	133.51	18	P		PKPdf	10 29 32.5	-0.1
T56A	Rocky Mt baz=321,SNR=10	133.51	30	P		PKPdf	10 29 32.2	-0.6
BRAL	Brewton baz=310,SNR=9.0	133.56	42	P		PKiKP	10 29 33.8	-0.5
Q59A	Harwood baz=326	133.61	26	P		PKPdf	10 29 33.1	+0.2
P61A	Hammonton baz=329	133.70	23	P		PKPdf	10 29 32.5	-0.5
V55A	Taylorsville baz=319,SNR=9.2	133.80	32	P		PKiKP	10 29 34.3	-0.4
R58B	Mineral baz=324,SNR=12	133.81	27	P		PKiKP	10 29 34.0	-0.6
CBN	Corbin Frederi baz=325,SNR=6.2	133.84	27	P		PKPdf	10 29 33.8	+0.5
CBN	Corbin Frederi comp=Z,7µm,21.0s	133.84	27	IAMs_20	IAMs_20		11 33 04.2	
Q60A	Greensboro baz=328	133.84	25	P		PKiKP	10 29 34.5	-0.1
W54A	Cherokee Point baz=318,SNR=8.1	133.84	34	P		PKPdf	10 29 33.7	+0.2
U56A	King baz=320,SNR=8.4	133.86	31	P		PKPdf	10 29 33.9	+0.4
U56A	King comp=Z,7µm,22.0s	133.86	31	IAMs_20	IAMs_20		11 35 31.1	
T57A	Hurt baz=322,SNR=8.0	133.92	29	P		PKPdf	10 29 33.9	+0.3
R59A	King George, V baz=326,SNR=7.0	133.96	27	P		PKiKP	10 29 34.4	-0.5
S58A	Poland Farm, P baz=324,SNR=7.5	134.01	28	P		PKPdf	10 29 33.8	+0.2
S58A	Poland Farm, P comp=Z,6µm,20.0s	134.01	28	IAMs_20	IAMs_20		11 35 01.8	
X54A	Belton baz=317,SNR=9.1	134.13	34	P		PKPdf	10 29 34.3	+0.3
R60A	Leonardtown, M baz=326	134.14	26	P		PKiKP	10 29 34.8	-0.4
Q61A	Milford baz=328	134.16	24	P		PKiKP	10 29 35.0	-0.3
V56A	Mocksville baz=320,SNR=7.7	134.21	32	P		PKPdf	10 29 34.8	+0.7
S59A	Mechanicsville baz=325,SNR=5.6	134.24	27	P		PKPdf	10 29 34.6	+0.5
PAULI	Pauline comp=Z,6µm,20.0s	134.25	34	IAMs_20	IAMs_20		11 39 43.6	
KMSC	Kings Mountain baz=319,SNR=7.0	134.27	33	P		PKPdf	10 29 34.7	+0.4
GOGA	Godfrey baz=315,SNR=6.5	134.31	36	P		PKPdf	10 29 34.8	+0.4
T58A	Grand View Acr baz=323,SNR=13	134.31	29	P		PKPdf	10 29 34.4	+0.1
U57A	Blanch baz=322,SNR=14	134.32	30	P		PKPdf	10 29 34.5	+0.2
CMIG	Matias Romero comp=Z,62nm,0.8s,baz=273,slow=1.2,SNR=10	134.40	63	PKP		PKiKP	10 29 36.6	+0.3
CMIG	comp=Z,17nm,1.2s,baz=282,slow=2.8,SNR=4.0			PP		PP	10 32 06.9	-0.2
CMIG	comp=Z,66nm,1.2s,baz=268,slow=6.0,SNR=5.7			SKPbc		SKPab	10 33 03.4	-1.0
CMIG	comp=Z,26nm,1.0s,baz=335,slow=7.7,SNR=3.6			SKP			10 33 11.7	
V57A	Coltrane Farms baz=321,SNR=17	134.53	31	P		PKPdf	10 29 35.3	+0.5
S60A	Water View baz=326	134.57	27	P		PKiKP	10 29 35.5	-0.6
X55A	Gracelyn & Ava baz=318,SNR=8.9	134.60	34	P		PKPdf	10 29 35.5	+0.6
W56A	Indian Trail baz=320,SNR=6.4	134.68	32	P		PKPdf	10 29 35.4	+0.4
U58A	Oxford baz=323,SNR=8.8	134.75	29	P		PKPdf	10 29 35.4	+0.3
T59A	Double "B" Far baz=324,SNR=12	134.76	28	P		PKPdf	10 29 35.4	+0.4
T59A	Double "B" Far	134.76	28			PKiKP	10 29 36.1	-0.4
X56A	White Oak baz=318,SNR=9.3	134.92	33	P		PKPdf	10 29 35.9	+0.4
V58A	Windy Hill, Pi baz=322,SNR=8.0	134.94	30	P		PKPdf	10 29 35.8	+0.3
V58A	Windy Hill, Pi comp=Z,7µm,20.0s	134.94	30	IAMs_20	IAMs_20		11 34 22.6	
W57A	Gilead baz=320,SNR=6.1	134.98	32	P		PKPdf	10 29 35.8	+0.2
W57A	Gilead comp=Z,7µm,22.0s	134.98	32	IAMs_20	IAMs_20		11 35 53.8	
T60A	Surry baz=325,SNR=6.8	135.00	27	P		PKPdf	10 29 36.1	+0.6
U59A	Littleton baz=324,SNR=6.7	135.15	29	P		PKiKP	10 29 36.6	-0.7
Y56A	Pelion baz=318,SNR=6.5	135.29	34	P		PKPdf	10 29 36.6	+0.4
U60A	Pendleton baz=324	135.35	28	P		PKPdf	10 29 36.6	+0.4
V59A	Middlesex baz=323,SNR=11	135.40	30	P		PKPdf	10 29 36.7	+0.4
X57A	Johnson Farm, baz=320	135.45	32	P		PKPdf	10 29 37.0	+0.6
W58A	Raeford baz=321	135.48	31	P		PKPdf	10 29 36.8	+0.3
Z56A	Williston baz=317,SNR=7.2	135.59	35	P		PKiKP	10 29 37.6	-0.7
TIGA	Tifton baz=313,SNR=11	135.61	38	P		PKiKP	10 29 37.8	-0.7
TIGA	Tifton comp=Z,6µm,22.0s	135.61	38	IAMs_20	IAMs_20		11 37 28.3	
Y57A	Sumter baz=319,SNR=6.8	135.63	33	P		PKPdf	10 29 37.5	+0.7
W59A	Clinton baz=322	135.77	30	P		PKPdf	10 29 37.4	+0.3
X58A	Rowland baz=321	135.78	32	P		PKPdf	10 29 37.2	+0.1
U61A	Possum Corner baz=325	135.80	27	P		PKPdf	10 29 37.2	+0.1
V60A	Jim Taylor Roa baz=324	135.87	29	P		PKPdf	10 29 37.8	+0.6
CNNC	Cliffs of the baz=323	135.99	30	P		PKPdf	10 29 37.9	+0.5
Z57A	Bowman baz=318,SNR=11	135.99	34	P		PKPdf	10 29 37.9	+0.4
Y58A	Scranton baz=320,SNR=8.6	136.10	33	P		PKiKP	10 29 39.1	-0.2
X59A	McDuffie Farm, baz=322	136.15	31	P		PKPdf	10 29 37.7	0.0
V61A	Roper baz=325	136.18	28	P		PKPdf	10 29 38.0	+0.2
V61A	Roper comp=Z,7µm,22.0s	136.18	28	IAMs_20	IAMs_20		11 36 11.2	
W60A	Pink Hill baz=323	136.22	30	P		PKPdf	10 29 38.4	+0.6
157A	Early Branch baz=317	136.28	35	P		PKPdf	10 29 38.7	+0.7
NHSC	New Hope baz=319	136.43	34	P		PKPdf	10 29 39.0	+0.7
NHSC	New Hope comp=Z,7µm,22.0s	136.43	34	IAMs_20	IAMs_20		11 37 16.4	
LL01	San Ignacio de comp=Z,6µm,22.0s	136.44	159	IAMs_20	IAMs_20		11 26 08.0	
Z58A	St. Stephen baz=319	136.46	33	P		PKPdf	10 29 38.7	+0.3
Y59A	Loris baz=321	136.46	32	P		PKPdf	10 29 38.3	0.0
X60A	Albert Glenn T baz=322	136.47	30	P		PKPdf	10 29 38.5	+0.2
W61A	Ground Anchor baz=324	136.48	29	P		PKPdf	10 29 38.4	+0.1
158A	Hollywood baz=318	136.69	34	P		PKPdf	10 29 38.9	0.0
Y60A	Bolivia baz=322	136.79	31	P		PKPdf	10 29 38.8	-0.2
Z59A	Georgetown, SC baz=320	136.82	33	P		PKPdf	10 29 39.3	+0.3
456A	Hilliard comp=Z,6µm,21.0s	137.07	38	IAMs_20	IAMs_20		11 42 43.9	
CCIG	Comitan	137.14	63			PKiKP	10 29 41.5	-0.6
RTAL	Retalhuleu comp=Z,6µm,21.0s	138.17	65	IAMs_20	IAMs_20		11 30 55.5	
PLCA	Paso Flores comp=Z,21nm,1.1s,baz=201,slow=5.6,SNR=24	138.54	160	PKhKP	PKPpre		10 29 32.9	
PLCA	comp=Z,131nm,0.8s,baz=214,slow=1.9,SNR=30			PKP		PKiKP	10 29 44.4	+0.2
PLCA	comp=Z,28nm,1.0s,baz=202,slow=3.5,SNR=4.0			SKPbc		SKPbc	10 33 14.7	+1.5
PLCA	comp=Z,37nm,1.1s,baz=240,slow=9.1,SNR=3.8			SKP			10 33 20.3	
PLCA	Paso Flores	138.54	160	PKiKP		PKiKP	10 29 43.7	-0.6
PLCA	Paso Flores	138.54	160			PKiKP	10 29 43.7	-0.6
TEIG	Tepich	138.78	55	*eP*		PKPdf	10 29 38.8	-4.2
TEIG	Tepich comp=Z,6µm,22.0s	138.78	55	IAMs_20	IAMs_20		11 26 11.6	
PETF	Flores comp=Z,4µm,22.0s	138.90	61	IAMs_20	IAMs_20		11 22 56.4	
LC01	Cunco comp=Z,6µm,21.0s	139.66	157	IAMs_20	IAMs_20		11 30 23.6	
ESQI	Esquipulas comp=Z,5µm,22.0s	140.28	64	IAMs_20	IAMs_20		11 21 01.4	
MTO3	Montecristo	140.33	64			PKPdf	10 29 46.5	+0.3
H03N3	Juan Fernandez	140.60	145	PKP		PKPdf	10 29 45.4	-0.3
H03N2	Juan Fernandez	140.60	145	PKP		PKPdf	10 29 45.2	-0.4
H03N1	Juan Fernandez	140.61	145	PKP		PKPdf	10 29 45.4	-0.2
MBO	M'Bour comp=Z,5µm,21.0s	140.67	296	IAMs_20	IAMs_20		11 31 09.9	
BI03	Tigo comp=Z,5µm,21.0s	140.94	154	IAMs_20	IAMs_20		11 28 55.5	
H10N1	ASCENSION HYDR baz=107,slow=4.0,SNR=6.3	141.28	260	PKP		PKPdf	10 29 43.4	-3.9
H10N2	ASCENSION HYDR baz=107,slow=4.0,SNR=5.2	141.29	260	PKP		PKPdf	10 29 43.4	-4.0
H10N3	ASCENSION HYDR baz=107,slow=4.0,SNR=3.8	141.30	260	PKP		PKPdf	10 29 43.0	-4.3
H10S2	ASCENSION HYDR	141.31	259	PKP		PKPdf	10 29 45.1	-2.3
H10S3	ASCENSION HYDR	141.33	259	PKP		PKPdf	10 29 44.8	-2.7
BI02	San Fabin de comp=Z,4µm,22.0s	141.83	156	IAMs_20	IAMs_20		11 31 28.0	
TGUH	Tegucigalpa,Un	142.33	63	*eP*		PKPdf	10 29 44.1	-5.6
TGUH	Tegucigalpa,Un comp=Z,4µm,20.0s	142.33	63	IAMs_20	IAMs_20		11 27 52.5	
PAYG	Puerto Ayora	142.66	88			PKPdf	10 29 49.2	-1.0
BBSR	BB Station	143.80	17			PKPdf	10 29 51.6	-0.1
BBSR	BB Station comp=Z,4µm,22.0s	143.80	17	IAMs_20	IAMs_20		11 33 11.0	
MATN	Matagalpa comp=Z,5µm,22.0s	143.97	64	IAMs_20	IAMs_20		11 33 31.1	
VA01	Torpederas	144.75	152			PKPab	10 29 52.1	-0.1
MT02	Curacav comp=Z,5µm,19.0s	144.78	153	IAMs_20	IAMs_20		11 36 42.4	
MT05	Renca comp=Z,5µm,22.0s	144.85	154	IAMs_20	IAMs_20		11 33 04.2	
ACON	Acoyapa comp=Z,4µm,22.0s	145.01	65	IAMs_20	IAMs_20		11 34 00.1	
PEL	Peldehue comp=Z,4µm,22.0s	145.08	154	IAMs_20	IAMs_20		11 32 51.5	
GBS3	Finca Las Img	145.17	68	*eP*		PKPbc	10 29 54.1	-0.1
LAPC	Finca la Perla	145.20	68⇑	*eP*		PKPbc	10 29 53.9	-0.4
BUEV	Buena Vista	145.21	67	*eP*		PKPbc	10 29 54.4	0.0
GB1A	Borinquen Arri	145.21	67	*eP*		PKPbc	10 29 54.0	-0.4
GPS3	Bodega del ICE	145.26	68	*eP*		PKPbc	10 29 54.5	0.0
GPS1	Guardaparques	145.27	67	*eP*		PKPab	10 29 54.7	0.0
GPS2	Hotel Rincn d	145.28	68	*eP*		PKPdf	10 29 55.0	+0.1
GUAI	GUAI	145.29	68⇑	*eP*		PKPdf	10 29 55.1	+0.4
ORTG	Ortega, Santa	145.31	68	*eP*		PKPdf	10 29 55.6	+0.8
DUNO	Dulce Nombre,	145.37	69	*eP*		PKPab	10 29 55.3	+0.3
GUAB	Guayabo de Bag	145.41	68	*eP*		PKPab	10 29 55.7	+0.6
PLVR	Palo Verde	145.41	68	*eP*		PKPab	10 29 56.4	+1.0
COLC	Colonia	145.44	68	*eP*		PKPbc	10 29 55.1	+0.1
HORNC	Hornillas	145.45	67⇑	*eP*		PKPab	10 29 55.3	-0.1
VA03	San Esteban comp=Z,5µm,21.0s	145.46	153	IAMs_20	IAMs_20		11 35 34.4	
CUI	Cuipilapa	145.48	68	*eP*		PKPab	10 29 55.5	+0.1
JTS	Las Juntas de comp=Z,189nm,0.8s,baz=355,slow=2.7,SNR=40	145.80	68⇑	PKPbc		PKPab	10 29 56.5	-0.1
JTS	Las Juntas de	145.80	68⇑	*eP*		PKPbc	10 29 56.2	0.0
JTS	Las Juntas de	145.80	68	*eP*		PKPdf	10 29 55.4	-0.2
JTS	Las Juntas de	145.80	68			PKPdf	10 29 53.9	-1.8
JTS	Las Juntas de comp=Z,4µm,21.0s	145.80	68	IAMs_20	IAMs_20		11 33 48.1	
CASO	Castillo	145.96	68	*eP*		PKPbc	10 29 56.4	-0.3
ARE1	Arenal 1	145.96	68	*eP*		PKPbc	10 29 56.5	-0.2
CEDE	Laguna Cedeo	145.97	68	*eP*		PKPbc	10 29 56.7	0.0
LAFE	Finca La Fe, P	146.00	69	*eP*		PKPdf	10 29 56.2	+0.3
FORC	Fortuna	146.00	68	*eP*		PKPbc	10 29 56.6	-0.2
COVE	Coope Vega, Sa	146.16	67	*eP*		PKPdf	10 29 55.1	-1.2
SACV	Santiago Islan	146.26	301	PKPbc		PKPab	10 29 58.4	+0.1
SACV	Santiago Islan comp=Z,5µm,22.0s	146.26	301	IAMs_20	IAMs_20		11 36 14.3	
JACO	JACO, Garabito	146.28	69	*eP*		PKPdf	10 29 56.2	-0.2
SRA1	San Ramn	146.31	68	*eP*		PKPbc	10 29 57.3	-0.6
CO02	Combarbal	146.56	151	PKPbc		PKPdf	10 29 57.1	+0.4
CO02	comp=Z,5µm,22.0s			IAMs_20	IAMs_20		11 26 32.6	
HDC	Heredia	146.68	68	*eP*		PKPdf	10 29 57.4	+0.1
HDC	Heredia	146.68	68	PKPbc		PKPbc	10 29 59.3	+0.3
SJS	Escuela Geolog	146.75	68	*eP*		PKPbc	10 29 59.2	0.0
LCR2	La Lucha 2	146.87	68	*eP*		PKPdf	10 29 57.9	+0.2
RIMA	Rio Macho	146.99	68	*eP*		PKPdf	10 29 58.2	+0.3
CVTR	Volcan Turrial	147.00	68	*eP*		PKPdf	10 29 58.1	-0.1
CO03	El Pedregal comp=Z,5µm,22.0s	147.01	151	IAMs_20	IAMs_20		11 26 56.5	
CDM	Cerro de Muert	147.15	69	*eP*		PKPdf	10 29 59.5	+1.0
EDDO	Dominical	147.16	69	*eP*		PKPdf	10 29 57.6	-0.3
LPA	La Plata	147.20	172	*de*	PKiKP	PKPdf	10 29 47.9	-10
LPA					PP	PP	10 33 20.7	-2.7
LPA					PPP	PPP	10 36 40.5	
LPA					SDIFF		10 42 10.5	
LPA					SSS	SSS	10 57 55.2	
PEZE	Perez Zeledon,	147.29	69	*eP*		PKPdf	10 29 57.3	-1.0
EDLM	Las Mercedes	147.40	69	*eP*		PKPbc	10 30 00.1	-0.8
EDPN	Palmar Norte	147.63	69	*eP*		PKPbc	10 30 00.9	-0.5
RIOS	Rincon, Osa	147.66	70	*eP*		PKPdf	10 29 59.5	+0.8
DRK0	Durika	147.73	69	*eP*		PKPbc	10 30 00.7	-1.3
EDBA	Buenos Aires	147.74	69	*eP*		PKPbc	10 30 01.1	-0.7
PRVC	Isla de Provid	147.82	60	*eP*		PKPdf	10 30 00.4	+1.5
EDSV	San Vito	148.13	69	*eP*		PKPdf	10 30 01.1	+1.4
CDITO	Canoas	148.30	70	*eP*		PKPdf	10 30 00.8	+1.0
MTDJ	Mount Denham	148.38	49	*eP*		PKPbc	10 30 03.4	-0.1
MTDJ	Mount Denham comp=Z,4µm,22.0s	148.38	49	IAMs_20	IAMs_20		11 46 03.9	
BRU2	Volcan	148.40	69	*eP*		PKPdf	10 30 01.3	+1.1
LCO	Las Campanas	148.50	149	PKiKP		PKPdf	10 30 00.6	+0.5
LCO	comp=Z,5µm,21.0s			MLR	MLR			
LCO	Las Campanas	148.50	149			PKPdf	10 30 00.6	+0.5
LCO	comp=Z,5µm,21.0s			IAMs_20	IAMs_20		11 34 20.2	
AC04	Llanos de Chal comp=Z,5µm,21.0s	148.95	148	IAMs_20	IAMs_20		11 40 13.5	
GTBY	Guantanamo Bay	149.03	44	*eP*		PKPdf	10 30 00.1	-0.7
GTBY	Guantanamo Bay comp=Z,4µm,20.0s	149.03	44	IAMs_20	IAMs_20		11 37 58.6	
GO03	Copiap comp=Z,6µm,22.0s	149.88	148	IAMs_20	IAMs_20		11 34 18.0	
PLTB	Pedras Altas	150.66	179	*eP*		PKPdf	10 30 05.8	+2.6
PNME	Penonome	150.70	68	*eP*		PKPdf	10 30 02.0	-1.6
MAPC	Malpelo	150.71	78	*eP*		PKPdf	10 30 02.9	-0.8
UPA	Univ. de Panam	151.26	67	*eP*		PKPdf	10 30 02.1	-2.4
CPSB	Cacapava Do Su	152.01	179	*eP*		PKPdf	10 30 06.9	+1.6
GO02	Mina Guanaco comp=Z,4µm,20.0s	152.17	146	IAMs_20	IAMs_20		11 35 59.6	
SDDR	Presa de Saban	152.24	40			PKPdf	10 30 04.3	-1.7
SDDR				PKPbc		PKiKP	10 30 14.1	+1.2
ITQB	Itaqui	152.53	173	*eP*		PKPdf	10 30 08.4	+2.4
UPD2	Meteti	152.81	66	*eP*		PKPdf	10 30 08.4	+1.6
PB10	IPOC Station P	152.87	143			PKPdf	10 30 06.0	-0.7
PB10				PKPbc		PKiKP	10 30 16.2	+2.1
PB10	comp=Z,5µm,22.0s			IAMs_20	IAMs_20		11 31 33.7	
CNLB	Canela	153.03	184	*eP*		PKPdf	10 30 09.2	+2.4
BANI	BANI	153.27	39			PKPdf	10 30 08.3	+0.8
BANI				PKPbc		PKiKP	10 30 15.2	0.0
CAPC	Capurgana	153.39	66⇑	*eP*		PKPdf	10 30 08.0	+0.3
PTAC	Punta Ardita,	153.50	69	*eP*		PKPdf	10 30 07.8	-0.1
DR12	Loma Pena Alta	153.57	37			PKPdf	10 30 06.8	-1.1
PB15	IPOC Station P	153.75	144			PKPdf	10 30 09.2	+1.0
PB15				PKPbc		PKiKP	10 30 18.1	+2.0
PB15	comp=Z,5µm,22.0s			IAMs_20	IAMs_20		11 31 30.9	
TUMC	Tumaco	153.93	81	*eP*		PKPdf	10 30 10.1	+1.6
PB04	IPOC Station P	153.99	141			PKPdf	10 30 07.5	-1.0
PB04				PKPbc		PKiKP	10 30 18.5	+1.8
PAC1	Pacto, Paraso	154.06	85⇑	*eP*		PKPdf	10 30 08.8	0.0
PB06	IPOC Station P	154.07	143			PKPdf	10 30 09.3	+0.7
PB06				PKPbc		PKiKP	10 30 18.4	+1.7
PB06				PKPab		PKPab	10 30 31.9	+1.7
PB06	comp=Z,4µm,20.0s			IAMs_20	IAMs_20		11 35 25.5	
SOLC	Bahia Solano	154.18	71	*eP*		PKPdf	10 30 10.4	+1.6
LCBC	Los crdobas,	154.19	64	*eP*		PKPdf	10 30 09.8	+1.0
ATAH	Atahualpa comp=Z,112nm,1.0s,baz=304,slow=1.3,SNR=57	154.21	102	PKP		PKPdf	10 30 11.1	+1.7
ATAH	comp=Z,206nm,0.8s,baz=33,slow=0.9,SNR=26			PKPbc		pPKPdf	10 30 20.8	-1.8
ATAH	comp=Z,203nm,0.9s,baz=301,slow=7.8,SNR=7.4			PKPab		PKPab	10 30 31.6	+0.1
OTAV	Otavalo	154.40	85	*eP*		PKPdf	10 30 10.0	+0.3
OTAV	Otavalo	154.40	85	PKP2		PKPab	10 30 33.2	+0.8
OTAV							11 30 10.0	
OTAV	Otavalo	154.40	85			PKPdf	10 30 10.0	+0.3
OTAV				PKPbc		PKiKP	10 30 19.2	+1.1
OTAV				PKPab		PKPab	10 30 33.2	+0.8
OTAV	Otavalo	154.40	85	*eP*		PKPdf	10 30 10.9	+1.2
CUSE	Cuicocha Este	154.45	85	*eP*		PKPdf	10 30 07.8	-1.9
NNA	Nana comp=Z,94nm,1.0s,baz=303,slow=3.5,SNR=21	154.45	113	PKP		PKPdf	10 30 10.8	+1.6
NNA	comp=Z,222nm,0.9s,baz=290,slow=4.9,SNR=18			PKPbc		PKiKP	10 30 18.9	+1.3
NNA	Nana	154.45	113			PKPdf	10 30 08.5	-0.7
NNA				PKPbc		PKiKP	10 30 18.9	+1.3
NNA				PKPab		PKPab	10 30 33.4	+1.4
LVC	Limon Verde comp=Z,50nm,0.9s,baz=270,slow=2.2,SNR=25	154.54	144	PKP		PKPdf	10 30 11.6	+2.0
LVC	comp=Z,106nm,0.8s,baz=252,slow=1.6,SNR=27			PKPbc		PKiKP	10 30 20.3	+2.3
LVC	comp=Z,251nm,1.1s,baz=257,slow=1.4,SNR=16			PKPab		PKPab	10 30 34.0	+1.6
LVC	Limon Verde	154.54	144	PKiKP		PKPdf	10 30 10.4	+0.8
LVC							10 30 20.4	
LVC							10 30 33.8	
LVC	Limon Verde	154.54	144			PKPdf	10 30 10.4	+0.8
LVC				PKPbc		PKiKP	10 30 20.4	+2.3
LVC				PKPab		PKPab	10 30 33.8	+1.4
LVC	Limon Verde comp=Z,4µm,21.0s	154.54	144	IAMs_20	IAMs_20		11 53 18.7	
LVC	Limon Verde	154.54	144	*eP*		PKPdf	10 30 11.5	+2.0
PIZC	Pizarro, Choco	154.59	74	*eP*		PKPdf	10 30 10.6	+1.2

SJG				PKPab	sPKPbc	10 30 39.7	+1.2	
	comp=Z,56nm,0.7s,baz=337,slow=7.4,SNR=5.9							
SJG				PP	PP	10 34 18.0	+3.9	
	comp=Z,9.2nm,0.5s,baz=323,slow=20,SNR=1.5							
SJG	**San Juan**	**155.94**	**32**	*eP*	**PKPdf**	**10 30 10.5**	**-0.6**	
SJG	**San Juan**	**155.94**	**32**		**PKPdf**	**10 30 10.4**	**-0.7**	
SJG				PKPab	sPKPbc	10 30 39.8	+1.3	
SJG	**San Juan**	**155.94**	**32**	IAMs_20	IAMs_20	11 37 22.2		
	comp=Z,6μm,22.0s							
HELC	**Santa Helena**	**155.96**	**69**⇑	*eP*	**PKPdf**	**10 30 11.2**	**-0.5**	
PSGCX	**Pisagua**	**155.96**	**137**		**PKPdf**	**10 30 10.7**	**-0.5**	
PSGCX				PKPab	sPKPbc	10 30 39.8	+1.2	
PSGCX				IAMs_20	IAMs_20	11 31 28.2		
	comp=Z,4μm,22.0s							
ZARC	**Zaragoza, Cauc**	**156.10**	**66**⇑	*eP*	**PKPdf**	**10 30 11.4**	**-0.1**	
PCON	**Cinco Dias**	**156.14**	**79**⇑	*eP*	**PKPdf**	**10 30 12.8**	**+0.6**	
PB11	**IPOC Station P**	**156.16**	**138**		**PKPdf**	**10 30 11.3**	**-0.2**	
PB11				PKPab	PKPab	10 30 40.8	+1.6	
PB11				IAMs_20	IAMs_20	11 56 22.4		
	comp=Z,3μm,20.0s							
PB08	**IPOC Station P**	**156.22**	**139**	IAMs_20	IAMs_20	11 35 45.9		
	comp=Z,4μm,20.0s							
PUAC	**Puerto Asis, P**	**156.24**	**84**	*eP*	**PKPdf**	**10 30 11.7**	**+0.1**	
MTP	**Monte Pirata**	**156.27**	**31**		**PKPdf**	**10 30 10.8**	**-0.7**	
MTP				PKPab	PKPab	10 30 39.8	+0.4	
MARP	**Paez Belalcaza**	**156.47**	**78**	*eP*	**PKPdf**	**10 30 12.5**	**+0.2**	
URIC	**Uribia, Colomb**	**156.54**	**53**⇑	*eP*	**PKPdf**	**10 30 11.9**	**0.0**	
ANIL	**Santa Ana**	**156.60**	**73**	*eP*	**PKPdf**	**10 30 12.4**	**-0.1**	
AP01	**Chacalluta**	**156.63**	**134**		**PKPab**	**10 30 42.8**	**+1.7**	
AP01				IAMs_20	IAMs_20	11 42 42.3		
	comp=Z,4μm,20.0s							
MNMC	**Minye Minye**	**156.64**	**137**		**PKPdf**	**10 30 12.7**	**+0.3**	
MNMC				IAMs_20	IAMs_20	11 38 05.2		
	comp=Z,5μm,20.0s							
TOLC	**Tolima**	**156.65**	**73**	*eP*	**PKPdf**	**10 30 12.5**	**-0.1**	
TIJ01	**Guaruva-PR**	**156.76**	**189**	*eP*	**PKPdf**	**10 30 13.6**	**+1.5**	
NORC	**Norcasia**	**156.78**	**70**	*eP*	**PKPdf**	**10 30 11.9**	**-0.5**	
PTBC	**PUERTO BERRIO**	**156.83**	**68**⇑	*eP*	**PKPdf**	**10 30 11.4**	**-1.0**	
ORTC	**Ortega, Tolima**	**156.91**	**75**⇑	*eP*	**PKPdf**	**10 30 12.2**	**-0.3**	
CDVI	**St. Croix**	**156.96**	**30**		**PKPdf**	**10 30 12.0**	**-0.4**	
FLOC	**Florencia**	**157.00**	**81**⇑	*eP*	**PKPdf**	**10 30 12.8**	**+0.2**	
BETC	**Betania**	**157.00**	**78**⇑	*eP*	**PKPdf**	**10 30 13.2**	**+0.6**	
GARC	**Garzon, Huila**	**157.05**	**79**⇑	*eP*	**PKPdf**	**10 30 13.2**	**+0.2**	
OCAC	**Ocana**	**157.18**	**63**	*eP*	**PKPdf**	**10 30 13.7**	**+0.7**	
PB16	**IPOC Station P**	**157.24**	**136**		**PKPdf**	**10 30 14.2**	**+0.8**	
PB16				PKPab	PKPab	10 30 47.0	+2.6	
PB16				IAMs_20	IAMs_20	11 37 39.4		
	comp=Z,5μm,22.0s							
BRRC	**Barranca, Sant**	**157.30**	**66**⇑	*eP*	**PKPdf**	**10 30 13.2**	**+0.3**	
PET01	**Itanhaem-SP**	**157.43**	**194**	*eP*	**PKPdf**	**10 30 14.2**	**+1.4**	
SPBC	**San Pablo de B**	**157.50**	**69**	*eP*	**PKPdf**	**10 30 12.7**	**-0.7**	
ROSC	**El Rosal**	**157.53**	**72**	PKP	**PKPdf**	**10 30 14.6**	**+0.8**	
	comp=Z,93nm,0.8s,baz=168,slow=2.2,SNR=35							
ROSC				PKPab	**PKPab**	**10 30 47.9**	**+2.2**	
	comp=Z,104nm,0.8s,baz=7.0,slow=5.3,SNR=6.0							
ROSC	**El Rosal**	**157.53**	**72**	*eP*	**PKPdf**	**10 30 13.4**	**-0.3**	
ROSC	**El Rosal**	**157.53**	**72**		**PKPdf**	**10 30 13.6**	**-0.1**	
PTGB	**Pitanga**	**157.67**	**182**	*eP*	**PKPdf**	**10 30 14.3**	**+1.1**	
ESAR	**Angra dos Reis**	**157.78**	**201**	*eP*	**PKPdf**	**10 30 16.4**	**+3.1**	
PARB	**Paraibuna**	**157.88**	**198**	*eP*	**PKPdf**	**10 30 16.1**	**+2.6**	
BARC	**Barichara**	**157.98**	**66**	*eP*	**PKPdf**	**10 30 13.3**	**-0.8**	
SEUS	**St. Eustatius**	**158.02**	**26**	*eP*	**PKPdf**	**10 30 10.9**	**-2.8**	
SEUS	**St. Eustatius**	**158.02**	**26**	IAMs_20	IAMs_20	11 33 38.5		
	comp=Z,6μm,22.0s							
PTLC	**Puerto Leguiza**	**158.04**	**84**	*eP*	**PKPdf**	**10 30 13.4**	**-0.6**	
PAMC	**Pamplona, Colo**	**158.12**	**64**	*eP*	**PKPdf**	**10 30 14.2**	**-0.4**	
SPB	**Sao Paulo**	**158.14**	**194**		**PKPdf**	**10 30 14.6**	**+0.8**	
SPB					**PKPab**	**10 30 47.4**	**+0.2**	
SPB	**Sao Paulo**	**158.14**	**194**	*eP*	**PKPdf**	**10 30 16.1**	**+2.4**	
CHIC	**Chingaza**	**158.15**	**72**	*eP*	**PKPdf**	**10 30 14.3**	**-0.3**	
SKI	**Saint Kitts**	**158.27**	**26**	*eP*	**PKPdf**	**10 30 12.7**	**-1.4**	
RUSC	**La Rusia**	**158.34**	**68**⇑	*eP*	**PKPdf**	**10 30 14.2**	**-0.7**	
VILC	**Villavicencio,**	**158.34**	**73**	*eP*	**PKPdf**	**10 30 14.3**	**-0.1**	
VAO	**Valinhos**	**158.59**	**195**	*eP*	**PKPdf**	**10 30 16.7**	**+2.3**	
MACC	**Macarena, Meta**	**158.67**	**78**⇑	*eP*	**PKPdf**	**10 30 14.4**	**-0.3**	
FRTB	**Fartura**	**158.79**	**189**	*eP*	**PKPdf**	**10 30 16.9**	**+2.3**	
ANBD	**Bethesda, Anti**	**158.93**	**24**	*eP*	**PKPdf**	**10 30 11.7**	**-3.1**	
MLYT	**Lee's Yard**	**159.05**	**25**	*eP*	**PKPdf**	**10 30 14.5**	**-0.5**	
RIB01	**Linhares ES**	**159.06**	**215**	*eP*	**PKPdf**	**10 30 16.5**	**+1.5**	
SDV	**Santo Domingo**	**159.19**	**58**	PKP	**PKPdf**	**10 30 15.4**	**-0.1**	
	comp=Z,204nm,1.0s,baz=198,slow=0.5,SNR=86							
SDV				PKPab	**PKPab**	**10 30 54.7**	**+2.1**	
	comp=Z,80nm,0.8s,baz=354,slow=2.0,SNR=6.0							
SDV	**Santo Domingo**	**159.19**	**58**	*eP*	**PKPdf**	**10 30 15.3**	**-0.2**	
SDV	**Santo Domingo**	**159.19**	**58**	IAMs_20	IAMs_20	11 54 19.8		
	comp=Z,3μm,22.0s							
SDV	**Santo Domingo**	**159.19**	**58**	*eP*	**PKPdf**	**10 30 15.9**	**+0.4**	
TAMC	**Tame, Arauca**	**159.31**	**65**	*eP*	**PKPdf**	**10 30 15.8**	**+0.3**	
LPAZ	**La Paz**	**159.59**	**134**	PKP	**PKPdf**	**10 30 17.2**	**+0.8**	
	comp=Z,105nm,1.0s,baz=14,slow=1.6,SNR=171							
LPAZ				PKPab	**PKPab**	**10 30 54.4**	**-0.2**	
	comp=Z,118nm,1.0s,baz=178,slow=2.0,SNR=7.5							
LPAZ				PP	**PP**	**10 34 36.3**	**+0.8**	
	comp=Z,14nm,0.9s,baz=233,slow=3.2,SNR=3.4							
LPAZ	**La Paz**	**159.59**	**134**⇑	*eP*	**PKPdf**	**10 30 17.1**	**+0.8**	
LPAZ	**La Paz**	**159.59**	**134**	PKIKP	**PKPdf**	**10 30 16.8**	**+0.4**	
LPAZ	**La Paz**	**159.59**	**134**		**PKPdf**	**10 30 16.8**	**+0.4**	
LPAZ	**La Paz**	**159.59**	**134**	*eP*	**PKPdf**	**10 30 17.1**	**+0.7**	
TRCB	**Terra Rica**	**159.59**	**181**	*eP*	**PKPdf**	**10 30 16.6**	**+1.0**	
CZSB	**Cruzeiro do Su**	**159.61**	**106**	*eP*	**PKPdf**	**10 30 16.1**	**+0.4**	
BSCB	**Bom Sucesso**	**159.74**	**203**	*eP*	**PKPdf**	**10 30 17.1**	**+1.2**	
PTGC	**Puerto Gaitan,**	**159.80**	**71**	*eP*	**PKPdf**	**10 30 14.3**	**-1.7**	
H05N1	**Guadeloupe/Mar**	**159.88**	**23**	PKP	**PKPdf**	**10 30 14.9**	**-1.0**	
SJMB	**Sao Joao De Ma**	**160.00**	**214**	*eP*	**PKPdf**	**10 30 16.9**	**+0.9**	
NAN01	**Guarapari, ES**	**160.04**	**218**	*eP*	**PKPdf**	**10 30 17.5**	**+1.4**	
DSLB	**Salisbury**	**160.52**	**25**	*eP*	**PKPdf**	**10 30 11.4**	**-5.3**	
MDN	**Morne-Daniel**	**160.64**	**25**	*eP*	**PKPdf**	**10 30 14.2**	**-2.6**	
DLPL	**La Plaine**	**160.69**	**25**	*eP*	**PKPdf**	**10 30 16.0**	**-0.9**	
PCMB	**Pacaembu**	**160.71**	**185**	*eP*	**PKPdf**	**10 30 18.2**	**+1.5**	
FDF	**Fort de France**	**161.26**	**25**	*eP*	**PKPdf**	**10 30 13.0**	**-4.6**	
FDF	**Fort de France**	**161.26**	**25**	PKIKP	**PKPdf**	**10 30 17.7**	**+0.1**	
FDF	**Fort de France**	**161.26**	**25**		**PKPdf**	**10 30 17.7**	**+0.1**	
H05S1	**Guadeloupe/Mar**	**161.67**	**25**	PKPab	**PKPab**	**10 31 02.6**	**-0.3**	
SLBI	**Saint Lucia, B**	**161.97**	**26**	*eP*	PKPdf	10 30 10.0	-8.2	
MCLT	**Moule a Chique**	**162.26**	**26**	*eP*	**PKPdf**	**10 30 15.9**	**-2.6**	
ITRB	**Iturama**	**162.49**	**188**	*eP*	**PKPdf**	**10 30 19.6**	**+0.9**	
SVB	**Belmont**	**162.51**	**28**	*eP*	**PKPdf**	**10 30 17.0**	**-1.8**	
SVB	**Belmont**	**162.51**	**28**		**PKPdf**	**10 30 18.4**	**-0.4**	
GDU01	**Guandu, BA**	**162.54**	**229**	*eP*	**PKPdf**	**10 30 19.7**	**+0.8**	
RCBR	**Riachuelo**	**162.62**	**258**	PKP	**PKPdf**	**10 30 20.2**	**+1.2**	
	comp=Z,66nm,1.1s,baz=158,slow=1.3,SNR=11							
RCBR				PKPab	**PKPab**	**10 31 09.4**	**+1.9**	
	comp=Z,154nm,1.0s,baz=91,slow=3.6,SNR=16							
RCBR				PP	**PP**	**10 34 56.6**	**+4.4**	
	comp=Z,87nm,1.4s,baz=83,slow=7.3,SNR=4.8							
RCBR	**Riachuelo**	**162.62**	**258**		**PKPdf**	**10 30 17.8**	**-1.3**	
RCBR					**PKPab**	**10 31 07.7**	**+0.3**	
RCBR	**Riachuelo**	**162.62**	**258**	*eP*	**PKPdf**	**10 30 20.0**	**+1.0**	
PCRV	**Puerto La Cruz**	**163.03**	**43**	PKP	**PKPdf**	**10 30 19.4**	**0.0**	
	comp=Z,18nm,0.8s,baz=340,slow=3.4,SNR=5.4							
PCRV				PKPab	**PKPab**	**10 31 09.9**	**+0.9**	
	comp=Z,27nm,0.8s,baz=320,slow=7.9,SNR=3.0							
GCMP	**Grenada, Carri**	**163.10**	**30**	*eP*	PKPdf	10 30 10.0	-9.4	
GRGR	**Grenville**	**163.29**	**31**	*eP*	**PKPdf**	**10 30 13.0**	**-6.6**	
BBGH	**Gun Hill**	**163.35**	**23**	*eP*	**PKPdf**	**10 30 15.9**	**-3.7**	
IPMB	**Ipameri, GO**	**163.70**	**196**	*eP*	**PKPdf**	**10 30 20.1**	**+0.2**	
SIV	**San Ignacio**	**164.20**	**150**	PKP	**PKPdf**	**10 30 21.0**	**+0.6**	
	comp=Z,86nm,1.0s,baz=206,slow=1.3,SNR=187							
SIV				PKPab	**PKPab**	**10 31 15.5**	**+1.5**	
	comp=Z,182nm,0.9s,baz=230,slow=4.0,SNR=24							
SIV				PP	PP	10 35 08.0	+9.3	
	comp=Z,44nm,1.1s,baz=205,slow=5.3,SNR=5.9							
TOSP	**Speyside**	**164.56**	**29**	*eP*	**PKPdf**	**10 30 22.7**	**+1.9**	
TOSP	**Speyside**	**164.56**	**29**		**PKPdf**	**10 30 19.7**	**-1.0**	
TOSP					**PKPab**	**10 31 16.6**	**+1.0**	
PP1B	**Ponte de Pedra**	**164.65**	**173**	*eP*	**PKPdf**	**10 30 21.7**	**+0.9**	
TRN	**Trinidad (W)**	**164.66**	**33**	*eP*	**PKPdf**	**10 30 21.3**	**+0.5**	
JANB	**Januaria**	**164.69**	**213**	*eP*	**PKPdf**	**10 30 20.4**	**-0.5**	
ETMB	**Extrema**	**164.85**	**120**	*eP*	**PKPdf**	**10 30 21.2**	**+0.2**	
TPP	**Pointe-a-Pierr**	**164.91**	**34**	*eP*	**PKPdf**	**10 30 22.9**	**+1.8**	
BDFB	**Brasilia**	**165.84**	**200**	PKP	**PKPdf**	**10 30 22.7**	**+0.8**	
	comp=Z,50nm,1.0s,baz=51,slow=1.5,SNR=37							
BDFB				PKPab	**PKPab**	**10 31 22.7**	**+1.4**	
	comp=Z,93nm,0.9s,baz=81,slow=1.7,SNR=13							
BDFB				PP	**PP**	**10 35 09.2**	**+2.2**	
	comp=Z,54nm,1.0s,baz=81,slow=5.2,SNR=6.1							
BDFB	**Brasilia**	**165.84**	**200**	PKIKP	**PKPdf**	**10 30 21.3**	**-0.6**	
BDFB						10 31 22.6		
BDFB	**Brasilia**	**165.84**	**200**		**PKPdf**	**10 30 21.3**	**-0.6**	
BDFB				PKPab	**PKPab**	**10 31 22.6**	**+1.3**	
ARAG	**Araguaiana, MT**	**166.60**	**185**	*eP*	**PKPdf**	**10 30 23.2**	**+0.9**	
NBMO	**Morrinhos-CE**	**167.05**	**265**	*eP*	**PKPdf**	**10 30 23.1**	**+0.3**	
SDBA	**SAO DESIDERIO**	**167.14**	**218**	*eP*	**PKPdf**	**10 30 23.4**	**+0.5**	
VILB	**Vilhena**	**167.20**	**146**	*eP*	**PKPdf**	**10 30 24.5**	**+1.6**	
SAML	**Samuel**	**167.87**	**124**⇑	*eP*	**PKPdf**	**10 30 23.5**	**+0.2**	
SAML	**Samuel**	**167.87**	**124**	PKIKP	**PKPdf**	**10 30 23.1**	**-0.3**	
SAML	**Samuel**	**167.87**	**124**		**PKPdf**	**10 30 23.1**	**-0.3**	
SAML	**Samuel**	**167.87**	**124**	*eP*	**PKPdf**	**10 30 23.6**	**+0.2**	
SNDB	**Serra Nova Dou**	**170.22**	**190**	*eP*	**PKPdf**	**10 30 25.2**	**+0.4**	
ROSB	**Rosrio**	**171.14**	**266**	*eP*	**PKPdf**	**10 30 25.6**	**+0.2**	
SMTB	**Santa Maria do**	**171.54**	**219**	*eP*	**PKPdf**	**10 30 25.7**	**+0.2**	
MACA	**Manacapuru-AM**	**172.24**	**97**	*eP*	**PKPdf**	**10 30 26.0**	**+0.1**	
MDP	**Montagnes des**	**172.67**	**357**	PKP	**PKPdf**	**10 30 26.7**	**+0.6**	
	comp=Z,138nm,1.2s,baz=155,slow=1.7,SNR=13							
MDP				PKPab	**PKPab**	**10 31 51.5**	**+0.2**	
	comp=Z,33nm,1.0s,baz=37,slow=3.4,SNR=4.5							
MDP				PP	**PP**	**10 35 43.0**	**+2.0**	
	comp=Z,27nm,1.0s,baz=63,slow=2.7,SNR=3.7							
PRPB	**Parauapebas**	**175.01**	**219**	*eP*	**PKPdf**	**10 30 26.8**	**-0.1**	
TMAB	**Tom-Au,PA,Br**	**175.13**	**269**	*eP*	**PKPdf**	**10 30 27.1**	**+0.2**	
ITTB	**Itaituba**	**176.54**	**127**	*eP*	**PKPdf**	**10 30 26.9**	**-0.4**	
MCPB	**Macapa, AP**	**177.89**	**334**	*eP*	**PKPdf**	**10 30 27.9**	**+0.3**	

*IDC **21** 10:16:10.3±6.3, 38.00N×73.03E, h119km±37km, mb3.7/1, mb1 3.5/7, mb1mx3.2/69, mbtmp3.9/7, Error ellipse: s-maj=92.2km s-min=28.8km az=153.0*
*NNC **21** 10:16:17.2±2.7, 38.58N×73.00E, h162km±40km, mb2.7, mpv3.4, Error ellipse: s-maj=28.7km s-min=12.2km az=0.0*

ISC 21 10:16:11.3±2.0, 38.1N±0.1×73.0E±0.1, h127km, n17, σ1§40/20, 3C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.04**	**8**	P		**Pn**	**10 17 13.0**	**+1.2**
	SNR=230							
UCH	**Uchtor**	**4.27**	**16**	P		**Pn**	**10 17 16.2**	**+1.3**
	SNR=7.4							
EKS2	**Erkin-Say**	**4.57**	**7**	P		**Pn**	**10 17 20.1**	**+1.5**
	SNR=6.5							
AAK	**Ala-Archa**	**4.66**	**14**	P		**Pn**	**10 17 21.6**	**+1.8**
	3.3nm,0.3s,baz=164,slow=4.8,SNR=24							
AAK				S		**Sn**	**10 18 13.0**	**-0.1**
	2.5nm,0.3s,baz=334,slow=24,SNR=14							
ULHL	**Ulahol**	**4.82**	**30**	P		**Pn**	**10 17 22.6**	**+0.6**
	SNR=10.0							
TKM2	**Tokmak 2**	**5.19**	**22**	P		**Pn**	**10 17 28.1**	**+1.0**
	SNR=8.1							
TKM2	**Tokmak 2**	**5.19**	**22**	⇑P		**Pn**	**10 17 27.5**	**+0.5**
	3.4nm,0.6s							
TKM2				⇓S		**Sn**	**10 18 23.8**	**-2.2**
	3.1nm,0.5s							
USP	**Ospenovka**	**5.27**	**12**	P		**Pn**	**10 17 28.9**	**+1.0**
	SNR=9.1							
KK31	**Karatay Array**	**5.32**	**340**	⇑P		**Pn**	**10 17 29.7**	**+1.2**
	2.1nm,0.3s,baz=154,slow=12,SNR=47							
KK31				⇑S		**Sn**	**10 18 26.3**	**-2.4**
	30nm,0.4s,baz=157,slow=22,SNR=39							
MKAR	**Makanchi Array**	**11.06**	**35**	P		**Pn**	**10 18 44.5**	**-1.1**
	0.1nm,0.3s,baz=221,slow=16,SNR=5.1							
GEYT	**Alibeck**	**11.72**	**274**	P		**Pn**	**10 18 52.8**	**-1.8**
	0.8nm,0.3s,baz=80,slow=19,SNR=6.3							
KURBB	**Kurchatov Arra**	**13.11**	**16**	P		**Pn**	**10 19 13.8**	**+1.4**
	baz=207,slow=9.6,SNR=2.0							
AB31	**Akbulak array**	**14.56**	**324**	P		**Pn**	**10 19 30.7**	**-0.3**
	0.3nm,0.2s,baz=131,slow=13,SNR=27							
AKTO	**Aktyubinsk**	**16.27**	**324**	P		**P**	**10 19 54.2**	**+1.3**
	1.1nm,0.3s,baz=131,slow=9.5,SNR=7.1							
AKTO	**Aktyubinsk**	**16.27**	**324**	⇓P		**Pn**	**10 19 52.7**	**+0.4**
	3.4nm,0.9s							
ZALV	**Zalesovo Beam**	**17.80**	**23**	P		**P**	**10 20 09.0**	**-0.7**
	0.2nm,0.3s,baz=215,slow=13,SNR=4.1							
FINES	**FINESS Array B**	**37.05**	**324**	P		**P**	**10 23 09.8**	**+1.3**
	3.8nm,1.1s,baz=123,slow=12,SNR=3.4							

*IDC **21** 11:06:06.8±8.0, 35.40N×72.35E, h110km±66km, mb3.2/3, mb1 3.2/6, mb1mx3.0/47, mbtmp3.6/6, Error ellipse: s-maj=80.1km s-min=49.6km az=147.0*

ISC 21 11:06:07.6±2.5, 35.6N±0.2×72.1E±0.2, h100km, n8, σ1§73/8, 4C, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.25**	**14**	P		**Pn**	**11 07 52.1**	**+1.1**
	0.8nm,0.3s,baz=195,slow=4.2,SNR=7.6							
KK31	**Karatay Array**	**7.58**	**351**	⇑Pn		**Pn**	**11 07 53.9**	**-1.4**
	1.2nm,0.3s,baz=165,slow=11,SNR=29							
KK31				⇑Lg		Lg	11 09 22.4	
	1.8nm,0.5s,baz=170,slow=21,SNR=8.3							
TKM2	**Tokmak 2**	**7.78**	**19**	⇑Pn		**Pn**	**11 07 55.6**	**-2.7**
	0.2nm,0.3s							
TKM2				⇑Lg		Lg	11 09 18.6	
	0.8nm,0.7s							
MKAR	**Makanchi Array**	**13.53**	**31**	P		**Pn**	**11 09 16.9**	**+1.6**
	0.0nm,0.3s,baz=208,slow=11,SNR=1.7							
AKTO	**Aktyubinsk**	**18.00**	**330**	P		**Pn**	**11 10 11.4**	**+0.4**
	0.4nm,0.3s,baz=136,slow=6.5,SNR=2.5							
ZALV	**Zalesovo Beam**	**20.37**	**22**	P		**P**	**11 10 35.1**	**-0.9**
	0.7nm,0.3s,baz=220,slow=8.9,SNR=4.9							
FINES	**FINESS Array B**	**38.72**	**326**	P		**P**	**11 13 22.5**	**+1.0**
	0.8nm,0.6s,baz=123,slow=12,SNR=1.6							
TORD	**Torodi Ar. Bea**	**66.60**	**270**	P		**P**	**11 16 46.9**	**-0.6**
	0.4nm,0.7s,baz=64,slow=8.2,SNR=3.0							

*IDC **21** 11:11:39.2±1.1, 0.79S×127.51E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.6/49, mbtmp3.8/6, ML3.7/1, Error ellipse: s-maj=44.6km s-min=19.8km az=60.0*
*DJA **21** 11:11:42.0±0.4, 1°S±2°×12°E±°, h11km±3km, M4.1/14, mB4.8/1, mb4.6/3, MLv3.8/14, Mw(mB)4.0/1*

ISC 21 11:11:44.3±0.9, 0.79S±0.05×127.61E±0.05, h31km, n18, σ1§79/26, mb4.0/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.57**	**351**	P		**Pn**	**11 12 10.2**	**+0.2**
TNTI				S		**Sb**	**11 12 31.0**	**-1.1**
NLAI	**Namlea**	**2.49**	**192**	P		**Pn**	**11 12 22.4**	**-0.3**
NLAI				S		**Sn**	**11 12 53.3**	**+1.2**
MSAI	**Masohi**	**2.86**	**153**	P		**Pn**	**11 12 30.1**	**+2.3**
MSAI				S		**Sn**	**11 13 03.0**	**+1.7**
AAI	**Ambon**	**2.94**	**169**	P		**Pn**	**11 12 28.8**	**-0.1**
SIJI	**Sorong**	**3.65**	**91**	Pn		**Pn**	**11 12 39.8**	**+1.1**
	6.0nm,0.3s,baz=307,slow=11,SNR=17							
SIJI						**Sn**	**11 13 22.1**	**+1.4**
	0.6nm,0.3s,baz=234,slow=22,SNR=1.6							
KMSI	**Cibinong**	**3.88**	**290**	P		**Pn**	**11 12 43.1**	**+1.3**
KMSI				S		**Sn**	**11 13 28.7**	**+2.4**
BNDI	**Bandanaira**	**4.36**	**148**	P		**Pn**	**11 12 49.6**	**+1.2**
GTOI	**Gorontalo**	**4.81**	**287**	P		**Pn**	**11 12 57.7**	**+3.0**
GTOI				S		**Sn**	**11 13 53.2**	**+3.7**
LUWI	**Luwuk**	**4.85**	**267**	P		**Pn**	**11 12 53.5**	**-1.7**
LUWI				S		**Sn**	**11 13 48.7**	**-1.6**
FAKI	**Fak Fak**	**5.09**	**115**	P		**Pn**	**11 12 58.2**	**-0.4**
	0.1nm26nm,1.0s							
APSI	**Ampana**	**5.97**	**269**	P		**Pn**	**11 13 08.6**	**-1.9**
	0.1nm682nm30nm,0.6s							
APSI				S		**Sn**	**11 14 16.1**	**-1.8**
	0.1nm682nm30nm,0.6s							
SPSI	**Sidrap Palu**	**8.45**	**248**	P		**Pn**	**11 13 44.4**	**-0.3**
KAPI	**Kappang**	**8.90**	**242**	Pn		**Pn**	**11 13 54.3**	**+3.4**
	1.3nm,0.3s,baz=44,slow=7.6,SNR=4.2							
WRA	**Warramunga Arr**	**20.14**	**161**	P		**P**	**11 16 14.8**	**-1.3**
	0.8nm,0.5s,baz=343,slow=12,SNR=16							
ASAR	**Alice Springs**	**23.55**	**165**	P		**P**	**11 16 51.8**	**-0.4**
	3.0nm,0.6s,baz=344,slow=11,SNR=53							
MKAR	**Makanchi Array**	**61.77**	**326**	P		**P**	**11 21 59.7**	**-0.3**
	0.6nm,0.5s,baz=116,slow=7.5,SNR=9.7							
ZALV	**Zalesovo Beam**	**64.99**	**334**	P		**P**	**11 22 19.9**	**-1.3**
	0.5nm,0.4s,baz=123,slow=7.1,SNR=1.7							
KURBB	**Kurchatov Arra**	**66.00**	**328**	P		**P**	**11 22 27.2**	**-0.6**
	1.2nm,0.9s,baz=127,slow=5.8,SNR=7.9							

IDC 21 11:28:33.0±2.3, 0.73S×127.71E, h0km, mb3.0/3, mb1 3.3/3, mb1mx3.1/45, mbtmp3.1/3, Error ellipse: s-maj=167.7km s-min=28.5km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.17**	**162**	P		P	11 33 08.6	-0.6
	0.2nm,0.5s,baz=340,slow=11,SNR=5.4							
ASAR	**Alice Springs**	**23.58**	**166**	P		P	11 33 45.9	+0.4
	0.5nm,0.6s,baz=344,slow=11,SNR=14							
MKAR	**Makanchi Array**	**61.77**	**326**	P		P	11 38 53.4	-0.1
	0.1nm,0.3s,baz=117,slow=8.0,SNR=1.6							

*IDC **21** 11:28:59.7±1.0, 35.32N×137.38E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.4/59, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=25.3km s-min=17.6km az=90.0*
*JMA **21** 11:29:01.4, 36.31N×140.01E, h73km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs=234.00000°, δ24.00000°, λ143.00000°. NP2: φs=358.00000°, δ76.00000°, λ70.00000°. Principal axes: T Plg55.0000°, Azm243.0000°; N Plg19.0000°, Azm3.0000°; P Plg28.0000°, Azm104.0000°;*
JMA Felt I J1.

ISC 21 11:29:01.0±0.9, 36.31N±0.04×140.01E±0.05, h77km±7km, n22, σ0§80/35, mb3.6/5, 2C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.17**	**118**	⇑P		**Pn**	**11 29 12.4**	**+0.1**
JYT				S		**Sn**	**11 29 20.2**	**-0.4**
JAG	**Ashikaga**	**0.46**	**285**	⇓P		**Pn**	**11 29 14.3**	**+0.2**
JAG				S		**Sn**	**11 29 23.7**	**-0.1**
JKT	**Katashina**	**0.76**	**307**	⇓P		**Pn**	**11 29 17.5**	**+0.3**
JKT				S		**Sn**	**11 29 29.5**	**+0.2**
JRY	**Ryogami san**	**0.94**	**252**	⇓P		**Pn**	**11 29 19.7**	**+0.5**
JRY				S		**Sn**	**11 29 32.9**	**+0.1**
JFY	**Yanaizu**	**1.12**	**348**	P		**Pn**	**11 29 21.7**	**+0.3**
JFY				S		**Sn**	**11 29 37.1**	**+0.4**
JHK	**Hiroka**	**1.

WRA	Warramunga Arr	21.58	163	P	P	11 43 30.6	+1.0
	0.5nm,0.4s,baz=341,slow=11,SNR=11						
ASAR	Alice Springs	25.02	167	P	P	11 44 02.7	-1.2
	0.2nm,0.8s,baz=348,slow=7.0,SNR=1.7						
SONM	Songino Array	50.41	341	P	P	11 47 36.8	-0.4
	0.2nm,0.3s,baz=162,slow=11,SNR=2.1						
MKAR	Makanchi Array	60.56	326	P	P	11 48 50.2	+0.1
	0.2nm,0.4s,baz=120,slow=8.6,SNR=5.6						
KURBB	Kurchatov Arra	64.77	328	P	P	11 49 18.7	+0.7
	0.4nm,0.3s,baz=128,slow=6.3,SNR=2.7						

*IDC **21** 11:42:21.9±0.6,2°21N×126°89E,h0km,mb4.0/16, mb1 4.2/17,mb1mx4.0/42,mbtmp4.0/17,ML3.6/1,MS4.3/2, Ms1 4.3/2,ms1mx3.6/32,Error ellipse: s-maj=28.8km s-min=12.2km az=75.0*

*NEIC **21** 11:42:26.9±2.2,2°23N±0°06×127°11E±0°09,h35km±3km, mb4.4/23,Error ellipse: s-maj=13.5km s-min=6.2km az=63.0*

*DJA **21** 11:42:27.5±0.8,2°N±3°×12°7E±°,h14km±7km,M4.2/13, mB4.9/3,mb4.4/9,MLv4.1/13,Mw(mB)4.2/3*

ISC 21 11:42:27.2±0.5,2°28N±0°05×127°23E±0°08,h35km,n67,
σ1§52/67,mb4.2/24,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.50	175	P	Pn	11 42 52.5	+0.8
TNTI	Ternate	1.50	175		Pn	11 42 52.5	+0.8
TNTI				Sn	Sn	11 43 07.4	-2.7
SGSI	Sangihe	2.20	310	P	Pn	11 43 02.0	+0.7
KMSI	Cibinong	3.66	243	P	Pn	11 43 23.9	+2.5
GTOI	Gorontalo	4.52	249	P	Pn	11 43 34.9	+1.7
SIJI	Sorong	5.11	128	Pn	Pn	11 43 43.1	+1.7
	1.8nm,0.3s,baz=339,slow=13,SNR=6.4						
NLAI	Namlea	5.48	181	P	Pn	11 43 45.9	-0.6
	0.1nm1µm24nm,0.5s						
LUWI	Luwuk	5.54	234	P	Pn	11 43 49.4	+2.1
	0.5nm88nm,1.1s						
LUWI	Luwuk	5.54	234	Pn	Pn	11 43 46.6	-0.7
MRSI	Marisa	5.58	251	P	Pn	11 43 49.5	+1.7
	0.3nm1µm89nm,0.6s						
APSI	Ampana	6.41	240	P	Pn	11 44 00.1	+0.8
	0.2nm825nm68nm,1.3s						
TOLI2	Tolitoli	6.55	260	Pn	Pn	11 44 00.0	-1.1
FAKI	Fak Fak	7.20	136	Pn	Pn	11 44 10.3	+0.2
MPSI	Mapaga	7.58	255	P	Pn	11 44 19.3	+4.0
	0.1nm19nm,1.0s						
TTSI	Tana Toraja	9.10	235	P	Pn	11 44 37.2	+1.0
	16nm,1.0s						
MYLDM	Lahad Datu	9.17	289	Pn	Pn	11 44 36.0	-1.2
BATI	Baumata	12.90	196	LR	LR	11 50 15.4	
	comp=Z,1µm,21.9s,baz=144,slow=37						
SBUM	Sibu	15.00	271	Pn	Pn	11 45 53.7	-3.0
TWSI	Taliwang, Sumb	15.04	223	P	P	11 46 08.1	+5.9
MTN	Manton Dam	15.51	166		Pn	11 46 01.7	-1.8
MTN				IAmb	IAmb	11 46 10.5	
	comp=Z,12nm,0.7s						
JAGI	Jajag, Banyuwa	16.85	231	P	Pn	11 46 20.9	+0.3
KNRA	Kununurra	17.90	175	P	P	11 46 34.3	+0.3
KNRA				IAmb	IAmb	11 46 52.0	
	comp=Z,14nm,0.9s						
FITZ	Fitzroy Crossi	20.31	184	P	P	11 47 00.2	-0.1
	comp=Z,2.4nm,0.5s,baz=25,slow=12,SNR=17						
FITZ	Fitzroy Crossi	20.31	184	P	P	11 47 00.2	-0.1
TPUB	Ta-pu	21.86	344	P	P	11 47 16.8	-0.2
TPUB				IAmb	IAmb	11 47 39.1	
	comp=Z,29nm,1.1s						
WB0	Warramunga Arr	23.01	163	P	P	11 47 28.7	-0.6
WB0				IAmb	IAmb	11 47 29.8	
	comp=Z,17nm,1.1s						
WRAB	Tennant Creek	23.15	163	P	P	11 47 30.0	-0.7
WRAB				IAmb	IAmb	11 47 33.4	
	comp=Z,9.2nm,0.6s						
WRA	Warramunga Arr	23.16	163	P	P	11 47 30.3	-0.5
	comp=Z,8.6nm,0.5s,baz=340,slow=11,SNR=94						
WRA	Warramunga Arr	23.16	163	P	P	11 47 29.8	-1.0
WB2	Warramunga Arr	23.16	163	P	P	11 47 30.5	-0.3
WB2				IAmb	IAmb	11 47 34.2	
	comp=Z,9.8nm,0.9s						
PSA00	Pilbara Seismi	24.78	197	P	P	11 47 45.9	-0.1
PSA00				IAmb	IAmb	11 47 58.5	
	comp=Z,20nm,1.4s						
UBPT	Khong Chiam	25.04	302	P	P	11 47 49.0	+0.5
UBPT				IAmb	IAmb	11 47 49.1	
	comp=Z,15nm,1.1s						
AS31	Alice Springs	26.59	166	P	P	11 48 01.8	-0.7
ASAR	Alice Springs	26.59	166	P	P	11 48 02.2	-0.2
	comp=Z,1.0nm,0.5s,baz=352,slow=7.6,SNR=30						
ASAR				PcP	PcP	11 51 26.6	+0.3
	comp=Z,1.3nm,0.6s,baz=354,slow=2.4,SNR=16						
ASAR	Alice Springs	26.59	166	P	P	11 48 01.1	-1.4
CMAR	Chiang Mai Arr	32.05	302	P	P	11 48 49.4	-1.5
	comp=Z,0.7nm,0.7s,baz=99,slow=5.6,SNR=1.5						
MORW	Morawa	32.96	198	P	P	11 48 58.6	-0.2
JGF	Kuroka	34.46	15	P	P	11 49 11.8	-0.1
KSRS	Korea Array	35.01	1	P	P	11 49 16.9	+0.5
	comp=Z,1.2nm,0.9s,baz=182,slow=11,SNR=4.7						
MJAR	Matsushiro Arr	35.57	15	P	P	11 49 23.5	+2.1
	comp=Z,1.4nm,0.8s,baz=306,slow=29,SNR=3.1						
BBOO	Buckleboo	35.88	167	P	P	11 49 24.6	+0.6
STKA	Stephens Creek	36.60	159	P	P	11 49 30.8	+0.6
	comp=Z,4.8nm,0.5s,baz=333,slow=9.7,SNR=18						
STKA	Stephens Creek	36.60	159	P	P	11 49 30.6	+0.3
USRK	Ussuriysk Ar.	41.96	5	P	P	11 50 16.7	+1.9
	comp=Z,2.2nm,0.7s,baz=210,slow=8.3,SNR=3.1						
SONM	Songino Array	48.82	341	P	P	11 51 08.6	-0.6
	comp=Z,0.7nm,0.7s,baz=163,slow=8.6,SNR=4.2						
SONM	Songino Array	48.82	341	P	P	11 51 08.5	-0.8
PETK	Petropavlovsk-	56.59	21	P	P	11 52 07.7	+1.3
	comp=Z,2.6nm,0.8s,baz=294,slow=1.4,SNR=1.6						
MK31	Makanchi Array	59.02	326	P	P	11 52 22.2	-1.5
MK31				IAmb	IAmb	11 52 46.5	
	comp=Z,1.3nm,0.8s						
MKAR	Makanchi Array	59.02	326	P	P	11 52 22.3	-1.4
	comp=Z,0.7nm,0.6s,baz=118,slow=7.9,SNR=11						
MKAR	Makanchi Array	59.02	326	P	P	11 52 22.2	-1.5
ZALV	Zalesovo Beam	62.10	332	P	P	11 52 44.9	+0.4
	comp=Z,0.4nm,0.3s,baz=137,slow=6.8,SNR=1.7						
KURBB	Kurchatov Arra	63.22	328	P	P	11 52 50.4	-1.7
	comp=Z,1.6nm,0.5s,baz=129,slow=6.0,SNR=17						
KURK	Kurchatov	63.23	328	P	P	11 52 51.0	-1.1
KURK				IAmb	IAmb	11 53 08.9	
	comp=Z,3.1nm,0.8s						
KKAR	Karatay Array	64.63	317	P	P	11 53 00.2	-1.3
ABKAR	Akbulak array	73.58	321	P	P	11 53 56.1	-0.8
ABKAR	Akbulak array	73.58	321	P	P	11 53 56.3	-0.6
ABKAR				IAmb	IAmb	11 54 13.7	
	comp=Z,1.3nm,0.8s						
VNDA	Vanda	81.93	173	P	P	11 54 42.4	-0.4
	comp=Z,0.7nm,0.8s,baz=298,slow=5.5,SNR=6.5						
VNDA	Vanda	81.93	173	P	P	11 54 42.4	-0.4
MAW	Mawson	82.57	200	P	P	11 54 47.8	+1.5
MAW				IAmb	IAmb	11 54 59.1	
	comp=Z,3.5nm,1.5s						
IMAR	Indian Mountai	83.46	24	P	P	11 54 53.4	+2.3
PPLA	Purkeypile	83.69	27	P	P	11 54 54.0	+1.6
ILAR	Eielson Array	86.19	25	P	P	11 55 04.8	0.0
	comp=Z,0.4nm,0.7s,baz=240,slow=5.1,SNR=6.1						
OBN	Obninsk	88.53	325	LR	LR	12 37 40.3	
	comp=Z,186nm,20.9s,baz=264,slow=38						
KMBO	Kilima Mbogo	90.02	269	P	P	11 55 24.2	-0.2
	comp=Z,1.8nm,0.4s,baz=288,slow=19,SNR=1.3						
TXAR	Lajitas Array	122.08	53	PKP	PKiKP	12 01 19.6	+0.3
	comp=Z,0.3nm,0.7s,baz=243,slow=1.4,SNR=3.4						
TORD	Torodi Ar. Bea	123.83	287	PKP	PKPdf	12 01 21.5	-1.1
	comp=Z,0.3nm,0.5s,baz=48,slow=2.3,SNR=2.8						
BDFB	Brasilia	165.92	199	PKPab	PKPab	12 03 26.9	-2.4
	comp=Z,1.8nm,0.4s,baz=90,slow=9.1,SNR=1.7						

*IDC **21** 11:51:38.7±7.5,31°50S×179°88E,h435km±92km,mb2.9/3, mb1 3.2/4,mb1mx2.9/31,mbtmp4.0/4,Error ellipse: s-maj=94.3km s-min=40.3km az=5.0*

*WEL **21** 11:51:45.7±0.9,32°S±9°×18°0E±1°8,h445km±20km, M4.5/25,mB4.5/4,MLv4.8/25,Mw(mB)3.7/4,Error ellipse: s-maj=0.0km s-min=0.0km az=100.5*

ISC 21 11:51:40.7±1.9,31°6S±0°1×179°8E±0°2,h450km,n37,
σ1§95/53,mb3.4/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRZ	Great Barrier	5.88	217	P	P	11 53 14.8	+1.2
MXZ	Matakaoa Point	6.06	192	P	P	11 53 17.5	+2.0
MXZ				S	S	11 54 30.9	-2.2
KUZ	Kuaotunu	6.15	213	P	P	11 53 21.0	+4.6
WCZ	Waipu Caves	6.29	225	P	P	11 53 19.1	+1.3
WMGZ	Waiomatatini S	6.30	190	P	P	11 53 20.2	+2.3
WMGZ				S	S	11 54 38.8	+1.3
HAZ	Te Kaha	6.35	195	P	P	11 53 19.6	+1.1
HAZ				S	S	11 54 38.1	-0.4
PUZ	Puketiti	6.57	191	P	P	11 53 23.0	+2.3
PUZ				S	S	11 54 39.8	-2.9
RUGZ	Raukumara Rang	6.58	195	P	P	11 53 22.3	+1.3
RUGZ				S	S	11 54 40.0	-3.1
TWGZ	Tauwhareparae	6.72	193	P	P	11 53 25.9	+3.5
TWGZ				S	S	11 54 42.7	-2.9
MWZ	Matawai	6.96	195	P	P	11 53 25.5	+0.6
MWZ				S	S	11 54 50.1	-0.2
CNGZ	Carnagh Statio	6.98	191	P	P	11 53 26.6	+1.5
CNGZ				S	S	11 54 52.0	+1.4
URZ	Urewera	7.00	198	P	P	11 53 25.5	+0.3
	8.4nm,0.3s,baz=267,slow=3.5,SNR=84						
URZ				S	S	11 54 49.1	-1.7
	5.4nm,0.3s,baz=76,slow=19,SNR=16						
URZ	Urewera	7.00	198	P	P	11 53 25.3	+0.1
URZ				S	S	11 54 47.3	-3.5
RIGZ	Rimuhau	7.27	193	P	P	11 53 30.3	+2.1
RIGZ				S	S	11 54 54.9	-1.4
MUGZ	Murupara	7.29	199	P	P	11 53 29.9	+1.5
MUGZ				S	S	11 54 57.1	+0.4
RTZ	Ruatahuna	7.36	198	P	P	11 53 29.9	+0.7
RTZ				S	S	11 54 56.6	-1.6
SNGZ	Shannon Statio	7.43	195	P	P	11 53 32.3	+2.4
PRGZ	Paritu Road	7.46	192	P	P	11 53 33.2	+3.0
KNZ	Kokohu	7.60	193	P	P	11 53 33.6	+2.0
KNZ				S	S	11 55 00.3	-2.2
MRHZ	Matea Rd	7.72	200	P	P	11 53 34.3	+1.2
MRHZ				S	S	11 55 06.6	+1.4
NMHZ	Naumai	7.86	198	P	P	11 53 36.7	+2.1
NMHZ				S	S	11 55 08.6	+0.6
RATZ	Rangitukua	7.96	204	P	P	11 53 37.2	+1.6
ARHZ	Aropaoanui	7.97	196	P	P	11 53 37.3	+1.7
ARHZ				S	S	11 55 09.7	-0.4
HIZ	Hauiti	8.00	209	P	P	11 53 40.3	+4.3
BKZ	Black Stump Fm	8.01	199	P	P	11 53 36.0	-0.1
MCHZ	McNeill Hill	8.22	197	P	P	11 53 39.2	+0.9
CKHZ	Cape Kidnapper	8.33	195	P	P	11 53 40.9	+1.4
BHHZ	Black Hill Sta	8.44	200	P	P	11 53 40.4	-0.3
KRHZ	Kereru	8.49	198	P	P	11 53 41.3	0.0
KAHZ	Kahuranaki	8.51	196	P	P	11 53 43.5	+2.0
VRZ	Vera Road	8.56	208	P	P	11 53 44.2	+2.2
PXZ	Pawanui	8.74	195	P	P	11 53 44.5	+0.7
TSZ	Takapari Road	8.99	199	P	P	11 53 42.6	-4.1
STKA	Stephens Creek	32.41	259	P	P	11 57 31.8	-0.2
	1.3nm,0.5s,baz=112,slow=16,SNR=4.2						
ASAR	Alice Springs	41.32	269	P	P	11 58 44.3	-0.7
	0.3nm,0.3s,baz=103,slow=7.6,SNR=6.6						
WRA	Warramunga Arr	42.32	275	P	P	11 58 52.6	-1.1
	0.7nm,0.5s,baz=112,slow=7.7,SNR=17						
FINES	FINESS Array B	145.61	338	PKPbc	PKPdf	12 10 25.5	-0.5
	2.0nm,0.9s,baz=22,slow=4.5,SNR=5.8						

*REY **21** 12:15:26.3,64°68N×17°45W,h2km*

*IDC **21** 12:15:28.1±1.0,64°69N×17°68W,h0km,mb3.8/9, mb1 3.9/12,mb1mx3.7/41,mbtmp3.8/12,ML3.3/3,MS4.4/1, Ms1 4.4/1,ms1mx3.5/43,Error ellipse: s-maj=26.8km s-min=18.5km az=42.0*

*NEIC **21** 12:15:28.2±1.4,64°63N±0°06×17°7W±0°1,h7km±5km, mb4.5/14,Error ellipse: s-maj=9.7km s-min=7.9km az=208.0*

ISC 21 12:15:28.4±0.5,64°68N±0°02×17°47W±0°02,h10km,n77,
σ2§52/86,mb4.2/16,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IVON	Vonarskard	0.12	265	P	Pg	12 15 29.2	-2.1
	baz=269						
IDJK	Dyngjujokull	0.21	151	P	Pg	12 15 30.6	-2.2
	baz=152						
IHUS	Husbondi	0.40	192	P	Pg	12 15 34.0	-2.2
	baz=193						
IHUS				S	Sg	12 15 39.9	-1.6
	baz=193						
ISKR	Skrokkalda	0.41	253	P	Pg	12 15 34.1	-2.4
	baz=254						
THOR	Thorvaldshraun	0.42	53	P	Pg	12 15 34.5	-2.2
	baz=52						
IVOT	Vottur	0.43	163	P	Pg	12 15 34.4	-2.4
	baz=164						
IKRE	Kreppuhraun	0.48	77	P	Pg	12 15 35.2	-2.4
	baz=76						
IKRE				S	Sg	12 15 41.7	-2.3
	baz=76						
IJOK	Jokulheimar	0.49	222	P	Pg	12 15 35.7	-2.3
	baz=223						
IJOK				S	Sg	12 15 42.8	-1.7
	baz=223						
IASK	Askja	0.51	43	P	Pg	12 15 36.0	-2.3
	baz=42						
IASK				S	Sg	12 15 42.6	-2.4
	baz=42						
IMKO	Mokollar	0.57	58	P	Pg	12 15 36.7	-2.6
	baz=57						
IMKO				S	Sg	12 15 44.8	-2.0
	baz=57						
IIEY	Innrieyrar	0.66	206	P	Pg	12 15 38.3	-2.8
	baz=207						
ISVA	Svartarkot	0.66	8	P	Pg	12 15 38.5	-2.6
	baz=7.1						
IKSK	Karasker	0.68	140	P	Pg	12 15 37.9	-3.6
	baz=140						
IKAL	Kalfafell	0.74	187	P	Pg	12 15 39.6	-3.1
	baz=188						
IVSH	V-Sauoahnukur	0.76	80	P	Pg	12 15 39.8	-3.2
	baz=79						
IVSH				S	Sg	12 15 49.7	-3.1
	baz=79						
IVAT	Vatnsfell	0.80	232	P	Pg	12 15 41.2	-2.6
	baz=233						
IADA	Aoalbol	0.88	67	P	Pg	12 15 41.6	-3.6
	baz=66						
IADA				S	Sg	12 15 53.5	-3.1
	baz=66						
IFAG	Fagurholsmyri	0.89	156	P	Pg	12 15 41.8	-3.6
	baz=156						
IHVE	Hvavellir	0.92	283	P	Pg	12 15 42.5	-3.6
	baz=283						
IMEL	Melhnausar	0.95	21	P	Pg	12 15 43.3	-3.4
	baz=20						
IREN	Reynihlio	1.00	14	P	Pg	12 15 44.0	-3.5
	baz=13						
IKVO	Krokottuvotn	1.06	13	P	Pg	12 15 45.0	-3.8
	baz=13						
ISNB	Snabyli	1.08	209	P	Pg	12 15 45.3	-3.8
	baz=209						
IGRS	Grimsstaoir	1.11	30	P	Pb	12 15 46.0	-3.8
	baz=30						
IRJU	Rjupnafell	1.19	207	P	Pb	12 15 47.3	-3.7
	baz=207						
ISKI	Skildingahlsh	1.21	9	P	Pb	12 15 47.5	-3.8
	baz=8.3						
IGHA	Grjothals	1.21	16	P	Pn	12 15 47.6	-3.8
	baz=15						
IGRA	Granastaoir	1.24	358	P	Pn	12 15 48.0	-3.7
	baz=358						
IGYG	Gygjarholskot	1.26	252	P	Pn	12 15 48.3	-3.6
	baz=253						
IDIM	Dimmadalss	1.30	10	P	Pn	12 15 49.0	-3.6
	baz=9.3						
IHVO	Lagu-Hvolar	1.31	208	P	Pn	12 15 49.4	-3.3
	baz=209						
IHED	Heoinshofoi	1.41	3	P	Pn	12 15 50.5	-3.5
	baz=2.3						
IALF	Alftagrof	1.42	213	P	Pn	12 15 51.0	-3.1
	baz=213						
IESK	Eystri-Skogar	1.45	218	P	Pn	12 15 51.5	-3.1
	baz=218						
IBRE	Brettingsstaoi	1.46	353	P	Pn	12 15 51.5	-3.2
	baz=353						
ISAU	Saurbar	1.46	243	P	Pn	12 15 51.2	-3.5
	baz=243						
ISIG	Sigluflorour	1.57	338	P	Pn	12 15 53.3	-3.0
	baz=339						
BORG	Borgarnes	1.66	274		Pn	12 15 56.4	-1.1
BORG				Sn	Sn	12 16 18.3	-0.4
IKRO	Krokur	1.69	251	P	Pn	12 15 55.1	-2.8
	baz=252						
ISOL	Solvholt	1.69	245	P	Pn	12 15 55.4	-2.5
	baz=245						
ILEI	Leirhofn	1.78	13	P	Pn	12 15 56.3	-2.8
	baz=12						
IHRN	Hraun	1.81	323	P	Pn	12 15 56.9	-2.7
	baz=323						
SCO	Scoresbysund	6.07	346		Pn	12 16 57.8	-0.2
SCO				Sn	Sn	12 18 11.1	+3.7
SCO	Scoresbysund	6.07	346	*e*	Pn	12 16 47.9	-10
	baz=162,slow=6.9						
SCO				*i* P	Pn	12 16 57.7	-0.2
SCO				*i* S	Sn	12 18 11.6	+4.2
SCO				IAML		12 18 22.8	
	comp=Z,1.2nm,0.4s						
EKA	Eskdalemuir Ar	11.76	136	Pn	Pn	12 18 16.0	0.0
	baz=320,slow=13,SNR=4.8						
HFS	Hagfors	15.04	93	Pn	Pn	12 19 02.0	+1.4
	comp=Z,0.3nm,0.3s,baz=317,slow=10,SNR=1.9						
FINES	FINESS Array B	19.69	79	P	Pn	12 20 00.7	+2.0
	comp=Z,0.1nm,0.3s,baz=324,slow=9.4,SNR=4.4						
FINES	FINESS Array B	19.69	79	P	Pn	12 19 59.6	+0.9
CLL	Collm	20.70	116	P	P	12 20 09.4	+1.0
BRG	Berggiesshubel	21.41	115	*eP*	P	12 20 16.5	+0.5
	comp=Z,12nm,1.5s						
BFO	Black Forest	21.45	127	P	P	12 20 16.6	+0.1
BFO				IAmb	IAmb	12 20 54.6	
	comp=Z,16nm,1.5s						
KHC	Kasperske Hory	22.67	118	P	P	12 20 31.1	+1.5
GEC2	GERESS Array S	22.95	119	P	P	12 20 33.2	+0.6
GERES	GERESS Array B	22.95	119	P	P	12 20 34.2	+1.6
	comp=Z,0.6nm,0.6s,baz=318,slow=9.7,SNR=5.3						
GERES	GERESS Array B	22.95	119	P	P	12 20 33.2	+0.6
TUE	Stuetta	23.41	128	P	P	12 20 38.2	+0.9
TUE				IAmb	IAmb	12 20 52.6	
	comp=Z,29nm,1.9s						
PSZ	Piszkesteto	26.11	112	P	P	12 21 02.8	+0.7
PSZ				IAmb	IAmb	12 21 28.1	
	comp=Z,13nm,1.5s						
ESDC	Sonseca Array	26.26	156	P	P	12 21 04.8	+1.2
	comp=Z,0.8nm,1.0s,baz=354,slow=10,SNR=2.5						
ESDC	Sonseca Array	26.26	156	P	P	12 21 03.8	+0.3
KEST	Kesra	33.16	138	P	P	12 22 08.2	+3.4
	comp=Z,3.7nm,1.0s,baz=11,slow=16,SNR=2.7						
ARU	Arti	36.06	66	P	P	12 22 31.9	+2.3
ARU				IAmb	IAmb	12 23 45.5	
	comp=Z,4.8nm,0.9s						
ILGA	Ilgaz	37.39	104	P	P	12 22 43.1	+1.8
KSPA	Keystone Colle	39.98	264	P	P	12 23 01.6	-1.1
AKTO	Aktyubinsk	40.27	73	P	P	12 23 07.3	+2.3
	comp=Z,1.0nm,0.4s,baz=182,slow=8.3,SNR=2.2						
ABKAR	Akbulak array	41.97	73	P	P	12 23 19.9	+0.9
TIXI	Tiksi	42.01	15	P	P	12 23 20.6	+1.5
TIXI				IAmb	IAmb	12 23 22.3	
	comp=Z,18nm,1.7s						
GNI	Garni	42.82	94	LR	LR	12 41 59.1	
	comp=Z,481nm,19.7s,baz=252,slow=37						
BMAR	Burnt Mountain	42.88	333	P	P	12 23 25.5	-0.8
IL31		45.68	332	P	P	12 23 48.1	-0.4
ILAR	Eielson Array	45.68	332	P	P	12 23 49.9	+1.3
	comp=Z,1.0nm,1.0s,baz=15,slow=7.5,SNR=6.1						
ZALV	Zalesovo Beam	47.61	51	P	P	12 24 04.8	+0.9
	comp=Z,0.5nm,0.3s,baz=322,slow=8.3,SNR=2.3						
MKAR	Makanchi Array	52.70	58	P	P	12 24 43.5	+0.8
	comp=Z,1.5nm,1.1s,baz=317,slow=8.3,SNR=3.8						
TORD	Torodi Ar. Bea	53.15	156	P	P	12 24 47.5	+1.3
	comp=Z,1.2nm,1.0s,baz=342,slow=9.8,SNR=4.4						
PD31	Pinedale Array	53.18	293	P	P	12 24 46.2	-0.2
PD31				IAmb	IAmb	12 24 49.4	
	comp=Z,11nm,1.8s						
PDAR	Pinedale Array	53.18	293	P	P	12 24 47.0	+0.5
	comp=Z,0.9nm,0.7s,baz=57,slow=5.5,SNR=7.6						
PDAR	Pinedale Array	53.18	293	P	P	12 24 45.9	-0.5
GAR	Garm	54.63	73	P	P	12 24 58.3	+1.3
GAR				IAmb	IAmb	12 24 59.9	
	comp=Z,7.0nm,0.9s						

*REY **21** 12:20:41.1,64°67N×17°38W,h3km*

*NEIC **21** 12:20:42.7±1.2,64°45N±0°09×17°5W±0°1,h8km±2km, mb4.3/19,Error ellipse: s-maj=13.2km s-min=6.4km az=194.0*

*IDC **21** 12:20:43.3±0.8,64°51N×17°26W,h0km,mb3.8/9, mb1 4.0/13,mb1mx3.8/41,mbtmp3.7/13,ML2.7/3,MS4.3/3, Ms1 4.3/3,ms1mx3.5/52,Error ellipse: s-maj=27.3km s-min=15.7km az=28.0*

ISC 21 12:20:43.0±0.4,64°65N±0°02×17°34W±0°02,h10km,n89,
σ2§48/97,mb4.3/18,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	Dyngjuhals	0.14	356	P	Pg	12 20 43.9	-2.4
	baz=2.1						
IDYN				S	Sg	12 20 46.5	-2.2
	baz=2.1						
IDJK	Dyngjujokull	0.15	162	P	Pg	12 20 45.0	-1.5
	baz=159						
IVON	Vonarskard	0.18	279	P	Pg	12 20 44.3	-2.6
	baz=273						
IVON				S	Sg	12 20 47.3	-2.3
	baz=273						
IVOT	Vottur	0.38	170	P	Pg	12 20 48.6	-2.0
	baz=168						
IVOT				S	Sg	12 20 54.8	-0.9
	baz=168						
THOR	Thorvaldshraun	0.41	44	P	Pg	12 20 48.8	-2.2
	baz=48						
IKRE	Kreppuhraun	0.43	71	P	Pg	12 20 49.3	-2.2
	baz=74						
IKRE				S	Sg	12 20 55.9	-1.4
	baz=74						
ISKR	Skrokkalda	0.46	259	P	Pg	12 20 49.6	-2.4
	baz=257						
IJOK	Jokulheimar	0.51	229	P	Pg	12 20 50.5	-2.4
	baz=227						
IJOK				S	Sg	12 20 57.8	-1.7
	baz=227						
IMKO	Mokollar	0.54	52	P	Pg	12 20 51.1	-2.5
	baz=54						
IKSK	Karasker	0.62	142	P	Pg	12 20 52.0	-2.9
	baz=142						
IKSK				S	Sg	12 21 00

IHLA	**Hella**	**1.38 342**	P		**Pn**	12 21 04.3	**-3.9**
	baz=342							
IALF	**Alftagrof**	**1.42 216**	P		**Pn**	12 21 06.0	**-2.7**
	baz=215							
IHED	**Heoinshofoi**	**1.44 1**	P		**Pn**	12 21 05.1	**-4.0**
	baz=1.1							
IESK	**Eystri-Skogar**	**1.46 220**	P		**Pn**	12 21 06.4	**-3.0**
	baz=219							
ISAU	**Saurbar**	**1.49 245**	P		**Pn**	12 21 06.4	**-3.4**
	baz=244							
IMID	**Miomork**	**1.49 229**	P		**Pn**	12 21 07.1	**-2.8**
	baz=228							
IBRE	**Brettingsstaoi**	**1.50 351**	P		**Pn**	12 21 06.1	**-3.8**
	baz=352							
ISIG	**Siglufjorour**	**1.63 337**	P		**Pn**	12 21 08.0	**-3.7**
	baz=337							
IASM	**Asmuli**	**1.65 242**	P		**Pn**	12 21 09.2	**-2.7**
	baz=241							
BORG	**Borgarnes**	**1.71 275**			**Pn**	12 21 12.3	**-0.5**
BORG				Sn	**Sn**	12 21 33.7	**-1.1**
ISOL	**Solvholt**	**1.73 247**	P		**Pn**	12 21 10.1	**-2.9**
	baz=246							
IKRO	**Krokur**	**1.73 253**	P		**Pn**	12 21 10.2	**-2.9**
	baz=252							
IHEI	**Heioarbar**	**1.75 257**	P		**Pn**	12 21 10.5	**-2.8**
	baz=256							
ILEI	**Leirhofn**	**1.80 11**	P		**Pn**	12 21 10.9	**-3.2**
	baz=12							
IHRN	**Hraun**	**1.88 323**	P		**Pn**	12 21 12.1	**-2.9**
	baz=323							
SCO	**Scoresbysund**	**6.12 345**			**Pn**	12 22 15.4	**+2.1**
SCO				Sn	**Sn**	12 23 27.9	**+4.7**
EKA	**Eskdalemuir Ar**	**11.70 136**	Pn		**Pn**	12 23 29.5	**-0.2**
	baz=326,slow=13,SNR=8.1							
NOA	**NORSAR Array B**	**13.46 92**	Pn		**Pn**	12 23 52.6	**-1.3**
	0.0nm,0.3s,baz=296,slow=14,SNR=2.4							
HFS	**Hagfors**	**14.98 93**	Pn		**Pn**	12 24 14.8	**+0.3**
	0.1nm,0.3s,baz=300,slow=9.8,SNR=1.7							
FINES	**FINESS Array B**	**19.64 79**	P		**Pn**	12 25 13.3	**+0.5**
	0.1nm,0.3s,baz=312,slow=14,SNR=4.8							
FINES	**FINESS Array B**	**19.64 79**	P		**P**	12 25 11.1	**-0.3**
CLL	**Collm**	**20.64 116**	*e*P		**P**	12 25 23.0	**+0.7**
CLL			*e*			12 25 32.0		
CLL	**Collm**	**20.64 116**	P		**P**	12 25 20.7	**-1.5**
ECH	**Echery**	**21.09 130**	P		**P**	12 25 26.2	**-1.1**
BRG	**Berggiesshubel**	**21.34 115**	*e*P		**P**	12 25 30.8	**+0.8**
	23nm,1.8s							
FRB	**Frobisher Bay**	**21.82 291**	P		**P**	12 25 37.8	**+3.0**
	31nm,1.2s,baz=45,slow=10.0,SNR=3.2							
KHC	**Kasperske Hory**	**22.61 119**	P		**P**	12 25 42.3	**-1.2**
GEC2	**GERESS Array S**	**22.89 119**	P		**P**	12 25 45.9	**-0.6**
GERES	**GERESS Array B**	**22.89 119**	P		**P**	12 25 48.3	**+1.7**
	0.8nm,0.8s,baz=324,slow=6.6,SNR=4.2							
GERES	**GERESS Array B**	**22.89 119**	P		**P**	12 25 45.7	**-0.8**
VRAC	**Vranov**	**23.62 114**	LR		LR	12 36 37.7		
	comp=Z,510nm,18.6s,baz=244,slow=41							
MORC	**Moravsky Berou**	**23.63 112**	P		**P**	12 25 54.0	**+0.1**
MORC			IAmb		IAmb	12 26 17.1		
	comp=Z,15nm,1.5s							
STAL	**STALIGIAL**	**24.69 124**	P		**P**	12 26 03.7	**-0.2**
STAL			IAmb		IAmb	12 26 27.6		
	comp=Z,9.8nm,1.4s							
KWP	**Kalwaria Pacla**	**25.84 106**	P		**P**	12 26 14.1	**-0.1**
PSZ	**Piszkesteto**	**26.05 112**	P		**P**	12 26 16.5	**+0.4**
PSZ			IAmb		IAmb	12 26 19.7		
	comp=Z,12nm,1.3s							
SCHQ	**Schefferville**	**26.11 272**	LR		LR	12 34 46.9		
	comp=Z,1μm,21.8s,baz=136,slow=32							
ESDC	**Sonseca Array**	**26.21 156**	P		**P**	12 26 19.2	**+1.5**
	comp=Z,0.9nm,0.7s,baz=345,slow=9.2,SNR=3.5							
ARU	**Arti**	**36.03 66**	P		**P**	12 27 44.6	**+0.8**
ARU			IAmb		IAmb	12 27 49.3		
	comp=Z,5.0nm,1.2s							
IDI	**Anoyia**	**38.75 119**	LR		LR	12 47 02.3		
	comp=Z,277nm,18.3s,baz=304,slow=41							
M57A	**Sunshine Farm,**	**40.80 265**	P		**P**	12 28 23.1	**-1.0**
N58A	**Sunbury**	**41.03 264**	P		**P**	12 28 26.1	**+0.1**
N58A			IAmb		IAmb	12 28 50.7		
	comp=Z,21nm,1.2s							
TIXI	**Tiksi**	**42.03 15**	P		**P**	12 28 35.6	**+1.7**
TIXI			IAmb		IAmb	12 28 39.1		
	comp=Z,9.4nm,1.4s							
ILAR	**Eielson Array**	**45.73 333**	P		**P**	12 29 07.8	**+4.1**
	comp=Z,1.4nm,1.1s,baz=25,slow=6.2,SNR=8.1							
IMAR	**Indian Mountai**	**45.90 337**	P		**P**	12 29 06.9	**+1.9**
BCAR	**Beaver Creek A**	**46.16 329**	P		**P**	12 29 08.9	**+1.8**
ZAA0	**Zalesovo Array**	**47.59 51**	P		**P**	12 29 19.0	**+0.7**
ZAA0			IAmb		IAmb	12 29 19.2		
	comp=Z,3.9nm,1.3s							
KURK	**Kurchatov**	**48.07 58**	P		**P**	12 29 23.3	**+1.3**
KURK			IAmb		IAmb	12 29 25.9		
	comp=Z,2.6nm,0.8s							
Y52A	**Lilburn**	**50.05 266**	P		**P**	12 29 36.5	**-1.0**
KKAR	**Karatay Array**	**51.22 70**	P		**P**	12 29 47.5	**+1.2**
MKAR	**Makanchi Array**	**52.68 58**	P		**P**	12 29 58.2	**+1.1**
TORD	**Torodi Ar. Bea**	**53.10 157**	P		**P**	12 29 59.9	**-0.5**
	comp=Z,0.6nm,0.7s,baz=328,slow=6.9,SNR=4.3							
PD31	**Pinedale Array**	**53.25 293**	P		**P**	12 30 01.6	**0.0**
PD31			IAmb		IAmb	12 30 04.6		
	comp=Z,2.8nm,1.0s							
PDAR	**Pinedale Array**	**53.25 293**	P		**P**	12 30 03.4	**+1.9**
	comp=Z,1.3nm,0.8s,baz=60,slow=8.8,SNR=10							
PDAR	**Pinedale Array**	**53.25 293**	P		**P**	12 30 01.8	**+0.3**
KAN10	**Anthony SW Sta**	**53.29 280**	P		**P**	12 30 02.2	**+0.5**
GAR	**Garm**	**54.59 73**	P		**P**	12 30 12.0	**+0.7**
SONM	**Songino Array**	**59.61 41**	P		**P**	12 30 48.1	**+1.4**
	comp=Z,0.2nm,0.4s,baz=340,slow=11,SNR=3.6							
SONM	**Songino Array**	**59.61 41**	P		**P**	12 30 46.5	**-0.2**
TXAR	**Lajitas Array**	**62.35 280**	P		**P**	12 31 07.9	**+2.3**
	comp=Z,0.5nm,0.8s,baz=49,slow=5.7,SNR=4.4							
CMAR	**Chiang Mai Arr**	**84.08 59**	P		**P**	12 33 15.7	**+1.9**
	comp=Z,0.6nm,0.3s,baz=316,slow=5.0,SNR=4.3							

IDC 21 12:27:31.2±6.2, 20°.97S×173°.86W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/34, mbtmp4.1/4, Error ellipse: s-maj=256.0km s-min=59.2km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.30**	**264**	P	P	12 34 46.3	+1.0
	3.2nm,0.5s,baz=91,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**48.18**	**257**	P	P	12 36 11.6	-2.1
	1.1nm,0.7s,baz=96,slow=7.0,SNR=14						
WRA	**Warramunga Ar**	**48.37**	**262**	P	P	12 36 14.8	-0.4
	1.4nm,0.3s,baz=96,slow=8.4,SNR=48						
FITZ	**Fitzroy Crossi**	**56.80**	**262**	P	P	12 37 19.5	+1.9
	1.2nm,0.7s,baz=97,slow=8.1,SNR=2.2						
AKASG	**Malin Array Be**	**145.22**	**334**	PKPbc	PKPbc	12 47 09.3	-1.0
	0.3nm,0.2s,baz=50,slow=3.3,SNR=1.8						

IDC 21 12:30:52.6±469.0, 58°.08N×31°.19E, h0km, Error ellipse: s-maj=146.5km s-min=83.1km az=121.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**3.53**	**110**	*i*		12 53 10.0	
	baz=298,slow=268,SNR=0.5						
I37NO	**I37NO**	**12.34**	**339**	*i*		13 54 50.0	
	baz=149,slow=322,SNR=0.6						
I31KZ	**AKTYUBINSK INF**	**17.37**	**105**	*i*		14 10 10.0	
	baz=308,slow=321,SNR=1.7						

WEL 21 12:30:53.8±0.6, 38°S±4°×18°0W±°, h33km, M3.5/37, ML3.7/36, MLv3.5/37, Error ellipse: s-maj=0.0km s-min=0.0km az=23.9, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.28**	**265**	P	Pn	12 31 14.8	-0.4
WMGZ				S	Sn	12 31 32.0	+0.8
MXZ	**Matakaoa Point**	**1.37**	**276**	P	Pn	12 31 15.9	-0.6
MXZ				S	Sn	12 31 33.2	-0.3
PUZ	**Puketiti**	**1.44**	**255**	P	Pn	12 31 17.2	-0.4
PUZ				S	Sn	12 31 34.8	-0.5
CNGZ	**Carnagh Statio**	**1.62**	**241**	P	Pn	12 31 20.9	+0.9
TWGZ	**Tauwhareparae**	**1.68**	**253**	P	Pn	12 31 21.1	+0.2
TWGZ				S	Sn	12 31 41.8	+0.6
HAZ	**Te Kaha**	**1.77**	**268**	P	Pn	12 31 21.8	-0.3
HAZ				S	Sn	12 31 43.9	+0.4
TKGZ	**Te Karaka**	**1.86**	**246**	P	Pn	12 31 23.5	+0.2
TKGZ				S	Sn	12 31 46.5	+0.8
RUGZ	**Raukumara Rang**	**1.87**	**262**	P	Pn	12 31 23.1	-0.5
RIGZ	**Rimuhau**	**2.04**	**240**	P	Pn	12 31 26.1	+0.3
RIGZ				S	Sn	12 31 51.2	+1.2
MWZ	**Matawai**	**2.06**	**252**	P	Pn	12 31 25.7	-0.4
MWZ				S	Sn	12 31 50.9	+0.1
PRGZ	**Paritu Road**	**2.07**	**234**	P	Pn	12 31 26.6	+0.4
MHGZ	**Mahia Peninsul**	**2.19**	**228**	P	Pn	12 31 28.4	+0.5
MHGZ				S	Sn	12 31 54.9	+0.9
KNZ	**Kokohu**	**2.26**	**234**	P	Pn	12 31 28.6	-0.2
KNZ				S	Sn	12 31 56.4	+0.9
URZ	**Urewera**	**2.36**	**256**	P	Pn	12 31 30.7	+0.5
URZ				S	Sn	12 31 57.6	-0.4
SNGZ	**Shannon Statio**	**2.36**	**242**	P	Pn	12 31 30.6	+0.3
SNGZ				S	Sn	12 31 58.8	+0.7
WHRZ	**Whale Island**	**2.42**	**266**	P	Pn	12 31 32.2	+1.3
RTZ	**Ruatahuna**	**2.56**	**248**	P	Pn	12 31 33.5	+0.5
RTZ				S	Sn	12 32 03.9	+0.9
WHHZ	**Waihua**	**2.58**	**237**	P	Pn	12 31 33.7	+0.6
WHHZ				S	Sn	12 32 04.6	+1.3
RAHZ	**Arahi**	**2.60**	**242**	P	Pn	12 31 34.2	+0.7
EDRZ	**Edgecumbe**	**2.62**	**260**	P	Pn	12 31 34.1	+0.2
MUGZ	**Murupara**	**2.67**	**252**	P	Pn	12 31 34.5	0.0
MUGZ				S	Sn	12 32 04.9	-0.8
MTHZ	**Maungataniwha**	**2.75**	**245**	P	Pn	12 31 35.8	+0.3
MTHZ				S	Sn	12 32 08.5	+0.9
OPRZ	**Ohinepanea**	**2.75**	**266**	P	Pn	12 31 35.0	-0.5
ARHZ	**Aropaoanui**	**2.83**	**236**	P	Pn	12 31 37.3	+0.6
ARHZ				S	Sn	12 32 10.8	+1.2
NMHZ	**Naumai**	**2.88**	**240**	P	Pn	12 31 38.0	+0.6
PRRZ	**Plateau Road**	**2.97**	**254**	P	Pn	12 31 38.4	-0.2
TGRZ	**Tauranga**	**2.98**	**269**	P	Pn	12 31 38.4	-0.3
KARZ	**Kaharoa**	**3.00**	**263**	P	Pn	12 31 38.8	-0.2
CKHZ	**Cape Kidnapper**	**3.01**	**229**	P	Pn	12 31 38.9	-0.2
ALRZ	**Allen Road**	**3.02**	**253**	P	Pn	12 31 40.1	+0.8
HRRZ	**Handcock Road**	**3.03**	**256**	P	Pn	12 31 39.3	-0.1
MYRZ	**Mayor Island**	**3.04**	**277**	P	Pn	12 31 41.1	+1.6
HSRZ	**Hossack Road**	**3.04**	**258**	P	Pn	12 31 39.8	+0.3
BKZ	**Black Stump Fm**	**3.13**	**241**	P	Pn	12 31 40.9	+0.1
MCHZ	**McNeill Hill**	**3.13**	**235**	P	Pn	12 31 40.6	-0.1
KAHZ	**Kahuranaki**	**3.22**	**229**	P	Pn	12 31 42.1	+0.1
KRHZ	**Kereru**	**3.44**	**235**	P	Pn	12 31 44.4	-0.7
KUZ	**Kuaotunu**	**3.56**	**284**	P	Pn	12 31 45.8	-0.9
BHHZ	**Black Hill Sta**	**3.57**	**239**	P	Pn	12 31 46.6	-0.3
TOZ	**Tahuroa Road**	**3.58**	**268**	P	Pn	12 31 46.6	-0.3
MKAZ	**Moumakai**	**3.92**	**277**	P	Pn	12 31 51.3	-0.2
GRZ	**Great Barrier**	**3.93**	**290**	P	Pn	12 31 51.4	-0.4
TSZ	**Takapari Road**	**3.94**	**232**	P	Pn	12 31 50.8	-1.2
ETAZ	**East Tamaki Re**	**4.13**	**279**	P	Pn	12 31 54.5	+0.1
BFZ	**Birch Farm**	**4.17**	**224**	P	Pn	12 31 56.9	+1.9
MBAZ	**Motutapu North**	**4.19**	**281**	P	Pn	12 31 55.6	+0.2
PRWZ	**Pori Road**	**4.24**	**227**	P	Pn	12 31 55.5	-0.5
EPAZ	**Eden Park BICE**	**4.29**	**280**	P	Pn	12 31 57.3	+0.6
VRZ	**Vera Road**	**4.37**	**250**	P	Pn	12 31 59.0	+1.3
RVAZ	**Riverhead Bore**	**4.44**	**281**	P	Pn	12 31 59.2	+0.4
MRZ	**Mangatainoka R**	**4.54**	**228**	P	Pn	12 31 58.8	-1.3
WCZ	**Waipu Caves**	**4.88**	**290**	P	Pn	12 32 05.0	+0.2
OUZ	**Omahuta**	**5.74**	**294**	P	Pn	12 32 17.4	+0.7
CTZ	**Chatham Island**	**6.54**	**158**	P	Pn	12 32 29.8	+2.3
CTZ				S	Sn	12 33 37.7	-3.1

*IDC **21** 12:36:00.9±1.6, 2°.29N×127°.25E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.4/49, mbtmp3.5/6, MS3.9/1, Ms1 3.9/1, ms1mx3.2/26, Error ellipse: s-maj=108.6km s-min=20.0km az=68.0*

ISC 21 12:36:05.7±1.6, 2°.3N±0°.3×127°.5E±0°.6, h35km, n7, σ0§75/6, mb3.6/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.38**	**185**	P	**P**	**12 40 39.7**	**+0.1**
	0.4nm,0.5s,baz=27,slow=11,SNR=0.7						
WRA	**Warramunga Arr**	**23.14**	**163**	P	**P**	**12 41 09.7**	**+0.6**
	1.0nm,0.3s,baz=340,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.59**	**167**	P	**P**	**12 41 41.3**	**+0.4**
	0.3nm,0.4s,baz=343,slow=9.5,SNR=8.5						
STKA	**Stephens Creek**	**36.58**	**160**	P	**P**	**12 43 07.9**	**-0.5**
	0.6nm,0.3s,baz=322,slow=7.3,SNR=4.1						
KLR	**Kul'dur**	**46.87**	**4**	LR	LR	13 03 27.4	
	comp=Z,143nm,20.4s,baz=359,slow=35						
MKAR	**Makanchi Array**	**59.11**	**325**	P	**P**	**12 46 02.1**	**-0.6**
	0.1nm,0.3s,baz=121,slow=6.9,SNR=4.4						
KURBB	**Kurchatov Arra**	**63.30**	**327**	P	**P**	**12 46 31.7**	**+0.7**
	0.4nm,0.7s,baz=130,slow=5.5,SNR=2.8						

IDC 21 12:40:48.9±1.7, 0°.60S×127°.90E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/41, mbtmp3.5/4, Error ellipse: s-maj=131.8km s-min=23.3km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.23**	**162**	P	P	12 45 25.9	0.0
	0.4nm,0.5s,baz=342,slow=12,SNR=7.0						
ASAR	**Alice Springs**	**23.66**	**166**	P	P	12 46 02.2	0.0
	1.1nm,0.6s,baz=344,slow=11,SNR=28						
MKAR	**Makanchi Array**	**61.77**	**326**	P	P	12 51 09.5	0.0
	0.4nm,0.7s,baz=123,slow=8.2,SNR=4.1						
KURBB	**Kurchatov Arra**	**66.00**	**328**	P	P	12 51 37.2	0.0
	0.3nm,0.6s,baz=119,slow=5.8,SNR=2.4						

*ROM **21** 12:42:22.9±0.1, 44°.083N±0°.006×7°.626E±0°.005, h7km, ML1.9/9, Error ellipse: s-maj=0.8km s-min=0.2km az=204.0*
*STR **21** 12:42:24.0±0.7, 44°N±2°×±°, h3km, MLv2.0/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*LDG **21** 12:42:23.7±0.1, 44°.08N×7°.65E, h4km, Md2.7/1, Ml2.7/25, Error ellipse: s-maj=1.0km s-min=1.0km az=38.0*
*GEN **21** 12:42:23.8, 44°.08N×7°.63E, h2km±6km, Ml1.6*

ISC 21 12:42:23.2±0.8, 44°.08N±0°.02×7°.63E±0°.01, h13km±4km, n71, σ1§66/123, 3C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAOF	**Saorge**	**0.11**	**208**	Pg	**Pg**	**12 42 26.0**	**-0.2**
SAOF				Sg	**Sg**	**12 42 27.7**	**-0.7**
SAOF	**Saorge**	**0.11**	**208**	⇓P	**Pg**	**12 42 26.0**	**-0.2**
SAOF				S	**Sg**	**12 42 27.7**	**-0.7**
SAOF	**Saorge**	**0.11**	**208**	AML	AML		
	comp=E,2330μm,0.6s						
SAOF				AML	AML		
	comp=N,1980μm,0.6s						
MGRO	**Montegrosso**	**0.14**	**107**	P	**Pg**	**12 42 26.6**	**-0.2**
MGRO				S	**Sg**	**12 42 28.9**	**-0.3**
MGRO	**Montegrosso**	**0.14**	**107**	P	**Pg**	**12 42 26.6**	**-0.2**
MGRO				S	**Sg**	**12 42 29.0**	**-0.3**
MGRO				AML	AML		
	comp=E,865μm,0.8s						
MGRO				AML	AML		
	comp=N,996μm,0.8s						
MGRO				AML	AML		
	comp=E,864μm,0.8s						
TURF	**col de Turini**	**0.20**	**238**	Pg	**Pg**	**12 42 26.8**	**-0.9**
TURF				Sg	**Sg**	**12 42 29.9**	**-0.9**
ENR	**Entracque**	**0.21**	**314**	P	**Pg**	**12 42 28.0**	**+0.2**
ENR				S	**Sg**	**12 42 31.1**	**+0.1**
ENR	**Entracque**	**0.21**	**314**	P	**Pg**	**12 42 27.9**	**+0.2**
ENR				S	**Sg**	**12 42 31.1**	**+0.1**
ENR				AML	AML		
	comp=N,602μm,0.2s						
ENR				AML	AML		
	comp=E,432μm,0.4s						
GBOS	**Grotte di Boss**	**0.22**	**44**	P	**Pg**	**12 42 28.3**	**+0.3**
GBOS				S	**Sg**	**12 42 31.8**	**+0.5**
GBOS	**Grotte di Boss**	**0.22**	**44**	⇑P	**Pg**	**12 42 28.3**	**+0.3**
GBOS				S	**Sg**	**12 42 31.8**	**+0.5**
GBOS				AML	AML		
	comp=N,359μm,0.4s						
GBOS				AML	AML		
	comp=E,337μm,0.9s						
IMI	**Imperia**	**0.26**	**132**	P	**Pg**	**12 42 28.8**	**+0.1**
IMI				S	**Sg**	**12 42 32.8**	**+0.5**
IMI	**Imperia**	**0.26**	**132**	P	**Pg**	**12 42 28.7**	**+0.1**
IMI				S	**Sg**	**12 42 32.8**	**+0.5**
IMI				AML	AML		
	comp=E,86μm,0.4s						
IMI				AML	AML		
	comp=N,326μm,1.2s						
SBF	**Sospel**	**0.26**	**212**	*e*Pg	**Pg**	**12 42 29.1**	**+0.5**
SBF				*e*Sg	**Sg**	**12 42 32.9**	**+0.6**
	comp=N,133nm,0.2s						
STV	**Sant Anna di V**	**0.27**	**307**	P	**Pg**	**12 42 29.1**	**+0.3**
STV				S	**Sg**	**12 42 33.0**	**+0.3**
STV	**Sant Anna di V**	**0.27**	**307**	⇑P	**Pg**	**12 42 29.1**	**+0.3**
STV				S	**Sg**	**12 42 32.8**	**+0.1**
STV				AML	AML		
	comp=N,280μm,0.8s						
STV				AML	AML		
	comp=E,725μm,0.4s						
RORO	**Rocca Rossa**	**0.32**	**84**	P	**Pg**	**12 42 30.0**	**+0.4**
RORO				S	**Sg**	**12 42 34.4**	**+0.4**
RORO	**Rocca Rossa**	**0.32**	**84**	P	**Pg**	**12 42 29.7**	**+0.1**
RORO				S	**Sg**	**12 42 35.0**	**+1.0**
RORO				AML	AML		
	comp=N,245μm,1.0s						
RORO				AML	AML		
	comp=E,180μm,0.9s						
RORO				AML	AML		
	comp=N,244μm,1.0s						
ISO	**Isola**	**0.43**	**284**	Pg	**Pg**	**12 42 32.2**	**+0.5**
ISO				Sg	**Sg**	**12 42 37.6**	**+0.2**
FINB	**Finale Ligure**	**0.51**	**79**	P	**Pg**	**12 42 33.6**	**+0.4**
FINB				S	**Sb**	**12 42 41.1**	**-0.3**
FINB				AML	AML		
	comp=E,133μm,0.4s						
FINB				AML	AML		
	comp=N,220μm,0.4s						
PZZ	**Stroppo**	**0.56**	**319**	P	**Pb**	**12 42 35.0**	**0.0**
PZZ				S	**Sb**	**12 42 42.8**	**-0.2**
PZZ	**Stroppo**	**0.56**	**319**	P	**Pg**	**12 42 34.7**	**+0.5**
PZZ				S	**Sb**	**12 42 42.7**	**-0.3**
PZZ				AML	AML		
	comp=N,416μm,0.4s						
PZZ				AML	AML		
	comp=E,220μm,0.5s						
QLNO	**Quiliano**	**0.57**	**65**	P	**Pg**	**12 42 34.7**	**+0.4**
QLNO				S	**Sg**	**12 42 42.6**	**+0.7**
CALF	**Calern**	**0.61**	**237**	Pg	**Pb**	**12 42 35.8**	**+0.1**
SURF	**Saint Ours**	**0.71**	**305**	Pg	**Pb**	**12 42 37.5**	**0.0**
BHB	**Bricherasio**	**0.80**	**341**	P	**Pg**	**12 42 38.6**	**-0.2**
BHB				S	**Sg**	**12 42 49.2**	**0.0**
BHB	**Bricherasio**	**0.80**	**341**	P	**Pg**	**12 42 38.3**	**-0.4**
BHB				S	**Sg**	**12 42 49.3**	**+0.1**
BHB				AML	AML		
	comp=E,120μm,1.5s						
BHB				AML	AML		
	comp=N,139μm,0.8s						
PCP	**Piancastagn**	**0.80**	**55**	P	**Pg**	**12 42 38.9**	**+0.1**
PCP				S	**Sb**	**12 42 50.2**	**+0.4**
PCP				AML	AML		
	comp=N,82μm,0.6s						
PCP				AML	AML		
	comp=E,127μm,0.7s						
OGAG	**Argentiere**	**0.86**	**296**	Pg	**Pn**	**12 42 43.9**	**+2.8**
OGAG				Sg	**Sn**	**12 42 58.4**	**+4.7**
FRF	**La Foret Royal**	**0.88**	**234**	*e*Pg	**Pb**	**12 42 40.6**	**+0.3**
FRF	**La Foret Royal**	**0.88**	**234**	*e*P	**Pn**	**12 42 42.4**	**+1.1**
FRF				*e*Sg	**Sb**	**12 42 52.7**	**+0.7**
	comp=E,61nm,0.2s						
MBDF	**Montbardon**	**0.89**	**317**	*e*Pg	**Pb**	**12 42 40.8**	**+0.2**
MBDF				*e*Sg	**Sb**	**12 42 52.9**	**+0.5**
	comp=E,49nm,0.4s						
RRL	**Rocca Remolon**	**1.03**	**325**	P	**Pg**	**12 42 42.8**	**-0.3**
RRL				S	**Sg**	**12 42 56.8**	**+0.3**
RRL				AML	AML		
	comp=E,41μm,0.7s						
RRL				AML	AML		
	comp=N,62μm,0.9s						
RSP	**Reno Superiore**	**1.10**	**347**	P	**Pb**	**12 42 43.2**	**-0.9**
RSP				AML	AML		
	comp=N,34μm,0.5s						
RSP				AML	AML		
	comp=E,37μm,0.4s						
LMR	**La Mourre**	**1.10**	**228**	*e*Pn	**Pg**	**12 42 44.5**	**+0.1**
LMR				*e*Sn	**Sn**	**12 42 59.3**	**-0.1**
	comp=E,98nm,0.4s						
ARTF	**Artigues**	**1.41**	**250**	Pn	**Pg**	**12 42 50.3**	**+0.1**
ARTF				Sg	**Sg**	**12 43 09.2**	**+0.7**
BSTF	**la Bastide-des**	**1.44**	**263**	Pn	**Pg**	**12 42 51.1**	**+0.2**
BSTF				Sg	**Sg**	**12 43 11.3**	**+1.6**
SMRF	**Simiane la Rot**	**1.48**	**267**	*e*Pg	**Pg**	**12 42 51.9**	**+0.3**
SMRF				*e*Sg	**Sg**	**12 43 12.1**	**+1.2**
	comp=E,59nm,0.4s						
ORIF	**Oris-en-Rattie**	**1.50**	**304**	*e*Pn	**Pn**	**12 42 50.2**	**+0.2**
ORIF	**Oris-en-Rattie**	**1.50**	**304**	*e*Pg	**Pg**	**12 42 52.2**	**+0.2**
ORIF				*e*Sg	**Sg**	**12 43 12.4**	**+0.8**
	comp=E,22nm,0.4s						
ORIF	**Oris-en-Rattie**	**1.50**	**304**	P	**Pn**	**12 42 50.5**	**+0.5**
LPG	**La Plagne**	**1.55**	**337**	*e*Pn	**Pn**	**12 42 50.7**	**0.0**
LPG	**La Plagne**	**1.55**	**337**	*e*Pg	**Pg**	**12 42 52.9**	**0.0**
LPG				*e*Sg	**Sg**	**12 43 13.4**	**+0.4**
	comp=E,7.2nm,0.4s						
LPL	**La Plagne**	**1.57**	**336**	*e*Pn	**Pn**	**12 42 51.1**	**+0.1**
LPL	**La Plagne**	**1.57**	**336**	*e*Pg	**Pg**	**12 42 53.2**	**-0.1**
LPL				*e*Sn	**Sn**	**12 43 11.0**	**

mb4.7/45, Error ellipse: s-maj=14.7km s-min=8.3km az=219.0
*KLM **21** 12:43:49.0, 1.°91N×126.°63E, h50km, mb4.7*
*DJA **21** 12:43:50.5±0.2, 2.°N±2.°×12.°6E±.°, h43km±13km, M4.5/13, mb4.6/13, mB4.9/6, MLv4.6/13, Mw(mB)4.2/6*

ISC 21 12:43:49.9±0.9, **1.°92N**±0.°04×**126.°43E**±0.°05, **h46**km±8km, **n122**, σ1§**31**/133, **mb4.7**/50, **3D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.47**	**141**	P	**Pn**	**12 44 12.9**	**-1.1**
TNTI	**Ternate**	**1.47**	**141**	Pn	**Pn**	**12 44 12.9**	**-1.1**
TNTI				Sn	**Sn**	**12 44 32.2**	**+0.1**
SGSI	**Sangihe**	**1.97**	**333**	P	**Pn**	**12 44 20.2**	**-0.7**
SGSI				S	**Sn**	**12 44 44.6**	**+0.1**
KMSI	**Cibinong**	**2.79**	**241**	P	**Pn**	**12 44 32.5**	**+0.4**
KMSI				S	**Sn**	**12 45 06.5**	**+1.9**
GTOI	**Gorontalo**	**3.65**	**250**	P	**Pn**	**12 44 44.2**	**+0.3**
LUWI	**Luwuk**	**4.70**	**231**	P	**Pn**	**12 45 00.2**	**+1.9**
LUWI	**Luwuk**	**4.70**	**231**		**Pn**	**12 44 56.9**	**-1.4**
MRSI	**Marisa**	**4.71**	**252**	P	**Pn**	**12 44 59.8**	**+1.3**
NLAI	**Namlea**	**5.17**	**173**	P	**Pn**	**12 45 05.4**	**+0.6**
KCP	**Kidapawan**	**5.23**	**345**	‖*eP*	**Pn**	**12 45 07.9**	**+2.2**
KCP				*i* S	**Sn**	**12 46 05.0**	**+0.2**
APSI	**Ampana** 0.9nm2µm166nm,0.9s	**5.55**	**240**	P	**Pn**	**12 45 11.7**	**+1.7**
SIJI	**Sorong** 1.1nm,0.3s,baz=150,slow=22,SNR=2.2	**5.57**	**120**	Pn	**Pn**	**12 45 10.7**	**+0.4**
TOLI2	**Tolitoli**	**5.71**	**262**	Pn	**Pn**	**12 45 09.3**	**-2.9**
MPSI	**Mapaga** 0.1nm608nm30nm,0.6s	**6.72**	**257**	P	**Pn**	**12 45 27.3**	**+1.2**
FAKI	**Fak Fak**	**7.54**	**130**	Pn	**Pn**	**12 45 36.0**	**-1.4**
TTSI	**Tana Toraja** 701nm45nm,0.9s	**8.25**	**233**	P	**Pn**	**12 45 47.2**	**+0.1**
MYLDM	**Lahad Datu**	**8.55**	**292**	Pn	**Pn**	**12 45 50.5**	**-0.8**
SPSI	**Sidrap Palu** 487nm30nm,1.0s	**8.86**	**229**	P	**Pn**	**12 45 56.3**	**+0.8**
BNSI	**Bone** 31nm,0.6s	**8.91**	**225**	P	**Pn**	**12 45 56.0**	**-0.1**
KAPI	**Kappang** 1.9nm,0.3s,baz=83,slow=7.8,SNR=2.4	**9.59**	**224**	Pn	**Pn**	**12 46 03.5**	**-2.0**
KAPI				Sn	**Sn**	**12 47 50.0**	**-1.9**
KAPI	**Kappang** baz=331,slow=22,SNR=1.1	**9.59**	**224**	Pn	**Pn**	**12 46 02.0**	**-3.4**
BSSI	**Bau Bau, Buton** 382nm18nm,0.8s	**9.97**	**216**	P	**Pn**	**12 46 12.8**	**+2.2**
KKM	**Kota Kinabalu**	**10.98**	**292**	Pn	**Pn**	**12 46 23.1**	**-1.5**
EDFI	**Ende, Flores** 4.9nm,0.6s	**11.61**	**204**	P	**Pn**	**12 46 33.4**	**+0.3**
SOEI	**Soe**	**11.80**	**191**	Pn	**Pn**	**12 46 32.5**	**-3.3**
LQP	**Lukban**	**13.04**	**338**	‖*eP*	**Pn**	**12 46 56.0**	**+3.1**
SBUM	**Sibu**	**14.21**	**272**	Pn	**Pn**	**12 47 10.2**	**+1.6**
SBUM	**Sibu**	**14.21**	**272**	P	**P**	**12 47 17.0**	**+2.1**
JAY	**Jayapura** 0.6nm,0.3s,baz=266,slow=16,SNR=1.7	**14.93**	**107**	Pn	**Pn**	**12 47 18.6**	**+0.5**
MTN	**Manton Dam**	**15.39**	**162**		**Pn**	**12 47 22.2**	**-2.0**
KNRA	**Kununurra**	**17.64**	**173**		**Pn**	**12 47 51.5**	**-0.8**
FITZ	**Fitzroy Crossi** 1.0nm,0.3s,baz=11,slow=6.8,SNR=34	**19.91**	**182**	P	**P**	**12 48 16.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**19.91**	**182**		**P**	**12 48 16.5**	**-1.3**
TWG	**Pinlang** comp=Z,63nm,1.5s	**21.42**	**346**	P	**P**	**12 48 31.3**	**-2.8**
TWG				IAmb	IAmb	12 48 52.5	
YULB	**Yu-li** comp=Z,41nm,1.4s	**21.92**	**347**	P	**P**	**12 48 37.2**	**-2.3**
YULB				IAmb	IAmb	12 49 00.7	
TPUB	**Ta-pu** comp=Z,68nm,1.3s	**21.99**	**346**	P	**P**	**12 48 39.2**	**-1.0**
TPUB				IAmb	IAmb	12 48 45.5	
SSLB	**Suanglung**	**22.38**	**347**	P	**P**	**12 48 42.7**	**-1.7**
MYKOM	**Kota Tinggi**	**22.57**	**270**	P	**P**	**12 48 44.3**	**-2.3**
MYKOM	**Kota Tinggi**	**22.57**	**270**	P	**P**	**12 48 47.0**	**+0.4**
WB0	**Warramunga Arr** comp=Z,42nm,1.0s	**22.93**	**160**	P	**P**	**12 48 48.3**	**-1.9**
WB0				IAmb	IAmb	12 48 52.6	
WRAB	**Tennant Creek** comp=Z,30nm,0.9s	**23.07**	**161**	P	**P**	**12 48 50.4**	**-1.2**
WRAB				IAmb	IAmb	12 48 56.6	
WRA	**Warramunga Arr** comp=Z,13nm,0.4s,baz=337,slow=11,SNR=114	**23.07**	**161**	P	**P**	**12 48 50.4**	**-1.3**
WRA				S	**S**	**12 53 00.7**	**+1.3**
WRA	**Warramunga Arr** comp=Z,2.0nm,0.9s,baz=339,slow=18,SNR=6.5	**23.07**	**161**	P	**P**	**12 48 49.3**	**-2.4**
WB2	**Warramunga Arr** comp=Z,39nm,0.9s	**23.07**	**161**	P	**P**	**12 48 49.9**	**-1.8**
WB2				IAmb	IAmb	12 48 56.6	
WR0	**Warramunga Arr** comp=Z,40nm,1.4s	**23.15**	**160**	P	**P**	**12 48 51.3**	**-1.2**
WR0				IAmb	IAmb	12 48 56.2	
PSA00	**Pilbara Seismi** comp=Z,40nm,1.4s	**24.22**	**195**	P	**P**	**12 49 01.8**	**-0.7**
PSA00				IAmb	IAmb	12 49 05.5	
PSA00	**Pilbara Seismi** comp=Z,6.6nm,0.7s	**24.22**	**195**	P	**P**	**12 49 01.5**	**-1.0**
PSA00				IAmb	IAmb	12 49 06.5	
AS31	**Alice Springs**	**26.45**	**164**	P	**P**	**12 49 22.6**	**-0.1**
ASAR	**Alice Springs** comp=Z,4.1nm,0.5s,baz=344,slow=7.8,SNR=173	**26.45**	**164**	P	**P**	**12 49 22.4**	**-0.4**
ASAR				PcP	**PcP**	**12 52 48.2**	**+1.0**
ASAR	comp=Z,0.6nm,0.4s,baz=357,slow=2.2,SNR=4.1			S	**S**	**12 53 55.8**	**+2.3**
ASAR	comp=Z,0.7nm,0.9s,baz=348,slow=18,SNR=3.8 **Alice Springs**	**26.45**	**164**	P	**P**	**12 49 22.7**	**-0.1**
CTA	**Charters Tower** comp=Z,2.6nm,0.9s,baz=234,slow=7.2,SNR=2.8	**29.26**	**139**	P	**P**	**12 49 49.0**	**+1.1**
NJ2	**Nanjing**	**30.81**	**347**	*eP*	**P**	**12 50 00.9**	**-0.5**
NJ2	comp=Z,10.0nm,0.5s			pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,1.7nm,0.3s,baz=120,slow=7.7,SNR=6.4	**31.57**	**303**	P	**P**	**12 50 08.0**	**-0.4**
CMAR	comp=Z,0.7nm,0.4s,baz=202,slow=1.0,SNR=5.3			PcP	**PcP**	**12 53 00.2**	**0.0**
MORW	**Morawa**	**32.38**	**197**	P	**P**	**12 50 13.5**	**-1.8**
ENH	**Enshi**	**32.46**	**332**	P	**P**	**12 50 15.4**	**-0.7**
ENH	comp=Z,8.0nm,0.6s			IAmb	IAmb	12 50 15.8	
KMI	**Kunming** comp=Z,14nm,0.5s	**32.47**	**317**	‖*eP*	**P**	**12 50 15.4**	**-1.0**
KMI				pmax	pmax		
KMI	comp=Z,84nm,4.4s			pmax	pmax		
KMI	comp=Z,290nm,23.1s			LR	LR		
KMI	comp=Z,350nm,23.7s			LR	LR		
FORT	**Forrest**	**32.55**	**177**	P	**P**	**12 50 16.2**	**-0.5**
JWT	**Wachi**	**34.23**	**13**	P	**P**	**12 50 32.9**	**+1.6**
JWT	comp=Z,23nm,1.3s			IAmb	IAmb	12 50 33.5	
INU	**Inuyama**	**34.69**	**15**	P	**P**	**12 50 36.4**	**+1.2**
INU	comp=Z,10nm,0.9s			IAmb	IAmb	12 50 36.8	
JGF	**Kuroka**	**35.01**	**16**	P	**P**	**12 50 38.7**	**+0.5**
JGF	comp=Z,19nm,1.5s			IAmb	IAmb	12 50 45.4	
KSRS	**Korea Array** comp=Z,2.4nm,0.7s,baz=181,slow=9.7,SNR=11	**35.39**	**2**	P	**P**	**12 50 41.8**	**+0.5**
BBOO	**Buckleboo**	**35.72**	**166**	P	**P**	**12 50 43.6**	**-0.7**
NWAO	**Narrogin (SRO)**	**35.73**	**193**	P	**P**	**12 50 43.4**	**-0.9**
XAN	**Xi'an**	**35.90**	**335**	P	**P**	**12 50 44.1**	**-1.8**
XAN				pP	sP	12 50 59.0	-4.1
XAN	comp=Z,9.0nm,1.0s			pmax	pmax		
MAT	**Matsushiro**	**36.13**	**16**	P	**P**	**12 50 44.3**	**-3.4**
MJAR	**Matsushiro Arr** comp=Z,2.1nm,0.6s,baz=188,slow=9.5,SNR=7.3	**36.13**	**16**	P	**P**	**12 50 47.6**	**-0.1**
MJAR	**Matsushiro Arr**	**36.13**	**16**	P	**P**	**12 50 45.8**	**-1.9**
STKA	**Stephens Creek** comp=Z,3.6nm,0.5s,baz=345,slow=6.4,SNR=13	**36.56**	**158**	P	**P**	**12 50 51.5**	**+0.1**
STKA	**Stephens Creek**	**36.56**	**158**	P	**P**	**12 50 51.5**	**+0.1**
JMM	**Marumori**	**38.13**	**19**	P	**P**	**12 51 05.9**	**+1.3**
LZH	**Lanzhou**	**39.92**	**331**	*eP*	**P**	**12 51 19.8**	**0.0**
LZH				pP	pP	12 51 29.5	-2.4
LZH				*e*PP	**PnPn**	**12 52 57.0**	**+1.1**
LZH	comp=Z,24nm,1.3s			pmax	pmax		
LZH	comp=Z,100nm,5.6s			pmax	pmax		
LZH	comp=Z,370nm,13.7s			LR	LR		
LZH	comp=Z,380nm,14.0s			LR	LR		
LZH				LR	LR		
ARMA	**Armidale** comp=Z,480nm,16.5s	**40.14**	**145**	P	**P**	**12 51 22.7**	**+1.0**
HHC	**Hu-ho-hao-te**	**41.02**	**343**	*eP*	**P**	**12 51 28.5**	**-0.3**
HHC	comp=Z,25nm,1.1s			pmax	pmax		
HHC	comp=Z,56nm,5.6s			pmax	pmax		
USRK	**Ussuriysk Ar.** comp=Z,3.4nm,0.8s,baz=188,slow=5.6,SNR=4.4	**42.39**	**6**	P	**P**	**12 51 40.7**	**+0.9**
USRK	**Ussuriysk Ar.**	**42.39**	**6**	P	**P**	**12 51 39.2**	**-0.5**
H11S3	**WAKE ISLAND Hy** baz=252,slow=74,SNR=14	**42.75**	**65**	T	T	13 37 39.0	
H11S2	**WAKE ISLAND Hy** baz=252,slow=74,SNR=12	**42.76**	**65**	T	T	13 37 38.8	
H11S1	**WAKE ISLAND Hy** baz=252,slow=74,SNR=7.4	**42.76**	**65**	T	T	13 37 32.1	
LSA	**Lhasa** comp=Z,6.6nm,0.5s	**43.43**	**313**	P	**P**	**12 51 48.5**	**-0.5**
LSA				IAmb	IAmb	12 51 49.8	
GTA	**Gaotai**	**44.50**	**330**	*eP*	**P**	**12 51 56.3**	**-0.8**
GTA				pP	pP	12 52 06.1	-3.2
GTA				sP	sP	12 52 09.3	-5.2
GTA				PcP	**PP**	**12 53 41.8**	**+0.2**
GTA	comp=Z,3.0nm,0.7s			pmax	pmax		
ULN	**Ulaanbaatar**	**48.74**	**343**	P	**P**	**12 52 29.6**	**-0.5**
ULN	comp=Z,6.7nm,1.1s			IAmb	IAmb	12 52 33.8	
ULN				PcP	**PcP**	**12 53 56.2**	**+1.5**
SONM	**Songino Array** comp=Z,2.3nm,0.9s,baz=164,slow=9.2,SNR=9.3	**48.91**	**342**	P	**P**	**12 52 31.9**	**+0.5**
SONM				PcP	**PcP**	**12 53 56.6**	**+1.3**
SONM	**Songino Array** comp=Z,3.3nm,0.9s,baz=164,slow=4.1,SNR=7.2	**48.91**	**342**	P	**P**	**12 52 31.3**	**-0.2**
SONM				PcP	**PcP**	**12 53 56.4**	**+1.2**
WMQ	**Urumqi**	**54.04**	**326**	*eP*	**P**	**12 53 10.3**	**+0.5**
PETK	**Petropavlovsk-** comp=Z,6.7nm,0.9s,baz=176,slow=4.0,SNR=15	**57.21**	**22**	P	**P**	**12 53 34.0**	**+1.7**
PETK	**Petropavlovsk-**	**57.21**	**22**	P	**P**	**12 53 31.3**	**-1.0**
MK31	**Makanchi Array** comp=Z,4.1nm,0.5s	**58.87**	**326**	P	**P**	**12 53 42.7**	**-1.4**
MK31				IAmb	IAmb	12 53 45.2	
MKAR	**Makanchi Array** comp=Z,4.3nm,0.4s,baz=120,slow=7.8,SNR=82	**58.87**	**326**	P	**P**	**12 53 44.0**	**-0.1**
MKAR	**Makanchi Array**	**58.87**	**326**	P	**P**	**12 53 42.5**	**-1.6**
MAKZ	**Makanchi**	**59.06**	**326**	P	**P**	**12 53 44.9**	**-0.5**
BKZ	**Black Stump Fm**	**61.45**	**137**	P	**P**	**12 54 02.7**	**+0.8**
ZAA0	**Zalesovo Array**	**62.06**	**334**	P	**P**	**12 54 04.4**	**-1.3**
ZAA0	comp=Z,6.7nm,1.5s			IAmb	IAmb	12 54 31.1	
ZALV	**Zalesovo Beam** comp=Z,1.0nm,0.4s,baz=116,slow=6.9,SNR=6.2	**62.06**	**334**	P	**P**	**12 54 04.7**	**-1.0**
KURBB	**Kurchatov Arra** comp=Z,5.8nm,0.5s,baz=130,slow=6.5,SNR=69	**63.10**	**328**	P	**P**	**12 54 12.2**	**-0.5**
KURK	**Kurchatov**	**63.10**	**328**	P	**P**	**12 54 12.3**	**-0.4**
KK31	**Karatay Array**	**64.35**	**318**	P	**P**	**12 54 20.8**	**-0.3**
KK31	comp=Z,6.7nm,1.1s			IAmb	IAmb	12 54 24.7	
KKAR	**Karatay Array**	**64.35**	**318**	P	**P**	**12 54 20.6**	**-0.5**
KKAR	comp=Z,6.7nm,1.1s			IAmb	IAmb	12 54 24.7	
KKAR	**Karatay Array**	**64.35**	**318**	P	**P**	**12 54 20.0**	**-1.2**
BVAR	**Borovoye Array** comp=Z,1.4nm,0.4s,baz=128,slow=11,SNR=9.9	**68.67**	**327**	P	**P**	**12 54 48.7**	**+0.2**
BRVK	**Borovoye**	**68.74**	**327**	P	**P**	**12 54 48.5**	**-0.4**
BRVK	comp=Z,4.5nm,0.8s			IAmb	IAmb	12 54 57.6	
TIXI	**Tiksi** comp=Z,6.7nm,1.1s	**69.64**	**1**	P	**P**	**12 54 54.6**	**+0.5**
TIXI				IAmb	IAmb	12 54 55.1	
GEYT	**Alibeck** comp=Z,2.8nm,0.8s,baz=74,slow=6.2,SNR=2.6	**71.80**	**309**	P	**P**	**12 55 07.5**	**-0.4**
NRIK	**Noril'sk** comp=Z,3.9nm,0.5s,baz=120,slow=5.7,SNR=9.1	**72.11**	**346**	P	**P**	**12 55 09.7**	**+0.5**
SOCY	**Socotra**	**72.44**	**282**	P	**P**	**12 55 11.1**	**-1.2**
ABKAR	**Akbulak array**	**73.36**	**321**	P	**P**	**12 55 16.2**	**-0.7**
AKTO	**Aktyubinsk** comp=Z,2.7nm,0.4s,baz=115,slow=7.0,SNR=11	**74.89**	**322**	P	**P**	**12 55 25.5**	**-0.4**
ARU	**Arti** comp=Z,1.0nm,0.3s,baz=126,slow=6.6,SNR=6.4	**76.30**	**328**	P	**P**	**12 55 33.4**	**-0.4**
ARU	**Arti** comp=Z,8.8nm,0.9s	**76.30**	**328**	P	**P**	**12 55 33.3**	**-0.4**
ARU				IAmb	IAmb	12 55 41.4	
VNDA	**Vanda** comp=Z,1.6nm,0.5s,baz=316,slow=7.3,SNR=24	**81.68**	**173**	P	**P**	**12 56 03.3**	**+0.5**
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**12 56 03.9**	**+1.0**
IMAR	**Indian Mountai**	**84.11**	**24**	P	**P**	**12 56 17.5**	**+1.9**
KLMR	**Klimovskoe**	**86.83**	**331**	*eP*	**P**	**12 56 28.3**	**-1.0**
KLMR	comp=Z,19nm,1.3s			AMP		12 56 31.7	
ILAR	**Eielson Array** comp=Z,0.3nm,0.6s,baz=262,slow=6.3,SNR=4.1	**86.85**	**25**	P	**P**	**12 56 29.4**	**0.0**
BMAR	**Burnt Mountain**	**87.85**	**23**	P	**P**	**12 56 35.9**	**+1.7**
KMBO	**Kilima Mbogo** comp=Z,1.3nm,0.3s,baz=69,slow=9.2,SNR=8.6	**89.22**	**269**	P	**P**	**12 56 43.4**	**+1.3**
KMBO	**Kilima Mbogo**	**89.22**	**269**	P	**P**	**12 56 42.6**	**+0.5**
BRTR	**Keskin Array B** comp=Z,1.4nm,0.8s,baz=63,slow=2.7,SNR=3.0	**90.34**	**310**	P	**P**	**12 56 47.8**	**-1.6**
ARCES	**ARCESS Array B** comp=Z,2.4nm,0.7s,baz=90,slow=6.1,SNR=8.3	**92.03**	**340**	P	**P**	**12 56 54.0**	**+0.3**
FINES	**FINESS Array B** comp=Z,4.3nm,1.0s,baz=46,slow=5.5,SNR=6.0	**93.28**	**332**	P	**P**	**12 56 59.0**	**-0.5**
BURAR	**Bucovina Array**	**96.14**	**318**	P	**P**	**12 57 12.9**	**-0.2**
TORD	**Torodi Ar. Bea** comp=Z,2.4nm,0.7s,baz=52,slow=2.2,SNR=17	**123.18**	**287**	PKP	**PKiKP**	**13 02 43.3**	**+0.4**
TORD	**Torodi Ar. Bea**	**123.18**	**287**		**PKiKP**	**13 02 42.6**	**-0.3**

*IDC **21** 12:46:21.2±1.8, 1.°76N×125.°78E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.6/43, mbtmp3.8/4, Error ellipse: s-maj=197.0km s-min=23.4km az=65.0*
*NEIC **21** 12:46:23.8±2.3, 1.°9N±0.°1×126.°26E±0.°05, h35km±2km, mb4.1/8, Error ellipse: s-maj=19.9km s-min=7.5km az=16.0*

ISC 21 12:46:24.3±1.0, **1.°8N**±0.°1×**126.°19E**±0.°09, **h35**km, **n18**, σ1§**44**/19, **mb4.0**/9, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.56**	**131**	Pn	**Pn**	**12 46 49.6**	**0.0**
TNTI				Sn	**Sn**	**12 47 07.4**	**-1.2**
LUWI	**Luwuk**	**4.44**	**230**	Pn	**Pn**	**12 47 29.8**	**+0.5**
SAUI	**Saumlaki**	**10.98**	**152**	Pn	**Pn**	**12 48 59.9**	**+0.9**
SOEI	**Soe**	**11.65**	**189**	Pn	**Pn**	**12 49 07.1**	**-1.2**
WB0	**Warramunga Arr**	**22.90**	**160**	P	**P**	**12 51 26.9**	**+1.6**
WB0	comp=Z,5.6nm,1.1s			IAmb	IAmb	12 51 33.6	
COEN	**Coen**	**22.99**	**133**	P	**P**	**12 51 25.5**	**-0.7**
COEN	comp=Z,12nm,1.5s			IAmb	IAmb	12 51 34.7	
WRAB	**Tennant Creek**	**23.04**	**160**	P	**P**	**12 51 26.3**	**-0.4**
WRAB	comp=Z,4.4nm,0.5s			IAmb	IAmb	12 51 32.6	
WRA	**Warramunga Arr** comp=Z,1.6nm,0.5s,baz=337,slow=11,SNR=2.8	**23.05**	**160**	P	**P**	**12 51 27.6**	**+0.9**
WRA	**Warramunga Arr**	**23.05**	**160**	P	**P**	**12 51 28.0**	**+1.2**
WB2	**Warramunga Arr**	**23.05**	**160**	P	**P**	**12 51 27.3**	**+0.5**
WB2	comp=Z,4.1nm,0.8s			IAmb	IAmb	12 51 29.5	
WC3	**Warramunga Arr**	**23.07**	**160**	P	**P**	**12 51 26.6**	**-0.4**
WC3	comp=Z,5.0nm,0.8s			IAmb	IAmb	12 51 31.4	
AS31	**Alice Springs**	**26.41**	**164**	P	**P**	**12 51 59.1**	**+1.3**
ASAR	**Alice Springs** comp=Z,0.7nm,0.7s,baz=343,slow=11,SNR=3.5	**26.41**	**164**	P	**P**	**12 52 02.1**	**+4.2**
ASAR	**Alice Springs**	**26.41**	**164**	P	**P**	**12 51 58.0**	**+0.2**
CMAR	**Chiang Mai Arr**	**31.43**	**304**	P	**P**	**12 52 41.3**	**-1.3**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.3s,baz=119,slow=7.9,SNR=4.9	**58.83**	**326**	P	**P**	**12 56 20.5**	**+1.0**
KURBB	**Kurchatov Arra** comp=Z,0.5nm,0.5s,baz=123,slow=7.3,SNR=5.3	**63.07**	**328**	P	**P**	**12 56 48.8**	**+0.8**
KURK	**Kurchatov**	**63.07**	**328**	P	**P**	**12 56 47.3**	**-0.8**

*IDC **21** 12:51:21.2±0.5, 4.°06N×126.°71E, h0km, mb4.5/25, mb1 4.5/26, mb1mx4.4/48, mbtmp4.5/26, ML4.5/1, MS3.8/1, Ms1 3.8/1, ms1mx3.0/46, Error ellipse: s-maj=19.4km s-min=10.1km az=81.0*
*BJI **21** 12:51:23.1±0.0, 3.°68N×126.°89E, h38km, mB5.0/16, mb4.6/32, Ms4.5/7, Ms7 4.4/7*
*NEIC **21** 12:51:26.8±2.4, 4.°01N±0.°07×126.°76E±0.°06, h41km±6km, mb4.8/54, Error ellipse: s-maj=10.8km s-min=8.1km az=212.0*

*DJA **21** 12:51:27.0±0.4, 4.°N±4.°×12.°7E±.°, h10km, M4.5/28, mb4.9/28, mB4.9/13, MLv4.8/14, Mw(mB)4.2/13*
*KLM **21** 12:51:30.0, 4.°34N×126.°83E, h61km, mb4.8*

ISC 21 12:51:26.5±0.3, **4.°01N**±0.°04×**126.°79E**±0.°05, **h36**km, **n187**, σ1§**58**/188, **mb4.7**/51, **MS4.4**/3, **1C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	**Sangihe**	**1.30**	**256**	P	**Pn**	**12 51 48.9**	**+0.8**
SGSI				S	**Sn**	**12 52 06.5**	**+2.3**
DAV	**Davao City (W)** comp=Z,1µm,20.5s,baz=132,slow=47	**3.27**	**338**	LR	LR	12 53 50.3	
TNTI	**Ternate**	**3.27**	**170**	P	**Pn**	**12 52 17.3**	**+2.1**
TNTI	**Ternate**	**3.27**	**170**	Pn	**Pn**	**12 52 16.4**	**+1.2**
KCP	**Kidapawan**	**3.42**	**330**	‖*eP*	**Pn**	12 52 23.3	+5.9
KCP				*i* S	**Sn**	**12 53 02.6**	**+5.8**
KMSI	**Cibinong**	**4.42**	**219**	P	**Pn**	**12 52 34.2**	**+3.2**
CGP	**Cagayan de Oro**	**4.88**	**335**	‖*eP*	Pn	12 52 46.1	+8.8
CGP				*e*S	Sn	12 53 50.2	+18
GTOI	**Gorontalo** 0.5nm860nm75nm,0.6s	**5.05**	**228**	P	**Pn**	**12 52 42.2**	**+2.5**
MRSI	**Marisa** 0.8nm2µm156nm,0.5s	**5.98**	**234**	P	**Pn**	**12 52 55.8**	**+3.3**
LUWI	**Luwuk** 1.3nm6µm304nm,0.7s	**6.43**	**219**	P	Pn	12 53 04.8	+6.2
LUWI	**Luwuk**	**6.43**	**219**	Pn	**Pn**	**12 53 00.1**	**+1.4**
LUWI				Sn	**Sn**	**12 54 09.2**	**-1.6**
SIJI	**Sorong** 9.7nm,0.3s,baz=332,slow=17,SNR=26	**6.60**	**137**	Pn	**Pn**	**12 53 02.9**	**+1.9**
SIJI	7.7nm,0.3s,baz=39,slow=23,SNR=8.0			Sn	**Sn**	**12 54 15.6**	**+0.6**
TOLI2	**Tolitoli**	**6.66**	**245**	Pn	**Pn**	**12 53 02.2**	**+0.4**
TOLI2				Sn	**Sn**	**12 54 15.2**	**-1.3**
APSI	**Ampana** 0.6nm2µm174nm,1.0s	**7.09**	**227**	P	Pn	12 53 14.4	+6.6
NLAI	**Namlea**	**7.21**	**178**	P	**Pn**	**12 53 10.6**	**+1.2**
MSAI	**Masohi** 0.1nm530nm19nm,0.7s	**7.62**	**164**	P	Pn	12 53 20.6	+5.7
MPSI	**Mapaga** 0.2nm554nm37nm,0.8s	**7.79**	**242**	P	Pn	12 53 22.6	+5.2
MYLDM	**Lahad Datu**	**8.34**	**278**	Pn	**Pn**	**12 53 26.5**	**+1.6**
MYLDM				Sn	**Sn**	**12 54 58.6**	**+0.6**
FAKI	**Fak Fak** 37nm,0.8s	**8.79**	**142**	P	**Pn**	**12 53 33.3**	**+2.3**
FAKI	**Fak Fak**	**8.79**	**142**	Pn	**Pn**	**12 53 32.4**	**+1.4**
FAKI				Sn	**Sn**	**12 55 08.2**	**-0.7**
TTSI	**Tana Toraja** 36nm,0.7s	**9.88**	**225**	P	**Pn**	**12 53 49.3**	**+3.3**
SPSI	**Sidrap Palu** 20nm,0.7s	**10.58**	**222**	P	**Pn**	**12 53 59.5**	**+3.9**
KKM	**Kota Kinabalu**	**10.72**	**281**	Pn	**Pn**	**12 53 55.0**	**-2.8**
LQP	**Lukban**	**11.29**	**333**	‖*eP*	Pn	12 54 15.5	+10
BSSI	**Bau Bau, Buton** 14nm,0.6s	**11.89**	**212**	P	**Pn**	**12 54 16.4**	**+2.9**
KBKI	**Kotabaru** 11nm,0.9s	**12.86**	**236**	P	**Pn**	**12 54 30.2**	**+3.4**
MTKI	**Muara Teweh, K**	**12.86**	**248**	P	**Pn**	**12 54 29.9**	**+3.0**
EDFI	**Ende, Flores** 293nm26nm,0.9s	**13.66**	**202**	P	**Pn**	**12 54 39.6**	**+1.8**
SOEI	**Soe**	**13.90**	**190**	P	**Pn**	**12 54 45.3**	**+4.1**
BBKI	**Banjar Baru** 33nm,0.8s	**14.06**	**238**	P	**Pn**	**12 54 47.1**	**+3.9**
BATI	**Baumata** 9.5nm,0.3s,baz=264,slow=0.7,SNR=7.4	**14.46**	**192**	Pn	**Pn**	**12 54 50.5**	**+1.7**
BATI	**Baumata** 567nm71nm,0.7s	**14.46**	**192**	P	**Pn**	**12 54 52.4**	**+3.7**
SBUM	**Sibu**	**14.63**	**264**		**P**	**12 54 54.8**	**-2.0**
SBUM	**Sibu**	**14.63**	**264**	P	**P**	**12 54 56.0**	**-0.8**
GENI	**Genyem** 93nm,0.9s	**14.89**	**116**	P	**P**	**12 54 57.2**	**-2.6**
JAY	**Jayapura** 0.6nm,0.3s,baz=275,slow=19,SNR=2.7	**15.34**	**115**	Pn	**P**	**12 55 03.4**	**-1.4**
WBSI	**Waikabubak, Su** 1µm145nm,0.8s	**15.44**	**208**	P	**P**	**12 55 06.1**	**+0.3**
TWSI	**Taliwang, Sumb** 53nm,0.7s	**16.06**	**218**	P	**Pn**	**12 55 11.7**	**+2.0**
PBKI	**Pangkalan Bun** 148nm,0.6s	**16.52**	**246**	P	**P**	**12 55 19.2**	**+1.4**
KSM	**Kuching**	**16.65**	**262**	P	**Pn**	**12 55 17.5**	**+0.3**
KSM	**Kuching**	**16.65**	**262**	P	**P**	**12 55 22.0**	**+2.7**
SRBI	**Singaraja** 51nm,0.7s	**16.67**	**224**	P	**P**	**12 55 21.3**	**+1.9**
KMMI	**Kalianget** 40nm,1.2s	**16.87**	**229**	P	**P**	**12 55 23.2**	**+1.5**
MTN	**Manton Dam** baz=17,SNR=36	**17.29**	**166**	P	**Pn**	**12 55 23.2**	**-2.0**
MTN	baz=17			S	**S**	**12 58 43.2**	**-1.4**
MTN	**Manton Dam**	**17.29**	**166**		**Pn**	**12 55 23.5**	**-1.7**
MTN	comp=Z,71nm,0.6s			IAmb	IAmb	12 55 27.8	
KDU	**Kakadu** baz=18,SNR=25	**17.52**	**161**	P	**Pn**	**12 55 25.9**	**-2.2**
KDU	baz=18			S	**S**	**12 58 49.4**	**+0.1**
JAGI	**Jajag, Banyuwa**	**17.68**	**225**	P	**P**	**12 55 31.6**	**+0.9**
JAGI	comp=Z,64nm,1.2s			IAmb	IAmb	12 55 37.2	
KNRA	**Kununurra** baz=20,SNR=94	**19.66**	**174**	P	**P**	**12 55 53.1**	**+0.7**
KNRA	**Kununurra**	**19.66**	**174**	P	**P**	**12 55 52.6**	**+0.2**
YULB	**Yu-li**	**19.98**	**345**	P	**P**	**12 55 54.7**	**-1.2**
TPUB	**

GSI				IAmb	IAmb	12 57 25.2		
	comp=Z,21nm,0.8s							
CTA	**Charters Tower**	**30.65**	**142**	P	**P**	**12 57 38.4**	**+0.7**	
	comp=Z,3.1nm,0.6s,baz=314,slow=7.9,SNR=3.0							
CM36	**Chiang Mai Arr**	**30.68**	**300**	P	**P**	**12 57 39.0**	**+1.0**	
CM35	**Chiang Mai Arr**	**30.69**	**301**	P	**P**	**12 57 38.0**	**-0.1**	
CM04	**Chiang Mai Arr**	**30.73**	**300**	P	**P**	**12 57 40.0**	**+1.6**	
CM09	**Chiang Mai Arr**	**30.73**	**300**	P	**P**	**12 57 40.8**	**+2.3**	
CM01	**Chiang Mai Arr**	**30.75**	**300**	P	P	12 57 45.0	+6.4	
CM05	**Chiang Mai Arr**	**30.76**	**300**	P	**P**	**12 57 42.1**	**+3.4**	
CM02	**Chiang Mai Arr**	**30.77**	**300**	P	**P**	**12 57 41.2**	**+2.5**	
CMAR	**Chiang Mai Arr**	**30.78**	**300**	P	**P**	**12 57 39.0**	**+0.1**	
	comp=Z,1.9nm,0.5s,baz=118,slow=7.4,SNR=14							
CMAR	**Chiang Mai Arr**	**30.78**	**300**	P	**P**	**12 57 38.7**	**-0.2**	
CM15	**Chiang Mai Arr**	**30.80**	**300**	P	**P**	**12 57 40.0**	**+1.0**	
CM13	**Chiang Mai Arr**	**30.80**	**300**	P	**P**	**12 57 41.0**	**+2.0**	
ENH	**Enshi**	**30.82**	**330**	P	**P**	**12 57 38.5**	**-0.6**	
ENH				IAmb	IAmb	12 57 59.3		
	comp=Z,15nm,1.2s							
CMMT	**Chiang Mai**	**30.93**	**301**	P	**P**	**12 57 41.5**	**+1.4**	
CM33	**Chiang Mai Arr**	**30.93**	**301**	P	**P**	**12 57 41.0**	**+0.8**	
CHTO	**Chiang Mai**	**30.93**	**301**	P	**P**	**12 57 40.6**	**+0.4**	
MEEK	**Meekatharra**	**31.48**	**194**	P	**P**	**12 57 45.2**	**+0.2**	
	baz=32,SNR=19							
JWT	**Wachi**	**32.12**	**13**	P	**P**	**12 57 50.3**	**-0.1**	
JWT				IAmb	IAmb	12 58 18.1		
	comp=Z,21nm,1.4s							
JGF	**Kuroka**	**32.92**	**16**	P	**P**	**12 57 56.9**	**-0.6**	
JGF				IAmb	IAmb	12 58 18.7		
	comp=Z,17nm,1.5s							
KSRS	**Korea Array**	**33.30**	**2**	P	**P**	**12 58 00.6**	**-0.1**	
	comp=Z,2.5nm,0.8s,baz=176,slow=9.5,SNR=11							
MJAR	**Matsushiro Arr**	**34.04**	**17**	P	**P**	**12 58 05.2**	**-1.9**	
	comp=Z,1.0nm,0.7s,baz=211,slow=6.8,SNR=4.0							
XAN	**Xi'an**	**34.19**	**333**	P	**P**	**12 58 07.3**	**-1.3**	
XAN				IAmb	IAmb	12 58 16.9		
	comp=Z,11nm,1.0s							
CD2	**Chengdu**	**34.45**	**324**	P	**P**	**12 58 10.4**	**-0.5**	
CD2				pmax	pmax			
	comp=Z,30nm,0.5s							
MORW	**Morawa**	**34.47**	**197**	P	**P**	**12 58 11.3**	**+0.3**	
	baz=35,SNR=8.2							
MORW	**Morawa**	**34.47**	**197**	P	**P**	**12 58 11.7**	**+0.7**	
MORW				IAmb	IAmb	12 58 13.0		
	comp=Z,16nm,1.2s							
FORT	**Forrest**	**34.62**	**178**	P	**P**	**12 58 12.6**	**+0.4**	
	baz=35,SNR=27							
FORT	**Forrest**	**34.62**	**178**	P	**P**	**12 58 13.0**	**+0.8**	
QLP	**Quilpie**	**34.78**	**152**	P	**P**	**12 58 13.5**	**-0.3**	
	baz=35,SNR=8.6							
KMBL	**Kambalda**	**35.49**	**187**	P	**P**	**12 58 20.3**	**+0.5**	
	baz=36,SNR=11							
BLDU	**Ballidu**	**35.75**	**195**	P	**P**	**12 58 22.1**	**+0.1**	
	baz=36,SNR=16							
KLBR	**Kellerberrin**	**36.44**	**193**	P	**P**	**12 58 28.3**	**+0.4**	
	baz=37,SNR=10							
MUN	**Mundaring**	**37.18**	**195**	P	**P**	**12 58 34.4**	**+0.2**	
	baz=37,SNR=11							
EIDS	**Eidsvold**	**37.54**	**142**	P	**P**	**12 58 38.3**	**+1.0**	
	baz=38,SNR=6.1							
EIDS	**Eidsvold**	**37.54**	**142**	P	**P**	**12 58 38.4**	**+1.0**	
EIDS				IAmb	IAmb	12 58 39.0		
	comp=Z,16nm,0.7s							
BBOO	**Buckleboo**	**37.66**	**167**	P	**P**	**12 58 39.0**	**+0.8**	
	baz=38,SNR=80							
BBOO	**Buckleboo**	**37.66**	**167**	P	**P**	**12 58 39.1**	**+0.8**	
NWAO	**Narrogin (SRO)**	**37.84**	**193**	P	**P**	**12 58 40.1**	**+0.4**	
	comp=Z,7.6nm,0.4s,baz=22,slow=9.0,SNR=17							
NWAO	**Narrogin (SRO)**	**37.84**	**193**	P	**P**	**12 58 40.3**	**+0.5**	
	baz=38,SNR=14							
NWAO	**Narrogin (SRO)**	**37.84**	**193**	P	**P**	**12 58 40.2**	**+0.5**	
LZH	**Lanzhou**	**38.29**	**329**	*eP*	**P**	**12 58 47.5**	**+3.7**	
LZH				pP	sP	12 58 59.3	+2.3	
LZH				sP	pP	12 59 02.8	+8.6	
LZH				pmax	pmax			
	comp=Z,26nm,1.3s							
LZH				pmax	pmax			
	comp=Z,100nm,5.4s							
LZH				LR	LR			
	comp=Z,400nm,13.2s							
LZH				LR	LR			
	comp=Z,420nm,13.5s							
LZH				LR	LR			
	comp=Z,630nm,16.4s							
STKA	**Stephens Creek**	**38.37**	**159**	P	**P**	**12 58 45.4**	**+1.1**	
	comp=Z,33nm,0.5s,baz=332,slow=8.7,SNR=98							
STKA	**Stephens Creek**	**38.37**	**159**	P	**P**	**12 58 45.2**	**+0.9**	
	baz=38,SNR=79							
STKA	**Stephens Creek**	**38.37**	**159**	P	**P**	**12 58 45.3**	**+1.1**	
STKA				IAmb	IAmb	12 58 46.2		
	comp=Z,10nm,0.7s							
HTT	**Hallett**	**38.97**	**164**	P	**P**	**12 58 50.5**	**+1.2**	
	baz=39,SNR=10							
CMSA	**Cobar Meteorol**	**39.67**	**154**	P	**P**	**12 58 56.6**	**+1.4**	
	baz=40,SNR=26							
USRK	**Ussuriysk Ar.**	**40.28**	**6**	P	**P**	**12 58 59.6**	**-0.5**	
	comp=Z,1.1nm,0.7s,baz=179,slow=5.8,SNR=3.0							
ARMA	**Armidale**	**41.67**	**147**	P	**P**	**12 59 13.8**	**+2.0**	
	baz=42,SNR=7.2							
ARMA	**Armidale**	**41.67**	**147**	P	**P**	**12 59 14.0**	**+2.2**	
ARMA				IAmb	IAmb	12 59 14.4		
	comp=Z,17nm,0.6s							
ASAJ	**Asahikawa**	**42.31**	**17**	P	**P**	**12 59 17.3**	**+0.6**	
	comp=Z,9.3nm,0.9s,baz=198,slow=9.6,SNR=4.7							
GTA	**Gaotai**	**42.89**	**329**	*eP*	**P**	**12 59 22.0**	**+0.3**	
GTA				pP	pP	12 59 31.8	-0.4	
GTA				sP	sP	12 59 35.6	+0.6	
GTA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
ARPS	**Mount Arapiles**	**42.94**	**162**	P	**P**	**12 59 23.4**	**+1.6**	
	baz=43,SNR=27							
YNG	**Young**	**43.21**	**154**	P	**P**	**12 59 26.3**	**+2.2**	
	baz=43,SNR=7.6							
ODAN	**Odare**	**43.96**	**305**	*eP*	**P**	**12 59 33.0**	**+2.4**	
CNB	**Canberra Magne**	**44.49**	**153**	P	**P**	**12 59 36.2**	**+1.7**	
	baz=45,SNR=6.0							
TOO	**Toolangi**	**44.88**	**159**	P	**P**	**12 59 39.9**	**+2.4**	
	baz=45,SNR=12							
TOO	**Toolangi**	**44.88**	**159**	P	**P**	**12 59 40.0**	**+2.4**	
TOO				IAmb	IAmb	12 59 40.9		
	comp=Z,45nm,1.4s							
KLR	**Kul'dur**	**45.25**	**5**	P	**P**	**12 59 40.1**	**-0.1**	
	comp=Z,1.2nm,0.4s,baz=184,slow=11,SNR=4.7							
GUN	**Gumba**	**45.61**	**306**	*eP*	**P**	**12 59 42.7**	**-1.2**	
ULN	**Ulaanbaatar**	**46.87**	**342**	P	**P**	**12 59 54.2**	**+0.9**	
SONM	**Songino Array**	**47.05**	**341**	P	**P**	**12 59 55.4**	**+0.8**	
	comp=Z,1.4nm,0.7s,baz=160,slow=7.6,SNR=6.7							
SONM				PcP	**PcP**	**13 01 26.9**	**+0.6**	
	comp=Z,0.8nm,0.8s,baz=163,slow=4.4,SNR=1.7							
SONM	**Songino Array**	**47.05**	**341**	P	**P**	**12 59 54.1**	**-0.5**	
KOLN	**Koldanda**	**47.41**	**305**	*eP*	**P**	**12 59 57.0**	**-0.9**	
	comp=Z,24nm,0.7s							
DANN	**Dangsing**	**47.50**	**305**	*eP*	**P**	**12 59 57.3**	**-1.4**	
	comp=Z,25nm,0.7s							
PYUN	**Piuthan**	**48.04**	**305**	*eP*	**P**	**13 00 01.8**	**-0.9**	
	comp=Z,13nm,0.5s							
WMQ	**Urumqi**	**52.53**	**325**	*eP*	**P**	**13 00 38.8**	**+2.5**	
WMQ				sP	sP	13 00 53.1	+3.1	
WMQ				pmax	pmax			
	comp=Z,12nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,440nm,7.7s							
WMQ				LR	LR			
	comp=Z,360nm,20.3s							
WMQ				LR	LR			
	comp=Z,570nm,20.3s							
WMQ				LR	LR			
	comp=Z,470nm,29.1s							
PETK	**Petropavlovsk-**	**55.15**	**22**	P	**P**	**13 00 55.5**	**+0.3**	
	comp=Z,3.9nm,0.8s,baz=203,slow=4.2,SNR=8.6							
MK31	**Makanchi Array**	**57.36**	**325**	P	**P**	**13 01 09.6**	**-1.6**	
MKAR	**Makanchi Array**	**57.36**	**325**	P	**P**	**13 01 10.6**	**-0.5**	
	comp=Z,1.7nm,0.5s,baz=114,slow=7.6,SNR=18							
MAKZ	**Makanchi**	**57.55**	**325**	P	**P**	**13 01 11.2**	**-1.2**	
MAKZ				IAmb	IAmb	13 01 22.0		
	comp=Z,8.2nm,1.1s							
YAK	**Yakutsk**	**57.93**	**2**	P	**P**	**13 01 15.0**	**+0.2**	
	comp=Z,14nm,0.6s,baz=212,slow=10.0,SNR=1.6							
YAK	**Yakutsk**	**57.93**	**2**	P	**P**	**13 01 15.2**	**+0.5**	
ZAA0	**Zalesovo Array**	**60.37**	**333**	P	**P**	**13 01 34.0**	**+2.2**	
ZALV	**Zalesovo Beam**	**60.37**	**333**	P	**P**	**13 01 29.9**	**-1.9**	
	comp=Z,1.5nm,0.5s,baz=133,slow=3.9,SNR=5.2							
ZALV	**Zalesovo Beam**	**60.37**	**333**	P	**P**	**13 01 30.0**	**-1.8**	
KURBB	**Kurchatov Arra**	**61.53**	**327**	P	**P**	**13 01 38.9**	**-0.9**	
	comp=Z,4.5nm,0.7s,baz=124,slow=6.5,SNR=23							
KURK	**Kurchatov**	**61.54**	**327**	P	**P**	**13 01 38.7**	**-1.2**	
KURK				IAmb	IAmb	13 01 49.8		
	comp=Z,15nm,1.1s							
GAR	**Garm**	**61.78**	**313**	P	**P**	**13 01 41.6**	**-0.3**	
GAR				IAmb	IAmb	13 02 00.5		
	comp=Z,7.3nm,0.7s							
LBZ	**Lake Benmore**	**61.88**	**146**	P	**P**	**13 01 41.9**	**-0.4**	
THZ	**Tophouse**	**61.89**	**142**	P	**P**	**13 01 41.8**	**-0.7**	
THZ				IAmb	IAmb	13 01 47.9		
	comp=Z,17nm,1.0s							
KKAR	**Karatay Array**	**63.07**	**317**	P	**P**	**13 01 50.4**	**+0.1**	
BRVK	**Borovoye**	**67.19**	**327**	P	**P**	**13 02 16.5**	**-0.3**	
BRVK				IAmb	IAmb	13 02 26.9		
	comp=Z,9.7nm,1.0s							
TIXI	**Tiksi**	**67.56**	**1**	P	**P**	**13 02 18.8**	**0.0**	
TIXI				IAmb	IAmb	13 02 34.8		
	comp=Z,5.3nm,0.8s							
NRIK	**Noril'sk**	**70.17**	**346**	P	**P**	**13 02 35.2**	**+0.2**	
	comp=Z,2.9nm,0.4s,baz=118,slow=4.9,SNR=4.9							
CASY	**Casey**	**71.10**	**187**	P	**P**	**13 02 40.9**	**+0.2**	
CASY				IAmb	IAmb	13 02 42.4		
	comp=Z,3.9nm,0.6s							
ABKAR	**Akbulak array**	**71.97**	**321**	P	**P**	**13 02 45.0**	**-1.4**	
ABKAR	**Akbulak array**	**71.97**	**321**	P	**P**	**13 02 45.0**	**-1.4**	
UNV	**Unalaska Valle**	**73.16**	**35**	P	**P**	**13 02 53.2**	**-0.1**	
ARU	**Arti**	**74.73**	**328**	P	**P**	**13 03 00.9**	**-1.6**	
ARU				IAmb	IAmb	13 03 11.7		
	comp=Z,8.2nm,0.9s							
RAYN	**Ar Rayn**	**80.43**	**293**	P	**P**	**13 03 34.4**	**-0.7**	
ABPO	**Ambohimpanom**	**81.46**	**250**	P	**P**	**13 03 40.1**	**-0.7**	
ABPO				IAmb	IAmb	13 03 41.8		
	comp=Z,6.9nm,0.6s							
IMAR	**Indian Mountai**	**82.06**	**24**	P	**P**	**13 03 44.0**	**+1.1**	
VNDA	**Vanda**	**83.70**	**173**	P	**P**	**13 03 52.0**	**+0.9**	
	comp=Z,2.4nm,0.6s,baz=312,slow=6.4,SNR=24							
VNDA	**Vanda**	**83.70**	**173**	P	**P**	**13 03 51.7**	**+0.7**	
VNDA				IAmb	IAmb	13 03 52.9		
	comp=Z,5.1nm,1.1s							
ILAR	**Eielson Array**	**84.83**	**25**	P	**P**	**13 03 57.2**	**+0.2**	
	comp=Z,0.7nm,0.6s,baz=241,slow=5.7,SNR=5.1							
KLMR	**Klimovskoe**	**85.19**	**331**	*eP*	**P**	**13 03 57.1**	**-1.8**	
KLMR				AMP		13 04 14.4		
	comp=Z,29nm,1.5s							
BMAR	**Burnt Mountain**	**85.80**	**23**	P	**P**	**13 04 02.3**	**+0.4**	
ARCES	**ARCESS Array B**	**90.21**	**340**	P	**P**	**13 04 23.4**	**+0.5**	
	comp=Z,2.1nm,0.8s,baz=87,slow=7.4,SNR=4.1							
FINES	**FINESS Array B**	**91.61**	**332**	P	**P**	**13 04 29.1**	**-0.4**	
	comp=Z,2.7nm,1.0s,baz=59,slow=5.4,SNR=3.7							
QSPA	**South Pole Qui**	**93.92**	**180**	P	**P**	**13 04 39.1**	**-1.1**	
QSPA				IAmb	IAmb	13 05 01.5		
	comp=Z,5.3nm,1.2s							
BURAR	**Bucovina Array**	**94.83**	**318**	P	**P**	**13 04 42.3**	**-2.6**	
NOA	**NORSAR Array B**	**98.56**	**334**	P	Pdif	13 05 01.9	+0.5	
	comp=Z,0.4nm,0.6s,baz=65,slow=4.7,SNR=2.2							
TORD	**Torodi Ar. Bea**	**122.89**	**288**		**PKPdf**	**13 10 19.6**	**-0.2**	
	comp=Z,0.9nm,0.4s,baz=58,slow=1.8,SNR=8.6							
TORD	**Torodi Ar. Bea**	**122.89**	**288**		**PKPdf**	**13 10 19.8**	**-0.1**	
PLCA	**Paso Flores**	**140.25**	**159**	PKP	**PKPdf**	**13 10 51.8**	**-0.2**	
	comp=Z,0.8nm,0.5s,baz=169,slow=5.2,SNR=1.7							

*NEIC **21** 12:55:15.3±1.9, 1.°76N±0.°07×126.°47E±0.°07, h35km±1km, mb4.6/30, Error ellipse: s-maj=14.5km s-min=8.2km az=47.0*
*DJA **21** 12:55:16.2±1.4, 2.°1N±3.°×12.°6E±.°, h25km±13km, M4.5/16, mb4.6/9, mB4.8/3, MLv4.5/16, Mw(mB)4.0/3*
*IDC **21** 12:55:19.4±2.0, 1.°71N×126.°19E, h73km±17km, mb4.0/19, mb1 1.1/23, mb1mx3.9/55, mbtmp4.3/23, MS4.4/1, Ms1 4.4/1, ms1mx3.2/37, Error ellipse: s-maj=20.5km s-min=8.4km az=69.0*

ISC 21 12:55:16.7±0.4, 1.79N±0.°05×126.°40E±0.°06, h47km, n86, σ1§23/86, mb4.5/29, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.40**	**136**	P		**P**	**Pn**	**12 55 39.3**	**-0.6**
TNTI	**Ternate**	**1.40**	**136**			**P**	**Pn**	**12 55 39.0**	**-0.9**
SGSI	**Sangihe**	**2.07**	**335**	P		**P**	**Pn**	**12 55 48.1**	**-0.9**
SGSI				S		**S**	**Sn**	**12 56 13.3**	**-0.3**
KMSI	**Cibinong**	**2.70**	**243**	P		**P**	**Pn**	**12 55 58.4**	**+0.8**
GTOI	**Gorontalo**	**3.58**	**251**	P		**P**	**Pn**	**12 56 11.5**	**+1.9**
LUWI	**Luwuk**	**4.59**	**232**	P		**P**	**Pn**	**12 56 25.3**	**+1.7**
LUWI	**Luwuk**	**4.59**	**232**	Pn		**P**	**Pn**	**12 56 25.5**	**+1.9**
MRSI	**Marisa**	**4.64**	**254**	P		**P**	**Pn**	**12 56 25.4**	**+1.1**
NLAI	**Namlea**	**5.05**	**172**	P		**P**	**Pn**	**12 56 30.5**	**+0.6**
APSI	**Ampana**	**5.45**	**241**	P		**P**	**Pn**	**12 56 37.7**	**+2.2**
	0.9nm2µm113nm,0.7s								
SIJI	**Sorong**	**5.54**	**118**	P		**P**	**Pn**	**12 56 39.5**	**+2.8**
	1.8nm,0.3s,baz=348,slow=11,SNR=4.0								
TOLI2	**Tolitoli**	**5.65**	**263**				**Pn**	**12 56 36.5**	**-1.7**
MSAI	**Masohi**	**5.70**	**154**	P		**P**	**Pn**	**12 56 41.1**	**+2.3**
	0.1nm14nm,0.6s								
MPSI	**Mapaga**	**6.66**	**258**	P		**P**	**Pn**	**12 56 52.3**	**+0.3**
	0.1nm28nm,0.6s								
FAKI	**Fak Fak**	**7.49**	**129**	Pn		**P**	**Pn**	**12 57 02.2**	**-1.2**
TTSI	**Tana Toraja**	**8.14**	**234**	P		**P**	**Pn**	12 57 09.1	-3.3
	36nm,0.7s								
MYLDM	**Lahad Datu**	**8.57**	**293**				**Pn**	**12 57 20.1**	**+1.8**
BNSI	**Bone**	**8.79**	**226**	P		**P**	**Pn**	**12 57 21.9**	**+0.6**
KAPI	**Kappang**	**9.47**	**224**	P		**P**	**Pn**	**12 57 32.4**	**+1.8**
	3.2nm,0.3s,baz=79,slow=5.6,SNR=8.3								
KAPI	**Kappang**	**9.47**	**224**				**Pn**	**12 57 32.5**	**+1.9**
BSSI	**Bau Bau, Buton**	**9.84**	**217**	P		P	Pn	12 57 42.9	+7.2
KKM	**Kota Kinabalu**	**11.00**	**293**				**Pn**	**12 57 53.3**	**+1.7**
SBUM	**Sibu**	**14.18**	**273**	Pn			**Pn**	**12 58 33.5**	**-1.4**
GENI	**Genyem**	**14.44**	**108**	P		P	P	12 58 48.8	+4.6
JAY	**Jayapura**	**14.93**	**107**	P		**P**	**P**	**12 58 50.2**	**+0.5**
	1.6nm,0.3s,baz=216,slow=12,SNR=8.4								
MTN	**Manton Dam**	**15.28**	**162**	Pn			**Pn**	**12 58 47.9**	**-1.5**
MTN				IAmb		IAmb	IAmb	12 58 52.4	
	comp=Z,15nm,0.6s								
JAGI	**Jajag, Banyuwa**	**15.90**	**230**	Pn			**Pn**	**12 58 56.7**	**-0.8**
JAGI				IAmb		IAmb	IAmb	12 59 24.7	
	comp=Z,28nm,0.8s								
KSM	**Kuching**	**16.09**	**269**				**Pn**	**12 58 59.4**	**-0.4**
KNRA	**Kununurra**	**17.52**	**172**				**Pn**	**12 59 16.6**	**-1.0**
KNRA				IAmb		IAmb	IAmb	12 59 37.7	
	comp=Z,28nm,1.1s								
FITZ	**Fitzroy Crossi**	**19.78**	**182**	P		**P**	**P**	**12 59 42.5**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=334,slow=5.4,SNR=6.8								
DLV	**T Lat**	**20.42**	**300**	P		P	P	**12 59 50.5**	**+0.1**
DLV				IAmb		IAmb	IAmb	12 59 56.1	
	comp=Z,60nm,1.4s								
WB0	**Warramunga Arr**	**22.82**	**160**	P		**P**	**P**	**13 00 14.6**	**-1.2**
WB0				IAmb		IAmb	IAmb	13 00 18.9	
	comp=Z,22nm,0.8s								
WRAB	**Tennant Creek**	**22.96**	**161**	P		P	**P**	**13 00 16.8**	**-0.4**
WRA	**Warramunga Arr**	**22.96**	**161**	P		P	**P**	**13 00 16.1**	**-1.2**
	comp=Z,16nm,0.5s,baz=338,slow=11,SNR=24								
WRA				PcP		**PcP**	**PcP**	**13 04 06.4**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=319,slow=2.2,SNR=4.0								
WRA				S		**S**	**S**	**13 04 21.4**	**-2.9**
	comp=Z,1.2nm,1.0s,baz=330,slow=17,SNR=4.4								
WB2	**Warramunga Arr**	**22.97**	**161**	P		P	**P**	**13 00 17.6**	**+0.2**
SDSI	**Sungai Dareh**	**25.11**	**264**	P		P	P	13 00 45.8	+8.4
AS31	**Alice Springs**	**26.34**	**164**	P		P	**P**	**13 00 48.0**	**-0.5**
ASAR	**Alice Springs**	**26.34**	**164**	P		P	**P**	**13 00 48.6**	**+0.1**
	comp=Z,7.5nm,0.4s,baz=347,slow=13,SNR=22								
ASAR				PcP		**PcP**	**PcP**	**13 04 13.8**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=348,slow=2.5,SNR=4.7								
ASAR				S		**S**	**S**	**13 05 17.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=348,slow=22,SNR=2.5								
ASAR	**Alice Springs**	**26.34**	**164**	P		P	**P**	**13 00 47.4**	**-1.0**
RABL	**Rabaul**	**26.43**	**103**	P		P	**P**	**13 00 48.0**	**-1.4**
RPSI	**Rantau Prapat**	**27.46**	**272**	P		P	**P**	**13 00 59.7**	**+1.0**
RPSI				IAmb		IAmb	IAmb	13 01 04.5	
	comp=Z,12nm,1.4s								
CTA	**Charters Tower**	**29.19**	**139**	P		P	**P**	**13 01 16.2**	**+2.2**
	comp=Z,2.8nm,0.7s,baz=328,slow=12,SNR=5.9								
CTA				LR		LR	LR	13 14 33.5	
	comp=Z,765nm,21.8s,baz=168,slow=39								
CMAR	**Chiang Mai Arr**	**31.61**	**303**	P		P	**P**	**13 01 33.7**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=106,slow=6.0,SNR=1.5								
CMAR				PcP		**PcP**	**PcP**	**13 04 28.1**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=129,slow=2.4,SNR=4.5								
CMAR	**Chiang Mai Arr**	**31.61**	**303**	P		P	**P**	**13 01 34.7**	**-0.7**
ENH	**Enshi**	**32.55**	**332**	P		P	**P**	**13 01 44.1**	**+0.5**
ENH				IAmb		IAmb	IAmb	13 01 46.9	
	comp=Z,6.3nm,0.7s								
HNR	**Honiara**	**35.23**	**109**	P		P	**P**	**13 02 10.3**	**+3.3**
	comp=Z,41nm,0.5s,baz=106,slow=6.4,SNR=4.7								
KSRS	**Korea Array**	**35.52**	**2**	P		P	**P**	**13 02 10.2**	**+1.2**
	comp=Z,1.2nm,0.5s,baz=180,slow=9.9,SNR=1.1								
KS19	**Wonju Array Si**	**35.56**	**2**	P		P	**P**	**13 02 09.9**	**+0.4**
KS19				IAmb		IAmb	IAmb	13 02 21.8	
	comp=Z,10nm,1.1s								
NWAO	**Narrogin (SRO)**	**35.60**	**193**	P		P	**P**	**13 02 09.9**	**0.0**
	comp=Z,3.9nm,0.5s,baz=36,slow=8.7,SNR=1.2								
EIDS	**Eidsvold**	**36.06**	**140**	P		P	**P**	**13 02 12.9**	**-1.0**
EIDS				IAmb		IAmb	IAmb	13 02 17.8	
	comp=Z,15nm,1.4s								
STKA	**Stephens Creek**	**36.46**	**158**	P		P	**P**	**13 02 16.4**	**-0.8**
	comp=Z,3.8nm,0.5s,baz=343,slow=9.1,SNR=8.0								
STKA	**Stephens Creek**	**36.46**	**158**	P		P	**P**	**13 02 16.5**	**-0.8**
JYT	**Yasato**	**36.57**	**19**	P		P	**P**	**13 02 18.8**	**+0.7**
H11S3	**WAKE ISLAND Hy**	**42.84**	**65**	T		T	T	13 50 10.2	
	baz=252,slow=75,SNR=16								
H11S1	**WAKE ISLAND Hy**	**42.85**	**64**	T		T	T	13 50 19.1	
	baz=252,slow=75,SNR=3.8								
H11S2	**WAKE ISLAND Hy**	**42.85**	**65**	T		T	T	13 50 18.5	
	baz=252,slow=75,SNR=14								
LSA	**Lhasa**	**43.49**	**313**	P		P	**P**	**13 03 17.0**	**+0.8**
SANVU	**Saraoutou**	**43.84**	**115**	P		P	**P**	**13 03 17.8**	**-0.8**
KLR	**Kul'dur**	**47.48**	**5**	P		P	**P**	**13 03 46.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=126,slow=4.0,SNR=3.2								
HIA	**Hailar**	**47.64**	**354**	P		P	**P**	**13 03 49.2**	**+1.0**
HIA				IAmb		IAmb	IAmb	13 03 54.0	
	comp=Z,12nm,1.2s								
SONM	**Songino Array**	**49.02**	**342**	P		P	**P**	**13 03 59.1**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=153,slow=6.9,SNR=6.0								
SONM				PcP		**PcP**	**P**	**13 05 21.3**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=165,slow=4.1,SNR=4.1								
SONM	**Songino Array**	**49.02**	**342**	P		P	**P**	**13 03 59.3**	**+0.3**
PETK	**Petropavlovsk-**	**57.34**	**22**	P		P	**P**	**13 05 02.2**	**+2.3**
	comp=Z,2.1nm,0.9s,baz=225,slow=5.3,SNR=1.4								
MK31	**Makanchi Array**	**58.96**	**326**	P		P	**P**	**13 05 11.4**	**0.0**
MK31				IAmb		IAmb	IAmb	13 05 16.2	
	comp=Z,4.0nm,0.8s								
MKAR	**Makanchi Array**	**58.96**	**326**	P		P	**P**	**13 05 10.8**	**-0.5**
	comp=Z,2.6nm,0.4s,baz=120,slow=7.9,SNR=29								
MKAR	**Makanchi Array**	**58.96**	**326**	P		P	**P**	**13 05 10.6**	**-0.8**
MAKZ	**Makanchi**	**59.14**	**326**	P		P	**P**	**13 05 12.1**	**-0.5**
MAKZ				IAmb		IAmb	IAmb	13 05 17.4	
	comp=Z,3.5nm,0.8s								
ZAA0	**Zalesovo Array**	**62.16**	**334**	P		P	**P**	**13 05 33.6**	**+0.6**
ZALV	**Zalesovo Beam**	**62.16**	**334**	P		P	**P**	**13 05 32.8**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=134,slow=6.4,SNR=3.6								
ZALV	**Zalesovo Beam**	**62.16**	**334**	P		P	**P**	**13 05 33.8**	**+0.8**
GAR	**Garm**	**62.99**	**313**	P		P	**P**	**13 05 39.3**	**+0.3**
KURBB	**Kurchatov Arra**	**63.19**	**328**	P		P	**P**	**13 05 39.0**	**-0.9**
	comp=Z,4.8nm,0.6s,baz=130,slow=6.3,SN

SONM	**Songino Array**	**36.38**	**343**	P		**P**	**13 32 52.7**	**-1.2**
	0.5nm,0.5s,baz=153,slow=9.0,SNR=2.8							
ASAR	**Alice Springs**	**38.98**	**161**	P		**P**	**13 33 16.2**	**+0.3**
	0.4nm,0.6s,baz=337,slow=6.7,SNR=6.5							
MKAR	**Makanchi Array**	**46.39**	**324**	P		**P**	**13 34 14.5**	**-0.7**
	0.2nm,0.4s,baz=113,slow=8.0,SNR=2.3							

RHSSO 21 13:32:58.4±0.5, 42°.89N×18°.03E, h4km±3km, ML1.4/3, 2C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STON	**Ston**	**0.24**	**266**	*e*Pg		Pg	13 33 02.8	-0.2
STON				*e*Sg		Sg	13 33 07.0	+0.8
STON	**Ston**	**0.24**	**266**	*e*Pg		Pg	13 33 02.8	-0.2
STON				Sg		Sg	13 33 06.9	+0.7
TREB	**Trebinje**	**0.29**	**126**	⇑*i*Pg		Pg	13 33 03.7	-0.4
TREB				*e*Sg		Sg	13 33 08.6	+0.7
BRY	**Bratogost**	**0.38**	**88**	⇑*i*Pg		Pg	13 33 04.9	-0.8
BRY				*e*Sg		Sg	13 33 10.8	+0.1
HCY	**Herceg Novi**	**0.56**	**142**	⇓*i*Pg		Pg	13 33 08.2	-1.0
HCY				*e*Sg		Sg	13 33 17.2	+0.8
UPM	**Unac-Piva**	**0.72**	**64**	*e*Pg		Pg	13 33 11.6	-0.6
UPM				*e*Sg		Sg	13 33 22.1	+0.6
MAKA	**Makarska**	**0.84**	**299**	*e*Pg		Pg	13 33 13.6	-0.8
MAKA				Sg		Sg	13 33 26.1	+0.8
LSTV	**Lastovo**	**0.84**	**262**	*e*Pg		Pg	13 33 13.8	-0.8
LSTV				Sg		Sg	13 33 25.4	-0.1
DRME	**Dracevica, Mon**	**1.11**	**129**	*e*Pg		Pg	13 33 18.2	-1.4
DRME				*e*Sg		Sg	13 33 34.1	+0.1
KIJV	**Kijevo**	**1.62**	**314**	Sg		Sg	13 33 50.2	-0.3
ZIRJ	**Zirje**	**1.90**	**295**	Sn		Sn	13 33 56.2	+0.2
MORI	**Morici**	**1.95**	**301**	Sg		Sg	13 34 00.5	-0.6
DUGI	**Dugi Otok**	**2.43**	**298**	Sn		Sn	13 34 09.1	0.0

*IDC **21** 13:34:10.5±1.7,50°.19N×18°.79E, h0km, mb1 3.5/4, mb1mx3.2/50, mbtmp3.3/4, ML2.8/4, Error ellipse: s-maj=28.4km s-min=9.7km az=136.0*
*IPEC **21** 13:34:10.6±0.3,50°.28N×18°.82E, h3km±1km, ML3.3/3, Error ellipse: s-maj=3.9km s-min=1.1km az=161.0*
*PRU **21** 13:34:10.7±0.0,50°.28N×18°.78E, h0km*
*VIE **21** 13:34:10.1±0.6,50°.32N×18°.76E, h0km, mb2.5/4, ml3.2/4, Error ellipse: s-maj=4.8km s-min=3.4km az=179.0 17 km WNW of Katowice Suspected Mining induced.*
*BGR **21** 13:34:11.3±0.3,50°.21N×18°.78E, h1km, ML3.5/14, Error ellipse: s-maj=8.9km s-min=3.3km az=0.0*

ISC 21 13:34:09.0±0.7, 50°.31N±0°.03×18°.78E±0°.02, h0km, n55, σ1℘76/95, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OKC	**Ostrava-Krasne**	**0.63**	**221**	*e*Pg		**Pb**	**13 34 23.0**	**+0.2**
OKC	**Ostrava-Krasne**	**0.63**	**221**	*e*PG		**Pb**	**13 34 22.6**	**-0.2**
OKC				*e*SG		**Sg**	**13 34 29.7**	**+0.6**
	comp=Z,196nm,0.6s							
OJC	**Ojcow**	**0.66**	**98**	*i* Pg		**Pg**	**13 34 22.7**	**+1.2**
OJC				*e*Sg		**Sg**	**13 34 31.4**	**+1.3**
OJC	**Ojcow**	**0.66**	**98**	*e*Pg		**Pg**	**13 34 22.8**	**+1.2**
OJC				*e*Sg		**Sg**	**13 34 31.9**	**+1.9**
MORC	**Moravsky Berou**	**0.96**	**237**	*e*PG		**Pb**	**13 34 29.1**	**+0.5**
MORC				*e*SG		**Sb**	**13 34 40.9**	**-0.9**
MORC	**Moravsky Berou**	**0.96**	**237**	*e*Pg		**Pb**	**13 34 29.1**	**+0.5**
MORC				*e*Sg		**Sb**	**13 34 42.0**	**+0.2**
MORC	**Moravsky Berou**	**0.96**	**237**	*e*Pg		**Pb**	**13 34 29.0**	**+0.5**
	baz=58							
MORC				*e*Sg		**Sb**	**13 34 40.9**	**-0.9**
	529nm,0.7s,baz=58							
LANS	**Liptovska Anna**	**1.25**	**159**	*e*PG		**Pn**	**13 34 33.7**	**0.0**
LANS				*e*SG		**Sb**	**13 34 50.2**	**+0.2**
LANS				*e*LG		Lg	13 34 54.0	
KRLC	**Kraliky**	**1.31**	**260**	*e*PG		**Pb**	**13 34 34.8**	**+0.4**
KRLC				*e*SG		**Sb**	**13 34 51.9**	**+0.1**
	comp=Z,162nm,0.5s							
NIE	**Niedzica**	**1.33**	**132**	*e*Pg		**Pg**	**13 34 34.8**	**+0.4**
NIE				*e*Sg		**Sb**	**13 34 52.9**	**+0.5**
DPC	**Dobruska-Polom**	**1.58**	**272**	*e*Pn		**Pg**	**13 34 39.9**	**+0.7**
DPC				*e*Sg		**Sg**	**13 35 01.6**	**+2.0**
DPC	**Dobruska-Polom**	**1.58**	**272**	*e*PG		**Pg**	**13 34 39.9**	**+0.7**
DPC				*e*SG		**Sg**	**13 35 01.4**	**+1.8**
	comp=Z,184nm,0.7s							
JAVC	**Velka Javorina**	**1.62**	**207**	*e*PN		**Pb**	**13 34 40.0**	**+0.2**
JAVC	**Velka Javorina**	**1.62**	**207**	*e*Pn		**Pb**	**13 34 40.0**	**+0.2**
	baz=27							
OSTC	**Ostas**	**1.66**	**279**	*e*PG		**Pb**	**13 34 40.9**	**+0.5**
OSTC				*e*SG		**Sg**	**13 35 04.4**	**+2.1**
	comp=Z,122nm,0.8s							
KSP	**Ksiaz**	**1.67**	**289**	*e*Pb		**Pb**	**13 34 41.3**	**+0.7**
KSP				*i* Pg		**Pg**	**13 34 43.1**	**+2.1**
KSP				*e*Sg		**Sg**	**13 35 05.5**	**+2.7**
KSP	**Ksiaz**	**1.67**	**289**	*e*Pn		**Pb**	**13 34 41.4**	**+0.7**
KSP				*e*Pg		**Pg**	**13 34 43.2**	**+2.1**
KSP				*e*Sg		**Sg**	**13 35 05.7**	**+3.0**
VRAC	**Vranov**	**1.74**	**236**	*e*PN		**Pb**	**13 34 41.7**	**-0.1**
VRAC				*e*SG		**Sg**	**13 35 04.9**	**+0.1**
VRAC	**Vranov**	**1.74**	**236**	*e*Pn		**Pb**	**13 34 41.7**	**-0.1**
	baz=55							
VRAC				*e*Sg		**Sg**	**13 35 04.9**	**+0.1**
	272nm,0.6s,baz=55							
CHVC	**Chvalec**	**1.77**	**280**	*e*PG		**Pb**	**13 34 42.3**	**+0.1**
CHVC				*e*SG		**Sg**	**13 35 06.5**	**+0.8**
	comp=Z,93nm,0.6s							
UPC	**Upice**	**1.78**	**277**	*e*Pg		**Pg**	**13 34 44.2**	**+1.1**
UPC				*e*SG		**Sg**	**13 35 08.5**	**+2.3**
	comp=Z,62nm,0.7s							
VYHS	**Vyhne**	**1.82**	**179**	*e*PN		**Pn**	**13 34 41.7**	**+0.2**
VYHS				*e*SN		**Sn**	**13 35 04.7**	**-0.6**
KRUC	**Moravsky**	**1.99**	**232**	*e*PN		**Pn**	**13 34 45.1**	**+1.1**
KRUC				*e*SG		**Sg**	**13 35 12.7**	**-0.3**
KRUC	**Moravsky**	**1.99**	**232**	*e*Pn		**Pn**	**13 34 45.0**	**+1.1**
	baz=51							
KRUC				*e*Sg		**Sg**	**13 35 12.7**	**-0.3**
	165nm,1.0s,baz=51							
KECS	**Kecovo**	**2.14**	**148**	*e*PN		**Pn**	**13 34 47.0**	**+1.0**
KECS				*e*LG		Lg	13 35 26.8	
MODS	**Modra-Piesok**	**2.18**	**207**	*e*PN		**Pn**	**13 34 46.2**	**-0.2**
MODS				*e*LG		Lg	13 35 18.4	
CRVS	**Cervenica-Dubn**	**2.24**	**128**	*e*PN		**Pn**	**13 34 47.6**	**+0.3**
CRVS				*e*LG		Lg	13 35 30.9	
TREC	**Trest**	**2.37**	**246**	*e*PG		**Pb**	**13 34 52.8**	**+0.3**
TREC				*e*SG		**Sg**	**13 35 24.5**	**-0.4**
	comp=Z,200nm,1.3s							
PRU	**Pruhonice**	**2.75**	**265**	*e*PG		**Pg**	**13 35 00.7**	**-0.9**
PRU				*e*SG		**Sg**	**13 35 36.9**	**-0.3**
	comp=Z,30nm,0.5s							
PRA	**Prague**	**2.81**	**267**	*e*SG		**Sg**	**13 35 39.9**	**+0.8**
	comp=Z,44nm,0.7s							
CONA	**Conrad Observa**	**3.06**	**220**	*i* Pn		**Pn**	**13 35 00.2**	**+1.5**
	1.8nm,0.3s							
CONA				*i* Sn		**Sn**	**13 35 35.2**	**-0.8**
	17nm,0.5s							
CONA				Sg		**Sg**	**13 35 53.8**	**+6.5**
	23nm,0.4s							
BRG	**Berggiesshubel**	**3.13**	**282**	PG		**Pg**	**13 35 09.0**	**0.0**
BRG				SG		**Sg**	**13 35 52.0**	**+2.3**
	32nm,0.6s							
BRG	**Berggiesshubel**	**3.13**	**282**	*e*Pg		**Pg**	**13 35 10.9**	**+1.9**
BRG				*e*Sg		**Sg**	**13 35 53.1**	**+3.5**
PBCC	**Pribram**	**3.15**	**260**	*e*SG		**Sg**	**13 35 50.6**	**+0.4**
FBE	**Freiberg**	**3.51**	**282**	*e*SG		**Sg**	**13 36 02.6**	**+0.9**
KHC	**Kasperske Hory**	**3.58**	**253**	*e*PN		**Pn**	**13 35 06.9**	**+1.2**
KHC				*e*PG		**Pg**	**13 35 18.0**	**+0.5**
KHC				*e*SG		**Sg**	**13 36 04.3**	**+0.4**
	comp=Z,66nm,0.8s							
GEC2	**GERESS Array S**	**3.62**	**248**	*e*Pg		**Pg**	**13 35 18.3**	**0.0**
GEC2				*e*Sg		**Sg**	**13 36 03.5**	**-1.7**
GERES	**GERESS Array B**	**3.62**	**248**	Pn		**Pn**	**13 35 06.7**	**+0.3**
	0.6nm,0.3s,baz=67,slow=15,SNR=8.5							
GERES				Pg		**Pb**	**13 35 15.3**	**+1.5**
	1.6nm,0.3s,baz=71,slow=14,SNR=10.0							
GERES				Lg		Lg	13 36 03.8	
	6.2nm,0.3s,baz=63,slow=30,SNR=24							
ARSA	**Arzberg**	**3.75**	**216**	*e*Pn		**Pn**	**13 35 10.1**	**+2.1**
	1.7nm,0.4s							
ARSA				*e*Sg		**Sg**	**13 36 14.3**	**+5.1**
	14nm,0.6s							
CLL	**Collm**	**3.80**	**287**	*e*Pg		**Pg**	**13 35 23.0**	**+1.3**
CLL				*e*Sg		**Sg**	**13 36 12.0**	**+1.0**
	comp=Z,64nm,0.9s							
CLL	**Collm**	**3.80**	**287**	*e*Pg		**Pg**	**13 35 23.9**	**+2.1**
MOA	**Molln**	**3.86**	**232**	*i* Pn		**Pn**	**13 35 06.9**	**-2.7**
	comp=Z,1.2nm,0.2s							
MOA				*e*Sg		**Sg**	**13 36 10.2**	**-2.7**
	comp=Z,62nm,0.6s							
WET	**Wettzell**	**4.00**	**255**	*e*Sg		**Sg**	**13 36 15.3**	**-2.3**
TANN	**Tannenbergstha**	**4.05**	**274**	*e*Sg		**Sg**	**13 36 18.3**	**-0.6**
NKC	**Novy Kostel**	**4.07**	**271**	*e*SG		**Sg**	**13 36 19.3**	**-0.2**
	comp=Z,37nm,0.6s							
ROTZ	**Rotzenmuhle**	**4.27**	**265**	*e*Sg		**Sg**	**13 36 26.0**	**-0.2**
MANZ	**Manzenberg**	**4.30**	**268**	*e*Sg		**Sg**	**13 36 28.1**	**+0.9**
MOX	**Moxa**	**4.59**	**277**	*e*Sg		**Sg**	**13 36 38.0**	**+1.7**
GRF	**Grafenberg Arr**	**4.92**	**266**	*e*SG		**Sg**	**13 36 46.2**	**-0.6**
BSD	**Bornholm Skovb**	**5.35**	**335**	*i* P		**Pn**	**13 35 31.2**	**+1.2**
BSD				*e*S		**Sn**	**13 36 29.1**	**-3.2**
BSD	**Bornholm Skovb**	**5.35**	**335**	*e*S		**Sn**	**13 36 29.1**	**-3.2**
BSD				*e*		**Pn**	**13 35 30.6**	**+0.6**
	baz=154,slow=11							
BSD				*i* P		**Pn**	**13 35 31.3**	**+1.2**
BSD				IAML			13 36 39.2	
	comp=Z,2.1nm,0.3s							
AKASG	**Malin Array Be**	**6.67**	**83**	Pg		**Pb**	**13 36 06.7**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=272,slow=14,SNR=1.8							
AKASG				Lg		Lg	13 37 36.1	
	comp=Z,1.7nm,0.3s,baz=276,slow=28,SNR=2.6							
NOA	**NORSAR Array B**	**11.56**	**341**	Pn		**Pn**	**13 36 54.1**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=152,slow=12,SNR=2.1							
FINES	**FINESS Array B**	**11.87**	**17**	Pn		**Pn**	**13 36 56.5**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=197,slow=11,SNR=12							
FINES				Sn		**Sn**	**13 39 05.2**	**-7.2**
	comp=Z,0.5nm,0.3s,baz=199,slow=20,SNR=7.7							
ARCES	**ARCESS Array B**	**19.55**	**7**	P		**P**	**13 38 38.8**	**+0.9**
	baz=198,slow=11,SNR=5.2							

*ASRS **21** 13:40:24.1±0.2,50°.1N×9°.1E±°, h10km, MLh3.4/15, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **21** 13:40:28.8±2.9,50°.57N×90°.46E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=24.2km s-min=12.0km az=90.0*

ISC 21 13:40:27.1±0.8, 50°.53N±0°.04×90°.75E±0°.02, h10km, n33, σ1℘71/57, 7C-4D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TEL	**Teeli**	**0.60**	**325**	Pg		**Pb**	**13 40 40.2**	**+0.4**
TEL				Sg		**Sb**	**13 40 49.0**	**+0.6**
CUR	**Chagan-Uzun**	**1.60**	**255**	Pg		Pn	**13 40 55.9**	**+0.4**
CUR				Sg		Sn	**13 41 16.6**	**-0.7**
ULGR	**Ulagan, Altay**	**1.78**	**274**	Pg		**Pb**	**13 40 59.9**	**0.0**
ULGR				Sg		**Sb**	**13 41 23.1**	**+0.8**
AKAR	**Aktash**	**2.01**	**265**	Pg		**Pb**	**13 41 04.0**	**+0.2**
AKAR				Sg		**Sn**	**13 41 28.2**	**+1.7**
CHBI	**Chibit, Altay**	**2.09**	**265**	Pg		**Pb**	**13 41 05.3**	**+0.2**
CHBI				Sg		**Sb**	**13 41 32.5**	**+1.4**
DJO	**Djoy, Khakassi**	**2.27**	**7**	Pg		**Pg**	**13 41 10.8**	**+0.1**
DJO				Sg		**Sg**	**13 41 40.2**	**+0.1**
DGZ	**Jazzator, Alta**	**2.29**	**250**	Pg		**Pb**	**13 41 08.7**	**+0.1**
DGZ				Sg		**Sb**	**13 41 37.9**	**+0.8**
DJOS	**Djoyskaya Sosn**	**2.31**	**10**	Pg		**Pg**	**13 41 11.2**	**0.0**
DJOS				Sg		**Sg**	**13 41 42.0**	**+0.9**
CERR	**Cheremushki**	**2.37**	**10**	Pg		**Pg**	**13 41 12.6**	**+0.2**
CERR				Sg		**Sg**	**13 41 43.0**	**0.0**
TBTR	**Tabat**	**2.40**	**360**	Pg		**Pg**	**13 41 12.8**	**-0.4**
TBTR				Sg		**Sg**	**13 41 44.5**	**+0.2**
ARTR	**Artybash**	**2.53**	**302**	Pg		**Pb**	**13 41 11.6**	**-0.9**
ARTR				Sg		**Sg**	**13 41 47.2**	**-1.0**
KZLR	**Kyzyl**	**2.61**	**62**	Pg		**Pb**	**13 41 15.3**	**+1.2**
KZLR				Sg		**Sg**	**13 41 51.2**	**+0.2**
ARDR	**Aradan**	**2.65**	**38**	Pg		**Pg**	**13 41 16.5**	**-1.3**
ARDR				Sg		**Sg**	**13 41 50.5**	**-1.6**
BLRR	**Bol'shaya Rech**	**2.72**	**22**	Pg		**Pg**	**13 41 18.3**	**-0.9**
BLRR				Sg		**Sg**	**13 41 54.1**	**-0.3**
VEH	**Verkhnyaya Baz**	**2.74**	**355**	Pg		**Pg**	**13 41 19.1**	**-0.5**
VEH				Sg		**Sg**	**13 41 55.1**	**0.0**
ERNS	**Erzin**	**2.83**	**94**	Sg		**Sb**	**13 41 53.6**	**+1.1**
TUNR	**Tungur**	**2.86**	**264**	Pg		**Pb**	**13 41 18.8**	**+0.7**
TUNR				Sg		**Sb**	**13 41 55.4**	**+2.2**
TASR	**Tashtagol**	**2.86**	**322**	Pg		**Pg**	**13 41 21.4**	**-0.5**
TASR				Sg		**Sg**	**13 41 57.0**	**-1.9**
ABNR	**Abakan**	**3.23**	**7**	Pg		**Pg**	**13 41 27.3**	**-1.6**
ABNR				Sg		**Sg**	**13 42 11.1**	**+0.3**
UKR	**Ust'-Kan**	**3.82**	**278**	Pg		**Pb**	**13 41 36.6**	**+2.0**
UKR				Sg		**Sg**	**13 42 26.9**	**-2.7**
TDJR	**Todzha**	**3.83**	**59**	Pg		**Pb**	**13 41 35.1**	**+0.3**
TDJR				Sg		**Sb**	**13 42 25.9**	**+4.6**
ELT	**Eltsovka**	**3.91**	**316**	Pg		**Pb**	**13 41 37.6**	**+1.6**
ELT				Sg		**Sg**	**13 42 29.5**	**-3.1**
SHRR	**Shira**	**3.99**	**355**	Pg		**Pg**	**13 41 41.5**	**-1.9**
SHRR				Sg		**Sg**	**13 42 34.0**	**-1.1**
KNGR	**Kungurtug, Tuv**	**4.31**	**86**	Pn		**Pn**	**13 41 29.4**	**-3.4**
KNGR				Pg		**Pb**	**13 41 46.5**	**+3.5**
KNGR				Sg		**Sg**	**13 42 45.2**	**-0.4**
SALR	**Pechorkino, Sa**	**4.97**	**324**	Sg		**Sg**	**13 43 04.8**	**-1.6**
ZAA0	**Zalesovo Array**	**5.00**	**316**	⇑Pg		**Pb**	**13 41 56.9**	**+2.2**
	0.2nm,0.6s							
ZAA0				⇓Lg		Lg	13 43 04.6	
	2.3nm,0.8s							
ORY	**Orie**	**5.20**	**29**	Pg		**Pg**	**13 42 06.0**	**-0.7**
ORY				Sg		**Sg**	**13 43 11.7**	**-2.3**
ORL	**Orlik**	**6.00**	**67**	Sg		**Sg**	**13 43 36.8**	**-2.8**
NVSII	**Novosibirsk**	**6.29**	**316**	Sg		**Sg**	**13 43 47.1**	**-1.5**
MK31	**Makanchi Array**	**6.73**	**240**	⇑Pn		**Pn**	**13 42 06.9**	**+0.9**
	0.6nm,0.6s,baz=49,slow=16,SNR=12							
MK31				⇑Pg		Pb	13 42 29.2	+5.1
	0.9nm,0.5s,baz=52,slow=16,SNR=3.5							
MK31				⇑Lg		Lg	13 43 58.3	
	2.5nm,0.5s,baz=59,slow=26,SNR=3.5							
MAKZ	**Makanchi**	**6.90**	**241**	⇑Pg		Pg	13 42 34.7	-4.4
	3.6nm,0.9s							
MAKZ				⇓Lg		Lg	13 44 01.0	
	5.1nm,1.1s							
KURK	**Kurchatov**	**7.72**	**276**	⇓Pg		**Pb**	**13 42 43.8**	**+2.9**
	3.0nm,1.2s							
KURK				⇑Lg		Lg	13 44 29.0	
	5.7nm,0.8s							
KURBB	**Kurchatov Arra**	**7.78**	**275**	⇓Pg		**Pb**	**13 42 46.6**	**+4.6**
	2.0nm,0.8s							
KURBB				⇑Lg		Lg	13 44 31.2	
	14nm,0.7s							

*IDC **21** 13:43:26.8±0.8, 13°.51N×91°.03W, h0km, mb4.2/13, mb1 4.4/16, mb1mx4.2/42, mbtmp4.2/16, ML3.8/3, MS4.1/16, Ms1 4.1/16, ms1mx3.8/40, Error ellipse: s-maj=30.1km s-min=12.0km az=49.0*
*SNET **21** 13:43:31.4±1.3, 13°.33N×91°.23W, h49km, ML4.3*
*NEIC **21** 13:43:32.2±2.5, 13°.37N±0°.10×91°.20W±0°.08, h45km±10km, mb4.6/23, Error ellipse: s-maj=16.7km s-min=7.5km az=215.0*
*GCG **21** 13:43:44.2±0.6, 14°.34N×91°.05W, h38km±8km, MD4.3*

ISC 21 13:43:32.6±0.6, 13°.37N±0°.07×91°.18W±0°.06, h50km, n111, σ1℘29/103, mb4.4/22, MS4.1/15, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FUG	**Fuego 3**	**1.12**	**17**	*e*P		**Pn**	**13 43 52.0**	**-0.1**
ERG	**Entre ros, C**	**1.13**	**340**	*e*P		**Pn**	**13 43 55.0**	**+2.9**
PCG	**Pacaya**	**1.16**	**29**	*e*P		**Pn**	**13 43 54.9**	**+2.2**
RTAL	**Retalhuleu**	**1.25**	**336**			**Pn**	**13 43 51.3**	**-2.4**
STG3	**Santiaguito 3,**	**1.38**	**344**	*e*P		**Pn**	**13 43 57.2**	**+1.5**
NBG	**Las Nubes**	**1.45**	**34**	*e*P		**Pn**	**13 43 58.3**	**+1.6**
RTR	**El Retiro**	**1.58**	**71**	*e*P		**Pn**	**13 43 58.2**	**-0.2**
SBLS	**San Blas**	**1.58**	**73**	*e*P		**Pn**	**13 43 58.6**	**+0.1**
SNJE	**San Jose**	**1.61**	**72**	*e*P		**Pn**	**13 43 58.6**	**-0.2**
CEDA	**San Andres**	**1.79**	**76**	IAML			13 44 39.6	
	comp=Z,2μm,0.4s							
TACO	**Tacachico**	**1.87**	**71**	*e*P		**Pn**	**13 44 01.8**	**-0.4**
BOQS	**Boqueron**	**1.88**	**79**	*e*P		**Pn**	**13 44 03.4**	**+0.9**
SNET	**Serv Nac Est T**	**1.92**	**80**	Pn		**Pn**	**13 44 03.0**	**0.0**
HUEH	**Huehuetenango**	**1.96**	**351**	Pn		**Pn**	**13 44 03.5**	**-0.2**
MTO3	**Montecristo**	**2.04**	**60**	*e*P		**Pn**	**13 44 04.8**	**+0.1**
MTO3	**Montecristo**	**2.04**	**60**	Pn		**Pn**	**13 44 05.0**	**+0.2**
LFRS	**El Faro**	**2.08**	**83**	*e*P		**Pn**	**13 44 05.2**	**+0.1**
LBRS	**Las Brisas**	**2.11**	**80**	*e*P		**Pn**	**13 44 05.7**	**+0.1**
ESQI	**Esquipulas**	**2.14**	**56**	*e*P		**Pn**	**13 44 06.6**	**+0.6**
ESQI				*e*P			13 44 07.4	
ESQI				IAML			13 44 52.2	
	comp=N,4μm,1.0s							
ESQI	**Esquipulas**	**2.14**	**56**	Pn		**Pn**	**13 44 06.5**	**+0.6**
PAVA	**Las Pavas**	**2.21**	**81**	*e*P		**Pn**	**13 44 06.7**	**-0.2**
MRL	**Marmol**	**2.23**	**40**	*e*P		**Pn**	**13 44 09.8**	**+2.4**
COEG	**Centro de Oper**	**2.25**	**83**	*e*P		**Pn**	**13 44 07.3**	**-0.1**
COEG				IAML			13 44 46.5	
	comp=Z,807nm,0.3s							
TECA	**Tecapa**	**2.61**	**87**	*e*P		**Pn**	**13 44 12.9**	**+0.4**
PACA	**Pacayal**	**2.78**	**88**	*e*P		**Pn**	**13 44 16.4**	**+1.6**
CCIG	**Comitan**	**3.04**	**342**			**Pn**	**13 44 18.2**	**-0.2**
LCND	**La Caada**	**3.20**	**91**	*e*P		**Pn**	**13 44 19.7**	**-0.7**
LCND				IAML			13 45 05.4	
	comp=Z,523nm,0.2s							
TGUH	**Tegucigalpa,Un**	**3.86**	**79**	Pn		**Pn**	**13 44 30.4**	**+0.8**
MATN	**Matagalpa**	**5.14**	**94**	Pn		**Pn**	**13 44 45.4**	**-1.7**
CMIG	**Matias Romero**	**5.14**	**316**	Pn		**Pn**	**13 44 43.6**	**-3.5**
	comp=Z,1.5nm,0.3s,baz=142,slow=11,SNR=12							
CMIG				Sn		**Sn**	**13 45 46.3**	**+1.1**
	comp=Z,4.9nm,0.3s,baz=46,slow=8.3,SNR=5.4							
CMIG				Lg		Lg	13 45 58.5	
	comp=Z,7.6nm,0.3s,baz=56,slow=23,SNR=4.4							
CMIG				LR		LR	13 46 54.1	
	comp=Z,1μm,20.0s,baz=155,slow=40							
JTS	**Las Juntas de**	**6.82**	**116**	Pn		**Pn**	**13 45 09.1**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=283,slow=17,SNR=2.9							
JTS				Lg		Lg	13 47 01.3	
	comp=Z,0.2nm,0.3s,baz=89,slow=20,SNR=1.1							
JTS	**Las Juntas de**	**6.82**	**116**	Pn		**Pn**	**13 45 11.7**	**+1.5**
TEIG	**Tepich**	**7.36**	**22**	Pn		**Pn**	**13 45 19.4**	**+1.9**
MOTC	**Monteria, Cord**	**15.89**	**105**	*e*P		**Pn**	**13 47 12.8**	**-0.2**
DBBC	**Dabeiba**	**16.02**	**112**	*e*P		**P**	**13 47 19.8**	**+2.3**
SJCC	**San Jacinto, C**	**16.05**	**101**	*e*P		**P**	**13 47 18.3**	**+0.5**
CBOC	**Ciudad Bolivar**	**16.70**	**115**	*e*P		**P**	**13 47 26.2**	**+1.0**
PLMC	**San Jos del P**	**16.93**	**118**	*e*P		P	13 47 35.5	+7.9
HELC	**Santa Helena**	**16.98**	**113**	*e*P		**Pn**	**13 47 26.1**	**-1.1**
ZARC	**Zaragoza, Cauc**	**17.08**	**108**	*e*P		**Pn**	**13 47 27.9**	**-0.1**
YOTC	**Yotoco, Valle**	**17.37**	**121**	*e*P		**Pn**	**13 47 29.5**	**-2.2**
PTBC	**PUERTO BERRIO,**	**17.81**	**111**	*e*P		**P**	**13 47 37.1**	**-0.1**
BBAC	**Balboa, Cauca**	**17.81**	**128**	*e*P		**P**	**13 47 39.0**	**+1.5**
NORC	**Norcasia**	**17.85**	**114**	*e*P		**P**	**13 47 37.8**	**0.0**
TOLC	**Tolima**	**17.92**	**118**	*e*P		**P**	**13 47 43.3**	**+4.5**
POPC	**Popayan, Colom**	**17.93**	**126**	*e*P		**Pn**	**13 47 37.5**	**-1.3**
OTAV	**Otavalo**	**18.15**	**135**	*e*P		**Pn**	**13 47 41.5**	**0.0**
GCUF	**Volcan Galeras**	**18.25**	**130**	*e*P		**Pn**	**13 47 44.0**	**+1.1**
PCON	**Cinco Dias**	**18.28**	**126**	*e*P		**P**	**13 47 42.5**	**-0.5**
ORTC	**Ortega, Tolima**	**18.33**	**119**	*e*P		**Pn**	**13 47 43.9**	**+0.4**
SPBC	**San Pablo de B**	**18.52**	**113**	*e*P		**Pn**	**13 47 45.5**	**-0.3**
ROSC	**El Rosal**	**18.67**	**115**	*e*P		**Pn**	**13 47 49.4**	**+1.6**
PAMC	**Pamplona, Colo**	**19.13**	**106**	*e*P		**P**	**13 47 51.1**	**-1.1**
CHIC	**Chingaza**	**19.28**	**115**	*e*P		**Pn**	**13 47 55.7**	**+0.4**
RUSC	**La Rusia**	**19.32**	**111**	*e*P		**P**	**13 47 53.6**	**-0.7**
FLOC	**Florencia**	**19.32**	**126**	*e*P		**Pn**	**13 47 57.5**	**+2.2**
TXAR	**Lajitas Array**	**19.

comp=Z,0.3nm,0.8s,baz=67,slow=1.6,SNR=2.1
CMAR Chiang Mai Arr 146.84 342 PKPbc **PKPab 14 03 11.2 -0.2**
comp=Z,4.4nm,0.8s,baz=333,slow=3.3,SNR=27

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*IDC **21** 13:50:42.6±1.2, 19.5°58N×120.°69E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/46, mbtmp3.8/7, Error ellipse: s-maj=59.4km s-min=18.1km az=61.0*
*NEIC **21** 13:50:44.0±2.1, 19.°6N±0.°1×120.°8E±0.°2, h10km±2km, mb4.1/6, Error ellipse: s-maj=37.4km s-min=9.2km az=59.0*
ISC 21 13:50:45.9±1.0, **19.°6N**±0.°1×**120.°7E**±0.°2, **h23**km, **n20, σ0s82/19, mb4.0/9, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWG	**Pinlang**	**3.23**	**6**	P	Pn	**Pn**	**13 51 34.2**	**-1.1**
TPUB	**Ta-pu**	**3.69**	**359**	P	Pn	**Pn**	**13 51 40.2**	**-1.4**
YULB	**Yu-li**	**3.83**	**9**	P	Pn	**Pn**	**13 51 43.6**	**+0.2**
YHNB	**Yeheng**	**5.09**	**7**	P	Pn	**Pn**	**13 52 01.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.58**	**270**	P	P	**P**	**13 55 23.1**	**-0.3**
	0.5nm,0.3s,baz=79,slow=10,SNR=4.6							
MKAR	**Makanchi Array**	**41.42**	**320**	P	P	**P**	**13 58 31.4**	**+0.7**
	1.4nm,0.9s,baz=113,slow=9.5,SNR=5.0							
MKAR	**Makanchi Array**	**41.42**	**320**	P	P		**13 58 30.9**	**+0.2**
WRA	**Warramunga Arr**	**41.51**	**160**	P	P		**13 58 30.9**	**-0.7**
	1.2nm,0.5s,baz=344,slow=9.6,SNR=18							
WRA	**Warramunga Arr**	**41.51**	**160**	P	P		**13 58 30.2**	**-1.4**
WB2	**Warramunga Arr**	**41.51**	**160**	P	P		**13 58 31.0**	**-0.6**
WR0	**Warramunga Arr**	**41.59**	**160**	P	P		**13 58 31.7**	**-0.5**
WR0					IAmb	IAmb	13 58 44.0	
	comp=Z,5.0nm,1.2s							
ZALV	**Zalesovo Beam**	**43.90**	**330**	P	P		**13 58 50.3**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=114,slow=9.6,SNR=3.6							
AS31	**Alice Springs**	**44.89**	**163**	P	P		**13 58 59.3**	**+0.4**
AS31					IAmb	IAmb	13 59 13.1	
	comp=Z,1.6nm,0.6s							
ASAR	**Alice Springs**	**44.89**	**163**	P	P		**13 58 59.7**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=340,slow=7.0,SNR=15							
ASAR	**Alice Springs**	**44.89**	**163**	P	P		**13 58 59.5**	**+0.6**
KURK	**Kurchatov**	**45.39**	**323**	P	P		**13 59 03.2**	**+0.7**
KURK	**Kurchatov**	**45.39**	**323**	IAmb	IAmb		13 59 03.9	
	comp=Z,2.3nm,0.9s							
KURBB	**Kurchatov Arra**	**45.40**	**323**	P	P		**13 59 03.2**	**+0.6**
	comp=Z,2.3nm,0.8s,baz=122,slow=7.9,SNR=18							
BRVK	**Borovoye**	**51.06**	**323**	P	P		**13 59 47.2**	**+0.9**
FINES	**FINESS Array B**	**75.17**	**330**	P	P		**14 02 26.5**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=103,slow=6.1,SNR=1.9							

DJA 21 13:54:03.2±0.3, **1°S**±3°×**12°8E**±°, **h10**km, **M4.1**/13, **mB5.0**/1, **mb4.8**/3, **MLv3.7**/13, **Mw(mB)4.3**/1, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.57**	**352**	P	Pn		13 54 29.2	-1.9
TNTI				S	Sn		13 54 48.8	-2.7
NLAI	**Namlea**	**2.48**	**191**	P	Pn		13 54 43.3	-0.4
NLAI				S	Sn		13 55 14.6	+0.5
MSAI	**Masohi**	**2.87**	**152**	P	Pn		13 54 50.7	+1.6
KMSI	**Cibinong**	**3.85**	**291**	P	Pn		13 55 02.8	+0.2
FAKI	**Fak Fak**	**5.11**	**114**	P	Pn		13 55 18.9	-1.0
	0.1nm30nm,0.9s							
APSI	**Ampana**	**5.94**	**269**	P	Pn		13 55 31.5	+0.2
	0.2nm48nm,0.5s							
SPSI	**Sidrap Palu**	**8.43**	**248**	P	Pn		13 56 06.3	+0.9

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*NEIC **21** 13:59:25.3±1.6, 18.°48N±0.°06×146.°5E±0.°2, h40km±13km, mb4.4/13, Error ellipse: s-maj=25.4km s-min=7.9km az=77.0*
*IDC **21** 13:59:33.2±7.4, 18.°23N×146.°39E, h92km±52km, mb3.4/4, mb1 3.5/5, mb1mx3.2/50, mbtmp3.8/5, Error ellipse: s-maj=157.9km s-min=21.1km az=90.0*
ISC 21 13:59:27.6±1.0, **18.°41N**±0.°08×**146.°7E**±0.°2, **h64**km, **n22, σ1s81/20, mb4.1/9, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.09**	**200**	P	P	**Pn**	**14 00 43.8**	**+2.4**
	4.3nm,0.3s,baz=190,slow=20,SNR=0.9							
GUMO				S	S	**Sn**	**14 01 39.4**	**+0.5**
	3.1nm,0.3s,baz=126,slow=19,SNR=2.1							
GUMO	**Guam**	**5.09**	**200**	Pn	Pn	**Pn**	**14 00 39.2**	**-2.1**
JHJ2	**Mitsune**	**15.88**	**339**	Pn	Pn	**Pn**	**14 03 04.2**	**-2.9**
PATS	**Pohnpei**	**16.16**	**134**	Pn	Pn	**Pn**	**14 03 08.7**	**-2.0**
PATS					IAmb	IAmb	14 03 24.8	
	comp=Z,65nm,1.1s							
H11S3	**WAKE ISLAND Hy**	**19.00**	**87**	T	T	T	14 23 14.5	
	baz=273,slow=75,SNR=6.3							
H11S1	**WAKE ISLAND Hy**	**19.01**	**87**	T	T	T	14 23 13.3	
	baz=273,slow=75,SNR=3.9							
H11S2	**WAKE ISLAND Hy**	**19.02**	**87**	T	T	T	14 23 12.4	
	baz=273,slow=75,SNR=5.7							
MJB9	**Matsu-Tunnel**	**19.55**	**339**	P	P		**14 03 49.1**	**-0.9**
LUWI	**Luwuk**	**30.42**	**233**	P	P		**14 05 31.7**	**-2.4**
MYLDM	**Lahad Datu**	**30.48**	**248**	P	P		**14 05 33.4**	**-1.3**
MYLDM					IAmb	IAmb	14 05 47.7	
	comp=Z,9.0nm,1.2s							
KLR	**Kul'dur**	**33.02**	**342**	P	P		**14 06 00.3**	**+3.7**
	comp=Z,1.0nm,0.4s,baz=163,slow=14,SNR=6.7							
MTN	**Manton Dam**	**34.62**	**207**	P	P		**14 06 09.6**	**-1.2**
MTN					IAmb	IAmb	14 06 16.2	
	comp=Z,13nm,1.2s							
WB0	**Warramunga Arr**	**39.80**	**198**	P	P		**14 06 55.4**	**+0.8**
WB0					IAmb	IAmb	14 07 13.0	
	comp=Z,11nm,1.5s							
WR0	**Warramunga Arr**	**39.94**	**198**	P	P		**14 06 56.3**	**+0.5**
WB2	**Warramunga Arr**	**39.98**	**198**	P	P		**14 06 57.1**	**+1.0**
WB2					IAmb	IAmb	14 07 03.2	
	comp=Z,4.2nm,1.2s							
WRA	**Warramunga Arr**	**39.98**	**198**	P	P		**14 06 56.7**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=22,slow=9.5,SNR=8.9							
WRA	**Warramunga Arr**	**39.98**	**198**	P	P		**14 06 55.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**41.75**	**211**	P	P		**14 07 12.2**	**+1.5**
FITZ					IAmb	IAmb	14 07 13.1	
	comp=Z,4.0nm,1.1s							
AS31	**Alice Springs**	**43.63**	**197**	P	P		**14 07 26.2**	**+0.3**
ASAR	**Alice Springs**	**43.63**	**197**	P	P		**14 07 26.4**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=24,slow=6.7,SNR=11							
STKA	**Stephens Creek**	**50.23**	**186**	P	P		**14 08 19.1**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=358,slow=11,SNR=2.8							
STKA	**Stephens Creek**	**50.23**	**186**	P	P		**14 08 17.9**	**+0.7**

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*IDC **21** 14:01:30.9±1.1, 19.°53N×120.°62E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/52, mbtmp3.8/7, Error ellipse: s-maj=52.4km s-min=18.2km az=64.0*
*MAN **21** 14:01:33.2, 19.°53N×120.°42E, h14km, mb4.3, ML3.2, MS2.9*
ISC 21 14:01:34.4±1.2, **19.°5N**±0.°2×**120.°6E**±0.°3, **h23**km, **n7, σ0s39/7, mb3.8/6, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.51**	**271**	P	P	**P**	**14 06 10.9**	**-0.1**
	0.7nm,0.4s,baz=78,slow=9.1,SNR=6.8							
SONM	**Songino Array**	**30.52**	**341**	P	P	**P**	**14 07 45.9**	**-0.1**
	0.5nm,0.6s,baz=153,slow=9.0,SNR=3.2							
MKAR	**Makanchi Array**	**41.42**	**320**	P	P	**P**	**14 09 19.4**	**+0.2**
	3.5nm,1.0s,baz=107,slow=8.1,SNR=12							
WRA	**Warramunga Arr**	**41.46**	**160**	P	P	**P**	**14 09 19.3**	**-0.4**
	0.4nm,0.6s,baz=342,slow=9.2,SNR=7.0							
ZALV	**Zalesovo Beam**	**43.93**	**330**	P	P	**P**	**14 09 39.0**	**-0.4**
	0.6nm,0.4s,baz=119,slow=8.6,SNR=5.7							
ASAR	**Alice Springs**	**44.84**	**163**	P	P	**P**	**14 09 47.4**	**+0.4**
	0.8nm,0.6s,baz=340,slow=6.9,SNR=24							
FINES	**FINESS Array B**	**75.20**	**330**	P	P	**P**	**14 13 15.2**	**+0.3**
	0.5nm,0.5s,baz=39,slow=9.3,SNR=3.6							

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*MEX **21** 14:18:16.4±0.3, 13.°05N×91.°92W, h88km±191km, MD3.9*
GCG 21 14:18:25.0±0.3, **14.°98N×91.°52W, h34**km±9km, **MD3.6, Guatemala**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.27**	**191**	*e*P	P	Pb	14 18 33.2	+0.5
STG3				*e*S	S	Sb	14 18 39.3	+1.5
FUG	**Fuego 3**	**0.84**	**129**	*e*P	P	Pn	14 18 40.9	+0.3
FUG				*e*S	S	Sb	14 18 53.5	+1.1
NBG	**Las Nubes**	**1.20**	**109**	*e*P	P	Pn	14 18 46.3	+0.7
PCIG		**1.79**	**294**	*i* P	P	Pb	14 19 00.4	+3.2
PCIG				*i* S	S	Sb	14 19 33.4	+14

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*IDC **21** 14:20:18.4±1.4, 1.°29N×125.°48E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.5/45, mbtmp3.7/6, ML2.8/1, Error ellipse: s-maj=114.3km s-min=19.3km az=68.0*
*NEIC **21** 14:20:21±2.9, 1.°6N±0.°2×126.°4E±0.°2, h36km±13km, mb4.3/10, Error ellipse: s-maj=29.4km s-min=13.8km az=45.0*
ISC 21 14:20:22.0±1.0, **1.°6N**±0.°2×**126.°5E**±0.°2, **h47**km, **n20, σ2s01/20, mb3.9/9, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**131**	P	P	**Pn**	**14 20 42.7**	**+0.6**
FAKI	**Fak Fak**	**7.28**	**128**	Pn	Pn	**Pn**	**14 22 03.7**	**-2.2**
KNRA	**Kununurra**	**17.26**	**173**	Pn	Pn	**Pn**	**14 24 17.9**	**-2.0**
KNRA					IAmb	IAmb	14 24 54.2	
	comp=Z,54nm,1.8s							
FITZ	**Fitzroy Crossi**	**19.54**	**182**	P	P	**P**	**14 24 44.1**	**-1.7**
	comp=Z,0.0nm,0.3s,baz=351,slow=13,SNR=1.7							
WB0	**Warramunga Arr**	**22.56**	**160**	P	P		**14 25 19.9**	**+1.4**
WB0					IAmb	IAmb	14 25 46.7	
	comp=Z,9.4nm,1.4s							
WRAB	**Tennant Creek**	**22.70**	**161**	P	P		**14 25 21.2**	**+1.3**
WRAB					IAmb	IAmb	14 25 22.8	
	comp=Z,16nm,1.6s							
WRA	**Warramunga Arr**	**22.71**	**161**	P	P		**14 25 21.6**	**+1.6**
	comp=Z,5.5nm,1.1s,baz=336,slow=11,SNR=16							
WRA	**Warramunga Arr**	**22.71**	**161**	P	P		**14 25 21.4**	**+1.4**
WB2	**Warramunga Arr**	**22.71**	**161**	P	P		**14 25 20.2**	**+0.2**
WR0	**Warramunga Arr**	**22.79**	**160**	P	P		**14 25 20.8**	**-0.1**
WR0					IAmb	IAmb	14 25 58.3	
	comp=Z,22nm,1.9s							
PMG	**Port Moresby**	**23.30**	**118**	P	P		**14 25 24.2**	**-1.8**
AS31	**Alice Springs**	**26.08**	**164**	P	P		**14 25 54.1**	**+2.6**
ASAR	**Alice Springs**	**26.08**	**164**	P	P		**14 25 55.6**	**+4.2**
	comp=Z,0.8nm,0.4s,baz=351,slow=14,SNR=13							
ASAR	**Alice Springs**	**26.08**	**164**	P	P		**14 25 53.9**	**+2.4**
GSI	**Gunungsitoli**	**28.90**	**270**	P	P		**14 26 14.9**	**-1.9**
MKAR	**Makanchi Array**	**59.20**	**326**	P	P		**14 30 19.3**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=120,slow=7.5,SNR=5.5							
MKAR	**Makanchi Array**	**59.20**	**326**	P	P		**14 30 18.4**	**-0.1**
KURBB	**Kurchatov Arra**	**63.44**	**328**	P	P		**14 30 47.6**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=126,slow=6.1,SNR=5.9							
KURK	**Kurchatov**	**63.44**	**328**	P	P		**14 30 46.3**	**-0.6**
KURK					IAmb	IAmb	14 32 30.1	
	comp=Z,2.6nm,1.1s							
VNDA	**Vanda**	**81.31**	**173**	P	P		**14 32 36.1**	**+3.2**
	comp=Z,0.4nm,0.8s,baz=322,slow=3.1,SNR=2.4							

IDC 21 14:39:38.8±2.0, **1.°62N×126.°65E, h0km, mb3.3**/3, **mb1 3.6**/3, **mb1mx3.3**/24, **mbtmp3.4**/3, **Error ellipse: s-maj=168.6km s-min=24.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.72**	**161**	P	P		14 44 42.4	-0.1
	0.9nm,0.4s,baz=339,slow=11,SNR=26							
ASAR	**Alice Springs**	**26.11**	**165**	P	P		14 45 14.7	+0.1
	0.3nm,0.5s,baz=349,slow=13,SNR=9.3							
MKAR	**Makanchi Array**	**59.24**	**326**	P	P		14 49 42.0	-0.1
	0.3nm,0.7s,baz=108,slow=9.4,SNR=2.9							

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*IDC **21** 15:00:47.2±1.1, 34.°79N×73.°78E, h0km, mb3.4/4, mb1 3.5/8, mb1mx3.3/52, mbtmp3.5/8, ML3.3/4, Error ellipse: s-maj=32.4km s-min=22.3km az=78.0*
ISC 21 15:00:52.2±1.2, **34.°91N**±0.°10×**73.°9E**±0.°2, **h34**km, **n11, σ1s43/12, mb3.4/3, 4C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.73**	**3**	Pn	Pn		15 02 47.4	+5.0
	0.3nm,0.3s,baz=166,slow=2.7,SNR=5.1							
TKM2	**Tokmak 2**	**8.10**	**9**	⇑Pn	**Pn**		**15 02 49.9**	**+2.3**
	2.2nm,0.8s							
TKM2				⇑Sn	**Sn**		**15 04 18.8**	**+0.7**
	3.2nm,0.8s							
KK31	**Karatay Array**	**8.59**	**343**	⇑Pn	**Pn**		**15 02 54.7**	**+0.6**
	0.4nm,0.3s,baz=158,slow=12,SNR=20							
KK31				⇑Sn	**Sn**		**15 04 28.4**	**-1.4**
	0.7nm,0.3s,baz=160,slow=22							
MKAR	**Makanchi Array**	**13.45**	**26**	Pn	P		**15 04 06.6**	**-2.8**
	0.1nm,0.3s,baz=209,slow=12,SNR=3.3							
KURBB	**Kurchatov Arra**	**16.06**	**11**	Pn	**Pn**		**15 04 35.1**	**-0.1**
	0.0nm,0.3s,baz=199,slow=11,SNR=2.5							
BVAR	**Borovoye Array**	**18.28**	**353**	P	P		**15 05 02.6**	**-0.2**
	0.2nm,0.3s,baz=129,slow=12,SNR=5.4							
AKTO	**Aktyubinsk**	**19.35**	**328**	P	P		**15 05 15.6**	**+0.9**
	0.4nm,0.3s,baz=129,slow=10,SNR=5.0							
ZALV	**Zalesovo Beam**	**20.52**	**19**	P	P		**15 05 26.5**	**-0.8**
	1.2nm,0.4s,baz=214,slow=11,SNR=6.0							
TORD	**Torodi Ar. Bea**	**68.08**	**271**	P	P		**15 11 48.2**	**-0.6**
	0.2nm,0.4s,baz=46,slow=6.4,SNR=2.9							
WRA	**Warramunga Arr**	**79.15**	**124**	P	P		**15 12 54.3**	**+0.6**
	0.3nm,0.8s,baz=325,slow=4.7,SNR=4.7							
ASAR	**Alice Springs**	**81.41**	**127**	P	P		**15 13 06.3**	**+0.5**
	0.2nm,0.7s,baz=300,slow=4.3,SNR=4.5							

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*IDC **21** 15:06:32.8±1.5, 26.°28S×27.°71E, h0km, mb3.6/2, mb1 3.8/8, mb1mx3.5/43, mbtmp3.7/8, ML3.4/4, Error ellipse: s-maj=19.1km s-min=17.9km az=70.0*
*PRE **21** 15:06:32.9±1.1, 26.°37S×27.°67E, h2km, ML2.7*
*EAF **21** 15:06:34.4±0.7, 26.°36S×27.°73E, h5km±7km, MD3.6*
*BUL **21** 15:06:35.2±1.3, 26.°35S×27.°75E, h18km±17km, MD3.6*
ISC 21 15:06:32.9±1.1, **26.°36S**±0.°03×**27.°69E**±0.°03, **h11**km±7km, **n25, σ1s91/48, South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.25**	**254**	*e*P	P	**Pg**	**15 06 37.6**	**-0.6**
WDLM				*e*S	S	**Sg**	**15 06 40.7**	**-1.0**
WDLM					AML	AML	15 06 43.4	
	comp=Z,906nm,0.4s							
ERPM	**east rand prop**	**0.50**	**88**	*e*P	P	**Pg**	**15 06 43.0**	**+0.3**
ERPM				*e*S	S	**Sb**	**15 06 51.1**	**0.0**
ERPM					AML	AML	15 06 53.4	
	comp=Z,1μm,0.6s							
PRYS	**Parys**	**0.64**	**207**	*e*P	P	**Pg**	**15 06 45.6**	**+0.3**
PRYS				*e*S	S	**Sg**	**15 06 53.6**	**-0.1**
PRYS					AML	AML	15 07 02.9	
	comp=Z,603nm,0.7s							
SWZ	**Schweizer**	**2.26**	**248**	*e*P	Pn		**15 07 11.1**	**+0.8**
SWZ				*e*S	Sn		**15 07 40.0**	**+1.8**
SWZ					AML	AML	15 07 44.8	
	comp=Z,224nm,0.4s							
LBTB	**Lobatse**	**2.31**	**305**	Pn	Pn		**15 07 13.5**	**+2.5**
	comp=Z,13nm,0.3s,baz=122,slow=14,SNR=205							
LBTB					Pg	**Pb**	**15 07 14.8**	**+0.1**
	comp=Z,13nm,0.3s,baz=121,slow=18,SNR=205							
LBTB					Lg	Lg	15 07 44.5	
	comp=Z,36nm,0.3s,baz=61,slow=5.5,SNR=43							
LBTB					Rg	Rg	15 07 54.3	
	comp=Z,133nm,1.0s,baz=221,slow=22,SNR=10.0							
LBTB	**Lobatse**	**2.31**	**305**	*i* P	Pn		**15 07 13.4**	**+2.4**
LBTB				*i* S	Sn		**15 07 42.1**	**+2.6**
LBTB	**Lobatse**	**2.31**	**305**	*e*P	Pn		**15 07 12.9**	**+1.9**
LBTB				*e*S	Sn		**15 07 42.1**	**+2.6**
LBTB					AML	AML	15 07 45.2	
	comp=Z,148nm,0.7s							
LBTB	**Lobatse**	**2.31**	**305**	*i* P	Pn		**15 07 13.4**	**+2.4**
LBTB				*i* S	Sn		**15 07 42.1**	**+2.6**
BOSA	**Boshof**	**3.12**	**223**	Pn	Pn		**15 07 23.9**	**+1.8**
	comp=Z,3.0nm,0.3s,baz=40,slow=12,SNR=156							
BOSA					Pg	**Pg**	**15 07 31.6**	**-1.0**
	comp=Z,6.4nm,0.3s,baz=44,slow=15,SNR=31							
BOSA					Sn	**Sn**	**15 08 00.1**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=120,slow=20,SNR=3.8							
BOSA					Lg	Lg	15 08 08.3	
	comp=Z,9.6nm,0.3s,baz=149,slow=18,SNR=14							
BOSA	**Boshof**	**3.12**	**223**	*i* P	Pn		**15 07 24.0**	**+1.9**
BOSA				*i* S	Sn		**15 08 00.3**	**+1.0**
BOSA	**Boshof**	**3.12**	**223**	*e*P	Pn		**15 07 23.0**	**+0.9**
BOSA				*e*S	Sn		**15 08 00.1**	**+0.8**
BOSA					AML	AML	15 08 11.7	
	comp=Z,29nm,0.4s							
BOSA	**Boshof**	**3.12**	**223**	*i* P	Pn		**15 07 24.0**	**+1.9**
BOSA				*i* S	Sn		**15 08 00.3**	**+1.0**
POGA	**Pongola**	**3.72**	**106**	*i* P	Pn		**15 07 32.0**	**+1.7**
POGA				*i* S	Sn		**15 08 13.4**	**-0.8**
POGA	**Pongola**	**3.72**	**106**	*i* P	Pn		**15 07 32.0**	**+1.7**
POGA				*i* S	Sn		**15 08 13.4**	**-0.8**

MOPA	**Mopani**	**4.40**	**51**	*e*P	Pn		**15 07 40.9**	**+1.3**
MOPA				*e*S	Sn		**15 08 31.3**	**+0.5**
MOPA				AML	AML		15 08 54.7	
	comp=Z,15nm,0.5s							
MATP	**Matopo**	**5.95**	**7**	Pn	Pn		**15 08 01.8**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=185,slow=13,SNR=10							
MATP					Sn	**Sn**	**15 09 07.2**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=121,slow=13,SNR=7.2							
MATP					Lg		15 09 33.6	
	comp=Z,2.9nm,0.3s,baz=96,slow=19,SNR=6.9							
UPI	**Upington**	**6.06**	**249**	*e*P	Pn		**15 08 03.5**	**+1.0**
UPI				*e*S	Sn		**15 09 11.0**	**-0.9**
UPI				AML	AML		15 09 44.9	
	comp=Z,8.8nm,0.6s							
BLWY	**Bulawayo**	**6.25**	**8**	*i* P	Pn		**15 08 06.0**	**+0.8**
BLWY				*i* S	Sn		**15 09 13.2**	**-3.4**
BLWY	**Bulawayo**	**6.25**	**8**	*i* P	Pn		**15 08 06.0**	**+0.8**
BLWY				*i* S	Sn		**15 09 13.2**	**-3.4**
GRAN	**Grantham**	**7.63**	**218**	*e*P	Pn		**15 08 25.9**	**+1.8**
GRAN				*e*S	Sn		**15 09 48.8**	**-1.8**
GRAN				AML	AML		15 09 52.8	
	comp=Z,2.2nm,0.3s							
SUR	**Sutherland**	**8.48**	**223**	Pn	Pn		**15 08 37.2**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=44,slow=8.6,SNR=25							
SUR					Sn	**Sn**	**15 10 08.7**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=156,slow=19,SNR=4.5							
SUR					Lg	Lg	15 10 57.9	
	comp=Z,0.6nm,0.3s,baz=150,slow=20,SNR=3.1							
LSZ	**Lusaka**	**11.04**	**3**	Pn	Pn		**15 09 10.4**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=187,slow=12,SNR=4.8							
LSZ					Sn	**Sn**	**15 11 08.4**	**-6.0**
	comp=Z,0.4nm,0.3s,baz=233,slow=3.3,SNR=6.1							
LSZ					Lg	Lg	15 12 07.5	
	comp=Z,0.3nm,0.3s,baz=266,slow=19,SNR=2.0							
TSUM	**Tsumeb**	**11.72**	**305**	Pn	Pn		**15 09 20.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=122,slow=15,SNR=4.1							
TSUM					Lg	Lg	15 12 29.6	
	comp=Z,0.2nm,0.3s,baz=232,slow=19,SNR=2.2							
TORD	**Torodi Ar. Bea**	**46.70**	**324**	P	P		**15 15 03.2**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=140,slow=7.9,SNR=5.0							
MKAR	**Makanchi Array**	**87.92**	**34**	P	P		**15 19 23.7**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=240,slow=4.8,SNR=2.9							

IDC 21 15:18:19.6±1.9, **2.°40N×127.°17E, h0km, mb3.4**/4, **mb1 3.6**/4, **mb1mx3.3**/35, **mbtmp3.5**/4, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.4**/30, **Error ellipse: s-maj=135.2km s-min=26.4km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.44**	**225**	LR	LR		15 25 45.0	
	comp=Z,79nm,19.5s,baz=102,slow=43							
WRA	**Warramunga Arr**	**23.29**	**163**	P	P		15 23 28.9	-0.5
	0.6nm,0.5s,baz=343,slow=11,SNR=8.4							
ASAR	**Alice Springs**	**26.73**	**166**	P	P		15 24 01.1	+0.1
	0.1nm,0.4s,baz=346,slow=7.5,SNR=4.8							
STKA	**Stephens Creek**	**36.74**	**159**	P	P		15 25 29.0	+0.1
	1.4nm,0.8s,baz=331,slow=13,SNR=3.4							
MKAR	**Makanchi Array**	**58.89**	**326**	P	P		15 28 20.6	+0.1
	0.3nm,0.6s,baz=132,slow=8.0,SNR=3.6							

IDC 21 15:20:15.7±2.2, **2.°30N×126.°72E, h0km, mb3.2**/3, **mb1 3.4**/3, **mb1mx3.1**/35, **mbtmp3.2**/3, **Error ellipse: s-maj=192.0km s-min=24.8km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.33**	**162**	P	P		15 25 25.2	-0.5
	0.5nm,0.5s,baz=340,slow=11,SNR=4.8							
ASAR	**Alice Springs**	**26.74**	**165**	P	P		15 25 57.7	+0.5
	0.1nm,0.6s,baz=345,slow=7.4,SNR=3.9							
MKAR	**Makanchi Array**	**58.73**	**326**	P	P		15 30 15.2	-0.1
	0.2nm,0.5s,baz=130,slow=8.3,SNR=3.5							

IDC 21 15:24:45.4±1.8, **1.°74N×125.°91E, h0km, mb3.3**/3, **mb1 3.6**/4, **mb1mx3.3**/39, **mbtmp3.4**/4, **ML3.0**/1, **Error ellipse: s-maj=118.2km s-min=23.3km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.72**	**181**	P	Pn		15 29 17.4	-0.6
	0.0nm,0.3s,baz=0.0,slow=9.1,SNR=2.4							
WRA	**Warramunga Arr**	**23.08**	**159**	P	P		15 29 52.9	0.0
	0.3nm,0.3s,baz=337,slow=11,SNR=7.8							
ASAR

PRGZ			S	Sn	15 32 37.5	+1.2	
RAGZ	**Rawiri**	**2.06 249**	P	Pn	15 32 16.0	+1.1	
RAGZ			S	Sn	15 32 39.3	-0.1	
MHGZ	**Mahia Peninsul**	**2.06 227**	P	Pn	15 32 15.6	+0.8	
MHGZ			S	Sn	15 32 41.3	+1.9	
KNZ	**Kokohu**	**2.12 233**	P	Pn	15 32 15.7	0.0	
URZ	**Urewera**	**2.22 256**	P	Pn	15 32 17.8	+0.7	
URZ			S	Sn	15 32 43.5	+0.1	
SNGZ	**Shannon Statio**	**2.22 242**	P	Pn	15 32 17.8	+0.7	
SNGZ			S	Sn	15 32 44.4	+0.9	
WHRZ	**Whale Island**	**2.28 267**	P	Pn	15 32 18.7	+0.8	
RTZ	**Ruatahuna**	**2.42 249**	P	Pn	15 32 20.6	+0.7	
RTZ			S	Sn	15 32 48.8	+0.5	
WHHZ	**Waihua**	**2.44 237**	P	Pn	15 32 20.9	+0.9	
WHHZ			S	Sn	15 32 49.8	+1.1	
RAHZ	**Arahi**	**2.46 241**	P	Pn	15 32 21.2	+0.8	
RAHZ			S	Sn	15 32 51.0	+1.7	
EDRZ	**Edgecumbe**	**2.49 261**	P	Pn	15 32 21.0	+0.3	
MUGZ	**Murupara**	**2.53 253**	P	Pn	15 32 21.4	0.0	
MUGZ			S	Sn	15 32 49.9	-1.2	
MTHZ	**Maungataniwha**	**2.61 245**	P	Pn	15 32 22.8	+0.4	
MTHZ			S	Sn	15 32 53.6	+0.7	
OPRZ	**Ohinepanea**	**2.61 267**	P	Pn	15 32 21.4	-1.1	
TARZ	**Mount Tarawera**	**2.69 259**	P	Pn	15 32 23.8	+0.3	
ARHZ	**Aropaoanui**	**2.69 235**	P	Pn	15 32 24.4	+0.8	
ARHZ			S	Sn	15 32 56.1	+1.0	
RRRZ	**Republican Roa**	**2.70 257**	P	Pn	15 32 23.9	+0.2	
RRRZ			S	Sn	15 32 54.9	-0.3	
TGRZ	**Tauranga**	**2.85 270**	P	Pn	15 32 25.0	-0.7	
KARZ	**Kaharoa**	**2.87 264**	P	Pn	15 32 25.8	-0.1	
CKHZ	**Cape Kidnapper**	**2.88 228**	P	Pn	15 32 26.1	0.0	
CKHZ			S	Sn	15 32 59.9	+0.4	
MRHZ	**Matea Rd**	**2.91 247**	P	Pn	15 32 26.6	+0.1	
BKZ	**Black Stump Fm**	**2.98 241**	P	Pn	15 32 27.9	+0.2	
MCHZ	**McNeill Hill**	**2.99 235**	P	Pn	15 32 28.1	+0.5	
KMRZ	**Kaimai**	**3.10 267**	P	Pn	15 32 30.0	+0.8	
PXZ	**Pawanui**	**3.25 225**	P	Pn	15 32 30.5	-0.6	
RATZ	**Rangitukua**	**3.39 250**	P	Pn	15 32 34.1	+0.9	
BHHZ	**Black Hill Sta**	**3.43 239**	P	Pn	15 32 33.8	0.0	
TOZ	**Tahuroa Road**	**3.45 269**	P	Pn	15 32 33.6	-0.3	
KUZ	**Kuaotunu**	**3.45 286**	P	Pn	15 32 33.1	-0.9	
ETVZ	**East Tongariro**	**3.53 246**	P	Pn	15 32 34.9	-0.3	
PNHZ	**Pukenui**	**3.57 232**	P	Pn	15 32 35.3	-0.4	
MOVZ	**Moawhango**	**3.61 242**	P	Pn	15 32 37.7	+1.5	
MKAZ	**Moumakai**	**3.79 279**	P	Pn	15 32 38.3	-0.3	
TSZ	**Takapari Road**	**3.80 232**	P	Pn	15 32 37.8	-1.0	
GRZ	**Great Barrier**	**3.83 292**	P	Pn	15 32 38.6	-0.6	
ETAZ	**East Tamaki Re**	**4.01 280**	P	Pn	15 32 41.6	0.0	
HIZ	**Hauiti**	**4.01 258**	P	Pn	15 32 42.3	+0.6	
MBAZ	**Motutapu North**	**4.08 283**	P	Pn	15 32 42.7	+0.1	
PRWZ	**Pori Road**	**4.11 226**	P	Pn	15 32 43.0	+0.1	
RVAZ	**Riverhead Bore**	**4.32 282**	P	Pn	15 32 46.4	+0.4	
MRZ	**Mangatainoka R**	**4.40 228**	P	Pn	15 32 45.8	-1.2	
TMWZ	**Te Maipa**	**4.53 221**	P	Pn	15 32 47.2	-1.7	
OGWZ	**Otaki Gorge**	**4.74 229**	P	Pn	15 32 50.1	-1.6	
WCZ	**Waipu Caves**	**4.78 291**	P	Pn	15 32 52.6	+0.3	
TCW	**Tory Channel**	**5.52 230**	P	Pn	15 33 01.4	-0.9	
OUZ	**Omahuta**	**5.65 295**	P	Pn	15 33 05.0	+0.8	
CTZ	**Chatham Island**	**6.54 157**	P	Pn	15 33 19.5	+3.1	
CTZ			S	Sn	15 34 26.3	-3.3	

*IDC **21** 15:36:20.2±2.5,21°.59S×177°.37W,h247km±23km, mb3.8/14,mb1 4.0/16,mb1mx3.8/35,mbtmp4.4/16,Error ellipse: s-maj=16.1km s-min=12.2km az=147.0*

ISC 21 15:36:20.4±0.5,**21°.5S**±0°.1×**177°.4W**±0°.1,**h250km,n65,** σ1§**15**/66,**mb4.0**/14,**13C-6D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.27**	**36**	P	**Pn**	**15 38 29.0**	**-0.9**
	7.1nm,0.3s,baz=216,slow=6.3,SNR=22						
AFI				S	S	15 40 05.5	-9.2
	3.5nm,0.3s,baz=17,slow=19,SNR=3.5						
URZ	**Urewera**	**17.33**	**195**	P	**P**	**15 40 03.0**	**-2.6**
	2.5nm,0.3s,baz=287,slow=3.2,SNR=17						
CTA	**Charters Tower**	**38.29**	**266**	P	**P**	**15 42 41.7**	**+0.7**
	7.6nm,0.6s,baz=95,slow=11,SNR=19						
KRVT	**Keravat (AS076**	**34.28**	**296**	P	**P**	**15 42 44.2**	**+0.7**
	14nm,0.7s,baz=90,slow=1.0,SNR=2.1						
STKA	**Stephens Creek**	**37.88**	**245**	P	**P**	**15 43 14.2**	**+0.4**
	2.3nm,0.5s,baz=80,slow=8.5,SNR=8.9						
ASAR	**Alice Springs**	**44.87**	**258**	P	**P**	**15 44 10.2**	**-0.3**
	12nm,0.9s,baz=90,slow=8.2,SNR=89						
ASAR				PcP	**PcP**	**15 45 46.5**	**-1.1**
	1.8nm,0.7s,baz=108,slow=3.9,SNR=7.6						
JAY	**Jayapura**	**44.94**	**289**	P	**P**	**15 44 11.4**	**+0.3**
	13nm,0.5s,baz=134,slow=4.5,SNR=20						
WRA	**Warramunga Arr**	**45.05**	**263**	P	**P**	**15 44 11.0**	**-0.9**
	3.4nm,0.7s,baz=97,slow=8.2,SNR=26						
FITZ	**Fitzroy Crossi**	**53.48**	**263**	P	**P**	**15 45 15.5**	**-0.1**
	5.5nm,0.9s,baz=132,slow=5.8,SNR=11						
VNDA	**Vanda**	**56.94**	**185**	P	**P**	**15 45 40.2**	**+1.0**
	0.5nm,0.7s,baz=358,slow=6.7,SNR=2.8						
MJAR	**Matsushiro Arr**	**71.39**	**324**	P	**P**	**15 47 13.6**	**+0.1**
	0.9nm,0.5s,baz=163,slow=5.4,SNR=5.3						
NVAR	**Mina Array Bea**	**81.37**	**43**	P	**P**	**15 48 11.3**	**+1.7**
	1.2nm,0.7s,baz=230,slow=9.0,SNR=5.8						
SYO	**Syowa Base**	**85.85**	**193**↓	*eP*	**P**	**15 48 34.2**	**+2.7**
SYO	**Syowa Base**	**85.85**	**193**↑	*eP*	P	15 48 40.0	+8.5
TXAR	**Lajitas Array**	**87.12**	**57**	P	**P**	**15 48 40.4**	**+1.9**
	1.0nm,0.8s,baz=213,slow=6.6,SNR=11						
ILAR	**Eielson Array**	**89.19**	**13**	P	**P**	**15 48 47.0**	**-0.2**
	1.5nm,0.5s,baz=219,slow=5.9,SNR=24						
PDAR	**Pinedale Array**	**89.31**	**43**	P	**P**	**15 48 49.8**	**+1.1**
	0.7nm,0.8s,baz=180,slow=1.5,SNR=5.0						
CMAR	**Chiang Mai Arr**	**91.02**	**289**	P	**P**	**15 48 57.9**	**+1.0**
	1.9nm,0.7s,baz=125,slow=2.9,SNR=19						
ZALV	**Zalesovo Beam**	**111.67**	**321**	PKiKP	**PKiKP**	**15 54 22.0**	**-2.9**
	0.6nm,0.5s,baz=75,slow=1.7,SNR=3.5						
MKAR	**Makanchi Array**	**112.34**	**313**	PKiKP	**PKiKP**	**15 54 24.4**	**-2.0**
	0.5nm,0.7s,baz=65,slow=2.1,SNR=5.3						
BOSA	**Boshof**	**125.57**	**205**	PKP	**PKPdf**	**15 54 51.5**	**-1.2**
	1.9nm,0.8s,baz=158,slow=4.6,SNR=3.7						
ARCES	**ARCESS Array B**	**130.04**	**350**	PKP	**PKPdf**	**15 54 58.9**	**-0.8**
	4.3nm,0.7s,baz=46,slow=1.4,SNR=14						
FINES	**FINESS Array B**	**136.93**	**344**	PKhKP	PKPpre	15 55 05.2	
	1.4nm,0.9s,baz=94,slow=6.0,SNR=3.0						
FINES				PKP	**PKiKP**	**15 55 13.7**	**-0.9**
	2.2nm,0.8s,baz=107,slow=6.6,SNR=4.1						
NB2	**NORSAR Subarra**	**140.07**	**354**	PKP	PKPdf	15 55 09.0	-10
	comp=Z,0.4nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**140.07**	**354**	PKhKP	PKPpre	15 55 10.2	
	comp=Z,0.4nm,0.8s,baz=51,slow=4.6,SNR=3.1						
NOA				PKP	**PKPdf**	**15 55 18.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=13,slow=4.0,SNR=3.6						
BATM	**Batumi**	**141.59**	**310**	P↑	**PKiKP**	**15 55 28.8**	**+3.9**
AKASG	**Malin Array Be**	**144.20**	**331**	PKP	**PKPab**	**15 55 23.4**	**-1.3**
	comp=Z,6.5nm,0.7s,baz=43,slow=4.4,SNR=19						
SORM	**Soroca**	**146.40**	**328**	P↑	**PKPdf**	**15 55 29.9**	**-0.1**
BRTR	**Keskin Array B**	**147.97**	**311**	PKPbc	**PKPbc**	**15 55 35.4**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=145,slow=3.3,SNR=7.8						
TLCR		**148.32**	**4**	P↓	**PKPbc**	**15 55 36.8**	**+0.3**
BURAR	**Bucovina Array**	**148.35**	**330**	P↑	**PKPbc**	**15 55 37.1**	**+0.1**
BIZ	**Bicaz**	**148.32**	**329**	P↑	**PKPbc**	**15 55 37.3**	**+0.2**
TPGR	**Topolog**	**148.52**	**324**	P↓	**PKiKP**	**15 55 38.3**	**-0.8**
VRI	**Vrincioaia**	**148.75**	**327**	P↑	**PKPbc**	**15 55 36.7**	**-1.6**
OSTC	**Ostas**	**149.13**	**343**	*e*PKP	**PKPbc**	**15 55 39.1**	**+0.1**
CHVC	**Chvalec**	**149.15**	**343**	*e*PKP	**PKPbc**	**15 55 39.0**	**-0.1**
CLL	**Collm**	**149.20**	**347**↓	*i* PKPbc	**PKPbc**	**15 55 38.7**	**-0.4**
	comp=Z,9.0nm,0.7s						
CLL				*i* PKiKP	**PKiKP**	**15 55 40.7**	**+0.5**
	comp=Z,10.0nm,0.7s						
DPC	**Dobruska-Polom**	**149.29**	**343**	*e*PKP	**PKPbc**	**15 55 39.5**	**0.0**
DOPR	**Dopca**	**149.36**	**328**	↓P	**PKPbc**	**15 55 39.8**	**+0.1**
KRLC	**Kraliky**	**149.41**	**342**	*e*PKP	**PKPbc**	**15 55 39.3**	**-0.5**
BRG	**Berggiesshubel**	**149.41**	**346**	*i* PKP	**PKPbc**	**15 55 39.3**	**-0.3**
	comp=Z,2.7nm,0.6s						
MLR	**Muntele Rosu**	**149.41**	**327**	P↑	**PKPbc**	**15 55 38.2**	**-1.8**
PVCC	**Panska Ves**	**149.58**	**345**	*e*PKP	**PKiKP**	**15 55 40.3**	**-0.7**
VOIR		**149.90**	**328**	P↑	**PKiKP**	**15 55 41.3**	**-0.6**
DRGR		**150.00**	**332**	P↑	**PKPbc**	**15 55 40.0**	**-1.3**
PRU	**Pruhonice**	**150.09**	**345**	*e*PKP	**PKPbc**	**15 55 41.1**	**-0.2**
ARR	**Arges**	**150.16**	**328**	P↑	**PKiKP**	**15 55 42.5**	**0.0**
PBCC	**Pribram**	**150.50**	**345**	*e*PKP	**PKPbc**	**15 55 42.1**	**-0.2**
SIRR	**Siria**	**150.86**	**332**	P↑	**PKPbc**	**15 55 41.8**	**-1.6**
GZR	**Gura Zlata**	**151.03**	**330**	↓P	**PKPbc**	**15 55 42.9**	**-0.9**
KHC	**Kasperske Hory**	**151.12**	**345**	*e*PKP	**PKPbc**	**15 55 43.4**	**-0.4**
GERES	**GERESS Array B**	**151.35**	**345**	PKPbc	**PKPbc**	**15 55 43.9**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=29,slow=3.0,SNR=22						
BZS	**Buzias**	**151.39**	**332**	↓P	**PKPbc**	**15 55 43.9**	**-0.6**
CONA	**Conrad Observa**	**151.60**	**341**	*e*P	**PKiKP**	**15 55 45.0**	**-0.4**
	comp=Z,6.0nm,0.6s						
MDVR	**Moldovita**	**151.99**	**330**	↑P	**PKPbc**	**15 55 45.3**	**-0.6**
MOA	**Molln**	**152.13**	**343**	*e*P	**PKPbc**	**15 55 45.6**	**-0.5**
	comp=Z,3.1nm,0.6s						
SOKA	**Soboth**	**152.97**	**341**	*e*P	**PKPbc**	**15 55 47.2**	**-1.0**
	comp=Z,3.9nm,1.2s						
KBA	**Koelnbreinsper**	**153.08**	**344**	*e*P	**PKPbc**	**15 55 48.1**	**-0.4**
	comp=Z,2.1nm,0.5s						
WATA	**Walderalm**	**153.26**	**346**	*e*P	**PKPbc**	**15 55 48.1**	**-0.8**
	comp=Z,2.1nm,0.5s						
RETA	**Reutte**	**153.29**	**348**	*i* P	**PKiKP**	**15 55 49.4**	**+0.5**
	comp=Z,1.1nm,0.4s						
WTTA	**Wattenberg**	**153.32**	**346**	*e*P	**PKPbc**	**15 55 48.6**	**-0.4**
	comp=Z,3.4nm,0.6s						
MOTA	**Moosalm**	**153.36**	**347**	*i* P	**PKPbc**	**15 55 48.2**	**-0.9**
	comp=Z,2.7nm,0.6s						
ABTA	**Abfaltersbach**	**153.60**	**345**	*e*P	**PKPbc**	**15 55 48.4**	**-1.1**
	comp=Z,4.2nm,0.6s						
FETA	**Feichten**	**153.74**	**347**	*i* P	**PKPbc**	**15 55 49.6**	**-0.3**
	comp=Z,4.4nm,1.0s						
TORD	**Torodi Ar. Bea**	**171.61**	**174**	PKP	**PKPdf**	**15 55 58.5**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=123,slow=5.3,SNR=6.9						
TORD				PKPab	**PKPab**	**15 57 21.8**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=203,slow=6.0,SNR=3.0						

IDC 21 15:36:34.1±2.0,**1°.93N**×**126°.40E,h0km,mb3.4**/3, **mb1 3.6**/3,**mb1mx3.4**/33,**mbtmp3.4**/3,**Error ellipse: s-maj=175.0km s-min=24.3km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.09**	**161**	P	P	15 41 41.1	-0.5
	0.9nm,0.4s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	**26.46**	**164**	P	P	15 42 13.7	+0.6
	0.3nm,0.4s,baz=345,slow=8.9,SNR=10						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	15 46 34.4	-0.2
	0.2nm,0.5s,baz=124,slow=6.7,SNR=4.1						

IDC 21 15:40:58.8±2.0,**1°.86N**×**126°.14E,h0km,mb3.3**/3, **mb1 3.6**/3,**mb1mx3.3**/30,**mbtmp3.4**/3,**Error ellipse: s-maj=170.1km s-min=26.3km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.11**	**160**	P	P	15 46 06.0	-0.6
	0.7nm,0.4s,baz=339,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**26.47**	**164**	P	P	15 46 38.5	+0.6
	0.3nm,0.6s,baz=343,slow=7.8,SNR=4.9						
MKAR	**Makanchi Array**	**58.76**	**326**	P	P	15 50 58.6	-0.1
	0.2nm,0.4s,baz=113,slow=6.6,SNR=5.1						

IDC 21 15:42:29.1±2.1,**2°.08N**×**126°.51E,h0km,mb3.4**/3, **mb1 3.7**/3,**mb1mx3.4**/31,**mbtmp3.4**/3,**Error ellipse: s-maj=176.7km s-min=24.9km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.19**	**161**	P	P	15 47 37.2	-0.4
	0.7nm,0.4s,baz=340,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.58**	**165**	P	P	15 48 09.7	+0.5
	0.2nm,0.3s,baz=345,slow=12,SNR=5.5						
MKAR	**Makanchi Array**	**58.79**	**326**	P	P	15 52 29.1	-0.1
	0.2nm,0.6s,baz=124,slow=8.9,SNR=2.6						

*ANF **21** 15:49:40.5±1.1,40°.01N×120°.75W,h2km±7km,ML3.1/8, Error ellipse: s-maj=7.7km s-min=5.3km az=64.0*
*NEIC **21** 15:49:41.1±1.8,39°.95N±0°.02×120°.75W±0°.01,h8km±5km, Error ellipse: s-maj=3.5km s-min=1.4km az=165.0*
*REN **21** 15:49:41.6±2.8,39°.94N±0°.03×120°.72W±0°.03,h13km±6km, Error ellipse: s-maj=4.4km s-min=3.4km az=212.0*
*NCEDC **21** 15:49:41.5±2.2,39°.97N±0°.03×120°.74W±0°.03,h14km±7km, ML3.2/29,ML3.3/11(REN),Error ellipse: s-maj=4.6km s-min=2.5km az=210.0*

ISC 21 15:49:40.8±1.2,**39°.96N**±0°.02×**120°.75W**±0°.02,**h4**km±12km, **n63,**σ0§**94**/70,**Northern California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BEKR	**Beckworth**	**0.32**	**107**	Pg	**Pg**	**15 49 47.6**	**+0.6**
LOY	**Loyalton**	**0.50**	**127**		**Pg**	**15 49 50.8**	**+0.4**
LCMM	**Colby Mountain**	**0.62**	**288**		**Pg**	**15 49 53.0**	**+0.3**
IND	**Independence**	**0.63**	**146**		**Pg**	**15 49 53.5**	**+0.5**
ORV	**Oroville**	**0.70**	**235**		**Pg**	**15 49 54.8**	**+0.4**
ORV					**Sg**	**15 50 04.0**	**+0.5**
ORV	**Oroville**	**0.70**	**235**	Pg	**Pg**	**15 49 54.5**	**+0.2**
PEAR	**Peavine Mounta**	**0.70**	**120**		**Pg**	**15 49 54.6**	**+0.2**
WVA	**Winnemucca Val**	**0.71**	**91**		**Pg**	**15 49 54.6**	**+0.1**
VPK	**Verdi Peak**	**0.73**	**131**		**Pg**	**15 49 55.0**	**+0.1**
LMEM	**Manzanita Entr**	**0.85**	**313**		**Pg**	**15 49 57.7**	**+0.5**
O03E	**Paynes Creek**	**0.87**	**293**	P	**Pg**	**15 49 57.1**	**-0.5**
	baz=111,SNR=169						
O03E				S	**Sg**	**15 50 09.2**	**+0.3**
	baz=111						
HATC	**Hat Creek Radi**	**1.01**	**328**		**Pg**	**15 50 00.0**	**-0.3**
RUBR	**Rubicon Trail**	**1.02**	**153**		**Pg**	**15 50 00.0**	**-0.3**
AFDM	**Forest Hills D**	**1.02**	**190**		**Pg**	**15 49 59.5**	**-0.9**
VCNR	**Virginia City**	**1.08**	**128**		**Pg**	**15 50 01.1**	**-0.5**
LTCM	**Tuscan Springs**	**1.08**	**284**		**Pg**	**15 50 01.5**	**0.0**
SUTB	**Sutter Buttte**	**1.08**	**228**		**Pg**	**15 50 01.4**	**-0.2**
PAHR	**Pah Rah Range**	**1.08**	**103**		**Pg**	**15 50 01.1**	**-0.5**
EMB	**Emerald Bay**	**1.10**	**153**		**Pg**	**15 50 01.6**	**-0.5**
PNTR	**Pine Nut**	**1.25**	**134**		**Pb**	**15 50 04.3**	**-0.7**
WDC	**Whiskeytown Da**	**1.50**	**295**	Pn	**Pn**	**15 50 07.7**	**-0.8**
WDC					**Pb**	**15 50 07.8**	**-1.5**
GASB	**Alder Springs**	**1.54**	**259**		**Pn**	**15 50 08.9**	**-0.3**
MNRC	**McLaughlin Min**	**1.70**	**231**		**Pn**	**15 50 11.6**	**+0.4**
WAKR	**Walker**	**1.78**	**144**		**Pn**	**15 50 13.0**	**+0.5**
N02D	**Trinity Center**	**1.80**	**305**	P	**Pn**	**15 50 11.5**	**-1.2**
	baz=123,SNR=94						
N02D				S	**Sn**	**15 50 36.3**	**+0.3**
	baz=123						
GCRM	**Castle Rock Sp**	**1.93**	**233**		**Pn**	**15 50 14.5**	**+0.1**
CMB	**Columbia Colle**	**1.94**	**171**		**Pn**	**15 50 15.0**	**+0.3**
CMB	**Columbia Colle**	**1.94**	**171**	Pn	**Pn**	**15 50 14.8**	**+0.2**
GDXM	**Geysers**	**1.96**	**235**	Pn	**Pn**	**15 50 14.6**	**-0.2**
MOD	**Modoc Plateau**	**1.97**	**10**		**Pb**	**15 50 16.3**	**-1.1**
MOD	**Modoc Plateau**	**1.97**	**10**	Pn	**Pn**	**15 50 16.1**	**+1.0**
M04C	**Macdoel**	**2.00**	**336**	Pb	**Pb**	**15 50 16.8**	**-1.0**
	baz=155,SNR=14						
M04C				Sb	**Sb**	**15 50 43.9**	**+0.8**
	baz=155						
HOPS	**Hopland Field**	**2.04**	**242**	Pn	**Pn**	**15 50 15.7**	**-0.2**
M02C	**Callahan**	**2.14**	**313**	P	**Pn**	**15 50 17.5**	**0.0**
	baz=131,SNR=14						
M02C				Sb	**Sb**	**15 50 47.4**	**+0.2**
	baz=131						
RYN	**Ryan**	**2.18**	**127**		**Pn**	**15 50 17.8**	**-0.2**
BDM	**Black Diamond**	**2.18**	**204**		**Pn**	**15 50 18.2**	**+0.3**
KBSM	**Bell Springs**	**2.19**	**270**		**Pb**	**15 50 20.3**	**-0.7**
KVN	**Kaiserville**	**2.24**	**113**		**Pn**	**15 50 18.2**	**-0.7**
NVAR	**Mina Array Bea**	**2.44**	**128**		**Pn**	**15 50 21.2**	**-0.4**
LHV	**Little Huntoon**	**2.44**	**134**		**Pn**	**15 50 22.1**	**+0.7**
MCCM	**Marconi Confer**	**2.46**	**223**	Pn	**Pn**	**15 50 21.6**	**0.0**
L04D	**Klamath Falls**	**2.54**	**333**	Pg	**Pb**	**15 50 28.3**	**+1.2**
	baz=152,SNR=8.6						
MDCM	**Deadman Creek**	**2.61**	**149**		**Pb**	**15 50 28.9**	**+0.5**
MDPB	**Devils Postpil**	**2.67**	**150**	Pn	**Pn**	**15 50 25.6**	**+0.8**
K04D	**Chiloquin, OR**	**2.77**	**345**	Sb	**Sb**	**15 51 06.3**	**+1.1**
	baz=164						
MLAC	**Mammoth, Mammo**	**2.77**	**147**	Sb	**Sg**	**15 51 09.3**	**-0.5**
	baz=328						
BENR	**Benton**	**2.81**	**142**		**Pn**	**15 50 27.5**	**+0.7**
HUMO	**Hull Mountain**	**3.12**	**329**		**Pn**	**15 50 33.2**	**+2.3**
SAO	**San Andreas Ge**	**3.24**	**190**	Pn	**Pn**	**15 50 33.2**	**+0.9**
TPH	**Tonopah**	**3.33**	**123**	Pn	**Pn**	**15 50 34.2**	**+0.3**
J05D	**Fort Rock, OR**	**3.34**	**354**	Pb	**Pb**	**15 50 39.7**	**-1.0**
	baz=173,SNR=10						
J05D				Sb	**Sb**	**15 51 23.9**	**+2.1**
	baz=173						
PMPB	**Monarch Peak**	**3.74**	**181**	Pn	**Pn**	**15 50 38.8**	**-0.5**
PAGB	**Antelope Grade**	**4.24**	**174**	Pn	**Pn**	**15 50 42.7**	**-3.5**
ELK	**Elko**	**4.29**	**78**		**Pn**	**15 50 45.9**	**-1.1**
R11A	**Troy Canyon, C**	**4.33**	**110**	Pn	**Pn**	**15 50 46.2**	**-1.3**
TPNV	**Topopah Spring**	**4.64**	**129**	Pn	**Pn**	**15 50 51.2**	**-0.6**
MFID	**Camas Ranch**	**5.05**	**45**	Pn	**Pn**	**15 50 54.6**	**-2.8**
SPR3	**Spring Creek 3**	**5.06**	**99**	Pn	**Pn**	**15 50 58.4**	**+0.7**
SPR3					LR	15 52 21.0	
PRN	**Pahroc Range**	**5.14**	**118**	Pn	**Pn**	**15 50 58.5**	**-0.2**
PSUT	**Pine Spring**	**5.54**	**103**	Pn	**Pn**	**15 51 03.8**	**-0.4**
SHPR	**Sheep Range**	**5.59**	**126**	Pn	**Pn**	**15 51 05.0**	**+0.1**
MVU	**Marysvale**	**6.79**	**100**		**Pn**	**15 51 22.8**	**+1.4**
MSU	**Marysvale**	**6.81**	**100**	Pn	**Pn**	**15 51 23.0**	**+1.3**

IDC 21 16:06:07.2±4.1,**19°.64S**×**169°.23E,h0km,mb3.5**/2, **mb1 3.8**/3,**mb1mx3.4**/33,**mbtmp3.5**/3,**ML3.3**/1,**Error ellipse: s-maj=111.1km s-min=53.4km az=134.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.56**	**227**	Pn	Pn	16 07 03.5	-0.3
	2.4nm,0.3s,baz=104,slow=12,SNR=131						
DZM				Sn	Sn	16 07 39.1	-7.6
	36nm,0.3s,baz=133,slow=22,SNR=22						
WRA	**Warramunga Arr**	**32.80**	**263**	P	P	16 12 42.4	-0.1
	0.2nm,0.6s,baz=93,slow=8.5,SNR=4.8						
ASAR	**Alice Springs**	**33.03**	**257**	P	P	16 12 44.5	+0.1
	1.0nm,0.6s,baz=85,slow=9.3,SNR=33						
GERES	**GERESS Array B**	**144.84**	**332**	PKP	PKPbc	16 25 45.6	+0.4
	0.8nm,0.9s,baz=34,slow=3.7,SNR=4.0						

*IDC **21** 16:08:15.0±1.3,43°.26N×89°.62E,h0km,mb3.5/2, mb1 3.7/4,mb1mx3.2/51,mbtmp3.5/4,ML3.1/2,Error ellipse: s-maj=98.0km s-min=16.8km az=42.0*
*BJI **21** 16:08:18.3±0.0,43°.28N×89°.36E,h8km,ML3.2/10*
*NNC **21** 16:08:19.8±7.5,43°.42N×89°.20E,h15km±37km,mb3.7, mpv3.4,Error ellipse: s-maj=49.1km s-min=41.3km az=105.0*

ISC 21 16:08:16.3±1.4,**43°.1N**±0°.1×**89°.2E**±0°.1,**h10**km,**n9,** σ0§**91**/14,**5C-4D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**1.31**	**302**	Pg	**Pg**	**16 08 41.5**	**0.0**
WMQ				Sg	**Sb**	**16 08 57.5**	**-0.6**
WMQ				smax	smax		
	comp=N,320nm,0.5s						
WMQ				smax	smax		
	comp=E,420nm,0.5s						
MK31	**Makanchi Array**	**6.13**	**309**	↑Pn	**Pn**	**16 09 48.6**	**+1.6**
	0.4nm,0.3s,baz=119,slow=14,SNR=30						
MK31				↓Sn	**Sn**	**16 10 56.9**	**-0.3**
	5.7nm,0.7s,baz=114,slow=27,SNR=4.9						
MK31				↓Lg	Lg	16 11 26.7	
	3.1nm,0.5s,baz=118,slow=27,SNR=5.6						
MKAR	**Makanchi Array**	**6.13**	**309**	Pn	**Pn**	**16 09 48.6**	**+1.6**
	0.5nm,0.3s,baz=122,slow=13,SNR=34						
MKAR				Sn	**Sn**	**16 10 57.5**	**+0.3**
	1.4nm,0.3s,baz=118,slow=26,SNR=8.1			

LAMP	**Lampang**	**7.71**	**130**	P		**Pn**	**16 12 59.8**	**-3.3**
BWNR	**Bhubaneshwar**	**7.76**	**246**	*e*P		**Pn**	**16 13 03.9**	**+0.1**
BWNR				*e*S		**Sn**	**16 14 25.1**	**-5.5**
GUN	**Gumba**	**8.02**	**304**	*e*Pn		**Pn**	**16 13 09.6**	**+1.9**
GUN				*e*Sn		**Sn**	**16 14 37.8**	**+0.4**
	comp=N,1μm,0.8s							
PKI	**Pulchoki**	**8.22**	**301**	*e*Pn		**Pn**	**16 13 12.3**	**+1.9**
PKI				*e*Sn		**Sn**	**16 14 41.0**	**-1.4**
	comp=N,517nm,0.9s							
PKIN	**Phulchoki**	**8.23**	**301**	*e*Pn		**Pn**	**16 13 12.1**	**+1.5**
PKIN				*e*Sn		**Sn**	**16 14 41.0**	**-1.6**
	comp=N,508nm,0.7s							
NANT	**Nan**	**8.32**	**124**	P		**Pn**	**16 13 10.5**	**-1.0**
KKN	**Kakani**	**8.42**	**301**	*e*Pn		**Pn**	**16 13 14.5**	**+1.4**
SUKH	**Sukhothai**	**8.43**	**135**	P		**Pn**	**16 13 14.3**	**+1.2**
DMN	**Daman**	**8.48**	**300**	*e*Pn		**Pn**	**16 13 15.4**	**+1.5**
KMI	**Kunming**	**8.67**	**78**	⇑*i*P		Pn	16 13 21.8	+5.3
KMI				S		**Sn**	**16 15 00.4**	**+7.2**
KMI				pmax	pmax			
	comp=N,28nm,0.8s							
KMI				pmax	pmax			
	comp=N,140nm,3.5s							
KMI				LR	LR			
	comp=N,530nm,9.9s							
KMI				LR	LR			
	comp=N,570nm,11.5s							
KMI				LR	LR			
	comp=N,560nm,11.0s							
UTTA	**Uttaradit**	**8.88**	**130**	P		**Pn**	**16 13 19.5**	**+0.3**
GKN	**Gorkha**	**9.03**	**301**	*e*Pn		**Pn**	**16 13 22.7**	**+1.4**
GKN				*e*Sn		**Sn**	**16 14 58.3**	**-3.6**
	comp=N,563nm,0.7s							
PHIT	**Phitsanulok**	**9.16**	**133**	P		**Pn**	**16 13 24.2**	**+1.1**
KOLN	**Koldanda**	**9.76**	**297**	*e*Pn		**Pn**	**16 13 31.9**	**+0.5**
KOLN				*e*Sn		**Sn**	**16 15 15.7**	**-4.3**
	comp=N,423nm,0.5s							
DANN	**Dangsing**	**9.87**	**301**	*e*Pn		**Pn**	**16 13 33.2**	**+0.1**
DANN				*e*Sn		**Sn**	**16 15 19.1**	**-3.8**
	comp=N,220nm,0.6s							
CHLP	**Challavanipeta**	**10.07**	**242**	*e*P		**Pn**	**16 13 35.8**	**+0.3**
PYUN	**Piuthan**	**10.38**	**298**	*e*Pn		**Pn**	**16 13 39.9**	**-0.1**
PYUN				*e*Sn		**Sn**	**16 15 30.8**	**-4.5**
	comp=N,470nm,0.6s							
CD2	**Chengdu**	**11.76**	**49**	P		**Pn**	**16 14 02.3**	**+3.6**
CD2				S		**Sn**	**16 16 12.5**	**+3.7**
CD2				pmax	pmax			
	comp=N,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=N,210nm,9.4s							
CD2				LR	LR			
	comp=N,410nm,21.8s							
CD2				LR	LR			
	comp=N,330nm,12.1s							
CD2				LR	LR			
	comp=N,390nm,13.8s							
GYA	**Guiyang**	**12.38**	**74**	*e*P		**Pn**	**16 14 09.9**	**+2.7**
GYA				S		**Sn**	**16 16 22.6**	**-1.4**
GYA				pmax	pmax			
	comp=N,9.0nm,0.8s							
GYA				pmax	pmax			
	comp=N,64nm,4.2s							
GYA				LR	LR			
	comp=N,350nm,6.9s							
GYA				LR	LR			
	comp=N,320nm,8.9s							
GYA				LR	LR			
	comp=N,290nm,12.1s							
PVM	**Polavaram**	**12.70**	**242**	*e*P		**Pn**	**16 14 12.8**	**+1.3**
NGP	**Nagpur**	**13.48**	**262**	*e*P		**Pn**	**16 14 20.1**	**-2.1**
GGR	**Gangavaram**	**13.60**	**248**	*e*P		**Pn**	**16 14 23.9**	**0.0**
MYLAV	**Mylavaram**	**13.76**	**243**	*e*P		**Pn**	**16 14 26.5**	**+0.5**
BHPL	**Bhopal**	**14.66**	**272**	*e*P		**Pn**	**16 14 37.8**	**-0.5**
BHPL				*e*S		Sn	16 17 09.5	-10
BHPL				IAML			16 17 15.3	
	comp=N,48nm,1.0s							
ADKI	**Addanki**	**14.79**	**241**	*e*P		**Pn**	**16 14 39.6**	**-0.4**
CUPL	**Choutuppal**	**14.93**	**248**	*e*P		**Pn**	**16 14 41.3**	**-0.6**
NJS	**Nagarjunasagar**	**14.96**	**245**	*e*P		**Pn**	**16 14 41.5**	**-0.7**
HYB	**Hyderabad**	**15.19**	**249**	*i*P		**Pn**	**16 14 43.0**	**-2.3**
HYB				*e*S		**S**	**16 17 48.0**	**-0.7**
HYBB	**Hyderabad (bro**	**15.19**	**249**	*e*P		**Pn**	**16 14 45.7**	**+0.3**
DDI	**Dehra Dun**	**15.22**	**299**	*e*P		**Pn**	**16 14 45.5**	**-0.2**
DDI				*e*S		Sn	16 17 21.1	-12
NDI	**New Delhi**	**15.38**	**293**	*e*P		**Pn**	**16 14 43.0**	**-4.8**
NDI				*e*S		Sn	16 17 24.0	-13
LZH	**Lanzhou**	**15.40**	**34**	*e*P		**P**	**16 14 53.1**	**+0.7**
LZH				*e*S		**Sn**	**16 17 45.3**	**+7.6**
LZH				sS		S	16 17 56.6	+3.5
LZH				pmax	pmax			
	comp=N,63nm,1.0s							
LZH				pmax	pmax			
	comp=N,160nm,4.5s							
LZH				LR	LR			
	comp=N,290nm,10.0s							
LZH				LR	LR			
	comp=N,350nm,10.2s							
LZH				LR	LR			
	comp=N,390nm,13.0s							
ENH	**Enshi**	**15.82**	**62**	P		**Pn**	**16 14 55.6**	**+2.1**
ENH				IAmb		IAmb	16 15 11.9	
	comp=Z,33nm,0.9s							
QIZ	**Qiongzhong**	**15.99**	**103**	P		**Pn**	**16 14 54.4**	**-1.3**
QIZ				S		**Sn**	**16 17 50.1**	**-2.0**
QIZ				LR	LR			
	comp=Z,220nm,4.1s							
QIZ				LR	LR			
	comp=Z,280nm,9.3s							
QIZ				LR	LR			
	comp=Z,200nm,12.8s							
KLRI	**Killari**	**16.62**	**254**	*e*P		**Pn**	**16 15 02.9**	**-0.9**
GTA	**Gaotai**	**16.69**	**18**	⇑P		**Pn**	**16 15 04.5**	**-0.2**
GTA				pP		pP	16 15 16.8	+1.0
GTA				sP		sP	16 15 22.4	+2.2
GTA				S		**Sn**	**16 18 07.9**	**-1.2**
GTA				sS		S	16 18 23.4	+3.9
GTA				ScP		**ScP**	**16 23 20.8**	**-4.4**
GTA				pmax	pmax			
	comp=Z,6.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,58nm,5.1s							
GTA				LR	LR			
	comp=Z,130nm,11.6s							
GTA				LR	LR			
	comp=Z,240nm,14.9s							
XAN	**Xi'an**	**17.12**	**49**	P		**Pn**	**16 15 08.9**	**-1.1**
XAN				pP		pP	16 15 18.5	-2.0
XAN				S		**Sn**	**16 18 16.9**	**-2.5**
XAN				LR	LR			
	comp=Z,230nm,11.9s							
XAN				LR	LR			
	comp=Z,170nm,14.1s							
XAN				LR	LR			
	comp=Z,210nm,13.0s							
DHRM	**DHARAMSHALA**	**17.38**	**304**	*e*P		**Pn**	**16 15 13.2**	**-0.2**
DHRM				*e*S		Sn	16 18 13.0	-13
WHN	**Wuhan**	**19.90**	**65**	P		Pn	16 15 51.0	+7.3
NIL	**Nilore**	**20.29**	**304**	P		**P**	**16 15 45.7**	**-0.5**
IPM	**Ipoh**	**20.38**	**158**	P		**P**	**16 15 44.9**	**-2.4**
TSI	**Tuntungan**	**20.59**	**165**	P		Pn	16 15 51.6	-0.2
WMQ	**Urumqi**	**20.72**	**348**	*e*P		**P**	**16 15 53.0**	**+2.2**
WMQ				pP		sP	16 16 08.6	+4.2
WMQ				pmax	pmax			
	comp=Z,36nm,1.3s							
WMQ				pmax	pmax			
	comp=Z,210nm,3.6s							
WMQ				LR	LR			
	comp=Z,200nm,14.7s							
WMQ				LR	LR			
	comp=Z,33nm,6.9s							
THW	**Thamme Wali**	**21.13**	**301**	P		**P**	**16 15 56.2**	**+0.9**
PSI	**Prapat**	**21.35**	**165**	P		**P**	**16 16 00.1**	**+2.3**
	comp=Z,4.4nm,0.4s,baz=360,slow=12,SNR=7.4							
PSI				pP		**sP**	**16 16 12.2**	**+0.8**
	comp=Z,11nm,0.6s,baz=359,slow=5.3,SNR=5.1							
CEP	**Cherat**	**21.38**	**303**	P		**P**	**16 15 59.2**	**+1.1**
CEP				S		**S**	**16 19 50.0**	**-3.9**
KSH	**Kashi**	**21.67**	**321**	*e*P		**P**	**16 16 06.8**	**+5.7**
KSH				S		**S**	**16 19 56.8**	**-2.6**
KSH				sS		Sn	16 20 19.9	+11
KSH				pmax	pmax			
	comp=Z,32nm,0.6s							
KSH				pmax	pmax			
	comp=Z,270nm,5.3s							
KSH				LR	LR			
	comp=Z,200nm,6.4s							
KSH				LR	LR			
	comp=Z,250nm,6.4s							
KSH				LR	LR			
	comp=Z,290nm,5.7s							
BTO	**Baotou**	**22.00**	**36**	*e*P		**P**	**16 16 01.1**	**-3.5**
SHLS	**Shalkode**	**22.66**	**333**	*e*P		**P**	**16 16 12.2**	**+0.5**
	comp=Z,6.0nm,0.9s							
SHLS				*e*S		**S**	**16 20 16.7**	**-1.1**
HHC	**Hu-ho-hao-te**	**23.01**	**37**	*e*P		**P**	**16 16 15.5**	**+0.2**
HHC				S		**S**	**16 20 17.6**	**-6.1**
HHC				pmax	pmax			
	comp=Z,16nm,1.1s							
HHC				pmax	pmax			
	comp=Z,110nm,5.1s							
HHC				LR	LR			
	comp=Z,250nm,11.1s							
HHC				LR	LR			
	comp=Z,220nm,13.7s							
HHC				LR	LR			
	comp=Z,97nm,10.7s							
SATY	**Saty**	**23.04**	**331**	*e*P		**P**	**16 16 17.9**	**+2.3**
	comp=Z,4.9nm,1.0s							
SATY				*e*S		**S**	**16 20 25.9**	**+1.7**
KPKS	**Kokpek**	**23.24**	**332**	*e*P		**P**	**16 16 19.3**	**+1.7**
	comp=Z,5.5nm,1.1s							
TNSS	**Tian-Shan**	**23.69**	**329**	*e*P		**P**	**16 16 23.8**	**+1.5**
MDOK	**Medeo**	**23.74**	**329**	*e*P		**P**	**16 16 24.9**	**+2.4**
AAA	**Alma-Ata**	**23.84**	**329**	*e*P		**P**	**16 16 26.8**	**+3.5**
KBL	**Kabul**	**23.85**	**303**	P		**P**	**16 16 25.5**	**+1.7**
KBL				IAmb		IAmb	16 16 39.6	
	comp=Z,36nm,0.8s							
MYKOM	**Kota Tinggi**	**23.92**	**153**	P		**P**	**16 16 24.4**	**+0.1**
DRK	**Karamyk**	**24.19**	**316**	P		**P**	**16 16 27.9**	**+1.0**
DRK				IAmb		IAmb	16 16 30.2	
	comp=Z,7.9nm,0.6s							
CHKK	**Chushkaly**	**24.30**	**330**	*e*P		**P**	**16 16 29.0**	**+1.4**
TDK	**Taldyqorghan**	**24.61**	**334**	*e*P		**P**	**16 16 32.2**	**+1.8**
AAK	**Ala-Archa**	**24.62**	**325**	P		**P**	**16 16 33.3**	**+2.5**
	comp=Z,4.6nm,0.9s,baz=140,slow=7.0,SNR=9.7							
KUU	**Kurty**	**24.63**	**329**	*e*P		**P**	**16 16 32.3**	**+1.7**
	comp=Z,3.1nm,1.1s							
ZSN	**Zaisan**	**24.77**	**346**	*e*P		**P**	**16 16 33.4**	**+1.6**
	comp=Z,3.4nm,0.8s							
MK31	**Makanchi Array**	**24.82**	**342**	P		**P**	**16 16 33.8**	**+1.5**
MKAR	**Makanchi Array**	**24.82**	**342**	P		**P**	**16 16 33.7**	**+1.5**
	comp=Z,2.1nm,0.3s,baz=153,slow=9.9,SNR=31							
MKAR				LR		LR	16 28 15.2	
	comp=Z,83nm,20.0s,baz=156,slow=41							
GAR	**Garm**	**24.89**	**314**	P		**P**	**16 16 34.4**	**+1.2**
MAKZ	**Makanchi**	**24.92**	**341**	P		**P**	**16 16 34.6**	**+1.4**
SGDS	**Sogindy**	**25.13**	**327**	*e*P		**P**	**16 16 37.3**	**+2.1**
CHGR	**Chuyangaron**	**25.50**	**312**	P		**P**	**16 16 39.9**	**+1.3**
CHGR				IAmb		IAmb	16 16 59.2	
	comp=Z,35nm,1.0s							
SONM	**Songino Array**	**26.33**	**20**	P		**P**	**16 16 47.0**	**+1.0**
	comp=Z,10nm,0.9s,baz=200,slow=9.9,SNR=22							
SONM				ScP		**ScP**	**16 23 46.1**	**-2.9**
	comp=Z,1.1nm,1.0s,baz=197,slow=3.7,SNR=4.1							
SONM	**Songino Array**	**26.33**	**20**	P		**P**	**16 16 46.8**	**+0.7**
BTLS	**Baital**	**26.58**	**328**	*e*P		**P**	**16 16 50.0**	**+1.8**
IUG	**Iuzhnay**	**26.83**	**319**	*e*P		**P**	**16 16 52.5**	**+1.9**
SEM	**Semipalatinsk**	**28.66**	**342**	*e*P		**P**	**16 17 07.7**	**+0.6**
KURBB	**Kurchatov Arra**	**29.36**	**341**	P		**P**	**16 17 14.2**	**+1.3**
	comp=Z,1.6nm,0.8s,baz=154,slow=8.9,SNR=6.5							
KURBB				pP		**sP**	**16 17 25.4**	**-1.7**
	comp=Z,3.0nm,0.8s,baz=153,slow=8.8,SNR=8.1							
BRZS	**Berezniki**	**30.92**	**334**	*e*P		**P**	**16 17 27.5**	**+0.7**
ZAA0	**Zalesovo Array**	**31.00**	**350**	P		**P**	**16 17 27.2**	**-0.2**
ZAA0				IAmb		IAmb	16 17 29.6	
	comp=Z,5.9nm,0.7s							
ZALV	**Zalesovo Beam**	**31.00**	**350**	P		**P**	**16 17 28.8**	**+1.4**
	comp=Z,6.0nm,0.5s,baz=169,slow=8.1,SNR=25							
ZALV				pP		**sP**	**16 17 41.4**	**-0.2**
	comp=Z,3.9nm,0.7s,baz=170,slow=7.5,SNR=4.6							
ZALV				LR		LR	16 30 36.8	
	comp=Z,30nm,18.4s,baz=128,slow=37							
ZALV	**Zalesovo Beam**	**31.00**	**350**	P		**P**	**16 17 27.2**	**-0.2**
KSRS	**Korea Array**	**32.61**	**57**	P		**P**	**16 17 39.4**	**-2.4**
	comp=Z,0.5nm,0.5s,baz=249,slow=8.7,SNR=2.5							
GEYT	**Alibeck**	**33.29**	**304**	P		**P**	**16 17 50.5**	**+2.7**
	comp=Z,1.6nm,0.6s,baz=82,slow=10,SNR=2.0							
GEYT				pP		**sP**	**16 18 03.6**	**+1.7**
	comp=Z,4.5nm,0.8s,baz=111,slow=6.5,SNR=4.4							
BVAR	**Borovoye Array**	**34.19**	**335**	P		**P**	**16 17 56.5**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=140,slow=12,SNR=5.3							
BRVK	**Borovoye**	**34.25**	**335**	P		**P**	**16 17 57.5**	**+1.7**
BRVK				IAmb		IAmb	16 18 13.8	
	comp=Z,3.4nm,0.8s							
ABKAR	**Akbulak array**	**36.66**	**323**	P		**P**	**16 18 17.7**	**+1.0**
ABKAR	**Akbulak array**	**36.66**	**323**	P		**P**	**16 18 17.8**	**+1.2**
ABKAR				IAmb		IAmb	16 18 34.1	
	comp=Z,7.6nm,0.8s							
AKTO	**Aktyubinsk**	**38.34**	**323**	P		**P**	**16 18 33.0**	**+2.2**
	comp=Z,1.1nm,0.5s,baz=123,slow=9.1,SNR=3.7							
AKTO				pP		**sP**	**16 18 46.9**	**+1.8**
	comp=Z,5.0nm,0.8s,baz=126,slow=6.7,SNR=5.8							
AKTO				LR		LR	16 36 19.5	
	comp=Z,57nm,18.7s,baz=115,slow=39							
KLR	**Kul'dur**	**39.47**	**40**	P		**P**	**16 18 39.9**	**-0.4**
	comp=Z,4.0nm,0.8s,baz=267,slow=12,SNR=14							
MJAR	**Matsushiro Arr**	**40.54**	**61**	P		**P**	**16 18 48.0**	**-1.5**
	comp=Z,2.5nm,1.1s,baz=258,slow=5.8,SNR=4.8							
MJAR				LR		LR	16 36 18.3	
	comp=Z,72nm,18.3s,baz=200,slow=37							
ARU	**Arti**	**41.48**	**331**	P		**P**	**16 18 58.2**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=165,slow=10,SNR=4.0							
ARU				LR		LR	16 38 05.5	
	comp=Z,51nm,20.2s,baz=128,slow=39							
RAYN	**Ar Rayn**	**43.72**	**280**	P		**P**	**16 19 16.3**	**+0.7**
RAYN				IAmb		IAmb	16 19 30.7	
	comp=Z,9.4nm,1.4s							
GNI	**Garni**	**43.93**	**304**	LR		LR	16 42 23.8	
	comp=Z,26nm,18.4s,baz=138,slow=42							
SOEI	**Soe**	**44.83**	**134**	P		**P**	**16 19 23.0**	**-1.6**
SOEI				IAmb		IAmb	16 19 32.6	
	comp=Z,22nm,1.0s							
ASAJ	**Asahikawa**	**44.95**	**51**	P		**P**	**16 19 24.8**	**-0.3**
	comp=Z,7.1nm,0.8s,baz=282,slow=14,SNR=2.1							
YAK	**Yakutsk**	**45.61**	**23**	P		**P**	**16 19 30.0**	**0.0**
	comp=Z,2.2nm,0.5s,baz=70,slow=2.4,SNR=4.8							
NRIK	**Noril'sk**	**45.90**	**357**	P		**P**	**16 19 33.1**	**+0.9**
	comp=Z,4.2nm,0.5s,baz=164,slow=6.7,SNR=17							
FAKI	**Fak Fak**	**46.11**	**120**	P		**P**	**16 19 32.4**	**-2.1**
FAKI				IAmb		IAmb	16 19 33.4	
	comp=Z,17nm,0.8s							
MMAI	**Mount Meron Ar**	**51.36**	**294**	LR		LR	16 44 14.6	
	comp=Z,24nm,19.9s,baz=105,slow=38							
TIXI	**Tiksi**	**52.12**	**13**	P		**P**	**16 20 19.8**	**+0.1**
TIXI				IAmb		IAmb	16 20 20.4	
	comp=Z,21nm,1.4s							
KLMR	**Klimovskoe**	**52.28**	**330**	*e*P		**P**	**16 20 21.3**	**+0.2**
KLMR				AMP			16 20 38.7	
	comp=Z,12nm,1.2s							
BRTR	**Keskin Array B**	**52.43**	**303**	LR		LR	16 48 42.1	
	comp=Z,22nm,18.1s,baz=127,slow=43							
AKASG	**Malin Array Be**	**55.85**	**316**	P		**P**	**16 20 47.3**	**0.0**
	comp=Z,0.6nm,0.4s,baz=76,slow=6.4,SNR=4.8							
AKASG				pP		**sP**	**16 21 01.6**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=81,slow=6.0,SNR=5.6							
AKASG				LR		LR	16 48 42.3	
	comp=Z,45nm,21.7s,baz=80,slow=40							
MLR	**Muntele Rosu**	**57.97**	**310**	LR		LR	16 50 42.0	
	comp=Z,46nm,19.1s,baz=326,slow=41							
BURAR	**Bucovina Array**	**58.41**	**312**	P		**P**	**16 21 04.4**	**-1.2**
FINES	**FINESS Array B**	**58.73**	**329**	pP		pP	16 21 22.8	+4.8
	comp=Z,3.3nm,0.7s,baz=115,slow=13,SNR=5.0							
WB0	**Warramunga Arr**	**58.78**	**134**	P		**P**	**16 21 07.0**	**-1.4**
WRA	**Warramunga Arr**	**58.87**	**134**	P		**P**	**16 21 07.5**	**-1.5**
	comp=Z,1.4nm,0.3s,baz=322,slow=7.4,SNR=58							
WRA				pP		**sP**	**16 21 21.3**	**-2.3**
	comp=Z,2.5nm,0.8s,baz=322,slow=7.4,SNR=5.3							
WRA	**Warramunga Arr**	**58.87**	**134**	P		**P**	**16 21 06.8**	**-2.2**
WB2	**Warramunga Arr**	**58.88**	**134**	P		**P**	**16 21 07.7**	**-1.4**
WB2				IAmb		IAmb	16 21 11.1	
	comp=Z,11nm,1.2s							
WR0	**Warramunga Arr**	**59.02**	**134**	P		**P**	**16 21 07.9**	**-2.1**
WR0				IAmb		IAmb	16 21 10.4	
	comp=Z,3.4nm,0.8s							
KWP	**Kalwaria Pacla**	**60.02**	**315**	P		**P**	**16 21 17.5**	**+0.9**
ARCES	**ARCESS Array B**	**60.40**	**338**	P		**P**	**16 21 19.9**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=96,slow=6.8,SNR=7.4							
ARCES				LR		LR	16 51 14.3	
	comp=Z,32nm,18.0s,baz=315,slow=40							
AS31	**Alice Springs**	**61.27**	**137**	P		**P**	**16 21 24.4**	**-1.1**
AS31				IAmb		IAmb	16 21 25.0	
	comp=Z,2.0nm,0.6s							
ASAR	**Alice Springs**	**61.27**	**137**	P		**P**	**16 21 24.4**	**-1.0**
	comp=Z,4.3nm,0.5s,baz=320,slow=6.7,SNR=159							
ASAR	**Alice Springs**	**61.27**	**137**	P		**P**	**16 21 23.1**	**-2.4**
KRLC	**Kraliky**	**63.82**	**316**	*e*P		P	16 21 31.7	-10
DPC	**Dobruska-Polom**	**64.08**	**316**	*e*P		P	16 21 32.0	-12
NB2	**NORSAR Subarra**	**65.89**	**328**	P		**P**	**16 21 55.2**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=84,slow=6.5							
NOA	**NORSAR Array B**	**65.89**	**328**	P		**P**	**16 21 55.5**	**0.0**
	comp=Z,0.8nm,0.5s,baz=86,slow=6.4,SNR=11							
NOA				pP		**sP**	**16 22 09.9**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=86,slow=6.5,SNR=6.4							
NOA				LR		LR	16 53 40.9	
	comp=Z,39nm,19.0s,baz=340,slow=39							
GERES	**GERESS Array B**	**65.97**	**315**	P		**P**	**16 21 57.1**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=80,slow=6.4,SNR=19							
GERES				pP		**sP**	**16 22 11.7**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=75,slow=5.7,SNR=14							
GERES	**GERESS Array B**	**65.97**	**315**	P		**P**	**16 21 56.9**	**+0.6**
KHC	**Kasperske Hory**	**66.00**	**315**	*e*P		**P**	**16 21 58.0**	**+1.6**
KHC				*ex*		x	16 22 12.0	
CLL	**Collm**	**66.05**	**317**	*e*P		**P**	**16 21 58.0**	**+1.4**
CLL				LmV			16 54 00.0	
	comp=Z,100nm,20.9s							
NC204	**NORSAR Array S**	**66.09**	**328**	P		**P**	**16 21 56.7**	**-0.1**
STKA	**Stephens Creek**	**71.88**	**138**	P		**P**	**16 22 31.5**	**-1.5**
	comp=Z,2.3nm,0.7s,baz=322,slow=5.8,SNR=6.2							
STKA	**Stephens Creek**	**71.88**	**138**	P		**P**	**16 22 30.1**	**-2.9**
KEST	**Kesra**	**72.01**	**302**	pP		pP	16 22 50.2	+5.4
	comp=Z,4.4nm,0.9s,baz=312,slow=5.5,SNR=3.3							
BMAR	**Burnt Mountain**	**79.68**	**19**	P		**P**	**16 23 17.6**	**+0.4**
ILAR	**Eielson Array**	**80.53**	**22**	P		**P**	**16 23 20.9**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=295,slow=4.8,SNR=16							
ILAR				pP		**sP**	**16 23 36.8**	**+0.1**
	comp=Z,1.5nm,1.0s,baz=287,slow=5.4,SNR=4.7							
ESDC	**Sonseca Array**	**80.65**	**309**	P		**P**	**16 23 25.7**	**+2.7**
	comp=Z,0.6nm,0.7s,baz=33,slow=5.2,SNR=2.7							
ESDC				pP		**sP**	**16 23 38.0**	**+0.1**
	comp=Z,1.6nm,1.1s,baz=46,slow=6.4,SNR=3.2							
INK	**Inuvik**	**82.16**	**16**	P		**P**	**16 23 30.6**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=0.2,slow=6.4,SNR=4.9							
INK	**Inuvik**	**82.16**	**16**	P		**P**	**16 23 29.4**	**-0.9**
BOSA	**Boshof**	**83.63**	**235**	LR		LR	17 00 20.3	
	comp=Z,25nm,18.7s,baz=64,slow=35							
TORD	**Torodi Ar. Bea**	**86.36**	**283**	P		**P**	**16 23 54.0**	**+1.4**
	comp=Z,1.2nm,0.9s,baz=69,slow=3.7,SNR=4.5							
TORD				pP		**sP**	**16 24 06.7**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=70,slow=4.2,SNR=4.4							
TXAR	**Lajitas Array**	**124.89**	**18**	PKP		**PKPdf**	**16 30 10.6**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=245,slow=0.9,SNR=5.7							
TXAR				pPKP		**sPKPdf**	**16 30 25.1**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=222,slow=1.7,SNR=5.6							

IDC ***21*** *16:12:01.0±1.9,2°.13N×127°.23E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/39, mbtmp3.3/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/14, Error ellipse: s-maj=138.5km s-min=24.5km az=66.0*

DJA ***21*** *16:12:04.4±0.5,2°.N±.5°×12°.7E±°, h10km, M3.1/5, MLv3.1/5*

ISC 21 16:12:02.5±1.7,2°.1N±0°.1×127°.2E±0°.2, h10km, n6, σ1§**20/6, mb3.3/3, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.29**	**171**	P			**Pb**	**16 12 26.7**	**-0.3**
TNTI				S			**Sg**	**16 12 44.4**	**+0.2**
GTOI	**Gorontalo**	**4.38**	**251**	P			**Pn**	**16 13 09.1**	**-0.1**
WRA	**Warramunga Arr**	**22.97**	**162**	P		P		**16 17 06.2**	**-1.2**
	0.6nm,0.6s,baz=342,slow=11,SNR=10								
ASAR	**Alice Springs**	**26.40**	**166**	P		P		**16 17 41.1**	**+1.7**
	0.2nm,0.3s,baz=345,slow=11,SNR=11								
DZM	**Mont Dzumac**	**45.24**	**124**	LR		LR		16 40 25.0	
	comp=Z,53nm,18.4s,baz=206,slow=38								
MKAR	**Makanchi Array**	**59.17**	**326**	P		P		**16 22 03.7**	**-0.1**
	0.3nm,0.7s,baz=117,slow=8.8,SNR=3.1								

IDC ***21*** *16:12:37.4±1.0,22°.75N×12°.12W, h0km, mb3.8/10, mb1 3.9/14, mb1mx3.7/44, mbtmp3.8/14, ML3.9/3, Error ellipse: s-maj=27.5km s-min=19.9km az=91.0*

ISC 21 16:12:38.9±0.9,22°.63N±0°.09×11°.9W±0°.1, h10km, n17, σ1§**24/19, mb3.9/10, Mauritania**

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

comp=N,137nm,0.7s
ASUD Al Ashush, Dub 3.26 162 *e*Pn **Pn 16 35 27.0 +2.7**
KHGB Koh Gabri 3.29 37 *e*Pn **Pn 16 35 25.7 +0.8**
KHGB *e* 16 36 19.9
UOSS Minazif 3.31 147 *e*Pn **Pn 16 35 26.5 +1.5**
HATD Hatta, Dubai 3.38 149 *e*Pn **Pn 16 35 27.9 +2.0**
ASHO Ashiyiah 3.47 151 *e*Pn **Pn 16 35 28.3 +1.1**
CHMN Cheshme madani 3.61 53 *e* **Pg 16 35 44.0 +1.8**
IMEH Mehriz 3.65 5 *e*Pn **Pn 16 35 30.8 +0.9**
ALNE Al Ain 3.92 159 *e*Pn **Pn 16 35 35.2 +1.8**
KLNJ Kolanjah 3.98 326 *e*Pn **Pn 16 35 33.9 -0.5**
ISAD Sadrabad 4.18 354 *e*Pn **Pn 16 35 38.6 +1.4**
IRAM Ramesheh 4.35 339 *e*Pn **Pn 16 35 40.2 +0.7**
YZKH Yazd 4.64 4 *e*Pn **Pn 16 35 44.5 +1.1**
YZKH Yazd 4.64 4 *e*Pn **Pn 16 35 44.5 +1.1**
UMZA Um Al Zommool 5.08 170 *e*Pn **Pn 16 35 50.5 +1.2**
IPIR Pirpir 5.70 331 *e*Pn **Pn 16 35 58.5 +0.4**
WSAR Wadi Sarin 6.01 137 Pn **Pn 16 36 03.0 +1.0**
comp=N,0.6nm,0.3s,baz=316,slow=6.1,SNR=10
WSAR Sn **Sn 16 37 10.7 -0.2**
comp=N,0.6nm,0.3s,baz=145,slow=18,SNR=5.1
NHDN Nehbandan 6.25 53 *e*Pn **Pn 16 36 07.2 +1.6**
KRSH Karshahi 6.46 345 *e*Pn **Pn 16 36 08.2 -0.2**
MKAR Makanchi Array 29.11 42 P **P 16 40 33.8 -0.1**
comp=N,0.7nm,1.0s,baz=224,slow=6.0,SNR=2.6
KURBB Kurchatov Arra 29.38 32 P **P 16 40 36.0 -0.3**
comp=N,0.3nm,0.6s,baz=234,slow=8.5,SNR=3.3
ZALV Zalesovo Beam 34.47 32 P **P 16 41 18.9 -2.0**
comp=N,0.9nm,0.5s,baz=243,slow=8.5,SNR=4.3
FINES FINESS Array B 38.59 339 P **P 16 41 56.2 +0.3**
comp=N,1.0nm,0.7s,baz=163,slow=8.0,SNR=5.5
TORD Torodi Ar. Bea 50.94 265 P **P 16 43 33.4 -1.6**
comp=N,0.9nm,0.7s,baz=64,slow=8.1,SNR=6.0
ASAR Alice Springs 92.26 115 P **P 16 47 43.1 -0.6**
comp=N,0.2nm,0.7s,baz=292,slow=4.9,SNR=4.8

*PRE **21** 16:58:28.5±1.3,26°.93S×26°.78E,h2km,ML2.8*
*EAF **21** 16:58:30.7±1.8,27°.04S×26°.85E,h0km±19km,MD4.0*
*BUL **21** 16:58:31.6±1.2,27°.02S×26°.88E,h13km±16km,MD4.0*
ISC 21 16:58:29.0±1.3,**26°.97S**±0°.03×**26°.80E**±0°.03,**h2**km±10km,
n21,σ1**965**/42,**South Africa**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.50**	**86**	*e*P		**Pg**	**16 58 39.1**	**+0.5**
PRYS				*e*S		**Sg**	**16 58 46.4**	**+1.2**
PRYS				AML		AML	16 58 52.7	
	comp=Z,312nm,0.8s							
WDLM	**Western Deep L**	**0.78**	**46**	*e*P		**Pg**	**16 58 43.5**	**-0.4**
WDLM				*e*S		**Sg**	**16 58 53.4**	**-0.6**
WDLM				AML		AML	16 58 55.2	
	comp=Z,503nm,0.8s							
KLOF	**Kloof**	**0.95**	**50**	*e*P		**Pg**	**16 58 45.8**	**-1.5**
KLOF				*e*S		**Sg**	**16 58 59.1**	**-0.5**
KLOF				AML		AML	16 59 05.6	
	comp=Z,630nm,0.3s							
KSR	**Koster**	**1.11**	**5**	*e*P		**Pg**	**16 58 49.5**	**-0.9**
KSR				*e*S		**Sg**	**16 59 03.7**	**-1.1**
KSR				AML		AML	16 59 10.7	
	comp=Z,1μm,0.2s							
SWZ	**Schweizer**	**1.33**	**260**	*e*P		**Pg**	**16 58 53.9**	**-0.6**
SWZ				*e*S		**Sg**	**16 59 11.5**	**-0.1**
SWZ				AML		AML	16 59 15.0	
	comp=Z,376nm,0.3s							
ERPM	**east rand prop**	**1.43**	**65**	*e*P		**Pb**	**16 58 57.2**	**+0.7**
ERPM				*e*S		**Sn**	**16 59 16.5**	**+0.8**
ERPM				AML		AML	16 59 19.1	
	comp=Z,119nm,0.3s							
BOSA	**Boshof**	**2.14**	**219**	*i*P		**Pn**	**16 59 07.2**	**+1.4**
BOSA				*i*S		**Sn**	**16 59 33.3**	**+0.3**
BOSA	**Boshof**	**2.14**	**219**	*e*P		**Pn**	**16 59 06.5**	**+0.6**
BOSA				*e*S		**Sn**	**16 59 32.7**	**-0.3**
BOSA				AML		AML	16 59 38.1	
	comp=Z,51nm,0.3s							
BOSA	**Boshof**	**2.14**	**219**	*i*P		**Pn**	**16 59 07.2**	**+1.4**
BOSA				*i*S		**Sn**	**16 59 33.3**	**+0.3**
LBTB	**Lobatse**	**2.22**	**331**	*i*P		**Pn**	**16 59 08.9**	**+1.9**
LBTB				*i*S		**Sn**	**16 59 37.5**	**+2.4**
LBTB	**Lobatse**	**2.22**	**331**	*e*P		**Pn**	**16 59 07.0**	**0.0**
LBTB				*e*S		**Sn**	**16 59 35.0**	**0.0**
LBTB				AML		AML	16 59 38.9	
	comp=Z,140nm,0.2s							
LBTB	**Lobatse**	**2.22**	**331**	*i*P		**Pn**	**16 59 08.9**	**+1.9**
LBTB				*i*S		**Sn**	**16 59 37.5**	**+2.4**
POGA	**Pongola**	**4.39**	**96**	*i*P		**Pn**	**16 59 38.1**	**+1.4**
POGA				*i*S		**Sn**	**17 00 24.9**	**-3.5**
POGA	**Pongola**	**4.39**	**96**	*e*P		**Pn**	**16 59 37.2**	**+0.5**
POGA				*e*S		**Sn**	**17 00 26.9**	**-1.6**
POGA				AML		AML	17 00 49.9	
	comp=Z,58nm,0.5s							
POGA	**Pongola**	**4.39**	**96**	*i*P		**Pn**	**16 59 38.1**	**+1.4**
POGA				*i*S		**Sn**	**17 00 24.9**	**-3.5**
UPI	**Upington**	**5.11**	**253**	*e*P		**Pn**	**16 59 46.9**	**+0.2**
UPI				*e*S		**Sn**	**17 00 43.2**	**-3.1**
UPI				AML		AML	17 01 13.5	
	comp=Z,11nm,0.4s							
MOPA	**Mopani**	**5.40**	**51**	*e*P		**Pn**	**16 59 50.4**	**-0.2**
MOPA				*e*S		**Sn**	**17 00 49.9**	**-3.4**
MOPA				AML		AML	17 01 24.3	
	comp=Z,12nm,0.6s							
KEIM	**Keimoes**	**5.45**	**250**	*e*P		**Pn**	**16 59 51.0**	**-0.3**
KEIM				*e*S		**Sn**	**17 00 52.8**	**-1.8**
KEIM				AML		AML	17 01 21.1	
	comp=Z,23nm,0.4s							
GRAN	**Grantham**	**6.67**	**216**	*e*P		**Pn**	**17 00 08.9**	**+0.8**
GRAN				*e*S		**Sn**	**17 01 21.8**	**-3.0**
GRAN				AML		AML	17 01 45.8	
	comp=Z,4.7nm,0.7s							
BLWY	**Bulawayo**	**6.99**	**14**	*i*P		**Pn**	**17 00 13.7**	**+1.0**
BLWY				*i*S		**Sn**	**17 01 31.4**	**-1.4**
BLWY	**Bulawayo**	**6.99**	**14**	*i*P		**Pn**	**17 00 13.7**	**+1.0**
BLWY				*i*S		**Sn**	**17 01 31.4**	**-1.4**

*BJI **21** 17:01:14.6±0.0,48°.54N×155°.07E,h76km,mB4.7/30,*
mb4.6/41,Ms4.2/5,Ms7 3.9/3
*KRSC **21** 17:01:16.0±2.2,48°.31N×155°.18E,h101km±35km,ML4.7*
*MOS **21** 17:01:17.6±1.3,48°.40N×154°.80E,h85km,mb4.5/11,Error*
ellipse: s-maj=7.3km s-min=3.6km az=73.9
*SKHL **21** 17:01:18.8±0.6,48°.37N×154°.77E,h90km±2km,mb4.8/7,*
msh5.4/6
*IDC **21** 17:01:20.7±2.4,48°.51N×154°.60E,h88km±21km,mb3.9/18,*
mb1 4.0/25,mb1mx3.8/58,mbtmp4.2/25,MS3.0/8,
Ms1 3.0/8,ms1mx2.8/46,Error ellipse: s-maj=20.6km
s-min=12.4km az=155.0
*NEIC **21** 17:01:20.1±1.7,48°.53N±0°.10×154°.62E±0°.06,h85km±7km,*
mb4.7/39,Error ellipse: s-maj=15.2km s-min=1.9km
az=157.0
ISC 21 17:01:20.8±0.5,**48°.47N**±0°.06×**154°.80E**±0°.05,**h100**km,
n285,σ1**988**/308,**mb4.4**/62,**27C-7D**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.38**	**21**	*e*P		**Pn**	**17 01 56.5**	**-1.8**
SKR				*e*S		**Sn**	**17 02 25.4**	**-1.6**
SKR	**Severo-Kuril's**	**2.38**	**21**	*e*P		**Pn**	**17 01 56.4**	**-1.8**
SKR				AMB		AMB	17 01 59.0	
	90nm,0.4s							
SKR				*e*S		**Sn**	**17 02 25.0**	**-2.0**
SKR				A		A	17 02 30.0	
	657nm,0.6s							
SKR				A		A	17 02 30.0	
	247nm,0.6s							
SKR	**Severo-Kuril's**	**2.38**	**21**	PN		**Pn**	**17 01 56.5**	**-1.8**
SKR				S		**Sn**	**17 02 25.4**	**-1.6**
PAU	**Pauzhetka**	**3.27**	**23**	*e*P		**Pn**	**17 02 08.9**	**-1.2**
PAU				*e*S		**Sn**	**17 02 46.9**	**-1.3**
PAU	**Pauzhetka**	**3.27**	**23**	*e*P		**Pn**	**17 02 09.2**	**-0.9**
PAU				AMB		AMB	17 02 22.6	
	136nm,0.5s							
PAU				*e*S		**Sn**	**17 02 47.0**	**-1.3**
PAU				A		A	17 02 50.7	
	420nm,0.3s							
PAU				A		A	17 02 50.7	
	460nm,0.3s							
PAU	**Pauzhetka**	**3.27**	**23**	PN		**Pn**	**17 02 08.9**	**-1.2**
PAU				S		**Sn**	**17 02 46.9**	**-1.3**
KDTR	**Khodutka, Kamc**	**3.96**	**31**	*e*P		**Pn**	**17 02 16.5**	**-2.8**
KDTR				*e*S		**Sn**	**17 03 00.1**	**-4.5**
KDTR	**Khodutka, Kamc**	**3.96**	**31**	PN		**Pn**	**17 02 16.5**	**-2.8**
KDTR				S		**Sn**	**17 03 00.1**	**-4.5**
ASAK	**Asacha**	**4.39**	**26**	*e*P		**Pn**	**17 02 25.2**	**-0.1**
ASAK	**Asacha**	**4.39**	**26**	PN		**Pn**	**17 02 25.2**	**-0.1**
MTVR	**Mutnovka**	**4.57**	**27**	*e*P		**Pn**	**17 02 26.1**	**-1.6**
MTVR				*e*S		**Sn**	**17 03 16.7**	**-2.9**
MTVR	**Mutnovka**	**4.57**	**27**	PN		**Pn**	**17 02 26.1**	**-1.6**
MTVR				S		**Sn**	**17 03 16.7**	**-2.9**
GRL	**Gorelyy**	**4.59**	**26**	*e*P		**Pn**	**17 02 27.0**	**-1.1**
GRL				*e*S		**Sn**	**17 03 18.4**	**-1.9**
GRL	**Gorelyy**	**4.59**	**26**	PN		**Pn**	**17 02 27.0**	**-1.1**
GRL				S		**Sn**	**17 03 18.4**	**-1.9**
RUS	**Russkaya**	**4.63**	**29**	*e*P		**Pn**	**17 02 25.7**	**-2.7**
RUS				*e*S		**Sn**	**17 03 16.5**	**-4.4**
RUS	**Russkaya**	**4.63**	**29**	PN		**Pn**	**17 02 25.7**	**-2.7**
RUS				S		**Sn**	**17 03 16.5**	**-4.4**
APC	**Apacha**	**4.71**	**18**	*e*P		**Pn**	**17 02 30.2**	**+0.7**
APC	**Apacha**	**4.71**	**18**	PN		**Pn**	**17 02 30.2**	**+0.7**
KRMR	**Karymshinskiy**	**4.86**	**25**	*e*P		**Pn**	**17 02 31.7**	**+0.2**
KRMR				*e*S		**Sn**	**17 03 24.4**	**-2.0**
KRMR	**Karymshinskiy**	**4.86**	**25**	PN		**Pn**	**17 02 31.7**	**+0.2**
KRMR				S		**Sn**	**17 03 24.4**	**-2.0**
PEA0B	**Petropavlovsk-**	**5.00**	**20**	*i*PN		**Pn**	**17 02 33.5**	**+0.1**
PETK	**Petropavlovsk-**	**5.00**	**20**	P		**Pn**	**17 02 33.5**	**0.0**
	1.5nm,0.3s,baz=170,slow=11,SNR=177							
PETK				S		**Sn**	**17 03 35.5**	**+5.5**
	0.7nm,0.3s,baz=221,slow=15,SNR=2.4							
PETK				LR		LR	17 05 01.4	
	comp=Z,55nm,20.2s,baz=132,slow=44							
PETK	**Petropavlovsk-**	**5.00**	**20**			**Pn**	**17 02 33.3**	**-0.1**
PET	**Petropavlovsk**	**5.18**	**27**	*e*P		**Pn**	**17 02 34.5**	**-1.3**
PET				*e*S		**Sn**	**17 03 31.6**	**-2.6**
PET	**Petropavlovsk**	**5.18**	**27**	*e*P		**Pn**	**17 02 35.7**	**-0.1**
PET				*e*S		**Sn**	**17 03 32.9**	**-1.3**
PET				A		A	17 03 44.8	
	110nm,0.5s							
PET				A		A	17 03 44.8	
	100nm,0.5s							
PET	**Petropavlovsk**	**5.18**	**27**	*e*PN		**Pn**	**17 02 34.7**	**-1.1**
PET				*e*S		**Sn**	**17 03 33.5**	**-0.7**
PET				smax		smax		
	comp=N,106nm,0.5s							
PET				smax		smax		
	comp=E,100nm,0.5s							
DALK	**Dalny**	**5.21**	**27**	*e*P		**Pn**	**17 02 34.5**	**-1.8**
DALK				*e*S		**Sn**	**17 03 32.1**	**-3.0**
DALK	**Dalny**	**5.21**	**27**	PN		**Pn**	**17 02 34.5**	**-1.8**
DALK				S		**Sn**	**17 03 32.1**	**-3.0**
UGLR	**Uglovaya**	**5.39**	**27**	*e*P		**Pn**	**17 02 37.4**	**-1.4**
UGLR	**Uglovaya**	**5.39**	**27**	PN		**Pn**	**17 02 37.4**	**-1.4**
KOK	**Koryaka**	**5.41**	**25**	*e*P		**Pn**	**17 02 39.3**	**+0.2**
KOK	**Koryaka**	**5.41**	**25**	*e*P		**Pn**	**17 02 39.3**	**+0.2**
KOK	**Koryaka**	**5.41**	**25**	PN		**Pn**	**17 02 39.3**	**+0.2**
AVH	**Avacha**	**5.41**	**26**	*e*P		**Pn**	**17 02 38.3**	**-0.8**
AVH				*e*S		**Sn**	**17 03 36.8**	**-3.3**
AVH	**Avacha**	**5.41**	**26**	PN		**Pn**	**17 02 38.3**	**-0.8**
AVH				S		**Sn**	**17 03 36.8**	**-3.3**
SMAR	**Somma**	**5.43**	**26**	*e*P		**Pn**	**17 02 38.9**	**-0.6**
SMAR	**Somma**	**5.43**	**26**	PN		**Pn**	**17 02 38.9**	**-0.6**
KRER	**Koryakskii**	**5.45**	**26**	*e*P		**Pn**	**17 02 38.9**	**-0.8**
KRER				*e*S		**Sn**	**17 03 37.9**	**-3.3**
KRER	**Koryakskii**	**5.45**	**26**	PN		**Pn**	**17 02 38.9**	**-0.8**
KRER				S		**Sn**	**17 03 37.9**	**-3.3**
SDLR	**Sedlovina**	**5.47**	**27**	*e*P		**Pn**	**17 02 38.4**	**-1.5**
SDLR	**Sedlovina**	**5.47**	**27**	PN		**Pn**	**17 02 38.4**	**-1.5**
KRX	**Arik**	**5.47**	**25**	*e*P		**Pn**	**17 02 39.7**	**-0.2**
KRX	**Arik**	**5.47**	**25**	PN		**Pn**	**17 02 39.7**	**-0.2**
NLC	**Nalytchevo**	**5.52**	**30**	*e*S		**Sn**	**17 03 36.9**	**-5.7**
GNL	**Ganaly**	**5.60**	**20**	*e*P		**Pn**	**17 02 41.6**	**0.0**
GNL	**Ganaly**	**5.60**	**20**	PN		**Pn**	**17 02 41.6**	**0.0**
SPN	**Mys Shipunski**	**5.70**	**34**	*e*P		**Pn**	**17 02 40.2**	**-2.7**
SPN				*e*S		**Sn**	**17 03 41.0**	**-5.9**
SPN	**Mys Shipunski**	**5.70**	**34**	*e*P		**Pn**	**17 02 40.2**	**-2.7**
SPN	**Mys Shipunski**	**5.70**	**34**	PN		**Pn**	**17 02 40.2**	**-2.7**
KUR	**Kuril'sk**	**5.75**	**238**	*i*P		**Pn**	**17 02 41.8**	**-1.8**
KUR				AMB		AMB	17 02 55.0	
	comp=E,70nm,0.7s							
KUR				*e*S		**Sn**	**17 03 44.3**	**-3.9**
KUR				A		A	17 03 55.0	
	comp=E,80nm,0.6s							
KUR				A		A	17 03 55.0	
	comp=E,90nm,0.6s							
KUR	**Kuril'sk**	**5.75**	**238**	⇓*i*PN		**Pn**	**17 02 42.0**	**-1.6**
KUR				*e*S		**Sn**	**17 03 44.3**	**-3.9**
KUR				pmax		pmax		
	comp=Z,53nm,0.4s							
KUR				pmax		pmax		
	comp=E,31nm,0.5s							
KUR				pmax		pmax		
	comp=N,24nm,0.4s							
KUR				smax		smax		
	comp=E,69nm,0.5s							
KUR				smax		smax		
	comp=N,45nm,0.6s							
MKZ	**Mys Kozlova**	**7.47**	**33**	*e*P		**Pn**	**17 03 03.4**	**-3.6**
MKZ				*e*S		**Sn**	**17 04 22.8**	**-7.2**
MKZ	**Mys Kozlova**	**7.47**	**33**	PN		**Pn**	**17 03 03.4**	**-3.6**
KZV	**Kizimen**	**7.48**	**25**	*e*P		**Pn**	**17 03 07.9**	**+0.7**
KZV	**Kizimen**	**7.48**	**25**	PN		**Pn**	**17 03 07.9**	**+0.7**
TUMD	**Tumrok D**	**7.58**	**25**	*e*P		**Pn**	**17 03 08.4**	**-0.1**
TUMR	**Tumrok**	**7.58**	**24**	*e*P		**Pn**	**17 03 09.2**	**+0.6**
TUMR	**Tumrok**	**7.58**	**24**	PN		**Pn**	**17 03 08.4**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**7.62**	**238**	*e*P		**Pn**	**17 03 05.7**	**-3.3**
YUK				AMB		AMB	17 03 06.0	
	comp=N,160nm,0.9s							
YUK	**Yuzh-Kuril'sk**	**7.62**	**238**	*e*PN		**Pn**	**17 03 05.6**	**-3.4**
YUK				pmax		pmax		
	comp=Z,70nm,0.3s							
GRPR	**Tuman**	**7.69**	**238**	*e*P		Pn	17 03 06.0	-4.0
GRPR				*e*S		**Sn**	**17 04 30.0**	**-5.5**
GRPR	**Tuman**	**7.69**	**238**	*e*PN		**Pn**	**17 03 06.5**	**-3.5**
RUSJ	**Misakicho**	**7.92**	**240**	*e*PN		**Pn**	**17 03 10.9**	**-2.2**
GLVR	**Golovnino**	**7.99**	**237**	*i*P		Pn	17 03 10.0	-4.1
GLVR				*e*S		**Sn**	**17 04 36.0**	**-6.8**
GLVR	**Golovnino**	**7.99**	**237**	⇑*i*PN		Pn	17 03 10.2	-3.9
NMR	**Nemuro--Hokkai**	**8.12**	**234**	*i*P		Pn	17 03 09.0	-6.8
NMR	**Nemuro--Hokkai**	**8.12**	**234**	⇓*i*PN		Pn	17 03 09.9	-5.9
TYV	**Tymovskoe**	**8.24**	**291**	*e*P		**Pn**	**17 03 16.8**	**-0.6**
TYV				AMB		AMB	17 03 20.0	
	comp=Z,24nm,1.0s							
TYV				*e*S		**Sn**	**17 04 46.0**	**-2.6**
TYV				A		A	17 04 51.0	
	comp=Z,17nm,1.0s							
TYV	**Tymovskoe**	**8.24**	**291**	*e*PN		**Pn**	**17 03 18.9**	**+1.5**
TYV				*e*S		**Sn**	**17 04 49.2**	**+0.6**
TYV				pmax		pmax		
	comp=Z,24nm,1.0s							
TYV				smax		smax		
	comp=E,17nm,1.4s							
YSS	**Yuzh-Sakhalins**	**8.27**	**264**	*i*P		**Pn**	**17 03 18.2**	**+0.4**
YSS				AMB		AMB	17 03 20.0	
	comp=E,70nm,0.7s							
YSS				*e*S		**Sn**	**17 04 46.3**	**-3.1**
YSS				A		A	17 04 55.0	
	comp=E,30nm,0.5s							
YSS				A		A	17 04 55.0	
	comp=E,10.0nm,0.5s							
YSS	**Yuzh-Sakhalins**	**8.27**	**264**	⇓*i*PN		**Pn**	**17 03 19.6**	**+1.8**
YSS				*e*S		**Sn**	**17 04 53.0**	**+3.6**
YSS				pmax		pmax		
	comp=Z,40nm,0.6s							
YSS				smax		smax		
	comp=N,30nm,0.5s							
YSS				smax		smax		
	comp=E,10.0nm,0.5s							
YSS	**Yuzh-Sakhalins**	**8.27**	**264**	Pn		**Pn**	**17 03 19.0**	**+1.2**
UGL	**Uglegorsk**	**8.44**	**279**	*e*P		**Pn**	**17 03 20.5**	**+0.4**
UGL				AMB		AMB	17 03 23.0	
	comp=E,100nm,0.9s							
UGL				*e*S		**Sn**	**17 04 49.5**	**-4.0**
UGL	**Uglegorsk**	**8.44**	**279**	*e*PN		**Pn**	**17 03 16.4**	**-3.7**
UGL				pmax		pmax		
	comp=Z,100nm,0.9s							
UGL				MLR		MLR		
	comp=Z,1μm,17.0s							
UGL				MLR		MLR		
	comp=E,1μm,14.0s							
KBTR	**Krutoberegovo**	**9.17**	**29**	*e*P		**Pn**	**17 03 27.8**	**-2.2**
KBTR	**Krutoberegovo**	**9.17**	**29**	PN		**Pn**	**17 03 27.8**	**-2.2**
JKA	**Kamikawa-asahi**	**9.50**	**247**	*e*P		**Pn**	**17 03 34.1**	**-0.5**
JKA	**Kamikawa-asahi**	**9.50**	**247**	Pn		**Pn**	**17 03 33.5**	**-1.1**
ASAJ	**Asahikawa**	**9.50**	**247**	P		**Pn**	**17 03 34.1**	**-0.5**
	comp=E,1.8nm,0.3s,baz=61,slow=13,SNR=20							
ASAJ				LR		LR	17 06 54.2	
	comp=E,45nm,19.1s,baz=112,slow=36							
ERM	**Erimo**	**10.43**	**236**	PN		Pn	17 03 43.6	-3.7
ERM	**Erimo**	**10.43**	**236**	Pn		Pn	17 03 43.6	-3.7
MA2	**Magadan**	**11.38**	**350**	LR		LR	17 08 24.9	
	comp=E,37nm,18.7s,baz=178,slow=38							
JTM	**Tenmabayashi**	**12.42**	**237**	Pn		**Pn**	**17 04 15.2**	**+1.2**
SMY	**Shemya**	**12.97**	**64**	PN		**Pn**	**17 04 19.4**	**-1.7**
SMY	**Shemya**	**12.97**	**64**	Pn		**Pn**	**17 04 19.4**	**-1.7**
EKMR	**Ekimchan**	**14.55**	**297**	*e*P		**Pn**	**17 04 40.0**	**-1.7**
EKMR				AMB		AMB	17 04 55.0	
	comp=E,8.0nm,0.6s							
SEY	**Seymchan**	**14.56**	**356**	P		**Pn**	**17 04 43.1**	**+1.4**
	comp=E,0.1nm,0.3s,baz=72,slow=20,SNR=1.6							
KLR	**Kul'dur**	**15.19**	**282**	P		**Pn**	**17 04 50.3**	**+0.6**
	comp=E,0.6nm,0.3s,baz=77,slow=11,SNR=16							
KLR				LR		LR	17 09 59.6	
	comp=E,66nm,20.9s,baz=87,slow=34							
KLR	**Kul'dur**	**15.19**	**282**	*ce*P		**Pn**	**17 04 50.4**	**+0.7**
KLR				pmax		pmax		
	comp=Z,12nm,1.0s							
JSD	**Sado**	**15.90**	**235**			**Pn**	**17 04 60.0**	**+1.3**
USA0B	**Ussuriysk Arra**	**16.30**	**263**	*i*P		**Pn**	**17 05 03.9**	**+0.2**
USRK	**Ussuriysk Ar.**	**16.30**	**263**	P		**Pn**	**17 05 02.9**	**-0.8**
	baz=66,slow=13,SNR=6.6							
USRK				LR		LR	17 10 37.9	
	comp=Z,77nm,21.0s,baz=39,slow=34							
MAJO	**Matsushiro**	**17.03**	**232**	*i*P		**Pn**	**17 05 11.5**	**-1.2**
MAT	**Matsushiro**	**17.03**	**232**	P		**Pn**	**17 05 12.3**	**-0.4**
MJAR	**Matsushiro Arr**	**17.03**	**232**	P		**Pn**	**17 05 13.0**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=4.8							
BMKR	**Bomnak**	**17.24**	**301**	*e*P		**Pn**	**17 05 12.0**	**-3.0**
MDJ	**Mudanjiang**	**17.73**	**267**	P		**P**	**17 05 18.8**	**-1.8**
MDJ				pmax		pmax		
	comp=Z,10.0nm,1.0s							
MDJ				pmax		pmax		
	comp=Z,130nm,3.5s							
MDJ	**Mudanjiang**	**17.73**	**267**			**P**	**17 05 19.9**	**-0.7**
KROS	**Kirovskiy**	**18.27**	**300**	*e*P		**P**	**17 05 26.0**	**-0.4**
KROS				AMB		AMB	17 05 30.0	
	comp=Z,5.0nm,0.4s							
JWT	**Wachi**	**19.48**	**235**	P		**P**	**17 05 40.8**	**+1.1**
YAK	**Yakutsk**	**19.56**	**323**	P		**P**	**17 05 39.3**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=102,slow=1.3,SNR=8.8							
YAK	**Yakutsk**	**19.56**	**323**	*e*P		**P**	**17 05 38.5**	**-1.8**
YAK	**Yakutsk**	**19.56**	**323**	*e*P		**P**	**17 05 38.6**	**-1.8**
YAK				pmax		pmax		
	comp=Z,15nm,0.9s							
YAK				pmax		pmax		
	comp=E,4.0nm,1.1s							
YAK	**Yakutsk**	**19.56**	**323**	P		**P**	**17 05 39.3**	**-1.0**
YAK				lAmb		lAmb	17 05 43.9	
	comp=Z,17nm,0.8s							
BILL	**Bilibino**	**20.47**	**12**	*e*P		**P**	**17 05 49.5**	**-0.6**
BILL	**Bilibino**	**20.47**	**12**	⇓*e*P		**P**	**17 05 49.3**	**-0.8**
BILL							17 09 58.0	
BILL				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KSRS	**Korea Array**	**22.42**	**251**	P		**P**	**17 06 10.9**	**-0.2**
	comp=Z,2.6nm,0.6s,baz=48,slow=10,SNR=15							
KSAR	**Wonju Array Be**	**22.45**	**251**	P		**P**	**17 06 11.7**	**+0.2**
KSAR	**Wonju Array Be**	**22.45**	**251**	P		**P**	**17 06 11.7**	**+0.2**
JNU	**Nakatsue**	**23.59**	**238**	P		**P**	**17 06 22.2**	**-0.3**
	comp=Z,6.3nm,0.9s,baz=45,slow=5.7,SNR=1.7							
TIK	**Tiksi**	**26.16**	**342**	*e*P		**P**	**17 06 44.0**	**-1.2**
TIXI	**Tiksi**	**26.17**	**342**	*i*P		**P**	**17 06 44.0**	**-1.3**
TIXI	**Tiksi**	**26.17**	**342**	P		**P**	**17 06 43.6**	**-1.7**
H11N2	**WAKE ISLAND Hy**	**30.29**	**157**	T		T	17 39 09.3	
	baz=344,slow=76,SNR=69							
H11N1	**WAKE ISLAND Hy**	**30.30**	**157**	T		T	17 39 12.6	
	baz=344,slow=76,SNR=123							
H11N3	**WAKE ISLAND Hy**	**30.30**	**157**	T		T	17 39 13.8	
	baz=344,slow=76,SNR=76							
HHC	**Hu-ho-hao-te**	**31.34**	**272**	*e*P		**P**	**17 07 33.8**	**+2.1**
HHC				pmax		pmax		
	comp=Z,9.0nm,1.1s							
HHC				pmax		pmax		
	comp=Z,81nm,5.9s							
H11S1	**WAKE ISLAND Hy**	**31.41**	**158**	T		T	17 40 35.7	
	baz=345,slow=76,SNR=374							
H11S3	**WAKE ISLAND Hy**	**31.42**	**158**	T		T	17 40 37.4	
	baz=345,slow=76,SNR=488							
H11S2	**WAKE ISLAND Hy**	**31.43**	**158**	T		T	17 40 37.1	
	baz=345,slow=76,SNR

KURK				IAmb	IAmb	17 09 45.1
	comp=Z,11nm,0.8s					
BRVK	**Borovoye**	**50.70 309**	*e*P	**P**	**17 10 09.5 -0.3**	
BRVK	**Borovoye**	**50.70 309**	*ce*P	**P**	**17 10 09.5 -0.3**	
BRVK			pmax	pmax		
	comp=Z,4.0nm,1.0s					
BRVK	**Borovoye**	**50.70 309**	P	**P**	**17 10 09.5 -0.3**	
BRVK			IAmb	IAmb	17 10 10.3	
	comp=Z,6.3nm,0.6s					
LSA	**Lhasa**	**51.32 273**	P	**P**	**17 10 16.1 +0.8**	
LSA			pmax	pmax		
	comp=Z,5.0nm,0.5s					
LSA	**Lhasa**	**51.32 273**	P	**P**	**17 10 16.1 +0.8**	
LSA			IAmb	IAmb	17 10 17.8	
	comp=Z,4.6nm,0.5s					
BOOM	**Boomskoye usch**	**53.32 295**	P	**P**	**17 10 30.0 +0.4**	
BOOM			pmax	pmax		
	comp=Z,62nm,1.6s					
BOOM	**Boomskoye usch**	**53.32 295**	P	**P**	**17 10 30.0 +0.4**	
SHL	**Shillong**	**53.56 268**	P	**P**	**17 10 31.5 -0.1**	
SHL			pmax	pmax		
	comp=Z,16nm,0.6s					
SHL	**Shillong**	**53.56 268**	P	**P**	**17 10 31.5 -0.1**	
CHTO	**Chiang Mai**	**53.62 257**	P	**P**	**17 10 32.4 +0.5**	
CHTO			pmax	pmax		
	comp=Z,5.0nm,0.7s					
CHTO	**Chiang Mai**	**53.62 257**	P	**P**	**17 10 32.4 +0.5**	
CHTO			IAmb	IAmb	17 10 34.5	
	comp=Z,4.6nm,0.7s					
CMAR	**Chiang Mai Arr**	**53.88 257**	P	**P**	**17 10 34.5 +0.8**	
	comp=Z,1.7nm,0.7s,baz=36,slow=6.9,SNR=15					
AAK	**Ala-Archa**	**54.10 296**	*e*P	**P**	**17 10 35.0 -0.3**	
AAK	**Ala-Archa**	**54.10 296**	*ce*P	**P**	**17 10 35.0 -0.3**	
AAK			pmax	pmax		
	comp=Z,7.0nm,0.7s					
ARU	**Arti**	**54.52 317**	*e*P	**P**	**17 10 37.7 -0.2**	
ARU	**Arti**	**54.52 317**	*c i*P	**P**	**17 10 37.7 -0.2**	
ARU			*PP	**pP**	**17 11 03.3 +1.3**	
ARU					17 11 38.0	
ARU					17 12 40.0	
ARU			S	**S**	**17 18 10.4 +1.4**	
ARU			SS	**SS**	**17 21 49.1 -3.0**	
ARU			pmax	pmax		
	comp=Z,11nm,1.6s					
ARU	**Arti**	**54.52 317**	P	**P**	**17 10 37.7 -0.5**	
GUN	**Gumba**	**55.99 275**	*e*P	**P**	**17 10 49.5 +0.2**	
	comp=Z,7.3nm,0.4s					
KK05	**Karatay Array**	**56.16 299**	P	**P**	**17 10 49.5 -0.4**	
KK09	**Karatay Array**	**56.17 299**	P	**P**	**17 10 49.7 -0.3**	
KKAR	**Karatay Array**	**56.17 299**	P	**P**	**17 10 49.6 -0.4**	
KKAR	**Karatay Array**	**56.17 299**	P	**P**	**17 10 49.6 -0.4**	
KKN	**Kakani**	**56.46 275**	*e*P	**P**	**17 10 53.6 +1.1**	
	comp=Z,7.0nm,0.5s					
PKI	**Pulchoki**	**56.52 275**	*e*P	**P**	**17 10 53.7 +0.6**	
	comp=Z,8.2nm,0.5s					
PKIN	**Phulchoki**	**56.53 275**	*e*P	**P**	**17 10 53.8 +0.8**	
	comp=Z,7.6nm,0.5s					
ARCES	**ARCESS Array B**	**56.60 341**	P	**P**	**17 10 52.8 +0.2**	
	comp=Z,5.7nm,1.0s,baz=15,slow=5.0,SNR=5.2					
ARCES			LR	LR	17 38 24.2	
	comp=Z,26nm,19.7s,baz=180,slow=39					
DMN	**Daman**	**56.70 275**	*e*P	**P**	**17 10 55.4 +1.2**	
	comp=Z,8.2nm,0.3s					
GKN	**Gorkha**	**56.75 276**	*e*P	**P**	**17 10 54.9 +0.4**	
	comp=Z,16nm,0.5s					
DANN	**Dangsing**	**57.10 277**	*e*P	**P**	**17 10 57.8 +0.7**	
	comp=Z,25nm,0.5s					
KOLN	**Koldanda**	**57.59 276**	*e*P	**P**	**17 11 00.9 +0.5**	
	comp=Z,5.2nm,0.5s					
PLID	**Pearl Lake**	**57.77 57**	P	**P**	**17 11 03.1 +1.6**	
PLID			IAmb	IAmb	17 11 14.6	
	comp=Z,6.4nm,1.3s					
BTK	**Batken**	**57.86 296**	P	**P**	**17 11 01.9 -0.1**	
BTK			pmax	pmax		
	comp=Z,3.0nm,0.8s					
BTK	**Batken**	**57.86 296**	P	**P**	**17 11 01.9 -0.1**	
BTK			IAmb	IAmb	17 11 04.0	
	comp=Z,2.8nm,0.8s					
AB31	**Akbulak array**	**58.20 310**	P	**P**	**17 11 03.7 -0.4**	
AB31			IAmb	IAmb	17 11 04.6	
	comp=Z,5.2nm,0.6s					
ABKAR	**Akbulak array**	**58.20 310**	P	**P**	**17 11 03.8 -0.3**	
ABKAR			IAmb	IAmb	17 11 04.5	
	comp=Z,5.2nm,0.6s					
ABKAR	**Akbulak array**	**58.20 310**	P	**P**	**17 11 03.5 -0.6**	
SUMG	**Summit**	**58.90 5**	P	**P**	**17 11 11.0 +1.8**	
SUMG			pmax	pmax		
	comp=Z,15nm,1.0s					
SUMG	**Summit**	**58.90 5**	P	**P**	**17 11 11.0 +1.8**	
CHGR	**Chuyangaron**	**59.74 295**	P	**P**	**17 11 14.7 -0.4**	
SAUI	**Saumlaki**	**59.90 207**	P	**P**	**17 11 18.4 +2.3**	
NIL	**Nilore**	**60.45 288**	P	**P**	**17 11 20.0 +0.1**	
NIL			pmax	pmax		
	comp=Z,9.0nm,0.7s					
NIL	**Nilore**	**60.45 288**	P	**P**	**17 11 20.0 +0.1**	
NVAR	**Mina Array Bea**	**60.64 64**	P	**P**	**17 11 23.1 +1.7**	
	comp=Z,0.9nm,0.6s,baz=297,slow=6.7,SNR=8.4					
BELG	**Belogornoye**	**62.01 318**	*i* P	**P**	**17 11 29.3 -0.7**	
BELG			pmax	pmax		
	comp=Z,1.0nm,0.9s					
PDAR	**Pinedale Array**	**62.82 55**	P	**P**	**17 11 37.7 +1.7**	
	comp=Z,1.1nm,0.9s,baz=321,slow=2.1,SNR=7.0					
FINES	**FINESS Array B**	**62.97 335**	P	**P**	**17 11 37.3 +1.1**	
	comp=Z,1.9nm,0.5s,baz=39,slow=7.8,SNR=19					
FINES			PcP	**PcP**	**17 12 16.5 +3.2**	
	comp=Z,0.5nm,0.4s,baz=35,slow=7.6,SNR=4.2					
FINES	**FINESS Array B**	**62.97 335**	*i* P	**P**	**17 11 35.9 -0.4**	
FINES			pmax	pmax		
	comp=Z,2.0nm,0.5s					
PRN	**Pahroc Range**	**63.25 63**	P	**P**	**17 11 40.2 +1.4**	
OBN	**Obninsk**	**64.53 326**	*e*P	**P**	**17 11 46.9 +0.3**	
OBN	**Obninsk**	**64.53 326**	ǁ *e*P	**P**	**17 11 46.9 +0.3**	
OBN			*PP	**pP**	**17 12 07.8 -3.6**	
OBN			pmax	pmax		
	comp=Z,4.0nm,1.1s					
GEYT	**Alibeck**	**66.70 301**	LR	LR	17 43 38.1	
	comp=Z,22nm,18.8s,baz=75,slow=38					
NC204	**NORSAR Array S**	**66.84 342**	P	**P**	**17 12 02.2 +0.7**	
NB201	**NORSAR Array S**	**66.94 342**	P	**P**	**17 12 02.7 +0.6**	
NB2	**NORSAR Subarra**	**66.96 342**	P	**P**	**17 12 02.3 +0.1**	
	comp=Z,2.3nm,0.6s,baz=26,slow=6.5					
NOA	**NORSAR Array B**	**66.96 342**	P	**P**	**17 12 02.9 +0.7**	
	comp=Z,2.5nm,0.6s,baz=25,slow=6.4,SNR=26					
NOA			LR	LR	17 45 15.7	
	comp=Z,11nm,20.1s,baz=355,slow=39					
NORES	**NORESS Array B**	**67.17 341**	*e*P	**P**	**17 12 05.7 +2.2**	
ANMO	**Albuquerque**	**69.97 60**	*ce*P	**P**	**17 12 22.6 +1.0**	
ANMO			pmax	pmax		
	comp=Z,8.0nm,2.5s					
KBZ	**Khabaz**	**70.48 314**	P	**P**	**17 12 25.3 +1.0**	
	comp=Z,2.5nm,0.8s,baz=84,slow=8.1,SNR=3.8					
AKASG	**Malin Array Be**	**70.75 327**	P	**P**	**17 12 25.6 -0.1**	
	comp=Z,2.3nm,0.5s,baz=32,slow=6.1,SNR=4.2					
AKASG	**Malin Array Be**	**70.75 327**	IAmb	IAmb	17 12 31.9	
	comp=Z,2.1nm,1.2s					
KOLS	**Kolonicke sedl**	**74.67 330**	*e*P	**P**	**17 12 50.0 +1.0**	
KOLS	**Kolonicke sedl**	**74.67 330**	*e*P	**P**	**17 12 50.0 +1.0**	
BUR08	**Bucovina Ar. S**	**74.75 327**	P	**P**	**17 12 50.3 +0.6**	
BUR08			IAmb	IAmb	17 12 51.2	
	comp=Z,3.7nm,0.7s					
BURAR	**Bucovina Array**	**74.77 327**	ǁP	**P**	**17 12 50.4 +0.6**	
BURAR	**Bucovina Array**	**74.77 327**	ǁP	**P**	**17 12 50.4 +0.6**	
UZH	**Uzhgorod**	**74.92 330**	ǁP	**P**	**17 12 48.0 -2.5**	
CRVS	**Cervenica-Dubn**	**74.97 330**	*e*P	**P**	**17 12 48.1 -2.7**	
CRVS	**Cervenica-Dubn**	**74.97 330**	*e*P	**P**	**17 12 48.1 -2.7**	
BIZ	**Bicaz**	**75.02 326**	ǁP	**P**	**17 12 52.3 +1.2**	
CHVC	**Chvalec**	**75.16 334**	*e*P	**P**	**17 12 53.0 +1.1**	
DPC	**Dobruska-Polom**	**75.30 334**	*e*P	**P**	**17 12 54.2 +1.5**	
DPC	**Dobruska-Polom**	**75.30 334**	*e*P	**P**	**17 12 54.2 +1.5**	
CLL	**Collm**	**75.36 336**	*i* P	**P**	**17 12 53.7 +0.8**	
	comp=Z,9.0nm,0.7s					
CLL	**Collm**	**75.36 336**	*i* P	**P**	**17 12 53.7 +0.8**	
CLL			pmax	pmax		
	comp=Z,9.0nm,0.7s					
CLL	**Collm**	**75.36 336**	P	**P**	**17 12 53.8 +0.8**	
CLL			IAmb	IAmb	17 12 54.7	
	comp=Z,8.9nm,0.7s					
LANS	**Liptovska Anna**	**75.40 332**	*e*P	**P**	**17 12 55.3 +2.0**	
LANS	**Liptovska Anna**	**75.40 332**	*e*P	**P**	**17 12 55.3 +2.0**	
KRLC	**Kraliky**	**75.40 334**	*e*P	**P**	**17 12 54.6 +1.3**	
KRLC	**Kraliky**	**75.40 334**	*e*P	**P**	**17 12 54.6 +1.3**	
MORC	**Moravsky Berou**	**75.44 333**	ǁP	**P**	**17 12 54.9 +1.4**	
MORC	**Moravsky Berou**	**75.44 333**	*e*P	**P**	**17 12 54.8 +1.3**	
MORC	**Moravsky Berou**	**75.44 333**	ǁP	**P**	**17 12 54.9 +1.4**	
MORC	**Moravsky Berou**	**75.44 333**	P	**P**	**17 12 54.7 +1.3**	
MORC			IAmb	IAmb	17 12 55.7	
	comp=Z,7.6nm,0.8s					
PVCC	**Panska Ves**	**75.64 335**	*e*P	**P**	**17 12 56.2 +1.7**	
PVCC	**Panska Ves**	**75.64 335**	*e*P	**P**	**17 12 56.2 +1.7**	
TXAR	**Lajitas Array**	**75.67 62**	P	**P**	**17 12 56.6 +1.4**	
	comp=Z,0.8nm,0.6s,baz=300,slow=4.6,SNR=7.6					
PRU	**Pruhonice**	**76.13 335**	*e*P	**P**	**17 12 58.6 +1.2**	
PRU	**Pruhonice**	**76.13 335**	*e*P	**P**	**17 12 58.6 +1.2**	
VRAC	**Vranov**	**76.14 333**	ǁP	**P**	**17 12 59.5 +2.0**	
VRAC	**Vranov**	**76.14 333**	*e*P	**P**	**17 12 58.9 +1.4**	
VRAC	**Vranov**	**76.14 333**	ǁP	**P**	**17 12 59.5 +2.0**	
VYHS	**Vyhne**	**76.17 332**	*e*P	**P**	**17 12 56.3 -1.4**	
VYHS	**Vyhne**	**76.17 332**	*e*P	**P**	**17 12 56.3 -1.4**	
JAVC	**Velka Javorina**	**76.22 332**	*e*P	**P**	**17 13 00.0 +2.1**	
MLR	**Muntele Rosu**	**76.30 326**	ǁP	**P**	**17 13 00.8 +2.2**	
MLR	**Muntele Rosu**	**76.30 326**	ǁP	**P**	**17 13 00.8 +2.2**	
DRGR		**76.36 328**	ǁP	**P**	**17 12 59.0 +0.1**	
DRGR		**76.36 328**	ǁP	**P**	**17 12 59.0 +0.1**	
KRUC	**Moravsky**	**76.42 333**	*e*P	**P**	**17 13 00.5 +1.5**	
PBCC	**Pribram**	**76.56 335**	*e*P	**P**	**17 13 01.1 +1.3**	
VOIR		**76.68 326**	ǁP	**P**	**17 13 02.7 +2.0**	
VOIR		**76.68 326**	ǁP	**P**	**17 13 02.7 +2.0**	
KHC	**Kasperske Hory**	**77.18 335**	*e*P	**P**	**17 13 04.8 +1.5**	
KHC	**Kasperske Hory**	**77.18 335**	*e*P	**P**	**17 13 04.8 +1.5**	
KHC	**Kasperske Hory**	**77.18 335**	P	**P**	**17 13 04.9 +1.6**	
KHC			IAmb	IAmb	17 13 05.9	
	comp=Z,6.4nm,0.7s					
GERES	**GERESS Array B**	**77.40 335**	P	**P**	**17 13 06.3 +1.6**	
	comp=Z,2.1nm,0.6s,baz=38,slow=5.9,SNR=22					
GZR	**Gura Zlata**	**77.55 328**	ǁP	**P**	**17 13 06.1 +0.6**	
GZR	**Gura Zlata**	**77.55 328**	ǁP	**P**	**17 13 06.1 +0.6**	
CONA	**Conrad Observa**	**77.59 333**	*i* P	**P**	**17 13 07.9 +2.1**	
	comp=Z,3.6nm,0.7s					
BRTR	**Keskin Array B**	**77.91 318**	P	**P**	**17 13 09.0 +1.3**	
	comp=Z,3.1nm,0.8s,baz=65,slow=4.2,SNR=8.2					
BRTR	**Keskin Array B**	**77.91 318**	P	**P**	**17 13 08.5 +0.8**	
BRTR	**Keskin Array B**	**77.91 318**	P	**P**	**17 13 08.5 +0.8**	
HERR	**Herculane**	**78.12 328**	ǁP	**P**	**17 13 09.6 +1.1**	
MOA	**Molln**	**78.14 334**	*i* P	**P**	**17 13 10.7 +2.1**	
	comp=Z,4.4nm,0.9s					
MDVR	**Moldovita**	**78.45 328**	ǁP	**P**	**17 13 11.5 +1.0**	
SOKA	**Soboth**	**78.97 333**	*i* P	**P**	**17 13 15.1 +1.8**	
	comp=Z,4.3nm,0.9s					
KBA	**Koelnbreinsper**	**79.10 334**	*i* P	**P**	**17 13 16.7 +2.5**	
	comp=Z,7.4nm,0.6s					
OBKA	**Obir**	**79.26 333**	*i* P	**P**	**17 13 17.0 +2.0**	
	comp=Z,2.0nm,0.6s					
WATA	**Walderalm**	**79.37 336**	*i* P	**P**	**17 13 18.1 +2.5**	
	comp=Z,3.8nm,0.5s					
WTTA	**Wattenberg**	**79.42 335**	*i* P	**P**	**17 13 18.3 +2.4**	
	comp=Z,9.7nm,0.7s					
MYKA	**Terra Mystica**	**79.42 334**	*i* P	**P**	**17 13 17.7 +1.9**	
	comp=Z,1.5nm,0.4s					
RETA	**Reutte**	**79.45 336**	*i* P	**P**	**17 13 18.4 +2.4**	
	comp=Z,2.9nm,0.7s					
MOTA	**Moosalm**	**79.49 336**	*i* P	**P**	**17 13 18.3 +2.0**	
	comp=Z,9.7nm,1.0s,SNR=5.3					
SQTA	**Sankt Quirin**	**79.57 336**	*i* P	**P**	**17 13 19.1 +2.4**	
	comp=Z,4.2nm,0.6s					
DIVS	**Divibare**	**79.65 329**	P	**P**	**17 13 17.8 +0.7**	
DAVA	**Damuels**	**79.87 337**	*e*P	**P**	**17 13 20.6 +2.3**	
	comp=Z,6.1nm,1.1s					
FETA	**Feichten**	**79.89 336**	*i* P	**P**	**17 13 20.7 +2.3**	
	comp=Z,4.4nm,0.9s,SNR=5.1					
TUE	**Stuetta**	**80.76 337**	P	**P**	**17 13 25.4 +2.2**	
TUE			IAmb	IAmb	17 13 26.5	
	comp=Z,7.4nm,0.9s					
KEST	**Kesra**	**90.69 333**	P	**P**	**17 14 14.9 +2.6**	
	comp=Z,4.7nm,0.7s,baz=7.6,slow=1.1,SNR=6.7					
H03N2	**Juan Fernandez**	**137.61 90**	T	T	19 53 51.5	
	baz=310,slow=77,SNR=50					
H03N1	**Juan Fernandez**	**137.62 90**	T	T	19 53 50.7	
	baz=310,slow=77,SNR=55					
H03N3	**Juan Fernandez**	**137.62 90**	T	T	19 53 49.6	
	baz=310,slow=77,SNR=40					
PLCA	**Paso Flores**	**147.20 94**	PKPbc	**PKPbc**	**17 20 53.0 +1.0**	
	comp=Z,1.1nm,0.8s,baz=253,slow=6.6,SNR=4.2					
PLCA	**Paso Flores**	**147.20 94**	PKP2	**PKPbc**	**17 20 53.0 +1.0**	

*IDC **21** 17:06:56.3±0.7, 1.61N×125.83E, h0km, mb4.1/12, mb1 4.2/15, mb1mx4.0/47, mbtmp4.1/15, ML3.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/37, Error ellipse: s-maj=35.5km s-min=12.9km az=73.0*

*NEIC **21** 17:07:01.1±3.0, 1.79N±0.08×126.37E±0.07, h37km±7km, mb4.5/26, Error ellipse: s-maj=13.9km s-min=7.4km az=215.0*

*DJA **21** 17:07:02.5±1.2, 2.7N±2.2×12.6E±°, h31km±18km, M4.4/13, mb4.7/11, mB4.8/3, MLv4.3/13, Mw(mB)4.0/3*

ISC 21 17:07:02.6±0.4, **1.82N**±0.05×**126.39E**±0.07, **h47**km, **n71**, σ1§**52**/74, **mb4.4**/29, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**137**	P	**Pn**	**17 07 25.2**	**-0.9**
TNTI				S	**Sn**	**17 07 46.0**	**+2.3**
TNTI	**Ternate**	**1.43**	**137**	Pn	**Pn**	**17 07 25.4**	**-0.7**
SGSI	**Sangihe**	**2.04**	**335**	P	**Pn**	**17 07 34.1**	**-0.5**
SGSI				S	**Sn**	**17 07 59.4**	**+0.5**
KMSI	**Cibinong**	**2.71**	**243**	P	**Pn**	**17 07 43.6**	**0.0**
GTOI	**Gorontalo**	**3.58**	**251**	P	**Pn**	**17 07 56.0**	**+0.4**
LUWI	**Luwuk**	**4.60**	**232**	P	**Pn**	**17 08 08.7**	**-0.9**
LUWI	**Luwuk**	**4.60**	**232**	Pn	**Pn**	**17 08 09.7**	**+0.1**
MRSI	**Marisa**	**4.64**	**253**	P	**Pn**	**17 08 11.3**	**+1.1**
NLAI	**Namlea**	**5.07**	**172**	P	**Pn**	**17 08 16.3**	**+0.1**
APSI	**Ampana**	**5.46**	**240**	P	**Pn**	**17 08 23.2**	**+1.7**
	0.5nm1µm126nm,0.9s						
SIJI	**Sorong**	**5.56**	**119**	Pn	**Pn**	**17 08 26.0**	**+3.1**
	0.6nm,0.3s,baz=324,slow=10,SNR=3.6						
SIJI				LR	LR	17 10 49.7	
	comp=Z,207nm,19.4s,baz=288,slow=39						
TOLI2	**Tolitoli**	**5.65**	**263**	Pn	**Pn**	**17 08 22.5**	**-1.5**
MPSI	**Mapaga**	**6.65**	**257**	P	**Pn**	**17 08 38.5**	**+0.6**
	0.1nm24nm,0.7s						
FAKI	**Fak Fak**	**7.51**	**129**	Pn	**Pn**	**17 08 50.6**	**+0.9**
TTSI	**Tana Toraja**	**8.15**	**234**	P	**Pn**	**17 08 58.1**	**-0.3**
	30nm,0.7s						
MYLDM	**Lahad Datu**	**8.55**	**293**	Pn	**Pn**	**17 09 05.4**	**+1.5**
SPSI	**Sidrap Palu**	**8.76**	**229**	P	**Pn**	**17 09 07.6**	**+0.8**
	25nm,0.5s						
BNSI	**Bone**	**8.81**	**225**	P	**Pn**	**17 09 07.3**	**-0.1**
	33nm,0.6s						
BKSI	**Bulukumba**	**9.46**	**221**	P	**Pn**	**17 09 15.8**	**-0.5**
	21nm,0.5s						
BSSI	**Bau Bau, Buton**	**9.86**	**217**	P	**Pn**	**17 09 21.8**	**0.0**
	459nm26nm,0.5s						
KKM	**Kota Kinabalu**	**10.98**	**293**	Pn	**Pn**	**17 09 38.4**	**+1.1**
SOEI	**Soe**	**11.69**	**190**	Pn	**Pn**	**17 09 48.9**	**+1.9**
SBUM	**Sibu**	**14.17**	**273**		**P**	**17 10 28.2**	**+1.1**
JAY	**Jayapura**	**14.95**	**107**	Pn	**P**	**17 10 33.6**	**-2.1**
	0.2nm,0.3s,baz=285,slow=19,SNR=2.0						
KNRA	**Kununurra**	**17.54**	**172**	Pn	**Pn**	**17 11 01.3**	**-2.5**
KNRA				IAmb	IAmb	17 11 25.3	
	comp=Z,54nm,1.6s						
FITZ	**Fitzroy Crossi**	**19.80**	**182**	P	**P**	**17 11 26.5**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=341,slow=4.3,SNR=14						
FITZ	**Fitzroy Crossi**	**19.80**	**182**	P	**P**	**17 11 27.8**	**-1.4**
TWG	**Pinlang**	**21.51**	**347**	P	**P**	**17 11 45.1**	**-2.5**
TWG				IAmb	IAmb	17 12 11.5	
	comp=Z,32nm,1.1s						
YULB	**Yu-li**	**22.01**	**347**	P	**P**	**17 11 50.4**	**-2.7**
YULB				IAmb	IAmb	17 12 10.4	
	comp=Z,28nm,1.5s						
TPUB	**Ta-pu**	**22.07**	**346**	P	**P**	**17 11 51.7**	**-2.1**
SSLB	**Suanglung**	**22.47**	**347**	P	**P**	**17 11 57.0**	**-1.0**
SSLB				IAmb	IAmb	17 12 17.6	
	comp=Z,21nm,1.2s						
WB0	**Warramunga Arr**	**22.84**	**160**	P	**P**	**17 12 00.5**	**-1.5**
WB0				IAmb	IAmb	17 12 04.7	
	comp=Z,11nm,0.7s						
COEN	**Coen**	**22.86**	**134**	P	**P**	**17 12 02.5**	**+0.3**
COEN				IAmb	IAmb	17 12 11.2	
	comp=Z,18nm,1.6s						
WRAB	**Tennant Creek**	**22.98**	**161**	P	**P**	**17 12 01.5**	**-1.9**
WRAB				IAmb	IAmb	17 12 05.2	
	comp=Z,11nm,0.9s						
WRA	**Warramunga Arr**	**22.99**	**161**	P	**P**	**17 12 02.4**	**-1.1**
	comp=Z,7.1nm,0.4s,baz=336,slow=10,SNR=127						
WRA	**Warramunga Arr**	**22.99**	**161**	P	**P**	**17 12 01.4**	**-2.1**
WB2	**Warramunga Arr**	**22.99**	**161**	P	**P**	**17 12 02.1**	**-1.4**
WB2				IAmb	IAmb	17 12 04.9	
	comp=Z,11nm,0.6s						
WR0	**Warramunga Arr**	**23.07**	**160**	P	**P**	**17 12 02.5**	**-1.8**
PSA00	**Pilbara Seismi**	**24.11**	**195**	P	**P**	**17 12 13.2**	**-0.9**
PSA00				IAmb	IAmb	17 12 14.6	
	comp=Z,7.3nm,0.7s						
AS31	**Alice Springs**	**26.36**	**164**	P	**P**	**17 12 34.0**	**-0.7**
ASAR	**Alice Springs**	**26.36**	**164**	P	**P**	**17 12 34.2**	**-0.4**
	comp=Z,3.0nm,0.5s,baz=343,slow=7.5,SNR=97						
ASAR	**Alice Springs**	**26.36**	**164**	P	**P**	**17 12 33.8**	**-0.8**
CTAO	**Charters Tower**	**29.22**	**139**	P	**P**	**17 13 00.8**	**+0.7**
CTAO				IAmb	IAmb	17 13 21.1	
	comp=Z,13nm,1.4s						
NJ2	**Nanjing**	**30.90**	**347**	*e*P	**P**	**17 13 15.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MORW	**Morawa**	**32.27**	**197**	P	**P**	**17 13 26.3**	**-0.7**
FORT	**Forrest**	**32.45**	**177**	P	**P**	**17 13 29.1**	**+0.6**
JWT	**Wachi**	**34.34**	**13**	P	**P**	**17 13 45.9**	**+1.0**
JWT				IAmb	IAmb	17 13 55.7	
	comp=Z,15nm,1.1s						
KSRS	**Korea Array**	**35.49**	**2**	P	**P**	**17 13 57.0**	**+2.2**
	comp=Z,1.2nm,0.8s,baz=180,slow=10,SNR=5.0						
XAN	**Xi'an**	**35.98**	**335**	P	**P**	**17 14 01.3**	**+2.2**
XAN				pP	pP	17 14 06.3	-4.8
XAN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MJAR	**Matsushiro Arr**	**36.24**	**16**	P	**P**	**17 14 03.6**	**+2.3**
	comp=Z,2.7nm,1.0s,baz=187,slow=9.4,SNR=4.8						
MAT	**Matsushiro**	**36.24**	**16**	P	**P**	**17 13 57.4**	**-3.9**
STKA	**Stephens Creek**	**36.48**	**158**	P	**P**	**17 14 03.1**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=342,slow=8.3,SNR=5.2						
STKA	**Stephens Creek**	**36.48**	**158**	IAmb	IAmb	17 14 07.2	
	comp=Z,0.8nm,0.9s						
LZH	**Lanzhou**	**39.99**	**331**	*e*P	**P**	**17 14 33.4**	**+0.4**
LZH				pP	pwP	17 14 48.3	+1.1
LZH				sP	sP	17 14 55.3	+4.8
LZH				*e*PP	**PnPn**	**17 16 10.6**	**+1.2**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.6s						
LZH				LR	LR		
	comp=N,230nm,13.6s						
LZH				LR	LR		
	comp=E,230nm,13.5s						
LZH				LR	LR		
	comp=Z,370nm,16.6s						
HHC	**Hu-ho-hao-te**	**41.10**	**343**	*e*P	**P**	**17 14 41.4**	**-0.7**
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,36nm,5.2s						
GTA	**Gaotai**	**44.57**	**330**	*e*P	**P**	**17 15 07.6**	**-2.6**
GTA				pP	pP	17 15 21.0	-1.5
GTA				sP	sP	17 15 28.3	+0.4
GTA				PcP	**PP**	**17 16 54.1**	**-0.8**
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,52nm,6.5s						
GTA				LR	LR		
	comp=N,73nm,15.3s						
GTA				LR	LR		
	comp=E,53nm,16.0s						
GTA				LR	LR		
	comp=Z,82nm,18.5s						
KLR	**Kul'dur**	**47.46**	**5**	P	**P**	**17 15 36.0**	**+3.3**
	comp=Z,0.8nm,0.4s,baz=174,slow=9.3,SNR=5.8						
SONM	**Songino Array**	**49.00**	**342**	P	**P**	**17 15 44.7**	**0.0**
	comp=Z,1.0nm,0.8s,baz=154,slow=6.1,SNR=5.5						
WMQ	**Urumqi**	**54.10**	**326**	*e*P	**P**	**17 16 24.1**	**+1.2**
MK31	**Makanchi Array**	**58.93**	**326**		**P**	**17 16 56.2**	**-0.9**
MK31				IAmb	IAmb	17 16 58.9	
	comp=Z,6.2nm,1.5s						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**17 16 56.4**	**-0.8**
	comp=Z,2.0nm,0.5s,baz=122,slow=7.5,SNR=39						
MAKZ	**Makanchi**	**59.12**	**326**	P	**P**	**17 16 57.8**	**-0.6**
MAKZ				IAmb	IAmb	17 17 00.5	
	comp=Z,11nm,1.4s						
LTZ	**Lake Taylor**	**60.60**	**143**	P	**P**	**17 17 08.2**	**-0.5**
ZALV	**Zalesovo Beam**	**62.13**	**334**	P	**P**	**17 17 16.7**	**-2.1**
	comp=Z,0.7nm,0.5s,baz=119,slow=8.4,SNR=5.0						
KURK	**Kurchatov**	**63.17**	**328**		**P**	**17 17 24.5**	**-1.2**
NRIK	**Noril'sk**	**72.19**	**346**	P	**P**	**17 18 23.6**	**+1.3**
	comp=Z,1.6nm,0.3s,baz=

AS31	**Alice Springs**	**18.23**	**165**	P	**P**	**17 14 56.5**	**+0.9**
ASAR	**Alice Springs**	**18.24**	**165**	P	**P**	**17 14 56.8**	**+1.3**
	comp=Z,3.5nm,0.3s,baz=345,slow=12,SNR=54						
ASAR				S	**S**	**17 18 06.8**	**-3.5**
	comp=Z,0.3nm,0.3s,baz=346,slow=21,SNR=8.3						
ASAR	**Alice Springs**	**18.24**	**165**	P	**P**	**17 14 56.4**	**+0.9**
SBUM	**Sibu**	**18.65**	**296**	P	**P**	**17 15 01.5**	**+1.5**
SBUM				IAmb	IAmb	17 15 02.4	
	comp=Z,4.5nm,0.7s						
BBOO	**Buckleboo**	**27.52**	**167**	P	**P**	**17 16 23.7**	**0.0**
CMAR	**Chiang Mai Arr**	**38.25**	**310**	P	**P**	**17 17 55.2**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=132,slow=6.7,SNR=6.6						
LZH	**Lanzhou**	**48.00**	**332**	⇑P	**P**	**17 19 16.3**	**+2.2**
LZH				pP	pwP	17 20 18.8	+3.8
LZH				sP	PcP	17 20 50.5	+13
LZH				PP	**PP**	**17 21 12.0**	**+3.0**
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,62nm,6.0s						
HHC	**Hu-ho-hao-te**	**49.24**	**343**	*e*P	**P**	**17 19 23.3**	**-0.1**
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,39nm,5.1s						
WMQ	**Urumqi**	**61.95**	**327**	*e*P	**P**	**17 20 53.8**	**+0.4**
MK31	**Makanchi Array**	**66.78**	**327**	P	**P**	**17 21 22.7**	**-1.8**
MKAR	**Makanchi Array**	**66.78**	**327**	P	**P**	**17 21 22.3**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=132,slow=8.0,SNR=12						
MKAR	**Makanchi Array**	**66.78**	**327**	P	**P**	**17 21 22.7**	**-1.8**
KURK	**Kurchatov**	**71.08**	**329**	P	**P**	**17 21 48.6**	**-2.1**
KURK				IAmb	IAmb	17 22 02.1	
	comp=Z,4.9nm,1.4s						

ROM 21 17:11:09.5±0.1, 46°132N±0°008×11°17E±0°01, h0km, ML1.3/2, Error ellipse: s-maj=1.1km s-min=0.7km az=309.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTI	**Castel Tesino**	**0.34**	**104**	P	Pg	17 11 17.2	+1.2
APPI	**Appiano**	**0.35**	**7**	P	Pb	17 11 17.4	-1.2
KOSI	**Kohlern**	**0.36**	**23**	P	Pb	17 11 18.0	-0.8
MABI	**Malga Bissina**	**0.46**	**261**	P	Pb	17 11 19.6	-1.0
ROVR	**Rover Verones**	**0.49**	**188**	P	Pg	17 11 19.9	+1.1
MAGA	**Magasa**	**0.52**	**227**	P	Pb	17 11 20.9	-0.6
ABSI	**Aberstueckl**	**0.61**	**10**	P	Pb	17 11 22.1	-0.9
AGOR	**Agordo**	**0.63**	**76**	P	Pb	17 11 22.9	-0.4
MOSI	**Grossmontoni**	**0.65**	**319**	P	Pb	17 11 23.3	-0.5
BRES	**Bressanone**	**0.69**	**34**	P	Pb	17 11 23.7	-0.8
RISI	**Rein**	**1.03**	**37**	P	Pg	17 11 29.7	+0.5
RISI				AML	AML		
	comp=N,17μm,0.2s						
RISI				AML	AML		
	comp=E,13μm,0.3s						

*IDC **21** 17:20:25.8±0.9, 42°.23N×119°.62W, h0km, mb3.3/1, mb1 3.7/6, mb1mx3.5/43, mbtmp3.3/6, ML3.3/5, MS2.9/7, Ms1 2.9/7, ms1mx2.8/21, Error ellipse: s-maj=13.0km s-min=5.6km az=3.0*

*ANF **21** 17:20:25.9±0.7, 41°.78N×119°.54W, h0km, ML4.0/14, Error ellipse: s-maj=7.2km s-min=3.6km az=106.0*

*SEA **21** 17:20:28.5±2.7, 41°.84N±0°.03×119°.61W±0°.01, h0km±6km, Error ellipse: s-maj=5.0km s-min=1.4km az=190.0*

*REN **21** 17:20:28.2±2.3, 41°.87N±0°.04×119°.61W±0°.03, h3km±6km, ML4.0/4, ML3.8/40(SEA), Mwr3.9/89(NEIC), Error ellipse: s-maj=5.2km s-min=3.6km az=189.0*

*NEIC **21** 17:20:28.2, 41°.87N×119°.61W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.12; $M_{\theta\theta}$=0.52; $M_{\phi\phi}$=0.64; $M_{r\theta}$=-0.40; $M_{r\phi}$=-0.15; $M_{\theta\phi}$=-0.74; Fault plane solution: M_0=1.04000×10^{15} NP1:ϕs=127.84000°, δ=34.13000°, λ=-172.35000°. NP2:ϕs=31.49000°, δ=85.71000°, λ=-56.11000°. Principal axes: T 1.0998, Plg32.0000°, Azm94.0000°; N -0.1277, Plg34.0000°, Azm209.0000°; P -0.9720, Plg40.0000°, Azm332.0000°;*

*NEIC **21** 17:20:29.7±2.3, 41°.93N±0°.03×119°.62W±0°.02, h1km±5km Error ellipse: s-maj=4.9km s-min=3.3km az=181.0*

ISC 21 17:20:29.0±1.1, 41°.94N±0°.03×119°.68W±0°.02, h9km±10km, n136, σ1.3, 83/148, Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.47**	**266**		**Pg**	**17 20 38.2**	**+0.1**
MOD					**Sb**	**17 20 45.6**	**-0.9**
WVOR	**Wild Horse Val**	**0.92**	**57**		**Pg**	**17 20 45.7**	**-1.0**
WVOR					**Sg**	**17 20 59.0**	**+0.3**
K05A	**Summer Lake**	**1.19**	**312**		**Pg**	**17 20 52.1**	**+0.2**
K05A				Sg	**Sn**	**17 21 10.1**	**+1.6**
M04C	**Macdoel**	**1.62**	**265**	P	**Pn**	**17 20 57.0**	**-0.8**
	baz=86,SNR=193						
M04C				S	**Sg**	**17 21 20.8**	**-0.3**
	baz=86						
J08A	**Circle Bar Ran**	**1.67**	**32**	Pn	**Pn**	**17 20 57.8**	**-0.7**
K04D	**Chiloquin, OR**	**1.68**	**295**	P	**Pn**	**17 20 59.0**	**+0.3**
	baz=115,SNR=17						
K04D				S	**Sg**	**17 21 23.8**	**+0.7**
	baz=115						
J05D	**Fort Rock, OR**	**1.77**	**320**	P	**Pn**	**17 21 00.5**	**+0.6**
	baz=139						
J05D				S	**Sg**	**17 21 28.2**	**+2.4**
	baz=139						
L04D	**Klamath Falls**	**1.97**	**279**	P	**Pn**	**17 21 02.1**	**-0.6**
	baz=99,SNR=66						
L04D				S	**Sg**	**17 21 31.3**	**-1.1**
	baz=99						
PINE	**Pine Mountain**	**2.07**	**334**		**Pn**	**17 21 05.4**	**+1.3**
BEKR	**Beckworth**	**2.13**	**194**		**Pn**	**17 21 05.3**	**+0.4**
I07A	**Izee**	**2.14**	**3**		**Pb**	**17 21 08.1**	**+0.1**
J04D	**Umpqua Nationa**	**2.21**	**307**	Pb	**Pb**	**17 21 09.9**	**+0.6**
	baz=126						
PAHR	**Pah Rah Range**	**2.24**	**174**		**Pn**	**17 21 06.8**	**+0.4**
YBH	**Yreka Blue Hor**	**2.27**	**266**	Pn	**Pn**	**17 21 06.0**	**-0.8**
	2.9nm,0.3s,baz=81,slow=11,SNR=53						
YBH				Lg	Lg	17 21 40.3	
	24nm,0.3s,baz=2.6,slow=12,SNR=18						
YBH				LR	LR	17 21 58.9	
	comp=Z,115nm,18.4s,baz=95,slow=40						
YBH	**Yreka Blue Hor**	**2.27**	**266**		**Pn**	**17 21 06.2**	**-0.6**
O03E	**Paynes Creek**	**2.30**	**225**	Pb	**Pn**	**17 21 06.9**	**-0.2**
	baz=46						
O03E				Sg	**Sb**	**17 21 40.4**	**+1.3**
	baz=46						
M02C	**Callahan**	**2.44**	**258**	P	**Pn**	**17 21 08.1**	**-1.0**
	baz=78,SNR=26						
M02C				Sb	**Sg**	**17 21 46.0**	**-1.3**
	baz=78						
N02D	**Trinity Center**	**2.47**	**248**	P	**Pn**	**17 21 08.5**	**-0.9**
	baz=68,SNR=13						
N02D				Sb	**Sg**	**17 21 46.2**	**-2.1**
	baz=68						
HUMO	**Hull Mountain**	**2.52**	**286**	Pn	**Pn**	**17 21 09.9**	**-0.2**
WDC	**Whiskeytown Da**	**2.55**	**239**		**Pn**	**17 21 12.7**	**+2.2**
VCNR	**Virginia City**	**2.64**	**179**		**Pn**	**17 21 10.5**	**-1.5**
I05D	**Terrebonne, OR**	**2.69**	**334**	Pb	**Pb**	**17 21 18.2**	**+0.9**
	baz=152						
I05D				Sb	**Sg**	**17 21 56.8**	**+1.5**
	baz=152						
I04A	**Tendick Farm,**	**2.73**	**314**	P	**Pn**	**17 21 14.2**	**+1.1**
	baz=132,SNR=15						
ORV	**Oroville**	**2.75**	**211**		**Pn**	**17 21 13.9**	**+0.5**
PNTR	**Pine Nut**	**2.85**	**179**		**Pb**	**17 21 18.5**	**-1.6**
RUBR	**Rubicon Trail**	**2.91**	**187**		**Pb**	**17 21 19.6**	**-1.5**
L02E	**Cave Junction**	**2.93**	**276**	P	**Pn**	**17 21 16.0**	**+0.3**
	baz=94						
L02E				Sb	**Sg**	**17 22 01.4**	**-1.6**
	baz=94						
K02D	**Willamette Mer**	**3.05**	**286**	P	**Pn**	**17 21 18.1**	**+0.6**
	baz=104						
K02D				S	**Sb**	**17 21 58.3**	**-2.5**
	baz=104						
KVN	**Kaiserville**	**3.13**	**157**		**Pn**	**17 21 19.6**	**+1.0**
AFDM	**Forest Hills D**	**3.15**	**199**		**Pn**	**17 21 20.6**	**+1.9**
KRMB	**Red Mountain**	**3.19**	**264**		**Pn**	**17 21 20.1**	**+0.7**
MFID	**Camas Ranch**	**3.20**	**61**		**Pn**	**17 21 19.1**	**-0.4**
I03D	**Drain, OR**	**3.22**	**304**	Pb	**Pb**	**17 21 27.3**	**+1.1**
	baz=122						
I03D				Sb	**Sg**	**17 22 11.0**	**-1.3**
	baz=122						
KHMM	**Horse Mountain**	**3.23**	**252**		**Pn**	**17 21 23.5**	**+3.5**
H04A	**Detroit Lake**	**3.30**	**327**		**Pb**	**17 21 27.3**	**-0.3**
J01E	**Myrtle Point**	**3.37**	**293**	Pb	**Pb**	**17 21 29.7**	**+0.8**
	baz=111						
BMO	**Blue Mountains**	**3.39**	**30**		**Pn**	**17 21 23.8**	**+1.7**
G08A	**Pilot Rock**	**3.39**	**9**		**Pn**	**17 21 26.0**	**+3.8**
KBO	**Bosley Butte**	**3.40**	**276**		**Pn**	**17 21 25.8**	**+3.6**
RYN	**Ryan**	**3.42**	**165**		**Pn**	**17 21 24.0**	**+1.3**
WAKR	**Walker**	**3.44**	**177**		**Pn**	**17 21 24.4**	**+1.5**
JCC	**Jacoby Creek,**	**3.46**	**253**		**Pn**	**17 21 25.8**	**+2.9**
KMRM	**Mail Ridge**	**3.50**	**242**		**Pn**	**17 21 25.4**	**+1.8**
ELK	**Elko**	**3.55**	**108**	Pn	**Pn**	**17 21 24.3**	**-0.2**
	1.0nm,0.3s,baz=298,slow=12,SNR=47						
ELK				Pg	**Pb**	**17 21 29.6**	**-2.5**
	5.4nm,0.3s,baz=302,slow=18,SNR=46						
ELK				Sn	**Sn**	**17 22 04.8**	**-1.9**
	7.5nm,0.3s,baz=186,slow=10,SNR=6.0						
ELK				Lg	Lg	17 22 16.7	
	9.6nm,0.3s,baz=132,slow=11,SNR=4.5						
ELK	**Elko**	**3.55**	**108**		**Pb**	**17 21 29.6**	**-2.5**
ELK	**Elko**	**3.55**	**108**		**Pn**	**17 21 24.5**	**0.0**
KEBM	**Edson Butte**	**3.57**	**287**		**Pn**	**17 21 27.1**	**+2.5**
NVAR	**Mina Array Bea**	**3.66**	**163**	Pn	**Pn**	**17 21 27.7**	**+1.7**
	1.0nm,0.3s,baz=339,slow=12,SNR=17						
NVAR				Pg	**Pb**	**17 21 36.5**	**+2.6**
	6.3nm,0.3s,baz=330,slow=15,SNR=49						
NVAR				Lg	Lg	17 22 23.9	
	32nm,0.3s,baz=346,slow=18,SNR=12						
NVAR				LR	LR	17 23 13.8	
	comp=Z,293nm,18.8s,baz=318,slow=42						
NVAR	**Mina Array Bea**	**3.66**	**163**		**Pb**	**17 21 36.5**	**+2.6**
NVAR	**Mina Array Bea**	**3.66**	**163**		**Pn**	**17 21 26.6**	**+0.6**
NV11	**Mina Array Sit**	**3.69**	**161**		**Pn**	**17 21 27.5**	**+1.1**
KCPM	**Cahto Peak**	**3.72**	**234**		**Pn**	**17 21 26.6**	**-0.1**
LHV	**Little Huntoon**	**3.79**	**166**		**Pn**	**17 21 29.1**	**+1.5**
HOPS	**Hopland Field**	**3.92**	**222**	Pn	**Pn**	**17 21 30.7**	**+1.4**
CMB	**Columbia Colle**	**3.94**	**188**		**Pn**	**17 21 31.7**	**+2.1**
PLID	**Pearl Lake**	**4.13**	**39**		**Pn**	**17 21 32.6**	**+0.1**
HLID	**Hailey**	**4.20**	**66**	Pn	**Pn**	**17 21 34.2**	**+0.8**
TPH	**Tonopah**	**4.30**	**153**		**Pn**	**17 21 35.0**	**+0.3**
MDPB	**Devils Postpil**	**4.33**	**174**		**Pn**	**17 21 36.4**	**+1.2**
OMMB	**Old Mammoth Mi**	**4.35**	**173**		**Pn**	**17 21 35.7**	**+0.1**
HAWA	**Hanford**	**4.45**	**1**		**Pn**	**17 21 38.6**	**+1.9**
F04A	**Amboy**	**4.45**	**335**		**Pb**	**17 21 43.6**	**-3.7**
E08A	**Dider Farm, El**	**4.57**	**5**		**Pn**	**17 21 40.9**	**+2.7**
E07A	**Sunnyside**	**4.62**	**359**	Pn	**Pn**	**17 21 42.3**	**+3.4**
E09A	**Wood Farm, Sta**	**4.70**	**13**		**Pn**	**17 21 44.0**	**+3.9**
R11A	**Troy Canyon, C**	**4.77**	**137**		**Pn**	**17 21 41.2**	**0.0**
SPR3	**Spring Creek 3**	**5.03**	**124**		**Pn**	**17 21 47.5**	**+2.6**
LON	**Longmire**	**5.04**	**343**		**Pn**	**17 21 47.6**	**+2.8**
BGU	**Big Grassy Mou**	**5.10**	**99**		**Pn**	**17 21 46.1**	**+0.3**
D08A	**Wollman Farm,**	**5.14**	**6**	Pn	**Pn**	**17 21 48.9**	**+2.7**
HVL	**Hansel Valley**	**5.16**	**89**		**Pn**	**17 21 47.4**	**+0.9**
BCYI	**Bear Canyon**	**5.17**	**61**		**Pn**	**17 21 47.1**	**+0.4**
SAO	**San Andreas Ge**	**5.35**	**195**	Pn	**Pn**	**17 21 50.4**	**+1.4**
LTY	**Liberty**	**5.36**	**353**	Pn	**Pn**	**17 21 54.0**	**+4.8**
SPUT	**South Promonto**	**5.46**	**94**		**Pn**	**17 21 51.5**	**+1.0**
DUG	**Dugway, Tooele**	**5.48**	**106**		**Pn**	**17 21 51.6**	**+0.8**
PSUT	**Pine Spring**	**5.61**	**125**		**Pn**	**17 21 53.0**	**+0.3**
TPNV	**Topopah Spring**	**5.65**	**151**		**Pn**	**17 21 55.0**	**+1.8**
MCMT	**McKenzie Canyo**	**5.75**	**58**		**Pn**	**17 21 56.3**	**+1.6**
PRN	**Pahroc Range**	**5.77**	**140**		**Pn**	**17 21 54.7**	**-0.1**
PMPB	**Monarch Peak**	**5.78**	**189**	Pn	**Pn**	**17 21 54.3**	**-0.7**
HWUT	**Hardware Ranch**	**6.08**	**90**		**Pn**	**17 22 00.7**	**+1.5**
CTU	**Camp Tracy**	**6.10**	**99**	Pn	**Pn**	**17 22 01.2**	**+1.7**
DLMT	**Dillon**	**6.17**	**54**	Pn	**Pn**	**17 22 01.0**	**+0.6**
TCUT	**Toone Canyon**	**6.26**	**95**		**Pn**	**17 22 02.5**	**+0.7**
JLU	**Jordanelle**	**6.34**	**99**		**Pn**	**17 22 04.1**	**+1.2**
MPU	**Maple Canyon**	**6.39**	**105**	Pn	**Pn**	**17 22 05.0**	**+1.6**
TCRU	**Three Creeks R**	**6.45**	**119**		**Pn**	**17 22 05.8**	**+1.4**
SHPR	**Sheep Range**	**6.46**	**146**	Pn	**Pn**	**17 22 06.2**	**+1.8**
LRM	**Limekiln Ridge**	**6.51**	**51**	Pn	**Pn**	**17 22 06.7**	**+1.6**
CCUT	**Cedar City**	**6.55**	**130**		**Pn**	**17 22 07.8**	**+2.1**
NEW	**Newport**	**6.58**	**15**	Lg	Lg	17 23 47.9	
	0.1nm,0.3s,baz=322,slow=19,SNR=2.1						
TPAW	**Teton Pass**	**6.61**	**74**		**Pn**	**17 22 07.4**	**+0.8**
MVU	**Marysvale**	**6.67**	**119**		**Pn**	**17 22 08.6**	**+1.3**
SZCU	**Shurtz Canyon**	**6.68**	**128**		**Pn**	**17 22 05.2**	**-2.2**
MSU	**Marysvale**	**6.68**	**118**		**Pn**	**17 22 06.6**	**-0.9**
IMW	**Indian Meadow**	**6.71**	**70**	Pn	**Pn**	**17 22 09.0**	**+1.1**
SNOW	**Snow King Moun**	**6.75**	**74**		**Pn**	**17 22 09.7**	**+1.2**
YHB	**Horse Butte**	**6.79**	**63**		**Pn**	**17 22 11.2**	**+2.2**
YHL	**Hebgen Lake**	**6.84**	**62**		**Pn**	**17 22 11.5**	**+1.8**
BOZ	**Bozeman (W)**	**6.88**	**55**	Pn	**Pn**	**17 22 10.4**	**+0.3**
YPP	**Pitchstone Pla**	**6.90**	**67**		**Pn**	**17 22 09.7**	**-0.9**
YMR	**Madison River**	**6.92**	**64**		**Pn**	**17 22 13.4**	**+2.7**
FLWY	**Flagg Ranch**	**6.92**	**69**		**Pn**	**17 22 12.5**	**+1.8**
MTPU	**Mount Pierson**	**6.95**	**122**		**Pn**	**17 22 12.3**	**+1.0**
JTMT	**Jette**	**6.96**	**32**	Pn	**Pn**	**17 22 12.0**	**+0.8**
TMUT	**Trail Mountain**	**6.96**	**109**		**Pn**	**17 22 12.8**	**+1.3**
LCMT	**Little Creek M**	**7.00**	**133**		**Pn**	**17 22 13.0**	**+1.3**
GSC	**Goldstone, Bar**	**7.00**	**160**	Pn	**Pn**	**17 22 13.4**	**+1.6**
YHH	**Holmes Hill**	**7.04**	**63**		**Pn**	**17 22 16.7**	**+4.3**
H17A	**Grant Village**	**7.09**	**67**		**Pn**	**17 22 14.0**	**+0.8**
YNR	**Norris Junctio**	**7.12**	**64**		**Pn**	**17 22 14.6**	**+1.0**
Q16A	**Castle Valley**	**7.16**	**112**		**Pn**	**17 22 15.7**	**+1.6**
P17A	**Butcher Ranch,**	**7.23**	**107**		**Pn**	**17 22 15.5**	**+0.6**
KNB	**Kanab**	**7.23**	**131**		**Pn**	**17 22 16.1**	**+1.1**
PKCU	**Pink Cliffs**	**7.24**	**126**		**Pn**	**17 22 16.4**	**+1.1**
SRU	**San Rafael Swe**	**7.53**	**109**		**Pn**	**17 22 19.5**	**+0.5**
BW06	**Boulder Array**	**7.54**	**80**		**Pn**	**17 22 21.5**	**+2.2**
PD31	**Pinedale Array**	**7.54**	**80**		**Pn**	**17 22 20.6**	**+1.3**
PDAR	**Pinedale Array**	**7.54**	**80**	Pn	**Pn**	**17 22 20.6**	**+1.3**
	0.1nm,0.3s,baz=265,slow=12,SNR=11						
PDAR				Lg	Lg	17 24 24.2	
	baz=261,slow=17,SNR=3.7						
PDAR				LR	LR	17 24 44.0	
	comp=Z,25nm,20.7s,baz=305,slow=35						
PDAR	**Pinedale Array**	**7.54**	**80**	Pn	**Pn**	**17 22 19.6**	**+0.3**
RDMU	**Red Mountain**	**7.74**	**97**	Pn	**Pn**	**17 22 24.8**	**+2.8**
U15A	**North Rim**	**7.95**	**131**	Pn	**Pn**	**17 22 27.4**	**+2.5**
PFO	**Pinyon Flats O**	**8.70**	**162**	LR	LR	17 25 57.5	
	comp=Z,52nm,21.6s,baz=354,slow=37						
O20A	**White River Ci**	**8.83**	**98**		**Pn**	**17 22 38.9**	**+2.0**
PV23	**Carpenter Ridg**	**8.88**	**110**		**Pn**	**17 22 39.1**	**+1.5**
SMCO	**Snowmass**	**10.06**	**102**		**Pn**	**17 22 55.8**	**+1.9**
N23A	**Red Feather La**	**10.37**	**91**		**Pn**	**17 22 59.9**	**+1.7**
SDCO	**Great Sand Dun**	**11.68**	**106**		**Pn**	**17 23 19.0**	**+3.0**
ANMO	**Albuquerque**	**12.49**	**120**	LR	LR	17 28 35.3	
	comp=Z,121nm,19.5s,baz=309,slow=39						
TXAR	**Lajitas Array**	**18.06**	**129**	P	**Pn**	**17 24 41.6**	**+1.3**
	0.0nm,0.3s,baz=328,slow=12,SNR=4.8						
TXAR	**Lajitas Array**	**18.06**	**129**	P	**P**	**17 24 45.0**	**+4.3**
LPIG	**La Paz**	**19.43**	**153**	LR	LR	17 32 39.2	
	comp=Z,54nm,20.3s,baz=348,slow=37						
INK	**Inuvik**	**27.44**	**349**	LR	LR	17 36 58.4	
	comp=Z,93nm,19.8s,baz=24,slow=36						
ILAR	**Eielson Array**	**27.63**	**335**	P	**P**	**17 26 11.3**	**-5.2**
	0.3nm,0.6s,baz=152,slow=9.1,SNR=2.0						
ILAR	**Eielson Array**	**27.63**	**335**	P	**P**	**17 26 11.3**	**-5.2**

PRU 21 17:26:30.0±0.0, 49°.86N×18°.55E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**265**	*e*PG	Pg	17 26 34.7	-0.3
OKC				*e*SG	Sg	17 26 38.3	-0.1
	comp=Z,7.4nm,0.5s						
KRLC	**Kraliky**	**1.16**	**281**	*e*PG	Pg	17 26 50.5	-1.8
KRLC				*e*SG	Sg	17 27 06.9	-0.4
	comp=Z,1.5nm,0.3s						
DPC	**Dobruska-Polom**	**1.52**	**290**	*e*SG	Sg	17 27 17.9	-0.8
DPC	**Dobruska-Polom**	**1.52**	**290**	*e*	Sg	17 27 17.9	-0.8

JMA 21 18:01:05.8±0.1, 24°.98N×123°.55E, h29km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.66**	**166**	P	Pb	18 01 18.4	-0.5
IRIF				*e*S	Sb	18 01 27.2	-0.6
YOJ	**Yonaguni jima**	**0.71**	**224**	P	Pb	18 01 19.3	-0.4
YOJ				*e*S	Sb	18 01 29.1	0.0
JYNG	**Yonagunijimaku**	**0.76**	**226**	*e*S	Sb	18 01 29.8	-0.7
JISG	**Ishigakijimahi**	**0.79**	**119**	P	Pn	18 01 20.5	-0.5
JISG				*e*S	Sb	18 01 31.1	-0.4
JIJ	**Ishigaki jima**	**0.82**	**139**	P	Pn	18 01 20.9	-0.5
JIJ				*e*S	Sn	18 01 32.4	-0.1
JKRS	**Kuro-shima**	**0.85**	**150**	S	Sb	18 01 32.6	-0.4

TAP 21 18:02:05.0, 24°.21N×121°.77E, h7km, ML2.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.16**	**257**	P	Pg	18 02 09.1	+0.8
	baz=256						
NACB				S	Sg	18 02 12.2	+1.7
	baz=256						
TWD	**Chiawan**	**0.20**	**230**	*e*P	Pg	18 02 09.5	+0.5
	baz=228						
ENA	**Nanau**	**0.22**	**354**	P	Pg	18 02 10.5	+1.1
	baz=356						
ENA				S	Sg	18 02 14.1	+1.8
	baz=356						
ENAH	**Nanao**	**0.24**	**10**	*e*P	Pg	18 02 10.4	+0.6
	baz=9.0						
ENAH				*e*S	Sg	18 02 14.9	+1.7
	baz=9.0						
ETLH	**Xiulin Townshi**	**0.26**	**269**	*e*P	Pb	18 02 11.2	-0.9
	baz=269						
ETLH				*e*S	Sb	18 02 17.8	+1.0
	baz=269						
TWC	**Suao**	**0.41**	**11**	*e*P	Pg	18 02 13.4	+0.5
	baz=12						
TWC				*e*S	Sb	18 02 20.3	-0.6
	baz=12						
NNSB	**Datong**	**0.41**	**302**	*e*P	Pb	18 02 14.1	-0.6
	baz=302						
NNSB				*e*S	Sb	18 02 20.6	-0.6
	baz=302						
NNSH	**Datong**	**0.41**	**302**	*e*P	Pb	18 02 14.4	-0.2
	baz=302						
NNSH				*e*S	Sb	18 02 20.6	-0.6
	baz=302						
NNS	**Nan Shan**	**0.42**	**303**	P	Pb	18 02 14.8	-0.1
	baz=302						
NNS				S	Sb	18 02 21.0	-0.6
	baz=302						
NDT	**Datong Townshi**	**0.45**	**330**	*e*P	Pb	18 02 15.4	+0.1
	baz=329						
NDT				*e*S	Sb	18 02 22.9	+0.6
	baz=329						
WHF	**Hehuan Shan**	**0.46**	**262**	P	Pb	18 02 14.9	-0.8
	baz=261						
WHF				*e*S	Sg	18 02 21.4	+1.2
	baz=261						
ENTT	**Nioudou**	**0.47**	**337**	P	Pb	18 02 15.6	0.0
	baz=337						
ENTT				S	Sb	18 02 22.5	-0.1
	baz=337						
FUSS	**Fushou**	**0.48**	**275**	*e*P	Pb	18 02 15.7	-0.2
	baz=274						
FUSS				*e*S	Sb	18 02 23.7	+0.5
	baz=274						
ESL	**Shilin**	**0.50**	**218**	*e*P	Pg	18 02 15.0	+0.3
	baz=216						
TWE	**Neicheng**	**0.52**	**350**	P	Pb	18 02 16.2	-0.2
	baz=351						
TWE				S	Sb	18 02 24.1	0.0
	baz=351						
TWT	**Tachien**	**0.54**	**275**	*e*P	Pb	18 02 17.0	+0.1
	baz=274						
TWT				*e*S	Sb	18 02 25.2	+0.2
	baz=274						
TDCB	**Techi**	**0.56**	**275**	*e*P	Pb	18 02 17.2	0.0
	baz=274						
TDCB				*e*S	Sb	18 02 25.1	-0.3
	baz=274						
CHGB	**Renai**	**0.56**	**255**	*e*P	Pb	18 02 16.8	-0.5
	baz=254						
CHGB				*e*S	Sb	18 02 25.2	-0.4
	baz=254						
YHNB	**Yeheng**	**0.58**	**322**	*e*P	Pb	18 02 17.8	+0.3
	baz=322						
YHNB				*e*S	Sb	18 02 26.1	+0.2
	baz=322						
NSK	**Sanguang**	**0.59**	**321**	*e*P	Pb	18 02 18.6	+0.8
	baz=321						
NSK				*e*S	Sb	18 02 26.2	-0.2
	baz=321						
OWD	**Renai**	**0.59**	**245**	*e*P	Pb	18 02 17.3	-0.6
	baz=244						
NWLT	**Wulai**	**0.61**	**337**	*e*P	Pb	18 02 18.3	+0.2
	baz=337						
NWLT				*e*S	Sb	18 02 26.6	-0.3
	baz=337						
EGFH	**Guangfu**	**0.62**	**210**	*e*P	Pb	18 02 17.9	-0.3
	baz=209						
WHP	**Taichung City**	**0.75**	**275**	P	Pb	18 02 21.1	+0.6
	baz=275						
WHP				*e*S	Sb	18 02 31.9	+1.0
	baz=275						
TIPB	**Shuangxi**	**0.76**	**4**	*e*P	Pb	18 02 20.6	0.0
	baz=4.0						
TIPB				*e*S	Sb	18 02 30.6	-0.5

FAKI	**Fak Fak**	**5.06**	**115**	Pn	**Pn**	**18 06 15.7**	**-0.4**
TOLI2	**Tolitoli**	**7.13**	**285**	Pn	**Pn**	**18 06 44.4**	**-0.2**
SAUI	**Saumlaki**	**8.04**	**153**	Pn	**Pn**	**18 06 57.6**	**+0.6**
KAPI	**Kappang**	**8.96**	**242**	P	**Pn**	**18 07 12.2**	**+2.5**
	0.7nm,0.3s,baz=93,slow=11,SNR=1.7						
KAPI	**Kappang**	**8.96**	**242**	Pn	**Pn**	**18 07 11.1**	**+1.4**
MYLDM	**Lahad Datu**	**10.89**	**303**	Pn	**Pn**	**18 07 36.0**	**-0.2**
MTN	**Manton Dam**	**12.49**	**164**	Pn	**Pn**	**18 07 56.1**	**-2.0**
JAY	**Jayapura**	**13.15**	**98**	LR	LR	18 13 06.8	
	comp=Z,52nm,21.1s,baz=352,slow=37						
JAGI	**Jajag, Banyuwa**	**15.49**	**240**	Pn	**Pn**	**18 08 40.3**	**+1.6**
JAGI				IAmb	IAmb	18 08 56.0	
	comp=Z,34nm,1.0s						
FITZ	**Fitzroy Crossi**	**17.35**	**186**	P	**Pn**	**18 09 01.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=26,slow=8.6,SNR=6.0						
FITZ	**Fitzroy Crossi**	**17.35**	**186**		**P**	**18 09 02.4**	**-0.8**
WB0	**Warramunga Arr**	**20.01**	**161**	P	**P**	**18 09 30.9**	**-1.6**
WB0				IAmb	IAmb	18 09 33.3	
	comp=Z,5.0nm,0.9s						
WRAB	**Tennant Creek**	**20.15**	**161**	P	**P**	**18 09 33.2**	**-0.8**
WRA	**Warramunga Arr**	**20.15**	**162**	P	**P**	**18 09 32.2**	**-1.9**
	comp=Z,1.9nm,0.6s,baz=342,slow=12,SNR=28						
WRA	**Warramunga Arr**	**20.15**	**162**	P	**P**	**18 09 33.1**	**-1.1**
WB2	**Warramunga Arr**	**20.16**	**161**	P	**P**	**18 09 32.2**	**-1.9**
WB2				IAmb	IAmb	18 09 33.2	
	comp=Z,7.1nm,1.1s						
COEN	**Coen**	**20.18**	**131**	P	**P**	**18 09 35.0**	**+0.5**
COEN				IAmb	IAmb	18 09 35.9	
	comp=Z,18nm,1.4s						
WR0	**Warramunga Arr**	**20.23**	**161**	P	**P**	**18 09 33.4**	**-1.6**
AS31	**Alice Springs**	**23.56**	**166**	P	**P**	**18 10 08.9**	**-1.3**
AS31				IAmb	IAmb	18 10 10.5	
	comp=Z,1.9nm,0.7s						
ASAR	**Alice Springs**	**23.56**	**166**	P	**P**	**18 10 09.1**	**-1.1**
	comp=Z,5.0nm,0.6s,baz=344,slow=11,SNR=6.5						
ASAR				PcP	**PcP**	**18 13 55.4**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=343,slow=1.6,SNR=2.3						
ASAR	**Alice Springs**	**23.56**	**166**	P	**P**	**18 10 08.7**	**-1.5**
XMIS	**Christmas Isla**	**23.92**	**245**	P	**P**	**18 10 13.3**	**-0.3**
UBPT	**Khong Chiam**	**27.12**	**307**	P	**P**	**18 10 43.4**	**+0.8**
UBPT				IAmb	IAmb	18 10 46.3	
	comp=Z,22nm,1.4s						
FORT	**Forrest**	**29.86**	**179**	P	**P**	**18 11 07.3**	**+0.4**
BBOO	**Buckleboo**	**32.85**	**167**	P	**P**	**18 11 33.5**	**+0.3**
STKA	**Stephens Creek**	**33.63**	**158**	P	**P**	**18 11 40.7**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=325,slow=7.2,SNR=5.1						
STKA	**Stephens Creek**	**33.63**	**158**	P	**P**	**18 11 40.7**	**+0.6**
MJAR	**Matsushiro Arr**	**38.38**	**14**	LR	LR	18 25 44.4	
	comp=Z,14nm,21.1s,baz=200,slow=32						
LZH	**Lanzhou**	**42.84**	**331**	*e*P	**P**	**18 13 01.3**	**+3.6**
LZH				pP	pP	18 13 08.3	+0.3
LZH				sP	sP	18 13 11.5	-0.7
LZH				*e*PP	**PcP**	**18 14 43.8**	**-4.7**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,5.5s						
HHC	**Hu-ho-hao-te**	**43.93**	**342**	*e*P	**P**	**18 13 06.4**	**+0.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,70nm,5.3s						
ODAN	**Odare**	**47.50**	**308**	*e*P	**P**	**18 13 34.6**	**-0.4**
RAMN	**Ramite**	**48.16**	**308**	*e*P	**P**	**18 13 40.3**	**+0.2**
	comp=Z,23nm,0.7s						
GUN	**Gumba**	**49.18**	**309**	*e*P	**P**	**18 13 47.8**	**-0.2**
	comp=Z,14nm,0.6s						
PKI	**Pulchoki**	**49.39**	**308**	*e*P	**P**	**18 13 49.0**	**-0.6**
KKN	**Kakani**	**49.59**	**308**	*e*P	**P**	**18 13 50.5**	**-0.5**
DMN	**Daman**	**49.65**	**308**	*e*P	**P**	**18 13 51.3**	**-0.2**
GKN	**Gorkha**	**50.20**	**308**	*e*P	**P**	**18 13 55.1**	**-0.5**
	comp=Z,10nm,0.8s						
KOLN	**Koldanda**	**50.91**	**307**	*e*P	**P**	**18 14 01.0**	**0.0**
	comp=Z,27nm,0.7s						
DANN	**Dangsing**	**51.04**	**308**	*e*P	**P**	**18 14 01.7**	**-0.4**
	comp=Z,21nm,0.6s						
PYUN	**Piuthan**	**51.54**	**308**	*e*P	**P**	**18 14 06.0**	**+0.3**
SONM	**Songino Array**	**51.82**	**342**	P	**P**	**18 14 08.6**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=147,slow=6.6,SNR=1.8						
SONM	**Songino Array**	**51.82**	**342**	IAmb	IAmb	18 14 13.2	
	comp=Z,1.1nm,1.3s						
WMQ	**Urumqi**	**56.94**	**326**	*e*P	**P**	**18 14 46.8**	**+2.2**
MK31	**Makanchi Array**	**61.77**	**326**	P	**P**	**18 15 17.0**	**-0.9**
MK31				IAmb	IAmb	18 15 32.7	
	comp=Z,3.2nm,1.2s						
MKAR	**Makanchi Array**	**61.77**	**326**	P	**P**	**18 15 17.0**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=116,slow=8.2,SNR=10						
MKAR	**Makanchi Array**	**61.77**	**326**	P	**P**	**18 15 16.8**	**-1.1**
YAK	**Yakutsk**	**62.64**	**1**	P	**P**	**18 15 22.5**	**-0.9**
ZALV	**Zalesovo Beam**	**64.99**	**334**	P	**P**	**18 15 37.5**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=130,slow=8.5,SNR=2.1						
BRVK	**Borovoye**	**71.65**	**328**	P	**P**	**18 16 21.6**	**+0.9**
BRVK				IAmb	IAmb	18 16 24.2	
	comp=Z,2.3nm,0.9s						
TIXI	**Tiksi**	**72.29**	**0**	P	**P**	**18 16 25.0**	**+0.8**
TIXI				IAmb	IAmb	18 16 27.7	
	comp=Z,2.0nm,0.8s						

TAP ***21*** *18:17:33.8,24.°87N×122.°39E,h9km,ML3.2,C*
JMA ***21*** *18:17:33.5±0.2,24.°80N×122.°44E,h1km±3km,M2.7*
ISC 21 18:17:33.7±1.1,24.°85N±0.°02×122.°43E±0.°02,h6km±9km, n72,σ0°48/140,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.43**	**292**	P	**Pg**	**18 17 42.4**	**+0.4**
	baz=290						
TWB1				S	**Sg**	**18 17 48.4**	**+0.7**
	baz=290						
EGS		**0.45**	**270**	*e*P	**Pg**	**18 17 42.7**	**+0.4**
	baz=265						
EGS				*e*S	**Sb**	**18 17 49.6**	**-1.3**
	baz=265						
NTC	**Toucheng**	**0.54**	**271**	*e*P	**Pb**	**18 17 44.8**	**-0.8**
	baz=268						
NTC				*e*S	**Sb**	**18 17 52.8**	**-0.8**
	baz=268						
TIPB	**Shuangxi**	**0.56**	**283**	P	**Pb**	**18 17 45.3**	**-0.6**
	baz=280						
TIPB				S	**Sb**	**18 17 53.4**	**-0.8**
	baz=280						
TWC	**Suao**	**0.58**	**246**	*e*P	**Pb**	**18 17 45.4**	**-0.7**
	baz=241						
TWC				*e*S	**Sb**	**18 17 54.3**	**-0.3**
	baz=241						
JYNG	**Yonagunijimaku**	**0.61**	**130**	P	**Pg**	**18 17 45.1**	**-0.4**
JYNG				S	**Sg**	**18 17 52.9**	**-0.6**
ILA	**Ilan**	**0.62**	**263**	*e*P	**Pb**	**18 17 46.8**	**-0.1**
	baz=259						
ILA				S	**Sb**	**18 17 56.1**	**+0.2**
	baz=259						
NWF	**Wu-fen Shan**	**0.63**	**291**	P	**Pb**	**18 17 46.4**	**-0.7**
	baz=289						
NWF				S	**Sb**	**18 17 55.4**	**-0.8**
	baz=289						
WFSB	**Wu-fen Shan**	**0.63**	**291**	P	**Pb**	**18 17 46.5**	**-0.6**
	baz=289						
WFSB				S	**Sb**	**18 17 55.6**	**-0.5**
	baz=289						
YOJ	**Yonaguni jima**	**0.66**	**126**	*e*P	**Pb**	**18 17 47.4**	**-0.1**
	baz=125						
YOJ				*e*S	**Sb**	**18 17 58.1**	**+1.3**
	baz=125						
YOJ	**Yonaguni jima**	**0.66**	**126**	P	**Pg**	**18 17 45.7**	**-0.6**
YOJ				S	**Sg**	**18 17 54.4**	**-0.4**
ENAH	**Nanao**	**0.69**	**235**	*e*P	**Pg**	**18 17 47.1**	**+0.3**
	baz=231						
ENAH				*e*S	**Sb**	**18 17 57.9**	**+0.2**
	baz=231						
TWE	**Neicheng**	**0.70**	**260**	P	**Pb**	**18 17 47.6**	**-0.7**
	baz=256						
TWE				S	**Sb**	**18 17 57.2**	**-1.0**
	baz=256						
ENA	**Nanau**	**0.75**	**236**	*e*P	**Pb**	**18 17 48.7**	**-0.4**
	baz=232						
ENA				*e*S	**Sb**	**18 17 60.0**	**+0.4**
	baz=232						
TWA	**Mucha**	**0.78**	**280**	*e*P	**Pb**	**18 17 49.0**	**-0.5**
	baz=278						
TWA				*e*S	**Sg**	**18 17 59.4**	**+0.6**
	baz=278						
ENTT	**Nioudou**	**0.81**	**256**	P	**Pb**	**18 17 50.1**	**0.0**
	baz=252						
ENTT				S	**Sb**	**18 18 01.3**	**0.0**
	baz=252						
NHDH	**Xindian Distri**	**0.83**	**278**	*e*P	**Pb**	**18 17 49.9**	**-0.6**
	baz=276						
NHDH				S	**Sb**	**18 18 01.7**	**-0.1**
	baz=276						
YM08	**YM08**	**0.83**	**294**	*e*P	**Pg**	**18 17 49.9**	**+0.2**
	baz=293						
YM08				*e*S	**Sb**	**18 18 01.5**	**-0.5**
	baz=293						
YM01	**YM01**	**0.83**	**291**	*e*P	**Pg**	**18 17 50.0**	**+0.3**
	baz=290						
YM01				*e*S	**Sb**	**18 18 01.6**	**-0.5**
	baz=290						
YM11	**YM11**	**0.84**	**293**	*e*P	**Pg**	**18 17 50.1**	**+0.3**
	baz=291						
YM11				*e*S	**Sb**	**18 18 02.0**	**-0.1**
	baz=291						
NWLT	**Wulai**	**0.84**	**266**	*e*P	**Pg**	**18 17 50.1**	**+0.3**
	baz=263						
NWLT				*e*S	**Sb**	**18 18 02.0**	**-0.3**
	baz=263						
TAP1	**Taipei**	**0.84**	**283**	*e*P	**Pb**	**18 17 50.3**	**-0.4**
	baz=281						
TAP1				*e*S	**Sb**	**18 18 02.5**	**+0.3**
	baz=281						
YM05	**YM05**	**0.84**	**292**	*e*P	**Pb**	**18 17 50.4**	**-0.3**
	baz=291						
YM05				S	**Sb**	**18 18 02.6**	**+0.3**
	baz=291						
PCYT	**Pengchaiyu**	**0.84**	**338**	*e*P	**Pg**	**18 17 50.0**	**+0.1**
	baz=339						
PCYT				*e*S	**Sg**	**18 18 01.1**	**+0.3**
	baz=339						
YM10	**YM10**	**0.84**	**292**	*e*P	**Pg**	**18 17 50.1**	**+0.2**
	baz=290						
YM10				*e*S	**Sb**	**18 18 02.3**	**-0.1**
	baz=290						
TAP	**Taipei**	**0.86**	**283**	*e*P	**Pb**	**18 17 50.6**	**-0.3**
	baz=281						
TAP				*e*S	**Sb**	**18 18 01.9**	**-0.8**
	baz=281						
TATO	**Taipei**	**0.86**	**279**	*e*P	**Pg**	**18 17 50.3**	**+0.1**
	baz=277						
TATO				*e*S	**Sb**	**18 18 02.4**	**-0.5**
	baz=277						
TWY	**Chenhua**	**0.86**	**300**	*e*P	**Pg**	**18 17 50.0**	**-0.2**
	baz=299						
TWY				*e*S	**Sg**	**18 18 02.0**	**+0.5**
	baz=299						
YM04	**YM04**	**0.86**	**291**	*e*P	**Pg**	**18 17 50.4**	**+0.1**
	baz=289						
YM04				*e*S	**Sb**	**18 18 02.4**	**-0.6**
	baz=289						
NDT	**Datong Townshi**	**0.86**	**254**	*e*P	**Pb**	**18 17 50.8**	**-0.3**
	baz=251						
NDT				*e*S	**Sb**	**18 18 03.0**	**+0.1**
	baz=251						
YM03	**YM03**	**0.87**	**293**	*e*P	**Pb**	**18 17 50.9**	**-0.3**
	baz=291						
YM03				*e*S	**Sb**	**18 18 02.5**	**-0.7**
	baz=291						
ANP	**Anpu**	**0.89**	**293**	*e*P	**Pb**	**18 17 50.9**	**+0.1**
	baz=291						
ANP				*e*S	**Sg**	**18 18 02.8**	**+0.4**
	baz=291						
TWS1	**Kuangyinshan**	**0.95**	**286**	*e*P	**Pg**	**18 17 52.1**	**+0.2**
	baz=284						
TWS1				S	**Sb**	**18 18 05.2**	**-0.2**
	baz=284						
YHNB	**Yeheng**	**0.97**	**260**	P	**Pg**	**18 17 52.3**	**0.0**
	baz=257						
YHNB				S	**Sg**	**18 18 05.2**	**+0.3**
	baz=257						
NSK	**Sanguang**	**0.99**	**260**	P	**Pb**	**18 17 52.8**	**-0.4**
	baz=258						
NSK				S	**Sb**	**18 18 06.8**	**+0.3**
	baz=258						
NACB	**Ninganchiao**	**1.01**	**229**	P	**Pg**	**18 17 53.0**	**0.0**
	baz=226						
NACB				S	**Sb**	**18 18 07.7**	**+0.6**
	baz=226						
NNSB	**Datong**	**1.04**	**247**	*e*P	**Pg**	**18 17 53.0**	**-0.6**
	baz=244						
NNSB				S	**Sb**	**18 18 07.7**	**-0.3**
	baz=244						
NNSH	**Datong**	**1.04**	**247**	*e*P	**Pg**	**18 17 53.4**	**-0.2**
	baz=244						
NNSH				*e*S	**Sb**	**18 18 07.4**	**-0.6**
	baz=244						
NNS	**Nan Shan**	**1.04**	**247**	*e*P	**Pg**	**18 17 53.5**	**-0.1**
	baz=244						
NNS				S	**Sb**	**18 18 07.7**	**-0.4**
	baz=244						
ETLH	**Xiulin Townshi**	**1.07**	**234**	P	**Pg**	**18 17 53.9**	**-0.3**
	baz=231						
ETLH				S	**Sb**	**18 18 09.4**	**+0.5**
	baz=231						
TWD	**Chiawan**	**1.07**	**225**	*e*P	**Pg**	**18 17 54.2**	**-0.1**
	baz=222						
TWD				*e*S	**Sn**	**18 18 09.5**	**-1.0**
	baz=222						
FUSS	**Fushou**	**1.23**	**241**	*e*P	**Pg**	**18 17 57.0**	**-0.3**
	baz=239						
FUSS				*e*S	**Sn**	**18 18 14.3**	**-0.3**
	baz=239						
WHF	**Hehuan Shan**	**1.27**	**237**	P	**Pb**	**18 17 58.0**	**-0.2**
	baz=234						
WHF				*e*S	**Sb**	**18 18 15.1**	**+0.1**
	baz=234						
TWT	**Tachien**	**1.28**	**243**	*e*P	**Pg**	**18 17 57.9**	**-0.3**
	baz=241						
TWT				*e*S	**Sn**	**18 18 15.7**	**-0.1**
	baz=241						
IRIF	**Iriomote-Funau**	**1.29**	**113**	P	**Pn**	**18 17 57.9**	**-0.3**
IRIF				S	**Sb**	**18 18 15.4**	**+0.2**
TDCB	**Techi**	**1.30**	**243**	*e*P	**Pg**	**18 17 58.0**	**-0.6**
	baz=241						
TDCB				*e*S	**Sn**	**18 18 16.2**	**0.0**
	baz=241						
LIOB	**Emei**	**1.30**	**261**	*e*P	**Pn**	**18 17 58.0**	**-0.4**
	baz=259						
LIOB				*e*S	**Sn**	**18 18 15.6**	**-0.4**
	baz=259						
NSTT	**Nanjuang**	**1.31**	**261**	*e*P	**Pn**	**18 17 57.9**	**-0.7**
	baz=259						
NSTT				*e*S	**Sn**	**18 18 16.1**	**-0.3**
	baz=259						
ESL	**Shilin**	**1.37**	**222**	*e*P	**Pn**	**18 17 58.9**	**-0.4**
	baz=219						
ESL				*e*S	**Sg**	**18 18 17.4**	**-0.3**
	baz=219						
CHGB	**Renai**	**1.38**	**236**	*e*P	**Pn**	**18 17 59.7**	**0.0**
	baz=233						
CHGB				*e*S	**Sn**	**18 18 18.6**	**+0.2**
	baz=233						
OWD	**Renai**	**1.45**	**232**	*e*P	**Pn**	**18 18 00.1**	**-0.4**
	baz=230						
OWD				*e*S	**Sg**	**18 18 20.5**	**+0.3**
	baz=230						
WHP	**Taichung City**	**1.46**	**248**	*e*P	**Pg**	**18 18 01.4**	**-0.4**
	baz=245						
WHP				*e*S	**Sg**	**18 18 21.1**	**+0.4**
	baz=245						
HATJ	**Hateruma jima**	**1.48**	**122**	P	**Pn**	**18 18 01.2**	**+0.4**
JKRS	**Kuro-shima**	**1.56**	**112**	P	**Pn**	**18 18 00.7**	**-1.3**
NSY	**Sanyi**	**1.57**	**255**	*e*P	**Pn**	**18 18 01.9**	**-0.2**
	baz=252						
NSY				*e*S	**Sn**	**18 18 22.8**	**-0.1**
	baz=252						
TWQ1	**Liyutan**	**1.58**	**252**	*e*P	**Pn**	**18 18 02.4**	**+0.2**
	baz=250						
TWQ1				*e*S	**Sb**	**18 18 23.4**	**-0.3**
	baz=250						
DPDB	**Guoxing**	**1.59**	**240**	*e*P	**Pn**	**18 18 02.6**	**+0.2**
	baz=237						
DPDB				*e*S	**Sb**	**18 18 23.4**	**-0.4**
	baz=237						
JIJ	**Ishigaki jima**	**1.63**	**107**	P	**Pn**	**18 18 03.5**	**+0.5**
JIJ				S	**Sn**	**18 18 24.8**	**+0.5**
SMLT	**Sun Moon Lake**	**1.69**	**236**	*e*P	**Pn**	**18 18 04.1**	**+0.3**
	baz=233						
SMLT				*e*S	**Sb**	**18 18 26.9**	**+0.1**
	baz=233						
SSLB	**Suanglung**	**1.71**	**232**	*e*P	**Pn**	**18 18 04.6**	**+0.6**
	baz=230						
SSLB				*e*S	**Sb**	**18 18 27.1**	**-0.1**
	baz=230						
TYC	**Yuchr**	**1.71**	**237**	*e*P	**Pn**	**18 18 04.5**	**+0.5**
	baz=235						
TYC				*e*S	**Sn**	**18 18 26.4**	**+0.2**
	baz=235						
JISG	**Ishigakijimahi**	**1.73**	**98**	P	**Pn**	**18 18 04.5**	**+0.2**
ALS	**Alishan**	**1.99**	**228**	*e*P	**Pn**	**18 18 08.4**	**+0.3**
	baz=226						
ALS				*e*S	**Sn**	**18 18 33.4**	**-0.1**
	baz=226						
CHN5	**Tsauling**	**2.02**	**232**	*e*P	**Pn**	**18 18 08.7**	**+0.3**
	baz=230						
CHN5				*e*S	**Sn**	**18 18 34.5**	**+0.5**
	baz=230						
ELDTW	**Lidau**	**2.09**	**218**	*e*P	**Pn**	**18 18 09.7**	**+0.3**
	baz=216						
ELDTW				*e*S	**Sn**	**18 18 36.1**	**+0.3**
	baz=216						
TPUB	**Ta-pu**	**2.25**	**227**	*e*P	**Pn**	**18 18 12.1**	**+0.6**
	baz=225						
TPUB				*e*S	**Sn**	**18 18 40.3**	**+0.8**
	baz=225						
WTP	**Ta-pu**	**2.30**	**227**	*e*P	**Pn**	**18 18 12.6**	**+0.4**
	baz=224						
WTP				*e*S	**Sn**	**18 18 41.5**	**+0.7**
	baz=224						
TWK	**Hsinying**	**2.37**	**229**	*e*P	**Pn**	**18 18 13.4**	**+0.3**
	baz=227						
TWK				*e*S	**Sn**	**18 18 43.4**	**+0.8**
	baz=227						
CHN1	**Nanshi**	**2.40**	**227**	*e*P	**Pn**	**18 18 14.0**	**+0.5**
	baz=225						
CHN1				*e*S	**Sn**	**18 18 43.4**	**+0.2**
	baz=225						
SGST	**Jiashian**	**2.43**	**224**	*e*S	**Sn**	**18 18 44.8**	**+0.7**
	baz=222						
EAST	**Anshuo**	**2.85**	**211**	*e*P	**Pn**	**18 18 20.7**	**+1.0**
	baz=209						
EAST				*e*S	**Sn**	**18 18 55.2**	**+0.8**
	baz=209						
XPSS	**Dashiqiu**	**2.89**	**316**	*e*P	**Pn**	**18 18 21.0**	**+0.7**
	baz=315						
XPSS				*e*S	**Sn**	**18 18 55.8**	**+0.4**
	baz=315						

IDC ***21*** *18:26:29.7±1.0,1.°96N×126.°58E,h0km,mb3.8/6, mb1 3.9/8,mb1mx3.6/37,mbtmp3.8/8,ML3.7/2,MS3.3/3, Ms1 3.2/3,ms1mx2.6/53,Error ellipse: s-maj=59.2km s-min=17.4km az=67.0*
NEIC ***21*** *18:26:38.0±1.7,2.°09N±0.°06×127.°09E±0.°08,h69km±4km, mb4.2/20,Error ellipse: s-maj=11.5km s-min=7.9km az=70.0*
ISC 21 18:26:37.5±0.6,2.°14N±0.°07×127.°10E±0.°07,h63km,n36, σ1s11°/37,mb4.1/12,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.38**	**169**		**Pn**	**18 27 00.1**	**-0.6**
TNTI				Sn	**Sn**	**18 27 17.4**	**-0.7**
SIJI	**Sorong**	**5.12**	**126**	Pn	**Pn**	**18 27 52.4**	**+0.6**
	1.9nm,0.3s,baz=325,slow=18,SNR=14						
SIJI				Sn	**Sn**	**18 28 50.3**	**+0.7**
	baz=58,slow=22,SNR=1.5						
KCP	**Kidapawan**	**5.24**	**338**	*e*P	**Pn**	**18 27 52.8**	**-0.6**
LUWI	**Luwuk**	**5.36**	**234**	Pn	**Pn**	**18 27 55.6**	**+0.7**
TOLI2	**Tolitoli**	**6.40**	**261**	Pn	**Pn**	**18 28 08.9**	**-0.3**
FAKI	**Fak Fak**	**7.19**	**134**	Pn	**Pn**	**18 28 21.9**	**+1.0**
MYLDM	**Lahad Datu**	**9.10**	**290**	Pn	**Pn**	**18 28 47.9**	**+1.7**
JAY	**Jayapura**	**14.36**	**109**	LR	LR	18 36 04.6	
	comp=Z,30nm,20.7s,baz=300,slow=39						
SBUM	**Sibu**	**14.87**	**271**	P	**P**	**18 30 09.6**	**+1.0**
MTN	**Manton Dam**	**15.41**	**165**		**P**	**18 30 13.6**	**-1.0**
KSM	**Kuching**	**16.80**	**268**	P	**P**	**18 30 30.4**	**+0.4**
KSM				IAmb	IAmb	18 30 41.8	
	comp=Z,20nm,1.5s						
KNRA	**Kununurra**	**17.77**	**175**		**P**	**18 30 41.1**	**+0.4**
KNRA				IAmb	IAmb	18 30 48.0	
	comp=Z,14nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.16**	**184**	P	**P**	**18 31 03.4**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=20,slow=10.0,SNR=6.0						
FITZ	**Fitzroy Crossi**	**20.16**	**184**	P	**P**	**18 31 06.6**	**-0.2**
WB0	**Warramunga Arr**	**22.91**	**162**	P	**P**	**18 31 35.6**	**-0.7**
WB0				IAmb	IAmb	18 31 38.6	
	comp=Z,5.0nm,0.3s						
WRAB	**Tennant Creek**	**23.06**	**162**	P	**P**	**18 31 36.5**	**-1.3**
WRAB				IAmb	IAmb	18 31 37.6	
	comp=Z,13nm,1.4s						
WRA	**Warramunga Arr**	**23.06**	**162**	P	**P**	**18 31 37.0**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=340,slow=11,SNR=48						
WRA	**Warramunga Arr**	**23.06**	**162**	P	**P**	**18 31 37.1**	**-0.8**
WB2	**Warramunga Arr**	**23.07**	**162**	P	**P**	**18 31 37.3**	**-0.6**
WB2				IAmb	IAmb	18 32 12.0	
	comp=Z,14nm,1.6s						
WR0	**Warramunga Arr**	**23.14**	**162**	P	**P**	**18 31 38.0**	**-0.6**
WR0				IAmb	IAmb	18 32 09.6	
	comp=Z,8.5nm,1.1s						
PSA00	**Pilbara Seismi**	**24.61**	**196**	P	**P**	**18 31 52.5**	**+0.4**
PSA00				IAmb	IAmb	18 31 56.2	
	comp=Z,9.9nm,1.0s						
AS31	**Alice Springs**	**26.49**	**166**	P	**P**	**18 32 09.2**	**+0.1**
ASAR	**Alice Springs**	**26.49**	**166**	P	**P**	**18 32 09.1**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=345,slow=7.5,SNR=19						
ASAR				PcP	**PcP**	**18 35 33.0**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=336,slow=1.7,SNR=1.8						
ASAR	**Alice Springs**	**26.49**	**166**	P	**P**	**18 32 08.6**	**-0.5**
GSI	**Gunungsitoli**	**29.52**	**269**	P	**P**	**18 32 34.6**	**-1.7**
BBOO	**Buckleboo**	**35.77**	**167**	P	**P**	**18 33 29.6**	**-1.0**
NWAO	**Narrogin (SRO)**	**36.10**	**194**	P	**P**	**18 33 35.6**	**+2.1**
STKA	**Stephens Creek**	**36.52**	**159**	P	**P**	**18 33 37.1**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=350,slow=7.3,SNR=11						
STKA				LR	LR	18 49 01.3	
	comp=Z,45nm,18.3s,baz=216,slow=37						
WAKE	**Wake Island**	**42.27**	**63**	P	**P**	**18 34 25.4**	**+0.2**
SONM	**Songino Array**	**48.92**	**342**	P	**P**	**18 35 17.8**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=145,slow=8.5,SNR=4.0						
MK31	**Makanchi Array**	**59.07**	**326**	P	**P**	**18 36 30.6**	**-0.7**
MK31				IAmb	IAmb	18 37 05.1	
	comp=Z,4.2nm,1.4s						
MKAR	**Makanchi Array**	**59.07**	**326**	P	**P**	**18 36 30.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=118,slow=7.2,SNR=13						
MAKZ	**Makanchi**	**59.26**	**326**	P	**P**	**18 36 30.5**	**-2.0**
SNZO	**South Karori**	**61.10**	**141**	P	**P**	**18 36 43.4**	**-1.8**
URZ	**Urewera**	**61.13**	**136**	LR	LR	19 03 57.6	
	comp=Z,62nm,18.4s,baz=210,slow=37						
VNDA	**Vanda**	**81.81**	**173**	P	**P**	**18 38 49.4**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=315,slow=9.3,SNR=5.3

	baz=298								
FUSS				*i*	S		Sb	18 37 32.6	-0.1
	baz=298								
NNSH	**Datong**	**0.46**	**322**	⇓	*i*P		**Pb**	18 37 25.9	-0.4
	baz=318								
NNSH				*i*	S		**Sb**	18 37 32.4	-0.5
	baz=318								
NNSB	**Datong**	**0.46**	**322**	⇓	*i*P		**Pb**	18 37 25.9	-0.4
	baz=321								
NNSB				*i*	S		**Sb**	18 37 32.6	-0.3
	baz=321								
EGFH	**Guangfu**	**0.46**	**211**		*e*P		**Pb**	18 37 25.4	-0.9
	baz=219								
EGFH					*e*S		**Sn**	18 37 33.8	-0.7
	baz=219								
CHGB	**Renai**	**0.47**	**270**	⇑	*i*P		**Pb**	18 37 26.3	-0.2
	baz=262								
CHGB					S		**Sb**	18 37 32.7	-0.7
	baz=262								
NNS	**Nan Shan**	**0.47**	**322**	⇓	*i*P		**Pb**	18 37 26.1	-0.4
	baz=322								
NNS					S		**Sb**	18 37 32.8	-0.5
	baz=322								
OWD	**Renai**	**0.48**	**257**	⇑	*i*P		**Pb**	18 37 26.2	-0.4
	baz=255								
OWD					S		**Sb**	18 37 32.9	-0.7
	baz=255								
TWT	**Tachien**	**0.51**	**292**		P		**Pb**	18 37 27.0	0.0
	baz=289								
TWT					S		**Sb**	18 37 34.4	+0.2
	baz=289								
TDCB	**Techi**	**0.52**	**291**	⇑	*i*P		**Pb**	18 37 27.1	-0.2
	baz=289								
TDCB					S		**Sb**	18 37 34.2	-0.4
	baz=289								
NDT	**Datong Townshi**	**0.56**	**343**		*i*P		**Pb**	18 37 27.4	-0.5
	baz=344								
NDT					*i*S		**Sb**	18 37 35.2	-0.4
	baz=344								
TWC	**Suao**	**0.56**	**15**		*i*P		**Pb**	18 37 27.7	-0.2
	baz=17								
TWC					S		**Sb**	18 37 35.7	+0.1
	baz=17								
ENTT	**Nioudou**	**0.58**	**349**		*i*P		**Pb**	18 37 27.8	-0.5
	baz=351								
ENTT					S		**Sb**	18 37 36.2	-0.1
	baz=351								
HGSD	**Ruisui**	**0.62**	**203**		P		**Pn**	18 37 29.5	0.0
	baz=211								
HGSD					S		**Sn**	18 37 38.9	+0.5
	baz=211								
EHY	**Hungye**	**0.65**	**211**		*e*P		**Pb**	18 37 27.8	-1.5
	baz=208								
TWE	**Neicheng**	**0.65**	**358**		P		**Pb**	18 37 28.9	-0.5
	baz=355								
TWE					*e*S		**Sb**	18 37 37.8	-0.4
	baz=355								
YHNB	**Yeheng**	**0.67**	**335**	⇓	*i*P		**Pb**	18 37 29.2	-0.5
	baz=326								
YHNB					S		**Sb**	18 37 37.6	-1.0
	baz=326								
NSK	**Sanguang**	**0.68**	**334**	⇓	*i*P		**Pb**	18 37 29.3	-0.6
	baz=325								
NSK					S		**Sb**	18 37 38.0	-1.0
	baz=325								
DPDB	**Guoxing**	**0.70**	**268**	⇑	*i*P		**Pb**	18 37 29.8	-0.3
	baz=262								
DPDB					*e*S		**Sn**	18 37 40.3	-0.2
	baz=262								
ILA	**Ilan**	**0.70**	**4**		*e*P		**Pn**	18 37 30.6	0.0
	baz=1.0								
ILA					*e*S		**Sn**	18 37 40.7	+0.3
	baz=1.0								
WHP	**Taichung City**	**0.71**	**288**		*e*P		**Pb**	18 37 30.2	-0.2
	baz=286								
WHP					*e*S		**Sb**	18 37 39.8	-0.1
	baz=286								
SSLB	**Suanglung**	**0.73**	**248**	⇑	*i*P		**Pb**	18 37 30.1	-0.6
	baz=251								
SSLB					*e*S		**Sb**	18 37 39.8	-0.5
	baz=251								
NWLT	**Wulai**	**0.73**	**347**		*e*P		**Pb**	18 37 29.9	-0.8
	baz=341								
NWLT					S		**Sb**	18 37 39.4	-1.0
	baz=341								
SMLT	**Sun Moon Lake**	**0.74**	**256**	⇑	*i*P		**Pb**	18 37 30.5	-0.4
	baz=253								
SMLT					*e*S		**Sb**	18 37 40.2	-0.6
	baz=253								
YULB	**Yu-li**	**0.76**	**208**		*e*P		**Pn**	18 37 29.2	-2.2
	baz=205								
YULB					*e*S		**Sb**	18 37 39.2	-2.0
	baz=205								
TYC	**Yuchr**	**0.78**	**258**	⇓	*i*P		**Pn**	18 37 31.1	-0.5
	baz=255								
TYC					*e*S		**Sn**	18 37 42.0	-0.4
	baz=255								
EYUL	**Yuli**	**0.79**	**205**		*e*P		**Pn**	18 37 31.0	-0.8
	baz=214								
TWF1	**Yuli**	**0.80**	**207**		*e*P		**Pn**	18 37 29.9	-2.0
	baz=214								
TWF1					*e*S		**Sb**	18 37 39.9	-2.3
	baz=214								
NTC	**Toucheng**	**0.80**	**9**		*e*P		**Pb**	18 37 31.8	0.0
	baz=357								
NTC					*e*S		**Sn**	18 37 43.1	+0.2
	baz=357								
EGS		**0.81**	**16**		*e*P		**Pb**	18 37 32.4	+0.4
	baz=24								
EGS					*e*S		**Sn**	18 37 43.8	+0.7
	baz=24								
LIOB	**Emei**	**0.84**	**313**		*i*P		**Pb**	18 37 32.9	+0.2
	baz=312								
LIOB					S		**Sn**	18 37 43.9	-0.1
	baz=312								
NSTT	**Nanjuang**	**0.84**	**312**		P		**Pb**	18 37 32.7	+0.1
	baz=311								
NSTT					*e*S		**Sn**	18 37 43.2	-0.8
	baz=311								
WHYT	**Xinyi Township**	**0.85**	**245**		*e*P		**Pn**	18 37 32.4	-0.2
	baz=246								
WHYT					*e*S		**Sn**	18 37 44.9	+0.7
	baz=246								
NHDH	**Xindian Distri**	**0.91**	**351**		*e*P		**Pb**	18 37 33.4	-0.3
	baz=351								
NHDH					*e*S		**Sn**	18 37 44.6	-0.9
	baz=351								
TIPB	**Shuangxi**	**0.91**	**8**		P		**Pb**	18 37 33.7	-0.1
	baz=358								
TIPB					*e*S		**Sb**	18 37 46.8	+1.2
	baz=358								
WJS	**Zhushan**	**0.91**	**255**		P		**Pb**	18 37 34.1	+0.4
	baz=254								
WJS					*e*S		**Sb**	18 37 46.6	+1.1
	baz=254								
NSY	**Sanyi**	**0.92**	**293**		*e*P		**Pb**	18 37 34.5	+0.7
	baz=291								
NSY					*e*S		**Sb**	18 37 46.4	+0.7
	baz=291								
TWA	**Mucha**	**0.92**	**354**		P		**Pb**	18 37 33.6	-0.2
	baz=344								
TWA					*e*S		**Sb**	18 37 45.5	-0.2
	baz=344								
TATO	**Taipei**	**0.93**	**349**		P		**Pb**	18 37 33.5	-0.5
	baz=348								
TATO					S		**Sb**	18 37 45.4	-0.5
	baz=348								
TCU	**Taichung**	**0.93**	**275**		*e*P		**Pb**	18 37 34.0	0.0
	baz=275								
TCU					*e*S		**Sb**	18 37 48.8	+2.8
	baz=275								
FULB	**Fuli**	**0.94**	**203**		*e*P		**Pn**	18 37 33.8	0.0
	baz=211								
FULB					*e*S		**Sb**	18 37 47.3	+1.1
	baz=211								
WNT	**Mingjian**	**0.94**	**259**		P		**Pb**	18 37 34.6	+0.4
	baz=246								
WNT					*e*S		**Sb**	18 37 47.7	+1.4
	baz=246								
NMLH	**Miaoli**	**0.94**	**300**		*e*P		**Pb**	18 37 34.8	+0.5
	baz=298								
NMLH					*e*S		**Sb**	18 37 47.4	+0.9
	baz=298								
SBCB	**Hsinchu**	**0.97**	**319**		*e*P		**Pn**	18 37 33.8	-0.5
	baz=317								
SBCB					*e*S		**Sb**	18 37 47.5	+0.4
	baz=317								
ALS	**Alishan**	**0.98**	**236**		P		**Pb**	18 37 34.7	-0.3
	baz=236								
ALS					*e*S		**Sb**	18 37 49.1	+1.4
	baz=236								
TWB1	**Santiao Chiao**	**0.98**	**16**		P		**Pb**	18 37 35.1	+0.2
	baz=20								
TWB1					*e*S		**Sn**	18 37 46.6	-0.7
	baz=20								
TAP1	**Taipei**	**0.98**	**351**		*e*P		**Pb**	18 37 34.4	-0.5
	baz=350								
TAP1					*e*S		**Sb**	18 37 47.6	+0.1
	baz=350								
HSN	**Hsinchu**	**0.98**	**318**		*e*P		**Pb**	18 37 35.5	+0.5
	baz=320								
HSN					*e*S		**Sb**	18 37 49.1	+1.5
	baz=320								
TAP	**Taipei**	**0.98**	**350**		*e*P		**Pb**	18 37 34.7	-0.2
	baz=350								
TAP					*e*S		**Sb**	18 37 47.5	-0.1
	baz=350								
WDJ	**Dajia District**	**1.00**	**287**		*e*P		**Pb**	18 37 35.4	+0.2
	baz=286								
WDJ					*e*S		**Sb**	18 37 50.2	+2.3
	baz=286								
CHKT	**Chengkung**	**1.00**	**197**		*e*P		**Pn**	18 37 34.2	-0.5
	baz=205								
CHKT					*e*S		**Sb**	18 37 48.7	+0.5
	baz=205								
NWF	**Wu-fen Shan**	**1.01**	**5**		P		**Pb**	18 37 35.1	-0.3
	baz=351								
NWF					*e*S		**Sb**	18 37 49.3	+1.0
	baz=351								
WFSB	**Wu-fen Shan**	**1.01**	**5**		*e*P		**Pb**	18 37 35.0	-0.3
	baz=351								
WFSB					*e*S		**Sb**	18 37 49.6	+1.4
	baz=351								
NCUH	**Zhongli**	**1.01**	**333**		P		**Pb**	18 37 35.4	0.0
	baz=331								
NCUH					*e*S		**Sb**	18 37 49.0	+0.7
	baz=331								
NCU	**National Centr**	**1.01**	**333**		*e*P		**Pb**	18 37 34.7	-0.7
	baz=332								
NCU					*e*S		**Sb**	18 37 49.8	+1.5
	baz=332								
WCHH	**Zhanghua**	**1.03**	**271**		*e*P		**Pb**	18 37 35.9	+0.1
	baz=271								
WCHH					*e*S		**Sb**	18 37 49.9	+1.0
	baz=271								
CHN5	**Tsauling**	**1.04**	**244**		P		**Pb**	18 37 36.0	+0.1
	baz=232								
CHN5					*e*S		**Sb**	18 37 50.5	+1.3
	baz=232								
TWS1	**Kuangyinshan**	**1.06**	**347**		P		**Pb**	18 37 35.6	-0.7
	baz=357								
TWS1					*e*S		**Sb**	18 37 50.6	+0.9
	baz=357								
ELDTW	**Lidau**	**1.07**	**215**		*e*P		**Pn**	18 37 35.4	-0.3
	baz=213								
ELDTW					*e*S		**Sb**	18 37 50.3	+0.2
	baz=213								
YM01	**YM01**	**1.08**	**354**		P		**Pn**	18 37 35.6	-0.2
	baz=353								
YM01					*e*S		**Sb**	18 37 50.2	-0.3
	baz=353								
YM04	**YM04**	**1.09**	**353**		P		**Pn**	18 37 35.6	-0.4
	baz=353								
YM04					*e*S		**Sb**	18 37 49.9	-0.8
	baz=353								
YM10	**YM10**	**1.09**	**354**		P		**Pn**	18 37 35.6	-0.4
	baz=353								
YM10					*e*S		**Sb**	18 37 50.9	+0.1
	baz=353								
WGK	**Gukeng**	**1.10**	**250**		*e*P		**Pb**	18 37 37.0	+0.1
	baz=250								
YM05	**YM05**	**1.10**	**354**		*e*P		**Pn**	18 37 35.5	-0.7
	baz=353								
YM05					*e*S		**Sb**	18 37 50.6	-0.4
	baz=353								
YM11	**YM11**	**1.10**	**355**		*e*P		**Pn**	18 37 35.5	-0.6
	baz=355								
NTST	**Danshui**	**1.12**	**349**		*e*P		**Pb**	18 37 36.5	-0.8
	baz=358								
NTST					*e*S		**Sb**	18 37 52.0	+0.6
	baz=358								
WDLH	**Douliu**	**1.12**	**251**		*e*P		**Pb**	18 37 37.0	-0.3
	baz=251								
WDLH					*e*S		**Sb**	18 37 52.8	+1.5
	baz=251								
YM03	**YM03**	**1.12**	**353**		*e*P		**Pn**	18 37 35.9	-0.5
	baz=352								
YM08	**YM08**	**1.12**	**355**		*e*P		**Pn**	18 37 35.7	-0.7
	baz=340								
ANP	**Anpu**	**1.13**	**352**		*e*P		**Pn**	18 37 35.5	-1.1
	baz=352								
EDH	**Donghe**	**1.14**	**198**		*e*P		**Pn**	18 37 35.8	-0.8
	baz=207								
EDH					*e*S		**Sb**	18 37 52.8	+0.7
	baz=207								
TWY	**Chenhua**	**1.21**	**356**		*e*P		**Pn**	18 37 37.5	0.0
	baz=342								
JYNG	**Yonagunijimaku**	**1.21**	**71**		P		**Pn**	18 37 37.7	+0.2
JYNG					S		**Sn**	18 37 53.0	0.0
RLNB	**Erlin**	**1.23**	**262**		P		**Pb**	18 37 39.0	0.0
	baz=263								
RLNB					*e*S		**Sb**	18 37 55.7	+1.2
	baz=263								
CHN4	**Tsaushan**	**1.23**	**235**		P		**Pb**	18 37 38.9	-0.2
	baz=236								
CHN4					*e*S		**Sb**	18 37 56.3	+1.7
	baz=236								
CHN2	**Minshiung**	**1.23**	**245**		P		**Pb**	18 37 39.8	+0.7
	baz=245								
CHN2					*e*S		**Sb**	18 37 55.1	+0.5
	baz=245								
TPUB	**Ta-pu**	**1.23**	**232**		P		**Pb**	18 37 39.0	-0.2
	baz=232								
TPUB					S		**Sb**	18 37 55.9	+1.2
	baz=232								
STYT	**Tauyuan**	**1.24**	**224**		P		**Pn**	18 37 38.5	+0.5
	baz=217								
STYT					*e*S		**Sb**	18 37 55.8	+0.9
	baz=217								
WTK	**Tuku**	**1.25**	**253**		*e*P		**Pb**	18 37 39.2	-0.2
	baz=255								
WTK					*e*S		**Sb**	18 37 57.1	+2.0
	baz=255								
LONT	**Longtian**	**1.26**	**204**		*e*P		**Pn**	18 37 37.2	-1.1
	baz=200								
LONT					*e*S		**Sn**	18 37 53.2	-1.1
	baz=200								
YOJ	**Yonaguni jima**	**1.27**	**72**		*e*P		**Pn**	18 37 37.6	-0.8
	baz=73								
YOJ	**Yonaguni jima**	**1.27**	**72**		P		**Pn**	18 37 38.6	+0.2
YOJ					S		**Sn**	18 37 54.9	+0.4
WTP	**Ta-pu**	**1.28**	**231**		*e*P		**Pb**	18 37 39.9	-0.1
	baz=232								
WTP					*e*S		**Sb**	18 37 56.9	+0.8
	baz=232								
CHY	**Chiayi**	**1.29**	**244**		*e*P		**Pb**	18 37 40.1	0.0
	baz=245								
CHY					*e*S		**Sb**	18 37 57.1	+0.8
	baz=245								
WTCT	**Ta-ch'eng**	**1.30**	**261**		*e*P		**Pb**	18 37 39.8	-0.6
	baz=263								
WTCT					*e*S		**Sb**	18 37 58.0	+1.3
	baz=263								
TWK	**Hsinying**	**1.36**	**234**		*e*P		**Pb**	18 37 41.0	-0.3
	baz=235								
TWK					*e*S		**Sb**	18 37 58.8	+0.5
	baz=235								
TWG	**Pinlang**	**1.36**	**205**		*e*P		**Pn**	18 37 38.3	-1.4
	baz=190								
TWG					*e*S		**Sn**	18 37 57.5	+0.7
	baz=190								
TWGBT	**Beinan**	**1.36**	**204**		*e*P		**Pn**	18 37 37.9	-1.7
	baz=190								
TWGBT					*e*S		**Sb**	18 37 57.6	-0.8
	baz=190								
CHN1	**Nanshi**	**1.38**	**231**		*e*P		**Pb**	18 37 41.1	-0.5
	baz=232								
CHN1					*e*S		**Sb**	18 37 59.8	+0.9
	baz=232								
SNST	**Tainan City**	**1.38**	**233**		*e*P		**Pb**	18 37 41.8	+0.2
	baz=234								
SNST					*e*S		**Sb**	18 37 60.0	+1.1
	baz=234								
LDUT	**Ludao**	**1.40**	**188**		*e*P		**Pb**	18 37 41.5	-0.5
	baz=186								
WLGB	**Puzi**	**1.40**	**246**		*e*P		**Pn**	18 37 40.6	+0.4
	baz=249								
WLGB					*e*S		**Sb**	18 38 00.5	+1.0
	baz=249								
WSF	**Szhu**	**1.41**	**253**		*e*P		**Pb**	18 37 41.8	-0.4
	baz=255								
WSF					*e*S		**Sb**	18 38 01.6	+2.0
	baz=255								
SGST	**Jiashian**	**1.41**	**226**		*e*P		**Pn**	18 37 40.7	+0.3
	baz=213								
SGST					*e*S		**Sb**	18 38 01.2	+1.4
	baz=213								
SLGT	**Liugui**	**1.43**	**222**		*e*P		**Pb**	18 37 42.1	-0.4
	baz=224								
SLGT					*e*S		**Sb**	18 38 02.1	+1.7
	baz=224								
ICHU	**Yijhu**	**1.47**	**242**		*e*P		**Pb**	18 37 42.5	-0.7
	baz=246								
ICHU					*e*S		**Sb**	18 38 01.2	-0.2
	baz=246								
CHN8	**Yiju**	**1.53**	**242**		*e*P		**Pb**	18 37 43.1	-1.2
	baz=232								
CHN8					*e*S		**Sb**	18 38 03.1	-0.2
	baz=232								
PCYT	**Pengchaiyu**	**1.60**	**12**		*e*P		**Pn**	18 37 43.6	+0.7
	baz=15								
SCST	**Cishan**	**1.61**	**223**		P		**Pb**	18 37 46.0	+0.4
	baz=225								
SCST					S		**Sb**	18 38 07.9	+2.5
	baz=225								
ECL	**Taimali**	**1.61**	**205**		*e*P		**Pn**	18 37 42.5	-0.5
	baz=190								
ECL					*e*S		**Sn**	18 38 00.7	-2.2
	baz=190								
SCLT	**Jiali**	**1.63**	**237**		*e*P		**Pb**	18 37 45.2	-0.7
	baz=242								
SCLT					*e*S		**Sb**	18 38 06.7	+0.6
	baz=242								
SSD	**Sandimen**	**1.63**	**217**		P		**Pb**	18 37 45.1	-0.9
	baz=228								
SSD					*e*S		**Sb**	18 38 06.7	+0.5
	baz=228								
TSMG	**Majia**	**1.66**	**216**		P		**Pb**	18 37 45.5	-0.9
	baz=215								
TSMG					*e*S		**Sb**	18 38 06.6	-0.2
	baz=215								
TWM1	**Shoushan**	**1.70**	**224**		*e*P		**Pb**	18 37 47.4	+0.3
	baz=225								
MASBT	**Mashibuluo**	**1.74**	**214**		*e*P		**Pn**	18 37 45.4	+0.5
	baz=213								
MASBT					*e*S		**Sb**	18 38 08.6	-0.7
	baz=213								
EAST	**Anshuo**	**1.84**	**205**		*e*P		**Pn**	18 37 45.4	-0.9
	baz=194								
SSPT	**Xinbi**	**1.88**	**213**		*e*P		**Pb**	18 37 49.5	-0.7
	baz=196								
IRIF	**Iriomote-Funau**	**1.88**	**81**		P		**Pn**	18 37 47.6	+0.8
IRIF					S		**Sn**	18 38 10.2	+0.6
HATJ	**Hateruma jima**	**1.94**	**90**		P		**Pn**	18 37 48.1	+0.6
HATJ					S		**Sn**	18 38 11.3	+0.4
SCZT	**Fangliau**	**1.95**	**210**		*e*P		**Pn**	18 37 49.4	+1.6
	baz=194								
SLIU	**Shizi**	**2.01**	**204**		*e*P		**Pn**	18 37 50.4	+1.8
	baz=195								
PHUB	**P'eng-hu**	**2.02**	**255**		*e*P		**Pn**	18 37 49.0	+0.4
	baz=258								
PHUB					*e*S		**Sn**	18 38 13.6	+0.7
	baz=258								
PNG	**Penghu**	**2.02**	**256**		*e*P		**Pn**	18 37 49.0	+0.4
	baz=259								
PNG					*e*S		**Sn**	18 38 13.2	+0.3
	baz=259								
WDGT	**Dungji**	**2.02**	**247**		*e*P		**Pn**	18 37 49.1	+0.3
	baz=250								
JKRS	**Kuro-shima**	**2.13**	**85**		P		**Pn**	18 37 51.2	+1.0
JKRS					S		**Sn**	18 38 16.1	+0.4
HEN	**Hengchun**	**2.23**	**203**		*e*P		**Pn**	18 37 52.1	+0.5
	baz=192								
VWUC	**VWUC**	**2.24**	**295**		*e*P		**Pn**	18 37 51.0	-0.7
	baz=294								
VCHM	**Qimei**	**2.24**	**248**		*e*P		**Pn**	18 37 52.2	+0.5
	baz=239								
PTTC	**Pingtan**	**2.25**	**310**		*e*P		**Pn**	18 37 51.2	-0.7
	baz=308								
JIJ	**Ishigaki jima**	**2.26**	**82**		P		**Pn**	18 37 52.3	+0.3
JIJ					S		**Sn**	18 38 18.1	-0.9
JISG	**Ishigakijimahi**	**2.45**	**77**		P		**Pn**	18 37 54.9	+0.3
JISG					S		**Sn**	18 38 22.5	-1.1
PTMZ	**Houxiangcun**	**2.53**	**293**		*e*P		**Pn**	18 37 54.9	-0.9
	baz=292								
MATB	**Ma-tsu**	**2.61**	**323**		*e*P		**Pn**	18 37 55.1	-1.7
	baz=320								
JTJ	**Tarama**	**2.81**	**78**		P		**Pn**	18 38 00.7	+1.2
JTJ					*e*S		**Sn**	18 38 32.7	+0.2
KNM	**Kinmen**	**2.99**	**277**		*e*P		**Pn**	18 38 03.5	+1.4
	baz=277								
KNMB	**Chin-men Tao**	**3.04**	**278**		*e*P		**Pn**	18 38 01.6	-1.1
	baz=278								
AXDP	**Jialang**	**3.49**	**285**		*e*P		**Pn**	18 38 08.0	-0.9
	baz=284								
ZPLA	**Ao Xicun**	**3.60**	**269**		*e*P		**Pn**	18 38 10.2	-0.3
	baz=269								

*IDC **21** 18:49:42.4±1.3, 30.51N×131.48E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/76, mbtmp3.5/5, ML2.5/2, MS2.9/3, Ms1 3.0/3, ms1mx2.6/42, Error ellipse: s-maj=38.5km s-min=21.7km az=82.0*

*JMA **21** 18:49:45.1±0.1, 30.62N×131.54E, h44km±2km, M3.3*

ISC 21 18:49:46.7±1.5, 30.62N±0.06×131.49E±0.08, h35km±4km, n19, ∩0 83/28, mb3.5/4, 7C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	**Tanegashima 3**	**0.44**	**274**	⇑P	**Pb**	**18 49 55.5**	**-0.9**
JTN				*e*S	**Sn**	**18 50 03.8**	**+0.5**
JMTN	**Minamitane**	**0.55**	**246**	⇑P	**Pn**	**18 49 57.4**	**-0.7**
JMTN				S	**Sb**	**18 50 07.0**	**+0.9**
JTSR	**Tashiro 2**	**0.73**	**318**	⇑P	**Pn**	**18 49 59.5**	**-1.0**
JTSR				S	**Sn**	**18 50 10.9**	**+0.4**
JNAR	**Kushima--Naru**	**0.92**	**348**	⇓P	**Pn**	**18 50 02.3**	**-0.8**
JNAR				*e*S	**Sn**	**18 50 15.0**	**-0.1**
JYAK	**Yakushimahirau**	**0.93**	**246**	⇑P	**Pn**	**18 50 02.6**	**-0.6**
JYAK				S	**Sn**	**18 50 15.4**	**+0.1**
JNKG	**Nichinankitago**	**1.04**	**355**	P	**Pn**	**18 50 04.1**	**-0.7**
JNKG				S	**Sn**	**18 50 18.2**	**+0.1**
JKC	**Kuchinoerabu**	**1.12**	**262**	⇑P	**Pn**	**18 50 05.5**	**-0.4**
JSU	**Suzuyama**	**1.25**	**315**	⇑P	**Pn**	**18 50 06.8**	**-0.9**
JSU				S	**Sn**	**18 50 23.0**	**-0.3**
JTZ	**Takazaki**	**1.32**	**345**	⇓P	**Pn**	**18 50 08.2**	**-0.5**
JNN	**Nakanoshima**	**1.60**	**241**	⇓P	**Pn**	**18 50 12.2**	**-0.3**
JNN				S	**Sn**	**18 50 31.0**	**-0.9**
JTSN	**Tsuno**	**1.62**	**1**	⇑P	**Pn**	**18 50 11.8**	**-1.0**
JTSN				S	**Sn**	**18 50 31.3**	**-1.1**
JZO	**Okuchi**	**1.69**	**334**	P	**Pn**	**18 50 13.2**	**-0.6**
JNU	**Nakatsue**	**2.54**	**348**	Pn	**Pn**	**18 50 25.4**	**-0.1**
	1.3nm,0.3s,baz=173,slow=3.1,SNR=20						
JNU				Sn	**Sn**	**18 50 55.2**	**-0.1**
	5.0nm,0.3s,baz=166,slow=11,SNR=5.7						
JNU				LR	LR	18 51 44.1	
	comp=Z,178nm,19.4s,baz=172,slow=46						

*MOS **21** 18:53:28.8ₛ1.1,51°.96N×178°.60E,h117ᵏᵐ,mb4.5/12,*
Error ellipse: s-maj=8.6km s-min=7.7km az=88.3
ISC 21 18:53:27.8ₛ0.4,51°.82N±0°.06×178°.64E±0°.03,h98ᵏᵐ±3ᵏᵐ,
h98ᵏᵐ:pP-P,n357,σ1§04/379,mb4.5/124,7C-2D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSPA	**Little Sitkin**	**0.14**	**343**		**Pn**	**18 53 40.9**	**-0.7**
LSSA	**Little Sitkin**	**0.15**	**328**		**Pn**	**18 53 40.9**	**-0.7**
LSNW	**Little Sitkin**	**0.17**	**333**		**Pn**	**18 53 40.8**	**-0.9**
CETU	**Semis' Tuman**	**0.55**	**75**		**Pn**	**18 53 43.5**	**-0.2**
CESW	**Semis' Southwe**	**0.58**	**82**		**Pn**	**18 53 43.2**	**-0.7**
AMKA	**Amchitka**	**0.61**	**137**		**Pn**	**18 53 43.4**	**-0.8**
AMKA				Sn	**Sn**	**18 53 55.2**	**-1.2**
CEAP	**Semis' Anvil P**	**0.61**	**73**		**Pn**	**18 53 43.9**	**-0.4**
CERAA	**Semis' Rag'd T**	**0.65**	**82**		**Pn**	**18 53 44.0**	**-0.7**
GALAA	**Gareloi Lava P**	**1.61**	**91**		**Pn**	**18 53 55.4**	**+0.1**
TASE	**Tanaga Southea**	**2.06**	**88**		**Pn**	**18 54 01.0**	**-0.2**
TAFP	**Tanaga Falls P**	**2.10**	**87**		**Pn**	**18 54 01.3**	**-0.2**
TAFP					**Sn**	**18 54 27.6**	**+0.3**
KIMD	**Kanaga Island**	**2.56**	**90**		**Pn**	**18 54 07.4**	**-0.2**
KICM	**Kanaga Island**	**2.58**	**86**		**Pn**	**18 54 08.0**	**0.0**
KIKV	**Kanaga Island**	**2.60**	**87**		**Pn**	**18 54 07.7**	**-0.5**
ADK	**Adak**	**2.90**	**87**	Pn	**Pn**	**18 54 11.5**	**-0.6**
ADK				Sn	**Sn**	**18 54 45.5**	**-0.7**
SMY	**Shemya**	**2.93**	**290**	P	**Pn**	**18 54 11.6**	**-0.9**
SMY						18 54 45.9	
SMY	**Shemya**	**2.93**	**290**	Pn	**Pn**	**18 54 11.6**	**-0.9**
SMY				Sn	**Sn**	**18 54 45.9**	**-1.1**
ADAG	**Mount Adagdak**	**2.95**	**85**		**Pn**	**18 54 12.4**	**-0.4**
GSTD	**Great Sitkin T**	**3.24**	**84**		**Pn**	**18 54 16.0**	**-0.7**
GSMY	**Great Sitkin M**	**3.29**	**84**		**Pn**	**18 54 16.9**	**-0.5**
GSTR	**Great Sitkin T**	**3.29**	**83**	Pn	**Pn**	**18 54 16.9**	**-0.5**
KOWE	**Korovin West**	**4.42**	**80**		**Pn**	**18 54 33.4**	**+0.8**
ATKA	**Atka Island**	**4.44**	**82**	Pn	**Pn**	**18 54 32.5**	**-0.4**
KOKL	**Mount Kliuchef**	**4.45**	**81**		**Pn**	**18 54 33.0**	**0.0**
KOFP	**Korovin Flat P**	**4.51**	**81**		**Pn**	**18 54 34.4**	**+0.6**
KOSE	**Korovin Southe**	**4.54**	**81**		**Pn**	**18 54 35.2**	**+1.0**
NIKH	**Nikolski High**	**7.74**	**77**	Pn	**Pn**	**18 55 19.2**	**+1.6**
OKWE	**Okmok W'ng Wal**	**8.15**	**73**		**Pn**	**18 55 24.8**	**+1.6**
SPIA	**Saint Paul Isl**	**8.40**	**46**	Pn	**Pn**	**18 55 29.0**	**+2.5**
MAPS	**Pakushin South**	**8.96**	**72**		**Pn**	**18 55 36.2**	**+2.0**
MGOD	**Makushin Gods**	**9.00**	**72**		**Pn**	**18 55 36.5**	**+1.7**
UNV	**Unalaska Valle**	**9.22**	**71**	Pn	**Pn**	**18 55 39.0**	**+1.3**
AKUT	**Akutan**	**9.69**	**70**	Pn	**Pn**	**18 55 45.2**	**+1.1**
FALS	**False Pass**	**11.15**	**67**		**Pn**	**18 56 05.6**	**+1.7**
PET	**Petropavlovsk**	**12.26**	**283**	*i* P	**Pn**	**18 56 20.8**	**+2.1**
PET	**Petropavlovsk**	**12.26**	**283**	Pn	**Pn**	**18 56 18.1**	**-0.6**
PEA0B	**Petropavlovsk-**	**12.83**	**284**	*ce*P	**Pn**	**18 56 27.0**	**+0.7**
PEA0B	**Petropavlovsk-**	**12.83**	**284**	Pn	**Pn**	**18 56 25.9**	**-0.5**
PETK	**Petropavlovsk-**	**12.83**	**284**	P	**Pn**	**18 56 26.4**	**0.0**
	1.4nm,0.3s,baz=92,slow=18,SNR=64						
PETK				S	**Sn**	**18 58 41.7**	**-5.5**
	0.8nm,0.3s,baz=92,slow=20,SNR=2.3						
PETK				LR	LR	19 01 39.3	
	comp=Z,19nm,18.5s,baz=82,slow=38						
SDPT	**Sand Point**	**12.89**	**66**		**Pn**	**18 56 25.4**	**-1.7**
GAMB	**Gambell**	**13.02**	**19**	Pn	**Pn**	**18 56 27.2**	**-1.5**
CNBA	**Chernabura Isl**	**13.34**	**68**	Pn	**Pn**	**18 56 30.2**	**-2.8**
CHGN	**Chignik**	**14.17**	**63**	Pn	**Pn**	**18 56 43.1**	**-0.7**
CHIR	**Chirikof Islan**	**15.68**	**65**	Pn	**Pn**	**18 57 00.9**	**-2.0**
SII	**Sitkinak Islan**	**16.54**	**63**	Pn	**Pn**	**18 57 12.4**	**-1.2**
SVW2	**Sparrevohn**	**16.89**	**47**		**P**	**18 57 19.4**	**+1.1**
OHAK	**Old Harbor**	**17.09**	**61**	Pn	**Pn**	**18 57 17.5**	**-2.8**
BILL	**Bilibino**	**17.34**	**344**	*de*P	**P**	**18 57 25.5**	**+2.3**
BILL				pmax	pmax		
	comp=Z,120nm,1.7s						
MA2	**Magadan**	**17.41**	**307**	LR	LR	19 04 29.8	
	comp=Z,27nm,19.0s,baz=111,slow=38						
KDAK	**Kodiak Island**	**17.54**	**59**	P	**P**	**18 57 23.1**	**-2.4**
KDAK				pmax	pmax		
	comp=Z,175nm,1.5s						
KDAK	**Kodiak Island**	**17.54**	**59**		**P**	**18 57 23.1**	**-2.4**
SEY	**Seymchan**	**17.85**	**319**	P	**Pn**	**18 57 29.2**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=115,slow=16,SNR=2.5						
SEY	**Seymchan**	**17.85**	**319**	*i* P	**Pn**	**18 57 29.6**	**+0.1**
RSO	**Redoubt South**	**18.00**	**50**	P	**P**	**18 57 31.0**	**+0.2**
CNPM	**China Poot**	**18.52**	**54**	P	**P**	**18 57 36.0**	**-0.2**
CNPM				IAmb	IAmb	18 57 36.6	
	comp=Z,70nm,1.4s						
RDOG	**Red Dog Mine**	**18.58**	**22**	P	**Pn**	**18 57 39.8**	**+1.6**
BRLK	**Bradley Lake**	**18.74**	**53**	P	**P**	**18 57 38.1**	**-0.6**
BRLK				IAmb	IAmb	18 57 57.6	
	comp=Z,56nm,1.3s						
SKT	**Skwentna**	**19.02**	**46**	P	**Pn**	**18 57 44.6**	**+1.2**
SKT					**Sn**	**19 01 13.7**	**-2.5**
PPLA	**Purkeypile**	**19.05**	**43**	P	**Pn**	**18 57 43.8**	**-0.2**
SUA	**Susitna One**	**19.22**	**48**	P	**Pn**	**18 57 44.9**	**-1.0**
SUA				IAmb	IAmb	18 57 48.4	
	comp=Z,36nm,1.1s						
Q22K	**Cooper Landing**	**19.46**	**51**	P	**P**	**18 57 46.5**	**+0.1**
SEW	**Seward**	**19.52**	**52**	P	**P**	**18 57 46.4**	**-0.6**
KTH	**Kantishna Hill**	**19.83**	**42**	P	**P**	**18 57 50.7**	**+0.2**
KTH				IAmb	IAmb	18 58 19.7	
	comp=Z,22nm,0.8s						
TRF	**Thorofare Moun**	**20.06**	**43**	P	**P**	**18 57 54.1**	**+1.0**
GHO	**Glory Hole Cre**	**20.14**	**48**	P	**P**	**18 57 53.2**	**-0.7**
GHO				IAmb	IAmb	18 58 04.9	
	comp=Z,82nm,1.7s						
KNK	**Knik Glacier**	**20.27**	**49**	P	**P**	**18 57 53.5**	**-1.7**
KNK				IAmb	IAmb	18 57 56.5	
	comp=Z,34nm,1.0s						
SML	**Sawmill**	**20.42**	**48**	P	**P**	**18 57 55.9**	**-1.0**
SML				IAmb	IAmb	18 58 23.6	
	comp=Z,24nm,1.0s						
RND	**Reindeer**	**20.65**	**43**	P	**P**	**18 57 58.8**	**-0.6**
RND				pmax	pmax		
	comp=Z,13nm,0.9s						
RND	**Reindeer**	**20.65**	**43**	P	**P**	**18 57 58.8**	**-0.6**
BWN	**Browne**	**20.66**	**41**	P	Pn	18 58 01.2	-1.4
BWN				IAmb	IAmb	18 58 34.5	
	comp=Z,57nm,1.2s						
GLI	**Glacier Island**	**20.81**	**51**	P	**P**	**18 58 00.5**	**-0.5**
SCM	**Sheep Creek Mo**	**20.89**	**48**	P	**P**	**18 58 02.1**	**+0.1**
SCM				pmax	pmax		
	comp=Z,51nm,1.1s						
SCM	**Sheep Creek Mo**	**20.89**	**48**	P	**P**	**18 58 02.0**	**+0.1**
SCM				IAmb	IAmb	18 58 24.9	
	comp=Z,50nm,1.1s						
FID	**Port Fidalgo**	**21.08**	**51**	P	**P**	**18 58 03.4**	**-0.6**
FID				IAmb	IAmb	18 58 05.1	
	comp=Z,39nm,0.8s						
I23K	**Minto, Yukon-K**	**21.08**	**39**	P	**P**	**18 58 04.9**	**+1.1**
I23K				IAmb	IAmb	18 58 44.1	
	comp=Z,28nm,1.4s						
DHY	**Denali Highway**	**21.19**	**45**	P	**P**	**18 58 06.1**	**+0.9**
DHY				IAmb	IAmb	18 58 32.9	
	comp=Z,30nm,0.8s						
WRH	**Wood River Hil**	**21.33**	**41**	P	**P**	**18 58 06.2**	**-0.3**
EYAK	**Cordova Ski Ar**	**21.41**	**52**	P	**P**	**18 58 07.7**	**+0.4**
MDM	**Murphy Dome**	**21.45**	**40**	P	**P**	**18 58 07.6**	**-0.2**
MDM				IAmb	IAmb	18 58 32.2	
	comp=Z,25nm,0.9s						
KLU	**Klutina**	**21.48**	**49**	P	**P**	**18 58 08.2**	**-0.1**
KLU				IAmb	IAmb	18 58 41.4	
	comp=Z,52nm,1.4s						
M24K	**Tolsona, Glenn**	**21.48**	**48**	P	**P**	**18 58 09.8**	**+1.6**
CCB	**Clear Creek Bu**	**21.51**	**40**	P	**P**	**18 58 09.2**	**+0.8**
TCOL	**CIGO, UAF Yank**	**21.57**	**40**	P	**P**	**18 58 10.8**	**+1.8**
TCOL				IAmb	IAmb	18 58 33.5	
	comp=Z,38nm,1.1s						
COLA	**College**	**21.57**	**40**	P	**P**	**18 58 11.0**	**+2.0**
COLA				pmax	pmax		
	comp=Z,37nm,1.1s						
COLA	**College**	**21.57**	**40**	P	**P**	**18 58 11.0**	**+2.0**
COLA				IAmb	IAmb	18 58 33.5	
	comp=Z,37nm,1.1s						
COLD	**Coldfoot**	**21.72**	**33**	P	**P**	**18 58 12.7**	**+2.0**
HDA	**Harding Lake**	**21.77**	**41**	P	**P**	**18 58 12.6**	**+1.4**
POKR	**Poker Flat Res**	**21.82**	**39**	P	**P**	**18 58 12.4**	**+0.6**
IL31		**21.92**	**41**	P	**P**	**18 58 13.1**	**+0.4**
ILAR	**Eielson Array**	**21.92**	**41**	P	**P**	**18 58 12.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=251,slow=10,SNR=14						
ILAR				PcP	**PcP**	**19 02 06.5**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=255,slow=2.9,SNR=4.3						
ILAR				ScP	**ScP**	**19 05 32.8**	**-3.0**
	comp=Z,0.7nm,0.6s,baz=277,slow=3.5,SNR=7.5						
ILAR				LR	LR	19 06 18.7	
	comp=Z,66nm,18.1s,baz=184,slow=35						
ILAR	**Eielson Array**	**21.92**	**41**	P	**P**	**18 58 13.9**	**+1.1**
ILAR						19 02 06.5	
ILAR	**Eielson Array**	**21.92**	**41**		**P**	**18 58 13.9**	**+1.1**
KAIM	**Kayak Island**	**22.00**	**54**	P	**P**	**18 58 15.2**	**+1.6**
PAX	**Paxson**	**22.00**	**46**	P	**P**	**18 58 15.0**	**+1.2**
PAX				pmax	pmax		
	comp=Z,17nm,0.9s						
PAX	**Paxson**	**22.00**	**46**	P	**P**	**18 58 15.0**	**+1.2**
HMT	**Hamilton**	**22.11**	**53**	P	**P**	**18 58 14.1**	**-0.8**
N25K	**Chitina, Valde**	**22.12**	**49**	P	**P**	**18 58 14.9**	**-0.2**
N25K				IAmb	IAmb	18 58 24.8	
	comp=Z,28nm,1.4s						
GLB	**Gilahina Butte**	**22.47**	**50**	P	**P**	**18 58 18.3**	**-0.3**
GLB				IAmb	IAmb	18 58 43.2	
	comp=Z,37nm,1.3s						
VRDI	**Verde Repeater**	**22.61**	**51**	P	**P**	**18 58 20.2**	**-0.1**
VRDI				IAmb	IAmb	18 58 22.1	
	comp=Z,34nm,1.0s						
TOLK	**Toolik Lake Re**	**22.66**	**30**	P	**P**	**18 58 20.8**	**+0.3**
CRQM	**Cirque**	**22.71**	**52**	P	**P**	**18 58 20.9**	**-0.3**
CRQM				IAmb	IAmb	18 58 24.5	
	comp=Z,36nm,0.8s						
DOT	**Dot Lake**	**22.78**	**44**	P	**P**	**18 58 21.0**	**-0.8**
MCARA	**McCarthy VSAT**	**22.84**	**50**	P	**P**	**18 58 23.0**	**+0.7**
MCARA				IAmb	IAmb	18 58 24.4	
	comp=Z,39nm,0.9s						
TGL	**Tana Glacier**	**22.86**	**52**	P	**P**	**18 58 22.5**	**-0.2**
TGL				IAmb	IAmb	18 58 24.4	
	comp=Z,30nm,0.8s						
ISLE	**Juniper Island**	**23.09**	**52**	P	**P**	**18 58 22.8**	**-2.1**
ISLE				IAmb	IAmb	18 58 46.5	
	comp=Z,45nm,1.2s						
BALM	**Baldy**	**23.12**	**51**	P	**P**	**18 58 24.2**	**-1.1**
BARN	**Barnard Glacie**	**23.46**	**51**	P	**P**	**18 58 28.0**	**-0.4**
CTGM	**Chitina Glacie**	**23.61**	**52**	P	**P**	**18 58 29.7**	**-0.1**
CTGM				IAmb	IAmb	18 58 31.8	
	comp=Z,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**23.70**	**272**	*e*P	**P**	**18 58 31.3**	**+0.9**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS	**Yuzh-Sakhalins**	**23.70**	**272**	P	**P**	**18 58 32.1**	**+1.7**
YSS				IAmb	IAmb	18 58 58.8	
	comp=Z,53nm,1.4s						
K27K	**Chicken**	**23.72**	**44**	P	**P**	**18 58 30.6**	**+0.1**
PCA	**Pinnacle**	**24.09**	**54**	P	**P**	**18 58 33.5**	**-0.5**
EGAK	**Eagle**	**24.28**	**42**	P	**P**	**18 58 35.5**	**0.0**
EGAK				IAmb	IAmb	18 58 36.6	
	comp=Z,17nm,0.9s						
BCPM	**Bancas Point**	**24.40**	**54**	P	**P**	**18 58 37.7**	**+1.1**
DAWY	**Dawson**	**24.89**	**44**	P	**P**	**18 58 41.1**	**-0.1**
DAWY				IAmb	IAmb	18 59 06.6	
	comp=Z,16nm,0.7s						
JKA	**Kamikawa-asahi**	**25.12**	**266**	IAmb	IAmb	18 59 23.3	
	comp=Z,20nm,1.1s						
ASAJ	**Asahikawa**	**25.12**	**266**	P	**P**	**18 58 45.1**	**+1.7**
	comp=Z,8.6nm,0.8s,baz=78,slow=9.1,SNR=9.0						
HYT	**Haines Junctio**	**25.47**	**52**	P	**P**	**18 58 46.4**	**-0.2**
HYT				IAmb	IAmb	18 59 11.5	
	comp=Z,31nm,1.1s						
WHY	**Whitehorse**	**26.76**	**52**	P	**P**	**18 58 58.2**	**0.0**
YAK	**Yakutsk**	**27.92**	**311**	*i* P	**P**	**18 59 08.0**	**-0.3**
YAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	**Inuvik**	**28.02**	**36**	P	**P**	**18 59 08.8**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=260,slow=7.2,SNR=5.4						
INK				LR	LR	19 09 45.4	
	comp=Z,60nm,21.7s,baz=279,slow=35						
INK	**Inuvik**	**28.02**	**36**	P	**P**	**18 59 09.5**	**+0.4**
INK				pmax	pmax		
	comp=Z,13nm,1.4s						
INK	**Inuvik**	**28.02**	**36**	P	**P**	**18 59 09.5**	**+0.4**
INK				IAmb	IAmb	18 59 38.3	
	comp=Z,13nm,1.4s						
DLBC	**Dease Lake**	**29.45**	**57**	P	**P**	**18 59 22.0**	**0.0**
	comp=Z,1.9nm,0.3s,baz=287,slow=14,SNR=1.8						
TIXI	**Tiksi**	**29.46**	**331**	*i* P	**P**	**18 59 21.7**	**-0.2**
KLR	**Kul'dur**	**29.52**	**284**	P	**P**	**18 59 22.6**	**-0.1**
	comp=Z,8.2nm,0.6s,baz=60,slow=8.1,SNR=35						
KLR				LR	LR	19 12 41.1	
	comp=Z,29nm,18.5s,baz=64,slow=39						
KLR	**Kul'dur**	**29.52**	**284**	*ce*P	**P**	**18 59 22.3**	**-0.4**
KLR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
USRK	**Ussuriysk Ar.**	**31.66**	**275**	P	**P**	**18 59 41.6**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=67,slow=11,SNR=3.3						
USRK				PcP	**PcP**	**19 02 30.9**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=27,slow=1.5,SNR=6.8						
MJAR	**Matsushiro Arr**	**32.30**	**258**	P	**P**	**18 59 47.5**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=50,slow=7.3,SNR=5.2						
MJAR				PcP	**PcP**	**19 02 33.5**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=70,slow=1.7,SNR=2.5						
MJAR	**Matsushiro Arr**	**32.30**	**258**	IAmb	IAmb	18 59 50.8	
	comp=Z,1.6nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**33.33**	**200**	T	T	19 35 38.6	
	baz=11,slow=76,SNR=34						
H11N3	**WAKE ISLAND Hy**	**33.34**	**200**	T	T	19 35 36.7	
	baz=11,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**33.34**	**200**	T	T	19 35 39.8	
	baz=11,slow=76,SNR=42						
H11S1	**WAKE ISLAND Hy**	**34.55**	**200**	T	T	19 37 08.0	
	baz=116,slow=79,SNR=47						
H11S3	**WAKE ISLAND Hy**	**34.57**	**200**	T	T	19 37 12.1	
	baz=116,slow=79,SNR=28						
H11S2	**WAKE ISLAND Hy**	**34.57**	**200**	T	T	19 37 14.4	
	baz=116,slow=79,SNR=32						
YKA	**Yellowknife Ar**	**36.08**	**46**	P	**P**	**19 00 19.9**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=284,slow=8.1,SNR=8.4						
YKA	**Yellowknife Ar**	**36.08**	**46**	*ce*P	**P**	**19 00 20.0**	**+0.4**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	**Korea Array**	**38.04**	**268**	P	**P**	**19 00 37.1**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=52,slow=8.6,SNR=4.4						
KSRS				PcP	**PcP**	**19 02 50.6**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=59,slow=3.1,SNR=6.1						
LON	**Longmire**	**38.23**	**73**	P	**P**	**19 00 38.6**	**+0.6**
LON				pmax	pmax		
	comp=Z,13nm,1.5s						
LON	**Longmire**	**38.23**	**73**	P	**P**	**19 00 38.6**	**+0.6**
LON				IAmb	IAmb	19 00 54.4	
	comp=Z,13nm,1.4s						
B08A	**Colville Reser**	**38.89**	**70**	P	**P**	**19 00 43.2**	**-0.3**
B08A				IAmb	IAmb	19 00 44.4	
	comp=Z,6.8nm,1.0s						
RES	**Resolute Bay**	**40.00**	**24**	P	**P**	**19 00 52.4**	**+0.1**
	comp=Z,1.7nm,0.5s,baz=306,slow=1.5,SNR=10						
RES	**Resolute Bay**	**40.00**	**24**	P	**P**	**19 00 53.7**	**+1.4**
RES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
RES	**Resolute Bay**	**40.00**	**24**	P	**P**	**19 00 53.7**	**+1.4**
RES				IAmb	IAmb	19 00 58.3	
	comp=Z,6.9nm,0.7s						
NEW	**Newport**	**40.22**	**69**	P	**P**	**19 00 54.6**	**+0.1**
	comp=Z,3.6nm,0.5s,baz=285,slow=8.4,SNR=5.8						
NEW	**Newport**	**40.22**	**69**	IAmb	IAmb	19 00 55.1	
	comp=Z,6.5nm,0.9s						
YBH	**Yreka Blue Hor**	**40.39**	**81**	P	**P**	**19 00 56.1**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=3.3,slow=7.7,SNR=5.7						
YBH	**Yreka Blue Hor**	**40.39**	**81**	P	**P**	**19 00 57.5**	**+1.4**
YBH				pmax	pmax		
	comp=Z,17nm,1.5s						
YBH	**Yreka Blue Hor**	**40.39**	**81**	P	**P**	**19 00 57.5**	**+1.4**
YBH				IAmb	IAmb	19 01 07.4	
	comp=Z,17nm,1.4s						
KMRM	**Mail Ridge**	**40.66**	**83**	P	**P**	**19 01 00.4**	**+2.1**
K05A	**Summer Lake**	**40.93**	**78**	P	**P**	**19 01 01.5**	**+0.8**
K05A				IAmb	IAmb	19 01 15.7	
	comp=Z,14nm,1.1s						
WALA	**Waterton Lakes**	**41.66**	**66**	P	**P**	**19 01 05.7**	**-0.7**
WALA				IAmb	IAmb	19 01 07.6	
	comp=Z,7.8nm,0.9s						
MOD	**Modoc Plateau**	**41.76**	**79**	P	**P**	**19 01 08.8**	**+1.4**
JTMT	**Jette**	**42.12**	**68**	P	**P**	**19 01 09.2**	**-1.0**
JTMT				IAmb	IAmb	19 01 23.0	
	comp=Z,10nm,1.4s						
ORV	**Oroville**	**42.42**	**82**	P	**P**	**19 01 12.4**	**-0.1**
ORV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ORV	**Oroville**	**42.42**	**82**	P	**P**	**19 01 12.4**	**-0.1**
WVOR	**Wild Horse Val**	**42.47**	**77**	P	**P**	**19 01 13.2**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WVOR	**Wild Horse Val**	**42.47**	**77**	P	**P**	**19 01 13.2**	**+0.1**
PLID	**Pearl Lake**	**42.55**	**72**	P	**P**	**19 01 13.1**	**-0.7**
MSO	**Missoula**	**42.80**	**69**	P	**P**	**19 01 14.9**	**-0.8**
MSO				IAmb	IAmb	19 01 16.2	
	comp=Z,7.1nm,1.1s						
BEKR	**Beckworth**	**42.93**	**81**	P	**P**	**19 01 17.0**	**+0.1**
NRIK	**Noril'sk**	**43.21**	**329**	*ce*P	**P**	**19 01 17.6**	**-0.9**
NRIK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PAHR	**Pah Rah Range**	**43.62**	**81**	P	**P**	**19 01 23.1**	**+0.6**
PAHR				IAmb	IAmb	19 01 24.6	
	comp=Z,8.4nm,1.1s						
PNTR	**Pine Nut**	**43.87**	**82**	P	**P**	**19 01 25.6**	**+1.0**
PNTR				IAmb	IAmb	19 01 26.3	
	comp=Z,12nm,0.9s						
CMB	**Columbia Colle**	**44.04**	**83**	P	**P**	**19 01 26.0**	**+0.3**
CMB				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CMB	**Columbia Colle**	**44.04**	**83**	P	**P**	**19 01 26.0**	**+0.3**
LRM	**Limekiln Ridge**	**44.22**	**69**	P	**P**	**19 01 27.2**	**0.0**
WAKR	**Walker**	**44.33**	**82**	P	**P**	**19 01 28.6**	**+0.4**
BCYI	**Bear Canyon**	**44.52**	**72**	P	**P**	**19 01 28.8**	**-0.8**
MCMT	**McKenzie Canyo**	**44.55**	**71**	P	**P**	**19 01 28.6**	**-1.2**
ULN	**Ulaanbaatar**	**44.63**	**295**	*i* P	**P**	**19 01 30.5**	**+0.1**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ULN	**Ulaanbaatar**	**44.63**	**295**	P	**P**	**19 01 28.0**	**-2.4**
KVN	**Kaiserville**	**44.81**	**81**	P	**P**	**19 01 32.5**	**+0.5**
KVN				pmax	pmax		
	comp=Z,11nm,1.6s						
KVN	**Kaiserville**	**44.81**	**81**	P	**P**	**19 01 32.5**	**+0.5**
KVN				IAmb	IAmb	19 01 33.3	
	comp=Z,11nm,1.6s						
RYN	**Ryan**	**44.81**	**81**	P	**P**	**19 01 32.1**	**+0.1**
RYN				IAmb	IAmb	19 01 33.0	
	comp=Z,4.2nm,0.6s						
BOZ	**Bozeman (W)**	**44.82**	**69**	P	**P**	**19 01 30.9**	**-1.0**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	**Bozeman (W)**	**44.82**	**69**	P	**P**	**19 01 30.9**	**-1.0**
SONM	**Songino Array**	**45.01**	**295**	P	**P**	**19 01 33.9**	**+0.5**
	comp=Z,1.9nm,0.5s,baz=65,slow=7.5,SNR=15						
SONM				pP	**pP**	**19 01 57.8**	**+1.5**
	comp=Z,1.1nm,0.5s,baz=56,slow=8.5,SNR=3.0						
SONM				PcP	**PcP**	**19 03 13.0**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=60,slow=2.7,SNR=8.8						
SONM				ScP	**ScP**	**19 06 55.9**	**0.0**
	comp=Z,1.3nm,0.9s,baz=35,slow=2.9,SNR=4.1						
SONM				LR	LR	19 21 55.5	
	comp=Z,52nm,18.4s,baz=268,slow=38						
SONM	**Songino Array**	**45.01**	**295**	P	**P**	**19 01 33.3**	**-0.1**
LHV	**Little Huntoon**	**45.06**	**82**	P	**P**	**19 01 35.2**	**+1.5**
LHV				IAmb	IAmb	19 02 00.5	
	comp=Z,11nm,1.4s						
NVAR	**Mina Array Bea**	**45.07**	**81**	P	**P**	**19 01 34.4**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=295,slow=7.9,SNR=18						
NVAR				pP	**pP**	**19 01 58.5**	**+1.5**
	comp=Z,2.3nm,0.8s,baz=290,slow=7.2,SNR=4.7						
NVAR				PcP	**PcP**	**19 03 13.9**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=274,slow=2.6,SNR=2.7						
NVAR				ScP	**ScP**	**19 06 55.4**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=288,slow=5.6,SNR=6.1						
MDPB	**Devils Postpil**	**45.10**	**83**	P	**P**	**19 01 35.3**	**+0.9**
OMMB	**Old Mammoth Mi**	**45.16**	**83**	P	**P**	**19 01 35.9**	**+1.0**
NV11	**Mina Array Sit**	**45.16**	**81**	P	**P**	**19 01 34.7**	**0.0**
YHL	**Hebgen Lake**	**45.51**	**70**	P	**P**	**19 01 36.7**	**-0.9**
ELK	**Elko**	**45.52**	**77**	P	**P**	**19 01 37.5**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=331,slow=5.7,SNR=7.7						
ELK				pP	**pP**	**19 02 01.8**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=295,slow=9.5,SNR=6.0						
ELK	**Elko**	**45.52**	**77**	P	**P**	**19 01 37.5**	**-0.1**
YHB	**Horse Butte**	**45.56**	**70**	P	**P**	**19 01 37.8**	**-0.1**
PAGB	**Antelope Grade**	**45.59**	**86**	P	**P**	**19 01 38.8**	**+0.8**
PAGB				IAmb	IAmb	19

comp=Z,9.8nm,1.2s
PV19 Morning Glory 50.81 75 P **P** **19 02 17.4 -0.9**
PV19 IAmb IAmb 19 02 45.1
comp=Z,5.4nm,0.8s
PV17 East Wray Mesa 50.84 75 P **P** **19 02 18.3 -0.3**
PV18 Skein Mesa, Pa 50.90 75 P **P** **19 02 19.3 +0.3**
PV18 IAmb IAmb 19 02 45.9
comp=Z,9.7nm,1.1s
PV03 Paradox Valley 50.93 75 P **P** **19 02 18.2 -1.0**
PV03 IAmb IAmb 19 02 45.6
comp=Z,4.7nm,0.9s
PV13 Radium Mtn., P 51.01 75 P **P** **19 02 19.2 -0.6**
SPX San Pedro Mart 51.70 87 P **P** **19 02 24.3 -0.8**
SPX IAmb IAmb 19 02 51.6
comp=Z,9.1nm,1.1s
SSLB Suanglung 51.80 260 P **P** **19 02 24.5 -1.1**
ZALV Zalesovo Beam 52.55 312 P **P** **19 02 29.6 -1.1**
comp=Z,0.7nm,0.3s,baz=83,slow=4.6,SNR=2.7
ZALV PcP **PcP** **19 03 40.2 +0.5**
comp=Z,3.7nm,0.6s,baz=35,slow=4.1,SNR=12
SUMG Summit 53.24 13 *i* P **P** **19 02 35.9 -0.1**
SUMG Summit 53.24 13 P **P** **19 02 35.7 -0.3**
SUMG IAmb IAmb 19 02 44.4
comp=Z,11nm,1.4s
SUMG Summit 53.24 13 *i* P **P** **19 02 35.9 -0.1**
SUMG Summit 53.24 13 *i* P **P** **19 02 36.0 -0.1**
DBG Daneborg 53.51 6 *i* P **P** **19 02 36.4 -1.1**
LZH Lanzhou 53.73 284 *eP* **P** **19 02 41.3 +1.5**
LZH pP pP 19 03 04.5 +1.0
LZH sP sP 19 03 15.3 +1.0
LZH *e*PP **PP** **19 04 45.0 +3.6**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,130nm,6.4s
LZH LR LR
comp=N,170nm,14.7s
LZH LR LR
comp=E,170nm,15.0s
LZH LR LR
comp=Z,290nm,17.2s
GTA Gaotai 53.91 290 *eP* **P** **19 02 41.3 +0.2**
GTA pP pP 19 03 05.3 +0.5
GTA sP sP 19 03 15.3 -0.4
GTA sS sS 19 10 47.9 0.0
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,25nm,6.2s
GTA LR LR
comp=N,54nm,16.7s
GTA LR LR
comp=E,70nm,18.5s
GTA LR LR
comp=Z,56nm,16.7s
ICESG Greenland Ices 56.16 16 *i* P **P** **19 02 56.5 -0.5**
N35A Tabor 56.90 65 P **P** **19 03 01.3 -1.1**
ARCES ARCESS Array B 57.37 349 P **P** **19 03 04.0 -1.2**
comp=Z,6.4nm,1.1s,baz=23,slow=7.5,SNR=5.1
ARCES ARCESS Array B 57.37 349 P **P** **19 03 04.0 -1.2**
MNTX Cornudas Mount 57.44 79 P **P** **19 03 06.4 +0.1**
KURK Kurchatov 57.55 312 P **P** **19 03 07.6 +0.9**
KURK 19 03 59.7
KURK Kurchatov 57.55 312 P **P** **19 03 06.4 -0.3**
KURBB Kurchatov Arra 57.65 312 P **P** **19 03 07.6 +0.1**
comp=Z,5.5nm,0.5s,baz=42,slow=6.6,SNR=45
KURBB PcP **PcP** **19 03 59.7 +0.3**
comp=Z,2.9nm,0.8s,baz=43,slow=5.3,SNR=4.2
KURBB ScP **ScP** **19 07 50.9 +0.7**
comp=Z,0.2nm,0.4s,baz=44,slow=4.0,SNR=4.6
WMQ Urumqi 57.75 301 *eP* **P** **19 03 11.6 +3.2**
MK31 Makanchi Array 58.49 307 P **P** **19 03 12.9 -0.6**
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 58.49 307 P **P** **19 03 12.9 -0.6**
MK31 IAmb IAmb 19 03 15.2
comp=Z,2.6nm,0.7s
MKAR Makanchi Array 58.49 307 P **P** **19 03 12.9 -0.5**
comp=Z,2.8nm,0.5s,baz=50,slow=5.3,SNR=36
MKAR PcP **PcP** **19 04 02.7 -0.2**
comp=Z,1.2nm,0.6s,baz=50,slow=4.0,SNR=4.0
MKAR Makanchi Array 58.49 307 P **P** **19 03 12.8 -0.7**
MKAR PcP **PcP** **19 04 03.5 +0.6**
P38A Dawn 58.92 64 P **P** **19 03 15.1 -1.4**
BVAR Borovoye Array 59.50 318 P **P** **19 03 19.7 -0.6**
comp=Z,3.7nm,0.4s,baz=54,slow=10,SNR=53
BVAR PcP **PcP** **19 04 06.3 -0.5**
comp=Z,1.6nm,0.4s,baz=114,slow=3.7,SNR=5.2
BVAR ScP **ScP** **19 07 58.0 -0.4**
comp=Z,0.2nm,0.5s,baz=15,slow=6.6,SNR=2.5
BRVK Borovoye 59.52 318 *ce*P **P** **19 03 19.0 -1.4**
BRVK pmax pmax
comp=Z,3.0nm,0.6s
BRVK Borovoye 59.52 318 P **P** **19 03 20.9 +0.4**
BRVK PcP **PcP** **19 04 07.0 +0.2**
TX31 Lajitas Ar. Si 60.15 80 P **P** **19 03 24.6 -0.6**
TX32 Lajitas Array 60.15 80 P **P** **19 03 24.9 -0.3**
TXAR Lajitas Array 60.15 80 P **P** **19 03 24.6 -0.6**
comp=Z,1.5nm,0.6s,baz=310,slow=4.8,SNR=18
TXAR pP **pP** **19 03 49.2 0.0**
comp=Z,1.2nm,0.5s,baz=300,slow=5.0,SNR=5.1
TXAR ScP **ScP** **19 08 00.0 -1.7**
comp=Z,0.5nm,0.7s,baz=289,slow=3.8,SNR=4.0
TXAR Lajitas Array 60.15 80 P **P** **19 03 25.1 -0.1**
SCHQ Schefferville 60.63 37 P **P** **19 03 27.9 0.0**
comp=Z,4.6nm,0.9s,baz=77,slow=17,SNR=2.0
SCHQ Schefferville 60.63 37 P **P** **19 03 27.9 0.0**
ARU Arti 61.37 327 P **P** **19 03 33.5 +0.6**
comp=Z,2.8nm,0.4s,baz=10,slow=4.1,SNR=17
ARU Arti 61.37 327 *d* *i*P **P** **19 03 33.5 +0.6**
ARU *PP **pP** **19 03 59.4 +2.6**
ARU 19 04 13.2
ARU 19 05 48.7
ARU S **S** **19 11 48.4 +2.8**
ARU SS **SS** **19 15 50.6 +3.9**
ARU pmax pmax
comp=Z,6.0nm,0.5s
ARU Arti 61.37 327 P **P** **19 03 33.2 +0.3**
FCAR Ozark Folk Cen 62.33 66 P **P** **19 03 38.0 -1.6**
FINES FINESS Array B 64.98 346 P **P** **19 03 55.4 -1.2**
comp=Z,1.2nm,0.8s,baz=18,slow=5.0,SNR=5.0
AAK Ala-Archa 65.34 309 P **P** **19 03 59.8 +0.2**
comp=Z,3.9nm,0.5s,baz=114,slow=5.2,SNR=16
SIJI Sorong 65.89 234 P **P** **19 04 03.3 +0.1**
comp=Z,25nm,0.7s,baz=37,slow=6.6,SNR=22
AKTO Aktyubinsk 66.38 323 P **P** **19 04 06.6 +0.7**
comp=Z,9.8nm,0.5s,baz=58,slow=8.2,SNR=46
ABKAR Akbulak array 66.60 321 P **P** **19 04 07.7 +0.4**
ABKAR IAmb IAmb 19 04 08.2
comp=Z,3.2nm,0.6s
ABKAR Akbulak array 66.60 321 P **P** **19 04 07.6 +0.4**
KK31 Karatay Array 66.89 311 P **P** **19 04 09.5 +0.2**
KK31 Karatay Array 66.89 311 P **P** **19 04 09.5 +0.2**
KK31 IAmb IAmb 19 04 11.0
comp=Z,3.4nm,0.6s
KKAR Karatay Array 66.89 311 IAmb IAmb 19 04 11.0
comp=Z,3.4nm,0.6s
KSH Kashi 66.94 305 *eP* **P** **19 04 13.8 +4.0**
KSH pmax pmax
comp=Z,17nm,0.8s
KSH pmax pmax
comp=Z,100nm,4.0s
NB2 NORSAR Subarra 67.04 353 P **P** **19 04 08.6 -1.3**
comp=Z,9.8nm,1.4s,baz=8.2,slow=6.2
NOA NORSAR Array B 67.04 353 P **P** **19 04 09.0 -0.9**
comp=Z,0.1nm,0.4s,baz=10,slow=6.5,SNR=9.1
NOA pP **pP** **19 04 33.3 -0.9**
comp=Z,3.1nm,1.0s,baz=8.3,slow=6.4,SNR=7.3
TKL Tuckaleechee C 67.15 61 P **P** **19 04 10.5 -0.5**
comp=Z,3.6nm,0.7s,baz=113,slow=7.7,SNR=4.3
FAKI Fak Fak 67.18 232 P **P** **19 04 11.0 -0.4**
HFS Hagfors 67.74 352 P **P** **19 04 12.9 -1.4**
comp=Z,0.7nm,0.5s,baz=37,slow=5.7,SNR=1.5
HFS PcP **PcP** **19 04 40.9 +0.6**
comp=Z,0.7nm,0.4s,baz=6.8,slow=3.6,SNR=2.3
PAYA Payao 68.13 274 P **P** **19 04 18.9 +1.5**
UTTA Uttaradit 68.92 272 P **P** **19 04 23.1 +0.9**
CM34 Chiang Mai Arr 68.96 274 P **P** **19 04 23.0 +0.5**
CM35 Chiang Mai Arr 69.09 274 P **P** **19 04 23.0 -0.3**
CM33 Chiang Mai Arr 69.11 274 P **P** **19 04 24.0 +0.6**
CM31 Chiang Mai Arr 69.38 274 P **P** **19 04 27.3 +2.1**
CM31 Chiang Mai Arr 69.38 274 P **P** **19 04 25.4 +0.3**
CMAR Chiang Mai Arr 69.38 274 P **P** **19 04 25.0 -0.1**
comp=Z,1.8nm,0.5s,baz=27,slow=7.1,SNR=18
CMAR PcP **PcP** **19 04 48.9 +0.9**
comp=Z,1.2nm,0.7s,baz=12,slow=3.9,SNR=7.0
CMAR Chiang Mai Arr 69.38 274 *ce*P **P** **19 04 25.2 +0.1**
CMAR pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 69.38 274 P **P** **19 04 25.3 +0.1**
CM02 Chiang Mai Arr 69.40 274 P **P** **19 04 26.0 +0.8**
CM15 Chiang Mai Arr 69.40 274 P **P** **19 04 26.3 +1.1**
CM04 Chiang Mai Arr 69.40 274 P **P** **19 04 26.0 +0.7**
CM05 Chiang Mai Arr 69.42 274 P **P** **19 04 26.7 +1.3**
CM13 Chiang Mai Arr 69.43 274 P **P** **19 04 26.3 +0.9**
TAPN Taplejung 69.55 288 *eP* **P** **19 04 27.1 +0.7**
ODAN Odare 70.11 288 *eP* **P** **19 04 30.2 +0.4**
GAR Garm 70.16 308 P **P** **19 04 30.4 +0.7**
GUN Gumba 70.20 290 *eP* **P** **19 04 31.2 +0.7**
comp=Z,29nm,0.4s
RAMN Ramite 70.50 289 *eP* **P** **19 04 32.7 +0.5**
comp=Z,20nm,0.5s
KKN Kakani 70.64 290 *eP* **P** **19 04 33.6 +0.6**
comp=Z,17nm,0.6s
PKI Pulchoki 70.73 290 *eP* **P** **19 04 34.0 +0.3**
comp=Z,18nm,0.6s
PKIN Phulchoki 70.74 290 *eP* **P** **19 04 33.9 +0.3**
comp=Z,18nm,0.6s
GKN Gorkha 70.86 291 *eP* **P** **19 04 34.5 +0.3**
comp=Z,22nm,0.6s
CHGR Chuyangaron 70.99 309 P **P** **19 04 35.2 +0.4**
CHGR IAmb IAmb 19 04 36.8
comp=Z,11nm,0.8s
DANN Dangsing 71.10 292 *eP* **P** **19 04 36.4 +0.5**
comp=Z,22nm,0.6s
KOLN Koldanda 71.63 292 *eP* **P** **19 04 39.2 +0.2**
comp=Z,20nm,0.9s
PYUN Piuthan 71.73 292 *eP* **P** **19 04 40.0 +0.4**
comp=Z,20nm,0.7s
NIL Nilore 72.84 303 P **P** **19 04 46.5 +0.7**
NIL pmax pmax
comp=Z,7.0nm,0.6s
NIL Nilore 72.84 303 P **P** **19 04 46.5 +0.7**
NIL IAmb IAmb 19 04 48.6
comp=Z,7.4nm,0.6s
EKA Eskdalemuir Ar 73.20 1 P **P** **19 04 48.0 +0.5**
comp=Z,1.4nm,0.7s,baz=8.9,slow=5.9,SNR=2.1
EKA Eskdalemuir Ar 73.20 1 P **P** **19 04 48.0 +0.5**
KBL Kabul 74.29 306 P **P** **19 04 54.4 -0.2**
KBL pmax pmax
comp=Z,6.0nm,0.7s
KBL Kabul 74.29 306 P **P** **19 04 54.4 -0.2**
KBL IAmb IAmb 19 04 56.0
comp=Z,5.7nm,0.7s
AKASG Malin Array Be 74.61 340 P **P** **19 04 54.1 -1.7**
comp=Z,1.3nm,0.4s,baz=22,slow=6.9,SNR=5.9
AKASG pP **pP** **19 05 20.6 +0.1**
comp=Z,0.7nm,0.4s,baz=21,slow=6.3,SNR=2.2
MTN Manton Dam 76.37 228 P **P** **19 05 06.5 +0.3**
CTA Charters Tower 77.00 211 P **P** **19 05 10.5 +0.8**
comp=Z,5.2nm,0.7s,baz=4.6,slow=7.0,SNR=9.4
KIV Kislovodsk 77.28 329 *eP* **P** **19 05 11.5 +0.2**
KIV pmax pmax
comp=Z,22nm,1.0s
KBZ Khabaz 77.42 329 P **P** **19 05 11.8 0.0**
comp=Z,2.3nm,0.9s,baz=38,slow=7.6,SNR=2.7
KBZ Khabaz 77.42 329 *i* P **P** **19 05 12.2 +0.3**
KBZ pmax pmax
comp=Z,6.0nm,1.3s
BATI Baumata 77.72 236 P **P** **19 05 14.2 +0.3**
comp=Z,23nm,0.6s,baz=145,slow=2.3,SNR=11
WB0 Warramunga Arr 81.08 222 IAmb IAmb 19 05 32.5
comp=Z,7.6nm,0.8s
WR0 Warramunga Arr 81.19 221 IAmb IAmb 19 05 33.0
comp=Z,8.8nm,0.8s
WRAB Tennant Creek 81.24 222 P **P** **19 05 32.7 -0.2**
WRAB pmax pmax
comp=Z,10.0nm,1.0s
WRAB Tennant Creek 81.24 222 P **P** **19 05 32.7 -0.2**
WRAB IAmb IAmb 19 05 33.5
comp=Z,10nm,1.0s
WB2 Warramunga Arr 81.25 222 IAmb IAmb 19 05 33.5
comp=Z,9.9nm,0.9s
WRA Warramunga Arr 81.25 222 P **P** **19 05 32.6 -0.2**
comp=Z,6.5nm,0.7s,baz=31,slow=6.1,SNR=81
WRA pP **pP** **19 05 57.5 -0.5**
comp=Z,1.0nm,0.8s,baz=31,slow=6.3,SNR=1.8
WRA Warramunga Arr 81.25 222 *ce*P **P** **19 05 32.7 -0.2**
WRA pmax pmax
comp=Z,8.0nm,0.7s
WRA Warramunga Arr 81.25 222 P **P** **19 05 31.9 -1.0**
FITZ Fitzroy Crossi 83.50 230 P **P** **19 05 45.1 +0.5**
comp=Z,9.2nm,0.7s,baz=15,slow=5.5,SNR=32
FITZ Fitzroy Crossi 83.50 230 P **P** **19 05 45.3 +0.7**
FITZ IAmb IAmb 19 05 46.0
comp=Z,10nm,0.8s
BRTR Keskin Array B 83.86 334 P **P** **19 05 47.9 +1.4**
comp=Z,1.0nm,0.5s,baz=50,slow=2.5,SNR=4.3
ASAR Alice Springs 84.76 220 P **P** **19 05 51.4 +0.4**
comp=Z,5.7nm,0.8s,baz=23,slow=5.5,SNR=102
STKA Stephens Creek 89.46 211 P **P** **19 06 14.2 +0.9**
comp=Z,7.3nm,0.6s,baz=346,slow=5.3,SNR=19
STKA Stephens Creek 89.46 211 P **P** **19 06 14.1 +0.8**
STKA IAmb IAmb 19 06 15.4
comp=Z,2.3nm,0.8s
TORD Torodi Ar. Bea 115.25 357 PKP **PKiKP** **19 11 56.9 -1.1**
comp=Z,0.9nm,0.5s,baz=347,slow=2.4,SNR=9.3
TORD Torodi Ar. Bea 115.25 357 PKP **PKiKP** **19 11 56.7 -1.2**
DBIC Dimbokro 121.66 4 PKP **PKPdf** **19 12 09.7 -0.6**
comp=Z,2.0nm,0.5s,baz=0.9,slow=2.2,SNR=6.8
H03N2 Juan Fernandez 122.80 104 T T 21 25 43.6
baz=317,slow=77,SNR=4.7
H03N1 Juan Fernandez 122.82 104 T T 21 25 50.1
baz=317,slow=77,SNR=5.8
H03N3 Juan Fernandez 122.82 104 T T 21 25 37.7
baz=317,slow=77,SNR=5.6
VNDA Vanda 129.50 185 PKP **PKiKP** **19 12 24.2 +0.2**
comp=Z,1.0nm,1.1s,baz=293,slow=1.9,SNR=2.7
CPUP Villa Florida 131.12 81 PKP **PKiKP** **19 12 30.1 +1.3**
comp=Z,0.9nm,0.5s,baz=297,slow=2.3,SNR=2.1
CPUP SKPbc **SKPbc** **19 15 42.8 -0.7**
comp=Z,1.2nm,0.5s,baz=315,slow=5.7,SNR=4.3
PLCA Paso Flores 132.63 105 PKP **PKPdf** **19 12 31.0 +0.6**
comp=Z,0.6nm,0.5s,baz=308,slow=19,SNR=1.9
PLCA SKPbc **SKPbc** **19 15 49.0 +0.5**
comp=Z,2.0nm,0.8s,baz=300,slow=5.5,SNR=5.7
PLCA Paso Flores 132.63 105 PKIKP **PKPdf** **19 12 31.0 +0.6**
MAW Mawson 145.86 218 PKPbc **PKPbc** **19 12 54.3 0.0**
comp=Z,7.4nm,0.8s,baz=93,slow=8.5,SNR=11
BOSA Boshof 149.47 309 PKPbc **PKPbc** **19 13 05.8 +0.4**
comp=Z,10nm,0.6s,baz=26,slow=2.8,SNR=40
BOSA PKPab **PKPab** **19 13 10.8 +0.2**
comp=Z,4.9nm,0.6s,baz=47,slow=4.5,SNR=8.0
SNAA Sanae 160.07 179 PKPab **PKPab** **19 13 53.7 -0.8**

*IDC **21** 18:53:52.4±7.1, 18°.21S×176°.79W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.6/52, mbtmp3.8/3, Error ellipse: s-maj=305.0km s-min=40.9km az=142.0*
*NEIC **21** 18:54:49.0±2.1, 18°.6S±0°.4×177°.7W±0°.2, h533km±16km, mb4.2/10, Error ellipse: s-maj=56.7km s-min=21.2km az=156.0*
ISC 21 18:54:44.5±2.3, 18°.8S±0°.4×177°.2W±0°.3, h500km, n16, σ1°59/15, mb4.1/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.62**	**283**	P	**P**	**18 56 10.8**	**+2.6**
CTAO	**Charters Tower**	**34.42**	**262**	P	**P**	**19 00 49.5**	**-0.2**
CTAO				IAmb	IAmb	19 00 57.4	
comp=Z,14nm,1.4s							
COEN	**Coen**	**38.24**	**271**	P	**P**	**19 01 19.2**	**-2.3**
COEN				IAmb	IAmb	19 01 26.8	
comp=Z,12nm,1.4s							
BBOO	**Buckleboo**	**43.97**	**242**	P	**P**	**19 02 06.7**	**-0.1**
WR0	**Warramunga Arr**	**45.39**	**260**	P	**P**	**19 02 17.3**	**-0.7**
WR0				IAmb	IAmb	19 02 17.7	
comp=Z,12nm,1.5s							
WB0	**Warramunga Arr**	**45.55**	**260**	P	**P**	**19 02 18.9**	**-0.3**
WB0				IAmb	IAmb	19 02 27.3	
comp=Z,8.0nm,1.4s							
WB2	**Warramunga Arr**	**45.57**	**260**	P	**P**	**19 02 18.8**	**-0.6**
WRA	**Warramunga Arr**	**45.58**	**260**	P	**P**	**19 02 18.9**	**-0.6**
comp=Z,0.4nm,0.4s,baz=96,slow=7.5,SNR=13							
WRA	**Warramunga Arr**	**45.58**	**260**	P	**P**	**19 02 17.3**	**-2.2**
ASAR	**Alice Springs**	**45.64**	**255**	P	**P**	**19 02 19.1**	**-0.8**
comp=Z,0.8nm,0.4s,baz=88,slow=7.9,SNR=16							
ASAR	**Alice Springs**	**45.64**	**255**	P	**P**	**19 02 18.1**	**-1.8**
FITZ	**Fitzroy Crossi**	**53.99**	**261**	P	**P**	**19 03 21.6**	**+0.2**
GIRL	**Giralia**	**63.72**	**254**	P	**P**	**19 04 29.2**	**+2.3**
TOLI2	**Tolitoli**	**63.99**	**281**	P	**P**	**19 04 27.0**	**-1.8**
TOLI2				IAmb	IAmb	19 04 28.0	
comp=Z,7.8nm,0.9s							
ILAR	**Eielson Array**	**86.52**	**13**	P	**P**	**19 06 33.5**	**+0.1**
comp=Z,0.5nm,0.8s,baz=214,slow=6.1,SNR=2.5							
LBTB	**Lobatse**	**131.09**	**208**		PKPpre	19 12 57.4	

*IDC **21** 18:54:48.5±2.0, 9°.52S×155°.52E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/50, mbtmp3.6/4, Error ellipse: s-maj=72.1km s-min=30.5km az=133.0*
*NEIC **21** 18:54:51.9±1.6, 9°.6S±0°.2×155°.4E±0°.1, h23km±6km, mb4.1/5, Error ellipse: s-maj=24.7km s-min=20.8km az=164.0*
ISC 21 18:54:53.2±1.6, 9°.5S±0°.2×155°.3E±0°.2, h29km, n10, σ0°85/9, mb3.9/6, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**6.16**	**329**	Pn	**Pn**	**18 56 22.2**	**-0.1**
WR0	**Warramunga Arr**	**22.57**	**240**	P	**P**	**18 59 51.6**	**+0.1**
WB0	**Warramunga Arr**	**22.62**	**241**	P	**P**	**18 59 51.6**	**-0.4**
WB0				IAmb	IAmb	19 00 03.5	
comp=Z,8.9nm,1.4s							
WRAB	**Tennant Creek**	**22.73**	**241**	P	**P**	**18 59 52.5**	**-0.6**
WRAB				IAmb	IAmb	19 00 01.9	
comp=Z,11nm,1.5s							
WB2	**Warramunga Arr**	**22.73**	**241**	P	**P**	**18 59 51.8**	**-1.3**
WRA	**Warramunga Arr**	**22.74**	**241**	P	**P**	**18 59 53.5**	**+0.2**
comp=Z,1.6nm,0.9s,baz=66,slow=9.8,SNR=7.4							
WRA	**Warramunga Arr**	**22.74**	**241**	IAmb	IAmb	18 59 55.3	
comp=Z,0.2nm,1.4s							
ASAR	**Alice Springs**	**24.81**	**233**	P	**P**	**19 00 14.3**	**+1.2**
comp=Z,1.0nm,0.9s,baz=62,slow=10,SNR=7.1							
SONM	**Songino Array**	**71.63**	**328**	P	**P**	**19 06 12.8**	**+0.6**
comp=Z,1.0nm,0.9s,baz=139,slow=7.5,SNR=3.9							
NVAR	**Mina Array Bea**	**93.04**	**52**	P	**P**	**19 08 04.2**	**-0.5**
comp=Z,0.3nm,0.7s,baz=254,slow=6.5,SNR=1.8							

*IDC **21** 18:55:03.0±1.4, 9°.68S×155°.58E, h0km, mb3.9/9, mb1 4.2/9, mb1mx3.9/49, mbtmp3.9/9, MS3.0/2, Ms1 3.0/2, ms1mx2.7/21, Error ellipse: s-maj=44.3km s-min=21.7km az=121.0*
*NEIC **21** 18:55:07.6±1.1, 9°.6S±0°.1×155°.3E±0°.2, h23km±6km, mb4.2/11, Error ellipse: s-maj=35.2km s-min=15.1km az=68.0*
ISC 21 18:55:07.8±0.9, 9°.6S±0°.1×155°.4E±0°.2, h29km, n27, σ1°23/24, mb4.1/14, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.46**	**89**	LR	LR	18 57 34.8	
comp=Z,86nm,21.9s,baz=38,slow=35							
RABL	**Rabaul**	**6.23**	**328**	Pn	**Pn**	**18 56 36.9**	**-0.9**
PMG	**Port Moresby**	**8.15**	**270**	LR	LR	19 00 10.4	
comp=Z,197nm,20.7s,baz=128,slow=37							
EIDS	**Eidsvold**	**16.27**	**194**	P	**P**	**18 58 56.0**	**-1.1**
EIDS				IAmb	IAmb	18 58 59.6	
comp=Z,14nm,1.0s							
WR0	**Warramunga Arr**	**22.66**	**240**	P	**P**	**19 00 05.7**	**-1.3**
WR0				IAmb	IAmb	19 00 25.7	
comp=Z,10nm,1.4s							
WB0	**Warramunga Arr**	**22.71**	**241**	P	**P**	**19 00 06.3**	**-1.2**
WB0				IAmb	IAmb	19 00 09.0	
comp=Z,6.8nm,1.1s							
WRAB	**Tennant Creek**	**22.82**	**241**	P	**P**	**19 00 07.1**	**-1.5**
WB2	**Warramunga Arr**	**22.82**	**241**	P	**P**	**19 00 07.5**	**-1.2**
WB2				IAmb	IAmb	19 00 18.2	
comp=Z,12nm,1.4s							
WRA	**Warramunga Arr**	**22.83**	**241**	P	**P**	**19 00 08.8**	**+0.1**
comp=Z,3.8nm,1.0s,baz=66,slow=9.9,SNR=9.8							
WRA	**Warramunga Arr**	**22.83**	**241**	P	**P**	**19 00 07.7**	**-1.0**
ASAR	**Alice Springs**	**24.89**	**233**	P	**P**	**19 00 28.8**	**+0.4**
comp=Z,2.2nm,0.9s,baz=62,slow=9.7,SNR=10							
ASAR	**Alice Springs**	**24.89**	**233**	P	**P**	**19 00 27.0**	**-1.4**
STKA	**Stephens Creek**	**25.65**	**208**	P	**P**	**19 00 36.0**	**+0.9**
comp=Z,2.7nm,0.8s,baz=34,slow=12,SNR=2.4							
STKA	**Stephens Creek**	**25.65**	**208**	IAmb	IAmb	19 00 38.4	
comp=Z,2.8nm,1.5s							
KNRA	**Kununurra**	**26.70**	**254**	P	**P**	**19 00 47.4**	**+2.6**
FITZ	**Fitzroy Crossi**	**30.11**	**250**	P	**P**	**19 01 14.8**	**-0.4**
FITZ				IAmb	IAmb	19 01 28.6	
comp=Z,7.6nm,1.5s							
USRK	**Ussuriysk Ar.**	**57.56**	**340**	P	**P**	**19 04 56.6**	**+1.9**
comp=Z,2.8nm,1.1s,baz=153,slow=13,SNR=4.5							
CMAR	**Chiang Mai Arr**	**62.28**	**297**	P	**P**	**19 05 28.5**	**+0.8**
comp=Z,0.2nm,0.2s,baz=120,slow=5.3,SNR=6.3							
CMAR	**Chiang Mai Arr**	**62.28**	**297**	P	**P**	**19 05 27.7**	**0.0**
ULN	**Ulaanbaatar**	**71.38**	**328**	P	**P**	**19 06 25.8**	**+0.5**
SONM	**Songino Array**	**71.70**	**328**	P	**P**	**19 06 28.2**	**+1.0**
comp=Z,1.7nm,0.8s,baz=134,slow=6.0,SNR=7.6							
QSPA	**South Pole Qui**	**80.44**	**180**	P	**P**	**19 07 17.4**	**+0.7**
QSPA				IAmb	IAmb	19 07 18.7	
comp=Z,4.9nm,1.0s							
ILAR	**Eielson Array**	**85.58**	**21**	P	**P**	**19 07 41.7**	**-1.3**
comp=Z,1.3nm,0.9s,baz=240,slow=5.4,SNR=5.5							
MKAR	**Makanchi Array**	**85.59**	**319**	P	**P**	**19 07 42.9**	**-0.6**
comp=Z,0.5nm,0.9s,baz=105,slow=9.1,SNR=1.9							
MKAR	**Makanchi Array**	**85.59**	**319**	P	**P**	**19 07 42.0**	**-1.5**
NVAR	**Mina Array Bea**	**92.96**	**52**	P	**P**	**19 08 18.8**	**0.0**
comp=Z,1.0nm,0.9s,baz=256,slow=7.3,SNR=3.5							
ESDC	**Sonseca Array**	**144.82**	**332**	PKPbc	**PKPab**	**19 14 40.2**	**-1.2**
comp=Z,1.0nm,0.9s,baz=19,slow=3.9,SNR=4.7							

IDC 21 19:14:18.5±4.6, 8°.50S×120°.85E, h194km±19km, mb3.4/1, mb1 3.0/5, mb1mx2.8/32, mbtmp3.4/5, Error ellipse: s-maj=69.3km s-min=42.1km az=26.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**3.26**	**122**	P	Pn	19 15 11.2	+0.3
5.7nm,0.3s,baz=297,slow=9.7,SNR=13							
BATI				S	Sn	19 15 51.2	-0.7
6.6nm,0.3s,baz=270,slow=1.0,SNR=5.3							
FITZ	**Fitzroy Crossi**	**10.62**	**154**	P	Pn	19 16 46.1	+0.3
0.2nm,0.3s,baz=328,slow=12,SNR=18							
FITZ				S	Sn	19 18 40.9	-3.5
0.2nm,0.3s,baz=337,slow=24,SNR=1.5							
WRA	**Warramunga Arr**	**17.32**	**133**	P	Pn	19 18 08.6	-0.3
0.1nm,0.3s,baz=307,slow=13,SNR=7.0							
WRA				S	S	19 21 19.3	+1.6
0.1nm,0.3s,baz=301,slow=21,SNR=2.7							
ASAR	**Alice Springs**	**19.59**	**142**	P	P	19 18 33.4	+1.3
0.1nm,0.3s,baz=310,slow=9.0,SNR=14							
ASAR				ScP	ScP	19 25 58.1	-3.2
0.0nm,0.3s,baz=321,slow=0.6,SNR=5.1							
STKA	**Stephens Creek**	**30.22**	**143**	P	P	19 20 10.5	-0.4
0.8nm,0.5s,baz=319,slow=9.3,SNR=4.1							

IDC 21 19:25:38.2±2.4, 1°.28N×127°.42E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/38, mbtmp3.3/3, Error ellipse: s-maj=183.7km s-min=28.7km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.16**	**163**	P	P	19 30 35.6	-0.3
0.4nm,0.7s,baz=341,slow=11,SNR=4.0							
ASAR	**Alice Springs**	**25.59**	**166**	P	P	19 31 09.5	+0.2
0.2nm,0.5s,baz=343,slow=11,SNR=8.8							
MKAR	**Makanchi Array**	**59.95**	**326**	P	P	19 35 46.4	-0.1
0.4nm,0.7s,baz=124,slow=8.4,SNR=2.9							

*IDC **21** 19:28:44.4±1.0, 0°.33N×125°.54E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.6/38, mbtmp3.6/6, ML3.1/2, Error ellipse: s-maj=19.2km s-min=12.2km az=65.0*
*DJA **21** 19:28:48.0±0.3, 0°N±4°×12°6E±°, h10km, M4.4/10, mB5.2/2, mb4.2/2, MLv4.5/10, Mw(mB)4.6/2*
*NEIC **21** 19:28:50.0±1.4, 0°.36N±0°.08×125°.86E±0°.06, h50km±11km, mb4.2/15, Error ellipse: s-maj=12.9km s-min=8.0km az=152.0*
ISC 21 19:28:49.8±0.6, 0°.37N±0°.08×125°.89E±0°.05, h44km, n35, σ1°38/38, mb4.0/10, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.

LUWI	Luwuk	3.42 246		Pn		19 29 42.0	+1.3
MRSI	Marisa	3.95 272	P	Pn		19 29 47.0	-1.0
APSI	Ampana	4.43 253	P	Pn		19 29 55.6	+1.1
TOLI2	Tolitoli	5.16 278		Pn		19 30 04.3	-0.3
SIJI	Sorong	5.51 103	Pn	Pn		19 30 12.8	+3.3
	0.8nm,0.3s,baz=290,slow=20,SNR=5.3						
KCP	Kidapawan	6.65 353	⇓*i*P	Pn		19 30 28.6	+3.6
TTSI	Tana Toraja	6.95 241	P	Pn		19 30 29.3	+0.1
KSM	Kuching	15.62 274	P	P		19 32 30.0	-0.6
KSM			IAmb	IAmb		19 32 34.4	
	comp=Z,17nm,1.1s						
FITZ	Fitzroy Crossi	18.35 181	P	P		19 32 59.5	-1.3
	comp=Z,0.0nm,0.3s,baz=354,slow=10,SNR=3.0						
FITZ	Fitzroy Crossi	18.35 181	P	P		19 32 59.7	-1.1
WB0	Warramunga Arr	21.68 158	P	P		19 33 36.0	-1.0
WB0			IAmb	IAmb		19 33 48.2	
	comp=Z,6.6nm,0.8s						
WRAB	Tennant Creek	21.81 158	P	P		19 33 38.3	-0.1
WRAB			IAmb	IAmb		19 34 24.6	
	comp=Z,8.4nm,1.4s						
WRA	Warramunga Arr	21.82 158	P	P		19 33 38.0	-0.5
	comp=Z,1.0nm,0.5s,baz=337,slow=11,SNR=21						
WB2	Warramunga Arr	21.82 158	P	P		19 33 37.8	-0.7
WR0	Warramunga Arr	21.91 158	P	P		19 33 38.8	-0.6
WR0			IAmb	IAmb		19 34 10.8	
	comp=Z,11nm,1.5s						
COEN	Coen	22.26 130	P	P		19 33 40.8	-2.6
COEN			IAmb	IAmb		19 33 43.5	
	comp=Z,22nm,1.5s						
TPUB	Ta-pu	23.36 348	P	P		19 33 54.0	-0.5
AS31	Alice Springs	25.12 162	P	P		19 34 12.6	+1.7
ASAR	Alice Springs	25.13 162	P	P		19 34 12.5	+1.6
	comp=Z,0.8nm,0.5s,baz=341,slow=8.4,SNR=21						
ASAR			PcP	PcP		19 37 46.6	+2.2
	comp=Z,0.1nm,0.4s,baz=345,slow=2.6,SNR=1.2						
ASAR	Alice Springs	25.13 162	P	P		19 34 10.8	-0.1
ASAR				PcP		19 37 45.2	+0.8
SONM	Songino Array	50.22 343	P	P		19 37 42.1	+0.5
	comp=Z,0.4nm,0.7s,baz=161,slow=9.2,SNR=2.5						
MK31	Makanchi Array	59.86 327	P	P		19 38 49.6	-1.4
MK31			IAmb	IAmb		19 39 02.0	
	comp=Z,2.6nm,1.1s						
MKAR	Makanchi Array	59.86 327	P	P		19 38 50.4	-0.6
	comp=Z,0.5nm,0.5s,baz=120,slow=7.7,SNR=7.8						
MKAR			PcP	PcP		19 39 37.1	-0.1
	comp=Z,0.6nm,0.8s,baz=135,slow=5.3,SNR=2.1						
MKAR	Makanchi Array	59.86 327	P	P		19 38 50.2	-0.9
MAKZ	Makanchi	60.04 327	P	P		19 38 51.9	-0.3
GAR	Garm	63.61 314	P	P		19 39 17.0	+0.4
KURK	Kurchatov	64.14 329	P	P		19 39 20.1	+0.5
KURK			IAmb	IAmb		19 39 23.9	
	comp=Z,3.4nm,0.9s						
AB02	Akbulak array	74.23 322	P	P		19 40 21.9	-0.3
ABKAR	Akbulak array	74.23 322	P	P		19 40 21.3	-0.9
AB04	Akbulak array	74.23 322		P		19 40 21.7	-0.5

*IDC **21** 19:29:56.3±1.2,0.°11N×123.°57E,h0km,mb3.5/5, mb1 3.7/7,mb1mx3.5/35,mbtmp3.6/7,ML3.8/2,MS3.1/2, Ms1 3.1/2,ms1mx2.6/28,Error ellipse: s-maj=49.4km s-min=19.4km az=70.0*

ISC 21 19:30:12.7±1.1,0.°54S±0.°09×122.°8E±0.°2,h150km,n8, σ2s05/8,mb3.4/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	5.37 214		Pn	Pn	19 31 29.7	-1.3
	7.0nm,0.3s,baz=34,slow=7.3,SNR=11						
KAPI				Sn	Sn	19 32 32.1	0.0
	0.9nm,0.3s,baz=62,slow=20,SNR=1.7						
FITZ	Fitzroy Crossi	17.68 171		P	Pn	19 34 10.0	+0.3
	0.1nm,0.3s,baz=359,slow=12,SNR=1.7						
FITZ				LR	LR	19 41 22.8	
	comp=Z,78nm,18.8s,baz=342,slow=38						
WRA	Warramunga Arr	22.37 150		P	P	19 34 58.4	-0.2
	0.5nm,0.6s,baz=338,slow=9.8,SNR=1.6						
ASAR	Alice Springs	25.40 156		P	P	19 35 28.6	+2.2
	0.6nm,0.9s,baz=338,slow=9.0,SNR=1.2						
CMAR	Chiang Mai Arr	30.08 310		P	P	19 36 10.7	+2.6
	0.3nm,0.4s,baz=127,slow=6.9,SNR=2.0						
JHJ	Hachijo jima 2	37.13 24		LR	LR	19 52 09.0	
	comp=Z,19nm,20.1s,baz=270,slow=37						
SONM	Songino Array	50.25 346		P	P	19 38 50.9	-2.7
	1.0nm,0.7s,baz=159,slow=6.2,SNR=6.5						
MKAR	Makanchi Array	58.95 329		P	P	19 39 56.5	+0.2
	0.3nm,0.4s,baz=125,slow=8.7,SNR=6.1						

*IDC **21** 19:33:21.7±1.3,1.°73N×126.°26E,h0km,mb3.9/4, mb1 4.0/5,mb1mx3.6/33,mbtmp3.8/5,ML3.8/1,Error ellipse: s-maj=102.3km s-min=22.0km az=69.0*

*NEIC **21** 19:33:28.0±1.1,1.°85N±0.°08×126.°56E±0.°09,h59km±7km, mb4.2/15,Error ellipse: s-maj=15.5km s-min=8.3km az=49.0*

ISC 21 19:33:27.2±0.9,1.°84N±0.°10×126.°57E±0.°09,h47km,n27, σ0s97/30,mb4.0/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.32 143			Pn	19 33 50.5	+1.2
LUWI	Luwuk	4.76 233		Pn	Pn	19 34 37.5	+1.0
LUWI				Sn	Sn	19 35 30.4	0.0
TOLI2	Tolitoli	5.84 263		Pn	Pn	19 34 49.4	-1.9
MYLDM	Lahad Datu	8.71 293		Pn	Pn	19 35 32.0	+1.2
KAPI	Kappang	9.63 225		Pn	Pn	19 35 44.2	+0.8
KKM	Kota Kinabalu	11.14 292		Pn	Pn	19 36 03.6	-0.5
MTN	Manton Dam	15.27 163		Pn	Pn	19 36 58.4	-1.5
MTN				IAmb	IAmb	19 37 25.5	
	comp=Z,8.4nm,1.0s						
KNRA	Kununurra	17.54 173		P	P	19 37 30.5	+1.4
KNRA				IAmb	IAmb	19 37 47.5	
	comp=Z,30nm,1.4s						
FITZ	Fitzroy Crossi	19.83 183		P	P	19 37 53.2	-1.0
	comp=Z,0.2nm,0.3s,baz=360,slow=10,SNR=7.5						
WB0	Warramunga Arr	22.80 161		P	P	19 38 26.0	-0.2
WB0				IAmb	IAmb	19 38 28.7	
	comp=Z,7.3nm,1.1s						
WRAB	Tennant Creek	22.94 161		P	P	19 38 27.6	-0.1
WRAB				IAmb	IAmb	19 38 29.9	
	comp=Z,4.9nm,0.5s						
WRA	Warramunga Arr	22.95 161		P	P	19 38 27.4	-0.3
	comp=Z,2.6nm,0.4s,baz=338,slow=11,SNR=37						
WRA				PcP	PcP	19 42 17.8	+1.0
	comp=Z,0.3nm,0.7s,baz=335,slow=2.1,SNR=2.0						
WRA	Warramunga Arr	22.95 161		P	P	19 38 27.6	-0.1
WB2	Warramunga Arr	22.95 161		P	P	19 38 27.6	-0.1
WB2				IAmb	IAmb	19 38 30.5	
	comp=Z,9.3nm,1.3s						
WR0	Warramunga Arr	23.03 161		P	P	19 38 28.3	-0.3
WR0				IAmb	IAmb	19 38 38.2	
	comp=Z,14nm,1.6s						
AS31	Alice Springs	26.34 165		P	P	19 38 59.1	+0.1
ASAR	Alice Springs	26.34 165		P	P	19 38 59.6	+0.7
	comp=Z,1.0nm,0.5s,baz=344,slow=7.7,SNR=35						
ASAR				PcP	PcP	19 42 25.3	+1.0
	comp=Z,0.4nm,0.6s,baz=339,slow=2.1,SNR=5.2						
ASAR	Alice Springs	26.34 165		P	P	19 38 57.1	-1.9
BBOO	Buckleboo	35.61 166		P	P	19 40 21.4	+0.9
NWAO	Narrogin (SRO)	35.69 194		P	P	19 40 21.0	-0.2
STKA	Stephens Creek	36.44 158		P	P	19 40 26.7	-0.9
TOO	Toolangi	42.95 158		P	P	19 41 21.5	-0.3
MKAR	Makanchi Array	59.02 326		P	P	19 43 22.9	+0.6
	comp=Z,0.6nm,0.5s,baz=120,slow=7.9,SNR=12						
MKAR	Makanchi Array	59.02 326		P	P	19 43 21.5	-0.9
MAKZ	Makanchi	59.20 326		P	P	19 43 23.9	+0.3
MAKZ				IAmb	IAmb	19 43 45.8	
	comp=Z,4.1nm,1.2s						
KURK	Kurchatov	63.25 328		P	P	19 43 50.0	-0.9
KURK				IAmb	IAmb	19 44 01.4	
	comp=Z,4.0nm,1.1s						
VNDA	Vanda	81.58 173		P	P	19 45 40.9	+1.3
	comp=Z,0.4nm,0.5s,baz=314,slow=7.0,SNR=2.6						

*JMA **21** 19:56:14.9±0.1,24.°82N×122.°44E,h4km,M2.5*

*TAP **21** 19:56:15.8,24.°87N×122.°39E,h18km±2km,ML2.7,D*

ISC 21 19:56:14.9±1.1,24.°84N±0.°04×122.°45E±0.°03,h11km±10km, n31,σ0s37/48,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	Santiao Chiao	0.45 292		P	Pg	19 56 23.8	+0.2
	baz=290						
TWB1				S	Sg	19 56 30.0	+0.4
	baz=290						
EGS		0.47 270		P	Pb	19 56 24.6	-0.5
	baz=265						
EGS				S	Sb	19 56 32.1	+0.1
	baz=265						
TIPB	Shuangxi	0.58 283		P	Pb	19 56 26.8	-0.2
	baz=280						
TIPB				S	Sb	19 56 34.9	-0.4
	baz=280						
TWC	Suao	0.59 247	*e*P	Pg		19 56 26.5	+0.2
	baz=241						
TWC			*e*S	Sb		19 56 35.6	+0.1
	baz=241						
JYNG	Yonagunijimaku	0.60 131	P	Pg		19 56 26.4	-0.1
JYNG			S	Sg		19 56 34.1	-0.3
YOJ	Yonaguni jima	0.64 126	*e*P	Pg		19 56 26.9	-0.4
	baz=125						
YOJ	Yonaguni jima	0.64 126	P	Pg		19 56 27.2	-0.1
YOJ			*e*S	Sg		19 56 35.6	-0.1
NWF	Wu-fen Shan	0.65 291	*i* P	Pb		19 56 28.0	-0.2
	baz=289						
NWF			S	Sb		19 56 36.4	-0.8
	baz=289						
WFSB	Wu-fen Shan	0.65 291	*e*P	Pb		19 56 28.0	-0.2
	baz=289						
WFSB			*e*S	Sb		19 56 36.3	-0.8
	baz=289						
TWE	Neicheng	0.72 260	P	Pb		19 56 29.4	0.0
	baz=256						
TWE			S	Sb		19 56 38.9	-0.4
	baz=256						
ENA	Nanau	0.76 237	P	Pg		19 56 29.8	+0.2
	baz=232						
ENA			*e*S	Sb		19 56 41.3	+0.7
	baz=232						
ENTT	Nioudou	0.83 256	P	Pb		19 56 31.3	+0.1
	baz=252						
ENTT			*e*S	Sb		19 56 42.3	0.0
	baz=252						
NHDH	Xindian Distri	0.84 278	*e*S	Sb		19 56 42.2	-0.7
	baz=276						
YM08	YM08	0.85 294	*e*P	Pb		19 56 31.6	-0.1
	baz=293						
YM01	YM01	0.85 291	*e*P	Pb		19 56 31.7	0.0
	baz=290						
YM11	YM11	0.85 292	*e*P	Pb		19 56 31.7	0.0
	baz=291						
NWLT	Wulai	0.86 266	*e*P	Pb		19 56 31.8	0.0
	baz=263						
YM10	YM10	0.86 291	*e*P	Pb		19 56 31.6	+0.1
	baz=290						
TWY	Chenhua	0.88 299	P	Pb		19 56 32.4	+0.3
	baz=299						
TWY			S	Sb		19 56 43.5	-0.4
	baz=299						
YM04	YM04	0.88 291	*e*P	Pb		19 56 32.2	+0.1
	baz=289						
YHNB	Yeheng	0.99 260	*e*P	Pb		19 56 34.1	0.0
	baz=257						
NSK	Sanguang	1.00 261	P	Pg		19 56 34.2	0.0
	baz=257						
NACB	Ninganchiao	1.02 229	*e*P	Pg		19 56 34.1	-0.4
	baz=225						
NACB			*e*S	Sn		19 56 49.0	-0.5
	baz=225						
NNSB	Datong	1.05 247	*e*P	Pg		19 56 34.9	-0.3
	baz=244						
NNSB			*e*S	Sg		19 56 48.5	-0.3
	baz=244						
NNS	Nan Shan	1.06 248	*e*P	Pb		19 56 35.5	+0.3
	baz=244						
NNS			*e*S	Sb		19 56 49.1	0.0
	baz=244						
ETLH	Xiulin Townshi	1.08 234	*e*P	Pg		19 56 35.4	-0.3
	baz=231						
FUSS	Fushou	1.25 242	*e*P	Pb		19 56 38.7	+0.1
	baz=239						
IRIF	Iriomote-Funau	1.27 113	P	Pn		19 56 39.0	+0.4
IRIF			*e*S	Sb		19 56 55.8	+0.6
TDCB	Techi	1.31 244	*e*P	Pb		19 56 39.7	+0.1
	baz=240						
NSTT	Nanjuang	1.33 261	*e*P	Pg		19 56 41.4	+1.0
	baz=258						
CHGB	Renai	1.40 236	*e*P	Pg		19 56 41.5	-0.2
	baz=233						
CHGB			*e*S	Sn		19 56 59.3	+0.2
	baz=233						

WEL 21 20:02:25.8±0.8,37.°S±5.°×18.°0W±.°,h33km,M3.5/18, mB4.8/1,ML3.7/18,MLv3.5/18,Mw(mB)4.0/1,Error ellipse: s-maj=0.0km s-min=0.0km az=25.5,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.33 253		P	Pn	20 02 48.8	+0.6
WMGZ				S	Sb	20 03 06.0	-1.1
MXZ	Matakaoa Point	1.37 264		P	Pn	20 02 48.6	-0.1
MXZ				S	Sn	20 03 05.6	-0.2
PUZ	Puketiti	1.54 245		P	Pn	20 02 51.6	+0.6
PUZ				S	Sn	20 03 10.6	+0.7
CNGZ	Carnagh Statio	1.77 234		P	Pn	20 02 55.1	+0.9
TWGZ	Tauwhareparae	1.78 245		P	Pn	20 02 55.6	+1.3
TWGZ				S	Sn	20 03 17.0	+1.2
HAZ	Te Kaha	1.81 259		P	Pn	20 02 55.1	+0.5
HAZ				S	Sn	20 03 16.5	0.0
RUGZ	Raukumara Rang	1.94 254		P	Pn	20 02 57.1	+0.5
RUGZ				S	Sn	20 03 21.5	+1.7
MWZ	Matawai	2.17 245		P	Pn	20 03 00.0	+0.3
MWZ				S	Sn	20 03 25.1	-0.3
RIGZ	Rimuhau	2.19 234		P	Pn	20 03 00.6	+0.6
RIGZ				S	Sn	20 03 27.5	+1.6
PRGZ	Paritu Road	2.25 228		P	Pn	20 03 01.1	+0.3
MHGZ	Mahia Peninsul	2.39 224		P	Pn	20 03 02.9	+0.2
KNZ	Kokohu	2.43 229		P	Pn	20 03 03.1	-0.1
URZ	Urewera	2.45 250		P	Pn	20 03 04.4	+0.9
URZ				S	Sn	20 03 32.6	+0.3
WHRZ	Whale Island	2.46 259		S	Sn	20 03 34.7	+2.2
SNGZ	Shannon Statio	2.51 237		P	Pn	20 03 04.8	+0.5
SNGZ				S	Sn	20 03 34.2	+0.4
RAHZ	Arahi	2.75 237		P	Pn	20 03 07.9	+0.3
RAHZ				S	Sn	20 03 39.9	+0.3
MUGZ	Murupara	2.77 247		P	Pn	20 03 08.7	+0.7
MUGZ				S	Sn	20 03 39.1	-1.2
MTHZ	Maungataniwha	2.88 240		P	Pn	20 03 09.8	+0.3
MTHZ				S	Sn	20 03 43.1	+0.1
ARHZ	Aropaoanui	3.00 232		P	Pn	20 03 12.0	+0.9
ARHZ				S	Sn	20 03 47.0	+1.2
KUZ	Kuaotunu	3.51 280		P	Pn	20 03 17.8	-0.3
KUZ				S	Sn	20 03 55.5	-3.0
GRZ	Great Barrier	3.85 287		P	Pn	20 03 22.9	+0.1
GRZ				S	Sn	20 04 04.5	-2.4
MKAZ	Moumakai	3.90 273		P	Pn	20 03 23.6	+0.2
WCZ	Waipu Caves	4.81 286		P	Pn	20 03 36.9	+1.0
TRWZ	Traveller	5.19 219		P	Pn	20 03 43.9	+2.8
OUZ	Omahuta	5.65 291		P	Pn	20 03 48.4	+1.0
CTZ	Chatham Island	6.78 159		P	Pn	20 04 04.3	+1.3
CTZ				S	Sn	20 05 14.2	-4.8

*MOS **21** 20:18:26.5±0.6,42.°39N×48.°82E,h11km,mb3.7/1,Error ellipse: s-maj=11.6km s-min=5.7km az=11.1*

*DRS **21** 20:18:30.9±0.0,42.°39N×48.°60E,h18km*

ISC 21 20:18:27.1±1.5,42.°40N±0.°04×48.°68E±0.°05,h12km±10km, n41,σ1s36/62,7C-4D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGKR	Sergokala	0.76 275		*e*Pg	Pn	20 18 42.7	-0.9
SGKR				*e*Sg	Sg	20 18 51.5	-0.3
SGKR	Sergokala	0.76 275	⇑	*e*PG	Pn	20 18 42.8	-0.9
SGKR				*e*		20 18 51.4	
URKR	Urkarakh	0.81 254		*i* Pg	Pn	20 18 43.7	-0.8
	156nm,0.2s						
URKR				*e*Sg	Sg	20 18 53.0	-0.5
	1μm,0.5s						
URKR	Urkarakh	0.81 254	⇓	*i*PG	Pb	20 18 43.5	+0.3
URKR				*i*		20 18 52.7	
URKR				pmax	pmax		
	comp=Z,156nm,0.2s						
URKR				smax	smax		
	comp=N,723nm,0.9s						
MAK	Makhachkala	1.03 303		*e*PG	Pn	20 18 48.7	+1.3
MAK				*e*S	Sn	20 19 02.3	+0.6

AKT	Akhty	1.16 218		*i* Pg	Pg	20 18 50.1	+0.7
	comp=N,473nm,0.3s						
AKT				*e*Sg	Sb	20 19 03.9	-0.3
	comp=N,1μm,0.3s						
AKT	Akhty	1.16 218		*e*PG	Pg	20 18 50.1	+0.7
AKT				*e*S	Sb	20 19 03.6	-0.5
KMKR	Kumukh	1.20 258		*i* Pg	Pb	20 18 50.0	+0.1
	comp=N,39nm,0.3s						
KMKR				*e*Sg	Sb	20 19 03.5	-2.0
	comp=N,347nm,0.4s						
KMKR	Kumukh	1.20 258	⇑	*i*PG	Pb	20 18 50.0	+0.1
KMKR				pmax	pmax		
	comp=Z,39nm,0.3s						
BUJR	Buynaksk	1.24 291		*i* Pg	Pg	20 18 51.3	+0.4
	comp=Z,39nm,0.2s						
BUJR				*e*Sg	Sb	20 19 06.0	-0.3
	comp=Z,564nm,0.4s						
BUJR	Buynaksk	1.24 291	⇓	*i*PG	Pg	20 18 51.3	+0.4
BUJR				pmax	pmax		
	comp=Z,39nm,0.3s						
ARKR	Arakani	1.26 280		*i* Pg	Pg	20 18 51.4	-0.1
ARKR				*e*Sg	Sb	20 19 06.4	-0.7
ARKR	Arakani	1.26 280	⇑	*i*PG	Pg	20 18 51.3	-0.1
GNBR	Gunib	1.27 270	⇓	*e*PG	Pb	20 18 50.9	-0.1
KRNR	Karanay	1.38 289		*i* Pg	Pb	20 18 52.6	-0.3
KRNR				*e*Sg	Sn	20 19 09.0	-1.4
KRNR	Karanay	1.38 289	⇑	*i*PG	Pb	20 18 52.5	-0.3
XNZR	Khunzakh	1.47 276		*e*Pg	Pg	20 18 54.7	-0.6
XNZR				*e*Sg	Sn	20 19 11.9	-0.9
XNZR	Khunzakh	1.47 276		*e*PG	Pg	20 18 54.7	-0.6
DBC	Dubki	1.50 295		*i* Pg	Pb	20 18 54.8	-0.2
	comp=Z,37nm,0.4s						
DBC				*e*Sg	Sn	20 19 12.6	-0.8
	comp=Z,166nm,0.6s						
DBC	Dubki	1.50 295		*e*PG	Pb	20 18 54.9	0.0
BTLR	Botlikh	1.83 279		*e*Pg	Pb	20 19 00.8	+0.1
	comp=Z,24nm,0.5s						
BTLR				*e*Sg	Sn	20 19 22.5	+0.8
	comp=Z,126nm,0.6s						
BTLR	Botlikh	1.83 279		*e*PN	Pb	20 19 00.8	+0.1
BTLR				pmax	pmax		
	comp=Z,24nm,0.5s						
LGD	Lagodekhi	1.90 254		P	Pb	20 19 00.9	-0.8
LGD				S	Sb	20 19 26.3	+1.0
LGD	Lagodekhi	1.90 254		*e*PN	Pb	20 19 00.9	-0.8
DVE	Vedeno	1.96 287		*e*PN	Pb	20 19 03.0	+0.2
DVE				pmax	pmax		
	comp=Z,12nm,0.4s						
GROC	Groznyy	2.27 292		*e*PN	Pb	20 19 07.9	-0.1
GROC				*e*S	Sb	20 19 35.5	-0.5
GUDG	Gudauri	3.11 273		*e*PN	Pb	20 19 20.6	-1.9
LACR	Lac	3.26 279		*e*PN	Pb	20 19 22.8	-2.2
LACR				*e*S	Sn	20 19 57.1	+0.1
KORR	Kora	3.47 283		*e*PN	Pg	20 19 35.2	+1.7
KORR				*e*S	Sb	20 20 11.8	+1.3
DMNI	Dmanisi	3.52 254		P	Pn	20 19 23.6	+1.9
DMNI				S	Sn	20 20 02.6	-0.7
ZEI	Tsey	3.55 278		*i* PN	Pn	20 19 24.3	+2.1
ZEI				*i* S	Sn	20 20 05.0	+0.9
GNI	Garni	3.72 234		*i* PN	Pn	20 19 26.9	+2.4
DIGR	Digorskoe uzhe	3.79 279		*e*PN	Pn	20 19 28.0	+2.4
ONI	Oni	3.87 275		*e*PN	Pn	20 19 30.0	+3.5
ONI				*e*S	Sb	20 20 20.6	-1.5
KBZ	Khabaz	4.44 289		*e*PN	Pn	20 19 35.2	+1.0
BEYR	Belyy Ugol+	4.58 293		*e*PN	Pn	20 19 39.0	+2.8
KIV	Kislovodsk	4.65 292		*e*PN	Pn	20 19 39.0	+1.8
KIV				*e*S	Sn	20 20 31.6	+0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ALER	Alexandrovskoy	4.81 301		*e*PN	Pn	20 19 41.5	+2.2
BELG	Belogornoye	10.03 356		*i* P	Pn	20 20 53.3	+2.5
AKTO	Aktyubinsk	10.30 35	⇑	Pn	Pn	20 20 52.2	-2.4
	comp=Z,4.3nm,1.4s						
AKTO			⇓	Sn	Sn	20 22 47.3	-2.6
	comp=Z,1.7nm,0.7s						
AB31	Akbulak array	10.43 45	⇑	Pn	Pn	20 20 59.8	+3.5
	comp=Z,0.1nm,0.3s,baz=240,slow=13,SNR=7.4						
AB31			⇑	Sn	Sn	20 22 55.3	+2.4
	comp=Z,0.4nm,0.4s,baz=245,slow=25,SNR=4.0						

*IDC **21** 20:18:45.1±2.0,43.°49N×105.°34W,h0km,mb1 3.5/3, mb1mx3.3/31,mbtmp3.2/3,ML2.5/2,Error ellipse: s-maj=51.7km s-min=9.7km az=152.0*

*NEIC **21** 20:18:47.3±1.8,43.°63N±0.°05×105.°21W±0.°07,h0km±2km, ML3.3/67,Error ellipse: s-maj=10.0km s-min=6.7km az=318.0*

ISC 21 20:18:46.0±1.0,43.°64N±0.°05×105.°17W±0.°06,h0km,n54, σ1s51/53,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.95 59			Pb	20 19 06.4	+1.0
K22A	Casper	1.40 225			Pg	20 19 10.9	-1.9
PHWY	Pilot Hill	2.35 185			Pn	20 19 26.6	+0.4
RWWY	Rawlins	2.47 218			Pn	20 19 29.0	+1.3
RWWY				IAML		20 20 05.5	
	160nm,0.5s						
RWWY				IAML		20 20 12.2	
	135nm,0.6s						
N23A	Red Feather La	2.81 192			Pn	20 19 33.7	+1.3
N23A				IAML		20 20 17.4	
	comp=E,111nm,0.5s						
LAO	LASA Array	3.13 347			Pn	20 19 37.5	+0.8
RLMT	Red Lodge	3.29 298			Pn	20 19 39.6	+0.6
RLMT				IAML		20 21 37.5	
	comp=E,46nm,4.2s						
RLMT				IAML		20 21 45.7	
	comp=E,51nm,4.7s						
BW06	Boulder Array	3.33 256			Pn	20 19 39.5	+0.1
PD31	Pinedale Array	3.33 256			Pn	20 19 39.5	0.0
PDAR	Pinedale Array	3.33 256		Pn	Pn	20 19 39.2	-0.2
	comp=E,5.8nm,0.3s,baz=78,slow=18,SNR=24						
PDAR				Lg	Lg	20 20 24.1	
	comp=E,12nm,0.3s,baz=71,slow=35,SNR=11						
PDAR	Pinedale Array	3.33 256			Pn	20 19 40.0	+0.5
YNE	Yellowstone No	3.73 293			Pn	20 19 45.3	+0.2
YMP	Mirror Lake PI	3.75 289			Pn	20 19 45.9	+0.5
ISCO	Idaho Springs	3.86 185			Pn	20 19 46.4	-0.5
GCMT	Greycliff	3.86 305			Pn	20 19 46.0	-0.7
LKWY	Lake	3.88 286		Pn	Pn	20 19 51.3	+4.2
LKWY				IAML		20 21 01.3	
	comp=E,52nm,0.6s						
LKWY				IAML		20 21 05.5	
	comp=E,41nm,4.2s						
H17A	Grant Village	3.97 283			Pn	20 19 50.9	+2.5
FLWY	Flagg Ranch	4.03 278			Pn	20 19 50.6	+1.6
FLWY				IAML		20 21 03.9

	comp=E,27nm,4.5s							
SMCO					IAML		20 22 56.6	
	comp=E,23nm,4.3s							
Q24A	**Divide**	**4.68**	**180**		Pn	**Pn**	**20 20 00.1**	**+2.0**
Q24A					IAML		20 21 25.3	
	comp=E,26nm,0.5s							
Q24A					IAML		20 21 29.7	
	comp=N,17nm,0.6s							
DGMT	**Dagmar**	**4.87**	**8**		Pn	**Pn**	**20 20 03.3**	**+2.8**
KSCO	**Kaye Shedlock'**	**5.01**	**157**		Pn	**Pn**	**20 20 03.9**	**+1.4**
BOZ	**Bozeman (W)**	**5.01**	**295**			**Pn**	**20 20 02.6**	**+0.1**
BOZ					IAML		20 22 49.6	
	comp=N,17nm,4.7s							
BOZ					IAML		20 23 06.7	
	comp=N,16nm,4.7s							
HWUT	**Hardware Ranch**	**5.14**	**249**			**Pn**	**20 20 04.5**	**+0.1**
HWUT					IAML		20 22 11.6	
	comp=N,18nm,3.8s							
HWUT					IAML		20 22 26.5	
	comp=N,17nm,4.7s							
TCUT	**Toone Canyon**	**5.27**	**243**			**Pn**	**20 20 06.5**	**+0.4**
HRY	**Holter Researc**	**5.62**	**305**			**Pn**	**20 20 12.0**	**+1.1**
LRM	**Limekiln Ridge**	**5.63**	**295**		Pn	**Pn**	**20 20 10.8**	**-0.3**
CTU	**Camp Tracy**	**5.71**	**241**		Pn	**Pn**	**20 20 12.4**	**+0.2**
SPUT	**South Promonto**	**5.87**	**249**		Pn	**Pn**	**20 20 14.5**	**+0.1**
SDCO	**Great Sand Dun**	**5.90**	**183**		Pn	**Pn**	**20 20 17.5**	**+2.7**
P17A	**Butcher Ranch,**	**5.90**	**227**		Pn	**Pn**	**20 20 16.1**	**+1.3**
HVU	**Hansel Valley**	**5.91**	**254**		Pn	**Pn**	**20 20 15.6**	**+0.7**
PV14	**Lion Creek, Pa**	**6.02**	**210**		Pn	**Pn**	**20 20 18.2**	**+1.7**
SRU	**San Rafael Swe**	**6.06**	**223**		Pn	**Pn**	**20 20 17.4**	**+0.4**
PV17	**East Wray Mesa**	**6.08**	**209**		Pn	**Pn**	**20 20 17.9**	**+0.7**
TMUT	**Trail Mountain**	**6.28**	**228**		Pn	**Pn**	**20 20 21.2**	**+1.0**
I10CA	**LAC DU BONNET**	**9.06**	**40**	*i*			21 13 05.0	
	baz=220,slow=310,SNR=8.2							
ULM	**Lac du Bonnet**	**9.16**	**41**		Pn	**Pn**	**20 20 58.5**	**-0.8**
	comp=N,0.6nm,0.3s,baz=230,slow=12,SNR=5.0							
ULM					Lg	Lg	20 23 35.5	
	comp=N,0.2nm,0.3s,baz=104,slow=15,SNR=3.8							
ULM	**Lac du Bonnet**	**9.16**	**41**			**Pn**	**20 20 57.7**	**-1.6**
NVAR	**Mina Array Bea**	**11.20**	**247**		Pn	**Pn**	**20 21 28.0**	**+0.4**
	comp=N,0.0nm,0.3s,baz=55,slow=13,SNR=1.5							

JMA 21 20:20:24.0±0.1,**30°28N**×**141°37E**,**h48**km,**M3.8,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**3.09**	**335**	*e*S	Sn	20 21 45.7	-0.3
JHJ2	**Mitsune**	**3.12**	**335**	P	Pn	20 21 12.6	+1.9
CBIJ	**Chichi jima**	**3.25**	**167**	P	Pn	20 21 13.9	+1.4
CBIJ				S	Sn	20 21 51.2	+1.2
BSO1	**Boso 1**	**4.37**	**356**	P	Pn	20 21 30.6	+3.2
BSO1				S	Sn	20 22 20.4	+3.6
BSO3	**Boso 3**	**4.57**	**351**	P	Pn	20 21 32.4	+2.1
BSO4	**Boso 4**	**4.78**	**350**	P	Pn	20 21 35.8	+2.5
JOD2	**Odawara 2**	**5.33**	**339**	P	Pn	20 21 43.4	+2.4
JRY	**Ryogami san**	**6.08**	**341**	P	Pn	20 21 53.3	+1.9
JAG	**Ashikaga**	**6.33**	**346**	P	Pn	20 21 55.3	+0.5
JHO	**Hitachi**	**6.35**	**354**	P	Pn	20 21 56.0	+1.0

ISK ***21*** *20:20:39.6,33°.77N×32°.99E,h84km,ML3.6/14*
HLW ***21*** *20:20:39.1,33°.93N×32°.84E,h15km±15km,Md3.5*
NIC ***21*** *20:20:40.7±0.0,33°.81N×32°.80E,h25km±2km,Ml3.6/7*
GII ***21*** *20:20:41.4±0.3,33°.84N×32°.82E,h40km,MD2.8/8*
ISC 21 20:20:39.6±1.1,**33°.83N**±0°.02×**32°.85E**±0°.03,**h15**km±9km,
n69,σ0s66/96,1C-2D,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSC2	**CSNet OBS 4**	**0.90**	**213**	⇓P	**Pg**	**20 20 57.3**	**+0.3**
OSC2				S	**Sg**	**20 21 10.3**	**+1.6**
SZAC	**Souni**	**0.92**	**2**	⇑P	**Pn**	**20 20 58.1**	**0.0**
SZAC				S	**Sn**	**20 21 12.2**	**+1.0**
SZAC				AML	AML	20 21 14.6	
	15nm,0.4s						
SZAC				AML	AML	20 21 14.6	
	15nm,0.4s						
SZAC				AML	AML	20 21 15.2	
	9.6nm,0.4s						
SZAC				AML	AML	20 21 15.2	
	9.6nm,0.4s						
NATA	**Nata**	**0.98**	**346**	P	**Pn**	**20 20 58.9**	**+0.1**
NATA				S	**Sn**	**20 21 13.7**	**+1.2**
NATA				AML	AML	20 21 17.0	
	13nm,0.4s						
NATA				AML	AML	20 21 17.0	
	13nm,0.4s						
NATA				AML	AML	20 21 19.5	
	6.5nm,0.8s						
NATA				AML	AML	20 21 19.5	
	6.5nm,0.8s						
ASGA	**Asgata**	**1.01**	**19**	⇓P	**Pn**	**20 20 59.3**	**0.0**
ASGA				S	**Sn**	**20 21 14.0**	**+0.7**
ASGA				AML	AML	20 21 14.7	
	6.4nm,0.3s						
ASGA				AML	AML	20 21 14.7	
	6.4nm,0.3s						
ASGA				AML	AML	20 21 16.2	
	11nm,0.4s						
ASGA				AML	AML	20 21 16.2	
	11nm,0.4s						
CSS	**Mathiatis**	**1.20**	**19**	PN	**Pn**	**20 21 01.9**	**0.0**
CSS				SN	**Sn**	**20 21 18.9**	**+1.0**
CSS	**Mathiatis**	**1.20**	**19**	Pg	**Pn**	**20 21 01.8**	**0.0**
CSS	**Mathiatis**	**1.20**	**19**	P	**Pn**	**20 21 01.9**	**0.0**
AKMS	**Akamas**	**1.26**	**340**	P	**Pn**	**20 21 01.7**	**-1.0**
AKMS				S	**Sn**	**20 21 19.4**	**-0.1**
AKMS				AML	AML	20 21 22.6	
	1.6nm,0.4s						
AKMS				AML	AML	20 21 22.6	
	1.6nm,0.4s						
AKMS				AML	AML	20 21 30.3	
	2.3nm,0.2s						
AKMS				AML	AML	20 21 30.3	
	2.3nm,0.2s						
AKIN	**Akıncılar- Kıb**	**1.29**	**23**	PN	**Pg**	**20 21 03.6**	**-0.8**
LEF	**Lefka**	**1.29**	**1**	PN	**Pg**	**20 21 03.8**	**-0.6**
LEF				SN	**Sg**	**20 21 22.0**	**+0.8**
ALFC	**Alefka**	**1.34**	**351**	P	**Pn**	**20 21 03.8**	**0.0**
ALFC				S	**Sn**	**20 21 21.5**	**+0.1**
ALFC				AML	AML	20 21 22.7	
	3.0nm,0.3s						
ALFC				AML	AML	20 21 22.7	
	3.0nm,0.3s						
ALFC				AML	AML	20 21 26.9	
	3.4nm,0.2s						
ALFC				AML	AML	20 21 26.9	
	3.4nm,0.2s						
MVOU	**Mavrovouni**	**1.35**	**28**	P	**Pg**	**20 21 04.7**	**-0.9**
MVOU				S	**Sg**	**20 21 24.0**	**+0.8**
MVOU				AML	AML	20 21 26.3	
	1.2nm,0.5s						
MVOU				AML	AML	20 21 26.3	
	1.2nm,0.5s						
MVOU				AML	AML	20 21 28.4	
	1.1nm,0.5s						
MVOU				AML	AML	20 21 28.4	
	1.1nm,0.5s						
OSC1	**CSNet OBS 1**	**1.35**	**256**	P	**Pn**	**20 21 02.8**	**-1.2**
OSC1				S	**Sn**	**20 21 20.6**	**-1.1**
ATHAL	**Athalassa**	**1.38**	**19**	P	**Pg**	**20 21 06.5**	**+0.2**
ATHAL				AML	AML	20 21 34.2	
	5.0nm,0.8s						
ATHAL				AML	AML	20 21 39.1	
	3.5nm,0.4s						
AKDN	**Akdeniz- Kıbrı**	**1.47**	**4**	PN	**Pb**	**20 21 06.5**	**-0.1**
PARAL	**Paralimni**	**1.52**	**40**	P	**Pb**	**20 21 07.2**	**-0.3**
PARAL				S	**Sg**	**20 21 27.0**	**-1.7**
LFK	**Lefkose**	**1.55**	**21**	PN	**Pn**	**20 21 07.2**	**+0.4**
HNTI	**Hanita**	**2.08**	**110**	Pn	**Pn**	**20 21 14.0**	**0.0**
OFRI	**`Ofer**	**2.16**	**123**	Pn	**Pn**	**20 21 15.0**	**-0.1**
BLGI	**Bet Lehem HaGe**	**2.24**	**118**	Pn	**Pn**	**20 21 16.7**	**+0.5**
BLGI					Sn	**20 21 44.1**	**+0.4**
DQRL	**Deir Qamar**	**2.27**	**92**	*e*P	**Pb**	**20 21 19.7**	**-0.6**
MMC7	**Mount Meron ar**	**2.27**	**110**	Pn	**Pn**	**20 21 16.9**	**+0.2**
MMC7				Sn	**Sn**	**20 21 45.0**	**+0.5**
MMA0B	**Mount Meron ar**	**2.28**	**110**	Pn	**Pn**	**20 21 18.0**	**+1.1**
TEKE	**Tekeli-Mersin**	**2.32**	**5**	PN	**Pn**	**20 21 18.1**	**+0.8**
AKKU	**Akkuyu-Mersin**	**2.39**	**14**	PN	**Pn**	**20 21 18.9**	**+0.6**
TISA	**Tisan-Mersin**	**2.42**	**16**	PN	**Pn**	**20 21 19.1**	**+0.4**
SLTI	**Sal'it**	**2.43**	**130**	Pn	**Pn**	**20 21 18.7**	**-0.1**
SLTI					Sn	**20 21 48.1**	**-0.1**
GEM	**Giv'at Ha'Em**	**2.43**	**104**	Pn	**Pn**	**20 21 19.4**	**+0.6**
GAZI	**Gazipasa**	**2.44**	**350**	PN	**Pn**	**20 21 20.2**	**+1.2**
YESI	**Yesilovacik-Me**	**2.45**	**15**	PN	**Pn**	**20 21 19.5**	**+0.4**
KARG	**Kargicak-Mersi**	**2.47**	**16**	PN	**Pn**	**20 21 19.5**	**+0.1**
NATI	**Neve Ativ**	**2.47**	**102**	Pn	**Pn**	**20 21 19.8**	**+0.4**
NATI					Sn	**20 21 48.8**	**-0.6**
IKL	**Isikli**	**2.50**	**16**	PN	**Pn**	**20 21 20.5**	**+0.7**
RCY	**Rachaya**	**2.51**	**97**	*e*P	**Pn**	**20 21 20.4**	**+0.4**
BERE	**Bereket-Mersin**	**2.53**	**7**	PN	**Pn**	**20 21 20.9**	**+0.6**
MMLI	**Mount Malkishu**	**2.56**	**122**	Pn	**Pn**	**20 21 21.0**	**+0.3**
MMLI					Sn	**20 21 51.5**	**-0.2**
HWQ	**Hawqa**	**2.61**	**79**	*e*P	**Pn**	**20 21 21.6**	**+0.3**
TEVE	**Tevekalti-Mers**	**2.65**	**10**	PN	**Pn**	**20 21 22.3**	**+0.4**
KEBE	**Keben-Mersin**	**2.71**	**15**	PN	**Pn**	**20 21 23.2**	**+0.5**
HMDT	**Nahal Hemdat**	**2.74**	**124**	Pn	**Pn**	**20 21 23.7**	**+0.6**
HMDT					Sn	**20 21 56.5**	**+0.5**
ALAN	**Alanya-ANTALYA**	**2.80**	**346**	PN	**Pn**	**20 21 25.3**	**+1.4**
AMAZ	**Amatzia**	**2.88**	**142**	Pn	**Pn**	**20 21 25.2**	**+0.2**
AMAZ					Sn	**20 21 58.9**	**-0.4**
AMAZ	**Amatzia**	**2.88**	**142**	P	**Pn**	**20 21 25.5**	**+0.6**
AMAZ				S	**Sn**	**20 21 59.5**	**+0.2**
DSI	**Dead Sea**	**3.10**	**136**	Pn	**Pn**	**20 21 28.4**	**+0.4**
YTIR	**Yattir**	**3.11**	**142**	Pn	**Pn**	**20 21 28.5**	**+0.2**
YTIR					Sn	**20 22 05.5**	**+0.2**
KZIT	**Kziot**	**3.19**	**155**	Pn	**Pn**	**20 21 29.6**	**+0.3**
KZIT					Sn	**20 22 07.1**	**-0.1**
MDBI	**Mazsada**	**3.28**	**139**	Pn	**Pn**	**20 21 31.3**	**+0.8**
KRMN	**Karaman**	**3.35**	**6**	PN	**Pn**	**20 21 31.9**	**+0.3**
GHAJ	**Ghor Haditha**	**3.41**	**137**	Pn	**Pn**	**20 21 33.5**	**+1.3**
KRTS	**Karatas**	**3.43**	**36**	PN	**Pn**	**20 21 32.3**	**-0.2**
YAYL	**Yayladag**	**3.46**	**50**	PN	**Pn**	**20 21 32.1**	**-1.0**
ZFRI	**Zfri**	**3.81**	**148**	Pn	**Pn**	**20 21 38.0**	**+0.2**
KARA	**Karaisali**	**3.87**	**27**	PN	**Pn**	**20 21 38.5**	**-0.1**
HHAG	**Hagoal**	**3.92**	**190**	P	**Pn**	**20 21 39.6**	**+0.3**
	baz=190						
PRNI	**Paran**	**3.92**	**152**	Pn	**Pn**	**20 21 39.5**	**+0.2**
PRNI					Sn	**20 22 25.0**	**-0.1**
SUZ	**Suez**	**3.98**	**180**	P	**Pn**	**20 21 40.5**	**+0.4**
	baz=181						
KOT	**Kottamia**	**3.99**	**193**	P	**Pn**	**20 21 40.6**	**+0.3**
	baz=193						
KRMI	**Paran Flat**	**4.03**	**156**	Pn	**Pn**	**20 21 41.0**	**+0.2**
KRMI					Sn	**20 22 27.6**	**-0.2**
HLW	**Helwan**	**4.16**	**198**	P	**Pn**	**20 21 43.6**	**+1.0**
	baz=198						
HRFI	**Mount Harif**	**4.21**	**153**	Pn	**Pn**	**20 21 43.6**	**+0.2**
HRFI					Sn	**20 22 32.2**	**-0.1**
HMYD	**Mayadein**	**4.38**	**204**	P	**Pn**	**20 21 46.5**	**+0.8**
	baz=204						
MBRI	**Mt Berech**	**4.39**	**156**	Pn	**Pn**	**20 21 46.2**	**+0.4**
MBRI					Sn	**20 22 37.0**	**+0.2**
EIL	**Elat**	**4.51**	**156**	Pn	**Pn**	**20 21 47.6**	**+0.1**
ZAF	**Zafarana**	**4.54**	**183**	P	**Pn**	**20 21 48.4**	**+0.6**
	baz=184						
ZAF					S	**Sn**	**20 22 39.1**	**-1.2**
	baz=184						
HNAT	**Natroun**	**4.60**	**205**	P	**Pn**	**20 21 49.4**	**+0.8**
	baz=205						
HNAT					S	**Sn**	**20 22 40.0**	**-1.7**
	baz=205						
HBST	**Basata**	**4.87**	**160**	P	**Pn**	**20 21 53.1**	**+0.7**
	baz=160						
RYAN	**Fayoum**	**5.22**	**206**	P	**Pn**	**20 21 57.3**	**+0.1**
	baz=206						
NBNS	**Bani Suef**	**5.36**	**195**	P	**Pn**	**20 21 59.3**	**+0.2**
	baz=195						
TAMRE	**El Minia**	**6.35**	**196**	P	**Pn**	**20 22 13.1**	**+0.4**
	baz=196						

IDC ***21*** *20:27:40.2±1.0,43°.91N×105°.61W,h0km,mb1 3.7/5,*
mb1mx3.5/39,mbtmp3.4/5,ML3.0/4,Error ellipse:
s-maj=22.2km s-min=8.0km az=149.0
NEIC ***21*** *20:27:41.6±2.1,43°.70N±0°.05×105°.43W±0°.06,h0km±2km,*
ML3.6/96,Error ellipse: s-maj=9.3km s-min=6.9km
az=321.0
ISC 21 20:27:39.7±0.8,**43°.62N**±0°.04×**105°.31W**±0°.04,**h0**km,**n103,**
σ1s74/99,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.05**	**61**		**Pg**	**20 27 59.4**	**-0.4**
K22A	**Casper**	**1.31**	**223**		**Pg**	**20 28 04.8**	**-0.1**
PHWY	**Pilot Hill**	**2.32**	**183**		**Pn**	**20 28 21.5**	**+2.1**
RWWY	**Rawlins**	**2.38**	**217**		**Pn**	**20 28 22.8**	**+2.5**
RWWY				IAML		20 28 56.1	
	470nm,1.0s						
RWWY				IAML		20 28 58.8	
	745nm,1.0s						
N23A	**Red Feather La**	**2.76**	**190**		**Pn**	**20 28 27.6**	**+2.1**
N23A				IAML		20 29 09.6	
	comp=E,199nm,1.0s						
N23A				IAML		20 29 20.3	
	comp=N,221nm,0.9s						
LAO	**LASA Array**	**3.14**	**348**		**Pn**	**20 28 30.2**	**-0.3**
RLMT	**Red Lodge**	**3.21**	**299**		**Pn**	**20 28 32.1**	**+0.5**
RLMT				IAML		20 30 09.8	
	comp=N,126nm,1.2s						
BW06	**Boulder Array**	**3.22**	**256**		**Pn**	**20 28 32.8**	**+1.1**
PD31	**Pinedale Array**	**3.22**	**256**		**Pn**	**20 28 32.2**	**+0.5**
PDAR	**Pinedale Array**	**3.22**	**256**	Pn	**Pn**	**20 28 32.7**	**+0.9**
	comp=N,6.8nm,0.3s,baz=73,slow=14,SNR=44						
PDAR				Lg	Lg	20 29 17.0	
	comp=N,38nm,0.3s,baz=69,slow=36,SNR=19						
YNE	**Yellowstone No**	**3.65**	**294**		**Pn**	**20 28 38.1**	**+0.5**
YMP	**Mirror Lake Pl**	**3.66**	**290**		**Pn**	**20 28 38.7**	**+0.8**
LKWY	**Lake**	**3.79**	**286**		**Pn**	**20 28 41.7**	**+2.1**
LKWY				IAML		20 29 42.3	
	comp=N,115nm,1.6s						
GCMT	**Greycliff**	**3.79**	**306**		**Pn**	**20 28 38.7**	**-0.8**
ISCO	**Idaho Springs**	**3.82**	**184**		**Pn**	**20 28 42.3**	**+2.2**
H17A	**Grant Village**	**3.88**	**283**		**Pn**	**20 28 43.1**	**+2.3**
YUF	**Upper Falls**	**3.90**	**288**		**Pn**	**20 28 44.3**	**+3.2**
FLWY	**Flagg Ranch**	**3.93**	**279**		**Pn**	**20 28 42.6**	**+1.1**
FLWY				IAML		20 29 57.6	
	comp=N,103nm,1.9s						
FLWY				IAML		20 30 01.9	
	comp=N,101nm,1.1s						
SNOW	**Snow King Moun**	**3.96**	**270**		**Pn**	**20 28 41.9**	**0.0**
SNOW				IAML		20 29 58.8	
	comp=N,172nm,1.1s						
SNOW				IAML		20 29 59.1	
	comp=N,137nm,0.9s						
YNR	**Norris Junctio**	**4.02**	**288**		**Pn**	**20 28 45.6**	**+2.9**
YPP	**Pitchstone Pla**	**4.02**	**281**		**Pn**	**20 28 44.1**	**+1.3**
YNM	**Yellowstone No**	**4.04**	**288**	Pn	**Pn**	**20 28 46.2**	**+3.3**
REDW	**Red Top Meadow**	**4.04**	**268**		**Pn**	**20 28 44.9**	**+1.9**
REDW				IAML		20 29 55.6	
	comp=N,151nm,1.3s						
REDW				IAML		20 30 07.8	
	comp=N,126nm,1.2s						
IMW	**Indian Meadow**	**4.09**	**276**		**Pn**	**20 28 45.1**	**+1.4**
IMW				IAML		20 30 02.7	
	comp=N,104nm,0.7s						
TPAW	**Teton Pass**	**4.10**	**270**		**Pn**	**20 28 45.4**	**+1.5**
TPAW				IAML		20 30 13.9	
	comp=N,99nm,1.0s						
O20A	**White River Ci**	**4.11**	**213**		**Pn**	**20 28 44.8**	**+0.9**
O20A				IAML		20 30 02.4	
	comp=E,132nm,1.2s						
O20A				IAML		20 30 30.0	
	comp=N,126nm,2.1s						
FXWY	**Fox Creek**	**4.15**	**272**	Pn	**Pn**	**20 28 45.1**	**+0.5**
YHH	**Holmes Hill**	**4.15**	**288**	Pn	**Pn**	**20 28 45.2**	**+0.6**
YMR	**Madison River**	**4.21**	**286**		**Pn**	**20 28 47.1**	**+1.9**
AHID	**Auburn Hatcher**	**4.32**	**261**		**Pn**	**20 28 47.9**	**+1.1**
AHID				IAML		20 30 01.2	
	comp=E,140nm,1.2s						
AHID				IAML		20 30 03.1	
	comp=N,122nm,0.9s						
YHB	**Horse Butte**	**4.38**	**287**		**Pn**	**20 28 49.9**	**+2.2**
RDMU	**Red Mountain**	**4.40**	**228**	Pn	**Pn**	**20 28 47.9**	**0.0**
YHL	**Hebgen Lake**	**4.40**	**288**		**Pn**	**20 28 48.6**	**+0.7**
E28A	**Huff**	**4.41**	**46**		**Pn**	**20 28 47.8**	**-0.1**
QLMT	**Earthquake Lak**	**4.56**	**288**		**Pn**	**20 28 51.2**	**+1.0**
SMCO	**Snowmass**	**4.61**	**196**		Pn	20 28 56.6	+5.6
SMCO				IAML		20 30 15.7	
	comp=N,60nm,0.9s						
SMCO				IAML		20 30 18.2	
	comp=N,80nm,1.1s						
Q24A	**Divide**	**4.65**	**178**		Pn	20 28 57.3	+5.8
Q24A				IAML		20 30 08.4	
	comp=E,48nm,1.2s						
SUSD	**Miller**	**4.65**	**78**		**Pn**	**20 28 54.5**	**+3.3**
K31A	**O'Neill**	**4.90**	**99**	Pn	**Pb**	**20 29 07.5**	**+1.2**
DGMT	**Dagmar**	**4.92**	**9**	Pn	**Pn**	**20 28 55.0**	**+0.2**
BOZ	**Bozeman (W)**	**4.93**	**296**		Pn	20 29 00.0	+4.9
BOZ				IAML		20 30 33.6	
	comp=E,33nm,1.9s						
KSCO	**Kaye Shedlock'**	**5.03**	**155**		**Pb**	**20 29 05.9**	**-2.7**
HWUT	**Hardware Ranch**	**5.04**	**249**		**Pn**	**20 28 57.5**	**+0.9**
HWUT				IAML		20 30 29.4	
	comp=E,75nm,0.8s						
HWUT				IAML		20 30 39.9	
	comp=E,65nm,0.9s						
TCUT	**Toone Canyon**	**5.16**	**243**		**Pn**	**20 28 58.9**	**+0.4**
EGMT	**Eagleton**	**5.39**	**326**		**Pn**	**20 29 02.1**	**+0.6**
JLU	**Jordanelle**	**5.47**	**239**		**Pn**	**20 29 03.0**	**+0.3**
DLMT	**Dillon**	**5.50**	**291**		**Pn**	**20 29 05.0**	**+2.1**
DLMT				IAML		20 30 35.7	
	comp=E,40nm,0.9s						
DLMT				IAML		20 31 45.1	
	comp=E,35nm,3.4s						
LRM	**Limekiln Ridge**	**5.55**	**296**		**Pn**	**20 29 04.6**	**+0.9**
HRY	**Holter Researc**	**5.55**	**306**		**Pn**	**20 29 03.1**	**-0.6**
MCMT	**McKenzie Canyo**	**5.55**	**285**		**Pn**	**20 29 06.8**	**+3.0**
CTU	**Camp Tracy**	**5.61**	**241**		**Pn**	**20 29 04.8**	**+0.3**
PV22	**Blue Mesa, Par**	**5.72**	**209**		**Pn**	**20 29 07.6**	**+1.6**
PV22				IAML		20 30 56.9	
	comp=N,34nm,1.2s						
PV22				IAML		20 30 57.5	
	comp=E,48nm,0.9s						
BGNE	**Belgrade**	**5.73**	**110**		**Pb**	**20 29 22.9**	**+2.4**
PV07	**Paradox Valley**	**5.76**	**207**		**Pn**	**20 29 08.1**	**+1.5**
PV07				IAML		20 31 06.1	
	comp=E,33nm,1.3s						
PV07				IAML		20 31 11.8	
	comp=N,32nm,1.1s						
SPUT	**South Promonto**	**5.76**	**249**		**Pn**	**20 29 08.0**	**+1.4**
PV15	**Paradox Valley**	**5.79**	**206**		**Pn**	**20 29 08.2**	**+1.1**
HVU	**Hansel Valley**	**5.80**	**254**		**Pn**	**20 29 07.5**	**+0.3**
P17A	**Butcher Ranch,**	**5.81**	**226**		**Pn**	**20 29 09.3**	**+2.0**
MDND	**Maddock**	**5.82**	**41**		**Pb**	**20 29 24.9**	**+3.0**
SDCO	**Great Sand Dun**	**5.87**	**182**		**Pn**	**20 29 10.8**	**+2.7**
PV23	**Carpenter Ridg**	**5.87**	**210**		**Pn**	**20 29 09.5**	**+1.3**
PV04	**Paradox Valley**	**5.88**	**209**		**Pn**	**20 29 09.9**	**+1.6**
BCYI	**Bear Canyon**	**5.89**	**280**		**Pn**	**20 29 09.3**	**+0.9**
PV12	**Saucer Basin,**	**5.92**	**208**		**Pn**	**20 29 10.7**	**+1.9**
MPU	**Maple Canyon**	**5.94**	**235**		**Pn**	**20 29 10.0**	**+0.9**
PV14	**Lion Creek, Pa**	**5.95**	**209**		**Pn**	**20 29 10.5**	**+1.3**
PV10	**Paradox Valley**	**5.95**	**210**		**Pn**	**20 29 12.2**	**+3.0**
PV20	**West Nyswonger**	**5.95**	**209**	Pn	**Pn**	**20 29 11.1**	**+1.8**
PV11	**David Mesa, Pa**	**5.96**	**208**		**Pn**	**20 29 10.5**	**+1.2**
PV16	**Nyswonger Mesa**	**5.96**	**208**		**Pn**	**20 29 11.1**	**+1.8**
SRU	**San Rafael Swe**	**5.97**	**223**		**Pn**	**20 29 10.7**	**+1.2**
S22A	**4UR Ranch, Cre**	**5.98**	**192**	Pn	**Pn**	**20 29 12.3**	**+2.6**
PV19	**Morning Glory**	**5.99**	**209**		**Pn**	**20 29 10.9**	**+1.1**
PV03	**Paradox Valley**	**5.99**	**208**		**Pn**	**20 29 11.4**	**+1.6**
PV02	**Paradox Valley**	**6.00**	**207**		**Pn**	**20 29 11.2**	**+1.3**
PV17	**East Wray Mesa**	**6.01**	**209**		**Pn**	**20 29 12.1**	**+2.1**
PV01	**Paradox Valley**	**6.01**	**205**		**Pn**	**20 29 12.2**	**+2.1**
PV18	**Skein Mesa, Pa**	**6.02**	**208**		**Pn**	**20 29 11.9**	**+1.7**
PV13	**Radium Mtn., P**	**6.07**	**207**		**Pn**	**20 29 12.5**	**+1.7**
TMUT	**Trail Mountain**	**6.19**	**228**		**Pn**	**20 29 13.9**	**+1.3**
ECSD	**EROS Data Cent**	**6.31**	**86**	Pn	**Pb**	**20 29 30.3**	**0.0**
BGU	**Big Grassy Mou**	**6.33**	**247**		**Pn**	**20 29 16.0**	**+1.7**
CBKS	**Cedar Bluff**	**6.38**	**137**		**Pb**	**20 29 29.1**	**-2.4**
Q16A	**Castle Valley**	**6.45**	**225**		**Pn**	**20 29 17.0**	**+1.0**
T25A	**Trinidad**	**6.51**	**174**		Pn	20 29 22.3	+5.5
DUG	**Dugway, Tooele**	**6.56**	**241**	Pn	**Pn**	**20 29 18.5**	**+0.9**
HLID	**Hailey**	**6.61**	**273**	Pn	**Pn**	**20 29 20.5**	**+2.3**
MVCO	**Mesa Verde**	**6.85**	**202**	Pn	**Pn**	**20 29 25.2**	**+3.7**
MSO	**Missoula**	**6.89**	**301**	Pn	**Pn**	**20 29 23.2**	**+1.2**
MSU	**Marysvale**	**7.28**	**228**		**Pn**	**20 29 29.4**	**+1.9**
MVU	**Marysvale**	**7.30**	**228**	Pn	**Pn**	**20 29 29.6**	**+1.8**
TCRU	**Three Creeks R**	**7.35**	**230**		**Pn**	**20 29 29.4**	**+0.9**
MTPU	**Mount Pierson**	**7.63**	**225**		**Pn**	**20 29 33.6**	**+1.2**
MFID	**Camas Ranch**	**7.65**	**272**	Pn	**Pn**	**20 29 35.0**	**+2.5**
PLID	**Pearl Lake**	**7.80**	**285**	Pn	**Pn**	**20 29 37.3**	**+2.7**
ELK	**Elko**	**7.91**	**252**	Pn	**Pn**	**20 29 37.9**	**+1.7**
	comp=N,0.2nm,0.3s,baz=59,slow=17,SNR=3.9						
ELK					Sn	**20 31 06.2**	**-0.4**

TNSS				S		**Sb**	**20 40 56.8**	**-1.0**
	3.1nm,0.5s							
DJR	**Jarkent**	**1.36**	**36**	*eP*		**Pn**	**20 40 41.9**	**+0.2**
	1.9nm,0.2s							
DJR				*eS*		**Sn**	**20 41 00.2**	**-0.1**
	8.3nm,0.3s							
DJR	**Jarkent**	**1.36**	**36**	P		**Pn**	**20 40 41.8**	**+0.1**
	1.7nm,0.3s							
DJR				S		**Sn**	**20 41 00.2**	**-0.1**
	8.3nm,0.3s							
CHKK	**Chushkaly**	**1.38**	**297**	*eP*		**Pg**	**20 40 43.0**	**+0.9**
	1.7nm,0.2s							
CHKK				*eS*		**Sg**	**20 41 02.3**	**+2.4**
	8.4nm,0.2s							
CHKK	**Chushkaly**	**1.38**	**297**	P		**Pg**	**20 40 43.0**	**+0.9**
CHKK				S		**Sg**	**20 41 02.3**	**+2.4**
KTBS	**Karatobe**	**1.53**	**289**	*eP*		**Pn**	**20 40 43.8**	**-0.2**
	1.7nm,0.2s							
KTBS				*eS*		**Sn**	**20 41 03.6**	**-0.7**
	16nm,0.4s							
KTBS	**Karatobe**	**1.53**	**289**	P		**Pn**	**20 40 43.6**	**-0.3**
	1.3nm,0.2s							
KTBS				S		**Sn**	**20 41 03.7**	**-0.7**
	16nm,0.4s							
KDJ	**Kajisay**	**1.56**	**225**	⇑ *iP*		**Pg**	**20 40 47.5**	**+1.8**
	baz=20							
KDJ				⇑ *iS*		**Sg**	**20 41 07.7**	**+1.7**
	baz=20							
MTBS	**Maitube**	**1.65**	**267**	*eP*		**Pg**	**20 40 47.6**	**+0.3**
	3.9nm,0.2s							
MTBS				*eS*		**Sg**	**20 41 10.2**	**+1.5**
	11nm,0.2s							
MTBS	**Maitube**	**1.65**	**267**	P		**Pg**	**20 40 47.6**	**+0.3**
	3.9nm,0.2s							
MTBS				S		**Sg**	**20 41 10.4**	**+1.7**
	11nm,0.2s							
ULHL	**Ulahol**	**2.05**	**242**	⇓ *iP*		**Pb**	**20 40 54.0**	**+0.3**
	baz=39							
ULHL				⇓ *iS*		**Sb**	**20 41 18.3**	**-1.4**
	baz=39							
KAPS	**Kapalarasan**	**2.11**	**13**	*eP*		**Pb**	**20 40 53.4**	**-1.2**
	1.1nm,0.4s							
KAPS				*eS*		**Sb**	**20 41 20.0**	**-1.1**
	2.8nm,0.2s							
KAPS	**Kapalarasan**	**2.11**	**13**	Pg		**Pb**	**20 40 54.3**	**-0.3**
	1.1nm,0.4s							
KAPS				Lg		Lg	20 41 21.6	
	2.8nm,0.2s							
BOOM	**Boomskoye usch**	**2.15**	**251**	⇑ *iP*		**Pb**	**20 40 55.3**	**-0.1**
	baz=48							
BOOM				⇑ *iS*		**Sb**	**20 41 20.9**	**-1.5**
	baz=48							
TKM2	**Tokmak 2**	**2.28**	**263**	⇓ *iP*		**Pb**	**20 40 57.0**	**-0.6**
	baz=61							
TKM2				⇓ *iS*		**Sn**	**20 41 23.4**	**+0.3**
	baz=61							
TKM2	**Tokmak 2**	**2.28**	**263**	⇑ Pg		**Pb**	**20 40 57.8**	**+0.1**
	1.2nm,0.5s							
TKM2				⇑ Lg		Lg	20 41 28.8	
	2.4nm,0.5s							
KBK	**Karagaybulak**	**2.80**	**259**	⇑ *eP*		**Pb**	**20 41 04.2**	**-2.3**
	baz=57							
KBK				⇑ *iS*		**Sn**	**20 41 36.1**	**+0.2**
	baz=57							

*IDC **21** 20:40:16.9±1.0,2˝.01N×126˝.84E, h0km, mb4.0/8, mb1 4.2/8, mb1mx3.8/33, mbtmp4.1/8, Error ellipse: s-maj=108.1km s-min=16.7km az=71.0*
*DJA **21** 20:40:22.8±0.4,2˝N±4˝×12˝7E±˝, h10km, M4.2/10, mB5.1/1, mb4.4/6, MLv4.1/10, Mw(mB)4.5/1*
*NEIC **21** 20:40:24.0±2.2, 1˝.89N±0˝.09×126˝.68E±0˝.08, h58km±9km, mb4.4/28, Error ellipse: s-maj=14.8km s-min=9.6km az=218.0*

ISC 21 20:40:23.4±0.5,**1˝.96N**±0˝.06×**126˝.69E**±0˝.07,**h47**km,**n56,**
σ1§**18**/57,**mb4.4**/18,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36**	**150**	P	**Pn**	**20 40 46.2**	**+0.1**
TNTI				S	**Sn**	**20 41 01.9**	**-1.1**
TNTI	**Ternate**	**1.36**	**150**		**Pn**	**20 40 46.2**	**+0.1**
SGSI	**Sangihe**	**2.07**	**326**	P	**Pn**	**20 40 56.3**	**+0.6**
KMSI	**Cibinong**	**3.04**	**243**	P	**Pn**	**20 41 08.5**	**-0.5**
GTOI	**Gorontalo**	**3.90**	**250**	P	**Pn**	**20 41 21.5**	**+0.6**
LUWI	**Luwuk**	**4.92**	**233**	P	**Pn**	**20 41 36.1**	**+1.2**
LUWI	**Luwuk**	**4.92**	**233**	Pn	**Pn**	**20 41 35.7**	**+0.7**
MRSI	**Marisa**	**4.97**	**253**	P	**Pn**	**20 41 36.9**	**+1.4**
APSI	**Ampana**	**5.79**	**241**	P	**Pn**	**20 41 49.0**	**+2.2**
	0.1nm41nm,0.7s						
TOLI2	**Tolitoli**	**5.96**	**262**	Pn	**Pn**	**20 41 47.4**	**-1.8**
FAKI	**Fak Fak**	**7.38**	**131**	Pn	**Pn**	**20 42 10.5**	**+1.8**
TTSI	**Tana Toraja**	**8.48**	**234**	P	**Pn**	**20 42 23.6**	**-0.1**
	10nm,0.7s						
MYLDM	**Lahad Datu**	**8.77**	**292**	Pn	Pn	20 42 32.9	+5.2
BNSI	**Bone**	**9.12**	**226**	P	**Pn**	**20 42 33.2**	**+0.7**
	9.9nm,0.6s						
KKM	**Kota Kinabalu**	**11.20**	**292**	Pn	**Pn**	**20 43 04.7**	**+3.5**
SOEI	**Soe**	**11.89**	**192**	P	**Pn**	**20 43 11.6**	**+1.1**
MTN	**Manton Dam**	**15.36**	**163**	Pn	**Pn**	**20 43 57.3**	**+0.1**
MTN				IAmb	IAmb	20 44 07.9	
	comp=Z,22nm,1.4s						
KNRA	**Kununurra**	**17.65**	**173**		**Pn**	**20 44 24.5**	**-1.5**
KNRA				IAmb	IAmb	20 44 59.1	
	comp=Z,43nm,1.6s						
FITZ	**Fitzroy Crossi**	**19.96**	**183**	P	**P**	**20 44 52.0**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=11,slow=13,SNR=7.1						
FITZ	**Fitzroy Crossi**	**19.96**	**183**	P	**P**	**20 44 49.1**	**-2.7**
CISI	**Cisompet, Garu**	**21.07**	**243**	P	**P**	**20 45 05.4**	**+1.5**
CISI				IAmb	IAmb	20 45 39.8	
	comp=Z,42nm,1.0s						
TNG	**Tangerang**	**21.58**	**248**	P	P	20 45 26.1	+17
TPUB	**Ta-pu**	**22.01**	**345**	P	**P**	**20 45 13.2**	**-0.7**
TPUB				IAmb	IAmb	20 45 17.1	
	comp=Z,20nm,0.9s						
SSLB	**Suanglung**	**22.39**	**346**	P	**P**	**20 45 17.8**	**-0.3**
SSLB				IAmb	IAmb	20 45 20.7	
	comp=Z,25nm,1.2s						
COEN	**Coen**	**22.75**	**135**	P	**P**	**20 45 22.4**	**+0.6**
COEN				IAmb	IAmb	20 45 31.3	
	comp=Z,16nm,1.4s						
WB0	**Warramunga Arr**	**22.88**	**161**	P	**P**	**20 45 21.5**	**-1.7**
WRAB	**Tennant Creek**	**23.02**	**161**	P	**P**	**20 45 23.3**	**-1.3**
WRAB				IAmb	IAmb	20 45 28.0	
	comp=Z,6.9nm,0.5s						
WRA	**Warramunga Arr**	**23.03**	**161**	P	**P**	**20 45 23.5**	**-1.2**
	comp=Z,5.3nm,0.5s,baz=339,slow=11,SNR=63						
WRA				PcP	**PcP**	**20 49 13.7**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=337,slow=2.2,SNR=4.6						
WRA	**Warramunga Arr**	**23.03**	**161**	P	**P**	**20 45 23.1**	**-1.6**
WB2	**Warramunga Arr**	**23.03**	**161**	P	**P**	**20 45 23.4**	**-1.3**
WB2				IAmb	IAmb	20 45 28.1	
	comp=Z,8.2nm,0.6s						
WR0	**Warramunga Arr**	**23.11**	**161**	P	**P**	**20 45 24.3**	**-1.2**
WR0				IAmb	IAmb	20 45 27.5	
	comp=Z,5.2nm,0.5s						
AS31	**Alice Springs**	**26.42**	**165**	P	**P**	**20 45 54.9**	**-1.1**
ASAR	**Alice Springs**	**26.43**	**165**	P	**P**	**20 45 55.5**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=346,slow=13,SNR=19						
ASAR				PcP	**PcP**	**20 49 21.2**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=346,slow=2.4,SNR=4.6						
ASAR	**Alice Springs**	**26.43**	**165**	P	**P**	**20 45 56.4**	**+0.4**
GSI	**Gununguitoli**	**29.11**	**269**	P	**P**	**20 46 18.1**	**-2.0**
MORW	**Morawa**	**32.50**	**198**	P	**P**	**20 46 50.2**	**+0.4**
BBOO	**Buckleboo**	**35.70**	**166**	P	**P**	**20 47 16.9**	**-0.6**
NWAO	**Narrogin (SRO)**	**35.83**	**194**	P	**P**	**20 47 17.1**	**-1.6**
STKA	**Stephens Creek**	**36.51**	**158**	P	**P**	**20 47 23.8**	**-0.6**
	comp=Z,1.3nm,0.4s,baz=353,slow=8.3,SNR=4.8						
STKA	**Stephens Creek**	**36.51**	**158**	IAmb	IAmb	20 47 28.3	
	comp=Z,1.8nm,1.4s						
SHL	**Shillong**	**40.90**	**308**	P	**P**	**20 48 00.0**	**-1.6**
SHL				IAmb	IAmb	20 48 04.0	
	comp=Z,4.4nm,0.8s						
LSA	**Lhasa**	**43.58**	**313**	P	**P**	**20 48 24.5**	**+0.8**
SONM	**Songino Array**	**48.95**	**342**	P	**P**	**20 49 05.3**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=155,slow=8.1,SNR=8.1						
SONM	**Songino Array**	**48.95**	**342**	P	**P**	**20 49 04.4**	**-0.8**
WMQ	**Urumqi**	**54.15**	**326**	*eP*	**P**	**20 49 45.8**	**+1.8**
MK31	**Makanchi Array**	**58.98**	**326**	P	**P**	**20 50 18.1**	**-0.2**
MK31				IAmb	IAmb	20 50 18.8	
	comp=Z,5.0nm,1.4s						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**20 50 18.2**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=121,slow=8.1,SNR=45						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**20 50 17.9**	**-0.4**
MKAR				PcP	**PcP**	**20 51 07.6**	**+0.6**
MAKZ	**Makanchi**	**59.16**	**326**	P	**P**	**20 50 19.4**	**-0.1**
MAKZ				IAmb	IAmb	20 50 46.1	
	comp=Z,6.8nm,1.4s						
GAR	**Garm**	**63.09**	**313**	P	**P**	**20 50 45.8**	**-0.7**
KURK	**Kurchatov**	**63.20**	**328**	P	**P**	**20 50 46.5**	**-0.3**
ABKAR	**Akbulak array**	**73.49**	**321**	P	**P**	**20 51 51.1**	**0.0**
ABKAR	**Akbulak array**	**73.49**	**321**	P	**P**	**20 51 50.6**	**-0.6**
ARU	**Arti**	**76.40**	**328**	P	**P**	**20 52 08.3**	**+0.5**
ARU				IAmb	IAmb	20 52 10.4	
	comp=Z,3.9nm,0.9s						
VNDA	**Vanda**	**81.69**	**173**	P	**P**	**20 52 37.0**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=328,slow=4.0,SNR=4.3						
FINES	**FINESS Array B**	**93.36**	**332**	P	**P**	**20 53 34.2**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=90,slow=8.3,SNR=3.8						

*IDC **21** 21:05:09.9±1.7,5˝.77S×152˝.12E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/42, mbtmp3.8/5, MS3.1/4, Ms1 3.1/4, ms1mx2.7/34, Error ellipse: s-maj=51.1km s-min=13.3km az=102.0*
*NEIC **21** 21:05:17.9±1.5, 5˝.46S±0˝.08×151˝.76E±0˝.09, h64km±8km, mb4.2/24, Error ellipse: s-maj=14.1km s-min=9.3km az=126.0*

ISC 21 21:05:16.2±0.6,**5˝.45S**±0˝.07×**151˝.79E**±0˝.09,**h45**km,**n42,**
σ1§**58**/38,**mb4.2**/13,**MS3.1**/3,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.16**	**12**	Pg	**Pn**	**21 05 38.5**	**+2.4**
	415nm,0.3s,baz=232,slow=3.1,SNR=197						
KRVT				Lg	Lg	21 05 56.8	
	636nm,0.3s,baz=12,slow=20,SNR=9.4						
KRVT				LR	LR	21 06 13.0	
	comp=Z,527nm,18.2s,baz=131,slow=44						
RABL	**Rabaul**	**1.30**	**16**		**Pn**	**21 05 40.4**	**+2.3**
PMG	**Port Moresby**	**6.05**	**229**	Pn	**Pn**	**21 06 46.5**	**+3.3**
	2.8nm,0.3s,baz=71,slow=8.6,SNR=5.5						
PMG				Sn	**Sn**	**21 07 49.9**	**-1.3**
	3.7nm,0.3s,baz=137,slow=19,SNR=2.4						
PMG	**Port Moresby**	**6.05**	**229**	Pn	**Pn**	**21 06 46.4**	**+3.2**
JAY	**Jayapura**	**11.44**	**284**	LR	LR	21 12 31.4	
	comp=Z,41nm,20.4s,baz=208,slow=37						
COEN	**Coen**	**11.98**	**224**	Pn	**Pn**	**21 08 05.2**	**+0.7**
SANVU	**Saraoutou**	**18.11**	**124**	P	**P**	**21 09 24.0**	**-0.5**
SANVU				IAmb	IAmb	21 09 29.0	
	comp=Z,23nm,0.9s						
FAKI	**Fak Fak**	**19.65**	**277**	P	**P**	**21 09 41.1**	**-0.5**
FAKI				IAmb	IAmb	21 09 58.4	
	comp=Z,6.9nm,1.0s						
EIDS	**Eidsvold**	**19.82**	**182**	P	**P**	**21 09 43.6**	**+0.3**
EIDS				IAmb	IAmb	21 09 45.7	
	comp=Z,6.9nm,1.1s						
WB0	**Warramunga Arr**	**22.12**	**228**	P	**P**	**21 10 08.7**	**+0.6**
WR0	**Warramunga Arr**	**22.13**	**228**	P	**P**	**21 10 10.0**	**+1.8**
WC3	**Warramunga Arr**	**22.25**	**228**	P	**P**	**21 10 09.7**	**+0.2**
WRAB	**Tennant Creek**	**22.25**	**228**	P	**P**	**21 10 11.1**	**+1.5**
WB2	**Warramunga Arr**	**22.26**	**228**	P	**P**	**21 10 09.2**	**-0.4**
WRA	**Warramunga Arr**	**22.27**	**228**	P	**P**	**21 10 09.6**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=52,slow=9.8,SNR=12						
WRA	**Warramunga Arr**	**22.27**	**228**	P	**P**	**21 10 05.4**	**-4.3**
KNRA	**Kununurra**	**24.79**	**244**	P	**P**	**21 10 35.7**	**+1.5**
KNRA				IAmb	IAmb	21 10 54.4	
	comp=Z,9.6nm,0.9s						
ARMA	**Armidale**	**24.84**	**180**	P	**P**	**21 10 33.4**	**-1.2**
ASAR	**Alice Springs**	**25.00**	**222**	P	**P**	**21 10 37.4**	**+1.3**
	comp=Z,1.7nm,0.7s,baz=59,slow=8.8,SNR=19						
ASAR	**Alice Springs**	**25.00**	**222**	P	**P**	**21 10 35.6**	**-0.5**
TNTI	**Ternate**	**25.16**	**283**	P	**P**	**21 10 37.0**	**-0.7**
TNTI				IAmb	IAmb	21 10 50.6	
	comp=Z,9.2nm,0.8s						
FUNA	**Funafuti**	**27.37**	**98**	P	**P**	**21 10 57.7**	**+0.2**
FITZ	**Fitzroy Crossi**	**28.47**	**242**	P	**P**	**21 11 07.3**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=66,slow=7.5,SNR=9.8						
FITZ	**Fitzroy Crossi**	**28.47**	**242**	IAmb	IAmb	21 11 22.7	
	comp=Z,2.5nm,0.8s						
DAV	**Davao City (W)**	**28.97**	**295**	LR	LR	21 22 11.3	
	comp=Z,44nm,18.9s,baz=170,slow=35						
BBOO	**Buckleboo**	**30.93**	**206**	P	**P**	**21 11 27.9**	**-1.1**
BBOO				IAmb	IAmb	21 11 37.3	
	comp=Z,4.9nm,1.1s						
TOLI2	**Tolitoli**	**31.65**	**281**	P	**P**	**21 11 34.7**	**-0.8**
TOLI2				IAmb	IAmb	21 11 52.3	
	comp=Z,6.1nm,1.1s						
KAPI	**Kappang**	**31.91**	**269**	LR	LR	21 25 59.6	
	comp=Z,41nm,18.2s,baz=82,slow=39						
TOO	**Toolangi**	**32.49**	**189**	P	**P**	**21 11 40.2**	**-2.4**
TOO				IAmb	IAmb	21 11 53.2	
	comp=Z,3.6nm,0.9s						
FORT	**Forrest**	**33.66**	**219**	P	**P**	**21 11 52.4**	**-0.5**
URZ	**Urewera**	**39.95**	**148**	LR	LR	21 25 02.6	
	comp=Z,41nm,21.7s,baz=146,slow=30						
OXZ	**Oxford**	**41.74**	**158**	P	**P**	**21 13 02.7**	**+1.7**
OXZ				IAmb	IAmb	21 13 07.5	
	comp=Z,6.9nm,0.8s						
JNU	**Nakatsue**	**43.19**	**334**	P	**P**	**21 13 10.7**	**-2.2**
JSD	**Sado**	**45.06**	**345**	P	**P**	**21 13 27.4**	**-0.4**
SONM	**Songino Array**	**66.34**	**328**	P	**P**	**21 16 01.8**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=137,slow=5.0,SNR=4.3						
SONM	**Songino Array**	**66.34**	**328**	P	**P**	**21 16 01.6**	**+1.1**
ILAR	**Eielson Array**	**83.13**	**22**	P	**P**	**21 17 38.1**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=258,slow=4.5,SNR=2.7						
ILAR	**Eielson Array**	**83.13**	**22**	P	**P**	**21 17 36.6**	**-0.5**
MCARA	**McCarthy VSAT**	**83.19**	**26**	P	**P**	**21 17 36.5**	**-1.0**
COLD	**Coldfoot**	**83.20**	**19**	P	**P**	**21 17 36.9**	**-0.5**
COLD				IAmb	IAmb	21 17 56.7	
	comp=Z,1.1nm,0.9s						
CTGM	**Chitina Glacie**	**83.78**	**27**	P	**P**	**21 17 41.2**	**+0.5**
CTGM				IAmb	IAmb	21 18 00.2	
	comp=Z,7.2nm,1.0s						
TORD	**Torodi Ar. Bea**	**149.54**	**287**	PKPbc	**PKPbc**	**21 25 02.2**	**+0.4**
	comp=Z,2.2nm,0.7s,baz=75,slow=3.3,SNR=14						

*IDC **21** 21:07:35.1±1.1,28˝.03N×101˝.63E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.4/54, mbtmp3.6/6, ML3.9/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/36, Error ellipse: s-maj=30.8km s-min=18.5km az=73.0*
*BJI **21** 21:07:36.3±0.0, 27˝.92N×101˝.40E, h12km, ML3.5/14*
*NEIC **21** 21:07:36.4±1.5, 27˝.92N±0˝.08×101˝.54E±0˝.09, h10km±1km, mb4.4/17, Error ellipse: s-maj=14.2km s-min=13.3km az=317.0*

ISC 21 21:07:36.0±0.6,**27˝.98N**±0˝.04×**101˝.43E**±0˝.06,**h10**km,**n31,**
σ1§**62**/35,**mb4.3**/12,**Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.07**	**157**	*ePn*	**Pn**	**21 08 24.8**	**-0.1**
KMI				Pg	**Pg**	**21 08 33.0**	**-2.0**
KMI				Sg	**Sb**	**21 09 10.0**	**+1.4**
KMI				smax	smax		
	comp=N,150nm,0.7s						
KMI				smax	smax		
	comp=E,160nm,0.9s						
KMI	**Kunming**	**3.07**	**157**	Pn	**Pn**	**21 08 25.1**	**+0.3**
CD2	**Chengdu**	**3.56**	**34**	Pn	**Pb**	**21 08 35.8**	**-3.4**
CD2				Sn	**Sb**	**21 09 20.9**	**-1.6**
CD2				Sg	**Sg**	**21 09 33.8**	**+3.3**
CD2				smax	smax		
	comp=N,350nm,1.1s						
CD2				smax	smax		
	comp=E,580nm,1.0s						
GYA	**Guiyang**	**4.90**	**107**	Pn	**Pn**	**21 08 52.3**	**+2.4**
GYA				Sn	**Sn**	**21 09 49.6**	**+2.8**
GYA				Sg	**Sg**	**21 10 16.0**	**+2.5**
GYA				smax	smax		
	comp=N,37nm,1.2s						
GYA				smax	smax		
	comp=E,36nm,1.1s						
SLVN	**Son La**	**6.99**	**161**	Pn	**Pn**	**21 09 17.7**	**-0.8**
ENH	**Enshi**	**7.41**	**70**	Pn	**Pn**	**21 09 23.9**	**-0.4**
XAN	**Xi'an**	**8.82**	**45**	P	Pn	21 09 49.9	+6.2
XAN				smax	smax		
	comp=N,64nm,1.3s						
XAN				smax	smax		
	comp=E,47nm,1.2s						
CMAR	**Chiang Mai Arr**	**9.74**	**194**	Pn	**Pn**	**21 09 57.9**	**+1.6**
	0.3nm,0.3s,baz=9.6,slow=12,SNR=2.2						
CMAR				Pg		21 10 36.4	
	0.2nm,0.3s,baz=6.2,slow=18,SNR=14						
CMAR				Lg	Lg	21 12 49.4	
	0.5nm,0.3s,baz=11,slow=31,SNR=6.1						
SSLB	**Suanglung**	**18.06**	**99**		**Pn**	**21 11 46.3**	**-0.9**
SSLB				IAmb	IAmb	21 12 01.4	
	comp=Z,18nm,1.1s						
YHNB	**Yeheng**	**18.18**	**96**		**Pn**	**21 11 47.4**	**-1.3**
WMQ	**Urumqi**	**19.29**	**329**	*eP*	**P**	**21 12 02.1**	**+1.1**
MKAR	**Makanchi Array**	**24.05**	**326**	P	**P**	**21 12 52.8**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=132,slow=10,SNR=17						
MK31	**Makanchi Array**	**24.06**	**326**	P	**P**	**21 12 53.2**	**+1.8**
KSRS	**Korea Array**	**24.15**	**60**	P	**P**	**21 12 51.3**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=242,slow=11,SNR=2.3						
MAKZ	**Makanchi**	**24.22**	**326**	P	**P**	**21 12 54.4**	**+1.5**
HIA	**Hailar**	**25.50**	**29**	P	**P**	**21 13 05.1**	**+0.7**
HIA				IAmb	IAmb	21 13 22.8	
	comp=Z,4.9nm,0.7s						
JNU	**Nakatsue**	**25.83**	**71**	P	**P**	**21 13 07.4**	**-0.3**
JNU				IAmb	IAmb	21 13 20.7	
	comp=Z,14nm,1.1s						
AAK	**Ala-Archa**	**26.26**	**311**	P	**P**	**21 13 12.0**	**+0.4**
GSI	**Gununguitoli**	**26.78**	**189**	P	**P**	**21 13 15.8**	**-0.5**
JHS	**Saijyo**	**27.84**	**67**	P	**P**	**21 13 23.8**	**-1.9**
JHS				IAmb	IAmb	21 13 42.4	
	comp=Z,8.0nm,0.9s						
KURBB	**Kurchatov Arra**	**28.51**	**329**	P	**P**	**21 13 32.2**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=143,slow=8.7,SNR=7.2						
PETK	**Petropavlovsk-**	**48.06**	**42**	LR	LR	21 37 14.5	
	comp=Z,28nm,18.6s,baz=116,slow=37						
WRA	**Warramunga Arr**	**57.30**	**143**	P	**P**	**21 17 24.0**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=331,slow=7.9,SNR=17						
WB2	**Warramunga Arr**	**57.30**	**143**	P	**P**	**21 17 24.2**	**0.0**
WB2				IAmb	IAmb	21 17 24.9	
	comp=Z,3.9nm,1.0s						
WC3	**Warramunga Arr**	**57.33**	**143**	P	**P**	**21 17 23.8**	**-0.6**
WC3				IAmb	IAmb	21 17 25.5	
	comp=Z,4.6nm,1.1s						
WR0	**Warramunga Arr**	**57.42**	**142**	P	**P**	**21 17 24.6**	**-0.4**
WR0				IAmb	IAmb	21 17 25.6	
	comp=Z,3.2nm,1.1s						
CSS	**Mathiatis**	**57.51**	**295**	P	**P**	**21 17 26.2**	**+0.6**
COEN	**Coen**	**58.08**	**130**	P	**P**	**21 17 27.1**	**-2.7**
MORW	**Morawa**	**58.42**	**165**	P	**P**	**21 17 32.4**	**+0.5**
MORW				IAmb	IAmb	21 17 38.9	
	comp=Z,2.6nm,0.8s						
ARD1	**ARCESS Array S**	**59.17**	**337**	P	**P**	**21 17 38.8**	**+2.1**
ASAR	**Alice Springs**	**60.14**	**145**	P	**P**	**21 17 44.3**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=326,slow=6.9,SNR=2.2						

*IDC **21** 21:43:21.7±7.5, 16˝.80S×174˝.89W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/26, mbtmp3.9/3, Error ellipse: s-maj=327.4km s-min=37.8km az=141.0*
*NEIC **21** 21:43:25.4±2.0, 16˝.80S±0˝.09×174˝.97W±0˝.08, h41km±7km, mb4.7/36, Error ellipse: s-maj=13.1km s-min=10.6km az=172.0*

ISC 21 21:43:24.8±0.5,**16˝.83S**±0˝.09×**174˝.95W**±0˝.08,**h35**km,**n49,**
σ1§**19**/48,**mb4.5**/20,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.22**	**47**	Pn	**Pn**	**21 44 26.6**	**-0.1**
NIUE	**Niue**	**5.28**	**116**	Pn	**Pn**	**21 44 41.3**	**0.0**
MSVF	**Nonsavu**	**6.74**	**261**	Pn	**Pn**	**21 45 01.3**	**-0.2**
FUNA	**Funafuti**	**10.03**	**325**	Pn	**Pn**	**21 45 46.5**	**0.0**
SANVU	**Saraoutou**	**17.20**	**272**	Pn	**Pn**	**21 47 21.2**	**-1.3**
SANVU				IAmb	IAmb	21 47 28.4	
	comp=Z,27nm,1.0s						
DZM	**Mont Dzumac**	**18.30**	**250**		**Pn**	**21 47 36.4**	**+0.3**
MXZ	**Matakaoa Point**	**21.49**	**195**	P	**P**	**21 48 09.8**	**-0.7**
MXZ				IAmb	IAmb	21 48 20.4	
	comp=Z,54nm,1.1s						
URZ	**Urewera**	**22.46**	**197**	P	**P**	**21 48 20.8**	**-0.1**
URZ				IAmb	IAmb	21 48 26.8	
	comp=Z,14nm,1.2s						
BFZ	**Birch Farm**	**24.96**	**196**	P	**P**	**21 48 46.7**	**+1.7**
BFZ				IAmb	IAmb	21 48 55.8	
	comp=Z,13nm,1.0s						
MSWZ	**Moikau Station**	**25.92**	**197**	P	**P**	**21 48 51.0**	**-2.7**
QRZ	**Quartz Range**	**26.25**	**202**	P	**P**	**21 48 58.9**	**+2.2**
QRZ				IAmb	IAmb	21 49 12.2	
	comp=Z,48nm,1.1s						
CMWZ	**Cape Campbell**	**26.52**	**198**	P	**P**	**21 48 57.1**	**-2.1**
FOZ	**Fox Glacier**	**29.59**	**203**	P	**P**	**21 49 28.1**	**+1.5**
PMG	**Port Moresby**	**37.58**	**276**	P	**P**	**21 50 36.2**	**0.0**
PMG				IAmb	IAmb	21 50 40.0	
	comp=Z,18nm,1.1s						
WB0	**Warramunga Arr**	**48.04**	**258**	P	**P**	**21 51 59.3**	**-1.8**
WB2	**Warramunga Arr**	**48.06**	**258**	P	**P**	**21 52 02.3**	**+1.0**
WRAB	**Tennant Creek**	**48.07**	**258**	P	**P**	**21 52 00.4**	**-0.9**
WRAB				IAmb	IAmb	21 52 10.4	
	comp=Z,5.6nm,1.1s						
WRA	**Warramunga Arr**	**48.

KEF5				S	Sg	21 52 28.3	+0.5
KEF4	**Livadi, Kephal**	**0.38**	**326**	P	Pg	21 52 22.4	-0.2
KEF4				S	Sb	21 52 28.6	-0.4
DMLN	**Damoulianata-K**	**0.39**	**320**	P	Pb	21 52 23.4	-0.1
DMLN				S	Sg	21 52 28.7	+0.6
FSK	**Fiskardo**	**0.53**	**349**	P	Pg	21 52 24.9	-0.4
FSK				S	Sb	21 52 33.1	-0.2
EVGI	**Lefkada island**	**0.68**	**357**	P	Pg	21 52 27.7	-0.4
EVGI				S	Sb	21 52 37.9	+0.3

*TIR **21** 21:52:53.0,41′.08N×20′.20E,h11km±1km,Md2.9*
*BEO **21** 21:52:54.6±0.6,41′.00N×20′.10E,h0km,ML2.6/13*
*PDG **21** 21:52:54.9±0.3,41′.12N×20′.01E,h2km,ML2.6/13,Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*SKO **21** 21:52:54.4,41′.08N×20′.12E,h11km*

ISC 21 21:52:54.2±1.1,**41°.07N**±0′.03×**20°.11E**±0′.02,**h6**km±9km, **n66,σ1§09/96,14C-6D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**326**	*e*Pg	**Pg**	**21 53 00.5**	**-0.2**
TIR				*e*Sg	**Sg**	**21 53 06.6**	**+1.6**
TIR	**Tirane**	**0.33**	**326**	⇑P	**Pg**	**21 53 00.5**	**-0.2**
TIR				⇓S	**Sg**	**21 53 05.8**	**+0.8**
TIR	**Tirane**	**0.33**	**326**	P	**Pg**	**21 53 00.5**	**-0.2**
	baz=318						
TIR				S	**Sb**	**21 53 06.8**	**-1.4**
	baz=318						
OHR	**Ohrid**	**0.52**	**85**	*i* Pg	**Pg**	**21 53 04.2**	**-0.1**
OHR				*i* Sg	**Sg**	**21 53 12.2**	**+1.1**
OHR				*e*Lg	Lg	21 53 12.4	
	comp=N,822nm,0.4s						
OHR				*e*Lg	Lg	21 53 12.6	
	comp=E,638nm,0.5s						
PHP	**Peshkopia**	**0.66**	**22**	P	**Pg**	**21 53 05.8**	**-1.1**
	baz=16						
PHP				S	**Sg**	**21 53 15.6**	**0.0**
	baz=16						
PUK	**Puka**	**0.98**	**351**	P	**Pg**	**21 53 12.5**	**-0.6**
	baz=347						
PUK				S	**Sb**	**21 53 27.3**	**+0.2**
	baz=347						
LSK	**Leskovik**	**0.99**	**158**	P	**Pg**	**21 53 12.2**	**-1.1**
	baz=161						
LSK				S	**Sb**	**21 53 26.8**	**-0.4**
	baz=161						
ULC	**Ulcinj**	**1.10**	**324**	⇑*i*Pg	**Pg**	**21 53 14.0**	**-1.3**
ULC				*i* Sg	**Sb**	**21 53 30.2**	**-0.2**
SRN	**Sarande**	**1.19**	**184**	P	**Pg**	**21 53 16.9**	**-0.1**
	baz=188						
SRN				S	**Sn**	**21 53 34.4**	**+0.4**
	baz=188						
BCI	**Bajram Curri**	**1.29**	**359**	P	**Pn**	**21 53 18.2**	**-0.7**
	baz=356						
BCI				S	**Sn**	**21 53 37.1**	**+0.5**
	baz=356						
DRME	**Dracevica, Mon**	**1.31**	**328**	⇓*i*Pg	**Pn**	**21 53 17.6**	**-1.6**
DRME				*i* Sg	**Sn**	**21 53 37.1**	**+0.1**
DRME	**Dracevica, Mon**	**1.31**	**328**	*e*Pn	**Pn**	**21 53 17.5**	**-1.6**
SKO	**Skopje**	**1.34**	**48**	*e*Pg	**Pn**	**21 53 18.6**	**-1.0**
SKO				*e*Sg	**Sb**	**21 53 37.2**	**-0.2**
SKO	**Skopje**	**1.34**	**48**	*i* Pg	**Pn**	**21 53 18.8**	**-0.8**
PDG	**Podgorica**	**1.50**	**335**	*e*Pg	**Pn**	**21 53 21.8**	**+0.1**
PDG				*e*Sg	**Sg**	**21 53 45.0**	**+2.6**
PDG	**Podgorica**	**1.50**	**335**	⇓P	**Pb**	**21 53 22.2**	**-0.2**
PDG				⇑S	**Sg**	**21 53 42.7**	**+0.3**
PDG	**Podgorica**	**1.50**	**335**	*e*Pn	**Pn**	**21 53 20.7**	**-1.0**
TTG	**Podgorica**	**1.50**	**335**	⇑*i*Pg	**Pn**	**21 53 21.2**	**-0.5**
TTG				*i* Sg	**Sg**	**21 53 43.5**	**+1.1**
PVY	**Plav**	**1.53**	**356**	*e*Pg	**Pn**	**21 53 21.6**	**-0.6**
PVY				*i* Sg	**Sg**	**21 53 45.2**	**+1.9**
BUM	**Brajici-Budva**	**1.53**	**324**	⇑*i*Pg	**Pn**	**21 53 21.6**	**-0.6**
BUM				*i* Sg	**Sg**	**21 53 44.6**	**+1.3**
STIP	**Stip**	**1.68**	**68**	*i* Pg	**Pg**	**21 53 27.2**	**+0.8**
CEME	**Cevo**	**1.72**	**329**	*e*Pn	**Pn**	**21 53 25.5**	**+0.7**
CEME				*i* Sn	**Sg**	**21 53 50.6**	**+1.1**
IVA	**Berane**	**1.81**	**355**	⇑*i*Pn	**Pn**	**21 53 27.1**	**-0.7**
IVA				*i* Sn	**Sg**	**21 53 53.3**	**+1.0**
HCY	**Herceg Novi**	**1.83**	**319**	*e*Pn	**Pn**	**21 53 26.8**	**+0.5**
HCY				*i* Sn	**Sg**	**21 53 53.0**	**0.0**
HCY	**Herceg Novi**	**1.83**	**319**	*e*Pn	**Pn**	**21 53 26.2**	**-0.1**
KOME	**Kolasin**	**1.83**	**346**	*e*Pn	**Pb**	**21 53 27.5**	**-0.7**
KOME				*i* Sn	**Sg**	**21 53 53.6**	**+0.5**
NKME	**Niksic**	**1.90**	**333**	⇑*i*Pn	**Pb**	**21 53 28.4**	**-1.0**
NKME				*i* Sn	**Sg**	**21 53 55.2**	**-0.1**
NKY	**Niksic**	**1.93**	**335**	*e*Pn	**Pn**	**21 53 28.7**	**+1.0**
NKY				*i* Sn	**Sb**	**21 53 54.8**	**+0.5**
TREB	**Trebinje**	**2.10**	**322**	*e*Pn	**Pn**	**21 53 30.7**	**+0.7**
TREB				*e*Sn	**Sb**	**21 53 59.5**	**+0.3**
TREB	**Trebinje**	**2.10**	**322**	*e*Pn	**Pn**	**21 53 30.1**	**+0.1**
BRY	**Bratogost**	**2.17**	**328**	⇑*i*Pn	**Pn**	**21 53 32.2**	**+1.1**
BRY				*i* Sn	**Sb**	**21 54 00.7**	**-0.6**
BRY	**Bratogost**	**2.17**	**328**	*e*Pn	**Pb**	**21 53 33.1**	**-0.9**
SJES	**Sjenica**	**2.19**	**357**	*e*Pn	**Pb**	**21 53 34.5**	**+0.2**
SJES				*e*Sn	**Sb**	**21 54 02.3**	**+0.5**
SJES	**Sjenica**	**2.19**	**357**	*e*Pn	**Pb**	**21 53 33.4**	**-0.9**
BOSS	**Bosilegrad**	**2.27**	**50**	*e*Pn	**Pb**	**21 53 35.0**	**-0.7**
SELS	**Selova**	**2.27**	**19**	*e*Pn	**Pb**	**21 53 34.4**	**-1.3**
UPM	**Unac-Piva**	**2.31**	**338**	⇓*i*Pn	**Pn**	**21 53 34.1**	**+1.1**
UPM				*i* Sn	**Sb**	**21 54 05.1**	**-0.2**
UPM	**Unac-Piva**	**2.31**	**338**	*e*Pn	**Pb**	**21 53 35.3**	**-1.1**
PLE	**Pljevlja**	**2.32**	**347**	⇓*i*Pn	**Pn**	**21 53 34.3**	**+1.2**
PLE				*e*Sn	**Sb**	**21 54 05.4**	**-0.1**
IVAS	**Ivanjica**	**2.50**	**1**	*e*Pn	**Pb**	**21 53 37.7**	**-1.9**
STON	**Ston**	**2.54**	**316**	*e*Pn	**Pn**	**21 53 36.5**	**+0.5**
STON				*e*Sn	**Sn**	**21 54 08.2**	**+0.9**
STON	**Ston**	**2.54**	**316**	*e*Pn	**Pn**	**21 53 36.0**	**+0.1**
MATE	**Matera**	**2.62**	**262**	⇑P	**Pn**	**21 53 39.0**	**+2.0**
MATE				⇓S	**Sb**	**21 54 14.2**	**+0.4**
BBLS	**Lazići**	**2.84**	**350**	*e*Pn	**Pn**	**21 53 42.4**	**+2.2**
BBLS	**Lazići**	**2.84**	**350**	*e*Pn	**Pn**	**21 53 42.4**	**+2.2**
GRUS	**Gruza**	**2.85**	**9**	*e*Pn	**Pn**	**21 53 42.4**	**+2.1**
ZAPS	**Zavoj**	**2.89**	**40**	*e*Pn	**Pb**	**21 53 44.0**	**-2.2**
LSTV	**Lastovo**	**2.94**	**306**	*e*Pn	**Pn**	**21 53 41.2**	**-0.3**
DIVS	**Divibare**	**3.03**	**358**	*e*Pn	**Pn**	**21 53 45.4**	**+2.6**
DIVS	**Divibare**	**3.03**	**358**	*e*Pn	**Pn**	**21 53 41.7**	**-1.1**
HAPS	**Han Pijesak,Bl**	**3.13**	**345**	*e*Pn	**Pb**	**21 53 47.6**	**-2.8**
HAPS	**Han Pijesak,Bl**	**3.13**	**345**	*e*Pn	**Pn**	**21 53 45.0**	**+0.8**
ZAGS	**Zajecar**	**3.16**	**29**	*e*Pn	**Pn**	**21 53 46.3**	**+1.8**
BLKB	**Belogradchik**	**3.18**	**36**	⇑S	**Sn**	**21 54 24.0**	**+0.8**
MAKA	**Makarska**	**3.19**	**315**	*e*Pn	**Pn**	**21 53 44.9**	**0.0**
RICI	**Ricice**	**3.28**	**319**	*e*Pn	**Pn**	**21 53 46.3**	**+0.2**
MDVR	**Moldovita**	**3.89**	**17**	⇑S	**Sn**	**21 54 40.6**	**-0.1**
MDVR	**Moldovita**	**3.89**	**17**	⇑P	**Pn**	**21 53 55.1**	**+0.5**
KIJV	**Kijevo**	**4.01**	**318**	*e*Pn	**Pn**	**21 53 56.8**	**+0.6**
FRGS	**Fruska Gora**	**4.09**	**357**	*e*Pn	**Pn**	**21 53 59.9**	**+2.6**
ZIRJ	**Zirje**	**4.20**	**309**	*e*Pn	**Pn**	**21 53 58.3**	**-0.5**
MORI	**Morici**	**4.29**	**312**	*e*Pn	**Pn**	**21 54 00.3**	**+0.3**
BZS	**Buzias**	**4.67**	**13**	⇑P	**Pn**	**21 54 06.4**	**+1.1**
DUGI	**Dugi Otok**	**4.74**	**310**	*e*Pn	**Pn**	**21 54 06.5**	**+0.3**
GZR	**Gura Zlata**	**4.74**	**23**	⇑P	**Pn**	**21 54 06.3**	**+0.1**
NVLJ	**Novalja**	**5.20**	**314**	*e*Pn	**Pn**	**21 54 12.8**	**+0.3**

IDC 21 21:56:03.1±2.2,**1°.90N**×**126°.13E**,**h0**km,**mb3.1**/3, **mb1 3.3**/3,**mb1mx3.2**/23,**mbtmp3.1**/3,**Error ellipse: s-maj=180.5km s-min=28.4km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.15**	**160**	P	P	22 01 11.0	-0.3
	0.3nm,0.5s,baz=339,slow=11,SNR=9.1						
ASAR	**Alice Springs**	**26.51**	**164**	P	P	22 01 43.1	+0.6
	0.1nm,0.5s,baz=345,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	**58.73**	**326**	P	P	22 06 02.6	-0.2
	0.1nm,0.5s,baz=125,slow=7.4,SNR=1.6						

IDC 21 21:56:42.9±2.2,**1°.89N**×**126°.64E**,**h0**km,**mb3.4**/3, **mb1 3.6**/3,**mb1mx3.4**/23,**mbtmp3.4**/3,**Error ellipse: s-maj=174.6km s-min=27.8km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.98**	**161**	P	P	22 01 49.8	+0.4
	0.6nm,0.5s,baz=341,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.37**	**165**	P	P	22 02 20.8	-0.3
	0.3nm,0.4s,baz=340,slow=7.1,SNR=7.7						
MKAR	**Makanchi Array**	**59.01**	**326**	P	P	22 06 44.5	-0.1
	0.3nm,0.6s,baz=128,slow=8.4,SNR=2.6						

*IDC **21** 22:08:25.4±2.6,14′.01S×76°.20W,h0km,mb4.1/1, mb1 4.0/2,mb1mx3.5/32,mbtmp3.9/2,ML3.6/1,MS3.2/4, Ms1 3.2/4,ms1mx2.9/34,Error ellipse: s-maj=127.5km s-min=43.5km az=16.0*
*NEIC **21** 22:08:26.2±2.3,15′.10S±0′.09×76°.3W±0′.1,h10km±2km, mb4.1/2,Error ellipse: s-maj=25.7km s-min=10.0km az=241.0*

ISC 21 22:08:25.0±1.2,**15°.24S**±0′.09×**76°.4W**±0′.1,**h10**km,**n30, σ1§98/24,mb4.1/3,MS3.2/3,Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.26**	**353**	Pn	**Pn**	**22 09 16.5**	**+0.2**
NNA				Sn	**Sn**	**22 09 52.1**	**-3.1**
PB16	**IPOC Station P**	**7.30**	**116**	Pn	**Pn**	**22 10 13.8**	**+1.4**
PSGCX	**Pisagua**	**7.41**	**127**	Pn	**Pn**	**22 10 14.6**	**+1.1**
MNMC	**Minye Minye**	**7.58**	**122**	Pn	**Pn**	**22 10 17.5**	**+1.5**
PB11	**IPOC Station P**	**7.87**	**126**	Pn	**Pn**	**22 10 20.9**	**+1.1**
TA01	**Diego Aracena**	**7.96**	**133**	Pn	**Pn**	**22 10 22.3**	**+1.5**
TA01				Sn	**Sn**	**22 11 49.8**	**-1.2**
LPAZ	**La Paz**	**8.05**	**99**	Pn	**Pn**	**22 10 24.8**	**+2.1**
	0.4nm,0.3s,baz=288,slow=8.0,SNR=14						
LPAZ				Sn	Sn	22 12 00.3	+6.1
	0.1nm,0.3s,baz=273,slow=21,SNR=1.1						
LPAZ				LR	LR	22 13 38.5	
	comp=Z,92nm,20.2s,baz=262,slow=39						
PATCX	**Punta Patache**	**8.14**	**134**	Pn	**Pn**	**22 10 25.3**	**+1.8**
PATCX				Sn	**Sn**	**22 11 54.0**	**-1.7**
GO01	**Chusmiza**	**8.18**	**124**	Pn	**Pn**	**22 10 25.8**	**+1.4**
PB08	**IPOC Station P**	**8.47**	**126**	Pn	**Pn**	**22 10 29.6**	**+1.3**
PB08				Sn	**Sn**	**22 12 01.3**	**-2.8**
PB01	**IPOC Station P**	**8.76**	**132**	Pn	**Pn**	**22 10 33.9**	**+1.9**
PB01				Sn	**Sn**	**22 12 08.6**	**-2.3**
PB07	**IPOC Station P**	**8.95**	**137**	Pn	**Pn**	**22 10 36.0**	**+1.4**
PB07				Sn	**Sn**	**22 12 14.3**	**-1.3**
AC01	**Pan de Azucar**	**12.14**	**154**	Pn	**Pn**	**22 11 13.8**	**-4.4**
H03N1	**Juan Fernandez**	**18.26**	**187**	T	T	22 32 01.8	
	baz=9.0,slow=74,SNR=394						
H03N2	**Juan Fernandez**	**18.26**	**187**	T	T	22 31 58.3	
	baz=9.0,slow=74,SNR=473						
H03N3	**Juan Fernandez**	**18.28**	**187**	T	T	22 31 58.6	
	baz=9.0,slow=74,SNR=420						
CPUP	**Villa Florida**	**20.95**	**125**	LR	LR	22 22 49.2	
	comp=Z,45nm,19.2s,baz=296,slow=40						
PLCA	**Paso Flores**	**25.91**	**170**	P	**P**	**22 13 58.9**	**+1.5**
PLCA				IAmb	IAmb	22 14 33.0	
	comp=Z,2.9nm,1.1s						
BDFB	**Brasilia**	**27.38**	**95**	LR	LR	22 25 44.3	
	comp=Z,102nm,18.8s,baz=105,slow=38						
SJG	**San Juan**	**34.65**	**17**	LR	LR	22 29 19.2	
	comp=Z,48nm,21.7s,baz=262,slow=38						
TOA0	**Torodi Ar. Sit**	**82.27**	**74**	P	**P**	**22 20 47.0**	**-0.4**
TOA0				IAmb	IAmb	22 23 36.9	
	comp=Z,4.6nm,1.4s						
TORD	**Torodi Ar. Bea**	**82.27**	**74**	P	**P**	**22 20 46.7**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=260,slow=5.2,SNR=6.5						
TORD	**Torodi Ar. Bea**	**82.27**	**74**	P	**P**	**22 20 47.0**	**-0.4**
H11N3	**WAKE ISLAND Hyl**	**19.72**	**284**	T	T	00 38 35.3	
	baz=96,slow=74,SNR=101						
H11N2	**WAKE ISLAND Hyl**	**19.73**	**284**	T	T	00 38 38.4	
	baz=96,slow=74,SNR=82						
H11N1	**WAKE ISLAND Hyl**	**19.74**	**284**	T	T	00 38 41.2	
	baz=96,slow=74,SNR=45						
H11S2	**WAKE ISLAND Hyl**	**19.76**	**283**	T	T	00 38 41.2	
	baz=97,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hyl**	**19.77**	**283**	T	T	00 38 40.7	
	baz=97,slow=75,SNR=29						
H11S3	**WAKE ISLAND Hyl**	**19.78**	**283**	T	T	00 38 40.3	
	baz=97,slow=75,SNR=26						
WRA	**Warramunga Arr**	**133.77**	**222**	PKP	**PKiKP**	**22 27 46.9**	**+2.5**
	comp=Z,0.4nm,0.8s,baz=135,slow=2.9,SNR=4.6						

*IDC **21** 22:15:46.3±1.5,13′.76N×87°.47W,h0km,mb3.6/4, mb1 4.0/6,mb1mx3.7/43,mbtmp3.7/6,ML3.6/2,MS2.8/3, Ms1 2.8/3,ms1mx2.5/36,Error ellipse: s-maj=87.5km s-min=22.8km az=51.0*
*NEIC **21** 22:15:51.6±2.1,12°.89N±0′.07×88°.31W±0′.06,h72km±9km, mb4.3/22,Md4.0(SNET),Error ellipse: s-maj=11.2km s-min=7.3km az=201.0*
*UCR **21** 22:15:51.8±1.5,12°.86N×88°.35W,h57km±12km,ML3.9, mb4.3(NEIC)*
*INET **21** 22:15:51.4,12°.75N×88°.37W,h29km,ML4.1*
*SNET **21** 22:15:51.1±1.2,12°.77N×88°.37W,h49km±15km,ML4.0*

ISC 21 22:15:51.4±0.9,**12°.87N**±0′.07×**88°.32W**±0′.04,**h63**km±7km, **n110,σ1§10/128,mb4.2/15,20C-8D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**0.39**	**11**	⇑*i*P	**Pn**	**22 16 02.3**	**-0.4**
JUCU				*e*S	**Sn**	**22 16 11.0**	**+0.1**
JUCU				IAML		22 16 14.3	
	comp=Z,17µm,0.3s						
JUCU	**Jucuarįn**	**0.39**	**11**	⇑*i*P	**Pn**	**22 16 02.3**	**-0.4**
JUCU				*e*S	**Sn**	**22 16 11.0**	**+0.1**
JUCU				IAML		22 16 14.3	
	comp=Z,17µm,0.3s						
ALJI	**Alcalda de J**	**0.51**	**332**	⇑*i*P	**Pn**	**22 16 03.8**	**0.0**
ALJI				*e*S	**Sn**	**22 16 13.7**	**+0.9**
ALJI	**Alcalda de J**	**0.51**	**332**	⇑*i*P	**Pn**	**22 16 03.8**	**0.0**
ALJI				*e*S	**Sn**	**22 16 13.7**	**+0.9**
ALJI				*e*		22 16 13.7	
LCY	**Lacayo**	**0.55**	**3**	⇑*i*P	**Pn**	**22 16 04.7**	**+0.4**
LCY	**Lacayo**	**0.55**	**3**	⇑*i*P	**Pn**	**22 16 04.7**	**+0.4**
PACA	**Pacayal**	**0.59**	**0**	*e*P	**Pn**	**22 16 05.3**	**+0.5**
PACA				*e*S	**Sn**	**22 16 15.8**	**+1.2**
PACA	**Pacayal**	**0.59**	**0**	*e*P	**Pn**	**22 16 05.3**	**+0.5**
PACA				*e*S	**Sn**	**22 16 15.8**	**+1.2**
LCND	**La Caada**	**0.61**	**44**	⇑*i*P	**Pn**	**22 16 04.8**	**0.0**
LCND				*e*S	**Sn**	**22 16 15.4**	**+0.8**
LCND				IAML		22 16 19.0	
	comp=Z,29µm,0.6s						
LCND	**La Caada**	**0.61**	**44**	⇑*i*P	**Pn**	**22 16 04.8**	**0.0**
LCND				*e*S	**Sn**	**22 16 15.4**	**+0.8**
LCND				IAML		22 16 19.0	
	comp=Z,29µm,0.6s						
TECA	**Tecapa**	**0.64**	**344**	⇑*i*P	**Pn**	**22 16 05.5**	**+0.1**
TECA	**Tecapa**	**0.64**	**344**	⇑*i*P	**Pn**	**22 16 05.5**	**+0.1**
CSGN	**Cosiguina Volc**	**0.75**	**82**	Pn	**Pn**	**22 16 06.7**	**+0.1**
CSGN				Sn	**Sn**	**22 16 17.9**	**+0.1**
COEG	**Centro de Oper**	**0.92**	**324**	⇑*i*P	**Pn**	**22 16 08.7**	**0.0**
COEG				*e*S	**Sn**	**22 16 22.7**	**+1.3**
COEG				IAML		22 16 34.5	
	comp=Z,4µm,0.4s						
COEG	**Centro de Oper**	**0.92**	**324**	⇑*i*P	**Pn**	**22 16 08.7**	**0.0**
COEG				*e*S	**Sn**	**22 16 22.7**	**+1.3**
COEG				IAML		22 16 34.5	
	comp=Z,4µm,0.4s						
PAVA	**Las Pavas**	**1.03**	**325**	⇑*i*P	**Pn**	**22 16 10.5**	**+0.4**
PAVA				*e*S	**Sn**	**22 16 25.9**	**+2.0**
PAVA				IAML		22 16 28.5	
	comp=Z,5µm,0.4s						
PAVA	**Las Pavas**	**1.03**	**325**	⇑*i*P	**Pn**	**22 16 10.5**	**+0.4**
PAVA				*e*S	**Sn**	**22 16 25.9**	**+2.0**
PAVA				IAML		22 16 28.5	
	comp=Z,5µm,0.4s						
LFRS	**El Faro**	**1.04**	**316**	⇑*i*P	**Pn**	**22 16 10.2**	**0.0**
LFRS	**El Faro**	**1.04**	**316**	⇑*i*P	**Pn**	**22 16 10.2**	**0.0**
LBRS	**Las Brisas**	**1.11**	**321**	⇓*i*P	**Pn**	**22 16 11.7**	**+0.6**
LBRS	**Las Brisas**	**1.11**	**321**	⇓*i*P	**Pn**	**22 16 11.7**	**+0.6**
LALI	**Alcalda de L**	**1.15**	**302**	⇓*i*P	**Pn**	**22 16 11.1**	**-0.4**
LALI				*e*S	**Sn**	**22 16 25.1**	**-1.4**
LALI				IAML		22 16 33.3	
	comp=Z,938nm,0.5s						
LALI	**Alcalda de L**	**1.15**	**302**	⇓*i*P	**Pn**	**22 16 11.1**	**-0.4**
LALI				*e*S	**Sn**	**22 16 25.1**	**-1.4**
LALI				IAML		22 16 33.3	
	comp=Z,938nm,0.5s						
SNET	**Serv Nac Est T**	**1.20**	**313**	Pn	**Pn**	**22 16 12.4**	**+0.1**
BOQS	**Boqueron**	**1.27**	**313**	⇓*i*P	**Pn**	**22 16 13.7**	**+0.5**
BOQS				*e*S	**Sn**	**22 16 30.7**	**+1.1**
BOQS	**Boqueron**	**1.27**	**313**	⇓*i*P	**Pn**	**22 16 13.7**	**+0.5**
BOQS				*e*S	**Sn**	**22 16 30.7**	**+1.1**
TACO	**Tacachico**	**1.48**	**318**	⇑*e*P	**Pn**	**22 16 16.2**	**+0.3**
TACO				IAML		22 16 38.1	
	comp=Z,564nm,0.5s						
TACO	**Tacachico**	**1.48**	**318**	⇑*e*P	**Pn**	**22 16 16.2**	**+0.3**
TACO				IAML		22 16 38.1	
	comp=Z,564nm,0.5s						
TGUH	**Tegucigalpa,Un**	**1.56**	**41**	⇓*i*P	**Pn**	**22 16 18.1**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.56**	**41**	⇓*i*P	**Pn**	**22 16 18.1**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.56**	**41**	Pn	**Pn**	**22 16 17.5**	**+0.3**
CEVE	**Cerro Verde**	**1.58**	**307**	*e*P	**Pn**	**22 16 17.8**	**+0.3**
CEVE				IAML		22 16 46.0	
	comp=Z,5µm,0.5s						
CEVE	**Cerro Verde**	**1.58**	**307**	*e*P	**Pn**	**22 16 17.8**	**+0.3**
CEVE				IAML		22 16 46.0	
	comp=Z,5µm,0.5s						
SBLS	**San Blas**	**1.59**	**307**	*e*P	**Pn**	**22 16 18.2**	**+0.6**
SBLS	**San Blas**	**1.59**	**307**	*e*P	**Pn**	**22 16 18.2**	**+0.6**
SNJE	**San Jose**	**1.59**	**309**	*e*P	**Pn**	**22 16 18.3**	**+0.6**
SNJE	**San Jose**	**1.59**	**309**	*e*P	**Pn**	**22 16 18.3**	**+0.6**
CNGN	**Cerro Negro**	**1.63**	**103**	*e*P	**Pn**	**22 16 17.4**	**-0.6**
CNGN	**Cerro Negro**	**1.63**	**103**	*e*P	**Pn**	**22 16 17.4**	**-0.6**
NUBE	**Las Nubes**	**1.75**	**306**	*e*P	**Pn**	**22 16 19.9**	**+0.2**
NUBE				*e*S	**Sn**	**22 16 41.9**	**+0.8**
NUBE				IAML		22 16 46.2	
	comp=Z,784nm,0.4s						
NUBE	**Las Nubes**	**1.75**	**306**	*e*P	**Pn**	**22 16 19.9**	**+0.2**
NUBE				*e*S	**Sn**	**22 16 41.9**	**+0.8**
NUBE				IAML		22 16 46.2	
	comp=Z,784nm,0.4s						
MTO3	**Montecristo**	**1.82**	**327**	⇑*i*P	**Pn**	**22 16 21.4**	**+0.6**
MTO3				IAML		22 16 50.1	
	comp=Z,798nm,0.9s						
MTO3	**Montecristo**	**1.82**	**327**	⇑*i*P	**Pn**	**22 16 21.4**	**+0.6**
MTO3				IAML		22 16 50.1	
	comp=Z,798nm,0.9s						
MTO3	**Montecristo**	**1.82**	**327**	Pn	**Pn**	**22 16 21.3**	**+0.5**
ESQI	**Esquipulas**	**1.95**	**330**	Pn	**Pn**	**22 16 23.1**	**+0.8**
ACON	**Acoyapa**	**3.21**	**106**		**Pn**	**22 16 38.3**	**-1.1**
HZTE	**Horizontes, Gu**	**3.43**	**128**	*e*P	**Pn**	**22 16 43.9**	**+1.5**
GBS3	**Finca Las Img**	**3.49**	**126**	*e*P	**Pn**	**22 16 44.4**	**+1.0**
GB1A	**Borinquen Arri**	**3.52**	**125**	*e*P	**Pn**	**22 16 44.1**	**+0.4**
LAPC	**Finca la Perla**	**3.52**	**126**	*e*P	**Pn**	**22 16 43.7**	**0.0**
BUEV	**Buena Vista**	**3.52**	**126**	*e*P	**Pn**	**22 16 44.3**	**+0.5**
BUAI	**Buenos Aires**	**3.54**	**124**	*e*P	**Pn**	**22 16 44.5**	**+0.6**
GPS1	**Guardaparques**	**3.58**	**125**	*e*P	**Pn**	**22 16 46.5**	**+1.9**
GPS2	**Hotel Rincn d**	**3.59**	**126**	*e*P	**Pn**	**22 16 45.5**	**+0.8**
RTAL	**Retalhuleu**	**3.67**	**297**	Pn	**Pn**	**22 16 46.7**	**+1.1**
LIM1	**Limonal**	**3.70**	**125**	*e*P	**Pn**	**22 16 47.2**	**+1.0**
HORNC	**Hornillas**	**3.75**	**125**	*e*P	**Pn**	**22 16 46.8**	**-0.1**
ORTG	**Ortega, Santa**	**3.75**	**131**	*e*P	**Pn**	**22 16 47.9**	**+0.9**
COLC	**Colonia**	**3.76**	**125**	*e*P	**Pn**	**22 16 47.3**	**+0.3**
GUAI	**GUAI**	**3.78**	**133**	*e*P	**Pn**	**22 16 48.0**	**+0.8**
CUI	**Cuipilapa**	**3.80**	**125**	*e*P	**Pn**	**22 16 48.7**	**+1.2**
PLVR	**Palo Verde**	**3.84**	**130**	*e*P	**Pn**	**22 16 49.5**	**+1.2**
DUNO	**Dulce Nombre,**	**3.92**	**135**	*e*P	**Pn**	**22 16 49.7**	**+0.5**
JTS	**Las Juntas de**	**4.18**	**127**	Pn	**Pn**	**22 16 53.5**	**+0.7**
	comp=Z,3.7nm,0.3s,baz=356,slow=13,SNR=13						
JTS				Pg		22 16 59.8	
	comp=Z,60nm,0.3s,baz=345,slow=16,SNR=86						
JTS				Sn	**Sn**	**22 17 42.0**	**+1.6**
	comp=Z,10nm,0.3s,baz=210,slow=20,SNR=2.1						
JTS				Lg	Lg	22 17 55.4	
	comp=Z,49nm,0.3s,baz=182,slow=22,SNR=7.0						
JTS	**Las Juntas de**	**4.18**	**127**		**Pn**	**22 16 53.7**	**+0.9**
CEDE	**Laguna Cedeo**	**4.26**	**123**	*e*P	**Pn**	**22 16 55.8**	**+1.8**
PETF	**Flores**	**4.29**	**340**		**Pn**	**22

baz=40
IURH S Sg 22 16 02.5 +0.1
baz=40
IHAM Hamarinn 0.25 221 P Pg 22 15 59.7 -0.8
baz=221
IHAM S Sg 22 16 03.6 -0.3
baz=221
IGRF Grimsfjall 0.27 164 P Pg 22 16 00.1 -0.8
baz=164
IKVE Kverkfjoll 0.33 88 P Pg 22 16 01.1 -0.8
baz=88
IKVE S Sg 22 16 05.8 -0.6
baz=88
IHUS Husbondi 0.39 194 P Pg 22 16 02.2 -0.8
baz=194
IHUS S Sg 22 16 07.5 -0.6
baz=194
IVOT Vottur 0.41 164 P Pg 22 16 02.6 -0.9
baz=164
ISKR Skrokkalda 0.42 255 P Pg 22 16 02.5 -1.1
baz=255
THOR Thorvaldshraun 0.42 51 P Pg 22 16 02.6 -1.1
baz=51
THOR S Sg 22 16 08.9 -0.3
baz=51
IKRE Kreppuhraun 0.47 75 P Pg 22 16 03.3 -1.2
baz=76
IKRE S Sg 22 16 09.8 -0.8
baz=76
IJOK Jokulheimar 0.49 224 P Pg 22 16 03.8 -1.1
baz=224
IASK Askja 0.51 41 P Pg 22 16 04.0 -1.3
baz=41
IASK S Sg 22 16 10.9 -1.1
baz=41
IIEY Innrieyrar 0.65 208 P Pg 22 16 06.4 -1.5
baz=207
IKSK Karasker 0.66 140 P Pg 22 16 06.0 -2.1
baz=140
ISVA Svartarkot 0.68 7 P Pg 22 16 06.8 -1.6
baz=6.7
IKAL Kalfafell 0.73 189 P Pg 22 16 07.9 -1.6
baz=188
IVSH V-Sauoahnukur 0.75 78 P Pg 22 16 07.9 -1.9
baz=79
IVSH S Sg 22 16 18.0 -1.5
baz=79
IVAT Vatnsfell 0.80 234 P Pg 22 16 09.1 -1.7
baz=233
IFAG Fagurholsmyri 0.87 156 P Pg 22 16 09.9 -2.1
baz=156
IADA Aoalbol 0.87 65 P Pg 22 16 09.8 -2.3
baz=66
IADA S Sg 22 16 21.8 -1.7
baz=66
IHVE Hveravellir 0.93 283 P Pg 22 16 10.8 -2.5
baz=283
IMEL Melhnausar 0.96 20 P Pg 22 16 11.5 -2.4
baz=20
IREN Reynihlio 1.01 13 P Pg 22 16 12.3 -2.4
baz=13
ISNB Snabyli 1.07 210 P Pg 22 16 13.5 -2.4
baz=210
IKVO Krokottuvotn 1.08 12 P Pg 22 16 13.4 -2.6
baz=12
IGRS Grimsstaoir 1.12 29 P Pb 22 16 14.2 -2.6
baz=29
IRJU Rjupnafell 1.19 208 P Pb 22 16 15.5 -2.3
baz=208
IGHA Grjothals 1.22 15 P Pn 22 16 15.6 -2.9
baz=15
IGRA Granastaoir 1.26 357 P Pn 22 16 16.1 -2.8
baz=357
IGYG Gygjarholskot 1.26 253 P Pn 22 16 16.3 -2.7
baz=253
IHVO Lagu-Hvolar 1.30 209 P Pn 22 16 17.6 -1.9
baz=209
IALF Alftagrof 1.41 214 P Pn 22 16 19.1 -1.9
baz=214
ISAU Saurbar 1.46 244 P Pn 22 16 19.4 -2.3
baz=244
IGIL Gilhagi 1.49 17 P Pn 22 16 19.6 -2.4
baz=17
ISIG Siglufjorour 1.59 338 P Pn 22 16 21.6 -1.9
baz=338
BORG Borgarnes 1.67 274 Pn Pn 22 16 23.6 -1.1
IKRO Krokur 1.70 252 P Pn 22 16 23.1 -1.9
baz=252
ISOL Solvholt 1.70 246 P Pn 22 16 23.4 -1.6
baz=246
IHEI Heioarbar 1.71 256 P Pn 22 16 23.4 -1.8
baz=256
ILEI Leirhofn 1.79 12 P Pn 22 16 24.3 -2.0
baz=12
IHRN Hraun 1.83 323 P Pn 22 16 25.0 -1.8
baz=323
SCO Scoresbysund 6.09 346 Pn 22 17 24.9 -0.3
SCO Scoresbysund 6.09 346 *e* Pn 22 17 24.1 -1.1
baz=158,slow=10
SCO *i* P Pn 22 17 25.5 +0.3
SCO *i* S Sn 22 18 40.0 +5.2
SCO IAML 22 18 50.2
comp=Z,1.2nm,0.5s
ANGG Ammassalik, Gr 8.55 285 Pn Pn 22 17 58.4 -0.6
SUMG Summit 10.96 325 Pn Pn 22 18 31.8 -0.5
EKB10 Eskdalemuir Ar 11.71 136 Pn Pn 22 18 41.6 -0.7
EKB9 Eskdalemuir Ar 11.72 136 Pn Pn 22 18 41.9 -0.5
EKB8 Eskdalemuir Ar 11.72 136 Pn Pn 22 18 42.1 -0.4
EKB7 Eskdalemuir Ar 11.73 136 Pn Pn 22 18 41.1 -1.4
EKA Eskdalemuir Ar 11.74 136 Pn Pn 22 18 43.1 +0.4
baz=326,slow=13,SNR=6.1
EKR3 Eskdalemuir Ar 11.75 136 Pn Pn 22 18 42.9 +0.1
NC204 NORSAR Array S 13.20 92 Pn Pn 22 19 02.5 -0.2
NB000 NORSAR Array S 13.32 93 Pn Pn 22 19 05.1 +0.8
NA001 NORSAR Array S 13.46 93 Pn Pn 22 19 08.2 +2.1
NOA NORSAR Array B 13.51 92 Pn Pn 22 19 05.5 -1.3
comp=Z,0.0nm,0.3s,baz=300,slow=13,SNR=3.4
HFS Hagfors 15.02 93 Pn P 22 19 31.1 -1.7
comp=Z,0.1nm,0.3s,baz=321,slow=11,SNR=2.0
SPB3 Spitsbergen Ar 16.85 23 Pn P 22 19 50.8 -2.2
SPB3 IAmb IAmb 22 20 09.6
comp=Z,49nm,1.4s
SPB4 Spitsbergen Ar 16.85 23 P 22 19 53.5 +0.5
SPB4 IAmb IAmb 22 19 57.3
comp=Z,101nm,1.3s
SPA0 Spitsbergen Ar 16.86 23 Pn P 22 19 52.5 -0.6
SPA0 IAmb IAmb 22 19 56.2
comp=Z,74nm,1.5s
SPB2 Spitsbergen Ar 16.86 23 Pn P 22 19 52.2 -0.9
SPB2 IAmb IAmb 22 19 58.3
comp=Z,48nm,1.4s
SPA1 Spitsbergen Ar 16.86 23 Pn P 22 19 52.3 -0.8
SPB5 Spitsbergen Ar 16.86 23 P 22 19 52.9 -0.2
SPB5 IAmb IAmb 22 20 01.1
comp=Z,58nm,1.4s
SPB1 Spitsbergen Ar 16.86 23 Pn P 22 19 52.6 -0.5
SPB1 IAmb IAmb 22 19 56.2
comp=Z,60nm,1.4s
ARB4 ARCESS Array S 17.09 55 Pn P 22 19 55.3 -0.4
ARD4 ARCESS Array S 17.11 55 P 22 19 56.5 +0.6
ARD4 IAmb IAmb 22 20 06.6
comp=Z,35nm,1.4s
UCC Uccle 17.98 130 P 22 20 05.5 -0.1
UCC IAmb IAmb 22 20 06.3
comp=Z,30nm,1.4s
CLL Collm 20.68 116 P Pn 22 20 37.3 -0.1
ECH Echery 21.14 129 P P 22 20 41.2 +1.1
STU Stuttgart 21.35 125 P P 22 20 44.2 +1.8
STU IAmb IAmb 22 20 49.4
comp=Z,11nm,0.8s
BRG Berggiesshubel 21.39 115 *e*P P 22 20 44.5 +1.8
comp=Z,11nm,1.3s
BFO Black Forest 21.43 127 P P 22 20 43.9 +0.6
CHVC Chvalec 22.45 113 *e*P P 22 20 56.7 +2.6
KHC Kasperske Hory 22.65 119 *e*P P 22 20 58.5 +2.1
KHC Kasperske Hory 22.65 119 P P 22 20 58.3 +1.9
DPC Dobruska-Polom 22.74 113 *e*P P 22 20 58.3 +1.0
GERES GERESS Array B 22.93 119 P P 22 20 59.9 +0.5
comp=Z,0.7nm,0.9s,baz=327,slow=6.4,SNR=4.3
SSB Saint Sauveur 22.93 137 P P 22 20 57.6 -1.8
EUNU Eureka 23.68 336 P P 22 21 07.4 +0.8
EUNU IAmb IAmb 22 21 19.0
comp=Z,11nm,1.4s
COI Coimbra 25.06 164 P P 22 21 17.1 -2.4
COI IAmb IAmb 22 21 18.6
comp=Z,33nm,1.4s

ESDC Sonseca Array 26.25 156 P P 22 21 32.0 +1.7
comp=Z,1.0nm,0.8s,baz=344,slow=8.7,SNR=7.9
ESDC Sonseca Array 26.25 156 P P 22 21 30.3 -0.1
OSSC Osservatorio P 26.62 129 P P 22 21 33.4 -0.2
OSSC IAmb IAmb 22 21 38.9
comp=Z,6.2nm,0.9s
CORL Corleone 32.36 131 P P 22 22 25.7 +1.0
CLTB Caltabellotta 32.62 131 P P 22 22 27.1 +0.1
CLTB IAmb IAmb 22 22 31.5
comp=Z,13nm,1.2s
MOQ Mont Orford 35.45 264 P P 22 22 51.3 -0.1
DELO Deloro Mine 38.39 268 P P 22 23 15.9 -0.5
BR131 Keskin Array S 38.45 105 P P 22 23 19.4 +2.3
BR131 IAmb IAmb 22 23 37.0
comp=Z,6.7nm,1.1s
AKAS Kas 39.80 112 P P 22 23 29.1 +0.7
ABKAR Akbulak array 41.97 73 P P 22 23 47.1 +1.1
ABKAR Akbulak array 41.97 73 P P 22 23 46.9 +1.0
ABKAR IAmb IAmb 22 23 49.0
comp=Z,3.6nm,1.2s
TIXI Tiksi 42.02 15 P P 22 23 48.0 +1.9
P57A Homestead Farm 42.67 264 P P 22 23 51.2 -0.6
P57A IAmb IAmb 22 24 07.1
comp=Z,19nm,1.4s
CBN Corbin Frederi 43.47 262 P P 22 23 58.8 +0.6
L42A Oliver, Polo 45.59 277 P P 22 24 14.6 -0.6
ILAR Eielson Array 45.70 332 P P 22 24 18.0 +2.3
comp=Z,1.0nm,1.0s,baz=38,slow=6.0,SNR=4.8
ILAR Eielson Array 45.70 332 P P 22 24 17.4 +1.6
TCOL CIGO, UAF Yank 45.80 333 P P 22 24 16.9 +0.4
TCOL IAmb IAmb 22 24 25.2
comp=Z,10nm,0.9s
E28A Huff 46.50 289 P P 22 24 21.1 -1.2
WHY Whitehorse 46.53 323 P P 22 24 22.4 -0.1
BWN Browne 46.74 333 P P 22 24 25.0 +1.1
KURK Kurchatov 48.09 58 P P 22 24 34.8 +0.2
KURK IAmb IAmb 22 24 36.8
comp=Z,3.3nm,0.9s
SIT Sitka 49.75 321 P P 22 24 47.2 0.0
SACV Santiago Islan 49.83 188 P P 22 24 44.1 -4.2
KSU1 Kansas State U 50.95 280 P P 22 24 54.6 -2.0
KSU1 IAmb IAmb 22 24 58.8
comp=Z,10nm,1.1s
KKAR Karatay Array 51.25 70 P P 22 25 00.3 +1.4
TORD Torodi Ar. Bea 53.13 156 P P 22 25 13.8 +0.8
comp=Z,1.4nm,1.1s,baz=352,slow=9.0,SNR=4.4
TORD Torodi Ar. Bea 53.13 156 P P 22 25 13.0 -0.1
PDAR Pinedale Array 53.20 293 P P 22 25 14.8 +1.3
comp=Z,0.5nm,0.6s,baz=38,slow=5.6,SNR=5.1
BTK Batken 53.93 72 P P 22 25 20.5 +1.7
BTK IAmb IAmb 22 25 22.4
comp=Z,5.5nm,1.2s
GAR Garm 54.62 73 P P 22 25 24.4 +0.5
GAR IAmb IAmb 22 25 27.7
comp=Z,8.0nm,0.9s
TXAR Lajitas Array 62.31 280 P P 22 26 19.6 +2.0
comp=Z,1.2nm,1.2s,baz=28,slow=5.7,SNR=3.8

*REY **21** 22:21:11.1, 64.67N×17.37W, h11km*
*MOS **21** 22:21:12.8±1.3, 64.67N×17.22W, h10km, mb4.4/15, Error ellipse: s-maj=14.7km s-min=8.5km az=123.4*
*IDC **21** 22:21:13.0±0.8, 64.56N×17.28W, h0km, mb3.8/13, mb1 4.0/17, mb1mx3.8/49, mbtmp3.8/17, ML2.6/3, MS3.2/5, Ms1 3.2/5, ms1mx2.8/49, Error ellipse: s-maj=22.1km s-min=14.7km az=34.0*
*NEIC **21** 22:21:14.2±2.0, 64.64N±0.08×17.1W±0.1, h5km±1km, mb4.5/71, Error ellipse: s-maj=11.8km s-min=7.8km az=188.0*
ISC 21 22:21:14.2±0.3, 64.67N±0.02×17.16W±0.03, h10km, n215, σ1s73/203, mb4.2/71, 10C-1D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.15**	**324**	P	**Pg**	**22 21 14.1**	**-3.6**
baz=1.3							
IURH	**Urdarhals**	**0.15**	**2**	P	**Pg**	**22 21 15.2**	**-2.5**
baz=32							
IURH				S	**Sg**	**22 21 18.4**	**-1.7**
baz=32							
IDJK	**Dyngjujokull**	**0.17**	**191**	P	**Pg**	**22 21 14.8**	**-3.1**
baz=160							
IKVE	**Kverkfjoll**	**0.21**	**87**	P	**Pg**	**22 21 17.3**	**-1.3**
baz=88							
IGRF	**Grimsfjall**	**0.27**	**190**	P	**Pg**	**22 21 16.4**	**-3.2**
baz=170							
THOR	**Thorvaldshraun**	**0.34**	**38**	P	**Pg**	**22 21 18.6**	**-2.3**
baz=48							
IHAM	**Hamarinn**	**0.34**	**237**	P	**Pg**	**22 21 16.5**	**-4.5**
baz=226							
IKRE	**Kreppuhraun**	**0.35**	**70**	P	**Pg**	**22 21 19.3**	**-1.9**
baz=74							
IKRE				S	**Sg**	**22 21 25.8**	**-0.1**
baz=74							
IVOT	**Vottur**	**0.40**	**181**	P	**Pg**	**22 21 18.6**	**-3.4**
baz=168							
IASK	**Askja**	**0.44**	**29**	P	**Pg**	**22 21 20.2**	**-2.6**
baz=38							
ISKR	**Skrokkalda**	**0.54**	**259**	P	Pg	22 21 19.7	-5.0
baz=257							
IJOK	**Jokulheimar**	**0.58**	**233**	P	Pg	22 21 20.6	-4.9
baz=227							
IKSK	**Karasker**	**0.59**	**149**	P	**Pg**	**22 21 22.0**	**-3.6**
baz=142							
IKSK				S	**Sg**	**22 21 31.1**	**-2.2**
baz=142							
ISVA	**Svartarkot**	**0.67**	**357**	P	Pg	22 21 22.5	-4.7
baz=4.2							
IIEY	**Innrieyrar**	**0.71**	**217**	P	Pg	22 21 22.8	-5.1
baz=210							
IKAL	**Kalfafell**	**0.76**	**198**	P	Pg	22 21 24.1	-4.6
baz=191							
IKAL				S	**Sg**	**22 21 34.1**	**-4.6**
baz=191							
IADA	**Aoalbol**	**0.76**	**62**	P	**Pg**	**22 21 25.9**	**-3.0**
baz=64							
IFAG	**Fagurholsmyri**	**0.83**	**164**	P	**Pg**	**22 21 26.1**	**-3.9**
baz=158							
IFAG				S	**Sg**	**22 21 38.1**	**-2.7**
baz=158							
IMEL	**Melhnausar**	**0.93**	**13**	P	**Pg**	**22 21 27.9**	**-4.1**
baz=18							
IHVE	**Hveravellir**	**1.05**	**282**	P	Pg	22 21 27.6	-6.8
baz=283							
IKVO	**Krokottuvotn**	**1.06**	**6**	P	Pg	22 21 29.8	-4.7
baz=11							
IGRS	**Grimsstaoir**	**1.07**	**24**	P	Pg	22 21 29.9	-4.8
baz=28							
ISKI	**Skildingahlsh**	**1.21**	**3**	P	Pb	22 21 32.1	-5.0
baz=6.7							
IRJU	**Rjupnafell**	**1.25**	**213**	P	Pn	22 21 32.5	-5.1
baz=209							
IGRA	**Granastaoir**	**1.27**	**352**	P	Pn	22 21 32.4	-5.5
baz=356							
IFED	**Fedgar**	**1.28**	**241**	P	Pn	22 21 32.3	-5.8
baz=238							
IDIM	**Dimmadalss**	**1.30**	**4**	P	Pn	22 21 33.5	-4.9
baz=7.9							
IHVO	**Lagu-Hvolar**	**1.36**	**214**	P	Pn	22 21 34.2	-5.0
baz=210							
IGYG	**Gygjarholskot**	**1.38**	**255**	P	Pn	22 21 33.2	-6.2
baz=254							
IHLA	**Hella**	**1.38**	**339**	P	**Pn**	**22 21 35.0**	**-4.5**
baz=342							
IHED	**Heoinshofoi**	**1.42**	**358**	P	Pn	22 21 35.1	-4.8
baz=1.0							
BORG	**Borgarnes**	**1.79**	**274**	P	**Pn**	**22 21 41.6**	**-3.5**
BORG						22 22 04.9	
BORG	**Borgarnes**	**1.79**	**274**	Pn	**Pn**	**22 21 41.6**	**-3.5**
BORG				Sn	**Sn**	**22 22 04.9**	**-2.9**
SCO	**Scoresbysund**	**6.12**	**345**	P	**Pn**	**22 22 42.4**	**-2.1**
SCO	**Scoresbysund**	**6.12**	**345**	Pn	**Pn**	**22 22 42.4**	**-2.1**
ANGG	**Ammassalik, Gr**	**8.67**	**286**	Pn	**Pn**	**22 23 19.2**	**-0.2**
EKA	**Eskdalemuir Ar**	**11.66**	**137**	Pn	**Pn**	**22 23 59.6**	**-0.8**
baz=323,slow=13,SNR=9.3							
ESK	**Eskdalemuir**	**11.66**	**137**	P	**Pn**	**22 23 59.8**	**-0.6**
ESK	**Eskdalemuir**	**11.66**	**137**	Pn	**Pn**	**22 23 59.8**	**-0.6**
DSB	**Dublin**	**12.71**	**149**	Pn	Pn	22 24 09.7	-5.0
NBO00	**NORSAR Array S**	**13.20**	**93**	Pn	**Pn**	**22 24 19.7**	**-1.8**
NAO01	**NORSAR Array S**	**13.34**	**94**	Pn	**Pn**	**22 24 18.8**	**-4.5**
NC303	**NORSAR Array S**	**13.37**	**92**	Pn	**Pn**	**22 24 22.5**	**-1.2**
NOA	**NORSAR Array B**	**13.39**	**93**	Pn	**Pn**	**22 24 22.4**	**-1.6**
0.0nm,0.3s,baz=90,slow=17,SNR=2.9							
NOA				LR	LR	22 29 35.1	
comp=Z,44nm,22.0s,baz=305,slow=37							

NB201 NORSAR Array S 13.42 93 Pn **Pn** 22 24 22.6 -1.8
SFJD Kangerlussuaq 13.80 295 LR LR 22 29 13.4
comp=Z,192nm,18.6s,baz=88,slow=35
HFS Hagfors 14.90 93 Pn **Pn** 22 24 43.8 -0.8
0.1nm,0.3s,baz=307,slow=16,SNR=1.1
ARCES ARCESS Array B 17.00 55 LR LR 22 30 21.3
comp=Z,70nm,19.9s,baz=275,slow=32
ARD4 ARCESS Array S 17.01 55 Pn **Pn** 22 25 11.7 -0.1
FINES FINESS Array B 19.56 79 P **Pn** 22 25 43.6 +0.6
0.1nm,0.3s,baz=316,slow=5.3,SNR=5.8
FINES LR LR 22 32 40.5
comp=Z,72nm,20.5s,baz=290,slow=35
FINES FINESS Array B 19.56 79 P P 22 25 41.3 -0.4
TULEG Thule 19.93 327 P Pn 22 25 48.2 +1.0
TULEG IAmb IAmb 22 26 04.9
comp=Z,46nm,1.5s
CLL Collm 20.57 116 *i* P P 22 25 52.6 -0.2
comp=Z,20nm,1.5s
CLL Collm 20.57 116 P P 22 25 52.9 +0.1
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 20.57 116 P P 22 25 52.9 +0.1
BRG Berggiesshubel 21.28 116 *e*P P 22 26 01.0 +0.6
comp=Z,12nm,1.1s
BRG Berggiesshubel 21.28 116 *e*P P 22 26 01.0 +0.6
BRG pmax pmax
comp=Z,12nm,1.1s
BFO Black Forest 21.34 128 P P 22 26 01.2 +0.2
BFO pmax pmax
comp=Z,13nm,1.2s
BFO Black Forest 21.34 128 P P 22 26 01.2 +0.2
BFO IAmb IAmb 22 26 06.2
comp=Z,13nm,1.2s
VSU Vasula 21.42 86 *e*P P 22 26 01.1 -0.7
PABE Paberze 22.07 95 *e*P P 22 26 10.0 +1.3
KSP Ksiaz 22.23 113 *e*P P 22 26 10.8 +0.2
CHVC Chvalec 22.33 113 *e*P P 22 26 13.7 +1.9
OSTC Ostas 22.42 113 *e*P P 22 26 16.8 +4.1
KHC Kasperske Hory 22.55 119 *ce*P P 22 26 14.9 +0.8
KHC pmax pmax
comp=Z,22nm,2.5s
KHC Kasperske Hory 22.55 119 *e*P P 22 26 16.2 +2.1
KHC Kasperske Hory 22.55 119 P P 22 26 15.2 +1.1
DPC Dobruska-Polom 22.63 113 *e*P P 22 26 16.2 +1.3
DPC Dobruska-Polom 22.63 113 *e*P P 22 26 16.2 +1.3
SUW Suwalki 22.74 99 P P 22 26 16.3 +0.3
SUW pmax pmax
comp=Z,14nm,1.1s
SUW Suwalki 22.74 99 P P 22 26 16.3 +0.3
SUW IAmb IAmb 22 26 25.4
comp=Z,14nm,1.1s
GEC2 GERESS Array S 22.83 119 P P 22 26 17.3 +0.2
GERES GERESS Array B 22.83 119 P P 22 26 17.3 +0.2
comp=Z,1.1nm,0.8s,baz=330,slow=7.7,SNR=6.9
GERES LR LR 22 35 45.7
comp=Z,72nm,21.4s,baz=313,slow=38
GERES GERESS Array B 22.83 119 P P 22 26 18.0 +0.9
RETA Reutte 22.90 125 *i* P P 22 26 18.7 +0.9
comp=Z,6.2nm,1.4s
ISAL Salakas 22.95 93 *e*P P 22 26 18.9 +0.7
KRLC Kraliky 23.02 113 *e*P P 22 26 18.5 -0.6
KRLC Kraliky 23.02 113 *e*P P 22 26 18.5 -0.6
IIGN Ignalina 23.13 93 *e*P P 22 26 20.9 +0.8
MOTA Moosalm 23.14 125 *e*P P 22 26 20.5 +0.1
comp=Z,8.2nm,1.2s
DAVOX Davos/Dischmat 23.20 128 P P 22 26 22.3 +1.2
comp=Z,3.9nm,0.8s,baz=329,slow=8.8,SNR=4.1
SQTA Sankt Quirin 23.29 125 *e*P P 22 26 22.2 +0.4
comp=Z,7.0nm,1.5s
FETA Feichten 23.29 126 *e*P P 22 26 21.8 -0.1
comp=Z,6.9nm,1.4s
IDID Didziasalis 23.38 93 *e*P P 22 26 23.2 +0.6
WTTA Wattenberg 23.40 124 *e*P P 22 26 22.9 -0.1
comp=Z,7.1nm,1.4s
VRAC Vranov 23.56 115 P P 22 26 25.5 +1.1
comp=Z,0.6nm,0.4s,baz=322,slow=10,SNR=3.8
MORC Moravsky Berou 23.56 113 P P 22 26 25.7 +1.2
MORC pmax pmax
comp=Z,9.0nm,1.4s
MORC Moravsky Berou 23.56 113 P P 22 26 25.7 +1.2
EUNU Eureka 23.73 336 P P 22 26 27.4 +1.5
EUNU IAmb IAmb 22 26 29.2
comp=Z,19nm,1.4s
OJC Ojcow 24.12 109 P P 22 26 30.2 +0.4
OJC pmax pmax
comp=Z,2.0nm,0.7s
OJC Ojcow 24.12 109 P P 22 26 30.2 +0.4
CONA Conrad Observa 24.40 117 *i* P P 22 26 32.9 +0.4
comp=Z,4.1nm,1.0s
CTI Castel Tesino 24.45 126 P P 22 26 33.4 +0.5
CTI pmax pmax
comp=Z,9.0nm,1.3s
CTI Castel Tesino 24.45 126 P P 22 26 33.4 +0.5
CTI IAmb IAmb 22 26 39.2
comp=Z,8.9nm,1.3s
ZOU Zoufplan 24.48 123 P P 22 26 34.1 +0.8
CIMO Cimolais 24.50 124 P P 22 26 34.3 +1.0
SMOL Smolenice 24.53 115 *e*P P 22 26 34.3 +0.8
SMOL Smolenice 24.53 115 *e*P P 22 26 34.3 +0.8
MODS Modra-Piesok 24.58 115 *e*P P 22 26 34.8 +0.8
MODS Modra-Piesok 24.58 115 *e*P P 22 26 34.8 +0.8
STAL STALIGIAL 24.64 124 P P 22 26 35.6 +1.0
MYKA Terra Mystica 24.66 122 *e*P P 22 26 37.6 +2.8
comp=Z,4.1nm,1.0s
PRED Cave del Predi 24.79 123 P P 22 26 38.2 +2.2
PRED IAmb IAmb 22 26 43.5
comp=Z,9.1nm,1.5s
LANS Liptovska Anna 24.83 111 *e*P P 22 26 37.3 +1.0
LANS pmax pmax
comp=Z,3.0nm,1.0s
LANS Liptovska Anna 24.83 111 *e*P P 22 26 37.3 +1.0
TEOL Teolo 25.05 127 P P 22 26 35.7 -2.6
TEOL IAmb IAmb 22 26 49.9
comp=Z,6.4nm,0.8s
VYHS Vyhne 25.10 113 *e*P P 22 26 39.4 +0.7
VYHS pmax pmax
comp=Z,14nm,1.6s
VYHS Vyhne 25.10 113 *e*P P 22 26 39.4 +0.7
SOKA Soboth 25.13 120 *e*P P 22 26 41.2 +2.1
comp=Z,3.7nm,1.3s
KWP Kalwaria Pacla 25.77 107 *e*P P 22 26 44.1 -0.6
KWP Kalwaria Pacla 25.77 107 P P 22 26 45.9 +1.1
KWP pmax pmax
comp=Z,28nm,1.1s
KWP Kalwaria Pacla 25.77 107 P P 22 26 45.9 +1.1
PSZ Piszkesteto 25.98 112 P P 22 26 47.9 +1.1
PSZ pmax pmax
comp=Z,5.0nm,1.0s
PSZ Piszkesteto 25.98 112 P P 22 26 47.9 +1.1
PSZ IAmb IAmb 22 26 54.2
comp=Z,5.4nm,1.0s
KOLS Kolonicke sedl 26.14 108 *e*P P 22 26 50.7 +2.6
KOLS pmax pmax
comp=Z,16nm,1.6s
KOLS Kolonicke sedl 26.14 108 *e*P P 22 26 50.7 +2.6
ESDC Sonseca Array 26.20 156 P P 22 26 48.7 0.0
comp=Z,1.6nm,0.8s,baz=350,slow=8.9,SNR=14
UZH Uzhgorod 26.38 108 *e*P P 22 26 49.6 -0.7
UZH *i* 22 26 54.4
AKASG Malin Array Be 27.70 98 P P 22 27 01.8 -0.3
comp=Z,0.2nm,0.3s,baz=331,slow=9.5,SNR=1.9
AKASG Malin Array Be 27.70 98 *ce*P P 22 27 05.0 +2.9
AKASG Malin Array Be 27.70 98 IAmb IAmb 22 27 02.8
comp=Z,1.1nm,1.1s
OBN Obninsk 27.74 84 *e*P P 22 27 02.7 +0.4
OBN pmax pmax
comp=Z,5.0nm,0.4s
KIRV Kirov 30.84 70 *ce*P P 22 27 30.6 +0.7
BELG Belogornoye 34.34 79 *i* P P 22 28 01.9 +1.4
BELG pmax pmax
comp=Z,2.0nm,0.9s
NRIK Noril'sk 36.37 35 *i* P P 22 28 18.4 +0.6
NRIK pmax pmax
comp=Z,2.0nm,1.1s
J59A Piesco 38.02 264 P P 22 28 35.8 +3.7
J59A IAmb IAmb 22 28 37.9
comp=Z,28nm,1.4s
BR131 Keskin Array S 38.34 106 P P 22 28 34.5 -0.5
BR131 pmax pmax
comp=Z,3.0nm,1.1s
BR131 Keskin Array S 38.34 106 P P 22 28 34.5 -0.5
BRTR Keskin Array B 38.34 106 P P 22 28 35.1 +0.1
BRTR Keskin Array B 38.34 106 P P 22 28 35.1 +0.1
KBZ Khabaz 38.97 93 *i* P P 22 28 40.9 +0.9

KBZ pmax pmax
comp=Z,7.0nm,1.4s
AKAS Kas 39.69 113 P **P** **22 28 44.9 -1.4**
KOPT Kop Dagi 40.98 98 P **P** **22 28 57.2 +0.1**
KOPT IAmb IAmb 22 29 11.1
comp=Z,10nm,0.9s
I49A Point Hope 41.21 273 P **P** **22 29 01.1 +2.5**
ABKAR Akbulak array 41.85 73 P **P** **22 29 04.4 +0.5**
ABKAR Akbulak array 41.85 73 P **P** **22 29 02.8 -1.1**
ABKAR IAmb IAmb 22 29 19.9
comp=Z,3.0nm,1.2s
TIXI Tiksi 41.99 15⇑*iP* **P** **22 29 06.3 +1.6**
GNI Garni 42.69 94 *i* P **P** **22 29 11.9 +1.0**
GNI pmax pmax
comp=Z,8.0nm,1.2s
TOLK Toolik Lake Re 42.80 337 P **P** **22 29 14.2 +2.7**
BRVK Borovoye 43.00 62*ce*P **P** **22 29 13.4 +0.2**
BRVK pmax pmax
comp=Z,4.0nm,1.7s
FYU Fort Yukon 43.84 333 P **P** **22 29 20.6 +0.9**
R58B Mineral 44.00 263 P **P** **22 29 24.2 +2.9**
S54A Dingess, Beckl 45.61 266 P **P** **22 29 37.5 +3.2**
IL31 45.75 333 P **P** **22 29 36.3 +1.3**
IL31 IAmb IAmb 22 29 38.4
comp=Z,4.1nm,1.1s
ILAR Eielson Array 45.75 333 P **P** **22 29 36.9 +1.9**
comp=Z,3.3nm,1.1s,baz=24,slow=5.3,SNR=13
ILAR PcP **PcP** **22 31 13.4 +1.0**
comp=Z,1.8nm,1.2s,baz=4.2,slow=3.7,SNR=5.2
ILAR Eielson Array 45.75 333 P **P** **22 29 37.2 +2.2**
MDM Murphy Dome 45.85 333 P **P** **22 29 38.0 +2.2**
MDM IAmb IAmb 22 29 40.4
comp=Z,11nm,1.4s
TCOL CIGO, UAF Yank 45.85 333 P **P** **22 29 39.0 +3.3**
SFIN Lafayette 45.95 273 P **P** **22 29 40.5 +3.6**
MENT Mentasta 46.72 330 P **P** **22 29 42.3 -0.4**
U54A Nelsons Funny 46.91 266 P **P** **22 29 46.9 +2.5**
ZAA0 Zalesovo Array 47.52 52 P **P** **22 29 49.0 0.0**
ZAA0 IAmb IAmb 22 29 51.5
comp=Z,1.9nm,0.9s
ZALV Zalesovo Beam 47.52 52 P **P** **22 29 49.6 +0.7**
comp=Z,0.4nm,0.3s,baz=342,slow=9.1,SNR=3.9
KURK Kurchatov 47.99 58*ce*P **P** **22 29 52.2 -0.4**
KURK pmax pmax
comp=Z,5.0nm,0.8s
KURK Kurchatov 47.99 58 P **P** **22 29 52.7 +0.1**
KURK IAmb IAmb 22 29 55.3
comp=Z,5.5nm,0.9s
SEW Seward 50.49 331 P **P** **22 30 13.0 +1.4**
X48A Hartselle 50.91 269 P **P** **22 30 17.5 +2.4**
X48A IAmb IAmb 22 30 25.4
comp=Z,9.2nm,1.4s
KK31 Karatay Array 51.14 70 P **P** **22 30 17.4 +0.6**
KK31 pmax pmax
comp=Z,1.0nm,0.9s
KK31 Karatay Array 51.14 70 P **P** **22 30 17.4 +0.6**
KKAR Karatay Array 51.14 70 P **P** **22 30 18.0 +1.2**
KKAR pmax pmax
comp=Z,10.0nm,1.5s
KKAR Karatay Array 51.14 70 P **P** **22 30 18.0 +1.2**
KKAR Karatay Array 51.14 70 P **P** **22 30 18.1 +1.2**
KKAR IAmb IAmb 22 30 20.0
comp=Z,10nm,1.5s
YAK Yakutsk 51.22 19 *i* P **P** **22 30 17.7 +0.6**
YAK pmax pmax
comp=Z,4.0nm,0.9s
BOZ Bozeman (W) 51.74 297 P **P** **22 30 24.1 +2.7**
BOZ pmax pmax
comp=Z,6.0nm,0.9s
BOZ Bozeman (W) 51.74 297 P **P** **22 30 24.1 +2.7**
BOZ IAmb IAmb 22 30 26.2
comp=Z,6.3nm,0.8s
H17A Grant Village 52.34 295 P **P** **22 30 27.9 +1.8**
H17A IAmb IAmb 22 30 29.6
comp=Z,7.2nm,0.9s
352A Blakely 52.54 265 P **P** **22 30 27.2 -0.2**
MKAR Makanchi Array 52.60 59 P **P** **22 30 28.5 +0.8**
comp=Z,1.3nm,0.9s,baz=328,slow=4.3,SNR=6.1
MKAR Makanchi Array 52.60 59*ce*P **P** **22 30 28.2 +0.5**
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR Makanchi Array 52.60 59 P **P** **22 30 27.9 +0.3**
TORD Torodi Ar. Bea 53.09 157 P **P** **22 30 30.5 -1.0**
comp=Z,1.0nm,0.8s,baz=342,slow=8.4,SNR=5.5
PD31 Pinedale Array 53.31 293 P **P** **22 30 33.6 +0.4**
PD31 IAmb IAmb 22 30 34.5
comp=Z,3.5nm,1.1s
PDAR Pinedale Array 53.31 293 P **P** **22 30 32.7 -0.5**
comp=Z,1.9nm,0.8s,baz=64,slow=8.4,SNR=3.7
PDAR Pinedale Array 53.31 293 P **P** **22 30 33.2 0.0**
BTK Batken 53.82 72 P **P** **22 30 37.8 +1.0**
BTK pmax pmax
comp=Z,4.0nm,0.9s
BTK Batken 53.82 72 P **P** **22 30 37.8 +1.0**
BTK IAmb IAmb 22 30 45.1
comp=Z,3.9nm,0.9s
CHGR Chuyangaron 54.32 74 P **P** **22 30 41.9 +1.4**
CHGR IAmb IAmb 22 30 43.4
comp=Z,10nm,1.1s
GAR Garm 54.51 73 P **P** **22 30 43.0 +1.1**
DRK Karamyk 54.71 71 P **P** **22 30 44.5 +1.0**
O20A White River Ci 55.01 291 P **P** **22 30 45.5 -0.1**
O20A IAmb IAmb 22 30 57.6
comp=Z,4.6nm,0.8s
HRA Herat 55.05 83 P **P** **22 30 46.3 +0.4**
HWUT Hardware Ranch 55.08 294 P **P** **22 30 47.0 +0.9**
HWUT IAmb IAmb 22 30 48.6
comp=Z,5.4nm,1.1s
TCUT Toone Canyon 55.44 294 P **P** **22 30 49.9 +1.1**
BGU Big Grassy Mou 56.24 295 P **P** **22 30 54.8 +0.4**
PV22 Blue Mesa, Par 56.60 290 P **P** **22 30 58.0 +1.0**
PV22 IAmb IAmb 22 31 00.3
comp=Z,11nm,1.4s
PV10 Paradox Valley 56.84 290 P **P** **22 30 59.7 +0.9**
PV10 IAmb IAmb 22 31 13.3
comp=Z,10.0nm,0.9s
PV13 Radium Mtn., P 56.93 290 P **P** **22 31 00.2 +0.7**
PV13 IAmb IAmb 22 31 01.3
comp=Z,10nm,1.1s
OBIP Obispado Ponce 57.04 239 P **P** **22 31 02.1 +2.1**
WMQ Urumqi 57.11 56 *eP* **P** **22 31 03.6 +3.2**
PV05 Paradox Valley 57.12 290 P **P** **22 31 00.3 -0.4**
PV05 IAmb IAmb 22 31 02.3
comp=Z,8.2nm,1.1s
MSU Marysvale 57.98 293 P **P** **22 31 07.9 +1.1**
MSU Marysvale 57.98 293 P **P** **22 31 07.9 +1.1**
MVU Marysvale 58.00 293 P **P** **22 31 09.5 +2.6**
MOD Modoc Plateau 58.16 301 P **P** **22 31 08.2 +0.3**
MOD IAmb IAmb 22 31 13.6
comp=Z,5.2nm,0.8s
SPR3 Spring Creek 3 58.40 295 P **P** **22 31 11.0 +1.1**
SPR3 IAmb IAmb 22 31 13.8
comp=Z,5.9nm,1.4s
PSUT Pine Spring 58.62 294 P **P** **22 31 12.6 +1.4**
ANMO Albuquerque 58.73 286*ce*P **P** **22 31 13.0 +1.0**
ANMO pmax pmax
comp=Z,9.0nm,2.5s
R11A Troy Canyon, C 59.45 295 P **P** **22 31 17.1 +0.1**
BNM Barren Site 59.49 286 P **P** **22 31 19.0 +1.7**
SONM Songino Array 59.55 41 P **P** **22 31 18.0 +0.6**
comp=Z,1.1nm,0.9s,baz=326,slow=7.5,SNR=5.6
SONM Songino Array 59.55 41 P **P** **22 31 17.6 +0.2**
ULN Ulaanbaatar 59.70 40*ce*P **P** **22 31 17.4 -1.1**
ULN pmax pmax
comp=Z,6.0nm,2.5s
ULN Ulaanbaatar 59.70 40 P **P** **22 31 16.4 -2.1**
WUAZ Wupatki 60.24 290 P **P** **22 31 23.5 +1.0**
RYN Ryan 60.34 298 P **P** **22 31 23.6 +0.6**
RYN IAmb IAmb 22 31 24.7
comp=Z,4.0nm,1.1s
OMMB Old Mammoth Mi 61.41 298 P **P** **22 31 32.6 +2.1**
OMMB IAmb IAmb 22 31 34.6
comp=Z,5.5nm,1.2s
KVTX Kingsville 61.52 274 P **P** **22 31 31.4 +0.4**
TXAR Lajitas Array 62.43 281 P **P** **22 31 37.3 +0.1**
comp=Z,0.8nm,0.9s,baz=31,slow=5.1,SNR=6.5
GSC Goldstone, Bar 62.59 295 P **P** **22 31 40.4 +2.2**
GSC pmax pmax
comp=Z,5.0nm,1.2s
GSC Goldstone, Bar 62.59 295 P **P** **22 31 40.4 +2.2**
GSC IAmb IAmb 22 31 44.5
comp=Z,4.9nm,1.1s
319A Douglas 62.99 286 P **P** **22 31 42.5 +1.5**
319A IAmb IAmb 22 31 46.6
comp=Z,7.3nm,1.1s
GTA Gaotai 65.19 50 P **P** **22 31 57.4 +2.1**
GTA pP sP 22 32 01.1 +0.8
GTA sP pP 22 32 03.6 +4.6
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,51nm,6.2s
GTA LR LR
comp=N,55nm,16.7s
GTA LR LR
comp=E,58nm,16.7s
GTA LR LR
comp=Z,71nm,16.4s
LZH Lanzhou 69.52 48 *eP* **P** **22 32 21.8 -1.0**
LZH pP pP 22 32 24.5 -2.0
LZH sP sP 22 32 25.8 -2.0
LZH *eP*P **PP** **22 34 56.9 +1.0**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,110nm,5.0s
LZH LR LR
comp=N,150nm,16.0s
LZH LR LR
comp=E,160nm,16.1s
LZH LR LR
comp=Z,230nm,18.2s
CMAR Chiang Mai Arr 84.01 59 P **P** **22 33 45.6 +1.0**
comp=Z,0.9nm,0.3s,baz=324,slow=7.1,SNR=6.8
CMAR Chiang Mai Arr 84.01 59*ce*P **P** **22 33 46.2 +1.6**
CMAR pmax pmax
comp=Z,1.0nm,0.3s

*NEIC **21** 22:21:37.1±2.5,28.49S±0.07×74.09E±0.09,h10km±1km, mb4.5/12, Error ellipse: s-maj=16.7km s-min=6.8km az=133.0*
*IDC **21** 22:21:38.3±1.3,28.26S×74.18E,h0km,mb3.9/5, mb1 4.1/5,mb1mx3.6/40,mbtmp3.9/5,MS3.5/1,Ms1 3.4/1, ms1mx2.7/36,Error ellipse: s-maj=36.8km s-min=32.9km az=176.0*
ISC 21 22:21:37.8±0.7,28.4S±0.1×74.1E±0.1,h10km,n27,
σ2s05/19,mb4.2/11,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIS	**Amsterdam Isla**	**9.76**	**164**	Pn	**Pn**	**22 23 56.1**	**-2.1**
RER	**Riviere de l'E**	**18.18**	**289**	Pn	**Pn**	**22 25 47.0**	**-3.5**
H08S2	**Diego Garcia H**	**20.75**	**355**	T	T	22 47 17.8	
	baz=176,slow=76,SNR=10.0						
H08S1	**Diego Garcia H**	**20.75**	**355**	T	T	22 47 17.7	
	baz=176,slow=76,SNR=9.2						
H08S3	**Diego Garcia H**	**20.76**	**355**	T	T	22 47 19.1	
	baz=176,slow=76,SNR=14						
FOMA	**Nahampoana Res**	**24.48**	**272**	P	**P**	**22 26 57.0**	**-0.1**
H01W2	**Cape Leeuwin H**	**34.48**	**111**	T	T	23 04 51.5	
	baz=270						
H01W3	**Cape Leeuwin H**	**34.48**	**111**	T	T	23 04 52.6	
	baz=270						
H01W1	**Cape Leeuwin H**	**34.50**	**111**	T	T	23 04 50.3	
	baz=270						
MAW	**Mawson**	**39.77**	**187**	LR	LR	22 41 13.5	
	comp=Z,67nm,20.8s,baz=230,slow=29						
CMAR	**Chiang Mai Arr**	**52.44**	**30**	P	**P**	**22 30 51.9**	**+1.2**
	1.1nm,0.3s,baz=216,slow=7.8,SNR=4.7						
ASAR	**Alice Springs**	**53.45**	**100**	P	**P**	**22 31 00.1**	**+1.7**
	0.9nm,0.6s,baz=250,slow=6.6,SNR=15						
ASAR	**Alice Springs**	**53.45**	**100**	P	**P**	**22 30 55.2**	**-3.1**
AS31	**Alice Springs**	**53.45**	**100**	P	**P**	**22 30 55.1**	**-3.3**
TOLI2	**Tolitoli**	**53.47**	**65**	P	**P**	**22 30 56.9**	**-1.7**
TOLI2				IAmb	IAmb	22 31 13.5	
	comp=Z,8.0nm,1.0s						
MYLDM	**Lahad Datu**	**54.24**	**59**	P	**P**	**22 31 03.8**	**-0.3**
MYLDM				IAmb	IAmb	22 31 09.3	
	comp=Z,4.6nm,0.8s						
MTN	**Manton Dam**	**55.08**	**86**	P	**P**	**22 31 09.1**	**-1.2**
MTN				IAmb	IAmb	22 31 21.6	
	comp=Z,7.7nm,1.1s						
WRA	**Warramunga Arr**	**55.09**	**95**	P	**P**	**22 31 12.1**	**+1.7**
	comp=Z,1.6nm,0.8s,baz=250,slow=7.5,SNR=14						
WB2	**Warramunga Arr**	**55.10**	**95**	P	**P**	**22 31 11.0**	**+0.6**
WRAB	**Tennant Creek**	**55.11**	**95**	P	P	22 31 04.2	-6.2
UOSS	**Minazif**	**55.81**	**340**	P	**P**	**22 31 15.5**	**+0.3**
UOSS				IAmb	IAmb	22 31 26.8	
	comp=Z,4.3nm,1.1s						
SHL	**Shillong**	**56.35**	**19**	P	**P**	**22 31 19.0**	**-0.3**
SHL				IAmb	IAmb	22 31 21.1	
	comp=Z,2.5nm,0.4s						
SLVN	**Son La**	**57.23**	**33**	P	**P**	**22 31 25.2**	**-0.3**
SLVN				IAmb	IAmb	22 31 38.9	
	comp=Z,2.8nm,1.1s						
QSPA	**South Pole Qui**	**61.69**	**180**	P	**P**	**22 31 59.7**	**+3.8**
	comp=Z,0.9nm,0.7s,baz=272,slow=3.9,SNR=3.9						
KBL	**Kabul**	**62.83**	**355**	P	**P**	**22 32 04.1**	**+0.3**
KKAR	**Karatay Array**	**71.27**	**357**	P	**P**	**22 32 57.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**81.27**	**290**	P	**P**	**22 33 56.4**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=105,slow=5.1,SNR=2.7						

*NNC **21** 22:45:16.6±9.5,32.61N×78.60E,h0km,mb4.3,Error ellipse: s-maj=144.2km s-min=104.4km az=89.0*
*BJI **21** 22:45:31.5±0.0,34.26N×78.94E,h11km,mB4.5/13, mb4.2/17,ML4.3/3,Ms3.9/8,Ms7 3.7/5*
*IDC **21** 22:45:31.0±0.6,34.29N×79.08E,h0km,mb4.1/24, mb1 4.2/29,mb1mx4.1/56,mbtmp4.1/29,ML4.0/5,MS3.3/12, Ms1 3.3/12,ms1mx3.1/39,Error ellipse: s-maj=17.6km s-min=11.7km az=52.0*
*MOS **21** 22:45:33.6±1.2,34.32N×78.95E,h28km,mb4.2/10,Error ellipse: s-maj=8.2km s-min=4.0km az=105.4*
*NEIC **21** 22:45:36.4±2.1,34.40N±0.07×79.00E±0.08,h37km±6km, mb4.3/34,Error ellipse: s-maj=11.3km s-min=8.3km az=212.0*
ISC 21 22:45:33.3±0.3,34.32N±0.04×78.86E±0.04,h10km,n200,
σ1s89/195,mb4.3/57,MS3.2/13,15C-5D,Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**2.98**	**227**	*eP*	**Pb**	**22 46 25.2**	**-1.3**
DHRM				*eS*	**Sg**	**22 47 12.8**	**+3.9**
DHRM				IAML		22 47 16.2	
	comp=E,747nm,0.7s						
DHRM				IAML		22 47 16.9	
	comp=N,308nm,0.7s						
SMLA	**Simla**	**3.49**	**205**	*eP*	**Pb**	**22 46 31.6**	**-3.5**
SMLA				*eS*	**Sg**	**22 47 24.1**	**-1.2**
NIL	**Nilore**	**4.70**	**263**	P	**Pn**	**22 46 47.1**	**+2.8**
NIL	**Nilore**	**4.70**	**263**	Pn	**Pn**	**22 46 47.1**	**+2.8**
KSH	**Kashi**	**5.68**	**337**	Pn	**Pn**	**22 46 59.6**	**+1.8**
KSH				Sn	**Sn**	**22 48 00.8**	**-2.3**
CEP	**Cherat**	**5.79**	**267**	P	**Pn**	**22 47 01.0**	**+1.7**
THW	**Thamme Wali**	**6.13**	**258**	P	**Pn**	**22 47 06.2**	**+2.2**
SONA	**Sohna**	**6.24**	**195**	*eP*	**Pn**	**22 47 08.6**	**+3.2**
SONA				*ex*	x	22 48 18.1	
DRK	**Karamyk**	**7.64**	**314**		**Pn**	**22 47 25.3**	**+0.3**
KBL	**Kabul**	**8.11**	**274**	P	**Pn**	**22 47 34.2**	**+2.9**
KBL	**Kabul**	**8.11**	**274**	Pn	**Pn**	**22 47 34.2**	**+2.9**
GAR	**Garm**	**8.30**	**307**	Pn	**Pn**	**22 47 35.0**	**+1.2**
BOOM	**Boomskoye usch**	**8.47**	**345**	P	**Pn**	**22 47 36.2**	**0.0**
BOOM	**Boomskoye usch**	**8.47**	**345**	Pn	**Pn**	**22 47 36.2**	**0.0**
BTK	**Batken**	**8.60**	**314**	P	**Pn**	**22 47 38.5**	**+0.7**
BTK	**Batken**	**8.60**	**314**	Pn	**Pn**	**22 47 38.5**	**+0.7**
SATY	**Saty**	**8.73**	**358**	*eP*	**Pn**	**22 47 41.5**	**+1.8**
SATY							
	comp=N,3.4nm,0.9s						
SATY				LR	LR	22 50 45.5	
	comp=N,21nm,9.2s						
SATY	**Saty**	**8.73**	**358**	*eP*	**Pn**	**22 47 41.5**	**+1.8**
SATY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SATY				MLR	MLR		
	comp=Z,21nm,9.0s						
TNSS	**Tian-Shan**	**8.83**	**351**	*eP*	**Pn**	**22 47 43.5**	**+2.2**
TNSS	**Tian-Shan**	**8.83**	**351**	*eP*	**Pn**	**22 47 43.5**	**+2.2**
SHLS	**Shalkode**	**8.84**	**3**	*eP*	**Pn**	**22 47 43.0**	**+1.8**
	comp=Z,10nm,0.8s						
SHLS				*eS*	**Sn**	**22 49 19.8**	**-1.1**
SHLS	**Shalkode**	**8.84**	**3**	*eP*	**Pn**	**22 47 42.9**	**+1.8**
SHLS				*eS*	**Sn**	**22 49 19.7**	**-1.1**
SHLS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHGR	**Chuyangaron**	**8.93**	**302**	Pn	**Pn**	**22 47 41.5**	**-0.8**
MDOK	**Medeo**	**8.94**	**351**	*eP*	**Pn**	**22 47 45.4**	**+2.8**
MDOK				LR	LR	22 50 51.0	
	comp=Z,139nm,8.8s						
MDOK	**Medeo**	**8.94**	**351**	*eP*	**Pn**	**22 47 45.4**	**+2.8**
MDOK				MLR	MLR		
	comp=Z,139nm,9.0s						
TKM2	**Tokmak 2**	**8.96**	**344**	⇑Pn	**Pn**	**22 47 47.0**	**+4.1**
	comp=Z,12nm,1.2s						
TKM2				⇑Sn	Sn	22 49 51.5	+28
	comp=Z,49nm,1.4s						
AAK	**Ala-Archa**	**8.98**	**339**	Pn	**Pn**	**22 47 46.5**	**+3.4**
	comp=Z,1.4nm,0.3s,baz=152,slow=8.0,SNR=21						
AAK				Lg	Lg	22 50 19.9	
	comp=Z,0.2nm,0.3s,baz=252,slow=20,SNR=2.4						
AAK	**Ala-Archa**	**8.98**	**339**	*ce*P	**Pn**	**22 47 46.3**	**+3.2**
AAK				pmax	pmax		
	comp=Z,84nm,1.3s						
AAK	**Ala-Archa**	**8.98**	**339**	Pn	**Pn**	**22 47 45.6**	**+2.5**
AAA	**Alma-Ata**	**9.00**	**351**	*eP*	**Pn**	**22 47 46.3**	**+2.9**
AAA	**Alma-Ata**	**9.00**	**351**	*eP*	**Pn**	**22 47 46.3**	**+2.9**
FRU1	**Bishkek**	**9.10**	**340**	P	**Pn**	**22 47 46.0**	**+1.3**
FRU1	**Bishkek**	**9.10**	**340**	Pn	**Pn**	**22 47 46.0**	**+1.3**
KPKS	**Kokpek**	**9.13**	**359**	*eP*	**Pn**	**22 47 47.2**	**+2.0**
	comp=Z,21nm,0.9s						
KPKS	**Kokpek**	**9.13**	**359**	*eP*	**Pn**	**22 47 47.1**	**+2.0**
KPKS				pmax	pmax		
	comp=Z,21nm,0.9s						
SGDS	**Sogindy**	**9.69**	**341**	LR	LR	22 51 25.7	
	comp=Z,96nm,13.2s						
KUU	**Kurty**	**9.76**	**349**	*eP*	**Pn**	**22 47 56.5**	**+2.8**
	comp=Z,17nm,0.9s						
KUU				LR	LR	22 51 32.7	
	comp=Z,69nm,8.3s						
KUU	**Kurty**	**9.76**	**349**	*eP*	**Pn**	**22 47 56.4**	**+2.8**
KUU				pmax	pmax		
	comp=Z,17nm,0.9s						
KUU				MLR	MLR		
	comp=Z,69nm,8.0s						
IUG	**Iuzhnay**	**10.45**	**321**	*eP*	**Pn**	**22 48 06.4**	**+3.2**
IUG				LR	LR	22 51 44.5	
	comp=Z,77nm,10.1s						
IUG	**Iuzhnay**	**10.45**	**321**	*eP*	**Pn**	**22 48 06.4**	**+3.2**
IUG				MLR	MLR		
	comp=Z,77nm,10.0s						
TDK	**Taldyqorghan**	**10.67**	**358**	*eP*	**Pn**	**22 48 07.5**	**+1.2**
	comp=Z,8.6nm,1.0s						
TDK	**Taldyqorghan**	**10.67**	**358**	*eP*	**Pn**	**22 48 07.4**	**+1.2**
TDK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KK31	**Karatay Array**	**10.92**	**326**	⇓Pn	**Pn**	**22 48 12.5**	**+3.0**
	comp=Z,1.9nm,0.4s,baz=154,slow=12,SNR=13						
KK31				⇓Sn	Sn	22 50 30.4	+19
	comp=Z,5.3nm,0.7s,baz=158,slow=23						
KK31	**Karatay Array**	**10.92**	**326**	P	**Pn**	**22 48 10.7**	**+1.1**
KK31	**Karatay Array**	**10.92**	**326**	Pn	**Pn**	**22 48 10.7**	**+1.1**
KKAR	**Karatay Array**	**10.92**	**326**	P	**Pn**	**22 48 09.7**	**+0.1**
KKAR	**Karatay Array**	**10.92**	**326**	Pn	**Pn**	**22 48 10.5**	**+0.9**
KKAR	**Karatay Array**	**10.92**	**326**	Pn	**Pn**	**22 48 09.7**	**+0.1**
BTLS	**Baital**	**11.33**	**342**	LR	LR	22 52 33.5	
	comp=Z,61nm,11.9s						
LSA	**Lhasa**	**11.40**	**110**	P	**Pn**	**22 48 16.4**	**-0.3**
LSA				pmax	pmax		
	comp=Z,50nm,1.1s						
LSA	**Lhasa**	**11.40**	**110**	P	**Pn**	**22 48 15.4**	**-1.3**
LSA	**Lhasa**	**11.40**	**110**	Pn	**Pn**	**22 48 15.4**	**-1.3**
WMQ	**Urumqi**	**11.70**	**33**	*eP*	**Pn**	**22 48 18.6**	**-1.8**
WMQ				pP		22 48 24.8	
WMQ				S	**Sn**	**22 50 38.3**	**+7.2**
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,81nm,3.7s						
WMQ	**Urumqi**	**11.70**	**33**	P	**Pn**	**22 48 19.2**	**-1.2**
WMQ	**Urumqi**	**11.70**	**33**	Pn	**Pn**	**22 48 19.2**	**-1.2**
MAKZ	**Makanchi**	**12.70**	**10**	P	**Pn**	**22 48 32.4**	**-1.4**
MAKZ	**Makanchi**	**12.70**	**10**	Pn	**Pn**	**22 48 32.4**	**-1.4**
MK31	**Makanchi Array**	**12.73**	**11**	*ce*P	**Pn**	**22 48 34.7**	**+0.4**
MK31	**Makanchi Array**	**12.73**	**11**	Pn	**Pn**	**22 48 33.2**	**-1.1**
MKAR	**Makanchi Array**	**12.73**	**11**	Pn	**Pn**	**22 48 33.9**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=186,slow=14,SNR=37						
MKAR				Sn	**Sn**	**22 50 51.1**	**-4.9**
	comp=Z,0.1nm,0.3s,baz=190,slow=20,SNR=3.1						
MKAR				LR	LR	22 54 10.9	
	comp=Z,134nm,18.2s,baz=203,slow=41						
MKAR	**Makanchi Array**	**12.73**	**11**	Pn	**Pn**	**22 48 33.0**	**-1.3**
HRA	**Herat**	**13.73**	**275**	Pn	**Pn**	**22 48 49.7**	**+1.6**
SHL	**Shillong**	**14.26**	**124**	P	Pn	22 48 49.5	-6.0
SHL	**Shillong**	**14.26**	**124**	Pn	Pn	22 48 49.5	-6.0
SEM	**Semipalatinsk**	**16.11**	**3**	*eP*	**Pn**	**22 49 21.8**	**+1.8**
SEM	**Semipalatinsk**	**16.11**	**3**	*eP*	**Pn**	**22 49 21.7**	**+1.8**
KURBB	**Kurchatov Arra**	**16.29**	**359**	Pn	**Pn**	**22 49 20.6**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=187,slow=11,SNR=42						
KURBB				Lg	Lg	22 54 11.4	
	comp=Z,0.0nm,0.3s,baz=181,slow=27,SNR=1.8						
KURBB	**Kurchatov Arra**	**16.29**	**359**	⇓P	**P**	**22 49 27.0**	**+1.9**
	comp=Z,6.8nm,1.0s						
BRZS	**Berezniki**	**16.30**	**346**	*eP*	**P**	**22 49 24.7**	**-0.4**
	comp=Z,11nm,0.9s						
BRZS	**Berezniki**	**16.30**	**346**	*eP*	**P**	**22 49 24.7**	**-0.4**
BRZS				pmax	pmax		
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**16.39**	**359**	⇑P	**P**	**22 49 28.5**	**+2.4**
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**16.39**	**359**	*ce*P	**Pn**	**22 49 22.5**	**-0.7**
KURK				pmax	pmax		
	comp=Z,14nm,1.0s						
KURK	**Kurchatov**	**16.39**	**359**			**22 49 23.6**	**+0.3**
KURK				IAmb	IAmb	22 49 30.7	
	comp=Z,10nm,0.8s						
HYB	**Hyderabad**	**16.84**	**181**	*i* P	**P**	**22 49 31.0**	**-0.3**
GEYT	**Alibeck**	**17.13**	**288**	P	**P**	**22 49 35.1**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=89,slow=8.0,SNR=5.1						
GEYT	**Alibeck**	**17.13**	**288**	P	**Pn**	**22 49 31.8**	**-1.0**
GYA0B	**ALIBECK ARRAY**	**17.13**	**288**	Pn	**Pn**	**22 49 32.8**	**0.0**
GTA	**Gaotai**	**17.51**	**67**	*eP*	**Pn**	**22 49 35.5**	**-2.2**
GTA				pP	P	22 49 40.1	+1.3
GTA				sP	pP	22 49 43.3	+0.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,46nm,6.4s						
GTA				LR	LR		
	comp=Z,180nm,15.3s						
GTA				LR	LR		
	comp=Z,76nm,12.0s						
BVAR	**Borovoye Array**	**19.65**	**345**	P	**P**	**22 50 02.0**	**0.0**
	comp=Z,0.8nm,0.3s,baz=146,slow=8.0,SNR=11						
BRVK	**Borovoye**	**19.70**	**345**	⇑P	**P**	**22 50 01.9**	**-0.7**
	comp=Z,19nm,1.1s						
BRVK	**Borovoye**	**19.70**	**345**	*ce*P	**P**	**22 50 02.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,25nm,1.3s						
BRVK	**Borovoye**	**19.70**	**345**	P	**P**	**22 50 02.6**	**0.0**
BRVK				IAmb	IAmb	22 50 06.7	
	comp=Z,16nm,0.9s						
ZAA0	**Zalesovo Array**	**20.07**	**10**	P	**P**	**22 50 06.1**	**-0.5**
ZAA0				IAmb	IAmb	22 50 11.0	
	comp=Z,5.6nm,0.8s						
ZALV	**Zalesovo Beam**	**20.07**	**10**	P	**P**	**22 50 06.0**	**-0.6**
	comp=Z,4.7nm,0.6s,baz=201,slow=11,SNR=9.7						
ZALV				LR	LR	22 58 35.7	
	comp=Z,69nm,19.6s,baz=40,slow=39						
AB31	**Akbulak array**	**20.45**	**323**	⇑P	**P**	**22 50 11.2**	**+0.5**
	comp=Z,3.8nm,0.6s,baz=127,slow=9.5,SNR=46						
ABKAR	**Akbulak array**	**20.45**	**323**	P	**P**	**22 50 11.5**	**+0.8**
ABKAR				IAmb	IAmb	22 50 15.1	
	comp=Z,7.9nm,0.7s						
ABKAR	**Akbulak array**	**20.45**	**323**	P	**P**	**22 50 11.2**	**+0.4**
LZH	**Lanzhou**	**20.48**	**78**	*eP*	**P**	**22 50 11.0**	**-0.4**
LZH				pP	sP	22 50 20.1	+2.2
LZH				sP	pP	22 50 25.6	+10
LZH				*eP*P	**PnPn**	**22 50 32.3**	**+3.7**
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		

comp=Z,13nm,0.8s,baz=116,slow=9.2,SNR=43
AKTO LR LR 22 59 36.7
comp=Z,81nm,18.3s,baz=137,slow=38
AKTO Aktyubinsk 22.16 323 ⇓P **P 22 50 28.5 -0.7**
comp=Z,16nm,0.8s
KMI Kunming 22.63 108⇑ *e*P **P 22 50 36.8 +2.1**
KMI pP sP 22 50 40.8 -0.2
KMI pmax pmax
comp=Z,8.0nm,0.9s
KMI pmax pmax
comp=Z,84nm,4.2s
KMI LR LR
comp=Z,82nm,6.6s
KMI LR LR
comp=Z,100nm,5.5s
KMI LR LR
comp=Z,120nm,9.7s
CHTO Chiang Mai 23.62 126 P **P 22 50 42.9 -1.7**
CHTO pmax pmax
comp=Z,4.0nm,1.0s
CHTO Chiang Mai 23.62 126 P **P 22 50 42.9 -1.7**
CM33 Chiang Mai Arr 23.62 126 P **P 22 50 43.0 -1.6**
CMMT Chiang Mai 23.63 126 P **P 22 50 44.0 -0.7**
comp=Z,194nmcomp=Z,2.6nm,0.9s
CM32 Chiang Mai Arr 23.67 126 P **P 22 50 50.0 +4.9**
CM34 Chiang Mai Arr 23.74 125 P **P 22 50 47.0 +1.3**
CM35 Chiang Mai Arr 23.86 126 P **P 22 50 48.0 +1.1**
CM15 Chiang Mai Arr 23.87 126 P **P 22 50 45.5 -1.5**
CM31 Chiang Mai Arr 23.88 126 P **P 22 50 46.6 -0.4**
comp=Z,236nm,0.6s
CM31 Chiang Mai Arr 23.88 126 P **P 22 50 44.9 -2.2**
CM31 IAmb IAmb 22 50 54.6
comp=Z,7.1nm,0.8s
CMAR Chiang Mai Arr 23.88 126 P **P 22 50 45.1 -1.9**
comp=Z,5.4nm,0.9s,baz=314,slow=10,SNR=34
CMAR LR LR 23 01 07.1
comp=Z,58nm,18.2s,baz=1.5,slow=40
CM13 Chiang Mai Arr 23.88 126 P **P 22 50 45.0 -2.1**
comp=Z,58nmcomp=Z,7.1nm,0.9s
PAYA Payao 23.88 123 P **P 22 50 45.0 -2.1**
comp=Z,11µmcomp=Z,132nm,0.8s
CM02 Chiang Mai Arr 23.89 126 P **P 22 50 45.0 -2.2**
comp=Z,56nmcomp=Z,7.9nm,0.8s
CM01 Chiang Mai Arr 23.91 126 P **P 22 50 46.0 -1.4**
comp=Z,69nmcomp=Z,9.0nm,0.9s
CM05 Chiang Mai Arr 23.92 126 P **P 22 50 45.0 -2.5**
comp=Z,46nmcomp=Z,6.6nm,0.9s
CM09 Chiang Mai Arr 23.92 126 P **P 22 50 46.1 -1.4**
comp=Z,7.0nm,0.6s
CM36 Chiang Mai Arr 23.93 126 P **P 22 50 47.0 -0.6**
CM04 Chiang Mai Arr 23.94 126 P **P 22 50 45.9 -1.8**
comp=Z,75nmcomp=Z,11nm,0.9s
LAMP Lampang 24.29 125 P **P 22 50 51.0 0.0**
comp=Z,18nm,1.0s
SONM Songino Array 24.61 48 P **P 22 50 52.6 -1.1**
comp=Z,1.1nm,0.8s,baz=238,slow=8.1,SNR=6.6
SONM Songino Array 24.61 48 P **P 22 50 53.1 -0.7**
NANT Nan 24.83 123 P **P 22 50 56.8 +0.9**
comp=Z,13µmcomp=Z,270nm,0.6s
XAN Xi'an 24.84 82 P **P 22 50 55.8 0.0**
XAN pmax pmax
comp=Z,5.0nm,1.3s
XAN Xi'an 24.84 82 P **P 22 50 53.2 -2.6**
XAN pmax pmax
comp=Z,4.0nm,1.0s
XAN Xi'an 24.84 82 P **P 22 50 53.2 -2.6**
ULN Ulaanbaatar 25.03 49*ce*P **P 22 50 58.1 +0.5**
ULN pmax pmax
comp=Z,5.0nm,1.3s
ULN Ulaanbaatar 25.03 49 P **P 22 50 56.6 -0.9**
GYA Guiyang 25.18 101 *e*P **P 22 50 57.1 -2.0**
GYA S **S 22 55 28.4 +4.0**
GYA SS **SnSn 22 56 21.6 +7.3**
GYA pmax pmax
comp=Z,5.0nm,0.9s
GYA pmax pmax
comp=Z,78nm,4.9s
GYA LR LR
comp=Z,95nm,5.2s
GYA LR LR
comp=Z,100nm,3.8s
GYA LR LR
comp=Z,100nm,6.2s
UTTA Uttaradit 25.46 125 P **P 22 51 01.9 +0.4**
comp=Z,14nm,0.9s
SLVN Son La 25.57 114 P **P 22 51 02.7 +0.1**
SLVN IAmb IAmb 22 51 13.5
comp=Z,5.9nm,0.9s
PHIT Phitsanulok 25.76 126 P **P 22 51 06.3 +2.1**
comp=Z,56nm,1.1s
PBA Port Blair 25.87 147 P P 22 51 05.5 +0.2
ARU Arti 26.11 334 *d* P **P 22 51 07.5 +0.4**
comp=Z,1.0nm,0.5s,baz=155,slow=6.3,SNR=6.0
ARU Arti 26.11 334 *d* P **P 22 51 07.2 +0.1**
ARU 22 51 44.0
ARU S **S 22 55 36.2 -2.2**
ARU pmax pmax
comp=Z,8.0nm,1.1s
ARU Arti 26.11 334 P **P 22 51 07.5 +0.4**
ARU IAmb IAmb 22 51 10.5
comp=Z,7.0nm,1.0s
ENH Enshi 26.15 90 P **P 22 51 06.7 -1.1**
ENH IAmb IAmb 22 51 22.9
comp=Z,5.9nm,0.9s
UTHA Uthaitani 26.32 130 P **P 22 51 09.8 +0.5**
GNI Garni 27.66 292 LR LR 23 04 24.6
comp=Z,32nm,19.0s,baz=60,slow=41
GNI Garni 27.66 292 P **P 22 51 22.4 +0.9**
GNI pmax pmax
comp=Z,13nm,1.2s
GNI Garni 27.66 292 P **P 22 51 22.4 +0.9**
GNI IAmb IAmb 22 51 37.1
comp=Z,13nm,1.1s
AKH Akhalkalaki 28.66 295 P **P 22 51 30.7 +0.4**
AKH pmax pmax
comp=Z,12nm,1.0s
AKH Akhalkalaki 28.66 295 P **P 22 51 30.7 +0.4**
AKH IAmb IAmb 22 51 40.1
comp=Z,12nm,1.0s
BELG Belogornoye 28.69 319 *i* P **P 22 51 32.5 +2.2**
BELG pmax pmax
comp=Z,1.0nm,0.6s
KBZ Khabaz 29.28 299 LR LR 23 05 34.7
comp=Z,70nm,18.1s,baz=69,slow=41
KVAR Kislovodsk Arr 29.45 300 LR LR 23 05 27.5
comp=Z,47nm,20.1s,baz=278,slow=40
KIV Kislovodsk 29.46 300 *e*P **P 22 51 41.7 +4.4**
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,95nm,15.0s
KIRV Kirov 31.17 330 P **P 22 51 52.5 +0.4**
comp=Z,7.3nm,0.6s,baz=135,slow=5.7,SNR=4.1
NRIK Noril'sk 35.41 5 LR LR 23 08 53.4
comp=Z,49nm,18.8s,baz=230,slow=40
NRIK Noril'sk 35.41 5*ce*P **P 22 52 27.6 -1.3**
NRIK pmax pmax
comp=Z,2.0nm,1.0s
OBN Obninsk 35.79 319 *i* P **P 22 52 34.2 +1.8**
OBN pmax pmax
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 36.20 292 P **P 22 52 33.8 -2.6**
BRTR Keskin Array B 36.20 292 P **P 22 52 33.8 -2.6**
CSS Mathiatis 37.21 284 P **P 22 52 45.0 +0.2**
GSI Gunungsitoli 37.22 148 P **P 22 52 45.1 +0.1**
AKASG Malin Array Be 39.28 310 P **P 22 53 03.1 +1.1**
comp=Z,0.3nm,0.4s,baz=102,slow=8.9,SNR=4.7
AKASG LR LR 23 10 57.6
comp=Z,28nm,19.6s,baz=95,slow=39
AKASG Malin Array Be 39.28 310 P **P 22 53 03.1 +1.1**
AKASG pmax pmax
comp=Z,1.0nm,1.1s
AKBB Malin Array Si 39.28 310*ce*P **P 22 53 03.0 +1.0**
AKBB Malin Array Si 39.28 310 P **P 22 53 01.5 -0.5**
KSRS Korea Array 39.52 71 LR LR 23 12 33.2
comp=Z,10nm,18.3s,baz=200,slow=41
RGRI Rengat 40.91 143 P P 22 53 20.5 +4.6
KLR Kul'dur 41.31 52 *i* P **P 22 53 19.6 +0.7**
KLR pmax pmax
comp=Z,3.0nm,0.9s
MLR Muntele Rosu 41.41 302 P **P 22 53 22.3 +2.4**
comp=Z,5.5nm,0.9s,baz=106,slow=6.7,SNR=4.5
MLR Muntele Rosu 41.41 302 P **P 22 53 20.3 +0.4**
MLR Muntele Rosu 41.41 302 P **P 22 53 20.3 +0.4**
ALN Alexandroupoli 41.82 295 P **P 22 53 22.2 -1.0**
ALN pmax pmax
comp=Z,7.0nm,1.0s
ALN Alexandroupoli 41.82 295 P **P 22 53 22.1 -1.0**
ALN IAmb IAmb 22 53 25.1
comp=Z,6.6nm,1.0s
BURAR Bucovina Array 41.82 305 P **P 22 53 21.9 -1.3**
BUR08 Bucovina Ar. S 41.83 305 P **P 22 53 21.5 -1.8**
YAK Yakutsk 42.15 33*ce*P **P 22 53 26.8 +1.3**
YAK pmax pmax
comp=Z,7.0nm,0.7s
FINES FINESS Array B 42.88 326 P **P 22 53 31.9 +0.4**
comp=Z,3.6nm,0.6s,baz=113,slow=9.1,SNR=33
FINES FINESS Array B 42.88 326*ce*P **P 22 53 31.7 +0.2**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 42.88 326 P **P 22 53 30.8 -0.7**
SUW Suwalki 43.24 315 P **P 22 53 31.6 -2.9**
SUW pmax pmax
comp=Z,10.0nm,1.0s
SUW Suwalki 43.24 315 P **P 22 53 31.6 -2.9**
SUW IAmb IAmb 22 53 35.5
comp=Z,9.7nm,1.0s
TIXI Tiksi 45.51 20 *e*P **P 22 53 53.5 +1.1**
TIXI Tiksi 45.51 20 P **P 22 53 51.1 -1.3**
TIXI IAmb IAmb 22 53 57.9
comp=Z,5.1nm,1.1s
ARCES ARCESS Array B 45.64 337 P **P 22 53 53.8 +0.3**
comp=Z,3.8nm,0.8s,baz=100,slow=8.1,SNR=14
ARCES LR LR 23 12 31.6
comp=Z,66nm,18.9s,baz=30,slow=35
VRAC Vranov 47.43 308 P **P 22 54 08.7 +0.9**
comp=Z,2.4nm,0.8s,baz=100,slow=11,SNR=3.2
CONA Conrad Observa 48.08 306 *e*P **P 22 54 14.2 +1.2**
comp=Z,6.4nm,1.6s
HFS Hagfors 48.71 323 P **P 22 54 17.6 +0.1**
comp=Z,1.8nm,0.6s,baz=101,slow=7.7,SNR=7.0
SOKA Soboth 48.82 305 *e*P **P 22 54 19.6 +0.8**
comp=Z,3.4nm,0.6s
GERES GERESS Array B 49.38 308 P **P 22 54 21.2 -1.8**
GERES GERESS Array B 49.38 308 P **P 22 54 21.2 -1.8**
NC602 NORSAR Array S 49.78 324 P **P 22 54 25.3 -0.5**
NC303 NORSAR Array S 49.87 324 P **P 22 54 25.8 -0.6**
NB2 NORSAR Subarra 49.95 324 P **P 22 54 26.6 -0.5**
comp=Z,1.0nm,0.6s,baz=90,slow=7.9
NOA NORSAR Array B 49.95 324 P **P 22 54 26.9 -0.2**
comp=Z,2.6nm,0.9s,baz=90,slow=7.5,SNR=8.7
NOA LR LR 23 17 08.8
comp=Z,36nm,19.6s,baz=0.0,slow=38
SPITS Spitsbergen Ar 51.09 346 P **P 22 54 35.7 +0.2**
comp=Z,6.9nm,0.9s,baz=103,slow=3.6,SNR=4.3
TOLI2 Tolitoli 51.21 121 P **P 22 54 35.9 -1.2**
TOLI2 IAmb IAmb 22 54 39.9
comp=Z,5.6nm,0.8s
MURB Monte Urbino 51.24 301 P **P 22 54 38.2 +1.0**
LATE Laterza 51.91 300 P **P 22 54 41.8 -0.4**
LATE IAmb IAmb 22 54 43.0
comp=Z,5.7nm,1.1s
CORL Corleone 52.10 294 P **P 22 54 43.0 -0.7**
SALO Salr 52.10 304 P **P 22 54 43.2 -0.3**
DAVOX Davos/Dischmat 52.28 306 P **P 22 54 45.1 +0.1**
comp=Z,1.3nm,0.4s,baz=161,slow=3.6,SNR=3.5
KMBO Kilima Mbogo 52.57 237 *i* P P 22 54 53.0 +5.4
EKA Eskdalemuir Ar 58.24 318 P **P 22 55 27.5 -0.1**
comp=Z,3.2nm,0.8s,baz=35,slow=7.4,SNR=3.7
ESDC Sonseca Array 64.10 302 P **P 22 56 07.8 +0.1**
comp=Z,0.4nm,0.7s,baz=62,slow=8.8,SNR=4.9
ESDC Sonseca Array 64.10 302 IAmb IAmb 22 56 10.4
comp=Z,1.1nm,1.1s
TORD Torodi Ar. Bea 72.18 274 P **P 22 56 58.1 -0.6**
comp=Z,2.5nm,0.9s,baz=50,slow=5.0,SNR=19
ILAR Eielson Array 74.96 19 P **P 22 57 13.5 -0.7**
comp=Z,0.5nm,0.7s,baz=319,slow=5.4,SNR=3.2
WRA Warramunga Arr 75.47 127 P **P 22 57 15.8 -2.0**
comp=Z,1.1nm,0.9s,baz=315,slow=6.8,SNR=11
WRA Warramunga Arr 75.47 127 IAmb IAmb 22 57 19.8
comp=Z,0.1nm,1.0s
ASAR Alice Springs 77.84 130 P **P 22 57 29.7 -1.5**
comp=Z,1.6nm,1.0s,baz=317,slow=5.1,SNR=10.0
YKA Yellowknife Ar 82.91 6 P **P 22 57 56.9 -1.0**
comp=Z,0.5nm,0.5s,baz=354,slow=4.5,SNR=3.7
YKA Yellowknife Ar 82.91 6 *i* P **P 22 57 56.5 -1.4**
YKA pmax pmax
comp=Z,1.0nm,0.5s
STKA Stephens Creek 88.42 131 P **P 22 58 24.7 -0.9**
comp=Z,1.3nm,0.5s,baz=324,slow=8.7,SNR=3.3
STKA Stephens Creek 88.42 131 IAmb IAmb 22 58 25.9
comp=Z,0.6nm,0.9s

*NNC **21** 22:53:23.7±3.2,41.81N×82.66E,h0km,mb3.8,mpv3.5,*
Error ellipse: s-maj=25.9km s-min=18.6km az=178.0
*SOME **21** 22:53:30.4,42.07N×82.38E,h0km*
ISC 21 22:53:26.8±2.0,41.94N±0.09×82.59E±0.06,h13km,n36,
σ2s43/57,4C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**2.23**	**313**	*e*P	**Pg**	**22 54 10.7**	**+1.2**
	58nm,0.2s						
KTMS				*e*S	**Sg**	**22 54 39.8**	**+1.4**
	160nm,0.4s						
KTMS	**Ketmen**	**2.23**	**313**	Pg	**Pn**	**22 54 05.5**	**+2.0**
	56nm,0.2s						
KTMS				Lg	Lg	22 54 39.8	
	148nm,0.5s						
SHLS	**Shalkode**	**2.61**	**299**	*e*P	**Pb**	**22 54 12.1**	**-1.3**
	37nm,0.3s						
SHLS				*e*S	**Sn**	**22 54 42.1**	**+1.7**
	186nm,0.5s						
SHLS	**Shalkode**	**2.61**	**299**	Pg	**Pn**	**22 54 10.3**	**+1.6**
	30nm,0.3s						
SHLS				Lg	Lg	22 54 46.3	
	152nm,0.5s						
PDGK	**Podgornoye**	**2.67**	**302**	⇑Pg	**Pn**	**22 54 10.9**	**+1.3**
	12nm,0.5s						
PDGK				⇓Lg	Lg	22 54 51.0	
	68nm,0.6s						
UZB	**Uzynbulak**	**2.90**	**296**	*e*P	**Pg**	**22 54 21.1**	**-1.1**
	9.5nm,0.3s						
UZB				*e*S	**Sg**	**22 54 57.9**	**-1.8**
	58nm,0.5s						
UZB	**Uzynbulak**	**2.90**	**296**	Pg	**Pb**	**22 54 18.4**	**+0.1**
	4.3nm,0.2s						
UZB				Lg	Lg	22 55 01.1	
	27nm,0.5s						
DJR	**Jarkent**	**3.14**	**320**	*e*P	**Pb**	**22 54 25.6**	**+3.1**
	10.0nm,0.6s						
DJR				*e*S	**Sg**	**22 55 05.1**	**-2.7**
	32nm,0.6s						
DJR	**Jarkent**	**3.14**	**320**	Pg	**Pb**	**22 54 21.2**	**-1.4**
	5.1nm,0.4s						
DJR				Lg	Lg	22 55 06.0	
	32nm,0.4s						
KPKS	**Kokpek**	**3.25**	**299**	*e*P	**Pb**	**22 54 27.5**	**+3.1**
	19nm,0.3s						
KPKS				*e*S	**Sg**	**22 55 08.6**	**-2.7**
	111nm,0.5s						
SATY	**Saty**	**3.29**	**291**	*e*P	**Pg**	**22 54 28.6**	**-1.1**
	12nm,0.5s						
SATY				*e*S	**Sg**	**22 55 10.4**	**-1.9**
	41nm,0.5s						
SATY	**Saty**	**3.29**	**291**	Pg	**Pb**	**22 54 26.3**	**+1.3**
	3.7nm,0.2s						
SATY				Lg	Lg	22 55 14.0	
	37nm,0.5s						
MNBS	**Baschi**	**3.74**	**306**	*e*P	**Pb**	**22 54 36.4**	**+3.7**
	8.2nm,0.4s						
MNBS				*e*S	**Sg**	**22 55 24.3**	**-2.5**
	28nm,0.4s						
KAPS	**Kapalarasan**	**4.08**	**326**	*e*P	**Pg**	**22 54 44.1**	**-0.8**
	8.8nm,0.4s						
KAPS				*e*S	**Sg**	**22 55 37.4**	**-0.3**
	26nm,0.5s						
KAPS	**Kapalarasan**	**4.08**	**326**	Pg	**Pb**	**22 54 36.6**	**-1.9**
	8.0nm,0.4s						
KAPS				Lg	Lg	22 55 33.5	
	12nm,0.4s						
ARXS	**Arharly**	**4.16**	**305**	*e*P	**Pg**	**22 54 45.9**	**-0.6**
	12nm,0.4s						
ARXS				*e*S	**Sg**	**22 55 39.8**	**-0.5**
	25nm,0.5s						
KOTS	**Kotyrbulak**	**4.24**	**290**	*e*P	**Pg**	**22 54 47.0**	**-1.0**
	13nm,0.4s						
KOTS				*e*S	**Sg**	**22 55 41.8**	**-1.2**
	25nm,0.5s						
MDOK	**Medeo**	**4.27**	**288**	*e*P	**Pb**	**22 54 45.3**	**+3.6**
	3.1nm,0.6s						
MDOK				*e*S	**Sg**	**22 55 39.2**	**-4.6**
	23nm,0.7s						
MDOK	**Medeo**	**4.27**	**288**	Pg	**Pb**	**22 54 45.0**	**+3.2**
	2.2nm,0.5s						
MDOK				Lg	Lg	22 55 46.3	
	21nm,1.1s						
TNSS	**Tian-Shan**	**4.31**	**287**	*e*P	**Pg**	**22 54 47.5**	**-1.9**
	14nm,0.6s						
TNSS				*e*S	**Sg**	**22 55 42.9**	**-2.3**
	11nm,0.7s						
TNSS	**Tian-Shan**	**4.31**	**287**	Pg	**Pb**	**22 54 43.5**	**+0.8**
	4.7nm,0.5s						
TNSS				Lg	Lg	22 55 42.6	
	8.6nm,0.7s						
TDK	**Taldyqorghan**	**4.31**	**317**	*e*P	**Pb**	**22 54 46.9**	**+4.5**
	38nm,0.7s						
TDK				*e*S	**Sg**	**22 55 42.0**	**-3.2**
	45nm,0.8s						
TDK	**Taldyqorghan**	**4.31**	**317**	Pg	**Pb**	**22 54 42.7**	**+0.3**
	16nm,0.3s						
TDK				Lg	Lg	22 55 41.8	
	26nm,0.8s						
CHKK	**Chushkaly**	**4.53**	**297**	*e*P	**Pg**	**22 54 52.6**	**-1.0**
	3.0nm,0.4s						
CHKK				*e*S	**Sg**	**22 55 51.3**	**-1.0**
	13nm,0.3s						
KTBS	**Karatobe**	**4.69**	**294**	*e*P	**Pb**	**22 54 53.1**	**+4.2**
	2.3nm,0.4s						
KTBS				*e*S	**Sg**	**22 55 52.6**	**-4.6**
	24nm,0.6s						
MTBS	**Maitube**	**4.70**	**287**	*e*P	**Pg**	**22 54 54.8**	**-2.0**
	6.0nm,0.6s						
MTBS				*e*S	**Sg**	**22 55 55.5**	**-2.1**
	9.0nm,0.3s						
MK31	**Makanchi Array**	**4.85**	**358**	⇓Pn	**Pn**	**22 54 41.0**	**+1.6**
	1.3nm,0.6s,baz=198,slow=14,SNR=41						
MK31				⇓Pg	**Pg**	**22 54 58.9**	**-0.8**
	1.7nm,0.5s,baz=176,slow=16,SNR=4.6						
MK31				⇑Lg	Lg	22 56 03.1	
	10nm,0.6s,baz=170,slow=28,SNR=6.6						
KUU	**Kurty**	**4.98**	**295**	*e*P	**Pg**	**22 55 00.2**	**-2.0**
	2.6nm,0.5s						
KUU				*e*S	**Sg**	**22 56 04.9**	**-1.8**
	16nm,0.9s						
KUU	**Kurty**	**4.98**	**295**	Pg	**Pb**	**22 54 58.1**	**+4.3**
	1.4nm,0.5s						
KUU				Lg	Lg	22 56 08.2	
	14nm,0.8s						
KST	**Kastek**	**5.02**	**285**	*e*P	**Pg**	**22 55 00.3**	**-2.6**
	9.9nm,1.0s						
KST				*e*S	**Sg**	**22 56 05.1**	**-2.7**
	14nm,0.7s						
KST	**Kastek**	**5.02**	**285**	Pg	**Pg**	**22 55 00.1**	**-2.8**
	5.7nm,0.9s						
KST				Lg	Lg	22 56 12.9	
	14nm,0.7s						
DGS	**Degeres**	**5.20**	**287**	*e*P	**Pg**	**22 55 04.0**	**-2.2**
	4.4nm,0.5s						
DGS				*e*S	**Sg**	**22 56 11.7**	**-1.8**
	19nm,0.6s						
TKM2	**Tokmak 2**	**5.26**	**283**	⇑Pn	**Pn**	**22 54 46.1**	**+0.8**
	1.1nm,0.5s						
TKM2				⇑Lg	Lg	22 56 08.8	
	12nm,0.8s						
KRBS	**Karabastau**	**5.38**	**291**	*e*P	**Pg**	**22 55 06.5**	**-3.2**
	2.7nm,0.6s						
KRBS				*e*S	**Sg**	**22 56 15.9**	**-3.4**
	5.1nm,0.6s						
ZSN	**Zaisan**	**5.74**	**16**	*e*P	**Pg**	**22 55 13.8**	**-2.8**
	3.1nm,0.7s						
ZSN				*e*S	**Sg**	**22 56 28.4**	**-2.5**
	12nm,0.5s						
ZSN	**Zaisan**	**5.74**	**16**	Pg	Pn	22 54 58.3	+6.7
	1.0nm,0.5s						
ZSN				Lg	Lg	22 56 09.1	
	4.1nm,0.8s						

IDC 21 23:00:15.9±2.2,1.68N×126.47E,h0km,mb3.2/3,
mb1 3.4/3,mb1mx3.3/35,mbtmp3.2/3,Error ellipse:
s-maj=180.0km s-min=27.3km az=66.0,Northern
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.84**	**161**	P	P	23 05 19.6	-1.2
	0.4nm,0.6s,baz=339,slow=11,SNR=5.8						
ASAR	**Alice Springs**	**26.21**	**164**	P	P	23 05 53.9	+1.3
	0.1nm,0.3s,baz=347,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	**59.09**	**326**	P	P	23 10 18.0	-0.1
	0.2nm,0.4s,baz=126,slow=7.1,SNR=4.6						

*NEIC **21** 23:28:15.4±2.6,24.43S±0.09×179.9E±0.1,h498km±8km,*
mb4.6/67,Error ellipse: s-maj=16.0km s-min=12.5km
az=106.0
*IDC **21** 23:28:18.4±1.7,24.53S×179.70E,h517km±17km,mb3.7/9,*
mb1 3.9/11,mb1mx3.5/46,mbtmp4.6/11,Error ellipse:
s-maj=21.1km s-min=13.7km az=173.0
ISC 21 23:28:16.9±0.4,24.40S±0.05×179.92E±0.06,h517km,
n113,σ1s53/121,mb4.5/38,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.21**	**159**	P	**P**	**23 29 46.9**	**+0.4**
GLKZ	**Green Lake**	**5.21**	**159**	P	**P**	**23 29 47.3**	**+0.8**
GLKZ				S	**S**	**23 30 59.8**	**-0.1**
MSVF	**Nonsavu**	**6.86**	**345**	P	**P**	**23 30 03.1**	**+0.6**
NIUE	**Niue**	**10.82**	**63**	P	**P**	**23 30 42.7**	**-0.4**
OUZ	**Omahuta**	**12.10**	**205**	P	**P**	**23 30 57.7**	**+1.4**
DZM	**Mont Dzumac**	**12.61**	**278**	P	**P**	**23 31 03.5**	**+1.5**
	3.6nm,0.3s,baz=86,slow=17,SNR=34						
DZM	**Mont Dzumac**	**12.61**	**278**	P	**P**	**23 31 03.9**	**+1.9**
AFI	**Afiamalu**	**13.05**	**38**	P	**P**	**23 31 04.2**	**-2.3**
	3.6nm,0.3s,baz=164,slow=7.4,SNR=2.2						
AFI				S	**S**	**23 33 21.4**	**-5.0**
	3.4nm,0.3s,baz=0.0,slow=20,SNR=1.9						
MXZ	**Matakaoa Point**	**13.20**	**186**	P	**P**	**23 31 09.4**	**+1.6**
MXZ	**Matakaoa Point**	**13.20**	**186**	P	**P**	**23 31 08.3**	**+0.6**
HAZ	**Te Kaha**	**13.44**	**187**	P	**P**	**23 31 11.5**	**+1.2**
RUGZ	**Raukumara Rang**	**13.66**	**188**	P	**P**	**23 31 14.1**	**+1.4**
TOZ	**Tahuroa Road**	**13.82**	**195**	P	**P**	**23 31 18.3**	**+4.1**
URZ	**Urewera**	**14.03**	**189**	P	**P**	**23 31 15.3**	**-1.1**
	6.4nm,0.3s,baz=348,slow=2.0,SNR=28						
URZ				S	**S**	**23 33 41.1**	**-3.4**
	1.4nm,0.3s,baz=62,slow=23,SNR=11						
URZ	**Urewera**	**14.03**	**189**	P	**P**	**23 31 15.3**	**-1.1**
URZ				S	**S**	**23 33 40.3**	**-4.1**
URZ	**Urewera**	**14.03**	**189**	P	**P**	**23 31 14.9**	**-1.5**
MWZ	**Matawai**	**14.04**	**188**	P	**P**	**23 31 18.0**	**+1.3**
MWZ				S	**S**	**23 33 42.2**	**-2.7**
KNZ	**Kokohu**	**14.71**	**187**	P	**P**	**23 31 23.5**	**0.0**
HIZ	**Hauiti**	**14.72**	**196**	P	**P**	**23 31 27.4**	**+3.7**
HIZ	**Hauiti**	**14.72**	**196**	P	**P**	**23 31 24.6**	**+0.9**
SANVU	**Saraoutou**	**14.90**	**304**	P	**P**	**23 31 25.0**	**-0.9**
BKZ	**Black Stump Fm**	**15.01**	**190**	P	**P**	**23 31 26.4**	**-0.3**
BKZ	**Black Stump Fm**	**15.01**	**190**	P	**P**	**23 31 25.4**	**-1.4**
FUNA	**Funafuti**	**15.80**	**357**	P	**P**	**23 31 32.4**	**-2.9**
BFZ	**Birch Farm**	**16.53**	**190**	P	**P**	**23 31 41.2**	**-1.1**
MSWZ	**Moikau Station**	**17.41**	**192**	P	**P**	**23 31 48.3**	**-2.6**
SNZO	**South Karori**	**17.42**	**193**	P	**P**	**23 31 48.1**	**-2.7**
BHW	**Baring Head**	**17.48**	**193**	P	**P**	**23 31 49.7**	**-1.7**
QRZ	**Quartz Range**	**17.51**	**199**	P	**P**	**23 31 51.1**	**-0.6**
PLWZ	**Palliser**	**17.56**	**192**	P	**P**	**23 31 51.1**	**-1.2**
NNZ	**Nelson**	**17.64**	**196**	P	**P**	**23 31 53.1**	**+0.2**
TUWZ	**Tuamarina**	**17.70**	**195**	P	**P**	**23 31 52.5**	**-0.9**
BSWZ	**Blackbirch Sta**	**17.99**	**195**	P	**P**	**23 31 55.0**	**-1.0**
THZ	**Tophouse**	**18.28**	**197**	P	**P**	**23 31 58.0**	**-0.7**
THZ				IAmb	IAmb	23 32 04.2	
	comp=Z,17nm,0.9s						
KHZ	**Kahutara**	**18.73**	**195**	P	**P**	**23 32 01.6**	**-1.3**
KHZ				IAmb	IAmb	23 32 05.8	
	comp=Z,11nm,0.9s						
LTZ	**Lake Taylor**	**19.40**	**197**	P	**P**	**23 32 08.5**	**-0.4**
LTZ				IAmb	IAmb	23 32 10.6	
	comp=Z,16nm,0.8s						
OXZ	**Oxford**	**19.96**	**197**	P	**P**	**23 32 12.3**	**-1.8**
MQZ	**McQueen's Vall**	**20.16**	**195**	P	**P**	**23 32 14.4**	**-1.4**
RPZ	**Rata Peaks**	**20.60**	**199**	P	**P**	**23 32 19.7**	**-0.2**
	comp=Z,8.5nm,0.5s,baz=37,slow=5.1,SNR=2.3						
RPZ	**Rata Peaks**	**20.60**	**199**	P	**P**	**23 32 18.8**	**-1.0**
RPZ				IAmb	IAmb	23 32 26.8	
	comp=Z,22nm,1.1s						
FOZ	**Fox Glacier**	**20.82**	**201**	P	**P**	**23 32 20.5**	**-1.3**
LBZ	**Lake Benmore**	**21.47**	**199**	P	**P**	**23 32 26.8**	**-0.8**
LBZ				IAmb	IAmb	23 32 32.6	

	comp=Z,6.5nm,0.9s							
ODZ	**Otahua Downs**	**21.93**	**198**	P		**P**	**23 32 31.8**	**-0.1**
ODZ				IAmb		IAmb	23 32 32.8	
	comp=Z,12nm,1.1s							
WKZ	**Wanaka**	**22.23**	**201**	P		**P**	**23 32 34.4**	**-0.2**
WKZ				IAmb		IAmb	23 32 53.5	
	comp=Z,16nm,1.0s							
KNTN	**Kanton**	**22.96**	**22**	P		**P**	**23 32 40.7**	**-0.8**
MLZ	**Mavora Lakes**	**23.00**	**202**	P		**P**	**23 32 42.1**	**+0.7**
MLZ				IAmb		IAmb	23 32 46.2	
	comp=Z,33nm,1.2s							
WHZ	**Wether Hill Ro**	**23.52**	**201**	P		**P**	**23 32 47.1**	**+1.0**
WHZ				IAmb		IAmb	23 32 52.1	
	comp=Z,25nm,1.2s							
HNR	**Honiara**	**24.17**	**305**	P		**P**	**23 32 51.4**	**-0.8**
ARMA	**Armidale**	**25.78**	**250**	P		**P**	**23 33 07.6**	**+1.1**
EIDS	**Eidsvold**	**26.16**	**262**	P		**P**	**23 33 10.5**	**+0.8**
EIDS				IAmb		IAmb	23 33 10.7	
	comp=Z,10nm,0.7s							
CTAO	**Charters Tower**	**31.41**	**271**	P		**P**	**23 33 56.3**	**+0.7**
TOO	**Toolangi**	**32.12**	**238**	P		**P**	**23 34 02.0**	**+0.7**
TOO				IAmb		IAmb	23 34 02.6	
	comp=Z,9.5nm,0.7s							
TAU	**Tasmania Unive**	**32.55**	**227**	P		**P**	**23 34 04.9**	**0.0**
TAU				IAmb		IAmb	23 34 11.7	
	comp=Z,28nm,1.1s							
STKA	**Stephens Creek**	**34.47**	**249**	P		**P**	**23 34 21.4**	**+0.1**
	comp=Z,11nm,0.5s,baz=86,slow=9.6,SNR=31							
STKA	**Stephens Creek**	**34.47**	**249**	P		**P**	**23 34 21.6**	**+0.3**
COEN	**Coen**	**36.13**	**280**	P		**P**	**23 34 35.5**	**+0.3**
PATS	**Pohnpei**	**37.52**	**323**	P		**P**	**23 34 46.7**	**0.0**
BBOO	**Buckleboo**	**39.19**	**247**	P		**P**	**23 34 59.3**	**-0.8**
AS31	**Alice Springs**	**41.88**	**261**	P		**P**	**23 35 21.5**	**-0.3**
ASAR	**Alice Springs**	**41.88**	**261**	P		**P**	**23 35 21.5**	**-0.3**
	comp=Z,7.2nm,0.7s,baz=91,slow=7.3,SNR=105							
ASAR				ScP		**ScP**	**23 40 07.6**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=113,slow=3.0,SNR=5.1							
ASAR				S		**S**	**23 41 01.2**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=100,slow=16,SNR=5.0							
ASAR	**Alice Springs**	**41.88**	**261**	P		**P**	**23 35 21.1**	**-0.8**
WR0	**Warramunga Arr**	**42.12**	**267**	P		**P**	**23 35 23.0**	**-0.7**
WR0				IAmb		IAmb	23 35 23.3	
	comp=Z,11nm,0.5s							
WB2	**Warramunga Arr**	**42.29**	**267**	P		**P**	**23 35 24.3**	**-0.7**
WB2				IAmb		IAmb	23 35 25.1	
	comp=Z,20nm,0.6s							
WRAB	**Tennant Creek**	**42.30**	**267**	P		**P**	**23 35 22.1**	**-3.0**
WRAB				IAmb		IAmb	23 35 25.0	
	comp=Z,18nm,0.6s							
WB0	**Warramunga Arr**	**42.30**	**267**	P		**P**	**23 35 24.4**	**-0.7**
WB0				IAmb		IAmb	23 35 25.1	
	comp=Z,23nm,0.7s							
WRA	**Warramunga Arr**	**42.30**	**267**	P		**P**	**23 35 24.6**	**-0.6**
	comp=Z,18nm,0.5s,baz=103,slow=8.0,SNR=154							
WRA				ScP		**ScP**	**23 40 10.1**	**+1.7**
	comp=Z,3.4nm,0.8s,baz=102,slow=4.1,SNR=18							
WRA				S		**S**	**23 41 05.8**	**-2.8**
	comp=Z,0.9nm,0.9s,baz=107,slow=14,SNR=4.7							
WRA	**Warramunga Arr**	**42.30**	**267**	P		**P**	**23 35 23.5**	**-1.6**
FORT	**Forrest**	**46.07**	**250**	P		**P**	**23 35 53.1**	**-1.1**
MTN	**Manton Dam**	**47.42**	**275**	P		**P**	**23 36 03.7**	**-0.9**
MTN				IAmb		IAmb	23 36 04.2	
	comp=Z,7.9nm,0.8s							
KNRA	**Kununurra**	**48.62**	**270**	P		**P**	**23 36 13.5**	**0.0**
KNRA				IAmb		IAmb	23 36 14.1	
	comp=Z,45nm,1.1s							
FAKI	**Fak Fak**	**50.66**	**287**	P		**P**	**23 36 28.0**	**-0.6**
FITZ	**Fitzroy Crossi**	**50.72**	**266**	IAmb		IAmb	23 36 30.4	
	comp=Z,14nm,0.7s							
SOEI	**Soe**	**54.82**	**275**	P		**P**	**23 36 59.9**	**+1.4**
	comp=Z,24nm,1.0s							
SOEI	**Soe**	**54.82**	**275**	IAmb		IAmb	23 37 09.0	
	comp=Z,18nm,0.9s							
NWAO	**Narrogin (SRO)**	**54.97**	**246**	P		**P**	**23 36 57.8**	**-1.3**
NWAO				IAmb		IAmb	23 37 00.2	
	comp=Z,16nm,0.9s							
NWAO	**Narrogin (SRO)**	**54.97**	**246**	P		**P**	**23 36 57.8**	**-1.3**
NWAO				IAmb		IAmb	23 37 00.2	
	comp=Z,14nm,1.0s							
PSA00	**Pilbara Seismi**	**55.01**	**260**	P		**P**	**23 36 58.6**	**-1.0**
MORW	**Morawa**	**56.64**	**250**	P		**P**	**23 37 09.8**	**-1.0**
MORW				IAmb		IAmb	23 37 10.5	
	comp=Z,8.8nm,0.6s							
EDFI	**Ende, Flores**	**57.55**	**275**	P		**P**	**23 37 17.0**	**-0.3**
CASY	**Casey**	**59.63**	**206**	P		**P**	**23 37 30.0**	**-0.4**
GIRL	**Giralia**	**59.73**	**257**	P		**P**	**23 37 31.0**	**-0.8**
LUWI	**Luwuk**	**59.87**	**284**	P		**P**	**23 37 32.9**	**0.0**
LUWI				IAmb		IAmb	23 37 39.1	
	comp=Z,16nm,0.6s							
TOLI2	**Tolitoli**	**62.63**	**285**	P		**P**	**23 37 50.2**	**-0.8**
TOLI2				IAmb		IAmb	23 37 50.9	
	comp=Z,7.5nm,0.8s							
JAGI	**Jajag, Banyuwa**	**64.52**	**272**	P		**P**	**23 38 01.8**	**-1.2**
QSPA	**South Pole Qui**	**65.69**	**180**	P		**P**	**23 38 10.7**	**+1.0**
	comp=Z,2.4nm,1.0s,baz=352,slow=1.2,SNR=6.2							
QSPA	**South Pole Qui**	**65.69**	**180**	P		**P**	**23 38 10.5**	**+0.8**
KKM	**Kota Kinabalu**	**68.98**	**287**	P		**P**	**23 38 30.8**	**0.0**
KKM				IAmb		IAmb	23 38 43.1	
	comp=Z,17nm,0.9s							
ERM	**Erimo**	**74.31**	**332**	P		**P**	**23 38 59.8**	**-1.3**
YHNB	**Yeheng**	**74.79**	**306**	P		**P**	**23 39 04.2**	**-0.1**
YHNB				IAmb		IAmb	23 39 15.7	
	comp=Z,12nm,1.0s							
MAW	**Mawson**	**77.26**	**200**	P		**P**	**23 39 17.9**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=289,slow=4.1,SNR=1.8							
MAW	**Mawson**	**77.26**	**200**	P		**P**	**23 39 17.6**	**+0.5**
SLBS	**Sierra La Lagu**	**83.11**	**60**	P		**P**	**23 39 50.8**	**+2.2**
GSI	**Gunungsitoli**	**83.56**	**274**	P		**P**	**23 39 51.2**	**+0.2**
GSI				IAmb		IAmb	23 39 57.9	
	comp=Z,14nm,1.0s							
KRMB	**Red Mountain**	**83.69**	**39**	P		**P**	**23 39 52.6**	**+1.4**
KRMB				IAmb		IAmb	23 40 08.5	
	comp=Z,20nm,1.2s							
SNAA	**Sanae**	**84.17**	**179**	P		**P**	**23 39 52.4**	**-0.6**
OHAK	**Old Harbor**	**84.38**	**14**	P		**P**	**23 39 55.5**	**+1.6**
OHAK				IAmb		IAmb	23 40 09.4	
	comp=Z,9.6nm,1.0s							
NVAR	**Mina Array Bea**	**85.16**	**44**	P		**P**	**23 40 00.3**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=223,slow=7.6,SNR=7.4							
TPNV	**Topopah Spring**	**85.62**	**46**	P		**P**	**23 40 02.6**	**+1.8**
KVN	**Kaiserville**	**85.65**	**44**	P		**P**	**23 40 02.1**	**+1.2**
LON	**Longmire**	**88.20**	**36**	P		**P**	**23 40 14.6**	**+2.1**
LON				IAmb		IAmb	23 40 29.2	
	comp=Z,6.5nm,1.1s							
CMAR	**Chiang Mai Arr**	**89.63**	**290**	P		**P**	**23 40 21.7**	**+1.9**
	comp=Z,1.2nm,0.5s,baz=148,slow=3.8,SNR=9.8							
TMUT	**Trail Mountain**	**90.23**	**46**	P		**P**	**23 40 24.4**	**+1.9**
M24K	**Tolsona, Glenn**	**90.38**	**15**	P		**P**	**23 40 21.9**	**-0.4**
TRF	**Thorofare Moun**	**90.65**	**13**	P		**P**	**23 40 24.1**	**+0.5**
TRF				IAmb		IAmb	23 40 37.5	
	comp=Z,7.0nm,1.2s							
TX31	**Lajitas Ar. Si**	**90.75**	**58**	P		**P**	**23 40 26.5**	**+1.6**
TX32	**Lajitas Array**	**90.75**	**58**	P		**P**	**23 40 27.1**	**+2.3**
TXAR	**Lajitas Array**	**90.75**	**58**	P		**P**	**23 40 27.1**	**+2.2**
	comp=Z,1.2nm,0.7s,baz=211,slow=6.7,SNR=17							
BPAW	**Bear Paw Mtn.**	**91.10**	**12**	P		**P**	**23 40 26.8**	**+1.3**
BPAW				IAmb		IAmb	23 40 30.5	
	comp=Z,9.8nm,0.7s							
DOT	**Dot Lake**	**92.21**	**15**	P		**P**	**23 40 32.4**	**+1.8**
DOT				IAmb		IAmb	23 40 43.0	
	comp=Z,8.8nm,1.2s							
LZH	**Lanzhou**	**93.62**	**308**	⇑P		**P**	**23 40 38.6**	**+0.6**
LZH				pP		pwP	23 42 36.3	-0.4
LZH				sP		sP	23 43 18.5	-4.8
LZH				PP		**PP**	**23 44 35.4**	**+3.3**
LZH				pmax		pmax		
	comp=Z,20nm,1.4s							
LZH				pmax		pmax		
	comp=Z,89nm,4.3s							
ISCO	**Idaho Springs**	**94.23**	**48**	P		**P**	**23 40 41.3**	**+0.5**
BRTR	**Keskin Array B**	**147.82**	**307**	PKPbc		**PKPbc**	**23 47 04.7**	**+0.9**
	comp=Z,1.4nm,0.6s,baz=70,slow=2.7,SNR=2.0							
CLL	**Collm**	**151.31**	**343**	*i* PKPbc		**PKPbc**	**23 47 12.3**	**+0.8**
	comp=Z,4.0nm,0.7s							

*DDA **21** 23:56:42.6,36˚.41N×27˚.51E,h7km±4km,ML2.1*
*ATH **21** 23:56:43.4,36˚.32N×27˚.82E,h71km±4km,ML2.9/2,Error ellipse: s-maj=4.4km s-min=1.9km az=125.0*
ISC 21 23:56:44.6±1.5,36˚.32N±0˚.04×27˚.81E±0˚.04,h65km±12km, n15,σ0s97/26,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.28**	**111**	P	**Pn**	**23 56 55.2**	**+0.2**
ARG				S	**Sn**	**23 57 03.3**	**+0.5**
ARG				AML	AML	23 57 04.0	
	comp=E,2676μm,0.2s						
ARG				AML	AML	23 57 04.0	
	comp=N,1029μm,0.1s						
TURN	**Turunc**	**0.58**	**37**	*i* P	**Pn**	**23 56 57.6**	**-0.1**
TURN				*i* S	**Sn**	**23 57 06.3**	**-1.1**
DALY	**Dalyan (Mula)**	**0.84**	**53**	*i* P	**Pn**	**23 57 01.4**	**+0.6**
DALY				*i* S	**Sn**	**23 57 13.8**	**+0.9**
KARP	**Karpathos**	**0.93**	**215**	P	**Pn**	**23 57 02.1**	**+0.1**
KARP				S	**Sn**	**23 57 14.8**	**0.0**
KARP				AML	AML	23 57 15.1	
	comp=N,1206μm,0.3s						
KARP				AML	AML	23 57 15.3	
	comp=E,1525μm,0.1s						
FETY	**Fethiye**	**1.08**	**72**	*i* P	**Pn**	**23 57 03.5**	**-0.3**
FETY				*i* S	**Sn**	**23 57 18.1**	**-0.1**
AYDN	**Tasoluk**	**1.34**	**2**	*i* P	**Pn**	**23 57 07.5**	**+0.1**
AYDN				IAML		23 57 24.0	
	comp=E,38nm,0.3s						
AYDN				*i* S	**Sn**	**23 57 24.0**	**-0.5**
AYDN				IAML		23 57 25.0	
	comp=N,55nm,0.3s						
KSL	**Kastellorizon**	**1.45**	**96**	P	**Pn**	**23 57 08.7**	**+0.1**
KSL				S	**Sn**	**23 57 26.5**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.45**	**37**	*i* P	**Pn**	**23 57 11.2**	**+2.4**
TAVA				*i* S	**Sn**	**23 57 27.6**	**+0.6**
TAVA				IAML		23 57 31.0	
	comp=N,32nm,0.6s						
TAVA				IAML		23 57 32.0	
	comp=E,33nm,0.2s						
AKAS	**Kas**	**1.46**	**93**	*i* P	**Pn**	**23 57 08.9**	**0.0**
AKAS				*i* S	**Sn**	**23 57 24.2**	**-3.0**
GCAM	**G?zelcaml?**	**1.46**	**342**	*i* P	**Pn**	**23 57 08.0**	**-0.8**
GCAM				IAML		23 57 23.0	
	comp=N,29nm,1.4s						
GCAM				*i* S	**Sn**	**23 57 26.6**	**-0.4**
GCAM				IAML		23 57 27.0	
	comp=E,25nm,0.3s						
SMG	**Samos**	**1.59**	**331**	P	**Pn**	**23 57 10.6**	**-0.1**
SMG				S	**Sn**	**23 57 30.5**	**+0.2**
GOLH	**Golhisar**	**1.68**	**56**	*i* P	**Pn**	**23 57 12.7**	**+0.8**
ZKR	**Zakros**	**1.76**	**228**	P	**Pn**	**23 57 13.9**	**+1.0**
DGB	**zmir**	**1.88**	**337**	*i* P	**Pn**	**23 57 14.1**	**-0.5**
NPS	**Neapolis**	**2.07**	**240**	P	**Pn**	**23 57 17.2**	**+0.1**

*NIED **22** 00:07:09.2,37˚.19N×141˚.64E,h27km,MW3.8,Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr=2.66; Mθθ=2.74; Mφφ=-0.08; Mrθ=1.06; Mθφ=3.95; Mφr=3.07; Fault plane solution: M0=5.78000×10^14^ NP1: φs=199.00000°,δ=66.00000°,λ=140.00000°. NP2: φs=90.00000°,δ=54.00000°,λ=-30.00000°.*
*JMA **22** 00:07:09.1±0.1,37˚.19N×141˚.64E,h27km±1km,M4.1*
JMA Felt I J1.
*NEIC **22** 00:07:10.7±1.8,37˚.29N±0˚.04×141˚.63E±0˚.07,h24km±6km, mb4.5/12,Error ellipse: s-maj=8.2km s-min=5.7km az=58.0*
*IDC **22** 00:07:13.2±3.3,37˚.11N×141˚.50E,h41km±32km,mb3.5/12, mb1 3.8/14,mb1mx3.6/35,mbtmp3.8/14,ML3.0/2,MS2.7/4, Ms1 2.8/4,ms1mx2.5/33,Error ellipse: s-maj=24.8km s-min=16.1km az=76.0*
ISC 22 00:07:08.8±1.6,37˚.22N±0˚.04×141˚.64E±0˚.06,h13km±9km, n72,σ1s14/69,mb3.8/17,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.62**	**284**	P	**Pg**	**00 07 21.4**	**+0.4**
JFK				S	**Sg**	**00 07 29.8**	**+0.5**
ONAJ	**Iwakimizuishiy**	**0.68**	**260**	P	**Pg**	**00 07 22.0**	**0.0**
ONAJ				*e*S	**Sg**	**00 07 30.7**	**-0.3**
JMST	**Minamisoumatoc**	**0.78**	**310**	P	**Pg**	**00 07 23.9**	**0.0**
JMST				S	**Sg**	**00 07 34.2**	**+0.1**
JFFD	**Fukushimafurud**	**0.87**	**262**	P	**Pb**	**00 07 25.2**	**-0.5**
JMM	**Marumori**	**0.93**	**314**	P	**Pb**	**00 07 26.2**	**-0.6**
JMM				S	**Sb**	**00 07 38.3**	**-0.7**
JMM	**Marumori**	**0.93**	**314**		**Pb**	**00 07 26.4**	**-0.4**
JMM				Sg	**Sb**	**00 07 38.4**	**-0.7**
JHO	**Hitachi**	**1.05**	**235**	P	**Pb**	**00 07 27.8**	**-1.0**
JFT	**Otama**	**1.08**	**286**	P	**Pb**	**00 07 29.0**	**-0.3**
JFT				*e*S	**Sb**	**00 07 43.1**	**-0.2**
JIO	**Ouri**	**1.25**	**350**	P	**Pn**	**00 07 31.2**	**-0.8**
JIO				S	**Sb**	**00 07 47.0**	**-1.3**
JOU	**Okura**	**1.38**	**326**	P	**Pn**	**00 07 34.0**	**+0.3**
JOU				S	**Sn**	**00 07 51.8**	**-0.1**
JYT	**Yasato**	**1.52**	**230**		**Pn**	**00 07 36.5**	**+0.8**
JFY	**Yanaizu**	**1.55**	**277**	P	**Pn**	**00 07 36.3**	**+0.2**
JFY				S	**Sn**	**00 07 56.3**	**+0.2**
JSD	**Sado**	**2.80**	**288**		**Pn**	**00 07 53.8**	**+0.5**
MJAR	**Matsushiro Arr**	**2.83**	**257**	P	**Pn**	**00 07 54.0**	**+0.3**
	0.7nm,0.3s,baz=84,slow=15,SNR=8.7						
MJAR	**Matsushiro Arr**	**2.83**	**257**		**Pn**	**00 07 55.7**	**+2.0**
MAJO	**Matsushiro**	**2.83**	**257**		**Pn**	**00 07 55.9**	**+2.2**
MAT	**Matsushiro**	**2.83**	**257**	P	**Pn**	**00 07 54.7**	**+1.0**
MAT				S	**Sn**	**00 08 27.3**	**-0.4**
JTM	**Tenmabayashi**	**3.59**	**353**		**Pn**	**00 08 05.8**	**+1.7**
JSG	**Sagara**	**3.78**	**229**	Pn	**Pn**	**00 08 09.5**	**+2.7**
JGF	**Kuroka**	**3.81**	**246**		**Pn**	**00 08 11.2**	**+4.0**
INU	**Inuyama**	**4.17**	**245**		**Pn**	**00 08 13.0**	**+0.9**
JHJ2	**Mitsune**	**4.36**	**201**	Pn	**Pn**	**00 08 15.9**	**+1.2**
JHJ	**Hachijo jima 2**	**4.37**	**201**	P	**Pn**	**00 08 15.4**	**+0.6**
	11nm,0.3s,baz=249,slow=23,SNR=2.2						
JHJ				S	**Sn**	**00 09 03.0**	**-2.5**
	6.0nm,0.3s,baz=82,slow=23,SNR=1.0						
JHJ				LR	LR	00 10 14.3	
	comp=Z,133nm,18.5s,baz=6.0,slow=43						
ERM	**Erimo**	**4.93**	**13**	Pn	**Pn**	**00 08 21.8**	**-0.7**
JEM	**Erimo**	**4.93**	**13**	Pn	Pg	00 08 50.1	+6.9
JWT	**Wachi**	**5.40**	**251**		**Pn**	**00 08 31.3**	**+2.3**
JEW	**Eniwo**	**5.61**	**359**	Pn	**Pn**	**00 08 30.8**	**-1.1**
JKA	**Kamikawa-asahi**	**6.93**	**6**	Pn	**Pn**	**00 08 50.0**	**0.0**
JHS	**Saijyo**	**7.24**	**255**	Pn	**Pn**	**00 08 54.4**	**+0.1**
JNU	**Nakatsue**	**9.71**	**248**	Pn	**Pn**	**00 09 28.3**	**+0.1**
USRK	**Ussuriysk Ar.**	**10.11**	**317**	P	Pn	00 09 41.9	+8.3
	baz=123,slow=12,SNR=8.1						
KSRS	**Korea Array**	**10.92**	**275**	P	Pn	00 09 54.3	+10
	baz=94,slow=13,SNR=7.8						
KSRS				LR	LR	00 13 22.9	
	comp=Z,23nm,19.4s,baz=226,slow=34						
KLR	**Kul'dur**	**13.98**	**332**	LR	LR	00 15 34.7	
	comp=Z,34nm,18.3s,baz=130,slow=36						
PETK	**Petropavlovsk-**	**19.44**	**30**	P	**P**	**00 11 33.9**	**-0.8**
PET	**Petropavlovsk**	**19.76**	**32**	P	**P**	**00 11 37.6**	**-0.7**
PET				IAmb	IAmb	00 11 42.5	
	comp=Z,27nm,1.0s						
SONM	**Songino Array**	**27.83**	**304**	P	**P**	**00 12 58.6**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=108,slow=8.4,SNR=5.9						
SONM	**Songino Array**	**27.83**	**304**	IAmb	IAmb	00 13 00.4	
	comp=Z,0.7nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.09**	**121**	T	T	00 42 18.3	
	baz=314,slow=75,SNR=225						
H11N1	**WAKE ISLAND Hy**	**28.10**	**121**	T	T	00 42 18.3	
	baz=314,slow=75,SNR=255						
H11N3	**WAKE ISLAND Hy**	**28.11**	**121**	T	T	00 42 21.1	
	baz=314,slow=75,SNR=199						
H11S1	**WAKE ISLAND Hy**	**28.81**	**123**	T	T	00 43 16.1	
	baz=316,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**28.81**	**124**	T	T	00 43 25.4	
	baz=316,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	**28.83**	**123**	T	T	00 43 10.5	
	baz=316,slow=76,SNR=7.6						
ZALV	**Zalesovo Beam**	**41.92**	**312**	P	**P**	**00 14 59.5**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=78,slow=6.8,SNR=7.2						
ZALV	**Zalesovo Beam**	**41.92**	**312**	P	**P**	**00 14 58.6**	**-0.2**
MK31	**Makanchi Array**	**44.17**	**302**	P	**P**	**00 15 17.0**	**-0.2**
MKAR	**Makanchi Array**	**44.17**	**302**	P	**P**	**00 15 17.7**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=84,slow=12,SNR=6.7						
MAKZ	**Makanchi**	**44.38**	**302**	P	**P**	**00 15 19.0**	**+0.1**
MAKZ				IAmb	IAmb	00 15 31.9	
	comp=Z,3.3nm,1.1s						
KURK	**Kurchatov**	**45.96**	**308**	P	**P**	**00 15 30.6**	**-0.7**
KURK				IAmb	IAmb	00 15 32.6	
	comp=Z,4.4nm,1.1s						
ILAR	**Eielson Array**	**49.24**	**32**	P	**P**	**00 15 58.1**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=266,slow=6.6,SNR=14						
ILAR	**Eielson Array**	**49.24**	**32**	P	**P**	**00 15 56.4**	**-0.2**
FYU	**Fort Yukon**	**49.86**	**30**	P	**P**	**00 15 59.0**	**-2.3**
N25K	**Chitina, Valde**	**50.53**	**36**	P	**P**	**00 16 06.0**	**-0.5**
N25K				IAmb	IAmb	00 16 16.8	
	comp=Z,5.0nm,1.1s						
KKAR	**Karatay Array**	**53.19**	**300**	P	**P**	**00 16 26.0**	**-0.5**
CISI	**Cisompet, Garu**	**54.63**	**223**	P	**P**	**00 16 36.0**	**-1.4**
CHGR	**Chuyangaron**	**55.75**	**295**	P	**P**	**00 16 45.4**	**+0.1**
CHGR				IAmb	IAmb	00 16 52.4	
	comp=Z,4.8nm,0.7s						
WRAB	**Tennant Creek**	**57.26**	**188**	P	**P**	**00 16 55.2**	**-0.8**
WRAB				IAmb	IAmb	00 17 04.9	
	comp=Z,10nm,1.1s						
WRA	**Warramunga Arr**	**57.27**	**188**	P	**P**	**00 16 55.8**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=6.0,slow=7.5,SNR=8.4						
ABKAR	**Akbulak array**	**57.96**	**310**	P	**P**	**00 16 59.6**	**-1.1**
ABKAR	**Akbulak array**	**57.96**	**310**	P	**P**	**00 17 00.5**	**-0.2**
ASAR	**Alice Springs**	**61.00**	**188**	P	**P**	**00 17 21.8**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=9.8,slow=6.5,SNR=5.6						
FINES	**FINESS Array B**	**68.73**	**332**	P	**P**	**00 18 11.8**	**0.0**
	comp=Z,2.1nm,0.9s,baz=35,slow=10,SNR=3.4						
NOA	**NORSAR Array B**	**74.08**	**337**	P	**P**	**00 18 45.0**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=52,slow=5.1,SNR=1.5						
NOA				LR	LR	00 54 32.6	
	comp=Z,6.4nm,19.8s,baz=270,slow=38						
AKASG	**Malin Array Be**	**74.26**	**322**	P	**P**	**00 18 45.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=56,slow=45,SNR=2.0						
NVAR	**Mina Array Bea**	**74.73**	**53**	P	**P**	**00 18 50.6**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=300,slow=4.5,SNR=3.6						
PDAR	**Pinedale Array**	**77.41**	**46**	P	**P**	**00 19 05.2**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=242,slow=1.9,SNR=1.7						
TCRU	**Three Creeks R**	**78.30**	**50**	P	**P**	**00 19 10.7**	**+1.8**
CLL	**Collm**	**81.02**	**330**	*e*P	**P**	**00 19 24.0**	**+0.9**
TXAR	**Lajitas Array**	**89.87**	**52**	P	**P**	**00 20 08.2**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=328,slow=3.2,SNR=3.0						
H03N2	**Juan Fernandez**	**146.87**	**96**	T	T	03 10 57.7	
	baz=292,slow=76,SNR=24						
H03N3	**Juan Fernandez**	**146.88**	**96**	T	T	03 11 01.5	
	baz=292,slow=76,SNR=27						
H03N1	**Juan Fernandez**	**146.88**	**96**	T	T	03 10 59.5	
	baz=292,slow=76,SNR=28						

*NEIC **22** 00:08:23.9±1.8,18˚.30N±0˚.05×100˚.87W±0˚.04,h54km±9km, Error ellipse: s-maj=8.0km s-min=5.6km az=161.0*
*MEX **22** 00:08:24.7±0.6,18˚.31N×100˚.86W,h58km±6km,MD4.2*
ISC 22 00:08:23.8±0.8,18˚.29N±0˚.04×100˚.87W±0˚.04, h53km±10km,n49,σ0s92/59,mb4.1/6,Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.49**	**91**	*i* P	**Pn**	**00 08 34.7**	**-0.6**
ARIG				*i* S	**Sn**	**00 08 43.1**	**-0.4**
ARIG	**Puente Sto Nin**	**0.49**	**91**		**Pn**	**00 08 34.7**	**-0.6**
ARIG					**Sn**	**00 08 43.1**	**-0.4**
ZIIG	**Zihuatanejo**	**0.88**	**220**	*i* P	**Pn**	**00 08 39.9**	**-0.1**
ZIIG				*i* S	**Sn**	**00 08 52.1**	**+0.1**
ZIIG	**Zihuatanejo**	**0.88**	**220**		**Pn**	**00 08 39.9**	**-0.1**
ZIIG					**Sn**	**00 08 52.1**	**+0.1**
MEIG	**Mezcala**	**1.24**	**107**	*i* P	**Pn**	**00 08 44.9**	**0.0**
MEIG				*i* S	**Sn**	**00 08 59.8**	**-0.9**
MEIG	**Mezcala**	**1.24**	**107**		**Pn**	**00 08 44.9**	**0.0**
PLIG	**Platanillo**	**1.30**	**85**	*i* P	**Pn**	**00 08 45.7**	**0.0**
PLIG				*i* S	**Sn**	**00 09 01.7**	**-0.4**
PLIG	**Platanillo**	**1.30**	**85**		**Pn**	**00 08 45.7**	**0.0**
CAIG	**El Cayaco**	**1.36**	**155**	*i* P	**Pn**	**00 08 45.6**	**-0.9**
CAIG				*i* S	**Sn**	**00 09 03.1**	**-0.3**
CAIG	**El Cayaco**	**1.36**	**155**		**Pn**	**00 08 45.6**	**-0.9**
MOIG	**Morelia**	**1.42**	**348**	*i* P	**Pn**	**00 08 46.4**	**-1.0**
MOIG				*i* S	**Sn**	**00 09 03.7**	**-1.4**
MOIG	**Morelia**	**1.42**	**348**		**Pn**	**00 08 48.9**	**+1.4**
UNM	**Universidad Na**	**1.91**	**57**	Pn	**Pn**	**00 08 55.0**	**+0.9**
TLIG	**Tlapa**	**2.31**	**108**	*i* P	**Pn**	**00

PRK				AML	AML	00 11 41.6
	comp=N,4470μm,0.3s					
PRK	**Paraskevi**	**0.60**	**264**	P	**Pb**	**00 11 27.8 +0.6**
PRK				S	**Sb**	**00 11 36.0 +0.5**
	comp=N,3μm,0.4s					
BALY	**Balya**	**0.62**	**46**	*i* P	**Pg**	**00 11 26.5 -0.6**
BALY				*i* S	**Sg**	**00 11 35.4 -0.1**
BALB	**Balikesir**	**0.73**	**63**	PG	**Pg**	**00 11 28.5 -0.7**
BALB				SG	**Sg**	**00 11 38.9 +0.1**
AKS	**Akhisar**	**0.74**	**125**	PG	**Pg**	**00 11 29.0 -0.4**
AKHS	**Akhisar**	**0.74**	**125**	*i* P	**Pg**	**00 11 28.6 -0.8**
EZN	**Ezine**	**0.75**	**313**	PG	**Pg**	**00 11 29.6 0.0**
EZN				SG	**Sg**	**00 11 40.0 +0.5**
EZN	**Ezine**	**0.75**	**313**	P	**Pg**	**00 11 29.0 -0.6**
EZN				S	**Sg**	**00 11 39.5 0.0**
	comp=N,2μm,0.2s					
GONE	**Gonen-Balikesi**	**0.89**	**34**	PG	**Pg**	**00 11 31.6 -0.6**
GOMA	**Golmarmara-Man**	**0.91**	**131**	PG	**Pg**	**00 11 32.4 -0.2**
BLCB	**Balcova**	**0.92**	**180**	PG	**Pg**	**00 11 32.8 0.0**
BLCB	**Balcova**	**0.92**	**180**	P	**Pg**	**00 11 31.7 -1.1**
BLCB				S	**Sg**	**00 11 44.8 0.0**
BOZC	**Bozcaada**	**0.93**	**305**	PG	**Pg**	**00 11 32.9 0.0**
BOZC	**Bozcaada**	**0.93**	**305**	*i* P	**Pg**	**00 11 32.7 -0.2**
BOZC				*i* S	**Sg**	**00 11 43.8 -1.2**
BOZC				IAML		00 11 47.0
	comp=E,2μm,0.2s					
BOZC				IAML		00 11 48.0
	comp=N,1μm,0.2s					
URLA	**Izmir**	**1.01**	**200**	PG	**Pb**	**00 11 34.5 +0.2**
URLA	**Izmir**	**1.01**	**200**	*i* P	**Pb**	**00 11 33.9 -0.3**
URLA				*i* S	**Sb**	**00 11 48.2 +0.8**
URLA				IAML		00 11 50.0
	comp=E,2μm,0.5s					
URLA				IAML		00 11 51.0
	comp=N,3μm,0.6s					
KNL	**Balıkesir**	**1.03**	**21**	*i* P	**Pb**	**00 11 33.7 -1.0**
KNL				*i* S	**Sb**	**00 11 48.1 0.0**
KNL				IAML		00 11 51.0
	comp=E,959nm,0.6s					
KNL				IAML		00 11 52.0
	comp=N,579nm,0.4s					
LPK	**Lapseki**	**1.08**	**349**	PG	**Pb**	**00 11 35.5 0.0**
GELI	**Tayfur-Gelibol**	**1.17**	**338**	PN	**Pb**	**00 11 37.2 +0.2**
EDC	**Edincik**	**1.22**	**31**	PN	**Pn**	**00 11 37.5 -0.2**
GOKA	**anakkale-Gk**	**1.24**	**316**	*i* P	**Pn**	**00 11 38.1 +0.2**
GOKA				*i* S	**Sb**	**00 11 53.1 -0.9**
GOKA				IAML		00 11 56.0
	comp=N,3μm,0.6s					
GOKA				IAML		00 11 56.0
	comp=E,4μm,0.5s					
GADA	**Gvkgeada**	**1.24**	**315**	PN	**Pn**	**00 11 38.3 +0.3**
GADA	**Gvkgeada**	**1.24**	**315**	P	**Pn**	**00 11 37.9 -0.1**
GADA				S	**Sb**	**00 11 54.3 +0.1**
	comp=E,1μm,0.7s					
DGB	**zmir**	**1.26**	**186**	*i* P	**Pn**	**00 11 37.6 -0.7**
DGB				*i* S	**Sn**	**00 11 55.5 +0.5**
DGB				IAML		00 11 57.0
	comp=E,831nm,0.7s					
DST	**Dursunbey**	**1.26**	**76**	PN	**Pb**	**00 11 38.8 +0.2**
MRMT	**Marmara Adasi**	**1.36**	**18**	PN	**Pn**	**00 11 39.7 0.0**
PSRA	**Psara**	**1.38**	**237**	PN	**Pn**	**00 11 39.2 -0.6**
RKY	**Sarkoy-Tekirda**	**1.38**	**4**	PN	**Pn**	**00 11 40.4 +0.4**
SART	**Tekirdag**	**1.38**	**5**	*i* P	**Pn**	**00 11 40.4 +0.4**
SART				*i* S	**Sn**	**00 11 58.5 +0.3**
MAR9	**Marsite Statio**	**1.41**	**21**	PN	**Pn**	**00 11 40.2 0.0**
ERIK	**Erikli-Kesan**	**1.42**	**344**	PN	**Pn**	**00 11 40.7 +0.3**
MAR2	**Marsite Statio**	**1.42**	**9**	PN	**Pn**	**00 11 41.1 +0.6**
MANT	**Manisa**	**1.44**	**124**	*i* P	**Pn**	**00 11 41.1 +0.1**
MANT				*i* S	**Sb**	**00 12 00.7 +0.5**
MAR4	**Marsite Statio**	**1.49**	**8**	PN	**Pn**	**00 11 41.8 +0.3**
KULA	**Kula-Manisa**	**1.50**	**122**	PN	**Pn**	**00 11 41.9 +0.3**
KULA	**Kula-Manisa**	**1.50**	**122**	P	**Pn**	**00 11 41.4 -0.2**
KULA				S	**Sb**	**00 12 02.2 +0.7**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**154**	PN	**Pn**	**00 11 41.5 -0.4**
SIMA	**Simav-Kutahya**	**1.53**	**98**	PN	**Pn**	**00 11 42.7 +0.7**
KESN	**Edirne-Kesan**	**1.54**	**350**	*i* P	**Pn**	**00 11 42.5 +0.1**
KESN				*i* S	**Sn**	**00 12 02.2 -0.3**
KESN				IAML		00 12 05.0
	comp=E,800nm,0.3s					
KESN				IAML		00 12 05.0
	comp=N,1μm,0.3s					
LIA	**Limnos Island**	**1.55**	**293**	P	**Pn**	**00 11 42.3 +0.1**
LIA				AML	AML	00 12 05.6
	comp=E,1398μm,0.5s					
LIA				AML	AML	00 12 06.0
	comp=N,888μm,0.3s					
LIA	**Limnos Island**	**1.55**	**293**	P	**Pn**	**00 11 42.3 +0.1**
LIA				S	**Sn**	**00 12 01.8 -0.3**
	comp=N,572nm,0.4s					
ENEZ	**Enez**	**1.58**	**335**	PN	**Pn**	**00 11 43.3 +0.7**
ENEZ	**Enez**	**1.58**	**335**	P	**Pn**	**00 11 43.1 +0.5**
ENEZ				S	**Sb**	**00 12 04.2 +0.4**
	comp=N,2μm,0.3s					
EFSA	**Agios Efstrati**	**1.60**	**279**	P	**Pn**	**00 11 42.9 -0.1**
SMG	**Samos**	**1.61**	**186**	P	**Pn**	**00 11 41.9 -1.1**
SMG				AML	AML	00 12 09.9
	comp=N,2253μm,0.4s					
SMG				AML	AML	00 12 10.2
	comp=E,2104μm,0.6s					
SMG	**Samos**	**1.61**	**186**	P	**Pn**	**00 11 41.9 -1.1**
SMG				S	**Sb**	**00 12 05.9 +1.3**
	comp=E,1μm,0.5s					
ORLT	**Orhaneli**	**1.61**	**62**	PN	**Pn**	**00 11 43.6 +0.4**
GCAM	**G?zelcaml?**	**1.61**	**174**	PN	**Pn**	**00 11 43.8 +0.7**
GCAM	**G?zelcaml?**	**1.61**	**174**	*i* P	**Pb**	**00 11 44.4 -0.2**
GCAM				*i* S	**Sn**	**00 12 03.9 +0.2**
GCAM				IAML		00 12 09.0
	comp=E,384nm,0.5s					
SMTH	**Samothraki Isl**	**1.64**	**316**	P	**Pn**	**00 11 43.8 +0.3**
SMTH				AML	AML	00 12 09.5
	comp=N,939μm,0.3s					
SMTH				AML	AML	00 12 10.2
	comp=E,796μm,0.3s					
SMTH	**Samothraki Isl**	**1.64**	**316**	P	**Pn**	**00 11 43.8 +0.3**
SMTH				S	**Sn**	**00 12 04.7 +0.3**
	comp=E,448nm,0.3s					
TKR	**Tekirdag**	**1.72**	**13**	PN	**Pn**	**00 11 45.2 +0.6**
ALN	**Alexandroupoli**	**1.76**	**335**	P	**Pn**	**00 11 45.3 +0.2**
ALN				AML	AML	00 12 12.5
	comp=N,4115μm,0.5s					
ALN				AML	AML	00 12 12.7
	comp=E,1641μm,0.7s					
ALN	**Alexandroupoli**	**1.76**	**335**	PN	**Pn**	**00 11 46.2 +1.1**
ALN	**Alexandroupoli**	**1.76**	**335**	P	**Pn**	**00 11 45.1 0.0**
ALN				S	**Sn**	**00 12 07.5 +0.2**
	comp=E,1μm,0.6s					
MDNY	**Mudanya-Bursa**	**1.77**	**53**	PN	**Pn**	**00 11 45.1 -0.2**
UKOP	**Uzunkopru-Edir**	**1.84**	**350**	PN	**Pn**	**00 11 47.4 +1.1**
GEDZ	**Gediz**	**1.86**	**97**	PN	**Pn**	**00 11 47.6 +1.0**
ARMT	**Armutlu**	**1.88**	**48**	PN	**Pn**	**00 11 46.5 -0.3**
TVSB	**Tavsanli**	**1.89**	**85**	PN	**Pn**	**00 11 47.8 +0.9**
CRLT	**Corlu**	**1.90**	**16**	PN	**Pn**	**00 11 47.6 +0.6**
GEMT	**Gemlik**	**2.00**	**55**	PN	**Pn**	**00 11 49.2 +0.7**
RDO	**Rodhopi**	**2.16**	**328**	P	**Pn**	**00 11 51.1 +0.5**
RDO				AML	AML	00 12 25.1
	comp=N,334μm,0.2s					
RDO				AML	AML	00 12 27.6
	comp=E,346μm,0.2s					
RDO	**Rodhopi**	**2.16**	**328**	P	**Pn**	**00 11 50.7 0.0**
THAS	**Thassos island**	**2.20**	**307**	P	**Pn**	**00 11 51.6 +0.4**
THAS	**Thassos island**	**2.20**	**307**	P	**Pn**	**00 11 51.2 0.0**
THAS				S	**Sn**	**00 12 16.8 -1.4**
	comp=E,148nm,0.4s					
ISK	**Istanbul-Kandi**	**2.34**	**41**	P	**Pn**	**00 11 52.2 -0.9**
YER	**Yerkesik**	**2.38**	**155**	PN	**Pn**	**00 11 54.8 +1.0**
YER	**Yerkesik**	**2.38**	**155**	P	**Pn**	**00 11 53.4 -0.4**
APE	**Apeiranthos**	**2.53**	**208**	P	**Pn**	**00 11 54.2 -1.5**
APE	**Apeiranthos**	**2.53**	**208**	⇑P	**Pn**	**00 11 54.2 -1.5**
APE				⇑S	**Sn**	**00 12 24.5 -2.0**
EDRB	**Edirne**	**2.54**	**355**	P	**Pn**	**00 11 56.1 +0.2**
KAVA	**Kavala**	**2.56**	**312**	P	**Pn**	**00 11 56.5 +0.4**
OUR	**Ouranopolis**	**2.56**	**294**	P	**Pn**	**00 11 56.2 0.0**
OUR	**Ouranopolis**	**2.56**	**294**	P	**Pn**	**00 11 54.9 -1.3**
AMGA	**Amorgos Island**	**2.63**	**200**	P	**Pn**	**00 11 55.3 -1.8**
KDZ	**Kurdzhali**	**2.64**	**333**	*i* P	**Pn**	**00 11 57.7 +0.4**
RZN	**Rozhen**	**2.96**	**324**	*i* P	**Pn**	**00 12 02.4 +0.6**
DIM	**Dimitrovgrad**	**2.97**	**338**	*i* P	**Pn**	**00 12 02.0 +0.3**
FETY	**Fethiye**	**3.12**	**148**	P	**Pn**	**00 12 04.6 +0.7**
FETY				S	**Sn**	**00 12 40.7 -0.3**
NVR	**Nevrokopi**	**3.17**	**311**	P	**Pn**	**00 12 04.9 +0.4**
NVR	**Nevrokopi**	**3.17**	**311**	P	**Pn**	**00 12 05.0 +0.5**
JMB	**Yambol**	**3.17**	**354**	*i* P	**Pn**	**00 12 04.8 +0.3**
SRS	**Serrai**	**3.20**	**305**	P	**Pn**	**00 12 05.4 +0.5**
SRS	**Serrai**	**3.20**	**305**	P	**Pn**	**00 12 05.3 +0.5**
MMB	**Musomiste**	**3.40**	**313**	*i* P	**Pn**	**00 12 08.6 +0.9**
KNT	**Kendrikon**	**3.67**	**302**	P	**Pn**	**00 12 12.7 +1.3**
KKB	**Krupnik**	**3.95**	**312**	*i* P	**Pn**	**00 12 17.3 +2.1**
RAZG	**Razgrad**	**4.27**	**355**	⇓P	**Pn**	**00 12 20.2 +0.5**
VTS	**Vitosha**	**4.38**	**320**	*i* P	**Pn**	**00 12 22.3 +1.0**
STIP	**Stip**	**4.40**	**304**	*i* Pn	**Pn**	**00 12 21.1 -0.3**
SGRR	**Singureni**	**4.97**	**351**	⇓P	**Pn**	**00 12 30.0 +0.8**
TIRR	**Tirgusor**	**5.25**	**11**	⇓P	**Pn**	**00 12 33.4 +0.4**
NEHR	**Nehoiu**	**6.14**	**355**	⇑P	**Pn**	**00 12 45.8 +0.5**
MLR	**Muntele Rosu**	**6.23**	**353**	⇓P	**Pn**	**00 12 46.9 +0.2**
VOIR		**6.30**	**347**	⇑P	**Pn**	**00 12 47.9 +0.4**
HERR	**Herculane**	**6.54**	**330**	⇓P	**Pn**	**00 12 50.6 -0.2**
PLOR	**Plostina**	**6.54**	**358**	⇑P	**Pn**	**00 12 51.9 +1.0**
VRI	**Vrincioaia**	**6.56**	**358**	⇓P	**Pn**	**00 12 52.6 +1.6**
LOT	**Lotru**	**6.59**	**340**	⇑P	**Pn**	**00 12 52.2 +0.5**
MDVR	**Moldovita**	**6.75**	**326**	⇑P	**Pn**	**00 12 54.2 +0.5**
DOPR	**Dopca**	**6.76**	**350**	⇑P	**Pn**	**00 12 55.1 +1.2**
GZR	**Gura Zlata**	**6.85**	**334**	⇑P	**Pn**	**00 12 55.0 -0.1**
BZS	**Buzias**	**7.47**	**329**	⇑P	**Pn**	**00 13 03.1 -0.4**
MILM	**Milestii Mici**	**7.72**	**9**	⇓P	**Pn**	**00 13 07.5 +0.6**
DRGR		**8.12**	**338**	⇑P	**Pn**	**00 13 13.0 +0.5**
BURAR	**Bucovina Array**	**8.41**	**352**	⇓P	**Pn**	**00 13 18.4 +1.9**

JMA ***22*** *00:29:20.6±0.2,24.01N×121.65E,h0km*
TAP ***22*** *00:29:21.7,24.01N×121.61E,h8km,ML2.8,C*
ISC 22 00:29:21.7±0.8, 24.01N±0.01×121.64E±0.03, h10km±5km, n65, σ0.965/115, 7D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
HWA	**Hwalien**	**0.04**	**221**	⇓*i*P		**Pg**	**00 29 23.6**	**0.0**
HWA	baz=169			*i* S		**Sg**	**00 29 25.2**	**+0.3**
TWD	**Chiawan**	**0.08**	**333**	*i* P		**Pg**	**00 29 23.8**	**-0.2**
TWD	baz=359			*i* S		**Sg**	**00 29 25.5**	**-0.2**
NACB	**Ninganchiao**	**0.17**	**347**	⇓*i*P		**Pg**	**00 29 25.3**	**-0.1**
NACB	baz=4.0			*i* S		**Sg**	**00 29 27.8**	**-0.1**
ETLH	**Xiulin Townshi**	**0.24**	**325**	⇓*i*P		**Pg**	**00 29 26.7**	**0.0**
ETLH	baz=331			*e*S		**Sg**	**00 29 30.8**	**+0.8**
ESL	**Shilin**	**0.27**	**224**	*i* P		**Pg**	**00 29 26.8**	**-0.3**
ESL	baz=229			*e*S		**Sg**	**00 29 30.2**	**-0.5**
WHF	**Hehuan Shan**	**0.36**	**292**	⇓*i*P		**Pg**	**00 29 29.0**	**-0.1**
WHF	baz=295			S		**Sg**	**00 29 33.9**	**-0.1**
EGFH	**Guangfu**	**0.39**	**209**	*e*P		**Pb**	**00 29 29.6**	**-1.1**
EGFH	baz=218			*e*S		**Sg**	**00 29 34.4**	**-0.1**
OWD	**Renai**	**0.42**	**263**	P		**Pg**	**00 29 30.0**	**-0.1**
OWD	baz=273			S		**Sg**	**00 29 35.7**	**0.0**
CHGB	**Renai**	**0.42**	**277**	⇓*i*P		**Pb**	**00 29 30.3**	**-1.1**
CHGB	baz=278			*i* S		**Sg**	**00 29 35.6**	**-0.2**
ENA	**Nanau**	**0.43**	**13**	⇓*i*P		**Pg**	**00 29 30.1**	**0.0**
ENA	baz=18			*e*S		**Sg**	**00 29 35.8**	**0.0**
FUSS	**Fushou**	**0.43**	**304**	*i* P		**Pb**	**00 29 30.6**	**-1.0**
FUSS	baz=306			*i* S		**Sg**	**00 29 36.6**	**+0.7**
NNSB	**Datong**	**0.48**	**331**	*i* P		**Pb**	**00 29 31.3**	**-1.0**
NNSB	baz=335			*e*S		**Sg**	**00 29 37.1**	**-0.2**
NNSH	**Datong**	**0.48**	**331**	P		**Pg**	**00 29 31.2**	**+0.2**
NNSH	baz=334			*e*S		**Sg**	**00 29 37.3**	**-0.1**
NNS	**Nan Shan**	**0.49**	**331**	P		**Pg**	**00 29 31.4**	**+0.1**
NNS	baz=335			*e*S		**Sb**	**00 29 38.6**	**-1.3**
TDCB	**Techi**	**0.50**	**299**	⇓*i*P		**Pb**	**00 29 31.9**	**-0.8**
TDCB	baz=301			*e*S		**Sg**	**00 29 38.6**	**+0.5**
HGSD	**Ruisui**	**0.55**	**201**	P		**Pb**	**00 29 33.0**	**-0.4**
HGSD	baz=184			*e*S		**Sn**	**00 29 44.1**	**-0.7**
EHY	**Hungye**	**0.58**	**210**	P		**Pg**	**00 29 32.5**	**-0.4**
EHY	baz=216			*e*S		**Sb**	**00 29 41.0**	**-1.2**
NDT	**Datong Townshi**	**0.60**	**349**	P		**Pb**	**00 29 33.7**	**-0.6**
NDT	baz=352			*e*S		**Sb**	**00 29 42.2**	**-0.7**
TWC	**Suao**	**0.63**	**18**	*e*P		**Pb**	**00 29 34.4**	**-0.4**
TWC	baz=11			*e*S		**Sg**	**00 29 42.5**	**+0.3**
ENTT	**Nioudou**	**0.63**	**354**	P		**Pb**	**00 29 34.3**	**-0.6**
ENTT	baz=358			*e*S		**Sb**	**00 29 42.9**	**-0.9**
DPDB	**Guoxing**	**0.65**	**272**	P		**Pb**	**00 29 34.9**	**-0.2**
DPDB	baz=273			*e*S		**Sb**	**00 29 44.2**	**-0.1**
SSLB	**Suanglung**	**0.66**	**251**	P		**Pg**	**00 29 34.5**	**-0.1**
SSLB	baz=263			*e*S		**Sg**	**00 29 42.6**	**-0.6**
SMLT	**Sun Moon Lake**	**0.68**	**260**	P		**Pb**	**00 29 35.4**	**-0.4**
SMLT	baz=260			*e*S		**Sb**	**00 29 44.5**	**-0.8**
WHP	**Taichung City**	**0.68**	**293**	P		**Pb**	**00 29 35.4**	**-0.4**
WHP	baz=285			*e*S		**Sb**	**00 29 45.4**	**+0.1**
YULB	**Yu-li**	**0.69**	**207**	P		**Pg**	**00 29 34.5**	**-0.5**
YULB	baz=215			*e*S		**Sb**	**00 29 45.5**	**+0.1**
YHNB	**Yeheng**	**0.70**	**340**	*e*P		**Pb**	**00 29 35.7**	**-0.4**
YHNB	baz=343			*e*S		**Sb**	**00 29 45.0**	**-0.8**
TWE	**Neicheng**	**0.71**	**2**	P		**Pb**	**00 29 35.8**	**-0.4**
TWE	baz=6.0			*e*S		**Sb**	**00 29 45.7**	**-0.3**
NSK	**Sanguang**	**0.71**	**339**	P		**Pb**	**00 29 35.9**	**-0.4**
NSK	baz=342			*e*S		**Sb**	**00 29 45.4**	**-0.7**
EYUL	**Yuli**	**0.72**	**204**	*e*P		**Pg**	**00 29 35.2**	**-0.4**
TYC	**Yuchr**	**0.72**	**262**	P		**Pb**	**00 29 35.6**	**-0.7**
TYC	baz=262			*e*S		**Sg**	**00 29 45.0**	**-0.1**
TWF1	**Yuli**	**0.72**	**205**	*e*P		**Pg**	**00 29 35.0**	**-0.7**
NWLT	**Wulai**	**0.77**	**351**	P		**Pb**	**00 29 36.9**	**-0.4**
NWLT	baz=353			*e*S		**Sg**	**00 29 46.8**	**-0.1**
NSTT	**Nanjuang**	**0.85**	**317**	*e*P		**Pn**	**00 29 39.3**	**-0.4**
NSTT	baz=319			*e*S		**Sb**	**00 29 50.4**	**+0.4**
LIOB	**Emei**	**0.85**	**318**	*e*P		**Pn**	**00 29 39.6**	**-0.2**
LIOB	baz=320			*e*S		**Sb**	**00 29 50.4**	**+0.3**
WJS	**Zhushan**	**0.85**	**258**	*e*P		**Pn**	**00 29 39.9**	**+0.1**
WJS	baz=258			*e*S		**Sb**	**00 29 51.1**	**+1.0**
TWQ1	**Liyutan**	**0.86**	**293**	*e*P		**Pn**	**00 29 40.1**	**+0.3**
	baz=287							
FULB	**Fuli**	**0.87**	**201**	*e*P		**Pb**	**00 29 39.2**	**+0.3**
FULB	baz=215			*e*S		**Sb**	**00 29 51.2**	**+0.6**
EGS	baz=215	**0.88**	**18**	*e*P		**Pb**	**00 29 39.5**	**+0.4**
WNT	**Mingjian**	**0.88**	**262**	*e*P		**Pn**	**00 29 39.7**	**-0.4**
WNT	baz=267			*e*S		**Sn**	**00 29 53.0**	**0.0**
TCU	**Taichung**	**0.89**	**279**	*e*P		**Pb**	**00 29 39.4**	**+0.2**
NSY	baz=274 **Sanyi**	**0.90**	**297**	*e*P		**Pn**	**00 29 41.2**	**+0.8**
NSY	baz=309			*e*S		**Sn**	**00 29 53.4**	**0.0**
ALS	baz=309 **Alishan**	**0.91**	**237**	*e*P		**Pb**	**00 29 39.6**	**-0.1**
ALS	baz=237			*e*S		**Sb**	**00 29 51.8**	**-0.2**
NMLH	**Miaoli**	**0.93**	**304**	*e*P		**Pn**	**00 29 41.2**	**+0.3**
NMLH	baz=306			*e*S		**Sn**	**00 29 54.3**	**0.0**
CHKT	**Chengkung**	**0.94**	**195**	*e*P		**Pb**	**00 29 39.7**	**-0.4**
CHKT	baz=184			*e*S		**Sb**	**00 29 53.3**	**+0.7**
CHN5	**Tsauling**	**0.97**	**245**	*e*P		**Pn**	**00 29 41.6**	**+0.1**
CHN5	baz=235			*e*S		**Sn**	**00 29 55.0**	**-0.3**
WDJ	**Dajia District**	**0.97**	**291**	*e*P		**Pn**	**00 29 41.7**	**+0.3**
TATO	baz=291 **Taipei**	**0.97**	**352**	*e*P		**Pb**	**00 29 40.6**	**-0.1**
TATO	baz=354			*e*S		**Sb**	**00 29 53.6**	**+0.1**
TIPB	baz=354 **Shuangxi**	**0.97**	**10**	*e*P		**Pn**	**00 29 41.9**	**+0.4**
TIPB	baz=3.0			*e*S		**Sg**	**00 29 52.4**	**-0.8**
WCHH	**Zhanghua**	**0.99**	**274**	*e*P		**Pn**	**00 29 41.8**	**+0.2**
WCHH	baz=275			*e*S		**Sn**	**00 29 55.9**	**+0.2**
ELDTW	baz=275 **Lidau**	**0.99**	**215**	*e*P		**Pg**	**00 29 40.2**	**-0.6**
NWF	baz=202 **Wu-fen Shan**	**1.06**	**7**	*e*P		**Pn**	**00 29 43.2**	**+0.4**
WFSB	baz=7.0 **Wu-fen Shan**	**1.06**	**7**	*e*P		**Pn**	**00 29 43.1**	**+0.4**
EDH	baz=7.0 **Donghe**	**1.08**	**196**	*e*P		**Pg**	**00 29 41.4**	**-1.0**
EDH	baz=198			*e*S		**Sb**	**00 29 57.0**	**+0.5**
YM01	**YM01**	**1.13**	**357**	*e*P		**Pn**	**00 29 44.2**	**+0.5**
YM05	baz=8.0 **YM05**	**1.15**	**357**	*e*P		**Pn**	**00 29 45.3**	**+1.3**
CHN4	baz=356 **Tsaushan**	**1.16**	**236**	*e*P		**Pn**	**00 29 45.0**	**+1.1**
CHN4	baz=228			*e*S		**Sn**	**00 30 01.9**	**+2.0**
TPUB	**Ta-pu**	**1.16**	**233**	P		**Pn**	**00 29 44.4**	**+0.3**
TPUB	baz=234			*e*S		**Sn**	**00 30 00.3**	**+0.3**
YM03	baz=234 **YM03**	**1.17**	**356**	*e*P		**Pn**	**00 29 44.8**	**+0.6**
WTP	baz=355 **Ta-pu**	**1.21**	**231**	*e*P		**Pn**	**00 29 45.2**	**+0.5**
WTP	baz=232			*e*S		**Sn**	**00 30 01.3**	**+0.2**
TWK	**Hsinying**	**1.29**	**235**	*e*P		**Pn**	**00 29 46.1**	**+0.3**
CHN1	baz=237 **Nanshi**	**1.31**	**231**	*e*P		**Pb**	**00 29 47.8**	**+1.4**
CHN1	baz=222			*e*S		**Sn**	**00 30 06.4**	**+2.8**
SLGT	baz=222 **Liugui**	**1.36**	**222**	*e*P		**Pg**	**00 29 47.2**	**-0.6**
SLGT	baz=224			*e*S		**Sn**	**00 30 06.6**	**+1.7**
TSMG	**Majia**	**1.58**	**215**	*e*P		**Pg**	**00 29 51.3**	**-0.9**
TSMG	baz=218			*e*S		**Sg**	**00 30 12.9**	**+0.2**
EAST	baz=218 **Anshuo**	**1.77**	**204**	*e*P		**Pn**	**00 29 51.9**	**-0.6**
IRIF	baz=195 **Iriomote-Funau**	**1.94**	**80**	P		**Pn**	**00 29 54.9**	**+0.2**

IDC ***22*** *00:50:03.4±0.7,4.04S×68.20E,h0km,mb4.0/18, mb1 4.1/18,mb1mx3.9/54,mbtmp4.0/18,MS3.8/26, Ms1 3.8/26,ms1mx3.7/40,Error ellipse: s-maj=20.0km s-min=17.0km az=21.0*
NEIC ***22*** *00:50:04.3±2.0,4.08S±0.09×68.16E±0.09,h10km±1km, mb4.6/65,Error ellipse: s-maj=16.1km s-min=15.4km az=196.0*
GCMT ***22*** *00:50:07.3±0.2,4.16S±0.02×68.29E±0.02,h12km, MW4.8/95,Moment Tensor Solution. s32,c37; s95,c132; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=1.97±.05; Mθθ0.97±.06; Mφφ0.99±.06; Mrθ1.09±.20; Mθφ-0.95±.04; Mφr-0.08±.20; Best double couple: M₀2.22900×10¹⁶ NP1:φs150.00000°,δ36.00000°,λ-63.00000°. NP2: φs298.00000°,δ59.00000°,λ-108.00000°. Principal axes: T 2.1120, Plg12.0000°, Azm41.0000°; N 0.2320, Plg15.0000°, Azm308.0000°; P -2.3460, Plg70.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 22 00:50:04.3±0.5, 4.10S±0.08×68.21E±0.07, h10km, n116, σ0.992/92, mb4.5/48, MS3.8/26, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
DGAR	**Diego Garcia**	**5.35**	**128**	Pn		**Pn**	**00 51 25.1**	**+0.8**
H08S3	**Diego Garcia H**	**5.51**	**130**	T		T	00 57 05.8	
	baz=311,slow=74,SNR=60							
H08S1	**Diego Garcia H**	**5.51**	**130**	T		T	00 57 04.8	
	baz=311,slow=74,SNR=40							
H08S2	**Diego Garcia H**	**5.53**	**130**	T		T	00 57 06.0	
	baz=311,slow=74,SNR=43							
PALK	**Pallekele**	**16.82**	**48**	Pn		**Pn**	**00 54 00.1**	**-0.1**
RER	**Riviere de l'E**	**20.84**	**214**	P		**P**	**00 54 45.4**	**-1.1**
RER				IAmb		IAmb	00 54 54.2	
	comp=Z,36nm,1.1s							
OPO	**Ambohidratompo**	**25.09**	**233**	LR		LR	01 03 08.8	
	comp=Z,291nm,19.2s,baz=198,slow=31							
WSAR	**Wadi Sarin**	**28.73**	**341**	LR		LR	01 05 16.0	
	comp=Z,201nm,20.5s,baz=170,slow=32							
PBA	**Port Blair**	**28.99**	**57**	P		P	00 56 04.9	+0.4
ATD	**Arta Tunnel**	**29.63**	**302**	LR		LR	01 06 04.5	
	comp=Z,75nm,21.1s,baz=66,slow=32							
KMBO	**Kilima Mbogo**	**31.07**	**275**	LR		LR	01 06 31.3	
	comp=Z,178nm,21.4s,baz=94,slow=32							
UOSS	**Minazif**	**31.14**	**339**	P		**P**	**00 56 22.8**	**-0.7**
UOSS				IAmb		IAmb	00 56 28.3	
	comp=Z,5.4nm,1.1s							
KULM	**Kulim**	**33.72**	**74**	P		**P**	**00 56 45.8**	**-0.4**
KULM				IAmb		IAmb	00 56 58.8	
	comp=Z,7.5nm,1.0s							
SRIT	**Nakonsritamara**	**33.74**	**68**	P		**P**	**00 56 45.6**	**-0.9**
SHL	**Shillong**	**37.38**	**37**	P		**P**	**00 57 17.8**	**+0.1**
XMIS	**Christmas Isla**	**37.65**	**102**	P		**P**	**00 57 20.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**37.67**	**53**	P		**P**	**00 57 21.2**	**+1.1**
	comp=Z,1.0nm,0.3s,baz=240,slow=9.6,SNR=8.3							
CMAR				LR		LR	01 11 18.0	
	comp=Z,104nm,18.9s,baz=276,slow=34							
NIL	**Nilore**	**37.84**	**7**	P		**P**	**00 57 21.3**	**-0.1**
NIL				IAmb		IAmb	00 57 26.5	
	comp=Z,7.9nm,0.9s							
**

MATP	**Matopo**	**41.90**	**244**	P		**P**	**00 57 56.9**	**+1.4**
	comp=Z,3.5nm,1.3s,baz=32,slow=3.1,SNR=2.1							
SMRI	**Semarang**	**42.12**	**96**	P		**P**	**00 57 57.4**	**+0.1**
KSM	**Kuching**	**42.43**	**83**	P		**P**	**00 58 00.6**	**+0.8**
KSM				IAmb		IAmb	00 58 10.2	
	comp=Z,7.9nm,0.6s							
GAR	**Garm**	**42.93**	**2**	P		**P**	**00 58 04.2**	**+0.7**
GAR				IAmb		IAmb	00 58 09.4	
	comp=Z,15nm,1.2s							
SLVN	**Son La**	**43.15**	**53**	P		**P**	**00 58 05.6**	**0.0**
DRK	**Karamyk**	**43.49**	**4**	P		**P**	**00 58 08.7**	**+0.4**
BTK	**Batken**	**44.00**	**3**	P		**P**	**00 58 12.9**	**+0.8**
BTK				IAmb		IAmb	00 58 16.8	
	comp=Z,5.0nm,0.9s							
SBUM	**Sibu**	**44.46**	**82**	P		**P**	**00 58 12.9**	**-3.2**
SBUM				IAmb		IAmb	00 58 26.9	
	comp=Z,3.7nm,0.7s							
AAK	**Ala-Archa**	**46.86**	**6**	P		**P**	**00 58 35.6**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=179,slow=13,SNR=4.4							
AAK	**Ala-Archa**	**46.86**	**6**	P		**P**	**00 58 35.9**	**+1.0**
AAK				IAmb		IAmb	00 58 40.0	
	comp=Z,3.1nm,0.9s							
KK31	**Karatay Array**	**47.03**	**2**	P		**P**	**00 58 34.9**	**-1.1**
KKAR	**Karatay Array**	**47.03**	**2**	P		**P**	**00 58 36.6**	**+0.6**
KKAR	**Karatay Array**	**47.03**	**2**	P		**P**	**00 58 35.2**	**-0.8**
KKAR				IAmb		IAmb	00 58 39.8	
	comp=Z,2.3nm,1.1s							
FRU1	**Bishkek**	**47.05**	**6**	P		**P**	**00 58 36.9**	**+0.7**
FRU1				IAmb		IAmb	00 58 39.3	
	comp=Z,12nm,1.1s							
BOSA	**Boshof**	**47.49**	**234**	P		**P**	**00 58 41.0**	**+0.9**
	comp=Z,4.1nm,1.1s,baz=262,slow=15,SNR=2.8							
BOSA				LR		LR	01 16 21.4	
	comp=Z,239nm,19.5s,baz=44,slow=33							
GEVA	**Gevas**	**48.21**	**333**	P		**P**	**00 58 44.6**	**-0.8**
WMQ	**Urumqi**	**50.83**	**18**	P		**P**	**00 59 06.0**	**+0.8**
WMQ				IAmb		IAmb	00 59 22.2	
	comp=Z,7.0nm,1.1s							
CSS	**Mathiatis**	**50.83**	**323**	P		**P**	**00 59 05.4**	**+0.1**
CSS				IAmb		IAmb	00 59 22.0	
	comp=Z,8.0nm,0.8s							
KAPI	**Kappang**	**51.37**	**93**	LR		LR	01 18 44.9	
	comp=Z,154nm,20.6s,baz=289,slow=34							
HKPS	**Hong Kong Po S**	**51.98**	**58**	P		**P**	**00 59 12.4**	**-1.8**
MAKZ	**Makanchi**	**52.13**	**12**	P		**P**	**00 59 13.7**	**-1.1**
MK31	**Makanchi Array**	**52.18**	**12**	P		**P**	**00 59 14.0**	**-1.3**
MKAR	**Makanchi Array**	**52.18**	**12**	P		**P**	**00 59 16.1**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=248,slow=35,SNR=3.6							
ENH	**Enshi**	**52.20**	**46**	P		**P**	**00 59 16.3**	**+0.6**
ENH				IAmb		IAmb	00 59 24.6	
	comp=Z,7.8nm,0.6s							
H01W3	**Cape Leeuwin H**	**52.35**	**132**	T		T	01 55 35.1	
	baz=290							
H01W2	**Cape Leeuwin H**	**52.35**	**132**	T		T	01 55 36.6	
	baz=290							
H01W1	**Cape Leeuwin H**	**52.37**	**132**	T		T	01 55 31.5	
	baz=290							
TOLI2	**Tolitoli**	**52.79**	**86**	P		**P**	**00 59 19.7**	**-0.6**
TOLI2				IAmb		IAmb	00 59 25.0	
	comp=Z,8.1nm,1.1s							
KBZ	**Khabaz**	**52.79**	**337**	P		**P**	**00 59 20.3**	**+0.6**
	comp=Z,5.3nm,1.0s,baz=146,slow=1.6,SNR=4.9							
KBZ				LR		LR	01 22 09.9	
	comp=Z,20nm,18.2s,baz=136,slow=36							
PSA00	**Pilbara Seismi**	**52.97**	**114**	P		**P**	**00 59 21.6**	**0.0**
PSA00				IAmb		IAmb	00 59 23.0	
	comp=Z,5.6nm,0.9s							
KIV	**Kislovodsk**	**53.06**	**337**	P		**P**	**00 59 21.2**	**-0.7**
KIV				IAmb		IAmb	00 59 24.9	
	comp=Z,6.3nm,1.0s							
ABKAR	**Akbulak array**	**53.62**	**353**	P		**P**	**00 59 26.3**	**+0.5**
ABKAR				IAmb		IAmb	00 59 30.4	
	comp=Z,4.7nm,1.1s							
ABKAR	**Akbulak array**	**53.62**	**353**	P		**P**	**00 59 26.4**	**+0.6**
XAN	**Xi'an**	**53.96**	**42**	P		**P**	**00 59 27.6**	**-1.0**
XAN				IAmb		IAmb	00 59 31.8	
	comp=Z,8.8nm,1.0s							
BRTR	**Keskin Array B**	**53.97**	**327**	P		**P**	**00 59 27.3**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=184,slow=13,SNR=3.6							
BRTR				LR		LR	01 22 46.0	
	comp=Z,31nm,18.8s,baz=116,slow=36							
ELL	**Elmali**	**54.10**	**322**	P		**P**	**00 59 28.9**	**-0.8**
AKTO	**Aktyubinsk**	**55.02**	**352**	P		**P**	**00 59 34.7**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=146,slow=9.6,SNR=4.0							
KURK	**Kurchatov**	**55.33**	**8**	P		**P**	**00 59 38.3**	**+0.1**
KURK				IAmb		IAmb	00 59 42.0	
	comp=Z,4.8nm,1.1s							
BRVK	**Borovoye**	**56.97**	**1**	P		**P**	**00 59 49.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**57.81**	**109**	LR		LR	01 21 24.8	
	comp=Z,66nm,19.9s,baz=270,slow=32							
ZAA0	**Zalesovo Array**	**59.48**	**11**	P		**P**	**01 00 07.8**	**+0.4**
ZAA0				IAmb		IAmb	01 00 10.6	
	comp=Z,4.3nm,0.9s							
ZALV	**Zalesovo Beam**	**59.48**	**11**	P		**P**	**01 00 07.2**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=208,slow=6.0,SNR=10							
ZALV	**Zalesovo Beam**	**59.48**	**11**	P		**P**	**01 00 07.3**	**-0.1**
ARU	**Arti**	**60.84**	**354**	P		**P**	**01 00 17.3**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=102,slow=5.6,SNR=4.8							
ARU	**Arti**	**60.84**	**354**	P		**P**	**01 00 16.4**	**-0.3**
ARU				IAmb		IAmb	01 00 20.4	
	comp=Z,4.9nm,0.9s							
SONM	**Songino Array**	**61.59**	**28**	P		**P**	**01 00 22.3**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=224,slow=6.1,SNR=18							
SONM				LR		LR	01 27 02.3	
	comp=Z,560nm,20.1s,baz=192,slow=36							
ULN	**Ulaanbaatar**	**61.92**	**29**	P		**P**	**01 00 25.1**	**+0.7**
ULN				IAmb		IAmb	01 00 35.2	
	comp=Z,4.4nm,1.1s							
FORT	**Forrest**	**62.14**	**123**	P		**P**	**01 00 27.8**	**+1.8**
MAW	**Mawson**	**63.50**	**182**	LR		LR	01 21 29.1	
	comp=Z,196nm,21.1s,baz=52,slow=30							
FAKI	**Fak Fak**	**63.91**	**91**	P		**P**	**01 00 38.3**	**+0.2**
AKASG	**Malin Array Be**	**64.01**	**334**	P		**P**	**01 00 37.7**	**-0.3**
	comp=Z,0.2nm,0.2s,baz=110,slow=5.5,SNR=4.7							
DIVS	**Divibare**	**64.56**	**323**	P		**P**	**01 00 41.5**	**-0.4**
DIVS				IAmb		IAmb	01 00 52.2	
	comp=Z,3.0nm,0.9s							
ASAR	**Alice Springs**	**66.12**	**114**	P		**P**	**01 00 52.1**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=278,slow=5.2,SNR=5.9							
ASAR				LR		LR	01 28 14.8	
	comp=Z,76nm,18.9s,baz=282,slow=35							
ASAR	**Alice Springs**	**66.12**	**114**	P		**P**	**01 00 51.6**	**-0.8**
WRA	**Warramunga Arr**	**66.18**	**110**	P		**P**	**01 00 52.8**	**0.0**
	comp=Z,1.6nm,0.7s,baz=283,slow=6.1,SNR=12							
WRA				LR		LR	01 25 23.1	
	comp=Z,53nm,21.6s,baz=255,slow=32							
WRA	**Warramunga Arr**	**66.18**	**110**	P		**P**	**01 00 52.4**	**-0.5**
WB2	**Warramunga Arr**	**66.19**	**110**	P		**P**	**01 00 51.6**	**-1.3**
WB2				IAmb		IAmb	01 01 02.8	
	comp=Z,2.8nm,0.8s							
WC3	**Warramunga Arr**	**66.21**	**110**	P		**P**	**01 00 52.6**	**-0.5**
WC3				IAmb		IAmb	01 01 09.4	
	comp=Z,7.4nm,1.1s							
WB0	**Warramunga Arr**	**66.22**	**110**	P		**P**	**01 00 53.5**	**+0.4**
WB0				IAmb		IAmb	01 00 57.3	
	comp=Z,4.0nm,1.0s							
WR0	**Warramunga Arr**	**66.37**	**110**	P		**P**	**01 00 53.2**	**-0.8**
WR0				IAmb		IAmb	01 00 57.4	
	comp=Z,5.5nm,1.0s							
NRCA	**Norcia**	**68.18**	**319**	P		**P**	**01 01 05.6**	**+0.5**
NRCA				IAmb		IAmb	01 01 21.5	
	comp=Z,3.3nm,1.0s							
TORD	**Torodi Ar. Bea**	**68.21**	**286**	P		**P**	**01 01 06.2**	**+0.4**
	comp=Z,0.9nm,1.0s,baz=103,slow=3.8,SNR=4.7							
TORD				LR		LR	01 30 09.1	
	comp=Z,90nm,18.6s,baz=120,slow=35							
TORD	**Torodi Ar. Bea**	**68.21**	**286**	P		**P**	**01 01 05.0**	**-0.7**
SUW	**Suwalki**	**68.98**	**333**	P		**P**	**01 01 09.5**	**-0.3**
SUW				IAmb		IAmb	01 01 13.5	
	comp=Z,9.0nm,1.0s							
KSAR	**Wonju Array Be**	**69.03**	**47**	P		**P**	**01 01 10.0**	**-0.4**
KSRS	**Korea Array**	**69.06**	**47**	LR		LR	01 33 19.8	
	comp=Z,152nm,18.1s,baz=256,slow=38							
HIA	**Hailar**	**69.34**	**33**	P		**P**	**01 01 12.8**	**+0.6**
CIMO	**Cimolais**	**70.26**	**322**	P		**P**	**01 01 16.8**	**-1.2**
CTI	**Castel Tesino**	**70.62**	**322**	P		**P**	**01 01 18.1**	**-2.1**
CTI				IAmb		IAmb	01 01 24.1	
	comp=Z,3.0nm,1.1s							
SALO	**Salr**	**71.12**	**321**	P		**P**	**01 01 23.3**	**+0.1**
CLL	**Collm**	**72.42**	**327**	P		**P**	**01 01 31.3**	**+0.5**
GRA1	**Grafenberg Arr**	**72.61**	**325**	P		**P**	**01 01 31.2**	**-0.8**
GRA1				IAmb		IAmb	01 01 36.4	
	comp=Z,8.9nm,0.9s							
FINES	**FINESS Array B**	**72.95**	**340**	LR		LR	01 35 48.3	
	comp=Z,48nm,18.5s,baz=112,slow=38							
SHEL	**Horse Pasture**	**73.47**	**255**	P		**P**	**01 01 36.1**	**-1.7**
STKA	**Stephens Creek**	**73.74**	**122**	LR		LR	01 32 24.9	
	comp=Z,82nm,19.0s,baz=212,slow=34							
USRK	**Ussuriysk Ar.**	**74.47**	**42**	LR		LR	01 36 05.3	
	comp=Z,70nm,20.8s,baz=220,slow=37							
NRIK	**Noril'sk**	**74.47**	**7**	P		**P**	**01 01 42.9**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=152,slow=3.1,SNR=3.9							
NRIK				LR		LR	01 36 06.6	
	comp=Z,62nm,18.9s,baz=201,slow=37							
MJAR	**Matsushiro Arr**	**76.54**	**51**	LR		LR	01 37 52.3	
	comp=Z,42nm,18.1s,baz=265,slow=38							
MJAR	**Matsushiro Arr**	**76.54**	**51**	P		**P**	**01 01 55.7**	**+0.6**
HFS	**Hagfors**	**76.80**	**335**	P		**P**	**01 01 55.6**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=185,slow=31,SNR=2.6							
GUMO	**Guam**	**78.04**	**75**	LR		LR	01 34 03.0	
	comp=Z,39nm,21.3s,baz=110,slow=34							
PMG	**Port Moresby**	**78.45**	**99**	LR		LR	01 35 22.0	
	comp=Z,23nm,21.6s,baz=212,slow=35							
ARCES	**ARCESS Array B**	**78.97**	**346**	LR		LR	01 38 02.0	
	comp=Z,48nm,20.9s,baz=350,slow=36							
ESDC	**Sonseca Array**	**79.02**	**312**	P		**P**	**01 02 10.8**	**+1.8**
	comp=Z,1.6nm,1.1s,baz=102,slow=4.2,SNR=6.7							
TIXI	**Tiksi**	**84.98**	**16**	P		**P**	**01 02 39.6**	**+0.1**
TIXI				IAmb		IAmb	01 02 43.0	
	comp=Z,7.1nm,1.1s							
SPA0	**Spitsbergen Ar**	**86.70**	**351**	P		**P**	**01 02 49.0**	**+1.0**
VNDA	**Vanda**	**86.82**	**167**	LR		LR	01 37 16.4	
	comp=Z,93nm,18.5s,baz=266,slow=33							
PETK	**Petropavlovsk-**	**92.94**	**37**	LR		LR	01 47 33.5	
	comp=Z,43nm,20.5s,baz=270,slow=37							
PDAR	**Pinedale Array**	**141.44**	**357**	PKP		**PKPdf**	**01 09 36.3**	**0.0**
	comp=Z,0.2nm,0.5s,baz=2.3,slow=2.3,SNR=1.8							
NVAR	**Mina Array Bea**	**145.31**	**9**	PKPbc		**PKPdf**	**01 09 43.9**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=1.1,slow=2.3,SNR=10							
NVAR	**Mina Array Bea**	**145.31**	**9**			**PKPdf**	**01 09 44.5**	**+1.2**
TXAR	**Lajitas Array**	**153.75**	**344**	PKPbc		**PKPbc**	**01 10 04.1**	**-0.5**
	comp=Z,0.3nm,0.9s,baz=207,slow=2.5,SNR=4.9							

*HLW **22** 00:58:17.1, 35.˚10N×28.˚12E, h33km±44km, Md3.8, Ml3.5*
*IDC **22** 00:58:18.5±2.6, 35.˚10N×28.˚11E, h37km±28km, mb3.7/9, mb1 3.7/14, mb1mx3.5/41, mbtmp3.7/14, ML3.7/4, MS2.6/2, Ms1 2.6/2, ms1mx2.1/44, Error ellipse: s-maj=22.0km s-min=15.9km az=172.0*
*NIC **22** 00:58:18.4±0.0, 34.˚92N×28.˚10E, h25km±1km, Ml3.8/4*
*ATH **22** 00:58:18.8, 35.˚10N×28.˚01E, h76km±5km, ML3.1/2, Error ellipse: s-maj=6.8km s-min=1.9km az=337.0*
*THE **22** 00:58:19.6, 34.˚94N×28.˚12E, h21km±4km, ML3.2/4, Error ellipse: s-maj=4.8km s-min=0.9km az=162.0*
*GII **22** 00:58:22.7±0.0, 34.˚41N×28.˚27E, h20km, MD3.3/3, Mm3.4/3*
*DDA **22** 00:58:26.9, 35.˚88N×28.˚06E, h22km±2km, ML2.6*

ISC 22 00:58:16.6±0.5, 35.˚01N±0.˚03×28.˚13E±0.˚02, h28km, n126, σ2s30/151, mb3.6/9, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.96**	**305**	P			**Pb**	**00 58 36.1**	**+1.5**
KARP				S			**Sn**	**00 58 48.5**	**+1.6**
KARP				AML		AML		00 58 55.2	
	comp=N,3175μm,0.8s								
KARP				AML		AML		00 58 58.6	
	comp=E,2312μm,0.7s								
KARP	**Karpathos**	**0.96**	**305**	P			**Pb**	**00 58 36.5**	**+1.9**
KARP				S			**Sn**	**00 58 50.8**	**+3.8**
KARP				AML		AML		00 58 54.1	
	comp=E,3.6nm,0.7s								
KARP				AML		AML		00 58 54.1	
	comp=E,3.6nm,0.7s								
KARP				AML		AML		00 58 58.2	
	comp=E,2.3nm,0.7s								
KARP				AML		AML		00 58 58.2	
	comp=E,2.3nm,0.7s								
KARP	**Karpathos**	**0.96**	**305**	P			**Pb**	**00 58 36.5**	**+1.9**
KARP				S			**Sn**	**00 58 50.7**	**+3.8**
ARG	**Arkhangelos**	**1.21**	**360**	P			**Pb**	**00 58 40.6**	**+1.8**
ARG				AML		AML		00 59 12.6	
	comp=N,1102μm,0.6s								
ARG				AML		AML		00 59 17.4	
	comp=E,1084μm,0.7s								
ARG	**Arkhangelos**	**1.21**	**360**	P			**Pb**	**00 58 40.7**	**+1.8**
ARG	**Arkhangelos**	**1.21**	**360**	P			**Pb**	**00 58 40.6**	**+1.8**
ZKR	**Zakros**	**1.57**	**274**	P			**Pn**	**00 58 44.3**	**+1.7**
ZKR	**Zakros**	**1.57**	**274**	P			**Pn**	**00 58 44.7**	**+2.1**
KSL	**Kastellorizon**	**1.65**	**46**	P			**Pb**	**00 58 46.8**	**+0.6**
KSL	**Kastellorizon**	**1.65**	**46**	P			**Pb**	**00 58 46.9**	**+0.7**
KSL	**Kastellorizon**	**1.65**	**46**	P			**Pb**	**00 58 46.9**	**+0.7**
KSL				S			**Sb**	**00 59 07.1**	**+0.6**
STIA	**Sitia Lasithi**	**1.68**	**277**	P			**Pn**	**00 58 46.6**	**+2.5**
AKAS	**Kas**	**1.71**	**44**	*i* P			**Pn**	**00 58 47.4**	**+2.7**
AKAS				*i* S			**Sb**	**00 59 09.2**	**+0.5**
TURN	**Turunc**	**1.77**	**3**	*i* P			**Pb**	**00 58 48.6**	**+0.3**
NIS1	**Nisyros Isl.**	**1.77**	**334**	P			**Pb**	**00 58 49.1**	**+0.7**
FETY	**Fethiye**	**1.80**	**25**	*i* P			**Pn**	**00 58 48.4**	**+2.7**
FETY	**Fethiye**	**1.80**	**25**	P			**Pn**	**00 58 48.5**	**+2.7**
DALY	**Dalyan (Mula)**	**1.86**	**13**	*i* P			**Pn**	**00 58 48.8**	**+2.3**
FRMA	**Ierapetra Chan**	**1.97**	**271**	P			**Pn**	**00 58 48.6**	**+0.6**
NPS	**Neapolis**	**2.08**	**278**	P			**Pn**	**00 58 52.1**	**+2.6**
NPS	**Neapolis**	**2.08**	**278**	P			**Pn**	**00 58 52.3**	**+2.7**
YER	**Yerkesik**	**2.13**	**3**	P			**Pb**	**00 58 54.1**	**-0.4**
BODT	**Bodrum**	**2.15**	**342**	P			**Pn**	**00 58 52.5**	**+1.8**
LAST	**Lasithi**	**2.18**	**275**	P			**Pn**	**00 58 53.4**	**+2.4**
LAST	**Lasithi**	**2.18**	**275**	P			**Pn**	**00 58 53.5**	**+2.4**
ELL	**Elmali**	**2.26**	**39**	P			**Pb**	**00 58 56.3**	**-0.5**
ANAF	**Anafi Island**	**2.34**	**306**	P			**Pn**	**00 58 54.8**	**+1.6**
ANAF	**Anafi Island**	**2.34**	**306**	P			**Pn**	**00 58 54.6**	**+1.4**
GOLH	**Golhisar**	**2.51**	**27**	*i* P			**Pb**	**00 59 00.4**	**-0.6**
KSTL	**Kastelli Herak**	**2.52**	**278**	P			**Pn**	**00 58 55.4**	**-0.3**
TAVA	**TAVAZZILI_Tavas**	**2.53**	**14**	*i* P			**Pn**	**00 58 53.9**	**+2.4**
AMGA	**Amorgos Island**	**2.57**	**316**	P			**Pn**	**00 58 57.8**	**+1.5**
AMGA	**Amorgos Island**	**2.57**	**316**	P			**Pn**	**00 58 58.2**	**+1.9**
THR6	**Thira Island,**	**2.60**	**302**	P			**Pn**	**00 58 58.7**	**+2.0**
THT2	**Imerovigli**	**2.62**	**304**	P			**Pn**	**00 58 59.1**	**+1.8**
THR3	**Thira Island,**	**2.62**	**303**	P			**Pn**	**00 58 58.3**	**+1.2**
AYDN	**Tasoluk**	**2.66**	**356**	*i* P			**Pn**	**00 58 59.5**	**+2.0**
THR5	**Thira Island,**	**2.67**	**303**	P			**Pn**	**00 58 59.5**	**+1.9**
IDI	**Anoyia**	**2.67**	**277**	Pn			**Pn**	**00 58 59.8**	**+2.1**
	comp=E,6.7nm,0.3s,baz=94,slow=2.9,SNR=351								
IDI				Sn			**Sn**	**00 59 29.7**	**+0.5**
	comp=E,6.2nm,0.3s,baz=199,slow=22,SNR=5.8								
IDI	**Anoyia**	**2.67**	**277**	P			**Pn**	**00 58 60.0**	**+2.2**
IDI	**Anoyia**	**2.67**	**277**	P			**Pn**	**00 59 00.1**	**+2.3**
IDI				S			**Sn**	**00 59 29.6**	**+0.4**
	comp=E,98nm,0.8s								
KORT	**Korkueli**	**2.68**	**42**	*i* P			**Pb**	**00 59 03.9**	**-0.1**
KORT				*i* S			**Sb**	**00 59 35.4**	**-1.2**
KORT				IAML				00 59 54.0	
	comp=E,43nm,0.6s								
SIVA	**Sivas**	**2.72**	**271**	P			**Pn**	**00 59 00.9**	**+2.5**
SIVA	**Sivas**	**2.72**	**271**	P			**Pn**	**00 59 01.0**	**+2.5**
TMBK	**Timbaki Herakl**	**2.76**	**272**	P			**Pn**	**00 59 01.8**	**+2.9**
GCAM	**G?zelcaml?**	**2.78**	**345**	*i* P			**Pn**	**00 59 01.1**	**+1.9**
GCAM				*i* S			Sn	00 59 11.6	-20
GCAM				IAML				00 59 22.0	
	comp=N,52nm,1.4s								
SMG	**Samos**	**2.89**	**339**	P			**Pn**	**00 59 02.7**	**+2.0**
SMG	**Samos**	**2.89**	**339**	P			**Pn**	**00 59 02.7**	**+2.0**
APE	**Apeiranthos**	**2.94**	**315**	P			**Pn**	**00 59 02.9**	**+1.5**
APE	**Apeiranthos**	**2.94**	**315**	P			**Pn**	**00 59 03.0**	**+1.5**
APE				S			**Sn**	**00 59 37.1**	**+1.1**
PRNS	**Prines Rethymn**	**2.99**	**278**	P			**Pn**	**00 59 04.7**	**+2.6**
PRNS				S			**Sn**	**00 59 41.2**	**+4.1**
OSC1	**CSNet OBS 1**	**3.01**	**119**	P			**Pn**	**00 59 04.5**	**+2.1**
OSC1				S			**Sn**	**00 59 39.6**	**+2.1**
BRDR	**BURDUR-Merkez**	**3.10**	**30**	*i* P			Pn	00 59 08.7	+5.0
DGB	**zmir**	**3.20**	**342**	*i* P			**Pn**	**00 59 06.6**	**+1.6**
VAM	**Vamos**	**3.24**	**278**	P			**Pn**	**00 59 07.0**	**+1.4**
VAM	**Vamos**	**3.24**	**278**	P			**Pn**	**00 59 07.4**	**+1.8**
VAM				S			**Sn**	**00 59 46.0**	**+2.8**
	comp=N,112nm,0.4s								
GVDS	**Gavdos**	**3.32**	**268**	P			**Pn**	**00 59 08.4**	**+1.7**
GVDS				S			**Sn**	**00 59 45.7**	**+0.5**
	comp=N,112nm,0.5s								
GVD	**Gavdhos**	**3.33**	**268**	P			**Pn**	**00 59 07.6**	**+0.9**
KEPZ	**Antalya-Kepez**	**3.39**	**55**	*i* P			**Pn**	**00 59 11.5**	**+3.8**
KEPZ				*i* S			**Sn**	**00 59 46.0**	**-1.1**
IMMV	**Iera Moni Meta**	**3.42**	**279**	P			**Pn**	**00 59 10.3**	**+2.2**
IMMV	**Iera Moni Meta**	**3.42**	**279**	P			**Pn**	**00 59 10.3**	**+2.2**
IMMV				S			**Sn**	**00 59 49.4**	**+1.6**
	comp=N,160nm,0.7s								
AKMS	**Akamas**	**3.45**	**89**	P			**Pn**	**00 59 11.3**	**+2.8**
AKMS				AML		AML		00 59 52.1	
	comp=N,0.5nm,0.5s								
AKMS				AML		AML		00 59 56.0	
	comp=N,0.5nm,0.2s								
BLCB	**Balcova**	**3.48**	**346**	P			**Pn**	**00 59 10.7**	**+1.8**
MANT	**Manisa**	**3.49**	**6**	*i* P			**Pn**	**00 59 10.2**	**+1.0**
KULA	**Kula-Manisa**	**3.53**	**7**	P			**Pn**	**00 59 11.9**	**+2.3**
RODP	**Rodopos**	**3.62**	**280**	P			**Pn**	**00 59 13.3**	**+2.5**
KZIL	**AFYON_Kizioren**	**3.62**	**26**	*i* P			**Pn**	**00 59 15.3**	**+4.3**
NATA	**Nata**	**3.66**	**92**	P			**Pn**	**00 59 14.1**	**+2.8**
NATA				AML		AML		00 59 58.2	
	comp=N,0.8nm,0.4s								
NATA				AML		AML		00 59 59.7	
	comp=N,1.2nm,0.4s								
BAGO	**Egridir - ISPA**	**3.67**	**35**	*i* P			Pn	00 59 16.7	+5.2
ALFC	**Alefka**	**3.67**	**86**	P			**Pn**	**00 59 14.0**	**+2.5**
ALFC				AML		AML		00 59 56.9	
	comp=N,0.5nm,0.3s								
ALFC				AML		AML		00 59 57.6	
	comp=N,0.5nm,0.2s								
MATC	**Matruh**	**3.73**	**192**	P			**Pn**	**00 59 14.1**	**+1.9**
	baz=192								
USAK	**Uak-Merkez**	**3.77**	**11**	*i* P			**Pn**	**00 59 15.0**	**+2.1**
SZAC	**Souni**	**3.92**	**92**	P			**Pn**	**00 59 17.8**	**+2.9**
OSC2	**CSNet OBS 4**	**3.94**	**118**	P			**Pn**	**00 59 17.6**	**+2.4**
OSC2				S			**Sn**	**01 00 03.5**	**+3.1**
ANKY	**Antikythira Is**	**4.03**	**284**	P			**Pn**	**00 59 18.0**	**+1.6**
DOGA	**KONYA_Doganhis**	**4.21**	**42**	*i* P			Pn	00 59 25.4	+6.5
ASGA	**Asgata**	**4.21**	**92**	P			**Pn**	**00 59 21.8**	**+2.8**
GDZ	**Gediz**	**4.21**	**14**	*i* P			**Pn**	**00 59 21.7**	**+2.6**
CSS	**Mathiatis**	**4.27**	**89**	P			**Pn**	**00 59 22.7**	**+3.0**
SLUM	**Salum**	**4.27**	**216**	P			**Pn**	**00 59 21.1**	**+1.4**
	baz=215								
KTHA	**Kythira Island**	**4.31**	**288**	P			**Pn**	**00 59 21.6**	**+1.3**
MVOU	**Mavrovouni**	**4.52**	**88**	P			**Pn**	**00 59 26.6**	**+3.5**
VLI	**Veliai**	**4.55**	**294**	P			**Pn**	**00 59 24.9**	**+1.3**
VLX	**Vlachokerasia**	**5.21**	**299**	P			**Pn**	**00 59 34.4**	**+1.7**
HNAT	**Natroun**	**5.76**	**158**	P			**Pn**	**00 59 41.7**	**+1.5**
	baz=158								
HNAT				S			**Sn**	**01 00 43.8**	**-1.5**
	baz=158								
KOT	**Kottamia**	**5.95**	**147**	P			**Pn**	**00 59 44.4**	**+1.5**
	baz=147								
SWA2		**6.18**	**202**	P			**Pn**	**00 59 47.3**	**+1.4**
	baz=202								
RYAN	**Fayoum**	**6.18**	**162**	P			**Pn**	**00 59 46.7**	**+0.7**
	baz=162								
MMAI	**Mount Meron Ar**	**6.36**	**106**	Pn			**Pn**	**00 59 49.8**	**+1.3**
	comp=N,1.5nm,0.3s,baz=320,slow=12,SNR=15								
MMAI				Sn			**Sn**	**01 01 02.3**	**+2.1**
	comp=N,5.7nm,0.3s,baz=311,slow=26,SNR=12								
BRTR

WR0	**Warramunga Arr**	**13.43**	**158**	Pn	**Pn**	**01 20 56.5**	**-0.1**
AS31	**Alice Springs**	**16.70**	**165**	P	**P**	**01 21 33.6**	**-3.4**
AS31				IAmb	IAmb	01 21 41.9	
	comp=Z,3.8nm,0.3s						
ASAR	**Alice Springs**	**16.70**	**165**	P	**Pn**	**01 21 40.8**	**+3.5**
	comp=Z,1.9nm,0.3s,baz=343,slow=11,SNR=83						
ASAR				S	**S**	**01 24 44.2**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=344,slow=24,SNR=4.7						
ASAR	**Alice Springs**	**16.70**	**165**	P	**P**	**01 21 33.6**	**-3.4**
STKA	**Stephens Creek**	**26.87**	**156**	P	**P**	**01 23 25.6**	**+6.9**
	comp=Z,0.7nm,0.3s,baz=323,slow=10.0,SNR=4.3						
MKAR	**Makanchi Array**	**68.20**	**327**	P	**P**	**01 28 34.9**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=120,slow=7.1,SNR=5.3						

IDC 22 01:29:35.6±2.2, 1°.83N×126°.24E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/31, mbtmp3.4/3, Error ellipse: s-maj=175.1km s-min=28.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.05**	**160**	P	P	01 34 42.8	0.0
	1.1nm,0.6s,baz=339,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.42**	**164**	P	P	01 35 14.2	0.0
	0.4nm,0.9s,baz=343,slow=8.1,SNR=2.1						
MKAR	**Makanchi Array**	**58.84**	**326**	P	P	01 39 36.0	-0.1
	0.5nm,0.8s,baz=123,slow=7.3,SNR=2.0						

*NNC **22** 01:46:30.8±0.7, 43°.20N×78°.61E, h0km, mb2.9, mpv1.9, Error ellipse: s-maj=7.7km s-min=3.8km az=161.0*
*SOME **22** 01:46:31.0, 43°.20N×78°.58E, h10km*
ISC 22 01:46:31.4±1.2, 43°.22N±0°.03×78°.60E±0°.03, h1km±19km, n8, σ0$32/15, 3C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.21**	**221**	*e*P	**Pg**	**01 46 35.3**	**-0.2**
	3.2nm,0.1s						
SATY				*e*S	**Sg**	**01 46 38.5**	**+0.2**
	5.5nm,0.1s						
SATY	**Saty**	**0.21**	**221**	P	**Pg**	**01 46 35.3**	**-0.2**
	1.7nm,0.1s						
SATY				S	**Sg**	**01 46 38.5**	**+0.2**
	5.1nm,0.1s						
KPKS	**Kokpek**	**0.25**	**14**	*e*P	**Pg**	**01 46 36.3**	**+0.1**
	0.9nm,0.1s						
KPKS				*e*S	**Sg**	**01 46 40.1**	**+0.6**
	6.2nm,0.1s						
UZB	**Uzynbulak**	**0.32**	**103**	*e*P	**Pg**	**01 46 37.5**	**0.0**
	0.9nm,0.1s						
UZB				*e*S	**Sg**	**01 46 42.0**	**+0.3**
	4.1nm,0.1s						
UZB	**Uzynbulak**	**0.32**	**103**	P	**Pg**	**01 46 37.1**	**-0.3**
	0.3nm,0.1s						
UZB				S	**Sg**	**01 46 41.6**	**0.0**
	2.9nm,0.1s						
PDGK	**Podgornoye**	**0.66**	**80**	⇓P	**Pg**	**01 46 43.8**	**-0.3**
	2.4nm,1.0s						
PDGK				⇑S	**Sg**	**01 46 52.8**	**+0.2**
	5.3nm,1.4s						
MNBS	**Baschi**	**0.87**	**351**	*e*P	**Pg**	**01 46 47.5**	**-0.5**
	0.1nm,0.1s						
MNBS				*e*S	**Sg**	**01 46 59.3**	**0.0**
	1.9nm,0.2s						
TKM2	**Tokmak 2**	**2.22**	**263**	⇑Pg	**Pn**	**01 47 09.5**	**+0.1**
	4.9nm,1.4s						
TKM2				⇑Lg	Lg	01 47 38.3	
	4.4nm,1.4s						

IDC 22 02:22:48.3±1.9, 1°.95N×126°.55E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/35, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=119.4km s-min=24.2km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P	P	02 27 22.8	+0.8
	0.0nm,0.3s,baz=5.2,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	**23.06**	**161**	P	P	02 27 55.1	-0.4
	1.0nm,0.6s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	**26.45**	**165**	P	P	02 28 27.4	+0.2
	0.2nm,0.4s,baz=346,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	02 32 49.2	-0.1
	0.3nm,0.4s,baz=122,slow=8.0,SNR=7.0						

*ISN **22** 02:28:40.0±1.2, 33°.08N×46°.10E, h17km±8km, ML3.2*
*TEH **22** 02:28:48.6, 33°.22N×46°.13E, h10km, ML2.8*
ISC 22 02:28:42.4±1.2, 32°.96N±0°.06×45°.93E±0°.05, h10km, n8, σ1$12/10, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.14**	**1**	*e*Pg	**Pg**	**02 28 44.0**	**-1.7**
IBDR				AML	AML	02 28 51.7	
	comp=N,4μm,0.4s						
IBDR				AML	AML	02 28 53.5	
	comp=E,3μm,0.4s						
BHD	**Baghdad**	**1.33**	**284**	*e*Pn	**Pg**	**02 29 08.0**	**0.0**
BHD				*e*Sn	**Sn**	**02 29 27.0**	**+2.1**
IGHG	**Ghaleghazi**	**1.46**	**21**	*e*Pg	**Pg**	**02 29 10.5**	**0.0**
IGHG				*e*		02 29 37.4	
IKFM	**Kafar-mosalman**	**1.70**	**70**	*e*Pn	**Pg**	**02 29 15.8**	**+0.7**
IKFM				*e*		02 29 40.4	
KER	**Kermanshah**	**1.74**	**35**	*e*Pn	**Pg**	**02 29 15.8**	**+0.1**
KER				*e*		02 29 49.0	
IDHR	**Dehrash**	**1.77**	**12**	*e*Pn	**Pg**	**02 29 16.6**	**+0.2**
IDHR				*e*		02 29 19.1	
IKOM	**Komasi**	**1.79**	**47**	*e*Pn	**Pg**	**02 29 16.7**	**-0.1**
IKOM				*e*		02 29 44.9	
NSR	**Nassriya**	**1.96**	**175**	*e*Pn	**Pn**	**02 29 15.0**	**-0.6**
NSR				*e*Sn	**Sb**	**02 29 42.0**	**-0.6**

*REN **22** 02:40:22.5±3.2, 41°.87N±0°.04×119°.61W±0°.04, h4km±7km, ML3.6/3, ML3.2/16(SEA), Error ellipse: s-maj=5.8km s-min=3.7km az=178.0*
*SEA **22** 02:40:23±3.3, 41°.87N±0°.04×119°.63W±0°.06, h0km±7km, Error ellipse: s-maj=6.7km s-min=5.6km az=76.0*
*ANF **22** 02:40:23.3±0.5, 41°.83N×119°.69W, h5km, ML3.2/8, Error ellipse: s-maj=4.8km s-min=4.4km az=159.0*
*NEIC **22** 02:40:23.6±1.8, 42°.00N±0°.03×119°.67W±0°.04, h11km±6km, Error ellipse: s-maj=6.1km s-min=1.8km az=132.0*
ISC 22 02:40:22.6±1.3, 41°.89N±0°.03×119°.63W±0°.02, h1km±12km, n57, σ1$19/70, Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.50**	**271**		**Pg**	**02 40 32.6**	**+0.4**
MOD					**Sg**	**02 40 39.9**	**+1.1**
WVOR	**Wild Horse Val**	**0.92**	**53**		**Pg**	**02 40 39.9**	**-0.2**
WVOR	**Wild Horse Val**	**0.92**	**53**	Sg	**Sg**	**02 40 52.0**	**+0.1**
K05A	**Summer Lake**	**1.25**	**312**	Pg	**Pg**	**02 40 46.5**	**-0.1**
K05A				Sg	**Sg**	**02 41 02.5**	**-0.4**
M04C	**Macdoel**	**1.66**	**267**	P	**Pn**	**02 40 51.7**	**-1.2**
	baz=86,SNR=53						
M04C				S	**Sb**	**02 41 15.6**	**+0.2**
	baz=86						
J08A	**Circle Bar Ran**	**1.69**	**30**	Pn	**Pn**	**02 40 52.2**	**-1.2**
J08A				Sn	**Sn**	**02 41 14.4**	**-1.4**
K04D	**Chiloquin, OR**	**1.74**	**296**	P	**Pn**	**02 40 54.4**	**+0.4**
	baz=115,SNR=12						
K04D				S	**Sb**	**02 41 17.7**	**-0.1**
	baz=115						
J05D	**Fort Rock, OR**	**1.83**	**320**	P	**Pn**	**02 40 56.1**	**+0.8**
	baz=139,SNR=12						
J05D				S	**Sb**	**02 41 21.2**	**+0.8**
	baz=139						
L04D	**Klamath Falls**	**2.02**	**280**	P	**Pn**	**02 40 56.4**	**-1.4**
	baz=99,SNR=45						
L04D				Sb	**Sb**	**02 41 26.6**	**+0.8**
	baz=99						
BEKR	**Beckworth**	**2.10**	**196**		**Pb**	**02 41 01.0**	**-0.5**
PINE	**Pine Mountain**	**2.13**	**334**		**Pn**	**02 40 59.2**	**-0.2**
I07A	**Izee**	**2.19**	**2**	Pn	**Pn**	**02 41 01.2**	**+1.0**
PAHR	**Pah Rah Range**	**2.19**	**175**		**Pn**	**02 41 01.3**	**+1.0**
O03E	**Paynes Creek**	**2.29**	**227**	Pn	**Pn**	**02 41 00.7**	**-0.8**
	baz=46,SNR=11						
O03E				Pb	**Pb**	**02 41 03.7**	**-1.0**
	baz=46						
O03E				Sb	**Sb**	**02 41 33.1**	**-0.4**
	baz=46						
YBH	**Yreka Blue Hor**	**2.31**	**267**	Pn	**Pn**	**02 41 01.1**	**-0.7**
M02C	**Callahan**	**2.47**	**259**	Pb	**Pb**	**02 41 07.0**	**-0.8**
	baz=78						
M02C				Sb	**Sb**	**02 41 40.3**	**+1.6**
	baz=78						
N02D	**Trinity Center**	**2.49**	**249**	Pb	**Pb**	**02 41 06.8**	**-1.3**
	baz=68						
N02D				Sb	**Sg**	**02 41 41.2**	**-1.3**
	baz=68						
WDC	**Whiskeytown Da**	**2.56**	**240**		**Pn**	**02 41 06.5**	**+1.4**
HUMO	**Hull Mountain**	**2.57**	**287**		**Pn**	**02 41 04.5**	**-0.9**
VCNR	**Virginia City**	**2.59**	**180**		**Pn**	**02 41 07.5**	**+1.7**
ORV	**Oroville**	**2.73**	**212**	Pn	**Pn**	**02 41 09.2**	**+1.6**
I05D	**Terrebonne, OR**	**2.75**	**333**	Pb	**Pb**	**02 41 13.0**	**+0.5**
	baz=152						
PNTR	**Pine Nut**	**2.80**	**180**		**Pn**	**02 41 09.9**	**+1.2**
RUBR	**Rubicon Trail**	**2.87**	**188**	Pn	**Pn**	**02 41 10.9**	**+1.3**
L02E	**Cave Junction**	**2.97**	**276**	P	**Pn**	**02 41 10.8**	**0.0**
	baz=94,SNR=11						
L02E				Sb	**Sb**	**02 41 53.9**	**+0.7**
	baz=94						
KVN	**Kaiserville**	**3.07**	**157**		**Pn**	**02 41 13.3**	**+1.0**
K02D	**Willamette Mer**	**3.10**	**286**	P	**Pn**	**02 41 13.7**	**+1.0**
	baz=104,SNR=69						
AFDM	**Forest Hills D**	**3.11**	**200**	Pn	**Pn**	**02 41 14.2**	**+1.4**
MFID	**Camas Ranch**	**3.19**	**60**	Pn	**Pn**	**02 41 13.0**	**-1.0**
KHMM	**Horse Mountain**	**3.25**	**253**	Pn	**Pn**	**02 41 16.5**	**+1.7**
I03D	**Drain, OR**	**3.28**	**305**	Sb	**Sb**	**02 42 05.3**	**+3.4**
	baz=122						
RYN	**Ryan**	**3.37**	**165**	Pn	**Pn**	**02 41 18.3**	**+1.8**
WAKR	**Walker**	**3.39**	**177**	Pn	**Pn**	**02 41 18.2**	**+1.5**
BMO	**Blue Mountains**	**3.41**	**29**	Pn	**Pn**	**02 41 17.9**	**+0.9**
G08A	**Pilot Rock**	**3.43**	**8**	Pn	**Pn**	**02 41 16.0**	**-1.3**
ELK	**Elko**	**3.50**	**108**	Pn	**Pn**	**02 41 18.9**	**+0.6**
NVAR	**Mina Array Bea**	**3.60**	**163**	Pn	**Pn**	**02 41 19.5**	**-0.2**
NV11	**Mina Array Sit**	**3.64**	**161**	Pn	**Pn**	**02 41 18.7**	**-1.4**
LHV	**Little Huntoon**	**3.74**	**166**	Pn	**Pn**	**02 41 21.2**	**-0.1**
CMB	**Columbia Colle**	**3.90**	**189**	Pn	**Pn**	**02 41 23.3**	**-0.3**
HLID	**Hailey**	**4.19**	**65**	P	**Pn**	**02 41 28.0**	**+0.3**
	baz=248						
HLID				Sb	**Sb**	**02 42 31.5**	**+3.2**
	baz=248						
HLID	**Hailey**	**4.19**	**65**		**Pn**	**02 41 27.7**	**0.0**
TPH	**Tonopah**	**4.24**	**153**	Pn	**Pn**	**02 41 27.2**	**-1.2**
MDPB	**Devils Postpil**	**4.28**	**174**	Pn	**Pn**	**02 41 28.0**	**-1.0**
R11A	**Troy Canyon, C**	**4.70**	**137**	P	**Pn**	**02 41 36.8**	**+2.0**
	baz=320						
R11A	**Troy Canyon, C**	**4.70**	**137**	Pn	**Pn**	**02 41 36.2**	**+1.4**
SPR3	**Spring Creek 3**	**4.97**	**124**		**Pn**	**02 41 37.3**	**-1.3**
BGU	**Big Grassy Mou**	**5.05**	**99**		**Pn**	**02 41 38.4**	**-1.2**
HVU	**Hansel Valley**	**5.12**	**89**	Pn	**Pn**	**02 41 40.7**	**+0.2**
BCYI	**Bear Canyon**	**5.16**	**60**	Pn	**Pn**	**02 41 40.6**	**-0.5**
SPUT	**South Promonto**	**5.41**	**94**	Pn	**Pn**	**02 41 43.2**	**-1.4**
DUG	**Dugway, Tooele**	**5.42**	**106**	P	**Pn**	**02 41 46.0**	**+1.3**
	baz=290						
DUG	**Dugway, Tooele**	**5.42**	**106**		**Pn**	**02 41 43.9**	**-0.8**
PSUT	**Pine Spring**	**5.55**	**125**		**Pn**	**02 41 45.5**	**-0.9**
PRN	**Pahroc Range**	**5.70**	**140**		**Pn**	**02 41 47.0**	**-1.5**
MCMT	**McKenzie Canyo**	**5.75**	**57**	Pn	**Pn**	**02 41 49.3**	**+0.1**
CCUT	**Cedar City**	**6.49**	**130**	Pn	**Pn**	**02 41 59.2**	**-0.2**

*IDC **22** 02:45:26.7±3.6, 11°.79N×142°.13E, h73km±36km, mb3.3/7, mb1 3.5/8, mb1mx3.4/36, mbtmp3.6/8, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/20, Error ellipse: s-maj=34.2km s-min=20.2km az=107.0*
ISC 22 02:45:24.5±0.9, 11°.8N±0°.2×142°.0E±0°.1, h50km, n10, σ1$03/9, mb3.6/7, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.34**	**57**	P	**Pn**	**02 46 14.6**	**+0.4**
	13nm,0.3s,baz=33,slow=4.2,SNR=5.9						
GUMO				S	**Sn**	**02 46 52.9**	**+0.3**
	4.4nm,0.3s,baz=77,slow=8.3,SNR=1.5						
JAY	**Jayapura**	**14.26**	**185**	LR	LR	02 53 54.5	
	comp=Z,36nm,18.4s,baz=270,slow=36						
DAV	**Davao City (W)**	**16.84**	**255**	LR	LR	02 58 03.2	
	comp=Z,273nm,18.1s,baz=184,slow=45						
WRA	**Warramunga Arr**	**32.41**	**194**	P	**P**	**02 51 49.1**	**-0.8**
	0.3nm,0.8s,baz=14,slow=9.7,SNR=2.1						
ASAR	**Alice Springs**	**36.11**	**193**	P	**P**	**02 52 22.8**	**+0.9**
	0.2nm,0.7s,baz=23,slow=12,SNR=1.8						
SONM	**Songino Array**	**46.65**	**327**	P	**P**	**02 53 48.4**	**+0.2**
	0.4nm,0.6s,baz=146,slow=8.4,SNR=3.9						
MKAR	**Makanchi Array**	**60.86**	**317**	P	**P**	**02 55 32.8**	**+0.9**
	0.3nm,0.6s,baz=87,slow=9.8,SNR=2.4						
ZALV	**Zalesovo Beam**	**61.48**	**326**	P	**P**	**02 55 36.1**	**+0.2**
	0.9nm,0.3s,baz=149,slow=6.1,SNR=2.7						
ILAR	**Eielson Array**	**71.39**	**25**	P	**P**	**02 56 37.2**	**-1.9**
	0.6nm,0.7s,baz=253,slow=5.9,SNR=5.9						
NVAR	**Mina Array Bea**	**90.24**	**51**	P	**P**	**02 58 20.7**	**+0.3**
	0.1nm,0.3s,baz=264,slow=3.6,SNR=3.6						

*ECGS **22** 02:55:13.4, 1°.19S±0°.01×29°.29E±0°.01, h0km±4km, ML2.5, Error ellipse: s-maj=2.5km s-min=1.8km az=73.1, smi:local/423bc8a2-cb98-4a50-849b-641ae5480090 Note: Depth/Latitude/Longitude errors are calculated from covariance matrix as 1D marginal (Lon/Lat errors as great circle degrees) while OriginUncertainty min/max horizontal errors are calculated from 2D error ellipsoid and are therefore seemingly higher compared to 1D errors. Error estimates can be reconstructed from the following original NonLinLoc error statistics line:STATISTICS ExpectX 31.3399 Y 36.0168 Z 5.59808 CovXX 2.53211 XY 0.331291 XZ -4.26933 YY 1.5458 YZ 1.47158 ZZ 16.101 EllAz1 313.979 Dip1 -14.8327 Len1 1.50454 Az2 222.063 Dip2 -7.19339 Len2 2.71939 Len3 7.846824e+00*
ISC 22 02:55:12.3±1.4, 1°.15S±0°.05×29°.32E±0°.04, h10km, n12, σ0$31/13, Lake Tanganyika region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RGB	**Rumangabo**	**0.20**	**166**	*i* P	**Pg**	**02 55 17.1**	**+0.4**
RGB	**Rumangabo**	**0.20**	**166**	*i* S	**Sg**	**02 55 19.7**	**+0.1**
LBGA	**Luboga**	**0.23**	**240**	*i* S	**Sg**	**02 55 20.6**	**+0.1**
LBGA	**Luboga**	**0.23**	**240**	*i* P	**Pg**	**02 55 17.5**	**+0.3**
KTSH	**Kitshanga**	**0.28**	**252**	*i* S	**Sg**	**02 55 21.8**	**-0.2**
KTSH	**Kitshanga**	**0.28**	**252**	*i* P	**Pg**	**02 55 18.4**	**+0.3**
GOM	**Goma**	**0.53**	**190**	*e*P	**Pg**	**02 55 23.0**	**+0.2**
GOM	**Goma**	**0.53**	**190**	*i* S	**Sg**	**02 55 29.9**	**0.0**
BOBN	**Bobandana**	**0.63**	**209**	*i* P	**Pg**	**02 55 24.4**	**-0.2**
BOBN	**Bobandana**	**0.63**	**209**	*i* S	**Sg**	**02 55 32.3**	**-0.6**
MBAR	**Mbarara**	**1.52**	**69**	*e*P	**Pg**	**02 55 41.6**	**0.0**
MBAR				*e*S	**Sg**	**02 56 01.4**	**0.0**
BUJA	**Bujumbura/Buru**	**2.23**	**178**	*i* S	**Sb**	**02 56 20.5**	**-0.2**

*ISU **22** 03:00:44.0, 41°.70N×72°.50E, h10km*
*KRNET **22** 03:00:45.3±0.1, 41°.70N×72°.53E, h13km, mb2.7*
*SOME **22** 03:00:45.0, 41°.70N×72°.52E, h5km*
*NNC **22** 03:00:46.1±1.6, 41°.80N×72°.43E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=15.8km s-min=6.3km az=171.0*
*KNET **22** 03:00:46.6±0.4, 41°.74N×72°.62E, h2km±1km, ml2.5, Error ellipse: s-maj=2.9km s-min=2.1km az=8.0*
ISC 22 03:00:45.0±1.1, 41°.70N±0°.02×72°.53E±0°.02, h9km±10km, n45, σ1$11/80, 21C-22D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.51**	**138**	⇓*i*P	**Pg**	**03 00 54.7**	**-0.1**
	baz=38						
ARSB				⇓*i*S	**Sg**	**03 01 02.2**	**+0.7**
	baz=38						
ARSB	**Arslanbob**	**0.51**	**138**	*e*P	**Pg**	**03 00 54.4**	**-0.4**
ARSB				*e*S	**Sg**	**03 01 01.8**	**+0.3**
MNAS	**Manas**	**0.78**	**358**	⇑*i*P	**Pb**	**03 01 00.4**	**-0.5**
	baz=59						
MNAS				⇑*i*S	**Sb**	**03 01 11.2**	**-0.5**
	baz=59						
AML	**Almayashu**	**0.97**	**63**	⇑*i*P	**Pg**	**03 01 03.8**	**+0.2**
	baz=64						
AML				⇑*i*S	**Sb**	**03 01 17.2**	**+0.1**
	baz=64						
AML	**Almayashu**	**0.97**	**63**	⇑P	**Pb**	**03 01 04.0**	**-0.1**
	17nm,0.2s,SNR=80						
AML				⇓S	**Sb**	**03 01 17.7**	**+0.6**
	52nm,0.2s						
MRKS	**Merke**	**1.16**	**26**	*e*P	**Pn**	**03 01 07.7**	**+0.2**
	7.8nm,0.1s						
MRKS				*e*S	**Sn**	**03 01 24.1**	**+0.5**
	45nm,0.2s						
MRKS	**Merke**	**1.16**	**26**	P	**Pn**	**03 01 07.6**	**+0.2**
	7.8nm,0.1s						
MRKS				S	**Sn**	**03 01 24.2**	**+0.6**
	45nm,0.2s						
OHH	**Osh**	**1.19**	**171**	⇑*i*P	**Pg**	**03 01 08.0**	**+0.1**
	baz=70						
OHH				⇑*i*S	**Sn**	**03 01 24.4**	**+0.2**
	baz=70						
OHH	**Osh**	**1.19**	**171**	*e*P	**Pg**	**03 01 08.0**	**+0.1**
OHH				*e*S	**Sn**	**03 01 23.8**	**-0.4**
EKS2	**Erkin-Say**	**1.33**	**44**	⇓*i*P	**Pb**	**03 01 10.3**	**+0.1**
	baz=44						
EKS2				⇓*i*S	**Sg**	**03 01 28.5**	**+0.7**
	baz=44						
EKS2	**Erkin-Say**	**1.33**	**44**	⇓P	**Pg**	**03 01 10.7**	**+0.2**
	4.6nm,0.1s,SNR=13						
ARLS	**Aral**	**1.35**	**83**	⇓*i*P	**Pb**	**03 01 10.7**	**+0.2**
	baz=82						
ARLS				⇓*i*S	**Sg**	**03 01 29.4**	**+1.1**
	baz=82						
DZA	**Taraz**	**1.49**	**324**	*e*P	**Pg**	**03 01 13.2**	**-0.3**
	63nm,0.1s						
DZA				*e*S	**Sg**	**03 01 33.6**	**+0.8**
	357nm,0.3s						
DZA	**Taraz**	**1.49**	**324**	P	**Pg**	**03 01 13.2**	**-0.3**
	63nm,0.1s						
DZA				S	**Sg**	**03 01 33.0**	**+0.2**
	357nm,0.3s						
UCH	**Uchtor**	**1.57**	**70**	⇓*i*P	**Pg**	**03 01 14.9**	**-0.2**
	baz=70						
UCH				⇓*i*S	**Sg**	**03 01 35.8**	**+0.4**
	baz=70						
UCH	**Uchtor**	**1.57**	**70**	⇑P	**Pg**	**03 01 15.4**	**+0.3**
	11nm,0.2s,SNR=18						
UCH				⇑S	**Sg**	**03 01 37.7**	**+2.3**
	18nm,0.1s						
SFK	**Sufi-Kurgan**	**1.84**	**156**	⇑*i*P	**Pb**	**03 01 19.0**	**+0.1**
	baz=56						
SFK				⇑*i*S	**Sg**	**03 01 44.2**	**0.0**
	baz=56						
CHMG	**Chimgan**	**1.90**	**266**	*e*P	**Pb**	**03 01 19.1**	**-0.7**
CHMG				*e*S	**Sb**	**03 01 43.7**	**0.0**
IUG	**Iuzhnay**	**1.92**	**284**	*e*P	**Pb**	**03 01 20.5**	**+0.4**
	26nm,0.2s						
IUG				*e*S	**Sg**	**03 01 46.3**	**-0.4**
	106nm,0.3s						
KBK	**Karagaybulak**	**2.03**	**61**	⇓*e*P	**Pb**	**03 01 22.3**	**+0.2**
	baz=61						
KBK				⇓*e*S	**Sg**	**03 01 49.4**	**-0.9**
	baz=61						
KBK	**Karagaybulak**	**2.03**	**61**	⇑P	**Pg**	**03 01 23.8**	**-0.2**
	4.7nm,0.1s,SNR=11						
KK31	**Karatay Array**	**2.05**	**314**	Pn	**Pb**	**03 01 21.8**	**-0.6**
	3.0nm,0.3s,baz=130,slow=16,SNR=82						
KK31				⇓Lg	Lg	03 01 49.1	
	5.5nm,0.3s,baz=126,slow=28,SNR=14						
CHMS	**Chumysh**	**2.09**	**51**	⇑*i*P	**Pb**	**03 01 23.2**	**+0.1**
	baz=51						
CHMS				⇑*i*S	**Sb**	**03 01 50.4**	**+1.2**
	baz=51						
BTK	**Batken**	**2.10**	**219**	⇑*i*P	**Pb**	**03 01 23.0**	**-0.2**
	baz=19						
BTK				⇑*i*S	**Sb**	**03 01 50.2**	**+0.9**
	baz=19						
BTK	**Batken**	**2.10**	**219**	*e*P	**Pb**	**03 01 22.9**	**-0.2**
BTK				*e*S	**Sb**	**03 01 49.9**	**+0.6**
USP	**Ospenovka**	**2.13**	**42**	⇓*i*P	**Pb**	**03 01 23.6**	**-0.2**
	baz=42						
USP				⇓*i*S	**Sb**	**03 01 51.8**	**+1.4**
	baz=42						
USP	**Ospenovka**	**2.13**	**42**	⇓P	**Pb**	**03 01 24.9**	**+1.1**
	3.3nm,0.1s,SNR=8.3						
USP				⇓S	**Sg**	**03 01 54.8**	**+1.2**
	16nm,0.2s						
DRK	**Karamyk**	**2.29**	**194**	⇓*i*P	**Pb**	**03 01 26.1**	**-0.5**
	baz=94						
DRK				⇓*i*S	**Sb**	**03 01 55.7**	**+0.6**
	baz=94						
TKM2	**Tokmak 2**	**2.58**	**61**	⇓*i*P	**Pb**	**03 01 29.9**	**-1.6**
	baz=61						
TKM2				⇓*i*S	**Sb**	**03 02 02.7**	**-0.6**
	baz=61						
TKM2	**Tokmak 2**	**2.58**	**61**	⇓Pg	**Pb**	**03 01 32.7**	**+1.2**
	2.8nm,0.4s						
TKM2				⇑Lg	Lg	03 02 08.0	
	18nm,0.8s						
BOOM	**Boomskoye usch**	**2.65**	**72**	⇑*i*P	**Pb**	**03 01 31.2**	**-1.6**
	baz=72						
BOOM				⇑*i*S	**Sb**	**03 02 04.3**	**-1.2**
	baz=72						
ULHL	**Ulahol**	**2.82**	**78**	⇑*i*P	**Pb**	**03 01 33.3**	**-2.3**
	baz=78						
ULHL				⇑*i*S	**Sb**	**03 02 08.3**	**-1.9**
	baz=78						
DGS	**Degeres**	**2.85**	**56**	*e*P	**Pg**	**03 01 38.4**	**-1.1**
	5.8nm,0.4s						
DGS				*e*S	**Sg**	**03 02 16.5**	**+0.1**
	13nm,0.4s						
DGS	**Degeres**	**2.85**	**56**	Pg	**Pg**	**03 01 38.1**	**-1.4**
	5.8nm,0.4s						
DGS				Lg	Lg	03 02 16.2	
	13nm,0.4s						
KST	**Kastek**	**2.87**	**61**	*e*P	**Pg**	**03 01 38.6**	**-1.4**
	5.1nm,0.4s						
KST				*e*S	**Sg**	**03 02 16.9**	**-0.3**
	25nm,0.6s						
KST	**Kastek**	**2.87**	**61**	Pg	**Pg**	**03 01 38.6**	**-1.4**
	5.3nm,0.5s						
KST				Lg	Lg	03 02 16.7	
	15nm,0.6s						
KRBS	**Karabastau**	**3.06**	**48**	*e*P	**Pb**	**03 01 40.9**	**+1.4**
	1.6nm,0.2s						
KRBS				*e*S	**Sg**	**03 02 21.1**	**-0.2**
	8.1nm,0.4s						
MTBS	**Maitube**	**3.22**	**62**	*e*P	**Pb**	**03 01 44.4**	**+2.1**
	5.

σ1§38/67, mb3.9/15, MS3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.65	293	P	Pn	03 10 53.5	-1.2
ONAJ				eS	Sn	03 11 11.9	-3.8
JHYU	Hitachinakayam	1.71	266	P	Pn	03 10 54.9	-0.6
JHYU				eS	Sn	03 11 15.6	-1.5
JHO	Hitachi	1.73	275	P	Pn	03 10 54.5	-1.2
JYT	Yasato	2.04	264	Pn	Pn	03 10 59.6	-0.4
JMM	Marumori	2.06	313		Pn	03 10 59.4	-0.9
JFT	Otama	2.16	299	P	Pn	03 11 01.4	-0.3
BSO1	Boso 1	2.30	218	P	Pn	03 11 02.8	-0.3
JAG	Ashikaga	2.62	270	P	Pn	03 11 07.2	-0.8
JMK	Ichinoseki	2.74	335	P	Pn	03 11 08.3	-1.2
JYK	Kaneyama	3.06	323	P	Pn	03 11 13.5	-0.6
JRY	Ryogami san	3.11	263	P	Pn	03 11 14.1	-0.6
JYN	Shimob	3.51	255	P	Pn	03 11 20.7	+0.4
MJAR	Matsushiro Arr	3.62	272	Pn	Pn	03 11 22.5	+0.7
	0.7nm,0.3s,baz=92,slow=10,SNR=31						
MJAR				LR	LR	03 13 05.3	
	comp=Z,255nm,21.2s,baz=110,slow=45						
MAJO	Matsushiro	3.62	272		Pn	03 11 23.0	+1.2
MAT	Matsushiro	3.62	272	P	Pn	03 11 22.7	+0.9
MAT				eS	Sn	03 12 02.9	-1.4
JSD	Sado	3.87	295	Pn	Pn	03 11 25.9	+0.8
JSG	Sagara	4.10	245	Pn	Pn	03 11 30.1	+1.8
JHJ2	Mitsune	4.12	216	Pn	Pn	03 11 28.3	-0.2
JHJ	Hachijo jima 2	4.12	217	Pn	Pn	03 11 27.2	-1.5
	47nm,0.3s,baz=328,slow=18,SNR=16						
JHJ				Sn	Sn	03 12 13.2	-3.4
	34nm,0.3s,baz=235,slow=23,SNR=6.3						
JGF	Kuroka	4.42	260		Pn	03 11 34.7	+2.0
JTM	Tenmabayashi	4.49	344	Pn	Pn	03 11 35.0	+1.3
INU	Inuyama	4.75	258		Pn	03 11 38.4	+1.1
JWT	Wachi	6.05	261	Pn	Pn	03 11 57.4	+2.3
JKA	Kamikawa-asahi	7.63	359	Pn	Pn	03 12 14.9	-1.9
ASAJ	Asahikawa	7.63	359	Pn	Pn	03 12 16.6	-0.2
	1.6nm,0.3s,baz=204,slow=13,SNR=6.2						
ASAJ				Sn	Sn	03 13 38.6	-4.3
	0.4nm,0.3s,baz=244,slow=29,SNR=2.1						
JMN	Monobe	7.74	252	Pn	Pn	03 12 20.4	+2.1
JHS	Saijyo	7.94	262	Pn	Pn	03 12 22.8	+1.8
JNU	Nakatsue	10.29	254	Pn	Pn	03 12 50.5	-2.7
	0.2nm,0.3s,baz=75,slow=16,SNR=2.3						
JNU				LR	LR	03 17 31.0	
	comp=Z,152nm,19.4s,baz=89,slow=41						
USRK	Ussuriysk Ar.	11.23	317	LR	LR	03 17 03.7	
	comp=Z,160nm,19.0s,baz=160,slow=36						
USRK	Ussuriysk Ar.	11.23	317	Pn	Pn	03 13 07.8	+1.7
KSRS	Korea Array	11.87	279	Pn	Pn	03 13 16.6	+1.8
	0.2nm,0.3s,baz=231,slow=18,SNR=4.1						
KSRS				LR	LR	03 17 04.2	
	comp=Z,57nm,18.9s,baz=110,slow=34						
KSAR	Wonju Array Be	11.90	279	Pn	Pn	03 13 14.0	-1.3
KLR	Kul'dur	15.04	331	Pn	P	03 14 01.7	-1.7
	0.2nm,0.3s,baz=264,slow=22,SNR=3.2						
HIA	Hailar	21.03	315	P	P	03 15 09.9	+0.6
HIA				IAmb	IAmb	03 15 14.3	
	comp=Z,8.6nm,1.0s						
MA2	Magadan	23.70	10	LR	LR	03 25 43.9	
	comp=Z,87nm,18.2s,baz=176,slow=39						
YAK	Yakutsk	26.84	346	LR	LR	03 29 12.4	
	comp=Z,95nm,19.1s,baz=92,slow=42						
H11N2	WAKE ISLAND Hy	26.97	122	T	T	03 44 19.2	
	baz=314,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	26.98	122	T	T	03 44 18.1	
	baz=314,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	26.99	122	T	T	03 44 13.9	
	baz=314,slow=75,SNR=24						
XAN	Xi'an	27.62	275	P	P	03 16 13.6	+0.5
H11S1	WAKE ISLAND Hy	27.69	124	T	T	03 45 12.9	
	baz=316,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	27.69	124	T	T	03 45 10.2	
	baz=316,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	27.70	124	T	T	03 45 11.7	
	baz=316,slow=76,SNR=13						
ENH	Enshi	28.33	267	P	P	03 16 20.2	+0.7
ULN	Ulaanbaatar	28.52	305	P	P	03 16 21.0	-0.2
ULN				IAmb	IAmb	03 16 42.7	
	comp=Z,5.4nm,0.9s						
SONM	Songino Array	28.95	305	P	P	03 16 25.6	+0.6
	comp=Z,2.0nm,0.9s,baz=110,slow=8.5,SNR=9.4						
SONM	Songino Array	28.95	305	P	P	03 16 25.3	+0.3
WMQ	Urumqi	42.02	298	P	P	03 18 18.4	+1.5
CMAR	Chiang Mai Arr	42.37	257	LR	LR	03 38 55.8	
	comp=Z,45nm,19.3s,baz=138,slow=40						
ZAA0	Zalesovo Array	43.05	313	P	P	03 18 25.5	+0.4
ZAA0				IAmb	IAmb	03 18 43.2	
	comp=Z,4.5nm,0.9s						
ZALV	Zalesovo Beam	43.05	313	P	P	03 18 25.0	-0.1
	comp=Z,1.4nm,0.7s,baz=76,slow=6.3,SNR=4.4						
ZALV	Zalesovo Beam	43.05	313	P	P	03 18 24.6	-0.6
NRIK	Noril'sk	44.20	335	LR	LR	03 39 20.8	
	comp=Z,98nm,18.8s,baz=20,slow=39						
MK31	Makanchi Array	45.29	303	P	P	03 18 43.1	-0.1
MK31				IAmb	IAmb	03 19 06.4	
	comp=Z,7.0nm,1.1s						
MKAR	Makanchi Array	45.29	303	P	P	03 18 43.2	0.0
	comp=Z,0.5nm,0.8s,baz=104,slow=15,SNR=1.8						
MKAR	Makanchi Array	45.29	303	P	P	03 18 45.2	+2.0
KURK	Kurchatov	47.09	309	P	P	03 18 57.6	+0.3
BPAW	Bear Paw Mtn.	47.62	33	P	P	03 19 01.2	-0.1
MDM	Murphy Dome	48.84	32	P	P	03 19 11.5	+0.9
ILAR	Eielson Array	49.41	32	P	P	03 19 15.1	+0.1
	comp=Z,1.0nm,0.7s,baz=266,slow=6.7,SNR=9.4						
KKAR	Karatay Array	54.30	301	P	P	03 19 52.2	+0.4
WRA	Warramunga Arr	56.67	189	P	P	03 20 08.7	-0.2
	comp=Z,1.3nm,0.8s,baz=11,slow=7.7,SNR=8.5						
CHGR	Chuyangaron	56.84	296	P	P	03 20 11.0	+0.8
DLBC	Dease Lake	58.42	38	P	P	03 20 20.7	-0.3
ABKAR	Akbulak array	59.09	311	P	P	03 20 25.4	-0.3
AS31	Alice Springs	60.39	189	P	P	03 20 35.5	+0.6
ASAR	Alice Springs	60.40	189	P	P	03 20 35.6	+0.7
	comp=Z,0.7nm,0.9s,baz=352,slow=4.3,SNR=5.1						
FINES	FINESS Array B	69.78	333	P	P	03 21 37.0	+1.5
	comp=Z,4.2nm,1.0s,baz=98,slow=4.0,SNR=2.8						
NVAR	Mina Array Bea	74.48	54	P	P	03 22 04.9	+0.6
	comp=Z,0.9nm,0.9s,baz=278,slow=5.5,SNR=5.3						
NOA	NORSAR Array B	75.09	338	P	P	03 22 07.0	-0.2
	comp=Z,1.8nm,1.0s,baz=172,slow=19,SNR=4.7						
NOA				LR	LR	03 59 20.3	
	comp=Z,57nm,18.2s,baz=225,slow=39						
AKASG	Malin Array Be	75.37	323	P	P	03 22 08.8	-0.1
	comp=Z,0.2nm,0.3s,baz=224,slow=55,SNR=1.8						
AKASG	Malin Array Be	75.37	323	IAmb	IAmb	03 22 11.9	
	comp=Z,2.2nm,1.2s						
MMAI	Mount Meron Ar	83.13	306	LR	LR	04 04 33.0	
	comp=Z,22nm,18.1s,baz=10.0,slow=39						
GERES	GERESS Array B	83.73	329	P	P	03 22 55.9	+1.3
	comp=Z,0.1nm,0.5s,baz=223,slow=24,SNR=2.6						
LPAZ	La Paz	146.06	62	PKPbc	PKPab	03 30 07.2	-0.1
	comp=Z,1.7nm,1.0s,baz=350,slow=10,SNR=4.1						

*KRNET **22** 03:56:38.2±0.1, 41.°95N×72.°23E, h11km, mb2.8*
*SOME **22** 03:56:38.4, 42.°00N×72.°22E, h5km*
*NNC **22** 03:56:39.5±0.6, 42.°05N×72.°24E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=5.1km s-min=1.8km az=2.0*

ISC 22 03:56:37.4±1.1, 41.°99N±0.°02×72.°26E±0.°02, h7km±10km, n34, σ1§01/61, 23C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAS	Manas	0.53	20	⇑iP	Pb	03 56 49.8	+0.6
	baz=21						
MNAS				⇑iS	Sb	03 56 57.5	+0.4
	baz=21						
ARSB	Arslanbob	0.85	140	⇑iP	Pg	03 56 54.3	+0.5
	baz=38						
ARSB				⇑iS	Sb	03 57 06.0	-0.3
	baz=38						
TRKS	Terek-Say	0.95	242	⇓iP	Pg	03 56 55.7	0.0
	baz=38						
TRKS				⇓iS	Sb	03 57 08.5	-0.7
	baz=38						
MRKS	Merke	1.04	43	eP	Pn	03 56 58.9	+0.4
	11nm,0.1s						
MRKS				eS	Sn	03 57 13.7	+0.3
	54nm,0.3s						
MRKS	Merke	1.04	43	P	Pn	03 56 58.9	+0.4
	11nm,0.1s						
MRKS				S	Sn	03 57 13.7	+0.3
	54nm,0.3s						
AML	Almayashu	1.08	82	⇑iP	Pn	03 56 59.4	+0.1
	baz=80						
AML				⇑iS	Sn	03 57 14.4	-0.2
	baz=80						
EKS2	Erkin-Say	1.31	59	⇑iP	Pg	03 57 03.7	+1.1
	baz=58						
EKS2				⇑iS	Sn	03 57 22.2	+2.1
	baz=58						
OHH	Osh	1.51	165	⇑iP	Pg	03 57 06.5	+0.1
	baz=63						
OHH				⇑iS	Sg	03 57 27.0	+1.0
	baz=63						
ARLS	Aral	1.54	94	⇑iP	Pg	03 57 07.6	+0.6
	baz=92						
ARLS				⇑iS	Sg	03 57 29.1	+2.0
	baz=92						
IUG	Iuzhnay	1.67	276	eP	Pg	03 57 09.7	+0.3
	22nm,0.2s						
IUG				eS	Sg	03 57 32.0	+1.0
	148nm,0.4s						
UCH	Uchtor	1.69	81	⇑iP	Pg	03 57 10.7	+0.8
	baz=80						
UCH				⇑iS	Sg	03 57 33.9	+2.0
	baz=80						
KK31	Karatay Array	1.71	311	⇓P	Pb	03 57 09.1	0.0
	1.6nm,0.2s,baz=128,slow=15,SNR=42						
KK31				⇓S	Sg	03 57 32.2	-0.1
	3.0nm,0.2s,baz=128,slow=28,SNR=9.0						
USP	Ospenovka	2.09	51	⇑iP	Pg	03 57 17.1	-0.4
	baz=51						
USP				⇑iS	Sg	03 57 45.3	+0.7
	baz=51						
CHMS	Chumysh	2.10	60	⇑iP	Pg	03 57 17.1	-0.6
	baz=60						
CHMS				⇑iS	Sg	03 57 45.3	+0.4
	baz=60						
KBK	Karagaybulak	2.10	71	⇓iP	Pg	03 57 17.1	-0.6
	baz=70						
KBK				⇓iS	Sg	03 57 45.3	+0.3
	baz=70						
SFK	Sufi-Kurgan	2.18	154	⇑iP	Pb	03 57 17.6	+0.3
	baz=53						
SFK				⇑iS	Sb	03 57 46.1	+1.4
	baz=53						
BTK	Batken	2.21	210	⇓iP	Pb	03 57 17.8	+0.1
	baz=10.0						
BTK				⇓iS	Sg	03 57 47.1	-1.4
	baz=10.0						
DRK	Karamyk	2.53	188	⇓iP	Pb	03 57 21.6	-1.6
	baz=88						
DRK				⇓iS	Sb	03 57 53.7	-0.9
	baz=88						
TKM2	Tokmak 2	2.64	68	⇓eP	Pb	03 57 24.5	-0.6
	baz=68						
TKM2				⇓iS	Sb	03 57 58.3	+0.5
	baz=68						
TKM2	Tokmak 2	2.64	68	⇓Pg	Pg	03 57 27.5	-0.4
	6.5nm,1.1s						
TKM2				⇓Lg	Lg	03 58 02.7	
	11nm,0.6s						
BOOM	Boomskoye usch	2.78	78	⇓iP	Pb	03 57 26.8	-0.7
	baz=78						
BOOM				⇓iS	Sb	03 58 01.8	0.0
	baz=78						
DGS	Degeres	2.88	63	eP	Pg	03 57 31.4	-1.2
	4.0nm,0.4s						
DGS				eS	Sg	03 58 09.2	-0.7
	13nm,0.5s						
DGS	Degeres	2.88	63	Pg	Pg	03 57 31.4	-1.2
	4.0nm,0.4s						
DGS				Lg	Lg	03 58 09.2	
	13nm,0.5s						
KST	Kastek	2.94	68	eP	Pg	03 57 33.0	-0.6
	3.2nm,0.4s						
KST				eS	Sg	03 58 11.9	+0.3
	22nm,0.4s						
KST	Kastek	2.94	68	Pg	Pg	03 57 33.0	-0.6
	3.2nm,0.4s						
KST				Lg	Lg	03 58 11.9	
	22nm,0.7s						
ULHL	Ulahol	2.97	84	⇑iP	Pb	03 57 29.3	-1.5
	baz=83						
ULHL				⇑iS	Sb	03 58 06.3	-1.1
	baz=83						
BTLS	Baital	3.32	22	eP	Pg	03 57 40.9	-0.1
	1.2nm,0.2s						
BTLS				eS	Sg	03 58 25.6	+1.6
	3.2nm,0.2s						
BTLS	Baital	3.32	22	Pg	Pg	03 57 38.9	-2.1
	1.3nm,0.3s						
BTLS				Lg	Lg	03 58 22.3	
	3.3nm,0.3s						
TNSS	Tian-Shan	3.62	72	eP	Pg	03 57 45.3	-1.5
	2.8nm,0.6s						
TNSS				eS	Sg	03 58 33.3	-0.4
	3.2nm,0.5s						
TNSS	Tian-Shan	3.62	72	Pg	Pg	03 57 46.1	-0.7
	2.9nm,1.1s						
TNSS				Lg	Lg	03 58 34.2	
	3.1nm,0.5s						
KTBS	Karatobe	3.68	61	eP	Pg	03 57 46.0	-1.9
	1.4nm,0.8s						
KTBS				eS	Sg	03 58 34.1	-1.5
	10nm,0.5s						
KTBS	Karatobe	3.68	61	Pg	Pg	03 57 46.0	-1.9
	1.4nm,0.8s						
KTBS				Lg	Lg	03 58 34.1	
	10nm,0.5s						
MDOK	Medeo	3.73	70	eP	Pg	03 57 47.4	-1.4
	3.4nm,0.4s						
MDOK				eS	Sg	03 58 37.0	-0.1
	4.7nm,0.5s						
MDOK	Medeo	3.73	70	Pg	Pg	03 57 48.6	-0.2
	3.4nm,0.7s						
MDOK				Lg	Lg	03 58 38.4	
	4.7nm,0.5s						

*IDC **22** 04:00:23.5±1.1, 30.°63N×131.°16E, h0km, mb3.7/11, mb1 3.7/14, mb1mx3.6/48, mbtmp3.7/14, ML2.8/3, MS2.9/6, Ms1 3.0/6, ms1mx2.7/52, Error ellipse: s-maj=36.7km s-min=19.8km az=78.0*
*JMA **22** 04:00:27.2±0.1, 30.°63N×131.°56E, h40km±2km, M3.6*
*NIED **22** 04:00:27.2, 30.°63N×131.°56E, h40km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}0.22; $M_{\theta\theta}$0.17; $M_{\phi\phi}$-0.39; $M_{r\theta}$-0.01; $M_{\theta\phi}$-0.41; $M_{\phi r}$-1.06; Fault plane solution: $M_0$1.17000×10¹⁵ NP1: ϕ_s179.00000°, δ83.00000°, λ69.00000°. NP2:ϕ_s70.00000°, δ22.00000°, λ160.00000°.*

ISC 22 04:00:27.8±1.6, 30.°69N±0.°05×131.°45E±0.°07, h31km±10km, n34, σ1§04/37, mb3.6/11, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTN	Tanegashima 3	0.41	265	P	Pn	04 00 37.5	0.0
JTN				eS	Sn	04 00 45.6	+1.6
JMTN	Minamitane	0.56	238	P	Pn	04 00 39.6	0.0
JMTN				eS	Sn	04 00 49.4	+1.6
JTSR	Tashiro 2	0.65	316	P	Pn	04 00 41.4	+0.4
JTSR				eS	Sn	04 00 52.1	+1.9
JNAR	Kushima--Naru	0.84	350	P	Pb	04 00 44.3	+0.3
JNAR				eS	Sn	04 00 56.6	+1.7
JYAK	Yakushimahirau	0.93	241	P	Pn	04 00 44.7	0.0
JYAK				eS	Sb	04 00 58.3	+0.9
JNKG	Nichinankitago	0.97	356	P	Pb	04 00 45.9	-0.2
JNKG				eS	Sb	04 01 00.0	+1.4
JKC	Kuchinoerabu	1.10	258	P	Pb	04 00 47.6	-0.8
JSU	Suzuyama	1.18	314	P	Pb	04 00 48.7	-0.9
JSU				eS	Sb	04 01 05.5	+1.0
JTZ	Takazaki	1.24	346	P	Pb	04 00 50.1	-0.6
JTZ				eS	Sb	04 01 06.9	+0.5
JTSN	Tsuno	1.55	2	P	Pn	04 00 53.6	+0.4
JTSN				S	Sb	04 01 13.6	-1.5
JNN	Nakanoshima	1.60	238	P	Pn	04 00 54.4	+0.4
JZO	Okuchi	1.61	334	P	Pb	04 00 55.2	-1.8
JZO				eS	Sb	04 01 16.3	-0.8
JNU	Nakatsue	2.47	349	Pn	Pn	04 01 07.3	+1.4
	1.9nm,0.3s,baz=353,slow=22,SNR=16						
JNU				Sn	Sn	04 01 34.3	-0.8
	10nm,0.3s,baz=54,slow=3.7,SNR=6.4						
KSRS	Korea Array	7.35	338	LR	LR	04 05 24.3	
	comp=Z,90nm,18.0s,baz=171,slow=41						
JHJ	Hachijo jima 2	7.49	69	LR	LR	04 05 14.2	
	comp=Z,74nm,18.4s,baz=262,slow=37						
MJAR	Matsushiro Arr	8.11	42	Pn	Pn	04 02 24.0	+0.6
	0.3nm,0.3s,baz=244,slow=14,SNR=11						
MJAR				LR	LR	04 05 42.9	
	comp=Z,45nm,18.3s,baz=235,slow=38						
ASAJ	Asahikawa	16.04	30	LR	LR	04 10 37.4	
	comp=Z,56nm,19.1s,baz=112,slow=38						
KLR	Kul'dur	18.52	1	P	Pn	04 04 42.8	+1.0
	0.1nm,0.3s,baz=172,slow=14,SNR=1.9						
SONM	Songino Array	25.70	319	P	P	04 05 54.7	-0.5
	0.5nm,0.5s,baz=135,slow=9.8,SNR=3.9						
PETK	Petropavlovsk-	29.43	33	LR	LR	04 18 02.0	
	comp=Z,26nm,21.6s,baz=332,slow=36						
CMAR	Chiang Mai Arr	31.85	255	LR	LR	04 21 34.2	
	comp=Z,25nm,18.1s,baz=174,slow=40						
H11N2	WAKE ISLAND Hy	33.75	100	T	T	04 42 55.8	
	baz=296,slow=75,SNR=7.8						
H11N1	WAKE ISLAND Hy	33.75	100	T	T	04 42 55.8	
	baz=296,slow=75,SNR=5.3						
H11N3	WAKE ISLAND Hy	33.77	100	T	T	04 42 55.8	
	baz=296,slow=75,SNR=5.7						
MKAR	Makanchi Array	40.88	307	P	P	04 08 05.2	-1.7
	0.4nm,0.7s,baz=77,slow=13,SNR=2.6						
KURBB	Kurchatov Arra	43.75	313	P	P	04 08 28.3	-1.9
	0.4nm,0.4s,baz=103,slow=9.1,SNR=4.1						
BVAR	Borovoye Array	48.96	316	P	P	04 09 10.3	-0.8
	1.1nm,0.6s,baz=55,slow=18,SNR=4.0						
WRA	Warramunga Arr	50.42	176	P	P	04 09 22.7	+0.2
	0.6nm,0.9s,baz=354,slow=8.1,SNR=3.9						
ASAR	Alice Springs	54.10	177	P	P	04 09 49.9	+0.1
	0.1nm,0.3s,baz=246,slow=29,SNR=2.3						
FINES	FINESS Array B	70.38	331	P	P	04 11 38.5	+0.1
	1.0nm,0.5s,baz=69,slow=3.3,SNR=8.4						
AKASG	Malin Array Be	73.98	320	P	P	04 12 00.1	0.0
	0.6nm,0.4s,baz=56,slow=6.7,SNR=3.1						
HFS	Hagfors	76.18	333	P	P	04 12 12.9	+0.3
	1.3nm,0.8s,baz=297,slow=4.3,SNR=2.0						
BRTR	Keskin Array B	76.52	308	P	P	04 12 15.5	+0.4
	0.9nm,0.7s,baz=142,slow=41,SNR=2.5						
NOA	NORSAR Array B	76.55	334	P	P	04 12 14.8	0.0
	0.4nm,0.6s,baz=122,slow=11,SNR=2.1						

*BJI **22** 04:18:39.0±0.0, 17.°70S×168.°30E, h62km, mB5.1/46, mb5.2/62, Ms4.9/39, Ms7 4.6/39*
*MOS **22** 04:18:40.9±0.9, 17.°56S×168.°09E, h67km, mb5.5/26, MS4.4/4, Error ellipse: s-maj=9.5km s-min=7.0km az=124.4*
*NEIC **22** 04:18:40.9±1.5, 17.°67S±0.°06×168.°26E±0.°09, h64km±1km, mb5.2/147, Error ellipse: s-maj=12.4km s-min=8.4km az=84.0*
*IDC **22** 04:18:41.3±1.3, 17.°66S×168.°22E, h64km±10km, mb4.7/30, mb1 4.8/31, mb1mx4.7/43, mbtmp5.0/31, MS4.2/24, Ms1 4.2/24, ms1mx4.1/33, Error ellipse: s-maj=14.6km s-min=10.1km az=86.0*
*GCMT **22** 04:18:43.9±0.1, 17.°68S±0.°01×167.°98E±0.°01, h74km±1km, MW5.3/138, Moment Tensor Solution. s115,c199; s138,c251; Duration: 1§2 Moment tensor: Scale 10¹⁷ Nm; M_{rr}-0.09±.02; $M_{\theta\theta}$-0.11±.02; $M_{\phi\phi}$0.19±.02; $M_{r\theta}$-0.92±.01; $M_{\theta\phi}$0.93±.02; $M_{\phi r}$-0.07±.01; Best double couple: $M_0$1.32100×10¹⁷ NP1:ϕ_s176.00000°, δ46.00000°, λ-176.00000°. NP2:ϕ_s84.00000°, δ87.00000°, λ-44.00000°. Principal axes: T 1.3320, Plg28.0000°, Azm139.0000°; N -0.0220, Plg45.0000°, Azm261.0000°; P -1.3110, Plg32.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 04:18:39.6±0.3, 17.°70S±0.°04×168.°27E±0.°05, h50km, n501, σ1§41/474, mb5.2/121, MS4.4/39, 35C-20D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	Saraoutou	2.46	335	Pn	Pn	04 19 17.9	+0.7
SANVU				Sn	Sn	04 19 46.5	+0.5
I22FR	PORTLAGUERRE I	4.66	196	i		04 46 40.0	
	baz=14,slow=317,SNR=0.8						
DZM	Mont Dzumac	4.68	201	ePn	Pn	04 19 48.3	+0.5
	1μm,0.3s						
DZM				eSn	Sn	04 20 38.9	-2.0
	3μm,0.3s						
DZM				eLR	LR	04 20 51.7	
	comp=Z,14μm,28.1s						
DZM	Mont Dzumac	4.68	201	P	Pn	04 19 48.9	+1.1
	278nm,0.3s,baz=36,slow=6.5,SNR=1229						
DZM				S	Sn	04 20 38.3	-2.6
	780nm,0.3s,baz=153,slow=20,SNR=17						
DZM	Mont Dzumac	4.68	201	Pn	Pn	04 19 49.1	+1.3
MSVF	Nonsavu	9.32	92	i P	Pn	04 20 58.4	+6.9
NFK	Norfolk Island	11.30	181	P	Pn	04 21 20.7	+2.3
	baz=11,SNR=7.0						
HNR	Honiara	11.52	314	P	Pn	04 21 24.2	+2.7
	79nm,0.3s,baz=182,slow=1.4,SNR=44						
HNR	Honiara	11.52	314	Pn	Pn	04 21 23.1	+1.5
FUNA	Funafuti	14.01	51	Pn	Pn	04 21 56.0	+0.6
LHI	Lord Howe Isla	16.09	210	Pn	Pn	04 22 22.2	-0.3
LHI				IAmb	IAmb	04 22 36.1	
	comp=Z,290nm,1.2s						
RAO	Raoul Island	17.10	135	P	Pn	04 22 34.9	-0.2
RAO				pmax	pmax		
	comp=Z,227nm,0.7s						
RAO	Raoul Island	17.10	135	Pn	Pn	04 22 34.9	-0.2
EIDS	Eidsvold	17.70	242		Pn	04 22 41.7	-0.9
OUZ	Omahuta	18.09	166		P	04 22 47.6	+0.5
OUZ				IAmb	IAmb	04 22 53.0	
	comp=Z,200nm,0.9s						
TARA	Tarawa	19.48	14	P	P	04 23 01.9	-0.5
AFI	Afiamalu	19.57	82	LR	LR	04 29 30.2	
	comp=Z,362nm,20.9s,baz=186,slow=33						
AFI	Afiamalu	19.57	82	P	P	04 23 03.8	+0.2
AFI				pmax	pmax		
	comp=Z,185nm,1.5s						
AFI	Afiamalu	19.57	82	P	P	04 23 03.8	+0.2
AFI				IAmb	IAmb	04 23 34.4	
	comp=Z,185nm,1.4s						
ARMA	Armidale	19.75	227	P	P	04 23 05.3	-0.2
	baz=20,SNR=6.7						
ARMA	Armidale	19.75	227	P	P	04 23 07.0	+1.5
ARMA				IAmb	IAmb	04 23 18.6	
	comp=Z,75nm,0.8s						
RMQ	Roma	20.06	241	P	P	04 23 08.5	-0.4
	baz=20,SNR=23						
RABL	Rabaul	20.71	309	P	P	04 23 16.4	+0.5
CTA	Charters Tower	20.96	260	P	P	04 23 19.9	+1.3
	comp=Z,

QIS **Mount Isa** 27.21 259 P **P** 04 24 18.5 -0.5
baz=27,SNR=3.5
STKA **Stephens Creek** 27.93 235 P **P** 04 24 26.1 +0.8
comp=Z,16nm,1.0s,baz=51,slow=8.2,SNR=19
STKA ScP **ScP** 04 31 15.8 -0.8
comp=Z,5.1nm,0.9s,baz=35,slow=2.4,SNR=5.6
STKA **Stephens Creek** 27.93 235 P **P** 04 24 26.1 +0.8
baz=28,SNR=13
STKA **Stephens Creek** 27.93 235 P **P** 04 24 25.8 +0.6
TOO **Toolangi** 28.14 221 P **P** 04 24 28.2 +1.1
baz=28,SNR=6.7
TOO **Toolangi** 28.14 221 P **P** 04 24 27.6 +0.5
TOO pmax pmax
comp=Z,78nm,1.4s
TOO **Toolangi** 28.14 221 P **P** 04 24 27.6 +0.5
TOO IAmb IAmb 04 24 52.8
comp=Z,78nm,1.4s
ARPS **Mount Arapiles** 30.06 226 P **P** 04 24 45.2 +1.1
baz=30,SNR=5.0
MOO **Moorlands** 30.51 212 P **P** 04 24 50.0 +2.0
baz=30,SNR=4.3
HTT **Hallett** 30.62 234 P **P** 04 24 49.9 +0.7
baz=30,SNR=5.3
WB0 **Warramunga Arr** 32.12 261 P **P** 04 25 01.8 -0.6
WRAB **Tennant Creek** 32.15 261 *ce*P **P** 04 25 02.5 -0.2
WRAB pmax pmax
comp=Z,22nm,2.5s
WRAB **Tennant Creek** 32.15 261 P **P** 04 25 02.8 0.0
WRA **Warramunga Arr** 32.16 261 P **P** 04 25 01.6 -1.2
comp=Z,1.9nm,0.5s,baz=80,slow=6.0,SNR=32
WRA ScP **ScP** 04 31 29.2 -1.4
comp=Z,8.6nm,1.1s,baz=88,slow=3.4,SNR=16
WRA LR LR 04 36 17.6
comp=Z,422nm,20.7s,baz=80,slow=33
WRA **Warramunga Arr** 32.16 261 *ce*P **P** 04 25 02.2 -0.6
WRA pmax pmax
comp=Z,2.0nm,0.4s
WRA **Warramunga Arr** 32.16 261 P **P** 04 25 01.5 -1.3
WRA **ScP** 04 31 29.3 -1.4
BBOO **Buckleboo** 32.63 236 P **P** 04 25 07.1 +0.3
baz=32,SNR=8.8
BBOO **Buckleboo** 32.63 236 P **P** 04 25 06.8 0.0
BBOO IAmb IAmb 04 25 29.2
comp=Z,24nm,0.8s
AS31 **Alice Springs** 32.64 254 P **P** 04 25 06.5 -0.5
ASAR **Alice Springs** 32.64 254 P **P** 04 25 06.5 -0.6
comp=Z,12nm,0.7s,baz=81,slow=8.9,SNR=174
ASAR ScP **ScP** 04 31 30.6 -1.6
comp=Z,5.2nm,1.0s,baz=100,slow=3.6,SNR=14
ASAR LR LR 04 36 49.4
comp=Z,572nm,21.2s,baz=84,slow=33
ASAR **Alice Springs** 32.64 254 P **P** 04 25 06.2 -0.8
KDU **Kakadu** 34.86 273 P **P** 04 25 25.6 -0.8
baz=35,SNR=4.0
MTN **Manton Dam** 36.10 272 P **P** 04 25 36.7 -0.3
baz=36,SNR=4.9
MTN **Manton Dam** 36.10 272 P **P** 04 25 36.0 -1.1
MTN IAmb IAmb 04 26 17.1
comp=Z,14nm,0.6s
WRKA **Warakurna** 37.83 252 P **P** 04 25 51.2 -0.5
baz=38,SNR=13
KNRA **Kununurra** 37.85 267 P **P** 04 25 51.1 -0.7
baz=38,SNR=8.8
KNRA **Kununurra** 37.85 267 P **P** 04 25 51.3 -0.5
FAKI **Fak Fak** 38.25 288 P **P** 04 25 54.4 -0.8
FAKI IAmb IAmb 04 25 55.4
comp=Z,46nm,1.0s
FORT **Forrest** 38.70 243 P **P** 04 25 59.0 +0.2
baz=38,SNR=16
FORT **Forrest** 38.70 243 P **P** 04 25 58.6 -0.2
GUMO **Guam** 38.72 322 LR LR 04 40 37.3
comp=Z,346nm,21.9s,baz=126,slow=34
TBI **Tubuai** 39.88 105 *e*S **S** 04 32 12.7 +2.4
comp=Z,302nm,36.8s
TBI *e*LQ LQ 04 35 32.0
comp=Z,2µm,31.2s
TBI *e*LR LR 04 37 12.4
comp=Z,791nm,28.5s,baz=272
PPT2 **Papeete2** 40.11 96 *e*S **S** 04 32 17.7 +3.7
comp=Z,315nm,28.6s
PPT2 *e*LQ LQ 04 35 40.7
comp=Z,2µm,31.8s
PPT2 *e*LR LR 04 37 22.5
comp=Z,799nm,29.0s
PPT **Papeete** 40.12 96 LR LR 04 38 39.2
comp=Z,368nm,20.0s,baz=260,slow=30
FITZ **Fitzroy Crossi** 40.50 263 LR LR 04 41 48.6
comp=Z,262nm,21.1s,baz=92,slow=34
FITZ **Fitzroy Crossi** 40.50 263 P **P** 04 26 14.0 0.0
baz=40,SNR=40
FITZ **Fitzroy Crossi** 40.50 263 P **P** 04 26 13.4 -0.6
NLAI **Namlea** 42.82 285 P **P** 04 26 34.4 +1.4
comp=Z,1µmcomp=Z,44nm,1.3s
SOEI **Soe** 43.38 274 P **P** 04 26 39.4 +1.7
comp=Z,46nm,1.0s
SOEI **Soe** 43.38 274 P **P** 04 26 37.5 -0.2
SOEI IAmb IAmb 04 27 03.8
comp=Z,38nm,0.9s
BATI **Baumata** 43.84 274 LR LR 04 44 35.6
comp=Z,365nm,19.5s,baz=77,slow=36
KMBL **Kambalda** 44.03 243 P **P** 04 26 42.9 +0.3
baz=44,SNR=5.6
MBWA **Marble Bar** 45.77 257 P **P** 04 26 57.1 +0.6
EDFI **Ende, Flores** 46.10 275 P **P** 04 26 59.0 -0.3
comp=Z,213nmcomp=Z,9.8nm,1.0s
KLBR **Kellerberrin** 47.56 243 P **P** 04 27 09.8 -0.7
baz=47,SNR=5.3
WBSI **Waikabubak, Su** 48.05 273 P **P** 04 27 13.5 -1.0
comp=Z,50nm,0.9s
NWAO **Narrogin (SRO)** 48.12 241 P **P** 04 27 13.5 -1.2
comp=Z,34nm,0.8s,baz=78,slow=8.0,SNR=12
NWAO **Narrogin (SRO)** 48.12 241 P **P** 04 27 14.5 -0.2
baz=48,SNR=9.0
NWAO **Narrogin (SRO)** 48.12 241 P **P** 04 27 14.0 -0.7
NWAO pmax pmax
comp=Z,37nm,0.9s
NWAO **Narrogin (SRO)** 48.12 241 P **P** 04 27 14.0 -0.7
APSI **Ampana** 48.74 285 P **P** 04 27 17.2 -2.5
comp=Z,484nmcomp=Z,48nm,1.0s
MORW **Morawa** 48.91 247 P **P** 04 27 20.7 -0.2
baz=49,SNR=6.0
MORW **Morawa** 48.91 247 P **P** 04 27 20.3 -0.6
MORW IAmb IAmb 04 27 55.5
comp=Z,21nm,0.8s
BNSI **Bone** 48.92 280 P **P** 04 27 22.2 +1.1
comp=Z,42nm,1.2s
KAPI **Kappang** 49.06 279 P **P** 04 27 22.3 +0.2
KAPI pmax pmax
comp=Z,33nm,0.9s
KAPI **Kappang** 49.06 279 P **P** 04 27 22.3 +0.2
KAPI IAmb IAmb 04 27 43.0
comp=Z,33nm,0.9s
TOLI2 **Tolitoli** 50.34 287 P **P** 04 27 31.3 -0.6
TOLI2 IAmb IAmb 04 27 32.2
comp=Z,33nm,1.2s
MPSI **Mapaga** 50.84 285 P **P** 04 27 35.5 -0.2
comp=Z,471nmcomp=Z,49nm,0.9s
JCJ **Chichijima** 51.21 330 P **P** 04 27 37.6 -0.6
MYLDM **Lahad Datu** 54.12 290 P **P** 04 28 01.2 +1.3
BBKI **Banjar Baru** 54.19 279 P **P** 04 28 00.3 -0.2
TGY **Tagaytay City** 56.38 301 P **P** 04 28 16.1 -0.1
comp=Z,92nm,0.3s,baz=189,slow=3.7,SNR=5.4
TGY LR LR 04 47 39.0
comp=Z,117nm,22.0s,baz=157,slow=31
JHJ **Hachijo jima 2** 57.39 332 LR LR 04 49 13.1
comp=Z,160nm,20.5s,baz=126,slow=32
SBUM **Sibu** 58.73 284 P **P** 04 28 32.3 -0.5
SBUM **Sibu** 58.73 284 P **P** 04 28 34.0 +1.2
VNDA **Vanda** 59.94 182 P **P** 04 28 40.6 +0.4
comp=Z,12nm,1.1s,baz=359,slow=7.2,SNR=28
VNDA LR LR 04 51 28.0
comp=Z,196nm,21.9s,baz=11,slow=33
VNDA **Vanda** 59.94 182 P **P** 04 28 40.5 +0.4
VNDA pmax pmax
comp=Z,76nm,1.8s
VNDA **Vanda** 59.94 182 P **P** 04 28 40.5 +0.3
KSM **Kuching** 60.14 282 P **P** 04 28 42.0 -0.6
KSM **Kuching** 60.14 282 P **P** 04 28 43.0 +0.4
JGF **Kuroka** 60.56 331 IAmb IAmb 04 28 46.4
comp=Z,15nm,0.9s
JMN **Monobe** 60.75 327 P **P** 04 28 46.1 -0.2
MJAR **Matsushiro Arr** 60.96 333 P **P** 04 28 46.5 -1.2
comp=Z,22nm,1.0s,baz=165,slow=7.4,SNR=36
MJAR LR LR 04 51 08.7
comp=Z,70nm,21.1s,baz=205,slow=32
MJAR **Matsushiro Arr** 60.96 333 P **P** 04 28 46.8 -0.9
comp=Z,11nm,1.0s
MJAR **Matsushiro Arr** 60.96 333 P **P** 04 28 46.8 -0.9
MAJO **Matsushiro** 60.97 333 P **P** 04 28 47.0 -0.7
MAJO pmax pmax
comp=Z,40nm,1.1s
MAJO **Matsushiro** 60.97 333 P **P** 04 28 47.0 -0.7
MAT **Matsushiro** 60.97 333 P **P** 04 28 46.5 -1.2
MAT S **S** 04 36 59.2 -3.3
JMM **Marumori** 61.01 335 IAmb IAmb 04 28 48.5
comp=Z,23nm,1.0s
CASY **Casey** 61.17 203 P **P** 04 28 48.9 +0.2
JWT **Wachi** 61.23 330 IAmb IAmb 04 28 50.6
comp=Z,28nm,1.0s
JNU **Nakatsue** 61.88 325 P **P** 04 28 53.3 -0.7
comp=Z,26nm,1.1s,baz=7.5,slow=4.8,SNR=4.4
YHNB **Yeheng** 62.14 311 P **P** 04 28 55.4 -0.6
YUK **Yuzh-Kuril'sk** 64.76 342 *e*P **P** 04 29 11.9 -0.8
YUK *e*S **S** 04 37 49.3 -0.3
JKA **Kamikawa-asahi** 65.84 340 IAmb IAmb 04 29 21.2
comp=Z,29nm,1.0s
ASAJ **Asahikawa** 65.84 340 P **P** 04 29 20.0 +0.2
comp=Z,20nm,0.8s,baz=220,slow=10,SNR=11
ASAJ LR LR 04 53 30.7
comp=Z,754nm,21.8s,baz=163,slow=32
ASAJ **Asahikawa** 65.84 340 P **P** 04 29 20.0 +0.2
TJN **Taejon** 66.23 325 *ce*P **P** 04 29 21.8 -0.6
MYKOM **Kota Tinggi** 66.29 280 P **P** 04 29 25.0 +1.7
KSRS **Korea Array** 66.72 326 P **P** 04 29 25.8 +0.3
comp=Z,5.5nm,0.8s,baz=145,slow=6.6,SNR=17
KSRS LR LR 04 58 40.4
comp=Z,82nm,18.6s,baz=152,slow=36
KSAR **Wonju Array Be** 66.73 326 P **P** 04 29 25.2 -0.4
KSAR **Wonju Array Be** 66.73 326 P **P** 04 29 25.2 -0.4
KS19 **Wonju Array Si** 66.78 326 IAmb IAmb 04 29 59.3
comp=Z,41nm,1.6s
INCN **Inchon** 67.44 325 P **P** 04 29 30.1 0.0
INCN pmax pmax
comp=Z,123nm,1.5s
INCN **Inchon** 67.44 325 P **P** 04 29 30.1 0.0
SDSI **Sungai Dareh** 67.68 276 P **P** 04 29 30.6 -1.6
comp=Z,18µmcomp=Z,10nm,1.2s
QIZ **Qiongzhong** 68.02 300 P **P** 04 29 33.5 -0.6
QIZ LR LR
comp=Z,120nm,7.0s
QIZ LR LR
comp=Z,130nm,6.4s
QIZ LR LR
comp=Z,140nm,21.1s
YSS **Yuzh-Sakhalins** 68.33 341 ||*i*P **P** 04 29 36.5 +1.0
YSS *e* 04 29 57.4
YSS *e*S **S** 04 38 32.1 -0.6
YSS pmax pmax
comp=Z,40nm,1.2s
YSS smax smax
comp=E,100nm,9.9s
YSS MLR MLR
comp=Z,200nm,19.0s
YSS MLR MLR
comp=N,200nm,15.0s
YSS MLR MLR
comp=E,100nm,15.0s
YSS **Yuzh-Sakhalins** 68.33 341 P **P** 04 29 35.8 +0.3
BKNI **Bangkinang** 68.45 278 P **P** 04 29 36.2 -0.8
NJ2 **Nanjing** 68.46 316 *e*P **P** 04 29 37.4 +0.8
NJ2 pmax pmax
comp=E,14nm,0.5s
SKR **Severo-Kuril's** 68.92 352 *e*P P 04 29 51.6 +13
SKR *e*S SKiKP 04 39 07.9 -18
SKR MLR MLR
comp=Z,100nm,16.0s
IPM **Ipoh** 69.86 282 P **P** 04 29 45.4 -0.4
IPM IAmb IAmb 04 29 46.4
comp=Z,19nm,0.8s
USA0B **Ussuriysk Arra** 69.95 333 *d*/*i*P **P** 04 29 45.7 +0.1
USA0B **Ussuriysk Arra** 69.95 333 P **P** 04 29 46.2 +0.7
USA0B IAmb IAmb 04 29 48.5
comp=Z,60nm,1.4s
USRK **Ussuriysk Ar.** 69.95 333 P **P** 04 29 46.0 +0.4
comp=Z,10nm,0.8s,baz=126,slow=4.9,SNR=22
USRK **Ussuriysk Ar.** 69.95 333 P **P** 04 29 46.0 +0.4
MNSI **Mandailing Nat** 69.98 278 P **P** 04 29 46.2 -0.3
comp=Z,2µmcomp=Z,44nm,0.9s
WHN **Wuhan** 70.63 312 P **P** 04 29 49.8 -0.3
PET **Petropavlovsk** 70.91 354 *e*P P 04 29 57.3 +6.1
PET *e*'PP **PcP** 04 30 15.0 +3.5
PET *e*S **S** 04 39 02.1 -0.7
PET *e*SS **SS** 04 43 29.5 -7.4
PET pmax pmax
comp=Z,50nm,1.3s
PEA0B **Petropavlovsk-** 71.10 353 *ce*P **P** 04 29 52.5 +0.1
PETK **Petropavlovsk-** 71.10 353 P **P** 04 29 52.5 +0.1
comp=Z,11nm,0.9s,baz=148,slow=8.6,SNR=13
PETK LR LR 04 56 29.2
comp=Z,302nm,21.1s,baz=173,slow=32
PETK **Petropavlovsk-** 71.10 353 P **P** 04 29 52.4 0.0
RPSI **Rantau Prapat** 71.23 279 P **P** 04 29 53.2 -0.8
DL2 **Dalian** 71.23 323 P **P** 04 29 53.8 +0.3
DL2 pP **PcP** 04 30 14.3 +1.1
DL2 S **S** 04 39 05.3 -1.8
DL2 pmax pmax
comp=Z,110nm,0.9s
DL2 pmax pmax
comp=Z,230nm,5.8s
DL2 LR LR
comp=Z,310nm,19.6s
DL2 LR LR
comp=Z,260nm,23.7s
DL2 LR LR
comp=Z,520nm,30.2s
PSI **Prapat** 71.26 279 P **P** 04 29 53.3 -1.1
comp=Z,6.3nm,0.4s,baz=172,slow=0.3,SNR=8.6
MDJ **Mudanjiang** 71.33 332 P **P** 04 29 54.6 +0.6
MDJ pP pP 04 30 10.8 +2.6
MDJ sP sP 04 30 18.4 +4.6
MDJ PP **PP** 04 32 34.9 +1.9
MDJ S **S** 04 39 09.3 +1.2
MDJ SS **SS** 04 43 47.1 +3.4
MDJ pmax pmax
comp=Z,34nm,0.6s
MDJ pmax pmax
comp=Z,260nm,3.9s
MDJ LR LR
comp=Z,180nm,6.8s
MDJ LR LR
comp=Z,280nm,8.8s
MDJ LR LR
comp=Z,430nm,26.1s
MDJ **Mudanjiang** 71.33 332 P **P** 04 29 54.0 0.0
TYV **Tymovskoe** 71.88 343 *e*P P 04 30 12.7 +16
TYV pmax pmax
comp=Z,200nm,3.5s
TYV pmax pmax
comp=Z,19nm,1.3s
GSI **Gunungsitoli** 72.04 277 P **P** 04 29 59.7 +0.7
comp=Z,8µmcomp=Z,44nm,1.6s
GSI **Gunungsitoli** 72.04 277 P **P** 04 29 58.2 -0.8
GSI IAmb IAmb 04 30 00.4
comp=Z,48nm,1.0s
QSPA **South Pole Qui** 72.35 180 P **P** 04 30 00.4 +0.3
comp=Z,89nm,1.0s,baz=18,slow=1.8,SNR=186
QSPA **South Pole Qui** 72.35 180 P **P** 04 30 00.4 +0.3
CN2 **Changchun** 72.67 329 *e*P **P** 04 30 01.9 -0.1
CN2 sP sP 04 30 24.4 +2.5
CN2 PP **PP** 04 32 49.4 +4.9
CN2 *e*S **S** 04 39 19.5 -3.9
CN2 pmax pmax
comp=Z,50nm,0.8s
NONG **Nongkai** 73.24 296 P **P** 04 30 06.0 +0.1
CHAI **Chaiyaphum** 73.34 293 P **P** 04 30 07.4 +0.8
GRNR **Gornyy** 73.69 340 ||*i*P **P** 04 30 09.2 +1.3
GRNR pmax pmax
comp=Z,20nm,1.2s
KLR **Kul'dur** 74.09 336 P **P** 04 30 10.9 +0.6
comp=Z,18nm,1.0s,baz=127,slow=3.6,SNR=44
KLR **Kul'dur** 74.09 336 *ce*P **P** 04 30 10.6 +0.3
KLR pmax pmax
comp=Z,46nm,1.2s
BJT **Baijiatuau** 75.15 321 P **P** 04 30 16.7 0.0
BJT pmax pmax
comp=Z,63nm,1.2s
BJT **Baijiatuau** 75.15 321 P **P** 04 30 16.6 0.0
BJI **Beijing** 75.16 321 P **P** 04 30 17.0 +0.3
BJI S **S** 04 39 53.8 +2.2
BJI pmax pmax
comp=Z,41nm,1.6s
BJI pmax pmax
comp=Z,250nm,3.5s
BJI LR LR
comp=Z,220nm,15.8s
BJI LR LR
comp=Z,180nm,11.2s
BJI LR LR
comp=Z,740nm,34.0s
UTHA **Uthaitani** 75.44 292 P **P** 04 30 20.0 +1.2
XAN **Xi'an** 76.39 313 P **P** 04 30 23.8 -0.2
XAN pmax pmax
comp=Z,20nm,0.8s
XAN LR LR
comp=Z,160nm,23.9s
XAN LR LR
comp=Z,110nm,24.9s
XAN LR LR
comp=Z,250nm,22.8s
XAN **Xi'an** 76.39 313 P **P** 04 30 23.7 -0.2
XAN pmax pmax
comp=Z,13nm,0.7s
XAN **Xi'an** 76.39 313 P **P** 04 30 23.7 -0.2
KMI **Kunming** 76.68 302 ⇑*e*P **P** 04 30 27.0 +1.0
KMI pP PcP 04 30 38.6 +1.4
KMI sP sP 04 30 44.8 -0.9
KMI pmax pmax
comp=Z,33nm,1.1s
CM31 **Chiang Mai Arr** 77.03 294 P **P** 04 30 28.1 +0.3
CM31 IAmb IAmb 04 30 29.7
comp=Z,26nm,1.2s
CMAR **Chiang Mai Arr** 77.03 294 P **P** 04 30 28.4 +0.6
comp=Z,10.0nm,0.8s,baz=125,slow=4.4,SNR=14
CMAR **Chiang Mai Arr** 77.03 294 *ce*P **P** 04 30 29.1 +1.3
CMAR pmax pmax
comp=Z,11nm,0.8s
CHTO **Chiang Mai** 77.17 295 P **P** 04 30 28.9 +0.3
CHTO pmax pmax
comp=Z,19nm,1.0s
CHTO **Chiang Mai** 77.17 295 P **P** 04 30 28.9 +0.3
HHC **Hu-ho-hao-te** 78.45 320 *e*P **P** 04 30 36.3 +0.9
HHC S **S** 04 40 27.0 -0.8
HHC pmax pmax
comp=Z,45nm,1.2s
HHC pmax pmax
comp=Z,96nm,5.3s
HHC LR LR
comp=Z,230nm,22.4s
HHC LR LR
comp=Z,190nm,20.4s
HHC LR LR
comp=Z,410nm,23.5s
CD2 **Chengdu** 78.57 308 ⇑*i*P **P** 04 30 36.6 +0.4
CD2 PcP **PcP** 04 30 47.6 +2.5
CD2 PP **PP** 04 33 38.9 +4.2
CD2 S **S** 04 40 28.1 -1.2
CD2 sS ScS 04 40 55.9 +2.5
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 pmax pmax
comp=Z,340nm,10.2s
CD2 LR LR
comp=Z,260nm,26.1s
CD2 LR LR
comp=Z,310nm,32.5s
CD2 LR LR
comp=Z,450nm,27.3s
HIA **Hailar** 79.32 330 *d*/*i*P **P** 04 30 40.0 +0.2
HIA pmax pmax
comp=Z,68nm,1.3s
HIA **Hailar** 79.32 330 P **P** 04 30 39.1 -0.7
ZEA **Zeya** 79.38 337 *e*P **P** 04 30 40.8 +0.8
ZEA *e*S **S** 04 40 39.5 +2.6
ZEA pmax pmax
comp=N,30nm,1.0s
ZEA pmax pmax
comp=Z,40nm,0.7s
ZEA smax smax
comp=E,100nm,7.7s
MAW **Mawson** 79.51 202 P **P** 04 30 41.6 +1.0
comp=E,25nm,1.0s,baz=101,slow=7.5,SNR=16
MAW LR LR 04 59 55.5
comp=E,220nm,21.9s,baz=68,slow=31
MAW **Mawson** 79.51 202 P **P** 04 30 42.2 +1.6
baz=79,SNR=9.5
MAW **Mawson** 79.51 202 P **P** 04 30 41.5 +0.8
LZH **Lanzhou** 81.01 312 *e*P **P** 04 30 50.5 +1.0
LZH pP sP 04 31 07.9 -1.3
LZH sP pP 04 31 14.8 +11
LZH S **S** 04 40 54.6 -0.6
LZH sS sS 04 41 25.0 +6.9
LZH pmax pmax
comp=E,36nm,1.3s
LZH pmax pmax
comp=E,97nm,8.1s
LZH LR LR
comp=E,180nm,17.4s
LZH LR LR
comp=E,150nm,18.1s
LZH LR LR
comp=E,140nm,18.9s
SEY **Seymchan** 81.33 353 P **P** 04 30 50.7 +0.4
comp=E,22nm,1.1s,baz=150,slow=7.1,SNR=11
SEY **Seymchan** 81.33 353 *i*P **P** 04 30 50.8 +0.6
SVW2 **Sparrevohn** 83.69 17 IAmb IAmb 04 31 04.0
comp=Z,38nm,1.3s
BELA **Belgrano 2** 83.71 175 P **P** 04 31 01.7 -1.0
CNPM **China Poot** 83.71 19 P **P** 04 31 02.9 +0.1
ULN **Ulaanbaatar** 85.08 324 *ce*P **P** 04 31 10.3 +0.1
ULN pmax pmax
comp=Z,113nm,1.7s
ULN **Ulaanbaatar** 85.08 324 P **P** 04 31 10.5 +0.4
TTA **Tatalina** 85.10 16 P **P** 04 31 09.9 +0.1
TTA pmax pmax
comp=Z,125nm,0.3s
TTA **Tatalina** 85.10 16 P **P** 04 31 09.9 +0.1
YAK **Yakutsk** 85.13 343 LR LR 05 05 33.3
comp=Z,43nm,22.0s,baz=91,slow=33
YAK **Yakutsk** 85.13 343 *e*P **P** 04 31 09.7 -0.1
YAK pmax pmax
comp=Z,75nm,0.9s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK **Yakutsk** 85.13 343 P **P** 04 31 09.8 -0.1
GTA **Gaotai** 85.40 314 ||P **P** 04 31 12.6 +0.6
GTA pP pP 04 31 29.8 +3.5
GTA sP sP 04 31 37.0 +5.2
GTA SKS S 04 41 27.8 -12
GTA S **SKSac** 04 41 35.9 +2.8
GTA sS sS 04 42 02.0 -1.2
GTA pmax pmax
comp=E,44nm,1.1s
GTA pmax pmax
comp=E,66nm,8.2s
GTA LR LR
comp=E,98nm,21.8s
GTA LR LR
comp=E,170nm,22.9s
GTA LR LR
comp=E,230nm,21.1s
SONM **Songino Array** 85.44 323 P **P** 04 31 12.0 +0.1
comp=E,24nm,0.9s,baz=140,slow=5.4,SNR=103
SONM **Songino Array** 85.44 323 P **P** 04 31 11.2 -0.8
BILL **Bilibino** 85.50 359 ||*i*P **P** 04 31 11.7 +0.1
BILL *e* 04 34 29.7
BILL *e*S S 04 41 26.2 -13
BILL pmax pmax
comp=Z,90nm,1.8s
SHL **Shillong** 85.81 298 IAmb IAmb 04 31 39.9
comp=Z,25nm,1.0s
SYO **Syowa Base** 86.15 196 ||*i*P **P** 04 31 13.6 -1.4
SYO **Syowa Base** 86.15 196 ||*i*PcP **P** 04 31 15.6 +0.6
N02D **Trinity Center** 86.50 45 P **P** 04 31 18.6 +1.3
baz=243
M02C **Callahan** 86.59 45 P **P** 04 31 19.2 +1.5
baz=243
ARVC **Arvin** 86.75 52 P **P** 04 31 20.0 +1.4
baz=246
AFDM **Forest Hills D** 86.80 48 P **P** 04 31 19.2 +0.5
AFDM IAmb IAmb 04 31 20.2
comp=Z,12nm,0.9s
O03E **Paynes Creek** 86.81 46 P **P** 04 31 19.0 +0.2
baz=244
CMB **Columbia Colle** 86.83 49 IAmb IAmb 04 31 20.4

	comp=Z,14nm,0.9s								
VES	**Vestal, Richgr**	**86.86**	**51**	P	**P**	**04 31 19.5**	**+0.4**		
	baz=246								
KTH	**Kantishna Hill**	**86.97**	**17**	IAmb	IAmb	04 31 17.9			
	comp=Z,16nm,1.0s								
TRF	**Thorofare Moun**	**87.06**	**17**	IAmb	IAmb	04 31 19.5			
	comp=Z,15nm,0.9s								
ISA	**Isabella, Lake**	**87.23**	**51**	P	**P**	**04 31 21.8**	**+0.8**		
	baz=246,SNR=8.0								
BFSC	**Mount Baldy Ra**	**87.28**	**53**	P	**P**	**04 31 21.5**	**+0.2**		
	baz=246								
EDW2	**Edwards Air Fo**	**87.28**	**52**	P	**P**	**04 31 21.8**	**+0.6**		
	baz=246,SNR=5.5								
MURC	**Murrieta**	**87.38**	**54**	P	**P**	**04 31 22.5**	**+0.8**		
	baz=247								
RND	**Reindeer**	**87.44**	**18**	P	**P**	**04 31 20.0**	**-1.4**		
RND				pmax	pmax				
	comp=Z,15nm,1.1s								
RND	**Reindeer**	**87.44**	**18**	P	**P**	**04 31 19.9**	**-1.4**		
RND				IAmb	IAmb	04 31 21.3			
	comp=Z,15nm,1.1s								
BOD	**Bodaibo**	**87.55**	**334**	*e*P	**P**	**04 31 19.6**	**-2.2**		
BOD				pmax	pmax				
	comp=Z,27nm,1.7s								
MDPB	**Devils Postpil**	**87.60**	**49**	IAmb	IAmb	04 31 24.6			
	comp=Z,12nm,0.8s								
WAKR	**Walker**	**87.70**	**48**	IAmb	IAmb	04 31 24.9			
	comp=Z,12nm,0.8s								
MONP2	**Monument Peak**	**87.70**	**55**	P	**P**	**04 31 23.9**	**+0.4**		
	baz=247								
LRMC	**Laurel Mtn Rad**	**87.75**	**52**	P	**P**	**04 31 24.4**	**+0.8**		
	baz=246								
MLAC	**Mammoth, Mammo**	**87.77**	**49**	P	**P**	**04 31 25.4**	**+1.6**		
	baz=246								
PNTR	**Pine Nut**	**87.83**	**48**	IAmb	IAmb	04 31 25.3			
	comp=Z,13nm,0.9s								
CWC	**Cottonwood Cre**	**87.84**	**51**	P	**P**	**04 31 24.4**	**+0.4**		
	baz=246								
VCNR	**Virginia City**	**87.88**	**48**	P	**P**	**04 31 24.5**	**+0.4**		
VCNR				IAmb	IAmb	04 31 25.8			
	comp=Z,26nm,1.9s								
PFO	**Pinyon Flats O**	**87.95**	**54**	P	**P**	**04 31 24.9**	**+0.3**		
	baz=247								
MPMC	**Manual Prospec**	**88.13**	**51**	P	**P**	**04 31 26.3**	**+0.9**		
	baz=247,SNR=6.3								
SWSC	**Sam W. Stewart**	**88.21**	**55**	P	**P**	**04 31 26.3**	**+0.7**		
	baz=248								
PAHR	**Pah Rah Range**	**88.24**	**47**	IAmb	IAmb	04 31 27.5			
	comp=Z,20nm,1.3s								
LHV	**Little Huntoon**	**88.26**	**49**	IAmb	IAmb	04 31 57.3			
	comp=Z,19nm,1.2s								
RYN	**Ryan**	**88.40**	**49**	IAmb	IAmb	04 31 28.3			
	comp=Z,12nm,1.0s								
BELC	**Belle Mtn. Jos**	**88.45**	**54**	P	**P**	**04 31 28.1**	**+1.1**		
	baz=248,SNR=7.7								
WRH	**Wood River Hil**	**88.47**	**17**	IAmb	IAmb	04 31 27.5			
	comp=Z,50nm,2.0s								
NVAR	**Mina Array Bea**	**88.48**	**49**	P	**P**	**04 31 27.9**	**+0.9**		
	comp=Z,6.7nm,0.8s,baz=227,slow=8.4,SNR=47								
NVAR				LR	LR	05 02 40.8			
	comp=Z,141nm,21.9s,baz=249,slow=30								
NVAR	**Mina Array Bea**	**88.48**	**49**	P	**P**	**04 31 27.1**	**0.0**		
J05D	**Fort Rock, OR**	**88.51**	**44**	P	**P**	**04 31 28.0**	**+1.0**		
	baz=244								
ZAK	**Zakamensk**	**88.51**	**325**	*e*P	**P**	**04 31 26.5**	**-0.3**		
ZAK				pmax	pmax				
	comp=Z,2.0nm,1.3s								
MOD	**Modoc Plateau**	**88.53**	**45**	IAmb	IAmb	04 31 28.7			
	comp=Z,10nm,0.8s								
GRAC	**Grapevine Rang**	**88.59**	**50**	P	**P**	**04 31 28.5**	**+1.1**		
	baz=247,SNR=6.5								
NV11	**Mina Array Sit**	**88.59**	**49**	IAmb	IAmb	04 31 29.1			
	comp=Z,20nm,1.3s								
CCB	**Clear Creek Bu**	**88.69**	**17**	IAmb	IAmb	04 33 51.7			
	comp=Z,24nm,1.7s								
BC3	**Big Chuckawall**	**88.74**	**54**	P	**P**	**04 31 29.3**	**+1.1**		
	baz=248								
FURC	**Furnace Creek,**	**88.75**	**51**	P	**P**	**04 31 29.0**	**+0.9**		
	baz=247								
HDA	**Harding Lake**	**88.75**	**18**	P	**P**	**04 31 26.0**	**-1.5**		
	baz=222								
HDA	**Harding Lake**	**88.75**	**18**	IAmb	IAmb	04 31 27.5			
	comp=Z,23nm,1.2s								
MDM	**Murphy Dome**	**88.80**	**17**	IAmb	IAmb	04 31 27.2			
	comp=Z,27nm,1.4s								
TCOL	**CIGO, UAF Yank**	**88.84**	**17**	P	**P**	**04 31 27.1**	**-0.7**		
	baz=221								
COLA	**College**	**88.84**	**17**	*i* P	**P**	**04 31 26.2**	**-1.6**		
COLA				pmax	pmax				
	comp=Z,12nm,0.9s								
SHOC	**Shoshone, Teco**	**88.97**	**52**	P	**P**	**04 31 29.9**	**+0.7**		
	baz=247								
TLY	**Talaya**	**88.97**	**326**	P	**P**	**04 31 28.8**	**0.0**		
	comp=Z,1.7nm,0.3s,baz=185,slow=6.4,SNR=4.6								
TLY	**Talaya**	**88.97**	**326**	*e*P	**P**	**04 31 28.9**	**+0.1**		
TLY				*e*		04 42 05.1			
TLY				*e*PS	**PS**	**04 43 29.7**	**+5.9**		
TLY				*e*SS	SS	04 48 06.9	-0.3		
TLY				pmax	pmax				
	comp=Z,44nm,1.5s								
TLY				MLR	MLR				
	comp=Z,203nm,14.0s								
GMRC	**Granite Mounta**	**89.01**	**53**	P	**P**	**04 31 30.1**	**+0.6**		
	baz=248								
ILAR	**Eielson Array**	**89.04**	**18**	P	**P**	**04 31 27.1**	**-1.7**		
	comp=Z,5.3nm,0.7s,baz=237,slow=4.8,SNR=42								
ILAR				LR	LR	05 04 00.7			
	comp=Z,240nm,21.3s,baz=238,slow=30								
ILAR	**Eielson Array**	**89.04**	**18**	P	**P**	**04 31 26.8**	**-2.0**		
TUQ	**Turquoise Moun**	**89.06**	**52**	P	**P**	**04 31 30.3**	**+0.6**		
	baz=248,SNR=9.5								
IRM	**Iron Mountain**	**89.17**	**54**	P	**P**	**04 31 31.3**	**+1.1**		
	baz=248,SNR=6.3								
SCRK	**Sand Creek**	**89.33**	**19**	P	**P**	**04 31 29.4**	**-1.0**		
	baz=225								
TPNV	**Topopah Spring**	**89.39**	**51**	P	**P**	**04 31 32.0**	**+0.7**		
	baz=247,SNR=7.6								
TPNV	**Topopah Spring**	**89.39**	**51**	IAmb	IAmb	04 31 33.0			
	comp=Z,10.0nm,0.9s								
WVOR	**Wild Horse Val**	**89.88**	**45**	IAmb	IAmb	04 31 35.1			
	comp=Z,10.0nm,0.9s								
I07A	**Izee**	**89.99**	**43**	IAmb	IAmb	04 31 35.6			
	comp=Z,17nm,0.9s								
PDMCI	**Parker Dam,Lak**	**90.00**	**54**	P	**P**	**04 31 35.2**	**+1.2**		
	baz=248,SNR=7.7								
COLD	**Coldfoot**	**90.03**	**15**	P	**P**	**04 31 33.5**	**+0.1**		
	baz=219								
COLD	**Coldfoot**	**90.03**	**15**	P	**P**	**04 31 33.3**	**0.0**		
COLD				IAmb	IAmb	04 31 36.4			
	comp=Z,17nm,1.3s								
B05A	**Bryant**	**90.18**	**39**	P	**P**	**04 31 35.4**	**+1.0**		
	baz=243								
214A	**Organ Pipe Nat**	**90.20**	**57**	P	**P**	**04 31 36.2**	**+1.2**		
	baz=249								
214A	**Organ Pipe Nat**	**90.20**	**57**	IAmb	IAmb	04 31 37.1			
	comp=Z,16nm,1.2s								
NVL	**N'lazarevskaya**	**90.26**	**188**	*e*P	**P**	**04 31 33.4**	**-1.2**		
NVL				*e*S	**SKSac**	**04 41 58.5**	**-2.8**		
NVL				pmax	pmax				
	comp=Z,48nm,1.1s								
J08A	**Circle Bar Ran**	**90.37**	**44**	IAmb	IAmb	04 31 37.2			
	comp=Z,17nm,0.8s								
R11A	**Troy Canyon, C**	**90.41**	**50**	P	**P**	**04 31 36.5**	**+0.4**		
	baz=248								
PRN	**Pahroc Range**	**90.45**	**51**	IAmb	IAmb	04 31 38.3			
	comp=Z,16nm,0.9s								
W13A	**Hualapai Mount**	**90.48**	**53**	IAmb	IAmb	04 31 38.4			
	comp=Z,9.5nm,0.9s								
SNAA	**Sanae**	**90.65**	**183**	P	**P**	**04 31 36.1**	**-0.4**		
SNAA	**Sanae**	**90.65**	**183**	P	**P**	**04 31 36.1**	**-0.4**		
	comp=Z,34nm,1.1s,baz=182,slow=4.7,SNR=68								
SNAA	**Sanae**	**90.65**	**183**	*ce*P	**P**	**04 31 36.0**	**-0.4**		
SNAA				pmax	pmax				
	comp=Z,46nm,1.2s								
SNAA	**Sanae**	**90.65**	**183**	P	**P**	**04 31 35.8**	**-0.7**		
EGAK	**Eagle**	**90.78**	**19**	IAmb	IAmb	04 31 37.8			
	comp=Z,12nm,1.2s								
DAWY	**Dawson**	**90.87**	**20**	IAmb	IAmb	04 32 13.8			
	comp=Z,24nm,2.0s								
HAWA	**Hanford**	**90.94**	**41**	IAmb	IAmb	04 31 39.7			
	comp=Z,16nm,0.9s								
E08A	**Dider Farm, El**	**91.28**	**41**	P	**P**	**04 31 39.9**	**+0.3**		
E08A				IAmb	IAmb	04 31 41.3			
	comp=Z,11nm,0.9s								
VNA3	**Neumayer Olymp**	**91.28**	**181**	P	**P**	**04 31 38.9**	**-0.5**		
VNA2	**Neumayer--Watz**	**91.56**	**181**	P	**P**	**04 31 40.6**	**-0.1**		
	baz=152,slow=6.2								
VNA1	**Neumayer--Stat**	**91.85**	**181**	P	**P**	**04 31 41.8**	**-0.1**		
B08A	**Colville Reser**	**91.88**	**40**	P	**P**	**04 31 41.8**	**-0.7**		
B08A				IAmb	IAmb	04 31 47.2			
	comp=Z,18nm,1.6s								
TUC	**Tucson**	**91.93**	**57**	P	**P**	**04 31 43.7**	**+0.5**		
TUC				pmax	pmax				
	comp=Z,7.0nm,1.0s								
TUC	**Tucson**	**91.93**	**57**	P	**P**	**04 31 44.2**	**+1.1**		
	baz=250								
TUC	**Tucson**	**91.93**	**57**	P	**P**	**04 31 43.6**	**+0.5**		
TUC				IAmb	IAmb	04 31 45.3			
	comp=Z,7.2nm,0.9s								
X16A	**Lo Mia Camp, P**	**92.13**	**55**	IAmb	IAmb	04 31 46.3			
	comp=Z,9.6nm,0.9s								
MFID	**Camas Ranch**	**92.16**	**45**	P	**P**	**04 31 43.5**	**-0.5**		
U15A	**North Rim**	**92.16**	**53**	IAmb	IAmb	04 31 46.4			
	comp=Z,9.1nm,0.8s								
WUAZ	**Wupatki**	**92.55**	**54**	P	**P**	**04 31 47.0**	**+1.0**		
	baz=250								
319A	**Douglas**	**92.83**	**58**	IAmb	IAmb	04 31 49.5			
	comp=Z,12nm,0.9s								
TIXI	**Tiksi**	**93.05**	**348**	⇑*i*P	**P**	**04 31 46.3**	**-0.9**		
TIXI	**Tiksi**	**93.05**	**348**	P	**P**	**04 31 46.8**	**-0.4**		
DUG	**Dugway, Tooele**	**93.09**	**49**	P	**P**	**04 31 48.6**	**+0.3**		
	baz=250								
HLID	**Hailey**	**93.17**	**45**	P	**P**	**04 31 49.3**	**+0.5**		
	baz=249								
WMQ	**Urumqi**	**95.47**	**314**	*e*P	**P**	**04 31 59.4**	**+0.3**		
WMQ				pP	sP	04 32 18.6	-0.8		
WMQ				sP	pP	04 32 24.3	+10		
WMQ				pmax	pmax				
	comp=Z,36nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,120nm,3.6s								
WMQ				LR	LR				
	comp=Z,1μm,28.8s								
WMQ				LR	LR				
	comp=Z,2μm,29.1s								
WMQ				LR	LR				
	comp=Z,490nm,28.9s								
PDAR	**Pinedale Array**	**96.25**	**47**	P	**P**	**04 32 02.4**	**-0.5**		
	comp=Z,0.3nm,0.5s,baz=207,slow=3.0,SNR=4.3								
PDAR				LR	LR	05 08 46.4			
	comp=Z,55nm,20.1s,baz=281,slow=31								
TXAR	**Lajitas Array**	**96.84**	**62**	P	**P**	**04 32 06.0**	**+0.3**		
	comp=Z,1.3nm,1.0s,baz=235,slow=4.4,SNR=4.9								
TXAR				LR	LR	05 09 35.9			
	comp=Z,44nm,19.3s,baz=0.0,slow=32								
C36M	**Paulatuk**	**98.85**	**19**	P	**P**	**04 32 12.1**	**-1.5**		
	baz=243								
C36M	**Paulatuk**	**98.85**	**19**	IAmb	IAmb	04 32 12.9			
	comp=Z,7.3nm,1.1s								
YKA	**Yellowknife Ar**	**99.73**	**27**	P	**Pdif**	**04 32 17.4**	**-0.4**		
	comp=Z,1.8nm,0.9s,baz=264,slow=5.3,SNR=5.8								
YKA				LR	LR	05 10 13.5			
	comp=Z,104nm,21.3s,baz=0.0,slow=31								
MK31	**Makanchi Array**	**99.99**	**316**	P	**Pdif**	**04 32 18.9**	**-0.5**		
MK31				pmax	pmax				
	comp=Z,12nm,1.6s								
MK31	**Makanchi Array**	**99.99**	**316**	Pdif	**Pdif**	**04 32 18.9**	**-0.5**		
MK31				IAmb	IAmb	04 32 20.3			
	comp=Z,12nm,1.6s								
MKAR	**Makanchi Array**	**99.99**	**316**	P	**Pdif**	**04 32 18.6**	**-0.7**		
	comp=Z,2.5nm,0.8s,baz=100,slow=5.4,SNR=9.9								
MKAR	**Makanchi Array**	**99.99**	**316**	*i* P	**Pdif**	**04 32 19.3**	**-0.1**		
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
MKAR	**Makanchi Array**	**99.99**	**316**	Pdif	**Pdif**	**04 32 18.4**	**-1.0**		
ZALV	**Zalesovo Beam**	**100.33**	**323**	P	**Pdif**	**04 32 19.2**	**-1.4**		
	comp=Z,3.3nm,0.9s,baz=112,slow=4.0,SNR=9.9								
ZALV	**Zalesovo Beam**	**100.33**	**323**	*i* P	**Pdif**	**04 32 20.3**	**-0.3**		
ZALV				pmax	pmax				
	comp=Z,3.0nm,0.9s								
ZALV	**Zalesovo Beam**	**100.33**	**323**	Pdif	**Pdif**	**04 32 18.8**	**-1.8**		
WMOK	**Wichita Mounta**	**102.23**	**57**	P	**Pdif**	**04 32 28.6**	**-1.0**		
	baz=257								
NRIK	**Noril'sk**	**103.17**	**339**	Pdiff	**Pdif**	**04 32 32.1**	**-0.7**		
	comp=Z,4.2nm,1.0s,baz=95,slow=5.9,SNR=5.5								
ARU	**Arti**	**115.45**	**325**	PKP	**PKiKP**	**04 37 14.7**	**-0.8**		
	comp=Z,2.0nm,0.6s,baz=1.8,slow=0.6,SNR=12								
ARU	**Arti**	**115.45**	**325**	*i* PKIKP	**PKiKP**	**04 37 14.8**	**-0.8**		
ARU						04 38 18.4			
ARU						04 44 21.5			
ARU				SS	SS	04 54 14.4	+1.6		
ARU	**Arti**	**115.45**	**325**		**PKiKP**	**04 37 14.3**	**-1.3**		
SPITS	**Spitsbergen Ar**	**117.97**	**354**	PKP	**PKPdf**	**04 37 19.0**	**-0.9**		
	comp=Z,3.2nm,0.8s,baz=19,slow=9.2,SNR=0.7								
BELG	**Belogornoye**	**122.44**	**321**	*i* PKIKP	**PKPdf**	**04 37 28.5**	**-0.6**		
ARCES	**ARCESS Array B**	**123.35**	**345**	PKP	**PKPdf**	**04 37 29.1**	**-1.3**		
	comp=Z,6.2nm,0.9s,baz=75,slow=2.2,SNR=20								
KLMR	**Klimovskoe**	**123.75**	**333**	*e*PKIKP	**PKPdf**	**04 37 29.8**	**-1.6**		
KLMR				pmax	pmax				
	comp=Z,26nm,1.3s								
KLMR	**Klimovskoe**	**123.75**	**333**	*e*PKPdf	**PKPdf**	**04 37 29.8**	**-1.6**		
KLMR				AMP		04 37 31.8			
	comp=Z,26nm,1.3s								
VRH	**Novokhopyorsk**	**126.29**	**321**	*e*PKIKP	**PKPdf**	**04 37 35.3**	**-1.3**		
VRH				pmax	pmax				
	comp=Z,20nm,0.4s								
RAYN	**Ar Rayn**	**126.40**	**286**	PKIKP	**PKPdf**	**04 37 38.3**	**+0.6**		
RAYN	**Ar Rayn**	**126.40**	**286**		**PKPdf**	**04 37 38.3**	**+0.6**		
ZEI	**Tsey**	**126.91**	**311**	*i* PKIKP	**PKPdf**	**04 37 36.6**	**-1.7**		
ZEI				pmax	pmax				
	comp=Z,6.0nm,1.0s								
LPSR	**Galich'ya Gora**	**127.44**	**324**	*e*PKIKP	**PKPdf**	**04 37 38.1**	**-0.6**		
LPSR				pmax	pmax				
	comp=Z,10.0nm,0.9s								
AKH	**Akhalkalaki**	**127.45**	**309**	⇓P	**PKPdf**	**04 37 40.0**	**+0.7**		
KBZ	**Khabaz**	**127.45**	**312**	PKP	**PKPdf**	**04 37 39.0**	**0.0**		
	comp=Z,2.0nm,0.8s,baz=142,slow=5.9,SNR=3.6								
KIV	**Kislovodsk**	**127.56**	**312**	*i* PKIKP	**PKPdf**	**04 37 37.9**	**-1.5**		
KIV				pmax	pmax				
	comp=Z,16nm,1.0s								
OBN	**Obninsk**	**127.70**	**327**	*c i* PKIKP	**PKPdf**	**04 37 39.2**	**+0.1**		
OBN				*e*		04 39 40.5			
OBN				pmax	pmax				
	comp=Z,5.0nm,0.4s								
OBN				MLR	MLR				
	comp=Z,153nm,22.0s								
VSR	**Storozhevoye**	**127.81**	**322**	*e*PKIKP	**PKPdf**	**04 37 38.0**	**-1.5**		
VSR				pmax	pmax				
	comp=Z,10.0nm,1.1s								
VORD	**Divnogorie**	**127.82**	**322**	*e*PKIKP	**PKPdf**	**04 37 38.8**	**-0.7**		
VORD				pmax	pmax				
	comp=Z,8.0nm,0.8s								
FINES	**FINESS Array B**	**128.82**	**338**	PKP	**PKPdf**	**04 37 39.8**	**-1.3**		
	comp=Z,3.9nm,0.9s,baz=69,slow=3.6,SNR=7.2								
FINES				SKPbc	SKPbc	04 40 54.9			
	comp=Z,5.6nm,1.1s,baz=160,slow=7.3,SNR=5.5								
SOC	**Sochi**	**129.74**	**312**	*i* PKIKP	**PKPdf**	**04 37 44.2**	**+0.8**		
SOC				*e*		04 39 57.1			
SOC				*e*PPP	PPP	04 42 38.2			
SOC				*e*SS	SS	04 57 09.7	-5.2		
SOC				*e*SSS	SSS	05 01 58.6			
VSU	**Vasula**	**130.49**	**335**	*e*P	**SKPbc**	**04 41 02.3**	**-1.4**		
BDFB	**Brasilia**	**131.26**	**131**	PKP	**PKPdf**	**04 37 48.1**	**+0.8**		
	comp=Z,1.3nm,0.6s,baz=151,slow=16,SNR=2.0								
BDFB				SKPbc	**SKPbc**	**04 41 06.0**	**-2.1**		
	comp=Z,4.7nm,0.9s,baz=290,slow=4.7,SNR=5.1								
IZAR	**Zarasai**	**132.38**	**332**	*e*P	**SKPbc**	**04 41 11.1**	**+0.4**		
IDID	**Didziasalis**	**132.42**	**331**	*e*P	**SKPbc**	**04 41 10.0**	**-0.8**		
ISAL	**Salakas**	**132.54**	**332**	*e*P	**SKPbc**	**04 41 10.9**	**-0.4**		
IIGN	**Ignalina**	**132.63**	**331**	*e*P	**SKPbc**	**04 41 10.2**	**-1.4**		
PABE	**Paberze**	**133.54**	**333**	*e*P	**SKPbc**	**04 41 12.4**	**-2.2**		
AKASG	**Malin Array Be**	**133.71**	**325**	PKP	**PKPdf**	**04 37 50.0**	**-0.7**		
	comp=Z,5.1nm,0.9s,baz=66,slow=2.2,SNR=9.7								
AKASG				SKPbc	**SKPbc**	**04 41 13.1**	**-2.3**		
	comp=Z,6.6nm,0.8s,baz=45,slow=4.0,SNR=13								
AKASG	**Malin Array Be**	**133.71**	**325**	PKIKP	**PKPdf**	**04 37 50.3**	**-0.4**		
AKASG	**Malin Array Be**	**133.71**	**325**	PKPdf	**PKPdf**	**04 37 50.3**	**-0.4**		
AKBB	**Malin Array Si**	**133.71**	**325**	*c i* PKIKP	**PKPdf**	**04 37 50.0**	**-0.7**		
NB2	**NORSAR Subarra**	**133.72**	**345**	PKPdf	**PKPdf**	**04 37 50.4**	**-0.1**		
	comp=Z,3.2nm,1.1s,baz=27,slow=1.8								
NOA	**NORSAR Array B**	**133.72**	**345**	PKP	**PKPdf**	**04 37 50.2**	**-0.3**		
	comp=Z,2.7nm,1.0s,baz=32,slow=2.0,SNR=5.4								
NOA				SKPbc	**SKPbc**	**04 41 12.7**	**-2.5**		
	comp=Z,5.3nm,1.0s,baz=32,slow=2.7,SNR=7.5								
BRTR	**Keskin Array B**	**135.13**	**309**	PKP	**PKPdf**	**04 37 53.7**	**-0.2**		
	comp=Z,2.7nm,0.9s,baz=66,slow=3.0,SNR=6.0								
BRTR				SKPbc	**SKPbc**	**04 41 18.0**	**-2.7**		
	comp=Z,5.3nm,1.2s,baz=151,slow=2.8,SNR=5.6								
SORM	**Soroca**	**135.47**	**322**	⇓P	**PKPdf**	**04 37 53.5**	**-0.6**		
SORM	**Soroca**	**135.47**	**322**	⇓PKIKP	**PKPdf**	**04 37 53.5**	**-0.6**		
BIZ	**Bicaz**	**137.38**	**322**	⇑P	**PKPdf**	**04 37 57.6**	**-0.1**		
BUR08	**Bucovina Ar. S**	**137.55**	**323**	PKPdf	**PKPdf**	**04 37 58.4**	**+0.3**		
BURAR	**Bucovina Array**	**137.55**	**323**	⇑P	**PKPdf**	**04 37 58.9**	**+0.8**		
BURAR	**Bucovina Array**	**137.55**	**323**	⇑PKIKP	**PKPdf**	**04 37 58.9**	**+0.8**		
MLR	**Muntele Rosu**	**138.20**	**320**	⇑P	**PKiKP**	**04 38 02.8**	**+1.3**		
MLR	**Muntele Rosu**	**138.20**	**320**	⇑PKIKP	**PKiKP**	**04 38 02.8**	**+1.3**		
KOLS	**Kolonicke sedl**	**138.44**	**326**	*e*PKIKP	**PKPdf**	**04 38 00.0**	**+0.4**		
KOLS	**Kolonicke sedl**	**138.44**	**326**	*e*PKP	**PKPdf**	**04 38 00.0**	**+0.4**		
CRVS	**Cervenica-Dubn**	**138.88**	**327**	*e*PKIKP	**PKPdf**	**04 38 01.1**	**+0.7**		
CRVS	**Cervenica-Dubn**	**138.88**	**327**	*e*PKP	**PKPdf**	**04 38 01.1**	**+0.7**		
ARR	**Arges**	**139.06**	**320**	⇑P	**PKPdf**	**04 38 00.8**	**-0.1**		
DRGR		**139.43**	**323**	⇑P	PKPdf	04 37 52.3	-9.2		
DRGR		**139.43**	**323**	⇑PKHKP	PKPpre	04 37 52.3			
GZR	**Gura Zlata**	**140.16**	**321**	⇓P	**PKPdf**	**04 37 58.9**	**-4.0**		
GZR	**Gura Zlata**	**140.16**	**321**	⇓PKHKP	PKPpre	04 37 58.9			
MORC	**Moravsky Berou**	**140.27**	**330**	⇑P	**PKPdf**	**04 38 04.9**	**+2.0**		
MORC	**Moravsky Berou**	**140.27**	**330**	*e*PKP	PKPdf	04 37 54.8	-8.1		
MORC				*e*SKP		04 41 34.0			
MORC	**Moravsky Berou**	**140.27**	**330**	⇑PKIKP	**PKPdf**	**04 38 04.9**	**+2.0**		
OSTC	**Ostas**	**140.34**	**332**	*e*PKPDF	**PKiKP**	**04 38 05.7**	**+0.2**		
CHVC	**Chvalec**	**140.38**	**332**	*e*PKPDF	**PKiKP**	**04 38 05.8**	**+0.2**		
CHVC				*ex*	x	04 38 12.1			
KRLC	**Kraliky**	**140.42**	**331**	*e*PKHKP	PKPpre	04 37 54.9			
KRLC				*e*		04 38 04.2			
KRLC	**Kraliky**	**140.42**	**331**	*e*PKPpre	PKPpre	04 37 54.9			
KRLC				*e*PKPDF	**PKPdf**	**04 38 04.2**	**+1.0**		
DPC	**Dobruska-Polom**	**140.44**	**332**	*e*PKIKP	**PKPdf**	**04 38 05.4**	**+2.2**		
DPC	**Dobruska-Polom**	**140.44**	**332**	*e*PKPDF	**PKPdf**	**04 38 05.4**	**+2.2**		
VYHS	**Vyhne**	**140.49**	**328**	*e*PKIKP	**PKPdf**	**04 38 03.4**	**+0.1**		
VYHS	**Vyhne**	**140.49**	**328**	*e*PKP	**PKPdf**	**04 38 03.4**	**+0.1**		
HERR	**Herculane**	**140.65**	**321**	⇑P	PKPdf	04 37 56.4	-7.3		
BZS	**Buzias**	**140.72**	**322**	⇑P	**PKPdf**	**04 37 59.0**	**-4.8**		
BZS	**Buzias**	**140.72**	**322**	⇑PKIKP	**PKPdf**	**04 37 59.0**	**-4.8**		
JAVC	**Velka Javorina**	**140.83**	**329**	*e*PKP	**PKPdf**	**04 37 59.1**	**-4.9**		
JAVC				*e*SKP		04 41 36.5			
VRAC	**Vranov**	**141.04**	**330**	*e*PKP	PKPdf	04 37 57.1	-7.2		
VRAC				*e*SKP		04 41 36.0			
BRG	**Berggiesshubel**	**141.08**	**334**	*e*PKP	**PKPdf**	**04 37 58.5**	**-5.7**		
	comp=Z,3.5nm,0.7s								
BRG				*i*		04 38 06.7			
	comp=Z,5.4nm,0.8s								
BRG				*e*PKS	PP	04 41 35.6	+30		
	comp=Z,11nm,1.3s								
BRG	**Berggiesshubel**	**141.08**	**334**	*e*PKHKP	PKPpre	04 37 58.5			
BRG				pmax	pmax				
	comp=Z,4.0nm,0.7s								
BRG				pmax	pmax				
	comp=Z,5.0nm,0.8s								
BRG				pmax	pmax				
	comp=Z,11nm,1.3s								
MDVR	**Moldovita**	**141.13**	**321**	⇑P	**PKPdf**	**04 38 03.3**	**-1.4**		
CLL	**Collm**	**141.14**	**335**	*e*PKPpre	PKPpre	04 38 00.0			
CLL				*e*PKPdf	**PKPdf**	**04 38 03.0**	**-1.4**		
	comp=Z,6.0nm,1.1s								
CLL				*i* PKiKP	**PKiKP**	**04 38 06.7**	**-0.4**		
	comp=Z,6.0nm,1.0s								
CLL				*ep*PKPdf	sPKPdf	04 38 24.0	-0.9		
CLL				*e*		04 41 14.0			
CLL				*e*SKPdf	**SKPdf**	**04 41 30.0**	**-5.0**		
CLL				*e*PPS	PPS	04 53 36.0			
CLL				*e*SS	SS	04 59 48.0	+18		
CLL	**Collm**	**141.14**	**335**	*e*PKIKP	**PKPdf**	**04 38 00.0**	**-4.4**		
CLL				pmax	p

BMRD	**Maredsous**	**144.88**	**342**	PKPdf	**PKPab**	**04 38 10.2**	**0.0**
MOTA	**Moosalm**	**144.98**	**333**	*e*P	**PKPab**	**04 38 10.5**	**-0.4**
	comp=Z,71nm,1.0s,SNR=35						
WLF	**Walferdange**	**145.00**	**340**	PKPdf	**PKPab**	**04 38 11.0**	**+0.4**
WLF				x	x	04 38 17.1	
RETA	**Reutte**	**145.02**	**333**	*e*P	PKPbc	04 38 10.9	0.0
	comp=Z,28nm,0.8s,SNR=16						
SQTA	**Sankt Quirin**	**145.03**	**332**	*e*P	**PKPbc**	**04 38 10.8**	**-0.2**
	comp=Z,48nm,0.7s,SNR=28						
SQTA	**Sankt Quirin**	**145.03**	**332**	*i* P	**SKPbc**	**04 41 44.3**	**-2.7**
	comp=Z,15nm,1.5s						
DOU	**Dourbes**	**145.11**	**342**	PKPdf	**PKPbc**	**04 38 11.1**	**+0.1**
DOU				PKiKP	**PKPdf**	**04 38 14.6**	**+3.1**
CIMO	**Cimolais**	**145.14**	**330**		**PKPbc**	**04 38 10.7**	**-0.6**
BFO	**Black Forest**	**145.34**	**336**	PKIKP	**PKPbc**	**04 38 11.6**	**-0.2**
BFO	**Black Forest**	**145.34**	**336**		**PKPbc**	**04 38 11.6**	**-0.2**
FETA	**Feichten**	**145.39**	**333**	*e*P	**PKPbc**	**04 38 12.3**	**+0.1**
	comp=Z,90nm,0.9s,SNR=39						
FETA	**Feichten**	**145.39**	**333**	*i* P	**SKPbc**	**04 41 46.8**	**-1.1**
	comp=Z,6.5nm,1.1s						
DAVA	**Damuels**	**145.55**	**334**	*e*P	**PKPdf**	**04 38 12.6**	**+0.2**
	comp=Z,83nm,1.0s,SNR=21						
SGRT	**San Giovanni R**	**146.43**	**321**		**PKPdf**	**04 38 15.2**	**+1.1**
MATE	**Matera**	**146.49**	**319**	⇑P	**PKPdf**	**04 38 15.5**	**+1.4**
TIP	**Timpagrande**	**147.28**	**317**	⇑P	**PKPbc**	**04 38 18.3**	**+0.4**
SENIN	**Lac Senin/Sane**	**147.35**	**335**		**PKPdf**	**04 38 17.9**	**+2.3**
AQU	**L'Aquila**	**147.40**	**324**	*e*P	**PKPdf**	**04 38 17.8**	**+2.2**
OSSC	**Osservatorio P**	**147.75**	**328**		**PKPdf**	**04 38 18.0**	**+1.9**
BNI	**Bardonecchia**	**148.67**	**334**	PKP2	**PKPbc**	**04 38 21.7**	**+0.2**
BNI	**Bardonecchia**	**148.67**	**334**		**PKPbc**	**04 38 21.7**	**+0.2**
KEST	**Kesra**	**154.07**	**318**	PKPbc	**PKPbc**	**04 38 33.7**	**-0.6**
	comp=Z,6.2nm,0.8s,baz=271,slow=0.9,SNR=8.2						
KEST				PKPab	**sPKPdf**	**04 38 48.0**	**+1.3**
	comp=Z,20nm,1.1s,baz=289,slow=1.8,SNR=10						
PBRG	**Braganca**	**155.59**	**351**	*e*PKPab	**PKPab**	**04 38 53.9**	**-0.2**
POLO	**Lamas de Olo**	**156.16**	**353**	*e*PKPab	**PKPab**	**04 38 56.7**	**+0.1**
PVRL	**Vila Real**	**156.25**	**352**	*e*PKPab	**PKPab**	**04 38 56.9**	**0.0**
MVO	**Moncorvo**	**156.26**	**351**	*e*PKPab	**PKPab**	**04 38 57.3**	**+0.3**
PVIS	**Viseu**	**156.82**	**353**	*e*PKPab	**PKPab**	**04 38 58.8**	**-0.6**
ESDC	**Sonseca Array**	**157.08**	**344**	PKPab	**PKPab**	**04 38 60.0**	**-0.6**
	comp=Z,3.5nm,0.8s,baz=17,slow=4.1,SNR=20						
MTE	**Manteigas**	**157.09**	**352**	*e*PKPab	**PKPab**	**04 39 00.7**	**+0.2**
PCAS	**Casmilo, Conde**	**157.54**	**353**	*e*PKPab	**PKPab**	**04 39 02.4**	**0.0**
PCBR	**Castelo Branco**	**157.63**	**351**	*e*PKPab	**PKPab**	**04 39 03.0**	**+0.2**
PMRV	**Marv??o**	**158.02**	**351**	*e*PKPab	**PKPab**	**04 39 04.5**	**0.0**
EVO	**Evora**	**158.99**	**352**	*e*PKPab	**PKPab**	**04 39 08.9**	**+0.2**
PBEJ	**Beja**	**159.46**	**351**	*e*PKPab	**PKPab**	**04 39 11.4**	**+0.6**
PCVE	**Castro Verde**	**159.87**	**351**	*e*PKPab	**PKPab**	**04 39 13.1**	**+0.5**
MORF	**Marmelete**	**160.28**	**353**	*e*PKPab	**PKPab**	**04 39 15.4**	**+1.0**
TORD	**Torodi Ar. Bea**	**166.29**	**253**	PKP	**PKPdf**	**04 38 39.1**	**-1.1**
	comp=Z,2.8nm,0.9s,baz=66,slow=0.9,SNR=12						
TORD				PKPab	**PKPab**	**04 39 40.9**	**-0.6**
	comp=Z,1.0nm,1.1s,baz=92,slow=3.5,SNR=8.4						
TORD	**Torodi Ar. Bea**	**166.29**	**253**		**PKPdf**	**04 38 39.4**	**-0.8**

*IDC **22** 04:32:34.7±0.9,21°.78S×68°.30W,h116km±14km,mb3.4/2, mb1 3.4/5,mb1mx3.2/37,mbtmp3.6/5,Error ellipse: s-maj=26.2km s-min=22.9km az=131.0*
*GUC **22** 04:32:36.2±0.8,21°.71S×68°.49W,h127km±4km,ML3.7*
ISC 22 04:32:34.9±0.9,**21°.70S**±0'.04×**68°.45W**±0'.07,**h127**km±8km, **n23,**σ0**95**/41,**10C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.74**	**262**	⇑*i*P		**P**	**Pn**	**04 32 56.1**	**+0.6**
PB09				*i* S		**S**	**Sn**	**04 33 11.7**	**+0.6**
PB09				IAML				04 33 14.2	
	comp=E,1μm,0.4s								
LVC	**Limon Verde**	**1.00**	**205**	P		**P**	**Pn**	**04 32 58.3**	**+0.4**
	comp=E,34nm,0.3s,baz=56,slow=14,SNR=324								
LVC				S			**Sn**	**04 33 13.6**	**-1.8**
	comp=E,114nm,0.3s,baz=282,slow=23,SNR=22								
LVC	**Limon Verde**	**1.00**	**205**	*e*P		**P**	**Pn**	**04 32 58.7**	**+0.7**
LVC				*e*S			**Sn**	**04 33 16.1**	**+0.6**
PB01	**IPOC Station P**	**1.17**	**304**	⇑*i*P		**P**	**Pn**	**04 32 59.5**	**+0.2**
PB01				*i* S			**Sn**	**04 33 17.6**	**-0.2**
PB01				IAML				04 33 20.3	
	comp=E,889nm,0.3s								
PB03	**IPOC Station P**	**1.26**	**254**	⇑*i*P		**P**	**Pn**	**04 33 00.8**	**+0.5**
PB03				*i* S			**Sn**	**04 33 19.2**	**-0.4**
PB03				IAML				04 33 20.3	
	comp=N,2μm,0.5s								
PB07	**IPOC Station P**	**1.33**	**269**	⇑*i*P		**P**	**Pn**	**04 33 01.4**	**+0.3**
PB07				*i* S			**Sn**	**04 33 21.2**	**+0.1**
PB07				IAML				04 33 25.7	
	comp=N,2μm,0.2s								
PB06	**IPOC Station P**	**1.44**	**226**	⇑*i*P		**P**	**Pn**	**04 33 02.7**	**+0.4**
PB06				*i* S			**Sn**	**04 33 23.7**	**+0.5**
PB06				IAML				04 33 25.4	
	comp=N,2μm,0.1s								
PB08	**IPOC Station P**	**1.69**	**337**	⇑*i*P		**P**	**Pn**	**04 33 06.6**	**+1.3**
PB08				*i* S			**Sn**	**04 33 29.5**	**+0.9**
PB08				IAML				04 33 30.4	
	comp=E,262nm,0.5s								
PB04	**IPOC Station P**	**1.70**	**248**	*e*P		**P**	**Pn**	**04 33 05.2**	**0.0**
PB04				*i* S			**Sn**	**04 33 27.6**	**-0.9**
PB04				IAML				04 33 35.7	
	comp=N,1μm,0.2s								
PB15	**IPOC Station P**	**1.77**	**212**	⇑*i*P		**P**	**Pn**	**04 33 07.1**	**+0.9**
PB15				*e*S			**Sn**	**04 33 31.1**	**+1.0**
PATCX	**Punta Patache**	**1.81**	**299**	⇑*i*P		**P**	**Pn**	**04 33 07.0**	**+0.4**
PATCX				*i* S			**Sn**	**04 33 30.2**	**-0.5**
PATCX				IAML				04 33 32.7	
	comp=N,691nm,0.4s								
TA01	**Diego Aracena**	**1.97**	**305**	⇑*i*P		**P**	**Pn**	**04 33 08.4**	**+0.1**
TA01				*i* S			**Sn**	**04 33 33.2**	**-0.7**
TA01				IAML				04 33 35.3	
	comp=E,597nm,0.4s								
PB05	**IPOC Station P**	**1.99**	**234**	*e*P		**P**	**Pn**	**04 33 09.0**	**+0.4**
PB05				*e*S			**Sn**	**04 33 34.0**	**-0.5**
GO01	**Chusmiza**	**2.14**	**341**	*e*P		**P**	**Pn**	**04 33 11.8**	**+0.9**
GO01				*e*S			**Sn**	**04 33 38.6**	**+0.1**
GO01				IAML				04 33 42.6	
	comp=N,388nm,0.2s								
GO01				IAML				04 33 43.1	
	comp=E,402nm,0.2s								
PB11	**IPOC Station P**	**2.23**	**329**	⇑*i*P		**P**	**Pn**	**04 33 12.1**	**+0.2**
PB11				*i* S			**Sn**	**04 33 39.5**	**-0.6**
PB11				IAML				04 33 41.9	
	comp=N,755nm,0.5s								
PSGC	**Pisagua**	**2.61**	**323**	*e*P		**P**	**Pn**	**04 33 16.0**	**-0.6**
PSGC				*e*S			**Sn**	**04 33 46.9**	**-1.7**
PSGC				IAML				04 33 48.6	
	comp=N,172nm,0.5s								
PB10	**IPOC Station P**	**2.65**	**227**	*e*P		**P**	**Pn**	**04 33 16.7**	**-0.2**
PB10				*e*S			**Sn**	**04 33 48.0**	**-1.3**
PB10				IAML				04 33 57.0	
	comp=N,183nm,0.3s								
PB10				IAML				04 34 01.9	
	comp=E,205nm,0.2s								
MNMC	**Minye Minye**	**2.77**	**337**	*e*P		**P**	**Pn**	**04 33 19.4**	**+0.6**
MNMC				⇓*e*S			**Sn**	**04 33 52.7**	**+0.2**
MNMC				IAML				04 33 55.0	
	comp=N,309nm,0.2s								
LPAZ	**La Paz**	**5.39**	**3**	P		**P**	**Pn**	**04 33 55.3**	**+1.5**
	comp=N,0.4nm,0.3s,baz=278,slow=1.6,SNR=24								
SIV	**San Ignacio**	**9.00**	**52**	P		**P**	**Pn**	**04 34 39.4**	**-2.5**
	comp=N,0.8nm,0.3s,baz=248,slow=13,SNR=19								
SIV				S			Sn	04 36 12.0	-10
	comp=N,0.1nm,0.3s,baz=342,slow=23,SNR=1.4								
CPUP	**Villa Florida**	**11.16**	**117**	P		**P**	**Pn**	**04 35 08.9**	**-1.9**
	comp=N,0.1nm,0.3s,baz=316,slow=12,SNR=3.9								
TXAR	**Lajitas Array**	**61.04**	**325**	P			**P**	**04 42 36.0**	**+0.7**
	comp=N,0.7nm,1.0s,baz=117,slow=7.4,SNR=3.4								
TORD	**Torodi Ar. Bea**	**77.02**	**70**	P			**P**	**04 44 15.6**	**+1.2**
	comp=N,0.6nm,1.0s,baz=257,slow=6.0,SNR=4.3								

*NEIC **22** 04:34:34.9±1.7,0°.40N±0°.07×125°.46E±0°.06,h46km±6km, mb4.8/70,Error ellipse: s-maj=9.8km s-min=9.2km az=196.0*
*IDC **22** 04:34:36.9±1.8,0°.35N×125°.46E,h62km±15km,mb4.4/31, mb1 4.4/35,mb1mx4.4/43,mbtmp4.7/35,MS3.7/7, Ms1 3.7/7,ms1mx3.2/47,Error ellipse: s-maj=14.0km s-min=7.5km az=74.0*
*DJA **22** 04:34:37.6±0.1,0°.N±2°.x12°.6E±°,h66km±2km,M4.8/32, mb5.0/32,mB5.2/12,MLv5.0/23,Mw(mB)4.6/12*
*KLM **22** 04:34:38.0,0°.39N×125°.56E,h84km,mb4.9*
ISC 22 04:34:37.4±0.7,**0°.41N**±0°.04×**125°.53E**±0°.04,**h68**km±7km, **n220,**σ1§**29**/229,**mb4.8**/74,**2C-1D,Northern Moluccas Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.56**	**276**	P		**P**	**Pn**	**04 35 01.8**	**-1.2**
KMSI				S		**S**	**Sn**	**04 35 21.2**	**-1.2**
TNTI	**Ternate**	**1.88**	**79**	P		**P**	**Pn**	**04 35 07.7**	**+0.4**
TNTI				S		**S**	**Sn**	**04 35 30.9**	**+0.8**
TNTI	**Ternate**	**1.88**	**79**	P		Pn	**Pn**	**04 35 07.0**	**-0.3**
LBMI	**Labuha**	**2.23**	**118**	P		P	**Pn**	**04 35 11.7**	**-0.4**
LBMI				S			**Sn**	**04 35 39.7**	**+1.0**
GTOI	**Gorontalo**	**2.53**	**275**	P		P	**Pn**	**04 35 18.7**	**+2.6**
GTOI				S			**Sn**	**04 35 50.9**	**+5.0**
LUWI	**Luwuk**	**3.11**	**242**	P		P	**Pn**	**04 35 25.8**	**+1.7**
LUWI	**Luwuk**	**3.11**	**242**	Pn		Pn	**Pn**	**04 35 26.2**	**+2.1**
SGSI	**Sangihe**	**3.26**	**0**	P		P	**Pn**	**04 35 27.0**	**+0.9**
MRSI	**Marisa**	**3.59**	**271**	P		P	**Pn**	**04 35 29.7**	**-0.9**
NLAI	**Namlea**	**3.95**	**157**	P		P	**Pn**	**04 35 34.3**	**-1.2**
APSI	**Ampana**	**4.09**	**251**	P		P	**Pn**	**04 35 40.0**	**+2.5**
TOLI2	**Tolitoli**	**4.80**	**278**	Pn		Pn	**Pn**	**04 35 45.9**	**-1.2**
AAI	**Ambon**	**4.86**	**147**	P		P	**Pn**	**04 35 47.9**	**-0.2**
MSAI	**Masohi**	**5.04**	**138**	P		P	**Pn**	**04 35 51.4**	**+0.8**
	0.7nm2μm204nm,0.8s								
MPSI	**Mapaga**	**5.63**	**269**	P		P	**Pn**	**04 36 01.1**	**+2.6**
	0.8nm2μm180nm,0.7s								
DDMP	**Don Marcelino,**	**5.66**	**2**	*e*P		P	**Pn**	**04 35 58.6**	**-0.4**
DDMP				*e*S		S	**Sn**	**04 37 06.7**	**+4.0**
SIJI	**Sorong**	**5.88**	**102**	P		P	**Pn**	**04 36 02.3**	**+0.3**
	3.3nm,0.3s,baz=276,slow=9.4,SNR=19								
SKMP	**Bagumbayan, Su**	**6.15**	**351**	*e*P		P	**Pn**	**04 36 05.7**	**0.0**
SKMP				*e*S		S	**Sn**	**04 37 11.9**	**-2.8**
BNDI	**Bandanaira**	**6.56**	**138**	P		P	**Pn**	**04 36 11.5**	**+0.1**
	1.2nm20μm342nm,0.7s								
KCP	**Kidapawan**	**6.57**	**356**	⇑*i*P		P	**Pn**	**04 36 14.6**	**+3.1**
KCP				*i* S			Sn	04 37 45.0	+20
DAV	**Davao City (W)**	**6.62**	**0**	LR		LR	LR	04 39 03.2	
	comp=Z,552nm,18.3s,baz=176,slow=40								
DAV	**Davao City (W)**	**6.62**	**0**	Pn		Pn	**Pn**	**04 36 09.3**	**-2.8**
TTSI	**Tana Toraja**	**6.66**	**239**	P		P	**Pn**	**04 36 12.7**	**+0.1**
	0.8nm2μm193nm,0.6s								
SPSI	**Sidrap Palu**	**7.21**	**233**	P		P	**Pn**	**04 36 21.5**	**+1.3**
	0.5nm1μm131nm,0.6s								
BNSI	**Bone**	**7.22**	**229**	P		P	**Pn**	**04 36 20.8**	**+0.5**
	0.4nm1μm133nm,0.7s								
FAKI	**Fak Fak**	**7.49**	**116**	P		P	**Pn**	**04 36 24.4**	**+0.4**
	0.1nm580nm52nm,1.0s								
FAKI	**Fak Fak**	**7.49**	**116**	Pn		Pn	**Pn**	**04 36 21.3**	**-2.7**
PAGZ	**Pagadian**	**7.70**	**344**	*e*P		P	**Pn**	**04 36 26.2**	**-0.6**
BKSI	**Bulukumba**	**7.84**	**223**	P		P	**Pn**	**04 36 30.5**	**+1.7**
	0.3nm63nm,0.8s								
KAPI	**Kappang**	**7.89**	**227**	P		P	**Pn**	**04 36 29.3**	**-0.2**
	3.0nm,0.3s,baz=56,slow=3.5,SNR=15								
KAPI				LR		LR	LR	04 40 02.6	
	comp=Z,460nm,22.0s,baz=95,slow=42								
KAPI	**Kappang**	**7.89**	**227**	Pn		Pn	**Pn**	**04 36 27.5**	**-2.0**
MYLDM	**Lahad Datu**	**8.47**	**304**	Pn		Pn	**Pn**	**04 36 34.6**	**-2.8**
GLSP	**General Luna,**	**9.33**	**4**	*e*P		P	**Pn**	**04 36 51.8**	**+2.6**
CNOP	**Candoni, Negro**	**9.79**	**343**	*e*P		Pn	**Pn**	04 36 47.0	-8.4
EDFI	**Ende, Flores**	**9.87**	**203**	P		P	**Pn**	**04 36 57.4**	**+0.8**
	5.3nm,0.9s								
KBKI	**Kotabaru**	**10.05**	**248**	P		Pn	04	37 16.1	+17
SOEI	**Soe**	**10.17**	**187**	P		Pn	04	37 06.2	+5.4
	65nm,0.9s								
SOEI	**Soe**	**10.17**	**187**	Pn		Pn	**Pn**	**04 36 57.9**	**-2.9**
KKM	**Kota Kinabalu**	**10.85**	**301**	Pn		Pn	**Pn**	**04 37 05.7**	**-4.4**
CUYO	**Cuyo Island**	**11.30**	**337**	*e*P		P	**Pn**	**04 37 18.1**	**+1.9**
SBUM	**Sibu**	**13.46**	**279**	Pn		Pn	**Pn**	**04 37 43.8**	**-1.6**
SBUM	**Sibu**	**13.46**	**279**	P		P	**Pn**	**04 37 46.0**	**+0.6**
KMMI	**Kalianget**	**13.71**	**237**	P		P	**P**	**04 37 58.9**	**+3.7**
MTN	**Manton Dam**	**14.29**	**157**	Pn		Pn	**Pn**	**04 37 54.9**	**-1.5**
TGY	**Tagaytay City**	**14.35**	**342**	P		P	**P**	**04 38 00.9**	**-1.4**
	44nm,0.3s,baz=310,slow=4.9,SNR=5.2								
BLJI	**Banyuglugur**	**14.39**	**236**	P		P	**P**	**04 38 06.4**	**+3.6**
KSM	**Kuching**	**15.25**	**274**	Pn		Pn	**Pn**	**04 38 05.5**	**-3.4**
KSM	**Kuching**	**15.25**	**274**	P		P	**P**	**04 38 13.0**	**+0.6**
PWJI	**Pagerwojo**	**16.04**	**238**	P		P	**Pn**	**04 38 19.9**	**+1.0**
	101nm,1.6s								
KNRA	**Kununurra**	**16.30**	**169**				**Pn**	**04 38 20.9**	**-1.2**
KNRA					IAmb		IAmb	04 38 26.1	
	comp=Z,51nm,0.8s								
WOJI	**Wonogiri, Jawa**	**16.71**	**240**	P		P	**Pn**	**04 38 27.8**	**+0.6**
	comp=Z,22nm,0.9s								
SMRI	**Semarang**	**16.77**	**244**				**Pn**	**04 38 27.5**	**-0.6**
SMRI					IAmb		IAmb	04 38 31.1	
	comp=Z,60nm,0.8s								
KPJI	**Karang Pucung**	**18.25**	**245**	P		P	**Pn**	**04 38 46.8**	**+0.6**
	comp=Z,91nm,0.9s								
FITZ	**Fitzroy Crossi**	**18.39**	**180**	P		P	**P**	**04 38 46.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=22,slow=8.7,SNR=10								
FITZ	**Fitzroy Crossi**	**18.39**	**180**	P		P	**P**	**04 38 46.0**	**-1.0**
LEM	**Lembang**	**19.26**	**248**	P		P	**P**	**04 38 56.1**	**-0.6**
	comp=Z,4.9nm,0.3s,baz=352,slow=16,SNR=3.9								
DLV	**T Lat**	**20.43**	**305**	P		P	**P**	**04 39 09.4**	**-0.2**
DLV					IAmb		IAmb	04 39 24.6	
	comp=Z,80nm,1.6s								
KLSI		**21.38**	**256**	P		P	**P**	**04 39 17.9**	**-1.7**
	comp=Z,8.6nm,1.0s								
MYKOM	**Kota Tinggi**	**21.72**	**274**	P		P	**P**	**04 39 22.6**	**-0.6**
MYKOM	**Kota Tinggi**	**21.72**	**274**	P		P	**P**	**04 39 24.0**	**+0.9**
WB0	**Warramunga Arr**	**21.85**	**157**	P		P	**P**	**04 39 23.3**	**-1.2**
WB0					IAmb		IAmb	04 39 26.8	
	comp=Z,33nm,0.8s								
MANU	**Manus Island**	**21.97**	**96**	P		P	**P**	**04 39 25.0**	**-0.9**
WRAB	**Tennant Creek**	**21.99**	**157**	P		P	**P**	**04 39 25.1**	**-0.9**
WRAB					IAmb		IAmb	04 39 28.2	
	comp=Z,37nm,0.8s								
WRA	**Warramunga Arr**	**21.99**	**157**	P		P	**P**	**04 39 24.6**	**-1.4**
	comp=Z,27nm,0.7s,baz=338,slow=11,SNR=226								
WRA				S			**S**	**04 43 24.1**	**-1.0**
	comp=Z,10.0nm,1.3s,baz=334,slow=18,SNR=13								
WB2	**Warramunga Arr**	**22.00**	**157**	P		P	**P**	**04 39 24.6**	**-1.5**
WR0	**Warramunga Arr**	**22.08**	**157**	P		P	**P**	**04 39 25.5**	**-1.5**
PSA00	**Pilbara Seismi**	**22.54**	**194**	P		P	**P**	**04 39 31.6**	**-0.3**
COEN	**Coen**	**22.57**	**130**	P		P	**P**	**04 39 31.4**	**-0.8**
COEN					IAmb		IAmb	04 39 39.1	
	comp=Z,20nm,0.8s								
SDSI	**Sungai Dareh**	**24.14**	**267**	P		P	**P**	**04 39 47.0**	**-0.2**
	comp=Z,19nm,0.7s								
BKNI	**Bangkinang**	**24.49**	**270**	P		P	**P**	**04 39 50.0**	**-0.5**
UBPT	**Khong Chiam**	**24.72**	**308**	P		P	**P**	**04 39 52.8**	**+0.3**
IPM	**Ipoh**	**24.81**	**280**	P		P	**P**	**04 39 52.4**	**-1.0**
IPM					IAmb		IAmb	04 39 53.2	
	comp=Z,18nm,0.6s								
IPM	**Ipoh**	**24.81**	**280**	P		P	**P**	**04 39 53.0**	**-0.4**
AS31	**Alice Springs**	**25.27**	**162**	P		P	**P**	**04 39 57.3**	**-0.2**
ASAR	**Alice Springs**	**25.28**	**162**	P		P	**P**	**04 39 57.9**	**+0.3**
	comp=Z,24nm,0.8s,baz=337,slow=8.4,SNR=95								
ASAR					PcP		**PcP**	**04 43 29.6**	**+0.3**
	comp=Z,1.2nm,0.4s,baz=342,slow=2.1,SNR=4.8								
ASAR					S		**S**	**04 44 19.0**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=352,slow=21,SNR=5.0								
ASAR					ScP		**ScP**	**04 47 04.3**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=344,slow=2.3,SNR=10.0								
KULM	**Kulim**	**25.31**	**281**	P		P	**P**	**04 39 58.0**	**+0.1**
MNSI	**Mandailing Nat**	**25.95**	**271**	P		P	P	04 40 14.1	+10
RPSI	**Rantau Prapat**	**26.69**	**275**	P		P	**P**	**04 40 09.7**	**-0.7**
PSI	**Prapat**	**26.70**	**275**	P		P	**P**	**04 40 09.6**	**-1.0**
	comp=Z,9.0nm,0.8s,baz=1.7,slow=4.2,SNR=8.6								
PSI					LR		LR	04 51 28.9	
	comp=Z,204nm,19.9s,baz=91,slow=38								
KRVT	**Keravat (AS076**	**26.89**	**100**	LR			LR	04 50 44.1	
	comp=Z,130nm,19.9s,baz=290,slow=36								
KCSI	**Kotacane, Aceh**	**27.91**	**277**	P		P	**P**	**04 40 20.6**	**-0.8**
	comp=Z,30nm,0.7s								
NONG	**Nongkai**	**28.14**	**310**	P		P	**P**	**04 40 23.7**	**+0.4**
	comp=Z,19nm,1.0s								
CTA	**Charters Tower**	**28.76**	**136**	P		P	**P**	**04 40 29.6**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=314,slow=11,SNR=4.8								
UTHA	**Uthaitani**	**29.83**	**302**	P		P	**P**	**04 40 38.5**	**+0.2**
	comp=Z,22nm,0.8s								
UTTA	**Uttaradit**	**30.00**	**306**	P		P	**P**	**04 40 40.0**	**+0.2**
	comp=Z,14nm,0.8s								
NANT	**Nan**	**30.46**	**308**	P		P	**P**	**04 40 45.1**	**+1.1**
	comp=Z,13μmcomp=Z,254nm,0.6s								
SUKH	**Sukhothai**	**30.61**	**305**	P		P	**P**	**04 40 45.0**	**-0.3**
	comp=Z,31nm,0.7s								
CM35	**Chiang Mai Arr**	**31.62**	**307**	P		P	**P**	**04 40 54.0**	**-0.2**
GYA	**Guiyang**	**31.64**	**326**	⇓P		P	**P**	**04 40 54.4**	**+0.1**
GYA					pmax		pmax		
	comp=Z,9.0nm,0.7s								
CM31	**Chiang Mai Arr**	**31.68**	**306**	P		P	**P**	**04 40 54.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**31.68**	**306**	P		P	**P**	**04 40 55.0**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=133,slow=7.5,SNR=15								
CMAR					PcP		**PcP**	**04 43 46.2**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=177,slow=1.9,SNR=5.5								
CMAR					LR		LR	04 55 22.3	
	comp=Z,50nm,20.7s,baz=146,slow=39								

CMAR	**Chiang Mai Arr**	**31.68**	**306**	P		**P**	**04 40 54.2**	**-0.5**
CMMT	**Chiang Mai**	**31.86**	**307**	P		**P**	**04 40 56.3**	**0.0**
CHTO	**Chiang Mai**	**31.86**	**307**	P		**P**	**04 40 55.8**	**-0.5**
CHTO				IAmb		IAmb	04 40 57.0	
	comp=Z,10nm,0.8s							
NJ2	**Nanjing**	**32.10**	**349**	*e*P		**P**	**04 41 00.4**	**+2.2**
NJ2				pmax		pmax		
	comp=Z,11nm,0.5s							
ENH	**Enshi**	**33.39**	**334**	P		**P**	**04 41 08.8**	**-0.8**
ENH				IAmb		IAmb	04 41 11.3	
	comp=Z,12nm,0.9s							
STKA	**Stephens Creek**	**35.53**	**156**	P		**P**	**04 41 28.4**	**+0.4**
	comp=Z,9.6nm,0.7s,baz=326,slow=8.2,SNR=25							
STKA	**Stephens Creek**	**35.53**	**156**	P		**P**	**04 41 27.8**	**-0.2**
INU	**Inuyama**	**36.38**	**16**	P		**P**	**04 41 35.7**	**+0.6**
INU				IAmb		IAmb	04 41 36.8	
	comp=Z,13nm,0.7s							
CD2	**Chengdu**	**36.70**	**328**	P		**P**	**04 41 38.8**	**+0.8**
CD2				pmax		pmax		
	comp=Z,20nm,1.1s							
JGF	**Kuroka**	**36.71**	**16**	P		**P**	**04 41 37.3**	**-0.8**
XAN	**Xi'an**	**36.90**	**337**	P		**P**	**04 41 38.1**	**-1.6**
XAN				pP		pP	04 41 55.8	+0.1
XAN				pmax		pmax		
	comp=Z,8.0nm,0.6s							
XAN				LR		LR		
	comp=N,160nm,22.8s							
XAN				LR		LR		
	comp=E,160nm,22.8s							
XAN				LR		LR		
	comp=Z,260nm,24.9s							
XAN	**Xi'an**	**36.90**	**337**	P		**P**	**04 41 38.2**	**-1.5**
KSAR	**Wonju Array Be**	**36.92**	**3**	P		**P**	**04 41 40.2**	**+0.5**
KSRS	**Korea Array**	**36.93**	**3**	P		**P**	**04 41 40.9**	**+1.1**
	comp=Z,3.0nm,0.6s,baz=181,slow=11,SNR=11							
MAJO	**Matsushiro**	**37.83**	**17**	P		**P**	**04 41 47.4**	**-0.1**
MAT	**Matsushiro**	**37.83**	**17**	P		**P**	**04 41 47.2**	**-0.3**
MJAR	**Matsushiro Arr**	**37.83**	**17**	P		**P**	**04 41 47.0**	**-0.5**
	comp=Z,12nm

comp=Z,3.9nm,0.5s,baz=123,slow=5.5,SNR=16
ZALV LR LR 05 15 03.6
comp=Z,89nm,21.3s,baz=24,slow=38
ZALV Zalesovo Beam 63.02 334 P **P** **04 44 55.4 -1.7**
GAR Garm 63.32 314 P **P** **04 44 58.5 -1.1**
BTK Batken 63.39 316 P **P** **04 45 00.3 +0.3**
BTK IAmb IAmb 04 45 02.7
comp=Z,8.1nm,0.8s
BTLS Baital 63.48 322 *eP* **P** **04 44 58.7 -1.7**
KURK Kurchatov 63.91 329 P **P** **04 45 02.0 -1.1**
IUG Iuzhnay 64.79 317 *eP* **P** **04 45 07.8 -1.4**
comp=Z,4.3nm,0.9s
KK31 Karatay Array 64.87 318 P **P** **04 45 09.0 -0.6**
KK31 IAmb IAmb 04 45 11.4
comp=Z,11nm,1.2s
KKAR Karatay Array 64.87 318 P **P** **04 45 08.5 -1.1**
SEY Seymchan 65.52 13 P **P** **04 45 15.2 +1.8**
comp=Z,2.2nm,0.5s,baz=194,slow=5.0,SNR=5.4
BRZS Berezniki 66.72 326 *eP* **P** **04 45 19.7 -1.6**
HRA Herat 67.93 307 P **P** **04 45 29.1 -0.5**
HRA IAmb IAmb 04 45 32.1
comp=Z,3.9nm,0.6s
BRVK Borovoye 69.53 328 P **P** **04 45 38.0 -0.9**
BRVK IAmb IAmb 04 45 41.1
comp=Z,23nm,1.3s
TIXI Tiksi 71.16 1 P **P** **04 45 48.2 -0.2**
TIXI IAmb IAmb 04 45 49.1
comp=Z,7.5nm,0.8s
GEYT Alibeck 72.06 310 P **P** **04 45 55.4 +0.9**
comp=Z,6.8nm,0.5s,baz=188,slow=10,SNR=8.1
GYA0B ALIBECK ARRAY 72.06 310 P **P** **04 45 54.8 +0.3**
GYA0B IAmb IAmb 04 45 56.8
comp=Z,6.8nm,0.8s
NRIK Noril'sk 73.36 347 P **P** **04 46 02.1 +0.5**
comp=Z,11nm,0.5s,baz=123,slow=6.3,SNR=16
ABKAR Akbulak array 73.97 322 P **P** **04 46 04.5 -1.0**
ARU Arti 77.10 328 P **P** **04 46 22.4 -0.9**
ARU IAmb IAmb 04 46 23.4
comp=Z,14nm,0.9s
VNDA Vanda 80.31 172 P **P** **04 46 41.0 +0.5**
comp=Z,1.0nm,0.8s,baz=340,slow=3.6,SNR=5.3
RAYN Ar Rayn 80.69 294 P **P** **04 46 42.9 -0.9**
RAYN IAmb IAmb 04 46 45.9
comp=Z,12nm,1.2s
AKH Akhalkalaki 83.75 311 IAmb IAmb 04 47 01.4
comp=Z,17nm,1.0s
GEVA Gevas 83.83 308 P **P** **04 47 00.1 0.0**
KBZ Khabaz 84.38 314 P **P** **04 47 03.6 +1.1**
comp=Z,4.8nm,0.8s,baz=166,slow=3.3,SNR=6.9
MARD Mardin 85.57 307 P **P** **04 47 08.2 -0.5**
COLD Coldfoot 87.40 23 P **P** **04 47 17.8 +0.9**
COLD IAmb IAmb 04 47 19.4
comp=Z,8.2nm,0.9s
KLMR Klimovskoe 87.69 331 *eP* **P** **04 47 16.9 -1.5**
KLMR AMP 04 47 21.6
comp=Z,27nm,1.4s
KMBO Kilima Mbogo 88.28 269 P **P** **04 47 23.9 +1.3**
comp=Z,8.8nm,0.9s,baz=62,slow=6.6,SNR=26
KMBO Kilima Mbogo 88.28 269 P **P**
KMBO **PcP** **04 47 23.7 -0.5**
ILAR Eielson Array 88.60 25 P **P** **04 47 22.3 -0.3**
comp=Z,0.9nm,0.6s,baz=240,slow=5.2,SNR=8.8
ILAR Eielson Array 88.60 25 P **P** **04 47 22.4 -0.2**
SYO Syowa Base 88.91 201 *e*PcP **PcP** **04 47 26.0 +0.6**
OBN Obninsk 89.07 325 P **P** **04 47 23.9 -1.1**
BMAR Burnt Mountain 89.58 23 P **P** **04 47 28.6 +1.3**
BCAR Beaver Creek A 90.86 27 P **P** **04 47 34.8 +1.5**
BRTR Keskin Array B 91.20 310 P **P** **04 47 33.8 -1.7**
comp=Z,1.7nm,0.7s,baz=108,slow=4.0,SNR=4.6
ARCES ARCESS Array B 93.13 340 P **P** **04 47 42.0 -1.6**
comp=Z,2.0nm,0.7s,baz=90,slow=4.5,SNR=7.6
SPITS Spitsbergen Ar 93.48 349 P **P** **04 47 44.0 -1.2**
comp=Z,4.7nm,0.7s,baz=101,slow=8.6,SNR=6.8
INK Inuvik 93.67 21 P **P** **04 47 46.6 +0.5**
INK IAmb IAmb 04 47 48.2
comp=Z,12nm,1.5s
AKASG Malin Array Be 93.69 321 P **P** **04 47 44.8 -1.7**
comp=Z,1.2nm,0.6s,baz=64,slow=5.2,SNR=5.3
AKASG LR LR 05 35 09.4
comp=Z,40nm,20.8s,baz=55,slow=39
AKASG Malin Array Be 93.69 321 P **P** **04 47 45.3 -1.2**
FINES FINESS Array B 94.17 332 P **P** **04 47 47.0 -1.6**
comp=Z,2.7nm,0.9s,baz=80,slow=4.5,SNR=7.5
BURAR Bucovina Array 96.66 318 P **P** **04 47 59.9 -0.4**
C36M Paulatuk 96.72 20 P **P** **04 48 00.1 +0.1**
KOLS Kolonicke sedl 98.39 320 *e*PDIFF Pdif 04 48 09.0 +1.0
CRVS Cervenica-Dubn 98.92 320 *e*PDIFF Pdif 04 48 10.8 +0.4
BOSA Boshof 99.21 241 P **Pdif** **04 48 11.5 -0.8**
comp=Z,6.1nm,1.1s,baz=32,slow=5.7,SNR=3.9
NOA NORSAR Array B 101.20 333 P **Pdif** **04 48 18.6 -1.7**
comp=Z,0.6nm,0.8s,baz=72,slow=4.5,SNR=3.4
ULM Lac du Bonnet 118.43 29 PKP **PKiKP** **04 53 17.7 +0.3**
comp=Z,3.3nm,0.8s,baz=205,slow=6.9,SNR=3.2
ANMO Albuquerque 120.13 48 PKP **PKiKP** **04 53 22.9 +1.5**
comp=Z,0.3nm,0.3s,baz=158,slow=7.3,SNR=3.7
TORD Torodi Ar. Bea 122.73 286 PKP **PKPdf** **04 53 26.6 +0.1**
comp=Z,2.5nm,0.7s,baz=54,slow=1.8,SNR=17
TORD Torodi Ar. Bea 122.73 286 **PKiKP** **04 53 27.0 +0.2**
TXAR Lajitas Array 124.55 53 PKP **PKiKP** **04 53 31.1 +0.9**
comp=Z,0.9nm,0.8s,baz=294,slow=1.2,SNR=6.2
DBIC Dimbokro 130.00 279 PKP **PKiKP** **04 53 41.9 +0.6**
comp=Z,2.3nm,0.7s,baz=340,slow=4.6,SNR=3.6
TKL Tuckaleechee C 134.91 34 PKP **PKiKP** **04 53 51.3 +0.6**
comp=Z,2.9nm,0.6s,baz=145,slow=5.1,SNR=5.4
LPAZ La Paz 159.25 140 PKP **PKPdf** **04 54 31.8 +1.9**
comp=Z,1.5nm,0.9s,baz=0.1,slow=2.5,SNR=5.6

*INET **22** 04:39:39.8, 13˚.89N×92˚.46W, h10km, ML3.9, MW3.6*
*GCG **22** 04:39:41.3±0.6, 13˚.83N×92˚.26W, h49km±7km, MD4.5*
*SNET **22** 04:39:47.1±1.8, 14˚.12N×91˚.92W, h56km±16km, ML4.6*
*UCR **22** 04:39:47.3±1.6, 14˚.13N×91˚.91W, h57km±14km, ML4.4, mb4.3(NEIC)*
*NEIC **22** 04:39:48.8±1.9, 14˚.19N±0˚.09×91˚.83W±0˚.07, h67km±8km, mb4.3/30, Error ellipse: s-maj=14.4km s-min=8.0km az=213.0*
*MEX **22** 04:39:48.2±0.6, 14˚.26N×91˚.79W, h76km±12km, MD4.3*
*IDC **22** 04:39:49.1±2.1, 14˚.53N×91˚.72W, h59km±18km, mb3.7/6, mb1 4.1/9, mb1mx3.7/42, mbtmp4.0/9, MS3.5/10, Ms1 3.5/10, ms1mx3.2/39, Error ellipse: s-maj=41.8km s-min=13.1km az=37.0*

ISC 22 04:39:47.9±0.9, 14˚.15N±0˚.07×91˚.93W±0˚.05, h63km±7km, n125, σ1s17/151, mb4.3/15, 6D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RTAL	**Retalhuleu**	**0.43**	**31**	||*i*P	**Pn**	**04 39 58.3**	**-1.3**
RTAL				*e*S		**Sn**	**04 40 07.3**	**-0.6**
RTAL	**Retalhuleu**	**0.43**	**31**	Pn		**Pn**	**04 39 58.2**	**-1.3**
ERG	**Entre ros, C**	**0.45**	**51**	||*i*P	**Pn**	**04 39 59.2**	**-0.5**
STG3	**Santiaguito 3,**	**0.65**	**32**	||*i*P	**Pn**	**04 40 01.1**	**-1.0**
THIG		**0.82**	**336**	*e*P		**Pn**	**04 40 03.0**	**-0.8**
THIG				*e*S		**Sn**	**04 40 15.3**	**-0.2**
THIG		**0.82**	**336**			**Pn**	**04 40 03.1**	**-0.7**
FUG	**Fuego 3**	**1.09**	**74**	||*i*P	**Pn**	**04 40 06.3**	**-1.1**
HUEH	**Huehuetenango**	**1.23**	**19**	*e*P		**Pn**	**04 40 09.3**	**-0.1**
HUEH				*e*S		**Sn**	**04 40 26.6**	**+1.3**
HUEH				IAML			04 40 35.0	
	comp=Z,13μm,0.4s							
HUEH	**Huehuetenango**	**1.23**	**19**			**Pn**	**04 40 09.2**	**-0.1**
PCG	**Pacaya**	**1.30**	**79**	||*e*P	**Pn**	**04 40 09.6**	**-0.6**
NBG	**Las Nubes**	**1.59**	**74**	||*e*P	**Pn**	**04 40 14.7**	**+0.6**
NBG				*e*S		**Sn**	**04 40 35.2**	**+1.3**
PCIG		**1.98**	**321**	*e*P		**Pn**	**04 40 19.2**	**0.0**
PCIG				*e*S		**Sn**	**04 40 42.0**	**-1.0**
PCIG		**1.98**	**321**			**Pn**	**04 40 19.2**	**0.0**
NUBE	**Las Nubes**	**2.10**	**97**	*e*P		**Pn**	**04 40 19.8**	**-1.2**
NUBE				*e*S		**Sn**	**04 40 45.1**	**-1.0**
NUBE	**Las Nubes**	**2.10**	**97**	*e*P		**Pn**	**04 40 19.8**	**-1.2**
NUBE				*e*S		**Sn**	**04 40 45.1**	**-1.0**
CCIG	**Comitan**	**2.13**	**355**	*e*P		**Pn**	**04 40 18.7**	**-2.7**
CCIG	**Comitan**	**2.13**	**355**			**Pn**	**04 40 22.5**	**+1.2**
RTR	**El Retiro**	**2.23**	**96**	*e*P		**Pn**	**04 40 22.6**	**-0.1**
RTR	**El Retiro**	**2.23**	**96**	*e*P		**Pn**	**04 40 22.6**	**-0.1**
SBLS	**San Blas**	**2.26**	**98**	*e*P		**Pn**	**04 40 22.8**	**-0.4**
SBLS	**San Blas**	**2.26**	**98**	*e*P		**Pn**	**04 40 22.8**	**-0.4**
CEVE	**Cerro Verde**	**2.26**	**98**	*e*P		**Pn**	**04 40 22.7**	**-0.5**
CEVE				*e*S		**Sn**	**04 40 50.7**	**+0.6**
CEVE				IAML			04 40 57.8	
	comp=Z,10μm,0.5s							
CEVE	**Cerro Verde**	**2.26**	**98**	*e*P		**Pn**	**04 40 22.7**	**-0.5**
CEVE				*e*S		**Sn**	**04 40 50.7**	**+0.6**
CEVE				IAML			04 40 57.8	
	comp=Z,10μm,0.5s							
SNJE	**San Jose**	**2.27**	**97**	*e*P		**Pn**	**04 40 22.9**	**-0.4**
SNJE	**San Jose**	**2.27**	**97**	*e*P		**Pn**	**04 40 22.9**	**-0.4**
MRL	**Marmol**	**2.36**	**67**	*e*P		**Pn**	**04 40 24.5**	**-0.1**
MRL				*e*S		**Sn**	**04 40 58.3**	**+5.7**
CEDA	**San Andres**	**2.48**	**98**	*e*P		**Pn**	**04 40 26.2**	**+0.1**
CEDA				*e*S		**Sn**	**04 40 55.6**	**+0.3**
CEDA				IAML			04 41 13.1	
	comp=Z,7μm,0.5s							
CEDA	**San Andres**	**2.48**	**98**	*e*P		**Pn**	**04 40 26.2**	**+0.1**
CEDA				*e*S		**Sn**	**04 40 55.6**	**+0.3**
CEDA				IAML			04 41 13.1	
	comp=Z,7μm,0.5s							
MTO3	**Montecristo**	**2.50**	**84**	*e*P		**Pn**	**04 40 25.2**	**-1.2**
MTO3	**Montecristo**	**2.50**	**84**	*e*P		**Pn**	**04 40 25.2**	**-1.2**
MTO3	**Montecristo**	**2.50**	**84**	Pn		**Pn**	**04 40 24.8**	**-1.7**
TACO	**Tacachico**	**2.50**	**94**	*e*P		**Pn**	**04 40 25.2**	**-1.1**
TACO				*e*S		**Sn**	**04 40 56.3**	**+0.5**
TACO				IAML			04 41 01.2	
	comp=Z,626nm,0.8s							
TACO	**Tacachico**	**2.50**	**94**	*e*P		**Pn**	**04 40 25.2**	**-1.1**
TACO				*e*S		**Sn**	**04 40 56.3**	**+0.5**
TACO				IAML			04 41 01.2	
	comp=Z,626nm,0.8s							
ESQI	**Esquipulas**	**2.54**	**81**	*e*P		**Pn**	**04 40 26.2**	**-0.7**
ESQI	**Esquipulas**	**2.54**	**81**	Pn		**Pn**	**04 40 25.8**	**-1.0**
BOQS	**Boqueron**	**2.60**	**99**	*e*P		**Pn**	**04 40 27.6**	**-0.2**
BOQS				*e*S		**Sn**	**04 40 59.5**	**+1.0**
BOQS	**Boqueron**	**2.60**	**99**	*e*P		**Pn**	**04 40 27.6**	**-0.2**
BOQS				*e*S		**Sn**	**04 40 59.5**	**+1.0**
LALI	**Alcalda de L**	**2.62**	**104**	*e*P		**Pn**	**04 40 26.9**	**-0.9**
LALI				*e*S		**Sn**	**04 40 58.3**	**-0.2**
LALI	**Alcalda de L**	**2.62**	**104**	*e*P		**Pn**	**04 40 26.9**	**-0.9**
LALI				*e*S		**Sn**	**04 40 58.3**	**-0.2**
SNET	**Serv Nac Est T**	**2.66**	**100**	*e*P		**Pn**	**04 40 28.1**	**-0.4**
SNET				*e*S		**Sn**	**04 40 58.6**	**-1.0**
SNET	**Serv Nac Est T**	**2.66**	**100**	*e*P		**Pn**	**04 40 28.1**	**-0.4**
SNET				*e*S		**Sn**	**04 40 58.6**	**-1.0**
SNET	**Serv Nac Est T**	**2.66**	**100**			**Pn**	**04 40 27.7**	**-0.8**
OPAM	**Oficina de Pla**	**2.69**	**99**	*e*P		**Pn**	**04 40 28.6**	**-0.3**
OPAM				*e*S		**Sn**	**04 41 00.7**	**+0.4**
OPAM				IAML			04 41 12.6	
	comp=Z,2μm,0.4s							
OPAM	**Oficina de Pla**	**2.69**	**99**	*e*P		**Pn**	**04 40 28.6**	**-0.3**
OPAM				*e*S		**Sn**	**04 41 00.7**	**+0.4**
OPAM				IAML			04 41 12.6	
	comp=Z,2μm,0.4s							
LBRS	**Las Brisas**	**2.83**	**98**	*e*P		**Pn**	**04 40 30.4**	**-0.4**
LBRS	**Las Brisas**	**2.83**	**98**	*e*P		**Pn**	**04 40 30.4**	**-0.4**
LFRS	**El Faro**	**2.83**	**100**	*e*P		**Pn**	**04 40 30.9**	**0.0**
LFRS	**El Faro**	**2.83**	**100**	*e*P		**Pn**	**04 40 30.9**	**0.0**
TGIG		**2.85**	**336**	*e*P		**Pn**	**04 40 29.9**	**-1.3**
TGIG				*e*S		**Sn**	**04 41 02.2**	**-2.2**
TGIG		**2.85**	**336**			**Pn**	**04 40 32.0**	**+0.8**
PAVA	**Las Pavas**	**2.94**	**98**	*e*P		**Pn**	**04 40 31.8**	**-0.5**
PAVA	**Las Pavas**	**2.94**	**98**	*e*P		**Pn**	**04 40 31.8**	**-0.5**
PAVA				*e*S		**Sn**	**04 41 08.9**	**+2.4**
COEG	**Centro de Oper**	**3.01**	**100**	*e*P		**Pn**	**04 40 32.7**	**-0.5**
COEG				*e*S		**Sn**	**04 41 08.4**	**+0.2**
COEG				IAML			04 41 18.0	
	comp=Z,3μm,0.5s							
COEG	**Centro de Oper**	**3.01**	**100**	*e*P		**Pn**	**04 40 32.7**	**-0.5**
COEG				*e*S		**Sn**	**04 41 08.4**	**+0.2**
COEG				IAML			04 41 18.0	
	comp=Z,3μm,0.5s							
ALJI	**Alcalda de J**	**3.36**	**104**	*e*P		**Pn**	**04 40 37.6**	**-0.4**
ALJI				*e*S		**Sn**	**04 41 16.2**	**-0.6**
ALJI				IAML			04 41 25.9	
	comp=Z,2μm,0.6s							
ALJI	**Alcalda de J**	**3.36**	**104**	*e*P		**Pn**	**04 40 37.6**	**-0.4**
ALJI				*e*S		**Sn**	**04 41 16.2**	**-0.6**
ALJI				IAML			04 41 25.9	
	comp=Z,2μm,0.6s							
COEB	**Comit de Eme**	**3.36**	**101**	*e*P		**Pn**	**04 40 37.8**	**-0.3**
COEB				*e*S		**Sn**	**04 41 16.9**	**-0.1**
COEB				IAML			04 41 28.6	
	comp=Z,1μm,0.5s							
COEB	**Comit de Eme**	**3.36**	**101**	*e*P		**Pn**	**04 40 37.8**	**-0.3**
COEB				*e*S		**Sn**	**04 41 16.9**	**-0.1**
COEB				IAML			04 41 28.6	
	comp=Z,1μm,0.5s							
PETF	**Flores**	**3.39**	**36**	Pn		**Pn**	**04 40 37.8**	**-0.6**
TECA	**Tecapa**	**3.39**	**101**	*e*P		**Pn**	**04 40 38.5**	**-0.1**
TECA	**Tecapa**	**3.39**	**101**	*e*P		**Pn**	**04 40 38.5**	**-0.1**
LCND	**La Caada**	**4.01**	**102**	*e*P		**Pn**	**04 40 46.6**	**-0.3**
LCND				*e*S		**Sn**	**04 41 33.8**	**+1.1**
LCND	**La Caada**	**4.01**	**102**	*e*P		**Pn**	**04 40 46.6**	**-0.3**
LCND				*e*S		**Sn**	**04 41 33.8**	**+1.1**
CMIG	**Matias Romero**	**4.08**	**316**	P		**Pn**	**04 40 48.2**	**+0.4**
	comp=Z,14nm,0.3s,baz=127,slow=9.9,SNR=75							
CMIG				S		**Sn**	**04 41 32.5**	**-1.8**
	comp=Z,41nm,0.3s,baz=127,slow=8.6,SNR=5.1							
CMIG				LR		LR	04 42 18.1	
	comp=Z,223nm,19.2s,baz=126,slow=38							
CMIG	**Matias Romero**	**4.08**	**316**	*e*P		**Pn**	**04 40 48.3**	**+0.4**
CMIG				*i* S		**Sn**	**04 41 33.6**	**-0.8**
CSGN	**Cosiguina Volc**	**4.41**	**105**	Pn		**Pn**	**04 40 52.1**	**-0.2**
TGUH	**Tegucigalpa,Un**	**4.52**	**91**	Pn		**Pn**	**04 40 52.8**	**-1.1**
CRIN	**San Cristobal**	**4.96**	**106**	Pn		**Pn**	**04 41 00.4**	**+0.4**
ACON	**Acoyapa**	**6.93**	**107**			**Pn**	**04 41 27.7**	**+0.8**
TEIG	**Tepich**	**6.97**	**30**	Pn		**Pn**	**04 41 26.7**	**-0.8**
TLIG	**Tlapa**	**7.23**	**299**	Pn		**Pn**	**04 41 33.4**	**+2.2**
ESPN	**Las Esperanzas**	**7.68**	**104**			**Pn**	**04 41 38.7**	**+1.6**
JTS	**Las Juntas de**	**7.82**	**119**	P		**Pn**	**04 41 40.6**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=2.6,slow=7.0,SNR=14							
JTS				S		**Sn**	**04 43 08.3**	**+2.0**
	baz=41,slow=22,SNR=2.5							
JTS	**Las Juntas de**	**7.82**	**119**	Pn		**Pn**	**04 41 40.0**	**+0.9**
HDC	**Heredia**	**8.68**	**118**	Pn		**Pn**	**04 41 51.0**	**-0.1**
MOIG	**Morelia**	**10.43**	**303**	Pn		**Pn**	**04 42 17.7**	**+2.7**
ZAIG	**Zacatecas**	**13.23**	**312**	Pn		**Pn**	**04 42 55.3**	**+2.0**
143A	**Socs Landing,**	**18.47**	**1**	P		**P**	**04 43 59.0**	**+0.3**
143A				IAmb		IAmb	04 44 27.6	
	comp=Z,14nm,0.9s							
TX31	**Lajitas Ar. Si**	**18.61**	**326**			**Pn**	**04 44 02.1**	**+0.8**
TX32	**Lajitas Array**	**18.61**	**326**	P		**Pn**	**04 44 02.2**	**+0.9**
TXAR	**Lajitas Array**	**18.61**	**326**	P		**Pn**	**04 44 01.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=155,slow=12,SNR=18							
TXAR				PcP		**PcP**	**04 48 27.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=112,slow=1.0,SNR=2.8							
TXAR	**Lajitas Array**	**18.61**	**326**	P		**Pn**	**04 44 02.5**	**+1.2**
Z47A	**Carrollton**	**19.28**	**10**	P		**P**	**04 44 07.9**	**+0.3**
Z47A				IAmb		IAmb	04 44 09.1	
	comp=Z,13nm,0.6s							
WLAR	**White Oak Lake**	**19.48**	**357**	P		**P**	**04 44 10.5**	**+0.8**
WLAR				IAmb		IAmb	04 44 32.7	
	comp=Z,12nm,0.9s							
ROSC	**El Rosal**	**19.66**	**116**	P		**P**	**04 44 11.3**	**-1.0**
ROSC				IAmb		IAmb	04 44 20.0	
	comp=Z,16nm,1.1s							
LPIG	**La Paz**	**19.97**	**302**	LR		LR	04 51 12.9	
	comp=Z,52nm,21.9s,baz=105,slow=34							
MIAR	**Mount Ida**	**20.36**	**356**	P		**P**	**04 44 20.6**	**+1.3**
GOGA	**Godfrey**	**20.66**	**20**	P		**P**	**04 44 20.8**	**-1.7**
GOGA				IAmb		IAmb	04 44 21.9	
	comp=Z,21nm,1.3s							
MNTX	**Cornudas Mount**	**21.38**	**327**	P		**P**	**04 44 31.8**	**+1.5**
W35A	**Tecumseh**	**21.38**	**349**	P		**P**	**04 44 31.9**	**+1.7**
SDV	**Santo Domingo**	**21.50**	**102**	LR		LR	04 52 48.2	
	comp=Z,67nm,19.5s,baz=258,slow=36							
WVT	**Waverly**	**22.19**	**9**	P		**P**	**04 44 37.3**	**-1.6**
AMTX	**Amarillo**	**22.44**	**339**	P		**P**	**04 44 42.9**	**+1.2**
AMTX				IAmb		IAmb	04 44 43.9	
	comp=Z,27nm,1.4s							
PBMO	**Poplar Bluff**	**22.57**	**3**	P		**P**	**04 44 42.9**	**-0.1**
PBMO				IAmb		IAmb	04 44 43.1	
	comp=Z,14nm,1.4s							
TKL	**Tuckaleechee C**	**22.63**	**17**	P		**P**	**04 44 41.6**	**-2.1**
	comp=Z,4.2nm,0.6s,baz=178,slow=8.9,SNR=5.4							
TKL				LR		LR	04 54 06.4	
	comp=Z,236nm,21.1s,baz=185,slow=39							
121A	**Cookes Peak, D**	**23.33**	**324**	P		**P**	**04 44 53.4**	**+2.5**
SIUC	**Southern Illin**	**23.59**	**5**	P		**P**	**04 44 51.4**	**-1.7**
BNM	**Barren Site**	**23.95**	**329**	P		**P**	**04 44 57.3**	**+0.6**
U54A	**Nelsons Funny**	**24.04**	**20**	P		**P**	**04 44 55.4**	**-1.8**
LENM	**Lemitar**	**24.14**	**328**	P		**P**	**04 44 59.8**	**+1.5**
ANMO	**Albuquerque**	**24.50**	**330**	P		**P**	**04 45 01.1**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=145,slow=12,SNR=8.9							
ANMO				LR		LR	04 55 59.2	
	comp=Z,52nm,21.5s,baz=158,slow=40							
ANMO	**Albuquerque**	**24.50**	**330**	P		**P**	**04 45 02.9**	**+1.3**
ATAH	**Atahualpa**	**25.05**	**147**	LR		LR	04 53 53.8	
	comp=Z,82nm,18.5s,baz=345,slow=33							
SJG	**San Juan**	**25.06**	**78**	LR		LR	04 54 17.9	
	comp=Z,84nm,19.4s,baz=262,slow=35							
W18A	**Petrified Fore**	**26.33**	**326**	P		**P**	**04 45 19.4**	**+1.2**
W18A				IAmb		IAmb	04 45 21.4	
	comp=Z,10nm,1.3s							
MVCO	**Mesa Verde**	**27.30**	**330**	P		**P**	**04 45 27.6**	**+0.7**
MVCO				IAmb		IAmb	04 45 29.4	
	comp=Z,12nm,1.4s							
CTU	**Camp Tracy**	**31.60**	**331**	P		**P**	**04 46 06.2**	**+1.2**
SPR3	**Spring Creek 3**	**31.67**	**326**	IAmb		IAmb	04 46 09.0	
	comp=Z,4.0nm,1.2s							
PDAR	**Pinedale Array**	**32.31**	**335**	P		**P**	**04 46 10.4**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=116,slow=10,SNR=2.2							
NVAR	**Mina Array Bea**	**33.60**	**321**	P		**P**	**04 46 24.4**	**+1.9**
	comp=Z,2.4nm,0.6s,baz=132,slow=8.2,SNR=26							
NVAR				PcP		**PcP**	**04 49 02.6**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=151,slow=1.7,SNR=4.0							
LHV	**Little Huntoon**	**33.61**	**320**	IAmb		IAmb	04 46 29.4	
	comp=Z,8.8nm,1.4s							
HLID	**Hailey**	**35.08**	**331**	IAmb		IAmb	04 46 39.9	
	comp=Z,5.1nm,1.3s							
MCMT	**McKenzie Canyo**	**35.37**	**334**	P		**P**	**04 46 38.8**	**+1.1**
MFID	**Camas Ranch**	**35.65**	**330**	IAmb		IAmb	04 46 46.6	
	comp=Z,7.5nm,1.4s							
SAML	**Samuel**	**36.61**	**127**	P		**P**	**04 46 46.2**	**-2.1**
SAML				IAmb		IAmb	04 46 47.5	
	comp=Z,4.4nm,0.9s							
YKA	**Yellowknife Ar**	**50.89**	**347**	P		**P**	**04 48 40.5**	**-1.8**
	comp=Z,1.1nm,0.6s,baz=142,slow=8.1,SNR=11							
BDFB	**Brasília**	**52.54**	**123**	P		**P**	**04 48 54.1**	**-1.4**
PLCA	**Paso Flores**	**58.10**	**161**	LR		LR	05 08 42.3	
	comp=Z,115nm,21.4s,baz=238,slow=30							
SFJD	**Kangerlussuaq**	**59.35**	**18**	LR		LR	05 14 22.9	
	comp=Z,123nm,19.8s,baz=248,slow=35							
BCAR	**Beaver Creek A**	**59.93**	**336**	P		**P**	**04 49 47.5**	**+0.1**
ILAR	**Eielson Array**	**62.73**	**337**	P		**P**	**04 50 05.2**	**-0.9**
	comp=Z,3.8nm,1.1s,baz=137,slow=5.1,SNR=12							
PPT	**Papeete**	**65.02**	**243**	LR		LR	05 10 40.5	
	comp=Z,57nm,19.2s,baz=321,slow=28							
LZH	**Lanzhou**	**127.86**	**344**	*e*PKP		**PKPdf**	**04 58 43.8**	**-3.4**
LZH				sPKP			04 59 21.4	
WRA	**Warramunga Arr**	**135.50**	**256**	PKP		**PKiKP**	**04 59 04.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=89,slow=2.5,SNR=6.7							
CMAR	**Chiang Mai Arr**	**145.87**	**341**	PKPbc		**PKPdf**	**04 59 20.9**	**+0.5**
	comp=Z,3.1nm,0.5s,baz=342,slow=3.7,SNR=27							

*TAP **22** 04:41:07.8, 24˚.84N×122˚.01E, h11km, ML3.2, D*
*JMA **22** 04:41:08.1±0.1, 24˚.86N×121˚.98E, h37km±4km, M2.7*

ISC 22 04:41:07.4±0.8, 24˚.84N±0˚.03×122˚.01E±0˚.03, h15km±5km, n38, σ0s63/52, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.07**	**271**	*i* P		**Pg**	**04 41 10.4**	**+0.1**
	baz=276							
EGS				*e*S		**Sg**	**04 41 11.9**	**-0.5**
	baz=276							
NTC	**Toucheng**	**0.16**	**274**	*i* P		**Pb**	**04 41 12.1**	**+0.1**
	baz=276							
NTC				*e*S		**Sb**	**04 41 15.1**	**0.0**
	baz=276							
TWB1	**Santiao Chiao**	**0.16**	**354**	*i* P		**Pg**	**04 41 11.6**	**+0.1**
	baz=356							
TWB1				*e*S		**Sg**	**04 41 14.4**	**+0.1**
	baz=356							
TIPB	**Shuangxi**	**0.21**	**308**	*i* P		**Pb**	**04 41 13.0**	**+0.1**
	baz=309							
TIPB				S		**Sb**	**04 41 16.2**	**-0.3**
	baz=309							
TWC	**Suao**	**0.27**	**212**	*i* P		**Pb**	**04 41 13.6**	**-0.3**
	baz=210							
TWC				*e*S		**Sg**	**04 41 17.0**	**-0.2**
	baz=210							
NWF	**Wu-fen Shan**	**0.30**	**318**	*i* P		**Pb**	**04 41 14.9**	**+0.4**
	baz=318							
NWF				S		**Sb**	**04 41 19.9**	**+0.5**
	baz=318							
WFSB	**Wu-fen Shan**	**0.30**	**318**	*i* P		**Pb**	**04 41 14.9**	**+0.4**
	baz=318							
WFSB				S		**Sb**	**04 41 19.6**	**+0.3**
	baz=318							

M_{rr}1.53; $M_{\theta\theta}$-8.36; $M_{\phi\phi}$6.84; $M_{r\theta}$3.56; $M_{\theta\phi}$-2.34; $M_{\phi r}$-4.48; Fault plane solution: $M_0$9.87000×10^{14} NP1: ϕ_s124.00000°,δ81.00000°,λ145.00000°. NP2: ϕ_s220.00000°,δ56.00000°,λ11.00000°.

ISC 22 04:44:11.4±0.8, 33°.79N±0°.05×135°.29E±0°.03, h48km±6km, n58, σ0.96/63, **mb4.3**/9, **5C-5D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWM	**Minabe**	**0.08**	**41**	⇓P	**Pn**	**04 44 19.2**	**+0.3**
JWM				S	**Sn**	**04 44 24.7**	**+0.4**
JTNC	**Tanabenakahech**	**0.27**	**83**	⇓P	**Pn**	**04 44 20.1**	**0.0**
JTNC				S	**Sn**	**04 44 26.3**	**0.0**
JWY	**Kouya**	**0.50**	**30**	⇓P	**Pn**	**04 44 22.3**	**-0.3**
JWY				S	**Sn**	**04 44 30.0**	**-0.6**
JAI	**Aioi**	**0.70**	**271**	⇑P	**Pn**	**04 44 25.1**	**+0.1**
JAI				eS	**Sn**	**04 44 35.1**	**+0.2**
JAWN	**Awajishima-nag**	**0.77**	**335**	⇑P	**Pn**	**04 44 25.8**	**-0.1**
JAWN				S	**Sn**	**04 44 36.3**	**-0.2**
JHE	**Heguri**	**0.93**	**21**	⇓P	**Pn**	**04 44 27.5**	**-0.6**
JHE				S	**Sn**	**04 44 39.3**	**-1.0**
JKN2	**Miekihoku**	**0.94**	**61**	⇓P	**Pn**	**04 44 27.5**	**-0.7**
JKN2				S	**Sn**	**04 44 39.1**	**-1.4**
JMN	**Monobe**	**1.18**	**268**	⇑P	**Pn**	**04 44 31.4**	**-0.1**
JMN				S	**Sn**	**04 44 46.0**	**-0.4**
JMN	**Monobe**	**1.18**	**268**	Pn	**Pn**	**04 44 31.2**	**-0.2**
JKS	**Kasai**	**1.25**	**343**	⇑P	**Pn**	**04 44 32.1**	**-0.3**
JKS				S	**Sn**	**04 44 47.1**	**-1.0**
TTO1	**TONANKAI O.B.S**	**1.26**	**97**	⇑P	**Pn**	**04 44 32.1**	**-0.2**
TSUJ	**Tsu 2**	**1.31**	**45**	P	**Pn**	**04 44 32.3**	**-1.0**
JWT	**Wachi**	**1.50**	**4**	Pn	**Pn**	**04 44 35.4**	**-0.5**
INU	**Inuyama**	**2.11**	**42**	Pn	**Pn**	**04 44 44.2**	**-0.1**
JHS	**Saijyo**	**2.17**	**305**	Pn	**Pn**	**04 44 44.7**	**-0.3**
JGF	**Kuroka**	**2.49**	**43**	Pn	**Pn**	**04 44 48.8**	**-0.6**
JSG	**Sagara**	**2.56**	**69**	Pn	**Pn**	**04 44 50.2**	**-0.2**
MAJO	**Matsushiro**	**3.64**	**40**		**Pn**	**04 45 05.9**	**+0.6**
MAT	**Matsushiro**	**3.64**	**40**	P	**Pn**	**04 45 05.3**	**0.0**
MAT				eS	**Sn**	**04 45 52.6**	**+5.6**
MJAR	**Matsushiro Arr**	**3.64**	**40**	Pn	**Pn**	**04 45 05.4**	**+0.2**
	0.3nm,0.3s,baz=215,slow=13,SNR=9.9						
MJAR				Pg		04 45 14.9	
	0.9nm,0.3s,baz=228,slow=16,SNR=16						
MJAR				Lg	Lg	04 46 02.1	
	0.7nm,0.3s,baz=227,slow=28,SNR=7.5						
MJAR	**Matsushiro Arr**	**3.64**	**40**		**Pn**	**04 45 05.2**	**0.0**
JNU	**Nakatsue**	**3.75**	**261**	Pn	**Pn**	**04 45 07.1**	**+0.4**
	46nm,0.3s,baz=58,slow=4.8,SNR=240						
JNU				Sn	**Sn**	**04 45 49.3**	**-0.2**
	10nm,0.3s,baz=313,slow=20,SNR=4.1						
JNU	**Nakatsue**	**3.75**	**261**	Pn	**Pn**	**04 45 06.2**	**-0.5**
JHJ	**Hachijo jima 2**	**3.82**	**99**	Pn	**Pn**	**04 45 07.7**	**+0.1**
	113nm,0.3s,baz=2.5,slow=7.0,SNR=27						
JHJ				Sn	**Sn**	**04 45 49.5**	**-1.7**
	58nm,0.3s,baz=79,slow=22,SNR=5.1						
JHJ2	**Mitsune**	**3.84**	**99**	Pn	**Pn**	**04 45 07.6**	**-0.4**
JSU	**Suzuyama**	**4.67**	**242**	Pn	**Pn**	**04 45 19.1**	**-0.3**
KSRS	**Korea Array**	**7.03**	**303**	Pn	**Pn**	**04 45 51.9**	**+0.3**
	1.9nm,0.3s,baz=126,slow=14,SNR=16						
KSRS				Sn	**Sn**	**04 47 09.6**	**-0.5**
	1.5nm,0.3s,baz=118,slow=24,SNR=9.3						
KSAR	**Wonju Array Be**	**7.05**	**303**	Pn	**Pn**	**04 45 51.6**	**-0.3**
KS19	**Wonju Array Si**	**7.09**	**304**		**Pn**	**04 45 52.5**	**+0.1**
HHC	**Hu-ho-hao-te**	**20.11**	**297**	eP	Pn	04 48 43.6	+0.3
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,39nm,4.9s						
SONM	**Songino Array**	**25.80**	**312**	P	**P**	**04 49 37.7**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=124,slow=9.8,SNR=7.6						
SONM	**Songino Array**	**25.80**	**312**	P	**P**	**04 49 38.3**	**+0.3**
LZH	**Lanzhou**	**25.82**	**284**	eP	**P**	**04 49 40.0**	**+1.6**
LZH				pP	pP	04 49 51.5	+0.8
LZH				sP	sP	04 49 57.0	+0.5
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**31.36**	**108**	T	T	05 23 04.6	
	baz=302,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hy**	**31.36**	**108**	T	T	05 23 04.9	
	baz=302,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**31.38**	**108**	T	T	05 23 05.8	
	baz=302,slow=75,SNR=22						
H11S3	**WAKE ISLAND Hy**	**31.88**	**111**	T	T	05 23 43.0	
	baz=305,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hy**	**31.88**	**111**	T	T	05 23 46.5	
	baz=305,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**31.90**	**111**	T	T	05 23 46.1	
	baz=305,slow=75,SNR=12						
WMQ	**Urumqi**	**37.96**	**300**	eP	**P**	**04 51 26.1**	**+1.7**
MK31	**Makanchi Array**	**41.71**	**304**	P	**P**	**04 51 56.1**	**+0.7**
MKAR	**Makanchi Array**	**41.71**	**304**	P	**P**	**04 51 56.1**	**+0.7**
	comp=Z,2.1nm,0.6s,baz=90,slow=10,SNR=14						
MKAR	**Makanchi Array**	**41.71**	**304**	P	**P**	**04 51 55.6**	**+0.2**
KURK	**Kurchatov**	**44.09**	**310**	P	**P**	**04 52 14.8**	**+0.2**
KURK				IAmb	IAmb	04 52 38.4	
	comp=Z,12nm,1.6s						
KK31	**Karatay Array**	**50.45**	**301**	P	**P**	**04 53 04.9**	**+0.7**
KK31				IAmb	IAmb	04 53 05.5	
	comp=Z,4.7nm,0.8s						
KKAR	**Karatay Array**	**50.45**	**301**	P	**P**	**04 53 04.3**	**+0.1**
GAR	**Garm**	**51.58**	**296**	P	**P**	**04 53 12.9**	**0.0**
CHGR	**Chuyangaron**	**52.54**	**296**	P	**P**	**04 53 20.2**	**+0.2**
WB0	**Warramunga Arr**	**53.26**	**181**	P	**P**	**04 53 25.1**	**-0.2**
WB2	**Warramunga Arr**	**53.44**	**181**	P	**P**	**04 53 26.1**	**-0.5**
WRA	**Warramunga Arr**	**53.44**	**181**	P	**P**	**04 53 25.4**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=357,slow=7.8,SNR=26						
KBL	**Kabul**	**53.89**	**291**	P	**P**	**04 53 29.8**	**-0.3**
ABKAR	**Akbulak array**	**56.21**	**310**	P	**P**	**04 53 46.1**	**-0.3**
AS31	**Alice Springs**	**57.15**	**182**	P	**P**	**04 53 52.9**	**-0.3**
AS31				IAmb	IAmb	04 54 11.9	
	comp=Z,2.7nm,1.6s						
ASAR	**Alice Springs**	**57.15**	**182**	P	**P**	**04 53 52.8**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=13,slow=14,SNR=14						
ASAR	**Alice Springs**	**57.15**	**182**	P	**P**	**04 53 53.2**	**0.0**
FINES	**FINESS Array B**	**69.28**	**331**	P	**P**	**04 55 11.8**	**-1.3**
	comp=Z,4.6nm,1.1s,baz=107,slow=2.6,SNR=5.2						
H03S3	**Juan Fernandez**	**151.66**	**100**	T	T	07 53 04.4	
	SNR=5.2						

IDC 22 04:57:14.9±8.1, 5°.51S×148°.40E, h0km, mb4.0/3, mb1 4.0/5, mb1mx3.6/40, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=121.5km s-min=59.6km az=45.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.06**	**198**	Pn	Pn	04 58 19.5	+1.2
	3.3nm,0.3s,baz=345,slow=17,SNR=6.1						
PMG				Sn	Sn	04 59 01.2	-5.5
	2.4nm,0.3s,baz=218,slow=22,SNR=2.1						
WRA	**Warramunga Arr**	**19.82**	**222**	P	P	05 01 46.5	-0.9
	0.3nm,0.3s,baz=50,slow=10,SNR=7.4						
ASAR	**Alice Springs**	**22.82**	**216**	P	P	05 02 19.0	-0.7
	1.4nm,0.6s,baz=50,slow=8.9,SNR=14						
FITZ	**Fitzroy Crossi**	**25.51**	**239**	P	P	05 02 45.4	+0.1
	3.5nm,0.6s,baz=91,slow=8.6,SNR=5.6						
STKA	**Stephens Creek**	**27.00**	**193**	P	P	05 02 59.2	+0.6
	1.5nm,0.5s,baz=15,slow=6.1,SNR=4.4						

IDC 22 05:01:19.7±1.0, 47°.88N×33°.52E, h0km, mb3.8/3, mb1 3.7/8, mb1mx3.4/42, mbtmp3.6/8, ML2.8/6, Error ellipse: s-maj=18.5km s-min=11.9km az=41.0

ISC 22 05:01:19.4±0.9, 47°.91N±0°.06×33°.47E±0°.06, h10km, n24, σ2.83/28, **mb3.8**/3, **13C-7D, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MILM	**Milestii Mici**	**3.31**	**254**	⇑P	**Pb**	**05 02 20.9**	**+2.8**
MILM				⇑S	**Sg**	**05 03 04.3**	**-1.4**
SORM	**Soroca**	**3.44**	**276**	⇑P	**Pn**	**05 02 14.0**	**+1.0**
SORM				⇓S	**Sn**	**05 02 54.5**	**+0.7**
AKASG	**Malin Array Be**	**3.94**	**317**	Pn	**Pn**	**05 02 21.4**	**+1.6**
	0.9nm,0.3s,baz=128,slow=18,SNR=5.2						
AKASG				Pg	**Pb**	**05 02 29.1**	**+0.2**
	2.7nm,0.3s,baz=126,slow=17,SNR=4.4						
AKASG				Lg	Lg	05 03 19.5	
	8.5nm,0.3s,baz=126,slow=31,SNR=14						
VASR	**Vaslui**	**4.07**	**254**	⇓P	**Pb**	**05 02 29.5**	**-1.5**
VASR				⇑S	**Sb**	**05 03 22.0**	**+1.8**
TLCR		**4.21**	**231**	⇑P	**Pg**	**05 02 40.0**	**+0.1**
VARL	**Varlezi**	**4.34**	**245**	⇓S	**Sg**	**05 03 35.9**	**-2.8**
GHRR		**4.54**	**248**	⇑P	**Pb**	**05 02 37.8**	**-1.3**
GHRR				⇓S	**Sb**	**05 03 37.4**	**+3.6**
TPGR	**Topolog**	**4.64**	**231**	⇑P	**Pg**	**05 02 45.8**	**-2.4**
TESR	**Tescani**	**4.85**	**256**	⇑S	**Sb**	**05 03 38.9**	**-3.9**
VRI	**Vrincioaia**	**5.05**	**249**	⇑P	**Pb**	**05 02 45.1**	**-2.7**
BIZ	**Bicaz**	**5.09**	**262**	⇑P	**Pn**	**05 02 40.1**	**+4.4**
BIZ				⇓S	**Sn**	**05 03 40.5**	**+6.0**
BISRR	**Bisoca**	**5.21**	**246**	⇓P	**Pb**	**05 02 47.9**	**-2.7**
BURAR	**Bucovina Array**	**5.57**	**270**	⇑P	**Pn**	**05 02 42.8**	**+0.4**
MLR	**Muntele Rosu**	**5.71**	**248**	Pn	**Pn**	**05 02 46.4**	**+2.1**
	0.2nm,0.3s,baz=84,slow=18,SNR=3.0						
MLR				Lg	Lg	05 04 08.6	
	0.5nm,0.3s,baz=0.2,slow=22,SNR=5.9						
MLR	**Muntele Rosu**	**5.71**	**248**	⇑P	Pb	05 02 53.8	-5.3
MLR				⇓S	**Sb**	**05 04 06.2**	**-1.4**
DRGR			**7.39**	**265**	⇑P	**Pn**	**05 03 09.5**	**+2.1**
KVAR	**Kislovodsk Arr**	**7.55**	**118**	Lg	Lg	05 05 13.8	
	baz=204,slow=15,SNR=2.0						
KBZ	**Khabaz**	**7.80**	**119**	Pn	**Pn**	**05 03 11.7**	**-1.2**
	0.1nm,0.3s,baz=306,slow=22,SNR=2.2						
KBZ				Lg	Lg	05 05 29.1	
	0.1nm,0.3s,baz=239,slow=18,SNR=2.2						
FINES	**FINESS Array B**	**14.21**	**345**	Pn	Pn	05 04 36.1	-4.3
	0.1nm,0.3s,baz=154,slow=14,SNR=5.5						
FINES				Sn	Sn	05 06 58.8	-19
	0.0nm,0.3s,baz=156,slow=28,SNR=2.9						
HFS	**Hagfors**	**16.79**	**324**	Pn	**Pn**	**05 05 09.1**	**-5.3**
	0.1nm,0.3s,baz=121,slow=14,SNR=5.9						
NOA	**NORSAR Array B**	**18.31**	**324**	Pn	**Pn**	**05 05 29.0**	**-4.3**
	0.0nm,0.3s,baz=131,slow=11,SNR=1.7						
ARCES	**ARCESS Array B**	**22.04**	**353**	P	**P**	**05 06 14.1**	**+0.2**
	2.5nm,0.6s,baz=171,slow=8.6,SNR=16						
ZALV	**Zalesovo Beam**	**32.32**	**60**	P	**P**	**05 07 49.8**	**+1.5**
	0.8nm,0.4s,baz=298,slow=6.4,SNR=2.0						
TORD	**Torodi Ar. Bea**	**43.58**	**228**	P	**P**	**05 09 26.4**	**+2.8**
	0.6nm,0.7s,baz=31,slow=7.7,SNR=4.7						

IPEC 22 05:06:40.1±0.3, 51°.58N×16°.08E, h0km, ML2.5/4, Error ellipse: s-maj=1.9km s-min=1.6km az=36.0
IDC 22 05:06:41.8±0.7, 51°.42N×16°.14E, h0km, mb3.4/1, mb1 3.4/8, mb1mx3.2/56, mbtmp3.3/8, ML2.8/7, Error ellipse: s-maj=14.5km s-min=6.7km az=103.0
DNK 22 05:06:42.7±2.8, 51°.60N×15°.73E, h0km, 89km, ML2.3
PRU 22 05:06:42.7±0.0, 51°.45N×16°.07E, h0km
BGR 22 05:06:43.1±0.3, 51°.46N×16°.11E, h1km, ML3.1/22, Error ellipse: s-maj=4.4km s-min=2.2km az=21.0
VIE 22 05:06:45.4±0.9, 51°.27N×15°.96E, h0km, mb2.5/6, ml2.9/6, Error ellipse: s-maj=7.9km s-min=5.5km az=45.0 76 km WNW of Wroclaw Suspected Mining induced.
UPP 22 05:06:46.8±2.9, 51°.81N×15°.53E, h0km, ML2.2, Suspected explosion

ISC 22 05:06:40.2±0.6, 51°.53N±0°.02×16°.15E±0°.02, h0km, n95, σ1.28/170, **Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.69**	**172**	*i* Pg	**Pb**	**05 06 54.8**	**-0.3**
KSP				eSg	**Sg**	**05 07 03.2**	**+0.8**
KSP	**Ksiaz**	**0.69**	**172**	ePg	**Pb**	**05 06 54.9**	**-0.3**
KSP				eSg	**Sg**	**05 07 03.3**	**+0.8**
CHVC	**Chvalec**	**0.94**	**184**	ePG	**Pg**	**05 06 58.9**	**+0.6**
CHVC				eSG	**Sg**	**05 07 09.5**	**-1.0**
	comp=Z,67nm,0.5s						
OSTC	**Ostas**	**0.97**	**177**	ePG	**Pb**	**05 06 59.8**	**-0.2**
OSTC				eSG	**Sg**	**05 07 11.2**	**-0.3**
	comp=Z,72nm,0.3s						
UPC	**Upice**	**1.03**	**185**	ePG	**Pg**	**05 07 00.5**	**+0.6**
UPC				eSG	**Sg**	**05 07 12.7**	**-0.4**
	comp=Z,165nm,0.4s						
DPC	**Dobruska-Polom**	**1.19**	**175**	ePg	**Pb**	**05 07 03.8**	**+0.2**
DPC				eSg	**Sn**	**05 07 20.5**	**-0.4**
DPC	**Dobruska-Polom**	**1.19**	**175**	ePG	**Pg**	**05 07 03.3**	**+0.4**
DPC				eSG	**Sg**	**05 07 17.9**	**-0.4**
	comp=Z,47nm,0.4s						
PVCC	**Panska Ves**	**1.41**	**225**	ePG	**Pb**	**05 07 08.0**	**+0.6**
PVCC				eSG	**Sg**	**05 07 25.9**	**+0.3**
	comp=Z,208nm,0.3s						
KRLC	**Kraliky**	**1.51**	**164**	ePG	**Pb**	**05 07 09.2**	**+0.1**
KRLC				eSG	**Sg**	**05 07 27.4**	**-1.3**
	comp=Z,78nm,0.5s						
BRG	**Berggiesshubel**	**1.53**	**245**	PN	**Pn**	**05 07 06.6**	**-2.2**
BRG				PG	**Pg**	**05 07 10.4**	**+0.8**
BRG				SG	**Sg**	**05 07 30.4**	**+0.9**
	192nm,0.5s						
RUE	**Ruedersdorf**	**1.75**	**304**	ePn	**Pb**	**05 07 12.8**	**-0.3**
RUE				eSg	**Sg**	**05 07 38.9**	**+2.7**
PRA	**Prague**	**1.82**	**217**	ePG	**Pn**	**05 07 13.3**	**+0.5**
PRA				eSG	**Sb**	**05 07 38.4**	**+0.7**
	comp=Z,19nm,0.7s						
PRU	**Pruhonice**	**1.85**	**214**	ePG	**Pn**	**05 07 13.7**	**+0.5**
PRU				eSG	**Sb**	**05 07 38.8**	**+0.3**
	comp=Z,54nm,0.8s						
FBE	**Freiberg**	**1.86**	**252**	ePn	**Pb**	**05 07 14.6**	**-0.4**
FBE				ePg	**Pg**	**05 07 16.4**	**+0.6**
FBE				eSg	**Sg**	**05 07 40.0**	**+0.2**
MORC	**Moravsky Berou**	**1.97**	**153**	ePN	**Pn**	**05 07 15.7**	**+0.9**
MORC				eSG	**Sg**	**05 07 43.8**	**+0.4**
MORC	**Moravsky Berou**	**1.97**	**153**	ePn	**Pn**	**05 07 15.7**	**+0.9**
MORC				eSg	**Sb**	**05 07 42.5**	**+0.5**
MORC	**Moravsky Berou**	**1.97**	**153**	ePn	**Pn**	**05 07 15.6**	**+0.8**
	baz=333						
MORC				eSg	**Sg**	**05 07 43.7**	**+0.4**
	35nm,0.5s,baz=333						
CLL	**Collm**	**1.98**	**265**	ePn	**Pn**	**05 07 15.0**	**0.0**
CLL				ePg	**Pg**	**05 07 18.0**	**-0.1**
CLL				*e*		05 07 21.0	
CLL				*i*		05 07 22.9	
CLL				eSg	**Sg**	**05 07 45.0**	**+1.2**
	comp=Z,33nm,0.7s						
CLL	**Collm**	**1.98**	**265**	ePn	**Pn**	**05 07 15.6**	**+0.6**
CLL				eSg	**Sg**	**05 07 45.1**	**+1.2**
OKC	**Ostrava-Krasne**	**2.12**	**142**	ePg	**Pg**	**05 07 20.7**	**-0.1**
OKC				eSg	**Sg**	**05 07 47.7**	**-0.5**
OKC	**Ostrava-Krasne**	**2.12**	**142**	ePG	**Pg**	**05 07 20.7**	**-0.1**
OKC				eSG	**Sg**	**05 07 47.5**	**-0.7**
	comp=Z,72nm,0.8s						
VRAC	**Vranov**	**2.24**	**172**	Pg	**Pn**	**05 07 20.1**	**+1.5**
	comp=Z,2.8nm,0.3s,baz=331,slow=14,SNR=11						
VRAC				Lg	Lg	05 07 51.5	
	comp=Z,6.6nm,0.3s,baz=255,slow=23,SNR=9.2						
VRAC	**Vranov**	**2.24**	**172**	ePN	**Pn**	**05 07 19.1**	**+0.5**
VRAC				eSG	**Sg**	**05 07 52.1**	**-0.1**
VRAC	**Vranov**	**2.24**	**172**	ePn	**Pn**	**05 07 19.1**	**+0.5**
	baz=352						
VRAC				eSg	**Sg**	**05 07 52.0**	**-0.1**
	comp=Z,22nm,0.3s,baz=352						
TREC	**Trest**	**2.28**	**191**	ePN	**Pb**	**05 07 21.0**	**-1.2**
TREC				ePG	**Pg**	**05 07 22.7**	**-1.1**
TREC				eSG	**Sb**	**05 07 51.6**	**+0.7**
	comp=Z,25nm,0.3s						
PBCC	**Pribram**	**2.30**	**217**	ePG	**Pg**	**05 07 23.7**	**-0.5**
PBCC				eSG	**Sg**	**05 07 53.3**	**-0.7**
KRUC	**Moravsky**	**2.48**	**176**	ePN	**Pn**	**05 07 22.5**	**+0.7**
KRUC				eSG	**Sg**	**05 07 59.3**	**-0.4**
KRUC	**Moravsky**	**2.48**	**176**	ePn	**Pn**	**05 07 22.5**	**+0.7**
	baz=356						
KRUC				eSg	**Sg**	**05 07 59.3**	**-0.4**
	comp=Z,15nm,0.3s,baz=356						
TANN	**Tannenbergstha**	**2.58**	**246**	ePn	**Pn**	**05 07 24.6**	**+1.3**
TANN				ePg	**Pg**	**05 07 30.3**	**+0.6**
TANN				eSg	**Sg**	**05 08 04.1**	**+1.0**
OJC	**Ojcow**	**2.66**	**118**	ePn	**Pn**	**05 07 24.3**	**0.0**
OJC				ePg	**Pg**	**05 07 33.6**	**+2.5**
OJC				eSg	**Sg**	**05 08 08.5**	**+2.9**
NKC	**Novy Kostel**	**2.68**	**242**	ePN	**Pn**	**05 07 25.9**	**+1.3**
NKC				ePG	**Pg**	**05 07 30.6**	**-0.9**
NKC				eSG	**Sg**	**05 08 05.9**	**-0.3**
	comp=Z,56nm,0.3s						
GUNZ	**Gunzen**	**2.68**	**246**	ePn	**Pn**	**05 07 26.4**	**+1.7**
GUNZ				ePg	**Pg**	**05 07 32.1**	**+0.5**
GUNZ				eSg	**Sg**	**05 08 06.4**	**+0.2**
WERN	**Wernitzgruen**	**2.69**	**244**	ePn	**Pn**	**05 07 25.9**	**+1.1**
WERN				ePg	**Pg**	**05 07 32.5**	**+0.8**
WERN				eSg	**Sg**	**05 08 05.7**	**-0.9**
PLN	**Plauen**	**2.73**	**249**	ePn	**Pn**	**05 07 26.3**	**+1.0**
PLN				ePg	**Pg**	**05 07 33.6**	**+1.2**
PLN				eSg	**Sg**	**05 08 07.4**	**-0.4**
NEUB	**Neuenburg**	**2.76**	**265**	ePg	**Pg**	**05 07 34.1**	**+1.0**
NEUB				eSg	**Sg**	**05 08 10.7**	**+2.0**
JAVC	**Velka Javorina**	**2.85**	**159**	ePN	**Pn**	**05 07 27.8**	**+0.9**
JAVC				eSG	**Sg**	**05 08 11.4**	**-0.2**
JAVC	**Velka Javorina**	**2.85**	**159**	*e*Pn	**Pn**	**05 07 27.8**	**+0.9**
	baz=340						
JAVC				eSg	**Sg**	**05 08 11.4**	**-0.2**
	comp=Z,21nm,0.6s,baz=340						
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**05 07 28.7**	**+0.9**
KHC				*e*PG	**Pb**	**05 07 34.2**	**+1.2**
KHC				*e*SN	**Sn**	**05 08 03.1**	**-0.4**
KHC				*e*SG	**Sb**	**05 08 11.5**	**+2.4**
	comp=Z,17nm,0.5s						
MOX	**Moxa**	**2.99**	**255**	*e*Pn	**Pn**	**05 07 30.0**	**+1.1**
MOX				*e*Pg	**Pg**	**05 07 37.8**	**+0.3**
MOX				*e*Sg	**Sg**	**05 08 17.5**	**+1.2**
MANZ	**Manzenberg**	**2.99**	**241**	*e*Pn	**Pn**	**05 07 30.3**	**+1.4**
MANZ				*e*Sg	**Sg**	**05 08 16.2**	**-0.1**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	*e*Pn	**Pn**	**05 07 31.1**	**+1.2**
GEC2	**GERESS Array S**	**3.11**	**211**	*e*Pn	**Pn**	**05 07 32.0**	**+1.4**
GEC2				*e*Pg	**Pb**	**05 07 38.3**	**+1.8**
GERES	**GERESS Array B**	**3.11**	**211**	Pn	**Pn**	**05 07 31.1**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=27,slow=13,SNR=43						
GERES				Pg	**Pb**	**05 07 37.8**	**+1.3**
	comp=Z,4.5nm,0.3s,baz=29,slow=17,SNR=33						
GERES				Lg	Lg	05 08 16.2	
	comp=Z,3.8nm,0.3s,baz=36,slow=25,SNR=5.1						
SMOL	**Smolenice**	**3.13**	**164**	*e*PG	**Pg**	**05 07 41.7**	**+1.5**
WET	**Wettzell**	**3.17**	**223**	*e*Pn	**Pn**	**05 07 32.3**	**+0.9**
LANS	**Liptovska Anna**	**3.19**	**137**	*e*PN	**Pn**	**05 07 32.8**	**+1.1**
LANS				*e*LG	Lg	05 08 30.1	
MODS	**Modra-Piesok**	**3.24**	**167**	*e*PN	**Pn**	**05 07 33.4**	**+1.1**
MODS				*e*PG	**Pg**	**05 07 42.0**	**-0.3**
MODS				*e*SG	**Sg**	**05 08 25.9**	**+1.6**
NIE	**Niedzica**	**3.39**	**127**	*e*P	**Pg**	**05 07 45.8**	**+0.6**
NIE				*e*S	**Sg**	**05 08 30.5**	**+1.3**
ZST	**Bratislava**	**3.39**	**169**	*e*SG	**Sg**	**05 08 28.8**	**-0.4**
VYHS	**Vyhne**	**3.50**	**149**	*e*PN	**Pn**	**05 07 35.8**	**-0.1**
VYHS				*e*SG	**Sg**	**05 08 34.5**	**+1.9**
CLZ	**Clausthal**	**3.61**	**277**	*e*Pn	**Pn**	**05 07 39.5**	**+2.1**
CONA	**Conrad Observa**	**3.61**	**183**	*i* Pn	**Pn**	**05 07 39.1**	**+1.7**
	comp=Z,1.8nm,0.3s,SNR=12						
CONA				ePg	**Pg**	**05 07 49.2**	**-0.2**
	comp=Z,5.3nm,0.3s						
CONA				Sg	**Sg**	**05 08 35.5**	**-0.6**
	comp=Z,20nm,0.5s						
GRF	**Grafenberg Arr**	**3.64**	**242**	*e*Pn	**Pn**	**05 07 39.3**	**+1.6**
GRF				*e*Sg	**Sg**	**05 08 36.8**	**-0.1**
BSD	**Bornholm Skovb**	**3.67**	**349**	*e*	**Pn**	**05 07 38.3**	**+0.2**
	baz=190,slow=14						
BSD				*i* P	**Pn**	**05 07 39.3**	**+1.2**
BSD				*i* S	**Sn**	**05 08 20.2**	**-1.8**
BSD				IAML		05 08 25.3	
	comp=Z,3.1nm,0.4s						
MOA	**Molln**	**3.88**	**199**	*e*Pn	**Pn**	**05 07 42.4**	**+1.3**
	comp=Z,1.1nm,0.2s,SNR=8.6						
MOA				ePg	**Pg**	**05 07 54.8**	**+0.2**
	comp=Z,3.7nm,0.3s						
MOA				Sg	**Sg**	**05 08 45.2**	**+0.4**
	comp=Z,30nm,0.7s						
UBBA	**Unterbreizbach**	**3.93**	**262**	*e*SG	**Sg**	**05 08 47.9**	**+1.5**
BSEG	**Bad Segeberg**	**4.28**	**307**	*e*Pn	**Pn**	**05 07 47.9**	**+1.3**
ARSA	**Arzberg**	**4.30**	**186**	*e*Pn	**Pn**	**05 07 50.2**	**+3.3**
	comp=Z,2.0nm,0.2s						
ARSA				*e*SG	**Sg**	**05 08 57.0**	**-1.3**
	comp=Z,17nm,0.8s						
RJOB	**Jochberg**	**4.38**	**211**	*e*Pn	**Pn**	**05 07 49.0**	**+1.1**
BLEU	**Blekinge**	**4.79**	**358**	P	**Pn**	**05 07 55.1**	**+1.6**
BLEU				S	**Sn**	**05 08 47.6**	**-2.1**
KBA	**Koelnbreinsper**	**4.82**	**203**	*i* Pn	**Pn**	**05 07 55.7**	**+1.5**
	comp=Z,1.4n

FAUS	**Fauske**	**1.47**	**37**	*eS*	Sg		05 09 13.4	-1.5
STEI	**Steigen**	**1.92**	**26**	*eSg*	Sb		05 09 27.4	-0.7
STEI				IAML			05 09 46.2	
	comp=Z,1.2nm,0.7s							

IDC ***22*** *05:20:17.0±1.2, 1°.82N×126°.23E, h0km, mb4.0/5, mb1 1.4/6, mb1mx3.8/47, mbtmp4.0/6, ML4.1/1, MS3.4/3, Ms1 3.4/3, ms1mx2.7/39, Error ellipse: s-maj=114.9km s-min=17.8km az=70.0*

DJA ***22*** *05:20:20.9±2.1, 2°.N±4°×12°.6E±°, h13km±20km, M4.2/8, mB4.7/1, mb4.7/2, MLv4.0/8, Mw(mB)3.9/1*

NEIC ***22*** *05:20:22.0±2.2, 1°.85N±0°.09×126°.36E±0°.08, h35km±2km, mb4.2/16, Error ellipse: s-maj=18.5km s-min=9.2km az=221.0*

ISC 22 05:20:22.7±0.6, **1°.93N**±0°.04×**126°.37E**±0°.07, **h47**km, **n42,** σ1≈**23**/42, **mb4.2**/12, **MS3.7**/3, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.52**	**139**	P	**Pn**	**05 20 46.7**	**-0.8**
TNTI	**Ternate**	**1.52**	**139**		**Pn**	**05 20 46.1**	**-1.4**
TNTI				Sn	**Sn**	**05 21 05.6**	**-0.6**
SGSI	**Sangihe**	**1.94**	**334**	P	**Pn**	**05 20 53.9**	**+0.7**
GTOI	**Gorontalo**	**3.60**	**249**	P	**Pn**	**05 21 17.7**	**+1.7**
DDMP	**Don Marcelino,**	**4.20**	**351**	*eP*	**Pn**	**05 21 24.9**	**+0.7**
DDMP				*eS*	**Sn**	**05 22 08.0**	**-4.0**
LUWI	**Luwuk**	**4.66**	**231**	Pn	**Pn**	**05 21 30.1**	**-0.4**
MRSI	**Marisa**	**4.66**	**252**	P	**Pn**	**05 21 30.4**	**-0.2**
SKMP	**Bagumbayan, Su**	**4.91**	**338**	*eP*	**Pn**	**05 21 33.8**	**-0.2**
SKMP				*eS*	**Sn**	**05 22 28.2**	**-1.4**
KCP	**Kidapawan**	**5.20**	**346**↑	*eP*	Pn	05 21 45.2	+7.1
APSI	**Ampana**	**5.50**	**239**	P	**Pn**	**05 21 42.5**	**+0.4**
	0.2nm594nm38nm,0.5s						
TOLI2	**Tolitoli**	**5.65**	**262**	Pn	**Pn**	**05 21 43.1**	**-1.0**
PAGZ	**Pagadian**	**6.59**	**333**	*eP*	**Pn**	**05 21 56.7**	**-0.4**
PAGZ				*eS*	**Sn**	**05 23 08.0**	**-3.0**
FAKI	**Fak Fak**	**7.60**	**129**	Pn	**Pn**	**05 22 10.6**	**-0.4**
MYLDM	**Lahad Datu**	**8.49**	**293**		**Pn**	**05 22 24.0**	**+0.8**
MTN	**Manton Dam**	**15.42**	**162**	Pn	**Pn**	**05 23 57.1**	**-0.2**
KNRA	**Kununurra**	**17.66**	**172**	P	**Pn**	**05 24 24.2**	**-1.1**
KNRA				IAmb	IAmb	05 24 29.3	
	comp=Z,8.2nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.92**	**182**	P	**P**	**05 24 50.0**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=16,slow=10,SNR=10						
FITZ	**Fitzroy Crossi**	**19.92**	**182**	P	**P**	**05 24 49.7**	**-0.9**
WB0	**Warramunga Arr**	**22.96**	**160**	P	**P**	**05 25 22.3**	**-1.0**
WB0				IAmb	IAmb	05 25 31.0	
	comp=Z,6.8nm,0.6s						
WRAB	**Tennant Creek**	**23.10**	**161**	P	**P**	**05 25 23.5**	**-1.2**
WRAB				IAmb	IAmb	05 25 24.8	
	comp=Z,12nm,1.2s						
WRA	**Warramunga Arr**	**23.10**	**161**	P	**P**	**05 25 23.8**	**-0.9**
	comp=Z,5.7nm,0.5s,baz=337,slow=11,SNR=70						
WRA	**Warramunga Arr**	**23.10**	**161**	P	**P**	**05 25 23.0**	**-1.7**
JOW	**Kunigami**	**24.83**	**4**	P	**P**	**05 25 42.0**	**+1.3**
AS31	**Alice Springs**	**26.48**	**164**	P	**P**	**05 25 54.3**	**-1.4**
AS31				IAmb	IAmb	05 25 59.8	
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**26.48**	**164**	P	**P**	**05 25 55.5**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=343,slow=7.7,SNR=31						
ASAR	**Alice Springs**	**26.48**	**164**	P	**P**	**05 25 54.3**	**-1.4**
CMAR	**Chiang Mai Arr**	**31.51**	**303**	LR	LR	05 41 55.4	
	comp=Z,23nm,18.3s,baz=190,slow=41						
CMAR	**Chiang Mai Arr**	**31.51**	**303**	P	**P**	**05 26 40.2**	**-0.3**
FORT	**Forrest**	**32.57**	**177**	P	**P**	**05 26 50.0**	**+0.4**
JWT	**Wachi**	**34.23**	**13**	P	**P**	**05 27 05.5**	**+1.4**
BBOO	**Buckleboo**	**35.75**	**166**	P	**P**	**05 27 17.9**	**+0.7**
BBOO				IAmb	IAmb	05 27 19.1	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**36.60**	**158**	P	**P**	**05 27 24.5**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=334,slow=12,SNR=2.8						
STKA	**Stephens Creek**	**36.60**	**158**	P	**P**	**05 27 24.5**	**+0.1**
SONM	**Songino Array**	**48.88**	**342**	P	**P**	**05 29 05.8**	**+1.9**
	comp=Z,0.9nm,0.9s,baz=164,slow=6.7,SNR=4.7						
SONM	**Songino Array**	**48.88**	**342**	P	**P**	**05 29 05.0**	**+1.1**
MK31	**Makanchi Array**	**58.83**	**326**	P	**P**	**05 30 17.2**	**+0.7**
MK31				IAmb	IAmb	05 30 39.7	
	comp=Z,2.9nm,1.2s						
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**05 30 17.1**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=120,slow=7.9,SNR=30						
VNDA	**Vanda**	**81.70**	**173**	P	**P**	**05 32 35.1**	**-0.6**
VNDA				IAmb	IAmb	05 33 03.8	
	comp=Z,3.1nm,1.4s						
QSPA	**South Pole Qui**	**91.85**	**180**	P	**P**	**05 33 25.9**	**+0.2**
QSPA				IAmb	IAmb	05 33 27.8	
	comp=Z,0.9nm,1.1s						
AKASG	**Malin Array Be**	**93.05**	**321**	LR	LR	06 20 50.4	
	comp=Z,25nm,18.8s,baz=280,slow=39						
FINES	**FINESS Array B**	**93.24**	**332**	LR	LR	06 19 12.7	
	comp=Z,31nm,20.4s,baz=230,slow=38						
TORD	**Torodi Ar. Bea**	**123.12**	**287**	PKP	**PKiKP**	**05 39 15.8**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=69,slow=1.2,SNR=3.1						

IDC ***22*** *05:29:41.6±1.6, 0°.84S×98°.54E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.7/50, mbtmp3.9/10, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/37, Error ellipse: s-maj=52.4km s-min=18.6km az=61.0*

NEIC ***22*** *05:29:47.5±0.9, 0°.76S±0°.06×98°.62E±0°.09, h41km±8km, mb4.4/12, Error ellipse: s-maj=14.4km s-min=6.8km az=65.0*

DJA ***22*** *05:29:47.2±0.7, 1°.S±6°×9°.9E±°, h21km±8km, M3.8/8, MLv3.8/8*

ISC 22 05:29:46.6±0.6, **0°.73S**±0°.06×**98°.62E**±0°.07, **h32**km, **n50,** σ1≈**14**/48, **mb4.1**/13, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBSI	**Pulau Batu**	**0.75**	**333**	P	**Pb**	**05 30 01.3**	**+0.1**
PBSI				S	**Sn**	**05 30 12.1**	**+0.9**
SISI	**Saibi**	**0.76**	**142**	P	**Pb**	**05 30 02.6**	**+1.2**
MNSI	**Mandailing Nat**	**1.79**	**32**	P	**Pn**	**05 30 16.7**	**+1.4**
GSI	**Gunungsitoli**	**2.27**	**333**	P	**Pn**	**05 30 22.5**	**+0.6**
GSI	**Gunungsitoli**	**2.27**	**333**		**Pn**	**05 30 22.9**	**+1.0**
SBSI	**Sibolga**	**2.28**	**7**	P	**Pn**	**05 30 23.6**	**+1.1**
BKNI	**Bangkinang**	**2.64**	**67**		**Pn**	**05 30 27.9**	**+1.0**
SDSI	**Sungai Dareh**	**2.82**	**94**	P	**Pn**	**05 30 31.7**	**+2.2**
KRJI	**Kerinci**	**3.15**	**116**	P	**Pn**	**05 30 37.3**	**+3.2**
RPSI	**Rantau Prapat**	**3.41**	**5**		**Pn**	**05 30 39.2**	**+1.6**
RPSI	**Rantau Prapat**	**3.41**	**5**		**Pn**	**05 30 39.3**	**+1.6**
PSI	**Prapat**	**3.52**	**5**	Pn	**Pn**	**05 30 39.3**	**+0.1**
	2.4nm,0.3s,baz=180,slow=12,SNR=12						
PSI				LR	LR	05 32 14.6	
	comp=Z,187nm,21.8s,baz=270,slow=43						
TPTI		**4.21**	**340**	P	**Pn**	**05 30 49.9**	**+1.2**
MNAI	**Manna**	**5.64**	**130**	Pn	**Pn**	**05 31 08.8**	**+0.5**
MNAI				Sn	**Sn**	**05 32 09.0**	**-3.1**
KULM	**Kulim**	**6.31**	**19**	Pn	**Pn**	**05 31 19.6**	**+2.0**
COCO	**West Island**	**11.53**	**189**	Pn	**Pn**	**05 32 28.3**	**+0.2**
SBUM	**Sibu**	**13.96**	**77**	Pn	**Pn**	**05 33 01.0**	**-1.4**
CM31	**Chiang Mai Arr**	**19.07**	**1**	P	**P**	**05 34 05.6**	**-0.9**
CM31				IAmb	IAmb	05 34 33.3	
	comp=Z,5.9nm,0.3s						
CMAR	**Chiang Mai Arr**	**19.07**	**1**	P	**P**	**05 34 06.5**	**0.0**
	baz=188,slow=12,SNR=5.6						
CMAR	**Chiang Mai Arr**	**19.07**	**1**	P	**Pn**	**05 34 08.0**	**+0.5**
TOLI2	**Tolitoli**	**22.24**	**85**	P	**P**	**05 34 40.1**	**-0.9**
TOLI2				IAmb	IAmb	05 34 57.3	
	comp=Z,7.4nm,1.2s						
KMI	**Kunming**	**26.00**	**9**	P	**P**	**05 35 17.2**	**+0.1**
KMI				IAmb	IAmb	05 35 17.6	
	comp=Z,22nm,0.5s						
H08S2	**Diego Garcia H**	**26.93**	**255**	T	T	06 03 26.8	
	baz=76,slow=75,SNR=1259						
H08S3	**Diego Garcia H**	**26.93**	**255**	T	T	06 03 26.8	
	baz=76,slow=75,SNR=1270						
H08S1	**Diego Garcia H**	**26.95**	**255**	T	T	06 03 14.0	
	baz=76,slow=75,SNR=716						
MORW	**Morawa**	**32.72**	**151**	P	**P**	**05 36 16.1**	**-0.4**
MORW				IAmb	IAmb	05 36 44.1	
	comp=Z,21nm,1.4s						
WB0	**Warramunga Arr**	**39.80**	**121**	P	**P**	**05 37 16.8**	**-0.3**
WRA	**Warramunga Arr**	**39.83**	**121**	P	**P**	**05 37 16.9**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=302,slow=9.1,SNR=22						
WRA	**Warramunga Arr**	**39.83**	**121**	P	**P**	**05 37 16.9**	**-0.4**
WB2	**Warramunga Arr**	**39.84**	**121**	P	**P**	**05 37 17.2**	**-0.2**
WB2				IAmb	IAmb	05 37 26.4	
	comp=Z,5.9nm,1.1s						
ASAR	**Alice Springs**	**41.11**	**126**	P	**P**	**05 37 28.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=299,slow=7.4,SNR=10						
ASAR	**Alice Springs**	**41.11**	**126**	P	**P**	**05 37 27.3**	**-0.7**
AS31	**Alice Springs**	**41.12**	**126**	P	**P**	**05 37 28.6**	**+0.6**
KSAR	**Wonju Array Be**	**46.63**	**32**	P	**P**	**05 38 12.0**	**0.0**
KSRS	**Korea Array**	**46.66**	**32**	P	**P**	**05 38 11.8**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=218,slow=7.9,SNR=4.9						
DRK	**Karamyk**	**46.95**	**331**	P	**P**	**05 38 14.4**	**-0.4**
SONM	**Songino Array**	**48.84**	**7**	P	**P**	**05 38 30.7**	**+1.5**
	comp=Z,1.8nm,0.6s,baz=185,slow=9.4,SNR=11						
SONM	**Songino Array**	**48.84**	**7**	P	**P**	**05 38 30.1**	**+1.0**
MK31	**Makanchi Array**	**49.45**	**345**	P	**P**	**05 38 34.7**	**+1.0**
MK31				IAmb	IAmb	05 38 35.4	
	comp=Z,1.7nm,0.8s						
MKAR	**Makanchi Array**	**49.45**	**345**	P	**P**	**05 38 34.9**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=152,slow=8.0,SNR=10						
MKAR	**Makanchi Array**	**49.45**	**345**	P	**P**	**05 38 33.9**	**+0.2**
USRK	**Ussuriysk Ar.**	**53.71**	**29**	P	**P**	**05 39 06.0**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=240,slow=7.7,SNR=2.4						
USRK	**Ussuriysk Ar.**	**53.71**	**29**	P	**P**	**05 39 05.8**	**+0.2**
ZALV	**Zalesovo Beam**	**55.68**	**350**	P	**P**	**05 39 19.0**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=157,slow=4.8,SNR=4.4						
ZALV	**Zalesovo Beam**	**55.68**	**350**	P	**P**	**05 39 19.8**	**+0.1**
ARMA	**Armidale**	**58.26**	**126**	P	**P**	**05 39 37.0**	**-1.6**
ABKAR	**Akbulak array**	**59.87**	**332**	P	**P**	**05 39 49.2**	**0.0**
FINES	**FINESS Array B**	**82.35**	**332**	P	**P**	**05 42 05.3**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=106,slow=4.2,SNR=5.4						
ARCES	**ARCESS Array B**	**84.81**	**340**	LR	LR	06 24 38.3	
	comp=Z,26nm,19.6s,baz=65,slow=39						
TXAR	**Lajitas Array**	**144.49**	**35**	PKP	**PKPdf**	**05 49 20.1**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=212,slow=0.6,SNR=5.1						

IDC 22 05:51:20.8±8.6, **10°.24S**×**154°.61E, h0**km, **mb3.5**/3, **mb1 3.8**/3, **mb1mx3.4**/27, **mbtmp3.6**/3, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.6**/21, **Error ellipse: s-maj=134.6km s-min=85.0km az=26.0, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.34**	**137**	LR	LR	05 59 39.7	
	comp=Z,154nm,18.2s,baz=20,slow=30						
WRA	**Warramunga Arr**	**21.80**	**241**	P	P	05 56 15.5	+0.9
	1.2nm,1.0s,baz=66,slow=9.5,SNR=7.0						
ASAR	**Alice Springs**	**23.84**	**233**	P	P	05 56 35.8	-0.1
	1.5nm,0.9s,baz=61,slow=9.9,SNR=10						
STKA	**Stephens Creek**	**24.67**	**207**	P	P	05 56 42.6	-0.8
	3.0nm,1.1s,baz=37,slow=15,SNR=2.3						

JMA ***22*** *05:56:24.1±0.2, 22°.73N×121°.44E, h1km, M3.5*

TAP ***22*** *05:56:26.1, 22°.76N×121°.31E, h18km, ML3.3, B*

ISC 22 05:56:26.7±1.0, **22°.75N**±0°.02×**121°.32E**±0°.03, **h21**km±1km, **n69,** σ0≈**96**/104, **1C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LDUT	**Ludao**	**0.15**	**117**	P	**Pb**	**05 56 31.6**	**-1.0**
	baz=121						
LDUT				*eS*	**Sb**	**05 56 35.5**	**-1.4**
	baz=121						
TTN	**Taitung**	**0.16**	**273**	P	**Pb**	**05 56 31.4**	**-1.2**
	baz=265						
TTN				S	**Sb**	**05 56 35.2**	**-1.7**
	baz=265						
EDH	**Donghe**	**0.23**	**356**	P	**Pb**	**05 56 31.7**	**-0.9**
	baz=359						
EDH				S	**Sb**	**05 56 35.3**	**-1.5**
	baz=359						
TWGBT	**Beinan**	**0.23**	**288**	*i* P	**Pb**	**05 56 31.8**	**-0.9**
	baz=284						
TWGBT				*eS*	**Sb**	**05 56 36.2**	**-0.7**
	baz=284						
LONT	**Longtian**	**0.24**	**312**	*eP*	**Pb**	**05 56 31.9**	**-0.8**
	baz=310						
LONT				*eS*	**Sb**	**05 56 36.0**	**-1.0**
	baz=310						
TWG	**Pinlang**	**0.24**	**288**↑	*i* P	**Pb**	**05 56 31.9**	**-0.9**
	baz=284						
TWG				*eS*	**Sb**	**05 56 36.2**	**-0.8**
	baz=284						
CHKT	**Chengkung**	**0.35**	**7**	*eP*	**Pb**	**05 56 34.0**	**-0.1**
	baz=10.0						
CHKT				*eS*	**Sb**	**05 56 39.4**	**+0.1**
	baz=10.0						
ECL	**Taimali**	**0.37**	**247**↓	*i* P	**Pb**	**05 56 34.1**	**-0.2**
	baz=242						
ECL				*eS*	**Sb**	**05 56 39.6**	**-0.1**
	baz=242						
FULB	**Fuli**	**0.45**	**357**	*eP*	**Pb**	**05 56 35.8**	**-0.2**
	baz=358						
FULB				*eS*	**Sb**	**05 56 42.8**	**+0.6**
	baz=358						
ELDTW	**Lidau**	**0.52**	**328**↓	*i* P	**Pb**	**05 56 36.1**	**-1.2**
	baz=328						
ELDTW				*eS*	**Sb**	**05 56 42.5**	**-2.0**
	baz=328						
EAST	**Anshuo**	**0.57**	**231**	*eP*	**Pb**	**05 56 37.7**	**-0.3**
	baz=227						
EAST				*eS*	**Sb**	**05 56 45.2**	**-0.5**
	baz=227						
EYUL	**Yuli**	**0.60**	**360**	*eP*	**Pb**	**05 56 37.5**	**-1.1**
	baz=1.0						
EYUL				*eS*	**Sb**	**05 56 46.4**	**-0.3**
	baz=1.0						
TWF1	**Yuli**	**0.60**	**358**	*eP*	**Pb**	**05 56 37.3**	**-1.4**
	baz=359						
TWF1				*eS*	**Sb**	**05 56 45.5**	**-1.3**
	baz=359						
TSMG	**Majia**	**0.62**	**267**	*eP*	**Pb**	**05 56 38.0**	**-1.0**
	baz=264						
TSMG				*eS*	**Sb**	**05 56 45.8**	**-1.6**
	baz=264						
SSD	**Sandimen**	**0.64**	**270**	*eP*	**Pb**	**05 56 38.1**	**-1.1**
	baz=268						
SSD				*eS*	**Sb**	**05 56 45.6**	**-2.0**
	baz=268						
YULB	**Yu-li**	**0.65**	**358**	*eP*	**Pb**	**05 56 37.9**	**-1.5**
	baz=359						
MASBT	**Mashibuluo**	**0.65**	**258**	*i* P	**Pb**	**05 56 38.6**	**-0.8**
	baz=256						
MASBT				*eS*	**Sb**	**05 56 46.6**	**-1.4**
	baz=256						
STYT	**Tauyuan**	**0.67**	**309**	*eP*	**Pb**	**05 56 38.8**	**-1.0**
	baz=308						
STYT				*eS*	**Sb**	**05 56 47.9**	**-0.7**
	baz=308						
SLGT	**Liugui**	**0.67**	**292**	*eP*	**Pb**	**05 56 39.0**	**-0.8**
	baz=290						
SLGT				*eS*	**Sb**	**05 56 47.8**	**-0.9**
	baz=290						
LAY	**Lan-yu**	**0.73**	**163**	*eP*	**Pb**	**05 56 40.6**	**-0.2**
	baz=162						
LAY				*eS*	**Sb**	**05 56 51.7**	**+1.3**
	baz=162						
SSPT	**Xinbi**	**0.74**	**250**	*eP*	**Pb**	**05 56 41.0**	**+0.1**
	baz=247						
SSPT				*eS*	**Sb**	**05 56 51.2**	**+0.6**
	baz=247						
SCZT	**Fangliau**	**0.75**	**240**	*eP*	**Pb**	**05 56 41.2**	**+0.3**
	baz=238						
SCZT				*eS*	**Sb**	**05 56 51.4**	**+0.7**
	baz=238						
HGSD	**Ruisui**	**0.75**	**7**	*eP*	**Pb**	**05 56 40.3**	**-0.7**
	baz=8.0						
EHY	**Hungye**	**0.76**	**0**	*eP*	**Pb**	**05 56 40.4**	**-0.8**
	baz=1.0						
SGST	**Jiashian**	**0.76**	**296**	*eP*	**Pb**	**05 56 40.0**	**-1.2**
	baz=295						
SGST				*eS*	**Sb**	**05 56 51.6**	**+0.5**
	baz=295						
SCST	**Cishan**	**0.78**	**281**	*eP*	**Pb**	**05 56 39.6**	**-1.8**
	baz=279						
WTP	**Ta-pu**	**0.82**	**308**	*eP*	**Pb**	**05 56 42.1**	**-0.2**
	baz=307						
WTP				*eS*	**Sb**	**05 56 53.6**	**+0.7**
	baz=307						
TWM1	**Shoushan**	**0.83**	**276**	*eP*	**Pn**	**05 56 43.6**	**+0.4**
	baz=274						
TPUB	**Ta-pu**	**0.84**	**311**	*eP*	**Pb**	**05 56 42.4**	**-0.3**
	baz=310						
TPUB				S	**Sb**	**05 56 54.4**	**+0.8**
	baz=310						
CHN1	**Nanshi**	**0.85**	**301**	*eP*	**Pb**	**05 56 42.6**	**-0.2**
	baz=300						
CHN1				*eS*	**Sn**	**05 56 55.2**	**-0.1**
	baz=300						
SNST	**Tainan City**	**0.89**	**302**	*eP*	**Pb**	**05 56 43.6**	**+0.1**
	baz=301						
SNST				*eS*	**Sn**	**05 56 56.4**	**0.0**
	baz=301						
ALS	**Alishan**	**0.90**	**328**	*eP*	**Pb**	**05 56 42.7**	**-1.0**
	baz=328						
ALS				*eS*	**Sb**	**05 56 55.4**	**0.0**
	baz=328						
CHN4	**Tsaushan**	**0.90**	**312**	P	**Pb**	**05 56 43.5**	**-0.2**
	baz=311						
CHN4				*eS*	**Sn**	**05 56 56.6**	**+0.1**
	baz=311						
EGFH	**Guangfu**	**0.93**	**6**	*eP*	**Pb**	**05 56 44.4**	**+0.4**
	baz=6.0						
CHN5	**Tsauling**	**1.03**	**325**	*eP*	**Pn**	**05 56 45.5**	**-0.6**
	baz=325						
CHN5				*eS*	**Sb**	**05 56 59.5**	**+0.4**
	baz=325						
ESL	**Shilin**	**1.07**	**6**	*eP*	**Pn**	**05 56 46.7**	**+0.2**
	baz=6.0						
SSLB	**Suanglung**	**1.09**	**342**	*eP*	**Pn**	**05 56 46.0**	**-0.8**
	baz=342						
SSLB				*eS*	**Sb**	**05 57 00.3**	**-0.4**
	baz=342						
CHN2	**Minshiung**	**1.10**	**315**	*eP*	**Pn**	**05 56 46.0**	**-0.9**
	baz=314						
CHN2				*eS*	**Sn**	**05 57 03.3**	**+1.7**
	baz=314						
CHY	**Chiayi**	**1.11**	**312**	*eP*	**Pn**	**05 56 47.1**	**0.0**
	baz=312						
CHY				*eS*	**Sn**	**05 57 02.6**	**+0.8**
	baz=312						
WDLH	**Douliu**	**1.18**	**323**	*eP*	**Pn**	**05 56 48.3**	**+0.3**
	baz=322						
WDLH				*eS*	**Sb**	**05 57 04.9**	**+1.6**
	baz=322						
WLGB	**Puzi**	**1.19**	**308**	*eP*	**Pn**	**05 56 48.3**	**+0.2**
	baz=307						
WLGB				*eS*	**Sb**	**05 57 05.1**	**+1.6**
	baz=307						
SMLT	**Sun Moon Lake**	**1.20**	**341**	*eP*	**Pn**	**05 56 48.6**	**+0.2**
	baz=341						
SMLT				*eS*	**Sb**	**05 57 05.5**	**+1.6**
	baz=341						
WJS	**Zhushan**	**1.20**	**333**	*eP*	**Pn**	**05 56 48.2**	**-0.1**
	baz=333						
WJS				*eS*	**Sb**	**05 57 05.1**	**+1.2**
	baz=333						
OWD	**Renai**	**1.21**	**354**	*eP*	**Pn**	**05 56 47.2**	**-1.4**
	baz=354						
TYC	**Yuchr**	**1.23**	**340**	*eP*	**Pb**	**05 56 49.4**	**+0.2**
	baz=340						
TYC				*eS*	**Sb**	**05 57 06.2**	**+1.5**
	baz=340						
WNT	**Mingjian**	**1.27**	**333**	*eP*	**Pb**	**05 56 50.2**	**+0.2**
	baz=332						
WNT				*eS*	**Sb**	**05 57 07.6**	**+1.8**
	baz=332						
CHGB	**Renai**	**1.32**	**354**	*eP*	**Pn**	**05 56 48.9**	**-1.1**
	baz=354						
DPDB	**Guoxing**	**1.33**	**344**	*eP*	**Pn**	**05 56 50.4**	**+0.3**
	baz=344						
DPDB				*eS*	**Sb**	**05 57 07.8**	**+0.1**
	baz=344						
WHF	**Hehuan Shan**	**1.40**	**358**	*eP*	**Pn**	**05 56 50.4**	**-0.9**
	baz=358						
WHF				*eS*	**Sn**	**05 57 08.5**	**-0.8**
	baz=358						
NACB	**Ninganchiao**	**1.44**	**10**	*eP*	Pn	05 56 49.5	-2.1
	baz=10.0						
ETLH	**Xiulin Townshi**	**1.46**	**6**	*eP*	Pn	05 56 50.7	-1.2
	baz=6.0						
FUSS	**Fushou**	**1.50**	**357**	*eP*	Pn	05 56 51.9	-0.7
	baz=357						
TWT	**Tachien**	**1.51**	**355**	*eP*	Pn	05 56 52.7	0.0
	baz=354						
TDCB	**Techi**	**1.51**	**354**	*eP*	Pn	05 56 51.2	-1.5
	baz=354						
WHP	**Taichung City**	**1.56**	**347**	*eP*	Pn	05 56 53.9	+0.5
	baz=347						
WHP				*eS*	**Sb**	**05 57 14.3**	**-0.1**
	baz=347						
TWQ1	**Liyutan**	**1.67**	**343**	*eP*	**Pb**	**05 56 56.5**	**-0.3**
	baz=342						
TWQ1				*eS*	**Sb**	**05 57 17.5**	**0.0**
	baz=342						
NNSH	**Datong**	**1.68**	**2**	*eP*	Pn	05 56 55.7	+0.7
	baz=2.0						
NSY	**Sanyi**	**1.74**	**343**	*eP*	Pn	05 56 55.7	0.0
	baz=343						
NSY				*eS*	**Sb**	**05 57 19.9**	**+0.6**
	baz=343						
PHUB	**P'eng-hu**	**1.78**	**296**	*eP*	Pn	05 56 55.9	-0.4
	baz=295						
PHUB				*eS*	**Sn**	**05 57 18.3**	**+0.1**
	baz=295						
VCHM	**Qimei**	**1.80**	**285**	*eP*	Pn	05 56 56.4	-0.1
	baz=284						
VCHM				*eS*	**Sn**	**05 57 18.1**	**-0.7**
	baz=284						
PNG	**Penghu**	**1.82**	**297**	*eP*	Pn	05 56 56.8	0.0
	baz=296						
PNG				*eS*	**Sn**	**05 57 18.5**	**-0.7**
	baz=296						
YHNB	**Yeheng**	**1.92**	**2**	*eP*	Pn	05 56 58.6	+0.4
	baz=1.0						
JYNG	**Yonagunijimaku**	**2.26**	**41**	P	Pn	05 57 01.8	-1.0
JYNG				S	**Sn**	**05 57 29.5**	**-0.6**
TIPB	**Shuangxi**	**2.27**	**12**	*eP*	**Pn**	**05 57 03.5**	**+0.6**
	baz=12						
TIPB				*eS*	**Sn**	**05 57 31.5**	**+1.3**
	baz=12						
YOJ	**Yonaguni jima**	**2.31**	**42**	P	Pn	05 57 03.3	-0.2
YOJ				S	**Sn**	**05 57 31.8**	**+0.6**
IRIF	**Iriomote-Funau**	**2.72**	**54**	P	Pn	05 57 09.4	+0.3
JKRS

LL01				*i* S		**Sn**	**06 28 27.3**	**-4.0**
LL01				IAML			06 28 30.5	
	comp=E,969nm,0.6s							
LL01	**San Ignacio de**	**1.74**	**166**			**Pn**	**06 28 07.0**	**-2.1**
LL01				Sn		**Sn**	**06 28 26.9**	**-4.5**
PLCA	**Paso Flores**	**1.85**	**92**	P		**Pn**	**06 28 10.2**	**-0.5**
	comp=E,15nm,0.3s,baz=272,slow=11,SNR=630							
PLCA				S		**Sn**	**06 28 29.5**	**-4.6**
	comp=E,19nm,0.3s,baz=268,slow=12,SNR=8.8							
PLCA				LR		LR	06 28 37.8	
	comp=E,45nm,18.2s,baz=184,slow=37							
LC01	**Cunco**	**1.99**	**26**	⇓*iP*		**Pn**	**06 28 12.8**	**+0.5**
LC01				*i* S		**Sn**	**06 28 37.3**	**+0.2**
LC01				IAML			06 28 42.0	
	comp=E,708nm,0.2s							
LC01	**Cunco**	**1.99**	**26**			**Pn**	**06 28 12.8**	**+0.5**
BI04	**Isla Mocha**	**2.38**	**343**	*i* S		**Sn**	**06 28 45.0**	**-1.1**
BI04				IAML			06 28 46.5	
	comp=N,4μm,0.5s							
LL02	**Futaleuf**	**2.64**	**162**	⇓*iP*		**Pn**	**06 28 19.2**	**-1.6**
LAJA	**Laja**	**3.41**	**4**	*eP*		**Pn**	**06 28 32.1**	**+0.9**
BI03	**Tigo**	**3.84**	**360**	*eP*		**Pn**	**06 28 36.9**	**-0.1**
BI03				*i* S		**Sn**	**06 29 17.7**	**-3.4**
BI03	**Tigo**	**3.84**	**360**			**Pn**	**06 28 37.0**	**+0.1**
BI03				Sn		**Sn**	**06 29 17.6**	**-3.4**
BI02	**San Fabin de**	**4.24**	**19**	⇓*iP*		**Pn**	**06 28 43.0**	**+0.7**
BI02				*i* S		**Sn**	**06 29 33.1**	**+2.3**
BI02	**San Fabin de**	**4.24**	**19**	Pn		**Pn**	**06 28 43.1**	**+0.7**
MT02	**Curacav**	**7.56**	**12**	Pn		**Pn**	**06 29 25.2**	**-2.3**
ROC1	**El Roble**	**7.86**	**12**			**Pn**	**06 29 29.8**	**-2.0**
H03S1	**Juan Fernandez**	**8.30**	**324**	P		**Pn**	**06 29 39.5**	**+2.3**
H03S1				S		**Sn**	**06 31 04.8**	**-4.3**
	SNR=18							
H03S1				T		T	06 36 59.5	
	baz=142,slow=75,SNR=4.6							
H03S2	**Juan Fernandez**	**8.32**	**323**	P		**Pn**	**06 29 39.4**	**+2.0**
H03S2				S		**Sn**	**06 31 04.7**	**-4.7**
	SNR=5.1							
H03S2				T		T	06 36 52.2	
	baz=142,slow=75,SNR=9.6							
H03S3	**Juan Fernandez**	**8.32**	**324**	P		**Pn**	**06 29 39.6**	**+2.2**
H03S3				S		**Sn**	**06 31 05.5**	**-4.1**
	SNR=30							
H03S3				T		T	06 36 52.0	
	baz=142,slow=75,SNR=28							
VA04	**Juan Fernndez**	**8.44**	**325**	Pn		**Pn**	**06 29 41.6**	**+2.3**
H03N3	**Juan Fernandez**	**8.64**	**325**	P		**Pn**	**06 29 44.6**	**+2.8**
H03N3				S		**Sn**	**06 31 15.1**	**-2.2**
	baz=202,slow=73,SNR=17							
H03N1	**Juan Fernandez**	**8.64**	**325**	P		**Pn**	**06 29 44.5**	**+2.6**
H03N1				S		**Sn**	**06 31 14.2**	**-3.2**
	baz=202,slow=73,SNR=9.4							
H03N2	**Juan Fernandez**	**8.65**	**325**	P		**Pn**	**06 29 44.7**	**+2.7**
H03N2				S		**Sn**	**06 31 14.2**	**-3.5**
	baz=202,slow=73,SNR=15							
GO09	**Cerro Castillo**	**10.59**	**178**	Pn		**Pn**	**06 30 04.9**	**-3.6**
AC02	**Maricunga**	**14.19**	**14**			**Pn**	**06 30 53.6**	**-3.0**
EFI	**East Falkland**	**15.05**	**142**	Pn		**Pn**	**06 31 04.1**	**-2.9**
GO02	**Mina Guanaco**	**15.74**	**11**			**Pn**	**06 31 16.5**	**+0.2**
GO02				IAmb		IAmb	06 31 21.5	
	comp=Z,43nm,1.4s							
LVC	**Limon Verde**	**18.35**	**12**	P		**Pn**	**06 31 49.3**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=190,slow=8.2,SNR=8.3							
LVC	**Limon Verde**	**18.35**	**12**			**Pn**	**06 31 48.6**	**+0.4**
CPUP	**Villa Florida**	**19.34**	**47**	P		**P**	**06 31 58.0**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=214,slow=6.8,SNR=3.1							
GO01	**Chusmiza**	**21.20**	**10**	P		**P**	**06 32 19.0**	**+1.0**
GO01				IAmb		IAmb	06 32 26.7	
	comp=Z,18nm,1.2s							
MNMC	**Minye Minye**	**21.68**	**9**	P		**P**	**06 32 25.1**	**+2.2**
MNMC				IAmb		IAmb	06 32 31.5	
	comp=Z,11nm,0.8s							
PB16	**IPOC Station P**	**22.48**	**9**	P		**P**	**06 32 34.0**	**+2.4**
PB16				IAmb		IAmb	06 32 44.9	
	comp=Z,11nm,1.2s							
PMSA	**Palmer Station**	**24.67**	**171**	P		**P**	**06 32 51.7**	**+0.8**
LPAZ	**La Paz**	**24.68**	**11**	P		**P**	**06 32 54.0**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=141,slow=5.1,SNR=9.9							
LPAZ	**La Paz**	**24.68**	**11**	P		**P**	**06 32 52.5**	**+0.4**
SIV	**San Ignacio**	**26.70**	**26**	P		**P**	**06 33 10.6**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=222,slow=7.7,SNR=12							
BELA	**Belgrano 2**	**40.46**	**168**	P		**P**	**06 35 09.4**	**+1.3**
VNA3	**Neumayer Olymp**	**43.53**	**155**	P		**P**	**06 35 33.5**	**+0.4**
VNA2	**Neumayer--Watz**	**44.22**	**155**	P		**P**	**06 35 39.3**	**+0.7**
	baz=274,slow=6.5							
SNAA	**Sanae**	**45.75**	**155**	P		**P**	**06 35 51.3**	**+0.5**
SNAA	**Sanae**	**45.75**	**155**	P		**P**	**06 35 51.1**	**+0.4**
SNAA				IAmb		IAmb	06 35 52.3	
	comp=Z,6.6nm,1.0s							
QSPA	**South Pole Qui**	**49.56**	**180**	P		**P**	**06 36 21.8**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=148,slow=1.8,SNR=16							
QSPA	**South Pole Qui**	**49.56**	**180**	P		**P**	**06 36 22.3**	**+1.9**
QSPA				IAmb		IAmb	06 36 22.8	
	comp=Z,2.6nm,0.8s							
BOSA	**Boshof**	**77.67**	**117**	P		**P**	**06 39 25.9**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=213,slow=3.2,SNR=7.9							
DBIC	**Dimbokro**	**78.09**	**70**	P		**P**	**06 39 28.6**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=207,slow=4.5,SNR=1.4							
TORD	**Torodi Ar. Bea**	**87.20**	**70**	P		**P**	**06 40 15.4**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=241,slow=4.8,SNR=2.6							

WEL 22 06:32:19.1±1.0,**36°S**±9°×**18°0E**±1°0,**h148**km±18km,
M3.5/12,**MLv3.5**/12,**Error ellipse: s-maj=0.0km s-min=0.0km az=51.3,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.96**	**212**	P	Pn	06 32 54.1	+0.5
MXZ				S	Sn	06 33 19.6	-0.6
WMGZ	**Waiomatatini S**	**2.15**	**206**	P	Pn	06 32 56.1	+0.3
WMGZ				S	Sn	06 33 23.8	-0.3
HAZ	**Te Kaha**	**2.36**	**218**	P	Pn	06 32 59.3	+0.9
HAZ				S	Sn	06 33 29.6	+0.9
PUZ	**Puketiti**	**2.43**	**206**	P	Pn	06 32 59.4	+0.2
PUZ				S	Sn	06 33 29.2	-1.0
RUGZ	**Raukumara Rang**	**2.58**	**216**	P	Pn	06 33 01.3	+0.2
RUGZ				S	Sn	06 33 35.5	+1.8
CNGZ	**Carnagh Statio**	**2.82**	**203**	P	Pn	06 33 05.2	+1.2
CNGZ				S	Sn	06 33 37.6	-1.1
MWZ	**Matawai**	**2.95**	**214**	P	Pn	06 33 05.7	+0.1
MWZ				S	Sn	06 33 44.2	+2.4
URZ	**Urewera**	**3.09**	**219**	P	Pn	06 33 07.3	-0.1
URZ				S	Sn	06 33 45.3	+0.4
KUZ	**Kuaotunu**	**3.25**	**254**	P	Pn	06 33 07.2	-2.2
SNGZ	**Shannon Statio**	**3.40**	**211**	P	Pn	06 33 12.6	+1.1
SNGZ				S	Sn	06 33 53.6	+1.5
MTHZ	**Maungataniwha**	**3.68**	**216**	P	Pn	06 33 16.3	+1.2
MTHZ				S	Sn	06 33 57.8	-0.8
TOZ	**Tahuroa Road**	**3.77**	**240**	P	Pn	06 33 15.8	-0.4
MKAZ	**Moumakai**	**3.77**	**250**	P	Pn	06 33 15.5	-0.8
ETAZ	**East Tamaki Re**	**3.91**	**253**	P	Pn	06 33 18.7	+0.6
BKZ	**Black Stump Fm**	**4.10**	**216**	P	Pn	06 33 20.5	0.0
OUZ	**Omahuta**	**4.94**	**276**	P	Pn	06 33 29.1	-2.5
CTZ	**Chatham Island**	**8.36**	**161**	P	Pn	06 34 20.6	+3.5
CTZ				S	Sn	06 35 46.4	-3.6

NEIC ***22*** *06:41:11.8±1.8,41°.89N±0°.04×119°.60W±0°.07,h8km±7km, Error ellipse: s-maj=7.7km s-min=6.2km az=86.0*

NEIC ***22*** *06:41:11.6,41°.85N×119°.59W,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=0.89; Mθθ-0.75; Mφφ 1.64; Mrθ -1.42; Mrφ-0.20; Mθφ-2.54; Fault plane solution: M₀3.24000×10¹⁴ NP1:φ=27.00000°, δ81.19000°, λ-70.29000°. NP2:φ=140.14000°, δ21.52000°, λ-155.33000°. Principal axes: T 3.3001, Plg33.0000°, Azm100.0000°; N -0.1151, Plg19.0000°, Azm204.0000°; P -3.1850, Plg50.0000°, Azm319.0000°.*

REN ***22*** *06:41:11.6±2.1,41°.85N±0°.04×119°.59W±0°.07,h2km±7km, ML3.8/3,ML3.6/20(SEA),Mwr3.6/29(NEIC) Error ellipse: s-maj=7.6km s-min=5.2km az=96.0*

SEA ***22*** *06:41:12.5±2.3,41°.84N±0°.04×119°.62W±0°.07,h0km±7km, Error ellipse: s-maj=7.6km s-min=5.8km az=86.0*

ANF ***22*** *06:41:12.1±0.4,41°.84N×119°.68W,h2km,ML3.6/12,Error ellipse: s-maj=4.1km s-min=3.8km az=103.0*

IDC ***22*** *06:41:14.3±1.6,41°.94N×119°.56W,h0km,mb3.4/1, mb1 3.6/4,mb1mx3.4/41,mbtmp3.1/4,ML3.4/3,MS2.6/1, Ms1 2.7/1,ms1mx2.4/28,Error ellipse: s-maj=20.5km s-min=11.4km az=95.0*

ISC 22 06:41:12.1±0.7,**41°.84N**±0°.03×**119°.56W**±0°.02,**h10**km,**n67,σ1§56/81,Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOD	**Modoc Plateau**	**0.56**	**277**		**Pg**	**06 41 21.9**	**-1.1**
MOD	**Modoc Plateau**	**0.56**	**277**		**Sg**	**06 41 29.1**	**-1.3**
WVOR	**Wild Horse Val**	**0.91**	**49**		**Pg**	**06 41 28.9**	**-0.6**
WVOR					**Sb**	**06 41 41.7**	**-0.5**
K05A	**Summer Lake**	**1.33**	**312**	Pn	**Pn**	**06 41 35.8**	**-1.1**
M04C	**Macdoel**	**1.71**	**269**	P	**Pn**	**06 41 40.9**	**-1.1**
	baz=87,SNR=34						
M04C				S	**Sb**	**06 42 05.2**	**0.0**
	baz=87						
J08A	**Circle Bar Ran**	**1.71**	**27**		**Pn**	**06 41 41.8**	**-0.3**
K04D	**Chiloquin, OR**	**1.81**	**296**	P	**Pb**	**06 41 43.8**	**-1.5**
	baz=115,SNR=19						
K04D				S	**Sb**	**06 42 08.1**	**0.0**
	baz=115						
J05D	**Fort Rock, OR**	**1.90**	**320**	P	**Pb**	**06 41 45.4**	**-1.5**
	baz=139,SNR=39						
J05D				S	**Sb**	**06 42 11.0**	**+0.2**
	baz=139						
BEKR	**Beckworth**	**2.06**	**197**	Pn	**Pb**	**06 41 49.9**	**+0.2**
L04D	**Klamath Falls**	**2.08**	**281**	P	**Pn**	**06 41 45.7**	**-1.4**
	baz=99,SNR=48						
L04D				Sb	**Sb**	**06 42 16.0**	**+0.1**
	baz=99						
PAHR	**Pah Rah Range**	**2.14**	**176**		**Pb**	**06 41 49.8**	**-1.2**
PINE	**Pine Mountain**	**2.20**	**333**		**Pn**	**06 41 48.0**	**-0.8**
I07A	**Izee**	**2.24**	**1**		**Pn**	**06 41 48.8**	**-0.6**
O03E	**Paynes Creek**	**2.29**	**228**	Pn	**Pn**	**06 41 50.0**	**-0.1**
	baz=46						
O03E				Pb	**Pb**	**06 41 53.0**	**-0.6**
	baz=46						
O03E				Sb	**Sg**	**06 42 23.6**	**-2.1**
	baz=46						
YBH	**Yreka Blue Hor**	**2.36**	**268**	Pn	**Pn**	**06 41 51.0**	**0.0**
M02C	**Callahan**	**2.51**	**261**	Pg	**Pb**	**06 41 58.0**	**+0.7**
	baz=78,SNR=7.8						
M02C				Sb	**Sb**	**06 42 29.3**	**+1.1**
	baz=78						
N02D	**Trinity Center**	**2.52**	**251**	Pb	**Pb**	**06 41 55.6**	**-1.9**
	baz=68,SNR=14						
N02D				Sb	**Sb**	**06 42 29.8**	**+1.2**
	baz=68						
VCNR	**Virginia City**	**2.54**	**182**		**Pn**	**06 41 53.7**	**+0.2**
WDC	**Whiskeytown Da**	**2.58**	**242**	Pn	**Pn**	**06 41 53.8**	**-0.1**
HUMO	**Hull Mountain**	**2.64**	**288**	Pn	**Pn**	**06 41 53.8**	**-0.9**
I05D	**Terrebonne, OR**	**2.82**	**333**	Pb	**Pb**	**06 42 01.7**	**-0.8**
	baz=152,SNR=9.7						
RUBR	**Rubicon Trail**	**2.82**	**189**		**Pn**	**06 41 58.0**	**+0.5**
I04A	**Tendick Farm,**	**2.87**	**314**	Sb	**Sb**	**06 42 40.1**	**+1.6**
	baz=132						
KVN	**Kaiserville**	**3.00**	**158**	Pn	**Pn**	**06 41 59.3**	**-0.6**
L02E	**Cave Junction**	**3.03**	**277**	P	**Pn**	**06 42 00.2**	**+0.1**
	baz=94,SNR=11						
L02E				Sb	**Sb**	**06 42 43.2**	**0.0**
	baz=94						
AFDM	**Forest Hills D**	**3.08**	**201**		**Pn**	**06 42 02.2**	**+1.4**
K02D	**Willamette Mer**	**3.17**	**287**	P	**Pn**	**06 42 02.0**	**0.0**
	baz=104,SNR=66						
MFID	**Camas Ranch**	**3.17**	**59**	Pn	**Pn**	**06 42 02.2**	**+0.1**
KRMB	**Red Mountain**	**3.27**	**266**	Pn	**Pn**	**06 42 01.1**	**-2.4**
KHMM	**Horse Mountain**	**3.29**	**254**		**Pn**	**06 42 03.5**	**-0.3**
RYN	**Ryan**	**3.31**	**166**		**Pn**	**06 42 05.0**	**+1.0**
WAKR	**Walker**	**3.33**	**178**		**Pn**	**06 42 05.4**	**+1.0**
I03D	**Drain, OR**	**3.35**	**305**	Pb	**Pb**	**06 42 11.5**	**0.0**
	baz=122						
I03D				Sb	**Sb**	**06 42 54.8**	**+2.5**
	baz=122						
ELK	**Elko**	**3.43**	**107**	Pn	**Pn**	**06 42 06.9**	**+1.0**
NVAR	**Mina Array Bea**	**3.54**	**164**	Pn	**Pb**	**06 42 11.5**	**-3.4**
	0.8nm,0.3s,baz=344,slow=14,SNR=13						
NVAR				Pg	**Pg**	**06 42 20.8**	**+0.9**
	3.1nm,0.3s,baz=337,slow=15,SNR=19						
NVAR				Lg	Lg	06 43 05.9	
	9.7nm,0.3s,baz=349,slow=22,SNR=14						
NVAR				LR	LR	06 43 21.8	
	comp=Z,83nm,18.9s,baz=327,slow=35						
NVAR	**Mina Array Bea**	**3.54**	**164**		**Pn**	**06 42 05.9**	**-1.4**
NV11	**Mina Array Sit**	**3.57**	**162**		**Pn**	**06 42 08.7**	**+1.1**
CMB	**Columbia Colle**	**3.85**	**190**		**Pn**	**06 42 10.7**	**-0.8**
HLID	**Hailey**	**4.16**	**64**	P	**Pn**	**06 42 16.9**	**+1.1**
	baz=248						
HLID				Sb	**Sg**	**06 43 22.3**	**-3.4**
	baz=248						
HLID	**Hailey**	**4.16**	**64**	Pn	**Pn**	**06 42 16.5**	**+0.7**
OMMB	**Old Mammoth Mi**	**4.24**	**174**	Pn	**Pn**	**06 42 17.6**	**+0.6**
R11A	**Troy Canyon, C**	**4.63**	**138**	P	**Pn**	**06 42 25.9**	**+3.6**
	baz=320						
R11A	**Troy Canyon, C**	**4.63**	**138**	Pn	**Pn**	**06 42 21.2**	**-1.0**
SPR3	**Spring Creek 3**	**4.89**	**124**	Pn	**Pn**	**06 42 24.9**	**-1.1**
HVU	**Hansel Valley**	**5.07**	**88**	Pn	**Pn**	**06 42 28.6**	**+0.4**
SPUT	**South Promonto**	**5.36**	**93**		**Pn**	**06 42 33.8**	**+1.6**
DUG	**Dugway, Tooele**	**5.36**	**106**	P	**Pn**	**06 42 35.1**	**+2.8**
	baz=290						
DUG				Sb	**Sg**	**06 43 58.8**	**-5.3**
	baz=290						
DUG	**Dugway, Tooele**	**5.36**	**106**		**Pn**	**06 42 31.5**	**-0.7**
PSUT	**Pine Spring**	**5.47**	**125**		**Pn**	**06 42 34.7**	**+0.8**
TPNV	**Topopah Spring**	**5.52**	**151**	Sb	**Sg**	**06 44 07.2**	**-1.9**
	baz=333						
TPNV	**Topopah Spring**	**5.52**	**151**		**Pn**	**06 42 33.8**	**-0.6**
PRN	**Pahroc Range**	**5.63**	**140**	Pn	**Pn**	**06 42 35.7**	**-0.3**
MCMT	**McKenzie Canyo**	**5.73**	**56**		**Pn**	**06 42 35.5**	**-1.9**
C09A	**Chrisman Ranch**	**6.03**	**8**	Pn	**Pn**	**06 42 40.2**	**-1.1**
TCRU	**Three Creeks R**	**6.33**	**118**	Pn	**Pn**	**06 42 46.2**	**+0.6**
AHID	**Auburn Hatcher**	**6.34**	**79**	Pn	**Pn**	**06 42 47.2**	**+1.5**
CCUT	**Cedar City**	**6.42**	**130**	Pn	**Pn**	**06 42 45.6**	**-1.3**
LRM	**Limekiln Ridge**	**6.50**	**50**	Pn	**Pn**	**06 42 48.5**	**+0.6**
REDW	**Red Top Meadow**	**6.60**	**74**	Pn	**Pn**	**06 42 50.6**	**+1.2**
SNOW	**Snow King Moun**	**6.69**	**73**	Pn	**Pn**	**06 42 51.8**	**+1.2**
B06A	**Marblemount**	**6.81**	**349**	Pn	**Pn**	**06 42 51.8**	**-0.2**
BOZ	**Bozeman (W)**	**6.86**	**54**	Pn	**Pn**	**06 42 52.2**	**-0.7**
FLWY	**Flagg Ranch**	**6.87**	**68**	Pn	**Pn**	**06 42 53.8**	**+0.7**
PGC	**Sidney**	**7.34**	**339**	Pn	**Pn**	**06 42 59.0**	**-0.3**
PDAR	**Pinedale Array**	**7.47**	**80**	Pn	Pn	06 43 06.6	+5.3
	0.1nm,0.3s,baz=264,slow=13,SNR=3.9						
PDAR				Pg	**Pb**	**06 43 23.5**	**+1.6**
	0.1nm,0.3s,baz=276,slow=18,SNR=4.0						
PDAR				Lg	Lg	06 45 09.0	
	0.1nm,0.3s,baz=237,slow=23,SNR=2.7						
TXAR	**Lajitas Array**	**17.93**	**129**	Pn	**P**	**06 45 27.8**	**+5.7**
	0.0nm,0.3s,baz=300,slow=12,SNR=3.0						
ILAR	**Eielson Array**	**27.75**	**335**	P	**P**	**06 47 02.5**	**+1.9**
	0.5nm,1.0s,baz=128,slow=5.8,SNR=4.4						

IDC ***22*** *06:43:33.4±1.0,21°.66S×67°.18W,h181km±9km,mb3.4/6, mb1 3.7/9,mb1mx3.5/25,mbtmp4.0/9,Error ellipse: s-maj=20.2km s-min=12.1km az=111.0*

VAO ***22*** *06:43:34.4±0.5,21°.58S×67°.36W,h206km±8km,mb3.6*

NEIC ***22*** *06:43:34.3±2.2,21°.63S±0°.06×67°.5W±0°.1,h206km±7km, Error ellipse: s-maj=14.4km s-min=8.5km az=87.0*

GUC ***22*** *06:43:35.3±0.7,21°.66S×67°.49W,h207km±7km,ML4.4*

SCB ***22*** *06:43:39.0±2.3,21°.62S×67°.37W,h149km±14km,ML3.9/4, Error ellipse: s-maj=7.1km s-min=5.3km az=0.0*

ISC 22 06:43:33.4±0.6,**21°.63S**±0°.04×**67°.32W**±0°.04,**h191**km±6km,
n108,σ1§55/141,mb4.0/11,7C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOCB	**Mochara**	**1.61**	**77**	P	**Pn**	**06 44 10.4**	**+2.5**
MOCB				S	**S**	**06 44 31.6**	**-2.8**
MOCB				IAML		06 44 37.8	
	2μm,0.4s						
YJA	**Yavi**	**1.76**	**108**	P	**Pn**	**06 44 12.1**	**+2.8**
YJA				S	**S**	**06 44 35.2**	**-1.8**
YJA				IAML		06 44 40.0	
	97nm,0.2s						
LVC	**Limon Verde**	**1.77**	**236**	P	**Pn**	**06 44 10.4**	**+1.2**
	34nm,0.3s,baz=38,slow=8.6,SNR=316						
LVC				S	**S**	**06 44 37.2**	**+0.2**
	69nm,0.3s,baz=207,slow=20,SNR=67						
LVC	**Limon Verde**	**1.77**	**236**	*eP*	**Pn**	**06 44 10.4**	**+1.2**
LVC				*i* S	**S**	**06 44 37.5**	**+0.5**
LVC	**Limon Verde**	**1.77**	**236**	*eP*	**Pn**	**06 44 10.7**	**+1.4**
PB09	**IPOC Station P**	**1.80**	**264**	*eP*	**Pn**	**06 44 10.8**	**+1.5**
PB09				*i* S	**S**	**06 44 38.0**	**+0.9**
PB09	**IPOC Station P**	**1.80**	**264**		**Pn**	**06 44 10.3**	**+1.0**
PB09				S	**S**	**06 44 37.9**	**+0.8**
PB09	**IPOC Station P**	**1.80**	**264**	P	**Pn**	**06 44 10.8**	**+1.5**
PB09				S	**S**	**06 44 33.9**	**-3.2**
PB01	**IPOC Station P**	**2.11**	**286**	⇓*iP*	**Pn**	**06 44 13.4**	**+1.0**
PB01				*i* S	**S**	**06 44 42.4**	**-0.3**
PB01				IAML		06 44 44.5	
	comp=E,1μm,0.3s						
PB01	**IPOC Station P**	**2.11**	**286**		**Pn**	**06 44 13.8**	**+1.3**
PB01				S	**S**	**06 44 42.3**	**-0.5**
PB01	**IPOC Station P**	**2.11**	**286**	P	**Pn**	**06 44 13.8**	**+1.3**
PB08	**IPOC Station P**	**2.27**	**311**	⇑*iP*	**Pn**	**06 44 16.4**	**+1.8**
PB08				*i* S	**S**	**06 44 47.6**	**+1.1**
PB08	**IPOC Station P**	**2.27**	**311**		**Pn**	**06 44 16.4**	**+1.8**
PB08				S	**S**	**06 44 47.8**	**+1.3**
PB08	**IPOC Station P**	**2.27**	**311**	P	**Pn**	**06 44 16.5**	**+1.8**
PB08				S	**S**	**06 44 43.7**	**-2.8**
PB08				IAML		06 44 49.5	
	comp=E,445nm,0.4s						
PB03	**IPOC Station P**	**2.30**	**259**	⇑*iP*	**Pn**	**06 44 15.4**	**+0.7**
PB03				*i* S	**S**	**06 44 45.7**	**-1.0**
PB03				IAML		06 44 47.1	
	comp=E,1μm,0.4s						
PB06	**IPOC Station P**	**2.34**	**243**	*eP*	**Pn**	**06 44 16.1**	**+1.0**
PB06				*i* S	**S**	**06 44 47.0**	**-0.6**
PB06				IAML		06 44 48.1	
	comp=E,811nm,0.1s						
PB06	**IPOC Station P**	**2.34**	**243**		**Pn**	**06 44 16.8**	**+1.6**
PB06				S	**S**	**06 44 46.6**	**-1.0**
PB06	**IPOC Station P**	**2.34**	**243**	P	**Pn**	**06 44 16.5**	**+1.3**
PB07	**IPOC Station P**	**2.39**	**267**	⇑*iP*	**Pn**	**06 44 16.6**	**+0.9**
PB07				*i* S	**S**	**06 44 47.2**	**-1.2**
PB07				IAML		06 44 49.1	
	comp=N,1μm,0.1s						
PB07	**IPOC Station P**	**2.39**	**267**		**Pn**	**06 44 16.7**	**+1.0**
PB07				S	**S**	**06 44 47.2**	**-1.2**
PB15	**IPOC Station P**	**2.53**	**231**	⇓*iP*	**Pn**	**06 44 18.3**	**+1.0**
PB15				*i* S	**S**	**06 44 51.5**	**0.0**
PB15	**IPOC Station P**	**2.53**	**231**		**Pn**	**06 44 18.9**	**+1.5**
PB15				S	**S**	**06 44 50.9**	**-0.7**
GO01	**Chusmiza**	**2.63**	**318**		**Pn**	**06 44 20.1**	**+1.4**
GO01				S	**S**	**06 44 54.0**	**0.0**
PB04	**IPOC Station P**	**2.72**	**255**	⇓*iP*	**Pn**	**06 44 20.0**	**+0.6**
PB04				*i* S	**S**	**06 44 53.8**	**-1.4**
PB04				IAML		06 44 56.1	
	comp=N,816nm,0.2s						
PB04	**IPOC Station P**	**2.72**	**255**		**Pn**	**06 44 20.1**	**+0.7**
PB04	**IPOC Station P**	**2.72**	**255**	P	**Pn**	**06 44 20.2**	**+0.7**
PATCX	**Punta Patache**	**2.77**	**287**	*eP*	**Pn**	**06 44 20.3**	**+0.4**
PATCX				*eS*	**S**	**06 44 54.7**	**-1.3**
PATCX				IAML		06 44 57.2	
	comp=E,932nm,0.2s						
PATCX	**Punta Patache**	**2.77**	**287**		**Pn**	**06 44 21.0**	**+1.0**
PB11	**IPOC Station P**	**2.87**	**310**	⇑*iP*	**Pn**	**06 44 21.7**	**+0.4**
PB11				*i* S	**S**	**06 44 57.5**	**-1.0**
PB11				IAML		06 44 59.1	
	comp=N,789nm,0.2s						
PB11	**IPOC Station P**	**2.87**	**310**		**Pn**	**06 44 22.1**	**+0.8**
TA01	**Diego Aracena**	**2.88**	**291**	⇑*iP*	**Pn**	**06 44 21.1**	**0.0**
TA01				*i* S	**S**	**06 44 56.3**	**-2.0**
TA01				IAML		06 44 58.4	
	comp=E,528nm,0.3s						
TA01	**Diego Aracena**	**2.88**	**291**	Pn	**Pn**	**06 44 21.5**	**+0.4**
PB05	**IPOC Station P**	**2.93**	**245**	*eP*	**Pn**	**06 44 22.4**	**+0.5**
PB05				*eS*	**S**	**06 44 57.6**	**-2.1**
PB05				IAML		06 44 59.9	
	comp=N,466nm,0.2s						
MNMC	**Minye Minye**	**3.28**	**319**	*eP*	**Pn**	**06 44 27.2**	**+1.0**
MNMC				*i* S	**S**	**06 45 07.5**	**0.0**
MNMC	**Minye Minye**	**3.28**	**319**		**Pn**	**06 44 27.3**	**+1.0**
MNMC	**Minye Minye**	**3.28**	**319**	P	**Pn**	**06 44 27.5**	**+1.2**
MNMC				S	**S**	**06 45 03.8**	**-3.7**
MNMC				IAML		06 45 10.3	
	comp=N,998nm,0.2s						
PSGC	**Pisagua**	**3.32**	**307**	⇑*eP*	**Pn**	**06 44 26.0**	**-0.6**
PSGC				*i* S	**S**	**06 45 05.4**	**-2.6**
PSGCX	**Pisagua**	**3.32**	**307**	Pn	**Pn**	**06 44 26.7**	**+0.1**
SLA	**San Lorenzo**	**3.50**	**152**	P	**Pn**	**06 44 30.9**

ULM	**Lac du Bonnet**	**75.90**	**342**	P	**P**	**06 54 57.9**	**-0.8**
TOA0	**Torodi Ar. Sit**	**76.01**	**70**	P	**P**	**06 55 00.5**	**+0.4**
TOA0				IAmb	IAmb	06 55 01.0	
	comp=Z,3.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.01**	**70**	P	**P**	**06 55 00.4**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=258,slow=5.4,SNR=36						
TORD	**Torodi Ar. Bea**	**76.01**	**70**	P	**P**	**06 55 00.1**	**0.0**
REDW	**Red Top Meadow**	**76.05**	**329**	P	**P**	**06 54 58.5**	**-1.5**
REDW				IAmb	IAmb	06 55 26.1	
	comp=Z,8.1nm,1.4s						
NVAR	**Mina Array Bea**	**76.52**	**321**	P	**P**	**06 55 04.8**	**+2.0**
	comp=Z,0.3nm,0.6s,baz=161,slow=5.7,SNR=2.6						
YKA	**Yellowknife Ar**	**91.81**	**340**	P	**P**	**06 56 20.4**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=128,slow=6.0,SNR=5.6						
ASAR	**Alice Springs**	**130.46**	**206**	PKP	**PKiKP**	**07 02 22.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=134,slow=1.9,SNR=5.1						
WRA	**Warramunga Arr**	**133.57**	**209**	PKP	**PKiKP**	**07 02 28.8**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=160,slow=1.8,SNR=7.5						
MKAR	**Makanchi Array**	**144.86**	**37**	PKP	**PKPdf**	**07 02 48.6**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=310,slow=3.9,SNR=26						
SONM	**Songino Array**	**153.37**	**9**	PKPbc	**PKiKP**	**07 03 10.3**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=226,slow=0.1,SNR=2.5						

IDC ***22*** *06:43:51.1±0.8, 0.°22S×125.°45E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/34, mbtmp3.9/10, ML3.6/1, Error ellipse: s-maj=60.1km s-min=15.3km az=74.0*

NEIC ***22*** *06:43:55±1.8, 0.°30S±0.°07×125.°44E±0.°05, h34km±7km, mb4.2/15, Error ellipse: s-maj=10.9km s-min=7.2km az=199.0*

DJA ***22*** *06:43:56.6±0.3, 0.°S±4.°×12.°6E±.°, h10km, M4.1/12, mb4.3/2, MLv3.9/12*

ISC 22 06:43:55.5±0.5, 0.°27S±0.°07×125.°54E±0.°05, h35km, n39, σ1°§24/35, mb4.1/15, Southern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.77**	**298**	P	**Pn**	**06 44 26.6**	**+2.9**
LBMI	**Labuha**	**2.00**	**101**	P	**Pn**	**06 44 27.8**	**+1.0**
TNTI	**Ternate**	**2.10**	**61**	P	**Pn**	**06 44 29.2**	**+1.0**
TNTI	**Ternate**	**2.10**	**61**		**Pn**	**06 44 29.0**	**+0.8**
LUWI	**Luwuk**	**2.87**	**254**	P	Pn	06 44 45.4	+6.6
LUWI	**Luwuk**	**2.87**	**254**	Pn	**Pn**	**06 44 37.5**	**-1.4**
NLAI	**Namlea**	**3.34**	**152**	P	Pn	06 44 51.1	+5.8
MRSI	**Marisa**	**3.67**	**282**	P	Pn	06 44 54.2	+4.3
APSI	**Ampana**	**3.94**	**261**	P	Pn	06 45 01.6	+8.0
MSAI	**Masohi**	**4.56**	**132**	P	**Pn**	**06 45 04.2**	**+2.1**
TOLI2	**Tolitoli**	**4.95**	**286**	Pn	**Pn**	**06 45 05.4**	**-2.0**
FAKI	**Fak Fak**	**7.21**	**112**	Pn	**Pn**	**06 45 38.6**	**+0.1**
SBUM	**Sibu**	**13.59**	**282**	Pn	**Pn**	**06 47 06.0**	**+0.1**
KNRA	**Kununurra**	**15.64**	**168**	Pn	**Pn**	**06 47 34.2**	**+0.8**
KNRA				IAmb	IAmb	06 47 59.7	
	comp=Z,25nm,1.2s						
UGM	**Wanagama**	**16.78**	**243**	P	**Pn**	**06 47 47.3**	**-0.8**
FITZ	**Fitzroy Crossi**	**17.72**	**180**	P	**P**	**06 48 01.4**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=29,slow=9.1,SNR=7.1						
FITZ	**Fitzroy Crossi**	**17.72**	**180**	P	**Pn**	**06 47 57.3**	**-2.3**
WB0	**Warramunga Arr**	**21.23**	**156**	P	**P**	**06 48 39.1**	**+0.5**
WB0				IAmb	IAmb	06 48 43.5	
	comp=Z,5.9nm,0.7s						
WRA	**Warramunga Arr**	**21.37**	**157**	P	**P**	**06 48 40.4**	**+0.3**
	comp=Z,4.1nm,0.7s,baz=337,slow=11,SNR=42						
WRA	**Warramunga Arr**	**21.37**	**157**	P	**P**	**06 48 39.7**	**-0.4**
WB2	**Warramunga Arr**	**21.37**	**157**	P	**P**	**06 48 39.4**	**-0.8**
WB2				IAmb	IAmb	06 48 45.2	
	comp=Z,6.7nm,0.7s						
MANU	**Manus Island**	**21.89**	**95**	P	**P**	**06 48 44.4**	**-1.4**
COEN	**Coen**	**22.13**	**129**	P	**P**	**06 48 49.1**	**+0.8**
COEN				IAmb	IAmb	06 48 52.7	
	comp=Z,6.2nm,0.8s						
TWG	**Pinlang**	**23.36**	**350**	P	**P**	**06 49 00.9**	**-0.1**
AS31	**Alice Springs**	**24.64**	**161**		**P**	**06 49 13.0**	**0.0**
ASAR	**Alice Springs**	**24.64**	**161**	P	**P**	**06 49 14.7**	**+1.6**
	comp=Z,2.0nm,0.9s,baz=343,slow=8.4,SNR=21						
ASAR	**Alice Springs**	**24.64**	**161**		**P**	**06 49 13.7**	**+0.7**
STKA	**Stephens Creek**	**34.91**	**156**	P	**P**	**06 50 45.0**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=342,slow=7.1,SNR=6.8						
STKA	**Stephens Creek**	**34.91**	**156**	P	**P**	**06 50 43.7**	**-0.3**
KSRS	**Korea Array**	**37.60**	**3**	P	**P**	**06 51 08.2**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=179,slow=9.4,SNR=4.7						
SHL	**Shillong**	**41.43**	**311**	P	**P**	**06 51 38.1**	**-1.1**
SHL				IAmb	IAmb	06 51 51.9	
	comp=Z,3.5nm,0.9s						
SONM	**Songino Array**	**50.72**	**343**	P	**P**	**06 52 52.8**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=159,slow=8.2,SNR=5.4						
SONM	**Songino Array**	**50.72**	**343**	P	**P**	**06 52 51.1**	**-0.9**
PETK	**Petropavlovsk-**	**59.56**	**22**	P	**P**	**06 53 55.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=201,slow=11,SNR=1.3						
MK31	**Makanchi Array**	**60.19**	**327**	P	**P**	**06 54 00.3**	**+0.3**
MK31				IAmb	IAmb	06 54 12.2	
	comp=Z,1.2nm,1.0s						
MKAR	**Makanchi Array**	**60.19**	**327**	P	**P**	**06 54 00.1**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=120,slow=8.4,SNR=13						
ZALV	**Zalesovo Beam**	**63.62**	**335**	P	**P**	**06 54 22.1**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=123,slow=5.3,SNR=2.4						
NRIK	**Noril'sk**	**74.01**	**347**	P	**P**	**06 55 28.1**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=135,slow=5.7,SNR=2.3						
QSPA	**South Pole Qui**	**89.67**	**180**	P	**P**	**06 56 47.4**	**-2.3**
QSPA				IAmb	IAmb	06 56 52.8	
	comp=Z,2.9nm,1.4s						

IDC 22 06:50:28.9±17.0, 0.°32N×126.°76E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/32, mbtmp3.3/3, Error ellipse: s-maj=274.3km s-min=163.9km az=160.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.47**	**160**	P	P	06 55 19.3	+0.1
	0.5nm,0.6s,baz=339,slow=11,SNR=6.0						
ASAR	**Alice Springs**	**24.84**	**164**	P	P	06 55 52.7	-0.5
	0.1nm,0.6s,baz=346,slow=13,SNR=2.2						
STKA	**Stephens Creek**	**34.97**	**158**	P	P	06 57 23.2	+0.3
	0.9nm,0.4s,baz=338,slow=9.2,SNR=3.0						

SJA ***22*** *06:50:52.4±1.0, 20.°00S×71.°12W, h10km, ML5.0, MW4.9*

IDC ***22*** *06:50:53.8±0.5, 19.°91S×70.°77W, h0km, mb4.4/15, mb1 4.6/19, mb1mx4.5/27, mbtmp4.4/19, ML3.9/4, MS4.3/19, Ms1 4.3/19, ms1mx4.2/25, Error ellipse: s-maj=20.1km s-min=11.2km az=59.0*

NEIC ***22*** *06:50:53.6±1.5, 20.°07S±0.°02×71.°13W±0.°05, h15km±3km, mb5.1/76, Ms_20 4.7/50, Mwr5.0/46, Mww5.0, ML4.9(GUC), Error ellipse: s-maj=7.4km s-min=2.8km az=73.0*

NEIC ***22*** *06:50:54.5, 20.°08S×71.°11W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.61; $M_{\theta\theta}$-3.96; $M_{\theta\phi}$0.65; $M_{\theta\phi}$1.39; $M_{\phi r}$-1.64; Fault plane solution: M_o4.41000×10^{16} NP1:ϕ_s346.71000°, δ33.21000°, λ94.78000°. NP2:ϕ_s161.01000°, δ56.92000°, λ86.88000°. Principal axes: T 3.9847, Plg78.0000°, Azm60.0000°; N 0.7561, Plg3.0000°, Azm163.0000°; P -4.7408, Plg12.0000°, Azm253.0000°;*

GUC ***22*** *06:50:55.6±0.8, 20.°04S×71.°12W, h17km±4km, ML5.0*

BJI ***22*** *06:50:55.0±0.0, 20.°10S×71.°10W, h20km, mB5.5/14, Ms5.2/7, Ms7 4.9/8*

MOS ***22*** *06:50:56.5±1.5, 20.°06S×71.°04W, h33km, mb5.1/17, Error ellipse: s-maj=13.1km s-min=8.7km az=109.3*

NEIC ***22*** *06:50:56, 19.°98S×71.°12W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}3.75; $M_{\theta\theta}$-0.24; $M_{\theta\phi}$-3.51; $M_{r\theta}$0.90; $M_{\theta\phi}$1.06; $M_{\phi r}$-2.49; Fault plane solution: M_o4.62000×10^{16} NP1:ϕ_s346.00000°, δ28.00000°, λ93.00000°. NP2:ϕ_s162.00000°, δ62.00000°, λ88.00000°. Principal axes: T 4.5826, Plg72.0000°, Azm67.0000°; N 0.0690, Plg2.0000°, Azm162.0000°; P -4.6515, Plg17.0000°, Azm253.0000°;*

VAO ***22*** *06:50:57.9±0.4, 19.°93S×70.°51W, h10km, mb5.0*

GCMT ***22*** *06:50:59.6±0.2, 19.°98S±0.°02×71.°30W±0.°01, h21km, MW5.1/94, Moment Tensor Solution. s51,c64; s94,c143; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.17±.18; $M_{\theta\theta}$-0.10±.10; $M_{\theta\phi}$-4.07±.12; $M_{r\theta}$0.13±.15; $M_{\theta\phi}$0.94±.06; $M_{\phi r}$-3.07±.19; Best double couple: M_o5.22500×10^{16} NP1:ϕ_s341.00000°, δ27.00000°, λ79.00000°. NP2: ϕ_s173.00000°, δ63.00000°, λ96.00000°. Principal axes: T 5.1940, Plg71.0000°, Azm96.0000°; N 0.0680, Plg5.0000°, Azm351.0000°; P -5.2570, Plg18.0000°, Azm259.0000°;*

nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 22 06:50:55.6±0.4, 20.°05S±0.°02×71.°05W±0.°04, h22km±3km, n443, σ1°§69/436, mb5.1/69, MS4.7/46, 17C-3D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	**Huaiquique**	**0.89**	**105**	⇑*iP*	**Pb**	**06 51 12.0**	**-0.4**
TA02				*i* S	**Sb**	**06 51 24.1**	**+0.1**
TA02				IAML		06 51 25.6	
	comp=E,57μm,0.4s						
TA01	**Diego Aracena**	**0.97**	**122**	⇑*iP*	**Pb**	**06 51 13.3**	**-0.4**
TA01				*i* S	**Sb**	**06 51 26.1**	**0.0**
TA01	**Diego Aracena**	**0.97**	**122**	Pn	**Pb**	**06 51 13.3**	**-0.4**
TA01				Sn	**Sb**	**06 51 26.1**	**0.0**
PSGC	**Pisagua**	**0.98**	**63**	⇑*iP*	**Pb**	**06 51 13.0**	**-1.1**
PSGC				*e*S	**Sb**	**06 51 25.9**	**-0.7**
PSGCX	**Pisagua**	**0.98**	**63**		**Pb**	**06 51 12.9**	**-1.1**
PSGCX				Sn	**Sb**	**06 51 26.7**	**+0.1**
PSGCX	**Pisagua**	**0.98**	**63**	*i P*	**Pb**	**06 51 13.2**	**-0.8**
PSGCX				*e*S	**Sb**	**06 51 26.2**	**-0.4**
PSGCX				IAML		06 51 29.4	
	comp=Z,33μm,0.8s						
PATCX	**Punta Patache**	**1.14**	**133**	⇑*iP*	**Pn**	**06 51 15.8**	**-0.7**
PATCX				*i* S	**Sb**	**06 51 30.9**	**-0.3**
PATCX				IAML		06 51 37.9	
	comp=E,29μm,0.6s						
PATCX	**Punta Patache**	**1.14**	**133**		**Pn**	**06 51 15.9**	**-0.6**
PATCX				Sn	**Sb**	**06 51 30.7**	**-0.5**
PATCX	**Punta Patache**	**1.14**	**133**	*i* P	**Pn**	**06 51 16.0**	**-0.4**
PATCX				*e*S	**Sb**	**06 51 30.6**	**-0.6**
PATCX				IAML		06 51 38.8	
	comp=Z,23μm,1.6s						
PB11	**IPOC Station P**	**1.34**	**78**	⇑*iP*	**Pn**	**06 51 18.9**	**-0.3**
PB11				*i* S	**Sn**	**06 51 37.2**	**+0.6**
PB11	**IPOC Station P**	**1.34**	**78**		**Pn**	**06 51 19.0**	**-0.3**
PB11				Sn	**Sn**	**06 51 37.6**	**+0.5**
PB11	**IPOC Station P**	**1.34**	**78**	*i* P	**Pn**	**06 51 19.1**	**-0.2**
PB11				*e*S	**Sb**	**06 51 38.1**	**+1.1**
PB11				IAML		06 51 44.5	
	comp=Z,33μm,1.4s						
MNMC	**Minye Minye**	**1.65**	**57**	⇑*iP*	**Pn**	**06 51 23.7**	**+0.1**
MNMC				*i* S	**Sb**	**06 51 46.1**	**+0.2**
MNMC	**Minye Minye**	**1.65**	**57**	Pn	**Pn**	**06 51 23.8**	**+0.1**
MNMC				Sn	**Sb**	**06 51 46.3**	**+0.4**
MNMCX	**Minye Minye**	**1.65**	**57**	*i* P	**Pn**	**06 51 23.8**	**+0.3**
MNMCX				*e*S	**Sb**	**06 51 47.2**	**+1.3**
MNMCX				IAML		06 52 03.2	
	comp=Z,22μm,0.9s						
PB01	**IPOC Station P**	**1.77**	**124**	⇑*iP*	**Pn**	**06 51 25.2**	**+0.1**
PB01				IAML		06 51 56.9	
	comp=N,23μm,0.6s						
PB01	**IPOC Station P**	**1.77**	**124**		**Pn**	**06 51 24.8**	**-0.3**
PB01				Sn	**Sn**	**06 51 46.6**	**-0.5**
PB01	**IPOC Station P**	**1.77**	**124**	*i* P	**Pn**	**06 51 25.4**	**+0.3**
PB01				*e*S	**Sb**	**06 51 50.7**	**+1.4**
PB01				IAML		06 51 56.3	
	comp=Z,17μm,0.6s						
PB08	**IPOC Station P**	**1.79**	**93**	⇑*iP*	**Pn**	**06 51 25.6**	**+0.1**
PB08				*i* S	**Sb**	**06 51 50.6**	**+0.6**
PB08				IAML		06 51 55.8	
	comp=N,10μm,0.5s						
PB08	**IPOC Station P**	**1.79**	**93**		**Pn**	**06 51 25.7**	**+0.1**
PB08				Sn	**Sn**	**06 51 48.2**	**+0.3**
PB08	**IPOC Station P**	**1.79**	**93**	*i* P	**Pn**	**06 51 25.8**	**+0.2**
PB08				*e*S	**Sb**	**06 51 50.7**	**+0.7**
PB08				IAML		06 51 55.6	
	comp=Z,20μm,0.9s						
GO01	**Chusmiza**	**1.79**	**78**	⇑*iP*	**Pn**	**06 51 25.8**	**+0.1**
GO01				*i* S	**Sb**	**06 51 50.8**	**+0.6**
GO01	**Chusmiza**	**1.79**	**78**		**Pn**	**06 51 25.9**	**+0.2**
GO01				Sn	**Sn**	**06 51 49.5**	**+1.5**
AP01	**Chacalluta**	**1.80**	**22**	*e*P	**Pn**	**06 51 25.0**	**-0.3**
AP01				*e*S	**Sn**	**06 51 48.3**	**+0.8**
AP01	**Chacalluta**	**1.80**	**22**		**Pn**	**06 51 25.0**	**-0.3**
AP01				Sn	**Sn**	**06 51 47.4**	**+0.1**
PB07	**IPOC Station P**	**2.00**	**147**	⇑*iP*	**Pn**	**06 51 27.9**	**-0.4**
PB07	**IPOC Station P**	**2.00**	**147**		**Pn**	**06 51 27.8**	**-0.4**
PB16	**IPOC Station P**	**2.24**	**41**	⇑*iP*	**Pn**	**06 51 32.2**	**+0.2**
PB16				*i* S	**Sb**	**06 52 03.2**	**-0.1**
PB16	**IPOC Station P**	**2.24**	**41**		**Pn**	**06 51 32.2**	**+0.2**
PB03	**IPOC Station P**	**2.33**	**149**	⇑*iP*	**Pn**	**06 51 32.7**	**-0.2**
PB03				*i* S	**Sn**	**06 52 03.4**	**+2.3**
PB03				IAML		06 52 21.3	
	comp=N,6μm,0.6s						
PB04	**IPOC Station P**	**2.43**	**160**	*e*P	**Pn**	**06 51 33.4**	**-0.8**
PB04				*e*S	**Sb**	**06 52 06.1**	**-2.2**
PB04				IAML		06 52 23.3	
	comp=N,13μm,0.3s						
PB04	**IPOC Station P**	**2.43**	**160**		**Pn**	**06 51 33.4**	**-0.8**
PB04	**IPOC Station P**	**2.43**	**160**	*i* P	**Pn**	**06 51 33.3**	**-0.8**
PB04				*e*S	**Sb**	**06 52 15.1**	**+6.8**
PB04				IAML		06 52 23.4	
	comp=Z,10μm,0.8s						
PB09	**IPOC Station P**	**2.43**	**136**	⇑*iP*	**Pn**	**06 51 35.2**	**+1.0**
PB09				*e*S	**Sb**	**06 52 06.7**	**-1.6**
PB09				IAML		06 52 19.7	
	comp=N,14μm,0.6s						
PB09	**IPOC Station P**	**2.43**	**136**		**Pn**	**06 51 35.2**	**+1.0**
PB05	**IPOC Station P**	**2.90**	**164**	*e*P	**Pn**	**06 51 39.7**	**-1.0**
PB05				⇓⇓*i* S	**Sn**	**06 52 15.9**	**+0.9**
PB05				IAML		06 52 48.7	
	comp=N,4μm,0.5s						
PB05	**IPOC Station P**	**2.90**	**164**	*i* P	**Pn**	**06 51 40.2**	**-0.5**
PB05				*e*S	**Sb**	**06 52 25.2**	**+3.3**
PB05				IAML		06 52 41.1	
	comp=Z,4μm,0.6s						
PB06	**IPOC Station P**	**2.98**	**153**	*e*P	**Pn**	**06 51 41.2**	**-0.6**
PB06				*e*S	**Sn**	**06 52 16.5**	**-0.6**
PB06				IAML		06 52 41.3	
	comp=E,5μm,0.8s						
PB06				IAML		06 52 42.7	
	comp=N,6μm,0.5s						
PB06	**IPOC Station P**	**2.98**	**153**		**Pn**	**06 51 41.0**	**-0.8**
LVC	**Limon Verde**	**3.24**	**142**	Pn	**Pn**	**06 51 46.8**	**+1.2**
	comp=N,54nm,0.3s,baz=312,slow=9.8,SNR=345						
LVC				Pg	**Pb**	**06 51 53.1**	**+0.4**
	comp=N,84nm,0.3s,baz=312,slow=10,SNR=36						
LVC				Sn	**Sn**	**06 52 24.9**	**+1.3**
	comp=N,144nm,0.3s,baz=293,slow=21,SNR=7.8						
LVC				Lg	Lg	06 52 36.3	
	comp=N,225nm,0.3s,baz=36,slow=1.2,SNR=7.8						
LVC	**Limon Verde**	**3.24**	**142**	*e*P	**Pn**	**06 51 46.8**	**+1.2**
LVC				*e*S	**Sn**	**06 52 22.4**	**-1.2**
LVC	**Limon Verde**	**3.24**	**142**	P	**Pn**	**06 51 45.9**	**+0.4**
LVC	**Limon Verde**	**3.24**	**142**	Pn	**Pn**	**06 51 45.9**	**+0.4**
LVC	**Limon Verde**	**3.24**	**142**	*e*P	**Pn**	**06 51 47.0**	**+1.5**
PB15	**IPOC Station P**	**3.47**	**155**	*e*P	**Pn**	**06 51 47.9**	**-0.7**
PB15				*e*S	**Sn**	**06 52 28.1**	**-1.1**
PB15	**IPOC Station P**	**3.47**	**155**		**Pn**	**06 51 47.9**	**-0.7**
PB15	**IPOC Station P**	**3.47**	**155**	*i* P	**Pn**	**06 51 50.4**	**+1.7**
PB15				IAML		06 53 09.4	
	comp=Z,6μm,0.7s						
PB10	**IPOC Station P**	**3.48**	**172**	Pn	**Pn**	**06 51 47.2**	**-1.3**
PB10	**IPOC Station P**	**3.48**	**172**	*i* P	**Pn**	**06 51 47.0**	**-1.5**
PB10				IAML		06 53 05.1	
	comp=Z,1μm,3.2s						
PB14	**IPOC Station P**	**4.60**	**173**	Pn	**Pn**	**06 52 02.7**	**-1.5**
LPAZ	**La Paz**	**4.66**	**37**	Pn	**Pn**	**06 52 07.8**	**+2.6**
	comp=Z,0.9nm,0.3s,baz=208,slow=8.5,SNR=47						
LPAZ	**La Paz**	**4.66**	**37**	P	**Pn**	**06 52 07.1**	**+1.8**
LPAZ	**La Paz**	**4.66**	**37**		**Pn**	**06 52 07.1**	**+1.8**
LPAZ	**La Paz**	**4.66**	**37**	*i* P	**Pn**	**06 52 08.4**	**+3.1**
GO02	**Mina Guanaco**	**5.27**	**165**	Pn	**Pn**	**06 52 13.2**	**-0.2**
YJA	**Yavi**	**5.59**	**113**	*i* P	**Pn**	**06 52 20.9**	**+3.0**
YJA				IAML		06 54 26.5	
	comp=Z,169nm,2.6s						
AC01	**Pan de Azucar**	**6.09**	**176**	Pn	**Pn**	**06 52 23.0**	**-1.4**
HJA	**Humahuaca**	**6.12**	**122**	*i* P	**Pn**	**06 52 27.3**	**+2.2**
AC02	**Maricunga**	**6.99**	**166**		**Pn**	**06 52 37.2**	**+0.1**
GO03	**Copiap**	**7.55**	**174**	Pn	**Pn**	**06 52 43.2**	**-1.3**
AC04	**Llanos de Chal**	**8.12**	**180**	Pn	**Pn**	**06 52 48.4**	**-3.9**
AHML	**Horco Molle**	**8.52**	**143**	*i* P	**Pn**	**06 53 00.0**	**+2.3**
AC05	**El Transito**	**8.78**	**176**	Pn	**Pn**	**06 53 01.1**	**-0.4**
VCA	**Vinchina**	**9.03**	**164**	*i* P	**Pn**	**06 53 04.2**	**-0.8**
NNA	**Nana**	**9.75**	**324**	Pn	**Pn**	**06 53 17.7**	**+2.9**
	comp=Z,0.7nm,0.3s,baz=227,slow=21,SNR=4.4						
NNA				Sn	**Sn**	**06 55 01.4**	**-2.4**
	comp=Z,1.7nm,0.3s,baz=226,slow=15,SNR=2.5						
NNA				LR	LR	06 56 48.5	
	comp=Z,866nm,19.1s,baz=158,slow=36						
NNA	**Nana**	**9.75**	**324**	*ce*P	**Pn**	**06 53 17.3**	**+2.5**
NNA				pmax	pmax		
	comp=Z,57nm,1.3s						
NNA	**Nana**	**9.75**	**324**		**Pn**	**06 53 12.4**	**-2.4**
ACLC	**CERRO LA CRUZ**	**10.05**	**159**	*i* P	**Pn**	**06 53 18.3**	**-0.6**
SIV	**San Ignacio**	**10.31**	**69**	Pn	**Pn**	**06 53 20.5**	**-2.0**
	comp=Z,1.1nm,0.3s,baz=263,slow=12,SNR=32						
ETMB	**Extrema**	**11.19**	**25**	*e*P	**Pn**	**06 53 34.3**	**-0.1**
PTLB	**Pontes e Lacer**	**12.24**	**70**	*e*P	**Pn**	**06 53 46.6**	**-2.1**
CZSB	**Cruzeiro do Su**	**12.35**	**352**	*e*P	**Pn**	**06 53 54.8**	**+4.6**
SAML	**Samuel**	**13.40**	**36**	P	**Pn**	**06 54 01.7**	**-2.9**
SAML	**Samuel**	**13.40**	**36**		**Pn**	**06 54 01.7**	**-2.9**
SAML	**Samuel**	**13.40**	**36**	*e*P	**Pn**	**06 54 01.6**	**-3.1**
CPUP	**Villa Florida**	**14.08**	**119**	Pn	**Pn**	**06 54 13.8**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=299,slow=12,SNR=3.4						
CPUP				LR	LR	07 00 07.0	
	comp=Z,897nm,21.4s,baz=298,slow=40						
CPUP	**Villa Florida**	**14.08**	**119**	P	**Pn**	**06 54 14.2**	**+0.3**
CPUP	**Villa Florida**	**14.08**	**119**	Pn	**Pn**	**06 54 14.2**	**+0.3**
AQDB	**Aquidauana**	**14.42**	**94**	*e*P	**Pn**	**06 54 16.5**	**-2.0**
BO02	**Sierra Bellavi**	**14.69**	**179**	Pn	**Pn**	**06 54 22.5**	**+0.2**
H03N1	**Juan Fernandez**	**15.07**	**206**	Pn	**Pn**	**06 54 26.4**	**-0.6**
	baz=111,slow=14,SNR=13						
H03N1				T	T	07 10 07.1	
	baz=33,slow=72,SNR=169						
H03N2	**Juan Fernandez**	**15.07**	**206**	Pn	**Pn**	**06 54 26.2**	**-0.9**
	baz=111,slow=14,SNR=9.2						
H03N2				T	T	07 09 57.8	
	baz=33,slow=72,SNR=145						
H03N3	**Juan Fernandez**	**15.08**	**206**	Pn	**Pn**	**06 54 25.9**	**-1.4**
	baz=111,slow=14,SNR=12						
H03N3				T	T	07 10 02.3	
	baz=33,slow=72,SNR=140						
VA04	**Juan Fernndez**	**15.21**	**205**	Pn	**Pn**	**06 54 28.0**	**-1.1**
VA04				IAmb	IAmb	06 54 31.0	
	comp=Z,181nm,1.3s						
H03S3	**Juan Fernandez**	**15.40**	**205**	Pn	**Pn**	**06 54 28.3**	**-3.1**
	baz=176,slow=72,SNR=12						
H03S3				T	T	07 10 41.7	
	baz=38,slow=72,SNR=7.5						
H03S1	**Juan Fernandez**	**15.41**	**205**	Pn	**Pn**	**06 54 29.0**	**-2.6**
	baz=176,slow=72,SNR=18						
H03S1				T	T	07 10 19.1	
	baz=38,slow=72,SNR=5.9						
H03S2	**Juan Fernandez**	**15.42**	**205**	Pn	**Pn**	**06 54 28.6**	**-2.9**
	baz=176,slow=72,SNR=22						
H03S2				T	T	07 10 34.7	
	baz=38,slow=72,SNR=7.4						
PP1B	**Ponte de Pedra**	**15.50**	**84**	*e*P	**Pn**	**06 54 29.7**	**-3.4**
ITQB	**Itaqui**	**16.21**	**129**	*e*P	**Pn**	**06 54 42.3**	**+0.2**
BI02	**San Fabin de**	**16.56**	**181**		**P**	**06 54 48.7**	**-0.3**
CLDB	**Colider**	**17.29**	**60**	*e*P	**Pn**	**06 54 53.5**	**-2.4**
TRCB	**Terra Rica**	**17.37**	**102**	*e*P	**Pn**	**06 54 55.2**	**-1.6**
PTGB	**Pitanga**	**18.16**	**108**	*e*P	**Pn**	**06 55 04.6**	**-2.0**
PCMB	**Pacaembu**	**18.57**	**98**	*e*P	**P**	**06 55 09.6**	**-1.7**
ITAB	**Concordia**	**18.74**	**116**	*e*P	**P**	**06 55 11.9**	**-1.2**
LC01	**Cumco**	**18.80**	**182**	P	**P**	**06 55 12.2**	**-1.5**
LPA	**La Plata**	**18.80**	**145**	*de*P	**P**	**06 55 10.0**	**-3.7**
LPA				PPP	PPP	06 56 18.9	
LPA				S	**S**	**06 58 54.1**	**+7.7**
ARAG	**Araguaiana, MT**	**18.81**	**80**	*e*P	**P**	**06 55 11.7**	**-2.3**
ITRB	**Iturama**	**19.47**	**93**	*e*P	**P**	**06 55 20.7**	**-0.4**
PLTB	**Pedras Altas**	**19.53**	**130**	*e*P	**P**	**06 55 22.2**	**+0.5**
MACA	**Manacapuru-AM**	**19.60**	**32**	*e*P	**P**	**06 55 21.3**	**-1.2**
NPGB	**Novo Progresso**	**19.97**	**52**	*e*P	**P**	**06 55 24.6**	**-2.1**
FRTB	**Fartura**	**20.23**	**103**	*e*P	**P**	**06 55 27.8**	**-1.7**
PTLC	**Puerto Leguiza**	**

comp=Z,1µm,18.7s,baz=165,slow=30
FDF Fort de France 35.91 16 IAMs_20 IAMs_20 07 14 15.4
comp=Z,1µm,19.0s
RCBR Riachuelo 36.95 72 P **P** **06 58 03.7 +0.1**
RCBR pmax pmax
comp=Z,68nm,1.1s
RCBR MLR MLR
comp=Z,2µm,18.0s
RCBR Riachuelo 36.95 72 P **P** **06 58 03.7 +0.1**
RCBR Riachuelo 36.95 72 *e*P **P** **06 58 04.0 +0.4**
MLPR Magueyes Islan 37.98 6 P **P** **06 58 11.6 -0.4**
CRPR Cabo Rojo, PR 38.01 6 P **P** **06 58 11.2 -1.1**
OBIP Obispado Ponce 38.10 7 P **P** **06 58 12.2 -0.9**
OBIP IAmb IAmb 06 58 29.0
comp=Z,58nm,1.2s
PDPR Patillas Dam, 38.15 8 P **P** **06 58 12.4 -1.1**
PDPR IAmb IAmb 06 58 26.8
comp=Z,31nm,0.9s
SJG San Juan 38.22 8 LR LR 07 15 14.6
comp=Z,240nm,18.2s,baz=201,slow=38
SJG San Juan 38.22 8 P **P** **06 58 12.8 -1.3**
SJG pmax pmax
comp=Z,28nm,1.0s
SJG San Juan 38.22 8 P **P** **06 58 12.8 -1.3**
SJG IAmb IAmb 06 58 23.8
comp=Z,28nm,1.0s
MTP Monte Pirata 38.29 8 P **P** **06 58 13.4 -1.3**
CBYP Canovanas 38.42 8 P **P** **06 58 14.6 -1.2**
CBYP IAmb IAmb 06 58 22.8
comp=Z,73nm,1.2s
CUPR Culebra, Puert 38.53 9 P **P** **06 58 15.3 -1.4**
CUPR IAmb IAmb 06 58 29.5
comp=Z,63nm,1.4s
PMSA Palmer Station 44.95 176 LR LR 07 16 60.0
comp=Z,177nm,18.7s,baz=348,slow=35
Y60A Bolivia 54.18 353 P **P** **07 00 21.4 +2.0**
baz=172
Y60A Bolivia 54.18 353 P **P** **07 00 20.5 +1.1**
Y57A Sumter 54.49 350 P **P** **07 00 21.1 -0.5**
X59A McDuffie Farm, 54.79 352 P **P** **07 00 25.3 +1.5**
baz=171
BIRD Birdtown, Kers 55.12 351 P **P** **07 00 26.5 +0.3**
BIRD IAmb IAmb 07 00 34.3
comp=Z,19nm,1.1s
HKT Hockley 55.14 334 *i*P **P** **07 00 27.4 +1.0**
HKT pmax pmax
comp=Z,14nm,1.4s
W58A Raeford 55.31 352 P **P** **07 00 29.0 +1.4**
baz=171
W59A Clinton 55.35 353 P **P** **07 00 29.5 +1.5**
baz=172
CNNC Cliffs of the 55.36 353 P **P** **07 00 28.0 0.0**
CNNC IAmb IAmb 07 00 40.0
comp=Z,29nm,1.0s
W56A Indian Trail 55.62 351 P **P** **07 00 28.8 -1.0**
baz=169
KMSC Kings Mountain 55.74 350 P **P** **07 00 31.9 +1.1**
baz=168
KMSC Kings Mountain 55.74 350 P **P** **07 00 29.5 -1.2**
KMSC IAmb IAmb 07 00 40.9
comp=Z,26nm,1.3s
V59A Middlesex 55.92 353 P **P** **07 00 33.6 +1.6**
baz=172
FPAL Fort Paine 56.02 346 P **P** **07 00 32.4 -0.4**
V56A Mocksville 56.27 351 P **P** **07 00 36.2 +1.7**
baz=169
U59A Littleton 56.45 353 P **P** **07 00 37.0 +1.3**
baz=172
U60A Pendleton 56.51 354 P **P** **07 00 37.7 +1.6**
baz=173
V52A Sevierville 56.84 348 P **P** **07 00 38.1 -0.4**
V52A IAmb IAmb 07 00 48.2
comp=Z,30nm,1.2s
OXF Oxford 57.00 342 P **P** **07 00 40.6 +0.9**
baz=160
T59A Double "B" Far 57.04 354 P **P** **07 00 41.6 +1.7**
baz=173
T59A Double "B" Far 57.04 354 P **P** **07 00 39.3 -0.6**
T59A IAmb IAmb 07 00 42.9
comp=Z,30nm,1.2s
T58A Grand View Acr 57.12 353 P **P** **07 00 42.3 +1.8**
baz=172
T57A Hurt 57.26 352 P **P** **07 00 40.2 -1.3**
T57A IAmb IAmb 07 00 43.9
comp=Z,18nm,1.1s
WLAR White Oak Lake 57.43 338 P **P** **07 00 41.4 -1.3**
V48A Smith Brothers 57.46 345 P **P** **07 00 41.9 -1.0**
V48A IAmb IAmb 07 00 54.7
comp=Z,18nm,1.1s
W45A Hickory Valley 57.54 342 P **P** **07 00 42.2 -1.3**
W45A IAmb IAmb 07 00 55.9
comp=Z,24nm,0.9s
CLTN Cedars of Leba 57.67 345 P **P** **07 00 43.3 -1.1**
R58B Mineral 58.06 354 P **P** **07 00 49.1 +2.1**
baz=173
R58B Mineral 58.06 354 P **P** **07 00 46.0 -1.0**
R58B IAmb IAmb 07 00 49.7
comp=Z,25nm,1.3s
WVT Waverly 58.08 344 P **P** **07 00 45.9 -1.4**
WVT pmax pmax
comp=Z,10.0nm,1.0s
WVT Waverly 58.08 344 P **P** **07 00 47.4 +0.1**
baz=162
WVT Waverly 58.08 344 P **P** **07 00 45.9 -1.4**
S55A Lewisburg 58.19 351 P **P** **07 00 49.9 +1.8**
baz=170
TX31 Lajitas Ar. Si 58.30 326 P **P** **07 00 47.9 -1.2**
TXAR Lajitas Array 58.30 326 P **P** **07 00 50.6 +1.4**
comp=Z,0.8nm,0.8s,baz=137,slow=6.6,SNR=6.8
TXAR LR LR 07 24 52.1
comp=Z,148nm,18.5s,baz=0.0,slow=35
TXAR Lajitas Array 58.30 326 P **P** **07 00 46.6 -2.5**
TXAR Lajitas Array 58.30 326 P **P** **07 00 46.6 -2.5**
MIAR Mount Ida 58.36 338 P **P** **07 00 49.8 +0.5**
baz=155
T47A Sharon Grove 58.72 345 P **P** **07 00 50.6 -1.1**
T47A IAmb IAmb 07 01 07.4
comp=Z,31nm,1.4s
W39A Magazine 59.02 338 P **P** **07 00 55.4 +1.5**
baz=155
W39A Magazine 59.02 338 P **P** **07 00 51.8 -2.1**
W39A IAmb IAmb 07 01 04.9
comp=Z,17nm,1.1s
X37A Clayton 59.05 337 P **P** **07 00 53.3 -0.8**
X37A IAmb IAmb 07 01 07.9
comp=Z,23nm,1.1s
ABTX Abilene, Hawle 59.08 332 P **P** **07 00 52.7 -1.7**
ABTX IAmb IAmb 07 01 06.4
comp=Z,14nm,1.0s
Q57A Strasburg 59.17 353 P **P** **07 00 56.7 +1.9**
baz=172
P57A Homestead Farm 59.57 354 P **P** **07 00 59.9 +2.3**
baz=172
P56A Dayton Farm, R 59.68 353 P **P** **07 01 00.4 +2.1**
baz=172
U40A Yellville 59.77 340 P **P** **07 00 59.7 +0.7**
baz=156
U40A Yellville 59.77 340 P **P** **07 00 59.1 +0.1**
S44A Carbondale 59.93 343 P **P** **07 01 00.3 +0.2**
O57A Amberson 60.26 354 P **P** **07 01 05.1 +2.8**
baz=173
TUL1 Leonard 60.38 337 P **P** **07 01 04.9 +1.7**
baz=153
TUL1 Leonard 60.38 337 P **P** **07 01 02.2 -1.0**
TUL1 IAmb IAmb 07 01 11.0
comp=Z,36nm,1.4s
O56A Blue Knob Stat 60.41 353 P **P** **07 01 05.2 +1.8**
baz=172
O56A Blue Knob Stat 60.41 353 P **P** **07 01 01.2 -2.2**
BELA Belgrano 2 60.47 172 P **P** **07 01 02.2 -1.1**
N56A West Decatur 61.02 354 P **P** **07 01 09.4 +1.9**
baz=172
MNTX Cornudas Mount 61.08 327 P **P** **07 01 09.6 +1.5**
baz=143
MNTX Cornudas Mount 61.08 327 P **P** **07 01 06.1 -2.0**
MNTX IAmb IAmb 07 01 21.2
comp=Z,21nm,1.4s
S39A Bolivar 61.14 340 P **P** **07 01 08.3 0.0**
S39A IAmb IAmb 07 01 17.7
comp=Z,14nm,1.0s
M59A Waymart 61.41 356 P **P** **07 01 11.7 +1.6**
baz=175
T35A Sooner Cattle 61.54 337 P **P** **07 01 10.4 -0.7**
T35A IAmb IAmb 07 01 27.4
comp=Z,22nm,1.2s
M55A Ridgway 61.62 353 P **P** **07 01 12.2 +0.6**

L58A Harry Jones Me 61.94 356 P **P** **07 01 15.6 +1.9**
baz=175
KAN13 South Haven SW 61.99 336 P **P** **07 01 13.2 -0.9**
L59A Walton 62.03 357 P **P** **07 01 16.3 +1.9**
baz=176
L59A Walton 62.03 357 P **P** **07 01 14.4 +0.1**
VNA3 Neumayer Olymp 62.09 161 P **P** **07 01 16.1 +1.7**
BINY Binghamton 62.10 356 P **P** **07 01 15.8 +1.0**
baz=175
BINY Binghamton 62.10 356 P **P** **07 01 13.8 -1.0**
HSIG 62.14 321 P **P** **07 01 13.9 -1.4**
L56A Greenwood 62.16 355 P **P** **07 01 16.8 +1.6**
baz=173
VNA1 Neumayer--Stat 62.32 160 P **P** **07 01 18.0 +2.1**
P40A Paris 62.43 342 P **P** **07 01 16.8 -0.2**
P40A IAmb IAmb 07 01 33.0
comp=Z,31nm,1.4s
K59A Cooperstown 62.60 357 P **P** **07 01 19.6 +1.5**
baz=176
VNA2 Neumayer--Watz 62.68 161 P **P** **07 01 19.8 +1.5**
J59A Piesco 63.27 357 P **P** **07 01 23.6 +1.0**
baz=176
J59A Piesco 63.27 357 P **P** **07 01 22.1 -0.5**
I61A Oroboro, Fairl 63.67 359 P **P** **07 01 26.9 +1.8**
baz=179
ANMO Albuquerque 64.20 328 *ce*P **P** **07 01 30.4 +1.3**
ANMO pmax pmax
comp=Z,54nm,5.6s
H58A Gabriels 64.21 358 P **P** **07 01 29.8 +1.1**
baz=177
SNAA Sanae 64.30 161 P **P** **07 01 30.8 +1.7**
SNAA Sanae 64.30 161 *c i*P **P** **07 01 29.7 +0.6**
SNAA pmax pmax
comp=Z,19nm,1.4s
SNAA Sanae 64.30 161 P **P** **07 01 28.2 -0.9**
SNAA IAmb IAmb 07 01 46.2
comp=Z,14nm,1.1s
H57A Richville 64.31 357 P **P** **07 01 30.0 +0.7**
baz=176
H59A Cadyville 64.42 358 P **P** **07 01 31.8 +1.7**
baz=177
CBKS Cedar Bluff 64.43 335 P **P** **07 01 29.1 -1.2**
CBKS pmax pmax
comp=Z,30nm,1.4s
CBKS Cedar Bluff 64.43 335 P **P** **07 01 29.1 -1.2**
CBKS IAmb IAmb 07 01 39.2
comp=Z,30nm,1.4s
FRNY Flat Rock 64.61 358 P **P** **07 01 31.8 +0.6**
FRNY IAmb IAmb 07 01 43.6
comp=Z,22nm,1.1s
G57A Newington 64.93 357 P **P** **07 01 34.9 +1.6**
baz=176
G62A West of Eustis 64.95 0 P **P** **07 01 32.8 -0.7**
GLMI Grayling 65.73 349 P **P** **07 01 42.0 +3.4**
baz=166
SDCO Great Sand Dun 65.99 331 P **P** **07 01 43.6 +2.8**
baz=145
SDCO Great Sand Dun 65.99 331 P **P** **07 01 38.3 -2.5**
SDCO IAmb IAmb 07 01 47.2
comp=Z,15nm,1.4s
L34A Svendsen Farm, 66.00 340 P **P** **07 01 38.3 -2.1**
W18A Petrified Fore 66.02 326 P **P** **07 01 44.7 +3.8**
baz=140
Q24A Divide 66.83 332 P **P** **07 01 49.5 +3.4**
baz=145
D62A Allapoint, All 66.84 1 P **P** **07 01 47.4 +1.8**
baz=182
D58A Chemin du LacG 66.85 359 P **P** **07 01 47.4 +1.7**
baz=178
D55A Sainte-Anne-du 66.87 357 P **P** **07 01 47.2 +1.4**
baz=176
WUAZ Wupatki 67.19 325 P **P** **07 01 52.6 +4.2**
baz=139
ECSD EROS Data Cent 67.66 340 P **P** **07 01 51.9 +1.0**
baz=154
ECSD EROS Data Cent 67.66 340 P **P** **07 01 49.7 -1.2**
ECSD IAmb IAmb 07 01 58.8
comp=Z,18nm,1.3s
ISCO Idaho Springs 67.71 332 P **P** **07 01 54.6 +2.9**
baz=145
PV15 Paradox Valley 67.88 329 IAMs_20 IAMs_20 07 22 16.6
comp=Z,431nm,21.0s
PV03 Paradox Valley 67.99 329 IAMs_20 IAMs_20 07 24 36.6
comp=Z,407nm,21.0s
PFO Pinyon Flats O 68.71 320 *i*P **P** **07 01 59.1 +1.2**
PFO pmax pmax
comp=Z,7.0nm,1.0s
N23A Red Feather La 68.75 332 P **P** **07 02 00.7 +2.5**
baz=145
NVL N'lazarevskaya 68.89 159 *e*P P 07 02 10.0 +12
NVL *e*S SKiKP 07 11 26.4 -22
NVL pmax pmax
comp=Z,12nm,0.9s
LIC Lamto 69.93 75 *e*P **P** **07 02 03.7 -2.1**
comp=Z,85nm,1.5s
TIC Toumodi 70.11 75 *e*P **P** **07 02 05.6 -1.3**
QSPA South Pole Qui 70.14 180 P **P** **07 02 06.6 +0.3**
QSPA IAmb IAmb 07 02 14.2
comp=Z,29nm,1.2s
KIC Kosan Boka 70.25 75 *e*P **P** **07 02 06.7 -1.0**
comp=Z,71nm,1.4s
DBIC Dimbokro 70.27 75 P **P** **07 02 07.1 -0.7**
comp=Z,20nm,1.0s,baz=214,slow=6.0,SNR=11
DBIC LR LR 07 31 31.6
comp=Z,350nm,19.3s,baz=224,slow=35
DBIC Dimbokro 70.27 75 P **P** **07 02 06.8 -1.0**
DBIC pmax pmax
comp=Z,34nm,1.2s
DBIC Dimbokro 70.27 75 P **P** **07 02 06.8 -1.0**
RSSD Black Hills 70.64 335 P **P** **07 02 11.1 +1.4**
baz=147
TPNV Topopah Spring 70.93 323 P **P** **07 02 16.1 +4.5**
baz=135
DUG Dugway, Tooele 71.45 327 P **P** **07 02 18.8 +4.1**
baz=139
R11A Troy Canyon, C 71.55 324 P **P** **07 02 19.4 +4.1**
baz=136
CWC Cottonwood Cre 71.62 322 P **P** **07 02 20.1 +4.3**
baz=134
PDAR Pinedale Array 71.86 331 P **P** **07 02 18.5 +1.3**
comp=Z,0.6nm,0.6s,baz=122,slow=7.2,SNR=5.8
PDAR LR LR 07 35 09.6
comp=Z,126nm,18.9s,baz=120,slow=37
PDAR Pinedale Array 71.86 331 P **P** **07 02 16.3 -0.9**
TBI Tubuai 72.07 251 *e*S **S** **07 11 34.6 -5.1**
comp=Z,303nm,25.2s
TBI Tubuai 72.07 251 *e*LR LR 07 24 20.7
comp=Z,567nm,28.5s,baz=107
MDND Maddock 72.28 340 P **P** **07 02 21.1 +1.8**
baz=152
MDND Maddock 72.28 340 P **P** **07 02 17.4 -1.8**
MDND IAmb IAmb 07 02 31.6
comp=Z,30nm,1.1s
NVAR Mina Array Bea 73.12 323 P **P** **07 02 27.5 +2.7**
comp=Z,2.1nm,0.9s,baz=149,slow=7.0,SNR=13
ULM Lac du Bonnet 73.35 344 P **P** **07 02 25.0 -0.5**
comp=Z,8.1nm,1.1s,baz=219,slow=8.5,SNR=3.2
ULM LR LR 07 37 14.4
comp=Z,228nm,18.5s,baz=128,slow=38
ULM Lac du Bonnet 73.35 344 *i*P **P** **07 02 24.4 -1.1**
RLMT Red Lodge 73.60 333 P **P** **07 02 29.8 +2.4**
baz=143
LAO LASA Array 73.63 336 P **P** **07 02 29.9 +2.6**
baz=146
PPT2 Papeete2 73.69 257 *e*S **SKiKP** **07 11 51.8 -5.6**
comp=Z,560nm,25.8s
PPT2 Papeete2 73.69 257 *e*LR LR 07 25 05.0
comp=Z,400nm,24.8s,baz=112
PPT Papeete 73.70 257 LR LR 07 28 04.8
comp=Z,54nm,20.7s,baz=120,slow=30
KOWA Kowa 74.31 68 P **P** **07 02 29.9 -2.0**
HLID Hailey 74.76 329 P **P** **07 02 37.6 +3.4**
baz=138
MFID Camas Ranch 75.35 328 P **P** **07 02 36.5 -1.0**
MSO Missoula 76.98 331 P **P** **07 02 49.4 +2.7**
baz=139
VNDA Vanda 77.92 190 P **P** **07 02 54.9 +3.4**
comp=Z,2.8nm,1.0s,baz=146,slow=6.0,SNR=6.0
VNDA Vanda 77.92 190 P **P** **07 02 50.1 -1.4**
VNDA pmax pmax
comp=Z,9.0nm,1.3s
VNDA Vanda 77.92 190 P **P** **07 02 50.1 -1.4**
SYO Syowa Base 78.56 160 *ll e*pP **P** **07 02 55.4 +0.3**
TOA0 Torodi Ar. Sit 78.78 72 P **P** **07 02 56.1 -1.1**
TORD Torodi Ar. Bea 78.78 72 P **P** **07 02 56.8 -0.5**
comp=Z,45nm,1.0s,baz=257,slow=5.1,SNR=145

TORD S S 07 13 05.3 +11
comp=Z,1.3nm,1.0s,baz=246,slow=10,SNR=4.2
TORD LR LR 07 36 07.7
comp=Z,371nm,20.7s,baz=250,slow=35
TORD Torodi Ar. Bea 78.78 72 P **P** **07 02 56.0 -1.3**
TSUM Tsumeb 82.38 108 P **P** **07 03 15.8 -1.0**
TSUM IAmb IAmb 07 03 19.1
comp=Z,17nm,1.1s
PVAQ Vaqueiros 82.54 46 *e*P **P** **07 03 18.0 +1.1**
comp=Z,28nm,2.1s
PVAQ Vaqueiros 82.54 46 *e*LQ LQ 07 28 35.5
PVAQ *e*LR LR 07 34 30.6
comp=Z,153nm,20.0s
PMTG Montargil 83.09 44 *e*P **P** **07 03 20.6 +0.9**
comp=Z,30nm,1.7s
PMRV Marv??o 83.83 44 *e*P **P** **07 03 24.1 +0.5**
comp=Z,16nm,1.3s
PCBR Castelo Branco 83.99 44 *e*P **P** **07 03 25.8 +1.5**
comp=Z,24nm,1.7s
PVIS Viseu 84.19 43 *e*P **P** **07 03 25.5 +0.1**
comp=Z,22nm,1.6s
MTE Manteigas 84.24 43 *e*P **P** **07 03 26.6 +0.9**
comp=Z,30nm,1.2s
MTE Manteigas 84.24 43 *e*LR LR 07 36 12.2
comp=Z,369nm,18.0s
POLO Lamas de Olo 84.61 42 *e*P **P** **07 03 28.3 +0.7**
comp=Z,11nm,1.6s
PGAV Gavieira, Arco 84.62 42 *e*P **P** **07 03 30.1 +2.4**
PGAV Gavieira, Arco 84.62 42 *e*LR LR 07 35 42.7
comp=Z,390nm,20.0s
PCAB Cabril 84.64 42 *e*P **P** **07 03 28.5 +0.8**
comp=Z,33nm,1.8s
MVO Moncorvo 84.98 43 *e*P **P** **07 03 30.3 +0.9**
comp=Z,38nm,1.5s
MVO Moncorvo 84.98 43 *e*LR LR 07 36 28.7
comp=Z,293nm,18.0s
PBRG Braganca 85.50 43 *e*P **P** **07 03 32.2 +0.2**
comp=Z,25nm,1.3s
BOSA Boshof 85.90 119 P **P** **07 03 35.5 +1.0**
comp=Z,2.4nm,0.9s,baz=294,slow=17,SNR=2.1
BOSA LR LR 07 38 42.4
comp=Z,248nm,18.7s,baz=246,slow=34
PAB San Pablo 85.91 45 P **P** **07 03 33.3 -0.8**
PAB pmax pmax
comp=Z,14nm,1.2s
PAB San Pablo 85.91 45 P **P** **07 03 33.3 -0.8**
PAB IAmb IAmb 07 03 35.4
comp=Z,14nm,1.1s
TAM Tamanrasset 85.98 64 P **P** **07 03 34.9 0.0**
TAM pmax pmax
comp=Z,27nm,1.2s
TAM MLR MLR
comp=Z,500nm,20.0s
TAM Tamanrasset 85.98 64 P **P** **07 03 34.9 0.0**
TAM IAMs_20 IAMs_20 07 42 11.0
comp=Z,491nm,20.0s
ES12 SONSECA Array 86.22 45 IAMs_20 IAMs_20 07 44 28.8
comp=Z,255nm,18.0s
ESDC Sonseca Array 86.23 45 P **P** **07 03 36.9 +1.2**
comp=Z,7.3nm,1.1s,baz=244,slow=5.4,SNR=21
ESDC LR LR 07 38 13.0
comp=Z,154nm,21.0s,baz=235,slow=33
ESDC Sonseca Array 86.23 45 P **P** **07 03 35.3 -0.4**
ESBB Sonseca Array 86.23 45 P **P** **07 03 34.4 -1.2**
ESBB IAmb IAmb 07 03 37.8
comp=Z,14nm,1.2s
MAW Mawson 86.28 164 P **P** **07 03 37.8 +2.4**
comp=Z,8.6nm,1.0s,baz=234,slow=8.0,SNR=5.4
MAW LR LR 07 44 45.6
comp=Z,147nm,18.2s,baz=238,slow=37
YKA Yellowknife Ar 89.17 341 P **P** **07 03 50.1 +1.1**
comp=Z,2.9nm,0.8s,baz=127,slow=4.3,SNR=8.8
YKA LR LR 07 46 22.4
comp=Z,180nm,21.1s,baz=0.0,slow=37
LSZ Lusaka 93.24 107 IAMs_20 IAMs_20 07 46 54.2
comp=Z,373nm,20.0s
KEST Kesra 94.04 54 P **P** **07 04 13.0 +0.5**
comp=Z,3.9nm,1.0s,baz=281,slow=5.1,SNR=3.6
KEST LR LR 07 47 23.6
comp=Z,268nm,19.4s,baz=270,slow=36
CTI Castel Tesino 99.28 44 IAMs_20 IAMs_20 07 50 58.4
comp=Z,354nm,19.0s
CIMO Cimolais 99.89 44 IAMs_20 IAMs_20 07 47 43.5
comp=Z,293nm,20.0s
TIP Timpagrande 100.75 52 IAMs_20 IAMs_20 07 52 43.6
comp=Z,307nm,19.0s
MBAR Mbarara 100.87 95 IAMs_20 IAMs_20 07 47 12.3
comp=Z,346nm,20.0s
AGG Agios Georgios 104.89 54 IAMs_20 IAMs_20 07 58 07.3
comp=Z,179nm,19.0s
KMBO Kilima Mbogo 106.77 98 IAMs_20 IAMs_20 07 51 58.6
comp=Z,342nm,20.0s
DZM Mont Dzumac 109.96 236 *e*LR LR 07 41 49.9
comp=Z,244nm,23.2s
ISP Isparta 110.94 56 IAMs_20 IAMs_20 08 00 24.6
comp=Z,165nm,20.0s
AKASG Malin Array Be 111.69 42 *c i*PKIKP **PKiKP** **07 09 31.7 +3.3**
MARD Mardin 118.97 58 IAMs_20 IAMs_20 08 03 57.5
comp=Z,193nm,21.0s
KBZ Khabaz 120.76 50 *e*PKIKP **PKiKP** **07 09 47.0 +0.8**
GEVA Gevas 120.83 57 IAMs_20 IAMs_20 08 07 45.5
comp=Z,144nm,19.0s
BELG Belogornoye 123.08 40 *i* PKIKP **PKPdf** **07 09 50.1 -0.1**
H11S2 WAKE ISLAND Hyd 125.69 279 T T 09 29 25.9
baz=101,slow=74,SNR=139
H11S1 WAKE ISLAND Hyd 125.70 279 T T 09 29 26.6
baz=101,slow=74,SNR=64
H11S3 WAKE ISLAND Hyd 125.71 279 T T 09 29 28.7
baz=101,slow=74,SNR=86
H11N3 WAKE ISLAND Hyd 125.74 280 T T 09 29 27.9
baz=102,slow=74,SNR=24
H11N2 WAKE ISLAND Hyd 125.75 280 T T 09 29 35.8
baz=102,slow=74,SNR=28
H11N1 WAKE ISLAND Hyd 125.76 280 T T 09 29 37.6
baz=102,slow=74,SNR=14
TIXI Tiksi 127.10 352 *i* PKIKP **PKPdf** **07 09 57.1 -0.3**
SEY Seymchan 127.97 336 *i* PKIKP **PKiKP** **07 10 00.8 +0.9**
ARU Arti 128.05 33 *i* PKIKP **PKiKP** **07 10 01.0 +0.8**
ARU 07 12 03.6
ARU 07 17 11.9
ARU SS SS 07 29 18.4 +3.2
NRIK Noril'sk 128.99 10 *i* PKIKP **PKiKP** **07 10 02.6 +0.8**
ASAR Alice Springs 130.20 210 PKP **PKiKP** **07 10 06.0 +0.3**
comp=Z,1.6nm,1.0s,baz=159,slow=2.5,SNR=9.2
UOSS Minazif 131.27 74 IAMs_20 IAMs_20 08 10 53.1
comp=Z,197nm,20.0s
WRA Warramunga Arr 133.12 214 PKP **PKiKP** **07 10 11.3 -0.3**
comp=Z,0.9nm,0.8s,baz=159,slow=1.9,SNR=11
WRAB Tennant Creek 133.12 214 *e*PKIKP **PKPdf** **07 10 10.3 -0.2**
BRVK Borovoye 135.62 33 *i* PKIKP **PKPdf** **07 10 13.6 -0.5**
KURK Kurchatov 141.16 31 *i* PKIKP **PKPdf** **07 10 23.4 -0.9**
ZALV Zalesovo Beam 141.45 23 PKP **PKPdf** **07 10 24.5 -0.2**
comp=Z,2.2nm,0.6s,baz=332,slow=2.2,SNR=7.2
ZALV Zalesovo Beam 141.45 23 PKIKP **PKPdf** **07 10 24.0 -0.7**
ZALV Zalesovo Beam 141.45 23 **PKPdf** **07 10 24.0 -0.7**
JKA Kamikawa-asahi 143.13 318 IAMs_20 IAMs_20 08 06 53.8
comp=Z,123nm,20.0s
AAK Ala-Archa 143.32 44 *i* PKIKP **PKPdf** **07 10 28.7 0.0**
KUU Kurty 143.90 41 *e*PKP PKPbc 07 10 28.1 +0.9
comp=Z,9.7nm,1.2s
KUU Kurty 143.90 41 *e*PKIKP PKPbc 07 10 28.0 +0.8
KUU pmax pmax
comp=Z,10.0nm,1.2s
CHKK Chushkaly 144.32 41 *e*PKP **PKPdf** **07 10 30.0 -0.2**
CHKK Chushkaly 144.32 41 *e*PKIKP **PKPdf** **07 10 29.9 -0.2**
TDK Taldyqorghan 144.55 38 *e*PKP **PKPdf** **07 10 30.9 +0.3**
TDK Taldyqorghan 144.55 38 *e*PKIKP **PKPdf** **07 10 30.8 +0.3**
AAA Alma-Ata 144.61 42 *e*PKP **PKPdf** **07 10 31.6 +0.8**
AAA Alma-Ata 144.61 42 *e*PKIKP **PKPdf** **07 10 31.6 +0.8**
MDOK Medeo 144.71 42 *e*PKP **PKPdf** **07 10 31.2 +0.1**
MDOK Medeo 144.71 42 *e*PKIKP **PKPdf** **07 10 31.2 +0.1**
MAKZ Makanchi 145.41 33 PKIKP **PKPab** **07 10 32.3 +0.2**
MAKZ Makanchi 145.41 33 PKPdf **PKPab** **07 10 32.2 +0.2**
KPKS Kokpek 145.57 40 *e*PKP **PKPdf** **07 10 32.5 0.0**
comp=Z,34nm,1.1s
KPKS Kokpek 145.57 40 *e*PKP2 **PKPdf** **07 10 32.5 0.0**
KPKS pmax pmax
comp=Z,34nm,1.1s
NIL Nilore 145.57 59 PKP2 **PKPab** **07 10 33.4 +0.3**
NIL Nilore 145.57 59 PKPdf **PKPab** **07 10 33.4 +0.3**
NIL Nilore 145.57 59 IAMs_20 IAMs_20 08 20 33.1
comp=Z,163nm,19.0s
MK31 Makanchi Array 145.58 33 *i* PKP2 **PKPdf** **07 10 31.8 -0.5**
MK31 Makanchi Array 145.58 33 PKPdf **PKPab** **07 10 33.0 +0.2**
MKAR Makanchi Array 145.58 33 PKPbc **PKPab** **07 10 33.6 +0.9**
comp=Z,18nm,0.9s,baz=315,slow=2.8,SNR=71

MKAR	**Makanchi Array**	**145.58**	**33**	PKIKP	**PKPab**	**07 10 33.2**	**+0.5**
MKAR	**Makanchi Array**	**145.58**	**33**	PKPdf	**PKPab**	**07 10 33.2**	**+0.5**
SATY	**Saty**	**145.62**	**41**	*e*PKP	**PKPab**	**07 10 33.1**	**0.0**
	comp=Z,13nm,1.0s						
SATY	**Saty**	**145.62**	**41**	*e*PKP2	**PKPab**	**07 10 33.1**	**0.0**
SATY				pmax	pmax		
	comp=Z,13nm,1.0s						
KLR	**Kul'dur**	**145.63**	**333**	*i* PKP2	**PKPab**	**07 10 33.4**	**+0.6**
KSH	**Kashi**	**145.69**	**48**	PKPbc	**PKPab**	**07 10 34.1**	**+0.6**
SHLS	**Shalkode**	**146.21**	**40**	*e*PKP	**PKPab**	**07 10 35.6**	**+0.2**
	comp=Z,7.5nm,1.3s						
SHLS	**Shalkode**	**146.21**	**40**	*e*PKP2	**PKPab**	**07 10 35.5**	**+0.2**
SHLS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ZSN	**Zaisan**	**146.39**	**30**	*e*PKP	**PKPbc**	**07 10 34.9**	**-0.1**
	comp=Z,4.2nm,1.2s						
ZSN	**Zaisan**	**146.39**	**30**	*e*PKP2	**PKPbc**	**07 10 34.8**	**-0.1**
ZSN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MOY	**Mondy**	**147.83**	**9**	*e*PKP2	**PKPab**	**07 10 41.3**	**-0.1**
MOY				pmax	pmax		
	comp=Z,24nm,1.4s						
TLY	**Talaya**	**148.16**	**6**	*e*PKP2	**PKPbc**	**07 10 39.5**	**-0.2**
TLY				pmax	pmax		
	comp=Z,27nm,1.4s						
USRK	**Ussuriysk Ar.**	**149.20**	**327**	PKPbc	**PKiKP**	**07 10 44.4**	**+0.6**
	comp=Z,6.0nm,1.0s,baz=52,slow=3.6,SNR=7.2						
ZAK	**Zakamensk**	**149.40**	**7**	*e*PKP2	**PKiKP**	**07 10 43.7**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,11nm,1.5s						
MJAR	**Matsushiro Arr**	**149.60**	**309**	PKPbc	**PKiKP**	**07 10 45.5**	**+0.7**
	comp=Z,3.5nm,0.7s,baz=185,slow=0.6,SNR=10						
MJB9	**Matsu-Tunnel**	**149.60**	**309**	IAMs_20	IAMs_20	07 57 07.7	
	comp=Z,196nm,22.0s						
WMQ	**Urumqi**	**150.38**	**32**	*e*PKPbc	**PKPdf**	**07 10 39.0**	**-1.3**
WMQ				LR	LR		
	comp=Z,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,2μm,29.1s						
WMQ				LR	LR		
	comp=Z,220nm,26.5s						
HYB	**Hyderabad**	**151.12**	**90**	*i* PKP	**PKPbc**	**07 10 48.0**	**0.0**
SONM	**Songino Array**	**152.20**	**4**	PKP	**PKPdf**	**07 10 44.8**	**+1.7**
	comp=Z,0.8nm,0.9s,baz=48,slow=2.1,SNR=2.5						
SONM				PKPbc	**sPKPdf**	**07 10 51.0**	**-0.2**
	comp=Z,6.5nm,0.9s,baz=45,slow=2.5,SNR=8.0						
JHS	**Saijyo**	**153.99**	**310**	IAMs_20	IAMs_20	08 17 43.8	
	comp=Z,166nm,19.0s						
KSRS	**Korea Array**	**156.04**	**320**	PKP	**PKPdf**	**07 10 50.5**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=90,slow=2.4,SNR=1.7						
JTU	**Tsushima**	**156.86**	**313**	IAMs_20	IAMs_20	08 20 05.5	
	comp=Z,86nm,18.0s						
HHC	**Hu-ho-hao-te**	**159.14**	**354**	*e*PKP	**PKPdf**	**07 10 48.5**	**-4.0**
GTA	**Gaotai**	**159.16**	**20**	*e*PKP	**PKPdf**	**07 10 54.4**	**+1.8**
GTA				PKPab	**PKPab**	**07 11 30.0**	**+0.6**
GTA				LR	LR		
	comp=Z,94nm,17.8s						
GTA				LR	LR		
	comp=Z,73nm,18.9s						
GTA				LR	LR		
	comp=Z,180nm,19.3s						
LZH	**Lanzhou**	**163.40**	**15**	*e*PKP	**PKPdf**	**07 10 52.9**	**-4.3**
LZH				pPKP	pPKPdf	07 11 03.8	+0.4
LZH				sPKP		07 11 07.3	
LZH				LR	LR		
	comp=Z,130nm,17.0s						
LZH				LR	LR		
	comp=Z,140nm,17.6s						
LZH				LR	LR		
	comp=Z,200nm,18.8s						
NJ2	**Nanjing**	**165.10**	**325**	*e*PKP	**PKPdf**	**07 10 58.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**170.42**	**98**	PKP	**PKPdf**	**07 11 03.4**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=330,slow=1.5,SNR=1.7						
CMAR				PKPab	**PKPab**	**07 12 20.4**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=264,slow=5.2,SNR=5.5						

SOME 22 07:02:35.6, 43°03N×77°10E, h15km, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNSS	**Tian-Shan**	**0.11**	**272**	*e*P	Pg	07 02 39.5	0.0
	5.9nm,0.1s						
TNSS				*e*S	Sb	07 02 42.3	-0.1
	6.9nm,0.2s						
MDOK	**Medeo**	**0.14**	**344**	*e*P	Pg	07 02 39.6	+0.1
	1.7nm,0.1s						
MDOK				*e*S	Sb	07 02 42.5	-0.4
	9.1nm,0.2s						
KOTS	**Kotyrbulak**	**0.20**	**2**	*e*P	Pg	07 02 40.8	+0.3
	3.6nm,0.2s						
KOTS				*e*S	Sb	07 02 44.5	-0.3
	39nm,0.4s						
KTBS	**Karatobe**	**0.74**	**336**	*e*P	Pg	07 02 49.7	-0.4
	0.7nm,0.1s						
KTBS				*e*S	Sg	07 02 59.5	-0.4
	3.5nm,0.2s						

NNC 22 07:02:59.3±3.1, 41°60N×78°41E, h0km, mb3.4, mpv3.0, 5C-1D, Error ellipse: s-maj=22.0km s-min=13.2km az=172.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDOK	**Medeo**	**1.86**	**328**	Pg	Pg	07 03 35.5	+0.6
	2.4nm,0.7s						
MDOK				Lg	Lg	07 03 59.4	
	5.7nm,0.9s						
KOTS	**Kotyrbulak**	**1.90**	**330**	P	Pg	07 03 35.4	-0.3
	4.3nm,0.2s						
KOTS				S	Sg	07 03 59.9	-0.3
	13nm,0.6s						
PDGK	**Podgornoye**	**1.90**	**24**	⇑Pg	Pn	07 03 32.2	-1.0
	1.8nm,0.6s						
PDGK				⇑Lg	Lg	07 03 58.2	
	2.3nm,0.6s						
KNDC	**Almaty**	**1.94**	**327**	⇓Pg	Pn	07 03 33.0	-0.6
	19nm,0.5s						
KNDC				⇑Lg	Lg	07 03 59.5	
	12nm,0.5s						
KST	**Kastek**	**2.32**	**309**	Pg	Pg	07 03 43.8	0.0
	6.7nm,0.7s						
KST				Lg	Lg	07 04 13.6	
	10nm,0.8s						
KTBS	**Karatobe**	**2.47**	**329**	Pg	Pb	07 03 44.7	+0.1
	5.9nm,0.8s						
KTBS				Lg	Lg	07 04 15.4	
	19nm,0.8s						
TKM2	**Tokmak 2**	**2.47**	**303**	⇑Pg	Pn	07 03 40.6	-0.4
	3.0nm,0.6s						
TKM2				⇑Lg	Lg	07 04 15.8	
	6.6nm,0.7s						
MNBS	**Baschi**	**2.48**	**360**	Pg	Pg	07 03 46.0	-0.8
	7.6nm,0.7s						
MNBS				Lg	Lg	07 04 17.4	
	6.3nm,0.7s						
CHKK	**Chushkaly**	**2.48**	**336**	Pg	Pb	07 03 45.3	+0.5
	6.6nm,0.7s						
CHKK				Lg	Lg	07 04 16.5	
	18nm,0.8s						
DGS	**Degeres**	**2.55**	**311**	Pg	Pg	07 03 47.3	-0.9
	9.1nm,0.8s						
DGS				Lg	Lg	07 04 19.7	
	5.6nm,1.0s						
ARXS	**Arharly**	**2.65**	**351**	Pg	Pb	07 03 48.5	+0.8
	16nm,0.6s						
ARXS				Lg	Lg	07 04 22.1	
	9.2nm,0.8s						
DJR	**Jarkent**	**2.91**	**20**	Pg	Pg	07 03 53.9	-1.2
	3.4nm,0.5s						
DJR				Lg	Lg	07 04 31.1	
	3.9nm,0.7s						

IDC 22 07:06:29.1±2.6, 31°27S×68°55W, h87km±22km, mb3.3/5, mb1 3.7/9, mb1mx3.6/30, mbtmp3.7/9, Error ellipse: s-maj=37.8km s-min=21.3km az=89.0
GUC 22 07:06:32.3±0.8, 31°33S×68°76W, h121km±23km, ML4.1
ISC 22 07:06:31.0±0.8, 31°31S±0°04×68°71W±0°06, h108km±7km, n27, σ1°39/45, mb3.3/5, 2C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.20**	**94**	*e*P	**Pn**	**07 06 47.0**	**+0.7**
RTLL				*i* S	**Sn**	**07 06 58.4**	**+0.7**
CO03	**El Pedregal**	**1.77**	**285**	*e*P	**Pn**	**07 07 02.0**	**+1.0**
CO03				*e*S	**Sn**	**07 07 24.8**	**+0.9**
CO03				IAML		07 07 26.3	
	comp=E,1μm,0.2s						
CO03				IAML		07 07 28.4	
	comp=N,1μm,0.4s						
CO01	**Juntas del Tor**	**1.79**	**318**	⇓*e*P	**Pn**	**07 07 03.6**	**+2.1**
CO01				*e*S	**Sn**	**07 07 27.2**	**+2.5**
CO02	**Combarbal**	**1.97**	**273**	*e*P	**Pn**	**07 07 04.2**	**+0.6**
CO02				*i* S	**Sn**	**07 07 29.0**	**+0.6**
CO02				IAML		07 07 31.9	
	comp=N,2μm,0.5s						
GO04	**Tololo Observa**	**2.13**	**302**	*e*P	**Pn**	**07 07 06.4**	**+0.6**
GO04				*i* S	**Sn**	**07 07 33.2**	**+0.8**
GO04				IAML		07 07 36.7	
	comp=E,3μm,0.5s						
VA03	**San Esteban**	**2.13**	**227**	*e*P	**Pn**	**07 07 06.3**	**+0.6**
VA03				*i* S	**Sn**	**07 07 33.1**	**+0.9**
VA03				IAML		07 07 35.9	
	comp=N,822nm,0.2s						
PEL	**Peldehue**	**2.48**	**222**	*e*P	**Pn**	**07 07 10.2**	**+0.1**
PEL				*e*S	**Sn**	**07 07 40.5**	**+0.4**
ROCH	**El Roble**	**2.56**	**229**	*e*P	**Pn**	**07 07 10.9**	**-0.5**
ROCH				*e*S	**Sn**	**07 07 41.6**	**-0.7**
ROCH				IAML		07 07 44.1	
	comp=N,452nm,0.3s						
VCA	**Vinchina**	**2.60**	**10**	*e*P	**Pn**	**07 07 13.9**	**+2.0**
VCA				*i* S	**Sn**	**07 07 45.4**	**+2.1**
VCA				IAML		07 07 50.8	
	comp=N,417nm,0.7s						
MT03	**Universidad Ad**	**2.66**	**215**	*e*P	**Pn**	**07 07 13.3**	**+0.8**
MT03				*e*S	**Sn**	**07 07 45.4**	**+1.0**
MT03				IAML		07 07 47.1	
	comp=N,518nm,0.5s						
MT03				IAML		07 07 48.4	
	comp=E,523nm,0.3s						
MT05	**Renca**	**2.69**	**219**	*e*P	**Pn**	**07 07 13.0**	**0.0**
MT05				*i* S	**Sn**	**07 07 45.9**	**+0.7**
MT05				IAML		07 07 46.8	
	comp=E,1μm,0.2s						
AC05	**El Transito**	**2.82**	**331**	*e*P	**Pn**	**07 07 16.7**	**+2.0**
AC05				*e*S	**Sn**	**07 07 49.3**	**+1.0**
AC05				IAML		07 07 54.0	
	comp=N,942nm,0.2s						
LMEL	**Las Melosas**	**2.83**	**206**	⇓*e*P	**Pn**	**07 07 15.6**	**+0.8**
LMEL				*e*S	**Sn**	**07 07 48.5**	**+0.1**
MT09	**Talagante**	**3.12**	**218**	*e*P	**Pn**	**07 07 17.9**	**-0.8**
MT09				*i* S	**Sn**	**07 07 55.7**	**+0.2**
MT09				IAML		07 07 56.0	
	comp=N,287nm,0.4s						
VA05	**Santo Domingo**	**3.39**	**226**	*e*P	**Pn**	**07 07 20.7**	**-1.4**
VA05				*e*S	**Sn**	**07 07 59.3**	**-2.3**
VA05				IAML		07 08 10.2	
	comp=E,303nm,0.5s						
AC04	**Llanos de Chal**	**3.72**	**326**	*e*P	**Pn**	**07 07 26.6**	**0.0**
AC04				*e*S	**Sn**	**07 08 08.5**	**-1.0**
LVC	**Limon Verde**	**8.67**	**359**	P	**Pn**	**07 08 32.5**	**-1.4**
	comp=E,2.1nm,0.3s,baz=165,slow=10.0,SNR=24						
LVC				S	**Sn**	**07 10 05.2**	**-5.0**
	comp=E,0.3nm,0.3s,baz=197,slow=11,SNR=2.0						
PLCA	**Paso Flores**	**9.52**	**189**	P	**Pn**	**07 08 43.8**	**-1.3**
	comp=E,0.3nm,0.3s,baz=3.2,slow=11,SNR=10						
LPAZ	**La Paz**	**14.97**	**2**	P	**Pn**	**07 09 57.5**	**0.0**
	comp=E,0.1nm,0.3s,baz=173,slow=7.4,SNR=13						
SIV	**San Ignacio**	**16.77**	**26**	P	**Pn**	**07 10 17.8**	**-1.7**
	comp=E,0.1nm,0.3s,baz=202,slow=11,SNR=6.1						
TXAR	**Lajitas Array**	**68.88**	**328**	P	**P**	**07 17 24.7**	**+0.6**
	comp=E,0.3nm,0.6s,baz=152,slow=8.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**80.63**	**68**	P	**P**	**07 18 32.3**	**+0.1**
	comp=E,0.5nm,0.6s,baz=268,slow=4.6,SNR=3.7						
PDAR	**Pinedale Array**	**82.71**	**331**	P	**P**	**07 18 43.7**	**+0.9**
	comp=E,0.2nm,0.5s,baz=129,slow=9.4,SNR=2.2						
NVAR	**Mina Array Bea**	**83.36**	**323**	P	**P**	**07 18 47.5**	**+1.3**
	comp=E,0.1nm,0.3s,baz=169,slow=6.2,SNR=2.3						
ESDC	**Sonseca Array**	**92.69**	**44**	P	**P**	**07 19 29.9**	**-0.8**
	comp=E,0.2nm,0.5s,baz=258,slow=6.2,SNR=6.0						
ZALV	**Zalesovo Beam**	**150.46**	**32**	PKPbc	**PKPbc**	**07 26 09.5**	**+0.1**
	comp=E,0.7nm,0.4s,baz=270,slow=1.3,SNR=4.4						
MKAR	**Makanchi Array**	**152.88**	**47**	PKPbc	**PKPbc**	**07 26 14.7**	**-0.5**
	comp=E,0.8nm,0.9s,baz=17,slow=1.3,SNR=4.0						
MKAR				PKPab	**PKPab**	**07 26 27.6**	**+0.9**
	comp=E,0.4nm,0.6s,baz=343,slow=4.5,SNR=2.8						

IDC 22 07:09:25.9±0.8, 7°77S×76°38W, h0km, mb4.0/11, mb1 4.3/15, mb1mx4.2/31, mbtmp4.1/15, ML3.7/4, MS3.3/2, Ms1 3.3/2, ms1mx3.0/27, Error ellipse: s-maj=23.0km s-min=13.2km az=27.0
VAO 22 07:09:29.4±1.0, 7°85S×76°34W, h10km, mb4.4
NEIC 22 07:09:32.2±1.8, 7°71S±0°07×76°2W±0°1, h47km±6km, mb4.3/22, Error ellipse: s-maj=15.5km s-min=9.1km az=68.0
ISC 22 07:09:31.3±0.5, 7°70S±0°05×76°39W±0°08, h35km, n99, σ1°33/97, mb4.2/19, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.07**	**286**	Pn	**Pn**	**07 10 02.9**	**-1.1**
	129nm,0.3s,baz=40,slow=4.8,SNR=235						
ATAH				Lg	Lg	07 10 33.4	
	145nm,0.3s,baz=328,slow=18,SNR=12						
CZSB	**Cruzeiro do Su**	**3.65**	**91**	*e*P	**Pn**	**07 10 27.1**	**+1.8**
NNA	**Nana**	**4.28**	**186**	Pn	**Pn**	**07 10 35.3**	**+1.2**
	13nm,0.3s,baz=0.1,slow=10,SNR=22						
NNA				Lg	Lg	07 11 29.9	
	37nm,0.3s,baz=251,slow=16,SNR=7.2						
NNA	**Nana**	**4.28**	**186**		**Pn**	**07 10 34.8**	**+0.8**
PTLC	**Puerto Leguiza**	**7.98**	**12**	*e*P	Pn	07 11 18.2	-6.7
OTAV	**Otavalo**	**8.15**	**345**	*e*P	**Pn**	**07 11 27.7**	**+0.1**
OTAV	**Otavalo**	**8.15**	**345**	Pn	**Pn**	**07 11 29.7**	**+2.1**
OTAV	**Otavalo**	**8.15**	**345**	*e*P	**Pn**	**07 11 30.4**	**+2.7**
PUAC	**Puerto Asis, P**	**8.20**	**359**	*e*P	**Pn**	**07 11 25.5**	**-2.4**
CUSE	**Cuicocha Este**	**8.21**	**346**	*e*P	**Pn**	**07 11 29.8**	**+1.4**
GCUF	**Volcan Galeras**	**8.92**	**354**	*e*P	**Pn**	**07 11 38.1**	**-0.2**
CRUC	**La Cruz**	**9.23**	**356**	*e*P	**Pn**	**07 11 41.3**	**-1.0**
FLOC	**Florencia**	**9.25**	**5**	*e*P	**Pn**	**07 11 40.9**	**-1.5**
BBAC	**Balboa, Cauca**	**9.70**	**355**	*e*P	**Pn**	**07 11 47.9**	**-0.7**
SOTA	**Rioblanco**	**9.78**	**359**	*e*P	**Pn**	**07 11 48.5**	**-1.5**
GARC	**Garzon, Huila**	**9.87**	**5**	*e*P	**Pn**	**07 11 49.4**	**-1.6**
PCON	**Cinco Dias**	**9.96**	**360**	*e*P	**Pn**	**07 11 50.8**	**-1.9**
MACC	**Macarena, Meta**	**10.11**	**15**	*e*P	**Pn**	**07 11 52.7**	**-1.4**
POPC	**Popayan, Colom**	**10.18**	**358**	*e*P	**Pn**	**07 11 55.5**	**+0.3**
ETMB	**Extrema**	**10.27**	**103**	*e*P	**Pn**	**07 11 55.4**	**-0.9**
MARP	**Paez Belalcaza**	**10.48**	**2**	*e*P	**Pn**	**07 11 57.4**	**-2.1**
GUVC	**San Jose del G**	**10.85**	**20**	*e*P	**Pn**	**07 12 05.8**	**+1.5**
ORTC	**Ortega, Tolima**	**11.59**	**6**	*e*P	**Pn**	**07 12 13.4**	**-1.0**
YOTC	**Yotoco, Valle**	**11.61**	**0**	*e*P	**Pn**	**07 12 14.1**	**-0.6**
LPAZ	**La Paz**	**11.74**	**137**	Pn	**Pn**	**07 12 19.2**	**+2.2**
	0.3nm,0.3s,baz=322,slow=11,SNR=13						
LPAZ				Lg	Lg	07 15 30.0	
	0.4nm,0.3s,baz=119,slow=9.2,SNR=8.9						
LPAZ	**La Paz**	**11.74**	**137**		**Pn**	**07 12 17.5**	**+0.5**
VILC	**Villavicencio,**	**12.04**	**13**	*e*P	**Pn**	**07 12 19.3**	**-1.4**
ANIL	**Santa Ana**	**12.15**	**5**	*e*P	**P**	**07 12 36.9**	**+2.4**
TOLC	**Tolima**	**12.25**	**5**	*e*P	**Pn**	**07 12 27.0**	**+3.3**
PB16	**IPOC Station P**	**12.51**	**148**		**Pn**	**07 12 26.8**	**-0.6**
PLMC	**San Jos del P**	**12.53**	**0**	*e*P	**Pn**	**07 12 27.4**	**+0.1**
CHIC	**Chingaza**	**12.53**	**12**	*e*P	**Pn**	**07 12 26.7**	**-1.0**
PTGC	**Puerto Gaitan,**	**12.56**	**20**	*e*P	**Pn**	**07 12 25.0**	**-2.7**
ROSC	**El Rosal**	**12.63**	**9**	Pn	**Pn**	**07 12 30.1**	**+1.1**
	2.1nm,0.3s,baz=178,slow=15,SNR=5.8						
SAML	**Samuel**	**13.12**	**96**		**Pn**	**07 12 33.7**	**-1.7**
MNMC	**Minye Minye**	**13.13**	**151**	Pn	**Pn**	**07 12 36.9**	**+1.1**
SPBC	**San Pablo de B**	**13.47**	**10**	*e*P	**Pn**	**07 12 38.2**	**-1.9**
CBOC	**Ciudad Bolivar**	**13.48**	**2**	*e*P	**Pn**	**07 12 38.5**	**-1.9**
GO01	**Chusmiza**	**13.79**	**150**	Pn	**Pn**	**07 12 45.4**	**+0.6**
RUSC	**La Rusia**	**13.90**	**14**	*e*P	**Pn**	**07 12 45.1**	**-1.3**
TA01	**Diego Aracena**	**14.13**	**155**	Pn	**Pn**	**07 12 47.4**	**-1.6**
PTBC	**PUERTO BERRIO,**	**14.28**	**8**	*e*P	**Pn**	**07 12 47.8**	**-3.3**
PATCX	**Punta Patache**	**14.37**	**156**	Pn	**Pn**	**07 12 50.5**	**-1.8**
ZARC	**Zaragoza, Cauc**	**15.17**	**6**	*e*P	**P**	**07 13 06.5**	**-1.4**
PAMC	**Pamplona, Colo**	**15.39**	**14**	*e*P	**Pn**	**07 13 05.4**	**-1.0**
PB09	**IPOC Station P**	**15.61**	**155**	P	**P**	**07 13 10.5**	**-2.3**
OCAC	**Ocana**	**16.13**	**11**	*e*P	**P**	**07 13 19.7**	**+1.1**
MOTC	**Monteria, Cord**	**16.39**	**3**	*e*P	**P**	**07 13 22.2**	**+0.9**
LVC	**Limon Verde**	**16.48**	**155**	LR	LR	07 19 35.9	
	comp=Z,181nm,18.3s,baz=314,slow=37						
LVC	**Limon Verde**	**16.48**	**155**	Pn	**Pn**	**07 13 20.3**	**+0.1**
SIV	**San Ignacio**	**17.09**	**120**	P	**Pn**	**07 13 25.8**	**-1.9**
	0.5nm,0.3s,baz=308,slow=11,SNR=26						
SIV				Lg	Lg	07 18 23.7	
	0.3nm,0.3s,baz=44,slow=24,SNR=3.1						
SIV				LR	LR	07 20 02.4	
	comp=Z,59nm,21.9s,baz=279,slow=37						
SDV	**Santo Domingo**	**17.45**	**19**	P	**Pn**	**07 13 31.5**	**-0.7**
	2.4nm,0.3s,baz=249,slow=14,SNR=10						
SDV	**Santo Domingo**	**17.45**	**19**	*e*P	**Pn**	**07 13 31.6**	**-0.6**
SDV	**Santo Domingo**	**17.45**	**19**	P	**Pn**	**07 13 32.2**	**0.0**
SDV	**Santo Domingo**	**17.45**	**19**	*e*P	**P**	**07 13 33.7**	**+0.5**
SJCC	**San Jacinto, C**	**17.53**	**4**	*e*P	**Pn**	**07 13 33.5**	**+0.4**
AC02	**Maricunga**	**20.24**	**161**	P	**P**	**07 14 02.6**	**-1.5**
AC02				IAmb	IAmb	07 14 14.3	
	comp=Z,20nm,1.4s						
CLDB	**Colider**	**20.56**	**100**	*e*P	**P**	**07 14 06.4**	**-0.9**
ITTB	**Itaituba**	**20.80**	**82**	*e*P	**P**	**07 14 09.7**	**-0.1**
NPGB	**Novo Progresso**	**20.86**	**90**	*e*P	**P**	**07 14 11.2**	**+0.6**
PCRV	**Puerto La Cruz**	**21.27**	**34**	P	**P**	**07 14 15.6**	**+0.7**
	comp=Z,4.7nm,0.7s,baz=184,slow=14,SNR=2.1						
PLCV	**Puerto La Cruz**	**21.28**	**34**	P	**P**	**07 14 15.6**	**+0.6**
LCO	**Las Campanas**	**21.86**	**167**	P	**P**	**07 14 20.9**	**-0.5**
LCO				IAmb	IAmb	07 14 27.6	
	comp=Z,20nm,1.0s						
CO03	**El Pedregal**	**23.63**	**168**	P	**P**	**07 14 40.5**	**+1.1**
CO03				IAmb	IAmb	07 14 56.5	
	comp=Z,8.0nm,1.1s						
AQDB	**Aquidauana**	**23.70**	**125**	*e*P	**P**	**07 14 41.4**	**+1.2**
MCPB	**Macapa, AP**	**25.33**	**74**	*e*P	**P**	**07 14 56.8**	**+1.7**
CPUP	**Villa Florida**	**25.92**	**138**	P	**P**	**07 14 59.1**	**-1.2**
	comp=Z,2.3nm,0.8s,baz=317,slow=11,SNR=3.1						
CPUP	**Villa Florida**	**25.92**	**138**	P	**P**	**07 14 59.1**	**-1.2**
SDDR	**Presa de Saban**	**26.99**	**11**	P	**P**	**07 15 08.5**	**-1.5**
MTP	**Monte Pirata**	**27.78**	**23**	P	**P**	**07 15 15.1**	**-2.0**
PLCA	**Paso Flores**	**33.30**	**172**	P	**P**	**07 16 06.0**	**+0.2**
	comp=Z,1.9nm,1.0s,baz=0.0,slow=13,SNR=2.7						
PLCA	**Paso Flores**	**33.30**	**172**	P	**P**	**07 16 05.7**	**-0.1**
PLCA				IAmb	IAmb	07 16 22.0	
	comp=Z,7.5nm,1.4s						
LRAL	**Lakeview Retre**	**41.75**	**347**	P	**P**	**07 17 17.7**	**+0.5**
LRAL				IAmb	IAmb	07 17 42.2	
	comp=Z,5.7nm,1.1s						
TX31	**Lajitas Ar. Si**	**45.23**	**326**	P	**P**	**07 17 45.7**	**+0.2**
TX32	**Lajitas Array**	**45.23**	**326**	P	**P**	**07 17 45.7**	**+0.2**
TXAR	**Lajitas Array**	**45.23**	**326**	P	**P**	**07 17 46.2**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=154,slow=8.6,SNR=6.8						
TXAR	**Lajitas Array**	**45.23**	**326**	P	**P**	**07 17 45.5**	**0.0**
FNO	**Franklin**	**47.11**	**336**	P	**P**	**07 18 00.3**	**+0.2**
SDCO	**Great Sand Dun**	**52.76**	**331**	P	**P**	**07 18 43.7**	**+0.4**
ECSD	**EROS Data Cent**	**54.38**	**342**	P	**P**	**07 18 54.2**	**-0.5**
ECSD				IAmb	IAmb	07 19 00.6	
	comp=Z,5.0nm,1.2s						
PDAR	**Pinedale Array**	**58.61**	**332**	P	**P**	**07 19 25.3**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=146,slow=9.8,SNR=4.0						
ULM	**Lac du Bonnet**	**60.15**	**346**	P	**P**	**07 19 36.2**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=158,slow=6.3,SNR=4.1						
ULM	**Lac du Bonnet**	**60.15**	**346**	P	**P**	**07 19 35.7**	**+0.3**
NVAR	**Mina Array Bea**	**60.21**	**323**	P	**P**	**07 19 36.5**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=135,slow=7.4,SNR=5.3						
DBIC	**Dimbokro**	**72.75**	**81**	P	**P**	**07 20 57.9**	**+1.2**
	comp=Z,8.3nm,1.1s,baz=257,slow=5.6,SNR=4.8						
YKA	**Yellowknife Ar**	**75.90**	**343**	P	**P**	**07 21 12.6**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=142,slow=5.6,SNR=3.1						
SNAA	**Sanae**	**77.58**	**162**	P	**P**	**07 21 24.7**	**+1.2**
SNAA	**Sanae**	**77.58**	**162**	P	**P**	**07 21 24.0**	**+0.5**
SNAA				IAmb	IAmb	07 21 26.0	
	comp=Z,3.3nm,1.1s						
TOA0	**Torodi Ar. Sit**	**80.25**	**75**	P	**P**	**07 21 37.2**	**-2.0**
TOA0				IAmb	IAmb	07 21 48.8	
	comp=Z,8.2nm,1.4s						
TORD	**Torodi Ar. Bea**	**80.25**	**75**	P	**P**	**07 21 39.1**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=288,slow=6.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**80.25**	**75**	P	**P**	**07 21 39.5**	**+0.3**
QSPA	**South Pole Qui**	**82.40**	**180**	P	**P**	**07 21 50.8**	**+1.0**
QSPA				IAmb	IAmb	07 21 52.2	
	comp=Z,2.8nm,0.9s						
ILAR	**Eielson Array**	**88.77**	**336**	P	**P**	**07 22 21.0**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=152,slow=4.5,SNR=7.5						
ILAR	**Eielson Array**	**88.77**	**336**	P	**P**	**07 22 21.4**	**+0.3**
VNDA	**

KUTZ	Kaahu Road	0.10	351	P		Pn	07 50 11.2	+0.2
TLZ	Tolley Road	0.35	317	P		Pn	07 50 11.7	+0.2
HSRZ	Hossack Road	0.42	49	P		Pn	07 50 12.0	+0.2
MRHZ	Matea Rd	0.51	119	P		Pn	07 50 11.9	-0.3
MRHZ				S		Sn	07 50 27.7	-2.2
TMVZ	Te Maari	0.54	191	P		Pn	07 50 12.6	+0.2
WTVZ	West Tongariro	0.57	200	P		Pn	07 50 12.6	0.0
MUGZ	Murupara	0.73	82	P		Pn	07 50 13.0	-0.4
BKZ	Black Stump Fm	0.77	139	P		Pn	07 50 13.7	0.0
HIZ	Hauiti	0.78	275	P		Pn	07 50 13.7	+0.1
MOVZ	Moawhango	0.82	185	P		Pn	07 50 13.7	-0.3
MTHZ	Maungataniwha	0.83	109	P		Pn	07 50 14.1	+0.1
RTZ	Ruatahuna	0.89	92	P		Pn	07 50 14.5	0.0
TOZ	Tahuroa Road	0.89	342	P		Pn	07 50 14.8	+0.4
NMHZ	Naumai	0.91	125	P		Pn	07 50 15.7	+1.0
BHHZ	Black Hill Sta	0.92	169	P		Pn	07 50 14.6	-0.1
OPRZ	Ohinepanea	0.93	37	P		Pn	07 50 14.7	0.0
VRZ	Vera Road	1.00	237	P		Pn	07 50 15.5	+0.3
RAHZ	Arahi	1.03	109	P		Pn	07 50 16.1	+0.6
URZ	Urewera	1.05	72	P		Pn	07 50 15.2	-0.4
MCHZ	McNeill Hill	1.09	143	P		Pn	07 50 16.9	+0.9
ARHZ	Aropaoanui	1.13	127	P		Pn	07 50 17.0	+0.7
KRHZ	Kereru	1.14	159	P		Pn	07 50 16.6	+0.2
SNGZ	Shannon Statio	1.19	100	P		Pn	07 50 17.4	+0.5
WHHZ	Waihua	1.19	115	P		Pn	07 50 17.4	+0.6
MWZ	Matawai	1.35	80	P		Pn	07 50 18.3	-0.1
WAZ	Wanganui	1.35	209	P		Pn	07 50 18.4	+0.1
PNHZ	Pukenui	1.36	168	P		Pn	07 50 18.6	+0.2
CKHZ	Cape Kidnapper	1.44	139	P		Pn	07 50 19.8	+0.7
KAHZ	Kahuranaki	1.45	147	P		Pn	07 50 19.9	+0.6
TSZ	Takapari Road	1.48	176	P		Pn	07 50 19.3	-0.2
KNZ	Kokohu	1.50	108	P		Pn	07 50 19.9	+0.2
RIGZ	Rimuhau	1.51	95	P		Pn	07 50 20.3	+0.5
NEZ	North Egmont	1.53	243	P		Pn	07 50 20.7	+0.6
WPHZ	Waipukurau	1.55	163	P		Pn	07 50 20.3	0.0
RUGZ	Raukumara Rang	1.57	67	P		Pn	07 50 19.8	-0.8
MKAZ	Moumakai	1.57	340	P		Pn	07 50 21.0	+0.5
TKGZ	Te Karaka	1.58	85	P		Pn	07 50 21.2	+0.6
KHEZ	Kahui Hut	1.59	243	P		Pn	07 50 21.2	+0.4
PRGZ	Paritu Road	1.63	103	P		Pn	07 50 21.4	+0.3
MHGZ	Mahia Peninsul	1.71	110	P		Pn	07 50 22.6	+0.6
TWGZ	Tauwhareparae	1.73	77	P		Pn	07 50 22.7	+0.5
HAZ	Te Kaha	1.74	62	P		Pn	07 50 21.6	-0.6
ETAZ	East Tamaki Re	1.78	336	P		Pn	07 50 23.1	+0.4
PRHZ	Porangahau	1.79	160	P		Pn	07 50 22.7	0.0
AWAZ	Awhitu Peninsu	1.79	328	P		Pn	07 50 22.8	0.0
KUZ	Kuaotunu	1.84	357	P		Pn	07 50 23.7	+0.3
CNGZ	Carnagh Statio	1.86	88	P		Pn	07 50 23.5	-0.1
WTAZ	Waiatarua	1.93	328	P		Pn	07 50 25.3	+0.9
MBAZ	Motutapu North	1.96	337	P		Pn	07 50 25.0	+0.3
PUZ	Puketiti	1.97	76	P		Pn	07 50 24.6	-0.2
RVAZ	Riverhead Bore	2.07	331	P		Pn	07 50 26.6	+0.7
MRZ	Mangatainoka R	2.08	186	P		Pn	07 50 25.2	-0.8
BFZ	Birch Farm	2.12	172	S		Sn	07 50 52.3	-3.1
WMGZ	Waiomatatini S	2.17	70	P		Pn	07 50 26.9	-0.1
MXZ	Matakaoa Point	2.19	63	P		Pn	07 50 27.5	+0.2
OGWZ	Otaki Gorge	2.29	193	P		Pn	07 50 27.5	-0.9
HOWZ	Holdsworth Sta	2.33	186	P		Pn	07 50 26.4	-2.5
GRZ	Great Barrier	2.35	352	P		Pn	07 50 29.8	+0.6
KIW	Kapiti Island	2.39	197	P		Pn	07 50 28.2	-1.3
MTW	Mount Morrison	2.58	186	P		Pn	07 50 30.4	-1.5
CAW	Cannon Point	2.59	193	P		Pn	07 50 30.7	-1.3
DUWZ	D'Urville Isla	2.67	213	P		Pn	07 50 31.2	-1.7
PAWZ	Paruwai Farm	2.81	186	P		Pn	07 50 33.0	-1.7
TRWZ	Traveller	2.81	182	P		Pn	07 50 33.5	-1.3
WEL	Wellington	2.82	197	P		Pn	07 50 32.3	-2.5
MSWZ	Moikau Station	2.87	189	P		Pn	07 50 33.6	-1.8
TCW	Tory Channel	2.89	204	P		Pn	07 50 33.8	-1.8
BHW	Baring Head	2.92	195	P		Pn	07 50 34.0	-2.0
PLWZ	Palliser	3.02	188	P		Pn	07 50 35.2	-2.1
TUWZ	Tuamarina	3.19	207	P		Pn	07 50 37.3	-2.1
NNZ	Nelson	3.24	215	P		Pn	07 50 38.0	-2.0
QRZ	Quartz Range	3.40	228	P		Pn	07 50 39.4	-2.6
BSWZ	Blackbirch Sta	3.47	205	P		Pn	07 50 41.1	-1.9
OUZ	Omahuta	3.81	331	P		Pn	07 50 48.8	+1.5
THZ	Tophouse	3.89	214	P		Pn	07 50 46.0	-2.4
KHZ	Kahutara	4.21	204	P		Pn	07 50 50.2	-2.2
DSZ	Denniston Nort	4.42	223	P		Pn	07 50 51.8	-3.4
LTZ	Lake Taylor	5.00	212	P		Pn	07 50 59.5	-3.2
ARCZ	Arundel	6.41	212	P		Pn	07 51 18.0	-3.4
ODZ	Otahua Downs	7.53	209	P		Pn	07 51 32.5	-3.7

WEL 22 07:54:04.1, 44°S±1°×17°1E±°, h7km±6km, M2.6/6, ML2.6/7, MLv2.6/6, Error ellipse: s-maj=0.0km s-min=0.0km az=94.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
RPZ	Rata Peaks	0.21	58	P	Pg	07 54 09.9		+1.6
ARCZ	Arundel	0.29	114	P	Pb	07 54 11.4		-0.3
MHCZ	Mount Hutt	0.62	62	P	Pb	07 54 17.6		+0.2
LBZ	Lake Benmore	0.72	219	P	Pb	07 54 19.0		+0.1
WACZ	Wakanui South	0.75	99	P	Pb	07 54 20.2		+0.7
WVZ	Waitaha Valley	0.75	356	P	Pb	07 54 19.5		0.0
FOZ	Fox Glacier	0.78	292	P	Pb	07 54 20.4		+0.4
ODZ	Otahua Downs	1.22	185	P	Pb	07 54 27.4		-0.1
MQZ	McQueen's Vall	1.34	85	P	Pn	07 54 28.4		-0.8
LTZ	Lake Taylor	1.49	46	P	Pg	07 54 33.6		+0.9
AKCZ	Akaroa Harbour	1.52	92	P	Pn	07 54 28.1		-3.6
WKZ	Wanaka	1.63	232	P	Pg	07 54 36.6		+1.3
EAZ	Earnscleugh	1.77	217	P	Pn	07 54 34.6		-0.5

TIF 22 08:07:56.2, 41.57N×43.33E, h20km
NORS 22 08:07:57.3±0.0, 41.62N×43.41E, h3km, MPVA3.5
DDA 22 08:07:58.1, 41.45N×43.20E, h6km±2km, ML2.5
ISC 22 08:07:55.9±1.0, 41°53N±0°02×43°34E±0°02, h20km±3km, n23, σ0°91/46, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
BKRG	Bakuriani	0.27	30	P	Pb	08 08 02.4		+0.2
BKRG				S	Sb	08 08 06.7		+0.3
EPOS	Posof	0.46	267	*i* P	Pg	08 08 05.5		0.0
EPOS				*i* S	Sg	08 08 11.7		-0.2
DMNI	Dmanisi	0.67	107	P	Pn	08 08 10.1		-0.3
DMNI				S	Sn	08 08 19.5		-0.8
EAK	Akyaka	0.86	166	*i* P	Pn	08 08 13.4		+0.3
EAK				*i* S	Sb	08 08 20.7		-2.8
TKB	Tkibuli	0.86	343	P	Pg	08 08 12.5		-0.4
TKB				S	Sg	08 08 24.1		-0.2
ONI	Oni	1.07	4	P	Pg	08 08 16.2		-0.4
ONI				S	Sn	08 08 30.4		+0.2
ONI	Oni	1.07	4	*i* Pg	Pg	08 08 16.3		-0.4
ONI				*e*Sg	Sg	08 08 30.4		+0.2
BTNK	Botanikuri	1.10	81	P	Pg	08 08 18.4		+1.1
BTNK				S	Sg	08 08 33.3		+1.5
DIGO	Kars	1.11	179	*i* P	Pg	08 08 18.3		+0.8
DIGO				*i* S	Sb	08 08 31.2		+0.5
DAGI	Agillar	1.17	248	*i* P	Pg	08 08 18.3		-0.2
DAGI				*i* S	Sn	08 08 33.3		+0.7
GUDG	Gudauri	1.26	42	P	Pg	08 08 19.8		-0.6
GUDG				S	Sg	08 08 37.0		0.0
GUDG	Gudauri	1.26	42	*e*Pg	Pg	08 08 20.3		-0.1
GUDG				*e*Sg	Sg	08 08 37.1		0.0
DBOC	Borcka	1.27	262	*i* P	Pb	08 08 19.9		+0.7
DBOC				*i* S	Sb	08 08 34.2		-1.0
ZEI	Tsey	1.33	18	*e*Pg	Pg	08 08 21.4		-0.2
ZEI				*e*Sg	Sg	08 08 40.0		+0.9
DBAD	Bademkaya	1.34	248	*i* P	Pg	08 08 21.4		-0.5
DBAD				*i* S	Sn	08 08 37.6		+0.7
DDEM	Demirkent	1.36	243	*i* P	Pg	08 08 22.3		+0.1
DDEM				*i* S	Sn	08 08 37.4		0.0
DDEM				IAML		08 08 43.0		
	comp=E,104nm,0.2s							
DDEM				IAML		08 08 46.0		
	comp=N,137nm,0.3s							
DIGR	Digorskoe uzhe	1.38	7	*e*Pg	Pg	08 08 22.1		-0.6
DIGR				*e*Sg	Sg	08 08 40.9		+0.1
PNSH	Pansheti	1.46	40	P	Pb	08 08 22.5		0.0
PNSH				S	Sg	08 08 42.2		-1.0
LACR	Lac	1.48	28	*e*Pg	Pg	08 08 23.8		-0.7
LACR				*e*Sg	Sg	08 08 43.0		-0.8
KORR	Kora	1.65	19	*e*Pg	Pg	08 08 28.6		+0.9
KORR				*e*Sg	Sg	08 08 50.4		+1.2
LSNR	Lesken	1.79	11	*e*Pg	Pg	08 08 30.3		0.0
LSNR				*e*Sg	Sg	08 08 54.7		+1.1
LGD	Lagodekhi	2.19	81	P	Pb	08 08 35.9		+0.9
LGD				S	Sg	08 09 03.8		-2.8
BAYB	BAYBURT	2.66	243	*i* P	Pg	08 08 46.0		-1.0
BAYB				*i* S	Sn	08 09 10.8		+1.2

IDC 22 08:43:53.0±0.5, 8.81S×74.71W, h135km±4km, mb4.4/21, mb1 4.6/28, mb1mx4.5/33, mbtmp4.8/28, MS3.2/3, Ms1 3.2/3, ms1mx3.0/32, Error ellipse: s-maj=9.4km s-min=7.6km az=62.0
ARE 22 08:43:53±1.6, 8.72S±0.06×74.63W±0.09, h151km±4km, Error ellipse: s-maj=12.8km s-min=9.1km az=91.0
NEIC 22 08:43:53.5±1.2, 8.77S±0.06×74.60W±0.09, h138km±5km, mb5.1/377, ML5.4(ARE), Error ellipse: s-maj=13.4km s-min=9.4km az=90.0
VAO 22 08:43:54.1±0.3, 8.78S×74.48W, h126km±1km, mb5.1
ISC 22 08:43:53.0±0.3, 8.78S±0.03×74.63W±0.04, h133km±3km, h134km: pP-P, n879, σ0.88/901, mb5.1/203, 2C-2D, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
CZSB	Cruzeiro do Su	2.17	61	*e*S	Sn	08 44 54.9		-2.2
NNA	Nana	3.86	214	P	Pn	08 44 51.4		+0.2
	204nm,0.3s,baz=34,slow=4.3,SNR=269							
NNA				S	Sn	08 45 33.3		-2.9
	1µm,0.3s,baz=287,slow=18,SNR=16							
NNA	Nana	3.86	214	Pn	Pn	08 44 51.5		+0.4
NNA				Sn	Sn	08 45 35.4		-0.8
ATAH	Atahualpa	4.08	293	P	Pn	08 44 54.0		-0.3
	71nm,0.3s,baz=106,slow=4.7,SNR=388							
ATAH				S	Sn	08 45 39.5		-2.2
	153nm,0.3s,baz=90,slow=6.0,SNR=15							
ETMB	Extrema	8.37	98	*e*P	Pn	08 45 50.8		-0.7
PTLC	Puerto Leguiza	8.89	359	*e*P	Pn	08 45 51.0		-7.6
PUAC	Puerto Asis, P	9.47	348	*e*P	Pn	08 46 03.3		-3.0
OTAV	Otavalo	9.73	337	*e*P	Pn	08 46 08.3		-2.0
OTAV	Otavalo	9.73	337		Pn	08 46 08.6		-0.7
CUSE	Cuicocha Este	9.78	337	*e*P	Pn	08 46 09.4		-1.4
LPAZ	La Paz	9.79	140	P	Pn	08 46 12.1		+1.0
	2.3nm,0.3s,baz=321,slow=8.5,SNR=74							
LPAZ				LR	LR	08 50 19.8		
	comp=Z,107nm,20.9s,baz=332,slow=39							
LPAZ	La Paz	9.79	140	Pn	Pn	08 46 10.8		-0.3
LPAZ	La Paz	9.79	140	*e*P	Pn	08 46 11.5		+0.4
LPAZ				*e*S	Sn	08 47 57.8		-1.9
PAC1	Pacto, Paraso	9.90	335	*e*P	Pn	08 46 12.6		+0.4
GCUF	Volcan Galeras	10.30	345	*e*P	Pn	08 46 14.7		-3.2
FLOC	Florencia	10.34	354	*e*P	Pn	08 46 13.8		-4.3
PB16	IPOC Station P	10.72	153	Pn	Pn	08 46 25.4		+1.9
MACC	Macarena, Meta	10.88	1	*e*P	Pn	08 46 22.2		-3.0
GARC	Garzon, Huila	10.93	355	*e*P	Pn	08 46 21.0		-5.1
SOTA	Rioblanco	11.02	350	*e*P	Pn	08 46 27.3		-0.2
BBAC	Balboa, Cauca	11.04	346	*e*P	Pn	08 46 25.4		-2.1
PCON	Cinco Dias	11.17	351	*e*P	Pn	08 46 28.2		-1.4
SAML	Samuel	11.31	92		Pn	08 46 28.9		-1.9
SAML	Samuel	11.31	92	*e*P	Pn	08 46 28.9		-1.9
MNMC	Minye Minye	11.39	155		Pn	08 46 32.2		+0.1
BETC	Betania	11.41	356	*e*P	Pn	08 46 31.0		-1.2
GUVC	San Jose del G	11.42	10	*e*P	Pn	08 46 29.7		-2.7
POPC	Popayan, Colom	11.43	350	*e*P	Pn	08 46 30.8		-1.9
PSGCX	Pisagua	11.60	158		Pn	08 46 34.4		-0.4
MARP	Paez Belalcaza	11.62	353	*e*P	Pn	08 46 32.9		-2.3
PB11	IPOC Station P	11.93	157		Pn	08 46 37.5		-1.7
GO01	Chusmiza	12.03	155		Pn	08 46 40.8		0.0
PB08	IPOC Station P	12.47	155		Pn	08 46 46.2		-0.2
TA01	Diego Aracena	12.48	160	Pn	Pn	08 46 46.0		-0.1
ORTC	Ortega, Tolima	12.62	357	*e*P	Pn	08 46 47.3		-0.7
PATCX	Punta Patache	12.73	161		Pn	08 46 49.4		0.0
YOTC	Yotoco, Valle	12.79	352	*e*P	Pn	08 46 49.2		-1.2
VILC	Villavicencio,	12.84	4	*e*P	Pn	08 46 50.6		-0.4
PTGC	Puerto Gaitan,	13.13	11	*e*P	Pn	08 46 53.2		-1.4
PB01	IPOC Station P	13.16	158		Pn	08 46 53.8		-1.3
ANIL	Santa Ana	13.21	357	*e*P	P	08 47 00.5		-0.4
TOLC	Tolima	13.29	357	*e*P	P	08 47 00.5		-1.5
CHIC	Chingaza	13.35	4	*e*P	Pn	08 46 54.9		-2.9
ROSC	El Rosal	13.53	1	P	Pn	08 47 02.3		+2.1
	3.2nm,0.3s,baz=206,slow=7.2,SNR=7.1							
ROSC	El Rosal	13.53	1	*e*P	Pn	08 47 01.1		+0.9
ROSC	El Rosal	13.53	1	Pn	Pn	08 46 59.5		-0.7
PB07	IPOC Station P	13.66	161		Pn	08 47 01.6		+0.1
PLMC	San Jos del P	13.69	353	*e*P	Pn	08 47 03.0		+1.1
PB09	IPOC Station P	13.94	159		Pn	08 47 05.7		+0.6
PB04	IPOC Station P	14.15	163		Pn	08 47 08.0		+0.2
NORC	Norcasia	14.25	359	*e*P	Pn	08 47 09.0		+0.4
SPBC	San Pablo de B	14.35	2	*e*P	Pn	08 47 11.8		-0.5
MAPC	Malpelo	14.48	331	*e*P	Pn	08 47 10.6		-1.2
CBOC	Ciudad Bolivar	14.61	355	*e*P	Pn	08 47 14.9		+1.3
RUSC	La Rusia	14.66	6	*e*P	Pn	08 47 15.3		+0.8
PB06	IPOC Station P	14.67	161		Pn	08 47 12.9		-1.5
VILB	Vilhena	14.76	108	*e*P	Pn	08 47 15.3		-0.1
LVC	Limon Verde	14.81	159	P	Pn	08 47 16.5		+0.3
	1.4nm,0.3s,baz=321,slow=10,SNR=37							
LVC	Limon Verde	14.81	159	Pn	Pn	08 47 15.4		-0.9
LVC	Limon Verde	14.81	159	*e*P	Pn	08 47 16.8		+0.5
HELC	Santa Helena	14.90	357	*e*P	P	08 47 19.4		-0.3
MACA	Manacapuru-AM	14.94	69	*e*P	Pn	08 47 15.7		-2.0
SIV	San Ignacio	15.05	120	P	Pn	08 47 19.8		+0.8
	6.3nm,0.3s,baz=298,slow=9.7,SNR=130							
SIV				S	Sn	08 50 03.3		-2.6
	8.3nm,0.3s,baz=239,slow=11,SNR=6.8							
PB10	IPOC Station P	15.16	166	Pn	Pn	08 47 19.0		-1.3
PB10				IAmb	IAmb	08 47 25.3		
	comp=Z,109nm,0.8s							
SOLC	Bahia Solano	15.16	349	*e*P	P	08 47 22.1		-0.2
PB15	IPOC Station P	15.18	162		Pn	08 47 20.9		+0.2
PB15				IAmb	IAmb	08 47 25.4		
	comp=Z,49nm,0.7s							
PTBC	PUERTO BERRIO,	15.22	1	*e*P	Pn	08 47 20.6		-0.4
BARC	Barichara	15.34	5	*e*P	P	08 47 23.7		-0.8
TAMC	Tame, Arauca	15.38	11	*e*P	Pn	08 47 22.7		-0.4
DBBC	Dabeiba	15.77	354	*e*P	P	08 47 30.7		+1.5
PAMC	Pamplona, Colo	16.13	7	*e*P	P	08 47 34.3		+0.8
ZARC	Zaragoza, Cauc	16.17	359	*e*P	Pn	08 47 32.1		-0.7
PB14	IPOC Station P	16.27	166	Pn	Pn	08 47 32.7		-1.5
UREC	San Jos de Ur	16.45	357	*e*P	Pn	08 47 35.1		-1.2
PTLB	Pontes e Lacer	16.52	115	*e*P	P	08 47 37.3		-0.1
OCAC	Ocana	16.96	4	*e*P	P	08 47 42.0		-0.4
GO02	Mina Guanaco	16.98	164		Pn	08 47 43.2		+0.2
GO02				IAmb	IAmb	08 47 45.7		
	comp=Z,65nm,0.8s							
MOTC	Monteria, Cord	17.47	357	*e*P	P	08 47 47.9		+0.1
CAPC	Capurgana	17.51	351	*e*P	P	08 47 47.6		-0.7
AC01	Pan de Azucar	17.69	168	P	P	08 47 50.3		+0.1
SDV	Santo Domingo	17.99	13	P	P	08 47 53.9		+0.2
	comp=Z,5.8nm,0.3s,baz=187,slow=12,SNR=23							
SDV				S	Sn	08 51 20.8		+4.0
	comp=Z,0.5nm,0.3s,baz=56,slow=13,SNR=3.2							
SDV	Santo Domingo	17.99	13		Pn	08 47 54.6		-0.4
SDV	Santo Domingo	17.99	13	*e*P	Pn	08 47 54.8		-0.3
ARGC	Ariguani, Magd	18.52	1	*e*P	P	08 48 00.1		+0.8
SJCC	San Jacinto, C	18.56	358	*e*P	P	08 48 00.3		+0.5
CLDB	Colider	18.67	98	*e*P	P	08 48 00.2		-0.8
AC02	Maricunga	18.70	165	P	P	08 48 01.2		-0.5
AC02				IAmb	IAmb	08 48 07.5		
	comp=Z,52nm,0.7s							
NPGB	Novo Progresso	19.16	86	*e*P	P	08 48 06.4		+0.1
GO03	Copiap	19.17	168	P	P	08 48 06.2		-0.2
ITTB	Itaituba	19.27	78	*e*P	P	08 48 08.2		+0.7
AC04	Llanos de Chal	19.61	171	P	P	08 48 10.3		+0.8
EDPN	Palmar Norte	19.70	333	*e*P	Pn	08 48 14.5		-0.4
EDBA	Buenos Aires	19.80	334	*e*P	Pn	08 48 15.5		-0.5
SMRC	Santa Marta, M	19.82	1	*e*P	P	08 48 12.1		-1.3
DRK0	Durika	19.87	334	*e*P	P	08 48 15.5		+1.3
CDM	Cerro de Muert	20.36	333	*e*P	P	08 48 19.5		-0.2
AC05	El Transito	20.37	169	P	P	08 48 20.2		+0.8
AC05				IAmb	IAmb	08 48 21.7		
	comp=Z,46nm,0.8s							
LCO	Las Campanas	20.46	170	P	P	08 48 19.4		-1.1
LCO				IAmb	IAmb	08 48 22.7		
	comp=Z,59nm,0.8s							
LCR2	La Lucha 2	20.63	333	*e*P	P	08 48 23.9		+1.5
CVTR	Volcan Turrial	20.77	334	*e*P	Pn	08 48 26.1		-1.8
HDC	Heredia	20.91	333	P	P	08 48 26.2		+0.9
HDC				IAmb	IAmb	08 48 28.5		
	comp=Z,114nm,1.0s							
PP1B	Ponte de Pedra	21.11	117	*e*P	P	08 48 28.2		+0.9
PP1B				*e*S	S	08 52 16.9		+2.1
PCRV	Puerto La Cruz	21.30	28	P	P	08 48 30.4		+1.1
	comp=Z,36nm,0.7s,baz=208,slow=3.0,SNR=17							
PLCV	Puerto La Cruz	21.30	28	P	P	08 48 30.4		+1.0
MALB	Monte Alegre	21.40	72	*e*P	P	08 48 30.3		-0.1
MALB				*e*S	S	08 52 21.9		+1.7
CO01	Juntas del Tor	21.51	169	P	P	08 48 32.6		+0.9
JTS	Las Juntas de	21.55	331	P	P	08 48 32.0		-0.1
	comp=Z,16nm,0.8s,baz=219,slow=4.1,SNR=10							
JTS	Las Juntas de	21.55	331	P	P	08 48 32.4		+0.3
GO04	Tololo Observa	21.58	171	P	P	08 48 32.0		-0.5
GO04				IAmb	IAmb	08 48 40.4		
	comp=Z,67nm,0.9s							
CEDE	Laguna Cedeo	21.61	332	*e*P	P	08 48 35.3		+2.6
AQDB	Aquidauana	21.66	125	*e*P	P	08 48 32.9		-0.3
CUI	Cuipilapa	21.97	331	*e*P	P	08 48 38.5		+2.0
BUEV	Buena Vista	22.21	331	*e*P	P	08 48 41.6		+2.7
CO03	El Tambredegal	22.25	171	P	P	08 48 38.2		-1.1
CO02	Combarbal	22.57	172	P	P	08 48 42.1		-0.2
CO02				IAmb	IAmb	08 48 45.6		
	comp=Z,69nm,0.8s							
ESPN	Las Esperanzas	22.95	335	P	P	08 48 46.7		+0.7
ACON	Acoyapa	23.13	333	P	P	08 48 48.9		+1.3
SNDB	Serra Nova Dou	23.16	100	*e*P	P	08 48 47.7		-0.4
SNDB				*e*S	S	08 52 49.8		+0.1
ARAG	Araguaiana, MT	23.32	109	*e*P	P	08 48 49.6		+0.1
ZON	Zonda	23.32	167	P	P	08 48 47.5		-1.9
CPUP	Villa Florida	23.96	139	P	P	08 48 54.0		-1.1
	comp=Z,4.6nm,0.5s,baz=326,slow=10,SNR=10							
CPUP				pP	pP	08 49 21.6		-0.7
	comp=Z,9.7nm,0.7s,baz=322,slow=10,SNR=5.4							
CPUP				LR	LR	08 58 48.3		
	comp=Z,39nm,21.6s,baz=261,slow=37							
CPUP	Villa Florida	23.96	139	P	P	08 48 54.3		-0.8
CPUP	Villa Florida	23.96	139	*e*P	P	08 48 55.6		+0.5
MCPB	Macapa, AP	23.98	71	*e*P	P	08 48 55.4		-0.1
VA03	San Esteban	24.16	172	P	P	08 48 56.7		-0.4
VA03				IAmb	IAmb	08 49 00.9		
	comp=Z,38nm,0.8s							
GRGR	Grenville	24.45	32	P	P	08 48 59.5		-0.2
PEL	Peldehue	24.52	172	P	P	08 49 00.8		+0.6
PEL				IAmb	IAmb	08 49 04.3		
	comp=Z,85nm,1.3s							
MT02	Curacav	24.57	173	P	P	08 49 01.1		+0.5
PRPB	Paraupebas	24.73	86	*e*P	P	08 49 03.0		+0.7
TRCB	Terra Rica	25.29	126	*e*P	P	08 49 07.2		-0.1
SVB	Belmont	25.62	31	P	P	08 49 08.5		-1.8
PCMB	Pacaembu	25.85	122	*e*P	P	08 49 12.3		-0.1
PCMB				*e*S	S	08 53 32.6		+0.2
ITRB	Iturama	25.87	117	*e*P	P	08 49 13.3		+0.7
MDP	Montagnes des	25.89	59	P	P	08 49 12.4		-0.4
	comp=Z,9.2nm,0.7s,baz=243,slow=10,SNR=6.4							
TGUH	Tegucigalpa,Un	25.93	331	P	P	08 49 13.4		+0.2
BO02	Sierra Bellavi	26.13	173	P	P	08 49 16.1		+1.3
SMTB	Santa Maria do	26.71	92	*e*P	P	08 49 20.5		+0.3
PTGB	Pitanga	26.72	129	*e*P	P	08 49 20.2		0.0
ITQB	Itaqui	26.77	143	*e*P	P

baz=175
X59A McDuffie Farm, 43.28 355 P P 08 51 41.7 +0.3
baz=174,SNR=8.2
X58A Rowland 43.33 354 P P 08 51 41.7 -0.1
baz=173
X55A Gracelyn & Ava 43.52 352 P P 08 51 43.5 +0.1
baz=170,SNR=5.0
BIRD Birdtown, Kers 43.54 353 P P 08 51 43.8 +0.3
HKT Hockley 43.58 333 P P 08 51 45.1 +1.3
Z47A Carrollton 43.66 344 P P 08 51 43.8 -0.8
Z47A IAmb IAmb 08 51 44.1
comp=Z,23nm,0.7s
W60A Pink Hill 43.69 356 P P 08 51 45.3 +0.6
baz=176
X54A Belton 43.71 351 P P 08 51 45.0 0.0
baz=169
W58A Raeford 43.78 355 P P 08 51 45.9 +0.4
baz=173,SNR=13
Y49A Blount Mountai 43.85 346 P P 08 51 45.1 -1.0
W59A Clinton 43.86 355 P P 08 51 46.3 +0.3
baz=174
CNNC Cliffs of the 43.89 356 P P 08 51 46.6 +0.3
baz=175
833A Chaparral WMA, 43.97 328 P P 08 51 48.1 +0.9
baz=144
833A Chaparral WMA, 43.97 328 P P 08 51 46.6 -0.5
W57A Gilead 43.99 354 P P 08 51 47.2 +0.1
baz=172,SNR=7.8
W57A Gilead 43.99 354 P P 08 51 47.2 +0.1
W57A IAmb IAmb 08 51 48.1
comp=Z,41nm,0.8s
W56A Indian Trail 44.04 353 P P 08 51 47.3 -0.3
baz=172
KMSC Kings Mountain 44.14 352 P P 08 51 48.3 0.0
baz=170
KMSC Kings Mountain 44.14 352 P P 08 51 48.1 -0.3
W54A Cherokee Point 44.21 351 P P 08 51 49.1 +0.1
baz=169
BG3 Lake Jocassee 44.24 350 P P 08 51 49.2 +0.1
FPAL Fort Paine 44.32 347 P P 08 51 49.0 -0.9
FPAL IAmb IAmb 08 51 49.8
comp=Z,22nm,0.7s
V60A Jim Taylor Roa 44.37 357 P P 08 51 50.9 +0.7
baz=176,SNR=5.7
V60A Jim Taylor Roa 44.37 357 P P 08 51 50.7 +0.5
V60A IAmb IAmb 08 51 51.4
comp=Z,44nm,0.7s
V59A Middlesex 44.44 356 P P 08 51 51.1 +0.5
baz=175,SNR=12
W52A Murphy 44.51 349 P P 08 51 50.6 -0.7
V58A Windy Hill, Pi 44.53 355 P P 08 51 51.5 +0.1
baz=174,SNR=8.7
V58A Windy Hill, Pi 44.53 355 P P 08 51 51.3 -0.2
V58A IAmb IAmb 08 51 52.4
comp=Z,39nm,0.8s
X48A Hartselle 44.58 345 P P 08 51 50.8 -1.1
NATX Nacogdoches 44.63 335 P P 08 51 53.5 +1.1
baz=151,SNR=13
V57A Coltrane Farms 44.69 354 P P 08 51 52.8 +0.1
baz=173,SNR=6.5
V56A Mocksville 44.69 353 P P 08 51 53.0 +0.3
baz=172,SNR=8.2
Y45A Yeager Farm, C 44.71 342 P P 08 51 52.7 -0.2
V54A Nebo 44.85 352 P P 08 51 53.8 -0.2
baz=170,SNR=5.2
EFI East Falkland 44.88 165 P P 08 51 55.3 +1.3
EFI IAmb IAmb 08 52 22.9
comp=Z,61nm,1.4s
V53A Saluda 44.88 351 P P 08 51 54.0 -0.3
W50A Signal Mountai 44.89 348 P P 08 51 53.9 -0.5
W50A IAmb IAmb 08 51 54.5
comp=Z,32nm,0.8s
CPCT Cooper Cave 44.97 349 P P 08 51 54.6 -0.4
U59A Littleton 44.99 356 P P 08 51 55.3 +0.3
baz=176,SNR=7.1
TKL Tuckaleechee C 45.03 349 P P 08 51 54.9 -0.5
SWET Sewanee 45.04 347 P P 08 51 54.3 -1.3
U60A Pendleton 45.07 357 P P 08 51 56.0 +0.3
baz=176
U58A Oxford 45.08 356 P P 08 51 56.1 +0.3
baz=174,SNR=9.6
435B Jarrell 45.09 332 P P 08 51 56.9 +0.9
baz=147,SNR=5.5
V52A Sevierville 45.18 350 P P 08 51 56.2 -0.4
V52A IAmb IAmb 08 51 57.0
comp=Z,33nm,0.8s
U57A Blanch 45.19 355 P P 08 51 56.6 0.0
baz=173,SNR=6.4
U56A King 45.21 353 P P 08 51 57.5 +0.6
baz=172,SNR=7.7
U56A King 45.21 353 P P 08 51 57.1 +0.2
U56A IAmb IAmb 08 51 58.5
comp=Z,88nm,1.4s
Z41A Richland Creek 45.24 338 P P 08 51 56.7 -0.4
baz=154,SNR=5.3
OXF Oxford 45.28 343 P P 08 51 56.9 -0.4
baz=159,SNR=6.0
OXF Oxford 45.28 343 P P 08 51 56.1 -1.3
OXF IAmb IAmb 08 51 57.9
comp=Z,45nm,1.0s
V51A Loudon 45.28 349 P P 08 51 56.7 -0.7
V51A IAmb IAmb 08 51 57.6
comp=Z,25nm,0.8s
237A Washetta, Mont 45.33 334 P P 08 51 59.1 +1.3
PLAL Pickwick Lake 45.34 344 P P 08 51 56.3 -1.6
U54A Nelsons Funny 45.56 352 P P 08 51 59.5 -0.2
baz=170
U54A Nelsons Funny 45.56 352 P P 08 51 59.7 0.0
T59A Double "B" Far 45.59 357 P P 08 52 00.3 +0.5
baz=176,SNR=11
T59A Double "B" Far 45.59 357 P P 08 52 00.1 +0.3
T59A IAmb IAmb 08 52 00.6
comp=Z,38nm,0.6s
T58A Grand View Acr 45.63 356 P P 08 52 00.5 +0.3
baz=175,SNR=14
T60A Surry 45.72 358 P P 08 52 01.3 +0.5
baz=177
WLAR White Oak Lake 45.74 338 P P 08 52 01.6 +0.5
WLAR IAmb IAmb 08 52 02.4
comp=Z,61nm,1.0s
T57A Hurt 45.74 355 P P 08 52 01.3 +0.3
baz=174,SNR=20
T57A Hurt 45.74 355 P P 08 52 01.2 +0.3
V48A Smith Brothers 45.75 346 P P 08 52 00.2 -0.9
V48A IAmb IAmb 08 52 00.9
comp=Z,47nm,0.8s
V48A pP 08 52 32.2 +0.8
W45A Hickory Valley 45.81 343 P P 08 52 00.3 -1.3
T56A Rocky Mt 45.85 354 P P 08 52 02.4 +0.6
baz=172,SNR=7.4
TZTN Tazewell 45.86 350 P P 08 52 01.2 -0.7
baz=168
TZTN Tazewell 45.86 350 P P 08 52 01.5 -0.4
TZTN IAmb IAmb 08 52 02.1
comp=Z,23nm,0.8s
JCT Junction City 45.92 329 P P 08 52 02.9 +0.3
baz=144,SNR=6.2
CLTN Cedars of Leba 45.97 347 P P 08 52 01.8 -1.1
CLTN PcP 08 53 37.4 0.0
T55A Pulaski 46.02 353 P P 08 52 03.7 +0.5
baz=172,SNR=6.5
WHTX Lake Whitney, 46.04 333 P P 08 52 03.9 +0.5
baz=148,SNR=10.0
WHTX Lake Whitney, 46.04 333 P P 08 52 04.2 +0.8
WHTX IAmb IAmb 08 52 05.1
comp=Z,60nm,1.2s
T54A Tazewell 46.06 352 P P 08 52 03.2 -0.4
baz=170
BLA Blacksburg 46.07 354 P P 08 52 03.4 -0.2
baz=172
BLA Blacksburg 46.07 354 P P 08 52 04.2 +0.6
Z38A Mt. Pleasant 46.08 336 P P 08 52 04.2 +0.5
T53A Wise 46.12 351 P P 08 52 03.3 -0.8
baz=169
U49A Red Boiling Sp 46.26 348 P P 08 52 03.7 -1.4
S58A Poland Farm, P 46.26 356 P P 08 52 05.2 +0.1
baz=175,SNR=7.7
S58A Poland Farm, P 46.26 356 P P 08 52 05.3 +0.3
S58A IAmb IAmb 08 52 06.1
comp=Z,28nm,0.7s
S60A Water View 46.28 358 P P 08 52 05.6 +0.4
baz=177
X40A Basin Creek Fa 46.36 339 P P 08 52 05.4 -0.5
baz=155,SNR=5.2
X40A Basin Creek Fa 46.36 339 P P 08 52 05.7 -0.2
S59A Mechanicsville 46.37 357 P P 08 52 06.4 +0.6
baz=176,SNR=9.0
WVT Waverly 46.37 345 P P 08 52 04.0 -1.9
baz=162
WVT Waverly 46.37 345 P P 08 52 03.9 -1.9
S56A Natural Bridge 46.44 355 P P 08 52 06.8 +0.3
baz=173,SNR=5.9
UALR University of 46.45 340 P P 08 52 06.2 -0.3
S57A Dark Hollow, R 46.47 355 P P 08 52 07.2 +0.5
baz=174,SNR=16
S57A Dark Hollow, R 46.47 355 P P 08 52 07.0 +0.3
S57A IAmb IAmb 08 52 08.0
comp=Z,45nm,0.7s
R58B Mineral 46.60 356 P P 08 52 08.2 +0.6
baz=176,SNR=6.6
R58B Mineral 46.60 356 P P 08 52 08.2 +0.6
R58B IAmb IAmb 08 52 08.7
comp=Z,20nm,0.7s
S55A Lewisburg 46.63 354 P P 08 52 08.6 +0.6
baz=172,SNR=14
MIAR Mount Ida 46.68 338 P P 08 52 07.7 -0.7
baz=154,SNR=9.8
MIAR Mount Ida 46.68 338 P P 08 52 08.1 -0.2
S53A Williamson 46.75 352 P P 08 52 08.6 -0.3
baz=170,SNR=6.7
S54A Dingess, Beckl 46.76 353 P P 08 52 08.8 -0.2
baz=171,SNR=5.5
S54A Dingess, Beckl 46.76 353 P P 08 52 08.1 -0.9
S54A IAmb IAmb 08 52 09.9
comp=Z,32nm,0.9s
W41B Gary Mavity, V 46.78 340 P P 08 52 08.4 -0.8
baz=156,SNR=16
W41B Gary Mavity, V 46.78 340 P P 08 52 08.3 -0.8
W41B IAmb IAmb 08 52 09.3
comp=Z,41nm,0.8s
R59A King George, V 46.79 357 P P 08 52 09.8 +0.7
baz=177,SNR=9.1
CBN Corbin Frederi 46.81 357 P P 08 52 10.1 +0.8
baz=176,SNR=9.9
R60A Leotlown, M 46.84 358 P P 08 52 10.4 +0.9
baz=177
WHAR Wooly Hollow 46.90 340 P P 08 52 09.4 -0.7
WHAR IAmb IAmb 08 52 10.1
comp=Z,43nm,0.8s
S51A Beattyville 46.93 350 P P 08 52 09.4 -0.9
S51A IAmb IAmb 08 52 24.3
comp=Z,26nm,0.8s
R58A Rapidan 46.94 356 P P 08 52 11.1 +0.8
baz=175,SNR=8.4
R57A Stanardsville 46.97 356 P P 08 52 11.1 +0.6
baz=175
T47A Sharon Grove 47.01 346 P P 08 52 09.6 -1.3
Z35A Perchaven, San 47.09 334 P P 08 52 11.3 -0.3
R54A Victor 47.09 353 P P 08 52 11.6 +0.1
baz=171
R55A Marlinton 47.10 354 P P 08 52 12.2 +0.5
baz=173,SNR=6.2
R55A Marlinton 47.10 354 P P 08 52 12.2 +0.5
R55A IAmb IAmb 08 52 13.2
comp=Z,30nm,0.8s
TX32 Lajitas Array 47.10 325 P P 08 52 12.0 0.0
TXAR Lajitas Array 47.10 325 P P 08 52 12.0 +0.1
comp=Z,7.8nm,0.7s,baz=149,slow=8.9,SNR=93
TXAR PcP PcP 08 53 41.1 -0.6
comp=Z,2.8nm,0.7s,baz=148,slow=7.6,SNR=6.1
TXAR Lajitas Array 47.10 325 P P 08 52 12.2 +0.3
TX31 Lajitas Ar. Si 47.11 325 P P 08 52 12.2 +0.2
TX31 IAmb IAmb 08 52 12.7
comp=Z,24nm,0.7s
R56A Bull Pasture M 47.15 355 P P 08 52 12.6 +0.5
baz=174
LCAR Lake Charles 47.25 342 P P 08 52 11.6 -1.1
LCAR IAmb IAmb 08 52 12.5
comp=Z,32nm,1.2s
W39A Magazine 47.34 339 P P 08 52 13.6 +0.1
baz=154,SNR=17
W39A Magazine 47.34 339 P P 08 52 13.5 0.0
W39A IAmb IAmb 08 52 14.4
comp=Z,85nm,1.4s
R53A Hurricane 47.36 352 P P 08 52 13.4 -0.3
baz=170
FCAR Ozark Folk Cen 47.39 341 P P 08 52 12.9 -1.0
FCAR IAmb IAmb 08 52 13.5
comp=Z,30nm,0.7s
X37A Clayton 47.40 337 P P 08 52 14.3 +0.4
X37A IAmb IAmb 08 52 15.6
comp=Z,52nm,0.9s
Q59A Harwood 47.44 358 P P 08 52 14.5 +0.4
baz=177
Q58A Fox Den Farm, 47.56 357 P P 08 52 15.6 +0.5
baz=176,SNR=13
ABTX Abilene, Hawle 47.59 331 P P 08 52 16.0 +0.5
baz=146,SNR=32
ABTX Abilene, Hawle 47.59 331 P P 08 52 16.2 +0.7
R50A Paris 47.68 350 P P 08 52 15.2 -0.9
R50A IAmb IAmb 08 52 16.2
comp=Z,25nm,0.8s
PBMO Poplar Bluff 47.69 343 P P 08 52 15.1 -1.1
PBMO IAmb IAmb 08 52 15.6
comp=Z,26nm,0.8s
PBMO PcP 08 53 42.7 -0.8
Q57A Strasburg 47.70 356 P P 08 52 17.0 +0.8
baz=175,SNR=8.1
Q56A Snyder Ridge, 47.76 355 P P 08 52 17.4 +0.7
baz=174,SNR=5.0
Q56A Snyder Ridge, 47.76 355 P P 08 52 17.7 +0.9
Q56A IAmb IAmb 08 52 18.4
comp=Z,23nm,0.8s
Q55A Buckhannon 47.80 354 P P 08 52 17.8 +0.8
baz=173,SNR=6.1
Q53A Leroy 47.83 353 P P 08 52 17.1 0.0
baz=171,SNR=9.7
R49A Shelbyville 47.85 349 P P 08 52 16.7 -0.7
R49A IAmb IAmb 08 52 17.2
comp=Z,29nm,1.1s
Q54A Coxs Mills 47.87 353 P P 08 52 17.3 -0.2
baz=172,SNR=8.3
Q54A Coxs Mills 47.87 353 P P 08 52 17.4 0.0
Q54A IAmb IAmb 08 52 18.2
comp=Z,34nm,0.7s
SDMD Soldier's Deli 47.99 358 P P 08 52 18.8 +0.4
WCI Wyandotte Cave 48.02 348 P P 08 52 17.3 -1.3
baz=164
WCI Wyandotte Cave 48.02 348 P P 08 52 17.4 -1.3
WCI IAmb IAmb 08 52 18.1
comp=Z,56nm,1.2s
Q52A Bidwell 48.02 352 P P 08 52 18.4 -0.4
baz=170
U40A Yellville 48.06 340 P P 08 52 18.4 -0.7
baz=156,SNR=23
U40A Yellville 48.06 340 P P 08 52 18.2 -0.7
U40A IAmb IAmb 08 52 19.1
comp=Z,35nm,0.7s
P58A Pank, Wackersv 48.09 357 P P 08 52 19.7 +0.5
baz=176,SNR=7.7
T42A Van Buren 48.12 342 P P 08 52 18.0 -1.4
T42A IAmb IAmb 08 52 18.6
comp=Z,26nm,0.6s
P57A Homestead Farm 48.12 356 P P 08 52 20.1 +0.6
baz=176
P59A Jarrettsville 48.17 358 P P 08 52 20.5 +0.7
baz=178,SNR=6.4
P56A Dayton Farm, R 48.20 356 P P 08 52 20.5 +0.5
baz=174
S44A Carbondale 48.21 344 P P 08 52 18.7 -1.5
S44A IAmb IAmb 08 52 19.7
comp=Z,28nm,0.8s
SIUC Southern Illin 48.22 344 P P 08 52 18.8 -1.5
SIUC IAmb IAmb 08 52 19.8
comp=Z,38nm,0.8s
SIUC PcP 08 53 44.6 -0.7
Q51A Peebles 48.25 351 P P 08 52 19.7 -0.7
P60A Greenville 48.35 359 P P 08 52 21.9 +0.7
baz=179
P60A Greenville 48.35 359 P P 08 52 21.8 +0.6
HHAR Hobbs 48.37 339 P P 08 52 20.9 -0.5
HHAR IAmb IAmb 08 52 21.6
comp=Z,41nm,0.7s
P53A Whipple 48.43 353 P P 08 52 21.9 +0.1
baz=171,SNR=7.2
P53A Whipple 48.43 353 P P 08 52 21.8 0.0
P53A IAmb IAmb 08 52 22.5
comp=Z,38nm,0.7s
MCWV Mont Chateau 48.43 355 P P 08 52 21.8 0.0
baz=173
W35A Tecumseh 48.49 336 P P 08 52 22.4 +0.1
MVL Millersville 48.56 358 P P 08 52 23.5 +0.7
MVL IAmb IAmb 08 52 24.4
comp=Z,46nm,0.9s
MGMO Mountain Grove 48.59 341 P P 08 52 22.3 -0.9
P51A Williamsport 48.65 351 P P 08 52 22.5 -0.9
baz=169
U38A Gravette 48.67 339 P P 08 52 23.3 -0.4
U38A IAmb IAmb 08 52 23.8
comp=Z,26nm,0.7s
P52A Corning 48.67 352 P P 08 52 22.8 -0.8
baz=170,SNR=7.0
P52A Corning 48.67 352 P P 08 52 23.0 -0.6
P52A IAmb IAmb 08 52 23.7
comp=Z,32nm,0.8s
O58A Lewisberry 48.70 358 P P 08 52 24.6 +0.7
baz=177
TUL1 Leonard 48.72 337 P P 08 52 24.2 0.0
baz=152,SNR=12
TUL1 Leonard 48.72 337 P P 08 52 24.1 0.0
TUL1 IAmb IAmb 08 52 25.1
comp=Z,40nm,0.8s
FNO Franklin 48.80 335 P P 08 52 24.9 +0.1
PAGS Pennsylvania G 48.80 358 P P 08 52 25.3 +0.7
PAGS IAmb IAmb 08 52 26.1
comp=Z,20nm,0.7s
FVM French Village 48.81 343 P P 08 52 23.6 -1.1
O57A Amberson 48.82 357 P P 08 52 25.5 +0.7
baz=176
O60A Telford 48.85 359 P P 08 52 25.7 +0.6
baz=179
O59A Robesonia 48.87 358 P P 08 52 25.8 +0.7
baz=178,SNR=6.4
O56A Blue Knob Stat 48.94 356 P P 08 52 26.4 +0.7
baz=175,SNR=5.3
O56A Blue Knob Stat 48.94 356 P P 08 52 26.3 +0.5
O56A IAmb IAmb 08 52 26.7
comp=Z,21nm,0.8s
WMOK Wichita Mounta 48.95 333 P P 08 52 25.9 0.0
baz=148,SNR=7.7
WMOK Wichita Mounta 48.95 333 P P 08 52 26.1 +0.1
BLO Bloomington 48.97 348 P P 08 52 24.9 -1.1
P49A Miami Univ. Ec 48.97 350 P P 08 52 24.4 -1.5
baz=167,SNR=6.4
P49A Miami Univ. Ec 48.97 350 P P 08 52 24.4 -1.5
P49A IAmb IAmb 08 52 25.3
comp=Z,35nm,0.9s
O54A Avella 49.00 354 P P 08 52 25.6 -0.6
baz=172
P48A Milroy 49.03 349 P P 08 52 24.8 -1.6
P48A IAmb IAmb 08 52 25.6
comp=Z,35nm,1.1s
O52A Adamsville 49.10 353 P P 08 52 26.3 -0.7
baz=171,SNR=6.1
CCM Cathedral Cave 49.11 343 P P 08 52 25.8 -1.2
baz=158
CCM Cathedral Cave 49.11 343 P P 08 52 26.2 -0.9
CCM IAmb IAmb 08 52 28.1
comp=Z,24nm,0.6s
CCM PcP 08 53 48.5 -0.1
OK030 Cody Creek RV 49.12 336 P P 08 52 26.7 -0.5
O53A New Philadelph 49.16 353 P P 08 52 26.6 -0.7
baz=171
OK031 S. Brethren Rd 49.17 336 P P 08 52 27.5 -0.1
BCOK Bluff Creek, N 49.23 335 P P 08 52 28.1 +0.1
O51A Pataskala 49.24 352 P P 08 52 27.3 -0.7
baz=170
SSPA Standing Stone 49.26 357 P P 08 52 28.4 +0.2
baz=176
Q44A Meyer Farm, Va 49.29 345 P P 08 52 27.3 -1.1
Q44A IAmb IAmb 08 52 42.5
comp=Z,30nm,0.7s
QUOK Quay 49.31 336 P P 08 52 28.9 +0.3
ACSO Alum Creek Sta 49.37 352 P P 08 52 27.9 -1.1
baz=169
N58A Sunbury 49.41 358 P P 08 52 29.9 +0.6
baz=177,SNR=7.3
N58A Sunbury 49.41 358 P P 08 52 29.6 +0.3
N58A IAmb IAmb 08 52 30.7
comp=Z,29nm,0.8s
S39A Bolivar 49.43 340 P P 08 52 28.6 -0.9
S39A IAmb IAmb 08 52 29.4
comp=Z,41nm,0.9s
N59A State Game Lan 49.46 359 P P 08 52 30.3 +0.6
baz=178,SNR=6.6
N59A State Game Lan 49.46 359 P P 08 52 30.4 +0.8
N59A IAmb IAmb 08 52 31.3
comp=Z,27nm,0.8s
O49A Covington 49.54 350 P P 08 52 28.9 -1.3
O49A IAmb IAmb 08 52 29.9
comp=Z,33nm,0.9s
P46A Rosedale 49.55 347 P P 08 52 28.9 -1.4
P46A IAmb IAmb 08 52 29.7
comp=Z,38nm,0.9s
N56A West Decatur 49.56 356 P P 08 52 30.9 +0.4
baz=175,SNR=6.0
R40A Maddies Statio 49.64 342 P P 08 52 29.8 -1.2
R40A IAmb IAmb 08 52 30.7
comp=Z,38nm,1.2s
N53A Lisbon 49.67 354 P P 08 52 30.8 -0.4
N53A IAmb IAmb 08 52 43.6
comp=Z,41nm,1.0s
N54A Moraine State 49.74 355 P P 08 52 31.9 +0.1
baz=173,SNR=5.4
N54A Moraine State 49.74 355 P P 08 52 31.6 -0.1
N54A IAmb IAmb 08 52 32.7
comp=Z,47nm,1.0s
MNTX Cornudas Mount 49.85 325 P P 08 52 32.4 -0.4
baz=139,SNR=18
MNTX Cornudas Mount 49.85 325 P P 08 52 32.5 -0.3
MNTX IAmb IAmb 08 52 34.3
comp=Z,36nm,1.5s
M60A Port Jervis 49.86 0 P P 08 52 32.7 +0.1
baz=180
T35A Sooner Cattle 49.88 337 P P 08 52 33.1 +0.2
T35A IAmb IAmb 08 52 33.9
comp=Z,64nm,1.2s
M57A Sunshine Farm, 49.92 358 P P 08 52 33.6 +0.4
baz=177,SNR=5.0
M57A Sunshine Farm, 49.92 358 P P 08 52 33.1 0.0
M57A IAmb IAmb 08 52 34.4
comp=Z,31nm,0.8s
M58A Price's Panora 49.93 358 P P 08 52 34.1 +0.9
baz=178,SNR=6.8
M62A Hamden 50.00 2 P P 08 52 33.9 +0.3
baz=182
M59A Waymart 50.08 359 P P 08 52 35.0 +0.7
baz=179
KSPA Keystone Colle 50.10 359 P P 08 52 35.0 +0.5
KSPA IAmb IAmb 08 52 35.4
comp=Z,22nm,1.0s
CROK Carrier 50.11 335 P P 08 52 34.5 -0.2
P43A Skaggs, Pawnee 50.12 345 P P 08 52 34.0 -0.7
M56A Emporium 50.12 357 P P 08 52 34.7 0.0
baz=175,SNR=5.3
M56A Emporium 50.12 357 P P 08 52 34.9 +0.3
M56A IAmb IAmb 08 52 45.8
comp=Z,24nm,0.6s
M55A Ridgway 50.14 356 P P 08 52 34.9 +0.1
M55A IAmb IAmb 08 52 46.3
comp=Z,23nm,0.7s
MSTX Muleshoe 50.21 329 P P 08 52 35.4 -0.2
baz=143,SNR=28
MSTX Muleshoe 50.21 329 P P 08 52 35.4 -0.2
MSTX IAmb IAmb 08 52 37.2
comp=Z,28nm,0.8s
SFIN Lafayette 50.25 348 P P 08 52 33.9 -1.7
baz=164,SNR=15
SFIN Lafayette 50.25 348 P P 08 52 34.0 -1.6
M54A Oil Creek Stat 50.25 355 P P 08 52 35.7 +0.1
baz=174,SNR=5.7
M54A Oil Creek Stat 50.25 355 P P 08 52 35.9 +0.3
M54A IAmb IAmb 08 52 36.5
comp=Z,35nm,0.9s
M53A WI Miller and 50.28 354 P P 08 52 35.6 -0.2
M53A IAmb IAmb 08 52 48.3
comp=Z,40nm,0.8s
O44A Mansfield 50.34 346 P P 08 52 34.8 -1.6
KAN13 South Haven SW 50.34 336 P P 08 52 36.4 0.0
M51A Elyria 50.35 353 P P 08 52 35.3 -1.0
baz=170
AMTX Amarillo 50.41 331 P P 08 52 36.6 -0.4
baz=144
AMTX Amarillo 50.41 331 P P 08 52 36.7 -0.4
AMTX IAmb IAmb 08 52 37.7
comp=Z,36nm,1.2s
U32A Winter Ranch, 50.43 334 P P 08 52 37.1 0.0
N47A Urbana 50.45 349 P P 08 52 35.7 -1.5

N47A pP 08 53 08.6 +0.5
KAN09 Caldwell North 50.51 336 P P 08 52 37.9 +0.3
M50A Fremont 50.53 352 P P 08 52 37.0 -0.7
KS20 Mayfield South 50.56 336 P P 08 52 38.0 0.0
KS20 pP 08 53 11.1 +2.1
L57A Andrews Acres 50.57 358 P P 08 52 38.1 0.0
baz=177,SNR=6.5
KAN01 Argonia South 50.58 336 P P 08 52 38.4 +0.3
KAN05 Bluff City Nor 50.58 336 P P 08 52 38.6 +0.4
L58A Harry Jones Me 50.59 359 P P 08 52 38.8 +0.7
baz=178,SNR=9.5
P40A Paris 50.71 343 P P 08 52 37.7 -1.4
P40A IAmb IAmb 08 52 38.7
comp=Z,29nm,0.8s
L59A Walton 50.72 360 P P 08 52 39.9 +0.7
baz=179
KAN08 Anthony NE Sta 50.73 336 P P 08 52 39.5 +0.2
L56A Greenwood 50.74 357 P P 08 52 39.7 +0.4
baz=176
L56A Greenwood 50.74 357 P P 08 52 39.3 0.0
BINY Binghamton 50.74 359 P P 08 52 40.1 +0.7
baz=178,SNR=15
BINY Binghamton 50.74 359 P P 08 52 39.9 +0.5
L53A Girard 50.75 355 P P 08 52 38.7 -0.6
baz=173
KAN12 Harper NE Stat 50.80 336 P P 08 52 40.0 +0.2
HDIL Hopedale 50.92 346 P P 08 52 39.2 -1.5
baz=161,SNR=14
HDIL Hopedale 50.92 346 P P 08 52 39.0 -1.7
P38A Dawn 51.25 341 P P 08 52 41.9 -1.3
P38A IAmb IAmb 08 52 42.9
comp=Z,38nm,0.8s
K57A Scipio Center 51.29 358 P P 08 52 43.8 +0.4
baz=178,SNR=6.8
K58A Earlville 51.30 359 P P 08 52 44.1 +0.6
baz=179,SNR=12
K58A Earlville 51.30 359 P P 08 52 43.5 0.0
K59A Cooperstown 51.30 360 P P 08 52 43.8 +0.3
baz=180
N41A Harden Midland 51.47 344 P P 08 52 43.3 -1.4
KSU1 Kansas State U 51.83 338 P P 08 52 47.0 -0.5
baz=152,SNR=16
KSU1 Kansas State U 51.83 338 P P 08 52 46.5 -1.0
KSU1 IAmb IAmb 08 52 48.6
comp=Z,42nm,0.8s
121A Cookes Peak, D 51.84 324 P P 08 52 48.7 +0.8
baz=137,SNR=13
121A Cookes Peak, D 51.84 324 P P 08 52 47.6 -0.3
121A IAmb IAmb 08 52 49.8
comp=Z,32nm,1.1s
J56A Wolcott 51.84 358 P P 08 52 46.7 -0.8
baz=177
J58A Remsen 51.89 359 P P 08 52 48.0 +0.1
baz=179
319A Douglas 51.91 322 P P 08 52 48.4 0.0
319A IAmb IAmb 08 52 50.1
comp=Z,44nm,1.0s
J57A Williamstown 51.95 359 P P 08 52 48.5 +0.2
baz=178
J57A Williamstown 51.95 359 P P 08 52 48.2 -0.1
J57A IAmb IAmb 08 52 48.9
comp=Z,35nm,0.7s
J59A Piesco 51.99 0 P P 08 52 49.3 +0.7
baz=180,SNR=6.2
J59A Piesco 51.99 0 P P 08 52 48.8 +0.2
J59A IAmb IAmb 08 52 50.1
comp=Z,48nm,1.1s
R32A Long Quarter, 52.05 336 P P 08 52 49.3 +0.1
R32A pP 08 53 21.9 +1.6
I58A Old Forge 52.22 360 P P 08 52 50.5 +0.2
baz=180,SNR=5.7
N38A Joes South For 52.23 342 P P 08 52 49.1 -1.3
I59A Olmsteadville 52.33 1 P P 08 52 51.6 +0.5
baz=181
I57A Carthage 52.48 359 P P 08 52 52.1 -0.1
baz=179
I61A Oroboro, Fairl 52.51 2 P P 08 52 53.1 +0.7
baz=183
LENM Lemitar 52.58 326 P P 08 52 53.8 +0.4
I51A Listowel 52.66 354 P P 08 52 52.6 -0.8
baz=172
I63A Otisfield 52.71 4 P P 08 52 54.4 +0.5
baz=185
CBKS Cedar Bluff 52.80 335 P P 08 52 55.3 +0.5
baz=148,SNR=10
CBKS Cedar Bluff 52.80 335 P P 08 52 54.7 0.0
LBNH Lisbon 52.83 2 P P 08 52 54.4 -0.3
baz=183
L40A Anamosa 52.83 345 P P 08 52 52.7 -2.1
ANMO Albuquerque 52.89 327 P P 08 52 55.7 +0.1
baz=139
ANMO Albuquerque 52.89 327 P P 08 52 55.3 -0.3
ANMO IAmb IAmb 08 52 56.9
comp=Z,24nm,1.1s
H58A Gabriels 52.95 0 P P 08 52 54.9 -0.8
baz=180
H57A Richville 53.00 359 P P 08 52 56.1 +0.2
baz=179,SNR=7.8
N35A Tabor 53.06 340 P P 08 52 55.1 -1.4
H60A Morristown 53.12 2 P P 08 52 57.2 +0.3
baz=182
LONY Lake Ozonia 53.15 0 P P 08 52 56.9 -0.2
baz=180
LONY Lake Ozonia 53.15 0 P P 08 52 56.6 -0.5
LONY IAmb IAmb 08 52 57.8
comp=Z,19nm,0.8s
H59A Cadyville 53.18 1 P P 08 52 57.7 +0.3
baz=181
H53A Bobcaygeon 53.22 356 P P 08 52 56.8 -0.8
baz=175
SCIA State Center 53.24 343 P P 08 52 56.8 -1.0
baz=157,SNR=6.4
SCIA State Center 53.24 343 P P 08 52 56.4 -1.4
H63A New Sharon 53.35 4 P P 08 52 59.6 +1.1
baz=186
JFWS Jewell Farm 53.38 346 P P 08 52 57.4 -1.4
baz=161,SNR=5.1
JFWS Jewell Farm 53.38 346 P P 08 52 57.5 -1.4
JFWS IAmb IAmb 08 52 58.2
comp=Z,30nm,0.8s
T25A Trinidad 53.53 330 P P 08 53 00.9 +0.6
baz=142,SNR=29
T25A Trinidad 53.53 330 P P 08 53 00.3 0.0
N33A J Bar K, Exete 53.58 339 P P 08 52 59.6 -0.8
G57A Newington 53.63 360 P P 08 53 00.7 +0.1
baz=180
G60A Masonville 53.67 2 P P 08 53 01.7 +0.8
baz=183
G58A Ormstown 53.68 1 P P 08 53 01.2 +0.3
baz=181,SNR=6.1
K38A Parkersburg 53.80 343 P P 08 53 00.3 -1.6
K38A IAmb IAmb 08 53 01.0
comp=Z,30nm,0.7s
G63A Kingsbury 53.83 4 P P 08 53 02.6 +0.6
baz=186
G62A West of Eustis 53.87 4 P P 08 53 02.9 +0.5
baz=185
G62A West of Eustis 53.87 4 P P 08 53 02.9 +0.5
G62A IAmb IAmb 08 53 03.7
comp=Z,32nm,0.9s
G61A St-Isidore-de- 53.88 3 P P 08 53 03.6 +1.1
baz=184
PKME Peaks-Kenny Pk 54.01 5 P P 08 53 03.6 +0.3
baz=186
G54A Lake Saint Pet 54.02 357 P P 08 53 03.0 -0.4
baz=176
G64A Maxfield 54.04 5 P P 08 53 04.0 +0.4
baz=187
G65A Princeton 54.10 6 P P 08 53 04.5 +0.5
baz=189
KSCO Kaye Shedlock' 54.21 333 P P 08 53 05.4 +0.3
baz=145,SNR=11
KSCO Kaye Shedlock' 54.21 333 P P 08 53 05.3 +0.2
L34A Svendsen Farm, 54.29 340 P P 08 53 04.3 -1.2
I40A Norwalk 54.40 346 P P 08 53 04.8 -1.4
I40A IAmb IAmb 08 53 05.7
comp=Z,46nm,1.0s
BGNE Belgrade 54.42 338 P P 08 53 06.3 -0.2
baz=151,SNR=7.3
BGNE Belgrade 54.42 338 P P 08 53 06.1 -0.3
214A Organ Pipe Nat 54.51 320 P P 08 53 08.1 +0.8
baz=132,SNR=22
214A Organ Pipe Nat 54.51 320 P P 08 53 07.9 +0.6
X18A Snowflake 54.53 324 P P 08 53 08.0 +0.4
X18A IAmb IAmb 08 53 09.2
comp=Z,36nm,1.1s

SDCO Great Sand Dun 54.54 330 P P 08 53 08.2 +0.5
baz=142,SNR=66
SDCO Great Sand Dun 54.54 330 P P 08 53 07.9 +0.1
F60A Warwick 54.55 2 P P 08 53 07.5 +0.2
baz=183
ALGO Algonquin Park 54.57 357 P P 08 53 06.6 -0.8
baz=176
F61A St Evariste 54.60 3 P P 08 53 07.1 -0.5
baz=184
F64A Sherman 54.68 5 P P 08 53 08.0 -0.2
baz=188
W18A Petrified Fore 54.83 325 P P 08 53 10.2 +0.5
baz=136,SNR=7.0
W18A Petrified Fore 54.83 325 P P 08 53 10.0 +0.2
E58A La Victoria 54.91 1 P P 08 53 10.0 +0.1
baz=182
E57A Chemin Saint G 54.94 0 P P 08 53 10.2 +0.1
baz=181,SNR=6.8
E60A Ste Agathe de 54.97 3 P P 08 53 10.6 +0.3
baz=184
E55A Montcerf-Lytto 55.00 359 P P 08 53 10.6 +0.2
baz=178
E59A St. Maurice 55.04 2 P P 08 53 11.4 +0.7
baz=182
E56A St. Veronique 55.07 360 P P 08 53 11.4 +0.4
baz=180,SNR=8.0
E61A Lac Etchemin 55.09 3 P P 08 53 11.7 +0.6
baz=185
S22A 4UR Ranch, Cre 55.21 329 P P 08 53 12.8 +0.2
baz=140,SNR=15
S22A 4UR Ranch, Cre 55.21 329 P P 08 53 12.5 -0.1
I37A Lemond, Waseca 55.24 344 P P 08 53 10.4 -1.8
E64A Bridgewater 55.28 6 P P 08 53 12.5 0.0
baz=188
X16A Lo Mia Camp, P 55.33 323 P P 08 53 13.9 +0.5
X16A IAmb IAmb 08 53 15.0
comp=Z,25nm,0.8s
Q24A Divide 55.33 331 P P 08 53 13.5 +0.1
baz=142
Q24A Divide 55.33 331 P P 08 53 13.3 -0.1
E62A Clayton Lake 55.34 4 P P 08 53 13.4 +0.5
baz=186
D55A Sainte-Anne-du 55.55 359 P P 08 53 14.5 0.0
baz=179
D58A Chemin du LacG 55.65 1 P P 08 53 15.4 +0.3
baz=182,SNR=9.6
MVCO Mesa Verde 55.67 327 P P 08 53 15.9 0.0
baz=138,SNR=11
MVCO Mesa Verde 55.67 327 P P 08 53 15.8 0.0
K31A O'Neill 55.70 339 P P 08 53 15.1 -0.5
D62A Allapoint, All 55.83 5 P P 08 53 16.7 +0.3
baz=187
D63A Stockholm 55.87 5 P P 08 53 17.2 +0.6
baz=188
LATQ La Tuque 55.94 2 P P 08 53 17.4 +0.3
baz=182,SNR=8.8
ECSD EROS Data Cent 55.95 341 P P 08 53 16.3 -1.0
baz=164,SNR=17
ECSD EROS Data Cent 55.95 341 P P 08 53 16.6 -0.8
Y14A Wickenburg 55.95 321 P P 08 53 17.6 0.0
Y14A IAmb IAmb 08 53 19.1
comp=Z,18nm,1.1s
WUAZ Wupatki 56.05 324 P P 08 53 19.2 +0.8
baz=135,SNR=47
WUAZ Wupatki 56.05 324 P P 08 53 19.1 +0.6
SPMN Marine on St. 56.19 345 P P 08 53 17.8 -1.2
baz=158,SNR=18
SPMN Marine on St. 56.19 345 P P 08 53 17.8 -1.2
ISCO Idaho Springs 56.21 331 P P 08 53 19.9 +0.2
baz=142,SNR=16
ISCO Idaho Springs 56.21 331 P P 08 53 19.9 +0.2
SMCO Snowmass 56.38 330 P P 08 53 21.5 +0.5
SMCO IAmb IAmb 08 53 22.6
comp=Z,13nm,0.8s
PV01 Paradox Valley 56.40 328 P P 08 53 21.3 +0.4
PV15 Paradox Valley 56.51 328 P P 08 53 22.3 +0.6
GLA Glamis 56.51 319 P P 08 53 22.1 +0.5
baz=130
GLA Glamis 56.51 319 P P 08 53 22.2 +0.5
PV02 Paradox Valley 56.54 328 P P 08 53 22.3 +0.3
PV13 Radium Mtn., P 56.55 328 P P 08 53 22.1 +0.1
ESJX Sierra Juarez 56.59 318 P P 08 53 22.1 -0.2
PV03 Paradox Valley 56.64 328 P P 08 53 22.7 +0.1
PV03 IAmb IAmb 08 53 23.8
comp=Z,18nm,0.9s
PV05 Paradox Valley 56.64 328 P P 08 53 22.5 -0.1
VLDQ Val d'Or 56.70 358 P P 08 53 22.8 +0.3
VLDQ IAmb IAmb 08 53 33.9
comp=Z,14nm,0.8s
PDMCI Parker Dam,Lak 56.90 321 P P 08 53 24.8 +0.6
baz=131,SNR=6.8
F36A Milaca 56.97 344 P P 08 53 23.3 -1.2
U15A North Rim 57.22 324 P P 08 53 27.2 +0.3
U15A IAmb IAmb 08 53 28.7
comp=Z,30nm,0.9s
N23A Red Feather La 57.23 332 P P 08 53 27.2 +0.4
baz=142,SNR=5.4
N23A Red Feather La 57.23 332 P P 08 53 27.2 +0.4
N23A IAmb IAmb 08 53 27.9
comp=Z,15nm,0.9s
W13A Hualapai Mount 57.27 322 P P 08 53 27.7 +0.7
W13A IAmb IAmb 08 53 29.0
comp=Z,26nm,1.0s
BC3 Big Chuckawall 57.30 320 P P 08 53 28.1 +0.9
baz=130,SNR=15
PHWY Pilot Hill 57.33 333 P P 08 53 27.2 -0.3
PHWY IAmb IAmb 08 53 28.8
comp=Z,38nm,1.2s
SUSD Miller 57.36 339 P P 08 53 26.6 -0.7
baz=151,SNR=12
SUSD Miller 57.36 339 P P 08 53 26.5 -0.8
IRM Iron Mountain 57.43 320 P P 08 53 28.9 +0.9
baz=130,SNR=29
LSQQ Lebel-sur-Quev 57.63 358 P P 08 53 28.5 -0.5
baz=177
F33A 5 Mile Ranch, 57.74 342 P P 08 53 28.8 -1.1
F33A IAmb IAmb 08 53 29.8
comp=Z,38nm,1.1s
O20A White River Ci 57.74 330 P P 08 53 30.7 +0.4
baz=140,SNR=14
O20A White River Ci 57.74 330 P P 08 53 30.3 0.0
O20A IAmb IAmb 08 53 31.7
comp=Z,32nm,1.1s
BELC Bell Mtn. Jos 57.87 320 P P 08 53 31.8 +0.6
baz=130,SNR=9.0
109C Camp Elliot, M 57.90 318 P P 08 53 31.8 +0.5
baz=128
TPFO Pinon Flats 57.92 319 P P 08 53 32.3 +0.7
baz=129,SNR=8.7
PFO Pinyon Flats O 57.92 319 P P 08 53 32.4 +0.8
baz=129,SNR=7.5
PFO Pinyon Flats O 57.92 319 P P 08 53 32.0 +0.4
PFO IAmb IAmb 08 53 33.3
comp=Z,18nm,0.9s
KNB Kanab 57.94 324 P P 08 53 32.5 +0.8
PKCU Pink Cliffs 57.94 325 P P 08 53 32.7 +0.8
SRU San Rafael Swe 58.15 328 P P 08 53 33.2 0.0
GMRC Granite Mounta 58.16 320 P P 08 53 33.9 +0.7
baz=130,SNR=11
LCMT Little Creek M 58.18 324 P P 08 53 33.8 +0.4
MTPU Mount Pierson 58.29 326 P P 08 53 34.4 +0.1
MATQ Matagami 58.35 358 P P 08 53 33.2 -0.9
baz=176,SNR=6.0
Q16A Castle Valley 58.36 327 P P 08 53 34.9 +0.3
MURC Murrieta 58.40 318 P P 08 53 35.5 +0.7
baz=128,SNR=6.9
CHGQ Chibougamau 58.44 0 P P 08 53 34.3 -0.4
baz=180
RWWY Rawlins 58.45 332 P P 08 53 35.3 +0.1
RWWY IAmb IAmb 08 53 36.8
comp=Z,32nm,0.9s
SZCU Shurtz Canyon 58.49 325 P P 08 53 35.9 +0.3
P17A Butcher Ranch, 58.53 328 P P 08 53 35.8 0.0
HEC Hector,Ludlow 58.61 320 P P 08 53 37.4 +1.1
baz=130,SNR=8.1
CCUT Cedar City 58.62 324 P P 08 53 37.3 +0.8
MSU Marysvale 58.62 326 P P 08 53 36.7 +0.2
BBRC Big Bear Solar 58.63 319 P P 08 53 37.8 +1.1
baz=129
MVU Marysvale 58.63 326 P P 08 53 36.9 +0.3
TMUT Trail Mountain 58.65 327 P P 08 53 36.7 -0.1
RDMU Red Mountain 58.74 329 P P 08 53 37.1 -0.1
TUQ Turquoise Moun 58.74 321 P P 08 53 37.9 +0.6
baz=130,SNR=7.3
TCRU Three Creeks R 58.84 326 P P 08 53 38.2 +0.2
K22A Casper 58.89 333 P P 08 53 38.4 +0.2
baz=142,SNR=10.0
K22A Casper 58.89 333 P P 08 53 38.2 0.0
K22A IAmb IAmb 08 53 39.4
comp=Z,41nm,1.2s
SHPR Sheep Range 58.97 322 P P 08 53 39.2 +0.3
SHPR IAmb IAmb 08 53 40.6
comp=Z,28nm,1.2s
RSSD Black Hills 59.01 336 P P 08 53 39.7 +0.6
baz=146
RSSD Black Hills 59.01 336 P P 08 53 39.1 +0.1
RSSD IAmb IAmb 08 53 41.2
comp=Z,38nm,1.1s
BFSC Mount Baldy Ra 59.09 319 P P 08 53 40.1 +0.4
baz=128
D32A Dogwood Acres, 59.13 342 P P 08 53 38.9 -0.6
GSC Goldstone, Bar 59.21 320 P P 08 53 41.2 +0.8
baz=130,SNR=8.1
GSC Goldstone, Bar 59.21 320 P P 08 53 41.0 +0.6
GSC IAmb IAmb 08 53 42.1
comp=Z,13nm,0.8s
SHOC Shoshone, Teco 59.26 321 P P 08 53 41.8 +1.1
baz=130
MWC Mount Wilson 59.34 319 P P 08 53 41.8 +0.2
MWC IAmb IAmb 08 53 43.2
comp=Z,24nm,1.2s
MPU Maple Canyon 59.40 328 P P 08 53 41.8 0.0
PRN Pahroc Range 59.51 323 P P 08 53 42.5 0.0
PSUT Pine Spring 59.58 325 P P 08 53 43.6 +0.6
EDW2 Edwards Air Fo 59.71 319 P P 08 53 44.0 +0.2
baz=128,SNR=6.9
JLU Jordanelle 59.73 328 P P 08 53 44.0 -0.1
E28A Huff 59.82 339 P P 08 53 44.4 +0.1
AGMN Agassiz Nation 59.85 344 P P 08 53 43.6 -0.9
baz=156,SNR=6.1
AGMN Agassiz Nation 59.85 344 P P 08 53 43.5 -0.9
AGMN IAmb IAmb 08 53 44.0
comp=Z,17nm,0.7s
LRMC Laurel Mtn Rad 59.88 320 P P 08 53 45.6 +0.5
baz=129
TPNV Topopah Spring 59.92 322 P P 08 53 46.3 +0.9
baz=131,SNR=40
TPNV Topopah Spring 59.92 322 P P 08 53 46.0 +0.6
TPNV IAmb IAmb 08 53 47.8
comp=Z,26nm,0.8s
CTU Camp Tracy 59.95 328 P P 08 53 45.3 -0.2
FURC Furnace Creek, 59.99 321 P P 08 53 46.4 +0.8
baz=130,SNR=18
TCUT Toone Canyon 60.08 329 P P 08 53 46.7 +0.2
MPMC Manual Prospec 60.12 321 P P 08 53 47.0 +0.2
baz=129,SNR=9.7
DUG Dugway, Tooele 60.16 327 P P 08 53 47.6 +0.7
baz=135,SNR=41
DUG Dugway, Tooele 60.16 327 P P 08 53 47.2 +0.3
SPR3 Spring Creek 3 60.16 325 P P 08 53 47.1 -0.1
SPR3 IAmb IAmb 08 53 48.3
comp=Z,18nm,0.8s
BW06 Boulder Array 60.39 331 P P 08 53 48.0 -0.6
baz=139,SNR=15
BW06 Boulder Array 60.39 331 P P 08 53 47.8 -0.7
BW06 IAmb IAmb 08 53 49.2
comp=Z,23nm,1.2s
PD31 Pinedale Array 60.39 331 P P 08 53 48.2 -0.3
PD31 IAmb IAmb 08 53 49.2
comp=Z,21nm,1.2s
PDAR Pinedale Array 60.39 331 P P 08 53 47.9 -0.6
comp=Z,8.6nm,0.9s,baz=141,slow=7.6,SNR=42
PDAR Pinedale Array 60.39 331 P P 08 53 48.2 -0.3
ARVC Arvin 60.40 319 P P 08 53 48.9 +0.4
baz=128
R11A Troy Canyon, C 60.45 324 P P 08 53 49.8 +0.9
baz=132,SNR=40
R11A Troy Canyon, C 60.45 324 P P 08 53 49.9 +0.9
R11A IAmb IAmb 08 53 50.8
comp=Z,19nm,0.8s
ISA Isabella, Lake 60.50 320 P P 08 53 49.8 +0.6
baz=128,SNR=9.3
ISA Isabella, Lake 60.50 320 P P 08 53 49.5 +0.3
ISA IAmb IAmb 08 53 50.7
comp=Z,12nm,0.8s
HWUT Hardware Ranch 60.52 329 P P 08 53 49.6 +0.3
MDND Maddock 60.56 341 P P 08 53 49.7 +0.3
baz=151,SNR=9.0
MDND Maddock 60.56 341 P P 08 53 49.6 +0.3
GRAC Grapevine Rang 60.64 321 P P 08 53 50.9 +0.8
baz=130,SNR=6.6
CWC Cottonwood Cre 60.73 321 P P 08 53 51.5 +0.6
baz=129
SPUT South Promonto 60.76 328 P P 08 53 50.9 -0.1
BGU Big Grassy Mou 60.79 327 P P 08 53 51.1 -0.1
PKM Mcpherson Peak 60.90 318 P P 08 53 52.8 +0.6
baz=127
VES Vestal, Richgr 61.00 319 P P 08 53 53.0 +0.5
baz=128,SNR=6.1
AHID Auburn Hatcher 61.14 330 P P 08 53 53.3 -0.3
AHID IAmb IAmb 08 53 54.2
comp=Z,19nm,0.8s
TPH Tonopah 61.24 322 P P 08 53 54.8 +0.5
HVU Hansel Valley 61.27 328 P P 08 53 54.0 -0.4
SMMC Simmler 61.27 318 P P 08 53 55.5 +1.0
baz=127,SNR=7.3
REDW Red Top Meadow 61.46 331 P P 08 53 55.4 -0.3
SNOW Snow King Moun 61.49 331 P P 08 53 55.9 -0.1
TPAW Teton Pass 61.60 331 P P 08 53 56.5 -0.3
ULM Lac du Bonnet 61.63 345 P P 08 53 55.3 -1.1
comp=Z,16nm,0.8s,baz=156,slow=7.8,SNR=22
ULM pP pP 08 54 28.8 +0.3
comp=Z,5.2nm,0.8s,baz=120,slow=9.4,SNR=2.1
ULM PcP PcP 08 54 36.0 -0.7
comp=Z,5.1nm,0.5s,baz=169,slow=2.1,SNR=5.2
ELK Elko 61.87 326 P P 08 53 58.2 -0.4
ELK IAmb IAmb 08 53 59.7
comp=Z,23nm,1.4s
IMW Indian Meadow 61.90 331 P P 08 53 58.3 -0.5
IMW IAmb IAmb 08 54 00.7
comp=Z,36nm,1.4s
FLWY Flagg Ranch 61.92 331 P P 08 53 58.4 -0.4
FLWY IAmb IAmb 08 54 00.3
comp=Z,32nm,0.9s
MLAC Mammoth, Mammo 61.95 321 P P 08 53 59.9 +0.8
baz=129
LAO LASA Array 61.99 336 P P 08 53 59.1 +0.1
baz=144,SNR=6.0
LAO LASA Array 61.99 336 P P 08 53 58.8 -0.3
LAO IAmb IAmb 08 54 00.0
comp=Z,40nm,1.4s
NV11 Mina Array Sit 62.03 322 P P 08 53 59.9 +0.3
NV11 IAmb IAmb 08 54 01.2
comp=Z,21nm,1.3s
OMMB Old Mammoth Mi 62.04 321 P P 08 54 00.2 +0.4
OMMB IAmb IAmb 08 54 01.4
comp=Z,25nm,0.9s
RLMT Red Lodge 62.05 333 P P 08 53 59.5 -0.2
baz=141,SNR=7.3
RLMT Red Lodge 62.05 333 P P 08 53 59.5 -0.2
RLMT IAmb IAmb 08 54 00.8
comp=Z,30nm,1.3s
MDPB Devils Postpil 62.10 321 P P 08 54 00.7 +0.5
MDPB IAmb IAmb 08 54 01.6
comp=Z,18nm,0.7s
NVAR Mina Array Bea 62.12 322 P P 08 54 00.8 +0.5
comp=Z,9.9nm,0.8s,baz=140,slow=7.3,SNR=73
NVAR PcP PcP 08 54 38.5 -0.8
comp=Z,2.7nm,0.8s,baz=136,slow=5.9,SNR=4.4
NVAR Mina Array Bea 62.12 322 P P 08 53 59.9 -0.4
LHV Little Huntoon 62.13 322 P P 08 54 01.0 +1.0
LHV IAmb IAmb 08 54 02.1
comp=Z,25nm,1.0s
YNE Yellowstone No 62.30 332 P P 08 54 01.4 0.0
RYN Ryan 62.38 322 P P 08 54 02.3 +0.3
YNR Norris Junctio 62.39 332 P P 08 54 02.3 +0.3
KVN Kaiserville 62.40 323 P P 08 54 02.1 0.0
KVN IAmb IAmb 08 54 03.4
comp=Z,29nm,1.4s
YMR Madison River 62.49 332 P P 08 54 03.4 +0.7
YHB Horse Butte 62.66 331 P P 08 54 04.8 +1.0
YHL Hebgen Lake 62.73 332 P P 08 54 05.0 +0.7
GCMT Greycliff 62.75 333 P P 08 54 04.4 +0.2
WAKR Walker 62.86 322 P P 08 54 05.7 +0.5
WAKR IAmb IAmb 08 54 07.2
comp=Z,18nm,0.9s
CMB Columbia Colle 63.16 321 P P 08 54 07.3 +0.3
PNTR Pine Nut 63.32 322 P P 08 54 09.3 +1.1
PNTR IAmb IAmb 08 54 10.2
comp=Z,30nm,0.8s
HLID Hailey 63.38 329 P P 08 54 08.9 +0.4

baz=135,SNR=19
HLID Hailey 63.38 329 P **P** 08 54 08.7 +0.2
BCYI Bear Canyon 63.41 330 P **P** 08 54 09.2 +0.5
VCNR Virginia City 63.48 322 P **P** 08 54 10.1 +0.8
VCNR IAmb IAmb 08 54 11.1
comp=Z,35nm,0.9s
BOZ Bozeman (W) 63.50 332 P **P** 08 54 09.6 +0.4
baz=138
MCMT McKenzie Canyo 63.51 331 P **P** 08 54 10.1 +0.7
PAHR Pah Rah Range 63.58 323 P **P** 08 54 10.7 +0.9
PAHR IAmb IAmb 08 54 11.7
comp=Z,30nm,0.9s
SCHQ Schefferville 63.71 5 P **P** 08 54 10.1 -0.1
comp=Z,20nm,1.0s,baz=217,slow=5.5,SNR=10
SCHQ PcP **PcP** 08 54 44.2 -0.9
comp=Z,7.4nm,0.6s,baz=195,slow=3.7,SNR=6.6
DLMT Dillon 63.78 331 P **P** 08 54 11.0 0.0
DLMT IAmb IAmb 08 54 13.1
comp=Z,26nm,1.4s
MFID Camas Ranch 64.02 328 P **P** 08 54 13.1 +0.5
AFDM Forest Hills D 64.08 321 P **P** 08 54 13.1 +0.2
BEKR Beckworth 64.27 322 P **P** 08 54 15.0 +0.6
BEKR IAmb IAmb 08 54 16.0
comp=Z,20nm,0.9s
HRY Holter Researc 64.42 333 P **P** 08 54 15.6 +0.4
EGMT Eagleton 64.51 335 P **P** 08 54 15.7 0.0
baz=141,SNR=12
EGMT Eagleton 64.51 335 P **P** 08 54 15.5 -0.1
ORV Oroville 64.77 321 P **P** 08 54 18.3 +0.8
WVOR Wild Horse Val 64.89 325 P **P** 08 54 18.0 -0.3
PLID Pearl Lake 65.27 329 P **P** 08 54 20.3 -0.5
O03E Paynes Creek 65.40 322 P **P** 08 54 21.4 -0.2
baz=127
J08A Circle Bar Ran 65.41 326 P **P** 08 54 21.5 0.0
MSO Missoula 65.49 331 P **P** 08 54 22.6 +0.6
baz=137,SNR=27
MSO Missoula 65.49 331 P **P** 08 54 22.6 +0.6
BMO Blue Mountains 65.78 328 P **P** 08 54 23.7 -0.2
WDC Whiskeytown Da 66.03 322 P **P** 08 54 24.3 -1.1
WDC IAmb IAmb 08 54 24.9
comp=Z,14nm,0.8s
JTMT Jette 66.32 332 P **P** 08 54 27.9 +0.5
JTMT IAmb IAmb 08 54 28.9
comp=Z,26nm,1.1s
M04C Macdoel 66.33 323 P **P** 08 54 27.5 -0.1
baz=128,SNR=6.3
K05A Summer Lake 66.36 324 P **P** 08 54 28.8 +1.0
N02D Trinity Center 66.36 322 P **P** 08 54 26.6 -1.1
baz=127
I07A Izee 66.44 326 P **P** 08 54 28.5 +0.3
I07A IAmb IAmb 08 54 29.8
comp=Z,55nm,1.3s
F10A Beach Ranch, E 66.50 329 P **P** 08 54 29.4 +0.9
F10A IAmb IAmb 08 54 30.1
comp=Z,16nm,0.8s
M02C Callahan 66.70 322 P **P** 08 54 29.0 -0.9
baz=127
L04D Klamath Falls 66.87 323 P **P** 08 54 30.8 -0.2
baz=127
J05D Fort Rock, OR 66.91 325 P **P** 08 54 31.4 +0.2
baz=129,SNR=6.4
G08A Pilot Rock 66.94 328 P **P** 08 54 31.7 +0.3
PINE Pine Mountain 67.06 325 P **P** 08 54 33.2 +0.9
PINE IAmb IAmb 08 54 34.6
comp=Z,32nm,1.1s
WALA Waterton Lakes 67.11 333 P **P** 08 54 32.4 +0.1
WALA IAmb IAmb 08 54 33.4
comp=Z,20nm,0.7s
FFC Flin Flon 67.31 343 P **P** 08 54 32.9 -0.4
L02E Cave Junction 67.61 323 P **P** 08 54 35.4 -0.1
baz=126
I05D Terrebonne, OR 67.62 326 P **P** 08 54 36.4 +0.8
baz=129,SNR=5.5
I04A Tendick Farm, 67.89 325 P **P** 08 54 37.1 -0.1
baz=128
K02D Willamette Mer 67.96 323 P **P** 08 54 38.3 +0.5
baz=126,SNR=5.3
NEW Newport 68.03 331 P **P** 08 54 37.9 -0.1
baz=134,SNR=6.1
NEW Newport 68.03 331 P **P** 08 54 37.9 -0.1
G05D Wamic, OR 68.18 326 P **P** 08 54 39.9 +0.9
baz=129
C09A Chrisman Ranch 68.27 330 P **P** 08 54 40.9 +1.4
I03D Drain, OR 68.37 324 P **P** 08 54 39.6 -0.6
baz=127
PMOZ Porto Moniz, M 68.52 50 *e*LR LR 09 46 34.0
comp=Z,6μm,20.0s
B08A Colville Reser 69.17 330 P **P** 08 54 45.0 -0.1
F04D Rainier, OR 69.63 326 P **P** 08 54 48.9 +1.0
baz=128
D05A Enumclaw 69.77 328 P **P** 08 54 49.5 +0.7
B06A Marblemount 70.36 329 P **P** 08 54 52.4 +0.1
B06A IAmb IAmb 08 54 53.1
comp=Z,29nm,0.8s
B05A Bryant 70.51 329 P **P** 08 54 53.1 -0.2
baz=130,SNR=5.6
D03D Eldon 70.57 327 P **P** 08 54 54.4 +0.7
baz=128
LIC Lamto 70.96 80 *e*PKP1 **P** 08 54 58.3 +1.6
comp=Z,33nm,0.7s
TIC Toumodi 71.05 80 *e*PKP1 **P** 08 54 57.4 +0.1
DBIC Dimbokro 71.21 80 P **P** 08 54 58.2 0.0
comp=Z,26nm,0.5s,baz=234,slow=5.1,SNR=9.9
DBIC pP **pP** 08 55 31.6 +0.5
comp=Z,5.8nm,0.6s,baz=156,slow=11,SNR=2.0
KIC Kosan Boka 71.27 80 *e*PKP1 **P** 08 54 58.7 +0.2
comp=Z,38nm,0.7s
BELA Belgrano 2 72.05 172 P **P** 08 55 03.1 +1.0
VNA3 Neumayer Olymp 73.81 162 P **P** 08 55 13.5 +0.9
VNA1 Neumayer--Stat 74.03 161 P **P** 08 55 15.4 +1.6
VNA2 Neumayer--Watz 74.40 162 P **P** 08 55 17.0 +1.1
baz=295,slow=6.4
SNAA Sanae 76.02 162 P **P** 08 55 26.1 +0.8
SNAA Sanae 76.02 162 P **P** 08 55 26.1 +0.8
PNCL Nicolau / Gran 77.13 48 *e*P **P** 08 55 33.2 +1.1
comp=Z,28nm,1.8s
PCVE Castro Verde 77.31 48 *e*P **P** 08 55 34.5 +1.4
comp=Z,29nm,1.6s
YKA Yellowknife Ar 77.45 342 P **P** 08 55 32.8 -0.5
comp=Z,13nm,0.6s,baz=136,slow=6.7,SNR=102
YKA pP **pP** 08 56 08.2 +1.5
comp=Z,13nm,0.9s,baz=137,slow=6.4,SNR=6.6
PVAQ Vaqueiros 77.47 49 *e*LR LR 09 39 29.0
comp=Z,8μm,20.0s
EVO Evora 77.66 47 *e*P P 08 55 39.9 +4.9
comp=Z,15nm,2.1s
PMRV Marv??o 78.44 47 *e*LR LR 09 38 15.4
comp=Z,5μm,18.0s
PCBR Castelo Branco 78.53 46 *e*P **P** 08 55 44.4 +4.6
PVIS Viseu 78.56 45 *e*P **P** 08 55 43.5 +3.5
comp=Z,26nm,1.9s
MTE Manteigas 78.69 46 *e*P **P** 08 55 45.1 +4.3
comp=Z,27nm,2.1s
MTE Manteigas 78.69 46 *e*LR LR 09 40 56.4
comp=Z,8μm,20.0s
PGAV Gavieira, Arco 78.78 44 *e*LR LR 09 40 28.7
comp=Z,8μm,20.0s
TORD Torodi Ar. Bea 78.85 75 P **P** 08 55 41.6 -0.4
comp=Z,3.8nm,0.6s,baz=272,slow=4.8,SNR=29
TORD Torodi Ar. Bea 78.85 75 P **P** 08 55 41.4 -0.6
PCAB Cabril 78.85 44 *e*P **P** 08 55 43.2 +1.7
PVRL Vila Real 78.90 45 *e*P P 08 55 47.4 +5.6
MVO Moncorvo 79.34 45 *e*LR LR 09 37 39.5
comp=Z,7μm,20.0s
PBRG Braganca 79.78 45 *e*P **P** 08 55 46.8 +0.2
comp=Z,24nm,1.9s
PAB San Pablo 80.69 48 P **P** 08 55 52.4 +0.8
ESDC Sonseca Array 81.01 48 P **P** 08 55 53.9 +0.6
comp=Z,3.2nm,0.9s,baz=255,slow=6.1,SNR=8.9
QSPA South Pole Qui 81.33 180 P **P** 08 55 55.8 +1.3
ICESG Greenland Ices 81.42 12 *i* P **P** 08 55 54.5 -0.7
ICESG IAmb IAmb 08 55 55.4
comp=Z,20nm,0.7s
BESE Bessie Mountai 82.65 333 P **P** 08 56 02.2 +0.8
BESE IAmb IAmb 08 56 03.2
comp=Z,25nm,0.9s
RES Resolute Bay 84.25 355 P **P** 08 56 09.2 0.0
SUMG Summit 84.50 10 P **P** 08 56 11.2 +0.2
SUMG Summit 84.50 10 *i* P **P** 08 56 10.9 -0.1
comp=Z,89nm,0.7s
SUMG Summit 84.50 10 *i* P **P** 08 56 10.9 -0.1
SUMG IAmb IAmb 08 56 11.8
comp=Z,89nm,0.7s
C36M Paulatuk 85.05 344 P **P** 08 56 11.8 -1.5
baz=131
TULEG Thule 85.24 1 P **P** 08 56 14.3 +0.2
TULEG IAmb IAmb 08 56 15.5
comp=Z,29nm,1.0s
TULEG Thule 85.24 1 *ll* P **P** 08 56 14.5 +0.4
TULEG IAmb IAmb 08 56 15.2
comp=Z,20nm,0.8s
SCO Scoresbysund 86.64 16 *i* P **P** 08 56 21.6 +0.6
comp=Z,16nm,0.9s
SCO Scoresbysund 86.64 16 *i* P **P** 08 56 21.7 +0.6
SCO IAmb IAmb 08 56 22.7
comp=Z,10nm,0.9s
CTGM Chitina Glacie 86.66 333 P **P** 08 56 22.5 +0.9
CTGM IAmb IAmb 08 56 23.2
comp=Z,32nm,0.9s
BARN Barnard Glacie 86.84 333 P **P** 08 56 23.1 +0.5
BARN IAmb IAmb 08 56 24.1
comp=Z,16nm,0.8s
DAWY Dawson 87.19 337 P **P** 08 56 23.9 -0.1
INK Inuvik 87.19 341 P **P** 08 56 23.6 -0.2
INK IAmb IAmb 08 56 24.2
comp=Z,14nm,0.8s
TGL Tana Glacier 87.24 333 P **P** 08 56 24.2 -0.2
TGL IAmb IAmb 08 56 25.8
comp=Z,34nm,1.0s
MCARA McCarthy VSAT 87.58 333 P **P** 08 56 26.5 +0.7
VRDI Verde Repeater 87.71 333 P **P** 08 56 26.8 +0.2
VRDI IAmb IAmb 08 56 27.8
comp=Z,28nm,0.8s
BCAR Beaver Creek A 87.72 335 P **P** 08 56 27.0 +0.5
GLB Gilahina Butte 87.95 333 P **P** 08 56 27.8 +0.2
GLB IAmb IAmb 08 56 29.5
comp=Z,24nm,1.2s
EGAK Eagle 88.19 337 P **P** 08 56 28.5 -0.1
EGAK IAmb IAmb 08 56 29.5
comp=Z,21nm,0.8s
EGAK **pP** 08 57 04.4 +1.6
K27K Chicken 88.24 336 P **P** 08 56 29.8 +0.9
baz=114
K27K Chicken 88.24 336 P **P** 08 56 29.6 +0.7
VNDA Vanda 88.32 190 P **P** 08 56 30.1 +1.0
comp=Z,3.2nm,0.8s,baz=136,slow=3.1,SNR=20
VNDA Vanda 88.32 190 pP 08 57 04.6 +1.1
L26K Log Cabin Wild 88.36 335 P **P** 08 56 29.7 +0.2
baz=113
N25K Chitina, Valde 88.36 333 P **P** 08 56 30.7 +1.1
baz=112
DOT Dot Lake 88.90 335 P **P** 08 56 32.0 -0.1
KLU Klutina 88.91 333 P **P** 08 56 32.2 0.0
SCRK Sand Creek 88.99 336 P **P** 08 56 32.9 +0.3
baz=112
TSUM Tsumeb 89.22 109 P **P** 08 56 33.7 -1.0
TSUM pP **pP** 08 57 09.6 +0.7
M24K Tolsona, Glenn 89.24 334 P **P** 08 56 33.9 +0.2
baz=110
M24K Tolsona, Glenn 89.24 334 P **P** 08 56 34.0 +0.3
PAX Paxson 89.24 334 P **P** 08 56 33.4 -0.3
PAX IAmb IAmb 08 56 34.2
comp=Z,16nm,0.9s
PAX **pP** 08 57 08.8 +0.9
RIDG Independent Ri 89.26 335 P **P** 08 56 33.9 +0.2
RIDG IAmb IAmb 08 56 34.9
comp=Z,25nm,0.9s
SML Sawmill 90.10 333 P **P** 08 56 37.6 -0.1
KEST Kesra 90.21 54 P **P** 08 56 39.0 +0.1
comp=Z,1.7nm,0.5s,baz=24,slow=16,SNR=1.8
SYO Syowa Base 90.27 161 *ll eP* **P** 08 56 36.3 -2.0
SYO Syowa Base 90.27 161 *ll* iPcP **P** 08 56 37.8 -0.5
SYO Syowa Base 90.27 161 *ll* epP pP 08 57 12.8 +0.2
HDA Harding Lake 90.36 336 P **P** 08 56 38.7 -0.1
baz=110
HDA Harding Lake 90.36 336 P **P** 08 56 38.4 -0.4
HDA IAmb IAmb 08 56 39.4
comp=Z,16nm,1.1s
IL31 90.45 336 P **P** 08 56 38.8 -0.3
ILAR Eielson Array 90.45 336 P **P** 08 56 39.0 -0.3
comp=Z,5.3nm,0.9s,baz=148,slow=3.5,SNR=32
ILAR pP **pP** 08 57 14.9 +1.5
comp=Z,3.8nm,0.9s,baz=128,slow=3.2,SNR=6.8
ILAR PP **PP** 09 00 13.6 -2.1
comp=Z,2.1nm,0.9s,baz=117,slow=6.8,SNR=9.2
ILAR Eielson Array 90.45 336 P **P** 08 56 38.8 -0.4
BMAR Burnt Mountain 90.52 339 P **P** 08 56 39.9 +0.3
CCB Clear Creek Bu 90.79 336 P **P** 08 56 40.6 -0.2
CCB IAmb IAmb 08 56 41.4
comp=Z,9.6nm,0.8s
POKR Poker Plat Res 90.79 336 P **P** 08 56 40.9 +0.1
baz=109
POKR Poker Plat Res 90.79 336 P **P** 08 56 40.5 -0.3
POKR IAmb IAmb 08 56 41.9
comp=Z,18nm,0.9s
MEM Membach 90.82 39 PcP **P** 08 56 40.6 -0.7
RND Reindeer 90.83 334 P **P** 08 56 41.4 +0.3
RND IAmb IAmb 08 56 42.9
comp=Z,14nm,0.7s
WRH Wood River Hil 90.85 335 P **P** 08 56 41.2 +0.2
COLA College 90.88 336 P **P** 08 56 41.4 +0.3
TCOL CIGO, UAF Yank 90.88 336 P **P** 08 56 41.7 +0.5
baz=109
TCOL CIGO, UAF Yank 90.88 336 P **P** 08 56 41.3 +0.1
TCOL pP **pP** 08 57 17.0 +1.6
MCK McKinley 90.97 335 P **P** 08 56 41.6 -0.1
baz=108
MDM Murphy Dome 91.06 336 P **P** 08 56 41.8 -0.3
CUT Chulitna 91.15 333 P **P** 08 56 42.5 0.0
baz=107
DAG Danmarks Havn 91.16 11 *i* P **P** 08 56 42.2 0.0
comp=Z,7.3nm,0.7s
DAG Danmarks Havn 91.16 11 *i* P **P** 08 56 42.2 0.0
DAG IAmb IAmb 08 56 42.8
comp=Z,7.3nm,0.7s
NEA2 Nenana 91.29 335 P **P** 08 56 42.8 -0.3
baz=108
TRF Thorofare Moun 91.46 334 P **P** 08 56 43.7 -0.5
TRF IAmb IAmb 08 56 44.6
comp=Z,7.7nm,0.7s
I23K Minto, Yukon-K 91.57 336 P **P** 08 56 44.4 0.0
baz=108
SKT Skwentna 91.60 333 P **P** 08 56 44.3 -0.3
KTH Kantishna Hill 91.76 334 P **P** 08 56 45.4 -0.1
KTH IAmb IAmb 08 56 46.4
comp=Z,12nm,0.9s
RSO Redoubt South 91.77 331 P **P** 08 56 44.9 -0.8
MLY Manley 92.10 336 P **P** 08 56 46.6 -0.3
baz=106
COLD Coldfoot 92.51 338 P **P** 08 56 49.0 +0.3
baz=107
COLD Coldfoot 92.51 338 P **P** 08 56 48.8 +0.1
DAVA Damuels 92.67 43 *i* P P 08 56 56.3 +6.2
comp=Z,7.2nm,0.9s
TOLK Toolik Lake Re 92.70 339 P **P** 08 56 49.6 0.0
baz=107
MOTA Moosalm 93.50 43 *e*P P 08 56 59.8 +5.8
comp=Z,6.0nm,0.7s
SQTA Sankt Quirin 93.56 43 *e*P P 08 57 00.3 +6.2
comp=Z,4.7nm,0.5s
WTTA Wattenberg 93.85 43 *e*P P 08 57 01.8 +6.3
comp=Z,11nm,0.9s
ABTA Abfaltersbach 94.37 44 *e*P P 08 57 04.5 +6.7
comp=Z,7.4nm,1.0s
MYKA Terra Mystica 95.12 44 *e*P P 08 57 07.8 +6.5
comp=Z,3.4nm,0.6s
GERES GERESS Array B 95.44 42 P **P** 08 57 04.0 +1.3
comp=Z,0.4nm,0.7s,baz=336,slow=4.6,SNR=1.8
NB2 NORSAR Subarra 95.60 29 P **P** 08 57 03.6 +0.5
comp=Z,10nm,1.2s,baz=263,slow=4.6
NB2 NORSAR Subarra 95.60 29 P **P** 08 57 03.6 +0.5
baz=263,slow=4.6
NOA NORSAR Array B 95.60 29 P **P** 08 57 03.3 +0.2
comp=Z,0.8nm,0.8s,baz=249,slow=4.8,SNR=2.5
MOA Molln 95.69 43 *e*P P 08 57 10.9 +7.1
comp=Z,5.9nm,1.1s
ARSA Arzberg 96.47 43 *i* P P 08 57 14.4 +7.0
comp=Z,3.9nm,0.9s
CONA Conrad Observa 96.77 43 *e*P P 08 57 15.0 +6.3
comp=Z,3.4nm,0.7s
SEY Seymchan 116.31 338 PKP **PKPdf** 09 02 19.6 -0.8
comp=Z,2.4nm,0.7s,baz=296,slow=3.1,SNR=5.3
ARU Arti 120.12 28 PKP **PKiKP** 09 02 28.1 +0.1
comp=Z,0.5nm,0.4s,baz=171,slow=6.3,SNR=4.5
STKA Stephens Creek 126.78 219 PKP **PKiKP** 09 02 42.1 +0.1
comp=Z,3.4nm,0.6s,baz=74,slow=2.6,SNR=12
ZALV Zalesovo Beam 132.02 16 PKP **PKPdf** 09 02 51.0 +0.3
comp=Z,8.3nm,0.5s,baz=327,slow=1.4,SNR=0.8
ASAR Alice Springs 137.37 220 PKhKP PKPpre 09 02 51.0
comp=Z,0.6nm,0.6s,baz=132,slow=2.5,SNR=12
ASAR PKP **PKPdf** 09 03 00.3 -1.5
comp=Z,3.6nm,0.7s,baz=135,slow=2.2,SNR=19
ASAR pPKP pPKPdf 09 03 37.1 -0.5
comp=Z,2.2nm,0.8s,baz=130,slow=2.3,SNR=4.3
WR0 Warramunga Arr 139.50 225 **PKPdf** 09 03 05.6 -0.1
WRAB Tennant Creek 139.65 225 **PKPdf** 09 03 05.4 -0.6
WRA Warramunga Arr 139.66 225 PKhKP PKPpre 09 02 57.4
comp=Z,0.7nm,0.7s,baz=122,slow=2.7,SNR=13
WRA PKP **PKPdf** 09 03 05.6 -0.4
comp=Z,4.4nm,0.6s,baz=133,slow=1.8,SNR=24
WRA pPKP pPKPdf 09 03 40.8 -1.0
comp=Z,2.8nm,0.8s,baz=129,slow=1.9,SNR=2.6
WB0 Warramunga Arr 139.74 225 PKPdf **PKPdf** 09 03 05.7 -0.4
KSRS Korea Array 144.91 328 PKP **PKPdf** 09 03 14.5 -0.3
comp=Z,19nm,0.9s,baz=42,slow=2.6,SNR=4.2
KSAR Wonju Array Be 144.94 328 PKPbc 09 03 14.1 -0.2
KNRA Kununurra 146.43 224 **PKPbc** 09 03 19.6 +0.1
MTN Manton Dam 146.59 230 **PKPbc** 09 03 19.9 -0.1
FITZ Fitzroy Crossi 146.63 217 **PKPbc** 09 03 20.5 +0.5
PSA00 Pilbara Seismi 146.66 205 **PKPbc** 09 03 20.1 +0.1
LZH Lanzhou 152.78 3 *e*PKPbc **PKPdf** 09 03 22.8 -4.9
LZH pPKP pPKPdf 09 04 05.0 +1.4
LZH sPKP 09 04 22.3
LZH PP **PP** 09 07 16.4 -1.8
LZH LR LR
comp=N,1μm,19.2s
LZH LR LR
comp=E,2μm,20.1s
LZH LR LR
comp=Z,1μm,20.5s

NEIC ***22*** *08:52:22.9±1.7, 16°.07N±0°.07×98°.65W±0°.03, h27km±7km, Error ellipse: s-maj=11.0km s-min=3.2km az=196.0*
MEX ***22*** *08:52:24.7±0.5, 16°.01N×98°.66W, h16km±6km, MD4.0*
ISC 22 08:52:21.5±1.8, 16°.09N±0°.06×98°.65W±0°.04, h16km±14km, n28, σ1°02/43, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.59**	**59**	*e*P	**Pn**	**08 52 34.9**	**-0.3**
PNIG				*e*S	**Sb**	**08 52 42.7**	**+1.2**
PNIG	**Pinotepa**	**0.59**	**59**		**Pn**	**08 52 34.9**	**-0.3**
PNIG					**Sb**	**08 52 42.7**	**+1.2**
TXIG	**Tlaxiaco**	**1.44**	**36**	*e*P	**Pb**	**08 52 47.5**	**-0.5**
TXIG				*i* S	**Sb**	**08 53 05.5**	**-0.8**
PEIG	**Puerto Escondi**	**1.45**	**93**	*e*P	**Pb**	**08 52 47.5**	**-0.6**
PEIG				*i* S	**Sn**	**08 53 03.9**	**-1.8**
TLIG	**Tlapa**	**1.47**	**3**	*e*P	**Pn**	**08 52 47.8**	**+0.3**
TLIG				*e*S	**Sn**	**08 53 06.2**	**-0.2**
TLIG	**Tlapa**	**1.47**	**3**		**Pb**	**08 52 48.0**	**-0.6**
TLIG					**Sn**	**08 53 06.6**	**+0.1**
CAIG	**El Cayaco**	**1.82**	**302**	*e*P	**Pn**	**08 52 52.2**	**+0.1**
CAIG				*i* S	**Sn**	**08 53 14.1**	**-0.9**
CAIG	**El Cayaco**	**1.82**	**302**		**Pn**	**08 52 52.2**	**+0.1**
CAIG					**Sb**	**08 53 18.0**	**+1.0**
FTIG	**Fresnillo de T**	**1.88**	**15**	*e*P	**Pb**	**08 52 54.2**	**-1.3**
FTIG				*i* S	**Sn**	**08 53 16.6**	**+0.1**
HLIG	**Huajuapan de L**	**1.91**	**25**	*e*P	**Pb**	**08 52 55.3**	**-0.9**
HLIG				*e*S	**Sn**	**08 53 18.5**	**+1.0**
MEIG	**Mezcala**	**2.05**	**333**	*e*P	**Pn**	**08 52 56.4**	**+1.0**
MEIG				*i* S	**Sn**	**08 53 21.0**	**+0.3**
MEIG	**Mezcala**	**2.05**	**333**		**Pn**	**08 52 56.4**	**+1.0**
MEIG					**Sn**	**08 53 19.5**	**-1.2**
VHO	**Vista Hermosa**	**2.08**	**62**	*e*P	**Pn**	**08 52 57.3**	**+1.4**
VHO				*i* S	**Sn**	**08 53 21.6**	**-0.1**
HUIG	**Huatulco**	**2.47**	**97**	*i* P	**Pn**	**08 53 01.9**	**+0.9**
HUIG				*i* S	**Sn**	**08 53 29.5**	**-1.4**
HUIG	**Huatulco**	**2.47**	**97**		**Pg**	**08 53 08.9**	**+0.1**
HUIG					**Sn**	**08 53 31.2**	**+0.4**
UNM	**Universidad Na**	**3.26**	**351**	Pn	**Pn**	**08 53 13.7**	**+1.4**
MOIG	**Morelia**	**4.31**	**326**	Pn	**Pn**	**08 53 27.7**	**+1.1**
CCIG	**Comitan**	**6.26**	**87**	Pn	**Pn**	**08 53 54.1**	**+0.7**
RTAL	**Retalhuleu**	**6.89**	**102**	Pn	**Pn**	**08 54 05.2**	**+3.3**
HUEH	**Huehuetenango**	**6.93**	**95**	Pn	**Pn**	**08 54 01.6**	**-1.0**
ZAIG	**Zacatecas**	**7.61**	**332**	Pn	**Pn**	**08 54 12.1**	**+0.2**
ESQI	**Esquipulas**	**9.11**	**98**	Pn	**Pn**	**08 54 32.6**	**+0.2**
TX32	**Lajitas Array**	**13.97**	**342**	Pn	**Pn**	**08 55 38.8**	**-0.1**
TX31	**Lajitas Ar. Si**	**13.97**	**342**	Pn	**Pn**	**08 55 38.9**	**0.0**
WHTX	**Lake Whitney,**	**15.87**	**4**	Pn	**Pn**	**08 56 02.6**	**-1.7**
WHTX				IAmb	IAmb	08 56 04.4	
comp=Z,4.9nm,0.8s							
SRIG	**Santa Rosalia**	**16.85**	**314**	P	**Pn**	**08 56 17.0**	**+0.3**
SRIG				IAmb	IAmb	08 56 24.8	
comp=Z,27nm,0.9s							
SMCO	**Snowmass**	**24.13**	**344**	P	**P**	**08 57 37.6**	**+0.4**
SMCO				IAmb	IAmb	08 58 06.3	
comp=Z,4.8nm,0.7s							
MTPU	**Mount Pierson**	**24.91**	**334**	P	**P**	**08 57 44.0**	**-0.3**

NEIC ***22*** *08:55:26.6±1.4, 30°.34N±0°.06×101°.74E±0°.07, h9km, mb5.8/253,Ms_20 6.2/861,Mwb5.9/89,Mwc6.1/61,Mww5.9, Mwc6.1(GCMT),Error ellipse: s-maj=10.3km s-min=9.4km az=121.0*
IDC ***22*** *08:55:26.1±0.3,30°.28N×101°.67E, h0km,mb5.3/44, mb1 5.3/44,mb1mx5.3/47,mbtmp5.3/44,ML5.1/1,MS6.0/48, Ms1 6.0/48,ms1mx5.9/64,Error ellipse: s-maj=10.4km s-min=9.1km az=41.0*
MOS ***22*** *08:55:27.1±1.1,30°.27N×101°.72E,h23km,mb5.9/112, MS6.1/93,Error ellipse: s-maj=4.9km s-min=3.2km az=123.2*
NEIC ***22*** *08:55:27,30°.34N×101°.72E,h14km,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr=0.23; Mθθ8.98; Mφφ-8.76; Mrθ0.02; Mrφ-1.55; Mθφ2.68; Fault plane solution: Mo9.40000×10^17 NP1:φs231.06000°, δ77.90000°,λ-169.59000°. NP2:φs138.86000°, δ79.83000°,λ-12.29000°. Principal axes: T 9.1236, Plg1.0000°, Azm185.0000°; N 0.5289, Plg74.0000°, Azm280.0000°; P -9.6524, Plg16.0000°, Azm95.0000°;*
BJI ***22*** *08:55:28.0±0.0,30°.29N×101°.68E,h20km,mB6.3/50, mb5.6/55,ML6.1/24,Ms6.4/68,Ms7 6.4/73*
GCMT ***22*** *08:55:29.6±0.1,30°.24N×101°.78E,h25km,MW6.1/168, Moment Tensor Solution. s160,c355; s168,c564; Duration: 28 Moment tensor: Scale 10^18Nm; Mrr-0.23±.01; Mθθ1.94±.01; Mφφ-1.71±.01; Mrθ0.12±.03; Mθφ-0.52±.01; Mrφ0.10±.03; Best double couple: Mo1.90300×10^18 NP1:φs143.00000°, δ85.00000°, λ-1.00000°. NP2:φs233.00000°,δ89.00000°, λ-175.00000°. Principal axes: T 2.0170, Plg3.0000°, Azm8.0000°; N -0.2320, Plg85.0000°, Azm244.0000°; P -1.7900, Plg4.0000°, Azm98.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***22*** *08:55:32,30°.23N×101°.48E,h20km,Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr0.37; Mθθ0.61; Mφφ-0.98; Mrθ0.50; Mrφ-0.27; Mθφ-0.23; Fault plane solution: Mo1.05000×10^18 NP1:φs48.00000°, δ59.00000°,λ156.00000°. NP2:φs151.00000°,δ70.00000°, λ33.00000°. Principal axes: T 1.0645, Plg38.0000°, Azm12.0000°; N -0.0251, Plg51.0000°, Azm178.0000°; P -1.0394, Plg7.0000°, Azm277.0000°;*
NEIC ***22*** *08:55:32,30°.24N×101°.81E,h24km,Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-0.17; Mθθ2.01; Mφφ-1.85; Mrθ0.05; Mrφ-0.59; Mθφ0.34; Fault plane solution: Mo2.05000×10^18 NP1:φs143.00000°, δ82.00000°,λ-8.00000°. NP2:φs234.00000°,δ83.00000°, λ-172.00000°. Principal axes: T 2.0999, Plg0.0000°, Azm8.0000°; N -0.0988, Plg79.0000°, Azm278.0000°; P -2.0011, Plg11.0000°, Azm98.0000°;*
BGR ***22*** *08:55:33.6±0.0,30°.41N×101°.18E,h33km,mb6.1, mB_BB6.3,Ms6.2*
NEIC ***22*** *08:55:40.6,30°.48N×101°.25E,h16km,Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr-0.34; Mθθ1.50; Mφφ-1.16; Mrθ0.33; Mθφ-0.53; Mrφ-0.70; Fault plane solution: Mo1.65000×10^18 NP1:φs322.73000°, δ80.50000°,λ-29.95000°. NP2:φs58.16000°,δ60.51000°, λ-169.06000°. Principal axes: T 1.7068, Plg13.0000°, Azm14.0000°; N -0.1156, Plg59.0000°, Azm127.0000°; P -1.5912, Plg28.0000°, Azm277.0000°;*
ISC 22 08:55:26.5±0.4, 30°.31N±0°.02×101°.80E±0°.02, h2km±1km, h3km:pP-P,n1725,σ2s10/1736, mb5.8/353, MS6.2/559, 122C-42D, Sichuan

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

CD2	**Chengdu**	**1.79**	**70**	⇓*i*	Pg		**Pg**	**08 56 01.9**	**+1.1**
CD2					Sg		**Sg**	**08 56 28.8**	**+4.9**
CD2					smax		smax		
	comp=N,253µm,0.8s								
CD2					smax		smax		
	comp=E,248µm,0.9s								
KMI	**Kunming**	**5.24**	**171**	⇑*e*	Pn		**Pn**	**08 56 49.3**	**+3.3**
KMI					Sg		**Sg**	**08 58 20.8**	**+6.0**
KMI					LR		LR		
	comp=E,731µm,15.3s								
KMI					LR		LR		
	comp=Z,205µm,6.9s								
KMI	**Kunming**	**5.24**	**171**				**Pn**	**08 56 48.3**	**+2.3**
KMI					Sn		**Sn**	**08 57 46.1**	**-1.1**
GYA	**Guiyang**	**5.75**	**131**	⇓	Pn		**Pn**	**08 56 54.8**	**+1.8**
GYA					Sn		**Sn**	**08 58 02.9**	**+3.2**
GYA					Sg		**Sg**	**08 58 32.9**	**+1.6**
GYA					smax		smax		
	comp=N,27µm,1.1s								
GYA					smax		smax		
	comp=E,36µm,1.0s								
GYA					LR		LR		
	comp=N,178µm,5.8s								
GYA					LR		LR		
	comp=E,191µm,6.5s								
GYA					LR		LR		
	comp=Z,114µm,8.9s								
LZH	**Lanzhou**	**6.01**	**16**		Pn		**Pn**	**08 56 59.8**	**+3.3**
LZH					Sn		**Sn**	**08 58 07.6**	**+1.6**
LZH					Sg		**Sg**	**08 58 35.6**	**-3.8**
LZH					smax		smax		
	comp=N,11µm,1.4s								
LZH					smax		smax		
	comp=E,11µm,1.3s								
LZH					LR		LR		
	comp=N,346µm,7.0s								
LZH					LR		LR		
	comp=Z,258µm,8.5s								
LKP	**Lekhapani**	**6.01**	**242**	*e*	P		**Pn**	**08 56 57.7**	**+1.3**
LKP				*e*	P		**Pn**	**08 56 57.7**	**+1.3**
ENH	**Enshi**	**6.64**	**88**				**Pn**	**08 57 05.9**	**+0.7**
DIBR	**DIBRUGARH**	**6.67**	**247**	*e*	P		**Pn**	**08 57 06.5**	**+0.9**
DIBR				*e*	P		**Pn**	**08 57 06.5**	**+0.9**
DIBR					IAmb		IAmb	08 57 35.0	
	comp=Z,17µm,2.0s								
DIBR					IAmb		IAmb	08 57 35.0	
	comp=Z,17µm,2.0s								
XAN	**Xi'an**	**7.08**	**57**		Pn		**Pn**	**08 57 12.3**	**+1.0**
XAN					Pg		**Pg**	**08 57 38.3**	**-3.9**
XAN					Sn		**Sn**	**08 58 38.6**	**+6.2**
XAN					Sg		**Sg**	**08 59 14.8**	**+0.8**
XAN					smax		smax		
	comp=E,18µm,1.4s								
XAN					smax		smax		
	comp=E,14µm,1.1s								
XAN					LR		LR		
	comp=E,130µm,8.8s								
XAN					LR		LR		
	comp=E,92µm,5.1s								
XAN					LR		LR		
	comp=E,119µm,8.8s								
XAN	**Xi'an**	**7.08**	**57**		P		**Pn**	**08 57 12.1**	**+0.8**
XAN								08 58 30.7	
XAN	**Xi'an**	**7.08**	**57**				**Pn**	**08 57 12.1**	**+0.8**
XAN					Sn		**Sn**	**08 58 30.7**	**-1.7**
ZIRO	**ZIRO**	**7.50**	**250**	*e*	P		**Pn**	**08 57 17.4**	**+0.3**
ZIRO				*e*	P		**Pn**	**08 57 17.4**	**+0.3**
JORH	**JORHAT**	**7.54**	**244**	*e*	P		**Pn**	**08 57 17.8**	**+0.4**
JORH				*e*	P		**Pn**	**08 57 17.8**	**+0.4**
MOKO	**MOKOCHONG**	**7.55**	**240**	*e*	P		**Pn**	**08 57 18.6**	**+0.8**
MOKO				*e*	P		**Pn**	**08 57 18.6**	**+0.8**
TEZP	**TEZPUR**	**8.74**	**247**	*e*	P		**Pn**	**08 57 33.1**	**-0.8**
TEZP				*e*	P		**Pn**	**08 57 33.1**	**-0.8**
IMP	**Imphal**	**8.85**	**234**	*e*	P		**Pn**	**08 57 35.4**	**-0.2**
IMP				*e*	P		**Pn**	**08 57 35.4**	**-0.2**
IMP					IAmb		IAmb	08 57 51.9	
	comp=Z,483nm,1.3s								
IMP					IAmb		IAmb	08 57 51.9	
	comp=Z,483nm,1.3s								
SLVN	**Son La**	**9.14**	**168**		Pn		**Pn**	**08 57 39.6**	**+0.1**
SLVN					Sn		**Sn**	**08 59 24.0**	**+0.9**
GTA	**Gaotai**	**9.22**	**350**	⇑	P		**Pn**	**08 57 42.0**	**+1.4**
GTA					pP			08 57 46.9	
GTA					sP			08 57 49.3	
GTA					S		**Sn**	**08 59 27.8**	**+2.8**
GTA					LR		LR		
	comp=Z,100µm,12.0s								
GTA					LR		LR		
	comp=Z,230µm,12.7s								
GTA					LR		LR		
	comp=Z,102µm,9.5s								
LSA	**Lhasa**	**9.26**	**269**		P		**Pn**	**08 57 42.8**	**+1.3**
LSA					pP			08 57 47.6	
LSA					S		**Sn**	**08 59 31.5**	**+5.0**
LSA					pmax		pmax		
	comp=Z,1µm,1.4s								
LSA					LR		LR		
	comp=Z,163µm,5.7s								
LSA					LR		LR		
	comp=Z,129µm,10.0s								
LSA	**Lhasa**	**9.26**	**269**		P		**Pn**	**08 57 41.5**	**0.0**
LSA					P		**Pn**	**08 57 41.5**	**0.0**
LSA	**Lhasa**	**9.26**	**269**		P		**Pn**	**08 57 40.7**	**-0.8**
LSA	**Lhasa**	**9.26**	**269**				**Pn**	**08 57 40.7**	**-0.8**
SILR	**SILCHAR**	**9.70**	**238**	*e*	P		**Pn**	**08 57 47.3**	**+0.2**
SILR				*e*	P		**Pn**	**08 57 47.3**	**+0.2**
GUWA	**GUWAHATI**	**9.81**	**248**	*e*	P		**Pn**	**08 57 46.6**	**-2.0**
GUWA				*e*	P		**Pn**	**08 57 46.6**	**-2.0**
GUWA					IAmb		IAmb	08 57 57.9	
	comp=Z,230nm,0.7s								
GUWA					IAmb		IAmb	08 57 57.9	
	comp=Z,230nm,0.7s								
SHL	**Shillong**	**9.96**	**244**	*e*	P		**Pn**	**08 57 49.5**	**-1.3**
SHL				*e*	P		**Pn**	**08 57 49.5**	**-1.3**
SHL	**Shillong**	**9.96**	**244**		P		**Pn**	**08 57 49.7**	**-1.2**
	SNR=154								
SHL					S		**Sn**	**08 59 37.7**	**-5.7**
SHL	**Shillong**	**9.96**	**244**		P		**Pn**	**08 57 49.9**	**-1.0**
SHL	**Shillong**	**9.96**	**244**		Pn		**Pn**	**08 57 49.9**	**-1.0**
CRAI	**Chiangrai**	**10.12**	**188**		P		**Pn**	**08 57 56.9**	**+3.9**
WHN	**Wuhan**	**10.83**	**86**	⇓*i*	P		**Pn**	**08 58 01.6**	**-1.0**
WHN					S		**Sn**	**09 00 03.4**	**-1.1**
WHN					pmax		pmax		
	comp=Z,3µm,3.2s								
WHN					pmax		pmax		
	comp=Z,10µm,6.2s								
WHN					LR		LR		
	comp=N,602µm,9.9s								
WHN					LR		LR		
	comp=E,291µm,9.1s								
WHN					LR		LR		
	comp=Z,379µm,9.7s								
PAYA	**Payao**	**11.05**	**190**		P		**Pn**	**08 58 08.7**	**+3.1**
	comp=Z,98µmcomp=Z,11µm,1.1s								
PAYA	**Payao**	**11.05**	**190**		P		**Pn**	**08 58 08.7**	**+3.1**
SAIH	**SAIHA**	**11.09**	**227**	*e*	P		**Pn**	**08 58 05.0**	**-1.3**
SAIH				*e*	P		**Pn**	**08 58 05.0**	**-1.3**
AGT	**Agartala**	**11.37**	**238**	*e*	P		**Pn**	**08 58 08.2**	**-1.8**
AGT				*e*	P		**Pn**	**08 58 08.2**	**-1.8**
TIY	**Taiyuan**	**11.49**	**47**	*e*	P		**Pn**	**08 58 13.4**	**+1.7**
TIY					PP		**PnPn**	**08 58 24.5**	**+5.0**
TIY					pmax		pmax		
	comp=Z,100nm,0.9s								
TIY					pmax		pmax		
	comp=Z,1µm,4.9s								
TIY					LR		LR		
	comp=Z,98µm,11.6s								
BELO	**BELONIA**	**11.62**	**235**	*e*	P		**Pn**	**08 58 14.0**	**+0.6**
BELO				*e*	P		**Pn**	**08 58 14.0**	**+0.6**
CM34	**Chiang Mai Arr**	**11.66**	**193**		P		**Pn**	**08 58 17.0**	**+2.9**
CM33	**Chiang Mai Arr**	**11.74**	**193**		P		**Pn**	**08 58 18.0**	**+3.0**
CHTO	**Chiang Mai**	**11.74**	**193**		P		**Pn**	**08 58 18.0**	**+2.9**
CHTO					P		**Pn**	**08 58 18.0**	**+2.9**
CHTO	**Chiang Mai**	**11.74**	**193**		P		**Pn**	**08 58 17.2**	**+2.1**
CHTO	**Chiang Mai**	**11.74**	**193**		Pn		**Pn**	**08 58 17.1**	**+2.1**
CMMT	**Chiang Mai**	**11.74**	**193**		P		**Pn**	**08 58 18.4**	**+3.2**
	comp=Z,4µmcomp=Z,118nm,1.7s								
CMMT	**Chiang Mai**	**11.74**	**193**		P		**Pn**	**08 58 18.3**	**+3.2**
CM35	**Chiang Mai Arr**	**11.83**	**192**		P		**Pn**	**08 58 19.0**	**+2.6**
LAMP	**Lampang**	**11.90**	**190**		P		**Pn**	**08 58 20.8**	**+3.5**
	comp=Z,4µmcomp=Z,340nm,0.9s								
LAMP	**Lampang**	**11.90**	**190**		P		**Pn**	**08 58 21.1**	**+3.8**
CM32	**Chiang Mai Arr**	**11.92**	**194**		P		**Pn**	**08 58 21.0**	**+3.5**
GTK	**Tadong**	**11.96**	**259**	*e*	P		**Pn**	**08 58 16.1**	**-2.0**
GTK				*e*	P		**Pn**	**08 58 16.1**	**-2.0**
GTK					IAmb		IAmb	08 58 28.1	
	comp=Z,198nm,0.9s								
GTK					IAmb		IAmb	08 58 28.1	
	comp=Z,198nm,0.9s								
CM36	**Chiang Mai Arr**	**12.00**	**192**		P		**Pn**	**08 58 21.0**	**+2.4**
CM31	**Chiang Mai Arr**	**12.09**	**193**		P		**Pn**	**08 58 23.4**	**+3.6**
	comp=Z,32µmcomp=Z,99µmcomp=Z,5µm,1.0s								
CM31	**Chiang Mai Arr**	**12.09**	**193**		Pn		**Pn**	**08 58 21.9**	**+2.1**
CMAR	**Chiang Mai Arr**	**12.09**	**193**		Pn		**Pn**	**08 58 22.7**	**+2.8**
	comp=Z,1.7nm,0.3s,baz=8.5,slow=13,SNR=351								
CMAR					Lg		Lg	09 01 44.5	
	baz=16,slow=27,SNR=2.2								
CMAR					LR		LR	09 03 33.5	
	comp=Z,40µm,18.3s,baz=34,slow=40								
CMAR	**Chiang Mai Arr**	**12.09**	**193**		P		**Pn**	**08 58 21.4**	**+1.6**
CMAR	**Chiang Mai Arr**	**12.09**	**193**				**Pn**	**08 58 21.4**	**+1.6**
CM09	**Chiang Mai Arr**	**12.09**	**193**		P		**Pn**	**08 58 23.4**	**+3.4**
	comp=Z,4µmcomp=Z,196nm,1.1s								
CM09	**Chiang Mai Arr**	**12.09**	**193**		P		**Pn**	**08 58 23.6**	**+3.7**
CM15	**Chiang Mai Arr**	**12.10**	**193**		P		**Pn**	**08 58 23.4**	**+3.4**
	comp=Z,3µmcomp=Z,154nm,1.0s								
CM02	**Chiang Mai Arr**	**12.11**	**193**		P		**Pn**	**08 58 23.6**	**+3.4**
	comp=Z,261nmcomp=Z,4µmcomp=Z,180nm,0.9s								
CM01	**Chiang Mai Arr**	**12.12**	**193**		P		**Pn**	**08 58 23.0**	**+2.7**
	comp=Z,281nmcomp=Z,4µmcomp=Z,196nm,1.1s								
CM13	**Chiang Mai Arr**	**12.13**	**193**		P		**Pn**	**08 58 23.0**	**+2.6**
	comp=Z,2µmcomp=Z,132nm,1.0s								
CM13	**Chiang Mai Arr**	**12.13**	**193**		P		**Pn**	**08 58 24.0**	**+3.6**
CM04	**Chiang Mai Arr**	**12.14**	**193**		P		**Pn**	**08 58 23.0**	**+2.5**
	comp=Z,4µmcomp=Z,170nm,0.9s								
CM04	**Chiang Mai Arr**	**12.14**	**193**		P		**Pn**	**08 58 23.9**	**+3.4**
CM05	**Chiang Mai Arr**	**12.14**	**193**		P		**Pn**	**08 58 23.8**	**+3.3**
	comp=Z,2µmcomp=Z,126nm,0.9s								
CM05	**Chiang Mai Arr**	**12.14**	**193**		P		**Pn**	**08 58 23.9**	**+3.3**
BTO	**Baotou**	**12.25**	**31**	*e*	P		**Pn**	**08 58 23.4**	**+1.3**
NONG	**Nongkai**	**12.26**	**174**		P		**Pn**	**08 58 24.0**	**+1.9**
	comp=Z,15µmcomp=Z,568nm,1.1s								
UTTA	**Uttaradit**	**12.56**	**185**		P		**Pn**	**08 58 29.0**	**+2.6**
	comp=Z,2µmcomp=Z,196nm,1.0s								
UTTA	**Uttaradit**	**12.56**	**185**		P		**Pn**	**08 58 28.8**	**+2.5**
GZH	**Guangzhou**	**12.57**	**122**		P		**Pn**	**08 58 24.0**	**-2.4**
GZH					S		**Sn**	**09 00 43.8**	**-3.3**
GZH					LR		LR		
	comp=Z,60µm,6.5s								
MHMT	**Maesarieng**	**12.59**	**197**		P		**Pn**	**08 58 30.0**	**+3.3**
	comp=Z,27µmcomp=Z,14µmcomp=Z,361nm,1.2s								
MHMT	**Maesarieng**	**12.59**	**197**		P		**Pn**	**08 58 30.2**	**+3.5**
TAPN	**Taplejung**	**12.70**	**260**	*e*	P		**Pn**	**08 58 27.5**	**-1.0**
SUKH	**Sukhothai**	**12.93**	**189**		P		**Pn**	**08 58 34.5**	**+3.2**
	comp=Z,3µmcomp=Z,349nm,0.9s								
SUKH	**Sukhothai**	**12.93**	**189**		P		**Pn**	**08 58 34.7**	**+3.4**
ODAN	**Odare**	**13.12**	**258**	*e*	P		**Pn**	**08 58 34.0**	**-0.2**
	comp=Z,480nm,0.8s								
PHIT	**Phitsanulok**	**13.13**	**186**		P		**Pn**	**08 58 37.0**	**+2.9**
	comp=Z,8µmcomp=Z,1µm,1.0s								
PHIT	**Phitsanulok**	**13.13**	**186**		P		**Pn**	**08 58 36.8**	**+2.7**
HHC	**Hu-ho-hao-te**	**13.16**	**34**	*e*	P		**Pn**	**08 58 35.8**	**+1.2**
HHC					pP		P	08 58 39.0	-5.9
HHC					S		**Sn**	**09 01 03.4**	**+1.8**
HHC					pmax		pmax		
	comp=Z,59nm,1.4s								
HHC					pmax		pmax		
	comp=Z,3µm,5.3s								
HHC					LR		LR		
	comp=Z,350µm,12.7s								
HHC					LR		LR		
	comp=Z,177µm,11.2s								
MCO	**Taipa Grande**	**13.33**	**125**		P		**Pn**	**08 58 36.0**	**-0.8**
QIZ	**Qiongzhong**	**13.40**	**145**		P		**Pn**	**08 58 37.4**	**-0.3**
QIZ					S		**Sn**	**09 01 09.8**	**+2.5**
QIZ					pmax		pmax		
	comp=Z,49nm,0.9s								
QIZ					pmax		pmax		
	comp=Z,1µm,5.0s								
QIZ					LR		LR		
	comp=Z,174µm,14.0s								
QIZ					LR		LR		
	comp=Z,85µm,10.8s								
QIZ	**Qiongzhong**	**13.40**	**145**				**Pn**	**08 58 37.1**	**-0.6**
HKPS	**Hong Kong Po S**	**13.65**	**123**		Pn		**Pn**	**08 58 42.6**	**+1.5**
HKC	**Hong Kong Obse**	**13.66**	**123**	⇑	P		**Pn**	**08 58 40.0**	**-1.3**
RAMN	**Ramite**	**13.77**	**260**	*e*	P		**Pn**	**08 58 42.2**	**-0.8**
	comp=Z,673nm,1.2s								
TIA	**Tai'an**	**14.10**	**61**		P		**Pn**	**08 58 48.9**	**+1.7**
TIA					S		**Sn**	**09 01 20.9**	**-3.4**
TIA					pmax		pmax		
	comp=Z,69nm,1.0s								
TIA					pmax		pmax		
	comp=Z,3µm,3.2s								
TIA					LR		LR		
	comp=Z,57µm,8.3s								
TIA					LR		LR		
	comp=Z,56µm,10.9s								
TIA					LR		LR		
	comp=Z,77µm,11.3s								
GUN	**Gumba**	**14.13**	**264**	*e*	P		**Pn**	**08 58 44.6**	**-3.4**
CHAI	**Chaiyaphum**	**14.35**	**179**		P		**Pn**	**08 58 52.6**	**+1.9**
	comp=Z,3µmcomp=Z,278nm,1.0s								
PKI	**Pulchoki**	**14.61**	**263**	*e*	P		**Pn**	**08 58 51.3**	**-3.3**
PKIN	**Phulchoki**	**14.62**	**263**	*e*	P		**Pn**	**08 58 51.3**	**-3.4**
KKN	**Kakani**	**14.67**	**264**	*e*	P		**Pn**	**08 58 51.7**	**-3.6**
NJ2	**Nanjing**	**14.70**	**79**	⇓*i*	P		**Pn**	**08 58 54.5**	**-1.0**
NJ2					pP		**P**	**08 58 58.9**	**-2.9**
NJ2					PP		**PnPn**	**08 59 05.3**	**+1.9**
NJ2					S		**Sn**	**09 01 39.5**	**+0.5**
NJ2					sS		S	09 01 47.3	-11
NJ2					SS			09 01 57.3	
NJ2					pmax		pmax		
	comp=Z,220nm,1.1s								
NJ2					pmax		pmax		
	comp=Z,4µm,3.5s								
NJ2					LR		LR		
	comp=Z,71µm,7.6s								
NJ2					LR		LR		
	comp=Z,112µm,10.4s								
UTHA	**Uthaitani**	**14.85**	**189**		P		**Pn**	**08 58 59.6**	**+2.1**
	comp=Z,4µmcomp=Z,298nm,0.9s								
DMN	**Daman**	**14.86**	**264**	*e*	P		**Pn**	**08 58 54.3**	**-3.7**
GKN	**Gorkha**	**15.18**	**266**	*e*	P		**Pn**	**08 58 57.5**	**-4.6**
BJT	**Baijiatuao**	**15.21**	**47**		P		**Pn**	**08 59 03.0**	**+0.7**
BJT					pmax		pmax		
	comp=Z,89nm,0.8s								
BJT	**Baijiatuao**	**15.21**	**47**				**Pn**	**08 59 03.0**	**+0.7**
BJI	**Beijing**	**15.22**	**47**		P		**Pn**	**08 59 03.0**	**+0.6**
BJI					S		**Sn**	**09 01 53.5**	**+1.9**
BJI					LR		LR		
	comp=Z,175µm,14.7s								
BJI					LR		LR		
	comp=Z,30µm,25.5s								
UBPT	**Khong Chiam**	**15.34**	**167**		P		**P**	**08 59 06.8**	**-2.3**
	comp=Z,18µmcomp=Z,11µmcomp=Z,560nm,0.7s								
UBPT	**Khong Chiam**	**15.34**	**167**		P		**P**	**08 59 08.0**	**-1.0**
UBPT	**Khong Chiam**	**15.34**	**167**		Pn		**Pn**	**08 59 05.9**	**+1.8**
BOK	**Bokaro**	**15.59**	**249**	*e*	P		**Pn**	**08 59 04.6**	**-2.8**
BOK					IAmb		IAmb	08 59 16.7	
	comp=Z,748nm,1.5s								
BOK					IAmb		IAmb	08 59 16.7	
	comp=Z,748nm,1.5s								
QZH	**Quanzhou**	**15.81**	**106**	⇓*i*	P		**Pn**	**08 59 08.9**	**-1.3**
QZH					S		**Sn**	**09 02 02.8**	**-3.2**
QZH					pmax		pmax		
	comp=Z,390nm,1.4s								
QZH					pmax		pmax		
	comp=Z,5µm,5.7s								
QZH					LR		LR		
	comp=Z,104µm,12.3s								
QZH					LR		LR		
	comp=Z,45µm,11.6s								
QZH					LR		LR		
	comp=Z,106µm,10.9s								
KNMB	**Chin-men Tao**	**15.84**	**108**		P		**P**	**08 59 12.7**	**-1.8**
KNMB					IAmb		IAmb	08 59 21.5	
	comp=Z,712nm,0.8s								
DANN	**Dangsing**	**15.86**	**267**	*e*	P		**Pn**	**08 59 06.0**	**-5.2**
SRDT	**SRDT**	**16.08**	**189**		P		**Pn**	**08 59 15.1**	**+1.3**
	comp=Z,236nm,1.2s								
SRDT	**SRDT**	**16.08**	**189**		P		**P**	**08 59 16.2**	**-1.1**
KOLN	**Koldanda**	**16.12**	**265**	*e*	P		**Pn**	**08 59 10.6**	**-3.9**
SRAK	**Srakaew**	**16.23**	**179**		P		**P**	**08 59 17.1**	**-1.7**
	comp=Z,33µmcomp=Z,4µm,1.1s								
SRAK	**Srakaew**	**16.23**	**179**		P		**P**	**08 59 18.2**	**-0.7**
PYUN	**Piuthan**	**16.57**	**267**	*e*	P		**Pn**	**08 59 16.1**	**-4.2**
SSE	**Sheshan**	**16.69**	**82**		P		**Pn**	**08 59 21.3**	**-0.2**
SSE					S		**S**	**09 02 34.8**	**-4.2**
SSE					sS		**sS**	**09 02 42.3**	**+0.5**
SSE					pmax		pmax		
	comp=Z,74nm,1.3s								
SSE					pmax		pmax		
	comp=Z,2µm,4.0s								
PATY	**Pattaya**	**17.33**	**183**		P		**P**	**08 59 32.7**	**+1.6**
	comp=Z,14µmcomp=Z,259nm,0.9s								
PHET	**Kaeng Krachan**	**17.44**	**187**		P		**P**	**08 59 32.5**	**+0.3**
	comp=Z,5µmcomp=Z,542nm,0.9s								
PHET	**Kaeng Krachan**	**17.44**	**187**		P		**P**	**08 59 35.4**	**+3.1**
WMQ	**Urumqi**	**17.53**	**324**	*e*	P		**Pn**	**08 59 31.0**	**-1.1**
WMQ					sP		sP	08 59 39.8	+4.0
WMQ					PP		**PnPn**	**08 59 50.9**	**+8.6**
WMQ					S		**Sn**	**09 02 48.0**	**+0.3**
WMQ					sS		S	09 02 52.3	-3.8
WMQ					SS		**SnSn**	**09 03 08.8**	**+7.6**
WMQ					pmax		pmax		
	comp=Z,210nm,2.1s								
WMQ					pmax		pmax		
	comp=Z,5µm,7.3s								
WMQ					LR		LR		
	comp=Z,72µm,13.5s								
WMQ					LR		LR		
	comp=Z,62µm,15.9s								
BWNR	**Bhubaneshwar**	**17.55**	**239**	*e*	P		**Pn**	**08 59 32.2**	**-0.1**
BWNR				*e*	S		**Sn**	**09 02 49.3**	**+1.0**
I34MN	**SONGINO INFRAS**	**17.82**	**10**	*i*				10 45 50.0	
	baz=188,slow=335,SNR=0.7								
SONM	**Songino Array**	**17.85**	**10**		P		**P**	**08 59 37.4**	**+0.5**
	comp=Z,6.6nm,0.3s,baz=194,slow=8.4,SNR=765								
SONM					Lg		Lg	09 04 55.3	
	comp=Z,0.1nm,0.3s,baz=202,slow=26,SNR=1.0								
SONM					LR		LR	09 07 42.0	
	comp=Z,50µm,20.0s,baz=186,slow=41								
SONM	**Songino Array**	**17.85**	**10**		P		**Pn**	**08 59 35.8**	**-0.3**
SONM	**Songino Array**	**17.85**	**10**		P		**Pn**	**08 59 35.8**	**-0.3**
ULN	**Ulaanbaatar**	**17.99**	**12**		P		**P**	**08 59 39.5**	**+1.2**
ULN					P		**P**	**08 59 39.5**	**+1.2**
ULN					S		**S**	**09 03 05.6**	**+0.1**
ULN					S		**S**	**09 03 05.6**	**+0.1**
ULN	**Ulaanbaatar**	**17.99**	**12**	*ce*	P		**P**	**08 59 39.0**	**+0.6**
ULN					pmax		pmax		
	comp=Z,2µm,1.7s								
ULN	**Ulaanbaatar**	**17.99**	**12**				**Pn**	**08 59 37.9**	**+0.1**
TPUB	**Ta-pu**	**18.19**	**108**				**P**	**08 59 41.5**	**+0.9**
TPUB					IAmb		IAmb	09 00 02.7	
	comp=Z,403nm,0.9s								
TATO	**Taipei**	**18.23**	**102**		P		**P**	**08 59 42.5**	**+1.6**
TATO					P		**P**	**08 59 42.5**	**+1.6**
TATO					S		**S**	**09 03 16.2**	**+5.9**
TATO					S		**S**	**09 03 16.2**	**+5.9**
TATO	**Taipei**	**18.23**	**102**		P		**P**	**08 59 42.3**	**+1.3**
SSLB	**Suanglung**	**18.24**	**106**				**P**	**08 59 42.4**	**+1.2**
SSLB					IAmb		IAmb	08 59 51.0	
	comp=Z,831nm,0.9s								
YHNB	**Yeheng**	**18.24**	**103**		P		**Pn**	**08 59 40.0**	**-1.1**
DL2	**Dalian**	**18.41**	**57**		P		**P**	**08 59 45.5**	**+2.6**
DL2					pmax		pmax		
	comp=Z,390nm,1.0s								
DL2					pmax		pmax		
	comp=Z,6µm,6.8s								
DL2					LR		LR		
	comp=Z,104µm,19.3s								
DL2					LR		LR		
	comp=Z,63µm,17.5s								
NACB	**Ninganchiao**	**18.62**	**104**				**Pn**	**08 59 46.1**	**+0.6**
NACB					IAmb		IAmb	08 59 57.0	
	comp=Z,639nm,1.4s								
YULB	**Yu-li**	**18.70**	**107**		P		**Pn**	**08 59 47.9**	**+1.4**
TWG	**Pinlang**	**18.77**	**109**		P		**Pn**	**08 59 49.2**	**+1.8**
TWG					IAmb		IAmb	08 59 52.2	
	comp=Z,440nm,0.9s								
DGPR	**DIGLIPUR**	**18.92**	**208**	*e*	P		**P**	**08 59 48.2**	**-0.5**
DGPR				*e*	P		**P**	**08 59 48.2**	**-0.5**
DGPR					IAmb		IAmb	08 59 51.8	
	comp=Z,779nm,1.0s								
DGPR					IAmb		IAmb	08 59 51.8	
	comp=Z,779nm,1.0s								
DLV	**T Lat**	**19.30**	**160**		P		**Pn**	**08 59 53.6**	**-0.4**
YOJ	**Yonaguni jima**	**19.70**	**102**		P		**P**	**08 59 55.2**	**-2.0**
YOJ					pmax		pmax		
	comp=Z,884nm,1.4s								
YOJ	**Yonaguni jima**	**19.70**	**102**		P		**P**	**08 59 55.2**	**-2.0**
YOJ					IAmb		IAmb	09 00 13.5	
	comp=Z,884nm,1.4s								
CHLP	**Challavanipeta**	**19.95**	**238**	*e*	P		**P**	**09 00 00.3**	**+0.3**
CHLP					IVmB_BB			09 00 04.8	
	comp=Z,6µm,3.0s								
CHLP					IVMsBB			09 10 06.8	
	comp=Z,7µm,14.2s								
ZAK	**Zakamensk**	**20.08**	**3**	*e*	P		Pn	09 00 03.1	+0.1
ZAK					pmax		pmax		
	comp=Z,664nm,1.5s								
PBA	**Port Blair**	**20.38**	**206**	*e*	P		P	09 00 05.0	+0.4
PBA				*e*	P		P	09 00 05.0	+0.4
PBA	**Port Blair**	**20.

INCN P P 09 00 22.0 +2.3
INCN S Sn 09 04 27.1 -3.2
INCN S Sn 09 04 27.1 -3.2
INCN S Sn 09 04 27.1 -3.2
INCN Inchon 21.78 64 P P **09 00 20.6 +1.0**
INCN pmax pmax
comp=Z,565nm,1.2s
INCN MLR MLR
comp=Z,61μm,20.0s
INCN Inchon 21.78 64 P P **09 00 20.6 +1.0**
INCN IAmb IAmb 09 00 27.2
comp=Z,565nm,1.1s
DHRM DHARAMSHALA 21.87 282 *e*P P **09 00 19.3 -1.6**
DHRM *e*P P **09 00 19.3 -1.6**
DHRM IAmb IAmb 09 00 27.7
comp=Z,2μm,1.5s
DHRM IAmb IAmb 09 00 27.7
comp=Z,2μm,1.5s
SHLS Shalkode 21.94 312 *i* P P **09 00 18.2 -3.2**
comp=Z,798nm,2.1s
SHLS *e*S S **09 04 18.8 -5.6**
SHLS LR LR 09 08 17.8
comp=Z,5μm,8.0s
SHLS Shalkode 21.94 312 *i* P P **09 00 18.2 -3.2**
SHLS *e*S S **09 04 18.8 -5.6**
SHLS pmax pmax
comp=Z,797nm,2.1s
SHLS MLR MLR
comp=Z,5μm,8.0s
SGCP Mt. Cagua 21.98 119 *e*P P **09 00 25.2 +3.3**
IRK Irkutsk 21.99 4⇓ *i*P P **09 00 23.8 +2.1**
IRK pmax pmax
comp=Z,4μm,2.0s
PDGK Podgornoye 22.00 312 P P **09 00 21.5 -0.6**
CVP Callao Caves 22.14 120⇑ *i*P P **09 00 26.5 +2.9**
TJN Taejon 22.16 67 *ce*P P **09 00 25.6 +1.9**
PRZ Przheval'sk 22.33 309 P P **09 00 25.0 -0.7**
PRZ pmax pmax
comp=Z,953nm,1.2s
PRZ MLR MLR
comp=Z,58μm,18.0s
PRZ Przheval'sk 22.33 309 P P **09 00 25.0 -0.7**
PRZ IAMs_20 IAMs_20 09 10 04.1
comp=Z,58μm,18.0s
MK31 Makanchi Array 22.34 323 *e*P P **09 00 24.6 -1.0**
MK31 Makanchi Array 22.34 323 P P **09 00 24.7 -0.9**
MK31 IAmb IAmb 09 00 31.9
comp=Z,333nm,1.1s
MKAR Makanchi Array 22.34 323 P P **09 00 24.8 -0.9**
comp=Z,65nm,0.9s,baz=132,slow=11,SNR=122
MKAR S S **09 04 25.9 -6.1**
comp=Z,9.2nm,1.0s,baz=223,slow=2.5,SNR=1.0
MKAR LR LR 09 09 27.5
comp=Z,33μm,18.9s,baz=125,slow=38
MKAR P3KPbc 09 34 11.7
comp=Z,1.0nm,1.0s,baz=303,slow=5.5,SNR=4.4
MKAR Makanchi Array 22.34 323 P P **09 00 24.6 -1.0**
MKAR Makanchi Array 22.34 323 P P **09 00 24.6 -1.0**
NGP Nagpur 22.40 251 *e*P P **09 00 24.5 -1.9**
TRTT Trang 22.45 185 P P **09 00 28.2 +1.3**
MAKZ Makanchi 22.52 323 P P **09 00 25.6 -1.9**
MAKZ pmax pmax
comp=Z,918nm,1.4s
MAKZ MLR MLR
comp=Z,54μm,19.0s
MAKZ Makanchi 22.52 323 P P **09 00 25.6 -1.9**
PVM Polavaram 22.54 239 *e*P P **09 00 27.6 -0.3**
PVM IVmB_BB 09 00 37.4
comp=Z,2μm,2.5s
PVM IVMs_BB IVMs_BB 09 09 19.4
comp=Z,6μm,11.7s
PKDT Phuket 22.54 189 P P **09 00 28.0 +0.1**
SATY Saty 22.58 311⇑ *i*P P **09 00 27.9 -0.5**
comp=Z,450nm,1.9s
SATY *e*S S **09 04 36.2 -0.5**
SATY LR LR 09 08 54.2
comp=Z,6μm,10.7s
SATY Saty 22.58 311 *c i*P P **09 00 27.8 -0.5**
SATY *e*S S **09 04 36.1 -0.5**
SATY pmax pmax
comp=Z,450nm,1.9s
SATY MLR MLR
comp=Z,6μm,11.0s
KPKS Kokpek 22.59 312⇑ *i*P P **09 00 27.4 -1.0**
comp=Z,443nm,1.7s
KPKS Kokpek 22.59 312 *c i*P P **09 00 27.3 -1.0**
KPKS pmax pmax
comp=Z,443nm,1.7s
CAUP Cauayan 22.61 122 *e*P P **09 00 32.2 +3.5**
KS19 Wonju Array Si 22.74 65 P P **09 00 29.7 -0.2**
KS19 IAmb IAmb 09 00 51.3
comp=Z,346nm,1.0s
KSAR Wonju Array Be 22.75 65 P P **09 00 29.2 -0.8**
KSAR Wonju Array Be 22.75 65 P P **09 00 29.1 -0.8**
KSRS Korea Array 22.78 65 P P **09 00 31.1 +0.8**
comp=Z,95nm,0.8s,baz=252,slow=8.3,SNR=127
KSRS S S **09 04 38.9 -1.2**
comp=Z,2.6nm,0.8s,baz=215,slow=1.0,SNR=0.9
KSRS LR LR 09 09 17.9
comp=Z,46μm,19.1s,baz=262,slow=36
BHPL Bhopal 22.85 258 *e*P P **09 00 28.6 -2.6**
BHPL *e*P P **09 00 28.6 -2.6**
BHPL IAmb IAmb 09 00 37.1
comp=Z,255nm,1.0s
BHPL IAmb IAmb 09 00 37.1
comp=Z,255nm,1.0s
KSH Kashi 23.02 300⇑ *i*P P **09 00 33.8 +0.8**
KSH S S **09 04 42.8 -1.8**
KSH SS SnSn **09 05 25.9 +10**
KSH pmax pmax
comp=Z,150nm,1.1s
KSH pmax pmax
comp=Z,17μm,4.6s
KSH LR LR
comp=Z,45μm,8.7s
KSH LR LR
comp=Z,73μm,12.0s
HHU Hamhung 23.06 58 P P **09 00 39.1 +5.9**
HHU S Sn 09 04 57.3 -3.5
CN2 Changchun 23.08 48⇑ P P **09 00 35.0 +1.6**
CN2 pP sP 09 00 39.0 +3.0
CN2 *e*S S **09 04 47.3 +2.0**
CN2 pmax pmax
comp=Z,400nm,0.2s
CN2 pmax pmax
comp=Z,6μm,4.0s
CN2 LR LR
comp=Z,59μm,12.0s
CN2 LR LR
comp=Z,54μm,15.0s
BALP Baler 23.22 124 *e*P P **09 00 36.2 +1.3**
GGR Gangavaram 23.27 243 *e*P P **09 00 34.7 -0.9**
GGR IVmB_BB 09 00 41.1
comp=Z,2μm,3.1s
GGR IVMs_BB IVMs_BB 09 09 50.0
comp=Z,6μm,9.5s
CIT Chita 23.36 18 *e*P P **09 00 38.5 +2.3**
CIT *e* 09 00 50.4
CIT *e* 09 01 07.4
CIT *e* 09 05 45.6
CIT pmax pmax
comp=Z,1μm,2.3s
RPR Rampur 23.38 246 *e*P P **09 00 36.2 -0.4**
RPR IVmB_BB 09 00 39.6
comp=Z,3μm,4.5s
RPR IVMs_BB IVMs_BB 09 10 26.8
comp=Z,8μm,8.7s
TDK Taldyqorghan 23.51 315 *i* P P **09 00 37.2 -0.6**
comp=Z,2μm,2.4s
TDK Taldyqorghan 23.51 315 *i* P P **09 00 37.2 -0.6**
TDK pmax pmax
comp=Z,2μm,2.4s
MDOK Medeo 23.52 310 *i* P P **09 00 37.9 -0.2**
MDOK *e*S S **09 04 52.6 -0.3**
MDOK LR LR 09 09 55.4
comp=Z,19μm,11.4s
MDOK Medeo 23.52 310 *i* P P **09 00 37.8 -0.2**
MDOK *e*S S **09 04 52.6 -0.3**
MDOK MLR MLR
comp=Z,19μm,11.0s
TNSS Tian-Shan 23.54 309 *e*P P **09 00 38.6 0.0**
TNSS Tian-Shan 23.54 309 *e*P P **09 00 38.5 0.0**
QVP Quezon City--P 23.58 127 *e*P P **09 00 42.2 +3.6**
MYLAV Mylavaram 23.59 240 *e*P P **09 00 39.3 +0.6**
MYLAV IVmB_BB 09 00 43.0
comp=Z,3μm,3.4s
MYLAV IVMsBB 09 09 47.7
comp=Z,7μm,12.8s
KNDC Almaty 23.60 310 P P **09 00 40.5 +1.8**
AAA Alma-Ata 23.63 310 *e*P P **09 00 39.3 +0.3**
AAA *e*S S **09 04 54.8 +0.4**
AAA LR LR 09 09 33.8
comp=Z,7μm,10.4s
AAA Alma-Ata 23.63 310 *e*P P **09 00 39.3 +0.3**
AAA *e*S S **09 04 54.8 +0.4**
AAA MLR MLR
comp=Z,7μm,10.0s
JTU Tsushima 23.64 73 P P **09 00 39.0 -0.1**
JTU IAMs_20 IAMs_20 09 09 40.0
comp=Z,57μm,18.0s
LUBP Lubang 23.70 130 *e*P P **09 00 39.0 -0.8**
ULHL Ulahol 23.70 307 P P **09 00 41.6 +1.7**
SNR=47
CHKK Chushkaly 23.86 311 *e*P P **09 00 40.6 -0.6**
CHKK Chushkaly 23.86 311 *e*P P **09 00 40.6 -0.6**
TGY Tagaytay City 23.90 128 P P **09 00 43.5 +1.7**
comp=Z,202nm,0.3s,baz=270,slow=3.0,SNR=1.8
TGY LR LR 09 09 27.5
comp=Z,16μm,18.9s,baz=314,slow=35
BOOM Boomskoye usch 24.00 308 P P **09 00 42.1 -0.7**
BOOM pmax pmax
comp=Z,202nm,1.0s
BOOM MLR MLR
comp=Z,51μm,20.0s
BOOM Boomskoye usch 24.00 308 P P **09 00 42.1 -0.7**
BOOM IAmb IAmb 09 00 47.5
comp=Z,202nm,0.9s
KUU Kurty 24.30 311⇑ *i*P P **09 00 44.6 -0.7**
comp=Z,1μm,2.2s
KUU LR LR 09 09 58.4
comp=Z,18μm,10.7s
KUU Kurty 24.30 311 *c i*P P **09 00 44.6 -0.7**
KUU pmax pmax
comp=Z,1μm,2.2s
KUU MLR MLR
comp=Z,18μm,11.0s
LQP Lukban 24.30 127⇑ *e*P P **09 00 46.4 +0.6**
PGP Puerto Galera 24.34 129⇑ *e*P P **09 00 48.9 +3.0**
TKM2 Tokmak 2 24.40 308 P P **09 00 46.7 +0.3**
SNR=44
TKM2 Tokmak 2 24.40 308 P P **09 00 46.2 -0.3**
NIL Nilore 24.41 285 P P **09 00 46.5 0.0**
NIL Nilore 24.41 285 P P **09 00 44.7 -1.8**
NIL pmax pmax
comp=Z,903nm,1.0s
NIL Nilore 24.41 285 P P **09 00 44.7 -1.8**
CUPL Choutuppal 24.56 243 *e*P P **09 00 47.5 -0.4**
CUPL IVMsBB 09 10 37.2
comp=Z,5μm,11.3s
JSU Suzuyama 24.59 80 P P **09 00 48.5 +0.4**
ADKI Addanki 24.65 239 *e*P P **09 00 49.1 +0.5**
ADKI IVmB_BB 09 00 53.9
comp=Z,5μm,2.9s
ADKI IVMs_BB IVMs_BB 09 11 48.4
comp=Z,7μm,12.2s
NJS Nagarjunasagar 24.71 241 *e*P P **09 00 49.5 +0.2**
NJS IVmB_BB 09 00 53.8
comp=Z,4μm,3.0s
NJS IVMsBB 09 10 13.1
comp=Z,6μm,14.5s
KBK Karagaybulak 24.75 307 P P **09 00 49.7 +0.2**
SNR=114
HYB Hyderabad 24.78 244 *i* P P **09 00 49.0 -0.9**
HYB *e*S S **09 05 16.0 +2.9**
HYB *e*LR LR
comp=Z,16nm,18.0s
HYBB Hyderabad (bro 24.78 244 *e*P P **09 00 49.5 -0.4**
HYBB IVmB_BB 09 00 54.2
comp=Z,5μm,2.7s
HYBB IVMsBB 09 10 53.1
comp=Z,6μm,16.7s
JNU Nakatsue 24.86 76 P P **09 00 52.2 +1.7**
comp=Z,89nm,0.8s,baz=267,slow=2.8,SNR=15
JNU S S **09 05 17.8 +3.5**
comp=Z,12nm,0.9s,baz=294,slow=16,SNR=1.2
JNU LR LR 09 11 01.0
comp=Z,35μm,18.6s,baz=274,slow=37
JNU Nakatsue 24.86 76 P P **09 00 50.7 +0.2**
UCH Uchtor 24.90 306 P P **09 00 53.0 +1.7**
SNR=55
KULM Kulim 24.92 183 P P **09 00 50.0 -1.1**
KULM IAmb IAmb 09 01 17.3
comp=Z,253nm,1.3s
KULM Kulim 24.92 183 P P **09 00 54.0 +3.0**
BUSP Coron 24.96 133 *e*P P **09 00 53.0 +1.5**
JCNP Jose Panganiba 24.99 125 *e*P P **09 00 54.6 +2.8**
CHMS Chumysh 25.00 308 P P **09 00 51.7 -0.1**
SNR=19
FRU1 Bishkek 25.02 307 P P **09 00 51.5 -0.4**
FRU1 pmax pmax
comp=Z,279nm,1.2s
FRU1 MLR MLR
comp=Z,47μm,21.0s
FRU1 Bishkek 25.02 307 P P **09 00 51.5 -0.4**
FRU1 IAmb IAmb 09 01 16.3
comp=Z,279nm,1.1s
AAK Ala-Archa 25.05 307 P P **09 00 52.7 +0.4**
comp=Z,111nm,1.0s,baz=111,slow=6.4,SNR=109
AAK S S **09 05 16.1 -1.4**
comp=Z,3.9nm,0.8s,baz=180,slow=16,SNR=0.8
AAK LR LR 09 11 37.0
comp=Z,33μm,19.7s,baz=99,slow=39
AAK Ala-Archa 25.05 307 P P **09 00 53.1 +0.7**
AAK P P **09 00 53.1 +0.7**
AAK Ala-Archa 25.05 307 *ce*P P **09 00 51.4 -0.9**
AAK pmax pmax
comp=Z,574nm,1.3s
AAK MLR MLR
comp=Z,88μm,18.0s
ENPP El Nido 25.09 136 *e*P P **09 00 52.3 -0.4**
SJMP San Jose 25.21 131 *e*P P **09 00 54.2 +0.5**
SGDS Sogindy 25.25 309 *e*P P **09 00 53.8 -0.2**
comp=Z,150nm,1.7s
SGDS LR LR 09 10 31.8
comp=Z,5μm,10.5s
SGDS Sogindy 25.25 309 *e*P P **09 00 53.8 -0.2**
SGDS pmax pmax
comp=Z,151nm,1.7s
SGDS MLR MLR
comp=Z,5μm,11.0s
USP Ospenovka 25.27 308 P P **09 00 53.9 -0.3**
SNR=111
LHMI Lhok Sumawe 25.37 191 P P **09 00 55.1 0.0**
comp=Z,17μmcomp=Z,10μmcomp=Z,319nm,1.1s
LHMI Lhok Sumawe 25.37 191 P P **09 00 53.2 -1.9**
LHMI IAmb IAmb 09 01 11.8
comp=Z,181nm,0.9s
AML Almayashu 25.44 305 P P **09 00 56.4 +0.3**
SNR=145
EKS2 Erkin-Say 25.56 307 P P **09 00 57.1 +0.2**
SNR=95
IPM Ipoh 25.71 182 P P **09 00 55.5 -2.7**
IPM IAmb IAmb 09 01 16.3
comp=Z,174nm,1.1s
IPM Ipoh 25.71 182 P P **09 00 57.0 -1.2**
SEM Semipalatinsk 25.77 327 *e*P P **09 00 57.7 -1.1**
comp=Z,179nm,1.6s
SEM LR LR 09 10 45.1
comp=Z,13μm,10.9s
SEM Semipalatinsk 25.77 327 *e*P P **09 00 57.6 -1.2**
SEM pmax pmax
comp=Z,179nm,1.6s
SEM MLR MLR
comp=Z,13μm,11.0s
OTRP Odiongan 25.88 129 *e*P P **09 01 05.9 +6.1**
KLRI Killari 25.96 248 *e*P P **09 01 00.6 0.0**
KLRI IVmB_BB 09 01 04.8
comp=Z,4μm,3.1s
KLRI IVMs_BB IVMs_BB 09 11 27.8
comp=Z,9μm,10.2s
SCSP San Jose Seism 26.00 125 *e*P P **09 01 06.4 +5.5**
BATP Bataraza 26.12 142 *e*P P **09 01 01.6 -0.3**
MDJ Mudanjiang 26.12 49 P P **09 01 03.4 +1.6**
MDJ pP sP 09 01 07.5 +3.0
MDJ sP pP 09 01 09.3 +5.6
MDJ S S **09 05 34.4 +0.4**
MDJ pmax pmax
comp=Z,32nm,1.2s
MDJ pmax pmax
comp=Z,3μm,6.5s
MDJ LR LR
comp=Z,43μm,15.3s
MDJ LR LR
comp=Z,43μm,12.0s
DRK Karamyk 26.16 299 P P **09 01 03.2 +0.6**
SKHT Srikalahasti 26.21 236 *e*P P **09 01 02.9 0.0**
SKHT IVmB_BB 09 01 11.1
comp=Z,1μm,2.7s
SKHT IVMs_BB IVMs_BB 09 11 57.5
comp=Z,4μm,15.7s
BTLS Baital 26.27 312 *e*P P **09 01 01.8 -1.4**
comp=Z,70nm,1.6s
BTLS *e*S S **09 05 35.2 -1.3**
BTLS Baital 26.27 312 *e*P P **09 01 01.8 -1.4**
BTLS *e*S S **09 05 35.1 -1.3**
BTLS pmax pmax
comp=Z,70nm,1.6s
JMZ Minamidaito 2 26.30 93 P P **09 01 03.0 -0.6**
CUYO Cuyo Island 26.35 133 *e*P P **09 01 03.9 -0.2**
MLSI Meulaboh, Aceh 26.41 192 P P **09 01 06.5 +1.9**
comp=Z,10μmcomp=Z,6μmcomp=Z,187nm,0.8s
PVCP Virac 26.50 124 *e*P P **09 01 04.8 -0.6**
ZAA0 Zalesovo Array 26.63 337 P P **09 01 05.0 -1.2**
ZAA0 IAMs_20 IAMs_20 09 12 13.3
comp=Z,48μm,18.0s
ZALV Zalesovo Beam 26.63 337 P P **09 01 05.7 -0.5**
comp=Z,223nm,0.8s,baz=143,slow=8.8,SNR=248
ZALV LR LR 09 11 33.3
comp=Z,28μm,19.8s,baz=152,slow=36
ZALV P3KPbc 09 33 53.6
comp=Z,0.6nm,0.5s,baz=262,slow=4.5,SNR=3.8
ZALV Zalesovo Beam 26.63 337 P P **09 01 04.5 -1.8**
ZALV Zalesovo Beam 26.63 337 P P **09 01 04.5 -1.8**
JHS Saijyo 26.71 72 P P **09 01 07.4 +0.1**
JHS IAMs_20 IAMs_20 09 11 34.3
comp=Z,77μm,19.0s
KURBB Kurchatov Arra 26.73 326 P P **09 01 06.3 -0.8**
comp=Z,168nm,1.2s,baz=134,slow=9.4,SNR=280
KURBB P3KPbc 09 33 53.3
comp=Z,0.7nm,0.7s,baz=310,slow=5.0,SNR=8.2
KURBB Kurchatov Arra 26.73 326 P P **09 01 06.0 -1.2**
KURK Kurchatov 26.75 326 P P **09 01 07.4 +0.1**
KURK P P **09 01 07.4 +0.1**
KURK S S **09 05 47.5 +3.8**
KURK S S **09 05 47.5 +3.8**
KURK Kurchatov 26.75 326 *ce*P P **09 01 06.5 -0.8**
KURK pmax pmax
comp=Z,330nm,1.3s
KURK MLR MLR
comp=Z,50μm,16.0s
KURK Kurchatov 26.75 326 P P **09 01 05.9 -1.4**
KURK IAmb IAmb 09 01 22.9
comp=Z,255nm,0.8s
TSI Tuntungan 26.84 187 P P **09 01 09.8 +1.3**
comp=Z,13μmcomp=Z,15μmcomp=Z,767nm,1.4s
KCSI Kotacane, Aceh 26.92 189 P P **09 01 08.7 -0.5**
comp=Z,61μmcomp=Z,3μmcomp=Z,166nm,1.2s
BTK Batken 27.01 300 P P **09 01 08.6 -1.4**
BTK pmax pmax
comp=Z,466nm,1.5s
BTK MLR MLR
comp=Z,21μm,19.0s
BTK Batken 27.01 300 P P **09 01 08.6 -1.4**
VLA Vladivostok 27.13 54 *d i*P P **09 01 11.9 +1.0**
VLA pmax pmax
comp=Z,189nm,1.2s
VLA MLR MLR
comp=Z,25μm,15.0s
GAR Garm 27.20 297 P P **09 01 10.7 -1.1**
URV Uravakonda 27.25 241 *e*P P **09 01 12.4 +0.2**
URV IVmB_BB 09 01 19.1
comp=Z,1μm,2.3s
URV IVMsBB 09 11 49.0
comp=Z,5μm,11.9s
TPTI 27.26 190 P P **09 01 15.6 +3.3**
comp=Z,2μmcomp=Z,60nm,1.0s
DZA Taraz 27.34 306 *e*P P **09 01 12.2 -0.6**
DZA LR LR 09 12 11.1
comp=Z,5μm,11.0s
DZA Taraz 27.34 306 *e*P P **09 01 12.2 -0.6**
DZA MLR MLR
comp=Z,5μm,11.0s
JMN Monobe 27.35 74 P P **09 01 12.0 -1.0**
JMN IAMs_20 IAMs_20 09 13 15.2
comp=Z,51μm,20.0s
PSI Prapat 27.50 186 P P **09 01 14.8 +0.3**
comp=Z,46nm,1.1s,baz=360,slow=6.5,SNR=20
PSI S S **09 05 47.5 -8.9**
comp=Z,2.5nm,0.4s,baz=359,slow=3.8,SNR=1.0
PSI LR LR 09 11 58.1
comp=Z,19μm,20.0s,baz=317,slow=36
GUIM Jordan 27.53 131 *e*P P **09 01 15.3 +0.7**
USA0B Ussuriysk Arra 27.56 51 P P **09 01 15.2 +0.5**
USA0B pmax pmax
comp=Z,257nm,1.5s
USA0B Ussuriysk Arra 27.56 51 P P **09 01 15.2 +0.5**
USA0B IAmb IAmb 09 01 24.1
comp=Z,257nm,1.5s
USRK Ussuriysk Ar. 27.56 51 P P **09 01 16.5 +1.8**
comp=Z,36nm,0.9s,baz=254,slow=7.1,SNR=29
USRK LR LR 09 12 32.0
comp=Z,23μm,19.3s,baz=240,slow=37
USRK Ussuriysk Ar. 27.56 51 P P **09 01 15.5 +0.8**
USRK Ussuriysk Ar. 27.56 51 P P **09 01 15.5 +0.8**
RPSI Rantau Prapat 27.61 186 P P **09 01 14.1 -1.2**
RPSI IAmb IAmb 09 01 40.7
comp=Z,172nm,1.2s
RPSI Rantau Prapat 27.61 186 P P **09 01 14.8 -0.5**
KKM Kota Kinabalu 27.69 148 P P **09 01 15.5 -0.7**
KKM IAmb IAmb 09 01 21.3
comp=Z,215nm,0.9s
KBL Kabul 27.90 287 P P **09 01 19.5 +1.3**
SNR=255
KBL Kabul 27.90 287 P P **09 01 18.1 -0.1**
KBL pmax pmax
comp=Z,325nm,1.1s
KBL Kabul 27.90 287 P P **09 01 18.1 -0.1**
POO Poona 27.95 252 *e*P P **09 01 18.5 0.0**
POO *e*P P **09 01 18.5 0.0**
KK31 Karatay Array 27.98 306 P P **09 01 17.4 -1.1**
KK31 pmax pmax
comp=Z,220nm,1.5s
KK31 Karatay Array 27.98 306 P P **09 01 17.4 -1.1**
KK31 IAmb IAmb 09 01 26.9
comp=Z,220nm,1.5s
KKAR Karatay Array 27.98 306 P P **09 01 17.2 -1.3**
KKAR pmax pmax
comp=Z,220nm,1.5s
KKAR Karatay Array 27.98 306 P P **09 01 17.2 -1.3**
KKAR IAmb IAmb 09 01 26.9
comp=Z,220nm,1.5s
CHGR Chuyangaron 28.05 296 P P **09 01 18.3 -1.1**
IUG luzhnay 28.06 304 *e*P P **09 01 19.5 0.0**
comp=Z,108nm,2.2s
IUG *e*S S **09 06 04.8 -0.1**
IUG luzhnay 28.06 304 *e*P P **09 01 19.4 0.0**
IUG *e*S S **09 06 04.8 -0.1**
IUG pmax pmax
comp=Z,108nm,2.2s
CNOP Candoni, Negro 28.16 132 *e*P P **09 01 23.3 +2.9**
BRLS Borolday 28.43 305 *e*P P **09 01 23.4 +0.7**
BRLS LR LR 09 12 56.6
comp=Z,7μm,12.0s
BRLS Borolday 28.43 305 *e*P P **09 01 23.3 +0.7**
BRLS MLR MLR
comp=Z,7μm,12.0s
MYKOM Kota Tinggi 28.43 176 P P **09 01 22.2 -0.6**
MYKOM IAmb IAmb 09 01 42.2
comp=Z,108nm,1.0s
MYKOM Kota Tinggi 28.43 176 P P **09 01 25.0 +2.2**
OCLP Ormoc 28.57 127 *e*P P **09 01 26.8 +2.7**
JWT Wachi 28.59 71 P P **09 01 23.3 -0.8**
OTUK Ortayu 28.74 317 P P **09 01 24.6 -0.7**
BOD Bodaibo 28.77 14 *e*P P **09 01 26.9 +1.5**
BOD pmax pmax
comp=Z,112nm,2.0s
SPMM Sapulut 28.98 149 P P **09 01 29.0 +1.3**
GSI Gunungsitoli 29.13 189 P P **09 01 28.4 -0.5**
comp=Z,8μmcomp=Z,6μmcomp=Z,154nm,1.8s
GSI Gunungsitoli 29.13 189 P P **09 01 28.1 -0.8**
TPRI Tanjung Pinang 29.35 174 P P **09 01 31.7 +0.8**
comp=Z,75nm,0.9s
MSLP Maasin 29.40 128 *e*P P **09 01 33.4 +2.0**
BRZS Berezniki 29.40 320⇑ *i*P P **09 01 30.4 -0.8**
comp=Z,142nm,2.5s
BRZS Berezniki 29.40 320 *c i*P P **09 01 30.3 -0.8**

BRZS pmax pmax
comp=Z,142nm,2.5s
SBUM Sibu 29.42 158 P **P** **09 01 31.4 -0.1**
SBUM IAmb IAmb 09 01 51.8
comp=Z,113nm,0.9s
SBUM Sibu 29.42 158 P **P** **09 01 33.0 +1.5**
MNSI Mandailing Nat 29.43 185 P **P** **09 01 29.0 -2.6**
comp=Z,2µmcomp=Z,32nm,0.9s
BHUJ Bhuj 29.48 264 *e*P **P** **09 01 32.3 +0.2**
BHUJ *e*P **P** **09 01 32.3 +0.2**
KLR Kul'dur 29.49 42 P **P** **09 01 33.1 +1.1**
comp=Z,42nm,0.9s,baz=261,slow=9.2,SNR=42
KLR LR LR 09 13 04.1
comp=Z,24µm,18.4s,baz=240,slow=36
KLR Kul'dur 29.49 42*ce*P **P** **09 01 33.0 +1.1**
KLR pmax pmax
comp=Z,183nm,1.6s
KLR MLR MLR
comp=Z,18µm,14.0s
MYLDM Lahad Datu 29.54 145 P **P** **09 01 33.4 +0.8**
MYLDM IAmb IAmb 09 01 56.5
comp=Z,232nm,1.0s
ZEA Zeya 29.79 31 *e*P **P** **09 01 35.8 +1.3**
ZEA *e* 09 02 27.2
ZEA *e* 09 04 37.4
ZEA *e*S **S** **09 06 25.6 -6.0**
ZEA *e*SS **ScP** **09 08 20.6 -0.4**
ZEA pmax pmax
comp=E,30nm,0.9s
ZEA pmax pmax
comp=N,20nm,1.5s
ZEA pmax pmax
comp=Z,50nm,0.9s
ZEA pmax pmax
comp=E,300nm,8.1s
ZEA pmax pmax
comp=N,400nm,6.6s
ZEA pmax pmax
comp=Z,600nm,6.0s
ZEA pmax pmax
comp=E,300nm,5.2s
ZEA pmax pmax
comp=N,300nm,5.4s
ZEA pmax pmax
comp=Z,500nm,9.1s
ZEA smax smax
comp=N,1µm,9.8s
ZEA smax smax
comp=E,700nm,12.4s
ZEA MLR MLR
comp=E,30µm,13.0s
ZEA MLR MLR
comp=N,35µm,9.0s
ZEA MLR MLR
comp=Z,35µm,16.0s
KSM Kuching 29.80 163 P **P** **09 01 34.7 -0.1**
KSM Kuching 29.80 163 P **P** **09 01 36.0 +1.1**
BKNI Bangkinang 29.83 182 P **P** **09 01 36.3 +1.1**
comp=Z,9µmcomp=Z,7µmcomp=Z,331nm,1.0s
BKNI Bangkinang 29.83 182 P **P** **09 01 34.8 -0.4**
BKNI IAmb IAmb 09 01 48.6
comp=Z,201nm,0.9s
INU Inuyama 29.91 71 P **P** **09 01 35.4 -0.4**
PAGZ Pagadian 30.14 133 *e*P **P** **09 01 39.7 +1.8**
JGF Kuroka 30.19 70 P **P** **09 01 37.5 -0.8**
JGF IAMs_20 IAMs_20 09 15 14.2
comp=Z,39µm,18.0s
PALK Pallekele 30.29 225 P **P** **09 01 40.1 +0.8**
PALK P **P** **09 01 40.1 +0.8**
PALK P **P** **09 01 40.1 +0.8**
PALK S **S** **09 06 41.1 +0.9**
PALK S **S** **09 06 41.1 +0.9**
PALK S **S** **09 06 41.1 +0.9**
GLSP General Luna, 30.52 127 *e*P **P** **09 01 36.7 -4.6**
MAJO Matsushiro 30.88 69*d i*P **P** **09 01 43.2 -1.2**
MAJO pmax pmax
comp=Z,110nm,1.8s
MAJO MLR MLR
comp=Z,16µm,16.0s
MAJO Matsushiro 30.88 69 P **P** **09 01 44.3 -0.1**
MAT Matsushiro 30.88 69 P **P** **09 01 43.1 -1.3**
MAT S **S** **09 06 49.0 -0.2**
MJAR Matsushiro Arr 30.88 69 P **P** **09 01 44.0 -0.5**
comp=Z,54nm,1.2s,baz=278,slow=8.6,SNR=22
MJAR Matsushiro Arr 30.88 69 P **P** **09 01 42.8 -1.6**
MJAR pmax pmax
comp=Z,46nm,1.5s
MJAR Matsushiro Arr 30.88 69 P **P** **09 01 42.8 -1.6**
JSG Sagara 30.89 72 P **P** **09 01 43.2 -1.2**
JSG IAmb IAmb 09 01 50.1
comp=Z,246nm,1.3s
TEY Ternei 30.95 52 ‖ *i*P **P** **09 01 46.0 +1.2**
TEY *e*S **S** **09 06 51.7 +1.7**
TEY pmax pmax
comp=Z,700nm,2.3s
TEY pmax pmax
comp=N,30nm,0.9s
TEY pmax pmax
comp=E,30nm,0.9s
TEY pmax pmax
comp=Z,80nm,1.8s
TEY smax smax
comp=E,2µm,8.6s
TEY smax smax
comp=N,4µm,6.2s
TEY MLR MLR
comp=E,31µm,14.0s
TEY MLR MLR
comp=N,31µm,9.0s
TEY MLR MLR
comp=Z,54µm,11.0s
SDSI Sungai Dareh 31.07 181 P **P** **09 01 46.7 +0.6**
comp=Z,84nm,1.2s
BUKP Musuan 31.19 131 *e*P **P** **09 01 49.8 +2.5**
STKI Sintang 31.46 161 P **P** **09 01 49.3 -0.3**
SISI Saibi 31.57 185 P **P** **09 01 52.4 +1.9**
comp=Z,3µmcomp=Z,116nm,0.9s
KCP Kidapawan 31.86 132 ‖ *i*P **P** **09 01 54.3 +1.1**
SKMP Bagumbayan, Su 31.89 133 *e*P **P** **09 01 55.7 +2.3**
DAV Davao City (W) 32.13 131 ‖ *i*P **P** **09 01 56.1 +0.5**
BRVK Borovoye 32.29 324 P **P** **09 01 56.2 -0.3**
BRVK P **P** **09 01 56.2 -0.3**
BRVK Borovoye 32.29 324 P **P** **09 01 55.0 -1.5**
BRVK pmax pmax
comp=Z,107nm,1.0s
BRVK MLR MLR
comp=Z,54µm,20.0s
BRVK Borovoye 32.29 324 P **P** **09 01 55.0 -1.5**
BRVK IAmb IAmb 09 02 17.8
comp=Z,107nm,1.0s
BRVK Borovoye 32.29 324 IAMs_20 IAMs_20 09 14 52.8
comp=Z,54µm,20.0s
PPBI Pangkal Pinang 32.56 172 P **P** **09 02 00.0 +0.8**
MATI Mati 32.67 130 *e*P **P** **09 02 02.0 +1.8**
GRNR Gornyy 32.88 42 ‖ *i*P **P** **09 02 04.5 +2.8**
GRNR *e*S **S** **09 07 27.6 +7.6**
GRNR pmax pmax
comp=E,10.0nm,0.8s
GRNR pmax pmax
comp=N,8.0nm,0.9s
GRNR pmax pmax
comp=Z,20nm,0.8s
GRNR smax smax
comp=N,8.0nm,0.7s
GRNR MLR MLR
comp=E,12µm,10.0s
GRNR MLR MLR
comp=N,9µm,15.0s
GRNR MLR MLR
comp=Z,23µm,10.0s
DDMP Don Marcelino, 32.95 132 *e*P **P** **09 02 03.1 +0.5**
JMM Marumori 32.97 66 P **P** **09 02 02.6 -0.1**
JMM IAmb IAmb 09 02 10.7
comp=Z,67nm,0.7s
PMBI Palembang 33.18 175 IAMs_20 IAMs_20 09 14 09.3
comp=Z,40µm,19.0s
TPI Tanjungpandan 33.36 169 P **P** **09 02 07.7 +1.5**
comp=Z,3µmcomp=Z,61nm,1.2s
MTKI Muara Teweh, K 33.49 156 P **P** **09 02 08.7 +1.3**
comp=Z,6µmcomp=Z,96nm,1.5s
HRA Herat 33.52 287 P **P** **09 02 06.5 -1.3**
HRA IAmb IAmb 09 02 19.3
comp=Z,123nm,1.4s
KSI Kapahiang 33.78 179 P **P** **09 02 09.9 -0.1**
comp=Z,6µmcomp=Z,16µmcomp=Z,161nm,1.0s
SMKI Samarinda 33.92 152 P **P** **09 02 13.2 +2.0**
LHSI Lahat 33.99 177 P **P** **09 02 12.7 +1.0**
comp=Z,5µmcomp=Z,123nm,1.0s
TOLI2 Tolitoli 34.18 145 P **P** **09 02 13.1 -0.3**
TOLI2 IAmb IAmb 09 02 21.0
comp=Z,121nm,1.2s
MPSI Mapaga 34.42 147 P **P** **09 02 17.5 +2.0**
comp=Z,4µmcomp=Z,1µmcomp=Z,31nm,0.8s
BKB Balikpapan 34.54 153 P **P** **09 02 17.6 +1.1**
comp=Z,4µmcomp=Z,7µmcomp=Z,231nm,0.9s
BKB Balikpapan 34.54 153 P **P** **09 02 14.4 -2.1**
BKB IAMs_20 IAMs_20 09 18 49.4
comp=Z,29µm,18.0s
KLSI 34.92 175 P **P** **09 02 20.5 +0.8**
comp=Z,2µmcomp=Z,57nm,1.1s
ASAJ Asahikawa 34.92 55 P **P** **09 02 19.4 -0.1**
comp=Z,55nm,0.8s,baz=264,slow=8.8,SNR=29
ASAJ Asahikawa 34.92 55 P **P** **09 02 17.9 -1.7**
ASAJ pmax pmax
comp=Z,167nm,1.0s
ASAJ MLR MLR
comp=Z,19µm,19.0s
JKA Kamikawa-asahi 34.92 55 P **P** **09 02 17.9 -1.8**
JKA IAmb IAmb 09 02 32.1
comp=Z,167nm,1.0s
ERM Erimo 35.05 59 *i* P **P** **09 02 22.6 +1.9**
ERM pmax pmax
comp=Z,53nm,1.0s
ERM MLR MLR
comp=Z,21µm,15.0s
LWLI Liwa 35.20 176 P **P** **09 02 22.7 +0.4**
comp=Z,147nm,0.9s
MRSI Marisa 35.31 143 P **P** **09 02 27.4 +4.2**
comp=Z,3µmcomp=Z,3µmcomp=Z,60nm,1.0s
YSS Yuzh-Sakhalins 35.58 50 κ *i*P **P** **09 02 26.5 +1.3**
YSS *e* 09 03 53.7
YSS *e*S **S** **09 08 02.0 +0.2**
YSS pmax pmax
comp=Z,200nm,1.0s
YSS pmax pmax
comp=Z,2µm,3.5s
YSS MLR MLR
comp=Z,35µm,13.0s
YSS MLR MLR
comp=N,30µm,12.0s
YSS MLR MLR
comp=E,25µm,12.0s
YSS Yuzh-Sakhalins 35.58 50 P **P** **09 02 25.2 0.0**
YSS IAMs_20 IAMs_20 09 17 21.4
comp=Z,31µm,19.0s
GTOI Gorontalo 35.74 142 P **P** **09 02 26.2 -0.7**
comp=Z,3µmcomp=Z,198nm,0.9s
BBKI Banjar Baru 35.83 157 P **P** **09 02 28.4 +0.8**
comp=Z,4µmcomp=Z,107nm,0.9s
KBKI Kotabaru 36.13 155 P **P** **09 02 32.3 +2.1**
comp=Z,2µmcomp=Z,58nm,1.0s
KMSI Cibinong 36.32 140 P **P** **09 02 35.7 +3.9**
comp=Z,471nm,0.9s
APSI Ampana 36.35 145 P **P** **09 02 33.8 +1.7**
comp=Z,2µmcomp=Z,131nm,0.9s
YAK Yakutsk 36.56 22 P **P** **09 02 34.0 +0.6**
comp=Z,43nm,0.8s,baz=191,slow=0.5,SNR=12
YAK Yakutsk 36.56 22 *e*P **P** **09 02 32.7 -0.6**
YAK *e* 09 03 57.8
YAK *e*S **S** **09 08 15.8 -0.6**
YAK *e*SS **SnSn** **09 10 40.5 -4.3**
YAK *e*SSS SSS 09 11 11.4
YAK pmax pmax
comp=Z,90nm,0.9s
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=E,19nm,1.0s
YAK pmax pmax
comp=Z,248nm,2.0s
YAK pmax pmax
comp=E,183nm,1.6s
YAK pmax pmax
comp=N,240nm,1.9s
YAK smax smax
comp=E,1µm,4.1s
YAK smax smax
comp=N,810nm,3.5s
YAK MLR MLR
comp=Z,10µm,14.0s
YAK Yakutsk 36.56 22 P **P** **09 02 32.3 -1.0**
YAK IAmb IAmb 09 02 50.0
comp=Z,148nm,0.7s
YAK IAMs_20 IAMs_20 09 18 47.4
comp=Z,30µm,19.0s
TYV Tymovskoe 36.58 44 *e*P **P** **09 02 36.0 +2.3**
TYV *e*S **S** **09 08 23.5 +6.5**
TYV pmax pmax
comp=Z,159nm,1.3s
TYV pmax pmax
comp=Z,2µm,3.5s
TYV smax smax
comp=E,13nm,1.6s
TYV smax smax
comp=E,1µm,5.8s
TYV MLR MLR
comp=Z,47nm,13.0s
GEYT Alibeck 36.69 294 P **P** **09 02 35.5 +0.6**
comp=Z,27nm,0.7s,baz=119,slow=5.8,SNR=26
GEYT LR LR 09 21 25.1
comp=Z,31µm,19.5s,baz=90,slow=43
AB31 Akbulak array 36.74 313 *i* P **P** **09 02 34.3 -0.8**
ABKAR Akbulak array 36.74 313 P **P** **09 02 33.5 -1.6**
ABKAR Akbulak array 36.74 313 P **P** **09 02 33.5 -1.6**
LUWI Luwuk 37.03 144 P **P** **09 02 36.9 -1.0**
comp=Z,9µmcomp=Z,290nm,0.9s
YUK Yuzh-Kuril'sk 37.24 56*c i*P **P** **09 02 40.1 +0.7**
YUK *e* 09 04 04.0
YUK *e* 09 04 58.2
YUK *i* S **S** **09 08 26.9 -0.4**
YUK pmax pmax
comp=Z,896nm,1.9s
YUK pmax pmax
comp=Z,569nm,1.1s
YUK pmax pmax
comp=E,192nm,0.8s
YUK pmax pmax
comp=N,277nm,0.9s
YUK MLR MLR
comp=E,22µm,16.0s
YUK MLR MLR
comp=Z,22µm,16.0s
LEM Lembang 37.35 170 P **P** **09 02 41.3 +0.6**
comp=Z,59nm,0.7s,baz=11,slow=9.2,SNR=11
TTSI Tana Toraja 37.37 149 P **P** **09 02 41.5 +0.7**
comp=Z,4µmcomp=Z,214nm,0.8s
KPJI Karang Pucung 38.05 168 P **P** **09 02 48.0 +1.5**
comp=Z,9µmcomp=Z,307nm,1.9s
SMRI Semarang 38.06 166 IAMs_20 IAMs_20 09 18 20.0
comp=Z,33µm,19.0s
TNTI Ternate 38.12 136 P **P** **09 02 49.7 +2.6**
comp=Z,1µmcomp=Z,2µmcomp=Z,36nm,0.7s
TNTI Ternate 38.12 136 P **P** **09 02 46.4 -0.7**
SPSI Sidrap Palu 38.17 150 P **P** **09 02 48.0 +0.5**
comp=Z,4µmcomp=Z,6µmcomp=Z,266nm,1.8s
GRJI Gresik 38.41 163 P **P** **09 02 51.5 +2.0**
comp=Z,91nm,0.7s
JLN Jalan Bani Buh 38.71 268 P **P** **09 02 53.9 +1.8**
SNR=43
JLN P **P** **09 02 53.9 +1.8**
SNR=43
JLN S **S** **09 08 50.4 +0.4**
JLN S **S** **09 08 50.4 +0.4**
BNSI Bone 38.71 150 P **P** **09 02 52.7 +0.6**
comp=Z,3µmcomp=Z,116nm,1.1s
KUR Kuril'sk 38.80 54*d i*P **P** **09 02 53.5 +0.9**
KUR *e* 09 04 22.5
KUR *e*PPP PPP 09 04 43.0
KUR *e* 09 05 04.5
KUR *i* S **S** **09 08 51.5 +0.7**
KUR SSS SSS 09 12 06.8
KUR *e* 09 13 03.1
KUR pmax pmax
comp=Z,689nm,1.3s
KUR pmax pmax
comp=N,357nm,2.1s
KUR pmax pmax
comp=E,152nm,1.2s
KUR pmax pmax
comp=Z,2µm,6.8s
KUR pmax pmax
comp=E,2µm,5.9s
KUR pmax pmax
comp=N,1µm,7.1s
KUR MLR MLR
comp=Z,22µm,14.0s
KUR MLR MLR
comp=N,15µm,15.0s
KUR MLR MLR
comp=E,19µm,15.0s
UGM Wanagama 38.92 166 P **P** **09 02 57.3 +3.5**
comp=E,5µmcomp=E,6µmcomp=E,291nm,1.4s
UGM Wanagama 38.92 166 P **P** **09 02 52.6 -1.2**
UGM IAmb IAmb 09 03 06.0
comp=Z,293nm,1.1s
WBK Wadi Bani Khal 38.93 269 P **P** **09 02 55.9 +1.9**
SNR=34
WBK P **P** **09 02 55.9 +1.9**
SNR=34
WBK S **S** **09 08 57.1 +3.8**
WBK S **S** **09 08 57.1 +3.8**
WOJI Wonogiri, Jawa 38.93 166 P **P** **09 02 55.5 +1.6**
comp=Z,3µmcomp=Z,103nm,0.9s
KMMI Kalianget 38.94 161 P **P** **09 02 56.2 +2.2**
comp=Z,7µmcomp=Z,7µmcomp=Z,169nm,1.5s
SVE Sverdlovsk 38.98 325*de*P **P** **09 02 53.6 -0.3**
SVE *e* 09 04 25.2
SVE *e*S **S** **09 08 53.2 -0.1**
SVE pmax pmax
comp=Z,372nm,1.7s
SVE MLR MLR
comp=Z,37µm,18.0s
WSAR Wadi Sarin 39.00 270 LR LR 09 21 15.0
comp=Z,12µm,20.5s,baz=94,slow=40
KAPI Kappang 39.11 151 P **P** **09 02 54.8 -0.6**
KAPI pmax pmax
comp=Z,126nm,1.2s
KAPI Kappang 39.11 151 P **P** **09 02 54.8 -0.6**
PWJI Pagerwojo 39.31 164 P **P** **09 02 57.8 +0.8**
comp=Z,4µmcomp=Z,159nm,1.1s
BIDO Bidbid 39.34 271 P **P** **09 02 59.4 +2.0**
SNR=64
BIDO P **P** **09 02 59.4 +2.0**
SNR=64
BIDO S **S** **09 09 05.0 +5.5**
BIDO S **S** **09 09 05.0 +5.5**
BLJI Banyuglugur 39.50 161 P **P** **09 03 01.3 +2.7**
comp=Z,75nm,1.1s
BKSI Bulukumba 39.54 151 P **P** **09 02 59.6 +0.6**
comp=Z,2µmcomp=Z,3µmcomp=Z,130nm,0.7s
SMDO Samad 39.57 270 P **P** **09 03 01.3 +1.9**
SNR=75
SMDO P **P** **09 03 01.3 +1.9**
SNR=75
SMDO P **P** **09 03 01.3 +1.9**
SNR=75
SMDO S **S** **09 09 06.2 +3.1**
SMDO S **S** **09 09 06.2 +3.1**
SMDO S **S** **09 09 06.2 +3.1**
ABJI Asem Bagus 39.73 161 P **P** **09 03 03.8 +3.3**
comp=Z,4µmcomp=Z,127nm,0.9s
JMDO Jabal Madar 39.76 269 P **P** **09 03 02.7 +1.8**
SNR=42
JMDO P **P** **09 03 02.7 +1.8**
SNR=42
JMDO P **P** **09 03 02.7 +1.8**
SNR=42
ARU Arti 39.87 324 P **P** **09 03 00.3 -1.1**
comp=Z,36nm,0.8s,baz=118,slow=6.0,SNR=63
ARU LR LR 09 19 41.8
comp=Z,28µm,19.2s,baz=104,slow=37
ARU Arti 39.87 324*c i*P **P** **09 03 01.0 -0.3**
ARU 09 04 31.0
ARU 09 05 04.8
ARU S **S** **09 09 08.8 +2.2**
ARU pmax pmax
comp=Z,171nm,1.1s
ARU MLR MLR
comp=Z,24µm,17.0s
ARU Arti 39.87 324 P **P** **09 03 00.1 -1.2**
ARU IAmb IAmb 09 03 07.2
comp=Z,178nm,0.9s
ARU IAMs_20 IAMs_20 09 20 08.2
comp=Z,31µm,21.0s
NRIK Noril'sk 39.92 352 P **P** **09 03 01.6 0.0**
comp=Z,161nm,1.1s,baz=153,slow=7.3,SNR=139
NRIK S S 09 08 53.4 -14
comp=Z,1.5nm,0.5s,baz=85,slow=17,SNR=0.9
NRIK LR LR 09 20 21.3
comp=Z,22µm,20.4s,baz=166,slow=37
NRIK PKP2ab 09 36 47.1
comp=Z,1.7nm,0.6s,baz=63,slow=11,SNR=5.5
NRIK Noril'sk 39.92 352*ce*P **P** **09 03 01.4 -0.2**
NRIK pmax pmax
comp=Z,183nm,1.1s
NRIK MLR MLR
comp=Z,17µm,17.0s
GMJI Gumukmas 39.96 162 P **P** **09 03 03.8 +1.3**
comp=Z,5µmcomp=Z,6µmcomp=Z,152nm,1.9s
HOQ Hoqain 40.03 271 P **P** **09 03 04.8 +1.7**
SNR=99
HOQ P **P** **09 03 04.8 +1.7**
SNR=99
HOQ P **P** **09 03 04.8 +1.7**
SNR=99
HOQ S **S** **09 09 12.6 +2.8**
HOQ S **S** **09 09 12.6 +2.8**
HOQ S **S** **09 09 12.6 +2.8**
BANOM Banah 40.17 275 P **P** **09 03 06.6 +2.3**
SNR=22
BANOM P **P** **09 03 06.6 +2.3**
SNR=22
BANOM S **S** **09 09 16.5 +4.5**
BANOM S **S** **09 09 16.5 +4.5**
SRBI Singaraja 40.29 159 P **P** **09 03 08.2 +3.0**
comp=Z,6µmcomp=Z,6µmcomp=Z,195nm,3.0s
JAGI Jajag, Banyuwa 40.35 161 P **P** **09 03 07.2 +1.5**
comp=Z,4µmcomp=Z,4µmcomp=Z,151nm,2.5s
JAGI Jajag, Banyuwa 40.35 161 P **P** **09 03 04.1 -1.6**
MDH Madha 40.36 274 P **P** **09 03 08.0 +2.2**
SNR=24
MDH P **P** **09 03 08.0 +2.2**
SNR=24
MDH P **P** **09 03 08.0 +2.2**
SNR=24
MDH S **S** **09 09 16.1 +1.4**
MDH S **S** **09 09 16.1 +1.4**
MDH S **S** **09 09 16.1 +1.4**
MHTO MHTO 40.38 267 P **P** **09 03 07.8 +1.7**
SNR=125
MHTO P **P** **09 03 07.8 +1.7**
SNR=125
MHTO P **P** **09 03 07.8 +1.7**
SNR=125
MHTO S **S** **09 09 17.7 +2.6**
MHTO S **S** **09 09 17.7 +2.6**
MHTO S **S** **09 09 17.7 +2.6**
BSY Bisya 40.41 270 P **P** **09 03 08.2 +1.9**
SNR=166
BSY P **P** **09 03 08.2 +1.9**
SNR=166
BSY P **P** **09 03 08.2 +1.9**
SNR=166
BSY S **S** **09 09 17.8 +2.2**
BSY S **S** **09 09 17.8 +2.2**
BSY S **S** **09 09 17.8 +2.2**
BSSI Bau Bau, Buton 40.44 151 P **P** **09 03 06.5 0.0**
comp=Z,2µmcomp=Z,73nm,1.5s
SOHO SOHO 40.52 273 P **P** **09 03 09.3 +2.2**
SOHO P **P** **09 03 09.3 +2.2**
SOHO S **S** **09 09 20.6 +3.5**
SOHO S **S** **09 09 20.6 +3.5**
UOSS Minazif 40.55 274 P **P** **09 03 06.2 -1.2**
HATD Hatta, Dubai 40.65 274 P **P** **09 03 10.6 +2.4**
SNR=62
HATD P **P** **09 03 10.6 +2.4**
SNR=62
HATD P **P** **09 03 10.6 +2.4**
SNR=62
HATD S **S** **09 09 22.4 +3.3**
HATD S **S** **09 09 22.4 +3.3**
HATD S **S** **09 09 22.4 +3.3**
ASHO Ashiyiah 40.75 274 P **P** **09 03 11.4 +2.2**
SNR=125
ASHO P **P** **09 03 11.4 +2.2**
SNR=125
ASHO S **S** **09 09 26.3 +5.6**
ASHO S **S** **09 09 26.3 +5.6**

ARQ	**Araqi**	**40.79**	**271**	P		**P**	**09 03 11.5**	**+2.1**	
	SNR=115								
ARQ				P		**P**	**09 03 11.5**	**+2.1**	
	SNR=115								
ARQ				P		**P**	**09 03 11.5**	**+2.1**	
	SNR=115								
ARQ				S		**S**	**09 09 25.2**	**+3.9**	
ARQ				S		**S**	**09 09 25.2**	**+3.9**	
ARQ				S		**S**	**09 09 25.2**	**+3.9**	
UMQ	**Umm Al-Quwin**	**40.84**	**275**	P		**P**	**09 03 13.3**	**+3.6**	
	SNR=9.6								
UMQ				P		**P**	**09 03 13.3**	**+3.6**	
	SNR=9.6								
UMQ				P		**P**	**09 03 13.3**	**+3.6**	
	SNR=9.6								
UMQ				S		**S**	**09 09 22.2**	**+0.4**	
UMQ				S		**S**	**09 09 22.2**	**+0.4**	
UMQ				S		**S**	**09 09 22.2**	**+0.4**	
NAZ	**Nazwa, Dubai**	**41.00**	**274**	P		**P**	**09 03 13.7**	**+2.5**	
	SNR=70								
NAZ				P		**P**	**09 03 13.7**	**+2.5**	
	SNR=70								
NAZ				S		**S**	**09 09 29.4**	**+5.1**	
NAZ				S		**S**	**09 09 29.4**	**+5.1**	
FAQ	**Al Faqa, Dubai**	**41.14**	**274**	P		**P**	**09 03 14.3**	**+2.1**	
	SNR=64								
FAQ				P		**P**	**09 03 14.3**	**+2.1**	
	SNR=64								
FAQ				S		**S**	**09 09 28.9**	**+2.6**	
FAQ				S		**S**	**09 09 28.9**	**+2.6**	
DQM	**DQM**	**41.17**	**266**	P		**P**	**09 03 14.3**	**+1.8**	
	SNR=85								
DQM				P		**P**	**09 03 14.3**	**+1.8**	
	SNR=85								
DQM				P		**P**	**09 03 14.3**	**+1.8**	
	SNR=85								
DQM				S		**S**	**09 09 30.6**	**+3.7**	
DQM				S		**S**	**09 09 30.6**	**+3.7**	
DQM				S		**S**	**09 09 30.6**	**+3.7**	
NLAI	**Namlea**	**41.20**	**140**	P		**P**	**09 03 15.1**	**+2.3**	
	comp=Z,2µmcomp=Z,62nm,0.9s								
ASUD	**Al Ashush, Dub**	**41.40**	**274**	P		**P**	**09 03 16.6**	**+2.2**	
	SNR=33								
ASUD				P		**P**	**09 03 16.6**	**+2.2**	
	SNR=33								
ASUD				P		**P**	**09 03 16.6**	**+2.2**	
	SNR=33								
ASUD				S		**S**	**09 09 32.2**	**+1.9**	
ASUD				S		**S**	**09 09 32.2**	**+1.9**	
ASUD				S		**S**	**09 09 32.2**	**+1.9**	
TWSI	**Taliwang, Sumb**	**41.44**	**157**	P		**P**	**09 03 15.2**	**+0.5**	
	comp=Z,3µmcomp=Z,3µmcomp=Z,137nm,1.5s								
AJN	**Ajban**	**41.72**	**274**	P		**P**	**09 03 18.9**	**+1.9**	
	SNR=39								
AJN				P		**P**	**09 03 18.9**	**+1.9**	
	SNR=39								
AJN				P		**P**	**09 03 18.9**	**+1.9**	
	SNR=39								
AJN				S		**S**	**09 09 36.8**	**+1.9**	
AJN				S		**S**	**09 09 36.8**	**+1.9**	
AJN				S		**S**	**09 09 36.8**	**+1.9**	
PLAI	**Plampang**	**41.84**	**156**	P		**P**	**09 03 19.1**	**+1.1**	
	comp=Z,4µmcomp=Z,4µmcomp=Z,163nm,0.8s								
AAI	**Ambon**	**42.19**	**139**	P		**P**	**09 03 25.0**	**+4.1**	
	comp=Z,4µmcomp=Z,173nm,0.9s								
MSAI	**Masohi**	**42.34**	**137**	P		**P**	**09 03 24.1**	**+2.0**	
	comp=Z,1µmcomp=Z,41nm,0.9s								
GUMO	**Guam**	**42.98**	**103**	P		**P**	**09 03 28.9**	**+1.5**	
	comp=Z,122nm,0.8s,baz=300,slow=7.7,SNR=4.8								
WBSI	**Waikabubak, Su**	**43.17**	**154**	P		**P**	**09 03 26.5**	**-2.4**	
	comp=Z,4µmcomp=Z,301nm,0.9s								
EDFI	**Ende, Flores**	**43.29**	**151**	P		**P**	**09 03 28.3**	**-1.6**	
	comp=Z,1µmcomp=Z,52nm,0.8s								
MMRI	**Maumere**	**43.42**	**150**	P		**P**	**09 03 31.7**	**+0.8**	
	comp=Z,3µmcomp=Z,7µmcomp=Z,371nm,1.5s								
MMRI	**Maumere**	**43.42**	**150**	P		**P**	**09 03 29.9**	**-0.9**	
SHAO	**Shalim**	**43.60**	**265**	P		**P**	**09 03 33.6**	**+1.2**	
	SNR=26								
SHAO				P		**P**	**09 03 33.6**	**+1.2**	
	SNR=26								
SHAO				S		**S**	**09 10 03.2**	**+0.4**	
SHAO				S		**S**	**09 10 03.2**	**+0.4**	
MA2	**Magadan**	**43.84**	**34**	P		**P**	**09 03 35.9**	**+2.1**	
	comp=Z,67nm,0.8s,baz=258,slow=11,SNR=13								
MA2				S		**S**	**09 09 58.1**	**-7.3**	
	comp=Z,7.1nm,0.9s,baz=166,slow=23,SNR=1.4								
MA2	**Magadan**	**43.84**	**34**	*ce*P		**P**	**09 03 34.9**	**+1.1**	
MA2					pmax	pmax			
	comp=Z,279nm,1.7s								
MA2					MLR	MLR			
	comp=Z,9µm,14.0s								
MA2	**Magadan**	**43.84**	**34**	P		**P**	**09 03 32.1**	**-1.8**	
MA2					IAmb	IAmb	09 03 41.0		
	comp=Z,198nm,1.2s								
BNDI	**Bandanaira**	**43.85**	**137**	P		**P**	**09 03 35.8**	**+1.4**	
	comp=Z,3µmcomp=Z,34µmcomp=Z,238nm,0.8s								
TIXI	**Tiksi**	**43.92**	**12**	*ce*P		**P**	**09 03 33.5**	**-0.8**	
TIXI	**Tiksi**	**43.92**	**12**	P		**P**	**09 03 32.4**	**-1.9**	
TIXI					IAmb	IAmb	09 03 42.0		
	comp=Z,211nm,1.3s								
FAKI	**Fak Fak**	**44.02**	**133**	P		**P**	**09 03 39.7**	**+4.0**	
	comp=Z,2µmcomp=Z,46nm,0.8s								
BASI	**Baing, Sumba**	**44.16**	**153**	P		**P**	**09 03 35.4**	**-1.4**	
	comp=Z,2µmcomp=Z,3µmcomp=Z,257nm,1.0s								
DMTO	**DMTO**	**44.31**	**265**	P		**P**	**09 03 39.2**	**+1.1**	
	SNR=41								
DMTO				P		**P**	**09 03 39.2**	**+1.1**	
	SNR=41								
DMTO				P		**P**	**09 03 39.2**	**+1.1**	
	SNR=41								
DMTO				S		**S**	**09 10 12.7**	**-0.5**	
DMTO				S		**S**	**09 10 12.7**	**-0.5**	
DMTO				S		**S**	**09 10 12.7**	**-0.5**	
MAK	**Makhachkala**	**44.65**	**302**	*e*P		P	09 03 33.1	-7.4	
MAK				*e*S		S	09 10 06.8	-11	
MAK				*e*SS		**SS**	**09 13 32.1**	**-5.1**	
MAK					pmax	pmax			
	comp=Z,645nm,1.6s								
MAK					MLR	MLR			
	comp=Z,16µm,11.0s								
SKR	**Severo-Kuril's**	**44.90**	**47**	*e*P		**P**	**09 03 39.9**	**-2.4**	
SKR				*e*			09 05 31.7		
SKR				*i* S		**S**	**09 10 18.7**	**-2.2**	
SKR				*e*SS		**ScS**	**09 13 35.4**	**-5.4**	
SKR					pmax	pmax			
	comp=Z,36nm,1.3s								
SKR					pmax	pmax			
	comp=Z,600nm,4.3s								
SKR					pmax	pmax			
	comp=Z,200nm,17.6s								
SKR					MLR	MLR			
	comp=Z,12µm,16.0s								
SKR					MLR	MLR			
	comp=Z,12µm,16.0s								
BELG	**Belogornoye**	**45.01**	**315**	*c i*P		**P**	**09 03 42.4**	**-0.8**	
BELG					pmax	pmax			
	comp=Z,34nm,1.0s								
BELG					MLR	MLR			
	comp=Z,2µm,21.0s								
RBK	**Rabkut**	**45.04**	**265**	P		**P**	**09 03 44.8**	**+0.8**	
	SNR=72								
RBK				P		**P**	**09 03 44.8**	**+0.8**	
	SNR=72								
RBK				P		**P**	**09 03 44.8**	**+0.8**	
	SNR=72								
RBK				S		**S**	**09 10 22.8**	**-1.1**	
RBK				S		**S**	**09 10 22.8**	**-1.1**	
RBK				S		**S**	**09 10 22.8**	**-1.1**	
KIRV	**Kirov**	**45.23**	**324**	LR		LR	09 23 00.0		
	comp=Z,21µm,19.0s,baz=109,slow=37								
KIRV	**Kirov**	**45.23**	**324**	*c* iP		**P**	**09 03 43.3**	**-1.6**	
WHFO	**Wadi Hawf**	**45.24**	**266**	P		**P**	**09 03 45.7**	**+0.1**	
	SNR=45								
WHFO				P		**P**	**09 03 45.7**	**+0.1**	
	SNR=45								
WHFO				P		**P**	**09 03 45.7**	**+0.1**	
	SNR=45								
WHFO				S		**S**	**09 10 24.9**	**-1.8**	
WHFO				S		**S**	**09 10 24.9**	**-1.8**	
WHFO				S		**S**	**09 10 24.9**	**-1.8**	
BAKI	**Biak**	**45.27**	**128**	P		**P**	**09 03 45.6**	**-0.1**	
	comp=Z,3µmcomp=Z,149nm,1.1s								
SOEI	**Soe**	**45.32**	**148**	P		**P**	**09 03 46.5**	**+0.3**	
	comp=Z,3µmcomp=Z,176nm,0.9s								
SOEI	**Soe**	**45.32**	**148**	P		**P**	**09 03 44.3**	**-1.9**	
SOEI					IAmb	IAmb	09 04 03.5		
	comp=Z,124nm,0.8s								
BATI	**Baumata**	**45.44**	**149**	P		**P**	**09 03 50.7**	**+3.6**	
	comp=Z,3µmcomp=Z,143nm,1.0s								
SEY	**Seymchan**	**45.75**	**30**	P		**P**	**09 03 49.9**	**+0.9**	
	comp=Z,6.4nm,0.8s,baz=242,slow=5.7,SNR=9.0								
SEY					LR	LR	09 23 33.8		
	comp=Z,23µm,18.3s,baz=247,slow=37								
SEY	**Seymchan**	**45.75**	**30**	*i* P		**P**	**09 03 48.2**	**-0.8**	
GROC	**Groznyy**	**45.88**	**302**	*e*P		**P**	**09 03 48.9**	**-1.4**	
GROC				*e*			09 05 35.7		
GROC				*e*S		**S**	**09 10 33.4**	**-2.0**	
GROC					pmax	pmax			
	comp=Z,64nm,1.1s								
ABTO	**Aybut**	**45.89**	**265**	P		**P**	**09 03 52.0**	**+1.2**	
	SNR=39								
ABTO				P		**P**	**09 03 52.0**	**+1.2**	
	SNR=39								
ABTO				P		**P**	**09 03 52.0**	**+1.2**	
	SNR=39								
ABTO				P		**pP**	**09 03 52.2**	**-0.5**	
ABTO				P		**pP**	**09 03 52.2**	**-0.5**	
ABTO				P		**pP**	**09 03 52.2**	**-0.5**	
ABTO				S		**S**	**09 10 33.8**	**-2.4**	
ABTO				S		**S**	**09 10 33.8**	**-2.4**	
ABTO				S		**S**	**09 10 33.8**	**-2.4**	
PEA0B	**Petropavlovsk-**	**46.13**	**44**	P		**P**	**09 03 50.5**	**-1.7**	
PEA0B	**Petropavlovsk-**	**46.13**	**44**	P		**P**	**09 03 50.5**	**-1.7**	
PEA0B					IAmb	IAmb	09 03 58.2		
	comp=Z,134nm,1.1s								
PEA0B					IAMs_20	IAMs_20	09 24 33.0		
	comp=Z,19µm,18.0s								
PETK	**Petropavlovsk-**	**46.13**	**44**	P		**P**	**09 03 53.3**	**+1.1**	
	comp=Z,52nm,0.9s,baz=222,slow=4.2,SNR=37								
PETK					LR	LR	09 24 43.7		
	comp=Z,18µm,18.1s,baz=263,slow=38								
PETK	**Petropavlovsk-**	**46.13**	**44**	P		**P**	**09 03 50.7**	**-1.5**	
PETK	**Petropavlovsk-**	**46.13**	**44**	P		**P**	**09 03 50.7**	**-1.5**	
PET	**Petropavlovsk**	**46.70**	**44**	*α i*P		**P**	**09 03 59.0**	**+2.5**	
PET				*e*			09 05 32.1		
PET				*e*			09 05 51.6		
PET				*e*S		**S**	**09 10 45.8**	**-0.9**	
PET				*e*SS		**SS**	**09 14 04.0**	**-8.7**	
PET					pmax	pmax			
	comp=Z,140nm,1.2s								
PET					pmax	pmax			
	comp=Z,600nm,12.3s								
PET					smax	smax			
	comp=N,2µm,19.3s								
PET					smax	smax			
	comp=E,1µm,17.1s								
PET					MLR	MLR			
	comp=Z,29µm,15.0s								
PET					MLR	MLR			
	comp=Z,30µm,15.0s								
PET	**Petropavlovsk**	**46.70**	**44**	P		**P**	**09 03 55.5**	**-1.0**	
PET					IAmb	IAmb	09 04 02.8		
	comp=Z,144nm,1.2s								
GNI	**Garni**	**46.93**	**298**	LR		LR	09 28 05.4		
	comp=Z,14µm,18.1s,baz=100,slow=42								
GNI	**Garni**	**46.93**	**298**	P		**P**	**09 04 02.4**	**+3.6**	
GNI				P		**P**	**09 04 02.4**	**+3.6**	
GNI				P		**P**	**09 04 02.4**	**+3.6**	
GNI				S		**S**	**09 10 51.7**	**+0.9**	
GNI				S		**S**	**09 10 51.7**	**+0.9**	
GNI				S		**S**	**09 10 51.7**	**+0.9**	
GNI	**Garni**	**46.93**	**298**	*i* P		**P**	**09 03 57.5**	**-1.3**	
GNI					pmax	pmax			
	comp=Z,164nm,1.7s								
GNI					MLR	MLR			
	comp=Z,10µm,16.0s								
GNI	**Garni**	**46.93**	**298**	P		**P**	**09 03 58.0**	**-0.8**	
GNI					IAmb	IAmb	09 04 10.9		
	comp=Z,83nm,1.2s								
ZEI	**Tsey**	**47.30**	**302**	*e*P		**P**	**09 03 59.9**	**-1.8**	
ZEI					pmax	pmax			
	comp=Z,54nm,1.4s								
SAUI	**Saumlaki**	**47.45**	**139**	P		**P**	**09 04 06.6**	**+3.7**	
	comp=Z,216nm,0.9s								
SAUI	**Saumlaki**	**47.45**	**139**	P		**P**	**09 04 01.4**	**-1.5**	
SMPI	**Sarmi**	**47.65**	**126**	P		**P**	**09 04 06.1**	**+1.7**	
	comp=Z,2µmcomp=Z,3µmcomp=Z,148nm,1.2s								
SOCY	**Socotra**	**47.69**	**258**	P		**P**	**09 04 05.7**	**+0.8**	
	SNR=16								
SOCY	**Socotra**	**47.69**	**258**	P		**P**	**09 04 01.9**	**-3.0**	
GOF	**Gofitskoye**	**47.77**	**305**	*e*P		**P**	**09 04 05.4**	**+0.3**	
GOF				*e*S		S	09 11 12.7	+10	
GOF					pmax	pmax			
	comp=Z,156nm,1.4s								
KBZ	**Khabaz**	**47.96**	**303**	P		**P**	**09 04 07.7**	**+1.2**	
	comp=Z,6.9nm,0.8s,baz=85,slow=9.5,SNR=10								
KBZ					S	**S**	**09 10 57.4**	**-7.6**	
	comp=Z,2.4nm,0.9s,baz=160,slow=20,SNR=1.8								
KBZ					LR	LR	09 27 18.2		
	comp=Z,13µm,18.4s,baz=79,slow=40								
KBZ	**Khabaz**	**47.96**	**303**	*ce*P		**P**	**09 04 04.3**	**-2.2**	
KBZ					pmax	pmax			
	comp=Z,83nm,2.2s								
KBZ					MLR	MLR			
	comp=Z,18µm,16.0s								
KIV	**Kislovodsk**	**48.09**	**304**	⇑P		**P**	**09 04 10.2**	**+2.5**	
KIV	**Kislovodsk**	**48.09**	**304**	P		**P**	**09 04 08.6**	**+0.9**	
KIV				P		**P**	**09 04 08.6**	**+0.9**	
KIV				S		**S**	**09 11 10.7**	**+3.6**	
KIV				S		**S**	**09 11 10.7**	**+3.6**	
KIV	**Kislovodsk**	**48.09**	**304**	*e*P		**P**	**09 04 06.6**	**-1.1**	
KIV				*e*S		**S**	**09 11 07.0**	**-0.2**	
KIV					pmax	pmax			
	comp=Z,783nm,4.8s								
KIV					pmax	pmax			
	comp=Z,174nm,1.1s								
KIV					MLR	MLR			
	comp=Z,47µm,16.0s								
KIV	**Kislovodsk**	**48.09**	**304**	P		**P**	**09 04 06.8**	**-0.9**	
VRH	**Novokhopyorsk**	**48.57**	**313**	*e*P		**P**	**09 04 10.2**	**-0.9**	
VRH				*e*S		**S**	**09 11 09.8**	**-3.6**	
VRH					pmax	pmax			
	comp=Z,80nm,0.8s								
VRH					smax	smax			
	comp=N,3µm,19.0s								
VRH					MLR	MLR			
	comp=Z,8µm,13.0s								
BATM	**Batumi**	**49.05**	**301**	⇓P		**P**	**09 04 17.6**	**+2.6**	
BATM	**Batumi**	**49.05**	**301**	⇓P		**P**	**09 04 17.6**	**+2.6**	
GENI	**Genyem**	**49.10**	**125**	P		**P**	**09 04 17.9**	**+2.3**	
	comp=Z,4µmcomp=Z,7µmcomp=Z,233nm,1.1s								
JAY	**Jayapura**	**49.42**	**124**	P		**P**	**09 04 20.8**	**+2.6**	
	comp=Z,2µmcomp=Z,1µmcomp=Z,30nm,0.9s								
VORD	**Divnogorie**	**50.10**	**313**	*e*P		**P**	**09 04 21.0**	**-1.8**	
VORD					pmax	pmax			
	comp=Z,70nm,1.5s								
VORD					MLR	MLR			
	comp=Z,2µm,8.0s								
VORR	**Voronezh**	**50.15**	**314**	*e*P		**P**	**09 04 21.0**	**-2.2**	
VORR					pmax	pmax			
	comp=Z,300nm,1.4s								
VSR	**Storozhevoye**	**50.18**	**313**	*e*P		**P**	**09 04 22.2**	**-1.2**	
VSR				*e*S		**S**	**09 11 31.6**	**-4.4**	
VSR					pmax	pmax			
	comp=Z,100nm,1.1s								
VSR					smax	smax			
	comp=N,1µm,9.8s								
VSR					MLR	MLR			
	comp=Z,4µm,12.0s								
RAYN	**Ar Rayn**	**50.23**	**277**	P		**P**	**09 04 23.1**	**-1.2**	
RAYN					pmax	pmax			
	comp=Z,261nm,1.4s								
RAYN	**Ar Rayn**	**50.23**	**277**	P		**P**	**09 04 23.1**	**-1.2**	
SOC	**Sochi**	**50.27**	**303**	*e*P		P	09 04 17.7	-6.6	
SOC				*e*			09 06 18.2		
SOC				*e*PPP		PPP	09 07 11.6		
SOC				*e*S		**S**	**09 11 29.1**	**-8.4**	
SOC				*e*SS		**SS**	**09 15 05.5**	**-5.2**	
SOC				*e*SSS		SSS	09 16 37.5		
SOC					MLR	MLR			
	comp=Z,22µm,18.0s								
LPSR	**Galich'ya Gora**	**50.32**	**315**	*e*P		**P**	**09 04 23.5**	**-1.0**	
LPSR				*e*S		**S**	**09 11 35.5**	**-2.5**	
LPSR					pmax	pmax			
	comp=Z,160nm,0.9s								
LPSR					smax	smax			
	comp=N,1µm,10.9s								
LPSR					MLR	MLR			
	comp=Z,15µm,24.0s								
KLMR	**Klimovskoe**	**50.59**	**326**	*d i*P		**P**	**09 04 26.3**	**-0.1**	
KLMR				*e*			09 06 19.9		
KLMR				*e*S		**S**	**09 11 43.2**	**+1.7**	
KLMR				pmax	pmax				
	comp=Z,358nm,1.4s								
KLMR				MLR	MLR				
	comp=Z,5µm,12.0s								
KLMR	**Klimovskoe**	**50.59**	**326**	⇓*i*P		**P**	**09 04 26.3**	**-0.1**	
KLMR				*i* P		**P**	**09 04 26.3**	**-0.1**	
KLMR				*i* P		**P**	**09 04 26.3**	**-0.1**	
KLMR				AMP			09 04 31.8		
	comp=Z,358nm,1.4s								
KLMR				*e*PP		**PP**	**09 06 20.0**	**-2.0**	
KLMR				*e*S		**S**	**09 11 43.2**	**+1.7**	
KLMR				*e*S		**S**	**09 11 43.2**	**+1.7**	
KLMR				*e*SS		**SS**	**09 15 19.5**	**+4.3**	
KLMR				*e*SS		**SS**	**09 15 19.5**	**+4.3**	
KLMR				LQ		LQ	09 22 15.3		
KLMR				LQ		LQ	09 22 15.3		
KLMR				LR		LR	09 23 47.3		
KLMR				AMP			09 26 02.9		
	comp=Z,5µm,11.8s								
MOS	**Moscow**	**51.16**	**319**	*e*P		**P**	**09 04 28.6**	**-2.1**	
MOS				*e*			09 06 26.3		
MOS				*e*S		**S**	**09 11 45.5**	**-3.9**	
MOS				*e*			09 14 15.8		
MOS				*e*SS		**SS**	**09 15 23.5**	**-0.8**	
MOS				pmax	pmax				
	comp=Z,2µm,2.0s								
MOS				pmax	pmax				
	comp=Z,575nm,1.6s								
MOS				MLR	MLR				
	comp=E,19µm,14.0s								
MOS				MLR	MLR				
	comp=Z,23µm,14.0s								
OBN	**Obninsk**	**51.74**	**318**	*c i*P		**P**	**09 04 34.6**	**-0.5**	
OBN				*i*			09 04 38.5		
OBN				*i*			09 06 39.1		
OBN				*i* S		**S**	**09 11 54.5**	**-3.0**	
OBN				pmax	pmax				
	comp=Z,147nm,1.3s								
OBN				MLR	MLR				
	comp=Z,15µm,15.0s								
OBN	**Obninsk**	**51.74**	**318**	P		**P**	**09 04 33.8**	**-1.3**	
OBN				IAMs_20	IAMs_20		09 27 46.3		
	comp=Z,25µm,20.0s								
ANN	**Anapa**	**51.76**	**305**	*e*P		**P**	**09 04 37.0**	**+1.6**	
ANN				*e*PP		**sP**	**09 04 40.3**	**+2.1**	
ANN				*e*			09 06 39.2		
ANN				*e*S		**S**	**09 12 00.3**	**+2.2**	
ANN				pmax	pmax				
	comp=N,96nm,1.3s								
ANN				pmax	pmax				
	comp=Z,160nm,1.1s								
ANN				pmax	pmax				
	comp=E,32nm,0.8s								
ANN				MLR	MLR				
	comp=N,14µm,20.0s								
ANN				MLR	MLR				
	comp=E,17µm,15.0s								
ANN				MLR	MLR				
	comp=Z,29µm,18.0s								
TMCR	**Tamitsa**	**51.76**	**330**	*e*P		**P**	**09 04 33.5**	**-1.6**	
TMCR				*e*S		**S**	**09 11 57.1**	**-0.5**	
TMCR				pmax	pmax				
	comp=Z,211nm,1.2s								
KNRA	**Kununurra**	**52.58**	**147**	P		**P**	**09 04 41.3**	**-0.4**	
KNRA				IAmb	IAmb		09 04 46.2		
	comp=Z,133nm,1.1s								
BILL	**Bilibino**	**52.73**	**25**	*ce*P		**P**	**09 04 42.5**	**+0.2**	
BILL				*i*			09 04 56.5		
BILL				*i*			09 06 50.6		
BILL				*i* S		**S**	**09 12 12.8**	**+2.0**	
BILL				pmax	pmax				
	comp=Z,139nm,2.1s								
BILL				MLR	MLR				
	comp=Z,30µm,18.0s								
BILL	**Bilibino**	**52.73**	**25**	P		**P**	**09 04 42.9**	**+0.5**	
GAZ	**Gaziantep**	**53.24**	**296**	P		**P**	**09 04 44.4**	**-2.3**	
GAZ				IAmb	IAmb		09 04 53.0		
	comp=Z,216nm,1.5s								
FITZ	**Fitzroy Crossi**	**53.33**	**151**	P		**P**	**09 04 46.2**	**-1.1**	
LVZ	**Lovozero**	**53.71**	**334**	*ce*P		**P**	**09 04 47.1**	**-2.5**	
LVZ				pmax	pmax				
	comp=Z,222nm,1.7s								
LVZ				MLR	MLR				
	comp=Z,14µm,14.0s								
LVZ	**Lovozero**	**53.71**	**334**	P		**P**	**09 04 48.2**	**-1.3**	
LVZ				IAmb	IAmb		09 04 50.3		
	comp=Z,151nm,1.1s								
DIKM	**Dikmen**	**53.81**	**302**	⇑P		**P**	**09 04 52.2**	**+1.5**	
MBWA	**Marble Bar**	**54.00**	**159**	P		**P**	**09 04 55.7**	**+3.5**	
MBWA				P		**P**	**09 04 55.7**	**+3.5**	
MANU	**Manus Island**	**54.04**	**118**	P		**P**	**09 04 51.7**	**-1.0**	
APA	**Apatity**	**54.13**	**334**	⇓*i*P		**P**	**09 04 50.5**	**-2.1**	
APA				*i*			09 06 51.8		
APA				*i* S		**S**	**09 12 21.0**	**-8.8**	
APA				*i*			09 14 38.0		
APA				*i* SS		**SS**	**09 16 12.0**	**+1.1**	
APA				pmax	pmax				
	comp=Z,45nm,1.1s								
PSA00	**Pilbara Seismi**	**54.43**	**159**	P		**P**	**09 04 54.8**	**-0.5**	
PSA00	**Pilbara Seismi**	**54.43**	**159**	P		**P**	**09 04 54.7**	**-0.5**	
PSA00				IAmb	IAmb		09 04 59.6		
	comp=Z,81nm,0.8s								
PSA00				IAMs_20	IAMs_20		09 30 36.7		
	comp=Z,8µm,22.0s								
PUL	**Pulkovo**	**55.10**	**324**	*i* P		**P**	**09 04 59.4**	**-0.3**	
PUL				pmax	pmax				
	comp=Z,170nm,0.9s								
PUL				MLR	MLR				
	comp=Z,19µm,19.0s								
BR131	**Keskin Array S**	**55.41**	**300**	*c i*P		**P**	**09 05 00.6**	**-1.9**	
BR131	**Keskin Array S**	**55.41**	**300**	P		**P**	**09 05 00.7**	**-1.9**	
BR131				IAmb	IAmb		09 05 08.6		
	comp=Z,113nm,1.4s								
BRTR	**Keskin Array B**	**55.41**	**300**	P		**P**	**09 05 02.1**	**-0.4**	
	comp=Z,16nm,1.0s,baz=114,slow=5.5,SNR=28								
BRTR				LR		LR	09 34 36.2		
	comp=Z,5µm,18.1s,baz=74,slow=42								
BRTR	**Keskin Array B**	**55.41**	**300**	P		**P**	**09 05 01.0**	**-1.5**	
BRTR	**Keskin Array B**	**55.41**	**300**	P		**P**	**09 05 01.0**	**-1.5**	
MMAI	**Mount Meron Ar**	**55.72**	**291**	LR		LR	09 34 50.9		
	comp=Z,8µm,18.7s,baz=70,slow=42								
BR231	**Keskin MP Arra**	**56.03**	**300**	P		**P**	**09 05 05.2**	**-1.7**	
BR231				IAmb	IAmb		09 05 26.8		
	comp=Z,126nm,1.1s								
SMY	**Shemya**	**56.04**	**44**	IAMs_20	IAMs_20		09 29 02.9		
	comp=Z,13µm,18.0s								
AKASG	**Malin Array Be**	**56.48**	**313**	P		**P**	**09 05 08.3**	**-1.5**	

MNK e 09 07 20.0
MNK e 09 08 38.0
MNK eS S **09 13 04.0 -1.8**
MNK MLR MLR
comp=Z,29µm,16.0s
MNK MLR MLR
comp=Z,26µm,16.0s
MNK MLR MLR
comp=E,15µm,17.0s
CSS Mathiatis 56.83 294 P P **09 05 10.1 -2.5**
CSS IAmb IAmb 09 05 24.7
comp=Z,109nm,1.2s
VSU Vasula 57.02 323 eP P **09 05 12.9 -0.6**
VSU Vasula 57.02 323 i P P **09 05 12.1 -1.4**
VSU pmax pmax
comp=Z,323nm,0.9s
VSU MLR MLR
comp=Z,34µm,16.0s
MDUB Mudurnu 57.06 301 P P **09 05 12.0 -2.2**
EIL Elat 57.10 288 LR LR 09 33 37.1
comp=Z,11µm,19.4s,baz=74,slow=40
FIA1 FINESS Array S 57.12 326 P P **09 05 13.0 -1.2**
FIA1 IAmb IAmb 09 05 39.6
comp=Z,58nm,1.0s
FINES FINESS Array B 57.12 326 P P **09 05 13.0 -1.2**
comp=Z,11nm,0.6s,baz=79,slow=9.9,SNR=32
FINES LR LR 09 30 07.2
comp=Z,26µm,18.9s,baz=89,slow=36
FINES FINESS Array B 57.12 326 P P **09 05 12.7 -1.4**
FINES FINESS Array B 57.12 326 P P **09 05 12.7 -1.4**
ARD3 ARCESS Array S 57.15 336 P P **09 05 13.6 -0.7**
ARD3 IAmb IAmb 09 05 16.0
comp=Z,133nm,1.3s
ARC3 ARCESS Array S 57.16 336 P P **09 05 13.3 -1.1**
ARC3 IAmb IAmb 09 05 16.1
comp=Z,156nm,1.4s
ARB2 ARCESS Array S 57.17 336 P P **09 05 13.7 -0.8**
ARB2 IAmb IAmb 09 05 15.5
comp=Z,123nm,1.2s
ARA0 ARCESS Array S 57.17 336 eP P **09 05 13.9 -0.5**
ARCES ARCESS Array B 57.17 336 P P **09 05 14.0 -0.4**
comp=Z,33nm,0.7s,baz=87,slow=7.0,SNR=70
IDID Didziasalis 57.35 319 eP P **09 05 15.1 -0.8**
KIS Kishinev 57.36 309⇓ iP P **09 05 16.3 +0.2**
comp=Z,430nm,3.4s
KIS Kishinev 57.36 309d iP P **09 05 16.3 +0.2**
KIS eS S **09 13 10.8 -2.7**
KIS ePS PKiKP 09 13 18.0 +42
KIS eSS SS **09 16 57.0 -5.5**
KIS pmax pmax
comp=Z,400nm,3.4s
KIS MLR MLR
comp=E,3µm,16.0s
KIS MLR MLR
comp=Z,4µm,16.0s
NACGM Naroch 57.38 319 eP P **09 05 16.0 -0.1**
NACGM PM 09 05 23.0
comp=Z,0.4nm,1.0s
NACGM ePP PP **09 07 27.0 +3.9**
NACGM ePPP PPP 09 08 30.0
NACGM eS S **09 13 12.0 -1.5**
NACGM eSS SS **09 17 05.0 +2.6**
NACGM eSSS SSS 09 19 26.0
NACGM eLQ LQ 09 23 57.0
NACGM eLR LR 09 27 05.0
NACGM LRM MLR 09 31 20.0
comp=Z,32nm,14.0s
MILM Milestii Mici 57.38 309⇑ P P **09 05 17.2 +0.9**
SORM Soroca 57.46 310⇑ P P **09 05 15.4 -1.4**
SORM Soroca 57.46 310⇑ P P **09 05 15.4 -1.4**
ATD Arta Tunnel 57.53 264 P P **09 05 16.1 -1.8**
ATD IAmb IAmb 09 05 24.5
comp=Z,117nm,1.2s
IZAR Zarasai 57.58 320 eP P **09 05 16.4 -1.1**
IIGN Ignalina 57.64 319 eP P **09 05 17.1 -0.9**
ISAL Salakas 57.67 319 eP P **09 05 17.3 -0.8**
HOPEN Hopen 57.69 344 eP P **09 05 17.2 -0.7**
HOPEN eS S **09 13 17.4 +0.5**
HOPEN eSS SS **09 17 06.8 +0.3**
HOPEN IVMs_BB IVMs_BB 09 34 35.4
comp=Z,8µm,11.9s
TLCR 57.72 307⇑ P P **09 05 19.1 +0.4**
TLCR 57.72 307⇑ P P **09 05 19.1 +0.4**
JURR Jurilovca 57.77 306⇑ P P **09 05 20.0 +1.0**
PATS Pohnpei 57.78 102 P P **09 05 18.6 -0.8**
HAMF Hammerfest 57.80 337 eP P **09 05 18.3 -0.5**
HAMF eS S **09 13 20.7 +2.1**
HAMF eSS SS **09 17 12.9 +4.4**
HAMF IVMs_BB IVMs_BB 09 31 27.8
comp=Z,6µm,19.2s
KTK1 Kautokeino 57.98 335 eP P **09 05 19.4 -0.7**
KTK1 eS S **09 13 22.7 +1.8**
TPGR Topolog 58.07 307⇑ P P **09 05 21.6 +0.4**
VASR Vaslui 58.12 309⇓ P P **09 05 22.6 +1.1**
TIRR Tirgusor 58.16 306⇑ P P **09 05 21.9 +0.1**
TIRR Tirgusor 58.16 306⇑ P P **09 05 21.9 +0.1**
TIRR Tirgusor 58.16 306 IAMs_20 IAMs_20 09 34 50.2
comp=Z,24µm,20.0s
CFR Carcaliu 58.20 307⇑ P P **09 05 22.1 +0.1**
CFR Carcaliu 58.20 307⇑ P P **09 05 22.1 +0.1**
ISP Isparta 58.23 298 P P **09 05 20.6 -2.0**
ISP pmax pmax
comp=Z,103nm,0.9s
ISP Isparta 58.23 298 P P **09 05 20.6 -2.0**
ISP IAmb IAmb 09 05 27.5
comp=Z,103nm,0.9s
VARL Varlezi 58.24 308⇑ P P **09 05 23.2 +0.9**
BIR Birlad 58.31 308⇑ P P **09 05 24.0 +1.2**
BIR Birlad 58.31 308⇑ P P **09 05 24.0 +1.2**
TLBR Topalu 58.40 306⇓ P P **09 05 24.3 +0.8**
HARR Harsova 58.44 306⇑ P P **09 05 23.9 +0.1**
HARR Harsova 58.44 306⇑ P P **09 05 23.9 +0.1**
ICOR Ion Corvin 58.66 306⇑ P P **09 05 25.3 0.0**
PMG Port Moresby 58.80 125d iP P **09 05 26.5 -0.1**
PMG pmax pmax
comp=Z,72nm,0.8s
PMG MLR MLR
comp=Z,2µm,18.0s
PMG Port Moresby 58.80 125 P P **09 05 26.0 -0.6**
PMG IAmb IAmb 09 05 35.2
comp=Z,108nm,1.0s
ODBI Odobesti 58.81 308⇓ P P **09 05 27.2 +0.9**
AMRR Amara 58.88 306⇑ P P **09 05 27.8 +1.0**
AMRR Amara 58.88 306⇑ P P **09 05 27.8 +1.0**
PABE Paberze 58.89 319 eP P **09 05 25.9 -0.7**
TESR Tescani 58.92 309⇑ P P **09 05 27.4 +0.3**
WRAB Tennant Creek 58.96 144d iP P **09 05 26.6 -1.0**
WRAB pmax pmax
comp=Z,199nm,1.0s
WRAB MLR MLR
comp=Z,3µm,20.0s
WRAB Tennant Creek 58.96 144 P P **09 05 26.8 -0.8**
WRA Warramunga Arr 58.97 144 P P **09 05 27.2 -0.4**
comp=Z,111nm,0.8s,baz=336,slow=7.5,SNR=402
WRA S S **09 13 32.6 -2.3**
comp=Z,3.3nm,1.2s,baz=289,slow=10.0,SNR=5.8
WRA PKPPKP **P'P'df** **09 35 03.9 +7.6**
comp=Z,3.0nm,1.0s,baz=157,slow=1.8,SNR=11
WRA Warramunga Arr 58.97 144 i P P **09 05 27.2 -0.4**
WRA pmax pmax
comp=Z,104nm,0.9s
WB2 Warramunga Arr 58.97 144 P P **09 05 27.1 -0.5**
TEND Ethiopian Broa 59.00 266 eP P 09 05 18.1 -10
TEND eS S **09 13 43.5 +7.7**
ELL Elmali 59.00 297 P P **09 05 26.7 -1.3**
ELL pmax pmax
comp=Z,398nm,0.9s
ELL MLR MLR
comp=Z,34µm,19.0s
ELL Elmali 59.00 297 P P **09 05 26.7 -1.3**
VRI Vrincioaia 59.01 308⇑ P P **09 05 28.7 +1.0**
VRI Vrincioaia 59.01 308⇑ P P **09 05 28.7 +1.0**
PLOR Plostina 59.07 308⇑ P P **09 05 28.1 0.0**
PLOR Plostina 59.07 308⇑ P P **09 05 28.1 0.0**
WR0 Warramunga Arr 59.08 144 P P **09 05 27.6 -0.9**
RABL Rabaul 59.09 116 P P **09 05 28.5 -0.1**
BISRR Bisoca 59.09 308⇑ P P **09 05 29.7 +1.3**
BJO1 Bjornoya 59.15 342 eP P **09 05 27.8 -0.3**
BJO1 eS S **09 13 36.2 +0.2**
BJO1 IVMs_BB IVMs_BB 09 36 26.3
comp=Z,10µm,14.9s
PRD Provadia 59.16 305 eP P **09 05 28.5 -0.3**
BIZ Bicaz 59.19 309⇑ P P **09 05 29.0 +0.1**

NEF NEVSHA 59.24 305 eP P **09 05 27.5 -1.8**
ISR Istrita 59.31 307⇑ P P **09 05 30.0 +0.2**
ISR Istrita 59.31 307⇑ P P **09 05 30.0 +0.2**
COEN Coen 59.36 132 P P **09 05 30.4 0.0**
COEN IAmb IAmb 09 05 35.0
comp=Z,74nm,0.8s
NEHR Nehoiu 59.41 308⇑ P P **09 05 30.9 +0.4**
AMKA Amchitka 59.43 45 P P **09 05 29.4 -1.0**
KULA Kula-Manisa 59.46 299 P P 09 05 25.7 -5.3
TRO Tromso 59.47 336 eP P **09 05 29.8 -0.7**
TRO IVmB_BB 09 05 30.4
comp=Z,1µm,1.1s
TRO eS S **09 13 38.9 -1.4**
TRO eSS SS **09 17 38.4 +3.7**
TRO IVMs_BB IVMs_BB 09 32 56.8
comp=Z,9µm,12.1s
MANT Manisa 59.54 299 P P **09 05 28.9 -2.9**
MANT IAmb IAmb 09 05 48.5
comp=Z,154nm,1.4s
SUW Suwalki 59.60 318 eP P **09 05 30.2 -1.4**
SUW eS S **09 13 41.0 -1.4**
SUW eL L 09 32 26.7
comp=Z,20µm,19.6s
SUW Suwalki 59.60 318 P P **09 05 29.7 -1.9**
SUW pmax pmax
comp=Z,257nm,1.0s
SUW MLR MLR
comp=Z,20µm,20.0s
SUW Suwalki 59.60 318 P P **09 05 29.7 -1.9**
SUW IAMs_20 IAMs_20 09 32 33.3
comp=Z,20µm,20.0s
OZUR 59.60 308⇑ P P **09 05 32.5 +0.7**
SULR 59.61 307⇑ P P **09 05 32.5 +0.7**
SPA0 Spitsbergen Ar 59.63 346 P P **09 05 31.0 -0.5**
SPA0 Spitsbergen Ar 59.63 346 eP P **09 05 31.3 -0.2**
SPA0 eS S **09 13 42.9 +0.7**
SPITS Spitsbergen Ar 59.63 346 LR LR 09 35 52.3
comp=Z,18µm,19.1s,baz=75,slow=41
MLR Muntele Rosu 59.63 308 LR LR 09 34 37.7
comp=Z,21µm,21.6s,baz=60,slow=40
MLR Muntele Rosu 59.63 308⇑ P P **09 05 32.1 -0.1**
MLR Muntele Rosu 59.63 308 P P **09 05 31.2 -1.0**
MLR Muntele Rosu 59.63 308 P P **09 05 31.2 -1.0**
BURAR Bucovina Array 59.63 310⇑ P P **09 05 32.2 +0.1**
BURAR Bucovina Array 59.63 310⇑ P P **09 05 32.2 +0.1**
BURAR Bucovina Array 59.63 310 P P **09 05 30.9 -1.2**
BUR08 Bucovina Ar. S 59.64 310 P P **09 05 30.1 -2.1**
FETY Fethiye 59.67 297 P P **09 05 33.1 +0.7**
RAZG Razgrad 59.70 305⇑ P P **09 05 32.8 +0.2**
HSPB Hornsund (broa 59.87 345 eP P **09 05 32.8 +0.3**
HSPB eL L 09 31 47.1
comp=Z,20µm,22.6s
HSPB Hornsund (broa 59.87 345 eP P **09 05 32.8 -0.3**
HSPB eS S **09 13 46.7 +1.4**
HSPB IVMs_BB IVMs_BB 09 36 32.4
comp=Z,8µm,13.6s
DOPR Dopca 59.90 308⇑ P P **09 05 34.8 +0.9**
LVV L'vov 59.92 313 eP P **09 05 33.1 -0.8**
LVV eS S **09 13 41.3 -5.4**
LVV eSS SS **09 17 45.1 +2.6**
LVV pmax pmax
comp=Z,350nm,2.0s
LVV MLR MLR
comp=N,3µm,15.0s
LVV MLR MLR
comp=E,10µm,15.0s
LVV MLR MLR
comp=Z,6µm,15.0s
JMB Yambol 59.93 304 eP P **09 05 34.2 +0.1**
PBUR Paburge 59.94 320 eP P **09 05 33.1 -0.8**
SZH Strazhica 60.19 305 eP P **09 05 35.9 0.0**
VOIR 60.26 308⇑ P P **09 05 36.3 -0.1**
VOIR 60.26 308⇑ P P **09 05 36.3 -0.1**
MTUR Matau 60.30 308⇑ P P **09 05 36.8 +0.1**
MTUR Matau 60.30 308⇑ P P **09 05 36.8 +0.1**
ARCR ARCALIA 60.33 310⇑ P P **09 05 37.8 +1.0**
KBS Kingsbay 60.45 347 eP P **09 05 36.6 -0.5**
KBS eS S **09 13 50.4 -2.4**
KBS eSS SS **09 17 55.0 +5.2**
KBS IVMs_BB IVMs_BB 09 36 00.8
comp=Z,5µm,18.6s
STFAR Stefanesti-Arg 60.46 307⇑ P P **09 05 37.6 -0.1**
ZIMR 60.48 306⇑ P P **09 05 37.7 -0.2**
ZIMR 60.48 306⇑ P P **09 05 37.7 -0.2**
HUMR Humele 60.53 307⇓ P P **09 05 38.8 +0.6**
ARR Arges 60.56 308⇑ P P **09 05 37.9 -0.5**
MORW Morawa 60.59 166 P P **09 05 37.2 -1.4**
ENEZ Enez 60.70 302 P P **09 05 39.1 -0.3**
ALN Alexandroupoli 60.74 303 P P **09 05 38.1 -1.6**
ALN pmax pmax
comp=Z,78nm,1.3s
ALN Alexandroupoli 60.74 303 P P **09 05 38.0 -1.6**
ALN IAmb IAmb 09 06 07.2
comp=Z,78nm,1.3s
ALN Alexandroupoli 60.74 303 P P **09 05 39.5 -0.1**
BMR Baia Mare 60.75 311⇑ P P **09 05 39.7 +0.1**
BMR Baia Mare 60.75 311⇑ P P **09 05 39.7 +0.1**
N2IH Innhavet 60.75 334 eP P **09 05 38.0 -1.2**
KWP Kalwaria Pacla 60.80 313 eP P **09 05 39.3 -0.7**
KWP eS S **09 13 54.6 -3.4**
KWP eSSS SSS 09 20 39.5
KWP eL L 09 34 12.7
comp=Z,11µm,23.3s
KWP Kalwaria Pacla 60.80 313 P P **09 05 38.7 -1.3**
KWP pmax pmax
comp=Z,141nm,0.9s
KWP MLR MLR
comp=Z,12µm,20.0s
KWP Kalwaria Pacla 60.80 313 P P **09 05 38.6 -1.3**
KWP IAMs_20 IAMs_20 09 34 54.8
comp=Z,12µm,20.0s
EZN Ezine 60.83 301 P P **09 05 39.9 -0.4**
CJR Cluj-Napoca 60.92 310⇑ P P **09 05 41.0 +0.1**
CJR Cluj-Napoca 60.92 310⇑ P P **09 05 41.0 +0.1**
N2ST Straumen 60.98 334 eP P **09 05 39.9 -0.9**
KDZ Kurdzhali 60.98 304 eP P **09 05 41.6 +0.2**
STEI Steigen 61.02 334 eP P **09 05 39.8 -1.3**
STEI IVmBBB 09 05 43.3
comp=Z,2µm,2.0s
STEI eS S **09 13 59.6 -0.6**
STEI eSS SS **09 18 02.8 +3.9**
STEI IVMs_BB IVMs_BB 09 33 45.7
comp=Z,12µm,14.9s
RDO Rodhopi 61.04 303 P P **09 05 40.2 -1.5**
GADA Gvkgeada 61.04 302 P P **09 05 41.0 -0.7**
SMG Samos 61.07 299 P P **09 05 41.8 -0.2**
FAUS Fauske 61.09 334 eP P **09 05 40.1 -1.4**
FAUS eS S **09 13 55.6 -5.5**
FAUS IVMs_BB IVMs_BB 09 32 49.9
comp=Z,11µm,16.3s
LOT Lotru 61.12 308⇑ P P **09 05 41.8 -0.6**
ANKE Ethiopia-Afar 61.14 264 eP P **09 05 43.1 -0.2**
ANKE eS S **09 14 09.1 +5.0**
SMTH Samothraki Isl 61.23 302 P P **09 05 42.1 -1.0**
UZH Uzhgorod 61.30 312 eP P **09 05 40.4 -2.9**
UZH e 09 05 47.3
UZH e 09 06 20.0
UZH i 09 09 30.5
UZH i S **09 13 56.4 -8.0**
UZH i 09 14 08.0
UZH e 09 15 25.0
UZH MLR MLR
comp=N,2µm,18.0s
UZH MLR MLR
comp=E,3µm,18.0s
UZH MLR MLR
comp=Z,2µm,18.0s
N2VI Vinje 61.34 335 eP P **09 05 42.0 -1.2**
PLD Plovdiv 61.37 304 eP P **09 05 43.8 -0.1**
BEL Belsk 61.47 316 eP P **09 05 44.3 -0.2**
BEL eS S **09 14 05.1 -1.3**
BEL eL L 09 32 44.0
comp=Z,27µm,18.8s
RZN Rozhen 61.48 304 eP P **09 05 44.3 -0.6**
KARP Karpathos 61.48 296 P P **09 05 42.6 -2.3**
DRGR 61.49 310⇓ P P **09 05 45.2 +0.4**
DRGR 61.49 310⇓ P P **09 05 45.2 +0.4**
DRGR 61.49 310 eP P **09 05 44.4 -0.4**
DEV Deva 61.60 309⇑ P P **09 05 46.2 +0.8**
DEV Deva 61.60 309⇑ P P **09 05 46.2 +0.8**
LOF Lofoten 61.61 335 eP P **09 05 43.0 -2.1**
LOF IVmB_BB 09 05 44.3
comp=Z,1µm,0.8s
LOF eS S **09 14 04.9 -2.8**
LOF eSS SS **09 18 11.5 +3.3**
LOF IVMs_BB IVMs_BB 09 34 05.0
comp=Z,13µm,12.8s
PGB Panagyurishte 61.63 305 eP P **09 05 46.0 +0.2**
MOR8 Moi Rana 61.64 333 eP P **09 05 42.9 -2.5**
MOR8 IVmB_BB 09 05 44.0
comp=Z,898nm,1.6s
MOR8 eS S **09 14 09.1 +0.9**
MOR8 eSS SS **09 18 06.1 -2.7**
MOR8 IVMs_BB IVMs_BB 09 34 55.5
comp=Z,8µm,11.5s
GAMB Gambell 61.74 30 IAMs_20 IAMs_20 09 34 17.6
comp=Z,13µm,19.0s
NBB30 Finnes 61.76 333 eP P **09 05 44.6 -1.5**
THAS Thassos island 61.79 303 P P **09 05 48.3 +1.6**
GZR Gura Zlata 61.81 308⇓ P P **09 05 47.1 +0.1**
GZR Gura Zlata 61.81 308⇓ P P **09 05 47.1 +0.1**
KAVA Kavala 61.82 303 P P **09 05 45.8 -1.2**
N2SV S_rv¥gen 61.85 335 eP P **09 05 45.8 -1.0**
AS31 Alice Springs 61.89 146 P P **09 05 47.2 -0.3**
ASAR Alice Springs 61.89 146 P P **09 05 47.4 -0.2**
comp=Z,23nm,0.9s,baz=328,slow=6.7,SNR=182
ASAR S S **09 14 11.2 -1.1**
comp=Z,1.2nm,1.0s,baz=329,slow=3.4,SNR=2.5
ASAR PKPPKP **P'P'df** **09 34 53.5 +2.1**
comp=Z,0.7nm,0.8s,baz=155,slow=2.4,SNR=5.7
ASAR Alice Springs 61.89 146 P P **09 05 46.4 -1.2**
ASAR Alice Springs 61.89 146 P P **09 05 46.4 -1.2**
N2VA Vr_y 62.02 334 eP P **09 05 46.7 -1.1**
KONS Konsvik 62.09 333 eP P **09 05 47.2 -1.1**
KONS eS S **09 14 08.8 -5.0**
NBB40 Tonnes 62.13 333 eP P **09 05 47.7 -0.9**
STOK Stokkvaagen 62.17 333 eP P **09 05 49.8 +0.9**
NVR Nevrokopi 62.19 304 P P **09 05 50.8 +1.3**
HERR Herculane 62.20 308⇑ P P **09 05 49.3 -0.2**
MMB Mus¸omiste 62.22 304 eP P **09 05 50.0 +0.3**
APE Apeiranthos 62.25 299⇑ P P **09 05 49.1 -1.0**
APE Apeiranthos 62.25 299⇑ P P **09 05 49.1 -1.0**
N2RO R¸st 62.26 334 eP P **09 05 49.2 -0.3**
VTS Vitosha 62.27 305 eP P **09 05 50.1 -0.1**
ANAF Anafi Island 62.29 298 P P **09 05 48.8 -1.5**
SIRR Siria 62.33 309⇑ P P **09 05 50.3 -0.1**
NIE Niedzica 62.37 313 eP P **09 05 51.3 +0.7**
NIE eS S **09 14 15.7 -2.3**
NIE eL L 09 33 24.4
comp=Z,13µm,21.6s
OUR Ouranopolis 62.40 303 P P **09 05 52.7 +1.8**
SRS Serrai 62.45 303 P P **09 05 50.2 -1.1**
OJC Ojcow 62.47 314 eP P **09 05 50.5 -0.7**
OJC eS S **09 14 12.5 -6.8**
OJC eSSS SSS 09 21 13.1
OJC eL L 09 33 21.3
comp=Z,24µm,22.2s
OJC Ojcow 62.47 314 P P **09 05 50.1 -1.1**
OJC pmax pmax
comp=Z,49nm,0.6s
OJC Ojcow 62.47 314 P P **09 05 50.1 -1.1**
OJC IAmb IAmb 09 05 57.1
comp=Z,49nm,0.6s
BZS Buzias 62.54 309⇑ P P **09 05 51.9 +0.2**
BZS Buzias 62.54 309⇑ P P **09 05 51.9 +0.2**
SNT1 Gialos, Santor 62.54 298 P P **09 05 50.0 -1.9**
KKB Krupnik 62.60 304 eP P **09 05 51.7 -0.5**
MDVR Moldovita 62.71 308⇑ P P **09 05 52.1 -0.8**
SOH Sokhos 62.71 303 P P **09 05 52.5 -0.6**
PAIG Paliouri 62.75 302 P P **09 05 51.3 -1.9**
PLG Polygyros 62.78 303 P P **09 05 52.0 -1.5**
KYMI Kymi, Euboea I 62.84 301 P P **09 05 51.0 -2.9**
LAST Lasithi 62.91 297 P P **09 05 53.0 -1.5**
TNA Tin City 62.94 28 IAMs_20 IAMs_20 09 31 43.0
comp=Z,17µm,22.0s
KNT Kendrikon 62.94 304 P P **09 05 52.5 -2.0**
HORT Hortiatis 62.97 303 P P **09 05 52.3 -2.5**
NSS Namsos 63.01 331 eP P **09 05 53.5 -0.9**
NSS eS S **09 14 29.6 +4.2**
NSS eSS SS **09 18 31.1 +0.9**
NSS IVMs_BB IVMs_BB 09 33 38.8
comp=Z,8µm,14.6s
EREA Eretria 63.03 300 P P **09 05 53.6 -1.6**
PSZ Piszkesteto 63.03 312 P P **09 05 54.5 -0.6**
PSZ pmax pmax
comp=Z,41nm,1.2s
PSZ MLR MLR
comp=Z,12µm,18.0s
PSZ Piszkesteto 63.03 312 P P **09 05 54.5 -0.6**
PSZ IAMs_20 IAMs_20 09 36 16.0
comp=Z,12µm,18.0s
VAY Valandovo 63.13 304 i P P **09 05 55.0 -0.7**
DION Dionisos Attik 63.14 300 P P **09 05 51.7 -4.2**
PTLI Penteli 63.20 300 P P **09 05 52.2 -1.1**
GKP Gorka Klasztor 63.21 318 eP P **09 05 56.3 +0.3**
GKP eS S **09 14 26.9 -1.4**
GKP eSSS SSS 09 21 20.8
GKP eL L 09 34 36.7
comp=Z,25µm,18.1s
ATHU Athens Univers 63.28 300 P P **09 05 55.0 -1.9**
STIP Stip 63.29 304 i P P **09 05 54.9 -1.9**
VLY Voula,Athens 63.31 300 P P **09 05 55.2 -1.8**
HFS Hagfors 63.32 326 LR LR 09 33 49.8
comp=Z,19µm,18.4s,baz=78,slow=36
IDI Anoyia 63.32 297 LR LR 09 39 03.5
comp=Z,5µm,21.2s,baz=68,slow=41
IDI Anoyia 63.32 297⇑ P P **09 05 55.7 -1.5**
IDI Anoyia 63.32 297 P P **09 05 55.5 -1.7**
IDI Anoyia 63.32 297 P P **09 05 55.7 -1.5**
GRG Griva 63.36 304 P P **09 05 54.8 -2.5**
SIVA Sivas 63.47 297 P P **09 05 57.5 -0.6**
LIT Litokhoron 63.56 303 P P **09 05 56.3 -2.4**
LIT pmax pmax
comp=Z,36nm,0.8s
LIT Litokhoron 63.56 303 P P **09 05 56.3 -2.4**
LIT IAmb IAmb 09 06 06.3
comp=Z,36nm,0.8s
LIT Litokhoron 63.56 303 P P **09 05 55.7 -3.0**
VILL Villia 63.57 300 P P **09 05 55.5 -3.3**
OKC Ostrava-Krasne 63.60 314 eP P **09 05 58.7 0.0**
OKC eS S **09 14 32.3 -1.1**
OKC MLR MLR
comp=Z,14µm,15.3s
OKC Ostrava-Krasne 63.60 314 eP P **09 05 58.7 0.0**
OKC eS S **09 14 32.3 -1.1**
OKC AMS AMS 09 34 10.0
comp=Z,14µm,15.3s
ATAL Atalanti 63.62 301 P P **09 05 57.5 -1.6**
LKR Lokris 63.65 301 P P **09 05 57.5 -1.7**
SKO Skopje 63.73 305 i P P **09 05 59.6 -0.1**
AXAR Agios Charalam 63.87 301 P P **09 05 59.0 -1.7**
LOUT Loutraki 63.88 300 P P **09 05 58.0 -2.8**
FRGS Fruska Gora 63.89 309⇑ iP P **09 05 59.9 -0.8**
IMMV Iera Moni Meta 63.96 297 P P **09 06 00.7 -0.7**
MORC Moravsky Berou 63.99 314⇓ P P **09 06 00.6 -0.8**
MORC Moravsky Berou 63.99 314 eP P **09 06 01.0 -0.4**
MORC eS S **09 14 38.2 -0.2**
MORC Moravsky Berou 63.99 314⇓ P P **09 06 00.6 -0.8**
MORC Moravsky Berou 63.99 314 P P **09 05 59.9 -1.5**
MORC IAMs_20 IAMs_20 09 34 35.4
comp=Z,16µm,19.0s
NC405 NORSAR Array S 64.00 327 P P **09 05 60.0 -1.2**
KZN Kozani 64.02 303 P P **09 05 58.8 -3.0**
BSD Bornholm Skovb 64.02 320 eP P **09 06 02.7 +1.3**
BSD MLR MLR
comp=Z,20µm,14.0s
BSD Bornholm Skovb 64.02 320 i P P **09 06 02.7 +1.3**
comp=Z,20µm,14.0s
BSD Bornholm Skovb 64.02 320 eP P **09 06 02.7 +1.3**
BSD IAMs_20 IAMs_20 09 34 15.5
comp=Z,20µm,14.3s
AGG Agios Georgios 64.02 302 P P **09 05 59.6 -2.1**
AGG pmax pmax
comp=Z,85nm,0.8s
AGG Agios Georgios 64.02 302 P P **09 05 59.6 -2.1**
AGG Agios Georgios 64.02 302 P P **09 05 59.4 -2.4**
TBLU Trondheim 64.07 330 eP P **09 06 00.1 -1.5**
TBLU IVmB_BB 09 06 02.2
comp=Z,1µm,2.1s
TBLU eS S **09 14 40.8 +2.1**
TBLU IVMs_BB IVMs_BB 09 33 50.6
comp=Z,8µm,27.0s
THL Klokotos Trika 64.08 302 P P **09 05 58.0 -4.0**
DIVS Divibare 64.09 308⇑ iP P **09 06 01.0 -1.1**
DIVS Divibare 64.09 308 P P **09 06 00.6 -1.5**

DIVS IAmb IAmb 09 06 20.8
comp=Z,129nm,1.5s
GVDS Gavdos 64.09 297 P **P** **09 06 01.7 -0.5**
GVD Gavdhos 64.09 297 P **P** **09 06 00.7 -1.5**
NC303 NORSAR Array S 64.13 327 P **P** **09 06 00.5 -1.5**
MAKR Makrakomi, Fth 64.17 302 P **P** **09 05 59.9 -2.8**
JAVC Velka Javorina 64.18 313 *e*P **P** **09 06 02.9 +0.2**
JAVC *e*S **S** **09 14 42.7 +1.9**
RDOG Red Dog Mine 64.19 25 P **P** **09 06 02.6 +0.3**
RDOG IAmb IAmb 09 06 24.2
comp=Z,49nm,1.1s
NB201 NORSAR Array S 64.21 327 P **P** **09 06 01.7 -0.9**
NB201 IAmb IAmb 09 06 21.8
comp=Z,92nm,1.1s
ANM Nome 64.24 29 IAMs_20 IAMs_20 09 35 43.6
comp=Z,19µm,20.0s
NB2 NORSAR Subarra 64.25 327 P **P** **09 06 00.7 -2.2**
comp=Z,68nm,1.0s,baz=74,slow=6.9
NB2 NORSAR Subarra 64.25 327 P **P** **09 06 00.7 -2.2**
baz=74,slow=6.9
NOA NORSAR Array B 64.25 327 P **P** **09 06 01.1 -1.8**
comp=Z,14nm,0.8s,baz=75,slow=6.6,SNR=32
NOA PP **PP** **09 08 25.2 +1.5**
comp=Z,5.8nm,0.9s,baz=65,slow=8.2,SNR=3.9
TEKS Tekeris 64.26 308 *e*P **P** **09 06 02.8 -0.4**
KNDR Palaiochora Ch 64.27 297 P **P** **09 06 05.7 +2.4**
VLI Veliai 64.33 299 P **P** **09 06 00.9 -2.9**
MORH Mrgy, Hungar 64.35 310⇑ *i*P **P** **09 06 02.3 -1.4**
GUR Goura 64.37 300 P **P** **09 06 00.9 -3.2**
KALE Kalithea 64.37 301 P **P** **09 06 01.5 -2.6**
KRLC Kraliky 64.38 315 *e*P **P** **09 06 03.1 -0.8**
KRLC *e* 09 06 06.6
KRLC *e*S **S** **09 14 40.8 -2.3**
KRLC MLR MLR
comp=Z,20µm,21.0s
KRLC Kraliky 64.38 315 *e*P **P** **09 06 03.1 -0.8**
KRLC *e*pP **pP** **09 06 06.6 +0.7**
KRLC *e*S **S** **09 14 40.8 -2.3**
KRLC AMS AMS 09 34 10.0
comp=Z,20µm,21.0s
KTHA Kythira Island 64.39 298 P **P** **09 06 01.9 -2.3**
NC204 NORSAR Array S 64.40 328 P **P** **09 06 01.6 -2.2**
SERG Sergoula 64.43 301 P **P** **09 06 02.0 -2.4**
KPRO Kipourio 64.43 303 P **P** **09 06 00.9 -3.5**
EVR Evrytania 64.44 302 P P 09 05 59.8 -4.8
KSP Ksiaz 64.45 316 *e*P **P** **09 06 04.5 +0.2**
KSP *e*S S **09 14 42.2 -1.7**
KSP *e*SSS SSS 09 21 47.3
KSP *e*L L 09 34 37.6
comp=Z,18µm,20.0s
NBO00 NORSAR Array S 64.46 327 P **P** **09 06 02.0 -2.2**
NBO00 IAmb IAmb 09 06 13.3
comp=Z,86nm,1.1s
OHR Ohrid 64.46 304 *i* P P 09 05 55.6 -9.0
NAO01 NORSAR Array S 64.46 327 P **P** **09 06 02.7 -1.5**
NAO01 IAmb IAmb 09 06 08.4
comp=Z,60nm,0.9s
ANX Ano Chora 64.47 301 P **P** **09 06 02.2 -2.5**
KLV Kalavryta, Ach 64.48 301 P **P** **09 06 01.9 -2.9**
NEST Nestorio 64.51 303 P **P** **09 06 03.0 -2.0**
PENT Pentalofos 64.51 303 P **P** **09 06 03.4 -1.6**
EFP Efpalio 64.53 301 P **P** **09 06 03.0 -2.0**
VLX Vlachokerasia 64.53 300 P **P** **09 06 02.0 -3.2**
IVA Berane 64.54 306 *e*P **P** **09 06 04.4 -0.7**
BBLS Lazići 64.56 307⇑ *i*P **P** **09 06 03.9 -1.3**
TRIP Tripoli 64.56 300 P **P** **09 06 04.2 -1.2**
NWAO Narrogin (SRO) 64.57 166 P **P** **09 06 04.3 -0.8**
NWAO pmax pmax
comp=Z,67nm,0.9s
NWAO MLR MLR
comp=Z,9µm,22.0s
NWAO Narrogin (SRO) 64.57 166 P **P** **09 06 04.8 -0.3**
NWAO IAmb IAmb 09 06 19.7
comp=Z,91nm,0.9s
NWAO Narrogin (SRO) 64.57 166 P **P** **09 06 04.3 -0.8**
NWAO IAmb IAmb 09 06 19.7
comp=Z,67nm,0.9s
NWAO IAMs_20 IAMs_20 09 35 29.2
comp=Z,9µm,22.0s
DPC Dobruska-Polom 64.58 315 *e*P **P** **09 06 03.9 -1.3**
DPC *e* 09 06 08.2
DPC *e*S **S** **09 14 40.9 -4.7**
DPC MLR MLR
comp=Z,22µm,18.6s
DPC Dobruska-Polom 64.58 315 *e*P **P** **09 06 03.9 -1.3**
DPC *e*pP **sP** **09 06 08.2 +0.2**
DPC *e*S **S** **09 14 40.9 -4.7**
DPC AMS AMS 09 34 20.0
comp=Z,22µm,18.6s
PVY Plav 64.58 306 *e*P **P** **09 06 05.2 -0.3**
OSTC Ostas 64.58 315 *e*P **P** **09 06 04.0 -1.2**
OSTC *ex* x 09 06 07.9
OSTC *e*S **S** **09 14 45.1 -0.5**
OSTC AMS AMS 09 34 20.0
comp=Z,15µm,15.7s
CHVC Chvalec 64.67 315 *e*P **P** **09 06 05.4 -0.4**
CHVC *ex* x 09 06 09.4
CHVC *e*S **S** **09 14 45.1 -1.6**
CHVC AMS AMS 09 34 30.0
comp=Z,14µm,16.5s
UPC Upice 64.72 315 *e*P **P** **09 06 05.7 -0.4**
UPC *e* 09 06 09.9
UPC *e*S **S** **09 14 45.1 -2.1**
UPC MLR MLR
comp=Z,18µm,18.5s
UPC Upice 64.72 315 *e*P **P** **09 06 05.7 -0.4**
UPC *e*pP **sP** **09 06 09.9 +1.0**
UPC *e*S **S** **09 14 45.1 -2.1**
UPC AMS AMS 09 34 20.0
comp=Z,18µm,18.5s
VRAC Vranov 64.72 314 PKPPKP 09 35 07.0
comp=Z,1.7nm,0.4s,baz=325,slow=1.8,SNR=3.8
VRAC LR LR 09 35 18.1
comp=Z,14µm,18.2s,baz=68,slow=37
VRAC Vranov 64.72 314⇑⇑ *i*P **P** **09 06 05.7 -0.4**
VRAC Vranov 64.72 314 *e*P **P** **09 06 05.8 -0.4**
VRAC *e*S **S** **09 14 48.9 +1.6**
VRAC Vranov 64.72 314⇑⇑ *i*P **P** **09 06 05.7 -0.4**
PLE Plješvlja 64.74 307⇓⇓ *i*P **P** **09 06 05.8 -0.7**
HAPS Han Pijesak,BI 64.80 308 *e*P **P** **09 06 04.1 -2.8**
OSL Oslo 64.80 326 *e*P **P** **09 06 05.6 -0.8**
OSL IVmB_BB 09 06 08.2
comp=Z,939nm,1.4s
OSL *e*S **S** **09 14 48.1 +0.3**
OSL *e*SS **SS** **09 19 02.7 +4.3**
OSL IVMs_BB IVMs_BB 09 34 02.9
comp=Z,7µm,14.5s
KOME Kolasin 64.81 306⇓⇓ *i*P **P** **09 06 06.3 -0.6**
LSK Leskovik 64.92 303 P **P** **09 06 05.3 -2.4**
KRUC Moravsky 64.92 314 *e*P **P** **09 06 07.1 -0.3**
KRUC *e*S **S** **09 14 49.3 -0.5**
ITM Ithomi 64.94 300 P **P** **09 06 05.3 -2.5**
ITM IAmb IAmb 09 06 18.5
comp=Z,52nm,0.7s
DOMB Dombas 64.95 329 *e*P **P** **09 06 06.7 -0.7**
DOMB IVmB_BB 09 06 07.0
comp=Z,602nm,1.5s
DOMB *e*S **S** **09 14 48.6 -1.1**
DOMB *e*SS **SS** **09 19 06.6 +6.0**
DOMB IVMs_BB IVMs_BB 09 33 32.3
comp=Z,8µm,17.7s
AMT Artemida-Makis 64.98 300 P **P** **09 06 06.1 -1.9**
PDO Prodromos 65.01 301 P **P** **09 06 04.2 -4.0**
TIR Tirane 65.05 305 P **P** **09 06 06.8 -1.6**
TIR pmax pmax
comp=Z,56nm,0.9s
TIR MLR MLR
comp=Z,7µm,20.0s
TIR Tirane 65.05 305 P **P** **09 06 06.8 -1.6**
TIR IAmb IAmb 09 06 12.4
comp=Z,56nm,0.9s
RGN Rugen 65.07 320 *e*P **P** **09 06 08.4 +0.2**
RGN Rugen 65.07 320 IAMs_20 IAMs_20 09 34 42.6
comp=Z,14µm,19.0s
UPM Unac-Piva 65.12 307 *e*P **P** **09 06 08.0 -1.0**
UPM Unac-Piva 65.12 307 *e*P **P** **09 06 07.4 -1.6**
PDG Podgorica 65.12 306⇓⇓ P **P** **09 06 07.5 -1.3**
PDG Podgorica 65.12 306⇑⇑ *i*P **P** **09 06 07.0 -1.8**
PDG Podgorica 65.12 306 P **P** **09 06 07.8 -1.1**
PDG IAmb IAmb 09 06 19.6
comp=Z,52nm,0.9s
TTG Podgorica 65.12 306⇓⇓ *i*P **P** **09 06 08.5 -0.3**
PYL PYLOS 65.17 300 P P 09 06 04.5 -4.8

NKY Niksic 65.18 306 *e*P **P** **09 06 08.6 -0.8**
A21K Barrow 65.20 20 P **P** **09 06 10.3 +1.5**
baz=291
A21K Barrow 65.20 20 P **P** **09 06 07.7 -1.1**
A21K IAMs_20 IAMs_20 09 36 13.2
comp=Z,17µm,21.0s
COP Copenhagen 65.21 321 *e*P **P** **09 06 12.0 +2.9**
COP MLR MLR
comp=Z,18µm,16.0s
COP Copenhagen 65.21 321 *i* P **P** **09 06 12.0 +2.9**
comp=Z,18µm,16.0s
COP Copenhagen 65.21 321 *e*P **P** **09 06 12.0 +2.9**
COP IAMs_20 IAMs_20 09 34 49.3
comp=Z,18µm,16.5s
NKME Niksic 65.23 306⇓⇓ *i*P **P** **09 06 09.4 -0.2**
DRME Dracevica, Mon 65.25 306⇓⇓ *i*P **P** **09 06 09.6 -0.1**
DRME Dracevica, Mon 65.25 306⇑⇑ *i*P **P** **09 06 08.7 -1.0**
ULC Ulcinj 65.29 306⇓⇓ *i*P **P** **09 06 09.6 -0.3**
CEME Cevo 65.32 306⇓⇓ *i*P **P** **09 06 09.8 -0.4**
TREC Trest 65.42 314 *e*P **P** **09 06 11.2 +0.5**
TREC *e*S **S** **09 15 00.0 +4.1**
TREC MLR MLR
comp=Z,16µm,15.5s
TREC Trest 65.42 314 *e*P **P** **09 06 11.2 +0.5**
TREC *e*S **S** **09 15 00.0 +4.1**
TREC AMS AMS 09 35 00.0
comp=Z,16µm,15.5s
KONO Kongsberg 65.43 326 *i* P **P** **09 06 09.8 -0.7**
KONO pmax pmax
comp=Z,52nm,1.2s
KONO MLR MLR
comp=Z,10µm,16.0s
KONO Kongsberg 65.43 326 IAMs_20 IAMs_20 09 35 43.2
comp=Z,16µm,19.0s
KONO Kongsberg 65.43 326 *e*P **P** **09 06 10.9 +0.4**
KONO IVmB_BB 09 06 14.2
comp=Z,1µm,2.6s
KONO *e*S **S** **09 14 51.5 -4.1**
KONO IVMs_BB IVMs_BB 09 34 53.4
comp=Z,7µm,13.3s
RUE Ruedersdorf 65.44 318 *e*P **P** **09 06 10.8 0.0**
RUE Ruedersdorf 65.44 318 *e*P **P** **09 06 10.7 0.0**
comp=Z,553nm,2.3s,baz=70,slow=6.3
MOL Molde 65.46 329 *e*P **P** **09 06 09.3 -1.3**
MOL IVmB_BB 09 06 10.7
comp=Z,892nm,1.7s
MOL *e*S **S** **09 14 54.5 -1.3**
MOL *e*SS **SS** **09 19 09.0 +0.7**
MOL IVMs_BB IVMs_BB 09 34 50.2
comp=Z,10µm,16.0s
BRY Bratogost 65.47 307 *e*P **P** **09 06 10.3 -1.0**
BRY Bratogost 65.47 307 *e*P **P** **09 06 09.6 -1.7**
BEHE Becsehely 65.50 311⇑⇑ *i*P **P** **09 06 11.4 +0.2**
PVCC Panska Ves 65.59 316 *e*P P 09 06 17.9 +6.2
PVCC *e*S **S** **09 14 51.5 -6.4**
PVCC MLR MLR
comp=Z,15µm,16.9s
PVCC Panska Ves 65.59 316 *e*P P 09 06 17.9 +6.2
PVCC *e*S **S** **09 14 51.5 -6.4**
PVCC AMS AMS 09 36 20.0
comp=Z,15µm,16.9s
CONA Conrad Observa 65.62 313 *i* P **P** **09 06 11.8 -0.2**
comp=Z,55nm,1.0s,SNR=38
TREB Trebinje 65.66 307 *e*P **P** **09 06 11.0 -1.3**
FORT Forrest 65.69 155 P **P** **09 06 11.3 -1.1**
SKAR Skarslia 65.72 327 *e*P **P** **09 06 11.8 -0.6**
SKAR IVmB_BB 09 06 16.5
comp=Z,2µm,3.7s
SKAR *e*S **S** **09 14 57.7 -1.6**
SKAR *e*SS **SS** **09 19 13.8 +1.1**
SKAR IVMs_BB IVMs_BB 09 34 56.0
comp=Z,6µm,12.3s
PRU Pruhonice 65.78 315 *e*P **P** **09 06 13.1 +0.2**
PRU *e*S **S** **09 14 57.9 -2.3**
PRU MLR MLR
comp=Z,19µm,17.1s
PRU Pruhonice 65.78 315 *e*P **P** **09 06 13.1 +0.2**
PRU *e*S **S** **09 14 57.9 -2.3**
PRU AMS AMS 09 35 00.0
comp=Z,19µm,17.1s
BLY Banja Luka 65.79 309⇑⇑ *i*P **P** **09 06 12.3 -0.8**
PRA Prague 65.82 315 *e*P P 09 06 05.1 -8.1
PRA *e*S S 09 14 51.5 -9.2
PRA MLR MLR
comp=Z,9µm,17.4s
PRA Prague 65.82 315 *e*P P 09 06 05.1 -8.1
PRA *e*S S 09 14 51.5 -9.2
PRA AMS AMS 09 35 10.0
comp=Z,9µm,17.4s
AKN Aaknes 65.83 329 IVmB_BB 09 06 12.8
comp=Z,922nm,2.5s
AKN *e*P **P** **09 06 13.3 +0.2**
AKN *e*S **S** **09 14 59.6 -0.8**
AKN *e*SS **SS** **09 19 17.9 +3.6**
AKN IVMs_BB IVMs_BB 09 35 02.9
comp=Z,10µm,15.6s
BRG Berggiesshubel 65.86 316 *i* P **P** **09 06 12.4 -1.0**
comp=Z,60nm,1.5s
BRG *i* 09 06 38.2
comp=Z,55nm,1.2s
BRG S **S** **09 15 00.0 -1.1**
BRG *e*PKPPKP 09 34 56.4
comp=Z,4.5nm,1.7s
comp=N,13µm,18.1s
comp=E,14µm,14.6s
comp=Z,22µm,18.8s
BRG Berggiesshubel 65.86 316 *i* P **P** **09 06 12.4 -1.0**
BRG *i* 09 06 38.2
BRG S **S** **09 15 00.0 -1.1**
BRG pmax pmax
comp=Z,60nm,1.5s
BRG MLR MLR
comp=N,13µm,18.1s
BRG MLR MLR
comp=E,14µm,14.6s
BRG MLR MLR
comp=Z,22µm,18.8s
BRG Berggiesshubel 65.86 316 *e*P **P** **09 06 13.4 0.0**
comp=Z,262nm,2.1s,baz=70,slow=6.3
CTAO Charters Tower 65.88 134 P **P** **09 06 13.6 -0.3**
CTAO pmax pmax
comp=Z,72nm,0.8s
CTAO Charters Tower 65.88 134 P **P** **09 06 13.6 -0.3**
CTAO IAmb IAmb 09 06 18.5
comp=Z,72nm,0.8s
ARSA Arzberg 66.05 312 *i* P **P** **09 06 14.0 -0.8**
comp=Z,31nm,1.0s,SNR=16
STON Ston 66.06 307 *e*P **P** **09 06 13.1 -1.8**
FBE Freiberg 66.19 316 *e*P **P** **09 06 15.9 +0.3**
comp=Z,366nm,2.1s,baz=70,slow=6.3
PBCC Pribram 66.21 315 *e*P **P** **09 06 14.7 -1.1**
PBCC *ex* x 09 06 24.5
CLL Collm 66.28 317 *e*P **P** **09 06 14.0 -2.1**
comp=Z,229nm,2.1s
CLL *e*S **S** **09 15 05.0 -1.2**
CLL *e*SKSac **SKSac** **09 16 12.0 -1.4**
CLL *e*SS **SS** **09 19 18.0 -3.6**
CLL *e*SSS SSS 09 22 24.0
CLL *e*SSSS 09 23 18.0
CLL Lmax 09 37 00.0
CLL Collm 66.28 317 *e*P **P** **09 06 14.0 -2.1**
CLL *e*S **S** **09 15 05.0 -1.2**
CLL pmax pmax
comp=Z,229nm,2.1s
CLL Collm 66.28 317 *e*P **P** **09 06 15.7 -0.4**
comp=Z,229nm,2.1s,baz=70,slow=6.3
CLL Collm 66.28 317 P **P** **09 06 14.4 -1.7**
CLL IAmb IAmb 09 06 35.5
comp=Z,80nm,1.5s
CLL IAMs_20 IAMs_20 09 37 11.7
comp=Z,10µm,19.0s
GROS Grobnik 66.33 311 *e*P **P** **09 06 15.2 -1.5**
HOMB Homborsund 66.42 325 *e*P **P** **09 06 16.2 -0.7**
HOMB *e*S **S** **09 15 07.1 -0.5**
HOMB IVMs_BB IVMs_BB 09 35 24.2
comp=Z,10µm,11.2s
HOMB Homborsund 66.42 325 *e*P **P** **09 06 16.2 -0.7**
SCTE Santa Cesarea 66.48 304 P **P** **09 06 16.0 -1.6**
PERS Pernice 66.52 311 *i* P **P** **09 06 17.1 -0.8**
PERS *i* pP **pP** **09 06 19.8 -0.1**
HYA Hoyanger 66.53 328 *e*P **P** **09 06 21.0 +3.5**
HYA *e*S **S** **09 15 07.3 -1.6**
SOKA Soboth 66.56 311 *i* P **P** **09 06 16.8 -1.3**
comp=Z,58nm,1.0s,SNR=38

CRES Cresnjev 66.57 310⇑⇑ *i*P **P** **09 06 17.2 -1.0**
KHC Kasperske Hory 66.65 314 *e*P **P** **09 06 18.2 -0.4**
KHC *e*S **S** **09 15 09.9 -1.1**
KHC MLR MLR
comp=Z,21µm,17.5s
KHC Kasperske Hory 66.65 314 *e*P **P** **09 06 18.2 -0.4**
KHC *ex* x 09 06 36.1
KHC *ex* x 09 06 57.5
KHC *e*S **S** **09 15 09.9 -1.1**
KHC AMS AMS 09 36 00.0
comp=Z,21µm,17.5s
KHC Kasperske Hory 66.65 314 *e*P **P** **09 06 16.7 -2.0**
MOA Molln 66.66 313 *i* P **P** **09 06 18.2 -0.5**
comp=Z,23nm,0.9s,SNR=17
GEC2 GERESS Array S 66.67 314 *e*P **P** **09 06 19.0 +0.1**
comp=Z,234nm,2.1s,baz=70,slow=6.3
GEC2 GERESS Array S 66.67 314 P **P** **09 06 16.1 -2.7**
GEC2 IAMs_20 IAMs_20 09 35 55.3
comp=Z,20µm,20.0s
GERES GERESS Array B 66.67 314 P **P** **09 06 17.6 -1.3**
comp=Z,7.6nm,0.7s,baz=64,slow=6.2,SNR=41
GERES S **S** **09 15 04.0 -7.4**
comp=Z,0.4nm,0.5s,baz=236,slow=48,SNR=1.9
GERES PKPPKP **P'P'df** **09 35 03.0 +7.4**
comp=Z,0.2nm,0.3s,baz=254,slow=5.0,SNR=3.7
GERES LR LR 09 36 26.2
comp=Z,19µm,20.1s,baz=72,slow=37
GERES GERESS Array B 66.67 314 P **P** **09 06 17.3 -1.5**
GERES GERESS Array B 66.67 314 P **P** **09 06 17.3 -1.5**
MUD Monsted U'grnd 66.69 323 *i* P **P** **09 06 19.0 +0.4**
MUD MLR MLR
comp=Z,30µm,15.0s
MUD Monsted U'grnd 66.69 323 *i* P **P** **09 06 19.0 +0.4**
comp=Z,30µm,15.0s
MUD Monsted U'grnd 66.69 323 *i* P **P** **09 06 18.2 -0.4**
MUD *e*P **pP** **09 06 18.4 -2.2**
MUD *i* P **P** **09 06 19.0 +0.4**
MUD IAMs_20 IAMs_20 09 35 57.0
comp=Z,30µm,15.4s
ODD1 Odda 66.77 327 *e*P **P** **09 06 18.7 -0.5**
ODD1 IVmB_BB 09 06 19.1
comp=Z,973nm,2.3s
ODD1 *e*S **S** **09 15 12.0 0.0**
PDKS Podkum 66.80 311 *i* P **P** **09 06 19.1 -0.5**
PDKS *i* pP **pP** **09 06 21.9 +0.3**
PDKS *e*S **S** **09 15 16.4 +3.7**
FOO Floro 66.89 329 *e*P **P** **09 06 20.4 +0.5**
FOO IVmB_BB 09 06 23.1
comp=Z,1µm,3.8s
FOO *e*S **S** **09 15 11.7 -1.6**
FOO *e*SS **SS** **09 19 34.0 +3.3**
FOO IVMs_BB IVMs_BB 09 35 43.8
comp=Z,9µm,17.9s
TANN Tannenbergstha 66.90 316 *e*P **P** **09 06 20.2 0.0**
comp=Z,342nm,2.0s,baz=70,slow=6.3
OBKA Obir 66.93 311 *i* P **P** **09 06 19.1 -1.4**
comp=Z,22nm,0.8s,SNR=17
BSEG Bad Segeberg 66.94 320 *e*P **P** **09 06 20.8 +0.5**
comp=Z,99nm,1.0s,baz=70,slow=6.3
NKC Novy Kostel 66.97 316 *e*P **P** **09 06 20.6 0.0**
NKC *e* 09 06 28.6
NKC *e*S **S** **09 15 19.2 +4.5**
NKC MLR MLR
comp=Z,19µm,16.2s
NKC Novy Kostel 66.97 316 *e*P **P** **09 06 20.6 0.0**
NKC *ex* x 09 06 28.6
NKC *e*S **S** **09 15 19.2 +4.5**
NKC AMS AMS 09 36 10.0
comp=Z,19µm,16.2s
GUNZ Gunzen 67.00 316 *e*P **P** **09 06 20.8 0.0**
comp=Z,191nm,2.0s,baz=70,slow=6.3
WERN Wernitzgruen 67.00 316 *e*P **P** **09 06 20.9 +0.1**
comp=Z,183nm,2.1s,baz=70,slow=6.3
BLS5 Blasjo 67.02 326 *e*P **P** **09 06 21.1 +0.3**
BLS5 IVmB_BB 09 06 24.6
comp=Z,2µm,3.0s
BLS5 *e*S **S** **09 15 15.9 +0.9**
BLS5 *e*SS **SS** **09 19 37.6 +4.8**
BLS5 IVMs_BB IVMs_BB 09 35 29.5
comp=Z,6µm,10.8s
SNART Snartemo 67.04 325 *e*P **P** **09 06 20.8 0.0**
SNART *e*S **S** **09 15 15.8 +0.6**
SNART Snartemo 67.04 325 *i* P **P** **09 06 20.4 -0.4**
SNART *i* P **pP** **09 06 21.0 -1.9**
NEUB Neuenburg 67.04 317 *e*P **P** **09 06 20.8 -0.2**
comp=Z,102nm,1.1s,baz=70,slow=6.3
PLN Plauen 67.06 316 *e*P **P** **09 06 21.1 0.0**
comp=Z,171nm,2.0s,baz=70,slow=6.3
WET Wettzell 67.08 315 *e*P **P** **09 06 21.6 +0.3**
comp=Z,234nm,2.0s,baz=70,slow=6.3
LJU Ljubljana 67.11 311 *e*P **P** **09 06 20.4 -1.1**
LJU *e*pP **pP** **09 06 23.8 +0.2**
LJU *e*S **S** **09 15 15.2 -1.3**
LJU *e* 09 22 41.5
LJU *e* 09 32 17.4
LJU Ljubljana 67.11 311⇑⇑ *i*P **P** **09 06 20.0 -1.6**
DAG Danmarks Havn 67.18 348 *i* P **P** **09 06 20.3 -1.2**
DAG MLR MLR
comp=Z,11µm,18.0s
DAG Danmarks Havn 67.18 348 *i* P **P** **09 06 20.3 -1.2**
comp=Z,11µm,18.0s
DAG Danmarks Havn 67.18 348 *i* P **P** **09 06 20.6 -0.9**
DAG IAMs_20 IAMs_20 09 39 13.0
comp=Z,11µm,18.5s
DAG Danmarks Havn 67.18 348 *i* P **P** **09 06 20.3 -1.2**
BER Bergen 67.20 328 *e*P **P** **09 06 21.7 -0.1**
BER IVmB_BB 09 06 24.5
comp=Z,1µm,2.4s
BER *e*S **S** **09 15 15.9 -1.1**
BER *e*SS **SS** **09 19 38.9 +3.4**
BER IVMs_BB IVMs_BB 09 35 51.8
comp=Z,9µm,13.4s
SUE Sulen 67.22 328 *e*P **P** **09 06 22.0 +0.1**
SUE IVmB_BB 09 06 25.7
comp=Z,1µm,2.9s
SUE *e*S **S** **09 15 18.5 +1.3**
SUE IVMs_BB IVMs_BB 09 36 25.4
comp=Z,7µm,15.2s
ASK Askoy 67.23 328 *e*P **P** **09 06 21.8 -0.2**
ASK *e*S **S** **09 15 16.9 -0.5**
MANZ Manzenberg 67.26 316 *e*P **P** **09 06 22.7 +0.2**
comp=Z,196nm,2.2s,baz=70,slow=6.3
ROTZ Rotzenmuhle 67.28 315 *e*P **P** **09 06 22.9 +0.4**
comp=Z,233nm,1.9s,baz=70,slow=6.3
CEY Cerknica 67.28 311⇑⇑ *i*P **P** **09 06 22.0 -0.7**
MOX Moxa 67.33 316 *e*P **P** **09 06 22.9 +0.1**
comp=Z,178nm,1.9s,baz=70,slow=6.3
MOX *e*L L 09 36 30.1
comp=Z,10µm,18.3s
ASSE Asse, Remlinge 67.36 318 *e*P **P** **09 06 22.9 0.0**
comp=Z,212nm,2.2s,baz=70,slow=6.3
RIY Rijeka 67.39 310 *e*P **P** **09 06 21.7 -1.6**
MYKA Terra Mystica 67.48 312 *i* P **P** **09 06 22.9 -1.0**
comp=Z,11nm,0.8s,SNR=9.8
KBA Koelnbreinsper 67.51 312 *i* P **P** **09 06 23.4 -0.8**
comp=Z,28nm,0.9s,SNR=17
MATE Matera 67.54 305⇑⇑ P **P** **09 06 23.0 -1.3**
NRDL Niedersach Rie 67.56 319 *e*P **P** **09 06 24.8 +0.6**
comp=Z,409nm,2.1s,baz=70,slow=6.3
CADS Cadrg 67.56 311 *i* P **P** **09 06 23.1 -1.3**
CADS *i* pP **pP** **09 06 26.2 -0.2**
PRED Cave del Predi 67.59 312 P **P** **09 06 23.0 -1.7**
PRED IAMs_20 IAMs_20 09 36 56.7
comp=Z,17µm,22.0s
SKDS Skadanscina 67.62 311 *e*P **P** **09 06 23.8 -1.0**
SKDS *e*S **S** **09 15 21.6 -1.2**
SKDS *e* 09 22 54.6
RJOB Jochberg 67.63 313 *e*P **P** **09 06 24.1 -0.8**
comp=Z,153nm,1.6s,baz=70,slow=6.3
CLZ Clausthal 67.64 318 *e*P **P** **09 06 25.0 +0.2**
comp=Z,86nm,1.1s,baz=70,slow=6.3
GRA1 Grafenberg Arr 67.90 316 P **P** **09 06 24.0 -2.5**
GRA1 IAmb IAmb 09 06 31.0
comp=Z,75nm,1.2s
GRA1 IAMs_20 IAMs_20 09 36 48.7
comp=Z,19µm,21.0s
GRF Grafenberg Arr 67.90 316 P **P** **09 06 24.0 -2.5**
GRF pmax pmax
comp=Z,75nm,1.2s
GRF MLR MLR
comp=Z,19µm,21.0s
GRF Grafenberg Arr 67.90 316 *e*P **P** **09 06 26.9 +0.4**
comp=Z,347nm,2.0s,baz=70,slow=6.3
GRF *e*L L 09 36 48.6
comp=Z,18µm,21.5s

JMIC **Jan Mayen** 67.91 341 LR LR 09 39 15.3
comp=Z,7µm,20.9s,baz=74,slow=39
JMIC **Jan Mayen** 67.91 341 eP P 09 06 25.9 -0.2
JMIC eS S 09 15 31.6 +6.4
JMIC IVMs_BB IVMs_BB 09 33 40.3
comp=Z,4µm,30.2s
ZOU **Zoufplan** 67.94 312 P P 09 06 24.4 -2.6
ZOU IAMs_20 IAMs_20 09 37 14.7
comp=Z,20µm,21.0s
LODK **Lodwar** 67.99 261 P P 09 06 30.1 +2.5
SNR=35
TIP **Timpagrande** 68.03 303 P P 09 06 25.3 -2.3
TIP IAmb IAmb 09 06 51.7
comp=Z,50nm,1.0s
ABTA **Abfaltersbach** 68.16 312 i P P 09 06 26.7 -1.6
comp=Z,27nm,1.5s,SNR=16
UBBA **Unterbreizbach** 68.22 317 eP P 09 06 28.5 +0.1
comp=Z,115nm,1.7s,baz=70,slow=6.3
IMAR **Indian Mountai** 68.29 25 P P 09 06 28.1 -0.5
CIMO **Cimolais** 68.37 312 P P 09 06 27.3 -2.2
CIMO IAmb IAmb 09 06 33.5
comp=Z,47nm,1.0s
FALS **False Pass** 68.40 38 IAMs_20 IAMs_20 09 35 52.3
comp=Z,11µm,18.0s
TOLK **Toolik Lake Re** 68.52 22 P P 09 06 30.2 0.0
baz=298,SNR=20
TOLK S S 09 15 33.3 +0.5
baz=298
TOLK **Toolik Lake Re** 68.52 22 P P 09 06 30.4 +0.2
TOLK IAmb IAmb 09 06 49.6
comp=Z,91nm,0.9s
WTTA **Wattenberg** 68.53 313 i P P 09 06 29.5 -1.2
comp=Z,39nm,1.1s,SNR=24
WATA **Walderalm** 68.54 313 i P P 09 06 29.6 -1.2
comp=Z,73nm,1.4s,SNR=21
TTA **Tatalina** 68.71 29 P P 09 06 29.9 -1.5
TTA pmax pmax
comp=Z,65nm,1.4s
TTA **Tatalina** 68.71 29 P P 09 06 29.9 -1.5
TTA IAmb IAmb 09 06 50.9
comp=Z,65nm,1.4s
KMBO **Kilima Mbogo** 68.80 256 P P 09 06 33.6 +0.7
comp=Z,34nm,0.8s,baz=43,slow=8.4,SNR=38
KMBO S S 09 15 36.1 -1.8
comp=Z,0.7nm,0.3s,baz=110,slow=23,SNR=1.1
KMBO LR LR 09 38 35.0
comp=Z,3µm,18.1s,baz=60,slow=38
KMBO **Kilima Mbogo** 68.80 256 P P 09 06 36.1 +3.2
KMBO P P 09 06 36.1 +3.2
KMBO **Kilima Mbogo** 68.80 256 P P 09 06 30.7 -2.2
KMBO pmax pmax
comp=Z,74nm,1.1s
KMBO MLR MLR
comp=Z,7µm,19.0s
KMBO **Kilima Mbogo** 68.80 256 P P 09 06 30.7 -2.2
KMBO IAmb IAmb 09 06 38.9
comp=Z,74nm,1.1s
KIBK **Kibwezi** 68.80 254 P P 09 06 35.1 +2.4
SNR=54
SQTA **Sankt Quirin** 68.82 313 i P P 09 06 31.2 -1.3
comp=Z,60nm,1.5s,SNR=20
MOTA **Moosalm** 68.84 313 i P P 09 06 31.2 -1.4
comp=Z,56nm,1.5s,SNR=28
PAOL **Paolisi** 68.90 306 P P 09 06 30.3 -2.7
IBBN **Ibbenburen** 68.97 319 eP P 09 06 33.2 +0.1
comp=Z,579nm,2.5s,baz=70,slow=6.3
CTI **Castel Tesino** 68.97 312 P P 09 06 31.7 -1.7
CTI pmax pmax
comp=Z,54nm,1.1s
CTI MLR MLR
comp=Z,19µm,22.0s
CTI **Castel Tesino** 68.97 312 P P 09 06 31.7 -1.7
CTI IAmb IAmb 09 06 37.6
comp=Z,54nm,1.1s
CTI IAMs_20 IAMs_20 09 37 49.2
comp=Z,19µm,22.0s
COLD **Coldfoot** 68.99 23 P P 09 06 33.1 +0.1
baz=298,SNR=38
COLD S S 09 15 38.3 +0.1
baz=298
COLD **Coldfoot** 68.99 23 P P 09 06 32.3 -0.7
COLD IAmb IAmb 09 06 50.7
comp=Z,71nm,0.9s
INTR **Introdacqua** 68.99 307 P P 09 06 31.3 -2.2
INTR IAmb IAmb 09 06 44.1
comp=Z,69nm,1.1s
INTR IAMs_20 IAMs_20 09 37 24.8
comp=Z,12µm,22.0s
DBG **Daneborg** 69.00 346 i P P 09 06 31.5 -1.4
DBG IAmb IAmb 09 06 33.5
comp=Z,138nm,1.4s
DBG **Daneborg** 69.00 346 i P P 09 06 32.1 -0.8
RETA **Reutte** 69.00 313 i P P 09 06 32.5 -1.0
comp=Z,71nm,1.7s,SNR=18
CEL **Celeste** 69.01 303 P P 09 06 31.2 -2.5
FETA **Feichten** 69.19 313 i P P 09 06 33.9 -1.0
comp=Z,40nm,1.2s,SNR=19
AQU **L'Aquila** 69.21 308 P P 09 06 33.5 -1.3
AQU **L'Aquila** 69.21 308 i P P 09 06 33.7 -1.2
AQU **L'Aquila** 69.21 308 P P 09 06 33.5 -1.3
AQU IAMs_20 IAMs_20 09 39 13.5
comp=Z,12µm,20.0s
NRCA **Norcia** 69.22 308 P P 09 06 34.0 -0.9
NRCA IAmb IAmb 09 06 47.6
comp=Z,46nm,0.9s
TEOL **Teolo** 69.22 311 P P 09 06 34.1 -0.7
TEOL IAmb IAmb 09 06 40.1
comp=Z,66nm,0.7s
UBR **Ueberruh** 69.33 314 eP P 09 06 35.3 -0.3
comp=Z,315nm,2.1s,baz=70,slow=6.3
TNS **Taunus Mts** 69.37 317 eP P 09 06 35.7 0.0
comp=Z,297nm,2.4s,baz=70,slow=6.3
MURB **Monte Urbino** 69.46 309 P P 09 06 35.5 -0.9
MURB IAMs_20 IAMs_20 09 42 46.7
comp=Z,10µm,21.0s
STU **Stuttgart** 69.48 315 P P 09 06 34.8 -1.5
STU pmax pmax
comp=Z,72nm,1.1s
STU MLR MLR
comp=Z,16µm,20.0s
STU **Stuttgart** 69.48 315 eP P 09 06 36.3 0.0
comp=Z,274nm,2.0s,baz=70,slow=6.3
STU **Stuttgart** 69.48 315 P P 09 06 34.8 -1.5
STU IAmb IAmb 09 06 55.2
comp=Z,72nm,1.1s
STU IAMs_20 IAMs_20 09 37 36.4
comp=Z,16µm,20.0s
BUG **Bochum--Univer** 69.58 318 eP P 09 06 37.0 +0.1
comp=Z,384nm,2.3s,baz=70,slow=6.3
DAVA **Damuels** 69.63 313 i P P 09 06 35.3 -2.2
comp=Z,22nm,1.1s
EUNU **Eureka** 69.77 2 P P 09 06 36.0 -1.7
EUNU IAMs_20 IAMs_20 09 41 36.1
comp=Z,17µm,19.0s
DAVOX **Davos/Dischmat** 69.83 313 LR LR 09 39 08.1
comp=Z,16µm,18.7s,baz=56,slow=38
MLY **Manley** 69.84 26 P P 09 06 39.1 +0.8
baz=299,SNR=25
MLY S S 09 15 48.7 +0.2
baz=299
SALO **Salr** 69.87 312 P P 09 06 37.3 -1.5
AHRW **Bad Neuenahr-A** 70.05 317 eP P 09 06 40.1 +0.3
comp=Z,114nm,1.6s,baz=70,slow=6.3
ZCCA **Zocca** 70.07 310 P P 09 06 37.8 -2.4
ZCCA IAmb IAmb 09 06 56.4
comp=Z,83nm,0.9s
ZCCA IAMs_20 IAMs_20 09 38 59.2
comp=Z,17µm,21.0s
BFO **Black Forest** 70.18 315 P P 09 06 38.3 -2.4
BFO pmax pmax
comp=Z,56nm,1.1s
BFO MLR MLR
comp=Z,17µm,19.0s
BFO **Black Forest** 70.18 315 eP P 09 06 40.4 -0.4
comp=Z,149nm,1.8s,baz=70,slow=6.3
BFO **Black Forest** 70.18 315 P P 09 06 38.3 -2.4
BFO IAmb IAmb 09 07 00.0
comp=Z,56nm,1.1s
BFO IAMs_20 IAMs_20 09 38 07.0
comp=Z,17µm,19.0s
BPAW **Bear Paw Mtn.** 70.19 26 P P 09 06 39.1 -1.4
LATE **Laterza** 70.20 308 P P 09 06 39.0 -1.9
OSSC **Osservatorio P** 70.21 309 P P 09 06 39.2 -1.8
OSSC IAmb IAmb 09 06 53.8
comp=Z,60nm,1.1s
TUE **Stuetta** 70.28 313 P P 09 06 40.0 -1.6
TUE IAmb IAmb 09 07 06.0
comp=Z,60nm,1.0s
I23K **Minto, Yukon-K** 70.30 25 P P 09 06 41.7 +0.7
baz=300
I23K S S 09 15 55.1 +1.4
baz=300
I23K **Minto, Yukon-K** 70.30 25 P P 09 06 40.0 -1.0
I23K IAmb IAmb 09 07 00.9
comp=Z,77nm,1.1s
PRMA **PARMA** 70.34 311 IAMs_20 IAMs_20 09 39 01.4
comp=Z,14µm,21.0s
CHGN **Chignik** 70.42 36 IAMs_20 IAMs_20 09 38 45.8
comp=Z,12µm,19.0s
CNBA **Chernabura Isl** 70.45 37 IAMs_20 IAMs_20 09 36 29.5
comp=Z,10µm,20.0s
KTH **Kantishna Hill** 70.48 27 P P 09 06 41.0 -1.4
KTH IAmb IAmb 09 06 48.6
comp=Z,162nm,1.5s
KTH IAMs_20 IAMs_20 09 39 19.4
comp=Z,18µm,21.0s
VLC **Villacollemand** 70.53 310 IAMs_20 IAMs_20 09 39 25.5
comp=Z,16µm,22.0s
BTNL **Ternell** 70.58 318 P P 09 06 41.5 -1.6
MEM **Membach** 70.64 318 P P 09 06 43.6 +0.2
MEM pP sP 09 06 46.9 +0.7
BBOO **Buckleboo** 70.67 150 P P 09 06 42.8 -0.8
BBOO IAmb IAmb 09 07 05.8
comp=Z,83nm,1.1s
NEA2 **Nenana** 70.68 26 P P 09 06 43.6 +0.2
baz=300,SNR=30
NEA2 S S 09 15 58.0 -0.2
baz=300
BWN **Browne** 70.74 26 IAMs_20 IAMs_20 09 39 39.8
comp=Z,15µm,21.0s
BEBN **Eben Emael** 70.76 318 P P 09 06 44.4 +0.3
BMAR **Burnt Mountain** 70.76 22 P P 09 06 43.7 -0.2
TRF **Thorofare Moun** 70.78 27 IAMs_20 IAMs_20 09 39 29.6
comp=Z,17µm,22.0s
MDM **Murphy Dome** 70.81 25 P P 09 06 43.9 -0.4
MDM IAMs_20 IAMs_20 09 39 47.7
comp=Z,11µm,20.0s
BSTI **Sart Tilman** 70.91 318 P P 09 06 45.4 +0.3
ECH **Echery** 70.94 315 P P 09 06 43.6 -1.8
ECH pmax pmax
comp=Z,25nm,1.0s
ECH MLR MLR
comp=Z,13µm,20.0s
ECH **Echery** 70.94 315 P P 09 06 43.6 -1.8
ECH IAMs_20 IAMs_20 09 38 29.1
comp=Z,13µm,20.0s
WLF **Walferdange** 70.95 317 P P 09 06 46.0 +0.6
WLF **Walferdange** 70.95 317 P P 09 06 43.7 -1.6
WLF pmax pmax
comp=Z,173nm,1.2s
WLF MLR MLR
comp=Z,11µm,21.0s
WLF **Walferdange** 70.95 317 eP P 09 06 45.9 +0.6
comp=Z,505nm,1.8s,baz=70,slow=6.3
WLF **Walferdange** 70.95 317 P P 09 06 43.7 -1.6
WLF IAMs_20 IAMs_20 09 37 31.2
comp=Z,11µm,21.0s
TCOL **CIGO, UAF Yank** 70.98 25 P P 09 06 45.3 +0.1
baz=301,SNR=19
TCOL S S 09 16 01.4 -0.3
baz=301
TCOL **CIGO, UAF Yank** 70.98 25 P P 09 06 43.8 -1.4
TCOL IAMs_20 IAMs_20 09 38 38.5
comp=Z,9µm,19.0s
COLA **College** 70.99 25 c i P P 09 06 44.9 -0.4
COLA pmax pmax
comp=Z,119nm,1.0s
COLA MLR MLR
comp=Z,7µm,16.0s
COLA **College** 70.99 25 P P 09 06 44.5 -0.8
SKT **Skwentna** 71.00 29 P P 09 06 45.3 -0.2
SKT IAmb IAmb 09 07 07.0
comp=Z,77nm,1.1s
SKT IAMs_20 IAMs_20 09 35 58.2
comp=Z,17µm,19.0s
POKR **Poker Plat Res** 71.01 25 P P 09 06 46.0 +0.5
baz=301,SNR=44
POKR S S 09 16 03.3 +1.1
baz=301
POKR **Poker Plat Res** 71.01 25 P P 09 06 44.6 -0.9
CORL **Corleone** 71.03 303 P P 09 06 44.0 -2.1
CORL IAmb IAmb 09 07 10.8
comp=Z,85nm,1.3s
MSSA **Maissana** 71.04 311 P P 09 06 44.3 -1.8
MSSA IAmb IAmb 09 07 11.4
comp=Z,67nm,1.4s
MSSA IAMs_20 IAMs_20 09 40 38.9
comp=Z,9µm,20.0s
WRH **Wood River Hil** 71.11 25 P P 09 06 46.0 0.0
WRH IAMs_20 IAMs_20 09 40 05.8
comp=Z,16µm,18.0s
CCB **Clear Creek Bu** 71.12 25 P P 09 06 44.1 -2.0
CCB IAMs_20 IAMs_20 09 40 07.2
comp=Z,12µm,19.0s
BCLA **Clavier** 71.13 318 P P 09 06 46.0 -0.4
MCK **McKinley** 71.17 26 P P 09 06 46.3 -0.1
baz=300,SNR=11
CLTB **Caltabellotta** 71.22 303 P P 09 06 45.7 -1.6
BGES **Gesves** 71.27 318 P P 09 06 46.8 -0.4
BGES pP sP 09 06 50.4 +0.3
CUT **Chulitna** 71.31 28 P P 09 06 48.5 +1.2
baz=300,SNR=12
RND **Reindeer** 71.36 27 P P 09 06 47.1 -0.6
RND pmax pmax
comp=Z,60nm,0.9s
RND MLR MLR
comp=Z,20µm,18.0s
RND **Reindeer** 71.36 27 P P 09 06 47.1 -0.6
RND IAmb IAmb 09 07 04.9
comp=Z,60nm,0.9s
IL31 71.39 25 P P 09 06 46.4 -1.3
ILAR **Eielson Array** 71.39 25 P P 09 06 46.7 -1.1
comp=Z,20nm,1.1s,baz=281,slow=5.3,SNR=43
ILAR LR LR 09 40 27.8
comp=Z,15µm,18.7s,baz=301,slow=38
ILAR **Eielson Array** 71.39 25 P P 09 06 47.0 -0.7
PRP **Porcupine Dome** 71.48 24 P P 09 06 47.4 -1.1
PRP IAmb IAmb 09 07 07.4
comp=Z,69nm,0.9s
PRP IAMs_20 IAMs_20 09 40 27.5
comp=Z,13µm,19.0s
BMRD **Maredsous** 71.49 318 P P 09 06 48.2 -0.3
BMRD pP sP 09 06 52.0 +0.6
UCC **Uccle** 71.52 318 IAMs_20 IAMs_20 09 40 37.2
comp=Z,15µm,19.0s
HDA **Harding Lake** 71.56 25 P P 09 06 48.5 -0.3
baz=302,SNR=13
HDA **Harding Lake** 71.56 25 P P 09 06 47.6 -1.2
HDA IAMs_20 IAMs_20 09 37 13.8
comp=Z,12µm,19.0s
SUA **Susitna One** 71.58 29 P P 09 06 48.2 -0.9
SENIN **Lac Senin/Sane** 71.62 313 P P 09 06 46.8 -3.0
SENIN IAMs_20 IAMs_20 09 37 06.2
comp=Z,14µm,19.0s
DOU **Dourbes** 71.68 318 P P 09 06 49.3 -0.4
DOU pP sP 09 06 53.1 +0.5
DOU PcP PcP 09 07 06.5 -2.4
SNF **Seneffe** 71.68 318 P P 09 06 49.1 -0.6
SNF pP sP 09 06 53.4 +0.9
ABPO **Ambohimpanom** 71.85 234 P P 09 06 49.7 -1.6
ABPO pmax pmax
comp=Z,65nm,1.5s
ABPO **Ambohimpanom** 71.85 234 P P 09 06 49.7 -1.6
SCO **Scoresbysund** 71.85 343 P P 09 06 48.5 -1.9
SCO pmax pmax
comp=Z,51nm,1.2s
SCO MLR MLR
comp=Z,6µm,19.0s
SCO **Scoresbysund** 71.85 343 P P 09 06 48.5 -1.9
SCO **Scoresbysund** 71.85 343 i P P 09 06 50.3 0.0
comp=Z,5µm,16.0s
SCO **Scoresbysund** 71.85 343 i P P 09 06 50.7 +0.4
SCO IAMs_20 IAMs_20 09 45 03.2
comp=Z,5µm,15.8s
SCO **Scoresbysund** 71.85 343 eP P 09 06 50.4 0.0
CHIR **Chirikof Islan** 72.04 35 IAMs_20 IAMs_20 09 37 52.5
comp=Z,14µm,18.0s
DHY **Denali Highway** 72.11 27 P P 09 06 50.9 -1.4
DHY IAmb IAmb 09 07 12.8
comp=Z,55nm,1.0s
DHY IAMs_20 IAMs_20 09 40 37.3
comp=Z,14µm,18.0s
GHO **Glory Hole Cre** 72.17 28 P P 09 06 51.1 -1.5
GHO IAMs_20 IAMs_20 09 36 34.2
comp=Z,16µm,19.0s
PMR **Palmer** 72.18 28 P P 09 06 51.4 -1.1
PMR pmax pmax
comp=Z,98nm,0.9s
PMR **Palmer** 72.18 28 P P 09 06 51.4 -1.1
PMR IAmb IAmb 09 06 59.2
comp=Z,98nm,0.9s
PMR IAMs_20 IAMs_20 09 36 25.4
comp=Z,14µm,18.0s
RC01 **Rabbit Creek A** 72.19 29 P P 09 06 53.4 +0.8
baz=301
CNPM **China Poot** 72.33 31 IAMs_20 IAMs_20 09 40 57.6
comp=Z,14µm,21.0s
BRLK **Bradley Lake** 72.37 30 IAMs_20 IAMs_20 09 37 08.4
comp=Z,12µm,18.0s
SML **Sawmill** 72.40 28 P P 09 06 53.4 -0.5
SML IAMs_20 IAMs_20 09 35 32.1
comp=Z,13µm,20.0s
SII **Sitkinak Islan** 72.41 34 IAMs_20 IAMs_20 09 39 26.8
comp=Z,17µm,20.0s
STKA **Stephens Creek** 72.46 145 P P 09 06 54.1 -0.5
comp=Z,32nm,1.0s,baz=331,slow=6.0,SNR=54
STKA S S 09 16 19.8 +0.3
comp=Z,1.7nm,1.0s,baz=3.6,slow=16,SNR=1.8
STKA **Stephens Creek** 72.46 145 P P 09 06 54.0 -0.5
STKA pmax pmax
comp=Z,10.0nm,1.1s
STKA **Stephens Creek** 72.46 145 P P 09 06 54.0 -0.5
OHAK **Old Harbor** 72.52 33 IAMs_20 IAMs_20 09 37 10.8
comp=Z,14µm,18.0s
KNK **Knik Glacier** 72.55 28 P P 09 06 53.1 -1.7
KNK IAmb IAmb 09 07 10.7
comp=Z,78nm,0.8s
KNK IAMs_20 IAMs_20 09 36 46.2
comp=Z,14µm,19.0s
BNI **Bardonecchia** 72.57 312 P P 09 06 54.8 -0.6
BNI pmax pmax
comp=Z,47nm,0.8s
BNI MLR MLR
comp=Z,16µm,21.0s
BNI **Bardonecchia** 72.57 312 P P 09 06 54.8 -0.6
BNI IAmb IAmb 09 07 12.3
comp=Z,47nm,0.8s
BNI IAMs_20 IAMs_20 09 39 57.4
comp=Z,16µm,21.0s
KDAK **Kodiak Island** 72.58 33 P P 09 06 54.3 -0.7
KDAK pmax pmax
comp=Z,282nm,1.5s
KDAK MLR MLR
comp=Z,15µm,20.0s
KDAK **Kodiak Island** 72.58 33 P P 09 06 54.2 -0.7
KDAK IAMs_20 IAMs_20 09 39 03.3
comp=Z,15µm,20.0s
RIDG **Independent Ri** 72.70 25 P P 09 06 54.6 -1.1
RIDG IAmb IAmb 09 07 01.5
comp=Z,105nm,1.1s
RIDG IAMs_20 IAMs_20 09 40 59.0
comp=Z,14µm,21.0s
EIDS **Eidsvold** 72.76 134 P P 09 06 55.3 -1.1
EIDS IAmb IAmb 09 06 59.7
comp=Z,114nm,1.1s
SCM **Sheep Creek Mo** 72.79 28 P P 09 06 55.2 -1.1
SCM pmax pmax
comp=Z,94nm,0.8s
SCM **Sheep Creek Mo** 72.79 28 P P 09 06 55.2 -1.1
SCM IAmb IAmb 09 07 12.8
comp=Z,94nm,0.8s
SCM IAMs_20 IAMs_20 09 35 46.4
comp=Z,13µm,20.0s
SEW **Seward** 72.81 30 IAMs_20 IAMs_20 09 41 12.6
comp=Z,17µm,21.0s
SCRK **Sand Creek** 72.89 25 P P 09 06 56.6 -0.2
baz=304,SNR=41
PAX **Paxson** 72.90 26 P P 09 06 56.2 -0.7
PAX pmax pmax
comp=Z,42nm,1.1s
PAX **Paxson** 72.90 26 P P 09 06 56.1 -0.7
PAX IAMs_20 IAMs_20 09 37 07.4
comp=Z,14µm,20.0s
DOT **Dot Lake** 73.04 25 P P 09 06 57.2 -0.5
DOT IAMs_20 IAMs_20 09 41 16.9
comp=Z,16µm,20.0s
M24K **Tolsona, Glenn** 73.10 27 P P 09 06 59.6 +1.6
baz=303,SNR=15
M24K **Tolsona, Glenn** 73.10 27 P P 09 06 57.1 -1.0
M24K IAMs_20 IAMs_20 09 40 52.6
comp=Z,15µm,21.0s
VSL **Villasalto** 73.15 306 P P 09 06 57.7 -1.0
TULEG **Thule** 73.24 358 P P 09 06 57.2 -1.4
TULEG IAmb IAmb 09 07 14.0
comp=Z,57nm,0.9s
TULEG IAMs_20 IAMs_20 09 42 29.6
comp=Z,9µm,18.0s
TULEG **Thule** 73.24 358 i P P 09 06 58.6 0.0
TULEG IAmb IAmb 09 06 59.7
comp=Z,95nm,1.3s
TULEG IAMs_20 IAMs_20 09 47 19.1
comp=Z,8µm,16.7s
TULEG **Thule** 73.24 358 i P P 09 06 58.6 0.0
GLI **Glacier Island** 73.40 28 IAMs_20 IAMs_20 09 41 46.5
comp=Z,13µm,18.0s
EGAK **Eagle** 73.42 23 P P 09 06 57.7 -2.2
EGAK IAMs_20 IAMs_20 09 41 47.8
comp=Z,15µm,19.0s
ESK **Eskdalemuir** 73.50 325 IAMs_20 IAMs_20 09 37 53.9
comp=Z,10µm,20.0s
KLU **Klutina** 73.54 28 P P 09 07 00.1 -0.6
INK **Inuvik** 73.54 19 P P 09 07 00.6 +0.1
comp=Z,37nm,0.8s,baz=326,slow=7.3,SNR=36
INK LR LR 09 44 13.8
comp=Z,12µm,18.3s,baz=328,slow=40
INK **Inuvik** 73.54 19 P P 09 07 00.1 -0.4
INK pmax pmax
comp=Z,71nm,0.8s
INK MLR MLR
comp=Z,17µm,22.0s
INK **Inuvik** 73.54 19 P P 09 07 00.1 -0.4
INK IAmb IAmb 09 07 15.2
comp=Z,71nm,0.8s
INK IAMs_20 IAMs_20 09 40 32.7
comp=Z,17µm,22.0s
K27K **Chicken** 73.54 24 P P 09 07 01.2 +0.6
baz=306
K27K **Chicken** 73.54 24 P P 09 07 00.6 0.0
K27K IAmb IAmb 09 07 12.7
comp=Z,110nm,1.2s
L26K **Log Cabin Wild** 73.67 26 P P 09 07 03.4 +2.1
baz=305
FID **Port Fidalgo** 73.72 28 IAMs_20 IAMs_20 09 42 13.1
comp=Z,16µm,20.0s
SUMG **Summit** 73.83 348 P P 09 07 01.9 -0.7
SUMG pmax pmax
comp=Z,98nm,1.0s
SUMG MLR MLR
comp=Z,17µm,20.0s
SUMG **Summit** 73.83 348 P P 09 07 01.9 -0.7
SUMG IAmb IAmb 09 07 15.6
comp=Z,98nm,1.0s
SUMG **Summit** 73.83 348 i P P 09 07 02.4 -0.2
comp=Z,41µm,18.0s
SUMG **Summit** 73.83 348 i P P 09 07 04.5 +1.9
SUMG **Summit** 73.83 348 i P P 09 07 02.5 -0.2
SUMG IAMs_20 IAMs_20 09 43 18.8
comp=Z,41µm,18.2s
SUMG **Summit** 73.83 348 i P P 09 07 02.1 -0.5
SUMG i P P 09 07 04.5 +1.9
SSB **Saint Sauveur** 73.83 313 IAMs_20 IAMs_20 09 40 39.6
comp=Z,11µm,22.0s
HIN **Hinchinbrook I** 73.91 29 IAMs_20 IAMs_20 09 41 24.3
comp=Z,15µm,20.0s
CLF **Chambon-Foret** 73.98 316 IAMs_20 IAMs_20 09 42 45.4
comp=Z,11µm,19.0s
N25K **Chitina, Valde** 74.00 27 P P 09 07 04.4 +0.9
baz=305
N25K **Chitina, Valde** 74.00 27 P P 09 07 03.3 -0.1
N25K IAMs_20 IAMs_20 09 36 22.9
comp=Z,15µm,19.0s
MBAR **Mbarara** 74.02 260 P P 09 07 07.2 +2.8
MBAR P P 09 07 07.2 +2.8
MBAR **Mbarara** 74.02 260 P P 09 07 03.4 -1.0
MBAR pmax pmax
comp=Z,73nm,1.4s
MBAR MLR MLR
comp=Z,5µm,18.0s

MBAR Mbarara 74.02 260 P P 09 07 03.4 -1.0
GLB Gilahina Butte 74.40 27 P P 09 07 04.2 -1.5
GLB IAmb IAmb 09 07 28.4
comp=Z,99nm,1.2s
GLB IAMs_20 IAMs_20 09 41 44.0
comp=Z,17µm,21.0s
DAWY Dawson 74.46 24 P P 09 07 04.6 -1.5
VRDI Verde Repeater 74.67 27 P P 09 07 05.9 -1.5
RES Resolute Bay 74.69 5 P P 09 07 07.0 -0.1
comp=Z,39nm,1.1s,baz=346,slow=5.1,SNR=28
RES Resolute Bay 74.69 5 P P 09 07 05.6 -1.5
RES pmax pmax
comp=Z,44nm,1.0s
RES Resolute Bay 74.69 5 P P 09 07 05.6 -1.5
MCARA McCarthy VSAT 74.75 27 P P 09 07 07.8 +0.1
MCARA IAmb IAmb 09 07 19.8
comp=Z,78nm,1.0s
KEST Kesra 74.82 303 P P 09 07 08.2 -0.4
comp=Z,13nm,0.8s,baz=243,slow=2.4,SNR=11
KEST LR LR 09 44 24.5
comp=Z,3µm,21.8s,baz=352,slow=39
KEST Kesra 74.82 303 P P 09 07 06.8 -1.8
KEST IAmb IAmb 09 07 13.7
comp=Z,152nm,1.5s
C36M Paulatuk 75.17 15 P P 09 07 09.8 -0.1
baz=320
C36M S S 09 16 47.6 -1.5
baz=320
C36M Paulatuk 75.17 15 P P 09 07 08.9 -1.0
C36M IAmb IAmb 09 07 26.5
comp=Z,107nm,0.9s
TGL Tana Glacier 75.19 27 P P 09 07 09.4 -1.0
TGL IAmb IAmb 09 07 22.1
comp=Z,114nm,1.1s
BALM Baldy 75.22 27 P P 09 07 10.5 -0.1
BALM IAMs_20 IAMs_20 09 38 34.5
comp=Z,17µm,22.0s
BARN Barnard Glacie 75.47 27 P P 09 07 11.5 -0.6
BARN IAmb IAmb 09 07 18.6
comp=Z,108nm,1.5s
BARN IAMs_20 IAMs_20 09 39 07.2
comp=Z,16µm,21.0s
CTGM Chitina Glacie 75.65 27 P P 09 07 13.0 -0.1
CTGM IAmb IAmb 09 07 25.8
comp=Z,56nm,0.8s
CMAH Djebel Manchou 75.81 304 P P 09 07 14.2 -0.1
FOMA Nahampoana Res 76.04 230 P P 09 07 13.6 -1.9
FOMA IAmb IAmb 09 07 24.1
comp=Z,54nm,0.9s
UPNV Upernavik 76.07 353 *e*P **P 09 07 16.9 +1.8**
CKFL Kef-Lekhel 76.41 304 P P **09 07 17.3 -0.6**
MAHO Mahon 76.49 308 *i* P **P 09 07 19.2 +1.2**
MAHO *i* S **S 09 17 00.4 -4.3**
PCA Pinnacle 76.61 27 IAMs_20 IAMs_20 09 43 05.4
comp=Z,15µm,21.0s
CTEI Djebel Teioual 76.80 304 P P 09 07 23.7 +3.7
BCPM Bancas Point 76.94 27 IAMs_20 IAMs_20 09 43 25.1
comp=Z,14µm,21.0s
ICESG Greenland Ices 76.94 347 *i* P **P 09 07 19.7 -0.8**
ICESG IAmb IAmb 09 07 21.8
comp=Z,174nm,1.4s
ICESG Greenland Ices 76.94 347 *i* P **P 09 07 19.8 -0.7**
DFRA Djebel Bou Aff 76.95 305 P P 09 07 21.5 +0.6
HYT Haines Junctio 77.20 26 P P 09 07 19.7 -2.2
HYT IAmb IAmb 09 07 33.9
comp=Z,71nm,1.1s
HYT IAMs_20 IAMs_20 09 39 57.9
comp=Z,12µm,18.0s
SET Setif 77.45 305 P P 09 07 25.0 +1.3
SANVU Saraoutou 77.63 116 P P 09 07 23.0 -1.7
SANVU IAmb IAmb 09 07 40.3
comp=Z,68nm,0.8s
ILULI Ilulissat 78.80 350 *e*P **P 09 07 31.1 +0.8**
ILULI Ilulissat 78.80 350 *i* P **P 09 07 31.1 +0.8**
ILULI Ilulissat 78.80 350 *e*P **P 09 07 31.1 +0.8**
SKAG Skagway 78.92 26 P P 09 07 29.7 -1.6
SKAG IAmb IAmb 09 07 43.6
comp=Z,116nm,1.0s
TOO Toolangi 78.94 146 P P 09 07 30.4 -1.1
TOO pmax pmax
comp=Z,54nm,0.9s
TOO Toolangi 78.94 146 P P 09 07 30.4 -1.1
TOO IAmb IAmb 09 07 40.6
comp=Z,54nm,0.9s
BESE Bessie Mountai 79.70 26 P P 09 07 33.4 -2.2
BESE IAMs_20 IAMs_20 09 43 32.0
comp=Z,13µm,20.0s
JIS Juneau Island 80.09 26 P P 09 07 36.0 -1.6
SFJD Kangerlussuaq 80.76 349 LR LR 09 48 08.4
comp=Z,10µm,19.3s,baz=18,slow=39
SFJD Kangerlussuaq 80.76 349 P P 09 07 39.0 -2.1
SFJD pmax pmax
comp=Z,122nm,1.2s
SFJD MLR MLR
comp=Z,10µm,20.0s
SFJD Kangerlussuaq 80.76 349 P P 09 07 39.0 -2.1
SFJD IAmb IAmb 09 07 45.2
comp=Z,122nm,1.2s
SFJD Kangerlussuaq 80.76 349 IAMs_20 IAMs_20 09 47 03.2
comp=Z,9µm,20.0s
SFJD Kangerlussuaq 80.76 349 *i* P **P 09 07 40.2 -0.8**
comp=Z,700nm,20.0s
SFJD Kangerlussuaq 80.76 349 *i* P **P 09 07 40.8 -0.3**
SFJD IAMs_20 IAMs_20 09 47 02.4
comp=Z,701nm,20.0s
SFJD Kangerlussuaq 80.76 349 *i* P **P 09 07 40.2 -0.8**
DZM Mont Dzumac 81.03 122 *e*P **P 09 07 45.5 +2.2**
comp=Z,126nm,1.2s
DZM Mont Dzumac 81.03 122 *e*S **S 09 17 54.9 +1.1**
comp=Z,2µm,30.0s
DZM *e*SS **SS 09 23 09.6 +0.9**
comp=Z,4µm,25.1s
DZM *e*LQ LQ 09 29 40.2
comp=Z,9µm,30.8s
DZM *e*LR LR 09 33 12.4
comp=Z,5µm,23.4s
CART Cartagena 81.21 308 *e*P **P 09 07 41.5 -2.5**
CART *e*S **S 09 17 54.0 -1.2**
UCM Universidad Co 81.26 312 *i* P **P 09 07 46.6 +2.2**
UCM *i* S **S 09 17 53.3 -2.5**
DLBC Dease Lake 81.60 25 P P 09 07 47.6 +1.8
comp=Z,8.7nm,1.0s,baz=299,slow=6.1,SNR=6.0
DLBC LR LR 09 46 53.6
comp=Z,16µm,19.1s,baz=302,slow=38
ES19 SONSECA Array 82.01 311 IAMs_20 IAMs_20 09 44 14.8
comp=Z,8µm,19.0s
ES09 SONSECA Array 82.02 311 IAMs_20 IAMs_20 09 44 16.1
comp=Z,9µm,19.0s
ES08 SONSECA Array 82.03 311 IAMs_20 IAMs_20 09 45 47.4
comp=Z,7µm,19.0s
ES10 SONSECA Array 82.04 311 IAMs_20 IAMs_20 09 44 15.8
comp=Z,9µm,19.0s
ES18 SONSECA Array 82.04 311 IAMs_20 IAMs_20 09 46 04.5
comp=Z,10µm,22.0s
ES07 SONSECA Array 82.05 311 IAMs_20 IAMs_20 09 45 48.9
comp=Z,7µm,19.0s
ES06 SONSECA Array 82.06 311 IAMs_20 IAMs_20 09 45 49.1
comp=Z,8µm,20.0s
ES17 SONSECA Array 82.06 311 IAMs_20 IAMs_20 09 44 16.1
comp=Z,9µm,20.0s
ES04 SONSECA Array 82.06 311 IAMs_20 IAMs_20 09 46 04.2
comp=Z,10µm,22.0s
ESBB Sonseca Array 82.07 311 P P 09 07 47.4 -1.2
ESBB IAMs_20 IAMs_20 09 46 03.2
comp=Z,9µm,21.0s
ESDC Sonseca Array 82.07 311 P P 09 07 48.0 -0.6
comp=Z,6.6nm,0.8s,baz=43,slow=4.9,SNR=36
ESDC S S **09 17 59.7 -4.5**
comp=Z,0.1nm,0.4s,baz=50,slow=8.6,SNR=1.3
ESDC LR LR 09 46 37.9
comp=Z,7µm,21.5s,baz=60,slow=38
ESDC Sonseca Array 82.07 311 P P 09 07 47.8 -0.8
ES05 SONSECA Array 82.07 311 IAMs_20 IAMs_20 09 46 04.4
comp=Z,10µm,21.0s
ES12 SONSECA Array 82.07 311 IAMs_20 IAMs_20 09 44 16.4
comp=Z,8µm,19.0s
ES16 SONSECA Array 82.08 311 IAMs_20 IAMs_20 09 46 04.6
comp=Z,10µm,20.0s
ES13 SONSECA Array 82.08 311 IAMs_20 IAMs_20 09 46 05.7
comp=Z,10µm,21.0s
ES14 SONSECA Array 82.10 311 IAMs_20 IAMs_20 09 46 06.0
comp=Z,9µm,21.0s
ES15 SONSECA Array 82.10 311 IAMs_20 IAMs_20 09 46 06.1
comp=Z,10µm,21.0s
PAB San Pablo 82.39 311 P P 09 07 47.7 -2.6
PAB pmax pmax
comp=Z,39nm,1.3s
PAB MLR MLR
comp=Z,9µm,20.0s
PAB San Pablo 82.39 311 P P 09 07 47.7 -2.6
PAB San Pablo 82.39 311 IAMs_20 IAMs_20 09 46 01.8
comp=Z,9µm,20.0s
CRAG Craig 82.54 28 IAMs_20 IAMs_20 09 41 24.2
comp=Z,11µm,21.0s
PBRG Braganca 82.65 314 *e*P **P 09 07 52.0 +0.4**
comp=Z,84nm,2.0s
PBRG Braganca 82.65 314 *e*S **S 09 18 15.4 +5.3**
PBRG *e*SS **SS 09 23 33.1 +2.2**
YKA Yellowknife Ar 83.01 16 P P 09 07 52.9 -0.1
comp=Z,15nm,0.8s,baz=334,slow=4.9,SNR=29
YKA LR LR 09 48 06.7
comp=Z,9µm,19.6s,baz=0.0,slow=38
MVO Moncorvo 83.19 314 *e*P **P 09 07 54.4 -0.1**
comp=Z,124nm,1.9s
MVO Moncorvo 83.19 314 *e*S **S 09 18 17.8 +2.1**
MVO Moncorvo 83.19 314 *e*LQ LQ 09 34 48.0
MVO *e*LR LR 09 37 35.2
comp=Z,7µm,20.0s
PCAB Cabril 83.50 315 *e*P **P 09 07 56.1 +0.1**
comp=Z,207nm,1.7s
PGAV Gavieira, Arco 83.50 315 *e*P **P 09 07 56.3 +0.2**
comp=Z,244nm,1.7s
PGAV Gavieira, Arco 83.50 315 *e*S **S 09 18 17.7 -1.1**
PGAV Gavieira, Arco 83.50 315 *e*LQ LQ 09 34 13.6
PGAV *e*LR LR 09 40 35.7
comp=Z,8µm,20.0s
POLO Lamas de Olo 83.55 314 *e*P **P 09 07 57.1 +0.8**
comp=Z,59nm,2.2s
POLO Lamas de Olo 83.55 314 *e*S **S 09 18 23.3 +4.0**
PVRL Vila Real 83.55 314 *e*P **P 09 07 59.8 +3.5**
comp=Z,106nm,2.2s
TAM Tamanrasset 83.91 293 P P 09 07 56.2 -2.4
TAM pmax pmax
comp=Z,14nm,0.9s
TAM MLR MLR
comp=Z,4µm,20.0s
TAM Tamanrasset 83.91 293 P P 09 07 56.2 -2.4
MTE Manteigas 83.95 314 *e*P **P 09 07 59.9 +1.5**
comp=Z,216nm,1.7s
MTE Manteigas 83.95 314 *e*S **S 09 18 21.5 -1.8**
MTE Manteigas 83.95 314 *e*LQ LQ 09 34 26.8
MTE *e*LR LR 09 38 08.3
comp=Z,8µm,20.0s
MTE Manteigas 83.95 314 P P 09 07 57.1 -1.2
MTE IAMs_20 IAMs_20 09 46 35.8
comp=Z,10µm,19.0s
PVIS Viseu 83.98 314 *e*P **P 09 07 59.6 +1.1**
comp=Z,170nm,1.7s
LSZ Lusaka 84.03 249 P P 09 08 01.4 +2.3
LSZ P P **09 08 01.4 +2.3**
LSZ Lusaka 84.03 249 P P 09 07 57.4 -1.7
LSZ pmax pmax
comp=Z,54nm,1.2s
LSZ MLR MLR
comp=Z,10µm,18.0s
LSZ Lusaka 84.03 249 P P 09 07 57.4 -1.7
LSZ IAmb IAmb 09 08 09.2
comp=Z,54nm,1.1s
LSZ Lusaka 84.03 249 IAMs_20 IAMs_20 09 44 43.9
comp=Z,10µm,18.0s
PCBR Castelo Branco 84.22 313 *e*P **P 09 08 00.2 +0.5**
comp=Z,96nm,1.7s
PMRV Marv??o 84.41 313 *e*P **P 09 08 00.5 -0.2**
comp=Z,195nm,1.7s
PMRV Marv??o 84.41 313 *e*S **S 09 18 25.9 -1.9**
PMRV Marv??o 84.41 313 *e*LQ LQ 09 34 41.1
PMRV *e*LR LR 09 38 14.6
comp=Z,5µm,18.0s
COI Coimbra 84.60 314 *e*P **P 09 08 02.9 +1.3**
comp=Z,242nm,1.9s
COI Coimbra 84.60 314 IAMs_20 IAMs_20 09 46 10.1
comp=Z,8µm,19.0s
PCAS Casmilo, Conde 84.74 314 *e*P **P 09 08 04.8 +2.5**
comp=Z,120nm,1.8s
PCAS Casmilo, Conde 84.74 314 *e*S **S 09 18 29.7 -1.5**
NRS Narsarsuaq 85.03 345 IAMs_20 IAMs_20 09 50 06.8
comp=Z,8µm,18.0s
CEU Ceuta 85.08 309 *e*P **P 09 08 04.0 -0.1**
CEU *e*S **S 09 18 26.1 -8.4**
PMTG Montargil 85.14 313 *e*P **P 09 08 03.6 -0.7**
comp=Z,135nm,2.1s
PMTG Montargil 85.14 313 *e*S **S 09 18 34.1 -1.0**
PSBE So Bento 85.24 313 *e*P **P 09 08 05.0 +0.1**
comp=Z,310nm,2.0s
PSBE So Bento 85.24 313 *e*S **S 09 18 32.3 -3.9**
PSBE *e*SS **SS 09 24 16.3 +7.0**
SFS San Fernando 85.31 310 IAMs_20 IAMs_20 09 50 03.3
comp=Z,7µm,20.0s
EVO Evora 85.32 312 *i* P **P 09 08 07.9 +2.6**
EVO *e*S **S 09 18 37.9 +1.1**
EVO Evora 85.32 312 *e*P **P 09 08 05.1 -0.1**
comp=Z,177nm,2.2s
PBEJ Beja 85.51 312 *e*P **P 09 08 07.0 +0.8**
comp=Z,130nm,1.9s
PVAQ Vaqueiros 85.78 311 *e*P **P 09 08 08.9 +1.4**
comp=Z,162nm,1.8s
PVAQ Vaqueiros 85.78 311 *e*S S 09 18 32.3 -9.1
PVAQ *e*SS **SS 09 24 26.1 +9.0**
PVAQ *e*LQ LQ 09 34 16.5
PVAQ *e*LR LR 09 38 43.6
comp=Z,8µm,20.0s
PVAQ Vaqueiros 85.78 311 P P 09 08 06.8 -0.7
PVAQ IAmb IAmb 09 08 12.2
comp=Z,136nm,1.5s
PVAQ IAMs_20 IAMs_20 09 48 15.4
comp=Z,11µm,21.0s
PCVE Castro Verde 85.85 312 *e*P **P 09 08 09.4 +1.5**
comp=Z,141nm,1.8s
PCVE Castro Verde 85.85 312 *e*S **S 09 18 37.2 -5.0**
PCVE *e*SS **SS 09 24 25.1 +6.9**
PMAFR Mafra 85.88 313 *e*P **P 09 08 07.3 -0.7**
comp=Z,314nm,1.8s
PMAFR Mafra 85.88 313 *e*S **S 09 18 44.3 +1.9**
PMAFR *e*SS **SS 09 24 22.9 +4.4**
PNCL Nicolau / Gran 85.89 312 *e*P **P 09 08 09.2 +1.1**
comp=Z,184nm,2.2s
PNCL Nicolau / Gran 85.89 312 *e*S **S 09 18 43.5 +1.0**
PNCL *e*SS **SS 09 24 25.2 +6.5**
LIS Lisbon 85.93 313 *e*P **P 09 08 06.5 -1.8**
LIS AMS AMS 09 49 58.8
comp=E,10µm,20.7s
LIS Lisbon 85.93 313 *e*P **P 09 08 06.5 -1.8**
FRB Frobisher Bay 85.95 356 LR LR 09 48 34.2
comp=E,6µm,21.1s,baz=356,slow=37
IFR Ifrane 86.24 307 *e*P **P 09 08 13.4 +3.3**
IFR *e*S S 09 18 37.2 -9.2
PTEO Sao Teotonio 86.35 312 *e*P **P 09 08 11.4 +1.1**
comp=E,225nm,1.8s
MORF Marmelete 86.44 312 *e*P **P 09 08 09.0 -1.9**
MORF AMS AMS 09 45 56.7
comp=N,8µm,16.6s
MORF Marmelete 86.44 312 *e*P **P 09 08 09.0 -1.9**
MORF Marmelete 86.44 312 *e*P **P 09 08 11.5 +0.6**
comp=N,179nm,2.1s
MORF Marmelete 86.44 312 *e*S **S 09 18 44.2 -3.8**
MORF *e*SS **SS 09 24 29.6 +2.7**
PFVI Vila Bisbo 86.65 311 *e*S **S 09 18 51.6 +1.6**
PFVI *e*SS **SS 09 24 33.6 +3.6**
PFVI Vila Bisbo 86.65 311 IAMs_20 IAMs_20 09 46 31.6
comp=Z,11µm,20.0s
RTC Rabat Centre 87.16 308 IAMs_20 IAMs_20 09 49 00.2
comp=Z,8µm,20.0s
MSVF Nonsavu 87.48 112 *i* P **P 09 08 15.2 -1.0**
MSVF pmax pmax
comp=Z,50nm,1.0s
AVE Averroes 87.93 308 *e*P **P 09 08 22.7 +4.6**
AVE *e*S **S 09 18 57.7 -4.8**
FCC Fort Churchill 90.28 8 P P 09 08 27.0 -1.6
FCC pmax pmax
comp=Z,76nm,1.4s
FCC Fort Churchill 90.28 8 P P 09 08 27.0 -1.6
FCC IAmb IAmb 09 08 37.1
comp=Z,76nm,1.4s
FCC IAMs_20 IAMs_20 09 54 22.3
comp=Z,8µm,18.0s
LBTB Lobatse 91.38 242 P P 09 08 31.5 -2.9
LBTB pmax pmax
comp=Z,8.0nm,0.8s
LBTB Lobatse 91.38 242 P P 09 08 31.5 -2.9
TOC2 Torodi Ar. Sit 91.94 286 IAMs_20 IAMs_20 09 55 51.2
comp=Z,6µm,19.0s
TOC1 Torodi Ar. Sit 91.95 286 IAMs_20 IAMs_20 09 55 50.4
comp=Z,7µm,18.0s
TOA2 Torodi Ar. Sit 91.96 286 IAMs_20 IAMs_20 09 55 51.4
comp=Z,6µm,19.0s
TOB3 Torodi Ar. Sit 91.97 286 IAMs_20 IAMs_20 09 55 41.5
comp=Z,6µm,19.0s
TOA0 Torodi Ar. Sit 91.97 286 P P 09 08 35.0 -2.3
TOA0 IAmb IAmb 09 08 54.3
comp=Z,43nm,1.1s
TORD Torodi Ar. Bea 91.97 286 P P 09 08 36.1 -1.2
comp=Z,17nm,0.9s,baz=45,slow=4.0,SNR=24
TORD PP **PP 09 12 16.6 0.0**
comp=Z,9.0nm,0.9s,baz=53,slow=3.7,SNR=6.5
TORD LR LR 09 56 02.8
comp=Z,5µm,18.9s,baz=30,slow=40
TORD Torodi Ar. Bea 91.97 286 P P 09 08 36.0 -1.2
TOB5 Torodi Ar. Sit 91.98 286 IAMs_20 IAMs_20 09 55 51.8
comp=Z,6µm,19.0s
TOC4 Torodi Ar. Sit 91.98 286 IAMs_20 IAMs_20 09 55 42.8
comp=Z,6µm,19.0s
TOC5 Torodi Ar. Sit 91.99 286 IAMs_20 IAMs_20 09 55 52.6
comp=Z,7µm,19.0s
NLWA Neilton Lookou 92.41 29 IAMs_20 IAMs_20 09 50 59.5
comp=Z,8µm,20.0s
B05A Bryant 92.45 28 P P 09 08 40.8 +1.8
baz=323
B06A Marblemount 92.49 27 IAMs_20 IAMs_20 09 47 38.3
comp=Z,9µm,20.0s
D03D Eldon 92.62 29 P P 09 08 42.6 +2.8
baz=322
FFC Flin Flon 92.86 14 P P 09 08 40.8 +0.1
FFC pmax pmax
comp=Z,42nm,1.3s
FFC MLR MLR
comp=Z,8µm,20.0s
FFC Flin Flon 92.86 14 P P 09 08 40.8 +0.1
FFC IAmb IAmb 09 08 55.0
comp=Z,42nm,1.2s
FFC Flin Flon 92.86 14 IAMs_20 IAMs_20 09 51 12.1
comp=Z,8µm,20.0s
C06D Leavenworth 93.20 27 P P 09 08 45.9 +3.5
baz=324
E03A Lebam 93.21 29 IAMs_20 IAMs_20 09 47 31.5
comp=Z,7µm,20.0s
D05A Enumclaw 93.35 28 IAMs_20 IAMs_20 09 54 45.3
comp=Z,7µm,18.0s
B08A Colville Reser 93.45 26 P P 09 08 40.9 -2.7
B08A IAMs_20 IAMs_20 09 54 00.6
comp=Z,10µm,19.0s
BOSA Boshof 93.58 239 P P 09 08 42.1 -2.4
comp=Z,4.1nm,0.8s,baz=100,slow=6.1,SNR=2.7
BOSA LR LR 09 52 00.7
comp=Z,4µm,18.2s,baz=61,slow=36
E04D Cinebar 93.62 29 P P 09 08 48.7 +4.4
baz=323
LON Longmire 93.78 28 IAMs_20 IAMs_20 09 53 16.0
comp=Z,6µm,20.0s
LTY Liberty 93.83 27 IAMs_20 IAMs_20 09 54 24.4
comp=Z,6µm,19.0s
AFI Afiamalu 93.87 104 LR LR 09 47 09.4
comp=Z,2µm,21.9s,baz=294,slow=33
F04A Amboy 94.18 29 IAMs_20 IAMs_20 09 51 56.7
comp=Z,6µm,19.0s
C09A Chrisman Ranch 94.31 26 P P 09 08 46.4 -1.1
C09A IAMs_20 IAMs_20 09 49 14.9
comp=Z,9µm,20.0s
NEW Newport 94.35 25 P P 09 08 48.1 +0.3
comp=Z,7.0nm,0.9s,baz=345,slow=2.2,SNR=9.4
NEW Newport 94.35 25 P P 09 08 47.8 0.0
NEW pmax pmax
comp=Z,11nm,0.9s
NEW Newport 94.35 25 P P 09 08 49.4 +1.6
baz=327
NEW Newport 94.35 25 P P 09 08 47.8 0.0
SCHQ Schefferville 94.64 353 P P 09 08 48.4 -0.5
comp=Z,12nm,0.9s,baz=14,slow=7.6,SNR=4.1
SCHQ LR LR 09 55 49.9
comp=Z,6µm,19.5s,baz=6.0,slow=38
SCHQ Schefferville 94.64 353 P P 09 08 48.9 0.0
SCHQ IAMs_20 IAMs_20 09 55 29.8
comp=Z,7µm,21.0s
D08A Wollman Farm, 94.68 27 IAMs_20 IAMs_20 09 49 16.8
comp=Z,11µm,22.0s
TSUM Tsumeb 94.70 251 IAMs_20 IAMs_20 09 52 56.0
comp=Z,6µm,19.0s
PMOZ Porto Moniz, M 94.71 312 *e*LR LR 09 44 44.3
comp=Z,6µm,20.0s
E07A Sunnyside 94.72 27 IAMs_20 IAMs_20 09 50 33.0
comp=Z,7µm,20.0s
HAWA Hanford 94.99 27 IAMs_20 IAMs_20 09 51 00.9
comp=Z,8µm,20.0s
F07A Phinny Hill Vi 95.23 28 IAMs_20 IAMs_20 09 55 18.6
comp=Z,7µm,19.0s
E09A Wood Farm, Sta 95.43 26 IAMs_20 IAMs_20 09 49 49.6
comp=Z,11µm,21.0s
KOWA Kowa 95.94 290 IAMs_20 IAMs_20 09 57 26.4
comp=Z,6µm,20.0s
G08A Pilot Rock 96.12 28 IAMs_20 IAMs_20 09 49 55.0
comp=Z,7µm,21.0s
KBO Bosley Butte 96.31 33 IAMs_20 IAMs_20 09 48 29.4
comp=Z,6µm,21.0s
PINE Pine Mountain 96.52 30 IAMs_20 IAMs_20 09 56 56.8
comp=Z,6µm,19.0s
MSO Missoula 96.71 24 P P 09 08 58.4 -0.3
baz=330
I07A Izee 96.89 29 IAMs_20 IAMs_20 09 50 40.4
comp=Z,8µm,22.0s
KRMB Red Mountain 96.99 33 IAMs_20 IAMs_20 09 49 01.6
comp=Z,8µm,21.0s
EGMT Eagleton 97.03 21 IAMs_20 IAMs_20 09 51 48.4
comp=Z,9µm,21.0s
BMO Blue Mountains 97.14 27 IAMs_20 IAMs_20 09 56 25.8
comp=Z,8µm,20.0s
YBH Yreka Blue Hor 97.38 32 LR LR 09 55 47.6
comp=Z,3µm,18.6s,baz=334,slow=37
YBH Yreka Blue Hor 97.38 32 IAMs_20 IAMs_20 09 57 45.8
comp=Z,6µm,21.0s
K05A Summer Lake 97.40 30 IAMs_20 IAMs_20 09 54 25.1
comp=Z,6µm,20.0s
J08A Circle Bar Ran 97.91 28 IAMs_20 IAMs_20 09 53 36.4
comp=Z,6µm,20.0s
KMRM Mail Ridge 98.10 33 IAMs_20 IAMs_20 09 54 40.5
comp=Z,5µm,19.0s
ULM Lac du Bonnet 98.27 11 P Pdif 09 09 06.3 +0.8
comp=Z,1.7nm,0.7s,baz=326,slow=7.3,SNR=2.1
ULM LR LR 09 57 33.4
comp=Z,4µm,18.3s,baz=336,slow=38
ULM Lac du Bonnet 98.27 11 IAMs_20 IAMs_20 09 55 21.6
comp=Z,8µm,22.0s
MOD Modoc Plateau 98.32 30 IAMs_20 IAMs_20 09 58 10.6
comp=Z,5µm,20.0s
WDC Whiskeytown Da 98.37 33 IAMs_20 IAMs_20 09 58 32.1
comp=Z,7µm,21.0s
DLMT Dillon 98.44 24 IAMs_20 IAMs_20 09 57 01.6
comp=Z,8µm,19.0s
KCPM Cahto Peak 98.58 34 IAMs_20 IAMs_20 09 54 55.8
comp=Z,5µm,18.0s
DRLN Deer Lake 98.66 346 IAMs_20 IAMs_20 09 54 27.3
comp=Z,8µm,19.0s
MFID Camas Ranch 98.92 27 IAMs_20 IAMs_20 09 57 32.0
comp=Z,8µm,20.0s
HLID Hailey 99.34 26 P Pdif 09 09 13.6 +3.0
baz=329
HLID Hailey 99.34 26 IAMs_20 IAMs_20 09 52 23.0
comp=Z,8µm,20.0s
GDXM Geysers 99.65 34 IAMs_20 IAMs_20 09 55 38.0
comp=Z,5µm,19.0s
RLMT Red Lodge 99.77 22 IAMs_20 IAMs_20 09 54 48.0
comp=Z,9µm,21.0s
MDND Maddock 99.85 14 IAMs_20 IAMs_20 09 54 30.5
comp=Z,9µm,20.0s
AGMN Agassiz Nation 100.16 12 IAMs_20 IAMs_20 10 00 34.5
comp=Z,7µm,18.0s
FLWY Flagg Ranch 100.22 23 IAMs_20 IAMs_20 09 58 38.4
comp=Z,7µm,19.0s
IMW Indian Meadow 100.30 23 IAMs_20 IAMs_20 09 52 43.6
comp=Z,9µm,21.0s
B35A Bob, Littlefor 100.45 10 IAMs_20 IAMs_20 09 58 37.3
comp=Z,8µm,18.0s
PAHR Pah Rah Range 100.51 31 IAMs_20 IAMs_20 09 57 41.5
comp=Z,6µm,22.0s
SNOW Snow King Moun 100.75 24 IAMs_20 IAMs_20 09 54 28.4
comp=Z,9µm,20.0s
DBIC Dimbokro 100.85 284 PP PP 09 13 26.4 +1.1
comp=Z,6.9nm,1.0s,baz=34,slow=8.4,SNR=6.2
KIC Kosan Boka 100.92 284 *e*PKP1 **PP 09 13 26.1 +0.3**
comp=Z,451nm,2.5s
D32A Dogwood Acres, 101.06 13 IAMs_20 IAMs_20 10 01 21.4

	comp=Z,10µm,20.0s							
EYMN	**Ely**	**101.19**	**9**	IAMs_20	IAMs_20	10 00 48.5		
	comp=Z,9µm,19.0s							
LIC	**Lamto**	**101.23**	**284**	*e*PKP1	**PP**	**09 13 26.5**		**-1.7**
	comp=Z,83nm,1.3s							
ELK	**Elko**	**101.41**	**28**	IAMs_20	IAMs_20	09 57 31.1		
	comp=Z,7µm,19.0s							
WAKR	**Walker**	**101.47**	**32**	IAMs_20	IAMs_20	09 53 45.9		
	comp=Z,5µm,21.0s							
KVN	**Kaiserville**	**101.62**	**31**	IAMs_20	IAMs_20	09 54 55.9		
	comp=Z,5µm,19.0s							
BW06	**Boulder Array**	**101.77**	**23**	IAMs_20	IAMs_20	09 59 29.0		
	comp=Z,8µm,19.0s							
PDAR	**Pinedale Array**	**101.77**	**23**	P	**Pdif**	**09 09 22.8**		**+1.3**
	comp=Z,0.7nm,0.8s,baz=34,slow=4.3,SNR=4.5							
PDAR				PP	**PP**	**09 13 33.6**		**+2.7**
	comp=Z,1.4nm,1.0s,baz=90,slow=1.5,SNR=5.0							
PDAR				PKKPbc	**PKKPbc**	**09 25 27.2**		**-0.3**
	comp=Z,0.4nm,0.8s,baz=144,slow=7.8,SNR=1.5							
RYN	**Ryan**	**101.78**	**31**	IAMs_20	IAMs_20	10 00 34.1		
	comp=Z,6µm,18.0s							
BATG	**Bathurst New B**	**102.00**	**352**	IAMs_20	IAMs_20	10 01 38.5		
	comp=Z,8µm,18.0s							
NVAR	**Mina Array Bea**	**102.04**	**31**	P	**Pdif**	**09 09 26.7**		**+3.9**
	comp=Z,1.4nm,0.9s,baz=301,slow=4.5,SNR=7.6							
NVAR				PP	**PKiKP**	**09 13 41.8**		**-3.6**
	comp=Z,2.5nm,1.0s,baz=309,slow=4.4,SNR=4.1							
NVAR				PKKPbc	**PKKPdf**	**09 25 34.5**		**+2.3**
	comp=Z,0.5nm,0.7s,baz=137,slow=2.9,SNR=3.7							
HWUT	**Hardware Ranch**	**102.08**	**25**	IAMs_20	IAMs_20	09 53 48.3		
	comp=Z,10µm,21.0s							
LHV	**Little Huntoon**	**102.10**	**31**	IAMs_20	IAMs_20	10 00 55.5		
	comp=Z,6µm,19.0s							
NV11	**Mina Array Sit**	**102.10**	**31**	IAMs_20	IAMs_20	10 00 52.2		
	comp=Z,6µm,19.0s							
RSSD	**Black Hills**	**102.25**	**19**	P	**Pdif**	**09 09 26.7**		**+3.1**
	baz=338							
RSSD	**Black Hills**	**102.25**	**19**	IAMs_20	IAMs_20	09 55 08.2		
	comp=Z,9µm,22.0s							
OMMB	**Old Mammoth Mi**	**102.39**	**32**	IAMs_20	IAMs_20	10 01 05.4		
	comp=Z,5µm,20.0s							
D41A	**Chassel**	**102.42**	**7**	IAMs_20	IAMs_20	09 57 29.4		
	comp=Z,8µm,19.0s							
F33A	**5 Mile Ranch,**	**102.44**	**13**	IAMs_20	IAMs_20	09 57 36.5		
	comp=Z,8µm,19.0s							
E38A	**The Farm, Brul**	**102.49**	**9**	IAMs_20	IAMs_20	09 59 29.4		
	comp=Z,8µm,19.0s							
D62A	**Allapoint, All**	**102.52**	**354**	IAMs_20	IAMs_20	10 02 46.6		
	comp=Z,7µm,19.0s							
PQI	**Presque Isle**	**102.82**	**353**	IAMs_20	IAMs_20	09 55 53.6		
	comp=Z,7µm,22.0s							
DUG	**Dugway, Tooele**	**102.84**	**27**	IAMs_20	IAMs_20	10 00 04.2		
	comp=Z,6µm,21.0s							
K22A	**Casper**	**102.86**	**21**	IAMs_20	IAMs_20	09 59 06.1		
	comp=Z,8µm,20.0s							
F36A	**Milaca**	**102.92**	**11**	IAMs_20	IAMs_20	09 57 59.8		
	comp=Z,8µm,20.0s							
E62A	**Clayton Lake**	**103.02**	**354**	IAMs_20	IAMs_20	10 01 58.9		
	comp=Z,8µm,19.0s							
E63A	**Oxbow**	**103.11**	**353**	IAMs_20	IAMs_20	09 56 04.6		
	comp=Z,6µm,21.0s							
LMN	**Caledonia Moun**	**103.22**	**350**	IAMs_20	IAMs_20	09 59 26.2		
	comp=Z,7µm,19.0s							
SPR3	**Spring Creek 3**	**103.26**	**28**	IAMs_20	IAMs_20	09 56 55.6		
	comp=Z,6µm,19.0s							
R11A	**Troy Canyon, C**	**103.29**	**29**	IAMs_20	IAMs_20	09 57 02.4		
	comp=Z,6µm,20.0s							
SPMN	**Marine on St.**	**103.65**	**11**	IAMs_20	IAMs_20	09 57 12.3		
	comp=Z,6µm,20.0s							
F64A	**Sherman**	**103.66**	**353**	IAMs_20	IAMs_20	09 56 29.6		
	comp=Z,7µm,21.0s							
F42A	**Maple Grove Fa**	**103.75**	**7**	IAMs_20	IAMs_20	10 02 05.6		
	comp=Z,8µm,20.0s							
F63A	**Nahmakanta, Br**	**103.89**	**353**	IAMs_20	IAMs_20	10 03 41.9		
	comp=Z,7µm,21.0s							
G40A	**Rib Lake**	**103.99**	**9**	IAMs_20	IAMs_20	09 57 54.0		
	comp=Z,9µm,22.0s							
G65A	**Princeton**	**104.22**	**352**	IAMs_20	IAMs_20	10 04 34.6		
	comp=Z,7µm,18.0s							
HAL	**Halifax**	**104.23**	**349**	IAMs_20	IAMs_20	09 59 08.7		
	comp=Z,6µm,20.0s							
PRN	**Pahroc Range**	**104.31**	**30**	IAMs_20	IAMs_20	09 57 35.5		
	comp=Z,7µm,20.0s							
PHWY	**Pilot Hill**	**104.42**	**21**	IAMs_20	IAMs_20	09 55 09.3		
	comp=Z,6µm,21.0s							
G62A	**West of Eustis**	**104.50**	**354**	IAMs_20	IAMs_20	10 01 20.1		
	comp=Z,8µm,21.0s							
O20A	**White River Ci**	**104.56**	**23**	IAMs_20	IAMs_20	10 06 36.4		
	comp=Z,6µm,20.0s							
N23A	**Red Feather La**	**104.63**	**21**	IAMs_20	IAMs_20	09 57 41.4		
	comp=Z,9µm,20.0s							
EMMW	**East Machias**	**104.69**	**352**	IAMs_20	IAMs_20	10 04 49.2		
	comp=Z,8µm,18.0s							
PLVO	**Plevna**	**105.00**	**359**	IAMs_20	IAMs_20	09 58 43.3		
	comp=Z,9µm,22.0s							
H43A	**Windswept, Lux**	**105.06**	**7**	IAMs_20	IAMs_20	10 03 38.4		
	comp=Z,7µm,18.0s							
WVL	**Waterville**	**105.07**	**354**	IAMs_20	IAMs_20	10 03 38.2		
	comp=Z,6µm,19.0s							
FRNY	**Flat Rock**	**105.09**	**357**	IAMs_20	IAMs_20	10 02 04.7		
	comp=Z,6µm,20.0s							
H62A	**Milan**	**105.19**	**355**	IAMs_20	IAMs_20	09 59 30.4		
	comp=Z,7µm,20.0s							
I40A	**Norwalk**	**105.28**	**9**	IAMs_20	IAMs_20	10 03 41.3		
	comp=Z,8µm,20.0s							
LONY	**Lake Ozonia**	**105.35**	**357**	IAMs_20	IAMs_20	10 02 04.6		
	comp=Z,8µm,20.0s							
I42A	**Draeger Farm,**	**105.50**	**8**	IAMs_20	IAMs_20	09 58 55.1		
	comp=Z,7µm,19.0s							
VT1	**Waterbury**	**105.55**	**356**	IAMs_20	IAMs_20	10 01 27.0		
	comp=Z,7µm,20.0s							
LBNH	**Lisbon**	**105.58**	**355**	IAMs_20	IAMs_20	10 00 01.7		
	comp=Z,6µm,21.0s							
MWC	**Mount Wilson**	**105.59**	**33**	IAMs_20	IAMs_20	10 03 27.9		
	comp=Z,5µm,20.0s							
I63A	**Otisfield**	**105.67**	**354**	IAMs_20	IAMs_20	10 00 03.9		
	comp=Z,8µm,21.0s							
SMCO	**Snowmass**	**105.85**	**23**	IAMs_20	IAMs_20	09 59 37.5		
	comp=Z,6µm,19.0s							
PV14	**Lion Creek, Pa**	**105.86**	**25**	IAMs_20	IAMs_20	09 58 02.8		
	comp=Z,10µm,22.0s							
I62A	**Tamworth**	**105.90**	**355**	IAMs_20	IAMs_20	09 59 51.1		
	comp=Z,7µm,22.0s							
PV19	**Morning Glory**	**105.92**	**25**	IAMs_20	IAMs_20	09 58 03.6		
	comp=Z,8µm,22.0s							
PV07	**Paradox Valley**	**105.93**	**24**	IAMs_20	IAMs_20	09 56 11.7		
	comp=Z,6µm,20.0s							
PV16	**Nyswonger Mesa**	**105.95**	**25**	IAMs_20	IAMs_20	09 58 05.2		
	comp=Z,9µm,22.0s							
I49A	**Point Hope**	**105.98**	**3**	IAMs_20	IAMs_20	10 02 51.5		
	comp=Z,9µm,20.0s							
PV12	**Saucer Basin,**	**105.98**	**25**	IAMs_20	IAMs_20	09 56 23.5		
	comp=Z,8µm,20.0s							
NCB	**Newcomb**	**105.98**	**357**	IAMs_20	IAMs_20	09 58 04.3		
	comp=Z,5µm,22.0s							
PV18	**Skein Mesa, Pa**	**106.01**	**25**	IAMs_20	IAMs_20	09 58 06.8		
	comp=Z,8µm,21.0s							
PV03	**Paradox Valley**	**106.02**	**25**	IAMs_20	IAMs_20	09 58 08.2		
	comp=Z,8µm,22.0s							
PV15	**Paradox Valley**	**106.08**	**24**	IAMs_20	IAMs_20	09 56 16.6		
	comp=Z,7µm,20.0s							
PECO	**Prince Edward**	**106.10**	**359**	IAMs_20	IAMs_20	10 06 44.5		
	comp=Z,7µm,18.0s							
HNH	**Hanover**	**106.14**	**356**	IAMs_20	IAMs_20	10 02 34.4		
	comp=Z,7µm,20.0s							
L34A	**Svendsen Farm,**	**106.15**	**14**	IAMs_20	IAMs_20	09 58 14.5		
	comp=Z,10µm,22.0s							
MBO	**M'Bour**	**106.21**	**298**	IAMs_20	IAMs_20	10 02 48.5		
	comp=Z,6µm,21.0s							
PV01	**Paradox Valley**	**106.23**	**25**	IAMs_20	IAMs_20	09 58 13.7		
	comp=Z,7µm,20.0s							
JFWS	**Jewell Farm**	**106.29**	**9**	IAMs_20	IAMs_20	10 03 25.0		
	comp=Z,8µm,19.0s							
U15A	**North Rim**	**106.30**	**28**	IAMs_20	IAMs_20	10 03 58.8		
	comp=Z,6µm,20.0s							
FFD	**Franklin Falls**	**106.33**	**355**	IAMs_20	IAMs_20	10 00 26.4		
	comp=Z,8µm,21.0s							
J47A	**Sunmer**	**106.56**	**5**	IAMs_20	IAMs_20	09 59 30.7		
	comp=Z,9µm,21.0s							
J57A	**Williamstown**	**106.61**	**358**	IAMs_20	IAMs_20	10 04 23.8		
	comp=Z,7µm,20.0s							
J58A	**Remsen**	**106.64**	**358**	IAMs_20	IAMs_20	09 59 31.6		
	comp=Z,10µm,22.0s							
J56A	**Wolcott**	**106.76**	**359**	IAMs_20	IAMs_20	10 02 50.9		
	comp=Z,6µm,20.0s							
W13A	**Hualapai Mount**	**106.76**	**30**	IAMs_20	IAMs_20	10 00 38.4		
	comp=Z,6µm,19.0s							
J55A	**Hilton**	**106.78**	**360**	IAMs_20	IAMs_20	10 01 58.4		
	comp=Z,9µm,20.0s							
SCIA	**State Center**	**106.81**	**12**	IAMs_20	IAMs_20	10 05 17.0		
	comp=Z,8µm,19.0s							
MVCO	**Mesa Verde**	**107.08**	**25**	IAMs_20	IAMs_20	09 59 35.1		
	comp=Z,6µm,20.0s							
N33A	**J Bar K, Exete**	**107.09**	**15**	IAMs_20	IAMs_20	10 01 50.6		
	comp=Z,9µm,21.0s							
K50A	**Casco**	**107.16**	**3**	IAMs_20	IAMs_20	10 05 04.6		
	comp=Z,8µm,21.0s							
K62A	**Royalston**	**107.17**	**355**	IAMs_20	IAMs_20	10 02 57.7		
	comp=Z,8µm,20.0s							
S22A	**4UR Ranch, Cre**	**107.19**	**23**	IAMs_20	IAMs_20	10 03 09.0		
	comp=Z,8µm,19.0s							
TRY	**Troy**	**107.19**	**357**	IAMs_20	IAMs_20	10 02 24.3		
	comp=Z,8µm,21.0s							
K58A	**Earlville**	**107.24**	**358**	IAMs_20	IAMs_20	09 59 58.7		
	comp=Z,8µm,20.0s							
L42A	**Oliver, Polo**	**107.27**	**9**	IAMs_20	IAMs_20	10 05 12.8		
	comp=Z,8µm,20.0s							
HRV	**Adam Dziewonsk**	**107.28**	**355**	IAMs_20	IAMs_20	10 00 51.6		
	comp=Z,9µm,22.0s							
MMNY	**Mt. Morris Dam**	**107.31**	**360**	IAMs_20	IAMs_20	10 01 42.5		
	comp=Z,9µm,20.0s							
KSCO	**Kaye Shedlock'**	**107.37**	**20**	IAMs_20	IAMs_20	10 01 08.4		
	comp=Z,8µm,20.0s							
WES	**Weston**	**107.38**	**355**	IAMs_20	IAMs_20	10 01 05.3		
	comp=Z,8µm,22.0s							
BCX	**Boston College**	**107.42**	**355**	IAMs_20	IAMs_20	10 01 05.3		
	comp=Z,6µm,22.0s							
WUAZ	**Wupatki**	**107.46**	**28**	IAMs_20	IAMs_20	10 01 11.5		
	comp=Z,5µm,20.0s							
SDCO	**Great Sand Dun**	**107.64**	**22**	IAMs_20	IAMs_20	10 02 41.7		
	comp=Z,9µm,21.0s							
WVNY	**West Valley, N**	**107.64**	**0**	IAMs_20	IAMs_20	10 05 18.6		
	comp=Z,7µm,21.0s							
L46A	**Eue Claire**	**107.64**	**6**	IAMs_20	IAMs_20	10 03 12.6		
	comp=Z,8µm,22.0s							
HQIL	**Hanson Quary C**	**107.69**	**8**	IAMs_20	IAMs_20	10 06 22.0		
	comp=Z,8µm,20.0s							
L59A	**Walton**	**107.80**	**358**	IAMs_20	IAMs_20	10 01 56.3		
	comp=Z,7µm,20.0s							
L48A	**N Adams**	**107.87**	**5**	IAMs_20	IAMs_20	10 01 34.5		
	comp=Z,8µm,20.0s							
L56A	**Greenwood**	**107.91**	**360**	IAMs_20	IAMs_20	10 02 02.2		
	comp=Z,9µm,21.0s							
ERPA	**Erie**	**107.91**	**1**	IAMs_20	IAMs_20	10 01 53.4		
	comp=Z,8µm,19.0s							
M44A	**Midewin, Midew**	**108.08**	**8**	IAMs_20	IAMs_20	10 05 17.2		
	comp=Z,9µm,21.0s							
Y14A	**Wickenburg**	**108.13**	**30**	IAMs_20	IAMs_20	10 00 58.6		
	comp=Z,6µm,21.0s							
M65A	**Busby, Falmout**	**108.14**	**354**	IAMs_20	IAMs_20	10 05 16.8		
	comp=Z,7µm,18.0s							
KSCT	**Kent School, K**	**108.19**	**356**	IAMs_20	IAMs_20	10 03 16.6		
	comp=Z,9µm,21.0s							
ALLY	**Allegheny Colle**	**108.37**	**2**	IAMs_20	IAMs_20	10 00 35.7		
	comp=Z,7µm,20.0s							
X16A	**Lo Mia Camp, P**	**108.38**	**29**	IAMs_20	IAMs_20	10 02 20.4		
	comp=Z,5µm,21.0s							
KSPA	**Keystone Colle**	**108.45**	**358**	IAMs_20	IAMs_20	10 03 17.0		
	comp=Z,7µm,22.0s							
W18A	**Petrified Fore**	**108.46**	**27**	IAMs_20	IAMs_20	10 02 12.9		
	comp=Z,8µm,19.0s							
M50A	**Fremont**	**108.50**	**4**	IAMs_20	IAMs_20	10 01 34.1		
	comp=Z,9µm,19.0s							
M54A	**Oil Creek Stat**	**108.52**	**1**	IAMs_20	IAMs_20	10 02 22.1		
	comp=Z,8µm,19.0s							
T25A	**Trinidad**	**108.55**	**22**	IAMs_20	IAMs_20	09 58 20.7		
	comp=Z,8µm,20.0s							
M56A	**Emporium**	**108.56**	**360**	IAMs_20	IAMs_20	10 00 53.6		
	comp=Z,9µm,21.0s							
YLE	**Yale**	**108.56**	**356**	IAMs_20	IAMs_20	10 03 18.5		
	comp=Z,7µm,22.0s							
M53A	**WI Miller and**	**108.57**	**2**	IAMs_20	IAMs_20	10 04 29.9		
	comp=Z,8µm,20.0s							
M55A	**Ridgway**	**108.57**	**0**	IAMs_20	IAMs_20	10 02 58.9		
	comp=Z,7µm,21.0s							
WSPT	**Westport, CT**	**108.73**	**356**	IAMs_20	IAMs_20	10 03 41.9		
	comp=Z,9µm,21.0s							
HDIL	**Hopedale**	**108.74**	**9**	IAMs_20	IAMs_20	10 06 43.8		
	comp=Z,7µm,21.0s							
TRNY	**Table Rock, Ra**	**108.80**	**357**	IAMs_20	IAMs_20	09 59 58.9		
	comp=Z,6µm,22.0s							
N47A	**Urbana**	**108.82**	**6**	IAMs_20	IAMs_20	10 01 49.8		
	comp=Z,7µm,20.0s							
KSU1	**Kansas State U**	**108.84**	**15**	IAMs_20	IAMs_20	10 01 47.9		
	comp=Z,8µm,19.0s							
ODNJ	**Ogdensburg**	**108.88**	**357**	IAMs_20	IAMs_20	10 08 28.0		
	comp=Z,6µm,19.0s							
X18A	**Snowflake**	**108.89**	**27**	IAMs_20	IAMs_20	10 03 02.3		
	comp=Z,6µm,21.0s							
PAL	**Palisades**	**108.93**	**357**	IAMs_20	IAMs_20	10 08 29.2		
	comp=Z,8µm,18.0s							
R32A	**Long Quarter,**	**108.99**	**17**	IAMs_20	IAMs_20	10 00 11.1		
	comp=Z,9µm,22.0s							
N54A	**Moraine State**	**109.06**	**1**	IAMs_20	IAMs_20	10 01 04.9		
	comp=Z,7µm,20.0s							
N59A	**State Game Lan**	**109.09**	**358**	IAMs_20	IAMs_20	10 06 08.6		
	comp=Z,8µm,20.0s							
CPNY	**Central Park**	**109.14**	**357**	IAMs_20	IAMs_20	10 08 41.9		
	comp=Z,7µm,20.0s							
N53A	**Lisbon**	**109.19**	**2**	IAMs_20	IAMs_20	10 04 47.4		
	comp=Z,8µm,20.0s							
O44A	**Mansfield**	**109.25**	**8**	IAMs_20	IAMs_20	10 05 51.1		
	comp=Z,8µm,20.0s							
BRNJ	**Basking Ridge**	**109.28**	**357**	IAMs_20	IAMs_20	10 08 46.5		
	comp=Z,8µm,19.0s							
LUPA	**Lehigh Univers**	**109.40**	**358**	IAMs_20	IAMs_20	10 03 55.6		
	comp=Z,7µm,20.0s							
SSPA	**Standing Stone**	**109.41**	**360**	IAMs_20	IAMs_20	10 05 29.0		
	comp=Z,6µm,21.0s							
P43A	**Skaggs, Pawnee**	**109.61**	**9**	IAMs_20	IAMs_20	10 07 27.8		
	comp=Z,7µm,18.0s							
O49A	**Covington**	**109.62**	**5**	IAMs_20	IAMs_20	10 07 30.9		
	comp=Z,6µm,20.0s							
ACSO	**Alum Creek Sta**	**109.67**	**4**	IAMs_20	IAMs_20	10 06 26.1		
	comp=Z,6µm,18.0s							
PAGS	**Pennsylvania G**	**109.80**	**359**	IAMs_20	IAMs_20	10 03 44.4		
	comp=Z,8µm,20.0s							
ANMO	**Albuquque**	**109.84**	**24**	IAMs_20	IAMs_20	09 57 51.1		
	comp=Z,7µm,22.0s							
O52A	**Adamsville**	**109.85**	**3**	IAMs_20	IAMs_20	10 02 32.7		
	comp=Z,6µm,19.0s							
214A	**Organ Pipe Nat**	**109.90**	**31**	IAMs_20	IAMs_20	09 59 28.9		
	comp=Z,4µm,19.0s							
P46A	**Rosedale**	**109.92**	**7**	IAMs_20	IAMs_20	10 01 48.9		
	comp=Z,8µm,19.0s							
PSUB	**Penn St. Stra**	**110.07**	**358**	IAMs_20	IAMs_20	10 04 07.4		
	comp=Z,8µm,20.0s							
WUPA	**West Chester U**	**110.07**	**358**	IAMs_20	IAMs_20	10 04 12.4		
	comp=Z,8µm,20.0s							
P48A	**Milroy**	**110.26**	**6**	IAMs_20	IAMs_20	10 08 41.7		
	comp=Z,6µm,19.0s							
P61A	**Hammonton**	**110.30**	**357**	IAMs_20	IAMs_20	10 04 28.4		
	comp=Z,7µm,19.0s							
P52A	**Corning**	**110.31**	**3**	IAMs_20	IAMs_20	10 06 11.1		
	comp=Z,7µm,19.0s							
MCWV	**Mont Chateau**	**110.37**	**1**	IAMs_20	IAMs_20	10 06 37.4		
	comp=Z,5µm,18.0s							
Q44A	**Meyer Farm, Va**	**110.40**	**9**	IAMs_20	IAMs_20	10 07 44.8		
	comp=Z,7µm,18.0s							
P51A	**Williamsport**	**110.41**	**4**	IAMs_20	IAMs_20	10 03 03.8		
	comp=Z,5µm,20.0s							
BLO	**Bloomington**	**110.44**	**7**	IAMs_20	IAMs_20	10 01 56.5		
	comp=Z,8µm,19.0s							
Y22D	**IRIS PASSCAL I**	**110.45**	**25**	IAMs_20	IAMs_20	09 59 45.5		
	comp=Z,6µm,21.0s							
TUC	**Tucson**	**110.48**	**29**	IAMs_20	IAMs_20	10 05 02.6		
	comp=Z,5µm,20.0s							
P57A	**Homestead Farm**	**110.56**	**360**	IAMs_20	IAMs_20	10 02 04.4		
	comp=Z,8µm,20.0s							
SDMD	**Soldier's Deli**	**110.62**	**359**	IAMs_20	IAMs_20	10 05 25.1		
	comp=Z,5µm,19.0s							
U32A	**Winter Ranch,**	**110.84**	**18**	IAMs_20	IAMs_20	10 01 08.1		
	comp=Z,6µm,21.0s							
Q56A	**Snyder Ridge,**	**110.99**	**1**	IAMs_20	IAMs_20	10 05 56.0		
	comp=Z,8µm,21.0s							
Q60A	**Greensboro**	**111.00**	**358**	IAMs_20	IAMs_20	10 04 27.2		
	comp=Z,8µm,20.0s							
R49A	**Shelbyville**	**111.44**	**6**	IAMs_20	IAMs_20	10 04 54.0		
	comp=Z,7µm,18.0s							
121A	**Cookes Peak, D**	**111.50**	**27**	IAMs_20	IAMs_20	10 01 13.3		
	comp=Z,6µm,22.0s							
USIN	**University of**	**111.50**	**8**	IAMs_20	IAMs_20	10 08 45.8		
	comp=Z,6µm,19.0s							
R50A	**Paris**	**111.52**	**5**	IAMs_20	IAMs_20	10 05 35.1		
	comp=Z,7µm,19.0s							
SIUC	**Southern Illin**	**111.54**	**9**	IAMs_20	IAMs_20	10 03 19.3		
	comp=Z,7µm,19.0s							
S44A	**Carbondale**	**111.56**	**9**	IAMs_20	IAMs_20	10 03 20.4		
	comp=Z,7µm,18.0s							
R53A	**Hurricane**	**111.62**	**3**	IAMs_20	IAMs_20	10 07 12.1		
	comp=Z,7µm,20.0s							
OK029	**Liberty Lake**	**111.79**	**17**	IAMs_20	IAMs_20	10 04 56.1		
	comp=Z,8µm,20.0s							
OK031	**S. Brethren Rd**	**111.79**	**16**	IAMs_20	IAMs_20	10 05 28.1		
	comp=Z,7µm,20.0s							
319A	**Douglas**	**111.92**	**28**	IAMs_20	IAMs_20	09 58 39.6		
	comp=Z,5µm,20.0s							
T42A	**Van Buren**	**111.93**	**11**	IAMs_20	IAMs_20	10 02 29.3		
	comp=Z,8µm,22.0s							
MSTX	**Muleshoe**	**111.98**	**22**	IAMs_20	IAMs_20	10 01 05.6		
	comp=Z,8µm,20.0s							
OK025	**Westminster Rd**	**112.02**	**17**	IAMs_20	IAMs_20	10 08 22.3		
	comp=Z,8µm,20.0s							
R58B	**Mineral**	**112.08**	**360**	IAMs_20	IAMs_20	10 04 30.6		
	comp=Z,8µm,20.0s							
HHAR	**Hobbs**	**112.12**	**14**	IAMs_20	IAMs_20	10 01 45.7		
	comp=Z,8µm,22.0s							
OKCFA	**Oklahoma City**	**112.15**	**17**	IAMs_20	IAMs_20	10 05 07.7		
	comp=Z,7µm,20.0s							
S54A	**Dingess, Beckl**	**112.18**	**3**	IAMs_20	IAMs_20	10 04 42.4		
	comp=Z,6µm,19.0s							
S51A	**Beattyville**	**112.21**	**5**	IAMs_20	IAMs_20	10 06 52.4		
	comp=Z,8µm,20.0s							
S61A	**Accomac**	**112.32**	**358**	IAMs_20	IAMs_20	10 05 06.0		
	comp=Z,7µm,21.0s							
WMOK	**Wichita Mounta**	**112.45**	**18**	IAMs_20	IAMs_20	10 02 00.6		
	comp=Z,7µm,22.0s							
HENM	**Henderson Moun**	**112.49**	**10**	IAMs_20	IAMs_20	10 04 38.0		
	comp=Z,8µm,21.0s							
EPT	**El Paso**	**112.66**	**26**	IAMs_20	IAMs_20	10 10 17.5		
	comp=Z,5µm,18.0s							
T50A	**Nancy**	**112.73**	**6**	IAMs_20	IAMs_20	10 06 44.2		
	comp=Z,7µm,18.0s							
BLA	**Blacksburg**	**112.80**	**2**	IAMs_20	IAMs_20	10 07 37.7		
	comp=Z,7µm,21.0s							
LCAR	**Lake Charles**	**112.85**	**11**	IAMs_20	IAMs_20	10 07 00.8		
	comp=Z,6µm,18.0s							
T60A	**Surry**	**112.89**	**359**	IAMs_20	IAMs_20	10 05 48.0		
	comp=Z,7µm,20.0s							
T59A	**Double "B" Far**	**113.06**	**359**	IAMs_20	IAMs_20	10 07 55.8		
	comp=Z,6µm,19.0s							
MNTX	**Cornudas Mount**	**113.15**	**25**	IAMs_20	IAMs_20	10 08 37.8		
	comp=Z,6µm,18.0s							
W39A	**Magazine**	**113.20**	**14**	IAMs_20	IAMs_20	10 00 24.3		
	comp=Z,8µm,22.0s							
HSIG		**113.24**	**31**	IAMs_20	IAMs_20	10 06 44.0		
	comp=Z,4µm,18.0s							
WVT	**Waverly**	**113.29**	**8**	IAMs_20	IAMs_20	10 03 18.2		
	comp=Z,7µm,20.0s							
VNDA	**Vanda**	**113.34**	**168**	PKiKP	**PKiKP**	**09 14 03.5**		**-1.3**
	comp=Z,0.4nm,0.6s,baz=4.1,slow=1.8,SNR=1.6							
U54A	**Nelsons Funny**	**113.43**	**3**	IAMs_20	IAMs_20	10 04 26.6		
	comp=Z,8µm,20.0s							
HBAR	**Harrisburg**	**113.44**	**11**	IAMs_20	IAMs_20	10 05 40.3		
	comp=Z,6µm,20.0s							
U61A	**Possum Corner**	**113.69**	**358**	IAMs_20	IAMs_20	10 03 54.2		
	comp=Z,8µm,21.0s							
MIAR	**Mount Ida**	**113.88**	**14**	IAMs_20	IAMs_20	10 09 37.1		
	comp=Z,7µm,21.0s							
MET	**Memphis--Engin**	**113.98**	**11**	IAMs_20	IAMs_20	10 02 37.6		
	comp=Z,7µm,20.0s							
TKL	**Tuckaleechee C**	**114.17**	**5**	IAMs_20	IAMs_20	10 11 13.2		
	comp=Z,5µm,20.0s							
Z35A

SNAA	**Sanae**	**123.06**	**201**	P		**PKiKP**	**09 14 25.5**	**+1.6**
VNA2	**Neumayer--Watz**	**124.59**	**202**	P		**PKiKP**	**09 14 28.5**	**+1.6**
	baz=75,slow=2.9							
VNA3	**Neumayer Olymp**	**125.28**	**202**	P		**PKiKP**	**09 14 29.4**	**+1.1**
UNM	**Universidad Na**	**126.67**	**25**	IAMs_20	IAMs_20		10 11 00.4	
	comp=Z,5μm,20.0s							
GRTK	**Grand Turk**	**128.03**	**352**	IAMs_20	IAMs_20		10 14 06.2	
	comp=Z,5μm,21.0s							
TLIG	**Tlapa**	**128.52**	**25**	IAMs_20	IAMs_20		10 16 34.4	
	comp=Z,6μm,21.0s							
BELA	**Belgrano 2**	**128.56**	**191**	PKPdf		**PKPdf**	**09 14 32.4**	**-1.6**
TEIG	**Tepich**	**128.82**	**12**	IAMs_20	IAMs_20		10 18 57.2	
	comp=Z,5μm,20.0s							
GTBY	**Guantanamo Bay**	**129.96**	**356**	IAMs_20	IAMs_20		10 16 52.5	
	comp=Z,5μm,21.0s							
SC01	**Santiago de lo**	**130.03**	**351**	IAMs_20	IAMs_20		10 21 15.2	
	comp=Z,5μm,19.0s							
SEUS	**St. Eustatius**	**130.26**	**341**	IAMs_20	IAMs_20		10 08 58.2	
	comp=Z,5μm,22.0s							
SDDR	**Presa de Saban**	**130.54**	**351**	IAMs_20	IAMs_20		10 20 48.8	
	comp=Z,3μm,20.0s							
MTDJ	**Mount Denham**	**131.74**	**359**	IAMs_20	IAMs_20		10 11 38.6	
	comp=Z,4μm,20.0s							
CCIG	**Comitan**	**131.77**	**18**	IAMs_20	IAMs_20		10 18 45.6	
	comp=Z,5μm,21.0s							
FDF	**Fort de France**	**132.30**	**337**	IAMs_20	IAMs_20		10 11 18.6	
	comp=Z,4μm,22.0s							
HUEH	**Huehuetenango**	**132.86**	**18**	IAMs_20	IAMs_20		10 20 24.5	
	comp=Z,5μm,21.0s							
ESQI	**Esquipulas**	**134.11**	**15**	IAMs_20	IAMs_20		10 20 32.5	
	comp=Z,5μm,19.0s							
MTO3	**Montecristo**	**134.26**	**15**	IAMs_20	IAMs_20		10 16 43.5	
	comp=Z,5μm,22.0s							
GRGR	**Grenville**	**134.89**	**337**	IAMs_20	IAMs_20		10 20 41.5	
	comp=Z,4μm,21.0s							
SNET	**Serv Nac Est T**	**134.98**	**15**	IAMs_20	IAMs_20		10 20 38.6	
	comp=Z,5μm,20.0s							
TGUH	**Tegucigalpa,Un**	**135.03**	**13**	IAMs_20	IAMs_20		10 15 04.7	
	comp=Z,4μm,22.0s							
CRIN	**San Cristobal**	**136.39**	**13**	IAMs_20	IAMs_20		10 21 25.9	
	comp=Z,6μm,21.0s							
ESPN	**Las Esperanzas**	**137.33**	**9**	IAMs_20	IAMs_20		10 16 41.3	
	comp=Z,3μm,22.0s							
PCRV	**Puerto La Cruz**	**137.68**	**340**	PKhKP	PKPpre		09 14 48.6	
	comp=Z,3.2nm,0.7s,baz=157,slow=7.7,SNR=1.7							
HDC	**Heredia**	**139.52**	**9**	IAMs_20	IAMs_20		10 23 39.2	
	comp=Z,3μm,19.0s							
SJCC	**San Jacinto, C**	**139.92**	**355**	*eP*	PKPdf		09 14 49.0	-8.2
SDV	**Santo Domingo**	**140.35**	**348**	PKhKP	PKPpre		09 14 51.5	
	comp=Z,5.8nm,0.5s,baz=74,slow=1.2,SNR=6.6							
SDV	**Santo Domingo**	**140.35**	**348**	*eP*	PKPdf		09 14 49.9	-8.3
MOTC	**Monteria, Cord**	**141.06**	**356**	*eP*	**PKiKP**		**09 15 01.2**	**-0.7**
OCAC	**Ocana**	**141.38**	**352**	*eP*	**PKPdf**		**09 14 55.2**	**-4.8**
ELOV	**Elorza**	**141.97**	**346**	*eP*	**PKPdf**		**09 14 57.9**	**-2.9**
ZARC	**Zaragoza, Cauc**	**142.27**	**355**	*eP*	**PKPdf**		**09 14 55.9**	**-5.5**
BRRC	**Barranca, Sant**	**142.54**	**353**	*eP*	**PKPdf**		**09 14 54.4**	**-7.5**
DBBC	**Dabeiba**	**142.83**	**357**	*eP*	**PKPdf**		**09 15 01.6**	**-1.0**
BARC	**Barichara**	**142.99**	**352**	*eP*	**PKPdf**		**09 15 01.3**	**-1.7**
PTBC	**PUERTO BERRIO**	**143.18**	**354**	*eP*	PKPab		09 14 57.2	-1.4
HELC	**Santa Helena**	**143.61**	**356**	*eP*	PKPab		09 15 00.3	-0.3
RUSC	**La Rusia**	**143.67**	**351**	*eP*	PKPab		09 14 59.7	-1.3
CBOC	**Ciudad Bolivar**	**143.97**	**356**	*eP*	PKPab		09 15 00.8	-1.0
SPBC	**San Pablo de B**	**144.02**	**353**	*eP*	**PKPab**		**09 15 00.1**	**-1.8**
NORC	**Norcasia**	**144.19**	**354**	*eP*	PKPbc		09 15 02.8	-0.1
SJMB	**Sao Joao De Ma**	**144.54**	**280**	*eP*	**PKPdf**		**09 15 04.5**	**-0.7**
CROSA	**EL ROSAL, CUNDI**	**144.84**	**353**	*eP*	**PKPdf**		**09 15 07.5**	**+1.1**
ROSC	**El Rosal**	**144.85**	**353**	PKP	PKPbc		09 15 05.6	+0.2
	comp=Z,200nm,0.9s,baz=24,slow=2.5,SNR=12							
ROSC	**El Rosal**	**144.85**	**353**	*eP*	**PKPab**		**09 15 04.0**	**-1.3**
ROSC	**El Rosal**	**144.85**	**353**	PKPdf	**PKPab**		**09 15 04.7**	**-0.6**
ROSC				IAMs_20	IAMs_20		10 27 46.9	
	comp=Z,5μm,21.0s							
RREF	**El Recreo**	**144.88**	**355**	*eP*	**PKPab**		**09 15 02.3**	**-3.4**
PLMC	**San Jos del P**	**144.93**	**357**	*eP*	**PKPab**		**09 15 03.2**	**-2.0**
CHIC	**Chingaza**	**144.99**	**352**	*eP*	**PKPab**		**09 15 03.9**	**-1.9**
TOLC	**Tolima**	**145.19**	**355**	*eP*	**PKPbc**		**09 15 04.9**	**-1.5**
PTGC	**Puerto Gaitan,**	**145.19**	**349**	*eP*	**PKPbc**		**09 15 02.8**	**-3.3**
VILC	**Villavicencio,**	**145.50**	**352**	*eP*	**PKPbc**		**09 15 04.7**	**-2.5**
MAPC	**Malpelo**	**145.72**	**6**	*eP*	**PKPab**		**09 15 09.3**	**+1.3**
YOTC	**Yotoco, Valle**	**145.85**	**357**	*eP*	**PKPdf**		**09 15 05.9**	**-1.9**
ORTC	**Ortega, Tolima**	**145.85**	**355**	*eP*	**PKPdf**		**09 15 07.2**	**-0.5**
MALC	**Bahia Malaga**	**145.86**	**358**	*eP*	**PKPab**		**09 15 09.9**	**+1.4**
GUVC	**San Jose del G**	**146.90**	**350**	*eP*	**PKPbc**		**09 15 11.8**	**+0.5**
MARP	**Paez Belalcaza**	**146.96**	**356**	*eP*	**PKPbc**		**09 15 11.8**	**0.0**
BETC	**Betania**	**147.09**	**355**	*eP*	**PKPab**		**09 15 13.1**	**-0.2**
POPC	**Popayan, Colom**	**147.30**	**357**	*eP*	**PKPdf**		**09 15 10.9**	**+0.5**
MACC	**Macarena, Meta**	**147.46**	**352**	*eP*	**PKPdf**		**09 15 10.6**	**+0.1**
PCON	**Cinco Dias**	**147.50**	**357**	*eP*	**PKPdf**		**09 15 12.2**	**+1.1**
GARC	**Garzon, Huila**	**147.58**	**355**	*eP*	**PKPbc**		**09 15 12.3**	**-1.1**
BBAC	**Balboa, Cauca**	**147.83**	**358**	*eP*	**PKPdf**		**09 15 11.3**	**0.0**
CFLOR	**Florencia**	**148.19**	**355**	*eP*	**PKPdf**		**09 15 06.8**	**-4.8**
FLOC	**Florencia**	**148.19**	**355**	*eP*	**PKPbc**		**09 15 14.8**	**-0.1**
PAYG	**Puerto Ayora**	**148.36**	**24**	IAMs_20	IAMs_20		10 26 10.0	
	comp=Z,5μm,21.0s							
GCUF	**Volcan Galeras**	**148.62**	**358**	*eP*	**PKPbc**		**09 15 15.9**	**-0.6**
BDFB	**Brasilia**	**148.73**	**291**	PKPbc	**PKPbc**		**09 15 15.6**	**-0.7**
	comp=Z,17nm,0.7s,baz=53,slow=2.7,SNR=12							
BDFB	**Brasilia**	**148.73**	**291**	PKP2	**PKPbc**		**09 15 15.2**	**-1.1**
BDFB	**Brasilia**	**148.73**	**291**		**PKPbc**		**09 15 15.2**	**-1.1**
BDFB				IAMs_20	IAMs_20		10 22 54.6	
	comp=Z,5μm,20.0s							
PUAC	**Puerto Asis, P**	**149.27**	**357**	*eP*	**PKPbc**		**09 15 15.6**	**-2.0**
PTLC	**Puerto Leguiza**	**149.51**	**353**	*eP*	**PKPbc**		**09 15 16.1**	**-2.1**
CUSE	**Cuicocha Este**	**149.55**	**0**	*eP*	**PKiKP**		**09 15 20.7**	**+0.7**
OTAV	**Otavalo**	**149.62**	**1**	*eP*	**PKPbc**		**09 15 18.1**	**-1.0**
SPB	**Sao Paulo**	**151.83**	**276**	IAMs_20	IAMs_20		10 25 56.9	
	comp=Z,3μm,21.0s							
SAML	**Samuel**	**154.53**	**323**	*eP*	**PKPdf**		**09 15 22.5**	**+1.4**
SAML	**Samuel**	**154.53**	**323**	IAMs_20	IAMs_20		10 21 39.8	
	comp=Z,3μm,22.0s							
ATAH	**Atahualpa**	**156.94**	**1**	PKPab	**PKPab**		**09 15 55.8**	**+1.2**
	comp=Z,19nm,1.0s,baz=337,slow=3.4,SNR=9.8							
GO09	**Cerro Castillo**	**158.61**	**190**	IAMs_20	IAMs_20		10 24 42.6	
	comp=Z,4μm,21.0s							
SIV	**San Ignacio**	**158.80**	**308**	PKP	**PKPdf**		**09 15 26.0**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=117,slow=3.2,SNR=9.7							
SIV				PKPab	**PKPab**		**09 16 00.8**	**-1.5**
	comp=Z,12nm,0.8s,baz=81,slow=5.0,SNR=17							
CPUP	**Villa Florida**	**161.21**	**277**	PKP	**PKPdf**		**09 15 29.6**	**+0.6**
	comp=Z,3.6nm,0.9s,baz=322,slow=5.0,SNR=3.9							
LPAZ	**La Paz**	**163.27**	**324**	PKP	**PKPdf**		**09 15 31.2**	**-0.9**
	comp=Z,6.9nm,0.8s,baz=27,slow=3.9,SNR=25							
LPAZ				PKPab	**PKPab**		**09 16 21.3**	**-1.1**
	comp=Z,7.3nm,0.9s,baz=52,slow=7.3,SNR=6.5							
LPAZ	**La Paz**	**163.27**	**324**	PKIKP	**PKPdf**		**09 15 31.1**	**-1.1**
LPAZ	**La Paz**	**163.27**	**324**		**PKPdf**		**09 15 31.1**	**-1.1**
PB16	**IPOC Station P**	**165.69**	**324**	PKPab	**PKPab**		**09 16 30.8**	**-2.2**
PLCA	**Paso Flores**	**167.89**	**209**	PKP	**PKPdf**		**09 15 33.5**	**-1.1**
	comp=Z,2.2nm,0.9s,baz=180,slow=1.0,SNR=3.7							
PLCA				PKPab	**PKPab**		**09 16 41.4**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=153,slow=6.0,SNR=9.7							
LVC	**Limon Verde**	**168.69**	**311**	PKPab	**PKPab**		**09 16 44.7**	**-1.3**
	comp=Z,21nm,0.8s,baz=15,slow=2.9,SNR=12							
LVC	**Limon Verde**	**168.69**	**311**	PKPab	**PKPab**		**09 16 44.9**	**-1.1**

*ISK **22** 08:57:42.9, 38.08N×26.99E, h7km, ML3.7/31*
*THE **22** 08:57:42.9, 38.08N×27.11E, h0km±1km, ML3.7/4, Error ellipse: s-maj=1.7km s-min=1.0km az=336.0*
*DDA **22** 08:57:43.4, 38.12N×27.01E, h6km±3km, MW3.9*
*ATH **22** 08:57:43.0, 38.07N×26.96E, h28km±1km, ML3.7/7, Error ellipse: s-maj=2.2km s-min=1.0km az=82.0*

ISC 22 08:57:42.9±0.9, **38.05N**±0.01×**26.97E**±0.02, **h18**km±5km, **n115**,σ1§**53**/157, **10C-3D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGB	**zmir**	**0.07**	**273**	*i* P	**Pg**	**08 57 47.0**	**+0.7**
DGB				*i* S	**Sg**	**08 57 48.4**	**-0.1**
DGB				IAML		08 57 49.0	
	comp=E,7μm,0.2s						
DGB				IAML		08 57 50.0	
	comp=N,8μm,0.8s						
SMG	**Samos**	**0.36**	**198**	P	**Pn**	**08 57 51.8**	**-1.5**
SMG				S	**Sb**	**08 57 57.5**	**+1.4**
SMG				AML	AML	08 57 58.4	
	comp=N,11745μm,0.3s						
SMG				AML	AML	08 58 02.4	
	comp=E,12863μm,0.2s						
SMG	**Samos**	**0.36**	**198**	P	**Pn**	**08 57 51.7**	**-1.5**
SMG				S	**Sb**	**08 57 58.0**	**+1.9**
	comp=E,6μm,0.2s						
GCAM	**G?zelcaml?**	**0.40**	**149**	PG	**Pb**	**08 57 51.6**	**0.0**
GCAM				SG	**Sb**	**08 57 58.1**	**+0.7**
GCAM	**G?zelcaml?**	**0.40**	**149**	*i* P	**Pb**	**08 57 52.0**	**+0.5**
GCAM				*i* S	**Sb**	**08 57 56.3**	**-1.1**
GCAM				IAML		08 57 58.0	
	comp=N,5μm,0.3s						
GCAM				IAML		08 58 00.0	
	comp=E,2μm,0.4s						
URLA	**Izmir**	**0.43**	**316**	PG	**Pg**	**08 57 51.5**	**-0.3**
URLA				SG	**Sg**	**08 57 58.2**	**+0.5**
URLA	**Izmir**	**0.43**	**316**	*i* P	**Pb**	**08 57 52.3**	**+0.3**
URLA				*i* S	**Sg**	**08 57 57.2**	**-0.5**
URLA				IAML		08 57 59.0	
	comp=N,5μm,0.2s						
URLA				IAML		08 57 59.0	
	comp=E,2μm,0.2s						
AYDB	**Zeytinkoy-Aydi**	**0.73**	**98**	PG	**Pg**	**08 57 57.2**	**-0.1**
AYDB				SG	**Sb**	**08 58 07.7**	**+0.7**
AYDN	**Tasoluk**	**0.81**	**118**	*i* P	**Pb**	**08 57 59.3**	**+0.7**
ZEDA	**zmir-Bergama**	**0.92**	**5**	*i* P	**Pg**	**08 58 00.3**	**-0.5**
ZEDA				*i* S	**Sg**	**08 58 09.4**	**-3.6**
ZEDA				IAML		08 58 15.0	
	comp=N,2μm,0.3s						
ZEDA				IAML		08 58 18.0	
	comp=E,1μm,0.3s						
YKAV	**Yalikavak-Bodr**	**0.95**	**165**	PG	**Pn**	**08 58 02.3**	**+0.8**
YKAV				SG	**Sn**	**08 58 16.5**	**+1.9**
MLSB	**Milas**	**0.98**	**139**	PG	**Pn**	**08 58 02.9**	**+1.0**
MLSB				SG	**Sn**	**08 58 16.8**	**+1.3**
GOMA	**Golmarmara-Man**	**0.99**	**48**	PG	**Pg**	**08 58 01.9**	**-0.3**
GOMA				SG	**Sg**	**08 58 15.2**	**0.0**
BODT	**Bodrum**	**1.02**	**165**	PG	**Pn**	**08 58 02.9**	**+0.5**
BODT	**Bodrum**	**1.02**	**165**	P	**Pn**	**08 58 03.1**	**+0.7**
BODT				S	**Sn**	**08 58 18.4**	**+2.1**
DKL	**Dikili**	**1.02**	**357**	PG	**Pg**	**08 58 02.3**	**-0.5**
BDRM	**Kayabasi**	**1.05**	**159**	*i* P	**Pn**	**08 58 03.5**	**+0.7**
BDRM				*i* S	**Sb**	**08 58 15.3**	**-0.7**
BDRM				IAML		08 58 20.0	
	comp=E,539nm,0.4s						
AKHS	**Akhisar**	**1.06**	**38**	*i* P	**Pg**	**08 58 02.0**	**-1.4**
AKHS				*i* S	**Sg**	**08 58 13.2**	**-4.2**
AKHS				IAML		08 58 19.0	
	comp=E,1μm,0.4s						
AKS	**Akhisar**	**1.06**	**38**	PG	**Pg**	**08 58 02.2**	**-1.3**
AKS				SG	**Sg**	**08 58 17.2**	**-0.2**
PSRA	**Psara**	**1.21**	**294**	P	**Pg**	**08 58 06.0**	**-0.4**
PSRA				S	**Sg**	**08 58 21.6**	**-0.7**
PSRA				AML	AML	08 58 25.1	
	comp=N,4592μm,0.3s						
PSRA				AML	AML	08 58 26.1	
	comp=E,6403μm,0.3s						
AYVA	**Ayvalik**	**1.28**	**350**	*i* P	**Pn**	**08 58 06.9**	**+1.0**
AYVA				*i* S	**Sb**	**08 58 21.1**	**-1.5**
AYVA				IAML		08 58 26.0	
	comp=E,982nm,0.5s						
AYVA				IAML		08 58 27.0	
	comp=N,1μm,0.3s						
KOSK	**Kos Island**	**1.29**	**180**	PN	**Pg**	**08 58 08.2**	**+0.3**
KOSK	**Kos Island**	**1.29**	**180**	P	**Pg**	**08 58 07.1**	**-0.8**
KOSK				S	**Sn**	**08 58 26.7**	**+3.7**
	comp=N,958nm,0.5s						
PRK	**Paraskevi**	**1.32**	**336**	P	**Pb**	**08 58 07.8**	**+0.7**
PRK				S	**Sb**	**08 58 25.3**	**+1.6**
PRK				AML	AML	08 58 28.9	
	comp=N,18004μm,0.5s						
PRK				AML	AML	08 58 32.9	
	comp=E,16047μm,0.8s						
PRK	**Paraskevi**	**1.32**	**336**	P	**Pb**	**08 58 07.9**	**+0.7**
PRK				S	**Sg**	**08 58 28.0**	**+2.5**
	comp=E,8μm,0.6s						
MANT	**Manisa**	**1.32**	**70**	*i* P	**Pn**	**08 58 07.9**	**+1.2**
MANT				*i* S	**Sb**	**08 58 20.6**	**-3.5**
MANT				IAML		08 58 26.0	
	comp=N,865nm,0.3s						
MANT				IAML		08 58 26.0	
	comp=E,846nm,0.3s						
YER	**Yerkesik**	**1.38**	**131**	PN	**Pg**	**08 58 08.8**	**-0.8**
YER				SN	**Sg**	**08 58 29.5**	**+1.8**
YER	**Yerkesik**	**1.38**	**131**	P	**Pg**	**08 58 08.3**	**-1.3**
YER				S	**Sb**	**08 58 25.7**	**0.0**
DATC	**Datca-Mugla**	**1.40**	**157**	PN	**Pg**	**08 58 09.6**	**-0.3**
KULA	**Kula-Manisa**	**1.41**	**70**	PN	**Pn**	**08 58 09.1**	**+1.3**
KULA	**Kula-Manisa**	**1.41**	**70**	P	**Pn**	**08 58 07.6**	**-0.2**
KULA				S	**Sn**	**08 58 24.3**	**-1.6**
NISR	**Nisiros**	**1.44**	**175**	P	**Pg**	**08 58 12.4**	**+1.7**
STEP	**BALIKESIR_Sava**	**1.45**	**23**	*i* P	**Pn**	**08 58 09.4**	**+1.1**
STEP				*i* S	**Sn**	**08 58 25.5**	**-1.4**
STEP				IAML		08 58 33.0	
	comp=N,1μm,0.9s						
STEP				IAML		08 58 36.0	
	comp=E,1μm,0.4s						
AMGA	**Amorgos Island**	**1.49**	**216**	P	**Pg**	**08 58 09.4**	**-2.3**
AMGA				S	**Sg**	**08 58 30.3**	**-0.6**
AMGA				AML	AML	08 58 37.0	
	comp=E,4963μm,0.3s						
AMGA				AML	AML	08 58 39.7	
	comp=N,3132μm,0.4s						
AMGA	**Amorgos Island**	**1.49**	**216**	P	**Pg**	**08 58 09.3**	**-2.3**
AMGA				S	**Sg**	**08 58 34.2**	**+3.2**
APE	**Apeiranthos**	**1.51**	**230**	P	**Pg**	**08 58 09.9**	**-2.1**
APE				S	**Sg**	**08 58 31.0**	**-0.6**
APE				AML	AML	08 58 38.2	
	comp=N,1701μm,0.5s						
APE				AML	AML	08 58 38.9	
	comp=E,1313μm,0.3s						
APE	**Apeiranthos**	**1.51**	**230**	⇑P	**Pg**	**08 58 09.9**	**-2.1**
APE				⇓S	**Sg**	**08 58 30.6**	**-1.0**
APE	**Apeiranthos**	**1.51**	**230**	PN	**Pg**	**08 58 10.9**	**-1.1**
APE	**Apeiranthos**	**1.51**	**230**	P	**Pg**	**08 58 09.8**	**-2.1**
APE				S	**Sg**	**08 58 34.0**	**+2.4**
TURN	**Turunc**	**1.62**	**141**	PN	**Pg**	**08 58 12.9**	**-1.3**
TURN	**Turunc**	**1.62**	**141**	*i* P	**Pn**	**08 58 11.2**	**+0.6**
TURN				*i* S	**Sn**	**08 58 30.5**	**-0.6**
TURN				IAML		08 58 41.0	
	comp=E,561nm,1.4s						
TURN				IAML		08 58 43.0	
	comp=N,534nm,0.5s						
TAVA	**DENIZLI_Tavas**	**1.64**	**110**	*i* P	**Pn**	**08 58 11.5**	**+0.5**
TAVA				*i* S	**Sn**	**08 58 31.9**	**+0.1**
TAVA				IAML		08 58 41.0	
	comp=E,183nm,0.5s						
TAVA				IAML		08 58 43.0	
	comp=N,193nm,0.7s						
BAYC	**CANAKKALE_Bayr**	**1.72**	**349**	*i* P	**Pn**	**08 58 12.2**	**+0.1**
BAYC				*i* S	**Sn**	**08 58 30.5**	**-3.2**
BAYC				IAML		08 58 38.0	
	comp=E,522nm,0.4s						
BAYC				IAML		08 58 46.0	
	comp=N,307nm,0.6s						
USAK	**Uak-Merkez**	**1.74**	**67**	*i* P	**Pn**	**08 58 12.6**	**+0.2**
USAK				*i* S	**Sn**	**08 58 32.4**	**-1.7**
USAK				IAML		08 58 43.0	
	comp=N,394nm,0.6s						
USAK				IAML		08 58 45.0	
	comp=E,176nm,0.6s						
BALB	**Balikesir**	**1.74**	**24**	PN	**Pn**	**08 58 13.6**	**+1.3**
BALY	**Balya**	**1.76**	**16**	*i* P	**Pn**	**08 58 12.3**	**-0.4**
BALY				*i* S	**Sn**	**08 58 33.1**	**-1.6**
BALY				IAML		08 58 43.0	
	comp=N,595nm,0.4s						
BALY				IAML		08 58 43.0	
	comp=E,562nm,0.4s						
DALY	**Dalyan (Mula)**	**1.82**	**132**	PN	**Pb**	**08 58 15.3**	**-0.3**
DALY	**Dalyan (Mula)**	**1.82**	**132**	*i* P	**Pg**	**08 58 19.2**	**+1.4**
DALY				*i* S	**Sn**	**08 58 36.8**	**+1.0**
DALY				IAML		08 58 48.0	
	comp=N,239nm,0.6s						
DALY				IAML		08 58 48.0	
	comp=E,249nm,0.5s						
EZN	**Ezine**	**1.84**	**344**	PN	**Pn**	**08 58 15.8**	**+2.1**
EZN	**Ezine**	**1.84**	**344**	P	**Pn**	**08 58 13.8**	**+0.1**
SIMA	**Simav-Kutahya**	**1.88**	**56**	PN	**Pn**	**08 58 16.0**	**+1.6**
BOZC	**Bozcaada**	**1.93**	**338**	PN	**Pn**	**08 58 17.1**	**+2.2**
BOZC	**Bozcaada**	**1.93**	**338**	*i* P	**Pg**	**08 58 19.4**	**-0.6**
BOZC				*i* S	**Sn**	**08 58 38.9**	**+0.2**
BOZC				IAML		08 58 46.0	
	comp=N,448nm,0.8s						
BOZC				IAML		08 58 47.0	
	comp=E,488nm,0.3s						
ANAF	**Anafi Island**	**1.94**	**210**	P	**Pb**	**08 58 16.1**	**-1.7**
ANAF				S	**Sb**	**08 58 41.1**	**-0.6**
ANAF				AML	AML	08 58 53.6	
	comp=E,5628μm,0.3s						
ANAF				AML	AML	08 58 53.7	
	comp=N,6453μm,0.3s						
ANAF	**Anafi Island**	**1.94**	**210**	P	**Pb**	**08 58 16.3**	**-1.5**
ANAF				S	**Sg**	**08 58 45.3**	**-0.2**
	comp=N,3μm,0.4s						
KARY	**Karystos**	**2.00**	**270**	P	**Pb**	**08 58 17.5**	**-1.3**
DST	**Dursunbey**	**2.02**	**39**	PN	**Pn**	**08 58 17.6**	**+1.5**
THT2	**Imerovigli**	**2.03**	**218**	PN	**Pb**	**08 58 18.9**	**-0.4**
ARG	**Arkhangelos**	**2.05**	**153**	P	**Pb**	**08 58 18.1**	**-1.4**
ARG				S	**Sb**	**08 58 44.0**	**-0.7**
ARG				AML	AML	08 58 56.2	
	comp=N,1395μm,0.7s						
ARG				AML	AML	08 58 58.4	
	comp=E,862μm,0.6s						
ARG	**Arkhangelos**	**2.05**	**153**	PN	**Pb**	**08 58 18.7**	**-0.9**
ARG	**Arkhangelos**	**2.05**	**153**	P	**Pb**	**08 58 18.2**	**-1.4**
GONE	**Gonen-Balikesi**	**2.07**	**15**	PN	**Pn**	**08 58 18.2**	**+1.4**
SKY	**Skiros Island**	**2.08**	**294**	P	**Pb**	**08 58 20.4**	**+0.4**
SKY	**Skiros Island**	**2.08**	**294**	P	**Pb**	**08 58 20.5**	**+0.4**
GEDZ	**Gediz**	**2.15**	**62**	PN	**Pn**	**08 58 20.5**	**+2.4**
FETY	**Fethiye**	**2.19**	**129**	PN	**Pb**	**08 58 20.8**	**-1.3**
FETY	**Fethiye**	**2.19**	**129**	*i* P	**Pn**	**08 58 20.3**	**+1.8**
FETY				*i* S	**Sn**	**08 58 45.3**	**0.0**
FETY				IAML		08 59 01.0	
	comp=N,83nm,0.7s						
FETY				IAML		08 59 01.0	
	comp=E,58nm,0.6s						
FETY	**Fethiye**	**2.19**	**129**	P	**Pb**	**08 58 20.5**	**-1.6**
FETY				S	**Sn**	**08 58 46.7**	**+1.4**
GOLH	**Golhisar**	**2.21**	**111**	*i* P	**Pb**	**08 58 21.0**	**-1.4**
GOLH				*i* S	**Sb**	**08 58 50.8**	**+1.3**
GOLH				IAML		08 59 07.0	
	comp=N,175nm,1.3s						
GOLH				IAML		08 59 38.0	
	comp=E,30nm,2.3s						
GDZ	**Gediz**	**2.22**	**61**	*i* P	**Pb**	**08 58 23.5**	**+0.8**
GDZ				*i* S	**Sn**	**08 58 48.7**	**+2.5**
GDZ				IAML		08 58 58.0	
	comp=E,64nm,0.4s						
GDZ				IAML		08 58 59.0	
	comp=N,63nm,0.8s						
KNL	**Balıkesir**	**2.26**	**11**	*i* P	**Pb**	**08 58 24.7**	**+1.5**
KNL				*i* S	**Sn**	**08 58 49.7**	**+2.8**
KNL				IAML		08 58 56.0	
	comp=N,319nm,0.6s						
KNL				IAML		08 58 58.0	
	comp=E,432nm,0.5s						
GOKA	**anakkale-Gk**	**2.29**	**339**	*i* P	**Pg**	**08 58 26.4**	**-0.6**
GOKA				*i* S	**Sn**	**08 58 48.2**	**+0.5**
GOKA				IAML		08 58 59.0	
	comp=N,1μm,0.4s						
GOKA				IAML		08 59 03.0	
	comp=E,870nm,0.6s						
GADA	**Gvkgeada**	**2.30**	**339**	PN	**Pn**	**08 58 22.3**	**+2.4**
GADA	**Gvkgeada**	**2.30**	**339**	P	**Pn**	**08 58 20.5**	**+0.6**
LIA	**Limnos Island**	**2.31**	**323**	P	**Pn**	**08 58 21.3**	**+1.1**
LIA	**Limnos Island**	**2.31**	**323**	P	**Pn**	**08 58 21.9**	**+1.7**
LPK	**Lapseki**	**2.33**	**356**	PN	**Pn**	**08 58 22.3**	**+1.9**
KYMI	**Kymi, Euboea I**	**2.33**	**285**	P	**Pn**	**08 58 21.9**	**+1.4**
TVSB	**Tavsanli**	**2.40**	**54**	PN	**Pn**	**08 58 23.8**	**+2.4**
EDC	**Edincik**	**2.40**	**16**	PN	**Pn**	**08 58 22.9**	**+1.6**
BASM	**Basmaki-Afyon**	**2.43**	**92**	PN	**Pn**	**08 58 23.8**	**+1.9**
ORLT	**Orhaneli**	**2.49**	**36**	PN	**Pn**	**08 58 24.9**	**+2.2**
KARP	**Karpathos**	**2.50**	**176**	P	**Pn**	**08 58 24.0**	**+1.2**
KARP	**Karpathos**	**2.50**	**176**	PN	**Pb**	**08 58 25.6**	**-1.8

BBLS	**Lazići**	**1.56**	**73**	*e*Pn		**Pn**	**09 17 48.1**	**-0.3**
BBLS				*e*Sn		**Sb**	**09 18 09.8**	**+0.4**
BUM	**Brajici-Budva**	**1.59**	**134**	*e*Pn		**Pn**	**09 17 49.1**	**+0.3**
BUM				*e*Sn		**Sg**	**09 18 13.3**	**+2.2**
KOME	**Kolasin**	**1.69**	**109**	⇓*i*Pn		**Pb**	**09 17 51.1**	**-0.4**
KOME				*e*Sn		**Sg**	**09 18 16.0**	**+1.9**
PDG	**Podgorica**	**1.71**	**124**	*e*Pg		**Pb**	**09 17 52.2**	**+0.3**
PDG				*e*Sg		**Sg**	**09 18 16.9**	**+1.9**
PDG	**Podgorica**	**1.71**	**124**	⇓P		**Pn**	**09 17 50.7**	**+0.3**
PDG				⇑S		**Sg**	**09 18 17.2**	**+2.2**
PDG	**Podgorica**	**1.71**	**124**	*e*Pn		**Pn**	**09 17 51.1**	**+0.7**
PDG				*e*Sn		**Sb**	**09 18 13.7**	**0.0**
TTG	**Podgorica**	**1.71**	**124**	⇓*i*Pn		**Pn**	**09 17 51.1**	**+0.7**
TTG				*i* Sn		**Sg**	**09 18 16.1**	**+1.1**
DUGI	**Dugi Otok**	**1.75**	**290**	*e*Pn		**Pb**	**09 17 52.1**	**-0.5**
DUGI				Sn		**Sg**	**09 18 16.5**	**+0.2**
DRME	**Dracevica, Mon**	**1.83**	**132**	*e*Pn		**Pb**	**09 17 53.1**	**-0.7**
DRME				*i* Sn		**Sg**	**09 18 18.9**	**+0.2**
DRME	**Dracevica, Mon**	**1.83**	**132**	*e*Pn		**Pn**	**09 17 52.4**	**+0.4**
DRME				*e*Sn		**Sn**	**09 18 16.4**	**+0.9**
TEKS	**Tekeris**	**1.94**	**54**	*e*Sg		**Pg**	**09 17 57.1**	**-0.1**
TEKS	**Tekeris**	**1.94**	**54**	*e*Pn		**Pn**	**09 17 54.1**	**+0.5**
TEKS				*e*Sn		**Sn**	**09 18 19.3**	**+1.0**
IVA	**Berane**	**1.94**	**105**	*e*Pn		**Pb**	**09 17 55.0**	**-0.8**
IVA				*e*Sn		**Sg**	**09 18 22.2**	**-0.2**
ULC	**Ulcinj**	**2.02**	**135**	⇑*i*Pn		**Pn**	**09 17 55.9**	**+1.3**
ULC				*i* Sn		**Sg**	**09 18 23.7**	**-1.0**
DIVS	**Divibare**	**2.04**	**70**	*e*Pn		**Pn**	**09 17 56.3**	**+1.4**
DIVS	**Divibare**	**2.04**	**70**	*e*Pn		**Pn**	**09 17 55.5**	**+0.6**
DIVS				*e*Sn		**Sn**	**09 18 21.8**	**+1.1**
IVAS	**Ivanjica**	**2.05**	**85**	*e*Pg		**Pb**	**09 17 58.0**	**+0.4**
PVY	**Plav**	**2.09**	**112**	*e*Pn		**Pb**	**09 17 57.0**	**+1.4**
PVY				*i* Sn		**Sb**	**09 18 25.6**	**+1.1**
NVLJ	**Novalja**	**2.12**	**304**	*e*Pn		**Pn**	**09 17 57.0**	**+1.0**
NVLJ				Sn		**Sb**	**09 18 25.0**	**-0.5**
MOSL	**Moslavina**	**2.24**	**349**	*e*Pn		**Pn**	**09 17 57.6**	**0.0**
TRUS	**Trudelj**	**2.36**	**69**	*e*Pn		**Sn**	**09 18 22.8**	**-5.8**
GRUS	**Gruza**	**2.49**	**78**	*e*Pg		**Pb**	**09 18 05.9**	**+0.8**
GRUS				*e*Sg		**Sg**	**09 18 41.4**	**+1.4**
OZLJ	**Ozalj**	**2.58**	**329**	*e*Pn		**Pn**	**09 18 02.8**	**+0.6**
PTJ	**Puntijarka**	**2.68**	**339**	*e*Pn		**Pn**	**09 18 05.1**	**+1.4**
CRES	**Cresnjev**	**2.76**	**331**	*e*Pn		**Pn**	**09 18 04.3**	**-0.5**
CRES				*e*Sn		**Sn**	**09 18 37.7**	**-0.8**
SELS	**Selova**	**2.76**	**93**	*e*Pg		Pn	09 17 55.6	-9.2
TIR	**Tirane**	**2.79**	**137**	⇑S		**Sb**	**09 18 42.2**	**-2.3**
KALN	**Kalnik**	**2.79**	**347**	*e*Pn		**Pn**	**09 18 05.3**	**+0.1**
RIV	**Rijeka**	**2.80**	**314**	*e*Pn		**Pn**	**09 18 04.3**	**-1.0**
RIV				*e*Sn		**Sn**	**09 18 38.4**	**-1.1**
MATE	**Matera**	**2.81**	**190**	⇑P		**Pn**	**09 18 03.4**	**-2.0**
MATE				⇓S		**Sn**	**09 18 38.6**	**-0.9**
MORH	**Mrgy, Hungar**	**2.95**	**18**	*e*Pn		**Sn**	**09 18 07.5**	**+0.2**
MORH				*e*Sn		**Sn**	**09 18 42.9**	**-0.2**
CEY	**Cerknica**	**3.12**	**319**	*e*Pn		**Pn**	**09 18 09.3**	**-0.5**
CEY				*e*Sn		**Sn**	**09 18 46.4**	**-1.0**
MDVR	**Moldovita**	**3.43**	**65**	⇓P		**Pn**	**09 18 12.1**	**-1.9**
SOKA	**Soboth**	**3.65**	**334**	*i* Pn		**Pn**	**09 18 18.1**	**+1.0**
	2.8nm,0.5s							
SOKA				*e*Sn		**Sn**	**09 19 00.1**	**-0.4**
	3.9nm,0.5s							
OBKA	**Obir**	**3.67**	**328**	Pg		**Pg**	**09 18 28.9**	**-1.4**
	4.8nm,0.6s							
OBKA				*i* Sn		**Sn**	**09 19 03.5**	**+2.3**
	11nm,0.6s							
BZS	**Buzias**	**3.77**	**53**	⇑P		**Pn**	**09 18 14.7**	**-3.9**
BZS				⇓S		**Sn**	**09 19 02.8**	**-0.5**
BLKB	**Belogradchik**	**3.88**	**85**	⇑S		**Sn**	**09 19 08.8**	**+2.6**
ARSA	**Arzberg**	**4.04**	**342**	*i* Pn		**Pn**	**09 18 23.4**	**+1.0**
	3.6nm,0.3s							
ARSA				*i* Sn		**Sn**	**09 19 10.3**	**+0.1**
	1.1nm,0.3s							
TIP	**Timpagrande**	**4.26**	**186**	⇑P		**Pn**	**09 18 23.3**	**-2.2**
TIP				⇓S		**Sn**	**09 19 14.4**	**-1.1**
GZR	**Gura Zlata**	**4.37**	**61**	⇑P		**Pn**	**09 18 24.1**	**-2.8**
GZR				⇑S		**Sn**	**09 19 16.7**	**-1.4**
CONA	**Conrad Observa**	**4.63**	**348**	*e*Pn		**Pn**	**09 18 32.5**	**+1.9**
	1.1nm,0.3s							
CONA				*i* Sn		**Sn**	**09 19 24.0**	**-0.7**
	2.7nm,0.7s							
ABTA	**Abfaltersbach**	**4.78**	**316**	*i* Pn		**Pn**	**09 18 34.5**	**+2.0**
	0.4nm,0.2s							
ABTA				*e*Sn		**Sn**	**09 19 28.0**	**-0.3**
	1.7nm,0.4s							
MOA	**Molln**	**4.93**	**335**	*i* Pn		**Pn**	**09 18 37.4**	**+2.8**
	1.5nm,0.2s							
MOA				*e*Sn		**Sn**	**09 19 33.1**	**+1.1**
	3.7nm,0.5s							
WTTA	**Wattenberg**	**5.57**	**316**	Pn		**Pn**	**09 18 45.1**	**+1.6**
	1.2nm,0.2s							
MOTA	**Moosalm**	**5.89**	**314**	*e*Pn		**Pn**	**09 18 49.9**	**+1.9**
	0.4nm,0.2s							
KHC	**Kasperske Hory**	**6.28**	**337**	*e*SN		**Sn**	**09 20 05.1**	**-0.2**

NNC 22 09:17:30.5±2.5, 41°.36N×83°.95E, h0km, mb3.7, mpv3.3, 3C-5D, Error ellipse: s-maj=20.5km s-min=14.6km az=145.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**3.85**	**302**	⇑Pg	Pb	09 18 41.4	+2.2
	16nm,1.0s						
PDGK				⇓Lg	Lg	09 19 32.4	
	36nm,1.1s						
MK31	**Makanchi Array**	**5.56**	**348**	⇓Pn	Pn	09 18 54.4	-0.1
	1.7nm,0.8s,baz=164,slow=12,SNR=5.8						
MK31				⇓Pg	Pg	09 19 12.9	-4.1
	1.2nm,0.6s,baz=161,slow=14,SNR=4.7						
MK31				⇓Lg	Lg	09 20 24.2	
	13nm,0.6s,baz=169,slow=29,SNR=4.3						
MAKZ	**Makanchi**	**5.63**	**346**	⇑Lg	Lg	09 20 29.5	
	16nm,1.1s						
TKM2	**Tokmak 2**	**6.40**	**287**	⇑Pn	Pn	09 19 05.3	-0.9
	4.5nm,1.2s						
TKM2				⇓Lg	Lg	09 20 54.8	
	9.6nm,0.8s						

IDC 22 09:31:53.1±400.0, 55°.60N×50°.79E, h0km, Error ellipse: s-maj=180.8km s-min=150.3km az=164.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**7.66**	**284**	*i*		10 20 30.0	
	baz=94,slow=339,SNR=1.0						
I46RU	**ZALESOVO INFRA**	**19.58**	**81**	*i*		11 35 00.0	
	baz=290,slow=331,SNR=1.1						
I34MN	**SONGINO INFRAS**	**34.49**	**79**	*i*		13 03 00.0	
	baz=308,slow=330,SNR=1.1						

DJA ***22*** *09:37:19.5±1.7, 5°.S±8°.×15°.5E±1°.7, h228km±7km, M5.2/12, mb4.6/12, mB5.3/3, MLv5.5/2, Mw(mB)4.7/3*
NEIC ***22*** *09:37:22.3±1.2, 5°.45S±0°.09×154°.4E±0°.1, h218km±7km, mb4.7/31, Error ellipse: s-maj=16.2km s-min=12.6km az=77.0*
IDC ***22*** *09:37:22.1±1.2, 5°.50S×154°.45E, h215km±9km, mb3.9/17, mb1 4.1/20, mb1mx3.8/52, mbtmp4.5/20, Error ellipse: s-maj=13.5km s-min=9.9km az=93.0*
ISC 22 09:37:20.5±0.6, 5°.47S±0°.06×154°.53E±0°.08, h200km, n70, σ1§31/75, mb4.6/33, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**2.68**	**298**	Pn	**Pn**	**09 38 08.5**	**+2.0**
RABL				S	**Sn**	**09 38 42.9**	**+0.6**
KRVT	**Keravat (AS076**	**2.75**	**295**	P	**Pn**	**09 38 09.5**	**+2.2**
	291nm,0.3s,baz=115,slow=1.1,SNR=530						
KRVT				S	**Sn**	**09 38 45.1**	**+1.4**
	165nm,0.3s,baz=84,slow=22,SNR=6.7						
MANU	**Manus Island**	**7.92**	**295**		**Pn**	**09 39 14.3**	**+1.5**
PMG	**Port Moresby**	**8.29**	**241**	P	**Pn**	**09 39 20.6**	**+3.0**
	0.8nm,0.3s,baz=70,slow=12,SNR=1.9						
COEN	**Coen**	**14.01**	**232**		**P**	**09 40 34.9**	**+2.4**
JAY	**Jayapura**	**14.10**	**281**	P	**P**	**09 40 33.4**	**-0.2**
	2.3nm,0.3s,baz=134,slow=6.5,SNR=10						
SMPI	**Sarmi**	**16.16**	**282**	P	**P**	**09 40 52.4**	**-3.9**
	2µm25nm,0.8s						
CTA	**Charters Tower**	**16.61**	**208**	P	**Pn**	**09 41 03.0**	**+0.7**
	3.7nm,0.3s,baz=31,slow=13,SNR=47						
CTAO	**Charters Tower**	**16.61**	**208**		**Pn**	**09 41 04.0**	**+1.8**
CTAO				IAmb	IAmb	09 41 06.8	
	comp=Z,36nm,0.8s						
DZM	**Mont Dzumac**	**20.13**	**146**	P	**P**	**09 41 40.3**	**+0.8**
	comp=Z,10nm,0.4s,baz=248,slow=7.8,SNR=28						
DZM	**Mont Dzumac**	**20.13**	**146**	P	**P**	**09 41 40.5**	**+1.0**
DZM				IAmb	IAmb	09 41 42.6	
	comp=Z,15nm,0.6s						
FAKI	**Fak Fak**	**22.37**	**276**	P	**P**	**09 42 02.1**	**-0.3**
SIJI	**Sorong**	**23.67**	**280**	P	**P**	**09 42 14.5**	**+0.3**
	comp=Z,8.2nm,0.3s,baz=57,slow=20,SNR=4.1						
WR0	**Warramunga Arr**	**24.20**	**232**	P	**P**	**09 42 19.2**	**+0.3**
WB0	**Warramunga Arr**	**24.21**	**232**	P	**P**	**09 42 19.0**	**0.0**
WB0				IAmb	IAmb	09 42 20.0	
	comp=Z,28nm,0.6s						
MTN	**Manton Dam**	**24.22**	**251**	P	**P**	**09 42 19.0**	**-0.2**
WC3	**Warramunga Arr**	**24.33**	**232**	P	**P**	**09 42 19.9**	**-0.2**
WC3				IAmb	IAmb	09 42 21.2	
	comp=Z,25nm,0.6s						
WRAB	**Tennant Creek**	**24.33**	**232**	P	**P**	**09 42 20.2**	**+0.1**
WB2	**Warramunga Arr**	**24.34**	**232**	P	**P**	**09 42 20.1**	**-0.1**
WRA	**Warramunga Arr**	**24.35**	**232**	P	**P**	**09 42 20.5**	**+0.2**
	comp=Z,23nm,0.6s,baz=56,slow=9.4,SNR=294						
WRA	**Warramunga Arr**	**24.35**	**232**	P	**P**	**09 42 19.3**	**-0.9**
BNDI	**Bandanaira**	**24.55**	**271**	P	**P**	**09 42 21.0**	**-1.2**
	comp=Z,10µmcomp=Z,154nm,0.6s						
AS31	**Alice Springs**	**26.87**	**226**	P	**P**	**09 42 42.4**	**-0.6**
AS31				IAmb	IAmb	09 42 43.2	
	comp=Z,5.5nm,0.5s						
ASAR	**Alice Springs**	**26.87**	**226**	P	**P**	**09 42 42.7**	**-0.3**
	comp=Z,8.6nm,0.4s,baz=57,slow=9.4,SNR=240						
ASAR				S	**S**	**09 47 00.3**	**-4.5**
	comp=Z,1.1nm,0.8s,baz=53,slow=16,SNR=4.7						
ASAR	**Alice Springs**	**26.87**	**226**	P	**P**	**09 42 42.1**	**-0.9**
KNRA	**Kununurra**	**27.25**	**246**	P	**P**	**09 42 45.7**	**-0.7**
KNRA				IAmb	IAmb	09 42 46.5	
	comp=Z,15nm,0.8s						
SANI	**Sanana**	**28.68**	**276**	P	**P**	**09 42 57.0**	**-2.1**
	comp=Z,19nm,0.9s						
STKA	**Stephens Creek**	**28.93**	**203**	P	**P**	**09 43 00.6**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=358,slow=9.4,SNR=9.1						
STKA	**Stephens Creek**	**28.93**	**203**	P	**P**	**09 43 00.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**30.88**	**244**	P	**P**	**09 43 17.6**	**-0.8**
	comp=Z,14nm,0.3s,baz=55,slow=8.1,SNR=132						
BBOO	**Buckleboo**	**32.20**	**210**	P	**P**	**09 43 29.4**	**-0.5**
BBOO				IAmb	IAmb	09 43 30.5	
	comp=Z,16nm,0.9s						
EDFI	**Ende, Flores**	**32.74**	**262**	P	**P**	**09 43 33.2**	**-1.7**
KAPI	**Kappang**	**34.64**	**269**	P	**P**	**09 43 50.5**	**-0.6**
	comp=Z,15nm,0.7s,baz=155,slow=8.7,SNR=3.7						
KAPI	**Kappang**	**34.64**	**269**	P	**P**	**09 43 48.9**	**-2.2**
KAPI				IAmb	IAmb	09 43 51.8	
	comp=Z,23nm,0.8s						
FORT	**Forrest**	**35.40**	**221**	P	**P**	**09 43 56.4**	**-1.1**
PSAD2	**Pilbara Seismi**	**37.11**	**241**	P	**P**	**09 44 11.0**	**-1.1**
PSAD2				IAmb	IAmb	09 44 11.9	
	comp=Z,14nm,0.8s						
PSAC2	**Pilbara Seismi**	**37.15**	**241**	P	**P**	**09 44 11.5**	**-0.9**
PSAC2				IAmb	IAmb	09 44 12.2	
	comp=Z,27nm,0.7s						
PSA00	**Pilbara Seismi**	**37.20**	**241**	P	**P**	**09 44 11.8**	**-1.0**
PSA00				IAmb	IAmb	09 44 12.6	
	comp=Z,22nm,0.7s						
LTZ	**Lake Taylor**	**40.35**	**160**	P	**P**	**09 44 39.6**	**+0.9**
LTZ				IAmb	IAmb	09 44 59.2	
	comp=Z,36nm,1.2s						
GIRL	**Giralia**	**42.47**	**242**	P	**P**	**09 44 57.1**	**+0.9**
MORW	**Morawa**	**43.29**	**233**	P	**P**	**09 45 02.0**	**-0.7**
MORW				IAmb	IAmb	09 45 02.3	
	comp=Z,9.4nm,0.6s						
UGM	**Wanagama**	**43.76**	**264**	P	**P**	**09 45 06.6**	**-0.2**
CISI	**Cisompet, Garu**	**46.45**	**265**	P	**P**	**09 45 26.7**	**-1.2**
CISI				IAmb	IAmb	09 45 27.2	
	comp=Z,38nm,0.6s						
KSRS	**Korea Array**	**49.38**	**332**	P	**P**	**09 45 50.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=145,slow=6.0,SNR=2.8						
KSRS				PcP	**PcP**	**09 47 09.8**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=163,slow=4.1,SNR=4.5						
KULM	**Kulim**	**54.85**	**280**	P	**P**	**09 46 30.0**	**-0.7**
KULM				IAmb	IAmb	09 46 30.4	
	comp=Z,7.7nm,0.6s						
KLR	**Kul'dur**	**57.98**	**343**	P	**P**	**09 46 51.5**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=309,slow=1.6,SNR=5.0						
PETK	**Petropavlovsk-**	**58.42**	**2**	P	**P**	**09 46 55.3**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=148,slow=8.0,SNR=6.2						
PETK	**Petropavlovsk-**	**58.42**	**2**	P	**P**	**09 46 56.5**	**+1.5**
CM31	**Chiang Mai Arr**	**59.72**	**295**	P	**P**	**09 47 05.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**59.72**	**295**	P	**P**	**09 47 05.9**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=118,slow=5.1,SNR=17						
HHC	**Hu-ho-hao-te**	**60.60**	**324**	*e*P	**P**	**09 47 10.5**	**+0.2**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,730nm,4.7s						
LZH	**Lanzhou**	**62.91**	**315**	*e*P	**P**	**09 47 27.1**	**+1.2**
LZH				pP	pwP	09 48 18.5	+2.3
LZH				sP	sP	09 48 42.6	+11
LZH				PP	**PP**	**09 49 50.1**	**+3.1**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,2µm,6.9s						
LZH				LR	LR		
	comp=N,1µm,15.8s						
LZH				LR	LR		
	comp=E,1µm,16.0s						
LZH				LR	LR		
	comp=Z,1µm,16.4s						
SONM	**Songino Array**	**67.81**	**327**	P	**P**	**09 47 57.0**	**0.0**
	comp=Z,0.8nm,0.8s,baz=152,slow=7.5,SNR=4.2						
CASY	**Casey**	**67.90**	**198**	P	**P**	**09 47 57.0**	**-0.1**
CASY				IAmb	IAmb	09 47 57.8	
	comp=Z,9.5nm,1.2s						
TLY	**Talaya**	**71.52**	**329**	P	**P**	**09 48 17.9**	**-1.6**
WMQ	**Urumqi**	**77.40**	**317**	*e*P	**P**	**09 48 54.1**	**+0.5**
IMAR	**Indian Mountai**	**80.44**	**19**	P	**P**	**09 49 10.1**	**+0.5**
MK31	**Makanchi Array**	**81.96**	**319**	P	**P**	**09 49 17.4**	**-0.7**
MKAR	**Makanchi Array**	**81.96**	**319**	P	**P**	**09 49 18.1**	**0.0**
	comp=Z,0.9nm,0.4s,baz=90,slow=8.6,SNR=15						
MKAR	**Makanchi Array**	**81.96**	**319**	P	**P**	**09 49 16.7**	**-1.3**
IL31		**82.13**	**22**	P	**P**	**09 49 18.2**	**-0.2**
ILAR	**Eielson Array**	**82.13**	**22**	P	**P**	**09 49 17.6**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=245,slow=6.2,SNR=10						
ILAR	**Eielson Array**	**82.13**	**22**	P	**P**	**09 49 17.9**	**-0.6**
MAKZ	**Makanchi**	**82.17**	**319**	P	**P**	**09 49 18.9**	**-0.2**
ZALV	**Zalesovo Beam**	**82.67**	**326**	P	**P**	**09 49 21.1**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=115,slow=7.0,SNR=6.1						
ZALV	**Zalesovo Beam**	**82.67**	**326**	P	**P**	**09 49 20.2**	**-1.3**
MAW	**Mawson**	**85.62**	**203**	P	**P**	**09 49 35.7**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=180,slow=4.0,SNR=1.7						
NRIK	**Noril'sk**	**87.15**	**341**	P	**P**	**09 49 42.2**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=153,slow=4.5,SNR=2.0						
KK05	**Karatay Array**	**89.33**	**313**	P	**P**	**09 49 53.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**152.15**	**288**	PKPbc	**PKPbc**	**09 56 52.3**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=67,slow=2.1,SNR=14						

IDC ***22*** *09:39:28.2±1.0, 36°.80N×97°.60W, h0km, mb3.6/1, mb1 3.7/6, mb1mx3.5/47, mbtmp3.4/6, ML3.2/5, Error ellipse: s-maj=15.3km s-min=12.1km az=144.0*
TUL ***22*** *09:39:29±1.5, 36°.76N±0°.03×97°.58W±0°.06, h5km±7km, ML3.7, Error ellipse: s-maj=7.6km s-min=2.3km az=64.0*
NEIC ***22*** *09:39:29.1±1.2, 36°.74N±0°.03×97°.56W±0°.06, h8km±4km, Error ellipse: s-maj=7.3km s-min=2.2km az=61.0*
ANF ***22*** *09:39:30.3±0.8, 36°.77N×97°.59W, h11km±6km, ML4.6/11, Error ellipse: s-maj=2.8km s-min=2.1km az=28.0*
ISC 22 09:39:29.2±0.9, 36°.75N±0°.02×97°.58W±0°.03, h10km±8km, n108, σ1§15/117, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GC02	**Grant County #**	**0.25**	**294**		**Pg**	**09 39 34.3**	**+0.1**
GC02				Sg	**Sg**	**09 39 38.0**	**+0.3**
KAN13	**South Haven SW**	**0.27**	**17**		**Pg**	**09 39 34.7**	**0.0**
KAN13				Sg	**Sg**	**09 39 38.8**	**+0.4**
KAN09	**Caldwell North**	**0.38**	**355**		**Pg**	**09 39 36.8**	**0.0**
KAN09				Sg	**Sg**	**09 39 42.4**	**+0.5**
CROK	**Carrier**	**0.41**	**233**		**Pg**	**09 39 37.3**	**+0.1**
CROK				Sg	**Sg**	**09 39 43.3**	**+0.7**
KAN01	**Argonia South**	**0.42**	**340**		**Pg**	**09 39 37.6**	**0.0**
KAN05	**Bluff City Nor**	**0.43**	**327**		**Pg**	**09 39 37.6**	**+0.1**
KS20	**Mayfield South**	**0.48**	**2**		**Pg**	**09 39 38.5**	**0.0**
KAN10	**Anthony SW Sta**	**0.56**	**312**		**Pg**	**09 39 40.0**	**0.0**
KAN08	**Anthony NE Sta**	**0.57**	**326**		**Pg**	**09 39 40.3**	**+0.1**
KAN12	**Harper NE Stat**	**0.64**	**328**		**Pg**	**09 39 41.5**	**-0.1**
T35A	**Sooner Cattle**	**0.87**	**79**		**Pg**	**09 39 45.6**	**-0.3**
QUOK	**Quay**	**0.91**	**129**		**Pg**	**09 39 46.4**	**-0.4**
OK029	**Liberty Lake**	**0.96**	**174**		**Pg**	**09 39 47.3**	**-0.3**
OK031	**S. Brethren Rd**	**1.00**	**143**		**Pg**	**09 39 48.0**	**-0.4**
OK030	**Cody Creek RV**	**1.04**	**142**		**Pg**	**09 39 48.8**	**-0.4**
BCOK	**Bluff Creek, N**	**1.09**	**181**		**Pg**	**09 39 49.7**	**-0.5**
OK025	**Westminster Rd**	**1.19**	**170**		**Pb**	**09 39 51.4**	**-0.4**
U32A	**Winter Ranch,**	**1.21**	**252**		**Pb**	**09 39 51.6**	**-0.6**
OKCFA	**Oklahoma City**	**1.34**	**176**		**Pn**	**09 39 54.0**	**0.0**
OKCSW	**OKLAHOMA CITY**	**1.35**	**175**	Pn	**Pn**	**09 39 54.2**	**+0.1**
FNO	**Franklin**	**1.50**	**174**		**Pn**	**09 39 56.7**	**+0.5**
TUL1	**Leonard**	**1.67**	**120**	P	**Pn**	**09 39 59.3**	**+0.8**
	baz=301						
TUL1				S	**Sb**	**09 40 21.8**	**+0.6**
	baz=301						
TUL1	**Leonard**	**1.67**	**120**		**Pn**	**09 39 59.4**	**+0.8**
W35A	**Tecumseh**	**1.70**	**160**	Pn	**Pn**	**09 39 59.6**	**+0.7**
R32A	**Long Quarter,**	**1.89**	**332**		**Pn**	**09 40 02.7**	**+1.0**
WMOK	**Wichita Mounta**	**2.24**	**206**	P	**Pn**	**09 40 07.2**	**+0.9**
	baz=26						
WMOK				S	**Sn**	**09 40 36.1**	**+2.1**
	baz=26						
WMOK	**Wichita Mounta**	**2.24**	**206**		**Pn**	**09 40 07.5**	**+1.1**
KSU1	**Kansas State U**	**2.47**	**18**	S	**Sb**	**09 40 41.8**	**-2.3**
	baz=198						
KSU1	**Kansas State U**	**2.47**	**18**		**Pn**	**09 40 10.4**	**+0.9**
CBKS	**Cedar Bluff**	**2.68**	**321**	P	**Pn**	**09 40 13.3**	**+0.8**
	baz=140						
CBKS				Sb	**Sb**	**09 40 51.6**	**+1.4**
	baz=140						
CBKS	**Cedar Bluff**	**2.68**	**321**		**Pn**	**09 40 12.7**	**+0.3**
X37A	**Clayton**	**2.81**	**140**		**Pn**	**09 40 15.0**	**+0.8**
HHAR	**Hobbs**	**2.97**	**98**		**Pn**	**09 40 17.9**	**+1.5**
W39A	**Magazine**	**3.45**	**116**	Pb	**Pb**	**09 40 31.9**	**+1.5**
	baz=298						
S39A	**Bolivar**	**3.52**	**73**	Pn	**Pn**	**09 40 24.5**	**+0.5**
AMTX	**Amarillo**	**3.82**	**242**	Pn	**Pn**	**09 40 29.5**	**+1.3**
U40A	**Yellville**	**3.82**	**95**	P	**Pn**	**09 40 29.2**	**+1.0**
	baz=277						
U40A				Sb	**Sb**	**09 41 26.6**	**+3.4**
	baz=277						
U40A	**Yellville**	**3.82**	**95**	Pn	**Pn**	**09 40 29.1**	**+1.0**
MIAR	**Mount Ida**	**3.93**	**123**	Pb	**Pb**	**09 40 40.1**	**+1.4**
	baz=305						
MIAR				Sb	**Sg**	**09 41 31.5**	**-3.9**
	baz=305						
MIAR	**Mount Ida**	**3.93**	**123**	Pn	**Pn**	**09 40 32.0**	**+2.3**
N33A	**J Bar K, Exete**	**3.98**	**1**	Pn	**Pn**	**09 40 30.4**	**0.0**
Z38A	**Mt. Pleasant**	**4.08**	**148**	Pn	**Pn**	**09 40 32.4**	**+0.7**
MGMO	**Mountain Grove**	**4.27**	**83**		**Pn**	**09 40 35.2**	**+0.9**
P38A	**Dawn**	**4.29**	**47**		**Pn**	**09 40 35.1**	**+0.6**
N35A	**Tabor**	**4.37**	**20**		**Pn**	**09 40 36.0**	**+0.3**
ABTX	**Abilene, Hawle**	**4.46**	**203**	Pn	**Pn**	**09 40 38.1**	**+1.2**
X40A	**Basin Creek Fa**	**4.48**	**119**	Pb	**Pb**	**09 40 48.8**	**+0.9**
	baz=302						
X40A	**Basin Creek Fa**	**4.48**	**119**		**Pn**	**09 40 38.0**	**+0.8**
R40A	**Maddies Statio**	**4.49**	**68**		**Pn**	**09 40 38.0**	**+0.6**
W41B	**Gary Mavity, V**	**4.60**	**108**	Sb	**Sb**	**09 41 49.6**	**+4.1**
	baz=292						
BGNE	**Belgrade**	**4.67**	**355**	Pn	**Pn**	**09 40 40.0**	**+0.2**
WHTX	**Lake Whitney,**	**4.75**	**179**	P	**Pn**	**09 40 41.8**	**+0.9**
	baz=359						
WHTX	**Lake Whitney,**	**4.75**	**179**	Pn	**Pn**	**09 40 41.3**	**+0.4**
WLAR	**White Oak Lake**	**4.77**	**129**		**Pn**	**09 40 42.6**	**+1.5**
237A	**Washetta, Mont**	**4.96**	**162**	Pn

KZV				*e*S		**Sn**	**09 53 26.6 +0.6**		
KZV	**Kizimen**	**1.01**	**308**	PN		**Pn**	**09 53 13.3 +0.4**		
KZV				S		**Sn**	**09 53 26.6 +0.6**		
TUMD	**Tumrok D**	**1.02**	**314**	*i* P		**Pn**	**09 53 13.2 +0.3**		
TUMD				*e*S		**Sn**	**09 53 26.4 +0.3**		
TUMR	**Tumrok**	**1.18**	**312**	*i* P		**Pn**	**09 53 16.0 +0.8**		
TUMR	**Tumrok**	**1.18**	**312**	PN		**Pn**	**09 53 13.2 -2.0**		
TUMR				S		**Sn**	**09 53 26.4 -3.8**		
KII	**Karymskiy**	**1.39**	**251**	*e*P		**Pn**	**09 53 18.7 +0.6**		
KII				*e*S		**Sn**	**09 53 36.3 +1.0**		
KII	**Karymskiy**	**1.39**	**251**	PN		**Pn**	**09 53 18.7 +0.6**		
KII				S		**Sn**	**09 53 36.3 +1.0**		
KMNR	**Kamenistaya**	**1.51**	**327**	*e*P		**Pn**	**09 53 21.3 +1.7**		
KMNR	**Kamenistaya**	**1.51**	**327**	PN		**Pn**	**09 53 21.3 +1.7**		
BZGR	**Bezymyannyi-Gr**	**1.55**	**339**	*e*P		**Pn**	**09 53 21.6 +1.4**		
BZGR	**Bezymyannyi-Gr**	**1.55**	**339**	PN		**Pn**	**09 53 21.6 +1.4**		
BZMR	**Bezymyannaya**	**1.59**	**335**	*e*P		**Pn**	**09 53 22.0 +1.2**		
BZMR	**Bezymyannaya**	**1.59**	**335**	PN		**Pn**	**09 53 22.0 +1.2**		
ZLN	**Zelenaya**	**1.60**	**342**	*e*P		**Pn**	**09 53 22.6 +1.7**		
ZLN	**Zelenaya**	**1.60**	**342**	PN		**Pn**	**09 53 22.6 +1.7**		
BZWR	**Bezymyannyi-We**	**1.61**	**335**	*e*P		**Pn**	**09 53 22.6 +1.4**		
BZWR	**Bezymyannyi-We**	**1.61**	**335**	PN		**Pn**	**09 53 22.6 +1.4**		
KIRR	**Kirishev**	**1.64**	**333**	*e*P		**Pn**	**09 53 23.1 +1.5**		
KIRR	**Kirishev**	**1.64**	**333**	PN		**Pn**	**09 53 23.1 +1.5**		
LGNR	**Loginova**	**1.68**	**341**	*e*P		**Pn**	**09 53 24.2 +2.0**		
LGNR	**Loginova**	**1.68**	**341**	PN		**Pn**	**09 53 24.2 +2.0**		
CIRR	**Tsirk**	**1.70**	**342**	*e*P		**Pn**	**09 53 24.1 +1.8**		
CIRR	**Tsirk**	**1.70**	**342**	PN		**Pn**	**09 53 24.1 +1.8**		
SPN	**Mys Shipunski**	**1.72**	**216**	*i* P		**Pn**	**09 53 21.7 -0.7**		
SPN				*e*S		**Sn**	**09 53 41.0 -2.2**		
SPN	**Mys Shipunski**	**1.72**	**216**	PN		**Pn**	**09 53 21.7 -0.7**		
SPN				S		**Sn**	**09 53 41.0 -2.2**		
KBTR	**Krutoberegovo**	**1.83**	**20**	*e*P		**Pn**	**09 53 24.8 +0.9**		
KBTR				*e*S		**Sn**	**09 53 48.0 +2.2**		
KBTR	**Krutoberegovo**	**1.83**	**20**	PN		**Pn**	**09 53 24.8 +0.9**		
KBTR				S		**Sn**	**09 53 48.0 +2.2**		
KRSR	**Krestovskiy**	**1.83**	**340**	*e*P		**Pn**	**09 53 25.3 +1.2**		
KRSR	**Krestovskiy**	**1.83**	**340**	PN		**Pn**	**09 53 25.3 +1.2**		
KBG	**Krutoberegovo**	**1.85**	**18**	*e*P		**Pn**	**09 53 25.3 +1.1**		
KBG				*e*S		**Sn**	**09 53 48.4 +2.1**		
KBG	**Krutoberegovo**	**1.85**	**18**	PN		**Pn**	**09 53 25.3 +1.1**		
KBG				S		**Sn**	**09 53 48.4 +2.1**		
KOZ	**Kozyrevsk**	**1.87**	**327**	*e*P		**Pn**	**09 53 26.6 +2.0**		
KOZ	**Kozyrevsk**	**1.87**	**327**	PN		**Pn**	**09 53 26.6 +2.0**		
KLY	**Klyuchi**	**1.91**	**342**	*i* P		**Pn**	**09 53 26.1 +1.1**		
KLY				*e*S		**Sn**	**09 53 49.4 +1.7**		
KLY	**Klyuchi**	**1.91**	**342**	PN		**Pn**	**09 53 26.1 +1.1**		
KLY				S		**Sn**	**09 53 49.4 +1.7**		
NLC	**Nalytchevo**	**1.93**	**227**	*e*P		**Pn**	**09 53 25.6 +0.3**		
NLC				*e*S		**Sn**	**09 53 48.6 +0.4**		
NLC	**Nalytchevo**	**1.93**	**227**	PN		**Pn**	**09 53 25.6 +0.3**		
NLC				S		**Sn**	**09 53 48.6 +0.4**		
SDLR	**Sedlovina**	**2.06**	**235**	*e*P		**Pn**	**09 53 28.9 +1.6**		
SDLR				*e*S		**Sn**	**09 53 52.8 +1.0**		
SDLR	**Sedlovina**	**2.06**	**235**	PN		**Pn**	**09 53 28.9 +1.6**		
SDLR				S		**Sn**	**09 53 52.8 +1.0**		
SMKR	**Semkarok**	**2.09**	**357**	*e*P		**Pn**	**09 53 29.6 +2.0**		
SMKR	**Semkarok**	**2.09**	**357**	PN		**Pn**	**09 53 29.6 +2.0**		
BDR	**Baidarnaya**	**2.09**	**353**	*e*P		**Pn**	**09 53 29.4 +1.8**		
BDR	**Baidarnaya**	**2.09**	**353**	PN		**Pn**	**09 53 29.4 +1.8**		
SMAR	**Somma**	**2.11**	**235**	*e*P		**Pn**	**09 53 29.6 +1.6**		
SMAR				*e*S		**Sn**	**09 53 54.3 +1.1**		
SMAR	**Somma**	**2.11**	**235**	PN		**Pn**	**09 53 29.6 +1.6**		
SMAR				S		**Sn**	**09 53 54.3 +1.1**		
KRER	**Koryakskii**	**2.11**	**237**	*e*P		**Pn**	**09 53 29.9 +1.9**		
KRER	**Koryakskii**	**2.11**	**237**	PN		**Pn**	**09 53 29.9 +1.9**		
KRX	**Arik**	**2.13**	**239**	*e*P		**Pn**	**09 53 29.4 +1.2**		
KRX				*e*S		**Sn**	**09 53 54.4 +0.9**		
KRX	**Arik**	**2.13**	**239**	PN		**Pn**	**09 53 29.4 +1.2**		
KRX				S		**Sn**	**09 53 54.4 +0.9**		
UGLR	**Uglovaya**	**2.13**	**234**	*i* P		**Pn**	**09 53 29.9 +1.6**		
UGLR				*e*S		**Sn**	**09 53 54.7 +1.1**		
UGLR	**Uglovaya**	**2.13**	**234**	PN		**Pn**	**09 53 29.9 +1.6**		
UGLR				S		**Sn**	**09 53 54.7 +1.1**		
SRDR	**Sredinnyy**	**2.14**	**329**	*e*P		**Pn**	**09 53 29.7 +1.5**		
SRDR	**Sredinnyy**	**2.14**	**329**	PN		**Pn**	**09 53 29.7 +1.5**		
AVH	**Avacha**	**2.14**	**236**	*i* P		**Pn**	**09 53 30.3 +2.0**		
AVH	**Avacha**	**2.14**	**236**	PN		**Pn**	**09 53 30.3 +2.0**		
SRKR	**Sorokina**	**2.17**	**352**	*e*P		**Pn**	**09 53 30.6 +1.8**		
SRKR	**Sorokina**	**2.17**	**352**	PN		**Pn**	**09 53 30.6 +1.8**		
KOK	**Koryaka**	**2.18**	**237**	*e*P		**Pn**	**09 53 30.4 +1.6**		
KOK	**Koryaka**	**2.18**	**237**	PN		**Pn**	**09 53 30.4 +1.6**		
ESO	**Esso**	**2.23**	**311**	*i* P		**Pn**	**09 53 31.1 +1.7**		
ESO	**Esso**	**2.23**	**311**	PN		**Pn**	**09 53 31.1 +1.7**		
DALK	**Dalny**	**2.28**	**231**	*e*P		**Pn**	**09 53 31.2 +1.1**		
DALK				*e*S		**Sn**	**09 53 57.4 +0.4**		
DALK	**Dalny**	**2.28**	**231**	PN		**Pn**	**09 53 31.2 +1.1**		
DALK				S		**Sn**	**09 53 57.4 +0.4**		
PET	**Petropavlovsk**	**2.33**	**232**	*e*P		**Pn**	**09 53 32.2 +1.4**		
PET				*e*S		**Sn**	**09 53 59.1 +0.8**		
PET	**Petropavlovsk**	**2.33**	**232**	*e*PN		**Pn**	**09 53 32.1 +1.3**		
PET				*e*S		**Sn**	**09 53 59.0 +0.8**		
PET				pmax	pmax				
	comp=Z,174nm,0.4s								
PET				smax	smax				
	comp=N,968nm,0.4s								
PET				smax	smax				
	comp=E,838nm,0.4s								
PET	**Petropavlovsk**	**2.33**	**232**			**Pn**	**09 53 32.6 +1.8**		
GNL	**Ganaly**	**2.35**	**251**	*e*P		**Pn**	**09 53 33.0 +1.8**		
GNL	**Ganaly**	**2.35**	**251**	PN		**Pn**	**09 53 33.0 +1.8**		
BKI	**Bering**	**2.58**	**72**	*e*P		**Pn**	**09 53 34.0 -0.1**		
BKI				*e*S		**Sn**	**09 54 03.5 -0.7**		
BKI	**Bering**	**2.58**	**72**	PN		**Pn**	**09 53 34.0 -0.1**		
BKI				S		**Sn**	**09 54 03.5 -0.7**		
KRMR	**Karymshinskiy**	**2.70**	**233**	*e*P		**Pn**	**09 53 38.4 +2.5**		
KRMR				*e*S		**Sn**	**09 54 09.7 +2.4**		
KRMR	**Karymshinskiy**	**2.70**	**233**	PN		**Pn**	**09 53 38.4 +2.5**		
KRMR				S		**Sn**	**09 54 09.7 +2.4**		
PEA0B	**Petropavlovsk-**	**2.75**	**241**	*i* PN		**Pn**	**09 53 37.6 +1.0**		
PEA0B	**Petropavlovsk-**	**2.75**	**241**			**Pn**	**09 53 38.2 +1.6**		
PEA0B				Sn		**Sn**	**09 54 11.5 +3.0**		
PETK	**Petropavlovsk-**	**2.75**	**241**	Pn		**Pn**	**09 53 37.6 +1.0**		
	comp=E,11nm,0.3s,baz=73,slow=18,SNR=283								
PETK				S		**Sn**	**09 54 12.8 +4.3**		
	comp=E,18nm,0.3s,baz=80,slow=40,SNR=7.5								
PETK	**Petropavlovsk-**	**2.75**	**241**			**Pn**	**09 53 38.2 +1.6**		
PETK						**Sn**	**09 54 10.8 +2.3**		
RUS	**Russkaya**	**2.81**	**224**	*e*P		**Pn**	**09 53 37.8 +0.4**		
RUS				*e*S		**Sn**	**09 54 10.5 +0.5**		
RUS	**Russkaya**	**2.81**	**224**	PN		**Pn**	**09 53 37.8 +0.4**		
RUS				S		**Sn**	**09 54 10.5 +0.5**		
GRL	**Gorelyy**	**2.91**	**229**	*e*P		**Pn**	**09 53 40.6 +1.7**		
GRL				*e*S		**Sn**	**09 54 14.9 +2.2**		
GRL	**Gorelyy**	**2.91**	**229**	PN		**Pn**	**09 53 40.6 +1.7**		
GRL				S		**Sn**	**09 54 14.9 +2.2**		
MTVR	**Mutnovka**	**2.91**	**227**	*e*P		**Pn**	**09 53 40.5 +1.5**		
MTVR	**Mutnovka**	**2.91**	**227**	PN		**Pn**	**09 53 40.5 +1.5**		
ASAK	**Asacha**	**3.10**	**228**	*e*P		**Pn**	**09 53 44.1 +2.5**		
ASAK	**Asacha**	**3.10**	**228**	PN		**Pn**	**09 53 44.1 +2.5**		
APC	**Apacha**	**3.12**	**241**	*e*P		**Pn**	**09 53 43.8 +2.1**		
APC				*e*S		**Sn**	**09 54 21.4 +3.7**		
APC	**Apacha**	**3.12**	**241**	PN		**Pn**	**09 53 43.8 +2.1**		
APC				S		**Sn**	**09 54 21.4 +3.7**		
KDTR	**Khodutka, Kamc**	**3.47**	**220**	*e*P		**Pn**	**09 53 47.8 +1.4**		
KDTR				*e*S		**Sn**	**09 54 27.0 +0.9**		
KDTR	**Khodutka, Kamc**	**3.47**	**220**	PN		**Pn**	**09 53 47.8 +1.4**		
KDTR				S		**Sn**	**09 54 27.0 +0.9**		
PAU	**Pauzhetka**	**4.24**	**226**	*e*P		**Pn**	**09 53 59.5 +2.5**		
PAU	**Pauzhetka**	**4.24**	**226**	PN		**Pn**	**09 53 59.5 +2.5**		
PALN	**Palana**	**4.69**	**349**	*e*P		Pn	09 54 07.8 +4.6		
PALN	**Palana**	**4.69**	**349**	PN		Pn	09 54 07.8 +4.6		
OSSR	**Ossora**	**4.82**	**8**	*e*P		**Pn**	**09 54 07.3 +2.4**		
OSSR	**Ossora**	**4.82**	**8**	PN		**Pn**	**09 54 07.3 +2.4**		
SKR	**Severo-Kuril's**	**5.12**	**224**	*e*P		**Pn**	**09 54 11.6 +2.6**		
SKR	**Severo-Kuril's**	**5.12**	**224**	*e*PN		Pn	09 54 16.5 +7.5		
SKR				*e*S		**Sn**	**09 55 13.7 +6.9**		
SKR				pmax	pmax				
	comp=Z,33nm,0.8s								
SKR				smax	smax				
	comp=E,74nm,0.5s								
SKR				smax	smax				
	comp=N,71nm,0.5s								
SKR				MLR	MLR				
	comp=Z,1μm,12.0s								
SMY	**Shemya**	**7.59**	**98**	PN		**Pn**	**09 54 45.1 +2.1**		
SMY	**Shemya**	**7.59**	**98**	Pn		**Pn**	**09 54 45.1 +2.1**		
MA2	**Magadan**	**7.82**	**315**	*i* PN		**Pn**	**09 54 44.1 -2.1**		
OKH	**Okha**	**11.07**	**273**	*de*PN		Pn	09 55 19.3 -11		
OKH				MLR	MLR				
	comp=Z,1μm,15.0s								
KUR	**Kuril'sk**	**12.84**	**229**	*i* PN		**Pn**	**09 55 52.6 -2.2**		
BILL	**Bilibino**	**13.75**	**7**	*i* P		**Pn**	**09 56 07.1 0.0**		
ASAJ	**Asahikawa**	**16.16**	**238**	Pn		**Pn**	**09 56 40.3 +1.3**		
	comp=Z,0.4nm,0.3s,baz=330,slow=22,SNR=1.3								
ERM	**Erimo**	**17.49**	**232**	*i* P		**Pn**	**09 56 54.6 -1.0**		
ERM	**Erimo**	**17.49**	**232**	P		**P**	**09 56 56.8 +0.4**		
YAK	**Yakutsk**	**18.28**	**307**	*i* P		**P**	**09 57 04.2 -0.7**		
YAK				pmax	pmax				
	comp=Z,6.0nm,0.8s								
KLR	**Kul'dur**	**19.14**	**266**	Pn		**P**	**09 57 14.8 +0.3**		
	comp=Z,0.1nm,0.3s,baz=59,slow=8.3,SNR=7.2								
KLR	**Kul'dur**	**19.14**	**266**	*i* P		**P**	**09 57 14.7 +0.3**		
KLR				pmax	pmax				
	comp=Z,3.0nm,0.9s								
JTM	**Tenmabayashi**	**19.43**	**234**	P		**P**	**09 57 18.4 +0.8**		
JMM	**Marumori**	**21.91**	**229**	P		**P**	**09 57 45.4 +0.9**		
JMM				IAmb	IAmb		09 57 48.3		
	comp=Z,14nm,1.1s								
TIXI	**Tiksi**	**22.22**	**333**	*i* P		**P**	**09 57 45.5 -2.0**		
TIXI	**Tiksi**	**22.22**	**333**	P		**P**	**09 57 46.8 -0.7**		
MAJO	**Matsushiro**	**24.17**	**232**	*i* P		**P**	**09 58 07.0 -0.2**		
MAJO				pmax	pmax				
	comp=Z,5.0nm,1.0s								
MAJO	**Matsushiro**	**24.17**	**232**	P		**P**	**09 58 07.2 0.0**		
MAJO				IAmb	IAmb		09 58 28.1		
	comp=Z,18nm,1.5s								
MJAR	**Matsushiro Arr**	**24.17**	**232**	P		**P**	**09 58 07.6 +0.4**		
	comp=Z,3.9nm,1.1s,baz=10,slow=11,SNR=7.2								
MJAR	**Matsushiro Arr**	**24.17**	**232**	P		**P**	**09 58 07.7 +0.5**		
TRF	**Thorofare Moun**	**25.71**	**50**	P		**P**	**09 58 22.1 +0.8**		
TRF				IAmb	IAmb		09 58 47.7		
	comp=Z,7.3nm,1.4s								
TOLK	**Toolik Lake Re**	**26.27**	**38**	P		**P**	**09 58 26.7 +0.6**		
RND	**Reindeer**	**26.36**	**50**	P		**P**	**09 58 27.2 +0.2**		
RND				pmax	pmax				
	comp=Z,10.0nm,1.3s								
RND	**Reindeer**	**26.36**	**50**	P		**P**	**09 58 27.2 +0.2**		
RND				IAmb	IAmb		09 58 41.1		
	comp=Z,10nm,1.3s								
ILAR	**Eielson Array**	**27.16**	**47**	P		**P**	**09 58 34.3 +0.3**		
	comp=Z,0.4nm,0.9s,baz=291,slow=6.2,SNR=2.5								
H11N2	**WAKE ISLAND Hy**	**34.94**	**171**	T		T	10 36 47.0		
	baz=355,slow=76,SNR=853								
H11N3	**WAKE ISLAND Hy**	**34.95**	**171**	T		T	10 36 48.1		
	baz=355,slow=76,SNR=854								
H11N1	**WAKE ISLAND Hy**	**34.96**	**171**	T		T	10 36 48.3		
	baz=355,slow=76,SNR=932								
NRIK	**Noril'sk**	**35.31**	**324**	*i* P		**P**	**09 59 42.3 -3.3**		
NRIK				pmax	pmax				
	comp=Z,1.0nm,0.7s								
H11S1	**WAKE ISLAND Hy**	**36.14**	**172**	T		T	10 38 25.6		
	baz=352,slow=76,SNR=20								
H11S3	**WAKE ISLAND Hy**	**36.15**	**172**	T		T	10 38 17.2		
	baz=352,slow=76,SNR=16								
H11S2	**WAKE ISLAND Hy**	**36.15**	**172**	T		T	10 38 21.7		
	baz=352,slow=76,SNR=19								
EUNU	**Eureka**	**40.35**	**14**	P		**P**	**10 00 28.9 +0.9**		
EUNU				IAmb	IAmb		10 00 47.2		
	comp=Z,7.8nm,0.7s								
SPITS	**Spitsbergen Ar**	**45.90**	**351**	P		**P**	**10 01 11.7 -1.1**		
	comp=Z,3.8nm,0.8s,baz=57,slow=8.2,SNR=12								
KURBB	**Kurchatov Array**	**47.90**	**302**	P		P	10 01 25.1 -3.6		
	comp=Z,0.3nm,0.4s,baz=57,slow=7.9,SNR=3.1								
MKAR	**Makanchi Array**	**48.40**	**295**	P		**P**	**10 01 30.7 -1.9**		
	comp=Z,0.3nm,0.7s,baz=59,slow=6.0,SNR=2.7								
ARCES	**ARCESS Array B**	**52.24**	**342**	P		**P**	**10 02 00.2 -1.1**		
	comp=Z,5.9nm,1.1s,baz=37,slow=4.4,SNR=7.6								
ARU	**Arti**	**53.00**	**317**	*i* P		P	10 02 03.2 -3.9		
ARU				pmax	pmax				
	comp=Z,2.0nm,1.0s								
NVAR	**Mina Array Bea**	**54.39**	**72**	P		**P**	**10 02 19.8 +2.0**		
	comp=Z,3nm,0.5s,baz=316,slow=6.3,SNR=2.9								
PDAR	**Pinedale Array**	**56.02**	**63**	P		**P**	**10 02 31.2 +1.7**		
	comp=Z,0.2nm,0.6s,baz=280,slow=5.4,SNR=2.2								
PDAR				pP		**pP**	**10 02 41.5 +0.3**		
	comp=Z,0.1nm,0.4s,baz=3.8,slow=4.5,SNR=3.1								
FINES	**FINESS Array B**	**59.19**	**337**	P		**P**	**10 02 50.4 -0.8**		
	comp=Z,2.6nm,0.5s,baz=39,slow=8.0,SNR=25								
FINES	**FINESS Array B**	**59.19**	**337**	P		**P**	**10 02 50.1 -1.1**		
NB2	**NORSAR Subarra**	**62.44**	**344**	P		**P**	**10 03 12.5 -0.9**		
	comp=Z,0.7nm,0.5s,baz=19,slow=6.9								
NOA	**NORSAR Array B**	**62.44**	**344**	P		**P**	**10 03 12.6 -0.7**		
	comp=Z,22nm,0.9s,baz=22,slow=6.7,SNR=9.1								
HFS	**Hagfors**	**62.89**	**343**	P		**P**	**10 03 15.1 -1.1**		
	comp=Z,1.1nm,0.5s,baz=46,slow=4.3,SNR=11								
TXAR	**Lajitas Array**	**69.23**	**69**	P		**P**	**10 03 59.0 +1.5**		
	comp=Z,0.3nm,0.6s,baz=290,slow=5.3,SNR=9.3								
TXAR				pP		**pP**	**10 04 10.3 +0.8**		
	comp=Z,0.3nm,0.6s,baz=280,slow=5.0,SNR=2.9								
WRA	**Warramunga Arr**	**77.76**	**206**	P		**P**	**10 04 47.6 +0.1**		
	comp=Z,0.4nm,0.7s,baz=19,slow=6.1,SNR=5.9								
WRA				pP		**pP**	**10 04 58.8 -0.8**		
	comp=Z,0.5nm,0.7s,baz=19,slow=5.9,SNR=3.6								
ASAR	**Alice Springs**	**81.44**	**206**	P		**P**	**10 05 08.5 +1.1**		
	comp=Z,0.9nm,0.6s,baz=8.8,slow=5.5,SNR=11								
ESDC	**Sonseca Array**	**85.39**	**349**	P		**P**	**10 05 27.4 -0.4**		
	comp=Z,0.4nm,0.7s,baz=336,slow=2.8,SNR=2.5								
ESDC				pP		**pP**	**10 05 38.7 -1.7**		
	comp=Z,0.8nm,0.8s,baz=359,slow=4.1,SNR=4.8								
ESDC				sP		**sP**	**10 05 45.3 +0.1**		
	comp=Z,0.7nm,0.6s,baz=359,slow=5.8,SNR=4.2								

*IDC **22** 09:54:36.7±2.8,20.11S×177.99W,h409km±28km, mb3.4/10,mb1 3.7/11,mb1mx3.4/26,mbtmp4.2/11,Error ellipse: s-maj=19.8km s-min=11.5km az=135.0*
*NEIC **22** 09:54:39.3±1.0,19.96S±0.10×178.1W±0.2,h434km±8km, mb4.2/19,Error ellipse: s-maj=23.6km s-min=13.7km az=85.0*

ISC 22 09:54:35.9±0.6,20.10S±0.10×177.8W±0.1,h400km,n47, σ1913/49,mb3.8/19,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.55**	**300**	P		**Pn**	**09 55 55.6**	**+2.1**
AFI	**Afiamalu**	**8.45**	**44**	P		Pn	09 56 30.8	-5.4
	5.1nm,0.3s,baz=258,slow=2.6,SNR=8.7							
AFI				S		S	09 58 01.0	-14
	4.8nm,0.3s,baz=103,slow=19,SNR=9.5							
DZM	**Mont Dzumac**	**14.80**	**260**	P		**P**	**09 57 49.5**	**+3.0**
	0.5nm,0.3s,baz=78,slow=20,SNR=5.6							
DZM	**Mont Dzumac**	**14.80**	**260**	P		P	09 57 50.0	+3.6
URZ	**Urewera**	**18.62**	**193**	P		**P**	**09 58 25.6**	**-1.3**
	1.5nm,0.3s,baz=264,slow=4.1,SNR=7.4							
URZ				S		**S**	**10 01 37.1**	**0.0**
	0.1nm,0.3s,baz=292,slow=0.8,SNR=1.0							
WHZ	**Wether Hill Ro**	**28.27**	**201**	P		**P**	**09 59 55.4**	**+1.1**
CTAO	**Charters Tower**	**33.69**	**264**	P		**P**	**10 00 42.1**	**+0.5**
CTAO				IAmb		IAmb	10 00 42.6	
	comp=Z,9.4nm,0.8s							
TOO	**Toolangi**	**36.26**	**233**	P		**P**	**10 01 03.2**	**+0.1**
TOO				IAmb		IAmb	10 01 32.3	
	comp=Z,24nm,1.4s							
COEN	**Coen**	**37.71**	**273**	P		**P**	**10 01 15.7**	**+0.2**
COEN				IAmb		IAmb	10 01 26.8	
	comp=Z,14nm,1.5s							
STKA	**Stephens Creek**	**38.10**	**244**	P		**P**	**10 01 17.4**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=117,slow=6.6,SNR=4.5							
BBOO	**Buckleboo**	**42.87**	**243**	P		**P**	**10 01 56.7**	**-0.3**
BBOO				IAmb		IAmb	10 02 17.5	
	comp=Z,16nm,1.4s							
WR0	**Warramunga Arr**	**44.62**	**262**	P		**P**	**10 02 09.7**	**-1.2**
WR0				IAmb		IAmb	10 02 15.6	
	comp=Z,7.7nm,1.5s							
AS31	**Alice Springs**	**44.76**	**256**	P		**P**	**10 02 11.8**	**-0.2**
ASAR	**Alice Springs**	**44.76**	**256**	P		**P**	**10 02 11.6**	**-0.5**
	comp=Z,6.3nm,0.6s,baz=93,slow=8.3,SNR=134							
ASAR				PcP		**PcP**	**10 03 45.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=106,slow=3.8,SNR=4.3							
ASAR				S		**S**	**10 08 16.9**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=93,slow=15,SNR=4.7							
ASAR	**Alice Springs**	**44.76**	**256**	P		**P**	**10 02 11.1**	**-0.9**
WB0	**Warramunga Arr**	**44.79**	**262**	P		**P**	**10 02 11.0**	**-1.2**
WB0				IAmb		IAmb	10 02 11.7	
	comp=Z,3.2nm,0.6s							
WB2	**Warramunga Arr**	**44.80**	**262**	P		**P**	**10 02 11.3**	**-1.0**
WRAB	**Tennant Creek**	**44.80**	**262**	P		**P**	**10 02 11.2**	**-1.1**
WRA	**Warramunga Arr**	**44.81**	**262**	P		**P**	**10 02 11.3**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=96,slow=7.5,SNR=70							
WRA				PcP		**PcP**	**10 03 45.6**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=91,slow=5.0,SNR=1.8							
WRA	**Warramunga Arr**	**44.81**	**262**	P		**P**	**10 02 11.2**	**-1.2**
FORT	**Forrest**	**49.60**	**246**	P		**P**	**10 02 47.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**53.23**	**262**	P		**P**	**10 03 15.0**	**-0.4**
PSA00	**Pilbara Seismi**	**57.91**	**257**	P		**P**	**10 03 47.6**	**-0.6**
PSA00				IAmb		IAmb	10 03 51.7	
	comp=Z,17nm,1.3s							
QSPA	**South Pole Qui**	**69.97**	**180**	P		**P**	**10 05 06.4**	**+1.2**
QSPA				IAmb		IAmb	10 05 07.0	
	comp=Z,5.1nm,0.8s							
MJAR	**Matsushiro Arr**	**69.98**	**323**	P		**P**	**10 05 04.8**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=158,slow=6.6,SNR=5.9							
MJAR	**Matsushiro Arr**	**69.98**	**323**	P		**P**	**10 05 04.7**	**-0.7**
PETK	**Petropavlovsk-**	**75.92**	**345**	P		**P**	**10 05 38.7**	**-0.8**
	comp=Z,2.5nm,1.0s,baz=167,slow=8.9,SNR=4.1							
YBH	**Yreka Blue Hor**	**79.88**	**39**	P		**P**	**10 06 02.6**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=194,slow=2.6,SNR=5.3							
NVAR	**Mina Array Bea**	**80.63**	**43**	P		**P**	**10 06 07.4**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=228,slow=8.1,SNR=7.1							
PMR	**Palmer**	**84.59**	**13**	P		**P**	**10 06 24.7**	**-0.3**
GHO	**Glory Hole Cre**	**84.80**	**13**	P		**P**	**10 06 26.0**	**-0.1**
TXAR	**Lajitas Array**	**86.71**	**57**	P		**P**	**10 06 37.3**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=219,slow=8.0,SNR=8.1							
MCMT	**McKenzie Canyo**	**87.55**	**40**	P		**P**	**10 06 41.7**	**+1.7**
CCB	**Clear Creek Bu**	**87.59**	**12**	P		**P**	**10 06 38.6**	**-0.8**
CCB				IAmb		IAmb	10 06 39.4	
	comp=Z,10nm,1.4s							
ILAR	**Eielson Array**	**87.89**	**13**	P		**P**	**10 06 40.0**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=232,slow=5.1,SNR=14							
PDAR	**Pinedale Array**	**88.56**	**43**	P		**P**	**10 06 45.3**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=216,slow=3.3,SNR=7.7							
PDAR	**Pinedale Array**	**88.56**	**43**	P		**P**	**10 06 45.9**	**+1.1**
MKAR	**Makanchi Array**	**111.03**	**314**	PKiKP		**PKiKP**	**10 12 20.6**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=64,slow=2.8,SNR=3.6							
MKAR	**Makanchi Array**	**111.03**	**314**			**PKiKP**	**10

*SEA **22** 10:12:39.2±2.2,41.84N±0.03×119.63W±0.03,h0km±7km, Error ellipse: s-maj=4.4km s-min=2.4km az=163.0*
*NEIC **22** 10:12:39.5±2.8,41.93N±0.04×119.68W±0.03,h10km±7km, Error ellipse: s-maj=6.6km s-min=2.9km az=161.0*
ISC 22 10:12:39.0±1.2,41.89N±0.04×119.66W±0.03,h9km±13km, n20,σ0 75/27,Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.48**	**271**		**Pg**	**10 12 48.1**	**-0.2**
MOD					**Sg**	**10 12 55.2**	**+0.4**
WVOR	**Wild Horse Val**	**0.93**	**54**		**Pg**	**10 12 56.8**	**-0.1**
WVOR					**Sg**	**10 13 09.6**	**+0.6**
K05A	**Summer Lake**	**1.24**	**313**		**Pn**	**10 13 02.5**	**-0.2**
M04C	**Macdoel**	**1.64**	**267**	P	**Pn**	**10 13 07.6**	**-0.5**
	baz=86,SNR=15						
M04C				S	**Sg**	**10 13 31.6**	**0.0**
	baz=86						
K04D	**Chiloquin, OR**	**1.72**	**296**	P	**Pb**	**10 13 10.5**	**-0.4**
	baz=115,SNR=6.4						
K04D				S	**Sg**	**10 13 35.3**	**+1.1**
	baz=115						
J05D	**Fort Rock, OR**	**1.81**	**321**	P	**Pb**	**10 13 12.5**	**0.0**
	baz=140,SNR=21						
J05D				S	**Sg**	**10 13 38.0**	**+0.7**
	baz=140						
WVA	**Winnemucca Val**	**1.95**	**184**		**Pn**	**10 13 14.1**	**+1.6**
L04D	**Klamath Falls**	**2.00**	**280**	P	**Pn**	**10 13 12.5**	**-0.6**
	baz=99,SNR=44						
L04D				S	**Sg**	**10 13 42.2**	**-1.0**
	baz=99						
BEKR	**Beckworth**	**2.09**	**195**		**Pn**	**10 13 14.0**	**-0.4**
PINE	**Pine Mountain**	**2.12**	**334**		**Pn**	**10 13 14.4**	**-0.4**
PAHR	**Pah Rah Range**	**2.19**	**175**		**Pn**	**10 13 15.1**	**-0.7**
LOY	**Loyalton**	**2.28**	**191**		**Pb**	**10 13 19.5**	**-0.8**
O03E	**Paynes Creek**	**2.28**	**226**	P	**Pn**	**10 13 16.4**	**-0.5**
	baz=45,SNR=12						
O03E				Sb	**Sb**	**10 13 49.4**	**+0.8**
	baz=45						
YBH	**Yreka Blue Hor**	**2.29**	**267**	Pn	**Pn**	**10 13 16.2**	**-0.8**
PEAR	**Peavine Mounta**	**2.29**	**186**		**Pb**	**10 13 20.4**	**-0.3**
KBF	**Kyburz Flat**	**2.42**	**190**		**Pb**	**10 13 22.5**	**-0.3**
N02D	**Trinity Center**	**2.47**	**249**	Sb	**Sb**	**10 13 55.7**	**+1.5**
	baz=67						
WDC	**Whiskeytown Da**	**2.54**	**240**	Pn	**Pn**	**10 13 20.3**	**-0.1**
HUMO	**Hull Mountain**	**2.55**	**287**		**Pn**	**10 13 20.0**	**-0.6**
ELK	**Elko**	**3.52**	**108**	Pn	**Pn**	**10 13 33.4**	**-0.7**

*IDC **22** 10:13:46.0±1.6,35.60N×23.00E,h0km,mb3.5/3, mb1 3.6/3,mb1mx3.3/33,mbtmp3.5/3,Error ellipse: s-maj=34.7km s-min=24.1km az=1.0*
*ATH **22** 10:13:52.1,35.33N×23.28E,h29km±1km,ML3.2/7,Error ellipse: s-maj=2.5km s-min=0.8km az=48.0*
*ISK **22** 10:13:52.6,35.35N×23.31E,h28km,ML3.2/4*
*THE **22** 10:13:54.3,35.39N×23.32E,h44km±4km,ML3.1/11,Error ellipse: s-maj=4.9km s-min=1.4km az=60.0*
ISC 22 10:13:52.7±1.0,35.36N±0.05×23.28E±0.05,h42km±9km, n52,σ2 02/71,mb3.3/3,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.36**	**111**	PG	**Pn**	**10 14 02.6**	**+1.0**
KNDR	**Palaiochora Ch**	**0.36**	**111**	P	**Pn**	**10 14 03.5**	**+1.9**
KNDR				S	**Sn**	**10 14 10.0**	**+2.1**
	2μm,0.5s						
RODP	**Rodopos**	**0.44**	**63**	PG	**Pn**	**10 14 02.4**	**-0.2**
RODP				SG	**Sn**	**10 14 09.4**	**-0.3**
RODP	**Rodopos**	**0.44**	**63**	P	**Pn**	**10 14 02.5**	**-0.2**
RODP				S	**Sn**	**10 14 10.9**	**+1.2**
	1μm,0.4s						
ANKY	**Antikythira Is**	**0.51**	**2**	P	**Pn**	**10 14 03.5**	**0.0**
ANKY				S	**Sn**	**10 14 11.3**	**+0.1**
ANKY				AML	AML	10 14 14.0	
	comp=N,7491μm,0.5s						
ANKY				AML	AML	10 14 15.3	
	comp=E,5921μm,0.4s						
ANKY	**Antikythira Is**	**0.51**	**2**	P	**Pn**	**10 14 03.7**	**+0.2**
ANKY				S	**Sn**	**10 14 12.1**	**+0.9**
	comp=E,3μm,0.5s						
IMMV	**Iera Moni Meta**	**0.58**	**80**	P	**Pn**	**10 14 04.3**	**-0.2**
IMMV				S	**Sn**	**10 14 13.0**	**-0.1**
IMMV				AML	AML	10 14 14.0	
	comp=N,3331μm,0.4s						
IMMV				AML	AML	10 14 14.5	
	comp=E,3539μm,0.4s						
IMMV	**Iera Moni Meta**	**0.58**	**80**	PG	**Pn**	**10 14 04.5**	**-0.1**
IMMV				SG	**Sn**	**10 14 13.3**	**+0.3**
IMMV	**Iera Moni Meta**	**0.58**	**80**	P	**Pn**	**10 14 04.3**	**-0.2**
IMMV				S	**Sn**	**10 14 12.9**	**-0.1**
	comp=E,2μm,0.4s						
CHAN	**Chania**	**0.64**	**76**	P	**Pn**	**10 14 05.5**	**+0.2**
CHAN				S	**Sn**	**10 14 16.8**	**+2.4**
	comp=E,525nm,0.7s						
VAM	**Vamos**	**0.75**	**86**	P	**Pn**	**10 14 07.0**	**+0.2**
VAM				S	**Sn**	**10 14 18.2**	**+1.1**
VAM				AML	AML	10 14 22.9	
	comp=E,2661μm,0.5s						
VAM				AML	AML	10 14 25.2	
	comp=N,3090μm,0.6s						
VAM	**Vamos**	**0.75**	**86**	P	**Pn**	**10 14 07.1**	**+0.2**
VAM				S	**Sn**	**10 14 19.2**	**+2.1**
	comp=N,1μm,0.6s						
GVDS	**Gavdos**	**0.84**	**128**	PG	**Pn**	**10 14 08.1**	**0.0**
GVDS				SG	**Sn**	**10 14 19.8**	**+0.5**
GVDS	**Gavdos**	**0.84**	**128**	P	**Pn**	**10 14 08.0**	**0.0**
GVDS				S	**Sn**	**10 14 21.4**	**+2.1**
	comp=N,1μm,0.4s						
GVD	**Gavdhos**	**0.84**	**128**	P	**Pn**	**10 14 08.1**	**+0.1**
GVD				S	**Sn**	**10 14 19.8**	**+0.5**
GVD				AML	AML	10 14 25.5	
	comp=E,3331μm,0.4s						
GVD				AML	AML	10 14 26.6	
	comp=N,4020μm,0.3s						
GVD	**Gavdhos**	**0.84**	**128**	PG	**Pn**	**10 14 08.2**	**+0.1**
GVD	**Gavdhos**	**0.84**	**128**	P	**Pn**	**10 14 08.2**	**+0.1**
GVD				S	**Sn**	**10 14 21.1**	**+1.8**
	comp=N,2μm,0.3s						
KTHA	**Kythira Island**	**0.91**	**349**	P	**Pn**	**10 14 10.5**	**+1.5**
KTHA				S	**Sn**	**10 14 23.9**	**+2.9**
KTHA				AML	AML	10 14 28.4	
	comp=N,1677μm,0.4s						
KTHA				AML	AML	10 14 28.9	
	comp=E,4603μm,0.6s						
KTHA	**Kythira Island**	**0.91**	**349**	PG	**Pn**	**10 14 10.1**	**+1.1**
KTHA	**Kythira Island**	**0.91**	**349**	P	**Pn**	**10 14 10.6**	**+1.5**
KTHA				S	**Sn**	**10 14 23.6**	**+2.6**
	comp=E,2μm,0.5s						
SIVA	**Sivas**	**1.30**	**105**	P	**Pn**	**10 14 16.6**	**+2.3**
SIVA				S	**Sn**	**10 14 34.1**	**+3.6**
SIVA				AML	AML	10 14 43.6	
	comp=E,3089μm,0.6s						
SIVA				AML	AML	10 14 44.5	
	comp=N,2428μm,0.7s						
SIVA	**Sivas**	**1.30**	**105**	P	**Pn**	**10 14 16.4**	**+2.1**
SIVA				S	**Sn**	**10 14 33.1**	**+2.6**
	comp=N,1μm,0.6s						
IDI	**Anoyia**	**1.32**	**93**	Pn	**Pn**	**10 14 15.5**	**+0.8**
	comp=N,7.0nm,0.3s,baz=286,slow=11,SNR=26						
IDI				Sn	**Sn**	**10 14 35.7**	**+4.6**
	comp=N,26nm,0.3s,baz=357,slow=19,SNR=9.5						
IDI	**Anoyia**	**1.32**	**93**	P	**Pn**	**10 14 16.7**	**+2.0**
IDI	**Anoyia**	**1.32**	**93**	PN	**Pn**	**10 14 15.2**	**+0.5**
IDI	**Anoyia**	**1.32**	**93**	P	**Pn**	**10 14 15.6**	**+0.9**
VLI	**Veliai**	**1.38**	**349**	P	**Pn**	**10 14 17.5**	**+2.0**
VLI				S	**Sn**	**10 14 36.4**	**+3.9**
VLI				AML	AML	10 14 40.8	
	comp=E,1183μm,0.5s						
VLI				AML	AML	10 14 41.8	
	comp=N,1068μm,0.4s						
VLI	**Veliai**	**1.38**	**349**	P	**Pn**	**10 14 16.9**	**+1.4**
MHLO	**Agia Marina, M**	**1.61**	**34**	P	**Pn**	**10 14 20.6**	**+2.0**
MHLO	**Agia Marina, M**	**1.61**	**34**	P	**Pn**	**10 14 19.2**	**+0.6**
LAST	**Lasithi**	**1.81**	**96**	P	**Pn**	**10 14 23.2**	**+1.8**
NPS	**Neapolis**	**1.91**	**92**	P	**Pn**	**10 14 26.9**	**+4.2**
PYL	**PYLOS**	**1.97**	**321**	P	**Pn**	**10 14 26.8**	**+3.2**
PYL	**PYLOS**	**1.97**	**321**	P	**Pn**	**10 14 25.3**	**+1.7**
KRND	**KRANIDI**	**2.02**	**357**	P	**Pn**	**10 14 26.5**	**+2.3**
KRND	**KRANIDI**	**2.02**	**357**	P	**Pn**	**10 14 26.2**	**+2.0**
KRND				S	**Sn**	**10 14 49.6**	**+1.4**
	comp=N,228nm,0.5s						
ITM	**Ithomi**	**2.12**	**329**	P	**Pn**	**10 14 29.3**	**+3.7**
ITM	**Ithomi**	**2.12**	**329**	PN	**Pn**	**10 14 27.6**	**+2.0**
ITM	**Ithomi**	**2.12**	**329**	P	**Pn**	**10 14 26.8**	**+1.2**
VLX	**Vlachokerasia**	**2.13**	**340**	P	**Pn**	**10 14 28.6**	**+2.7**
VLX	**Vlachokerasia**	**2.13**	**340**	P	**Pn**	**10 14 28.4**	**+2.5**
ZKR	**Zakros**	**2.42**	**95**	PN	**Pn**	**10 14 30.9**	**+1.2**
APE	**Apeiranthos**	**2.49**	**46**	PN	**Pn**	**10 14 31.8**	**+1.0**
AMT	**Artemida-Makis**	**2.51**	**330**	P	**Pn**	**10 14 34.4**	**+3.4**
LSTV	**Lastovo**	**8.91**	**328**	*e*Pn	**Pn**	**10 15 54.0**	**-4.7**
LSTV					Sn	10 17 24.4	-13
RICI	**Ricice**	**9.41**	**332**	Sn	Sn	10 17 37.5	-12
KIJV	**Kijevo**	**10.12**	**331**	*e*Pn	**Pn**	**10 16 11.9**	**-3.5**
KIJV				Sn	Sn	10 17 57.3	-10
ZIRJ	**Zirje**	**10.16**	**327**	Sn	Sn	10 17 57.4	-11
DUGI	**Dugi Otok**	**10.69**	**326**	Sn	Sn	10 18 10.8	-11
TORD	**Torodi Ar. Bea**	**29.47**	**227**	P	**P**	**10 19 51.7**	**-1.1**
	comp=N,0.2nm,0.5s,baz=38,slow=9.6,SNR=2.1						
ARCES	**ARCESS Array B**	**34.25**	**1**	P	**P**	**10 20 30.6**	**-3.6**
	comp=N,1.6nm,0.9s,baz=188,slow=11,SNR=1.4						
MKAR	**Makanchi Array**	**44.95**	**56**	P	**P**	**10 22 03.6**	**+0.1**
	comp=N,0.2nm,0.4s,baz=271,slow=7.1,SNR=1.9						

*IDC **22** 10:21:05.5±2.2,9.54S×113.69E,h0km,mb3.1/3, mb1 3.4/5,mb1mx3.3/29,mbtmp3.3/5,ML3.3/2,Error ellipse: s-maj=60.8km s-min=27.0km az=49.0*
*DJA **22** 10:21:11.8±0.7,9°S±5°×11°4E±°,h10km,M3.7/7,MLv3.7/7*
ISC 22 10:21:11.3±1.1,9.48S±0.08×113.96E±0.06,h31km,n12, σ1 9 65/14,mb3.1/3,South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**1.02**	**11**	P	**Pb**	**10 21 30.8**	**+0.4**
JAGI				S	**Sb**	**10 21 44.3**	**+0.8**
GMJI	**Gumukmas**	**1.30**	**337**	P	**Pb**	**10 21 35.3**	**+0.1**
ABJI	**Asem Bagus**	**1.69**	**9**	P	**Pb**	**10 21 42.2**	**+0.4**
SRBI	**Singaraja**	**1.86**	**42**	P	**Pb**	**10 21 43.9**	**-0.7**
PWJI	**Pagerwojo**	**2.57**	**304**	P	**Pn**	**10 21 52.4**	**+1.5**
TWSI	**Taliwang, Sumb**	**2.98**	**76**	P	**Pn**	**10 21 59.0**	**+2.5**
PLAI	**Plampang**	**3.83**	**81**	P	**Pn**	**10 22 11.1**	**+3.0**
KAPI	**Kappang**	**7.26**	**53**	Pn	**Pn**	**10 22 56.3**	**+1.0**
	0.5nm,0.3s,baz=167,slow=7.1,SNR=1.1						
KAPI				Sn	**Sn**	**10 24 14.3**	**-2.5**
	0.5nm,0.3s,baz=230,slow=13,SNR=1.3						
FITZ	**Fitzroy Crossi**	**14.21**	**128**	Pn	**Pn**	**10 24 29.5**	**-1.1**
	0.1nm,0.3s,baz=314,slow=11,SNR=1.5						
FITZ				Sn	Sn	10 26 55.5	-12
	0.1nm,0.3s,baz=195,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**22.26**	**120**	P	**P**	**10 26 06.0**	**0.0**
	0.2nm,0.6s,baz=294,slow=12,SNR=1.8						
ASAR	**Alice Springs**	**23.71**	**129**	P	**P**	**10 26 21.6**	**+0.7**
	0.3nm,0.4s,baz=304,slow=9.2,SNR=10.0						
MKAR	**Makanchi Array**	**62.74**	**336**	P	**P**	**10 31 32.0**	**-1.5**
	0.1nm,0.4s,baz=142,slow=6.8,SNR=2.1						

IDC 22 10:33:06.9±8.2,7.92N×94.88E,h0km,mb3.3/3,mb1 3.5/3, mb1mx3.2/30,mbtmp3.3/3,Error ellipse: s-maj=441.6km s-min=30.4km az=58.0,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**27.15**	**236**	T	T	11 05 20.9	
	baz=56,slow=76,SNR=9.2						
H08S2	**Diego Garcia H**	**27.15**	**236**	T	T	11 05 21.1	
	baz=56,slow=76,SNR=8.9						
H08S1	**Diego Garcia H**	**27.17**	**236**	T	T	11 05 22.3	
	baz=56,slow=76,SNR=5.2						
MKAR	**Makanchi Array**	**40.21**	**347**	P	P	10 40 45.1	-0.1
	0.4nm,0.6s,baz=165,slow=8.9,SNR=5.2						
WRA	**Warramunga Arr**	**47.69**	**126**	P	P	10 41 45.4	-0.3
	0.1nm,0.5s,baz=306,slow=8.1,SNR=1.2						
ASAR	**Alice Springs**	**49.38**	**130**	P	P	10 41 58.6	0.0
	0.3nm,0.7s,baz=306,slow=7.5,SNR=3.0						

IDC 22 10:40:30.6±2.1,1.95N×126.60E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.2/30,mbtmp3.4/3,MS3.9/1,Ms1 3.9/1, ms1mx3.1/22,Error ellipse: s-maj=179.7km s-min=25.6km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.04**	**161**	P	P	10 45 37.0	-0.6
	0.8nm,0.5s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.43**	**165**	P	P	10 46 10.1	+0.7
	0.2nm,0.4s,baz=346,slow=11,SNR=5.0						
ASAR				LR	LR	10 58 16.1	
	comp=Z,236nm,19.7s,baz=330,slow=40						
MKAR	**Makanchi Array**	**58.94**	**326**	P	P	10 50 31.6	-0.2
	0.2nm,0.3s,baz=118,slow=7.8,SNR=5.7						

*IDC **22** 10:49:24.0±1.4,7.15N×94.24E,h0km,mb3.7/9, mb1 3.8/10,mb1mx3.6/60,mbtmp3.7/10,ML3.6/1,Error ellipse: s-maj=68.4km s-min=19.2km az=55.0*
*NEIC **22** 10:49:29.6±1.0,7.3N±0.1×94.44E±0.06,h35km±2km, mb4.5/5, Error ellipse: s-maj=26.6km s-min=5.7km az=199.0*
*NDI **22** 10:49:32.4±0.3,7.17N×93.51E,h15km,ML3.9, mb4.5(NEIC)*
ISC 22 10:49:28.4±0.7,7.29N±0.10×94.46E±0.07,h24km,n23, σ0 s 77/22,mb3.9/11,Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**0.60**	**242**	*e*P	**Pn**	**10 49 41.3**	**-0.2**
CMBY				*i* x	x	10 49 41.4	
	baz=293,slow=4.8						
CMBY				*e*S	**Sb**	**10 49 47.6**	**-0.7**
CMBY				IAML		10 49 50.3	
	comp=E,8μm,0.3s						
CMBY				IAML		10 49 50.4	
	comp=N,11μm,0.3s						
PSI	**Prapat**	**6.30**	**135**	Pn	**Pn**	**10 51 01.8**	**+1.9**
	comp=N,1.2nm,0.3s,baz=360,slow=12,SNR=4.7						
RPSI	**Rantau Prapat**	**6.37**	**136**		**Pn**	**10 51 01.8**	**+1.0**
RPSI	**Rantau Prapat**	**6.37**	**136**	Pn	**Pn**	**10 51 01.9**	**+1.0**
KULM	**Kulim**	**6.46**	**108**		**Pn**	**10 51 01.8**	**-0.3**
KULM				Sn	**Sn**	**10 52 14.9**	**-0.2**
BKNI	**Bangkinang**	**9.53**	**136**	Pn	**Pn**	**10 51 43.7**	**-0.5**
H08S3	**Diego Garcia H**	**26.46**	**236**	T	T	11 21 47.7	
	baz=58,slow=74						
H08S2	**Diego Garcia H**	**26.46**	**236**	T	T	11 21 40.6	
	baz=58						
H08S1	**Diego Garcia H**	**26.48**	**236**	T	T	11 21 52.6	
	baz=58,slow=74						
MKAR	**Makanchi Array**	**40.72**	**347**	P	**P**	**10 57 06.8**	**-0.5**
	comp=N,1.9nm,0.8s,baz=161,slow=8.4,SNR=11						
MKAR	**Makanchi Array**	**40.72**	**347**	P	**P**	**10 57 07.3**	**+0.1**
MTN	**Manton Dam**	**41.57**	**119**	P	**P**	**10 57 13.5**	**-1.0**
SONM	**Songino Array**	**41.66**	**12**	P	**P**	**10 57 16.0**	**+1.0**
	comp=N,0.2nm,0.3s,baz=202,slow=7.4,SNR=2.6						
KURBB	**Kurchatov Arra**	**45.19**	**346**	P	**P**	**10 57 43.1**	**-0.1**
	comp=N,2.6nm,0.8s,baz=168,slow=7.2,SNR=13						
KURK	**Kurchatov**	**45.25**	**346**	P	**P**	**10 57 43.9**	**+0.2**
KURK				IAmb	IAmb	10 57 45.7	
	comp=Z,9.2nm,1.4s						
ZALV	**Zalesovo Beam**	**47.17**	**352**	P	**P**	**10 57 59.2**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=168,slow=8.8,SNR=4.6						
WB0	**Warramunga Arr**	**47.62**	**125**	P	**P**	**10 58 02.5**	**-0.4**
WB0				IAmb	IAmb	10 58 10.5	
	comp=Z,6.7nm,1.3s						
WRA	**Warramunga Arr**	**47.66**	**125**	P	**P**	**10 58 03.1**	**-0.1**
	comp=Z,0.7nm,1.2s,baz=308,slow=8.5,SNR=1.9						
ASAR	**Alice Springs**	**49.30**	**130**	P	**P**	**10 58 14.8**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=307,slow=8.0,SNR=2.0						
ABKAR	**Akbulak array**	**50.89**	**331**	P	**P**	**10 58 28.3**	**+0.9**
AKTO	**Aktyubinsk**	**52.61**	**331**	P	**P**	**10 58 39.9**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=124,slow=5.5,SNR=2.9						
FINES	**FINESS Array B**	**73.37**	**332**	P	**P**	**11 00 57.8**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=99,slow=7.2,SNR=4.3						
GERES	**GERESS Array B**	**78.47**	**318**	P	**P**	**11 01 27.3**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=83,slow=6.3,SNR=3.5						

*IDC **22** 10:55:47.3±0.7,28.23N×53.38E,h0km,mb4.0/23, mb1 4.1/26,mb1mx4.0/44,mbtmp4.0/26,ML3.6/3,MS4.0/1, Ms1 4.0/1,ms1mx3.0/58,Error ellipse: s-maj=17.0km s-min=13.8km az=2.0*
*TEH **22** 10:55:49.4,28.27N×53.41E,h8km,ML3.9*
*THR **22** 10:55:52.7±0.7,28.39N×53.41E,h18km±6km,ML3.9*
*DSN **22** 10:55:53.8±2.7,27.91N×53.35E,h10km,ML4.2/11,Error ellipse: s-maj=41.5km s-min=9.5km az=10.0*

*OMAN **22** 10:55:55.5±0.8,27.93N×53.21E,h40km,mb5.2/14, ml4.0/11,Error ellipse: s-maj=25.1km s-min=9.6km az=280.0*
ISC 22 10:55:48.9±0.4,28.23N±0.04×53.37E±0.04,h10km,n111, σ2 s 03/135,mb4.0/27,1C,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHRM	**Jahrom**	**0.33**	**33**	*e*Pg	**Pg**	**10 55 54.5**	**-1.0**
JHRM				*e*		10 56 03.2	
QIR1	**Qir**	**0.38**	**310**	*e*Pg	**Pg**	**10 55 56.6**	**+0.2**
LMD1	**Lamerd**	**0.91**	**192**	*e*		10 56 29.9	
LMD1				*e*Pg	**Pn**	**10 56 08.5**	**+0.8**
LAR1	**LAR**	**1.05**	**122**	*e*Pg	**Pn**	**10 56 10.6**	**+0.9**
LAR1				*e*		10 56 33.3	
SHI	**Shiraz**	**1.59**	**332**	*e*Pg	**Pg**	**10 56 18.9**	**-0.6**
SHI				*e*		10 56 59.6	
AHBU	**AHRAM**	**1.93**	**290**	*e*Pn	**Pg**	**10 56 26.0**	**0.0**
BNDS	**Bandar-Abbas**	**2.61**	**108**	*e*Pn	**Pb**	**10 56 36.8**	**+0.9**
BNDS	**Bandar-Abbas**	**2.61**	**108**	*e*Pn	**Pb**	**10 56 36.8**	**+0.9**
GENO	**Geno**	**2.61**	**108**	*e*Pn	**Pn**	**10 56 34.0**	**+2.6**
GENO				*e*		10 57 27.3	
KLNJ	**Kolanjah**	**3.17**	**331**	*e*Pn	**Pn**	**10 56 40.4**	**+1.2**
KLNJ				*e*		10 57 50.5	
NGRK	**Negar Kerman**	**3.26**	**64**	*e*Pn	**Pn**	**10 56 42.2**	**+1.7**
NGRK				*e*		10 57 41.6	
SHME	**Shamm**	**3.29**	**131**	P	**Pn**	**10 56 43.0**	**+2.5**
SHME	**Shamm**	**3.29**	**131**	*e*Pn	**Pn**	**10 56 42.9**	**+2.5**
IMEH	**Mehriz**	**3.33**	**19**	*e*Pn	**Pn**	**10 56 44.5**	**+3.2**
UMQ	**Umm Al-Quwin**	**3.38**	**142**	*e*Pn	**Pn**	**10 56 44.4**	**+2.6**
KRBR	**Kerman**	**3.44**	**59**	*e*Pn	**Pn**	**10 56 46.1**	**+3.2**
KRBR				*e*Sg	**Sg**	**10 57 36.8**	**-2.6**
KRBR				IAML		10 57 50.3	
	comp=N,208nm,0.4s						
KRBR	**Kerman**	**3.44**	**59**	*e*Pn	**Pn**	**10 56 46.1**	**+3.2**
KHGB	**Koh Gabri**	**3.45**	**51**	*e*Pn	**Pn**	**10 56 45.0**	**+2.0**
KHGB				*e*		10 57 53.1	
BANOM	**Banah**	**3.48**	**131**	*i* P	**Pn**	**10 56 44.6**	**+1.5**
	SNR=12						
BANOM				S	**Sn**	**10 57 23.2**	**-1.2**
BANOM	**Banah**	**3.48**	**131**	P	**Pn**	**10 56 46.5**	**+3.4**
	SNR=18						
BANOM				S	**Sn**	**10 57 23.3**	**-1.2**
BANOM	**Banah**	**3.48**	**131**	*e*Pn	**Pn**	**10 56 46.1**	**+3.0**
IRAM	**Rameshe h**	**3.67**	**347**	*e*Pn	**Pn**	**10 56 47.9**	**+2.0**
IRAM				*e*		10 57 58.4	
ISAD	**Sadrabad**	**3.68**	**4**	*e*Pn	**Pn**	**10 56 48.6**	**+2.4**
MSFE	**Esma-Masafi**	**3.79**	**138**	*i* P	**Pn**	**10 56 49.8**	**+2.3**
	SNR=9.3						
MSFE	**Esma-Masafi**	**3.79**	**138**	*e*Pn	**Pn**	**10 56 49.9**	**+2.4**
NAZ	**Nazwa, Dubai**	**3.82**	**147**	P	**Pn**	**10 56 50.8**	**+3.0**
NAZ	**Nazwa, Dubai**	**3.82**	**147**	P	**Pn**	**10 56 51.2**	**+3.4**
	SNR=9.5						
NAZ				S	**Sn**	**10 57 36.1**	**+3.2**
NAZ	**Nazwa, Dubai**	**3.82**	**147**	*e*Pn	**Pn**	**10 56 50.3**	**+2.4**
IBAF	**Bafgh**	**3.85**	**29**	*e*Pn	**Pn**	**10 56 50.9**	**+2.5**
MDH	**Madha**	**3.92**	**137**	*i* P	**Pn**	**10 56 51.9**	**+2.8**
	SNR=6.5						
MDH	**Madha**	**3.92**	**137**	P	**Pn**	**10 56 53.2**	**+4.0**
MDH				P	Pb	10 56 53.2	-4.9
	SNR=6.5						
MDH				S	**Sn**	**10 57 36.7**	**+1.4**
MDH	**Madha**	**3.92**	**137**	*e*Pn	**Pn**	**10 56 51.0**	**+1.8**
ASUD	**Al Ashush, Dub**	**4.00**	**154**	*i* P	**Pn**	**10 56 53.4**	**+3.2**
	SNR=7.8						
ASUD	**Al Ashush, Dub**	**4.00**	**154**	P	**Pn**	**10 56 53.3**	**+3.0**
	SNR=8.8						
ASUD				S	**Sn**	**10 57 38.9**	**+1.8**
ASUD	**Al Ashush, Dub**	**4.00**	**154**	*e*Pn	**Pn**	**10 56 53.5**	**+3.2**
FAQ	**Al Faqa, Dubai**	**4.00**	**150**	*i* P	**Pn**	**10 56 53.1**	**+2.8**
	SNR=11						
FAQ	**Al Faqa, Dubai**	**4.00**	**150**	P	**Pn**	**10 56 53.1**	**+2.8**
	SNR=11						
FAQ				S	**Sn**	**10 57 38.3**	**+1.0**
FAQ	**Al Faqa, Dubai**	**4.00**	**150**	*e*Pn	**Pn**	**10 56 52.3**	**+2.0**
UOSS	**Minazif**	**4.14**	**142**	*i* P	**Pn**	**10 56 53.4**	**+1.3**
	SNR=13						
UOSS	**Minazif**	**4.14**	**142**	P	**Pn**	**10 56 54.2**	**+2.0**
UOSS	**Minazif**	**4.14**	**142**	*e*Pn	**Pn**	**10 56 53.5**	**+1.3**
HATD	**Hatta, Dubai**	**4.20**	**143**	*i* P	**Pn**	**10 56 55.0**	**+2.0**
	SNR=11						
HATD	**Hatta, Dubai**	**4.20**	**143**	P	**Pn**	**10 56 56.9**	**+3.9**
	SNR=11						
HATD				S	**Sn**	**10 57 44.1**	**+2.0**
HATD	**Hatta, Dubai**	**4.20**	**143**	*e*Pn	**Pn**	**10 56 55.5**	**+2.5**
ASHO	**Ashiyiah**	**4.27**	**145**	*i* P	**Pn**	**10 56 55.8**	**+1.7**
	SNR=32						
ASHO	**Ashiyiah**	**4.27**	**145**	P	**Pn**	**10 56 56.3**	**+2.2**
	SNR=14						
ASHO				S	**Sn**	**10 57 44

MLR	**Muntele Rosu**	**27.70**	**316**	P	**P**	**11 01 37.8**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=167,slow=14,SNR=1.8						
BVAR	**Borovoye Array**	**27.79**	**22**	P	**P**	**11 01 37.6**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=189,slow=8.3,SNR=5.4						
AKASG	**Malin Array Be**	**28.94**	**327**	P	**P**	**11 01 47.1**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=134,slow=8.0,SNR=5.5						
MKAR	**Makanchi Array**	**29.24**	**43**	P	**P**	**11 01 51.1**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=240,slow=9.3,SNR=8.1						
MKAR				PcP	**PcP**	**11 04 58.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=228,slow=2.5,SNR=2.9						
KURBB	**Kurchatov Arra**	**29.37**	**34**	P	**P**	**11 01 51.9**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=234,slow=8.8,SNR=5.6						
ZALV	**Zalesovo Beam**	**34.46**	**33**	P	**P**	**11 02 36.5**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=239,slow=8.9,SNR=8.1						
MBAR	**Mbarara**	**35.96**	**221**	P	**P**	**11 02 50.9**	**+0.8**
	comp=Z,2.8nm,0.3s,baz=22,slow=19,SNR=0.9						
GERES	**GERESS Array B**	**36.69**	**315**	P	**P**	**11 02 57.1**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=106,slow=7.3,SNR=3.0						
FINES	**FINESS Array B**	**37.87**	**339**	P	**P**	**11 03 05.8**	**+0.1**
	comp=Z,3.6nm,1.0s,baz=144,slow=6.8,SNR=7.9						
GTA	**Gaotai**	**39.77**	**61**	⇑P	**P**	**11 03 23.4**	**+1.2**
GTA				pP	sP	11 03 30.5	+3.6
GTA				sP	pP	11 03 34.1	+8.6
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**42.74**	**93**	P	**P**	**11 03 47.0**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=294,slow=10,SNR=6.1						
NB2	**NORSAR Subarra**	**43.16**	**331**	P	**P**	**11 03 48.8**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=126,slow=9.3						
NOA	**NORSAR Array B**	**43.16**	**331**	P	**P**	**11 03 48.9**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=121,slow=8.1,SNR=4.3						
ARCES	**ARCESS Array B**	**44.37**	**346**	P	**P**	**11 03 59.3**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=129,slow=7.1,SNR=2.2						
SONM	**Songino Array**	**45.15**	**49**	P	**P**	**11 04 06.8**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=246,slow=8.8,SNR=8.5						
OPO	**Ambohidratompo**	**46.91**	**188**	LR	LR	11 23 19.7	
	comp=Z,185nm,20.6s,baz=20,slow=35						
XAN	**Xi'an**	**47.41**	**68**	P	**P**	**11 04 23.5**	**-0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ESDC	**Sonseca Array**	**48.18**	**299**	P	**P**	**11 04 30.1**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=64,slow=5.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	**50.26**	**264**	P	**P**	**11 04 45.5**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=56,slow=7.0,SNR=26						
DBIC	**Dimbokro**	**58.95**	**260**	P	**P**	**11 05 48.4**	**-0.5**
	comp=Z,6.6nm,1.0s,baz=35,slow=8.9,SNR=3.9						
KSRS	**Korea Array**	**61.84**	**60**	P	**P**	**11 06 06.9**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=278,slow=8.5,SNR=4.7						
KLR	**Kul'dur**	**61.84**	**47**	P	**P**	**11 06 08.0**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=304,slow=7.0						
ILAR	**Eielson Array**	**85.96**	**9**	P	**P**	**11 08 28.8**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=324,slow=4.4,SNR=7.8						
YKA	**Yellowknife Ar**	**89.08**	**354**	P	**P**	**11 08 44.0**	**0.0**
	comp=Z,1.0nm,0.9s,baz=22,slow=5.3,SNR=2.3						
WRA	**Warramunga Arr**	**91.67**	**112**	P	**P**	**11 08 56.0**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=316,slow=4.1,SNR=5.1						
ASAR	**Alice Springs**	**93.14**	**115**	P	**P**	**11 09 02.9**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=307,slow=4.7,SNR=4.8						
TXAR	**Lajitas Array**	**118.69**	**337**	PKP	**PKPdf**	**11 14 37.6**	**-0.3**
	comp=Z,0.1nm,0.7s,baz=22,slow=2.9,SNR=1.6						

*IDC **22** 11:03:48.8±3.7,37.09N×71.79E,h97km±32km,mb3.4/5, mb1 3.5/10,mb1mx3.2/51,mbtmpb3.8/10,Error ellipse: s-maj=34.2km s-min=21.2km az=170.0*
*NNC **22** 11:03:53.5±5.5,37.84N×71.58E,h0km,mb4.5,mpv4.4, Error ellipse: s-maj=43.0km s-min=27.6km az=176.0*

ISC 22 11:03:49.2±0.7,**37.28N**±0.06×**71.69E**±0.06,**h100**km,**n37,** σ2**s64**/45,**mb3.4**/5,**5C-3D**,**Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AML	**Almayashu**	**5.09**	**17**	P		**Pn**	**11 05 05.8**	**+2.4**
	SNR=204							
UCH	**Uchtor**	**5.40**	**23**	P		**Pn**	**11 05 10.1**	**+2.4**
	SNR=27							
EKS2	**Erkin-Say**	**5.61**	**16**	P		**Pn**	**11 05 13.0**	**+2.8**
	SNR=49							
AAK	**Ala-Archa**	**5.77**	**21**	P		**Pn**	**11 05 15.1**	**+2.7**
	31nm,0.3s,baz=183,slow=6.1,SNR=281							
AAK				S		**Sn**	**11 06 17.0**	**-0.3**
	8.3nm,0.3s,baz=179,slow=22,SNR=17							
THN	**Thein Dam**	**5.86**	**144**	*e*P		**Pn**	**11 05 17.5**	**+4.1**
THN				*e*S		**Sn**	**11 06 19.5**	**+0.3**
KK31	**Karatay Array**	**5.89**	**352**	⇑P		**Pn**	**11 05 16.7**	**+2.8**
	21nm,0.4s,baz=177,slow=13,SNR=409							
KK31				⇓S		**Sn**	**11 06 18.2**	**-1.8**
	17nm,0.3s,baz=170,slow=23,SNR=5.6							
KBK	**Karagaybulak**	**5.93**	**24**	P		**Pn**	**11 05 17.1**	**+2.5**
	SNR=20							
ULHL	**Ulahol**	**6.08**	**34**	P		**Pn**	**11 05 18.2**	**+1.5**
	SNR=10							
CHMS	**Chumysh**	**6.18**	**21**	P		**Pn**	**11 05 20.3**	**+2.5**
	SNR=48							
USP	**Ospenovka**	**6.36**	**19**	P		**Pn**	**11 05 22.6**	**+2.3**
	SNR=14							
TKM2	**Tokmak 2**	**6.38**	**27**	P		**Pn**	**11 05 22.8**	**+2.0**
	SNR=55							
TKM2	**Tokmak 2**	**6.38**	**27**	⇓P		**Pn**	**11 05 22.6**	**+1.8**
	20nm,0.5s							
TKM2				⇑S		**Sn**	**11 06 31.7**	**-0.6**
	33nm,1.1s							
GEYT	**Alibeck**	**10.79**	**278**	P		**Pn**	**11 06 21.1**	**+0.5**
	2.0nm,0.3s,baz=112,slow=9.6,SNR=6.2							
GEYT				S		**Sn**	**11 08 18.0**	**-1.3**
	2.9nm,0.3s,baz=97,slow=23,SNR=7.8							
MKAR	**Makanchi Array**	**12.34**	**36**	P		**Pn**	**11 06 41.3**	**+0.1**
	0.1nm,0.3s,baz=217,slow=14,SNR=12							
PYUN	**Piuhan**	**13.19**	**131**	*e*P		**Pn**	**11 06 50.3**	**-2.4**
	131nm,0.5s							
PYUN				*e*S		Sn	11 09 03.1	-15
DANN	**Dangsing**	**13.49**	**128**	*e*P		**Pn**	**11 06 54.2**	**-2.5**
	51nm,0.4s							
KOLN	**Koldanda**	**13.80**	**130**	*e*P		**Pn**	**11 06 58.3**	**-2.4**
	28nm,0.4s							
KURBB	**Kurchatov Arra**	**14.21**	**18**	P		**Pn**	**11 07 03.5**	**-2.1**
	0.0nm,0.3s,baz=212,slow=12,SNR=4.3							
GKN	**Gorkha**	**14.29**	**127**	*e*P		**Pn**	**11 07 04.2**	**-2.7**
	83nm,0.5s							
AB31	**Akbulak array**	**14.70**	**328**	⇑P		**Pn**	**11 07 12.7**	**+0.9**
	1.4nm,0.3s,baz=132,slow=14,SNR=81							
AB31				⇑S		**Sn**	**11 09 51.4**	**-2.3**
	5.6nm,0.6s,baz=146,slow=24,SNR=8.7							
KKN	**Kakani**	**14.85**	**126**	*e*P		**Pn**	**11 07 10.8**	**-3.3**
DMN	**Daman**	**14.86**	**127**	*e*P		**Pn**	**11 07 11.6**	**-2.7**
	36nm,0.5s							
PKIN	**Phulchoki**	**15.07**	**126**	*e*P		**Pn**	**11 07 13.8**	**-3.2**
	26nm,0.4s							
PKI	**Pulchoki**	**15.08**	**126**	*e*P		**Pn**	**11 07 13.8**	**-3.4**
GUN	**Gumba**	**15.16**	**124**	*e*P		**Pn**	**11 07 14.8**	**-3.4**
	26nm,0.4s							
BVAR	**Borovoye Array**	**15.78**	**357**	P		**P**	**11 07 28.1**	**+0.8**
	0.1nm,0.3s,baz=126,slow=7.5,SNR=2.5							
RAMN	**Ramite**	**16.27**	**125**	*e*P		**Pn**	**11 07 29.2**	**-2.9**
	38nm,0.6s							
AKTO	**Aktyubinsk**	**16.40**	**328**	P		**P**	**11 07 35.9**	**+1.7**
	0.6nm,0.3s,baz=130,slow=14,SNR=13							
AKTO				S		**Sn**	**11 10 25.7**	**-9.2**
	0.2nm,0.3s,baz=210,slow=20,SNR=2.1							
AKTO	**Aktyubinsk**	**16.40**	**328**	⇓P		**P**	**11 07 35.8**	**+1.5**
	3.7nm,0.7s							
AKTO				⇑S		**Sn**	**11 10 33.2**	**-1.7**
	6.8nm,1.1s							
TAPN	**Taplejung**	**16.75**	**122**	*e*P		**Pn**	**11 07 35.0**	**-3.0**
	33nm,0.5s							
ODAN	**Odare**	**16.86**	**124**	*e*P		**Pn**	**11 07 37.2**	**-2.0**
	36nm,0.8s							
ZALV	**Zalesovo Beam**	**18.98**	**24**	P		**P**	**11 08 02.8**	**+0.2**
	0.4nm,0.3s,baz=220,slow=9.7,SNR=7.1							
SONM	**Songino Array**	**27.44**	**56**	P		**P**	**11 09 26.1**	**+0.5**
	0.4nm,0.7s,baz=260,slow=8.9,SNR=4.1							
FINES	**FINESS Array B**	**37.16**	**325**	P		**P**	**11 10 52.0**	**+2.1**
	3.1nm,1.1s,baz=138,slow=11,SNR=2.3							
ARCES	**ARCESS Array B**	**40.64**	**337**	P		**P**	**11 11 19.9**	**+1.0**
	3.6nm,1.0s,baz=108,slow=8.6,SNR=2.0							
TORD	**Torodi Ar. Bea**	**66.29**	**269**	P		**P**	**11 14 27.5**	**+0.4**
	0.3nm,0.6s,baz=41,slow=5.5,SNR=2.4							
WRA	**Warramunga Arr**	**81.93**	**122**	P		**P**	**11 15 57.1**	**-0.8**
	0.2nm,0.6s,baz=322,slow=4.5,SNR=2.0							

*ISN **22** 11:05:23.6±1.3,33.09N×46.56E,h0km±5km,ML2.6*
*TEH **22** 11:05:25.7,33.00N×46.51E,h12km,ML2.8*

ISC 22 11:05:25.7±1.0,**33.00N**±0.05×**46.51E**±0.06,**h13**km,**n9,** σ0**s69**/13,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IBDR	**Badra**	**0.50**	**283**	*e*Pg		**Pb**	**11 05 36.0**	**-0.3**
IBDR				*e*Sg		**Sb**	**11 05 43.0**	**-0.5**
IBDR				AML	AML		11 06 01.6	
	comp=E,151nm,0.5s							
IBDR				AML	AML		11 06 10.1	
	comp=N,199nm,0.7s							
IKFM	**Kafar-mosalman**	**1.24**	**65**	*e*Pg		**Pg**	**11 05 49.4**	**-0.2**
IKFM				*e*			11 06 12.9	
IGHG	**Ghaleghazi**	**1.32**	**2**	*e*Pg		**Pg**	**11 05 51.4**	**+0.1**
IGHG				*e*			11 06 22.1	
IKOM	**Komasi**	**1.44**	**35**	*e*Pg		**Pg**	**11 05 53.3**	**-0.1**
IKOM				*e*			11 05 54.3	
IVIS	**Veis**	**1.55**	**11**	*e*Pg		**Pg**	**11 05 55.1**	**-0.4**
IVIS				*e*			11 05 56.8	
IDOB	**Doab**	**1.60**	**60**	*e*Pg		**Pg**	**11 05 55.4**	**-1.1**
IDHR	**Dehrash**	**1.69**	**357**	*e*Pg		**Pg**	**11 05 57.2**	**-1.1**
IDHR				*e*Sg		**Sg**	**11 06 21.4**	**+1.0**
IDHR				*e*			11 06 24.0	
BHD	**Baghdad**	**1.80**	**279**	*e*Pn		**Pn**	**11 05 57.0**	**+0.5**
BHD				*e*Sn		**Sb**	**11 06 21.0**	**-0.1**
NSR	**Nassriya**	**2.01**	**189**	*e*Pn		**Pn**	**11 06 00.0**	**+0.6**
NSR				*e*Sn		**Sb**	**11 06 27.0**	**-0.1**
NSR				AML	AML		11 06 28.0	
	comp=E,332nm,0.1s							

IDC 22 11:24:44.0±3.0,**5.15S**×**152.56E**,**h0**km,**mb3.7**/3, **mb1 3.9**/3,**mb1mx3.4**/43,**mbtmpb3.7**/3,**Error ellipse: s-maj=55.5km s-min=12.3km az=75.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRVT	**Keravat (AS076**	**0.99**	**328**	Pg		Pn	11 25 05.0	-0.3
	301nm,0.3s,baz=166,slow=1.6,SNR=475							
KRVT				Lg		Lg	11 25 15.6	
	144nm,0.3s,baz=30,slow=21,SNR=9.3							
WRA	**Warramunga Arr**	**23.04**	**229**	P		P	11 29 51.4	+0.3
	0.8nm,0.4s,baz=53,slow=10,SNR=12							
ASAR	**Alice Springs**	**25.73**	**222**	P		P	11 30 17.4	+0.9
	0.3nm,0.3s,baz=52,slow=9.3,SNR=6.4							
FITZ	**Fitzroy Crossi**	**29.28**	**242**	P		P	11 30 47.5	-0.8
	1.2nm,0.7s,baz=80,slow=6.1,SNR=2.3							
TORD	**Torodi Ar. Bea**	**150.19**	**287**	PKPbc		PKPbc	11 44 35.7	-2.4
	0.2nm,0.5s,baz=72,slow=1.3,SNR=2.2							

*NEIC **22** 11:31:27.6±1.0,63.44N±0.03×149.21W±0.07,h98km±4km, Error ellipse: s-maj=5.0km s-min=4.4km az=215.0*
*ANF **22** 11:31:28.0±0.3,63.48N×149.20W,h91km±4km,ML3.5/15, Error ellipse: s-maj=3.5km s-min=2.3km az=97.0*
*AEIC **22** 11:31:28±0.9,63.45N±0.03×149.21W±0.07,h90km±5km, ML3.3,Error ellipse: s-maj=5.1km s-min=4.2km az=46.0*

ISC 22 11:31:27.6±1.2,**63.47N**±0.03×**149.21W**±0.03,**h94**km±6km, **n137,** σ0**s72**/164,**Central Alaska**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RND	**Reindeer**	**0.17**	**112**			**Pn**	**11 31 41.5**	**+0.4**
RND						**Sn**	**11 31 51.4**	**+0.3**
MCK	**McKinley**	**0.29**	**25**	P		**Pn**	**11 31 42.1**	**+0.6**
	baz=203,SNR=70							
MCK				S		**Sn**	**11 31 52.4**	**+0.7**
	baz=203							
MCK	**McKinley**	**0.29**	**25**			**Pn**	**11 31 42.1**	**+0.6**
MCK						**Sn**	**11 31 52.5**	**+0.7**
TRF	**Thorofare Moun**	**0.48**	**268**			**Pn**	**11 31 43.3**	**+0.5**
TRF						**Sn**	**11 31 54.7**	**+0.5**
HUR	**Hurricane**	**0.53**	**201**			**Pn**	**11 31 43.0**	**0.0**
HUR						**Sn**	**11 31 54.2**	**-0.2**
WAT2	**Susitna Watana**	**0.58**	**151**			**Pn**	**11 31 43.5**	**0.0**
WAT2						**Sn**	**11 31 55.1**	**-0.3**
WAT7	**Susitna Watana**	**0.66**	**165**			**Pn**	**11 31 44.0**	**-0.2**
WAT7						**Sn**	**11 31 56.0**	**-0.6**
WAT1	**Susitna Watana**	**0.71**	**155**			**Pn**	**11 31 44.4**	**-0.2**
WAT1						**Sn**	**11 31 56.8**	**-0.4**
BWN	**Browne**	**0.71**	**351**			**Pn**	**11 31 45.1**	**+0.5**
KTH	**Kantishna Hill**	**0.77**	**277**			**Pn**	**11 31 45.7**	**+0.5**
KTH						**Sn**	**11 31 58.6**	**+0.3**
DHY	**Denali Highway**	**0.92**	**115**			**Pn**	**11 31 47.1**	**+0.3**
DHY						**Sn**	**11 32 01.6**	**+0.4**
BPAW	**Bear Paw Mtn.**	**1.01**	**309**			**Pn**	**11 31 48.3**	**+0.6**
BPAW						**Sn**	**11 32 02.8**	**0.0**
WAT6	**Susitna Watana**	**1.12**	**142**			**Pn**	**11 31 48.8**	**-0.2**
WRH	**Wood River Hil**	**1.12**	**26**			**Pn**	**11 31 49.4**	**+0.5**
WRH						**Sn**	**11 32 05.0**	**0.0**
NEA2	**Nenana**	**1.13**	**3**	P		**Pn**	**11 31 49.3**	**+0.4**
	baz=183,SNR=12							
NEA2				S		**Sn**	**11 32 05.1**	**0.0**
	baz=183							
NEA2	**Nenana**	**1.13**	**3**			**Pn**	**11 31 49.4**	**+0.4**
CUT	**Chulitna**	**1.17**	**205**	P		**Pn**	**11 31 49.4**	**-0.1**
	baz=24,SNR=172							
CUT				S		**Sn**	**11 32 05.6**	**-0.5**
	baz=24							
CUT	**Chulitna**	**1.17**	**205**			**Pn**	**11 31 49.4**	**-0.1**
CAST	**Castle Rocks**	**1.29**	**269**			**Pn**	**11 31 50.7**	**-0.2**
CCB	**Clear Creek Bu**	**1.33**	**27**			**Pn**	**11 31 51.8**	**+0.4**
HDA	**Harding Lake**	**1.37**	**46**	P		**Pn**	**11 31 52.2**	**+0.3**
	baz=227,SNR=51							
HDA				S		**Sn**	**11 32 10.1**	**-0.2**
	baz=227							
HDA				S		**Sn**	**11 32 10.1**	**-0.2**
	baz=227							
HDA	**Harding Lake**	**1.37**	**46**			**Pn**	**11 31 52.5**	**+0.6**
CHUM	**Lake Minchumin**	**1.44**	**288**			**Pn**	**11 31 53.2**	**+0.5**
PPLA	**Purkeypile**	**1.47**	**248**			**Pn**	**11 31 53.5**	**+0.2**
PS08	**TAPS Pump Stn8**	**1.51**	**43**			**Pn**	**11 31 53.8**	**+0.3**
TCOL	**CIGO, UAF Yank**	**1.53**	**22**	P		**Pn**	**11 31 54.3**	**+0.5**
	baz=203,SNR=20							
TCOL				S		**Sn**	**11 32 13.6**	**-0.1**
	baz=203							
TCOL	**CIGO, UAF Yank**	**1.53**	**22**			**Pn**	**11 31 54.3**	**+0.5**
COLA	**College**	**1.53**	**22**			**Pn**	**11 31 54.2**	**+0.4**
MDM	**Murphy Dome**	**1.56**	**16**			**Pn**	**11 31 54.8**	**+0.6**
IL31		**1.66**	**37**			**Pn**	**11 31 55.6**	**+0.3**
ILAR	**Eielson Array**	**1.66**	**37**	Pn		**Pn**	**11 31 55.1**	**-0.3**
I23K	**Minto, Yukon-K**	**1.69**	**358**	P		**Pn**	**11 31 56.5**	**+0.7**
	baz=178,SNR=20							
I23K				S		**Sn**	**11 32 17.3**	**+0.1**
	baz=178							
I23K	**Minto, Yukon-K**	**1.69**	**358**			**Pn**	**11 31 56.3**	**+0.5**
MLY	**Manley**	**1.70**	**338**	P		**Pn**	**11 31 56.6**	**+0.5**
	baz=156,SNR=9.2							
MLY				S		**Sn**	**11 32 17.3**	**-0.4**
	baz=156							
MLY	**Manley**	**1.70**	**338**			**Pn**	**11 31 56.6**	**+0.5**
GHO	**Glory Hole Cre**	**1.71**	**175**			**Pn**	**11 31 56.0**	**-0.2**
SML	**Sawmill**	**1.72**	**166**			**Pn**	**11 31 56.3**	**0.0**
PAX	**Paxson**	**1.77**	**105**			**Pn**	**11 31 57.9**	**+0.9**
POKR	**Poker Plat Res**	**1.83**	**24**	P		**Pn**	**11 31 58.2**	**+0.5**
	baz=206,SNR=35							
POKR				S		**Sn**	**11 32 20.6**	**+0.1**
	baz=206							
POKR	**Poker Plat Res**	**1.83**	**24**			**Pn**	**11 31 58.1**	**+0.5**
SKT	**Skwentna**	**1.84**	**217**			**Pn**	**11 31 57.2**	**-0.6**
SCM	**Sheep Creek Mo**	**1.86**	**151**			**Pn**	**11 31 58.3**	**+0.2**
PMR	**Palmer**	**1.89**	**179**			**Pn**	**11 31 58.5**	**+0.2**
M24K	**Tolsona, Glenn**	**1.96**	**133**	P		**Pn**	**11 31 59.9**	**+0.6**
	baz=315,SNR=59							
M24K				S		**Sn**	**11 32 26.3**	**+2.7**
	baz=315							
M24K	**Tolsona, Glenn**	**1.96**	**133**			**Pn**	**11 32 00.1**	**+0.8**
RIDG	**Independent Ri**	**1.97**	**80**			**Pn**	**11 31 59.8**	**+0.3**
KNK	**Knik Glacier**	**2.10**	**170**			**Pn**	**11 32 01.2**	**+0.1**
SUA	**Susitna One**	**2.14**	**200**			**Pn**	**11 32 01.9**	**+0.1**
PS11	**TAPS Pump St11**	**2.21**	**127**			**Pn**	**11 32 03.6**	**+0.9**
DOT	**Dot Lake**	**2.31**	**83**			**Pn**	**11 32 04.3**	**+0.3**
STLK	**Strandline Lak**	**2.32**	**213**			**Pn**	**11 32 04.0**	**-0.2**
SCRK	**Sand Creek**	**2.38**	**75**	P		**Pn**	**11 32 05.0**	**+0.1**
	baz=259,SNR=37							
SCRK				S		**Sn**	**11 32 32.3**	**-1.3**
	baz=259							
SCRK	**Sand Creek**	**2.38**	**75**			**Pn**	**11 32 05.1**	**+0.1**
RC01	**Rabbit Creek A**	**2.40**	**186**	P		**Pn**	**11 32 06.2**	**+1.0**
	baz=5.7,SNR=21							
RC01				S		**Sn**	**11 32 35.0**	**+1.0**
	baz=5.7							
RC01	**Rabbit Creek A**	**2.40**	**186**			**Pn**	**11 32 06.3**	**+1.2**
KLU	**Klutina**	**2.50**	**141**			**Pn**	**11 32 06.2**	**-0.4**
MENT	**Mentasta**	**2.54**	**100**	Pn		**Pn**	**11 32 07.0**	**-0.1**
SPCG	**Spurr Capps Gl**	**2.55**	**212**			**Pn**	**11 32 07.2**	**0.0**
PRP	**Porcupine Dome**	**2.60**	**36**			**Pn**	**11 32 07.2**	**-0.7**
SPCP	**Crater Peak Br**	**2.60**	**213**			**Pn**	**11 32 07.8**	**-0.1**
PWL	**Port Wells**	**2.65**	**171**			**Pn**	**11 32 08.5**	**0.0**
SPBG	**Spurr Blockage**	**2.66**	**215**			**Pn**	**11 32 09.0**	**+0.3**
SPNN	**North Nagishla**	**2.66**	**219**			**Pn**	**11 32 08.8**	**0.0**
SPCR	**Spurr Chakacha**	**2.67**	**213**			**Pn**	**11 32 08.7**	**-0.1**
L26K	**Log Cabin Wild**	**2.69**	**97**	P		**Pn**	**11 32 09.4**	**+0.4**
	baz=282,SNR=66							
L26K				S		**Sn**	**11 32 43.4**	**+2.6**
	baz=282							
L26K	**Log Cabin Wild**	**2.69**	**97**			**Pn**	**11 32 09.4**	**+0.4**
SPWE	**Spurr West**	**2.70**	**217**			**Pn**	**11 32 08.8**	**-0.4**
CKL	**Chakachamna La**	**2.71**	**214**			**Pn**	**11 32 09.3**	**-0.1**
JPK	**Jack Peak**	**2.71**	**152**			**Pn**	**11 32 08.8**	**-0.5**
GLI	**Glacier Island**	**2.78**	**158**			**Pn**	**11 32 09.9**	**-0.3**
N25K	**Chitina, Valde**	**2.84**	**129**	P		**Pn**	**11 32 11.4**	**+0.3**
	baz=313,SNR=11							
N25K				S		**Sn**	**11 32 45.6**	**+1.1**
	baz=313							
N25K	**Chitina, Valde**	**2.84**	**129**			**Pn**	**11 32 11.2**	**+0.1**
DIV	**Divide**	**2.85**	**144**			**Pn**	**11 32 10.3**	**-0.8**
CAPN	**Captain Cook N**	**2.86**	**199**	P		**Pn**	**11 32 14.1**	**+2.8**
	baz=18							
O22K	**Cooper Landing**	**3.01**	**185**	P		**Pn**	**11 32 14.1**	**+0.9**
	baz=4.4,SNR=15							
O22K	**Cooper Landing**	**3.01**	**185**			**Pn**	**11 32 13.3**	**+0.1**
SLKM	**Skilak Lake**	**3.01**	**190**			**Pn**	**11 32 13.8**	**+0.4**
FID	**Port Fidalgo**	**3.02**	**154**			**Pn**	**11 32 12.7**	**-0.6**
TTA	**Tatalina**	**3.13**	**263**			**Pn**	**11 32 14.6**	**-0.3**
TT01	**Tatalina**	**3.14**	**263**			**Pn**	**11 32 14.9**	**0.0**
IM03		**3.19**	**324**			**Pn**	**11 32 15.9**	**+0.4**
IMAR	**Indian Mountai**	**3.19**	**324**			**Pn**	**11 32 15.5**	**-0.1**
K27K	**Chicken**	**3.22**	**77**	P		**Pn**	**11 32 16.4**	**+0.3**
	baz=263							
K27K				S		**Sn**	**11 32 52.4**	**-1.0**
	baz=263							
K27K	**Chicken**	**3.22**	**77**			**Pn**	**11 32 16.0**	**0.0**
GLB	**Gilahina Butte**	**3.23**	**127**			**Pn**	**11 32 16.7**	**+0.4**
BMRM	**Bremner River**	**3.31**	**137**			**Pn**	**11 32 16.5**	**-0.8**
DFR	**Drift River**	**3.32**	**211**			**Pn**	**11 32 18.2**	**+0.7**
EYAK	**Cordova Ski Ar**	**3.36**	**149**			**Pn**	**11 32 17.4**	**-0.5**
BC03		**3.38**	**94**			**Pn**	**11 32 18.1**	**-0.1**
BCAR	**Beaver Creek A**	**3.38**	**94**			**Pn**	**11 32 17.5**	**-0.7**
SEW	**Seward**	**3.38**	**182**			**Pn**	**11 32 18.3**	**+0.1**
NCT	**North Crescent**	**3.41**	**213**			**Pn**	**11 32 19.7**	**+1.0**
RDWB	**Redoubt West**	**3.45**	**211**			**Pn**	**11 32 20.2**	**+0.9**
RSO	**Redoubt South**	**3.45**	**211**			**Pn**	**11 32 20.0**	**+0.7**
RED	**Redoubt Volcan**	**3.49**	**210**			**Pn**	**11 32 20.0**	**+0.2**
VRDI	**Verde Repeater**	**3.50**	**127**			**Pn**	**11 32 20.0**	**-0.1**
FYU	**Fort Yukon**	**3.54**	**27**	Pn		**Pn**	**11 32 19.9**	**-0.3**
MCARA	**McCarthy VSAT**	**3.56**	**123**			**Pn**	**11 32 20.5**	**-0.2**
EGAK	**Eagle**	**3.77**	**66**			**Pn**	**11 32 23.7**	**+0.3**
COLD	**Coldfoot**	**3.80**	**354**	P		**Pn**	**11 32 24.6**	**+0.8**
	baz=173,SNR=8.6							
COLD	**Coldfoot**	**3.80**	**354**			**Pn**	**11 32 24.5**	**+0.7**
BRLK	**Bradley Lake**	**3.81**	**193**			**Pn**

UZB				*e*S		**Sb**	**11 51 41.0**	**-0.8**
	42nm,0.5s							
UZB	**Uzynbulak**	**3.81**	**299**	Pg		**Pb**	**11 50 54.8**	**-0.9**
	2.8nm,0.4s							
UZB				Lg		Lg	11 51 41.0	
	42nm,0.5s							
DJR	**Jarkent**	**4.04**	**318**	*e*P		**Pb**	**11 51 00.2**	**+0.5**
	5.3nm,0.3s							
DJR				*e*S		**Sb**	**11 51 51.0**	**+2.4**
	4.9nm,0.7s							
DJR	**Jarkent**	**4.04**	**318**	Pg		**Pg**	**11 51 03.0**	**-2.7**
	4.8nm,0.3s							
DJR				Lg		Lg	11 51 55.0	
	4.9nm,0.7s							
SATY	**Saty**	**4.18**	**295**	*e*P		**Pb**	**11 51 01.6**	**-0.5**
	2.2nm,0.2s							
SATY				*e*S		**Sb**	**11 51 52.8**	**0.0**
	16nm,0.6s							
SATY	**Saty**	**4.18**	**295**	Pg		**Pb**	**11 51 01.6**	**-0.5**
	2.2nm,0.2s							
SATY				Lg		Lg	11 51 52.8	
	16nm,0.6s							
MNBS	**Baschi**	**4.66**	**307**	*e*P		**Pb**	**11 51 09.8**	**-0.4**
	2.1nm,0.4s							
MNBS				*e*S		**Sb**	**11 52 06.7**	**+0.3**
	9.2nm,0.5s							
MNBS	**Baschi**	**4.66**	**307**	Pg		**Pb**	**11 51 09.8**	**-0.4**
	2.1nm,0.4s							
MNBS				Lg		Lg	11 52 06.7	
	9.2nm,0.5s							
ARXS	**Arharly**	**5.08**	**306**	*e*P		**Pb**	**11 51 18.3**	**+1.0**
	2.7nm,0.5s							
ARXS				*e*S		**Sb**	**11 52 21.5**	**+3.0**
	8.7nm,0.6s							
ARXS	**Arharly**	**5.08**	**306**	Pg		**Pb**	**11 51 18.3**	**+1.0**
	2.7nm,0.5s							
ARXS				Lg		Lg	11 52 21.5	
	8.7nm,0.6s							
MK31	**Makanchi Array**	**5.47**	**351**	⇑Pg		**Pg**	**11 51 30.9**	**-2.2**
	0.4nm,0.5s,baz=166,slow=15,SNR=7.0							
MK31				⇑Lg		Lg	11 52 46.9	
	3.5nm,0.6s,baz=176,slow=27,SNR=3.8							
MAKZ	**Makanchi**	**5.53**	**348**	⇑Lg		Lg	11 52 46.0	
	4.3nm,1.1s							
TKM2	**Tokmak 2**	**6.13**	**287**	⇓Lg		Lg	11 52 53.2	
	3.3nm,0.7s							

*IDC **22** 11:56:45.5±2.3,2.°97N×92.°52E,h0km,mb3.5/5,mb1 3.7/7, mb1mx3.5/40,mbtmp3.6/7,ML4.1/2,Error ellipse: s-maj=66.0km s-min=23.3km az=55.0*
*NEIC **22** 11:56:46.7±1.2,2.°95N±0.°05×92.°48E±0.°09,h10km±2km, mb4.1/2,Error ellipse: s-maj=16.3km s-min=8.6km az=255.0*

ISC 22 11:56:50.0±1.1,3.°0N±0.°1×92.°51E±0.°09,h35km,n20, σ0s78/19,mb3.6/7,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
GSI	**Gunungsitoli**	**5.33**	**108**			**Pn**	**Pn**	**11 58 06.6**	**-0.4**
PSI	**Prapat**	**6.41**	**91**	Pn		**Pn**	**Pn**	**11 58 21.9**	**-0.1**
	5.7nm,0.3s,baz=360,slow=6.0,SNR=24								
PSI				Sn		**Sn**	**Sn**	**11 59 33.6**	**-0.4**
	0.8nm,0.3s,baz=360,slow=22,SNR=2.9								
RPSI	**Rantau Prapat**	**6.41**	**92**			**Pn**	**Pn**	**11 58 21.9**	**0.0**
RPSI	**Rantau Prapat**	**6.41**	**92**	Pn		**Pn**	**Pn**	**11 58 22.3**	**+0.4**
RPSI				Sn		**Sn**	**Sn**	**11 59 33.1**	**-0.9**
KULM	**Kulim**	**8.44**	**74**	Pn		**Pn**	**Pn**	**11 58 49.5**	**-0.3**
IPM	**Ipoh**	**8.62**	**80**	Pn		**Pn**	**Pn**	**11 58 52.7**	**+0.3**
PALK	**Pallekele**	**12.51**	**290**	Pn		**Pn**	**Pn**	**11 59 44.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**16.62**	**22**	Pn		**Pn**	**Pn**	**12 00 39.1**	**-1.4**
	0.2nm,0.3s,baz=220,slow=15,SNR=6.4								
H08S2	**Diego Garcia H**	**22.59**	**242**	T		T	T	12 25 21.5	
	baz=60								
H08S3	**Diego Garcia H**	**22.59**	**242**	T		T	T	12 25 13.1	
	baz=60								
H08S1	**Diego Carcia H**	**22.61**	**242**	T		T	T	12 25 12.0	
	baz=60								
MKAR	**Makanchi Array**	**44.54**	**350**	P		**P**	**P**	**12 04 59.1**	**+0.8**
	0.6nm,0.6s,baz=171,slow=8.1,SNR=7.1								
MKAR	**Makanchi Array**	**44.54**	**350**	P		**P**	**P**	**12 04 58.8**	**+0.4**
MAKZ	**Makanchi**	**44.61**	**350**	P		**P**	**P**	**12 04 59.7**	**+0.8**
MAKZ				IAmb		IAmb	IAmb	12 05 00.4	
	comp=Z,4.9nm,1.4s								
SONM	**Songino Array**	**46.27**	**13**	P		**P**	**P**	**12 05 13.1**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=201,slow=7.7,SNR=1.6								
WRA	**Warramunga Arr**	**46.95**	**121**	P		**P**	**P**	**12 05 18.2**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=298,slow=8.9,SNR=2.1								
ASAR	**Alice Springs**	**48.21**	**126**	P		**P**	**P**	**12 05 28.1**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=296,slow=7.6,SNR=1.8								
ZAA0	**Zalesovo Array**	**51.20**	**354**	P		**P**	**P**	**12 05 49.6**	**-0.1**
ZAA0				IAmb		IAmb	IAmb	12 05 52.4	
	comp=Z,2.3nm,1.2s								
ZALV	**Zalesovo Beam**	**51.20**	**354**	P		**P**	**P**	**12 05 50.6**	**+0.9**
	comp=Z,1.3nm,0.5s,baz=183,slow=8.6,SNR=8.2								
ZALV	**Zalesovo Beam**	**51.20**	**354**	P		**P**	**P**	**12 05 51.0**	**+1.3**

*SKHL **22** 12:35:55.8±0.5,50.°57N×136.°72E,h11km,mb4.0/4*
SKHL Felt (II-III) at Solnechny, Hurba; (II) at Gorny.
*MOS **22** 12:35:56.0±2.4,50.°60N×136.°71E,h9km,mb3.9/1,Error ellipse: s-maj=23.5km s-min=17.8km az=107.4*
MOS Felt (III) at Khurba, (II) at Solnechnyy, Gornyy.

ISC 22 12:35:57.1±0.7,50.°56N±0.°03×136.°51E±0.°03,h10km,n18, σ2s02/36,1C-1D,Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
GRNR	**Gornyy**	**0.21**	**346**	⇓*i*Pg		**Pg**	**Pg**	**12 36 00.6**	**-1.0**
GRNR				AMB		AMB	AMB	12 36 00.7	
	255nm,0.1s								
GRNR				*e*Sg		**Sg**	**Sg**	**12 36 04.0**	**-0.7**
GRNR				A		A	A	12 36 04.1	
	5μm,0.1s								
GRNR				A		A	A	12 36 04.1	
	3μm,0.1s								
GRNR	**Gornyy**	**0.21**	**346**	⇑*i*P		**Pg**	**Pg**	**12 36 00.6**	**-1.0**
GRNR				*e*S		**Sg**	**Sg**	**12 36 02.9**	**-1.8**
GRNR				pmax		pmax	pmax		
	comp=N,120nm,0.4s								
GRNR				pmax		pmax	pmax		
	comp=E,140nm,0.4s								
GRNR				pmax		pmax	pmax		
	comp=Z,80nm,0.4s								
GRNR				smax		smax	smax		
	comp=E,240nm,0.3s								
KHBR	**Khabarovsk**	**2.29**	**205**	*e*Pn		**Pn**	**Pn**	**12 36 33.5**	**-1.5**
KHBR				*e*Pg		**Pb**	**Pb**	**12 36 37.6**	**-0.9**
KHBR				AMB		AMB	AMB	12 36 39.1	
	comp=E,47nm,0.4s								
KHBR				*e*Sn		**Sn**	**Sn**	**12 37 03.9**	**+0.7**
KHBR				*e*Sg		**Sb**	**Sb**	**12 37 08.4**	**+1.5**
KHBR				A		A	A	12 37 10.5	
	comp=E,153nm,0.2s								
EKMR	**Ekimchan**	**3.34**	**320**	*e*Pn		**Pn**	**Pn**	**12 36 48.9**	**-0.6**
EKMR				*e*Pg		**Pb**	**Pb**	**12 36 58.0**	**+1.5**
EKMR				AMB		AMB	AMB	12 37 01.1	
	comp=E,8.0nm,0.5s								
EKMR				Pg		Pg	**Pg**	**12 37 03.6**	**+2.4**
EKMR				*e*Sg		**Sg**	**Sg**	**12 37 42.2**	**-2.3**
EKMR				A		A	A	12 37 47.0	
	comp=E,74nm,0.6s								
EKMR				A		A	A	12 37 47.0	
	comp=E,56nm,0.6s								
KLR	**Kul'dur**	**3.35**	**248**	*e*Pn		**Pn**	**Pn**	**12 36 50.0**	**+0.5**
KLR				Pn		**Pb**	**Pb**	**12 36 54.5**	**-2.1**
KLR				*e*Pg		**Pg**	**Pg**	**12 36 59.2**	**-2.1**
KLR				*e*Sg		**Sg**	**Sg**	**12 37 45.5**	**+0.8**
KLR	**Kul'dur**	**3.35**	**248**	*i*P		**Pn**	**Pn**	**12 36 50.1**	**+0.5**
NKL	**Nikolayevsk**	**3.66**	**43**	*e*Pg		**Pb**	**Pb**	**12 37 00.1**	**-1.8**
NKL				Pg		**Pg**	**Pg**	**12 37 05.0**	**-2.3**
NKL				*e*Sg		**Sb**	**Sb**	**12 37 48.4**	**+2.1**
UGL	**Uglegorsk**	**3.89**	**110**	*e*Sg		**Sb**	**Sb**	**12 37 54.4**	**+1.4**
UGL				A		A	A	12 38 00.4	
	comp=E,109nm,0.4s								
TYV	**Tymovskoe**	**3.92**	**83**	*e*Pn		**Pn**	**Pn**	**12 36 55.7**	**-1.6**
TYV				*e*Pg		**Pb**	**Pb**	**12 37 04.6**	**-1.7**
TYV				Pg		**Pg**	**Pg**	**12 37 10.2**	**-2.0**
TYV				*e*Sg		**Sb**	**Sb**	**12 37 54.9**	**+1.1**
TYV				A		A	A	12 38 03.1	
	comp=E,45nm,1.1s								
TYV	**Tymovskoe**	**3.92**	**83**	*e*P		**Pb**	**Pb**	**12 37 07.3**	**+1.0**
TYV				pmax		pmax	pmax		
	comp=Z,100nm,2.8s								
TYV				pmax		pmax	pmax		
	comp=Z,17nm,0.7s								
YSS	**Yuzh-Sakhalins**	**5.49**	**129**	*e*P		**Pn**	**Pn**	**12 37 22.8**	**+4.0**
BMKR	**Bomnak**	**6.25**	**315**	*e*Pn		**Pn**	**Pn**	**12 37 29.0**	**-0.3**
BMKR				*e*Sg		**Sg**	**Sg**	**12 39 14.8**	**-2.7**
BMKR				A		A	A	12 39 19.8	
	comp=Z,10.0nm,0.5s								
ZEA	**Zeya**	**6.52**	**303**	*e*Sg		**Sg**	**Sg**	**12 39 23.0**	**-3.4**
ZEA				A		A	A	12 39 32.3	
	comp=Z,20nm,0.7s								
KROS	**Kirovskiy**	**6.99**	**307**	*e*Pn		**Pn**	**Pn**	**12 37 39.6**	**+0.1**
KROS				*e*Sg		**Sg**	**Sg**	**12 39 37.0**	**-4.4**
KROS				A		A	A	12 39 44.8	
	comp=Z,9.0nm,0.5s								
USA0B	**Ussuriysk Arra**	**7.06**	**207**	*i*P		**Pn**	**Pn**	**12 37 40.9**	**+0.4**
HIA	**Hailar**	**10.89**	**270**	*i*P		**Pn**	**Pn**	**12 38 36.5**	**+3.5**
HIA				pmax		pmax	pmax		
	comp=Z,3.0nm,0.8s								
MAJO	**Matsushiro**	**14.07**	**174**	*i*P		**Pn**	**Pn**	**12 39 14.8**	**-1.6**
BRVK	**Borovoye**	**39.71**	**300**	*i*P		**P**	**P**	**12 43 31.2**	**+1.9**
BRVK				pmax		pmax	pmax		
	comp=Z,1.0nm,1.1s								

IDC 22 12:57:50.3±1.7,29.°67N×101.°05E,h0km,mb3.0/3, mb1 3.3/4,mb1mx3.2/41,mbtmp3.1/4,ML3.0/1,Error ellipse: s-maj=86.8km s-min=27.4km az=65.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SONM	**Songino Array**	**18.60**	**11**	P		P	P	13 02 08.6	-0.6
	0.1nm,0.3s,baz=191,slow=12,SNR=1.7								
MKAR	**Makanchi Array**	**22.47**	**325**	P		P	P	13 02 51.2	+0.1
	0.2nm,0.6s,baz=128,slow=12,SNR=1.9								
WRA	**Warramunga Arr**	**58.84**	**143**	P		P	P	13 07 50.8	-0.1
	0.3nm,0.8s,baz=325,slow=8.7,SNR=2.2								
ASAR	**Alice Springs**	**61.72**	**146**	P		P	P	13 08 10.8	+0.1
	0.2nm,0.8s,baz=327,slow=7.6,SNR=1.3								

*BGR **22** 13:08:15.1±0.0,36.°49N×138.°74E,h33km,mb6.4, mB_BB6.8,Ms6.6*
*MOS **22** 13:08:16.5±1.2,36.°65N×137.°84E,h12km,mb6.1/72, MS6.4/62,Error ellipse: s-maj=5.3km s-min=3.2km az=104.7*
*IDC **22** 13:08:16.6±0.3,36.°65N×137.°79E,h0km,mb5.5/42, mb1 5.6/44,mb1mx5.6/45,mbtmp5.5/44,ML4.6/2,MS6.3/48, Ms1 6.3/48,ms1mx6.2/54,Error ellipse: s-maj=8.9km s-min=6.6km az=54.0*
*BJI **22** 13:08:17.1±0.0,36.°55N×137.°85E,h10km,mB6.6/60, mb5.5/79,Ms6.8/78,Ms7 6.5/83*
*NIED **22** 13:08:17.9,36.°69N×137.°89E,h5km,MW6.3,Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁸Nm; Mrr2.30; Mθθ-1.02; Mϕϕ-1.28; Mrθ-0.37; Mrϕ-1.84; Mθϕ0.54; Fault plane solution: M₀2.76000×10¹⁸ NP1:ϕs25.00000°, δ50.00000°,λ65.00000°. NP2:ϕs241.00000°,δ47.00000°, λ117.00000°.*
*JMA **22** 13:08:17.9,36.°69N×137.°89E,h5km±1km,M6.7 Broadband fault plane solution: P waves. NP1: ϕs251.00000°,δ33.00000°,λ161.00000°. NP2: ϕs358.00000°,δ80.00000°,λ59.00000°. Principal axes: T Plg46.0000°, Azm236.0000°; N Plg31.0000°, Azm4.0000°; P Plg28.0000°, Azm112.0000°;*
*NEIC **22** 13:08:18.4±2.0,36.°64N±0.°05×137.°89E±0.°06,h9km±1km, mb6.2/415,Ms_20 6.2/931,Mwb6.2/141,Mwc6.2/57, Mww6.2,Mwc6.2(GCMT) Error ellipse: s-maj=9.6km s-min=6.8km az=134.0*
*NEIC **22** 13:08:18.6,36.°62N×137.°92E,h4km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.26; Mθθ-0.42; Mϕϕ-0.85; Mrθ0.08; Mϕθ-1.33; Mϕr2.41; Fault plane solution: M₀2.97000×10¹⁸ NP1:ϕs251.32000°, δ27.87000°,λ149.16000°. NP2:ϕs9.14000°,δ76.13000°, λ65.58000°. Principal axes: T 2.9813, Plg53.0000°, Azm250.0000°; N -0.0166, Plg24.0000°, Azm15.0000°; P -2.9646, Plg27.0000°, Azm118.0000°;*
*GCMT **22** 13:08:23.4±0.0,36.°76N×137.°88E,h12km,MW6.2/162, Moment Tensor Solution. s146,c331; s162,c617; Duration: 3s2 Moment tensor: Scale 10¹⁸Nm; Mrr2.03±.01; Mθθ-0.72±.01; Mϕϕ-1.31±.01; Mrθ-1.22±.04; Mϕθ-2.07±.01; Mϕr-0.25±.04; Best double couple: M₀2.93800×10¹⁸ NP1:ϕs15.00000°,δ41.00000°, λ49.00000°. NP2:ϕs244.00000°,δ61.00000°,λ120.00000°. Principal axes: T 2.5820, Plg62.0000°, Azm202.0000°; N 0.7140, Plg25.0000°, Azm48.0000°; P -3.2950, Plg11.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
*NEIC **22** 13:08:23,36.°74N×137.°93E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr2.08; Mθθ-0.73; Mϕϕ-1.35; Mrθ-0.82; Mϕθ-2.21; Mϕr0.46; Fault plane solution: M₀3.02000×10¹⁸ NP1:ϕs13.00000°, δ51.00000°,λ47.00000°. NP2:ϕs249.00000°,δ55.00000°, λ130.00000°. Principal axes: T 2.6589, Plg58.0000°, Azm218.0000°; N 0.6191, Plg32.0000°, Azm43.0000°; P -3.2781, Plg2.0000°, Azm311.0000°;*
*NEIC **22** 13:08:24,36.°74N×138.°41E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr2.08; Mθθ-0.88; Mϕϕ-1.20; Mrθ-0.62; Mϕθ-1.31; Mϕr0.12; Fault plane solution: M₀2.32000×10¹⁸ NP1:ϕs26.00000°, δ43.00000°,λ67.00000°. NP2:ϕs236.00000°,δ51.00000°, λ110.00000°. Principal axes: T 2.2499, Plg74.0000°, Azm207.0000°; N 0.1332, Plg15.0000°, Azm43.0000°; P -2.3832, Plg4.0000°, Azm312.0000°;*
*KEA **22** 13:08:25.1±0.0,36.°80N×137.°90E,h9km,mB6.2/3, MS6.1/3*
*NEIC **22** 13:08:31.8,36.°94N×138.°03E,h10km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.80; Mθθ-0.52; Mϕϕ-1.29; Mrθ0.64; Mϕθ-1.76; Mϕr-0.30; Fault plane solution: M₀2.44000×10¹⁸ NP1:ϕs193.23000°, δ49.43000°,λ51.65000°. NP2:ϕs63.81000°,δ53.44000°, λ125.94000°. Principal axes: T 2.1755, Plg62.0000°, Azm35.0000°; N 0.5357, Plg28.0000°, Azm220.0000°; P -2.7112, Plg2.0000°, Azm129.0000°;*

ISC 22 13:08:18.3±0.3,36.°64N±0.°02×137.°89E±0.°02,h10km±1km, h10km:pP-P,n2422,σ1s67/2422,mb6.1/485,MS6.2/622, 193C-63D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MJB9	**Matsu-Tunnel**	**0.27**	**110**				**Pg**	**13 08 23.6**	**-0.2**
MAJO	**Matsushiro**	**0.27**	**110**	*d*iP			**Pg**	**13 08 23.2**	**-0.6**
MAJO	**Matsushiro**	**0.27**	**110**				**Pg**	**13 08 23.4**	**-0.5**
MAT	**Matsushiro**	**0.27**	**110**	P			**Pg**	**13 08 23.5**	**-0.3**
MAT				S			**Sg**	**13 08 27.8**	**+0.3**
MAT	**Matsushiro**	**0.27**	**110**	P			**Pg**	**13 08 23.3**	**-0.5**
MJAR	**Matsushiro Arr**	**0.27**	**111**	Pg			**Pg**	**13 08 24.2**	**+0.3**
	602nm,0.3s,baz=300,slow=18								
JNG	**Nsakai**	**0.29**	**144**	⇓P			**Pg**	**13 08 24.2**	**+0.1**
JNG				S			**Sg**	**13 08 29.0**	**+1.0**
JTT	**Ttatey**	**0.45**	**266**	P			**Pg**	**13 08 27.1**	**-0.1**
JTT				S			**Sg**	**13 08 32.7**	**-0.4**
JJN	**Nakama**	**0.51**	**25**	⇑P			**Pg**	**13 08 27.5**	**-0.8**
JGK	**Kuni**	**0.61**	**97**	⇓P			**Pg**	**13 08 29.6**	**-0.5**
JGK				S			**Sb**	**13 08 39.2**	**-0.5**
JGN	**Niukaw**	**0.62**	**228**	⇑P			**Pg**	**13 08 30.2**	**-0.2**
JNT	**Takato**	**0.79**	**165**	⇓P			**Pg**	**13 08 33.6**	**+0.1**
JNT				S			**Sb**	**13 08 45.8**	**+0.8**
JSZ	**Suzu**	**0.91**	**333**	⇓P			**Pg**	**13 08 34.4**	**-1.5**
JSZ				S			**Sg**	**13 08 47.7**	**-0.1**
JJH	**Hakui**	**0.94**	**288**	⇓P			**Pg**	**13 08 35.5**	**-0.9**
JRY	**Ryogami san**	**1.02**	**127**	⇓P			**Pg**	**13 08 36.6**	**-1.5**
JHK	**Hiroka**	**1.09**	**56**	⇓P			**Pg**	**13 08 37.2**	**-2.1**
JKT	**Katashina**	**1.10**	**83**	⇓P			**Pg**	**13 08 38.0**	**-1.5**
JIZZ	**Izumozaki**	**1.11**	**36**	⇑P			**Pg**	**13 08 38.7**	**-0.9**
JGF	**Kuroka**	**1.12**	**203**	⇑P			**Pg**	**13 08 39.8**	**-0.1**
JGF	**Kuroka**	**1.12**	**203**				**Pn**	**13 08 41.8**	**+1.7**
JYN	**Shimob**	**1.25**	**155**	⇓P			**Pn**	**13 08 41.9**	**-0.1**
JAG	**Ashikaga**	**1.28**	**99**	⇓P			**Pn**	**13 08 40.9**	**-1.4**
JKG	**Kaga**	**1.31**	**254**	⇑P			**Pn**	**13 08 42.6**	**-0.1**
JSD	**Sado**	**1.43**	**12**	⇓P			**Pn**	**13 08 42.1**	**-2.2**
JSD				S			**Sn**	**13 09 02.2**	**-1.0**
JSD	**Sado**	**1.43**	**12**	Pn			**Pn**	**13 08 44.1**	**-0.2**
JHG	**Hegura jima**	**1.44**	**328**	⇑P			**Pn**	**13 08 43.0**	**-1.4**
JHG				S			**Sb**	**13 09 03.7**	**+0.2**

INU	**Inuyama**	**1.47**	**209**	Pn		**Pb**	**13 08 45.8**	**0.0**
JSGW	**Sagamiharawaka**	**1.48**	**134**	⇓P		**Pn**	**13 08 44.6**	**-0.5**
JFNN	**Fujinakano**	**1.58**	**156**	⇓P		**Pb**	**13 08 47.6**	**0.0**
JICN	**Ichinomiyachia**	**1.58**	**213**	P		**Pb**	**13 08 47.4**	**-0.3**
SHZ3	**Shizuoka 3**	**1.59**	**171**	P		**Pb**	**13 08 47.5**	**-0.4**
JNS	**Sasagawa**	**1.64**	**44**	S		**Sb**	**13 09 08.8**	**-0.6**
JFY	**Yanaizu**	**1.64**	**62**	⇓P		**Pb**	**13 08 46.6**	**-0.7**
JYZW	**Yoshizawa**	**1.64**	**185**	P		**Pb**	**13 08 48.1**	**-0.6**
JSB	**Shiboa**	**1.66**	**78**	⇓P		**Pb**	**13 08 48.2**	**+0.6**
JOD2	**Odawara 2**	**1.68**	**144**	⇓P		**Pb**	**13 08 48.8**	**-0.6**
JOD2				S		**Sg**	**13 09 12.7**	**+0.3**
HMMJ	**Hamamatsu 2**	**1.78**	**184**	⇑P		**Pb**	**13 08 50.3**	**-0.8**
JFM	**Mihama**	**1.90**	**235**	⇑P		**Pb**	**13 08 52.0**	**-1.1**
JYT	**Yasato**	**1.90**	**102**	Pn		**Pn**	**13 08 51.3**	**+0.5**
JHTM	**Izuhatsuma**	**1.91**	**151**	⇓P		**Pb**	**13 08 52.7**	**-0.5**
JEG	**Eigenji**	**1.93**	**220**	⇑P		**Pb**	**13 08 52.7**	**-1.0**
JSG	**Sagara**	**1.97**	**173**	⇑P		**Pb**	**13 08 53.9**	**-0.5**
JSG	**Sagara**	**1.97**	**173**	Pn		**Pg**	**13 08 55.9**	**-0.3**
JIZS	**Izushimoda**	**2.08**	**157**	P		**Pb**	**13 08 54.7**	**-1.4**
JAA	**Atsumi**	**2.09**	**197**	⇑P		**Pn**	**13 08 54.7**	**+1.2**
JAW	**Awa shima**	**2.11**	**30**	P		**Pn**	**13 08 53.1**	**-0.6**
JHO	**Hitachi**	**2.15**	**90**	⇓P		**Pn**	**13 08 54.4**	**+0.1**
JFFD	**Fukushimafurud**	**2.19**	**77**	⇓P		**Pn**	**13 08 55.1**	**+0.3**
JIHU	**Itakohorinouch**	**2.23**	**107**	⇓P		**Pn**	**13 08 55.1**	**-0.3**
JYS	**Shirataka**	**2.34**	**47**	⇓P		**Pn**	**13 08 56.8**	**-0.1**
I30JP	**ISUMI INFRASON**	**2.37**	**123**	Pn		**Pb**	**13 09 00.0**	**-1.1**
	baz=310,slow=12,SNR=2.3							
I30JP				*i*			13 21 00.0	
	baz=307,slow=306,SNR=2.8							
ONAJ	**Iwakimizuishiy**	**2.38**	**78**	⇓P		**Pn**	**13 08 57.8**	**+0.4**
JKUC	**kamogawauchiur**	**2.38**	**128**	⇓P		**Pn**	**13 08 58.5**	**+1.0**
JWT	**Wachi**	**2.43**	**237**	⇑P		**Pn**	**13 08 59.9**	**+1.8**
JWT	**Wachi**	**2.43**	**237**	Pn		**Pb**	**13 09 00.2**	**-2.0**
JIE	**Ise**	**2.44**	**204**	⇑P		**Pn**	**13 08 59.7**	**+1.4**
JKY	**Yasaka**	**2.47**	**247**	⇑P		**Pn**	**13 08 59.6**	**+0.9**
JSKK	**Shikinejimakit**	**2.54**	**155**	⇓P		**Pb**	**13 09 01.8**	**-2.2**
BSO4	**Boso 4**	**2.58**	**129**	P		**Pn**	**13 09 01.6**	**+1.5**
JMM	**Marumori**	**2.62**	**61**			**Pn**	**13 09 02.2**	**+1.5**
JHE	**Heguri**	**2.67**	**223**	⇑P		**Pn**	**13 09 02.9**	**+1.4**
JOU	**Okura**	**2.80**	**51**	⇓P		**Pn**	**13 09 03.4**	**+0.2**
BSO3	**Boso 3**	**2.81**	**130**	P		**Pn**	**13 09 03.8**	**+0.7**
JKSM	**Kasumi**	**2.82**	**249**	⇑P		**Pn**	**13 09 04.4**	**+1.0**
JMIK	**Miki**	**2.94**	**232**	⇑P		**Pn**	**13 09 06.6**	**+1.4**
JWY	**Kouya**	**3.06**	**219**	⇑P		**Pn**	**13 09 07.8**	**+1.0**
JAD	**Aida**	**3.47**	**242**	⇑P		**Pn**	**13 09 14.2**	**+1.8**
JWM	**Minabe**	**3.47**	**217**	⇑P		**Pn**	**13 09 12.7**	**+0.3**
JOI	**OKI**	**3.76**	**266**	P		**Pn**	**13 09 17.0**	**+0.6**
JHJ	**Hachijo jima 2**	**3.84**	**156**	Pn		**Pn**	**13 09 18.7**	**+1.2**
	1μm,0.3s,baz=91,slow=23,SNR=94							
JHJ				Sn		**Sb**	**13 10 13.7**	**+1.0**
	baz=58,slow=19,SNR=0.9							
JHJ2	**Mitsune**	**3.86**	**155**	Pn		**Pn**	**13 09 20.1**	**+2.3**
JJS	**Sakaide**	**3.94**	**236**	⇑P		**Pn**	**13 09 19.8**	**+0.9**
JAI	**Aioi**	**4.00**	**226**	⇑P		**Pn**	**13 09 20.7**	**+1.0**
JNM	**Ikuma**	**4.10**	**255**	P		**Pn**	**13 09 22.7**	**+1.6**
JHS	**Saijyo**	**4.21**	**249**	⇑P		**Pn**	**13 09 24.6**	**+2.0**
JHS	**Saijyo**	**4.21**	**249**	Pn		**Pn**	**13 09 24.6**	**+2.0**
JJG	**Jouge**	**4.34**	**244**	⇑P		**Pn**	**13 09 26.9**	**+2.4**
JMN	**Monobe**	**4.38**	**230**	⇑P		**Pn**	**13 09 26.0**	**+1.0**
JMN	**Monobe**	**4.38**	**230**	Pn		**Pn**	**13 09 26.3**	**+1.2**
MRT2	**Murotomisaki 2**	**4.47**	**225**	⇑P		**Pn**	**13 09 26.7**	**+0.5**
JGT2	**ShimaneMisato**	**4.65**	**252**	P		**Pn**	**13 09 30.4**	**+1.8**
JTM	**Tenmabayashi**	**4.83**	**30**	Pn		**Pn**	**13 09 33.2**	**+2.1**
JHT	**Toyohira**	**4.87**	**248**	P		**Pn**	**13 09 34.7**	**+3.0**
JHM	**Kurahashi**	**5.04**	**242**	P		**Pn**	**13 09 36.4**	**+2.4**
JKU	**Kubokawa**	**5.17**	**231**	P		**Pn**	**13 09 37.5**	**+1.7**
JHIK	**Hikimi**	**5.29**	**248**	⇑P		**Pn**	**13 09 40.2**	**+2.7**
JTO	**Tosashimizu**	**5.63**	**229**	P		**Pn**	**13 09 43.8**	**+1.6**
JFA	**Akaike**	**6.50**	**245**	⇑P		**Pn**	**13 09 56.3**	**+2.2**
ERM	**Erimo**	**6.74**	**36**

GRPR smax smax
comp=N,2μm,3.4s
GRPR smax smax
comp=E,6μm,4.6s
GRPR MLR MLR
comp=Z,108μm,12.0s
GRPR MLR MLR
comp=E,133μm,14.0s
GRPR MLR MLR
comp=N,189μm,15.0s
YUK Yuzh-Kuril'sk 9.57 37⇓ *i*P **Pn 13 10 35.8 -0.3**
YUK *e*S **Sn 13 12 24.2 +0.6**
YUK pmax pmax
comp=Z,1μm,1.0s
YUK pmax pmax
comp=N,893nm,0.8s
YUK pmax pmax
comp=E,1μm,0.7s
YUK pmax pmax
comp=Z,7μm,1.2s
YUK smax smax
comp=N,6μm,2.7s
YUK smax smax
comp=E,10μm,2.7s
YUK MLR MLR
comp=Z,145μm,15.0s
YUK MLR MLR
comp=E,174μm,17.0s
YUK MLR MLR
comp=N,152μm,16.0s
PYS Pyongsong 9.86 289 P Pn 13 10 45.0 +4.9
PYAG Pyongyang 9.89 288 P Pn 13 10 48.0 +7.4
PYAG pP 13 10 49.8
PYAG S **Sn 13 12 39.4 +7.7**
MDJ Mudanjiang 10.16 324 P Pn 13 10 49.5 +5.3
MDJ PP **PnPn 13 10 55.5 +3.6**
MDJ S **Sn 13 12 37.3 -0.9**
MDJ LR LR
comp=N,514μm,14.7s
MDJ LR LR
comp=N,274μm,16.9s
MDJ LR LR
comp=N,585μm,13.9s
JCJ Chichijima 10.19 158 Pn **Pn 13 10 43.8 -0.8**
YSS Yuzh-Sakhalins 10.93 18k *i*P **Pn 13 10 56.8 +2.1**
YSS *e*S **Sn 13 12 58.8 +1.9**
YSS pmax pmax
comp=Z,860nm,1.0s
YSS pmax pmax
comp=Z,15μm,3.2s
YSS pmax pmax
comp=N,12μm,3.4s
YSS pmax pmax
comp=E,4μm,3.1s
YSS MLR MLR
comp=Z,190μm,13.0s
YSS MLR MLR
comp=N,151μm,12.0s
YSS MLR MLR
comp=E,136μm,14.0s
YSS Yuzh-Sakhalins 10.93 18 Pn **Pn 13 10 56.6 +2.0**
SUJ Sinuiju 11.07 292 P **Pn 13 11 01.4 +4.7**
SUJ S Sn 13 13 10.6 +10
KUR Kuril'sk 11.42 38⇓ *i*P **Pn 13 11 01.3 -0.2**
KUR *i*S **Sn 13 13 09.4 +0.3**
KUR pmax pmax
comp=Z,988nm,1.0s
KUR pmax pmax
comp=E,199nm,0.8s
KUR pmax pmax
comp=N,212nm,1.1s
KUR pmax pmax
comp=Z,8μm,1.4s
KUR smax smax
comp=N,3μm,2.3s
KUR smax smax
comp=E,5μm,2.5s
KUR smax smax
comp=Z,115μm,14.0s
KUR smax smax
comp=E,218μm,16.0s
KUR smax smax
comp=N,133μm,14.0s
CN2 Changchun 11.89 311 *e*P **Pn 13 11 12.1 +4.1**
CN2 pmax pmax
comp=N,490nm,1.3s
JMZ Minamidaito 2 12.20 210 **Pn 13 11 13.5 +1.3**
SNY Shenyang 12.24 299 ⇑P **Pn 13 11 17.0 +4.3**
SNY S Sn 13 13 41.8 +13
SNY LR LR
comp=N,271μm,15.5s
SNY LR LR
comp=N,204μm,15.3s
SNY LR LR
comp=N,295μm,14.7s
JIH Iheya 12.75 224 P Pg 13 11 29.0
UGL Uglegorsk 12.80 12⇓ *e*P **Pn 13 11 23.5 +3.2**
UGL *e*S **Sn 13 13 45.9 +3.1**
UGL pmax pmax
comp=Z,1μm,1.7s
UGL pmax pmax
comp=N,364nm,2.2s
UGL pmax pmax
comp=Z,13μm,4.0s
UGL smax smax
comp=E,32μm,9.5s
UGL smax smax
comp=N,14μm,7.0s
UGL MLR MLR
comp=N,46μm,14.0s
UGL MLR MLR
comp=Z,69μm,14.0s
UGL MLR MLR
comp=E,116μm,16.0s
DL2 Dalian 13.07 285 P **Pn 13 11 26.5 +2.5**
DL2 S **Sn 13 13 52.3 +2.9**
DL2 pmax pmax
comp=E,490nm,1.8s
DL2 LR LR
comp=E,373μm,14.9s
DL2 LR LR
comp=E,124μm,21.4s
DL2 LR LR
comp=E,268μm,13.7s
KLR Kul'dur 13.36 342 Pn **Pn 13 11 28.2 +0.3**
comp=E,1.8nm,0.3s,baz=148,slow=11,SNR=72
KLR LR LR 13 16 20.9
comp=E,130μm,19.9s,baz=159,slow=36
KLR Kul'dur 13.36 342*c**e*P **Pn 13 11 30.1 +2.2**
JKE Kume jima 2 13.97 226 P **Pn 13 11 36.4 0.0**
GRNR Gornyy 14.17 356⇓ *i*P **Pn 13 11 41.6 +2.6**
GRNR *e*S **Sn 13 14 24.3 +8.2**
GRNR pmax pmax
comp=N,20nm,1.0s
GRNR pmax pmax
comp=E,7.0nm,1.0s
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR smax smax
comp=N,9.0nm,0.9s
GRNR MLR MLR
comp=E,98μm,16.0s
GRNR MLR MLR
comp=N,49μm,18.0s
GRNR MLR MLR
comp=Z,56μm,16.0s
TYV Tymovskoe 14.63 12 *e*P **Pn 13 11 45.9 +0.7**
TYV *e*S **Sn 13 14 31.8 +4.5**
TYV pmax pmax
comp=Z,951nm,1.5s
TYV pmax pmax
comp=Z,18μm,3.1s
TYV smax smax
comp=N,82nm,1.2s
TYV smax smax
comp=N,13μm,4.5s
TYV MLR MLR
comp=E,91μm,12.0s
TYV MLR MLR
comp=Z,98μm,12.0s
SSE Sheshan 14.93 253 P **P 13 11 52.9 -2.2**
SSE S **S 13 14 44.4 -8.6**
SSE pmax pmax
comp=Z,190nm,1.2s
SSE pmax pmax
comp=Z,460nm,3.5s

NJ2 Nanjing 16.37 259⇑ *i*P **P 13 12 10.5 -0.6**
NJ2 pP **pP 13 12 13.8 -0.6**
NJ2 sP **sP 13 12 14.9 -1.0**
NJ2 PP Pn 13 12 21.5 +13
NJ2 S **Sn 13 15 15.0 +5.0**
NJ2 pmax pmax
comp=Z,640nm,1.7s
NJ2 pmax pmax
comp=Z,44μm,7.6s
NJ2 LR LR
comp=Z,186μm,13.7s
NJ2 LR LR
comp=Z,164μm,11.8s
NJ2 LR LR
comp=Z,225μm,12.8s
NKL Nikolayevsk 16.63 6 *e*P **Pn 13 12 10.0 -1.3**
NKL pmax pmax
comp=N,8.0nm,1.3s
NKL pmax pmax
comp=E,34nm,1.4s
NKL pmax pmax
comp=Z,500nm,1.4s
NKL MLR MLR
comp=E,1μm,16.0s
NKL MLR MLR
comp=N,139nm,15.0s
NKL MLR MLR
comp=Z,37μm,12.0s
TIA Tai'an 16.72 275 P **P 13 12 15.6 +0.6**
TIA pmax pmax
comp=Z,160nm,1.5s
TIA LR LR
comp=Z,126μm,12.6s
TIA LR LR
comp=Z,202μm,13.9s
TIA LR LR
comp=Z,269μm,14.7s
JISG Ishigakijimahi 16.74 228 P **P 13 12 16.3 +1.1**
JIJ Ishigaki jima 17.01 228 P **P 13 12 18.4 +0.2**
OKH Okha 17.27 10*d* *i*P **P 13 12 21.0 0.0**
OKH *i*S **Sn 13 15 33.3 +1.7**
OKH pmax pmax
comp=Z,4μm,9.6s
OKH smax smax
comp=E,22μm,8.1s
OKH smax smax
comp=N,12μm,9.1s
IRIF Iriomote-Funau 17.28 229 P **P 13 12 20.9 -0.3**
BJI Beijing 17.37 288 P **P 13 12 22.3 +0.2**
BJI S **S 13 15 41.9 -0.7**
BJI pmax pmax
comp=N,220nm,1.7s
BJI LR LR
comp=N,123μm,15.4s
BJI LR LR
comp=N,50μm,24.5s
BJI LR LR
comp=N,78μm,28.3s
BJT Baijiatuau 17.37 288 P **P 13 12 23.6 +1.4**
BJT pmax pmax
comp=Z,5μm,1.9s
BJT Baijiatuau 17.37 288 P **P 13 12 23.6 +1.4**
BJT IAmb IAmb 13 12 27.1
comp=Z,5μm,1.9s
JYNG Yonagunijimaku 17.67 231 P **P 13 12 26.8 +1.2**
TATO Taipei 18.24 235 P **Pn 13 12 30.8 -0.8**
TATO P **Pn 13 12 30.8 -0.8**
TATO Taipei 18.24 235 P **P 13 12 33.0 +1.2**
HIA Hailar 18.27 319 P **P 13 12 32.8 +0.8**
HIA pmax pmax
comp=Z,804nm,1.6s
HIA Hailar 18.27 319 **P 13 12 32.8 +0.8**
YHNB Yeheng 18.52 235 P **Pn 13 12 35.8 +0.7**
ZEA Zeya 18.64 340 *e*P **P 13 12 35.1 -0.9**
ZEA *e*S **Sn 13 15 57.1 -7.4**
ZEA pmax pmax
comp=N,9μm,7.6s
ZEA pmax pmax
comp=Z,12μm,9.0s
ZEA pmax pmax
comp=E,90nm,1.0s
ZEA pmax pmax
comp=N,160nm,0.9s
ZEA pmax pmax
comp=Z,350nm,1.3s
ZEA smax smax
comp=Z,9μm,11.7s
ZEA smax smax
comp=N,9μm,10.5s
ZEA smax smax
comp=E,20μm,11.8s
ZEA MLR MLR
comp=E,47μm,11.0s
ZEA MLR MLR
comp=N,85μm,14.0s
ZEA MLR MLR
comp=Z,64μm,16.0s
NACB Ninganchiao 18.73 233 P **P 13 12 35.8 -1.4**
SKR Severo-Kuril's 19.19 37*d* *i*P **P 13 12 41.5 -0.5**
SKR *e*S Sn 13 16 06.7 -11
SKR pmax pmax
comp=Z,4μm,5.1s
SKR pmax pmax
comp=Z,7μm,3.3s
SKR pmax pmax
comp=Z,317nm,1.1s
SKR MLR MLR
comp=Z,45μm,16.0s
SKR MLR MLR
comp=Z,44μm,16.0s
SSLB Suanglung 19.41 233 P **P 13 12 44.4 -0.4**
YULB Yu-li 19.47 232 P **P 13 12 43.7 -1.7**
TPUB Ta-pu 19.96 233 P **P 13 12 50.3 -0.5**
TWG Pinlang 20.03 231 P **P 13 12 51.0 -0.5**
QZH Quanzhou 20.23 240⇑ *i*P **P 13 12 54.3 +0.7**
QZH S **S 13 16 41.4 +0.9**
QZH pmax pmax
comp=Z,310nm,2.7s
QZH pmax pmax
comp=Z,22μm,9.0s
QZH LR LR
comp=Z,79μm,18.5s
QZH LR LR
comp=Z,78μm,14.7s
QZH LR LR
comp=Z,81μm,13.7s
TIY Taiyuan 20.30 281 *e*P Pn 13 12 57.3 +0.9
TIY S Sn 13 16 45.1 0.0
TIY SS **SnSn 13 17 09.4 +10**
TIY pmax pmax
comp=Z,490nm,1.1s
TIY pmax pmax
comp=Z,19μm,6.2s
TIY LR LR
comp=Z,68μm,12.4s
TIY LR LR
comp=Z,166μm,13.9s
TIY LR LR
comp=Z,195μm,16.8s
WHN Wuhan 20.51 260 ⇑P Pn 13 12 58.3 -0.5
WHN S Sn 13 16 48.4 -1.6
WHN pmax pmax
comp=Z,48μm,8.9s
KNMB Chin-men Tao 20.68 240 IAms_20 IAms_20 13 21 38.8
comp=Z,75μm,18.0s
HHC Hu-ho-hao-te 20.93 290 *e*P **P 13 13 01.1 -0.2**
HHC pP sP 13 13 05.3 -0.8
HHC sP pP 13 13 08.1 +3.5
HHC PP **PnPn 13 13 23.5 +3.8**
HHC S **S 13 16 49.0 -5.6**
HHC sS sS 13 16 55.6 -3.9
HHC pmax pmax
comp=Z,360nm,1.6s
HHC pmax pmax
comp=Z,18μm,5.2s
HHC LR LR
comp=Z,104μm,12.0s
HHC LR LR
comp=Z,128μm,12.5s
HHC LR LR
comp=Z,115μm,13.6s
BBP Basco 21.31 225 *e*P **P 13 13 07.1 +1.8**
PEA0B Petropavlovsk- 21.52 34*c**e*P **P 13 13 07.4 0.0**
PEA0B Petropavlovsk- 21.52 34 P **P 13 13 07.5 0.0**
PEA0B IAmb IAmb 13 13 31.6
comp=Z,2μm,1.7s

PEA0B IAms_20 IAms_20 13 21 56.7
comp=Z,61μm,18.0s
PETK Petropavlovsk- 21.52 34 P **P 13 13 06.9 -0.5**
comp=Z,144nm,1.0s,baz=217,slow=1.0,SNR=41
PETK PcP **PcP 13 17 08.7 -1.0**
comp=Z,7.4nm,0.7s,baz=86,slow=3.6,SNR=4.1
PETK LR LR 13 22 08.1
comp=Z,58μm,18.2s,baz=217,slow=39
PETK PKiKP **PKiKP 13 24 55.6 -0.5**
comp=Z,4.1nm,1.1s,baz=166,slow=0.6,SNR=2.7
PETK Petropavlovsk- 21.52 34 P **P 13 13 07.3 -0.1**
PETK Petropavlovsk- 21.52 34 P **P 13 13 07.3 -0.1**
PET Petropavlovsk 21.90 35 *e*P **P 13 13 11.8 +0.4**
PET *e*S **S 13 17 06.1 -7.1**
PET 13 17 41.2
PET pmax pmax
comp=Z,16μm,7.7s
PET pmax pmax
comp=Z,772nm,1.4s
PET pmax pmax
comp=Z,7μm,12.9s
PET smax smax
comp=N,35μm,11.6s
PET MLR MLR
comp=Z,72μm,17.0s
PET MLR MLR
comp=Z,66μm,18.0s
BTO Baotou 22.09 289 *e*P **P 13 13 13.9 +0.1**
BTO S **S 13 17 21.8 +4.4**
SGCP Mt. Cagua 23.04 222 *e*P **P 13 13 23.4 -0.4**
CIT Chita 23.07 319 *e*P **P 13 13 22.4 -1.6**
CIT *e* 13 13 53.2
CIT *e* 13 14 05.5
CIT *e* 13 17 36.7
CIT *e* 13 18 35.2
CIT pmax pmax
comp=Z,1μm,5.8s
CVP Callao Caves 23.60 221⇑ *e*P **P 13 13 28.6 -0.9**
XAN Xi'an 23.74 272 P **P 13 13 28.9 -1.9**
XAN S **S 13 17 45.8 -0.3**
XAN pmax pmax
comp=Z,290nm,2.3s
XAN pmax pmax
comp=Z,33μm,7.2s
XAN LR LR
comp=Z,151μm,14.1s
XAN LR LR
comp=Z,92μm,16.1s
XAN LR LR
comp=Z,153μm,18.4s
APYP Conner 23.78 223 *e*P **P 13 13 29.5 -1.7**
GUMO Guam 23.79 163 P **P 13 13 30.9 -0.4**
comp=Z,596nm,0.8s,baz=182,slow=12,SNR=23
GUMO LR LR 13 22 15.4
comp=Z,43μm,18.4s,baz=354,slow=35
GUMO Guam 23.79 163 P **P 13 13 31.3 0.0**
GUMO Guam 23.79 163 IAms_20 IAms_20 13 22 04.6
comp=Z,51μm,18.0s
CAUP Cauayan 24.23 220 *e*P **P 13 13 33.0 -2.4**
ABRA Dolores 24.25 223 *e*P P 13 13 21.9 -14
MA2 Magadan 24.42 16 LR LR 13 23 60.0
comp=Z,24μm,19.1s,slow=39
MA2 Magadan 24.42 16*c**e*P **P 13 13 35.3 -1.6**
MA2 pmax pmax
comp=Z,2μm,1.7s
MA2 MLR MLR
comp=Z,32μm,15.0s
MA2 Magadan 24.42 16 P **P 13 13 36.6 -0.3**
ENH Enshi 24.48 263 IAms_20 IAms_20 13 23 26.9
comp=Z,96μm,19.0s
HKC Hong Kong Obse 25.02 242 ⇑P **P 13 13 45.0 +2.4**
HKPS Hong Kong Po S 25.06 242 IAms_20 IAms_20 13 24 12.9
comp=Z,54μm,20.0s
GZH Guangzhou 25.12 244 P **P 13 13 39.9 -3.6**
GZH S **S 13 18 00.3 -8.0**
GZH pmax pmax
comp=Z,36μm,7.8s
GZH LR LR
comp=Z,191μm,15.8s
GZH LR LR
comp=Z,167μm,16.9s
ULN Ulaanbaatar 25.27 306 P **P 13 13 44.7 -0.2**
ULN P **P 13 13 44.7 -0.2**
ULN Ulaanbaatar 25.27 306*c* *i*P **P 13 13 44.5 -0.3**
ULN pmax pmax
comp=Z,182nm,1.4s
ULN MLR MLR
comp=Z,189μm,16.0s
BALP Baler 25.37 219 *e*P **P 13 13 47.6 +1.8**
SMPP San Manuel, Pa 25.49 221 *e*P **P 13 13 45.6 -1.4**
SONM Songino Array 25.69 306 P **P 13 13 47.8 -0.9**
comp=Z,26nm,0.9s,baz=108,slow=6.8,SNR=61
SONM PcP **PcP 13 17 19.3 +0.5**
comp=Z,5.1nm,0.8s,baz=116,slow=2.1,SNR=1.3
SONM ScP **ScP 13 20 59.1 +0.9**
comp=Z,2.3nm,1.0s,baz=108,slow=3.3,SNR=1.9
SONM LR LR 13 24 14.7
comp=Z,213μm,19.1s,baz=112,slow=37
SONM P3KPbc 13 46 45.6
comp=Z,2.8nm,1.2s,baz=246,slow=3.6,SNR=4.3
SONM Songino Array 25.69 306 P **P 13 13 48.1 -0.6**
BOLP Bolinao 25.72 223 *e*P **P 13 13 52.3 +3.3**
YAK Yakutsk 25.93 351 P **P 13 13 49.8 -0.7**
comp=Z,98nm,0.6s,baz=146,slow=2.6,SNR=86
YAK LR LR 13 23 56.5
comp=Z,71μm,19.1s,baz=166,slow=36
YAK Yakutsk 25.93 351*c* *i*P **P 13 13 49.8 -0.7**
YAK *e*S **S 13 18 20.5 +0.1**
YAK pmax pmax
comp=Z,636nm,1.1s
YAK pmax pmax
comp=N,553nm,1.2s
YAK pmax pmax
comp=E,100nm,1.1s
YAK smax smax
comp=E,22μm,5.7s
YAK smax smax
comp=N,19μm,4.8s
YAK MLR MLR
comp=Z,75μm,19.0s
YAK Yakutsk 25.93 351 P **P 13 13 49.3 -1.1**
YAK IAmb IAmb 13 13 57.7
comp=Z,498nm,1.0s
YAK IAms_20 IAms_20 13 23 35.7
comp=Z,72μm,20.0s
PVCP Virac 26.04 212 *e*P **P 13 13 50.2 -1.6**
POLP Polilio Island 26.05 217 *e*P **P 13 13 52.5 +0.5**
JCNP Jose Panganiba 26.07 215 *e*P **P 13 13 49.2 -2.9**
SCSP San Jose Seism 26.26 213 *e*P **P 13 13 51.9 -1.9**
BOD Bodaibo 26.43 331 *e*P **P 13 13 53.3 -1.7**
BOD pmax pmax
comp=Z,200nm,2.0s
CNP Catarman 26.81 210 *e*P **P 13 14 05.4 +6.7**
TGY Tagaytay City 27.08 218 P **P 13 14 01.4 0.0**
comp=Z,146nm,0.4s,baz=90,slow=1.5,SNR=7.0
BOAC Boac 27.20 216 *e*P P 13 14 11.3 +9.1
LZH Lanzhou 27.34 279⇑ P **P 13 14 03.4 -0.3**
LZH sP sP 13 14 13.0 +4.7
LZH PP **PnPn 13 14 50.3 +2.8**
LZH S **S 13 18 40.8 -2.8**
LZH sS sS 13 18 50.5 +1.0
LZH SS **SnSn 13 20 01.6 +10**
LZH pmax pmax
comp=Z,71nm,1.5s
LZH pmax pmax
comp=Z,14μm,8.2s
LZH LR LR
comp=Z,184μm,15.6s
PGP Puerto Galera 27.59 218⇑ *e*P **P 13 14 04.5 -1.4**
LUBP Lubang 27.75 219 *e*P **P 13 14 03.4 -3.8**
SEY Seymchan 27.80 14 P **P 13 14 07.5 +0.3**
comp=Z,287nm,1.0s,baz=214,slow=7.0,SNR=34
SEY LR LR 13 24 50.1
comp=Z,22μm,21.4s,baz=202,slow=36
SEY Seymchan 27.80 14 *i* P **P 13 14 07.4 +0.1**
OTRP Odiongan 28.07 215 *e*P **P 13 14 08.3 -1.8**
OCLP Ormoc 28.16 209 *e*P **P 13 14 10.7 -0.2**
IRK Irkutsk 28.31 314 *e*P **P 13 14 11.0 -1.0**
IRK pmax pmax
comp=Z,587nm,3.2s
ZAK Zakamensk 28.33 310 *e*P **P 13 14 11.1 -1.2**
ZAK pmax pmax
comp=Z,112nm,1.4s
GYA Guiyang 28.37 258 ⇓P **P 13 14 12.3 -0.6**
GYA PP **PnPn 13 15 06.6 +5.0**

GYA S **S** **13 18 53.3 -6.6**
GYA pmax pmax
comp=Z,75nm,1.4s
GYA pmax pmax
comp=Z,6µm,10.8s
GYA LR LR
comp=Z,57µm,14.7s
GYA LR LR
comp=Z,155µm,15.0s
GYA LR LR
comp=Z,194µm,15.7s
SJMP San Jose 28.41 216 *e*P P 13 14 20.1 +7.0
TLY Talaya 28.49 313 P **P** **13 14 13.1 -0.5**
comp=Z,2.7nm,0.4s,baz=128,slow=8.0,SNR=6.6
TLY LR LR 13 25 51.5
comp=Z,96µm,18.8s,baz=108,slow=37
TLY Talaya 28.49 313 P **P** **13 14 13.0 -0.7**
TLY P **P** **13 14 13.0 -0.7**
TLY Talaya 28.49 313*c i*P **P** **13 14 12.0 -1.6**
TLY *e* 13 15 06.8
TLY *e*PPP PPP 13 15 13.3
TLY *e* 13 17 20.5
TLY *e*S **S** **13 19 04.3 +3.2**
TLY pmax pmax
comp=Z,463nm,2.0s
TLY MLR MLR
comp=Z,421µm,18.0s
GLSP General Luna, 28.78 205 *e*P **P** **13 14 12.3 -4.2**
CD2 Chengdu 28.84 269⇑ *i*P **P** **13 14 16.5 -0.5**
CD2 S **S** **13 19 08.9 +1.8**
CD2 sS sS 13 19 13.8 +0.8
CD2 ScP **ScP** **13 21 06.8 -1.1**
CD2 PcS **PcS** **13 21 09.0 -0.3**
CD2 pmax pmax
comp=Z,80nm,1.5s
CD2 pmax pmax
comp=Z,11µm,9.8s
CD2 LR LR
comp=Z,220µm,17.8s
MSLP Maasin 28.91 207 *e*P **P** **13 14 17.5 0.0**
BUSP Coron 29.25 217 *e*P **P** **13 14 19.1 -1.5**
GUIM Jordan 29.36 212 *e*P **P** **13 14 21.7 +0.1**
CUYO Cuyo Island 29.86 215 *e*P P 13 14 34.6 +8.6
GTA Gaotai 29.98 287⇑ P **P** **13 14 26.0 -1.1**
GTA pP pP 13 14 30.8 +0.4
GTA sP sP 13 14 33.3 +1.6
GTA PP **PP** **13 15 25.9 -8.7**
GTA PcP **PcP** **13 17 29.1 -0.3**
GTA S **S** **13 19 24.0 -1.0**
GTA sS sS 13 19 33.8 +3.2
GTA SS **ScP** **13 21 04.3 -7.2**
GTA PcS **PcS** **13 21 11.0 -1.8**
GTA pmax pmax
comp=Z,46nm,1.7s
GTA LR LR
comp=Z,94µm,17.1s
GTA LR LR
comp=Z,60µm,20.7s
GTA LR LR
comp=Z,80nm,20.0s
CNOP Candoni, Negro 30.06 211 *e*P **P** **13 14 26.1 -1.6**
MOY Mondy 30.06 312 *e*P **P** **13 14 26.5 -1.2**
MOY pmax pmax
comp=Z,261nm,3.7s
QIZ Qiongzhong 30.22 242 P **P** **13 14 28.8 -0.4**
QIZ S **S** **13 19 29.8 +1.1**
QIZ pmax pmax
comp=Z,5µm,6.1s
QIZ LR LR
comp=Z,78µm,17.0s
QIZ LR LR
comp=Z,85µm,17.8s
QIZ LR LR
comp=Z,59µm,14.4s
ENPP El Nido 30.31 218 *e*P **P** **13 14 28.8 -1.2**
WAKE Wake Island 30.56 117 IAMs_20 IAMs_20 13 24 28.8
comp=Z,43µm,21.0s
BUKP Musuan 30.92 205 *e*P **P** **13 14 34.4 -1.1**
MATI Mati 31.41 203 *e*P **P** **13 14 36.8 -2.9**
DAV Davao City (W) 31.51 204 IAMs_20 IAMs_20 13 29 17.2
comp=Z,36µm,18.0s
DAV Davao City (W) 31.51 204⇑ *e*P **P** **13 14 38.6 -1.9**
PAGZ Pagadian 31.56 208 *e*P **P** **13 14 39.4 -1.7**
KCP Kidapawan 31.73 205⇑ *i*P **P** **13 14 42.3 -0.3**
KMI Kunming 32.11 259⇑ *i*P **P** **13 14 46.3 +0.2**
KMI pP sP 13 14 50.1 -0.7
KMI sP pP 13 14 51.5 +2.1
KMI PP **PP** **13 15 48.3 -10**
KMI S **S** **13 19 58.5 -0.2**
KMI pmax pmax
comp=Z,86nm,1.6s
KMI pmax pmax
comp=Z,6µm,10.2s
KMI LR LR
comp=Z,52µm,17.2s
KMI LR LR
comp=Z,170µm,16.4s
KMI LR LR
comp=Z,177µm,17.2s
SKMP Bagumbayan, Su 32.37 205 *e*P **P** **13 14 47.8 -0.4**
DDMP Don Marcelino, 32.37 203 *e*P **P** **13 14 47.7 -0.5**
AMKA Amchitka 32.75 50 P **P** **13 14 48.5 -2.7**
BATP Bataraza 33.19 218 *e*P **P** **13 14 55.5 +0.2**
SGSI Sangihe 34.71 202 P **P** **13 15 07.8 -0.8**
comp=Z,3µmcomp=Z,176nm,0.9s
BILL Bilibino 35.24 18*ce*P **P** **13 15 12.5 -0.1**
BILL *e* 13 16 36.3
BILL *i* S **S** **13 20 41.9 -4.0**
BILL *i* SS **SnSn** **13 23 04.0 +0.9**
BILL pmax pmax
comp=Z,364nm,1.5s
BILL pmax pmax
comp=Z,1µm,2.1s
BILL MLR MLR
comp=Z,41µm,17.0s
BILL Bilibino 35.24 18 P **P** **13 15 12.0 -0.6**
BILL IAmb IAmb 13 15 17.2
comp=Z,779nm,1.8s
BILL IAMs_20 IAMs_20 13 32 01.7
comp=Z,45µm,19.0s
ADK Adak 35.30 50 P **P** **13 15 12.3 -1.0**
ADK pmax pmax
comp=Z,468nm,1.3s
ADK Adak 35.30 50 P **P** **13 15 12.3 -1.0**
ADK IAmb IAmb 13 15 23.6
comp=Z,468nm,1.3s
TIXI Tiksi 35.39 355*ce*P **P** **13 15 12.6 -1.3**
TIXI pmax pmax
comp=Z,1µm,1.7s
TIXI Tiksi 35.39 355 P **P** **13 15 13.1 -0.8**
TIXI IAmb IAmb 13 15 18.7
comp=Z,518nm,1.2s
NONG Nongkai 35.72 248 P **P** **13 15 18.1 +0.8**
comp=Z,17µmcomp=Z,885nm,1.1s
UBPT Khong Chiam 35.82 242 P **P** **13 15 19.0 +0.9**
comp=Z,6µmcomp=Z,176nm,1.4s
UBPT Khong Chiam 35.82 242 IAMs_20 IAMs_20 13 30 00.0
comp=Z,45µm,20.0s
MYLDM Lahad Datu 36.01 214 P **P** **13 15 20.2 +0.5**
MYLDM IAmb IAmb 13 15 45.1
comp=Z,281nm,1.2s
MYLDM IAMs_20 IAMs_20 13 27 00.9
comp=Z,32µm,19.0s
DLV T Lat 36.11 235 IAMs_20 IAMs_20 13 29 37.1
comp=Z,31µm,21.0s
KKM Kota Kinabalu 36.34 218 P **P** **13 15 22.2 -0.5**
LKP Lekhapani 36.61 268 *e*P **P** **13 15 25.2 +0.4**
LKP IAmb IAmb 13 15 29.4
comp=Z,154nm,1.0s
ATKA Atka Island 36.86 50 P **P** **13 15 27.2 +0.6**
ATKA IAmb IAmb 13 15 33.0
comp=Z,804nm,1.4s
ATKA IAMs_20 IAMs_20 13 27 55.8
comp=Z,33µm,21.0s
TNTI Ternate 37.00 198 P **P** **13 15 27.8 -0.3**
comp=Z,6µmcomp=Z,6µmcomp=Z,290nm,1.9s
TNTI Ternate 37.00 198 P **P** **13 15 27.6 -0.6**
DIBR DIBRUGARH 37.30 268 *e*P **P** **13 15 31.5 +0.8**
PAYA Payao 37.44 253 P **P** **13 15 33.0 +1.0**
comp=Z,10µmcomp=Z,1µm,1.0s
BAKI Biak 37.67 183 P **P** **13 15 34.1 +0.2**
comp=Z,3µmcomp=Z,101nm,0.9s
SIJI Sorong 37.82 191 P **P** **13 15 34.3 -0.9**
comp=Z,184nm,0.8s,baz=26,slow=6.9,SNR=85
UTTA Uttaradit 37.87 250 P **P** **13 15 36.0 +0.4**
comp=Z,2µmcomp=Z,160nm,1.0s
CHAI Chaiyaphum 37.94 247 P **P** **13 15 36.0 -0.2**
comp=Z,5µmcomp=Z,464nm,1.4s
LAMP Lampang 38.10 252 P **P** **13 15 38.0 +0.4**
comp=Z,2µmcomp=Z,261nm,0.9s
MOKO MOKOCHONG 38.12 267 *e*P **P** **13 15 37.9 +0.1**
MOKO IAmb IAmb 13 15 52.7
comp=Z,450nm,1.1s
KMSI Cibinong 38.13 203 P **P** **13 15 37.8 +0.1**
comp=Z,486nmcomp=Z,6µmcomp=Z,749nm,0.9s
ZIRO ZIRO 38.13 269 *e*P **P** **13 15 38.1 +0.2**
ZIRO IAmb IAmb 13 15 46.7
comp=Z,184nm,1.0s
JORH JORHAT 38.14 268 *e*P **P** **13 15 38.6 +0.8**
CM34 Chiang Mai Arr 38.28 253 P **P** **13 15 39.0 -0.1**
PHIT Phitsanulok 38.31 250 P **P** **13 15 40.0 +0.7**
comp=Z,3µmcomp=Z,201nm,1.1s
CM35 Chiang Mai Arr 38.38 253 P **P** **13 15 40.0 +0.1**
GTOI Gorontalo 38.38 204 P **P** **13 15 38.7 -1.2**
comp=Z,3µmcomp=Z,168nm,1.2s
SMPI Sarmi 38.44 179 P **P** **13 15 40.7 +0.4**
comp=Z,7µmcomp=Z,3µmcomp=Z,94nm,0.8s
CM33 Chiang Mai Arr 38.46 253 P **P** **13 15 40.0 -0.6**
CMMT Chiang Mai 38.46 253 P **P** **13 15 40.7 +0.1**
comp=Z,4µmcomp=Z,93nm,1.0s
CHTO Chiang Mai 38.46 253 P **P** **13 15 40.8 +0.2**
CHTO P **P** **13 15 40.8 +0.2**
CHTO Chiang Mai 38.46 253 P **P** **13 15 40.6 0.0**
CHTO pmax pmax
comp=Z,114nm,0.9s
CHTO MLR MLR
comp=Z,66µm,18.0s
CHTO Chiang Mai 38.46 253 P **P** **13 15 40.6 0.0**
WMQ Urumqi 38.49 297 P **P** **13 15 40.8 +0.1**
WMQ PP **PP** **13 17 14.5 +5.8**
WMQ S **S** **13 21 41.9 +5.7**
WMQ pmax pmax
comp=Z,120nm,2.1s
WMQ pmax pmax
comp=Z,10µm,8.1s
WMQ LR LR
comp=Z,71µm,19.1s
WMQ LR LR
comp=Z,54µm,16.5s
WMQ LR LR
comp=Z,52µm,21.5s
CM36 Chiang Mai Arr 38.52 253 P **P** **13 15 41.0 -0.1**
CM32 Chiang Mai Arr 38.63 253 P **P** **13 15 42.0 0.0**
CM09 Chiang Mai Arr 38.64 253 P **P** **13 15 42.8 +0.7**
comp=Z,610nmcomp=Z,72nm,0.9s
CM31 Chiang Mai Arr 38.67 253 P **P** **13 15 43.0 +0.6**
comp=Z,31µmcomp=Z,29µmcomp=Z,2µm,0.8s
CM31 Chiang Mai Arr 38.67 253 P **P** **13 15 40.6 -1.8**
CMAR Chiang Mai Arr 38.67 253 P **P** **13 15 42.0 -0.4**
comp=Z,40nm,0.8s,baz=45,slow=7.8,SNR=147
CMAR PcP **PcP** **13 17 54.5 +0.1**
comp=Z,21nm,1.1s,baz=17,slow=2.7,SNR=6.8
CMAR LR LR 13 30 37.1
comp=Z,19µm,21.6s,baz=70,slow=35
CMAR Chiang Mai Arr 38.67 253 P **P** **13 15 41.1 -1.3**
KWAJ Kwajalein Atol 38.67 128 IAMs_20 IAMs_20 13 28 48.9
comp=Z,31µm,21.0s
CM04 Chiang Mai Arr 38.68 253 P **P** **13 15 43.0 +0.5**
comp=Z,649nmcomp=Z,80nm,0.8s
CM01 Chiang Mai Arr 38.68 253 P **P** **13 15 43.0 +0.5**
comp=Z,601nmcomp=Z,66nm,0.9s
CM02 Chiang Mai Arr 38.68 253 P **P** **13 15 43.0 +0.5**
comp=Z,629nmcomp=Z,81nm,0.8s
CM15 Chiang Mai Arr 38.69 253 P **P** **13 15 43.0 +0.4**
comp=Z,529nmcomp=Z,65nm,0.8s
CM05 Chiang Mai Arr 38.70 253 P **P** **13 15 43.1 +0.5**
comp=Z,186nmcomp=Z,602nmcomp=Z,68nm,0.8s
KOHI KOHIMA 38.71 266 *e*P **P** **13 15 41.4 -1.4**
KOHI IAmb IAmb 13 15 56.6
comp=Z,316nm,1.4s
CM13 Chiang Mai Arr 38.72 253 P **P** **13 15 43.2 +0.4**
comp=Z,679nmcomp=Z,80nm,0.8s
SUKH Sukhothai 38.72 251 P **P** **13 15 43.4 +0.6**
comp=Z,2µmcomp=Z,184nm,0.9s
TOLI2 Tolitoli 38.74 208 P **P** **13 15 41.6 -1.2**
MRSI Marisa 38.90 206 P **P** **13 15 45.0 +0.8**
comp=Z,9µmcomp=Z,6µmcomp=Z,300nm,1.2s
JAY Jayapura 39.04 176 P **P** **13 15 44.5 -1.0**
comp=Z,53nm,0.9s,baz=327,slow=6.5,SNR=19
JAY Jayapura 39.04 176 P **P** **13 15 45.6 +0.2**
comp=Z,5µmcomp=Z,2µmcomp=Z,56nm,1.0s
GENI Genyem 39.09 176 P **P** **13 15 45.8 0.0**
comp=Z,12µmcomp=Z,6µmcomp=Z,185nm,1.1s
SRAK Srakaew 39.12 244 P **P** **13 15 43.3 -2.8**
comp=Z,6µmcomp=Z,45µmcomp=Z,5µm,1.0s
TEZP TEZPUR 39.37 268 *e*P **P** **13 15 47.9 -0.2**
TEZP IAmb IAmb 13 16 00.9
comp=Z,899nm,1.9s
LSA Lhasa 39.42 274 P **P** **13 15 50.0 +0.9**
LSA pP **sP** **13 15 54.6 +0.8**
LSA S **S** **13 21 52.9 +1.6**
LSA pmax pmax
comp=Z,160nm,1.7s
LSA pmax pmax
comp=Z,6µm,2.9s
LSA LR LR
comp=Z,49µm,10.0s
LSA LR LR
comp=Z,47µm,10.0s
LSA LR LR
comp=Z,88µm,10.7s
LSA Lhasa 39.42 274 P **P** **13 15 49.3 +0.1**
LSA Lhasa 39.42 274 P **P** **13 15 49.2 +0.1**
LSA P **P** **13 15 49.2 +0.1**
LSA Lhasa 39.42 274 IAMs_20 IAMs_20 13 33 29.1
comp=Z,32µm,20.0s
MANU Manus Island 39.48 165 P **P** **13 15 48.7 -0.4**
MHMT Maesarieng 39.61 253 P **P** **13 15 51.1 +0.8**
comp=Z,7µmcomp=Z,210nm,1.1s
FAKI Fak Fak 39.70 189 P **P** **13 15 51.0 +0.1**
comp=Z,10µmcomp=Z,6µmcomp=Z,352nm,0.9s
FAKI Fak Fak 39.70 189 P **P** **13 15 49.8 -1.1**
FAKI IAMs_20 IAMs_20 13 29 19.1
comp=Z,42µm,20.0s
MPSI Mapaga 39.78 209 P **P** **13 15 52.3 +0.7**
comp=Z,8µmcomp=Z,5µmcomp=Z,166nm,1.6s
LUWI Luwuk 40.04 204 P **P** **13 15 52.2 -1.5**
comp=Z,7µmcomp=Z,6µmcomp=Z,493nm,1.3s
UTHA Uthaitani 40.05 249 P **P** **13 15 54.8 +0.9**
comp=Z,1µmcomp=Z,123nm,1.3s
SANI Sanana 40.05 199 P **P** **13 15 51.3 -2.6**
comp=Z,9µmcomp=Z,6µmcomp=Z,192nm,0.8s
ZAA0 Zalesovo Array 40.10 313 IAMs_20 IAMs_20 13 32 30.8
comp=Z,44µm,22.0s
ZALV Zalesovo Beam 40.10 313 P **P** **13 15 52.1 -1.8**
comp=Z,18nm,1.1s,baz=93,slow=7.4,SNR=28
ZALV PcP **PcP** **13 17 57.7 -0.6**
comp=Z,52nm,0.7s,baz=102,slow=2.1,SNR=20
ZALV LR LR 13 32 41.8
comp=Z,38µm,19.1s,baz=92,slow=37
ZALV Zalesovo Beam 40.10 313 P **P** **13 15 51.4 -2.5**
ZALV Zalesovo Beam 40.10 313 P **P** **13 15 51.4 -2.5**
ZSN Zaisan 40.12 303⇑ *i*P **P** **13 15 53.9 -0.3**
ZSN *e*PP **PP** **13 17 26.3 0.0**
ZSN LR LR 13 32 10.1
comp=Z,14µm,10.9s
ZSN Zaisan 40.12 303*c i*P **P** **13 15 53.9 -0.3**
ZSN *e* 13 17 26.3
ZSN MLR MLR
comp=Z,14µm,11.0s
NIKH Nikolski High 40.16 49 IAMs_20 IAMs_20 13 29 59.1
comp=Z,32µm,21.0s
SILR SILCHAR 40.19 266 *e*P **P** **13 15 56.3 +1.3**
SILR IAmb IAmb 13 16 10.8
comp=Z,938nm,1.2s
APSI Ampana 40.29 206 P **P** **13 15 55.9 +0.1**
comp=Z,5µmcomp=Z,5µmcomp=Z,290nm,1.4s
GUWA GUWAHATI 40.44 269 *e*P **P** **13 15 56.3 -0.7**
GUWA IAmb IAmb 13 16 11.1
comp=Z,566nm,1.5s
GAMB Gambell 40.53 32 IAMs_20 IAMs_20 13 34 07.2
comp=Z,24µm,19.0s
SHL Shillong 40.57 268 *e*P **P** **13 15 58.4 0.0**
SHL IAmb IAmb 13 16 14.5
comp=Z,171nm,1.1s
SHL Shillong 40.57 268 P **P** **13 15 58.0 -0.4**
MSAI Masohi 40.65 194 P **P** **13 15 59.4 +0.6**
comp=Z,2µmcomp=Z,114nm,1.1s
PATY Pattaya 40.70 244 P **P** **13 16 01.0 +1.7**
comp=Z,240nm,1.1s
NLAI Namlea 40.93 197 P **P** **13 16 01.1 0.0**
comp=Z,5µmcomp=Z,169nm,1.6s
SRDT SRDT 41.05 248 P **P** **13 16 03.0 +0.8**
comp=Z,166nm,1.4s
SAIH SAIHA 41.16 263 *e*P **P** **13 16 02.4 -0.8**
SAIH IAmb IAmb 13 16 15.1
comp=Z,384nm,0.6s
SBUM Sibu 41.45 221 IAMs_20 IAMs_20 13 34 13.9
comp=Z,27µm,19.0s
SBUM Sibu 41.45 221 P **P** **13 16 06.0 +0.6**
SMKI Samarinda 41.59 212 P **P** **13 16 08.8 +2.2**
comp=Z,19µmcomp=Z,11µmcomp=Z,379nm,1.5s
PHET Kaeng Krachan 41.61 245 P **P** **13 16 07.0 +0.3**
comp=Z,5µmcomp=Z,618nm,0.9s
BNDI Bandanaira 41.62 192 P **P** **13 16 06.9 +0.1**
comp=Z,13µmcomp=Z,18µmcomp=Z,1µm,1.0s
AGT Agartala 41.87 266 *e*P **P** **13 16 09.8 +1.0**
AGT IAmb IAmb 13 16 17.2
comp=Z,509nm,1.2s
AGT *e*S **S** **13 22 19.9 -7.0**
MK31 Makanchi Array 41.93 302*c i*P **P** **13 16 07.7 -1.4**
MK31 Makanchi Array 41.93 302 P **P** **13 16 08.3 -0.8**
MKAR Makanchi Array 41.93 302 P **P** **13 16 07.4 -1.7**
comp=Z,15nm,0.7s,baz=89,slow=9.5,SNR=62
MKAR PP **PnPn** **13 17 52.2 +1.1**
comp=Z,12nm,0.9s,baz=82,slow=8.7,SNR=4.6
MKAR PcP **PcP** **13 18 04.7 +0.2**
comp=Z,31nm,1.0s,baz=78,slow=5.4,SNR=6.2
MKAR ScP **ScP** **13 21 54.0 -0.9**
comp=Z,2.8nm,0.9s,baz=94,slow=5.8,SNR=4.0
MKAR PKiKP **PKiKP** **13 25 10.0 -0.5**
comp=Z,0.5nm,0.7s,baz=43,slow=1.4,SNR=1.9
MKAR LR LR 13 34 08.3
comp=Z,127µm,18.4s,baz=84,slow=37
MKAR Makanchi Array 41.93 302 P **P** **13 16 08.2 -1.0**
BELO BELONIA 42.02 265 *e*P **P** **13 16 09.7 -0.3**
MAKZ Makanchi 42.14 302 P **P** **13 16 08.3 -2.6**
MAKZ Makanchi 42.14 302 P **P** **13 16 09.8 -1.0**
GTK Tadong 42.44 272 *e*P **P** **13 16 13.2 -0.5**
GTK IAmb IAmb 13 16 26.8
comp=Z,104nm,1.1s
BKB Balikpapan 42.46 212 P **P** **13 16 13.8 +0.2**
comp=Z,17µmcomp=Z,12µmcomp=Z,429nm,1.5s
NRIK Noril'sk 42.46 336 P **P** **13 16 12.7 -0.4**
comp=Z,50nm,0.9s,baz=122,slow=6.7,SNR=59
NRIK PcP **PcP** **13 18 06.5 +0.7**
comp=Z,39nm,0.8s,baz=100,slow=4.8,SNR=4.8
NRIK LR LR 13 34 37.2
comp=Z,85µm,21.9s,baz=116,slow=37
NRIK Noril'sk 42.46 336*d i*P **P** **13 16 11.5 -1.6**
NRIK pmax pmax
comp=Z,186nm,1.3s
NRIK MLR MLR
comp=Z,133µm,16.0s
TNA Tin City 42.60 30 P **P** **13 16 14.4 +0.2**
baz=254
TNA S **S** **13 22 38.6 +2.0**
baz=254
TNA Tin City 42.60 30 P **P** **13 16 14.1 -0.1**
TNA IAmb IAmb 13 16 21.2
comp=Z,502nm,1.2s
TNA IAMs_20 IAMs_20 13 34 47.7
comp=Z,24µm,19.0s
RABL Rabaul 42.75 159 P **P** **13 16 16.2 +0.2**
RABL IAMs_20 IAMs_20 13 31 44.2
comp=Z,23µm,20.0s
KRVT Keravat (AS076 42.82 159 P **P** **13 16 17.1 +0.5**
baz=180,slow=1.0
KDI Kendari 42.83 203 P P 13 16 26.5 +10
TTSI Tana Toraja 42.93 207 P **P** **13 16 19.5 +2.1**
comp=Z,3µmcomp=Z,77nm,1.9s
SEM Semipalatinsk 42.94 307 *e*P **P** **13 16 16.1 -1.5**
SEM *i* PP **PP** **13 17 57.2 +0.3**
SEM LR LR 13 33 48.7
comp=Z,13µm,12.5s
SEM Semipalatinsk 42.94 307 *e*P **P** **13 16 16.0 -1.5**
SEM *i* 13 17 57.2
SEM MLR MLR
comp=Z,13µm,13.0s
MTKI Muara Teweh, K 43.06 215 P **P** **13 16 19.1 +0.5**
comp=Z,8µmcomp=Z,7µmcomp=Z,164nm,2.0s
TAPN Taplejung 43.14 272 *e*P **P** **13 16 19.6 +0.1**
comp=Z,343nm,1.1s
KSM Kuching 43.29 222 P **P** **13 16 21.0 +0.6**
ANM Nome 43.41 32 IAMs_20 IAMs_20 13 33 42.3
comp=Z,22µm,20.0s
ODAN Odare 43.61 272 *e*P **P** **13 16 23.3 +0.1**
comp=Z,629nm,1.3s
SPSI Sidrap Palu 43.80 207 P **P** **13 16 25.6 +1.2**
comp=Z,8µmcomp=Z,4µmcomp=Z,96nm,1.8s
STKI Sintang 43.86 220 P **P** **13 16 26.4 +1.4**
KURK Kurchatov 43.95 308 P **P** **13 16 24.4 -0.9**
KURK P **P** **13 16 24.4 -0.9**
KURK Kurchatov 43.95 308*c i*P **P** **13 16 22.7 -2.7**
KURK pmax pmax
comp=Z,86nm,0.8s
KURK MLR MLR
comp=Z,112µm,16.0s
KURK Kurchatov 43.95 308 P **P** **13 16 24.0 -1.3**
KURBB Kurchatov Arra 44.02 308 P **P** **13 16 23.3 -2.6**
BNSI Bone 44.08 206 P **P** **13 16 28.6 +1.9**
comp=Z,7µmcomp=Z,181nm,1.1s
RAMN Ramite 44.21 273 *e*P **P** **13 16 28.1 +0.1**
comp=Z,308nm,0.9s
GUN Gumba 44.37 274 *e*P **P** **13 16 29.6 +0.1**
PDGK Podgornoye 44.45 297 P **P** **13 16 29.1 -0.6**
SHLS Shalkode 44.51 297⇑ *i*P **P** **13 16 27.4 -2.8**
SHLS *i* PP **PcP** **13 18 10.2 -3.2**
SHLS *e*S **S** **13 23 01.5 -4.0**
SHLS LR LR 13 35 23.1
comp=Z,6µm,11.6s
SHLS Shalkode 44.51 297*c i*P **P** **13 16 27.3 -2.8**
SHLS *i* 13 18 10.2
SHLS *e*S **S** **13 23 01.5 -4.0**
SHLS MLR MLR
comp=Z,6µm,12.0s
KBKI Kotabaru 44.60 212 P **P** **13 16 31.2 +0.3**
comp=Z,7µmcomp=Z,18nm,0.6s
KAPI Kappang 44.77 206 P **P** **13 16 32.4 +0.1**
comp=Z,67nm,0.8s,baz=18,slow=5.0,SNR=37
KAPI Kappang 44.77 206 P **P** **13 16 31.3 -1.0**
KAPI P **P** **13 16 31.3 -1.0**
KAPI P **P** **13 16 31.3 -1.0**
SAUI Saumlaki 44.81 189 P **P** **13 16 32.7 +0.1**
comp=Z,20µmcomp=Z,10µmcomp=Z,520nm,1.1s
SURT Suratani 44.88 242 P **P** **13 16 35.0 +1.8**
comp=Z,64nmcomp=Z,7.2nm,1.1s
TDK Taldyqorghan 44.89 300 *e*P **P** **13 16 32.4 -0.7**
TDK *i* S **S** **13 23 11.6 +0.9**
TDK LR LR 13 35 25.3
comp=Z,30µm,13.5s
TDK Taldyqorghan 44.89 300 *e*P **P** **13 16 32.3 -0.7**
TDK *i* S **S** **13 23 11.6 +0.9**
TDK MLR MLR
comp=Z,30µm,13.0s
PKI Pulchoki 44.90 274 *e*P **P** **13 16 33.4 -0.2**
comp=Z,485nm,1.5s
PKIN Phulchoki 44.90 274 *e*P **P** **13 16 33.4 -0.2**
comp=Z,560nm,1.6s
KKN Kakani 44.91 274 *e*P **P** **13 16 33.7 +0.1**
comp=Z,302nm,1.0s
BKSI Bulukumba 44.93 205 P **P** **13 16 32.8 -0.7**
comp=Z,11µmcomp=Z,5µmcomp=Z,120nm,1.2s
KPKS Kokpek 45.00 298⇑ *i*P **P** **13 16 33.4 -0.6**
KPKS *i* PP **PP** **13 18 18.7 -0.3**
KPKS *e*S **S** **13 23 12.7 +0.1**
KPKS LR LR 13 35 29.1
comp=Z,15µm,12.6s
KPKS Kokpek 45.00 298*c i*P **P** **13 16 33.4 -0.6**
KPKS *i* 13 18 18.6
KPKS *e*S **S** **13 23 12.7 +0.1**
KPKS MLR MLR
comp=Z,15µm,13.0s
TRTT Trang 45.03 240 P **P** **13 16 36.0 +1.6**
comp=Z,8µmcomp=Z,216nm,1.4s
DMN Daman 45.12 274 *e*P **P** **13 16 35.3 -0.1**
comp=Z,785nm,1.7s
RDOG Red Dog Mine 45.14 27 IAMs_20 IAMs_20 13 34 57.8
comp=Z,21µm,21.0s
SATY Saty 45.29 297 *e*P **P** **13 16 36.0 -0.3**
SATY *e*S **S** **13 23 17.3 +0.4**
SATY LR LR 13 36 07.4
comp=Z,9µm,12.2s
SATY Saty 45.29 297 *e*P **P** **13 16 36.0 -0.3**
SATY *e*S **S** **13 23 17.2 +0.4**
SATY MLR MLR
comp=Z,9µm,12.0s

BBKI **Banjar Baru** 45.32 213 P P 13 16 36.5 -0.2
comp=Z,7µmcomp=Z,7µmcomp=Z,251nm,1.4s
GKN **Gorkha** 45.33 275 *e*P P 13 16 37.0 +0.1
comp=Z,664nm,1.1s
BSSI **Bau Bau, Buton** 45.57 205 P P 13 16 36.9 -1.7
comp=Z,7µmcomp=Z,3µmcomp=Z,116nm,1.4s
CNBA **Chernabura Isl** 45.62 46 P P 13 16 38.9 +0.2
CNBA IAmb IAmb 13 16 43.0
comp=Z,498nm,1.3s
CNBA IAMs_20 IAMs_20 13 33 47.5
comp=Z,29µm,22.0s
DANN **Dangsing** 45.89 276 *e*P P 13 16 41.6 +0.1
comp=Z,525nm,0.8s
PKDT **Phuket** 45.94 241 P P 13 16 43.1 +1.5
PBKI **Pangkalan Bun** 46.14 218 P P 13 16 44.8 +1.7
comp=Z,8µmcomp=Z,172nm,1.2s
KULM **Kulim** 46.21 237 P P 13 16 44.3 +0.6
KULM IAmb IAmb 13 16 46.7
comp=Z,193nm,1.2s
KULM **Kulim** 46.21 237 P P 13 16 45.0 +1.3
BOK **Bokaro** 46.22 269 *e*P P 13 16 44.2 +0.5
BOK IAmb IAmb 13 16 51.2
comp=Z,371nm,1.6s
BOK *e*S S 13 23 21.6 -8.7
MDOK **Medeo** 46.23 298 *i* P P 13 16 43.4 -0.5
MDOK *i* PP PP 13 18 32.8 +0.6
MDOK *i* S S 13 23 30.8 +0.3
MDOK **Medeo** 46.23 298 *i* P P 13 16 43.3 -0.5
MDOK *i* 13 18 32.7
MDOK *i* S S 13 23 30.8 +0.3
KOLN **Koldanda** 46.26 275 *e*P P 13 16 44.6 +0.3
comp=Z,985nm,1.4s
AAA **Alma-Ata** 46.32 298 *e*P P 13 16 44.2 -0.3
AAA *e*S S 13 23 31.9 +0.4
AAA LR LR 13 36 17.4
comp=Z,19µm,12.9s
AAA **Alma-Ata** 46.32 298 *e*P P 13 16 44.1 -0.3
AAA *e*S S 13 23 31.9 +0.4
AAA MLR MLR
comp=Z,19µm,13.0s
TNSS **Tian-Shan** 46.33 298 *e*P P 13 16 44.5 -0.4
TNSS **Tian-Shan** 46.33 298 *e*P P 13 16 44.5 -0.4
DGPR **DIGLIPUR** 46.45 252 *e*P P 13 16 45.5 -0.1
DGPR IAmb IAmb 13 16 58.9
comp=Z,484nm,1.1s
IPM **Ipoh** 46.55 235 P P 13 16 46.2 -0.3
IPM IAmb IAmb 13 16 48.6
comp=Z,186nm,0.9s
IPM **Ipoh** 46.55 235 P P 13 16 47.0 +0.5
KUU **Kurty** 46.57 299 *e*P P 13 16 45.1 -1.2
comp=Z,72nm,1.9s
KUU *e*S S 13 23 34.7 -0.3
KUU LR LR 13 36 15.3
comp=Z,18µm,12.4s
KUU **Kurty** 46.57 299 *e*P P 13 16 45.1 -1.2
KUU *e*S S 13 23 34.7 -0.3
KUU pmax pmax
comp=Z,72nm,1.9s
KUU MLR MLR
comp=Z,18µm,12.0s
PYUN **Piuthan** 46.61 276 *e*P P 13 16 47.2 +0.2
comp=Z,1µm,1.1s
PMG **Port Moresby** 46.62 167 P P 13 16 46.9 0.0
comp=Z,33nm,0.7s,baz=359,slow=10.0,SNR=10
PMG PcP PcP 13 18 22.1 +1.3
comp=Z,35nm,0.8s,baz=45,slow=9.1,SNR=2.6
PMG **Port Moresby** 46.62 167 *c i*P P 13 16 46.3 -0.5
PMG pmax pmax
comp=Z,54nm,1.0s
PMG MLR MLR
comp=Z,9µm,18.0s
PMG **Port Moresby** 46.62 167 P P 13 16 47.7 +0.8
MYKOM **Kota Tinggi** 46.80 230 IAMs_20 IAMs_20 13 35 46.3
comp=Z,26µm,21.0s
MYKOM **Kota Tinggi** 46.80 230 P P 13 16 50.0 +1.7
TKM2 **Tokmak 2** 47.32 298 P P 13 16 53.2 +0.8
SNR=52
TKM2 **Tokmak 2** 47.32 298 P P 13 16 52.2 -0.3
MMRI **Maumere** 47.37 201 P P 13 16 51.5 -1.3
comp=Z,12µmcomp=Z,7µmcomp=Z,475nm,1.1s
PBA **Port Blair** 47.55 250 *e*P P 13 16 55.1 +1.0
PBA IAmb IAmb 13 17 01.9
comp=Z,157nm,1.1s
SVW2 **Sparrevohn** 47.55 37 P P 13 16 55.2 +1.5
SVW2 IAmb IAmb 13 17 06.7
comp=Z,369nm,1.4s
EDFI **Ende, Flores** 47.65 202 P P 13 16 52.8 -2.2
comp=Z,5µmcomp=Z,3µmcomp=Z,98nm,1.9s
TARA **Tarawa** 47.75 129 IAMs_20 IAMs_20 13 33 45.4
comp=Z,32µm,21.0s
CHIR **Chirikof Islan** 47.81 44 IAMs_20 IAMs_20 13 37 04.1
comp=Z,27µm,20.0s
BRZS **Berezniki** 47.82 308⇑ *i*P P 13 16 55.1 -0.9
BRZS *e*S S 13 23 52.8 +0.1
BRZS **Berezniki** 47.82 308 *c i*P P 13 16 55.1 -0.9
BRZS *e*S S 13 23 52.7 +0.1
KBK **Karagaybulak** 47.85 298 P P 13 16 56.1 -0.5
SNR=74
SGDS **Sogindy** 47.88 299⇑ *i*P P 13 16 56.5 -0.1
SGDS *e*S S 13 23 54.5 +0.7
SGDS **Sogindy** 47.88 299 *c i*P P 13 16 56.4 -0.1
SGDS *e*S S 13 23 54.4 +0.7
SOEI **Soe** 47.89 198 P P 13 16 56.2 -0.7
comp=Z,9µmcomp=Z,6µmcomp=Z,464nm,1.1s
SOEI **Soe** 47.89 198 P P 13 16 55.7 -1.2
BTLS **Baital** 47.90 301⇑ *i*P P 13 16 56.1 -0.5
BTLS *e*S S 13 23 54.5 +0.5
BTLS **Baital** 47.90 301 *c i*P P 13 16 56.1 -0.5
BTLS *e*S S 13 23 54.4 +0.5
A21K **Barrow** 47.93 23 P P 13 16 56.3 -0.2
baz=260,SNR=7.8
A21K S S 13 23 55.0 +1.4
baz=260
A21K **Barrow** 47.93 23 P P 13 16 56.8 +0.3
A21K IAMs_20 IAMs_20 13 39 35.5
comp=Z,22µm,19.0s
KSH **Kashi** 47.98 293⇑ *i*P P 13 17 01.3 +3.8
KSH PP PP 13 18 50.8 +1.5
KSH S S 13 23 57.9 +2.5
KSH ScS ScS 13 26 54.8 +3.7
KSH pmax pmax
comp=Z,160nm,1.4s
KSH pmax pmax
comp=Z,17µm,6.3s
KSH LR LR
comp=Z,34µm,15.7s
KSH LR LR
comp=Z,15µm,11.4s
KSH LR LR
comp=Z,62µm,19.2s
USP **Ospenovka** 48.01 299 P P 13 16 56.6 -1.0
SNR=35
AAK **Ala-Archa** 48.18 298 P P 13 16 58.2 -0.9
SNR=30
AAK **Ala-Archa** 48.18 298 *i* P P 13 16 58.4 -0.6
SNR=48
AAK **Ala-Archa** 48.18 298 *c i*P P 13 16 57.4 -1.6
AAK pmax pmax
comp=Z,86nm,1.0s
AAK MLR MLR
comp=Z,183µm,18.0s
TPI **Tanjungpandan** 48.26 222 P P 13 17 00.7 +1.0
comp=Z,13µmcomp=Z,5µmcomp=Z,107nm,1.4s
UCH **Uchtor** 48.27 297 P P 13 17 01.7 +1.5
SNR=9.7
OTUK **Ortayu** 48.36 305 P P 13 16 59.1 -1.1
BATI **Baumata** 48.48 199 P P 13 17 00.1 -1.3
comp=Z,373nm,1.0s,baz=159,slow=1.8,SNR=33
BATI **Baumata** 48.48 199 P P 13 17 01.3 0.0
comp=Z,5µmcomp=Z,4µmcomp=Z,206nm,1.1s
SII **Sitkinak Islan** 48.53 43 IAMs_20 IAMs_20 13 37 39.3
comp=Z,29µm,20.0s
PPBI **Pangkal Pinang** 48.61 225 P P 13 17 03.4 +1.0
comp=Z,11µmcomp=Z,12µmcomp=Z,171nm,1.4s
EKS2 **Erkin-Say** 48.68 298 P P 13 17 03.7 +0.8
SNR=25
LHMI **Lhok Sumawe** 48.79 240 P P 13 17 06.9 +3.1
comp=Z,29µmcomp=Z,18µmcomp=Z,328nm,1.4s
BRVK **Borovoye** 48.80 312 P P 13 17 01.4 -2.1
BRVK **Borovoye** 48.80 312 P P 13 17 03.2 -0.3
AML **Almayashu** 48.89 297 P P 13 17 05.3 +0.5
SNR=7.8
KMMI **Kalianget** 48.91 212 P P 13 17 05.6 +1.0
comp=Z,14µmcomp=Z,7µmcomp=Z,194nm,1.0s
TSI **Tuntungan** 48.92 237 P P 13 17 07.0 +2.2
comp=Z,13µmcomp=Z,8µmcomp=Z,160nm,1.2s
OHAK **Old Harbor** 48.95 42 P P 13 17 04.9 +0.3
OHAK IAMs_20 IAMs_20 13 37 55.4
comp=Z,30µm,21.0s
RSO **Redoubt South** 48.96 38 P P 13 17 04.4 -0.4
PLAI **Plampang** 49.02 207 P P 13 17 04.5 -0.9
comp=Z,9µmcomp=Z,4µmcomp=Z,167nm,1.0s
WBSI **Waikabubak, Su** 49.21 204 P P 13 17 06.0 -1.0
comp=Z,2µmcomp=Z,126nm,1.0s
TWSI **Taliwang, Sumb** 49.26 208 P P 13 17 06.5 -0.8
comp=Z,7µmcomp=Z,4µmcomp=Z,152nm,1.1s
KDAK **Kodiak Island** 49.27 41 P P 13 17 07.2 +0.2
KDAK pmax pmax
comp=Z,510nm,1.4s
KDAK MLR MLR
comp=Z,29µm,21.0s
KDAK **Kodiak Island** 49.27 41 P P 13 17 07.2 +0.2
KDAK IAMs_20 IAMs_20 13 37 31.8
comp=Z,29µm,21.0s
RPSI **Rantau Prapat** 49.27 236 IAMs_20 IAMs_20 13 41 42.8
comp=Z,30µm,21.0s
SRBI **Singaraja** 49.32 210 P P 13 17 08.1 +0.3
comp=Z,21µmcomp=Z,11µmcomp=Z,268nm,1.0s
BASI **Baing, Sumba** 49.37 203 P P 13 17 06.4 -1.8
comp=Z,3µmcomp=Z,3µmcomp=Z,148nm,1.2s
KCSI **Kotacane, Aceh** 49.45 238 P P 13 17 09.3 +0.5
comp=Z,4µmcomp=Z,42nm,1.0s
ABJI **Asem Bagus** 49.46 212 P P 13 17 10.8 +1.9
comp=Z,8µmcomp=Z,151nm,1.6s
HOM **Homer** 49.58 39 P P 13 17 10.4 +1.1
baz=275
BPAW **Bear Paw Mtn.** 49.60 33 IAmb IAmb 13 17 22.1
comp=Z,315nm,1.6s
BPAW IAMs_20 IAMs_20 13 39 17.0
comp=Z,19µm,20.0s
DDI **Dehra Dun** 49.61 281 *e*P P 13 17 10.2 +0.1
DDI IAmb IAmb 13 17 29.4
comp=Z,282nm,1.4s
MTN **Manton Dam** 49.63 189 IAmb IAmb 13 17 10.9
comp=Z,222nm,0.8s
MLY **Manley** 49.68 32 P P 13 17 10.8 +0.7
baz=271,SNR=20
MLY S S 13 24 21.9 +3.4
baz=271
BKNI **Bangkinang** 49.69 232 P P 13 17 12.6 +1.9
comp=Z,13µmcomp=Z,8µmcomp=Z,324nm,1.5s
BKNI **Bangkinang** 49.69 232 IAMs_20 IAMs_20 13 40 08.8
comp=Z,27µm,19.0s
BLJI **Banyuglugur** 49.69 212 P P 13 17 12.1 +1.5
comp=Z,29µmcomp=Z,20µmcomp=Z,64nm,0.8s
CMBY **CAMPBELL BAY** 49.71 245 *e*P P 13 17 11.9 +1.1
CMBY IAmb IAmb 13 17 20.3
comp=Z,731nm,1.5s
CAPN **Captain Cook N** 49.72 37 P P 13 17 11.7 +1.3
baz=275
MLSI **Meulaboh, Aceh** 49.85 240 P P 13 17 13.1 +1.2
comp=Z,10µmcomp=Z,7µmcomp=Z,222nm,1.2s
COLD **Coldfoot** 49.87 29 P P 13 17 12.1 +0.7
baz=270,SNR=64
COLD S S 13 24 23.0 +2.0
baz=270
TRF **Thorofare Moun** 49.94 34 P P 13 17 12.9 +0.6
BRLK **Bradley Lake** 49.95 39 P P 13 17 12.0 -0.1
BRLK IAmb IAmb 13 17 17.1
comp=Z,344nm,1.4s
SMLA **Simla** 49.99 282 *e*P P 13 17 12.3 -0.5
SMLA IAmb IAmb 13 17 22.5
comp=Z,107nm,1.0s
CUT **Chulitna** 50.02 35 P P 13 17 13.2 +0.7
baz=274,SNR=7.5
CUT S S 13 24 24.2 +1.0
baz=274
TPTI 50.04 238 P P 13 17 12.7 -0.6
comp=Z,45µmcomp=Z,2µmcomp=Z,35nm,1.7s
JAGI **Jajag, Banyuwa** 50.10 211 P P 13 17 14.2 +0.4
comp=Z,9µmcomp=Z,4µmcomp=Z,164nm,1.0s
TOLK **Toolik Lake Re** 50.11 27 P P 13 17 14.1 +0.8
baz=270,SNR=59
TOLK S S 13 24 25.6 +1.2
baz=270
TOLK **Toolik Lake Re** 50.11 27 P P 13 17 13.5 +0.2
DHRM **DHARAMSHALA** 50.22 284 *e*P P 13 17 14.4 -0.5
DHRM IAmb IAmb 13 17 29.4
comp=Z,376nm,1.2s
GMJI **Gumukmas** 50.23 212 P P 13 17 13.9 -0.8
comp=Z,8µmcomp=Z,4µmcomp=Z,122nm,1.0s
I23K **Minto, Yukon-K** 50.26 32 P P 13 17 14.8 +0.5
baz=273,SNR=19
I23K S S 13 24 29.1 +2.6
baz=273
MNSI **Mandailing Nat** 50.26 234 P P 13 17 16.2 +1.2
comp=Z,8µmcomp=Z,5µmcomp=Z,63nm,1.1s
BWN **Browne** 50.27 33 IAMs_20 IAMs_20 13 39 48.4
comp=Z,23µm,19.0s
HNR **Honiara** 50.30 151 P P 13 17 15.4 +0.2
comp=Z,88nm,0.8s,baz=172,slow=2.1,SNR=5.2
HNR **Honiara** 50.30 151 IAMs_20 IAMs_20 13 35 58.3
comp=Z,18µm,22.0s
DZA **Taraz** 50.35 299 *e*P P 13 17 15.8 +0.2
comp=Z,76nm,1.7s
DZA *e*S S 13 24 29.4 +0.9
DZA LR LR 13 38 45.4
comp=Z,4µm,12.1s
DZA **Taraz** 50.35 299 *e*P P 13 17 15.7 +0.2
DZA *e*S S 13 24 29.3 +0.8
DZA pmax pmax
comp=Z,76nm,1.7s
DZA MLR MLR
comp=Z,4µm,12.0s
CHLP **Challavanipeta** 50.37 264 *e*P P 13 17 16.0 +0.2
CHLP IVmB_BB 13 17 21.1
comp=Z,4µm,6.1s
CHLP IVMs_BB IVMs_BB 13 42 53.4
comp=Z,8µm,16.6s
RC01 **Rabbit Creek A** 50.38 37 P P 13 17 15.3 -0.1
baz=276,SNR=13
RC01 S S 13 24 28.4 +0.1
baz=276
NEA2 **Nenana** 50.41 32 P P 13 17 16.1 +0.5
baz=273,SNR=36
NEA2 S S 13 24 31.8 +3.1
baz=273
SDSI **Sungai Dareh** 50.42 230 P P 13 17 16.7 +0.5
comp=Z,8µmcomp=Z,215nm,1.7s
O22K **Cooper Landing** 50.45 38 P P 13 17 16.3 +0.4
baz=276,SNR=6.4
O22K S S 13 24 28.6 -0.6
baz=276
O22K **Cooper Landing** 50.45 38 IAMs_20 IAMs_20 13 39 31.7
comp=Z,19µm,20.0s
MCK **McKinley** 50.53 33 P P 13 17 15.9 -0.6
baz=274,SNR=33
MCK S S 13 24 29.9 -0.4
baz=274
RND **Reindeer** 50.59 34 IAmb IAmb 13 17 28.6
comp=Z,380nm,1.4s
PMR **Palmer** 50.62 36 IAmb IAmb 13 17 28.8
comp=Z,424nm,1.4s
SEW **Seward** 50.63 38 IAmb IAmb 13 17 44.7
comp=Z,405nm,1.4s
SEW IAMs_20 IAMs_20 13 40 38.4
comp=Z,18µm,20.0s
PWJI **Pagerwojo** 50.73 214 P P 13 17 18.3 -0.1
comp=Z,7µmcomp=Z,286nm,0.9s
WRH **Wood River Hil** 50.84 32 P P 13 17 19.7 +0.9
WRH IAMs_20 IAMs_20 13 40 02.8
comp=Z,17µm,20.0s
KK31 **Karatay Array** 50.87 299 *i* P P 13 17 17.1 -2.3
KKAR **Karatay Array** 50.87 299 P P 13 17 20.7 +1.3
KKAR pmax pmax
comp=Z,128nm,1.2s
KKAR **Karatay Array** 50.87 299 P P 13 17 20.7 +1.3
TCOL **CIGO, UAF Yank** 50.91 32 P P 13 17 18.8 -0.5
baz=274,SNR=17
TCOL S S 13 24 37.9 +2.4
baz=274
TCOL **CIGO, UAF Yank** 50.91 32 IAmb IAmb 13 17 31.9
comp=Z,456nm,1.5s
COLA **College** 50.91 32 *c i*P P 13 17 19.7 +0.4
COLA pmax pmax
comp=Z,285nm,1.4s
COLA MLR MLR
comp=Z,8µm,16.0s
COLA **College** 50.91 32 P P 13 17 20.6 +1.3
COLA IAmb IAmb 13 17 31.9
comp=Z,453nm,1.5s
CCB **Clear Creek Bu** 50.95 32 P P 13 17 21.1 +1.5
CCB IAMs_20 IAMs_20 13 37 05.7
comp=Z,19µm,22.0s
KNK **Knik Glacier** 50.96 36 IAmb IAmb 13 17 31.8
comp=Z,331nm,1.4s
SML **Sawmill** 50.98 36 IAmb IAmb 13 17 32.1
comp=Z,437nm,1.4s
POKR **Poker Plat Res** 51.07 32 P P 13 17 20.4 -0.2
baz=274,SNR=79
POKR S S 13 24 40.3 +2.4
baz=274
POKR **Poker Plat Res** 51.07 32 IAMs_20 IAMs_20 13 38 07.9
comp=Z,18µm,21.0s
GSI **Gunungsitoli** 51.20 236 P P 13 17 22.2 +0.1
comp=Z,16µmcomp=Z,14µmcomp=Z,394nm,1.5s
UGM **Wanagama** 51.22 216 P P 13 17 22.2 0.0
comp=Z,12µmcomp=Z,10µmcomp=Z,449nm,1.2s
DHY **Denali Highway** 51.28 34 IAmb IAmb 13 18 43.2
comp=Z,548nm,1.9s
KRJI **Kerinci** 51.30 229 P P 13 17 34.7 +12
ILAR **Eielson Array** 51.34 32 P P 13 17 21.9 -0.6
comp=Z,41nm,0.9s,baz=268,slow=4.4,SNR=133
ILAR PcP PcP 13 18 37.5 +0.2
comp=Z,16nm,0.8s,baz=273,slow=3.6,SNR=5.9
ILAR LR LR 13 40 07.2
comp=Z,11µm,20.2s,baz=290,slow=37
ILAR P4KPbc 13 54 49.1
comp=Z,0.7nm,0.7s,baz=264,slow=4.7,SNR=7.5
ILAR **Eielson Array** 51.34 32 P P 13 17 22.5 0.0
HDA **Harding Lake** 51.34 33 P P 13 17 22.7 +0.1
baz=275,SNR=59
HDA S S 13 24 40.7 -0.8
baz=275
HDA S S 13 24 40.7 -0.8
baz=275
HDA **Harding Lake** 51.34 33 IAMs_20 IAMs_20 13 37 16.0
comp=Z,18µm,21.0s
BRLS **Boroday** 51.36 299 *e*P P 13 17 24.5 +1.4
comp=Z,218nm,2.0s
BRLS **Boroday** 51.36 299 *e*P P 13 17 24.5 +1.4
BRLS pmax pmax
comp=Z,218nm,2.0s
SCM **Sheep Creek Mo** 51.45 36 IAmb IAmb 13 17 35.7
comp=Z,437nm,1.2s
SCM IAMs_20 IAMs_20 13 40 27.0
comp=Z,18µm,20.0s
LHSI **Lahat** 51.46 226 P P 13 17 24.6 +0.6
comp=Z,18µmcomp=Z,11µmcomp=Z,467nm,1.1s
KLSI 51.48 224 P P 13 17 24.9 +0.8
comp=Z,5µmcomp=Z,3µmcomp=Z,76nm,1.5s
KPJI **Karang Pucung** 51.48 218 P P 13 17 24.2 0.0
comp=Z,15µmcomp=Z,7µmcomp=Z,205nm,1.2s
IUG **luzhnay** 51.49 298 *e*P P 13 17 23.8 -0.4
comp=Z,255nm,1.9s
IUG *e*S S 13 24 44.6 +0.2
IUG **luzhnay** 51.49 298 *e*P P 13 17 23.7 -0.4
IUG *e*S S 13 24 44.6 +0.2
IUG pmax pmax
comp=Z,255nm,1.9s
GLI **Glacier Island** 51.69 37 P P 13 17 25.4 +0.2
BLSI **Bandar Lampung** 51.75 223 P P 13 17 26.5 +0.3
comp=Z,9µmcomp=Z,6µmcomp=Z,218nm,0.5s
PRP **Porcupine Dome** 51.84 31 IAMs_20 IAMs_20 13 41 40.0
comp=Z,15µm,19.0s
FYU **Fort Yukon** 51.86 30 IAMs_20 IAMs_20 13 41 12.4
comp=Z,17µm,18.0s
KSI **Kapahiang** 51.86 227 P P 13 17 27.6 +0.5
comp=Z,5µmcomp=Z,151nm,1.0s
M24K **Tolsona, Glenn** 51.95 35 P P 13 17 27.3 0.0
baz=278,SNR=16
M24K S S 13 24 53.0 +2.9
baz=278
M24K **Tolsona, Glenn** 51.95 35 IAmb IAmb 13 18 18.0
comp=Z,408nm,1.4s
M24K IAMs_20 IAMs_20 13 40 42.3
comp=Z,17µm,20.0s
FID **Port Fidalgo** 52.00 37 IAMs_20 IAMs_20 13 39 55.2
comp=Z,24µm,20.0s
NIL **Nilore** 52.04 287 P P 13 17 29.2 +0.9
NIL pmax pmax
comp=Z,146nm,0.9s
NIL MLR MLR
comp=Z,33µm,18.0s
NIL **Nilore** 52.04 287 P P 13 17 29.2 +0.9
HIN **Hinchinbrook I** 52.05 38 IAMs_20 IAMs_20 13 40 54.8
comp=Z,14µm,18.0s
LWLI **Liwa** 52.12 225 P P 13 17 31.2 +2.1
comp=Z,4µmcomp=Z,96nm,0.8s
KLU **Klutina** 52.16 36 IAMs_20 IAMs_20 13 41 57.8
comp=Z,18µm,19.0s
SISI **Saibi** 52.19 232 P P 13 17 36.8 +7.3
Q23K **Middleton Isla** 52.28 39 P P 13 17 30.5 +0.9
baz=280
Q23K **Middleton Isla** 52.28 39 IAMs_20 IAMs_20 13 41 01.2
comp=Z,19µm,19.0s
KASI **Kota Agung** 52.29 224 P P 13 17 35.8 +5.6
GAR **Garm** 52.30 294 IAmb IAmb 13 17 36.3
comp=Z,219nm,1.1s
RIDG **Independent Ri** 52.34 33 IAMs_20 IAMs_20 13 37 38.3
comp=Z,19µm,22.0s
EYAK **Cordova Ski Ar** 52.39 37 IAMs_20 IAMs_20 13 40 25.9
comp=Z,15µm,20.0s
SCRK **Sand Creek** 52.68 33 P P 13 17 31.9 -0.8
baz=278,SNR=64
SCRK S S 13 25 00.3 +0.2
baz=278
DOT **Dot Lake** 52.69 33 P P 13 17 31.8 -0.9
DOT IAMs_20 IAMs_20 13 41 01.7
comp=Z,18µm,20.0s
KNRA **Kununurra** 52.74 191 IAmb IAmb 13 17 52.3
comp=Z,269nm,1.1s
N25K **Chitina, Valde** 52.77 36 P P 13 17 32.8 -0.6
baz=280,SNR=16
N25K S S 13 25 04.5 +3.1
baz=280
RAGM **Ragged Mountai** 52.94 37 IAMs_20 IAMs_20 13 40 28.5
comp=Z,25µm,20.0s
MENT **Mentasta** 52.96 34 IAmb IAmb 13 17 47.6
comp=Z,243nm,1.2s
MENT IAMs_20 IAMs_20 13 41 26.7
comp=Z,24µm,20.0s
PVM **Polavaram** 52.99 264 *e*P P 13 17 35.9 +0.5
PVM IVmB_BB 13 17 40.5
comp=Z,3µm,5.7s
PVM IVMs_BB IVMs_BB 13 39 16.0
comp=Z,5µm,27.2s
L26K **Log Cabin Wild** 53.11 34 P P 13 17 35.3 -0.5
baz=280,SNR=53
L26K S S 13 25 08.9 +3.1
baz=280
HMT **Hamilton** 53.15 37 IAMs_20 IAMs_20 13 40 34.1
comp=Z,24µm,20.0s
GLB **Gilahina Butte** 53.17 36 IAmb IAmb 13 17 48.9
comp=Z,291nm,1.4s
GLB IAMs_20 IAMs_20 13 40 21.4
comp=Z,17µm,21.0s
CHGR **Chuyangaron** 53.27 294 IAmb IAmb 13 17 43.4
comp=Z,292nm,1.0s
BHPL **Bhopal** 53.29 273 *e*P P 13 17 36.8 -0.8
BHPL IAmb IAmb 13 17 43.8
comp=Z,159nm,1.3s
BHPL *e*S S 13 25 06.2 -3.1
VRDI **Verde Repeater** 53.38 36 IAmb IAmb 13 17 50.4
comp=Z,379nm,1.5s
VRDI IAMs_20 IAMs_20 13 41 13.9
comp=Z,16µm,20.0s
SUCK **Suckling Hills** 53.44 38 IAMs_20 IAMs_20 13 38 14.7
comp=Z,16µm,19.0s
K27K **Chicken** 53.50 33 P P 13 17 39.3 +0.7
baz=280
K27K S S 13 25 14.0 +2.9
baz=280
MCARA **McCarthy VSAT** 53.55 36 IAmb IAmb 13 17 44.4
comp=Z,184nm,1.0s
SVE **Sverdlovsk** 53.57 318 *d i*P P 13 17 39.4 +0.2
SVE *e* 13 20 46.4
SVE *e*S S 13 25 11.0 -1.1
SVE *e* 13 27 29.1
SVE *e* 13 28 53.5
SVE pmax pmax
comp=Z,170nm,1.2s
SVE MLR MLR
comp=N,26µm,14.0s
SVE MLR MLR
comp=Z,77µm,16.0s
SVE MLR MLR
comp=E,58µm,16.0s
CRQM **Cirque** 53.62 37 IAmb IAmb 13 17 52.3

comp=Z,304nm,1.2s
CRQM IAMs_20 IAMs_20 13 39 36.0
comp=Z,17µm,22.0s
TGL Tana Glacier 53.77 37 IAmb IAmb 13 17 55.1
comp=Z,324nm,1.4s
TGL IAMs_20 IAMs_20 13 39 28.3
comp=Z,18µm,22.0s
EGAK Eagle 53.77 32 IAmb IAmb 13 17 47.1
comp=Z,350nm,1.7s
GGR Gangavaram 53.82 266 *e*P **P** **13 17 41.2 -0.4**
GGR IVmB_BB 13 17 46.2
comp=Z,3µm,5.3s
GGR IVMs_BB IVMs_BB 13 42 17.3
comp=Z,5µm,16.0s
BALM Baldy 53.94 36 IAmb IAmb 13 18 10.7
comp=Z,271nm,1.6s
BALM IAMs_20 IAMs_20 13 40 39.9
comp=Z,16µm,21.0s
RPR Rampur 54.00 268 *e*P **P** **13 17 43.4 +0.5**
RPR IVmB_BB 13 17 47.2
comp=Z,3µm,5.5s
RPR IVMs_BB IVMs_BB 13 42 25.4
comp=Z,5µm,15.5s
ISLE Juniper Island 54.03 37 IAmb IAmb 13 18 04.8
comp=Z,193nm,1.1s
MYLAV Mylavaram 54.06 265 *e*P **P** **13 17 43.2 0.0**
MYLAV IVmB_BB 13 17 48.7
comp=Z,3µm,4.7s
MYLAV IVMs_BB IVMs_BB 13 45 13.0
comp=Z,6µm,17.1s
BARN Barnard Glacie 54.26 36 IAmb IAmb 13 18 14.3
comp=Z,420nm,1.8s
BARN IAMs_20 IAMs_20 13 40 49.4
comp=Z,17µm,21.0s
MESA MESA 54.31 37 IAMs_20 IAMs_20 13 41 30.8
comp=Z,17µm,20.0s
YAH Yahtse 54.37 37 IAmb IAmb 13 17 51.3
comp=Z,333nm,1.6s
YAH IAMs_20 IAMs_20 13 42 15.3
comp=Z,18µm,20.0s
DAWY Dawson 54.66 32 IAMs_20 IAMs_20 13 43 31.6
comp=Z,22µm,19.0s
ARU Arti 54.77 318 LR LR 13 43 22.0
comp=Z,44µm,18.1s,baz=72,slow=38
ARU Arti 54.77 318*c i*P **P** **13 17 47.7 -0.3**
ARU 13 18 47.7
ARU 13 19 47.7
ARU PPP PPP 13 20 58.3
ARU S **S** **13 25 31.0 +2.5**
ARU 13 27 35.3
ARU SS **SS** **13 29 08.0 -3.0**
ARU pmax pmax
comp=Z,124nm,1.2s
ARU pmax pmax
comp=Z,3µm,7.0s
ARU smax smax
comp=N,5µm,10.5s
ARU MLR MLR
comp=Z,63µm,15.0s
ARU Arti 54.77 318 P **P** **13 17 48.4 +0.4**
ARU IAmb IAmb 13 17 59.6
comp=Z,352nm,1.5s
KBL Kabul 54.90 290 P **P** **13 17 49.5 -0.1**
SNR=90
KBL Kabul 54.90 290 P **P** **13 17 50.0 +0.5**
KBL pmax pmax
comp=Z,125nm,1.2s
KBL MLR MLR
comp=Z,33µm,19.0s
KBL Kabul 54.90 290 P **P** **13 17 50.0 +0.5**
ADKI Addanki 55.09 264 *e*P **P** **13 17 51.0 +0.2**
ADKI IVmB_BB 13 17 56.2
comp=Z,3µm,5.8s
ADKI IVMs_BB IVMs_BB 13 44 48.0
comp=Z,6µm,17.4s
PCA Pinnacle 55.16 37 P **P** **13 17 51.6 +0.8**
NJS Nagarjunasagar 55.23 265 *e*P **P** **13 17 51.5 -0.3**
NJS IVmB_BB 13 17 56.4
comp=Z,3µm,6.2s
NJS IVMs_BB IVMs_BB 13 41 01.9
comp=Z,6µm,21.3s
HYB Hyderabad 55.36 267 *i*P **P** **13 17 52.0 -0.8**
HYB *e* 13 18 58.0
HYB *e*PP **PP** **13 19 56.0 -0.5**
HYB *e*S **S** **13 25 40.0 +2.6**
HYB *e*LR LR
comp=Z,16nm,18.0s
HYBB Hyderabad (bro 55.36 267 *e*P **P** **13 17 52.7 -0.2**
HYBB IVmB_BB 13 17 57.1
comp=Z,3µm,6.9s
HYBB IVMs_BB IVMs_BB 13 43 49.6
comp=Z,5µm,17.3s
FITZ Fitzroy Crossi 55.66 194 P **P** **13 17 54.2 -0.5**
comp=Z,65nm,0.9s,baz=17,slow=8.8,SNR=70
FITZ Fitzroy Crossi 55.66 194 P **P** **13 17 54.6 -0.1**
INK Inuvik 56.02 27 LR LR 13 42 03.2
comp=Z,794nm,21.2s,baz=264,slow=36
INK Inuvik 56.02 27 P **P** **13 17 57.0 +0.3**
INK pmax pmax
comp=Z,266nm,1.4s
INK MLR MLR
comp=Z,16µm,20.0s
INK Inuvik 56.02 27 P **P** **13 17 57.0 +0.3**
INK IAmb IAmb 13 18 08.9
comp=Z,266nm,1.4s
INK IAMs_20 IAMs_20 13 43 29.3
comp=Z,16µm,20.0s
AB31 Akbulak array 56.02 309 *i*P **P** **13 17 55.9 -1.2**
ABKAR Akbulak array 56.02 309 P **P** **13 17 55.8 -1.2**
ABKAR Akbulak array 56.02 309 P **P** **13 17 56.4 -0.6**
WB0 Warramunga Arr 56.20 184 P **P** **13 17 57.5 -1.1**
WB0 IAmb IAmb 13 17 59.8
comp=Z,206nm,0.8s
HYT Haines Junctio 56.29 36 IAmb IAmb 13 18 11.6
comp=Z,225nm,1.2s
WRAB Tennant Creek 56.36 184*c i*P **P** **13 17 58.5 -1.2**
WRAB pmax pmax
comp=Z,200nm,1.0s
WRAB Tennant Creek 56.36 184 P **P** **13 17 58.8 -1.0**
WRAB IAmb IAmb 13 18 01.0
comp=Z,223nm,1.1s
WB2 Warramunga Arr 56.37 184 P **P** **13 17 58.8 -1.0**
WB2 IAmb IAmb 13 18 01.1
comp=Z,221nm,1.0s
WRA Warramunga Arr 56.37 184 P **P** **13 17 58.8 -1.1**
comp=Z,160nm,0.8s,baz=2.4,slow=7.5,SNR=343
WRA PcP **PcP** **13 18 58.4 +1.5**
comp=Z,38nm,0.8s,baz=358,slow=4.7,SNR=5.1
WRA LR LR 13 39 53.9
comp=Z,13µm,21.5s,baz=5.0,slow=34
WRA P4KPbc 13 55 14.8
comp=Z,0.7nm,0.7s,baz=358,slow=4.4,SNR=7.3
WRA Warramunga Arr 56.37 184 P **P** **13 17 58.3 -1.5**
WR0 Warramunga Arr 56.38 184 P **P** **13 17 58.9 -1.0**
WR0 IAmb IAmb 13 18 01.1
comp=Z,253nm,0.9s
KLRI Killari 56.59 268 *e*P **P** **13 18 00.8 -0.8**
KLRI IVmB_BB 13 18 05.6
comp=Z,4µm,6.3s
KLRI IVMs_BB IVMs_BB 13 45 30.4
comp=Z,6µm,15.0s
AKTO Aktyubinsk 56.82 311 LR LR 13 43 36.5
comp=Z,80µm,18.1s,baz=69,slow=37
CTA Charters Tower 56.97 171 P **P** **13 18 03.9 -0.2**
comp=Z,37nm,0.7s,baz=0.8,slow=7.8,SNR=72
CTAO Charters Tower 56.97 171 P **P** **13 18 03.9 -0.2**
CTAO pmax pmax
comp=Z,239nm,1.7s
CTAO Charters Tower 56.97 171 P **P** **13 18 03.9 -0.2**
WHY Whitehorse 57.57 36 P **P** **13 18 09.3 +1.3**
WHY IAmb IAmb 13 18 21.1
comp=Z,246nm,1.4s
WHY IAMs_20 IAMs_20 13 41 21.8
comp=Z,14µm,21.0s
SKAG Skagway 57.73 37 IAMs_20 IAMs_20 13 45 52.1
comp=Z,12µm,18.0s
URV Uravakonda 57.75 265 *e*P **P** **13 18 09.1 -0.8**
URV IVmB_BB 13 18 14.3
comp=Z,3µm,6.4s
URV IVMs_BB IVMs_BB 13 44 52.9
comp=Z,4µm,15.2s
POO Poona 58.55 270 *e*P **P** **13 18 14.6 -0.9**
POO IAmb IAmb 13 18 22.2
comp=Z,116nm,1.0s
SANVU Saraoutou 58.73 146 P **P** **13 18 16.2 -0.3**
SANVU IAmb IAmb 13 18 26.9
comp=Z,154nm,0.7s
SANVU IAMs_20 IAMs_20 13 39 43.6
comp=Z,15µm,22.0s
KIRV Kirov 58.84 322 LR LR 13 45 30.5
comp=Z,71µm,19.2s,baz=69,slow=38
KIRV Kirov 58.84 322*c i*P **P** **13 18 15.5 -1.3**
HLK Haleakala 58.85 86 P **P** **13 18 18.2 +0.4**
HLK IAmb IAmb 13 18 22.3
comp=Z,200nm,0.7s
C36M Paulatuk 58.96 24 P **P** **13 18 16.9 -0.5**
baz=292,SNR=97
C36M S **S** **13 26 24.5 +1.2**
baz=292
BHUJ Bhuj 59.50 278 *e*P **P** **13 18 22.2 +0.3**
BHUJ IAmb IAmb 13 18 28.4
comp=Z,133nm,1.4s
PALK Pallekele 59.53 255 P **P** **13 18 23.2 +0.9**
PALK pmax pmax
comp=Z,109nm,1.2s
PALK MLR MLR
comp=Z,21µm,18.0s
PALK Pallekele 59.53 255 P **P** **13 18 23.2 +0.9**
HPAH Hawaii Prepara 59.67 87 P **P** **13 18 24.5 +1.2**
HOPEN Hopen 59.73 345 *e*P **P** **13 18 23.2 +0.6**
HOPEN *e*S **S** **13 26 33.4 +0.4**
HOPEN *e*SS **SS** **13 30 32.8 +4.8**
HOPEN IVMs_BB IVMs_BB 13 46 48.7
comp=Z,19µm,15.5s
POHA Pohakuloa 59.95 87 P **P** **13 18 27.2 +1.9**
MLOA Mauna Loa Obse 60.03 87 P **P** **13 18 28.0 +1.9**
HRA Herat 60.07 292 P **P** **13 18 26.1 +0.1**
HRA IAmb IAmb 13 18 28.7
comp=Z,476nm,2.0s
ASAR Alice Springs 60.10 184 P **P** **13 18 25.1 -0.7**
comp=Z,66nm,0.8s,baz=8.2,slow=6.2,SNR=259
ASAR LR LR 13 41 57.7
comp=Z,11µm,21.1s,baz=360,slow=34
ASAR PKPPKP 13 47 48.5
comp=Z,1.0nm,0.7s,baz=153,slow=3.0,SNR=8.0
ASAR PKP2bc 13 47 57.3
comp=Z,5.8nm,1.0s,baz=168,slow=2.8,SNR=18
ASAR Alice Springs 60.10 184 P **P** **13 18 26.1 +0.2**
MLH Mauna Loa 60.20 87 P **P** **13 18 27.5 +0.4**
GOA Goa 60.21 268 *e*P **P** **13 18 27.3 +0.5**
GOA IAmb IAmb 13 18 34.1
comp=Z,193nm,1.1s
CRAG Craig 60.23 41 IAMs_20 IAMs_20 13 41 55.4
comp=Z,13µm,21.0s
PSAD1 Pilbara Seismi 60.25 199 P **P** **13 18 26.3 -0.5**
SPA0 Spitsbergen Ar 60.35 348 P **P** **13 18 27.1 +0.2**
SPA0 Spitsbergen Ar 60.35 348 *e*P **P** **13 18 27.7 +0.7**
SPA0 IVmB_BB 13 18 33.6
comp=Z,6µm,6.1s
SPA0 *e*S **S** **13 26 44.0 +2.9**
SPA0 *e*SS **SS** **13 30 39.3 +1.4**
SPA0 IVMs_BB IVMs_BB 13 45 52.1
comp=Z,9µm,14.4s
SPITS Spitsbergen Ar 60.35 348 LR LR 13 46 11.0
comp=Z,24µm,18.0s,baz=35,slow=38
PSA00 Pilbara Seismi 60.35 199 IAmb IAmb 13 18 36.2
comp=Z,192nm,1.4s
KBS Kingsbay 60.55 350 P **P** **13 18 26.5 -1.8**
KBS Kingsbay 60.55 350 P **P** **13 18 26.5 -1.8**
KBS Kingsbay 60.55 350 *e*P **P** **13 18 29.1 +0.8**
KBS IVmB_BB 13 18 33.0
comp=Z,5µm,2.7s
KBS *e*S **S** **13 26 43.7 +0.1**
KBS *e*SS **SS** **13 30 42.0 +1.0**
KBS IVMs_BB IVMs_BB 13 47 09.1
comp=Z,8µm,11.9s
KBS Kingsbay 60.55 350 *i*P **P** **13 18 29.4 +1.1**
KBS IAMs_20 IAMs_20 13 47 04.1
comp=Z,40µm,15.0s
ALE Alert 60.66 3 IAMs_20 IAMs_20 13 48 28.8
comp=Z,14µm,20.0s
EUNU Eureka 60.98 8 P **P** **13 18 30.5 -0.8**
EUNU IAMs_20 IAMs_20 13 48 09.2
comp=Z,12µm,18.0s
KNTN Kanton 61.08 118 IAMs_20 IAMs_20 13 39 23.5
comp=Z,19µm,22.0s
HSPB Hornsund (broa 61.23 347 *e*P **P** **13 18 32.9 0.0**
HSPB *e*S **S** **13 26 50.9 -1.4**
HSPB *e*L L 13 46 06.9
comp=Z,26µm,20.3s
HSPB Hornsund (broa 61.23 347 *e*P **P** **13 18 34.1 +1.2**
HSPB IVmB_BB 13 18 37.2
comp=Z,8µm,2.4s
HSPB *e*S **S** **13 26 53.1 +0.8**
HSPB IVMs_BB IVMs_BB 13 46 00.8
comp=Z,9µm,16.7s
LVZ Lovozero 61.30 335 *i*P **P** **13 18 34.4 +0.8**
LVZ pmax pmax
comp=Z,107nm,1.2s
LVZ MLR MLR
comp=Z,42µm,20.0s
GEYT Alibeck 61.53 298 P **P** **13 18 35.1 -0.6**
comp=Z,26nm,0.8s,baz=65,slow=2.1,SNR=43
GEYT LR LR 13 46 59.3
comp=Z,39µm,20.7s,baz=80,slow=38
GYA0B ALIBECK ARRAY 61.53 298 P **P** **13 18 35.1 -0.5**
TMCR Tamitsa 61.72 331 *e*P **P** **13 18 33.9 -2.5**
TMCR *e*S **S** **13 26 58.3 -0.5**
TMCR pmax pmax
comp=Z,284nm,1.3s
APA Apatity 61.87 335⇓ *i*P **P** **13 18 36.2 -1.2**
APA *i* 13 20 55.0
APA *i*PPP PPP 13 22 29.0
APA *i*S **S** **13 26 59.0 -1.7**
APA *i*PS 13 27 11.0
APA *i*SS **SS** **13 30 56.0 -5.9**
APA *i*SSS SSS 13 33 49.0
APA pmax pmax
comp=Z,64nm,1.4s
BJO1 Bjornoya 62.11 345 *e*P **P** **13 18 39.8 +0.9**
BJO1 IVmB_BB 13 18 42.6
comp=Z,9µm,3.6s
BJO1 *e*PP **PP** **13 20 56.9 +1.9**
BJO1 *e*S **S** **13 27 06.8 +3.3**
BJO1 *e*SS **SS** **13 31 05.7 +0.4**
BJO1 IVMs_BB IVMs_BB 13 48 06.7
comp=Z,11µm,17.1s
BELG Belogornoye 62.15 316*c i*P **P** **13 18 36.9 -2.5**
BELG pmax pmax
comp=Z,38nm,1.1s
BELG MLR MLR
comp=Z,6µm,14.0s
KLMR Klimovskoe 62.56 327 *e*P **P** **13 18 39.8 -2.3**
KLMR *e* 13 21 00.8
KLMR *e*S **S** **13 27 08.2 -1.3**
KLMR *e*SS **SS** **13 31 13.5 +0.5**
KLMR pmax pmax
comp=Z,116nm,1.3s
KLMR MLR MLR
comp=Z,14µm,14.0s
KLMR Klimovskoe 62.56 327 *e*P **P** **13 18 39.8 -2.3**
KLMR AMP 13 18 48.2
comp=Z,116nm,1.3s
KLMR *e*PP **PP** **13 21 00.8 +1.5**
KLMR *e*S **S** **13 27 08.3 -1.3**
KLMR *e*S **S** **13 27 08.3 -1.3**
KLMR *e*SS **SS** **13 31 13.5 +0.5**
KLMR *e*SS **SS** **13 31 13.5 +0.5**
KLMR LQ LQ 13 41 14.8
KLMR LQ LQ 13 41 14.8
KLMR LR LR 13 44 53.5
KLMR AMP 13 48 04.7
comp=Z,14µm,13.6s
KEV Kevo 62.79 339 P **P** **13 18 44.3 +0.8**
KEV pmax pmax
comp=Z,391nm,1.5s
KEV MLR MLR
comp=Z,54µm,21.0s
KEV Kevo 62.79 339 P **P** **13 18 44.3 +0.8**
EIDS Eidsvold 62.92 167 P **P** **13 18 45.1 +0.3**
EIDS IAmb IAmb 13 18 51.4
comp=Z,260nm,1.6s
HAMF Hammerfest 63.24 340 *e*P **P** **13 18 47.0 +0.5**
HAMF IVmB_BB 13 18 49.8
comp=Z,5µm,5.0s
HAMF *e*PP **PP** **13 21 05.6 +0.5**
HAMF *e*S **S** **13 27 19.7 +1.8**
HAMF *e*SS **SS** **13 31 26.3 +3.1**
HAMF IVMs_BB IVMs_BB 13 51 06.7
comp=Z,17µm,15.4s
ARD3 ARCESS Array S 63.34 339 IAmb IAmb 13 18 52.3
comp=Z,284nm,1.5s
ARD2 ARCESS Array S 63.34 339 IAmb IAmb 13 18 52.4
comp=Z,252nm,1.4s
ARD1 ARCESS Array S 63.34 339 IAmb IAmb 13 18 52.4
comp=Z,155nm,1.1s
ARC2 ARCESS Array S 63.35 339 IAmb IAmb 13 18 53.2
comp=Z,206nm,1.4s
ARD4 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.4
comp=Z,210nm,1.3s
ARC1 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.4
comp=Z,197nm,1.2s
ARC3 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.4
comp=Z,231nm,1.4s
ARB1 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,194nm,1.2s
ARB2 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,243nm,1.3s
ARA1 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,188nm,1.2s
ARA0 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,177nm,1.2s
ARA0 ARCESS Array S 63.35 339 *e*P **P** **13 18 47.7 +0.4**
ARA2 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,177nm,1.2s
ARB3 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,192nm,1.2s
ARCES ARCESS Array B 63.35 339 P **P** **13 18 47.0 -0.2**
comp=Z,34nm,0.8s,baz=60,slow=8.2,SNR=71
ARCES PP **PP** **13 21 05.8 -0.3**
comp=Z,16nm,1.0s,baz=36,slow=9.4,SNR=2.1
ARCES LR LR 13 49 04.6
comp=Z,56µm,21.4s,baz=60,slow=39
ARD9 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,162nm,1.1s
ARA3 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,159nm,1.1s
ARB5 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,160nm,1.1s
ARC4 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,345nm,1.6s
ARC7 ARCESS Array S 63.35 339 IAmb IAmb 13 18 52.5
comp=Z,174nm,1.2s
ARB4 ARCESS Array S 63.36 339 IAmb IAmb 13 18 52.5
comp=Z,172nm,1.2s
ARC5 ARCESS Array S 63.36 339 IAmb IAmb 13 18 52.5
comp=Z,260nm,1.4s
ARC6 ARCESS Array S 63.36 339 IAmb IAmb 13 18 52.5
comp=Z,164nm,1.1s
ARD5 ARCESS Array S 63.36 339 IAmb IAmb 13 18 52.5
comp=Z,284nm,1.4s
ARD8 ARCESS Array S 63.36 339 IAmb IAmb 13 18 52.5
comp=Z,152nm,1.1s
ARD6 ARCESS Array S 63.37 339 IAmb IAmb 13 18 52.6
comp=Z,159nm,1.1s
ARD7 ARCESS Array S 63.37 339 IAmb IAmb 13 18 52.6
comp=Z,157nm,1.1s
KTK1 Kautokeino 64.32 339 *e*P **P** **13 18 54.4 +0.7**
KTK1 *e*PP **PP** **13 21 15.2 +0.7**
KTK1 *e*S **S** **13 27 32.7 +1.5**
KTK1 *e*SS **SS** **13 31 38.9 -1.2**
DZM Mont Dzumac 64.32 151 *e*P **P** **13 18 55.7 +1.4**
comp=Z,246nm,1.4s
DZM *e*S **S** **13 27 31.4 -1.0**
comp=Z,33µm,33.0s
DZM *e*LQ LQ 13 35 24.3
comp=Z,30µm,27.8s
DZM *e*LR LR 13 38 03.2
comp=Z,31µm,22.9s
DZM Mont Dzumac 64.32 151 P **P** **13 18 53.7 -0.5**
comp=Z,48nm,0.9s,baz=16,slow=8.2,SNR=13
DZM Mont Dzumac 64.32 151 IAmb IAmb 13 19 06.6
comp=Z,319nm,1.8s
DZM IAMs_20 IAMs_20 13 43 25.7
comp=Z,18µm,21.0s
TRO Tromso 65.15 340 *e*P **P** **13 18 59.0 0.0**
TRO *e*S **S** **13 27 43.6 +2.1**
TRO *e*SS **SS** **13 31 52.0 -0.9**
TRO IVMs_BB IVMs_BB 13 52 29.4
comp=Z,25µm,15.8s
YKA Yellowknife Ar 65.55 29 P **P** **13 19 01.5 -0.3**
comp=Z,3.8nm,0.6s,baz=134,slow=32,SNR=44
YKA PKPPKP 13 47 38.6
comp=Z,1.1nm,0.8s,baz=109,slow=2.0,SNR=3.9
YKA LR LR 13 50 36.7
comp=Z,8µm,18.6s,baz=0.0,slow=39
TULEG Thule 65.84 7 P **P** **13 19 02.2 -1.2**
TULEG IAMs_20 IAMs_20 13 49 55.1
comp=Z,19µm,20.0s
TULEG Thule 65.84 7⇑ *i*P **P** **13 19 03.2 -0.1**
TULEG IAmb IAmb 13 19 04.6
comp=Z,118nm,0.7s
TULEG IAMs_20 IAMs_20 13 51 47.7
comp=Z,19µm,18.1s
MOS Moscow 65.86 322 *e*P **P** **13 19 01.7 -2.1**
MOS *e* 13 19 31.1
MOS *e* 13 21 28.6
MOS *e*PPP PPP 13 23 07.2
MOS *e*S **S** **13 27 50.1 -0.5**
MOS *e* 13 28 56.9
MOS *e*SS **SS** **13 32 10.8 +6.3**
MOS pmax pmax
comp=Z,345nm,1.8s
MOS pmax pmax
comp=Z,7µm,5.8s
MOS pmax pmax
comp=N,2µm,6.0s
MOS pmax pmax
comp=E,3µm,6.0s
MOS smax smax
comp=N,9µm,8.8s
MOS smax smax
comp=E,6µm,8.8s
MOS MLR MLR
comp=E,57µm,14.0s
MOS MLR MLR
comp=Z,79µm,14.0s
MOS MLR MLR
comp=N,38µm,13.0s
DAG Danmarks Havn 65.90 354⇑ *i*P **P** **13 19 04.1 +0.3**
DAG MLR MLR
comp=Z,9µm,15.0s
DAG Danmarks Havn 65.90 354⇑ *i*P **P** **13 19 04.1 +0.3**
comp=Z,9µm,15.0s
DAG Danmarks Havn 65.90 354⇑ *i*P **P** **13 19 04.1 +0.3**
DAG IAMs_20 IAMs_20 13 59 54.0
comp=Z,9µm,14.8s
VRH Novokhopyorsk 65.95 317 *e*P **P** **13 19 03.3 -1.2**
VRH *e*PPP PPP 13 23 04.9
VRH *e*S **S** **13 27 46.5 -5.3**
VRH pmax pmax
comp=Z,90nm,1.2s
VRH smax smax
comp=N,6µm,9.9s
VRH MLR MLR
comp=Z,48µm,16.0s
MSVF Nonsavu 66.05 138 *i*P **P** **13 19 03.9 -1.6**
MSVF pmax pmax
comp=Z,187nm,1.3s
MSVF MLR MLR
comp=Z,5µm,17.0s
MSVF Nonsavu 66.05 138 P **P** **13 19 07.5 +1.9**
MSVF IAmb IAmb 13 19 14.0
comp=Z,229nm,1.1s
MSVF Nonsavu 66.05 138 IAMs_20 IAMs_20 13 43 00.7
comp=Z,15µm,20.0s
MAK Makhachkala 66.45 307 *e*P **P** **13 19 03.8 -4.1**
MAK *e*PPP PPP 13 23 08.9
MAK *e*S **S** **13 27 52.8 -5.4**
MAK *e*SS **SS** **13 32 12.9 -1.4**
MAK *e*SSS SSS 13 35 11.9
MAK pmax pmax
comp=Z,742nm,2.0s
MAK pmax pmax
comp=Z,8µm,3.6s
MAK smax smax
comp=N,3µm,2.8s
MAK smax smax
comp=E,6µm,3.4s
MAK MLR MLR
comp=Z,52µm,16.0s
MAK MLR MLR
comp=E,69µm,13.0s
MAK MLR MLR
comp=N,81µm,13.0s
OBN Obninsk 66.70 322 LR LR 13 50 36.3
comp=N,24µm,18.6s,baz=54,slow=38
OBN Obninsk 66.70 322⇑ P **P** **13 19 09.1 -0.1**

OBN	**Obninsk**	**66.70**	**322**	*c*	*i*P	**P**	**13 19 08.3**	**-0.9**
OBN					*i*		13 19 36.3	
OBN					*i* S	**S**	**13 27 59.3**	**-1.4**
OBN					*i* SS	**SS**	**13 32 21.3**	**+3.8**
OBN					pmax	pmax		
	comp=Z,272nm,1.7s							
OBN					pmax	pmax		
	comp=Z,7µm,6.0s							
OBN					MLR	MLR		
	comp=Z,96µm,16.0s							
LPSR	**Galich'ya Gora**	**66.77**	**319**	*e*	P	**P**	**13 19 09.1**	**-0.6**
LPSR					*e*S	**S**	**13 27 54.1**	**-7.6**
LPSR					pmax	pmax		
	comp=Z,100nm,0.8s							
LPSR					smax	smax		
	comp=N,4µm,10.0s							
LPSR					MLR	MLR		
	comp=Z,52µm,14.0s							
PUL	**Pulkovo**	**67.07**	**328**	*e*	P	**P**	**13 19 11.5**	**0.0**
PUL	**Pulkovo**	**67.07**	**328**	*i*	P	**P**	**13 19 11.1**	**-0.4**
PUL					pmax	pmax		
	comp=Z,85nm,0.7s							
PUL					MLR	MLR		
	comp=Z,32µm,17.0s							
N2IH	**Innhavet**	**67.07**	**340**	*e*	P	**P**	**13 19 11.5**	**+0.2**
VORR	**Voronezh**	**67.09**	**318**	*e*	P	**P**	**13 19 09.0**	**-2.8**
VORR					pmax	pmax		
	comp=Z,400nm,2.0s							
STEI	**Steigen**	**67.29**	**340**	*e*	P	**P**	**13 19 13.0**	**+0.2**
STEI					IVmB_BB		13 19 13.5	
	comp=Z,2µm,2.6s							
STEI					*e*S	**S**	**13 28 09.4**	**+2.0**
STEI					*e*SS	**SS**	**13 32 24.6**	**-1.4**
STEI					IVMs_BB	IVMs_BB	13 51 15.7	
	comp=Z,18µm,21.1s							
N2VI	**Vinje**	**67.30**	**340**	*e*	P	**P**	**13 19 12.6**	**-0.3**
VSR	**Storozhevoye**	**67.34**	**318**	*e*	P	**P**	**13 19 12.6**	**-0.8**
VSR					*e*S	**S**	**13 28 01.7**	**-7.0**
VSR					pmax	pmax		
	comp=Z,260nm,1.8s							
VSR					smax	smax		
	comp=N,5µm,10.4s							
VSR					MLR	MLR		
	comp=Z,24µm,16.0s							
VORD	**Divnogorie**	**67.40**	**317**	*e*	P	**P**	**13 19 13.4**	**-0.4**
VORD					*e*S	**S**	**13 28 06.5**	**-2.9**
VORD					pmax	pmax		
	comp=Z,110nm,1.3s							
VORD					smax	smax		
	comp=N,3µm,8.7s							
GROC	**Groznyy**	**67.43**	**308**	*e*	P	**P**	**13 19 11.8**	**-2.3**
GROC					*e*		13 19 39.2	
GROC					*e*S	**S**	**13 28 05.7**	**-4.3**
GROC					pmax	pmax		
	comp=Z,45nm,0.4s							
GROC					MLR	MLR		
	comp=Z,16µm,12.0s							
N2TV	**TΨrnvik**	**67.57**	**340**	*e*	P	**P**	**13 19 14.6**	**+0.1**
N2ST	**Straumen**	**67.58**	**339**	*e*	P	**P**	**13 19 14.8**	**+0.2**
LOF	**Lofoten**	**67.61**	**340**	*e*	P	**P**	**13 19 14.4**	**-0.4**
LOF					IVmB_BB		13 19 18.1	
	comp=Z,5µm,4.3s							
LOF					*e*S	**S**	**13 28 12.3**	**+1.0**
LOF					*e*SS	**SS**	**13 32 32.0**	**+0.9**
LOF					IVMs_BB	IVMs_BB	13 53 52.0	
	comp=Z,17µm,16.8s							
FAUS	**Fauske**	**67.65**	**339**	*e*	P	**P**	**13 19 15.6**	**+0.5**
FAUS					IVmB_BB		13 19 20.2	
	comp=Z,5µm,2.6s							
FAUS					*e*S	**S**	**13 28 13.9**	**+2.1**
FAUS					*e*SS	**SS**	**13 32 33.1**	**+1.5**
FAUS					IVMs_BB	IVMs_BB	13 50 51.4	
	comp=Z,15µm,20.7s							
FORT	**Forrest**	**67.69**	**189**		IAmb	IAmb	13 19 28.6	
	comp=Z,222nm,1.1s							
FORT					IAMs_20	IAMs_20	13 48 03.8	
	comp=Z,14µm,21.0s							
FINES	**FINESS Array B**	**67.82**	**331**		P	**P**	**13 19 15.5**	**-0.7**
	comp=Z,51nm,0.7s,baz=72,slow=6.2,SNR=151							
FINES					LR	LR	13 50 53.4	
	comp=Z,34µm,18.9s,baz=48,slow=38							
FINES	**FINESS Array B**	**67.82**	**331**		P	**P**	**13 19 15.2**	**-1.0**
NBB08	**Skaug oppvekst**	**67.83**	**340**	*e*	P	**P**	**13 19 16.2**	**+0.1**
N2SV	**SΨrvΨgen**	**67.92**	**340**	*e*	P	**P**	**13 19 16.4**	**-0.4**
N2VA	**VΨrΨy**	**68.17**	**340**	*e*	P	**P**	**13 19 18.1**	**-0.2**
JLN	**Jalan Bani Buh**	**68.18**	**282**		P	**P**	**13 19 19.4**	**+0.2**
	SNR=15							
JLN					P	**P**	**13 19 19.4**	**+0.2**
	SNR=15							
JLN					P	**P**	**13 19 19.4**	**+0.2**
	SNR=15							
GOF	**Gofitskoye**	**68.22**	**310**⇑	*e*	P	**P**	**13 19 20.0**	**+0.9**
GOF					*e*S	**S**	**13 28 21.7**	**+2.2**
GOF					pmax	pmax		
	comp=Z,398nm,1.9s							
GOF					smax	smax		
	comp=N,99nm,1.7s							
GOF					smax	smax		
	comp=E,21nm,0.6s							
NBB05	**Inndyr**	**68.24**	**339**	*e*	P	**P**	**13 19 19.0**	**+0.2**
STKA	**Stephens Creek**	**68.25**	**177**		P	**P**	**13 19 19.1**	**-0.1**
	comp=E,42nm,0.8s,baz=344,slow=7.7,SNR=86							
STKA					PKPPKP	P'P'df	13 47 37.3	+7.9
	comp=E,2.9nm,0.8s,baz=180,slow=3.0,SNR=4.2							
STKA					LR	LR	13 48 19.6	
	comp=E,13µm,21.0s,baz=356,slow=35							
WBK	**Wadi Bani Khal**	**68.29**	**283**		P	**P**	**13 19 20.5**	**+0.6**
	SNR=16							
WBK					P	**P**	**13 19 20.5**	**+0.6**
	SNR=16							
DBG	**Daneborg**	**68.37**	**354**⇑	*i*	P	**P**	**13 19 19.6**	**+0.1**
DBG					IAMs_20	IAMs_20	13 57 21.6	
	comp=Z,10µm,17.0s							
NBB30	**Finnes**	**68.37**	**340**	*e*	P	**P**	**13 19 19.9**	**+0.3**
NBB17	**Glomfjord BΨr**	**68.42**	**339**	*e*	P	**P**	**13 19 19.9**	**0.0**
N2RO	**RΨst**	**68.43**	**340**	*e*	P	**P**	**13 19 20.4**	**+0.5**
BIDO	**Bidbid**	**68.47**	**284**		P	**P**	**13 19 22.1**	**+1.1**
	SNR=27							
BIDO					P	**P**	**13 19 22.1**	**+1.1**
	SNR=27							
MORW	**Morawa**	**68.51**	**200**		P	**P**	**13 19 21.2**	**+0.4**
MORW					IAmb	IAmb	13 19 27.2	
	comp=Z,175nm,1.5s							
BANOM	**Banah**	**68.64**	**287**	*i*	P	**P**	**13 19 21.4**	**-0.6**
	SNR=23							
BANOM	**Banah**	**68.64**	**287**		P	**P**	**13 19 22.4**	**+0.4**
	SNR=18							
BANOM					P	**P**	**13 19 22.4**	**+0.4**
	SNR=18							
SHME	**Shamm**	**68.69**	**287**	*i*	P	**P**	**13 19 21.4**	**-0.9**
	SNR=41							
MOR8	**Moi Rana**	**68.73**	**339**	*e*	P	**P**	**13 19 20.3**	**-1.5**
MOR8					IVmB_BB		13 19 25.6	
	comp=Z,5µm,2.8s							
MOR8					*e*PP	**PP**	**13 21 51.4**	**-1.6**
MOR8					*e*S	**S**	**13 28 24.0**	**-0.9**
MOR8					*e*SS	**SS**	**13 32 46.3**	**-2.1**
MOR8					IVMs_BB	IVMs_BB	13 53 22.1	
	comp=Z,17µm,15.1s							
SMDO	**Samad**	**68.77**	**283**		P	**P**	**13 19 23.3**	**+0.3**
	SNR=43							
SMDO					P	**P**	**13 19 23.3**	**+0.3**
	SNR=43							
SMDO					P	**P**	**13 19 23.3**	**+0.3**
	SNR=43							
ZEI	**Tsey**	**68.84**	**308**	*e*	P	**P**	**13 19 21.0**	**-2.2**
ZEI					pmax	pmax		
	comp=Z,52nm,1.4s							
KONS	**Konsvik**	**68.88**	**339**	*e*	P	**P**	**13 19 22.5**	**-0.3**
KONS					*e*S	**S**	**13 28 26.5**	**0.0**
NBB40	**Tonnes**	**68.90**	**339**	*e*	P	**P**	**13 19 23.0**	**+0.1**
MDH	**Madha**	**68.96**	**286**	*i*	P	**P**	**13 19 22.9**	**-1.1**
	SNR=14							
MDH	**Madha**	**68.96**	**286**		P	**P**	**13 19 24.3**	**+0.3**
	SNR=9.3							
MDH					P	**P**	**13 19 24.3**	**+0.3**
	SNR=9.3							
KBZ	**Khabaz**	**68.99**	**309**		P	**P**	**13 19 24.1**	**+0.2**
	comp=Z,42nm,0.8s,baz=65,slow=6.3,SNR=33							
KBZ					LR	LR	13 52 14.7	
	comp=Z,29µm,18.5s,baz=48,slow=38							
KBZ	**Khabaz**	**68.99**	**309**	*c*	*i*P	**P**	**13 19 22.9**	**-0.9**
KBZ					pmax	pmax		
	comp=Z,51nm,0.9s							
KBZ					MLR	MLR		
	comp=Z,24µm,16.0s							
KVAR	**Kislovodsk Arr**	**69.00**	**310**		LR	LR	13 50 20.2	
	comp=Z,30µm,18.4s,baz=263,slow=37							
KIV	**Kislovodsk**	**69.01**	**310**	⇑	P	**P**	**13 19 25.1**	**+1.0**
KIV	**Kislovodsk**	**69.01**	**310**	*i*	P	**P**	**13 19 23.4**	**-0.7**
	SNR=15							
KIV	**Kislovodsk**	**69.01**	**310**	*e*	P	**P**	**13 19 23.5**	**-0.6**
KIV					*e*		13 21 56.4	
KIV					*e*S	**S**	**13 28 29.3**	**+0.3**
KIV					*e*SS	**SS**	**13 32 55.5**	**+1.5**
KIV					pmax	pmax		
	comp=Z,401nm,1.1s							
KIV					pmax	pmax		
	comp=Z,6µm,4.8s							
KIV					MLR	MLR		
	comp=Z,73µm,18.0s							
KIV	**Kislovodsk**	**69.01**	**310**		P	**P**	**13 19 24.4**	**+0.3**
KIV					IAmb	IAmb	13 19 35.2	
	comp=Z,164nm,1.0s							
A04D	**Lummi Island**	**69.01**	**44**		P	**P**	**13 19 23.5**	**-0.4**
	baz=302							
A04D					S	**S**	**13 28 30.9**	**+2.3**
	baz=302							
STOK	**Stokkvaagen**	**69.03**	**339**	*e*	P	**P**	**13 19 24.3**	**+0.7**
STOK					*e*S	**S**	**13 28 31.3**	**+3.0**
MSFE	**Esma-Masafi**	**69.04**	**287**	*i*	P	**P**	**13 19 24.0**	**-0.6**
	SNR=23							
HOQ	**Hoqain**	**69.08**	**284**		P	**P**	**13 19 25.0**	**+0.3**
	SNR=50							
HOQ					P	**P**	**13 19 25.0**	**+0.3**
	SNR=50							
HOQ					P	**P**	**13 19 25.0**	**+0.3**
	SNR=50							
JMDO	**Jabal Madar**	**69.09**	**283**		P	**P**	**13 19 25.0**	**+0.1**
	SNR=26							
JMDO					P	**P**	**13 19 25.0**	**+0.1**
	SNR=26							
JMDO					P	**P**	**13 19 25.0**	**+0.1**
	SNR=26							
AFI	**Afiamalu**	**69.11**	**127**		P	**P**	**13 19 25.6**	**+0.6**
AFI					pmax	pmax		
	comp=Z,68nm,0.9s							
AFI	**Afiamalu**	**69.11**	**127**		P	**P**	**13 19 25.6**	**+0.6**
BBOO	**Buckleboo**	**69.11**	**182**		P	**P**	**13 19 24.0**	**-0.5**
BBOO					IAMs_20	IAMs_20	13 48 18.2	
	comp=Z,15µm,20.0s							
UOSS	**Minazif**	**69.22**	**286**	*i*	P	**P**	**13 19 24.7**	**-0.9**
	SNR=19							
UOSS	**Minazif**	**69.22**	**286**		P	**P**	**13 19 25.0**	**-0.6**
UOSS	**Minazif**	**69.22**	**286**		IAMs_20	IAMs_20	13 53 07.4	
	comp=Z,18µm,22.0s							
UMQ	**Umm Al-Quwin**	**69.33**	**287**	*i*	P	**P**	**13 19 26.9**	**+0.6**
	SNR=12							
UMQ	**Umm Al-Quwin**	**69.33**	**287**		P	**P**	**13 19 28.0**	**+1.7**
	SNR=9.1							
UMQ					P	**P**	**13 19 28.0**	**+1.7**
	SNR=9.1							
UMQ					P	**P**	**13 19 28.0**	**+1.7**
	SNR=9.1							
VSU	**Vasula**	**69.34**	**328**	*e*	P	**P**	**13 19 25.4**	**-0.3**
VSU	**Vasula**	**69.34**	**328**	*c*	*i*P	**P**	**13 19 24.9**	**-0.8**
VSU					pmax	pmax		
	comp=Z,210nm,0.9s							
VSU					MLR	MLR		
	comp=Z,52µm,15.0s							
HATD	**Hatta, Dubai**	**69.34**	**286**	*i*	P	**P**	**13 19 26.6**	**+0.2**
	SNR=36							
HATD	**Hatta, Dubai**	**69.34**	**286**		P	**P**	**13 19 26.8**	**+0.5**
	SNR=36							
HATD					P	**P**	**13 19 26.8**	**+0.5**
	SNR=36							
HATD					P	**P**	**13 19 26.8**	**+0.5**
	SNR=36							
SOHO	**SOHO**	**69.39**	**285**	*i*	P	**P**	**13 19 26.0**	**-0.7**
	SNR=41							
D03D	**Eldon**	**69.42**	**46**		P	**P**	**13 19 26.0**	**-0.5**
	baz=302,SNR=19							
D03D					S	**S**	**13 28 35.8**	**+2.2**
	baz=302							
ASHO	**Ashiyiah**	**69.47**	**286**	*i*	P	**P**	**13 19 26.7**	**-0.6**
	SNR=34							
ASHO	**Ashiyiah**	**69.47**	**286**		P	**P**	**13 19 27.5**	**+0.3**
	SNR=49							
ASHO					P	**P**	**13 19 27.5**	**+0.3**
	SNR=49							
B05A	**Bryant**	**69.60**	**45**		P	**P**	**13 19 27.7**	**+0.1**
	baz=302,SNR=19							
B05A					S	**S**	**13 28 36.5**	**+0.9**
	baz=302							
BSY	**Bisya**	**69.60**	**284**		P	**P**	**13 19 28.6**	**+0.6**
	SNR=60							
BSY					P	**P**	**13 19 28.6**	**+0.6**
	SNR=60							
BSY					P	**P**	**13 19 28.6**	**+0.6**
	SNR=60							
NAZ	**Nazwa, Dubai**	**69.62**	**286**	*i*	P	**P**	**13 19 27.4**	**-0.7**
	SNR=7.6							
NAZ	**Nazwa, Dubai**	**69.62**	**286**		P	**P**	**13 19 28.5**	**+0.4**
	SNR=28							
NAZ					P	**P**	**13 19 28.5**	**+0.4**
	SNR=28							
NAZ					P	**P**	**13 19 28.5**	**+0.4**
	SNR=28							
GNI	**Garni**	**69.65**	**305**		LR	LR	13 52 32.9	
	comp=Z,86µm,18.1s,baz=57,slow=38							
GNI	**Garni**	**69.65**	**305**	*c*	*i*P	**P**	**13 19 27.4**	**-0.9**
GNI					pmax	pmax		
	comp=Z,85nm,1.3s							
GNI					MLR	MLR		
	comp=Z,75µm,18.0s							
D04E	**Lakebay**	**69.79**	**46**		P	**P**	**13 19 28.5**	**-0.2**
	baz=302							
FAQ	**Al Faqa, Dubai**	**69.80**	**286**	*i*	P	**P**	**13 19 28.9**	**-0.3**
	SNR=16							
FAQ	**Al Faqa, Dubai**	**69.80**	**286**		P	**P**	**13 19 29.1**	**-0.1**
	SNR=23							
FAQ					P	**P**	**13 19 29.1**	**-0.1**
	SNR=23							
FAQ					P	**P**	**13 19 29.1**	**-0.1**
	SNR=23							
B06A	**Marblemount**	**69.80**	**44**		P	**P**	**13 19 29.6**	**+0.8**
ARQ	**Araqi**	**69.82**	**284**		P	**P**	**13 19 29.5**	**+0.1**
	SNR=38							
ARQ					P	**P**	**13 19 29.5**	**+0.1**
	SNR=38							
ARQ					P	**P**	**13 19 29.5**	**+0.1**
	SNR=38							
MHTO	**MHTO**	**69.94**	**282**		P	**P**	**13 19 29.5**	**-0.6**
	SNR=57							
MHTO					P	**P**	**13 19 29.5**	**-0.6**
	SNR=57							
MHTO					P	**P**	**13 19 29.5**	**-0.6**
	SNR=57							
JMIC	**Jan Mayen**	**70.01**	**349**		LR	LR	13 51 01.4	
	comp=Z,5µm,20.2s,baz=30,slow=37							
JMIC	**Jan Mayen**	**70.01**	**349**	*e*	P	**P**	**13 19 30.1**	**+0.4**
JMIC					IVmB_BB		13 19 34.8	
	comp=Z,7µm,2.4s							
JMIC					*e*S	**S**	**13 28 40.2**	**+0.4**
JMIC					*e*SS	**SS**	**13 33 11.7**	**+3.7**
ALNE	**Al Ain**	**70.04**	**286**	*i*	P	**P**	**13 19 30.0**	**-0.7**
	SNR=11							
ASUD	**Al Ashush, Dub**	**70.06**	**286**	*i*	P	**P**	**13 19 30.5**	**-0.3**
	SNR=25							
ASUD	**Al Ashush, Dub**	**70.06**	**286**		P	**P**	**13 19 31.5**	**+0.7**
	SNR=15							
ASUD					P	**P**	**13 19 31.5**	**+0.7**
	SNR=15							
TASB	**TASBURUN-IGDIR**	**70.07**	**305**		P	**P**	**13 19 31.4**	**+0.7**
F04D	**Rainier, OR**	**70.24**	**47**		P	**P**	**13 19 32.1**	**+0.6**
	baz=302							
E04D	**Cinebar**	**70.24**	**46**		P	**P**	**13 19 31.4**	**-0.1**
	baz=303,SNR=16							
E04D					S	**S**	**13 28 45.1**	**+1.9**
	baz=303							
AJN	**Ajban**	**70.36**	**286**	*i*	P	**P**	**13 19 31.4**	**-1.2**
	SNR=17							
AJN	**Ajban**	**70.36**	**286**		P	**P**	**13 19 32.3**	**-0.4**
	SNR=19							
AJN					P	**P**	**13 19 32.3**	**-0.4**
	SNR=19							
UPNV	**Upernavik**	**70.44**	**4**	*e*	P	**P**	**13 19 31.8**	**-0.5**
UPNV					IAMs_20	IAMs_20	13 53 00.0	
	comp=Z,11µm,19.4s							
C06D	**Leavenworth**	**70.46**	**44**		P	**P**	**13 19 33.3**	**+0.4**
	baz=303							
C06D					S	**S**	**13 28 45.7**	**-0.2**
	baz=303							
KARS	**Kars**	**70.49**	**306**		P	**P**	**13 19 34.6**	**+1.2**
G03D	**McMinnville, O**	**70.56**	**48**		P	**P**	**13 19 33.5**	**0.0**
	baz=303							
G03D					S	**S**	**13 28 48.2**	**+1.3**
	baz=303							
NSS	**Namsos**	**70.63**	**338**	*e*	P	**P**	**13 19 33.3**	**-0.2**
NSS					IVmB_BB		13 19 37.2	
	comp=Z,5µm,4.8s							
NSS					*e*PP	**PP**	**13 22 09.7**	**+0.3**
NSS					*e*S	**S**	**13 28 47.8**	**+0.7**
NSS					*e*SS	**SS**	**13 33 19.5**	**+1.9**
NSS					IVMs_BB	IVMs_BB	13 56 50.2	
	comp=Z,14µm,14.7s							
F04A	**Amboy**	**70.67**	**47**		IAmb	IAmb	13 19 47.1	
	comp=Z,258nm,1.1s							
I02D	**Swisshome**	**70.80**	**49**		P	**P**	**13 19 35.0**	**0.0**
	baz=303							
I02D					S	**S**	**13 28 52.5**	**+2.7**
	baz=303							
DQM	**DQM**	**70.84**	**281**		P	**P**	**13 19 35.3**	**-0.3**
	SNR=14							
DQM					P	**P**	**13 19 35.3**	**-0.3**
	SNR=14							
LTY	**Liberty**	**70.95**	**45**		IAmb	IAmb	13 20 00.7	
	comp=Z,323nm,1.5s							
SENK	**Senkaya-Erzuru**	**70.99**	**307**		P	**P**	**13 19 37.2**	**+0.7**
SOC	**Sochi**	**71.03**	**310**	*c*	*i*P	**P**	**13 19 35.7**	**-0.7**
SOC					*e*		13 22 08.9	
SOC					*e*PPP	PPP	13 23 53.9	
SOC					*e*S	**S**	**13 28 53.7**	**+1.2**
SOC					*e*SS	**SS**	**13 33 25.3**	**+0.4**
SOC					pmax	pmax		
	comp=Z,103nm,1.2s							
SOC					MLR	MLR		
	comp=Z,18µm,12.0s							
SUMG	**Summit**	**71.05**	**359**⇑	*i*	P	**P**	**13 19 37.8**	**+1.3**
SUMG					MLR	MLR		
	comp=Z,34µm,17.0s							
SUMG	**Summit**	**71.05**	**359**		IAMs_20	IAMs_20	13 54 50.3	
	comp=Z,14µm,18.0s							
SUMG	**Summit**	**71.05**	**359**⇑	*i*	P	**P**	**13 19 37.8**	**+1.3**
	comp=Z,34µm,17.0s							
SUMG	**Summit**	**71.05**	**359**⇑	*i*	P	**P**	**13 19 37.8**	**+1.3**
SUMG					IAMs_20	IAMs_20	13 54 45.1	
	comp=Z,34µm,17.3s							
B08A	**Colville Reser**	**71.09**	**43**		IAmb	IAmb	13 19 49.4	
	comp=Z,317nm,1.3s							
AGRB	**Hanur-Agry**	**71.10**	**306**		P	**P**	**13 19 38.7**	**+1.5**
IZAR	**Zarasai**	**71.19**	**326**	*e*	P	**P**	**13 19 37.2**	**0.0**
MICGM	**Minsk**	**71.21**	**325**⇑	*i*	P	**P**	**13 19 37.0**	**-0.3**
MICGM					PM		13 19 38.0	
	comp=Z,0.6nm,1.5s							
MICGM					PM		13 19 41.0	
	comp=Z,10nm,6.0s							
MICGM					*e*PcP	**PcP**	**13 19 53.0**	**-4.2**
MICGM					*e*PP	**PP**	**13 22 09.0**	**-5.6**
MICGM					*e*PPP	PPP	13 23 54.0	
MICGM					*e*S	**S**	**13 28 55.0**	**+0.8**
MICGM					*e*PS	PnS	13 29 06.0	-16
MICGM					*e*SS	**SS**	**13 33 26.0**	**-1.0**
MICGM					*e*SSS	SSS	13 36 52.0	
MICGM					*e*LQ	LQ	13 45 38.0	
MICGM					LQM		13 49 47.0	
	comp=E,43nm,16.0s							
MICGM					LQM		13 49 48.0	
	comp=N,30nm,16.0s							
MICGM					*e*LR	LR	13 50 08.0	
MICGM					LRM	MLR	13 54 38.0	
	comp=E,67nm,16.0s							
MICGM					LRM	MLR	13 54 40.0	
	comp=Z,106nm,15.0s							
MICGM					LRM	MLR	13 54 40.0	
	comp=E,55nm,13.0s							
MICGM					LRM	MLR	13 54 42.0	
	comp=Z,83nm,14.0s							
MNK	**Minsk**	**71.21**	**325**⇑	*i*	P	**P**	**13 19 37.0**	**-0.3**
MNK					*e*		13 19 55.0	
MNK					*e*		13 23 54.0	
MNK					*e*S	**S**	**13 28 55.0**	**+0.8**
MNK					*e*		13 33 26.0	
MNK					pmax	pmax		
	comp=Z,620nm,1.5s							
MNK					pmax	pmax		
	comp=Z,10µm,6.0s							
MNK					smax	smax		
	comp=E,5µm,9.0s							
MNK					MLR	MLR		
	comp=E,67µm,16.0s							
MNK					MLR	MLR		
	comp=Z,106µm,15.0s							
MNK					MLR	MLR		
	comp=E,55µm,13.0s							
MNK					MLR	MLR		
	comp=Z,83µm,14.0s							
IDID	**Didziasalis**	**71.24**	**326**	*e*	P	**P**	**13 19 37.9**	**+0.4**
H04D	**Lebanon**	**71.24**	**48**		P	**P**	**13 19 38.0**	**+0.3**
	baz=303							
H04D					S	**S**	**13 28 57.1**	**+2.1**
	baz=303							
F05D	**White Salmon**	**71.25**	**46**		P	**P**	**13 19 38.4**	**+0.6**
	baz=304							
F05D					S	**S**	**13 28 56.7**	**+1.6**
	baz=304							
J01E	**Myrtle Point**	**71.26**	**50**		P	**P**	**13 19 37.9**	**+0.1**
	baz=303							
J01E					S	**S**	**13 28 56.4**	**+1.3**
	baz=303							
I03D	**Drain, OR**	**71.33**	**49**		P	**P**	**13 19 38.1**	**-0.1**
	baz=303,SNR=16							
I03D					S	**S**	**13 28 58.8**	**+2.8**
	baz=303							
VANB	**Van**	**71.36**	**304**		P	**P**	**13 19 40.6**	**+1.9**
ISAL	**Salakas**	**71.36**	**326**	*e*	P	**P**	**13 19 38.5**	**+0.4**
IIGN	**Ignalina**	**71.45**	**326**	*e*	P	**P**	**13 19 39.1**	**+0.4**
NACGM	**Naroch**	**71.47**	**325**	*e*	P	**P**	**13 19 39.0**	**+0.1**
NACGM					*e*PP	**PP**	**13 22 13.0**	**-3.9**
NACGM					*e*PPP	PPP	13 24 02.0	
NACGM					*e*S	**S**	**13 28 56.0**	**-1.2**
NACGM					*e*SS	**SS**	**13 33 26.0**	**-5.0**
NACGM					*e*SSS	SSS	13 36 56.0	
NACGM					*e*LQ	LQ	13 44 38.0	
NACGM					*e*LR	LR	13 51 04.0	
NACGM					LRM	MLR	13 54 50.0	
	comp=Z,44nm,14.0s							
KOPR	**Koprukoy-ERZUR**	**71.62**	**306**		P	**P**	**13 19 41.9**	**+1.6**
MLAZ	**Malazgirt-MUS**	**71.62**	**305**		P	**P**	**13 19 42.1**	**+1.8**
K02D	**Willamette Mer**	**71.68**	**50**		P	**P**	**13 19 41.0**	**+0.6**
	baz=303							
K02D					S	**S**	**13 29 01.7**	**+1.4**
	baz=303							
G05D	**Wamic, OR**	**71.69**	**47**		P	**P**	**13 19 40.8**	**+0.4**
	baz=304							
G05D					S	**S**	**13 29 02.9**	**+2.7**
	baz=304							
SLIT	**Slitere, Latvi**	**71.71**	**329**	*e*	P	**P**	**13 19 40.1**	**-0.1**
CHOM	**Cayeli-Rize**	**71.72**	**308**		P	**P**	**13 19 41.6**	**+0.9**
ANN	**Anapa**	**71.74**	**313**	*e*	P	**P**	**13 19 38.4**	**-2.3**
ANN					*e**PP	**pP**	**13 19 41.6**	**-2.6**
ANN					*e*		13 20 02.8	
ANN					*e*		13 22 18.8	
ANN					*e*S	**S**	**13 28 59.3**	**-1.4**
ANN					*e*		13 29 37.7	
ANN					pmax	pmax		
	comp=Z,316nm,1.8s							
ANN					pmax	pmax		
	comp=E,60nm,1.1s							
ANN					pmax	pmax		

NWAO pmax pmax
comp=Z,195nm,1.4s
NWAO Narrogin (SRO) 71.85 198 P **P** **13 19 40.6 -0.6**
NWAO IAmb IAmb 13 19 48.5
comp=Z,195nm,1.4s
CUKT Cukurca 71.93 303 P **P** **13 19 42.8 +0.7**
C09A Chrisman Ranch 71.99 44 IAmb IAmb 13 19 54.9
comp=Z,275nm,1.1s
L02E Cave Junction 72.01 51 P **P** **13 19 42.0 -0.4**
baz=303
L02E S **S** **13 29 06.4 +2.5**
baz=303
D08A Wollman Farm, 72.05 44 IAmb IAmb 13 19 48.4
comp=Z,513nm,1.8s
TBLU Trondheim 72.08 338 *e*P **P** **13 19 41.5 -0.9**
TBLU IVmB_BB 13 19 46.6
comp=Z,5μm,2.8s
TBLU *e*S **S** **13 29 03.3 -0.7**
TBLU IVMs_BB IVMs_BB 13 57 54.6
comp=Z,12μm,13.9s
HAWA Hanford 72.08 45 IAmb IAmb 13 19 55.7
comp=Z,239nm,1.4s
HUMO Hull Mountain 72.16 50 P **P** **13 19 44.5 +1.2**
HUMO IAmb IAmb 13 19 50.1
comp=Z,352nm,2.0s
I05D Terrebonne, OR 72.18 48 P **P** **13 19 44.0 +0.6**
baz=304,SNR=25
I05D S **S** **13 29 08.2 +2.2**
baz=304
SCO Scoresbysund 72.19 353⇑ *i*P **P** **13 19 44.3 +1.4**
SCO MLR MLR
comp=Z,11μm,18.0s
SCO Scoresbysund 72.19 353 IAMs_20 IAMs_20 13 56 31.9
comp=Z,11μm,19.0s
SCO Scoresbysund 72.19 353⇑ *i*P **P** **13 19 44.3 +1.4**
comp=Z,10μm,18.0s
SCO Scoresbysund 72.19 353⇑ *i*P **P** **13 19 44.3 +1.4**
SCO IAMs_20 IAMs_20 13 56 25.5
comp=Z,11μm,18.3s
GURO Guroymak-BITLI 72.28 305 P **P** **13 19 45.8 +1.6**
VRTB Varto-Mus 72.33 306 P **P** **13 19 46.5 +2.0**
J04D Umpqua Nationa 72.33 49 P **P** **13 19 44.9 +0.4**
baz=304,SNR=9.4
J04D S **S** **13 29 08.7 +0.7**
baz=304
NEW Newport 72.36 43 P **P** **13 19 44.6 +0.2**
baz=305,SNR=50
NEW S **S** **13 29 08.8 +1.0**
baz=305
NEW Newport 72.36 43 IAmb IAmb 13 19 57.0
comp=Z,232nm,1.2s
PABE Paberze 72.36 327 *e*P **P** **13 19 44.2 0.0**
KTUT Trabzon 72.41 308⇓ P **P** **13 19 45.3 +0.5**
KTUT Trabzon 72.41 308 P **P** **13 19 45.4 +0.6**
KARO Karliova-Bingo 72.51 306 P **P** **13 19 46.6 +1.0**
SIRT Sirnak 72.58 304 P **P** **13 19 47.4 +1.4**
YEDI Yedisu-Bingol 72.77 306 P **P** **13 19 48.2 +1.1**
L04D Klamath Falls 72.78 50 P **P** **13 19 47.5 +0.4**
baz=304,SNR=21
L04D S **S** **13 29 12.6 -0.5**
baz=304
YBH Yreka Blue Hor 72.80 51 LR LR 13 46 26.8
comp=Z,5μm,21.6s,baz=302,slow=31
E09A Wood Farm, Sta 72.80 45 IAmb IAmb 13 19 60.0
comp=Z,363nm,1.3s
J05D Fort Rock, OR 72.83 49 P **P** **13 19 48.5 +1.0**
baz=304,SNR=39
J05D S **S** **13 29 14.4 +0.8**
baz=304
AKASG Malin Array Be 72.85 321 P **P** **13 19 46.4 -0.8**
comp=Z,34nm,0.6s,baz=50,slow=6.3,SNR=96
AKASG LR LR 13 54 19.1
comp=Z,96μm,18.9s,baz=50,slow=38
AKASG Malin Array Be 72.85 321 P **P** **13 19 46.9 -0.3**
K04D Chiloquin, OR 72.89 49 P **P** **13 19 47.5 -0.3**
baz=304
K04D S **S** **13 29 15.5 +1.3**
baz=304
M02C Callahan 72.90 51 P **P** **13 19 48.9 +1.1**
baz=304,SNR=15
M02C S **S** **13 29 17.6 +3.3**
baz=304
PBUR Paburge 72.90 328 *e*P **P** **13 19 47.3 -0.1**
BNGB Bingl 72.92 306 P **P** **13 19 49.4 +1.4**
KMRM Mail Ridge 73.01 52 IAMs_20 IAMs_20 13 45 09.7
comp=Z,12μm,21.0s
SVAN Silvan-Diyarba 73.05 305 P **P** **13 19 49.7 +1.0**
ERZN Erzincan 73.21 307 P **P** **13 19 53.5 +3.8**
N02D Trinity Center 73.22 51 P **P** **13 19 50.5 +0.8**
baz=304,SNR=16
N02D S **SKiKP** **13 29 19.9 -1.7**
baz=304
M04C Macdoel 73.31 50 P **P** **13 19 50.9 +0.6**
baz=304,SNR=32
M04C S **S** **13 29 20.0 +0.9**
baz=304
DOMB Dombas 73.36 337 *e*P **P** **13 19 49.9 -0.2**
DOMB IVmB_BB 13 19 55.4
comp=Z,4μm,2.6s
DOMB *e*PP **PP** **13 22 32.8 -0.1**
DOMB *e*S **SKiKP** **13 29 20.6 -0.6**
DOMB IVMs_BB IVMs_BB 13 58 24.4
comp=Z,15μm,15.8s
SHAO Shalim 73.40 280 *i* P **P** **13 19 51.2 +0.2**
SNR=13
SHAO Shalim 73.40 280 P **P** **13 19 51.2 +0.2**
SNR=11
SHAO P **P** **13 19 51.2 +0.2**
SNR=11
MOL Molde 73.41 338 *e*P **P** **13 19 50.5 +0.2**
MOL IVmB_BB 13 19 54.5
comp=Z,6μm,5.1s
MOL *e*PP **PP** **13 22 32.9 -0.3**
MOL *e*S **SKiKP** **13 29 21.8 +0.7**
MOL *e*SS **SS** **13 34 01.6 +1.3**
MOL IVMs_BB IVMs_BB 13 56 26.9
comp=Z,9μm,16.9s
NB2 NORSAR Subarra 73.43 336 P **P** **13 19 49.8 -0.7**
comp=Z,591nm,1.7s,baz=41,slow=6.2
NB2 NORSAR Subarra 73.43 336 P **P** **13 19 49.8 -0.7**
baz=41,slow=6.2
NOA NORSAR Array B 73.43 336 P **P** **13 19 49.5 -0.9**
comp=Z,56nm,0.6s,baz=41,slow=6.0,SNR=308
WDC Whiskeytown Da 73.55 52 IAmb IAmb 13 19 57.7
comp=Z,332nm,1.7s
SIM Simferopol' 73.60 314*c* *i*P **P** **13 19 50.8 -0.9**
SIM S **SKiKP** **13 29 21.0 -0.9**
SIM pmax pmax
comp=Z,1μm,7.1s
SIM MLR MLR
comp=Z,10μm,18.7s
WALA Waterton Lakes 73.60 41 IAmb IAmb 13 20 04.7
comp=Z,336nm,1.5s
O02D Mt. Diablo Mer 73.62 52 P **P** **13 19 53.4 +1.3**
baz=304
SUW Suwalki 73.67 326 *e*P **P** **13 19 51.8 -0.2**
SUW *e*S **SKiKP** **13 29 20.1 -1.7**
SUW *e*L L 13 54 44.1
comp=Z,46μm,16.8s
NAO01 NORSAR Array S 73.68 336 IAmb IAmb 13 19 60.0
comp=Z,372nm,1.3s
PTK Pertek 73.81 307 P **P** **13 19 53.9 +0.5**
DYBB Diyarbakir 73.85 305 P **P** **13 19 54.8 +1.4**
AKN Aaknes 73.88 338 *e*P **P** **13 19 53.8 +0.7**
AKN IAmb IAmb 13 19 59.8
comp=Z,158nm,1.1s
AKN *e*PP **PP** **13 22 37.1 -0.2**
AKN *e*S **S** **13 29 25.8 +1.2**
AKN *e*SS **SS** **13 34 13.4 +6.0**
AKN IVMs_BB IVMs_BB 13 56 41.4
comp=Z,9μm,14.4s
MAZI Mazidag 73.92 305 P **P** **13 19 54.9 +1.0**
ILIC ilic-Erzincan 74.03 307 P **P** **13 19 55.9 +1.4**
HOPS Hopland Field 74.10 53 IAMs_20 IAMs_20 13 46 09.4
comp=Z,11μm,21.0s
DMTO DMTO 74.10 280 P **P** **13 19 55.0 -0.1**
SNR=15
DMTO P **P** **13 19 55.0 -0.1**
SNR=15
NIUE Niue 74.13 129 IAMs_20 IAMs_20 13 44 50.6
comp=Z,13μm,22.0s
SVRC Sivrice-ELAZID 74.16 306 P **P** **13 19 56.9 +1.5**
TOO Toolangi 74.17 174 IAMs_20 IAMs_20 13 51 29.1
comp=Z,11μm,19.0s
O03E Paynes Creek 74.17 51 P **P** **13 19 54.8 -0.6**
baz=305,SNR=39

O03E S **S** **13 29 29.4 +0.6**
baz=305
JTMT Jette 74.20 42 IAmb IAmb 13 20 08.4
comp=Z,226nm,1.0s
ILULI Ilulissat 74.25 3 P **P** **13 19 55.1 0.0**
ILULI pmax pmax
comp=Z,112nm,0.7s
ILULI MLR MLR
comp=Z,10μm,18.0s
ILULI Ilulissat 74.25 3 P **P** **13 19 55.1 0.0**
ILULI IAmb IAmb 13 19 57.5
comp=Z,112nm,0.7s
ILULI IAMs_20 IAMs_20 13 54 47.8
comp=Z,10μm,18.0s
ILULI Ilulissat 74.25 3 *i* P **P** **13 19 55.7 +0.6**
comp=Z,10μm,17.0s
ILULI Ilulissat 74.25 3 *i* P **P** **13 19 55.7 +0.6**
ILULI IAMs_20 IAMs_20 13 54 41.4
comp=Z,10μm,16.6s
RSDY Resadiye-TOKAT 74.28 309 P **P** **13 19 56.9 +1.0**
GDXM Geysers 74.39 53 IAMs_20 IAMs_20 13 45 56.9
comp=Z,15μm,21.0s
OSL Oslo 74.41 335 *e*P **P** **13 19 56.0 -0.2**
OSL IVmB_BB 13 20 01.8
comp=Z,6μm,3.2s
OSL *e*S **S** **13 29 32.4 +1.9**
OSL *e*SS **SS** **13 34 18.4 +2.8**
OSL IVMs_BB IVMs_BB 13 59 06.3
comp=Z,17μm,14.7s
J08A Circle Bar Ran 74.44 47 IAmb IAmb 13 20 10.2
comp=Z,215nm,1.1s
ICESG Greenland Ices 74.57 359⇑ *i*P **P** **13 19 58.6 +1.2**
ICESG IAmb IAmb 13 19 59.1
comp=Z,120nm,0.8s
SKAR Skarslia 74.64 337 *e*P **P** **13 19 58.5 +0.9**
SKAR IVmB_BB 13 20 03.7
comp=Z,5μm,3.5s
SKAR *e*S **S** **13 29 36.6 +3.5**
SKAR IVMs_BB IVMs_BB 13 56 03.7
comp=Z,12μm,15.6s
SNOP Sinop 74.65 311 P **P** **13 19 58.5 +0.6**
KVT Kavak 74.68 310 P **P** **13 19 59.8 +1.6**
MCCM Marconi Confer 74.71 54 IAMs_20 IAMs_20 13 46 12.4
comp=Z,9μm,20.0s
SVSK Karacayir 74.76 308 P **P** **13 20 00.3 +1.7**
MALT Malatya 74.76 306 P **P** **13 20 00.4 +1.6**
RBK Rabkut 74.81 281 P **P** **13 19 59.0 -0.3**
SNR=24
RBK P **P** **13 19 59.0 -0.3**
SNR=24
TOKT Tokat 74.81 309 P **P** **13 20 00.3 +1.3**
DIKM Dikmen 74.84 311⇑ P **P** **13 19 59.9 +0.8**
DIKM Dikmen 74.84 311 P **P** **13 20 01.3 +2.3**
PLID Pearl Lake 74.85 45 IAmb IAmb 13 20 11.8
comp=Z,327nm,1.8s
SORM Soroca 74.87 319⇑ P **P** **13 19 58.9 -0.2**
WVOR Wild Horse Val 74.89 48 IAmb IAmb 13 20 12.7
comp=Z,296nm,1.4s
FOO Floro 74.91 339 *e*P **P** **13 20 00.1 +1.1**
FOO IVmB_BB 13 20 03.0
comp=Z,5μm,5.1s
FOO *e*S **S** **13 29 37.1 +1.1**
FOO *e*SS **SS** **13 34 24.9 +1.9**
FOO IVMs_BB IVMs_BB 13 55 40.1
comp=Z,9μm,15.3s
HYA Hoyanger 74.91 338 *e*P **P** **13 19 59.7 +0.6**
HYA *e*PP **PP** **13 22 46.5 +0.6**
HYA *e*S **S** **13 29 30.6 -5.4**
WHFO Wadi Hawf 74.92 281 P **P** **13 19 59.3 -0.6**
SNR=17
WHFO P **P** **13 19 59.3 -0.6**
SNR=17
MSO Missoula 74.94 42 P **P** **13 19 59.7 0.0**
baz=308,SNR=57
MSO S **S** **13 29 35.6 -1.6**
baz=308
MSO Missoula 74.94 42 IAmb IAmb 13 20 12.1
comp=Z,282nm,1.4s
URFA Urfa 75.00 306 P **P** **13 20 01.6 +1.4**
KONO Kongsberg 75.00 336 *i* P **P** **13 19 58.3 -1.3**
KONO pmax pmax
comp=Z,37nm,0.9s
KONO MLR MLR
comp=Z,28μm,19.0s
KONO Kongsberg 75.00 336 P **P** **13 19 59.6 0.0**
KONO IAmb IAmb 13 20 07.7
comp=Z,354nm,1.9s
KONO Kongsberg 75.00 336 *e*P **P** **13 19 58.8 -0.9**
KONO IVmB_BB 13 20 03.3
comp=Z,5μm,4.8s
KONO *e*S **S** **13 29 40.6 +3.5**
KONO IVMs_BB IVMs_BB 13 59 30.4
comp=Z,15μm,12.8s
PURM Purcari 75.05 317⇑ P **P** **13 20 01.6 +1.5**
BEKR Beckworth 75.33 51 IAmb IAmb 13 20 14.8
comp=Z,162nm,1.1s
KIS Kishinev 75.33 318⇑ *i*P **P** **13 19 59.9 -1.8**
comp=Z,2μm,6.4s
KIS Kishinev 75.33 318 *e*PP PP 13 22 57.0 +7.1
KIS Kishinev 75.33 318⇑ P **P** **13 20 01.2 -0.6**
KIS Kishinev 75.33 318*c* *i*P **P** **13 19 59.9 -1.8**
KIS *e* 13 22 57.0
KIS *e*PPP PPP 13 24 36.0
KIS *e*S **S** **13 29 34.0 -7.2**
KIS *e*PS 13 30 12.0
KIS *e*SS **SS** **13 34 31.0 +0.8**
KIS pmax pmax
comp=Z,2μm,6.4s
KIS smax smax
comp=N,2μm,11.5s
KIS smax smax
comp=E,2μm,10.0s
KIS MLR MLR
comp=Z,15μm,14.5s
KIS MLR MLR
comp=E,10μm,14.0s
MILM Milestii Mici 75.38 318⇑ P **P** **13 20 01.6 -0.4**
BZK Bozkurt 75.42 312⇓ P **P** **13 20 04.2 +1.9**
BZK Bozkurt 75.42 312 P **P** **13 20 04.7 +2.4**
SUE Sulen 75.42 338 *e*P **P** **13 20 02.8 +0.8**
SUE IVmB_BB 13 20 06.3
comp=Z,6μm,4.7s
SUE *e*PP **PP** **13 22 50.1 -0.2**
SUE *e*S **S** **13 29 43.5 +1.8**
SUE *e*SS **SS** **13 34 34.6 +3.8**
SUE IVMs_BB IVMs_BB 13 58 07.0
comp=Z,8μm,14.7s
AFDM Forest Hills D 75.47 52 IAmb IAmb 13 20 15.6
comp=Z,323nm,1.8s
FFC Flin Flon 75.54 31 P **P** **13 20 03.3 +0.5**
FFC pmax pmax
comp=Z,888nm,1.8s
FFC MLR MLR
comp=Z,11μm,19.0s
FFC Flin Flon 75.54 31 P **P** **13 20 03.3 +0.5**
FFC Flin Flon 75.54 31 IAMs_20 IAMs_20 13 56 23.5
comp=Z,11μm,19.0s
FCC Fort Churchill 75.59 25 IAMs_20 IAMs_20 13 56 13.4
comp=Z,13μm,20.0s
ABTO Aybut 75.61 281 P **P** **13 20 03.6 -0.3**
SNR=33
ABTO P **P** **13 20 03.6 -0.3**
SNR=33
ASK Askoy 75.75 338 *e*P **P** **13 20 04.0 +0.1**
ASK *e*PP **PP** **13 22 48.8 -4.2**
ASK *e*S **S** **13 29 47.1 +1.8**
ODD1 Odda 75.76 337 *e*P **P** **13 20 03.3 -0.7**
ODD1 *e*PP **PP** **13 22 53.8 +0.6**
ODD1 *e*S **S** **13 29 48.0 +2.3**
ODD1 *e*SS **SS** **13 34 38.7 +2.6**
BER Bergen 75.79 338 *e*P **P** **13 20 04.9 +0.8**
BER IVmB_BB 13 20 08.3
comp=Z,6μm,5.0s
BER *e*PP **PP** **13 22 54.1 +0.8**
BER *e*S **S** **13 29 48.5 +2.8**
BER IVMs_BB IVMs_BB 13 58 26.2
comp=Z,16μm,14.0s
IAS Iasi 75.88 319⇑ P **P** **13 20 04.9 0.0**
MFID Camas Ranch 75.96 46 IAmb IAmb 13 20 18.8
comp=Z,311nm,1.4s
LVV L'vov 76.00 322 *e*P **P** **13 20 04.0 -1.5**
LVV *e* 13 22 58.3
LVV *e*S **S** **13 29 46.3 -2.2**
LVV pmax pmax
comp=N,2μm,5.0s
LVV pmax pmax
comp=E,2μm,5.0s
LVV pmax pmax
comp=Z,5μm,5.0s
LVV smax smax
comp=E,4μm,5.8s
LVV smax smax
comp=N,3μm,5.5s
LVV MLR MLR
comp=N,43μm,17.0s
LVV MLR MLR
comp=E,76μm,17.0s
LVV MLR MLR
comp=Z,83μm,17.0s
SARI SarD1z-Kayseri 76.00 307 P **P** **13 20 07.2 +1.2**
PAHR Pah Rah Range 76.03 51 P **P** **13 20 06.2 +0.1**
CORM Corum 76.08 310 P **P** **13 20 08.2 +1.8**
VASR Vaslui 76.10 318⇑ P **P** **13 20 06.8 +0.6**
BNN Bunyan 76.11 308 P **P** **13 20 07.8 +1.3**
BEL Belsk 76.20 325 *e*P **P** **13 20 07.7 +1.1**
BEL *e*PP **PP** **13 22 54.8 -2.3**
BEL *e*S **S** **13 29 49.1 -1.5**
BEL *e*L L 13 56 54.5
comp=Z,106μm,16.1s
BLS5 Blasjo 76.20 337 *e*P **P** **13 20 06.6 +0.1**
BLS5 IVmB_BB 13 20 12.3
comp=Z,4μm,2.6s
BLS5 *e*S **S** **13 29 52.4 +1.9**
BLS5 *e*SS **SS** **13 34 43.7 +1.0**
BLS5 IVMs_BB IVMs_BB 13 59 30.4
comp=Z,16μm,12.5s
GAZ Gaziantep 76.21 306 P **P** **13 20 06.9 -0.2**
KURC Kurucasile-Bar 76.24 312 P **P** **13 20 06.8 -0.2**
CMB Columbia Colle 76.38 53 IAmb IAmb 13 20 13.8
comp=Z,149nm,1.1s
CMB IAMs_20 IAMs_20 13 47 21.6
comp=Z,10μm,21.0s
EGMT Eagleton 76.41 40 P **P** **13 20 08.2 +0.2**
baz=310,SNR=79
EGMT S **S** **13 29 52.9 -0.4**
baz=310
BSD Bornholm Skovb 76.42 330⇑ *i*P **P** **13 20 07.8 0.0**
BSD pmax pmax
comp=Z,140nm,0.9s
BSD MLR MLR
comp=Z,33μm,16.0s
BSD Bornholm Skovb 76.42 330⇑ *i*P **P** **13 20 07.8 0.0**
comp=Z,136nm,0.9s
comp=Z,33μm,16.0s
BSD Bornholm Skovb 76.42 330⇑ *i*P **P** **13 20 07.9 0.0**
BSD IAmb IAmb 13 20 08.9
comp=Z,136nm,0.9s
BSD IAMs_20 IAMs_20 13 57 51.6
comp=Z,33μm,16.3s
HOMB Homborsund 76.43 335 *e*P **P** **13 20 08.5 +0.7**
HOMB IVmB_BB 13 20 11.6
comp=Z,5μm,4.6s
HOMB *e*PP **PP** **13 22 59.0 +0.2**
HOMB *e*S **S** **13 29 51.2 -1.7**
HOMB IVMs_BB IVMs_BB 13 55 22.8
comp=Z,11μm,18.3s
HOMB Homborsund 76.43 335 *i* P **P** **13 20 08.0 +0.3**
HOMB *i* P **P** **13 20 08.0 +0.3**
CANT Cankiri 76.45 311 P **P** **13 20 09.2 +0.8**
TLCR 76.46 317⇑ P **P** **13 20 08.9 +0.8**
PRAR RASCA 76.47 319⇑ P **P** **13 20 09.2 +0.9**
SFJD Kangerlussuaq 76.48 3 P **P** **13 20 07.9 -0.1**
SFJD pmax pmax
comp=Z,241nm,1.2s
SFJD MLR MLR
comp=Z,8μm,19.0s
SFJD Kangerlussuaq 76.48 3 P **P** **13 20 07.9 -0.1**
SFJD IAmb IAmb 13 20 13.1
comp=Z,241nm,1.1s
SFJD Kangerlussuaq 76.48 3 IAMs_20 IAMs_20 13 58 39.8
comp=Z,8μm,19.0s
SFJD Kangerlussuaq 76.48 3 *i* P **P** **13 20 08.4 +0.5**
comp=Z,600nm,17.0s
SFJD Kangerlussuaq 76.48 3 *i* P **P** **13 20 08.5 +0.5**
SFJD IAMs_20 IAMs_20 14 04 31.5
comp=Z,601nm,17.1s
DLMT Dillon 76.59 43 IAmb IAmb 13 20 15.1
comp=Z,364nm,1.2s
HLID Hailey 76.69 45 P **P** **13 20 10.4 +0.6**
baz=308,SNR=79
HLID S **S** **13 29 58.1 +1.4**
baz=308
KMY Karmoy 76.75 337 *e*P **P** **13 20 10.6 +1.0**
KMY IVmB_BB 13 20 13.8
comp=Z,5μm,5.1s
KMY *e*PP **PP** **13 23 01.2 -0.2**
KMY *e*S **S** **13 29 58.7 +2.3**
KMY IVMs_BB IVMs_BB 13 59 42.1
comp=Z,11μm,13.0s
KWP Kalwaria Pacla 76.77 323 *e*P **P** **13 20 09.9 -0.1**
KWP *e*PP **PP** **13 23 01.1 -0.9**
KWP *e*S **S** **13 29 56.5 -0.6**
KWP *e*L L 13 56 40.7
comp=Z,111μm,18.7s
GKP Gorka Klasztor 76.78 328 *e*P **P** **13 20 10.4 +0.6**
GKP *e*PP **PP** **13 23 02.2 +0.3**
GKP *e*S **S** **13 29 56.5 -0.4**
GKP *e*L L 13 56 50.9
comp=Z,53μm,16.5s
TESR Tescani 76.80 319⇑ P **P** **13 20 10.3 +0.1**
SCHL Schela 76.80 317⇓ P **P** **13 20 10.2 0.0**
SNART Snartemo 76.81 336 *e*P **P** **13 20 10.2 +0.3**
SNART *e*PP **PP** **13 23 01.8 -0.2**
SNART *e*S **S** **13 30 00.6 +3.6**
SNART Snartemo 76.81 336 *i* P **P** **13 20 10.0 +0.1**
SNART *i* P **P** **13 20 10.1 +0.1**
BIZ Bicaz 76.81 319⇑ P **P** **13 20 11.0 +0.8**
CFR Carcaliu 76.83 317⇑ P **P** **13 20 10.6 +0.3**
BURAR Bucovina Array 76.84 320⇑ P **P** **13 20 10.9 +0.5**
BURAR Bucovina Array 76.84 320 P **P** **13 20 11.1 +0.6**
TPGR Topolog 76.88 316⇓ P **P** **13 20 11.2 +0.5**
KOZT Kozan 76.92 307 P **P** **13 20 11.4 +0.4**
BOZ Bozeman (W) 76.97 42 P **P** **13 20 11.5 +0.2**
baz=309,SNR=31
BOZ S **S** **13 30 01.2 +1.5**
baz=309
BR131 Keskin Array S 76.97 310*c* *i*P **P** **13 20 10.7 -0.7**
BRTR Keskin Array B 76.97 310 P **P** **13 20 10.9 -0.5**
comp=Z,27nm,0.9s,baz=99,slow=3.9,SNR=67
BRTR LR LR 13 58 04.6
comp=Z,13μm,18.0s,baz=68,slow=39
BRTR Keskin Array B 76.97 310 P **P** **13 20 12.5 +1.1**
COP Copenhagen 76.97 332⇑ *i*P **P** **13 20 11.4 +0.5**
COP *i* 13 23 01.5
COP pmax pmax
comp=Z,76nm,0.6s
COP MLR MLR
comp=Z,28μm,16.0s
COP Copenhagen 76.97 332⇑ *i*P **P** **13 20 11.4 +0.5**
comp=Z,76nm,0.6s
COP *i* 13 23 01.5
comp=Z,28μm,16.0s
COP Copenhagen 76.97 332⇑ *i*P **P** **13 20 11.5 +0.5**
COP IAmb IAmb 13 20 12.9
comp=Z,76nm,0.6s
COP *i* 13 23 01.5
COP IAMs_20 IAMs_20 13 58 31.4
comp=Z,28μm,16.3s
ODBI Odobesti 77.05 318⇑ P **P** **13 20 12.7 +1.1**
GOET G??ttrup 77.13 334 *i* P **P** **13 20 12.7 +1.0**
comp=Z,301nm,0.7s
GOET G??ttrup 77.13 334 *i* P **P** **13 20 12.8 +1.0**
GOET IAmb IAmb 13 20 13.8
comp=Z,301nm,0.7s
TIRR Tirgusor 77.14 316⇑ P **P** **13 20 12.1 +0.1**
TIRR Tirgusor 77.14 316 *e*P **P** **13 20 12.2 +0.1**
VRI Vrincioaia 77.17 318⇑ P **P** **13 20 13.2 +0.9**
RYN Ryan 77.21 51 IAmb IAmb 13 20 25.9
comp=Z,160nm,1.1s
PLOR Plostina 77.22 318⇑ P **P** **13 20 13.4 +0.9**
KVN Kaiserville 77.22 51 IAmb IAmb 13 20 26.1
comp=Z,265nm,1.2s
CEYT Ceyhan 77.25 307 P **P** **13 20 14.6 +1.8**
HARR Harsova 77.26 317⇑ P **P** **13 20 11.9 -0.9**
MFTR Murfatlar 77.31 316⇑ P **P** **13 20 12.8 -0.2**
YAYX Yaylak 77.33 309 P **P** **13 20 14.4 +1.0**
TAHT Tahtakopru-Hat 77.34 306 P **P** **13 20 14.7 +1.3**
GRER 77.34 318⇓ P **P** **13 20 15.2 +1.9**
BISRR Bisoca 77.38 318⇑ P **P** **13 20 15.2 +1.7**
ANTO Ankara 77.40 310 IAMs_20 IAMs_20 13 57 46.6

comp=Z,9µm,19.0s
LOD Lodumlu 77.41 310 P **P** 13 20 15.0 +1.2
MANR Mangalia 77.44 316 ⇓P **P** 13 20 13.2 -0.6
LHV Little Huntoon 77.44 52 IAMs_20 IAMs_20 13 48 37.7
comp=Z,9µm,21.0s
MDPB Devils Postpil 77.45 52 IAMs_20 IAMs_20 13 47 55.9
comp=Z,10µm,20.0s
NVAR Mina Array Bea 77.46 51 P **P** 13 20 15.2 +0.8
comp=Z,77nm,1.0s,baz=299,slow=4.9,SNR=82
NVAR LR LR 13 48 44.2
comp=Z,7µm,21.5s,baz=299,slow=31
NVAR Mina Array Bea 77.46 51 P **P** 13 20 15.3 +0.9
RGN Rugen 77.47 331 *e*P **P** 13 20 13.6 -0.1
SERE Sereflikochisa 77.48 309 P **P** 13 20 14.7 +0.4
AFSR Afar-Bala (An 77.48 310 P **P** 13 20 15.7 +1.4
OMMB Old Mammoth Mi 77.51 52 IAMs_20 IAMs_20 13 47 57.6
comp=Z,11µm,21.0s
OZUR 77.52 319 ⇑P **P** 13 20 15.7 +1.4
KARA Karaisali 77.55 307 P **P** 13 20 15.9 +1.4
NV11 Mina Array Sit 77.56 51 IAmb IAmb 13 20 27.1
comp=Z,233nm,1.4s
RAO Raoul Island 77.58 141 IAMs_20 IAMs_20 13 48 39.6
comp=Z,9µm,22.0s
MUD Monsted U'grnd 77.59 334 *i* P **P** 13 20 15.1 +0.8
MUD MLR MLR
comp=Z,31µm,16.0s
MUD Monsted U'grnd 77.59 334 *i* P **P** 13 20 15.1 +0.8
comp=Z,31µm,16.0s
MUD Monsted U'grnd 77.59 334 *i* P **P** 13 20 14.6 +0.2
MUD *i* P **P** 13 20 15.2 +0.8
MUD IAMs_20 IAMs_20 14 00 36.5
comp=Z,31µm,16.1s
MLAC Mammoth, Mammo 77.61 52 P **P** 13 20 16.0 +0.8
baz=307,SNR=8.2
ARCR ARCALIA 77.63 320 ⇓P **P** 13 20 16.4 +1.6
AMRR Amara 77.64 317 ⇓P **P** 13 20 16.0 +1.2
UZH Uzhgorod 77.64 322 *e*P **P** 13 20 14.7 -0.1
UZH *e* 13 20 24.9
UZH *e* 13 23 14.5
UZH *i* S **S** 13 30 03.5 -3.0
UZH *i* 13 30 32.7
UZH *i* 13 30 44.9
UZH *e* 13 38 24.4
UZH MLR MLR
comp=N,16µm,16.0s
UZH MLR MLR
comp=E,22µm,16.0s
UZH MLR MLR
comp=Z,13µm,16.0s
BMR Baia Mare 77.68 321 ⇑P **P** 13 20 16.1 +1.0
NEHR Nehoiu 77.68 318 ⇑P **P** 13 20 16.2 +1.1
ICOR Ion Corvin 77.69 316 ⇑P **P** 13 20 16.1 +0.9
ISR Istrita 77.74 318 ⇑P **P** 13 20 16.9 +1.3
KRTS Karatas 77.75 306 P **P** 13 20 18.5 +2.9
PSN Preselentsi 77.75 316 *e*P **P** 13 20 17.5 +2.0
OJC Ojcow 77.76 325 *e*P **P** 13 20 15.2 -0.3
OJC *e*PP **PP** 13 23 11.2 +0.9
OJC *e*S **S** 13 30 07.2 -0.6
OJC *e*L L 13 57 06.2
comp=Z,58µm,18.1s
OJC Ojcow 77.76 325 P **P** 13 20 16.2 +0.8
OJC pmax pmax
comp=Z,481nm,1.5s
OJC Ojcow 77.76 325 P **P** 13 20 16.2 +0.8
DOPR Dopca 77.81 319 ⇓P **P** 13 20 17.3 +1.4
MLR Muntele Rosu 77.83 318 ⇑P **P** 13 20 16.7 +0.6
SULT Sultanhani-AKS 77.96 309 P **P** 13 20 18.2 +1.3
SOCY Socotra 77.99 276 P **P** 13 20 15.6 -1.8
SNR=10.0
SOCY Socotra 77.99 276 P **P** 13 20 16.7 -0.7
SOCY IAMs_20 IAMs_20 13 56 20.1
comp=Z,13µm,20.0s
MDUB Mudurnu 78.00 312 P **P** 13 20 18.4 +1.3
LEHL Lehliu 78.01 317 ⇓P **P** 13 20 18.1 +1.2
ANGG Ammassalik, Gr 78.02 358 IAmb IAmb 13 20 18.1
comp=Z,122nm,0.7s
ANGG Ammassalik, Gr 78.02 358 *i* P **P** 13 20 16.0 -0.6
ANGG IAmb IAmb 13 20 18.2
comp=Z,117nm,0.6s
ANGG IAMs_20 IAMs_20 13 58 56.5
comp=Z,14µm,17.7s
VOG Valley Oaks Go 78.04 54 P **P** 13 20 17.6 +0.4
baz=307
VOG S **S** 13 30 10.5 -0.7
baz=307
SECR 78.06 318 ⇑P **P** 13 20 17.6 +0.4
YESY Yesilyurt 78.07 308 P **P** 13 20 18.6 +1.0
NIE Niedzica 78.07 324 *e*P **P** 13 20 17.5 +0.2
NIE *e*PP **PP** 13 23 13.6 +0.7
NIE *e*S **S** 13 30 10.0 -1.3
NIE *e*L L 13 58 37.0
comp=Z,23µm,16.2s
ISOG Isortoq, Green 78.11 359 *i* P **P** 13 20 17.8 +0.7
ISOG IAmb IAmb 13 20 19.0
comp=Z,102nm,0.8s
RAYN Ar Rayn 78.17 290 *i* P **P** 13 20 17.6 -0.6
SNR=34
RAYN Ar Rayn 78.17 290 P **P** 13 20 18.5 +0.2
RAYN pmax pmax
comp=Z,107nm,1.0s
RAYN Ar Rayn 78.17 290 P **P** 13 20 18.5 +0.2
SULR 78.18 317 ⇑P **P** 13 20 18.9 +1.0
SMMC Simmler 78.23 55 P **P** 13 20 18.5 +0.1
baz=307
SMMC S **S** 13 30 13.9 +0.5
baz=307
CJR Cluj-Napoca 78.26 320 ⇓P **P** 13 20 19.8 +1.4
LKWY Lake 78.30 43 IAMs_20 IAMs_20 13 54 14.5
comp=Z,14µm,21.0s
H17A Grant Village 78.31 43 P **P** 13 20 19.3 +0.3
baz=310,SNR=55
H17A Grant Village 78.31 43 IAMs_20 IAMs_20 13 56 12.8
comp=Z,12µm,20.0s
TIN Tinemaha, Big 78.34 52 P **P** 13 20 18.5 -0.6
baz=307,SNR=14
TIN S **S** 13 30 16.4 +1.7
baz=307
VOIR 78.34 319 ⇓P **P** 13 20 19.6 +0.7
SAUV Serdivan-Sakar 78.36 312 P **P** 13 20 17.6 -1.3
SPNC Sapanca-Adapaz 78.40 312 P **P** 13 20 20.1 +0.9
IMW Indian Meadow 78.43 43 IAmb IAmb 13 20 32.7
comp=Z,524nm,1.9s
ORH Orhaniye 78.43 313 P P 13 20 28.9 +10
GULT Gulveren 78.43 312 P **P** 13 20 20.2 +0.7
SVRH Sivrihisar-ESK 78.43 311 P P 13 20 24.8 +5.3
PRD Provadia 78.50 316 *e*P **P** 13 20 21.5 +1.8
SILT Sile 78.50 313 P **P** 13 20 20.7 +1.0
VES Vestal, Richgr 78.52 54 P **P** 13 20 19.5 -0.4
baz=307,SNR=36
VES S **S** 13 30 17.0 +0.7
baz=307
NEF NEVSHA 78.53 316 *e*P **P** 13 20 20.2 +0.3
RLMT Red Lodge 78.55 42 P **P** 13 20 19.0 -1.2
baz=311
RLMT Red Lodge 78.55 42 IAMs_20 IAMs_20 13 58 28.0
comp=Z,7µm,18.0s
KIZT Kizilcal 78.56 310 P **P** 13 20 21.1 +0.8
ARR Arges 78.61 319 ⇑P **P** 13 20 21.7 +1.4
PKM Mcpherson Peak 78.61 55 P **P** 13 20 21.1 +0.4
baz=307,SNR=18
PKM S **S** 13 30 18.3 +0.5
baz=307
SRCK Saricakaya, Es 78.61 312 P **P** 13 20 22.5 +2.1
SGRR Singureni 78.63 317 ⇓P **P** 13 20 20.2 -0.2
DRGR 78.66 321 ⇓P **P** 13 20 21.6 +1.0
DRGR 78.66 321 *e*P **P** 13 20 21.2 +0.6
LADK Ladik-KONYA 78.68 309 P **P** 13 20 20.7 -0.2
TPAW Teton Pass 78.69 44 P **P** 13 20 21.4 +0.4
TPAW IAmb IAmb 13 20 27.8
comp=Z,639nm,2.0s
RAZG Razgrad 78.76 316 ⇑P **P** 13 20 21.7 +0.5
CIFT Cifteler, Eski 78.77 311 P **P** 13 20 21.4 0.0
OKC Ostrava-Krasne 78.79 325 *e*P **P** 13 20 22.1 +0.9
OKC *e* 13 20 25.6
OKC *e*S **S** 13 30 15.6 -3.2
OKC MLR MLR
comp=Z,43µm,14.7s
OKC smax smax
comp=N,8.0nm,0.4s
OKC Ostrava-Krasne 78.79 325 *e*P **P** 13 20 22.1 +0.9
OKC *ex* x 13 20 25.6
OKC *e*S **S** 13 30 15.6 -3.2
OKC AMS AMS 13 57 50.0
comp=N,43µm,14.7s

KLYT Kilyos 78.79 313 P **P** 13 20 21.1 -0.2
RUE Ruedersdorf 78.80 329 *e*P **P** 13 20 21.0 -0.1
RUE Ruedersdorf 78.80 329 *e*P **P** 13 20 21.4 +0.3
comp=N,1µm,2.2s,baz=40,slow=5.2
CWC Cottonwood Cre 78.80 53 P **P** 13 20 22.0 +0.2
baz=307
CWC S **S** 13 30 20.9 +1.1
baz=307
SILI Silifke-Mersin 78.81 307 P **P** 13 20 21.9 +0.4
SKMB Sankelmark Bun 78.83 332 *e*P **P** 13 20 21.9 +0.6
comp=N,1µm,1.8s,baz=40,slow=5.2
OUZ Omahuta 78.83 151 IAMs_20 IAMs_20 13 49 51.1
comp=Z,13µm,22.0s
KONT Konya--Tatoy 78.84 309 P **P** 13 20 22.6 +0.9
DGMT Dagmar 78.88 37 P **P** 13 20 22.1 +0.3
baz=314
DGMT Dagmar 78.88 37 IAMs_20 IAMs_20 13 58 09.3
comp=Z,9µm,20.0s
KEBE Keben-Mersin 78.89 307 P **P** 13 20 22.5 +0.4
ADVT Abdulvahap 78.90 312 P **P** 13 20 22.7 +0.8
ISK Istanbul-Kandi 78.90 313 P **P** 13 20 23.3 +1.4
KAVV Kandilli-Istan 78.90 313 P **P** 13 20 23.9 +2.0
KSP Ksiaz 78.91 327 *e*P **P** 13 20 21.8 -0.1
KSP *e*PP **PP** 13 23 20.5 +0.7
KSP *e*S **S** 13 30 18.3 -1.8
KSP *e*SS **SS** 13 35 17.3 -6.7
KSP *e*L L 13 59 05.0
comp=Z,49µm,16.0s
GRAC Grapevine Rang 78.92 52 P **P** 13 20 22.5 +0.3
baz=308,SNR=24
GRAC S **S** 13 30 21.9 +1.1
baz=308
SBC Santa Barbara 78.94 55 P **P** 13 20 22.9 +0.6
baz=307
SBC S **S** 13 30 23.3 +2.4
baz=307
HUMR Humele 78.97 318 ⇓P **P** 13 20 22.1 -0.1
CAVI Cavuskoy 78.98 312 P **P** 13 20 23.2 +0.8
BGKT Bogazkoy 79.00 313 P **P** 13 20 23.7 +1.3
LOT Lotru 79.01 319 ⇑P **P** 13 20 23.2 +0.5
ISA Isabella, Lake 79.02 54 P **P** 13 20 22.5 -0.3
baz=307,SNR=22
ISA S **S** 13 30 22.5 +0.6
baz=307
IKL Isikli 79.04 307 P **P** 13 20 23.5 +0.7
TEVE Tevekalti-Mers 79.08 307 P **P** 13 20 23.9 +0.8
CTYL Yalikoy Yolu 79.09 314 P **P** 13 20 22.9 -0.1
LAO LASA Array 79.09 39 P **P** 13 20 22.6 -0.4
baz=313,SNR=69
LAO S **S** 13 30 23.0 +0.7
baz=313
BSEG Bad Segeberg 79.10 331 *e*P **P** 13 20 22.9 +0.2
comp=Z,724nm,2.2s,baz=40,slow=5.2
COPA Copaceanca 79.10 317 ⇓P **P** 13 20 22.8 -0.2
MORC Moravsky Berou 79.11 325 ⇑P **P** 13 20 24.0 +1.0
MORC Moravsky Berou 79.11 325 ⇑*i*P **P** 13 20 23.9 +0.9
MORC *e*PP **PP** 13 23 22.1 +0.5
MORC *e*S **S** 13 30 23.2 +0.8
MORC Moravsky Berou 79.11 325 IAmb IAmb 13 20 35.9
comp=Z,211nm,1.3s
ARVC Arvin 79.11 54 P **P** 13 20 22.9 -0.3
baz=307,SNR=15
ARVC S **S** 13 30 23.4 +0.7
baz=307
CTKS Kestanelik-??a 79.12 314 P **P** 13 20 24.5 +1.4
OSTC Ostas 79.15 326 *e*P **P** 13 20 23.6 +0.4
OSTC *ex* x 13 20 32.6
OSTC *e*S **S** 13 30 20.1 -2.6
OSTC AMS AMS 13 59 00.0
comp=Z,63µm,14.7s
DEV Deva 79.17 320 ⇑P **P** 13 20 24.0 +0.7
AKKU Akkuyu-Mersin 79.17 307 P **P** 13 20 24.5 +1.0
CHVC Chvalec 79.20 327 *e*P **P** 13 20 23.2 -0.3
CHVC *ex* x 13 20 34.3
CHVC *e*S **S** 13 30 23.1 -0.2
CHVC AMS AMS 13 59 00.0
comp=Z,58µm,13.7s
R11A Troy Canyon, C 79.21 50 P **P** 13 20 24.0 +0.1
baz=308,SNR=199
R11A S **S** 13 30 25.0 +0.9
baz=308
R11A Troy Canyon, C 79.21 50 IAmb IAmb 13 20 30.2
comp=Z,388nm,1.6s
GEMT Gemlik 79.22 313 P **P** 13 20 24.7 +1.0
NUUK Nuuk 79.23 4⇑*i*P **P** 13 20 24.4 +1.2
NUUK IAmb IAmb 13 20 25.4
comp=Z,275nm,0.7s
NUUK IAMs_20 IAMs_20 13 57 36.1
comp=Z,12µm,17.0s
KRLC Kraliky 79.24 326 *e*P **P** 13 20 23.3 -0.4
KRLC *e* 13 20 31.0
KRLC *e*S **S** 13 30 16.4 -7.4
KRLC MLR MLR
comp=Z,66µm,15.6s
KRLC Kraliky 79.24 326 *e*P **P** 13 20 23.3 -0.4
KRLC *ex* x 13 20 31.0
KRLC *e*S **S** 13 30 16.4 -7.4
KRLC AMS AMS 13 58 40.0
comp=Z,66µm,15.6s
DPC Dobruska-Polom 79.25 326 *e*P **P** 13 20 23.5 -0.3
DPC *e* 13 20 29.5
DPC *e*S **S** 13 30 24.7 +0.8
DPC MLR MLR
comp=Z,80µm,15.3s
DPC Dobruska-Polom 79.25 326 *e*P **P** 13 20 23.5 -0.3
DPC *ep*P **sP** 13 20 29.5 +0.9
DPC *e*S **S** 13 30 24.7 +0.8
DPC AMS AMS 13 59 00.0
comp=Z,80µm,15.3s
SCZ2 Santa Cruz Isl 79.26 56 P **P** 13 20 24.3 +0.2
baz=307
SCZ2 S **S** 13 30 25.4 +1.0
baz=307
BERE Bereket-Mersin 79.27 307 P **P** 13 20 25.1 +0.8
SZH Strazhica 79.28 316 *e*P **P** 13 20 24.4 +0.4
UPC Upice 79.28 327 *e*P **P** 13 20 24.0 +0.1
UPC *e* 13 20 33.9
UPC *e*S **S** 13 30 19.1 -4.9
UPC MLR MLR
comp=Z,69µm,13.9s
UPC Upice 79.28 327 *e*P **P** 13 20 24.0 +0.1
UPC *e*PCP **PcP** 13 20 33.9 +1.8
UPC *e*S **S** 13 30 19.1 -4.9
UPC AMS AMS 13 59 00.0
comp=Z,69µm,13.9s
SLVT Silivri 79.29 314 P **P** 13 20 24.3 +0.2
PSZ Piszkesteto 79.30 323 ⇑P **P** 13 20 25.3 +1.2
ARMT Armutlu 79.33 313 P **P** 13 20 23.3 -1.1
ZIMR 79.33 317 ⇑P **P** 13 20 24.4 +0.2
MPMC Manual Prospec 79.42 53 P **P** 13 20 25.1 0.0
baz=308,SNR=92
MPMC S **S** 13 30 27.8 +1.4
baz=308
JMB Yambol 79.43 315 *e*P **P** 13 20 25.8 +1.0
PHSR Pinarhisar 79.43 314 P **P** 13 20 26.9 +2.0
MDNY Mudanya-Bursa 79.44 313 P **P** 13 20 25.7 +0.8
TEKE Tekeli-Mersin 79.46 307 P **P** 13 20 25.6 +0.5
OSI Osito Audit: C 79.49 55 P **P** 13 20 25.4 +0.1
baz=307
OSI S **S** 13 30 27.8 +0.9
baz=307
HWUT Hardware Ranch 79.55 46 IAmb IAmb 13 20 39.0
comp=Z,338nm,1.3s
SIRR Siria 79.55 321 ⇑P **P** 13 20 26.3 +0.8
FURC Furnace Creek, 79.56 52 P **P** 13 20 26.4 +0.7
baz=308,SNR=55
FURC S **S** 13 30 28.2 +0.7
baz=308
GZR Gura Zlata 79.57 320 ⇑P **P** 13 20 26.0 +0.4
SPR3 Spring Creek 3 79.57 49 IAmb IAmb 13 20 32.9
comp=Z,439nm,1.9s
SHUT Suhut-Afyon 79.58 310 P **P** 13 20 26.9 +1.0
VLAD Vladila 79.63 318 ⇑P **P** 13 20 26.3 +0.4
TAU Tasmania Unive 79.64 173 P **P** 13 20 25.7 +0.1
TAU comp=Z,153nm,1.4s pmax pmax
TAU MLR MLR
comp=Z,9µm,20.0s
TAU Tasmania Unive 79.64 173 P **P** 13 20 25.7 +0.1
TAU Tasmania Unive 79.64 173 IAMs_20 IAMs_20 13 55 30.3
comp=Z,9µm,20.0s
PVL Pavlikeni 79.64 317 *e*P **P** 13 20 27.1 +1.2
LRMC Laurel Mtn Rad 79.64 53 P **P** 13 20 26.7 +0.4
baz=308,SNR=19

LRMC S **S** 13 30 29.8 +1.1
baz=308
TPNV Topopah Spring 79.66 52 P **P** 13 20 26.4 0.0
baz=308,SNR=73
TPNV S **S** 13 30 29.1 +0.2
baz=308
TPNV Topopah Spring 79.66 52 IAmb IAmb 13 20 31.4
comp=Z,568nm,1.9s
TPNV IAMs_20 IAMs_20 13 49 24.3
comp=Z,11µm,21.0s
TVSB Tavsanli 79.68 312 P **P** 13 20 27.1 +0.7
JAVC Velka Javorina 79.70 325 ⇑*i*P **P** 13 20 27.7 +1.4
JAVC *e*PP **PP** 13 23 29.6 +3.1
JAVC *e*S **S** 13 30 32.6 +3.9
DUG Dugway, Tooele 79.72 47 P **P** 13 20 26.9 +0.2
baz=310,SNR=93
DUG S **S** 13 30 32.1 +2.6
baz=310
EDRB Edirne 79.74 315 P **P** 13 20 27.5 +1.0
EDRB Edirne 79.74 315 P **P** 13 20 27.0 +0.5
SNCC San Nicolas Is 79.78 56 P **P** 13 20 27.3 +0.4
baz=307
SNCC S **S** 13 30 31.0 +1.1
baz=307
SNCC San Nicolas Is 79.78 56 IAMs_20 IAMs_20 13 49 13.1
comp=Z,10µm,20.0s
EDW2 Edwards Air Fo 79.81 54 P **P** 13 20 26.9 -0.2
baz=308,SNR=32
EDW2 S **S** 13 30 31.5 +1.2
baz=308
SRE Strehaia 79.83 319 ⇑P **P** 13 20 28.3 +1.3
MMAI Mount Meron Ar 79.86 304 LR LR 13 59 33.0
comp=Z,46µm,18.5s,baz=50,slow=39
VRAC Vranov 79.88 325 ⇑P **P** 13 20 28.3 +1.2
VRAC Vranov 79.88 325 ⇑*i*P **P** 13 20 27.8 +0.7
VRAC *e*PP **PP** 13 23 29.1 +1.2
VRAC *e*S **S** 13 30 31.6 +1.2
PVCC Panska Ves 79.90 327 *e*P **P** 13 20 28.2 +1.0
PVCC *e* 13 20 34.2
PVCC *e*S **S** 13 30 30.8 +0.2
PVCC MLR MLR
comp=Z,42µm,16.4s
PVCC Panska Ves 79.90 327 *e*P **P** 13 20 28.2 +1.0
PVCC *ep*P **PcP** 13 20 34.2 -0.6
PVCC *e*S **S** 13 30 30.8 +0.2
PVCC AMS AMS 13 58 40.0
comp=Z,42µm,16.4s
BRG Berggiesshubel 79.92 328 *i* P **P** 13 20 27.8 +0.5
comp=Z,89nm,1.1s
BRG PP **PP** 13 23 28.0 -0.2
BRG S **S** 13 30 32.0 +1.3
BRG SS **SS** 13 35 36.0 -3.0
comp=N,20µm,15.2s
comp=E,38µm,13.5s
comp=Z,45µm,14.5s
BRG Berggiesshubel 79.92 328 *i* P **P** 13 20 27.8 +0.5
BRG 13 23 28.0
BRG S **S** 13 30 32.0 +1.3
BRG SS **SS** 13 35 36.0 -3.0
BRG pmax pmax
comp=Z,89nm,1.1s
BRG MLR MLR
comp=N,20µm,15.2s
BRG MLR MLR
comp=E,38µm,13.5s
BRG MLR MLR
comp=Z,45µm,14.5s
BRG Berggiesshubel 79.92 328 *e*P **P** 13 20 27.5 +0.2
comp=Z,896nm,2.4s,baz=40,slow=5.2
GAZI Gazipasa 79.92 308 P **P** 13 20 26.9 -0.7
BW06 Boulder Array 79.93 44 P **P** 13 20 28.3 +0.4
baz=311,SNR=68
BW06 S **S** 13 30 31.6 -0.2
baz=311
BW06 Boulder Array 79.93 44 IAmb IAmb 13 20 33.5
comp=Z,362nm,1.8s
PD31 Pinedale Array 79.93 44 IAmb IAmb 13 20 33.5
comp=Z,326nm,1.8s
PDAR Pinedale Array 79.93 44 P **P** 13 20 28.1 +0.3
comp=Z,45nm,0.6s,baz=276,slow=1.5,SNR=170
PDAR PP **PP** 13 23 28.4 -0.5
comp=Z,6.2nm,1.1s,baz=325,slow=5.6,SNR=3.1
PDAR PKKPbc **PKKPbc** 13 39 12.9 +0.6
comp=Z,1.0nm,0.8s,baz=130,slow=4.9,SNR=7.8
PDAR LR LR 13 55 05.8
comp=Z,5µm,20.5s,baz=336,slow=35
PDAR Pinedale Array 79.93 44 P **P** 13 20 28.6 +0.7
DECC Green Verdugo 79.96 55 P **P** 13 20 28.2 +0.3
baz=308
DECC S **S** 13 30 32.0 +0.1
baz=308
GEDZ Gediz 79.97 311 P **P** 13 20 28.3 +0.4
CLL Collm 79.99 328 *i* P **P** 13 20 27.0 -0.7
comp=Z,150nm,1.0s
CLL *e*Pmax 13 20 30.0
CLL *i* sP **PcP** 13 20 33.9 -1.3
CLL *i* (PcP) **sP** 13 20 38.0 +5.4
CLL *e*PP **PP** 13 23 31.0 +2.2
CLL *e*PPP PPP 13 25 18.0
CLL *e*PPPP 13 26 42.0
CLL *e*S **S** 13 30 31.0 -0.5
CLL *e*(SKSac) 13 30 51.0
CLL *e*PS **PnS** 13 31 17.0 +1.8
CLL *e*SS **SS** 13 35 40.0 -0.1
CLL *e*SSS SSS 13 39 00.0
CLL *e*SSSS 13 41 30.0
CLL *e* 13 42 48.0
CLL Lmax 13 58 00.0
CLL Collm 79.99 328 *i* P **P** 13 20 27.0 -0.7
CLL *i* 13 20 33.9
CLL *e*S **S** 13 30 31.0 -0.5
CLL pmax pmax
comp=Z,150nm,1.0s
CLL MLR MLR
comp=Z,47µm,17.5s
CLL Collm 79.99 328 *e*P **P** 13 20 27.5 -0.2
comp=Z,307nm,1.7s,baz=40,slow=5.2
CLL Collm 79.99 328 IAmb IAmb 13 20 39.9
comp=Z,219nm,1.2s
BZS Buzias 80.02 320 ⇑P **P** 13 20 28.3 +0.4
MRMT Marmara Adasi 80.05 314 P **P** 13 20 29.0 +0.7
EDC Edincik 80.06 313 P **P** 13 20 29.2 +0.9
HERR Herculane 80.10 319 ⇑P **P** 13 20 28.7 +0.3
PRN Pahroc Range 80.12 51 IAMs_20 IAMs_20 13 50 08.5
comp=Z,8µm,21.0s
FBE Freiberg 80.13 328 *e*P **P** 13 20 28.9 +0.4
comp=Z,705nm,2.0s,baz=40,slow=5.2
KRUC Moravsky 80.14 325 ⇑*i*P **P** 13 20 28.9 +0.3
KRUC *e*PP **PP** 13 23 31.7 +1.6
KRUC *e*S **S** 13 30 34.1 +0.9
BAIL Bailesti 80.19 318 ⇓P **P** 13 20 30.3 +1.4
SIMA Simav-Kutahya 80.20 312 P **P** 13 20 30.6 +1.4
LEF Lefka 80.23 307 ⇑P **P** 13 20 29.7 +0.4
LEF Lefka 80.23 307 P **P** 13 20 29.9 +0.6
PUNG Punghina 80.24 319 ⇓P **P** 13 20 29.8 +0.7
RKY Sarkoy-Tekirda 80.24 314 P **P** 13 20 29.8 +0.5
BCK Bucak 80.24 310 P **P** 13 20 29.8 +0.4
NRDL Niedersach Rie 80.28 331 *e*P **P** 13 20 29.2 +0.1
comp=Z,720nm,2.2s,baz=40,slow=5.2
SHOC Shoshone, Teco 80.29 52 P **P** 13 20 30.2 +0.5
baz=308
SHOC S **S** 13 30 36.8 +1.5
baz=308
DIM Dimitrovgrad 80.29 316 *e*P **P** 13 20 30.2 +0.7
PRA Prague 80.29 327 *e*P **P** 13 20 30.3 +1.0
PRA *e* 13 20 37.2
PRA *e*S **S** 13 30 31.1 -3.6
PRA MLR MLR
comp=Z,26µm,14.4s
PRA Prague 80.29 327 *e*P **P** 13 20 30.3 +1.0
PRA *ex* x 13 20 37.2
PRA *e*S **S** 13 30 31.1 -3.6
PRA AMS AMS 13 59 40.0
comp=Z,26µm,14.4s
PRU Pruhonice 80.31 327 *e*P **P** 13 20 29.6 +0.2
PRU *e* 13 20 37.2
PRU *e*S **S** 13 30 33.0 -1.9
PRU MLR MLR
comp=Z,54µm,16.0s
PRU Pruhonice 80.31 327 *e*P **P** 13 20 29.6 +0.2
PRU *ex* x 13 20 37.2
PRU *e*S **S** 13 30 33.0 -1.9
PRU AMS AMS 13 59 30.0
comp=Z,54µm,16.0s

GSC Goldstone, Bar 80.32 53 P **P** **13 20 30.1 +0.2**
baz=308,SNR=39
GSC S **S** **13 30 34.6 -1.1**
baz=308
FMP Fort Macarthur 80.32 55 P **P** **13 20 29.9 +0.2**
baz=308
FMP S **S** **13 30 35.5 -0.1**
baz=308
ASSE Asse, Remlinge 80.33 330 *e*P **P** **13 20 29.6 +0.2**
comp=Z,777nm,2.1s,baz=40,slow=5.2
TREC Trest 80.39 326 *e*P **P** **13 20 30.0 +0.1**
TREC *e* 13 20 35.1
TREC *e*S **S** **13 30 34.5 -1.3**
TREC MLR MLR
comp=Z,75µm,14.7s
TREC Trest 80.39 326 *e*P **P** **13 20 30.0 +0.1**
TREC *e*pP **sP** **13 20 35.1 +0.3**
TREC *e*S **S** **13 30 34.5 -1.3**
TREC AMS AMS 13 59 30.0
comp=Z,75µm,14.7s
BFSC Mount Baldy Ra 80.42 54 P **P** **13 20 31.0 +0.5**
baz=308,SNR=18
BFSC S **S** **13 30 37.1 +0.2**
baz=308
BANR Banloc 80.42 320 ⇓P **P** **13 20 31.4 +1.3**
CIS Catalina Islan 80.43 56 P **P** **13 20 30.5 +0.1**
baz=308
CIS S **S** **13 30 37.6 +0.8**
baz=308
RRX Edison Barstow 80.46 54 P **P** **13 20 31.0 +0.4**
baz=308
RRX S **S** **13 30 38.1 +1.1**
baz=308
BALB Balikesir 80.50 313 P **P** **13 20 28.2 -2.5**
MDVR Moldovita 80.54 320 ⇓P **P** **13 20 31.4 +0.6**
NEUB Neuenburg 80.58 329 *e*P **P** **13 20 30.9 0.0**
comp=Z,285nm,1.3s,baz=40,slow=5.2
SCI2 San Clemente I 80.60 56 P **P** **13 20 32.0 +0.7**
baz=308
SCI2 S **S** **13 30 40.1 +1.6**
baz=308
SHPR Sheep Range 80.62 51 IAMs_20 IAMs_20 13 50 05.8
comp=Z,11µm,22.0s
KDZ Kurdzhali 80.62 315 *e*P **P** **13 20 32.5 +1.2**
ERIK Erikli-Kesan 80.64 314 P **P** **13 20 32.2 +0.9**
CLZ Clausthal 80.67 330 *e*P **P** **13 20 31.7 +0.3**
comp=Z,1µm,2.3s,baz=40,slow=5.2
KORT Korkueli 80.68 309 P **P** **13 20 31.0 -0.8**
LPK Lapseki 80.69 314 P **P** **13 20 32.6 +1.0**
PLD Plovdiv 80.72 316 *e*P **P** **13 20 32.3 +0.5**
PGB Panagyurishte 80.72 317 *e*P **P** **13 20 33.0 +1.1**
KULA Kula-Manisa 80.76 311 P **P** **13 20 32.7 +0.5**
KULA Kula-Manisa 80.76 311 P **P** **13 20 32.3 +0.1**
ALN Alexandroupoli 80.76 315 P **P** **13 20 32.0 0.0**
PBCC Pribram 80.77 327 *e*P **P** **13 20 31.7 -0.2**
PBCC *ex* x 13 20 39.1
PBCC *e*S **S** **13 30 40.0 +0.2**
ENEZ Enez 80.80 314 P **P** **13 20 32.3 +0.1**
ENEZ Enez 80.80 314 P **P** **13 20 32.9 +0.7**
TUQ Turquoise Moun 80.80 53 P **P** **13 20 32.6 0.0**
baz=309,SNR=94
TUQ S **S** **13 30 41.1 +0.2**
baz=309
GELI Tayfur-Gelibol 80.83 314 P **P** **13 20 33.3 +0.9**
BBRC Big Bear Solar 80.88 54 P **P** **13 20 33.4 +0.3**
baz=308,SNR=26
RDO Rodhopi 80.88 315 P **P** **13 20 33.3 +0.6**
TANN Tannenbergstha 80.89 328 *e*P **P** **13 20 32.8 +0.2**
comp=Z,1µm,2.4s,baz=40,slow=5.2
HEC Hector,Ludlow 80.91 53 P **P** **13 20 32.9 -0.2**
baz=308,SNR=28
HEC S **S** **13 30 42.5 +0.5**
baz=308
PLN Plauen 80.97 328 *e*P **P** **13 20 33.1 +0.2**
comp=Z,750nm,2.4s,baz=40,slow=5.2
GUNZ Gunzen 80.98 328 *e*P **P** **13 20 33.3 +0.2**
comp=Z,528nm,2.0s,baz=40,slow=5.2
RZN Rozhen 80.99 316 *e*P **P** **13 20 34.3 +0.8**
WERN Wernitzgruen 81.02 328 *e*P **P** **13 20 33.6 +0.3**
comp=Z,868nm,2.5s,baz=40,slow=5.2
NKC Novy Kostel 81.03 328 *e*P **P** **13 20 32.9 -0.4**
NKC *e*S **S** **13 30 40.1 -2.4**
NKC MLR MLR
comp=Z,45µm,12.6s
NKC Novy Kostel 81.03 328 *e*P **P** **13 20 32.9 -0.4**
NKC *ex* x 13 20 42.9
NKC *e*S **S** **13 30 40.1 -2.4**
NKC AMS AMS 14 01 20.0
comp=Z,45µm,12.6s
LEWI Lewis, Hebride 81.06 342 *e*P **P** **13 20 34.0 +0.7**
LEWI IAmb IAmb 13 20 39.8
comp=Z,248nm,1.3s
LEWI IAMs_20 IAMs_20 13 58 36.8
comp=Z,29µm,21.6s
MOX Moxa 81.07 329 *e*P **P** **13 20 33.6 +0.1**
comp=Z,637nm,2.2s,baz=40,slow=5.2
MOX *e*L L 13 59 26.8
comp=Z,35µm,18.4s
MORH Mrgy, Hungar 81.10 322⇑*i*P **P** **13 20 33.9 +0.2**
MURC Murrieta 81.11 55 P **P** **13 20 34.5 +0.4**
baz=308,SNR=26
MURC S **S** **13 30 44.7 +0.8**
baz=308
ELL Elmali 81.11 309 P **P** **13 20 34.7 +0.5**
VTS Vitosha 81.19 317 *e*P **P** **13 20 35.5 +1.0**
CONA Conrad Observa 81.21 325 *i*P **P** **13 20 34.8 +0.4**
comp=Z,72nm,0.9s,SNR=66
KAC Achnashellach 81.23 341 *e*P **P** **13 20 33.6 -0.6**
FRGS Fruska Gora 81.26 321⇑*i*P **P** **13 20 35.1 +0.5**
EZN Ezine 81.30 314 P **P** **13 20 35.7 +0.8**
EZN Ezine 81.30 314 P **P** **13 20 34.7 -0.2**
GADA Gvkgeada 81.30 314 P **P** **13 20 37.9 +3.0**
GADA Gvkgeada 81.30 314 P **P** **13 20 33.6 -1.3**
SMTH Samothraki Isl 81.33 314 P **P** **13 20 34.5 -0.6**
IBBN Ibbenburen 81.33 332 *e*P **P** **13 20 34.6 -0.3**
comp=Z,200nm,1.3s,baz=40,slow=5.2
ULM Lac du Bonnet 81.35 32 P **P** **13 20 34.7 -0.3**
comp=Z,107nm,1.0s,baz=312,slow=6.6,SNR=36
ULM LR LR 14 00 10.0
comp=Z,7µm,18.4s,baz=330,slow=38
ULM Lac du Bonnet 81.35 32 IAMs_20 IAMs_20 13 54 44.4
comp=Z,10µm,22.0s
MANZ Manzenberg 81.36 328 *e*P **P** **13 20 35.3 +0.2**
comp=Z,740nm,2.3s,baz=40,slow=5.2
KHC Kasperske Hory 81.36 327 *e*P **P** **13 20 34.7 -0.4**
KHC *e* 13 20 40.6
KHC *e*S **S** **13 30 48.5 +2.5**
KHC MLR MLR
comp=Z,86µm,15.2s
KHC Kasperske Hory 81.36 327 *e*P **P** **13 20 34.7 -0.4**
KHC *e*pP **PcP** **13 20 40.6 -0.7**
KHC *ex* x 13 20 51.5
KHC *e*S **S** **13 30 48.5 +2.5**
KHC AMS AMS 14 00 30.0
comp=Z,86µm,15.2s
GMRC Granite Mounta 81.37 53 P **P** **13 20 35.9 +0.3**
baz=309,SNR=45
GMRC S **S** **13 30 48.8 +1.9**
baz=309
BOZC Bozcaada 81.44 314 P **P** **13 20 36.6 +0.9**
DKL Dikili 81.45 313 P **P** **13 20 36.2 +0.5**
KPL Plockton 81.46 341 *e*P **P** **13 20 34.9 -0.5**
KPL IAmb IAmb 13 20 44.4
comp=Z,511nm,1.5s
KPL IAMs_20 IAMs_20 13 59 19.5
comp=Z,21µm,20.6s
ROTZ Rotzenmuhle 81.48 328 *e*P **P** **13 20 36.2 +0.5**
comp=Z,803nm,2.1s,baz=40,slow=5.2
MDND Maddock 81.49 35 P **P** **13 20 35.9 +0.1**
baz=317,SNR=30
MDND S **S** **13 30 46.4 -1.0**
baz=317
MDND Maddock 81.49 35 IAMs_20 IAMs_20 13 55 16.2
comp=Z,14µm,22.0s
GEC2 GERESS Array S 81.52 326 *e*P **P** **13 20 36.0 -0.1**
comp=Z,633nm,2.5s,baz=40,slow=5.2
GERES GERESS Array B 81.52 326 P **P** **13 20 35.6 -0.4**
comp=Z,25nm,0.6s,baz=38,slow=6.8,SNR=142
GERES LR LR 14 00 29.0
comp=Z,37µm,18.0s,baz=38,slow=38
GERES GERESS Array B 81.52 326 P **P** **13 20 35.9 -0.1**
KAVA Kavala 81.56 315 P **P** **13 20 35.6 -0.7**
AYDB Zeytinkoy-Aydi 81.58 311 P **P** **13 20 36.3 -0.3**
PFO Pinyon Flats O 81.59 54*c* *i*P **P** **13 20 36.5 -0.2**
PFO pmax pmax
comp=Z,134nm,1.0s
PFO MLR MLR
comp=Z,5µm,17.0s
PFO Pinyon Flats O 81.59 54 P **P** **13 20 36.9 +0.2**
baz=309,SNR=49
PFO S **S** **13 30 48.0 -1.1**
baz=309
PFO Pinyon Flats O 81.59 54 P **P** **13 20 37.6 +0.9**
PFO IAmb IAmb 13 20 42.3
comp=Z,164nm,1.1s
TPFO Pinon Flats 81.59 54 P **P** **13 20 37.0 +0.2**
baz=309,SNR=60
TPFO S **S** **13 30 47.7 -1.5**
baz=309
UBBA Unterbreizbach 81.61 330 *e*P **P** **13 20 36.3 +0.1**
comp=Z,1µm,2.8s,baz=40,slow=5.2
MMB Musomiste 81.61 316 *e*P **P** **13 20 36.7 +0.1**
109C Camp Elliot, M 81.61 55 P **P** **13 20 37.0 +0.3**
baz=308
109C S **S** **13 30 49.3 +0.3**
baz=308
AKAS Kas 81.63 309 P **P** **13 20 36.8 -0.1**
AKAS Kas 81.63 309 IAMs_20 IAMs_20 14 01 20.6
comp=Z,12µm,19.0s
BELC Belle Mtn. Jos 81.64 54 P **P** **13 20 37.1 0.0**
baz=309,SNR=46
WET Wettzell 81.66 327 *e*P **P** **13 20 37.1 +0.4**
comp=Z,505nm,2.1s,baz=40,slow=5.2
K22A Casper 81.67 42 P **P** **13 20 36.8 -0.3**
baz=313,SNR=12
NVR Nevrokopi 81.69 316 P **P** **13 20 37.3 +0.3**
FETY Fethiye 81.69 310 P **P** **13 20 37.3 +0.2**
FETY Fethiye 81.69 310 P **P** **13 20 36.3 -0.8**
PRK Paraskevi 81.70 313 P **P** **13 20 38.2 +1.1**
THAS Thassos island 81.71 315 P **P** **13 20 36.9 -0.1**
TOZ Tahuroa Road 81.77 151 P **P** **13 20 38.8 +1.6**
KKB Krupnik 81.78 317 *e*P **P** **13 20 38.4 +0.9**
INVG Invergeldie, C 81.82 340 *e*P **P** **13 20 36.9 -0.5**
INVG IAMs_20 IAMs_20 13 55 52.5
comp=Z,18µm,21.9s
TEKS Tekeris 81.83 321⇑*i*P **P** **13 20 38.2 +0.5**
BEHE Becsehely 81.83 323⇑*i*P **P** **13 20 41.5 +3.9**
DALY Dalyan (Mula) 81.84 310 P **P** **13 20 38.4 +0.6**
ESY Stoneypath 81.86 339 *e*P **P** **13 20 37.5 -0.1**
ARSA Arzberg 81.86 324 *i*P **P** **13 20 37.7 -0.1**
comp=Z,48nm,1.0s,SNR=38
YER Yerkesik 81.87 310 P **P** **13 20 44.0 +5.9**
YER Yerkesik 81.87 310 P **P** **13 20 38.9 +0.8**
E28A Huff 81.90 36 IAMs_20 IAMs_20 13 59 07.2
comp=Z,9µm,21.0s
DIVS Divibare 81.90 320⇑*i*P **P** **13 20 36.3 -1.8**
DIVS Divibare 81.90 320⇑*i*P **P** **13 20 38.4 +0.2**
GRA1 Grafenberg Arr 81.96 328 P **P** **13 20 39.1 +0.9**
GRF Grafenberg Arr 81.96 328 P **P** **13 20 39.1 +0.9**
GRF pmax pmax
comp=Z,1µm,2.0s
GRF MLR MLR
comp=Z,24µm,19.0s
GRF Grafenberg Arr 81.96 328 *e*P **P** **13 20 38.8 +0.5**
comp=Z,927nm,1.9s,baz=40,slow=5.2
GRF *e*L L 14 00 37.9
comp=Z,20µm,18.8s
RSSD Black Hills 81.97 40 P **P** **13 20 40.1 +1.4**
RSSD pmax pmax
comp=Z,784nm,2.0s
RSSD Black Hills 81.97 40 P **P** **13 20 38.6 -0.1**
baz=314
RSSD S **S** **13 30 52.6 -0.4**
baz=314
RSSD Black Hills 81.97 40 P **P** **13 20 40.1 +1.4**
MOA Molln 82.00 326 *i*P **P** **13 20 39.4 +0.8**
comp=Z,115nm,2.0s,SNR=35
SRS Serrai 82.00 316 P **P** **13 20 38.2 -0.4**
KMRZ Kaimai 82.04 150 P **P** **13 20 36.9 -1.7**
NEE2 Needles Airpor 82.05 52 P **P** **13 20 39.5 +0.4**
baz=309
NEE2 S **S** **13 30 55.5 +1.9**
baz=309
MONP2 Monument Peak 82.06 55 P **P** **13 20 39.5 +0.2**
baz=309,SNR=20
MONP2 S **S** **13 30 55.6 +1.4**
baz=309
MLSB Milas 82.07 311 P **P** **13 20 42.2 +3.1**
URLA Izmir 82.09 312 P **P** **13 20 39.6 +0.4**
KOGS Kog 82.10 324 *i*P **P** **13 20 39.1 +0.1**
IRM Iron Mountain 82.10 53 P **P** **13 20 39.6 +0.3**
baz=309,SNR=50
IRM S **S** **13 30 56.5 +2.4**
baz=309
EBL Broad Law 82.11 339 *e*P **P** **13 20 37.8 -1.1**
EAB Aberfoyle 82.11 340 *e*P **P** **13 20 37.5 -1.4**
TURN Turunc 82.12 310 P **P** **13 20 40.0 +0.7**
GCAM G?zelcaml? 82.14 311 P **P** **13 20 40.4 +1.0**
EIL Elat 82.19 301 LR LR 14 01 15.6
comp=Z,15µm,19.2s,baz=59,slow=39
HIZ Hauiti 82.20 152 P **P** **13 20 41.7 +2.3**
HIZ Hauiti 82.20 152 IAMs_20 IAMs_20 13 51 45.2
comp=Z,12µm,22.0s
BUG Bochum--Univer 82.20 331 *e*P **P** **13 20 39.1 -0.4**
comp=Z,512nm,2.1s,baz=40,slow=5.2
BC3 Big Chuckawall 82.21 54 P **P** **13 20 40.0 0.0**
baz=309,SNR=37
BC3 S **S** **13 30 56.4 +0.8**
baz=309
RAR Rarotonga 82.26 123 IAMs_20 IAMs_20 13 50 57.9
comp=Z,9µm,20.0s
OUR Ouranopolis 82.31 315 P **P** **13 20 40.2 0.0**
SOH Sokhos 82.33 316 P **P** **13 20 39.4 -1.0**
LAWE Loch Awe, Argy 82.34 340 *e*P **P** **13 20 39.9 -0.2**
LAWE IAmb IAmb 13 20 48.3
comp=Z,116nm,1.1s
LAWE IAMs_20 IAMs_20 13 57 55.3
comp=Z,24µm,21.5s
KNT Kendrikon 82.36 316 P **P** **13 20 40.0 -0.5**
NGRZ Ngongotaha 82.36 150 P **P** **13 20 30.0 -10**
BBLS Lazići 82.37 320⇑*i*P **P** **13 20 41.4 +0.8**
SMG Samos 82.37 312 P **P** **13 20 40.6 0.0**
STIP Stip 82.39 317 *i*P **P** **13 20 40.7 +0.1**
IKP In-Ko-Pah, Jac 82.41 55 P **P** **13 20 41.3 +0.2**
baz=309,SNR=23
IKP S **S** **13 30 58.2 +0.7**
baz=309
O20A White River Ci 82.42 45 P **P** **13 20 41.0 -0.1**
baz=312,SNR=33
O20A S **S** **13 30 58.8 +1.2**
baz=312
VAY Valandovo 82.43 317 *i*P **P** **13 20 41.9 +1.1**
SWSC Sam W. Stewart 82.43 54 P **P** **13 20 40.9 -0.1**
baz=309,SNR=15
SWSC S **S** **13 30 57.9 +0.4**
baz=309
HAPS Han Pijesak,Bl 82.44 320⇑*i*P **P** **13 20 41.3 +0.3**
U15A North Rim 82.45 50 IAMs_20 IAMs_20 13 51 58.1
comp=Z,8µm,21.0s
PGBU Glenifferbraes 82.48 340 *e*P **P** **13 20 39.8 -1.1**
PGBU IAmb IAmb 13 20 49.1
comp=Z,722nm,1.6s
PGBU IAMs_20 IAMs_20 13 56 24.0
comp=Z,19µm,22.6s
SOKA Soboth 82.51 324 *i*P **P** **13 20 40.9 -0.4**
comp=Z,103nm,0.8s,SNR=91
BODT Bodrum 82.51 311 P **P** **13 20 42.1 +0.7**
BODT Bodrum 82.51 311 P **P** **13 20 40.9 -0.5**
NRS Narsarsuaq 82.51 2 *i*P **P** **13 20 41.2 +0.4**
NRS pmax pmax
comp=Z,76nm,0.8s
NRS Narsarsuaq 82.51 2 P **P** **13 20 41.5 +0.7**
NRS IAmb IAmb 13 20 45.9
comp=Z,180nm,1.2s
NRS IAMs_20 IAMs_20 14 01 05.2
comp=Z,11µm,19.0s
NRS Narsarsuaq 82.51 2 *i*P **P** **13 20 41.2 +0.4**
comp=Z,76nm,0.8s
NRS Narsarsuaq 82.51 2 *i*P **P** **13 20 41.3 +0.4**
NRS IAmb IAmb 13 20 43.1
comp=Z,76nm,0.8s
ESK Eskdalemuir 82.55 339 *e*P **P** **13 20 41.4 +0.2**
ESK IAMs_20 IAMs_20 13 58 30.7
comp=Z,24µm,19.7s
ESK Eskdalemuir 82.55 339 P **P** **13 20 41.0 -0.2**
ESK pmax pmax
comp=Z,208nm,1.4s
ESK MLR MLR
comp=Z,26µm,21.0s
ESK Eskdalemuir 82.55 339 P **P** **13 20 41.0 -0.2**
ESK IAmb IAmb 13 20 50.4
comp=Z,208nm,1.4s
ARG Arkhangelos 82.56 310 P **P** **13 20 41.8 +0.2**
PLG Polygyros 82.58 315 P **P** **13 20 41.6 -0.1**
SKO Skopje 82.61 318 *i*P **P** **13 20 43.6 +1.8**
HORT Hortiatis 82.63 316 P **P** **13 20 41.2 -0.8**
PDMCI Parker Dam,Lak 82.65 53 P **P** **13 20 42.7 +0.6**
baz=310,SNR=32
PDMCI S **S** **13 31 01.3 +1.7**
baz=310
ZAG Zagreb 82.67 323⇑*i*P **P** **13 20 42.4 +0.4**
THE Thessaloniki 82.68 316 P **P** **13 20 41.8 -0.3**
THE Thessaloniki 82.68 316 P **P** **13 20 41.3 -0.8**
TNS Taunus Mts 82.70 330 *e*P **P** **13 20 42.1 0.0**
comp=Z,669nm,2.4s,baz=40,slow=5.2
RJOB Jochberg 82.75 326 *e*P **P** **13 20 42.0 -0.5**
comp=Z,1µm,2.3s,baz=40,slow=5.2
PAIG Paliouri 82.75 315 P **P** **13 20 42.3 -0.2**
PLE Pljevlja 82.75 320 *e*P **P** **13 20 42.5 -0.1**
GRG Griva 82.77 316 P **P** **13 20 42.0 -0.7**
IVA Berane 82.81 319 *e*P **P** **13 20 42.9 0.0**
AGMN Agassiz Nation 82.83 33 P **P** **13 20 43.2 +0.3**
baz=319,SNR=25
AGMN S **S** **13 30 59.2 -1.9**
baz=319
AGMN Agassiz Nation 82.83 33 IAMs_20 IAMs_20 14 00 10.7
comp=Z,11µm,20.0s
RUGZ Raukumara Rang 82.85 149 P **P** **13 20 42.9 0.0**
OBKA Obir 82.86 324 *i*P **P** **13 20 43.4 +0.3**
comp=Z,30nm,0.7s,SNR=23
BLY Banja Luka 82.86 322⇑*i*P **P** **13 20 43.6 +0.5**
URZ Urewera 82.87 150 P **P** **13 20 42.7 -0.1**
URZ Urewera 82.87 150 IAMs_20 IAMs_20 13 52 17.9
comp=Z,13µm,22.0s
CRES Cresnjev 82.93 324⇑*i*P **P** **13 20 43.6 +0.2**
SKY Skiros Island 82.95 314 P **P** **13 20 43.2 -0.4**
PDKS Podkum 82.97 324 *i*P **P** **13 20 42.9 -0.8**
PDKS *i*pP **pP** **13 20 44.0 -3.3**
AHRW Bad Neuenahr-A 82.99 331 *e*P **P** **13 20 43.5 -0.1**
comp=Z,214nm,1.4s,baz=40,slow=5.2
KBA Koelnbreinsper 82.99 325 *i*P **P** **13 20 44.4 +0.5**
comp=Z,197nm,1.6s,SNR=84
GLA Glamis 83.00 54 P **P** **13 20 45.0 +1.0**
baz=309,SNR=26
GLA S **S** **13 31 05.1 +1.7**
baz=309
GLA Glamis 83.00 54 IAMs_20 IAMs_20 13 51 45.0
comp=Z,8µm,20.0s
WTVZ West Tongariro 83.01 151 P **P** **13 20 46.1 +2.4**
KOME Kolasin 83.02 319⇑*i*P **P** **13 20 43.9 -0.1**
TMVZ Te Maari 83.05 151 P **P** **13 20 43.7 -0.2**
BCI Bajram Curri 83.07 319 P **P** **13 20 44.5 +0.3**
OTVZ Oturere 83.08 151 P **P** **13 20 44.0 -0.1**
UPM Unac-Piva 83.09 320 *e*P **P** **13 20 44.1 -0.4**
UPM Unac-Piva 83.09 320⇑*i*P **P** **13 20 44.1 -0.4**
PV23 Carpenter Ridg 83.09 47 IAmb IAmb 13 20 57.2
comp=Z,182nm,0.9s
PV23 IAMs_20 IAMs_20 14 02 39.8
comp=Z,7µm,19.0s
PV10 Paradox Valley 83.13 47 IAMs_20 IAMs_20 14 02 12.3
comp=Z,8µm,19.0s
PV14 Lion Creek, Pa 83.14 47 IAMs_20 IAMs_20 13 57 56.1
comp=Z,9µm,22.0s
KESW Keswick, Cumbr 83.14 338 *e*P **P** **13 20 43.8 -0.5**
KESW IAmb IAmb 13 20 52.6
comp=Z,895nm,1.7s
KESW IAMs_20 IAMs_20 13 58 59.7
comp=Z,29µm,20.8s
PV22 Blue Mesa, Par 83.17 46 IAmb IAmb 13 20 50.3
comp=Z,329nm,1.4s
PV22 IAMs_20 IAMs_20 13 53 29.8
comp=Z,8µm,21.0s
N23A Red Feather La 83.19 43 P **P** **13 20 45.5 +0.4**
baz=314,SNR=34
N23A S **S** **13 31 07.4 +1.9**
baz=314
MYKA Terra Mystica 83.19 325 *i*P **P** **13 20 44.7 -0.1**
comp=Z,94nm,1.7s,SNR=30
RAGZ Rawiri 83.19 150 P **P** **13 20 47.1 +2.4**
PV04 Paradox Valley 83.20 47 IAmb IAmb 13 20 57.8
comp=Z,139nm,1.0s
PV04 IAMs_20 IAMs_20 13 57 55.6
comp=Z,9µm,22.0s
D32A Dogwood Acres, 83.20 34 IAMs_20 IAMs_20 13 57 13.4
comp=Z,14µm,21.0s
PV19 Morning Glory 83.21 47 IAmb IAmb 13 20 52.4
comp=Z,184nm,0.8s
LJU Ljubljana 83.21 324 *e*PP PP 13 23 58.2 +2.7
LJU *e*S **S** **13 31 03.5 -1.5**
LJU *e* 13 32 06.6
LJU Ljubljana 83.21 324⇑*i*P **P** **13 20 44.7 -0.1**
VISS Visnje 83.24 324 *i*P **P** **13 20 43.2 -1.8**
VISS *i*pP **pP** **13 20 44.1 -4.4**
VISS *e*S **S** **13 31 04.7 -0.6**
VISS *e* 13 32 06.4
PV17 East Wray Mesa 83.24 47 IAMs_20 IAMs_20 14 02 22.7
comp=Z,9µm,22.0s
PV16 Nysvonger Mesa 83.25 47 IAmb IAmb 13 20 52.7
comp=Z,116nm,0.8s
BOJS Bojanci 83.26 323 *i*P **P** **13 20 44.4 -0.7**
BOJS *e*pP **pP** **13 20 45.5 -3.2**
BOJS *e*S **S** **13 31 05.7 +0.1**
MTHZ Maungataniwha 83.27 150 P **P** **13 20 46.3 +1.3**
PV11 David Mesa, Pa 83.28 47 IAMs_20 IAMs_20 13 58 09.7
comp=Z,8µm,22.0s
LIT Litokhoron 83.31 316 P **P** **13 20 44.2 -1.3**
PV12 Saucer Basin, 83.31 47 IAMs_20 IAMs_20 13 53 22.4
comp=Z,8µm,20.0s
PV07 Paradox Valley 83.32 46 IAMs_20 IAMs_20 13 53 34.7
comp=Z,8µm,20.0s
NKY Niksic 83.32 320 *e*P **P** **13 20 45.2 -0.4**
BTNL Ternell 83.32 331 P **P** **13 20 44.7 -0.7**
MOVZ Moawhango 83.32 151 P **P** **13 20 49.3 +4.0**
BEBN Eben Emael 83.33 332 P **P** **13 20 45.3 0.0**
PHP Peshkopia 83.34 318 P **P** **13 20 45.7 +0.1**
PHP Peshkopia 83.34 318 P **P** **13 20 45.1 -0.6**
MEM Membach 83.35 331 P **P** **13 20 45.4 -0.1**
GAL1 Galloway 83.37 339 *e*P **P** **13 20 45.8 +0.3**
GAL1 IAMs_20 IAMs_20 14 03 49.4
comp=Z,17µm,15.2s
NKME Niksic 83.37 320 *e*P **P** **13 20 45.6 -0.2**
KYMI Kymi, Euboea I 83.38 314 P **P** **13 20 45.5 -0.3**
PUK Puka 83.39 319 P **P** **13 20 46.4 +0.5**
BKZ Black Stump Fm 83.40 151 IAMs_20 IAMs_20 13 53 47.0
comp=Z,13µm,22.0s
XOR Xorichti 83.41 315 P **P** **13 20 45.1 -0.9**
NEO Neokhori 83.43 315 P **P** **13 20 44.9 -1.2**
PDG Podgorica 83.45 319⇑P **P** **13 20 46.7 +0.6**
PDG Podgorica 83.45 319⇑*i*P **P** **13 20 46.5 +0.3**
PDG Podgorica 83.45 319 P **P** **13 20 46.5 +0.4**
PDG IAmb IAmb 13 20 58.1
comp=Z,170nm,1.1s
TTG Podgorica 83.45 319 *e*P **P** **13 20 46.4 +0.3**
PV15 Paradox Valley 83.48 46 IAmb IAmb 13 20 53.7
comp=Z,97nm,0.9s
PV15 IAMs_20 IAMs_20 13 53 28.0
comp=Z,8µm,20.0s
CEY Cerknica 83.48 324⇑*i*P **P** **13 20 46.4 +0.1**
BRY Bratogost 83.49 320 *e*P **P** **13 20 46.2 -0.3**
BRY Bratogost 83.49 320⇑*i*P **P** **13 20 46.0 -0.5**
RIGZ Rimuhau 83.51 150 P **P** **13 20 49.3 +3.0**
STU Stuttgart 83.52 329 *e*P **P** **13 20 46.3 0.0**
comp=Z,339nm,1.6s,baz=40,slow=5.2
BSTI Sart Tilman 83.54 332 P **P** **13 20 47.1 +0.7**
OHR Ohrid 83.55 317 *i*P **P** **13 20 45.8 -0.9**
CEME Cevo 83.55 319⇑*i*P **P** **13 20 46.7 0.0**
WACR West Acre 83.55 335 *e*P **P** **13 20 45.5 -0.9**
WACR IAmb IAmb 13 20 48.2
comp=Z,140nm,0.8s
WACR IAMs_20 IAMs_20 14 01 46.3
comp=Z,25µm,19.4s
ZOU Zoufplan 83.55 325 P **P** **13 20 46.4 -0.4**
BHOU Houvegnez 83.56 331⇑P **P** **13 20 47.0 +0.4**
KZN Kozani 83.57 316 P **P** **13 20 46.1 -0.8**
CLGH Cloghs, Cushen 83.57 340 *e*P **P** **13 20 47.0 +0.5**
CLGH IAmb IAmb 13 20 55.4
comp=Z,203nm,1.1s
CLGH IAMs_20 IAMs_20 13 58 53.6
comp=Z,15µm,19.9s
APE Apeiranthos 83.58 312⇑P **P** **13 20 46.3 -0.6**
APE Apeiranthos 83.58 312 *i*P **P** **13 20 44.2 -2.7**
APE pmax pmax
comp=Z,90nm,1.6s
KARY Karystos 83.58 313 P **P** **13 20 45.9 -1.0**

KARP Karpathos 83.58 310 P P 13 20 46.5 -0.5
WATA Walderalm 83.59 327 *i* P P 13 20 47.3 +0.3
comp=Z,74nm,1.2s,SNR=34
WUAZ Wupatki 83.61 50 P P 13 20 47.7 +0.4
baz=311,SNR=119
WUAZ Wupatki 83.61 50 IAMs_20 IAMs_20 13 52 07.7
comp=Z,8µm,22.0s
ABTA Abfaltersbach 83.62 326 *i* P P 13 20 46.4 -0.6
comp=Z,48nm,1.0s,SNR=40
WTTA Wattenberg 83.62 326 *i* P P 13 20 47.6 +0.5
comp=Z,136nm,2.0s,SNR=34
DRME Dracevica, Mon 83.66 319⇑ *i*P P 13 20 47.8 +0.6
DRME Dracevica, Mon 83.66 319⇑ *i*P P 13 20 47.6 +0.4
BUM Brajici-Budva 83.73 319⇑ *i*P P 13 20 48.0 +0.3
LBWR Ladybower, Pea 83.74 337 *e*P P 13 20 47.9 +0.5
LBWR IAmb IAmb 13 20 48.5
comp=Z,247nm,1.0s
LBWR IAMs_20 IAMs_20 14 02 30.6
comp=Z,27µm,17.1s
RIY Rijeka 83.76 324⇑ *i*P P 13 20 47.3 -0.3
KRHZ Kereru 83.77 151 P P 13 20 48.7 +1.2
BCLA Clavier 83.77 332 ⇑P P 13 20 47.6 0.0
ULC Ulcinj 83.79 319⇑ *i*P P 13 20 48.1 +0.2
MOTA Moosalm 83.80 327 *i* P P 13 20 48.2 +0.2
comp=Z,151nm,1.9s,SNR=50
SKDS Skadanscina 83.82 324 *i* P P 13 20 46.6 -1.4
SKDS *i* pP pP 13 20 47.4 -4.2
SKDS *e*PP PP 13 24 01.6 +1.1
UCC Uccle 83.82 332 P P 13 20 47.8 0.0
RETA Reutte 83.84 327 *i* P P 13 20 48.7 +0.6
comp=Z,97nm,0.9s,SNR=61
HCY Herceg Novi 83.84 320⇑ *i*P P 13 20 47.8 -0.3
HCY Herceg Novi 83.84 320⇑ *i*P P 13 20 47.0 -1.1
SQTA Sankt Quirin 83.84 327 *i* P P 13 20 48.6 +0.4
comp=Z,69nm,1.3s,SNR=29
DION Dionisos Attik 83.85 314 P P 13 20 47.2 -1.1
SPX San Pedro Mart 83.85 56 IAMs_20 IAMs_20 13 50 54.6
comp=Z,8µm,21.0s
IOMK Kirk Michael 83.86 339 *e*P P 13 20 48.2 +0.3
IOMK IAMs_20 IAMs_20 13 59 10.4
comp=Z,44µm,18.7s
BGES Gesves 83.88 332 P P 13 20 48.0 -0.2
BGES PcP pP 13 20 51.8 0.0
TIR Tirane 83.89 318 P P 13 20 48.9 +0.5
TIR Tirane 83.89 318 P P 13 20 48.8 +0.5
NEST Nestorio 83.89 317 P P 13 20 48.1 -0.5
STAL STALIGIAL 83.89 325 P P 13 20 47.8 -0.6
ANAF Anafi Island 83.90 311 P P 13 20 46.8 -1.8
PTL Penteli 83.91 314 P P 13 20 47.4 -1.2
THL Klokotos Trika 83.94 316 P P 13 20 47.5 -1.2
STON Ston 83.95 320⇑ *i*P P 13 20 47.5 -1.1
ATAL Atalanti 83.96 314 P P 13 20 46.8 -2.0
UBR Ueberruh 83.97 328 *e*P P 13 20 48.7 -0.1
comp=Z,521nm,2.2s,baz=40,slow=5.2
WIM Isle of Man 83.99 339 *e*P P 13 20 49.1 +0.5
PENT Pentalofos 83.99 317 P P 13 20 48.4 -0.7
LKR Lokris 84.00 314 P P 13 20 46.7 -2.3
ATHU Athens Univers 84.01 313 P P 13 20 47.1 -2.0
RCHB Rochefort 84.01 332 P P 13 20 48.8 0.0
KPRO Kipourio 84.03 316 P P 13 20 47.5 -1.8
WLF Walferdange 84.05 331 P P 13 20 49.5 +0.4
comp=Z,229nm,2.2s
WLF Walferdange 84.05 331 *e*P P 13 20 49.2 +0.2
comp=Z,1µm,2.1s,baz=40,slow=5.2
BMRD Maredsous 84.07 332 P P 13 20 49.2 0.0
comp=Z,137nm,2.2s
VLY Voula,Athens 84.08 313 P P 13 20 48.0 -1.5
SNF Seneffe 84.08 332 P P 13 20 49.4 +0.2
AXAR Agios Charalam 84.12 315 P P 13 20 48.6 -1.0
ISCO Idaho Springs 84.12 44 P P 13 20 50.7 +0.6
baz=314,SNR=19
ISCO S S 13 31 13.0 -2.1
baz=314
ISCO Idaho Springs 84.12 44 IAMs_20 IAMs_20 14 02 10.8
comp=Z,8µm,19.0s
AGG Agios Georgios 84.13 315 P P 13 20 48.2 -1.5
VILL Villia 84.15 314 P P 13 20 48.4 -1.5
CWF Charnwood Fore 84.17 336 *e*P P 13 20 49.2 -0.4
CWF IAmb IAmb 13 20 58.2
comp=Z,235nm,1.2s
CWF IAMs_20 IAMs_20 14 06 07.0
comp=Z,21µm,14.2s
FETA Feichten 84.21 327 *i* P P 13 20 50.4 +0.3
comp=Z,44nm,0.8s,SNR=24
BFO Black Forest 84.22 329 P P 13 20 49.0 -1.0
BFO pmax pmax
BFO MLR MLR
comp=Z,35µm,18.0s
BFO Black Forest 84.22 329 *e*P P 13 20 49.8 -0.2
comp=Z,534nm,1.8s,baz=40,slow=5.2
BFO Black Forest 84.22 329 P P 13 20 49.0 -1.0
BFO IAmb IAmb 13 21 02.3
comp=Z,229nm,1.2s
MVCO Mesa Verde 84.23 47 P P 13 20 50.8 +0.3
baz=312,SNR=118
MVCO S S 13 31 19.2 +3.2
baz=312
MVCO Mesa Verde 84.23 47 P P 13 20 51.5 +1.0
MVCO IAMs_20 IAMs_20 13 58 20.8
comp=Z,8µm,21.0s
MAKR Makrakomi, Fth 84.25 315 P P 13 20 48.3 -2.0
X16A Lo Mia Camp, P 84.28 51 IAmb IAmb 13 20 57.1
comp=Z,193nm,1.2s
SUSD Miller 84.29 37 P P 13 20 50.7 +0.3
baz=318,SNR=15
SUSD S S 13 31 14.1 -1.8
baz=318
SUSD Miller 84.29 37 IAMs_20 IAMs_20 14 01 26.5
comp=Z,9µm,20.0s
DOU Dourbes 84.30 332 P P 13 20 50.2 -0.1
comp=Z,91nm,2.4s
LSK Leskovik 84.32 317 P P 13 20 51.4 +0.6
LSK Leskovik 84.32 317 P P 13 20 51.1 +0.4
DAVA Damuels 84.38 327 *i* P P 13 20 51.3 +0.3
comp=Z,94nm,0.8s,SNR=52
LTK Loutraki 84.45 314 P P 13 20 48.0 -3.3
ZKR Zakros 84.45 310 P P 13 20 51.1 -0.3
LOUT Loutraki 84.47 314 P P 13 20 49.4 -2.0
STIA Sitia Lasithi 84.47 310 P P 13 20 51.8 +0.3
EVR Evrytania 84.50 315 P P 13 20 49.8 -1.9
MHLO Agia Marina, M 84.50 312 P P 13 20 50.2 -1.4
JAN Janina 84.53 316 P P 13 20 51.4 -0.3
WME Myndd Eilian 84.53 338 *e*P P 13 20 50.3 -1.1
CTI Castel Tesino 84.54 326 IAmb IAmb 13 21 02.9
comp=Z,136nm,1.1s
SNZO South Karori 84.59 153 IAMs_20 IAMs_20 13 53 53.7
comp=Z,7µm,20.0s
WPS Cemaes, Angles 84.59 338 *e*P P 13 20 51.1 -0.6
WPS IAmb IAmb 13 20 55.2
comp=Z,549nm,2.0s
WPS IAMs_20 IAMs_20 13 59 41.6
comp=Z,27µm,21.5s
THAL Thalero 84.61 314 P P 13 20 50.5 -1.6
BFZ Birch Farm 84.61 152 IAMs_20 IAMs_20 13 53 35.1
comp=Z,10µm,22.0s
FOEL Foel Wylfa 84.64 338 *e*P P 13 20 51.5 -0.5
FOEL IAMs_20 IAMs_20 14 04 58.3
comp=Z,19µm,17.5s
WLF1 Llynfaes 84.65 338 *e*P P 13 20 51.3 -0.7
WLF1 IAmb IAmb 13 20 56.7
comp=Z,2µm,2.1s
WLF1 IAMs_20 IAMs_20 13 59 44.6
comp=Z,60µm,20.0s
KALE Kalithea 84.67 315 P P 13 20 51.2 -1.3
VLO Vlora 84.70 318 P P 13 20 53.6 +1.1
VLO Vlora 84.70 318 P P 13 20 53.0 +0.5
SERG Sergoula 84.70 315 P P 13 20 50.5 -2.1
YLL Llanberis 84.72 338 *e*P P 13 20 52.5 +0.2
NPS Neapolis 84.72 310 P P 13 20 51.2 -1.6
TRIZ Trizonia 84.73 315 P P 13 20 51.5 -1.2
KRND KRANIDI 84.78 313 P P 13 20 50.7 -2.3
EFP Efpalio 84.78 315 P P 13 20 51.6 -1.4
ECH Echery 84.80 329 IAmb IAmb 13 21 04.9
comp=Z,114nm,1.0s
SRN Sarande 84.84 317 P P 13 20 54.2 +1.0
SRN Sarande 84.84 317 P P 13 20 53.3 +0.1
PIX Pinacate 84.84 54 IAmb IAmb 13 21 04.5
comp=Z,134nm,1.1s
S22A 4UR Ranch, Cre 84.84 46 P P 13 20 54.1 +0.4
baz=313,SNR=99
S22A S S 13 31 25.2 +2.9
baz=313
S22A 4UR Ranch, Cre 84.84 46 IAmb IAmb 13 21 06.5
comp=Z,165nm,1.2s
S22A IAMs_20 IAMs_20 14 04 16.0
comp=Z,7µm,19.0s
HLM1 Long Mynd 84.86 337 *e*P P 13 20 53.4 +0.2
HLM1 IAMs_20 IAMs_20 14 04 43.7
comp=Z,22µm,16.0s
GUR Goura 84.87 314 P P 13 20 52.5 -1.1
LAST Lasithi 84.87 310 P P 13 20 52.5 -1.1
W18A Petrified Fore 84.88 50 P P 13 20 54.1 +0.3
baz=312,SNR=18
W18A S S 13 31 24.7 +2.1
baz=312
KLV Kalavryta, Ach 84.90 314 P P 13 20 52.6 -1.1
FOZ Fox Glacier 84.91 157 IAMs_20 IAMs_20 13 53 28.9
comp=Z,11µm,22.0s
EYMN Ely 84.96 31 P P 13 20 53.7 0.0
baz=322,SNR=17
EYMN S S 13 31 20.6 -2.0
baz=322
EYMN Ely 84.96 31 IAmb IAmb 13 20 58.7
comp=Z,290nm,1.4s
EYMN Ely 84.96 31 IAMs_20 IAMs_20 14 02 08.7
comp=Z,8µm,19.0s
Q24A Divide 84.96 44 P P 13 20 54.5 +0.2
baz=314,SNR=19
Q24A S S 13 31 23.3 -0.2
baz=314
214A Organ Pipe Nat 85.01 54 P P 13 20 54.5 +0.2
baz=310,SNR=40
214A S S 13 31 24.3 +0.7
baz=310
214A Organ Pipe Nat 85.01 54 IAmb IAmb 13 21 06.6
comp=Z,174nm,1.2s
LTZ Lake Taylor 85.03 155 IAMs_20 IAMs_20 13 55 13.1
comp=Z,7µm,20.0s
TEOL Teolo 85.05 325 IAmb IAmb 13 20 57.1
comp=Z,130nm,0.8s
KEK Kerkira 85.07 317 P P 13 20 52.7 -1.7
PDO Prodromos 85.07 315 P P 13 20 52.5 -1.9
X18A Snowflake 85.14 50 IAmb IAmb 13 21 07.6
comp=Z,143nm,1.3s
X18A IAMs_20 IAMs_20 13 53 06.2
comp=Z,8µm,22.0s
IDI Anoyia 85.15 311 ⇑P P 13 20 54.3 -0.7
IDI Anoyia 85.15 311 IAmb IAmb 13 21 07.0
comp=Z,201nm,1.1s
IDI Anoyia 85.15 311 P P 13 20 53.2 -1.8
TRIP Tripoli 85.19 314 P P 13 20 54.3 -0.8
HMNX Herstmonceux 85.21 335 *e*P P 13 20 55.2 +0.4
HMNX IAMs_20 IAMs_20 14 01 14.8
comp=Z,38µm,19.8s
TSLK Tsoukalades, L 85.21 316 P P 13 20 54.8 -0.3
DRO Drossia 85.22 315 P P 13 20 53.7 -1.5
VLX Vlachokerasia 85.23 314 P P 13 20 53.4 -2.0
LKD2 Lefkada island 85.24 316 P P 13 20 55.1 -0.2
LKD2 Lefkada island 85.24 316 P P 13 20 53.8 -1.5
DSB Dublin 85.27 339 P P 13 20 55.2 +0.1
DSB IAmb IAmb 13 21 04.4
comp=Z,146nm,1.3s
STRD Stroud 85.27 336 *e*P P 13 20 55.5 +0.3
STRD IAMs_20 IAMs_20 14 03 08.7
comp=Z,20µm,18.2s
RLS Riolos of Patr 85.28 315 P P 13 20 55.5 0.0
MCH1 Michaelchurch 85.35 337 *e*P P 13 20 55.5 0.0
MCH1 IAmb IAmb 13 21 03.3
comp=Z,1µm,2.1s
MCH1 IAMs_20 IAMs_20 14 04 58.5
comp=Z,23µm,16.0s
VLI Veliai 85.35 313 P P 13 20 53.9 -2.0
EVGI Lefkada island 85.35 316 P P 13 20 54.2 -1.7
WOL Wolverton 85.36 336 *e*P P 13 20 55.7 +0.1
WOL IAmb IAmb 13 21 04.2
comp=Z,365nm,1.1s
WOL IAMs_20 IAMs_20 14 02 15.7
comp=Z,20µm,17.9s
SIVA Sivas 85.38 311 P P 13 20 56.0 0.0
SWN1 Swindon 85.38 336 *e*P P 13 20 54.9 -0.8
SWN1 IAmb IAmb 13 21 00.4
comp=Z,2µm,2.1s
SWN1 IAMs_20 IAMs_20 14 05 17.5
comp=Z,21µm,15.3s
MONM Monmouth 85.42 337 *e*P P 13 20 54.8 -1.1
MONM IAmb IAmb 13 21 02.5
comp=Z,180nm,1.0s
MONM IAMs_20 IAMs_20 14 03 40.6
comp=Z,20µm,16.5s
VAM Vamos 85.49 311 P P 13 20 55.6 -1.0
OLDB Oldbury-Upon-S 85.49 337 *e*P P 13 20 56.2 0.0
OLDB IAmb IAmb 13 21 02.6
comp=Z,87nm,0.8s
OLDB IAMs_20 IAMs_20 14 07 00.5
comp=Z,23µm,13.6s
CHAN Chania 85.50 312 P P 13 20 55.3 -1.3
AMT Artemida-Makis 85.51 314 P P 13 20 55.1 -1.6
FSK Fiskardo 85.52 316 P P 13 20 54.7 -2.0
SCTE Santa Cesarea 85.54 318 P P 13 20 56.3 -0.4
SCTE IAmb IAmb 13 21 08.8
comp=Z,229nm,1.3s
SCTE Santa Cesarea 85.54 318 P P 13 20 56.9 +0.2
IMMV Iera Moni Meta 85.58 312 P P 13 20 56.1 -0.9
KTHA Kythira Island 85.59 313 P P 13 20 55.7 -1.4
SDCO Great Sand Dun 85.61 45 P P 13 20 57.3 -0.2
baz=314,SNR=83
SDCO S S 13 31 30.3 +0.4
baz=314
SDCO Great Sand Dun 85.61 45 IAmb IAmb 13 21 02.8
comp=Z,190nm,1.5s
ITM Ithomi 85.62 314 P P 13 20 55.5 -1.8
BAI Bari 85.64 319 ⇓ *i*P P 13 20 57.7 +0.5
KEF5 Kardakata, Kep 85.70 316 P P 13 20 57.2 -0.4
VLS Valsamata 85.70 315 P P 13 20 56.5 -1.1
ANKY Antikythira Is 85.71 312 P P 13 20 56.7 -1.0
F36A Milaca 85.73 33 P P 13 20 57.2 -0.3
F36A IAmb IAmb 13 21 02.4
comp=Z,244nm,1.9s
F36A IAMs_20 IAMs_20 14 01 59.3
comp=Z,10µm,21.0s
K31A O'Neill 85.73 38 IAMs_20 IAMs_20 14 01 36.7
comp=Z,11µm,20.0s
KEF4 Livadi, Kephal 85.74 316 P P 13 20 57.1 -0.6
SGRT San Giovanni R 85.76 321 P P 13 20 57.4 -0.5
NOCI Noci 85.77 319 P P 13 20 57.5 -0.5
LBZ Lake Benmore 85.80 157 IAMs_20 IAMs_20 13 53 56.3
comp=Z,12µm,22.0s
KEF3 Kipouria, Keph 85.82 316 P P 13 20 57.3 -0.9
TAR1 Taranto 85.85 319 ⇑ *i*P P 13 20 58.1 -0.1
KNDR Palaiochora Ch 85.91 312 P P 13 20 58.7 0.0
PYL PYLOS 85.93 314 P P 13 20 56.7 -2.0
GVDS Gavdos 85.93 311 P P 13 20 58.7 -0.1
GVD Gavdhos 85.94 311 P P 13 20 58.4 -0.4
ECSD EROS Data Cent 85.94 36 P P 13 20 58.6 -0.2
baz=319,SNR=56
ECSD S S 13 31 30.6 -1.8
baz=319
ECSD EROS Data Cent 85.94 36 IAMs_20 IAMs_20 14 04 47.2
comp=Z,10µm,19.0s
E38A The Farm, Brul 86.00 32 IAmb IAmb 13 21 02.9
comp=Z,143nm,1.1s
E38A IAMs_20 IAMs_20 14 02 41.2
comp=Z,8µm,21.0s
MLZ Mavora Lakes 86.07 159 IAMs_20 IAMs_20 13 56 45.6
comp=Z,7µm,20.0s
KSCO Kaye Shedlock' 86.33 43 P P 13 21 01.2 +0.4
baz=316,SNR=16
KSCO Kaye Shedlock' 86.33 43 IAMs_20 IAMs_20 14 01 10.9
comp=Z,7µm,20.0s
SCHQ Schefferville 86.45 14 P P 13 21 00.6 -0.4
comp=Z,38nm,0.8s,baz=2.8,slow=6.0,SNR=27
SCHQ LR LR 14 02 03.5
comp=Z,7µm,20.6s,baz=343,slow=37
SCHQ Schefferville 86.45 14 IAmb IAmb 13 21 07.3
comp=Z,290nm,1.6s
SCHQ IAMs_20 IAMs_20 14 02 23.3
comp=Z,9µm,20.0s
AQU L'Aquila 86.49 322 ⇑ *i*P P 13 21 02.0 +0.5
ODZ Otahua Downs 86.53 157 IAMs_20 IAMs_20 13 54 29.8
comp=Z,8µm,22.0s
SPMN Marine on St. 86.54 33 P P 13 21 01.6 0.0
baz=322,SNR=16
SPMN S S 13 31 38.4 +0.3
baz=322
SPMN Marine on St. 86.54 33 IAMs_20 IAMs_20 13 57 48.8
comp=Z,10µm,22.0s
PMOR Pomariorio Ree 86.64 111 *e*P P 13 21 02.7 +0.3
comp=Z,123nm,1.1s
OSSC Osservatorio P 86.64 324 IAmb IAmb 13 21 13.7
comp=Z,316nm,1.8s
T25A Trinidad 86.65 45 P P 13 21 02.2 -0.4
baz=315,SNR=40
T25A S S 13 31 45.3 +5.4
baz=315
T25A Trinidad 86.65 45 IAmb IAmb 13 21 14.7
comp=Z,165nm,1.2s
HTL Hartland 86.68 337 *e*P P 13 21 01.9 -0.3
HTL IAMs_20 IAMs_20 13 59 27.4
comp=Z,20µm,20.8s
D41A Chassel 86.86 30 IAMs_20 IAMs_20 14 01 34.9
comp=Z,9µm,21.0s
BGNE Belgrade 86.93 39 P P 13 21 03.4 -0.3
baz=318,SNR=16
BGNE S S 13 31 43.3 +1.2
baz=318
BGNE Belgrade 86.93 39 IAMs_20 IAMs_20 14 02 26.6
comp=Z,9µm,20.0s
ANMO Albuquerque 86.97 48 *c i*P P 13 21 02.0 -2.2
ANMO pmax pmax
comp=Z,60nm,1.2s
ANMO MLR MLR
comp=Z,6µm,19.0s
ANMO Albuquerque 86.97 48 P P 13 21 04.7 +0.5
baz=314
ANMO S S 13 31 40.2 -3.0
baz=314
VAH Vaihoa 86.99 111 *e*P P 13 21 04.0 -0.1
comp=Z,160nm,1.4s
DYA Yadsworthy 86.99 337 *e*P P 13 21 02.3 -1.4
DYA IAmb IAmb 13 21 12.3
comp=Z,228nm,1.2s
DYA IAMs_20 IAMs_20 14 04 31.0
comp=Z,22µm,16.6s
PPT Papeete 87.02 114 P P 13 21 04.2 0.0
comp=Z,53nm,1.1s,baz=329,slow=14,SNR=3.2
PPT LR LR 13 51 52.6
comp=Z,7µm,21.8s,baz=296,slow=30
PPT2 Papeete2 87.03 114 *e*P P 13 21 05.0 +0.6
comp=Z,125nm,1.3s
PPT2 Papeete2 87.03 114 *e*PP PP 13 24 22.9 -5.0
comp=Z,492nm,24.8s
PPT2 *e*S S 13 31 40.6 -3.0
comp=Z,4µm,24.8s
PPT2 *e*SS SS 13 37 27.2 +0.1
comp=Z,4µm,26.0s
PPT2 Papeete2 87.03 114 *e*LR LR 13 48 36.7
comp=Z,43µm,25.5s,baz=310
PPTF Pamatai, Papee 87.04 114 IAMs_20 IAMs_20 13 51 40.5
comp=Z,9µm,21.0s
PAE Paea 87.07 114 *e*P P 13 21 05.0 +0.5
comp=Z,14nm,1.2s
TIP Timpagrande 87.10 318 ⇑P P 13 21 04.9 +0.3
TIP Timpagrande 87.10 318 P P 13 21 03.9 -0.7
TIP IAmb IAmb 13 21 07.0
comp=Z,213nm,1.9s
TIAR Tiarei 87.18 114 *e*P P 13 21 05.4 +0.4
comp=Z,33nm,1.3s
ATD Arta Tunnel 87.21 282 IAMs_20 IAMs_20 14 05 38.3
comp=Z,10µm,20.0s
I37A Lemond, Waseca 87.22 34 IAMs_20 IAMs_20 13 59 56.8
comp=Z,12µm,21.0s
Y22D IRIS PASSCAL I 87.29 49 P P 13 21 05.9 +0.2
baz=313
Y22D IRIS PASSCAL I 87.29 49 IAMs_20 IAMs_20 13 55 08.2
comp=Z,11µm,21.0s
L34A Svendsen Farm, 87.39 37 IAMs_20 IAMs_20 14 05 49.6
comp=Z,8µm,18.0s
TVO Taravao 87.39 114 *e*P P 13 21 06.8 +0.7
comp=Z,27nm,1.0s
JSA Saint Aubin 87.49 335 *e*P P 13 21 06.2 +0.1
JSA IAmb IAmb 13 21 15.3
comp=Z,190nm,1.0s
JSA IAMs_20 IAMs_20 14 03 36.7
comp=Z,19µm,20.5s
G40A Rib Lake 87.63 32 IAmb IAmb 13 21 11.3
comp=Z,114nm,1.1s
G40A IAMs_20 IAMs_20 14 00 02.5
comp=Z,7µm,20.0s
319A Douglas 87.65 52 IAMs_20 IAMs_20 13 54 57.1
comp=Z,7µm,20.0s
N33A J Bar K, Exete 87.78 39 IAMs_20 IAMs_20 14 02 53.1
comp=Z,11µm,19.0s
121A Cookes Peak, D 87.81 50 P P 13 21 08.5 +0.3
baz=313,SNR=21
CBKS Cedar Bluff 88.02 41 P P 13 21 08.8 -0.2
baz=317,SNR=12
CBKS Cedar Bluff 88.02 41 IAMs_20 IAMs_20 13 58 47.8
comp=Z,10µm,22.0s
E43A Lone Tree Farm 88.04 29 IAMs_20 IAMs_20 13 59 46.1
comp=Z,8µm,21.0s
F42A Maple Grove Fa 88.09 30 IAMs_20 IAMs_20 14 04 14.6
comp=Z,10µm,20.0s
MEH Mehetia 88.32 114 *e*P P 13 21 11.2 +0.7
comp=Z,45nm,1.3s
MATQ Matagami 88.41 22 P P 13 21 10.5 0.0
baz=332,SNR=13
MATQ S S 13 31 54.0 -1.9
baz=332
TEND Ethiopian Broa 88.50 283 *e*P P 13 21 11.9 +0.4
TEND *e*S S 13 31 53.8 -4.1
I40A Norwalk 88.55 33 IAMs_20 IAMs_20 14 04 07.0
comp=Z,9µm,20.0s
K38A Parkersburg 88.57 35 IAMs_20 IAMs_20 13 59 08.7
comp=Z,11µm,22.0s
N35A Tabor 88.59 38 IAMs_20 IAMs_20 13 59 48.3
comp=Z,9µm,22.0s
TAOE Nuku Hiva Isla 88.84 102 *e*S S 13 31 57.9 -3.2
comp=Z,2µm,27.0s
TAOE Nuku Hiva Isla 88.84 102 *e*LQ LQ 13 45 41.8
comp=Z,9µm,26.7s
TAOE *e*LR LR 13 49 24.1
comp=Z,28µm,26.1s,baz=312
TAOE Nuku Hiva Isla 88.84 102 IAMs_20 IAMs_20 13 56 19.5
comp=Z,9µm,20.0s
R32A Long Quarter, 88.86 41 IAMs_20 IAMs_20 13 59 11.8
comp=Z,10µm,22.0s
SCIA State Center 88.94 36 P P 13 21 13.4 +0.2
baz=321,SNR=18
SCIA S S 13 32 00.6 -0.7
baz=321
SCIA State Center 88.94 36 IAmb IAmb 13 21 16.7
comp=Z,123nm,0.8s
E46A Sault Ste Mari 89.08 28 IAMs_20 IAMs_20 14 05 48.5
comp=Z,8µm,20.0s
CHGQ Chibougamau 89.22 20 P P 13 21 13.8 -0.5
baz=335,SNR=18
LSQQ Lebel-sur-Quev 89.23 22 P P 13 21 14.4 0.0
baz=333
LSQQ S S 13 32 03.3 -0.3
baz=333
I42A Draeger Farm, 89.29 32 IAmb IAmb 13 21 19.4
comp=Z,151nm,1.2s
I42A IAMs_20 IAMs_20 14 01 02.3
comp=Z,8µm,21.0s
H43A Windswept, Lux 89.29 31 IAMs_20 IAMs_20 14 04 51.4
comp=Z,11µm,20.0s
KSU1 Kansas State U 89.44 39 P P 13 21 15.1 -0.5
baz=319,SNR=26
KSU1 S S 13 32 04.2 -1.8
baz=319
KSU1 Kansas State U 89.44 39 IAmb IAmb 13 21 20.6
comp=Z,113nm,0.9s
KSU1 Kansas State U 89.44 39 IAMs_20 IAMs_20 14 03 47.0
comp=Z,12µm,20.0s
JFWS Jewell Farm 89.50 33 P P 13 21 14.9 -0.9
baz=323,SNR=7.5
JFWS S S 13 32 05.5 -0.9
baz=323
JFWS Jewell Farm 89.50 33 IAMs_20 IAMs_20 13 59 27.0
comp=Z,10µm,21.0s
G45A Suttons Bay 89.67 29 IAMs_20 IAMs_20 14 05 54.3
comp=Z,7µm,21.0s
L40A Anamosa 89.74 34 IAmb IAmb 13 21 28.4
comp=Z,168nm,1.2s
L40A IAMs_20 IAMs_20 14 00 29.5
comp=Z,9µm,21.0s
N38A Joes South For 89.80 36 IAMs_20 IAMs_20 14 06 49.4
comp=Z,8µm,19.0s
AMTX Amarillo 89.81 45 P P 13 21 17.4 -0.1
baz=316
AMTX S S 13 32 10.3 +0.5
baz=316
AMTX Amarillo 89.81 45 IAMs_20 IAMs_20 13 57 51.3
comp=Z,9µm,21.0s
MSTX Muleshoe 89.83 46 P P 13 21 17.5 -0.1
baz=316,SNR=10
MNTX Cornudas Mount 89.86 50 P P 13 21 18.2 +0.5

baz=314,SNR=18
U32A Winter Ranch, **90.21** **43** IAMs_20 IAMs_20 14 03 36.8
comp=Z,7µm,20.0s
KS21 Milan North St **90.25** **41** IAMs_20 IAMs_20 14 06 32.8
comp=Z,9µm,20.0s
GLMI Grayling **90.26** **29** P **P** **13 21 20.0 +0.7**
baz=327,SNR=12
GLMI Grayling **90.26** **29** IAMs_20 IAMs_20 14 01 39.8
comp=Z,10µm,22.0s
I45A Fountain **90.28** **30** IAMs_20 IAMs_20 14 00 11.4
comp=Z,11µm,22.0s
KS20 Mayfield South **90.35** **41** IAMs_20 IAMs_20 14 06 34.4
comp=Z,8µm,19.0s
L42A Oliver, Polo **90.48** **33** IAMs_20 IAMs_20 14 06 03.7
comp=Z,9µm,20.0s
K43A Burlington **90.50** **32** IAMs_20 IAMs_20 14 05 15.4
comp=Z,8µm,20.0s
P38A Dawn **90.57** **37** IAMs_20 IAMs_20 14 09 19.7
comp=Z,6µm,19.0s
CROK Carrier **90.67** **42** IAMs_20 IAMs_20 14 05 06.8
comp=Z,8µm,21.0s
TBI Tubuai **90.78** **119** *e*PP PP 13 24 57.7 -0.2
comp=Z,443nm,26.8s
TBI *e*SKSac **SKSac** **13 31 51.7 -2.1**
comp=Z,3µm,21.5s
TBI *e*S **S** **13 32 15.2 -3.3**
comp=Z,2µm,25.5s
TBI Tubuai **90.78** **119** *e*PS PS 13 33 28.4 +1.2
comp=Z,6µm,35.5s
TBI *e*SS SS 13 38 19.6 -1.9
comp=Z,3µm,28.5s
TBI *e*LQ LQ 13 46 30.5
comp=Z,9µm,30.5s
TBI *e*LR LR 13 50 23.0
comp=Z,31µm,26.5s,baz=308
N41A Harden Midland **90.98** **35** IAMs_20 IAMs_20 14 00 08.5
comp=Z,10µm,22.0s
L44A Lake County Fo **91.11** **32** P **P** **13 21 23.4 +0.2**
baz=325
L44A S **S** **13 32 19.6 -1.7**
baz=325
L44A Lake County Fo **91.11** **32** IAMs_20 IAMs_20 14 01 45.5
comp=Z,9µm,21.0s
T35A Sooner Cattle **91.14** **41** IAMs_20 IAMs_20 14 01 02.2
comp=Z,8µm,22.0s
P40A Paris **91.36** **36** IAMs_20 IAMs_20 14 07 45.5
comp=Z,7µm,20.0s
HQIL Hanson Quary C **91.44** **32** IAMs_20 IAMs_20 14 00 49.4
comp=Z,7µm,20.0s
OK029 Liberty Lake **91.48** **42** IAMs_20 IAMs_20 14 08 45.3
comp=Z,6µm,19.0s
D55A Sainte-Anne-du **91.51** **22** P **P** **13 21 24.9 -0.1**
baz=334
D55A S **S** **13 32 22.5 -2.2**
baz=334
J47A Sunmer **91.51** **30** IAMs_20 IAMs_20 14 07 58.9
comp=Z,8µm,19.0s
WMOK Wichita Mounta **91.54** **44** P **P** **13 21 26.0 +0.5**
baz=318,SNR=33
WMOK S **S** **13 32 25.3 -0.3**
baz=318
WMOK Wichita Mounta **91.54** **44** IAMs_20 IAMs_20 14 04 27.1
comp=Z,8µm,20.0s
QUOK Quay **91.60** **41** IAMs_20 IAMs_20 14 07 29.4
comp=Z,9µm,18.0s
ALGO Algonquin Park **91.64** **24** P **P** **13 21 25.9 +0.2**
baz=332,SNR=8.4
ALGO S **S** **13 32 23.5 -2.4**
baz=332
OK031 S. Brethren Rd **91.69** **42** IAMs_20 IAMs_20 14 07 05.9
comp=Z,8µm,20.0s
I49A Point Hope **91.69** **28** IAMs_20 IAMs_20 14 10 18.7
comp=Z,8µm,20.0s
M44A Midewin, Midew **91.69** **33** IAmb IAmb 13 21 31.3
comp=Z,123nm,1.2s
M44A IAMs_20 IAMs_20 14 00 57.1
comp=Z,9µm,21.0s
OK030 Cody Creek RV **91.74** **41** IAMs_20 IAMs_20 14 07 07.2
comp=Z,8µm,20.0s
HDIL Hopedale **91.81** **34** P **P** **13 21 26.4 -0.2**
baz=324
HDIL S **S** **13 32 27.2 -0.6**
baz=324
HDIL Hopedale **91.81** **34** IAMs_20 IAMs_20 14 06 12.4
comp=Z,10µm,21.0s
E55A Montcerf-Lytto **91.83** **23** P **P** **13 21 27.0 +0.5**
baz=333,SNR=5.7
E55A S **S** **13 32 25.9 -1.7**
baz=333
L46A Eue Claire **91.93** **31** IAMs_20 IAMs_20 14 06 22.1
comp=Z,8µm,20.0s
LATQ La Tuque **91.96** **20** P **P** **13 21 27.0 -0.1**
baz=336
LATQ S **S** **13 32 27.3 -1.5**
baz=336
FURI Furi **92.06** **283** IAMs_20 IAMs_20 14 08 11.8
comp=Z,9µm,19.0s
E56A St. Veronique **92.07** **22** P **P** **13 21 28.3 +0.7**
baz=334,SNR=13
E56A S **S** **13 32 27.4 -2.4**
baz=334
G54A Lake Saint Pet **92.12** **24** P **P** **13 21 27.2 -0.7**
baz=332
G54A S **S** **13 32 28.4 -1.9**
baz=332
S39A Bolivar **92.17** **38** IAmb IAmb 13 21 30.7
comp=Z,59nm,0.8s
S39A IAMs_20 IAMs_20 14 01 23.4
comp=Z,12µm,22.0s
D58A Chemin du LacG **92.19** **20** P **P** **13 21 28.5 +0.3**
baz=336,SNR=9.0
D58A S **S** **13 32 28.3 -2.6**
baz=336
R40A Maddies Statio **92.22** **37** IAmb IAmb 13 21 31.3
comp=Z,60nm,0.8s
R40A IAMs_20 IAMs_20 14 10 27.9
comp=Z,9µm,19.0s
TUL1 Leonard **92.28** **41** P **P** **13 21 29.6 +0.7**
baz=320,SNR=15
TUL1 S **S** **13 32 29.0 -3.0**
baz=320
TUL1 Leonard **92.28** **41** IAMs_20 IAMs_20 14 06 27.4
comp=Z,7µm,20.0s
SADO Sadowa **92.31** **25** IAMs_20 IAMs_20 14 10 14.8
comp=Z,10µm,18.0s
SLBS Sierra La Lagu **92.34** **58** IAMs_20 IAMs_20 13 59 42.8
comp=Z,8µm,19.0s
P43A Skaggs, Pawnee **92.45** **35** IAMs_20 IAMs_20 14 01 15.3
comp=Z,10µm,21.0s
E57A Chemin Saint G **92.45** **22** P **P** **13 21 29.7 +0.3**
baz=335,SNR=19
E57A S **S** **13 32 32.3 -1.0**
baz=335
I51A Listowel **92.48** **27** P **P** **13 21 29.9 +0.3**
baz=330
I51A S **S** **13 32 32.1 -1.5**
baz=330
O44A Mansfield **92.51** **34** IAMs_20 IAMs_20 14 02 14.8
comp=Z,8µm,20.0s
D59A Saint-Raymond **92.57** **20** P **P** **13 21 30.0 +0.1**
baz=336
TX32 Lajitas Array **92.57** **50** IAmb IAmb 13 21 36.2
comp=Z,71nm,1.1s
TXAR Lajitas Array **92.57** **50** P **P** **13 21 30.9 +0.5**
comp=Z,28nm,0.9s,baz=298,slow=2.9,SNR=110
TXAR PP **PP** **13 25 17.7 +6.5**
comp=Z,7.9nm,1.1s,baz=310,slow=4.7,SNR=4.3
TXAR PKKPbc **PKKPbc** **13 38 43.8 +1.9**
comp=Z,0.9nm,0.6s,baz=152,slow=3.9,SNR=14
TXAR LR LR 14 03 35.6
comp=Z,3µm,19.1s,baz=0.0,slow=36
TXAR Lajitas Array **92.57** **50** P **P** **13 21 31.1 +0.7**
U38A Gravette **92.61** **40** IAMs_20 IAMs_20 14 05 55.9
comp=Z,9µm,21.0s
ABTX Abilene, Hawle **92.61** **45** P **P** **13 21 31.0 +0.5**
baz=317,SNR=24
H53A Bobcaygeon **92.67** **25** P **P** **13 21 30.1 -0.4**
baz=332
H53A S **S** **13 32 32.6 -2.7**
baz=332
MAHO Mahon **92.71** **326** IS 13 32 03.4
MAHO Mahon **92.71** **326** I/P **P** **13 21 27.1 -3.7**
E58A La Victoria **92.74** **21** P **P** **13 21 31.3 +0.5**
baz=335,SNR=12
E58A S **S** **13 32 33.2 -2.6**
baz=335
L48A N Adams **92.75** **30** IAMs_20 IAMs_20 14 07 34.8
comp=Z,7µm,20.0s

AAM Ann Arbor **92.76** **30** P **P** **13 21 31.6 +0.7**
baz=328
AAM S **S** **13 32 34.2 -1.9**
baz=328
AAM Ann Arbor **92.76** **30** IAMs_20 IAMs_20 14 06 36.0
comp=Z,9µm,21.0s
K50A Casco **92.76** **29** IAMs_20 IAMs_20 14 02 41.0
comp=Z,10µm,22.0s
PLVO Plevna **92.77** **24** IAMs_20 IAMs_20 14 05 44.8
comp=Z,9µm,20.0s
D61A St Aubert, Com **92.82** **19** P **P** **13 21 31.1 0.0**
baz=338
F57A Harrington **92.83** **22** S **S** **13 32 34.8 -1.8**
baz=334
D60A Saint Jean D'O **92.90** **19** P **P** **13 21 31.8 +0.3**
baz=337,SNR=7.5
CCM Cathedral Cave **92.91** **37** P **P** **13 21 32.1 +0.4**
CCM pmax pmax
comp=Z,134nm,1.2s
CCM Cathedral Cave **92.91** **37** P **P** **13 21 31.7 0.0**
baz=323
CCM S **S** **13 32 37.7 +0.1**
baz=323
CCM Cathedral Cave **92.91** **37** P **P** **13 21 32.1 +0.4**
CCM IAmb IAmb 13 21 36.9
comp=Z,134nm,1.2s
CCM Cathedral Cave **92.91** **37** IAMs_20 IAMs_20 14 08 33.5
comp=Z,8µm,21.0s
SLM Saint Louis **92.92** **36** IAMs_20 IAMs_20 14 06 11.9
comp=Z,8µm,21.0s
SFIN Lafayette **92.93** **33** P **P** **13 21 32.2 +0.5**
baz=325,SNR=9.7
SFIN S **S** **13 32 41.1 +3.4**
baz=325
SFIN Lafayette **92.93** **33** IAMs_20 IAMs_20 14 01 43.8
comp=Z,9µm,21.0s
HHAR Hobbs **92.95** **40** IAMs_20 IAMs_20 14 06 04.1
comp=Z,8µm,21.0s
F58A St-Lin Laurent **93.04** **22** P **P** **13 21 31.9 -0.2**
baz=335
DELO Deloro Mine **93.05** **25** IAmb IAmb 13 21 37.4
comp=Z,140nm,1.3s
DELO IAMs_20 IAMs_20 14 07 49.3
comp=Z,7µm,21.0s
MGMO Mountain Grove **93.12** **38** IAMs_20 IAMs_20 14 01 51.3
comp=Z,10µm,22.0s
N47A Urbana **93.12** **32** IAMs_20 IAMs_20 14 02 57.7
comp=Z,8µm,20.0s
D62A Allapoint, All **93.22** **18** P **P** **13 21 32.7 -0.3**
baz=339
D62A S **S** **13 32 38.5 -1.5**
baz=339
D62A Allapoint, All **93.22** **18** IAMs_20 IAMs_20 14 05 40.4
comp=Z,9µm,20.0s
E60A Ste Agathe de **93.26** **20** P **P** **13 21 32.6 -0.5**
baz=337
E60A S **S** **13 32 38.3 -2.1**
baz=337
Q44A Meyer Farm, Va **93.28** **35** IAMs_20 IAMs_20 14 02 50.1
comp=Z,9µm,21.0s
FVM French Village **93.35** **36** IAMs_20 IAMs_20 14 09 13.4
comp=Z,9µm,19.0s
F59A Saint Guilaume **93.36** **21** P **P** **13 21 33.4 -0.1**
baz=326
G57A Newington **93.38** **23** P **P** **13 21 33.7 0.0**
baz=334,SNR=9.0
G57A S **S** **13 32 38.9 -2.6**
baz=334
Z35A Perchaven, San **93.43** **43** IAMs_20 IAMs_20 13 59 47.2
comp=Z,7µm,21.0s
U40A Yellville **93.45** **39** P **P** **13 21 33.5 -0.7**
baz=322,SNR=54
U40A S **S** **13 32 41.0 -1.5**
baz=322
U40A Yellville **93.45** **39** IAmb IAmb 13 21 39.1
comp=Z,101nm,0.9s
U40A IAMs_20 IAMs_20 14 06 27.1
comp=Z,9µm,19.0s
E61A Lac Etchemin **93.46** **19** P **P** **13 21 33.8 -0.3**
baz=338
F60A Warwick **93.49** **20** P **P** **13 21 34.5 +0.3**
baz=336,SNR=5.9
F60A S **S** **13 32 41.7 -0.7**
baz=336
D63A Stockholm **93.50** **17** P **P** **13 21 34.3 +0.1**
baz=339,SNR=6.6
X37A Clayton **93.51** **41** IAMs_20 IAMs_20 14 08 09.9
comp=Z,9µm,18.0s
P46A Rosedale **93.51** **33** IAMs_20 IAMs_20 14 01 16.2
comp=Z,10µm,22.0s
E62A Clayton Lake **93.53** **19** P **P** **13 21 34.5 0.0**
baz=338
E62A Clayton Lake **93.53** **19** IAmb IAmb 13 21 39.5
comp=Z,151nm,1.8s
E62A IAMs_20 IAMs_20 14 07 12.7
comp=Z,10µm,21.0s
KEST Kesra **93.57** **320** P **P** **13 21 34.4 -0.6**
comp=Z,8.7nm,0.7s,baz=240,slow=10.0,SNR=13
KEST LR LR 14 07 35.2
comp=Z,20µm,18.6s,baz=326,slow=38
G58A Ormstown **93.62** **22** P **P** **13 21 34.5 -0.2**
baz=335,SNR=8.6
G58A S **S** **13 32 42.3 -1.3**
baz=335
F61A St Evariste **93.75** **20** P **P** **13 21 36.2 +0.8**
baz=337,SNR=12
F61A S **S** **13 32 44.0 -0.7**
baz=337
BATG Bathurst New B **93.75** **16** IAmb IAmb 13 21 41.8
comp=Z,78nm,1.0s
BATG IAMs_20 IAMs_20 14 10 33.5
comp=Z,9µm,19.0s
M50A Fremont **93.76** **30** IAMs_20 IAMs_20 14 07 03.6
comp=Z,11µm,22.0s
PECO Prince Edward **93.78** **24** IAMs_20 IAMs_20 14 07 48.5
comp=Z,7µm,20.0s
T42A Van Buren **93.79** **37** IAmb IAmb 13 21 40.0
comp=Z,166nm,1.6s
T42A IAMs_20 IAMs_20 14 09 14.1
comp=Z,8µm,21.0s
J54A Appleton **93.80** **26** IAMs_20 IAMs_20 14 04 30.1
comp=Z,8µm,21.0s
H57A Richville **93.83** **23** P **P** **13 21 36.1 +0.3**
baz=334,SNR=7.0
CMAH Djebel Manchou **93.84** **322** P **P** **13 21 36.8 +0.7**
W39A Magazine **93.87** **40** P **P** **13 21 36.8 +0.6**
baz=321,SNR=7.6
W39A Magazine **93.87** **40** IAMs_20 IAMs_20 14 06 35.5
comp=Z,11µm,20.0s
LONY Lake Ozonia **93.94** **23** P **P** **13 21 36.5 +0.1**
baz=334
LONY S **S** **13 32 45.3 -1.2**
baz=334
LONY Lake Ozonia **93.94** **23** IAMs_20 IAMs_20 14 05 43.6
comp=Z,7µm,20.0s
MEDO Medina **93.96** **26** IAMs_20 IAMs_20 14 03 37.4
comp=Z,7µm,21.0s
E63A Oxbow **94.00** **18** P **P** **13 21 36.6 0.0**
baz=339
E63A S **S** **13 32 45.9 -0.9**
baz=339
E63A Oxbow **94.00** **18** IAmb IAmb 13 21 41.5
comp=Z,130nm,1.4s
CAEH 'Ain El Ouahch **94.00** **323** P **P** **13 21 38.2 +1.4**
JCT Junction City **94.08** **47** P **P** **13 21 38.0 +0.7**
baz=317,SNR=16
JCT S **S** **13 32 46.8 -1.5**
baz=317
JCT Junction City **94.08** **47** IAMs_20 IAMs_20 14 00 02.8
comp=Z,6µm,21.0s
J55A Hilton **94.09** **25** IAMs_20 IAMs_20 14 07 04.8
comp=Z,9µm,20.0s
S44A Carbondale **94.14** **36** IAmb IAmb 13 21 42.6
comp=Z,90nm,1.0s
S44A IAMs_20 IAMs_20 14 07 32.1
comp=Z,7µm,21.0s
SIUC Southern Illin **94.14** **36** IAmb IAmb 13 21 42.6
comp=Z,132nm,1.2s
SIUC IAMs_20 IAMs_20 14 06 58.0
comp=Z,6µm,20.0s
E64A Bridgewater **94.14** **18** P **P** **13 21 36.9 -0.3**
baz=340
M51A Elyria **94.16** **29** P **P** **13 21 37.8 +0.4**
baz=329
G60A Masonville **94.17** **21** P **P** **13 21 37.4 0.0**
baz=336
G60A S **S** **13 32 45.6 -2.9**
baz=336

BLO Bloomington **94.17** **33** IAMs_20 IAMs_20 14 01 47.8
comp=Z,11µm,22.0s
FCAR Ozark Folk Cen **94.18** **39** IAmb IAmb 13 21 42.3
comp=Z,276nm,1.9s
FCAR IAMs_20 IAMs_20 14 07 05.5
comp=Z,7µm,20.0s
H59A Cadyville **94.19** **22** P **P** **13 21 37.3 -0.2**
baz=335,SNR=6.9
H59A S **S** **13 32 46.8 -1.8**
baz=335
I57A Carthage **94.21** **24** P **P** **13 21 37.9 +0.4**
baz=334
I57A S **S** **13 32 49.3 +0.4**
baz=334
G61A St-Isidore-de- **94.23** **20** P **P** **13 21 38.1 +0.5**
baz=337,SNR=11
G61A S **S** **13 32 47.4 -1.6**
baz=337
H58A Gabriels **94.24** **22** P **P** **13 21 38.1 +0.3**
baz=335,SNR=8.9
O49A Covington **94.26** **31** IAMs_20 IAMs_20 14 11 59.0
comp=Z,8µm,18.0s
M52A Chesterland **94.30** **28** IAMs_20 IAMs_20 14 03 38.8
comp=Z,9µm,21.0s
PBMO Poplar Bluff **94.31** **37** IAMs_20 IAMs_20 14 04 17.8
comp=Z,9µm,22.0s
ERPA Erie **94.32** **27** P **P** **13 21 38.8 +0.7**
baz=330
ERPA S **S** **13 32 52.3 +2.4**
baz=330
ERPA Erie **94.32** **27** IAMs_20 IAMs_20 14 09 00.1
comp=Z,9µm,19.0s
WHTX Lake Whitney, **94.32** **45** P **P** **13 21 38.9 +0.6**
baz=319
WHTX S **S** **13 32 47.8 -2.4**
baz=319
WHTX Lake Whitney, **94.32** **45** IAMs_20 IAMs_20 14 06 19.8
comp=Z,7µm,20.0s
L53A Girard **94.36** **28** P **P** **13 21 39.0 +0.7**
baz=330
L53A S **S** **13 32 48.9 -1.4**
baz=330
CKFL Kef-Lekhel **94.37** **322** P **P** **13 21 39.2 +0.6**
J56A Wolcott **94.41** **25** P **P** **13 21 39.0 +0.5**
baz=333
J56A S **S** **13 32 48.3 -2.3**
baz=333
J56A Wolcott **94.41** **25** IAMs_20 IAMs_20 14 08 08.2
comp=Z,9µm,22.0s
P48A Milroy **94.41** **32** IAMs_20 IAMs_20 14 04 07.0
comp=Z,8µm,21.0s
N51A Ashland **94.44** **29** IAMs_20 IAMs_20 14 10 22.5
comp=Z,10µm,19.0s
MIAR Mount Ida **94.48** **40** P **P** **13 21 39.2 +0.2**
baz=321,SNR=22
MIAR Mount Ida **94.48** **40** IAmb IAmb 13 21 44.4
comp=Z,158nm,1.4s
MIAR IAMs_20 IAMs_20 14 07 06.7
comp=Z,10µm,20.0s
F63A Nahmakanta, Br **94.50** **19** P **P** **13 21 39.7 +0.8**
baz=339
F63A Nahmakanta, Br **94.50** **19** IAMs_20 IAMs_20 14 10 29.1
comp=Z,9µm,18.0s
LCAR Lake Charles **94.52** **38** IAMs_20 IAMs_20 14 02 56.4
comp=Z,11µm,22.0s
MMNY Mt. Morris Dam **94.53** **26** IAMs_20 IAMs_20 14 11 15.5
comp=Z,9µm,18.0s
F64A Sherman **94.54** **18** P **P** **13 21 39.5 +0.5**
baz=339
F64A S **S** **13 32 51.1 -0.5**
baz=339
F64A Sherman **94.54** **18** IAMs_20 IAMs_20 14 08 30.1
comp=Z,9µm,20.0s
H60A Morristown **94.56** **21** P **P** **13 21 39.4 +0.2**
baz=336,SNR=7.1
H60A S **S** **13 32 48.5 -3.4**
baz=336
G62A West of Eustis **94.57** **20** P **P** **13 21 39.8 +0.6**
baz=338
WHAR Wooly Hollow **94.57** **39** IAmb IAmb 13 21 44.3
comp=Z,146nm,1.3s
WHAR IAMs_20 IAMs_20 14 07 10.8
comp=Z,9µm,19.0s
WVNY West Valley, N **94.57** **26** IAMs_20 IAMs_20 14 06 46.6
comp=Z,9µm,20.0s
J57A Williamstown **94.57** **24** P **P** **13 21 39.4 +0.2**
baz=333,SNR=8.0
J57A S **S** **13 32 49.8 -2.2**
baz=333
J57A Williamstown **94.57** **24** IAMs_20 IAMs_20 14 07 40.5
comp=Z,7µm,19.0s
NCB Newcomb **94.63** **23** IAmb IAmb 13 21 44.8
comp=Z,246nm,1.8s
NCB IAMs_20 IAMs_20 14 05 56.0
comp=Z,6µm,20.0s
I58A Old Forge **94.65** **23** P **P** **13 21 39.8 +0.2**
baz=334
I58A S **S** **13 32 50.1 -2.6**
baz=334
M53A WI Miller and **94.65** **28** P **P** **13 21 40.1 +0.5**
baz=330
M53A S **S** **13 32 51.4 -1.4**
baz=330
M53A WI Miller and **94.65** **28** IAMs_20 IAMs_20 14 07 53.9
comp=Z,7µm,21.0s
P49A Miami Univ. Ec **94.65** **32** P **P** **13 21 40.0 +0.3**
baz=327,SNR=8.3
P49A S **S** **13 32 54.7 +1.8**
baz=327
P49A Miami Univ. Ec **94.65** **32** IAmb IAmb 13 21 44.7
comp=Z,248nm,1.9s
P49A IAMs_20 IAMs_20 14 08 07.3
comp=Z,8µm,20.0s
USIN University of **94.65** **34** IAMs_20 IAMs_20 14 03 42.6
comp=Z,9µm,22.0s
DFRA Djebel Bou Aff **94.66** **323** P **P** **13 21 41.6 +1.7**
W41B Gary Mavity, V **94.68** **39** P **P** **13 21 40.6 +0.7**
baz=322,SNR=7.7
W41B Gary Mavity, V **94.68** **39** IAMs_20 IAMs_20 14 07 13.8
comp=Z,9µm,20.0s
Z38A Mt. Pleasant **94.73** **42** IAMs_20 IAMs_20 14 09 32.3
comp=Z,10µm,19.0s
PARMO Parma **94.73** **37** IAMs_20 IAMs_20 14 04 27.9
comp=Z,8µm,21.0s
VT1 Waterbury **94.75** **22** IAMs_20 IAMs_20 14 06 55.3
comp=Z,10µm,21.0s
K56A Middlesex **94.76** **25** P **P** **13 21 40.4 +0.2**
baz=332
K56A S **S** **13 32 53.5 -0.3**
baz=332
ACSO Alum Creek Sta **94.78** **30** P **P** **13 21 40.8 +0.5**
baz=328,SNR=8.4
ACSO S **S** **13 32 57.6 +3.7**
baz=328
ACSO Alum Creek Sta **94.78** **30** IAMs_20 IAMs_20 14 08 33.6
comp=Z,7µm,20.0s
H61A Lyndonville **94.81** **21** P **P** **13 21 41.3 +1.0**
baz=336,SNR=13
H61A S **S** **13 32 56.5 +2.4**
baz=336
HENM Henderson Moun **94.82** **36** IAMs_20 IAMs_20 14 10 07.3
comp=Z,9µm,20.0s
J58A Remsen **94.85** **24** P **P** **13 21 41.0 +0.4**
baz=334,SNR=7.6
J58A S **S** **13 32 54.3 -0.2**
baz=334
J58A Remsen **94.85** **24** IAMs_20 IAMs_20 14 09 07.8
comp=Z,9µm,20.0s
PKME Peaks-Kenny Pk **94.85** **19** P **P** **13 21 40.7 +0.3**
baz=338
I59A Olmsteadville **94.90** **22** P **P** **13 21 41.0 +0.2**
baz=335,SNR=6.6
I59A S **S** **13 32 58.1 +3.2**
baz=335
G63A Kingsbury **94.91** **19** P **P** **13 21 41.4 +0.7**
baz=338
X40A Basin Creek Fa **94.92** **40** P **P** **13 21 41.4 +0.5**
baz=321,SNR=19
PVMO Portageville **94.96** **37** IAMs_20 IAMs_20 14 02 47.8
comp=Z,9µm,22.0s
PENMO Penman **94.96** **37** IAMs_20 IAMs_20 14 04 46.0
comp=Z,8µm,21.0s
M54A Oil Creek Stat **94.97** **27** P **P** **13 21 41.7 +0.6**
baz=331
M54A S **S** **13 32 56.6 +1.0**
baz=331
M54A Oil Creek Stat **94.97** **27** IAMs_20 IAMs_20 14 09 11.3
comp=Z,7µm,19.0s

T45A	**Paducah**	**94.97**	**36**	IAMs_20	IAMs_20	14 08 07.1
	comp=Z,7µm,20.0s					
H62A	**Milan**	**94.99**	**20**	P	**P**	**13 21 41.4 +0.2**
	baz=337,SNR=14					
H62A				S	**S**	**13 32 56.7 +1.0**
	baz=337					
J59A	**Piesco**	**95.00**	**23**	P	**P**	**13 21 41.4 +0.2**
	baz=334,SNR=8.3					
J59A	**Piesco**	**95.00**	**23**	IAmb	IAmb	13 21 46.3
	comp=Z,143nm,1.6s					
J59A				IAMs_20	IAMs_20	14 08 41.8
	comp=Z,8µm,18.0s					
G64A	**Maxfield**	**95.00**	**19**	P	**P**	**13 21 41.6 +0.5**
	baz=339,SNR=6.6					
K57A	**Scipio Center**	**95.00**	**25**	P	**P**	**13 21 41.0 -0.2**
	baz=333					
O51A	**Pataskala**	**95.00**	**30**	P	**P**	**13 21 41.2 -0.1**
	baz=328					
O51A				S	**S**	**13 32 55.1 -0.9**
	baz=328					
I60A	**Shoreham**	**95.03**	**22**	P	**P**	**13 21 41.9 +0.6**
	baz=335,SNR=7.8					
I60A				S	**S**	**13 32 59.6 +3.6**
	baz=335					
WCI	**Wyandotte Cave**	**95.05**	**33**	P	**P**	**13 21 40.6 -1.0**
WCI				pmax	pmax	
	comp=Z,34nm,0.8s					
WCI	**Wyandotte Cave**	**95.05**	**33**	P	**P**	**13 21 41.8 +0.3**
	baz=326					
WCI				S	**S**	**13 32 57.6 +1.2**
	baz=326					
WCI	**Wyandotte Cave**	**95.05**	**33**	P	**P**	**13 21 40.6 -1.0**
LBNH	**Lisbon**	**95.08**	**21**	P	**P**	**13 21 42.1 +0.6**
	baz=336					
LBNH				S	**S**	**13 33 01.1 +4.7**
	baz=336					
LBNH	**Lisbon**	**95.08**	**21**	IAMs_20	IAMs_20	14 07 36.6
	comp=Z,9µm,20.0s					
HICK	**Hickman**	**95.08**	**36**	IAMs_20	IAMs_20	14 10 14.1
	comp=Z,7µm,19.0s					
PEBM	**Pemiscott Bayo**	**95.12**	**37**	IAMs_20	IAMs_20	14 04 40.2
	comp=Z,9µm,21.0s					
N53A	**Lisbon**	**95.14**	**28**	IAMs_20	IAMs_20	14 04 03.8
	comp=Z,8µm,20.0s					
435B	**Jarrell**	**95.15**	**45**	P	**P**	**13 21 42.5 +0.4**
	baz=318					
435B	**Jarrell**	**95.15**	**45**	IAMs_20	IAMs_20	14 07 14.8
	comp=Z,8µm,19.0s					
GNAR	**Gosnell**	**95.16**	**37**	IAMs_20	IAMs_20	14 04 41.3
	comp=Z,8µm,20.0s					
SET	**Setif**	**95.17**	**323**	P	**P**	**13 21 43.0 +0.8**
L56A	**Greenwood**	**95.17**	**26**	P	**P**	**13 21 42.1 +0.1**
	baz=332,SNR=5.7					
L56A	**Greenwood**	**95.17**	**26**	P	**P**	**13 21 42.6 +0.5**
L56A				IAMs_20	IAMs_20	14 07 39.6
	comp=Z,8µm,20.0s					
HBAR	**Harrisburg**	**95.17**	**38**	IAMs_20	IAMs_20	14 03 14.7
	comp=Z,10µm,22.0s					
237A	**Washetta, Mont**	**95.23**	**43**	IAMs_20	IAMs_20	14 00 27.9
	comp=Z,7µm,22.0s					
K58A	**Earlville**	**95.27**	**24**	P	**P**	**13 21 42.5 +0.1**
	baz=334,SNR=10					
K58A	**Earlville**	**95.27**	**24**	P	**P**	**13 21 42.2 -0.2**
K58A				IAMs_20	IAMs_20	14 08 01.8
	comp=Z,10µm,20.0s					
GLAT	**Glass**	**95.27**	**37**	IAMs_20	IAMs_20	14 10 22.1
	comp=Z,9µm,19.0s					
I61A	**Oroboro, Fairl**	**95.28**	**21**	P	**P**	**13 21 43.0 +0.6**
	baz=336					
I61A				S	**S**	**13 33 01.1 +3.0**
	baz=336					
LNXT	**Lenox**	**95.31**	**37**	IAMs_20	IAMs_20	14 02 58.1
	comp=Z,10µm,22.0s					
LPAR	**Lepanto**	**95.31**	**38**	IAMs_20	IAMs_20	14 03 40.4
	comp=Z,9µm,21.0s					
N54A	**Moraine State**	**95.32**	**28**	P	**P**	**13 21 42.7 0.0**
	baz=330					
N54A				S	**S**	**13 32 58.7 0.0**
	baz=330					
N54A	**Moraine State**	**95.32**	**28**	IAMs_20	IAMs_20	14 10 05.7
	comp=Z,7µm,19.0s					
M55A	**Ridgway**	**95.33**	**27**	IAmb	IAmb	13 21 48.3
	comp=Z,239nm,1.9s					
M55A				IAMs_20	IAMs_20	14 09 36.9
	comp=Z,8µm,19.0s					
ACCN	**Adirondack Com**	**95.34**	**23**	IAmb	IAmb	13 21 48.1
	comp=Z,71nm,1.2s					
ACCN				IAMs_20	IAMs_20	14 06 27.6
	comp=Z,8µm,20.0s					
O52A	**Adamsville**	**95.34**	**29**	P	**P**	**13 21 43.0 +0.1**
	baz=329,SNR=5.8					
O52A				S	**S**	**13 33 01.9 +3.1**
	baz=329					
O52A	**Adamsville**	**95.34**	**29**	IAmb	IAmb	13 21 48.2
	comp=Z,172nm,1.9s					
O52A				IAMs_20	IAMs_20	14 03 19.3
	comp=Z,9µm,22.0s					
G65A	**Princeton**	**95.35**	**18**	P	**P**	**13 21 43.3 +0.6**
	baz=340					
G65A	**Princeton**	**95.35**	**18**	IAMs_20	IAMs_20	14 06 10.7
	comp=Z,9µm,22.0s					
LMN	**Caledonia Moun**	**95.38**	**16**	IAmb	IAmb	13 21 49.0
	comp=Z,58nm,0.9s					
LMN				IAMs_20	IAMs_20	14 06 53.5
	comp=Z,9µm,20.0s					
P51A	**Williamsport**	**95.39**	**31**	P	**P**	**13 21 43.2 +0.1**
	baz=328					
WLAR	**White Oak Lake**	**95.39**	**41**	IAMs_20	IAMs_20	14 07 36.8
	comp=Z,9µm,21.0s					
WVL	**Waterville**	**95.41**	**19**	IAMs_20	IAMs_20	14 06 16.2
	comp=Z,10µm,21.0s					
H64A	**Troy**	**95.45**	**19**	P	**P**	**13 21 43.5 +0.2**
	baz=338					
HNH	**Hanover**	**95.46**	**21**	IAMs_20	IAMs_20	14 10 33.8
	comp=Z,10µm,21.0s					
O53A	**New Philadelph**	**95.47**	**29**	P	**P**	**13 21 43.1 -0.3**
	baz=329,SNR=5.3					
O53A	**New Philadelph**	**95.47**	**29**	IAmb	IAmb	13 21 48.9
	comp=Z,219nm,1.9s					
O53A				IAMs_20	IAMs_20	14 05 22.7
	comp=Z,8µm,21.0s					
R49A	**Shelbyville**	**95.49**	**33**	IAMs_20	IAMs_20	14 03 14.7
	comp=Z,9µm,21.0s					
PBRG	**Braganca**	**95.50**	**334**	*e*P	**P**	**13 21 43.5 -0.1**
	comp=Z,63nm,2.0s					
PBRG	**Braganca**	**95.50**	**334**	*e*PP	**PP**	**13 25 36.2 +2.8**
PBRG				*e*S	**SKSac**	**13 32 23.7 +3.9**
PBRG				*e*SS	SS	13 39 51.2 +25
K59A	**Cooperstown**	**95.51**	**24**	P	**P**	**13 21 43.5 -0.1**
	baz=334,SNR=9.0					
UCM	**Universidad Co**	**95.51**	**331**	*i* P	**P**	**13 21 42.1 -1.6**
UCM				IS		13 32 23.5
M56A	**Emporium**	**95.53**	**26**	P	**P**	**13 21 43.7 0.0**
	baz=332					
M56A				S	**S**	**13 33 03.2 +2.7**
	baz=332					
M56A	**Emporium**	**95.53**	**26**	IAMs_20	IAMs_20	14 08 39.0
	comp=Z,8µm,21.0s					
HALT	**Halls**	**95.53**	**37**	IAMs_20	IAMs_20	14 10 32.1
	comp=Z,9µm,19.0s					
J60A	**Lant Hill Farm**	**95.54**	**22**	P	**P**	**13 21 43.9 +0.2**
	baz=335					
L57A	**Andrews Acres**	**95.54**	**25**	P	**P**	**13 21 43.9 +0.2**
	baz=333					
I62A	**Tamworth**	**95.58**	**21**	P	**P**	**13 21 43.9 +0.1**
	baz=337					
I62A	**Tamworth**	**95.58**	**21**	IAMs_20	IAMs_20	14 06 54.0
	comp=Z,7µm,20.0s					
I63A	**Otisfield**	**95.63**	**20**	P	**P**	**13 21 45.0 +0.9**
	baz=337,SNR=9.7					
I63A				S	**S**	**13 33 05.4 +4.2**
	baz=337					
I63A	**Otisfield**	**95.63**	**20**	IAMs_20	IAMs_20	14 05 44.3
	comp=Z,9µm,20.0s					
P52A	**Corning**	**95.63**	**30**	P	**P**	**13 21 44.4 +0.2**
	baz=329					
P52A				S	**S**	**13 33 05.1 +3.7**
	baz=329					
H65A	**Eastbrook**	**95.65**	**18**	P	**P**	**13 21 45.0 +0.9**
	baz=339,SNR=5.6					
Q51A	**Peebles**	**95.65**	**31**	IAmb	IAmb	13 21 47.0
	comp=Z,55nm,0.8s					
Q51A				IAMs_20	IAMs_20	14 08 36.7
	comp=Z,8µm,20.0s					
BINY	**Binghamton**	**95.66**	**25**	P	**P**	**13 21 44.8 +0.5**
	baz=333					
BINY				S	**S**	**13 33 05.1 +3.6**
	baz=333					
BINY	**Binghamton**	**95.66**	**25**	IAMs_20	IAMs_20	14 08 56.2
	comp=Z,8µm,19.0s					
J61A	**Chester**	**95.71**	**22**	P	**P**	**13 21 45.0 +0.6**
	baz=336,SNR=5.3					
T47A	**Sharon Grove**	**95.71**	**35**	IAmb	IAmb	13 21 47.5
	comp=Z,43nm,0.8s					
T47A				IAMs_20	IAMs_20	14 03 05.5
	comp=Z,10µm,22.0s					
H66A	**Whiting**	**95.80**	**18**	P	**P**	**13 21 45.1 +0.4**
	baz=340					
L58A	**Harry Jones Me**	**95.84**	**25**	P	**P**	**13 21 45.6 +0.5**
	baz=333,SNR=7.3					
L58A				S	**S**	**13 33 05.5 +2.4**
	baz=333					
O54A	**Avella**	**95.85**	**28**	P	**P**	**13 21 45.0 -0.1**
	baz=330,SNR=10					
O54A				S	**S**	**13 33 06.5 +3.2**
	baz=330					
O54A	**Avella**	**95.85**	**28**	IAMs_20	IAMs_20	14 09 00.7
	comp=Z,9µm,19.0s					
FFD	**Franklin Falls**	**95.86**	**21**	IAMs_20	IAMs_20	14 08 00.4
	comp=Z,9µm,20.0s					
MET	**Memphis--Engin**	**95.88**	**38**	IAMs_20	IAMs_20	14 04 08.3
	comp=Z,8µm,21.0s					
PGAV	**Gavieira, Arco**	**95.88**	**335**	*e*P	**P**	**13 21 47.0 +1.6**
	comp=Z,92nm,1.8s					
PGAV	**Gavieira, Arco**	**95.88**	**335**	*e*PP	**PP**	**13 25 40.9 +4.5**
PGAV				*e*S	**SKSac**	**13 32 23.1 +1.1**
PGAV				*e*SS	SS	13 39 42.9 +11
PGAV	**Gavieira, Arco**	**95.88**	**335**	*e*LR	LR	13 55 17.8
	comp=Z,18µm,18.0s					
X43A	**Marvell**	**95.89**	**39**	P	**P**	**13 21 46.2 +0.8**
	baz=323					
X43A	**Marvell**	**95.89**	**39**	IAMs_20	IAMs_20	14 08 26.6
	comp=Z,7µm,20.0s					
Z41A	**Richland Creek**	**95.89**	**41**	P	**P**	**13 21 46.0 +0.6**
	baz=321					
Z41A	**Richland Creek**	**95.89**	**41**	IAMs_20	IAMs_20	14 07 51.9
	comp=Z,10µm,20.0s					
833A	**Chaparral WMA,**	**95.90**	**48**	P	**P**	**13 21 46.2 +0.6**
	baz=317					
TRY	**Troy**	**95.93**	**23**	IAMs_20	IAMs_20	14 06 43.3
	comp=Z,9µm,20.0s					
K60A	**Five Rivers En**	**95.96**	**23**	P	**P**	**13 21 46.4 +0.8**
	baz=335					
L59A	**Walton**	**95.98**	**24**	P	**P**	**13 21 46.0 +0.3**
	baz=334,SNR=11					
L59A	**Walton**	**95.98**	**24**	IAMs_20	IAMs_20	14 08 32.7
	comp=Z,7µm,19.0s					
N56A	**West Decatur**	**95.99**	**27**	P	**P**	**13 21 46.6 +0.8**
	baz=332					
N56A				S	**S**	**13 33 06.6 +2.2**
	baz=332					
I64A	**Boothbay**	**96.01**	**20**	P	**P**	**13 21 46.7 +0.9**
	baz=338					
I64A				S	**S**	**13 33 09.8 +5.4**
	baz=338					
PCAB	**Cabril**	**96.02**	**335**	*e*P	**P**	**13 21 45.7 -0.2**
PCAB	**Cabril**	**96.02**	**335**	*e*PP	**PP**	**13 25 42.3 +4.9**
M57A	**Sunshine Farm,**	**96.03**	**26**	P	**P**	**13 21 46.7 +0.8**
	baz=332,SNR=15					
M57A				S	**S**	**13 33 07.3 +2.5**
	baz=332					
M57A	**Sunshine Farm,**	**96.03**	**26**	IAmb	IAmb	13 21 48.7
	comp=Z,65nm,0.7s					
M57A				IAMs_20	IAMs_20	14 05 37.3
	comp=Z,9µm,21.0s					
J62A	**Henniker**	**96.04**	**21**	P	**P**	**13 21 46.8 +0.9**
	baz=336					
NATX	**Nacogdoches**	**96.05**	**43**	IAMs_20	IAMs_20	14 01 41.4
	comp=Z,7µm,21.0s					
P53A	**Whipple**	**96.06**	**30**	P	**P**	**13 21 46.8 +0.7**
	baz=329					
P53A	**Whipple**	**96.06**	**30**	IAmb	IAmb	13 21 59.2
	comp=Z,82nm,1.6s					
P53A				IAMs_20	IAMs_20	14 08 53.2
	comp=Z,8µm,20.0s					
WVT	**Waverly**	**96.07**	**36**	P	**P**	**13 21 46.8 +0.6**
WVT				pmax	pmax	
	comp=Z,206nm,2.0s					
WVT	**Waverly**	**96.07**	**36**	P	**P**	**13 21 46.8 +0.6**
	baz=325					
WVT	**Waverly**	**96.07**	**36**	P	**P**	**13 21 46.8 +0.6**
WVT				IAmb	IAmb	13 21 51.5
	comp=Z,206nm,2.0s					
WVT	**Waverly**	**96.07**	**36**	IAMs_20	IAMs_20	14 10 31.3
	comp=Z,7µm,20.0s					
K61A	**Williamstown**	**96.11**	**23**	P	**P**	**13 21 46.9 +0.6**
	baz=335					
Q52A	**Bidwell**	**96.15**	**30**	P	**P**	**13 21 46.3 -0.2**
	baz=329					
MVO	**Moncorvo**	**96.16**	**334**	*e*P	**P**	**13 21 46.9 +0.3**
	comp=Z,51nm,1.8s					
MVO	**Moncorvo**	**96.16**	**334**	*e*PP	**PP**	**13 25 42.3 +3.7**
MVO				*e*S	**SKSac**	**13 32 32.5 +9.1**
MVO				*e*SS	**SS**	**13 39 39.8 +4.0**
MVO	**Moncorvo**	**96.16**	**334**	*e*LR	LR	13 54 53.9
	comp=Z,21µm,18.0s					
J63A	**Strafford**	**96.20**	**21**	P	**P**	**13 21 46.4 -0.2**
	baz=337					
J63A				S	**S**	**13 33 10.2 +4.1**
	baz=337					
W45A	**Hickory Valley**	**96.21**	**37**	IAMs_20	IAMs_20	14 10 55.2
	comp=Z,8µm,20.0s					
M58A	**Price's Panora**	**96.23**	**25**	P	**P**	**13 21 47.3 +0.4**
	baz=333,SNR=6.7					
POLO	**Lamas de Olo**	**96.24**	**335**	*e*P	**P**	**13 21 47.3 +0.3**
	comp=Z,39nm,1.9s					
POLO	**Lamas de Olo**	**96.24**	**335**	*e*PP	**PP**	**13 25 40.9 +1.7**
POLO				*e*S	**SKSac**	**13 32 31.4 +7.5**
POLO				*e*SS	SS	13 39 53.9 +17
KSPA	**Keystone Colle**	**96.30**	**25**	IAMs_20	IAMs_20	14 09 16.4
	comp=Z,8µm,19.0s					
PVRL	**Vila Real**	**96.30**	**335**	*e*P	**P**	**13 21 47.4 +0.2**
	comp=Z,87nm,1.9s					
PVRL	**Vila Real**	**96.30**	**335**	*e*PP	**PP**	**13 25 41.8 +2.2**
ESDC	**Sonseca Array**	**96.34**	**331**	P	**P**	**13 21 47.1 -0.3**
	comp=Z,2.5nm,0.8s,baz=21,slow=4.1,SNR=19					
ESDC				PP	**PP**	**13 25 41.4 +1.4**
	comp=Z,8.0nm,1.1s,baz=22,slow=7.2,SNR=6.8					
ESDC				LR	LR	14 08 47.4
	comp=Z,18µm,19.5s,baz=25,slow=38					
ESDC	**Sonseca Array**	**96.34**	**331**	P	**P**	**13 21 47.5 +0.1**
RER	**Riviere de l'E**	**96.35**	**248**	IAMs_20	IAMs_20	14 03 35.2
	comp=Z,8µm,21.0s					
SSPA	**Standing Stone**	**96.38**	**27**	P	**P**	**13 21 47.5 0.0**
	baz=332					
SSPA	**Standing Stone**	**96.38**	**27**	P	**P**	**13 21 48.7 +1.1**
SSPA				IAmb	IAmb	13 21 53.0
	comp=Z,115nm,1.8s					
SSPA	**Standing Stone**	**96.38**	**27**	IAMs_20	IAMs_20	14 08 55.6
	comp=Z,7µm,20.0s					
N57A	**Milroy**	**96.40**	**26**	P	**P**	**13 21 48.2 +0.5**
	baz=332,SNR=8.0					
N57A				S	**S**	**13 33 08.5 +0.5**
	baz=332					
L60A	**Shokan**	**96.42**	**24**	P	**P**	**13 21 48.0 +0.3**
	baz=335					
K62A	**Royalston**	**96.43**	**22**	P	**P**	**13 21 48.0 +0.3**
	baz=336					
K62A	**Royalston**	**96.43**	**22**	IAMs_20	IAMs_20	14 07 45.4
	comp=Z,10µm,21.0s					
M59A	**Waymart**	**96.43**	**25**	P	**P**	**13 21 47.9 +0.2**
	baz=334					
735A	**Kenedy**	**96.45**	**47**	IAMs_20	IAMs_20	14 00 13.5
	comp=Z,9µm,22.0s					
L61A	**Hillsdale 1, H**	**96.45**	**23**	P	**P**	**13 21 48.4 +0.5**
	baz=335					
O56A	**Blue Knob Stat**	**96.46**	**27**	P	**P**	**13 21 48.4 +0.5**
	baz=331,SNR=6.9					
O56A	**Blue Knob Stat**	**96.46**	**27**	IAMs_20	IAMs_20	14 10 23.6
	comp=Z,7µm,19.0s					
L61B	**Northampton**	**96.49**	**22**	P	**P**	**13 21 48.1 +0.1**
	baz=336					
MCWV	**Mont Chateau**	**96.51**	**28**	P	**P**	**13 21 48.5 +0.3**
	baz=330					
Q53A	**Leroy**	**96.54**	**30**	P	**P**	**13 21 49.1 +0.8**
	baz=329					
PAB	**San Pablo**	**96.60**	**332**	P	**P**	**13 21 48.4 -0.3**
PAB				pmax	pmax	
	comp=Z,41nm,1.7s					
PAB				MLR	MLR	
	comp=Z,23µm,20.0s					
PAB	**San Pablo**	**96.60**	**332**	P	**P**	**13 21 48.4 -0.3**
K63A	**Dunstable**	**96.61**	**21**	P	**P**	**13 21 48.8 +0.3**
	baz=337					
N58A	**Sunbury**	**96.62**	**26**	P	**P**	**13 21 48.9 +0.3**
	baz=333					
N58A	**Sunbury**	**96.62**	**26**	IAMs_20	IAMs_20	14 08 12.7
	comp=Z,9µm,19.0s					
OXF	**Oxford**	**96.62**	**38**	P	**P**	**13 21 49.0 +0.3**
	baz=324					
OXF	**Oxford**	**96.62**	**38**	IAMs_20	IAMs_20	14 04 20.0
	comp=Z,8µm,22.0s					
T50A	**Nancy**	**96.70**	**33**	IAmb	IAmb	13 21 51.3
	comp=Z,34nm,0.7s					
T50A				IAMs_20	IAMs_20	14 09 54.6
	comp=Z,7µm,19.0s					
U49A	**Red Boiling Sp**	**96.70**	**34**	IAmb	IAmb	13 21 54.2
	comp=Z,55nm,1.2s					
U49A				IAMs_20	IAMs_20	14 09 49.8
	comp=Z,8µm,20.0s					
Q54A	**Coxs Mills**	**96.71**	**29**	P	**P**	**13 21 49.6 +0.5**
	baz=330					
Q54A	**Coxs Mills**	**96.71**	**29**	IAmb	IAmb	13 21 53.5
	comp=Z,154nm,1.8s					
Q54A				IAMs_20	IAMs_20	14 04 11.5
	comp=Z,10µm,22.0s					
S51A	**Beattyville**	**96.72**	**32**	IAMs_20	IAMs_20	14 02 38.0
	comp=Z,8µm,21.0s					
QUA2	**Belchertown**	**96.74**	**22**	IAMs_20	IAMs_20	14 09 41.8
	comp=Z,8µm,19.0s					
HKT	**Hockley**	**96.77**	**45**	*i* P	**P**	**13 21 49.1 -0.3**
HKT				pmax	pmax	
	comp=Z,35nm,1.7s					
HKT	**Hockley**	**96.77**	**45**	IAMs_20	IAMs_20	14 11 16.4
	comp=Z,9µm,19.0s					
HRV	**Adam Dziewonsk**	**96.77**	**21**	P	**P**	**13 21 49.9 +0.6**
	baz=337					
CLTN	**Cedars of Leba**	**96.80**	**35**	IAMs_20	IAMs_20	14 03 38.4
	comp=Z,8µm,22.0s					
R53A	**Hurricane**	**96.82**	**30**	P	**P**	**13 21 50.3 +0.8**
	baz=329					
O57A	**Amberson**	**96.85**	**27**	P	**P**	**13 21 49.8 +0.2**
	baz=332					
V48A	**Smith Brothers**	**96.86**	**35**	IAMs_20	IAMs_20	14 03 39.1
	comp=Z,10µm,22.0s					
PVIS	**Viseu**	**96.86**	**335**	*e*P	**P**	**13 21 50.1 +0.3**
	comp=Z,54nm,1.9s					
PVIS	**Viseu**	**96.86**	**335**	*e*PP	**PP**	**13 25 49.3 +5.4**
N59A	**State Game Lan**	**96.87**	**25**	P	**P**	**13 21 50.5 +0.7**
	baz=333,SNR=5.8					
N59A				S	**S**	**13 33 13.8 +1.6**
	baz=333					
N59A	**State Game Lan**	**96.87**	**25**	IAMs_20	IAMs_20	14 09 24.5
	comp=Z,7µm,21.0s					
M60A	**Port Jervis**	**96.89**	**24**	P	**P**	**13 21 49.8 -0.1**
	baz=334					
M60A				S	**S**	**13 33 14.3 +2.1**
	baz=334					
PLAL	**Pickwick Lake**	**96.89**	**36**	IAMs_20	IAMs_20	14 06 03.0
	comp=Z,7µm,21.0s					
KSCT	**Kent School, K**	**96.89**	**23**	IAMs_20	IAMs_20	14 08 34.9
	comp=Z,10µm,20.0s					
CART	**Cartagena**	**96.92**	**328**	*e*P	**P**	**13 21 47.2 -2.8**
CART				*i* S	**SKSac**	**13 32 33.7 +6.4**
WES	**Weston**	**96.95**	**21**	IAMs_20	IAMs_20	14 08 20.3
	comp=Z,10µm,21.0s					
Q55A	**Buckhannon**	**96.99**	**29**	P	**P**	**13 21 50.5 +0.1**
	baz=330					
MTE	**Manteigas**	**97.02**	**334**	*e*P	Pdif	13 21 51.3 +0.7
	comp=Z,94nm,1.9s					
MTE	**Manteigas**	**97.02**	**334**	*e*PP	**PP**	**13 25 48.8 +3.6**
MTE				*e*S	**SKSac**	**13 32 33.1 +5.2**
MTE				*e*SS	SS	13 40 03.5 +16
MTE	**Manteigas**	**97.02**	**334**	*e*LR	LR	13 55 07.5
	comp=Z,18µm,18.0s					
P56A	**Dayton Farm, R**	**97.02**	**28**	P	Pdif	13 21 50.9 +0.3
	baz=331,SNR=8.9					
P56A				S	**S**	**13 33 14.9 +1.5**
	baz=331					
BCX	**Boston College**	**97.04**	**21**	IAMs_20	IAMs_20	14 08 44.7
	comp=Z,9µm,20.0s					
143A	**Socs Landing,**	**97.05**	**40**	IAMs_20	IAMs_20	14 08 43.7
	comp=Z,10µm,20.0s					
Y45A	**Yeager Farm, C**	**97.07**	**38**	IAMs_20	IAMs_20	14 04 57.0
	comp=Z,9µm,22.0s					
ODNJ	**Ogdensburg**	**97.11**	**24**	P	Pdif	13 21 51.4 +0.4
ODNJ				IAMs_20	IAMs_20	14 09 49.8
	comp=Z,7µm,20.0s					
N60A	**Cedar Hill Far**	**97.14**	**25**	P	Pdif	13 21 51.1 +0.1
	baz=334					
N60A				S	**S**	**13 33 15.4 +1.1**
	baz=334					
PAGS	**Pennsylvania G**	**97.16**	**26**	P	Pdif	13 21 51.1 0.0
PAGS				IAMs_20	IAMs_20	14 09 02.1
	comp=Z,7µm,20.0s					
O58A	**Lewisberry**	**97.18**	**26**	P	**P**	**13 21 50.8 -0.4**
	baz=332					
O58A				S	**S**	**13 33 15.6 +0.9**
	baz=332					
M61A	**Granite Spring**	**97.18**	**23**	P	**P**	**13 21 50.9 -0.3**
	baz=335					
TRNY	**Table Rock, Ra**	**97.18**	**24**	IAMs_20	IAMs_20	14 10 01.6
	comp=Z,8µm,19.0s					
O59A	**Robesonia**	**97.27**	**26**	P	**P**	**13 21 50.3 -1.3**
	baz=333					
O59A				S	**S**	**13 33 16.0 +0.5**
	baz=333					
LUPA	**Lehigh Univers**	**97.29**	**25**	IAMs_20	IAMs_20	14 09 56.6
	comp=Z,9µm,20.0s					
Q56A	**Snyder Ridge,**	**97.30**	**28**	P	Pdif	13 21 51.8 -0.1
	baz=331					
Q56A	**Snyder Ridge,**	**97.30**	**28**	IAMs_20	IAMs_20	14 05 24.0
	comp=Z,7µm,21.0s					
S53A	**Williamson**	**97.30**	**31**	P	**P**	**13 21 51.4 -0.4**
	baz=329					
R54A	**Victor**	**97.33**	**30**	P	**P**	**13 21 51.9 0.0**
	baz=330					
P57A	**Homestead Farm**	**97.35**	**27**	IAMs_20	IAMs_20	14 06 12.3
	comp=Z,7µm,21.0s					
PAL	**Palisades**	**97.41**	**24**	IAMs_20	IAMs_20	14 10 07.6
	comp=Z,8µm,19.0s					
YLE	**Yale**	**97.44**	**23**	IAMs_20	IAMs_20	14 08 39.3
	comp=Z,9µm,20.0s					
WSPT	**Westport, CT**	**97.45**	**23**	IAMs_20	IAMs_20	14 10 03.6
	comp=Z,8µm,19.0s					
BRNJ	**Basking Ridge**	**97.49**	**24**	IAMs_20	IAMs_20	14 09 19.4
	comp=Z,7µm,20.0s					
COI	**Coimbra**	**97.49**	**335**	*e*P	Pdif	13 21 53.3 +0.7
	comp=Z,69nm,1.4s					
COI	**Coimbra**	**97.49**	**335**	*e*PP	**PP**	**13 25 53.0 +4.3**
COI	**Coimbra**	**97.49**	**335**	*e*SS	SS	13 40 06.8 +12
PCBR	**Castelo Branco**	**97.49**	**334**	*e*P	Pdif	13 21 55.6 +3.0
	comp=Z,34nm,1.7s					
PCBR	**Castelo Branco**	**97.49**	**334**	*e*PP	**PP**	**13 25 47.5 -1.2**
L64A	**Middleborough**	**97.51**	**21**	P	Pdif	13 21 52.6 0.0
	baz=337					
O60A	**Telford**	**97.53**	**25**	P	**P**	**13 21 52.6 -0.2**
	baz=334					
S54A	**Dingess, Beckl**	**97.53**	**30**	P	**P**	**13 21 52.8 -0.1**
	baz=329					
S54A	**Dingess, Beckl**	**97.53**	**30**	IAMs_20	IAMs_20	14 10 27.4
	comp=Z,8µm,20.0s					
R55A	**Marlinton**	**97.59**	**29**	P	Pdif	13 21 53.2 0.0
	baz=330					
R55A	**Marlinton**	**97.59**

baz=337
R56A **Bull Pasture M** 97.77 29 P P 13 21 53.9 -0.1
baz=331
P59A **Jarrettsville** 97.81 26 P Pdif 13 21 54.0 0.0
baz=333
WUPA **West Chester U** 97.81 25 IAms_20 IAms_20 14 12 55.3
comp=Z,6µm,19.0s
X48A **Hartselle** 97.81 36 IAms_20 IAms_20 14 04 33.4
comp=Z,8µm,22.0s
PMRV **Marv??o** 97.83 334 eP P 13 21 54.1 0.0
comp=Z,47nm,1.6s
PMRV **Marv??o** 97.83 334 ePP PP 13 25 55.4 +4.0
PMRV eS SKSac 13 32 37.2 +5.2
PMRV eSS SS 13 40 16.6 +17
PMRV **Marv??o** 97.83 334 eLR LR 13 56 00.4
comp=Z,24µm,20.0s
PSUB **Penn St. - Bra** 97.87 25 IAms_20 IAms_20 14 12 40.8
comp=Z,9µm,19.0s
S55A **Lewisburg** 97.88 30 P P 13 21 54.3 -0.1
baz=330
VBMS **Vicksburg** 97.89 40 IAms_20 IAms_20 14 09 16.9
comp=Z,9µm,20.0s
P60A **Greenville** 97.91 25 P Pdif 13 21 54.5 0.0
baz=333,SNR=5.4
P60A **Greenville** 97.91 25 IAms_20 IAms_20 14 13 07.9
comp=Z,9µm,20.0s
M65A **Busby, Falmout** 97.91 21 IAms_20 IAms_20 14 11 02.5
comp=Z,8µm,19.0s
V51A **Loudon** 97.93 33 IAms_20 IAms_20 14 09 50.3
comp=Z,9µm,20.0s
Q58A **Fox Den Farm,** 97.95 27 P Pdif 13 21 54.7 0.0
baz=332
LODK **Lodwar** 97.99 280 P Pdif 13 21 55.5 +0.1
SNR=17
W50A **Signal Mountai** 98.00 34 IAms_20 IAms_20 14 06 22.2
comp=Z,8µm,21.0s
O61A **Allentown** 98.02 25 P P 13 21 54.9 -0.1
baz=334
T54A **Tazewell** 98.06 31 P Pdif 13 21 55.5 +0.1
baz=329,SNR=6.5
CPCT **Cooper Cave** 98.15 34 P P 13 21 55.2 -0.4
CPCT IAms_20 IAms_20 14 10 09.1
comp=Z,10µm,22.0s
R57A **Stanardsville** 98.20 28 P P 13 21 55.5 -0.3
baz=331
V52A **Sevierville** 98.23 33 P Pdif 13 21 56.3 +0.2
V52A IAmb IAmb 13 22 06.9
comp=Z,140nm,1.9s
V52A IAms_20 IAms_20 14 04 59.2
comp=Z,8µm,20.0s
PSBE **So Bento** 98.25 335 eP Pdif 13 21 57.8 +1.7
comp=Z,79nm,1.9s
PSBE **So Bento** 98.25 335 ePP PP 13 25 58.2 +3.7
PSBE eS SKSac 13 32 45.4 +11
PSBE eSS SS 13 40 32.5 +27
146A **Union** 98.30 39 IAms_20 IAms_20 14 05 13.6
comp=Z,10µm,22.0s
TKL **Tuckaleechee C** 98.31 33 P Pdif 13 21 56.6 +0.2
TKL pmax pmax
comp=Z,31nm,0.8s
TKL **Tuckaleechee C** 98.31 33 P Pdif 13 21 56.6 +0.2
TKL IAmb IAmb 13 21 58.9
comp=Z,31nm,0.8s
TKL IAms_20 IAms_20 14 03 42.2
comp=Z,8µm,21.0s
P61A **Hammonton** 98.32 25 IAms_20 IAms_20 14 10 25.7
comp=Z,7µm,19.0s
T55A **Pulaski** 98.33 30 P P 13 21 56.1 -0.4
baz=330,SNR=5.3
S56A **Natural Bridge** 98.33 29 P P 13 21 55.8 -0.7
baz=330
Z47A **Carrollton** 98.34 38 IAms_20 IAms_20 14 09 36.4
comp=Z,6µm,19.0s
344A **Westbrook Farm** 98.39 40 IAms_20 IAms_20 14 09 48.0
comp=Z,9µm,20.0s
R58A **Rapidan** 98.39 28 P P 13 21 56.6 -0.1
baz=332
BLA **Blacksburg** 98.40 30 P P 13 21 56.1 -0.7
baz=330
BLA **Blacksburg** 98.40 30 IAms_20 IAms_20 14 11 44.3
comp=Z,9µm,18.0s
FPAL **Fort Paine** 98.41 35 IAms_20 IAms_20 14 04 38.1
comp=Z,9µm,22.0s
U54A **Nelsons Funny** 98.42 31 P P 13 21 56.1 -0.8
baz=329
U54A **Nelsons Funny** 98.42 31 IAms_20 IAms_20 14 11 02.9
comp=Z,10µm,20.0s
PMTG **Montargil** 98.44 334 eP Pdif 13 21 59.3 +2.4
comp=Z,45nm,1.9s
PMTG **Montargil** 98.44 334 ePP PP 13 25 59.2 +3.2
PMTG eS SKSac 13 32 43.7 +8.7
PMTG eSS SS 13 40 31.4 +24
S57A **Dark Hollow, R** 98.50 29 P P 13 21 56.3 -0.9
baz=331
S57A **Dark Hollow, R** 98.50 29 IAms_20 IAms_20 14 09 50.9
comp=Z,8µm,20.0s
Q60A **Greensboro** 98.56 26 IAms_20 IAms_20 14 10 53.1
comp=Z,8µm,19.0s
Y49A **Blount Mountai** 98.60 36 IAms_20 IAms_20 14 04 56.2
comp=Z,10µm,22.0s
CBN **Corbin Frederi** 98.71 27 IAms_20 IAms_20 14 11 33.3
comp=Z,5µm,19.0s
T56A **Rocky Mt** 98.71 30 Pdiff P 13 21 58.0 -0.1
baz=330
W52A **Murphy** 98.71 34 IAms_20 IAms_20 14 10 24.0
comp=Z,9µm,19.0s
V53A **Saluda** 98.72 32 IAms_20 IAms_20 14 05 16.0
comp=Z,9µm,21.0s
R58B **Mineral** 98.73 28 IAms_20 IAms_20 14 09 43.0
comp=Z,7µm,20.0s
X51A **Calhoun** 98.73 35 IAms_20 IAms_20 14 04 59.7
comp=Z,9µm,21.0s
EVO **Evora** 98.85 334 *i* P P 13 21 57.2 -1.5
EVO *i* S SKSac 13 32 44.2 +7.1
EVO **Evora** 98.85 334 eP P 13 21 55.0 -3.7
comp=Z,41nm,1.8s
EVO **Evora** 98.85 334 ePP PP 13 26 03.4 +4.3
PMAFR **Mafra** 98.91 335 eP P 13 21 57.8 -1.2
comp=Z,113nm,2.0s
PMAFR **Mafra** 98.91 335 ePP PP 13 26 02.9 +3.3
PMAFR **Mafra** 98.91 335 eSS SS 13 40 30.1 +16
LRAL **Lakeview Retre** 98.99 37 Pdiff P 13 21 58.7 -0.7
baz=325
LRAL **Lakeview Retre** 98.99 37 IAms_20 IAms_20 14 10 21.7
comp=Z,7µm,20.0s
V54A **Nebo** 99.00 32 Pdiff P 13 21 58.1 -1.4
baz=329
EMAL **Malaga-Limoner** 99.04 330 eP Pdif 13 21 57.6 -1.9
EMAL *i* S SKSac 13 32 45.4 +7.3
T57A **Hurt** 99.05 29 Pdiff Pdif 13 21 58.4 -1.3
baz=331
T57A **Hurt** 99.05 29 IAms_20 IAms_20 14 05 35.4
comp=Z,10µm,21.0s
LIS **Lisbon** 99.08 334 ePdif Pdif 13 21 59.6 -0.1
LIS ePP PP 13 26 01.8 +0.9
LIS AMS AMS 14 04 42.0
comp=E,27µm,26.3s
LIS **Lisbon** 99.08 334 eP Pdif 13 21 59.6 -0.1
LIS *e* 13 26 01.8
346A **Big Creek Wild** 99.09 40 IAms_20 IAms_20 14 15 00.7
comp=Z,7µm,20.0s
U56A **King** 99.16 30 Pdiff Pdif 13 21 59.2 -1.0
baz=330
KMBO **Kilima Mbogo** 99.21 275 P Pdif 13 22 00.4 -0.7
comp=Z,2.0nm,0.7s,baz=40,slow=7.2,SNR=11
KMBO PP PP 13 26 04.0 +0.4
comp=Z,1.3nm,0.5s,baz=34,slow=8.7,SNR=6.1
KMBO LR LR 14 08 06.9
comp=Z,5µm,18.9s,baz=41,slow=36
KMBO **Kilima Mbogo** 99.21 275 *i* P Pdif 13 22 00.3 -0.7
SNR=5.1
KMBO **Kilima Mbogo** 99.21 275 IAms_20 IAms_20 14 14 13.7
comp=Z,9µm,18.0s
BG3 **Lake Jocassee** 99.24 33 P Pdif 13 22 01.3 +0.8
BG3 IAms_20 IAms_20 14 04 32.8
comp=Z,7µm,22.0s
V55A **Taylorsville** 99.24 31 Pdiff Pdif 13 21 59.7 -0.8
baz=329
PBEJ **Beja** 99.24 333 eP Pdif 13 22 01.6 +1.1
comp=Z,56nm,1.8s
PBEJ **Beja** 99.24 333 ePP PP 13 26 02.8 +0.6
KIBK **Kibwezi** 99.30 274 P Pdif 13 22 00.7 -0.5
SNR=8.7
T58A **Grand View Acr** 99.38 29 Pdiff Pdif 13 22 00.7 -0.4
baz=331
PNCL **Nicolau / Gran** 99.40 334 eP Pdif 13 21 56.0 -5.2
PNCL **Nicolau / Gran** 99.40 334 ePP PP 13 26 04.3 +0.9
PNCL **Nicolau / Gran** 99.40 334 eSS SS 13 40 43.3 +22
W54A **Cherokee Point** 99.48 32 Pdiff Pdif 13 22 00.7 -0.9
baz=328
U57A **Blanch** 99.51 30 Pdiff Pdif 13 22 00.7 -0.9
baz=330
V56A **Mocksville** 99.58 31 Pdiff Pdif 13 22 01.1 -0.9
baz=330
Z51A **Franklin** 99.62 35 IAms_20 IAms_20 14 06 16.3
comp=Z,10µm,22.0s
PCVE **Castro Verde** 99.66 333 eP Pdif 13 22 02.5 +0.2
comp=Z,56nm,1.9s
PCVE **Castro Verde** 99.66 333 ePP PP 13 26 06.6 +1.3
PCVE eS SKSac 13 32 46.8 +5.6
PCVE eSS SS 13 40 39.6 +15
Y52A **Lilburn** 99.68 34 IAms_20 IAms_20 14 11 30.7
comp=Z,9µm,21.0s
MELI **Melilla** 99.69 328 eS SKSac 13 32 41.4 +0.1
MELI **Melilla** 99.69 328 eP Pdif 13 21 60.0 -2.5
T59A **Double "B" Far** 99.73 28 Pdiff Pdif 13 22 02.3 -0.4
baz=332
T59A **Double "B" Far** 99.73 28 IAms_20 IAms_20 14 10 31.3
comp=Z,8µm,19.0s
PVAQ **Vaqueiros** 99.74 333 eP Pdif 13 22 04.8 +2.1
comp=Z,44nm,1.6s
PVAQ **Vaqueiros** 99.74 333 ePP PP 13 26 06.6 +0.7
PVAQ eS SKSac 13 32 47.9 +6.3
PVAQ eSS SS 13 40 36.3 +10
PVAQ **Vaqueiros** 99.74 333 eLR LR 13 56 40.3
comp=Z,19µm,20.0s
S61A **Accomac** 99.79 26 IAms_20 IAms_20 14 11 42.9
comp=Z,6µm,20.0s
KMSC **Kings Mountain** 99.80 32 Pdiff Pdif 13 22 02.4 -0.6
baz=329
V57A **Coltrane Farms** 99.80 30 Pdiff Pdif 13 22 02.7 -0.3
baz=330
U58A **Oxford** 99.85 29 Pdiff Pdif 13 22 02.1 -1.1
baz=331
X54A **Belton** 99.86 33 Pdiff Pdif 13 22 02.9 -0.4
baz=328
T60A **Surry** 99.89 27 IAms_20 IAms_20 14 10 54.5
comp=Z,8µm,19.0s
PBDV **Barranco-do-Ve** 99.96 333 eP Pdif 13 22 05.9 +2.2
PBDV **Barranco-do-Ve** 99.96 333 ePP PP 13 26 09.4 +1.7
PBDV eS SKSac 13 32 50.8 +8.0
PBDV eSS SS 13 40 44.5 +15
PTEO **Sao Teotonio** 99.98 334 eP Pdif 13 22 02.6 -1.1
comp=Z,70nm,1.7s
PTEO **Sao Teotonio** 99.98 334 ePP PP 13 26 12.7 +5.0
SFS **San Fernando** 100.00 331 eP Pdif 13 22 07.1 +3.3
W56A **Indian Trail** 100.12 31 Pdiff Pdif 13 22 03.9 -0.5
baz=330
V58A **Windy Hill, Pi** 100.15 30 Pdiff Pdif 13 22 03.9 -0.6
baz=331
V58A **Windy Hill, Pi** 100.15 30 IAms_20 IAms_20 14 13 07.6
comp=Z,7µm,19.0s
MORF **Marmelete** 100.17 333 ePdif Pdif 13 22 04.5 -0.2
MORF ePP PP 13 26 10.1 +0.8
MORF eSKSac SKSac 13 32 43.3 -0.5
MORF AMS AMS 14 07 58.0
comp=Z,19µm,19.5s
MORF **Marmelete** 100.17 333 eP Pdif 13 22 04.5 -0.2
MORF *e* 13 26 10.1
MORF *e* 13 32 43.3
MORF **Marmelete** 100.17 333 eP Pdif 13 22 03.9 -0.8
comp=Z,64nm,1.6s
MORF **Marmelete** 100.17 333 ePP PP 13 26 10.8 +1.6
MORF eS SKSac 13 32 53.4 +10
CEU **Ceuta** 100.17 330 eP Pdif 13 22 00.6 -4.0
HODGE **Hodges** 100.17 33 IAms_20 IAms_20 14 05 47.6
comp=Z,9µm,22.0s
U59A **Littleton** 100.18 29 IAms_20 IAms_20 14 05 21.3
comp=Z,8µm,22.0s
250A **Grady** 100.21 37 IAms_20 IAms_20 14 12 19.9
comp=Z,7µm,18.0s
X55A **Gracelyn & Ava** 100.24 32 Pdiff Pdif 13 22 04.7 -0.2
baz=329
U60A **Pendleton** 100.32 28 Pdiff Pdif 13 22 04.1 -1.2
baz=332
GOGA **Godfrey** 100.33 34 Pdiff Pdif 13 22 04.9 -0.5
baz=327
GOGA **Godfrey** 100.33 34 IAms_20 IAms_20 14 11 23.9
comp=Z,8µm,19.0s
W57A **Gilead** 100.35 31 Pdiff Pdif 13 22 04.3 -1.2
baz=330
W57A **Gilead** 100.35 31 IAms_20 IAms_20 14 12 58.0
comp=Z,7µm,19.0s
PVLZ **Peæn de** 100.36 329 eP Pdif 13 22 07.0 +1.5
PFVI **Vila Bisbo** 100.38 334 eP Pdif 13 22 08.6 +3.0
PFVI **Vila Bisbo** 100.38 334 ePP PP 13 26 12.7 +1.9
PFVI eS SKSac 13 32 51.1 +6.3
PFVI eSS SS 13 40 49.5 +14
X56A **White Oak** 100.48 32 Pdiff Pdif 13 22 05.1 -0.9
baz=329
BRAL **Brewton** 100.49 38 IAms_20 IAms_20 14 11 05.7
comp=Z,8µm,19.0s
V59A **Middlesex** 100.52 29 Pdiff Pdif 13 22 05.7 -0.5
baz=331
JSC **Jenkinsville** 100.56 32 IAms_20 IAms_20 14 06 31.9
comp=Z,6µm,20.0s
U61A **Possum Corner** 100.71 28 Pdiff Pdif 13 22 06.3 -0.7
baz=333
W58A **Raeford** 100.77 30 Pdiff Pdif 13 22 06.5 -0.8
baz=330
V60A **Jim Taylor Roa** 100.90 28 IAms_20 IAms_20 14 06 43.0
comp=Z,10µm,22.0s
X57A **Johnson Farm,** 100.90 31 Pdiff Pdif 13 22 07.3 -0.6
baz=330
CNNC **Cliffs of the** 101.12 29 IAms_20 IAms_20 14 06 48.2
comp=Z,10µm,22.0s
V61A **Roper** 101.14 28 IAms_20 IAms_20 14 07 41.6
comp=Z,7µm,22.0s
154A **Montrose** 101.16 34 IAms_20 IAms_20 14 06 14.0
comp=Z,9µm,21.0s
352A **Blakely** 101.26 36 IAms_20 IAms_20 14 06 39.8
comp=Z,8µm,22.0s
Z56A **Williston** 101.33 33 IAms_20 IAms_20 14 06 42.3
comp=Z,10µm,21.0s
Y58A **Scranton** 101.56 31 IAms_20 IAms_20 14 08 50.1
comp=Z,9µm,21.0s
V62A **Hyde County Ai** 101.57 28 IAms_20 IAms_20 14 16 45.2
comp=Z,8µm,18.0s
451A **Vernon** 101.58 37 IAms_20 IAms_20 14 15 04.3
comp=Z,7µm,18.0s
Y59A **Loris** 101.81 31 IAms_20 IAms_20 14 17 31.8
comp=Z,7µm,18.0s
TIGA **Tifton** 101.93 35 IAms_20 IAms_20 14 06 37.2
comp=Z,8µm,21.0s
255A **Hazlehurst** 102.03 34 IAms_20 IAms_20 14 14 33.8
comp=Z,7µm,18.0s
Y60A **Bolivia** 102.07 30 IAms_20 IAms_20 14 08 40.5
comp=Z,6µm,21.0s
IFR **Ifrane** 102.14 329 eP Pdif 13 22 13.5 -0.2
IFR *i* S SKSac 13 32 58.1 +4.3
553A **Crawfordville** 102.57 37 IAms_20 IAms_20 14 09 19.4
comp=Z,7µm,19.0s
AVE **Averroes** 103.25 331 eP Pdif 13 22 19.8 +1.4
AVE eS SKSac 13 33 00.7 +2.1
456A **Hilliard** 103.25 35 IAms_20 IAms_20 14 08 38.2
comp=Z,8µm,21.0s
ROSA **Rosais** 103.93 349 IAms_20 IAms_20 14 06 38.4
comp=Z,9µm,20.0s
656A **Willston** 104.16 36 IAms_20 IAms_20 14 13 39.3
comp=Z,8µm,20.0s
PAF **Port-aux-Franc** 104.46 219 IAms_20 IAms_20 14 12 52.0
comp=Z,6µm,20.0s
FOMA **Nahampoana Res** 105.14 250 IAms_20 IAms_20 14 05 36.6
comp=Z,8µm,21.0s
DWPF **Disney Wildern** 105.73 36 IAms_20 IAms_20 14 09 07.0
comp=Z,8µm,22.0s
PTCN **Pitcairn Islan** 106.02 109 IAms_20 IAms_20 14 01 17.5
comp=Z,9µm,22.0s
060A **Indiantown** 107.14 35 IAms_20 IAms_20 14 15 07.4
comp=Z,8µm,21.0s
061Z **Ochoppi** 107.88 36 IAms_20 IAms_20 14 12 52.9
comp=Z,8µm,22.0s
TEIG **Tepich** 108.60 46 IAms_20 IAms_20 14 20 14.1
comp=Z,5µm,20.0s
PETF **Flores** 110.23 49 IAms_20 IAms_20 14 07 51.8
comp=Z,8µm,22.0s
ESQI **Esquipulas** 112.36 50 IAms_20 IAms_20 14 10 26.3
comp=Z,5µm,22.0s
MTO3 **Montecristo** 112.47 50 IAms_20 IAms_20 14 09 16.3
comp=Z,5µm,20.0s
CRZF **Crozet Islands** 112.99 229 IAms_20 IAms_20 14 09 02.7
comp=Z,5µm,21.0s
VNDA **Vanda** 114.84 174 PKP PKPdf 13 26 57.7 -0.2
comp=Z,2.3nm,0.8s,baz=304,slow=3.6,SNR=14
VNDA PP PP 13 27 56.8 -0.4
comp=Z,3.6nm,1.0s,baz=342,slow=6.8,SNR=5.4
VNDA PKKPbc PKKPbc 13 37 36.0 -0.8
comp=Z,1.0nm,0.7s,baz=193,slow=2.1,SNR=7.6
TORD **Torodi Ar. Bea** 115.54 312 PKP PKiKP 13 27 00.9 -0.3
comp=Z,3.1nm,0.8s,baz=3.8,slow=2.9,SNR=14
TORD PP PP 13 28 00.3 -2.0
comp=Z,3.4nm,0.8s,baz=22,slow=8.9,SNR=4.8
TORD PKKPbc PKKPbc 13 37 31.1 -2.0
comp=Z,1.0nm,1.0s,baz=198,slow=4.1,SNR=3.1
TORD **Torodi Ar. Bea** 115.54 312 PKPdf 13 27 01.4 +0.2
GTBY **Guantanamo Bay** 115.68 35 IAms_20 IAms_20 14 24 03.5
comp=Z,5µm,18.0s
MTDJ **Mount Denham** 115.99 38 IAms_20 IAms_20 14 20 44.1
comp=Z,7µm,21.0s
GRTK **Grand Turk** 116.00 30 IAms_20 IAms_20 14 15 24.4
comp=Z,6µm,22.0s
KOWA **Kowa** 117.73 318 PKPdf PKPdf 13 27 05.4 -0.1
MAW **Mawson** 117.98 205 PKP PKiKP 13 27 04.9 +0.6
comp=Z,9.1nm,0.7s,baz=78,slow=5.3,SNR=18
MAW PKKPbc PKKPab 13 37 24.0 -0.8
comp=Z,7.0nm,0.8s,baz=249,slow=6.1,SNR=4.2
MAW **Mawson** 117.98 205 PKPdf PKiKP 13 27 05.7 +1.5
SC01 **Santiago de lo** 118.03 31 IAms_20 IAms_20 14 22 14.3
comp=Z,7µm,20.0s
SDDR **Presa de Saban** 118.19 32 IAms_20 IAms_20 14 22 25.7
comp=Z,6µm,20.0s
SJG **San Juan** 121.00 27 eP PKiKP 13 27 13.4 +1.6
SEUS **St. Eustatius** 122.66 24 IAms_20 IAms_20 14 19 16.5
comp=Z,5µm,22.0s
SKI **Saint Kitts** 122.89 24 IAms_20 IAms_20 14 19 02.4
comp=Z,4µm,21.0s
PAYG **Puerto Ayora** 122.91 63 IAms_20 IAms_20 14 09 23.3
comp=Z,6µm,22.0s
AZU **Azuero** 123.13 47 eP PKiKP 13 27 20.6 +4.5
RPN **Rapa Nui** 123.16 101 IAms_20 IAms_20 14 12 51.4
comp=Z,6µm,20.0s
SMRC **Santa Marta, M** 123.66 39 eP PKiKP 13 27 17.7 +0.6
BOSA **Boshof** 123.73 257 PKP PKPdf 13 27 15.9 -0.7
comp=Z,5.9nm,0.7s,baz=79,slow=1.1,SNR=14
BOSA PP PP 13 28 58.3 -1.4
comp=Z,2.8nm,1.0s,baz=109,slow=2.8,SNR=1.8
BOSA PKKPbc PKKPbc 13 37 03.9 +0.8
comp=Z,2.2nm,0.8s,baz=279,slow=4.3,SNR=3.5
BOSA **Boshof** 123.73 257 PKiKP PKPdf 13 27 16.0 -0.7
BOSA **Boshof** 123.73 257 PKiKP 13 27 17.7 +0.8
CAPC **Capurgana** 124.12 44 eP PKPdf 13 27 16.4 -1.4
SJCC **San Jacinto, C** 124.24 41 eP PKPdf 13 27 18.0 -0.1
URIC **Uribia, Colomb** 124.29 36 eP PKiKP 13 27 24.6 +6.3
DBIC **Dimbokro** 124.57 313 PKP PKPdf 13 27 18.2 -0.4
comp=Z,7.4nm,0.6s,baz=11,slow=2.3,SNR=17
DBIC PP PP 13 29 02.4 -1.9
comp=Z,5.8nm,0.9s,baz=11,slow=5.4,SNR=2.4
TIC **Toumodi** 124.69 313 ePKiKP PKPdf 13 27 17.0 -1.9
KIC **Kosan Boka** 124.75 313 ePKiKP PKPdf 13 27 17.6 -1.4
comp=Z,28nm,1.1s
ARGC **Ariguani, Magd** 124.76 40 eP PKiKP 13 27 22.3 +3.0
MOTC **Monteria, Cord** 124.92 42 eP PKPdf 13 27 19.2 -0.1
LIC **Lamto** 125.03 313 ePKiKP PKPdf 13 27 17.1 -2.4
comp=Z,38nm,1.0s
MAPC **Malpelo** 125.31 51 eP PKiKP 13 27 23.4 +3.0
FDF **Fort de France** 125.84 23 IAms_20 IAms_20 14 21 54.5
comp=Z,5µm,22.0s
UREC **San Jos de Ur** 125.85 42 eP PKiKP 13 27 21.9 +0.5
DBBC **Dabeiba** 126.09 44 eP PKPdf 13 27 21.7 +0.1
QSPA **South Pole Qui** 126.38 180 PKPdf PKiKP 13 27 21.2 +0.3
QSPA **South Pole Qui** 126.38 180 IAms_20 IAms_20 14 18 34.4
comp=Z,7µm,22.0s
ZARC **Zaragoza, Cauc** 126.43 42 eP PKPdf 13 27 21.9 -0.2
SYO **Syowa Base** 126.59 206 *i* PKiKP PKiKP 13 27 23.4 +2.2
OCAC **Ocana** 126.61 40 eP PKPdf 13 27 22.6 -0.1
HELC **Santa Helena** 127.14 43 eP PKiKP 13 27 26.3 +1.8
BRRC **Barranca, Sant** 127.36 41 eP PKPdf 13 27 23.8 -0.1
SDV **Santo Domingo** 127.38 36 eP PKPdf 13 27 24.1 +0.2
SDV **Santo Domingo** 127.38 36 PKPdf PKiKP 13 27 25.0 +0.2
SDV **Santo Domingo** 127.38 36 IAms_20 IAms_20 14 29 09.9
comp=Z,5µm,20.0s
SDV **Santo Domingo** 127.38 36 eP PKPdf 13 27 23.9 -0.4
PTBC **PUERTO BERRIO** 127.44 42 eP PKPdf 13 27 23.6 -0.5
PAMC **Pamplona, Colo** 127.69 40 eP PKPdf 13 27 24.5 -0.7
PLMC **San Jos del P** 127.78 45 eP PKPdf 13 27 24.8 0.0
NORC **Norcasia** 128.03 43 eP PKPdf 13 27 24.8 -0.5
BARC **Barichara** 128.07 41 eP PKPdf 13 27 23.1 -2.6
SPBC **San Pablo de B** 128.39 42 eP PKiKP 13 27 26.8 +0.2
YOTC **Yotoco, Valle** 128.49 46 eP PKPdf 13 27 25.7 -0.5
TOLC **Tolima** 128.58 44 eP PKPdf 13 27 26.3 -0.4
ANIL **Santa Ana** 128.61 44 eP PKPdf 13 27 26.5 -0.2
RUSC **La Rusia** 128.72 41 eP PKPdf 13 27 26.5 -0.7
ROSC **El Rosal** 128.93 43 PKP PKPdf 13 27 27.5 +0.1
comp=Z,9.9nm,0.4s,baz=172,slow=7.1,SNR=2.5
ROSC **El Rosal** 128.93 43 eP PKPdf 13 27 25.7 -1.8
ROSC **El Rosal** 128.93 43 IAms_20 IAms_20 14 29 53.4
comp=Z,5µm,22.0s
ORTC **Ortega, Tolima** 129.18 45 eP PKPdf 13 27 27.1 -0.4
CHIC **Chingaza** 129.42 43 eP PKPdf 13 27 25.9 -2.5
POPC **Popayan, Colom** 129.46 47 eP PKPdf 13 27 28.1 -0.2
BBAC **Balboa, Cauca** 129.53 48 eP PKPdf 13 27 27.4 -1.0
MARP **Paez Belalcaza** 129.64 46 eP PKPdf 13 27 29.0 +0.3
PCON **Cinco Dias** 129.79 47 eP PKPdf 13 27 28.5 -0.8
SOTA **Rioblanco** 129.82 47 eP PKiKP 13 27 31.2 +1.2
VILC **Villavicencio,** 129.88 43 eP PKPdf 13 27 28.4 -0.5
BETC **Betania** 130.07 46 eP PKPdf 13 27 29.5 +0.3
GCUF **Volcan Galeras** 130.10 49 eP PKiKP 13 27 30.9 +0.2
CUSE **Cucicocha Este** 130.18 51 eP PKiKP 13 27 31.7 +1.0
OTAV **Otavalo** 130.20 51 eP PKPdf 13 27 28.2 -1.7
OTAV **Otavalo** 130.20 51 eP PKPdf 13 27 30.0 +0.1
GARC **Garzon, Huila** 130.44 46 eP PKiKP 13 27 31.3 +0.3
PTGC **Puerto Gaitan,** 130.64 41 eP PKPdf 13 27 30.5 +0.3
FLOC **Florencia** 130.83 47 eP PKiKP 13 27 32.2 +0.7
PUAC **Puerto Asis, P** 131.11 49 eP PKiKP 13 27 33.8 +1.7
MACC **Macarena, Meta** 131.41 45 eP PKPdf 13 27 32.0 +0.3
GUVC **San Jose del G** 131.76 43 eP PKPdf 13 27 32.0 -0.3
PTLC **Puerto Leguiza** 132.47 47 eP PKPdf 13 27 33.4 -0.3
NVL **N'lazarevskaya** 135.85 203 ePKiKP PKPdf 13 27 38.4 +0.2
NVL ePPP PPP 13 33 11.5
NVL eSS SS 13 48 22.5 +7.1
NVL eSSS SSS 13 53 23.8
SNAA **Sanae** 139.52 198 P PKPdf 13 27 35.2 -10
NNA **Nana** 140.30 61 IAms_20 IAms_20 14 21 27.1
comp=Z,4µm,20.0s
VNA2 **Neumayer--Watz** 141.12 197 P PKPdf 13 27 41.9 -6.0
baz=94,slow=3.6
VNA3 **Neumayer Olymp** 141.43 196 P PKPdf 13 27 42.6 -5.9
VNA1 **Neumayer--Stat** 141.52 197 P PKPdf 13 27 43.4 -5.2
MALB **Monte Alegre** 143.61 21 eP PKPbc 13 27 51.6 +0.3
TMAB **Tom-Au,PÅ,Br** 145.46 11 eP PKPab 13 27 57.4 0.0
ETMB **Extrema** 145.51 45 eP PKPdf 13 27 56.5 -0.8
ITTB **Itaituba** 145.53 25 eP PKPdf 13 27 56.9 -0.5
ROSB **Rosrio** 146.37 4 eP PKPbc 13 27 60.0 -0.1
SAML **Samuel** 146.44 40 eP PKPdf 13 27 59.3 +0.4
SAML **Samuel** 146.44 40 PKP2 PKPbc 13 28 00.0 -0.2
SAML MLR MLR
comp=Z,4µm,20.0s
SAML **Samuel** 146.44 40 PKPbc 13 28 00.0 -0.2
SAML **Samuel** 146.44 40 IAms_20 IAms_20 14 34 46.4
comp=Z,4µm,20.0s
SAML **Samuel** 146.44 40 eP PKPdf 13 27 59.5 +0.5
NBMO **Morrinhos-CE** 146.78 356 eP PKPab 13 28 01.9 -0.5
NPGB **Novo Progresso** 148.16 26 eP PKPdf 13 28 02.0 +0.2
RCBR **Riachuelo** 148.81 348 PKPbc PKPbc 13 28 05.8 -1.0
comp=Z,54nm,0.8s,baz=341,slow=1.0,SNR=18
RCBR **Riachuelo** 148.81 348 eP PKPdf 13 28 03.2 +0.3
PRPB **Parauapebas** 148.87 15 eP PKPdf 13 28 03.6 +0.6
LPAZ **La Paz** 149.29 56 PKPbc PKPbc 13 28 08.6 0.0
comp=Z,28nm,0.8s,baz=338,slow=3.3,SNR=20
LPAZ **La Paz** 149.29 56 eP PKPdf 13 28 04.5 +0.2
LPAZ **La Paz** 149.29 56 eP PKPdf 13 28 05.1 +0.8
PSGCX **Pisagua** 150.18 63 PKiKP 13 28 11.2 +0.3
MNMC **Minye Minye** 150.25 62 IAms_20 IAms_20 14 29 57.8
comp=Z,4µm,20.0s
TA01 **Diego Aracena** 150.75 64 PKiKP 13 28 12.7 +0.8
VILB **Vilhena** 151.37 39 eP PKPdf 13 28 08.3 +1.4
CLDB **Colider** 151.52 29 eP PKPdf 13 28 06.2 -0.9
SMTB **Santa Maria do** 151.90 12 eP PKPdf 13 28 08.6 +0.9
PB15 **IPOC Station P** 152.88 68 IAms_20 IAms_20 14 30 40.1
comp=Z,5µm,20.0s
AC01 **Pan de Azucar** 153.62 75 PKiKP 13 28 18.9 +1.2
PTLB **Pontes e Lacer** 154.02 40 eP PKPdf 13 28 10.6 -0.1
SNDB **Serra Nova Dou** 154.09 21 eP PKPdf 13 28 11.2 +0.3
PEXB **Peixe** 154.94 14 eP PKPdf 13 28 12.5 +0.4
GO04 **Tololo Observa** 155.25 83 IAms_20 IAms_20 14 31 11.8
comp=Z,4µm,21.0s
CO02 **Combarbal** 155.47 86 IAms_20 IAms_20 14 47 09.6

comp=Z,4μm,21.0s
VA01 Torpederas 155.53 90 IAMs_20 IAMs_20 14 25 54.5
comp=Z,5μm,22.0s
CO01 Juntas del Tor 155.74 82 IAMs_20 IAMs_20 14 34 35.6
comp=Z,5μm,21.0s
LL01 San Ignacio de 156.00 113 IAMs_20 IAMs_20 14 27 55.5
comp=Z,4μm,22.0s
MT02 Curacav 156.01 91 IAMs_20 IAMs_20 14 27 09.9
comp=Z,4μm,22.0s
PEL Peldehue 156.34 90 IAMs_20 IAMs_20 14 26 57.9
comp=Z,3μm,21.0s
MT05 Renca 156.37 91 IAMs_20 IAMs_20 14 26 06.4
comp=Z,4μm,22.0s
LC01 Cunco 156.41 105 IAMs_20 IAMs_20 14 24 28.2
comp=Z,4μm,22.0s
BO02 Sierra Bellavi 156.68 94 IAMs_20 IAMs_20 14 32 15.7
comp=Z,4μm,20.0s
GDU01 Guandu, BA 157.06 354 *e*P **PKPdf 13 28 15.4 +0.6**
ARAG Araguaiana, MT 157.44 25 *e*P **PKPdf 13 28 16.4 +1.2**
ZON Zonda 157.45 85 IAMs_20 IAMs_20 14 31 23.0
comp=Z,4μm,21.0s
PLCA Paso Flores 157.47 109 PKP **PKPdf 13 28 14.0 -0.7**
comp=Z,1.6nm,0.8s,baz=230,slow=0.9,SNR=6.0
PLCA PKPab **PKPab 13 28 46.8 +0.4**
comp=Z,10nm,0.8s,baz=212,slow=2.0,SNR=11
PLCA Paso Flores 157.47 109 PKIKP **PKPdf 13 28 14.0 -0.7**
PLCA Paso Flores 157.47 109 *e*P **PKPdf 13 28 16.3 +1.6**
PP1B Ponte de Pedra 157.93 34 *e*P **PKPdf 13 28 16.8 +1.0**
JANB Januaria 158.42 6 *e*P **PKPdf 13 28 17.3 +0.8**
BDFB Brasilia 158.44 16 PKP **PKPdf 13 28 16.1 -0.5**
comp=Z,3.1nm,0.7s,baz=175,slow=11,SNR=2.4
BDFB PKPab **PKPab 13 28 51.0 0.0**
comp=Z,16nm,0.8s,baz=54,slow=2.9,SNR=11
BDFB PP **PP 13 32 29.8 -0.2**
comp=Z,6.7nm,0.9s,baz=22,slow=5.3,SNR=4.0
AQDB Aquidauana 159.99 40 *e*P **PKPdf 13 28 18.0 -0.2**
IPMB Ipameri, GO 160.65 18 *e*P **PKPdf 13 28 20.1 +1.0**
ITRB Iturama 161.64 25 *e*P **PKPdf 13 28 21.4 +1.4**
SJMB Sao Joao De Ma 162.11 357 *e*P **PKPdf 13 28 21.4 +0.9**
RIB01 Linhares ES 162.68 355 *e*P **PKPdf 13 28 22.6 +1.5**
PCMB Pacaembu 163.04 30 *e*P **PKPdf 13 28 23.4 +2.0**
CPUP Villa Florida 163.46 56 PKP **PKPdf 13 28 21.4 -0.2**
comp=Z,13nm,1.3s,baz=330,slow=1.3,SNR=5.2
CPUP PKPab **PKPab 13 29 11.8 -1.0**
comp=Z,26nm,1.2s,baz=339,slow=3.1,SNR=6.5
CPUP PP **PP 13 33 00.3 +2.4**
comp=Z,5.3nm,1.1s,baz=303,slow=6.4,SNR=3.2
CPUP Villa Florida 163.46 56 *e*P **PKPdf 13 28 22.5 +0.9**
TRCB Terra Rica 163.47 36 *e*P **PKPdf 13 28 22.6 +0.8**
BB19B Bebedouro 163.50 22 *e*P **PKPdf 13 28 23.2 +1.3**
FRTB Fartura 165.27 28 *e*P **PKPdf 13 28 24.1 +0.7**
PTGB Pitanga 165.36 38 *e*P **PKPdf 13 28 23.9 +0.4**
VAS01 Vassouras-RJ 165.65 5 *e*P **PKPdf 13 28 24.8 +1.1**
VAO Valinhos 165.78 19 *e*P **PKPdf 13 28 24.4 +0.6**
ITQB Itaqui 166.00 64 *e*P **PKPdf 13 28 24.9 +1.2**
MAN01 Angra dos Reis 166.18 7 *e*P **PKPdf 13 28 25.1 +0.9**
SPB Sao Paulo 166.21 21 *e*P **PKPdf 13 28 25.5 +1.5**
ESAR Angra dos Reis 166.28 9 *e*P **PKPdf 13 28 25.5 +1.4**
PARB Paraibuna 166.40 14 *e*P **PKPdf 13 28 25.4 +1.1**
PET01 Itanhaem-SP 166.91 21 *e*P **PKPdf 13 28 26.2 +1.7**
LPA La Plata 167.03 87 *d* *i* PKIKP **PKPdf 13 28 22.4 -1.9**
LPA PP **PP 13 33 16.7 -0.3**
LPA PPP PPP 13 40 06.0
TIJ01 Guaruva-PR 167.27 30 *e*P **PKPdf 13 28 27.2 +2.3**
ITAB Concordia 167.35 45 *e*P **PKPdf 13 28 27.9 +3.1**
CPSB Cacapava Do Su 168.69 60 *e*P **PKPdf 13 28 27.1 +1.5**
CNLB Canela 169.65 48 *e*P **PKPdf 13 28 27.3 +1.0**

WEL 22 13:11:42.5±0.5, 44°S±3°×16°9E±°, h5km, M2.5/3, ML2.9/12, MLv2.5/3, Error ellipse: s-maj=0.0km s-min=0.0km az=135.5, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCZ	**Jackson Bay**	**0.45**	**241**	P	Pg	13 11 51.1	0.0
JCZ				S	Sg	13 11 57.3	+0.3
FOZ	**Fox Glacier**	**0.48**	**47**	P	Pg	13 11 51.4	-0.4
FOZ				S	Sg	13 11 58.0	0.0
LBZ	**Lake Benmore**	**0.81**	**131**	P	Pg	13 11 58.4	+0.3
LBZ				S	Sg	13 12 09.3	+0.7
WKZ	**Wanaka**	**0.99**	**193**	P	Pg	13 12 00.7	-0.8
WKZ				S	Sg	13 12 13.7	-0.7
RPZ	**Rata Peaks**	**1.26**	**84**	P	Pg	13 12 06.5	-0.1
RPZ				S	Sg	13 12 21.4	-1.5
WVZ	**Waitaha Valley**	**1.29**	**53**	P	Pn	13 12 06.9	-0.2
WVZ				S	Sg	13 12 22.9	-1.1
MSZ	**Milford Sound**	**1.29**	**231**	P	Pn	13 12 07.2	0.0
MSZ				S	Sg	13 12 23.0	-1.1
EAZ	**Earnscleugh**	**1.37**	**181**	P	Pn	13 12 07.5	-0.8
EAZ				S	Sb	13 12 24.5	-1.9
ODZ	**Otahua Downs**	**1.51**	**142**	P	Pn	13 12 10.5	+0.2
ODZ				S	Sn	13 12 29.7	-0.7
MLZ	**Mavora Lakes**	**1.74**	**209**	P	Pb	13 12 14.3	-0.5
MLZ				S	Sb	13 12 37.4	+0.4
INZ	**Inchbonnie**	**1.92**	**54**	P	Pn	13 12 16.7	+0.9
TUZ	**Tuapeka**	**2.10**	**174**	P	Pb	13 12 20.0	-1.1
TUZ				S	Sb	13 12 46.7	-0.8
WHZ	**Wether Hill Ro**	**2.26**	**205**	P	Pn	13 12 19.6	-0.8
SYZ	**Scrubby Hill**	**2.68**	**183**	P	Pn	13 12 27.6	+1.4

JMA 22 13:13:47.6, 36°79N×137°93E, h6km±1km, M3.5, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.33**	**138**	P	Pg	13 13 53.6	-0.5
MAT				S	Sg	13 13 58.1	-0.4
MAT	**Matsushiro**	**0.33**	**138**	P	Pg	13 13 53.7	-0.4
JNG	**Nsakai**	**0.41**	**160**	P	Pg	13 13 55.1	-0.4
JNG				S	Sg	13 14 00.5	-0.3
JGK	**Kuni**	**0.61**	**112**	⇓P	Pg	13 13 59.3	-0.1
JGK				S	Sg	13 14 07.7	+0.3
JGN	**Niukaw**	**0.75**	**221**	P	Pg	13 14 01.8	-0.2
JSZ	**Suzu**	**0.80**	**326**	P	Pg	13 14 02.9	0.0
JSZ				S	Sb	13 14 14.3	-0.6

TAP 22 13:14:21.1, 23°53N×121°52E, h32km, ML2.0, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HGSD	**Ruisui**	**0.09**	**247**	*i* P	Pb	13 14 27.0	+0.4
	baz=250						
HGSD				*e*S	Sb	13 14 32.2	+1.7
	baz=250						
EGFH	**Guangfu**	**0.16**	**330**	*i* P	Pb	13 14 27.0	-0.3
	baz=318						
EGFH				S	Sb	13 14 32.1	+0.7
	baz=318						
EHY	**Hungye**	**0.18**	**263**	*i* P	Pb	13 14 27.1	-0.2
	baz=273						
EHY				*i* S	Sb	13 14 31.4	-0.3
	baz=273						
YULB	**Yu-li**	**0.24**	**236**	⇓*i*P	Pb	13 14 28.1	0.0
	baz=246						
YULB				S	Sb	13 14 32.6	-0.1
	baz=246						
EYUL	**Yuli**	**0.25**	**225**	*e*P	Pn	13 14 29.1	+0.4
	baz=238						
EYUL				*e*S	Sn	13 14 35.3	+1.8
	baz=238						
TWF1	**Yuli**	**0.27**	**229**	*i* P	Pb	13 14 28.4	0.0
	baz=240						
TWF1				*e*S	Sb	13 14 32.7	-0.5
	baz=240						
ESL	**Shilin**	**0.29**	**345**	P	Pb	13 14 28.0	-0.8
	baz=337						
ESL				S	Sb	13 14 33.6	-0.3
	baz=337						
FULB	**Fuli**	**0.39**	**212**	*e*P	Pn	13 14 32.0	+1.5
	baz=226						
FULB				*e*S	Sn	13 14 38.2	+1.5
	baz=226						
CHKT	**Chengkung**	**0.45**	**198**	*e*S	Sn	13 14 39.6	+1.3
	baz=188						
HWA	**Hwalien**	**0.46**	**10**	*e*P	Pb	13 14 30.9	-0.1
	baz=10.0						
OWD	**Renai**	**0.53**	**324**	*e*P	Pb	13 14 31.4	-0.8
	baz=328						
OWD				*e*S	Sb	13 14 38.0	-1.9
	baz=328						
TWD	**Chiawan**	**0.56**	**8**	P	Pb	13 14 32.6	0.0
	baz=356						
TWD				*e*S	Sb	13 14 40.6	+0.2
	baz=356						
ELDTW	**Lidau**	**0.57**	**234**	*e*P	Pb	13 14 31.9	-0.9
	baz=234						
ELDTW				*e*S	Sb	13 14 41.1	+0.2
	baz=234						
SSLB	**Suanglung**	**0.58**	**297**	P	Pb	13 14 32.5	-0.4
	baz=291						
SSLB				*e*S	Sb	13 14 40.2	-0.8
	baz=291						
EDH	**Donghe**	**0.58**	**199**	P	Pn	13 14 33.6	+0.4
	baz=213						
EDH				S	Sn	13 14 42.3	+0.7
	baz=213						
CHGB	**Renai**	**0.62**	**330**	*e*P	Pb	13 14 32.4	-1.3
	baz=333						
CHGB				*e*S	Sb	13 14 40.8	-1.5
	baz=333						
WHYT	**Xinyi Township**	**0.63**	**286**	P	Pb	13 14 33.7	-0.1
	baz=283						
WHYT				*e*S	Sn	13 14 43.0	+0.1
	baz=283						
NACB	**Ninganchiao**	**0.65**	**6**	*e*P	Pb	13 14 32.9	-1.2
	baz=355						
NACB				*e*S	Sn	13 14 43.4	+0.1
	baz=355						
ALS	**Alishan**	**0.65**	**269**	P	Pn	13 14 34.7	+0.3
	baz=275						
ALS				S	Sn	13 14 44.5	+0.7
	baz=275						
WHF	**Hehuan Shan**	**0.66**	**340**	*e*P	Pb	13 14 33.9	-0.6
	baz=339						
WHF				*e*S	Sb	13 14 43.5	-0.2
	baz=339						
ETLH	**Xiulin Townshi**	**0.68**	**357**	P	Pb	13 14 35.1	+0.5
	baz=356						
ETLH				*e*S	Sn	13 14 44.7	+0.6
	baz=356						
LONT	**Longtian**	**0.71**	**210**	*e*P	Pb	13 14 35.2	+0.1
	baz=199						
FUSS	**Fushou**	**0.76**	**341**	*e*P	Pn	13 14 35.6	-0.2
	baz=339						
FUSS				*e*S	Sb	13 14 46.0	-0.2
	baz=339						
CHN5	**Tsauling**	**0.77**	**275**	*e*P	Pb	13 14 36.8	+0.6
	baz=279						
CHN5				*e*S	Sn	13 14 47.8	+1.4
	baz=279						
TWGBT	**Beinan**	**0.81**	**210**	*e*S	Sb	13 14 47.6	+0.1
	baz=211						
TWG	**Pinlang**	**0.81**	**210**	*e*S	Sn	13 14 46.0	-1.3
	baz=211						
TPUB	**Ta-pu**	**0.84**	**255**	*e*P	Pn	13 14 36.9	+0.1
	baz=255						
TPUB				*e*S	Sb	13 14 48.5	+0.1
	baz=255						
CHN4	**Tsaushan**	**0.86**	**258**	*e*P	Pb	13 14 37.6	-0.1
	baz=252						
CHN4				*e*S	Sb	13 14 51.1	+2.2
	baz=252						
WTP	**Ta-pu**	**0.87**	**252**	*e*P	Pb	13 14 37.6	-0.3
	baz=252						
WTP				*e*S	Sb	13 14 49.8	+0.5
	baz=252						
NNSB	**Datong**	**0.91**	**352**	*e*P	Pn	13 14 37.7	0.0
NNSB				*e*S	Sb	13 14 50.0	-0.2
NNSH	**Datong**	**0.91**	**352**	*e*P	Pn	13 14 38.0	+0.3
NNSH				*e*S	Sn	13 14 49.9	+0.1
NNS	**Nan Shan**	**0.92**	**352**	*e*P	Pn	13 14 38.3	+0.4
NNS				*e*S	Sb	13 14 50.4	-0.2
SLGT	**Liugui**	**0.96**	**237**	*e*P	Pn	13 14 38.4	0.0
	baz=238						
SLGT				*e*S	Sb	13 14 51.3	-0.3
	baz=238						
SGST	**Jiashian**	**0.96**	**243**	*e*P	Pn	13 14 37.7	-0.7
	baz=243						
SGST				*e*S	Sb	13 14 54.0	+2.1
	baz=243						
CHN1	**Nanshi**	**0.97**	**250**	*e*P	Pb	13 14 39.9	+0.4
	baz=250						
CHN1				*e*S	Sb	13 14 54.0	+2.0
	baz=250						
TWK	**Hsinying**	**0.98**	**255**	*e*P	Pb	13 14 40.3	+0.7
	baz=255						
TWK				*e*S	Sb	13 14 54.2	+2.0
	baz=255						
ENTT	**Nioudou**	**1.11**	**2**	*e*P	Pb	13 14 41.7	-0.1
	baz=360						
ENTT				*e*S	Sb	13 14 55.4	-0.6
	baz=360						
YHNB	**Yeheng**	**1.15**	**354**	*e*P	Pn	13 14 41.5	+0.5
	baz=1.0						
YHNB				*e*S	Sb	13 14 56.6	-0.4
	baz=1.0						
NSK	**Sanguang**	**1.15**	**353**	*e*P	Pb	13 14 42.3	-0.3
NSK				*e*S	Sn	13 14 55.1	-0.8

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*IDC **22** 13:15:37.2±1.9, 36°74N×137°80E, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.4/40, mbtmp3.6/2, Error ellipse: s-maj=12.4km s-min=6.9km az=126.0*
*JMA **22** 13:15:39.9, 36°68N×137°89E, h4km±1km, M3.3*
JMA Felt II J1.
ISC 22 13:15:39.3±1.9, 36°7N±0°1×137°88E±0°09, h12km±14km, n9, σ0§28/14, 3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.30**	**118**	P	**Pg**	**13 15 45.3**	**-0.2**
MAT				S	**Sg**	**13 15 49.6**	**0.0**
MAT	**Matsushiro**	**0.30**	**118**	P	**Pg**	**13 15 45.1**	**-0.4**
MAT				S	**Sg**	**13 15 49.6**	**0.0**
MJAR	**Matsushiro Arr**	**0.30**	**118**	Pg	**Pg**	**13 15 45.2**	**-0.3**
	46nm,0.3s,baz=298,slow=18,SNR=19						
MJAR				Lg	Lg	13 15 50.9	
	74nm,0.3s,baz=301,slow=34,SNR=20						
JNG	**Nsakai**	**0.33**	**147**	⇓P	**Pg**	**13 15 46.2**	**+0.2**
JNG				S	**Sg**	**13 15 50.9**	**+0.4**
JTT	**Ttatey**	**0.44**	**260**	⇓P	**Pb**	**13 15 49.2**	**+0.2**
JGK	**Kuni**	**0.63**	**101**	⇓P	**Pg**	**13 15 51.6**	**+0.1**
JGK				S	**Sg**	**13 15 59.9**	**+0.1**
JGN	**Niukaw**	**0.64**	**225**	P	**Pb**	**13 15 52.4**	**-0.1**
JGN				S	**Sb**	**13 16 00.9**	**-0.5**
WRA	**Warramunga Arr**	**56.42**	**184**	P	**P**	**13 25 20.7**	**+0.1**
	0.5nm,0.7s,baz=360,slow=7.5,SNR=1.9						
ASAR	**Alice Springs**	**60.14**	**184**	P	**P**	**13 25 46.8**	**+0.1**
	0.7nm,1.0s,baz=3.6,slow=4.5,SNR=2.0						

ROM 22 13:19:25.1±0.0, 43°096N±0°001×13°105E±0°001, h11km, ML0.5/2, 1D, Error ellipse: s-maj=0.3km s-min=0.2km az=242.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FDMO	**Fiordimonte**	**0.06**	**192**	P	Pg	13 19 27.7	+0.3
FDMO				S	Sg	13 19 29.6	+0.5
FDMO				AML	AML		
	comp=N,31μm,0.1s						
FDMO				AML	AML		
	comp=E,23μm,0.1s						
CSP1	**Cessapalombo**	**0.07**	**93**	⇓P	Pg	13 19 27.8	+0.2
CSP1				S	Sg	13 19 29.8	+0.4
CSP1				AML	AML		
	comp=E,68μm,1.6s						
CSP1				AML	AML		
	comp=N,88μm,1.6s						
CESI	**CESI - Serrava**	**0.17**	**238**	P	Pb	13 19 29.7	-0.6
SNTG	**Esanatoglia**	**0.20**	**323**	P	Pg	13 19 29.9	+0.5
SNTG				S	Sg	13 19 33.5	+1.1
FOSV	**Fossato di Vic**	**0.32**	**308**	P	Pg	13 19 30.5	-1.1

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*LDG **22** 13:19:42.9±0.2, 43°03N×1°54W, h2km, Md2.0/2, Ml2.0/3, Error ellipse: s-maj=4.6km s-min=3.0km az=115.0*
*MDD **22** 13:19:43.4±0.2, 43°02N×1°50W, h0km, mbLg1.4/11, Error ellipse: s-maj=3.3km s-min=1.4km az=69.0, ARTIFICIAL*
STR 22 13:19:43.5±0.5, 43°N±2°×±°, h10km, MLv1.2/3, 1C, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EALK	**Alkurruntz**	**0.18**	**1**	Pg	Pg	13 19 47.0	-0.4
EALK					Sg	Sg	13 19 50.5	+0.3
EALK	**Alkurruntz**	**0.18**	**1**	Pg	Pg	13 19 47.1	-0.3
	0.7nm,0.1s,SNR=138						
EALK					Lg	Lg	13 19 50.8	
	138nm,0.5s,SNR=7.9						
EORO	**Oroz-Betelu**	**0.21**	**135**	⇑Pg	Pg	13 19 46.7	-1.2
	3.0nm,0.1s,SNR=18						
EORO					Lg	Lg	13 19 49.9	
	102nm,0.4s,SNR=6.4						
SJPF	**Ste Jean**	**0.22**	**70**	Pg	Pg	13 19 47.2	-0.9
SJPF					Lg	Lg	13 19 51.2	
	18nm,0.2s						
SJPF	**Ste Jean**	**0.22**	**70**	*e*Pg	Pg	13 19 47.2	-0.9
SJPF				*e*Sg	Sg	13 19 51.2	-0.1
	35nm,0.2s						
EARA	**Aranguren**	**0.27**	**191**	Pg	Pg	13 19 48.5	-0.5
EARA					Sg	Sg	13 19 53.3	+0.6
EARA	**Aranguren**	**0.27**	**191**	Pg	Pg	13 19 48.4	-0.6
	1.7nm,0.2s,SNR=5.3						
EARA					Lg	Lg	13 19 52.5	
	45nm,0.3s,SNR=13						
ATE	**Arette**	**0.60**	**85**	Pg	Pg	13 19 54.5	-0.5
ATE					Sg	Sg	13 20 03.0	+0.1
ATE	**Arette**	**0.60**	**85**	Pg	Pg	13 19 54.6	-0.5
	1.1nm,0.1s,SNR=7.9						
ATE					Lg	Lg	13 20 03.0	
	11nm,0.3s,SNR=7.9						
ETSF	**Etsaut**	**0.71**	**101**	Pg	Pg	13 19 56.0	-1.3
ETSF					Lg	Lg	13 20 06.6	
	1.5nm,0.2s						
ETSF	**Etsaut**	**0.71**	**101**	*e*Pg	Pg	13 19 56.0	-1.3
ETSF				*e*Sg	Sg	13 20 06.6	0.0
	3.0nm,0.2s						
ECHI	**Chisagues Biel**	**1.31**	**106**	Pg	Pg	13 20 08.6	-0.1
	0.5nm,0.1s,SNR=7.9						
ECHI					Lg	Lg	13 20 27.5	
	2.8nm,0.3s,SNR=7.9						
EPF	**Esparros**	**1.36**	**90**	Pg	Pn	13 20 08.1	-0.5
EPF					Lg	Lg	13 20 28.4	
	4.3nm,0.5s						
EPF	**Esparros**	**1.36**	**90**	*e*Pg	Pn	13 20 08.1	-0.5
EPF				*e*Sg	Sg	13 20 28.4	+1.2
	8.6nm,0.5s						
ELAN	**Lanestosa**	**1.42**	**278**	Lg	Lg	13 20 32.0	
	2.5nm,0.4s,SNR=7.9						
ESAC	**San Caprasio**	**1.53**	**149**	Pg	Pb	13 20 11.5	-0.4
	2.0nm,0.2s,SNR=5.0						
ESAC					Lg	Lg	13 20 32.8	
	22nm,0.3s,SNR=4.8						
CSOR	**Sort**	**2.06**	**108**	Pg	Pb	13 20 21.2	+0.2
	1.1nm,0.3s,SNR=7.9						
CSOR					Lg	Lg	13 20 49.5	
	2.7nm,0.3s,SNR=7.9						
ETOR	**Torete**	**2.25**	**191**	Pg	Pb	13 20 23.9	-0.5
	0.8nm,0.2s,SNR=7.9						
ETOR					Lg	Lg	13 20 54.6	
	6.6nm,0.5s,SNR=7.9						
MTLF	**Montolieu**	**2.74**	**82**	Pn	Pn	13 20 26.9	-0.7
MTLF					Sn	Sn	13 20 58.7	-2.1
	0.4nm,0.3s						
MTLF	**Montolieu**	**2.74**	**82**	*e*Pn	Pn	13 20 26.9	-0.7
MTLF				*e*Sn	Sn	13 20 58.7	-2.1
	0.9nm,0.3s						

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*GCG **22** 13:32:51.3±0.7, 13°19N×90°87W, h14km±5km, MD3.7*
*SNET **22** 13:32:56.0±1.5, 13°41N×90°68W, h12km±10km, ML2.8*
ISC 22 13:32:51.5±2.5, 13°23N±0°09×90°82W±0°07, h4km±12km, n17, σ1§42/22, 1C-1D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**1.17**	**10**	*e*P	**Pg**	**13 33 13.5**	**-0.5**
PCG				*e*S	**Sg**	**13 33 30.9**	**+1.7**
FUG	**Fuego 3**	**1.21**	**359**	*e*P	Pg	13 33 13.7	-1.0
FUG				*e*S	**Sg**	**13 33 31.5**	**+1.0**
NUBE	**Las Nubes**	**1.21**	**57**	*e*P	Pg	13 33 14.2	-0.6
NUBE				*e*S	**Sg**	**13 33 28.5**	**-2.0**
NUBE				IAML		13 33 34.0	
	comp=Z,170nm,0.2s						
CEVE	**Cerro Verde**	**1.30**	**63**	*e*P	**Pg**	**13 33 16.3**	**-0.3**
CEVE				*e*S	**Sg**	**13 33 32.2**	**-1.3**
CEVE				IAML		13 33 37.0	
	comp=Z,1μm,0.3s						
SBLS	**San Blas**	**1.31**	**63**	*e*P	**Pg**	**13 33 16.4**	**-0.3**
RTR	**El Retiro**	**1.32**	**60**	*e*P	Pg	13 33 16.5	-0.4
ERG	**Entre ros, C**	**1.40**	**329**	*e*P	Pn	13 33 17.0	-0.9
ERG				*e*S	**Sg**	**13 33 35.4**	**-1.2**
NBG	**Las Nubes**	**1.42**	**19**	*e*P	**Pn**	**13 33 18.5**	**0.0**
NBG				*e*S	**Sg**	**13 33 39.6**	**+2.3**
TACO	**Tacachico**	**1.60**	**63**	*e*P	**Pn**	**13 33 20.7**	**0.0**
TACO				*e*S	**Sn**	**13 33 39.7**	**-2.1**
STG3	**Santiaguito 3,**	**1.64**	**334**	*e*P	Pn	13 33 20.0	-1.4
STG3				*e*S	**Sn**	**13 33 41.3**	**-1.7**
LFRS	**El Faro**	**1.75**	**77**	*e*P	**Pn**	**13 33 23.8**	**+0.9**
MTO3	**Montecristo**	**1.83**	**51**	*e*P	Pn	13 33 23.7	-0.3
MTO3				*e*S	**Sn**	**13 33 46.5**	**-1.2**
COEG	**Centro de Oper**	**1.93**	**78**	*i* P	**Pn**	**13 33 26.5**	**+1.3**
COEG				*e*S	**Sn**	**13 33 48.7**	**-1.2**
ESQI	**Esquipulas**	**1.95**	**47**	⇓*i*P	**Pn**	**13 33 26.6**	**+1.1**
ESQI				*e*S	**Sn**	**13 33 50.0**	**-0.5**
ESQI				IAML		13 33 51.2	
	comp=Z,82nm,0.4s						
MRL	**Marmol**	**2.14**	**31**	⇑*i*P	Pn	13 33 27.8	-0.5
MRL	**Marmol**	**2.14**	**31**	*e*P	Pn	13 33 28.1	-0.2
MRL				*e*S	**Sn**	**13 33 56.5**	**+1.0**
LCND	**La Caada**	**2.85**	**88**	*e*P	**Pn**	**13 33 39.6**	**+1.7**
LCND				*e*S	**Sn**	**13 34 13.7**	**+1.0**

JMA 22 13:37:48.7, 36°65N×137°90E, h7km±1km, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.27**	**113**	P	Pg	13 37 53.9	-0.1
MAT				*e*S	Sg	13 37 58.4	+0.8
MAT	**Matsushiro**	**0.27**	**113**	P	Pg	13 37 53.9	-0.1
JNG	**Nsakai**	**0.29**	**146**	P	Pg	13 37 54.4	-0.1
JTT	**Ttatey**	**0.46**	**265**	P	Pg	13 37 57.9	+0.3
JGN	**Niukaw**	**0.64**	**228**	P	Pg	13 38 00.8	-0.1

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*IDC **22** 13:37:47.1±0.8, 36°53N×137°74E, h0km, mb4.0/15, mb1 4.2/17, mb1mx3.9/58, mbtmp4.0/17, ML3.1/2, Error ellipse: s-maj=20.8km s-min=6.4km az=8.0*
*NEIC **22** 13:37:48.9±2.6, 36°68N±0°04×137°92E±0°04, h7km±5km, mb4.6/6, Error ellipse: s-maj=5.8km s-min=4.6km az=214.0*
*JMA **22** 13:37:49.1, 36°78N×137°91E, h3km±1km, M4.5*
ISC 22 13:37:48.9±0.4, 36°62N±0°04×137°88E±0°03, h10km, n53, σ1§47/58, mb4.2/18, 1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJB9	**Matsu-Tunnel**	**0.27**	**105**		**Pg**	**13 37 54.1**	**-0.3**
MAT	**Matsushiro**	**0.27**	**105**	P	**Pb**	**13 37 55.5**	**-0.4**
MAT				S	**Sb**	**13 38 00.0**	**-0.6**
MAT	**Matsushiro**	**0.27**	**105**	P	**Pb**	**13 37 55.5**	**-0.4**
MAT				S	**Sb**	**13 38 00.1**	**-0.6**
JNG	**Nsakai**	**0.27**	**140**	*e*S	**Sb**	**13 38 02.4**	**+1.7**
MAJO	**Matsushiro**	**0.27**	**105**		**Pg**	**13 37 54.1**	**-0.3**
MJAR	**Matsushiro Arr**	**0.28**	**106**	Pg	**Pg**	**13 37 54.6**	**+0.1**
	76nm,0.3s,baz=306,slow=15,SNR=61						
MJAR				Lg	Lg	13 38 01.1	
	459nm,0.3s,baz=350,slow

JTM	**Tenmabayashi**	**4.85**	**30**	Pn	**Pn**	13 39 01.4	-0.6
JNU	**Nakatsue**	**6.73**	**241**	Pn	**Pn**	13 39 31.1	+3.3
	0.2nm,0.3s,baz=113,slow=7.7,SNR=2.3						
JNU				Sn	**Sn**	13 40 42.0	-2.5
	baz=17,slow=5.7,SNR=1.1						
JNU				Lg	Lg	13 41 22.8	
	0.1nm,0.3s,baz=75,slow=0.8,SNR=2.0						
JNU	**Nakatsue**	**6.73**	**241**		**Pn**	13 39 28.1	+0.3
KSRS	**Korea Array**	**8.01**	**279**	Pn	**Pn**	13 39 47.3	+2.0
	0.8nm,0.3s,baz=94,slow=14,SNR=14						
ASAJ	**Asahikawa**	**8.31**	**24**	Pn	**Pn**	13 39 50.7	+1.3
	0.2nm,0.3s,baz=225,slow=16,SNR=3.2						
JKA	**Kamikawa-asahi**	**8.31**	**24**		**Pn**	13 39 49.4	0.0
USRK	**Ussuriysk Ar.**	**8.80**	**331**	Pn	**Pn**	13 39 59.1	+2.9
	baz=140,slow=11,SNR=2.5						
KLR	**Kul'dur**	**13.38**	**342**	Pn	**Pn**	13 40 59.3	+0.6
	0.1nm,0.3s,baz=152,slow=13,SNR=3.8						
PEA0B	**Petropavlovsk-**	**21.54**	**34**	P	**P**	13 42 37.6	-0.6
PEA0B				IAmb	IAmb	13 42 52.4	
	comp=Z,26nm,1.4s						
PETK	**Petropavlovsk-**	**21.54**	**34**	P	**P**	13 42 38.8	+0.6
	comp=Z,5.7nm,0.9s,baz=195,slow=4.6,SNR=8.0						
SONM	**Songino Array**	**25.70**	**306**	P	**P**	13 43 18.9	-0.4
	comp=Z,0.3nm,0.4s,baz=109,slow=9.6,SNR=2.6						
YAK	**Yakutsk**	**25.95**	**351**	P	**P**	13 43 19.2	-2.0
YAK				IAmb	IAmb	13 43 23.1	
	comp=Z,13nm,1.2s						
SEY	**Seymchan**	**27.82**	**14**	P	**P**	13 43 38.9	+0.9
	comp=Z,5.9nm,1.1s,baz=215,slow=12,SNR=4.6						
TIXI	**Tiksi**	**35.41**	**355**	P	**P**	13 44 45.5	+0.9
ZALV	**Zalesovo Beam**	**40.11**	**313**	P	**P**	13 45 24.3	-0.2
	comp=Z,0.2nm,0.3s,baz=102,slow=6.6,SNR=1.5						
ZALV				PcP	**PcP**	13 47 29.1	+0.3
	comp=Z,0.6nm,0.5s,baz=102,slow=4.7,SNR=2.9						
MKAR	**Makanchi Array**	**41.94**	**302**	P	**P**	13 45 39.5	-0.2
	comp=Z,0.3nm,0.7s,baz=90,slow=7.8,SNR=2.5						
KURBB	**Kurchatov Arra**	**44.02**	**308**	P	**P**	13 45 56.2	-0.3
	comp=Z,0.8nm,0.8s,baz=86,slow=7.8,SNR=2.6						
KURBB				PcP	**PcP**	13 47 41.3	-0.6
	comp=Z,0.6nm,0.8s,baz=87,slow=3.7,SNR=4.3						
ILAR	**Eielson Array**	**51.36**	**32**	P	**P**	13 46 53.7	+0.4
	comp=Z,1.2nm,0.8s,baz=273,slow=6.6,SNR=10						
SARP	**Sargodha**	**53.17**	**285**	P	**P**	13 47 05.9	-1.3
BCAR	**Beaver Creek A**	**53.83**	**34**	P	**P**	13 47 12.8	+1.2
WRAB	**Tennant Creek**	**56.34**	**184**	P	**P**	13 47 30.9	+0.8
WRA	**Warramunga Arr**	**56.35**	**184**	P	**P**	13 47 29.1	-1.1
	comp=Z,2.6nm,0.7s,baz=358,slow=7.5,SNR=41						
WRA	**Warramunga Arr**	**56.35**	**184**	P	**P**	13 47 30.3	+0.1
WR0	**Warramunga Arr**	**56.36**	**184**	P	**P**	13 47 30.2	0.0
WR0				IAmb	IAmb	13 47 33.9	
	comp=Z,12nm,1.2s						
FINES	**FINESS Array B**	**67.84**	**331**	P	**P**	13 48 46.1	-0.8
	comp=Z,1.7nm,0.8s,baz=45,slow=8.1,SNR=2.4						
AKASG	**Malin Array Be**	**72.86**	**321**	P	**P**	13 49 17.9	+0.1
	comp=Z,0.9nm,0.4s,baz=49,slow=6.4,SNR=2.3						
NB2	**NORSAR Subarra**	**73.44**	**336**	P	**P**	13 49 22.0	+0.9
	comp=Z,3.1nm,1.0s,baz=42,slow=5.6						
NOA	**NORSAR Array B**	**73.44**	**336**	P	**P**	13 49 21.3	+0.2
	comp=Z,3.4nm,0.9s,baz=44,slow=5.6,SNR=7.4						
NVAR	**Mina Array Bea**	**77.48**	**51**	P	**P**	13 49 46.2	+1.2
	comp=Z,0.7nm,0.6s,baz=305,slow=5.0,SNR=4.4						
PDAR	**Pinedale Array**	**79.95**	**44**	P	**P**	13 49 59.4	+0.8
	comp=Z,1.7nm,0.7s,baz=289,slow=2.4,SNR=13						
CLL	**Collm**	**80.01**	**328**	*e*P	**P**	13 50 00.0	+1.7
ULM	**Lac du Bonnet**	**81.38**	**32**	P	**P**	13 50 05.5	-0.1
	comp=Z,3.2nm,0.9s,baz=274,slow=7.2,SNR=3.4						
TXAR	**Lajitas Array**	**92.59**	**50**	P	**P**	13 51 00.7	-0.4
	comp=Z,0.9nm,0.9s,baz=307,slow=3.2,SNR=9.3						
LPAZ	**La Paz**	**149.31**	**56**	PKPbc	**PKPbc**	13 57 39.6	+0.4
	comp=Z,1.8nm,0.9s,baz=270,slow=3.0,SNR=3.1						

JMA 22 13:41:32.9,34.06N×135.29E, h9km±1km, M0.3, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWM	**Minabe**	**0.22**	**166**	P	Pg	13 41 37.3	0.0
JWM				S	Sg	13 41 40.4	+0.1
JWY	**Kouya**	**0.30**	**58**	P	Pg	13 41 39.0	+0.1
JWY				S	Sg	13 41 43.4	+0.5
JTNC	**Tanabenakahech**	**0.36**	**132**	*e*S	Sg	13 41 44.9	+0.2

JMA 22 13:42:21.0,36.77N×137.94E, h9km±1km, M1.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.31**	**137**	P	Pg	13 42 26.7	-0.5
MAT				S	Sg	13 42 31.1	-0.3
MAT	**Matsushiro**	**0.31**	**137**	P	Pg	13 42 26.6	-0.6
MAT				*e*S	Sg	13 42 31.1	-0.3
JNG	**Nsakai**	**0.39**	**160**	*e*S	Sg	13 42 33.4	-0.3

*IDC **22** 13:45:22.6±0.4, 36.34N×66.58E, h0km, mb5.2/37, mb1 5.2/46, mb1mx5.1/56, mbtmp5.2/46, ML4.7/5, MS5.3/13, Ms1 5.3/13, ms1mx4.8/65, Error ellipse: s-maj=10.3km s-min=8.1km az=176.0*

*BJI **22** 13:45:23.0±0.0, 36.50N×66.70E, h10km, mB6.2/26, mb5.1/54, Ms5.5/23, Ms7 5.3/21*

*NNC **22** 13:45:25.6±1.3, 36.83N×66.43E, h0km, mb5.9, mpv5.7, Error ellipse: s-maj=14.1km s-min=7.4km az=161.0*

*MOS **22** 13:45:26.7±1.4, 36.67N×66.64E, h33km, mb5.7/56, MS4.6/9, Error ellipse: s-maj=4.5km s-min=3.3km az=70.8*

*NEIC **22** 13:45:26.8±1.8, 36.52N±0.04×66.58E±0.06, h22km±4km, mb5.5/102, Mwc5.4(GCMT), Error ellipse: s-maj=8.2km s-min=5.2km az=59.0*

*NEIC **22** 13:45:29, 36.61N×66.41E, h28km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.18; $M_{\theta\theta}$-1.28; $M_{\phi\phi}$0.10; $M_{r\theta}$-0.25; $M_{\theta\phi}$0.74; $M_{\phi r}$-0.64; Fault plane solution: M_o1.59000×10^{17} NP1:ϕ_s266.00000°, δ52.00000°, λ50.00000°. NP2:ϕ_s140.00000°, δ53.00000°, λ130.00000°. Principal axes: T 1.5865, Plg59.0000°, Azm113.0000°; N 0.0150, Plg31.0000°, Azm294.0000°; P -1.6015, Plg1.0000°, Azm204.0000°;*

*BGR **22** 13:45:29.4±0.0, 36.23N×66.23E, h28km±1km, mb5.1, Ms6.1*

*GCMT **22** 13:45:29.0±0.2, 36.63N±0.01×66.48E±0.02, h28km, MW5.4/105, Moment Tensor Solution. s31,c37; s105,c179; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.14±.07; $M_{\theta\theta}$-1.12±.04; $M_{\phi\phi}$-0.01±.04; $M_{r\theta}$-0.39±.06; $M_{\theta\phi}$0.67±.03; $M_{\phi r}$-0.44±.06; Best double couple: M_o1.44000×10^{17} NP1:ϕ_s139.00000°, δ47.00000°, λ127.00000°. NP2:ϕ_s271.00000°, δ54.00000°, λ57.00000°. Principal axes: T 1.4300, Plg63.0000°, Azm122.0000°; N 0.0230, Plg26.0000°, Azm292.0000°; P -1.4490, Plg4.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 13:45:26.4±0.3, 36.57N±0.03×66.53E±0.03, h21km±3km, h21km:pP-P, n770, σ1§52/840, mb5.4/248, MS5.3/16, 87C-19D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.89**	**134**	P	**Pn**	13 46 14.0	+2.6
	SNR=755						
KBL				S	**Sb**	13 46 54.8	+2.6
KBL	**Kabul**	**2.89**	**134**	PN	**Pn**	13 46 13.8	+2.4
KBL	**Kabul**	**2.89**	**134**		**Pn**	13 46 13.8	+2.4
CHGR	**Chuyangaron**	**2.95**	**44**	Pn	**Pn**	13 46 14.3	+2.2
GAR	**Garm**	**3.86**	**50**		**Pn**	13 46 26.4	+1.8
HRA	**Herat**	**4.12**	**239**		**Pn**	13 46 29.8	+1.4
BTK	**Batken**	**4.85**	**43**	PN	**Pn**	13 46 41.2	+3.0
BTK	**Batken**	**4.85**	**43**	Pn	**Pn**	13 46 41.2	+3.0
DRK	**Karamyk**	**5.08**	**54**		**Pn**	13 46 43.5	+2.0
CEP	**Cherat**	**5.19**	**120**	P	**Pn**	13 46 44.7	+1.7
CEP				S	**Sn**	13 47 43.0	+0.6
THW	**Thamme Wali**	**5.72**	**130**	P	**Pn**	13 46 51.4	+1.3
IUG	**luzhnay**	**6.19**	**25**	*e*P	**Pn**	13 46 55.2	-1.5
	baz=25						
IUG				LR	LR	13 49 25.4	
	6μm,12.1s,baz=25						
IUG	**luzhnay**	**6.19**	**25**	*e*PN	**Pn**	13 46 55.2	-1.5
IUG				MLR	MLR		
	comp=Z,6μm,12.0s						
NIL	**Nilore**	**6.24**	**116**	P	**Pn**	13 46 58.6	+1.3
NIL	**Nilore**	**6.24**	**116**	PN	**Pn**	13 46 58.9	+1.6
NIL	**Nilore**	**6.24**	**116**	Pn	**Pn**	13 46 58.9	+1.6
GEYT	**Alibeck**	**6.84**	**284**	Pn	**Pn**	13 47 05.9	+0.4
	comp=Z,32nm,0.3s,baz=101,slow=10.0,SNR=45						
GEYT				Sn	**Sn**	13 48 18.5	-4.3
	comp=Z,61nm,0.3s,baz=111,slow=16,SNR=2.1						
GEYT				Lg	Lg	13 49 11.4	
	baz=120,slow=29,SNR=2.3						
GEYT	**Alibeck**	**6.84**	**284**		**Pn**	13 47 04.5	-1.0
GYA0B	**ALIBECK ARRAY**	**6.84**	**284**	⇑Pn	**Pn**	13 47 05.9	+0.4
GYA0B				⇓Lg	Lg	13 48 59.6	
GYA0B	**ALIBECK ARRAY**	**6.84**	**284**	Pn	**Pn**	13 47 05.8	+0.2
BRLS	**Borolday**	**6.93**	**21**	*e*P	**Pn**	13 47 03.2	-3.6
	baz=21						
BRLS	**Borolday**	**6.93**	**21**	*e*PN	**Pn**	13 47 03.2	-3.6
KK31	**Karatay Array**	**7.21**	**24**	⇑Pn	**Pn**	13 47 10.1	-0.4
	comp=Z,437nm,0.8s,baz=213,slow=13,SNR=1808						
KK31				⇓Sn	**Sn**	13 48 32.6	+0.9
	comp=Z,305nm,0.6s,baz=211,slow=23,SNR=4.5						
KK31				⇓Lg	Lg	13 49 06.3	
	comp=Z,1μm,0.7s,baz=208,slow=29,SNR=4.6						
KK31	**Karatay Array**	**7.21**	**24**	PN	**Pn**	13 47 12.6	+2.1
KK31	**Karatay Array**	**7.21**	**24**	Pn	**Pn**	13 47 12.6	+2.1
KKAR	**Karatay Array**	**7.21**	**24**	PN	**Pn**	13 47 12.7	+2.2
KKAR	**Karatay Array**	**7.21**	**24**	Pn	**Pn**	13 47 12.7	+2.2
DZA	**Taraz**	**7.32**	**29**	*e*P	**Pn**	13 47 11.9	-0.1
	baz=29						
DZA	**Taraz**	**7.32**	**29**	*e*PN	**Pn**	13 47 11.9	-0.1
AML	**Almayashu**	**7.85**	**43**	P	**Pn**	13 47 20.6	+0.9
	SNR=198						
KSH	**Kashi**	**8.01**	**66**	Pn	**Pn**	13 47 17.4	-4.3
KSH				Sn	Sn	13 48 41.3	-10
KSH				LR	LR		
	comp=Z,44μm,8.4s						
KSH				LR	LR		
	comp=Z,38μm,5.7s						
KSH				LR	LR		
	comp=Z,31μm,5.2s						
EKS2	**Erkin-Say**	**8.26**	**40**	P	**Pn**	13 47 27.0	+1.9
	SNR=83						
UCH	**Uchtor**	**8.37**	**45**	P	**Pn**	13 47 27.7	+0.8
	SNR=168						
AAK	**Ala-Archa**	**8.63**	**43**	Pn	**Pn**	13 47 31.2	+1.0
	comp=Z,54nm,0.3s,baz=219,slow=11,SNR=387						
AAK				Sn	**Sn**	13 49 04.6	-2.3
	comp=Z,28nm,0.3s,baz=324,slow=13,SNR=4.3						
AAK				Lg	Lg	13 50 03.9	
	comp=Z,11nm,0.3s,baz=27,slow=3.5,SNR=1.6						
AAK				LR	LR	13 51 19.1	
	comp=Z,6μm,19.5s,baz=201,slow=41						
AAK	**Ala-Archa**	**8.63**	**43**	P	**Pn**	13 47 31.2	+1.0
	SNR=293						
AAK	**Ala-Archa**	**8.63**	**43**	*i* P	**Pn**	13 47 31.2	+1.0
	SNR=366						
AAK	**Ala-Archa**	**8.63**	**43**	⇓Pn	**Pn**	13 47 30.8	+0.7
	comp=Z,276nm,0.8s						
AAK				⇓Sn	**Sn**	13 49 06.6	-0.3
	comp=Z,1μm,1.4s						
AAK				⇑Lg	Lg	13 49 55.2	
	comp=Z,1μm,1.2s						
AAK	**Ala-Archa**	**8.63**	**43**	P	**Pn**	13 47 31.3	+1.0
AAK				S	**Sn**	13 49 06.5	-0.4
AAK	**Ala-Archa**	**8.63**	**43**	*i* P	**Pn**	13 47 31.1	+0.9
FRU1	**Bishkek**	**8.82**	**43**	P	**Pn**	13 47 34.0	+1.3
FRU1	**Bishkek**	**8.82**	**43**		**Pn**	13 47 34.0	+1.3
KBK	**Karagaybulak**	**8.89**	**44**	P	**Pn**	13 47 35.3	+1.5
	SNR=488						
CHMS	**Chumysh**	**9.01**	**42**	P	**Pn**	13 47 36.8	+1.5
	SNR=39						
USP	**Ospenovka**	**9.06**	**40**	P	**Pn**	13 47 37.8	+1.8
	SNR=134						
DHRM	**DHARAMSHALA**	**9.15**	**115**	*e*P	**Pn**	13 47 37.7	+0.2
DHRM				IAmb	IAmb	13 47 44.8	
	comp=Z,390nm,0.3s						
DHRM				*ex*	x	13 49 18.2	
SGDS	**Sogindy**	**9.26**	**40**	*e*P	**Pn**	13 47 36.9	-1.9
	comp=Z,46nm,0.5s,baz=40						
SGDS				LR	LR	13 51 04.7	
	comp=Z,973nm,8.3s,baz=40						
SGDS	**Sogindy**	**9.26**	**40**	*e*P	**Pn**	13 47 36.8	-1.9
SGDS				pmax	pmax		
	comp=Z,46nm,0.5s						
SGDS				MLR	MLR		
	comp=Z,973nm,8.0s						
BOOM	**Boomskoye usch**	**9.37**	**48**	P	**Pn**	13 47 41.5	+1.2
BOOM	**Boomskoye usch**	**9.37**	**48**	Pn	**Pn**	13 47 41.5	+1.2
ULHL	**Ulahol**	**9.41**	**50**	P	**Pn**	13 47 41.7	+0.8
	SNR=16						
TKM2	**Tokmak 2**	**9.43**	**45**	P	**Pn**	13 47 41.7	+0.5
	SNR=251						
TKM2	**Tokmak 2**	**9.43**	**45**	⇓Pn	**Pn**	13 47 41.4	+0.2
	comp=Z,244nm,0.5s						
TKM2				⇑Sn	**Sn**	13 49 29.0	+2.4
	comp=Z,286nm,0.8s						
TKM2				⇑Lg	Lg	13 50 22.0	
	comp=Z,544nm,1.1s						
BTLS	**Baital**	**10.19**	**32**	*e*P	**Pn**	13 47 49.9	-1.6
	baz=32						
BTLS	**Baital**	**10.19**	**32**	*e*P	**Pn**	13 47 49.9	-1.6
TNSS	**Tian-Shan**	**10.29**	**48**	*e*P	**Pn**	13 47 51.3	-1.9
	baz=48						
TNSS	**Tian-Shan**	**10.29**	**48**	*e*P	**Pn**	13 47 51.2	-1.9
AAA	**Alma-Ata**	**10.37**	**47**	*e*P	**Pn**	13 47 52.7	-1.2
	baz=47						
AAA				LR	LR	13 52 17.3	
	comp=Z,6μm,11.8s,baz=47						
AAA	**Alma-Ata**	**10.37**	**47**	*e*P	**Pn**	13 47 52.7	-1.2
AAA				MLR	MLR		
	comp=Z,6μm,12.0s						
SMLA	**Simla**	**10.38**	**118**	⇑*e*P	**Pn**	13 47 53.8	-0.3
KNDC	**Almaty**	**10.40**	**47**	Pn	**Pn**	13 47 54.8	+0.4
KNDC				Lg	Lg	13 50 51.8	
MDOK	**Medeo**	**10.42**	**48**	*e*P	**Pn**	13 47 52.6	-2.2
	baz=48						
MDOK				*e*S	**Sn**	13 49 49.7	-1.2
	baz=48						
MDOK				LR	LR	13 52 32.4	
	comp=Z,6μm,11.5s,baz=48						
MDOK	**Medeo**	**10.42**	**48**	*e*P	**Pn**	13 47 52.5	-2.2
MDOK				*e*S	**Sn**	13 49 49.7	-1.2
MDOK				MLR	MLR		
	comp=Z,6μm,11.0s						
KUU	**Kurty**	**10.47**	**43**	*e*P	**Pn**	13 47 53.6	-1.7
	comp=Z,38nm,0.7s,baz=43						
KUU				LR	LR	13 52 11.4	
	comp=Z,9μm,11.2s,baz=43						
KUU	**Kurty**	**10.47**	**43**	*e*P	**Pn**	13 47 53.5	-1.7
KUU				pmax	pmax		
	comp=Z,38nm,0.7s						
KUU				MLR	MLR		
	comp=Z,9μm,11.0s						
CHKK	**Chushkaly**	**10.80**	**44**	*e*P	**Pn**	13 47 58.4	-1.5
	baz=45						
CHKK	**Chushkaly**	**10.80**	**44**	*e*P	**Pn**	13 47 58.3	-1.5
PRZ	**Przheval'sk**	**10.90**	**54**	P	**Pn**	13 48 03.2	+1.8
PRZ	**Przheval'sk**	**10.90**	**54**	Pn	**Pn**	13 48 03.1	+1.8
SATY	**Saty**	**11.19**	**51**	*e*P	**Pn**	13 48 03.4	-2.0
	comp=Z,112nm,1.2s,baz=51						
SATY	**Saty**	**11.19**	**51**	*e*P	**Pn**	13 48 03.3	-2.0
SATY				pmax	pmax		
	comp=Z,112nm,1.2s						
DDI	**Dehra Dun**	**11.47**	**120**	*e*P	**Pn**	13 48 08.7	-0.3
DDI				IAmb	IAmb	13 48 12.5	
	comp=Z,222nm,0.5s						
KPKS	**Kokpek**	**11.58**	**50**	*e*P	**Pn**	13 48 09.2	-1.4
	baz=50						
KPKS				LR	LR	13 53 14.2	
	comp=Z,4μm,10.4s,baz=50						
KPKS	**Kokpek**	**11.58**	**50**	*e*P	**Pn**	13 48 09.1	-1.4
KPKS				MLR	MLR		
	comp=Z,4μm,10.0s						
SHLS	**Shalkode**	**11.91**	**53**	*e*P	**Pn**	13 48 16.6	+1.4
	comp=Z,56nm,0.9s,baz=53						
SHLS				LR	LR	13 53 46.7	
	comp=Z,1μm,9.4s,baz=53						
SHLS	**Shalkode**	**11.91**	**53**	*e*P	**Pn**	13 48 16.5	+1.4
SHLS				pmax	pmax		
	comp=Z,56nm,0.9s						
SHLS				MLR	MLR		
	comp=Z,1μm,9.0s						
PDGK	**Podgornoye**	**12.01**	**52**	⇑Pn	**Pn**	13 48 15.4	-1.1
	comp=Z,193nm,1.1s						
TDK	**Taldyqorghan**	**12.31**	**43**	*e*P	**Pn**	13 48 20.5	0.0
	baz=43						
TDK				LR	LR	13 53 26.9	
	comp=Z,10μm,12.0s,baz=43						
TDK	**Taldyqorghan**	**12.31**	**43**	*e*P	**Pn**	13 48 20.5	0.0
TDK				MLR	MLR		
	comp=Z,10μm,12.0s						
OTUK	**Ortayu**	**12.42**	**18**	⇑Pn	**Pn**	13 48 21.1	-0.8
	comp=Z,675nm,1.2s						
OTUK				⇑Sn	**Sn**	13 50 38.5	-1.2
	comp=Z,756nm,1.4s						
BHUJ	**Bhuj**	**13.55**	**168**	*e*P	**Pn**	13 48 35.9	-1.5
BHUJ				IAmb	IAmb	13 48 37.6	
	comp=Z,44nm,0.7s						
AB31	**Akbulak array**	**13.55**	**341**	⇑Pn	**Pn**	13 48 35.6	-1.8
	comp=Z,25nm,0.5s,baz=159,slow=12,SNR=175						
AB31				⇓Sn	**Sn**	13 51 01.8	-5.5
	comp=Z,188nm,0.9s,baz=157,slow=25,SNR=3.6						
ABKAR	**Akbulak array**	**13.55**	**341**	Pn	**Pn**	13 48 36.4	-1.0
ABKAR	**Akbulak array**	**13.55**	**341**	Pn	**Pn**	13 48 36.7	-0.6
SHME	**Shamm**	**13.73**	**223**	P	**Pn**	13 48 41.4	+1.5
BANOM	**Banah**	**13.74**	**222**	P	**Pn**	13 48 42.7	+2.5
BANOM	**Banah**	**13.74**	**222**	P	**Pn**	13 48 42.2	+2.1
	SNR=6.6						
BRZS	**Berezniki**	**14.12**	**16**	*e*P	**Pn**	13 48 42.5	-2.6
	comp=Z,78nm,0.6s,baz=17						
BRZS				LR	LR	13 53 56.5	
	comp=Z,3μm,11.6s,baz=17						
BRZS	**Berezniki**	**14.12**	**16**	*e*P	**Pn**	13 48 42.5	-2.6
BRZS				pmax	pmax		
	comp=Z,78nm,0.6s						
BRZS				MLR	MLR		
	comp=Z,3μm,12.0s						
MDH	**Madha**	**14.25**	**221**	P	**Pn**	13 48 49.3	+2.3
MSFE	**Esma-Masafi**	**14.27**	**221**	*i* P	**Pn**	13 48 49.4	+2.0
	SNR=8.1						
UOSS	**Minazif**	**14.58**	**220**	*i* P	**Pn**	13 48 54.5	+2.9
	SNR=6.8						
HATD	**Hatta, Dubai**	**14.72**	**220**	P	**Pn**	13 48 56.3	+2.8
HATD	**Hatta, Dubai**	**14.72**	**220**	P	**P**	13 49 01.3	+1.9
	SNR=5.7						
NAZ	**Nazwa, Dubai**	**14.84**	**222**	*i* P	**Pn**	13 48 56.4	+1.4
	SNR=12						
NAZ	**Nazwa, Dubai**	**14.84**	**222**	P	**P**	13 49 01.9	+1.3
	SNR=19						
NAZ				P	**P**	13 49 01.9	+1.3
	SNR=19						
ASHO	**Ashiyiah**	**14.87**	**220**	*i* P	**Pn**	13 48 58.0	+2.4
	SNR=28						
ASHO	**Ashiyiah**	**14.87**	**220**	P	**P**	13 48 58.5	-2.6
	SNR=18						
BIDO	**Bidbid**	**14.89**	**211**	P	**P**	13 49 01.5	+0.2
	SNR=6.6						
WSAR	**Wadi Sarin**	**14.94**	**209**	Pn	**Pn**	13 48 54.7	-1.7
	comp=Z,0.1nm,0.3s,baz=266,slow=3.5,SNR=2.6						
FAQ	**Al Faqa, Dubai**	**15.07**	**222**	*i* P	**P**	13 49 01.0	-2.3
	SNR=6.1						
FAQ	**Al Faqa, Dubai**	**15.07**	**222**	P	**P**	13 49 04.5	+1.3
	SNR=8.7						
FAQ				P	**P**	13 49 04.5	+1.3
	SNR=8.7						
SOHO	**SOHO**	**15.09**	**218**	*i* P	**Pn**	13 48 58.8	+0.4
	SNR=25						
AKTO	**Aktyubinsk**	**15.15**	**339**	Pn	**Pn**	13 48 58.3	-0.8
	comp=Z,3.8nm,0.3s,baz=151,slow=14,SNR=35						
AKTO				Sn	**Sn**	13 51 41.1	-5.1
	comp=Z,2.7nm,0.3s,baz=182,slow=11,SNR=3.2						
AKTO				Lg	Lg	13 53 30.5	
	comp=Z,2.5nm,0.3s,baz=38,slow=18,SNR=2.0						
AKTO	**Aktyubinsk**	**15.15**	**339**	⇑Pn	**Pn**	13 48 58.0	-1.1
	comp=Z,168nm,1.2s						
AKTO				⇑Sn	**Sn**	13 51 43.6	-2.6
	comp=Z,265nm,1.0s						
HOQ	**Hoqain**	**15.20**	**214**	P	**P**	13 49 05.6	+0.9
	SNR=9.4						
ASUD	**Al Ashush, Dub**	**15.31**	**222**	*i* P	**Pn**	13 49 02.5	+1.3
	SNR=12						
ASUD	**Al Ashush, Dub**	**15.31**	**222**	P	**P**	13 49 04.4	-1.5
	SNR=18						
SMDO	**Samad**	**15.34**	**211**	P	**P**	13 49 06.3	0.0
	SNR=10						
MAKZ	**Makanchi**	**15.39**	**44**	⇑P	**Pn**	13 49 01.7	-0.6
	comp=Z,431nm,1.3s						
MAKZ	**Makanchi**	**15.39**	**44**	P	**Pn**	13 49 00.9	-1.4
MAKZ				pmax	pmax		
	comp=Z,248nm,1.1s						
MAKZ	**Makanchi**	**15.39**	**44**	Pn	**Pn**	13 49 00.9	-1.4
MAKZ				IAmb	IAmb	13 49 09.1	
	comp=Z,248nm,1.1s						
AJN	**Ajban**	**15.54**	**223**	*i* P	**P**	13 49 06.9	-1.6
	SNR=14						
AJN	**Ajban**	**15.54**	**223**	P	**P**	13 49 09.5	+1.0
	SNR=19						
ALNE	**Al Ain**	**15.55**	**220**	*i* P	**Pn**	13 49 05.0	+0.6
	SNR=20						
MK31	**Makanchi Array**	**15.56**	**44**	P	**Pn**	13 49 02.6	-1.9
	comp=Z,86nm,0.8s,baz=230,slow=9.6,SNR=253						
MK31	**Makanchi Array**	**15.56**	**44**	*ce*P	**Pn**	13 49 02.5	-1.9
MK31	**Makanchi Array**	**15.56**	**44**	Pn	**Pn**	13 49 02.5	-1.9
MKAR	**Makanchi Array**	**15.56**	**44**	Pn	**Pn**	13 49 02.0	-2.4
	comp=Z,2.8nm,0.3s,baz=240,slow=14,SNR=131						
MKAR

GNI	**Garni**	**17.45**	**288**	*ce*	P		**Pn**	**13 49 27.2**	**-1.4**
GNI					pmax		pmax			
	comp=Z,424nm,2.5s									
GKN	**Gorkha**	**17.52**	**114**	*e*	P		**Pn**	**13 49 25.1**	**-4.5**
	comp=Z,2µm,1.2s									
WMQ	**Urumqi**	**17.69**	**59**	*e*	P		**Pn**	**13 49 31.8**	**+0.3**
WMQ					sP		sP	13 49 42.8	+1.8
WMQ					PP		**PnPn**	**13 49 46.8**	**+4.7**
WMQ					S		**S**	**13 52 52.1**	**-3.0**
WMQ					sS		Sn	13 52 54.0	+6.0
WMQ					pmax		pmax			
	comp=Z,200nm,1.1s									
WMQ					pmax		pmax			
	comp=Z,6µm,11.1s									
WMQ					LR		LR			
	comp=Z,10µm,17.9s									
WMQ					LR		LR			
	comp=Z,8µm,18.7s									
WMQ					LR		LR			
	comp=Z,11µm,15.3s									
WMQ	**Urumqi**	**17.69**	**59**		P		**Pn**	**13 49 30.2**	**-1.3**
WMQ					pmax		pmax			
	comp=Z,147nm,0.9s									
WMQ	**Urumqi**	**17.69**	**59**		Pn		**Pn**	**13 49 30.2**	**-1.3**
DMN	**Daman**	**18.08**	**114**	*e*	P		**Pn**	**13 49 33.0**	**-3.6**
KKN	**Kakani**	**18.11**	**114**	*e*	P		**Pn**	**13 49 33.4**	**-3.5**
	comp=Z,321nm,0.5s									
PKIN	**Phulchoki**	**18.31**	**114**	*e*	P		**Pn**	**13 49 35.8**	**-3.7**
PKI	**Pulchoki**	**18.32**	**114**	*e*	P		**Pn**	**13 49 36.1**	**-3.6**
ZEI	**Tsey**	**18.46**	**297**	*e*	P		**P**	**13 49 38.3**	**-2.6**
ZEI					pmax		pmax			
	comp=Z,51nm,0.9s									
GUN	**Gumba**	**18.49**	**112**	*e*	P		**P**	**13 49 38.8**	**-2.7**
KBZ	**Khabaz**	**19.38**	**299**		P		**P**	**13 49 50.1**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=110,slow=9.6,SNR=20									
KBZ					S		**Sn**	**13 53 20.2**	**-8.5**
	comp=Z,0.9nm,0.3s,baz=110,slow=15,SNR=1.6									
KBZ					Lg		Lg	13 55 52.9		
	comp=Z,0.3nm,0.3s,baz=281,slow=22,SNR=1.5									
KBZ	**Khabaz**	**19.38**	**299**	*ce*	P		**P**	**13 49 49.7**	**-1.1**
KBZ					pmax		pmax			
	comp=Z,69nm,0.9s									
RAMN	**Ramite**	**19.55**	**114**	*e*	P		**P**	**13 49 51.3**	**-1.7**
	comp=Z,272nm,0.4s									
KIV	**Kislovodsk**	**19.59**	**299**	*i*	P		**Pn**	**13 49 56.2**	**+1.6**
	SNR=13									
KIV	**Kislovodsk**	**19.59**	**299**		P		**P**	**13 49 53.5**	**+0.3**
KIV					*e*	S	**Sn**	**13 53 34.8**	**+1.0**
KIV					pmax		pmax			
	comp=Z,276nm,1.0s									
KIV	**Kislovodsk**	**19.59**	**299**		P		**Pn**	**13 49 54.1**	**-0.5**
GOF	**Gofitskoye**	**19.64**	**303**	*e*	P		**Pn**	**13 49 55.9**	**+0.8**
GOF					pmax		pmax			
	comp=Z,279nm,1.1s									
TAPN	**Taplejung**	**20.16**	**111**	*e*	P		**P**	**13 49 59.4**	**-0.3**
	comp=Z,539nm,0.8s									
ODAN	**Odare**	**20.18**	**113**	*e*	P		**P**	**13 49 59.6**	**-0.3**
	comp=Z,387nm,0.8s									
KLRI	**Killari**	**20.47**	**152**	*e*	P		**P**	**13 50 02.5**	**-0.3**
ARU	**Arti**	**20.58**	**347**		P		Pn	13 50 05.1	-0.9
	comp=Z,42nm,0.7s,baz=172,slow=5.8,SNR=146									
ARU					S		**S**	**13 53 46.6**	**-6.1**
	comp=Z,6.3nm,0.7s,baz=199,slow=22,SNR=1.4									
ARU					Lg		Lg	13 56 14.7		
	comp=Z,28nm,0.9s,baz=338,slow=22,SNR=2.2									
ARU	**Arti**	**20.58**	**347**	*d*	*i* P		Pn	13 50 05.1	-0.9
ARU								13 50 23.7		
ARU					SS		Sn	13 54 16.6	+19
ARU					pmax		pmax			
	comp=Z,132nm,0.8s									
ARU	**Arti**	**20.58**	**347**		P		Pn	13 50 05.2	-0.8
ARU					IAmb		IAmb	13 50 16.5		
	comp=Z,154nm,0.9s									
SVE	**Sverdlovsk**	**20.64**	**351**	*e*	P		Pn	13 50 05.9	-0.9
SVE					*e*	S	**S**	**13 53 56.3**	**+2.3**
SVE					pmax		pmax			
	comp=Z,254nm,1.4s									
BELG	**Belogornoye**	**20.68**	**326**	*i*	P		**P**	**13 50 05.4**	**+0.5**
BELG					pmax		pmax			
	comp=Z,65nm,1.0s									
GTK	**Tadong**	**20.84**	**110**	*e*	P		**P**	**13 50 07.1**	**+0.1**
GTK					IAmb		IAmb	13 50 11.1		
	comp=Z,180nm,0.6s									
RPR	**Rampur**	**20.92**	**144**	*e*	P		**P**	**13 50 07.8**	**+0.1**
BOK	**Bokaro**	**20.98**	**122**	*e*	P		**P**	**13 50 08.2**	**-0.2**
BOK					IAmb		IAmb	13 50 13.8		
	comp=Z,835nm,1.1s									
DMTO	**DMTO**	**21.39**	**212**		P		**P**	**13 50 11.6**	**-1.2**
	SNR=16									
ZAA0	**Zalesovo Array**	**21.52**	**30**		P		**P**	**13 50 14.1**	**+0.3**
ZAA0					IAmb		IAmb	13 50 25.6		
	comp=Z,231nm,0.8s									
ZALV	**Zalesovo Beam**	**21.52**	**30**		P		**P**	**13 50 13.9**	**+0.1**
	comp=Z,219nm,0.6s,baz=227,slow=10,SNR=644									
ZALV					S		**S**	**13 54 06.5**	**-4.8**
	comp=Z,12nm,0.8s,baz=228,slow=23,SNR=2.3									
ZALV					Lg		Lg	13 56 47.1		
	comp=Z,42nm,1.1s,baz=232,slow=26,SNR=0.9									
ZALV					LR		LR	13 59 44.4		
	comp=Z,7µm,18.9s,baz=177,slow=40									
ZALV					PKP2ab			14 28 07.5		
	comp=Z,0.7nm,0.4s,baz=92,slow=3.0,SNR=3.7									
ZALV	**Zalesovo Beam**	**21.52**	**30**		P		**P**	**13 50 13.7**	**-0.1**
ZALV	**Zalesovo Beam**	**21.52**	**30**		P		**P**	**13 50 13.7**	**-0.1**
LSA	**Lhasa**	**21.70**	**101**		P		**P**	**13 50 16.4**	**-0.1**
LSA					pmax		pmax			
	comp=Z,128nm,1.0s									
LSA	**Lhasa**	**21.70**	**101**		P		**P**	**13 50 16.4**	**-0.1**
WHFO	**Wadi Hawf**	**21.73**	**215**		P		**P**	**13 50 15.1**	**-1.4**
	SNR=15									
HYBB	**Hyderabad (bro**	**21.85**	**148**	*e*	P		**P**	**13 50 16.8**	**-0.9**
HYB	**Hyderabad**	**21.85**	**148**	*i*	P		**P**	**13 50 16.0**	**-1.7**
RBK	**Rabkut**	**21.90**	**213**		P		**P**	**13 50 17.0**	**-1.2**
	SNR=13									
CUPL	**Choutuppal**	**22.12**	**147**	*e*	P		**P**	**13 50 20.0**	**-0.6**
GGR	**Gangavaram**	**22.24**	**143**	*e*	P		**P**	**13 50 21.5**	**-0.4**
RAYN	**Ar Rayn**	**22.31**	**240**	*i*	P		**P**	**13 50 22.0**	**-0.6**
	SNR=25									
RAYN	**Ar Rayn**	**22.31**	**240**		P		**P**	**13 50 22.4**	**-0.3**
RAYN					pmax		pmax			
	comp=Z,64nm,0.9s									
RAYN	**Ar Rayn**	**22.31**	**240**		P		**P**	**13 50 22.4**	**-0.3**
ABTO	**Aybut**	**22.44**	**215**		P		**P**	**13 50 22.1**	**-2.0**
	SNR=25									
NJS	**Nagarjunasagar**	**22.94**	**147**	*e*	P		**P**	**13 50 28.8**	**-0.5**
VRH	**Novokhopyorsk**	**22.94**	**317**	*e*	P		**P**	**13 50 29.5**	**+0.4**
VRH					pmax		pmax			
	comp=Z,350nm,1.2s									
MYLAV	**Mylavaram**	**23.38**	**144**	*e*	P		**P**	**13 50 33.6**	**-0.1**
PVM	**Polavaram**	**23.43**	**141**	*e*	P		**P**	**13 50 34.5**	**+0.2**
ANN	**Anapa**	**23.45**	**300**	*e*	P		**P**	**13 50 35.4**	**+1.2**
ANN					*e*			13 50 42.7		
ANN					pmax		pmax			
	comp=Z,282nm,1.5s									
URV	**Uravakonda**	**23.57**	**153**	*e*	P		**P**	**13 50 35.9**	**+0.2**
CHLP	**Challavanipeta**	**23.71**	**135**	*e*	P		**P**	**13 50 36.1**	**-0.8**
GUWA	**GUWAHATI**	**23.78**	**109**	*e*	P		**P**	**13 50 36.3**	**-1.4**
GUWA					IAmb		IAmb	13 50 39.0		
	comp=Z,98nm,0.7s									
SHL	**Shillong**	**24.26**	**110**	*e*	P		**P**	**13 50 40.8**	**-1.5**
SHL					IAmb		IAmb	13 50 43.8		
	comp=Z,556nm,0.9s									
SHL	**Shillong**	**24.26**	**110**		P		**P**	**13 50 40.9**	**-1.5**
	SNR=278									
SHL	**Shillong**	**24.26**	**110**		P		**P**	**13 50 41.1**	**-1.3**
SHL					pmax		pmax			
	comp=Z,738nm,1.0s									
SHL	**Shillong**	**24.26**	**110**		P		**P**	**13 50 41.0**	**-1.3**
VSR	**Storozhevoye**	**24.37**	**316**	*e*	P		**P**	**13 50 43.1**	**+0.2**
VSR					pmax		pmax			
	comp=Z,200nm,1.0s									
TEZP	**TEZPUR**	**24.41**	**107**	*e*	P		**P**	**13 50 41.8**	**-1.8**
TEZP					IAmb		IAmb	13 50 45.2		
	comp=Z,183nm,0.9s									
VORR	**Voronezh**	**24.55**	**317**	*e*	P		**P**	**13 50 43.0**	**-1.5**
VORR					pmax		pmax			
	comp=Z,500nm,1.0s									
KIRV	**Kirov**	**24.72**	**338**		P		**P**	**13 50 47.2**	**+1.3**
	comp=Z,181nm,0.8s,baz=140,slow=0.8,SNR=72									
KIRV					S		S	13 55 19.0	+12	
	comp=Z,9.3nm,0.7s,baz=272,slow=18,SNR=1.1									
KIRV					Lg		Lg	13 58 31.9		
	comp=Z,25nm,0.9s,baz=112,slow=20,SNR=1.1									
AGT	**Agartala**	**24.75**	**114**	*e*	P		**P**	**13 50 46.5**	**0.0**
AGT					IAmb		IAmb	13 50 48.7		
	comp=Z,716nm,1.2s									
ZIRO	**ZIRO**	**24.79**	**104**	*e*	P		**P**	**13 50 45.7**	**-1.4**
ZIRO					IAmb		IAmb	13 50 47.7		
	comp=Z,177nm,0.6s									
ASF	**Jabal al Asfar**	**24.80**	**269**		P		**P**	**13 50 46.9**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=82,slow=15,SNR=2.4									
LPSR	**Galich'ya Gora**	**25.14**	**318**	*e*	P		**P**	**13 50 50.9**	**+1.1**
LPSR					pmax		pmax			
	comp=Z,370nm,1.0s									
BELO	**BELONIA**	**25.27**	**115**	*e*	P		**P**	**13 50 51.6**	**+0.4**
MMAI	**Mount Meron Ar**	**25.75**	**271**		P		**P**	**13 50 55.8**	**+0.2**
	comp=Z,18nm,1.1s,baz=57,slow=10,SNR=4.5									
SIM	**Simferopol'**	**25.80**	**299**	*c*	*i* P		**P**	**13 50 56.6**	**+0.7**
SIM						*e*	**S**	**13 55 22.6**	**-1.5**
SIM					pmax		pmax			
	comp=Z,139nm,0.9s									
KOHI	**KOHIMA**	**25.88**	**107**	*e*	P		**P**	**13 50 58.4**	**+1.3**
KOHI					IAmb		IAmb	13 51 00.1		
	comp=Z,125nm,0.8s									
MOKO	**MOKOCHONG**	**25.89**	**105**	*e*	P		**P**	**13 50 56.3**	**-0.8**
MOKO					IAmb		IAmb	13 50 59.1		
	comp=Z,168nm,0.8s									
BR131	**Keskin Array S**	**25.97**	**287**	*c*	*i* P		**P**	**13 50 58.5**	**+0.8**
BRTR	**Keskin Array B**	**25.97**	**287**		P		**P**	**13 50 59.0**	**+1.3**
	comp=Z,40nm,0.9s,baz=94,slow=6.9,SNR=82									
GTA	**Gaotai**	**26.30**	**74**	⇑	P		**P**	**13 51 00.6**	**-0.1**
GTA					pP		pP	13 51 08.4	+1.2	
GTA					sP		sP	13 51 12.0	+2.1	
GTA					LR		LR			
	comp=Z,5µm,14.5s									
GTA					LR		LR			
	comp=Z,7µm,15.6s									
GTA					LR		LR			
	comp=Z,7µm,18.5s									
SAIH	**SAIHA**	**26.86**	**114**	⇓	*e* P		**P**	**13 51 05.7**	**-0.2**
SAIH					IAmb		IAmb	13 51 10.4		
	comp=Z,149nm,0.8s									
EIL	**Elat**	**27.24**	**265**		P		**P**	**13 51 09.9**	**+0.9**
	comp=Z,30nm,0.9s,baz=41,slow=4.2,SNR=13									
MOS	**Moscow**	**27.39**	**324**	*e*	P		**P**	**13 51 09.6**	**-0.6**
MOS					*e*			13 51 59.0		
MOS					*e*	PPP	PPP	13 52 10.6		
MOS					pmax		pmax			
	comp=Z,177nm,1.3s									
OBN	**Obninsk**	**27.59**	**322**		P		**P**	**13 51 13.1**	**+1.2**
	comp=Z,12nm,0.5s,baz=51,slow=1.8,SNR=24									
OBN	**Obninsk**	**27.59**	**322**	⇓	*i* P		**P**	**13 51 13.6**	**+1.7**
OBN	**Obninsk**	**27.59**	**322**	⇑	*i* P		**P**	**13 51 13.1**	**+1.2**
OBN					*i*			13 51 58.1		
OBN					pmax		pmax			
	comp=Z,262nm,1.7s									
OBN	**Obninsk**	**27.59**	**322**		IAmb		IAmb	13 51 14.3		
	comp=Z,174nm,1.1s									
MOY	**Mondy**	**28.66**	**47**	*e*	P		**P**	**13 51 23.4**	**+1.7**
MOY					pmax		pmax			
	comp=Z,74nm,1.6s									
ELL	**Elmali**	**29.26**	**281**		P		**P**	**13 51 29.0**	**+1.8**
ELL					pmax		pmax			
	comp=Z,310nm,0.8s									
ELL	**Elmali**	**29.26**	**281**		P		**P**	**13 51 29.0**	**+1.8**
ZAK	**Zakamensk**	**29.70**	**51**	*e*	P		**P**	**13 51 32.4**	**+1.5**
ZAK					pmax		pmax			
	comp=Z,33nm,1.4s									
KLMR	**Klimovskoe**	**29.72**	**333**	*e*	P		**P**	**13 51 28.8**	**-2.0**
KLMR					pmax		pmax			
	comp=Z,71nm,1.3s									
KLMR	**Klimovskoe**	**29.72**	**333**	*e*	P		**P**	**13 51 28.9**	**-1.9**
KLMR					AMP			13 51 32.5		
	comp=Z,71nm,1.3s									
MFTR	**Murfatlar**	**29.80**	**297**	⇑	P		**P**	**13 51 33.5**	**+1.8**
TPGR	**Topolog**	**29.82**	**298**	⇑	P		**P**	**13 51 33.2**	**+1.3**
LZH	**Lanzhou**	**29.95**	**80**	*e*	P		**P**	**13 51 32.8**	**-0.5**
LZH					pP		pP	13 51 39.0	-0.8	
LZH					sP		sP	13 51 41.9	-0.6	
LZH					pmax		pmax			
	comp=Z,16nm,1.3s									
CFR	**Carcaliu**	**30.04**	**299**	⇓	P		**P**	**13 51 35.5**	**+1.7**
AKASG	**Malin Array Be**	**30.11**	**310**		P		**P**	**13 51 35.1**	**+0.7**
	comp=Z,14nm,0.9s,baz=93,slow=7.4,SNR=35									
AKASG	**Malin Array Be**	**30.11**	**310**	*i*	P		**P**	**13 51 35.0**	**+0.7**
AKASG					pmax		pmax			
	comp=Z,17nm,0.8s									
AKBB	**Malin Array Si**	**30.11**	**310**		P		**P**	**13 51 35.0**	**+0.6**
AKBB					pmax		pmax			
	comp=Z,119nm,1.6s									
AKBB	**Malin Array Si**	**30.11**	**310**		P		**P**	**13 51 35.0**	**+0.6**
AKBB					IAmb		IAmb	13 51 43.7		
	comp=Z,119nm,1.6s									
SORM	**Soroca**	**30.18**	**305**	⇑	P		**P**	**13 51 35.7**	**+0.6**
TLY	**Talaya**	**30.24**	**48**		P		**P**	**13 51 36.1**	**+0.5**
	comp=Z,9.0nm,0.7s,baz=220,slow=3.4,SNR=6.9									
TLY					LR		LR	14 05 08.4		
	comp=Z,4µm,20.3s,baz=238,slow=39									
TLY	**Talaya**	**30.24**	**48**	*e*	P		**P**	**13 51 37.8**	**+2.2**
TLY					pmax		pmax			
	comp=Z,42nm,0.9s									
TLY					MLR		MLR			
	comp=Z,17µm,16.0s									
TLY	**Talaya**	**30.24**	**48**		IAmb		IAmb	13 51 38.5		
	comp=Z,14nm,0.9s									
IRK	**Irkutsk**	**30.77**	**47**	*e*	P		**P**	**13 51 40.7**	**+0.5**
IRK					*e*			14 02 04.2		
IRK					pmax		pmax			
	comp=Z,58nm,2.3s									
ODBI	**Odobesti**	**30.83**	**300**	⇑	P		**P**	**13 51 44.1**	**+3.3**
VRI	**Vrincioaia**	**31.07**	**300**	⇑	P		**P**	**13 51 45.1**	**+2.2**
PLOR	**Plostina**	**31.12**	**300**	⇑	P		**P**	**13 51 45.0**	**+1.6**
TESR	**Tescani**	**31.16**	**301**	⇓	P		**P**	**13 51 45.0**	**+1.3**
ISR	**Istrita**	**31.16**	**298**	⇑	P		**P**	**13 51 46.7**	**+2.8**
RAGG	**Razgrad**	**31.18**	**295**	⇑	P		**P**	**13 51 45.1**	**+1.2**
SONM	**Songino Array**	**31.28**	**56**		P		**P**	**13 51 45.5**	**+0.6**
	comp=Z,20nm,1.1s,baz=269,slow=9.0,SNR=50									
SONM					PcP		**PcP**	**13 54 38.4**	**-0.4**	
	comp=Z,6.8nm,1.0s,baz=268,slow=4.7,SNR=3.7									
SONM	**Songino Array**	**31.28**	**56**		P		**P**	**13 51 46.0**	**+1.1**
CD2	**Chengdu**	**31.34**	**89**	⇑	*i* P		**P**	**13 51 44.3**	**-1.2**
CD2					pmax		pmax			
	comp=Z,70nm,1.3s									
NEHR	**Nehoiu**	**31.35**	**299**	⇑	P		**P**	**13 51 48.4**	**+3.0**
BIZ	**Bicaz**	**31.57**	**302**	⇑	P		**P**	**13 51 47.9**	**+0.6**
MLR	**Muntele Rosu**	**31.60**	**299**	⇑	P		**P**	**13 51 50.5**	**+2.8**
MLR	**Muntele Rosu**	**31.60**	**299**		P		**P**	**13 51 50.7**	**+3.0**
MLR					pmax		pmax			
	comp=Z,132nm,1.0s									
MLR	**Muntele Rosu**	**31.60**	**299**		P		**P**	**13 51 50.7**	**+3.0**
ULN	**Ulaanbaatar**	**31.72**	**56**	*ce*	P		**P**	**13 51 49.4**	**+0.6**
ULN					pmax		pmax			
	comp=Z,80nm,1.7s									
ULN	**Ulaanbaatar**	**31.72**	**56**		P		**P**	**13 51 49.6**	**+0.8**
ULN					IAmb		IAmb	13 51 52.5		
	comp=Z,124nm,1.7s									
OZUR		**31.73**	**300**	⇑	P		**P**	**13 51 50.7**	**+1.8**
BURAR	**Bucovina Array**	**32.22**	**303**	⇑	P		**P**	**13 51 54.9**	**+1.7**
BURAR	**Bucovina Array**	**32.22**	**303**		P		**P**	**13 51 54.3**	**+1.2**
VOIR		**32.23**	**299**	⇑	P		**P**	**13 51 54.7**	**+1.5**
BUR08	**Bucovina Ar. S**	**32.23**	**303**		P		**P**	**13 51 54.6**	**+1.3**
TMCR	**Tamitsa**	**32.51**	**337**	*e*	P		**P**	**13 51 54.3**	**-1.0**
TMCR					pmax		pmax			
	comp=Z,94nm,1.0s									
ARR	**Arges**	**32.52**	**299**	⇑	P		**P**	**13 51 57.7**	**+2.0**
APE	**Apeiranthos**	**32.64**	**283**	⇑	P		**P**	**13 51 59.0**	**+2.1**
APE	**Apeiranthos**	**32.64**	**283**	*i*	P		**P**	**13 51 56.4**	**-0.5**
APE					pmax		pmax			
	comp=Z,69nm,1.0s									
NACGM	**Naroch**	**32.67**	**317**	*e*	P		**P**	**13 51 57.0**	**+0.2**
IDID	**Didziasalis**	**32.82**	**318**	*e*	P		**P**	**13 51 59.3**	**+1.1**
PUL	**Pulkovo**	**32.82**	**327**	*ce*	P		**P**	**13 51 58.4**	**+0.3**
PUL					pmax		pmax			
	comp=Z,96nm,0.5s									
KMI	**Kunming**	**32.94**	**100**	⇓	*e* P		**P**	**13 51 58.3**	**-1.5**
KMI					pP		pP	13 52 07.6	+1.1	
KMI					sP		sP	13 52 11.8	+2.7	
KMI					pmax		pmax			
	comp=Z,38nm,1.6s									
IIGN	**Ignalina**	**33.11**	**317**	*e*	P		**P**	**13 52 02.1**	**+1.4**
LOT	**Lotru**	**33.13**	**299**	⇑	P		**P**	**13 52 02.6**	**+1.5**
MHMT	**Maesarieng**	**33.16**	**115**		P		**P**	**13 52 00.8**	**-0.7**
	comp=Z,80nm,1.3s									
DGPR	**DIGLIPUR**	**33.21**	**128**	*e*	P		**P**	**13 52 01.6**	**-0.4**
DGPR					IAmb		IAmb	13 52 05.2		
	comp=Z,49nm,0.9s									
IZAR	**Zarasai**	**33.22**	**318**	*e*	P		**P**	**13 52 02.7**	**+1.1**
ISAL	**Salakas**	**33.23**	**318**	*e*	P		**P**	**13 52 03.0**	**+1.2**
LVV	**L'vov**	**33.23**	**307**	*e*	P		**P**	**13 52 03.0**	**+1.2**
CHTO	**Chiang Mai**	**33.50**	**113**		P		**P**	**13 52 02.7**	**-1.8**
CHTO					pmax		pmax			
	comp=Z,66nm,1.4s									
CHTO	**Chiang Mai**	**33.50**	**113**		P		**P**	**13 52 02.7**	**-1.8**
CHTO					IAmb		IAmb	13 52 05.4		
	comp=Z,66nm,1.4s									
CM33	**Chiang Mai Arr**	**33.50**	**113**		P		**P**	**13 52 03.0**	**-1.5**
CMMT	**Chiang Mai**	**33.51**	**113**		P		**P**	**13 52 03.6**	**-1.0**
	comp=Z,19nm,1.6s									
CM32	**Chiang Mai Arr**	**33.53**	**113**		P		**P**	**13 52 04.0**	**-0.8**
IDI	**Anoyia**	**33.55**	**280**	⇑	P		**P**	**13 52 05.7**	**+0.9**
VTS	**Vitosha**	**33.62**	**294**	*e*	P		**P**	**13 52 07.3**	**+1.8**
CM34	**Chiang Mai Arr**	**33.63**	**113**		P		**P**	**13 52 04.0**	**-1.7**
CM15	**Chiang Mai Arr**	**33.71**	**114**		P		**P**	**13 52 05.0**	**-1.4**
	comp=Z,541nmcomp=Z,25nm,1.0s									
CM13	**Chiang Mai Arr**	**33.72**	**114**		P		**P**	**13 52 05.5**	**-0.9**
	comp=Z,582nmcomp=Z,60nm,1.2s									
CM31	**Chiang Mai Arr**	**33.72**	**114**		P		**P**	**13 52 05.0**	**-1.4**
	comp=Z,14µmcomp=Z,1µm,1.2s									
CMAR	**Chiang Mai Arr**	**33.72**	**114**		P		**P**	**13 52 05.2**	**-1.2**
	comp=Z,36nm,0.9s,baz=302,slow=7.6,SNR=152									
DEV	**Deva**	**33.74**	**300**	⇑	P		**P**	**13 52 09.0**	**+2.7**
CM02	**Chiang Mai Arr**	**33.74**	**114**		P		**P**	**13 52 05.9**	**-0.7**
	comp=Z,512nmcomp=Z,62nm,1.2s									
CM35	**Chiang Mai Arr**	**33.74**	**113**		P		**P**	**13 52 05.0**	**-1.6**
PTL	**Penteli**	**33.75**	**286**		P		**P**	**13 52 07.8**	**+1.3**
CM01	**Chiang Mai Arr**	**33.76**	**114**		P		**P**	**13 52 06.0**	**-0.8**
	comp=Z,574nmcomp=Z,65nm,1.2s									
CM05	**Chiang Mai Arr**	**33.76**	**114**		P		**P**	**13 52 05.0**	**-1.8**
	comp=Z,524nmcomp=Z,57nm,1.2s									
CM09	**Chiang Mai Arr**	**33.77**	**114**		P		**P**	**13 52 06.2**	**-0.7**
	comp=Z,481nmcomp=Z,47nm,1.3s									
CM04	**Chiang Mai Arr**	**33.79**	**114**		P		**P**	**13 52 06.0**	**-1.0**
	comp=Z,567nmcomp=Z,72nm,1.1s									
CM36	**Chiang Mai Arr**	**33.80**	**113**		P		**P**	**13 52 05.0**	**-2.1**
ATHU	**Athens Univers**	**33.83**	**286**		P		**P**	**13 52 08.6**	**+1.4**
GZR	**Gura Zlata**	**33.83**	**299**	⇑	P		**P**	**13 52 07.6**	**+0.4**
VLY	**Voula,Athens**	**33.84**	**285**		P		**P**	**13 52 08.6**	**+1.3**
PAYA	**Payao**	**33.86**	**111**		P		**P**	**13 52 06.6**	**-1.0**
	comp=Z,2µmcomp=Z,210nm,1.2s									
ATH	**Athens Observa**	**33.88**	**286**		P		**P**	**13 52 08.7**	**+1.1**
DRGR		**33.88**	**301**	⇓	P		**P**	**13 52 09.9**	**+2.2**
VSU	**Vasula**	**33.92**	**323**	*e*	P		**P**	**13 52 08.9**	**+1.3**
VSU	**Vasula**	**33.92**	**323**	*i*	P		**P**	**13 52 08.0**	**+0.3**
VSU					pmax		pmax			
	comp=Z,443nm,1.0s									
KWP	**Kalwaria Pacla**	**34.06**	**307**	*e*	P		**P**	**13 52 11.1**	**+2.0**
KWP					*e*	pP	**sP**	**13 52 18.1**	**-0.1**
HERR	**Herculane**	**34.09**	**298**	⇑	P		**P**	**13 52 10.1**	**+0.7**
LAMP	**Lampang**	**34.19**	**113**		P		**P**	**13 52 09.0**	**-1.5**
	comp=Z,54nm,1.1s									
VAY	**Valandovo**	**34.23**	**292**	*i*	P		**P**	**13 52 12.5**	**+1.9**
UZH	**Uzhgorod**	**34.25**	**305**	*e*	P		**P**	**13 52 10.5**	**-0.2**
UZH					*i*			13 52 18.7		
PABE	**Paberze**	**34.38**	**317**	*e*	P		**P**	**13 52 13.3**	**+1.6**
SUW	**Suwalki**	**34.47**	**314**	*e*	P		**P**	**13 52 12.7**	**+0.2**
STIP	**Stip**	**34.48**	**292**	*i*	P		**P**	**13 52 13.1**	**+0.3**
XAN	**Xi'an**	**34.49**	**81**		P		**P**	**13 52 11.8**	**-1.2**
XAN					pP		pP	13 52 14.8	-4.7	
XAN					pmax

BLY Banja Luka 37.81 298 ⇑*i*P **P** **13 52 43.0 +1.7**
GKP Gorka Klasztor 37.84 312 *e*P **P** **13 52 42.1 +0.8**
GKP *e*pP **pP** **13 52 48.8 +0.8**
PHET Kaeng Krachan 37.89 120 P **P** **13 52 42.3 +0.1**
comp=Z,832nmcomp=Z,98nm,1.0s
KRLC Kraliky 37.92 307 *e*P **P** **13 52 43.8 +1.7**
KRLC *e* 13 52 51.3
KRLC Kraliky 37.92 307 *e*P **P** **13 52 43.8 +1.7**
KRLC *e*pP **sP** **13 52 51.3 0.0**
VRAC Vranov 38.03 306 ⇑P **P** **13 52 45.1 +2.1**
VRAC Vranov 38.03 306 *e*P **P** **13 52 44.9 +1.9**
KRUC Moravsky 38.16 305 *e*P **P** **13 52 45.8 +1.7**
DPC Dobruska-Polom 38.22 307 *e*P **P** **13 52 46.4 +1.7**
DPC *e* 13 52 53.6
DPC Dobruska-Polom 38.22 307 *e*P **P** **13 52 46.4 +1.7**
DPC *e*pP **sP** **13 52 53.6 -0.2**
KSP Ksiaz 38.25 308 *e*P **P** **13 52 46.1 +1.2**
KSP *e*pP **sP** **13 52 52.8 -1.2**
OSTC Ostas 38.29 308 *e*P **P** **13 52 46.5 +1.2**
OSTC *ex* x 13 52 54.0
KOGS Kog 38.34 301 *i*P **P** **13 52 47.3 +1.6**
KOGS *i* 13 52 54.2
CHVC Chvalec 38.40 308 *e*P **P** **13 52 47.6 +1.4**
CHVC *ex* x 13 52 55.6
UPC Upice 38.42 308 *e*P **P** **13 52 48.1 +1.8**
UPC Upice 38.42 308 *e*P **P** **13 52 48.1 +1.8**
CONA Conrad Observa 38.53 303 *i*P **P** **13 52 49.2 +1.8**
comp=Z,45nm,1.2s,SNR=23
BJI Beijing 38.71 69 P **P** **13 52 49.6 +0.7**
BJI pmax pmax
comp=Z,8.0nm,0.8s
MATE Matera 38.73 292 ⇑P **P** **13 52 49.1 +0.1**
PATY Pattaya 38.75 119 P **P** **13 52 49.8 +0.5**
comp=Z,8µmcomp=Z,21nm,0.6s
ARSA Arzberg 38.79 302 *i*P **P** **13 52 50.8 +1.3**
comp=Z,18nm,1.1s,SNR=9.4
SRAK Srakaew 38.86 116 P **P** **13 52 54.0 +3.7**
comp=Z,4µmcomp=Z,398nm,1.2s
CRES Cresnjev 38.94 300 *i*P **P** **13 52 52.4 +1.7**
CRES Cresnjev 38.94 300 ⇑*i*P **P** **13 52 52.2 +1.5**
TIP Timpagrande 38.98 289 ⇑P **P** **13 52 51.4 +0.2**
BOJS Bojanci 39.11 300 *i*P **P** **13 52 53.9 +1.8**
SOKA Soboth 39.16 301 *i*P **P** **13 52 54.5 +1.8**
comp=Z,52nm,1.2s,SNR=25
PRU Pruhonice 39.36 307 *e*P **P** **13 52 56.2 +2.0**
PRU *e* 13 53 03.0
PRU Pruhonice 39.36 307 *e*P **P** **13 52 56.2 +2.0**
PRU *e*pP **sP** **13 53 03.0 -0.3**
BSD Bornholm Skovb 39.39 315 *i*P **P** **13 52 53.2 -1.1**
BSD pmax pmax
comp=Z,120nm,1.3s
BSD Bornholm Skovb 39.39 315 *i*P **P** **13 52 53.2 -1.1**
comp=Z,123nm,1.3s
BSD Bornholm Skovb 39.39 315 *i*P **P** **13 52 53.3 -1.1**
BSD IAmb IAmb 13 53 02.6
comp=Z,124nm,1.3s
PRA Prague 39.43 307 *e*P **P** **13 52 57.7 +2.9**
PRA Prague 39.43 307 *e*P **P** **13 52 57.7 +2.9**
OBKA Obir 39.51 301 *i*P **P** **13 52 57.4 +1.8**
comp=Z,45nm,1.5s,SNR=8.6
LJU Ljubljana 39.56 300 *i*P **P** **13 52 57.9 +2.0**
LJU *e* 13 53 04.6
LJU Ljubljana 39.56 300 ⇑*i*P **P** **13 52 57.4 +1.5**
MOA Molln 39.61 303 *i*P **P** **13 52 57.8 +1.4**
comp=Z,28nm,1.2s,SNR=11
CEY Cerknica 39.66 300 ⇑*i*P **P** **13 52 58.2 +1.4**
RIY Rijeka 39.66 299 ⇑*i*P **P** **13 52 57.5 +0.7**
PBCC Pribram 39.72 306 *e*P **P** **13 52 58.2 +1.0**
PBCC *ex* x 13 53 05.3
ARD3 ARCESS Array S 39.73 339 P **P** **13 52 58.1 +1.2**
ARA0 ARCESS Array S 39.74 339 *e*P **P** **13 52 58.3 +1.2**
ARCES ARCESS Array B 39.74 339 P **P** **13 52 58.1 +1.0**
comp=Z,50nm,0.9s,baz=127,slow=9.0,SNR=96
BRG Berggiesshubel 39.74 308 *i*P **P** **13 52 59.1 +1.7**
comp=Z,50nm,1.2s
BRG *e*PCP PcP 13 55 11.9 +8.5
comp=Z,42nm,1.4s
BRG *e*SCP **S** **13 58 59.0 -1.0**
comp=Z,6.0nm,0.5s
comp=N,508nm,20.9s
comp=E,460nm,26.8s
comp=Z,1µm,30.9s
BRG Berggiesshubel 39.74 308 *i*P **P** **13 52 59.1 +1.7**
BRG *e* 13 55 11.9
BRG *e* 13 58 59.0
BRG pmax pmax
comp=Z,50nm,1.2s
BRG pmax pmax
comp=N,6.0nm,0.5s
BRG MLR MLR
comp=N,508nm,20.9s
BRG MLR MLR
comp=E,460nm,26.8s
BRG MLR MLR
comp=Z,1µm,30.9s
BRG Berggiesshubel 39.74 308 *e*P **P** **13 52 58.8 +1.5**
comp=Z,50nm,1.2s,baz=88,slow=8.2
RUE Ruedersdorf 39.88 311 *e*P **P** **13 52 59.9 +1.5**
RUE Ruedersdorf 39.88 311 *e*P **P** **13 52 59.7 +1.3**
comp=Z,61nm,1.1s,baz=88,slow=8.2
GEC2 GERESS Array S 39.94 305 *e*P **P** **13 53 00.5 +1.4**
comp=Z,30nm,1.1s,baz=88,slow=8.2
GERES GERESS Array B 39.94 305 P **P** **13 53 00.4 +1.2**
comp=Z,15nm,0.9s,baz=87,slow=8.1,SNR=48
GERES PP **PnPn** **13 54 33.5 -0.8**
comp=Z,4.7nm,1.0s,baz=74,slow=10,SNR=2.6
GERES PcP **PcP** **13 55 03.0 -1.3**
comp=Z,10nm,1.0s,baz=74,slow=4.3,SNR=6.2
SKDS Skadanscina 39.97 300 *i*P **P** **13 53 00.3 +1.0**
WHN Wuhan 39.98 84 P **P** **13 52 59.1 -0.5**
KHC Kasperske Hory 40.01 305 *e*P **P** **13 53 00.3 +0.7**
KHC *e* 13 53 07.5
KHC *e* 13 54 34.0
KHC Kasperske Hory 40.01 305 *e*P **P** **13 53 00.3 +0.7**
KHC *e*pP **sP** **13 53 07.5 -1.3**
KHC *e*PP **PnPn** **13 54 34.0 -1.1**
FBE Freiberg 40.12 308 *e*P **P** **13 53 02.1 +1.7**
comp=Z,42nm,1.1s,baz=88,slow=8.2
MYKA Terra Mystica 40.12 301 *i*P **P** **13 53 02.3 +1.6**
comp=Z,20nm,1.1s,SNR=7.3
KTK1 Kautokeino 40.13 337 *e*P **P** **13 53 01.5 +1.1**
HIA Hailar 40.18 54 *i*P **P** **13 53 00.8 -0.3**
HIA pmax pmax
comp=Z,22nm,1.0s
HIA Hailar 40.18 54 P **P** **13 53 02.4 +1.4**
PRED Cave del Predi 40.19 301 P **P** **13 53 02.2 +1.0**
PRED IAmb IAmb 13 53 11.4
comp=Z,159nm,1.8s
ROBS Robic 40.25 301 *i*P **P** **13 53 02.9 +1.3**
RGN Rugen 40.26 314 *e*P **P** **13 53 02.4 +0.9**
KBA Koelnbreinsper 40.29 302 *i*P **P** **13 53 03.7 +1.6**
comp=Z,32nm,1.1s,SNR=17
CLL Collm 40.34 309 *i*P **P** **13 53 03.6 +1.3**
comp=Z,37nm,1.2s
CLL *i*pP **sP** **13 53 10.6 -0.8**
comp=Z,93nm,1.8s
CLL *i* 13 53 15.9
CLL *e*pPP 13 54 42.0
CLL LmV 15 32 00.0
comp=Z,600nm,21.5s
CLL Collm 40.34 309 *i*P **P** **13 53 03.6 +1.3**
CLL *i**SP **sP** **13 53 10.6 -0.8**
CLL pmax pmax
comp=Z,37nm,1.2s
CLL Collm 40.34 309 *e*P **P** **13 53 03.5 +1.2**
comp=Z,37nm,1.2s,baz=88,slow=8.2
CLL *e*pP **sP** **13 53 11.0 -0.5**
RJOB Jochberg 40.61 303 *e*P **P** **13 53 04.6 -0.1**
comp=Z,22nm,1.2s,baz=88,slow=8.2
TANN Tannenbergstha 40.69 307 *e*P **P** **13 53 06.8 +1.5**
comp=Z,52nm,1.1s,baz=88,slow=8.2
TANN *e*pP **sP** **13 53 14.3 -0.1**
NKC Novy Kostel 40.70 307 *e*P **P** **13 53 07.3 +1.9**
NKC Novy Kostel 40.70 307 *e*P **P** **13 53 07.3 +1.9**
GUNZ Gunzen 40.78 307 *e*P **P** **13 53 07.6 +1.6**
comp=Z,23nm,1.1s,baz=88,slow=8.2
AQU L'Aquila 40.86 295 ⇑*i*P **P** **13 53 08.2 +1.4**
HAMF Hammerfest 40.87 340 *e*P **P** **13 53 08.0 +1.5**
ROTZ Rotzenmuhle 40.88 306 *e*P **P** **13 53 08.7 +1.9**
comp=Z,56nm,1.2s,baz=88,slow=8.2
PLN Plauen 40.88 308 *e*P **P** **13 53 08.2 +1.4**
comp=Z,25nm,1.1s,baz=88,slow=8.2
ABTA Abfaltersbach 40.88 302 *i*P **P** **13 53 07.4 +0.4**
comp=Z,15nm,1.1s,SNR=6.7

MANZ Manzenberg 40.93 307 *e*P **P** **13 53 09.2 +1.9**
comp=Z,70nm,1.5s,baz=88,slow=8.2
CIMO Cimolais 40.98 301 P **P** **13 53 08.7 +1.0**
NEUB Neuenburg 41.11 309 *e*P **P** **13 53 10.1 +1.5**
comp=Z,67nm,1.1s,baz=88,slow=8.2
NEUB *e*pP **sP** **13 53 17.5 -0.3**
MOX Moxa 41.22 308 *e*P **P** **13 53 11.2 +1.5**
comp=Z,57nm,1.3s,baz=88,slow=8.2
MURB Monte Urbino 41.34 297 P **P** **13 53 12.9 +2.2**
WTTA Wattenberg 41.43 303 *i*P **P** **13 53 12.3 +0.7**
comp=Z,26nm,1.0s,SNR=12
WATA Walderalm 41.46 303 *i*P **P** **13 53 12.3 +0.4**
comp=Z,17nm,1.0s,SNR=7.0
GRF Grafenberg Arr 41.52 306 *e*P **P** **13 53 14.4 +2.3**
comp=Z,68nm,1.1s,baz=88,slow=8.2
TRTT Trang 41.58 125 P **P** **13 53 12.9 0.0**
SQTA Sankt Quirin 41.73 303 *i*P **P** **13 53 14.3 +0.4**
comp=Z,28nm,1.2s,SNR=7.7
TRO Tromso 41.77 337 *e*P **P** **13 53 14.2 +0.4**
MOTA Moosalm 41.78 303 *i*P **P** **13 53 14.6 +0.2**
comp=Z,33nm,1.0s,SNR=12
NC405 NORSAR Array S 41.93 324 P **P** **13 53 15.8 +0.5**
CLZ Clausthal 41.97 310 *e*P **P** **13 53 17.3 +1.6**
comp=Z,74nm,1.5s,baz=88,slow=8.2
BSEG Bad Segeberg 42.00 313 *e*P **P** **13 53 17.6 +1.7**
comp=Z,118nm,1.3s,baz=88,slow=8.2
BSEG *e*pP **sP** **13 53 25.1 +0.1**
RETA Reutte 42.00 303 *i*P **P** **13 53 16.6 +0.5**
comp=Z,22nm,1.2s,SNR=5.3
MOR8 Moi Rana 42.01 331 *e*P **P** **13 53 16.3 +0.5**
FETA Feichten 42.07 302 *i*P **P** **13 53 17.3 +0.5**
comp=Z,28nm,1.1s,SNR=10.0
FAUS Fauske 42.09 333 *e*P **P** **13 53 17.3 +0.8**
NC303 NORSAR Array S 42.12 324 P **P** **13 53 18.0 +1.2**
NRDL Niedersach Rie 42.12 311 *e*P **P** **13 53 18.7 +1.9**
comp=Z,76nm,1.6s,baz=88,slow=8.2
NB2 NORSAR Subarra 42.16 323 P **P** **13 53 18.0 +0.8**
comp=Z,14nm,0.7s,baz=101,slow=8.6
NB2 NORSAR Subarra 42.16 323 P **P** **13 53 18.0 +0.8**
baz=101,slow=8.6
NOA NORSAR Array B 42.16 323 P **P** **13 53 17.4 +0.2**
comp=Z,37nm,0.9s,baz=101,slow=8.1,SNR=86
NOA PP **PP** **13 54 56.7 +1.9**
comp=Z,8.6nm,0.8s,baz=108,slow=8.0,SNR=3.2
NOA LR LR 14 14 06.7
comp=Z,8µm,18.9s,baz=85,slow=41
OSL Oslo 42.23 322 *e*P **P** **13 53 19.1 +1.4**
UBBA Unterbreizbach 42.24 308 *e*P **P** **13 53 19.3 +1.5**
comp=Z,34nm,1.5s,baz=88,slow=8.2
MLSI Meulaboh, Aceh 42.27 132 P **P** **13 53 17.1 -1.5**
STEI Steigen 42.30 334 *e*P **P** **13 53 19.4 +1.2**
NBO00 NORSAR Array S 42.37 323 P **P** **13 53 19.6 +0.7**
NC204 NORSAR Array S 42.42 324 P **P** **13 53 20.3 +1.0**
NC204 IAmb IAmb 13 53 28.7
comp=Z,200nm,1.2s
UBR Ueberruh 42.42 303 *e*P **P** **13 53 20.1 +0.6**
comp=Z,36nm,1.1s,baz=88,slow=8.2
NSS Namsos 42.54 329 *e*P **P** **13 53 20.7 +0.6**
KONS Konsvik 42.61 332 *e*P **P** **13 53 21.9 +1.2**
DAVA Damuels 42.62 303 *i*P **P** **13 53 21.8 +0.5**
comp=Z,36nm,0.9s,SNR=16
MUD Monsted U'grnd 42.73 316 *i*P **P** **13 53 23.8 +2.0**
MUD Monsted U'grnd 42.73 316 *i*P **P** **13 53 23.8 +2.0**
MUD Monsted U'grnd 42.73 316 *i*P **P** **13 53 23.9 +2.0**
GOET G??ttrup 42.73 317 *i*P **P** **13 53 25.1 +3.3**
GOET G??ttrup 42.73 317 *i*P **P** **13 53 25.2 +3.3**
KONO Kongsberg 42.76 321 *ce*P **P** **13 53 22.5 +0.5**
KONO pmax pmax
comp=Z,62nm,2.5s
KONO Kongsberg 42.76 321 P **P** **13 53 21.4 -0.6**
KONO Kongsberg 42.76 321 *e*P **P** **13 53 23.1 +1.0**
STU Stuttgart 42.91 305 *e*P **P** **13 53 24.8 +1.3**
comp=Z,73nm,1.4s,baz=88,slow=8.2
STU *e*pP **sP** **13 53 32.7 +0.1**
NJ2 Nanjing 43.02 80 *e*P **P** **13 53 24.4 -0.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
DL2 Dalian 43.08 70 P **P** **13 53 26.8 +1.9**
DL2 pmax pmax
comp=Z,28nm,0.8s
TNS Taunus Mts 43.27 307 *e*P **P** **13 53 28.0 +1.6**
comp=Z,20nm,1.1s,baz=88,slow=8.2
DOMB Dombas 43.34 325 *e*P **P** **13 53 27.4 +0.7**
SKAR Skarsla 43.52 323 *e*P **P** **13 53 29.3 +1.1**
BFO Black Forest 43.53 305 *e*P **P** **13 53 29.3 +0.8**
comp=Z,21nm,1.2s,baz=88,slow=8.2
BFO *e*pP **sP** **13 53 36.6 -1.1**
TPTI 43.54 132 P **P** **13 53 27.7 -1.1**
comp=Z,37nm,1.8s
IBBN Ibbenburen 43.57 310 *e*P **P** **13 53 29.9 +1.2**
comp=Z,109nm,1.2s,baz=88,slow=8.2
IBBN *e*pP **sP** **13 53 37.6 -0.2**
LODK Lodwar 43.71 228 P **P** **13 53 31.4 +1.0**
SNR=8.4
BUG Bochum--Univer 43.92 309 *e*P **P** **13 53 32.8 +1.3**
comp=Z,60nm,1.4s,baz=88,slow=8.2
MOL Molde 44.11 325 *e*P **P** **13 53 34.2 +1.3**
AHRW Bad Neuenahr-A 44.12 308 *e*P **P** **13 53 34.9 +1.8**
comp=Z,62nm,1.7s,baz=88,slow=8.2
TSI Tuntungan 44.18 131 P **P** **13 53 34.5 +0.5**
comp=Z,85nm,1.2s
BLS5 Blasjo 44.34 321 *e*P **P** **13 53 35.5 +0.7**
HYA Hoyanger 44.60 323 *e*P **P** **13 53 37.7 +1.0**
ZEA Zeya 44.68 47 *e*P **P** **13 53 39.3 +1.8**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,20nm,1.3s
BTNL Ternell 44.71 308 P **P** **13 53 39.7 +1.8**
comp=Z,32nm,1.6s
BTNL pP **sP** **13 53 46.4 -0.7**
MEM Membach 44.79 308 P **P** **13 53 40.2 +1.7**
comp=Z,25nm,1.2s
MEM pP **sP** **13 53 47.3 -0.3**
MEM PcP **PcP** **13 55 20.8 +0.6**
WLF Walferdange 44.80 307 P **P** **13 53 40.6 +2.0**
comp=Z,54nm,1.2s
WLF pP **sP** **13 53 47.1 -0.6**
WLF Walferdange 44.80 307 *e*P **P** **13 53 40.3 +1.7**
comp=Z,86nm,1.1s,baz=88,slow=8.2
BHOU Houvegnez 44.82 308 P **P** **13 53 40.5 +1.8**
BHOU PcP **PP** **13 55 22.2 -1.1**
BHOU PP PcP 13 55 28.3 +7.9
PSI Prapat 44.95 131 P **P** **13 53 38.9 -1.4**
comp=Z,33nm,0.6s,baz=360,slow=6.3,SNR=30
PSI PcP **PcP** **13 55 20.9 -0.6**
comp=Z,12nm,0.7s,baz=184,slow=0.5,SNR=4.8
PSI LR LR 14 12 27.4
comp=Z,2µm,21.1s,baz=271,slow=36
IPM Ipoh 44.97 127 P **P** **13 53 39.0 -1.3**
RPSI Rantau Prapat 45.04 131 P **P** **13 53 38.3 -2.5**
RPSI IAmb IAmb 13 53 40.8
comp=Z,53nm,0.7s
RPSI PcP **PcP** **13 55 21.8 +0.2**
BSTI Sart Tilman 45.07 308 P **P** **13 53 42.5 +1.8**
GSI Gunungsitoli 45.34 134 P **P** **13 53 42.6 -0.6**
comp=Z,249nm,1.3s
GSI Gunungsitoli 45.34 134 P **P** **13 53 42.4 -0.8**
BGES Gesves 45.40 308 P **P** **13 53 45.1 +1.8**
BGES pP **sP** **13 53 51.3 -1.2**
BGES PcP **PcP** **13 55 23.3 +1.0**
KEST Kesra 45.58 287 P **P** **13 53 46.6 +1.6**
comp=Z,58nm,1.0s,baz=324,slow=2.5,SNR=34
BMRD Maredsous 45.61 308 P **P** **13 53 46.6 +1.7**
BMRD PcP **PcP** **13 55 23.3 +0.3**
DOU Dourbes 45.75 307 P **P** **13 53 48.0 +2.0**
DOU pP **sP** **13 53 55.4 +0.1**
DOU PcP **PcP** **13 55 24.6 +1.0**
SNF Seneffe 45.89 308 P **P** **13 53 49.2 +2.0**
YAK Yakutsk 46.01 36 LR LR 14 14 51.2
comp=Z,6µm,19.1s,baz=276,slow=38
YAK Yakutsk 46.01 36 *eP* **P** **13 53 48.3 +0.4**
YAK *e*PP **sP** **13 53 59.2 +2.1**
YAK *eS* **S** **14 00 29.3 -2.3**
YAK pmax pmax
comp=Z,129nm,0.8s
YAK pmax pmax
comp=N,15nm,1.0s
YAK pmax pmax
comp=E,67nm,1.0s
YAK smax smax
comp=E,330nm,1.7s
YAK smax smax
comp=N,88nm,1.1s
YAK Yakutsk 46.01 36 P **P** **13 53 48.1 +0.2**

HSPB Hornsund (broa 46.16 346 *eP* **P** **13 53 50.6 +1.6**
KMBO Kilima Mbogo 46.33 223 *i*P **P** **13 53 54.0 +2.7**
KMBO pmax pmax
comp=Z,5.0nm,0.3s
SPA0 Spitsbergen Ar 46.62 347 *eP* **P** **13 53 54.7 +2.1**
KIBK Kibwezi 46.93 221 P **P** **13 53 56.4 +0.6**
SNR=21
MNSI Mandailing Nat 46.94 132 P **P** **13 53 55.0 -0.8**
comp=Z,74nm,0.9s
TIXI Tiksi 47.07 23 *ce*P **P** **13 53 56.3 +0.2**
TIXI pmax pmax
comp=Z,353nm,0.7s
TIXI Tiksi 47.07 23 P **P** **13 53 57.0 +0.9**
MDJ Mudanjiang 47.49 60 P **P** **13 54 00.0 +0.2**
MDJ pmax pmax
comp=Z,18nm,1.1s
MDJ pmax pmax
comp=Z,4µm,11.8s
KBS Kingsbay 47.76 348 *i*P **P** **13 54 02.7 +1.3**
KBS pmax pmax
comp=Z,31nm,1.1s
KBS Kingsbay 47.76 348 *eP* **P** **13 54 03.1 +1.7**
KLR Kul'dur 48.00 53 P **P** **13 54 04.3 +0.7**
comp=Z,22nm,0.8s,baz=281,slow=8.8,SNR=35
KLR Kul'dur 48.00 53 *ce*P **P** **13 54 04.1 +0.4**
KLR pmax pmax
comp=Z,42nm,1.0s
BKNI Bangkinang 48.19 131 P **P** **13 54 04.7 -0.8**
comp=Z,173nm,1.0s
KSRS Korea Array 48.25 69 P **P** **13 54 05.7 0.0**
comp=Z,11nm,0.8s,baz=281,slow=6.2,SNR=36
KSRS PcP **PcP** **13 55 31.9 -0.7**
comp=Z,15nm,1.0s,baz=285,slow=3.5,SNR=9.0
KSRS LR LR 14 17 21.8
comp=Z,3µm,19.5s,baz=282,slow=40
SISI Saibi 48.35 134 P **P** **13 54 07.6 +0.9**
comp=Z,94nm,1.5s
MYKOM Kota Tinggi 48.84 126 P **P** **13 54 10.0 -0.5**
USA0B Ussuriysk Arra 49.26 60 *i*P **P** **13 54 13.2 -0.3**
USRK Ussuriysk Ar. 49.26 60 P **P** **13 54 13.8 +0.3**
comp=Z,15nm,0.8s,baz=283,slow=6.5,SNR=21
USRK Ussuriysk Ar. 49.26 60 P **P** **13 54 13.3 -0.2**
USRK Ussuriysk Ar. 49.26 60 P **P** **13 54 13.3 -0.2**
SDSI Sungai Dareh 49.42 131 P **P** **13 54 14.5 -0.5**
comp=Z,32nm,1.4s
VLA Vladivostok 49.47 61 *i*P **P** **13 54 14.6 -0.5**
VLA pmax pmax
comp=Z,130nm,1.0s
MBAR Mbarara 49.70 230 *i*P **P** **13 54 15.9 -1.4**
MBAR pmax pmax
comp=Z,7.0nm,0.9s
KRJI Kerinci 50.36 132 P **P** **13 54 22.5 +0.3**
comp=Z,238nm,0.8s
GRNR Gornyy 50.65 50 ⇑*i*P **P** **13 54 24.9 +0.9**
GRNR *e*S **S** **14 01 42.1 +4.5**
GRNR pmax pmax
comp=Z,9.0nm,1.2s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=E,3µm,16.0s
GRNR MLR MLR
comp=N,1µm,20.0s
GRNR MLR MLR
comp=Z,3µm,17.0s
JNU Nakatsue 52.05 74 P **P** **13 54 34.0 -0.7**
comp=Z,29nm,1.0s,baz=328,slow=5.5,SNR=8.0
JNU Nakatsue 52.05 74 IAmb IAmb 13 54 37.1
comp=Z,62nm,1.2s
TEY Ternei 52.20 58 ⇑*i*P **P** **13 54 34.9 -0.7**
TEY pmax pmax
comp=N,10.0nm,0.6s
TEY pmax pmax
comp=Z,60nm,1.1s
TEY pmax pmax
comp=E,20nm,1.3s
KSI Kapahiang 52.28 132 P **P** **13 54 35.8 -0.8**
comp=E,126nm,1.0s
PPBI Pangkal Pinang 53.31 127 P **P** **13 54 43.3 -0.8**
comp=E,7µmcomp=E,28nm,1.6s
KSM Kuching 53.41 121 P **P** **13 54 44.0 -0.9**
DAG Danmarks Havn 53.64 343 *i*P **P** **13 54 46.8 +1.1**
DAG pmax pmax
comp=Z,64nm,1.0s
DAG Danmarks Havn 53.64 343 *i*P **P** **13 54 46.8 +1.1**
comp=Z,64nm,1.0s
DAG Danmarks Havn 53.64 343 *i*P **P** **13 54 46.8 +1.1**
DAG IAmb IAmb 13 54 47.8
comp=Z,64nm,1.0s
SBUM Sibu 54.06 118 P **P** **13 54 49.0 -0.6**
ESDC Sonseca Array 54.21 296 P **P** **13 54 51.0 +0.4**
comp=Z,20nm,0.9s,baz=60,slow=7.6,SNR=100
ESDC PcP **PcP** **13 55 54.5 -0.3**
comp=Z,7.8nm,0.9s,baz=49,slow=4.6,SNR=7.0
ESDC Sonseca Array 54.21 296 P **P** **13 54 50.8 +0.2**
ESDC PcP **PcP** **13 55 55.9 +1.0**
DBG Daneborg 54.31 340 *i*P **P** **13 54 52.4 +1.7**
DBG IAmb IAmb 13 54 53.4
comp=Z,32nm,1.0s
PAB San Pablo 54.54 296 P **P** **13 54 52.6 -0.4**
PAB pmax pmax
comp=Z,61nm,1.4s
PAB San Pablo 54.54 296 P **P** **13 54 52.6 -0.4**
PAB IAmb IAmb 13 55 02.5
comp=Z,61nm,1.4s
TPI Tanjungpandan 54.74 126 P **P** **13 54 54.4 -0.2**
comp=Z,22nm,0.8s
PBRG Braganca 55.44 300 *eP* **P** **13 55 00.6 +1.2**
comp=Z,50nm,1.4s
YSS Yuzh-Sakhalins 55.70 54 *ce*P **P** **13 55 01.6 +0.4**
YSS pmax pmax
comp=Z,176nm,1.3s
YSS Yuzh-Sakhalins 55.70 54 P **P** **13 55 01.7 +0.6**
MVO Moncorvo 55.87 299 *eP* **P** **13 55 03.9 +1.3**
comp=Z,53nm,1.0s
MVO *e*pP **sP** **13 55 11.2 -0.7**
JEW Eniwo 56.22 59 P **P** **13 55 05.0 +0.1**
PVRL Vila Real 56.31 299 *eP* **P** **13 55 07.5 +1.8**
comp=Z,58nm,2.4s
PVRL *e*pP **sP** **13 55 13.9 -1.1**
POLO Lamas de Olo 56.33 299 *eP* **P** **13 55 07.1 +1.2**
comp=Z,30nm,1.7s
POLO *e*pP **sP** **13 55 14.3 -0.9**
SEY Seymchan 56.35 33 P **P** **13 55 06.8 +1.3**
comp=Z,29nm,0.9s,baz=264,slow=7.8,SNR=44
SEY Seymchan 56.35 33 *i*P **P** **13 55 05.6 +0.1**
PCAB Cabril 56.37 300 *eP* **P** **13 55 08.1 +2.0**
comp=Z,102nm,1.6s
PCAB *e*pP **sP** **13 55 15.0 -0.4**
PGAV Gavieira, Arco 56.45 300 *eP* **P** **13 55 08.6 +1.9**
comp=Z,106nm,1.5s
PGAV *e*pP **sP** **13 55 15.3 -0.8**
MA2 Magadan 56.51 37 P **P** **13 55 07.1 +0.3**
comp=Z,28nm,1.0s,baz=318,slow=5.3,SNR=5.1
MA2 LR LR 14 22 18.9
comp=Z,1µm,18.1s,baz=288,slow=39
MA2 Magadan 56.51 37 *ce*P **P** **13 55 06.4 -0.3**
MA2 pmax pmax
comp=Z,87nm,2.5s
MTE Manteigas 56.51 298 *eP* **P** **13 55 08.9 +1.7**
comp=Z,113nm,1.1s
MTE *e*pP **sP** **13 55 16.3 -0.2**
ASAJ Asahikawa 56.56 57 P **P** **13 55 06.9 -0.4**
comp=Z,22nm,1.1s,baz=290,slow=7.2,SNR=11
PVIS Viseu 56.64 299 *eP* **P** **13 55 09.8 +1.7**
comp=Z,95nm,1.1s
PVIS *e*pP **sP** **13 55 17.0 -0.4**
PCBR Castelo Branco 56.67 298 *eP* **P** **13 55 09.9 +1.7**
comp=Z,57nm,1.3s
PCBR *e*pP **sP** **13 55 17.1 -0.5**
PMRV Marv??o 56.77 297 *eP* **P** **13 55 10.1 +1.2**
comp=Z,62nm,1.7s
PMRV *e*pP **sP** **13 55 17.5 -0.8**
COI Coimbra 57.20 298 *eP* **P** **13 55 14.2 +2.3**
comp=Z,121nm,1.1s
COI *e*pP **sP** **13 55 20.8 -0.5**
PCAS Casmilo, Conde 57.32 298 *eP* **P** **13 55 14.4 +1.6**
comp=Z,60nm,1.6s
PMTG Montargil 57.50 297 *eP* **P** **13 55 14.9 +0.8**
comp=Z,43nm,1.5s
PMTG *e*pP **sP** **13 55 22.4 -1.1**
EVO Evora 57.56 296 *eP* **P** **13 55 15.9 +1.4**
comp=Z,78nm,1.1s
EVO *e*pP **sP** **13 55 23.0 -0.9**
PBEJ Beja 57.66 296 *eP* **P** **13 55 16.6 +1.4**
comp=Z,42nm,1.7s

ERM	**Erimo**	**57.70**	**59**	*ce*	P		**P**	**13 55 14.8**	**-0.6**	
ERM					pmax		pmax			
	comp=Z,126nm,1.7s									
PSBE	**So Bento**	**57.74**	**298**	*e*	P		**P**	**13 55 16.9**	**+1.1**	
	comp=Z,81nm,1.9s									
PVAQ	**Vaqueiros**	**57.80**	**295**	*e*	P		**P**	**13 55 16.9**	**+0.7**	
	comp=Z,76nm,1.7s									
PVAQ					epP		**sP**	**13 55 24.4**	**-1.1**	
PCVE	**Castro Verde**	**57.94**	**295**	*e*	P		**P**	**13 55 18.1**	**+0.9**	
	comp=Z,43nm,1.9s									
PBDV	**Barranco-do-Ve**	**58.02**	**295**	*e*	P		**P**	**13 55 19.2**	**+1.4**	
	comp=Z,87nm,1.8s									
PNCL	**Nicolau / Gran**	**58.10**	**296**	*e*	P		**P**	**13 55 19.9**	**+1.6**	
	comp=Z,62nm,2.0s									
PNCL					epP		**sP**	**13 55 26.9**	**-0.8**	
PMAFR	**Mafra**	**58.31**	**297**	*e*	P		**P**	**13 55 21.6**	**+1.8**	
	comp=Z,113nm,1.5s									
PMAFR					epP		**sP**	**13 55 28.8**	**-0.3**	
PTEO	**Sao Teotonio**	**58.47**	**296**	*e*	P		**P**	**13 55 22.7**	**+1.8**	
	comp=Z,55nm,1.1s									
KUR	**Kuril'sk**	**59.64**	**54**	*i*	P		**P**	**13 55 29.5**	**+0.6**	
KUR					pmax		pmax			
	comp=Z,141nm,1.1s									
SUMG	**Summit**	**59.80**	**340**	*i*	P		**P**	**13 55 31.8**	**+1.8**	
SUMG					pmax		pmax			
	comp=Z,94nm,1.0s									
SUMG	**Summit**	**59.80**	**340**	*i*	P		**P**	**13 55 31.8**	**+1.8**	
	comp=Z,94nm,1.0s									
SUMG	**Summit**	**59.80**	**340**	*i*	P		**P**	**13 55 31.8**	**+1.8**	
SUMG					IAmb		IAmb	13 55 32.6		
	comp=Z,94nm,1.0s									
BBKI	**Banjar Baru**	**60.08**	**121**		P		**P**	**13 55 30.3**	**-2.0**	
	comp=Z,11nm,0.9s									
BILL	**Bilibino**	**60.10**	**25**	*ce*	P		**P**	**13 55 32.8**	**+1.1**	
BILL				*i*				13 55 41.2		
BILL					pmax		pmax			
	comp=Z,294nm,1.3s									
MPSI	**Mapaga**	**61.07**	**114**		P		**P**	**13 55 37.8**	**-1.2**	
	comp=Z,19nm,0.9s									
ICESG	**Greenland Ices**	**61.76**	**337**	*i*	P		**P**	**13 55 44.7**	**+1.4**	
ICESG					IAmb		IAmb	13 55 45.1		
	comp=Z,50nm,1.0s									
TOA0	**Torodi Ar. Sit**	**62.12**	**266**		P		**P**	**13 55 45.5**	**-0.6**	
TORD	**Torodi Ar. Bea**	**62.12**	**266**		P		**P**	**13 55 45.6**	**-0.6**	
	comp=Z,78nm,1.0s,baz=43,slow=5.8,SNR=215									
TORD	**Torodi Ar. Bea**	**62.12**	**266**		P		**P**	**13 55 45.4**	**-0.8**	
TORD					pP		**pP**	**13 55 54.1**	**+1.0**	
PEA0B	**Petropavlovsk-**	**62.39**	**43**	*ce*	P		**P**	**13 55 46.5**	**-1.0**	
PEA0B	**Petropavlovsk-**	**62.39**	**43**		P		**P**	**13 55 47.4**	**-0.1**	
PEA0B					IAmb		IAmb	13 55 48.3		
	comp=Z,60nm,1.4s									
PETK	**Petropavlovsk-**	**62.39**	**43**		P		**P**	**13 55 47.2**	**-0.3**	
	comp=Z,6.8nm,0.9s,baz=318,slow=2.9,SNR=17									
MRSI	**Marisa**	**62.50**	**112**		P		**P**	**13 55 46.6**	**-2.0**	
	comp=Z,56nm,1.1s									
EUNU	**Eureka**	**62.64**	**355**		P		**P**	**13 55 50.7**	**+1.9**	
EUNU					IAmb		IAmb	13 55 59.7		
	comp=Z,61nm,1.6s									
PET	**Petropavlovsk**	**62.95**	**43**	*ce*	P		**P**	**13 55 50.0**	**-1.1**	
PET					pmax		pmax			
	comp=Z,84nm,1.0s									
TULEG	**Thule**	**63.73**	**349**		P		**P**	**13 55 55.7**	**-0.3**	
TULEG					IAmb		IAmb	13 55 57.8		
	comp=Z,68nm,1.2s									
TULEG	**Thule**	**63.73**	**349**	*i*	P		**P**	**13 55 56.8**	**+0.8**	
TULEG					IAmb		IAmb	13 55 57.5		
	comp=Z,60nm,1.1s									
ILULI	**Ilulissat**	**65.11**	**340**		P		**P**	**13 56 05.0**	**0.0**	
ILULI					pmax		pmax			
	comp=Z,83nm,0.9s									
ILULI	**Ilulissat**	**65.11**	**340**		P		**P**	**13 56 05.0**	**0.0**	
ILULI	**Ilulissat**	**65.11**	**340**	*i*	P		**P**	**13 56 06.5**	**+1.5**	
	comp=Z,85nm,0.9s									
ILULI	**Ilulissat**	**65.11**	**340**	*i*	P		**P**	**13 56 06.6**	**+1.5**	
ILULI					IAmb		IAmb	13 56 07.1		
	comp=Z,85nm,0.9s									
KOWA	**Kowa**	**65.96**	**271**		P		**P**	**13 56 11.6**	**+0.1**	
KOWA					pP		**sP**	**13 56 19.9**	**-1.0**	
SFJD	**Kangerlussuaq**	**66.35**	**338**	*i*	P		**P**	**13 56 13.8**	**+0.8**	
SFJD	**Kangerlussuaq**	**66.35**	**338**		P		**P**	**13 56 14.1**	**+1.0**	
SFJD					IAmb		IAmb	13 56 15.0		
	comp=Z,59nm,1.1s									
SFJD	**Kangerlussuaq**	**66.35**	**338**	*i*	P		**P**	**13 56 13.8**	**+0.8**	
SFJD	**Kangerlussuaq**	**66.35**	**338**	*i*	P		**P**	**13 56 13.9**	**+0.8**	
TNTI	**Ternate**	**66.42**	**108**		P		**P**	**13 56 13.6**	**-0.7**	
	comp=Z,38nm,1.3s									
WBSI	**Waikabubak, Su**	**67.64**	**122**		P		P	13 56 16.5	-5.6	
	comp=Z,62nm,1.3s									
NRS	**Narsarsuaq**	**68.10**	**331**	*i*	P		**P**	**13 56 24.8**	**+0.5**	
NRS					pmax		pmax			
	comp=Z,72nm,1.0s									
NRS	**Narsarsuaq**	**68.10**	**331**	*i*	P		**P**	**13 56 24.8**	**+0.5**	
	comp=Z,72nm,1.0s									
NRS	**Narsarsuaq**	**68.10**	**331**	*i*	P		**P**	**13 56 24.8**	**+0.5**	
NRS					IAmb		IAmb	13 56 26.6		
	comp=Z,72nm,1.0s									
DBIC	**Dimbokro**	**71.11**	**264**		P		**P**	**13 56 43.0**	**-0.6**	
	comp=Z,31nm,0.9s,baz=32,slow=7.3,SNR=27									
DBIC	**Dimbokro**	**71.11**	**264**		P		**P**	**13 56 43.0**	**-0.6**	
DBIC	**Dimbokro**	**71.11**	**264**		P		**P**	**13 56 43.4**	**-0.2**	
DBIC					pP		**pP**	**13 56 51.4**	**+0.8**	
DBIC					IAmb		IAmb	13 56 51.9		
	comp=Z,57nm,0.9s									
SOEI	**Soe**	**71.12**	**118**		P		**P**	**13 56 43.6**	**-0.1**	
	comp=Z,36nm,1.2s									
KIC	**Kosan Boka**	**71.20**	**264**	*e*	P		**P**	**13 56 43.5**	**-0.7**	
	comp=Z,411nm,1.6s									
TIC	**Toumodi**	**71.26**	**264**	*e*	P		**P**	**13 56 43.8**	**-0.7**	
LIC	**Lamto**	**71.51**	**264**	*e*	P		**P**	**13 56 45.3**	**-0.7**	
	comp=Z,193nm,1.2s									
TOLK	**Toolik Lake Re**	**71.71**	**13**		P		**P**	**13 56 47.8**	**+1.3**	
	baz=330									
TOLK	**Toolik Lake Re**	**71.71**	**13**		P		**P**	**13 56 47.8**	**+1.3**	
TOLK					IAmb		IAmb	13 56 49.0		
	comp=Z,63nm,0.9s									
TSUM	**Tsumeb**	**72.20**	**228**		P		**P**	**13 56 50.1**	**0.0**	
TSUM					IAmb		IAmb	13 56 51.3		
	comp=Z,45nm,1.1s									
COLD	**Coldfoot**	**72.82**	**14**		P		**P**	**13 56 54.3**	**+1.3**	
	baz=330,SNR=31									
COLD	**Coldfoot**	**72.82**	**14**		P		**P**	**13 56 54.4**	**+1.3**	
COLD					IAmb		IAmb	13 56 55.5		
	comp=Z,57nm,1.0s									
COLD					PcP		**PcP**	**13 57 08.6**	**-1.6**	
IMAR	**Indian Mountai**	**73.14**	**16**		P		**P**	**13 56 55.2**	**+0.2**	
BMAR	**Burnt Mountain**	**73.67**	**12**		P		**P**	**13 56 59.0**	**+0.9**	
C36M	**Paulatuk**	**74.10**	**4**		P		**P**	**13 57 00.8**	**+0.3**	
	baz=351									
C36M	**Paulatuk**	**74.10**	**4**		P		**P**	**13 57 01.0**	**+0.5**	
C36M					IAmb		IAmb	13 57 02.0		
	comp=Z,62nm,1.1s									
INK	**Inuvik**	**74.36**	**8**		IAmb		IAmb	13 57 04.4		
	comp=Z,64nm,1.1s									
MLY	**Manley**	**74.62**	**15**		P		**P**	**13 57 04.9**	**+1.3**	
	baz=330,SNR=9.0									
I23K	**Minto, Yukon-K**	**74.81**	**15**		P		**P**	**13 57 06.1**	**+1.4**	
	baz=331,SNR=13									
TTA	**Tatalina**	**75.16**	**19**		P		**P**	**13 57 07.5**	**+0.6**	
TTA					IAmb		IAmb	13 57 09.3		
	comp=Z,60nm,1.3s									
TTA					pP		**pP**	**13 57 14.8**	**+0.8**	
POKR	**Poker Flat Res**	**75.22**	**14**		P		**P**	**13 57 08.6**	**+1.5**	
	baz=332,SNR=22									
NEA2	**Nenana**	**75.35**	**15**		P		P	**13 57 08.7**	**+0.8**	
	baz=331,SNR=24									
TCOL	**CIGO, UAF Yank**	**75.35**	**14**		P		**P**	**13 57 09.1**	**+1.3**	
	baz=332,SNR=15									
COLA	**College**	**75.36**	**14**	*c i*	P		**P**	**13 57 08.8**	**+1.0**	
COLA					pmax		pmax			
	comp=Z,79nm,0.9s									
BOSA	**Boshof**	**75.56**	**217**		P		**P**	**13 57 08.4**	**-1.2**	
	comp=Z,32nm,1.1s,baz=34,slow=6.7,SNR=23									
BOSA	**Boshof**	**75.56**	**217**		P		**P**	**13 57 08.9**	**-0.7**	
BOSA					pP		**pP**	**13 57 16.8**	**+0.2**	
BOSA					IAmb		IAmb	13 57 17.7		
	comp=Z,80nm,1.1s									
CCB	**Clear Creek Bu**	**75.57**	**15**		IAmb		IAmb	13 57 11.0		
	comp=Z,84nm,1.8s									
ILAR	**Eielson Array**	**75.64**	**14**		P		**P**	**13 57 09.8**	**+0.3**	
	comp=Z,24nm,0.9s,baz=326,slow=4.1,SNR=116									
ILAR					LR		LR	14 36 02.5		
	comp=Z,2μm,18.6s,baz=321,slow=40									
ILAR	**Eielson Array**	**75.64**	**14**		P		**P**	**13 57 08.9**	**-0.6**	
ILAR	**Eielson Array**	**75.64**	**14**		P		**P**	**13 57 08.9**	**-0.6**	
KTH	**Kantishna Hill**	**75.86**	**16**		IAmb		IAmb	13 57 12.8		
	comp=Z,57nm,1.0s									
HDA	**Harding Lake**	**75.95**	**14**		P		**P**	**13 57 11.2**	**-0.1**	
	baz=333,SNR=14									
PPLA	**Purkeypile**	**76.13**	**17**		P		**P**	**13 57 13.2**	**+0.6**	
MCK	**McKinley**	**76.14**	**15**		P		**P**	**13 57 13.0**	**+0.5**	
	baz=331,SNR=7.0									
RND	**Reindeer**	**76.44**	**16**		P		**P**	**13 57 14.0**	**-0.2**	
RND					pmax		pmax			
	comp=Z,48nm,1.1s									
RND	**Reindeer**	**76.44**	**16**		P		**P**	**13 57 14.0**	**-0.2**	
RND					IAmb		IAmb	13 57 15.4		
	comp=Z,48nm,1.1s									
EGAK	**Eagle**	**76.67**	**12**		P		**P**	**13 57 16.0**	**+0.7**	
EGAK					IAmb		IAmb	13 57 17.7		
	comp=Z,42nm,1.1s									
SCRK	**Sand Creek**	**76.91**	**13**		P		**P**	**13 57 17.8**	**+0.9**	
	baz=335,SNR=29									
RIDG	**Independent Ri**	**76.96**	**14**		P		**P**	**13 57 17.6**	**+0.5**	
RIDG					IAmb		IAmb	13 59 36.3		
	comp=Z,38nm,0.9s									
CUT	**Chulitna**	**77.01**	**17**		P		**P**	**13 57 18.1**	**+0.8**	
	baz=330									
DHY	**Denali Highway**	**77.05**	**15**		IAmb		IAmb	13 57 20.0		
	comp=Z,50nm,1.0s									
DOT	**Dot Lake**	**77.19**	**13**		PcP		**PcP**	**13 57 29.4**	**+0.3**	
K27K	**Chicken**	**77.20**	**12**		P		**P**	**13 57 20.0**	**+1.6**	
	baz=337									
K27K	**Chicken**	**77.20**	**12**		IAmb		IAmb	13 57 21.2		
	comp=Z,59nm,1.1s									
DAWY	**Dawson**	**77.61**	**11**		IAmb		IAmb	13 57 23.0		
	comp=Z,76nm,1.1s									
GHO	**Glory Hole Cre**	**77.87**	**16**		IAmb		IAmb	13 57 24.3		
	comp=Z,74nm,1.0s									
FITZ	**Fitzroy Crossi**	**77.89**	**123**		P		**P**	**13 57 21.6**	**-1.1**	
FITZ					pP		**pP**	**13 57 29.9**	**0.0**	
L26K	**Log Cabin Wild**	**77.90**	**13**		P		**P**	**13 57 23.6**	**+1.3**	
	baz=336,SNR=13									
PMR	**Palmer**	**77.98**	**17**		IAmb		IAmb	13 57 24.4		
	comp=Z,42nm,1.0s									
BCAR	**Beaver Creek A**	**78.14**	**13**		P		**P**	**13 57 23.9**	**+0.2**	
SCM	**Sheep Creek Mo**	**78.17**	**16**		IAmb		IAmb	13 57 25.8		
	comp=Z,46nm,0.8s									
M24K	**Tolsona, Glenn**	**78.17**	**15**		P		**P**	**13 57 25.5**	**+1.6**	
	baz=334,SNR=22									
RC01	**Rabbit Creek A**	**78.28**	**17**		P		**P**	**13 57 25.0**	**+0.5**	
	baz=331									
KNRA	**Kununurra**	**78.35**	**120**		P		**P**	**13 57 24.1**	**-1.3**	
KLU	**Klutina**	**78.78**	**15**		IAmb		IAmb	13 57 29.8		
	comp=Z,53nm,1.0s									
N25K	**Chitina, Valde**	**78.95**	**15**		P		**P**	**13 57 29.5**	**+1.2**	
	baz=335									
BRLK	**Bradley Lake**	**79.16**	**18**		IAmb		IAmb	13 57 30.3		
	comp=Z,46nm,0.9s									
CNPM	**China Poot**	**79.28**	**19**		P		**P**	**13 57 30.2**	**+0.2**	
CNPM					IAmb		IAmb	13 58 10.3		
	comp=Z,113nm,1.6s									
VRDI	**Verde Repeater**	**79.52**	**14**		P		**P**	**13 57 32.6**	**+1.1**	
VRDI					IAmb		IAmb	13 57 33.8		
	comp=Z,56nm,1.3s									
TGL	**Tana Glacier**	**80.08**	**14**		P		**P**	**13 57 35.4**	**+1.0**	
MORW	**Morawa**	**80.17**	**137**		P		**P**	**13 57 33.8**	**-1.3**	
MORW					IAmb		IAmb	13 58 04.7		
	comp=Z,73nm,1.8s									
CTGM	**Chitina Glacie**	**80.17**	**13**		IAmb		IAmb	13 57 37.6		
	comp=Z,45nm,1.0s									
KDAK	**Kodiak Island**	**80.42**	**20**		P		**P**	**13 57 36.4**	**+0.2**	
KDAK					pmax		pmax			
	comp=Z,99nm,1.0s									
KDAK	**Kodiak Island**	**80.42**	**20**		P		**P**	**13 57 36.4**	**+0.2**	
SCHQ	**Schefferville**	**80.55**	**335**		P		**P**	**13 57 37.1**	**+0.2**	
	comp=Z,22nm,0.9s,baz=44,slow=7.4,SNR=8.5									
SCHQ	**Schefferville**	**80.55**	**335**		P		**P**	**13 57 37.7**	**+0.7**	
SUR	**Sutherland**	**80.83**	**218**		P		**P**	**13 57 38.8**	**0.0**	
SUR					IAmb		IAmb	13 57 48.3		
	comp=Z,58nm,1.2s									
HYT	**Haines Junctio**	**80.97**	**12**		IAmb		IAmb	13 57 42.2		
	comp=Z,65nm,1.1s									
YKA	**Yellowknife Ar**	**81.27**	**1**		P		**P**	**13 57 41.1**	**+0.5**	
	comp=Z,33nm,1.0s,baz=354,slow=5.7,SNR=46									
YKA	**Yellowknife Ar**	**81.27**	**1**	*i*	P		**P**	**13 57 41.0**	**+0.4**	
YKA					pmax		pmax			
	comp=Z,33nm,1.0s									
WHY	**Whitehorse**	**81.53**	**10**		P		**P**	**13 57 42.6**	**+0.4**	
FCC	**Fort Churchill**	**83.65**	**350**		P		**P**	**13 57 54.4**	**+1.3**	
FCC					pmax		pmax			
	comp=Z,47nm,1.0s									
FCC	**Fort Churchill**	**83.65**	**350**		P		**P**	**13 57 54.4**	**+1.3**	
FCC					IAmb		IAmb	13 57 55.4		
	comp=Z,47nm,1.0s									
DLBC	**Dease Lake**	**84.33**	**9**		LR		LR	14 38 49.2		
	comp=Z,974nm,20.9s,baz=338,slow=38									
DLBC	**Dease Lake**	**84.33**	**9**		P		**P**	**13 57 57.5**	**+0.7**	
WB0	**Warramunga Arr**	**85.06**	**119**		P		**P**	**13 57 58.8**	**-2.0**	
WB0					IAmb		IAmb	13 58 00.3		
	comp=Z,64nm,1.6s									
WRA	**Warramunga Arr**	**85.14**	**119**		P		**P**	**13 57 58.9**	**-2.2**	
	comp=Z,23nm,1.2s,baz=319,slow=4.5,SNR=47									
WRA					PP		**PP**	**14 01 16.1**	**-2.9**	
	comp=Z,7.8nm,1.2s,baz=318,slow=9.9,SNR=8.0									
WRA	**Warramunga Arr**	**85.14**	**119**		P		**P**	**13 57 59.5**	**-1.7**	
WRAB	**Tennant Creek**	**85.14**	**119**	*c*	P		**P**	**13 57 59.8**	**-1.4**	
WRAB					pmax		pmax			
	comp=Z,28nm,1.2s									
WRAB	**Tennant Creek**	**85.14**	**119**		P		**P**	**13 57 59.3**	**-1.9**	
WRAB					IAmb		IAmb	13 58 00.9		
	comp=Z,45nm,1.2s									
WB2	**Warramunga Arr**	**85.14**	**119**		IAmb		IAmb	13 58 00.9		
	comp=Z,48nm,1.2s									
WR0	**Warramunga Arr**	**85.29**	**119**		IAmb		IAmb	13 58 01.5		
	comp=Z,40nm,1.4s									
CHGQ	**Chibougamau**	**87.21**	**336**		P		**P**	**13 58 12.7**	**+1.7**	
	baz=30									
AS31	**Alice Springs**	**87.30**	**122**		P		**P**	**13 58 10.7**	**-1.2**	
ASAR	**Alice Springs**	**87.30**	**122**		P		**P**	**13 58 10.5**	**-1.3**	
	comp=Z,18nm,0.7s,baz=312,slow=4.9,SNR=116									
ASAR	**Alice Springs**	**87.30**	**122**		P		**P**	**13 58 10.4**	**-1.4**	
FORT	**Forrest**	**88.39**	**131**		P		**P**	**13 58 16.3**	**-0.4**	
FFC	**Flin Flon**	**88.53**	**353**		P		**P**	**13 58 17.9**	**+0.7**	
FFC					pmax		pmax			
	comp=Z,50nm,1.1s									
FFC	**Flin Flon**	**88.53**	**353**		P		**P**	**13 58 17.9**	**+0.7**	
BBB	**Bella Bella**	**90.69**	**9**		LR		LR	14 42 33.1		
	comp=Z,877nm,18.0s,baz=10,slow=38									
H59A	**Cadyville**	**91.49**	**333**		P		**P**	**13 58 32.6**	**+1.4**	
	baz=31									
ULM	**Lac du Bonnet**	**92.16**	**349**		P		**P**	**13 58 34.2**	**0.0**	
	comp=Z,17nm,1.1s,baz=0.4,slow=5.3,SNR=12									
ULM	**Lac du Bonnet**	**92.16**	**349**		P		**P**	**13 58 34.5**	**+0.3**	
ULM					IAmb		IAmb	13 58 35.6		
	comp=Z,28nm,1.1s									
AGMN	**Agassiz Nation**	**94.05**	**348**		P		**P**	**13 58 43.7**	**+0.7**	
	baz=14									
DGMT	**Dagmar**	**94.93**	**354**		P		**P**	**13 58 49.1**	**+2.0**	
	baz=7.5									
MDND	**Maddock**	**95.04**	**351**		P		**P**	**13 58 48.9**	**+1.3**	
	baz=11									
B05A	**Bryant**	**95.19**	**6**		P		**P**	**13 58 49.8**	**+1.6**	
	baz=353									
NEW	**Newport**	**95.47**	**2**		P		**P**	**13 58 51.0**	**+1.4**	
	baz=357									
EGMT	**Eagleton**	**95.71**	**357**		P		**P**	**13 58 52.1**	**+1.4**	
	baz=3.0									
LAO	**LASA Array**	**96.86**	**355**		P		**P**	**13 58 58.1**	**+2.1**	
	baz=5.9,SNR=5.5									
MSO	**Missoula**	**96.97**	**0**		P		**P**	**13 58 57.3**	**+0.8**	
	baz=360									
STKA	**Stephens Creek**	**97.78**	**124**		P		**P**	**13 58 58.9**	**-1.1**	
	comp=Z,2.2nm,0.7s,baz=305,slow=11,SNR=4.7									
Q57A	**Strasburg**	**98.11**	**333**		P		**P**	**13 59 01.6**	**-0.1**	
	baz=28									
ECSD	**EROS Data Cent**	**98.61**	**348**		P		Pdif	13 59 04.3	+0.5	
	baz=14,SNR=5.6									
RSSD	**Black Hills**	**99.22**	**353**		Pdiff		**Pdif**	**13 59 07.9**	**+1.0**	
	baz=7.7									
PDAR	**Pinedale Array**	**100.95**	**357**		P		**Pdif**	**13 59 15.9**	**+1.3**	
	comp=Z,0.2nm,0.4s,baz=26,slow=6.3,SNR=2.0									
TXAR	**Lajitas Array**	**113.80**	**351**		PKP		**PKiKP**	**14 04 04.2**	**+0.3**	
	comp=Z,1.4nm,1.0s,baz=56,slow=3.2,SNR=7.2									
TXAR					PKKPbc		**PKKPbc**	**14 14 45.0**	**-0.8**	
	comp=Z,0.4nm,0.7s,baz=180,slow=4.2,SNR=4.3									
SDBA	**SAO DESIDERIO**	**114.45**	**273**	*e*	P		**Pdif**	**14 00 16.4**	**+1.7**	
SMTB	**Santa Maria do**	**114.57**	**277**	*e*	P		**Pdif**	**14 00 15.3**	**+0.1**	
SNAA	**Sanae**	**118.23**	**200**		PKPdf		**PKPdf**	**14 04 10.4**	**-0.5**	
VNA2	**Neumayer--Watz**	**119.14**	**201**		PKPdf		**PKiKP**	**14 04 13.3**	**+0.6**	
VNA1	**Neumayer--Stat**	**119.27**	**202**		PKPdf		**PKiKP**	**14 04 13.0**	**+0.1**	
VNA3	**Neumayer Olymp**	**119.95**	**201**		PKPdf		**PKPdf**	**14 04 13.5**	**-0.6**	
VAO	**Valinhos**	**121.75**	**264**	*e*	P		**PKPdf**	**14 04 19.2**	**0.0**	
ARAG	**Araguaiana, MT**	**121.84**	**274**	*e*	P		**PKiKP**	**14 04 20.6**	**+1.1**	
CLDB	**Colider**	**122.27**	**281**	*e*	P		**PKiKP**	**14 04 21.8**	**+1.3**	
PCMB	**Pacaembu**	**124.50**	**267**	*e*	P		**PKiKP**	**14 04 24.9**	**+0.2**	
ROSC	**El Rosal**	**124.91**	**310**		PKP		**PKPdf**	**14 04 26.0**	**0.0**	
	comp=Z,7.8nm,0.3s,baz=105,slow=7.5,SNR=6.3									
PP1B	**Ponte de Pedra**	**125.34**	**274**	*e*	P		**PKiKP**	**14 04 27.3**	**+0.8**	
VNDA	**Vanda**	**126.54**	**164**		PKP		**PKPdf**	**14 04 25.6**	**-1.1**	
	comp=Z,2.4nm,0.9s,baz=286,slow=5.6,SNR=11									
VNDA					PP		**PP**	**14 06 19.7**	**-3.7**	
	comp=Z,1.5nm,1.2s,baz=233,slow=7.0,SNR=3.8									
PTGB	**Pitanga**	**126.66**	**265**	*e*	P		**PKiKP**	**14 04 29.6**	**+0.6**	
SAML	**Samuel**	**126.86**	**288**	*e*	P		**PKiKP**	**14 04 30.5**	**+0.9**	
AQDB	**Aquidauana**	**127.50**	**271**	*e*	P		**PKiKP**	**14 04 31.3**	**+0.6**	
PTLB	**Pontes e Lacer**	**127.56**	**279**	*e*	P		**PKiKP**	**14 04 31.6**	**+0.7**	
CNLB	**Canela**	**127.75**	**259**	*e*	P		**PKiKP**	**14 04 31.7**	**+0.7**	
ETMB	**Extrema**	**129.71**	**290**	*e*	P		**PKiKP**	**14 04 36.3**	**+0.9**	
CPSB	**Cacapava Do Su**	**130.25**	**259**	*e*	P		**PKiKP**	**14 04 35.6**	**-0.4**	
OTAV	**Otavalo**	**131.05**	**310**	*e*	P		**PKiKP**	**14 04 38.7**	**0.0**	
CPUP	**Villa Florida**	**131.62**	**266**		PKP		**PKPdf**	**14 04 36.8**	**-1.1**	
	comp=Z,16nm,1.0s,baz=88,slow=3.1,SNR=13									
LPAZ	**La Paz**	**135.13**	**284**		PKP		**PKPdf**	**14 04 45.4**	**-0.1**	
	comp=Z,2.7nm,0.6s,baz=34,slow=5.9,SNR=12									
LPAZ	**La Paz**	**135.13**	**284**	*e*	P		**PKPdf**	**14 04 45.6**	**+0.1**	
LVC	**Limon Verde**	**139.18**	**277**	*e*	P		**PKiKP**	**14 04 54.0**	**-0.7**	
CO02	**Combarbal**	**144.55**	**266**		PKPdf		PKPbc	14 05 00.9	+0.7	
BO02	**Sierra Bellavi**	**145.48**	**260**				**PKPab**	**14 05 03.6**	**+0.3**	
PLCA	**Paso Flores**	**146.47**	**250**		PKPbc		**PKPbc**	**14 05 05.5**	**-0.5**	
	comp=Z,34nm,0.9s,baz=109,slow=4.0,SNR=48									
PLCA	**Paso Flores**	**146.47**	**250**				**PKPab**	**14 05 07.0**	**+0.2**	
PLCA	**Paso Flores**	**146.47**	**250**	*e*	P		**PKPbc**	**14 05 06.3**	**+0.4**	

*IDC **22** 13:54:58.5±0.7,36.70N×137.79E,h0km,mb4.0/11, mb1 4.0/16,mb1mx3.9/48,mbtmp3.9/16,ML3.2/4, Error ellipse: s-maj=16.4km s-min=6.6km az=32.0*
*NEIC **22** 13:54:58.7±2.2,36.82N±0.04×137.87E±0.05,h7km±7km, mb4.6/6, Error ellipse: s-maj=6.4km s-min=4.7km az=60.0*
*JMA **22** 13:54:59.8,36.75N×137.90E,h3km±1km,M3.8*
JMA Felt III J1.

ISC 22 13:54:59.8±0.5,36°67N±0.05×137°92E±0.04,h10km,n44,
σ1s44/48,mb4.1/14,1D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MJB9	**Matsu-Tunnel**	**0.26**	**118**			**Pg**	**13 55 05.9**	**+0.7**
MAJO	**Matsushiro**	**0.27**	**119**	P	P	**P**	**13 55 06.0**	**+0.9**
MAJO	**Matsushiro**	**0.

MKAR Makanchi Array 44.00 305 P **P** **14 05 33.4 -0.2**
0.6nm,0.5s,baz=88,slow=9.1,SNR=8.5
WRA Warramunga Arr 53.12 185 P **P** **14 06 39.9 -2.8**
0.1nm,0.4s,baz=360,slow=7.6,SNR=6.2
FINES FINESS Array B 70.86 332 P **P** **14 08 39.0 -0.4**
0.4nm,0.4s,baz=46,slow=5.5,SNR=7.7
AKASG Malin Array Be 75.61 322 P **P** **14 09 06.2 -1.0**
0.2nm,0.3s,baz=49,slow=6.1,SNR=2.0
NOA NORSAR Array B 76.56 336 P **P** **14 09 12.0 -0.5**
0.8nm,0.7s,baz=44,slow=5.5,SNR=2.3

*IDC **22** 14:06:40.4±1.5,35.58N×141.24E,h0km,mb3.8/5, mb1 3.8/8,mb1mx3.5/48,mbtmp3.7/8,ML3.0/3,Error ellipse: s-maj=45.8km s-min=20.6km az=79.0*
*JMA **22** 14:06:46.6±0.2,35.53N×140.99E,h38km±1km,M3.2*
ISC 22 14:06:44.6±0.9,35.55N±0.05×141.25E±0.07,h33km,n26, σ0=95/20,mb3.9/5,1D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.35**	**296**	ǁP	**Pn**	**14 06 53.8**	**+0.4**
CHOJ				S	**Sb**	**14 06 58.9**	**+0.1**
JSMT	**Sammumatsuo**	**0.66**	**278**	P	**Pn**	**14 06 56.9**	**-0.7**
JIHU	**Itakohorinouch**	**0.72**	**306**	P	**Pb**	**14 06 58.8**	**0.0**
JIHU				S	**Sn**	**14 07 07.9**	**-0.4**
KTR	**Katsuura**	**0.86**	**243**	P	**Pb**	**14 06 59.8**	**-1.3**
JCN	**Nagara**	**0.86**	**262**	P	**Pb**	**14 07 00.4**	**-0.8**
BSO1	**Boso 1**	**0.92**	**194**	P	**Pb**	**14 07 01.9**	**+0.1**
BSO4	**Boso 4**	**0.93**	**233**	P	**Pb**	**14 07 01.0**	**-1.2**
BSO3	**Boso 3**	**0.96**	**219**	P	**Pb**	**14 07 01.6**	**-1.0**
JYT	**Yasato**	**1.09**	**309**	P	**Pb**	**14 07 03.6**	**-1.4**
JHJ	**Hachijo jima 2**	**2.71**	**207**	Pn	**Pn**	**14 07 25.1**	**-0.7**
	14nm,0.3s,baz=318,slow=22,SNR=22						
JHJ				Sn	**Sn**	**14 07 57.0**	**-0.5**
	64nm,0.3s,baz=84,slow=22,SNR=11						
ASAJ	**Asahikawa**	**8.62**	**6**	Pn	**Pn**	**14 08 45.3**	**-1.7**
	0.1nm,0.3s,baz=195,slow=10,SNR=1.8						
KSRS	**Korea Array**	**10.89**	**284**	Pn	**Pn**	**14 09 18.1**	**0.0**
	0.1nm,0.3s,baz=97,slow=13,SNR=1.1						
H11N2	**WAKE ISLAND Hy**	**27.54**	**118**	T	T	14 41 37.0	
	baz=310,slow=75,SNR=29						
H11N1	**WAKE ISLAND Hy**	**27.54**	**118**	T	T	14 41 39.4	
	baz=310,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**27.55**	**118**	T	T	14 41 33.7	
	baz=310,slow=75,SNR=33						
H11S1	**WAKE ISLAND Hy**	**28.20**	**120**	T	T	14 42 23.0	
	baz=312,slow=76,SNR=44						
H11S3	**WAKE ISLAND Hy**	**28.20**	**120**	T	T	14 42 23.1	
	baz=312,slow=76,SNR=41						
H11S2	**WAKE ISLAND Hy**	**28.21**	**120**	T	T	14 42 28.8	
	baz=312,slow=76,SNR=41						
ZALV	**Zalesovo Beam**	**42.83**	**314**	P	**P**	**14 14 39.2**	**0.0**
	0.5nm,0.5s,baz=99,slow=9.1,SNR=2.1						
MKAR	**Makanchi Array**	**44.81**	**303**	P	**P**	**14 14 55.7**	**+0.4**
	0.3nm,0.6s,baz=83,slow=9.6,SNR=4.8						
WRA	**Warramunga Arr**	**55.57**	**188**	P	**P**	**14 16 17.9**	**+1.0**
	0.8nm,0.7s,baz=5.6,slow=7.9,SNR=6.2						
STKA	**Stephens Creek**	**67.07**	**180**	P	**P**	**14 17 35.6**	**+1.1**
	1.5nm,0.8s,baz=332,slow=5.6,SNR=4.7						
FINES	**FINESS Array B**	**70.06**	**332**	P	**P**	**14 17 54.3**	**+1.3**
	1.5nm,1.0s,baz=54,slow=7.1,SNR=1.9						
H03N2	**Juan Fernandez**	**146.97**	**98**	T	T	17 11 01.9	
	baz=290,slow=76,SNR=18						
H03N3	**Juan Fernandez**	**146.98**	**98**	T	T	17 11 05.9	
	baz=290,slow=76,SNR=18						
H03N1	**Juan Fernandez**	**146.99**	**98**	T	T	17 11 04.2	
	baz=290,slow=76,SNR=17						

IDC 22 14:08:31.0±12.0,53.35N×158.45E,h0km,Error ellipse: s-maj=89.7km s-min=9.9km az=62.0,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I44RU	**PETROPAVLOVSK-**	**0.51**	**242**	*i*		14 12 20.0	
	baz=60,slow=335,SNR=5.9						
PETK	**Petropavlovsk-**	**0.51**	**243**	Pg	Pg	14 08 40.9	0.0
	0.6nm,0.3s,baz=66,slow=18,SNR=20						
I45RU	**USSURIYSK INFR**	**19.60**	**253**	*i*		16 07 20.0	
	baz=56,slow=382,SNR=1.9						
I30JP	**ISUMI INFRASON**	**22.11**	**223**	*i*		16 34 10.0	
	baz=31,slow=315,SNR=0.9						
I34MN	**SONGINO INFRAS**	**32.89**	**282**	*i*		17 43 10.0	
	baz=59,slow=340,SNR=1.2						

IDC 22 14:10:25.2±1.8,2.44N×127.33E,h0km,mb3.4/4, mb1 3.7/4,mb1mx3.4/40,mbtmp3.5/4,Error ellipse: s-maj=101.6km s-min=26.5km az=70.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.47**	**185**	P	P	14 15 05.3	+0.6
	1.1nm,0.9s,baz=344,slow=10,SNR=1.4						
WRA	**Warramunga Arr**	**23.28**	**163**	P	P	14 15 35.1	+0.4
	2.2nm,0.6s,baz=342,slow=11,SNR=27						
ASAR	**Alice Springs**	**26.73**	**166**	P	P	14 16 06.2	-0.4
	0.4nm,0.7s,baz=355,slow=7.9,SNR=7.2						
ASAR				PcP	PcP	14 19 28.9	-1.3
	0.3nm,0.7s,baz=350,slow=2.2,SNR=2.3						
MKAR	**Makanchi Array**	**58.95**	**325**	P	P	14 20 26.9	+0.5
	0.3nm,0.6s,baz=114,slow=8.7,SNR=2.5						

*JMA **22** 14:18:20.9±0.2,39.59N×143.65E,h18km±4km,M4.3*
*IDC **22** 14:18:21.2±0.9,39.57N×143.44E,h0km,mb4.0/15, mb1 4.0/21,mb1mx3.9/52,mbtmp4.0/21,ML3.5/4,Error ellipse: s-maj=21.0km s-min=16.4km az=105.0*
*MOS **22** 14:18:23.5±1.3,39.57N×143.38E,h35km,mb4.4/13,Error ellipse: s-maj=9.6km s-min=5.8km az=93.2*
*NEIC **22** 14:18:24.8±2.5,39.53N±0.06×143.44E±0.10,h31km±7km, mb4.3/5,Error ellipse: s-maj=12.8km s-min=6.9km az=126.0*
ISC 22 14:18:22.1±3.0,39.55N±0.05×143.59E±0.05,h14km±18km, n100,σ1=50/109,mb4.2/28,6C-1D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.37**	**272**	P	**Pn**	**14 18 46.1**	**-0.6**
MIYJ				*eS*	**Sb**	**14 19 04.0**	**-0.8**
JTH	**Tanohata**	**1.39**	**287**	P	**Pn**	**14 18 46.0**	**-1.0**
JTH				*eS*	**Sb**	**14 19 04.9**	**-0.4**
OFUJ	**Ofunato**	**1.56**	**253**	P	**Pn**	**14 18 49.0**	**-0.4**
JKEN	**Kujiedanarisaw**	**1.59**	**295**	P	**Pn**	**14 18 48.7**	**-1.0**
JOM	**Ohasama**	**1.78**	**268**	P	**Pn**	**14 18 52.5**	**+0.1**
JOM				*eS*	**Sb**	**14 19 16.0**	**-0.6**
JANG	**Nango**	**1.79**	**298**	P	**Pn**	**14 18 51.7**	**-0.9**
JMK	**Ichinoseki**	**1.93**	**253**	P	**Pn**	**14 18 54.5**	**0.0**
JMK				*eS*	**Sn**	**14 19 18.5**	**0.0**
JIO	**Ouri**	**2.06**	**239**	P	**Pn**	**14 18 55.9**	**-0.3**
JRG	**Rokugo**	**2.29**	**267**	P	**Pn**	**14 18 59.7**	**+0.3**
JTM	**Tenmabayashi**	**2.29**	**303**	P	**Pn**	**14 18 59.2**	**-0.3**
JTM				*eS*	**Sn**	**14 19 25.8**	**-1.7**
JTM	**Tenmabayashi**	**2.29**	**303**	Pn	**Pn**	**14 18 59.5**	**0.0**
ERM	**Erimo**	**2.49**	**353**	*ce*P	**Pn**	**14 19 02.7**	**+0.6**
ERM				pmax	pmax		
	comp=Z,76nm,0.7s						
ERM	**Erimo**	**2.49**	**353**		**Pn**	**14 19 02.7**	**+0.6**
JYK	**Kaneyama**	**2.59**	**257**	P	**Pn**	**14 19 04.0**	**+0.5**
JOT	**Ohata**	**2.67**	**314**	P	**Pn**	**14 19 04.6**	**0.0**
JMM	**Marumori**	**2.76**	**233**	Pn	**Pn**	**14 19 05.5**	**-0.3**
JNBK	**Urakawa-nobuka**	**2.80**	**347**	P	**Pn**	**14 19 07.2**	**+0.8**
JNBK				*eS*	**Sn**	**14 19 39.6**	**-0.4**
JKB	**Kayabe**	**3.04**	**321**	P	**Pn**	**14 19 11.1**	**+1.4**
JCH	**Churui**	**3.07**	**357**	P	**Pn**	**14 19 10.0**	**-0.1**
JFT	**Otama**	**3.26**	**233**	P	**Pn**	**14 19 13.2**	**+0.5**
JFT				*eS*	**Sn**	**14 19 50.6**	**-0.7**
JEW	**Eniwo**	**3.67**	**335**	Pn	**Pn**	**14 19 19.9**	**+1.6**
NMR	**Nemuro--Hokkai**	**4.14**	**22**	*e*P	**Pn**	**14 19 24.4**	**-0.5**
NMR				*eS*	**Sn**	**14 20 10.3**	**-2.8**
JYT	**Yasato**	**4.26**	**220**	Pn	**Pn**	**14 19 26.3**	**-0.2**
GLVR	**Golovnino**	**4.43**	**18**	*e*P	**Pn**	**14 19 29.2**	**+0.4**
GLVR				*eS*	**Sn**	**14 20 18.2**	**-2.0**
GLVR				smax	smax		
	comp=E,142nm,0.3s						
GLVR				smax	smax		
	comp=N,347nm,0.5s						
JKA	**Kamikawa-asahi**	**4.63**	**351**		**Pn**	**14 19 32.7**	**+1.2**
ASAJ	**Asahikawa**	**4.63**	**351**	Pn	**Pn**	**14 19 32.2**	**+0.7**
	comp=N,2.3nm,0.3s,baz=201,slow=17,SNR=32						
ASAJ				Sn	**Sn**	**14 20 20.2**	**-4.7**
	comp=N,1.4nm,0.3s,baz=271,slow=21,SNR=2.1						
RUSJ	**Misakicho**	**4.72**	**15**	*e*P	**Pn**	**14 19 33.4**	**+0.6**
RUSJ				*eS*	**Sn**	**14 20 26.4**	**-0.9**
GRPR	**Tuman**	**4.73**	**19**	*e*P	**Pn**	**14 19 32.0**	**-1.0**
GRPR				*eS*	**Sn**	**14 20 23.5**	**-4.1**
GRPR				smax	smax		
	comp=E,265nm,0.2s						
GRPR				smax	smax		
	comp=N,663nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.80**	**20**	*e*P	**Pn**	**14 19 34.6**	**+0.8**
YUK				*eS*	**Sn**	**14 20 26.0**	**-3.1**
YUK				pmax	pmax		
	comp=Z,95nm,0.2s						
YUK				smax	smax		
	comp=N,271nm,0.4s						
YUK				smax	smax		
	comp=E,192nm,0.5s						
MJB9	**Matsu-Tunnel**	**5.20**	**237**	Pn	**Pn**	**14 19 37.8**	**-1.6**
JGF	**Kuroka**	**6.32**	**233**	Pn	**Pn**	**14 19 55.3**	**+0.4**
KUR	**Kuril'sk**	**6.50**	**28**	P	Pn	14 19 51.0	-6.3
KUR				*eS*	**Sn**	**14 21 06.4**	**-4.8**
KUR				pmax	pmax		
	comp=Z,64nm,0.6s						
KUR				smax	smax		
	comp=N,84nm,0.6s						
KUR				smax	smax		
	comp=E,62nm,0.5s						
INU	**Inuyama**	**6.70**	**233**	Pn	**Pn**	**14 20 00.3**	**+0.3**
JHJ	**Hachijo jima 2**	**7.11**	**207**	Pn	**Pn**	**14 20 05.6**	**0.0**
	comp=E,9.0nm,0.3s,baz=232,slow=19,SNR=1.2						
JHJ				Sn	**Sn**	**14 21 19.5**	**-6.7**
	comp=E,9.4nm,0.3s,baz=66,slow=7.5,SNR=2.1						
JWT	**Wachi**	**7.78**	**239**	Pn	**Pn**	**14 20 15.6**	**+0.8**
JHS	**Saijyo**	**9.50**	**245**	Pn	**Pn**	**14 20 39.7**	**+1.3**
JMN	**Monobe**	**9.72**	**236**	Pn	**Pn**	**14 20 41.1**	**-0.4**
USA0B	**Ussuriysk Arra**	**9.82**	**302**	P	**Pn**	**14 20 42.5**	**-0.3**
USA0B	**Ussuriysk Arra**	**9.82**	**302**	Pn	**Pn**	**14 20 42.5**	**-0.3**
USRK	**Ussuriysk Ar.**	**9.82**	**302**	Pn	**Pn**	**14 20 42.0**	**-0.8**
	baz=98,slow=13,SNR=1.6						
USRK	**Ussuriysk Ar.**	**9.82**	**302**	P	**Pn**	**14 20 42.0**	**-0.8**
JNU	**Nakatsu**	**12.08**	**242**	Pn	**Pn**	**14 21 13.3**	**-0.6**
KSRS	**Korea Array**	**12.45**	**265**	Pn	**Pn**	**14 21 20.0**	**+1.2**
	comp=E,0.1nm,0.3s,baz=90,slow=12,SNR=8.5						
KLR	**Kul'dur**	**12.85**	**323**	Pn	**Pn**	**14 21 24.0**	**-0.1**
	comp=E,0.1nm,0.3s,baz=132,slow=14,SNR=3.6						
KLR	**Kul'dur**	**12.85**	**323**	*i* P	**Pn**	**14 21 20.8**	**-3.3**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PETK	**Petropavlovsk-**	**16.66**	**31**	Pn	**P**	**14 22 18.1**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=205,slow=9.5,SNR=1.7						
PETK	**Petropavlovsk-**	**16.66**	**31**	P	**P**	**14 22 18.5**	**+1.2**
ZEA	**Zeya**	**18.03**	**327**	*e*P	**Pn**	**14 22 31.8**	**-0.2**
ZEA				pmax	pmax		
	comp=N,10.0nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA	**Hailar**	**19.54**	**308**	*i* P	**P**	**14 22 47.1**	**-2.0**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SEY	**Seymchan**	**24.01**	**10**	P	**P**	**14 23 37.6**	**+1.5**
	comp=Z,3.2nm,0.7s,baz=195,slow=8.9,SNR=12						
SEY	**Seymchan**	**24.01**	**10**	*i* P	**P**	**14 23 37.8**	**+1.7**
YAK	**Yakutsk**	**24.06**	**344**	*i* P	**P**	**14 23 35.4**	**-1.1**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**27.48**	**300**	*ce*P	**P**	**14 24 07.2**	**-0.7**
ULN				pmax	pmax		
	comp=Z,12nm,2.5s						
SONM	**Songino Array**	**27.92**	**300**	P	**P**	**14 24 12.0**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=93,slow=8.4,SNR=10						
SONM	**Songino Array**	**27.92**	**300**	P	**P**	**14 24 11.9**	**+0.2**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**27.92**	**300**	P	**P**	**14 24 11.9**	**+0.2**
H11N2	**WAKE ISLAND Hy**	**28.15**	**128**	T	T	14 54 36.0	
	baz=318,slow=75,SNR=49						
H11N1	**WAKE ISLAND Hy**	**28.16**	**128**	T	T	14 54 26.5	
	baz=318,slow=75,SNR=38						
H11N3	**WAKE ISLAND Hy**	**28.16**	**128**	T	T	14 54 40.4	
	baz=318,slow=75,SNR=42						
H11S1	**WAKE ISLAND Hy**	**28.96**	**130**	T	T	14 55 45.5	
	baz=320,slow=76,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**28.97**	**130**	T	T	14 55 44.1	
	baz=320,slow=76,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**28.98**	**130**	T	T	14 55 45.5	
	baz=320,slow=76,SNR=6.4						
TLY	**Talaya**	**30.08**	**307**	*i* P	**P**	**14 24 28.5**	**-2.3**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BILL	**Bilibino**	**31.14**	**16**	*e*P	**P**	**14 24 42.5**	**+2.6**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	**Tiksi**	**33.03**	**352**	*i* P	**P**	**14 24 56.1**	**-0.3**
ZAA0	**Zalesovo Array**	**41.54**	**310**	P	**P**	**14 26 09.4**	**+0.6**
ZALV	**Zalesovo Beam**	**41.54**	**310**	P	**P**	**14 26 08.8**	**0.0**
	comp=Z,2.2nm,0.5s,baz=87,slow=8.3,SNR=12						
ZALV	**Zalesovo Beam**	**41.54**	**310**	P	**P**	**14 26 09.1**	**+0.3**
ZALV	**Zalesovo Beam**	**41.54**	**310**	P	**P**	**14 26 09.1**	**+0.3**
NRIK	**Noril'sk**	**41.74**	**334**	*i* P	**P**	**14 26 11.3**	**+1.1**
NRIK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**43.80**	**255**	P	**P**	**14 26 28.7**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=43,slow=7.7,SNR=7.4						
MK31	**Makanchi Array**	**44.28**	**300**	*ce*P	**P**	**14 26 31.2**	**0.0**
MK31	**Makanchi Array**	**44.28**	**300**	P	**P**	**14 26 29.8**	**-1.4**
MK31				lAmb	lAmb	14 26 32.6	
	comp=Z,4.2nm,0.9s						
MKAR	**Makanchi Array**	**44.28**	**300**	P	**P**	**14 26 31.7**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=83,slow=9.3,SNR=23						
MKAR	**Makanchi Array**	**44.28**	**300**	*ce*P	**P**	**14 26 31.7**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**44.28**	**300**	P	**P**	**14 26 29.9**	**-1.3**
KURK	**Kurchatov**	**45.77**	**307**	*ce*P	**P**	**14 26 42.7**	**-0.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK	**Kurchatov**	**45.77**	**307**	P	**P**	**14 26 41.5**	**-1.4**
KURBB	**Kurchatov Arra**	**45.85**	**306**	P	**P**	**14 26 43.7**	**+0.2**
	comp=Z,6.1nm,0.8s,baz=81,slow=8.1,SNR=46						
ILAR	**Eielson Array**	**46.46**	**34**	P	**P**	**14 26 50.1**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=255,slow=7.5,SNR=4.7						
BRVK	**Borovoye**	**50.23**	**311**	*ce*P	**P**	**14 27 17.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AAK	**Ala-Archa**	**50.83**	**297**	*i* P	**P**	**14 27 19.9**	**-2.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARU	**Arti**	**55.63**	**318**	*d* iP	**P**	**14 27 58.2**	**+1.0**
ARU				S	**S**	**14 35 44.0**	**+1.6**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ABKAR	**Akbulak array**	**57.65**	**310**	P	**P**	**14 28 12.4**	**+0.8**
ABKAR				lAmb	lAmb	14 28 13.0	
	comp=Z,3.3nm,0.8s						
ABKAR	**Akbulak array**	**57.65**	**310**	P	**P**	**14 28 11.4**	**-0.2**
WRA	**Warramunga Arr**	**59.81**	**190**	P	**P**	**14 28 27.7**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=7.5,slow=7.0,SNR=3.5						
ASAR	**Alice Springs**	**63.53**	**190**	P	**P**	**14 28 53.7**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=15,slow=5.2,SNR=5.1						
ASAR	**Alice Springs**	**63.53**	**190**	P	**P**	**14 28 51.4**	**-0.6**
ASAR	**Alice Springs**	**63.53**	**190**	P	**P**	**14 28 51.4**	**-0.6**
OBN	**Obninsk**	**67.11**	**323**	*e*P	**P**	**14 29 13.9**	**-0.9**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
FINES	**FINESS Array B**	**67.39**	**333**	P	**P**	**14 29 17.4**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=44,slow=8.5,SNR=7.7						
FINES	**FINESS Array B**	**67.39**	**333**	P	**P**	**14 29 15.5**	**-1.0**
FINES	**FINESS Array B**	**67.39**	**333**	P	**P**	**14 29 15.5**	**-1.0**
KIV	**Kislovodsk**	**70.55**	**311**	*e*P	**P**	**14 29 35.2**	**-1.4**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s						
KBZ	**Khabaz**	**70.56**	**311**	P	**P**	**14 29 37.9**	**+1.4**
	comp=Z,1.9nm,0.9s,baz=96,slow=2.4,SNR=3.5						
HFS	**Hagfors**	**72.49**	**336**	P	**P**	**14 29 48.6**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=57,slow=11,SNR=7.2						
NB2	**NORSAR Subarra**	**72.52**	**338**	P	**P**	**14 29 49.2**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**72.52**	**339**	P	**P**	**14 29 49.0**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=38,slow=6.0,SNR=8.0						
AKASG	**Malin Array Be**	**73.35**	**323**	P	**P**	**14 29 53.4**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=46,slow=5.7,SNR=7.0						
PDAR	**Pinedale Array**	**74.69**	**47**	P	**P**	**14 30 03.4**	**+1.9**
	comp=Z,0.2nm,0.4s,baz=289,slow=5.6,SNR=1.8						

*IDC **22** 14:19:29.7±0.9,36.62N×137.81E,h0km,mb3.9/7, mb1 4.1/7,mb1mx3.6/51,mbtmp3.9/7,Error ellipse: s-maj=22.4km s-min=7.3km az=17.0*
*JMA **22** 14:19:32.7±0.1,36.69N×137.97E,h15km±1km,M3.6 Broadband fault plane solution: P waves. NP1: φs=42.0000°,δ43.0000°,λ101.0000°. NP2: φs=207.0000°,δ48.0000°,λ80.0000°. Principal axes: T Plg82.0000°, Azm52.0000°; N Plg8.0000°, Azm214.0000°; P Plg2.0000°, Azm304.0000°;*
JMA Felt II J1.
ISC 22 14:19:31.3±0.9,36.6N±0.1×137.85E±0.08,h10km,n16, σ0=40/19,mb3.9/7,2D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNG	**Nsakai**	**0.29**	**136**	ǁP	**Pb**	**14 19 38.7**	**+0.1**
JNG				S	**Sb**	**14 19 42.9**	**-0.5**
MAJO	**Matsushiro**	**0.29**	**103**	P	**Pg**	**14 19 37.6**	**+0.4**
MAJO	**Matsushiro**	**0.29**	**103**	Pn	**Pg**	**14 19 37.6**	**+0.4**
MAT	**Matsushiro**	**0.29**	**103**	P	**Pg**	**14 19 37.5**	**+0.3**
MAT				S	**Sg**	**14 19 41.1**	**-0.1**
MAT	**Matsushiro**	**0.29**	**103**	P	**Pg**	**14 19 37.5**	**+0.3**
MAT				S	**Sg**	**14 19 41.1**	**-0.1**
MJAR	**Matsushiro Arr**	**0.30**	**104**	Pg	**Pg**	**14 19 37.5**	**+0.3**
	158nm,0.3s,baz=104,slow=28,SNR=159						
MJAR				Lg	Lg	14 19 41.2	
	150nm,0.3s,baz=345,slow=29,SNR=20						
MJAR	**Matsushiro Arr**	**0.30**	**104**	P	**Pg**	**14 19 37.5**	**+0.3**
MJAR	**Matsushiro Arr**	**0.30**	**104**	Pn	**Pg**	**14 19 37.6**	**+0.4**
JGK	**Kuni**	**0.64**	**94**	ǁP	**Pg**	**14 19 43.5**	**-0.1**
WRA	**Warramunga Arr**	**56.34**	**184**	P	**P**	**14 29 11.7**	**-0.8**
	0.8nm,0.8s,baz=0.3,slow=7.5,SNR=6.8						
ASAR	**Alice Springs**	**60.07**	**184**	P	**P**	**14 29 39.1**	**+0.5**
	0.7nm,0.9s,baz=358,slow=6.6,SNR=3.0						
RES	**Resolute Bay**	**63.70**	**14**	P	**P**	**14 30 02.3**	**-0.1**
	3.4nm,0.5s,baz=334,slow=3.1,SNR=5.8						
FINES	**FINESS Array B**	**67.83**	**331**	P	**P**	**14 30 28.6**	**-0.6**
	1.1nm,0.8s,baz=51,slow=7.3,SNR=1.2						
STKA	**Stephens Creek**	**68.22**	**177**	P	**P**	**14 30 32.1**	**+0.2**
	0.7nm,0.4s,baz=344,slow=7.4,SNR=3.0						
NOA	**NORSAR Array B**	**73.44**	**336**	P	**P**	**14 31 03.9**	**+0.4**
	0.9nm,0.7s,baz=40,slow=6.1,SNR=3.6						
PDAR	**Pinedale Array**	**79.97**	**44**	P	**P**	**14 31 41.0**	**0.0**
	0.5nm,0.6s,baz=346,slow=1.9,SNR=4.1						

IDC 22 14:35:46.3±2.9,9.64S×156.08E,h0km,mb3.5/5, mb1 3.6/5,mb1mx3.5/33,mbtmp3.5/5,Error ellipse: s-maj=80.6km s-min=30.3km az=109.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.35**	**242**	P	P	14 40 55.4	-1.2
	0.6nm,0.8s,baz=65,slow=9.3,SNR=5.0						
ASAR	**Alice Springs**	**25.36**	**234**	P	P	14 41 14.6	-0.7
	0.6nm,0.9s,baz=62,slow=9.9,SNR=5.6						
STKA	**Stephens Creek**	**25.88**	**209**	P	P	14 41 20.1	+0.1
	0.5nm,0.3s,baz=36,slow=17,SNR=3.3						
SONM	**Songino Array**	**72.13**	**327**	P	P	14 47 13.9	+1.0
	0.5nm,0.7s,baz=142,slow=5.1,SNR=3.6						
MKAR	**Makanchi Array**	**86.08**	**319**	P	P	14 48 29.6	+0.4
	0.3nm,0.8s,baz=98,slow=6.0,SNR=2.2						

*TUL **22** 14:36:06.3±0.7,36.64N±0.01×97.77W±0.02,h6km±7km, ML3.5,Error ellipse: s-maj=2.1km s-min=1.6km az=105.0*
*ANF **22** 14:36:06.5±0.3,36.64N×97.72W,h0km,ML4.0/12,Error ellipse: s-maj=3.8km s-min=3.3km az=2.0*
*NEIC **22** 14:36:06.3±0.7,36.625N±0.010×97.76W±0.02,h5km±7km, Error ellipse: s-maj=2.4km s-min=1.3km az=108.0*
*IDC **22** 14:36:06.9±1.9,36.84N×98.11W,h0km,mb3.4/1, mb1 3.6/4,mb1mx3.4/43,mbtmp3.3/4,ML2.9/2,Error ellipse: s-maj=25.6km s-min=13.2km az=109.0*
ISC 22 14:36:06.7±1.0,36.63N±0.02×97.73W±0.03,h8km±9km, n71,σ0=93/74,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.24**	**237**	Pg	**Pg**	**14 36 10.9**	**-0.6**
CROK				Sg	**Sg**	**14 36 14.6**	**-0.1**
GC02	**Grant County #**	**0.24**	**335**		**Pg**	**14 36 11.2**	**-0.4**
KAN13	**South Haven SW**	**0.43**	**28**		**Pg**	**14 36 15.2**	**0.0**
KAN05	**Bluff City Nor**	**0.49**	**347**		**Pg**	**14 36 15.8**	**-0.4**
KAN09	**Caldwell North**	**0.51**	**10**		**Pg**

ECSD	**EROS Data Cent** baz=187	7.14	7	P		Pn	14 37 50.2	-1.2	
ECSD	**EROS Data Cent**	7.14	7	Pn		Pn	14 37 50.3	-1.2	
ANMO	**Albuquerque** 0.2nm,0.3s,baz=82,slow=17,SNR=1.9	7.29	259	Pg		Pb	14 38 15.1	+1.5	
ANMO	0.6nm,0.3s,baz=344,slow=14,SNR=3.1			Lg		Lg	14 39 50.2		
L40A	**Anamosa**	7.40	41	Pn		Pn	14 37 55.4	+0.3	
SMCO	**Snowmass**	7.73	292	Pn		Pn	14 38 01.1	+1.2	
JFWS	**Jewell Farm**	8.52	40	Pn		Pn	14 38 09.8	-0.5	
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=39,slow=11,SNR=1.8	8.82	216	Pn		Pn	14 38 14.1	-0.5	
TXAR	0.4nm,0.3s,baz=47,slow=31,SNR=1.6			Lg		Lg	14 40 39.1		
PDAR	**Pinedale Array** baz=110,slow=13,SNR=2.4	10.97	308	Pn		Pn	14 38 42.0	-2.1	
PDAR	0.2nm,0.3s,baz=115,slow=14,SNR=1.7			Pg			14 39 22.9		
PDAR	0.3nm,0.3s,baz=116,slow=27,SNR=2.3			Lg		Lg	14 41 36.9		
TKL	**Tuckaleechee C** 0.5nm,0.3s,baz=182,slow=21,SNR=2.8	11.33	91	Lg		Lg	14 41 59.7		
ULM	**Lac du Bonnet** 0.4nm,0.3s,baz=185,slow=13,SNR=1.9	13.68	5	Pn		Pn	14 39 14.0	-6.8	
ULM	0.3nm,0.3s,baz=185,slow=14,SNR=1.9			Sn		Sn	14 41 38.8	-14	
ULM	0.2nm,0.3s,baz=150,slow=8.8,SNR=3.0			Lg		Lg	14 43 11.1		
ILAR	**Eielson Array** 0.3nm,0.6s,baz=100,slow=6.4,SNR=1.7	40.34	330	P		P	14 43 43.1	-1.3	

BJI ***22*** *14:55:30.7±0.0,34.˙35N×102.˙36E,h10km,mB4.9/11, mb4.5/33,ML4.5/26,Ms4.6/30,Ms7 4.3/35*
IDC ***22*** *14:55:30.2±0.6,34.˙32N×102.˙27E,h0km,mb4.0/25, mb1 4.1/29,mb1mx4.0/60,mbtmp4.0/29,ML3.7/4,MS4.2/4, Ms1 4.3/4,ms1mx3.8/44,Error ellipse: s-maj=16.8km s-min=12.0km az=34.0*
MOS ***22*** *14:55:31.1±0.9,34.˙33N×102.˙34E,h17km,mb4.7/17, MS4.2/4,Error ellipse: s-maj=7.7km s-min=5.1km az=124.4*
NEIC ***22*** *14:55:32.3±2.0,34.˙37N±0.˙08×102.˙36E±0.˙04,h10km±1km, mb4.5/17,Error ellipse: s-maj=13.6km s-min=5.3km az=348.0*

ISC 22 14:55:32.5±0.3,34.˙38N±0.˙03×102.˙32E±0.˙03,h10km,n180, σ1ŝ77/200,mb4.3/44,MS4.3/6,12C-1D,Gansu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	2.11	36	Pg		Pb		14 56 09.8	-1.2
LZH				Sg		Sb		14 56 38.4	+1.0
LZH				S		Sg		14 56 42.3	+1.8
LZH	comp=N,5μm,1.4s			smax		smax			
LZH	comp=E,9μm,1.0s			smax		smax			
CD2	**Chengdu**	3.67	160	Pn		Pn		14 56 32.0	+2.7
CD2				Sn		Sn		14 57 13.8	+1.2
CD2				Sg		Sg		14 57 31.4	+1.1
CD2	comp=N,600nm,0.9s			smax		smax			
CD2	comp=E,540nm,1.5s			smax		smax			
CD2	comp=N,4μm,5.4s			LR		LR			
CD2	comp=E,7μm,7.4s			LR		LR			
CD2	comp=Z,5μm,7.4s			LR		LR			
GTA	**Gaotai**	5.41	339	↑Pn		Pn		14 56 53.5	+0.1
GTA				Pg		Pb		14 57 10.6	+3.4
GTA				Sn		Sn		14 57 59.3	+3.6
GTA				Sg		Sg		14 58 24.8	-1.4
GTA	comp=N,100nm,1.2s			smax		smax			
GTA	comp=E,150nm,1.7s			smax		smax			
GTA	comp=N,2μm,11.6s			LR		LR			
GTA	comp=E,3μm,10.5s			LR		LR			
GTA	comp=Z,2μm,8.0s			LR		LR			
XAN	**Xi'an**	5.48	92	Pn		Pn		14 56 53.5	-0.8
XAN				Pg		Pb		14 57 11.1	+2.7
XAN				Sg		Sg		14 58 28.8	+0.3
XAN	comp=N,1μm,1.2s			smax		smax			
XAN	comp=E,1μm,1.1s			smax		smax			
XAN	comp=Z,2μm,7.1s			LR		LR			
XAN	**Xi'an**	5.48	92	P		Pn		14 56 53.5	-0.8
XAN	**Xi'an**	5.48	92	Pn		Pn		14 56 53.5	-0.8
ENH	**Enshi**	7.32	122			Pn		14 57 19.1	-0.4
BTO	**Baotou**	8.72	42	P		Pn		14 57 38.3	-0.5
GYA	**Guiyang**	8.74	153	P		Pn		14 57 39.9	+0.8
GYA				S		Sn		14 59 24.6	+6.9
GYA	comp=N,73nm,1.4s			smax		smax			
GYA	comp=E,81nm,0.9s			smax		smax			
GYA	comp=N,900nm,6.2s			LR		LR			
GYA	comp=E,660nm,4.8s			LR		LR			
GYA	comp=Z,860nm,6.1s			LR		LR			
HHC	**Hu-ho-hao-te**	9.77	46	eP		Pn		14 57 54.3	+1.1
HHC				S		Sn		14 59 45.4	+2.4
HHC	comp=Z,29nm,1.0s			pmax		pmax			
HHC	comp=N,2μm,8.6s			LR		LR			
HHC	comp=E,2μm,9.0s			LR		LR			
HHC	comp=Z,1μm,7.3s			LR		LR			
LSA	**Lhasa**	10.56	247	P		Pn		14 58 05.0	+0.6
LSA				pP				14 58 08.5	
LSA				S		Sn		15 00 01.4	-1.6
LSA	comp=Z,7.0nm,0.5s			pmax		pmax			
LSA	comp=N,560nm,5.7s			LR		LR			
LSA	comp=E,2μm,11.4s			LR		LR			
LSA	comp=Z,2μm,12.8s			LR		LR			
LSA	**Lhasa**	10.56	247	P		Pn		14 58 03.9	-0.5
LSA	**Lhasa**	10.56	247	Pn		Pn		14 58 03.9	-0.5
WHN	**Wuhan**	10.86	107	P		Pn		14 58 08.5	+0.5
WHN				S		Sn		15 00 08.1	-1.4
BJI	**Beijing**	12.40	59	P		Pn		14 58 28.6	-0.5
BJI				S		Sn		15 00 46.3	-1.0
BJI	comp=Z,3.0nm,0.8s			pmax		pmax			
BJI	comp=Z,290nm,14.2s			LR		LR			
SONM	**Songino Array** 0.6nm,0.3s,baz=194,slow=15,SNR=11	13.79	12	Pn		Pn		14 58 47.4	-0.7
SONM	baz=196,slow=24,SNR=1.2			Sn		Sn		15 01 16.4	-4.9
SONM	baz=192,slow=26,SNR=1.4			Lg		Lg		15 02 45.4	
SONM	**Songino Array**	13.79	12	P		Pn		14 58 48.6	+0.5
SONM	**Songino Array**	13.79	12	Pn		Pn		14 58 48.6	+0.5
ULN	**Ulaanbaatar**	13.93	13	ceP		Pn		14 58 49.0	-1.1
ULN	comp=Z,16nm,1.7s			pmax		pmax			
TAPN	**Taplejung**	14.36	245	eP		Pn		14 58 54.5	-1.7
WMQ	**Urumqi**	14.74	314	eP		Pn		14 58 59.6	-1.5
WMQ				sP		P		14 59 09.3	+2.1
WMQ				PP		PnPn		14 59 16.8	+7.8
WMQ				S		Sn		15 01 51.5	+7.0
WMQ	comp=Z,21nm,1.1s			pmax		pmax			
WMQ	comp=Z,100nm,10.1s			pmax		pmax			
WMQ	comp=Z,950nm,11.1s			LR		LR			
WMQ	comp=Z,1μm,9.1s			LR		LR			
ODAN	**Odare**	14.87	244	eP		Pn		14 59 01.1	-2.0
	comp=Z,117nm,1.0s								
PAYA	**Payao**	15.12	189	P		P		14 59 08.0	-3.5
	comp=Z,2μmcomp=Z,158nm,1.2s								
GUN	**Gumba**	15.47	250	eP		Pn		14 59 08.4	-2.8
	comp=Z,78nm,0.9s								
CM33	**Chiang Mai Arr**	15.79	192	P		P		14 59 17.0	-1.9
CHTO	**Chiang Mai**	15.79	192	P		P		14 59 18.7	-0.3
CHTO	comp=Z,27nm,1.0s			pmax		pmax			
CHTO	**Chiang Mai**	15.79	192	P		P		14 59 18.7	-0.3
CHTO				IAmb		IAmb		14 59 21.4	
	comp=Z,27nm,0.9s								
CMMT	**Chiang Mai**	15.79	192	P		P		14 59 17.4	-1.6
	comp=Z,16nm,0.9s								
CM35	**Chiang Mai Arr**	15.89	191	P		Pn		14 59 17.0	+0.7
CM32	**Chiang Mai Arr**	15.96	192	P		P		14 59 20.0	-0.9
LAMP	**Lampang**	15.97	189	P		P		14 59 21.6	+0.7
	comp=Z,374nmcomp=Z,37nm,1.0s								
KKN	**Kakani**	16.00	250	eP		Pn		14 59 15.1	-2.8
	comp=Z,28nm,0.6s								
PKI	**Pulchoki**	16.00	249	eP		Pn		14 59 14.7	-3.4
	comp=Z,35nm,0.8s								
PKIN	**Phulchoki**	16.01	250	eP		Pn		14 59 14.9	-3.2
	comp=Z,35nm,0.8s								
ZAK	**Zakamensk**	16.01	2	eP		Pn		14 59 16.1	-1.7
ZAK				pmax		pmax			
	comp=Z,9.0nm,1.3s								
CM36	**Chiang Mai Arr**	16.06	191	P		Pn		14 59 19.0	+0.5
CM31	**Chiang Mai Arr**	16.14	192	P		P		14 59 23.9	+1.0
	comp=Z,4μmcomp=Z,381nm,1.0s								
CMAR	**Chiang Mai Arr**	16.14	192	Pn		Pn		14 59 18.5	-1.1
	comp=Z,0.2nm,0.3s,baz=5.8,slow=11,SNR=30								
CMAR				Sn		Sn		15 02 12.6	-6.1
	comp=Z,0.4nm,0.3s,baz=12,slow=19,SNR=4.4								
CMAR				Lg		Lg		15 04 14.9	
	comp=Z,0.2nm,0.3s,baz=25,slow=15,SNR=1.5								
CMAR				LR		LR		15 06 09.8	
	comp=Z,375nm,18.0s,baz=320,slow=40								
CM09	**Chiang Mai Arr**	16.14	191	P		P		14 59 22.0	-0.9
	comp=Z,143nmcomp=Z,16nm,1.1s								
CM15	**Chiang Mai Arr**	16.15	192	P		P		14 59 21.0	-1.9
	comp=Z,111nmcomp=Z,16nm,1.0s								
CM02	**Chiang Mai Arr**	16.16	192	P		P		14 59 21.9	-1.2
	comp=Z,137nmcomp=Z,18nm,1.1s								
CM01	**Chiang Mai Arr**	16.17	192	P		P		14 59 22.0	-1.2
	comp=Z,121nmcomp=Z,15nm,1.1s								
CM13	**Chiang Mai Arr**	16.18	192	P		P		14 59 22.1	-1.1
	comp=Z,104nmcomp=Z,15nm,1.1s								
CM04	**Chiang Mai Arr**	16.19	191	P		P		14 59 22.2	-1.1
	comp=Z,111nmcomp=Z,14nm,1.1s								
CM05	**Chiang Mai Arr**	16.20	192	P		P		14 59 22.0	-1.4
	comp=Z,10nm,1.1s								
DMN	**Daman**	16.22	250	eP		Pn		14 59 18.4	-2.4
NONG	**Nongkai**	16.27	177	P		P		14 59 26.0	+1.8
	comp=Z,11nm,0.9s								
GKN	**Gorkha**	16.40	252	eP		Pn		14 59 19.4	-3.6
	comp=Z,227nm,1.0s								
MHMT	**Maasarieng**	16.61	195	P		P		14 59 29.6	+1.6
	comp=Z,16nm,1.1s								
UTTA	**Uttaradit**	16.64	186	P		P		14 59 27.5	-0.8
	comp=Z,166nmcomp=Z,16nm,1.0s								
QIZ	**Qiongzhong**	16.69	154	P		Pn		14 59 25.6	-1.0
QIZ				S		Sn		15 02 32.6	+0.6
QIZ	comp=Z,450nm,13.5s			LR		LR			
QIZ	comp=Z,2μm,15.1s			LR		LR			
QIZ	comp=Z,980nm,14.0s			LR		LR			
DANN	**Dangsing**	16.94	254	eP		Pn		14 59 26.7	-3.3
	comp=Z,111nm,0.8s								
PHIT	**Phitsanulok**	17.20	186	P		P		14 59 37.7	+3.1
	comp=Z,41nm,0.9s								
MOY	**Mondy**	17.31	357	eP		P		14 59 37.0	+1.3
MOY				pmax		pmax			
	comp=Z,10.0nm,1.7s								
TLY	**Talaya**	17.32	3	P		P		14 59 35.5	-0.3
	comp=Z,0.0nm,0.3s,baz=54,slow=14,SNR=1.4								
TLY				Lg		Lg		15 04 37.4	
	comp=Z,0.0nm,0.3s,baz=101,slow=19,SNR=2.3								
TLY	**Talaya**	17.32	3	eP		P		14 59 37.7	+2.0
TLY				pmax		pmax			
	comp=Z,28nm,1.9s								
TLY				MLR		MLR			
	comp=Z,2μm,14.0s								
KOLN	**Koldanda**	17.32	253	eP		Pn		14 59 31.2	-3.5
	comp=Z,160nm,1.0s								
PYUN	**Piuthan**	17.66	255	eP		Pn		14 59 36.3	-2.6
	comp=Z,132nm,0.9s								
IRK	**Irkutsk**	17.91	4	eP		P		14 59 42.5	+0.3
IRK				pmax		pmax			
	comp=Z,31nm,2.7s								
CHAI	**Chaiyaphum**	18.40	181	P		P		14 59 49.0	+1.2
	comp=Z,13nm,0.8s								
ZSN	**Zaisan**	18.50	320	eP		Pn		14 59 49.2	+0.2
	comp=Z,6.1nm,1.1s,baz=320								
ZSN				eS		Sn		15 03 17.5	+1.7
	baz=320								
ZSN	**Zaisan**	18.50	320	eP		Pn		14 59 49.1	+0.2
ZSN				eS		Sn		15 03 17.4	+1.7
ZSN	comp=Z,6.0nm,1.1s			pmax		pmax			
UTHA	**Uthaitani**	18.92	189	P		Pn		14 59 56.6	+2.5
	comp=Z,14nm,0.8s								
UBPT	**Khong Chiam**	19.23	171	P		Pn		14 59 58.7	+0.9
	comp=Z,12nm,0.9s								
UBPT	**Khong Chiam**	19.23	171	Pn		Pn		14 59 58.7	+0.9
UBPT				IAmb		IAmb		15 00 01.6	
	comp=Z,20nm,1.0s								
MK31	**Makanchi Array**	19.56	315	ceP		Pn		15 00 01.2	-0.5
MK31	**Makanchi Array**	19.56	315	P		Pn		15 00 00.9	-0.8
MKAR	**Makanchi Array**	19.56	315	P		P		15 00 00.1	-0.3
	comp=Z,0.3nm,0.3s,baz=119,slow=14,SNR=2.2								
MKAR				S		S		15 03 28.4	-13
	comp=Z,0.0nm,0.3s,baz=124,slow=19,SNR=1.6								
MKAR				Lg		Lg		15 05 49.2	
	comp=Z,0.0nm,0.3s,baz=132,slow=22,SNR=1.5								
MKAR				LR		LR		15 07 16.7	
	comp=Z,414nm,18.5s,baz=82,slow=36								
MKAR	**Makanchi Array**	19.56	315	P		P		15 00 00.5	+0.1
MKAR	**Makanchi Array**	19.56	315	P		P		15 00 00.5	+0.1
HIA	**Hailar**	19.68	36	iP		P		15 00 01.9	+0.3
HIA	comp=Z,7.0nm,1.0s			pmax		pmax			
MAKZ	**Makanchi**	19.75	315	P		Pn		15 00 03.9	-0.1
MAKZ	comp=Z,10.0nm,0.9s			pmax		pmax			
MAKZ	**Makanchi**	19.75	315			Pn		15 00 03.9	-0.1
SHLS	**Shalkode**	19.81	303	eP		P		14 59 59.3	-4.1
	comp=Z,10nm,1.2s,baz=304								
SHLS	**Shalkode**	19.81	303	eP		P		14 59 59.2	-4.1
SHLS	comp=Z,10.0nm,1.2s			pmax		pmax			
SRDT	**SRDT**	20.15	189	P		Pn		15 00 11.1	+2.3
	comp=Z,22nm,1.1s								
CN2	**Changchun**	20.21	55	eP		P		15 00 05.3	-2.2
CN2	comp=Z,10.0nm,0.7s			pmax		pmax			
SRAK	**Srakaew**	20.28	181	P		Pn		15 00 11.9	+1.6
	comp=Z,78nm,0.8s								
KPKS	**Kokpek**	20.45	303	eP		P		15 00 09.3	-0.9
	comp=Z,4.3nm,0.9s,baz=304								
KPKS	**Kokpek**	20.45	303	eP		P		15 00 09.3	-0.9
KPKS	comp=Z,4.0nm,0.9s			pmax		pmax			
TJN	**Taejon**	20.51	77	ceP		P		15 00 10.9	+0.2
SATY	**Saty**	20.52	302	eP		P		15 00 10.6	-0.5
	comp=Z,5.5nm,0.8s,baz=302								
SATY	**Saty**	20.52	302	eP		P		15 00 10.5	-0.5
SATY	comp=Z,6.0nm,0.8s			pmax		pmax			
YOJ	**Yonaguni jima**	20.52	113	P		Pn		15 00 11.8	-1.4
YOJ	comp=Z,109nm,1.2s			pmax		pmax			
YOJ	**Yonaguni jima**	20.52	113	Pn		Pn		15 00 11.8	-1.4
KSRS	**Korea Array**	20.94	74	P		P		15 00 14.9	-0.5
	comp=Z,4.1nm,0.8s,baz=264,slow=10.0,SNR=14								
TDK	**Taldyorghan** baz=307	21.17	307	eP		P		15 00 17.1	-0.7
TDK	**Taldyorghan**	21.17	307	eP		P		15 00 17.1	-0.7
MDOK	**Medeo** baz=302	21.50	302	eP		P		15 00 21.5	-0.2
MDOK	baz=302			eS		S		15 04 20.1	-0.1
MDOK	comp=Z,480nm,14.0s,baz=302			LR		LR		15 08 06.5	
MDOK	**Medeo**	21.50	302	eP		P		15 00 21.4	-0.2
MDOK				eS		S		15 04 20.0	-0.1
MDOK	comp=Z,480nm,14.0s			MLR		MLR			
PHET	**Kaeng Krachan**	21.51	187	P		P		15 00 28.0	+6.3
TNSS	**Tian-Shan** baz=301	21.54	301	eP		P		15 00 21.9	-0.5
TNSS	**Tian-Shan**	21.54	301	eP		P		15 00 21.8	-0.5
AAA	**Alma-Ata** baz=302	21.61	302	eP		P		15 00 22.7	0.0
AAA	comp=Z,308nm,13.3s,baz=302			LR		LR		15 07 59.5	
AAA	**Alma-Ata**	21.61	302	eP		P		15 00 22.7	0.0
AAA	comp=Z,308nm,13.0s			MLR		MLR			
KSH	**Kashi**	21.64	291	P		P		15 00 28.4	+5.3
KSH				S		S		15 04 22.1	-0.6
KSH	comp=Z,14nm,0.6s			pmax		pmax			
KSH	comp=Z,410nm,5.3s			pmax		pmax			
KSH	comp=Z,2μm,13.9s			LR		LR			
CHKK	**Chushkaly** baz=304	21.74	303	eP		P		15 00 23.5	-0.6
CHKK	**Chushkaly**	21.74	303	eP		P		15 00 23.4	-0.6
KUU	**Kurty**	22.20	303	eP		P		15 00 28.1	-1.0
	comp=Z,5.7nm,1.1s,baz=303								
KUU	**Kurty**	22.20	303	eP		P		15 00 28.0	-1.0
KUU	comp=Z,6.0nm,1.1s			pmax		pmax			
JTU	**Tsushima**	22.31	82	P		P		15 00 29.0	-1.2
JTU				IAmb		IAmb		15 00 34.3	
	comp=Z,26nm,1.1s								
SEM	**Semipalatinsk**	22.72	322	eP		P		15 00 34.0	-0.7
	comp=Z,5.6nm,1.5s,baz=322								
SEM	**Semipalatinsk**	22.72	322	eP		P		15 00 34.0	-0.7
SEM	comp=Z,6.0nm,1.5s			pmax		pmax			
ZAA0	**Zalesovo Array**	23.13	333	P		P		15 00 38.0	-0.6
ZAA0				IAmb		IAmb		15 00 41.5	
	comp=Z,16nm,1.3s								
ZALV	**Zalesovo Beam**	23.13	333	P		P		15 00 38.1	-0.5
	comp=Z,1.8nm,0.6s,baz=138,slow=11,SNR=17								
ZALV	**Zalesovo Beam**	23.13	333	P		P		15 00 37.6	-1.1
AAK	**Ala-Archa**	23.21	299	P		P		15 00 39.0	-0.7
	comp=Z,0.7nm,0.6s,baz=125,slow=2.1,SNR=3.7								
AAK				LR		LR		15 10 22.9	
	comp=Z,786nm,18.9s,baz=112,slow=38								
SGDS	**Sogindy** baz=301	23.29	301	eP		P		15 00 39.9	-0.5
SGDS	**Sogindy**	23.29	301	eP		P		15 00 39.8	-0.6
KURBB	**Kurchatov Arra**	23.74	320	P		P		15 00 44.3	-0.5
	comp=Z,2.6nm,0.7s,baz=126,slow=11,SNR=21								
KURK	**Kurchatov**	23.75	321	ceP		P		15 00 45.2	+0.4
KURK	comp=Z,19nm,1.7s			pmax		pmax			
KURK	**Kurchatov**	23.75	321	P		P		15 00 46.5	+1.7
KURK				IAmb		IAmb		15 00 56.8	
	comp=Z,8.7nm,0.8s								
JNU	**Nakatsue**	23.75	85	P		P		15 00 44.0	-1.0
	comp=Z,12nm,1.1s,baz=315,slow=4.9,SNR=3.6								
BTLS	**Baital** baz=305	24.10	305	eP		P		15 00 47.8	-0.5
BTLS	**Baital**	24.10	305	eP		P		15 00 47.7	-0.5
VLA	**Vladivostok**	24.56	60	iP		P		15 00 52.2	-0.2
VLA	comp=Z,18nm,1.1s			pmax		pmax			
USRK	**Ussuriysk Ar.**	24.85	58	P		P		15 00 55.1	0.0
	comp=Z,0.8nm,0.5s,baz=245,slow=9.4,SNR=1.6								
DZA	**Taraz** baz=299	25.54	299	eP		P		15 01 01.1	-0.4
DZA	**Taraz**	25.54	299	eP		P		15 01 01.0	-0.4
KKAR	**Karatay Array**	26.17	299	P		P		15 01 07.5	+0.4
KKAR	**Karatay Array**	26.17	299	P		P		15 01 07.5	+0.4
KLR	**Kul'dur**	26.28	47	P		P		15 01 07.8	-0.1
	comp=Z,7.8nm,1.0s,baz=261,slow=10,SNR=14								
KLR	**Kul'dur**	26.28	47	ceP		P		15 01 07.7	-0.2
KLR	comp=Z,9.0nm,1.0s			pmax		pmax			
JMZ	**Minamidaito 2**	26.35	101	P		P		15 01 08.4	-0.4
IUG	**Iuzhnay** comp=Z,2.0nm,1.1s,baz=297	26.40	297	eP		P		15 01 08.8	-0.5
IUG	**Iuzhnay**	26.40	297	eP		P		15 01 08.7	-0.5
IUG	comp=Z,2.0nm,1.1s			pmax		pmax			
BRZS	**Berezniki** baz=315	26.71	315	eP		P		15 01 11.4	-0.4
BRZS	**Berezniki**	26.71	315	eP		P		15 01 11.4	-0.4
MAJO	**Matsushiro**	29.21	75	iP		P		15 01 34.1	-0.3
MAJO	comp=Z,6.0nm,1.1s			pmax		pmax			
BRVK	**Borovoye**	29.39	319	iP		P		15 01 36.0	+0.3
BRVK	comp=Z,1.0nm,0.9s			pmax		pmax			
MYLDM	**Lahad Datu**	32.70	149	P		P		15 02 06.5	+1.3
YSS	**Yuzh-Sakhalins**	32.78	55	iP		P		15 02 04.3	-1.4
YSS	comp=Z,14nm,1.1s			pmax		pmax			
ABKAR	**Akbulak array**	34.42	309	P		P		15 02 21.4	+1.5
ABKAR	**Akbulak array**	34.42	309	P		P		15 02 20.4	+0.5
GEYT	**Alibeck**	35.62	289	P		P		15 02 29.8	-0.6
	comp=Z,1.5nm,0.5s,baz=76,slow=8.0,SNR=4.3								
GEYT	**Alibeck**	35.62	289	P		P		15 02 30.0	-0.5
NRIK	**Noril'sk**	35.97	351	P		P		15 02 32.2	-0.8
	comp=Z,2.7nm,0.8s,baz=166,slow=6.7,SNR=6.1								
NRIK	**Noril'sk**	35.97	351	ceP		P		15 02 33.1	+0.1
NRIK	comp=Z,5.0nm,1.0s			pmax		pmax			
ARU	**Arti**	36.94	320	diP		P		15 02 41.4	-0.1
ARU								15 04 03.8	
ARU				S		S		15 08 27.7	+1.3
ARU				SS		SnSn		15 10 56.5	-2.2
ARU	comp=Z,25nm,1.9s			pmax		pmax			
TIXI	**Tiksi**	39.87	13	ceP		P		15 03 04.8	-1.1
SEY	**Seymchan** comp=Z,1.5nm,0.7s,baz=163,slow=19,SNR=2.2	42.04	32	P		P		15 03 24.4	+0.5
KIRV	**Kirov**	42.26	322	iP		P		15 03 26.8	+1.1
BELG	**Belogornoye**	42.52	312	iP		P		15 03 29.5	+1.6
BELG	comp=Z,2.0nm,1.0s			pmax		pmax			
PETK	**Petropavlovsk-** comp=Z,3.2nm,1.1s,baz=268,slow=4.3,SNR=1.8	42.97	47	P		P		15 03 31.1	-0.6
PETK	**Petropavlovsk-**	42.97	47	P		P		15 03 30.4	-1.3
GNI	**Garni**	45.50	295	iP		P		15 03 52.8	+0.5
GNI	comp=Z,13nm,1.4s			pmax		pmax			
VRH	**Novokhopyorsk**	46.18	311	eP		P		15 03 56.5	-0.8
VRH	comp=Z,20nm,1.8s			pmax		pmax			
KBZ	**Khabaz** comp=Z,1.3nm,0.8s,baz=286,slow=7.4,SNR=1.6	46.20	300	P		P		15 03 55.8	-1.7
KLMR	**Klimovskoe**	47.53	324	eP		P		15 04 05.9	-1.8
KLMR	comp=Z,10.0nm,0.7s			pmax		pmax			
KLMR	**Klimovskoe**	47.53	324	eP		P		15 04 05.9	-1.8
KLMR				AMP				15 04 12.2	
	comp=Z,10.0nm,0.7s								
VSR	**Storozhevoye**	47.78	311	eP		P		15 04 08.6	-1.2
VSR	comp=Z,20nm,1.8s			pmax		pmax			
MOS	**Moscow**	48.43	317	eP		P		15 04 14.6	-0.1
MOS	comp=Z,39nm,1.3s			pmax		pmax			
OBN	**Obninsk**	49.06	316	↑iP		P		15 04 21.7	+2.1
OBN				e				15 06 14.5	
OBN	comp=Z,7.0nm,0.5s			pmax		pmax			
OBN	comp=Z,387nm,19.0s			MLR		MLR			
ARCES	**ARCESS Array B** comp=Z,3.7nm,0.9s,baz=78,slow=8.4,SNR=4.2	53.66	335	P		P		15 04 52.8	-1.1
BRTR	**Keskin Array B** comp=

KIWB	**Kanaga Island**	**58.31**	**46**	P	**P**	**15 05 26.1**	**-1.4**
NB2	**NORSAR Subarra**	**61.10**	**326**	P	**P**	**15 05 45.2**	**-1.4**
	comp=Z,2.9nm,1.1s,baz=74,slow=6.9						
NOA	**NORSAR Array B**	**61.10**	**326**	P	**P**	**15 05 45.3**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=74,slow=6.6,SNR=4.3						
WRAB	**Tennant Creek**	**62.02**	**146**	*ce*P	**P**	**15 05 51.8**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WRAB	**Tennant Creek**	**62.02**	**146**	P	**P**	**15 05 51.6**	**-1.5**
WRAB				IAmb	IAmb	15 05 53.1	
	comp=Z,6.0nm,0.9s						
WRA	**Warramunga Arr**	**62.02**	**146**	P	**P**	**15 05 52.2**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=343,slow=7.2,SNR=21						
GERES	**GERESS Array B**	**64.20**	**313**	P	**P**	**15 06 06.9**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=73,slow=4.5,SNR=5.5						
AS31	**Alice Springs**	**65.06**	**148**	P	**P**	**15 06 12.3**	**-1.0**
ASAR	**Alice Springs**	**65.06**	**148**	P	**P**	**15 06 12.4**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=341,slow=7.7,SNR=14						
ASAR	**Alice Springs**	**65.06**	**148**	P	**P**	**15 06 12.1**	**-1.1**
ILAR	**Eielson Array**	**67.54**	**26**	P	**P**	**15 06 28.1**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=296,slow=6.4,SNR=8.8						
BCAR	**Beaver Creek A**	**70.37**	**26**	P	**P**	**15 06 45.9**	**-0.4**
DAWY	**Dawson**	**70.58**	**24**	P	**P**	**15 06 47.7**	**+0.1**
DAWY				IAmb	IAmb	15 06 52.4	
	comp=Z,9.0nm,1.4s						
STKA	**Stephens Creek**	**75.56**	**146**	P	**P**	**15 07 16.5**	**-0.8**
	comp=Z,1.9nm,0.7s,baz=318,slow=10,SNR=2.7						
ESDC	**Sonseca Array**	**79.72**	**311**	P	**P**	**15 07 41.0**	**+0.2**
	comp=Z,1.5nm,1.2s,baz=57,slow=4.7,SNR=4.4						
SCHQ	**Scheffervill e**	**90.66**	**354**	P	**P**	**15 08 34.7**	**-0.4**
	comp=Z,4.9nm,0.9s,baz=307,slow=5.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**91.23**	**287**	P	**P**	**15 08 37.7**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=30,slow=3.8,SNR=5.1						
YBH	**Yreka Blue Hor**	**93.71**	**32**	LR	LR	15 51 20.0	
	comp=Z,355nm,19.5s,baz=122,slow=36						

*VAO **22** 14:59:04.2±0.9,20.°64S×69.°13W,h98km±7km,mb4.3*
*NEIC **22** 14:59:05.1±1.7,20.°93S±0.°05×69.°3W±0.°1,h119km±6km, Error ellipse: s-maj=18.0km s-min=7.0km az=94.0*
*GUC **22** 14:59:06.2±0.5,20.°87S×69.°09W,h108km±2km,ML4.1*
*IDC **22** 14:59:06.6±0.9,20.°90S×68.°84W,h117km±6km,mb3.7/4, mb1 3.7/7,mb1mx3.5/34,mbtmp4.1/7,Error ellipse: s-maj=26.5km s-min=8.3km az=103.0*

ISC 22 14:59:04.5±0.6,**20.°84S**±0.°03×**69.°11W**±0.°06,**h115**km±5km, **n87**,σ=**1°42**/103,**mb4.0**/4,**14C-2D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.40**	**240**	⇑*i*P	**Pn**	**14 59 21.7**	**+0.3**
PB01				*i* S	**Sn**	**14 59 34.0**	**-0.2**
PB01				IAML		14 59 34.8	
	comp=E,17μm,0.2s						
PB01	**IPOC Station P**	**0.40**	**240**		**Pn**	**14 59 21.2**	**-0.2**
PB08	**IPOC Station P**	**0.70**	**357**	⇓*i*P	**Pn**	**14 59 24.9**	**+1.0**
PB08				*e*S	**Sn**	**14 59 39.1**	**+0.8**
PB08				IAML		14 59 39.9	
	comp=E,10μm,0.3s						
PB08	**IPOC Station P**	**0.70**	**357**		**Pn**	**14 59 24.0**	**+0.2**
PB02	**IPOC Station P**	**0.87**	**237**	⇑*i*P	**Pn**	**14 59 25.6**	**+0.7**
PB02				*e*S	**Sn**	**14 59 40.0**	**-0.5**
PB02				IAML		14 59 43.8	
	comp=E,9μm,0.6s						
PB09	**IPOC Station P**	**0.96**	**187**	⇑*i*P	**Pn**	**14 59 26.7**	**+0.8**
PB09				*i* S	**Sn**	**14 59 42.4**	**+0.4**
PB09	**IPOC Station P**	**0.96**	**187**		**Pn**	**14 59 25.8**	**-0.1**
PATCX	**Punta Patache**	**0.97**	**271**	⇑*i*P	**Pn**	**14 59 26.8**	**+0.8**
PATCX				*e*S	**Sn**	**14 59 42.1**	**0.0**
PATCX				IAML		14 59 46.1	
	comp=E,4μm,0.2s						
PATCX	**Punta Patache**	**0.97**	**271**		**Pn**	**14 59 26.0**	**+0.1**
TA01	**Diego Aracena**	**1.04**	**285**	⇑*i*P	**Pn**	**14 59 27.1**	**+0.6**
TA01				*i* S	**Sn**	**14 59 43.2**	**+0.1**
TA01				IAML		14 59 45.4	
	comp=E,3μm,0.3s						
TA01	**Diego Aracena**	**1.04**	**285**		**Pn**	**14 59 27.0**	**+0.6**
TA02	**Huaiquique**	**1.11**	**301**	⇑*i*P	**Pn**	**14 59 27.9**	**+0.7**
TA02				*i* S	**Sn**	**14 59 44.8**	**+0.4**
TA02				IAML		14 59 46.2	
	comp=N,7μm,0.1s						
PB07	**IPOC Station P**	**1.14**	**219**	⇑*i*P	**Pn**	**14 59 28.4**	**+0.7**
PB07				*i* S	**Sn**	**14 59 45.1**	**-0.2**
PB07				IAML		14 59 46.6	
	comp=E,4μm,0.3s						
PB07	**IPOC Station P**	**1.14**	**219**		**Pn**	**14 59 27.7**	**-0.1**
GO01	**Chusmiza**	**1.17**	**356**	⇓*i*P	**Pn**	**14 59 29.7**	**+1.2**
GO01				*e*S	**Sn**	**14 59 47.4**	**+1.0**
GO01				IAML		14 59 49.3	
	comp=N,6μm,0.6s						
GO01	**Chusmiza**	**1.17**	**356**		**Pn**	**14 59 29.6**	**+1.2**
PB11	**IPOC Station P**	**1.19**	**335**	⇑*i*P	**Pn**	**14 59 29.3**	**+0.9**
PB11				*i* S	**Sn**	**14 59 46.9**	**+0.6**
PB11	**IPOC Station P**	**1.19**	**335**		**Pn**	**14 59 29.2**	**+0.9**
PB03	**IPOC Station P**	**1.34**	**206**	⇑*i*P	**Pn**	**14 59 30.5**	**+0.6**
PB03				*i* S	**Sn**	**14 59 48.6**	**-0.7**
PB03				IAML		14 59 50.3	
	comp=N,2μm,0.3s						
PSGC	**Pisagua**	**1.56**	**322**	⇑*i*P	**Pn**	**14 59 32.9**	**+0.5**
PSGC				*e*S	**Sn**	**14 59 53.6**	**-0.1**
PSGC				IAML		14 59 55.5	
	comp=E,2μm,0.3s						
PSGCX	**Pisagua**	**1.56**	**322**		**Pn**	**14 59 32.8**	**+0.3**
MNMC	**Minye Minye**	**1.76**	**345**	⇑*i*P	**Pn**	**14 59 36.5**	**+1.4**
MNMC	**Minye Minye**	**1.76**	**345**		**Pn**	**14 59 36.4**	**+1.3**
LVC	**Limon Verde**	**1.77**	**174**	P	**Pn**	**14 59 36.5**	**+1.3**
	comp=E,24nm,0.3s,baz=25,slow=9.0,SNR=302						
LVC				S	**Sn**	**14 59 59.5**	**+0.9**
	comp=E,111nm,0.3s,baz=104,slow=22,SNR=57						
LVC	**Limon Verde**	**1.77**	**174**	*e*P	**Pn**	**14 59 36.5**	**+1.3**
LVC				*i* S	**Sn**	**14 59 59.5**	**+0.9**
LVC	**Limon Verde**	**1.77**	**174**	*e*P	**Pn**	**14 59 36.1**	**+0.9**
PB04	**IPOC Station P**	**1.77**	**213**	⇑*i*P	**Pn**	**14 59 35.5**	**+0.4**
PB04				*i* S	**Sn**	**14 59 57.5**	**-0.9**
PB04				IAML		15 00 01.5	
	comp=E,1μm,0.4s						
PB04	**IPOC Station P**	**1.77**	**213**		**Pn**	**14 59 35.2**	**+0.1**
PB06	**IPOC Station P**	**1.90**	**193**	⇑*i*P	**Pn**	**14 59 37.2**	**+0.6**
PB06				*i* S	**Sn**	**15 00 00.6**	**-0.7**
PB06	**IPOC Station P**	**1.90**	**193**		**Pn**	**14 59 37.2**	**+0.6**
PB05	**IPOC Station P**	**2.24**	**207**	⇑*i*P	**Pn**	**14 59 41.2**	**+0.2**
PB05				*i* S	**Sn**	**15 00 07.0**	**-1.8**
PB15	**IPOC Station P**	**2.38**	**188**	*e*P	**Pn**	**14 59 43.6**	**+0.9**
PB15				*i* S	**Sn**	**15 00 12.9**	**+0.9**
PB15	**IPOC Station P**	**2.38**	**188**		**Pn**	**14 59 43.7**	**+0.9**
PB16	**IPOC Station P**	**2.52**	**351**		**Pn**	**14 59 46.7**	**+1.7**
PB10	**IPOC Station P**	**2.98**	**206**		**Pn**	**14 59 49.8**	**-0.6**
PB14	**IPOC Station P**	**3.95**	**197**		**Pn**	**15 00 02.5**	**-1.1**
GO02	**Mina Guanaco**	**4.32**	**186**	*e*P	**Pn**	**15 00 08.1**	**-0.5**
GO02				*e*S	**Sn**	**15 00 56.1**	**-2.1**
GO02	**Mina Guanaco**	**4.32**	**186**		**Pn**	**15 00 08.1**	**-0.5**
LPAZ	**La Paz**	**4.62**	**12**	P	**Pn**	**15 00 15.4**	**+2.5**
	comp=E,1.6nm,0.3s,baz=184,slow=6.2,SNR=18						
LPAZ				S	**Sn**	**15 00 58.6**	**-7.4**
	comp=E,1.4nm,0.3s,baz=202,slow=17,SNR=2.8						
LPAZ	**La Paz**	**4.62**	**12**		**Pn**	**15 00 17.1**	**+4.1**
AC01	**Pan de Azucar**	**5.45**	**194**	Pn	**Pn**	**15 00 21.3**	**-2.2**
AC02	**Maricunga**	**5.97**	**180**		**Pn**	**15 00 30.8**	**-0.1**
GO03	**Copiap**	**6.80**	**188**	Pn	**Pn**	**15 00 40.6**	**-1.1**
AC05	**El Transito**	**8.03**	**187**	Pn	**Pn**	**15 00 56.0**	**-2.5**
LCO	**Las Campanas**	**8.26**	**190**	Pn	**Pn**	**15 00 58.3**	**-3.4**
SIV	**San Ignacio**	**9.03**	**59**	Pn	**Pn**	**15 01 10.1**	**-1.9**
	comp=E,5.0nm,0.3s,baz=257,slow=9.8,SNR=41						
CO01	**Juntas del Tor**	**9.14**	**185**	Pn	**Pn**	**15 01 11.1**	**-2.5**
PTLB	**Pontes e Lacer**	**10.89**	**62**	*e*P	**Pn**	**15 01 34.6**	**-2.6**
VILB	**Vilhena**	**11.59**	**49**	*e*P	**Pn**	**15 01 45.8**	**-0.6**
ROC1	**El Roble**	**12.20**	**188**	Pn	**Pn**	**15 01 53.7**	**-1.0**
MT02	**Curacav**	**12.50**	**188**	Pn	**Pn**	**15 01 58.1**	**-0.2**
AQDB	**Aquidauana**	**12.56**	**91**	*e*P	**Pn**	**15 01 59.6**	**+0.4**
TRCB	**Terra Rica**	**15.43**	**100**	*e*P	**P**	**15 02 38.7**	**+0.7**
CLDB	**Colider**	**16.18**	**54**	*e*P	**Pn**	**15 02 45.3**	**-0.1**
PTGB	**Pitanga**	**16.19**	**107**	*e*P	**P**	**15 02 48.0**	**+1.6**
PCMB	**Pacaembu**	**16.66**	**96**	*e*P	**P**	**15 02 52.5**	**+0.8**
ITAB	**Concordia**	**16.76**	**116**	*e*P	**Pn**	**15 02 53.9**	**+1.5**
ARAG	**Araguaiana, MT**	**17.20**	**76**	*e*P	**Pn**	**15 02 57.8**	**-0.1**
FRTB	**Fartura**	**18.29**	**101**	*e*P	**P**	**15 03 09.2**	**-0.3**
TUI01	**Guaruva-PR**	**19.03**	**107**	*e*P	**Pn**	**15 03 20.7**	**+1.0**
NPGB	**Novo Progresso**	**19.12**	**46**	*e*P	**P**	**15 03 16.6**	**-2.0**
SNDB	**Serra Nova Dou**	**19.22**	**65**	*e*P	**P**	**15 03 19.6**	**-0.2**
BB19B	**Bebedouro**	**19.23**	**94**	*e*P	**Pn**	**15 03 20.9**	**-1.1**
PLCA	**Paso Flores**	**19.87**	**183**	P	**Pn**	**15 03 28.4**	**-0.9**
	comp=E,0.1nm,0.3s,baz=350,slow=12,SNR=4.7						
PLCA	**Paso Flores**	**19.87**	**183**	P	**Pn**	**15 03 27.8**	**-1.5**
IPMB	**Ipameri, GO**	**19.92**	**85**	*e*P	**P**	**15 03 27.8**	**+0.5**
BDFB	**Brasilia**	**20.69**	**79**	P	**P**	**15 03 34.8**	**-0.9**
	comp=E,5.0nm,0.4s,baz=244,slow=5.4,SNR=7.6						
BDFB	**Brasilia**	**20.69**	**79**	P	**P**	**15 03 34.3**	**-1.4**
BDFB				IAmb	IAmb	15 03 39.6	
	comp=Z,6.8nm,0.5s						
ITTB	**Itaituba**	**20.91**	**40**	*e*P	**P**	**15 03 37.0**	**-1.0**
LL01	**San Ignacio de**	**21.65**	**187**	P	**P**	**15 03 44.8**	**-0.8**
LL01				IAmb	IAmb	15 03 56.3	
	comp=Z,6.1nm,0.9s						
PEXB	**Peixe**	**21.75**	**70**	*e*P	**P**	**15 03 47.1**	**+0.1**
BSCB	**Bom Sucesso**	**22.73**	**95**	*e*P	**P**	**15 03 57.8**	**+0.7**
SMTB	**Santa Maria do**	**23.93**	**63**	*e*P	**P**	**15 04 09.4**	**+1.2**
JANB	**Januaria**	**24.27**	**80**	*e*P	**P**	**15 04 11.4**	**+0.1**
SDBA	**SAO DESIDERIO**	**24.64**	**74**	*e*P	**P**	**15 04 15.8**	**+1.2**
MCPB	**Macapa, AP**	**26.31**	**41**	*e*P	**P**	**15 04 31.2**	**+1.5**
RCBR	**Riachuelo**	**35.49**	**70**	P	**P**	**15 05 51.2**	**+0.8**
	comp=Z,6.1nm,0.7s,baz=234,slow=12,SNR=4.7						
RCBR	**Riachuelo**	**35.49**	**70**	P	**P**	**15 05 52.5**	**+2.1**
TXAR	**Lajitas Array**	**59.98**	**325**	P	**P**	**15 09 01.2**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=168,slow=8.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**77.31**	**71**	P	**P**	**15 10 47.3**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=254,slow=4.8,SNR=12						
TORD				pP	**pP**	**15 11 17.1**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=254,slow=5.0,SNR=7.0						
TORD				sP	**sP**	**15 11 29.4**	**-0.9**
	comp=Z,1.3nm,0.7s,baz=253,slow=5.2,SNR=4.2						
H11S2	**WAKE ISLAND Hyd**	**27.61**	**278**	T	T	17 37 58.3	
	baz=101,slow=75,SNR=25						
H11S1	**WAKE ISLAND Hyd**	**27.61**	**278**	T	T	17 37 55.7	
	baz=101,slow=75,SNR=20						
H11S3	**WAKE ISLAND Hyd**	**27.62**	**278**	T	T	17 37 57.4	
	baz=101,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hyd**	**27.67**	**279**	T	T	17 37 44.8	
	baz=102,slow=75,SNR=8.2						
H11N2	**WAKE ISLAND Hyd**	**27.68**	**279**	T	T	17 38 01.6	
	baz=102,slow=75,SNR=7.3						
H11N1	**WAKE ISLAND Hyd**	**27.69**	**279**	T	T	17 37 48.9	
	baz=102,slow=75,SNR=6.4						
MKAR	**Makanchi Array**	**145.21**	**35**	PKPbc	**PKiKP**	**15 18 30.2**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=329,slow=3.8,SNR=7.4						
MKAR				pPKPbc	pPKPab	15 19 01.6	+1.3
	comp=Z,0.5nm,0.8s,baz=308,slow=2.5,SNR=2.7						

*IDC **22** 15:02:45.9±1.0,49.°26S×109.°05E,h0km,mb4.1/6, mb1 4.3/6,mb1mx3.9/38,mbtmp4.1/6,Error ellipse: s-maj=42.6km s-min=17.8km az=105.0*
*NEIC **22** 15:02:47.4±1.4,49.°23S±0.°04×109.°3E±0.°5,h10km±2km, mb4.4/8,Error ellipse: s-maj=52.1km s-min=7.8km az=269.0*

ISC 22 15:02:47.2±1.0,**49.°3S**±0.°1×**109.°2E**±0.°3,**h10**km,**n23**, σ=**0°93**/16,**mb4.3**/9,**Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.79**	**16**	T	T	15 21 24.7	
	baz=193,slow=74,SNR=104						
H01W1	**Cape Leeuwin H**	**14.80**	**16**	T	T	15 21 25.5	
	baz=193,slow=74,SNR=163						
H01W3	**Cape Leeuwin H**	**14.81**	**16**	T	T	15 21 25.9	
	baz=193,slow=74,SNR=213						
ASAR	**Alice Springs**	**32.08**	**46**	P	**P**	**15 09 15.2**	**+0.9**
	2.0nm,0.8s,baz=209,slow=8.3,SNR=28						
AS31	**Alice Springs**	**32.08**	**46**	P	**P**	**15 09 15.6**	**+1.3**
VNDA	**Vanda**	**34.54**	**162**	P	**P**	**15 09 35.6**	**+0.5**
	1.1nm,0.6s,baz=295,slow=9.1,SNR=10.0						
VNDA	**Vanda**	**34.54**	**162**	P	**P**	**15 09 34.7**	**-0.5**
VNDA				IAmb	IAmb	15 09 36.6	
	comp=Z,4.3nm,1.4s						
WRA	**Warramunga Arr**	**35.50**	**44**	P	**P**	**15 09 44.8**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=207,slow=8.5,SNR=14						
WRA	**Warramunga Arr**	**35.50**	**44**	P	**P**	**15 09 43.5**	**-0.4**
WB2	**Warramunga Arr**	**35.50**	**44**	P	**P**	**15 09 42.2**	**-1.8**
WB2				IAmb	IAmb	15 09 46.2	
	comp=Z,6.8nm,1.2s						
WRAB	**Tennant Creek**	**35.51**	**44**	P	**P**	**15 09 44.1**	**0.0**
WRAB				IAmb	IAmb	15 09 46.5	
	comp=Z,12nm,1.5s						
WR0	**Warramunga Arr**	**35.58**	**44**	P	**P**	**15 09 43.2**	**-1.5**
WR0				IAmb	IAmb	15 09 46.9	
	comp=Z,8.1nm,1.3s						
WB0	**Warramunga Arr**	**35.68**	**43**	P	**P**	**15 09 44.8**	**-0.8**
QSPA	**South Pole Qui**	**40.89**	**180**	P	**P**	**15 10 29.6**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=327,slow=1.3,SNR=20						
QSPA	**South Pole Qui**	**40.89**	**180**	IAmb	IAmb	15 10 30.7	
	comp=Z,8.5nm,1.4s						
SNAA	**Sanae**	**50.30**	**202**	P	**P**	**15 11 43.0**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=149,slow=11,SNR=12						
H08S2	**Diego Garcia H**	**51.63**	**311**	T	T	16 07 13.7	
	baz=154						
H08S1	**Diego Carcia H**	**51.64**	**311**	T	T	16 07 14.6	
	baz=154						
H08S3	**Diego Garcia H**	**51.65**	**311**	T	T	16 07 14.6	
	baz=154						
CMAR	**Chiang Mai Arr**	**68.01**	**350**	P	**P**	**15 13 47.0**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=189,slow=5.8,SNR=12						
CMAR	**Chiang Mai Arr**	**68.01**	**350**	P	**P**	**15 13 46.7**	**+0.3**
ILAR	**Eielson Array**	**138.60**	**39**	PKP	**PKPdf**	**15 22 11.4**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=282,slow=3.6,SNR=1.5						
TXAR	**Lajitas Array**	**148.09**	**116**	PKPbc	**PKPbc**	**15 22 32.3**	**-0.6**
	comp=Z,0.9nm,1.0s,baz=217,slow=4.3,SNR=5.2						

IDC 22 15:15:30.5±3.8,**16.°62S×176.°08W,h0km,mb4.0**/3, **mb1 4.1**/3,**mb1mx3.6**/35,**mbtmp4.0**/3,**Error ellipse: s-maj=182.1km s-min=79.4km az=156.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.20**	**240**	P	P	15 23 17.3	+0.2
	0.6nm,0.3s,baz=89,slow=6.6,SNR=3.7						
WRA	**Warramunga Arr**	**47.06**	**258**	P	P	15 24 04.0	-0.4
	0.5nm,0.5s,baz=94,slow=6.6,SNR=7.7						
WRA				PcP	PcP	15 25 37.0	+0.4
	0.2nm,0.8s,baz=90,slow=3.3,SNR=2.0						
ASAR	**Alice Springs**	**47.29**	**253**	P	P	15 24 06.0	-0.2
	2.2nm,0.4s,baz=89,slow=8.3,SNR=66						
ASAR				PcP	PcP	15 25 36.8	-0.7
	0.2nm,0.5s,baz=107,slow=3.8,SNR=4.7						

*IDC **22** 15:18:38.6±0.9,36.°83N×137.°86E,h0km,mb3.7/6, mb1 3.9/7,mb1mx3.5/41,mbtmp3.7/7,ML3.5/1,Error ellipse: s-maj=30.7km s-min=7.6km az=44.0*
*JMA **22** 15:18:40.1,36.°86N×137.°97E,h5km±1km,M3.2 Broadband fault plane solution: P waves. NP1: ϕ±9.00000°,δ24.00000°,λ69.00000°. NP2:ϕ±212.00000°, δ68.00000°,λ99.00000°. Principal axes: T Plg66.0000°, Azm138.0000°; N Plg8.0000°, Azm28.0000°; P Plg22.0000°, Azm295.0000°;*
JMA Felt II J1.

ISC 22 15:18:41.2±0.8,**36.°79N**±0.°08×**137.°99E**±0.°06,**h18**km,**n13**, σ=**0°55**/16,**mb3.7**/6,**1D**,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.30**	**144**	P	**Pg**	**15 18 47.0**	**-0.8**
MAT				S	**Sg**	**15 18 52.1**	**-0.2**
MAT	**Matsushiro**	**0.30**	**144**	P	**Pg**	**15 18 47.0**	**-0.8**
MAT				S	**Sg**	**15 18 52.1**	**-0.2**
MJAR	**Matsushiro Arr**	**0.30**	**144**	Pg	**Pg**	**15 18 47.6**	**-0.2**
	31nm,0.3s,baz=321,slow=20,SNR=104						
MJAR				Lg	Lg	15 18 52.4	
	71nm,0.3s,baz=329,slow=47,SNR=51						
JNG	**Nsakai**	**0.39**	**166**	P	**Pg**	**15 18 49.0**	**-0.3**
JNG				S	**Sg**	**15 18 55.3**	**+0.5**
JTT	**Ttatey**	**0.56**	**251**	⇓P	**Pg**	**15 18 51.4**	**-0.9**
JGK	**Kuni**	**0.57**	**113**	P	**Pg**	**15 18 51.9**	**-0.7**
KSRS	**Korea Array**	**8.07**	**278**	Pn	**Pn**	**15 20 37.8**	**+0.4**
	0.6nm,0.3s,baz=93,slow=14,SNR=9.5						
WRA	**Warramunga Arr**	**56.53**	**184**	P	**P**	**15 28 22.2**	**-0.3**
	0.8nm,0.6s,baz=360,slow=8.0,SNR=19						
ASAR	**Alice Springs**	**60.25**	**184**	P	**P**	**15 28 49.0**	**+0.6**
	0.4nm,0.7s,baz=15,slow=13,SNR=8.5						
FINES	**FINESS Array B**	**67.73**	**331**	P	**P**	**15 29 36.9**	**-0.2**
	1.9nm,1.0s,baz=357,slow=9.5,SNR=3.4						
NOA	**NORSAR Array B**	**73.32**	**336**	P	**P**	**15 30 11.0**	**-0.4**
	0.4nm,0.6s,baz=42,slow=5.9,SNR=2.0						
PDAR	**Pinedale Array**	**79.77**	**44**	P	**P**	**15 30 48.9**	**+0.5**
	0.2nm,0.3s,baz=294,slow=2.9,SNR=2.4						
GERES	**GERESS Array B**	**81.44**	**326**	P	**P**	**15 30 57.3**	**+0.2**
	0.1nm,0.3s,baz=46,slow=4.6,SNR=2.1						

*IDC **22** 16:16:55.3±1.1,2.°24N×126.°81E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.5/48,mbtmp3.6/7,ML2.9/1,Error ellipse: s-maj=53.8km s-min=19.5km az=73.0*

ISC 22 16:17:02.1±1.0,**2.°3N**±0.°1×**127.°0E**±0.°2,**h53**km,**n7**,σ=**6°85**/8, **mb3.7**/5,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.27**	**126**	Pn	**Pn**	**16 18 18.2**	**-0.1**
	0.4nm,0.3s,baz=127,slow=20,SNR=1.8						
FITZ	**Fitzroy Crossi**	**20.27**	**184**	P	**P**	**16 21 32.4**	**-0.9**
	0.6nm,0.5s,baz=4.1,slow=14,SNR=1.7						
WRA	**Warramunga Arr**	**23.20**	**162**	P	**P**	**16 22 04.0**	**-0.6**
	1.7nm,0.6s,baz=340,slow=11,SNR=30						
ASAR	**Alice Springs**	**26.62**	**166**	P	**P**	**16 22 35.9**	**0.0**
	0.1nm,0.3s,baz=344,slow=11,SNR=11						
ASAR				PcP	**PcP**	**16 26 00.5**	**+1.4**
	0.3nm,0.5s,baz=348,slow=2.6,SNR=6.6						
JNU	**Nakatsue**	**30.92**	**6**	P	**P**	**16 23 13.6**	**-0.4**
	1.4nm,0.7s,baz=231,slow=14,SNR=1.2						
STKA	**Stephens Creek**	**36.66**	**159**	P	**P**	**16 24 04.2**	**+0.4**
	1.2nm,0.5s,baz=340,slow=8.8,SNR=4.6						
MKAR	**Makanchi Array**	**58.92**	**326**	P	**P**	**16 26 55.8**	**-0.1**
	0.2nm,0.4s,baz=118,slow=8.2,SNR=4.0						

*NAO **22** 16:18:35.6±0.8,65.°01N×27.°30E,ML2.7*
*IDC **22** 16:18:36.5±1.3,64.°90N×27.°74E,h0km,mb1 2.9/4, mb1mx2.8/44,mbtmp2.8/4,ML2.1/4,Error ellipse: s-maj=26.2km s-min=8.1km az=96.0*
*UPP **22** 16:18:36.6±1.9,64.°94N×27.°23E,h0km,ML2.3,Suspected explosion*
*HEL **22** 16:18:37.7±0.1,65.°02N×27.°47E,h10km±1km,ML2.4, Confirmed Earthquake*
*IEPN **22** 16:18:39.0,64.°97N×27.°93E,h5km*
*BER **22** 16:18:40.0±3.9,65.°01N×27.°40E,h14km±7km,ML2.1, ML2.4(HEL),Confirmed Earthquake*

ISC 22 16:18:34.9±1.0,**64.°97N**±0.°02×**27.°42E**±0.°02,**h12**km±9km, **n82**,σ=**2°25**/157,**1C**,**Finland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUL	**Oulu**	**0.66**	**281**	*e*P	**Pn**	**16 18 50.9**	**+0.9**
OUL				*e*S	**Sn**	**16 18 59.8**	**-0.5**
OUL	**Oulu**	**0.66**	**281**	*e*P	**Pn**	**16 18 50.9**	**+0.9**
OUL				*e*S	**Sn**	**16 18 59.8**	**-0.5**
OBF4	**Vikkela, Lumij**	**1.00**	**262**	*e*P	**Pn**	**16 18 56.7**	**+2.0**
OBF4				*e*S	**Sn**	**16 19 09.7**	**+1.0**
OBF4				MSG		16 19 10.5	
	comp=Z,46nm,0.1s						
OBF4	**Vikkela, Lumij**	**1.00**	**262**	*e*P	**Pn**	**16 18 56.7**	**+2.0**
OBF4				*e*S	**Sn**	**16 19 09.7**	**+1.0**
OBF4				MSG		16 19 10.5	
	comp=Z,46nm,0.1s						
MSF	**Maaselka**	**1.17**	**35**	⇑*i*P	**Pn**	**16 18 58.0**	**+1.0**
MSF				*e*S	**Sg**	**16 19 11.8**	**-0.6**
MSF	**Maaselka**	**1.17**	**35**	*e*PG	**Pn**	**16 18 58.0**	**+1.0**
MSF				*e*SG	**Sb**	**16 19 12.2**	**+0.1**
MSF	**Maaselka**	**1.17**	**35**	*e*PG	**Pn**	**16 18 58.0**	**+1.0**
MSF				*e*SG	**Sb**	**16 19 12.2**	**+0.1**
OUF	**Merijarvi**	**1.30**	**244**	*e*P	**Pg**	**16 19 01.5**	**+1.6**
OUF

KAF	**Kangasniemi**	**2.91**	**190**	*eP*	**Pb**	**16 19 25.6**	**-1.0**
KAF				*eSG*	**Sg**	**16 20 08.9**	**+0.8**
KAF				MSG		16 20 14.3	
	comp=Z,11nm,0.1s						
VRF	**Varrio**	**2.93**	**17**	*eP*	**Pn**	**16 19 23.8**	**+2.5**
VRF				*eS*	**Sn**	**16 19 57.7**	**+1.3**
VRF				MSG		16 20 08.2	
	comp=Z,14nm,0.2s						
VRF	**Varrio**	**2.93**	**17**	*eP*	**Pn**	**16 19 23.8**	**+2.5**
VRF				*eS*	**Sn**	**16 19 57.7**	**+1.3**
VRF				MSG		16 20 08.2	
	comp=Z,14nm,0.2s						
ODEU	**Stanfors**	**2.93**	**262**	P	**Pn**	**16 19 23.2**	**+2.0**
HARU	**Harads**	**2.94**	**297**	P	**Pn**	**16 19 23.7**	**+2.4**
KEF	**Keuruu**	**3.03**	**203**	*eP*	**Pb**	**16 19 26.8**	**-1.9**
KEF				*eS*	**Sn**	**16 20 02.0**	**+3.2**
KEF				*eSG*	**Sg**	**16 20 12.5**	**+0.3**
KEF				MSG		16 20 18.8	
	comp=Z,8.1nm,0.1s						
KEF	**Keuruu**	**3.03**	**203**	*eP*	**Pb**	**16 19 26.8**	**-1.9**
KEF				*eS*	**Sn**	**16 20 02.0**	**+3.2**
KEF				*eSG*	**Sg**	**16 20 12.5**	**+0.3**
KEF				MSG		16 20 18.8	
	comp=Z,8.1nm,0.1s						
LILU	**Lilltraesk**	**3.22**	**279**	P	**Pn**	**16 19 27.4**	**+2.2**
APA0	**Apatity Array**	**3.48**	**38**	Pn	**Pn**	**16 19 31.7**	**+2.9**
	baz=224,slow=12						
APA0				Sn	**Sn**	**16 20 13.0**	**+3.2**
	baz=222,slow=37						
APA0				Lg	Lg	16 20 22.9	
	baz=228,slow=37						
APA0	**Apatity Array**	**3.48**	**38**	Pn	**Pn**	**16 19 31.7**	**+2.9**
	baz=224,slow=12						
APA0				Sn	**Sn**	**16 20 13.0**	**+3.2**
	baz=222,slow=37						
APA0				Sg	**Sg**	**16 20 22.9**	**-3.5**
	baz=228,slow=37						
APZ9	**Apatity**	**3.56**	**40**	Pn	**Pn**	**16 19 30.2**	**+0.4**
APZ9				Lg	Lg	16 20 25.9	
APZ9	**Apatity**	**3.56**	**40**	Pn	**Pn**	**16 19 30.2**	**+0.4**
APZ9				Sg	**Sg**	**16 20 25.9**	**-3.2**
FIA0	**FINESS Array S**	**3.59**	**190**	Pn	**Pb**	**16 19 34.6**	**-3.6**
	baz=8.0,slow=12						
FIA0				Sn	**Sn**	**16 20 16.1**	**+3.5**
	baz=8.2,slow=22						
FIA0				Lg	Lg	16 20 27.3	
	baz=14,slow=28						
FIA0	**FINESS Array S**	**3.59**	**190**	Pn	**Pb**	**16 19 34.6**	**-3.6**
	baz=8.0,slow=12						
FIA0				Sn	**Sn**	**16 20 16.1**	**+3.5**
	baz=8.2,slow=22						
FIA0				Sg	**Sg**	**16 20 27.3**	**-2.7**
	baz=14,slow=28						
FINES	**FINESS Array B**	**3.59**	**190**	Pn	**Pb**	**16 19 34.7**	**-3.5**
	comp=Z,0.4nm,0.3s,baz=15,slow=11,SNR=28						
FINES				Sn	**Sn**	**16 20 15.9**	**+3.5**
	comp=Z,0.9nm,0.3s,baz=16,slow=21,SNR=7.4						
FINES				Lg	Lg	16 20 27.1	
	comp=Z,2.8nm,0.3s,baz=14,slow=26,SNR=14						
LANU	**Lannavaara**	**3.78**	**327**	P	**Pn**	**16 19 35.4**	**+2.4**
SALU	**Saltoluokta**	**4.35**	**308**	P	**Pn**	**16 19 43.6**	**+2.8**
KTK1	**Kautokeino**	**4.38**	**340**	*eP*	**Pn**	**16 19 43.3**	**+2.1**
KTK1				*eS*	**Sn**	**16 20 31.5**	**-0.6**
KTK1				IAML		16 20 54.2	
	comp=Z,13nm,0.4s						
ARA0	**ARCESS Array S**	**4.65**	**352**	Pn	**Pn**	**16 19 46.9**	**+2.1**
	baz=173,slow=16						
ARA0				Sn	**Sn**	**16 20 36.6**	**-2.1**
	baz=170,slow=28						
ARA0				Lg	Lg	16 20 56.8	
	baz=164,slow=37						
ARA0	**ARCESS Array S**	**4.65**	**352**	Pn	**Pn**	**16 19 46.9**	**+2.1**
	baz=173,slow=16						
ARA0				Sn	**Sn**	**16 20 36.6**	**-2.1**
	baz=170,slow=28						
ARA0				Sg	**Sb**	**16 20 56.8**	**+4.6**
	baz=164,slow=37						
ARCES	**ARCESS Array B**	**4.65**	**352**	Pn	**Pn**	**16 19 47.1**	**+2.3**
	baz=171,slow=12,SNR=20						
ARCES				Sn	**Sn**	**16 20 37.4**	**-1.3**
	baz=170,slow=23,SNR=7.1						
ARCES				Lg	Lg	16 20 56.6	
	baz=166,slow=30,SNR=15						
KIF	**Kilpisjarvi**	**4.81**	**330**	Pn	**Pn**	**16 19 49.8**	**+2.7**
KIF				Sn	**Sn**	**16 20 41.9**	**-0.8**
KIF				Lg	Lg	16 21 04.1	
KIF	**Kilpisjarvi**	**4.81**	**330**	Pn	**Pn**	**16 19 49.8**	**+2.7**
KIF				Sn	**Sn**	**16 20 41.9**	**-0.8**
KIF				Sg	**Sg**	**16 21 04.1**	**-5.1**
FAUS	**Fauske**	**5.48**	**302**	*eP*	**Pn**	**16 19 58.0**	**+1.8**
FAUS				*eS*	**Sn**	**16 20 57.1**	**-2.0**
FAUS				IAML		16 21 32.7	
	comp=Z,5.6nm,0.4s						
MOR8	**Moi Rana**	**5.52**	**288**	*eP*	**Pn**	**16 19 57.1**	**+0.2**
MOR8				*eS*	**Sn**	**16 20 55.0**	**-5.2**
MOR8				IAML		16 21 28.8	
	comp=Z,5.2nm,0.7s						
NOD	**Norderasen**	**5.69**	**260**	*eP*	**Pn**	**16 20 01.0**	**+1.8**
STEI	**Steigen**	**5.71**	**307**	*eP*	**Pn**	**16 20 00.8**	**+1.4**
STEI				*eS*	**Sn**	**16 21 02.3**	**-2.5**
STEI				IAML		16 21 38.3	
	comp=Z,4.0nm,0.7s						
KONS	**Konsvik**	**6.09**	**291**	*eP*	**Pn**	**16 20 05.4**	**+0.8**
KONS				IAML		16 22 00.7	
	comp=Z,4.7nm,0.5s						
LOF	**Lofoten**	**6.38**	**306**	*eP*	**Pn**	**16 20 09.0**	**+0.5**
LOF				*eS*	**Sn**	**16 21 17.3**	**-3.9**
LOF				IAML		16 21 45.2	
	comp=Z,2.9nm,1.0s						
NSS	**Namsos**	**6.63**	**273**	*eP*	**Pn**	**16 20 13.4**	**+1.5**
NSS				*eS*	**Sn**	**16 21 23.6**	**-3.7**
NSS				IAML		16 22 14.0	
	comp=Z,3.5nm,0.4s						
KLMR	**Klimovskoe**	**6.89**	**121**	*eP*	**Pn**	**16 20 15.5**	**-0.1**
KLMR				*eS*	**Sn**	**16 21 28.6**	**-5.2**
	comp=Z,29nm,2.9s						
HFS	**Hagfors**	**7.97**	**239**	Pn	**Pn**	**16 20 32.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=42,slow=12,SNR=6.3						
HFS				Sn	**Sn**	**16 21 56.4**	**-4.0**
	comp=Z,0.2nm,0.3s,baz=52,slow=29,SNR=6.0						
HFS				Lg	Lg	16 22 42.1	
	comp=Z,0.4nm,0.3s,baz=50,slow=28,SNR=5.8						
HFS	**Hagfors**	**7.97**	**239**	Pn	**Pn**	**16 20 31.2**	**+0.8**
	baz=42,slow=14						
HFS				Sn	**Sn**	**16 21 55.7**	**-4.7**
	baz=41,slow=28						
HFS				Lg	Lg	16 22 42.0	
	baz=48,slow=28						
HFS	**Hagfors**	**7.97**	**239**	Pn	**Pn**	**16 20 31.2**	**+0.8**
	baz=42,slow=14						
HFS				Sn	**Sn**	**16 21 55.7**	**-4.7**
	baz=41,slow=28						
HFS				Sg	**Sg**	**16 22 42.0**	**-8.3**
	baz=48,slow=28						
NB2	**NORSAR Subarra**	**8.35**	**249**	Pn	**Pn**	**16 20 37.6**	**+2.0**
	baz=57,slow=14						
NB2				Lg	Lg	16 22 57.7	
	baz=42,slow=37						
NB2	**NORSAR Subarra**	**8.35**	**249**	Pn	**Pn**	**16 20 37.6**	**+2.0**
	baz=57,slow=14						
NOA	**NORSAR Array B**	**8.35**	**249**	Pn	**Pn**	**16 20 36.7**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=57,slow=12,SNR=1.2						
NOA				Sn	**Sn**	**16 22 04.8**	**-4.9**
	comp=Z,0.0nm,0.3s,baz=49,slow=24,SNR=1.9						
NOA				Lg	Lg	16 22 55.3	
	comp=Z,0.1nm,0.3s,baz=139,slow=6.0,SNR=5.1						
NRA0	**NORESS Array S**	**8.40**	**247**	Pn	**Pn**	**16 20 38.2**	**+2.0**
	baz=50,slow=12						
NRA0				Sn	**Sn**	**16 22 06.6**	**-4.3**
	baz=61,slow=28						
NRA0				Lg	Lg	16 22 59.0	
	baz=46,slow=37						
NRA0	**NORESS Array S**	**8.40**	**247**	Pn	**Pn**	**16 20 38.2**	**+2.0**
	baz=50,slow=12						
NRA0				Sn	**Sn**	**16 22 06.6**	**-4.3**
	baz=61,slow=28						
SPITS	**Spitsbergen Ar**	**13.68**	**350**	Pn	**Pn**	**16 21 48.0**	**-0.4**
	baz=154,slow=40,SNR=2.4						

*BJI **22** 16:33:52.0±0.0,49.60S×108.54E,h15km,mB5.4/29, mb5.1/45,Ms4.9/7,Ms7 4.5/6*
*MOS **22** 16:33:53.0±0.8,49.28S×109.03E,h10km,mb5.3/11,Error ellipse: s-maj=24.5km s-min=10.2km az=70.9*
*IDC **22** 16:33:53.1±0.4,49.28S×108.94E,h0km,mb4.9/17, mb1 4.9/18,mb1mx4.7/33,mbtmp4.8/18,MS4.2/14, Ms1 4.2/14,ms1mx4.0/24,Error ellipse: s-maj=21.4km s-min=12.3km az=120.0*
*NEIC **22** 16:33:54.7±1.4,49.2S±0.1×108.9E±0.2,h10km±1km, mb5.0/19,Error ellipse: s-maj=28.7km s-min=7.4km az=312.0*
*GCMT **22** 16:33:57.7±0.3,49.23S±0.03×108.78E±0.04,h14km±1km, MW5.0/82,Moment Tensor Solution. s19,c21; s82,c119; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.10±.29; Mθθ-0.73±.17; Mφφ-2.37±.18; Mrθ0.44±.48; Mθφ2.07±.11; Mφr-1.60±.42; Best double couple: Mo3.82900×10^16 NP1:φs314.00000°,δ34.00000°,λ72.00000°. NP2: φs156.00000°,δ58.00000°,λ102.00000°. Principal axes: T 3.5380, Plg74.0000°, Azm97.0000°; N 0.5840, Plg10.0000°, Azm329.0000°; P -4.1200, Plg12.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 22 16:33:54.7±0.3,49.30S±0.06×108.84E±0.09,h10km,n246, σ1§11/239,mb5.1/53,MS4.3/17,11C-4D,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.91**	**17**	T	T		T	16 52 32.2	
	baz=192,slow=74								
H01W1	**Cape Leeuwin H**	**14.92**	**17**	T	T		T	16 52 33.0	
	baz=192,slow=74								
H01W3	**Cape Leeuwin H**	**14.93**	**17**	T	T		T	16 52 33.5	
	baz=192,slow=74								
NWAO	**Narrogin (SRO)**	**17.52**	**24**	P	**Pn**		**Pn**	**16 37 58.4**	**-0.5**
	baz=169,slow=16,SNR=1.5								
NWAO					LR		LR	16 42 58.1	
	comp=Z,1μm,21.7s,baz=206,slow=31								
KLBR	**Kellerberrin**	**18.92**	**24**	P	**Pn**		**Pn**	**16 38 15.9**	**-0.2**
	baz=19								
BLDU	**Ballidu**	**19.59**	**21**	P	**Pn**		**Pn**	**16 38 23.6**	**-0.6**
	baz=20								
KMBL	**Kambalda**	**20.43**	**34**	P	**P**		**P**	**16 38 31.7**	**-0.3**
	baz=20								
MORW	**Morawa**	**20.94**	**18**	P	**P**		**P**	**16 38 38.6**	**+1.1**
	baz=21,SNR=12								
MORW	**Morawa**	**20.94**	**18**	P	**P**		**P**	**16 38 36.6**	**-0.9**
MORW					IAmb		IAmb	16 38 43.4	
	comp=Z,73nm,1.1s								
FORT	**Forrest**	**23.52**	**45**	P	**P**		**P**	**16 39 04.6**	**-0.1**
	baz=23								
FORT	**Forrest**	**23.52**	**45**	P	**P**		**P**	**16 39 03.4**	**-1.4**
MEEK	**Meekatharra**	**23.86**	**22**	P	**P**		**P**	**16 39 08.6**	**+0.4**
	baz=24,SNR=4.9								
BBOO	**Buckleboo**	**26.12**	**61**	P	**P**		**P**	**16 39 28.4**	**-0.3**
	baz=26,SNR=5.7								
BBOO	**Buckleboo**	**26.12**	**61**	P	**P**		**P**	**16 39 28.0**	**-0.6**
BBOO					IAmb		IAmb	16 39 29.8	
	comp=Z,29nm,1.0s								
ARPS	**Mount Arapiles**	**26.95**	**75**	P	**P**		**P**	**16 39 36.2**	**+0.1**
	baz=27,SNR=5.2								
MOO	**Moorlands**	**27.34**	**90**	P	**P**		**P**	**16 39 39.0**	**-0.6**
	baz=27								
HTT	**Hallett**	**27.35**	**66**	P	**P**		**P**	**16 39 39.6**	**-0.2**
	baz=27,SNR=5.7								
WRKA	**Warakurna**	**28.59**	**39**	P	**P**		**P**	**16 39 51.2**	**+0.2**
	baz=28,SNR=4.7								
TOO	**Toolangi**	**28.80**	**80**	P	**P**		**P**	**16 39 53.5**	**+0.7**
	baz=29,SNR=4.2								
MAW	**Mawson**	**29.24**	**214**	P	**P**		**P**	**16 39 56.8**	**+0.6**
	comp=Z,22nm,1.1s,baz=77,slow=12,SNR=6.6								
MAW					LR		LR	16 49 07.8	
	comp=Z,690nm,20.7s,baz=57,slow=31								
MAW	**Mawson**	**29.24**	**214**	P	**P**		**P**	**16 39 58.4**	**+2.2**
	baz=29								
STKA	**Stephens Creek**	**30.04**	**67**	P	**P**		**P**	**16 40 03.0**	**-0.7**
	comp=Z,11nm,0.8s,baz=215,slow=9.5,SNR=24								
STKA					LR		LR	16 49 53.8	
	comp=Z,887nm,21.2s,baz=214,slow=32								
STKA	**Stephens Creek**	**30.04**	**67**	P	**P**		**P**	**16 40 03.5**	**-0.3**
	baz=30,SNR=14								
STKA	**Stephens Creek**	**30.04**	**67**	P	**P**		**P**	**16 40 03.0**	**-0.7**
STKA	**Stephens Creek**	**30.04**	**67**		**P**		**P**	**16 40 02.2**	**-1.6**
ASAR	**Alice Springs**	**32.28**	**47**	P	**P**		**P**	**16 40 23.1**	**-0.4**
	comp=Z,21nm,0.8s,baz=209,slow=8.0,SNR=170								
ASAR					PcP		**PcP**		
	comp=Z,2.2nm,1.0s,baz=198,slow=3.0,SNR=6.1								
ASAR					LR		LR	16 51 43.3	
	comp=Z,808nm,21.1s,baz=215,slow=33								
ASAR	**Alice Springs**	**32.28**	**47**	P	**P**		**P**	**16 40 23.4**	**-0.2**
AS31	**Alice Springs**	**32.28**	**47**	P	**P**		**P**	**16 40 22.8**	**-0.8**
YNG	**Young**	**32.66**	**78**	P	**P**		**P**	**16 40 27.6**	**+0.8**
	baz=32,SNR=7.4								
CMSA	**Cobar Meteorol**	**32.78**	**71**	P	**P**		**P**	**16 40 28.2**	**+0.4**
	baz=33,SNR=5.7								
FITZ	**Fitzroy Crossi**	**33.96**	**29**	P	**P**		**P**	**16 40 38.4**	**+0.3**
	baz=34,SNR=12								
FITZ	**Fitzroy Crossi**	**33.96**	**29**	P	**P**		**P**	**16 40 36.5**	**-1.6**
FITZ					IAmb		IAmb	16 40 40.8	
	comp=Z,43nm,1.4s								
VNDA	**Vanda**	**34.56**	**162**	P	**P**		**P**	**16 40 43.0**	**+0.2**
	comp=Z,19nm,1.0s,baz=288,slow=9.2,SNR=75								
VNDA	**Vanda**	**34.56**	**162**	P	**P**		**P**	**16 40 43.5**	**+0.7**
VNDA					pmax		pmax		
	comp=Z,30nm,1.1s								
VNDA	**Vanda**	**34.56**	**162**	P	**P**		**P**	**16 40 43.5**	**+0.7**
VNDA					IAmb		IAmb	16 40 44.7	
	comp=Z,30nm,1.1s								
QLP	**Quilpie**	**35.48**	**63**	P	**P**		**P**	**16 40 52.1**	**+0.8**
	baz=35,SNR=11								
WRA	**Warramunga Arr**	**35.69**	**44**	P	**P**		**P**	**16 40 52.5**	**-0.6**
	comp=Z,30nm,0.9s,baz=207,slow=8.2,SNR=127								
WRA					PcP		**PcP**		
	comp=Z,2.4nm,1.0s,baz=212,slow=3.3,SNR=4.8								
WRA					LR		LR	16 54 07.6	
	comp=Z,814nm,18.6s,baz=185,slow=34								
WRA	**Warramunga Arr**	**35.69**	**44**	P	**P**		**P**	**16 40 52.9**	**-0.3**
WB2	**Warramunga Arr**	**35.70**	**44**	P	**P**		**P**	**16 40 52.5**	**-0.7**
	baz=36								
WB2	**Warramunga Arr**	**35.70**	**44**	P	**P**		**P**	**16 40 52.5**	**-0.7**
WRAB	**Tennant Creek**	**35.71**	**44**	*ce*P	**P**		**P**	**16 40 51.7**	**-1.6**
WRAB					pmax		pmax		
	comp=Z,45nm,1.0s								
WRAB	**Tennant Creek**	**35.71**	**44**	P	**P**		**P**	**16 40 52.5**	**-0.8**
WR0	**Warramunga Arr**	**35.77**	**44**	P	**P**		**P**	**16 40 53.0**	**-0.8**
WB0	**Warramunga Arr**	**35.87**	**44**	P	**P**		**P**	**16 40 54.2**	**-0.5**
WB0					IAmb		IAmb	16 40 55.7	
	comp=Z,33nm,1.0s								
KNRA	**Kununurra**	**37.27**	**33**	P	**P**		**P**	**16 41 06.7**	**+0.2**
	baz=37,SNR=7.5								
KNRA	**Kununurra**	**37.27**	**33**	P	**P**		**P**	**16 41 06.0**	**-0.5**
KNRA					IAmb		IAmb	16 41 07.6	
	comp=Z,32nm,1.2s								
ARMA	**Armidale**	**37.27**	**76**	P	**P**		**P**	**16 41 07.8**	**+1.1**
	baz=37,SNR=6.1								
ARMA	**Armidale**	**37.27**	**76**	P	**P**		**P**	**16 41 05.5**	**-1.2**
ARMA					IAmb		IAmb	16 41 13.1	
	comp=Z,32nm,1.1s								
QIS	**Mount Isa**	**37.72**	**52**	P	**P**		**P**	**16 41 10.2**	**-0.2**
	baz=38,SNR=5.4								
SYO	**Syowa Base**	**37.93**	**213**	⇑*i*P	**P**		**P**	**16 41 11.0**	**-0.7**
SYO	**Syowa Base**	**37.93**	**213**	⇑*i*pP	pP		pP	16 41 14.6	+0.8
SYO	**Syowa Base**	**37.93**	**213**	⇑*i*sP	sP		sP	16 41 15.8	+1.2
RMQ	**Roma**	**38.25**	**68**	P	**P**		**P**	**16 41 15.5**	**+0.6**
	baz=38,SNR=24								
EIDS	**Eidsvold**	**40.49**	**70**	P	**P**		**P**	**16 41 33.7**	**+0.1**
	baz=40,SNR=3.4								
MTN	**Manton Dam**	**40.74**	**35**	P	**P**		**P**	**16 41 35.9**	**+0.2**
	baz=41,SNR=8.7								
MTN	**Manton Dam**	**40.74**	**35**	P	**P**		**P**	**16 41 35.8**	**+0.2**
MTN					IAmb		IAmb	16 41 36.8	
	comp=Z,32nm,1.0s								
QSPA	**South Pole Qui**	**40.83**	**180**	P	**P**		**P**	**16 41 37.0**	**+0.8**
	comp=Z,68nm,1.0s,baz=314,slow=2.4,SNR=96								
QSPA					PcP		**PcP**		
	comp=Z,8.1nm,1.0s,baz=270,slow=8.1,SNR=3.0								
QSPA	**South Pole Qui**	**40.83**	**180**	P	**P**		**P**	**16 41 37.3**	**+1.1**
KDU	**Kakadu**	**41.39**	**36**	P	**P**		**P**	**16 41 41.5**	**+0.5**
	baz=41,SNR=5.5								
CTAO	**Charters Tower**	**41.69**	**59**	P	**P**		**P**	**16 41 42.3**	**-1.2**
CTAO					pmax		pmax		
	comp=Z,23nm,1.1s								
CTAO	**Charters Tower**	**41.69**	**59**	P	**P**		**P**	**16 41 42.3**	**-1.2**
EDFI	**Ende, Flores**	**41.83**	**19**	P	**P**		**P**	**16 41 45.2**	**+0.5**
	comp=Z,12nm,1.6s								
MTSU	**Mount Surprise**	**42.20**	**55**	P	**P**		**P**	**16 41 48.0**	**+0.3**
	baz=42,SNR=4.9								
TPI	**Tanjungpandan**	**46.38**	**358**	P	**P**		**P**	**16 42 23.1**	**+2.0**
	comp=Z,20nm,1.1s								
PBKI	**Pangkalan Bun**	**46.48**	**4**	P	**P**		**P**	**16 42 24.7**	**+2.8**
	comp=Z,123nm,0.9s								
NVL	**N'lazarevskaya**	**46.62**	**207**	*eP*	**P**		**P**	**16 42 22.8**	**+0.4**
NVL					pmax		pmax		
	comp=Z,44nm,1.1s								
NVL					MLR		MLR		
	comp=Z,990nm,16.0s								
PPBI	**Pangkal Pinang**	**47.02**	**356**	P	**P**		**P**	**16 42 28.7**	**+2.6**
BNDI	**Bandanaira**	**48.07**	**29**	P	**P**		**P**	**16 42 38.1**	**+3.8**
	comp=Z,74nm,1.4s								
BKB	**Balikpapan**	**48.35**	**11**	P	P		P	16 42 42.1	+5.6
	comp=Z,72nm,1.4s								
MTKI	**Muara Teweh, K**	**48.45**	**8**	P	**P**		**P**	**16 42 39.0**	**+1.8**
SDSI	**Sungai Dareh**	**48.60**	**350**	P	**P**		**P**	**16 42 40.2**	**+1.8**
	comp=Z,16nm,1.1s								
SANI	**Sanana**	**49.31**	**23**	P	**P**		**P**	**16 42 43.7**	**-0.1**
	comp=Z,367nmcomp=Z,30nm,1.0s								
SNAA	**Sanae**	**50.16**	**203**	P	**P**		**P**	**16 42 51.0**	**+1.2**
SNAA	**Sanae**	**50.16**	**203**	P	**P**		**P**	**16 42 51.0**	**+1.2**
	comp=Z,41nm,1.0s,baz=134,slow=9.3,SNR=74								
SNAA	**Sanae**	**50.16**	**203**	*c i*P	**P**		**P**	**16 42 49.8**	**0.0**
SNAA					pmax		pmax		
	comp=Z,60nm,1.1s								
SNAA	**Sanae**	**50.16**	**203**	P	**P**		**P**	**16 42 50.6**	**+0.8**
MPSI	**Mapaga**	**50.35**	**14**	P	**P**		**P**	**16 42 53.5**	**+1.8**
	comp=Z,342nmcomp=Z,17nm,2.0s								
KSM	**Kuching**	**50.59**	**2**	P	**P**		**P**	**16 42 55.0**	**+1.5**
MRSI	**Marisa**	**50.85**	**17**	P	**P**		**P**	**16 42 56.4**	**+0.9**
	comp=Z,30nm,1.2s								
PMG	**Port Moresby**	**50.99**	**52**	*ce*P	**P**		**P**	**16 42 55.2**	**-1.4**
PMG					pmax		pmax		
	comp=Z,30nm,1.0s								
MYKOM	**Kota Tinggi**	**51.07**	**354**	P	**P**		**P**	**16 42 59.0**	**+1.9**
BELA	**Belgrano 2**	**51.12**	**189**	P	**P**		**P**	**16 42 56.6**	**-0.3**
H08S2	**Diego Garcia H**	**51.49**	**311**	T	T		T	17 38 16.7	
	baz=151,slow=76								
H08S1	**Diego Carcia H**	**51.50**	**311**	T	T		T	17 38 19.2	
	baz=151,slow=76								
H08S3	**Diego Garcia H**	**51.51**	**311**	T	T		T	17 38 17.9	
	baz=151,slow=76								
VNA2	**Neumayer--Watz**	**51.77**	**202**	P	**P**		**P**	**16 43 03.1**	**+1.3**
	baz=131,slow=10								
SIJI	**Sorong**	**51.94**	**29**	P	**P**		**P**	**16 43 03.8**	**+0.1**
	comp=Z,14nm,1.1s,baz=147,slow=1.1,SNR=7.1								
VNA3	**Neumayer Olymp**	**52.10**	**201**	P	**P**		**P**	**16 43 05.3**	**+1.0**
VNA1	**Neumayer--Stat**	**52.17**	**202**	P	**P**		**P**	**16 43 06.3**	**+1.6**
SMPI	**Sarmi**	**53.60**	**38**	P	**P**		**P**	**16 43 17.9**	**+1.9**
	comp=Z,29nm,1.0s								
GENI	**Genyem**	**53.66**	**40**	P	**P**		**P**	**16 43 19.5**	**+3.1**
	comp=Z,28nm,1.0s								
JAY	**Jayapura**	**53.96**	**41**	P	**P**		**P**	**16 43 18.6**	**-0.1**
	comp=Z,19nm,1.0s,baz=214,slow=5.1,SNR=11								
JAY					LR		LR	17 05 18.5	
	comp=Z,840nm,21.2s,baz=214,slow=35								
JAY	**Jayapura**	**53.96**	**41**	P	**P**		**P**	**16 43 19.2**	**+0.5**
	comp=Z,14nm,1.1s								
KULM	**Kulim**	**54.83**	**350**	P	**P**		**P**	**16 43 24.0**	**-0.9**
DDMP	**Don Marcelino,**	**57.11**	**20**	*eP*	**P**		**P**	**16 43 39.7**	**-1.5**
SKMP	**Bagumbayan, Su**	**57.25**	**19**	*eP*	**P**		**P**	**16 43 40.9**	**-1.3**
KRVT	**Dirgvaal (AS076**	**57.84**	**54**	P	**P**		**P**	**16 43 45.8**	**-0.7**
	comp=Z,16nm,0.9s,baz=13,slow=11,SNR=6.1								
KRVT					LR		LR	17 06 53.0	
	comp=Z,207nm,20.1s,baz=246,slow=34								
KCP	**Kidapawan**	**57.85**	**19**	⇓*eP*	**P**		**P**	**16 43 46.9**	**+0.4**
PAGZ	**Pagadian**	**58.31**	**17**	*eP*	**P**		**P**	**16 43 49.7**	**0.0**
BUKP	**Musuan**	**58.68**	**19**	*eP*	**P**		**P**	**16 43 52.2**	**-0.1**
CNOP	**Candoni, Negro**	**60.11**	**16**	*eP*	**P**		**P**	**16 44 00.7**	**-1.3**
SJMP	**San Jose**	**62.44**	**14**	*eP*	**P**		**P**	**16 44 17.7**	**-0.1**
MSVF	**Nonsavu**	**63.24**	**86**	*i* P	**P**		**P**	**16 44 23.8**	**+0.4**
MSVF					pmax		pmax		
	comp=Z,21nm,1.1s								
BOSA	**Boshof**	**64.88**	**255**	P	**P**		**P**	**16 44 33.3**	**-0.9**
	comp=Z,8.9nm,1.1s,baz=94,slow=4.5,SNR=5.5								
BOSA					LR		LR	17 07 04.8	
	comp=Z,453nm,19.0s,baz=130,slow=31								
CMAR	**Chiang Mai Arr**	**68.02**	**350**	P	**P**		**P**	**16 44 54.5**	**+0.6**
	comp=Z,12nm,0.9s,baz=191,slow=5.6,SNR=86								
CMAR					LR		LR	17 13 46.5	
	comp=Z,57nm,18.0s,baz=164,slow=35								
CMAR	**Chiang Mai Arr**	**68.02**	**350**	P	**P**		**P**	**16 44 52.2**	**-1.8**
KMI	**Kunming**	**74.28**	**354**	⇓*eP*	**P**		**P**	**16 45 34.0**	**+1.9**
KMI					pP		pwP	16 45 39.0

MDJ pmax pmax
comp=Z,9.0nm,0.9s
MDJ pmax pmax
comp=Z,100nm,4.4s
USRK Ussuriysk Ar. 95.29 16 P **P** **16 47 18.1 -0.1**
comp=Z,2.3nm,0.9s,baz=182,slow=5.0,SNR=5.2
AAK Ala-Archa 96.39 335 *ce*P **P** **16 47 22.8 -0.6**
AAK pmax pmax
comp=Z,9.0nm,1.1s
SONM Songino Array 96.77 358 P **P** **16 47 24.7 -0.2**
comp=Z,1.6nm,0.9s,baz=167,slow=4.8,SNR=9.6
SONM LR LR 17 30 52.9
comp=Z,20nm,20.3s,baz=160,slow=35
ULN Ulaanbaatar 96.79 359 *ce*P **P** **16 47 24.1 -1.0**
ULN pmax pmax
comp=Z,4.0nm,1.1s
MK31 Makanchi Array 98.45 342 *ce*P **P** **16 47 29.4 -3.0**
HIA Hailar 98.63 7 *i* P **P** **16 47 31.9 -1.3**
HIA pmax pmax
comp=Z,3.0nm,0.9s
ARU Arti 113.34 332 *i* PKIKP **PKiKP** **16 52 30.0 -1.5**
ARU 16 53 23.1
ARU 16 59 42.2
ARU SS SS 17 09 10.3 +1.6
OBN Obninsk 120.28 321 *i* PKIKP **PKPdf** **16 52 44.2 -0.6**
OBN pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 120.55 313 PKP **PKPdf** **16 52 44.3 -1.2**
comp=Z,0.9nm,0.6s,baz=82,slow=1.9,SNR=6.4
TIXI Tiksi 121.48 7 *ce*PKIKP **PKPdf** **16 52 45.6 -1.1**
KLMR Klimovskoe 123.09 327 *e*PKIKP **PKPdf** **16 52 48.7 -1.4**
KLMR *e* 16 54 28.2
KLMR pmax pmax
comp=Z,12nm,1.5s
KLMR Klimovskoe 123.09 327 *e*PKPdf **PKPdf** **16 52 48.7 -1.4**
KLMR AMP 16 52 50.9
comp=Z,12nm,1.5s
KLMR *eP*P **PP** **16 54 28.2 -2.4**
BILL Bilibino 124.60 23 *e*PKIKP **PKiKP** **16 52 53.1 0.0**
BILL pmax pmax
comp=Z,6.0nm,1.2s
SOKA Soboth 125.32 303 *i* P **PKiKP** **16 52 55.1 -0.2**
comp=Z,10nm,1.1s
ARSA Arzberg 125.39 303 *e*P **PKPdf** **16 52 55.1 +0.1**
comp=Z,9.6nm,1.4s
OBKA Obir 125.48 302 *i* P **PKiKP** **16 52 55.6 0.0**
comp=Z,4.4nm,1.1s
CONA Conrad Observa 125.61 304 *e*P **PKPdf** **16 52 54.8 -0.7**
comp=Z,4.9nm,1.6s
MYKA Terra Mystica 126.06 302 *i* P **PKPdf** **16 52 56.5 +0.2**
comp=Z,8.7nm,1.1s
KRLC Kraliky 126.39 307 *e*PKIKP **PKPdf** **16 52 57.0 +0.2**
KRLC *e* 16 53 01.6
KRLC Kraliky 126.39 307 *e*PKP **PKPdf** **16 52 57.0 +0.2**
KRLC *ep*PKP **sPKPdf** **16 53 01.6 +1.9**
KBA Koelnbreinsper 126.49 302 *e*P **PKPdf** **16 52 56.9 -0.4**
comp=Z,4.8nm,1.1s
ABTA Abfaltersbach 126.76 301 *e*P **PKPdf** **16 52 57.6 -0.1**
comp=Z,6.7nm,1.1s
DPC Dobruska-Polom 126.79 307 *e*PKIKP **PKPdf** **16 52 56.8 -0.8**
DPC *e* 16 53 02.5
DPC Dobruska-Polom 126.79 307 *e*PKP **PKPdf** **16 52 56.8 -0.8**
DPC *ep*PKP **sPKPdf** **16 53 02.5 +2.0**
OSTC Ostas 126.96 307 *e*PKP **PKPdf** **16 52 57.9 0.0**
OSTC *ep*PKP **sPKPdf** **16 53 02.5 +1.7**
CHVC Chvalec 127.06 307 *e*PKP **PKPdf** **16 52 57.1 -1.0**
CHVC *ep*PKP **sPKPdf** **16 53 03.7 +2.7**
GERES GERESS Array B 127.32 304 PKP **PKPdf** **16 52 58.0 -0.7**
comp=Z,2.9nm,1.0s,baz=126,slow=3.4,SNR=17
WTTA Wattenberg 127.55 302 *e*P **PKPdf** **16 52 59.5 +0.2**
comp=Z,12nm,1.4s
KHC Kasperske Hory 127.55 304 *e*PKIKP **PKPdf** **16 52 58.5 -0.6**
KHC Kasperske Hory 127.55 304 *e*PKP **PKPdf** **16 52 58.5 -0.6**
WATA Walderalm 127.62 302 *i* P **PKPdf** **16 52 59.4 0.0**
comp=Z,4.3nm,0.5s
SQTA Sankt Quirin 127.76 301 *e*P **PKPdf** **16 52 59.9 +0.2**
comp=Z,9.0nm,1.0s
MOTA Moosalm 127.89 301 *i* P **PKPdf** **16 52 59.8 -0.2**
comp=Z,7.4nm,1.1s
FETA Feichten 127.91 301 *e*P **PKPdf** **16 53 00.2 +0.2**
comp=Z,11nm,1.1s
RETA Reutte 128.16 301 *i* P **PKPdf** **16 53 00.2 -0.1**
comp=Z,7.8nm,1.3s
DAVA Damuels 128.54 301 *e*P **PKPdf** **16 53 01.3 +0.1**
comp=Z,8.4nm,1.3s
FINES FINESS Array B 128.56 322 PKP **PKPdf** **16 52 59.9 -0.6**
comp=Z,1.9nm,0.9s,baz=100,slow=3.1,SNR=2.3
CLL Collm 129.07 306 *i* PKPdf **PKPdf** **16 53 01.3 -0.5**
CLL *i* (sPKPdf) 16 53 07.0
CLL Collm 129.07 306 *i* PKIKP **PKPdf** **16 53 01.3 -0.5**
CLL *i* 16 53 07.0
ESDC Sonseca Array 132.57 285 PKP **PKPdf** **16 53 08.4 -0.5**
comp=Z,1.3nm,0.8s,baz=28,slow=1.9,SNR=7.3
ILAR Eielson Array 138.78 39 PKP **PKPdf** **16 53 18.3 -1.3**
comp=Z,0.8nm,0.9s,baz=238,slow=5.0,SNR=3.2
ISA Isabella, Lake 143.15 94 P PKPbc 16 53 25.7 +0.2
baz=233
N02D Trinity Center 143.33 83 P **PKPdf** **16 53 27.3 -1.4**
baz=239
BELC Belle Mtn. Jos 143.75 98 P PKPbc 16 53 28.3 +1.0
baz=231,SNR=6.6
CWC Cottonwood Cre 143.87 93 P **PKPdf** **16 53 28.9 -1.0**
baz=234
BC3 Big Chuckawall 143.89 99 P **PKPdf** **16 53 28.9 -1.0**
baz=231,SNR=7.5
GLA Glamis 143.91 100 P **PKPdf** **16 53 29.1 -0.8**
baz=230
GSC Goldstone, Bar 144.02 95 P PKPbc 16 53 28.9 +0.8
baz=233
MPMC Manual Prospec 144.03 94 P PKPbc 16 53 28.5 +0.3
baz=234
HEC Hector,Ludlow 144.04 96 P **PKPdf** **16 53 29.3 -0.9**
baz=232,SNR=8.3
I03D Drain, OR 144.25 79 P PKPbc 16 53 28.8 +0.4
baz=242
IRM Iron Mountain 144.40 98 P **PKPdf** **16 53 30.3 -0.4**
baz=231,SNR=24
GMRC Granite Mounta 144.46 97 P **PKPdf** **16 53 30.5 -0.5**
baz=232,SNR=10
214A Organ Pipe Nat 144.49 103 P **PKPdf** **16 53 30.6 -0.3**
baz=228,SNR=25
INK Inuvik 144.55 35 PKP **PKPab** **16 53 28.4 +0.1**
comp=Z,21nm,1.1s,baz=239,slow=2.8,SNR=13
GRAC Grapevine Rang 144.66 93 P **PKPdf** **16 53 30.8 -0.3**
baz=235
FURC Furnace Creek, 144.68 94 P **PKPdf** **16 53 31.2 +0.2**
baz=234
TUQ Turquoise Moun 144.68 96 P **PKPdf** **16 53 31.2 -0.1**
baz=233,SNR=6.2
SHOC Shoshone, Teco 144.73 95 P **PKPdf** **16 53 31.2 0.0**
baz=234,SNR=13
K04D Chiloquin, OR 144.77 81 P **PKPdf** **16 53 30.9 -0.3**
baz=241
J04D Umpqua Nationa 144.83 80 P **PKPdf** **16 53 31.0 -0.4**
baz=242
NVAR Mina Array Bea 144.85 90 PKP PKPbc 16 53 30.8 0.0
comp=Z,9.1nm,1.1s,baz=221,slow=5.2,SNR=34
I04A Tendick Farm, 144.89 79 P PKPbc 16 53 30.6 +0.1
baz=243
G03D McMinnville, O 144.98 76 P **PKPdf** **16 53 31.7 +0.4**
baz=244
H04D Lebanon 145.01 78 P **PKPdf** **16 53 31.3 -0.1**
baz=244
NEE2 Needles Airpor 145.12 98 P **PKPdf** **16 53 32.3 +0.4**
baz=232
PDMCI Parker Dam,Lak 145.14 99 P **PKPdf** **16 53 32.6 +0.7**
baz=231
TPNV Topopah Spring 145.36 94 P **PKPab** **16 53 33.3 +0.7**
baz=235,SNR=27
J05D Fort Rock, OR 145.41 81 P **PKPab** **16 53 33.3 +0.7**
baz=242
I05D Terrebonne, OR 145.83 79 P **PKPab** **16 53 34.3 +0.4**
baz=244
DAG Danmarks Havn 145.83 341 *i* PKP2 **PKPdf** **16 53 31.0 -0.8**
DAG pmax pmax
comp=Z,20nm,1.2s
DAG Danmarks Havn 145.83 341 *i* P **PKPdf** **16 53 31.0 -0.8**
comp=Z,20nm,1.2s
DAG Danmarks Havn 145.83 341 *i* P **PKPdf** **16 53 31.0 -0.8**
DAG IAmb IAmb 16 53 32.8
comp=Z,20nm,1.2s
E04D Cinebar 145.99 75 P **PKPab** **16 53 34.7 +0.3**
baz=246
TUC Tucson 146.01 105 P **PKPab** **16 53 34.7 -0.3**
baz=228
R11A Troy Canyon, C 146.59 92 P **PKPbc** **16 53 36.2 +0.1**
baz=236,SNR=25
B05A Bryant 146.94 72 P **PKPbc** **16 53 36.8 +0.3**
baz=249
DBG Daneborg 147.10 337 *i* P **PKPbc** **16 53 36.1 -0.1**
DBG IAmb IAmb 16 53 37.6
comp=Z,28nm,1.2s
WUAZ Wupatki 147.68 100 P **PKPbc** **16 53 39.5 +0.3**
baz=232
C36M Paulatuk 147.87 32 P **PKPbc** **16 53 37.8 -0.7**
baz=281
121A Cookes Peak, D 148.04 108 P **PKPbc** **16 53 39.2 -1.1**
baz=228,SNR=7.7
TXAR Lajitas Array 148.27 117 PKPbc **PKPbc** **16 53 40.1 -0.8**
comp=Z,8.5nm,1.0s,baz=198,slow=3.4,SNR=33
TXAR Lajitas Array 148.27 117 PKP2 **PKPbc** **16 53 41.4 +0.5**
TXAR Lajitas Array 148.27 117 PKPbc **PKPbc** **16 53 41.4 +0.5**
SCO Scoresbysund 148.84 331 *i* PKP2 **PKPbc** **16 53 41.2 +0.3**
SCO pmax pmax
comp=Z,34nm,1.2s
SCO Scoresbysund 148.84 331 *i* P **PKPbc** **16 53 41.2 +0.3**
comp=Z,34nm,1.2s
SCO Scoresbysund 148.84 331 *i* P **PKPbc** **16 53 41.2 +0.3**
SCO IAmb IAmb 16 53 47.1
comp=Z,34nm,1.2s
AOPR Arecibo Observ 148.92 188 PKPdf **PKPdf** **16 53 36.7 -2.1**
MNTX Cornudas Mount 148.95 112 P **PKPdf** **16 53 38.9 +0.5**
baz=226
DUG Dugway, Tooele 149.39 91 P **PKPdf** **16 53 39.8 +0.7**
baz=239,SNR=16
833A Chaparral WMA, 149.91 124 P **PKiKP** **16 53 46.1 +0.2**
baz=218
HLID Hailey 149.97 84 P **PKiKP** **16 53 45.5 -0.2**
baz=244
NEW Newport 150.06 74 P **PKPbc** **16 53 44.7 0.0**
baz=251
ANMO Albuquerque 150.46 106 P **PKPbc** **16 53 46.4 +0.1**
baz=230
MVCO Mesa Verde 150.55 100 P **PKiKP** **16 53 46.9 -0.3**
baz=234
JCT Junction City 151.35 120 P **PKPbc** **16 53 48.4 +0.1**
baz=221
MSO Missoula 151.58 78 P **PKPbc** **16 53 48.4 0.0**
baz=249
S22A 4UR Ranch, Cre 151.94 101 P **PKiKP** **16 53 50.6 +0.4**
baz=234,SNR=14
MSTX Muleshoe 152.10 111 P **PKPbc** **16 53 49.3 -0.7**
baz=227
O20A White River Ci 152.35 95 P **PKiKP** **16 53 51.4 +0.6**
baz=238,SNR=8.1
SUMG Summit 152.47 339 *i* PKIKP **PKPbc** **16 53 50.1 +0.1**
SUMG pmax pmax
comp=Z,150nm,1.5s
SUMG Summit 152.47 339 *i* P **PKPbc** **16 53 50.1 +0.1**
comp=Z,149nm,1.5s
SUMG Summit 152.47 339 *i* P **PKPbc** **16 53 50.1 +0.1**
SUMG IAmb IAmb 16 53 52.1
comp=Z,150nm,1.5s
BOZ Bozeman (W) 152.62 82 P **PKiKP** **16 53 51.7 +0.6**
baz=248
RES Resolute Bay 152.62 13 PKPbc **PKPbc** **16 53 49.3 -0.5**
comp=Z,12nm,0.9s,baz=265,slow=0.8,SNR=16
TULEG Thule 152.64 359 *i* P **PKPbc** **16 53 49.5 -0.3**
BW06 Boulder Array 152.78 89 P **PKiKP** **16 53 51.7 +0.1**
baz=243
PDAR Pinedale Array 152.78 89 PKP **PKPdf** **16 53 44.0 -0.2**
comp=Z,0.9nm,0.8s,baz=180,slow=0.7,SNR=4.8
PDAR PKPbc **PKPbc** **16 53 51.0 -0.5**
comp=Z,3.3nm,1.0s,baz=207,slow=3.0,SNR=11
SDCO Great Sand Dun 152.79 102 P **PKiKP** **16 53 52.3 +0.4**
baz=234
YKA Yellowknife Ar 152.90 44 PKPbc **PKPbc** **16 53 49.8 -0.9**
comp=Z,4.6nm,0.9s,baz=295,slow=2.1,SNR=8.8
YKA PKPab **PKPab** **16 54 02.2 +0.2**
comp=Z,9.0nm,1.0s,baz=281,slow=4.1,SNR=10
T25A Trinidad 153.12 104 P **PKPab** **16 54 03.9 -0.1**
baz=233,SNR=6.2
Q24A Divide 153.72 100 P **PKPab** **16 54 07.2 +0.6**
baz=236
WHTX Lake Whitney, 153.80 122 P **PKiKP** **16 53 54.4 +0.6**
baz=221
WMOK Wichita Mounta 155.03 115 P PKPdf 16 53 56.3 +8.9
baz=226
RSSD Black Hills 156.99 90 P **PKPab** **16 54 20.3 0.0**
baz=246
TUL1 Leonard 157.60 117 P **PKPab** **16 54 22.9 +0.1**
baz=226
U40A Yellville 159.59 121 P **PKPab** **16 54 31.3 -0.2**
baz=224
ECSD EROS Data Cent 161.67 98 P **PKPab** **16 54 39.8 -0.6**
baz=244
GOGA Godfrey 161.68 145 P **PKPab** **16 54 39.9 -0.6**
baz=206
Q52A Bidwell 166.96 138 P **PKPab** **16 55 04.0 +0.3**
baz=214
Q53A Leroy 167.19 141 P **PKPab** **16 55 04.5 -0.2**
baz=212

IDC 22 16:37:30.1±1.3, 49.04S×108.28E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/33, mbtmp3.8/5, Error ellipse: s-maj=59.6km s-min=23.7km az=114.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**14.78**	**19**	T	T	16 56 10.9	
	baz=193,slow=74,SNR=24						
H01W1	**Cape Leeuwin H**	**14.79**	**19**	T	T	16 56 11.8	
	baz=193,slow=74,SNR=26						
H01W3	**Cape Leeuwin H**	**14.80**	**19**	T	T	16 56 12.8	
	baz=193,slow=74,SNR=27						
ASAR	**Alice Springs**	**32.38**	**48**	P	P	16 44 01.9	+0.4
	0.8nm,0.7s,baz=208,slow=8.0,SNR=5.4						
WRA	**Warramunga Arr**	**35.77**	**45**	P	P	16 44 31.4	+0.6
	1.0nm,0.8s,baz=206,slow=8.5,SNR=3.9						
QSPA	**South Pole Qui**	**41.09**	**180**	P	P	16 45 15.2	-0.1
	1.8nm,0.8s,baz=330,slow=7.0,SNR=1.6						
SNAA	**Sanae**	**50.26**	**203**	P	P	16 46 27.7	+0.2
	2.0nm,0.9s,baz=127,slow=8.9,SNR=4.0						
CMAR	**Chiang Mai Arr**	**67.71**	**350**	P	P	16 48 27.9	-1.3
	0.2nm,0.3s,baz=178,slow=5.9,SNR=1.4						

*JMA **22** 16:45:53.6, 37.71N×141.00E, h76km±1km, M4.0*
JMA Felt II J1.
*NEIC **22** 16:45:53.6±2.5, 37.72N±0.06×141.0E±0.1, h81km±5km, mb4.5/14, Error ellipse: s-maj=13.0km s-min=8.3km az=113.0*
*NIED **22** 16:45:53.7, 37.71N×141.00E, h76km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr0.90; Mθθ0.00; Mθφ-0.90; Mrθ0.05; Mrφ-0.63; Mφφ-1.32; Fault plane solution: M0 1.72000×10^15 NP1: φs184.00000°, δ72.00000°, λ70.00000°. NP2: φs54.00000°, δ26.00000°, λ137.00000°.*
*IDC **22** 16:45:55.6±1.7, 37.68N×140.86E, h98km±16km, mb3.8/20, mb1 3.9/27, mb1mx3.8/44, mbtmp4.1/27 Error ellipse: s-maj=14.1km s-min=12.1km az=108.0*

ISC 22 16:45:53.0±0.7, 37.70N±0.04×141.06E±0.05, h77km±5km, n97, σ1s34/110, mb4.2/26, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMST	**Minamisoumatoc**	**0.14**	**282**	P	Pn	16 46 04.5	+0.3
JMST				S	Sn	16 46 12.7	+0.3
JMM	**Marumori**	**0.27**	**309**	P	Pn	16 46 04.9	+0.2
JMM				S	Sn	16 46 13.5	+0.1
JMM	**Marumori**	**0.27**	**309**		Pn	16 46 05.0	+0.2
JFK	**Kawauchi**	**0.36**	**204**	P	Pn	16 46 06.0	+0.6
JFK				S	Sn	16 46 14.9	+0.4
JFT	**Otama**	**0.60**	**253**	P	Pn	16 46 07.6	+0.2
JFT				S	Sn	16 46 18.5	+0.4
ONAJ	**Iwakimizuishiy**	**0.63**	**200**	P	Pn	16 46 08.4	+0.7
ONAJ				S	Sn	16 46 19.2	+0.6
JOU	**Okura**	**0.74**	**335**	P	Pn	16 46 09.3	+0.4
JOU				S	Sn	16 46 21.2	+0.6
JIO	**Ouri**	**0.79**	**17**	P	Pn	16 46 10.1	+0.7
JIO				S	Sn	16 46 21.9	+0.3
JYS	**Shirataka**	**0.95**	**304**	P	Pn	16 46 11.6	+0.4
JYS				S	Sn	16 46 25.2	+0.4
JFY	**Yanaizu**	**1.11**	**255**	P	Pn	16 46 13.5	+0.2
JFY				S	Sn	16 46 28.3	-0.2
JMK	**Ichinoseki**	**1.26**	**6**	P	Pn	16 46 15.8	+0.7
JMK				S	Sn	16 46 32.5	+0.8
JYK	**Kaneyama**	**1.34**	**336**	P	Pn	16 46 16.9	+0.8
JYK				*e*S	Sn	16 46 34.4	+0.9
JNS	**Sasagawa**	**1.39**	**276**	P	Pn	16 46 17.1	+0.4
JNS				S	Sn	16 46 34.9	+0.3
JYA	**Atsumi**	**1.39**	**311**	P	Pn	16 46 17.4	+0.7
JYA				S	Sn	16 46 35.3	+0.7
JAW	**Awa shima**	**1.62**	**299**	P	Pn	16 46 20.2	+0.5
JAW				*e*S	Sn	16 46 40.8	+0.8
JYT	**Yasato**	**1.62**	**206**	Pn	Pn	16 46 19.6	-0.1
JSD	**Sado**	**2.24**	**280**	Pn	Pn	16 46 27.9	-0.1
MJAR	**Matsushiro Arr**	**2.55**	**244**	P	Pn	16 46 33.5	+1.2
	3.9nm,0.3s,baz=66,slow=11,SNR=80						
MJAR				S	Sn	16 47 11.0	+8.7
	5.3nm,0.3s,baz=178,slow=14,SNR=4.2						
MJAR	**Matsushiro Arr**	**2.55**	**244**	Pn	Pn	16 46 33.1	+0.9
MAJO	**Matsushiro**	**2.55**	**244**	Pn	Pn	16 46 33.6	+1.4
MAT	**Matsushiro**	**2.55**	**244**	P	Pn	16 46 33.7	+1.4
MAT				S	Sn	16 47 02.9	+0.5
JTM	**Tenmabayashi**	**3.09**	**0**	Pn	Pn	16 46 40.9	+1.5
INU	**Inuyama**	**4.01**	**236**	Pn	Pn	16 46 53.2	+1.2
ERM	**Erimo**	**4.61**	**20**		Pn	16 46 59.6	-0.5
JHJ	**Hachijo jima 2**	**4.68**	**193**	P	Pn	16 47 02.2	+1.0
	31nm,0.3s,baz=315,slow=22,SNR=14						
JHJ				S	Sn	16 47 51.7	-2.5
	42nm,0.3s,baz=60,slow=20,SNR=2.2						
JWT	**Wachi**	**5.16**	**244**	Pn	Pn	16 47 09.9	+2.3
ASAJ	**Asahikawa**	**6.52**	**10**	P	Pn	16 47 26.0	-0.2
	4.2nm,0.3s,baz=217,slow=11,SNR=58						
ASAJ				S	Sn	16 48 37.9	-1.2
	0.5nm,0.3s,baz=136,slow=31,SNR=1.5						
ASAJ	**Asahikawa**	**6.52**	**10**	P	P	16 47 25.9	-2.7
JKA	**Kamikawa-asahi**	**6.52**	**10**		Pn	16 47 25.9	-0.3
JHS	**Saijyo**	**6.95**	**250**	Pn	Pn	16 47 33.1	+0.9
USA0B	**Ussuriysk Arra**	**9.45**	**316**	Pn	Pn	16 48 08.7	+2.5
USRK	**Ussuriysk Ar.**	**9.45**	**316**	P	Pn	16 48 08.1	+2.0
	baz=130,slow=13,SNR=27						
USRK	**Ussuriysk Ar.**	**9.45**	**316**	Pn	Pn	16 48 08.6	+2.5
JNU	**Nakatsue**	**9.48**	**244**	P	Pn	16 48 06.0	-0.7
	0.3nm,0.3s,baz=64,slow=3.9,SNR=6.0						
JNU				S	Sn	16 49 52.4	+0.8
	0.0nm,0.3s,baz=160,slow=19,SNR=1.5						
JNU	**Nakatsue**	**9.48**	**244**		Pn	16 48 03.5	-3.2
KSRS	**Korea Array**	**10.43**	**273**	P	Pn	16 48 21.4	+1.7
	0.4nm,0.3s,baz=85,slow=14,SNR=14						
KLR	**Kul'dur**	**13.35**	**333**	P	Pn	16 49 00.9	+1.7
	0.2nm,0.3s,baz=147,slow=17,SNR=3.2						
PETK	**Petropavlovsk-**	**19.27**	**32**	P	Pn	16 50 12.6	-0.3
	0.2nm,0.3s,baz=251,slow=4.5,SNR=7.1						
PETK	**Petropavlovsk-**	**19.27**	**32**	P	Pn	16 50 12.9	0.0
SEY	**Seymchan**	**26.20**	**12**	P	P	16 51 20.9	+0.8
	0.9nm,0.6s,baz=143,slow=20,SNR=1.3						
XAN	**Xi'an**	**26.23**	**272**	P	P	16 51 18.3	-2.5
XAN				IAmb	IAmb	16 51 21.2	
	comp=Z,9.8nm,0.5s						
ENH	**Enshi**	**27.12**	**264**	P	P	16 51 27.4	-1.4
SONM	**Songino Array**	**27.19**	**303**	P	P	16 51 28.3	-1.0
	comp=Z,4.2nm,0.7s,baz=101,slow=8.9,SNR=26						
SONM	**Songino Array**	**27.19**	**303**		P	16 51 28.0	-1.4
H11N2	**WAKE ISLAND Hy**	**28.73**	**121**	T	T	17 21 59.8	
	baz=315,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.74**	**121**	T	T	17 22 01.1	
	baz=315,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.75**	**121**	T	T	17 22 02.7	
	baz=315,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.46**	**123**	T	T	17 22 55.7	
	baz=317,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.46**	**123**	T	T	17 22 53.7	
	baz=317,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.47**	**123**	T	T	17 22 51.5	
	baz=317,slow=76						
ZALV	**Zalesovo Beam**	**41.26**	**312**	P	P	16 53 30.0	-0.3
	comp=Z,4.8nm,0.6s,baz=88,slow=7.6,SNR=24						
ZALV	**Zalesovo Beam**	**41.26**	**312**	P	P	16 53 29.2	-1.2
CMAR	**Chiang Mai Arr**	**41.40**	**254**	P	P	16 53 30.8	-1.2
	comp=Z,0.7nm,0.4s,baz=46,slow=8.2,SNR=4.4						
MK31	**Makanchi Array**	**43.53**	**301**	P	P	16 53 48.6	-0.3
MK31				IAmb	IAmb	16 53 49.5	
	comp=Z,6.9nm,0.8s						
MKAR	**Makanchi Array**	**43.53**	**301**	P	P	16 53 48.6	-0.3
	comp=Z,7.2nm,0.7s,baz=88,slow=9.7,SNR=64						
MAKZ	**Makanchi**	**43.74**	**302**	P	P	16 53 49.0	-1.6
MAKZ				IAmb	IAmb	16 53 51.2	
	comp=Z,7.8nm,0.8s						
KURK	**Kurchatov**	**45.30**	**308**	P	P	16 54 02.1	-0.8
TAPN	**Taplejung**	**45.62**	**273**	*e*P	P	16 54 07.1	+1.0
RAMN	**Ramite**	**46.68**	**273**	*e*P	P	16 54 14.0	-0.4
GUN	**Gumba**	**46.81**	**275**	*e*P	P	16 54 16.7	+1.1
	comp=Z,17nm,0.4s						
KKN	**Kakani**	**47.34**	**275**	*e*P	P	16 54 19.5	0.0
	comp=Z,11nm,0.5s						
GKN	**Gorkha**	**47.76**	**276**	*e*P	P	16 54 23.5	+0.9
DANN	**Dangsing**	**48.29**	**277**	*e*P	P	16 54 27.1	+0.2
	comp=Z,30nm,0.4s						
KOLN	**Koldanda**	**48.68**	**276**	*e*P	P	16 54 29.5	-0.3
PYUN	**Piuthan**	**49.01**	**277**	*e*P	P	16 54 32.1	-0.2
	comp=Z,18nm,0.4s						
HDA	**Harding Lake**	**49.08**	**33**	P	P	16 54 30.3	-1.8
IL31		**49.09**	**33**	P	P	16 54 32.8	+0.7
IL31				IAmb	IAmb	16 54 33.8	
	comp=Z,3.2nm,0.7s						
ILAR	**Eielson Array**	**49.09**	**33**	P	P	16 54 33.2	+1.1
	comp=Z,2.5nm,0.6s,baz=265,slow=5.8,SNR=22						
ILAR	**Eielson Array**	**49.09**	**33**	P	P	16 54 32.6	+0.5
BCAR	**Beaver Creek A**	**51.51**	**35**	P	P	16 54 52.4	+1.9
KKAR	**Karatay Array**	**52.55**	**300**	P	P	16 54 58.1	-0.5
INK	**Inuvik**	**53.93**	**27**	P	P	16 55 09.5	+1.3
	comp=Z,1.4nm,0.4s,baz=302,slow=4.6,SNR=8.1						
INK	**Inuvik**	**53.93**	**27**	P	P	16 55 09.6	+1.4
GAR	**Garm**	**54.16**	**295**	P	P	16 55 10.4	-0.1
GAR				IAmb	IAmb	16 55 18.1	
	comp=Z,4.7nm,1.0s						
CHGR	**Chuyangaron**	**55.13**	**295**	P	P	16 55 16.6	-0.9
ABKAR	**Akbulak array**	**57.30**	**310**	P	P	16 55 31.9	-0.7
ABKAR	**Akbulak array**	**57.30**	**310**	P	P	16 55 31.4	-1.2
WRA	**Warramunga Arr**	**57.68**	**187**	P	P	16 55 35.2	-0.3
	comp=Z,1.1nm,0.7s,baz=4.7,slow=7.3,SNR=24						
WRA	**Warramunga Arr**	**57.68**	**187**	P	P	16 55 35.5	0.0
ASAR	**Alice Springs**	**61.40**	**187**	P	P	16 56 01.4	+0.3
	comp=Z,0.6nm,0.7s,baz=17,slow=6.8,SNR=14						
ASAR	**Alice Springs**	**61.40**	**187**	P	P	16 56 02.0	+0.9
GEYT	**Alibeck**	**63.27**	**299**	P	P	16 56 13.2	-0.5
	comp=Z,21nm,0.8s,baz=316,slow=6.2,SNR=4.1						
ARCES	**ARCESS Array B**	**63.28**	**339**	P	P	16 56 13.1	0.0
	comp=Z,7.0nm,1.2s,baz=55,slow=7.8,SNR=2.2						
YKA	**Yellowknife Ar**	**63.38**	**30**	P	P	16 56 14.0	+0.2
	comp=Z,0.7nm,0.7s,baz=308,slow=5.8,SNR=2.3						
FINES	**FINESS Array B**	**68.10**	**332**	P	P	16 56 43.2	-1.0
	comp=Z,1.4nm,0.7s,baz=38,slow=9.6,SNR=5.6						
FINES	**FINESS Array B**	**68.10**	**332**	P	P	16 56 44.0	-0.2
KBZ	**Khabaz**	**70.26**	**310**	P	P	16 56 57.7	-0.2
	comp=Z,2.9nm,0.9s,baz=334,slow=6.3,SNR=4.1						
NOA	**NORSAR Array B**	**73.47**	**337**	P	P	16 57 16.1	-0.8
	comp=Z,0.5nm,0.7s,baz=39,slow=5.7,SNR=2.0						
AKASG	**Malin Array Be**	**73.60**	**322**	P	P	16 57 17.0	-0.8
	comp=Z,1.2nm,0.4s,baz=45,slow=6.2,SNR=8.5						
AKASG	**Malin Array Be**	**73.60**	**322**	P	P	16 57 17.5	-0.3
NVAR	**Mina Array Bea**	**74.82**	**53**	P	P	16 57 27.1	+1.8
	comp=Z,3.7nm,1.1s,baz=293,slow=6.3,SNR=7.3						
NVAR	**Mina Array Bea**	**74.82**	**53**	P	P	16 57 25.0	-0.3
PDAR	**Pinedale Array**	**77.40**	**45**	P	P	16 57 41.0	+1.1
	comp=Z,0.9nm,0.6s,baz=263,slow=1.4,SNR=7.4						
BRTR	**Keskin Array B**	**78.20**	**311**	P	P	16 57 44.8	+0.5
	comp=Z,1.0nm,0.8s,baz=18,slow=6.4,SNR=2.3						
GERES	**GERESS Array B**	**82.00**	**328**	P	P	16 58 04.5	-0.1
	comp=Z,0.4nm,0.5s,baz=42,slow=6.2,SNR=5.8						
TXAR	**Lajitas Array**	**89.94**	**52**	P	P	16 58 45.0	+0.9
	comp=Z,0.9nm,0.6s,baz=298,slow=2.8,SNR=10.0						
LPAZ	**La Paz**	**146.59**	**58**	PKPbc	**PKPab**	17 05 27.0	-1.1
	comp=Z,1.2nm,0.6s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.15**	**225**	Pn	Pn	17 04 00.1	-0.9
	4.8nm,0.3s,baz=311,slow=7.3,SNR=6.4						
GUMO				Sn	Sn	17 04 46.3	-4.0
	3.4nm,0.3s,baz=321,slow=3.2,SNR=2.5						
WRA	**Warramunga Arr**	**38.63**	**201**	P	P	17 10 22.1	+0.4
	0.3nm,0.6s,baz=26,slow=8.5,SNR=5.4						
ASAR	**Alice Springs**	**42.24**	**199**	P	P	17 10 51.3	-0.4
	0.1nm,0.8s,baz=26,slow=7.2,SNR=1.6						
ILAR	**Eielson Array**	**64.66**	**26**	P	P	17 13 35.8	0.0
	0.6nm,1.0s,baz=262,slow=6.1,SNR=2.1						

*IDC **22** 17:18:24.2±1.2, 7°33S×124°47E, h0km, mb3.6/3, mb1 4.0/9, mb1mx3.7/47, mbtmp3.9/9, ML3.9/6, MS3.1/5, Ms1 3.1/5, ms1mx2.8/38, Error ellipse: s-maj=32.3km s-min=18.5km az=73.0*
*DJA **22** 17:18:27.2±0.7, 7°S±2°×124°4E±°, h11km±6km, M4.3/15, mB4.8/7, mb4.8/10, MLv4.2/15, Mw(mB)4.1/7*
*NEIC **22** 17:18:29.3±2.4, 7°56S±0°06×124°09E±0°10, h108km±19km, mb4.2/8, Error ellipse: s-maj=14.7km s-min=8.0km az=65.0*
ISC 22 17:18:28.8±0.7, **7°50S**±0°05×**124°09E**±0°06, **h100**km, **n48**, σ2**s50**/51, **mb3.9**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**2.16**	**238**	P	**Pn**	**17 19 03.6**	**+0.2**
MMRI	**Maumere**	**2.16**	**238**	Pn	**Pn**	**17 19 03.7**	**+0.2**
SOEI	**Soe**	**2.25**	**176**	P	**Pn**	**17 19 07.1**	**+2.4**
SOEI	**Soe**	**2.25**	**176**		**Pn**	**17 19 07.1**	**+2.4**
EDFI	**Ende, Flores**	**2.68**	**242**	P	**Pn**	**17 19 10.5**	**0.0**
EDFI				S	**Sn**	**17 19 43.1**	**+0.6**
BATI	**Baumata**	**2.72**	**189**	Pn	**Pn**	**17 19 14.6**	**+3.6**
	12nm,0.3s,baz=20,slow=4.4,SNR=17						
BATI				Sn	**Sn**	**17 19 50.4**	**+7.1**
	24nm,0.3s,baz=281,slow=7.9,SNR=5.1						
BATI	**Baumata**	**2.72**	**189**	P	**Pn**	**17 19 15.0**	**+4.1**
BSSI	**Bau Bau, Buton**	**3.83**	**290**	P	**Pn**	**17 19 25.4**	**-0.3**
BSSI				S	**Sn**	**17 20 09.5**	**-0.2**
WSI	**Waingapu**	**4.33**	**240**	P	Pn	17 19 42.9	+10
BKSI	**Bulukumba**	**4.50**	**299**	P	**Pn**	**17 19 35.0**	**+0.2**
KAPI	**Kappang**	**4.97**	**300**	Pn	**Pn**	**17 19 42.9**	**+1.7**
	8.6nm,0.3s,baz=122,slow=6.6,SNR=30						
KAPI				Sn	**Sn**	**17 20 38.0**	**+0.4**
	5.4nm,0.3s,baz=66,slow=19,SNR=2.0						
KAPI				LR	LR	17 21 47.6	
	comp=Z,195nm,19.7s,baz=120,slow=39						
KAPI	**Kappang**	**4.97**	**300**	Pn	**Pn**	**17 19 42.2**	**+1.0**
BNSI	**Bone**	**5.02**	**308**	P	**Pn**	**17 19 42.2**	**+0.3**
	0.8nm3µm179nm,0.6s						
NLAI	**Namlea**	**5.19**	**35**	P	**Pn**	**17 19 45.0**	**+0.9**
	0.4nm2µm82nm,0.5s						
SPSI	**Sidrap Palu**	**5.56**	**309**	P	**Pn**	**17 19 50.4**	**+1.3**
	0.2nm781nm52nm,0.7s						
SANI	**Sanana**	**5.74**	**19**	P	**Pn**	**17 19 51.2**	**-0.4**
	0.1nm343nm28nm,0.7s						
TTSI	**Tana Toraja**	**6.14**	**316**	P	**Pn**	**17 19 59.5**	**+2.4**
	0.1nm420nm23nm,0.9s						
BNDI	**Bandanaira**	**6.49**	**63**	P	**Pn**	**17 20 01.5**	**-0.4**
	0.4nm102nm,0.7s						
LUWI	**Luwuk**	**6.55**	**348**	P	**Pn**	**17 20 02.8**	**+0.1**
	0.5nm2µm100nm,0.7s						
LUWI	**Luwuk**	**6.55**	**348**		**Pn**	**17 20 03.1**	**+0.5**
APSI	**Ampana**	**6.99**	**339**	P	**Pn**	**17 20 08.8**	**+0.2**
	0.1nm344nm32nm,0.7s						
SAUI	**Saumlaki**	**7.16**	**94**	Pn	**Pn**	**17 20 09.8**	**-1.1**
MTN	**Manton Dam**	**8.73**	**128**	Pn	**Pn**	**17 20 33.2**	**+1.0**
TOLI2	**Tolitoli**	**9.17**	**339**	Pn	**Pn**	**17 20 40.8**	**+2.4**
FAKI	**Fak Fak**	**9.31**	**61**	Pn	**Pn**	**17 20 42.4**	**+2.2**
KNRA	**Kununurra**	**9.32**	**151**	Pn	**Pn**	**17 20 39.7**	**-0.6**
SIJI	**Sorong**	**9.72**	**48**	Pn	**Pn**	**17 20 41.8**	**-4.1**
	0.3nm,0.3s,baz=157,slow=23,SNR=5.7						
FITZ	**Fitzroy Crossi**	**10.64**	**172**	Pn	**Pn**	**17 20 57.9**	**-0.4**
	0.3nm,0.3s,baz=356,slow=9.1,SNR=12						
FITZ				Sn	**Sn**	**17 22 50.4**	**-5.1**
	0.4nm,0.3s,baz=144,slow=14,SNR=5.1						
FITZ	**Fitzroy Crossi**	**10.64**	**172**	Pn	**Pn**	**17 20 57.9**	**-0.4**
FITZ					**Sn**	**17 22 54.0**	**-1.5**
MYLDM	**Lahad Datu**	**13.78**	**336**		**P**	**17 21 45.6**	**+0.6**
WB0	**Warramunga Arr**	**15.76**	**142**	Pn	**Pn**	**17 22 05.0**	**-0.3**
WB0				IAmb	IAmb	17 22 14.7	
	comp=Z,9.5nm,0.7s						
WRAB	**Tennant Creek**	**15.86**	**142**		**Pn**	**17 22 06.0**	**-0.5**
WRAB				IAmb	IAmb	17 22 15.6	
	comp=Z,15nm,0.7s						
WRA	**Warramunga Arr**	**15.86**	**142**	Pn	**Pn**	**17 22 05.8**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=321,slow=13,SNR=84						
WRA				Sn	**Sn**	**17 24 53.1**	**-9.0**
	comp=Z,0.3nm,0.3s,baz=303,slow=18,SNR=4.7						
WRA				LR	LR	17 28 41.4	
	comp=Z,43nm,18.6s,baz=340,slow=39						
WRA	**Warramunga Arr**	**15.86**	**142**		**Pn**	**17 22 06.0**	**-0.5**
WB2	**Warramunga Arr**	**15.87**	**142**		**Pn**	**17 22 05.8**	**-0.8**
WC3	**Warramunga Arr**	**15.89**	**142**		**Pn**	**17 22 06.2**	**-0.7**
WC3				IAmb	IAmb	17 22 15.9	
	comp=Z,15nm,0.7s						
WR0	**Warramunga Arr**	**16.00**	**142**	Pn	**Pn**	**17 22 07.4**	**-0.8**
WR0				IAmb	IAmb	17 22 17.3	
	comp=Z,8.0nm,0.7s						
AS31	**Alice Springs**	**18.63**	**151**	P	**Pn**	**17 22 42.8**	**+2.6**
ASAR	**Alice Springs**	**18.63**	**151**	P	**Pn**	**17 22 43.5**	**+3.3**
	comp=Z,0.5nm,0.3s,baz=324,slow=11,SNR=34						
ASAR				S	**S**	**17 26 01.2**	**-4.7**
	comp=Z,0.0nm,0.3s,baz=334,slow=20,SNR=4.3						
ASAR				LR	LR	17 30 48.6	
	comp=Z,38nm,20.4s,baz=321,slow=41						
ASAR	**Alice Springs**	**18.63**	**151**	P	**Pn**	**17 22 42.5**	**+2.4**
COEN	**Coen**	**19.80**	**110**	P	**Pn**	**17 22 56.5**	**+2.5**
COEN				IAmb	IAmb	17 23 08.2	
	comp=Z,7.5nm,0.8s						
PMG	**Port Moresby**	**22.89**	**96**	LR	LR	17 33 11.7	
	comp=Z,109nm,18.4s,baz=250,slow=39						
CMAR	**Chiang Mai Arr**	**35.79**	**316**	P	P	17 25 26.6	+7.9
	comp=Z,0.5nm,0.3s,baz=138,slow=8.2,SNR=2.2						
CMAR				LR	LR	17 43 12.9	
	comp=Z,26nm,19.8s,baz=182,slow=41						
LZH	**Lanzhou**	**47.35**	**338**	*e*P	**P**	**17 26 54.0**	**+1.0**
LZH				pP	pwP	17 27 23.0	+2.4
LZH				sP	sP	17 27 37.3	+11
LZH				pmax	pmax		
	comp=Z,28nm,1.6s						
LZH				pmax	pmax		
	comp=Z,90nm,5.4s						
HHC	**Hu-ho-hao-te**	**49.48**	**347**	*e*P	**P**	**17 27 08.6**	**-0.5**
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,4.8s						
WMQ	**Urumqi**	**60.78**	**331**	*e*P	**P**	**17 28 30.1**	**-0.2**
MKAR	**Makanchi Array**	**65.57**	**330**	P	P	17 29 09.9	+8.0
	comp=Z,0.1nm,0.4s,baz=123,slow=7.2,SNR=1.8						
VNDA	**Vanda**	**72.72**	**172**	P	P	17 29 54.2	+8.7
	comp=Z,0.6nm,1.1s,baz=332,slow=4.3,SNR=2.2						

*TAP **22** 17:25:54.4, 24°92N×122°45E, h15km, ML3.3, C*
*JMA **22** 17:25:55.1±0.1, 24°87N×122°46E, h24km±3km, M2.7*
ISC 22 17:25:54.7±1.1, **24°89N**±0°02×**122°46E**±0°02, **h20**km±4km, **n101**, σ0**s73**/161, **39C-32D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.45**	**286**	⇑*i*P	**Pg**	**17 26 03.6**	**-0.3**
	baz=281						
TWB1				S	**Sg**	**17 26 09.8**	**-0.3**
	baz=281						
NTC	**Toucheng**	**0.57**	**267**	⇑P	**Pg**	**17 26 06.1**	**-0.1**
	baz=275						
NTC				*e*S	**Sb**	**17 26 13.0**	**-0.8**
	baz=275						
TIPB	**Shuangxi**	**0.58**	**279**	⇑*i*P	**Pg**	**17 26 06.6**	**+0.2**
	baz=275						
TIPB				S	**Sg**	**17 26 14.7**	**+0.4**
	baz=275						
JYNG	**Yonagunijimaku**	**0.62**	**134**	P	**Pb**	**17 26 06.8**	**0.0**
JYNG				S	**Sb**	**17 26 15.4**	**+0.4**
TWC	**Suao**	**0.62**	**244**	⇑*i*P	**Pb**	**17 26 06.3**	**-0.6**
	baz=240						
TWC				*e*S	**Sg**	**17 26 16.3**	**+0.8**
	baz=240						
NWF	**Wu-fen Shan**	**0.64**	**287**	⇑*i*P	**Pg**	**17 26 07.8**	**+0.2**
	baz=283						
NWF				S	**Sg**	**17 26 16.6**	**+0.3**
	baz=283						
WFSB	**Wu-fen Shan**	**0.64**	**287**	⇑P	**Pg**	**17 26 07.8**	**+0.2**
	baz=283						
WFSB				*e*S	**Sg**	**17 26 16.6**	**+0.4**
	baz=283						
YOJ	**Yonaguni jima**	**0.65**	**130**	⇑*i*P	**Pb**	**17 26 07.5**	**0.0**
	baz=123						
YOJ				*e*S	**Sb**	**17 26 16.3**	**+0.2**
	baz=123						
YOJ	**Yonaguni jima**	**0.65**	**130**	P	**Pb**	**17 26 07.4**	**0.0**
YOJ				S	**Sb**	**17 26 16.2**	**+0.2**
ILA	**Ilan**	**0.66**	**260**	⇑*i*P	**Pg**	**17 26 08.2**	**+0.4**
	baz=256						
ILA				*e*S	**Sg**	**17 26 17.4**	**+0.8**
	baz=256						
ENAH	**Nanao**	**0.73**	**234**	⇑*i*P	**Pb**	**17 26 08.9**	**0.0**
	baz=231						
ENAH				*e*S	**Sb**	**17 26 18.6**	**+0.2**
	baz=231						
TWE	**Neicheng**	**0.74**	**257**	⇓*i*P	**Pg**	**17 26 09.2**	**-0.1**
	baz=253						
TWE				*e*S	**Sg**	**17 26 19.0**	**-0.1**
	baz=253						
NWRT	**Kuosheng**	**0.79**	**294**	*e*S	**Sg**	**17 26 20.7**	**-0.1**
	baz=291						
ENA	**Nanau**	**0.80**	**235**	⇓*i*P	**Pb**	**17 26 09.9**	**0.0**
	baz=232						
ENA				*e*S	**Sn**	**17 26 21.8**	**-0.4**
	baz=232						
TWA	**Mucha**	**0.80**	**277**	⇓*i*P	**Pg**	**17 26 10.3**	**-0.2**
	baz=274						
TWA				S	**Sn**	**17 26 21.7**	**-0.6**
	baz=274						
PCYT	**Pengchaiyu**	**0.82**	**335**	⇓*i*P	**Pb**	**17 26 10.1**	**-0.2**
	baz=334						
YM08	**YM08**	**0.85**	**291**	⇑P	**Pn**	**17 26 11.5**	**0.0**
	baz=288						
YM08				*e*S	**Sg**	**17 26 22.1**	**-0.5**
	baz=288						
ENTT	**Nioudou**	**0.85**	**254**	⇑*i*P	**Pg**	**17 26 11.1**	**-0.2**
	baz=235						
ENTT				*e*S	**Sn**	**17 26 23.8**	**+0.3**
	baz=235						
YM01	**YM01**	**0.85**	**288**	⇑P	**Pg**	**17 26 11.1**	**-0.3**
	baz=285						
YM01				*e*S	**Sg**	**17 26 22.8**	**+0.1**
	baz=285						
YM11	**YM11**	**0.85**	**289**	⇓P	**Pn**	**17 26 11.9**	**+0.2**
	baz=271						
YM11				*e*S	**Sn**	**17 26 23.6**	**-0.1**
	baz=271						
NHDH	**Xindian Distri**	**0.85**	**275**	⇓*i*P	**Pg**	**17 26 11.3**	**-0.1**
	baz=272						
NHDH				*e*S	**Sg**	**17 26 22.5**	**-0.2**
	baz=272						
YM05	**YM05**	**0.86**	**289**	⇑P	**Pn**	**17 26 11.6**	**-0.2**
	baz=271						
YM05				*e*S	**Sg**	**17 26 23.0**	**0.0**
	baz=271						
YM10	**YM10**	**0.86**	**288**	⇑P	**Pn**	**17 26 12.0**	**+0.2**
	baz=270						
YM10				*e*S	**Sb**	**17 26 21.8**	**-0.4**
	baz=270						
TAP1	**Taipei**	**0.86**	**280**	⇓*i*P	**Pn**	**17 26 12.0**	**+0.2**
	baz=277						
TAP1				*e*S	**Sg**	**17 26 23.1**	**0.0**
	baz=277						
TWY	**Chenhua**	**0.87**	**297**	⇓*i*P	**Pn**	**17 26 12.2**	**+0.3**
	baz=294						
TWY				*e*S	**Sn**	**17 26 24.5**	**+0.4**
	baz=294						
NWLT	**Wulai**	**0.88**	**263**	P	**Pg**	**17 26 11.8**	**-0.1**
	baz=260						
NWLT				*e*S	**Sg**	**17 26 23.2**	**-0.3**
	baz=260						
TAP	**Taipei**	**0.88**	**280**	⇑*i*P	**Pn**	**17 26 12.4**	**+0.4**
	baz=277						
TAP				S	**Sg**	**17 26 23.4**	**-0.2**
	baz=277						
YM04	**YM04**	**0.88**	**288**	⇑P	**Pn**	**17 26 12.1**	**0.0**
	baz=272						
YM04				*e*S	**Sg**	**17 26 23.2**	**-0.4**
	baz=272						
YM03	**YM03**	**0.89**	**290**	⇓P	**Pn**	**17 26 12.4**	**+0.2**
	baz=273						
YM03				*e*S	**Sb**	**17 26 22.7**	**-0.2**
	baz=273						
TATO	**Taipei**	**0.89**	**276**	⇓P	**Pb**	**17 26 11.6**	**+0.2**
	baz=273						
TATO				*e*S	**Sb**	**17 26 23.2**	**+0.3**
	baz=273						
ANP	**Anpu**	**0.91**	**290**	⇓P	**Pn**	**17 26 12.9**	**+0.4**
	baz=274						
ANP				*e*S	**Sb**	**17 26 22.5**	**-1.0**
	baz=274						
NDT	**Datong Townshi**	**0.91**	**252**	⇑P	**Pn**	**17 26 12.3**	**0.0**
	baz=232						
NDT				*e*S	**Sn**	**17 26 25.1**	**+0.2**
	baz=232						
TWS1	**Kuangyinshan**	**0.97**	**283**	⇓P	**Pg**	**17 26 14.7**	**+1.1**
	baz=280						
TWS1				*e*S	**Sn**	**17 26 26.8**	**+0.3**
	baz=280						
YHNB	**Yeheng**	**1.01**	**258**	⇓P	**Pb**	**17 26 13.7**	**+0.1**
	baz=270						
YHNB				*e*S	**Sn**	**17 26 27.4**	**-0.1**
	baz=270						
NSK	**Sanguang**	**1.02**	**259**	⇑P	**Pn**	**17 26 14.0**	**0.0**
	baz=270						
NSK				*e*S	**Sn**	**17 26 27.4**	**-0.4**
	baz=270						
NACB	**Ninganchiao**	**1.06**	**228**	⇑P	**Pb**	**17 26 14.0**	**-0.4**
	baz=237						
NACB				*e*S	**Sb**	**17 26 28.2**	**+0.3**
	baz=237						
NNSB	**Datong**	**1.08**	**245**	⇓P	**Pb**	**17 26 14.9**	**0.0**
	baz=242						
NNSB				*e*S	**Sn**	**17 26 29.3**	**-0.1**
	baz=242						
NNSH	**Datong**	**1.08**	**245**	*e*S	**Sg**	**17 26 30.2**	**+0.1**
	baz=243						
NNS	**Nan Shan**	**1.08**	**246**	⇑P	**Pn**	**17 26 15.1**	**+0.2**
	baz=243						
NNS				*e*S	**Sn**	**17 26 29.8**	**+0.3**
	baz=243						
ETLH	**Xiulin Townshi**	**1.12**	**233**	⇑P	**Pb**	**17 26 15.6**	**+0.1**
	baz=231						
ETLH				*e*S	**Sn**	**17 26 30.4**	**+0.1**
	baz=231						
TWD	**Chiawan**	**1.12**	**225**	⇓P	**Pb**	**17 26 16.0**	**+0.5**
	baz=231						
TWD				*e*S	**Sg**	**17 26 31.5**	**+0.2**
	baz=231						
FUSS	**Fushou**	**1.28**	**240**	⇓*e*P	**Pg**	**17 26 19.1**	**-0.4**
	baz=238						
FUSS				*e*S	**Sg**	**17 26 36.4**	**+0.1**
	baz=238						
IRIF	**Iriomote-Funau**	**1.28**	**115**	P	**Pn**	**17 26 17.0**	**-0.5**
IRIF				S	**Sn**	**17 26 34.1**	**+0.1**
WHF	**Hehuan Shan**	**1.31**	**236**	⇓P	**Pb**	**17 26 19.4**	**+0.4**
	baz=234						
WHF				*e*S	**Sb**	**17 26 36.2**	**+0.6**
	baz=234						
TWT	**Tachien**	**1.33**	**242**	P	**Pb**	**17 26 19.6**	**+0.5**
	baz=231						
TWT				*e*S	**Sg**	**17 26 38.9**	**+1.0**
	baz=231						
LIOB	**Emei**	**1.33**	**260**	*e*P	**Pb**	**17 26 18.8**	**-0.3**
	baz=258						
TDCB	**Techi**	**1.34**	**242**	⇓*e*P	**Pb**	**17 26 19.5**	**+0.2**
	baz=231						
TDCB				*e*S	**Sg**	**17 26 38.7**	**+0.4**
	baz=231						
SBCB	**Hsinchu**	**1.34**	**266**	*e*S	**Sb**	**17 26 36.3**	**+0.3**
	baz=281						
NSTT	**Nanjuang**	**1.35**	**260**	⇑*e*P	**Pn**	**17 26 18.9**	**+0.4**
	baz=256						
NSTT				*e*S	**Sb**	**17 26 36.8**	**+0.5**
	baz=256						
ESL	**Shilin**	**1.42**	**222**	⇑*e*P	**Pn**	**17 26 20.0**	**+0.5**
	baz=219						
CHGB	**Renai**	**1.43**	**235**	⇓*e*P	**Pb**	**17 26 21.5**	**+0.6**
	baz=246						
CHGB				*e*S	**Sg**	**17 26 40.1**	**-1.1**
	baz=246						
HATJ	**Hateruma jima**	**1.48**	**124**	P	**Pb**	**17 26 21.7**	**+0.2**
OWD	**Renai**	**1.49**	**232**	⇓*e*P	**Pb**	**17 26 21.9**	**0.0**
	baz=238						
OWD				*e*S	**Sb**	**17 26 40.9**	**+0.5**
	baz=238						
WHP	**Taichung City**	**1.51**	**247**	⇑*e*P	**Pg**	**17 26 23.5**	**-0.3**
	baz=244						
WHP				*e*S	**Sb**	**17 26 41.2**	**+0.4**
	baz=244						
EGFH	**Guangfu**	**1.54**	**218**	⇑*e*P	**Pb**	**17 26 22.1**	**-0.4**
	baz=199						
JKRS	**Kuro-shima**	**1.55**	**114**	P	**Pn**	**17 26 21.4**	**+0.2**
NMLH	**Miaoli**	**1.56**	**258**	*e*P	**Pg**	**17 26 25.2**	**+0.4**
	baz=255						
NMLH				*e*S	**Sg**	**17 26 46.1**	**+1.0**
	baz=255						
JIJ	**Ishigaki jima**	**1.62**	**108**	P	**Pb**	**17 26 23.7**	**-0.2**
JIJ				*e*S	**Sb**	**17 26 44.3**	**+0.4**
TWQ1	**Liyutan**	**1.63**	**251**	⇑*e*P	**Pg**	**17 26 25.3**	**-0.8**
	baz=249						
DPDB	**Guoxing**	**1.64**	**239**	⇑*e*P	**Pb**	**17 26 25.1**	**+0.8**
	baz=237						
HGSD	**Ruisui**	**1.68**	**215**	⇓*e*P	**Pn**	**17 26 23.7**	**+0.7**
	baz=199						
JISG	**Ishigakijimahi**	**1.71**	**100**	P	**Pn**	**17 26 23.1**	**-0.3**
EHY	**Hungye**	**1.72**	**217**	⇓*e*P	**Pn**	**17 26 23.6**	**0.0**
	baz=215						
SMLT	**Sun Moon Lake**	**1.74**	**235**	⇓*e*P	**Pb**	**17 26 26.4**	**+0.3**
	baz=215						
SSLB	**Suanglung**	**1.76**	**232**	⇑*e*P	**Pb**	**17 26 25.9**	**-0.4**
	baz=213						
TYC	**Yuchr**	**1.76**	**237**	⇑*e*P	**Pb**	**17 26 26.5**	**+0.1**
	baz=218						
YULB	**Yu-li**	**1.83**	**216**	⇓*e*P	**Pn**	**17 26 24.9**	**-0.1**
	baz=214						
EYUL	**Yuli**	**1.85**	**215**	*e*P	**Pb**	**17 26 26.9**	**-1.0**
	baz=200						
TWF1	**Yuli**	**1.86**	**215**	⇑*e*P	**Pn**	**17 26 25.5**	**0.0**
	baz=213						
WHYT	**Xinyi Township**	**1.89**	**231**	*e*P	**Pb**	**17 26 28.3**	**-0.2**
	baz=216						
WJS	**Zhushan**	**1.90**	**237**	*e*P	**Pb**	**17 26 29.4**	**+0.6**
	baz=235						
WNT	**Mingjian**	**1.91**	**239**	⇑*e*P	**Pb**	**17 26 29.0**	**+0.2**
	baz=254						
WNT				*e*S	**Sg**	**17 26 56.4**	**+0.2**
	baz=254						
FULB	**Fuli**	**1.99**	**213**	*e*P	**Pb**	**17 26 29.2**	**-1.1**
	baz=196						
ALS	**Alishan**	**2.04**	**228**	⇓*e*P	**Pb**	**17 26 30.2**	**-1.1**
	baz=209						
ALS				*e*S	**Sb**	**17 26 56.2**	**-0.2**
	baz=209						
CHKT	**Chengkung**	**2.04**	**210**	*e*P	**Pn**	**17 26 28.1**	**+0.1**
	baz=194						
CHKT				*e*S	**Sn**	**17 26 52.2**	**-0.7**
	baz=194						
CHN5	**Tsauling**	**2.07**	**232**	⇑*e*P	**Pb**	**17 26 31.2**	**-0.5**
	baz=213						
WGK	**Gukeng**	**2.10**	**236**	⇓*e*P	**Pb**	**17 26 31.9**	**-0.3**
	baz=251						
ELDTW	**Lidau**	**2.14**	**218**	⇑*e*P	**Pn**	**17 26 30.0**	**+0.5**
	baz=203						
EDH	**Donghe**	**2.18**	**209**	*e*P	**Pn**	**17 26 31.3**	**+1.5**
	baz=195						
EDH				*e*S	**Sn**	**17 26 57.4**	**+1.1**
	baz=195						
WTK	**Tuku**	**2.23**	**238**	*e*P	**Pb**	**17 26 33.1**	**-1.3**
	baz=236						
TPUB	**Ta-pu**	**2.30**	**227**	⇓*e*P	**Pb**	**17 26 34.3**	**-1.3**
	baz=210						
TPUB				*e*S	**Sb**	**17 27 04.8**	**+1.2**
	baz=210						
STYT	**Tauyuan**	**2.32**	**223**	⇓*e*P	**Pb**	**17 26 34.0**	**-1.9**
	baz=206						
WTP	**Ta-pu**	**2.35**	**226**	⇓*e*P	**Pb**	**17 26 34.8**	**-1.6**
	baz=209						
WTP				*e*S	**Sb**	**17 27 05.7**	**+0.7**
	baz=209						
TWGBT	**Beinan**	**2.42**	**212**	*e*P	**Pn**	**17 26 32.7**	**-0.5**
	baz=210						
TWG	**Pinlang**	**2.42**	**212**	⇑*e*P	**Pn**	**17 26 33.8**	**+0.7**
	baz=210						
TWK	**Hsinying**	**2.42**	**229**	⇓*e*P	**Pb**	**17 26 36.2**	**-1.4**
	baz=211						
CHN1	**Nanshi**	**2.45**	**227**	⇑*e*P	**Pb**	**17 26 36.2**	**-1.8**
	baz=210						
CHN1				*e*S	**Sb**	**17 27 09.3**	**+1.5**
	baz=210						
SGST	**Jiashian**	**2.48**	**224**	⇑*e*P	**Pn**	**17 26 35.9**	**+1.8**
	baz=207						
SGST				*e*S	**Sb**	**17 27 10.4**	**+1.5**
	baz=207						
SLGT	**Liugui**	**2.51**	**222**	*e*P	**Pb**	**17 26 37.4**	**-1.8**
	baz=220						
PTTC	**Pingtan**	**2.51**	**285**	⇑*e*P	**Pn**	**17 26 33.9**	**-0.6**
	baz=282						
ECL	**Taimali**	**2.66**	**212**	*e*P	**Pn**	**17 26 37.8**	**+1.3**
	baz=210						
SSD	**Sandimen**	**2.71**	**219**	⇓*e*P	**Pb**	**17 26 40.1**	**-2.4**
	baz=203						
SSD				*e*S	**Sb**	**17 27 12.9**	**-2.4**
	baz=203						
VWUC	**VWUC**	**2.74**	**273**	*e*P	**Pn**	**17 26 36.9**	**-0.6**
	baz=270						
TWM1	**Shoushan**	**2.77**	**223**	⇑*e*P	**Pb**	**17 26 42.9**	**-0.7**
	baz=221						
MASBT	**Mashibuluo**	**2.81**	**217**	*e*P	**Pn**	**17 26 39.9**	**+1.3**
	baz=203						
MASBT				*e*S	**Sb**	**17 27 16.9**	**-1.5**
	baz=203						
XPSS	**Dashiqiu**	**2.89**	**315**	*e*P	**Pn**	**17 26 40.1**	**+0.5**
	baz=314						
EAST	**Anshuo**	**2.90**	**211**	⇓*e*P	**Pb**	**17 26 43.1**	**-2.7**
	baz=209						
LYJJ	**Jianjiangzhen**	**2.95**	**305**	*e*P	**Pn**	**17 26 41.0**	**+0.6**
	baz=303						
PHUB	**P'eng-hu**	**2.97**	**243**	⇓*e*P	**Pn**	**17 26 41.4**	**+0.6**
	baz=241						
PHUB				*e*S	**Sn**	**17 27 16.7**	**+0.9**
	baz=241						
WDGT	**Dungji**	**3.03**	**238**	*e*P	**Pn**	**17 26 42.6**	**+1.1**
	baz=237						
AXDP	**Jialang**	**4.08**	**271**	*e*P	**Pn**	**17 26 56.0**	**+0.1**
	baz=268						

*IDC **22** 17:30:28.4±1.8, 7°50S×128°92E, h113km±22km, mb3.2/1, mb1 3.2/6, mb1mx3.0/48, mbtmp3.5/6, Error ellipse: s-maj=26.1km s-min=14.8km az=118.0*
ISC 22 17:30:28.5±0.9, **7°63S**±0°06×**129°04E**±

KRVT	**Keravat (AS076**	**1.61**	**336**	Pn	**Pn**	**17 47 46.4**	**-1.0**
	104nm,0.3s,baz=344,slow=2.0,SNR=115							
KRVT				Sn	**Sn**	**17 48 05.1**	**-1.8**
	109nm,0.3s,baz=32,slow=15,SNR=6.6							
RABL	**Rabaul**	**1.67**	**342**		**Pn**	**17 47 47.5**	**-0.7**
MANU	**Manus Island**	**6.48**	**305**		**Pn**	**17 48 56.2**	**+1.9**
PMG	**Port Moresby**	**6.54**	**236**	Pn	**Pn**	**17 48 54.8**	**-0.4**
	1.9nm,0.3s,baz=68,slow=8.7,SNR=6.6							
PMG				Sn	**Sn**	**17 50 07.1**	**-1.5**
	3.6nm,0.3s,baz=118,slow=20,SNR=5.9							
CTAO	**Charters Tower**	**15.52**	**203**	Pn	**Pn**	**17 50 55.1**	**-2.6**
CTAO				IAmb	IAmb	17 51 05.8		
	comp=Z,10nm,1.3s							
MTN	**Manton Dam**	**22.37**	**250**	P	**P**	**17 52 15.9**	**-0.7**
WB0	**Warramunga Arr**	**22.57**	**230**	P	**P**	**17 52 19.6**	**+0.9**
WB0				IAmb	IAmb	17 52 20.5		
	comp=Z,2.8nm,0.8s							
WR0	**Warramunga Arr**	**22.57**	**230**	P	**P**	**17 52 19.1**	**+0.5**
WR0				IAmb	IAmb	17 52 33.2		
	comp=Z,9.4nm,1.5s							
WRAB	**Tennant Creek**	**22.70**	**230**	P	**P**	**17 52 20.8**	**+0.8**
WRAB				IAmb	IAmb	17 52 59.5		
	comp=Z,11nm,1.6s							
WB2	**Warramunga Arr**	**22.70**	**230**	P	**P**	**17 52 19.1**	**-0.9**
WB2				IAmb	IAmb	17 52 26.8		
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**22.71**	**230**	P	**P**	**17 52 19.1**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=55,slow=10,SNR=23							
WRA	**Warramunga Arr**	**22.71**	**230**	P	**P**	**17 52 19.1**	**-1.1**
AS31	**Alice Springs**	**25.34**	**224**	P	**P**	**17 52 46.4**	**+1.3**
ASAR	**Alice Springs**	**25.34**	**224**	P	**P**	**17 52 45.4**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=59,slow=8.9,SNR=58							
KNRA	**Kununurra**	**25.44**	**245**	P	**P**	**17 52 48.6**	**+2.7**
STKA	**Stephens Creek**	**27.95**	**200**	P	**P**	**17 53 10.3**	**+1.9**
FITZ	**Fitzroy Crossi**	**29.09**	**243**	P	**P**	**17 53 17.5**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=59,slow=7.5,SNR=1.9							
SONM	**Songino Array**	**67.09**	**328**	P	**P**	**17 58 12.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=123,slow=5.3,SNR=2.8							
ILAR	**Eielson Array**	**83.12**	**22**	P	**P**	**17 59 42.8**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=250,slow=5.9,SNR=2.5							
TORD	**Torodi Ar. Bea**	**150.48**	**286**	PKPbc	**PKPbc**	**18 07 10.6**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=116,slow=3.4,SNR=3.4							

*THE **22** 17:49:16.6,38˚.40N×20˚.42E,h0km±2km,ML2.6/22,Error ellipse: s-maj=2.2km s-min=0.5km az=290.0*
*ATH **22** 17:49:16.3,38˚.40N×20˚.46E,h15km,ML2.5/20,Error ellipse: s-maj=1.5km s-min=0.7km az=278.0*
ISC 22 17:49:16.4±0.8,38˚.41N±0˚.02×20˚.42E±0˚.03,h13km±5km, n71,σ0s85/112,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.13**	**65**	P	**Pg**	**17 49 19.4**	**-0.3**
FSK				AML	AML	17 49 21.7	
	comp=N,8709μm,0.3s						
FSK				S	**Sg**	**17 49 21.8**	**-0.2**
FSK				AML	AML	17 49 22.1	
	comp=E,7520μm,0.1s						
FSK	**Fiskardo**	**0.13**	**65**	P	**Pg**	**17 49 19.5**	**-0.2**
FSK				S	**Sg**	**17 49 21.5**	**-0.5**
	comp=E,4μm,0.2s						
KEF5	**Kardakata, Kep**	**0.14**	**162**	P	**Pg**	**17 49 19.6**	**-0.2**
KEF5				S	**Sg**	**17 49 21.9**	**-0.3**
KEF5	**Kardakata, Kep**	**0.14**	**162**	P	**Pg**	**17 49 19.6**	**-0.2**
KEF5				S	**Sg**	**17 49 21.9**	**-0.3**
	comp=E,27μm,0.2s						
KEF4	**Livadi, Kephal**	**0.15**	**178**	P	**Pg**	**17 49 20.0**	**0.0**
KEF4				S	**Sg**	**17 49 22.8**	**+0.3**
KEF4	**Livadi, Kephal**	**0.15**	**178**	P	**Pg**	**17 49 20.0**	**0.0**
KEF4				S	**Sg**	**17 49 22.7**	**+0.3**
DMLN	**Damoulianata-K**	**0.17**	**191**	P	**Pg**	**17 49 20.4**	**+0.1**
DMLN				S	**Sg**	**17 49 23.4**	**+0.3**
	comp=E,12μm,0.4s						
LXRA	**Lixouri, Kepha**	**0.21**	**175**	P	**Pg**	**17 49 21.0**	**+0.1**
LXRA				S	**Sg**	**17 49 24.8**	**+0.8**
KEF3	**Kipouria, Keph**	**0.21**	**195**	P	**Pg**	**17 49 20.7**	**-0.3**
KEF3				S	**Sg**	**17 49 23.9**	**-0.2**
KEF3	**Kipouria, Keph**	**0.21**	**195**	P	**Pg**	**17 49 20.7**	**-0.3**
KEF3				S	**Sg**	**17 49 23.9**	**-0.2**
	comp=E,24μm,0.2s						
ARGA	**Argostoli. Kep**	**0.23**	**168**	P	**Pg**	**17 49 21.4**	**0.0**
ARGA				S	**Sg**	**17 49 25.1**	**+0.4**
ARG2	**Argostoli**	**0.23**	**166**	P	**Pg**	**17 49 21.3**	**-0.1**
ARG2				S	**Sg**	**17 49 24.9**	**+0.2**
	comp=E,10μm,0.1s						
VLS	**Valsamata**	**0.27**	**149**	P	**Pg**	**17 49 21.6**	**-0.4**
VLS				S	**Sg**	**17 49 25.5**	**-0.2**
VLS				AML	AML	17 49 25.8	
	comp=E,6215μm,0.1s						
VLS				AML	AML	17 49 26.1	
	comp=N,4963μm,0.1s						
VLS	**Valsamata**	**0.27**	**149**	P	**Pg**	**17 49 21.6**	**-0.4**
VLS				S	**Sg**	**17 49 25.5**	**-0.2**
	comp=N,3μm,0.1s						
EVGI	**Lefkada island**	**0.28**	**41**	P	**Pg**	**17 49 22.4**	**+0.1**
EVGI				S	**Sb**	**17 49 27.1**	**-1.0**
EVGI	**Lefkada island**	**0.28**	**41**	P	**Pg**	**17 49 22.4**	**+0.1**
EVGI				S	**Sb**	**17 49 27.2**	**-1.0**
	comp=N,1μm,0.1s						
PSDA	**Pessada-Kefalo**	**0.32**	**156**	P	**Pg**	**17 49 22.6**	**-0.3**
PSDA				S	**Sg**	**17 49 27.6**	**+0.4**
PSDA	**Pessada-Kefalo**	**0.32**	**156**	P	**Pg**	**17 49 22.6**	**-0.3**
PSDA				S	**Sg**	**17 49 27.4**	**+0.1**
	comp=N,250nm,0.3s						
NYDR	**Nydri-Lefkada**	**0.38**	**36**	P	**Pg**	**17 49 23.9**	**-0.1**
NYDR				S	**Sg**	**17 49 29.9**	**+0.8**
	comp=N,980nm,0.3s						
TSLK	**Tsoukalades, L**	**0.46**	**24**	P	**Pg**	**17 49 25.5**	**+0.1**
TSLK				S	**Sg**	**17 49 32.5**	**+0.9**
TSLK				AML	AML	17 49 35.5	
	comp=N,1292μm,0.3s						
TSLK				AML	AML	17 49 36.8	
	comp=E,1118μm,0.4s						
TSLK	**Tsoukalades, L**	**0.46**	**24**	P	**Pg**	**17 49 25.6**	**+0.1**
TSLK				S	**Sg**	**17 49 32.1**	**+0.5**
	comp=E,590nm,0.3s						
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P	**Pg**	**17 49 26.9**	**-0.6**
VLMS				S	**Sg**	**17 49 35.3**	**+0.4**
VLMS				AML	AML	17 49 39.7	
	comp=E,2046μm,0.1s						
VLMS				AML	AML	17 49 44.9	
	comp=N,3348μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P	**Pg**	**17 49 26.8**	**-0.6**
VLMS				S	**Sb**	**17 49 35.4**	**-0.8**
	comp=N,1μm,0.2s						
PDO	**Prodromos**	**0.63**	**72**	P	**Pg**	**17 49 28.2**	**-0.5**
PDO				S	**Sb**	**17 49 37.5**	**-0.6**
PDO				AML	AML	17 49 45.1	
	comp=E,863μm,0.4s						
PDO				AML	AML	17 49 46.4	
	comp=N,1142μm,0.3s						
PDO	**Prodromos**	**0.63**	**72**	P	**Pg**	**17 49 28.2**	**-0.5**
PDO				S	**Sb**	**17 49 38.2**	**+0.1**
	comp=N,720nm,0.3s						
KRI1	**kERI**	**0.81**	**157**	P	**Pg**	**17 49 31.1**	**-0.9**
KRI1				S	**Sb**	**17 49 43.3**	**+0.1**
	comp=N,890nm,0.2s						
RLS	**Riolos of Patr**	**0.90**	**113**	P	**Pg**	**17 49 32.7**	**-1.1**
RLS				S	**Sb**	**17 49 45.5**	**-0.3**
RLS				AML	AML	17 49 52.4	
	comp=N,294μm,0.4s						
RLS				AML	AML	17 49 58.8	
	comp=E,228μm,0.5s						
DRO	**Drossia**	**1.12**	**114**	P	**Pg**	**17 49 36.2**	**-1.6**
DRO				AML	AML	17 50 00.7	
	comp=E,285μm,0.3s						
DRO				AML	AML	17 50 03.3	
	comp=N,662μm,0.6s						
DRO	**Drossia**	**1.12**	**114**	P	**Pg**	**17 49 36.6**	**-1.3**
DRO				S	**Sn**	**17 49 54.3**	**+1.2**
	comp=N,240nm,0.5s						
EFP	**Efpalio**	**1.17**	**89**	P	**Pg**	**17 49 37.4**	**-1.5**
EFP				S	**Sb**	**17 49 54.2**	**+0.6**
EFP				AML	AML	17 50 00.4	
	comp=E,983μm,0.4s						
EFP				AML	AML	17 50 00.6	
	comp=N,819μm,0.5s						
EFP	**Efpalio**	**1.17**	**89**	P	**Pg**	**17 49 37.5**	**-1.4**
EFP				S	**Sn**	**17 49 55.4**	**+1.0**
	comp=N,475nm,0.5s						
ANX	**Ano Chora**	**1.20**	**81**	P	**Pg**	**17 49 38.2**	**-1.2**
ANX				AML	AML	17 50 01.4	
	comp=N,666μm,0.5s						
ANX				AML	AML	17 50 02.4	
	comp=E,809μm,0.5s						
ANX	**Ano Chora**	**1.20**	**81**	P	**Pg**	**17 49 38.2**	**-1.2**
ANX				S	**Sn**	**17 49 56.6**	**+1.4**
	comp=E,365nm,0.5s						
EVR	**Evrytania**	**1.20**	**65**	P	**Pg**	**17 49 38.4**	**-1.1**
EVR				AML	AML	17 50 02.5	
	comp=N,220μm,0.7s						
EVR				AML	AML	17 50 05.5	
	comp=E,207μm,0.8s						
EVR	**Evrytania**	**1.20**	**65**	P	**Pg**	**17 49 38.5**	**-1.1**
EVR				S	**Sn**	**17 49 57.7**	**+2.3**
	comp=E,108nm,0.7s						
SERG	**Sergoula**	**1.29**	**89**	P	**Pn**	**17 49 39.6**	**-0.6**
SERG				S	**Sn**	**17 49 57.8**	**+0.4**
SERG				AML	AML	17 50 03.0	
	comp=N,497μm,0.6s						
SERG				AML	AML	17 50 03.3	
	comp=E,505μm,0.7s						
SERG	**Sergoula**	**1.29**	**89**	P	**Pn**	**17 49 39.5**	**-0.7**
SERG				S	**Sn**	**17 49 59.9**	**+2.5**
	comp=E,252nm,0.6s						
TRIZ	**Trizonia**	**1.30**	**91**	P	**Pn**	**17 49 39.5**	**-0.8**
TRIZ	**Trizonia**	**1.30**	**91**	P	**Pn**	**17 49 39.6**	**-0.8**
TRIZ				S	**Sn**	**17 50 00.4**	**+2.8**
	comp=E,175nm,0.5s						
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pg**	**17 49 41.9**	**-0.3**
AMT				AML	AML	17 50 14.1	
	comp=N,219μm,0.5s						
AMT				AML	AML	17 50 15.5	
	comp=E,396μm,1.0s						
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pg**	**17 49 42.6**	**+0.4**
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**17 49 40.3**	**-0.8**
KALE				AML	AML	17 50 06.5	
	comp=N,527μm,0.8s						
KALE				AML	AML	17 50 08.1	
	comp=E,272μm,0.5s						
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**17 49 40.5**	**-0.6**
KALE				S	**Sn**	**17 50 01.3**	**+2.3**
	comp=E,202nm,0.7s						
KEK	**Kerkira**	**1.39**	**340**	P	**Pb**	**17 49 42.7**	**+0.4**
KEK				AML	AML	17 50 08.4	
	comp=N,179μm,0.6s						
KEK				AML	AML	17 50 10.0	
	comp=E,160μm,0.3s						
KEK	**Kerkira**	**1.39**	**340**	P	**Pb**	**17 49 42.8**	**+0.5**
KLV	**Kalavryta, Ach**	**1.41**	**104**	P	**Pn**	**17 49 41.5**	**-0.5**
KLV				S	**Sb**	**17 50 00.7**	**0.0**
KLV				AML	AML	17 50 10.8	
	comp=N,114μm,0.7s						
KLV				AML	AML	17 50 10.9	
	comp=E,102μm,0.5s						
KLV	**Kalavryta, Ach**	**1.41**	**104**	P	**Pn**	**17 49 41.4**	**-0.5**
KLV				S	**Sg**	**17 50 02.6**	**+0.7**
	comp=E,52nm,0.6s						
MAKR	**Makrakomi, Fth**	**1.47**	**65**	P	**Pn**	**17 49 43.0**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.47**	**65**	P	**Pn**	**17 49 43.3**	**+0.6**
GUR	**Goura**	**1.59**	**107**	P	**Pn**	**17 49 44.5**	**+0.1**
GUR				S	**Sg**	**17 50 07.2**	**-0.3**
GUR				AML	AML	17 50 12.4	
	comp=N,430μm,0.4s						
GUR				AML	AML	17 50 18.2	
	comp=E,306μm,0.4s						
GUR	**Goura**	**1.59**	**107**	P	**Pn**	**17 49 44.5**	**+0.1**
GUR				S	**Sg**	**17 50 08.5**	**+0.9**
	comp=E,195nm,0.4s						
AGG	**Agios Georgios**	**1.62**	**67**	P	**Pb**	**17 49 45.9**	**-0.3**
AGG				AML	AML	17 50 16.9	
	comp=E,111μm,0.6s						
AGG				AML	AML	17 50 17.0	
	comp=N,130μm,0.4s						
AGG	**Agios Georgios**	**1.62**	**67**	P	**Pb**	**17 49 46.1**	**-0.1**
DSF	**Desfina**	**1.66**	**89**	P	**Pb**	**17 49 47.1**	**+0.2**
DSF				AML	AML	17 50 17.2	
	comp=N,114μm,0.6s						
DSF				AML	AML	17 50 17.7	
	comp=E,97μm,0.6s						
DSF	**Desfina**	**1.66**	**89**	P	**Pb**	**17 49 47.0**	**+0.2**
THL	**Klokotos Trika**	**1.70**	**47**	P	**Pb**	**17 49 47.3**	**-0.3**
THL				AML	AML	17 50 16.6	
	comp=E,134μm,0.6s						
THL				AML	AML	17 50 17.0	
	comp=N,174μm,0.5s						
TRIP	**Tripoli**	**1.71**	**120**	P	**Pb**	**17 49 48.0**	**+0.3**
ITM	**Ithomi**	**1.71**	**135**	P	**Pb**	**17 49 47.4**	**-0.4**
PYL	**PYLOS**	**1.84**	**145**	P	**Pn**	**17 49 48.8**	**+1.0**
VLX	**Vlachokerasia**	**1.87**	**123**	P	**Pb**	**17 49 50.5**	**+0.1**
VLX				AML	AML	17 50 23.7	
	comp=E,171μm,1.1s						
VLX				AML	AML	17 50 27.2	
	comp=N,184μm,0.5s						
LTK	**Loutraki**	**2.04**	**100**	P	**Pb**	**17 49 53.3**	**-0.2**
VIL2	**Platees**	**2.25**	**94**	P	**Pb**	**17 49 55.8**	**-1.2**
STON	**Ston**	**4.92**	**336**	*e*Pn	**Pn**	**17 50 29.4**	**-0.6**
LSTV	**Lastovo**	**5.12**	**329**	*e*Pn	**Pn**	**17 50 32.1**	**-0.6**
LSTV				Sn	**Sn**	**17 51 28.2**	**-3.5**
MAKA	**Makarska**	**5.51**	**333**	*e*Pn	**Pn**	**17 50 38.3**	**+0.1**
RICI	**Ricice**	**5.66**	**335**	*e*Pn	**Pn**	**17 50 40.5**	**+0.2**
KIJV	**Kijevo**	**6.36**	**333**	*e*Pn	**Pn**	**17 50 50.4**	**+0.6**
ZIRJ	**Mirje**	**6.36**	**327**	*e*Pn	**Pn**	**17 50 49.5**	**-0.4**
MORI	**Morici**	**6.51**	**328**	*e*Pn	**Pn**	**17 50 52.5**	**+0.6**
DUGI	**Dugi Otok**	**6.89**	**326**	*e*Pn	**Pn**	**17 50 57.0**	**-0.2**
NVLJ	**Novalja**	**7.43**	**328**	*e*Pn	**Pn**	**17 51 04.8**	**+0.3**

*IDC **22** 17:57:37.0±1.5,2˚.19N×125˚.91E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.3/42,mbtmp3.6/5,Error ellipse: s-maj=122.4km s-min=18.3km az=68.0*
*DJA **22** 17:57:44.6±0.6,2˚.N±4˚×12˚.6E±˚,h48km±60km,M3.8/7, mb3.9/1,MLv3.8/7*
ISC 22 17:57:43.8±1.0,2˚.26N±0˚.06×126˚.3E±0˚.1,h55km,n15, σ1s09/15,mb3.8/4,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.60**	**332**	P	**Pn**	**17 58 10.2**	**+0.5**
TNTI	**Ternate**	**1.84**	**144**	P	**Pn**	**17 58 13.7**	**+0.7**
KMSI	**Cibinong**	**2.84**	**234**	P	Pn	17 58 33.4	+6.7
DDMP	**Don Marcelino,**	**3.86**	**352**	*e*P	**Pn**	**17 58 41.8**	**+1.2**
DDMP				*e*S	**Sn**	**17 59 24.8**	**+0.1**
SANI	**Sanana**	**4.29**	**184**	P	**Pn**	**17 58 45.6**	**-1.0**
SKMP	**Bagumbayan, Su**	**4.57**	**338**	*e*P	**Pn**	**17 58 50.4**	**+0.1**
SKMP				*e*S	**Sn**	**17 59 40.7**	**-1.5**
MRSI	**Marisa**	**4.68**	**248**	P	**Pn**	**17 58 53.5**	**+1.6**
KCP	**Kidapawan**	**4.86**	**346**	*e*P	Pn	17 58 59.6	+5.2
BUKP	**Musuan**	**5.71**	**348**	*e*P	**Pn**	**17 59 08.2**	**+2.1**
PAGZ	**Pagadian**	**6.25**	**333**	*e*P	**Pn**	**17 59 13.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**20.24**	**182**	P	**P**	**18 02 13.6**	**-1.1**
	0.4nm,0.4s,baz=353,slow=12,SNR=1.1						
WRA	**Warramunga Arr**	**23.45**	**161**	P	**P**	**18 02 48.2**	**-0.3**
	0.7nm,0.3s,baz=338,slow=10,SNR=32						
ASAR	**Alice Springs**	**26.82**	**164**	P	**P**	**18 03 19.9**	**+0.7**
	0.4nm,0.3s,baz=339,slow=7.4,SNR=20						
MKAR	**Makanchi Array**	**58.50**	**326**	P	**P**	**18 07 34.4**	**0.0**
	0.5nm,0.4s,baz=122,slow=8.0,SNR=15						
KURBB	**Kurchatov Arra**	**62.73**	**328**	P	**P**	**18 08 02.8**	**-0.3**
	0.6nm,0.5s,baz=129,slow=6.2,SNR=18						

*IDC **22** 18:03:16.9±4.6,5˚.25S×153˚.48E,h62km±34km,mb3.2/6, mb1 3.4/7,mb1mx3.2/44,mbtmp3.6/7,ML1.6/1,MS2.8/1, Ms1 2.8/1,ms1mx2.3/24,Error ellipse: s-maj=40.5km s-min=18.4km az=88.0*
ISC 22 18:03:15.7±1.2,5˚.22S±0˚.10×153˚.6E±0˚.1,h56km,n9, σ0s89/13,mb3.5/6,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.81**	**300**	P	**Pn**	**18 03 45.7**	**+1.2**
	9.1nm,0.3s,baz=139,slow=2.6,SNR=18						
KRVT				S	**Sn**	**18 04 05.8**	**-0.6**
	27nm,0.3s,baz=92,slow=14,SNR=5.0						
KRVT				LR	LR	18 04 38.1	
	comp=Z,83nm,19.5s,baz=135,slow=47						
PMG	**Port Moresby**	**7.62**	**237**	P	**Pn**	**18 05 05.8**	**+1.7**
	0.5nm,0.3s,baz=23,slow=7.7,SNR=2.2						
PMG				S	**Sn**	**18 06 28.1**	**-1.1**
	0.8nm,0.3s,baz=360,slow=5.7,SNR=2.4						
PMG				LR	LR	18 07 58.3	
	comp=Z,66nm,20.1s,baz=80,slow=37						
WRA	**Warramunga Arr**	**23.77**	**230**	P	**P**	**18 08 22.8**	**-0.6**
	0.4nm,0.7s,baz=54,slow=10,SNR=2.9						
WRA				PcP	**PcP**	**18 12 06.6**	**+0.7**
	0.4nm,0.8s,baz=51,slow=2.0,SNR=2.9						
ASAR	**Alice Springs**	**26.39**	**224**	P	**P**	**18 08 47.0**	**-0.1**
	0.1nm,0.5s,baz=54,slow=7.9,SNR=5.1						
ASAR				PcP	**PcP**	**18 12 12.3**	**+0.5**
	0.3nm,0.9s,baz=54,slow=4.8,SNR=2.6						
FITZ	**Fitzroy Crossi**	**30.16**	**243**	P	**P**	**18 09 20.1**	**-0.7**
	1.1nm,0.8s,baz=63,slow=11,SNR=1.7						
CMAR	**Chiang Mai Arr**	**58.77**	**295**	P	**P**	**18 13 08.8**	**+0.2**
	0.2nm,0.3s,baz=115,slow=6.5,SNR=4.0						
MKAR	**Makanchi Array**	**81.16**	**319**	P	**P**	**18 15 24.8**	**-0.7**
	0.3nm,0.6s,baz=93,slow=7.2,SNR=4.2						
QSPA	**South Pole Qui**	**84.74**	**180**	P	**P**	**18 15 43.5**	**-0.2**
	1.0nm,0.7s,baz=322,slow=1.3,SNR=10						
TORD	**Torodi Ar. Bea**	**151.19**	**288**	PKPbc	**PKPbc**	**18 23 03.4**	**-0.5**
	0.5nm,0.5s,baz=57,slow=2.4,SNR=5.9						

*TAP **22** 18:06:25.6,24˚.87N×122˚.38E,h8km±1km,ML2.5,C*
*JMA **22** 18:06:26.0±0.1,24˚.78N×122˚.42E,h6km±3km,M2.2*
ISC 22 18:06:25.5±1.0,24˚.84N±0˚.03×122˚.42E±0˚.02,h9km±9km, n47,σ0s51/82,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.43**	**293**	P	**Pg**	**18 06 34.1**	**+0.2**
	baz=290						
TWB1				S	**Sg**	**18 06 39.9**	**+0.4**
	baz=290						
EGS		**0.45**	**270**	*e*P	**Pg**	**18 06 34.1**	**-0.1**
	baz=265						
EGS				*e*S	**Sb**	**18 06 41.2**	**-1.2**
	baz=265						
TIPB	**Shuangxi**	**0.56**	**283**	P	**Pg**	**18 06 36.8**	**+0.4**
	baz=280						
TIPB				*e*S	**Sb**	**18 06 45.0**	**-0.6**
	baz=280						
TWC	**Suao**	**0.57**	**246**	*e*P	**Pb**	**18 06 37.2**	**-0.5**
	baz=240						
TWC				*e*S	**Sb**	**18 06 46.3**	**+0.4**
	baz=240						
JYNG	**Yonagunijimaku**	**0.61**	**129**	P	**Pg**	**18 06 37.4**	**0.0**
JYNG				S	**Sg**	**18 06 45.7**	**+0.2**
NWF	**Wu-fen Shan**	**0.62**	**291**	*e*P	**Pb**	**18 06 38.5**	**-0.2**
	baz=289						
NWF				*e*S	**Sb**	**18 06 47.1**	**-0.5**
	baz=289						
WFSB	**Wu-fen Shan**	**0.62**	**291**	*e*P	**Pg**	**18 06 37.6**	**-0.1**
	baz=289						
WFSB				*e*S	**Sg**	**18 06 46.7**	**+0.8**
	baz=289						
YOJ	**Yonaguni jima**	**0.66**	**125**	*e*P	**Pg**	**18 06 38.0**	**-0.2**
	baz=125						
YOJ				*e*S	**Sg**	**18 06 46.7**	**-0.1**
	baz=125						
YOJ	**Yonaguni jima**	**0.66**	**125**	P	**Pg**	**18 06 38.1**	**-0.2**
YOJ				S	**Sg**	**18 06 46.6**	**-0.2**
TWE	**Neicheng**	**0.70**	**260**	*e*P	**Pb**	**18 06 39.4**	**-0.5**
	baz=256						
TWE				*e*S	**Sb**	**18 06 49.5**	**-0.1**
	baz=256						
ENA	**Nanau**	**0.75**	**236**	*e*P	**Pb**	**18 06 40.5**	**-0.2**
	baz=232						
TWA	**Mucha**	**0.78**	**280**	*e*P	**Pb**	**18 06 41.3**	**+0.1**
	baz=278						
TWA				*e*S	**Sb**	**18 06 51.8**	**0.0**
	baz=278						
ENTT	**Nioudou**	**0.81**	**256**	*e*P	**Pb**	**18 06 41.9**	**+0.1**
	baz=252						
ENTT				*e*S	**Sg**	**18 06 51.6**	**0.0**
	baz=252						
NHDH	**Xindian Distri**	**0.82**	**278**	*e*P	**Pg**	**18 06 41.3**	**-0.1**
	baz=276						
NHDH				*e*S	**Sb**	**18 06 52.9**	**-0.4**
	baz=276						
YM08	**YM08**	**0.83**	**295**	*e*P	**Pg**	**18 06 41.8**	**+0.3**
	baz=293						
YM08				*e*S	**Sg**	**18 06 52.3**	**-0.1**
	baz=293						
YM01	**YM01**	**0.83**	**291**	*e*P	**Pb**	**18 06 42.4**	**+0.2**
	baz=290						
YM01				*e*S	**Sb**	**18 06 53.3**	**-0.2**
	baz=290						
NWLT	**Wulai**	**0.84**	**266**	*e*P	**Pb**	**18 06 42.1**	**-0.2**
	baz=263						
NWLT				*e*S	**Sb**	**18 06 53.4**	**-0.3**
	baz=263						
YM10	**YM10**	**0.84**	**292**	*e*P	**Pg**	**18 06 42.1**	**+0.4**
	baz=290						
PCYT	**Pengchaiyu**	**0.84**	**338**	*e*P	**Pg**	**18 06 41.0**	**-0.9**
	baz=339						
TWY	**Chenhua**	**0.86**	**300**	*e*P	**Pg**	**18 06 42.2**	**+0.1**
	baz=299						
TWY				*e*S	**Sb**	**18 06 54.2**	**-0.1**
	baz=299						
YM04	**YM04**	**0.86**	**291**	*e*P	**Pg**	**18 06 41.5**	**-0.6**
	baz=289						
NDT	**Datong Townshi**	**0.86**	**254**	*e*P	**Pb**	**18 06 42.8**	**+0.1**
	baz=251						
NDT				*e*S	**Sb**	**18 06 55.2**	**+0.8**
	baz=251						
YHNB	**Yeheng**	**0.97**	**260**	*e*P	**Pg**	**18 06 44.0**	**-0.2**
	baz=257						
YHNB				*e*S	**Sg**	**18 06 56.5**	**-0.3**
	baz=257						
NSK	**Sanguang**	**0.98**	**260**	*e*P	**Pg**	**18 06 44.2**	**-0.2**
	baz=257						
NSK				*e*S	**Sb**	**18 06 57.8**	**-0.1**
	baz=257						
NACB	**Ninganchiao**	**1.01**	**229**	*e*P	**Pg**	**18 06 44.5**	**-0.4**
	baz=225						
NACB				*e*S	**Sb**	**18 06 58.5**	**0.0**
	baz=225						
NNSB	**Datong**	**1.03**	**247**	*e*P	**Pg**	**18 06 45.2**	**-0.2**
	baz=244						
NNSB				*e*S	**Sb

	baz=230							
SSLB				*e*S		**Sg**	**18 07 20.2**	**-0.2**
	baz=230							
TYC	**Yuchr**	**1.71**	**237**	*e*P		**Pn**	**18 06 56.2**	**+0.7**
	baz=235							
TYC				*e*S		**Sg**	**18 07 20.6**	**+0.1**
	baz=235							
JISG	**Ishigakijimahi**	**1.73**	**98**	P		**Pn**	**18 06 56.9**	**+1.0**
TPUB	**Ta-pu**	**2.25**	**227**	*e*P		**Pn**	**18 07 04.0**	**+1.0**
	baz=225							

WEL 22 18:08:38.4,45°S±6°×16°7E±°, h86km±13km, M2.7/9, ML2.7/7, MLv2.7/9, Error ellipse: s-maj=0.0km s-min=0.0km az=58.9, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.35**	**218**	P	Pn	18 08 52.0	+0.3
MLZ	**Mavora Lakes**	**0.50**	**111**	P	Pn	18 08 53.5	+0.7
MSZ	**Milford Sound**	**0.62**	**33**	P	Pn	18 08 54.1	+0.4
WHZ	**Wether Hill Ro**	**0.78**	**154**	P	Pn	18 08 56.5	+1.1
WKZ	**Wanaka**	**1.17**	**72**	P	Pn	18 09 00.4	+0.6
EAZ	**Earnscleugh**	**1.31**	**92**	P	Pn	18 09 02.3	+0.8
JCZ	**Jackson Bay**	**1.47**	**41**	P	Pn	18 09 03.7	0.0
APZ	**The Paps**	**1.68**	**167**	P	Pn	18 09 08.2	+1.9
TUZ	**Tuapeka**	**1.71**	**117**	P	Pn	18 09 07.5	+0.9
SYZ	**Scrubby Hill**	**1.79**	**139**	P	Pn	18 09 08.7	+1.0
LBZ	**Lake Benmore**	**2.10**	**68**	P	Pn	18 09 10.8	-1.1
ODZ	**Otahua Downs**	**2.26**	**87**	P	Pn	18 09 13.5	-0.4
HHSZ	**Highcliff Hill**	**2.31**	**109**	P	Pn	18 09 15.2	+0.6

*IDC **22** 18:13:48.1±0.9, 30°19S×178°93W, h336km±8km, mb2.7/3, mb1 3.0/5, mb1mx2.8/46, mbtmp3.7/5, Error ellipse: s-maj=32.4km s-min=18.5km az=128.0*

ISC 22 18:13:49.0±0.8, 30°08S±0°08×179°0W±0°1, h350km, n28, σ1§62/40, mb2.7/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**1.26**	**50**	P	**Pn**	**18 14 36.5**	**+0.6**
RIZ	**Raoul Island**	**1.27**	**49**	P	**Pn**	**18 14 36.3**	**+0.4**
RAO	**Raoul Island**	**1.27**	**49**	P	**Pn**	**18 14 34.9**	**-1.1**
	46nm,0.3s,baz=51,slow=21,SNR=2.2						
RAO				S	**S**	**18 15 10.2**	**-3.4**
	114nm,0.3s,baz=57,slow=20,SNR=5.8						
WMGZ	**Waiomatatini S**	**8.01**	**195**	P	**P**	**18 15 48.4**	**+2.4**
WMGZ				S	**S**	**18 17 17.1**	**+1.1**
OUZ	**Omahuta**	**8.06**	**229**	P	**Pn**	**18 15 41.9**	**-1.8**
HAZ	**Te Kaha**	**8.10**	**198**	P	**P**	**18 15 48.1**	**+1.0**
HAZ				S	**S**	**18 17 17.8**	**-0.3**
PUZ	**Puketiti**	**8.28**	**195**	P	**P**	**18 15 49.9**	**+0.7**
PUZ				S	**S**	**18 17 21.1**	**-1.0**
RUGZ	**Raukumara Rang**	**8.32**	**198**	P	**P**	**18 15 49.1**	**-0.7**
RUGZ				S	**S**	**18 17 20.3**	**-2.9**
TWGZ	**Tauwhareparae**	**8.45**	**196**	P	**P**	**18 15 53.4**	**+2.3**
TWGZ				S	**S**	**18 17 27.9**	**+2.1**
CNGZ	**Carnagh Statio**	**8.69**	**195**	P	**P**	**18 15 56.3**	**+2.7**
MWZ	**Matawai**	**8.71**	**198**	P	**Pn**	**18 15 51.6**	**+0.2**
MWZ				S	**S**	**18 17 29.5**	**-2.0**
TKGZ	**Te Karaka**	**8.73**	**196**	P	**P**	**18 15 55.8**	**+1.7**
TKGZ				S	**S**	**18 17 32.0**	**+0.2**
URZ	**Urewera**	**8.76**	**200**	P	**Pn**	**18 15 51.0**	**-1.0**
	5.8nm,0.3s,baz=271,slow=4.5,SNR=55						
URZ				S	**S**	**18 17 29.6**	**-3.0**
	2.1nm,0.3s,baz=99,slow=7.8,SNR=3.3						
URZ	**Urewera**	**8.76**	**200**	P	**Pn**	**18 15 52.2**	**+0.2**
URZ				S	**S**	**18 17 29.9**	**-2.7**
RAGZ	**Rawiri**	**8.89**	**198**	P	**P**	**18 15 55.9**	**-0.1**
RAGZ				S	**S**	**18 17 34.0**	**-1.6**
RIGZ	**Rimuhau**	**9.00**	**196**	P	**P**	**18 15 57.9**	**+0.7**
RIGZ				S	**S**	**18 17 36.0**	**-2.0**
MUGZ	**Murupara**	**9.07**	**201**	P	**P**	**18 15 59.3**	**+1.4**
RTZ	**Ruatahuna**	**9.13**	**200**	P	**P**	**18 15 58.4**	**-0.3**
PRGZ	**Paritu Road**	**9.18**	**195**	P	**P**	**18 16 01.9**	**+2.8**
MTHZ	**Maungataniwha**	**9.39**	**200**	P	**P**	**18 16 02.2**	**+0.6**
DZM	**Mont Dzumac**	**15.29**	**298**	P	**Pn**	**18 17 09.9**	**+0.5**
	0.3nm,0.3s,baz=113,slow=21,SNR=2.1						
STKA	**Stephens Creek**	**33.69**	**257**	P	**P**	**18 20 00.1**	**+1.7**
	0.5nm,0.4s,baz=344,slow=18,SNR=3.0						
ASAR	**Alice Springs**	**42.24**	**267**	P	**P**	**18 21 09.7**	**+0.4**
	0.2nm,0.5s,baz=104,slow=6.8,SNR=11						
WRA	**Warramunga Arr**	**43.20**	**272**	P	**P**	**18 21 17.0**	**0.0**
	0.3nm,0.6s,baz=112,slow=6.3,SNR=8.3						
KURBB	**Kurchatov Arra**	**120.23**	**314**	PKP	**PKPdf**	**18 31 58.0**	**-0.3**
	0.2nm,0.5s,baz=99,slow=3.0,SNR=2.0						
FINES	**FINESS Array B**	**144.54**	**339**	PKP	**PKPdf**	**18 32 43.5**	**+0.2**
	1.5nm,0.3s,baz=42,slow=4.1,SNR=35						
NOA	**NORSAR Array B**	**148.30**	**351**	PKPbc	**PKiKP**	**18 32 54.6**	**-0.4**
	0.3nm,0.5s,baz=15,slow=4.1,SNR=1.7						
AKASG	**Malin Array Be**	**150.51**	**322**	PKPbc	**PKiKP**	**18 33 00.5**	**+0.7**
	0.3nm,0.3s,baz=50,slow=2.3,SNR=3.0						

*JMA **22** 18:16:25.9±0.1, 24°.84N×122°.43E, h9km±3km, M2.4*
*TAP **22** 18:16:25.2, 24°.88N×122°.44E, h9km±1km, ML2.5, C*

ISC 22 18:16:25.4±1.1, 24°.89N±0°.03×122°.44E±0°.02, h9km±9km, n58, σ0§56/101, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.43**	**286**	P	**Pb**	**18 16 34.6**	**-0.5**
	baz=287						
TWB1				S	**Sb**	**18 16 40.8**	**-1.0**
	baz=287						
TIPB	**Shuangxi**	**0.57**	**279**	*e*P	**Pb**	**18 16 37.4**	**-0.1**
	baz=279						
TIPB				*e*S	**Sb**	**18 16 45.4**	**-0.3**
	baz=279						
TWC	**Suao**	**0.61**	**243**	*e*P	**Pg**	**18 16 37.5**	**+0.4**
	baz=242						
TWC				*e*S	**Sb**	**18 16 47.4**	**+0.5**
	baz=242						
NWF	**Wu-fen Shan**	**0.63**	**287**	*e*P	**Pb**	**18 16 38.8**	**+0.1**
	baz=287						
NWF				*e*S	**Sb**	**18 16 47.6**	**0.0**
	baz=287						
WFSB	**Wu-fen Shan**	**0.63**	**287**	*e*P	**Pb**	**18 16 38.7**	**+0.1**
	baz=287						
WFSB				*e*S	**Sb**	**18 16 47.7**	**+0.3**
	baz=287						
JYNG	**Yonaguni jima**	**0.63**	**133**	P	**Pg**	**18 16 37.6**	**0.0**
JYNG				S	**Sg**	**18 16 46.1**	**+0.3**
YOJ	**Yonaguni jima**	**0.67**	**129**	*i* P	**Pg**	**18 16 38.3**	**+0.1**
	baz=128						
YOJ				*e*S	**Sg**	**18 16 46.8**	**-0.2**
	baz=128						
YOJ	**Yonaguni jima**	**0.67**	**129**	P	**Pg**	**18 16 38.2**	**-0.1**
YOJ				S	**Sg**	**18 16 46.5**	**-0.5**
TWE	**Neicheng**	**0.72**	**257**	*e*P	**Pb**	**18 16 39.9**	**-0.3**
	baz=256						
TWE				*e*S	**Sb**	**18 16 50.0**	**-0.2**
	baz=256						
ENA	**Nanau**	**0.79**	**235**	*e*P	**Pg**	**18 16 40.7**	**+0.2**
	baz=234						
ENA				*e*S	**Sb**	**18 16 51.3**	**-0.7**
	baz=234						
PCYT	**Pengchaiyu**	**0.81**	**336**	*e*P	**Pg**	**18 16 41.2**	**+0.1**
	baz=336						
YM01	**YM01**	**0.83**	**288**	*e*P	**Pg**	**18 16 41.7**	**+0.2**
	baz=288						
ENTT	**Nioudou**	**0.83**	**253**	*e*P	**Pb**	**18 16 42.2**	**+0.1**
	baz=252						
ENTT				*e*S	**Sb**	**18 16 53.2**	**-0.2**
	baz=252						
NHDH	**Xindian Distri**	**0.84**	**275**	*e*P	**Pg**	**18 16 41.9**	**+0.3**
	baz=275						
NHDH				*e*S	**Sg**	**18 16 52.9**	**+0.5**
	baz=275						
YM05	**YM05**	**0.84**	**289**	*e*P	**Pg**	**18 16 41.5**	**-0.1**
	baz=289						
YM10	**YM10**	**0.84**	**289**	*e*P	**Pg**	**18 16 41.9**	**+0.2**
	baz=288						
TWY	**Chenhua**	**0.86**	**297**	*e*P	**Pn**	**18 16 43.3**	**-0.4**
	baz=297						
NWLT	**Wulai**	**0.86**	**263**	*e*P	**Pg**	**18 16 42.1**	**+0.1**
	baz=263						
NWLT				*e*S	**Sg**	**18 16 53.1**	**-0.1**
	baz=263						
YM04	**YM04**	**0.86**	**288**	*e*P	**Pg**	**18 16 41.4**	**-0.7**
	baz=288						
TATO	**Taipei**	**0.87**	**276**	*e*P	**Pg**	**18 16 42.4**	**+0.2**
	baz=276						
TATO				*e*S	**Sb**	**18 16 54.2**	**-0.3**
	baz=276						
NDT	**Datong Townshi**	**0.89**	**252**	*e*P	**Pb**	**18 16 43.2**	**+0.1**
	baz=251						
NDT				*e*S	**Sb**	**18 16 55.2**	**+0.1**
	baz=251						
TWS1	**Kuangyinshan**	**0.95**	**283**	*e*P	**Pn**	**18 16 44.8**	**-0.1**
	baz=283						
TWS1				*e*S	**Sn**	**18 16 57.8**	**-0.9**
	baz=283						
YHNB	**Yeheng**	**0.99**	**258**	*e*P	**Pb**	**18 16 44.8**	**-0.1**
	baz=257						
YHNB				*e*S	**Sb**	**18 16 57.7**	**-0.4**
	baz=257						
NSK	**Sanguang**	**1.01**	**258**	*e*P	**Pg**	**18 16 44.7**	**-0.1**
	baz=258						
NSK				*e*S	**Sb**	**18 16 58.3**	**-0.2**
	baz=258						
NACB	**Ninganchiao**	**1.05**	**228**	*e*P	**Pg**	**18 16 45.1**	**-0.5**
	baz=227						
NACB				*e*S	**Sg**	**18 16 59.1**	**-0.1**
	baz=227						
NNSB	**Datong**	**1.07**	**245**	*e*P	**Pg**	**18 16 45.6**	**-0.3**
	baz=244						
NNSB				*e*S	**Sg**	**18 16 59.7**	**-0.1**
	baz=244						
NNSH	**Datong**	**1.07**	**245**	*e*P	**Pg**	**18 16 45.5**	**-0.4**
	baz=244						
NNSH				*e*S	**Sg**	**18 16 59.4**	**-0.4**
	baz=244						
NNS	**Nan Shan**	**1.07**	**246**	*e*P	**Pg**	**18 16 45.8**	**-0.2**
	baz=245						
NNS				*e*S	**Sg**	**18 16 59.7**	**-0.2**
	baz=245						
ETLH	**Xiulin Townshi**	**1.11**	**232**	*e*P	**Pb**	**18 16 46.2**	**-0.5**
	baz=232						
ETLH				*e*S	**Sn**	**18 17 02.2**	**-0.4**
	baz=232						
FUSS	**Fushou**	**1.26**	**240**	*e*P	**Pn**	**18 16 49.2**	**-0.3**
	baz=239						
FUSS				*e*S	**Sn**	**18 17 06.3**	**-0.4**
	baz=239						
IRIF	**Iriomote-Funau**	**1.29**	**115**	P	**Pn**	**18 16 49.7**	**+0.1**
WHF	**Hehuan Shan**	**1.30**	**236**	*e*P	**Pn**	**18 16 50.0**	**-0.1**
	baz=235						
WHF				*e*S	**Sn**	**18 17 08.9**	**+1.0**
	baz=235						
TWT	**Tachien**	**1.31**	**242**	*e*P	**Pg**	**18 16 50.7**	**0.0**
	baz=241						
TWT				*e*S	**Sg**	**18 17 08.9**	**+1.1**
	baz=241						
LIOB	**Emei**	**1.32**	**260**	*e*P	**Pn**	**18 16 49.5**	**-0.5**
	baz=259						
TDCB	**Techi**	**1.33**	**242**	*e*P	**Pb**	**18 16 50.3**	**-0.3**
	baz=241						
TDCB				*e*S	**Sg**	**18 17 08.2**	**0.0**
	baz=241						
NSTT	**Nanjuang**	**1.33**	**259**	*e*P	**Pn**	**18 16 49.9**	**-0.3**
	baz=259						
NSTT				*e*S	**Sg**	**18 17 09.5**	**+1.2**
	baz=259						
ESL	**Shilin**	**1.41**	**221**	*e*P	**Pn**	**18 16 50.6**	**-0.7**
	baz=220						
CHGB	**Renai**	**1.42**	**235**	*e*P	**Pb**	**18 16 52.2**	**0.0**
	baz=234						
CHGB				*e*S	**Sg**	**18 17 11.7**	**+0.6**
	baz=234						
OWD	**Renai**	**1.48**	**231**	*e*P	**Pb**	**18 16 52.8**	**-0.4**
	baz=231						
OWD				*e*S	**Sg**	**18 17 12.9**	**-0.2**
	baz=231						
HATJ	**Hateruma jima**	**1.49**	**123**	P	**Pn**	**18 16 52.7**	**+0.3**
HATJ				S	**Sn**	**18 17 11.6**	**-0.3**
WHP	**Taichung City**	**1.49**	**246**	*e*P	**Pb**	**18 16 53.1**	**-0.2**
	baz=246						
WHP				*e*S	**Sb**	**18 17 12.4**	**0.0**
	baz=246						
JKRS	**Kuro-shima**	**1.57**	**114**	P	**Pb**	**18 16 54.2**	**-0.3**
JKRS				S	**Sn**	**18 17 13.8**	**0.0**
DPDB	**Guoxing**	**1.62**	**239**	*e*P	**Pb**	**18 16 55.4**	**-0.2**
	baz=238						
DPDB				*e*S	**Sb**	**18 17 16.4**	**+0.2**
	baz=238						
JIJ	**Ishigaki jima**	**1.63**	**108**	P	**Pn**	**18 16 54.8**	**+0.5**
JIJ				*e*S	**Sb**	**18 17 16.2**	**-0.2**
HGSD	**Ruisui**	**1.67**	**214**	*e*P	**Pn**	**18 16 54.6**	**-0.2**
	baz=213						
JISG	**Ishigakijimahi**	**1.72**	**100**	P	**Pb**	**18 16 57.5**	**+0.3**
SMLT	**Sun Moon Lake**	**1.73**	**235**	*e*P	**Pb**	**18 16 56.6**	**-0.7**
	baz=234						
SMLT				*e*S	**Sb**	**18 17 19.2**	**0.0**
	baz=234						
SSLB	**Suanglung**	**1.74**	**231**	*e*P	**Pb**	**18 16 56.7**	**-0.9**
	baz=231						
TYC	**Yuchr**	**1.75**	**236**	*e*P	**Pb**	**18 16 56.8**	**-0.8**
	baz=235						
TYC				*e*S	**Sb**	**18 17 19.5**	**-0.2**
	baz=235						
YULB	**Yu-li**	**1.82**	**215**	*e*P	**Pn**	**18 16 56.9**	**0.0**
	baz=215						
EYUL	**Yuli**	**1.84**	**214**	*e*P	**Pn**	**18 16 57.1**	**-0.1**
	baz=213						
FULB	**Fuli**	**1.98**	**212**	*e*P	**Pn**	**18 16 59.5**	**+0.4**
	baz=211						
ALS	**Alishan**	**2.03**	**228**	*e*P	**Pn**	**18 17 00.5**	**+0.4**
	baz=227						
ALS				*e*S	**Sb**	**18 17 28.0**	**-0.1**
	baz=227						
CHN5	**Tsauling**	**2.06**	**232**	*e*P	**Pn**	**18 17 01.2**	**+0.9**
	baz=231						
CHN5				*e*S	**Sb**	**18 17 28.0**	**-0.8**
	baz=231						
CHN4	**Tsaushan**	**2.28**	**228**	*e*P	**Pn**	**18 17 04.4**	**+1.2**
	baz=227						
CHN4				*e*S	**Sb**	**18 17 33.1**	**-1.9**
	baz=227						
TPUB	**Ta-pu**	**2.29**	**227**	*e*P	**Pn**	**18 17 04.3**	**+0.9**
	baz=226						
TPUB				*e*S	**Sn**	**18 17 32.8**	**+1.1**
	baz=226						
SLGT	**Liugui**	**2.50**	**221**	*e*P	**Pn**	**18 17 07.8**	**+1.5**
	baz=221						
SLGT				*e*S	**Sn**	**18 17 38.6**	**+1.7**
	baz=221						
MASBT	**Mashibuluo**	**2.81**	**217**	*e*P	**Pn**	**18 17 11.7**	**+1.2**
	baz=216						
MASBT				*e*S	**Sn**	**18 17 44.0**	**-0.5**
	baz=216						

*IDC **22** 18:16:35.7±0.6, 32°.16N×104°.73E, h0km, mb3.9/18, mb1 3.9/21, mb1mx3.8/64, mbtmp3.8/21, ML3.6/3, MS3.2/4, Ms1 3.2/4, ms1mx2.7/66, Error ellipse: s-maj=23.6km s-min=12.8km az=60.0*
*MOS **22** 18:16:36.1±1.7, 32°.08N×104°.49E, h12km, mb4.2/8, Error ellipse: s-maj=10.7km s-min=7.0km az=86.8*
*NEIC **22** 18:16:40.6±2.1, 32°.11N±0°.08×104°.57E±0°.10, h30km±5km, mb4.5/29, Error ellipse: s-maj=12.2km s-min=11.8km az=122.0*
*BJI **22** 18:16:41.4±0.0, 32°.08N×104°.44E, h17km, mb4.1/4, ML3.9/21, Ms3.6/10, Ms7 3.5/8*

ISC 22 18:16:38.7±0.4, 32°.12N±0°.03×104°.51E±0°.04, h15km, n122, σ1§67/119, mb4.2/36, MS3.1/4, 4C-3D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.36**	**208**	*i* Pg	**Pn**	**18 17 03.0**	**-0.3**
CD2				Sg	**Sg**	**18 17 21.8**	**-1.0**
CD2				smax	smax		
	comp=N,10μm,0.5s						
CD2				smax	smax		
	comp=E,8μm,0.7s						
LZH	**Lanzhou**	**4.00**	**352**	Pg	**Pg**	**18 17 52.9**	**-2.5**
LZH				Sn	**Sn**	**18 18 32.0**	**+5.7**
LZH				Sg	**Sg**	**18 18 45.3**	**-1.9**
LZH				smax	smax		
	comp=N,280nm,1.0s						
LZH				smax	smax		
	comp=E,390nm,1.5s						
LZH				LR	LR		
	comp=N,750nm,5.4s						
LZH				LR	LR		
	comp=E,750nm,5.4s						
LZH				LR	LR		
	comp=Z,500nm,6.3s						
XAN	**Xi'an**	**4.17**	**61**	Pn	**Pn**	**18 17 42.5**	**+0.7**
XAN				Pg	**Pb**	**18 17 54.6**	**+2.8**
XAN				Sn	**Sn**	**18 18 36.8**	**+6.5**
XAN				Sg	**Sg**	**18 18 50.9**	**-1.7**
XAN				smax	smax		
	comp=N,360nm,0.8s						
XAN				smax	smax		
	comp=E,450nm,1.0s						
XAN				LR	LR		
	comp=Z,330nm,5.3s						
XAN	**Xi'an**	**4.17**	**61**	P	**Pn**	**18 17 41.5**	**-0.4**
XAN	**Xi'an**	**4.17**	**61**		**Pn**	**18 17 41.5**	**-0.4**
ENH	**Enshi**	**4.64**	**112**		**Pn**	**18 17 49.8**	**+1.4**
GYA	**Guiyang**	**5.94**	**161**	‖Pn	**Pn**	**18 18 06.3**	**0.0**
GYA				Sn	**Sn**	**18 19 17.3**	**+3.1**
GYA				Sg	**Sg**	**18 19 47.9**	**-1.6**
GYA				smax	smax		
	comp=N,160nm,0.8s						
GYA				smax	smax		
	comp=E,180nm,0.7s						
GYA				LR	LR		
	comp=N,120nm,3.8s						
GYA				LR	LR		
	comp=E,180nm,3.8s						
GTA	**Gaotai**	**8.22**	**334**	P	**Pn**	**18 18 38.3**	**+0.8**
GTA				S	**Sn**	**18 20 11.5**	**+1.3**
GTA				smax	smax		
	comp=N,7.0nm,1.5s						
GTA				smax	smax		
	comp=E,7.0nm,1.6s						
GTA				LR	LR		
	comp=N,180nm,9.8s						
GTA				LR	LR		
	comp=E,95nm,10.9s						
GTA				LR	LR		
	comp=Z,120nm,12.0s						
WHN	**Wuhan**	**8.56**	**98**	S	**Sn**	**18 20 12.6**	**-5.8**
WHN	**Wuhan**	**8.56**	**98**	LR	LR		
	comp=Z,440nm,12.3s						
WHN	**Wuhan**	**8.56**	**98**	LR	LR		
	comp=E,690nm,2.9s						
WHN	**Wuhan**	**8.56**	**98**	LR	LR		
	comp=N,960nm,4.0s						
WHN	**Wuhan**	**8.56**	**98**	*e*P	Pn	18 18 28.1	-14
SHL	**Shillong**	**12.85**	**243**	P	**Pn**	**18 19 39.9**	**-1.1**
SHL	**Shillong**	**12.85**	**243**		**Pn**	**18 19 39.9**	**-1.1**
CM34	**Chiang Mai Arr**	**14.06**	**201**	P	**P**	**18 20 06.0**	**+0.7**
CMMT	**Chiang Mai**	**14.16**	**202**	P	P	18 20 11.0	+4.6
CHTO	**Chiang Mai**	**14.16**	**202**	P	**Pn**	**18 20 00.7**	**+1.8**
CHTO	**Chiang Mai**	**14.16**	**202**		**Pn**	**18 20 00.7**	**+1.8**
CM35	**Chiang Mai Arr**	**14.23**	**201**	P	**P**	**18 20 09.0**	**+1.9**
CM32	**Chiang Mai Arr**	**14.35**	**202**	P	P	18 20 14.0	+5.6
CM36	**Chiang Mai Arr**	**14.39**	**201**	P	**P**	**18 20 09.0**	**0.0**
CM09	**Chiang Mai Arr**	**14.50**	**201**	P	**P**	**18 20 11.9**	**+1.8**
CM31	**Chiang Mai Arr**	**14.50**	**202**	P	P	18 20 14.8	+4.7
CMAR	**Chiang Mai Arr**	**14.50**	**202**	Pn	**Pn**	**18 20 05.6**	**+2.1**
	comp=N,0.5nm,0.3s,baz=10,slow=11,SNR=4.3						
CMAR	**Chiang Mai Arr**	**14.50**	**202**	P	**Pn**	**18 20 05.2**	**+1.7**
CMAR	**Chiang Mai Arr**	**14.50**	**202**		**Pn**	**18 20 05.2**	**+1.7**
CM15	**Chiang Mai Arr**	**14.51**	**202**	P	P	18 20 15.2	+5.0
CM02	**Chiang Mai Arr**	**14.52**	**202**	P	**P**	**18 20 12.9**	**+2.6**
CM01	**Chiang Mai Arr**	**14.53**	**201**	P	**P**	**18 20 14.0**	**+3.6**
CM04	**Chiang Mai Arr**	**14.54**	**201**	P	**P**	**18 20 14.8**	**+4.2**
CM13	**Chiang Mai Arr**	**14.54**	**202**	P	**P**	**18 20 12.5**	**+1.9**
CM05	**Chiang Mai Arr**	**14.55**	**202**	P	**P**	**18 20 12.0**	**+1.3**
SONM	**Songino Array**	**15.77**	**5**	Pn	**Pn**	**18 20 19.9**	**-0.4**
	comp=N,0.1nm,0.3s,baz=186,slow=13,SNR=2.4						
SONM	**Songino Array**	**15.77**	**5**	P	**Pn**	**18 20 19.9**	**-0.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SONM	**Songino Array**	**15.77**	**5**	IAmb	IAmb	18 20 28.2	
	comp=Z,3.5nm,1.2s						
ULN	**Ulaanbaatar**	**15.85**	**6**	P	**Pn**	**18 20 23.2**	**+1.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ULN	**Ulaanbaatar**	**15.85**	**6**		**Pn**	**18 20 23.2**	**+1.8**
ULN				P	**P**	**18 20 24.1**	**-1.0**
WMQ	**Urumqi**	**17.64**	**316**	*e*P	**Pn**	**18 20 43.5**	**-0.4**
TLY	**Talaya**	**19.56**	**358**	*i* P	**Pn**	**18 21 10.1**	**+2.9**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSRS	**Korea Array**	**19.93**	**68**	P	**P**	**18 21 07.9**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=256,slow=10.0,SNR=1.8						
HIA	**Hailar**	**20.59**	**29**	*i* P	Pn	18 21 22.2	+2.8
HIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK31	**Makanchi Array**	**22.46**	**317**	P	**P**	**18 21 37.4**	**+0.1**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	**Makanchi Array**	**22.46**	**317**	P	**P**	**18 21 37.4**	**+0.1**
MKAR	**Makanchi Array**	**22.46**	**317**	P	**P**	**18 21 38.5**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=119,slow=13,SNR=6.6						
MKAR	**Makanchi Array**	**22.46**	**317**	P	**P**	**18 21 36.8**	**-0.5**
MKAR	**Makanchi Array**	**22.46**	**317**	P	**P**	**18 21 36.8**	**-0.5**
MAKZ	**Makanchi**	**22.65**	**317**	P	**P**	**18 21 41.1**	**+1.9**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	**Makanchi**	**22.65**	**317**	P	**P**	**18 21 41.1**	**+1.9**
VLA	**Vladivostok**	**24.20**	**55**	*i* P	**P**	**18 21 56.3**	**+1.7**
VLA				pmax	pmax		
	comp=Z,15nm,1.1s						
AAK	**Ala-Archa**	**25.94**	**302**	LR	LR	18 33 41.3	
	comp=Z,44nm,18.1s,baz=120,slow=39						
ZAA0	**Zalesovo Array**	**25.97**	**333**	P	**P**	**18 22 10.7**	**+0.1**
ZALV	**Zalesovo Beam**	**25.97**	**333**	P	**P**	**18 22 11.2**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=128,slow=10,SNR=12						
ZALV	**Zalesovo Beam**	**25.97**	**333**	P	**P**	**18 22 10.7**	**+0.1**
ZALV	**Zalesovo Beam**	**25.97**	**333**	P	**P**	**18 22 10.7**	**+0.1**
NIL	**Nilore**	**26.25**	**282**	P	**P**	**18 22 12.6**	**-0.8**
NIL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NIL	**Nilore**	**26.25**	**282**	P	**P**	**18 22 12.6**	**-0.8**
NIL				IAmb	IAmb	18 22 17.0	
	comp=Z,5.1nm,0.8s						
KLR	**Kul'dur**	**26.60**	**42**	P	**P**	**18 22 14.7**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=261,slow=13,SNR=2.7						
KLR	**Kul'dur**	**26.60**	**42**	*e*P	**P**	**18 22 18.5**	**+2.2**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	**Kurchatov Arra**	**26.65**	**322**	P	**P**	**18 22 17.7**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=133,slow=8.7,SNR=7.7						
KURK	**Kurchatov**	**26.66**	**322**	*i* P	**P**	**18 22 16.0**	**-0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	**Kurchatov**	**26.66**	**322**	P	**P**	**18 22 17.3**	**+0.5**
ZEA	**Zeya**	**27.06**	**30**	*e*P	P	18 22 12

RAYN	**Ar Rayn**	**52.34**	**276**	P	**P**	**18 25 49.5**	**-0.8**
RAYN				pmax	pmax			
	comp=Z,5.0nm,1.4s							
RAYN	**Ar Rayn**	**52.34**	**276**	P	**P**	**18 25 49.5**	**-0.8**
RAYN				IAmb	IAmb	18 25 55.2		
	comp=Z,4.7nm,1.4s							
KNRA	**Kununurra**	**52.90**	**150**	P	**P**	**18 25 53.3**	**-0.9**
KNRA				IAmb	IAmb	18 25 59.5		
	comp=Z,18nm,1.1s							
FITZ	**Fitzroy Crossi**	**53.88**	**155**	P	**P**	**18 26 00.0**	**-1.4**
	comp=Z,2.5nm,1.0s,baz=351,slow=8.6,SNR=3.1							
FITZ	**Fitzroy Crossi**	**53.88**	**155**	P	**P**	**18 26 00.2**	**-1.2**
ARB3	**ARCESS Array S**	**56.48**	**336**	P	**P**	**18 26 19.3**	**-0.4**
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**18 26 18.0**	**-1.7**
	comp=Z,2.3nm,0.9s,baz=71,slow=6.8,SNR=4.4							
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**18 26 18.0**	**-1.7**
ARCES	**ARCESS Array B**	**56.48**	**336**	P	**P**	**18 26 18.0**	**-1.7**
FINES	**FINESS Array B**	**56.92**	**326**	P	**P**	**18 26 22.4**	**-0.5**
	comp=Z,2.6nm,1.0s,baz=91,slow=7.2,SNR=3.2							
AKASG	**Malin Array Be**	**56.95**	**313**	P	**P**	**18 26 22.3**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=68,slow=6.8,SNR=4.4							
WB0	**Warramunga Arr**	**59.00**	**147**	P	**P**	**18 26 35.6**	**-2.4**
WB0				IAmb	IAmb	18 26 38.4		
	comp=Z,7.0nm,1.4s							
WRAB	**Tennant Creek**	**59.12**	**147**	P	**P**	**18 26 38.5**	**-0.3**
WRAB				pmax	pmax			
	comp=Z,3.0nm,0.6s							
WRAB	**Tennant Creek**	**59.12**	**147**	P	**P**	**18 26 38.5**	**-0.3**
WRAB				IAmb	IAmb	18 26 40.0		
	comp=Z,3.5nm,0.6s							
WRA	**Warramunga Arr**	**59.12**	**147**	P	**P**	**18 26 38.1**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=339,slow=7.3,SNR=19							
WRA	**Warramunga Arr**	**59.12**	**147**	P	**P**	**18 26 37.4**	**-1.4**
WRA	**Warramunga Arr**	**59.12**	**147**	P	**P**	**18 26 37.4**	**-1.4**
WB2	**Warramunga Arr**	**59.13**	**147**	P	**P**	**18 26 38.3**	**-0.5**
WB2				IAmb	IAmb	18 26 49.5		
	comp=Z,8.0nm,1.2s							
WR0	**Warramunga Arr**	**59.23**	**147**	P	**P**	**18 26 38.5**	**-1.0**
WR0				IAmb	IAmb	18 26 39.6		
	comp=Z,4.0nm,1.0s							
BURAR	**Bucovina Array**	**60.25**	**310**	P	**P**	**18 26 45.5**	**-1.0**
SPIA	**Saint Paul Isl**	**61.18**	**38**	P	**P**	**18 26 51.8**	**-0.6**
AS31	**Alice Springs**	**62.18**	**149**	P	**P**	**18 26 58.9**	**-0.8**
ASAR	**Alice Springs**	**62.18**	**149**	P	**P**	**18 26 58.9**	**-0.7**
	comp=Z,8.8nm,0.8s,baz=334,slow=6.4,SNR=11							
NC405	**NORSAR Array S**	**63.74**	**327**	P	**P**	**18 27 09.8**	**+0.1**
NOA	**NORSAR Array B**	**64.00**	**327**	P	**P**	**18 27 10.1**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=71,slow=7.0,SNR=2.0							
MIDW	**Midway**	**66.23**	**71**	P	**P**	**18 27 26.4**	**+0.1**
FORT	**Forrest**	**66.41**	**158**	P	**P**	**18 27 27.0**	**-0.2**
SVW2	**Sparrevohn**	**66.95**	**31**	P	**P**	**18 27 28.1**	**-2.3**
GERES	**GERESS Array B**	**67.09**	**314**	P	**P**	**18 27 31.9**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=66,slow=4.7,SNR=2.9							
GERES	**GERESS Array B**	**67.09**	**314**	P	**P**	**18 27 32.4**	**+0.8**
PPLA	**Purkeypile**	**67.61**	**29**	P	**P**	**18 27 34.2**	**-0.5**
BMAR	**Burnt Mountain**	**68.21**	**23**	P	**P**	**18 27 39.3**	**+1.0**
RND	**Reindeer**	**68.71**	**28**	P	**P**	**18 27 41.8**	**+0.3**
RND				pmax	pmax			
	comp=Z,12nm,1.4s							
RND	**Reindeer**	**68.71**	**28**	P	**P**	**18 27 41.8**	**+0.3**
RND				IAmb	IAmb	18 28 18.2		
	comp=Z,12nm,1.4s							
ILAR	**Eielson Array**	**68.78**	**26**	P	**P**	**18 27 41.0**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=308,slow=4.4,SNR=1.9							
ILAR	**Eielson Array**	**68.78**	**26**	P	**P**	**18 27 41.0**	**-0.8**
NRCA	**Norcia**	**69.93**	**308**	P	**P**	**18 27 50.1**	**+0.6**
NRCA				IAmb	IAmb	18 28 04.8		
	comp=Z,3.4nm,1.1s							
KMBO	**Kilima Mbogo**	**71.48**	**257**	P	**P**	**18 28 00.9**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=42,slow=8.1,SNR=3.7							
KMBO	**Kilima Mbogo**	**71.48**	**257**	P	**P**	**18 28 00.3**	**+0.8**
KMBO				pmax	pmax			
	comp=Z,1.0nm,0.5s							
KMBO	**Kilima Mbogo**	**71.48**	**257**	P	**P**	**18 28 00.3**	**+0.8**
KMBO				IAmb	IAmb	18 28 01.2		
	comp=Z,1.3nm,0.5s							
BCAR	**Beaver Creek A**	**71.60**	**26**	P	**P**	**18 27 59.9**	**+0.7**
CTGM	**Chitina Glacie**	**72.99**	**28**	P	**P**	**18 28 08.6**	**+0.9**
YKA	**Yellowknife Ar**	**80.62**	**17**	P	**P**	**18 28 48.6**	**-1.9**
	comp=Z,1.3nm,0.8s,baz=334,slow=5.5,SNR=2.9							

*NEIC **22** 18:26:46.7±2.1,6°12S×0°06×155°07E±0°07,h119km±6km, mb4.3/18, Error ellipse: s-maj=10.3km s-min=9.2km az=114.0*

*IDC **22** 18:26:46.1±0.8,6°12S×155°05E,h114km±6km,mb3.6/10, mb1 3.8/15,mb1mx3.6/48,mbtmp4.1/15, Error ellipse: s-maj=14.2km s-min=10.3km az=44.0*

ISC 22 18:26:46.1±0.6,**6°05S**±0°06×**155°09E**±0°06,**h117**km±5km, **h119**km:**pP-P,n52,**σ1$27/61,**mb4.0**/15,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.45**	**302**			**Pn**	**18 27 39.1**	**+0.9**
KRVT	**Keravat (AS076**	**3.51**	**299**	P		**Pn**	**18 27 39.9**	**+0.9**
	5.1nm,0.3s,baz=160,slow=3.0,SNR=20							
KRVT				S		**Sn**	**18 28 20.1**	**+0.1**
	15nm,0.3s,baz=39,slow=2.9,SNR=3.8							
HNR	**Honiara**	**5.87**	**125**	P		**Pn**	**18 28 11.3**	**+0.5**
	3.5nm,0.3s,baz=256,slow=9.1,SNR=4.4							
HNR				S		**Sn**	**18 29 16.6**	**-0.2**
	2.6nm,0.3s,baz=30,slow=22,SNR=1.5							
HNR	**Honiara**	**5.87**	**125**			**Pn**	**18 28 10.6**	**-0.1**
PMG	**Port Moresby**	**8.53**	**247**	P		**Pn**	**18 28 47.7**	**+0.9**
	12nm,0.3s,baz=61,slow=7.5,SNR=39							
PMG				S		**Sn**	**18 30 19.4**	**-2.1**
	1.1nm,0.3s,baz=40,slow=4.5,SNR=2.3							
PATS	**Pohnpei**	**13.20**	**14**	Pn		**P**	**18 29 52.0**	**-2.6**
COEN	**Coen**	**14.11**	**235**	Pn		**Pn**	**18 30 02.5**	**+1.6**
SANVU	**Saraoutou**	**15.12**	**129**			**P**	**18 30 15.1**	**-0.8**
SANVU				IAmb		IAmb	18 30 15.7	
	comp=Z,23nm,0.9s							
CTA	**Charters Tower**	**16.38**	**211**	P		**Pn**	**18 30 29.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=20,slow=13,SNR=2.7							
CTAO	**Charters Tower**	**16.38**	**211**	P		**P**	**18 30 30.1**	**+0.1**
DZM	**Mont Dzumac**	**19.34**	**147**	P		**P**	**18 31 03.3**	**+0.8**
	comp=Z,3.1nm,0.3s,baz=255,slow=9.5,SNR=31							
DZM	**Mont Dzumac**	**19.34**	**147**	IAmb		IAmb	18 31 04.2	
	comp=Z,39nm,1.3s							
EIDS	**Eidsvold**	**19.59**	**191**	P		**P**	**18 31 06.0**	**+0.9**
EIDS				IAmb		IAmb	18 31 38.7	
	comp=Z,12nm,1.2s							
WR0	**Warramunga Arr**	**24.28**	**233**			**P**	**18 31 52.9**	**+0.2**
WB0	**Warramunga Arr**	**24.30**	**234**			**P**	**18 31 53.1**	**+0.3**
WB0				IAmb		IAmb	18 31 54.2	
	comp=Z,8.6nm,0.7s							
WRAB	**Tennant Creek**	**24.42**	**234**	P		**P**	**18 31 54.2**	**+0.3**
WRAB				IAmb		IAmb	18 31 55.7	
	comp=Z,10nm,0.8s							
WB2	**Warramunga Arr**	**24.43**	**234**			**P**	**18 31 54.3**	**+0.3**
WB2				IAmb		IAmb	18 31 55.8	
	comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	**24.44**	**234**	P		**P**	**18 31 54.2**	**+0.1**
	comp=Z,13nm,0.8s,baz=57,slow=10.0,SNR=91							
WRA				pP		**pP**	**18 32 18.2**	**+1.2**
	comp=Z,5.7nm,1.0s,baz=59,slow=9.6,SNR=5.9							
WRA	**Warramunga Arr**	**24.44**	**234**	P		**P**	**18 31 54.0**	**0.0**
ARMA	**Armidale**	**24.46**	**187**	P		**P**	**18 31 54.2**	**0.0**
ARMA				IAmb		IAmb	18 32 27.2	
	comp=Z,27nm,1.6s							
AS31	**Alice Springs**	**26.87**	**227**	P		**P**	**18 32 15.1**	**-0.9**
ASAR	**Alice Springs**	**26.87**	**227**	P		**P**	**18 32 15.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=58,slow=9.4,SNR=28							
KNRA	**Kununurra**	**27.53**	**248**	P		**P**	**18 32 22.8**	**+0.8**
STKA	**Stephens Creek**	**28.62**	**204**	P		**P**	**18 32 29.2**	**-2.3**
	comp=Z,1.0nm,0.6s,baz=48,slow=15,SNR=3.5							
STKA				pP		**pP**	**18 32 56.6**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=30,slow=7.9,SNR=2.5							
STKA	**Stephens Creek**	**28.62**	**204**	P		**P**	**18 32 30.7**	**-0.9**
FITZ	**Fitzroy Crossi**	**31.12**	**245**	P		**P**	**18 32 52.7**	**-1.1**
	comp=Z,2.1nm,0.9s,baz=82,slow=1.3,SNR=3.0							
FITZ	**Fitzroy Crossi**	**31.12**	**245**	P		**P**	**18 32 52.9**	**-0.9**
FITZ				IAmb		IAmb	18 32 54.0	
	comp=Z,6.6nm,1.2s							
FITZ				pP		**pP**	**18 33 17.3**	**-0.5**
BBOO	**Buckleboo**	**31.98**	**211**	P		**P**	**18 32 59.1**	**-2.0**
OMRZ	**Omania**	**37.31**	**152**	P		**P**	**18 33 50.6**	**+3.7**
RITZ	**Rihia Road**	**37.78**	**153**	P		**P**	**18 33 47.0**	**-3.9**
WNVZ	**Wahianoa**	**37.95**	**154**	P		**P**	**18 33 52.5**	**+0.1**
BKZ	**Black Stump Fm**	**38.22**	**153**	P		**P**	**18 33 55.4**	**+0.8**
BKZ	**Black Stump Fm**	**38.22**	**153**	P		**P**	**18 33 55.4**	**+0.8**
BHHZ	**Black Hill Sta**	**38.29**	**153**	P		**P**	**18 33 56.6**	**+1.4**
NMHZ	**Naumai**	**38.31**	**152**	P		**P**	**18 33 57.1**	**+1.7**
KWHZ	**Kaweka Forest**	**38.40**	**153**	P		**P**	**18 33 54.4**	**-1.7**
ARHZ	**Aropaoanui**	**38.53**	**152**	P		**P**	**18 33 58.2**	**+1.1**
MCHZ	**McNeill Hill**	**38.54**	**153**	P		**P**	**18 33 58.5**	**+1.2**
KRHZ	**Kereru**	**38.55**	**153**	P		**P**	**18 33 58.0**	**+0.7**
TUWZ	**Tuamarina**	**39.04**	**157**	P		**P**	**18 34 01.9**	**+0.6**
PETK	**Petropavlovsk-**	**58.98**	**2**	P		**P**	**18 36 32.5**	**-0.6**
	comp=Z,2.2nm,1.0s,baz=113,slow=15,SNR=1.5							
PETK				pP		**pP**	**18 37 01.8**	**+1.0**
	comp=Z,2.5nm,1.0s,baz=313,slow=9.9,SNR=1.2							
CMAR	**Chiang Mai Arr**	**60.47**	**295**	P		**P**	**18 36 45.3**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=118,slow=5.3,SNR=5.6							
CMAR				pP		**pP**	**18 37 11.1**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=118,slow=4.8,SNR=2.5							
CMAR	**Chiang Mai Arr**	**60.47**	**295**	P		**P**	**18 36 44.5**	**+0.5**
CMAR				pP		**pP**	**18 37 10.5**	**-1.8**
SONM	**Songino Array**	**68.60**	**327**	P		**P**	**18 37 38.4**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=137,slow=7.0,SNR=2.6							
SONM				pP		**pP**	**18 38 05.2**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=153,slow=13,SNR=2.9							
VNDA	**Vanda**	**71.52**	**178**	P		**P**	**18 37 54.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=7.1,slow=8.2,SNR=1.9							
MK31	**Makanchi Array**	**82.76**	**319**	P		**P**	**18 38 58.2**	**+1.1**
MKAR	**Makanchi Array**	**82.76**	**319**	P		**P**	**18 38 57.6**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=104,slow=5.2,SNR=11							
MKAR	**Makanchi Array**	**82.76**	**319**			**P**	**18 38 58.1**	**+1.0**
ZALV	**Zalesovo Beam**	**83.45**	**326**	P		**P**	**18 39 00.4**	**0.0**
	comp=Z,0.8nm,0.5s,baz=101,slow=7.7,SNR=3.7							
ZALV	**Zalesovo Beam**	**83.45**	**326**	P		**P**	**18 39 00.1**	**-0.4**
QSPA	**South Pole Qui**	**83.92**	**180**	P		**P**	**18 39 03.3**	**+0.5**
QSPA				IAmb		IAmb	18 39 03.6	
	comp=Z,2.4nm,0.6s							
GERES	**GERESS Array B**	**126.30**	**329**	PKP		**PKiKP**	**18 45 35.6**	**0.0**
	comp=Z,0.1nm,0.4s,baz=321,slow=1.7,SNR=3.6							

*SOME **22** 18:28:13.5,39°33N×77°00E,h5km*
*KRNET **22** 18:28:14.3±0.1,39°06N×77°25E,mb2.7*
*NNC **22** 18:28:15.5±1.1,39°42N×77°00E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=7.2km s-min=6.2km az=166.0*

ISC 22 18:28:17.1±2.0,**39°50N**±0°09×**76°95E**±0°05,**h10**km,**n35,**
σ2$20/53,**8C-6D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.71**	**282**	⇑*i*P		**Pb**	**18 29 06.1**	**+0.3**
	baz=89							
SFK				⇑*i*S		**Sg**	**18 29 44.1**	**0.0**
	baz=89							
BOOM	**Boomskoye usch**	**3.08**	**346**	⇑*i*P		**Pb**	**18 29 13.3**	**+1.2**
	baz=44							
BOOM				⇑*i*S		**Sg**	**18 29 56.6**	**+0.4**
	baz=44							
ARLS	**Aral**	**3.09**	**321**	⇓*i*P		**Pb**	**18 29 13.7**	**+1.4**
	baz=23							
ARLS				⇓*i*S		**Sg**	**18 29 56.6**	**+0.2**
	baz=23							
TNSS	**Tian-Shan**	**3.54**	**360**	*e*P		**Pb**	**18 29 21.5**	**+1.5**
	6.5nm,0.3s							
TNSS				*e*S		**Sg**	**18 30 10.7**	**0.0**
	7.1nm,0.5s							
TNSS	**Tian-Shan**	**3.54**	**360**	Pg		**Pb**	**18 29 21.5**	**+1.5**
	6.5nm,0.3s							
TNSS				Lg		Lg	18 30 10.3	
	7.1nm,0.5s							
ARSB	**Arslanbob**	**3.54**	**302**	⇓*i*P		**Pb**	**18 29 18.9**	**-0.9**
	baz=6.0							
ARSB				⇓*i*S		**Sb**	**18 30 06.2**	**+3.3**
	baz=6.0							
IZV	**Izvestkoviy**	**3.54**	**356**	*e*P		**Pb**	**18 29 21.9**	**+1.9**
	4.9nm,0.3s							
IZV				*e*S		**Sg**	**18 30 11.3**	**+0.5**
	12nm,0.5s							
IZV	**Izvestkoviy**	**3.54**	**356**	Pg		**Pg**	**18 29 22.7**	**-2.3**
	4.9nm,0.3s							
IZV				Lg		Lg	18 30 11.3	
	10nm,0.5s							
TKM2	**Tokmak 2**	**3.57**	**344**	⇑Pg		**Pb**	**18 29 21.6**	**+1.2**
	2.8nm,0.7s							
TKM2				⇑Lg		Lg	18 30 12.3	
	8.8nm,0.7s							
KST	**Kastek**	**3.62**	**348**	*e*P		**Pg**	**18 29 23.5**	**-2.9**
	3.8nm,0.3s							
KST				*e*S		**Sg**	**18 30 14.0**	**+0.7**
	11nm,0.5s							
KST	**Kastek**	**3.62**	**348**	Pg		**Pg**	**18 29 23.5**	**-2.9**
	3.8nm,0.3s							
KST				Lg		Lg	18 30 14.0	
	11nm,0.5s							
MDOK	**Medeo**	**3.66**	**1**	*e*P		**Pb**	**18 29 23.6**	**+1.7**
	5.6nm,0.4s							
MDOK				*e*S		**Sg**	**18 30 14.2**	**-0.5**
	11nm,0.6s							
MDOK	**Medeo**	**3.66**	**1**	Pg		**Pb**	**18 29 23.8**	**+1.9**
	5.6nm,0.4s							
MDOK				Lg		Lg	18 30 14.0	
	7.0nm,0.5s							
SATY	**Saty**	**3.72**	**17**	*e*P		**Pg**	**18 29 25.6**	**-2.8**
	5.2nm,0.5s							
SATY				*e*S		**Sg**	**18 30 17.5**	**+1.0**
	12nm,0.3s							
SATY	**Saty**	**3.72**	**17**	Pg		**Pg**	**18 29 25.6**	**-2.8**
	5.2nm,0.5s							
SATY				Lg		Lg	18 30 17.5	
	12nm,0.3s							
KOTS	**Kotyrbulak**	**3.73**	**2**	*e*P		**Pg**	**18 29 25.6**	**-3.0**
	15nm,0.3s							
KOTS				*e*S		**Sg**	**18 30 17.6**	**+0.7**
	42nm,0.5s							
KOTS	**Kotyrbulak**	**3.73**	**2**	Pg		**Pg**	**18 29 25.6**	**-3.0**
	15nm,0.3s							
KOTS				Lg		Lg	18 30 17.6	
	42nm,0.5s							
DGS	**Degeres**	**3.84**	**347**	*e*P		**Pg**	**18 29 28.1**	**-2.6**
	5.4nm,0.4s							
DGS				*e*S		**Sg**	**18 30 21.4**	**+0.9**
	9.4nm,0.5s							
DGS	**Degeres**	**3.84**	**347**	Pg		**Pb**	**18 29 27.0**	**+2.0**
	5.4nm,0.4s							
DGS				Lg		Lg	18 30 21.0	
	9.4nm,0.5s							
UZB	**Uzynbulak**	**3.96**	**22**	*e*P		**Pb**	**18 29 28.7**	**+1.6**
	2.7nm,0.7s							
UZB				*e*S		**Sg**	**18 30 22.6**	**-1.7**
	11nm,0.5s							
UZB	**Uzynbulak**	**3.96**	**22**	Pg		**Pb**	**18 29 28.5**	**+1.4**
	1.7nm,0.3s							
UZB				Lg		Lg	18 30 22.6	
	11nm,0.5s							
SHLS	**Shalkode**	**4.11**	**27**	*e*P		**Pg**	**18 29 34.2**	**-1.6**
	3.6nm,0.4s							
SHLS				*e*S		**Sg**	**18 30 31.9**	**+2.7**
	12nm,0.7s							
SHLS	**Shalkode**	**4.11**	**27**	Pg		**Pg**	**18 29 34.2**	**-1.6**
SHLS				Lg		Lg	18 30 31.9	
KPKS	**Kokpek**	**4.17**	**18**	*e*P		**Pb**	**18 29 32.6**	**+2.0**
	4.8nm,0.4s							
KPKS				*e*S		**Sg**	**18 30 29.1**	**-1.9**
	18nm,0.5s							
KTBS	**Karatobe**	**4.21**	**357**	*e*P		**Pb**	**18 29 32.6**	**+1.3**
	3.1nm,0.5s							
KTBS				*e*S		**Sg**	**18 30 29.4**	**-3.0**
	14nm,0.6s							
KTBS	**Karatobe**	**4.21**	**357**	Pg		**Pb**	**18 29 32.6**	**+1.3**
	3.1nm,0.5s							
KTBS				Lg		Lg	18 30 29.4	
	13nm,0.5s							
PDGK	**Podgornoye**	**4.28**	**26**	⇓Pg		**Pb**	**18 29 34.3**	**+1.9**
	4.3nm,0.8s							
PDGK				⇑Lg		Lg	18 30 32.8	
	22nm,0.9s							
KRBS	**Karabastau**	**4.30**	**348**	*e*P		**Pg**	**18 29 36.1**	**-3.3**
	5.0nm,0.6s							
KRBS				*e*S		**Sg**	**18 30 35.4**	**+0.2**
	5.4nm,0.7s							
KRBS	**Karabastau**	**4.30**	**348**	Pg		**Pb**	**18 29 35.1**	**+2.3**
	5.0nm,0.6s							
KRBS				Lg		Lg	18 30 34.4	
	5.4nm,0.7s							
SGDS	**Sogindy**	**4.32**	**337**	Pg		**Pg**	**18 29 36.3**	**-3.5**
	1.9nm,0.3s							
SGDS				Lg		Lg	18 30 35.4	
	4.8nm,0.3s							
MNBS	**Baschi**	**4.70**	**13**	*e*P		**Pb**	**18 29 43.0**	**+3.4**
	2.2nm,0.7s							
MNBS				*e*S		**Sg**	**18 30 47.0**	**-1.0**
	7.0nm,0.3s							
MNBS	**Baschi**	**4.70**	**13**	Pg		**Pb**	**18 29 42.6**	**+2.9**
	2.2nm,0.4s							
MNBS				Lg		Lg	18 30 47.0	
	7.0nm,0.3s							
DJR	**Jarkent**	**5.27**	**23**	*e*P		**Pb**	**18 29 51.7**	**+2.3**
	2.1nm,0.4s							
DJR				*e*S		**Sg**	**18 31 02.5**	**-3.8**
	5.2nm,0.4s							
DJR	**Jarkent**	**5.27**	**23**	Pg		**Pb**	**18 29 51.7**	**+2.3**
	2.1nm,0.4s							
DJR				Lg		Lg	18 31 01.7	
	5.2nm,0.4s							
KK31	**Karatay Array**	**6.04**	**309**	⇓Pg		**Pb**	**18 30 06.9**	**+4.5**
	0.4nm,0.6s,baz=128,slow=14							
KK31				⇑Lg		Lg	18 31 30.1	
	1.6nm,0.6s,baz=122,slow=28,SNR=2.8							

WEL 22 18:33:08.6,39°S±5°×17°8E±°,h18km±4km,**ML2.1/6,ML2.3/6, MLv2.1/6,Error ellipse: s-maj=0.0km s-min=0.0km az=61.8,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**0.21**	**337**	P		Pg	18 33 14.2	+0.6
RIGZ	**Rimuhau**	**0.43**	**266**	P		Pb	18 33 18.0	+0.3
TKGZ	**Te Karaka**	**0.43**	**303**	P		Pb	18 33 17.9	+0.2
TWGZ	**Tauwhareparae**	**0.56**	**332**	P		Pn	18 33 21.5	-0.2
PUZ	**Puketiti**	**0.60**	**356**	P		Pn	18 33 22.6	+0.3
MWZ	**Matawai**	**0.70**	**299**	P		Pb	18 33 22.1	-0.2
RUGZ	**Raukumara Rang**	**0.87**	**325**	P		Pb	18 33 24.6	-0.5
URZ	**Urewera**	**1.03**	**293**	P		Pb	18 33 27.5	-0.3
MTHZ	**Maungataniwha**	**1.16**	**261**	P		Pn	18 33 29.5	-0.4
KWHZ	**Kaweka Forest**	**1.65**	**242**	P		Pn	18 33 37.1	+0.5

*REY **22** 18:36:51.9,64°67N×17°40W,h9km*
*IDC **22** 18:36:53.3±0.8,64°53N×17°36W,h0km,mb3.7/12, mb1 3.9/16,mb1mx3.7/54,mbtmp3.7/16,ML2.5/3,MS3.3/10, Ms1 3.3/10,ms1mx2.9/52,Error ellipse: s-maj=24.8km s-min=14.9km az=31.0*

*NEIC **22** 18:36:54.3±2.1,64°47N±0°08×17°8W±0°2,h11km±5km, mb4.4/11,Error ellipse: s-maj=13.6km s-min=8.4km az=224.0*

ISC 22 18:36:53.8±0.5,**64°65N**±0°02×**17°37W**±0°02,**h10**km,**n113,**
σ2$54/120,**mb3.9**/25,**MS3.2**/6,**Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.14**	**0**	P		**Pg**	**18 36 54.8**	**-2.2**
	baz=7.1							
IDYN				S		**Sg**	**18 36 57.2**	**-2.1**
	baz=7.1							
IDJK	**Dyngjujokull**	**0.16**	**159**	P		**Pg**	**18 36 55.8**	**-1.6**
	baz=156							
IVON	**Vonarskard**	**0.17**	**277**	P		**Pg**	**18 36 55.0**	**-2.4**
	baz=272							
IURH	**Urdarhals**	**0.19**	**30**	P		**Pg**	**18 36 55.9**	**-2.0**
	baz=35							
IURH				S		**Sg**	**18 36 58.8**	**-1.9**
	baz=35							
IGRF	**Grimsfjall**	**0.25**	**170**	P		**Pg**	**18 36 57.1**	**-1.9**
	baz=167							
IHAM	**Hamarinn**	**0.26**	**229**	P		**Pg**	**18 36 57.2**	**-1.9**
	baz=224							
IKVE	**Kverkfjoll**	**0.30**	**85**	P		**Pg**	**18 36 58.0**	**-1.8**
	baz=88							
IKVE				S		**Sg**	**18 37 02.5**	**-1.4**
	baz=88							
IHUS	**Husbondi**	**0.38**	**199**	P		**Pg**	**18 36 59.3**	**-2.0**
	baz=196							
IVOT	**Vottur**	**0.39**	**168**	P		**Pg**	**18 36 59.5**	**-2.0**
	baz=166							
IVOT				S		**Sg**	**18 37 05.8**	**-0.9**
	baz=166							
THOR	**Thorvaldshraun**	**0.41**	**46**	P		**Pg**	**18 36 59.6**	**-2.2**
	baz=49							
IKRE	**Kreppuhraun**	**0.44**	**72**	P		**Pg**	**18 37 00.2**	**-2.2**
	baz=75							
IKRE				S		**Sg**	**18 37 06.8**	**-1.5**
	baz=75							
ISKR	**Skrokkalda**	**0.45**	**258**	P		**Pg**	**18 37 00.1**	**-2.4**
	baz=256							
ISKR				S		**Sg**	**18 37 06.3**	**-2.2**
	baz=256							
IJOK	**Jokulheimar**	**0.50**	**228**	P		**Pg**	**18 37 00.9**	**-2.6**
	baz=226							
IASK	**Askja**	**0.51**	**37**	P		**Pg**	**18 37 01.0**	**-2.6**
	baz=40							
IMKO	**Mokollar**	**0.55**	**53**	P		**Pg**	**18 37 02.0**	**-2.4**
	baz=55							
IMKO				S		**Sg**

	baz=241							
BORG	**Borgarnes**	**1.70**	**275**			**Pn**	**18 37 20.5**	**-2.9**
ISOL	**Solvholt**	**1.72**	**247**	P		**Pn**	**18 37 20.6**	**-3.1**
	baz=246							
IKRO	**Krokur**	**1.72**	**253**	P		**Pn**	**18 37 20.6**	**-3.1**
	baz=252							
IHEI	**Heioarbar**	**1.74**	**257**	P		**Pn**	**18 37 21.0**	**-2.9**
	baz=256							
ILEI	**Leirhofn**	**1.80**	**11**	P		**Pn**	**18 37 21.7**	**-3.1**
	baz=12							
IBJA	**Bjarnastaoir**	**1.86**	**249**	P		**Pn**	**18 37 23.2**	**-2.3**
	baz=249							
IHRN	**Hraun**	**1.86**	**323**	P		**Pn**	**18 37 22.5**	**-3.1**
	baz=323							
IKUD	**Kuludalsa**	**1.98**	**262**	P		**Pn**	**18 37 25.0**	**-2.2**
	baz=262							
SCO	**Scoresbysund**	**6.11**	**345**			**Pn**	**18 38 25.4**	**+1.5**
SCO	**Scoresbysund**	**6.11**	**345**	*e*		**Pn**	**18 38 20.9**	**-3.1**
	baz=156,slow=10							
SCO				*i*	P	**Pn**	**18 38 25.0**	**+1.1**
SCO				*i*	S	**Sn**	**18 39 40.1**	**+6.3**
SCO					IAML		18 39 48.6	
	comp=Z,1.2nm,0.5s							
EKA	**Eskdalemuir Ar**	**11.71**	**136**	Pn		**Pn**	**18 39 39.2**	**-1.5**
	baz=323,slow=13,SNR=8.7							
NOA	**NORSAR Array B**	**13.48**	**92**	Pn		**Pn**	**18 40 02.4**	**-2.4**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.2							
NOA					LR	LR	18 45 17.6	
	comp=Z,58nm,20.6s,baz=295,slow=37							
SFJD	**Kangerlussuaq**	**13.72**	**295**	LR		LR	18 45 06.1	
	comp=Z,328nm,18.1s,baz=96,slow=36							
HFS	**Hagfors**	**14.99**	**93**	Pn		**Pn**	**18 40 25.6**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=323,slow=6.3,SNR=2.3							
SPITS	**Spitsbergen Ar**	**16.86**	**23**	LR		LR	18 45 43.8	
	comp=Z,53nm,19.3s,baz=260,slow=31							
ARCES	**ARCESS Array B**	**17.08**	**55**	LR		LR	18 46 03.1	
	comp=Z,64nm,21.6s,baz=255,slow=32							
FINES	**FINESS Array B**	**19.65**	**79**	P		**Pn**	**18 41 23.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=344,slow=4.5,SNR=5.3							
FINES	**FINESS Array B**	**19.65**	**79**	P		**Pn**	**18 41 25.1**	**+1.4**
CLL	**Collm**	**20.65**	**116**	*e*P		**P**	**18 41 33.0**	**-0.2**
	comp=Z,33nm,2.2s							
NKC	**Novy Kostel**	**21.30**	**118**	*e*P		**P**	**18 41 44.5**	**+4.3**
BRG	**Berggiesshubel**	**21.36**	**115**	*e*PKP		**P**	**18 41 42.2**	**+1.4**
	comp=Z,12nm,1.3s							
BRG				*e*			18 41 52.6	
	comp=Z,13nm,1.4s							
BFO	**Black Forest**	**21.40**	**128**	P		**P**	**18 41 42.2**	**+0.9**
FRB	**Frobisher Bay**	**21.80**	**291**	LR		LR	18 48 46.1	
	comp=Z,189nm,18.2s,baz=42,slow=33							
PRU	**Pruhonice**	**22.29**	**116**	*e*P		**P**	**18 41 53.2**	**+2.3**
CHVC	**Chvalec**	**22.41**	**113**	*e*P		**P**	**18 41 55.2**	**+3.0**
KHC	**Kasperske Hory**	**22.62**	**119**	*e*P		**P**	**18 41 57.5**	**+3.1**
KHC	**Kasperske Hory**	**22.62**	**119**	P		**P**	**18 41 56.3**	**+1.9**
DPC	**Dobruska-Polom**	**22.70**	**113**	*e*P		**P**	**18 41 56.1**	**+0.8**
DAVA	**Damuels**	**22.83**	**127**	*e*P		**P**	**18 41 58.8**	**+2.0**
	comp=Z,5.7nm,1.1s							
GERES	**GERESS Array B**	**22.90**	**119**	P		**P**	**18 41 59.0**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=316,slow=7.5,SNR=6.9							
GERES					LR	LR	18 51 05.0	
	comp=Z,84nm,19.4s,baz=319,slow=37							
GERES	**GERESS Array B**	**22.90**	**119**	P		**P**	**18 41 58.5**	**+1.0**
RETA	**Reutte**	**22.96**	**125**	*e*P		**P**	**18 42 01.0**	**+2.9**
	comp=Z,2.3nm,0.8s							
KRLC	**Kraliky**	**23.10**	**113**	*e*P		**P**	**18 42 00.3**	**+0.8**
MOTA	**Moosalm**	**23.21**	**125**	*e*P		**P**	**18 42 02.1**	**+1.5**
	comp=Z,3.9nm,1.1s							
DAVOX	**Davos/Dischmat**	**23.27**	**127**	P		**P**	**18 42 02.2**	**+0.9**
	comp=Z,1.9nm,0.9s,baz=315,slow=18,SNR=2.7							
DAVOX					LR	LR	18 50 59.4	
	comp=Z,85nm,21.4s,baz=315,slow=36							
SQTA	**Sankt Quirin**	**23.35**	**125**	*e*P		**P**	**18 42 04.9**	**+2.8**
	comp=Z,3.9nm,0.9s							
VRAC	**Vranov**	**23.64**	**114**	LR		LR	18 52 28.1	
	comp=Z,48nm,19.2s,baz=311,slow=40							
EUNU	**Eureka**	**23.70**	**336**	P		**P**	**18 42 06.9**	**+1.7**
EUNU					IAmb	IAmb	18 42 09.3	
	comp=Z,28nm,1.9s							
CONA	**Conrad Observa**	**24.48**	**117**	*e*P		**P**	**18 42 13.8**	**+1.1**
	comp=Z,2.7nm,1.0s							
ARSA	**Arzberg**	**24.91**	**119**	*i* P		**P**	**18 42 17.8**	**+1.3**
	comp=Z,2.6nm,1.0s							
OBKA	**Obir**	**25.16**	**121**	*e*P		**P**	**18 42 19.8**	**+0.9**
	comp=Z,3.4nm,1.2s							
KWP	**Kalwaria Pacla**	**25.85**	**106**	P		**P**	**18 42 26.4**	**+1.3**
KWP					IAmb	IAmb	18 42 37.4	
	comp=Z,27nm,1.2s							
PSZ	**Piszkesteto**	**26.06**	**112**	P		**P**	**18 42 28.6**	**+1.5**
PSZ					IAmb	IAmb	18 42 33.0	
	comp=Z,11nm,1.3s							
ESDC	**Sonseca Array**	**26.22**	**156**	P		**P**	**18 42 28.1**	**-0.4**
	comp=Z,0.7nm,0.9s,baz=347,slow=9.4,SNR=6.2							
AKASG	**Malin Array Be**	**27.79**	**98**	P		**P**	**18 42 41.8**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=320,slow=9.7,SNR=2.2							
MDT	**Midelt**	**32.82**	**160**	LR		LR	18 56 38.2	
	comp=Z,28nm,20.3s,baz=19,slow=36							
BRTR	**Keskin Array B**	**38.42**	**105**	P		**P**	**18 44 17.2**	**+1.9**
	comp=Z,1.3nm,0.8s,baz=354,slow=6.7,SNR=3.9							
BRTR	**Keskin Array B**	**38.42**	**105**	P		**P**	**18 44 16.8**	**+1.5**
AKTO	**Aktyubinsk**	**40.24**	**73**	LR		LR	19 01 06.8	
	comp=Z,48nm,21.5s,baz=350,slow=36							
TIXI	**Tiksi**	**42.03**	**15**	P		P	18 44 48.9	+4.3
TIXI					IAmb	IAmb	18 44 49.8	
	comp=Z,5.4nm,1.1s							
ILAR	**Eielson Array**	**45.72**	**332**	P		**P**	**18 45 17.0**	**+2.6**
	comp=Z,1.3nm,1.0s,baz=27,slow=5.6,SNR=8.5							
ILAR					PcP	**PcP**	**18 46 53.9**	**+2.0**
	comp=Z,0.7nm,0.9s,baz=35,slow=3.3,SNR=3.0							
ILAR	**Eielson Array**	**45.72**	**332**	P		**P**	**18 45 16.6**	**+2.3**
KURK	**Kurchatov**	**48.07**	**58**	P		**P**	**18 45 33.8**	**+0.9**
KURK					IAmb	IAmb	18 45 36.3	
	comp=Z,2.8nm,0.9s							
MKAR	**Makanchi Array**	**52.68**	**58**	P		**P**	**18 46 08.4**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=290,slow=8.6,SNR=5.2							
MKAR	**Makanchi Array**	**52.68**	**58**	P		**P**	**18 46 08.6**	**+0.7**
TORD	**Torodi Ar. Bea**	**53.11**	**157**	P		**P**	**18 46 11.1**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=343,slow=9.0,SNR=4.1							
TORD	**Torodi Ar. Bea**	**53.11**	**157**	P		**P**	**18 46 10.5**	**-0.8**
PD31	**Pinedale Array**	**53.23**	**293**	P		**P**	**18 46 12.8**	**+0.6**
PD31					IAmb	IAmb	18 46 15.3	
	comp=Z,3.1nm,0.9s							
PDAR	**Pinedale Array**	**53.23**	**293**	P		**P**	**18 46 12.7**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=60,slow=8.8,SNR=8.9							
PDAR	**Pinedale Array**	**53.23**	**293**	P		**P**	**18 46 12.4**	**+0.2**
GAR	**Garm**	**54.60**	**73**	P		**P**	**18 46 23.6**	**+1.4**
SONM	**Songino Array**	**59.61**	**40**	P		**P**	**18 46 59.0**	**+1.5**
	comp=Z,0.5nm,0.9s,baz=348,slow=6.1,SNR=3.0							
NIL	**Nilore**	**60.40**	**74**	P		**P**	**18 47 01.8**	**-1.1**
TXAR	**Lajitas Array**	**62.34**	**280**	P		**P**	**18 47 18.1**	**+1.9**
	comp=Z,0.7nm,0.9s,baz=93,slow=5.1,SNR=4.0							
CMAR	**Chiang Mai Arr**	**84.09**	**59**	P		**P**	**18 49 26.4**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=327,slow=6.0,SNR=5.4							

IDC 22 19:07:10.4±5.8, 8°44S×156°28E, *h*0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/34, mbtmp3.9/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/25, Error ellipse: s-maj=97.7km s-min=78.4km az=11.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.06**	**263**		Op LR	LR	19 12 32.9	
	comp=Z,99nm,19.1s,baz=86,slow=36							
DZM	**Mont Dzumac**	**16.71**	**145**	LR		LR	19 15 35.4	
	comp=Z,75nm,18.4s,baz=72,slow=30							
WRA	**Warramunga Arr**	**24.11**	**239**	P		P	19 12 28.8	+0.6
	1.7nm,0.8s,baz=64,slow=9.5,SNR=12							
ASAR	**Alice Springs**	**26.23**	**232**	P		P	19 12 47.3	-0.1
	1.8nm,1.0s,baz=64,slow=9.6,SNR=11							
STKA	**Stephens Creek**	**27.02**	**208**	P		P	19 12 53.8	-0.6
	2.6nm,1.0s,baz=45,slow=8.6,SNR=4.4							

VIE 22 19:12:40.9±0.3, 46°74N×12°35E, *h*3km, ml0.9/3, 1C, Error ellipse: s-maj=4.0km s-min=1.4km az=10.0 6 km WSW of Sillian, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ABTA	**Abfaltersbach**	**0.12**	**86**	*i*	Pg	Pg	19 12 43.3	+0.1
	0.4nm,0.0s							
ABTA				*e*	Sg	Sg	19 12 44.9	+0.1
	1.9nm,0.0s							
CSMI	**Casera Mimoias**	**0.31**	**137**	*e*	Pg	Pg	19 12 47.5	+0.6
CSMI				*e*	Sg	Sg	19 12 51.6	+0.7

PRU **22** *19:14:07.6±0.0, 45°.65N×27°.53E, h0km, M5.6*

BGS **22** *19:14:13.9±1.9, 45°.99N×27°.69E, h40km, mb5.2, MW5.5(NEIC)*

BEO **22** *19:14:13.4±2.1, 45°.86N×27°.21E, h0km, ML5.6/21*

MOS **22** *19:14:15.0±1.0, 45°.89N×27°.14E, h37km, mb5.5/35, MS5.2/66, Error ellipse: s-maj=3.6km s-min=3.1km az=106.3*

MOS Felt (IV-V) at Kishinev.

BJI **22** *19:14:15.0±0.0, 45°.90N×27°.20E, h39km, mB5.5/71, mb5.4/83, Ms5.6/89, Ms7 5.6/83*

IDC **22** *19:14:15.5±0.7, 45°.85N×27°.15E, h34km±6km, mb4.9/37, mb1 5.0/52, mb1mx5.0/55, mbtmp5.1/52, ML4.5/12, MS5.2/49, Ms1 5.2/49, ms1mx5.1/55, Error ellipse: s-maj=5.8km s-min=5.2km az=18.0*

PDG **22** *19:14:15.9±0.6, 45°.84N×27°.15E, h57km±2km, MD6.5/4, ML4.7/14, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*

GII **22** *19:14:15.3±0.8, 45°.87N×27°.16E, h39km*

SIGU **22** *19:14:16.3±0.1, 45°.9N±0°.6×27°.2E±0°.6, h47km±1km, mb4.9/7*

SOF **22** *19:14:16.3, 45°.55N×27°.02E, h5km, MD5.8*

NEIC **22** *19:14:16.4±1.7, 45°.90N±0°.03×27°.15E±0°.03, h32km±1km, mb5.6/220, Ms_20 5.2/274, Mwb5.5/50, Mww5.6, ML5.7/6(BUC), Mwc5.7(GCMT), Error ellipse: s-maj=5.5km s-min=3.7km az=179.0*

MED_RC **22** *19:14:17.0±0.1, 45°.91N×27°.24E, h16km, MW5.8/34, Moment Tensor Solution. Body waves: s13,c16;Mantle waves: s34,c80; Duration: 2s1 Moment tensor: Scale 10^17Nm; Mrr-0.59±.04; Mθθ1.08±.04; Mϕϕ-0.49±.03; Mrθ-2.94±.15; Mθϕ-0.62±.03; Mϕr4.16±.22; Best double couple: Mw5.22000×10^17 NP1:ϕs252.00000°,δ11.00000°, λ-162.00000°. NP2:ϕs144.00000°,δ87.00000°, λ-80.00000°. Principal axes: T 5.2400, Plg41.0000°, Azm225.0000°; N -0.0500, Plg10.0000°, Azm324.0000°; P -5.1900, Plg47.0000°, Azm65.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

BUC **22** *19:14:17.1±0.1, 45°.87N×27°.15E, h41km±2km, ml5.7/66 Error ellipse: s-maj=1.2km s-min=1.0km az=37.0*

NEIC **22** *19:14:17, 45°.87N×27°.16E, h32km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.12; Mθθ1.13; Mϕϕ-1.01; Mrθ-1.01; Mθϕ-0.93; Mϕr1.13; Fault plane solution: Mw2.07000×10^17 NP1:ϕs241.91000°, δ43.70000°,λ-179.67000°. NP2:ϕs151.67000°, δ89.77000°,λ-46.30000°. Principal axes: T 2.2723, Plg31.0000°, Azm207.0000°; N -0.4783, Plg44.0000°, Azm331.0000°; P -1.7940, Plg31.0000°, Azm96.0000°;*

GCMT **22** *19:14:18.4±0.1, 45°.80N±0°.01×27°.17E±0°.01, h25km, MW5.7/151, Moment Tensor Solution. s110,c195; s151,c302; Duration: 1s7 Moment tensor: Scale 10^17 Nm; Mrr-0.64±.03; Mθθ1.32±.03; Mϕϕ-0.68±.02; Mrθ-2.50±.06; Mθϕ-0.84±.02; Mϕr2.90±.05; Best double couple: Mw4.06900×10^17 NP1:ϕs249.00000°,δ17.00000°, λ-160.00000°. NP2:ϕs140.00000°,δ84.00000°, λ-74.00000°. Principal axes: T 4.2610, Plg37.0000°, Azm216.0000°; N -0.3850, Plg16.0000°, Azm318.0000°; P -3.8780, Plg48.0000°, Azm67.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC **22** *19:14:20, 45°.76N×27°.16E, h28km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.56; Mθθ1.36; Mϕϕ-0.80; Mrθ-2.46; Mθϕ-0.86; Mϕr2.53; Fault plane solution: Mw3.82000×10^17 NP1:ϕs246.00000°, δ18.00000°,λ-161.00000°. NP2:ϕs138.00000°, δ84.00000°,λ-73.00000°. Principal axes: T 4.0632, Plg37.0000°, Azm212.0000°; N -0.5474, Plg17.0000°, Azm316.0000°; P -3.5158, Plg48.0000°, Azm66.0000°;*

NEIC **22** *19:14:22, 46°.16N×27°.30E, h30km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.12; Mθθ0.78; Mϕϕ-0.66; Mrθ-1.42; Mθϕ-0.54; Mϕr2.83; Fault plane solution: Mw3.30000×10^17 NP1:ϕs246.00000°, δ16.00000°,λ-176.00000°. NP2:ϕs153.00000°, δ89.00000°,λ-74.00000°. Principal axes: T 3.2738, Plg42.0000°, Azm228.0000°; N 0.0420, Plg16.0000°, Azm332.0000°; P -3.3158, Plg44.0000°, Azm78.0000°;*

ISC 22 19:14:17.3±0.2, 45°.86N±0°.02×27°.15E±0°.02, h35km, h37km:pP-P, n1823, σ1942/1367, mb5.5/249, MS5.2/223, 177C-144D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ODBI	**Odobesti**	**0.11**	**216**	⇑P		**Pn**	**19 14 23.9**	**+0.4**
ODBI				⇑S		**Sn**	**19 14 29.9**	**+2.2**
ODBI	**Odobesti**	**0.11**	**216**	⇑P		**Pn**	**19 14 23.9**	**+0.4**
ODBI				⇑S		**Sn**	**19 14 29.9**	**+2.2**
ODBI	**Odobesti**	**0.11**	**216**			**Pn**	**19 14 23.9**	**+0.4**
ODBI						**Sn**	**19 14 29.9**	**+2.2**
GHRR		**0.27**	**41**	⇓P		**Pn**	**19 14 24.8**	**-0.1**
GHRR				⇓S		**Sn**	**19 14 31.2**	**+1.0**
GHRR		**0.27**	**41**	⇓P		**Pn**	**19 14 24.8**	**-0.1**
GHRR				⇓S		**Sn**	**19 14 31.2**	**+1.0**
GHRR		**0.27**	**41**			**Pn**	**19 14 24.9**	**0.0**
GHRR						**Sn**	**19 14 31.2**	**+1.0**
VRI	**Vrincioaia**	**0.30**	**272**	⇓P		**Pn**	**19 14 24.3**	**-0.9**
VRI				⇓S		**Sn**	**19 14 31.0**	**+0.3**
VRI	**Vrincioaia**	**0.30**	**272**	⇓P		**Pn**	**19 14 24.3**	**-0.9**
VRI				⇓S		**Sn**	**19 14 31.0**	**+0.3**
VRI	**Vrincioaia**	**0.30**	**272**			**Pn**	**19 14 24.4**	**-0.9**
VRI						**Sn**	**19 14 31.0**	**+0.3**
VRI	**Vrincioaia**	**0.30**	**272**	P		**Pn**	**19 14 24.3**	**-0.9**
VRI				L		L	19 14 28.5	
VRI				S		**Sn**	**19 14 32.4**	**+1.7**
PLOR	**Plostina**	**0.35**	**269**	⇓P		**Pn**	**19 14 25.3**	**-0.7**
PLOR				⇓S		**Sn**	**19 14 32.5**	**+0.6**
PLOR	**Plostina**	**0.35**	**269**	⇓P		**Pn**	**19 14 25.3**	**-0.7**
PLOR				⇓S		**Sn**	**19 14 32.5**	**+0.6**
PLOR	**Plostina**	**0.35**	**269**			**Pn**	**19 14 25.3**	**-0.7**
PLOR						**Sn**	**19 14 32.4**	**+0.5**
BISRR	**Bisoca**	**0.44**	**225**	⇓P		**Pn**	**19 14 27.4**	**+0.2**
BISRR				⇓S		**Sn**	**19 14 34.5**	**+0.6**
BISRR	**Bisoca**	**0.44**	**225**	⇓P		**Pn**	**19 14 27.4**	**+0.2**
BISRR				⇓S		**Sn**	**19 14 34.5**	**+0.6**
BISRR	**Bisoca**	**0.44**	**225**			**Pn**	**19 14 27.4**	**+0.2**
BISRR						**Sn**	**19 14 35.9**	**+2.0**
TUDR		**0.45**	**126**	⇓P		**Pn**	**19 14 26.8**	**-0.4**
TUDR				⇓S		**Sn**	**19 14 34.8**	**+0.7**
TUDR		**0.45**	**126**	⇓P		**Pn**	**19 14 26.8**	**-0.4**
TUDR				⇓S		**Sn**	**19 14 34.8**	**+0.7**
TUDR		**0.45**	**126**			**Pn**	**19 14 26.9**	**-0.4**
TUDR						**Sn**	**19 14 35.0**	**+0.9**
GRER		**0.49**	**195**	⇑P		**Pn**	**19 14 28.7**	**+0.8**
GRER				⇓S		**Sn**	**19 14 36.1**	**+0.9**
GRER		**0.49**	**195**	⇑P		**Pn**	**19 14 28.7**	**+0.8**
GRER				⇓S		**Sn**	**19 14 36.1**	**+0.9**
GRER		**0.49**	**195**			**Pn**	**19 14 28.3**	**+0.4**
GRER						**Sn**	**19 14 35.9**	**+0.7**
BIR	**Birlad**	**0.53**	**39**	⇑P		**Pn**	19 14 27.9	-0.5
BIR				⇓S		**Sn**	**19 14 36.3**	**+0.2**
BIR	**Birlad**	**0.53**	**39**	⇑P		**Pn**	19 14 27.9	-0.5
BIR				⇓S		**Sn**	**19 14 36.3**	**+0.2**
BIR	**Birlad**	**0.53**	**39**	P		**Pn**	19 14 27.9	-0.5
BIR							19 14 36.6	
BIR	**Birlad**	**0.53**	**39**			Pn	19 14 27.9	-0.4
BIR						**Sn**	**19 14 36.6**	**+0.5**
SCHL	**Schela**	**0.59**	**127**	⇑P		**Pn**	**19 14 28.8**	**-0.5**
SCHL				⇓S		**Sn**	**19 14 37.9**	**+0.3**
SCHL	**Schela**	**0.59**	**127**	⇑P		**Pn**	**19 14 28.8**	**-0.5**
SCHL				⇓S		**Sn**	**19 14 37.9**	**+0.3**
SCHL	**Schela**	**0.59**	**127**			**Pn**	**19 14 28.9**	**-0.5**
SCHL						**Sn**	**19 14 38.0**	**+0.3**
NEHR	**Nehoiu**	**0.74**	**235**	⇓P		**Pn**	**19 14 31.9**	**+0.6**
NEHR	**Nehoiu**	**0.74**	**235**	⇓P		**Pn**	**19 14 31.9**	**+0.6**
NEHR	**Nehoiu**	**0.74**	**235**			**Pn**	**19 14 31.9**	**+0.6**
TESR	**Tescani**	**0.74**	**332**	⇓P		**Pn**	**19 14 30.8**	**-0.5**
TESR				⇓S		**Sn**	**19 14 41.8**	**+0.4**
TESR	**Tescani**	**0.74**	**332**	⇓P		**Pn**	**19 14 30.8**	**-0.5**
TESR				⇓S		**Sn**	**19 14 41.8**	**+0.4**
TESR	**Tescani**	**0.74**	**332**			Pn	19 14 30.1	-1.3
TESR						**Sn**	**19 14 41.8**	**+0.4**
GISR	**Galati**	**0.76**	**123**	⇑P		**Pn**	**19 14 31.1**	**-0.4**
GISR				⇓S		**Sn**	**19 14 42.0**	**+0.3**
GISR	**Galati**	**0.76**	**123**	⇑P		**Pn**	**19 14 31.1**	**-0.4**
GISR				⇓S		**Sn**	**19 14 42.0**	**+0.3**
GISR	**Galati**	**0.76**	**123**			**Pn**	**19 14 31.3**	**-0.2**
GISR						**Sn**	**19 14 42.0**	**+0.3**
GIUM	**Giurgiulesti**	**0.83**	**116**	P		**Pn**	**19 14 32.6**	**+0.1**
GIUM				S		**Sn**	**19 14 44.0**	**+0.6**
GIUM	**Giurgiulesti**	**0.83**	**116**	⇑P		**Pn**	**19 14 32.4**	**-0.1**
GIUM				⇑S		**Sn**	**19 14 44.1**	**+0.6**
GIUM	**Giurgiulesti**	**0.83**	**116**	⇑P		**Pn**	**19 14 32.4**	**-0.1**
GIUM				⇑S		**Sn**	**19 14 44.1**	**+0.6**
GIUM	**Giurgiulesti**	**0.83**	**116**			**Pn**	**19 14 32.7**	**+0.1**
GIUM						**Sn**	**19 14 44.4**	**+0.9**
ISR	**Istrita**	**0.85**	**210**	⇑P		**Pn**	**19 14 33.6**	**+0.7**
ISR	**Istrita**	**0.85**	**210**	⇑P		**Pn**	**19 14 33.6**	**+0.7**
ISR	**Istrita**	**0.85**	**210**	P		**Pn**	**19 14 33.6**	**+0.7**
ISR	**Istrita**	**0.85**	**210**			**Pn**	**19 14 33.6**	**+0.7**
VASR	**Vaslui**	**0.90**	**29**	⇑P		**Pn**	**19 14 33.6**	**+0.1**
VASR	**Vaslui**	**0.90**	**29**	⇑P		**Pn**	**19 14 33.6**	**+0.1**
VASR	**Vaslui**	**0.90**	**29**			**Pn**	**19 14 33.5**	**-0.1**
MLR	**Muntele Rosu**	**0.92**	**247**	Pg		**Pn**	**19 14 34.5**	**+0.6**
	8μm,0.3s,baz=33,slow=10,SNR=9203							
MLR					Lg	Lg	19 14 48.3	
	19μm,0.3s,baz=158,slow=19,SNR=50							
MLR	**Muntele Rosu**	**0.92**	**247**	⇓P		**Pn**	**19 14 34.5**	**+0.6**
MLR				⇓S		**Sn**	**19 14 47.1**	**+1.1**
MLR	**Muntele Rosu**	**0.92**	**247**	⇓P		**Pn**	**19 14 34.5**	**+0.6**
MLR				⇓S		**Sn**	**19 14 47.1**	**+1.1**
PGOR	**Pogoanele**	**0.96**	**187**	⇑P		**Pn**	**19 14 34.5**	**+0.2**
PGOR				⇑S		**Sn**	**19 14 47.1**	**+0.5**
PGOR	**Pogoanele**	**0.96**	**187**	⇑P		**Pn**	**19 14 34.5**	**+0.2**
PGOR				⇑S		**Sn**	**19 14 47.1**	**+0.5**
PGOR	**Pogoanele**	**0.96**	**187**			**Pn**	**19 14 34.5**	**+0.2**
PGOR						**Sn**	**19 14 47.1**	**+0.5**
CFR	**Carcaliu**	**0.97**	**134**	⇑P		Pn	19 14 33.5	-0.9
CFR				⇑S		**Sn**	**19 14 47.2**	**+0.3**
CFR	**Carcaliu**	**0.97**	**134**	⇑P		Pn	19 14 33.5	-0.9
CFR				⇑S		**Sn**	**19 14 47.2**	**+0.3**
CFR	**Carcaliu**	**0.97**	**134**			**Pn**	**19 14 34.1**	**-0.4**
CFR						**Sn**	**19 14 46.5**	**-0.4**
OZUR		**0.98**	**285**	⇓P		**Pn**	**19 14 34.2**	**-0.5**
OZUR		**0.98**	**285**	⇓P		**Pn**	**19 14 34.2**	**-0.5**
OZUR		**0.98**	**285**			**Pn**	**19 14 34.3**	**-0.4**
SECR		**1.12**	**223**	⇑P		**Pn**	**19 14 37.4**	**+0.9**
SECR				⇑S		**Sn**	**19 14 50.3**	**-0.5**
SECR		**1.12**	**223**	⇑P		**Pn**	**19 14 37.4**	**+0.9**
SECR				⇑S		**Sn**	**19 14 50.3**	**-0.5**
SECR		**1.12**	**223**			**Pn**	**19 14 37.4**	**+0.9**
SECR						**Sn**	**19 14 53.8**	**+3.1**
GIRR	**Girov**	**1.19**	**338**	⇑P		**Pn**	**19 14 37.0**	**-0.4**
GIRR	**Girov**	**1.19**	**338**	⇑P		**Pn**	**19 14 37.0**	**-0.4**
GIRR	**Girov**	**1.19**	**338**			**Pn**	**19 14 37.3**	**-0.2**
PLAR	**PLOIESTI**	**1.23**	**220**	⇑P		**Pn**	**19 14 39.1**	**+1.1**
PLAR				⇓S		**Sn**	**19 14 55.1**	**+1.7**
PLAR	**PLOIESTI**	**1.23**	**220**	⇑P		**Pn**	**19 14 39.1**	**+1.1**
PLAR				⇓S		**Sn**	**19 14 55.1**	**+1.7**
PLAR	**PLOIESTI**	**1.23**	**220**			**Pn**	**19 14 38.8**	**+0.7**
PLAR						**Sn**	**19 14 55.1**	**+1.7**
DOPR	**Dopca**	**1.23**	**276**	⇑P		**Pn**	**19 14 37.9**	**-0.2**
DOPR	**Dopca**	**1.23**	**276**	⇑P		**Pn**	**19 14 37.9**	**-0.2**
DOPR	**Dopca**	**1.23**	**276**			**Pn**	**19 14 38.1**	**0.0**
AMRR	**Amara**	**1.25**	**174**	⇑P		**Pn**	**19 14 38.3**	**-0.1**
AMRR				⇓S		**Sn**	**19 14 54.9**	**+1.0**
AMRR	**Amara**	**1.25**	**174**	⇑P		**Pn**	**19 14 38.3**	**-0.1**
AMRR				⇓S		**Sn**	**19 14 54.9**	**+1.0**
AMRR	**Amara**	**1.25**	**174**			**Pn**	**19 14 38.3**	**-0.1**
AMRR						**Sn**	**19 14 54.9**	**+1.0**
HARR	**Harsova**	**1.29**	**154**	⇓P		Pn	19 14 37.9	-1.0
HARR	**Harsova**	**1.29**	**154**	⇓P		Pn	19 14 37.9	-1.0
HARR	**Harsova**	**1.29**	**154**	P		**Pn**	**19 14 38.2**	**-0.6**
HARR	**Harsova**	**1.29**	**154**			**Pn**	**19 14 38.2**	**-0.6**
BIZ	**Bicaz**	**1

| | | |

MORC Moravsky Berou 7.56 305 P Pn 19 16 03.9 -1.2
MORC Moravsky Berou 7.56 305 Pn Pn 19 16 03.9 -1.2
MORC Moravsky Berou 7.56 305 **Pn** 19 16 04.7 -0.4
KYMI Kymi, Euboea I 7.56 198 P Pn 19 16 03.6 -1.5
MAKA Makarska 7.68 254 *e*Pn **Pn** 19 16 08.5 +1.9
AGG Agios Georgios 7.70 209 P **Pn** 19 16 06.0 -1.0
AGG Agios Georgios 7.70 209 Pn **Pn** 19 16 06.0 -1.0
AGG Agios Georgios 7.70 209 P **Pn** 19 16 05.9 -1.0
JAN Janina 7.74 219 P **Pn** 19 16 08.0 +0.6
BR131 Keskin Array S 7.76 140 P Pn 19 16 07.1 -0.8
BR131 Keskin Array S 7.76 140 Pn Pn 19 16 07.1 -0.8
BRTR Keskin Array B 7.76 140 Pn Pn 19 16 07.1 -0.8
comp=N,12nm,0.3s,baz=119,slow=2.8,SNR=367
BRTR Sn **Sn** **19 17 33.7 -0.9**
comp=N,22nm,0.3s,baz=306,slow=20,SNR=3.0
BRTR LR LR 19 19 42.9
comp=N,4µm,21.8s,baz=316,slow=42
BRTR Keskin Array B 7.76 140 Pn 19 16 07.2 -0.7
VLO Vlora 7.76 229 P **Pn** **19 16 08.9 +1.2**
baz=244
MAKR Makrakomi, Fth 7.78 210 P Pn 19 16 06.8 -1.2
ATAL Atalanti 7.79 205 P Pn 19 16 05.7 -2.4
ZAG Zagreb 7.80 274 ⇓*i* Pn **Pn** **19 16 09.8 +1.6**
EREA Eretria 7.81 199 P Pn 19 16 07.2 -1.2
PTJ Puntijarka 7.81 274 *e*Pn **Pn** **19 16 08.4 0.0**
AXAR Agios Charalam 7.83 207 P Pn 19 16 07.3 -1.4
LKR Lokris 7.83 205 P Pn 19 16 07.0 -1.7
KIJV Kijevo 7.85 260 *e*Pn **Pn** **19 16 11.1 +2.1**
VRAC Vranov 7.93 300 Pn Pn 19 16 08.3 -1.7
comp=N,1.8nm,0.3s,baz=112,slow=13,SNR=29
VRAC Sn **Sn** **19 17 38.4 0.0**
comp=N,7.9nm,0.3s,baz=69,slow=23,SNR=5.9
VRAC Lg Lg 19 18 17.9
comp=N,1.4nm,0.3s,baz=355,slow=19,SNR=1.8
VRAC LR LR 19 20 05.7
comp=N,13µm,18.4s,baz=107,slow=44
VRAC Vranov 7.93 300 ⇑P **Pn** **19 16 09.5 -0.5**
VRAC Vranov 7.93 300 ⇑P **Pn** **19 16 09.5 -0.5**
VRAC Vranov 7.93 300 *e*PN **Pn** **19 16 09.1 -0.9**
VRAC Vranov 7.93 300 P **Pn** **19 16 09.5 -0.5**
VRAC Vranov 7.93 300 **Pn** **19 16 09.5 -0.5**
SRN Sarande 7.95 224 P **Pn** **19 16 11.6 +1.3**
baz=232
SRN Sarande 7.95 224 P **Pn** **19 16 11.8 +1.5**
KRUC Moravsky 7.96 298 *e*PN Pn 19 16 09.3 -1.2
LSTV Lastovo 7.98 251 *e*Pn **Pn** **19 16 12.1 +1.4**
EVR Evrytania 7.98 212 P **Pn** **19 16 10.3 -0.6**
CONA Conrad Observa 8.01 289 *i* Pn Pn 19 16 10.0 -1.2
comp=N,14nm,0.3s,SNR=19
KARY Karystos 8.07 195 P Pn 19 16 10.6 -1.5
DION Dionisos Attik 8.13 198 P Pn 19 16 11.5 -1.4
ARSA Arzberg 8.14 284 *e*Pn **Pn** **19 16 12.7 -0.2**
comp=N,23nm,0.7s,SNR=14
KRLC Kraliky 8.14 305 *e*P Pn 19 16 11.9 -1.0
KRLC MLR MLR
comp=Z,11µm,19.1s
KRLC Kraliky 8.14 305 *e*PN Pn 19 16 11.9 -1.0
KRLC AMS AMS 19 19 40.0
comp=Z,11µm,19.1s
SMG Samos 8.14 182 P Pn 19 16 11.4 -1.6
CRES Cresnjev 8.17 274 ⇓*i* Pn **Pn** **19 16 13.3 0.0**
PTL Penteli 8.18 199 P Pn 19 16 12.2 -1.3
KEK Kerkira 8.18 224 P **Pn** **19 16 13.5 0.0**
OZLJ Ozalj 8.18 272 *e*Pn **Pn** **19 16 13.6 +0.1**
DSF Desfina 8.19 206 P Pn 19 16 12.1 -1.6
VILL Villia 8.20 202 P Pn 19 16 12.3 -1.5
ANX Ano Chora 8.23 210 P **Pn** **19 16 13.6 -0.7**
ATHU Athens Univers 8.27 199 P Pn 19 16 13.4 -1.4
ATH Athens Observa 8.28 199 P Pn 19 16 13.7 -1.2
KALE Kalithea 8.34 208 P **Pn** **19 16 14.7 -1.0**
BOJS Bojanci 8.34 272 *i* Pn **Pn** **19 16 16.4 +0.7**
BOJS *e* 19 16 18.2
BOJS *e*Sn **Sn** **19 17 46.4 -2.2**
comp=Z,6µm,4.9s
SERG Sergoula 8.34 209 P **Pn** **19 16 14.7 -1.1**
MORI Morici 8.37 260 *e*Pn **Pn** **19 16 18.5 +2.4**
VLY Voula,Athens 8.38 199 P Pn 19 16 15.0 -1.3
TRIZ Trizonia 8.38 209 P **Pn** **19 16 15.1 -1.1**
EFP Efpalio 8.38 210 P **Pn** **19 16 15.5 -0.8**
ISP Isparta 8.41 161 P **Pn** **19 16 16.3 -0.5**
ISP Isparta 8.41 161 Pn **Pn** **19 16 16.2 -0.5**
LTK Loutraki 8.42 203 P Pn 19 16 15.3 -1.6
SOKA Soboth 8.44 280 *i* Pn **Pn** **19 16 17.1 0.0**
comp=Z,14nm,0.5s,SNR=56
LOUT Loutraki 8.46 203 P Pn 19 16 15.8 -1.5
ALIK Aliki, Aigiali 8.46 208 P **Pn** **19 16 17.8 +0.4**
ZIRJ Zirje 8.48 259 *e*Pn **Pn** **19 16 20.1 +2.5**
PDO Prodromos 8.49 213 P **Pn** **19 16 17.9 +0.1**
THAL Thalero 8.50 205 P Pn 19 16 16.5 -1.3
TSLK Tsoukalades, L 8.51 217 P **Pn** **19 16 18.3 +0.2**
DPC Dobruska-Polom 8.53 306 *e*P Pn 19 16 17.0 -1.3
DPC MLR MLR
comp=Z,13µm,21.3s
DPC Dobruska-Polom 8.53 306 *e*PN Pn 19 16 17.0 -1.3
DPC AMS AMS 19 19 50.0
comp=Z,13µm,21.3s
SUW Suwalki 8.55 344 *e*P Pn 19 16 16.3 -2.2
SUW *e*S Sn 19 17 48.0 -5.7
SUW Suwalki 8.55 344 P Pn 19 16 16.2 -2.4
SUW Suwalki 8.55 344 Pn Pn 19 16 16.1 -2.4
NYDR Nydri-Lefkada 8.59 216 P **Pn** **19 16 19.0 -0.1**
SCTE Santa Cesarea 8.60 231 Pn **Pn** **19 16 18.3 -0.9**
TREC Trest 8.60 298 *e*P **Pn** **19 16 19.8 +0.5**
TREC MLR MLR
comp=Z,16µm,19.1s
TREC Trest 8.60 298 *e*PN **Pn** **19 16 19.8 +0.5**
TREC AMS AMS 19 20 10.0
comp=Z,16µm,19.1s
KLV Kalavryta, Ach 8.65 207 P Pn 19 16 18.0 -2.0
MICGM Minsk 8.67 3 *e*P **Pn** **19 16 24.0 +3.9**
MICGM *e*S **Sn** **19 18 04.0 +7.5**
MICGM *e*LR LR 19 18 30.0
MICGM LRM MLR 19 19 36.0
comp=Z,41nm,12.0s
MICGM LRM MLR 19 19 38.0
comp=Z,44nm,16.0s
MNK Minsk 8.67 3 *e*P **Pn** **19 16 24.0 +3.9**
MNK *e*S **Sn** **19 18 04.0 +7.5**
MNK MLR MLR
comp=Z,41µm,12.0s
MNK MLR MLR
comp=Z,44µm,16.0s
OSTC Ostas 8.68 307 *e*PN Pn 19 16 19.3 -1.1
OSTC AMS AMS 19 19 50.0
comp=Z,11µm,16.4s
EVGI Lefkada island 8.69 216 P **Pn** **19 16 20.6 +0.2**
GUR Goura 8.69 206 P Pn 19 16 18.9 -1.7
YER Yerkesik 8.76 174 P Pn 19 16 20.0 -1.5
NVJ Novalja 8.77 266 *e*Pn **Pn** **19 16 24.4 +2.9**
EPID Epidavros 8.77 201 P Pn 19 16 20.0 -1.6
OBKA Obir 8.77 279 *e*Pn **Pn** **19 16 22.7 +1.0**
comp=Z,40nm,1.2s,SNR=52
UPC Upice 8.78 306 *e*P **Pn** **19 16 21.1 -0.5**
UPC MLR MLR
comp=Z,12µm,18.0s
UPC Upice 8.78 306 *e*PN **Pn** **19 16 21.1 -0.5**
UPC AMS AMS 19 19 50.0
comp=Z,12µm,18.0s
TOKA Tokat 8.78 126 Pn 19 16 21.1 -0.7
DUGI Dugi Otok 8.78 262 *e*Pn **Pn** **19 16 24.1 +2.4**
KSP Ksiaz 8.78 309 *e*P **Pn** **19 16 21.1 -0.7**
BODT Bodrum 8.79 179 P Pn 19 16 20.5 -1.4
CHVC Chvalec 8.79 307 *e*PN Pn 19 16 20.4 -1.4
CHVC AMS AMS 19 19 50.0
comp=Z,11µm,15.9s
LJU Ljubljana 8.80 276 *e*Pn **Pn** **19 16 23.5 +1.5**
LJU Ljubljana 8.80 276 *e*Pn **Pn** **19 16 23.4 +1.5**
BAI Bari 8.85 241 *e*Pn **Pn** **19 16 21.7 -0.9**
FSK Fiskardo 8.86 216 P **Pn** **19 16 22.3 -0.5**
APE Apeiranthos 8.86 188 *c i* P Pn 19 16 21.3 -1.6
APE Apeiranthos 8.86 188 **Pn** **19 16 22.6 -0.4**
APE Apeiranthos 8.86 188 P Pn 19 16 21.2 -1.7
RLS Riolos of Patr 8.87 210 P **Pn** **19 16 23.5 +0.6**
DRO Drossia 8.88 209 P **Pn** **19 16 22.0 -1.1**
CEY Cerknica 8.89 274 ⇓*i* Pn **Pn** **19 16 23.8 +0.5**
RIY Rijeka 8.90 271 ⇑*i* Pn **Pn** **19 16 24.6 +1.2**
RIY Rijeka 8.90 271 *e*Pn **Pn** **19 16 25.2 +1.8**
TAR1 Taranto 8.96 237 *e*Pn **Pn** **19 16 23.1 -1.1**
KRND KRANIDI 8.98 201 P Pn 19 16 22.1 -2.4
KEF5 Kardakata, Kep 9.05 216 P **Pn** **19 16 24.8 -0.7**
MOA Molln 9.05 287 *i* Pn **Pn** **19 16 25.5 +0.1**
comp=Z,13nm,0.5s

NACGM Naroch 9.06 359 *e*P Pn 19 16 24.0 -1.5
NACGM PM 19 16 37.0
comp=Z,1.5nm,1.0s
NACGM *e*S **Sn** **19 18 06.0 -0.2**
NACGM *e*LQ LQ 19 18 54.0
NACGM *e*LR LR 19 19 28.0
NACGM LRM MLR 19 19 52.0
comp=Z,39nm,14.0s
TRIP Tripoli 9.09 205 P **Pn** **19 16 25.0 -1.0**
KEF4 Livadi, Kephal 9.09 216 P **Pn** **19 16 25.5 -0.4**
VLS Valsamata 9.09 215 P **Pn** **19 16 25.2 -0.8**
DMLN Damoulianata-K 9.13 216 P **Pn** **19 16 26.2 -0.3**
PSDA Pessada-Kefalo 9.15 215 P **Pn** **19 16 26.2 -0.6**
KEF3 Kipouria, Keph 9.17 216 P **Pn** **19 16 25.8 -1.2**
VLX Vlachokerasia 9.20 204 P Pn 19 16 25.6 -2.0
SKDS Skadanscina 9.20 273 *i* Pn **Pn** **19 16 29.3 +1.8**
SKDS *i* 19 16 30.4
SKDS *e*Sn **Sn** **19 18 06.6 -3.2**
SGRT San Giovanni R 9.21 248 Pn **Pn** **19 16 26.6 -1.1**
MATE Matera 9.23 239 ⇑P **Pn** **19 16 26.6 -1.2**
MATE Matera 9.23 239 ⇑P **Pn** **19 16 26.6 -1.2**
MATE Matera 9.23 239 **Pn** **19 16 27.3 -0.5**
SOC Sochi 9.23 100 *e*P Pn 19 16 24.4 -3.5
SOC *e* 19 18 06.8
SOC pmax pmax
comp=Z,184nm,0.7s
SOC MLR MLR
comp=Z,3µm,7.0s
AMT Artemida-Makis 9.26 208 P **Pn** **19 16 28.0 -0.3**
VLMS Volimes, Zakyn 9.32 214 P **Pn** **19 16 28.5 -0.7**
FETY Fethiye 9.33 170 P **Pn** **19 16 29.1 -0.2**
ELL Elmali 9.33 166 P **Pn** **19 16 30.3 +0.9**
ELL Elmali 9.33 166 Pn **Pn** **19 16 30.3 +0.9**
MYKA Terra Mystica 9.40 280 *e*Pn **Pn** **19 16 31.4 +1.2**
comp=Z,22nm,1.1s,SNR=55
PRU Pruhonice 9.42 301 *e*P **Pn** **19 16 30.6 +0.2**
PRU MLR MLR
comp=Z,12µm,13.2s
PRU Pruhonice 9.42 301 *e*PN **Pn** **19 16 30.6 +0.2**
PRU AMS AMS 19 20 40.0
comp=Z,12µm,13.2s
PRED Cave del Predi 9.45 278 **Pn** **19 16 32.1 +1.1**
IDID Didziasalis 9.47 359 *e*P Pn 19 16 28.6 -2.6
IDID IAmb IAmb 19 16 53.3
comp=Z,159nm,0.7s
THT2 Imerovigli 9.50 188 P **Pn** **19 16 30.7 -1.0**
ITM Ithomi 9.51 206 Pn **Pn** **19 16 31.3 -0.5**
ITM Ithomi 9.51 206 P **Pn** **19 16 31.1 -0.7**
PRA Prague 9.51 301 *e*P **Pn** **19 16 31.8 +0.1**
PRA MLR MLR
comp=Z,6µm,14.9s
PRA Prague 9.51 301 *e*PN **Pn** **19 16 31.8 +0.1**
PRA AMS AMS 19 20 30.0
comp=Z,6µm,14.9s
IIGN Ignalina 9.52 357 *e*P Pn 19 16 29.6 -2.2
IIGN IAmb IAmb 19 16 52.3
comp=Z,226nm,0.5s
THR3 Thira Island, 9.53 189 P **Pn** **19 16 31.1 -0.9**
VORD Divnogorie 9.55 53 *e*P Pn 19 16 31.0 -1.2
VORD pmax pmax
comp=Z,720nm,0.6s
VORD pmax pmax
comp=Z,980nm,0.8s
VORD MLR MLR
comp=Z,1µm,4.0s
VSR Storozhevoye 9.60 52 *e*P Pn 19 16 32.0 -0.9
VSR pmax pmax
comp=Z,1µm,0.5s
VSR pmax pmax
comp=Z,3µm,1.1s
VSR MLR MLR
comp=Z,6µm,10.0s
GEC2 GERESS Array S 9.61 293 *e*Pn **Pn** **19 16 32.9 -0.2**
GEC2 GERESS Array S 9.61 293 Pn **Pn** **19 16 33.1 0.0**
GERES GERESS Array B 9.61 293 Pn **Pn** **19 16 32.6 -0.5**
comp=Z,2.2nm,0.3s,baz=105,slow=14,SNR=67
GERES LR LR 19 20 43.8
comp=Z,6µm,21.9s,baz=110,slow=40
GERES GERESS Array B 9.61 293 **Pn** **19 16 32.2 -0.9**
KBA Koelnbreinsper 9.61 282 *e*Pn **Pn** **19 16 34.2 +1.0**
comp=Z,34nm,0.8s,SNR=99
PVCC Panska Ves 9.61 304 *e*P **Pn** **19 16 32.5 -0.6**
PVCC MLR MLR
comp=Z,12µm,13.7s
PVCC Panska Ves 9.61 304 *e*PN **Pn** **19 16 32.5 -0.6**
PVCC AMS AMS 19 20 30.0
comp=Z,12µm,13.7s
PBCC Pribram 9.65 298 *e*PN **Pn** **19 16 33.4 -0.2**
ARG Arkhangelos 9.66 175 P **Pn** **19 16 34.1 +0.3**
VLI Veliai 9.66 201 P Pn 19 16 32.1 -1.7
ISAL Salakas 9.75 357 *e*P Pn 19 16 32.3 -2.6
ISAL IAmb IAmb 19 16 44.3
comp=Z,165nm,0.6s
KHC Kasperske Hory 9.75 295 *c e*P **Pn** **19 16 34.9 -0.2**
KHC pmax pmax
comp=Z,159nm,2.5s
KHC Kasperske Hory 9.75 295 *e*PN **Pn** **19 16 34.4 -0.7**
KHC *e*SN **Sn** **19 18 23.7 +0.4**
KHC AMS AMS 19 20 40.0
comp=Z,14µm,19.2s
KHC Kasperske Hory 9.75 295 Pn **Pn** **19 16 35.3 +0.2**
AKAS Kas 9.79 168 Pn **Pn** **19 16 37.0 +1.2**
GKP Gorka Klasztor 9.82 323 *e*P Pn 19 16 34.7 -1.2
PYL PYLOS 9.83 206 P **Pn** **19 16 35.1 -1.0**
VORR Voronezh 9.86 49 ⇑*i* P Pn 19 16 36.0 -0.4
VORR pmax pmax
comp=Z,1µm,1.6s
ZOU Zoufplan 9.86 279 **Pn** **19 16 38.6 +2.0**
KSL Kastellorizon 9.87 168 P **Pn** **19 16 36.8 +0.2**
PABE Paberze 9.87 349 *e*P Pn 19 16 33.6 -2.9
IZAR Zarasai 9.92 357 *e*P Pn 19 16 35.8 -1.5
IZAR IAmb IAmb 19 16 47.5
comp=Z,173nm,0.6s
RJOB Jochberg 10.03 286 *e*Pn Pn 19 16 37.7 -1.1
STAL STALIGIÀL 10.05 277 **Pn** **19 16 40.0 +0.9**
KTHA Kythira Island 10.07 199 P Pn 19 16 38.2 -1.3
BRG Berggiesshubel 10.12 305 *i* P **Pn** **19 16 39.5 -0.5**
comp=Z,43nm,1.5s
BRG *i* 19 17 00.0
comp=Z,60nm,1.1s
comp=N,5µm,12.1s
comp=E,12µm,20.3s
comp=Z,10µm,14.5s
BRG Berggiesshubel 10.12 305 *i* P **Pn** **19 16 39.5 -0.5**
BRG pmax pmax
comp=Z,43nm,1.5s
BRG MLR MLR
comp=N,5µm,12.1s
BRG MLR MLR
comp=E,12µm,20.3s
BRG MLR MLR
comp=Z,10µm,14.5s
BRG Berggiesshubel 10.12 305 *e*Pn **Pn** **19 16 39.4 -0.6**
TIP Timpagrande 10.16 233 ⇑P Pn 19 16 39.1 -1.6
TIP Timpagrande 10.16 233 ⇑P Pn 19 16 39.1 -1.6
TIP Timpagrande 10.16 233 Pn **Pn** **19 16 40.3 -0.5**
ABTA Abfaltersbach 10.17 280 *e*Pn **Pn** **19 16 42.6 +1.7**
comp=Z,44nm,1.1s,SNR=32
WET Wettzell 10.20 294 *e*Pn **Pn** **19 16 41.8 +0.6**
LPSR Galich'ya Gora 10.23 44 *e*P Pn 19 16 39.7 -1.8
LPSR pmax pmax
comp=Z,1µm,1.0s
LPSR pmax pmax
comp=Z,1µm,1.0s
LPSR MLR MLR
comp=Z,11µm,10.0s
CIMO Cimolais 10.23 278 Pn **Pn** **19 16 42.7 +1.0**
INTR Introdacqua 10.30 253 Pn **Pn** **19 16 41.6 -1.0**
KARP Karpathos 10.30 180 Pn Pn 19 16 41.3 -1.3
PAOL Paolisi 10.34 247 **Pn** **19 16 42.9 -0.3**
ANKY Antikythira Is 10.39 198 P Pn 19 16 42.3 -1.5
FBE Freiberg 10.48 304 *e*Pn **Pn** **19 16 44.8 -0.1**
AQU L'Aquila 10.49 255 P **Pn** **19 16 45.1 -0.1**
AQU L'Aquila 10.49 255 ⇑*i* Pn **Pn** **19 16 44.7 -0.5**
AQU L'Aquila 10.49 255 Pn **Pn** **19 16 45.1 -0.1**
NRCA Norcia 10.50 258 **Pn** **19 16 44.9 -0.4**
RODP Rodopos 10.60 195 P **Pn** **19 16 46.7 0.0**
NPS Neapolis 10.65 187 P **Pn** **19 16 46.7 -0.6**
IMMV Iera Moni Meta 10.66 194 P Pn 19 16 46.2 -1.3
VAM Vamos 10.68 193 P **Pn** **19 16 48.0 +0.3**
IDI Anoyia 10.70 190 Pn **Pn** **19 16 47.0 -1.1**
comp=Z,3.0nm,0.3s,baz=16,slow=10.0,SNR=22
IDI Lg Lg 19 19 56.9
comp=Z,0.9nm,0.3s,baz=36,slow=17,SNR=1.1

IDI LR LR 19 21 27.5
comp=Z,5µm,18.2s,baz=353,slow=40
IDI Anoyia 10.70 190 P **Pn** **19 16 47.5 -0.5**
PBUR Paburge 10.70 344 *e*P Pn 19 16 44.7 -3.2
MURB Monte Urbino 10.76 261 **Pn** **19 16 49.0 +0.2**
LAST Lasithi 10.76 187 P **Pn** **19 16 48.4 -0.5**
NKC Novy Kostel 10.77 299 *e*P Pn 19 16 48.0 -1.0
NKC MLR MLR
comp=Z,13µm,11.2s
NKC Novy Kostel 10.77 299 *e*PN Pn 19 16 48.0 -1.0
NKC AMS AMS 19 21 10.0
comp=Z,13µm,11.2s
WTTA Wattenberg 10.78 283 *e*Pn **Pn** **19 16 50.8 +1.5**
comp=Z,41nm,0.9s,SNR=43
ROTZ Rotzenmuhle 10.78 297 *e*Pn **Pn** **19 16 49.2 +0.1**
CTI Castel Tesino 10.80 277 P **Pn** **19 16 50.3 +0.8**
CTI Castel Tesino 10.80 277 Pn **Pn** **19 16 50.3 +0.8**
WATA Walderalm 10.82 283 *e*Pn **Pn** **19 16 50.7 +0.9**
comp=Z,89nm,1.0s,SNR=46
WERN Wernitzgruen 10.83 299 *e*Pn **Pn** **19 16 50.2 +0.4**
CLL Collm 10.84 305 *e*P **Pn** **19 16 49.0 -0.8**
comp=Z,49nm,1.1s
CLL *i* 19 18 20.8
comp=Z,57nm,0.8s
CLL *e*(SS) 19 19 17.0
CLL *i* 19 19 39.2
CLL *e* 19 20 17.0
CLL *e* 19 20 30.0
CLL *e*Lmax 19 20 41.0
CLL Lm MLR 19 21 00.0
comp=N,10µm,19.1s
CLL Lm MLR 19 21 00.0
comp=E,8µm,20.0s
CLL *i* PKiKP PKiKP 19 30 40.4 -6.6
comp=Z,101nm,1.9s
CLL *e*PKKPdf **PKKPdf** **19 46 06.0 +7.1**
CLL *e*PKPPKPab PP'ab 19 57 36.0 -11
CLL Collm 10.84 305 *e*P **Pn** **19 16 49.0 -0.8**
CLL pmax pmax
comp=Z,49nm,1.1s
CLL Collm 10.84 305 *e*Pn Pn 19 16 48.6 -1.2
CLL Collm 10.84 305 Pn Pn 19 16 48.6 -1.2
TEOL Teolo 10.86 273 Pn **Pn** **19 16 50.9 +0.7**
GUNZ Gunzen 10.88 300 *e*Pn **Pn** **19 16 51.2 +0.7**
FRMA Ierapetra Chan 10.88 186 P **Pn** **19 16 49.9 -0.6**
MANZ Manzenberg 10.90 298 *e*Pn **Pn** **19 16 50.0 -0.8**
KNDR Palaiochora Ch 10.93 195 P **Pn** **19 16 50.8 -0.4**
RUE Ruedersdorf 10.97 312 *e*P Pn 19 16 48.5 -3.1
RUE IAmb IAmb 19 17 09.3
comp=Z,125nm,1.1s
PLN Plauen 11.03 300 *e*Pn **Pn** **19 16 52.4 -0.1**
OBN Obninsk 11.03 29 Pn Pn 19 16 48.9 -3.5
comp=Z,21nm,0.3s,baz=205,slow=2.6,SNR=59
OBN Sn Sn 19 18 42.8 -12
comp=Z,31nm,0.3s,baz=356,slow=23,SNR=7.7
OBN Lg Lg 19 19 54.1
comp=Z,28nm,0.3s,baz=173,slow=23,SNR=1.4
OBN LR LR 19 21 19.3
comp=Z,8µm,19.0s,baz=216,slow=38
OBN Obninsk 11.03 29 *c e*P Pn 19 16 48.1 -4.3
OBN *i* S Sn 19 18 46.0 -8.3
OBN pmax pmax
comp=Z,418nm,1.0s
OBN MLR MLR
comp=Z,25µm,17.0s
OBN Obninsk 11.03 29 Pn Pn 19 16 49.1 -3.3
VRH Novokhopyorsk 11.04 56 *e*P Pn 19 16 50.5 -2.0
VRH pmax pmax
comp=Z,720nm,0.6s
VRH pmax pmax
comp=Z,200nm,0.6s
VRH MLR MLR
comp=Z,32µm,13.0s
SQTA Sankt Quirin 11.07 283 *e*Pn **Pn** **19 16 54.4 +1.3**
comp=Z,15nm,0.7s,SNR=26
MOTA Moosalm 11.14 283 *e*Pn **Pn** **19 16 54.5 +0.3**
comp=Z,29nm,0.9s
KIV Kislovodsk 11.18 94 *i* P Pn 19 16 52.3 -2.4
SNR=16
KIV Kislovodsk 11.18 94 P Pn 19 16 51.6 -3.1
KIV P Pn 19 16 51.6 -3.1
KIV P Pn 19 16 51.6 -3.1
KIV Kislovodsk 11.18 94 *e*P Pn 19 16 51.4 -3.3
KIV *e*S **Sn** **19 18 55.4 -3.1**
KIV pmax pmax
comp=Z,606nm,1.0s
KIV MLR MLR
comp=Z,12µm,10.0s
KIV Kislovodsk 11.18 94 Pn Pn 19 16 52.0 -2.7
KVAR Kislovodsk Arr 11.19 94 Pn Pn 19 16 52.6 -2.2
baz=102,slow=22,SNR=12
KVAR Sn **Sn** **19 18 54.8 -3.9**
baz=284,slow=19,SNR=1.7
KVAR LR LR 19 22 20.0
comp=Z,8µm,18.4s,baz=302,slow=43
GOF Gofitskoye 11.20 88 ⇓*i* P Pn 19 16 52.7 -2.1
GOF *e*S Sn 19 18 53.0 -5.6
GOF pmax pmax
comp=Z,462nm,0.6s
GOF smax smax
comp=E,2µm,0.7s
GOF smax smax
comp=N,544nm,0.4s
GVDS Gavdos 11.24 193 P **Pn** **19 16 58.4 +2.9**
GVD Gavdhos 11.25 193 P **Pn** **19 16 54.9 -0.7**
CEL Celeste 11.29 232 Pn Pn 19 16 54.9 -1.3
RETA Reutte 11.38 284 *e*Pn **Pn** **19 16 57.3 -0.1**
comp=N,25nm,0.6s
GRA1 Grafenberg Arr 11.38 295 Pn **Pn** **19 16 57.2 -0.1**
GRF Grafenberg Arr 11.38 295 P **Pn** **19 16 57.2 -0.1**
GRF Grafenberg Arr 11.38 295 *e*Pn **Pn** **19 16 57.2 -0.1**
KOPT Kop Dagi 11.38 116 Pn Pn 19 16 57.0 -0.6
KBZ Khabaz 11.39 95 Pn **Pn** **19 16 54.9 -2.5**
comp=N,8.4nm,0.3s,baz=274,slow=8.7,SNR=108
KBZ LR LR 19 22 24.3
comp=N,15µm,20.3s,baz=298,slow=43
KBZ Khabaz 11.39 95 *c e*P Pn 19 16 54.7 -2.7
FETA Feichten 11.39 282 *e*Pn **Pn** **19 16 58.8 +1.2**
comp=N,28nm,0.7s
LATE Laterza 11.48 259 **Pn** **19 16 59.0 +0.4**
GAZ Gaziantep 11.49 136 Pn **Pn** **19 16 59.7 +0.8**
ZCCA Zocca 11.53 268 **Pn** **19 16 59.6 +0.1**
OSSC Osservatorio P 11.56 264 **Pn** **19 16 59.8 0.0**
SALO Salr 11.63 275 Pn **Pn** **19 17 01.9 +1.2**
UBR Ueberruh 11.83 285 *e*Pn **Pn** **19 17 03.8 +0.3**
CSS Mathiatis 11.85 155 Pn Pn 19 17 02.7 -1.1
MOS Moscow 11.89 30 *e*P Pn 19 16 59.0 -5.2
MOS pmax pmax
comp=N,291nm,0.7s
MOS pmax pmax
comp=E,234nm,0.7s
MOS pmax pmax
comp=Z,449nm,0.7s
MOS MLR MLR
comp=E,12µm,15.0s
MOS MLR MLR
comp=Z,24µm,15.0s
PRMA PARMA 11.91 271 **Pn** **19 17 05.9 +1.4**
DAVA Damuels 11.98 283 *i* Pn **Pn** **19 17 04.7 -0.9**
comp=Z,40nm,0.7s
DAVOX Davos/Dischmat 11.98 281 Pn Pn 19 17 03.0 -2.7
comp=Z,0.1nm,0.3s,baz=108,slow=6.4,SNR=2.7
DAVOX LR LR 19 22 36.6
comp=Z,9µm,20.7s,baz=84,slow=42
DAVOX Davos/Dischmat 11.98 281 P Pn 19 17 03.0 -2.7
VLC Villacollemand 11.99 268 Pn **Pn** **19 17 06.6 +1.0**
BSD Bornholm Skovb 12.09 324 *i* P Pn 19 17 02.0 -4.9
BSD MLR MLR
comp=Z,8µm,21.0s
BSD Bornholm Skovb 12.09 324 *i* P Pn 19 17 02.0 -4.9
comp=Z,8µm,21.0s
BSD Bornholm Skovb 12.09 324 *i* P Pn 19 17 02.0 -4.9
BSD *i* P P 19 17 02.2 -17
BSD IAMs_20 IAMs_20 19 23 12.9
comp=Z,8µm,20.6s
SLIT Slitere, Latvi 12.16 348 *e*P Pn 19 17 03.4 -4.5
SLIT IAmb IAmb 19 17 15.0
comp=Z,4µm,0.2s
TUE Stuetta 12.36 279 Pn **Pn** **19 17 12.9 +2.0**
ZEI Tsey 12.38 98 *e*P Pn 19 17 08.8 -2.4
ZEI pmax pmax
comp=Z,139nm,0.9s
RGN Rugen 12.40 320 *e*P Pn 19 17 08.6 -2.5
RGN IAmb IAmb 19 17 10.3
comp=Z,194nm,0.9s

RGN	Rugen	12.40	320	ePn	Pn	19 17 05.4	-5.7
RGN	Rugen	12.40	320	Pn	Pn	19 17 09.3	-1.8
STU	Stuttgart	12.53	290	P	Pn	19 17 12.1	-0.9
STU	Stuttgart	12.53	290	Pn	Pn	19 17 12.1	-0.9
CLZ	Clausthal	12.56	305	ePn	Pn	19 17 10.6	-2.8
MSSA	Maissana	12.56	269		Pn	19 17 13.8	+0.3
VSU	Vasula	12.63	359	eP	Pn	19 17 10.1	-4.2
VSU				IAmb	IAmb	19 17 11.6	
	comp=Z,620nm,0.3s						
VSU				IAmb	IAmb	19 17 24.3	
	comp=Z,3μm,1.0s						
VSU	Vasula	12.63	359	*i* P	Pn	19 17 09.3	-4.9
NRDL	Niedersach Rie	12.96	307	ePn	Pn	19 17 17.5	-1.3
CORL	Corleone	13.02	237	Pn	Pn	19 17 19.4	-0.4
BFO	Black Forest	13.06	288	P	Pn	19 17 20.3	0.0
BFO	Black Forest	13.06	288	ePn	Pn	19 17 19.9	-0.4
BFO	Black Forest	13.06	288	Pn	Pn	19 17 20.3	0.0
TNS	Taunus Mts	13.25	296	ePn	Pn	19 17 22.1	-0.7
CLTB	Caltabellotta	13.28	236		Pn	19 17 22.9	-0.4
MARD	Mardin	13.29	125	Pn	Pn	19 17 23.9	+0.4
BSEG	Bad Segeberg	13.51	313	ePn	Pn	19 17 23.1	-3.1
COP	Copenhagen	13.52	322	*i* P	Pn	19 17 23.7	-2.7
COP				MLR	MLR		
	comp=Z,5μm,11.0s						
COP	Copenhagen	13.52	322	*i* P	Pn	19 17 23.7	-2.7
	comp=Z,5μm,11.0s						
COP	Copenhagen	13.52	322	*i* P	Pn	19 17 23.7	-2.7
COP				IAMs_20	IAMs_20	19 23 55.9	
	comp=Z,5μm,11.1s						
GROC	Groznyy	13.56	95	eP	Pn	19 17 26.5	-0.6
GROC				eS	Sn	19 19 56.8	+0.3
GROC				pmax	pmax		
	comp=Z,104nm,0.9s						
SENIN	Lac Senin/Sane	13.78	279	Pn	Pn	19 17 31.1	+0.8
ECH	Echery	13.84	287	P	Pn	19 17 30.6	-0.2
ECH	Echery	13.84	287	Pn	Pn	19 17 30.6	-0.2
GEVA	Gevas	14.00	117	Pn	Pn	19 17 34.1	+0.9
GNI	Garni	14.07	108	Pn	Pn	19 17 33.1	-1.1
	comp=Z,2.1nm,0.3s,baz=324,slow=2.6,SNR=34						
GNI				LR	LR	19 25 08.3	
	comp=Z,7μm,19.6s,baz=324,slow=46						
GNI	Garni	14.07	108	P	Pn	19 17 34.8	+0.5
GNI	Garni	14.07	108	P	Pn	19 17 34.7	+0.5
GNI				P	Pn	19 17 34.7	+0.5
GNI				P	Pn	19 17 34.7	+0.5
GNI	Garni	14.07	108	*ce*P	Pn	19 17 34.0	-0.2
GNI				pmax	pmax		
	comp=Z,471nm,1.7s						
GNI	Garni	14.07	108	Pn	Pn	19 17 34.0	-0.2
PUL	Pulkovo	14.07	7	eP	Pn	19 17 29.1	-4.8
PUL	Pulkovo	14.07	7	*ce*P	Pn	19 17 28.9	-5.0
PUL				pmax	pmax		
	comp=Z,189nm,0.6s						
NATI	Neve Ativ	14.20	149	Pn	Pn	19 17 35.1	-0.8
GEM	Giv'at Ha'Em	14.22	150	Pn	Pn	19 17 34.6	-1.6
MMA0B	Mount Meron ar	14.31	151	Pn	Pn	19 17 35.7	-1.7
MMAI	Mount Meron Ar	14.31	151	Pn	Pn	19 17 36.0	-1.4
	comp=Z,2.2nm,0.3s,baz=341,slow=12,SNR=13						
MMAI				LR	LR	19 23 48.3	
	comp=Z,2μm,21.6s,baz=325,slow=40						
BNI	Bardonecchia	14.39	274	P	Pn	19 17 38.6	0.0
BNI	Bardonecchia	14.39	274	Pn	Pn	19 17 38.6	0.0
BLGI	Bet Lehem HaGe	14.50	152	Pn	Pn	19 17 38.0	-1.9
VSL	Villasalto	14.52	250	Pn	Pn	19 17 40.7	+0.4
WLF	Walferdange	14.62	293	P	Pn	19 17 46.7	+5.3
WLF	Walferdange	14.62	293	P	Pn	19 17 41.9	+0.4
WLF	Walferdange	14.62	293	ePn	Pn	19 17 46.6	+5.2
WLF	Walferdange	14.62	293	Pn	Pn	19 17 41.9	+0.4
BTNL	Ternell	14.77	296	pPn	P	19 17 50.6	+1.5
BTNL				sP	Pn	19 18 01.7	+18
BHOU	Houvegnez	14.81	295	P	Pn	19 17 48.0	+3.9
BHOU				sP	P	19 18 01.7	+12
MAK	Makhachkala	14.83	94	eP	Pn	19 17 41.8	-2.5
MAK				eS	Sn	19 20 24.8	-2.5
MAK				pmax	pmax		
	comp=Z,861nm,1.5s						
MAK				MLR	MLR		
	comp=Z,10μm,14.0s						
MMLI	Mount Malkishu	14.84	152	Pn	Pn	19 17 42.6	-2.0
MEM	Membach	14.86	296	P	Pn	19 17 49.1	+4.5
MEM				pP	P	19 17 58.8	+8.9
MEM				sP		19 18 03.6	
BELG	Belogornoye	14.89	57	*d* iP	Pn	19 17 39.3	-5.7
HMDT	Nahal Hemdat	15.05	152	Pn	Pn	19 17 45.1	-2.2
BEBN	Eben Emael	15.10	297	P	Pn	19 17 50.8	+3.0
BCLA	Clavier	15.27	295	P	Pn	19 17 54.9	+4.9
	comp=Z,87nm,2.5s						
RCHB	Rochefort	15.28	294	P	Pn	19 17 54.5	+4.4
RCHB				sP	pP	19 18 06.5	+2.6
BGES	Gesves	15.40	295	P	Pn	19 17 54.0	+2.3
BGES				PnPn	P	19 17 58.7	+2.7
BGES				sP	pP	19 18 10.1	+4.8
MUD	Monsted U'grnd	15.43	320	*i* P	Pn	19 17 47.6	-4.5
MUD	Monsted U'grnd	15.43	320	*i* P	Pn	19 17 47.6	-4.5
MUD	Monsted U'grnd	15.43	320	*i* P	Pn	19 17 47.6	-4.5
AMAZ	Amatzia	15.52	154	Pn	Pn	19 17 52.1	-1.4
BMRD	Maredsous	15.59	295	P	Pn	19 17 56.4	+2.1
BMRD				sP	pP	19 18 11.0	+3.6
DSI	Dead Sea	15.63	153	Pn	Pn	19 17 53.9	-1.0
FINES	FINESS Array B	15.63	358	Pn	Pn	19 17 45.7	-9.0
	comp=Z,3.8nm,0.3s,baz=172,slow=12,SNR=89						
FINES				Sn	Sn	19 20 29.1	-17
	comp=Z,16nm,0.3s,baz=167,slow=21,SNR=2.0						
FINES				Lg	Lg	19 22 22.8	
	comp=Z,9.9nm,0.3s,baz=169,slow=23,SNR=2.7						
FINES				LR	LR	19 24 03.1	
	comp=Z,17μm,19.0s,baz=177,slow=38						
FINES	FINESS Array B	15.63	358	P	Pn	19 17 47.1	-7.6
FINES	FINESS Array B	15.63	358		Pn	19 17 47.1	-7.6
FIA1	FINESS Array S	15.63	358	Pn	Pn	19 17 46.9	-7.8
DOU	Dourbes	15.67	294	P	Pn	19 17 59.4	+4.1
YTIR	Yattir	15.74	154	Pn	Pn	19 17 54.1	-2.3
GOET	G??ttrup	15.76	322	*i* P	Pn	19 17 52.4	-3.9
GOET	G??ttrup	15.76	322	*i* P	Pn	19 17 52.4	-3.9
SSB	Saint Sauveur	15.84	276	P	Pn	19 17 54.2	-3.4
SSB				pmax	pmax		
	comp=Z,76nm,1.2s						
SSB	Saint Sauveur	15.84	276	Pn	Pn	19 17 54.2	-3.4
SNF	Seneffe	15.92	295	P	Pn	19 18 00.9	+2.3
SNF				sP	pP	19 18 14.6	+3.5
GHAJ	Ghor Haditha	15.94	153	Pn	Pn	19 17 57.3	-1.5
KZIT	Kziot	15.96	157	Pn	Pn	19 17 56.1	-3.0
HFS	Hagfors	16.38	336	Pn	Pn	19 17 57.5	-6.8
	comp=Z,2.9nm,0.3s,baz=137,slow=14,SNR=62						
HFS				Sn	Sn	19 20 51.2	-14
	comp=Z,6.3nm,0.3s,baz=166,slow=26,SNR=2.8						
HFS				LR	LR	19 24 41.6	
	comp=Z,10μm,18.9s,baz=145,slow=38						
ZFRI	Zfri	16.51	155	Pn	Pn	19 18 04.3	-1.9
PRNI	Paran	16.65	156	Pn	Pn	19 18 05.6	-2.4
KLMR	Klimovskoe	16.69	21	*d* iP	Pn	19 18 00.9	-7.3
KLMR				*e*		19 21 01.2	
KLMR				pmax	pmax		
	comp=Z,2μm,1.4s						
KLMR	Klimovskoe	16.69	21	‖*i* Pn	Pn	19 18 00.9	-7.3
KLMR				*i* Pn	Pn	19 18 00.9	-7.3
KLMR				*i* Pn	Pn	19 18 00.9	-7.3
KLMR				AMP		19 18 12.6	
	comp=Z,2μm,1.4s						
KLMR				*e*Sn	Sn	19 21 01.2	-11
KLMR				*e*Sn	Sn	19 21 01.2	-11
KEST	Kesra	16.82	239	Pn	Pn	19 18 08.1	-2.0
	comp=Z,2.9nm,0.3s,baz=323,slow=2.4,SNR=79						
KEST				LR	LR	19 26 04.3	
	comp=Z,8μm,20.3s,baz=14,slow=42						
KEST	Kesra	16.82	239	Pn	Pn	19 18 09.4	-0.7
HRFI	Mount Harif	16.96	156	Pn	Pn	19 18 10.0	-1.8
CLF	Chambon-Foret	17.12	286		Pn	19 18 12.2	-1.5
MBRI	Mt Berech	17.15	157	Pn	Pn	19 18 12.6	-1.7
OSL	Oslo	17.16	331	eP	Pn	19 18 09.8	-4.3
EIL	Elat	17.28	157	P	Pn	19 18 14.8	-1.0
	comp=Z,0.8nm,0.3s,baz=337,slow=6.9,SNR=30						
EIL				S	Sn	19 21 32.7	+5.8
	comp=Z,0.5nm,0.3s,baz=17,slow=7.8,SNR=1.6						
EIL				LR	LR	19 26 00.8	
	comp=Z,1μm,20.1s,baz=348,slow=41						
EIL	Elat	17.28	157	Pn	Pn	19 18 13.0	-2.8
KONO	Kongsberg	17.34	329	*ce*P	Pn	19 18 14.9	-1.5
KONO				pmax	pmax		
	comp=Z,111nm,1.3s						
KONO	Kongsberg	17.34	329	Pn	Pn	19 18 13.0	-3.4
KONO	Kongsberg	17.34	329	eP	Pn	19 18 13.1	-3.3
SNART	Snartemo	17.41	323	eP	Pn	19 18 13.7	-3.5
SNART	Snartemo	17.41	323	*i* P	Pn	19 18 11.6	-5.6
CMAH	Djebel Manchou	17.43	245	P	Pn	19 18 16.9	-0.8
NC602	NORSAR Array S	17.51	334		Pn	19 18 13.3	-5.1
NC602				IAmb	IAmb	19 18 31.1	
	comp=Z,573nm,1.3s						
CAEH	'Ain El Ouahch	17.70	246	P	Pn	19 18 22.6	+1.6
MAHO	Mahon	17.77	259	‖*i* P	Pn	19 18 19.1	-2.7
MAHO				*e*S	S	19 22 04.7	+20
NAO01	NORSAR Array S	17.80	333	eP	Pn	19 18 17.9	-4.0
NB2	NORSAR Subarra	17.84	334	P	Pn	19 18 18.0	-4.6
	comp=Z,67nm,0.6s,baz=143,slow=12						
NB2	NORSAR Subarra	17.84	334	P	Pn	19 18 18.0	-4.6
	baz=143,slow=12						
NOA	NORSAR Array B	17.84	334	Pn	Pn	19 18 16.9	-5.7
	comp=Z,0.5nm,0.3s,baz=49,slow=24,SNR=98						
NOA				LR	LR	19 25 36.7	
	comp=Z,8μm,18.0s,baz=145,slow=38						
CKFL	Kef-Lekhel	18.02	246	P	Pn	19 18 24.4	-0.6
CASM	Ain Smara	18.25	246	P	P	19 18 26.4	-1.3
BLS5	Blasjo	18.39	325	eP	P	19 18 26.9	-2.1
CTEI	Djebel Teioual	18.42	245	P	P	19 18 30.3	+0.6
DFRA	Djebel Bou Aff	18.47	247	P	P	19 18 30.5	+0.3
SKAR	Skarslia	18.53	330	eP	P	19 18 28.3	-2.3
KIRV	Kirov	18.55	39	Pn	P	19 18 25.5	-5.2
	comp=Z,20nm,0.3s,baz=242,slow=5.8,SNR=41						
KIRV				Sn	Sn	19 21 36.3	-21
	comp=Z,6.5nm,0.3s,baz=162,slow=20,SNR=1.6						
KIRV				Lg	Lg	19 24 03.4	
	comp=Z,6.0nm,0.3s,baz=147,slow=22,SNR=2.4						
KIRV				LR	LR	19 25 45.0	
	comp=Z,26μm,18.7s,baz=236,slow=37						
ODD1	Odda	18.63	326	eP	P	19 18 28.4	-3.3
SET	Setif	18.98	247	P	P	19 18 36.0	+0.2
CKHR	Kef el Ahmar	19.02	247	P	P	19 18 36.4	+0.1
DOMB	Dombas	19.28	334	eP	P	19 18 36.7	-2.1
TMCR	Tamitsa	19.33	14	eP	P	19 18 35.2	-4.0
TMCR				*e*		19 22 08.2	
TMCR				pmax	pmax		
	comp=Z,833nm,1.4s						
BER	Bergen	19.43	326	eP	P	19 18 41.5	+1.2
ASK	Askoy	19.55	326	eP	P	19 18 42.5	+0.9
HYA	Hoyanger	19.62	329	eP	P	19 18 42.4	0.0
CWF	Charnwood Fore	19.71	301	eP	P	19 18 43.0	-0.4
SWN1	Swindon	19.86	297	eP	P	19 18 45.1	0.0
SWN1				IAmb	IAmb	19 18 48.7	
	comp=Z,191nm,1.2s						
TBLU	Trondheim	19.88	337	eP	P	19 18 45.2	0.0
JSA	Saint Aubin	20.02	290	eP	P	19 18 45.9	-1.0
AKN	Aaknes	20.04	332	eP	P	19 18 47.3	+0.2
SUE	Sulen	20.07	327	eP	P	19 18 45.9	-1.5
MOL	Molde	20.15	333	eP	P	19 18 48.0	-0.2
FOO	Floro	20.32	329	eP	P	19 18 49.8	-0.2
OLDB	Oldbury-Upon-S	20.34	297	eP	P	19 18 50.3	0.0
OLDB				IAmb	IAmb	19 18 53.7	
	comp=Z,389nm,1.8s						
MONM	Monmouth	20.51	298	eP	P	19 18 51.5	-0.6
NSS	Namsos	20.52	341	eP	P	19 18 50.0	-2.2
HLM1	Long Mynd	20.63	300	eP	P	19 18 52.3	-1.2
HLM1				IAmb	IAmb	19 18 57.3	
	comp=Z,46nm,1.0s						
MCH1	Michaelchurch	20.64	298	eP	P	19 18 52.3	-1.3
MCH1				IAmb	IAmb	19 18 55.8	
	comp=Z,100nm,1.1s						
FOEL	Foel Wylfa	20.87	301	eP	P	19 18 55.1	-0.9
FOEL				IAmb	IAmb	19 19 01.4	
	comp=Z,121nm,1.3s						
AKTO	Aktyubinsk	21.01	66	P	P	19 18 55.9	-1.8
	comp=Z,61nm,0.5s,baz=267,slow=9.0,SNR=106						
AKTO				S	S	19 22 46.6	-3.0
	comp=Z,28nm,0.7s,baz=189,slow=22,SNR=2.1						
AKTO				LR	LR	19 28 22.3	
	comp=Z,10μm,19.8s,baz=278,slow=40						
ESY	Stoneypath	21.14	309	eP	P	19 18 56.7	-2.3
EKA	Eskdalemuir Ar	21.29	307	P	P	19 18 58.4	-2.2
	comp=Z,28nm,0.8s,baz=103,slow=11,SNR=49						
ESK	Eskdalemuir	21.32	307	eP	P	19 18 58.8	-2.0
ESK	Eskdalemuir	21.32	307	P	P	19 18 58.6	-2.3
ESK				pmax	pmax		
	comp=Z,109nm,1.1s						
ESK	Eskdalemuir	21.32	307	P	P	19 18 58.6	-2.3
EBL	Broad Law	21.34	309	eP	P	19 18 59.6	-1.6
DRUM	Mains of Drumt	21.37	312	eP	P	19 19 00.1	-1.4
DRUM				IAmb	IAmb	19 19 02.1	
	comp=Z,161nm,0.8s						
EDI	Edinburgh	21.46	309	eP	P	19 19 00.8	-1.5
EDI				IAmb	IAmb	19 19 06.3	
	comp=Z,122nm,1.0s						
EBNR	Beni Rached	21.47	253	P	P	19 19 08.0	+5.3
MOR8	Moi Rana	21.48	346	eP	P	19 19 01.8	-0.8
WME	Myndd Eilian	21.59	302	eP	P	19 19 02.0	-1.8
WLF1	Llynfaes	21.63	302	eP	P	19 19 03.9	-0.4
WLF1				IAmb	IAmb	19 19 06.3	
	comp=Z,77nm,0.9s						
ECHA	Ech Chlef	21.66	253	P	P	19 19 03.0	-1.7
WPS	Pemaes, Angles	21.71	302	eP	P	19 19 03.2	-1.9
YRC	Rhoscolyn	21.73	301	eP	P	19 19 04.2	-1.1
NEWG	New Galloway	21.84	306	eP	P	19 19 05.6	-0.9
STOK	Stokkvaagen	21.88	345	eP	P	19 19 06.3	-0.5
EANR	'Ain N'Sour	21.95	252	P	P	19 19 00.0	-7.9
KONS	Konsvik	22.01	345	eP	P	19 19 06.5	-1.6
APA	Apatity	22.01	6	‖*i* P	P	19 19 06.3	-1.9
APA				*i*		19 19 39.0	
APA				*i* S	S	19 22 59.0	-10
APA				*i* SS	SnSn	19 23 55.0	+19
APA				pmax	pmax		
	comp=Z,323nm,0.8s						
APA				MLR	MLR		
	comp=Z,19μm,21.0s						
PGBU	Glenifferbraes	22.14	308	eP	P	19 19 08.2	-1.5
PGBU				IAmb	IAmb	19 19 10.6	
	comp=Z,74nm,1.0s						
ETRT	Tiaret	22.14	251	P	P	19 19 09.0	-1.0
ARU	Arti	22.17	50	P	P	19 19 07.3	-2.7
	comp=Z,191nm,0.6s,baz=249,slow=7.4,SNR=221						
ARU				S	S	19 23 21.5	+10
	comp=Z,24nm,0.7s,baz=178,slow=23,SNR=2.6						
ARU				LR	LR	19 28 05.9	
	comp=Z,16μm,18.2s,baz=248,slow=37						
ARU	Arti	22.17	50	*d* iP	P	19 19 07.6	-2.4
ARU				*PP	pP	19 19 18.3	-1.0
ARU				PPP	PPP	19 19 37.2	
ARU				S	S	19 23 11.0	-0.9
ARU				*SS	Sn	19 23 27.7	+3.4
ARU				SS	SnSn	19 23 40.1	+0.4
ARU				SSS	SSS	19 23 56.8	
ARU				pmax	pmax		
	comp=Z,788nm,0.8s						
ARU				MLR	MLR		
	comp=Z,13μm,16.0s						
ARU	Arti	22.17	50	P	P	19 19 07.6	-2.4
OKGL	Djebel Kef Gue	22.21	253	P	P	19 19 11.0	+0.4
ABKAR	Akbulak array	22.29	69	P	P	19 19 09.6	-1.8
ABKAR				IAmb	IAmb	19 19 35.6	
	comp=Z,340nm,1.1s						
NBB30	Finnes	22.33	346	eP	P	19 19 09.8	-1.8
NBB05	Inndyr	22.34	346	eP	P	19 19 10.1	-1.6
N2ST	Straumen	22.39	348	eP	P	19 19 11.7	-0.5
OJGS	Djebel Guires	22.44	252	P	P	19 19 10.0	-3.2
LVZ	Lovozero	22.44	7	*ce*P	P	19 19 11.1	-1.8
LVZ				pmax	pmax		
	comp=Z,218nm,0.7s						
LVZ				MLR	MLR		
	comp=Z,16μm,17.0s						
LVZ	Lovozero	22.44	7	P	P	19 19 10.7	-2.1
FAUS	Fauske	22.46	348	eP	P	19 19 11.5	-1.5
CART	Cartagena	22.49	258	‖*i* P	P	19 19 10.3	-3.2
CART				*e*S	S	19 23 17.4	-0.7
CART	Cartagena	22.49	258	P	P	19 19 11.2	-2.4
CART				IAmb	IAmb	19 19 15.6	
	comp=Z,194nm,1.0s						
NBB08	Skaug oppvekst	22.57	347	eP	P	19 19 13.1	-1.0
N2TV	Tvrnvik	22.66	348	eP	P	19 19 14.3	-0.8
OJBR	Djebel Berber	22.66	253	P	P	19 19 10.0	-5.5
LAWE	Loch Awe, Argy	22.74	309	eP	P	19 19 14.1	-2.0
UCM	Universidad Co	22.80	267	‖*i* P	P	19 19 13.7	-3.2
UCM				*e*S	S	19 23 20.3	-3.3
DSB	Dublin	22.81	301		P	19 19 15.7	-1.1
N2IH	Innhavet	22.92	349	eP	P	19 19 15.5	-2.3
STEI	Steigen	22.98	348	eP	P	19 19 17.4	-1.1
KAC	Achnashellach	23.01	312	eP	P	19 19 17.1	-1.8
N2RO	R,st	23.10	345	eP	P	19 19 18.6	-1.0
N2VA	Vr,y	23.13	346	eP	P	19 19 17.8	-2.1
ODJA	Bouhanifia	23.14	253	P	P	19 19 20.0	-0.4
KPL	Plockton	23.15	312	eP	P	19 19 19.2	-1.0
USTO	Oran	23.18	254	P	P	19 19 17.0	-3.7
N2SV	S,rvVgen	23.28	346	eP	P	19 19 19.4	-2.1
KTK1	Kautokeino	23.30	356	eP	P	19 19 19.4	-2.3
SVE	Sverdlovsk	23.38	50	*ce*P	P	19 19 21.5	-1.0
SVE				eS	S	19 23 28.8	-4.1
SVE				pmax	pmax		
	comp=Z,662nm,1.3s						
SVE				MLR	MLR		
	comp=Z,13μm,17.0s						
LOF	Lofoten	23.42	347	eP	P	19 19 20.4	-2.3
N2VI	Vinje	23.49	348	eP	P	19 19 21.6	-1.9
ES19	SONSECA Array	23.51	266	IAMs_20	IAMs_20	19 29 57.6	
	comp=Z,6μm,20.0s						
ES09	SONSECA Array	23.52	266	IAMs_20	IAMs_20	19 29 45.8	
	comp=Z,6μm,20.0s						
ES17	SONSECA Array	23.56	266	IAMs_20	IAMs_20	19 30 00.9	
	comp=Z,6μm,20.0s						
ESBB	Sonseca Array	23.57	266	P	P	19 19 21.7	-2.9
ESBB				IAmb	IAmb	19 19 24.1	
	comp=Z,503nm,1.8s						
ESDC	Sonseca Array	23.57	266	P	P	19 19 21.3	-3.3
	comp=Z,29nm,0.8s,baz=62,slow=9.1,SNR=145						
ESDC				S	S	19 23 39.0	+2.7
	comp=Z,4.1nm,1.1s,baz=55,slow=8.9,SNR=0.9						
ESDC				LR	LR	19 30 19.2	
	comp=Z,5μm,19.1s,baz=65,slow=41						
ESDC	Sonseca Array	23.57	266	P	P	19 19 21.2	-3.3
ES05	SONSECA Array	23.57	266	IAMs_20	IAMs_20	19 29 46.1	
	comp=Z,6μm,20.0s						
ES15	SONSECA Array	23.60	266	IAMs_20	IAMs_20	19 29 48.9	
	comp=Z,6μm,20.0s						
OTSS	Djebel Tessala	23.60	253	P	P	19 19 25.0	0.0
ARA2	ARCESS Array S	23.76	359	P	P	19 19 24.1	-2.0
ARA2				IAmb	IAmb	19 20 09.9	
	comp=Z,143nm,1.0s						
ARA0	ARCESS Array S	23.76	359	P	P	19 19 24.2	-1.9
ARA0				IAmb	IAmb	19 20 09.9	
	comp=Z,133nm,0.9s						
ARA0	ARCESS Array S	23.76	359	eP	P	19 19 24.0	-2.1
ARCES	ARCESS Array B	23.76	359	P	P	19 19 23.5	-2.6
	comp=Z,25nm,0.3s,baz=176,slow=8.2,SNR=172						
ARCES				S	S	19 23 39.3	+0.5
	comp=Z,12nm,0.6s,baz=168,slow=24,SNR=1.5						
ARCES				Lg	Lg	19 26 36.8	
	comp=Z,73nm,0.9s,baz=186,slow=23,SNR=1.8						
ARCES				LR	LR	19 28 44.9	
	comp=Z,12μm,18.3s,baz=175,slow=37						
ARCES				P3KP		19 53 43.8	
	comp=Z,3.4nm,0.9s,baz=56,slow=5.0,SNR=3.9						
PAB	San Pablo	23.89	266	P	P	19 19 25.2	-2.5
PAB				pmax	pmax		
	comp=Z,296nm,1.8s						
PAB				MLR	MLR		
	comp=Z,6μm,21.0s						
PAB	San Pablo	23.89	266	P	P	19 19 25.2	-2.5
PAB				IAmb	IAmb	19 19 27.3	
	comp=Z,296nm,1.8s						
KEV	Kevo	23.97	360	P	P	19 19 26.4	-1.6
KEV				pmax	pmax		
	comp=Z,283nm,1.2s						
KEV				MLR	MLR		
	comp=Z,13μm,18.0s						
KEV	Kevo	23.97	360	P	P	19 19 26.4	-1.6
KEV				IAmb	IAmb	19 19 52.4	
	comp=Z,283nm,1.2s						
TRO	Tromso	24.20	353	eP	P	19 19 28.3	-1.8
GEYT	Alibeck	24.26	98	P	P	19 19 29.6	-1.4
	comp=Z,116nm,0.7s,baz=291,slow=11,SNR=177						
GEYT				S	S	19 23 49.8	+2.3
	comp=Z,6.4nm,0.8s,baz=321,slow=12,SNR=1.1						
GEYT				LR	LR	19 31 10.8	
	comp=Z,2μm,19.8s,baz=320,slow=42						
GYA0B	ALIBECK ARRAY	24.26	98	P	P	19 19 31.6	+0.5
GYA0B				IAmb	IAmb	19 19 34.0	
	comp=Z,163nm,0.9s						
PBRG	Braganca	24.67	273	eP	P	19 19 32.7	-2.1
	comp=Z,131nm,1.4s						
PBRG				eS	S	19 23 58.7	+4.7
HAMF	Hammerfest	24.92	357	eP	P	19 19 36.1	-0.5
MELI	Melilla	25.03	256	eP	P	19 19 33.2	-4.8
MELI				eS	S	19 24 20.3	+21
MVO	Moncorvo	25.11	272	eP	P	19 19 36.8	-2.0
	comp=Z,180nm,1.3s						
MVO				eS	S	19 24 13.2	+12
MVO				eLR	LR	19 29 44.2	
	comp=Z,4μm,20.0s						
PVRL	Vila Real	25.55	272	eP	P	19 19 40.8	-1.9
	comp=Z,124nm,1.4s						
POLO	Lamas de Olo	25.56	273	eP	P	19 19 39.9	-3.0
	comp=Z,42nm,2.0s						
POLO				eS	S	19 24 17.2	+8.9
PCAB	Cabril	25.60	273	eP	P	19 19 41.0	-2.2
	comp=Z,263nm,1.6s						
PGAV	Gavieira, Arco	25.68	274	eP	P	19 19 42.3	-1.7
	comp=Z,133nm,2.0s						
PGAV				eS	S	19 24 20.6	+10
PGAV				eLR	LR	19 29 29.5	
	comp=Z,5

comp=Z,2µm,18.0s
PVAQ Vaqueiros 27.22 264 P **P** **19 19 55.1 -2.7**
PCVE Castro Verde 27.34 265 *eP* **P** **19 19 56.0 -2.8**
comp=Z,92nm,1.3s
PCVE *eS* S 19 25 09.0 +33
PNCL Nicolau / Gran 27.45 266 *eP* **P** **19 19 57.3 -2.5**
comp=Z,76nm,1.3s
PNCL *eS* S 19 24 56.2 +18
IFR Ifrane 27.54 255 *eP* P 19 19 55.7 -5.2
IFR *eS* S 19 25 02.3 +23
PMAFR Mafra 27.59 269 *eS* S 19 24 58.4 +18
MDT Midelt 27.61 253 P **P** **19 19 58.6 -2.8**
comp=Z,22nm,0.8s,baz=71,slow=7.6,SNR=23
MDT LR LR 19 31 12.0
comp=Z,3µm,21.2s,baz=58,slow=37
MDT Midelt 27.61 253 P **P** **19 20 00.6 -0.9**
SNR=17
LIS Lisbon 27.61 268 *eP* **P** **19 19 59.2 -2.0**
LIS AMS AMS 19 33 56.7
comp=E,4µm,19.5s
LIS Lisbon 27.61 268 *eP* **P** **19 19 59.2 -2.0**
MORF Marmelete 27.92 265 *eP* **P** **19 20 02.4 -1.7**
MORF AMS AMS 19 33 48.6
comp=E,4µm,18.1s
MORF Marmelete 27.92 265 *eP* **P** **19 20 02.4 -1.7**
RTC Rabat Centre 28.44 257 IAMs_20 IAMs_20 19 31 24.8
comp=Z,8µm,22.0s
BRVK Borovoye 28.59 60 P **P** **19 20 10.4 +0.6**
BRVK Borovoye 28.59 60 *ceP* P 19 20 08.3 -1.5
BRVK pmax pmax
BRVK comp=Z,102nm,0.8s
BRVK MLR MLR
comp=Z,8µm,17.0s
BRVK Borovoye 28.59 60 P P 19 20 09.2 -0.6
BRVK IAmb IAmb 19 20 58.5
comp=Z,135nm,0.9s
BRVK Borovoye 28.59 60 IAMs_20 IAMs_20 19 32 18.8
comp=Z,8µm,18.0s
BVAR Borovoye Array 28.65 60 P P 19 20 09.4 -1.0
comp=Z,17nm,0.6s,baz=332,slow=10.0,SNR=32
TAM Tamanrasset 28.95 225 P **P** **19 20 12.6 -0.9**
TAM pmax pmax
comp=Z,334nm,2.0s
TAM MLR MLR
comp=Z,5µm,21.0s
TAM Tamanrasset 28.95 225 P **P** **19 20 12.6 -0.9**
TAM IAmb IAmb 19 20 14.8
comp=Z,334nm,2.0s
TAM IAMs_20 IAMs_20 19 33 19.9
comp=Z,5µm,21.0s
HRA Herat 28.95 101 P **P** **19 20 14.5 +0.9**
AVE Averroes 29.21 257 *eP* P 19 20 10.5 -5.1
AVE *eS* S 19 25 20.3 +15
TZRR Tazzarine 29.51 251 P **P** **19 20 18.1 -0.3**
SNR=8.6
TZRR P **P** **19 20 18.1 -0.3**
SNR=8.6
ZGR Zagora 29.97 250 P **P** **19 20 22.0 -0.5**
SNR=10
ZGR P **P** **19 20 22.0 -0.5**
SNR=10
BRZS Berezniki 30.42 65 *i* P **P** **19 20 25.9 -0.3**
comp=Z,28nm,0.8s,baz=66
BRZS Berezniki 30.42 65 *i* P P 19 20 25.8 -0.4
BRZS pmax pmax
comp=Z,28nm,0.8s
SHME Shamm 30.42 121 *i* P P 19 20 25.3 -1.0
SNR=7.3
UMQ Umm Al-Quwin 30.53 122 P **P** **19 20 27.7 +0.4**
BANOM Banah 30.61 121 *i* P P 19 20 27.5 -0.6
SNR=7.3
KKAR Karatay Array 30.78 79 P **P** **19 20 29.7 +0.3**
KKAR Karatay Array 30.78 79 P **P** **19 20 29.7 +0.3**
KKAR IAmb IAmb 19 21 35.7
comp=Z,75nm,0.9s
KKAR Karatay Array 30.78 79 P **P** **19 20 29.6 +0.2**
IUG luzhnay 30.79 81 *i* P **P** **19 20 29.7 0.0**
comp=Z,84nm,2.1s,baz=82
IUG luzhnay 30.79 81 *i* P **P** **19 20 29.6 0.0**
IUG pmax pmax
comp=Z,84nm,2.1s
AJN Ajban 30.86 124 *i* P **P** **19 20 30.1 -0.1**
SNR=5.1
AJN Ajban 30.86 124 P **P** **19 20 31.5 +1.3**
SNR=6.8
AJN P **P** **19 20 31.5 +1.3**
SNR=6.8
NAZ Nazwa, Dubai 30.93 123 *i* P **P** **19 20 30.4 -0.5**
SNR=5.7
NAZ Nazwa, Dubai 30.93 123 P **P** **19 20 30.6 -0.3**
SNR=6.9
NAZ P **P** **19 20 30.6 -0.3**
SNR=6.9
MSFE Esma-Masafi 30.95 121 *i* P P 19 20 30.4 -0.6
SNR=12
ASUD Al Ashush, Dub 31.01 123 *i* P **P** **19 20 31.4 -0.2**
SNR=11
ASUD Al Ashush, Dub 31.01 123 P **P** **19 20 31.5 0.0**
SNR=8.2
ASUD P **P** **19 20 31.5 0.0**
SNR=8.2
FAQ Al Faqa, Dubai 31.08 123 P **P** **19 20 31.6 -0.5**
SNR=8.0
FAQ P **P** **19 20 31.6 -0.5**
SNR=8.0
MDH Madha 31.08 121 *i* P P 19 20 31.4 -0.7
SNR=8.8
MDH Madha 31.08 121 P P 19 20 31.5 -0.6
SNR=7.0
MDH P P 19 20 31.5 -0.6
SNR=7.0
UOSS Minazif 31.29 122 *i* P P 19 20 33.1 -0.9
SNR=8.3
UOSS Minazif 31.29 122 P P 19 20 32.9 -1.1
HATD Hatta, Dubai 31.33 122 *i* P P 19 20 33.7 -0.8
SNR=9.0
HATD Hatta, Dubai 31.33 122 P **P** **19 20 33.9 -0.5**
SNR=9.2
HATD P **P** **19 20 33.9 -0.5**
SNR=9.2
ASHO Ashiyiah 31.40 122 *i* P P 19 20 34.1 -0.9
SNR=16
ASHO Ashiyiah 31.40 122 P P 19 20 34.2 -0.8
SNR=10
ASHO P P 19 20 34.2 -0.8
SNR=10
DZA Taraz 31.42 79 *eP* **P** **19 20 35.1 0.0**
comp=Z,10nm,0.7s,baz=80
DZA Taraz 31.42 79 *eP* **P** **19 20 35.0 0.0**
DZA pmax pmax
comp=Z,10.0nm,0.7s
CHGR Chuyangaron 31.62 88 P **P** **19 20 37.5 +0.6**
CHGR IAMs_20 IAMs_20 19 35 42.7
comp=Z,9µm,21.0s
ALNE Al Ain 31.70 124 *i* P **P** **19 20 37.2 -0.4**
SNR=7.9
SOHO SOHO 32.09 122 *i* P P 19 20 40.2 -0.8
SNR=31
GAR Garm 32.28 87 P **P** **19 20 43.9 +1.1**
BTLS Baital 32.54 74 *i* P **P** **19 20 45.1 +0.2**
comp=Z,72nm,2.5s,baz=74
BTLS Baital 32.54 74 *i* P **P** **19 20 45.0 +0.2**
BTLS pmax pmax
comp=Z,73nm,2.5s
ARQ Araqi 32.70 123 P **P** **19 20 46.0 -0.4**
SNR=13
ARQ P **P** **19 20 46.0 -0.4**
SNR=13
SPA0 Spitsbergen Ar 32.71 356 P P 19 20 45.1 -0.9
SPA0 Spitsbergen Ar 32.71 356 *eP* **P** **19 20 45.6 -0.3**
SPITS Spitsbergen Ar 32.71 356 P P 19 20 44.1 -1.9
comp=Z,6.1nm,0.5s,baz=141,slow=14,SNR=65
HOQ Hoqain 32.97 122 P P 19 20 47.8 -1.0
SNR=16
EKS2 Erkin-Say 33.18 78 P **P** **19 20 51.9 +1.3**
SNR=11
AML Almayashu 33.32 79 P **P** **19 20 54.0 +1.9**
SNR=6.5
USP Ospenovka 33.45 77 P **P** **19 20 53.1 +0.3**
SNR=47
SGDS Sogindy 33.47 77 *i* P **P** **19 20 53.0 -0.1**
comp=Z,14nm,0.8s,baz=77
SGDS Sogindy 33.47 77 *i* P **P** **19 20 53.0 -0.1**
SGDS pmax pmax
comp=Z,14nm,0.8s
BIDO Bidbid 33.51 121 P **P** **19 20 53.1 -0.4**
SNR=12
BSY Bisya 33.55 123 P P 19 20 53.1 -0.7
SNR=7.6
BSY P P 19 20 53.1 -0.7
SNR=7.6
KBL Kabul 33.58 95 P **P** **19 20 56.1 +1.8**
SNR=30
KBL P **P** **19 20 56.1 +1.8**
SNR=30
KBL P **P** **19 20 56.1 +1.8**
SNR=30
KBL Kabul 33.58 95 P **P** **19 20 54.6 +0.4**
KBL pmax pmax
KBL comp=Z,80nm,1.3s
KBL MLR MLR
comp=Z,4µm,20.0s
KBL Kabul 33.58 95 P **P** **19 20 54.6 +0.4**
KBL IAmb IAmb 19 21 10.9
KBL comp=Z,80nm,1.3s
KBL IAMs_20 IAMs_20 19 37 07.6
comp=Z,4µm,20.0s
AAK Ala-Archa 33.68 78 *i* P **P** **19 20 56.3 +1.3**
SNR=111
AAK Ala-Archa 33.68 78 P **P** **19 20 55.9 +0.9**
AAK pmax pmax
comp=Z,189nm,1.3s
AAK MLR MLR
comp=Z,7µm,18.0s
AAK Ala-Archa 33.68 78 P **P** **19 20 55.9 +0.9**
AAK Ala-Archa 33.68 78 IAMs_20 IAMs_20 19 36 54.0
comp=Z,7µm,18.0s
KBS Kingsbay 33.68 355 P P 19 20 53.5 -0.9
KBS pmax pmax
comp=Z,77nm,1.1s
KBS MLR MLR
comp=Z,4µm,20.0s
KBS Kingsbay 33.68 355 P P 19 20 53.5 -0.9
KBS IAmb IAmb 19 21 24.7
comp=Z,77nm,1.1s
KBS Kingsbay 33.68 355 IAMs_20 IAMs_20 19 34 44.7
comp=Z,4µm,20.0s
KBS Kingsbay 33.68 355 *eP* **P** **19 20 54.4 0.0**
KBS Kingsbay 33.68 355 *i* P P 19 20 53.5 -0.9
KBS *i* 19 21 05.3
KBS IAMs_20 IAMs_20 19 34 53.0
comp=Z,16µm,18.2s
CHMS Chumysh 33.72 77 P **P** **19 20 55.5 +0.3**
SNR=12
SMDO Samad 33.81 122 P P 19 20 55.5 -0.7
SNR=15
UCH Uchtor 33.85 79 P **P** **19 20 58.0 +1.2**
SNR=14
KBK Karagaybulak 33.98 78 P **P** **19 20 58.7 +1.1**
SNR=30
KURK Kurchatov 34.02 63 *c i* P P 19 20 56.8 -0.8
KURK pmax pmax
comp=Z,33nm,1.0s
KURK MLR MLR
comp=Z,5µm,17.0s
KURK Kurchatov 34.02 63 P P 19 20 57.0 -0.6
KURK IAmb IAmb 19 22 05.6
comp=Z,62nm,1.1s
WSAR Wadi Sarin 34.02 121 P P 19 20 57.3 -0.6
comp=Z,31nm,0.9s,baz=339,slow=7.5,SNR=24
SCO Scoresbysund 34.16 333 P **P** **19 20 58.8 +0.1**
SCO pmax pmax
comp=Z,57nm,1.5s
SCO MLR MLR
comp=Z,2µm,21.0s
SCO Scoresbysund 34.16 333 P **P** **19 20 58.8 +0.1**
SCO Scoresbysund 34.16 333 *i* P **P** **19 20 58.4 -0.2**
SCO Scoresbysund 34.16 333 *i* P **P** **19 20 58.4 -0.2**
TKM2 Tokmak 2 34.33 77 P **P** **19 21 01.0 +0.4**
SNR=33
JMDO Jabal Madar 34.37 123 P **P** **19 21 00.5 -0.4**
SNR=23
JMDO P **P** **19 21 00.5 -0.4**
SNR=23
KUU Kurty 34.47 75 *i* P **P** **19 21 02.3 +0.5**
comp=Z,72nm,0.9s,baz=75
KUU *eS* **S** **19 26 28.2 +0.5**
baz=75
KUU Kurty 34.47 75 *i* P **P** **19 21 02.2 +0.5**
KUU *eS* **S** **19 26 28.1 +0.5**
KUU pmax pmax
comp=Z,72nm,0.9s
WBK Wadi Bani Khal 34.70 121 P P 19 21 09.0 +5.1
SNR=5.3
WBK P P 19 21 09.0 +5.1
SNR=5.3
CHKK Chushkaly 34.93 75 *eP* **P** **19 21 05.5 -0.2**
baz=75
CHKK Chushkaly 34.93 75 *eP* **P** **19 21 05.4 -0.2**
SEM Semipalatinsk 35.10 63 *eP* **P** **19 21 07.1 -0.1**
comp=Z,20nm,0.7s,baz=63
SEM Semipalatinsk 35.10 63 *eP* **P** **19 21 07.1 -0.1**
SEM pmax pmax
comp=Z,19nm,0.7s
AAA Alma-Ata 35.11 76 *eP* **P** **19 21 08.3 +1.0**
comp=Z,44nm,1.0s,baz=76
AAA *eS* **S** **19 26 38.7 +1.1**
baz=76
AAA LR LR 19 35 32.6
comp=Z,2µm,14.1s,baz=76
AAA Alma-Ata 35.11 76 *eP* **P** **19 21 08.3 +1.0**
AAA *eS* **S** **19 26 38.7 +1.1**
AAA pmax pmax
comp=Z,44nm,1.0s
AAA MLR MLR
comp=Z,2µm,14.0s
TNSS Tian-Shan 35.20 76 *eP* **P** **19 21 09.2 +0.8**
baz=76
TNSS Tian-Shan 35.20 76 *eP* **P** **19 21 09.2 +0.8**
DBG Daneborg 35.21 340 IAMs_20 IAMs_20 19 34 15.3
comp=Z,3µm,21.6s
MDOK Medeo 35.22 76 *eP* **P** **19 21 09.1 +0.7**
baz=76
MDOK *eS* **S** **19 26 40.0 +0.5**
baz=76
MDOK LR LR 19 35 33.2
comp=Z,2µm,14.5s,baz=76
MDOK Medeo 35.22 76 *eP* **P** **19 21 09.0 +0.7**
MDOK *eS* **S** **19 26 39.9 +0.5**
MDOK MLR MLR
comp=Z,2µm,15.0s
JLN Jalan Bani Buh 35.31 121 P **P** **19 21 10.0 +1.0**
SNR=11
MHTO MHTO 35.36 124 P **P** **19 21 10.0 +0.5**
SNR=7.5
MHTO P **P** **19 21 10.0 +0.5**
SNR=7.5
TDK Taldyqorghan 35.47 72 *eP* **P** **19 21 10.5 +0.2**
comp=Z,38nm,1.2s,baz=73
TDK LR LR 19 35 39.0
comp=Z,5µm,18.8s,baz=73
TDK Taldyqorghan 35.47 72 *eP* **P** **19 21 10.5 +0.2**
TDK pmax pmax
comp=Z,39nm,1.2s
TDK MLR MLR
comp=Z,5µm,19.0s
WHFO Wadi Hawf 35.55 133 P **P** **19 21 11.0 -0.2**
SNR=11
WHFO P **P** **19 21 11.0 -0.2**
SNR=11
ABTO Aybut 35.79 134 P **P** **19 21 12.7 -0.6**
SNR=14
ABTO P **P** **19 21 12.7 -0.6**
SNR=14
TEND Ethiopian Broa 35.94 156 *eP* **P** **19 21 16.4 +1.8**
TEND *eS* **S** **19 26 57.8 +7.2**
DQM DQM 35.95 126 P **P** **19 21 15.0 +0.5**
SNR=5.7
DQM P **P** **19 21 15.0 +0.5**
SNR=5.7
KSH Kashi 35.98 82 *i* P **P** **19 21 14.8 0.0**
KSH pP pP 19 21 26.0 +1.0
KSH PP **PnPn** **19 22 31.8 -4.2**
KSH S S 19 26 46.4 -4.7
KSH SS **SnSn** **19 29 09.9 -6.7**
KSH pmax pmax
comp=Z,170nm,0.9s
KSH LR LR
comp=Z,3µm,6.1s
KSH LR LR
comp=Z,3µm,6.0s
KSH LR LR
comp=Z,3µm,16.0s
DAG Danmarks Havn 36.08 344 *i* P P 19 21 14.0 -1.1
DAG *i* 19 21 27.0
DAG MLR MLR
comp=Z,2µm,19.0s
DAG Danmarks Havn 36.08 344 *i* P P 19 21 14.0 -1.1
DAG *i* 19 21 27.0
comp=Z,2µm,19.0s
DAG Danmarks Havn 36.08 344 *i* P P 19 21 14.0 -1.1
DAG *i* 19 21 27.0
DAG IAMs_20 IAMs_20 19 35 43.8
comp=Z,2µm,19.4s
RBK Rabkut 36.12 133 P P 19 21 15.4 -0.7
SNR=12
RBK P P 19 21 15.4 -0.7
SNR=12
SATY Saty 36.18 76 *eP* **P** **19 21 16.9 +0.4**
comp=Z,23nm,1.2s,baz=76
SATY Saty 36.18 76 *eP* **P** **19 21 16.9 +0.4**
SATY pmax pmax
comp=Z,23nm,1.2s
KPKS Kokpek 36.21 75 *eP* **P** **19 21 16.9 +0.2**
comp=Z,16nm,0.7s,baz=75
KPKS Kokpek 36.21 75 *eP* **P** **19 21 16.9 +0.2**
KPKS pmax pmax
comp=Z,16nm,0.7s
PMOZ Porto Moniz, M 36.23 265 *e* LR LR 19 33 57.9
comp=Z,2µm,20.0s
DMTO DMTO 36.33 131 P P 19 21 16.9 -1.0
SNR=12
DMTO P P 19 21 16.9 -1.0
SNR=12
SHAO Shalim 36.44 130 *i* P P 19 21 17.8 -0.9
SNR=6.9
ATD Arta Tunnel 36.73 154 P P 19 21 20.4 -0.9
comp=Z,4.4nm,0.3s,baz=258,slow=8.0,SNR=2.1
ATD Arta Tunnel 36.73 154 P **P** **19 21 21.4 +0.1**
SHLS Shalkode 36.86 75 *eP* **P** **19 21 25.3 +3.0**
comp=Z,29nm,0.9s,baz=75
SHLS Shalkode 36.86 75 *eP* **P** **19 21 25.2 +3.0**
SHLS pmax pmax
comp=Z,29nm,0.9s
NIL Nilore 36.99 93 P **P** **19 21 24.2 +0.8**
NIL pmax pmax
comp=Z,277nm,1.4s
NIL MLR MLR
comp=Z,4µm,20.0s
NIL Nilore 36.99 93 P **P** **19 21 24.2 +0.8**
NIL Nilore 36.99 93 IAMs_20 IAMs_20 19 39 26.3
comp=Z,4µm,20.0s
ZAA0 Zalesovo Array 37.07 56 P P 19 21 23.2 -0.6
ZAA0 IAmb IAmb 19 21 39.9
comp=Z,107nm,0.8s
ZALV Zalesovo Beam 37.07 56 P P 19 21 23.1 -0.7
comp=Z,85nm,0.6s,baz=281,slow=9.2,SNR=271
ZALV LR LR 19 38 07.4
comp=Z,12µm,19.0s,baz=286,slow=39
MAKZ Makanchi 37.22 68 P **P** **19 21 24.8 -0.4**
MAKZ pmax pmax
comp=Z,42nm,1.0s
MAKZ MLR MLR
comp=Z,7µm,20.0s
MAKZ Makanchi 37.22 68 P **P** **19 21 24.8 -0.4**
MAKZ IAMs_20 IAMs_20 19 37 33.3
comp=Z,7µm,20.0s
MK31 Makanchi Array 37.42 68 *ceP* P 19 21 26.3 -0.6
MK31 Makanchi Array 37.42 68 P **P** **19 21 26.7 -0.2**
MKAR Makanchi Array 37.42 68 P P 19 21 26.4 -0.5
comp=Z,23nm,0.5s,baz=272,slow=8.4,SNR=507
MKAR LR LR 19 37 51.1
comp=Z,7µm,20.5s,baz=280,slow=38
MKAR Makanchi Array 37.42 68 P **P** **19 21 26.6 -0.4**
NRIK Noril'sk 37.70 30 P P 19 21 28.5 -0.4
comp=Z,22nm,0.8s,baz=249,slow=5.4,SNR=34
NRIK LR LR 19 38 36.2
comp=Z,12µm,20.6s,baz=254,slow=39
NRIK Noril'sk 37.70 30 *i* P **P** **19 21 28.9 -0.1**
NRIK pmax pmax
comp=Z,33nm,1.0s
NRIK MLR MLR
comp=Z,12µm,20.0s
MACI Morro de la Ar 38.48 258 P **P** **19 21 35.6 -0.6**
ZSN Zaisan 38.86 66 *i* P **P** **19 21 39.4 +0.4**
comp=Z,20nm,0.9s,baz=66
ZSN Zaisan 38.86 66 *i* P **P** **19 21 39.4 +0.4**
ZSN pmax pmax
comp=Z,20nm,0.9s
TOC1 Torodi Ar. Sit 39.05 222 IAMs_20 IAMs_20 19 40 28.5
comp=Z,3µm,18.0s
TOC2 Torodi Ar. Sit 39.05 222 IAMs_20 IAMs_20 19 40 29.6
comp=Z,2µm,18.0s
TOA2 Torodi Ar. Sit 39.07 222 IAMs_20 IAMs_20 19 40 39.1
comp=Z,2µm,19.0s
TOA0 Torodi Ar. Sit 39.07 222 P P 19 21 39.5 -1.6
TORD Torodi Ar. Bea 39.07 222 P P 19 21 38.9 -2.1
comp=Z,242nm,0.7s,baz=27,slow=9.0,SNR=827
TORD PcP **PcP** **19 23 49.0 -1.5**
comp=Z,6.3nm,0.6s,baz=40,slow=3.0,SNR=1.2
TORD LR LR 19 40 24.0
comp=Z,2µm,18.2s,baz=30,slow=40
TORD Torodi Ar. Bea 39.07 222 P P 19 21 39.2 -1.8
TOC4 Torodi Ar. Sit 39.09 222 IAMs_20 IAMs_20 19 40 31.7
comp=Z,3µm,18.0s
TOC5 Torodi Ar. Sit 39.10 222 IAMs_20 IAMs_20 19 40 31.8
comp=Z,3µm,18.0s
SUMG Summit 39.74 335 *i* P **P** **19 21 46.8 +0.4**
SUMG Summit 39.74 335 P **P** **19 21 45.8 -0.7**
SUMG Summit 39.74 335 *i* P **P** **19 21 46.8 +0.4**
SUMG Summit 39.74 335 *i* P **P** **19 21 46.9 +0.4**
DHRM DHARAMSHALA 39.90 92 *eP* **P** **19 21 48.6 +0.5**
DHRM IAmb IAmb 19 22 00.8
comp=Z,121nm,1.0s
ICESG Greenland Ices 39.97 329 *i* P **P** **19 21 48.3 0.0**
BHK Bhakra 40.46 93 *ex* x 19 21 55.8
SOCY Socotra 40.56 137 P P 19 21 50.2 -3.2
KOWA Kowa 40.79 230 P P 19 21 53.4 -1.8
comp=Z,45nm,0.8s,baz=31,slow=9.0,SNR=90
KOWA Kowa 40.79 230 P P 19 21 53.5 -1.8
KOWA IAMs_20 IAMs_20 19 41 48.5
comp=Z,5µm,20.0s
BHUJ Bhuj 41.00 109 *eP* **P** **19 21 57.7 +0.8**
BHUJ IAmb IAmb 19 22 10.2
comp=Z,292nm,2.0s
SMLA Simla 41.15 93 *eP* **P** **19 21 58.0 -0.1**
SMLA IAmb IAmb 19 22 10.2
comp=Z,84nm,1.0s
WMQ Urumqi 42.08 70 *eP* **P** **19 22 06.4 +0.7**
WMQ pP pP 19 22 17.5 +1.5
WMQ sP sP 19 22 21.4 +1.3
WMQ PP **PP** **19 23 46.8 +3.6**
WMQ S **S** **19 28 20.4 -2.1**
WMQ sS sS 19 28 34.4 -5.2
WMQ SS SS 19 31 24.3 -6.0
WMQ pmax pmax
comp=Z,66nm,0.9s
WMQ pmax pmax
comp=Z,650nm,3.7s
WMQ LR LR
comp=Z,5µm,17.3s
WMQ LR LR
comp=Z,5µm,29.7s
WMQ LR LR
comp=Z,10µm,24.9s
WMQ Urumqi 42.08 70 P **P** **19 22 06.1 +0.4**
WMQ pmax pmax
comp=Z,69nm,1.0s
WMQ MLR MLR
comp=Z,6µm,20.0s
WMQ Urumqi 42.08 70 P **P** **19 22 06.0 +0.4**
WMQ Urumqi 42.08 70 IAMs_20 IAMs_20 19 42 12.2
comp=Z,6µm,20.0s
DDI Dehra Dun 42.24 93 *eP* **P** **19 22 07.2 +0.1**
DDI IAmb IAmb 19 22 19.1
comp=Z,183nm,1.2s
NDI New Delhi 42.63 96 *eP* **P** **19 22 10.0 -0.3**
LODK Lodwar 42.87 168 P **P** **19 22 12.7 +0.4**
SNR=55
SFJD Kangerlussuaq 44.29 327 P P 19 22 19.7 -3.3
comp=Z,11nm,0.6s,baz=88,slow=8.3,SNR=6.6
SFJD Kangerlussuaq 44.29 327 P **P** **19 22 22.5 -0.6**
SFJD pmax pmax
comp=Z,158nm,2.0s
SFJD Kangerlussuaq 44.29 327 P **P** **19 22 22.4 -0.6**
SFJD IAmb IAmb 19 22 38.0
comp=Z,158nm,2.0s
BHPL Bhopal 46.25 102 *eP* **P** **19 22 39.3 +0.1**
BHPL IAmb IAmb 19 22 51.7
comp=Z,124nm,1.1s

MBAR	**Mbarara**	**46.37**	**175**	P	P	19 22 38.3	-2.1	GTA			SS	**SS**	**19 34 21.4**	**-2.0**	ZEA			*e*		19 26 33.8	
	comp=Z,26nm,0.7s,baz=346,slow=7.5,SNR=96							GTA			pmax	pmax			ZEA			*e*S	S	19 32 46.9	+19
MBAR	**Mbarara**	**46.37**	**175***c*	*i*P	P	19 22 39.2	-1.2		comp=Z,22nm,1.5s						ZEA			pmax	pmax		
MBAR				pmax	pmax			GTA			pmax	pmax				comp=E,10.0nm,1.1s					
	comp=Z,107nm,1.5s								comp=Z,310nm,9.3s						ZEA			pmax	pmax		
MBAR				MLR	MLR			GTA			LR	LR				comp=Z,30nm,1.1s					
	comp=Z,1μm,20.0s								comp=Z,3μm,18.9s						ZEA			pmax	pmax		
MBAR	**Mbarara**	**46.37**	**175**	P	**P**	**19 22 39.8**	**-0.5**	GTA			LR	LR				comp=E,200nm,4.2s					
MBAR				IAmb	IAmb	19 22 41.5			comp=Z,4μm,19.6s						ZEA			pmax	pmax		
	comp=Z,143nm,1.4s							GTA			LR	LR				comp=Z,300nm,5.3s					
PYUN	**Piuthan**	**47.01**	**92**	*e*P	**P**	**19 22 45.8**	**+0.4**		comp=Z,6μm,20.0s						ZEA			pmax	pmax		
	comp=Z,358nm,0.9s							**ULN**	**Ulaanbaatar**	**52.31**	**57**	P	**P**	**19 23 25.8**	**+0.3**		comp=E,100nm,6.5s					
MOY	**Mondy**	**47.10**	**55**	*e*P	**P**	**19 22 46.1**	**+0.4**	ULN			pmax	pmax			ZEA			pmax	pmax		
MOY				pmax	pmax				comp=Z,98nm,1.6s							comp=Z,100nm,10.6s					
	comp=Z,98nm,2.3s							ULN			MLR	MLR			ZEA			MLR	MLR		
POO	**Poona**	**47.10**	**110**	*e*P	**P**	**19 22 45.9**	**-0.1**		comp=Z,9μm,19.0s							comp=E,1μm,14.0s					
POO				IAmb	IAmb	19 22 58.4		**ULN**	**Ulaanbaatar**	**52.31**	**57**	P	**P**	**19 23 25.8**	**+0.3**	ZEA			MLR	MLR		
	comp=Z,97nm,1.1s							ULN			IAmb	IAmb	19 23 41.6			comp=N,2μm,17.0s					
TULEG	**Thule**	**47.29**	**342**	P	P	19 22 45.4	-1.3		comp=Z,98nm,1.6s						ZEA			MLR	MLR		
TULEG				IAmb	IAmb	19 22 59.9		**SACV**	**Santiago Islan**	**52.35**	**251**	P	**P**	**19 23 25.1**	**-0.7**		comp=Z,3μm,17.0s					
	comp=Z,101nm,1.2s							**MYLAV**	**Mylavaram**	**52.89**	**105**	*e*P	P	19 23 29.0	-0.8	**PALK**	**Pallekele**	**59.88**	**113**	P	P	19 24 19.0	-0.7
DANN	**Dangsing**	**47.40**	**91**	*e*P	**P**	**19 22 48.7**	**+0.2**	MYLAV			IVmB_BB		19 23 29.5		PALK			pmax	pmax		
	comp=Z,164nm,0.8s								comp=Z,273nm,2.3s							comp=Z,106nm,1.3s					
KMBO	**Kilima Mbogo**	**47.63**	**166**	P	P	19 22 47.9	-2.4	MYLAV			IVMs_BB	IVMs_BB	19 51 09.6		PALK			MLR	MLR		
	comp=Z,4.9nm,0.8s,baz=238,slow=13,SNR=6.4								comp=Z,317nm,18.2s							comp=Z,600nm,22.0s					
KMBO	**Kilima Mbogo**	**47.63**	**166**	*i* P	**P**	**19 22 51.1**	**+0.8**	**ADKI**	**Addanki**	**53.09**	**106**	*e*P	P	19 23 30.0	-1.3	**PALK**	**Pallekele**	**59.88**	**113**	P	P	19 24 19.0	-0.7
	SNR=14							ADKI			IVmBBB		19 23 42.5		**HAL**	**Halifax**	**60.37**	**305**	P	**P**	**19 24 22.0**	**-0.7**
KMBO	**Kilima Mbogo**	**47.63**	**166**	P	P	19 22 49.4	-0.9		comp=Z,123nm,2.2s						HAL			pmax	pmax		
KMBO				pmax	pmax			ADKI			IVMs_BB	IVMs_BB	19 53 30.0			comp=Z,185nm,1.5s					
	comp=Z,22nm,1.3s								comp=Z,221nm,20.7s						**HAL**	**Halifax**	**60.37**	**305**	P	**P**	**19 24 22.0**	**-0.7**
KMBO	**Kilima Mbogo**	**47.63**	**166**	P	P	19 22 49.4	-0.9	**PVM**	**Polavaram**	**53.21**	**104**	*e*P	**P**	**19 23 31.9**	**-0.4**	**LSZ**	**Lusaka**	**60.85**	**179**	P	P	19 24 25.2	-1.1
KOLN	**Koldanda**	**47.64**	**92**	*e*P	**P**	**19 22 50.3**	**0.0**	PVM			IVmB_BB		19 23 43.2			comp=Z,6.6nm,0.6s,baz=358,slow=7.1,SNR=25					
	comp=Z,259nm,1.0s								comp=Z,398nm,1.3s						**LSZ**	**Lusaka**	**60.85**	**179**	*i* P	**P**	**19 24 26.9**	**+0.6**
DBIC	**Dimbokro**	**47.84**	**225**	P	P	19 22 49.1	-2.6	PVM			IVMs_BB	IVMs_BB	19 50 33.6		**LSZ**	**Lusaka**	**60.85**	**179**	P	**P**	**19 24 26.0**	**-0.3**
	comp=Z,127nm,0.5s,baz=15,slow=7.8,SNR=204								comp=Z,450nm,18.2s						LSZ			pmax	pmax		
DBIC				LR	LR	19 45 16.6		**CIT**	**Chita**	**53.88**	**50**	*e*P	**P**	**19 23 37.0**	**+0.2**		comp=Z,56nm,1.1s					
	comp=Z,4μm,20.0s,baz=7.0,slow=39							CIT			pmax	pmax			LSZ			MLR	MLR		
DBIC	**Dimbokro**	**47.84**	**225**	P	P	19 22 49.0	-2.6		comp=Z,147nm,2.0s							comp=Z,900nm,19.0s					
TIC	**Toumodi**	**47.94**	**225**	*e*P	P	19 22 49.7	-2.8	**CHLP**	**Challavanipeta**	**54.00**	**101**	*e*P	P	19 23 37.4	-0.6	**LSZ**	**Lusaka**	**60.85**	**179**	P	**P**	**19 24 26.0**	**-0.3**
KIC	**Kosan Boka**	**48.05**	**225**	*e*P	P	19 22 50.7	-2.6	CHLP			IVmB_BB		19 23 37.8		LSZ			IAmb	IAmb	19 24 40.4	
	comp=Z,347nm,0.8s								comp=Z,309nm,2.1s							comp=Z,56nm,1.1s					
GKN	**Gorkha**	**48.22**	**91**	*e*P	**P**	**19 22 54.4**	**-0.4**	CHLP			IVMs_BB	IVMs_BB	19 50 38.5		**LSZ**	**Lusaka**	**60.85**	**179**	*i* P	**P**	**19 24 26.9**	**+0.6**
	comp=Z,299nm,0.9s								comp=Z,326nm,18.0s						**XAN**	**Xi'an**	**61.21**	**70**	P	**P**	**19 24 28.8**	**+0.2**
LIC	**Lamto**	**48.31**	**225**	*e*P	P	19 22 52.9	-2.4	**GUWA**	**GUWAHATI**	**54.27**	**88**	*e*P	P	19 23 39.1	-0.9	XAN			PP	**PP**	**19 26 42.8**	**-0.6**
	comp=Z,697nm,0.8s							**DRLN**	**Deer Lake**	**54.34**	**307**	P	P	19 23 39.2	-0.9	XAN			S	**S**	**19 32 45.6**	**-0.4**
MBO	**M'Bour**	**48.48**	**244**	P	P	19 22 55.4	-1.2	**TEZP**	**TEZPUR**	**54.78**	**87**⇑	*e*P	**P**	**19 23 43.1**	**-0.4**	XAN			pmax	pmax		
TLY	**Talaya**	**48.60**	**54***d*	*i*P	**P**	**19 22 58.1**	**+0.9**	**SHL**	**Shillong**	**54.80**	**88**	*e*P	P	19 23 43.1	-0.8		comp=Z,72nm,1.1s					
TLY				*e*		19 23 09.2		SHL			IAmb	IAmb	19 23 55.5		XAN			pmax	pmax		
TLY				*e*		19 24 49.0			comp=Z,184nm,1.5s							comp=Z,620nm,4.3s					
TLY				*e*S	**S**	**19 29 59.8**	**+3.4**	**SHL**	**Shillong**	**54.80**	**88**	P	P	19 23 42.6	-1.4	XAN			LR	LR		
TLY				*e*		19 32 50.8			SNR=44							comp=Z,3μm,19.5s					
	comp=Z,188nm,1.6s			pmax	pmax			**SHL**	**Shillong**	**54.80**	**88**	P	P	19 23 42.5	-1.5	XAN			LR	LR		
TLY				MLR	MLR			SHL			pmax	pmax				comp=Z,2μm,19.5s					
	comp=Z,28μm,14.0s								comp=Z,186nm,1.4s						XAN			LR	LR		
TLY	**Talaya**	**48.60**	**54**	P	**P**	**19 22 58.0**	**+0.8**	SHL			MLR	MLR				comp=Z,4μm,21.7s					
TLY				IAmb	IAmb	19 23 11.7			comp=Z,3μm,20.0s						**XAN**	**Xi'an**	**61.21**	**70**	P	**P**	**19 24 28.4**	**-0.3**
	comp=Z,60nm,1.0s							**SHL**	**Shillong**	**54.80**	**88**	P	P	19 23 42.5	-1.5	XAN			pmax	pmax		
IRK	**Irkutsk**	**48.71**	**53**	*e*P	P	19 22 56.1	-1.9	SHL			IAMs_20	IAMs_20	19 50 42.9			comp=Z,141nm,1.3s					
IRK				pmax	pmax				comp=Z,3μm,20.0s						XAN			MLR	MLR		
	comp=Z,103nm,2.5s							**ZIRO**	**ZIRO**	**54.95**	**85**	*e*P	P	19 23 44.4	-0.6		comp=Z,4μm,21.0s					
DMN	**Daman**	**48.79**	**91**	*e*P	**P**	**19 22 59.3**	**0.0**	**AGT**	**Agartala**	**55.43**	**90**	*e*P	**P**	**19 23 49.2**	**+0.9**	**XAN**	**Xi'an**	**61.21**	**70**	P	**P**	**19 24 28.4**	**-0.3**
	comp=Z,207nm,0.9s							**BELO**	**BELONIA**	**55.98**	**91**	*e*P	**P**	**19 23 53.3**	**+1.1**	**D63A**	**Stockholm**	**61.45**	**309**	P	P	19 24 28.5	-1.5
KKN	**Kakani**	**48.80**	**91**	*e*P	**P**	**19 22 58.9**	**-0.4**	**YAK**	**Yakutsk**	**55.99**	**34**	*e*P	P	19 23 50.4	-1.4		baz=52					
	comp=Z,194nm,0.7s							YAK				*e**PP	pP	19 24 01.3	-1.1	**PQI**	**Presque Isle**	**61.62**	**309**	P	P	19 24 30.0	-1.2
ZAK	**Zakamensk**	**48.95**	**56**	*e*P	**P**	**19 23 00.1**	**+0.1**	YAK				*e*		19 26 03.0		PQI			IAmb	IAmb	19 24 43.0	
ZAK				pmax	pmax			YAK				*e*S	**S**	**19 31 34.1**	**-3.1**		comp=Z,113nm,1.7s					
	comp=Z,35nm,1.1s							YAK				*e**SS	pS	19 31 50.9	+1.1	**E64A**	**Bridgewater**	**61.67**	**308**	P	P	19 24 29.9	-1.5
KIBK	**Kibwezi**	**48.95**	**165**	P	**P**	**19 23 00.7**	**+0.4**	YAK				*e*SSS	SSS	19 37 23.8			baz=52					
	SNR=18							YAK				pmax	pmax			**D62A**	**Allapoint, All**	**61.93**	**310**	P	P	19 24 31.4	-1.8
PKIN	**Phulchoki**	**49.02**	**91**	*e*P	**P**	**19 23 00.7**	**-0.3**		comp=Z,21nm,0.6s								baz=52					
	comp=Z,122nm,0.8s							YAK				pmax	pmax			**E63A**	**Oxbow**	**61.99**	**309**	P	P	19 24 32.4	-1.2
EUNU	**Eureka**	**49.02**	**348**	P	**P**	**19 22 59.6**	**-0.5**		comp=N,7.0nm,1.1s								baz=52					
PKI	**Pulchoki**	**49.03**	**91**	*e*P	**P**	**19 23 00.8**	**-0.3**	YAK				pmax	pmax			**BJI**	**Beijing**	**62.13**	**60**	P	**P**	**19 24 34.8**	**+0.2**
	comp=Z,134nm,0.9s								comp=E,9.0nm,1.0s							BJI				PP	**PP**	**19 26 49.8**	**-1.4**
GUN	**Gumba**	**49.15**	**90**	*e*P	**P**	**19 23 02.0**	**-0.1**	YAK				pmax	pmax			BJI				S	**S**	**19 32 56.8**	**-0.5**
KLRI	**Killari**	**49.25**	**107**	*e*P	P	19 23 01.7	-0.9		comp=Z,227nm,2.8s							BJI				pmax	pmax		
KLRI				IVmB_BB		19 23 13.0		YAK				pmax	pmax				comp=Z,34nm,1.0s					
	comp=Z,314nm,2.1s			IVMsBB		19 48 42.7			comp=N,118nm,2.4s							BJI				pmax	pmax		
	comp=Z,460nm,19.3s							YAK				pmax	pmax				comp=Z,260nm,3.7s					
RAMN	**Ramite**	**50.24**	**91**	*e*P	**P**	**19 23 09.9**	**-0.4**		comp=E,59nm,1.9s							BJI				LR	LR		
	comp=Z,181nm,0.8s							YAK				smax	smax				comp=Z,4μm,19.5s					
RPR	**Rampur**	**50.51**	**104**	*e*P	P	19 23 11.3	-0.8		comp=E,92nm,3.1s							BJI				LR	LR		
RPR				IVmB_BB		19 23 11.8		YAK				smax	smax				comp=Z,2μm,19.9s					
	comp=Z,255nm,2.5s								comp=N,67nm,2.3s							BJI				LR	LR		
RPR				IVMs_BB	IVMs_BB	19 48 42.1		YAK				MLR	MLR				comp=Z,3μm,20.7s					
	comp=Z,279nm,15.0s								comp=Z,8μm,22.0s						**BJT**	**Baijiatuau**	**62.14**	**60**	P	**P**	**19 24 34.4**	**-0.4**
TIXI	**Tiksi**	**50.69**	**24**	*i* P	P	19 23 11.9	-0.9	YAK				MLR	MLR			BJT				pmax	pmax		
TIXI	**Tiksi**	**50.69**	**24**	P	**P**	**19 23 12.4**	**-0.4**		comp=N,2μm,20.0s								comp=Z,46nm,1.2s					
TIXI				IAmb	IAmb	19 23 25.1		YAK				MLR	MLR			BJT				MLR	MLR		
	comp=Z,72nm,1.1s								comp=E,2μm,17.0s								comp=Z,4μm,19.0s					
TAPN	**Taplejung**	**50.77**	**90**	*e*P	**P**	**19 23 14.4**	**0.0**	**YAK**	**Yakutsk**	**55.99**	**34**	P	P	19 23 50.5	-1.3	**BJT**	**Baijiatuau**	**62.14**	**60**	P	**P**	**19 24 34.4**	**-0.4**
	comp=Z,496nm,1.4s							**MOKO**	**MOKOCHONG**	**56.16**	**86**	*e*P	P	19 23 53.1	-0.6	BJT				IAmb	IAmb	19 24 47.1	
ODAN	**Odare**	**50.85**	**90**	*e*P	**P**	**19 23 15.1**	**+0.2**	MOKO				IAmb	IAmb	19 24 06.1			comp=Z,46nm,1.2s					
	comp=Z,558nm,1.3s								comp=Z,271nm,1.1s						**G65A**	**Princeton**	**62.28**	**307**	P	P	19 24 34.2	-1.4
HYBB	**Hyderabad (bro**	**51.02**	**106**	*e*P	P	19 23 14.7	-1.3	**KOHI**	**KOHIMA**	**56.26**	**87**	*e*P	**P**	**19 23 54.0**	**-0.4**		baz=52					
HYBB				IVmBBB		19 23 16.2		KOHI				IAmb	IAmb	19 24 06.6		**F64A**	**Sherman**	**62.30**	**308**	P	P	19 24 34.5	-1.2
	comp=Z,196nm,2.1s								comp=Z,58nm,0.9s							baz=52					
HYBB				IVMs_BB	IVMs_BB	19 50 12.9		**SCHQ**	**Schefferville**	**56.27**	**316**	P	P	19 23 51.4	-2.5	**BILL**	**Bilibino**	**62.36**	**16**	*e*P	P	19 24 34.2	-1.5
	comp=Z,385nm,15.7s								comp=Z,6.8nm,0.6s,baz=58,slow=8.4,SNR=7.3						BILL				*i*		19 24 46.0	
HYB	**Hyderabad**	**51.02**	**106**	*i* P	P	19 23 14.0	-2.0	SCHQ				LR	LR	19 48 21.2		BILL				*e*S	**S**	**19 33 04.0**	**+4.6**
HYB				*e*pP	pP	19 23 26.0	-0.5		comp=Z,922nm,18.9s,baz=74,slow=36						BILL				*e*SS	**SS**	**19 37 07.8**	**+5.6**
HYB				*e*		19 23 48.0		**LKP**	**Lekhapani**	**56.46**	**84**	*e*P	**P**	**19 23 56.0**	**+0.4**	BILL				pmax	pmax		
HYB				*e*S	**S**	**19 30 28.0**	**-2.9**	LKP				IAmb	IAmb	19 24 08.5			comp=Z,15nm,0.7s					
BOD	**Bodaibo**	**51.34**	**43**	*e*P	P	19 23 16.8	-1.0		comp=Z,179nm,1.2s						**BILL**	**Bilibino**	**62.36**	**16**	P	P	19 24 35.0	-0.7
BOD				pmax	pmax			**LZH**	**Lanzhou**	**56.65**	**71**	*e*P	**P**	**19 23 57.8**	**+0.7**	BILL				IAmb	IAmb	19 24 47.9	
	comp=Z,86nm,1.6s							LZH				pP	pP	19 24 08.8	+1.1		comp=Z,75nm,1.1s					
CUPL	**Choutuppal**	**51.35**	**106**	*e*P	P	19 23 17.1	-1.4	LZH				sP	sP	19 24 17.4	+5.5	**E62A**	**Clayton Lake**	**62.47**	**309**	P	P	19 24 35.9	-1.0
CUPL				IVmB_BB		19 23 28.6		LZH				S	S	19 31 41.9	-5.1	E62A				IAmb	IAmb	19 24 49.6	
	comp=Z,240nm,1.5s							LZH				sS	sS	19 32 06.8	+2.2		comp=Z,88nm,1.4s					
CUPL				IVMs_BB	IVMs_BB	19 50 19.5		LZH				pmax	pmax			**KMI**	**Kunming**	**62.63**	**81**⇓	*e*P	**P**	**19 24 38.3**	**-0.3**
	comp=Z,329nm,19.0s								comp=Z,97nm,1.0s						KMI				pP	pP	19 24 50.0	+0.7
BOK	**Bokaro**	**51.74**	**94**	*e*P	P	19 23 20.7	-0.6	LZH				pmax	pmax			KMI				sP	sP	19 24 54.6	+1.2
BOK				IAmb	IAmb	19 23 33.3			comp=Z,630nm,7.9s						KMI				PP	**PP**	**19 26 54.8**	**-1.5**
	comp=Z,165nm,1.1s							LZH				LR	LR			KMI				S	**S**	**19 33 04.5**	**0.0**
LSA	**Lhasa**	**51.75**	**85**	P	**P**	**19 23 22.3**	**+0.5**		comp=Z,4μm,16.6s						KMI				sS	pS	19 33 24.3	+6.8
LSA				sP	**pP**	**19 23 34.9**	**+2.6**	LZH				LR	LR			KMI				pmax	pmax		
LSA				PP	PP	19 25 13.1	-6.4		comp=Z,3μm,16.8s								comp=Z,70nm,1.0s					
LSA				S	**S**	**19 30 41.9**	**+0.3**	LZH				LR	LR			KMI				pmax	pmax		
LSA				pmax	pmax				comp=Z,4μm,18.5s							comp=Z,370nm,4.6s					
	comp=Z,370nm,0.9s							**SAIH**	**SAIHA**	**57.55**	**90**	*e*P	**P**	**19 24 04.0**	**+0.4**	KMI				LR	LR		
LSA				LR	LR			SAIH				IAmb	IAmb	19 24 16.6			comp=Z,780nm,20.1s					
	comp=Z,6μm,18.5s								comp=Z,136nm,0.9s						KMI				LR	LR		
LSA				LR	LR			**BTO**	**Baotou**	**58.01**	**63**	*e*P	P	19 24 04.9	-1.7		comp=Z,1μm,24.7s					
	comp=Z,6μm,26.3s							**HIA**	**Hailar**	**58.69**	**50**	P	**P**	**19 24 10.9**	**-0.2**	KMI				LR	LR		
LSA				LR	LR			HIA				pmax	pmax				comp=Z,2μm,24.2s					
	comp=Z,16μm,28.5s								comp=Z,51nm,1.2s						**KMI**	**Kunming**	**62.63**	**81**	P	**P**	**19 24 38.3**	**-0.3**
LSA	**Lhasa**	**51.75**	**85**	*i* P	**P**	**19 23 22.4**	**+0.5**	HIA				MLR	MLR			KMI				pmax	pmax		
	SNR=72								comp=Z,4μm,18.0s							comp=Z,85nm,1.0s					
LSA	**Lhasa**	**51.75**	**85**	P	**P**	**19 23 21.9**	**+0.1**	**HIA**	**Hailar**	**58.69**	**50**	P	**P**	**19 24 10.9**	**-0.2**	KMI				MLR	MLR		
LSA				pmax	pmax			HIA				IAmb	IAmb	19 24 24.0			comp=Z,2μm,18.0s					
	comp=Z,126nm,1.1s								comp=Z,51nm,1.2s						**KMI**	**Kunming**	**62.63**	**81**	P	**P**	**19 24 38.2**	**-0.3**
LSA				MLR	MLR			**GBN**	**Guysborough**	**58.73**	**305**	P	P	19 24 10.5	-0.8	**KMI**	**Kunming**	**62.63**	**81**	IAMs_20	IAMs_20	19 56 57.7	
	comp=Z,4μm,22.0s							**HHC**	**Hu-ho-hao-te**	**58.83**	**62**⇓	*i* P	**P**	**19 24 12.6**	**+0.3**		comp=Z,2μm,18.0s					
LSA	**Lhasa**	**51.75**	**85**	P	**P**	**19 23 21.9**	**+0.1**	HHC				pP	pP	19 24 25.3	+2.4	**F63A**	**Nahmakanta, Br**	**62.81**	**308**	P	P	19 24 38.1	-1.1
LSA				IAMs_20	IAMs_20	19 48 48.0		HHC				sP	sP	19 24 30.6	+3.5		baz=51					
	comp=Z,4μm,22.0s							HHC				S	**S**	**19 32 12.9**	**-2.4**	**F63A**	**Nahmakanta, Br**	**62.81**	**308**	P	P	19 24 38.2	-0.9
GGR	**Gangavaram**	**51.84**	**105**	*e*P	P	19 23 21.2	-1.0	HHC				sS	pS	19 32 34.3	+6.2	**G64A**	**Maxfield**	**62.90**	**308**	P	P	19 24 38.7	-1.0
GGR				IVmB_BB		19 23 32.7		HHC				pmax	pmax				baz=51					
	comp=Z,259nm,1.2s								comp=Z,46nm,1.4s						**CHGQ**	**Chibougamau**	**62.91**	**315**	P	P	19 24 37.8	-2.0
GGR				IVMs_BB	IVMs_BB	19 49 41.6		HHC				pmax	pmax				baz=50					
	comp=Z,366nm,18.7s								comp=Z,220nm,5.0s						**A21K**	**Barrow**	**63.10**	**1**	P	**P**	**19 24 41.2**	**+0.6**
URV	**Uravakonda**	**51.94**	**110**	*e*P	P	19 23 21.2	-1.6	HHC				LR	LR			A21K				IAMs_20	IAMs_20	19 57 17.8	
URV				IVmB_BB		19 23 32.8			comp=Z,2μm,16.3s							comp=Z,2μm,20.0s					
	comp=Z,167nm,1.5s							HHC				LR	LR			**SEY**	**Seymchan**	**63.15**	**25**	*i* P	P	19 24 40.6	-0.5
URV				IVMs_BB	IVMs_BB	19 51 07.7			comp=Z,4μm,16.2s						**C36M**	**Paulatuk**	**63.17**	**349**	P	P	19 24 40.4	-0.6
	comp=Z,300nm,14.6s							HHC				LR	LR				baz=22					
SONM	**Songino Array**	**51.95**	**57**	P	P	19 23 22.1	-0.5		comp=Z,5μm,16.7s						**C36M**	**Paulatuk**	**63.17**	**349**	P	**P**	**19 24 40.6**	**-0.5**
	comp=Z,33nm,0.8s,baz=295,slow=8.5,SNR=202							**CD2**	**Chengdu**	**59.69**	**76**⇓	*i* P	**P**	**19 24 18.5**	**+0.2**	C36M				IAmb	IAmb	19 24 53.2	
SONM				PcP	**PcP**	**19 24 33.1**	**-1.7**	CD2				pP	pP	19 24 29.9	+1.0		comp=Z,37nm,1.1s					
	comp=Z,4.8nm,0.6s,baz=281,slow=4.1,SNR=4.7							CD2				sP	sP	19 24 33.1	0.0	C36M				IAMs_20	IAMs_20	19 52 58.7	
SONM				LR	LR	19 47 13.4		CD2				S	**S**	**19 32 22.5**	**-4.0**		comp=Z,2μm,20.0s					
	comp=Z,9μm,19.7s,baz=302,slow=38							CD2				sS	pS	19 32 43.3	+3.9	**PKME**	**Peaks-Kenny Pk**	**63.19**	**308**	P	**P**	**19 24 41.4**	**-0.2**
SONM	**Songino Array**	**51.95**	**57**	P	**P**	**19 23 22.8**	**+0.1**	CD2				SS	**SS**	**19 36 20.3**	**-1.9**		baz=51					
NJS	**Nagarjunasagar**	**52.14**	**106**	*e*P	P	19 23 22.8	-1.5	CD2				pmax	pmax			**LATQ**	**La Tuque**	**63.72**	**312**	P	P	19 24 44.3	-0.8
NJS				IVmB_BB		19 23 34.4			comp=Z,130nm,0.7s								baz=50					
	comp=Z,193nm,1.2s							CD2				pmax	pmax			**G62A**	**West of Eustis**	**63.90**	**309**	P	**P**	**19 24 46.1**	**-0.3**
NJS				IVMs_BB	IVMs_BB	19 50 54.5			comp=Z,590nm,8.6s								baz=50					
	comp=Z,289nm,12.5s							CD2				LR	LR			**ENH**	**Enshi**	**63.94**	**73**	P	**P**	**19 24 46.5**	**-0.4**
GTA	**Gaotai**	**52.15**	**69**	⇑P	**P**	**19 23 24.3**	**0.0**		comp=Z,2μm,17.4s						ENH				IAMs_20	IAMs_20	19 56 07.8	
GTA				pP	pP	19 23 35.0	+0.2	CD2				LR	LR				comp=Z,2μm,21.0s					
GTA				sP	sP	19 23 38.9	-0.1		comp=Z,2μm,14.7s						**D58A**	**Chemin du LacG**	**63.95**	**312**	P	P	19 24 45.3	-1.4
GTA				PcP	**PcP**	**19 24 35.8**	**0.0**	CD2				LR	LR				baz=50					
GTA				S	**S**	**19 30 48.3**	**+2.0**		comp=Z,2μm,13.8s						**CHTO**	**Chiang Mai**	**64.14**	**89**	P	P	19 24 47.6	-0.7
GTA				sS	pS	19 31 03.5	+4.7	**ZEA**	**Zeya**	**59.83**	**43**	*e*P	**P**	**19 24 19.3**	**+0.5**	CHTO				pmax	pmax		
								ZEA				*e*		19 25 05.7			comp=Z,161nm,1.1s					
																CHTO				MLR	MLR		

comp=Z,1µm,21.0s
CHTO Chiang Mai 64.14 89 P P 19 24 47.6 -0.7
CM34 Chiang Mai Arr 64.26 89 P P 19 24 32.0 -17
CMAR Chiang Mai Arr 64.38 90 P P 19 24 48.5 -1.3
comp=Z,48nm,0.8s,baz=304,slow=7.7,SNR=18
CMAR LR LR 19 58 05.0
comp=Z,1µm,21.8s,baz=355,slow=41
CMAR Chiang Mai Arr 64.38 90 P **P** **19 24 49.7 -0.2**
CMAR Chiang Mai Arr 64.38 90 P **P** **19 24 49.7 -0.2**
G61A St-Isidore-de- 64.40 309 P **P** **19 24 49.7 +0.1**
baz=50
PAYA Payao 64.42 88 P P 19 24 44.1 -6.0
GYA Guiyang 64.47 78 ⇓P **P** **19 24 50.3 -0.2**
GYA pP pP 19 25 01.8 +0.5
GYA S **S** **19 33 26.3 -0.8**
GYA SKS **SKSac** **19 34 41.8 -0.5**
GYA SS **SS** **19 37 34.1 -3.2**
GYA pmax pmax
comp=Z,41nm,0.9s
GYA pmax pmax
comp=Z,350nm,4.2s
GYA LR LR
comp=Z,1µm,18.6s
GYA LR LR
comp=Z,940nm,15.4s
GYA LR LR
comp=Z,1µm,19.1s
MATQ Matagami 64.61 316 P P 19 24 49.3 -1.7
baz=48
E58A La Victoria 64.63 311 P P 19 24 50.0 -1.1
baz=49
LSQQ Lebel-sur-Quev 64.75 315 P P 19 24 50.4 -1.5
baz=48
PBA Port Blair 64.75 99 IAMs_20 IAMs_20 19 56 52.6
comp=Z,2µm,21.0s
MOQ Mont Orford 64.77 310 P **P** **19 24 51.6 -0.6**
LAMP Lampang 64.82 89 P P 19 24 41.9 -11
KLR Kul'dur 64.87 44 *i* P P 19 24 52.1 -0.5
KLR pmax pmax
comp=Z,41nm,1.0s
KLR MLR MLR
comp=Z,3µm,17.0s
E57A Chemin Saint G 65.06 312 P P 19 24 52.9 -1.0
baz=49
H61A Lyndonville 65.10 309 P **P** **19 24 53.9 -0.3**
baz=49
TIA Tai'an 65.10 63 P P 19 24 53.9 -0.5
TIA pmax pmax
comp=Z,23nm,0.8s
TIA pmax pmax
comp=Z,380nm,5.1s
TIA LR LR
comp=Z,1µm,13.9s
TIA LR LR
comp=Z,1µm,21.2s
TIA LR LR
comp=Z,3µm,19.6s
CN2 Changchun 65.14 52 *e*P P 19 24 53.9 -0.6
CN2 pP pP 19 25 04.3 -1.0
CN2 *e*S **S** **19 33 33.8 -0.9**
CN2 pmax pmax
comp=Z,50nm,0.7s
CN2 LR LR
comp=Z,3µm,14.0s
CN2 LR LR
comp=Z,4µm,14.0s
CN2 LR LR
comp=Z,6µm,15.0s
INK Inuvik 65.24 352 P P 19 24 53.0 -1.6
comp=Z,5.0nm,0.6s,baz=1.7,slow=6.6,SNR=8.3
INK Inuvik 65.24 352 P P 19 24 53.8 -0.9
INK pmax pmax
comp=Z,40nm,1.4s
INK MLR MLR
comp=Z,1µm,21.0s
INK Inuvik 65.24 352 P P 19 24 53.8 -0.9
INK IAMs_20 IAMs_20 19 53 06.5
comp=Z,1µm,21.0s
MA2 Magadan 65.24 28 *i* P P 19 24 53.4 -1.5
MA2 pmax pmax
comp=Z,35nm,0.9s
MA2 MLR MLR
comp=Z,2µm,17.0s
MA2 Magadan 65.24 28 P **P** **19 24 55.1 +0.2**
TSUM Tsumeb 65.33 190 P P 19 24 54.3 -1.7
TSUM Tsumeb 65.33 190 IAMs_20 IAMs_20 19 58 07.0
comp=Z,1µm,18.0s
D55A Sainte-Anne-du 65.35 313 P P 19 24 54.7 -1.1
baz=48
SNY Shenyang 65.37 55 ⇓P P 19 24 55.3 -0.7
SNY ScS SKiKP 19 34 47.1 -15
SNY pmax pmax
comp=Z,22nm,1.4s
SNY pmax pmax
comp=Z,110nm,5.9s
SNY LR LR
comp=Z,4µm,17.7s
SNY LR LR
comp=Z,6µm,17.3s
SNY LR LR
comp=Z,10µm,16.7s
VLDQ Val d'Or 65.62 315 P **P** **19 24 57.3 -0.2**
BLWY Bulawayo 65.69 178 *i* P **P** **19 24 58.1 -0.2**
BLWY Bulawayo 65.69 178 *i* P **P** **19 24 58.1 -0.2**
TOLK Toolik Lake Re 65.80 359 P **P** **19 24 58.7 +0.3**
baz=2.5,SNR=6.2
TOLK Toolik Lake Re 65.80 359 P **P** **19 24 58.7 +0.3**
TOLK IAMs_20 IAMs_20 19 51 34.2
comp=Z,2µm,20.0s
G58A Ormstown 65.84 310 P **P** **19 24 58.2 -0.8**
baz=49
SLVN Son La 65.92 84 P P 19 24 59.1 -0.9
SLVN IAmb IAmb 19 25 00.7
comp=Z,36nm,0.7s
SLVN IAMs_20 IAMs_20 19 57 57.1
comp=Z,2µm,21.0s
H59A Cadyville 65.98 310 P P 19 24 58.5 -1.4
baz=49
UTTA Uttaradit 65.99 89 P P 19 24 55.4 -4.9
GRNR Gornyy 66.04 41 ⇑*i*P **P** **19 25 00.0 -0.2**
GRNR *e* 19 27 33.8
GRNR *e*S **S** **19 33 49.3 +3.8**
GRNR pmax pmax
comp=E,10.0nm,1.3s
GRNR pmax pmax
comp=N,10.0nm,1.2s
GRNR pmax pmax
comp=Z,40nm,1.1s
GRNR smax smax
comp=N,1.0nm,1.0s
GRNR MLR MLR
comp=N,3µm,17.0s
GRNR MLR MLR
comp=E,2µm,17.0s
GRNR MLR MLR
comp=Z,5µm,17.0s
DL2 Dalian 66.12 58 P P 19 25 00.3 -0.5
DL2 S **S** **19 33 46.0 -0.7**
DL2 pmax pmax
comp=Z,29nm,0.7s
DL2 pmax pmax
comp=Z,470nm,5.0s
DL2 LR LR
comp=Z,3µm,15.9s
DL2 LR LR
comp=Z,2µm,15.3s
DL2 LR LR
comp=Z,5µm,16.1s
RDOG Red Dog Mine 66.16 4 P **P** **19 25 00.4 -0.3**
RDOG IAmb IAmb 19 25 14.3
comp=Z,82nm,1.2s
RDOG IAMs_20 IAMs_20 19 53 22.8
comp=Z,2µm,21.0s
NKL Nikolayevsk 66.24 37 *e*P P 19 24 58.8 -2.5
NKL *e*S S 19 34 01.8 +14
NKL pmax pmax
comp=E,75nm,0.5s
NKL pmax pmax
comp=N,5.0nm,1.3s
NKL pmax pmax
comp=Z,34nm,1.3s
NKL MLR MLR
comp=N,81nm,11.0s
NKL MLR MLR
comp=E,1µm,11.0s
NKL MLR MLR
comp=Z,6µm,17.0s
PHIT Phitsanulok 66.27 89 P P 19 24 55.0 -7.1
G57A Newington 66.36 311 P P 19 25 01.5 -0.9
baz=48
I59A Olmsteadville 66.64 309 P **P** **19 25 03.6 -0.6**
baz=48
MDJ Mudanjiang 66.85 49 P P 19 25 04.5 -0.9
MDJ pmax pmax
comp=Z,400nm,4.6s
BMAR Burnt Mountain 66.87 357 P **P** **19 25 05.6 +0.4**
WHN Wuhan 66.97 69 ⇓*i*P **P** **19 25 06.3 -0.1**
WHN sP **pP** **19 25 17.6 +0.4**
WHN S **S** **19 34 00.3 +3.0**
WHN pmax pmax
comp=Z,69nm,1.0s
WHN pmax pmax
comp=Z,470nm,5.4s
WHN LR LR
comp=Z,3µm,16.2s
WHN LR LR
comp=Z,2µm,10.8s
WHN LR LR
comp=Z,5µm,18.2s
H57A Richville 67.01 311 P **P** **19 25 05.8 -0.6**
baz=48
K61A Williamstown 67.06 308 P **P** **19 25 07.4 +0.6**
baz=48
ABPO Ambohimpanom 67.09 159 *i* P **P** **19 25 07.4 +0.1**
ABPO Ambohimpanom 67.09 159 P **P** **19 25 07.0 -0.3**
ABPO pmax pmax
comp=Z,37nm,1.4s
ABPO Ambohimpanom 67.09 159 P **P** **19 25 07.0 -0.3**
ABPO Ambohimpanom 67.09 159 *i* P **P** **19 25 07.4 +0.1**
J59A Piesco 67.20 309 P **P** **19 25 07.6 -0.1**
baz=48
M63A Gales Ferry 67.22 306 P **P** **19 25 07.8 0.0**
baz=48
COLD Coldfoot 67.23 359 P **P** **19 25 07.5 0.0**
baz=2.0,SNR=9.5
COLD Coldfoot 67.23 359 P **P** **19 25 07.5 0.0**
COLD IAmb IAmb 19 25 20.4
comp=Z,43nm,1.2s
COLD IAMs_20 IAMs_20 19 58 05.0
comp=Z,1µm,20.0s
SRDT SRDT 67.31 93 P P 19 24 56.9 -12
ALGO Algonquin Park 67.38 313 P P 19 25 07.3 -1.5
baz=47
I57A Carthage 67.50 310 P **P** **19 25 09.3 -0.4**
baz=47
NONG Nongkai 67.58 87 P P 19 25 09.0 -1.4
YKA Yellowknife Ar 67.75 342 P P 19 25 09.8 -1.1
comp=Z,35nm,0.6s,baz=31,slow=6.2,SNR=180
YKA LR LR 19 54 25.2
comp=Z,769nm,18.1s,baz=0.0,slow=36
G54A Lake Saint Pet 67.78 313 P P 19 25 10.1 -1.2
baz=47
CHAI Chaiyaphum 68.24 89 P P 19 25 14.0 -0.6
comp=Z,0.2nmcomp=Z,728nmcomp=Z,65nm,1.1s
TNA Tin City 68.31 7 IAMs_20 IAMs_20 19 58 33.5
comp=Z,1µm,21.0s
L59A Walton 68.35 309 P **P** **19 25 14.9 -0.2**
baz=47,SNR=5.1
L59A Walton 68.35 309 P **P** **19 25 14.5 -0.5**
USA0B Ussuriysk Arra 68.39 48 P **P** **19 25 14.8 -0.4**
USA0B pmax pmax
comp=Z,64nm,1.2s
USA0B Ussuriysk Arra 68.39 48 P **P** **19 25 14.8 -0.4**
USA0B IAmb IAmb 19 25 27.4
comp=Z,64nm,1.2s
USRK Ussuriysk Ar. 68.39 48 P P 19 25 13.6 -1.6
comp=Z,16nm,0.8s,baz=287,slow=5.4,SNR=29
USRK LR LR 19 58 32.2
comp=Z,4µm,19.0s,baz=316,slow=39
USRK Ussuriysk Ar. 68.39 48 P P 19 25 14.7 -0.5
USRK Ussuriysk Ar. 68.39 48 P P 19 25 14.7 -0.5
IMAR Indian Mountai 68.49 0 P **P** **19 25 15.3 -0.2**
J56A Wolcott 68.59 310 P **P** **19 25 16.5 +0.1**
baz=47
H53A Bobcaygeon 68.60 312 P **P** **19 25 16.2 -0.3**
baz=46
PHET Kaeng Krachan 68.66 93 P **P** **19 25 17.3 +0.1**
comp=Z,0.4nmcomp=Z,478nmcomp=Z,38nm,0.9s
BINY Binghamton 68.86 309 P **P** **19 25 17.5 -0.7**
baz=47
L58A Harry Jones Me 68.89 309 P **P** **19 25 18.2 -0.1**
baz=47
NJ2 Nanjing 68.89 65 ⇓*i*P P 19 25 18.0 -0.5
NJ2 pP pP 19 25 29.3 0.0
NJ2 sP sP 19 25 34.3 +0.9
NJ2 PP **PP** **19 27 49.3 -1.2**
NJ2 S **S** **19 34 19.3 -0.9**
NJ2 sS pS 19 34 33.9 +0.4
NJ2 pmax pmax
comp=Z,28nm,0.6s
NJ2 pmax pmax
comp=Z,310nm,3.5s
NJ2 LR LR
comp=Z,1µm,16.6s
NJ2 LR LR
comp=Z,1µm,15.2s
NJ2 LR LR
comp=Z,2µm,18.0s
M59A Waymart 69.01 308 P **P** **19 25 19.8 +0.7**
baz=47
VLA Vladivostok 69.08 49 *i* P P 19 25 17.4 -2.1
VLA pmax pmax
comp=Z,39nm,1.1s
VLA MLR MLR
comp=Z,6µm,17.0s
N60A Cedar Hill Far 69.28 308 P **P** **19 25 21.1 +0.3**
baz=47
POKR Poker Plat Res 69.28 358 P **P** **19 25 20.9 +0.5**
baz=4.0,SNR=6.3
POKR Poker Plat Res 69.28 358 P **P** **19 25 20.7 +0.3**
POKR IAmb IAmb 19 25 33.6
comp=Z,88nm,1.4s
POKR IAMs_20 IAMs_20 19 54 17.3
comp=Z,2µm,22.0s
I23K Minto, Yukon-K 69.30 358 P **P** **19 25 21.3 +0.8**
baz=2.6
I23K Minto, Yukon-K 69.30 358 P **P** **19 25 20.8 +0.3**
I23K IAmb IAmb 19 25 34.5
comp=Z,58nm,1.1s
EGAK Eagle 69.33 355 P **P** **19 25 20.4 -0.3**
EGAK IAMs_20 IAMs_20 19 53 53.5
comp=Z,1µm,22.0s
MLY Manley 69.44 359 P **P** **19 25 22.1 +0.7**
baz=1.6
L57A Andrews Acres 69.46 309 P P 19 25 21.0 -1.0
baz=46
MDM Murphy Dome 69.47 358 P **P** **19 25 21.6 +0.1**
MDM IAmb IAmb 19 25 35.2
comp=Z,75nm,1.2s
MDM IAMs_20 IAMs_20 19 54 23.1
comp=Z,1µm,21.0s
ANM Nome 69.48 6 P **P** **19 25 22.0 +0.4**
ANM pmax pmax
comp=Z,425nm,2.0s
ANM MLR MLR
comp=Z,2µm,22.0s
ANM Nome 69.48 6 P **P** **19 25 22.0 +0.4**
ANM IAMs_20 IAMs_20 19 55 55.6
comp=Z,2µm,22.0s
PATY Pattaya 69.51 92 P **P** **19 25 22.8 +0.3**
comp=Z,0.3nmcomp=Z,4µmcomp=Z,66nm,0.8s
COLA College 69.54 358 P **P** **19 25 22.0 +0.1**
COLA pmax pmax
comp=Z,24nm,0.9s
COLA MLR MLR
comp=Z,2µm,22.0s
COLA College 69.54 358 P **P** **19 25 22.0 +0.1**
COLA College 69.54 358 IAMs_20 IAMs_20 19 54 36.1
comp=Z,1µm,22.0s
TCOL CIGO, UAF Yank 69.54 358 P **P** **19 25 22.3 +0.3**
baz=3.7
TCOL CIGO, UAF Yank 69.54 358 IAMs_20 IAMs_20 19 54 36.1
comp=Z,2µm,22.0s
SRAK Srakaew 69.58 91 P **P** **19 25 25.0 +2.1**
IL31 69.61 357 P **P** **19 25 22.4 0.0**
IL31 IAmb IAmb 19 25 35.0
comp=Z,64nm,1.8s
ILAR Eielson Array 69.61 357 P P 19 25 21.2 -1.2
comp=Z,2.5nm,0.6s,baz=350,slow=5.7,SNR=29
ILAR PKPPKP P'P'df 19 53 27.5 -8.2
comp=Z,0.8nm,1.0s,baz=183,slow=5.1,SNR=3.3
ILAR LR LR 19 54 38.8
comp=Z,984nm,21.9s,baz=6.5,slow=35
ILAR Eielson Array 69.61 357 P **P** **19 25 21.9 -0.6**
ILAR Eielson Array 69.61 357 P **P** **19 25 21.9 -0.6**
N59A State Game Lan 69.62 308 P **P** **19 25 22.9 0.0**
baz=46
N59A State Game Lan 69.62 308 P P 19 25 22.0 -0.9
N59A IAmb IAmb 19 25 36.8
comp=Z,103nm,1.7s
GAMB Gambell 69.70 9 IAMs_20 IAMs_20 19 57 23.3
comp=Z,2µm,20.0s
L56A Greenwood 69.75 310 P **P** **19 25 23.3 -0.4**
baz=46
CCB Clear Creek Bu 69.77 358 P **P** **19 25 23.3 -0.1**
CCB IAmb IAmb 19 25 35.9
comp=Z,74nm,1.8s
CCB IAMs_20 IAMs_20 19 54 52.1
comp=Z,1µm,20.0s
O60A Telford 69.83 307 P **P** **19 25 24.1 0.0**
baz=46
NEA2 Nenana 69.85 358 P **P** **19 25 23.9 0.0**
baz=2.8,SNR=6.0
WRH Wood River Hil 69.95 358 P **P** **19 25 24.3 -0.2**
WRH IAmb IAmb 19 25 37.1
comp=Z,72nm,1.3s
HDA Harding Lake 69.98 357 P **P** **19 25 24.2 -0.4**
baz=4.4,SNR=17
INCN Inchon 70.01 57 P **P** **19 25 24.9 -0.4**
INCN pmax pmax
comp=Z,38nm,0.8s
INCN MLR MLR
comp=Z,4µm,19.0s
INCN Inchon 70.01 57 P **P** **19 25 24.9 -0.4**
INCN IAmb IAmb 19 25 25.4
comp=Z,38nm,0.8s
M57A Sunshine Farm, 70.07 309 P **P** **19 25 25.3 -0.4**
baz=46
K27K Chicken 70.13 355 P **P** **19 25 25.8 +0.2**
baz=8.0
K27K Chicken 70.13 355 P **P** **19 25 25.7 +0.1**
K27K IAmb IAmb 19 25 38.8
comp=Z,92nm,1.1s
TEY Ternei 70.16 45 ⇑*i*P P 19 25 25.0 -1.1
TEY *e* 19 25 36.5
TEY pmax pmax
comp=Z,60nm,0.7s
N58A Sunbury 70.19 308 P **P** **19 25 26.2 -0.1**
baz=46
SCRK Sand Creek 70.29 356 P **P** **19 25 26.5 -0.2**
baz=6.5,SNR=6.5
M56A Emporium 70.54 310 P P 19 25 27.4 -1.1
baz=46
LBTB Lobatse 70.55 181 *i* P **P** **19 25 28.1 -0.5**
LBTB Lobatse 70.55 181 P **P** **19 25 28.1 -0.5**
LBTB pmax pmax
comp=Z,59nm,1.0s
LBTB Lobatse 70.55 181 P **P** **19 25 28.1 -0.5**
LBTB IAmb IAmb 19 25 29.0
comp=Z,59nm,1.0s
LBTB Lobatse 70.55 181 *i* P **P** **19 25 28.1 -0.5**
DOT Dot Lake 70.62 356 P **P** **19 25 28.8 +0.1**
DOT IAmb IAmb 19 25 42.4
comp=Z,64nm,1.0s
DOT IAMs_20 IAMs_20 19 54 37.6
comp=Z,1µm,22.0s
N57A Milroy 70.71 309 P **P** **19 25 29.2 -0.4**
baz=46
MCK McKinley 70.71 358 P **P** **19 25 29.0 -0.2**
baz=2.9,SNR=7.3
KS19 Wonju Array Si 70.72 56 P **P** **19 25 29.2 -0.5**
KS19 IAmb IAmb 19 25 42.1
comp=Z,50nm,1.0s
KSAR Wonju Array Be 70.77 56 P P 19 25 28.8 -1.1
KSAR Wonju Array Be 70.77 56 P P 19 25 28.8 -1.1
KSRS Korea Array 70.78 56 P P 19 25 28.1 -1.9
comp=Z,28nm,0.7s,baz=318,slow=5.2,SNR=104
KSRS LR LR 19 59 09.5
comp=Z,3µm,18.2s,baz=310,slow=38
M55A Ridgway 70.86 310 P **P** **19 25 29.8 -0.7**
M55A IAmb IAmb 19 25 43.0
comp=Z,123nm,1.6s
KTH Kantishna Hill 70.93 359 P P 19 25 29.9 -0.6
KTH IAMs_20 IAMs_20 20 00 08.7
comp=Z,1µm,21.0s
FFC Flin Flon 70.93 332 P P 19 25 29.9 -0.7
FFC pmax pmax
comp=Z,113nm,1.8s
FFC Flin Flon 70.93 332 P P 19 25 29.9 -0.8
FFC IAmb IAmb 19 25 44.9
comp=Z,113nm,1.8s
SSPA Standing Stone 70.97 309 P **P** **19 25 31.5 +0.4**
baz=45
SSPA Standing Stone 70.97 309 P P 19 25 30.3 -0.9
N56A West Decatur 71.00 309 P **P** **19 25 31.3 0.0**
baz=45
SSE Sheshan 71.01 65 P P 19 25 30.6 -0.9
SSE S **S** **19 34 46.4 +1.4**
SSE pmax pmax
comp=Z,20nm,0.6s
SSE pmax pmax
comp=Z,99nm,3.5s
SSE LR LR
comp=Z,340nm,14.2s
SSE LR LR
comp=Z,710nm,13.6s
SSE Sheshan 71.01 65 IAMs_20 IAMs_20 19 58 47.8
comp=Z,2µm,20.0s
TRF Thorofare Moun 71.02 359 P P 19 25 30.6 -0.7
RND Reindeer 71.04 358 P P 19 25 30.3 -0.9
RND pmax pmax
comp=Z,22nm,0.9s
RND MLR MLR
comp=Z,1µm,21.0s
RND Reindeer 71.04 358 P P 19 25 30.3 -1.0
RND IAMs_20 IAMs_20 19 55 10.7
comp=Z,1µm,21.0s
BCAR Beaver Creek A 71.07 355 P **P** **19 25 31.1 -0.3**
UBPT Khong Chiam 71.10 87 P P 19 25 31.4 -0.9
UBPT IAmb IAmb 19 25 43.8
comp=Z,42nm,1.1s
L26K Log Cabin Wild 71.20 355 P **P** **19 25 32.8 +0.6**
baz=7.0,SNR=8.8
MENT Mentasta 71.31 356 IAMs_20 IAMs_20 19 55 12.8
comp=Z,957nm,20.0s
L53A Girard 71.31 311 P **P** **19 25 32.7 -0.5**
baz=45
M54A Oil Creek Stat 71.31 311 P **P** **19 25 32.5 -0.7**
baz=45
DHY Denali Highway 71.33 357 P **P** **19 25 32.8 -0.3**
DHY IAmb IAmb 19 25 45.7
comp=Z,73nm,1.1s
DHY IAMs_20 IAMs_20 19 55 33.3
comp=Z,1µm,21.0s
PAX Paxson 71.36 356 IAMs_20 IAMs_20 19 55 47.2
comp=Z,1µm,22.0s
E43A Lone Tree Farm 71.45 318 P P 19 25 33.1 -0.8
E43A IAmb IAmb 19 25 45.9
comp=Z,60nm,1.3s
TTA Tatalina 71.53 2 P **P** **19 25 34.7 +0.5**
TTA pmax pmax
comp=Z,64nm,1.4s
TTA MLR MLR
comp=Z,1µm,20.0s
TTA Tatalina 71.53 2 P **P** **19 25 34.7 +0.5**
TTA IAmb IAmb 19 25 47.6
comp=Z,64nm,1.4s
TTA IAMs_20 IAMs_20 20 02 47.7
comp=Z,1µm,20.0s
QIZ Qiongzhong 71.58 81 P **P** **19 25 35.3 +0.2**
QIZ S **S** **19 34 57.5 +5.5**
QIZ pmax pmax
comp=Z,49nm,0.9s
QIZ pmax pmax
comp=Z,190nm,2.7s
QIZ LR LR
comp=Z,770nm,18.3s
QIZ LR LR
comp=Z,290nm,16.2s
QIZ LR LR
comp=Z,670nm,21.1s
QIZ Qiongzhong 71.58 81 P **P** **19 25 34.9 -0.2**
QIZ IAmb IAmb 19 25 47.9
comp=Z,75nm,1.1s
QIZ Qiongzhong 71.58 81 IAMs_20 IAMs_20 20 00 45.8
comp=Z,1µm,22.0s
PPLA Purkeypile 71.59 360 P P 19 25 33.9 -0.8
O56A Blue Knob Stat 71.60 309 P **P** **19 25 34.8 -0.2**

baz=45
YSS Yuzh-Sakhalins 71.69 41 κ *i*P **P** **19 25 35.7 +0.4**
YSS *e**SP **pP** **19 25 47.4 +1.2**
YSS *e*PPP PPP 19 29 53.0
YSS *e*S **S** **19 34 51.3 -1.1**
YSS pmax pmax
comp=Z,150nm,1.0s
YSS MLR MLR
comp=Z,6µm,16.0s
YSS MLR MLR
comp=E,4µm,17.0s
YSS Yuzh-Sakhalins 71.69 41 P **P** **19 25 35.3 0.0**
P57A Homestead Farm 71.85 308 P **P** **19 25 36.1 -0.4**
baz=45
N54A Moraine State 71.87 310 P P 19 25 35.3 -1.3
baz=44
N54A Moraine State 71.87 310 P P 19 25 35.5 -1.1
Q58A Fox Den Farm, 72.05 308 P **P** **19 25 37.5 -0.1**
baz=45
M24K Tolsona, Glenn 72.25 357 P **P** **19 25 38.8 +0.2**
baz=4.9
M24K Tolsona, Glenn 72.25 357 P **P** **19 25 38.5 -0.1**
M24K IAmb IAmb 19 25 51.1
comp=Z,147nm,1.6s
EYMN Ely 72.29 322 P P 19 25 37.7 -1.2
baz=40
P56A Dayton Farm, R 72.29 309 P **P** **19 25 39.3 +0.2**
baz=45
ULM Lac du Bonnet 72.31 326 P P 19 25 36.9 -2.1
comp=Z,20nm,0.6s,baz=32,slow=6.6,SNR=30
ULM LR LR 19 57 51.3
comp=Z,1µm,20.6s,baz=44,slow=36
ULM Lac du Bonnet 72.31 326 P P 19 25 37.3 -1.7
ULM pmax pmax
comp=Z,24nm,0.7s
ULM Lac du Bonnet 72.31 326 P P 19 25 37.3 -1.7
HKPS Hong Kong Po S 72.33 76 P **P** **19 25 39.4 -0.1**
HKPS IAmb IAmb 19 26 29.1
comp=Z,90nm,1.3s
HKPS IAMs_20 IAMs_20 19 59 49.2
comp=Z,2µm,20.0s
Q57A Strasburg 72.39 308 P **P** **19 25 39.7 0.0**
baz=45
SKT Skwentna 72.51 359 P P 19 25 39.1 -0.9
SKT IAmb IAmb 19 25 53.1
comp=Z,62nm,1.2s
MLSI Meulaboh, Aceh 72.56 102 P P 19 25 39.1 -1.9
comp=Z,129nm,1.0s
O54A Avella 72.64 310 P **P** **19 25 40.8 -0.3**
baz=44
GHO Glory Hole Cre 72.68 358 P **P** **19 25 40.7 -0.4**
GHO IAmb IAmb 19 26 00.2
comp=Z,44nm,0.9s
N25K Chitina, Valde 72.68 356 P **P** **19 25 40.6 -0.5**
baz=6.0
MCWV Mont Chateau 72.72 309 P **P** **19 25 41.6 -0.1**
baz=44,SNR=5.2
MCWV Mont Chateau 72.72 309 P **P** **19 25 41.1 -0.5**
MCWV IAmb IAmb 19 25 55.2
comp=Z,167nm,2.0s
PEA0B Petropavlovsk- 72.74 29 P P 19 25 40.6 -0.9
PEA0B pmax pmax
comp=Z,46nm,1.1s
PEA0B MLR MLR
comp=Z,3µm,18.0s
PEA0B Petropavlovsk- 72.74 29 P P 19 25 40.6 -0.9
PETK Petropavlovsk- 72.74 29 P P 19 25 38.8 -2.7
comp=Z,6.9nm,0.7s,baz=328,slow=12,SNR=20
PETK LR LR 20 01 39.7
comp=Z,3µm,18.4s,baz=316,slow=39
PETK Petropavlovsk- 72.74 29 P P 19 25 40.7 -0.8
PETK Petropavlovsk- 72.74 29 P P 19 25 40.6 -0.9
T60A Surry 72.78 306 IAMs_20 IAMs_20 19 56 53.3
comp=Z,1µm,21.0s
GLB Gilahina Butte 72.81 355 IAMs_20 IAMs_20 19 56 04.4
comp=Z,1µm,22.0s
Q56A Snyder Ridge, 72.81 309 P P 19 25 41.1 -1.1
baz=44,SNR=7.6
Q56A Snyder Ridge, 72.81 309 P P 19 25 41.0 -1.2
Q56A IAmb IAmb 19 25 56.2
comp=Z,106nm,1.4s
WHY Whitehorse 72.84 351 P P 19 25 41.5 -0.6
KLU Klutina 72.86 357 IAMs_20 IAMs_20 19 56 22.8
comp=Z,1µm,21.0s
R57A Stanardsville 72.97 308 P **P** **19 25 43.2 +0.1**
baz=45
VRDI Verde Repeater 73.00 355 IAMs_20 IAMs_20 19 55 35.5
comp=Z,1µm,21.0s
O53A New Philadelph 73.03 311 P **P** **19 25 42.9 -0.6**
baz=44
PET Petropavlovsk 73.13 28 *e*PP **P** **19 25 48.1 +4.3**
PET *e*PPP PPP 19 30 16.6
PET *e*S **S** **19 35 06.4 -2.2**
PET pmax pmax
comp=Z,48nm,1.1s
PET pmax pmax
comp=Z,800nm,11.0s
PET pmax pmax
comp=Z,400nm,14.2s
PET MLR MLR
comp=Z,5µm,18.0s
PET MLR MLR
comp=Z,4µm,16.0s
S58A Poland Farm, P 73.19 307 P P 19 25 43.1 -1.3
baz=45
S58A Poland Farm, P 73.19 307 P P 19 25 43.6 -0.8
S58A IAmb IAmb 19 25 58.3
comp=Z,60nm,1.4s
E38A The Farm, Brul 73.34 321 P P 19 25 44.1 -1.1
T59A Double "B" Far 73.37 306 P P 19 25 44.5 -1.0
baz=45
R56A Bull Pasture M 73.38 308 P **P** **19 25 45.5 -0.1**
baz=44
SVW2 Sparrevohn 73.38 1 P **P** **19 25 45.4 +0.2**
RC01 Rabbit Creek A 73.38 358 P **P** **19 25 45.2 0.0**
baz=2.3
O52A Adamsville 73.46 311 P P 19 25 44.6 -1.4
baz=44,SNR=6.7
QZH Quanzhou 73.50 71 P P 19 25 45.8 -0.6
QZH S **SKiKP** **19 35 13.8 -0.2**
QZH pmax pmax
comp=Z,320nm,7.6s
QZH LR LR
comp=Z,1µm,21.8s
QZH LR LR
comp=Z,590nm,16.6s
QZH LR LR
comp=Z,1µm,17.1s
ISLE Juniper Island 73.55 355 P **P** **19 25 46.1 -0.3**
V61A Roper 73.64 305 IAMs_20 IAMs_20 19 53 53.2
comp=Z,1µm,22.0s
JTU Tsushima 73.67 57 P P 19 25 46.6 -0.8
P53A Whipple 73.68 310 P **P** **19 25 46.6 -0.7**
baz=44,SNR=8.2
P53A Whipple 73.68 310 P P 19 25 46.3 -1.0
KNMB Chin-men Tao 73.69 72 IAMs_20 IAMs_20 20 03 19.1
comp=Z,2µm,20.0s
Q54A Coxs Mills 73.74 309 P **P** **19 25 47.4 -0.3**
baz=44
ASAJ Asahikawa 73.75 43 LR LR 20 00 59.2
comp=Z,5µm,20.4s,baz=346,slow=38
ASAJ Asahikawa 73.75 43 P **P** **19 25 47.2 -0.4**
ASAJ pmax pmax
comp=Z,58nm,1.1s
ASAJ MLR MLR
comp=Z,5µm,21.0s
JKA Kamikawa-asahi 73.75 43 P **P** **19 25 47.2 -0.4**
JKA IAmb IAmb 19 25 59.8
comp=Z,58nm,1.1s
G40A Rib Lake 73.76 319 P P 19 25 46.3 -1.4
TPTI 73.82 102 P P 19 26 00.3 +12
O51A Pataskala 73.84 311 P P 19 25 46.7 -1.6
baz=43,SNR=8.2
AGMN Agassiz Nation 73.85 324 P P 19 25 46.5 -1.7
baz=38
AGMN Agassiz Nation 73.85 324 P P 19 25 46.9 -1.3
T58A Grand View Acr 73.94 307 P P 19 25 47.9 -1.0
baz=44
P52A Corning 73.97 311 P P 19 25 47.1 -1.9
baz=43,SNR=5.2
P52A Corning 73.97 311 P P 19 25 47.7 -1.3
P52A IAmb IAmb 19 26 01.6
comp=Z,150nm,1.8s
ACSO Alum Creek Sta 73.98 312 P P 19 25 47.3 -1.8
baz=43
O22K Cooper Landing 73.99 358 P **P** **19 25 48.3 -0.4**
baz=2.3
O22K Cooper Landing 73.99 358 P **P** **19 25 48.5 -0.2**
O22K IAmb IAmb 19 26 17.8
comp=Z,49nm,0.6s
S56A Natural Bridge 73.99 308 P **P** **19 25 49.5 +0.3**
baz=44
V60A Jim Taylor Roa 74.06 305 IAMs_20 IAMs_20 19 58 10.0
comp=Z,984nm,20.0s
BOSA Boshof 74.14 182 P P 19 25 48.5 -1.5
comp=Z,17nm,0.7s,baz=4.3,slow=6.2,SNR=54
BOSA LR LR 20 03 29.2
comp=Z,725nm,18.5s,baz=0.0,slow=40
BOSA Boshof 74.14 182 *i*P P 19 25 48.9 -1.1
BOSA Boshof 74.14 182 P P 19 25 49.1 -0.9
BOSA pmax pmax
comp=Z,81nm,1.3s
BOSA Boshof 74.14 182 P P 19 25 49.1 -0.9
BOSA IAmb IAmb 19 26 03.2
comp=Z,81nm,1.3s
BOSA Boshof 74.14 182 *i*P P 19 25 48.9 -1.1
JEW Eniwo 74.15 44 P **P** **19 25 50.1 +0.1**
SKR Severo-Kuril's 74.20 31 *e*P P 19 25 46.7 -3.4
SKR *e*S **SKiKP** **19 35 18.1 +3.7**
SKR pmax pmax
comp=Z,100nm,5.0s
SKR pmax pmax
comp=Z,200nm,5.9s
SKR MLR MLR
comp=Z,1µm,20.0s
SKR MLR MLR
comp=Z,1µm,19.0s
Q53A Leroy 74.20 310 P P 19 25 49.5 -0.9
baz=43
T57A Hurt 74.30 307 P P 19 25 49.8 -1.2
baz=44
U58A Oxford 74.34 306 P P 19 25 49.7 -1.5
baz=44
R54A Victor 74.41 309 P P 19 25 49.9 -1.7
baz=44
Q52A Bidwell 74.53 310 P P 19 25 50.9 -1.4
baz=43
P51A Williamsport 74.57 311 P P 19 25 50.7 -1.8
baz=43
P51A Williamsport 74.57 311 P P 19 25 51.0 -1.5
TSI Tuntungan 74.59 101 P P 19 26 03.4 +10
V59A Middlesex 74.61 306 P **P** **19 25 52.0 -0.8**
baz=44
O49A Covington 74.71 312 P P 19 25 52.2 -1.1
O49A IAmb IAmb 19 26 06.3
comp=Z,54nm,1.2s
KULM Kulim 74.74 98 P P 19 25 53.1 -0.8
KULM IAmb IAmb 19 26 05.7
comp=Z,56nm,1.0s
KULM Kulim 74.74 98 P P 19 25 53.0 -0.8
U57A Blanch 74.75 307 P P 19 25 52.2 -1.4
baz=44
F36A Milaca 74.78 321 P P 19 25 52.2 -1.4
R53A Hurricane 74.82 310 P P 19 25 53.0 -1.0
baz=43
S54A Dingess, Beckl 74.86 309 P P 19 25 53.4 -0.9
baz=44
SPMN Marine on St. 74.96 321 P P 19 25 53.6 -1.1
baz=39
V58A Windy Hill, Pi 75.09 306 IAMs_20 IAMs_20 19 55 14.3
comp=Z,1µm,20.0s
KUR Kuril'sk 75.29 39 *e*P P 19 25 55.2 -1.3
KUR *e* 19 26 08.1
KUR *e* 19 28 44.3
KUR MLR MLR
comp=Z,3µm,15.0s
KUR MLR MLR
comp=N,4µm,20.0s
KUR MLR MLR
comp=E,4µm,19.0s
YUK Yuzh-Kuril'sk 75.33 41 *e*P P 19 25 53.1 -3.7
YUK *e* 19 26 07.4
YUK *e* 19 28 40.8
YUK *e*PPP PPP 19 30 29.3
YUK *e*S **S** **19 35 30.1 -3.5**
YUK *e* 19 36 02.7
YUK *e*SS **SS** **19 40 21.8 -1.0**
YUK *e*SSS SSS 19 43 42.7
YUK pmax pmax
comp=N,72nm,1.0s
YUK pmax pmax
comp=Z,51nm,1.0s
YUK pmax pmax
comp=Z,552nm,1.8s
YUK MLR MLR
comp=E,1µm,17.0s
YUK MLR MLR
comp=Z,3µm,17.0s
YUK MLR MLR
comp=N,3µm,18.0s
PSI Prapat 75.34 101 P P 19 25 55.4 -2.0
comp=N,27nm,0.8s,baz=360,slow=3.9,SNR=20
PSI LR LR 20 03 33.5
comp=N,619nm,21.2s,baz=270,slow=39
PSI Prapat 75.34 101 P P 19 25 56.7 -0.7
PSI pmax pmax
comp=Z,136nm,1.2s
PSI MLR MLR
comp=Z,900nm,22.0s
TATO Taipei 75.38 69 IAMs_20 IAMs_20 20 03 50.0
comp=Z,2µm,20.0s
RPSI Rantau Prapat 75.42 101 P P 19 25 56.6 -1.0
JHS Saijyo 75.49 55 P P 19 25 56.6 -1.4
JTM Tenmabayashi 75.50 46 P P 19 25 57.2 -0.6
GSI Gunungsitoli 75.51 103 P P 19 26 09.8 +12
GSI Gunungsitoli 75.51 103 P **P** **19 25 57.8 -0.4**
GSI IAmb IAmb 19 26 10.6
comp=Z,64nm,1.0s
DLV T Lat 75.52 88 P **P** **19 25 58.4 -0.1**
DLV IAmb IAmb 19 26 11.6
comp=Z,82nm,1.1s
DLV IAMs_20 IAMs_20 20 04 19.1
comp=Z,2µm,22.0s
YHNB Yeheng 75.52 70 P P 19 25 57.7 -0.6
YHNB IAmb IAmb 19 26 31.0
comp=Z,93nm,1.4s
YHNB IAMs_20 IAMs_20 20 03 55.4
comp=Z,2µm,20.0s
JNU Nakatsue 75.53 57 LR LR 20 01 54.4
comp=Z,3µm,20.4s,baz=312,slow=38
JNU Nakatsue 75.53 57 P P 19 25 57.6 -0.6
JNU IAmb IAmb 19 26 10.6
comp=Z,88nm,1.2s
T54A Tazewell 75.54 309 P **P** **19 25 57.6 -0.6**
baz=43
IPM Ipoh 75.58 99 P P 19 25 57.7 -1.0
IPM IAmb IAmb 19 26 10.3
comp=Z,89nm,0.9s
IPM Ipoh 75.58 99 P P 19 25 58.0 -0.7
JFWS Jewell Farm 75.58 318 P P 19 25 56.9 -1.4
JFWS pmax pmax
comp=Z,117nm,1.7s
JFWS Jewell Farm 75.58 318 P P 19 25 57.0 -1.3
baz=40
JFWS Jewell Farm 75.58 318 P P 19 25 56.9 -1.4
JFWS IAmb IAmb 19 26 11.4
comp=Z,117nm,1.7s
JEM Erimo 75.60 44 IAMs_20 IAMs_20 20 01 03.8
comp=Z,3µm,22.0s
ERM Erimo 75.61 44 *i*P P 19 25 56.0 -2.4
ERM pmax pmax
comp=Z,39nm,1.0s
ERM MLR MLR
comp=Z,2µm,21.0s
ERM Erimo 75.61 44 P **P** **19 25 58.8 +0.5**
ERM IAmb IAmb 19 26 14.8
comp=Z,98nm,1.1s
MDND Maddock 75.70 326 P P 19 25 57.7 -1.2
baz=35
W58A Raeford 75.71 306 P P 19 25 57.7 -1.4
baz=44
SSLB Suanglung 75.85 70 P **P** **19 25 59.8 -0.4**
SSLB IAmb IAmb 19 26 14.2
comp=Z,131nm,1.7s
SSLB IAMs_20 IAMs_20 20 03 23.3
comp=Z,2µm,20.0s
RCBR Riachuelo 75.94 246 P P 19 25 59.6 -1.1
RCBR pmax pmax
comp=Z,34nm,0.8s
RCBR MLR MLR
comp=Z,800nm,19.0s
RCBR Riachuelo 75.94 246 P P 19 25 59.6 -1.1
RCBR IAmb IAmb 19 26 01.5
comp=Z,34nm,0.8s
RCBR Riachuelo 75.94 246 *e*P **P** **19 26 00.4 -0.3**
TPUB Ta-pu 75.98 71 P **P** **19 26 00.8 0.0**
TPUB IAmb IAmb 19 26 15.5
comp=Z,151nm,1.5s
TPUB IAMs_20 IAMs_20 20 03 16.6
comp=Z,2µm,22.0s
NACB Ninganchiao 76.01 70 IAMs_20 IAMs_20 20 03 45.3
comp=Z,2µm,19.0s
YULB Yu-li 76.35 71 IAMs_20 IAMs_20 20 04 00.5
comp=Z,2µm,20.0s
JSU Suzuyama 76.43 59 P P 19 26 02.3 -1.1
JWT Wachi 76.57 53 P **P** **19 26 04.1 +0.1**
JWT IAmb IAmb 19 26 16.8
comp=Z,73nm,1.2s
JWT IAMs_20 IAMs_20 20 02 47.2
comp=Z,2µm,19.0s
BLO Bloomington 76.59 313 IAMs_20 IAMs_20 19 58 58.8
comp=Z,2µm,20.0s
TWG Pinlang 76.60 71 IAMs_20 IAMs_20 20 03 37.3
comp=Z,2µm,21.0s
BIRD Birdtown, Kers 76.68 306 IAMs_20 IAMs_20 19 57 55.4
comp=Z,1µm,21.0s
V54A Nebo 76.68 308 P P 19 26 03.6 -1.1
baz=43
KDAK Kodiak Island 76.73 360 P **P** **19 26 04.4 -0.1**
KDAK pmax pmax
comp=Z,206nm,1.7s
KDAK Kodiak Island 76.73 360 P **P** **19 26 04.4 -0.1**
YOJ Yonaguni jima 76.73 69 IAMs_20 IAMs_20 20 03 45.4
comp=Z,2µm,21.0s
JMN Monobe 76.84 55 P **P** **19 26 05.4 -0.2**
JMN IAmb IAmb 19 26 18.5
comp=Z,106nm,1.2s
HDIL Hopedale 76.93 316 P P 19 26 04.4 -1.6
baz=40
Y57A Sumter 77.09 306 IAMs_20 IAMs_20 20 00 03.5
comp=Z,1µm,19.0s
MAJO Matsushiro 77.18 50 P P 19 26 06.8 -0.7
MAJO MLR MLR
comp=Z,2µm,18.0s
MAJO Matsushiro 77.18 50 P P 19 26 06.8 -0.7
MAJO Matsushiro 77.18 50 IAMs_20 IAMs_20 20 03 20.3
comp=Z,2µm,18.0s
MAT Matsushiro 77.18 50 P P 19 26 06.6 -0.9
MAT S **S** **19 35 54.6 +0.3**
MJAR Matsushiro Arr 77.19 50 P P 19 26 05.8 -1.7
comp=Z,13nm,0.8s,baz=337,slow=3.3,SNR=25
MJAR LR LR 20 03 32.0
comp=Z,1µm,18.2s,baz=330,slow=38
MJAR Matsushiro Arr 77.19 50 P P 19 26 06.9 -0.6
MJAR pmax pmax
comp=Z,26nm,1.1s
MJAR Matsushiro Arr 77.19 50 P P 19 26 06.8 -0.7
WCI Wyandotte Cave 77.19 312 P P 19 26 06.1 -1.3
WCI pmax pmax
comp=Z,51nm,1.2s
WCI Wyandotte Cave 77.19 312 P P 19 26 05.9 -1.6
baz=41
WCI Wyandotte Cave 77.19 312 P P 19 26 06.1 -1.4
WCI IAmb IAmb 19 26 20.7
comp=Z,50nm,1.2s
MNSI Mandailing Nat 77.24 102 P P 19 26 18.4 +10
W54A Cherokee Point 77.32 308 P P 19 26 06.8 -1.4
baz=42
INU Inuyama 77.42 52 IAMs_20 IAMs_20 20 07 08.8
comp=Z,913nm,18.0s
JGF Kuroka 77.42 52 P P 19 26 07.8 -1.1
JMM Marumori 77.56 48 P P 19 26 08.6 -0.9
N41A Harden Midland 77.57 317 P P 19 26 07.7 -1.8
N41A IAmb IAmb 19 26 22.4
comp=Z,119nm,1.4s
ECSD EROS Data Cent 77.81 322 P P 19 26 09.4 -1.5
baz=36
ECSD EROS Data Cent 77.81 322 P P 19 26 09.3 -1.6
ECSD IAmb IAmb 19 26 24.7
comp=Z,98nm,1.4s
SUR Sutherland 78.08 185 P **P** **19 26 11.6 -0.8**
SUR IAmb IAmb 19 26 12.4
comp=Z,46nm,1.0s
Z56A Williston 78.16 306 IAMs_20 IAMs_20 19 58 31.5
comp=Z,1µm,22.0s
U49A Red Boiling Sp 78.21 311 P P 19 26 11.8 -1.3
U49A IAmb IAmb 19 26 26.5
comp=Z,96nm,1.4s
SUSD Miller 78.22 324 P P 19 26 11.9 -1.2
baz=35
CPCT Cooper Cave 78.33 309 P P 19 26 12.8 -1.0
CPCT IAmb IAmb 19 26 27.0
comp=Z,63nm,1.3s
JYT Yasato 78.48 49 P P 19 26 13.0 -1.6
JYT IAmb IAmb 19 26 29.3
comp=Z,54nm,0.8s
JSG Sagara 78.56 52 IAMs_20 IAMs_20 20 05 26.8
comp=Z,891nm,19.0s
BKNI Bangkinang 78.58 101 P P 19 26 26.3 +11
BKNI Bangkinang 78.58 101 P P 19 26 14.2 -1.3
BKNI IAmb IAmb 19 26 26.4
comp=Z,42nm,0.9s
LAO LASA Array 79.14 329 P **P** **19 26 18.1 -0.1**
baz=31
LAO LASA Array 79.14 329 P **P** **19 26 17.9 -0.3**
LAO IAMs_20 IAMs_20 19 59 46.3
comp=Z,2µm,22.0s
ROSB Rosrio 79.16 254 *e*P **P** **19 26 17.9 -0.7**
EGMT Eagleton 79.19 332 P **P** **19 26 17.9 -0.6**
baz=29,SNR=5.2
MYKOM Kota Tinggi 79.46 98 P **P** **19 26 19.8 -0.5**
MYKOM IAmb IAmb 19 26 32.6
comp=Z,62nm,1.3s
WVT Waverly 79.58 312 P P 19 26 17.7 -3.0
baz=40
P38A Dawn 79.69 318 P P 19 26 19.6 -1.6
P38A IAmb IAmb 19 26 34.5
comp=Z,73nm,1.4s
SDSI Sungai Dareh 79.76 102 P P 19 26 20.1 -1.8
comp=Z,30nm,1.1s
CCM Cathedral Cave 79.82 315 P P 19 26 20.3 -1.7
CCM pmax pmax
comp=Z,42nm,1.3s
CCM Cathedral Cave 79.82 315 P P 19 26 20.2 -1.8
baz=38
CCM Cathedral Cave 79.82 315 P P 19 26 20.3 -1.7
R40A Maddies Statio 80.14 316 P P 19 26 22.4 -1.3
R40A IAmb IAmb 19 26 36.4
comp=Z,135nm,1.8s
BGNE Belgrade 80.36 321 P P 19 26 23.5 -1.3
baz=35
BGNE Belgrade 80.36 321 P P 19 26 23.4 -1.4
PBMO Poplar Bluff 80.41 314 P P 19 26 23.7 -1.5
PBMO IAmb IAmb 19 26 38.4
comp=Z,59nm,1.2s
KRJI Kerinci 80.62 103 P **P** **19 26 26.3 -0.4**
comp=Z,3µmcomp=Z,288nm,1.1s
JTMT Jette 80.85 335 P P 19 26 26.8 -0.8
JTMT IAmb IAmb 19 26 42.5
comp=Z,125nm,1.2s
JMZ Minamidaito 2 80.98 62 IAMs_20 IAMs_20 20 05 38.8
comp=Z,1µm,19.0s
NEW Newport 81.20 337 P **P** **19 26 28.9 -0.3**
baz=24
LCAR Lake Charles 81.33 314 P P 19 26 28.4 -1.7
HDBT Hernando Brdge 81.48 313 IAMs_20 IAMs_20 19 55 08.2
comp=Z,1µm,19.0s
LRAL Lakeview Retre 81.49 309 P P 19 26 29.2 -1.9
baz=40,SNR=6.1
LRAL Lakeview Retre 81.49 309 P P 19 26 29.3 -1.7
LRAL IAmb IAmb 19 26 44.3
comp=Z,75nm,1.1s
LRAL IAMs_20 IAMs_20 20 01 06.7
comp=Z,2µm,20.0s
KSU1 Kansas State U 81.54 319 P P 19 26 29.7 -1.5
baz=36
RLMT Red Lodge 81.56 330 P **P** **19 26 31.5 0.0**
baz=29
MSO Missoula 81.57 334 P P 19 26 30.0 -1.3
baz=26
SC01 Santiago de lo 81.60 289 IAMs_20 IAMs_20 20 10 06.9
comp=Z,761nm,19.0s
BOZ Bozeman (W) 81.94 332 P P 19 26 32.4 -1.0
BOZ pmax pmax
comp=Z,77nm,1.6s
BOZ Bozeman (W) 81.94 332 P **P** **19 26 32.9 -0.5**
baz=28,SNR=7.9
BOZ Bozeman (W) 81.94 332 P P 19 26 32.4 -1.0

BOZ IAmb IAmb 19 26 48.4
comp=Z,77nm,1.6s
Z47A Carrollton 81.95 310 IAMs_20 IAMs_20 20 02 11.6
comp=Z,2µm,20.0s
U40A Yellville 81.95 315 P P 19 26 31.7 -1.7
baz=38,SNR=6.1
LRM Limekiln Ridge 82.00 333 P P 19 26 32.7 -1.1
B05A Bryant 82.48 340 P P 19 26 34.8 -1.1
baz=21
C06D Leavenworth 82.50 339 P **P** **19 26 36.2 +0.1**
baz=22
WHAR Wooly Hollow 82.51 314 P P 19 26 35.0 -1.3
WHAR IAmb IAmb 19 26 49.1
comp=Z,98nm,1.3s
KSI Kapahiang 82.53 103 P P 19 26 48.0 +11
W41B Gary Mavity, V 82.58 314 P P 19 26 35.2 -1.4
baz=38
W41B Gary Mavity, V 82.58 314 P P 19 26 35.0 -1.7
W41B IAmb IAmb 19 26 49.5
comp=Z,99nm,1.4s
H17A Grant Village 82.65 331 IAMs_20 IAMs_20 20 06 20.5
comp=Z,2µm,19.0s
MCPB Macapa, AP 82.74 262 *e*P P 19 26 36.5 -1.3
D08A Wollman Farm, 82.79 337 P **P** **19 26 37.1 -0.4**
UALR University of 82.94 314 P P 19 26 37.5 -1.1
UALR IAmb IAmb 19 26 52.1
comp=Z,58nm,1.3s
CBKS Cedar Bluff 83.18 321 P P 19 26 38.6 -1.2
CBKS pmax pmax
comp=Z,128nm,1.4s
CBKS Cedar Bluff 83.18 321 P P 19 26 38.8 -1.1
baz=34
CBKS Cedar Bluff 83.18 321 P P 19 26 38.5 -1.3
LHSI Lahat 83.29 102 P P 19 26 51.5 +11
W39A Magazine 83.33 315 P P 19 26 39.5 -1.1
baz=37,SNR=7.7
D03D Eldon 83.40 340 P **P** **19 26 41.6 +0.9**
baz=20
X40A Basin Creek Fa 83.42 314 P P 19 26 39.3 -1.7
baz=37
PHWY Pilot Hill 83.46 326 IAMs_20 IAMs_20 20 08 11.8
comp=Z,906nm,22.0s
KS20 Mayfield South 83.49 319 IAMs_20 IAMs_20 20 09 05.1
comp=Z,1µm,20.0s
PD31 Pinedale Array 83.72 329 P P 19 26 41.2 -1.6
PD31 IAmb IAmb 19 26 56.2
comp=Z,108nm,1.7s
PDAR Pinedale Array 83.72 329 P P 19 26 40.8 -2.0
comp=Z,6.7nm,0.7s,baz=46,slow=4.3,SNR=16
PDAR LR LR 20 06 33.0
comp=Z,1µm,19.4s,baz=32,slow=38
PDAR Pinedale Array 83.72 329 P P 19 26 41.1 -1.7
BW06 Boulder Array 83.72 329 P P 19 26 41.5 -1.3
baz=29
TUL1 Leonard 83.73 317 P P 19 26 41.1 -1.5
baz=36,SNR=6.5
TUL1 Leonard 83.73 317 P P 19 26 41.1 -1.6
MIAR Mount Ida 83.74 314 P P 19 26 41.5 -1.2
baz=37,SNR=7.6
PPBI Pangkal Pinang 83.88 99 P P 19 26 55.1 +11
QUOK Quay 83.96 317 P P 19 26 42.5 -1.3
N23A Red Feather La 84.00 326 P **P** **19 26 44.0 -0.3**
baz=31
N23A Red Feather La 84.00 326 P P 19 26 43.0 -1.3
N23A IAmb IAmb 19 26 58.2
comp=Z,74nm,1.2s
N23A IAMs_20 IAMs_20 20 01 55.1
comp=Z,1µm,19.0s
KSM Kuching 84.17 94 P P 19 26 44.2 -1.0
KSM IAmb IAmb 19 26 58.6
comp=Z,60nm,1.1s
KSM IAMs_20 IAMs_20 20 10 38.0
comp=Z,994nm,22.0s
E04D Cinebar 84.19 340 P **P** **19 26 45.3 +0.5**
baz=21
KSCO Kaye Shedlock' 84.26 323 P **P** **19 26 45.0 -0.4**
baz=33
KSCO Kaye Shedlock' 84.26 323 IAMs_20 IAMs_20 20 05 49.0
comp=Z,1µm,19.0s
AHID Auburn Hatcher 84.27 330 IAMs_20 IAMs_20 20 05 39.3
comp=Z,1µm,19.0s
GDU01 Guandu, BA 84.27 244 *e*P P 19 26 44.2 -1.3
Z41A Richland Creek 84.38 313 P P 19 26 44.7 -1.2
baz=37
LWLI Liwa 84.52 103 P P 19 26 46.3 -0.7
comp=Z,136nm,1.0s
F05D White Salmon 84.54 339 P **P** **19 26 46.5 -0.1**
baz=21
HLID Hailey 84.65 333 P **P** **19 26 46.9 -0.5**
baz=26,SNR=6.2
KLSI 84.74 102 P P 19 26 57.8 +10
SBUM Sibu 84.81 92 P P 19 26 47.5 -0.8
SBUM IAmb IAmb 19 27 02.0
comp=Z,51nm,1.1s
SBUM IAMs_20 IAMs_20 20 11 23.7
comp=Z,787nm,20.0s
KKM Kota Kinabalu 85.06 86 P P 19 26 48.5 -1.3
KASI Kota Agung 85.18 103 P P 19 27 00.8 +11
Q24A Divide 85.34 325 P P 19 26 50.2 -0.9
baz=31
TPI Tanjungpandan 85.35 99 P P 19 27 02.6 +12
PRPB Parauapebas 85.39 256 *e*P **P** **19 26 50.4 -0.9**
BLSI Bandar Lampung 85.58 102 P P 19 27 06.3 +14
G03D McMinnville, O 85.62 340 P **P** **19 26 53.2 +1.2**
baz=20
STKI Sintang 85.99 94 P P 19 27 07.8 +14
J08A Circle Bar Ran 86.07 336 P **P** **19 26 54.1 -0.3**
J08A IAmb IAmb 19 27 08.2
comp=Z,106nm,1.9s
I04A Tendick Farm, 86.74 338 P **P** **19 26 56.9 -0.6**
baz=21
MPU Maple Canyon 86.89 330 P P 19 26 57.9 -0.7
J05D Fort Rock, OR 86.90 337 P **P** **19 26 58.8 +0.3**
baz=21,SNR=5.9
S22A 4UR Ranch, Cre 87.06 325 P P 19 26 58.7 -0.9
baz=30
DUG Dugway, Tooele 87.14 330 P **P** **19 26 59.2 -0.5**
DUG pmax pmax
comp=Z,26nm,1.1s
DUG MLR MLR
comp=Z,1µm,19.0s
DUG Dugway, Tooele 87.14 330 P **P** **19 26 59.6 -0.2**
baz=27,SNR=7.9
DUG Dugway, Tooele 87.14 330 P **P** **19 26 59.2 -0.5**
DUG IAMs_20 IAMs_20 20 07 32.3
comp=Z,1µm,19.0s
PV07 Paradox Valley 87.17 327 IAMs_20 IAMs_20 20 09 52.8
comp=Z,1µm,21.0s
MYLDM Lahad Datu 87.26 85 P **P** **19 27 00.6 +0.1**
PV02 Paradox Valley 87.41 327 IAMs_20 IAMs_20 20 11 19.1
comp=Z,966nm,22.0s
PV17 East Wray Mesa 87.43 327 P P 19 27 00.5 -0.7
PV17 IAmb IAmb 19 27 13.4
comp=Z,97nm,1.9s
ELK Elko 87.45 332 P **P** **19 27 00.7 -0.7**
ELK pmax pmax
comp=Z,117nm,1.7s
ELK MLR MLR
comp=Z,2µm,18.0s
ELK Elko 87.45 332 P P 19 27 00.7 -0.7
SKJI Sukabumi 87.66 102 P P 19 27 01.6 -0.7
Q16A Castle Valley 87.69 329 P P 19 27 01.7 -0.8
WHTX Lake Whitney, 87.72 316 IAMs_20 IAMs_20 20 07 16.1
comp=Z,1µm,21.0s
MOD Modoc Plateau 87.93 336 IAMs_20 IAMs_20 20 09 25.0
comp=Z,1µm,20.0s
PBKI Pangkalan Bun 88.10 96 P P 19 27 17.0 +13
MVCO Mesa Verde 88.18 326 IAMs_20 IAMs_20 20 11 15.7
comp=Z,954nm,20.0s
MSU Marysvale 88.41 329 P P 19 27 05.2 -0.8
MSU Marysvale 88.41 329 P P 19 27 05.2 -0.8
HKT Hockley 88.56 313 *i* P P 19 27 05.2 -1.2
HKT pmax pmax
comp=Z,6.0nm,1.0s
SPR3 Spring Creek 3 88.73 331 P P 19 27 06.8 -0.8
MTPU Mount Pierson 88.83 329 P P 19 27 07.4 -0.8
CISI Cisompet, Garu 88.91 102 P P 19 27 19.7 +11
CISI Cisompet, Garu 88.91 102 P P 19 27 07.2 -1.1
SDV Santo Domingo 89.07 282 P P 19 27 07.3 -2.0
MTKI Muara Teweh, K 89.09 92 P P 19 27 21.2 +12
ANMO Albuquerque 89.32 323 P P 19 27 09.1 -1.1
ANMO pmax pmax
comp=Z,17nm,1.3s
ANMO Albuquerque 89.32 323 P P 19 27 09.2 -1.1
baz=30
ANMO Albuquerque 89.32 323 P P 19 27 09.1 -1.2

R11A Troy Canyon, C 89.73 332 P **P** **19 27 11.5 -0.6**
baz=25,SNR=6.5
U15A North Rim 90.31 328 IAMs_20 IAMs_20 20 09 24.8
comp=Z,1µm,19.0s
PNTR Pine Nut 90.33 335 IAMs_20 IAMs_20 20 09 59.5
comp=Z,1µm,19.0s
PRN Pahroc Range 90.41 331 IAMs_20 IAMs_20 20 09 42.8
comp=Z,1µm,18.0s
RYN Ryan 90.42 334 IAMs_20 IAMs_20 20 08 51.1
comp=Z,1µm,20.0s
ORV Oroville 90.44 336 P P 19 27 14.3 -0.9
ORV pmax pmax
comp=Z,45nm,1.6s
ORV MLR MLR
comp=Z,2µm,18.0s
ORV Oroville 90.44 336 P 19 27 14.3 -0.9
ORV IAmb IAmb 19 27 29.3
comp=Z,46nm,1.6s
NV11 Mina Array Sit 90.49 333 P P 19 27 14.3 -1.3
W18A Petrified Fore 90.49 326 IAMs_20 IAMs_20 20 10 36.9
comp=Z,910nm,19.0s
NVAR Mina Array Bea 90.54 334 P P 19 27 14.0 -1.9
comp=Z,0.6nm,0.4s,baz=14,slow=4.2,SNR=1.5
NVAR LR LR 20 09 35.1
comp=Z,2µm,19.4s,baz=36,slow=37
NVAR Mina Array Bea 90.54 334 P P 19 27 14.8 -1.1
BKB Balikpapan 90.72 91 IAMs_20 IAMs_20 20 15 38.6
comp=Z,635nm,20.0s
DAV Davao City (W) 90.81 79 LR LR 20 13 39.7
comp=Z,2µm,19.8s,baz=340,slow=39
WAKR Walker 90.82 334 IAMs_20 IAMs_20 20 12 02.5
comp=Z,1µm,18.0s
BBKI Banjar Baru 90.85 94 P P 19 27 28.8 +11
AFDM Forest Hills D 90.86 336 P 19 27 16.4 -0.7
AFDM IAmb IAmb 19 27 30.6
comp=Z,39nm,1.5s
BDFB Brasilia 91.10 249 P P 19 27 15.3 -3.2
comp=Z,17nm,0.7s,baz=61,slow=4.2,SNR=26
BDFB LR LR 20 08 22.8
comp=Z,920nm,19.9s,baz=64,slow=36
BDFB Brasilia 91.10 249 P **P** **19 27 17.7 -0.8**
BDFB pmax pmax
comp=Z,16nm,0.7s
BDFB MLR MLR
comp=Z,1µm,21.0s
BDFB Brasilia 91.10 249 P **P** **19 27 17.7 -0.8**
BDFB IAmb IAmb 19 27 19.2
comp=Z,16nm,0.7s
BDFB IAMs_20 IAMs_20 20 08 22.6
comp=Z,1µm,21.0s
CMB Columbia Colle 91.53 335 IAMs_20 IAMs_20 20 09 53.4
comp=Z,1µm,20.0s
GRAC Grapevine Rang 91.55 332 P **P** **19 27 20.6 +0.2**
baz=24,SNR=5.3
MNTX Cornudas Mount 91.64 321 P P 19 27 18.6 -2.3
baz=31,SNR=6.1
MNTX Cornudas Mount 91.64 321 IAMs_20 IAMs_20 20 09 30.7
comp=Z,994nm,20.0s
KBKI Kotabaru 91.66 93 P P 19 27 32.9 +12
MPSI Mapaga 91.68 88 P P 19 27 32.5 +11
TEIG Tepich 92.06 302 IAMs_20 IAMs_20 20 07 04.1
comp=Z,679nm,20.0s
EPT El Paso 92.07 322 IAMs_20 IAMs_20 20 11 40.9
comp=Z,1µm,19.0s
W13A Hualapai Mount 92.07 329 IAMs_20 IAMs_20 20 11 13.5
comp=Z,1µm,22.0s
Y14A Wickenburg 92.79 328 IAMs_20 IAMs_20 20 10 55.5
comp=Z,1µm,20.0s
TX31 Lajitas Ar. Si 92.88 319 P P 19 27 24.6 -2.1
TXAR Lajitas Array 92.88 319 P P 19 27 23.1 -3.6
comp=Z,1.7nm,0.9s,baz=58,slow=5.0,SNR=8.4
TXAR LR LR 20 09 29.7
comp=Z,442nm,21.9s,baz=0.0,slow=36
TXAR Lajitas Array 92.88 319 P P 19 27 24.6 -2.1
TXAR Lajitas Array 92.88 319 P P 19 27 24.6 -2.1
IRM Iron Mountain 93.37 329 P **P** **19 27 28.8 -0.1**
baz=25,SNR=6.5
TUC Tucson 93.38 325 P **P** **19 27 28.4 -0.6**
TUC pmax pmax
comp=Z,17nm,1.3s
TUC Tucson 93.38 325 P **P** **19 27 28.3 -0.6**
baz=28
TUC Tucson 93.38 325 P **P** **19 27 28.4 -0.6**
PAGB Antelope Grade 93.62 334 IAMs_20 IAMs_20 20 11 24.8
comp=Z,1µm,21.0s
TTSI Tana Toraja 94.03 90 P P 19 27 41.6 +10
214A Organ Pipe Nat 94.48 327 IAMs_20 IAMs_20 20 13 51.4
comp=Z,972nm,18.0s
ROSC El Rosal 94.50 282 LR LR 20 09 19.8
comp=Z,415nm,19.7s,baz=51,slow=35
ROSC El Rosal 94.50 282 IAMs_20 IAMs_20 20 10 45.2
comp=Z,901nm,20.0s
KAPI Kappang 95.38 92 P P 19 27 37.0 -1.2
KAPI pmax pmax
comp=Z,75nm,1.2s
KAPI MLR MLR
comp=Z,200nm,21.0s
KAPI Kappang 95.38 92 P 19 27 37.0 -1.2
ESJX Sierra Juarez 95.60 329 IAMs_20 IAMs_20 20 12 59.4
comp=Z,898nm,20.0s
TGUH Tegucigalpa,Un 96.19 297 IAMs_20 IAMs_20 20 09 40.8
comp=Z,620nm,20.0s
HSIG 96.34 324 IAMs_20 IAMs_20 20 12 08.8
comp=Z,885nm,20.0s
TNTI Ternate 96.57 82 P 19 27 41.6 -2.1
SAML Samuel 96.58 264 IAMs_20 IAMs_20 20 09 55.2
comp=Z,833nm,21.0s
HDC Heredia 97.25 292 IAMs_20 IAMs_20 20 12 08.4
comp=Z,604nm,20.0s
CCIG Comitan 97.42 302 IAMs_20 IAMs_20 20 08 48.9
comp=Z,924nm,21.0s
SRIG Santa Rosalia 98.37 324 IAMs_20 IAMs_20 20 15 55.5
comp=Z,961nm,20.0s
GUMO Guam 98.57 61 LR LR 20 16 09.6
comp=Z,947nm,18.4s,baz=336,slow=38
SIJI Sorong 100.44 80 P **Pdif** **19 27 57.4 -3.7**
comp=Z,4.5nm,0.7s,baz=46,slow=1.4,SNR=5.4
BATI Baumata 101.77 93 P **Pdif** **19 28 05.1 -1.8**
comp=Z,5.4nm,0.5s,baz=236,slow=3.6,SNR=3.0
SOEI Soe 101.87 92 IAMs_20 IAMs_20 20 21 58.0
comp=Z,721nm,20.0s
GO01 Chusmiza 108.19 260 IAMs_20 IAMs_20 20 16 00.9
comp=Z,660nm,20.0s
PSGCX Pisagua 108.78 261 IAMs_20 IAMs_20 20 14 35.5
comp=Z,805nm,21.0s
SYO Syowa Base 114.92 175‖ *e*X PKPdf 19 32 50.2 -2.7
SYO Syowa Base 114.92 175‖ *e*PKiKP PKPdf 19 32 54.3 +1.4
WB9 Warramunga Arr 115.83 92 IAMs_20 IAMs_20 20 25 49.9
comp=Z,490nm,18.0s
WRA Warramunga Arr 115.90 92 PKP **PKPdf** **19 32 54.5 -1.9**
comp=Z,1.0nm,0.7s,baz=319,slow=1.5,SNR=27
WRA PKKPbc **PKKPbc** **19 43 24.2 -1.8**
comp=Z,0.5nm,0.7s,baz=130,slow=3.2,SNR=9.4
WRA Warramunga Arr 115.90 92 PKIKP **PKPdf** **19 32 55.1 -1.3**
WRA Warramunga Arr 115.90 92 **PKPdf** **19 32 55.0 -1.3**
WB1 Warramunga Ar. 115.92 92 IAMs_20 IAMs_20 20 10 14.2
comp=Z,585nm,20.0s
WR2 Warramunga Arr 115.92 92 IAMs_20 IAMs_20 20 22 24.3
comp=Z,749nm,21.0s
WR5 Warramunga Arr 115.97 92 IAMs_20 IAMs_20 20 23 40.6
comp=Z,599nm,20.0s
NVL N'lazarevskaya 116.84 186 *i* PKIKP PKPdf 19 32 38.0 -19
RABL Rabaul 116.86 66 IAMs_20 IAMs_20 20 26 03.8
comp=Z,435nm,21.0s
AS31 Alice Springs 118.05 96 PKPdf **PKPdf** **19 32 58.9 -1.6**
ASAR Alice Springs 118.05 96 PKP **PKPdf** **19 32 58.5 -1.9**
comp=Z,1.7nm,0.5s,baz=326,slow=1.3,SNR=44
ASAR PKKPbc **PKKPbc** **19 43 17.3 -1.2**
comp=Z,0.3nm,0.6s,baz=129,slow=3.6,SNR=6.1
SNAA Sanae 119.14 190 PKPdf **PKPdf** **19 32 58.6 -2.5**
SNAA Sanae 119.14 190 IAMs_20 IAMs_20 20 22 20.9
comp=Z,590nm,22.0s
VNA3 Neumayer Olymp 119.72 193 PKPdf **PKPdf** **19 33 00.4 -1.8**
PLCA Paso Flores 122.42 243 PKP **PKPdf** **19 33 05.8 -2.6**
comp=Z,4.4nm,0.6s,baz=54,slow=1.2,SNR=39
PLCA Paso Flores 122.42 243 PKIKP **PKPdf** **19 33 06.9 -1.5**
PLCA Paso Flores 122.42 243 **PKPdf** **19 33 06.9 -1.5**
CTA Charters Tower 124.31 84 PKP **PKPdf** **19 33 11.9 -0.6**
comp=Z,6.8nm,0.6s,baz=346,slow=2.1,SNR=15
CTAO Charters Tower 124.31 84 PKIKP **PKPdf** **19 33 12.1 -0.5**
CTAO Charters Tower 124.31 84 **PKPdf** **19 33 12.1 -0.5**
HNR Honiara 125.80 63 IAMs_20 IAMs_20 20 36 54.5
comp=Z,723nm,19.0s
STKA Stephens Creek 128.46 98 PKP **PKPdf** **19 33 19.4 -0.7**
comp=Z,1.7nm,0.3s,baz=332,slow=2.1,SNR=9.9
QSPA South Pole Qui 135.70 180 **PKPdf** **19 33 31.6 -1.2**
DZM Mont Dzumac 139.34 68 *e*PP PP 19 36 36.6 +1.5
comp=Z,173nm,30.2s
DZM Mont Dzumac 139.34 68 *e*LR LR 20 18 57.6
comp=Z,1µm,27.4s
TAOE Nuku Hiva Isla 141.55 340 *e*LR LR 20 19 47.6
comp=Z,601nm,24.0s
VNDA Vanda 143.62 165 PKP PKPab 19 33 42.1 -1.4
comp=Z,2.2nm,0.5s,baz=259,slow=4.9,SNR=21
AFI Afiamalu 144.37 33 PKP **PKPab** **19 33 48.3 +0.2**
comp=Z,13nm,0.5s,baz=29,slow=10,SNR=4.4
AFI Afiamalu 144.37 33 **PKPab** **19 33 48.2 +0.1**
PPT2 Papeete2 151.68 353 *e*PP PP 19 37 45.4 -1.8
comp=Z,174nm,27.5s
PPT2 Papeete2 151.68 353 *e*LR LR 20 24 38.7
comp=Z,769nm,24.0s
RPZ Rata Peaks 154.42 98 PKPbc **PKPdf** **19 34 10.9 +5.8**
comp=Z,10nm,0.8s,baz=230,slow=7.9,SNR=2.0
RPZ PKPab **sPKPdf** **19 34 26.4 +5.8**
comp=Z,13nm,0.6s,baz=282,slow=6.7,SNR=5.7
URZ Urewera 156.54 82 PKPab **PKPab** **19 34 35.2 -1.9**
comp=Z,14nm,0.9s,baz=344,slow=7.4,SNR=5.7
TBI Tubuai 157.38 352 *e*SS SS 19 58 17.2 +5.8
comp=Z,323nm,31.5s
TBI Tubuai 157.38 352 *e*LR LR 20 27 24.3
comp=Z,866nm,30.0s

DDA ***22*** *19:19:53.6,38.77N×39.99E,h7km±3km,ML3.9*
ISK ***22*** *19:19:53.0,38.73N×39.99E,h6km,ML3.9/28*
ISC 22 19:19:53.9±0.8,38.73N±0.02×40.03E±0.02,h10km,n48,
σ1°19/61,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HANI	**Diyarbakir_Han**	**0.42**	**137**	*i* P	**Pb**	**19 20 03.0**	**-0.5**
HANI				*i* S	**Sg**	**19 20 08.6**	**+0.7**
HANI				IAML		19 20 18.0	
	comp=E,9µm,0.6s						
PTK	**Pertek**	**0.53**	**289**	PG	**Pg**	**19 20 03.0**	**-1.2**
PTK				SG	**Sg**	**19 20 10.4**	**-0.8**
TNCL	**Tunceli-Merkez**	**0.54**	**316**	*i* P	**Pg**	**19 20 03.8**	**-0.7**
TNCL				*i* S	**Sg**	**19 20 09.9**	**-1.8**
TNCL				IAML		19 20 12.0	
	comp=N,14µm,0.9s						
TNCL				IAML		19 20 16.0	
	comp=E,14µm,0.4s						
BNGB	**Bingl**	**0.57**	**62**	PG	**Pg**	**19 20 04.7**	**-0.3**
BNGB				SG	**Sb**	**19 20 14.1**	**-0.2**
SVRC	**Sivrice-ELAZID**	**0.67**	**239**	PG	**Pg**	**19 20 05.7**	**-1.1**
DYBB	**Diyarbakir**	**0.78**	**174**	PG	**Pg**	**19 20 08.7**	**-0.2**
DYBB				SG	**Sb**	**19 20 19.7**	**-0.4**
DIYA	**Diyarbakir**	**0.80**	**175**	*i* P	**Pb**	**19 20 09.8**	**-0.3**
YEDI	**Yedisu-Bingol**	**0.82**	**29**	PG	**Pg**	**19 20 08.9**	**-0.8**
ELZG	**Elazig**	**0.85**	**255**	*i* P	**Pg**	**19 20 10.1**	**-0.2**
ERZN	**Erzincan**	**0.89**	**344**	PG	**Pg**	**19 20 10.8**	**-0.3**
KARO	**Karliova-Bingo**	**0.98**	**53**	PG	**Pg**	**19 20 12.6**	**-0.3**
EUZM	**Uzumlu**	**1.01**	**345**	*i* P	**Pg**	**19 20 12.8**	**-0.7**
EUZM				*i* S	**Sg**	**19 20 25.3**	**-1.3**
SVAN	**Silvan-Diyarba**	**1.08**	**122**	PN	**Pn**	**19 20 14.8**	**-0.4**
SVAN	**Silvan-Diyarba**	**1.08**	**122**	*i* P	**Pn**	**19 20 15.0**	**-0.2**
SVAN				*i* S	**Sg**	**19 20 26.7**	**-2.0**
SVAN				IAML		19 20 31.0	
	comp=E,2µm,0.6s						
MUSM	**Mu-Merkez**	**1.16**	**90**	*i* P	**Pn**	**19 20 15.9**	**-0.4**
MUSM				*i* S	**Sn**	**19 20 33.4**	**+1.1**
MUSM				IAML		19 20 37.0	
	comp=E,1µm,0.6s						
MUSM				IAML		19 20 38.0	
	comp=N,1µm,0.5s						
REFA	**Refahiye_ERZN**	**1.19**	**305**	*i* P	Pn	19 20 22.1	+5.3
REFA				*i* S	**Sn**	**19 20 39.6**	**+6.5**
VRTB	**Varto-Mus**	**1.19**	**68**	PN	**Pg**	**19 20 16.9**	**+0.1**
VRTB	**Varto-Mus**	**1.19**	**68**	*i* P	**Pb**	**19 20 15.4**	**-1.3**
BTMN	**Batman**	**1.28**	**130**	*i* P	**Pg**	**19 20 18.6**	**+0.1**
BTMN				*i* S	**Sn**	**19 20 35.7**	**+0.5**
BTMN				IAML		19 20 37.0	
	comp=N,3µm,0.5s						
BTMN				IAML		19 20 38.0	
	comp=E,3µm,0.6s						
MAZI	**Mazidag**	**1.31**	**165**	PN	**Pn**	**19 20 18.0**	**-0.3**
KEMA	**Kemaliye**	**1.31**	**295**	*i* P	**Pn**	**19 20 16.9**	**-1.5**
MALT	**Malatya**	**1.32**	**252**	PN	**Pn**	**19 20 18.1**	**-0.4**
ILIC	**ilic-Erzincan**	**1.35**	**303**	PN	**Pn**	**19 20 18.4**	**-0.5**
ARPR	**Arapgir-MALATY**	**1.37**	**286**	PN	**Pn**	**19 20 18.8**	**-0.5**
ATA5	**Erzurum, Merke**	**1.51**	**38**	*i* P	**Pg**	**19 20 22.8**	**0.0**
MARD	**Mardin**	**1.53**	**157**	*i* P	**Pb**	**19 20 21.9**	**-0.5**
MARD				*i* S	**Sg**	**19 20 42.6**	**-0.5**
MARD				IAML		19 20 44.0	
	comp=N,3µm,0.5s						
MARD				IAML		19 20 52.0	
	comp=E,3µm,0.7s						
KELT	**Kelkit**	**1.54**	**337**	*i* P	**Pg**	**19 20 22.8**	**-0.7**
GURO	**Guroymak-BITLI**	**1.58**	**96**	PN	**Pb**	**19 20 22.5**	**-0.7**
URFA	**Urfa**	**1.60**	**217**	PN	**Pn**	**19 20 22.2**	**-0.1**
HEKM	**Malatya_Hekimh**	**1.63**	**276**	*i* P	**Pb**	**19 20 23.2**	**-0.9**
HEKM				*i* S	**Sg**	**19 20 47.1**	**+0.8**
HEKM				IAML		19 20 50.0	
	comp=N,1µm,0.5s						
HEKM				IAML		19 20 51.0	
	comp=E,2µm,0.5s						
SRTM	**Siirt_Merkez**	**1.66**	**116**	*i* P	**Pb**	**19 20 23.9**	**-0.7**
SRTM				*i* S	**Sg**	**19 20 46.3**	**-0.9**
SRTM				IAML		19 20 54.0	
	comp=N,2µm,0.7s						
SRTM				IAML		19 20 54.0	
	comp=E,2µm,0.6s						
BLIS	**Bitlis-Merkez**	**1.66**	**100**	*i* P	**Pg**	**19 20 25.0**	**-0.8**
BLIS				*i* S	**Sg**	**19 20 46.8**	**-0.6**
BLIS				IAML		19 20 54.0	
	comp=N,1µm,0.5s						
BLIS				IAML		19 20 58.0	
	comp=E,791nm,0.7s						
BAYT	**Aydıntepe-Bayb**	**1.67**	**3**	PN	**Pn**	**19 20 23.5**	**+0.1**
KOPR	**Koprukoy-ERZUR**	**1.90**	**48**	PN	**Pn**	**19 20 26.9**	**+0.4**
MLAZ	**Malazgirt-MUS**	**2.01**	**77**	PN	**Pn**	**19 20 28.9**	**+0.9**
ADCV	**BITLIS_Adilcev**	**2.11**	**87**	*i* P	**Pg**	**19 20 33.2**	**-1.1**
SIRT	**Sirnak**	**2.26**	**122**	PN	**Pn**	**19 20 32.7**	**+1.3**
KTUT	**Trabzon**	**2.27**	**355**	PN	**Pn**	**19 20 32.2**	**+0.8**
AKDM	**Akdamar-Van**	**2.35**	**99**	PN	**Pn**	**19 20 33.5**	**+0.8**
ESPY	**Espiye-Giresun**	**2.41**	**336**	PN	**Pn**	**19 20 33.9**	**+0.5**
AGRB	**Hanur-Agry**	**2.45**	**69**	PN	**Pn**	**19 20 35.2**	**+1.0**
VANB	**Van**	**2.63**	**92**	PN	**Pn**	**19 20 38.1**	**+1.6**
SVSK	**Karacayir**	**2.64**	**298**	PN	**Pn**	**19 20 37.1**	**+0.6**
RSDY	**Resadiye-TOKAT**	**2.67**	**309**	PN	**Pn**	**19 20 37.4**	**+0.3**
GAZ	**Gaziantep**	**2.71**	**236**	PN	**Pn**	**19 20 38.5**	**+0.8**
VMUR	**Van-Muradiye**	**2.78**	**83**	*i* P	**Pg**	**19 20 45.7**	**-1.4**
SARI	**SarD1z-Kayseri**	**2.85**	**265**	PN	**Pn**	**19 20 39.8**	**+0.2**
CLDR	**Caldiran**	**3.06**	**81**	PN	**Pn**	**19 20 43.7**	**+1.2**

MAN 22 19:25:38.8,17.03N×119.78E,h2km,mb4.5,ML3.4,MS3.2,
1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.66**	**169**	*e*P	Pg	19 25 51.7	+0.3
BOLP				*e*S	Sb	19 26 01.6	-1.0
ABRA	**Dolores**	**1.08**	**55**	*e*P	Pg	19 25 58.8	-0.8
ABRA				*e*S	Sn	19 26 17.9	+1.4
SMPP	**San Manuel, Pa**	**1.23**	**135**	*e*P	Pg	19 25 58.9	-3.4
SMPP				*e*S	Sg	19 26 14.3	-4.0
APYP	**Conner**	**1.62**	**59**	*e*P	Pb	19 26 09.0	-0.4
APYP				*e*S	Sb	19 26 30.4	0.0
BALP	**Baler**	**2.15**	**126**	*e*P	Pn	19 26 16.3	+0.7
BALP				*e*S	Sn	19 26 43.5	+0.7
SGCP	**Mt. Cagua**	**2.47**	**60**	*e*P	Pb	19 26 24.6	+0.6
SGCP				*e*S	Sg	19 26 56.6	-1.7
LQP	**Lukban**	**3.36**	**149**‖	*e*P	Pb	19 26 38.9	-0.3

ATH 22 19:30:28.5,36.31N×22.78E,h15km±7km,ML1.8/2,Error
ellipse: s-maj=8.3km s-min=1.0km az=68.0,Southern
Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHA	**Kythira Island**	**0.23**	**102**	P	Pg	19 30 33.5	-0.1
KTHA				S	Sg	19 30 37.0	-0.2
KTHA				AML	AML	19 30 37.3	
	comp=E,1504µm,0.1s						
KTHA				AML	AML	19 30 37.9	
	comp=N,1124µm,0.1s						
VLI	**Velıai**	**0.43**	**17**	P	Pg	19 30 37.1	0.0
VLI				S	Sg	19 30 43.2	+0.2
VLI				AML	AML	19 30 45.2	

	comp=E,140µm,0.5s						
VLI				AML	AML	19 30 48.4	
	comp=N,173µm,0.4s						
ANKY	**Antikythira Is**	**0.61**	**136**	P	Pg	19 30 40.3	-0.1
ANKY				S	Sb	19 30 49.0	-0.1
PYL	**PYLOS**	**1.02**	**305**	P	Pb	19 30 47.8	-0.1
ITM	**Ithomi**	**1.11**	**322**	P	Pn	19 30 49.5	+0.1
VLX	**Vlachokerasia**	**1.11**	**343**	P	Pn	19 30 49.5	-0.1
VAM	**Vamos**	**1.46**	**128**	P	Pb	19 30 55.9	+0.5

NEIC ***22*** *19:33:00.7±1.2, 63.°00N±0.°02×149.°86W±0.°06, h88km±5km, Error ellipse: s-maj=4.3km s-min=3.3km az=72.0*
AEIC ***22*** *19:33:00.1±1.0, 62.°99N±0.°03×149.°88W±0.°06, h83km±4km, ML3.2, Error ellipse: s-maj=4.3km s-min=3.9km az=196.0*
ANF ***22*** *19:33:00.8±0.4, 63.°04N×149.°94W, h82km±5km, ML3.7/17, Error ellipse: s-maj=4.7km s-min=2.3km az=101.0*

ISC 22 19:33:00.7±1.2, 63.°01N±0.°03×149.°87W±0.°03, h87km±6km, n121, σ0s70/146, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.11**	**107**			**Pn**	**19 33 13.1**	**0.0**
TRF	**Thorofare Moun**	**0.48**	**337**			**Pn**	**19 33 15.7**	**+0.6**
TRF						**Sn**	**19 33 26.1**	**+0.3**
WAT7	**Susitna Watana**	**0.50**	**110**			**Pn**	**19 33 15.1**	**-0.1**
WAT7						**Sn**	**19 33 26.0**	**0.0**
WAT2	**Susitna Watana**	**0.59**	**94**			**Pn**	**19 33 15.8**	**-0.2**
WAT2						**Sn**	**19 33 27.3**	**0.0**
RND	**Reindeer**	**0.61**	**49**			**Pn**	**19 33 16.3**	**+0.3**
RND						**Sn**	**19 33 28.1**	**+0.5**
WAT1	**Susitna Watana**	**0.63**	**106**			**Pn**	**19 33 16.1**	**-0.2**
WAT1						**Sn**	**19 33 28.0**	**+0.2**
CUT	**Chulitna** baz=17,SNR=24	**0.64**	**197**	P		**Pn**	**19 33 16.1**	**-0.1**
CUT	baz=17			S		**Sn**	**19 33 28.0**	**+0.2**
CUT	**Chulitna**	**0.64**	**197**			**Pn**	**19 33 16.1**	**-0.1**
CUT						**Sn**	**19 33 28.2**	**+0.4**
KTH	**Kantishna Hill**	**0.72**	**319**			**Pn**	**19 33 17.6**	**+0.5**
KTH						**Sn**	**19 33 29.8**	**+0.4**
MCK	**McKinley** baz=210,SNR=104	**0.84**	**30**	P		**Pn**	**19 33 18.7**	**+0.4**
MCK	baz=210			S		**Sn**	**19 33 32.0**	**+0.4**
MCK	**McKinley**	**0.84**	**30**			**Pn**	**19 33 18.6**	**+0.3**
PPLA	**Purkeypile**	**1.06**	**265**			**Pn**	**19 33 21.5**	**+0.5**
PPLA						**Sn**	**19 33 37.3**	**+1.1**
WAT6	**Susitna Watana**	**1.07**	**113**			**Pn**	**19 33 20.6**	**-0.6**
WAT6						**Sn**	**19 33 35.5**	**-1.0**
CAST	**Castle Rocks**	**1.08**	**293**			**Sn**	**19 33 35.8**	**-0.6**
DHY	**Denali Highway**	**1.14**	**86**			**Pn**	**19 33 21.7**	**-0.2**
DHY						**Sn**	**19 33 38.1**	**+0.3**
BWN	**Browne**	**1.18**	**9**			**Pn**	**19 33 22.7**	**+0.5**
BPAW	**Bear Paw Mtn.**	**1.20**	**336**			**Pn**	**19 33 22.8**	**+0.3**
SKT	**Skwentna**	**1.29**	**217**			**Pn**	**19 33 23.2**	**-0.4**
SKT						**Sn**	**19 33 40.5**	**-0.4**
GHO	**Glory Hole Cre**	**1.32**	**160**			**Pn**	**19 33 24.1**	**+0.1**
GHO						**Sn**	**19 33 42.0**	**+0.3**
CHUM	**Lake Minchumin**	**1.40**	**310**			**Pn**	**19 33 25.3**	**+0.4**
SML	**Sawmill**	**1.41**	**149**			**Pn**	**19 33 25.4**	**+0.3**
PMR	**Palmer**	**1.47**	**166**			**Pn**	**19 33 25.6**	**-0.2**
SUA	**Susitna One**	**1.61**	**195**			**Pn**	**19 33 27.8**	**+0.1**
NEA2	**Nenana** baz=193,SNR=32	**1.63**	**12**	P		**Pn**	**19 33 27.7**	**-0.1**
NEA2	baz=193			S		**Sn**	**19 33 47.5**	**-0.9**
NEA2	**Nenana**	**1.63**	**12**			**Pn**	**19 33 27.8**	**-0.1**
WRH	**Wood River Hil**	**1.67**	**28**			**Pn**	**19 33 28.5**	**+0.2**
SCM	**Sheep Creek Mo**	**1.67**	**134**			**Pn**	**19 33 28.6**	**+0.1**
KNK	**Knik Glacier**	**1.74**	**157**			**Pn**	**19 33 29.5**	**+0.2**
STLK	**Strandline Lak**	**1.77**	**212**			**Pn**	**19 33 29.7**	**-0.2**
CCB	**Clear Creek Bu**	**1.88**	**28**			**Pn**	**19 33 31.1**	**0.0**
HDA	**Harding Lake** baz=224,SNR=94	**1.91**	**42**	P		**Pn**	**19 33 31.6**	**+0.1**
HDA	baz=224			S		**Sn**	**19 33 54.2**	**-0.9**
HDA	baz=224			S		**Sn**	**19 33 54.2**	**-0.9**
HDA	**Harding Lake**	**1.91**	**42**			**Pn**	**19 33 31.6**	**+0.1**
RC01	**Rabbit Creek A** baz=358,SNR=8.1	**1.93**	**178**	P		**Pn**	**19 33 31.9**	**+0.1**
RC01	baz=358			S		**Sn**	**19 33 55.1**	**-0.4**
RC01	**Rabbit Creek A**	**1.93**	**178**			**Pn**	**19 33 32.0**	**+0.1**
M24K	**Tolsona, Glenn** baz=299,SNR=24	**1.94**	**116**	P		**Pn**	**19 33 32.7**	**+0.7**
M24K	baz=299			S		**Sn**	**19 33 58.5**	**+2.7**
M24K	**Tolsona, Glenn**	**1.94**	**116**			**Pn**	**19 33 32.7**	**+0.7**
SPCG	**Spurr Capps Gl**	**2.00**	**211**			**Pn**	**19 33 32.8**	**0.0**
PAX	**Paxson**	**2.01**	**89**			**Pn**	**19 33 33.9**	**+0.9**
PS08	**TAPS Pump Stn8**	**2.05**	**40**			**Pn**	**19 33 33.4**	**+0.1**
SPCP	**Crater Peak Br**	**2.05**	**212**			**Pn**	**19 33 33.6**	**+0.1**
MLY	**Manley** baz=169,SNR=26	**2.06**	**350**	P		**Pn**	**19 33 33.8**	**+0.2**
MLY	**Manley**	**2.06**	**350**			**Pn**	**19 33 34.0**	**+0.5**
TCOL	**CIGO, UAF Yank** baz=206,SNR=5.5	**2.07**	**25**	P		**Pn**	**19 33 33.7**	**+0.1**
TCOL	baz=206			S		**Sn**	**19 33 58.2**	**-0.5**
TCOL	**CIGO, UAF Yank**	**2.07**	**25**			**Pn**	**19 33 33.8**	**+0.2**
COLA	**College**	**2.07**	**25**			**Pn**	**19 33 33.7**	**+0.1**
MDM	**Murphy Dome**	**2.08**	**20**			**Pn**	**19 33 34.0**	**+0.1**
SPNN	**North Nagishla**	**2.12**	**220**			**Pn**	**19 33 34.6**	**+0.2**
SPCR	**Spurr Chakacha**	**2.12**	**212**			**Pn**	**19 33 34.5**	**+0.1**
I23K	**Minto, Yukon-K** baz=186,SNR=24	**2.16**	**6**	P		**Pn**	**19 33 35.0**	**+0.3**
I23K	baz=186			S		**Sn**	**19 34 00.2**	**-0.6**
I23K	**Minto, Yukon-K**	**2.16**	**6**			**Pn**	**19 33 35.1**	**+0.3**
IL31		**2.21**	**35**			**Pn**	**19 33 35.4**	**+0.1**
ILAR	**Eielson Array**	**2.21**	**35**	Pn		**Pn**	**19 33 34.9**	**-0.5**
PS11	**TAPS Pump St11**	**2.24**	**113**			**Pn**	**19 33 36.9**	**+0.9**
PWL	**Port Wells**	**2.28**	**161**			**Pn**	**19 33 36.5**	**+0.1**
CAPN	**Captain Cook N** baz=15	**2.33**	**196**	P		**Pn**	**19 33 39.7**	**+2.6**
POKR	**Poker Plat Res** baz=208,SNR=46	**2.37**	**26**	P		**Pn**	**19 33 37.9**	**+0.3**
POKR	baz=208			S		**Sn**	**19 34 04.7**	**-1.3**
POKR	**Poker Plat Res**	**2.37**	**26**			**Pn**	**19 33 37.9**	**+0.3**
RIDG	**Independent Ri**	**2.38**	**70**			**Pn**	**19 33 38.6**	**+0.8**
KLU	**Klutina**	**2.40**	**128**			**Pn**	**19 33 37.6**	**-0.4**
GLI	**Glacier Island**	**2.51**	**147**			**Pn**	**19 33 38.8**	**-0.7**
SLKM	**Skilak Lake**	**2.52**	**184**			**Pn**	**19 33 40.0**	**+0.4**
O22K	**Cooper Landing** baz=358	**2.54**	**178**	P		**Pn**	**19 33 39.9**	**0.0**
O22K	**Cooper Landing**	**2.54**	**178**			**Pn**	**19 33 40.5**	**+0.7**
DOT	**Dot Lake**	**2.70**	**74**			**Pn**	**19 33 42.5**	**+0.5**
DIV	**Divide**	**2.70**	**133**			**Pn**	**19 33 41.1**	**-1.0**
DFR	**Drift River**	**2.77**	**210**			**Pn**	**19 33 43.0**	**0.0**
FID	**Port Fidalgo**	**2.78**	**143**			**Pn**	**19 33 42.3**	**-0.8**
TTA	**Tatalina**	**2.81**	**271**			**Pn**	**19 33 43.4**	**-0.1**
MENT	**Mentasta**	**2.81**	**89**			**Pn**	**19 33 44.1**	**+0.6**
TT01	**Tatalina**	**2.81**	**271**			**Pn**	**19 33 43.5**	**0.0**
SCRK	**Sand Creek** baz=252,SNR=39	**2.81**	**67**	P		**Pn**	**19 33 43.6**	**0.0**
SCRK	baz=252			S		**Sn**	**19 34 18.9**	**+2.2**
SCRK	**Sand Creek**	**2.81**	**67**			**Pn**	**19 33 43.6**	**0.0**
N25K	**Chitina, Valde** baz=302,SNR=13	**2.84**	**117**	P		**Pn**	**19 33 44.4**	**+0.4**
N25K	baz=302			S		**Sn**	**19 34 18.7**	**+1.4**
N25K	**Chitina, Valde**	**2.84**	**117**			**Pn**	**19 33 44.5**	**+0.6**
NCT	**North Crescent**	**2.86**	**212**			**Pn**	**19 33 44.7**	**+0.5**
PS06	**TAPS Pump Stn6**	**2.86**	**1**			**Pn**	**19 33 44.6**	**+0.6**
RSO	**Redoubt South**	**2.90**	**209**			**Pn**	**19 33 45.1**	**+0.1**
SEW	**Seward**	**2.92**	**176**			**Pn**	**19 33 44.7**	**-0.3**
RED	**Redoubt Volcan**	**2.95**	**209**			**Pn**	**19 33 45.4**	**0.0**
EYAK	**Cordova Ski Ar**	**3.15**	**140**			**Pn**	**19 33 48.2**	**+0.1**
BMRM	**Bremner River**	**3.22**	**127**			**Pn**	**19 33 48.6**	**-0.5**
GLB	**Gilahina Butte**	**3.25**	**116**			**Pn**	**19 33 49.3**	**-0.1**
BRLK	**Bradley Lake**	**3.30**	**189**			**Pn**	**19 33 50.1**	**0.0**
SVW2	**Sparrevohn**	**3.30**	**237**			**Pn**	**19 33 49.9**	**-0.3**
BRSE	**Bradley Lake S**	**3.31**	**188**			**Pn**	**19 33 49.9**	**-0.3**
IVE	**Iliamna Volcan**	**3.36**	**208**			**Pn**	**19 33 51.3**	**+0.2**
IM03		**3.42**	**332**			**Pn**	**19 33 52.1**	**+0.5**
HOM	**Homer** baz=14	**3.47**	**195**	P		**Pn**	**19 33 53.1**	**+0.7**
HOM	**Homer**	**3.47**	**195**			**Pn**	**19 33 52.3**	**-0.1**
VRDI	**Verde Repeater**	**3.51**	**118**			**Pn**	**19 33 52.4**	**-0.7**
CNPM	**China Poot**	**3.56**	**191**			**Pn**	**19 33 53.5**	**-0.1**
MCARA	**McCarthy VSAT**	**3.60**	**114**			**Pn**	**19 33 54.8**	**+0.6**
K27K	**Chicken** baz=257	**3.64**	**70**	P		**Pn**	**19 33 55.1**	**+0.5**
K27K	baz=257			S		**Sn**	**19 34 36.7**	**+0.3**
K27K	**Chicken**	**3.64**	**70**			**Pn**	**19 33 54.9**	**+0.2**
BC03		**3.68**	**86**			**Pn**	**19 33 55.0**	**-0.3**
BCAR	**Beaver Creek A**	**3.68**	**86**			**Pn**	**19 33 54.3**	**-1.1**
PS05	**TAPS Pump Stn5**	**3.83**	**355**			**Pn**	**19 33 58.1**	**+0.8**
CRQM	**Cirque**	**3.91**	**122**			**Pn**	**19 33 58.2**	**-0.3**
PTPK	**Patty Peak**	**3.93**	**114**			**Pn**	**19 33 58.7**	**-0.1**
BERG	**Berg Lake**	**3.94**	**129**			**Pn**	**19 33 59.3**	**+0.5**
TGL	**Tana Glacier**	**4.03**	**121**			**Pn**	**19 33 60.0**	**-0.1**
BALM	**Baldy**	**4.06**	**116**			**Pn**	**19 33 60.0**	**-0.5**
KHIT	**Khitrov Hills**	**4.07**	**126**			**Pn**	**19 34 00.6**	**0.0**
SUCK	**Suckling Hills**	**4.15**	**133**	Pn		**Pn**	**19 34 01.0**	**-0.6**
COLD	**Coldfoot** baz=178,SNR=13	**4.24**	**358**	P		**Pn**	**19 34 03.3**	**+0.6**
COLD	**Coldfoot**	**4.24**	**358**			**Pn**	**19 34 03.5**	**+0.8**
EGAK	**Eagle**	**4.24**	**61**			**Pn**	**19 34 02.9**	**+0.1**
YUK2	**White River**	**4.38**	**102**			**Pn**	**19 34 05.6**	**+0.8**
CTGM	**Chitina Glacie**	**4.52**	**113**	Pn		**Pn**	**19 34 06.8**	**0.0**
DAWY	**Dawson**	**4.81**	**73**			**Pn**	**19 34 10.4**	**-0.1**
BM03	**Burnt Mountain**	**4.95**	**24**			**Pn**	**19 34 12.8**	**+0.3**
BMAR	**Burnt Mountain**	**4.96**	**24**			**Pn**	**19 34 12.6**	**0.0**
KAKN	**Katmai Knife C**	**5.37**	**211**			**Pn**	**19 34 18.2**	**-0.1**
KDAK	**Kodiak Island**	**5.42**	**196**			**Pn**	**19 34 17.5**	**-1.3**
PCA	**Pinnacle**	**5.45**	**118**			**Pn**	**19 34 18.9**	**-0.4**
TOLK	**Toolik Lake Re** baz=181	**5.66**	**1**	P		**Pn**	**19 34 24.0**	**+2.0**
TOLK	**Toolik Lake Re**	**5.66**	**1**	Pn		**Pn**	**19 34 22.3**	**+0.2**
OHAK	**Old Harbor**	**6.05**	**198**	Pn		**Pn**	**19 34 25.2**	**-2.3**
HYT	**Haines Junctio**	**6.24**	**105**	Pn		**Pn**	**19 34 27.9**	**-2.2**
CHGN	**Chignik**	**7.99**	**217**	Pn		**Pn**	**19 34 52.0**	**-1.9**
C36M	**Paulatuk** baz=251	**12.12**	**47**	P		**Pn**	**19 35 49.4**	**-0.5**

BUC 22 19:38:50.5±0.2, 45.°87N×27.°15E, h36km±2km, ml1.2/3, 18C-18D, Error ellipse: s-maj=1.9km s-min=1.4km az=157.0, Romania

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ODBI	**Odobesti**	**0.12**	**214**		⇓P	Pn	19 38 56.4	-4.9
ODBI	**Odobesti**	**0.12**	**214**		⇑P	Pn	19 38 56.4	-4.9
GHRR		**0.27**	**42**		⇓P	Pn	19 38 58.3	-0.3
GHRR					⇓S	Sn	19 39 04.1	-1.4
GHRR		**0.27**	**42**		⇑P	Pn	19 38 58.3	-0.3
GHRR					⇑S	Sn	19 39 04.1	-1.4
VRI	**Vrincioaia**	**0.30**	**271**		⇑P	Pn	19 38 58.0	-0.6
VRI					⇑S	Sn	19 39 04.4	-0.8
VRI	**Vrincioaia**	**0.30**	**271**		⇑P	Pn	19 38 58.0	-0.6
VRI					⇑S	Sn	19 39 04.4	-0.8
PLOR	**Plostina**	**0.35**	**268**		⇓P	Pn	19 38 58.8	-0.2
PLOR					⇓S	Sn	19 39 05.5	-0.1
PLOR	**Plostina**	**0.35**	**268**		⇓P	Pn	19 38 58.8	-0.2
PLOR					⇑S	Sn	19 39 05.5	-0.1
BISRR	**Bisoca**	**0.44**	**225**		⇑P	Pn	19 39 00.2	0.0
BISRR					⇓S	Sn	19 39 08.0	+0.9
BISRR	**Bisoca**	**0.44**	**225**		⇑P	Pn	19 39 00.2	0.0
BISRR					⇓S	Sn	19 39 08.0	+0.9
TUDR		**0.45**	**127**		⇑P	Pn	19 39 00.3	0.0
TUDR		**0.45**	**127**		⇑P	Pn	19 39 00.3	0.0
BIR	**Birlad**	**0.52**	**39**		⇓P	Pn	19 39 00.8	-0.6
BIR					⇓S	Sn	19 39 09.2	+0.2
BIR	**Birlad**	**0.52**	**39**		⇑S	Sn	19 39 09.2	+0.2
TESR	**Tescani**	**0.74**	**332**		⇑P	Pn	19 39 04.2	-0.1
TESR					⇓S	Sn	19 39 15.0	+0.7
TESR	**Tescani**	**0.74**	**332**		⇑P	Pn	19 39 04.2	-0.1
TESR					⇓S	Sn	19 39 15.0	+0.7
MLR	**Muntele Rosu**	**0.93**	**247**		⇑P	Pn	19 39 08.0	+0.9
MLR					⇑S	Sn	19 39 20.1	+1.0
MLR	**Muntele Rosu**	**0.93**	**247**		⇑P	Pn	19 39 08.0	+0.9
MLR					⇑S	Sn	19 39 20.1	+1.0
CFR	**Carcaliu**	**0.97**	**134**		⇓P	Pn	19 39 07.9	+0.4
CFR					S	Sn	19 39 20.5	+0.4
CFR	**Carcaliu**	**0.97**	**134**		⇓P	Pn	19 39 07.9	+0.4
CFR					⇑S	Sn	19 39 20.5	+0.4
DOPR	**Dopca**	**1.23**	**275**		⇓P	Pn	19 39 10.9	-0.3
DOPR	**Dopca**	**1.23**	**275**		⇓P	Pn	19 39 10.9	-0.3

TAP 22 19:48:44.6, 24.°48N×121.°86E, h10km, ML1.8, 1C, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ENAH	**Nanao** baz=229	**0.05**	**230**		P	Pg	19 48 47.3	+0.6
ENAH	baz=229				S	Sg	19 48 48.9	+0.7
ENA	**Nanao** baz=239	**0.12**	**242**	*i*	P	Pg	19 48 48.1	+0.6
ENA	baz=239			*e*	S	Sg	19 48 50.3	+0.8
TWC	**Suao** baz=2.0	**0.12**	**357**	*i*	P	Pg	19 48 48.2	+0.6
TWC	baz=2.0			*i*	S	Sg	19 48 50.1	+0.4
TWE	**Neicheng** baz=326	**0.29**	**324**	⇑*i*	P	Pb	19 48 51.5	-0.4
TWE	baz=326				S	Sb	19 48 56.4	-0.3
ENTT	**Nioudou** baz=300	**0.31**	**301**	*i*	P	Pb	19 48 51.9	-0.2
ENTT	baz=300			*e*	S	Sb	19 48 56.2	-0.9
NDT	**Datong Townshi** baz=290	**0.33**	**291**	*e*	P	Pb	19 48 52.5	-0.1
NDT	baz=290			*e*	S	Sb	19 48 57.1	-0.9
EGS	baz=12	**0.37**	**11**	*e*	P	Pb	19 48 52.9	-0.3
NACB	**Ninganchiao** baz=217	**0.39**	**218**		P	Pg	19 48 52.6	+0.3
NACB	baz=217			*e*	S	Sg	19 48 58.1	+0.7
NNSB	**Datong** baz=262	**0.43**	**263**	*e*	P	Pg	19 48 53.4	+0.2
NNSH	**Datong** baz=262	**0.43**	**263**	*e*	P	Pb	19 48 54.2	-0.2
NWLT	**Wulai** baz=312	**0.43**	**312**		P	Pb	19 48 54.5	+0.2
NWLT	baz=312			*e*	S	Sb	19 49 00.8	-0.1
ETLH	**Xiulin Townshi** baz=230	**0.44**	**231**		P	Pg	19 48 53.8	+0.6
ETLH	baz=230			*e*	S	Sb	19 49 00.5	-0.6
NNS	**Nan Shan** baz=263	**0.44**	**264**	*e*	P	Pb	19 48 54.6	+0.1
TWD	**Chiawan** baz=209	**0.47**	**210**	*e*	P	Pg	19 48 53.9	+0.1
YHNB	**Yeheng** baz=293	**0.47**	**293**		P	Pb	19 48 55.2	+0.2
YHNB	baz=293				S	Sb	19 49 01.2	-0.9
TIPB	**Shuangxi** baz=356	**0.49**	**357**	*e*	P	Pb	19 48 54.9	-0.3
TIPB	baz=356				S	Sb	19 49 01.9	-0.5
NSK	**Sanguang** baz=293	**0.49**	**293**	*e*	P	Pb	19 48 55.5	+0.2
NSK	baz=293				S	Sb	19 49 01.9	-0.7
TWB1	**Santiao Chiao** baz=13	**0.54**	**13**	*e*	P	Pb	19 48 56.5	+0.5
FUSS	**Fushou** baz=247	**0.60**	**247**		P	Pb	19 48 57.6	+0.3
WHF	**Hehuan Shan** baz=237	**0.64**	**238**		P	Pb	19 48 57.6	-0.4
WHF	baz=237				S	Sb	19 49 07.3	+0.3
TWT	**Tachien** baz=249	**0.66**	**250**	*e*	P	Pb	19 48 58.2	0.0
TDCB	**Techi** baz=250	**0.68**	**250**	*e*	P	Pb	19 48 58.7	+0.2
TDCB	baz=250			*e*	S	Sb	19 49 07.8	-0.1
YM01	**YM01** baz=338	**0.71**	**339**		P	Pn	19 48 59.9	-0.8
YM10	**YM10**	**0.72**	**338**	*e*	P	Pb	19 48 59.8	+0.5
CHGB	**Renai** baz=235	**0.75**	**236**		P	Pb	19 48 59.8	0.0
CHGB	baz=235				S	Sb	19 49 10.1	-0.1
NSTT	**Nanjuang** baz=280	**0.79**	**281**	*e*	P	Pb	19 49 00.9	+0.5
OWD	**Renai** baz=229	**0.81**	**230**	*e*	P	Pb	19 49 00.7	-0.2
WHP	**Taichung City** baz=256	**0.85**	**256**	*e*	P	Pn	19 49 02.2	-0.5
DPDB	**Guoxing** baz=242	**0.96**	**242**	*e*	P	Pn	19 49 04.1	-0.1
SSLB	**Suanglung** baz=229	**1.08**	**230**		P	Pb	19 49 05.3	0.0
YULB	**Yu-li** baz=205	**1.20**	**205**	*e*	P	Pn	19 49 07.5	+0.1

IDC 22 19:50:44.2±7.0, 21.°25N×122.°80E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.2/54, mbtmp3.6/3, Error ellipse: s-maj=306.9km s-min=31.6km az=99.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy 41.27** baz=283,slow=74,SNR=5.3	**41.27**	**86**		T	T	20 41 37.0	
H11S1	**WAKE ISLAND Hy 41.28** baz=283,slow=74,SNR=4.4	**41.28**	**86**		T	T	20 41 41.2	
H11S2	**WAKE ISLAND Hy 41.29** baz=283,slow=74,SNR=4.7	**41.29**	**86**		T	T	20 41 39.0	
PETK	**Petropavlovsk-** 6.9nm,1.1s,baz=234,slow=6.9,SNR=3.7	**41.52**	**31**	P	P	P	19 58 32.9	-0.2
WRA	**Warramunga Arr** 0.5nm,1.2s,baz=345,slow=10,SNR=1.5	**42.47**	**164**	P	P	P	19 58 40.7	-0.5
ASAR	**Alice Springs** 0.2nm,0.6s,baz=339,slow=6.9,SNR=4.6	**45.94**	**166**	P	P	P	19 59 09.3	+0.3

IDC ***22*** *19:52:24.4±1.6, 36.°38N×137.°87E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.2/57, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=45.6km s-min=8.0km az=148.0*
JMA ***22*** *19:52:24.6±0.1, 36.°62N×137.°85E, h2km±2km, M3.2*
JMA Felt II J1.

ISC 22 19:52:24.8±1.0, 36.°61N±0.°05×137.°86E±0.°03, h10km, n11, σ0s72/15, 2C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JNG	**Nsakai**	**0.28**	**135**	⇑P		**Pg**	**19 52 30.2**	**-0.2**
MAT	**Matsushiro**	**0.29**	**102**	P		**Pg**	**19 52 30.2**	**-0.4**
MAT				S		**Sg**	**19 52 34.4**	**-0.1**
MAT	**Matsushiro**	**0.29**	**102**	P		**Pg**	**19 52 30.1**	**-0.5**
MJAR	**Matsushiro Arr** 34nm,0.3s,baz=288,slow=18,SNR=371	**0.29**	**102**	Pg		**Pg**	**19 52 31.0**	**+0.3**
MJAR	48nm,0.3s,baz=293,slow=33,SNR=48			Lg		Lg	19 52 35.3	
JTT	**Ttatey**	**0.42**	**270**	⇓P		**Pg**	**19 52 33.0**	**-0.1**
JGN	**Niukaw**	**0.58**	**229**	⇑P		**Pg**	**19 52 36.0**	**-0.1**
JGN				S		**Sb**	**19 52 44.0**	**-1.4**
JGK	**Kuni**	**0.63**	**94**	⇓P		**Pg**	**19 52 36.7**	**-0.3**
JGK				S		**Sg**	**19 52 45.9**	**+0.6**
JSZ	**Suzu**	**0.93**	**335**	P		**Pg**	**19 52 42.1**	**-0.6**
JSZ				S		**Sg**	**19 52 54.8**	**0.0**
KSRS	**Korea Array** 0.1nm,0.3s,baz=95,slow=14,SNR=2.0	**7.99**	**279**	Pn		**Pn**	**19 54 22.4**	**+1.5**
WRA	**Warramunga Arr** 0.7nm,0.9s,baz=0.6,slow=7.9,SNR=10.0	**56.34**	**184**	P		**P**	**20 02 05.2**	**-0.8**
ASAR	**Alice Springs** 0.2nm,0.7s,baz=13,slow=4.9,SNR=2.0	**60.06**	**184**	P		**P**	**20 02 32.1**	**+0.1**

IDC ***22*** *19:52:52.0±0.9, 64.°55N×17.°63W, h0km, mb3.7/13, mb1 3.9/17, mb1mx3.7/51, mbtmp3.7/17, ML2.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.8/54, Error ellipse: s-maj=26.9km s-min=14.9km az=45.0*
REY ***22*** *19:52:52.7, 64.°67N×17.°50W, h5km*
NEIC ***22*** *19:52:54.0±1.0, 64.°63N±0.°09×17.°6W±0.°1, h8km±4km, mb4.4/28, Error ellipse: s-maj=12.5km s-min=8.2km az=191.0*

ISC 22 19:52:53.8±0.4, 64.°67N±0.°02×17.°52W±0.°02, h10km, n113, σ1s93/133, mb4.1/32, Iceland

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard** baz=274	**0.10**	**270**	P		**Pg**	**19 52 55.2**	**-1.3**
IVON	baz=274			S		**Sg**	**19 52 57.2**	**-1.2**
IDJK	**Dyngjujokull** baz=145	**0.21**	**144**	P		**Pg**	**19 52 57.0**	**-1.2**
IURH	**Urdarhals** baz=44	**0.22**	**47**	P		**Pg**	**19 52 57.1**	**-1.2**
IURH	baz=44			S		**Sg**	**19 53 01.5**	**+0.1**
IHAM	**Hamarinn** baz=217	**0.23**	**214**	P		**Pg**	**19 52 57.1**	**-1.6**
IHAM	baz=217			S		**Sg**	**19 53 00.8**	**-1.1**
IGRF	**Grimsfjall** baz=159	**0.29**	**158**	P		**Pg**	**19 52 58.1**	**-1.6**
IGRF	baz=159			S		**Sg**	**19 53 02.9**	**-0.7**
ISKR	**Skrokkalda** baz=255	**0.39**	**254**	P		**Pg**	**19 53 00.2**	**-1.4**
IVOT	**Vottur** baz=161	**0.43**	**160**	P		**Pg**	**19 53 00.5**	**-1.8**
THOR	**Thorvaldshraun** baz=52	**0.45**	**54**	P		**Pg**	**19 53 00.9**	**-1.6**
THOR	baz=52			S		**Sg**	**19 53 07.5**	**-0.8**
IJOK	**Jokulheimar** baz=222	**0.47**	**221**	P		**Pg**	**19 53 01.3**	**-1.7**
IKRE	**Kreppuhraun** baz=76	**0.50**	**77**	P		**Pg**	**19 53 01.4**	**-2.1**
IKRE	baz=76			S		**Sg**	**19 53 08.7**	**-1.4**
IASK	**Askja** baz=43	**0.53**	**44**	P		**Pg**	**19 53 02.3**	**-1.9**
IASK	baz=43			S		**Sg**	**19 53 10.4**	**-0.7**
IMKO	**Mokollar** baz=57	**0.59**	**58**	P		**Pg**	**19 53 03.3**	**-1.9**
IMKO	baz=57			S		**Sg**	**19 53 11.9**	**-1.0**
IIEY	**Innrieyrar** baz=206	**0.64**	**205**	P		**Pg**	**19 53 04

baz=14
IGRS Grimsstaoir 1.13 31 P **Pb** 19 53 12.3 -3.1
baz=30
IFED Fedgar 1.15 236 P **Pb** 19 53 12.8 -3.0
baz=237
IRJU Rjupnafell 1.18 206 P **Pb** 19 53 13.3 -2.9
baz=207
IMJO Mjoaskard 1.20 233 P **Pb** 19 53 13.7 -2.9
baz=233
ISKI Skildingahlsh 1.22 9 P **Pn** 19 53 13.7 -3.2
baz=9.1
ISKI S **Sb** 19 53 30.3 -2.4
baz=9.1
IGHA Grjothals 1.23 17 P **Pn** 19 53 13.8 -3.2
baz=16
IGYG Gygjarholskot 1.23 253 P **Pn** 19 53 14.1 -3.0
baz=253
IGRA Granastaoir 1.25 359 P **Pn** 19 53 14.1 -3.2
baz=358
IGRA S **Sb** 19 53 30.9 -2.6
baz=358
IDIM Dimmadalss 1.32 10 P **Pn** 19 53 15.2 -3.0
baz=10
IHLA Hella 1.33 344 P **Pn** 19 53 15.6 -2.8
baz=344
IALF Alftagrof 1.40 212 P **Pn** 19 53 16.8 -2.5
baz=213
IHED Heoinshofoi 1.42 3 P **Pn** 19 53 16.7 -2.9
baz=3.1
BORG Borgarnes 1.64 274 Pn **Pn** 19 53 20.4 -2.2
BORG Sn **Sb** 19 53 43.0 -1.7
SCO Scoresbysund 6.08 346 Pn **Pn** 19 54 22.5 -1.0
SCO Scoresbysund 6.08 346 *e* Pn 19 54 12.0 -12
baz=169,slow=7.4
SCO *i* P **Pn** 19 54 23.0 -0.5
SCO *i* S **Sn** 19 55 39.5 +6.6
SCO IAML 19 55 46.2
comp=Z,1.5nm,0.6s
SUMG Summit 10.93 325 Pn **Pn** 19 55 30.2 -0.2
EKA Eskdalemuir Ar 11.77 136 Pn **Pn** 19 55 41.0 -0.5
baz=320,slow=13,SNR=20
ESK Eskdalemuir 11.77 136 Pn **Pn** 19 55 41.5 0.0
DSB Dublin 12.79 148 Pn **Pn** 19 55 56.1 +0.6
NC204 NORSAR Array S 13.24 92 Pn **Pn** 19 56 01.4 -0.2
NOA NORSAR Array B 13.54 92 Pn **Pn** 19 56 05.7 0.0
comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.0
HFS Hagfors 15.05 93 Pn **Pn** 19 56 25.9 -0.3
comp=Z,0.1nm,0.3s,baz=270,slow=18,SNR=2.8
FINES FINESS Array B 19.71 79 P **Pn** 19 57 23.1 -1.3
comp=Z,0.1nm,0.3s,baz=352,slow=9.6,SNR=3.1
FINES FINESS Array B 19.71 79 P **Pn** 19 57 23.8 -0.6
FIA1 FINESS Array S 19.71 79 P **Pn** 19 57 23.5 -0.9
CLL Collm 20.71 116 *e*P Pn 19 57 35.0 -1.3
comp=Z,36nm,2.1s
ECH Echery 21.16 129 P **P** 19 57 39.3 +0.5
NKC Novy Kostel 21.36 118 *e*P **P** 19 57 42.0 +1.1
STU Stuttgart 21.38 125 P **P** 19 57 40.3 -0.9
STU IAmb IAmb 19 57 43.9
comp=Z,13nm,0.7s
BRG Berggiesshubel 21.42 115 *e*P **P** 19 57 43.5 +2.0
comp=Z,20nm,1.8s
BRG *e* 19 57 49.3
comp=Z,4.8nm,0.9s
PRU Pruhonice 22.36 116 *e*P **P** 19 57 52.3 +0.7
CHVC Chvalec 22.48 113 *e*P **P** 19 57 55.5 +2.6
KHC Kasperske Hory 22.68 118 *e*P **P** 19 57 56.4 +1.2
KHC Kasperske Hory 22.68 118 P **P** 19 57 54.8 -0.3
DPC Dobruska-Polom 22.77 113 *e*P **P** 19 57 57.8 +1.7
SENIN Lac Senin/Sane 22.83 132 P **P** 19 57 55.9 -1.1
GEC2 GERESS Array S 22.96 119 P **P** 19 57 59.0 +0.9
GEC2 IAmb IAmb 19 58 14.4
comp=Z,24nm,1.8s
GERES GERESS Array B 22.96 119 P **P** 19 57 57.4 -0.8
comp=Z,0.5nm,0.7s,baz=329,slow=11,SNR=5.7
GERES GERESS Array B 22.96 119 P **P** 19 57 57.5 -0.7
RETA Reutte 23.03 125 P **P** 19 58 04.0 +5.2
comp=Z,12nm,1.7s
DAVOX Davos/Dischmat 23.33 127 P **P** 19 58 01.3 -0.7
comp=Z,1.1nm,0.7s,baz=339,slow=19,SNR=2.1
EUNU Eureka 23.66 336 P **P** 19 58 05.6 +0.8
EUNU IAmb IAmb 19 58 09.7
comp=Z,30nm,1.6s
CONA Conrad Observa 24.54 117 *e*P **P** 19 58 14.2 +0.9
comp=Z,3.2nm,0.9s
CTI Castel Tesino 24.58 125 P **P** 19 58 15.2 +1.4
CTI IAmb IAmb 19 58 23.5
comp=Z,5.1nm,1.0s
CIMO Cimolais 24.63 124 P **P** 19 58 14.6 +0.4
CIMO IAmb IAmb 19 58 27.6
comp=Z,10nm,1.6s
SOKA Soboth 25.27 120 *e*P **P** 19 58 24.0 +4.1
comp=Z,2.9nm,1.2s
SCHQ Schefferville 26.03 271 P **P** 19 58 26.7 0.0
ESDC Sonseca Array 26.26 156 P **P** 19 58 27.3 -1.7
comp=Z,0.8nm,0.7s,baz=357,slow=11,SNR=7.2
PAB San Pablo 26.32 157 P **P** 19 58 29.8 +0.3
PAB IAmb IAmb 19 58 39.6
comp=Z,13nm,1.4s
RES Resolute Bay 26.46 324 P **P** 19 58 28.9 -1.5
comp=Z,1.3nm,0.7s,baz=55,slow=16,SNR=1.6
AKASG Malin Array Be 27.85 98 P **P** 19 58 41.3 -1.8
comp=Z,0.3nm,0.4s,baz=316,slow=9.4,SNR=2.0
OBN Obninsk 27.89 84 LR LR 20 08 59.8
comp=Z,48nm,19.1s,baz=357,slow=35
BRTR Keskin Array B 38.49 105 P **P** 20 00 16.7 +0.8
comp=Z,0.6nm,0.8s,baz=334,slow=8.2,SNR=1.8
YKA Yellowknife Ar 39.20 313 P **P** 20 00 21.7 +0.2
comp=Z,1.4nm,0.9s,baz=36,slow=8.8,SNR=3.0
ABKAR Akbulak array 42.00 73 P **P** 20 00 45.3 +0.6
ABKAR Akbulak array 42.00 73 P **P** 20 00 45.5 +0.8
TIXI Tiksi 42.03 15 P **P** 20 00 45.6 +1.0
TIXI IAmb IAmb 20 00 48.4
comp=Z,7.6nm,1.2s
BMAR Burnt Mountain 42.89 333 P **P** 20 00 53.2 +1.4
ILAR Eielson Array 45.68 332 P **P** 20 01 15.2 +1.2
comp=Z,3.3nm,1.2s,baz=23,slow=6.7,SNR=9.6
ILAR PcP **PcP** 20 02 52.9 +1.1
comp=Z,0.8nm,0.8s,baz=3.1,slow=4.1,SNR=5.3
ILAR Eielson Array 45.68 332 P **P** 20 01 15.6 +1.6
IMAR Indian Mountai 45.85 337 P **P** 20 01 17.9 +2.5
ZAA0 Zalesovo Array 47.63 51 P **P** 20 01 30.5 +1.0
ZAA0 IAmb IAmb 20 01 37.5
comp=Z,2.4nm,1.0s
ZALV Zalesovo Beam 47.63 51 P **P** 20 01 31.0 +1.5
comp=Z,0.4nm,0.3s,baz=347,slow=5.9,SNR=1.9
ZALV PcP **PcP** 20 02 56.6 -2.2
comp=Z,0.6nm,0.3s,baz=347,slow=5.9,SNR=2.1
ZALV Zalesovo Beam 47.63 51 P **P** 20 01 30.3 +0.8
KURK Kurchatov 48.12 58 P **P** 20 01 33.6 +0.3
KURK IAmb IAmb 20 01 37.0
comp=Z,3.5nm,0.8s
KOWA Kowa 50.98 163 P **P** 20 01 55.7 +0.3
KOWA IAmb IAmb 20 01 60.0
comp=Z,14nm,1.6s
KK31 Karatay Array 51.28 70 P **P** 20 01 58.5 +1.0
KKAR Karatay Array 51.28 70 P **P** 20 01 58.5 +1.0
MKAR Makanchi Array 52.73 58 P **P** 20 02 06.8 -1.4
comp=Z,0.3nm,0.8s,baz=305,slow=8.0,SNR=2.7
TOA0 Torodi Ar. Sit 53.15 156 P **P** 20 02 12.3 +0.7
TOA0 IAmb IAmb 20 02 23.1
comp=Z,3.8nm,1.2s
TORD Torodi Ar. Bea 53.15 156 P **P** 20 02 10.9 -0.7
comp=Z,0.6nm,0.7s,baz=337,slow=8.1,SNR=4.1
TORD Torodi Ar. Bea 53.15 156 P **P** 20 02 11.8 +0.2
CHGR Chuyangaron 54.47 74 P **P** 20 02 22.4 +1.2
GAR Garm 54.66 73 P **P** 20 02 23.6 +1.0
O20A White River Ci 54.87 290 P **P** 20 02 25.0 +0.8
BGU Big Grassy Mou 56.10 295 P **P** 20 02 33.4 +0.4
KSH Kashi 56.50 68 *e*P **P** 20 02 39.5 +3.7
KSH pmax pmax
comp=Z,11nm,0.5s
KSH pmax pmax
comp=Z,370nm,6.8s
PV02 Paradox Valley 56.71 290 P **P** 20 02 38.2 +0.7
WMQ Urumqi 57.23 56 *e*P **P** 20 02 44.1 +3.2
MSU Marysvale 57.83 293 P **P** 20 02 46.0 +0.6
SONM Songino Array 59.64 40 P **P** 20 02 59.2 +1.5
comp=Z,1.0nm,1.1s,baz=328,slow=11,SNR=4.6
ULN Ulaanbaatar 59.79 40 P **P** 20 03 00.5 +1.7
ULN IAmb IAmb 20 03 14.2
comp=Z,3.8nm,1.3s
NIL Nilore 60.45 73 P **P** 20 03 04.5 +1.1
GTA Gaotai 65.30 49 *e*P **P** 20 03 37.4 +1.7
GTA pP sP 20 03 42.3 +1.6
GTA sP pP 20 03 44.8 +5.4
GTA pmax pmax
comp=Z,1.0nm,0.9s
HHC Hu-ho-hao-te 67.51 40 *e*P **P** 20 03 51.6 +1.8
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,180nm,4.8s
LZH Lanzhou 69.63 48 *e*P **P** 20 04 03.8 +0.7
LZH pP sP 20 04 09.0 +0.8
LZH sP pP 20 04 11.0 +4.2
LZH pmax pmax
comp=Z,24nm,1.6s
LZH pmax pmax
comp=Z,91nm,4.4s
CMAR Chiang Mai Arr 84.14 59 P **P** 20 05 25.1 +0.2
comp=Z,0.4nm,0.5s,baz=315,slow=5.9,SNR=7.4
CMAR Chiang Mai Arr 84.14 59 P **P** 20 05 25.6 +0.7

MAN 22 19:53:00.1, 5.91N×126.15E, h88km, mb4.7, ML3.6, MS3.5, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.47**	**295**	*e*P		Pn	19 53 13.0	-1.4
DDMP				*e*S		Sn	19 53 20.9	-4.2
MATI	**Mati**	**1.04**	**6**	*e*P		Pn	19 53 19.8	-0.3
MATI				*e*S		Sn	19 53 36.2	+1.0
KCP	**Kidapawan**	**1.52**	**316**	⇓*i*P		Pn	19 53 27.1	+1.0
KCP				*i* S		Sn	19 53 45.9	+0.2
SKMP	**Bagumbayan, Su**	**1.71**	**291**	*e*P		Pn	19 53 28.2	-0.1
SKMP				*e*S		Sn	19 53 48.1	-1.8
BUKP	**Musuan**	**2.24**	**331**	*e*P		Pn	19 53 37.0	+1.6
BUKP				*e*S		Sn	19 54 04.0	+1.5
CGP	**Cagayan de Oro**	**2.91**	**330**	*e*S		Sn	19 54 21.8	+3.2
CGP	**Cagayan de Oro**	**2.91**	**330**	⇓*e*P		Pn	19 53 46.8	+2.3
PAGZ	**Pagadian**	**3.35**	**305**	*e*P		Pn	19 53 51.4	+1.0
PAGZ				*e*S		Sn	19 54 16.5	-13
GLSP	**General Luna,**	**3.85**	**360**	*e*P		Pn	19 54 01.2	+4.0
GLSP				*e*S		Sn	19 54 48.3	+6.9

*IDC **22** 19:53:14.7±0.7, 36.64N×137.81E, h0km, mb3.6/10, mb1 3.8/13, mb1mx3.6/60, mbtmp3.6/13, ML2.7/3, MS4.5/1, Ms1 4.5/1, ms1mx3.3/52, Error ellipse: s-maj=17.8km s-min=6.2km az=19.0*
*JMA **22** 19:53:16.0, 36.62N×137.85E, h0km, M3.6*
JMA Felt III J1.

ISC 22 19:53:15.9±1.1, 36.66N±0.05×137.88E±0.03, h8km±8km, n24, σ0978/27, mb3.6/11, 1C, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.29**	**113**	P		**Pg**	**19 53 21.6**	**-0.1**
MAT				S		**Sg**	**19 53 26.0**	**+0.4**
MAT	**Matsushiro**	**0.29**	**113**	P		**Pg**	**19 53 21.7**	**0.0**
MAT				S		**Sg**	**19 53 25.9**	**+0.4**
MJAR	**Matsushiro Arr**	**0.29**	**113**	LR		LR	19 53 07.3	
	comp=Z,166nm,21.5s,baz=280,slow=20							
MJAR				Pg		**Pg**	**19 53 21.7**	**-0.1**
	73nm,0.3s,baz=331,slow=18,SNR=53							
MJAR				Lg		Lg	19 53 27.4	
	195nm,0.3s,baz=296,slow=34,SNR=13							
JNG	**Nsakai**	**0.31**	**144**	⇑P		**Pg**	**19 53 21.8**	**-0.3**
JNG				S		**Sg**	**19 53 26.2**	**0.0**
JTT	**Ttatey**	**0.44**	**263**	P		**Pg**	**19 53 24.9**	**+0.4**
JGK	**Kuni**	**0.62**	**98**	P		**Pg**	**19 53 28.3**	**+0.3**
JGK				S		**Sb**	**19 53 37.3**	**-0.6**
JGN	**Niukaw**	**0.62**	**226**	P		**Pg**	**19 53 27.8**	**-0.2**
JGN				S		**Sg**	**19 53 35.5**	**-0.7**
JSZ	**Suzu**	**0.89**	**333**	P		**Pg**	**19 53 33.0**	**0.0**
JNU	**Nakatsue**	**6.74**	**241**	Pn		**Pn**	**19 54 56.0**	**+0.8**
	0.3nm,0.3s,baz=61,slow=19,SNR=1.8							
KSRS	**Korea Array**	**8.00**	**279**	Pn		**Pn**	**19 55 13.6**	**+1.2**
	0.1nm,0.3s,baz=92,slow=14,SNR=2.5							
ASAJ	**Asahikawa**	**8.28**	**24**	Pn		Pn	19 55 22.6	+6.5
	0.3nm,0.3s,baz=213,slow=17,SNR=4.1							
USRK	**Ussuriysk Ar.**	**8.77**	**331**	Pn		**Pn**	**19 55 21.5**	**-1.4**
	baz=143,slow=18,SNR=4.1							
PETK	**Petropavlovsk-**	**21.51**	**34**	P		P	**19 58 06.0**	**+0.9**
	4.3nm,1.1s,baz=230,slow=16,SNR=1.9							
SONM	**Songino Array**	**25.67**	**306**	P		**P**	**19 58 46.8**	**+0.6**
	0.6nm,0.8s,baz=38,slow=7.3,SNR=2.6							
CMAR	**Chiang Mai Arr**	**38.66**	**253**	P		**P**	**20 00 40.9**	**+0.8**
	0.7nm,0.5s,baz=46,slow=8.6,SNR=7.2							
MKAR	**Makanchi Array**	**41.91**	**302**	P		**P**	**20 01 06.1**	**-0.6**
	0.4nm,0.8s,baz=92,slow=8.9,SNR=2.0							
PMG	**Port Moresby**	**46.64**	**167**	P		**P**	**20 01 46.0**	**+1.2**
	10nm,0.7s,baz=327,slow=16,SNR=2.6							
HNR	**Honiara**	**50.32**	**151**	LR		LR	20 19 06.4	
	comp=Z,592nm,21.8s,baz=76,slow=31							
ILAR	**Eielson Array**	**51.33**	**32**	P		**P**	**20 02 19.5**	**-0.7**
	0.8nm,1.1s,baz=243,slow=10.0,SNR=2.5							
WRA	**Warramunga Arr**	**56.39**	**184**	P		**P**	**20 02 56.6**	**-1.2**
	0.8nm,0.5s,baz=0.5,slow=7.8,SNR=16							
ASAR	**Alice Springs**	**60.12**	**184**	P		**P**	**20 03 22.3**	**-1.5**
	0.7nm,0.9s,baz=16,slow=11,SNR=6.5							
NOA	**NORSAR Array B**	**73.41**	**336**	P		**P**	**20 04 48.5**	**+0.3**
	0.7nm,0.6s,baz=42,slow=5.9,SNR=4.2							
PDAR	**Pinedale Array**	**79.93**	**44**	P		**P**	**20 05 26.4**	**+0.8**
	0.3nm,0.4s,baz=352,slow=1.8,SNR=2.1							
GERES	**GERESS Array B**	**81.50**	**326**	P		**P**	**20 05 33.3**	**-0.4**
	0.4nm,0.7s,baz=45,slow=2.9,SNR=2.3							

*NEIC **22** 19:59:36.7±2.4, 17.3S±0.1×172.4W±0.1, h10km±1km, mb4.6/13, Error ellipse: s-maj=25.0km s-min=19.0km az=13.0*
*IDC **22** 19:59:36.5±0.8, 17.09S×172.71W, h0km, mb4.1/13, mb1 4.3/13, mb1mx4.1/44, mbtmp4.1/13, MS2.9/1, Ms1 2.9/1, ms1mx2.6/38, Error ellipse: s-maj=26.7km s-min=19.4km az=137.0*

ISC 22 19:59:37.1±0.6, 17.3S±0.1×172.42W±0.09, h10km, n37, σ1931/36, mb4.4/18, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
NIUE	**Niue**	**2.97**	**127**	Pn		**Pn**	**20 00 23.3**	**-1.1**
AFI	**Afiamalu**	**3.40**	**11**	Pn		Pn	20 00 21.8	-8.5
	17nm,0.3s,baz=224,slow=11,SNR=11							
AFI				Sn		Sn	20 00 56.8	-14
	54nm,0.3s,baz=141,slow=18,SNR=5.5							
AFI				LR		LR	20 01 18.0	
	comp=Z,174nm,20.6s,baz=181,slow=31							
AFI	**Afiamalu**	**3.40**	**11**			Pn	20 00 22.1	-8.2
RAR	**Rarotonga**	**12.57**	**110**	Pn		**Pn**	**20 02 34.4**	**-1.7**
OUZ	**Omahuta**	**21.79**	**212**	P		**P**	**20 04 29.1**	**-0.1**
OUZ				IAmb		IAmb	20 04 40.8	
	comp=Z,23nm,1.3s							
URZ	**Urewera**	**22.83**	**202**	P		**P**	**20 04 42.2**	**+1.9**
	comp=Z,11nm,0.6s,baz=43,slow=4.1,SNR=7.7							
URZ	**Urewera**	**22.83**	**202**	P		**P**	**20 04 41.6**	**+1.3**
URZ				IAmb		IAmb	20 04 45.1	
	comp=Z,24nm,1.2s							
BKZ	**Black Stump Fm**	**23.86**	**202**	P		**P**	**20 04 52.0**	**+1.3**
BKZ				IAmb		IAmb	20 04 59.3	
	comp=Z,22nm,1.2s							
ARMA	**Armidale**	**35.23**	**242**	P		**P**	**20 06 31.7**	**-0.3**
ARMA				IAmb		IAmb	20 06 47.1	
	comp=Z,6.6nm,1.2s							
STKA	**Stephens Creek**	**43.95**	**242**	P		**P**	**20 07 42.4**	**-2.1**
	comp=Z,0.6nm,0.6s,baz=122,slow=9.5,SNR=1.5							
STKA	**Stephens Creek**	**43.95**	**242**	P		**P**	**20 07 43.6**	**-0.9**
BBOO	**Buckleboo**	**48.71**	**241**	P		**P**	**20 08 21.5**	**-0.5**
BBOO				IAmb		IAmb	20 08 30.3	
	comp=Z,13nm,1.2s							
WR0	**Warramunga Arr**	**50.17**	**258**	P		**P**	**20 08 31.9**	**-1.3**
WR0				IAmb		IAmb	20 08 33.4	
	comp=Z,9.7nm,1.4s							
WRA	**Warramunga Arr**	**50.36**	**258**	P		**P**	**20 08 32.5**	**-2.2**
	comp=Z,1.6nm,0.6s,baz=97,slow=7.0,SNR=28							
WRA	**Warramunga Arr**	**50.36**	**258**	P		**P**	**20 08 33.0**	**-1.7**
AS31	**Alice Springs**	**50.45**	**253**	P		**P**	**20 08 33.9**	**-1.5**
ASAR	**Alice Springs**	**50.45**	**253**	P		**P**	**20 08 33.2**	**-2.2**
	comp=Z,5.2nm,0.7s,baz=88,slow=8.6,SNR=86							
ASAR	**Alice Springs**	**50.45**	**253**	P		**P**	**20 08 33.7**	**-1.8**
FORT	**Forrest**	**55.43**	**244**	P		**P**	**20 09 11.5**	**-0.5**
KNRA	**Kununurra**	**56.23**	**262**	P		**P**	**20 09 17.4**	**-0.6**
SIJI	**Sorong**	**57.70**	**280**	P		**P**	**20 09 27.9**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=162,slow=20,SNR=2.6							
FITZ	**Fitzroy Crossi**	**58.76**	**259**	P		**P**	**20 09 35.7**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=108,slow=13,SNR=1.6							
FITZ	**Fitzroy Crossi**	**58.76**	**259**	P		**P**	**20 09 34.9**	**-0.9**
VNDA	**Vanda**	**61.62**	**186**	P		**P**	**20 09 57.3**	**+2.9**
	comp=Z,1.6nm,0.8s,baz=4.9,slow=6.0,SNR=9.7							
BATI	**Baumata**	**62.26**	**267**	P		**P**	**20 10 00.6**	**+0.8**
	comp=Z,3.4nm,0.5s,baz=88,slow=0.9,SNR=3.9							
MORW	**Morawa**	**65.95**	**245**	P		**P**	**20 10 23.4**	**-0.5**
PETK	**Petropavlovsk-**	**74.69**	**342**	P		**P**	**20 11 16.9**	**+0.2**
	comp=Z,4.6nm,1.1s,baz=120,slow=5.2,SNR=2.5							
TXAR	**Lajitas Array**	**80.88**	**56**	P		**P**	**20 11 54.0**	**+2.1**
	comp=Z,0.7nm,1.0s,baz=200,slow=10,SNR=2.3							
TXAR	**Lajitas Array**	**80.88**	**56**	P		**P**	**20 11 53.2**	**+1.3**
PDAR	**Pinedale Array**	**83.04**	**41**	P		**P**	**20 12 03.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=282,slow=4.5,SNR=2.1							
ILAR	**Eielson Array**	**84.10**	**11**	P		**P**	**20 12 07.0**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=219,slow=4.2,SNR=4.1							
CMAR	**Chiang Mai Arr**	**94.09**	**288**	P		**P**	**20 12 57.5**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=104,slow=2.3,SNR=7.1							
CMAR	**Chiang Mai Arr**	**94.09**	**288**	P		**P**	**20 12 56.8**	**+0.4**
GERES	**GERESS Array B**	**148.12**	**352**	PKPbc		**PKPbc**	**20 19 23.8**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=2.9,slow=3.9,SNR=1.8							
BRTR	**Keskin Array B**	**148.19**	**320**	PKPbc		**PKPbc**	**20 19 24.1**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=105,slow=1.0,SNR=6.5							
BRTR	**Keskin Array B**	**148.19**	**320**			**PKPbc**	**20 19 24.2**	**+0.4**
TORD	**Torodi Ar. Bea**	**173.00**	**125**	PKP		**PKPdf**	**20 19 47.6**	**+0.1**
	comp=Z,0.6nm,1.0s,baz=235,slow=5.1,SNR=2.8							
TORD				PKPab		**pPKPab**	**20 21 15.9**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=254,slow=5.3,SNR=3.9							

*IDC **22** 20:12:52.1±1.2, 12.67N×123.73E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/50, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=46.7km s-min=22.6km az=65.0*
*MAN **22** 20:12:55.2, 12.57N×123.32E, h20km, mb4.6, ML3.5, MS3.4*

ISC 22 20:12:55.8±1.8, 12.61N±0.04×123.34E±0.04, h23km±15km, n18, σ1949/28, mb3.6/4, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CNP	**Catarman**	**1.30**	**94**	*e*P		**Pn**	**20 13 17.7**	**-0.8**
CNP				*e*S		**Sb**	**20 13 35.8**	**+0.1**
OTRP	**Odiongan**	**1.31**	**259**	*e*P		**Pn**	**20 13 17.7**	**-1.0**
OTRP				*e*S		**Sn**	**20 13 35.2**	**-0.3**
GQP	**Guinayangan**	**1.56**	**326**	⇓*e*P		**Pn**	**20 13 22.2**	**0.0**
GQP				*e*S		**Sb**	**20 13 43.2**	**0.0**
BOAC	**Boac**	**1.69**	**300**	*e*P		**Pn**	**20 13 22.6**	**-1.3**
BOAC				*e*S		**Sb**	**20 13 47.0**	**0.0**
JCNP	**Jose Panganiba**	**1.78**	**340**	*e*P		**Pn**	**20 13 23.3**	**-2.0**
SJMP	**San Jose**	**2.17**	**266**	*e*P		**Pn**	**20 13 30.7**	**+0.1**
SJMP				*e*S		**Sn**	**20 13 57.8**	**+0.9**
LQP	**Lukban**	**2.30**	**311**	⇓*e*P		**Pn**	**20 13 33.1**	**+0.5**
LQP				*e*S		**Sb**	**20 14 07.5**	**+2.6**
LLP	**Lapu-Lapu**	**2.36**	**165**	⇑*i*P		**Pn**	**20 13 33.7**	**+0.6**
LLP				*i* S		**Sb**	**20 14 04.1**	**-2.2**
TGY	**Tagaytay City**	**2.77**	**303**	Pn		**Pn**	**20 13 40.6**	**+1.7**
	24nm,0.3s,baz=117,slow=18,SNR=4.5							
TGY				Sn		**Sb**	**20 14 18.3**	**0.0**
	baz=118,slow=16,SNR=1.3							
CNOP	**Candoni, Negro**	**2.85**	**194**	*e*P		**Pn**	**20 13 39.7**	**-0.2**
CNOP				*e*S		**Sb**	**20 14 20.4**	**0.0**
CUYO	**Cuyo Island**	**2.87**	**233**	*e*P		**Pn**	**20 13 40.4**	**+0.2**
MSLP	**Maasin**	**2.88**	**149**	*e*P		**Pn**	**20 13 40.1**	**-0.2**
GLSP	**General Luna,**	**3.92**	**135**	*e*P		**Pn**	**20 13 55.3**	**+0.9**
GLSP				*e*S		**Sn**	**20 14 44.3**	**+4.3**
ENPP	**El Nido**	**4.08**	**250**	*e*P		**Pn**	**20 13 56.3**	**-0.5**
WRA	**Warramunga Arr**	**34.11**	**161**	P		**P**	**20 19 37.6**	**-1.5**
	0.7nm,1.1s,baz=347,slow=9.0,SNR=3.5							
ASAR	**Alice Springs**	**37.50**	**164**	P		**P**	**20 20 07.8**	**-0.4**
	0.2nm,0.6s,baz=338,slow=7.0,SNR=6.5							
MKAR	**Makanchi Array**	**48.44**	**323**	P		**P**	**20 21 38.2**	**+1.7**
	0.7nm,0.7s,baz=125,slow=9.5,SNR=5.7							
PETK	**Petropavlovsk-**	**48.79**	**27**	P		**P**	**20 21 36.8**	**-2.2**
	2.1nm,0.9s,baz=213,slow=6.9,SNR=1.5							

*RSPR **22** 20:21:36.8, 19.40N×65.73W, h60km±5km, MD2.9/6*
*NEIC **22** 20:21:39.9±3.4, 19.15N±0.07×65.80W±0.06, h41km±44km, Error ellipse: s-maj=12.5km s-min=4.9km az=211.0*

ISC 22 20:21:35.5±2.0, 19.30N±0.10×65.76W±0.06, h14km, n29, σ0852/35, 6C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CBYP	**Canovanas**	**1.03**	**185**	⇑*e*P		**Pb**	**20 21 55.0**	**-0.1**
CBYP	**Canovanas**	**1.03**	**185**	*e*S		**Sn**	**20 22 10.6**	**+0.9**
CBYP	**Canovanas**	**1.03**	**185**			**Pb**	**20 21 54.9**	**-0.1**
CBYP	**Canovanas**	**1.03**	**185**			**Sn**	**20 22 10.6**	**+0.9**
GCPR	**Guayanabo City**	**1.03**	**198**	Pn		**Pb**	**20 21 55.2**	**+0.1**
CUPR	**Culebra, Puert**	**1.08**	**155**	⇑*e*P		**Pg**	**20 21 56.2**	**-0.2**
CUPR	**Culebra, Puert**	**1.08**	**155**	*e*S		**Sn**	**20 22 11.5**	**+0.4**
CUPR	**Culebra, Puert**	**1.08**	**155**			**Pg**	**20 21 56.2**	**-0.2**
CUPR						**Sn**	**20 22 11.5**	**+0.4**
HUMP	**Col San Antoni**	**1.15**	**184**	Pn		**Pg**	**20 21 57.8**	**0.0**
HUMP						**Sg**	**20 22 13.6**	**+0.8**
MTP	**Monte Pirata**	**1.21**	**171**	⇑*e*P		**Pb**	**20 21 58.0**	**-0.2**
MTP	**Monte Pirata**	**1.21**	**171**	*e*S		**Sn**	**20 22 14.5**	**+0.3**
MTP	**Monte Pirata**	**1.21**	**171**			**Pb**	**20 21 58.0**	**-0.2**
MTP						**Sn**	**20 22 14.5**	**+0.3**
SJG	**San Juan**	**1.24**	**198**	Pn		**Pg**	**20 21 59.1**	**-0.3**
SJG						**Sg**	**20 22 16.0**	**+0.5**
PDPR	**Patillas Dam,**	**1.30**	**191**	⇑*e*P		**Pb**	**20 21 59.4**	**-0.3**
PDPR	**Patillas Dam,**	**1.30**	**191**			**Pb**	**20 21 59.4**	**-0.3**
AOPR	**Arecibo Observ**	**1.34**	**225**	⇑*e*P		**Pn**	**20 21 59.6**	**-0.2**
AOPR	**Arecibo Observ**	**1.34**	**225**	*e*S		**Sn**	**20 22 17.7**	**+0.1**
AOPR	**Arecibo Observ**	**1.34**	**225**			**Pn**	**20 21 59.6**	**-0.2**
AOPR						**Sn**	**20 22 17.6**	**+0.1**
IGPR	**InterUniversit**	**1.37**	**194**	⇑*e*P		**Pb**	**20 22 00.5**	**-0.4**
IGPR	**InterUniversit**	**1.37**	**194**	*e*S		**Sn**	**20 22 18.6**	**+0.4**
IGPR	**InterUniversit**	**1.37**	**194**			**Sn**	**20 22 17.2**	**-0.9**
CELP	**Cerrillos**	**1.45**	**213**	⇓*e*P		**Pb**	**20 22 01.7**	**-0.5**
CELP	**Cerrillos**	**1.45**	**213**	*e*S		**

TESR				⇑S		Sb	20 25 12.1	+0.1
TESR	**Tescani**	**0.74**	**331**	⇑P		Pn	20 25 01.0	-0.5
TESR				⇑S		Sb	20 25 12.1	+0.1
NEHR	**Nehoiu**	**0.75**	**235**	⇑P		Pn	20 25 01.9	+0.2
NEHR				⇓S		Sb	20 25 12.3	+0.1
NEHR	**Nehoiu**	**0.75**	**235**	⇑P		Pn	20 25 01.9	+0.2
NEHR				⇓S		Sb	20 25 12.3	+0.1
GISR	**Galati**	**0.75**	**124**	⇓S		Sn	20 25 11.2	-0.6
GISR	**Galati**	**0.75**	**124**	⇓S		Sn	20 25 11.2	-0.6
GIUM	**Giurgiulesti**	**0.82**	**117**	⇑P		Pn	20 25 02.3	-0.3
GIUM				⇑S		Sn	20 25 13.9	+0.3
GIUM	**Giurgiulesti**	**0.82**	**117**	⇑P		Pn	20 25 02.3	-0.3
GIUM				⇑S		Sn	20 25 13.9	+0.3
ISR	**Istrita**	**0.86**	**211**	⇓P		Pn	20 25 03.6	+0.4
ISR	**Istrita**	**0.86**	**211**	⇓P		Pn	20 25 03.6	+0.4
VASR	**Vaslui**	**0.89**	**29**	⇑P		Pn	20 25 04.1	+0.5
VASR				⇓S		Sb	20 25 16.2	+0.1
VASR	**Vaslui**	**0.89**	**29**	⇑P		Pn	20 25 04.1	+0.5
VASR				⇓S		Sb	20 25 16.2	+0.1
MLR	**Muntele Rosu**	**0.93**	**247**	⇑P		Pn	20 25 04.8	+0.5
MLR				⇑S		Sn	20 25 17.0	+0.5
MLR	**Muntele Rosu**	**0.93**	**247**	⇑P		Pn	20 25 04.8	+0.5
MLR				⇑S		Sn	20 25 17.0	+0.5
PGOR	**Pogoanele**	**0.96**	**188**	⇑P		Pn	20 25 04.5	-0.1
PGOR				⇑S		Sn	20 25 17.6	+0.5
PGOR	**Pogoanele**	**0.96**	**188**	⇑P		Pn	20 25 04.5	-0.1
PGOR				⇑S		Sn	20 25 17.6	+0.5
CFR	**Carcaliu**	**0.97**	**135**	⇓P		Pn	20 25 03.4	-1.2
CFR				⇓S		Sn	20 25 17.0	-0.2
CFR	**Carcaliu**	**0.97**	**135**	⇓P		Pn	20 25 03.4	-1.2
CFR				⇓S		Sn	20 25 17.0	-0.2
OZUR		**0.99**	**284**	⇓P		Pn	20 25 04.9	-0.1
OZUR		**0.99**	**284**	⇓P		Pn	20 25 04.9	-0.1
GIRR	**Girov**	**1.19**	**337**	⇑P		Pn	20 25 07.4	-0.2
GIRR	**Girov**	**1.19**	**337**	⇑P		Pn	20 25 07.4	-0.2
DOPR	**Dopca**	**1.25**	**275**	⇑P		Pn	20 25 08.5	0.0
DOPR	**Dopca**	**1.25**	**275**	⇑P		Pn	20 25 08.5	0.0
AMRR	**Amara**	**1.26**	**174**	⇑P		Pn	20 25 08.3	-0.3
AMRR				⇓S		Sn	20 25 24.8	+0.4
AMRR	**Amara**	**1.26**	**174**	⇑P		Pn	20 25 08.3	-0.3
AMRR				⇓S		Sn	20 25 24.8	+0.4
HARR	**Harsova**	**1.29**	**155**	⇑P		Pn	20 25 08.6	-0.5
HARR	**Harsova**	**1.29**	**155**	⇑P		Pn	20 25 08.6	-0.5
BIZ	**Bicaz**	**1.30**	**326**	⇑P		Pn	20 25 09.1	-0.1
BIZ	**Bicaz**	**1.30**	**326**	⇑P		Pn	20 25 09.1	-0.1
TPGR	**Topolog**	**1.34**	**138**	⇓P		Pn	20 25 09.7	0.0
TPGR				⇓S		Sn	20 25 27.2	+0.8
TPGR	**Topolog**	**1.34**	**138**	⇓P		Pn	20 25 09.7	0.0
TPGR				⇓S		Sn	20 25 27.2	+0.8
TLCR		**1.34**	**120**	⇓P		Pn	20 25 10.7	+0.9
TLCR				⇓S		Sn	20 25 27.3	+0.9
TLCR		**1.34**	**120**	⇓P		Pn	20 25 10.7	+0.9
TLCR				⇓S		Sn	20 25 27.3	+0.9
SULR		**1.35**	**209**	⇓P		Pn	20 25 10.1	+0.2
SULR				⇓S		Sn	20 25 27.3	+0.8
SULR		**1.35**	**209**	⇓P		Pn	20 25 10.1	+0.2
SULR				⇓S		Sn	20 25 27.3	+0.8
IAS	**Iasi**	**1.36**	**11**	⇑P		Pn	20 25 10.6	+0.6
IAS				⇓S		Sn	20 25 27.6	+0.7
IAS	**Iasi**	**1.36**	**11**	⇑P		Pn	20 25 10.6	+0.6
IAS				⇓S		Sn	20 25 27.6	+0.7
LEHL	**Lehliu**	**1.41**	**190**	⇓P		Pn	20 25 10.7	0.0
LEHL				⇓S		Sn	20 25 29.0	+0.9
LEHL	**Lehliu**	**1.41**	**190**	⇓P		Pn	20 25 10.7	0.0
LEHL				⇓S		Sn	20 25 29.0	+0.9
TLBR	**Topalu**	**1.46**	**154**	⇑P		Pn	20 25 11.1	-0.3
TLBR				⇓S		Sn	20 25 29.8	+0.5
TLBR	**Topalu**	**1.46**	**154**	⇑P		Pn	20 25 11.1	-0.3
TLBR				⇓S		Sn	20 25 29.8	+0.5
VOIR		**1.54**	**255**	⇑P		Pn	20 25 12.3	-0.4
VOIR		**1.54**	**255**	⇑P		Pn	20 25 12.3	-0.4
MILM	**Milestii Mici**	**1.55**	**47**	⇑P		Pn	20 25 12.8	+0.1
MILM				⇓S		Sn	20 25 32.1	+0.5
MILM	**Milestii Mici**	**1.55**	**47**	⇑P		Pn	20 25 12.8	+0.1
MILM				⇓S		Sn	20 25 32.1	+0.5
MTUR	**Matau**	**1.61**	**247**	⇓P		Pn	20 25 13.4	-0.2
MTUR	**Matau**	**1.61**	**247**	⇓P		Pn	20 25 13.4	-0.2
KIS	**Kishinev**	**1.61**	**45**	*e*P		Pn	20 25 13.7	+0.2
	10.0nm,0.2s							
KIS				*e*S		Sb	20 25 35.1	-1.5
	10.0nm,0.4s							
JURR	**Jurilovca**	**1.63**	**132**	⇓P		Pn	20 25 14.1	+0.3
JURR	**Jurilovca**	**1.63**	**132**	⇓P		Pn	20 25 14.1	+0.3
PRAR	**RASCA**	**1.63**	**337**	⇑P		Pn	20 25 13.9	+0.1
PRAR	**RASCA**	**1.63**	**337**	⇑P		Pn	20 25 13.9	+0.1
TIRR	**Tirgusor**	**1.66**	**147**	⇑P		Pn	20 25 14.0	-0.1
TIRR				⇓S		Sn	20 25 34.7	+0.5
TIRR	**Tirgusor**	**1.66**	**147**	⇑P		Pn	20 25 14.0	-0.1
TIRR				⇓S		Sn	20 25 34.7	+0.5
ARR	**Arges**	**1.84**	**255**	⇑P		Pn	20 25 16.9	+0.1
ARR	**Arges**	**1.84**	**255**	⇑P		Pn	20 25 16.9	+0.1
SGRR	**Singureni**	**1.84**	**208**	⇑P		Pn	20 25 16.3	-0.4
SGRR				⇑S		Sn	20 25 40.4	+1.6
SGRR	**Singureni**	**1.84**	**208**	⇑P		Pn	20 25 16.3	-0.4
SGRR				⇑S		Sn	20 25 40.4	+1.6
HUMR	**Humele**	**2.04**	**230**	⇑P		Pn	20 25 18.9	-0.5
HUMR	**Humele**	**2.04**	**230**	⇑P		Pn	20 25 18.9	-0.5
BURAR	**Bucovina Array**	**2.21**	**323**	⇓P		Pn	20 25 22.8	+1.0
BURAR	**Bucovina Array**	**2.21**	**323**	⇓P		Pn	20 25 22.8	+1.0
RAZG	**Razgrad**	**2.34**	**192**	⇑P		Pn	20 25 22.9	-0.7
RAZG	**Razgrad**	**2.34**	**192**	⇑P		Pn	20 25 22.9	-0.7
SORM	**Soroca**	**2.41**	**19**	⇓P		Pn	20 25 24.4	-0.1
SORM	**Soroca**	**2.41**	**19**	⇓P		Pn	20 25 24.4	-0.1
LOT	**Lotru**	**2.42**	**261**	⇓P		Pn	20 25 24.5	-0.2
LOT	**Lotru**	**2.42**	**261**	⇓P		Pn	20 25 24.5	-0.2
PRD	**Provadia**	**2.67**	**176**	P		Pn	20 25 28.3	+0.3
PRD	**Provadia**	**2.67**	**176**	P		Pn	20 25 28.3	+0.3
SZH	**Strazhica**	**2.74**	**199**	P		Pn	20 25 27.7	-1.3
SZH	**Strazhica**	**2.74**	**199**	P		Pn	20 25 27.7	-1.3
ROIA	**ROIAK**	**2.77**	**177**	P		Pn	20 25 29.9	+0.4
ROIA	**ROIAK**	**2.77**	**177**	P		Pn	20 25 29.9	+0.4
GZR	**Gura Zlata**	**3.12**	**263**	⇓P		Pn	20 25 33.9	-0.4
GZR	**Gura Zlata**	**3.12**	**263**	⇓P		Pn	20 25 33.9	-0.4
DRGR		**3.22**	**288**	⇑P		Pn	20 25 35.3	-0.4
DRGR				⇑S		Sn	20 26 12.5	-0.4
DRGR		**3.22**	**288**	⇑P		Pn	20 25 35.3	-0.4
DRGR				⇑S		Sn	20 26 12.5	-0.4
JMB	**Yambol**	**3.42**	**187**	P		Pn	20 25 38.0	-0.4
JMB	**Yambol**	**3.42**	**187**	P		Pn	20 25 38.0	-0.4
PGB	**Panagyurishte**	**3.95**	**214**	P		Pn	20 25 45.6	-0.1
PGB	**Panagyurishte**	**3.95**	**214**	P		Pn	20 25 45.6	-0.1
DIM	**Dimitrovgrad**	**3.99**	**198**	P		Pn	20 25 45.3	-0.9
DIM	**Dimitrovgrad**	**3.99**	**198**	P		Pn	20 25 45.3	-0.9
RZN	**Rozhen**	**4.53**	**204**	P		Pn	20 25 53.3	-0.6
STIP	**Stip**	**5.51**	**223**	*i*P		Pn	20 26 03.7	-3.4

ANF ***22*** *20:26:27.6±1.1,31°.80N×115°.64W, h1km, ML3.1/8, Error ellipse: s-maj=12.0km s-min=5.4km az=38.0*
NEIC ***22*** *20:26:29.1±1.8,31°.797N±0°.010×115°.71W±0°.02, h7km±4km, Error ellipse: s-maj=2.3km s-min=1.3km az=67.0*
SCEDC ***22*** *20:26:29.9,31°.79N×115°.73W, h0km*
PAS ***22*** *20:26:29.4±2.0,31°.81N±0°.01×115°.72W±0°.01, h0km±5km, Error ellipse: s-maj=1.9km s-min=1.6km az=184.0*
ECX ***22*** *20:26:30.3±0.6,31°.80N×115°.68W, h10km±9km, MD3.2, ML3.5*
MEX ***22*** *20:26:31.0±0.3,31°.80N×115°.66W, h8km±4km, MD4.0*
ISC 22 20:26:29.3±0.9,**31°.78N**±0°.02×**115°.70W**±0°.02,**h17**km±7km, **n93**,σ0**s79**/135,**6C-6D,Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJX	**San Joaquin**	**0.23**	**265**	*e*P	**Pg**	**20 26 34.7**	**+0.2**
SJX				*e*S	**Sg**	**20 26 38.9**	**+0.9**
SJX				IAML		20 26 39.0	
	comp=N,10μm,0.1s						
ESJX	**Sierra Juarez**	**0.31**	**316**	Pg	**Pg**	**20 26 34.7**	**-1.3**
ESJX				Sg	**Sg**	**20 26 38.7**	**-1.8**
VTX	**Valle De La Tr**	**0.40**	**191**	⇓*i*P	**Pb**	**20 26 37.9**	**0.0**
VTX				*e*S	**Sb**	**20 26 44.0**	**+0.3**
VTX				⇑*e*		20 26 44.1	
VTX				IAML		20 26 44.1	
	comp=E,4μm,0.1s						
ECBX	**El Chinero**	**0.63**	**119**	⇑*e*P	**Pb**	**20 26 41.6**	**-0.2**
ECBX				*e*S	**Sb**	**20 26 49.9**	**-0.5**
CPBX	**Cerro Prieto**	**0.72**	**28**		**Pb**	**20 26 42.7**	**-0.7**
CPBX					**Sg**	**20 26 54.0**	**+1.1**
CPBX	**Cerro Prieto**	**0.72**	**28**	*e*P	**Pb**	**20 26 42.6**	**-0.7**
CPBX				*e*		20 26 55.7	
CPBX				IAML		20 26 55.7	
	comp=E,5μm,0.2s						
CPBX				⇑*e*		20 26 58.8	
CPBX				IAML		20 26 58.8	
	comp=N,5μm,0.2s						
GUVIX	**Guadalupe Vict**	**0.74**	**45**		**Pn**	**20 26 44.5**	**-0.4**
GUVIX					**Sn**	**20 26 55.6**	**-0.2**
MBIG	**Mexicali**	**0.75**	**34**	*e*S	**Sg**	**20 26 55.3**	**+1.3**
MBIG	**Mexicali**	**0.75**	**34**		**Sg**	**20 26 55.3**	**+1.3**
SPIG	**San Pedro Mart**	**0.76**	**165**	*e*P	**Pg**	**20 26 44.3**	**+0.1**
SPIG				*e*S	**Sg**	**20 26 54.8**	**+0.4**
SPIG	**San Pedro Mart**	**0.76**	**165**		**Pg**	**20 26 44.3**	**+0.1**
SPIG					**Sg**	**20 26 54.8**	**+0.4**
SPIG	**San Pedro Mart**	**0.76**	**165**	*e*P	**Pb**	**20 26 44.0**	**-0.2**
SPIG				*e*S	**Sg**	**20 26 54.6**	**+0.2**
SPX	**San Pedro Mart**	**0.77**	**165**		**Pg**	**20 26 44.3**	**0.0**
SPX					**Sg**	**20 26 54.9**	**+0.3**
SPX	**San Pedro Mart**	**0.77**	**165**	⇓*e*P	**Pg**	**20 26 44.3**	**0.0**
CCX	**Cicese**	**0.83**	**276**		**Pg**	**20 26 45.4**	**0.0**
CCX	**Cicese**	**0.83**	**276**		**Sg**	**20 26 56.7**	**+0.3**
SGL	**Mount Signal**	**0.86**	**358**		**Pb**	**20 26 45.3**	**-0.6**
SGL					**Sb**	**20 26 57.0**	**-0.1**
UABX	**UABC, Campus M**	**0.88**	**14**		**Pb**	**20 26 45.6**	**-0.4**
UABX					**Sg**	**20 26 58.0**	**+0.2**
RMX	**La Rumorosa**	**0.88**	**338**		**Pb**	**20 26 44.5**	**-1.7**
RMX	**La Rumorosa**	**0.88**	**338**	⇓*e*P	**Pb**	**20 26 44.5**	**-1.7**
YUH	**Yuha Desert**	**0.88**	**347**		**Pb**	**20 26 45.3**	**-0.8**
YUH					**Sb**	**20 26 56.9**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**0.93**	**338**	P	**Pb**	**20 26 46.5**	**-0.6**
	baz=160,SNR=96						
IKP				S	**Sb**	**20 26 58.3**	**-1.0**
	baz=160						
IKP	**In-Ko-Pah, Jac**	**0.93**	**338**		**Pb**	**20 26 46.5**	**-0.6**
IKP					**Sb**	**20 26 58.2**	**-1.0**
IKP	**In-Ko-Pah, Jac**	**0.93**	**338**	⇓*i*P	**Pb**	**20 26 46.5**	**-0.6**
WESC	**Westside Schoo**	**0.97**	**358**		**Pb**	**20 26 46.9**	**-0.8**
WESC					**Sn**	**20 27 01.5**	**-0.1**
CBX	**Cerro Bola**	**0.98**	**303**	Pg	**Pb**	**20 26 47.8**	**-0.1**
CBX	**Cerro Bola**	**0.98**	**303**		**Sb**	**20 27 00.7**	**+0.2**
CBX	**Cerro Bola**	**0.98**	**303**	⇑*i*P	**Pb**	**20 26 47.8**	**-0.1**
CBX				*e*S	**Sg**	**20 27 00.9**	**-0.3**
SFX	**San Felipe**	**1.04**	**136**		**Pb**	**20 26 48.1**	**-0.6**
SFX					**Sb**	**20 27 01.9**	**-0.1**
SFX	**San Felipe**	**1.04**	**136**	*e*P	**Pb**	**20 26 48.1**	**-0.6**
SFX				*e*S	**Sb**	**20 27 01.9**	**-0.1**
DREC	**Desert Rsrch C**	**1.04**	**12**		**Pb**	**20 26 48.9**	**+0.1**
DREC					**Sg**	**20 27 04.0**	**+0.9**
TJIG	**Tijuana**	**1.05**	**308**	*e*P	**Pb**	**20 26 48.5**	**-0.6**
TJIG				*e*S	**Sb**	**20 27 02.0**	**-0.7**
TJIG	**Tijuana**	**1.05**	**308**		**Pb**	**20 26 48.5**	**-0.6**
TJIG					**Sb**	**20 27 02.0**	**-0.7**
COK2	**Cook Ranch 2**	**1.06**	**359**		**Pb**	**20 26 48.7**	**-0.6**
SNR	**Schaffner Ranc**	**1.10**	**11**		**Pb**	**20 26 50.0**	**+0.2**
SNR					**Sg**	**20 27 05.9**	**+0.9**
CRR	**Carrizo Plain**	**1.12**	**348**		**Pn**	**20 26 49.6**	**-0.6**
CRR					**Sb**	**20 27 04.7**	**+0.1**
SWSC	**Sam W. Stewart**	**1.16**	**356**	P	**Pn**	**20 26 50.7**	**-0.1**
	baz=177,SNR=58						
SWSC				S	**Sb**	**20 27 06.0**	**+0.3**
	baz=177						
SWSC	**Sam W. Stewart**	**1.16**	**356**		**Pn**	**20 26 50.1**	**-0.7**
SWSC					**Sn**	**20 27 06.2**	**-0.1**
COA	**Coachella**	**1.18**	**24**		**Pb**	**20 26 51.8**	**+0.5**
CBKC	**Canebrake**	**1.21**	**337**		**Pb**	**20 26 51.9**	**+0.1**
SQX	**San Quintin**	**1.21**	**187**	⇓*e*P	**Pb**	**20 26 51.7**	**0.0**
SQX				*e*S	**Sn**	**20 27 07.7**	**+0.2**
BAR	**Barrett**	**1.22**	**318**		**Pn**	**20 26 51.2**	**-0.4**
BAR					**Sb**	**20 27 06.7**	**-0.7**
BAR	**Barrett**	**1.22**	**318**	⇑*e*P	**Pn**	**20 26 51.2**	**-0.4**
YMD	**Yuma Desert**	**1.24**	**51**		**Pn**	**20 26 52.0**	**+0.1**
MONP2	**Monument Peak**	**1.27**	**331**	P	**Pn**	**20 26 52.5**	**+0.1**
	baz=152,SNR=112						
MONP2				S	**Sb**	**20 27 08.2**	**-0.7**
	baz=152						
MONP2	**Monument Peak**	**1.27**	**331**		**Pn**	**20 26 52.6**	**+0.1**
MONP2					**Sb**	**20 27 08.3**	**-0.7**
MONP2	**Monument Peak**	**1.27**	**331**	⇓*e*P	**Pn**	**20 26 52.6**	**+0.1**
OLP	**Otay Lakes Par**	**1.33**	**309**		**Pn**	**20 26 53.1**	**0.0**
OLP					**Sb**	**20 27 10.5**	**-0.1**
OLP	**Otay Lakes Par**	**1.33**	**309**	⇑*e*P	**Pn**	**20 26 53.2**	**0.0**
RUN	**Ruthven**	**1.33**	**27**		**Pn**	**20 26 51.9**	**-1.2**
TJX	**Tijuana**	**1.36**	**303**		**Pb**	**20 26 54.3**	**0.0**
SDRC	**San Diego Road**	**1.42**	**312**		**Pn**	**20 26 54.5**	**+0.1**
SDRC					**Sn**	**20 27 12.6**	**-0.1**
SDRC	**San Diego Road**	**1.42**	**312**	*e*P	**Pn**	**20 26 54.6**	**+0.2**
GLA	**Glamis**	**1.46**	**30**	P	**Pn**	**20 26 54.5**	**-0.5**
	baz=212						
GLA	**Glamis**	**1.46**	**30**		**Pb**	**20 26 56.0**	**-0.1**
SLH	**Sleepy Hollow**	**1.48**	**342**		**Pb**	**20 26 56.8**	**+0.4**
SLH					**Sg**	**20 27 16.5**	**-0.7**
BORC	**Borrego Spring**	**1.60**	**338**		**Pb**	**20 26 58.8**	**+0.4**
DPP	**Dos Picos Cty**	**1.61**	**319**		**Pb**	**20 26 58.0**	**-0.6**
DPP					**Sb**	**20 27 18.3**	**-0.3**
109C	**Camp Elliot, M**	**1.62**	**313**	P	**Pn**	**20 26 57.8**	**+0.7**
	baz=133,SNR=17						
109C				S	**Sb**	**20 27 18.6**	**-0.4**
	baz=133						
109C	**Camp Elliot, M**	**1.62**	**313**		**Pn**	**20 26 57.9**	**+0.7**
CPE	**Camp Elliot**	**1.62**	**313**		**Pb**	**20 26 58.4**	**-0.6**
MATG	**Mataguay Scout**	**1.63**	**331**		**Pb**	**20 26 59.2**	**+0.3**
MATG					**Sb**	**20 27 19.6**	**+0.4**
HWB	**Hans Werner Br**	**1.64**	**320**		**Pb**	**20 26 58.5**	**-0.6**
HWB					**Sb**	**20 27 19.2**	**-0.2**
PLM	**Palomar**	**1.85**	**328**		**Pb**	**20 27 02.5**	**-0.3**
FRD	**Ford Ranch, An**	**1.87**	**336**		**Pb**	**20 27 03.6**	**+0.5**
FRD	**Ford Ranch, An**	**1.87**	**336**		**Pb**	**20 27 03.5**	**+0.5**
GORC	**Green Oak Ranc**	**1.88**	**317**		**Pb**	**20 27 02.7**	**-0.5**
GORC					**Sb**	**20 27 26.2**	**-0.3**
PIX	**Pinacate**	**1.92**	**96**		**Pn**	**20 26 59.7**	**-1.5**
XPFO	**Pion Flat**	**1.93**	**341**		**Pb**	**20 27 04.6**	**+0.5**
PFO	**Pinyon Flats O**	**1.93**	**341**	P	**Pn**	**20 27 01.7**	**+0.2**
	baz=161						
PFO				Sb	**Sb**	**20 27 29.0**	**+0.9**
	baz=161						
PFO	**Pinyon Flats O**	**1.93**	**341**		**Pn**	**20 27 01.2**	**-0.3**
CRY	**Cary Ranch**	**1.98**	**334**		**Pb**	**20 27 05.9**	**+0.9**
POB	**Polly Butte**	**2.16**	**332**		**Pn**	**20 27 05.8**	**+1.2**
MURC	**Murrieta**	**2.21**	**326**	Pb	**Pb**	**20 27 08.8**	**0.0**
	baz=145,SNR=13						
MURC				Sb	**Sb**	**20 27 36.3**	**+0.3**
	baz=145						
EW2	**E Wide Canyon**	**2.23**	**345**		**Pb**	**20 27 10.6**	**+1.3**
ELS	**Elsinore Mount**	**2.36**	**322**		**Pb**	**20 27 05.8**	**-1.6**
214A	**Organ Pipe Nat**	**2.46**	**85**	P	**Pn**	**20 27 08.0**	**-0.7**
	baz=267						
214A				S	**Sn**	**20 27 36.4**	**-2.0**
	baz=267						
214A	**Organ Pipe Nat**	**2.46**	**85**	*e*P	**Pn**	**20 27 07.7**	**-1.0**
214A				*e*S	**Sn**	**20 27 36.8**	**-1.6**
214A	**Organ Pipe Nat**	**2.46**	**85**		**Pn**	**20 27 07.6**	**-1.0**
BBRC	**Big Bear Solar**	**2.68**	**338**		**Pb**	**20 27 18.5**	**+1.6**
Y14A	**Wickenburg**	**3.12**	**46**		**Pn**	**20 27 17.6**	**-0.2**
MWC	**Mount Wilson**	**3.14**	**321**		**Pn**	**20 27 18.9**	**+0.7**
GSC	**Goldstone, Bar**	**3.63**	**346**		**Pn**	**20 27 26.6**	**+1.8**
W13A	**Hualapai Mount**	**3.64**	**24**	Pn	**Pn**	**20 27 27.3**	**+2.3**
TUC	**Tucson**	**4.20**	**82**	Pn	**Pn**	**20 27 34.1**	**+1.4**
X16A	**Lo Mia Camp, P**	**4.43**	**53**		**Pn**	**20 27 36.9**	**+0.9**
ISA	**Isabella, Lake**	**4.51**	**330**	Pn	**Pn**	**20 27 37.3**	**+0.4**
U15A	**North Rim**	**5.43**	**30**	Pn	**Pn**	**20 27 49.2**	**-0.5**
X18A	**Snowflake**	**5.54**	**59**	Pn	**Pn**	**20 27 52.4**	**+1.2**
CCUT	**Cedar City**	**6.07**	**18**	Pn	**Pn**	**20 27 59.9**	**+1.5**
MDPB	**Devils Postpil**	**6.47**	**335**		**Pn**	**20 28 04.7**	**+0.8**
121A	**Cookes Peak, D**	**6.75**	**82**	Pn	**Pn**	**20 28 08.6**	**+0.8**
NV11	**Mina Array Sit**	**6.93**	**344**	Pn	**Pn**	**20 28 12.6**	**+2.4**

IDC ***22*** *20:30:48.5±2.8,45°.58N×27°.96E, h0km, mb3.6/1, mb1 3.5/3, mb1mx3.1/47, mbtmp3.4/3, ML2.8/2, MS3.3/1, Ms1 3.3/1, ms1mx2.6/39, Error ellipse: s-maj=95.7km s-min=18.9km az=109.0*
SOF ***22*** *20:30:51.6, 46°.09N×27°.16E, h96km, MD3.7*
SIGU ***22*** *20:30:55.8, 45°.86N×27°.17E, h36km, mb3.4*
BUC ***22*** *20:30:56.0±0.1, 45°.85N×27°.19E, h36km±2km, ml3.1/42, Error ellipse: s-maj=1.0km s-min=1.0km az=153.0*
BEO ***22*** *20:30:56.2±1.1, 45°.67N×26°.75E, h0km, ML2.6/5*
ISC 22 20:30:55.0±0.9,**45°.85N**±0°.02×**27°.17E**±0°.02,**h35**km,**n122**, σ1**s49**/180,**94C-50D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ODBI	**Odobesti**	**0.12**	**220**	⇓P		**Pn**	**20 31 02.5**	**+1.3**
ODBI				⇓S		**Sn**	**20 31 08.0**	**+2.6**
ODBI	**Odobesti**	**0.12**	**220**	⇓P		**Pn**	**20 31 02.5**	**+1.3**
ODBI				⇓S		**Sn**	**20 31 08.0**	**+2.6**
GHRR		**0.27**	**39**	⇑P		**Pn**	**20 31 03.4**	**+0.9**
GHRR				⇓S		**Sn**	**20 31 09.4**	**+1.7**
GHRR		**0.27**	**39**	⇑P		**Pn**	**20 31 03.4**	**+0.9**
GHRR				⇓S		**Sn**	**20 31 09.4**	**+1.7**
VRI	**Vrincioaia**	**0.31**	**273**	⇓P		**Pn**	**20 31 03.1**	**+0.1**
VRI				⇓S		**Sn**	**20 31 09.7**	**+1.2**
VRI	**Vrincioaia**	**0.31**	**273**	⇓P		**Pn**	**20 31 03.1**	**+0.1**
VRI				⇓S		**Sn**	**20 31 09.7**	**+1.2**
PLOR	**Plostina**	**0.36**	**270**	⇑P		**Pn**	**20 31 04.0**	**+0.2**
PLOR				⇑S		**Sn**	**20 31 11.1**	**+1.4**
PLOR	**Plostina**	**0.36**	**270**	⇑P		**Pn**	**20 31 04.0**	**+0.2**
PLOR				⇑S		**Sn**	**20 31 11.1**	**+1.4**
TUDR		**0.44**	**126**	⇓P		**Pn**	**20 31 05.4**	**+0.6**
TUDR				⇓S		**Sn**	**20 31 12.7**	**+1.2**
TUDR		**0.44**	**126**	⇓P		**Pn**	**20 31 05.4**	**+0.6**
TUDR				⇓S		**Sn**	**20 31 12.7**	**+1.2**
BISRR	**Bisoca**	**0.44**	**226**	⇑P		**Pn**	**20 31 06.1**	**+1.2**
BISRR				⇓S		**Sn**	**20 31 14.2**	**+2.5**
BISRR	**Bisoca**	**0.44**	**226**	⇑P		**Pn**	**20 31 06.1**	**+1.2**
BISRR				⇓S		**Sn**	**20 31 14.2**	**+2.5**
VARL	**Varlezi**	**0.48**	**84**	⇑P		**Pn**	**20 31 06.1**	**+0.8**
VARL				⇓S		**Sn**	**20 31 13.8**	**+1.3**
VARL	**Varlezi**	**0.48**	**84**	⇑P		**Pn**	**20 31 06.1**	**+0.8**
VARL				⇓S		**Sn**	**20 31 13.8**	**+1.3**
GRER		**0.49**	**196**	⇓P		**Pn**	**20 31 07.2**	**+1.7**
GRER				⇓S		**Sn**	**20 31 14.8**	**+1.9**
GRER		**0.49**	**196**	⇓P		**Pn**	**20 31 07.2**	**+1.7**
GRER				⇓S		**Sn**	**20 31 14.8**	**+1.9**
BIR	**Birlad**	**0.52**	**38**	⇑P		**Pn**	**20 31 06.6**	**+0.7**
BIR				⇓S		**Sn**	**20 31 14.7**	**+1.1**
BIR	**Birlad**	**0.52**	**38**	⇑P		**Pn**	**20 31 06.6**	**+0.7**
BIR				⇓S		**Sn**	**20 31 14.7**	**+1.1**
SCHL	**Schela**	**0.58**	**127**	⇓P		**Pn**	**20 31 07.0**	**+0.2**
SCHL				⇑S		**Sn**	**20 31 15.9**	**+0.8**
SCHL	**Schela**	**0.58**	**127**	⇓P		**Pn**	**20 31 07.0**	**+0.2**
SCHL				⇑S		**Sn**	**20 31 15.9**	**+0.8**
NEHR	**Nehoiu**	**0.74**	**235**	⇑P		**Pn**	**20 31 10.9**	**+1.8**
NEHR				⇑S		**Sn**	**20 31 21.1**	**+2.0**
NEHR	**Nehoiu**	**0.

GZR				*e*Sn	**Sn**	**20 32 17.4**	**-0.2**
GZR	**Gura Zlata**	**3.11**	**263**	ǁP	**Pn**	**20 31 42.8**	**+1.2**
GZR	**Gura Zlata**	**3.11**	**263**	ǁP	**Pn**	**20 31 42.8**	**+1.2**
DRGR		**3.23**	**288**	*e*Pn	**Pn**	**20 31 45.4**	**+2.2**
DRGR				*e*Sn	**Sn**	**20 32 22.0**	**+1.6**
DRGR		**3.23**	**288**	ǁP	**Pn**	**20 31 44.5**	**+1.3**
DRGR		**3.23**	**288**	ǁP	**Pn**	**20 31 44.5**	**+1.3**
HORU	**Horodok**	**3.40**	**352**	*e*Pn	**Pn**	**20 31 47.5**	**+2.0**
JMB	**Yambol**	**3.41**	**187**	P	**Pn**	**20 31 46.2**	**+0.5**
SIRR	**Siria**	**3.85**	**278**	*e*Pn	**Pn**	**20 31 51.5**	**-0.3**
PGB	**Panagyurishte**	**3.94**	**214**	P	**Pn**	**20 31 54.2**	**+1.1**
DIM	**Dimitrovgrad**	**3.98**	**198**	P	**Pn**	**20 31 54.1**	**+0.6**
MDVR	**Moldovita**	**3.99**	**256**	*e*Pn	**Pn**	**20 31 53.5**	**-0.2**
ZAPS	**Zavoj**	**4.14**	**233**	*e*Pn	**Pn**	**20 31 55.8**	**+0.1**
ZAPS				*e*Sn	**Sn**	**20 32 40.2**	**-2.7**
PLD	**Plovdiv**	**4.15**	**206**	P	**Pn**	**20 31 55.9**	**+0.1**
RZN	**Rozhen**	**4.53**	**204**	P	**Pn**	**20 32 02.0**	**+0.8**
BOSS	**Bosilegrad**	**4.76**	**227**	*e*Pn	**Pn**	**20 32 05.4**	**+1.2**
BOSS				*e*Sn	**Sn**	**20 32 54.3**	**-3.8**
AKASG	**Malin Array Be**	**5.04**	**15**	Pn	**Pn**	**20 32 07.2**	**-0.8**
	1.3nm,0.3s,baz=193,slow=11,SNR=5.9						
AKASG				Sn	**Sn**	**20 33 01.7**	**-3.3**
	4.2nm,0.3s,baz=206,slow=22,SNR=3.1						
AKASG				Lg	Lg	20 33 31.0	
	15nm,0.3s,baz=191,slow=27,SNR=12						
STIP	**Stip**	**5.50**	**223**	*i* Pn	**Pn**	**20 32 11.9**	**-2.5**
VAY	**Valandovo**	**5.63**	**218**	*i* Pn	**Pn**	**20 32 17.0**	**+0.9**
FINES	**FINESS Array B**	**15.63**	**358**	Pn	**Pn**	**20 34 27.7**	**-4.7**
	0.1nm,0.3s,baz=173,slow=12,SNR=2.2						
FINES				Sn	Sn	20 37 12.0	-12
	0.1nm,0.3s,baz=166,slow=20,SNR=2.9						
KEST	**Kesra**	**16.83**	**239**	LR	LR	20 42 50.1	
	comp=Z,88nm,18.2s,baz=269,slow=42						
TORD	**Torodi Ar. Bea**	**39.08**	**222**	P	**P**	**20 38 18.3**	**-0.4**
	0.4nm,0.5s,baz=25,slow=9.0,SNR=4.4						

KRSC 22 20:31:21.2±2.0, 54°88N×165°61E, h31km±11km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.39**	**32**	*i* P	Pb	20 31 28.8	-1.2
BKI				*e*S	Sb	20 31 33.3	-2.7
KBTR	**Krutoberegovo**	**2.07**	**311**	*e*P	Pn	20 31 54.9	+1.1
KBTR				*e*S	Sn	20 32 19.3	+0.7
KBG	**Krutoberegovo**	**2.15**	**311**	*e*P	Pn	20 31 56.3	+1.4
KBG				*e*S	Sn	20 32 22.1	+1.6
MKZ	**Mys Kozlova**	**2.27**	**263**	*e*P	Pb	20 32 00.3	-1.2
MKZ				*e*S	Sb	20 32 27.2	-2.0
ZLN	**Zelenaya**	**2.97**	**295**	*e*P	Pb	20 32 10.5	-2.9
BZGR	**Bezymyannyi-Gr**	**3.00**	**293**	*e*P	Pb	20 32 10.9	-3.0
BZGR				*e*S	Sb	20 32 45.9	-4.2
TUMD	**Tumrok D**	**3.02**	**278**	*e*P	Pb	20 32 11.3	-2.9
TUMD				*e*S	Sb	20 32 47.2	-3.4
CIRR	**Tsirk**	**3.03**	**296**	*e*P	Pb	20 32 12.1	-2.4
KZV	**Kizimen**	**3.07**	**277**	*e*P	Pb	20 32 11.7	-3.5
BZWR	**Bezymyannyi-We**	**3.11**	**293**	*e*P	Pb	20 32 13.0	-2.9
KRSR	**Krestovskiy**	**3.17**	**297**	*e*P	Pb	20 32 13.4	-3.4
TUMR	**Tumrok**	**3.17**	**280**	*e*P	Pb	20 32 13.6	-3.2
KIRR	**Kirishev**	**3.19**	**292**	*e*P	Pb	20 32 13.9	-3.3
KMNR	**Kamenistaya**	**3.19**	**288**	*e*P	Pb	20 32 14.2	-3.1
KMNR				*e*S	Sb	20 32 51.9	-3.9
KOZ	**Kozyrevsk**	**3.47**	**292**	*e*P	Pb	20 32 18.5	-3.5
SRDR	**Sredinnyy**	**3.64**	**296**	*e*P	Pn	20 32 20.0	+4.6
KII	**Karymskiy**	**3.69**	**259**	*e*P	Pb	20 32 21.2	-4.6
KII				*e*S	Sn	20 33 01.7	+3.1
SPN	**Mys Shipunski**	**3.75**	**244**	*e*P	Pn	20 32 20.7	+3.8
SPN				*e*S	Sn	20 33 02.6	+2.7
NLC	**Nalytchevo**	**4.07**	**248**	*e*P	Pn	20 32 25.4	+4.1
NLC				*e*S	Sn	20 33 10.8	+3.0
ESO	**Esso**	**4.08**	**288**	*e*P	Pn	20 32 26.3	+4.9
SDLR	**Sedlovina**	**4.27**	**251**	*e*P	Pn	20 32 29.2	+5.0
SDLR				*e*S	Sn	20 33 17.1	+4.1
SMAR	**Somma**	**4.32**	**251**	*e*P	Pn	20 32 30.0	+5.0
UGLR	**Uglovaya**	**4.33**	**250**	*e*P	Pn	20 32 30.5	+5.5
KRER	**Koryakskii**	**4.34**	**251**	*e*P	Pn	20 32 30.4	+5.3
KRER				*e*S	Sn	20 33 18.5	+3.8
AVH	**Avacha**	**4.36**	**251**	*e*P	Pn	20 32 31.1	+5.8
AVH				*e*S	Sn	20 33 19.1	+4.1
KRX	**Arik**	**4.37**	**252**	*e*P	Pn	20 32 30.9	+5.4
KRX				*e*S	Sn	20 33 19.3	+3.9
KOK	**Koryaka**	**4.40**	**252**	*e*P	Pn	20 32 31.1	+5.2
PET	**Petropavlovsk**	**4.51**	**249**	*e*P	Pn	20 32 32.5	+5.2
GNL	**Ganaly**	**4.65**	**258**	*e*P	Pn	20 32 34.8	+5.5
KRMR	**Karymshinskiy**	**4.88**	**248**	*e*P	Pn	20 32 38.9	+6.5
KRMR				*e*S	Sn	20 33 32.0	+4.3
RUS	**Russkaya**	**4.88**	**243**	*e*P	Pn	20 32 37.0	+4.6
RUS				*e*S	Sn	20 33 31.8	+4.1
MTVR	**Mutnovka**	**5.02**	**245**	*e*P	Pn	20 32 39.7	+5.2
MTVR				*e*S	Sn	20 33 34.6	+3.1
GRL	**Gorelyy**	**5.04**	**246**	*e*P	Pn	20 32 39.5	+4.7
ASAK	**Asacha**	**5.22**	**245**	*e*P	Pn	20 32 43.0	+5.8
KDTR	**Khodutka, Kamc**	**5.46**	**239**	*e*P	Pn	20 32 44.7	+4.4
KDTR				*e*S	Sn	20 33 43.0	+1.0

*JMA **22** 20:33:24.5, 36°76N×137°91E, h5km±1km, M3.7*
JMA Felt III J1.
*IDC **22** 20:33:24.7±1.0, 36°32N×137°91E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.4/52, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=24.3km s-min=7.2km az=144.0*
*NIED **22** 20:33:24.6, 36°77N×137°91E, h5km, MW3.8, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=0.02; Mθθ=3.42; Mθφ=-3.44; Mrθ=-3.94; Mθφ=0.43; Mφr=2.80; Fault plane solution: M0=5.93000×10¹⁴ NP1: φs=310.00000°, δ=90.00000°, λ=54.00000°. NP2: φs=219.00000°, δ=36.00000°, λ=180.00000°.*
ISC 22 20:33:26.5±0.8, 36°59N±0°07×137°90E±0°04, h10km, n13, σ1s41/16, mb3.6/4, 1C-2D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNG	**Nsakai**	**0.24**	**138**	⇑P	**Pg**	**20 33 31.8**	**+0.3**
JNG				S	**Sg**	**20 33 37.1**	**+2.2**
MAT	**Matsushiro**	**0.25**	**100**	P	**Pg**	**20 33 30.5**	**-1.1**
MAT				S	**Sg**	**20 33 34.9**	**-0.2**
MAT	**Matsushiro**	**0.25**	**100**	P	**Pg**	**20 33 30.5**	**-1.1**
MAT				S	**Sg**	**20 33 34.9**	**-0.2**
MJAR	**Matsushiro Arr**	**0.25**	**100**	Pg	**Pg**	**20 33 30.8**	**-0.9**
	40nm,0.3s,baz=300,slow=19,SNR=1049						
MJAR				Lg	Lg	20 33 36.4	
	228nm,0.3s,baz=302,slow=27,SNR=93						
JTT	**Ttatey**	**0.46**	**272**	ǁP	**Pg**	**20 33 34.3**	**-1.1**
JGN	**Niukaw**	**0.59**	**232**	ǁP	**Pb**	**20 33 38.1**	**-0.9**
JGK	**Kuni**	**0.60**	**92**	ǁP	**Pg**	**20 33 36.3**	**-1.8**
KSRS	**Korea Array**	**8.03**	**279**	Pn	**Pn**	**20 35 23.6**	**+0.5**
	0.2nm,0.3s,baz=94,slow=14,SNR=2.4						
KSRS				Lg	Lg	20 37 46.5	
	0.3nm,0.3s,baz=123,slow=31,SNR=5.6						
ASAJ	**Asahikawa**	**8.33**	**24**	Pn	**Pn**	**20 35 28.9**	**+1.7**
	0.4nm,0.3s,baz=214,slow=18,SNR=2.3						
SONM	**Songino Array**	**25.72**	**306**	P	**P**	**20 38 57.9**	**+0.8**
	0.3nm,0.8s,baz=98,slow=8.6,SNR=1.8						
INK	**Inuvik**	**56.06**	**27**	P	**P**	**20 43 06.5**	**+1.4**
	1.6nm,0.9s,baz=304,slow=13,SNR=2.4						
WRA	**Warramunga Arr**	**56.32**	**184**	P	**P**	**20 43 05.3**	**-2.3**
	0.3nm,0.4s,baz=359,slow=7.8,SNR=10						
ASAR	**Alice Springs**	**60.05**	**184**	P	**P**	**20 43 32.5**	**-1.1**
	0.2nm,0.5s,baz=5.3,slow=5.9,SNR=1.4						

*NIED **22** 20:45:53.6, 39°04N×142°44E, h30km, MW3.6, Moment Tensor Solution. s1 Moment tensor: Scale 10¹⁴Nm; Mrr=0.73; Mθθ=2.19; Mφφ=-1.46; Mrθ=0.91; Mθφ=0.90; Mφr=0.87; Fault plane solution: M0=2.40000×10¹⁴ NP1: φs=217.00000°, δ=81.00000°, λ=-144.00000°. NP2: φs=121.00000°, δ=55.00000°, λ=-10.00000°.*
*JMA **22** 20:45:53.5±0.1, 39°04N×142°44E, h30km±1km, M3.9*
JMA Felt I J1.
*IDC **22** 20:45:55.7±2.1, 39°01N×142°33E, h42km±19km, mb3.4/12, mb1 3.6/18, mb1mx3.5/52, mbtmp3.7/18, ML3.1/6, Error ellipse: s-maj=22.8km s-min=10.4km az=113.0*
ISC 22 20:45:53.0±1.8, 38°97N±0°04×142°43E±0°07, h23km±12km, n36, σ1s02/44, mb3.7/12, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.60**	**281**	P	**Pb**	**20 46 05.4**	**+0.6**
OFUJ				S	**Sb**	**20 46 13.4**	**+0.5**
JKMT	**Kesennumamotoy**	**0.76**	**258**	P	**Pb**	**20 46 08.0**	**+0.5**
JKMT				S	**Sb**	**20 46 17.8**	**+0.4**
MIYJ	**Miyakonagasawa**	**0.77**	**322**	P	**Pb**	**20 46 07.0**	**-0.7**
MIYJ				S	**Sb**	**20 46 16.4**	**-1.3**
JMK	**Ichinoseki**	**0.94**	**269**	P	**Pn**	**20 46 10.8**	**+0.1**
JMK				S	**Sn**	**20 46 22.8**	**-0.6**
JIO	**Ouri**	**0.99**	**239**	P	**Pn**	**20 46 11.3**	**0.0**
JIO				S	**Sn**	**20 46 23.5**	**-1.0**
JOM	**Ohasama**	**1.01**	**300**	P	**Pn**	**20 46 11.6**	**-0.2**
JOM				S	**Sn**	**20 46 24.5**	**-0.8**
JTH	**Tanohata**	**1.06**	**336**	P	**Pn**	**20 46 11.1**	**-1.3**
JKZ	**Kuzumaki**	**1.32**	**320**	P	**Pn**	**20 46 16.0**	**-0.1**
JKZ				S	**Sn**	**20 46 32.6**	**-0.4**
JRG	**Rokugo**	**1.46**	**288**	P	**Pb**	**20 46 19.0**	**-0.4**
JRG				*e*S	**Sb**	**20 46 38.0**	**+0.5**
JOU	**Okura**	**1.50**	**247**	P	**Pb**	**20 46 19.8**	**-0.4**
JOU				S	**Sb**	**20 46 39.8**	**+0.9**
JANG	**Nango**	**1.57**	**334**	P	**Pn**	**20 46 19.4**	**0.0**
JANG				S	**Sn**	**20 46 39.0**	**0.0**
MJAR	**Matsushiro Arr**	**4.13**	**235**	P	**Pn**	**20 46 56.3**	**+1.7**
	0.3nm,0.3s,baz=36,slow=13,SNR=4.4						
MJAR				S	**Sn**	**20 47 43.3**	**+1.2**
	0.1nm,0.3s,baz=78,slow=16,SNR=2.2						
MAT	**Matsushiro**	**4.13**	**235**	P	**Pn**	**20 46 51.3**	**-3.3**
MAT				S	**Pn**	**20 46 56.1**	**+1.5**
ASAJ	**Asahikawa**	**5.15**	**1**	P	**Pn**	**20 47 09.9**	**+1.3**
	1.2nm,0.3s,baz=207,slow=18,SNR=8.4						
ASAJ				S	**Sn**	**20 48 07.5**	**+0.3**
	0.7nm,0.3s,baz=214,slow=18,SNR=1.2						
JHJ	**Hachijo jima 2**	**6.22**	**201**	P	**Pn**	**20 47 23.4**	**+0.2**
	12nm,0.3s,baz=22,slow=16,SNR=2.1						
JHJ				S	**Sn**	**20 48 31.0**	**-2.5**
	4.5nm,0.3s,baz=66,slow=20,SNR=1.0						
USRK	**Ussuriysk Ar.**	**9.40**	**307**	P	**Pn**	**20 48 08.1**	**+1.2**
	baz=84,slow=15,SNR=3.7						
KSRS	**Korea Array**	**11.51**	**267**	P	**Pn**	**20 48 35.2**	**-0.6**
	0.2nm,0.3s,baz=133,slow=14,SNR=2.7						
PETK	**Petropavlovsk-**	**17.62**	**32**	P	**P**	**20 49 57.8**	**+0.2**
	0.1nm,0.3s,baz=264,slow=15,SNR=1.9						
YAK	**Yakutsk**	**24.38**	**345**	P	**P**	**20 51 08.2**	**-0.8**
	1.9nm,0.6s,baz=180,slow=2.7,SNR=4.4						
SEY	**Seymchan**	**24.74**	**11**	P	**P**	**20 51 13.1**	**+0.8**
	1.7nm,0.8s,baz=223,slow=8.4,SNR=5.7						
H11N2	**WAKE ISLAND Hy**	**28.53**	**125**	T	T	21 22 11.3	
	baz=317,slow=75,SNR=51						
H11N1	**WAKE ISLAND Hy**	**28.54**	**125**	T	T	21 22 09.2	
	baz=317,slow=75,SNR=84						
H11N3	**WAKE ISLAND Hy**	**28.55**	**125**	T	T	21 22 11.9	
	baz=317,slow=75,SNR=85						
H11S1	**WAKE ISLAND Hy**	**29.31**	**127**	T	T	21 23 15.2	
	baz=318,slow=76,SNR=20						
H11S3	**WAKE ISLAND Hy**	**29.32**	**127**	T	T	21 23 15.1	
	baz=318,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**29.33**	**127**	T	T	21 23 13.5	
	baz=318,slow=76,SNR=14						
ZALV	**Zalesovo Beam**	**41.23**	**311**	P	**P**	**20 53 35.5**	**-0.3**
	0.7nm,0.3s,baz=74,slow=11,SNR=2.9						
CMAR	**Chiang Mai Arr**	**42.78**	**254**	P	**P**	**20 53 47.8**	**-1.0**
	0.2nm,0.5s,baz=161,slow=5.7,SNR=2.0						
MKAR	**Makanchi Array**	**43.80**	**301**	P	**P**	**20 53 57.0**	**+0.2**
	0.6nm,0.7s,baz=81,slow=7.9,SNR=4.7						
ILAR	**Eielson Array**	**47.44**	**33**	P	**P**	**20 54 26.1**	**+0.8**
	0.7nm,0.8s,baz=278,slow=6.2,SNR=5.7						
WRA	**Warramunga Arr**	**59.06**	**189**	P	**P**	**20 55 51.6**	**+0.2**
	0.4nm,0.3s,baz=6.2,slow=7.1,SNR=18						
ASAR	**Alice Springs**	**62.81**	**189**	P	**P**	**20 56 17.3**	**+0.6**
	0.1nm,0.4s,baz=8.9,slow=6.6,SNR=2.1						
FINES	**FINESS Array B**	**67.48**	**332**	P	**P**	**20 56 45.9**	**-0.6**
	0.6nm,0.8s,baz=29,slow=3.2,SNR=1.2						
NOA	**NORSAR Array B**	**72.71**	**337**	P	**P**	**20 57 18.5**	**-0.2**
	0.6nm,1.0s,baz=45,slow=5.5,SNR=2.2						
AKASG	**Malin Array Be**	**73.26**	**322**	P	**P**	**20 57 22.3**	**+0.3**
	0.6nm,0.4s,baz=58,slow=4.8,SNR=2.6						
PDAR	**Pinedale Array**	**75.75**	**46**	P	**P**	**20 57 37.9**	**+0.9**
	0.2nm,0.4s,baz=275,slow=5.3,SNR=2.3						

JMA 22 20:48:10.0±0.1, 32°58N×129°88E, h10km±1km, M-0.4, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGSJ	**Nagasakinomoza**	**0.09**	**307**	P	Pg	20 48 12.5	+0.1
NGSJ				*e*S	Sg	20 48 14.2	+0.1

JMA 22 20:49:59.6, 36°69N×137°88E, h5km±1km, M1.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.30**	**119**	P	Pg	20 50 05.2	-0.3
MAT				S	Sg	20 50 09.5	+0.1
MAT	**Matsushiro**	**0.30**	**119**	P	Pg	20 50 05.2	-0.3
JNG	**Nsakai**	**0.33**	**148**	P	Pg	20 50 06.1	0.0
JNG				S	Sg	20 50 11.1	+0.6

*IDC **22** 21:00:28.8±1.9, 6°30S×147°17E, h102km±17km, mb3.5/6, mb1 3.6/9, mb1mx3.4/34, mbtmp3.9/9, Error ellipse: s-maj=27.4km s-min=14.5km az=93.0*
ISC 22 21:00:28.3±1.2, 6°24S±0°09×147°2E±0°2, h100km, n10, σ0s89/12, mb3.5/6, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.15**	**180**	P	**Pn**	**21 01 16.2**	**+0.2**
	42nm,0.3s,baz=5.5,slow=5.8,SNR=108						
PMG				S	**Sn**	**21 01 52.4**	**-0.4**
	23nm,0.3s,baz=73,slow=23,SNR=15						
JAY	**Jayapura**	**7.43**	**300**	P	**Pn**	**21 02 13.6**	**-0.6**
	1.3nm,0.3s,baz=125,slow=5.7,SNR=8.1						
WRA	**Warramunga Arr**	**18.46**	**221**	P	**P**	**21 04 36.0**	**-0.5**
	0.2nm,0.3s,baz=46,slow=11,SNR=19						
ASAR	**Alice Springs**	**21.52**	**215**	P	**P**	**21 05 09.7**	**+0.2**
	0.8nm,0.5s,baz=44,slow=9.6,SNR=24						
ASAR				S	**S**	**21 09 01.2**	**-1.4**
	0.2nm,0.8s,baz=327,slow=34,SNR=1.9						
BATI	**Baumata**	**23.59**	**259**	P	**P**	**21 05 31.1**	**+0.8**
	6.9nm,0.4s,baz=173,slow=3.5,SNR=5.7						
FITZ	**Fitzroy Crossi**	**24.09**	**239**	P	**P**	**21 05 35.3**	**+0.6**
	7.3nm,0.7s,baz=71,slow=8.5,SNR=24						
STKA	**Stephens Creek**	**26.03**	**191**	P	**P**	**21 05 53.1**	**+0.8**
	0.8nm,0.5s,baz=21,slow=9.6,SNR=4.1						
MKAR	**Makanchi Array**	**77.79**	**320**	P	**P**	**21 12 15.8**	**+1.1**
	0.1nm,0.3s,baz=84,slow=6.8,SNR=1.1						
ILAR	**Eielson Array**	**85.63**	**23**	P	**P**	**21 12 54.2**	**-1.2**
	0.3nm,0.7s,baz=89,slow=14,SNR=2.2						
TORD	**Torodi Ar. Bea**	**145.31**	**284**	PKPbc	**PKPdf**	**21 19 55.6**	**+0.1**
	0.8nm,0.7s,baz=76,slow=3.5,SNR=4.9						

*NEIC **22** 21:04:57.6±1.1, 18°5N±0°2×68°81W±0°07, h133km±11km, Md3.4/18(RSPR), Error ellipse: s-maj=27.8km s-min=8.0km az=193.0*
*RSPR **22** 21:04:60.0, 18°68N×68°47W, h153km±2km, MD3.4/7*
ISC 22 21:04:57.3±1.4, 18°6N±0°2×68°78W±0°07, h134km, n34, σ0s85/41, 9C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**0.60**	**290**	Pn	**Pn**	**21 05 17.2**	**-0.4**
DR12					**Sn**	**21 05 32.5**	**-0.4**
AGPR	**Aguadilla, PR**	**1.59**	**94**	⇑*e*P	**Pn**	**21 05 27.4**	**+0.7**
AGPR	**Aguadilla, PR**	**1.59**	**94**	*e*S	**Sn**	**21 05 49.7**	**+0.6**
AGPR	**Aguadilla, PR**	**1.59**	**94**		**Pn**	**21 05 27.4**	**+0.7**
AGPR					**Sn**	**21 05 49.7**	**+0.6**
LSP	**Las Mesas**	**1.66**	**104**	⇑*e*P	**Pn**	**21 05 28.8**	**+1.3**
LSP	**Las Mesas**	**1.66**	**104**	*e*S	**Sn**	**21 05 51.2**	**+0.6**
LSP	**Las Mesas**	**1.66**	**104**		**Pn**	**21 05 28.8**	**+1.3**
LSP					**Sn**	**21 05 51.2**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.69**	**110**	⇑*e*P	**Pn**	**21 05 27.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.69**	**110**	*e*S	**Sn**	**21 05 49.5**	**-1.6**
CRPR	**Cabo Rojo, PR**	**1.69**	**110**		**Pn**	**21 05 27.8**	**-0.1**
CRPR					**Sn**	**21 05 49.5**	**-1.6**
MLPR	**Magueyes Islan**	**1.76**	**110**	⇑*e*P	**Pn**	**21 05 29.6**	**+1.0**
MLPR	**Magueyes Islan**	**1.76**	**110**	*e*S	**Sn**	**21 05 52.9**	**+0.3**
MLPR	**Magueyes Islan**	**1.76**	**110**		**Pn**	**21 05 28.7**	**+0.1**
MLPR	**Magueyes Islan**	**1.76**	**110**		**Sn**	**21 05 52.9**	**+0.3**
AOPR	**Arecibo Observ**	**1.94**	**97**	⇑*e*P	**Pn**	**21 05 31.5**	**+0.7**
AOPR	**Arecibo Observ**	**1.94**	**97**	*e*S	**Sn**	**21 05 55.8**	**-0.6**
AOPR	**Arecibo Observ**	**1.94**	**97**		**Pn**	**21 05 31.2**	**+0.4**
AOPR					**Sn**	**21 05 56.1**	**-0.3**
OBIP	**Obispado Ponce**	**2.13**	**104**	Pn	**Pn**	**21 05 33.8**	**+0.6**
EMPR	**Esperanza - Ma**	**2.14**	**92**	Pn	**Pn**	**21 05 34.2**	**+1.1**
CELP	**Cerrillos**	**2.15**	**103**	⇑*e*P	**Pn**	**21 05 34.4**	**+1.0**
CELP	**Cerrillos**	**2.15**	**103**	*e*S	**Sn**	**21 06 00.7**	**-0.3**
CELP	**Cerrillos**	**2.15**	**103**		**Sn**	**21 05 34.4**	**+1.0**
CELP					**Sn**	**21 06 00.7**	**-0.3**
SDDR	**Presa de Saban**	**2.41**	**280**	Pn	**Pn**	**21 05 37.3**	**+0.7**
SJG	**San Juan**	**2.54**	**100**	Pn	**Pn**	**21 05 38.8**	**+0.6**
GCPR	**Guaynabo City**	**2.57**	**96**	Pn	**Pn**	**21 05 38.5**	**-0.2**
PDPR	**Patillas Dam,**	**2.68**	**102**	⇑*e*P	**Pn**	**21 05 40.1**	**+0.2**
PDPR	**Patillas Dam,**	**2.68**	**102**	*e*S	**Sn**	**21 06 12.2**	**-0.6**
CBYP	**Canovanas**	**2.79**	**96**	⇑*e*P	**Pn**	**21 05 41.7**	**+0.2**
CBYP	**Canovanas**	**2.79**	**96**	*e*S	**Sn**	**21 06 13.4**	**-2.1**
CBYP	**Canovanas**	**2.79**	**96**		**Pn**	**21 05 41.7**	**+0.2**
HUMP	**Col San Antoni**	**2.82**	**98**	⇑*e*P	**Pn**	**21 05 41.9**	**+0.1**
HUMP	**Col San Antoni**	**2.82**	**98**	*e*S	**Sn**	**21 06 14.5**	**-1.5**
HUMP	**Col San Antoni**	**2.82**	**98**		**Pn**	**21 05 41.9**	**+0.1**
HUMP					**Sn**	**21 06 14.5**	**-1.5**
MTP	**Monte Pirata**	**3.10**	**98**	Pn	**Pn**	**21 05 45.9**	**+0.4**

*IDC **22** 21:16:03.3±1.1, 21°63N×121°11E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.5/40, mbtmp3.6/8, MS3.1/1, Ms1 3.3/1, ms1mx2.5/37, Error ellipse: s-maj=47.9km s-min=19.2km az=67.0*
*TAP **22** 21:16:05.3, 21°66N×121°14E, h18km, ML3.6, C*
*JMA **22** 21:16:05.6±0.3, 21°77N×120°96E, h28km, M3.9*
*NIED **22** 21:16:05.7, 21°77N×120°96E, h28km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10¹⁴Nm; Mrr=0.78; Mθθ=1.98; Mφφ=2.76; Mrθ=5.64; Mθφ=1.32; Mφr=5.56; Fault plane solution: M0=8.29000×10¹⁴ NP1: φs=40.00000°, δ=89.00000°, λ=-72.00000°. NP2: φs=133.00000°, δ=18.00000°, λ=-177.00000°.*
ISC 22 21:16:05.7±1.7, 21°69N±0°06×121°13E±0°03, h13km±9km, n107, σ1s20/131, mb3.5/8, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSEB	**Hengchuen, Pin**	**0.30**	**315**	P	**Pb**	**21 16 13.8**	**+1.0**
	baz=305						
TSEB				S	**Sb**	**21 16 19.8**	**+2.1**
	baz=305						
TWKBT	**Hengchun**	**0.38**	**310**	*i* P	**Pb**	**21 16 14.4**	**0.0**
	baz=304						
TWKBT				*i* S	**Sb**	**21 16 21.2**	**+1.0**
	baz=304						
TWK1	**Hengchun**	**0.39**	**310**	*i* P	**Pb**	**21 16 14.3**	**-0.2**
	baz=304						
TWK1				*i* S	**Sb**	**21 16 21.0**	**+0.5**
	baz=304						
HEN	**Hengchun**	**0.48**	**311**	P	**Pb**	**21 16 16.4**	**+0.4**
	baz=314						
HEN				*e*S	**Sb**	**21 16 24.5**	**+1.5**
	baz=314						
LAY	**Lan-yu**	**0.52**	**49**	*e*P	**Pn**	**21 16 18.4**	**-0.5**
	baz=45						
SLIU	**Shizi**	**0.60**	**330**	P	**Pb**	**21 16 18.6**	**+0.5**
	baz=342						
SLIU				*e*S	**Sn**	**21 16 28.9**	**-0.7**
	baz=342						
TAW	**Tawu**	**0.70**	**342**	P	**Pb**	**21 16 19.7**	**0.0**
	baz=356						
TAW				*e*S	**Sb**	**21 16 30.3**	**+1.0**
	baz=356						
EAST	**Anshuo**	**0.74**	**339**	*i* P	**Pb**	**21 16 20.2**	**-0.2**
	baz=353						
EAST				*e*S	**Sn**	**21 16 32.6**	**-0.3**
	baz=353						
SCZT	**Fangliau**	**0.83**	**325**	*i* P	**Pn**	**21 16 22.4**	**-0.6**
	baz=337						
SCZT				S	**Sn**	**21 16 35.1**	**0.0**
	baz=337						
ECL	**Taimali**	**0.92**	**350**	P	**Pg**	**21 16 22.1**	**-1.3**
	baz=360						
ECL				*e*S	**Sg**	**21 16 34.4**	**

VCHM	**Qimei**	**2.18**	**314**	*e*P	**Pn**	**21 16 39.8**	**-1.8**
	baz=316						
VCHM				*e*S	**Sn**	**21 17 05.8**	**-2.7**
	baz=316						
SMLT	**Sun Moon Lake**	**2.19**	**355**	*e*P	**Pn**	**21 16 43.5**	**+1.6**
	baz=7.0						
WNT	**Mingjian**	**2.21**	**349**	*e*P	**Pn**	**21 16 43.1**	**+0.9**
	baz=350						
TYC	**Yuchr**	**2.22**	**354**	*e*P	**Pn**	**21 16 43.7**	**+1.5**
	baz=6.0						
OWD	**Renai**	**2.25**	**1**	*e*P	**Pn**	**21 16 42.7**	**-0.1**
	baz=10.0						
PHUB	**P'eng-hu**	**2.31**	**322**	*e*P	**Pn**	**21 16 41.7**	**-1.8**
	baz=324						
DPDB	**Guoxing**	**2.34**	**355**	*e*P	**Pn**	**21 16 45.1**	**+1.2**
	baz=6.0						
CHGB	**Renai**	**2.36**	**1**	*e*P	**Pn**	**21 16 44.7**	**+0.4**
	baz=10.0						
PNG	**Penghu**	**2.37**	**322**	*e*P	**Pn**	**21 16 42.7**	**-1.5**
	baz=324						
WHF	**Hehuan Shan**	**2.45**	**3**	*e*P	**Pn**	**21 16 45.1**	**-0.6**
	baz=12						
NACB	**Ninganchiao**	**2.51**	**10**	*e*P	**Pn**	**21 16 44.7**	**-1.5**
	baz=9.0						
ETLH	**Xiulin Townshi**	**2.52**	**7**	*e*P	**Pn**	**21 16 46.4**	**-0.1**
	baz=7.0						
FUSS	**Fushou**	**2.55**	**2**	*e*P	**Pn**	**21 16 47.2**	**+0.2**
	baz=12						
TDCB	**Techi**	**2.55**	**1**	*e*P	**Pn**	**21 16 47.2**	**+0.3**
WHP	**Taichung City**	**2.58**	**356**	*e*P	**Pn**	**21 16 48.4**	**+1.2**
	baz=356						
TWQ1	**Liyutan**	**2.67**	**353**	*e*P	**Pn**	**21 16 49.4**	**+1.1**
	baz=340						
NNSB	**Datong**	**2.73**	**5**	*e*P	**Pn**	**21 16 48.8**	**-0.6**
	baz=13						
NNSH	**Datong**	**2.73**	**5**	*e*P	**Pn**	**21 16 48.2**	**-1.2**
	baz=13						
NNS	**Nan Shan**	**2.75**	**5**	*e*P	**Pn**	**21 16 50.9**	**+1.3**
	baz=13						
ENA	**Nanau**	**2.78**	**12**	*e*P	**Pn**	**21 16 49.7**	**-0.3**
	baz=2.0						
NDT	**Datong Townshi**	**2.92**	**7**	*e*P	**Pn**	**21 16 52.9**	**+1.1**
	baz=6.0						
NSTT	**Nanjuang**	**2.93**	**358**	*e*P	**Pn**	**21 16 54.1**	**+2.2**
	baz=358						
LIOB	**Emei**	**2.94**	**358**	*e*P	**Pn**	**21 16 52.9**	**+0.7**
	baz=358						
ENTT	**Nioudou**	**2.96**	**8**	*e*P	**Pn**	**21 16 54.5**	**+2.1**
	baz=7.0						
YHNB	**Yeheng**	**2.97**	**4**	*e*P	**Pn**	**21 16 53.7**	**+1.1**
	baz=349						
NSK	**Sanguang**	**2.98**	**4**	*e*P	**Pn**	**21 16 53.5**	**+0.8**
	baz=349						
TWE	**Neicheng**	**3.06**	**9**	*e*P	**Pn**	**21 16 54.3**	**+0.6**
	baz=9.0						
NWLT	**Wulai**	**3.09**	**6**	*e*P	**Pn**	**21 16 55.2**	**+0.9**
	baz=16						
JYNG	**Yonagunijimaku**	**3.22**	**31**	P	**Pn**	**21 16 56.5**	**+0.6**
JYNG				*e*S	**Sn**	**21 17 34.4**	**+0.3**
YOJ	**Yonaguni jima**	**3.26**	**32**	*e*P	**Pn**	**21 16 57.8**	**+1.3**
	baz=30						
YOJ	**Yonaguni jima**	**3.26**	**32**	P	**Pn**	**21 16 57.8**	**+1.3**
YOJ				*e*S	**Sn**	**21 17 35.2**	**+0.1**
TIPB	**Shuangxi**	**3.33**	**11**	*e*P	**Pn**	**21 16 58.6**	**+1.1**
	baz=2.0						
HATJ	**Hateruma jima**	**3.41**	**46**	P	**Pn**	**21 16 59.4**	**+0.8**
HATJ				S	**Sn**	**21 17 39.0**	**+0.1**
YM04	**YM04**	**3.47**	**6**	*e*P	**Pn**	**21 17 00.5**	**+1.1**
	baz=351						
YM10	**YM10**	**3.47**	**6**	*e*P	**Pn**	**21 17 00.9**	**+1.4**
	baz=351						
IRIF	**Iriomote-Funau**	**3.56**	**42**	P	**Pn**	**21 17 01.7**	**+1.1**
IRIF				S	**Sn**	**21 17 43.8**	**+1.2**
VWUC	**VWUC**	**3.63**	**335**	*e*P	**Pn**	**21 17 00.9**	**-0.7**
	baz=347						
JKRS	**Kuro-shima**	**3.67**	**46**	P	**Pn**	**21 17 03.7**	**+1.5**
JKRS				*e*S	**Sn**	**21 17 45.3**	**0.0**
KNM	**Kinmen**	**3.68**	**318**	*e*P	**Pn**	**21 17 02.5**	**+0.3**
	baz=319						
KNMB	**Chin-men Tao**	**3.74**	**318**	*e*P	**Pn**	**21 17 01.5**	**-1.6**
	baz=321						
PTMZ	**Houxiangcun**	**3.81**	**331**	*e*P	**Pn**	**21 17 03.7**	**-0.3**
	baz=344						
ZPLA	**Ao Xicun**	**3.83**	**306**	*e*P	**Pn**	**21 17 02.9**	**-1.4**
	baz=309						
JIJ	**Ishigaki jima**	**3.85**	**46**	P	**Pn**	**21 17 06.3**	**+1.7**
JIJ				S	**Sn**	**21 17 49.4**	**-0.3**
PTTC	**Pingtan**	**3.99**	**342**	*e*P	**Pn**	**21 17 06.6**	**0.0**
	baz=343						
JISG	**Ishigakijimahi**	**4.11**	**45**	P	**Pn**	**21 17 09.0**	**+0.8**
JISG				S	**Sn**	**21 17 56.3**	**+0.1**
AXDP	**Jialang**	**4.32**	**318**	*e*P	**Pn**	**21 17 09.9**	**-1.2**
	baz=321						
JTJ	**Tarama**	**4.41**	**48**	P	**Pn**	**21 17 13.9**	**+1.6**
JTJ				S	**Sn**	**21 18 05.2**	**+1.7**
JIRB	**Irabujima**	**4.86**	**49**	P	**Pn**	**21 17 19.6**	**+1.1**
JIRB				S	**Sn**	**21 18 15.5**	**+0.9**
JMJ2	**Miyako jima3**	**4.91**	**51**	S	**Sn**	**21 18 18.0**	**+2.0**
CMAR	**Chiang Mai Arr**	**21.08**	**265**	P	**P**	**21 20 48.8**	**-1.2**
	0.6nm,0.9s,baz=74,slow=8.8,SNR=6.2						
CMAR				LR	LR	21 29 05.2	
	comp=Z,48nm,18.2s,baz=280,slow=37						
SONM	**Songino Array**	**28.65**	**339**	P	**P**	**21 22 02.5**	**+0.3**
	0.6nm,0.8s,baz=153,slow=8.6,SNR=4.5						
MKAR	**Makanchi Array**	**40.12**	**318**	P	**P**	**21 23 41.5**	**+0.3**
	0.6nm,0.8s,baz=114,slow=9.0,SNR=2.9						
ZALV	**Zalesovo Beam**	**42.32**	**329**	P	**P**	**21 23 59.1**	**0.0**
	0.6nm,0.4s,baz=111,slow=8.1,SNR=4.2						
WRA	**Warramunga Arr**	**43.35**	**162**	P	**P**	**21 24 06.3**	**-1.4**
	0.3nm,0.5s,baz=345,slow=8.8,SNR=8.3						
ASAR	**Alice Springs**	**46.77**	**164**	P	**P**	**21 24 34.6**	**-0.3**
	0.2nm,0.4s,baz=345,slow=7.7,SNR=4.7						
NRIK	**Noril'sk**	**51.79**	**346**	P	**P**	**21 25 11.9**	**-0.9**
	1.4nm,0.4s,baz=88,slow=9.0,SNR=3.6						
FINES	**FINESS Array B**	**73.57**	**330**	P	**P**	**21 27 38.5**	**+0.2**
	1.9nm,1.0s,baz=44,slow=5.8,SNR=5.9						

WEL 22 21:32:58.0±1.5,38°S±11′≈18°0W±°,h33km,M3.2/15, ML3.5/15,MLv3.2/15,Error ellipse: s-maj=0.0km s-min=0.0km az=38.3,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.40**	**262**	P	Pn	21 33 20.9	-0.3
WMGZ				S	Sn	21 33 37.7	-0.7
MXZ	**Matakaoa Point**	**1.48**	**272**	P	Pn	21 33 21.0	-1.2
PUZ	**Puketiti**	**1.57**	**254**	P	Pn	21 33 23.7	+0.1
CNGZ	**Carnagh Statio**	**1.76**	**241**	P	Pn	21 33 27.0	+0.9
TWGZ	**Tauwhareparae**	**1.81**	**252**	P	Pn	21 33 27.2	+0.3
HAZ	**Te Kaha**	**1.89**	**266**	P	Pn	21 33 27.4	-0.5
RUGZ	**Raukumara Rang**	**2.00**	**260**	P	Pn	21 33 29.0	-0.5
RIGZ	**Rimuhau**	**2.17**	**240**	P	Pn	21 33 32.5	+0.6
MWZ	**Matawai**	**2.20**	**251**	P	Pn	21 33 32.1	-0.1
PRGZ	**Paritu Road**	**2.21**	**234**	P	Pn	21 33 33.0	+0.7
MHGZ	**Mahia Peninsul**	**2.33**	**229**	P	Pn	21 33 34.7	+0.8
RAGZ	**Rawiri**	**2.33**	**248**	P	Pn	21 33 34.8	+0.8
URZ	**Urewera**	**2.49**	**255**	P	Pn	21 33 37.2	+1.0
MUGZ	**Murupara**	**2.81**	**252**	P	Pn	21 33 40.3	-0.2
MTHZ	**Maungataniwha**	**2.88**	**244**	P	Pn	21 33 41.7	+0.1
ARHZ	**Aropaoanui**	**2.97**	**236**	P	Pn	21 33 43.1	+0.4
ARHZ				S	Sn	21 34 17.7	+0.5
BKZ	**Black Stump Fm**	**3.26**	**241**	P	Pn	21 33 46.9	+0.1
MCHZ	**McNeill Hill**	**3.26**	**235**	P	Pn	21 33 47.2	+0.4
KWHZ	**Kaweka Forest**	**3.43**	**238**	P	Pn	21 33 49.1	-0.1
CTZ	**Chatham Island**	**6.56**	**159**	S	Sn	21 35 45.4	-0.3

LDG ***22*** *21:34:19.7±0.1, 43.01N×0.01W, h2km, Md3.4/2, Ml3.5/47, Error ellipse: s-maj=1.0km s-min=0.9km az=82.0*
STR ***22*** *21:34:19.8±0.2, 43.N±2°×±°, h0km, MLv3.0/7, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/pyrenees_taup-2.11 preliminary*
MRB ***22*** *21:34:19.8±0.3, 43.02N×0.01W, h4km±3km, ML3.0/26, Error ellipse: s-maj=1.0km s-min=0.6km az=221.0*
INMG ***22*** *21:34:20.3±1.3, 43.01N×0.00E, h2km±2km, ML2.6, Error ellipse: s-maj=2.2km s-min=1.5km az=26.0*
SFS ***22*** *21:34:20.0, 42.98N×0.01W, ML2.7, BAREGES (FRANCIA)*
MDD ***22*** *21:34:20.1±0.3, 43.03N×0.00W, h1km±2km, mbLg3.1/21, Error ellipse: s-maj=2.6km s-min=1.7km az=8.0, PRXIMO*
ISC 22 21:34:18.4±0.7, 43.08N±0.01×0.02E±0.01, h17km±4km, n204, σ1.945/370, 5C-3D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYLO	**Lourdes**	**0.06**	**294**	Pg	**Pg**	**21 34 21.7**	**+0.1**
PYLO				Sg	**Sg**	**21 34 23.1**	**-0.6**
PYLO	**Lourdes**	**0.06**	**294**	P	**Pg**	**21 34 21.7**	**+0.1**
PYLO				S	**Sg**	**21 34 23.1**	**-0.6**
	7µm,0.1s						
EPF	**Esparros**	**0.24**	**101**	Pg	**Pb**	**21 34 24.7**	**+0.4**
EPF				Lg	Lg	21 34 28.2	
	965nm,0.4s						
EPF	**Esparros**	**0.24**	**101**	*e*Pg	**Pb**	**21 34 24.7**	**+0.4**
EPF				*e*Sg	**Sb**	**21 34 28.2**	**-0.1**
	2µm,0.4s						
EPF	**Esparros**	**0.24**	**101**	Pg	**Pb**	**21 34 24.7**	**+0.4**
EPF				Sg	**Sb**	**21 34 28.2**	**-0.1**
FMON	**Montouss**	**0.29**	**92**	P	**Pb**	**21 34 25.6**	**+0.4**
FMON				S	**Sb**	**21 34 30.3**	**+0.5**
ECHI	**Chisagues Biel**	**0.43**	**163**	Pg	**Pg**	**21 34 27.0**	**-0.2**
ECHI				Sg	**Sg**	**21 34 32.0**	**-1.1**
ECHI	**Chisagues Biel**	**0.43**	**163**	⇑Pg	**Pg**	**21 34 27.0**	**-0.2**
	68nm,0.1s,SNR=18						
ECHI				Lg	Lg	21 34 31.9	
	1µm,0.1s,SNR=7.9						
ECHI	**Chisagues Biel**	**0.43**	**163**	P	**Pg**	**21 34 27.0**	**-0.2**
ETSF	**Etsaut**	**0.46**	**248**	Pg	**Pg**	**21 34 27.8**	**0.0**
ETSF				Lg	Lg	21 34 33.1	
	835nm,0.3s						
ETSF	**Etsaut**	**0.46**	**248**	*e*Pg	**Pg**	**21 34 27.8**	**0.0**
ETSF				*e*Sg	**Sg**	**21 34 33.1**	**-1.0**
	2µm,0.3s						
ETSF	**Etsaut**	**0.46**	**248**	Pg	**Pg**	**21 34 27.8**	**0.0**
ATE	**Arette**	**0.53**	**271**	Pg	**Pg**	**21 34 29.3**	**+0.4**
ATE				Sg	**Sg**	**21 34 36.8**	**+0.6**
ATE	**Arette**	**0.53**	**271**	Pg	**Pg**	**21 34 29.4**	**+0.4**
	25nm,0.1s,SNR=7.9						
ATE				Lg	Lg	21 34 36.5	
	532nm,0.1s,SNR=7.9						
ATE	**Arette**	**0.53**	**271**	P	**Pg**	**21 34 29.4**	**+0.4**
ATE				S	**Sg**	**21 34 36.7**	**+0.6**
	371nm,0.1s						
URDF	**Urds**	**0.58**	**309**	Pg	**Pn**	**21 34 32.1**	**+0.2**
URDF				Sg	**Sn**	**21 34 40.8**	**-0.2**
CARA	**Val d'Aran**	**0.69**	**122**	P	**Pb**	**21 34 32.8**	**+0.6**
CARA				S	**Sb**	**21 34 42.8**	**+1.3**
	525nm,0.2s						
MLS	**Moulis**	**0.80**	**98**	Pg	**Pb**	**21 34 34.4**	**+0.6**
MLS				Sg	**Sn**	**21 34 46.9**	**+0.5**
MLS	**Moulis**	**0.80**	**98**	Pg	**Pn**	**21 34 34.9**	**0.0**
MLS				Lg	Lg	21 34 46.1	
	106nm,0.3s						
MLS	**Moulis**	**0.80**	**98**	P	**Pn**	**21 34 34.9**	**0.0**
MLS				S	**Sn**	**21 34 46.1**	**-0.3**
	106nm,0.3s						
SJPF	**Ste Jean**	**0.92**	**273**	Pg	**Pb**	**21 34 36.1**	**+0.2**
SJPF				Lg	Lg	21 34 47.3	
	41nm,0.2s						
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pg	**Pb**	**21 34 36.1**	**+0.2**
SJPF	**Ste Jean**	**0.92**	**273**	*e*Pn	**Pn**	**21 34 37.3**	**+0.7**
SJPF	**Ste Jean**	**0.92**	**273**	*e*P	**Pn**	**21 34 38.2**	**+1.6**
SJPF				*e*Sg	**Sb**	**21 34 47.3**	**-0.5**
	81nm,0.2s						
SJPF				*e*Sn	**Sn**	**21 34 50.0**	**+0.6**
	219nm,0.4s						
SJPF	**Ste Jean**	**0.92**	**273**	Pg	**Pb**	**21 34 36.1**	**+0.2**
CTRE	**Tremp**	**0.93**	**143**	Pg	**Pg**	**21 34 36.7**	**+0.1**
CTRE				Lg	Lg	21 34 49.1	
	107nm,0.3s						
CTRE	**Tremp**	**0.93**	**143**	P	**Pg**	**21 34 36.7**	**+0.1**
CTRE				S	**Sg**	**21 34 49.1**	**+0.3**
	107nm,0.3s						
EORO	**Oroz-Betelu**	**0.99**	**260**	⇓Pg	**Pg**	**21 34 37.8**	**+0.1**
	8.2nm,0.2s,SNR=18						
EORO				Lg	Lg	21 34 51.1	
	116nm,0.2s,SNR=19						
EORO	**Oroz-Betelu**	**0.99**	**260**	⇓Pg	**Pg**	**21 34 37.8**	**+0.1**
CEST	**Esterri de Car**	**1.02**	**117**	Pg	**Pn**	**21 34 38.5**	**+0.4**
CEST				Lg	Lg	21 34 52.9	
	106nm,0.3s						
CEST	**Esterri de Car**	**1.02**	**117**	P	**Pn**	**21 34 38.6**	**+0.4**
CEST				S	**Sn**	**21 34 52.9**	**+0.7**
	106nm,0.3s						
TERF	**Tercis-les-Bai**	**1.02**	**306**	Pg	**Pn**	**21 34 38.9**	**+0.9**
TERF				Sg	**Sn**	**21 34 54.1**	**+2.0**
CSOR	**Sort**	**1.08**	**130**	⇑Pg	**Pg**	**21 34 39.4**	**+0.2**
	11nm,0.2s,SNR=18						
CSOR				Lg	Lg	21 34 53.9	
	335nm,0.3s,SNR=11						
CSOR	**Sort**	**1.08**	**130**	P	**Pg**	**21 34 39.5**	**+0.2**
CSOR				S	**Sn**	**21 34 54.4**	**+0.9**
	141nm,0.4s						
EALK	**Alkurruntz**	**1.13**	**278**	Pg	**Pn**	**21 34 40.2**	**+0.6**
EALK				Sg	**Sn**	**21 34 56.0**	**+1.3**
EALK	**Alkurruntz**	**1.13**	**278**	Pg	**Pg**	**21 34 40.5**	**+0.2**
	4.2nm,0.1s,SNR=30						
EALK				Lg	Lg	21 34 55.8	
	192nm,0.2s,SNR=14						
EALK	**Alkurruntz**	**1.13**	**278**	Pg	**Pg**	**21 34 40.5**	**+0.2**
EARA	**Aranguren**	**1.22**	**256**	Pg	**Pg**	**21 34 42.1**	**+0.2**
EARA				Sg	**Sg**	**21 34 58.5**	**+0.8**
EARA	**Aranguren**	**1.22**	**256**	⇓Pg	**Pg**	**21 34 42.4**	**+0.5**
	3.4nm,0.1s,SNR=18						
EARA				Lg	Lg	21 34 58.7	
	124nm,0.3s						
CORG	**Organya**	**1.27**	**131**	Pg	**Pg**	**21 34 42.8**	**-0.2**
CORG				Lg	Lg	21 35 00.3	
	70nm,0.3s						
CORG	**Organya**	**1.27**	**131**	P	**Pg**	**21 34 42.8**	**-0.2**
CORG				S	**Sg**	**21 35 00.3**	**+0.7**
	139nm,0.3s						
ARBS	**La Rabassa**	**1.29**	**119**	P	**Pg**	**21 34 43.5**	**+0.2**
ARBS				S	**Sg**	**21 35 00.7**	**+0.6**
	362nm,0.3s						
CAVN	**Les Avellanes**	**1.31**	**155**	Pg	**Pb**	**21 34 42.9**	**+0.3**
CAVN				Lg	Lg	21 35 00.3	
	400nm,0.2s						
CAVN	**Les Avellanes**	**1.31**	**155**	P	**Pb**	**21 34 43.0**	**+0.3**
CAVN				S	**Sg**	**21 35 00.3**	**-0.4**
	801nm,0.2s						
ESAC	**San Caprasio**	**1.40**	**195**	⇑Pg	**Pg**	**21 34 46.1**	**+0.6**
	440nm,0.2s,SNR=18						
ESAC				Lg	Lg	21 35 03.5	
	2µm,0.3s,SNR=22						
FNEB	**Nbias**	**1.54**	**96**	Pn	**Pg**	**21 34 48.5**	**+0.4**
FNEB				Sg	**Sg**	**21 35 10.0**	**+1.9**
FNEB	**Nbias**	**1.54**	**96**	Pn	**Pg**	**21 34 47.8**	**-0.2**
FNEB				Sn	**Sg**	**21 35 08.4**	**+0.3**
	118nm,0.4s						
FNEB	**Nbias**	**1.54**	**96**	P	**Pg**	**21 34 47.8**	**-0.2**
FNEB				S	**Sg**	**21 35 08.4**	**+0.3**
	118nm,0.4s						
MONQ	**Montcuq**	**1.55**	**33**	Pn	**Pg**	**21 34 48.5**	**+0.3**
MONQ				Sn	**Sg**	**21 35 11.2**	**+2.9**
CLLI	**Llivia**	**1.56**	**112**	Pn	**Pg**	**21 34 49.2**	**+0.8**
	2.4nm,0.1s,SNR=11						
CLLI				⇑Pg	**Pb**	**21 34 51.2**	**+4.3**
	41nm,0.3s,SNR=18						
CLLI				Lg	Lg	21 35 10.9	
	18nm,0.1s						
CLLI	**Llivia**	**1.56**	**112**	P	**Pg**	**21 34 48.1**	**-0.3**
CLLI				S	**Sg**	**21 35 09.1**	**+0.4**
	125nm,0.5s						
MTLF	**Montolieu**	**1.63**	**80**	Pn	**Pb**	**21 34 47.9**	**-0.1**
MTLF				Pg	**Pg**	**21 34 50.8**	**+1.1**
MTLF				Lg	Lg	21 35 12.3	
	290nm,0.4s						
MTLF	**Montolieu**	**1.63**	**80**	*e*Pn	**Pb**	**21 34 47.9**	**-0.1**
MTLF	**Montolieu**	**1.63**	**80**	*e*Pg	**Pg**	**21 34 50.8**	**+1.1**
MTLF				*e*Sg	**Sg**	**21 35 12.3**	**+1.4**
	581nm,0.4s						
CBRU	**Bruguera**	**1.78**	**116**	Pn	**Pb**	**21 34 51.0**	**+0.4**
CBRU				Sn	**Sg**	**21 35 14.5**	**-1.1**
	88nm,0.4s						
CBRU	**Bruguera**	**1.78**	**116**	P	**Pb**	**21 34 51.0**	**+0.4**
CBRU				S	**Sg**	**21 35 14.5**	**-1.1**
	176nm,0.4s						
CORI	**Orista**	**1.86**	**126**	Pn	**Pb**	**21 34 51.6**	**-0.3**
CORI				Sn	**Sb**	**21 35 15.7**	**+0.8**
	283nm,0.3s						
CORI	**Orista**	**1.86**	**126**	P	**Pb**	**21 34 51.7**	**-0.3**
CORI				S	**Sb**	**21 35 15.8**	**+0.8**
	283nm,0.3s						
LRVF	**chteau la Riv**	**1.89**	**353**	P	**Pb**	**21 34 52.3**	**-0.2**
LRVF				Pn	**Pg**	**21 34 54.6**	**-0.1**
LRVF				Sn	**Sg**	**21 35 19.7**	**+0.5**

EPOB	**Poblet**	**1.89**	**155**	⇑Pg	**Pg**	**21 34 53.7**	**-1.0**
	17nm,0.2s,SNR=18						
EPOB				Sn	**Sb**	**21 35 15.1**	**-0.9**
	9.4nm,0.1s,SNR=5.6						
EPOB				Lg	Lg	21 35 18.5	
	126nm,0.4s,SNR=24						
EPOB	**Poblet**	**1.89**	**155**	P	**Pb**	**21 34 52.1**	**-0.4**
EPOB				S	**Sb**	**21 35 15.9**	**0.0**
	207nm,0.6s						
LFF	**La Frestale**	**1.93**	**15**	Pn	**Pb**	**21 34 52.6**	**-0.7**
LFF				Pg	**Pg**	**21 34 56.8**	**+1.2**
LFF				Sn	**Sb**	**21 35 17.0**	**-0.1**
LFF				Lg	Lg	21 35 22.7	
	218nm,0.5s						
LFF	**La Frestale**	**1.93**	**15**	*e*Pn	**Pb**	**21 34 52.6**	**-0.7**
LFF	**La Frestale**	**1.93**	**15**	*e*Pg	**Pg**	**21 34 56.8**	**+1.2**
LFF				*e*Sn	**Sb**	**21 35 17.0**	**-0.1**
LFF				*e*Sg	**Sg**	**21 35 22.7**	**+2.0**
	437nm,0.5s						
FILF	**Fillols**	**1.94**	**105**	Pn	**Pn**	**21 34 51.9**	**+1.2**
FILF				Sn	**Sn**	**21 35 15.6**	**+0.9**
	72nm,0.5s						
FILF	**Fillols**	**1.94**	**105**	P	**Pn**	**21 34 51.9**	**+1.2**
FILF				S	**Sn**	**21 35 15.6**	**+0.9**
	72nm,0.5s						
CGAR	**Garraf**	**1.96**	**155**	Pn	**Pg**	**21 34 57.1**	**+1.0**
CGAR				Sn	**Sg**	**21 35 24.7**	**+3.2**
	27nm,0.4s						
CGAR	**Garraf**	**1.96**	**155**	P	**Pg**	**21 34 57.1**	**+1.0**
CGAR				S	**Sg**	**21 35 24.8**	**+3.2**
	54nm,0.4s						
FESP	**Espira**	**2.07**	**96**	P	**Pb**	**21 34 55.1**	**-0.5**
FESP				S	**Sb**	**21 35 21.3**	**+0.3**
	15nm,0.3s						
CBEU	**Beuda**	**2.12**	**112**	Pn	**Pb**	**21 34 55.5**	**-1.0**
CBEU				Sn	**Sb**	**21 35 22.9**	**+0.4**
	192nm,0.3s						
CBEU	**Beuda**	**2.12**	**112**	P	**Pb**	**21 34 55.5**	**-1.0**
CBEU				S	**Sb**	**21 35 23.0**	**+0.4**
	192nm,0.3s						
ERTA	**Horta de San J**	**2.13**	**174**	Pg	**Pg**	**21 34 58.2**	**-1.1**
	11nm,0.3s,SNR=38						
ERTA				Sn	**Sn**	**21 35 20.2**	**+0.8**
	6.2nm,0.1s,SNR=5.0						
ERTA				Lg	Lg	21 35 25.3	
	84nm,0.3s,SNR=6.3						
ERTA	**Horta de San J**	**2.13**	**174**	P	**Pb**	**21 34 55.4**	**-1.2**
ERTA				S	**Sb**	**21 35 21.9**	**-0.8**
	88nm,0.4s						
SJAF	**Saint Jean de**	**2.19**	**105**	Pn	**Pb**	**21 34 57.4**	**-0.2**
SJAF	**Saint Jean de**	**2.19**	**105**	Pn	**Pg**	**21 34 59.1**	**-1.3**
	2.7nm,0.2s,SNR=7.9						
SJAF				Sn	**Sn**	**21 35 22.7**	**+2.0**
	1.4nm,0.2s,SNR=7.9						
SJAF				Lg	Lg	21 35 30.3	
	53nm,0.3s,SNR=7.9						
SJAF	**Saint Jean de**	**2.19**	**105**	P	**Pb**	**21 34 57.0**	**-0.6**
SJAF				S	**Sb**	**21 35 24.0**	**-0.4**
	57nm,0.4s						
EJON	**La Jonquera**	**2.20**	**106**	Pn	**Pb**	**21 34 59.0**	**+1.2**
	4.7nm,0.3s,SNR=11						
EJON				Sn	**Sb**	**21 35 24.2**	**-0.7**
	4.7nm,0.2s,SNR=8.7						
EJON				Lg	Lg	21 35 30.3	
	59nm,0.3s						
CFON	**Fontmartina**	**2.22**	**125**	Pn	**Pb**	**21 34 58.2**	**+0.1**
	5.8nm,0.2s,SNR=7.9						
CFON				Pg	**Pg**	**21 35 00.6**	**-0.3**
	19nm,0.2s,SNR=24						
CFON				Lg	Lg	21 35 29.6	
	297nm,0.3s,SNR=23						
CFON	**Fontmartina**	**2.22**	**125**	P	**Pb**	**21 34 56.7**	**-1.4**
CFON				S	**Sb**	**21 35 24.4**	**-0.9**
	438nm,0.3s						
CMAS	**Mas de Barbera**	**2.36**	**175**	Pn	**Pn**	**21 34 58.0**	**+1.6**
CMAS				Sn	**Sb**	**21 35 27.6**	**-1.7**
	104nm,0.4s						
CMAS	**Mas de Barbera**	**2.36**	**175**	P	**Pn**	**21 34 58.1**	**+1.6**
CAF	**Calviac**	**2.37**	**38**	Pn	**Pn**	**21 34 58.6**	**+2.1**
CAF				Pg	**Pg**	**21 35 04.7**	**+0.9**
CAF	**Calviac**	**2.37**	**38**	*e*Pn	**Pn**	**21 34 58.6**	**+2.1**
CAF	**Calviac**	**2.37**	**38**	*e*Pg	**Pg**	**21 35 04.7**	**+0.9**
CAF				*e*Sn	**Sn**	**21 35 27.4**	**+2.2**
	24nm,0.2s						
CAF				*e*Sg	**Sg**	**21 35 36.7**	**+2.2**
	97nm,0.3s						
CPAL	**Palau Saverder**	**2.44**	**107**	Sn	**Sb**	**21 35 30.0**	**-1.6**
	31nm,0.4s						
CPAL	**Palau Saverder**	**2.44**	**107**	S	**Sb**	**21 35 30.0**	**-1.6**
	31nm,0.4s						
CCAS	**Cassa de la Se**	**2.44**	**118**	Pn	**Pn**	**21 34 59.8**	**+2.3**
CCAS				Sn	**Sb**	**21 35 29.8**	**-1.9**
	54nm,0.5s						
CCAS	**Cassa de la Se**	**2.44**	**118**	P	**Pn**	**21 34 59.8**	**+2.3**
CCAS				S	**Sb**	**21 35 29.9**	**-1.9**
	54nm,0.5s						
RJF	**Les Rejaudoux**	**2.47**	**25**	*e

	0.4nm,0.1s,SNR=5.2							
BGF	**Bois d'Agland**	**4.02**	**29**	*e*Pn	**Pn**	**21 35 21.1 +1.9**
BGF	**Bois d'Agland**	**4.02**	**29**	*e*Pg	**Pg**	**21 35 35.5 +0.1**
BGF				*e*Sn	**Sn**	**21 36 06.7 +0.7**
BGF				*e*Sg	**Sg**	**21 36 28.2 +0.7**
	219nm,0.4s					
RUSF	**Rustrel**	**4.07**	**76**	Pn	**Pn**	**21 35 23.6 +3.7**
SMRF	**Simiane la Rot**	**4.14**	**76**	*e*Pn	**Pn**	**21 35 22.6 +1.7**
SMRF	**Simiane la Rot**	**4.14**	**76**	*e*P	Pb	21 35 26.2 -4.6
SMRF	**Simiane la Rot**	**4.14**	**76**	*e*Pg	**Pg**	**21 35 37.5 -0.1**
SMRF				*e*Sg	**Sg**	**21 36 31.1 -0.1**
	12nm,0.4s					
EIBI	**Ibiza**	**4.17**	**166**	Pn	**Pn**	**21 35 23.1 +1.8**
	0.4nm,0.2s,SNR=7.9					
EIBI				Sn	**Sn**	**21 36 07.8 -1.7**
	5.3nm,0.3s,SNR=7.9					
EBEN2	**Beniarda presa**	**4.40**	**182**	Pn	**Pn**	**21 35 26.2 +1.7**
	0.4nm,0.1s,SNR=7.9					
EBEN2				Sn	**Sn**	**21 36 13.7 -1.6**
	1.4nm,0.1s,SNR=7.9					
AVF	**Avril sur Loir**	**4.40**	**31**	*e*Pn	**Pn**	**21 35 26.6 +2.1**
AVF	**Avril sur Loir**	**4.40**	**31**	*e*Pg	**Pg**	**21 35 42.2 -0.5**
AVF				*e*Sn	**Sn**	**21 36 15.2 -0.2**
AVF				*e*Sg	**Sg**	**21 36 40.4 +0.7**
	25nm,0.3s					
AFON	**Font Roja**	**4.43**	**186**	Pn	**Pn**	**21 35 26.9 +2.0**
	0.3nm,0.2s,SNR=7.9					
AFON				Sn	**Sn**	**21 36 16.3 +0.1**
	1.3nm,0.2s,SNR=7.9					
SMF	**Signal de Mont**	**4.48**	**36**	*e*Pn	**Pn**	**21 35 27.8 +2.2**
SMF	**Signal de Mont**	**4.48**	**36**	*e*Pg	**Pg**	**21 35 43.4 -0.9**
SMF				*e*Sn	**Sn**	**21 36 18.5 +1.1**
SMF				*e*Sg	**Sg**	**21 36 42.6 +0.3**
	26nm,0.4s					
ESDC	**Sonseca Array**	**4.53**	**223**	Pn	**Pn**	**21 35 27.2 +0.8**
	1.0nm,0.3s,baz=43,slow=14,SNR=20					
ESDC				Sn	**Sn**	**21 36 16.9 -1.7**
	6.5nm,0.3s,baz=44,slow=24,SNR=12					
ETOB	**Tobarra**	**4.58**	**196**	Pn	**Pn**	**21 35 30.0 +2.9**
	0.8nm,0.2s,SNR=12					
ETOB				Sn	**Sn**	**21 36 17.8 -2.2**
	SNR=7.9					
HYF	**Humbligny**	**4.58**	**23**	*e*Pn	**Pn**	**21 35 28.8 +1.8**
HYF	**Humbligny**	**4.58**	**23**	*e*Pg	**Pg**	**21 35 45.4 -0.8**
HYF				*e*Sn	**Sn**	**21 36 20.1 +0.3**
HYF				*e*Sg	**Sg**	**21 36 45.4 -0.1**
ORIF	**Oris-en-Rattie**	**4.61**	**64**	*e*Pn	**Pn**	**21 35 29.5 +2.1**
ORIF	**Oris-en-Rattie**	**4.61**	**64**	*e*P	Pn	21 35 32.8 +5.4
ORIF				*e*Sn	**Sn**	**21 36 20.2 -0.4**
ORIF				*e*Sg	**Sg**	**21 36 45.4 -1.0**
	5.7nm,0.4s					
SSF	**Saint Saulge**	**4.69**	**31**	*e*Pn	**Pn**	**21 35 30.5 +2.1**
SSF	**Saint Saulge**	**4.69**	**31**	*e*Pg	**Pg**	**21 35 47.9 -0.3**
SSF				*e*Sn	**Sn**	**21 36 22.6 +0.2**
SSF				*e*Sg	**Sg**	**21 36 49.0 +0.2**
	23nm,0.5s					
LMR	**La Mourre**	**4.75**	**85**	*e*Pn	**Pn**	**21 35 30.5 +1.3**
LMR	**La Mourre**	**4.75**	**85**	*e*P	Pn	21 35 34.8 +5.6
LMR	**La Mourre**	**4.75**	**85**	*e*Pg	**Pg**	**21 35 48.5 -0.8**
LMR				*e*Sn	**Sn**	**21 36 23.7 -0.2**
LMR				*e*Sg	**Sg**	**21 36 49.3 -1.5**
	4.6nm,0.3s					
PAB	**San Pablo**	**4.82**	**224**	Pn	**Pn**	**21 35 32.6 +2.3**
	0.8nm,0.1s,SNR=7.9					
PAB				Sn	**Sn**	**21 36 25.2 -0.7**
	4.4nm,0.3s,SNR=7.9					
PAB				Lg	Lg	21 36 50.3
	6.0nm,0.3s,SNR=7.9					
FRF	**La Foret Royal**	**4.86**	**82**	*e*Pn	**Pn**	**21 35 31.8 +1.0**
FRF	**La Foret Royal**	**4.86**	**82**	*e*P	Pn	21 35 36.0 +5.2
FRF	**La Foret Royal**	**4.86**	**82**	*e*Pg	**Pg**	**21 35 49.5 -1.9**
FRF				*e*Sn	**Sn**	**21 36 25.4 -1.2**
FRF				*e*Sg	**Sg**	**21 36 51.7 -2.6**
	8.3nm,0.4s					
LOR	**Lormes**	**4.99**	**32**	*e*Pn	**Pn**	**21 35 34.7 +2.1**
	baz=214					
LOR	**Lormes**	**4.99**	**32**	*e*Pg	**Pg**	**21 35 53.3 -0.7**
	baz=210					
LOR				*e*Sn	**Sn**	**21 36 30.2 +0.2**
	baz=210					
LOR				*e*Sg	**Sg**	**21 36 58.6 0.0**
	15nm,0.3s,baz=204					
ECAL	**Calabor**	**5.12**	**260**	Pn	**Pn**	**21 35 37.1 +2.7**
	1.4nm,0.1s,SNR=11					
ECAL				Sn	**Sn**	**21 36 33.1 -0.2**
	2.9nm,0.2s,SNR=7.6					
ECAL				Lg	Lg	21 37 00.9
	8.3nm,0.3s,SNR=5.0					
MBDF	**Montbardon**	**5.15**	**69**	*e*Pn	**Pn**	**21 35 36.1 +1.2**
MBDF				*e*Sg	**Sg**	**21 37 02.5 -1.1**
	1.1nm,0.5s					
PBRG	**Braganca**	**5.16**	**258**	*e*Pn	**Pn**	**21 35 38.0 +3.0**
PBRG				*e*Sn	**Sn**	**21 36 34.8 +0.6**
PBRG				A	A	21 37 13.4
	3.8nm,0.3s					
EPON	**Pontenova**	**5.25**	**275**	Pn	**Pn**	**21 35 39.1 +3.0**
	0.7nm,0.1s,SNR=6.2					
EPON				Sn	**Sn**	**21 36 38.3 +2.0**
	0.5nm,0.2s,SNR=5.5					
EMUR	**La Murta**	**5.32**	**191**	Pn	**Pn**	**21 35 39.3 +2.2**
	0.7nm,0.1s,SNR=12					
EMUR				Sn	**Sn**	**21 36 36.3 -1.7**
	0.8nm,0.3s,SNR=7.9					
EMUR				Lg	Lg	21 37 07.1
	3.8nm,0.4s,SNR=4.0					
QUIF	**Quistinic**	**5.33**	**336**	*e*Pn	**Pn**	**21 35 38.8 +1.5**
QUIF	**Quistinic**	**5.33**	**336**	*e*Pg	**Pg**	**21 35 59.3 -1.2**
QUIF				*e*Sn	**Sn**	**21 36 37.3 -1.0**
QUIF				*e*Sg	**Sg**	**21 37 07.9 -1.7**
	14nm,0.4s					
GRR	**Gorron**	**5.35**	**354**	*e*Pn	**Pn**	**21 35 39.1 +1.6**
GRR	**Gorron**	**5.35**	**354**	*e*Pg	**Pg**	**21 35 59.5 -1.3**
GRR				*e*Sn	**Sn**	**21 36 38.1 -0.6**
GRR				*e*Sg	**Sg**	**21 37 08.8 -1.2**
	18nm,0.4s					
LPL	**La Plagne**	**5.40**	**61**	*e*Pn	**Pn**	**21 35 40.1 +1.7**
LPL	**La Plagne**	**5.40**	**61**	*e*Pg	**Pg**	**21 36 01.4 -0.4**
LPL				*e*Sn	**Sn**	**21 36 39.6 -0.6**
LPL				*e*Sg	**Sg**	**21 37 10.1 -1.6**
	2.8nm,0.3s					
LPG	**La Plagne**	**5.40**	**61**	Pn	Pn	21 35 43.9 +5.4
LPG				Sn	**Sn**	**21 36 39.5 -1.0**
LPG				Lg	Lg	21 37 11.0
	2.8nm,0.4s					
LPG	**La Plagne**	**5.40**	**61**	*e*P	Pn	21 35 43.9 +5.4
LPG				*e*Sn	**Sn**	**21 36 39.5 -1.0**
LPG				*e*Sg	**Sg**	**21 37 11.0 -0.8**
	5.5nm,0.4s					
SBF	**Sospel**	**5.45**	**79**	*e*Pn	**Pn**	**21 35 40.8 +1.8**
SBF				*e*Sn	**Sn**	**21 36 39.9 -1.4**
SBF				*e*Sg	**Sg**	**21 37 11.9 -1.5**
	13nm,0.5s					
EPLA	**Plasencia**	**5.48**	**239**	Pn	**Pn**	**21 35 41.0 +1.7**
	1.3nm,0.1s,SNR=7.9					
EPLA				Sn	**Sn**	**21 36 41.3 -0.6**
	0.7nm,0.2s,SNR=5.7					
SGMF	**Saint Gilles**	**5.49**	**342**	Pn	**Pn**	**21 35 41.0 +1.6**
SGMF				Pg	**Pg**	**21 36 01.9 -1.5**
SGMF				Sn	**Sn**	**21 36 41.3 -0.7**
SGMF				Lg	Lg	21 37 12.4
	6.4nm,0.3s					
SGMF	**Saint Gilles**	**5.49**	**342**	*e*Pn	**Pn**	**21 35 41.0 +1.6**
SGMF	**Saint Gilles**	**5.49**	**342**	*e*Pg	**Pg**	**21 36 01.9 -1.5**
SGMF				*e*Sn	**Sn**	**21 36 41.3 -0.7**
SGMF				*e*Sg	**Sg**	**21 37 12.4 -2.0**
	13nm,0.3s					
LDF	**La Druitiere**	**5.52**	**359**	*e*Pn	**Pn**	**21 35 40.9 +1.1**
LDF	**La Druitiere**	**5.52**	**359**	*e*Pg	**Pg**	**21 36 02.5 -1.6**
LDF				*e*Sn	**Sn**	**21 36 41.6 -1.3**
LDF				*e*Sg	**Sg**	**21 37 14.6 -0.9**
	20nm,0.4s					
CABF	**La Chapelle**	**5.58**	**49**	Pn	**Pn**	**21 35 42.2 +1.5**
CABF				Pg	**Pg**	**21 36 03.8 -1.3**
CABF				Lg	Lg	21 37 16.8
	2.6nm,0.4s					
CABF	**La Chapelle**	**5.58**	**49**	*e*Pn	**Pn**	**21 35 42.2 +1.5**
CABF	**La Chapelle**	**5.58**	**49**	*e*Pg	**Pg**	**21 36 03.8 -1.3**
CABF				*e*Sg	**Sg**	**21 37 16.8 -0.5**
	5.2nm,0.4s					
MVO	**Moncorvo**	**5.58**	**252**	Pn	**Pn**	**21 35 43.6 +2.9**
	1.2nm,0.1s,SNR=6.0					
MVO				Sn	**Sn**	**21 36 42.9 -1.7**
	3.2nm,0.2s,SNR=6.9					
MVO				Lg	Lg	21 37 13.8
	12nm,0.4s,SNR=5.0					

MVO	**Moncorvo**	**5.58**	**252**	*e*Pn	**Pn**	**21 35 43.5 +2.7**
MVO				*e*Sn	**Sn**	**21 36 44.1 -0.4**
MVO				A	A	21 37 15.0
	6.8nm,0.5s					
FLN	**La Foliniere**	**5.70**	**357**	Pn	**Pn**	**21 35 44.1 +1.8**
FLN				Pg	**Pg**	**21 36 05.9 -1.6**
FLN				Sn	**Sn**	**21 36 46.5 -0.8**
FLN				Lg	Lg	21 37 19.5
	13nm,0.5s					
FLN	**La Foliniere**	**5.70**	**357**	*e*Pn	**Pn**	**21 35 44.1 +1.8**
	baz=176					
FLN	**La Foliniere**	**5.70**	**357**	*e*Pg	**Pg**	**21 36 05.9 -1.6**
	baz=177					
FLN				*e*Sn	**Sn**	**21 36 46.5 -0.8**
FLN				*e*Sg	**Sg**	**21 37 19.5 -1.7**
	25nm,0.5s,baz=176					
ROSF	**Rostrenen**	**5.75**	**337**	Pn	**Pn**	**21 35 44.2 +1.3**
ROSF				Sn	**Sn**	**21 36 47.3 -1.1**
ROSF				Lg	Lg	21 37 21.1
	9.8nm,0.5s					
ROSF	**Rostrenen**	**5.75**	**337**	*e*Pn	**Pn**	**21 35 44.2 +1.3**
ROSF				*e*Sn	**Sn**	**21 36 47.3 -1.1**
ROSF				*e*Sg	**Sg**	**21 37 21.1 -1.6**
	20nm,0.5s					
EAGO	**Agolada(Pontev**	**5.96**	**270**	Pn	**Pn**	**21 35 48.5 +2.6**
	1.2nm,0.1s,SNR=7.9					
EAGO				Sn	**Sn**	**21 36 53.9 +0.1**
	1.8nm,0.2s,SNR=7.9					
EADA	**Adamuz**	**6.02**	**217**	Pn	**Pn**	**21 35 47.8 +1.0**
	0.1nm,0.2s,SNR=7.9					
EADA				Sn	**Sn**	**21 36 52.2 -3.1**
	0.6nm,0.1s,SNR=7.9					
EADA				Lg	Lg	21 37 27.5
	4.0nm,0.3s,SNR=7.9					
PVRL	**Vila Real**	**6.02**	**255**	*e*Pn	**Pn**	**21 35 48.9 +2.1**
PVRL				*e*Sn	**Sn**	**21 36 55.2 -0.2**
PVRL				A	A	21 37 42.8
	4.8nm,0.3s					
POLO	**Lamas de Olo**	**6.05**	**256**	*e*Pn	**Pn**	**21 35 49.5 +2.3**
POLO				*e*Sn	**Sn**	**21 36 56.2 +0.1**
POLO				A	A	21 37 28.2
	1.6nm,0.7s					
ELOB	**Lobios**	**6.10**	**261**	Pn	**Pn**	**21 35 50.1 +2.2**
	0.5nm,0.1s,SNR=6.6					
ELOB				Sn	**Sn**	**21 36 55.7 -1.6**
	0.4nm,0.2s,SNR=7.9					
SFTF	**Sexfontaines**	**6.22**	**33**	Pn	**Pn**	**21 35 51.8 +2.4**
SFTF				Sn	**Sn**	**21 36 58.7 -1.4**
SFTF				Lg	Lg	21 37 36.7
	16nm,0.5s					
SFTF	**Sexfontaines**	**6.22**	**33**	*e*Pn	**Pn**	**21 35 51.8 +2.4**
	baz=211					
SFTF				*e*Sn	**Sn**	**21 36 58.7 -1.4**
	baz=206					
SFTF				*e*Sg	**Sg**	**21 37 36.7 -1.2**
	16nm,0.5s					
PGAV	**Gavieira, Arco**	**6.23**	**263**	*e*Pn	**Pn**	**21 35 52.1 +2.4**
PGAV				*e*Sn	**Sn**	**21 37 01.9 +1.4**
PGAV				A	A	21 37 38.7
	4.0nm,1.0s					
MTE	**Manteigas**	**6.26**	**247**	*e*Sn	**Sn**	**21 37 00.9 -0.3**
MTE				A	A	21 37 54.7
	5.4nm,0.5s					
PVIS	**Viseu**	**6.36**	**251**	*e*Pn	**Pn**	**21 35 53.6 +2.2**
PVIS				*e*Sn	**Sn**	**21 37 03.1 -0.6**
MEZF	**Maizieres J'vi**	**6.46**	**31**	Pn	**Pn**	**21 35 54.8 +2.0**
MEZF				Pg	**Pg**	**21 36 20.6 -1.5**
MEZF				Lg	Lg	21 37 43.6
	9.4nm,0.4s					
MEZF	**Maizieres J'vi**	**6.46**	**31**	*e*Pn	**Pn**	**21 35 54.8 +2.0**
	baz=211					
MEZF	**Maizieres J'vi**	**6.46**	**31**	*e*Pg	**Pg**	**21 36 20.6 -1.5**
MEZF				*e*Sg	**Sg**	**21 37 43.6 -2.2**
	9.4nm,0.4s,baz=209					
ECAB	**El Cabril**	**6.49**	**221**	Pn	**Pn**	**21 35 55.7 +2.5**
	0.4nm,0.2s,SNR=10					
ECAB				Sn	**Sn**	**21 37 03.6 -3.2**
	1.9nm,0.3s,SNR=7.9					
PCBR	**Castelo Branco**	**6.50**	**243**	*e*Pn	**Pn**	**21 35 56.0 +2.8**
PCBR				*e*Sn	**Sn**	**21 37 06.3 -0.6**
PCBR				A	A	21 37 55.0
	3.8nm,0.5s					
EMAZ	**Mazaricos**	**6.60**	**272**	Pn	**Pn**	**21 35 57.1 +2.5**
	1.0nm,0.1s,SNR=7.9					
EMAZ				Sn	**Sn**	**21 37 07.7 -1.9**
	0.5nm,0.1s,SNR=7.9					
PGF	**Pioggiola**	**6.62**	**92**	Pn	**Pn**	**21 35 56.5 +1.4**
PGF				Sn	**Sn**	**21 37 08.1 -2.2**
	4.2nm,0.6s					
PGF	**Pioggiola**	**6.62**	**92**	*e*Pn	**Pn**	**21 35 56.5 +1.4**
PGF				*e*Sn	**Sn**	**21 37 08.1 -2.2**
	8.4nm,0.6s					
HAU	**Haudompre**	**6.63**	**40**	Pn	**Pn**	**21 35 57.4 +2.2**
HAU				Pg	**Pg**	**21 36 23.2 -2.2**
HAU				Lg	Lg	21 37 49.2
	2.8nm,0.3s					
HAU	**Haudompre**	**6.63**	**40**	*e*Pn	**Pn**	**21 35 57.4 +2.2**
HAU	**Haudompre**	**6.63**	**40**	*e*Pg	**Pg**	**21 36 23.2 -2.2**
HAU				*e*Sg	**Sg**	**21 37 49.2 -2.0**
	5.7nm,0.3s					
PMRV	**Marv??o**	**6.67**	**239**	*e*Pn	**Pn**	**21 35 57.8 +2.1**
PMRV				*e*Sn	**Sn**	**21 37 09.9 -1.4**
PMRV				A	A	21 37 11.5
	9.6nm,0.5s					
HINF	**Hinteralfeld**	**6.75**	**43**	Pn	**Pn**	**21 35 58.5 +1.8**
HINF				Pg	**Pg**	**21 36 26.1 -1.4**
HINF				Sn	**Sn**	**21 37 12.1 -1.1**
HINF				Lg	Lg	21 37 52.5
	2.6nm,0.4s					
HINF	**Hinteralfeld**	**6.75**	**43**	*e*Pn	**Pn**	**21 35 58.5 +1.8**
HINF	**Hinteralfeld**	**6.75**	**43**	*e*Pg	**Pg**	**21 36 26.1 -1.4**
HINF				*e*Sn	**Sn**	**21 37 12.1 -1.1**
HINF				*e*Sg	**Sg**	**21 37 52.5 -2.4**
	5.2nm,0.4s					
PAGF	**Fort de Pagny**	**6.77**	**34**	*e*Pn	**Pn**	**21 35 59.2 +2.1**
	baz=241					
PAGF				*e*Sg	**Sg**	**21 37 54.0 -1.7**
	5.6nm,0.4s,baz=214					
PCAS	**Casmilo, Conde**	**7.07**	**248**	*e*Sn	**Sn**	**21 37 19.5 -1.5**
EMIN	**Mina Concepcio**	**7.36**	**226**	Sn	**Sn**	**21 37 23.9 -4.3**
	1.6nm,0.3s,SNR=7.9					
CDF	**Champ du Feu**	**7.36**	**41**	Pn	**Pn**	**21 36 07.3 +2.1**
CDF				Lg	Lg	21 38 12.5
	1.7nm,0.5s					
CDF	**Champ du Feu**	**7.36**	**41**	*e*Pn	**Pn**	**21 36 07.3 +2.1**
CDF				*e*Sg	**Sg**	**21 38 12.5 -2.0**
	3.4nm,0.5s					
PMTG	**Montargil**	**7.40**	**240**	*e*Pn	**Pn**	**21 36 08.4 +2.7**
PMTG				*e*Sn	**Sn**	**21 37 29.1 -0.2**
BAIF	**Baives**	**7.56**	**21**	Pn	**Pn**	**21 36 09.4 +1.6**
BAIF				Lg	Lg	21 38 18.3
	0.9nm,0.4s					
BAIF	**Baives**	**7.56**	**21**	*e*Pn	**Pn**	**21 36 09.4 +1.6**
BAIF				*e*Sg		21 38 18.3
	1.8nm,0.4s					
EVO	**Evora**	**7.60**	**236**	*e*Pn	**Pn**	**21 36 10.2 +1.8**
EVO				*e*Sn	**Sn**	**21 37 32.5 -1.6**
PNCL	**Nicolau / Gran**	**8.18**	**236**	*e*Pn	**Pn**	**21 36 19.3 +3.0**
PTEO	**Sao Teotonio**	**8.67**	**233**	*e*Pn	**Pn**	**21 36 25.7 +2.7**

ANF 22 21:42:48.3±0.3, 37°17N×81°55W, h0km, ML2.4/9, ML2.1/9, Error ellipse: s-maj=3.4km s-min=1.8km az=102.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T54A	**Tazewell**	**0.11**	**192**	P	Pg	21 42 50.6	+0.2
	baz=12						
T55A	**Pulaski**	**0.61**	**95**	P	Pg	21 42 59.5	-0.5
	baz=275						
S54A	**Dingess, Beckl**	**0.66**	**17**	P	Pg	21 43 01.0	+0.1
	baz=197,SNR=7.2						
S54A				S	Sg	21 43 10.2	+0.8
	baz=197						
U54A	**Nelsons Funny**	**0.68**	**199**	S	Sg	21 43 11.6	+1.4
	baz=19						
T53A	**Wise**	**0.81**	**257**	P	Pg	21 43 03.6	-0.2
	baz=76,SNR=5.4						
T53A				S	Sg	21 43 13.5	-0.9
	baz=76						
S55A	**Lewisburg**	**1.03**	**54**	P	Pg	21 43 07.9	-0.1
	baz=234						
R54A	**Victor**	**1.10**	**23**	P	Pg	21 43 08.3	-1.2
	baz=204						
R54A				S	Sb	21 43 25.4	+0.2
	baz=204						
R53A	**Hurricane**	**1.20**	**345**	S	Sn	21 43 30.7	+1.2
	baz=164						
U56A	**King**	**1.24**	**131**	S	Sb	21 43 29.3	0.0
	baz=312						
V54A	**Nebo**	**1.43**	**193**	P	Pn	21 43 14.6	-0.8
	baz=13,SNR=11						
V54A				S	Sn	21 43 35.2	+0.3
	baz=13						
R55A	**Marlinton**	**1.59**	**45**	P	Pn	21 43 16.9	-0.8
	baz=226,SNR=8.2						
R55A				S	Sn	21 43 38.2	-0.8
	baz=226						
V56A	**Mocksville**	**1.60**	**148**	P	Pn	21 43 18.3	+0.4
	baz=328,SNR=6.3						
V56A				S	Sg	21 43 40.2	+0.5
	baz=328						
S56A	**Natural Bridge**	**1.66**	**72**	P	Pg	21 43 19.9	-0.1
	baz=253						
S56A				S	Sg	21 43 42.1	+0.6
	baz=253						
Q53A	**Leroy**	**1.69**	**1**	S	Sb	21 43 41.9	-0.1
	baz=181						
TZTN	**Tazewell**	**1.72**	**249**	P	Pn	21 43 20.2	+0.6
	baz=68						
T57A	**Hurt**	**1.84**	**95**	P	Pb	21 43 22.1	-0.8
	baz=276						
T57A				S	Sb	21 43 46.1	-0.4
	baz=276						
Q54A	**Coxs Mills**	**1.90**	**17**	Sb	Sg	21 43 49.3	+0.1
	baz=197						
V57A	**Coltrane Farms**	**1.92**	**131**	Pb	Pb	21 43 24.0	-0.1
	baz=313,SNR=8.7						
U57A	**Blanch**	**1.92**	**112**	P	Pn	21 43 23.1	+0.8
	baz=293						
R56A	**Bull Pasture M**	**2.10**	**53**	P	Pn	21 43 26.0	+1.2
	baz=234,SNR=5.8						

ANF 22 21:43:21.2±0.3, 37°79N×82°13W, h4km±2km, Error ellipse: s-maj=4.0km s-min=1.7km az=80.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S53A	**Williamson**	**0.11**	**178**	P	Pg	21 43 23.0	-0.4
	baz=358						
S53A				S	Sg	21 43 25.2	+0.3
	baz=358						
Q53A	**Leroy**	**1.17**	**24**	P	Pb	21 43 43.9	-0.1
	baz=204						
Q53A				S	Sb	21 43 59.5	-0.1
	baz=204						
Q52A	**Bidwell**	**1.18**	**355**	P	Pg	21 43 43.9	+0.1
	baz=175						
T55A	**Pulaski**	**1.26**	**122**	P	Pn	21 43 45.8	+0.1
	baz=303						
S55A	**Lewisburg**	**1.29**	**90**	P	Pb	21 43 46.1	0.0
	baz=271						
BLA	**Blacksburg**	**1.48**	**112**	P	Pn	21 43 48.9	+0.3
	baz=294						
BLA				S	Sg	21 44 08.8	+0.1
	baz=294						
Q54A	**Coxs Mills**	**1.57**	**40**	S	Sn	21 44 10.7	0.0
	baz=221						
P53A	**Whipple**	**1.79**	**19**	P	Pn	21 43 53.1	+0.1
	baz=199						
P53A				S	Sb	21 44 17.6	+0.1
	baz=199						
U56A	**King**	**2.01**	**135**	Sb	Sg	21 44 25.8	+0.1
	baz=316						
S56A	**Natural Bridge**	**2.04**	**92**	Sb	Sg	21 44 25.6	-1.1
	baz=274						
R56A	**Bull Pasture M**	**2.24**	**73**	S	Sb	21 44 29.2	-1.2
	baz=255						

WEL 22 21:45:30.9, 43°S±1°×17°3E±°, h11km±2km, M2.8/8, ML3.0/8, MLv2.8/8, Error ellipse: s-maj=0.0km s-min=0.0km az=42.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MQZ	**McQueen's Vall**	**0.24**	**204**	P	Pb	21 45 37.5	+0.2
MQZ				S	Sg	21 45 41.2	+1.8
OKCZ	**Okains Bay**	**0.31**	**140**	P	Pb	21 45 38.7	+0.3
OKCZ				S	Sb	21 45 43.6	+0.1
AMCZ	**Amberley**	**0.33**	**342**	P	Pb	21 45 38.9	+0.2
AMCZ				S	Sb	21 45 43.7	-0.2
AKCZ	**Akaroa Harbour**	**0.40**	**167**	P	Pb	21 45 40.4	+0.5
AKCZ				S	Sb	21 45 46.2	+0.2
RACZ	**Rakaia**	**0.53**	**243**	P	Pn	21 45 43.4	-0.9
RACZ				S	Sn	21 45 51.8	-1.4
QVZ	**Greta Valley S**	**0.55**	**19**	P	Pb	21 45 42.9	+0.3
GVZ				S	Sb	21 45 50.9	+0.4
OXZ	**Oxford**	**0.57**	**286**	P	Pb	21 45 43.6	+0.7
OXZ				S	Sn	21 45 52.7	-1.6
LTZ	**Lake Taylor**	**0.80**	**332**	P	Pn	21 45 47.7	-0.4
WACZ	**Wakanui South**	**0.82**	**236**	P	Pn	21 45 49.1	+0.6
MHCZ	**Mount Hutt**	**0.89**	**267**	P	Pn	21 45 49.5	+0.1
KHZ	**Kahutara**	**1.20**	**28**	P	Pn	21 45 53.2	-0.4
INZ	**Inchbonnie**	**1.24**	**307**	P	Pb	21 45 54.6	+0.2
ARCZ	**Arundel**	**1.25**	**248**	P	Pg	21 45 54.9	-0.1
RPZ	**Rata Peaks**	**1.28**	**259**	P	Pg	21 45 57.0	+1.5
WVZ	**Waitaha Valley**	**1.55**	**285**	P	Pg	21 46 00.4	-0.3
THZ	**Tophouse**	**1.73**	**3**	P	Pn	21 46 00.9	+0.1
DSZ	**Denniston Nort**	**1.89**	**337**	P	Pb	21 46 05.0	-0.4
BSWZ	**Blackbirch Sta**	**1.94**	**25**	P	Pn	21 46 04.1	+0.3
LBZ	**Lake Benmore**	**2.08**	**244**	P	Pb	21 46 08.0	-0.8
FOZ	**Fox Glacier**	**2.16**	**268**	P	Pb	21 46 09.2	-0.8
ODZ	**Otahua Downs**	**2.19**	**224**	P	Pn	21 46 07.9	+0.7
NNZ	**Nelson**	**2.31**	**11**	P	Pn	21 46 09.5	+0.7
QRZ	**Quartz Range**	**2.67**	**356**	P	Pn	21 46 15.1	+1.3
HHSZ	**Highcliff Hill**	**2.86**	**212**	P	Pn	21 46 16.9	+0.5
CAW	**Cannon Point**	**2.92**	**36**	P	Pn	21 46 16.4	-0.8
PKE	**Pukeiti**	**4.38**	**12**	P	Pn	21 46 39.4	+2.0
WNVZ	**Wahianoa**	**4.66**	**28**	P	Pn	21 46 42.6	+1.2
OTVZ

COEG	**Centro de Oper**	**1.00 329**	*eP*	**Pn**	**21 52 40.6**	**-0.4**
COEG			*eS*	**Sn**	**21 52 54.1**	**+0.1**
LFRS	**El Faro**	**1.10 321** ⇓	*iP*	**Pn**	**21 52 42.2**	**-0.2**
LFRS	**El Faro**	**1.10 321** ⇓	*iP*	**Pn**	**21 52 42.2**	**-0.2**
PAVA	**Las Pavas**	**1.10 329**	*eP*	**Pn**	**21 52 42.3**	**-0.3**
PAVA	**Las Pavas**	**1.10 329**	*eP*	**Pn**	**21 52 42.3**	**-0.3**
LBRS	**Las Brisas**	**1.18 325**	*eP*	**Pn**	**21 52 43.6**	**0.0**
LBRS	**Las Brisas**	**1.18 325**	*eP*	**Pn**	**21 52 43.6**	**0.0**
BOQS	**Boqueron**	**1.32 317** ⇑	*iP*	**Pn**	**21 52 45.7**	**0.0**
BOQS	**Boqueron**	**1.32 317** ⇑	*iP*	**Pn**	**21 52 45.7**	**0.0**
TACO	**Tacachico**	**1.55 321**	*eP*	**Pn**	**21 52 48.2**	**-0.3**
TACO	**Tacachico**	**1.55 321**	*eP*	**Pn**	**21 52 48.2**	**-0.3**
CNGN	**Cerro Negro**	**1.64 99**	*iP*	**Pn**	**21 52 49.5**	**-0.3**
CNGN			*eS*	**Sn**	**21 53 09.9**	**+0.3**
CNGN	**Cerro Negro**	**1.64 99**	*iP*	**Pn**	**21 52 49.5**	**-0.3**
CNGN			*eS*	**Sn**	**21 53 09.9**	**+0.3**
TGUH	**Tegucigalpa,Un**	**1.66 39**	*eP*	**Pn**	**21 52 50.0**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.66 39**	*eP*	**Pn**	**21 52 50.0**	**-0.2**
NUBE	**Las Nubes**	**1.79 309**	*eP*	**Pn**	**21 52 51.8**	**-0.2**
NUBE	**Las Nubes**	**1.79 309**	*eP*	**Pn**	**21 52 51.8**	**-0.2**
MTO3	**Montecristo**	**1.90 329**	*eP*	**Pn**	**21 52 53.2**	**-0.3**
MTO3	**Montecristo**	**1.90 329**	*eP*	**Pn**	**21 52 53.2**	**-0.3**

JMA 22 21:53:52.6±0.1, 24.55N×123.55E, h9km±3km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
IRIF	**Iriomote-Funau**	**0.27**	**143**	P		Pg	21 53 57.9	-0.1
IRIF				S		Sg	21 54 02.0	+0.4
YOJ	**Yonaguni jima**	**0.50**	**260**	P		Pg	21 54 02.4	+0.1
YOJ				S		Sg	21 54 08.7	-0.2
JKRS	**Kuro-shima**	**0.52**	**127**	P		Pg	21 54 02.9	+0.2
JKRS				S		Sg	21 54 09.8	+0.2
HATJ	**Hateruma jima**	**0.54**	**155**	P		Pg	21 54 03.0	-0.1
HATJ				S		Sg	21 54 09.7	-0.6
JYNG	**Yonagunijimaku**	**0.56**	**260**	P		Pg	21 54 03.5	0.0
JYNG				S		Sg	21 54 11.0	+0.2
JIJ	**Ishigaki jima**	**0.57**	**109**	P		Pg	21 54 03.4	-0.3
JIJ				S		Sg	21 54 11.2	0.0
JISG	**Ishigakijimahi**	**0.69**	**87**	P		Pg	21 54 06.0	0.0
JISG				S		Sg	21 54 15.0	-0.1
JTJ	**Tarama**	**1.05**	**85**	P		Pg	21 54 12.5	-0.3
JTJ				S		Sg	21 54 26.5	0.0

TAP 22 21:53:52.7, 23.73N×121.94E, h25km, ML2.1, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
ESL	**Shilin**	**0.47**	**281**	P		Pb	21 54 01.7	-0.7
	baz=273							
ESL				*eS*		Sb	21 54 08.5	-0.6
	baz=273							
TWD	**Chiawan**	**0.47**	**318**	⇓P		Pb	21 54 02.0	-0.5
	baz=319							
TWD				*eS*		Sb	21 54 08.9	-0.2
	baz=319							
EGFH	**Guangfu**	**0.47**	**263**	*eS*		Sn	21 54 10.5	-1.0
	baz=263							
HGSD	**Ruisui**	**0.53**	**244**	*eP*		Pb	21 54 02.8	-0.6
	baz=244							
HGSD				*eS*		Sb	21 54 10.4	-0.2
	baz=244							
NACB	**Ninganchiao**	**0.55**	**325**	*eP*		Pb	21 54 03.0	-0.8
	baz=325							
NACB				*eS*		Sb	21 54 10.7	-0.5
	baz=325							
EHY	**Hungye**	**0.61**	**249**	P		Pb	21 54 04.4	-0.4
	baz=256							
EHY				S		Sb	21 54 13.1	+0.1
	baz=256							
ETLH	**Xiulin Townshi**	**0.64**	**319**	*eP*		Pb	21 54 04.6	-0.7
	baz=319							
ETLH				*eS*		Sb	21 54 14.3	+0.4
	baz=319							
YULB	**Yu-li**	**0.68**	**241**	*eP*		Pb	21 54 05.4	-0.5
	baz=230							
YULB				*eS*		Sb	21 54 14.9	+0.1
	baz=230							
TWF1	**Yuli**	**0.70**	**238**	P		Pb	21 54 06.0	-0.3
	baz=227							
TWF1				S		Sb	21 54 15.7	+0.2
	baz=227							
ENA	**Nanau**	**0.72**	**346**	*eP*		Pb	21 54 06.4	-0.3
	baz=338							
ENA				*eS*		Sb	21 54 16.2	0.0
	baz=338							
WHF	**Hehuan Shan**	**0.74**	**304**	P		Pb	21 54 06.6	-0.7
	baz=305							
WHF				S		Sb	21 54 17.2	0.0
	baz=305							
CHGB	**Renai**	**0.77**	**296**	*eP*		Pb	21 54 07.2	-0.5
	baz=303							
CHGB				*eS*		Sb	21 54 18.1	+0.1
	baz=303							
FULB	**Fuli**	**0.79**	**229**	*eP*		Pb	21 54 06.7	-1.2
	baz=215							
FULB				*eS*		Sb	21 54 17.4	-0.8
	baz=215							
CHKT	**Chengkung**	**0.82**	**220**	*eS*		Sb	21 54 16.8	-2.1
	baz=208							
NNSB	**Datong**	**0.86**	**324**	*eP*		Pb	21 54 08.6	-0.6
	baz=324							
NNSB				*eS*		Sb	21 54 19.7	-0.7
	baz=324							
TWT	**Tachien**	**0.87**	**307**	*eP*		Pb	21 54 09.0	-0.4
	baz=306							
TWT				*eS*		Sb	21 54 20.6	-0.1
	baz=306							
NNS	**Nan Shan**	**0.88**	**324**	*eP*		Pb	21 54 09.2	-0.2
	baz=324							
NNS				*eS*		Sb	21 54 20.4	-0.4
	baz=324							
TDCB	**Techi**	**0.89**	**307**	*eP*		Pb	21 54 09.0	-0.6
	baz=307							
TDCB				*eS*		Sb	21 54 21.1	+0.1
	baz=307							
SSLB	**Suanglung**	**0.90**	**274**	*eP*		Pb	21 54 08.9	-0.9
	baz=274							
SSLB				*eS*		Sb	21 54 20.4	-1.0
	baz=274							
SMLT	**Sun Moon Lake**	**0.96**	**280**	P		Pn	21 54 10.3	-0.5
	baz=280							
SMLT				S		Sb	21 54 22.9	-0.3
	baz=280							
ENTT	**Nioudou**	**0.97**	**340**	*eP*		Pn	21 54 10.7	-0.2
	baz=340							
ENTT				S		Sb	21 54 23.2	-0.2
	baz=340							
ELDTW	**Lidau**	**1.00**	**238**	*eS*		Sb	21 54 21.8	-2.4
	baz=237							
TYC	**Yuchr**	**1.01**	**280**	*eP*		Pn	21 54 10.6	-0.7
	baz=290							
TYC				*eS*		Sb	21 54 24.3	0.0
	baz=290							
TWE	**Neicheng**	**1.02**	**346**	*eS*		Sb	21 54 24.3	-0.4
	baz=339							
ALS	**Alishan**	**1.06**	**259**	*eP*		Pb	21 54 13.9	+1.3
	baz=258							
ALS				S		Sb	21 54 25.9	-0.3
	baz=258							
YHNB	**Yeheng**	**1.07**	**331**	*eP*		Pn	21 54 11.8	-0.5
	baz=331							
YHNB				*eS*		Sb	21 54 24.9	-1.4
	baz=331							
NSK	**Sanguang**	**1.08**	**331**	*eP*		Pn	21 54 12.3	-0.1
	baz=331							
NSK				*eS*		Sb	21 54 25.4	-1.2
	baz=331							
CHN5	**Tsauling**	**1.16**	**264**	*eP*		Pb	21 54 14.3	0.0
	baz=264							
CHN5				*eS*		Sb	21 54 29.6	+0.7
	baz=264							
STYT	**Tauyuan**	**1.22**	**243**	*eS*		Sn	21 54 29.2	-0.8
	baz=231							
TPUB	**Ta-pu**	**1.27**	**251**	*eP*		Pb	21 54 16.1	0.0
	baz=239							
TPUB				*eS*		Sb	21 54 32.2	+0.1
	baz=239							
CHN4	**Tsaushan**	**1.29**	**253**	*eP*		Pb	21 54 16.6	+0.3
	baz=253							
CHN4				*eS*		Sb	21 54 33.7	+1.2
	baz=253							
WTP	**Ta-pu**	**1.31**	**249**	*eP*		Pb	21 54 16.8	+0.2
	baz=248							
WTP				*eS*		Sb	21 54 33.4	+0.4
	baz=248							
CHN1	**Nanshi**	**1.40**	**248**	*eP*		Pn	21 54 17.1	+0.3
	baz=248							
CHN1				*eS*		Sb	21 54 35.8	+0.1
	baz=248							
TWK	**Hsinying**	**1.41**	**251**	*eP*		Pb	21 54 18.9	+0.5
	baz=251							
TWK				*eS*		Sb	21 54 36.0	+0.1
	baz=251							
MASBT	**Mashibuluo**	**1.64**	**228**	*eP*		Pn	21 54 20.1	+0.2
	baz=223							
MASBT				*eS*		Sn	21 54 41.3	+1.1
	baz=223							

*SJA **22** 22:00:48.7±0.8, 35.37S×74.53W, h10km, ML4.3, MW4.3*
*GUC **22** 22:00:55.5±0.6, 35.57S×73.71W, h5km±5km, ML4.2*
*NEIC **22** 22:00:58.5, 35.58S×73.35W, h15km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}4.11; $M_{\theta\theta}$-0.11; $M_{\phi\phi}$-4.00; $M_{r\theta}$1.31; $M_{\theta\phi}$-1.16; $M_{\phi r}$-2.21; Fault plane solution: M_o4.94000×10^{15} NP1:ϕ_s33.80000°, δ36.57000°, λ122.81000°. NP2:ϕ_s175.04000°, δ59.95000°, λ68.10000°. Principal axes: T 5.1370, Plg67.0000°, Azm42.0000°; N -0.4248, Plg19.0000°, Azm186.0000°; P -4.7122, Plg12.0000°, Azm281.0000°;*
*NEIC **22** 22:00:58.5±1.8, 35.61S±0.03×73.35W±0.08, h10km±1km, mb4.5/15, Mwr4.4/13, ML4.2(GUC) Error ellipse: s-maj=11.3km s-min=4.8km az=281.0*
*IDC **22** 22:00:58.6±1.5, 35.60S×73.04W, h0km, mb4.2/5, mb1 4.2/6, mb1mx4.0/33, mbtmp4.2/6, ML4.3/1, MS3.7/8, Ms1 3.7/8, ms1mx3.4/26, Error ellipse: s-maj=57.4km s-min=18.7km az=89.0*
*VAO **22** 22:01:01.8±1.2, 35.61S×73.09W, h10km, mb4.4*
ISC 22 22:00:58.1±0.6, 35.60S±0.03×73.49W±0.05, h10km, n89, σ1°33/88, mb4.4/9, MS3.8/6, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
BI03	**Tigo**	**1.30**	**163**	⇑*iP*		**Pg**	**22 01 22.0**	**-1.0**
BI03				*iS*		**Sb**	**22 01 38.1**	**-1.3**
BI03	**Tigo**	**1.30**	**163**	Pn		**Pg**	**22 01 21.9**	**-1.2**
BI03				Sn		**Sb**	**22 01 38.3**	**-1.0**
BO03	**Pichilemu**	**1.67**	**49**	*eP*		**Pn**	**22 01 25.8**	**-1.5**
BO03				*iS*		**Sg**	**22 01 49.1**	**-2.5**
LAJA	**Laja**	**1.79**	**160**	*eP*		**Pn**	**22 01 28.8**	**-0.3**
LAJA				*iS*		**Sn**	**22 01 49.9**	**-2.0**
LAJA				IAML			22 02 07.2	
	comp=E,1μm,0.4s							
BI02	**San Fabin de**	**2.08**	**121**	⇑*iP*		**Pn**	**22 01 33.0**	**-0.2**
BI02				*eS*		**Sg**	**22 02 02.1**	**-2.9**
BI02				IAML			22 02 09.0	
	comp=E,3μm,0.5s							
BI02	**San Fabin de**	**2.08**	**121**			**Pn**	**22 01 32.7**	**-0.5**
BO02	**Sierra Bellavi**	**2.36**	**71**	*eP*		**Pn**	**22 01 36.1**	**-0.8**
BO02				*eS*		**Sb**	**22 02 09.3**	**-0.6**
BO02	**Sierra Bellavi**	**2.36**	**71**			**Pn**	**22 01 36.1**	**-0.8**
MT09	**Talagante**	**2.75**	**49**	*eP*		**Pn**	**22 01 42.3**	**-0.1**
BI04	**Isla Mocha**	**2.83**	**186**	*eP*		**Pn**	**22 01 42.7**	**-0.6**
BI04				*iS*		**Sn**	**22 02 16.5**	**-1.0**
BI04				IAML			22 02 20.6	
	comp=N,2μm,0.5s							
VA01	**Torpederas**	**2.98**	**31**	Pn		**Pn**	**22 01 44.4**	**-1.1**
CANA	**Caviahue**	**3.00**	**140**	*iP*		**Pb**	**22 01 50.0**	**-1.8**
CANA				IAML			22 02 55.0	
	comp=Z,444nm,1.2s							
MT02	**Curacav**	**3.03**	**40**	*eP*		**Pn**	**22 01 45.0**	**-1.3**
MT02				*iS*		**Sn**	**22 02 22.7**	**+0.1**
MT02				IAML			22 02 48.1	
	comp=E,599nm,0.7s							
MT02	**Curacav**	**3.03**	**40**	Pn		**Pn**	**22 01 44.9**	**-1.3**
MT05	**Renca**	**3.16**	**47**	*eP*		**Pn**	**22 01 48.2**	**+0.2**
MT05	**Renca**	**3.16**	**47**			**Pn**	**22 01 47.5**	**-0.5**
COIS	**El Sosneado**	**3.22**	**82**	*iP*		**Pb**	**22 01 54.6**	**-0.8**
COIS				*eS*		**Sg**	**22 02 42.0**	**+0.5**
ROC1	**El Roble**	**3.32**	**39**			**Pn**	**22 01 49.9**	**-0.4**
ROC1	**El Roble**	**3.32**	**39**	*iP*		**Pn**	**22 01 50.1**	**-0.2**
ROC1				*eS*		**Sb**	**22 02 36.0**	**-1.8**
EDS3	**Malargue**	**3.33**	**94**	*iP*		**Pb**	**22 01 57.7**	**+0.4**
PEL	**Peldehue**	**3.37**	**44**	Pn		**Pn**	**22 01 50.6**	**-0.2**
PEL	**Peldehue**	**3.37**	**44**	*iP*		**Pn**	**22 01 51.2**	**+0.3**
LAMA	**Las Malvinas**	**3.56**	**81**	*iP*		Pb	22 01 55.9	-5.3
VA03	**San Esteban**	**3.73**	**42**	*eP*		**Pn**	**22 01 55.2**	**-0.6**
VA03				*eS*		**Sn**	**22 02 37.2**	**-2.6**
VA03	**San Esteban**	**3.73**	**42**			**Pn**	**22 01 55.6**	**-0.2**
RFA	**San Rafael**	**4.19**	**80**	*iP*		**Pn**	**22 02 04.9**	**+2.7**
RFA				*eS*		**Sb**	**22 03 05.7**	**+3.0**
RFA				IAML			22 03 13.6	
	comp=Z,274nm,1.0s							
AAGR	**Agrelo**	**4.60**	**58**	*iP*		**Pn**	**22 02 10.1**	**+2.3**
AAGR				IAML			22 03 52.2	
	comp=Z,158nm,1.6s							
AUSP	**Uspallata**	**4.79**	**47**	*iP*		**Pn**	**22 02 11.9**	**+1.3**
H03S1	**Juan Fernandez**	**4.79**	**290**	T		T	22 07 01.6	
	baz=110,slow=73,SNR=2236							
H03S3	**Juan Fernandez**	**4.80**	**290**	T		T	22 07 02.3	
	baz=110,slow=73,SNR=1368							
H03S2	**Juan Fernandez**	**4.81**	**290**	T		T	22 07 01.5	
	baz=110,slow=73,SNR=1798							
VA04	**Juan Fernndez**	**4.82**	**292**	Pn		**Pn**	**22 02 12.3**	**+1.6**
CO02	**Combarbal**	**4.85**	**26**	Pn		**Pn**	**22 02 10.5**	**-0.8**
ASAL	**Salagasta**	**4.89**	**53**	*iP*		**Pn**	**22 02 13.9**	**+2.2**
ASAL				IAML			22 03 49.4	
	comp=Z,111nm,1.4s							
H03N1	**Juan Fernandez**	**4.97**	**294**	T		T	22 07 22.3	
	baz=110,slow=76,SNR=119							
H03N3	**Juan Fernandez**	**4.97**	**294**	T		T	22 07 22.9	
	baz=110,slow=76,SNR=115							
H03N2	**Juan Fernandez**	**4.99**	**294**	T		T	22 07 23.5	
	baz=110,slow=76,SNR=136							
CO03	**El Pedregal**	**5.29**	**27**	Pn		**Pn**	**22 02 16.5**	**-0.9**
RTCV	**Cerro Valdivia**	**5.55**	**49**	*iP*		**Pn**	**22 02 21.7**	**+0.8**
RTCV				IAML			22 04 11.9	
	comp=Z,93nm,2.3s							
PLCA	**Paso Flores**	**5.62**	**157**	Pn		**Pn**	**22 02 23.7**	**+1.8**
	comp=Z,1.9nm,0.3s,baz=323,slow=10,SNR=64							
PLCA				Lg		Lg	22 03 51.9	
	comp=Z,3.1nm,0.3s,baz=246,slow=18,SNR=4.3							
PLCA	**Paso Flores**	**5.62**	**157**	Pn		**Pn**	**22 02 23.2**	**+1.3**
PLCA	**Paso Flores**	**5.62**	**157**	*eP*		**Pn**	**22 02 23.5**	**+1.7**
ZON	**Zonda**	**5.69**	**46**	Pn		**Pn**	**22 02 22.8**	**0.0**
GO04	**Tololo Observa**	**5.86**	**23**	Pn		**Pn**	**22 02 23.9**	**-1.4**
GO04	**Tololo Observa**	**5.86**	**23**	*iP*		**Pn**	**22 02 22.7**	**-2.6**
RTLL	**Cerro Villicun**	**5.97**	**46**	*iP*		**Pn**	**22 02 27.1**	**+0.5**
RTLL				IAML			22 04 24.3	
	comp=Z,61nm,1.5s							
ACCO	**Cerro Coronel**	**6.22**	**38**	*iP*		**Pn**	**22 02 30.6**	**+0.3**
ACCO				IAML			22 04 32.6	
	comp=Z,43nm,0.7s							
CO01	**Juntas del Tor**	**6.29**	**28**	Pn		**Pn**	**22 02 30.7**	**-0.5**
AROD	**Rodeo**	**6.38**	**33**	*iP*		**Pn**	**22 02 33.0**	**+0.5**
LL01	**San Ignacio de**	**6.82**	**173**	Pn		**Pn**	**22 02 38.9**	**+0.7**
LCO	**Las Campanas**	**6.98**	**21**	Pn		**Pn**	**22 02 38.9**	**-1.8**
MRA	**San Martin**	**7.19**	**66**	*iP*		**Pn**	**22 02 43.4**	**+0.1**
AC05	**El Transito**	**7.27**	**23**	Pn		**Pn**	**22 02 43.8**	**-0.7**
GO03	**Copiap**	**8.45**	**20**			**Pn**	**22 02 59.4**	**-1.2**
GO02	**Mina Guanaco**	**10.93**	**19**	Pn		**Pn**	**22 03 32.9**	**-1.9**
LVC	**Limon Verde**	**13.54**	**18**	LR		LR	22 09 56.4	
	comp=Z,374nm,19.8s,baz=206,slow=40							
PB01	**IPOC Station P**	**14.92**	**15**			**Pn**	**22 04 27.7**	**-1.6**
PB11	**IPOC Station P**	**16.13**	**13**			**P**	**22 04 46.7**	**-1.8**
PB11				IAmb		IAmb	22 04 52.0	
	comp=Z,35nm,1.1s							
GO01	**Chusmiza**	**16.31**	**15**	Pn		**Pn**	**22 04 47.6**	**-0.2**
CPUP	**Villa Florida**	**16.64**	**61**	LR		LR	22 10 39.1	
	comp=Z,119nm,19.4s,baz=236,slow=36							
MNMC	**Minye Minye**	**16.76**	**13**	P		**P**	**22 04 55.0**	**-0.5**
MNMC				IAmb		IAmb	22 04 59.5	
	comp=Z,25nm,1.1s							
PB16	**IPOC Station P**	**17.55**	**13**			**P**	**22 05 03.1**	**-1.5**
EFI	**East Falkland**	**19.50**	**150**	P		**Pn**	**22 05 24.9**	**-1.5**
EFI				IAmb		IAmb	22 05 32.8	
	comp=Z,53nm,1.3s							
LPAZ	**La Paz**	**19.82**	**15**	P		**Pn**	**22 05 29.9**	**-1.1**
LPAZ	**La Paz**	**19.82**	**15**	*eP*		**Pn**	**22 05 32.8**	**+1.7**
TRCB	**Terra Rica**	**22.17**	**61**	*eP*		**P**	**22 05 55.3**	**+0.9**
SIV	**San Ignacio**	**22.46**	**33**	P		**P**	**22 05 58.0**	**+0.5**
	comp=Z,12nm,1.1s,baz=229,slow=11,SNR=12							
SIV				LR		LR	22 16 21.3	
	comp=Z,548nm,18.2s,baz=252,slow=41							
PTLB	**Pontes e Lacer**	**23.82**	**36**	*eP*		**P**	**22 06 11.3**	**0.0**
SPB	**Sao Paulo**	**25.54**	**69**	P		**P**	**22 06 26.9**	**-0.2**
SPB				IAmb		IAmb	22 06 36.3	
	comp=Z,22nm,1.2s							
SPB	**Sao Paulo**	**25.54**	**69**	*eP*		**P**	**22 06 28.2**	**+1.2**
VAO	**Valinhos**	**26.22**	**69**	*eP*		**P**	**22 06 34.8**	**+1.4**
PMSA	**Palmer Station**	**29.76**	**172**	LR		LR	22 19 12.4	
	comp=Z,239nm,18.5s,baz=6.0,slow=37							
SNAA	**Sanae**	**50.57**	**157**	P		**P**	**22 09 57.6**	**+1.2**
	comp=Z,7.9nm,1.1s,baz=296,slow=6.0,SNR=15							
SNAA	**Sanae**	**50.57**	**157**	P		**P**	**22 09 57.8**	**+1.3**
QSPA	**South Pole Qui**	**54.64**	**180**	P		**P**	**22 10 28.7**	**+1.9**
	comp=Z,2.6nm,0.9s,baz=176,slow=1.9,SNR=8.5							
QSPA	**South Pole Qui**	**54.64**	**180**	P		**P**	**22 10 29.0**	**+2.1**
QSPA				IAmb		IAmb	22 10 38.9	
	comp=Z,9.4nm,1.1s							
PPT	**Papeete**	**68.85**	**263**	LR		LR	22 34 17.8	
	comp=Z,20nm,20.6s,baz=202,slow=29							
MAW	**Mawson**	**71.98**	**164**	LR		LR	22 45 08.3	
	comp=Z,106nm,18.2s,baz=238,slow=37							
DBIC	**Dimbokro**	**76.81**	**72**	P		**P**	**22 12 50.3**	**-0.1**
BOSA	**Boshof**	**80.38**	**118**	P		**P**	**22 13 09.9**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=227,slow=4.4,SNR=4.2							
BOSA				LR		LR	22 45 57.5	
	comp=Z,28nm,18.4s,baz=242,slow=34							
BOSA	**Boshof**	**80.38**	**118**	P		**P**	**22 13 10.0**	**-0.1**
URZ	**Urewera**	**81.71**	**229**	LR		LR	22 41 17.2	
	comp=Z,40nm,20.9s,baz=211,slow=30							
ECSD	**EROS Data Cent**	**81.72**	**343**	P		**P**	**22 13 18.8**	**+2.3**
ECSD				IAmb		IAmb	22 13 37.0	
	comp=Z,2.4nm,0.9s							
KOWA	**Kowa**	**82.38**	**66**	P		**P**	**22 13 21.1**	**+0.5**
KOWA				IAmb		IAmb	22 13 31.3	
	comp=Z,6.5nm,1.1s							
LBTB	**Lobatse**	**82.71**	**115**	P		**P**	**22 13 22.1**	**-0.3**
LBTB				IAmb		IAmb	22 13 25.6	
	comp=Z,3.1nm,1.1s							
TORD	**Torodi Ar. Bea**	**85.87**	**71**	P		**P**	**22 13 38.4**	**0.0**
	comp=Z,1.3nm,1.0s,baz=260,slow=7.4,SNR=4.4							
TORD	**Torodi Ar. Bea**	**85.87**	**71**	P		**P**	**22 13 38.0**	**-0.4**
ZALV	**Zalesovo Beam**	**156.21**	**33**	PKPab		**PKPab**	**22 21 20.9**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=347,slow=3.3,SNR=1.7							
SONM	**Songino Array**	**167.77**	**0**	PKPab		**PKPab**	**22 22 12.7**	**+1.7**
	comp=Z,0.6nm,0.9s,baz=20,slow=4.7,SNR=3.9							

*NAO **22** 22:10:05.1±1.5, 73.21N×6.46E, ML3.5*
*IDC **22** 22:10:05.6±1.7, 73.15N×6.53E, h0km, mb3.4/3, mb1 3.6/8, mb1mx3.3/52, mbtmp3.5/8, ML3.0/5, MS3.2/5, Ms1 3.2/5, ms1mx2.8/39, Error ellipse: s-maj=29.7km s-min=19.4km az=95.0*
*BER **22** 22:10:08.4±3.8, 73.26N×6.60E, h10km, ML2.3, ML3.5(NAO), Confirmed Earthquake*
ISC 22 22:10:08.1±1.1, 73.20N±0.08×7.6E±0.1, h10km, n57, σ1°16/51, mb3.5/3, MS3.1/4, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
HSPB	**Hornsund (broa**	**4.33**	**24**	Pn		**Pn**	**22 11 13.5**	**-0.3**
HSPB	**Hornsund (broa**	**4.33**	**24**	Pn		**Pn**	**22 11 13.5**	**-0.3**
TRO	**Tromso**	**5.09**	**129**	Pn		**Pn**	**22 11 26.2**	**+2.0**
TRO	**Tromso**	**5.09**	**129**	Pn		**Pn**	**22 11 26.2**	**+2.0**
BRBB	**Barentsburg B**	**5.18**	**15**	Pn		**Pn**	**22 11 25.5**	**0.0**
BRBB	**Barentsburg B**	**5.18**	**15**	Pn		**Pn**	**22 11 25.5**	**0.0**
N2VI	**Vinje**	**5.36**	**153**	*eP*		**Pn**	**22 11 28.3**	**+0.3**
SPA0	**Spitsbergen Ar**	**5.45**	**19**	Pn		**Pn**	**22 11 28.6**	**-0.6**
	baz=201,slow=14							
SPA0	**Spitsbergen Ar**	**5.45**	**19**	Pn		**Pn**	**22 11 28.6**	**-0.6**
	baz=201,slow=14							
SPITS	**Spitsbergen Ar**	**5.45**	**19**	Pn		**Pn**	**22 11 27.9**	**-1.2**
	baz=197,slow=16,SNR=23							
LOF	**Lofoten**	**5.46**	**156**	Pn		**Pn**	**22 11 30.4**	**+1.0**
LOF				Sn		Sn	22 12 24.4	-7.7
LOF	**Lofoten**	**5.46**	**156**	*eP*		**Pn**	**22 11 29.4**	**0.0**
LOF				*eS*		Sn	22 12 24.1	-8.1
LOF				IAML			22 12 28.5	
	comp=Z,7.2nm,0.4s							
HAMF	**Hammerfest**	**5.62**	**109**	Pn		**Pn**	**22 11 32.9**	**+1.4**
HAMF	**Hammerfest**	**5.62**	**109**	*eP*		**Pn**	**22 11 32.4**	**+0.9**
HOPEN	**Hopen**	**5.62**	**46**	Pn		**Pn**	**22 11 31.9**	**+0.4**
HOPEN	**Hopen**	**5.62**	**46**	Pn		**Pn**	**22 11 31.9**	**+0.4**
N2VA	**Vr_y**	**5.82**	**160**	*eP*		**Pn**	**22 11 34.5**	**+0.2**
KBS	**Kingsbay**	**5.85**	**8**	Pn		**Pn**	**22 11 35.1**	**+0.4**
KBS	**Kingsbay**	**5.85**	**8**	*eP*		**Pn**	**22 11 34.7**	**0.0**
STEI	**Steigen**	**5.87**	**151**	*eP*		**Pn**	**22 11 35.9**	**+0.9**
N2RO	**R_st**	**5.91**	**163**	*eP*		**Pn**	**22 11 36.1**	**+0.6**
N2RO				*eS*		Sn	22 12 35.5	-7.7
KIF	**Kilpisjarvi**	**6.00**	**128**	Pn		**Pn**	**22

GERES	**GERESS Array B**	**147.09**	**347**	PKPbc	PKPbc	22 31 08.8	-0.8		
	0.1nm,0.5s,baz=17,slow=3.6,SNR=1.4								

WEL 22 22:27:07.9±0.8, 38°S±7°×18°0E±°, h33km, M3.3/23, ML3.5/23, MLv3.3/23, Error ellipse: s-maj=0.0km s-min=0.0km az=25.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.17**	**266**	P	Pn	22 27 27.5	-0.4
WMGZ				S	Sn	22 27 43.4	+0.7
MXZ	**Matakaoa Point**	**1.27**	**277**	P	Pn	22 27 28.5	-0.7
MXZ				S	Sn	22 27 44.4	-0.7
PUZ	**Puketiti**	**1.33**	**255**	P	Pn	22 27 29.7	-0.4
PUZ				S	Sn	22 27 47.4	+0.6
CNGZ	**Carnagh Statio**	**1.52**	**240**	P	Pn	22 27 33.6	+0.9
TWGZ	**Tauwhareparae**	**1.57**	**253**	P	Pn	22 27 33.5	0.0
TWGZ				S	Sn	22 27 53.8	+1.1
HAZ	**Te Kaha**	**1.67**	**269**	P	Pn	22 27 34.4	-0.4
HAZ				S	Sn	22 27 54.6	-0.4
RUGZ	**Raukumara Rang**	**1.76**	**262**	P	Pn	22 27 35.6	-0.6
RIGZ	**Rimuhau**	**1.93**	**239**	P	Pn	22 27 38.8	+0.4
RIGZ				S	Sn	22 28 03.1	+1.5
MWZ	**Matawai**	**1.96**	**252**	P	Pn	22 27 38.2	-0.6
MWZ				S	Sn	22 28 02.0	-0.2
PRGZ	**Paritu Road**	**1.97**	**232**	P	Pn	22 27 39.4	+0.4
RAGZ	**Rawiri**	**2.09**	**248**	P	Pn	22 27 40.8	+0.2
MHGZ	**Mahia Peninsul**	**2.10**	**227**	P	Pn	22 27 41.6	+0.9
MHGZ				S	Sn	22 28 07.4	+1.7
URZ	**Urewera**	**2.25**	**256**	P	Pn	22 27 43.2	+0.4
URZ				S	Sn	22 28 09.6	+0.1
SNGZ	**Shannon Statio**	**2.26**	**242**	P	Pn	22 27 43.1	+0.2
SNGZ				S	Sn	22 28 10.2	+0.5
WHRZ	**Whale Island**	**2.31**	**266**	P	Pn	22 27 44.2	+0.6
RTZ	**Ruatahuna**	**2.45**	**248**	P	Pn	22 27 46.3	+0.6
WHHZ	**Waihua**	**2.48**	**236**	P	Pn	22 27 46.1	+0.2
RAHZ	**Arahi**	**2.50**	**241**	P	Pn	22 27 46.7	+0.5
MARZ	**Manawahe**	**2.56**	**263**	P	Pn	22 27 47.5	+0.6
MUGZ	**Murupara**	**2.57**	**252**	P	Pn	22 27 47.2	+0.1
OPRZ	**Ohinepanea**	**2.64**	**267**	P	Pn	22 27 48.2	0.0
MTHZ	**Maungataniwha**	**2.64**	**244**	P	Pn	22 27 48.5	+0.3
TARZ	**Mount Tarawera**	**2.72**	**258**	P	Pn	22 27 49.3	0.0
ARHZ	**Aropaoanui**	**2.73**	**235**	P	Pn	22 27 49.9	+0.5
NMHZ	**Naumai**	**2.77**	**240**	P	Pn	22 27 50.3	+0.2
KARZ	**Kaharoa**	**2.90**	**263**	P	Pn	22 27 51.5	-0.2
CKHZ	**Cape Kidnapper**	**2.92**	**228**	P	Pn	22 27 51.9	0.0
MRHZ	**Matea Rd**	**2.94**	**247**	P	Pn	22 27 52.4	0.0
BKZ	**Black Stump Fm**	**3.02**	**241**	P	Pn	22 27 53.5	+0.1
MCHZ	**McNeill Hill**	**3.03**	**235**	P	Pn	22 27 53.5	+0.1
KAHZ	**Kahuranaki**	**3.12**	**228**	P	Pn	22 27 55.4	+0.6
KWHZ	**Kaweka Forest**	**3.19**	**237**	P	Pn	22 27 55.6	-0.2
PXZ	**Pawanui**	**3.29**	**225**	P	Pn	22 27 56.5	-0.5
KRHZ	**Kereru**	**3.35**	**234**	P	Pn	22 27 57.3	-0.6
BHHZ	**Black Hill Sta**	**3.47**	**239**	P	Pn	22 27 59.6	0.0
KUZ	**Kuaotunu**	**3.47**	**285**	P	Pn	22 27 58.2	-1.3
TOZ	**Tahuroa Road**	**3.48**	**269**	P	Pn	22 27 59.2	-0.4
TMVZ	**Te Maari**	**3.56**	**246**	P	Pn	22 28 00.8	-0.1
ETVZ	**East Tongariro**	**3.56**	**246**	P	Pn	22 28 00.6	-0.3
PRHZ	**Porangahau**	**3.58**	**224**	P	Pn	22 27 59.9	-1.1
OTVZ	**Oturere**	**3.61**	**245**	P	Pn	22 28 01.7	+0.1
PNHZ	**Pukenui**	**3.61**	**232**	P	Pn	22 28 00.7	-0.8
TUVZ	**Tukino**	**3.66**	**244**	P	Pn	22 28 02.1	-0.1
WNVZ	**Wahianoa**	**3.72**	**243**	P	Pn	22 28 02.5	-0.6
MKAZ	**Moumakai**	**3.81**	**278**	P	Pn	22 28 03.8	-0.5
TSZ	**Takapari Road**	**3.84**	**232**	P	Pn	22 28 03.6	-1.1
GRZ	**Great Barrier**	**3.84**	**291**	P	Pn	22 28 03.9	-0.8
DVHZ	**Dannevirke**	**3.87**	**227**	P	Pn	22 28 03.8	-1.2
WIAZ	**Waiheke Island**	**3.91**	**283**	P	Pn	22 28 05.2	-0.3
ETAZ	**East Tamaki Re**	**4.03**	**280**	P	Pn	22 28 07.1	-0.1
MBAZ	**Motutapu North**	**4.10**	**282**	P	Pn	22 28 08.1	-0.1
MRZ	**Mangatainoka R**	**4.44**	**228**	P	Pn	22 28 11.3	-1.5
TMWZ	**Te Maipa**	**4.57**	**221**	P	Pn	22 28 13.0	-1.7
HOWZ	**Holdsworth Sta**	**4.63**	**226**	P	Pn	22 28 13.7	-1.8
WCZ	**Waipu Caves**	**4.79**	**290**	P	Pn	22 28 17.9	+0.1
TCW	**Tory Channel**	**5.56**	**230**	P	Pn	22 29 26.7	-1.5
CTZ	**Chatham Island**	**6.55**	**157**	P	Pn	22 28 45.4	+3.5
CTZ				S	Sn	22 29 51.9	-3.5

IDC 22 22:29:48.3±9.8, 27°53N×139°47E, h569km±115km, mb2.9/8, mb1 3.0/8, mb1mx2.8/37, mbtmp3.8/8, Error ellipse: s-maj=76.5km s-min=13.5km az=72.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**32.74**	**317**	P	P	22 35 34.5	-0.5
	0.7nm,0.6s,baz=132,slow=8.1,SNR=4.6						
CMAR	**Chiang Mai Arr**	**38.24**	**265**	P	P	22 36 20.0	-0.8
	0.2nm,0.3s,baz=66,slow=5.0,SNR=1.6						
WRA	**Warramunga Arr**	**47.45**	**187**	P	P	22 37 32.2	-0.3
	0.8nm,0.3s,baz=6.4,slow=7.7,SNR=42						
ZALV	**Zalesovo Beam**	**47.58**	**319**	P	P	22 37 32.5	-0.4
	0.7nm,0.4s,baz=92,slow=7.4,SNR=2.9						
MKAR	**Makanchi Array**	**48.34**	**309**	P	P	22 37 39.6	+0.8
	0.3nm,0.3s,baz=89,slow=10,SNR=8.8						
ASAR	**Alice Springs**	**51.18**	**187**	P	P	22 37 59.9	0.0
	0.5nm,0.4s,baz=1.9,slow=5.1,SNR=20						
FINES	**FINESS Array B**	**76.48**	**333**	P	P	22 40 40.0	0.0
	1.8nm,0.4s,baz=72,slow=5.0,SNR=35						
NOA	**NORSAR Array B**	**82.30**	**337**	P	P	22 41 10.1	-0.6
	0.4nm,0.6s,baz=278,slow=12,SNR=1.7						

*IDC **22** 22:32:36.9±1.9, 18°.29S×177°.99W, h513km±24km, mb3.3/5, mb1 3.6/6, mb1mx3.1/33, mbtmp4.2/6, Error ellipse: s-maj=88.1km s-min=15.3km az=149.0*
*NEIC **22** 22:32:38.7±1.2, 19°.0S±0°.2×177°.7W±0°.1, h553km±9km, mb4.0/21, Error ellipse: s-maj=25.5km s-min=9.5km az=154.0*

ISC 22 22:32:38.9±0.7, 18°.8S±0°.1×177°.49W±0°.10, h570km, n38, σ1s96/39, mb4.0/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.36**	**283**	P	**P**	**22 34 05.3**	**+0.2**
NIUE	**Niue**	**7.17**	**93**	P	**P**	**22 34 28.3**	**-1.0**
AFI	**Afiamalu**	**7.33**	**49**	P	**P**	**22 34 29.5**	**-1.5**
	3.3nm,0.3s,baz=271,slow=2.0,SNR=6.3						
AFI				S	**S**	**22 35 56.1**	**-6.6**
	0.2nm,0.3s,baz=356,slow=22,SNR=1.2						
AFI	**Afiamalu**	**7.33**	**49**	P	**P**	**22 34 30.5**	**-0.5**
SANVU	**Saraoutou**	**15.00**	**281**	P	**P**	**22 35 48.0**	**-0.1**
DZM	**Mont Dzumac**	**15.40**	**255**	P	**P**	**22 35 50.7**	**-1.3**
EIDS	**Eidsvold**	**29.80**	**252**	P	**P**	**22 37 59.5**	**-1.1**
EIDS				IAmb	IAmb	22 38 08.6	
	comp=Z,4.3nm,1.1s						
ARMA	**Armidale**	**30.26**	**242**	P	**P**	**22 38 03.4**	**-1.3**
ARMA				IAmb	IAmb	22 38 05.0	
	comp=Z,4.6nm,0.9s						
CTAO	**Charters Tower**	**34.17**	**262**	P	**P**	**22 38 37.0**	**-0.8**
TOO	**Toolangi**	**37.30**	**232**	P	**P**	**22 39 02.3**	**-1.1**
TOO				IAmb	IAmb	22 39 16.9	
	comp=Z,4.4nm,1.1s						
COEN	**Coen**	**37.99**	**271**	P	**P**	**22 39 09.2**	**-0.1**
STKA	**Stephens Creek**	**38.98**	**242**	P	**P**	**22 39 16.5**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=93,slow=12,SNR=6.4						
STKA	**Stephens Creek**	**38.98**	**242**	P	**P**	**22 39 16.8**	**-0.2**
BBOO	**Buckleboo**	**43.75**	**242**	P	**P**	**22 39 53.7**	**-1.1**
BBOO				IAmb	IAmb	22 39 55.0	
	comp=Z,7.4nm,0.9s						
WR0	**Warramunga Arr**	**45.14**	**260**	P	**P**	**22 40 04.6**	**-1.0**
WR0				IAmb	IAmb	22 40 05.8	
	comp=Z,2.5nm,0.7s						
WB0	**Warramunga Arr**	**45.30**	**261**	P	**P**	**22 40 06.0**	**-0.9**
WB0				IAmb	IAmb	22 40 06.7	
	comp=Z,4.6nm,0.7s						
WB2	**Warramunga Arr**	**45.32**	**260**	P	**P**	**22 40 05.9**	**-1.1**
WB2				IAmb	IAmb	22 40 06.9	
	comp=Z,3.1nm,0.6s						
WRA	**Warramunga Arr**	**45.33**	**260**	P	**P**	**22 40 06.3**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=97,slow=8.6,SNR=55						
WRA	**Warramunga Arr**	**45.33**	**260**	P	**P**	**22 40 06.2**	**-0.9**
AS31	**Alice Springs**	**45.39**	**255**	P	**P**	**22 40 07.0**	**-0.6**
ASAR	**Alice Springs**	**45.39**	**255**	P	**P**	**22 40 07.0**	**-0.6**
	comp=Z,6.4nm,0.7s,baz=88,slow=8.7,SNR=66						
ASAR	**Alice Springs**	**45.39**	**255**	P	**P**	**22 40 06.7**	**-0.9**
KNRA	**Kununurra**	**51.27**	**265**	P	**P**	**22 40 50.2**	**-1.0**
KNRA				IAmb	IAmb	22 40 52.4	
	comp=Z,6.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**53.74**	**261**	P	**P**	**22 41 08.6**	**-0.3**

VNDA	**Vanda**		**59.64**	**185**	P	**P**	**22 41 48.4**	**+0.2**	
OHAK	**Old Harbor**		**78.39**	**13**	P	**P**	**22 43 43.4**	**+2.7**	
GHO	**Glory Hole Cre**		**83.47**	**13**	P	**P**	**22 44 09.7**	**+2.9**	
SCM	**Sheep Creek Mo**		**83.88**	**14**	P	**P**	**22 44 11.8**	**+2.9**	
SCM					IAmb	IAmb	22 44 25.3		
	comp=Z,5.3nm,1.0s								
TX31	**Lajitas Ar. Si**		**85.74**	**57**	P	**P**	**22 44 21.9**	**+3.2**	
TX31					IAmb	IAmb	22 44 25.6		
	comp=Z,1.9nm,1.0s								
TXAR	**Lajitas Array**		**85.74**	**57**	P	**P**	**22 44 22.7**	**+4.0**	
	comp=Z,0.7nm,0.6s,baz=222,slow=5.6,SNR=6.2								
TXAR	**Lajitas Array**		**85.74**	**57**	P	**P**	**22 44 22.1**	**+3.3**	
CCB	**Clear Creek Bu**		**86.26**	**12**	P	**P**	**22 44 22.1**	**+1.9**	
IL31			**86.56**	**13**	P	**P**	**22 44 23.6**	**+2.0**	
ILAR	**Eielson Array**		**86.56**	**13**	P	**P**	**22 44 22.3**	**+0.6**	
	comp=Z,0.4nm,0.5s,baz=237,slow=4.9,SNR=6.8								
ILAR	**Eielson Array**		**86.56**	**13**	P	**P**			
CLL	**Collm**		**146.51**	**348**	*e*PKPbc	**PKiKP**	**22 51 19.0**	**+0.2**	
GERES	**GERESS Array B**		**148.69**	**346**	PKPbc	**PKiKP**	**22 51 24.5**	**+0.9**	
	comp=Z,0.2nm,0.5s,baz=29,slow=3.0,SNR=4.3								
GERES	**GERESS Array B**		**148.69**	**346**		**PKiKP**	**22 51 24.6**	**+1.1**	

IDC 22 22:45:06.3±5.9, 21°.43S×66°.42W, h0km, mb3.8/1, mb1 3.8/2, mb1mx3.5/26, mbtmp3.7/2, ML3.7/1, Error ellipse: s-maj=181.7km s-min=64.0km az=47.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**9.64**	**122**	Pn	Pn	22 47 26.4	0.0
	0.2nm,0.3s,baz=354,slow=16,SNR=1.8						
TORD	**Torodi Ar. Bea**	**75.15**	**69**	P	P	22 56 51.1	0.0
	0.8nm,0.8s,baz=263,slow=5.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**140.87**	**27**	PKhKP	PKPpre	23 04 30.2	
	2.6nm,0.6s,baz=293,slow=3.9,SNR=10						
MKAR	**Makanchi Array**	**144.19**	**38**	PKP	PKPdf	23 04 43.6	-0.6
	0.4nm,0.6s,baz=309,slow=1.9,SNR=4.5						

IDC 22 22:48:40.8±1.9, 2°.32N×124°.17E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/25, mbtmp3.4/3, Error ellipse: s-maj=212.3km s-min=26.1km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.27**	**156**	P	P	22 54 00.2	+0.2
	0.3nm,0.3s,baz=334,slow=10,SNR=18						
ASAR	**Alice Springs**	**27.51**	**160**	P	P	22 54 29.4	0.0
	0.1nm,0.3s,baz=344,slow=7.9,SNR=4.9						
MKAR	**Makanchi Array**	**57.29**	**327**	P	P	22 58 30.2	-0.3
	0.2nm,0.3s,baz=126,slow=7.7,SNR=5.7						

ATH 22 23:11:06.8, 38°.10N×20°.44E, h18km±2km, ML2.0/2, Error ellipse: s-maj=2.4km s-min=1.1km az=42.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LXRA	**Lixouri, Kepha**	**0.10**	**359**	P	Pg	23 11 10.5	+0.1
LXRA				S	Sg	23 11 13.2	+0.4
PSDA	**Pessada-Kefalo**	**0.12**	**83**	P	Pg	23 11 10.4	-0.1
PSDA				S	Sg	23 11 12.9	-0.1
KEF3	**Kipouria, Keph**	**0.13**	**325**	P	Pg	23 11 10.7	+0.1
KEF3				S	Sg	23 11 13.4	+0.1
VLS	**Valsamata**	**0.14**	**57**	P	Pb	23 11 10.7	-0.1
VLS				S	Sb	23 11 13.5	0.0
VLS				AML	AML	23 11 13.6	
	comp=N,2577μm,0.1s						
VLS				AML	AML	23 11 13.7	
	comp=E,3660μm,0.1s						
KEF4	**Livadi, Kephal**	**0.16**	**356**	P	Pb	23 11 11.1	0.0
KEF4				S	Sb	23 11 14.4	+0.4
KEF5	**Kardakata, Kep**	**0.18**	**7**	P	Pg	23 11 11.4	0.0
KEF5				S	Sg	23 11 14.6	+0.1
VLMS	**Volimes, Zakyn**	**0.28**	**142**	P	Pg	23 11 13.0	0.0
VLMS				S	Sb	23 11 17.6	-0.2
VLMS				AML	AML	23 11 18.5	
	comp=E,388μm,0.2s						
VLMS				AML	AML	23 11 19.7	
	comp=N,472μm,0.1s						
FSK	**Fiskardo**	**0.37**	**15**	P	Pg	23 11 14.3	-0.2
EVGI	**Lefkada island**	**0.55**	**18**	P	Pg	23 11 17.2	-0.5
PDO	**Prodromos**	**0.77**	**49**	P	Pb	23 11 21.4	-0.2

*IDC **22** 23:43:58.1±2.5, 28°.40N×52°.96E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/28, mbtmp3.7/7, ML3.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/31, Error ellipse: s-maj=55.7km s-min=26.7km az=159.0*
*TEH **22** 23:43:58.8, 28°.49N×53°.05E, h5km, ML3.6*
*THR **22** 23:44:00.9±0.4, 28°.32N×53°.06E, h14km±2km, ML3.5*
*OMAN **22** 23:44:04.5±1.0, 28°.36N×53°.13E, h171km±296km, mb4.3/6, ml3.7/5, Error ellipse: s-maj=30.4km s-min=12.9km az=33.0*
*DSN **22** 23:44:04.3±1.9, 28°.02N×52°.96E, h10km, ML4.0/9, Error ellipse: s-maj=27.9km s-min=7.8km az=8.0*

ISC 22 23:43:59.1±1.0, 28°.48N±0°.04×53°.01E±0°.04, h3km±6km, n68, σ1s57/79, mb3.9/10, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QIR1	**Qir**	**0.03**	**96**	*e*Pg	**Pg**	**23 43 59.6**	**-0.3**
QIR1				*e*Sg	**Sg**	**23 44 00.3**	**-0.2**
GHIR	**Ghir-Karzin**	**0.19**	**186**	*e*Pg	**Pg**	**23 44 03.9**	**+1.0**
GHIR				IAML		23 44 10.2	
	comp=E,14μm,0.5s						
GHIR	**Ghir-Karzin**	**0.19**	**186**	*e*Pg	**Pg**	**23 44 03.9**	**+1.0**
JHRM	**Jahrom**	**0.50**	**87**	*e*		23 44 24.8	
JHRM				*e*Pg	**Pg**	**23 44 08.1**	**-0.6**
LMD1	**Lamerd**	**1.14**	**173**	*e*Pg	**Pn**	**23 44 23.0**	**+1.0**
LMD1				*e*		23 44 50.7	
SHI	**Shiraz**	**1.24**	**340**	*e*Pg	**Pn**	**23 44 24.7**	**+1.2**
LAR1	**LAR**	**1.45**	**123**	*e*Pg	**Pg**	**23 44 27.9**	**+1.0**
LAR1				*e*Sg	**Sn**	**23 44 50.2**	**+4.3**
LAR1				*e*		23 45 04.5	
KLNJ	**Kolanjah**	**2.81**	**334**	*e*Pn	**Pn**	**23 44 47.0**	**+1.8**
KLNJ				*e*		23 45 36.4	
BNDS	**Bandar-Abbas**	**3.00**	**110**	*e*Pn	**Pn**	**23 44 49.1**	**+1.4**
BNDS				IAML		23 45 51.4	
	comp=N,175nm,0.5s						
BNDS	**Bandar-Abbas**	**3.00**	**110**	*e*Pn	**Pn**	**23 44 49.1**	**+1.4**
GENO	**Geno**	**3.00**	**110**	*e*Pn	**Pn**	**23 44 50.2**	**+2.5**
GENO				*e*		23 46 11.0	
IMEH	**Mehriz**	**3.22**	**25**	*e*Pn	**Pn**	**23 44 52.7**	**+1.9**
IMEH				*e*		23 45 58.3	
IRAM	**Ramesheh**	**3.36**	**351**	*e*Pn	**Pn**	**23 44 54.8**	**+2.0**
IRAM				*e*		23 46 20.6	
NGRK	**Negar Kerman**	**3.46**	**69**	*e*Pn	**Pn**	**23 44 56.1**	**+1.9**
KHGB	**Koh Gabri**	**3.57**	**57**	*e*Pn	**Pn**	**23 44 57.0**	**+1.4**
KHGB				*e*		23 46 00.5	
KRBR	**Kerman**	**3.60**	**65**	*e*Pn	**Pn**	**23 44 59.1**	**+3.0**
KRBR				*e*Sg	**Sg**	**23 45 54.2**	**-0.6**
KRBR	**Kerman**	**3.60**	**65**	*e*Pn	**Pn**	**23 44 59.1**	**+3.0**
SHME	**Shamm**	**3.69**	**130**	P	**Pn**	**23 44 58.2**	**+1.1**
SHME	**Shamm**	**3.69**	**130**	*e*Pn	**Pn**	**23 44 58.8**	**+1.7**
BANOM	**Banah**	**3.88**	**130**	*i* P	**Pn**	**23 45 01.5**	**+1.8**
	SNR=15						
BANOM				S	**Sn**	**23 45 44.0**	**-1.9**
BANOM	**Banah**	**3.88**	**130**	P	**Pn**	**23 45 01.3**	**+1.6**
	SNR=15						
BANOM				S	**Sn**	**23 45 47.5**	**+1.6**
ICHK	**Chekchek**	**3.94**	**17**	*e*Pn	**Pn**	**23 45 02.6**	**+1.9**
KHNJ	**Kahnooj**	**4.18**	**96**	*e*Pn	**Pn**	**23 45 05.3**	**+1.5**
MSFE	**Esma-Masafi**	**4.19**	**137**	P	**Pn**	**23 45 04.4**	**+0.4**
MSFE	**Esma-Masafi**	**4.19**	**137**	*e*Pn	**Pn**	**23 45 05.6**	**+1.6**
CHMN	**Cheshme madani**	**4.19**	**70**	*e*		23 45 24.4	
CHMN				*e*Pn	**Pn**	**23 45 06.0**	**+1.7**
NAZ	**Nazwa, Dubai**	**4.21**	**145**	P	**Pn**	**23 45 03.7**	**-0.5**
NAZ	**Nazwa, Dubai**	**4.21**	**145**	*e*Pn	**Pn**	**23 45 06.2**	**+2.0**
MDH	**Madha**	**4.32**	**136**	P	**Pn**	**23 45 07.1**	**+1.4**
MDH				S	**Sn**	**23 45 57.6**	**+1.0**
MDH	**Madha**	**4.32**	**136**	*e*Pn	**Pn**	**23 45 08.7**	**+3.0**
ASUD	**Al Ashush, Dub**	**4.36**	**151**	P	**Pn**	**23 45 04.8**	**-1.5**
FAQ	**Al Faqa, Dubai**	**4.38**	**148**	P	**Pn**	**23 45 07.4**	**+0.9**
FAQ	**Al Faqa, Dubai**	**4.38**	**148**	*e*Pn	**Pn**	**23 45 08.1**	**+1.6**
UOSS	**Minazif**	**4.53**	**140**	P	**Pn**	**23 45 10.0**	**+1.4**
UOSS				S	**Sn**	**23 46 01.9**	**0.0**
UOSS	**Minazif**	**4.53**	**140**	*e*Pn	**Pn**	**23 45 10.4**	**+1.7**
IPIR	**Pirpir**	**4.57**	**337**	*e*Pn	**Pn**	**23 45 10.8**	**+1.4**
HATD	**Hatta, Dubai**	**4.59**	**142**	P	**Pn**	**23 45 10.7**	**+1.3**
HATD				S	**Sn**	**23 46 03.8**	**+0.5**

ASHO	**Ashiyiah**		**4.66**	**143**	*i* P	**Pn**	**23 45 11.1**	**+0.7**	
	SNR=8.9								
ASHO	**Ashiyiah**		**4.66**	**143**	P	**Pn**	**23 45 11.4**	**+0.9**	
	SNR=8.9								
ASHO					S	**Sn**	**23 46 04.6**	**-0.5**	
ASHO	**Ashiyiah**		**4.66**	**143**	*e*Pn	**Pn**	**23 45 11.7**	**+1.2**	
ANAR	**Anarak**		**4.74**	**7**	*e*Pn	**Pn**	**23 45 13.4**	**+1.9**	
IKLH	**Kolahrood**		**4.98**	**346**	*e*Pn	**Pn**	**23 45 17.5**	**+2.5**	
ALNE	**Al Ain**		**5.05**	**150**	*e*Pn	**Pn**	**23 45 19.1**	**+3.4**	
SOHO	**SOHO**		**5.36**	**143**	*i* P	**Pn**	**23 45 19.8**	**-0.2**	
	SNR=10								
TPRV	**Parvadeh(Tabas**		**5.53**	**34**	*e*Pn	**Pn**	**23 45 23.2**	**+0.8**	
ARQ	**Araqi**		**6.02**	**148**	P	**Pn**	**23 45 30.0**	**+1.0**	
	SNR=8.7								
ARQ					S	**Sn**	**23 46 37.7**	**-0.9**	
TKDS	**Koohdasht(Taba**		**6.21**	**34**	*e*Pn	**Pn**	**23 45 32.0**	**+0.1**	
TNSJ	**Nastanj**		**6.28**	**29**	*e*Pn	**Pn**	**23 45 33.5**	**+0.8**	
BSY	**Bisya**		**6.85**	**146**	P	**Pn**	**23 45 40.9**	**+0.4**	
	SNR=11								
BSY					S	**Sn**	**23 46 57.0**	**-2.1**	
	SNR=8.7								
IANJ	**Anjilo**		**7.01**	**6**	*e*Pn	**Pn**	**23 45 45.3**	**+2.4**	
SMDO	**Samad**		**7.05**	**139**	P	**Pn**	**23 45 43.9**	**+0.5**	
	SNR=9.8								
SMDO					S	**Sn**	**23 47 03.0**	**-1.2**	
	SNR=12								
WBK	**Wadi Bani Khal**		**7.94**	**136**	P	**Pn**	**23 45 54.8**	**-0.7**	
	SNR=11								
RAYN	**Ar Rayn**		**8.36**	**236**	*i* P	**Pn**	**23 46 00.6**	**-0.8**	
	SNR=5.7								
MHTO	**MHTO**		**8.71**	**148**	P	**Pn**	**23 46 06.0**	**0.0**	
	SNR=8.6								
MHTO					S	**Sn**	**23 47 42.0**	**-2.9**	
	SNR=15								
GEYT	**Alibeck**		**10.35**	**23**	LR	LR	23 50 46.2		
	comp=N,29nm,18.3s,baz=235,slow=39								
WHFO	**Wadi Hawf**		**10.54**	**176**	P	**Pn**	**23 46 30.0**	**-1.1**	
	SNR=8.8								
BRTR	**Keskin Array B**		**19.53**	**310**	P	**P**	**23 48 28.2**	**+0.4**	
	comp=N,0.1nm,0.3s,baz=119,slow=12,SNR=2.3								
MKAR	**Makanchi Array**		**29.28**	**43**	P	**P**	**23 50 03.6**	**+1.0**	
	comp=N,0.5nm,0.8s,baz=229,slow=8.7,SNR=2.0								
ZALV	**Zalesovo Beam**		**34.43**	**33**	P	**P**	**23 50 47.5**	**-0.2**	
	comp=N,4.3nm,1.0s,baz=238,slow=8.5,SNR=7.3								
GERES	**GERESS Array B**		**36.28**	**315**	P	**P**	**23 51 03.7**	**-0.2**	
	comp=N,0.1nm,0.4s,baz=148,slow=5.8,SNR=1.6								
WTTA	**Wattenberg**		**37.13**	**312**	*e*P	**P**	**23 51 10.5**	**-0.6**	
	comp=N,3.3nm,0.9s								
SQTA	**Sankt Quirin**		**37.40**	**312**	*e*P	**P**	**23 51 12.7**	**-0.6**	
	comp=N,1.9nm,0.5s								
FINES	**FINESS Array B**		**37.52**	**339**	P	**P**	**23 51 13.4**	**-0.6**	
	comp=N,1.6nm,0.8s,baz=140,slow=12,SNR=6.9								
RETA	**Reutte**		**37.76**	**312**	*i* P	**P**	**23 51 15.3**	**-1.1**	
	comp=N,5.3nm,2.1s								
DAVA	**Damuels**		**38.29**	**311**	*e*P	**P**	**23 51 20.2**	**-0.8**	
	comp=N,3.7nm,0.5s								
NOA	**NORSAR Array B**		**42.79**	**331**	P	**P**	**23 51 57.7**	**-0.2**	
	comp=N,0.3nm,0.7s,baz=123,slow=7.9,SNR=1.6								
TORD	**Torodi Ar. Bea**		**49.97**	**263**	P	**P**	**23 52 53.6**	**-1.2**	
	comp=N,1.7nm,1.0s,baz=51,slow=7.3,SNR=7.4								
BOSA	**Boshof**		**62.68**	**207**	LR	LR	00 23 12.2		
	comp=N,45nm,18.4s,baz=58,slow=38								

*SJA **23** 00:11:34.0±0.5, 36°.65S×75°.68W, h10km±234km, ML4.0, MW3.2*
*GUC **23** 00:12:06.2±0.4, 35°.72S×73°.58W

GUC 23 00:23:13.8±0.6, 26°39S×68°17W, h5km±5km, ML2.9, 8C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AC02	**Maricunga**	**0.97**	**243**	*i* P		00 23 30.8	-1.6
AC02				*e* S		00 23 45.4	+0.4
AC02	**Maricunga**	**0.97**	**243**	↓*i* P		00 23 30.8	-1.6
AC02				*e* S		00 23 45.4	+0.4
AC02				IAML		00 23 47.6	
	comp=E,372nm,0.2s						
GO02	**Mina Guanaco**	**1.78**	**313**	↑*i* P		00 23 40.9	-4.5
GO02				*i* S		00 24 10.0	+0.3
GO02				IAML		00 24 13.8	
	comp=E,272nm,0.8s						
GO02	**Mina Guanaco**	**1.78**	**313**	↑*i* P		00 23 40.9	-4.5
GO02				*i* S		00 24 10.0	+0.3
GO02				IAML		00 24 13.8	
	comp=E,272nm,0.8s						
AC01	**Pan de Azucar**	**2.20**	**276**	↑*i* P		00 23 49.7	-1.3
AC01				*i* S		00 24 20.7	-0.8
AC01				IAML		00 24 23.3	
	comp=E,149nm,0.1s						
AC01	**Pan de Azucar**	**2.20**	**276**	↑*i* P		00 23 49.7	-1.3
AC01				*i* S		00 24 20.7	-0.8
AC01				IAML		00 24 23.3	
	comp=E,149nm,0.1s						
GO03	**Copiap**	**2.20**	**237**	↑*e* P		00 23 51.8	+0.8
GO03				*i* S		00 24 23.7	-0.8
GO03				IAML		00 24 31.5	
	comp=N,85nm,0.2s						
GO03	**Copiap**	**2.20**	**237**	↑*e* P		00 23 51.8	+0.8
GO03				*i* S		00 24 23.7	-0.8
GO03				IAML		00 24 31.5	
	comp=N,85nm,0.2s						
VCA	**Vinchina**	**2.33**	**181**	*e* P		00 23 55.4	-1.0
VCA				*e* S		00 24 22.2	+0.1
VCA				IAML		00 24 40.1	
	comp=E,80nm,0.5s						
AHML	**Horco Molle**	**2.56**	**99**	*e* P		00 23 54.4	-1.7
AHML				*e* S		00 24 25.6	-2.0
AHML	**Horco Molle**	**2.56**	**99**	*e* P		00 23 54.4	-1.7
AHML				*e* S		00 24 25.6	-2.0
PB14	**IPOC Station P**	**2.68**	**311**	*e* P		00 23 55.2	-2.7
PB14				*e* S		00 24 32.0	+1.2
PB14				IAML		00 24 33.0	
	comp=N,102nm,0.6s						
CYA	**Choya**	**2.93**	**135**	↓*i* P		00 24 03.2	+2.2
CYA				*i* S		00 24 40.1	-2.6
CYA	**Choya**	**2.93**	**135**	↓*i* P		00 24 03.2	+2.2
CYA				*i* S		00 24 40.1	-2.6
AC05	**El Transito**	**3.07**	**217**	*e* P		00 24 05.0	+2.0
AC05				*e* S		00 24 42.6	+2.4
AC05				IAML		00 24 55.4	
	comp=E,49nm,0.4s						
AC05	**El Transito**	**3.07**	**217**	*e* P		00 24 05.0	+2.0
AC05				*e* S		00 24 43.6	-3.2
AC05				IAML		00 24 55.4	
	comp=E,49nm,0.4s						
AC04	**Llanos de Chal**	**3.15**	**234**	*e* P		00 24 06.0	+1.9
AC04				*e* S		00 24 44.2	+2.1
AC04	**Llanos de Chal**	**3.15**	**234**	↑*e* P		00 24 05.7	+1.6
AC04				*i* S		00 24 49.8	+0.7
PB15	**IPOC Station P**	**3.39**	**339**	↑*e* P		00 24 06.1	-1.4
PB15				*e* S		00 24 50.3	+2.2
PB10	**IPOC Station P**	**3.59**	**322**	*e* P		00 24 09.1	-1.1
PB10				*e* S		00 24 55.5	+2.5
PB10				IAML		00 25 05.7	
	comp=E,56nm,0.3s						

MAN 23 00:25:44.1, 13°34N×121°75E, h19km, mb4.2, ML3.0, MS2.7, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.14**	**38**	*e* P		00 25 48.8	+0.4
BOAC				*e* S		00 25 53.0	+1.7
LQP	**Lukban**	**0.79**	**345**	↓*e* P		00 25 59.4	0.0
LQP				*e* S		00 26 11.9	+0.1
PGP	**Puerto Galera**	**0.79**	**282**	↓*e* P		00 25 58.7	-0.6
PGP				*e* S		00 26 08.1	-1.6
OTRP	**Odiongan**	**1.01**	**165**	*e* P		00 26 02.3	-0.7
OTRP				*e* S		00 26 18.0	+0.9
SJMP	**San Jose**	**1.07**	**215**	*e* P		00 26 02.4	-1.6
SJMP				*e* S		00 26 19.2	+0.2
LUBP	**Lubang**	**1.52**	**285**	*e* P		00 26 10.3	+0.1
LUBP				*e* S		00 26 28.6	-0.8
BUSP	**Coron**	**2.02**	**229**	*e* P		00 26 17.6	+0.5
BUSP				*e* S		00 26 42.4	+0.5
SMPP	**San Manuel, Pa**	**2.98**	**340**	*e* P		00 26 37.0	+0.5

*IDC **23** 00:35:55.9±0.6, 4°48S×153°02E, h0km, mb4.3/16, mb1 4.4/18, mb1mx4.2/45, mbtmp4.3/18, ML2.9/2, MS3.2/7, Ms1 3.2/7, ms1mx2.9/41, Error ellipse: s-maj=13.2km s-min=10.6km az=16.0*
*NEIC **23** 00:35:57.8±1.7, 4°50S±0°06×152°99E±0°04, h13km±4km, mb4.6/34, Error ellipse: s-maj=8.2km s-min=5.3km az=182.0*
*DJA **23** 00:36:02.7±1.6, 4°S±12°×15°3E±1°4, h56km±6km, M4.7/9, mb4.7/9, mB5.3/2, MLv4.7/1, Mw(mB)4.7/2*
ISC 23 00:35:57.5±0.5, 4°50S±0°06×152°98E±0°06, h10km, n78, σ1§11/83, mb4.5/34, MS3.2/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.87**	**290**		**Pb**	**00 36 14.8**	**+0.1**
RABL					**Sb**	**00 36 26.6**	**+0.1**
KRVT	**Keravat (AS076**	**0.97**	**281**	Pg	**Pb**	**00 36 16.5**	**0.0**
	3μm,0.3s,baz=198,slow=0.9,SNR=1576						
KRVT				Lg	Lg	00 36 28.8	
	1μm,0.3s,baz=29,slow=20,SNR=9.9						
MANU	**Manus Island**	**6.12**	**293**	Pn	**Pn**	**00 37 29.5**	**+1.5**
PMG	**Port Moresby**	**7.56**	**230**	Pn	**Pn**	**00 37 49.8**	**+1.9**
	2.4nm,0.3s,baz=42,slow=7.4,SNR=3.5						
PMG				Sn	**Sn**	**00 39 16.4**	**+2.6**
	1.2nm,0.3s,baz=93,slow=18,SNR=1.5						
PMG				LR	LR	00 40 30.6	
	comp=Z,91nm,20.6s,baz=62,slow=36						
PMG	**Port Moresby**	**7.56**	**230**	Pn	**Pn**	**00 37 48.6**	**+0.7**
HNR	**Honiara**	**8.47**	**126**	LR	LR	00 41 29.6	
	comp=Z,150nm,21.3s,baz=298,slow=40						
PATS	**Pohnpei**	**12.45**	**25**	Pn	**Pn**	**00 38 54.4**	**-0.5**
COEN	**Coen**	**13.49**	**225**	Pn	**Pn**	**00 39 08.1**	**-1.0**
SMPI	**Sarmi**	**14.46**	**279**	P	**P**	**00 39 27.8**	**-1.5**
CTA	**Charters Tower**	**16.83**	**202**	Pn	**P**	**00 39 54.7**	**-0.8**
	0.1nm,0.3s,baz=12,slow=11,SNR=3.8						
CTAO	**Charters Tower**	**16.83**	**202**	P	**P**	**00 39 55.5**	**0.0**
FAKI	**Fak Fak**	**20.75**	**274**	P	**P**	**00 40 38.1**	**-0.6**
DZM	**Mont Dzumac**	**21.80**	**144**	P	**P**	**00 40 50.9**	**+0.9**
	5.0nm,0.5s,baz=332,slow=18,SNR=6.6						
DZM	**Mont Dzumac**	**21.80**	**144**	P	**P**	**00 40 50.3**	**+0.3**
DZM				IAmb	IAmb	00 40 59.6	
	comp=Z,23nm,1.1s						
SIJI	**Sorong**	**21.99**	**279**	P	**P**	**00 40 52.5**	**+0.5**
	comp=Z,4.1nm,0.4s,baz=168,slow=23,SNR=1.6						
MTN	**Manton Dam**	**23.12**	**248**	P	**P**	**00 41 03.3**	**-0.7**
MTN				IAmb	IAmb	00 41 05.8	
	comp=Z,14nm,1.1s						
WB0	**Warramunga Arr**	**23.63**	**228**	P	**P**	**00 41 08.2**	**-0.9**
WB0				IAmb	IAmb	00 41 10.1	
	comp=Z,20nm,0.8s						
WR0	**Warramunga Arr**	**23.64**	**228**	P	**P**	**00 41 08.3**	**-0.9**
WR0				IAmb	IAmb	00 41 10.8	
	comp=Z,50nm,1.4s						
WRA	**Warramunga Arr**	**23.78**	**228**	P	**P**	**00 41 09.7**	**-0.9**
	comp=Z,19nm,0.7s,baz=53,slow=9.6,SNR=138						
WRA				PcP	**PcP**	**00 44 54.5**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=44,slow=2.7,SNR=2.4						
WRA				ScP	**ScP**	**00 48 33.0**	**0.0**
	comp=Z,0.6nm,0.7s,baz=54,slow=2.8,SNR=5.1						
WRA				LR	LR	00 50 31.5	
	comp=Z,84nm,20.6s,baz=90,slow=37						
WRA	**Warramunga Arr**	**23.78**	**228**	P	**P**	**00 41 08.7**	**-1.8**
LBMI	**Labuha**	**25.74**	**278**	P	**P**	**00 41 24.0**	**-4.5**
	comp=Z,2μmcomp=Z,71nm,0.5s						
ARMA	**Armidale**	**25.81**	**183**	P	**P**	**00 41 30.0**	**+0.9**
ARMA				IAmb	IAmb	00 41 43.2	
	comp=Z,11nm,1.2s						
KNRA	**Kununurra**	**26.27**	**243**	P	**P**	**00 41 33.3**	**0.0**
AS31	**Alice Springs**	**26.49**	**222**	P	**P**	**00 41 34.2**	**-1.1**
ASAR	**Alice Springs**	**26.49**	**222**	P	**P**	**00 41 35.0**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=55,slow=8.7,SNR=47						
ASAR				PcP	**PcP**	**00 44 59.1**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=66,slow=2.3,SNR=2.1						
ASAR				ScP	**ScP**	**00 48 40.6**	**0.0**
	comp=Z,0.8nm,0.9s,baz=48,slow=3.6,SNR=5.2						
ASAR	**Alice Springs**	**26.49**	**222**	P	**P**	**00 41 34.3**	**-1.1**
STKA	**Stephens Creek**	**29.26**	**200**	P	**P**	**00 42 00.7**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=14,slow=11,SNR=9.5						
STKA				LR	LR	00 54 03.3	
	comp=Z,71nm,18.6s,baz=27,slow=37						
STKA	**Stephens Creek**	**29.26**	**200**	P	**P**	**00 41 59.6**	**-0.3**
FITZ	**Fitzroy Crossi**	**29.96**	**241**	P	**P**	**00 42 05.0**	**-1.3**
	comp=Z,5.5nm,0.4s,baz=50,slow=7.1,SNR=32						
FITZ	**Fitzroy Crossi**	**29.96**	**241**	P	**P**	**00 42 04.7**	**-1.6**
FITZ				IAmb	IAmb	00 42 06.2	
	comp=Z,6.7nm,0.7s						
BBOO	**Buckleboo**	**32.31**	**207**	P	**P**	**00 42 25.9**	**-0.9**
FORT	**Forrest**	**35.14**	**219**	P	**P**	**00 42 50.8**	**-0.7**
BKZ	**Black Stump Fm**	**40.56**	**152**	P	**P**	**00 43 37.0**	**-0.3**
BKZ				IAmb	IAmb	00 43 49.6	
	comp=Z,24nm,1.4s						
TUWZ	**Tuamarina**	**41.29**	**156**	P	**P**	**00 43 43.4**	**+0.2**
RPZ	**Rata Peaks**	**42.19**	**160**	P	**P**	**00 43 51.4**	**+0.8**
	comp=Z,6.1nm,0.7s,baz=256,slow=4.2,SNR=2.4						
RPZ				LR	LR	00 58 57.4	
	comp=Z,61nm,18.9s,baz=3.5,slow=33						
RPZ	**Rata Peaks**	**42.19**	**160**	P	**P**	**00 43 51.2**	**+0.6**
MORW	**Morawa**	**42.68**	**231**	P	**P**	**00 43 53.6**	**-1.1**
MORW				IAmb	IAmb	00 44 07.5	
	comp=Z,13nm,1.0s						
NWAO	**Narrogin (SRO)**	**43.73**	**225**	P	**P**	**00 44 02.0**	**-1.1**
NJ2	**Nanjing**	**48.73**	**321**	*e* P	**P**	**00 44 44.3**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.02**	**341**	P	**P**	**00 45 07.6**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=174,slow=10,SNR=5.5						
KLR	**Kul'dur**	**56.61**	**343**	P	**P**	**00 45 40.9**	**+0.3**
	comp=Z,3.7nm,0.8s,baz=168,slow=2.4,SNR=11						
KLR				LR	LR	01 08 16.4	
	comp=Z,20nm,19.4s,baz=133,slow=34						
PEA0B	**Petropavlovsk-**	**57.53**	**3**	P	**P**	**00 45 47.6**	**+0.6**
PETK	**Petropavlovsk-**	**57.53**	**3**	P	**P**	**00 45 47.8**	**+0.8**
	comp=Z,5.7nm,0.7s,baz=160,slow=6.2,SNR=22						
PETK				LR	LR	01 05 43.3	
	comp=Z,18nm,21.8s,baz=247,slow=31						
PETK	**Petropavlovsk-**	**57.53**	**3**	P	**P**	**00 45 47.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**57.91**	**295**	P	**P**	**00 45 51.4**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=131,slow=6.3,SNR=1.4						
HHC	**Hu-ho-hao-te**	**58.91**	**324**	*e* P	**P**	**00 45 59.6**	**+2.5**
HHC				pmax	pmax		
	comp=Z,25nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,6.5s						
LZH	**Lanzhou**	**61.14**	**316**	*e* P	**P**	**00 46 13.9**	**+1.3**
LZH				pP	sP	00 46 19.8	+2.4
LZH				sP	pP	00 46 23.1	+7.0
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,4.6s						
GTA	**Gaotai**	**65.56**	**317**	*e* P	**P**	**00 46 43.8**	**+2.1**
GTA				pP	sP	00 46 47.8	+1.2
GTA				sP	pP	00 46 50.9	+5.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**66.17**	**328**	P	**P**	**00 46 46.3**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=139,slow=5.1,SNR=5.9						
SONM	**Songino Array**	**66.17**	**328**	P	**P**	**00 46 45.9**	**+0.4**
VNDA	**Vanda**	**73.12**	**178**	P	**P**	**00 47 29.1**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=335,slow=5.8,SNR=9.7						
VNDA	**Vanda**	**73.12**	**178**	P	**P**	**00 47 29.1**	**+1.4**
VNDA				IAmb	IAmb	00 47 31.2	
	comp=Z,2.3nm,0.8s						
WMQ	**Urumqi**	**75.64**	**317**	*e* P	**P**	**00 47 43.5**	**+0.4**
CNPM	**China Poot**	**77.36**	**26**	P	**P**	**00 47 52.1**	**-0.3**
IMAR	**Indian Mountai**	**80.04**	**19**	P	**P**	**00 48 06.8**	**-0.2**
MK31	**Makanchi Array**	**80.22**	**319**	P	**P**	**00 48 08.4**	**-0.1**
MKAR	**Makanchi Array**	**80.22**	**319**	P	**P**	**00 48 08.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=92,slow=7.7,SNR=12						
MAKZ	**Makanchi**	**80.43**	**319**	P	**P**	**00 48 08.8**	**-0.8**
MAKZ				IAmb	IAmb	00 48 20.4	
	comp=Z,4.9nm,1.1s						
ZALV	**Zalesovo Beam**	**81.00**	**326**	P	**P**	**00 48 11.3**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=96,slow=6.5,SNR=2.3						
ILAR	**Eielson Array**	**81.81**	**22**	P	**P**	**00 48 15.0**	**-1.5**
	comp=Z,1.0nm,0.7s,baz=246,slow=5.4,SNR=8.0						
BALM	**Baldy**	**81.98**	**26**	P	**P**	**00 48 17.3**	**-0.3**
BALM				IAmb	IAmb	00 48 32.4	
	comp=Z,6.2nm,1.1s						
BARN	**Barnard Glacie**	**82.29**	**26**	P	**P**	**00 48 20.0**	**+0.7**
CTGM	**Chitina Glacie**	**82.40**	**27**	P	**P**	**00 48 19.8**	**-0.1**
BCAR	**Beaver Creek A**	**83.06**	**25**	P	**P**	**00 48 22.9**	**-0.2**
KURK	**Kurchatov**	**83.64**	**322**	P	**P**	**00 48 26.1**	**-0.2**
KURK				IAmb	IAmb	00 48 27.3	
	comp=Z,5.8nm,1.4s						
EGAK	**Eagle**	**84.01**	**23**	P	**P**	**00 48 27.7**	**-0.2**
DAWY	**Dawson**	**84.44**	**24**	P	**P**	**00 48 30.3**	**+0.2**
DAWY				IAmb	IAmb	00 48 40.4	
	comp=Z,7.1nm,1.5s						
AAK	**Ala-Archa**	**84.59**	**313**	P	**P**	**00 48 31.9**	**+0.3**
AAK				IAmb	IAmb	00 48 32.7	
	comp=Z,1.8nm,0.6s						
QSPA	**South Pole Qui**	**85.46**	**180**	P	**P**	**00 48 36.0**	**+0.6**
QSPA				IAmb	IAmb	00 48 43.0	
	comp=Z,7.9nm,1.2s						
KK31	**Karatay Array**	**87.56**	**313**	P	**P**	**00 48 44.9**	**-1.1**
KKAR	**Karatay Array**	**87.56**	**313**	P	**P**	**00 48 44.6**	**-1.5**
BRVK	**Borovoye**	**89.18**	**323**	P	**P**	**00 48 52.4**	**-1.1**
BRVK				IAmb	IAmb	00 48 53.3	
	comp=Z,2.4nm,0.9s						
CLL	**Collm**	**122.68**	**331**	*i* PKPdf	**PKiKP**	**00 54 54.2**	**+0.4**
	comp=Z,5.0nm,1.0s						
GERES	**GERESS Array B**	**123.89**	**329**	PKP	**PKiKP**	**00 54 56.5**	**0.0**
	comp=Z,0.8nm,0.8s,baz=48,slow=2.0,SNR=8.8						
GERES	**GERESS Array B**	**123.89**	**329**		**PKPdf**	**00 54 56.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**150.38**	**289**	PKPbc	**PKPbc**	**00 55 49.8**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=79,slow=2.2,SNR=52						
TORD	**Torodi Ar. Bea**	**150.38**	**289**		**PKPbc**	**00 55 49.5**	**-0.8**
BDFB	**Brasilia**	**151.15**	**134**	PKPbc	**PKPbc**	**00 55 50.6**	**-1.7**
	comp=Z,2.3nm,0.5s,baz=152,slow=5.4,SNR=4.6						

MAN 23 00:47:50.5, 13°41N×121°81E, h28km, mb4.1, ML2.9, MS2.5, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.06**	**33**	*e* P		00 47 56.2	+0.8
BOAC				*e* S		00 48 00.9	+2.2
LQP	**Lukban**	**0.74**	**339**	*e* P		00 48 07.3	+1.9
LQP				*i* S		00 48 20.3	+4.4
PGP	**Puerto Galera**	**0.84**	**276**	↑*e* P		00 48 06.0	-0.6
PGP				*e* S		00 48 15.4	-2.2
OTRP	**Odiongan**	**1.06**	**169**	*e* P		00 48 09.8	+0.2
OTRP				*e* S		00 48 23.9	0.0
SJMP	**San Jose**	**1.16**	**216**	*e* P		00 48 09.9	-1.1
SJMP				*e* S		00 48 26.6	-0.2
LUBP	**Lubang**	**1.56**	**282**	*e* P		00 48 17.0	+0.6
LUBP				*e* S		00 48 36.2	+0.6
CGP	**Cagayan de Oro**	**5.68**	**150**	↑*i* P		00 49 19.5	+6.3
CGP				*i* S		00 49 29.0	0.0

*LDG **23** 01:01:06.4±0.1, 42°64N×2°97E, h9km, Md1.3/2, Ml1.2/2, Error ellipse: s-maj=1.6km s-min=1.0km az=89.0*
*MDD **23** 01:01:06.9±0.5, 42°66N×2°98E, h0km, mbLg1.2/3, Error ellipse: s-maj=4.3km s-min=3.1km az=79.0, PRXIMO*
MRB 23 01:01:06.7±0.3, 42°64N×2°97E, h9km±2km, ML0.7/5, Error ellipse: s-maj=1.6km s-min=1.0km az=264.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJAF	**Saint Jean de**	**0.17**	**203**	Pg	Pg	01 01 10.5	+0.3
	9.2nm,0.0s,SNR=7.9						
SJAF				Lg	Lg	01 01 13.1	
	5.8nm,0.1s,SNR=7.9						
SJAF	**Saint Jean de**	**0.17**	**203**	P	Pg	01 01 10.4	+0.2
SJAF				S	Sg	01 01 12.9	+0.2
	12nm,0.2s						
EJON	**La Jonquera**	**0.20**	**197**	Pg	Pg	01 01 11.1	+0.3
	0.7nm,0.0s,SNR=7.9						
EJON				Lg	Lg	01 01 14.0	
	4.5nm,0.1s,SNR=20						
FESP	**Espira**	**0.21**	**329**	P	Pg	01 01 11.0	0.0
FESP				S	Sg	01 01 14.4	+0.4
FILF	**Fillols**	**0.31**	**256**	Pg	Pb	01 01 14.6	+0.1
FILF				Lg	Lg	01 01 20.5	
	2.8nm,0.2s						
FILF	**Fillols**	**0.31**	**256**	P	Pb	01 01 14.6	+0.1
FILF				S	Sb	01 01 20.6	+0.9
	2.8nm,0.2s						
CPAL	**Palau Saverder**	**0.36**	**156**	Pg	Pg	01 01 13.5	-0.2
CPAL				Lg	Lg	01 01 18.4	
	12nm,0.0s						
CPAL	**Palau Saverder**	**0.36**	**156**	P	Pg	01 01 13.5	-0.2
CPAL				S	Sg	01 01 18.5	0.0
	12nm,0.0s						
CBEU	**Beuda**	**0.44**	**210**	Pg	Pg	01 01 14.9	-0.4
CBEU				Lg	Lg	01 01 21.3	
	5.0nm,0.2s						
CBEU	**Beuda**	**0.44**	**210**	P	Pg	01 01 14.9	-0.3
CBEU				S	Sg	01 01 21.3	+0.3
	5.0nm,0.2s						
CBRU	**Bruguera**	**0.68**	**239**	Pg	Pg	01 01 19.4	-0.5
CBRU				Lg	Lg	01 01 29.1	
CBRU	**Bruguera**	**0.68**	**239**	P	Pg	01 01 19.4	-0.4
CBRU				S	Sg	01 01 29.1	+0.3
CLLI	**Llivia**	**0.75**	**258**	Pg	Pg	01 01 21.0	-0.3
	0.1nm,0.1s,SNR=6.3						
CLLI				Lg	Lg	01 01 31.1	
	0.3nm,0.1s,SNR=7.9						
CLLI	**Llivia**	**0.75**	**258**	P	Pg	01 01 20.5	-0.7
CLLI				S	Sg	01 01 31.2	+0.1
CCAS	**Cassa de la Se**	**0.76**	**184**	Pg	Pg	01 01 20.7	-0.5
CCAS				Lg	Lg	01 01 31.2	
CCAS	**Cassa de la Se**	**0.76**	**184**	P	Pg	01 01 20.8	-0.5
CCAS				S	Sg	01 01 31.3	+0.2
MTLF	**Montolieu**	**0.89**	**322**	Pg	Pg	01 01 23.2	-0.7
MTLF				Lg	Lg	01 01 34.8	
	0.3nm,0.1s						
MTLF	**Montolieu**	**0.89**	**322**	*e*Pg	Pg	01 01 23.2	-0.7
MTLF				*e*Sg	Sg	01 01 34.8	-0.7
	0.6nm,0.1s						
MTLF	**Montolieu**	**0.89**	**322**	Pg	Pg	01 01 23.2	-0.7
CORI	**Orista**	**0.95**	**226**	Pg	Pg	01 01 24.2	-0.8
CORI				Lg	Lg	01 01 37.3	
CORI	**Orista**	**0.95**	**226**	P	Pg	01 01 24.3	-0.7
CORI				S	Sg	01 01 37.4	0.0
CFON	**Fontmartina**	**0.96**	**205**	Pg	Pg	01 01 24.9	-0.3
	0.2nm,0.1s,SNR=7.9						
CFON				Lg	Lg	01 01 38.1	
	1.1nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**0.96**	**205**	P	Pg	01 01 24.2	-1.0
CFON				S	Sg	01 01 37.7	0.0
	2.2nm,0.2s						
LASF	**Ste Croix**	**1.58**	**24**	Pg	Pb	01 01 35.7	-0.3
LASF				Lg	Lg	01 01 56.0	
	0.1nm,0.2s						
LASF	**Ste Croix**	**1.58**	**24**	*e*Pg	Pb	01 01 35.7	-0.3
LASF				*e*Sg	Sb	01 01 56.0	-0.1
	0.2nm,0.2s						
LASF	**Ste Croix**	**1.58**	**24**	Pg	Pb	01 01 35.7	-0.3
EPF	**Esparros**	**1.97**	**282**	*e* P	Pn	01 01 40.4	0.0
EPF	**Esparros**	**1.97**	**282**	*e*Pg	Pb	01 01 43.0	+0.2

*SOME **23** 01:37:40.1, 39°22N×71°83E, h10km*
*IDC **23** 01:37:41.3±1.1, 38°97N×72°01E, h0km, mb3.6/7, mb1 3.7/12, mb1mx3.5/46, mbtmp3.6/12, ML3.1/5, Error ellipse: s-maj=20.3km s-min=13.9km az=132.0*
*KRNET **23** 01:37:43.5±0.1, 39°23N×71°92E, h18km, mb3.7*
*ISU **23** 01:37:46.7, 39°38N×72°14E, h0km*
*NNC **23** 01:37:51.8±5.4, 39°50N×72°47E, h198km±64km, mb2.6, mpv3.4, Error ellipse: s-maj=65.8km s-min=21.7km az=8.0*
ISC 23 01:37:44.9±0.7, 39°25N±0°04×71°89E±0°03, h10km, n58, σ2§29/93, mb3.5/7, 29C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.16**	**314**	↑*i* P	**Pb**	**01 38 05.9**	**-1.2**
	baz=14						
BTK				↑*i* S	**Sb**	**01 38 21.9**	**-0.3**
	baz=14						
GAR	**Garm**	**1.25**	**259**	↑*i* P	**Pn**	**01 38 06.8**	**-1.8**
	baz=60						
GAR				↑*i* S	**Sb**	**01 38 24.2**	**-0.7**
	baz=60						
OHH	**Osh**	**1.44**	**28**	↑*i* P	**Pn**	**01 38 10.3**	**-0.9**
	baz=27						
OHH				↑*i* S	**Sn**	**01 38 30.2**	**-0.1**
	baz=27						
OHH	**Osh**	**1.44**	**28**	*e* P	**Pn**	**01 38 10.9**	**-0.3**
OHH				*e* S	**Sn**	**01 38 28.8**	**-1.5**
SFK	**Sufi-Kurgan**	**1.46**	**58**	↑*i* P	**Pn**	**01 38 10.3**	**-1.2**
	baz=57						
SFK				↑*i* S	**Sn**	**01 38 29.9**	**-0.9**
	baz=57						
FRG	**Fergana**	**1.48**	**357**	*e* P	Pn	01 38 07.9	-3.8
FRG				*e* S	**Sn**	**01 38 27.7**	**-3.5**
ANR	**Andizhan**	**1.54**	**13**	*e* P	**Pb**	**01 38 14.5**	**+0.9**
ANR				*e* S	**Sg**	**01 38 38.2**	**+3.6**
CHGR	**Chuyangaron**	**2.21**	**255**	↑*i* P	**Pn**	**01 38 23.1**	**+1.3**
	baz=56						
CHGR				↑*i* S	**Sn**	**01 38 51.6**	**+2.3**
	baz=56						
ARSB	**Arslanbob**	**2.23**	**22**	↑*i* P	**Pn**	**01 38 23.2**	**+1.1**
	baz=21						

	baz=29						
CHMS	**Chumysh**	**4.32**	**29**	P	Pn	01 38 55.3	+4.6
	SNR=29						
ULHL	**Ulahol**	**4.46**	**46**	⇑*i*P	**Pn**	**01 38 53.7**	**+1.0**
	baz=46						
ULHL				⇑*i*S	**Sn**	**01 39 44.8**	**+0.1**
	baz=46						
BOOM	**Boomskoye usch**	**4.46**	**42**	⇑*i*P	**Pn**	**01 38 53.8**	**+1.1**
	baz=42						
BOOM				⇑*i*S	**Sn**	**01 39 44.9**	**+0.2**
	baz=42						
USP	**Ospenovka**	**4.47**	**25**	⇓*e*P	**Pn**	**01 38 53.8**	**+1.1**
	baz=25						
USP				⇓*i*S	**Sn**	**01 39 45.0**	**+0.2**
	baz=25						
USP	**Ospenovka**	**4.47**	**25**	P	**Pn**	**01 38 56.9**	**+4.2**
	SNR=16						
TKM2	**Tokmak 2**	**4.61**	**36**	⇓*e*P	**Pn**	**01 38 56.2**	**+1.3**
	baz=36						
TKM2				⇓*i*S	**Sn**	**01 39 49.0**	**+0.4**
	baz=36						
TKM2	**Tokmak 2**	**4.61**	**36**	P	**Pn**	**01 38 59.0**	**+4.1**
	SNR=11						
TKM2	**Tokmak 2**	**4.61**	**36**	⇑P	**Pn**	**01 38 57.5**	**+2.7**
	3.6nm,0.4s						
TKM2				⇓S	**Sn**	**01 39 45.2**	**-3.3**
	9.2nm,0.6s						
KST	**Kastek**	**4.88**	**38**	*e*P	**Pb**	**01 39 10.2**	**-0.3**
	11nm,0.3s						
KST				*e*S	**Sb**	**01 40 14.2**	**+5.0**
	27nm,0.8s						
DGS	**Degeres**	**4.94**	**35**	*e*P	**Pb**	**01 39 10.5**	**-1.1**
	18nm,0.3s						
DGS				*e*S	**Sb**	**01 40 15.0**	**+3.9**
	24nm,0.5s						
MTBS	**Maitube**	**5.17**	**40**	*e*P	**Pb**	**01 39 15.5**	**0.0**
	7.7nm,0.2s						
MTBS				*e*S	**Sb**	**01 40 23.8**	**+6.2**
	9.9nm,0.5s						
IZV	**Izvestkoviy**	**5.19**	**42**	*e*P	**Pb**	**01 39 18.6**	**+2.6**
	11nm,0.6s						
IZV				*e*S	**Sg**	**01 40 28.7**	**-3.0**
	29nm,0.8s						
KRBS	**Karabastau**	**5.27**	**31**	*e*P	**Pb**	**01 39 19.8**	**+2.7**
	3.9nm,0.5s						
KRBS				*e*S	**Sg**	**01 40 31.1**	**-3.0**
	12nm,0.6s						
TNSS	**Tian-Shan**	**5.37**	**44**	*e*P	**Pb**	**01 39 22.1**	**+3.0**
	9.9nm,0.4s						
TNSS				*e*S	**Sg**	**01 40 34.8**	**-2.6**
	14nm,0.7s						
MDOK	**Medeo**	**5.51**	**43**	*e*P	**Pb**	**01 39 23.9**	**+2.6**
	8.2nm,0.4s						
MDOK				*e*S	**Sg**	**01 40 38.0**	**-3.8**
	15nm,1.2s						
KOTS	**Kotyrbulak**	**5.59**	**43**	*e*P	**Pb**	**01 39 24.6**	**+1.8**
	28nm,0.6s						
KOTS				*e*S	**Sg**	**01 40 39.4**	**-5.1**
	87nm,0.6s						
KUU	**Kurty**	**5.71**	**34**	*e*P	**Pb**	**01 39 27.1**	**+2.4**
	5.1nm,0.5s						
KUU				*e*S	**Sg**	**01 40 43.5**	**-4.7**
	17nm,0.6s						
KTBS	**Karatobe**	**5.73**	**37**	*e*P	**Pb**	**01 39 27.3**	**+2.4**
	3.1nm,0.5s						
KTBS				*e*S	**Sg**	**01 40 43.4**	**-5.3**
	31nm,0.6s						
MKAR	**Makanchi Array**	**10.71**	**42**	Pn	**Pn**	**01 40 21.4**	**+3.2**
	0.1nm,0.3s,baz=221,slow=14,SNR=3.0						
KURBB	**Kurchatov Arra**	**12.30**	**20**	Pn	**Pn**	**01 40 40.2**	**+0.2**
	0.1nm,0.3s,baz=216,slow=12,SNR=5.5						
KURBB				Lg	Lg	01 44 17.1	
	0.0nm,0.3s,baz=208,slow=29,SNR=4.7						
AB31	**Akbulak array**	**13.15**	**323**	P	**Pn**	**01 40 51.6**	**-0.1**
	1.1nm,0.5s,baz=139,slow=11,SNR=27						
AB31				⇓S	**Sn**	**01 43 18.8**	**+1.0**
	1.1nm,0.5s,baz=138,slow=24,SNR=5.4						
AKTO	**Aktyubinsk**	**14.87**	**323**	Pn	**Pn**	**01 41 15.2**	**+0.1**
	0.1nm,0.3s,baz=273,slow=23,SNR=1.6						
AKTO				Sn	**Sn**	**01 43 57.1**	**-2.6**
	0.1nm,0.3s,baz=210,slow=24,SNR=1.9						
AKTO	**Aktyubinsk**	**14.87**	**323**	⇑P	**Pn**	**01 41 14.7**	**-0.4**
	3.5nm,1.1s						
ZALV	**Zalesovo Beam**	**17.13**	**27**	P	**P**	**01 41 46.2**	**+0.2**
	0.3nm,0.3s,baz=217,slow=12,SNR=10.0						
FINES	**FINESS Array B**	**35.64**	**324**	P	**P**	**01 44 42.8**	**+0.1**
	0.7nm,0.8s,baz=112,slow=13,SNR=4.2						
ARCES	**ARCESS Array B**	**38.90**	**336**	P	**P**	**01 45 10.3**	**+0.1**
	0.8nm,0.7s,baz=110,slow=7.8,SNR=1.0						
NOA	**NORSAR Array B**	**42.65**	**321**	P	**P**	**01 45 40.3**	**-1.0**
	0.7nm,0.9s,baz=86,slow=6.2,SNR=1.8						
TORD	**Torodi Ar. Bea**	**66.51**	**268**	P	**P**	**01 48 33.1**	**-2.0**
	0.2nm,0.4s,baz=47,slow=5.8,SNR=7.8						
ILAR	**Eielson Array**	**71.94**	**16**	P	**P**	**01 49 07.3**	**-0.7**
	0.3nm,0.7s,baz=320,slow=3.0,SNR=4.6						
YKA	**Yellowknife Ar**	**78.47**	**3**	P	**P**	**01 49 44.9**	**-0.7**
	0.7nm,0.7s,baz=347,slow=5.3,SNR=1.8						
WRA	**Warramunga Arr**	**82.86**	**123**	P	**P**	**01 50 06.8**	**-3.0**
	0.1nm,0.5s,baz=324,slow=4.9,SNR=5.7						

*NEIC **23** 01:57:47.2±1.0, 36.°69S±0.°05×177.°19E±0.°10, h10km±5km, Error ellipse: s-maj=13.4km s-min=2.6km az=56.0*
*WEL **23** 01:57:49.2±0.6, 37.°5S×17.°7E±.°, h12km, M4.3/37, ML4.5/35, MLv4.3/37, Error ellipse: s-maj=0.0km s-min=0.0km az=34.4*
*GCMT **23** 01:57:52.0±0.4, 36.°76S±0.°02×177.°20E±0.°02, h17km±1km, MW4.8/79, Moment Tensor Solution. s18,c20; s79,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.89±.13; $M_{\theta\theta}$-0.90±.08; $M_{\phi\phi}$ 1.78±.11; $M_{r\theta}$ 0.30±.23; $M_{\theta\phi}$ 1.24±.07; $M_{\phi r}$-0.31±.24; Best double couple: $M_0$1.93900×10^{16} NP1:ϕ_s243.00000°, δ67.00000°, λ-19.00000°. NP2: ϕ_s341.00000°, δ72.00000°, λ-156.00000°. Principal axes: T 2.2760, Plg3.0000°, Azm111.0000°; N -0.6770, Plg61.0000°, Azm15.0000°; P -1.6020, Plg29.0000°, Azm203.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **23** 01:57:54.1±1.0, 37.°19S×176.°41E, h0km, mb3.9/8, mb1 4.1/9, mb1mx4.0/41, mbtmp3.9/9, ML3.3/1, MS4.0/20, Ms1 4.0/20, ms1mx3.8/34 Error ellipse: s-maj=35.2km s-min=15.3km az=50.0*

ISC 23 01:57:48.0±1.0, 36.°70S±0.°04×177.°18E±0.°03, h8km±6km, n164, σ1§69/143, mb4.0/10, MS3.9/20, 1D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSRZ	**White Island S**	**0.82**	**180**	P	**Pn**	**01 58 05.4**	**-0.4**
WSRZ				S	**Sn**	**01 58 18.4**	**+0.3**
WIZ	**White Island**	**0.83**	**179**	P	**Pn**	**01 58 04.8**	**-1.1**
WIZ				S	**Sb**	**01 58 16.4**	**+0.6**
MYRZ	**Mayor Island**	**0.95**	**232**	P	**Pn**	**01 58 06.7**	**-0.9**
MYRZ				S	**Sb**	**01 58 19.4**	**0.0**
HAZ	**Te Kaha**	**1.16**	**156**	P	**Pn**	**01 58 09.5**	**-1.0**
HAZ				S	**Sn**	**01 58 26.1**	**-0.5**
WHRZ	**Whale Island**	**1.17**	**188**	P	**Pn**	**01 58 11.9**	**+1.2**
KUZ	**Kuaotunu**	**1.17**	**267**	P	**Pg**	**01 58 09.0**	**-1.4**
KUZ				S	**Sg**	**01 58 23.9**	**-1.7**
OPRZ	**Ohinepanea**	**1.25**	**203**	P	**Pn**	**01 58 10.9**	**-0.8**
MXZ	**Matakaoa Point**	**1.25**	**134**	P	**Pn**	**01 58 10.8**	**-1.0**
MXZ				S	**Sn**	**01 58 27.1**	**-1.6**
MXZ	**Matakaoa Point**	**1.25**	**134**	Pn	**Pn**	**01 58 10.6**	**-1.1**
TGRZ	**Tauranga**	**1.26**	**215**	P	**Pn**	**01 58 11.2**	**-0.7**
RUGZ	**Raukumara Rang**	**1.33**	**163**	P	**Pg**	**01 58 12.6**	**-0.9**
MARZ	**Manawahe**	**1.34**	**197**	P	**Pb**	**01 58 12.6**	**-0.9**
LIRZ	**Lichensteins R**	**1.45**	**208**	P	**Pb**	**01 58 14.9**	**-0.9**
EDRZ	**Edgecumbe**	**1.45**	**194**	P	**Pg**	**01 58 14.8**	**-1.0**
GRZ	**Great Barrier**	**1.46**	**287**	P	**Pb**	**01 58 14.1**	**-1.2**
WMGZ	**Waiomatatini S**	**1.49**	**139**	P	**Pg**	**01 58 16.3**	**-0.3**
KMRZ	**Kaimai**	**1.51**	**220**	P	**Pb**	**01 58 15.6**	**-0.7**
MKRZ	**Makatiti**	**1.54**	**201**	P	**Pg**	**01 58 17.3**	**-0.3**
OMRZ	**Omania**	**1.54**	**204**	P	**Pg**	**01 58 16.8**	**-0.8**
URZ	**Urewera**	**1.56**	**182**	Pn	**Pb**	**01 58 16.2**	**-0.9**
	81nm,0.3s,baz=343,slow=2.0,SNR=67						
URZ				Sn	**Sn**	**01 58 35.8**	**-0.5**
	106nm,0.3s,baz=351,slow=17,SNR=5.6						
URZ	**Urewera**	**1.56**	**182**	P	**Pb**	**01 58 15.6**	**-1.4**
URZ	**Urewera**	**1.56**	**182**	Pn	**Pb**	**01 58 15.7**	**-1.4**
TWGZ	**Tauwhareparae**	**1.61**	**157**	P	**Pg**	**01 58 19.2**	**+0.4**
PUZ	**Puketiti**	**1.62**	**148**	P	**Pg**	**01 58 18.6**	**-0.5**
TARZ	**Mount Tarawera**	**1.62**	**199**	P	**Pg**	**01 58 20.2**	**+1.0**
WIAZ	**Waiheke Island**	**1.64**	**266**	P	**Pb**	**01 58 17.7**	**-0.8**
MWZ	**Matawai**	**1.66**	**170**	P	**Pn**	**01 58 16.8**	**-0.6**
TOZ	**Tahuroa Road**	**1.69**	**232**	P	**Pn**	**01 58 17.6**	**-0.1**
MUGZ	**Murupara**	**1.80**	**190**	P	**Pg**	**01 58 21.5**	**-1.2**
RAGZ	**Rawiri**	**1.80**	**174**	P	**Pb**	**01 58 19.7**	**-1.6**
TKGZ	**Te Karaka**	**1.82**	**163**	P	**Pg**	**01 58 22.4**	**-0.5**
ETAZ	**East Tamaki Re**	**1.82**	**261**	P	**Pn**	**01 58 19.8**	**+0.2**
MBAZ	**Motutapu North**	**1.83**	**267**	P	**Pb**	**01 58 20.9**	**-0.9**
ABAZ	**Army Bay**	**1.89**	**272**	P	**Pb**	**01 58 20.9**	**-1.7**
RTZ	**Ruatahuna**	**1.92**	**185**	P	**Pb**	**01 58 22.6**	**-0.7**
EPAZ	**Eden Park BICE**	**1.96**	**264**	P	**Pn**	**01 58 21.8**	**+0.3**
CNGZ	**Carnagh Statio**	**1.96**	**156**	P	**Pg**	**01 58 23.8**	**-1.8**
HBAZ	**Herne Bay Bore**	**1.97**	**265**	P	**Pb**	**01 58 22.4**	**-1.7**
RIGZ	**Rimuhau**	**2.06**	**167**	P	**Pb**	**01 58 24.9**	**-0.7**
AWAZ	**Awhitu Peninsu**	**2.06**	**259**	P	**Pn**	**01 58 23.3**	**+0.4**
SNGZ	**Shannon Statio**	**2.08**	**176**	P	**Pb**	**01 58 24.6**	**-1.4**
TLZ	**Tolley Road**	**2.08**	**218**	P	**Pn**	**01 58 23.3**	**0.0**
KUTZ	**Kaahu Road**	**2.08**	**211**	P	**Pn**	**01 58 23.8**	**+0.6**
RVAZ	**Riverhead Bore**	**2.09**	**267**	P	**Pn**	**01 58 23.4**	**+0.2**
WTAZ	**Waiatarua**	**2.10**	**263**	P	**Pn**	**01 58 23.4**	**0.0**
MTHZ	**Maungataniwha**	**2.17**	**187**	P	**Pb**	**01 58 25.2**	**-2.2**
MRHZ	**Matea Rd**	**2.21**	**196**	P	**Pg**	**01 58 28.5**	**-2.0**
RAHZ	**Arahi**	**2.21**	**182**	P	**Pg**	**01 58 28.4**	**-2.1**
PRGZ	**Paritu Road**	**2.29**	**166**	P	**Pb**	**01 58 29.2**	**-0.4**
KNZ	**Kokohu**	**2.35**	**171**	P	**Pb**	**01 58 29.2**	**-1.4**
WHHZ	**Waihua**	**2.37**	**179**	P	**Pb**	**01 58 30.3**	**-0.7**
WCZ	**Waipu Caves**	**2.41**	**288**	P	**Pn**	**01 58 27.3**	**-0.3**
NMHZ	**Naumai**	**2.41**	**187**	P	**Pb**	**01 58 31.3**	**-0.4**
MHGZ	**Mahia Peninsul**	**2.52**	**167**	P	**Pb**	**01 58 33.1**	**-0.3**
BKZ	**Black Stump Fm**	**2.52**	**192**	P	**Pb**	**01 58 31.2**	**-2.3**
BKZ	**Black Stump Fm**	**2.52**	**192**	Pn	**Pn**	**01 58 28.8**	**-0.5**
ARHZ	**Aropaoanui**	**2.56**	**183**	P	**Pb**	**01 58 32.5**	**-1.7**
HIZ	**Hauiti**	**2.58**	**225**	P	**Pb**	**01 58 32.5**	**-0.9**
HIZ	**Gruiti**	**2.58**	**225**		**Pn**	**01 58 29.5**	**-0.6**
TMVZ	**Te Maari**	**2.68**	**205**	P	**Pb**	**01 58 35.7**	**-0.6**
KRVZ	**Karewarewa**	**2.68**	**206**	P	**Pb**	**01 58 34.9**	**-1.4**
ETVZ	**East Tongariro**	**2.69**	**205**	P	**Pb**	**01 58 35.7**	**-0.8**
WTVZ	**West Tongariro**	**2.72**	**207**	P	**Pb**	**01 58 33.8**	**-3.2**
TWVZ	**Taurewa**	**2.74**	**210**	P	**Pn**	**01 58 33.2**	**+0.9**
MCHZ	**McNeill Hill**	**2.77**	**188**	P	**Pb**	**01 58 36.0**	**-1.7**
KWHZ	**Kaweka Forest**	**2.79**	**192**	P	**Pb**	**01 58 36.1**	**-1.9**
MOVZ	**Moawhango**	**2.93**	**202**	P	**Pb**	**01 58 37.2**	**-3.3**
KRHZ	**Kereru**	**3.01**	**192**	P	**Pb**	**01 58 38.1**	**-3.7**
VRZ	**Vera Road**	**3.08**	**218**	P	**Pn**	**01 58 38.6**	**+1.6**
KAHZ	**Kahuranaki**	**3.10**	**184**	P	**Pn**	**01 58 39.1**	**+1.8**
OUZ	**Omahuta**	**3.26**	**296**	P	**Pn**	**01 58 39.1**	**-0.2**
OUZ	**Omahuta**	**3.26**	**296**	Pn	**Pn**	**01 58 38.4**	**-0.9**
PNHZ	**Pukenui**	**3.30**	**193**	P	**Pn**	**01 58 41.5**	**+1.5**
PXZ	**Pawanui**	**3.34**	**184**	P	**Pn**	**01 58 40.9**	**+0.5**
TSZ	**Takapari Road**	**3.49**	**196**	P	**Pn**	**01 58 44.0**	**+1.4**
NEZ	**North Egmont**	**3.54**	**223**	P	**Pn**	**01 58 45.7**	**+2.4**
PKE	**Pukeiti**	**3.54**	**224**	P	**Pn**	**01 58 45.4**	**+2.1**
PREZ	**Palmer Road**	**3.56**	**221**	P	**Pn**	**01 58 46.4**	**+3.0**
PRHZ	**Porangahau**	**3.59**	**187**	P	**Pn**	**01 58 45.0**	**+1.1**
KHEZ	**Kahui Hut**	**3.60**	**223**	P	**Pn**	**01 58 46.6**	**+2.4**
NBEZ	**Newall Road No**	**3.66**	**225**	P	**Pb**	**01 58 48.8**	**-4.1**
DVHZ	**Dannevirke**	**3.68**	**192**	P	**Pn**	**01 58 46.3**	**+1.1**
ANWZ	**Angora Road**	**3.79**	**188**	P	**Pb**	**01 58 50.6**	**-4.6**
PRWZ	**Pori Road**	**3.96**	**193**	P	**Pn**	**01 58 49.4**	**+0.3**
BFZ	**Birch Farm**	**4.04**	**190**	P	**Pn**	**01 58 50.5**	**+0.4**
BFZ	**Birch Farm**	**4.04**	**190**		**Pn**	**01 58 48.9**	**-1.2**
MRZ	**Mangatainoka R**	**4.15**	**197**	P	**Pn**	**01 58 52.6**	**+1.0**
HOWZ	**Holdsworth Sta**	**4.39**	**197**	P	**Pn**	**01 58 55.0**	**+0.1**
OGWZ	**Otaki Gorge**	**4.40**	**200**	P	**Pn**	**01 58 56.0**	**+1.0**
TMWZ	**Te Maipa**	**4.51**	**192**	P	**Pn**	**01 58 57.2**	**+0.6**
KIW	**Kapiti Island**	**4.52**	**202**	P	**Pn**	**01 58 58.1**	**+1.5**
CAW	**Cannon Point**	**4.70**	**200**	P	**Pn**	**01 59 00.0**	**+0.8**
DUNZ	**Dunville Isla**	**4.80**	**211**	P	**Pn**	**01 59 04.9**	**+4.0**
TRWZ	**Traveller**	**4.83**	**193**	P	**Pn**	**01 59 00.6**	**-0.4**
SNZO	**South Karori**	**4.99**	**202**		**Pn**	**01 59 02.1**	**-1.0**
BHW	**Baring Head**	**5.03**	**200**	P	**Pn**	**01 59 03.9**	**+0.2**
BHW	**Baring Head**	**5.03**	**200**		**Pn**	**01 59 02.8**	**-1.0**
TCW	**Tory Channel**	**5.04**	**206**	P	**Pn**	**01 59 06.4**	**+2.6**
PLWZ	**Palliser**	**5.09**	**196**	P	**Pn**	**01 59 03.5**	**-1.0**
PLWZ	**Palliser**	**5.09**	**196**	Pn	**Pn**	**01 59 03.2**	**-1.3**
TUWZ	**Tuamarina**	**5.35**	**207**		**Pn**	**01 59 06.9**	**-1.2**
NNZ	**Nelson**	**5.39**	**212**	P	**Pn**	**01 59 11.5**	**+2.8**
NNZ	**Nelson**	**5.39**	**212**		**Pn**	**01 59 08.1**	**-0.6**
QRZ	**Quartz Range**	**5.49**	**220**	P	**Pn**	**01 59 11.3**	**+1.2**
QRZ	**Quartz Range**	**5.49**	**220**	Pn	**Pn**	**01 59 08.9**	**-1.1**
CMWZ	**Cape Campbell**	**5.54**	**204**	Pn	**Pn**	**01 59 09.6**	**-1.2**
BSWZ	**Blackbirch Sta**	**5.63**	**206**		**Pn**	**01 59 11.3**	**-0.6**
THZ	**Tophouse**	**6.04**	**212**	P	**Pn**	**01 59 21.2**	**+3.5**
THZ	**Tophouse**	**6.04**	**212**	Pn	**Pn**	**01 59 17.2**	**-0.5**
KHZ	**Kahutara**	**6.36**	**205**	P	**Pn**	**01 59 23.2**	**+1.2**
KHZ	**Kahutara**	**6.36**	**205**	Pn	**Pn**	**01 59 20.1**	**-0.8**
GVZ	**Grets Valley S**	**7.02**	**206**	P	**Pn**	**01 59 33.8**	**+2.7**
LTZ	**Lake Taylor**	**7.15**	**210**	P	**Pn**	01 59 37.2	+4.3
LTZ	**Lake Taylor**	**7.15**	**210**	Pn	**Pn**	**01 59 32.1**	**-0.8**
INZ	**Inchbonnie**	**7.46**	**215**	P	**Pn**	**01 59 39.4**	**+2.3**
OXZ	**Oxford**	**7.70**	**209**	P	**Pn**	**01 59 44.0**	**+3.6**
OXZ	**Oxford**	**7.70**	**209**		**Pn**	**01 59 39.8**	**-0.6**
RPZ	**Rata Peaks**	**8.43**	**212**	Pn	**Pn**	**01 59 48.7**	**-1.6**
	0.5nm,0.3s,baz=54,slow=17,SNR=2.6						
RPZ				LR	LR	02 03 33.6	
	comp=Z,1μm,20.1s,baz=26,slow=44						
DZM	**Mont Dzumac**	**17.30**	**324**	*e*LR	LR	02 05 53.5	
	comp=Z,759nm,26.4s						
DZM	**Mont Dzumac**	**17.30**	**324**	LR	LR	02 07 15.1	
	comp=Z,1μm,18.1s,baz=93,slow=32						
RAR	**Rarotonga**	**25.30**	**59**	LR	LR	02 13 05.6	
	comp=Z,124nm,19.5s,baz=221,slow=35						
STKA	**Stephens Creek**	**29.68**	**269**	P	**P**	**02 03 57.3**	**+3.0**
	1.7nm,1.0s,baz=30,slow=11,SNR=1.9						
STKA				LR	LR	02 14 30.5	
	comp=Z,315nm,20.5s,baz=95,slow=34						
HNR	**Honiara**	**31.32**	**326**	LR	LR	02 15 02.5	
	comp=Z,158nm,18.0s,baz=104,slow=33						
TBI	**Tubuai**	**31.63**	**75**	*e*LR	LR	02 12 25.2	
	comp=Z,307nm,23.5s,baz=228						
TBI	**Tubuai**	**31.63**	**75**	*e*T	T	02 37 09.2	
	33nm,0.3s						
PAE	**Paea**	**34.88**	**66**	*e*T	T	02 41 09.5	
	2.5nm,0.3s						
PPT2	**Papeete2**	**34.93**	**66**	*e*LR	LR	02 14 03.3	
	comp=Z,310nm,25.8s						
PPT2	**Papeete2**	**34.93**	**66**	*e*T	T	02 41 13.8	
	9.6nm,0.4s						
PPT	**Papeete**	**34.95**	**66**	LR	LR	02 15 35.4	
	comp=Z,147nm,20.6s,baz=192,slow=30						
MEH	**Mehetia**	**35.87**	**68**	*e*T	T	02 42 25.0	
	13nm,0.3s						
PMOR	**Pomariorio Ree**	**37.83**	**64**	*e*T	T	02 44 50.4	
	8.2nm,0.3s						
VAH	**Vaihoa**	**37.87**	**65**	*e*T	T	02 44 52.3	
	14nm,0.2s						
PMG	**Port Moresby**	**38.44**	**307**	LR	LR	02 19 23.9	
	comp=Z,154nm,19.2s,baz=144,slow=34						
AS31	**Alice Springs**	**39.28**	**277**	P	**P**	**02 05 16.0**	**-1.4**
AS31				IAmb	IAmb	02 05 29.3	
	comp=Z,1.5nm,0.6s						
ASAR	**Alice Springs**	**39.28**	**277**	P	**P**	**02 05 18.9**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=114,slow=7.4,SNR=7.7						
ASAR				LR	LR	02 22 10.0	
	comp=Z,282nm,18.6s,baz=126,slow=38						
ASAR	**Alice Springs**	**39.28**	**277**	P	**P**	**02 05 16.3**	**-1.1**
KRVT	**Keravat (AS076**	**39.66**	**318**	LR	LR	02 19 30.3	
	comp=Z,127nm,19.1s,baz=153,slow=33						
WRA	**Warramunga Arr**	**40.87**	**282**	P	**P**	**02 05 31.9**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=124,slow=7.8,SNR=10						
WRA				PcP	PcP	02 07 38.8	+7.5
	comp=Z,0.9nm,1.1s,baz=118,slow=3.6,SNR=3.3						
WRA				LR	LR	02 22 54.6	
	comp=Z,252nm,18.6s,baz=130,slow=37						
WRA	**Warramunga Arr**	**40.87**	**282**	P	**P**	**02 05 31.9**	**+1.3**
FORT	**Forrest**	**40.91**	**264**	P	**P**	**02 05 29.2**	**-1.5**
FORT				IAmb	IAmb	02 05 40.3	
	comp=Z,20nm,0.8s						
VNDA	**Vanda**	**41.46**	**185**	P	**P**	**02 05 38.2**	**+3.5**
	comp=Z,0.2nm,0.6s,baz=27,slow=4.5,SNR=1.5						
JAY	**Jayapura**	**47.81**	**307**	LR	LR	02 25 37.8	
	comp=Z,75nm,20.1s,baz=120,slow=35						
FITZ	**Fitzroy Crossi**	**48.76**	**278**	P	**P**	**02 06 35.8**	**+2.4**
	comp=Z,2.6nm,0.8s,baz=144,slow=9.7,SNR=2.9						
FITZ				LR	LR	02 27 00.5	
	comp=Z,160nm,19.1s,baz=120,slow=36						
FITZ	**Fitzroy Crossi**	**48.76**	**278**	P	**P**	**02 06 33.1**	**-0.4**
QSPA	**South Pole Qui**	**53.42**	**180**	P	**P**	**02 07 07.0**	**-1.1**
SOEI	**Soe**	**54.69**	**286**	P	**P**	**02 07 16.9**	**-1.0**
BATI	**Baumata**	**54.88**	**285**	LR	LR	02 32 07.3	
	comp=Z,542nm,18.6s,baz=206,slow=38						
GUMO	**Guam**	**58.56**	**322**	LR	LR	02 29 22.9	
	comp=Z,52nm,18.7s,baz=82,slow=32						
BELA	**Belgrano 2**	**64.08**	**173**	P	**P**	**02 08 20.3**	**-1.5**
MAW	**Mawson**	**64.99**	**203**	LR	LR	02 36 51.9	
	comp=Z,160nm,18.5s,baz=66,slow=36						
SYO	**Syowa Base**	**70.05**	**195**	⇓*e*P	P	02 09 05.3	+5.5
SNAA	**Sanae**	**71.93**	**180**	P	P	02 09 19.1	+7.8
SNAA	**Sanae**	**71.93**	**180**	P	**P**	**02 09 12.2**	**+0.9**
VNA3	**Neumayer Olymp**	**72.25**	**178**	P	P	02 09 21.2	+8.0
VNA2	**Neumayer--Watz**	**72.63**	**178**	P	P	02 09 23.9	+8.5
PLCA	**Paso Flores**	**81.07**	**135**	P	P	02 10 12.4	+8.7
	comp=Z,1.5nm,0.7s,baz=207,slow=4.7,SNR=4.6						
PLCA				LR	LR	02 37 52.9	
	comp=Z,74nm,19.0s,baz=231,slow=30						
MAJO	**Matsushiro**	**81.35**	**329**	P	**P**	**02 10 02.8**	**-2.1**
KSRS	**Korea Array**	**86.72**	**323**	P	P	02 10 40.9	+8.7
	comp=Z,2.3nm,0.9s,baz=136,slow=5.9,SNR=6.2						
KSRS				LR	LR	02 46 15.4	
	comp=Z,14nm,19.6s,baz=180,slow=33						
CMAR	**Chiang Mai Arr**	**91.81**	**292**	P	P	02 11 03.5	+6.8
	comp=Z,1.5nm,0.5s,baz=152,slow=4.1,SNR=13						
CMAR				LR	LR	02 54 28.4	
	comp=Z,59nm,19.4s,baz=188,slow=37						
CPUP	**Villa Florida**	**98.99**	**132**	LR	LR	02 50 04.8	
	comp=Z,157nm,18.3s,baz=229,slow=32						
LPAZ	**La Paz**	**99.01**	**118**	LR	LR	02 45 55.9	
	comp=Z,48nm,22.0s,baz=247,slow=29						
FINES	**FINESS Array B**	**149.31**	**333**	PKPbc	**PKPab**	**02 17 41.4**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=57,slow=5.1,SNR=5.9						
BRTR	**Keskin Array B**	**151.31**	**287**	PKPbc	**PKPab**	**02 17 47.6**	**-2.7**
	comp=Z,0.8nm,1.0s,baz=96,slow=3.9,SNR=1.9						
BRTR				PKPab	**sPKPab**	**02 17 56.4**	**+3.3**
	comp=Z,0.8nm,0.8s,baz=108,slow=3.6,SNR=5.0						
TORD	**Torodi Ar. Bea**	**156.20**	**191**	PKPab	**PKPab**	**02 18 17.6**	**+6.4**
	comp=Z,1.6nm,1.0s,baz=168,slow=3.8,SNR=5.9						

*IDC **23** 02:08:47.5±1.5, 5.°13S×129.°97E, h0km, mb3.9/2, mb1 3.8/6, mb1mx3.4/54, mbtmp3.6/6, ML3.2/4, Error ellipse: s-maj=63.6km s-min=22.5km az=82.0*

ISC 23 02:08:50.7±0.9, 5.°21S±0.°06×130.°5E±0.°2, h35km, n6, σ4§70/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.38**	**10**	P	**Pn**	**02 09 56.5**	**+1.8**
	2.2nm,0.3s,baz=241,slow=22,SNR=23						
SIJI				Sn	**Sn**	**02 10 38.7**	**-5.9**
	11nm,0.3s,baz=249,slow=23,SNR=23						
FITZ	**Fitzroy Crossi**	**13.66**	**200**	Pn	**Pn**	**02 12 02.9**	**+0.8**
	0.0nm,0.3s,baz=0.0,slow=15,SNR=1.7						
FITZ				S

	58nm,0.2s							
UZB				Lg		Lg	02 35 56.7	
	133nm,0.3s							
SATY	**Saty**	**2.05**	**301**	*e*P		**Pg**	**02 35 37.1**	**+0.9**
	100nm,0.3s							
SATY				*e*S		**Sg**	**02 36 07.4**	**+4.7**
	141nm,0.2s							
SATY	**Saty**	**2.05**	**301**	Pg		**Pg**	**02 35 37.1**	**+0.9**
	100nm,0.3s							
SATY				Lg		Lg	02 36 07.4	
	141nm,0.2s							
ZHN	**Zhinishke**	**2.08**	**303**	*e*P		**Pg**	**02 35 37.6**	**+0.7**
	45nm,0.3s							
ZHN				*e*S		**Sg**	**02 36 07.8**	**+3.9**
	63nm,0.2s							
ZHN	**Zhinishke**	**2.08**	**303**	Pg		**Pg**	**02 35 37.6**	**+0.7**
	45nm,0.3s							
ZHN				Lg		Lg	02 36 07.8	
	63nm,0.2s							
KPKS	**Kokpek**	**2.12**	**313**	*e*P		**Pg**	**02 35 37.3**	**-0.2**
	120nm,0.4s							
KPKS				*e*S		**Sg**	**02 36 07.3**	**+2.4**
	824nm,0.4s							
DJR	**Jarkent**	**2.41**	**342**	*e*P		**Pb**	**02 35 39.7**	**-0.7**
	58nm,0.4s							
DJR				*e*S		**Sb**	**02 36 12.2**	**+2.1**
	48nm,0.5s							
DJR	**Jarkent**	**2.41**	**342**	Pg		**Pb**	**02 35 39.7**	**-0.7**
	58nm,0.4s							
DJR				Lg		Lg	02 36 12.3	
	48nm,0.5s							
KURS	**Kuram**	**2.42**	**307**	*e*P		**Pg**	**02 35 42.9**	**-0.5**
	24nm,0.6s							
KURS				*e*S		**Sg**	**02 36 17.4**	**+2.6**
	58nm,0.4s							
KURS	**Kuram**	**2.42**	**307**	Pg		**Pg**	**02 35 42.9**	**-0.5**
	24nm,0.6s							
KURS				Lg		Lg	02 36 17.4	
	58nm,0.4s							
MNBS	**Baschi**	**2.69**	**320**	*e*P		**Pg**	**02 35 46.3**	**-2.3**
	29nm,0.2s							
MNBS				*e*S		**Sg**	**02 36 23.3**	**-0.1**
	164nm,0.3s							
MNBS	**Baschi**	**2.69**	**320**	Pg		**Pg**	**02 35 46.3**	**-2.3**
	29nm,0.2s							
MNBS				Lg		Lg	02 36 23.3	
	164nm,0.3s							
KOTS	**Kotyrbulak**	**2.98**	**295**	*e*P		**Pg**	**02 35 53.3**	**-0.7**
	37nm,0.2s							
KOTS				*e*S		**Sg**	**02 36 35.0**	**+2.4**
	86nm,0.4s							
KOTS	**Kotyrbulak**	**2.98**	**295**	Pg		**Pg**	**02 35 53.3**	**-0.7**
	37nm,0.2s							
KOTS				Lg		Lg	02 36 35.0	
	86nm,0.4s							
MDOK	**Medeo**	**2.99**	**293**	*e*P		**Pg**	**02 35 54.2**	**-0.1**
	15nm,0.3s							
MDOK				*e*S		**Sg**	**02 36 36.6**	**+3.5**
	59nm,0.5s							
MDOK	**Medeo**	**2.99**	**293**	Pg		**Pg**	**02 35 54.2**	**-0.1**
	15nm,0.3s							
MDOK				Lg		Lg	02 36 36.6	
	59nm,0.5s							
TNSS	**Tian-Shan**	**3.02**	**290**	*e*P		**Pg**	**02 35 54.8**	**-0.1**
	12nm,0.3s							
TNSS				*e*S		**Sg**	**02 36 37.4**	**+3.3**
	37nm,0.6s							
TNSS	**Tian-Shan**	**3.02**	**290**	Pg		**Pg**	**02 35 54.8**	**-0.1**
	12nm,0.3s							
TNSS				Lg		Lg	02 36 37.4	
	37nm,0.6s							
ARXS	**Arharly**	**3.08**	**316**	*e*P		**Pg**	**02 35 53.5**	**-2.4**
	22nm,0.3s							
ARXS				*e*S		**Sg**	**02 36 35.4**	**-0.3**
	63nm,0.5s							
ARXS	**Arharly**	**3.08**	**316**	Pg		**Pg**	**02 35 53.5**	**-2.4**
	22nm,0.3s							
ARXS				Lg		Lg	02 36 35.4	
	63nm,0.5s							
IZV	**Izvestkoviy**	**3.26**	**289**	*e*P		**Pg**	**02 35 58.4**	**-0.9**
	8.3nm,0.2s							
IZV				*e*S		**Sg**	**02 36 43.7**	**+2.1**
	74nm,0.5s							
IZV	**Izvestkoviy**	**3.26**	**289**	Pg		**Pg**	**02 35 58.4**	**-0.9**
	8.3nm,0.2s							
IZV				Lg		Lg	02 36 43.7	
	74nm,0.5s							
CHKK	**Chushkaly**	**3.34**	**304**	*e*P		**Pg**	**02 35 58.7**	**-2.2**
	5.3nm,0.2s							
CHKK				*e*S		**Sg**	**02 36 44.2**	**+0.1**
	53nm,0.3s							
CHKK	**Chushkaly**	**3.34**	**304**	Pg		**Pg**	**02 35 58.7**	**-2.2**
	5.3nm,0.2s							
CHKK				Lg		Lg	02 36 44.2	
	53nm,0.3s							
KAPS	**Kapalarasan**	**3.41**	**342**	*e*P		**Pb**	**02 35 57.1**	**-0.3**
	31nm,0.3s							
KAPS				*e*S		**Sb**	**02 36 41.5**	**+2.6**
	34nm,0.6s							
KAPS	**Kapalarasan**	**3.41**	**342**	Pg		**Pb**	**02 35 57.1**	**-0.3**
	31nm,0.3s							
KAPS				Lg		Lg	02 36 41.5	
	34nm,0.6s							
MTBS	**Maitube**	**3.41**	**290**	*e*P		**Pg**	**02 36 01.9**	**-0.5**
	8.9nm,0.2s							
MTBS				*e*S		**Sg**	**02 36 49.5**	**+3.0**
	37nm,0.5s							
MTBS	**Maitube**	**3.41**	**290**	Pg		**Pg**	**02 36 01.9**	**-0.5**
	8.9nm,0.2s							
MTBS				Lg		Lg	02 36 49.5	
	37nm,0.5s							
TDK	**Taldyqorghan**	**3.44**	**330**	*e*P		**Pg**	**02 36 00.4**	**-2.4**
	19nm,0.4s							
TDK				*e*S		**Sg**	**02 36 47.5**	**+0.3**
	52nm,0.3s							
TDK	**Taldyqorghan**	**3.44**	**330**	Pg		**Pg**	**02 36 00.4**	**-2.4**
	19nm,0.4s							
TDK				Lg		Lg	02 36 47.5	
	52nm,0.3s							
KTBS	**Karatobe**	**3.46**	**300**	*e*P		**Pg**	**02 36 01.4**	**-1.9**
	4.0nm,0.3s							
KTBS				*e*S		**Sg**	**02 36 48.8**	**+0.7**
	98nm,0.3s							
KTBS	**Karatobe**	**3.46**	**300**	Pg		**Pg**	**02 36 01.4**	**-1.9**
	4.0nm,0.3s							
KTBS				Lg		Lg	02 36 48.8	
	98nm,0.3s							
KST	**Kastek**	**3.72**	**287**	*e*P		**Pg**	**02 36 07.2**	**-1.0**
	9.7nm,0.4s							
KST				*e*S		**Sg**	**02 36 58.7**	**+2.4**
	30nm,0.7s							
KST	**Kastek**	**3.72**	**287**	Pg		**Pg**	**02 36 07.2**	**-1.0**
	9.7nm,0.4s							
KST				Lg		Lg	02 36 58.7	
	30nm,0.7s							
KUU	**Kurty**	**3.77**	**301**	*e*P		**Pg**	**02 36 08.7**	**-0.4**
	9.6nm,0.6s							
KUU				*e*S		**Sg**	**02 37 01.4**	**+3.5**
	37nm,0.4s							
KUU	**Kurty**	**3.77**	**301**	Pg		**Pg**	**02 36 08.7**	**-0.4**
	9.6nm,0.6s							
KUU				Lg		Lg	02 37 01.4	
	37nm,0.4s							
TKM2	**Tokmak 2**	**3.96**	**285**	⇑Pn		**Pb**	**02 36 03.7**	**-3.1**
	1.7nm,0.5s							
TKM2				⇑Pg		**Pg**	**02 36 13.6**	**+0.9**
	8.1nm,0.7s							
TKM2				⇑Lg		Lg	02 37 08.8	
	16nm,0.6s							
KRBS	**Karabastau**	**4.12**	**295**	*e*P		**Pg**	**02 36 13.9**	**-2.0**
	2.3nm,0.3s							
KRBS				*e*S		**Sg**	**02 37 11.0**	**+1.7**
	18nm,0.3s							
KRBS	**Karabastau**	**4.12**	**295**	Pg		**Pg**	**02 36 13.9**	**-2.0**
	2.3nm,0.3s							
KRBS				Lg		Lg	02 37 11.0	
	18nm,0.3s							
AAK	**Ala-Archa**	**4.72**	**279**	⇓Pn		Pb	02 36 12.9	-6.9
	0.8nm,0.6s							
AAK				⇓Pg		**Pg**	**02 36 27.1**	**-0.3**
	2.8nm,0.5s							
AAK				⇑Lg		Lg	02 37 32.8	
	13nm,0.8s							
SGDS	**Sogindy**	**4.76**	**289**	Pg		**Pg**	**02 36 27.3**	**-0.9**
	4.3nm,0.6s							
SGDS				Lg		Lg	02 37 33.7	
	9.9nm,0.6s							
MAKZ	**Makanchi**	**4.84**	**10**	⇓Pn		**Pn**	**02 36 09.6**	**-0.2**
	2.5nm,0.3s							
MAKZ				⇑Sn		**Sn**	**02 37 06.1**	**+0.2**
	4.2nm,0.4s							
MAKZ				⇑Lg		Lg	02 37 23.9	
	18nm,0.7s							
MK31	**Makanchi Array**	**4.87**	**12**	Pn		**Pn**	**02 36 10.3**	**+0.1**
	0.6nm,0.3s,baz=197,slow=14,SNR=4.8							
MK31				⇑Pg		**Pb**	**02 36 22.1**	**-0.1**
	1.3nm,0.3s,baz=187,slow=16,SNR=4.6							
MK31				⇑Sn		**Sn**	**02 37 06.2**	**-0.3**
	5.3nm,0.2s,baz=186,slow=26,SNR=4.5							
MK31				⇓Lg		Lg	02 37 26.2	
	20nm,0.8s,baz=191,slow=29,SNR=11							
ZSN	**Zaisan**	**6.13**	**27**	*e*P		**Pb**	**02 36 43.3**	**-0.4**
	4.3nm,0.4s							
ZSN				*e*S		**Sb**	**02 38 00.6**	**+3.5**
	16nm,0.5s							
ZSN	**Zaisan**	**6.13**	**27**	Pg		**Pb**	**02 36 43.3**	**-0.4**
	4.3nm,0.4s							
ZSN				Lg		Lg	02 38 00.6	
	16nm,0.5s							
KK31	**Karatay Array**	**7.68**	**281**	Pn		Pn	02 36 52.7	+3.9
	0.1nm,0.2s,baz=166,slow=12,SNR=4.0							
KK31				⇓Pg		**Pg**	**02 37 21.6**	**-2.2**
	0.5nm,0.6s,baz=92,slow=15,SNR=3.9							
KK31				⇑Lg		Lg	02 39 07.1	
	1.0nm,0.5s,baz=89,slow=27,SNR=4.8							
KURBB	**Kurchatov Arra**	**8.72**	**350**	⇓Lg		Lg	02 39 32.7	
	9.4nm,0.7s							

IDC 23 02:41:38.6±2.1, 2°27N×126°67E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.4/34, mbtmp3.4/4, Error ellipse: s-maj=177.9km s-min=24.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.32**	**162**	P	P	02 46 48.0	-0.6
	0.5nm,0.3s,baz=340,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.72**	**165**	P	P	02 47 20.3	+0.3
	0.1nm,0.5s,baz=345,slow=6.7,SNR=4.5						
MKAR	**Makanchi Array**	**58.72**	**326**	P	P	02 51 37.9	-0.3
	0.1nm,0.3s,baz=120,slow=6.7,SNR=3.9						
VNDA	**Vanda**	**81.99**	**173**	P	P	02 54 00.4	+0.4
	0.4nm,0.8s,baz=307,slow=9.6,SNR=1.9						

IDC 23 02:47:27.8±1.6, 65°31S×179°18W, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.9/18, mbtmp3.9/5, ML3.4/1, MS3.5/5, Ms1 3.5/5, ms1mx3.3/17, Error ellipse: s-maj=53.5km s-min=24.7km az=55.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**13.55**	**198**	Pn	Pn	02 50 39.7	-1.1
	0.2nm,0.3s,baz=43,slow=18,SNR=48						
VNDA				LR	LR	02 54 44.0	
	comp=Z,182nm,19.6s,baz=3.0,slow=32						
QSPA	**South Pole Qui**	**24.78**	**180**	P	P	02 52 51.3	+0.3
	5.6nm,1.0s,baz=42,slow=5.9,SNR=12						
QSPA				LR	LR	03 01 39.5	
	comp=Z,192nm,18.9s,baz=40,slow=34						
MAW	**Mawson**	**40.29**	**212**	LR	LR	03 11 33.0	
	comp=Z,154nm,19.9s,baz=159,slow=36						
TBI	**Tubuai**	**46.14**	**39**	*e*LR	LR	03 08 36.8	
	comp=Z,80nm,28.8s						
TBI	**Tubuai**	**46.14**	**39**	*e*T	T	03 45 01.2	
	20nm,0.3s						
H01W1	**Cape Leeuwin H**	**49.19**	**274**	T	T	03 49 01.9	
	baz=149,slow=75,SNR=19						
H01W2	**Cape Leeuwin H**	**49.19**	**274**	T	T	03 49 02.2	
	baz=149,slow=75,SNR=18						
H01W3	**Cape Leeuwin H**	**49.21**	**274**	T	T	03 49 03.1	
	baz=149,slow=75,SNR=16						
ASAR	**Alice Springs**	**51.30**	**301**	P	P	02 56 33.4	0.0
	0.8nm,0.9s,baz=154,slow=7.6,SNR=6.1						
PPT2	**Papeete2**	**51.62**	**37**	*e*LR	LR	03 11 07.6	
	comp=Z,74nm,24.8s						
PPT	**Papeete**	**51.64**	**37**	LR	LR	03 15 19.8	
	comp=Z,17nm,18.2s,baz=38,slow=32						
VAH	**Vaihoa**	**54.37**	**38**	*e*T	T	03 55 18.0	
	35nm,0.3s						
PMOR	**Pomariorio Ree**	**54.53**	**38**	*e*T	T	03 55 29.4	
	4.9nm,0.3s						
WRA	**Warramunga Arr**	**54.56**	**303**	P	P	02 56 57.2	-0.2
	0.7nm,0.8s,baz=159,slow=6.2,SNR=6.1						
PLCA	**Paso Flores**	**60.80**	**124**	P	P	02 57 41.2	0.0
	2.4nm,1.1s,baz=190,slow=11,SNR=2.9						
H03S2	**Juan Fernandez**	**63.85**	**114**	T	T	04 08 21.3	
	baz=206,slow=74,SNR=16						
H03S1	**Juan Fernandez**	**63.85**	**114**	T	T	04 08 23.8	
	baz=206,slow=74,SNR=16						
H03S3	**Juan Fernandez**	**63.87**	**114**	T	T	04 08 23.7	
	baz=206,slow=74,SNR=16						
BOSA	**Boshof**	**84.48**	**201**	LR	LR	03 34 22.9	
	comp=Z,18nm,20.8s,baz=208,slow=33						

*TEH **23** 02:49:47.6, 38°.40N×46°.68E, h14km, ML2.8*
*THR **23** 02:49:48.2±0.3, 38°.44N×46°.68E, h15km, ML3.0*
*NSSP **23** 02:49:54.5, 38°.40N×46°.73E, h10km, Ms3.1*

ISC 23 02:49:46.6±0.9, 38°42N±0°04×46°68E±0°03, h10km, n20, σ0s87/21, 6C-1D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHAR	**Ahar**	**0.30**	**77**	*e*Pg	**Pb**	**02 49 54.3**	**+0.2**
AHAR				*e*Sg	**Sb**	**02 49 59.0**	**-0.2**
AHAR				*e*		02 49 59.9	
IHRS	**Heris**	**0.30**	**110**	*e*Pg	**Pb**	**02 49 53.8**	**-0.5**
IHRS				*e*		02 49 58.8	
ITBZ	**Tabriz**	**0.46**	**246**	*e*Pg	**Pb**	**02 49 56.3**	**-0.6**
ITBZ				*e*		02 50 04.0	
IHSH	**Hashtrud**	**0.47**	**104**	*e*Pg	Pn	02 50 10.0	+10
ISRB	**Sarab**	**0.98**	**127**	*e*		02 50 22.8	
ISRB				*e*Pg	**Pg**	**02 50 05.5**	**0.0**
GRMI	**Germi**	**1.03**	**68**	*e*Pg	**Pn**	**02 50 07.4**	**+0.3**
GRMI				IAML		02 50 22.4	
	comp=E,511nm,0.2s						
GRMI				IAML		02 50 24.0	
	comp=N,315nm,0.3s						
GRS	**Goris**	**1.11**	**346**	⇑*i*P	**Pn**	**02 50 09.0**	**+0.7**
GRS				⇓*i*S	**Sn**	**02 50 23.0**	**-0.7**
STKZ		**1.39**	**2**	⇑*i*P	Pg	02 50 25.2	+12
STKZ				⇑*i*S	Sg	02 50 44.7	+13
MAKU	**Maku**	**1.81**	**301**	*e*Pg	**Pg**	**02 50 21.2**	**-0.1**
MAKU				IAML		02 50 47.1	
	comp=N,121nm,0.4s						
MAHB	**Mahabad**	**1.82**	**205**	*e*Pg	**Pg**	**02 50 21.8**	**+0.2**
MAHB				*e*		02 50 46.5	
CLDR	**Caldiran**	**2.27**	**289**	*e*P	**Pb**	**02 50 28.9**	**+1.0**
GNI	**Garni**	**2.29**	**320**	⇑*i*P	**Pg**	**02 50 30.3**	**-0.1**
GNI	**Garni**	**2.29**	**320**	P	**Pg**	**02 50 29.7**	**-0.7**
ZNJK	**Zanjan**	**2.37**	**137**	*e*Pn	**Pb**	**02 50 28.8**	**-0.6**
TASB	**TASBURUN-IGDIR**	**2.45**	**310**	*e*P	**Pb**	**02 50 31.7**	**+0.9**
CUKT	**Cukurca**	**2.70**	**245**	*e*P	**Pg**	**02 50 38.1**	**-0.2**
AGRB	**Hanur-Agry**	**3.09**	**293**	*e*P	**Pb**	**02 50 40.3**	**-1.5**
STE	**Stepanavan**	**3.13**	**326**	⇑*i*P	**Pg**	**02 50 45.5**	**-1.0**
STE				⇑S	**Sg**	**02 51 28.8**	**+1.6**
MLAZ	**Malazgirt-MUS**	**3.31**	**284**	*e*P	**Pb**	**02 50 43.7**	**-1.7**
SIRT	**Sirnak**	**3.47**	**256**	*e*P	**Pb**	**02 50 48.5**	**+0.3**

*RSNC **23** 02:57:35.0±1.8, 6°.88N×73°.33W, h120km±7km, ML2.7, Fault plane solution: NP1:φs5.00000°, δ17.00000°, λ-102.00000°.*
*IDC **23** 02:57:37.2±7.3, 6°.33N×76°.02W, h105km±74km, mb1 3.4/2, mb1mx2.9/37, mbtmp4.0/2, ML1.7/1, Error ellipse: s-maj=96.5km s-min=32.1km az=91.0*

ISC 23 02:57:34.4±1.1, 6°91N±0°03×73°31W±0°04, h124km±7km, n32, σ1s35/60, 4C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.34**	**159**	*e*P	**Pn**	**02 57 52.2**	**0.0**
BARC				*e*S	**Sn**	**02 58 05.4**	**-0.4**
BRRC	**Barranca, Sant**	**0.45**	**296**	⇓*i*P	**Pn**	**02 57 52.6**	**+0.2**
BRRC				*e*S	**Sn**	**02 58 06.2**	**+0.1**
BRRC				*i*		02 58 07.6	
	comp=Z,202nm,0.1s						
PAMC	**Pamplona, Colo**	**0.74**	**55**	⇑*i*P	**Pn**	**02 57 55.3**	**+0.3**
PAMC				*e*S	**Sn**	**02 58 11.1**	**+0.6**
PAMC				*i*		02 58 14.2	
	comp=Z,124nm,0.5s						
RUSC	**La Rusia**	**1.03**	**168**	⇑*e*P	**Pn**	**02 57 56.9**	**-0.8**
RUSC				*e*S	**Sn**	**02 58 14.6**	**-0.6**
RUSC				*i*		02 58 16.7	
	comp=Z,65nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.20**	**252**	⇓*i*P	**Pn**	**02 57 57.6**	**-1.2**
PTBC				*e*S	**Sn**	**02 58 16.1**	**-1.2**
PTBC				*i*		02 58 23.5	
	comp=Z,80nm,0.4s						
OCAC	**Ocana**	**1.32**	**359**	*e*P	**Pn**	**02 58 00.3**	**+0.1**
OCAC				*e*S	**Sn**	**02 58 20.0**	**+0.1**
OCAC				*i*		02 58 21.4	
	comp=Z,228nm,0.3s						
SPBC	**San Pablo de B**	**1.46**	**211**	*e*P	**Pn**	**02 58 00.9**	**-0.9**
SPBC				*e*S	**Sn**	**02 58 21.6**	**-1.0**
SPBC				*i*		02 58 28.4	
	comp=Z,90nm,0.2s						
TAMC	**Tame, Arauca**	**1.58**	**107**	⇑*i*P	**Pn**	**02 58 03.1**	**+0.1**
TAMC				*e*S	**Sn**	**02 58 23.4**	**-1.4**
TAMC				*i*		02 58 30.1	
	comp=Z,81nm,0.6s						
ZARC	**Zaragoza, Cauc**	**1.64**	**291**	⇓*i*P	**Pn**	**02 58 03.9**	**+0.2**
ZARC				*e*S	**Sn**	**02 58 25.7**	**-0.4**
ZARC				*i*		02 58 30.7	
	comp=Z,111nm,0.3s						
NORC	**Norcasia**	**2.05**	**229**	*e*P	**Pn**	**02 58 07.6**	**-1.1**
NORC				*e*S	**Sn**	**02 58 33.9**	**-1.0**
NORC				*i*		02 58 38.1	
	comp=Z,29nm,0.5s						
ROSC	**El Rosal**	**2.29**	**206**	P	**Pn**	**02 58 13.7**	**+1.6**
	comp=Z,3.9nm,0.3s,baz=297,slow=11,SNR=5.8						
ROSC				S	**Sn**	**02 58 41.8**	**+0.9**
	comp=Z,3.8nm,0.3s,baz=51,slow=23,SNR=5.9						
ROSC	**El Rosal**	**2.29**	**206**	*e*P	**Pn**	**02 58 11.9**	**-0.2**
ROSC				*e*S	**Sn**	**02 58 40.8**	**-0.1**
ROSC				*i*		02 58 48.1	
	comp=Z,18nm,0.4s						
CHIC	**Chingaza**	**2.30**	**191**	*e*P	**Pn**	**02 58 12.2**	**-0.1**
CHIC				*e*S	**Sn**	**02 58 41.1**	**-0.2**
CHIC				*i*		02 58 46.5	
	comp=Z,23nm,0.4s						
HELC	**Santa Helena**	**2.32**	**252**	*e*P	**Pn**	**02 58 13.1**	**+0.7**
HELC				*e*S	**Sn**	**02 58 41.0**	**-0.5**
HELC				*i*		02 58 46.6	
	comp=Z,40nm,0.2s						
UREC	**San Jos de Ur**	**2.36**	**291**	*e*P	**Pn**	**02 58 11.7**	**-0.8**
UREC				*e*S	**Sn**	**02 58 40.5**	**-1.4**
UREC				*i*		02 58 51.8	
	comp=Z,60nm,0.2s						
GUY2C	**Guyana, Caldas**	**2.64**	**231**	*e*P	**Pn**	**02 58 16.8**	**+0.2**
GUY2C				*e*S	**Sn**	**02 58 47.7**	**-1.4**
GUY2C				*i*		02 58 56.1	
	comp=Z,24nm,0.5s						
VILC	**Villavicencio,**	**2.81**	**188**	*e*P	**Pn**	**02 58 18.0**	**-0.5**
VILC				*e*S	**Sn**	**02 58 50.6**	**-1.7**
VILC				*i*		02 58 58.6	
	comp=Z,40nm,0.3s						
RREF	**El Recreo**	**2.85**	**226**	*e*P	**Pn**	**02 58 20.2**	**+0.8**
RREF				*e*S	**Sn**	**02 58 53.9**	**0.0**
RREF				*i*		02 59 02.2	
	comp=Z,22nm,0.3s						
CBOC	**Ciudad Bolivar**	**2.88**	**249**	*e*P	**Pn**	**02 58 20.1**	**+0.7**
CBOC				*e*S	**Sn**	**02 58 52.8**	**-1.4**
CBOC				*i*		02 58 57.0	
	comp=Z,9.6nm,0.2s						
DBBC	**Dabeiba**	**2.88**	**272**	*e*P	**Pn**	**02 58 19.5**	**+0.1**
PTGC	**Puerto Gaitan,**	**2.94**	**156**	*e*P	**Pn**	**02 58 18.3**	**-1.7**
PTGC				*e*S	**Sn**	**02 58 51.7**	**-3.4**
PTGC				*i*		02 59 00.7	
	comp=Z,26nm,0.3s						
MOTC	**Monteria, Cord**	**2.98**	**309**	⇑*i*P	**Pn**	**02 58 19.5**	**-1.1**
MOTC				*e*S	**Sn**	**02 58 54.0**	**-2.2**
MOTC				*i*		02 59 01.7	
	comp=Z,15nm,0.4s						
TOLC	**Tolima**	**3.06**	**221**	*e*P	**Pn**	**02 58 22.1**	**+0.2**
TOLC				*e*S	**Sn**	**02 58 57.4**	**-1.1**
ARGC	**Ariguani, Magd**	**3.07**	**342**	*e*P	**Pn**	**02 58 23.4**	**+1.6**
ARGC				*e*S	**Sn**	**02 58 58.0**	**-0.3**
ANIL	**Santa Ana**	**3.18**	**221**	*e*P	**Pn**	**02 58 24.8**	**+1.3**
ANIL				*e*S	**Sn**	**02 58 59.8**	**-1.6**
SDV	**Santo Domingo**	**3.30**	**53**	P	**Sn**	**02 59 02.2**	**-1.6**
	comp=Z,11nm,0.3s,baz=223,slow=19,SNR=20						
SJCC	**San Jacinto, C**	**3.50**	**328**	⇓*i*P	**Pn**	**02 58 26.4**	**-1.0**
SJCC				*i*		02 58 27.1	
	comp=Z,13nm,0.1s						
SJCC				*e*S	**Sn**	**02 59 03.9**	**-4.6**
ORTC	**Ortega, Tolima**	**3.55**	**213**	*e*P	**Pn**	**02 58 27.7**	**-0.4**
ORTC				*e*S	**Sn**	**02 59 08.7**	**-1.0**
ORTC				*i*		02 59 16.4	
	comp=Z,10nm,0.3s						
LCBC	**Los crdobas,**	**3.60**	**303**	*e*P	**Pn**	**02 58 28.0**	**-0.7**
LCBC				*e*S	**Sn**	**02 59 10.6**	**-0.1**
LCBC				*i*		02 59 14.8	
	comp=Z,22nm,0.3s						
SMRC	**Santa Marta, M**	**4.32**	**348**	*e*P	**Pn**	**02 58 39.2**	**+0.9**
SMRC				*e*S	**Sn**	**02 59 24.8**	**-3.2**
ASAR	**Alice Springs**	**149.01**	**235**	PKPbc	**PKPdf**	**03 17 06.2**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=121,slow=3.8,SNR=1.6						
WRA	**Warramunga Arr**	**150.22**	**241**	PKPbc	**PKPdf**	**03 17 09.5**	**+2.9**
	comp=Z,0.2nm,0.4s,baz=111,slow=2.2,SNR=12						

*REY **23** 03:02:40.1, 64°.67N×17°.40W, h8km*
*IDC **23** 03:02:41.8±0.9, 64°.54N×17°.10W, h0km, mb3.7/8, mb1 3.9/12, mb1mx3.6/55, mbtmp3.7/12, ML2.5/3, MS3.3/5, Ms1 3.3/5, ms1mx2.8/64, Error ellipse: s-maj=25.3km s-min=16.8km az=35.0*
*NEIC **23** 03:02:41.2±1.4, 64°.48N±0°.09×17°.7W±0°.1, h7km±4km, mb4.5/26, Error ellipse: s-maj=13.6km s-min=8.5km az=193.0*

ISC 23 03:02:41.1±0.5, 64°67N±0°02×17°41W±0°02, h10km, n113, σ2s01/119, mb4.2/21, MS3.4/3, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.13**	**8**	P	**Pg**	**03 02 42.9**	**-1.3**
	baz=6.7						
IDYN				S	**Sg**	**03 02 45.5**	**-0.9**
	baz=6.7						
IVON	**Vonarskard**	**0.15**	**273**	P	**Pg**	**03 02 43.2**	**-1.3**
	baz=272						
IDJK	**Dyngjujokull**	**0.18**

IVSH				S	Sg	03 03 03.3	-1.6		
	baz=78								
IVAT	**Vatnsfell**	**0.81**	**234**	P	Pg	03 02 55.0	-1.8		
	baz=234								
IADA	**Aoalbol**	**0.86**	**65**	P	Pg	03 02 55.1	-2.6		
	baz=65								
IADA				S	Sg	03 03 07.0	-1.8		
	baz=65								
IFAG	**Fagurholsmyri**	**0.86**	**157**	P	Pg	03 02 55.3	-2.4		
	baz=158								
IFAG				S	Sg	03 03 07.2	-1.6		
	baz=158								
IMEL	**Melhnausar**	**0.96**	**19**	P	Pg	03 02 57.0	-2.7		
	baz=19								
IREN	**Reynihlio**	**1.01**	**12**	P	Pg	03 02 57.6	-2.8		
	baz=12								
IKVO	**Krokottuvotn**	**1.07**	**12**	P	Pg	03 02 58.7	-3.1		
	baz=12								
ISNB	**Snabyli**	**1.08**	**210**	P	Pg	03 02 59.3	-2.5		
	baz=210								
IGRS	**Grimsstaoir**	**1.12**	**28**	P	Pb	03 02 59.6	-2.9		
	baz=28								
IFED	**Fedgar**	**1.18**	**238**	P	Pb	03 03 01.4	-2.3		
	baz=238								
IRJU	**Rjupnafell**	**1.19**	**208**	P	Pb	03 03 01.3	-2.5		
	baz=208								
IGHA	**Grjothals**	**1.22**	**15**	P	Pn	03 03 01.0	-3.3		
	baz=14								
IMJO	**Mjoaskard**	**1.23**	**234**	P	Pb	03 03 02.1	-2.4		
	baz=234								
IGRA	**Granastaoir**	**1.26**	**357**	P	Pn	03 03 02.0	-2.7		
	baz=357								
IGYG	**Gygjarholskot**	**1.28**	**254**	P	Pn	03 03 02.4	-2.6		
	baz=254								
IHVO	**Lagu-Hvolar**	**1.31**	**210**	P	Pn	03 03 03.4	-2.0		
	baz=210								
IDIM	**Dimmadalss**	**1.32**	**9**	P	Pn	03 03 02.6	-2.9		
	baz=8.4								
IHAU	**Haukadalur**	**1.32**	**239**	P	Pn	03 03 03.3	-2.3		
	baz=239								
IHLA	**Hella**	**1.35**	**343**	P	Pn	03 03 03.3	-2.6		
	baz=342								
IALF	**Alftagrof**	**1.42**	**214**	P	Pn	03 03 04.9	-2.0		
	baz=214								
IHED	**Heoinshofoi**	**1.42**	**2**	P	Pn	03 03 04.0	-3.0		
	baz=1.5								
IHED				S	Sn	03 03 23.5	-2.2		
	baz=1.5								
IESK	**Eystri-Skogar**	**1.46**	**219**	P	Pn	03 03 05.6	-1.8		
	baz=219								
ISAU	**Saurbar**	**1.48**	**244**	P	Pn	03 03 05.2	-2.5		
	baz=244								
IBRE	**Brettingsstaoi**	**1.48**	**352**	P	Pn	03 03 04.9	-2.8		
	baz=352								
IGIL	**Gilhagi**	**1.48**	**17**	P	Pn	03 03 05.2	-2.6		
	baz=17								
IMID	**Miomork**	**1.48**	**228**	P	Pn	03 03 06.1	-1.7		
	baz=228								
ISIG	**Siglufjorour**	**1.60**	**337**	P	Pn	03 03 07.1	-2.3		
	baz=337								
IASM	**Asmuli**	**1.63**	**241**	P	Pn	03 03 08.3	-1.5		
	baz=241								
BORG	**Borgarnes**	**1.69**	**275**		Pn	03 03 09.2	-1.4		
BORG				Sn	Sn	03 03 30.8	-1.4		
ISOL	**Solvholt**	**1.71**	**246**	P	Pn	03 03 09.1	-1.8		
	baz=246								
IKRO	**Krokur**	**1.71**	**252**	P	Pn	03 03 08.9	-2.0		
	baz=252								
IHEI	**Heioarbar**	**1.73**	**256**	P	Pn	03 03 09.2	-2.0		
	baz=256								
ILEI	**Leirhofn**	**1.79**	**12**	P	Pn	03 03 10.0	-2.0		
	baz=12								
IHRN	**Hraun**	**1.84**	**323**	P	Pn	03 03 11.4	-1.4		
	baz=323								
IBJA	**Bjarnastaoir**	**1.85**	**249**	P	Pn	03 03 11.5	-1.3		
	baz=249								
ISAN	**Sandskeio**	**1.91**	**253**	P	Pn	03 03 12.1	-1.6		
	baz=253								
IKUD	**Kuludalsa**	**1.96**	**262**	P	Pn	03 03 13.1	-1.3		
	baz=262								
SCO	**Scoresbysund**	**6.09**	**345**		Pn	03 04 14.6	+3.5		
SCO	**Scoresbysund**	**6.09**	**345**	*e*	Pn	**03 04 10.9**	**-0.2**		
	baz=173,slow=9.3								
SCO				*i* P	Pn	**03 04 13.0**	**+1.9**		
SCO				*i* S	Sn	**03 05 25.2**	**+4.4**		
SCO				IAML		03 05 36.9			
	comp=Z,1.0nm,0.5s								
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn	Pn	**03 05 28.1**	**-0.2**		
	baz=323,slow=13,SNR=14								
ESK	**Eskdalemuir**	**11.73**	**136**	Pn	Pn	**03 05 29.3**	**+1.0**		
NC204	**NORSAR Array S**	**13.19**	**92**	Pn	Pn	**03 05 49.7**	**+1.4**		
NOA	**NORSAR Array B**	**13.49**	**92**	Pn	Pn	**03 05 50.8**	**-1.7**		
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.9								
NOA				LR	LR	03 11 42.7			
	comp=Z,28nm,19.6s,baz=300,slow=40								
NC405	**NORSAR Array S**	**13.68**	**92**	Pn	P	03 05 58.4	-5.4		
SFJD	**Kangerlussuaq**	**13.70**	**295**	LR	LR	03 10 55.5			
	comp=Z,271nm,18.9s,baz=76,slow=36								
HFS	**Hagfors**	**15.01**	**93**	Pn	Pn	**03 06 12.8**	**-0.2**		
	comp=Z,0.1nm,0.3s,baz=289,slow=9.0,SNR=3.3								
SPA0	**Spitsbergen Ar**	**16.85**	**23**	Pn	P	**03 06 39.1**	**+0.3**		
SPA0				IAmb	IAmb	03 06 50.8			
	comp=Z,126nm,1.6s								
FINES	**FINESS Array B**	**19.67**	**79**	P	Pn	**03 07 11.7**	**+0.5**		
	comp=Z,0.1nm,0.3s,baz=355,slow=14,SNR=2.8								
CLL	**Collm**	**20.67**	**116**	P	Pn	03 07 21.5	-1.6		
STU	**Stuttgart**	**21.34**	**126**	P	P	**03 07 28.5**	**+0.4**		
STU				IAmb	IAmb	03 07 36.1			
	comp=Z,11nm,0.9s								
BRG	**Berggiesshubel**	**21.38**	**115**	*e*P	P	**03 07 29.4**	**+1.0**		
	comp=Z,12nm,1.5s								
BRG				*i*		03 07 40.2			
	comp=Z,30nm,1.9s								
BFO	**Black Forest**	**21.42**	**127**	P	P	**03 07 29.4**	**+0.5**		
CHVC	**Chvalec**	**22.43**	**113**	*e*P	P	**03 07 42.8**	**+3.0**		
KHC	**Kasperske Hory**	**22.64**	**119**	*e*P	P	**03 07 45.7**	**+3.7**		
KHC	**Kasperske Hory**	**22.64**	**119**	P	P	**03 07 43.5**	**+1.4**		
DPC	**Dobruska-Polom**	**22.72**	**113**	*e*P	P	**03 07 44.7**	**+1.8**		
SUW	**Suwalki**	**22.84**	**98**	P	P	**03 07 45.7**	**+1.7**		
SUW				IAmb	IAmb	03 07 55.8			
	comp=Z,21nm,1.2s								
GERES	**GERESS Array B**	**22.92**	**119**	P	P	**03 07 45.9**	**+0.9**		
	comp=Z,0.9nm,0.9s,baz=337,slow=6.5,SNR=5.7								
GERES	**GERESS Array B**	**22.92**	**119**	P	P	**03 07 45.4**	**+0.3**		
TREC	**Trest**	**23.24**	**116**	*e*P	P	**03 07 50.5**	**+2.3**		
DAVOX	**Davos/Dischmat**	**23.29**	**127**	P	P	**03 07 52.4**	**+3.5**		
	comp=Z,1.3nm,0.6s,baz=325,slow=16,SNR=3.5								
MORC	**Moravsky Berou**	**23.66**	**112**	P	P	**03 07 54.1**	**+1.7**		
MORC				IAmb	IAmb	03 07 56.2			
	comp=Z,19nm,1.7s								
EUNU	**Eureka**	**23.68**	**336**	P	P	**03 07 54.4**	**+2.0**		
OJC	**Ojcow**	**24.22**	**109**	P	P	**03 07 59.8**	**+2.1**		
OJC				IAmb	IAmb	03 08 01.9			
	comp=Z,27nm,1.9s								
KWP	**Kalwaria Pacla**	**25.87**	**106**	P	P	**03 08 14.8**	**+2.1**		
KWP				IAmb	IAmb	03 08 25.5			
	comp=Z,19nm,1.1s								
PSZ	**Piszkesteto**	**26.08**	**112**	P	P	**03 08 15.7**	**+1.0**		
PSZ				IAmb	IAmb	03 08 19.5			
	comp=Z,8.4nm,1.1s								
ESDC	**Sonseca Array**	**26.24**	**156**	P	P	**03 08 17.5**	**+1.4**		
	comp=Z,1.2nm,1.0s,baz=347,slow=8.0,SNR=5.1								
ESDC	**Sonseca Array**	**26.24**	**156**	P	P	**03 08 15.5**	**-0.6**		
AKASG	**Malin Array Be**	**27.80**	**98**	P	P	**03 08 29.7**	**-0.3**		
	comp=Z,0.4nm,0.5s,baz=323,slow=9.5,SNR=4.0								
AKASG	**Malin Array Be**	**27.80**	**98**	P	P	**03 08 30.8**	**+0.8**		
OBN	**Obninsk**	**27.84**	**84**	LR	LR	03 19 17.0			
	comp=Z,22nm,21.3s,baz=165,slow=36								
ARU	**Arti**	**36.05**	**66**	LR	LR	03 24 17.1			
	comp=Z,64nm,19.0s,baz=358,slow=36								
BMAR	**Burnt Mountain**	**42.91**	**333**	P	P	**03 10 41.6**	**+2.3**		
IL31		**45.70**	**332**	P	P	**03 11 03.2**	**+1.7**		
IL31				IAmb	IAmb	03 11 08.0			
	comp=Z,17nm,1.6s								
ILAR	**Eielson Array**	**45.70**	**332**	P	P	03 11 06.5	+4.8		
	comp=Z,1.7nm,1.1s,baz=19,slow=5.6,SNR=10								
ILAR				PcP	PP	**03 12 42.5**	**-5.6**		
	comp=Z,0.8nm,0.9s,baz=335,slow=2.6,SNR=5.0								
ILAR	**Eielson Array**	**45.70**	**332**	P	P	**03 11 04.7**	**+3.1**		
I23K	**Minto, Yukon-K**	**45.84**	**334**	P	P	**03 11 05.5**	**+2.8**		
IMAR	**Indian Mountai**	**45.87**	**337**	P	P	03 11 07.0	+4.1		
BCAR	**Beaver Creek A**	**46.13**	**329**	P	P	**03 11 06.3**	**+1.2**		
ZAA0	**Zalesovo Array**	**47.60**	**51**	P	P	**03 11 18.4**	**+1.9**		
ZAA0				IAmb	IAmb	03 11 55.3			
	comp=Z,1.9nm,0.8s								
KURK	**Kurchatov**	**48.08**	**58**	P	P	**03 11 22.4**	**+2.1**		
KURK				IAmb	IAmb	03 11 23.9			
	comp=Z,4.0nm,1.1s								
KURBB	**Kurchatov Arra**	**48.12**	**58**	P	P	**03 11 20.9**	**+0.3**		
	comp=Z,2.2nm,0.8s,baz=325,slow=7.5,SNR=16								
BCPM	**Bancas Point**	**48.35**	**325**	P	P	**03 11 23.3**	**+1.0**		
RLMT	**Red Lodge**	**51.12**	**295**	P	P	**03 11 44.5**	**+0.6**		
KK31	**Karatay Array**	**51.24**	**70**	P	P	**03 11 47.3**	**+2.8**		
KK31				IAmb	IAmb	03 11 48.1			
	comp=Z,9.4nm,1.9s								
KKAR	**Karatay Array**	**51.24**	**70**	P	P	**03 11 46.4**	**+1.9**		
OXF	**Oxford**	**51.76**	**271**	P	P	**03 11 47.7**	**-0.8**		
MKAR	**Makanchi Array**	**52.69**	**58**	P	P	**03 11 57.6**	**+2.3**		
	comp=Z,0.8nm,0.8s,baz=320,slow=6.2,SNR=3.1								
TORD	**Torodi Ar. Bea**	**53.13**	**157**	P	P	**03 11 59.3**	**+0.5**		
	comp=Z,0.5nm,0.7s,baz=337,slow=7.3,SNR=3.4								
TORD	**Torodi Ar. Bea**	**53.13**	**157**	IAmb	IAmb	03 12 00.0			
	comp=Z,1.1nm,1.1s								
PD31	**Pinedale Array**	**53.21**	**293**	P	P	**03 11 59.5**	**+0.1**		
PDAR	**Pinedale Array**	**53.21**	**293**	P	P	**03 12 01.8**	**+2.3**		
	comp=Z,1.5nm,0.8s,baz=61,slow=7.0,SNR=11								
PDAR	**Pinedale Array**	**53.21**	**293**	P	P	**03 11 58.9**	**-0.5**		
QUOK	**Quay**	**53.48**	**278**	P	P	**03 12 00.8**	**-0.5**		
GAR	**Garm**	**54.61**	**73**	P	P	**03 12 12.0**	**+2.4**		
GAR				IAmb	IAmb	03 12 14.3			
	comp=Z,9.2nm,1.0s								
SIV	**San Ignacio**	**87.01**	**222**	LR	LR	03 49 59.2			
	comp=Z,38nm,18.2s,baz=101,slow=33								

NEIC ***23*** *03:15:47.8±0.9, 32.84N±0.04×96.89W±0.05, h4km±7km, mb_Lg3.3/76, Error ellipse: s-maj=6.5km s-min=4.8km az=61.0*

ANF ***23*** *03:15:48.7±0.6, 32.82N×96.91W, h10km±4km, ML4.0/17, Error ellipse: s-maj=3.4km s-min=2.2km az=150.0*

ISC 23 03:15:47.2±1.4, 32.84N±0.03×96.86W±0.03, h4km±11km, n123, σ1§01/137, Central Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Z35A	**Perchaven, San**	**0.59**	**326**		**Pg**	**03 15 58.5**	**-0.1**
Z35A				IAmb_Lg		03 16 05.7	
	comp=Z,254nm,1.0s						
Z35A				Sg	**Sg**	**03 16 06.0**	**-0.4**
WHTX	**Lake Whitney,**	**0.98**	**211**	P	**Pb**	**03 16 06.8**	**0.0**
	baz=29,SNR=54						
WHTX				S	**Sb**	**03 16 19.7**	**-0.4**
	baz=29						
WHTX	**Lake Whitney,**	**0.98**	**211**	Pg	**Pg**	**03 16 06.5**	**+0.4**
237A	**Washetta, Mont**	**1.22**	**133**	Pg	**Pn**	**03 16 11.9**	**+1.0**
Z38A	**Mt. Pleasant**	**1.63**	**74**		**Pn**	**03 16 17.8**	**+1.2**
435B	**Jarrell**	**2.14**	**197**	P	**Pn**	**03 16 24.5**	**+0.9**
	baz=16						
435B				S	**Sb**	**03 16 53.0**	**-0.4**
	baz=16						
435B	**Jarrell**	**2.14**	**197**		**Pn**	**03 16 24.3**	**+0.6**
X37A	**Clayton**	**2.14**	**35**		**Pn**	**03 16 24.8**	**+1.1**
NATX	**Nacogdoches**	**2.15**	**119**	P	**Pn**	**03 16 25.5**	**+1.7**
	baz=300						
NATX				S	**Sb**	**03 16 53.5**	**0.0**
	baz=300						
NATX	**Nacogdoches**	**2.15**	**119**	Pn	**Pn**	**03 16 25.6**	**+1.9**
W35A	**Tecumseh**	**2.31**	**360**	Pn	**Pn**	**03 16 26.8**	**+0.7**
ABTX	**Abilene, Hawle**	**2.36**	**266**	Pn	**Pn**	**03 16 26.8**	**+0.1**
	baz=84,SNR=109						
ABTX				Pb	**Pb**	**03 16 30.7**	**+0.5**
	baz=84						
ABTX				Sn	**Sn**	**03 16 57.2**	**+1.1**
	baz=84						
ABTX				Sb	**Sb**	**03 17 00.6**	**+0.8**
	baz=84						
ABTX	**Abilene, Hawle**	**2.36**	**266**	Pn	**Pn**	**03 16 26.9**	**+0.1**
FNO	**Franklin**	**2.46**	**350**		**Pn**	**03 16 29.6**	**+1.6**
WMOK	**Wichita Mounta**	**2.48**	**320**	P	**Pn**	**03 16 29.4**	**+1.0**
	baz=140,SNR=108						
WMOK	**Wichita Mounta**	**2.48**	**320**		**Pn**	**03 16 29.3**	**+0.9**
OKCSW	**OKLAHOMA CITY**	**2.61**	**349**		**Pn**	**03 16 31.8**	**+1.7**
OKCFA	**Oklahoma City**	**2.62**	**349**		**Pb**	**03 16 33.2**	**-1.4**
OKCFA				IAmb_Lg		03 17 16.8	
	comp=Z,123nm,0.8s						
OK025	**Westminster Rd**	**2.77**	**352**		**Pn**	**03 16 32.9**	**+0.6**
OK025				IAmb_Lg		03 17 21.4	
	comp=Z,117nm,0.9s						
BCOK	**Bluff Creek, N**	**2.88**	**348**		**Pn**	**03 16 35.5**	**+1.7**
OK029	**Liberty Lake**	**2.99**	**351**		**Pn**	**03 16 36.2**	**+0.8**
HKT	**Hockley**	**3.01**	**163**	Pn	**Pn**	**03 16 37.0**	**+1.5**
OK030	**Cody Creek RV**	**3.08**	**1**		**Pn**	**03 16 37.2**	**+0.6**
OK031	**S. Brethren Rd**	**3.11**	**0**		**Pn**	**03 16 37.5**	**+0.6**
TUL1	**Leonard**	**3.19**	**16**	P	**Pn**	**03 16 39.0**	**+0.9**
	baz=197						
TUL1				S	**Sn**	**03 17 18.4**	**+1.8**
	baz=197						
TUL1	**Leonard**	**3.19**	**16**		**Pn**	**03 16 38.6**	**+0.5**
TUL1				IAmb_Lg		03 17 35.5	
	comp=Z,57nm,1.0s						
MIAR	**Mount Ida**	**3.22**	**57**	P	**Pn**	**03 16 39.2**	**+0.6**
	baz=239,SNR=9.3						
MIAR	**Mount Ida**	**3.22**	**57**	Pn	**Pn**	**03 16 39.0**	**+0.5**
WLAR	**White Oak Lake**	**3.25**	**74**	Pn	**Pn**	**03 16 39.8**	**+0.9**
QUOK	**Quay**	**3.33**	**2**		**Pn**	**03 16 40.7**	**+0.7**
Z41A	**Richland Creek**	**3.43**	**82**	P	**Pn**	**03 16 42.6**	**+1.3**
	baz=264,SNR=5.1						
Z41A				S	**Sn**	**03 17 22.7**	**+0.3**
	baz=264						
Z41A	**Richland Creek**	**3.43**	**82**		**Pn**	**03 16 42.7**	**+1.3**
JCT	**Junction City**	**3.44**	**228**	P	**Pn**	**03 16 42.1**	**+0.5**
	baz=46,SNR=17						
JCT				S	**Sn**	**03 17 23.2**	**+0.4**
	baz=46						
JCT	**Junction City**	**3.44**	**228**	Pn	**Pn**	**03 16 42.3**	**+0.7**
W39A	**Magazine**	**3.47**	**46**	P	**Pn**	**03 16 44.3**	**+2.4**
	baz=228,SNR=10						
W39A				S	**Sn**	**03 17 26.3**	**+2.8**
	baz=228						
W39A	**Magazine**	**3.47**	**46**		**Pn**	**03 16 43.2**	**+1.2**
W39A				IAmb_Lg		03 17 41.8	
	comp=Z,63nm,0.9s						
X40A	**Basin Creek Fa**	**3.74**	**63**	P	**Pn**	**03 16 46.4**	**+0.8**
	baz=245						
X40A	**Basin Creek Fa**	**3.74**	**63**		**Pn**	**03 16 46.1**	**+0.5**
441A	**DeRidder**	**3.75**	**123**	Pn	**Pn**	**03 16 47.1**	**+1.3**
CROK	**Carrier**	**3.77**	**346**	Pn	**Pn**	**03 16 46.3**	**+0.1**
U32A	**Winter Ranch,**	**3.95**	**334**		**Pn**	**03 16 49.2**	**+0.6**
U32A				IAmb_Lg		03 17 57.4	
	comp=Z,62nm,0.8s						
735A	**Kenedy**	**4.05**	**192**	IAmb_Lg		03 18 03.5	
	comp=Z,82nm,0.8s						
T35A	**Sooner Cattle**	**4.08**	**4**		**Pn**	**03 16 50.7**	**+0.4**
T35A				IAmb_Lg		03 18 00.1	
	comp=Z,82nm,1.0s						
GC02	**Grant County #**	**4.09**	**349**		**Pn**	**03 16 50.5**	**0.0**
U38A	**Gravette**	**4.13**	**29**		**Pn**	**03 16 51.6**	**+0.5**
U38A				IAmb_Lg		03 18 02.4	
	comp=Z,48nm,0.9s						
HHAR	**Hobbs**	**4.20**	**34**		**Pn**	**03 16 52.8**	**+0.9**
KAN13	**South Haven SW**	**4.20**	**353**	Pn	**Pn**	**03 16 52.6**	**+0.6**
KAN09	**Caldwell North**	**4.33**	**352**	Pn	**Pn**	**03 16 54.6**	**+0.7**
KAN09					**Sn**	**03 17 46.4**	**+1.8**
KAN05	**Bluff City Nor**	**4.34**	**349**	Pn	**Pn**	**03 16 54.5**	**+0.6**
KAN01	**Argonia South**	**4.37**	**350**	Pn	**Pn**	**03 16 54.9**	**+0.6**
CCAR	**Cane Creek**	**4.39**	**74**		**Pn**	**03 16 55.6**	**+1.1**
KAN10	**Anthony SW Sta**	**4.40**	**347**	Pn	**Pn**	**03 16 54.5**	**-0.2**
KAN10					LR	03 18 07.3	
KS20	**Mayfield South**	**4.42**	**353**	Pn	**Pn**	**03 16 55.0**	**0.0**
KAN08	**Anthony NE Sta**	**4.47**	**349**	Pn	**Pn**	**03 16 56.8**	**+1.0**
W41B	**Gary Mavity, V**	**4.48**	**57**	P	**Pn**	**03 16 57.2**	**+1.4**
	baz=240						
W41B				S	**Sn**	**03 17 48.1**	**-0.2**
	baz=240						
W41B	**Gary Mavity, V**	**4.48**	**57**		**Pn**	**03 16 57.3**	**+1.4**
AMTX	**Amarillo**	**4.50**	**298**	P	**Pn**	**03 16 57.2**	**+1.0**
	baz=116						
AMTX	**Amarillo**	**4.50**	**298**	Pn	**Pn**	**03 16 56.6**	**+0.3**
WHAR	**Wooly Hollow**	**4.51**	**56**	Pn	**Pn**	**03 16 58.0**	**+1.8**
KAN12	**Harper NE Stat**	**4.55**	**348**	Pn	**Pn**	**03 16 57.2**	**+0.4**
143A	**Socs Landing,**	**4.59**	**90**		**Pn**	**03 16 57.9**	**+0.5**
U40A	**Yellville**	**4.82**	**42**	P	**Pn**	**03 17 02.0**	**+1.5**
	baz=224,SNR=6.9						
U40A	**Yellville**	**4.82**	**42**		**Pn**	**03 17 01.9**	**+1.4**
FCAR	**Ozark Folk Cen**	**4.96**	**51**		**Pn**	**03 17 03.5**	**+1.1**
FCAR				IAmb_Lg		03 18 22.0	
	comp=Z,34nm,1.2s						
833A	**Chaparral WMA,**	**5.00**	**207**	P	**Pn**	**03 17 04.3**	**+1.2**
	baz=25						
833A				S	**Sn**	**03 18 00.9**	**-0.4**
	baz=25						
833A	**Chaparral WMA,**	**5.00**	**207**	Pn	**Pn**	**03 17 03.8**	**+0.7**
833A					LR	03 18 25.3	
833A				IAmb_Lg		03 18 36.9	
	comp=Z,64nm,1.0s						
MSTX	**Muleshoe**	**5.08**	**284**	P	**Pn**	**03 17 04.7**	**+0.6**
	baz=101,SNR=6.4						
MSTX				S	**Sn**	**03 18 03.3**	**0.0**
	baz=101						
MSTX	**Muleshoe**	**5.08**	**284**		**Pn**	**03 17 04.3**	**+0.1**
X43A	**Marvell**	**5.25**	**70**	S	**Sn**	**03 18 08.6**	**+1.2**
	baz=253						
X43A	**Marvell**	**5.25**	**70**	Pn	**Pn**	**03 17 07.8**	**+1.4**
344A	**Westbrook Farm**	**5.37**	**103**	Pn	**Pn**	**03 17 08.9**	**+0.8**
VBMS	**Vicksburg**	**5.39**	**95**	S	**Sn**	**03 18 11.4**	**+0.6**
	baz=278						
S39A	**Bolivar**	**5.64**	**30**	IAmb_Lg		03 18 58.6	
	comp=Z,31nm,0.8s						
LCAR	**Lake Charles**	**5.71**	**54**		**Pn**	**03 17 12.6**	**-0.1**
MGMO	**Mountain Grove**	**5.72**	**40**		**Pn**	**03 17 13.8**	**+0.9**
MGMO				IAmb_Lg		03 18 50.7	
	comp=Z,47nm,0.9s						
R32A	**Long Quarter,**	**5.77**	**345**	Pn	**Pn**	**03 17 14.0**	**+0.4**
R32A				IAmb_Lg		03 19 00.1	
	comp=Z,41nm,0.8s						
CPRX	**Cap Rock**	**5.90**	**274**	Pn	**Pn**	**03 17 15.7**	**+0.2**
CLNB	**Carlsbad**	**5.96**	**266**	Pn	**Pn**	**03 17 16.1**	**-0.2**
Y45A	**Yeager Farm, C**	**6.21**	**78**	Pn	**Pn**	**03 17 20.4**	**+0.9**
KSU1	**Kansas State U**	**6.25**	**2**	Pn	**Pn**	**03 17 21.5**	**+1.3**
KSU1				IAmb_Lg		03 19 23.2	
	comp=Z,36nm,0.8s						
T42A	**Van Buren**	**6.32**	**47**		**Pn**	**03 17 22.2**	**+1.1**
GDL2	**Guadalupe Moun**	**6.37**	**266**		**Pn**	**03 17 22.3**	**+0.3**
CBKS	**Cedar Bluff**	**6.41**	**339**	P	**Pn**	**03 17 22.3**	**-0.1**
	baz=158						
CBKS				S	**Sn**	**03 18 33.5**	**-2.5**
	baz=158						
CBKS	**Cedar Bluff**	**6.41**	**339**	Pn	**Pn**	**03 17 23.7**	**+1.4**
CBKS				IAmb_Lg		03 19 27.5	
	comp=Z,28nm,0.7s						
OXF	**Oxford**	**6.43**	**73**	Pn	**Pn**	**03 17 24.4**	**+1.8**
PBMO	**Poplar Bluff**	**6.59**	**52**		**Pn**	**03 17 25.8**	**+1.0**
R40A	**Maddies Statio**	**6.60**	**33**		**Pn**	**03 17 26.0**	**+1.1**
R40A				IAmb_Lg		03 19 25.5	
	comp=Z,28nm,0.9s						
W45A	**Hickory Valley**	**6.78**	**68**	Pn	**Pn**	**03 17 29.0**	**+1.7**
W45A				IAmb_Lg		03 19 18.7	
	comp=Z,29nm,0.7s						
TXAR	**Lajitas Array**	**6.80**	**241**	Pn	**Pn**	**03 17 27.7**	**-0.2**
TX31	**Lajitas Ar. Si**	**6.81**	**241**		**Pn**	**03 17 27.6**	**-0.3**
TX32	**Lajitas Array**	**6.81**	**241**		**Pn**	**03 17 27.6**	**-0.3**
CCM	**Cathedral Cave**	**6.93**	**40**	P	**Pn**	**03 17 30.8**	**+1.3**
	baz=223						
CCM	**Cathedral Cave**	**6.93**	**40**	Pn	**Pn**	**03 17 29.9**	**+0.3**
CCM					**Sn**	**03 18 50.0**	**+1.2**
CCM				IAmb_Lg		03 19 34.8	
	comp=Z,26nm,1.1s						
PARMO	**Parma**	**6.98**	**55**	Pn	**Pn**	**03 17 30.8**	**+0.6**
PARMO				IAmb_Lg		03 19 50.0	
	comp=Z,46nm,1.0s						
GLAT	**Glass**	**7.12**	**59**	Pn	**Pn**	**03 17 32.6**	**+0.6**
P38A	**Dawn**	**7.29**	**21**	IAmb_Lg		03 19 49.2	
	comp=Z,22nm,0.8s						
MNTX	**Cornudas Mount**	**7.31**	**263**	P	**Pn**	**03 17 34.6**	**-0.2**
	baz=79						
MNTX				S	**Sn**	**03 18 55.5**	**-2.6**
	baz=79						
MNTX	**Cornudas Mount**	**7.31**	**263**	Pn	**Pn**	**03 17 35.2**	**+0.5**
MNTX				IAmb_Lg		03 19 39.7	
	comp=Z,48nm,0.8s						
FVM	**French Village**	**7.34**	**44**	Pn	**Pn**	**03 17 36.1**	**+0.9**
FVM					**Sn**	**03 18 58.6**	**-0.3**
T25A	**Trinidad**	**7.54**	**307**	P	**Pn**	**03 17 38.8**	**+0.8**
	baz=123						
T25A				Sb	Sg	03 19 39.5	-10
	baz=123						
T25A	**Trinidad**	**7.54**	**307**		**Pn**	**03 17 38.6**	**+0.6**
PLAL	**Pickwick Lake**	**7.61**	**71**	Pn	**Pn**	**03 17 39.5**	**+0.8**
P40A	**Paris**	**7.73**	**29**	Pn	**Pn**	**03 17 42.4**	**+1.9**
KSCO	**Kaye Shed

E28A	Huff	19.48	72	P		P	03 29 46.2	-0.7
YKA	Yellowknife Ar	20.25	18	P		P	03 29 55.3	+0.1
	comp=Z,0.8nm,0.7s,baz=208,slow=10,SNR=3.0							
ILAR	Eielson Array	23.44	340	P		P	03 30 26.7	-2.4
	comp=Z,0.3nm,0.7s,baz=135,slow=7.9,SNR=2.6							
BPAW	Bear Paw Mtn.	24.05	335	P		P	03 30 35.5	+0.4
TXAR	Lajitas Array	24.30	119	P		P	03 30 39.5	+1.7
	comp=Z,0.2nm,0.8s,baz=301,slow=6.2,SNR=2.6							
T35A	Sooner Cattle	24.96	95	P		P	03 30 44.9	+1.3
OK030	Cody Creek RV	25.21	98	P		P	03 30 47.0	+1.2
H11N3	WAKE ISLAND Hy	58.67	268	T		T	04 38 29.3	
	baz=49,slow=75,SNR=34							
H11N2	WAKE ISLAND Hy	58.67	268	T		T	04 38 26.4	
	baz=49,slow=75,SNR=21							
H11N1	WAKE ISLAND Hy	58.68	268	T		T	04 38 27.7	
	baz=49,slow=75,SNR=20							
H11S1	WAKE ISLAND Hy	59.60	267	T		T	04 39 32.1	
	baz=50,slow=79							
H11S2	WAKE ISLAND Hy	59.60	267	T		T	04 39 31.3	
	baz=50,slow=79							
H11S3	WAKE ISLAND Hy	59.61	267	T		T	04 39 31.5	
	baz=50,slow=79							
SONM	Songino Array	76.84	326	P		P	03 37 11.9	-0.2
	comp=Z,0.4nm,0.4s,baz=56,slow=3.6,SNR=3.8							
SONM	Songino Array	76.84	326	IAmb		IAmb	03 37 15.0	
	comp=Z,1.1nm,1.0s							

IDC ***23*** *03:28:30.0±1.7, 2.°88N×126.°59E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/44, mbtmp3.7/5, Error ellipse: s-maj=106.3km s-min=23.6km az=68.0*

NEIC ***23*** *03:28:34.7±2.0, 2.°9N±0.°1×126.°24E±0.°10, h35km±2km, mb4.1/7, Error ellipse: s-maj=27.5km s-min=8.4km az=212.0*

ISC 23 03:28:35.4±1.0, 2.°8N±0.°1×126.°2E±0.°1, h35km, n16, σ1§08/16, mb3.9/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.33	150	Pn	Pn	03 29 12.7	+1.4
LUWI	Luwuk	5.14	222	Pn	Pn	03 29 49.8	-0.2
TOLI2	Tolitoli	5.68	253	Pn	Pn	03 29 58.5	+1.2
FITZ	Fitzroy Crossi	20.79	182	P	P	03 33 14.6	+0.9
	0.5nm,0.5s,baz=34,slow=7.3,SNR=3.3						
WB0	Warramunga Arr	23.84	161	P	P	03 33 44.4	-1.1
WB0				IAmb	IAmb	03 33 56.6	
	comp=Z,3.6nm,0.8s						
WRA	Warramunga Arr	23.98	161	P	P	03 33 45.5	-1.3
	comp=Z,1.3nm,0.4s,baz=340,slow=10,SNR=28						
WRA	Warramunga Arr	23.98	161	P	P	03 33 46.3	-0.6
WR0	Warramunga Arr	24.06	160	P	P	03 33 47.2	-0.4
WR0				IAmb	IAmb	03 34 13.1	
	comp=Z,9.0nm,1.4s						
ASAR	Alice Springs	27.36	165	P	P	03 34 17.1	-0.4
	comp=Z,0.4nm,0.3s,baz=342,slow=10,SNR=12						
STKA	Stephens Creek	37.47	158	P	P	03 35 44.6	-1.0
	comp=Z,1.2nm,0.3s,baz=338,slow=9.9,SNR=3.8						
MK31	Makanchi Array	58.01	326	P	P	03 38 23.6	-1.2
MK31				IAmb	IAmb	03 38 46.8	
	comp=Z,5.8nm,1.4s						
MKAR	Makanchi Array	58.01	326	P	P	03 38 25.6	+0.8
	comp=Z,0.3nm,0.4s,baz=116,slow=7.7,SNR=5.3						
MKAR	Makanchi Array	58.01	326	P	P	03 38 23.9	-0.9
NIL	Nilore	58.08	308	P	P	03 38 26.2	+0.7
MAKZ	Makanchi	58.20	326	P	P	03 38 24.4	-1.7
ZAA0	Zalesovo Array	61.17	334	P	P	03 38 46.9	+0.5

IDC ***23*** *03:31:50.2±1.6, 3.°09N×127.°26E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/46, mbtmp3.6/6, MS3.3/4, Ms1 3.3/4, ms1mx2.7/42, Error ellipse: s-maj=105.0km s-min=22.6km az=68.0*

ISC 23 03:31:56.8±1.6, 3.°1N±0.°3×127.°3E±0.°6, h49km, n10, σ0§53/6, mb3.5/6, MS3.6/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	4.30	336	LR	LR	03 35 02.6	
	comp=Z,109nm,18.2s,baz=118,slow=45						
FITZ	Fitzroy Crossi	21.14	184	P	P	03 36 37.7	-0.1
	1.4nm,0.8s,baz=4.8,slow=12,SNR=2.4						
WRA	Warramunga Arr	23.92	164	P	P	03 37 05.7	-0.7
	1.7nm,0.7s,baz=342,slow=10,SNR=16						
ASAR	Alice Springs	27.38	167	P	P	03 37 37.4	-0.3
	0.5nm,0.5s,baz=348,slow=7.7,SNR=9.4						
HNR	Honiara	34.80	111	LR	LR	03 53 26.2	
	comp=Z,22nm,19.2s,baz=332,slow=37						
STKA	Stephens Creek	37.34	160	P	P	03 39 05.2	+0.5
	1.5nm,0.6s,baz=328,slow=13,SNR=4.7						
SONM	Songino Array	48.07	341	LR	LR	04 02 29.8	
	comp=Z,162nm,19.7s,baz=40,slow=38						
MKAR	Makanchi Array	58.40	325	P	P	03 41 47.4	0.0
	0.6nm,0.8s,baz=123,slow=7.9,SNR=4.1						
ZALV	Zalesovo Beam	61.41	333	LR	LR	04 09 13.2	
	comp=Z,40nm,18.2s,baz=61,slow=36						
VNDA	Vanda	82.74	173	P	P	03 44 14.8	-0.1
	0.1nm,0.4s,baz=315,slow=4.3,SNR=2.1						

IDC ***23*** *03:35:42.9±1.3, 43.°84N×128.°50W, h0km, mb3.7/6, mb1 3.8/9, mb1mx3.6/59, mbtmp3.6/9, ML3.4/2, MS3.4/9, Ms1 3.4/9, ms1mx3.1/47, Error ellipse: s-maj=30.2km s-min=16.8km az=31.0*

NEIC ***23*** *03:35:45.5±2.3, 43.°85N±0.°08×128.°3W±0.°1, h10km±2km, mb4.2/45, Error ellipse: s-maj=18.4km s-min=13.0km az=247.0*

ISC 23 03:35:45.3±1.0, 43.°9N±0.°1×128.°4W±0.°1, h13km, n110, σ1§41/97, mb4.2/11, MS3.4/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	3.12	107	Pn	Pn	03 36 33.1	-1.2
HUMO	Hull Mountain	4.17	105		Pn	03 36 47.1	-1.5
E03A	Lebam	4.35	50	Pn	Pn	03 36 50.6	-0.5
YBH	Yreka Blue Hor	4.69	115	LR	LR	03 38 18.1	
	comp=Z,194nm,20.9s,baz=326,slow=33						
F04A	Amboy	4.73	62	Pn	Pn	03 36 55.4	-0.9
NLWA	Neilton Lookou	4.76	40	Pn	Pn	03 36 57.2	+0.5
PINE	Pine Mountain	5.40	88	Pn	Pn	03 37 04.8	-0.9
WDC	Whiskeytown Da	5.44	125	Pn	Pn	03 37 06.4	+0.3
LON	Longmire	5.48	56		Pn	03 37 06.4	-0.3
D05A	Enumclaw	5.51	51		Pn	03 37 06.8	-1.5
LTY	Liberty	6.41	55		Pn	03 37 18.2	-1.2
E07A	Sunnyside	6.62	63		Pn	03 37 20.8	-1.4
ORV	Oroville	6.71	127	Pn	Pn	03 37 21.4	-2.1
HAWA	Hanford	6.77	65	Pn	Pn	03 37 24.1	-0.1
G08A	Pilot Rock	6.90	75	Pn	Pn	03 37 25.6	-0.5
E08A	Dider Farm, El	7.11	65		Pn	03 37 28.4	-0.6
J08A	Circle Bar Ran	7.22	90	Pn	Pn	03 37 30.9	+0.3
D08A	Wollman Farm,	7.40	61	Pn	Pn	03 37 33.1	+0.2
AFDM	Forest Hills D	7.43	129	Pn	Pn	03 37 33.9	+0.5
PAHR	Pah Rah Range	7.91	118	Pn	Pn	03 37 38.4	-1.7
BMO	Blue Mountains	8.02	79	Pn	Pn	03 37 40.7	-0.8
C09A	Chrisman Ranch	8.10	57	Pn	Pn	03 37 43.5	+0.9
PNTR	Pine Nut	8.14	123	Pn	Pn	03 37 42.9	-0.4
F10A	Beach Ranch, E	8.21	71	Pn	Pn	03 37 41.9	-2.3
CMB	Columbia Colle	8.40	131	Pn	Pn	03 37 49.6	+2.9
WAKR	Walker	8.61	125	Pn	Pn	03 37 51.8	+2.1
SAO	San Andreas Ge	8.85	141	Pn	Pn	03 37 51.2	-1.6
NEW	Newport	9.00	57	Pn	Pn	03 37 55.5	+0.7
	0.1nm,0.3s,baz=233,slow=15,SNR=2.7						
NEW				LR	LR	03 41 29.4	
	comp=Z,149nm,18.2s,baz=234,slow=38						
RYN	Ryan	9.09	122	Pn	Pn	03 37 56.5	+0.2
NVAR	Mina Array Bea	9.34	122	Pn	Pn	03 38 01.7	+1.9
	0.4nm,0.3s,baz=299,slow=13,SNR=4.6						
NVAR				LR	LR	03 41 36.8	
	comp=Z,198nm,21.0s,baz=268,slow=37						
MDPB	Devils Postpil	9.41	128	Pn	Pn	03 38 02.6	+1.8
NV11	Mina Array Sit	9.43	122	Pn	Pn	03 38 00.9	-0.1
OMMB	Old Mammoth Mi	9.47	128	Pn	Pn	03 38 03.1	+1.4
ELK	Elko	10.23	103	LR	LR	03 42 17.1	
	comp=Z,252nm,18.7s,baz=317,slow=38						
ISA	Isabella, Lake	11.18	134	Pn	Pn	03 38 24.2	-0.6
LRM	Limekiln Ridge	11.50	75	Pn	Pn	03 38 29.1	-0.3
PSUT	Pine Spring	12.17	111	Pn	Pn	03 38 39.4	+0.9
QLMT	Earthquake Lak	12.20	79	Pn	Pn	03 38 37.8	-1.0
GSC	Goldstone, Bar	12.36	130	Pn	Pn	03 38 39.4	-1.5
SHPR	Sheep Range	12.49	121	Pn	Pn	03 38 43.3	+0.4
PASC	Pasadena Art C	12.50	137	Pn	Pn	03 38 41.6	-1.3
SNCC	San Nicolas Is	12.65	144	Pn	Pn	03 38 43.8	-1.1
YUF	Upper Falls	12.85	80	Pn	Pn	03 38 47.4	-0.5
MSU	Marysvale	13.33	108	Pn	Pn	03 38 53.9	-0.4
PD31	Pinedale Array	13.77	88	Pn	Pn	03 38 58.4	-1.9
PDAR	Pinedale Array	13.77	88	Pn	Pn	03 39 04.1	+3.8
	baz=234,slow=12,SNR=2.6						
PDAR				LR	LR	03 44 33.0	
	comp=Z,240nm,19.1s,baz=271,slow=38						
PDAR	Pinedale Array	13.77	88	Pn	Pn	03 38 59.5	-0.8
GLA	Glamis	15.12	131	Pn	Pn	03 39 19.0	+0.4
GLA				IAmb	IAmb	03 39 32.0	
	comp=Z,8.2nm,0.9s						
WUAZ	Wupatki	15.51	117	Pn	Pn	03 39 23.1	-0.7
WUAZ				IAmb	IAmb	03 39 44.5	
	comp=Z,33nm,1.6s						
Y14A	Wickenburg	15.52	124	Pn	Pn	03 39 22.9	-0.9
PV20	West Nyswonger	15.64	104	Pn	Pn	03 39 23.9	-1.6
PV17	East Wray Mesa	15.67	104	Pn	Pn	03 39 22.2	-3.7
PV17				IAmb	IAmb	03 39 37.0	
	comp=Z,7.0nm,0.6s						
PV07	Paradox Valley	15.82	103	Pn	Pn	03 39 27.6	-0.3
X16A	Lo Mia Camp, P	16.16	120	Pn	Pn	03 39 32.8	+0.6
SMCO	Snowmass	16.70	99	Pn	Pn	03 39 37.4	-2.0
SMCO				IAmb	IAmb	03 39 44.2	
	comp=Z,16nm,0.8s						
W18A	Petrified Fore	16.82	115	Pn	Pn	03 39 38.1	-2.5
W18A				IAmb	IAmb	03 40 27.5	
	comp=Z,13nm,0.9s						
N23A	Red Feather La	16.85	92	Pn	Pn	03 39 40.8	-0.3
N23A				IAmb	IAmb	03 39 51.2	
	comp=Z,21nm,1.4s						
TUC	Tucson	17.99	124		P	03 39 55.0	-0.6
Q24A	Divide	18.09	98		P	03 39 56.5	-0.4
SDCO	Great Sand Dun	18.35	102	Pn	Pn	03 39 57.8	-1.9
SDCO				IAmb	IAmb	03 40 08.3	
	comp=Z,20nm,1.4s						
ANMO	Albuquerque	19.11	110	P	Pn	03 40 10.8	+2.1
	comp=Z,0.1nm,0.3s,baz=342,slow=9.6,SNR=3.5						
ANMO	Albuquerque	19.11	110	P	Pn	03 40 12.4	+3.6
T25A	Trinidad	19.40	102	P	P	03 40 10.7	-0.5
T25A				IAmb	IAmb	03 40 36.7	
	comp=Z,20nm,1.3s						
BNM	Barren Site	19.45	112	P	P	03 40 11.2	-0.6
319A	Douglas	19.55	123	P	P	03 40 12.9	+0.2
FFC	Flin Flon	20.25	48	P	Pn	03 40 21.7	-0.4
FFC				IAmb	IAmb	03 40 29.8	
	comp=Z,12nm,0.8s						
YKA	Yellowknife Ar	20.34	19	P	Pn	03 40 22.2	-0.8
	comp=Z,4.2nm,0.8s,baz=207,slow=10,SNR=6.6						
MENT	Mentasta	21.08	340	P	P	03 40 37.2	+8.1
MENT				IAmb	IAmb	03 40 41.4	
	comp=Z,15nm,1.2s						
K31A	O'Neill	21.59	83	P	P	03 40 34.8	+0.1
DOT	Dot Lake	21.77	341	P	P	03 40 37.4	+0.9
DOT				IAmb	IAmb	03 40 45.7	
	comp=Z,13nm,1.3s						
CBKS	Cedar Bluff	22.05	93	P	P	03 40 39.0	-0.6
DHY	Denali Highway	22.16	337	P	P	03 40 41.8	+1.0
D32A	Dogwood Acres,	22.17	70	P	P	03 40 39.9	-0.9
D32A				IAmb	IAmb	03 40 55.3	
	comp=Z,14nm,0.9s						
AMTX	Amarillo	22.44	104	P	P	03 40 46.2	+2.3
AMTX				IAmb	IAmb	03 40 56.4	
	comp=Z,14nm,1.1s						
ECSD	EROS Data Cent	22.88	79	P	P	03 40 49.1	+0.7
ECSD				IAmb	IAmb	03 40 57.7	
	comp=Z,8.4nm,0.9s						
ULM	Lac du Bonnet	22.94	62	P	P	03 40 49.7	+0.7
	comp=Z,4.3nm,0.9s,baz=300,slow=8.1,SNR=3.5						
ULM				LR	LR	03 50 28.6	
	comp=Z,94nm,18.4s,baz=227,slow=38						
IL31		23.39	340	P	P	03 40 53.5	+0.1
IL31				IAmb	IAmb	03 40 54.5	
	comp=Z,14nm,1.4s						
ILAR	Eielson Array	23.39	340	P	P	03 40 53.3	-0.2
	comp=Z,0.9nm,0.9s,baz=154,slow=8.5,SNR=7.5						
ILAR				PcP	PcP	03 44 37.9	-1.7
	comp=Z,0.6nm,0.8s,baz=178,slow=1.8,SNR=4.6						
L34A	Svendsen Farm,	23.46	83	P	P	03 40 53.7	-0.6
U32A	Winter Ranch,	23.60	98	P	P	03 40 55.3	-0.6
CROK	Carrier	24.28	97	P	P	03 41 01.9	-0.2
TX31	Lajitas Ar. Si	24.46	118	P	P	03 41 06.8	+2.8
TXAR	Lajitas Array	24.46	118	P	P	03 41 05.1	+1.1
	comp=Z,0.7nm,0.8s,baz=296,slow=8.4,SNR=9.2						
TXAR				LR	LR	03 52 25.1	
	comp=Z,59nm,19.0s,baz=0.0,slow=41						
TXAR	Lajitas Array	24.46	118	P	P	03 41 04.4	+0.4
WMOK	Wichita Mounta	24.56	102	P	P	03 41 07.5	+2.7
BCOK	Bluff Creek, N	24.94	99	P	P	03 41 08.6	+0.4
OK029	Liberty Lake	24.98	98	P	P	03 41 10.3	+1.8
T35A	Sooner Cattle	25.15	95	P	P	03 41 12.2	+2.1
BMAR	Burnt Mountain	25.17	345	P	P	03 41 11.3	+1.3
OKCFA	Oklahoma City	25.17	99	P	P	03 41 09.2	-1.1
OK025	Westminster Rd	25.17	99	P	P	03 41 13.3	+3.0
FNO	Franklin	25.28	99	P	P	03 41 10.2	-1.1
QUOK	Quay	25.34	97	P	P	03 41 11.7	-0.2
OK031	S. Brethren Rd	25.35	97	P	P	03 41 13.5	+1.6
IMAR	Indian Mountai	26.17	337	P	P	03 41 19.8	+0.8
435B	Jarrell	27.59	108	P	P	03 41 32.2	0.0
OXF	Oxford	31.38	94	P	P	03 42 07.6	+1.8
BLO	Bloomington	31.46	84	P	P	03 42 07.0	+0.7
MEDO	Medina	35.79	73	P	P	03 42 44.6	+0.6
H11N3	WAKE ISLAND Hy	58.47	268	T	T	04 48 53.3	
	baz=49,slow=75,SNR=64						
H11N2	WAKE ISLAND Hy	58.47	268	T	T	04 48 53.8	
	baz=49,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	58.49	268	T	T	04 48 54.4	
	baz=49,slow=75,SNR=53						
H11S1	WAKE ISLAND Hy	59.40	267	T	T	04 50 00.8	
	baz=50,slow=75,SNR=35						
H11S2	WAKE ISLAND Hy	59.41	267	T	T	04 50 00.3	
	baz=50,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	59.42	267	T	T	04 50 02.9	
	baz=50,slow=75,SNR=26						
ROSC	El Rosal	61.26	113	LR	LR	04 14 55.7	
	comp=Z,42nm,20.2s,baz=68,slow=38						
SONM	Songino Array	76.75	326	P	P	03 47 36.0	-0.4
	comp=Z,1.5nm,1.0s,baz=35,slow=5.4,SNR=5.8						
SONM	Songino Array	76.75	326	IAmb	IAmb	03 47 36.5	
	comp=Z,1.6nm,1.0s						
KURBB	Kurchatov Arra	83.03	343	P	P	03 48 09.2	-0.8
	comp=Z,0.6nm,0.8s,baz=18,slow=4.7,SNR=3.7						
BDFB	Brasilia	93.93	108	LR	LR	04 35 45.6	
	comp=Z,43nm,18.0s,baz=122,slow=38						

NEIC ***23*** *03:44:55.9±2.3, 14.°92S±0.°09×167.°4E±0.°1, h121km±6km, mb4.3/20, Error ellipse: s-maj=21.0km s-min=13.6km az=87.0*

IDC ***23*** *03:44:56.4±3.3, 14.°89S×167.°35E, h130km±28km, mb4.1/15, mb1 4.1/16, mb1mx3.9/51, mbtmp4.5/16, Error ellipse: s-maj=21.2km s-min=14.3km az=61.0*

ISC 23 03:44:56.6±0.5, 14.°94S±0.°06×167.°4E±0.°1, h129km, n54, σ1§18/56, mb4.4/19, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	Saraoutou	0.53	198	Pn	Pn	03 45 14.1	-1.6
DZM	Mont Dzumac	7.15	187	P	Pn	03 46 39.3	+0.7
	9.2nm,0.3s,baz=326,slow=7.1,SNR=45						
DZM				S	Sn	03 47 58.4	-0.1
	1.5nm,0.3s,baz=323,slow=20,SNR=2.7						
DZM	Mont Dzumac	7.15	187	Pn	Pn	03 46 38.5	-0.1
HNR	Honiara	9.09	306	Pn	Pn	03 47 05.4	+0.6
TARA	Tarawa	17.10	19	P	P	03 48 46.2	-1.3
EIDS	Eidsvold	18.46	233	P	Pn	03 49 03.4	-0.7
PMG	Port Moresby	20.50	283	P	P	03 49 25.2	+0.6
	7.5nm,0.6s,baz=138,slow=16,SNR=2.2						
CTA	Charters Tower	20.77	253	P	P	03 49 28.5	+1.0
	14nm,0.7s,baz=84,slow=12,SNR=20						
CTAO	Charters Tower	20.77	253	P	P	03 49 27.9	+0.4
CTAO				IAmb	IAmb	03 49 29.5	
	comp=Z,16nm,0.8s						
OUZ	Omahuta	20.95	166	P	P	03 49 31.3	+2.0
OUZ				IAmb	IAmb	03 49 32.5	
	comp=Z,15nm,0.8s						
URZ	Urewera	24.77	161	P	P	03 50 06.8	+0.5
	comp=Z,8.6nm,0.5s,baz=279,slow=2.5,SNR=8.6						
BKZ	Black Stump Fm	25.43	163	P	P	03 50 12.3	0.0
LTZ	Lake Taylor	28.06	172	P	P	03 50 36.3	+0.4
RPZ	Rata Peaks	28.85	174	P	P	03 50 43.6	+0.8
	comp=Z,12nm,0.8s,baz=344,slow=3.6,SNR=5.2						
RPZ	Rata Peaks	28.85	174	IAmb	IAmb	03 50 44.6	
	comp=Z,29nm,1.1s						
STKA	Stephens Creek	28.93	230	P	P	03 50 44.7	+1.0
	comp=Z,6.8nm,0.6s,baz=40,slow=8.1,SNR=26						
STKA				PcP	PcP	03 53 49.5	-0.2
	comp=Z,1.8nm,0.7s,baz=99,slow=2.9,SNR=3.7						
STKA	Stephens Creek	28.93	230	P	P	03 50 45.1	+1.4
WB0	Warramunga Arr	31.81	257	P	P	03 51 08.2	-1.0
WB0				IAmb	IAmb	03 51 09.2	
	comp=Z,4.5nm,1.0s						
WRA	Warramunga Arr	31.87	256	P	P	03 51 07.8	-2.0
	comp=Z,1.2nm,0.6s,baz=85,slow=9.1,SNR=24						
WRA				PcP	PcP	03 53 57.4	-0.2
	comp=Z,0.9nm,1.0s,baz=75,slow=3.1,SNR=5.1						
AS31	Alice Springs	32.69	249	P	P	03 51 15.7	-1.2
ASAR	Alice Springs	32.69	249	P	P	03 51 15.0	-1.9
	comp=Z,4.4nm,0.7s,baz=78,slow=8.9,SNR=90						
ASAR				PcP	PcP	03 53 58.6	-1.2
	comp=Z,0.5nm,0.6s,baz=85,slow=2.5,SNR=5.3						
ASAR	Alice Springs	32.69	249	P	P	03 51 14.9	-1.9
FITZ	Fitzroy Crossi	40.07	260	P	P	03 52 18.9	-0.8
FITZ				IAmb	IAmb	03 52 19.5	
	comp=Z,3.6nm,0.7s						
MAJO	Matsushiro	58.14	332	P	P	03 54 39.9	+3.1
MJB9	Matsu-Tunnel	58.14	332	P	P	03 54 36.2	-0.6
VNDA	Vanda	62.66	181	P	P	03 55 07.2	+0.3
	comp=Z,2.4nm,0.5s,baz=353,slow=7.7,SNR=19						
VNDA	Vanda	62.66	181	P	P	03 55 07.3	+0.3
VNDA				IAmb	IAmb	03 55 08.9	
	comp=Z,3.1nm,0.7s						
PETK	Petropavlovsk-	68.28	354	P	P	03 55 43.4	+0.1
	comp=Z,3.2nm,0.8s,baz=152,slow=6.5,SNR=3.6						
KLR	Kul'dur	71.24	336	P	P	03 56 02.8	+1.2
	comp=Z,1.0nm,0.6s,baz=126,slow=7.5,SNR=3.9						
QSPA	South Pole Qui	75.09	180	P	P	03 56 23.9	-0.3
	comp=Z,8.2nm,0.8s,baz=333,slow=0.5,SNR=23						
QSPA	South Pole Qui	75.09	180	P	P	03 56 23.9	-0.3
HHC	Hu-ho-hao-te	75.81	320	*eP*	P	03 56 28.6	0.0
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,59nm,5.9s						
LZH	Lanzhou	78.53	312	*eP*	P	03 56 45.3	+1.3
LZH				pP	pP	03 57 18.3	+2.2
LZH				sP	sP	03 57 30.8	+1.1
LZH				pmax	pmax		
	comp=Z,14nm,1.5s						
LZH				pmax	pmax		
	comp=Z,79nm,4.9s						
YAK	Yakutsk	82.26	343	P	P	03 57 02.8	-0.4
ULN	Ulaanbaatar	82.36	324	P	P	03 57 05.5	+1.3
ULN				IAmb	IAmb	03 57 06.8	
	comp=Z,3.8nm,1.1s						
SONM	Songino Array	82.72	324	P	P	03 57 06.2	+0.1
	comp=Z,0.7nm,0.5s,baz=138,slow=6.2,SNR=4.5						
SONM	Songino Array	82.72	324	P	P	03 57 07.1	+1.0
RAGM	Ragged Mountai	84.31	22	P	P	03 57 14.2	+0.5
ILAR	Eielson Array	86.69	18	P	P	03 57 23.1	-2.4
	comp=Z,1.4nm,0.7s,baz=242,slow=4.8,SNR=12						
WMQ	Urumqi	92.94	315	*eP*	P	03 57 56.9	+1.6
SNAA	Sanae	93.34	183	P	P	03 57 55.3	-1.4
VNA3	Neumayer Olymp	94.01	181	P	P	03 57 58.6	-1.1
VNA2	Neumayer--Watz	94.27	182	P	P	03 58 00.0	-0.9
PDAR	Pinedale Array	95.02	47	P	P	03 58 07.5	+2.5
	comp=Z,0.1nm,0.3s,baz=270,slow=1.8,SNR=2.7						
MKAR	Makanchi Array	97.42	316	P	P	03 58 15.1	-0.5
	comp=Z,0.8nm,0.6s,baz=86,slow=7.2,SNR=5.7						
ZALV	Zalesovo Beam	97.62	324	P	P	03 58 14.5	-1.8
	comp=Z,0.7nm,0.5s,baz=103,slow=10,SNR=3.4						
ARCES	ARCESS Array B	120.48	345	PKP	PKPdf	04 03 31.4	-0.9
	comp=Z,1.0nm,0.4s,baz=86,slow=2.4,SNR=14						
BOSA	Boshof	123.28	220	PKP	PKiKP	04 03 39.8	+0.4
	comp=Z,2.9nm,1.0s,baz=121,slow=5.9,SNR=3.3						
FINES	FINESS Array B	125.95	338	PKP	PKPdf	04 03 42.4	-0.6
	comp=Z,2.4nm,1.1s,baz=27,slow=1.4,SNR=7.1						
FINES	FINESS Array B	125.95	338		PKPdf	04 03 41.7	-1.2
NOA	NORSAR Array B	130.85	345	PKP	PKPdf	04 03 51.4	-0.9
	comp=Z,0.4nm,0.6s,baz=43,slow=2.4,SNR=2.4						
GERES	GERESS Array B	139.88	333	PKhKP	PKPpre	04 04 05.6	
	comp=Z,0.3nm,0.7s,baz=48,slow=2.0,SNR=3.5						
KEST	Kesra	151.44	320	PKPbc	PKPbc	04 04 35.2	-0.5
	comp=Z,2.9nm,0.8s,baz=99,slow=6.3,SNR=7.5						
TORD	Torodi Ar. Bea	165.99	264	PKPab	PKPab	04 05 47.4	-0.6
	comp=Z,0.5nm,0.7s,baz=92,slow=4.2,SNR=2.6						

MOS ***23*** *03:46:36.9±1.2, 36.°57N×137.°98E, h20km, mb4.4/

comp=E,400nm,11.0s
KLR Kul'dur 13.37 342 Pn **Pn** 03 49 50.6 +3.0
comp=E,0.2nm,0.3s,baz=145,slow=12,SNR=6.4
KLR LR LR 03 54 42.7
comp=E,286nm,18.7s,baz=155,slow=36
SSE Sheshan 14.96 253 P **Pn** 03 50 08.6 -0.8
SSE S **Sn** 03 52 55.1 0.0
SSE pmax pmax
comp=Z,19nm,0.7s
SSE LR LR
comp=N,270nm,15.6s
SSE LR LR
comp=E,320nm,12.2s
HIA Hailar 18.28 319 *i* P **Pn** 03 50 50.8 -0.8
HIA pmax pmax
comp=Z,14nm,1.5s
ZEA Zeya 18.64 340 *e*P **Pn** 03 50 58.0 +2.0
ZEA MLR MLR
comp=E,100nm,14.0s
ZEA MLR MLR
comp=N,100nm,19.0s
ZEA MLR MLR
comp=Z,100nm,16.0s
HHC Hu-ho-hao-te 20.95 290 *e*P Pn 03 51 23.5 -0.2
HHC S **S** 03 55 17.3 +2.7
HHC pmax pmax
comp=Z,12nm,0.7s
HHC pmax pmax
comp=Z,73nm,5.5s
HHC LR LR
comp=N,170nm,8.5s
HHC LR LR
comp=E,280nm,8.5s
HHC LR LR
comp=Z,300nm,9.4s
PETK Petropavlovsk- 21.51 34 LR LR 03 59 59.0
comp=Z,170nm,19.0s,baz=228,slow=37
XAN Xi'an 23.76 272 P **P** 03 51 50.1 -0.5
XAN S **S** 03 55 57.6 -8.4
XAN pmax pmax
comp=Z,5.0nm,1.2s
XAN LR LR
comp=N,330nm,11.6s
XAN LR LR
comp=E,280nm,12.2s
XAN LR LR
comp=Z,310nm,12.3s
GUMO Guam 23.78 163 LR LR 04 00 50.8
comp=Z,103nm,18.0s,baz=34,slow=36
MA2 Magadan 24.42 16 LR LR 04 01 11.8
comp=Z,98nm,19.9s,baz=239,slow=36
ULN Ulaanbaatar 25.29 306 P **P** 03 52 05.7 +1.1
ULN pmax pmax
comp=Z,12nm,1.7s
ULN Ulaanbaatar 25.29 306 P **P** 03 52 05.7 +1.1
ULN IAmb IAmb 03 52 38.7
comp=Z,12nm,1.7s
SONM Songino Array 25.71 306 P **P** 03 52 08.7 +0.3
comp=Z,1.9nm,0.9s,baz=108,slow=10,SNR=6.9
SONM Songino Array 25.71 306 P **P** 03 52 09.6 +1.2
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 25.71 306 P **P** 03 52 09.6 +1.2
YAK Yakutsk 25.94 351 *i* P **P** 03 52 10.9 +0.8
YAK pmax pmax
comp=Z,7.0nm,0.9s
LZH Lanzhou 27.37 279 *e*P **P** 03 52 24.6 +1.1
LZH pP sP 03 52 29.4 +1.2
LZH sP pP 03 52 31.3 +4.5
LZH pmax pmax
comp=Z,18nm,1.6s
LZH pmax pmax
comp=Z,62nm,4.6s
LZH LR LR
comp=N,240nm,16.4s
LZH LR LR
comp=E,330nm,16.5s
LZH LR LR
comp=Z,320nm,17.7s
GYA Guiyang 28.39 258⇓ *e*P **P** 03 52 34.9 +2.2
GYA pmax pmax
comp=Z,8.0nm,0.5s
GYA LR LR
comp=N,150nm,7.6s
GYA LR LR
comp=E,240nm,15.1s
GYA LR LR
comp=Z,270nm,13.1s
QIZ Qiongzhong 30.24 242 P **P** 03 52 48.9 -0.1
QIZ S **S** 03 57 49.6 +1.0
QIZ LR LR
comp=N,200nm,12.4s
QIZ LR LR
comp=E,260nm,16.8s
QIZ LR LR
comp=Z,210nm,14.6s
DAV Davao City (W) 31.51 204 LR LR 04 05 42.0
comp=Z,102nm,19.0s,baz=36,slow=36
BILL Bilibino 35.24 18 *e*P **P** 03 53 32.5 +0.3
BILL *e* 03 54 50.0
BILL *e*PPP PPP 03 55 04.5
BILL pmax pmax
comp=Z,5.0nm,1.4s
SIJI Sorong 37.83 191 LR LR 04 08 14.3
comp=Z,83nm,21.0s,baz=140,slow=34
WMQ Urumqi 38.52 297 *e*P **P** 03 54 02.1 +1.6
CMAR Chiang Mai Arr 38.70 253 LR LR 04 11 36.0
comp=Z,120nm,18.3s,baz=136,slow=39
MKAR Makanchi Array 41.95 302 P **P** 03 54 29.2 +0.3
comp=Z,0.7nm,0.8s,baz=80,slow=10,SNR=3.1
MKAR LR LR 04 12 00.5
comp=Z,61nm,21.7s,baz=80,slow=36
NRIK Noril'sk 42.48 336 *i* P **P** 03 54 31.8 -1.0
NRIK pmax pmax
comp=Z,2.0nm,0.9s
KURK Kurchatov 43.97 308 P **P** 03 54 45.9 +0.8
KURK Kurchatov 43.97 308 P **P** 03 54 45.3 +0.2
KURK IAmb IAmb 03 54 46.7
comp=Z,5.5nm,1.2s
KURBB Kurchatov Arra 44.04 308 P **P** 03 54 45.9 +0.2
comp=Z,1.4nm,0.8s,baz=84,slow=8.7,SNR=5.8
AAK Ala-Archa 48.20 298 *i* P **P** 03 55 17.2 -1.6
AAK pmax pmax
comp=Z,4.0nm,1.1s
BRVK Borovoye 48.82 312 *i* P **P** 03 55 23.0 -0.2
BRVK pmax pmax
comp=Z,2.0nm,1.0s
KK31 Karatay Array 50.89 299 P **P** 03 55 40.7 +1.6
KK31 pmax pmax
comp=Z,2.0nm,0.9s
KK31 Karatay Array 50.89 299 P **P** 03 55 40.7 +1.6
KKAR Karatay Array 50.89 299 P **P** 03 55 40.7 +1.6
KKAR Karatay Array 50.89 299 P **P** 03 55 40.7 +1.6
COLA College 50.90 32 *i* P **P** 03 55 39.1 +0.3
COLA pmax pmax
comp=Z,3.0nm,1.1s
ILAR Eielson Array 51.32 32 P **P** 03 55 40.9 -1.2
comp=Z,0.8nm,0.8s,baz=273,slow=5.7,SNR=9.7
NIL Nilore 52.07 287 P **P** 03 55 49.0 +0.9
NIL pmax pmax
comp=Z,5.0nm,0.6s
NIL Nilore 52.07 287 P **P** 03 55 49.0 +0.9
CHGR Chuyangaron 53.29 294 P **P** 03 55 58.8 +1.7
BCAR Beaver Creek A 53.79 34 P **P** 03 55 59.0 -1.3
ARU Arti 54.79 318*c* *i* P **P** 03 56 07.1 -0.6
ARU 03 58 07.2
ARU S **S** 04 03 50.3 +2.0
ARU SS **SS** 04 07 29.9 -1.0
ARU pmax pmax
comp=Z,10.0nm,1.8s
ABKAR Akbulak array 56.04 309 P **P** 03 56 16.6 -0.2
WRAB Tennant Creek 56.36 184 P **P** 03 56 17.8 -1.5
WRAB pmax pmax
comp=Z,5.0nm,1.1s
WRAB Tennant Creek 56.36 184 P **P** 03 56 17.8 -1.5
WRAB IAmb IAmb 03 58 06.3
comp=Z,5.1nm,1.1s
WB2 Warramunga Arr 56.37 184 P **P** 03 56 19.8 +0.4
WRA Warramunga Arr 56.37 184 P **P** 03 56 17.7 -1.7
comp=Z,0.9nm,0.5s,baz=0.1,slow=7.7,SNR=21
WRA Warramunga Arr 56.37 184 P **P** 03 56 18.1 -1.3
WRA Warramunga Arr 56.37 184 P **P** 03 56 18.1 -1.3
AKTO Aktyubinsk 56.84 311 LR LR 04 22 01.1
comp=Z,42nm,21.9s,baz=63,slow=37
ASAR Alice Springs 60.10 184 P **P** 03 56 44.4 -1.0
comp=Z,0.7nm,0.7s,baz=2.9,slow=7.4,SNR=8.5
ASAR Alice Springs 60.10 184 P **P** 03 56 44.8 -0.6
ASAR Alice Springs 60.10 184 P **P** 03 56 44.8 -0.6
SPITS Spitsbergen Ar 60.36 348 LR LR 04 23 37.9
comp=Z,66nm,19.1s,baz=15,slow=37
OBN Obninsk 66.71 322 *e*P **P** 03 57 28.7 -0.2
OBN *e*PPP PPP 04 01 32.3
OBN pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 67.84 331 P **P** 03 57 35.4 -0.5
comp=Z,2.6nm,0.9s,baz=345,slow=4.3,SNR=4.1
KIV Kislovodsk 69.03 310 *e*P **P** 03 57 43.1 -0.7
KIV pmax pmax
comp=Z,25nm,1.1s
KIV MLR MLR
comp=Z,133nm,17.0s
NEW Newport 72.34 43 P **P** 03 58 03.9 +0.1
comp=Z,1.9nm,0.8s,baz=320,slow=2.3,SNR=4.7
AKASG Malin Array Be 72.87 321 P **P** 03 58 06.7 -0.1
comp=Z,0.4nm,0.5s,baz=52,slow=6.0,SNR=1.7
NB2 NORSAR Subarra 73.44 336 P **P** 03 58 07.3 -2.8
comp=Z,23nm,2.0s,baz=41,slow=6.2
NOA NORSAR Array B 73.44 336 P **P** 03 58 08.7 -1.5
comp=Z,1.2nm,0.8s,baz=43,slow=5.9,SNR=3.9
JTMT Jette 74.18 42 P **P** 03 58 15.8 +0.9
HRY Holter Researc 76.14 42 P **P** 03 58 26.0 -0.1
ILGA Ilgaz 76.15 311 P **P** 03 58 26.2 -0.2
LRM Limekiln Ridge 76.36 43 P **P** 03 58 27.0 -0.6
DLMT Dillon 76.57 43 P **P** 03 58 29.1 +0.4
PDAR Pinedale Array 79.92 44 P **P** 03 58 47.0 -0.4
comp=Z,1.0nm,0.7s,baz=277,slow=2.0,SNR=12
PDAR Pinedale Array 79.92 44 P **P** 03 58 46.5 -0.8
CLL Collm 80.01 328 *e*P **P** 03 58 45.0 -2.3
GERES GERESS Array B 81.53 326 P **P** 03 58 54.5 -1.2
comp=Z,0.6nm,0.7s,baz=32,slow=5.2,SNR=6.5
SRU San Rafael Swe 81.76 47 P **P** 03 58 57.3 +0.1
SRU pmax pmax
comp=Z,4.0nm,0.7s
SRU San Rafael Swe 81.76 47 P **P** 03 58 57.3 +0.1
TXAR Lajitas Array 92.56 50 P **P** 03 59 49.8 -0.2
comp=Z,1.0nm,0.8s,baz=287,slow=3.9,SNR=9.2
ESDC Sonseca Array 96.35 331 LR LR 04 45 22.3
comp=Z,31nm,21.5s,baz=310,slow=36

*SOME **23** 03:48:57.1, 42.°17N × 81.°08E, h5km*
*NNC **23** 03:48:58.3 ± 0.9, 42.°14N × 81.°09E, h0km, mb3.6, mpv3.4,*
Error ellipse: s-maj=5.8km s-min=4.5km az=163.0
ISC 23 03:49:03.9 ± 2.5, 42.°33N ± 0.°09 × 80.°80E ± 0.°07, h17 km ± 11 km, n33, σ1 s71/54, 7C-5D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.16**	**344**	*e*P	**Pn**	**03 49 24.0**	**-1.5**
KTMS	94nm,0.1s			*e*S	**Sn**	**03 49 43.8**	**+2.8**
	20nm,0.2s						
KTMS	**Ketmen**	**1.16**	**344**	P	**Pn**	**03 49 24.0**	**-1.5**
KTMS	94nm,0.1s			S	**Sn**	**03 49 43.8**	**+2.8**
	20nm,0.2s						
SHLS	**Shalkode**	**1.28**	**310**	*e*P	**Pn**	**03 49 23.7**	**-3.5**
SHLS	30nm,0.1s			*e*S	**Sn**	**03 49 43.0**	**-1.0**
	51nm,0.2s						
SHLS	**Shalkode**	**1.28**	**310**	P	**Pn**	**03 49 23.7**	**-3.5**
SHLS	30nm,0.1s			S	**Sn**	**03 49 43.0**	**-1.0**
	51nm,0.2s						
PDGK	**Podgornoye**	**1.38**	**316**	P	**Pb**	**03 49 28.6**	**-0.7**
PDGK	3.4nm,0.2s			S	**Sg**	**03 49 51.5**	**+2.9**
	14nm,0.2s						
PDGK	**Podgornoye**	**1.38**	**316**	⇑P	**Pb**	**03 49 28.7**	**-0.7**
PDGK	4.2nm,0.5s			⇑S	**Sg**	**03 49 52.1**	**+3.4**
	11nm,0.3s						
UZB	**Uzynbulak**	**1.54**	**302**	*e*P	**Pb**	**03 49 32.0**	**-0.1**
UZB	28nm,0.4s			*e*S	**Sg**	**03 49 56.9**	**+3.3**
	30nm,0.2s						
SATY	**Saty**	**1.91**	**293**	*e*P	**Pg**	**03 49 38.7**	**-1.8**
SATY	11nm,0.2s			*e*S	**Sg**	**03 50 08.7**	**+3.4**
	44nm,0.2s						
SATY	**Saty**	**1.91**	**293**	Pg	**Pg**	**03 49 38.7**	**-1.8**
SATY	11nm,0.2s			Lg	Lg	03 50 08.7	
	44nm,0.2s						
KPKS	**Kokpek**	**1.92**	**307**	*e*P	**Pb**	**03 49 38.5**	**0.0**
KPKS	24nm,0.3s			*e*S	**Sg**	**03 50 08.7**	**+2.9**
	164nm,0.4s						
ZHN	**Zhinishke**	**1.93**	**296**	*e*P	**Pb**	**03 49 38.5**	**-0.2**
ZHN	31nm,0.2s			*e*S	**Sg**	**03 50 08.3**	**+2.2**
	16nm,0.2s						
DJR	**Jarkent**	**2.13**	**340**	*e*P	**Pb**	**03 49 41.5**	**-0.6**
DJR	12nm,0.3s			*e*S	**Sg**	**03 50 13.6**	**+1.2**
	16nm,0.5s						
DJR	**Jarkent**	**2.13**	**340**	Pg	**Pb**	**03 49 41.5**	**-0.6**
DJR	12nm,0.3s			Lg	Lg	03 50 13.6	
	16nm,0.5s						
KURS	**Kuram**	**2.25**	**302**	*e*P	**Pb**	**03 49 44.5**	**+0.4**
KURS	8.7nm,0.7s			*e*S	**Sg**	**03 50 18.5**	**+2.3**
	22nm,0.6s						
KURS	**Kuram**	**2.25**	**302**	Pg	**Pb**	**03 49 44.5**	**+0.4**
KURS	8.7nm,0.7s			Lg	Lg	03 50 18.5	
	22nm,0.6s						
MNBS	**Baschi**	**2.47**	**316**	*e*P	**Pb**	**03 49 47.6**	**-0.3**
	7.0nm,0.3s						
KOTS	**Kotyrbulak**	**2.86**	**290**	*e*P	**Pb**	**03 49 55.0**	**+0.5**
KOTS	7.1nm,0.4s			*e*S	**Sg**	**03 50 36.5**	**+0.7**
	35nm,0.4s						
KOTS	**Kotyrbulak**	**2.86**	**290**	Pg	**Pb**	**03 49 55.0**	**+0.5**
KOTS	7.1nm,0.4s			Lg	Lg	03 50 36.5	
	35nm,0.4s						
ARXS	**Arharly**	**2.87**	**312**	*e*P	**Pb**	**03 49 54.7**	**+0.1**
ARXS	3.3nm,0.2s			*e*S	**Sg**	**03 50 36.0**	**-0.1**
	15nm,0.4s						
ARXS	**Arharly**	**2.87**	**312**	Pg	**Pb**	**03 49 54.7**	**+0.1**
ARXS	3.3nm,0.2s			Lg	Lg	03 50 36.0	
	15nm,0.4s						
MDOK	**Medeo**	**2.88**	**288**	*e*P	**Pb**	**03 49 55.1**	**+0.2**
	2.9nm,0.2s						
MDOK				*e*S	**Sg**	**03 50 36.8**	**+0.2**
	13nm,0.4s						
MDOK	**Medeo**	**2.88**	**288**	Pg	**Pb**	**03 49 55.1**	**+0.2**
	2.9nm,0.2s						
MDOK				Lg	Lg	03 50 36.8	
	13nm,0.4s						
TNSS	**Tian-Shan**	**2.92**	**285**	*e*P	**Pb**	**03 49 56.0**	**+0.2**
	1.4nm,0.2s						
TNSS				*e*S	**Sg**	**03 50 38.2**	**+0.3**
	7.9nm,0.4s						
TNSS	**Tian-Shan**	**2.92**	**285**	Pg	**Pb**	**03 49 56.0**	**+0.2**
	1.4nm,0.2s						
TNSS				Lg	Lg	03 50 38.2	
	7.9nm,0.4s						
KAPS	**Kapalarasan**	**3.13**	**341**	*e*P	**Pb**	**03 49 58.5**	**-0.6**
	6.6nm,0.2s						
KAPS				*e*S	**Sg**	**03 50 42.9**	**-1.6**
	8.9nm,0.3s						
KAPS	**Kapalarasan**	**3.13**	**341**	Pg	**Pb**	**03 49 58.5**	**-0.6**
	6.6nm,0.2s						
KAPS				Lg	Lg	03 50 42.9	
	8.9nm,0.3s						
KTBS	**Karatobe**	**3.32**	**296**	*e*P	**Pb**	**03 50 03.0**	**+0.8**
	2.9nm,0.2s						
KTBS				*e*S	**Sg**	**03 50 50.2**	**-0.2**
	17nm,0.2s						
KST	**Kastek**	**3.63**	**283**	*e*P	**Pb**	**03 50 09.4**	**+1.7**
	1.9nm,0.4s						
KST				*e*S	**Sg**	**03 51 01.1**	**+0.5**
	6.1nm,0.7s						
KST	**Kastek**	**3.63**	**283**	Pg	**Pb**	**03 50 09.4**	**+1.7**
	1.9nm,0.4s						
KST				Lg	Lg	03 51 01.1	
	6.1nm,0.7s						
TKM2	**Tokmak 2**	**3.88**	**280**	⇓Pn	**Pn**	**03 50 03.6**	**+0.6**
	3.0nm,0.9s						
TKM2				⇑Lg	Lg	03 51 10.0	
	2.1nm,0.3s						
MAKZ	**Makanchi**	**4.55**	**10**	⇑Pn	**Pn**	**03 50 11.0**	**-1.0**
	1.1nm,0.5s						
MAKZ				⇓Sn	**Sn**	**03 51 07.7**	**+3.2**
	1.5nm,0.7s						
MAKZ				⇑Lg	Lg	03 51 27.5	
	3.4nm,0.7s						
MK31	**Makanchi Array**	**4.58**	**13**	⇓Pn	**Pn**	**03 50 11.8**	**-0.6**
	0.1nm,0.3s,baz=124,slow=12,SNR=7.8						
MK31				⇓Pg	**Pb**	**03 50 24.1**	**+0.2**
	0.6nm,0.3s,baz=185,slow=15,SNR=6.5						
MK31				⇓Sn	**Sn**	**03 51 07.9**	**+2.6**
	0.3nm,0.3s,baz=196,slow=26,SNR=4.7						
MK31				⇑Lg	Lg	03 51 27.3	
	2.9nm,0.6s,baz=189,slow=29,SNR=5.9						
AAK	**Ala-Archa**	**4.67**	**276**	⇑Lg	Lg	03 51 35.3	
	2.8nm,0.8s						

*IDC **23** 03:50:30.5 ± 1.9, 20.°44N × 121.°88E, h0km, mb3.8/4,*
mb1 4.0/4, mb1mx3.5/51, mbtmp3.8/4, Error ellipse:
s-maj=66.1km s-min=25.3km az=53.0
*NEIC **23** 03:50:34.5 ± 3.1, 19.°81N ± 0.°09 × 121.°02E ± 0.°05, h10km ± 2km,*
mb4.1/8, Error ellipse: s-maj=14.7km s-min=7.4km
az=168.0
ISC 23 03:50:34.5 ± 0.8, 20.°02N ± 0.°08 × 121.°1E ± 0.°2, h10 km, n16,
σ1 s28/15, mb4.1/5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**2.79**	**360**	P	**Pn**	**03 51 23.1**	**-1.4**
TPUB	**Ta-pu**	**3.29**	**353**	P	**Pn**	**03 51 32.9**	**-0.1**
YULB	**Yu-li**	**3.37**	**3**	P	**Pn**	**03 51 33.4**	**-0.8**
MYLDM	**Lahad Datu**	**14.96**	**190**	P	**Pn**	**03 54 06.7**	**+0.5**
BJT	**Baijiatuau**	**20.38**	**349**	P	**P**	**03 55 12.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**20.96**	**269**	P	Pn	03 55 23.6	+3.3
	4.1nm,0.3s,baz=80,slow=8.5,SNR=4.9						
CMAR	**Chiang Mai Arr**	**20.96**	**269**	P	**P**	**03 55 18.8**	**+1.0**
MAJO	**Matsushiro**	**22.27**	**39**	P	**P**	**03 55 33.7**	**+1.9**
MJAR	**Matsushiro Arr**	**22.27**	**39**	P	**P**	**03 55 33.1**	**+1.3**
WRA	**Warramunga Arr**	**41.78**	**161**	P	**P**	**03 58 22.9**	**-1.5**
	0.3nm,0.6s,baz=343,slow=9.1,SNR=5.2						
NIL	**Nilore**	**44.42**	**298**	P	**P**	**03 58 46.0**	**+0.4**
AAK	**Ala-Archa**	**45.05**	**311**	P	**P**	**03 58 48.9**	**-1.8**
AAK				IAmb	IAmb	03 58 49.4	
	comp=Z,2.7nm,1.1s						
ASAR	**Alice Springs**	**45.18**	**163**	P	**P**	**03 58 51.0**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=342,slow=6.9,SNR=5.6						
KURK	**Kurchatov**	**45.28**	**323**	P	**P**	**03 58 51.9**	**-0.2**
KURK				IAmb	IAmb	03 59 04.6	
	comp=Z,2.7nm,0.9s						
KURBB	**Kurchatov Arra**	**45.29**	**323**	P	**P**	**03 58 50.6**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=120,slow=8.5,SNR=6.0						
BUR08	**Bucovina Ar. S**	**79.31**	**317**	P	**P**	**04 02 41.1**	**+0.6**

*ISK **23** 03:52:12.9, 39.°59N × 28.°22E, h6km, ML2.3/24*
*DDA **23** 03:52:12.7, 39.°55N × 28.°20E, h7km ± 3km, ML2.0*
ISC 23 03:52:13.0 ± 1.0, 39.°56N ± 0.°02 × 28.°21E ± 0.°02, h10 km ± 10 km,
n40, σ0 s53/50, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.27**	**287**	PG	**Pg**	**03 52 18.9**	**+0.5**
BALB				SG	**Sb**	**03 52 23.7**	**-0.8**
DST	**Dursunbey**	**0.32**	**82**	PG	**Pg**	**03 52 19.5**	**+0.1**
DST				SG	**Sg**	**03 52 24.1**	**+0.4**
STEP	**BALIKESIR_Sava**	**0.42**	**244**	*i* P	**Pg**	**03 52 20.7**	**-0.6**
STEP				*i* S	**Sg**	**03 52 27.6**	**+0.7**
BALY	**Balya**	**0.49**	**292**	*i* P	**Pg**	**03 52 23.0**	**+0.4**
GONE	**Gonen-Balikesi**	**0.63**	**320**	PG	**Pg**	**03 52 25.1**	**-0.1**
GONE				SG	**Sb**	**03 52 34.4**	**-0.6**
ORLT	**Orhaneli**	**0.72**	**47**	PG	**Pg**	**03 52 26.9**	**0.0**
AKHS	**Akhisar**	**0.75**	**204**	*i* P	**Pg**	**03 52 26.8**	**-0.6**
SIMA	**Simav-Kutahya**	**0.77**	**128**	PG	**Pb**	**03 52 28.3**	**-0.2**
EDC	**Edincik**	**0.83**	**341**	PG	**Pg**	**03 52 28.9**	**-0.1**
GOMA	**Golmarmara-Man**	**0.88**	**195**	PG	**Pb**	**03 52 30.8**	**+0.4**
SHAP	**Saphane-Kutahy**	**0.95**	**124**	PG	**Pb**	**03 52 31.9**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.96**	**33**	PG	**Pb**	**03 52 31.6**	**-0.1**
TVSB	**Tavsanli**	**0.98**	**96**	PG	**Pg**	**03 52 31.7**	**-0.1**
IGD	**Bursa**	**1.04**	**47**	*i* P	**Pn**	**03 52 33.8**	**+0.1**
IGD				IAML		03 52 39.0	
	comp=N,16nm,0.9s						
IGD				*i* S	**Sb**	**03 52 46.9**	**+0.1**
USAK	**Uak-Merkez**	**1.06**	**143**	*i* P	**Pn**	**03 52 34.7**	**+0.8**
USAK				*i* S	**Sg**	**03 52 46.3**	**-0.7**
ZEDA	**zmir-Bergama**	**1.06**	**236**	*i* P	**Pb**	**03 52 33.5**	**+0.1**
GDZ	**Gediz**	**1.09**	**115**	*i* P	**Pg**	**03 52 33.8**	**-0.3**
GDZ				*i* S	**Sb**	**03 52 49.1**	**+0.6**
KULA	**Kula-Manisa**	**1.10**	**161**	PN	**Pn**	**03 52 35.1**	**+0.5**
MANT	**Manisa**	**1.10**	**166**	*i* P	**Pg**	**03 52 34.2**	**-0.1**
MANT				*i* S	**Sg**	**03 52 47.0**	**-1.6**
ARMT	**Armutlu**	**1.12**	**26**	PN	**Pn**	**03 52 34.8**	**0.0**
DKL	**Dikili**	**1.12**	**245**	PN	**Pn**	**03 52 35.1**	**+0.3**
MRMT	**Marmara Adasi**	**1.14**	**336**	PN	**Pg**	**03 52 34.6**	**-0.4**
AYVA	**Ayvalik**	**1.20**	**258**	*i* P	**Pn**	**03 52 36.8**	**+0.9**
AYVA				*i* S	**Sn**	**03 52 52.6**	**+0.4**
AYVA				IAML		03 52 54.0	
	comp=N,122nm,0.4s						
TRML	**Termal-Yalova**	**1.28**	**35**	PN	**Pn**	**03 52 36.1**	**-0.9**
BAYC	**CANAKKALE_Bayr**	**1.29**	**278**	*i* P	**Pn**	**03 52 36.7**	**-0.5**
BAYC				*i* S	**Sb**	**03 52 53.8**	**-0.4**
BAYC				IAML		03 52 57.0	
	comp=E,36nm,0.2s						
BAYC				IAML		03 52 57.0	
	comp=N,34nm,0.3s						
MAR6	**Marsite Statio**	**1.35**	**328**	PN	**Pn**	**03 52 38.2**	**+0.2**
MAR3	**Marsite Statio**	**1.37**	**330**	PN	**Pg**	**03 52 39.0**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.37**	**325**	PN	**Pb**	**03 52 38.9**	**0.0**
SART	**Tekirdag**	**1.37**	**325**	*i* P	**Pg**	**03 52 39.6**	**+0.2**
LPK	**Lapseki**	**1.38**	**306**	PN	**Pb**	**03 52 38.9**	**0.0**
CAVI	**Cavuskoy**	**1.41**	**63**	PN	**Pb**	**03 52 39.3**	**-0.2**
ADVT	**Atakulvahap**	**1.46**	**53**	PN	**Pn**	**03 52 39.8**	**+0.4**
EZN	**Ezine**	**1.48**	**281**	PN	**Pb**	**03 52 40.8**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.57**	**303**	PN	**Pn**	**03 52 41.4**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**1.63**	**189**	PN	**Pb**	**03 52 43.4**	**+0.1**
BOZC	**Bozcaada**	**1.69**	**280**	PN	**Pb**	**03 52 43.8**	**-0.3**
ERIK	**Erikli-Kesan**	**1.71**	**311**	PN	**Pb**	**03 52 44.0**	**-0.5**
SRCK	**Saricakaya, Es**	**1.92**	**75**	PN	**Pn**	**03 52 46.8**	**+1.0**
UKOP	**Uzunkopru-Edir**	**1.97**	**323**	PN	**Pn**	**03 52 47.3**	**+0.8**
ALN	**Alexandroupoli**	**2.12**	**310**	PN	**Pn**	**03 52 49.4**	**+0.8**

ATH 23 03:52:19.1, 38.°61N × 24.°49E, h27 km ± 1 km, ML2.2/2, Error ellipse: s-maj=1.7km s-min=0.9km az=292.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKY	**Skiros Island**	**0.27**	**10**	P	Pb	03 52 26.0	+0.1
SKY				S	Sb	03 52 30.9	+0.4
SKY				AML	AML	03 52 31.0	
	comp=N,1280μm,0.2s						
SKY				AML	AML	03 52 31.3	
	comp=E,976μm,0.2s						
KYMI	**Kymi, Euboea I**	**0.31**	**275**	P	Pb	03 52 26.6	+0.3
KYMI				S	Sb	03 52 31.2	-0.1
EREA	**Eretria**	**0.47**	**247**	P	Pb	03 52 29.5	+0.5
EREA				S	Sb	03 52 36.3	+0.7
EREA				AML	AML	03 52 37.4	
	comp=N,511μm,0.2s						
EREA				AML	AML	03 52 38.3	
	comp=E,610μm,0.1s						
KARY	**Karystos**	**0.58**	**184**	P	Pb	03 52 30.5	-0.1
KARY				S	Sn	03 52 40.0	-0.1
DION	**Dionisos Attik**	**0.69**	**220**	P	Pn	03 52 32.9	-0.1
DION				S	Sn	03 52 42.4	-0.4
AOS	**Alonnisos**	**0.74**	**320**	P	Pn	03 52 33.6	-0.1
AOS				S	Sn	03 52 44.8	+0.8
PTL	**Penteli**	**0.74**	**222**	P	Pn	03 52 34.1	+0.3
PTL				S	Sn	03 52 44.2	-0.1
ATHU	**Athens Univers**	**0.85**	**221**	P	Pn	03 52 35.6	+0.3
ATHU				S	Sn	03 52 46.7	-0.1
ATH	**Athens Observa**	**0.88**	**224**	P	Pb	03 52 35.7	0.0
ATH				S	Sn	03 52 48.3	+0.7
VIL2	**Platees**	**1.04**	**248**	P	Pb	03 52 39.4	+1.1
VIL2				S	Sb	03 52 53.1	+1.6
ATAL	**Atalanti**	**1.15**	**275**	P	Pb	03 52 41.0	+0.6
ATAL				S	Sb	03 52 57.1	+2.2
LKR	**Lokris**	**1.17**	**273**	P	Pb	03 52 41.1	+0.6

XOR	**Xorichti**	**1.26 307**	P	Pb	03 52 42.9	+0.7
LTK	**Loutraki**	**1.33 244**	P	Pb	03 52 44.5	+1.1
LOUT	**Loutraki**	**1.34 243**	P	Pb	03 52 43.4	-0.1
LIA	**Limnos Island**	**1.40 22**	P	Pb	03 52 44.4	-0.1
PAIG	**Paliouri**	**1.46 335**	P	Pb	03 52 45.6	+0.1
THAL	**Thalero**	**1.54 249**	P	Pb	03 52 47.6	+0.6
GUR	**Goura**	**1.82 249**	P	Pb	03 52 50.8	-0.9
KLV	**Kalavryta, Ach**	**1.92 254**	P	Pb	03 52 52.0	-1.5

*ISK **23** 04:00:00.1, 39˚.32N×27˚.04E, h6km, ML2.1/18*
*DDA **23** 04:00:00.6, 39˚.29N×27˚.09E, h7km±3km, ML1.8*
ISC 23 04:00:00.6±0.9, 39˚.31N±0˚.03×27˚.06E±0˚.03, h12km±11km, n24, σ0s52/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DKL	**Dikili**	**0.27**	**207**	PG	**Pg**	**04 00 06.1**	**-0.1**
DKL				SG	**Sg**	**04 00 10.1**	**+0.2**
AYVA	**Ayvalik**	**0.29**	**269**	*i* P	**Pg**	**04 00 07.3**	**+0.7**
ZEDA	**zmir-Bergama**	**0.35**	**178**	*i* P	**Pg**	**04 00 07.5**	**0.0**
ZEDA				*i* S	**Sg**	**04 00 11.4**	**-0.8**
ZEDA				IAML		04 00 13.0	
	comp=N,132nm,0.3s						
STEP	**BALIKESIR_Sava**	**0.51**	**83**	*i* P	**Pn**	**04 00 13.4**	**-0.3**
STEP				*i* S	**Sb**	**04 00 18.4**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.59**	**317**	*i* P	**Pb**	**04 00 13.0**	**+0.3**
BAYC				*i* S	**Sg**	**04 00 18.9**	**-0.8**
BAYC				IAML		04 00 20.0	
	comp=E,28nm,0.1s						
BALY	**Balya**	**0.60**	**45**	*i* P	**Pg**	**04 00 12.2**	**-0.2**
BALY				*i* S	**Sg**	**04 00 21.1**	**+0.7**
BALB	**Balikesir**	**0.71**	**62**	PG	**Pg**	**04 00 14.4**	**0.0**
BALB				SG	**Sb**	**04 00 24.5**	**-0.1**
EZN	**Ezine**	**0.77**	**312**	PG	**Pg**	**04 00 14.7**	**-0.7**
GONE	**Gonen-Balikesi**	**0.88**	**33**	PG	**Pg**	**04 00 17.4**	**-0.1**
BOZC	**Bozcaada**	**0.94**	**304**	PG	**Pg**	**04 00 17.9**	**-0.9**
URLA	**Izmir**	**1.02**	**201**	PG	**Pb**	**04 00 20.2**	**+0.1**
LPK	**Lapseki**	**1.08**	**348**	PG	**Pg**	**04 00 21.1**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.18**	**337**	PN	**Pg**	**04 00 22.9**	**-0.3**
EDC	**Edincik**	**1.20**	**31**	PN	**Pg**	**04 00 23.5**	**-0.2**
MRMT	**Marmara Adasi**	**1.35**	**17**	PN	**Pn**	**04 00 25.9**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.38**	**4**	PN	**Pn**	**04 00 25.9**	**+0.3**
ERIK	**Erikli-Kesan**	**1.42**	**343**	PN	**Pn**	**04 00 26.7**	**+0.6**
MAR3	**Marsite Statio**	**1.44**	**7**	PN	**Pn**	**04 00 26.9**	**+0.5**
KULA	**Kula-Manisa**	**1.48**	**122**	PN	**Pb**	**04 00 27.8**	**-0.2**
SIMA	**Simav-Kutahya**	**1.51**	**98**	PN	**Pb**	**04 00 28.3**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.51**	**154**	PN	**Pb**	**04 00 28.3**	**-0.3**
ENEZ	**Enez**	**1.58**	**334**	PN	**Pn**	**04 00 28.9**	**+0.5**
ALN	**Alexandroupoli**	**1.77**	**334**	PN	**Pn**	**04 00 31.4**	**+0.5**
TVSB	**Tavsanli**	**1.86**	**85**	PN	**Pn**	**04 00 33.4**	**+1.1**

WEL 23 04:13:48.4, 44˚S±4˚×16˚9E±˚, h5km±10km, M2.5/6, ML2.6/6, MLv2.5/6, Error ellipse: s-maj=0.0km s-min=0.0km az=113.3, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCZ	**Jackson Bay**	**0.11**	**34**	P	Pg	04 13 52.1	+1.4
WKZ	**Wanaka**	**0.70**	**161**	P	Pg	04 14 01.9	0.0
MSZ	**Milford Sound**	**0.76**	**227**	P	Pb	04 14 03.9	-0.1
FOZ	**Fox Glacier**	**1.02**	**52**	P	Pb	04 14 09.0	+0.4
LBZ	**Lake Benmore**	**1.09**	**102**	P	Pn	04 14 10.2	-0.1
EAZ	**Earnscleugh**	**1.15**	**158**	P	Pg	04 14 10.3	-0.3
ODZ	**Otahua Downs**	**1.64**	**123**	P	Pb	04 14 18.8	-0.4
ARCZ	**Arundel**	**1.80**	**84**	P	Pg	04 14 23.1	+0.3
TUZ	**Tuapeka**	**1.91**	**160**	P	Pb	04 14 24.2	+0.5
MHCZ	**Mount Hutt**	**2.17**	**74**	P	Pn	04 14 25.0	-0.2
SYZ	**Scrubby Hill**	**2.40**	**173**	P	Pn	04 14 29.4	+1.2

*JMA **23** 04:26:11.0±0.1, 24˚.24N×122˚.05E, h52km±2km, M2.7*
*TAP **23** 04:26:11.0, 24˚.27N×122˚.05E, h53km, ML3.2, B*
ISC 23 04:26:11.5±1.2, 24˚.28N±0˚.03×122˚.08E±0˚.02, h51km±8km, n107, σ0s78/156, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.30**	**303**	P	**Pn**	**04 26 20.7**	**0.0**
ENAH	baz=308			S	**Sn**	**04 26 27.7**	**+0.5**
ENA	**Nanao**	**0.34**	**295**	P	**Pn**	**04 26 21.1**	**0.0**
ENA	baz=298			S	**Sn**	**04 26 28.3**	**+0.3**
TWC	**Suao**	**0.39**	**327**	P	**Pn**	**04 26 21.4**	**-0.1**
TWC	baz=332			*eS*	**Sn**	**04 26 28.4**	**-0.3**
NACB	**Ninganchiao**	**0.46**	**256**	P	**Pn**	**04 26 21.9**	**-0.4**
NACB	baz=256			S	**Sn**	**04 26 30.1**	**-0.1**
TWD	**Chiawan**	**0.49**	**246**	P	**Pn**	**04 26 22.4**	**-0.2**
TWD	baz=244			*eS*	**Sn**	**04 26 31.1**	**+0.5**
HWA	**Hwalien**	**0.53**	**235**	*eP*	**Pn**	**04 26 23.5**	**+0.3**
ETLH	**Xiulin Townshi**	**0.56**	**262**	P	**Pn**	**04 26 23.3**	**-0.3**
ETLH	baz=262			S	**Sn**	**04 26 32.0**	**-0.2**
EGS	baz=350	**0.57**	**346**	*eP*	**Pn**	**04 26 24.4**	**+0.6**
EGS	baz=350			*eS*	**Sn**	**04 26 32.8**	**+0.3**
TWE	**Neicheng**	**0.58**	**319**	P	**Pn**	**04 26 23.8**	**0.0**
TWE	baz=322			*eS*	**Sn**	**04 26 32.5**	**0.0**
ENTT	**Nioudou**	**0.59**	**307**	P	**Pn**	**04 26 23.9**	**0.0**
ENTT	baz=309			S	**Sn**	**04 26 33.1**	**+0.3**
NDT	**Datong Townshi**	**0.61**	**301**	P	**Pn**	**04 26 24.1**	**0.0**
NDT	baz=303			*eS*	**Sn**	**04 26 33.3**	**0.0**
NTC	**Toucheng**	**0.61**	**338**	*eP*	**Pn**	**04 26 24.5**	**+0.3**
NTC	baz=340			*eS*	**Sn**	**04 26 33.7**	**+0.3**
NNSB	**Datong**	**0.66**	**283**	P	**Pn**	**04 26 24.6**	**-0.3**
NNSB	baz=284			S	**Sn**	**04 26 34.4**	**-0.1**
NNSH	**Datong**	**0.66**	**283**	P	**Pn**	**04 26 24.5**	**-0.3**
NNSH	baz=284			S	**Sn**	**04 26 34.3**	**-0.2**
NNS	**Nan Shan**	**0.67**	**284**	P	**Pn**	**04 26 24.7**	**-0.3**
NNS	baz=284			S	**Sn**	**04 26 34.4**	**-0.3**
NWLT	**Wulai**	**0.72**	**313**	P	**Pn**	**04 26 25.7**	**+0.1**
NWLT	baz=315			*eS*	**Sn**	**04 26 35.6**	**-0.3**
TIPB	**Shuangxi**	**0.72**	**341**	*eP*	**Pn**	**04 26 25.6**	**0.0**
TIPB	baz=343			S	**Sn**	**04 26 36.9**	**+1.0**
TWB1	**Santiao Chiao**	**0.73**	**353**	*eP*	**Pn**	**04 26 25.1**	**-0.5**
TWB1	baz=356			*eS*	**Sn**	**04 26 34.7**	**-1.2**
YHNB	**Yeheng**	**0.75**	**301**	P	**Pn**	**04 26 26.0**	**-0.1**
YHNB	baz=302			*eS*	**Sn**	**04 26 36.2**	**-0.3**
ESL	**Shilin**	**0.76**	**232**	P	**Pn**	**04 26 25.7**	**-0.3**
ESL	baz=230			*eS*	**Sn**	**04 26 36.4**	**-0.2**
WHF	**Hehuan Shan**	**0.76**	**260**	P	**Pn**	**04 26 26.3**	**-0.2**
WHF	baz=259			*eS*	**Sn**	**04 26 37.2**	**-0.1**
FUSS	**Fushou**	**0.77**	**267**	*eP*	**Pn**	**04 26 26.4**	**0.0**
FUSS	baz=267			S	**Sn**	**04 26 37.1**	**-0.1**
NSK	**Sanguang**	**0.77**	**301**	P	**Pn**	**04 26 26.1**	**-0.1**
NSK	baz=302			*eS*	**Sn**	**04 26 36.5**	**-0.5**
JYNG	**Yonagunijimaku**	**0.80**	**78**	P	**Pn**	**04 26 27.0**	**+0.4**
JYNG				S	**Sn**	**04 26 38.2**	**+0.6**
TWA	**Mucha**	**0.83**	**327**	*eP*	**Pn**	**04 26 27.4**	**+0.4**
TWA	baz=329			S	**Sn**	**04 26 39.0**	**+0.6**
TWT	**Tachien**	**0.83**	**268**	*eP*	**Pn**	**04 26 27.7**	**+0.6**
TWT	baz=268			*eS*	**Sn**	**04 26 39.0**	**+0.5**
NWF	**Wu-fen Shan**	**0.83**	**341**	P	**Pn**	**04 26 27.3**	**+0.2**
WFSB	**Wu-fen Shan**	**0.83**	**341**	P	**Pn**	**04 26 27.3**	**+0.3**
TDCB	**Techi**	**0.84**	**268**	*eP*	**Pn**	**04 26 27.6**	**+0.3**
TDCB	baz=268			S	**Sn**	**04 26 38.8**	**-0.1**
NHDH	**Xindian Distri**	**0.85**	**323**	P	**Pn**	**04 26 27.4**	**+0.2**
NHDH	baz=325			S	**Sn**	**04 26 39.3**	**+0.6**
EGFH	**Guangfu**	**0.86**	**225**	*eP*	**Pn**	**04 26 27.1**	**-0.3**
EGFH	baz=223			*eS*	**Sn**	**04 26 38.5**	**-0.4**
CHGB	**Renai**	**0.86**	**255**	*eP*	**Pn**	**04 26 27.7**	**+0.1**
CHGB	baz=255			S	**Sn**	**04 26 39.3**	**0.0**
YOJ	**Yonaguni jima**	**0.86**	**78**	*eP*	**Pn**	**04 26 27.8**	**+0.4**
YOJ	baz=77			*eS*	**Sn**	**04 26 40.0**	**+0.9**
YOJ	**Yonaguni jima**	**0.86**	**78**	P	**Pn**	**04 26 27.6**	**+0.2**
YOJ				S	**Sn**	**04 26 39.8**	**+0.7**
TATO	**Taipei**	**0.88**	**322**	P	**Pn**	**04 26 27.6**	**0.0**
TATO	baz=324			*eS*	**Sn**	**04 26 39.3**	**0.0**
OWD	**Renai**	**0.89**	**249**	P	**Pn**	**04 26 27.9**	**0.0**
OWD	baz=248			*eS*	**Sn**	**04 26 39.6**	**-0.4**
YM01	**YM01**	**0.98**	**332**	P	**Pn**	**04 26 29.2**	**+0.2**
YM01	baz=333			*eS*	**Sn**	**04 26 42.4**	**+0.5**
YM10	**YM10**	**0.99**	**331**	*eS*	**Sn**	**04 26 42.8**	**+0.6**
HGSD	**Ruisui**	**0.99**	**218**	P	**Pn**	**04 26 29.2**	**0.0**
YM05	**YM05**	**0.99**	**332**	*eP*	**Pn**	**04 26 29.6**	**+0.3**
YM05	baz=333			*eS*	**Sn**	**04 26 42.7**	**+0.3**
YM04	**YM04**	**1.00**	**330**	*eP*	**Pn**	**04 26 29.6**	**+0.3**
YM08	**YM08**	**1.01**	**334**	*eP*	**Pn**	**04 26 29.5**	**+0.2**
TWS1	**Kuangyinshan**	**1.01**	**323**	P	**Pn**	**04 26 29.6**	**+0.2**
TWS1	baz=325			S	**Sn**	**04 26 43.3**	**+0.7**
LIOB	**Emei**	**1.04**	**291**	*eP*	**Pn**	**04 26 30.4**	**+0.7**
LIOB	baz=291			*eS*	**Sn**	**04 26 44.1**	**+0.9**
WHP	**Taichung City**	**1.04**	**270**	*eP*	**Pn**	**04 26 30.9**	**+1.1**
WHP	baz=270			*eS*	**Sn**	**04 26 44.2**	**+0.8**
EHY	**Hungye**	**1.04**	**222**	*eP*	**Pn**	**04 26 29.3**	**-0.5**
NSTT	**Nanjuang**	**1.05**	**290**	*eP*	**Pn**	**04 26 30.4**	**+0.6**
NSTT	baz=290			S	**Sn**	**04 26 43.7**	**+0.2**
NTST	**Danshui**	**1.05**	**327**	*eS*	**Sn**	**04 26 43.8**	**+0.3**
TWY	**Chenhua**	**1.08**	**336**	*eP*	**Pn**	**04 26 30.9**	**+0.5**
DPDB	**Guoxing**	**1.09**	**257**	*eP*	**Pn**	**04 26 31.2**	**+0.8**
SBCB	**Hsinchu**	**1.12**	**297**	*eP*	**Pn**	**04 26 30.8**	**0.0**
YULB	**Yu-li**	**1.14**	**219**	*eP*	**Pn**	**04 26 30.6**	**-0.5**
SSLB	**Suanglung**	**1.15**	**245**	*eP*	**Pn**	**04 26 31.6**	**+0.3**
SSLB	baz=244			S	**Sn**	**04 26 45.9**	**0.0**
SMLT	**Sun Moon Lake**	**1.15**	**250**	*eP*	**Pn**	**04 26 32.2**	**+0.8**
EYUL	**Yuli**	**1.17**	**217**	*eP*	**Pn**	**04 26 31.3**	**-0.2**
TWF1	**Yuli**	**1.18**	**218**	*eP*	**Pn**	**04 26 31.2**	**-0.4**
TYC	**Yuchr**	**1.18**	**252**	*eP*	**Pn**	**04 26 32.5**	**+0.8**
NHW	**Xinwu Township**	**1.19**	**308**	*eP*	**Pn**	**04 26 31.1**	**-0.7**
TWQ1	**Liyutan**	**1.20**	**273**	*eP*	**Pn**	**04 26 32.6**	**+0.7**
TWQ1	baz=273			*eS*	**Sn**	**04 26 48.1**	**+1.0**
NMLH	**Miaoli**	**1.21**	**282**	*eP*	**Pn**	**04 26 32.6**	**+0.6**
NSY	**Sanyi**	**1.21**	**276**	*eP*	**Pn**	**04 26 32.8**	**+0.7**
FULB	**Fuli**	**1.30**	**214**	*eP*	**Pn**	**04 26 33.2**	**-0.1**
FULB	baz=212			*eS*	**Sn**	**04 26 50.0**	**+0.4**
WJS	**Zhushan**	**1.32**	**250**	*eP*	**Pn**	**04 26 35.2**	**+1.6**
WNT	**Mingjian**	**1.34**	**253**	*eP*	**Pn**	**04 26 35.9**	**+2.0**
CHKT	**Chengkung**	**1.35**	**209**	*eP*	**Pn**	**04 26 33.3**	**-0.7**
ALS	**Alishan**	**1.40**	**237**	*eP*	**Pn**	**04 26 36.2**	**+1.2**
CHN5	**Tsauling**	**1.46**	**242**	*eP*	**Pn**	**04 26 37.0**	**+1.5**
ELDTW	**Lidau**	**1.46**	**222**	*eP*	**Pn**	**04 26 35.6**	**-0.1**
EDH	**Donghe**	**1.49**	**209**	*eP*	**Pn**	**04 26 35.3**	**-0.6**
EDH	baz=207			*eS*	**Sn**	**04 26 53.0**	**-1.2**
IRIF	**Iriomote-Funau**	**1.50**	**88**	P	**Pn**	**04 26 36.2**	**+0.2**
IRIF				S	**Sn**	**04 26 54.5**	**0.0**
WDLH	**Douliu**	**1.53**	**248**	*eP*	**Pn**	**04 26 38.4**	**+1.9**
RLNB	**Erlin**	**1.62**	**256**	*eP*	**Pn**	**04 26 38.3**	**+0.6**
LONT	**Longtian**	**1.63**	**213**	*eP*	**Pn**	**04 26 37.9**	**+0.2**
STYT	**Tauyuan**	**1.65**	**228**	*eP*	**Pn**	**04 26 40.0**	**+1.8**
CHN2	**Minshiung**	**1.65**	**243**	*eP*	**Pn**	**04 26 39.7**	**+1.6**
TPUB	**Ta-pu**	**1.65**	**234**	*eP*	**Pn**	**04 26 39.7**	**+1.6**
WTK	**Tuku**	**1.66**	**249**	*eP*	**Pn**	**04 26 39.0**	**+0.8**
WTP	**Ta-pu**	**1.70**	**233**	*eP*	**Pn**	**04 26 40.3**	**+1.5**
LDUT	**Ludao**	**1.70**	**200**	*eP*	**Pn**	**04 26 37.8**	**-0.9**
CHY	**Chiayi**	**1.71**	**243**	*eP*	**Pn**	**04 26 41.2**	**+2.4**
TWGBT	**Beinan**	**1.73**	**212**	*eP*	**Pn**	**04 26 39.2**	**0.0**
TWG	**Pinlang**	**1.73**	**213**	*eP*	**Pn**	**04 26 39.3**	**+0.2**
JKRS	**Kuro-shima**	**1.76**	**91**	P	**Pn**	**04 26 39.0**	**-0.5**
JKRS				S	**Sn**	**04 27 01.7**	**+1.0**
TWK	**Hsinying**	**1.78**	**236**	*eP*	**Pn**	**04 26 41.6**	**+1.7**
CHN1	**Nanshi**	**1.80**	**233**	*eP*	**Pn**	**04 26 42.5**	**+2.4**
SGST	**Jiashian**	**1.82**	**229**	*eP*	**Pn**	**04 26 41.4**	**+0.9**
SLGT	**Liugui**	**1.84**	**226**	*eP*	**Pn**	**04 26 42.6**	**+1.9**
JIJ	baz=225						
JIJ	**Ishigaki jima**	**1.88**	**87**	P	**Pn**	**04 26 41.5**	**+0.3**
JIJ				S	**Sn**	**04 27 03.0**	**-0.8**
ECL	**Taimali**	**1.97**	**212**	*eP*	**Pn**	**04 26 43.1**	**+0.6**
SSD	baz=210 **Sandimen**	**2.03**	**221**	*eP*	**Pn**	**04 26 44.3**	**+1.1**
JISG	baz=220 **Ishigakijimahi**	**2.05**	**81**	S	**Sn**	**04 27 06.6**	**-1.4**
TSMG	**Majia**	**2.05**	**220**	*eP*	**Pn**	**04 26 45.5**	**+1.9**
MASBT	baz=219 **Mashibuluo**	**2.13**	**219**	*eP*	**Pn**	**04 26 45.8**	**+1.1**
EAST	baz=218 **Anshuo**	**2.21**	**211**	*eP*	**Pn**	**04 26 47.9**	**+2.2**
LAY	baz=210 **Lan-yu**	**2.29**	**192**	*eP*	**Pn**	**04 26 47.0**	**+0.2**
SLIU	baz=191 **Shizi**	**2.37**	**210**	*eP*	**Pn**	**04 26 48.6**	**+0.7**
JTJ	baz=209 **Tarama**	**2.41**	**81**	*eS*	**Sn**	**04 27 16.5**	**-0.3**
PNG	**Penghu**	**2.42**	**253**	*eP*	**Pn**	**04 26 48.6**	**0.0**
PNG	baz=252			*eS*	**Sn**	**04 27 16.2**	**-0.8**
PHUB	baz=252 **P'eng-hu**	**2.42**	**252**	*eP*	**Pn**	**04 26 48.6**	**0.0**
PHUB	baz=251			*eS*	**Sn**	**04 27 15.7**	**-1.4**
WDGT	baz=251 **Dungji**	**2.44**	**246**	*eP*	**Pn**	**04 26 49.2**	**+0.3**
WDGT	baz=245			*eS*	**Sn**	**04 27 17.0**	**-0.6**
VWUC	**VWUC**	**2.50**	**287**	*eP*	**Pn**	**04 26 48.7**	**-0.9**
VCHM	baz=286 **Qimei**	**2.66**	**247**	*eS*	**Sn**	**04 27 22.3**	**-0.6**
MATB	baz=246 **Ma-tsu**	**2.69**	**314**	*eP*	**Pn**	**04 26 51.5**	**-0.8**
PTMZ	baz=314 **Houxiangcun**	**2.80**	**286**	*eP*	**Pn**	**04 26 52.9**	**-0.9**
XPSS	baz=285 **Dashiqiu**	**3.14**	**327**	*eP*	**Pn**	**04 26 57.6**	**-0.9**
MHZQ	baz=327 **Yeshan**	**3.31**	**304**	*eP*	**Pn**	**04 26 59.4**	**-1.3**
KNMB	baz=303 **Chin-men Tao**	**3.38**	**274**	*eP*	**Pn**	**04 27 01.6**	**-0.1**
	baz=273						

IDC 23 04:39:28.3±1.1, 49˚.30S×109˚.12E, h0km, mb3.9/6, mb1 4.1/6, mb1mx3.9/37, mbtmp3.9/6, Error ellipse: s-maj=48.2km s-min=19.9km az=106.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**14.86**	**16**	T	T	04 58 06.8	
H01W1	baz=192,slow=74,SNR=19 **Cape Leeuwin H**	**14.87**	**16**	T	T	04 58 09.0	
H01W3	baz=192,slow=74,SNR=19 **Cape Leeuwin H**	**14.87**	**16**	T	T	04 58 08.8	
ASAR	baz=192,slow=74,SNR=19 **Alice Springs**	**32.15**	**46**	P	P	04 45 57.4	-0.2
VNDA	1.2nm,0.8s,baz=213,slow=9.7,SNR=7.1 **Vanda**	**34.51**	**162**	P	P	04 46 17.3	-0.3
WRA	0.6nm,0.6s,baz=301,slow=9.6,SNR=6.3 **Warramunga Arr**	**35.56**	**44**	P	P	04 46 27.4	+0.2
QSPA	2.3nm,1.0s,baz=206,slow=8.4,SNR=6.2 **South Pole Qui**	**40.84**	**180**	P	P	04 47 11.7	+0.3
SNAA	1.7nm,0.8s,baz=311,slow=5.0,SNR=5.1 **Sanae**	**50.23**	**202**	P	P	04 48 25.3	-0.3
CMAR	1.8nm,0.8s,baz=144,slow=12,SNR=6.2 **Chiang Mai Arr**	**68.05**	**350**	P	P	04 50 29.2	-0.3
TXAR	0.5nm,0.3s,baz=186,slow=6.4,SNR=4.7 **Lajitas Array**	**148.11**	**117**	PKPbc	PKPbc	04 59 15.5	-0.3
	0.6nm,0.9s,baz=193,slow=3.1,SNR=2.6						

IDC 23 04:45:35.4±18.0, 7˚.76N×93˚.17E, h0km, mb3.9/4, mb1 3.9/4, mb1mx3.4/60, mbtmp3.9/4, Error ellipse: s-maj=551.4km s-min=96.9km az=117.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**25.67**	**234**	T	T	05 17 55.6	
H08S2	baz=54,slow=74,SNR=16 **Diego Garcia H**	**25.67**	**234**	T	T	05 17 53.6	
H08S1	baz=54,slow=74,SNR=11 **Diego Carcia H**	**25.68**	**234**	T	T	05 17 54.8	
MKAR	baz=54 **Makanchi Array**	**40.00**	**348**	P	P	04 53 11.9	-0.1
ZALV	0.8nm,0.9s,baz=172,slow=6.3,SNR=3.1 **Zalesovo Beam**	**46.55**	**353**	P	P	04 54 04.6	-0.2
FINES	0.8nm,0.4s,baz=172,slow=12,SNR=2.7 **FINESS Array B**	**72.37**	**322**	P	P	04 57 03.0	0.0
HFS	1.1nm,0.9s,baz=123,slow=5.1,SNR=3.1 **Hagfors**	**78.07**	**330**	P	P	04 57 36.1	+0.1
	1.8nm,0.8s,baz=110,slow=3.8,SNR=6.6						

*IDC **23** 04:46:21.1±2.1, 35˚.96N×140˚.91E, h61km±23km, mb3.4/3, mb1 3.6/7, mb1mx3.2/73, mbtmp3.8/7, ML3.1/4, Error ellipse: s-maj=31.2km s-min=13.9km az=92.0*
*NEIC **23** 04:46:22.7±0.9, 36˚.04N±0˚.05×140˚.9E±0˚.1, h68km±9km, mb4.2/3, Error ellipse: s-maj=13.0km s-min=6.8km az=86.0*
*JMA **23** 04:46:22.3±0.1, 36˚.05N×140˚.81E, h82km±1km, M3.2*
ISC 23 04:46:23.0±0.9, 36˚.03N±0˚.04×140˚.79E±0˚.05, h80km±6km, n45, σ1s24/51, mb4.1/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIHU	**Itakohorinouch**	**0.22**	**253**	P	**Pn**	**04 46 35.0**	**+0.1**
JIHU				S	**Sn**	**04 46 44.8**	**+1.1**
CHOJ	**Chosi**	**0.33**	**170**	P	**Pn**	**04 46 35.1**	**-0.5**
CHOJ				S	**Sn**	**04 46 44.5**	**-0.3**
JHYU	**Hitachinakayam**	**0.35**	**332**	P	**Pn**	**04 46 35.1**	**-0.6**
JHYU				S	**Sn**	**04 46 44.5**	**-0.5**
JSMT	**Sammumatsuo**	**0.47**	**216**	P	**Pn**	**04 46 36.8**	**+0.2**
JYT	**Yasato**	**0.52**	**292**	P	**Pn**	**04 46 36.8**	**-0.2**
JYT				S	**Sn**	**04 46 46.9**	**-0.4**
JYT	**Yasato**	**0.52**	**292**		**Pn**	**04 46 36.3**	**-0.7**
JHO	**Hitachi**	**0.61**	**343**	P	**Pn**	**04 46 37.2**	**-0.6**
JHO				S	**Sn**	**04 46 48.1**	**-0.6**
JAG	**Ashikaga**	**1.15**	**290**	P	**Pn**	**04 46 43.8**	**-0.1**
JAG				S	**Sn**	**04 46 59.7**	**+0.1**
BSO3	**Boso 3**	**1.25**	**191**	P	**Pn**	**04 46 44.3**	**-0.6**
BSO3				S	**Sn**	**04 47 01.8**	**+0.5**
JFK	**Kawauchi**	**1.33**	**3**	P	**Pn**	**04 46 45.3**	**-1.0**
JFK				S	**Sn**	**04 47 02.2**	**-1.6**
BSO1	**Boso 1**	**1.38**	**173**	P	**Pn**	**04 46 45.6**	**-0.7**
BSO1				S	**Sn**	**04 47 04.8**	**+0.9**
JKT	**Katashina**	**1.44**	**301**	P	**Pn**	**04 46 47.8**	**+0.1**
JFT	**Otama**	**1.53**	**346**	P	**Pn**	**04 46 48.6**	**-0.1**
JFT				S	**Sn**	**04 47 07.9**	**-0.3**
JRY	**Ryogami san**	**1.53**	**270**	P	**Pn**	**04 46 48.5**	**-0.3**
JOD2	**Odawara 2**	**1.58**	**242**	P	**Pn**	**04 46 48.5**	**-0.9**
JOD2				S	**Sn**	**04 47 07.4**	**-2.0**
JFY	**Yanaizu**	**1.63**	**328**	P	**Pn**	**04 46 50.1**	**+0.1**
JIM2	**Oshima 3**	**1.72**	**221**	P	**Pn**	**04 46 49.9**	**-1.3**
JMM	**Marumori**	**1.83**	**0**	Pn	**Pn**	**04 46 52.2**	**-0.5**
MJAR	**Matsushiro Arr**	**2.15**	**285**	P	**Pn**	**04 46 56.4**	**-0.4**
	1.9nm,0.3s,baz=88,slow=12,SNR=74						
MJAR	**Matsushiro Arr**	**2.15**	**285**		**Pn**	**04 46 56.3**	**-0.6**
MAJO	**Matsushiro**	**2.15**	**285**	Pn	**Pn**	**04 46 57.4**	**+0.5**
MAT	**Matsushiro**	**2.15**	**285**	P	**Pn**	**04 46 57.5**	**+0.6**
MAT				*eS*	**Sn**	**04 47 18.3**	**-4.5**
JSG	**Sagara**	**2.52**	**238**	Pn	**Pn**	**04 47 02.5**	**+0.6**
JGF	**Kuroka**	**2.82**	**262**		**Pn**	**04 47 07.2**	**+1.2**
JSD	**Sado**	**2.85**	**315**	Pn	**Pn**	**04 47 05.8**	**-0.5**
JHJ	**Hachijo jima 2**	**3.02**	**196**	P	**Pn**	**04 47 07.5**	**-1.2**
	36nm,0.3s,baz=328,slow=20,SNR=17						
JHJ				S	**Sn**	**04 47 40.4**	**-3.4**
	46nm,0.3s,baz=124,slow=23,SNR=9.5						
JHJ2	**Mitsune**	**3.02**	**196**	Pn	**Pn**	**04 47 07.5**	**-1.1**
INU	**Inuyama**	**3.14**	**259**		**Pn**	**04 47 10.7**	**+0.4**
JKA	**Kamikawa-asahi**	**8.19**	**9**		**Pn**	**04 48 16.9**	**-2.2**
ASAJ	**Asahikawa**	**8.20**	**9**	P	**Pn**	**04 48 16.9**	**-2.2**
	0.4nm,0.3s,baz=37,slow=10,SNR=3.7						
USRK	**Uesurirysk Ar.**	**10.57**	**323**	P	**Pn**	**04 48 51.7**	**+0.1**
	baz=128,slow=13,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**28.09**	**118**	T	T	05 21 19.3	
	baz=311,slow=75,SNR=4.4						

H11N1	**WAKE ISLAND Hy**	**28.10**	**118**	T	T	05 21 19.3	
	baz=311						
H11N3	**WAKE ISLAND Hy**	**28.11**	**118**	T	T	05 21 22.1	
	baz=311,slow=75,SNR=3.4						
H11S1	**WAKE ISLAND Hy**	**28.76**	**120**	T	T	05 22 17.7	
	baz=312,slow=76,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**28.76**	**121**	T	T	05 22 13.7	
	baz=312,slow=76,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**28.78**	**121**	T	T	05 22 15.6	
	baz=312,slow=76,SNR=4.0						
ZAA0	**Zalesovo Array**	**42.23**	**313**	P	**P**	**04 54 09.5**	**+1.6**
ZAA0				IAmb	IAmb	04 54 47.0	
	comp=Z,2.2nm,0.5s						
ZALV	**Zalesovo Beam**	**42.23**	**313**	P	**P**	**04 54 09.4**	**+1.5**
MKAR	**Makanchi Array**	**44.23**	**303**	P	**P**	**04 54 24.5**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=81,slow=9.2,SNR=4.2						
KURK	**Kurchatov**	**46.16**	**309**	P	**P**	**04 54 40.9**	**+1.6**
KURK	**Kurchatov**	**46.16**	**309**	IAmb	IAmb	04 54 41.5	
	comp=Z,2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**46.23**	**309**	P	**P**	**04 54 40.9**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=82,slow=7.6,SNR=6.3						
IL31		**50.61**	**32**	P	**P**	**04 55 13.6**	**+0.3**
ILAR	**Eielson Array**	**50.61**	**32**	P	**P**	**04 55 14.1**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=263,slow=5.9,SNR=4.5						

IDC 23 04:46:32.5±1.8, 22°.34S×148°.14E, h0km, mb3.8/1, mb1 3.5/5, mb1mx3.4/35, mbtmp3.4/5, ML3.4/4, Error ellipse: s-maj=33.1km s-min=17.1km az=55.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.85**	**322**	Pn	Pn	04 47 20.3	+1.0
	5.9nm,0.3s,baz=143,slow=17,SNR=78						
CTA				Lg	Lg	04 48 02.7	
	37nm,0.3s,baz=73,slow=21,SNR=21						
STKA	**Stephens Creek**	**11.14**	**210**	Pn	Pn	04 49 12.4	-0.7
	0.1nm,0.3s,baz=42,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**13.10**	**278**	Pn	Pn	04 49 38.4	-1.6
	0.2nm,0.3s,baz=97,slow=12,SNR=13						
WRA				Sn	Sn	04 51 59.9	-6.7
	0.1nm,0.3s,baz=99,slow=25,SNR=2.2						
WRA				Lg	Lg	04 53 29.2	
	0.2nm,0.3s,baz=118,slow=32,SNR=6.7						
ASAR	**Alice Springs**	**13.18**	**262**	Pn	Pn	04 49 41.0	0.0
	0.1nm,0.3s,baz=90,slow=14,SNR=6.6						
ASAR				Sn	Sn	04 52 06.1	-2.4
	0.1nm,0.3s,baz=75,slow=26,SNR=3.9						
ASAR				Lg	Lg	04 53 31.6	
	0.1nm,0.3s,baz=72,slow=30,SNR=6.3						
QSPA	**South Pole Qui**	**67.72**	**180**	P	P	04 57 31.6	-0.1
	0.8nm,0.8s,baz=349,slow=5.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**146.83**	**260**	PKPbc	PKPbc	05 06 17.2	-0.4
	0.3nm,0.5s,baz=113,slow=3.9,SNR=4.4						

IDC 23 05:02:22.7±1.7, 0°.88N×126°.62E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.4/60, mbtmp3.7/5, ML3.3/1, Error ellipse: s-maj=102.7km s-min=23.6km az=67.0
DJA 23 05:02:27.9±1.9, 1°.1N±7°×12°.6E±°, h11km±19km, M3.6/7, MLv3.6/7
NEIC 23 05:02:27.4±2.2, 0°.7N±0°.1×126°.26E±0°.04, h35km±2km, mb4.1/9, Error ellipse: s-maj=23.5km s-min=7.0km az=177.0
ISC 23 05:02:29.2±0.8, 0°.53N±0°.09×126°.06E±0°.05, h35km, n27, σ1§92/27, mb3.9/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**80**	P	**Pn**	**05 02 52.8**	**+1.5**
TNTI				S	**Sn**	**05 03 10.6**	**+2.8**
TNTI	**Ternate**	**1.33**	**80**	Pn	Pn	05 02 46.5	-4.7
LBMI	**Labuha**	**1.85**	**129**	P	**Pn**	**05 03 00.3**	**+1.8**
KMSI	**Cibinong**	**2.08**	**271**	P	**Pn**	**05 03 01.2**	**-0.3**
GTOI	**Gorontalo**	**3.05**	**272**	P	**Pn**	**05 03 17.8**	**+2.9**
LUWI	**Luwuk**	**3.64**	**245**	P	**Pn**	**05 03 23.8**	**+0.8**
LUWI	**Luwuk**	**3.64**	**245**		**Pn**	**05 03 24.5**	**+1.5**
MRSI	**Marisa**	**4.12**	**269**	P	**Pn**	**05 03 33.3**	**+3.7**
APSI	**Ampana**	**4.63**	**252**	P	**Pn**	**05 03 39.0**	**+2.3**
TOLI2	**Tolitoli**	**5.31**	**276**		**Pn**	**05 03 46.8**	**+0.8**
FITZ	**Fitzroy Crossi**	**18.52**	**181**	P	**Pn**	**05 06 45.0**	**+2.0**
	0.1nm,0.3s,baz=355,slow=12,SNR=2.6						
FITZ	**Fitzroy Crossi**	**18.52**	**181**	P	**P**	**05 06 43.2**	**+0.5**
WB0	**Warramunga Arr**	**21.77**	**158**	P	**P**	**05 07 16.4**	**-1.6**
WRAB	**Tennant Creek**	**21.90**	**159**	P	**P**	**05 07 17.9**	**-1.5**
WRA	**Warramunga Arr**	**21.91**	**159**	P	**P**	**05 07 18.4**	**-1.1**
	1.8nm,0.8s,baz=339,slow=11,SNR=13						
WRA	**Warramunga Arr**	**21.91**	**159**	P	**P**	**05 07 17.9**	**-1.6**
WB2	**Warramunga Arr**	**21.91**	**159**	P	**P**	**05 07 17.4**	**-2.1**
WB2				IAmb	IAmb	05 07 44.6	
	comp=Z,5.9nm,1.2s						
WR0	**Warramunga Arr**	**22.00**	**158**	P	**P**	**05 07 19.8**	**-0.6**
WR0				IAmb	IAmb	05 07 26.6	
	comp=Z,4.2nm,1.1s						
ASAR	**Alice Springs**	**25.23**	**163**	P	**P**	**05 07 51.8**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=345,slow=12,SNR=17						
ASAR	**Alice Springs**	**25.23**	**163**	P	**P**	**05 07 52.0**	**0.0**
KULM	**Kulim**	**25.80**	**281**	P	**P**	**05 07 54.4**	**-2.9**
KULM				IAmb	IAmb	05 08 13.5	
	comp=Z,17nm,1.5s						
CTAO	**Charters Tower**	**28.49**	**137**	P	**P**	**05 08 17.6**	**-3.8**
CTAO				IAmb	IAmb	05 08 44.2	
	comp=Z,9.2nm,1.4s						
GSI	**Gunungsitoli**	**28.49**	**272**	P	**P**	**05 08 22.4**	**+0.9**
STKA	**Stephens Creek**	**35.43**	**157**	P	**P**	**05 09 22.4**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=331,slow=10,SNR=2.6						
MK31	**Makanchi Array**	**59.81**	**327**	P	**P**	**05 12 30.5**	**-0.5**
MKAR	**Makanchi Array**	**59.81**	**327**	P	**P**	**05 12 30.0**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=122,slow=7.6,SNR=5.4						
MKAR	**Makanchi Array**	**59.81**	**327**	P	**P**	**05 12 29.9**	**-1.2**

WEL 23 05:03:11.6±1.1, 38°S±9°×18°0W±°, h33km, M3.4/12, ML3.7/12, MLv3.4/12, Error ellipse: s-maj=0.0km s-min=0.0km az=18.2, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**1.58**	**243**	P	Pn	05 03 38.0	+0.8
TWGZ	**Tauwhareparae**	**1.65**	**256**	P	Pn	05 03 38.6	+0.4
TWGZ				S	Sn	05 03 58.9	+0.7
HAZ	**Te Kaha**	**1.76**	**270**	P	Pn	05 03 39.0	-0.8
TKGZ	**Te Karaka**	**1.82**	**248**	P	Pn	05 03 40.8	+0.3
TKGZ				S	Sn	05 04 03.0	+0.5
RUGZ	**Raukumara Rang**	**1.85**	**264**	P	Pn	05 03 40.1	-1.0
RIGZ	**Rimuhau**	**1.99**	**242**	P	Pn	05 03 43.3	+0.4
RIGZ				S	Sn	05 04 08.3	+1.5
PRGZ	**Paritu Road**	**2.02**	**235**	P	Pn	05 03 43.7	+0.4
MWZ	**Matawai**	**2.03**	**254**	P	Pn	05 03 42.8	-0.6
MWZ				S	Sn	05 04 07.5	-0.3
URZ	**Urewera**	**2.33**	**257**	P	Pn	05 03 47.8	+0.2
URZ				S	Sn	05 04 15.2	+0.1
RTZ	**Ruatahuna**	**2.52**	**250**	P	Pn	05 03 49.7	-0.6
MTHZ	**Maungataniwha**	**2.71**	**246**	P	Pn	05 03 53.0	+0.2
MTHZ				S	Sn	05 04 24.4	0.0
ARHZ	**Aropaoanui**	**2.78**	**237**	P	Pn	05 03 54.5	+0.7
ARHZ				S	Sn	05 04 28.0	+1.8
TARZ	**Mount Tarawera**	**2.80**	**260**	P	Pn	05 03 53.8	-0.3
NMHZ	**Naumai**	**2.83**	**242**	P	Pn	05 03 55.1	+0.5
CKHZ	**Cape Kidnapper**	**2.95**	**230**	P	Pn	05 03 56.5	+0.3
MCHZ	**McNeill Hill**	**3.07**	**236**	P	Pn	05 03 57.8	0.0
MCHZ				S	Sn	05 04 33.9	+0.4
BKZ	**Black Stump Fm**	**3.08**	**242**	P	Pn	05 03 58.0	0.0
BKZ				S	Sn	05 04 33.7	0.0
KAHZ	**Kahuranaki**	**3.16**	**230**	P	Pn	05 03 59.1	+0.1
KWHZ	**Kaweka Forest**	**3.25**	**239**	P	Pn	05 03 59.9	-0.3
KRHZ	**Kereru**	**3.39**	**236**	P	Pn	05 04 01.5	-0.7
BHHZ	**Black Hill Sta**	**3.52**	**240**	P	Pn	05 04 03.7	-0.3
KUZ	**Kuaotunu**	**3.57**	**286**	P	Pn	05 04 03.0	-1.6
PRHZ	**Porangahau**	**3.61**	**226**	P	Pn	05 04 04.3	-0.9
TMVZ	**Te Maari**	**3.63**	**247**	P	Pn	05 04 05.5	-0.1
ETVZ	**East Tongariro**	**3.63**	**247**	P	Pn	05 04 05.3	-0.3
OTVZ	**Oturere**	**3.67**	**247**	P	Pn	05 04 06.5	+0.3
NGZ	**Ngauruhoe**	**3.72**	**247**	P	Pn	05 04 08.1	+1.3
WNVZ	**Wahianoa**	**3.78**	**245**	P	Pn	05 04 07.5	-0.2
GRZ	**Great Barrier**	**3.95**	**292**	P	Pn	05 04 08.6	-1.2
BFZ	**Birch Farm**	**4.11**	**224**	P	Pn	05 04 10.2	-1.8
ETAZ	**East Tamaki Re**	**4.13**	**280**	P	Pn	05 04 11.3	-1.1
POWZ	**Post Office Ro**	**4.20**	**230**	P	Pn	05 04 14.0	+0.7
MRZ	**Mangatainoka R**	**4.48**	**229**	P	Pn	05 04 15.9	-1.2
CTZ	**Chatham Island**	**6.47**	**158**	P	Pn	05 04 46.8	+2.3
CTZ				S	Sn	05 05 55.6	-1.5

TEH 23 05:07:35.9, 37°.33N×50°.38E, h10km, ML3.9
IDC 23 05:07:35.2±4.0, 37°.20N×50°.30E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.4/53, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=64.1km s-min=28.7km az=9.0
THR 23 05:07:39.2±1.2, 37°.11N×50°.30E, h15km±4km, ML3.8
ISC 23 05:07:36.9±0.7, 37°.33N±0°.04×50°.37E±0°.04, h10km, n57, σ1§40/59, mb3.7/3, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QALM	**Alamut, Qazvin**	**0.92**	**166**	*e*Pg	**Pg**	**05 07 54.3**	**-0.4**
QALM				*e*		05 08 08.4	
IGZV	**Ghazvin**	**0.95**	**188**	*e*Pg	**Pg**	**05 07 54.8**	**-0.4**
IGZV				*e*		05 08 07.8	
QCNT	**Qazvin**	**1.08**	**196**	*e*	**Sn**	**05 08 12.9**	**-0.3**
QSDN	**Sirdan**	**1.26**	**230**	*e*Pg	**Pb**	**05 08 00.4**	**-0.6**
QSDN				*e*		05 08 17.4	
THKV	**Tehran--Karaj**	**1.47**	**164**	*e*Sg	**Sn**	**05 08 20.1**	**-2.9**
THKV				IAML		05 08 23.5	
	comp=N,2μm,0.2s						
ZNJK	**Zanjan**	**1.50**	**245**	*e*Pg	**Pn**	**05 08 04.3**	**+0.3**
ZNJK				*e*Sg	**Sn**	**05 08 22.6**	**-1.2**
ZNJK	**Zanjan**	**1.50**	**245**	*e*Pg	**Pn**	**05 08 04.4**	**+0.3**
CHTH	**Charan**	**1.54**	**157**	*e*Pg	**Pn**	**05 08 04.8**	**+0.1**
CHTH				*e*Sg	**Sn**	**05 08 22.7**	**-2.2**
CHTH	**Charan**	**1.54**	**157**	*e*Pg	**Pn**	**05 08 04.8**	**+0.1**
IMHD	**Mahdasht**	**1.66**	**172**	*e*		05 08 09.0	
IMHD				*e*Pg	**Pn**	**05 08 07.1**	**+1.0**
TEH	**Tehran**	**1.78**	**153**	*e*		05 08 36.1	
TEH				*e*Pg	**Pn**	**05 08 09.2**	**+1.3**
IPRN	**Peran**	**1.92**	**124**	*e*Pn	**Pn**	**05 08 09.9**	**+0.2**
IRAZ	**Razeghan**	**1.95**	**191**	*e*Pn	**Pn**	**05 08 10.4**	**+0.1**
IRAZ				*e*		05 08 11.5	
IHSB	**Hasanabad**	**2.02**	**159**	*e*Pn	**Pn**	**05 08 12.2**	**+1.0**
DAMV	**Damavand**	**2.13**	**142**	*e*Pn	**Pn**	**05 08 14.5**	**+1.7**
DAMV	**Damavand**	**2.13**	**142**	*e*Pn	**Pn**	**05 08 14.5**	**+1.7**
IDMV	**Damavand**	**2.20**	**142**	*e*Pn	**Pn**	**05 08 15.0**	**+1.2**
IDMV				*e*		05 08 45.2	
ISRB	**Sarab**	**2.21**	**284**	*e*Pn	**Pn**	**05 08 15.4**	**+1.6**
ISRB				*e*		05 08 25.5	
IALA	**Alasht**	**2.32**	**122**	*e*Pn	**Pn**	**05 08 16.0**	**+0.6**
IALA				*e*		05 08 55.8	
IQOM	**Qom**	**2.54**	**167**	*e*Pn	**Pn**	**05 08 19.2**	**+0.7**
IQOM				*e*		05 08 27.1	
IFIR	**Firoozkooh**	**2.55**	**131**	*e*Pn	**Pn**	**05 08 20.5**	**+1.9**
IFIR				*e*		05 09 05.1	
IVRN	**Varamin**	**2.57**	**154**	*e*Pn	**Pn**	**05 08 19.9**	**+1.2**
IVRN				*e*		05 09 02.6	
IHSH	**Hashtrud**	**2.65**	**293**	*e*Pn	**Pn**	**05 08 18.4**	**-1.6**
IHSH				*e*		05 09 05.8	
HSRG	**Sareghieh**	**2.68**	**220**	*e*Pn	**Pn**	**05 08 21.5**	**+1.1**
ASAO	**Ashtian**	**2.79**	**186**	*e*Pn	**Pn**	**05 08 22.6**	**+0.9**
ASAO				Sn	**Sn**	**05 08 54.8**	**-0.9**
ASAO	**Ashtian**	**2.79**	**186**	*e*Pn	**Pn**	**05 08 22.7**	**+0.9**
ISHM	**Shahmirzad**	**2.80**	**122**	*e*Pn	**Pn**	**05 08 23.5**	**+1.5**
ISHM				*e*		05 09 09.6	
IHRS	**Heris**	**2.82**	**292**	*e*Pn	**Pn**	**05 08 23.9**	**+1.7**
IHRS				*e*		05 09 00.1	
ILAS	**Lasjerd**	**2.85**	**132**	*e*Pn	**Pn**	**05 08 24.5**	**+1.8**
IKIA	**Kiasar**	**2.88**	**112**	*e*Pn	**Pn**	**05 08 24.4**	**+1.3**
IGLO	**Ghaloghah**	**2.89**	**106**	*e*Pn	**Pn**	**05 08 24.1**	**+0.9**
IGLO				*e*		05 09 04.3	
GHVR	**GHOM**	**2.94**	**165**	*e*Pn	**Pn**	**05 08 24.5**	**+0.8**
GHVR	**GHOM**	**2.94**	**165**	*e*Pn	**Pn**	**05 08 24.5**	**+0.8**
IALM	**Almabolaq**	**3.04**	**217**	*e*Pn	**Pn**	**05 08 27.3**	**+2.0**
IANJ	**Anjilo**	**3.41**	**122**	*e*Pn	**Pn**	**05 08 31.8**	**+1.5**
KHMZ	**Khomeyn**	**3.60**	**185**	*e*Pn	**Pn**	**05 08 34.5**	**+1.6**
KHMZ	**Khomeyn**	**3.60**	**185**	*e*Pn	**Pn**	**05 08 34.5**	**+1.6**
QAM	**Ghamsar**	**3.66**	**166**	*e*Pn	**Pn**	**05 08 34.6**	**+0.8**
IKOM	**Komasi**	**3.91**	**217**	*e*Pn	**Pn**	**05 08 39.3**	**+2.1**
IMND	**Minoodasht**	**4.02**	**89**	*e*Pn	**Pn**	**05 08 38.3**	**-0.1**
IKLH	**Kolahrood**	**4.12**	**166**	*e*Pn	**Pn**	**05 08 41.7**	**+1.6**
IKLH				*e*		05 09 46.3	
IDHR	**Dehrash**	**4.16**	**232**	*e*Pn	**Pn**	**05 08 42.6**	**+1.9**
IPIR	**Pirpir**	**4.65**	**175**	*e*Pn	**Pn**	**05 08 49.7**	**+2.2**
IZEF	**Zefreh**	**4.70**	**159**	*e*Pn	**Pn**	**05 08 49.8**	**+1.6**
ANAR	**Anarak**	**4.96**	**145**	*e*Pn	**Pn**	**05 08 53.4**	**+1.8**
IRAM	**Ramesheh**	**5.75**	**163**	*e*Pn	**Pn**	**05 09 04.2**	**+1.7**
SBZV	**Sabzevar**	**5.88**	**97**	*e*Pn	**Pn**	**05 09 06.0**	**+1.7**
ISFR	**Sfrayin**	**6.10**	**90**	*e*Pn	**Pn**	**05 09 09.7**	**+2.4**
GEYT	**Ailbeck**	**6.18**	**82**	Pn	**Pn**	**05 09 08.3**	**+0.1**
	comp=N,1.8nm,0.3s,baz=320,slow=4.7,SNR=10						
IKRD	**Kardeh**	**6.54**	**92**	*e*Pn	Pb	05 09 25.7	-5.1
TPRV	**Parvadeh(Tabas**	**6.72**	**128**	*e*Pn	**Pn**	**05 09 17.5**	**+1.8**
AKTO	**Aktyubinsk**	**14.20**	**20**	Pn	**Pn**	**05 10 56.1**	**-1.9**
	comp=N,0.6nm,0.3s,baz=206,slow=14,SNR=7.0						
ARU	**Arti**	**19.89**	**13**	P	**P**	**05 12 09.1**	**+0.9**
	comp=N,1.6nm,0.5s,baz=192,slow=9.3,SNR=8.0						
AKASG	**Malin Array Be**	**20.16**	**318**	P	**P**	**05 12 10.3**	**-0.9**
	comp=N,0.8nm,0.6s,baz=117,slow=12,SNR=4.0						
KURBB	**Kurchatov Arra**	**24.06**	**48**	P	**P**	**05 12 53.2**	**+1.1**
	comp=N,0.3nm,0.4s,baz=252,slow=9.7,SNR=3.1						
FINES	**FINESS Array B**	**28.52**	**336**	P	**P**	**05 13 33.2**	**+1.0**
	comp=N,1.2nm,0.9s,baz=132,slow=10,SNR=4.4						
ARCES	**ARCESS Array B**	**34.96**	**345**	P	**P**	**05 14 30.0**	**+1.3**
	comp=N,2.2nm,1.0s,baz=139,slow=12,SNR=2.7						

JMA 23 05:11:06.4±0.1, 24°.45N×121°.88E, h11km, M2.8
TAP 23 05:11:06.4, 24°.48N×121°.88E, h11km, ML3.3, B
ISC 23 05:11:06.1±0.8, 24°.46N±0°.01×121°.92E±0°.02, h10km±5km, n111, σ0§60/179, 6C-3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.10**	**265**	⇑*i*P	**Pg**	**05 11 08.9**	**+0.2**
	baz=249						
ENAH				S	**Sg**	**05 11 10.5**	**0.0**
	baz=249						
ENA	**Nanau**	**0.16**	**259**	⇓*i*P	**Pg**	**05 11 09.8**	**+0.1**
	baz=246						
ENA				S	**Sg**	**05 11 12.0**	**-0.1**
	baz=246						
TWC	**Suao**	**0.16**	**338**	⇑*i*P	**Pg**	**05 11 09.8**	**+0.2**
	baz=352						
TWC				*i* S	**Sg**	**05 11 11.8**	**-0.3**
	baz=352						
ILA	**Ilan**	**0.34**	**333**	⇑*i*P	**Pg**	**05 11 13.5**	**+0.6**
	baz=339						
ILA				*e*S	**Sb**	**05 11 19.2**	**-0.6**
	baz=339						
TWE	**Neicheng**	**0.35**	**319**	⇑*i*P	**Pg**	**05 11 13.1**	**+0.2**
	baz=323						
TWE				*e*S	**Sg**	**05 11 18.1**	**+0.4**
	baz=323						
ENTT	**Nioudou**	**0.37**	**300**	⇑*i*P	**Pg**	**05 11 13.5**	**+0.1**
	baz=300						
ENTT				S	**Sg**	**05 11 18.3**	**0.0**
	baz=300						
EGS		**0.39**	**2**	*e*P	**Pg**	**05 11 14.3**	**+0.6**
	baz=10.0						
EGS				*e*S	**Sg**	**05 11 19.3**	**+0.5**
	baz=10.0						
NDT	**Datong Townshi**	**0.39**	**291**	P	**Pg**	**05 11 14.2**	**+0.3**
	baz=290						
NDT				S	**Sg**	**05 11 18.9**	**-0.3**
	baz=290						
NTC	**Toucheng**	**0.40**	**349**	*i* P	**Pg**	**05 11 14.4**	**+0.3**
	baz=354						
NTC				*e*S	**Sb**	**05 11 20.7**	**-0.8**
	baz=354						
NACB	**Ninganchiao**	**0.41**	**226**	⇓*i*P	**Pg**	**05 11 14.2**	**+0.1**
	baz=220						
NACB				S	**Sg**	**05 11 19.8**	**+0.3**
	baz=220						
ETLH	**Xiulin Townshi**	**0.47**	**238**	⇓*i*P	**Pg**	**05 11 15.3**	**0.0**
	baz=233						
ETLH				*e*S	**Sg**	**05 11 22.0**	**+0.5**
	baz=233						
TWD	**Chiawan**	**0.48**	**218**	*i* P	**Pg**	**05 11 15.6**	**+0.2**
	baz=212						
TWD				*e*S	**Sg**	**05 11 22.5**	**+0.8**
	baz=212						
NNSB	**Datong**	**0.49**	**267**	P	**Pg**	**05 11 15.7**	**0.0**
	baz=264						
NNSB				*e*S	**Sg**	**05 11 21.6**	**-0.5**
	baz=264						
NNSH	**Datong**	**0.49**	**267**	*e*P	**Pg**	**05 11 15.7**	**+0.1**
	baz=264						
NNSH				S	**Sg**	**05 11 21.4**	**-0.7**
	baz=264						
NWLT	**Wulai**	**0.49**	**310**	P	**Pg**	**05 11 16.0**	**+0.2**
	baz=302						
NWLT				*e*S	**Sg**	**05 11 22.6**	**+0.3**
	baz=302						
NNS	**Nan Shan**	**0.49**	**268**	P	**Pg**	**05 11 15.8**	**0.0**
	baz=265						
NNS				*e*S	**Sg**	**05 11 21.8**	**-0.5**
	baz=265						
TIPB	**Shuangxi**	**0.52**	**351**	*e*P	**Pg**	**05 11 16.5**	**+0.3**
	baz=355						
TIPB				*e*S	**Sg**	**05 11 23.2**	**+0.1**
	baz=355						
YHNB	**Yeheng**	**0.54**	**293**	P	**Pb**	**05 11 16.8**	**-0.8**
	baz=299						
YHNB				S	**Sg**	**05 11 22.9**	**-0.7**
	baz=299						
TWB1	**Santiao Chiao**	**0.55**	**7**	*e*P	**Pg**	**05 11 17.0**	**+0.2**
	baz=13						
TWB1				*e*S	**Sg**	**05 11 24.2**	**+0.1**
	baz=13						
NSK	**Sanguang**	**0.55**	**293**	⇑*i*P	**Pg**	**05 11 17.1**	**+0.2**
	baz=299						
NSK				*i* S	**Sg**	**05 11 23.4**	**-0.7**
	baz=299						
HWA	**Hwalien**	**0.56**	**211**	*e*P	**Pb**	**05 11 18.0**	**+0.1**
	baz=212						
TWA	**Mucha**	**0.60**	**330**	*e*P	**Pb**	**05 11 18.3**	**-0.4**
	baz=333						
TWA				*e*S	**Sb**	**05 11 26.3**	**-1.0**
	baz=333						
NHDH	**Xindian Distri**	**0.62**	**325**	*e*P	**Pb**	**05 11 18.4**	**-0.5**
	baz=313						
NHDH				S	**Sb**	**05 11 27.1**	**-0.5**
	baz=313						
NWF	**Wu-fen Shan**	**0.62**	**349**	*e*P	**Pb**	**05 11 18.8**	**-0.3**
	baz=342						
NWF				*e*S	**Sg**	**05 11 26.3**	**-0.1**
	baz=342						
WFSB	**Wu-fen Shan**	**0.62**	**349**	P	**Pb**	**05 11 18.7**	**-0.3**
	baz=342						
WFSB				S	**Sb**	**05 11 27.6**	**-0.2**
	baz=342						
TATO	**Taipei**	**0.65**	**323**	P	**Pb**	**05 11 19.0**	**-0.5**
	baz=325						
TATO				*e*S	**Sg**	**05 11 26.9**	**-0.1**
	baz=325						
FUSS	**Fushou**	**0.65**	**251**	P	**Pg**	**05 11 18.9**	**+0.2**
	baz=248						
FUSS				S	**Sb**	**05 11 28.2**	**-0.5**
	baz=248						
WHF	**Hehuan Shan**	**0.67**	**242**	P	**Pg**	**05 11 19.3**	**+0.1**
	baz=239						
WHF				*e*S	**Sb**	**05 11 28.9**	**-0.7**
	baz=239						
TAP1	**Taipei**	**0.68**	**328**	*e*P	**Pb**	**05 11 20.1**	**+0.1**
	baz=318						
TAP1				*e*S	**Sb**	**05 11 29.8**	**+0.3**
	baz=318						
TAP	**Taipei**	**0.69**	**327**	*e*P	**Pb**	**05 11 20.2**	**+0.1**
	baz=318						
TAP				*e*S	**Sb**	**05 11 30.4**	**+0.7**
	baz=318						
TWT	**Tachien**	**0.70**	**253**	P	**Pb**	**05 11 20.1**	**-0.4**
	baz=251						
TWT				*e*S	**Sb**	**05 11 29.8**	**-0.6**
	baz=251						
TDCB	**Techi**	**0.72**	**254**	P	**Pg**	**05 11 20.2**	**+0.1**
	baz=244						
TDCB				*e*S	**Sb**	**05 11 30.0**	**-0.8**
	baz=244						
YM01	**YM01**	**0.75**	**335**	*i* P	**Pb**	**05 11 21.4**	**+0.1**
	baz=338						
YM01				*e*S	**Sb**	**05 11 31.9**	**+0.2**
	baz=338						
YM10	**YM10**	**0.77**	**335**	P	**Pb**	**05 11 21.6**	**+0.1**
	baz=338						
YM10				*e*S	**Sb**	**05 11 32.9**	**+0.8**
	baz=338						
YM11	**YM11**	**0.77**	**336**	P	**Pb**	**05 11 22.0**	**+0.4**
	baz=339						
YM11				*e*S	**Sb**	**05 11 33.0**	**+0.9**
	baz=339						
YM05	**YM05**	**0.77**	**336**	P	**Pb**	**05 11 21.8**	**+0.2**
	baz=338						
YM05				*e*S	**Sb**	**05 11 31.7**	**-0.5**
	baz=338						
YM04	**YM04**	**0.77**	**334**	*e*P	**Pb**	**05 11 21.8**	**+0.1**
	baz=336						
YM04				*e*S	**Sg**	**05 11 31.1**	**-0.1**
	baz=336						
ESL	**Shilin**	**0.78**	**215**	P	**Pg**	**05 11 20.8**	**-0.3**
	baz=219						
ESL				*e*S	**Sg**	**05 11 31.6**	**+0.3**
	baz=219						
TWS1	**Kuangyinshan**	**0.78**	**325**	*e*P	**Pb**	**05 11 22.3**	**+0.5**
	baz=326						
CHGB	**Renai**	**0.79**	**240**	*i* P	**P

SMLT	**Sun Moon Lake**	**1.09 239**	*eP*	**Pn**	**05 11 27.3**	**-0.2**
	baz=236						
SMLT			*eS*	**Sn**	**05 11 41.6**	**-1.1**
	baz=236						
EHY	**Hungye**	**1.09 210**	*eP*	**Pb**	**05 11 26.9**	**-0.1**
	baz=218						
EHY			*eS*	**Sb**	**05 11 41.2**	**-0.2**
	baz=218						
SSLB	**Suanglung**	**1.10 233**	P	**Pb**	**05 11 27.1**	**-0.1**
	baz=231						
SSLB			*eS*	**Sb**	**05 11 40.9**	**-0.8**
	baz=231						
TYC	**Yuchr**	**1.11 241**	*eP*	**Pn**	**05 11 27.5**	**-0.2**
	baz=238						
TYC			*eS*	**Sn**	**05 11 42.6**	**-0.5**
	baz=238						
WDJ	**Dajia District**	**1.17 265**	*eP*	**Pg**	**05 11 30.4**	**+1.9**
	baz=263						
TCU	**Taichung**	**1.17 255**	*eP*	**Pg**	**05 11 30.6**	**+1.9**
	baz=241						
PCYT	**Pengchaiyu**	**1.17 7**	*eP*	**Pb**	**05 11 28.2**	**-0.3**
	baz=10.0						
YULB	**Yu-li**	**1.20 208**	*eP*	**Pb**	**05 11 28.6**	**-0.3**
	baz=216						
WHYT	**Xinyi Township**	**1.23 232**	*eP*	**Pn**	**05 11 29.2**	**-0.1**
	baz=229						
EYUL	**Yuli**	**1.23 206**	*eP*	**Pn**	**05 11 29.3**	**0.0**
	baz=220						
EYUL			*eS*	**Sb**	**05 11 45.6**	**+0.2**
	baz=220						
TWF1	**Yuli**	**1.24 207**	*eP*	**Pn**	**05 11 29.5**	**+0.1**
	baz=215						
TWF1			*eS*	**Sn**	**05 11 46.5**	**+0.4**
	baz=215						
WJS	**Zhushan**	**1.26 240**	*eP*	**Pb**	**05 11 29.7**	**-0.2**
	baz=229						
WNT	**Mingjian**	**1.27 243**	*eP*	**Pg**	**05 11 31.5**	**+1.1**
	baz=236						
WNT			*eS*	**Sn**	**05 11 50.0**	**+3.1**
	baz=236						
WCHH	**Zhanghua**	**1.29 253**	*eP*	**Pg**	**05 11 31.6**	**+0.7**
	baz=250						
FULB	**Fuli**	**1.38 205**	*eP*	**Pn**	**05 11 31.4**	**0.0**
	baz=214						
ALS	**Alishan**	**1.39 227**	*eP*	**Pg**	**05 11 32.9**	**+0.1**
	baz=208						
CHN5	**Tsauling**	**1.42 233**	*eP*	**Pg**	**05 11 34.4**	**+1.0**
	baz=216						
WDLH	**Douliu**	**1.47 239**	*eP*	**Pg**	**05 11 34.7**	**+0.3**
	baz=250						
ELDTW	**Lidau**	**1.51 213**	*eP*	**Pb**	**05 11 34.6**	**+0.4**
	baz=210						
EDH	**Donghe**	**1.58 201**	*eP*	**Pn**	**05 11 33.8**	**-0.4**
	baz=183						
WTK	**Tuku**	**1.59 242**	*eP*	**Pg**	**05 11 37.3**	**+0.6**
	baz=254						
CHN2	**Minshiung**	**1.61 235**	*eP*	**Pg**	**05 11 37.5**	**+0.5**
	baz=217						
TPUB	**Ta-pu**	**1.65 226**	*eP*	**Pg**	**05 11 37.5**	**-0.2**
	baz=212						
TPUB			*eS*	**Sg**	**05 11 59.4**	**+0.3**
	baz=212						
IRIF	**Iriomote-Funau**	**1.66 94**	P	**Pn**	**05 11 34.8**	**-0.4**
IRIF			S	**Sn**	**05 11 56.3**	**-0.2**
CHY	**Chiayi**	**1.67 235**	*eP*	**Pg**	**05 11 38.8**	**+0.7**
	baz=217						
STYT	**Tauyuan**	**1.67 220**	*eP*	**Pg**	**05 11 38.4**	**+0.3**
	baz=216						
WTP	**Ta-pu**	**1.70 225**	*eP*	**Pb**	**05 11 38.0**	**+0.6**
	baz=206						
TWK	**Hsinying**	**1.77 228**	*eP*	**Pg**	**05 11 39.3**	**-0.7**
	baz=224						
HATJ	**Hateruma jima**	**1.77 103**	P	**Pn**	**05 11 37.4**	**+0.7**
HATJ			*eS*	**Sn**	**05 11 59.1**	**-0.2**
CHN1	**Nanshi**	**1.79 225**	*eP*	**Pb**	**05 11 39.4**	**+0.4**
	baz=221						
SGST	**Jiashian**	**1.83 222**	*eP*	**Pb**	**05 11 39.1**	**-0.6**
	baz=218						
ICHU	**Yijhu**	**1.85 234**	*eP*	**Pg**	**05 11 40.9**	**-0.8**
	baz=212						
SLGT	**Liugui**	**1.87 219**	*eP*	**Pb**	**05 11 40.6**	**+0.3**
	baz=215						
JKRS	**Kuro-shima**	**1.92 96**	P	**Pn**	**05 11 39.0**	**+0.2**
JKRS			S	**Sn**	**05 12 02.4**	**-0.6**
JIJ	**Ishigaki jima**	**2.03 92**	P	**Pn**	**05 11 40.3**	**0.0**
JIJ			S	**Sn**	**05 12 04.3**	**-1.5**
SSD	**Sandimen**	**2.07 215**	*eP*	**Pb**	**05 11 44.6**	**+0.9**
	baz=211						
TSMG	**Majia**	**2.10 214**	*eP*	**Pb**	**05 11 44.9**	**+0.7**
	baz=210						
MASBT	**Mashibuluo**	**2.18 213**	*eP*	**Pb**	**05 11 44.8**	**-0.9**
	baz=209						
JISG	**Ishigakijimahi**	**2.19 86**	P	**Pn**	**05 11 42.1**	**-0.3**
JISG			S	**Sn**	**05 12 08.9**	**-0.6**
PTTC	**Pingtan**	**2.21 298**	*eP*	**Pn**	**05 11 43.4**	**+0.7**
	baz=297						
VWUC	**VWUC**	**2.31 284**	*eP*	**Pn**	**05 11 43.7**	**-0.3**
	baz=282						
PNG	**Penghu**	**2.33 248**	*eP*	**Pn**	**05 11 45.1**	**+0.6**
	baz=245						
PHUB	**P'eng-hu**	**2.34 247**	*eP*	**Pn**	**05 11 44.3**	**-0.3**
	baz=243						
WDGT	**Dungji**	**2.38 240**	*eP*	**Pn**	**05 11 46.7**	**+1.5**
	baz=249						
SCZT	**Fangliau**	**2.39 210**	*eP*	**Pb**	**05 11 48.9**	**-0.4**
	baz=191						
MATB	**Ma-tsu**	**2.45 314**	*eP*	**Pn**	**05 11 46.4**	**+0.2**
	baz=312						
SLIU	**Shizi**	**2.46 205**	*eP*	**Pb**	**05 11 48.7**	**-1.6**
	baz=191						
PTMZ	**Houxiangcun**	**2.61 283**	*eP*	**Pn**	**05 11 49.2**	**+1.0**
	baz=282						
XPSS	**Dashiqiu**	**2.91 328**	*eP*	**Pn**	**05 11 51.9**	**-0.5**
	baz=327						
KNMB	**Chin-men Tao**	**3.21 271**	*eP*	**Pn**	**05 11 56.5**	**-0.1**
	baz=269						
AXDP	**Jialang**	**3.62 278**	*eP*	**Pn**	**05 12 03.0**	**+0.9**
	baz=276						

IDC ***23*** *05:12:44.0±8.9, 46°.87N×152°.99E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/45, mbtmp3.7/5, ML3.2/2, Error ellipse: s-maj=188.3km s-min=38.9km az=133.0*
SKHL ***23*** *05:12:51.8±0.2, 45°.82N×152°.73E, h40km±9km, mb4.6/2*
ISC 23 05:12:55.0±3.6, 45°.9N±0°.3×152°.5E±0°.2, h35km, n16, σ1s54/12, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.33**	**261**	*eP*		**Pn**	**05 13 44.0**		**-0.5**
KUR						AMB	AMB	05 13 45.7	
	90nm,0.5s								
KUR				*eS*		**Sn**	**05 14 23.0**		**+0.2**
KUR				A		A	05 14 25.3		
	80nm,0.5s								
KUR				A		A	05 14 25.3		
	90nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**5.07**	**251**	*eP*		**Pn**	**05 14 09.4**		**+1.0**
YUK						AMB	AMB	05 14 10.3	
	60nm,0.7s								
YUK				*eS*		**Sn**	**05 15 03.6**		**-2.0**
YUK				A		A	05 15 08.0		
	160nm,0.9s								
YUK				A		A	05 15 08.0		
	90nm,0.9s								
GRPR	**Tuman**	**5.14**	**251**	*eP*		**Pn**	**05 14 10.0**		**+0.5**
GRPR				*eS*		**Sn**	**05 15 10.3**		**+2.8**
GLVR	**Golovnino**	**5.41**	**249**	*eS*		**Sn**	**05 15 14.0**		**-0.2**
NMR	**Nemuro--Hokkai**	**5.45**	**245**	*i P*		**Pn**	**05 14 13.0**		**-0.7**
NMR				*eS*		**Sn**	**05 15 14.0**		**-1.1**
ASAJ	**Asahikawa**	**7.25**	**260**	Pn		**Pn**	**05 14 40.2**		**+1.8**
	0.7nm,0.3s,baz=40,slow=33,SNR=5.7								
USRK	**Ussuriysk Ar.**	**14.61**	**271**	Pn		**Pn**	**05 16 17.4**		**-1.7**
	baz=46,slow=12,SNR=4.3								
KSRS	**Korea Array**	**20.15**	**254**	P		**P**	**05 17 25.9**		**-0.1**
	0.6nm,0.3s,baz=56,slow=9.2,SNR=3.2								
H11N2	**WAKE ISLAND Hy 28.63**	**151**		T		T	05 50 08.9		
	baz=340,slow=76,SNR=169								
H11N1	**WAKE ISLAND Hy 28.64**	**151**		T		T	05 50 11.6		
	baz=340,slow=76,SNR=140								
H11N3	**WAKE ISLAND Hy 28.65**	**151**		T		T	05 50 11.7		
	baz=340,slow=76,SNR=116								
H11S1	**WAKE ISLAND Hy 29.70**	**152**		T		T	05 51 32.5		
	baz=340,slow=76,SNR=177								
H11S3	**WAKE ISLAND Hy 29.71**	**152**		T		T	05 51 34.5		
	baz=340,slow=76,SNR=122								
H11S2	**WAKE ISLAND Hy 29.72**	**152**		T		T	05 51 36.6		
	baz=340,slow=76,SNR=134								
MKAR	**Makanchi Array**	**46.99**	**298**	P		P	05 21 14.4		**-8.1**
	0.2nm,0.6s,baz=48,slow=6.7,SNR=2.5								
FINES	**FINESS Array B**	**64.67**	**335**	P		P	05 23 18.6		**-10**
	0.6nm,0.8s,baz=25,slow=4.6,SNR=3.4								

INET ***23*** *05:35:04.9, 10°.93N×86°.36W, h20km, ML2.4*
UCR 23 05:35:03.1±1.1, 10°.91N×86°.44W, h0km±4km, MW3.9, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**0.85**	**103**	*eP*		Pb		05 35 20.5	-0.3
GBS3	**Finca Las Img**	**0.98**	**98**	*i P*		Pg		05 35 22.1	+0.2
GBS3				*i S*		Sn		05 35 37.6	-1.1
LAPC	**Finca la Perla**	**1.00**	**98**	*i P*		Pg		05 35 22.1	-0.2
BUEV	**Buena Vista**	**1.02**	**96**	*i P*		Pg		05 35 22.9	+0.2
BUEV				*i S*		Sb		05 35 38.0	+0.2
GB1A	**Borinquen Arri**	**1.03**	**95**	*i P*		Pg		05 35 23.2	+0.3
GB1A				*eS*		Sn		05 35 39.2	-0.8
GPS3	**Bodega del ICE**	**1.07**	**98**	*i P*		Pg		05 35 23.5	-0.1
GPS3				*i S*		Sb		05 35 39.5	+0.4
GPS1	**Guardaparques**	**1.08**	**97**	*i P*		Pg		05 35 23.7	-0.2
GPS2	**Hotel Rincn d**	**1.08**	**98**	*eP*		Pg		05 35 23.9	0.0
GPS2				*eS*		Sb		05 35 39.3	-0.2
BUAI	**Buenos Aires**	**1.09**	**92**	*i P*		Pg		05 35 24.3	+0.3
ORTG	**Ortega, Santa**	**1.11**	**119**	*eP*		Pg		05 35 24.6	+0.2
ORTG				*eS*		Sb		05 35 40.0	-0.2
GUAI	**GUAI**	**1.12**	**125**	*i P*		Pg		05 35 24.3	-0.3
LIM1	**Limonal**	**1.19**	**100**	*i P*		Pg		05 35 25.4	-0.5
GUAB	**Guayabo de Bag**	**1.21**	**100**	*i P*		Pg		05 35 25.9	-0.4
COLC	**Colonia**	**1.24**	**101**	*i P*		Pg		05 35 26.3	-0.6
DUNO	**Dulce Nombre,**	**1.25**	**132**	*eP*		Pg		05 35 27.1	0.0
HORNC	**Hornillas**	**1.26**	**99**	*i P*		Pg		05 35 26.4	-0.8
CUI	**Cuipilapa**	**1.28**	**101**	*eP*		Pg		05 35 27.1	-0.6
JTS	**Las Juntas de**	**1.59**	**113**	*eP*		Pn		05 35 32.1	-0.4
CNGN	**Cerro Negro**	**1.60**	**351**	*eP*		Pn		05 35 29.8	-2.9
ARE1	**Arenal 1**	**1.75**	**105**	*eP*		Pb		05 35 36.0	-0.2
CEDE	**Laguna Cedeo**	**1.76**	**104**	*eP*		Pb		05 35 35.9	-0.4
CRIN	**San Cristobal**	**1.87**	**342**	*eP*		Pn		05 35 36.0	-0.5
COVE	**Coope Vega, Sa**	**2.01**	**95**	*eP*		Pn		05 35 37.9	-0.5
LCR2	**La Lucha 2**	**2.67**	**116**	*eP*		Pn		05 35 48.3	+0.8
RIMA	**Rio Macho**	**2.78**	**114**	*eP*		Pn		05 35 48.7	-0.4

IDC ***23*** *05:47:40.5±1.1, 32°.56N×92°.80E, h0km, mb3.5/4, mb1 3.6/7, mb1mx3.4/55, mbtmp3.5/7, ML3.7/3, MS3.1/5, Ms1 3.1/5, ms1mx2.8/42, Error ellipse: s-maj=46.8km s-min=21.9km az=60.0*
ISC 23 05:47:42.9±1.0, 32°.6N±0°.1×92°.8E±0°.2, h17km, n9, σ0s93/7, mb3.6/3, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.17**	**157**	Pn		**Pn**	**05 51 16.2**		**-0.2**
	0.5nm,0.3s,baz=322,slow=13,SNR=5.2								
CMAR				LR		LR	05 56 42.7		
	comp=Z,35nm,18.4s,baz=180,slow=36								
MKAR	**Makanchi Array**	**16.26**	**334**	Pn		**Pn**	**05 51 29.0**		**-1.5**
	0.1nm,0.3s,baz=166,slow=13,SNR=2.7								
MKAR				LR		LR	05 58 45.9		
	comp=Z,49nm,18.0s,baz=158,slow=41								
SONM	**Songino Array**	**18.37**	**30**	P		**Pn**	**05 51 57.3**		**+0.4**
	0.1nm,0.3s,baz=216,slow=14,SNR=3.6								
SONM				LR		LR	05 59 35.0		
	comp=Z,104nm,18.4s,baz=318,slow=39								
TLY	**Talaya**	**20.64**	**19**	LR		LR	06 01 30.5		
	comp=Z,53nm,18.8s,baz=210,slow=40								
KURBB	**Kurchatov Arra**	**20.83**	**334**	P		**P**	**05 52 24.2**		**+0.7**
	2.4nm,0.9s,baz=141,slow=11,SNR=14								
AKTO	**Aktyubinsk**	**31.14**	**315**	LR		LR	06 08 54.4		
	comp=Z,28nm,19.5s,baz=33,slow=41								
WRA	**Warramunga Arr**	**65.67**	**137**	P		**P**	**05 58 26.2**		**-0.4**
	0.2nm,0.8s,baz=323,slow=8.1,SNR=2.9								
ASAR	**Alice Springs**	**68.38**	**140**	P		**P**	**05 58 43.6**		**-0.1**
	0.4nm,0.9s,baz=321,slow=6.3,SNR=5.5								
TORD	**Torodi Ar. Bea**	**83.92**	**282**	P		**P**	**06 00 13.1**		**+0.7**
	0.3nm,0.4s,baz=46,slow=5.0,SNR=5.6								

IDC ***23*** *06:00:49.2±0.8, 37°.20S×179°.67E, h0km, mb4.4/5, mb1 4.6/7, mb1mx4.2/33, mbtmp4.4/7, ML4.1/2, MS3.4/8, Ms1 3.4/8, ms1mx3.2/21, Error ellipse: s-maj=24.7km s-min=22.1km az=147.0*
NEIC ***23*** *06:00:49.5±1.2, 37°.7S±0°.1×180°.0E±0°.1, h13km±7km, Error ellipse: s-maj=20.1km s-min=14.7km az=172.0*
WEL ***23*** *06:00:53.4±1.1, 38°.5S±10°×178°.0E±°, h33km, M4.4/18, ML4.8/18, MLv4.4/18, Error ellipse: s-maj=0.0km s-min=0.0km az=27.6*
ISC 23 06:00:49.7±1.4, 37°.72S±0°.06×179°.97E±0°.05, h12km±7km, n163, σ1s79/155, mb4.4/10, MS3.5/8, 2D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.24**	**265**	P		**Pg**	**06 01 13.8**		**+0.2**
WMGZ				S		**Sg**	**06 01 30.0**		**+0.3**
MXZ	**Matakaoa Point**	**1.33**	**276**	P		**Pb**	**06 01 13.9**		**-0.7**
MXZ	**Matakaoa Point**	**1.33**	**276**			**Pb**	**06 01 14.1**		**-0.6**
MXZ						**Sn**	**06 01 31.0**		**-0.7**
PUZ	**Puketiti**	**1.40**	**255**	P		**Pg**	**06 01 16.6**		**-0.1**
CNGZ	**Carnagh Statio**	**1.59**	**241**	P		**Pg**	**06 01 20.5**		**+0.2**
TWGZ	**Tauwhareparae**	**1.64**	**253**	P		**Pb**	**06 01 20.4**		**+0.4**
HAZ	**Te Kaha**	**1.74**	**268**	P		**Pb**	**06 01 20.6**		**-1.0**
HAZ				S		**Sb**	**06 01 42.6**		**-0.8**
TKGZ	**Te Karaka**	**1.83**	**246**	P		**Pb**	**06 01 22.9**		**-0.2**
RUGZ	**Raukumara Rang**	**1.83**	**261**	P		**Pn**	**06 01 21.9**		**+0.7**
RIGZ	**Rimuhau**	**2.00**	**240**	P		**Pb**	**06 01 25.5**		**-0.6**
MWZ	**Matawai**	**2.03**	**252**	P		**Pb**	**06 01 25.1**		**-1.5**
MWZ				S		**Sn**	**06 01 50.2**		**+1.1**
PRGZ	**Paritu Road**	**2.04**	**233**	P		**Pb**	**06 01 26.2**		**-0.6**
RAGZ	**Rawiri**	**2.16**	**248**	P		**Pb**	**06 01 27.4**		**-1.5**
RAGZ				S		**Sn**	**06 01 54.0**		**+1.4**
MHGZ	**Mahia Peninsul**	**2.17**	**228**	P		**Pb**	**06 01 27.9**		**-1.0**
KNZ	**Kokohu**	**2.23**	**233**	P		**Pb**	**06 01 28.5**		**-1.5**
URZ	**Urewera**	**2.33**	**256**	Pn		**Pn**	**06 01 29.3**		**+1.4**
	51nm,0.3s,baz=61,slow=4.9,SNR=138								
URZ						**Sn**	**06 01 58.0**		**+1.7**
	107nm,0.3s,baz=333,slow=13,SNR=20								
URZ	**Urewera**	**2.33**	**256**	P		**Pn**	**06 01 29.5**		**+1.7**
URZ				S		**Sn**	**06 01 57.6**		**+1.2**
URZ	**Urewera**	**2.33**	**256**			**Pn**	**06 01 29.4**		**+1.6**
SNGZ	**Shannon Statio**	**2.33**	**242**	P		**Pb**	**06 01 30.0**		**-1.7**
WHRZ	**Whale Island**	**2.38**	**266**	P		**Pb**	**06 01 30.4**		**-2.2**
RTZ	**Ruatahuna**	**2.52**	**248**	P		**Pb**	**06 01 32.9**		**-2.2**
WHHZ	**Waihua**	**2.55**	**237**	P		**Pb**	**06 01 33.3**		**-2.0**
RAHZ	**Arahi**	**2.57**	**241**	P		**Pb**	**06 01 34.2**		**-1.6**
EDRZ	**Edgecumbe**	**2.59**	**260**	P		**Pb**	**06 01 33.7**		**-2.4**
MARZ	**Manawahe**	**2.63**	**263**	P		**Pn**	**06 01 33.8**		**+1.8**
MUGZ	**Murupara**	**2.64**	**252**	P		**Pn**	**06 01 33.8**		**+1.6**
OPRZ	**Ohinepanea**	**2.71**	**266**	P		**Pn**	**06 01 33.7**		**+0.6**
MTHZ	**Maungataniwha**	**2.71**	**244**	P		**Pn**	**06 01 35.0**		**+1.7**
TARZ	**Mount Tarawera**	**2.79**	**258**	P		**Pn**	**06 01 36.2**		**+1.8**
ARHZ	**Aropaoanui**	**2.80**	**236**	P		**Pn**	**06 01 37.0**		**+2.6**
RRRZ	**Republican Roa**	**2.80**	**256**	P		**Pb**	**06 01 37.9**		**-1.9**
MKRZ	**Makatiti**	**2.81**	**260**	P		**Pb**	**06 01 39.6**		**-0.2**
NMHZ	**Naumai**	**2.84**	**240**	P		**Pn**	**06 01 37.1**		**+2.0**
OMRZ	**Omania**	**2.88**	**261**	P		**Pb**	**06 01 39.2**		**-1.8**
HLRZ	**Highlands Stat**	**2.91**	**258**	P		**Pb**	**06 01 40.8**		**-0.8**
PRRZ	**Plateau Road**	**2.93**	**253**	P		**Pn**	**06 01 38.0**		**+1.8**
TGRZ	**Tauranga**	**2.94**	**269**	P		**Pn**	**06 01 37.1**		**+0.7**
KARZ	**Kaharoa**	**2.97**	**263**	P		**Pn**	**06 01 38.1**		**+1.4**
CKHZ	**Cape Kidnapper**	**2.98**	**229**	P		**Pn**	**06 01 38.8**		**+1.9**
ALRZ	**Allen Road**	**2.98**	**252**	P		**Pn**	**06 01 38.3**		**+1.3**
HRRZ	**Handcock Road**	**2.99**	**256**	P		**Pn**	**06 01 38.4**		**+1.4**
MYRZ	**Mayor Island**	**3.00**	**277**	P		**Pn**	**06 01 38.6**		**+1.4**
HSRZ	**Hossack Road**	**3.00**	**257**	P		**Pb**	**06 01 40.3**		**-2.9**
MRHZ	**Matea Rd**	**3.01**	**247**	P		**Pn**	**06 01 39.1**		**+1.7**
NGRZ	**Ngongotaha**	**3.02**	**262**	P		**Pb**	**06 01 40.5**		**-2.9**
BKZ	**Black Stump Fm**	**3.09**	**241**	P		**Pn**	**06 01 40.4**		**+1.9**
BKZ	**Black Stump Fm**	**3.09**	**241**			**Pn**	**06 01 40.4**		**+1.9**
MCHZ	**McNeill Hill**	**3.10**	**235**	P		**Pn**	**06 01 40.5**		**+2.1**
WPRZ	**Whakapapatarin**	**3.11**	**254**	P		**Pb**	**06 01 42.2**		**-2.8**
KAHZ	**Kahuranaki**	**3.19**	**228**	P		**Pn**	**06 01 41.5**		**+1.8**
KMRZ	**Kaimai**	**3.20**	**266**	P		**Pn**	**06 01 41.2**		**+1.3**
KWHZ	**Kaweka Forest**	**3.27**	**237**	P		**Pn**	**06 01 42.6**		**+1.7**
PXZ	**Pawanui**	**3.35**	**225**	P		**Pn**	**06 01 43.4**		**+1.5**
KRHZ	**Kereru**	**3.42**	**235**	P		**Pn**	**06 01 44.3**		**+1.4**
RITZ	**Rihia Road**	**3.47**	**247**	P		**Pb**	**06 01 48.1**		**-3.1**
RATZ	**Rangitukua**	**3.50**	**250**	P		**Pn**	**06 01 46.7**		**+2.6**

BHHZ	**Black Hill Sta**	**3.54**	**239**	P		**Pn**	**06 01 46.0**	**+1.4**
TOZ	**Tahuroa Road**	**3.55**	**268**	P		**Pn**	**06 01 45.1**	**+0.5**
KATZ	**Kakaramea**	**3.59**	**248**	P		**Pn**	**06 01 49.1**	**+3.7**
WPHZ	**Waipukurau**	**3.62**	**229**	P		**Pn**	**06 01 47.2**	**+1.5**
TMVZ	**Te Maari**	**3.63**	**246**	P		**Pn**	**06 01 47.0**	**+1.1**
ETVZ	**East Tongariro**	**3.64**	**246**	P		**Pn**	**06 01 47.3**	**+1.3**
PRHZ	**Porangahau**	**3.64**	**225**	P		**Pn**	**06 01 46.5**	**+0.5**
KRVZ	**Karewarewa**	**3.67**	**247**	P		**Pn**	**06 01 47.6**	**+1.2**
PNHZ	**Pukenui**	**3.67**	**232**	P		**Pn**	**06 01 47.5**	**+1.1**
OTVZ	**Oturere**	**3.68**	**246**	P		**Pn**	**06 01 47.7**	**+1.1**
MOVZ	**Moawhango**	**3.71**	**242**	P		**Pn**	**06 01 49.3**	**+2.2**
WTVZ	**West Tongariro**	**3.72**	**247**	P		**Pn**	**06 01 49.2**	**+2.1**
TUVZ	**Tukino**	**3.73**	**244**	P		**Pn**	**06 01 49.0**	**+1.8**
NGZ	**Ngauruhoe**	**3.73**	**246**	P		**Pn**	**06 01 48.5**	**+1.2**
WHVZ	**Whangaehu Hut**	**3.78**	**244**	P		**Pn**	**06 01 49.4**	**+1.3**
WNVZ	**Wahianoa**	**3.79**	**244**	P		**Pn**	**06 01 49.2**	**+1.0**
DRZ	**Dome Shelter**	**3.79**	**244**	P		**Pn**	**06 01 51.4**	**+3.0**
FWVZ	**Far West T-bar**	**3.79**	**245**	P		**Pn**	**06 01 50.0**	**+1.7**
TWVZ	**Taurewa**	**3.81**	**248**	P		**Pn**	**06 01 50.5**	**+2.1**
ANWZ	**Angora Road**	**3.86**	**224**	P		**Pn**	**06 01 50.1**	**+1.1**
TSZ	**Takapari Road**	**3.91**	**232**	P		**Pn**	**06 01 50.4**	**+0.7**
DVHZ	**Dannevirke**	**3.93**	**228**	P		**Pn**	**06 01 50.6**	**+0.7**
PKVZ	**Pokaka**	**3.96**	**245**	P		**Pn**	**06 01 52.2**	**+1.8**
WIAZ	**Waiheke Island**	**3.97**	**282**	P		**Pn**	**06 01 50.4**	**0.0**
ETAZ	**East Tamaki Re**	**4.09**	**279**	P		**Pn**	**06 01 52.9**	**+0.7**
HIZ	**Hauiti**	**4.12**	**257**	P		**Pn**	**06 01 54.9**	**+2.5**
HIZ	**Hauiti**	**4.12**	**257**				**06 01 54.5**	**+2.1**
BFZ	**Birch Farm**	**4.14**	**223**			**Pn**	**06 01 52.9**	**+0.1**
MBAZ	**Motutapu North**	**4.16**	**282**	P		**Pn**	**06 01 53.3**	**+0.3**
PRWZ	**Pori Road**	**4.21**	**226**	P		**Pn**	**06 01 55.2**	**+1.5**
POWZ	**Post Office Ro**	**4.23**	**229**	P		**Pn**	**06 01 55.8**	**+1.8**
EPAZ	**Eden Park BICE**	**4.25**	**280**	P		**Pn**	**06 01 55.5**	**+1.6**
ABAZ	**Army Bay**	**4.25**	**284**	P		**Pn**	**06 01 55.2**	**+0.8**
HBAZ	**Herne Bay Bore**	**4.27**	**280**	P		**Pn**	**06 01 56.1**	**+1.5**
AWAZ	**Awhitu Peninsu**	**4.29**	**277**	P		**Pn**	**06 01 55.8**	**+0.9**
CPWZ	**Castlepoint**	**4.33**	**221**	P		**Pn**	**06 01 56.5**	**+1.1**
VRZ	**Vera Road**	**4.33**	**249**	P		**Pn**	**06 01 57.8**	**+2.4**
WTAZ	**Waiatarua**	**4.38**	**279**	P		**Pn**	**06 01 57.5**	**+1.4**
WAZ	**Wanganui**	**4.40**	**241**	P		**Pn**	**06 01 58.6**	**+2.2**
TIWZ	**Tintock**	**4.41**	**225**	P		**Pn**	**06 01 57.4**	**+0.9**
RVAZ	**Riverhead Bore**	**4.41**	**281**	P		**Pn**	**06 01 57.5**	**+1.1**
MRZ	**Mangatainoka R**	**4.51**	**228**	P		**Pn**	**06 01 58.1**	**+0.3**
LREZ	**Lake Rotokare**	**4.70**	**247**	P		**Pn**	**06 02 03.5**	**+3.0**
PREZ	**Palmer Road**	**4.84**	**249**	P		**Pn**	**06 02 06.1**	**+3.7**
OGWZ	**Otaki Gorge**	**4.85**	**229**	P		**Pn**	**06 02 02.8**	**+0.3**
NEZ	**North Egmont**	**4.87**	**250**	P		**Pn**	**06 02 06.4**	**+3.5**
PKE	**Pukeiti**	**4.93**	**251**	P		**Pn**	**06 02 07.0**	**+3.3**
KHEZ	**Kahui Hut**	**4.93**	**250**	P		**Pn**	**06 02 07.5**	**+3.7**
KIW	**Kapiti Island**	**5.03**	**230**	P		**Pn**	**06 02 05.6**	**+0.6**
TUWZ	**Tuamarina**	**5.96**	**230**	Pn		**Pn**	**06 02 17.9**	**+0.2**
BSWZ	**Blackbird Sta**	**6.17**	**228**	Pn		**Pn**	**06 02 21.2**	**+0.6**
CTZ	**Chatham Island**	**6.55**	**158**	P		**Pn**	**06 02 29.7**	**+3

NOA			PKPab	**PKPab**	**06 21 07.3**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=27,slow=3.2,SNR=3.6						
GERES	**GERESS Array B 165.07 323**		PKPab	**PKPab**	**06 21 49.3**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=1.1,slow=4.9,SNR=3.8						

*REY **23** 06:04:00.3, 64.67N×17.44W, h9km*
*IDC **23** 06:04:00.5±0.8, 64.55N×17.55W, h0km, mb3.6/8, mb1 3.9/10, mb1mx3.6/54, mbtmp3.7/10, ML3.2/2, Error ellipse: s-maj=30.8km s-min=17.0km az=36.0*
ISC 23 06:04:01.1±0.5, 64.68N±0.02×17.46W±0.02, h10km, n56, σ1°74/67, mb3.7/9, Iceland

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**21**	P		**Pg**	**06 04 03.2**	**-0.8**
	baz=15							
IDYN				S		**Sg**	**06 04 05.8**	**-0.3**
	baz=15							
IVON	**Vonarskard**	**0.13**	**267**	P		**Pg**	**06 04 03.3**	**-0.9**
	baz=270							
IVON				S		**Sg**	**06 04 05.6**	**-0.7**
	baz=270							
IURH	**Urdarhals**	**0.20**	**44**	P		**Pg**	**06 04 04.5**	**-0.8**
	baz=40							
IDJK	**Dyngjujokull**	**0.20**	**151**	P		**Pg**	**06 04 04.4**	**-1.0**
	baz=152							
IHAM	**Hamarinn**	**0.25**	**218**	P		**Pg**	**06 04 05.4**	**-0.9**
	baz=221							
IHAM				S		**Sg**	**06 04 09.5**	**-0.3**
	baz=221							
IGRF	**Grimsfjall**	**0.29**	**163**	P		**Pg**	**06 04 05.8**	**-1.2**
	baz=164							
IKVE	**Kverkfjoll**	**0.34**	**90**	P		**Pg**	**06 04 06.8**	**-1.1**
	baz=89							
IKVE				S		**Sg**	**06 04 11.6**	**-0.8**
	baz=89							
ISKR	**Skrokkalda**	**0.42**	**253**	P		**Pb**	**06 04 08.3**	**-2.3**
	baz=255							
THOR	**Thorvaldshraun**	**0.42**	**53**	P		**Pg**	**06 04 08.2**	**-1.2**
	baz=51							
THOR				S		**Sg**	**06 04 14.7**	**-0.3**
	baz=51							
IVOT	**Vottur**	**0.43**	**163**	P		**Pg**	**06 04 08.1**	**-1.4**
	baz=164							
IKRE	**Kreppuhraun**	**0.47**	**77**	P		**Pg**	**06 04 08.8**	**-1.6**
	baz=76							
IJOK	**Jokulheimar**	**0.49**	**222**	P		**Pg**	**06 04 09.3**	**-1.4**
	baz=224							
IASK	**Askja**	**0.51**	**43**	P		**Pg**	**06 04 09.6**	**-1.4**
	baz=41							
IASK				S		**Sg**	**06 04 16.8**	**-1.0**
	baz=41							
IMKO	**Mokollar**	**0.57**	**58**	P		**Pg**	**06 04 10.6**	**-1.4**
	baz=56							
IMKO				S		**Sg**	**06 04 18.5**	**-1.0**
	baz=56							
IIEY	**Innrieyrar**	**0.65**	**206**	P		**Pg**	**06 04 12.1**	**-1.6**
	baz=207							
ISVA	**Svartarkot**	**0.67**	**8**	P		**Pg**	**06 04 12.4**	**-1.5**
	baz=6.7							
IKSK	**Karasker**	**0.68**	**140**	P		**Pg**	**06 04 11.7**	**-2.5**
	baz=140							
IKAL	**Kalfafell**	**0.74**	**188**	P		**Pg**	**06 04 13.6**	**-1.8**
	baz=188							
IVSH	**V-Sauoahnukur**	**0.76**	**79**	P		**Pg**	**06 04 13.5**	**-2.2**
	baz=79							
IVSH				S		**Sg**	**06 04 23.8**	**-1.7**
	baz=79							
IVAT	**Vatnsfell**	**0.80**	**233**	P		**Pg**	**06 04 14.9**	**-1.6**
	baz=233							
IADA	**Aoalbol**	**0.88**	**66**	P		**Pg**	**06 04 15.5**	**-2.4**
	baz=66							
IHVE	**Hveravellir**	**0.92**	**283**	P		**Pg**	**06 04 16.5**	**-2.2**
	baz=283							
IMEL	**Melhnausar**	**0.96**	**21**	P		**Pg**	**06 04 17.1**	**-2.3**
	baz=20							
IREN	**Reynihlio**	**1.00**	**13**	P		**Pg**	**06 04 17.9**	**-2.4**
	baz=13							
IKVO	**Krokottuvotn**	**1.07**	**13**	P		**Pg**	**06 04 18.9**	**-2.6**
	baz=12							
ISNB	**Snabyli**	**1.08**	**209**	P		**Pg**	**06 04 19.2**	**-2.5**
	baz=210							
IGRS	**Grimsstaoir**	**1.12**	**30**	P		**Pb**	**06 04 19.8**	**-2.6**
	baz=29							
IFED	**Fedgar**	**1.17**	**237**	P		**Pb**	**06 04 21.1**	**-2.2**
	baz=237							
IRJU	**Rjupnafell**	**1.19**	**207**	P		**Pb**	**06 04 21.3**	**-2.4**
	baz=208							
IGHA	**Grjothals**	**1.22**	**16**	P		**Pn**	**06 04 21.3**	**-2.9**
	baz=15							
IMJO	**Mjoaskard**	**1.22**	**233**	P		**Pn**	**06 04 22.0**	**-2.2**
	baz=234							
IGRA	**Granastaoir**	**1.24**	**358**	P		**Pn**	**06 04 21.9**	**-2.6**
	baz=357							
IGYG	**Gygjarholskot**	**1.26**	**253**	P		**Pn**	**06 04 22.3**	**-2.4**
	baz=253							
IHVO	**Lagu-Hvolar**	**1.31**	**208**	P		**Pn**	**06 04 23.4**	**-1.9**
	baz=209							
IHLA	**Hella**	**1.33**	**343**	P		**Pn**	**06 04 23.4**	**-2.2**
	baz=343							
IESK	**Eystri-Skogar**	**1.45**	**218**	P		**Pn**	**06 04 25.6**	**-1.7**
	baz=218							
ISAU	**Saurbar**	**1.46**	**243**	P		**Pn**	**06 04 25.2**	**-2.3**
	baz=243							
IBRE	**Brettingsstaoi**	**1.46**	**353**	P		**Pn**	**06 04 25.3**	**-2.2**
	baz=352							
ISIG	**Siglufjorour**	**1.58**	**338**	P		**Pn**	**06 04 27.2**	**-1.8**
	baz=338							
SCO	**Scoresbysund**	**6.08**	**346**	*e*		**Pn**	**06 05 29.5**	**-1.3**
	baz=163,slow=9.3							
SCO				*i* P		**Pn**	**06 05 31.6**	**+0.8**
SCO				*eS*		**Sn**	**06 06 41.9**	**+1.7**
SCO				IAML			06 06 53.4	
	comp=Z,0.9nm,0.5s							
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn		**Pn**	**06 06 49.3**	**+0.7**
	baz=326,slow=13,SNR=8.1							
HFS	**Hagfors**	**15.03**	**93**	Pn		**P**	**06 07 38.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=303,slow=13,SNR=4.4							
FINES	**FINESS Array B**	**19.69**	**79**	P		**Pn**	**06 08 32.4**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=287,slow=26,SNR=1.8							
BRG	**Berggiesshubel**	**21.41**	**115**	*eP*		**P**	**06 08 50.3**	**+1.6**
	comp=Z,7.6nm,1.1s							
CHVC	**Chvalec**	**22.46**	**113**	*eP*		**P**	**06 09 02.9**	**+2.9**
KHC	**Kasperske Hory**	**22.67**	**118**	*eP*		**P**	**06 09 05.5**	**+3.3**
DPC	**Dobruska-Polom**	**22.75**	**113**	*eP*		**P**	**06 09 04.4**	**+1.3**
GERES	**GERESS Array B**	**22.95**	**119**	P		**P**	**06 09 06.2**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=335,slow=8.6,SNR=5.6							
ESDC	**Sonseca Array**	**26.26**	**156**	P		**P**	**06 09 35.1**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=344,slow=8.8,SNR=5.5							
BRTR	**Keskin Array B**	**38.47**	**105**	P		**P**	**06 11 23.4**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=347,slow=5.1,SNR=1.3							
ILAR	**Eielson Array**	**45.68**	**332**	P		**P**	**06 12 22.2**	**+0.9**
	comp=Z,1.1nm,1.0s,baz=27,slow=6.2,SNR=6.6							
ILAR				PcP		**PcP**	**06 13 59.9**	**+0.8**
	comp=Z,0.7nm,1.0s,baz=356,slow=5.9,SNR=4.5							
MKAR	**Makanchi Array**	**52.70**	**58**	P		**P**	**06 13 16.9**	**+1.6**
	comp=Z,1.0nm,0.9s,baz=311,slow=6.8,SNR=3.6							
TORD	**Torodi Ar. Bea**	**53.15**	**156**	P		**P**	**06 13 19.1**	**+0.3**
	comp=Z,1.5nm,1.1s,baz=346,slow=6.5,SNR=4.4							
PDAR	**Pinedale Array**	**53.19**	**293**	P		**P**	**06 13 20.8**	**+1.6**
	comp=Z,1.2nm,0.9s,baz=46,slow=6.4,SNR=7.8							
TXAR	**Lajitas Array**	**62.30**	**280**	P		**P**	**06 14 24.5**	**+1.3**
	comp=Z,0.5nm,1.0s,baz=72,slow=5.8,SNR=3.2							
ASAR	**Alice Springs**	**134.94**	**38**	PKP		**PKiKP**	**06 23 21.4**	**+0.1**
	comp=Z,0.3nm,1.0s,baz=359,slow=3.7,SNR=2.7							

*DJA **23** 06:52:31.4±0.6, 7.5S×11.9E, h405km, 7km, M3.9/14, mB4.5/3, mb4.2/6, MLv3.8/14, Mw(mB)3.7/3*
*IDC **23** 06:52:32.3±1.3, 6.91S×120.10E, h436km, 9km, mb3.0/4, mb1 3.2/7, mb1mx2.9/47, mbtmp3.9/7, Error ellipse: s-maj=80.6km s-min=10.3km az=56.0*
ISC 23 06:52:29.9±0.7, 7.38S±0.06×119.46E±0.07, h400km, n22, σ2°44/29, mb3.4/4, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BSSI	**Bau Bau, Buton**	**1.60**	**40**	P		**Pn**	**06 53 25.9**	**+2.3**
BKSI	**Bulukumba**	**2.15**	**18**	P		**Pn**	**06 53 29.1**	**+2.3**
PLAI	**Plampang**	**2.20**	**229**	P		**Pn**	**06 53 29.8**	**+2.6**
PLAI				S		**S**	**06 54 14.8**	**+1.4**
WBSI	**Waikabubak, Su**	**2.25**	**182**	P		**Pn**	**06 53 29.0**	**+1.4**
KAPI	**Kappang**	**2.37**	**7**	P		**Pn**	**06 53 31.2**	**+2.8**
	14nm,0.3s,baz=183,slow=5.4,SNR=38							
KAPI				S		**S**	**06 54 18.9**	**+3.5**
	0.0nm,0.3s,baz=46,slow=23,SNR=6.9							

EDFI	**Ende, Flores**	**2.60**	**122**	P		**Pn**	**06 53 31.1**	**+1.0**
TWSI	**Taliwang, Sumb**	**2.89**	**242**	P		**Pn**	**06 53 33.9**	**+1.7**
TWSI				S		**S**	**06 54 23.7**	**+1.1**
BNSI	**Bone**	**3.03**	**12**	P		**Pn**	**06 53 36.0**	**+2.6**
BASI	**Baing, Sumba**	**3.03**	**159**	P		**Pn**	**06 53 35.4**	**+2.0**
SPSI	**Sidrap Palu**	**3.40**	**5**	P		**Pn**	**06 53 39.4**	**+2.8**
BATI	**Baumata**	**5.02**	**124**	P		**Pn**	**06 53 54.0**	**+1.8**
	11nm,0.3s,baz=271,slow=1.1,SNR=11							
BATI				S		**S**	**06 55 00.9**	**+1.9**
	5.5nm,0.3s,baz=276,slow=2.6,SNR=1.7							
BATI	**Baumata**	**5.02**	**124**	P		**Pn**	**06 53 53.9**	**+1.8**
	0.1nm725nm24nm,0.6s							
SOEI	**Soe**	**5.31**	**117**	P		**Pn**	**06 53 56.6**	**+1.3**
	0.4nm1µm58nm,0.6s							
JAGI	**Jajag, Banyuwa**	**5.37**	**258**	P		**Pn**	**06 53 57.4**	**+1.6**
	0.2nm40nm,1.4s							
STKI	**Sintang**	**10.86**	**313**	P		**P**	**06 54 55.9**	**-1.2**
FITZ	**Fitzroy Crossi**	**12.24**	**151**	P		**Pn**	**06 55 13.8**	**-0.1**
	0.9nm,0.3s,baz=341,slow=8.9,SNR=20							
FITZ				S		**S**	**06 57 32.0**	**+5.6**
	0.1nm,0.3s,baz=127,slow=22,SNR=1.4							
WRA	**Warramunga Arr**	**19.09**	**132**	P		**P**	**06 56 25.5**	**-0.3**
	0.4nm,0.3s,baz=308,slow=11,SNR=24							
WRA				S		**S**	**06 59 36.1**	**-3.3**
	0.0nm,0.3s,baz=307,slow=14,SNR=3.6							
ASAR	**Alice Springs**	**21.32**	**141**	P		**P**	**06 56 46.5**	**0.0**
	0.7nm,0.5s,baz=314,slow=8.2,SNR=26							
ASAR				S		**S**	**07 00 13.8**	**-1.9**
	0.2nm,0.7s,baz=320,slow=17,SNR=1.7							
STKA	**Stephens Creek**	**31.94**	**143**	P		**P**	**06 58 20.5**	**+0.1**
	0.7nm,0.4s,baz=312,slow=9.8,SNR=4.4							
MKAR	**Makanchi Array**	**63.23**	**332**	P		**P**	**07 02 16.1**	**-1.2**
	0.5nm,0.6s,baz=155,slow=7.7,SNR=5.2							
ZALV	**Zalesovo Beam**	**67.70**	**339**	P		**P**	**07 02 43.1**	**-2.3**
	0.8nm,0.3s,baz=138,slow=6.7,SNR=2.6							
TXAR	**Lajitas Array**	**133.97**	**56**	PKP		**PKPdf**	**07 10 56.5**	**-4.6**
	0.5nm,1.0s,baz=338,slow=1.0,SNR=2.6							

*IDC **23** 07:02:30.0±1.1, 28.29N×65.96E, h0km, mb3.5/7, mb1 3.6/8, mb1mx3.3/54, mbtmp3.5/8, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/46, Error ellipse: s-maj=31.5km s-min=24.5km az=138.0*
ISC 23 07:02:35.0±0.9, 28.3N±0.2×65.8E±0.2, h35km, n9, σ1°85/9, mb3.4/7, Pakistan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**8.20**	**234**	P		**Pn**	**07 04 33.7**	**+2.2**
	0.8nm,0.3s,baz=59,slow=6.5,SNR=2.4							
WSAR				Sn		**Sn**	**07 05 59.8**	**-3.1**
	0.8nm,0.3s,baz=143,slow=7.0,SNR=2.3							
MKAR	**Makanchi Array**	**22.55**	**31**	P		**P**	**07 07 30.1**	**-2.0**
	0.6nm,0.6s,baz=214,slow=11,SNR=6.1							
AKTO	**Aktyubinsk**	**22.92**	**347**	LR		LR	07 18 20.1	
	comp=Z,26nm,19.7s,baz=116,slow=41							
ZALV	**Zalesovo Beam**	**29.19**	**23**	P		**P**	**07 08 33.4**	**+0.5**
	0.6nm,0.4s,baz=235,slow=12,SNR=1.8							
SONM	**Songino Array**	**36.91**	**47**	P		**P**	**07 09 40.9**	**+0.4**
	0.4nm,0.8s,baz=254,slow=10,SNR=2.3							
FINES	**FINESS Array B**	**42.35**	**333**	P		**P**	**07 10 24.8**	**-0.6**
	1.2nm,0.9s,baz=146,slow=10,SNR=3.4							
TORD	**Torodi Ar. Bea**	**61.23**	**270**	P		**P**	**07 12 47.7**	**+0.8**
	0.3nm,0.8s,baz=50,slow=8.2,SNR=2.1							
WRA	**Warramunga Arr**	**81.71**	**118**	P		**P**	**07 14 49.7**	**-0.6**
	0.2nm,0.7s,baz=321,slow=4.6,SNR=1.8							
ASAR	**Alice Springs**	**83.46**	**121**	P		**P**	**07 14 59.0**	**-0.3**
	0.2nm,0.6s,baz=309,slow=5.2,SNR=4.7							

*IDC **23** 07:03:27.0±1.0, 13.82N×144.11E, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.6/43, mbtmp4.0/5, Error ellipse: s-maj=22.1km s-min=16.2km az=27.0*
ISC 23 07:03:32.0±1.0, 13.8N±0.2×144.1E±0.1, h35km, n12, σ0°85/7, mb3.9/5, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.77**	**106**	Pn		**Pn**	**07 03 45.3**	**-1.0**
	48nm,0.3s,baz=254,slow=5.4,SNR=14							
GUMO				Sn		**Sn**	**07 03 57.5**	**+0.8**
	219nm,0.3s,baz=127,slow=18,SNR=42							
H11S3	**WAKE ISLAND Hy**	**22.18**	**75**	T		T	07 31 37.7	
	baz=268							
H11S1	**WAKE ISLAND Hy**	**22.19**	**75**	T		T	07 31 36.7	
	baz=268							
H11S2	**WAKE ISLAND Hy**	**22.19**	**75**	T		T	07 31 40.8	
	baz=268							
H11N1	**WAKE ISLAND Hy**	**22.58**	**72**	T		T	07 32 08.0	
	baz=264							
H11N2	**WAKE ISLAND Hy**	**22.59**	**72**	T		T	07 32 12.8	
	baz=264							
H11N3	**WAKE ISLAND Hy**	**22.60**	**72**	T		T	07 32 11.8	
	baz=264							
KSRS	**Korea Array**	**27.63**	**331**	P		**P**	**07 09 16.0**	**-0.3**
	1.0nm,0.8s,baz=149,slow=11,SNR=1.5							
WRA	**Warramunga Arr**	**34.88**	**196**	P		**P**	**07 10 20.6**	**+0.4**
	2.1nm,0.8s,baz=17,slow=9.6,SNR=19							
ASAR	**Alice Springs**	**38.55**	**195**	P		**P**	**07 10 51.8**	**+0.3**
	1.0nm,0.7s,baz=19,slow=12,SNR=15							
PETK	**Petropavlovsk-**	**40.68**	**13**	P		**P**	**07 11 09.7**	**+0.8**
	2.0nm,0.8s,baz=188,slow=9.9,SNR=1.9							
KURBB	**Kurchatov Arra**	**63.99**	**320**	P		**P**	**07 14 01.4**	**-0.5**
	0.9nm,0.2s,baz=105,slow=7.1,SNR=1.9							

*IDC **23** 07:04:16.0±0.9, 13.86N×144.10E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.6/43, mbtmp3.8/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/34, Error ellipse: s-maj=23.3km s-min=15.4km az=44.0*
ISC 23 07:04:21.0±0.9, 13.8N±0.1×144.1E±0.1, h35km, n16, σ0°93/9, mb3.7/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.79**	**109**	Pn		**Pn**	**07 04 34.7**	**-1.1**
	87nm,0.3s,baz=284,slow=8.3,SNR=1.7							
GUMO				Sn		**Sn**	**07 04 47.7**	**+1.3**
	258nm,0.3s,baz=178,slow=21,SNR=9.3							
H11S3	**WAKE ISLAND Hy**	**22.18**	**75**	T		T	07 32 34.1	
	baz=262,slow=75,SNR=21							
H11S1	**WAKE ISLAND Hy**	**22.19**	**75**	T		T	07 32 35.2	
	baz=262,slow=75,SNR=11							
H11S2	**WAKE ISLAND Hy**	**22.20**	**75**	T		T	07 32 26.9	
	baz=262,slow=75,SNR=7.0							
H11N1	**WAKE ISLAND Hy**	**22.58**	**72**	T		T	07 32 57.8	
	baz=258,slow=75							
H11N2	**WAKE ISLAND Hy**	**22.59**	**72**	T		T	07 33 00.8	
	baz=258,slow=75							
H11N3	**WAKE ISLAND Hy**	**22.60**	**72**	T		T	07 32 59.9	
	baz=258,slow=75							
PMG	**Port Moresby**	**23.30**	**172**	LR		LR	07 18 00.0	
	comp=Z,28nm,19.3s,baz=207,slow=35							
KSRS	**Korea Array**	**27.58**	**331**	P		**P**	**07 10 05.5**	**+0.6**
	1.2nm,0.7s,baz=134,slow=10,SNR=4.8							
HNR	**Honiara**	**27.97**	**145**	LR		LR	07 20 17.7	
	comp=Z,60nm,20.5s,baz=19,slow=34							
WRA	**Warramunga Arr**	**34.92**	**196**	P		**P**	**07 11 09.0**	**-0.7**
	0.9nm,0.7s,baz=17,slow=9.7,SNR=8.5							
ASAR	**Alice Springs**	**38.59**	**195**	P		**P**	**07 11 41.9**	**+0.9**
	0.5nm,0.7s,baz=18,slow=12,SNR=8.3							
PETK	**Petropavlovsk-**	**40.63**	**13**	P		**P**	**07 11 57.3**	**-0.3**
	1.2nm,0.5s,baz=220,slow=23,SNR=4.3							
SONM	**Songino Array**	**46.09**	**325**	P		**P**	**07 12 42.3**	**+0.4**
	0.4nm,0.8s,baz=142,slow=7.2,SNR=1.9							
MKAR	**Makanchi Array**	**60.78**	**316**	P		**P**	**07 14 29.2**	**-0.5**
	0.4nm,0.8s,baz=103,slow=11,SNR=1.8							
KURBB	**Kurchatov Arra**	**63.94**	**320**	P		**P**	**07 14 50.5**	**-0.1**
	1.0nm,0.2s,baz=102,slow=6.0,SNR=4.5							

IDC 23 07:31:05.5±5.0, 23.98N×95.60E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.2/50, mbtmp3.4/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/41, Error ellipse: s-maj=486.8km s-min=28.4km az=59.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**25.14**	**338**	P		P	07 36 32.3	0.0
	0.8nm,0.6s,baz=147,slow=10,SNR=5.8							
SONM	**Songino Array**	**25.31**	**17**	LR		LR	07 48 27.1	
	comp=Z,27nm,18.4s,baz=163,slow=41							
TLY	**Talaya**	**28.34**	**11**	LR		LR	07 48 32.3	
	comp=Z,25nm,19.3s,baz=249,slow=37							
WRA	**Warramunga Arr**	**57.71**	**136**	P		P	07 40 58.1	-0.2
	0.3nm,0.8s,baz=323,slow=7.5,SNR=5.1							

ASAR	**Alice Springs**	**60.21**	**139**	P		P	07 41 15.8	+0.1
	0.2nm,0.4s,baz=320,slow=6.5,SNR=4.2							

*ISK **23** 07:31:06.8, 35.95N×30.97E, h11km, ML3.0/29*
*DDA **23** 07:31:06.6, 35.91N×31.04E, h10km±2km, ML2.7*
*NIC **23** 07:31:09.9±0.0, 35.76N×30.77E, h5km±31km, Ml3.1/2*
*HLW **23** 07:31:14.8, 35.61N×30.66E, h11km±16km, Md3.8*
ISC 23 07:31:08.0±1.2, 36.04N±0.03×30.97E±0.02, h8km±10km, n62, σ1°45/81, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DEMR	**Demre-Antalya**	**0.88**	**283**	PG		**Pg**	**07 31 24.8**	**-0.2**
KEPZ	**Antalya-Kepez**	**1.00**	**31**	*i* P		**Pn**	**07 31 28.2**	**-0.2**
KEPZ				*i* S		**Sb**	**07 31 40.4**	**-0.7**
ALAN	**Alanya-ANTALYA**	**1.00**	**59**	PG		**Pn**	**07 31 27.6**	**-0.8**
KORT	**Korkueli**	**1.08**	**333**	PN		**Pn**	**07 31 29.5**	**-0.1**
KORT				SN		**Sn**	**07 31 47.9**	**+3.0**
KORT	**Korkueli**	**1.08**	**333**	*i* P		**Pn**	**07 31 31.2**	**+1.5**
KORT				*i* S		**Sn**	**07 31 46.6**	**+1.7**
KORT				IAML			07 31 53.0	
	comp=E,144nm,0.6s							
KORT				IAML			07 31 55.0	
	comp=N,107nm,0.7s							
GAZI	**Gazipasa**	**1.11**	**79**	PN		**Pb**	**07 31 28.9**	**-0.5**
GAZI				SN		**Sn**	**07 31 44.3**	**-1.1**
GAZI	**Gazipasa**	**1.11**	**79**	*i* P		**Pn**	**07 31 29.8**	**-0.1**
GAZI				*i* S		**Sg**	**07 31 42.0**	**-1.6**
GAZI				IAML			07 31 46.0	
	comp=N,521nm,0.5s							
GAZI				IAML			07 31 48.0	
	comp=E,238nm,0.3s							
ELL	**Elmali**	**1.11**	**310**	PN		**Pn**	**07 31 29.8**	**-0.2**
ELL	**Elmali**	**1.11**	**310**	P		**Pn**	**07 31 31.6**	**+1.5**
ELL				S		**Sn**	**07 31 51.4**	**+5.7**
AKAS	**Kas**	**1.12**	**280**	PN		**Pb**	**07 31 29.5**	**-0.2**
AKAS				SN		**Sb**	**07 31 45.2**	**+0.7**
AKAS	**Kas**	**1.12**	**280**	*i* P		**Pg**	**07 31 29.1**	**-0.4**
AKAS				IAML			07 31 58.0	
	comp=N,153nm,0.5s							
KSL	**Kastellorizon**	**1.13**	**276**	P		**Pn**	**07 31 30.4**	**+0.3**
KSL				S		**Sg**	**07 31 44.3**	**0.0**
BCK	**Bucak**	**1.45**	**348**	PN		**Pb**	**07 31 34.9**	**-0.5**
AKMS	**Akamas**	**1.51**	**132**	P		**Pg**	**07 31 38.1**	**+1.2**
AKMS				S		**Sg**	**07 31 58.9**	**+2.4**
AKMS				AML	AML		07 32 03.2	
	comp=N,1.1nm,0.4s							
AKMS				AML	AML		07 32 03.2	
	comp=N,1.1nm,0.4s							
AKMS				AML	AML		07 32 08.8	
	comp=N,1.0nm,0.6s							
AKMS				AML	AML		07 32 08.8	
	comp=N,1.0nm,0.6s							
SEYD	**Seydisehir-KON**	**1.53**	**27**	PN		**Pb**	**07 31 36.4**	**-0.4**
SEYD				SN		**Sg**	**07 31 57.2**	**-0.1**
ALFC	**Alefka**	**1.59**	**123**	P		**Pn**	**07 31 36.4**	**-0.2**
ALFC				S		**Sg**	**07 31 59.1**	**-0.1**
ALFC				AML	AML		07 32 03.9	
	comp=N,0.6nm,0.3s							
ALFC				AML	AML		07 32 03.9	
	comp=N,0.6nm,0.3s							
ALFC				AML	AML		07 32 05.5	
	comp=N,0.6nm,0.3s							
ALFC				AML	AML		07 32 05.5	
	comp=N,0.6nm,0.3s							
CAME	**Cameli-Denizli**	**1.62**	**304**	PN		**Pn**	**07 31 36.9**	**-0.1**
FETY	**Fethiye**	**1.64**	**292**	PN		**Pn**	**07 31 36.4**	**-0.7**
FETY	**Fethiye**	**1.64**	**292**	*i* P		**Pn**	**07 31 33.2**	**-3.9**
GOLH	**Golhisar**	**1.65**	**317**	*i* P		**Pg**	**07 31 40.3**	**+0.7**
GOLH				IAML			07 32 15.0	
	comp=N,90nm,0.9s							
TEKE	**Tekeli-Mersin**	**1.74**	**86**	PN		**Pn**	**07 31 38.3**	**-0.2**
AKDN	**Akdeniz- Kibrı**	**1.79**	**114**	PN		**Pn**	**07 31 38.3**	**-0.9**
ISP	**Isparta**	**1.82**	**349**	PN		**Pn**	**07 31 40.2**	**+0.5**
BERE	**Bereket-Mersin**	**1.85**	**80**	PN		**Pn**	**07 31 39.1**	**-1.1**
BAGO	**Egridir - ISPA**	**1.96**	**356**	*i* P		**Pg**	**07 31 45.2**	**-0.3**
BAGO				*i* S		**Sn**	**07 32 02.8**	**-3.6**
DALY	**Dalyan (Mula)**	**2.02**	**293**	PN		**Pn**	**07 31 41.9**	**-0.5**
DALY	**Dalyan (Mula)**	**2.02**	**293**	*i* P		**Pn**	**07 31 41.8**	**-0.5**
DALY				*i* S		**Sn**	**07 32 06.2**	**-1.7**
DALY				IAML			07 32 09.0	
	comp=E,48nm,1.2s							
DALY				IAML			07 32 12.0	
	comp=N,34nm,0.9s							
KMER	**Konya-Meram**	**2.06**	**33**	*i* P		**Pb**	**07 31 46.0**	**+0.2**
KMER				*i* S		**Sn**	**07 32 06.7**	**-2.3**
GULN	**MERSIN_Gulnar**	**2.09**	**85**	*i* P		**Pb**	**07 31 44.

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOVZ	**Moawhango**	**0.24**	**37**	P	Pb	07 49 56.5	-0.4
WNVZ	**Wahianoa**	**0.28**	**5**	P	Pb	07 49 57.5	0.0
WHVZ	**Whangaehu Hut**	**0.32**	**3**	P	Pn	07 50 02.5	+3.8
TUVZ	**Tukino**	**0.34**	**12**	P	Pb	07 49 58.4	+0.1
FWVZ	**Far West T-bar**	**0.35**	**358**	P	Pb	07 49 58.6	+0.2
BHHZ	**Black Hill Sta**	**0.40**	**74**	P	Pb	07 49 59.3	+0.3
OTVZ	**Oturere**	**0.45**	**10**	P	Pb	07 49 59.9	+0.1
ETVZ	**East Tongariro**	**0.48**	**14**	P	Pb	07 50 00.3	0.0
TMVZ	**Te Maari**	**0.50**	**12**	P	Pb	07 50 00.6	0.0
OGWZ	**Otaki Gorge**	**1.25**	**194**	P	Pb	07 50 12.9	-0.1

WEL 23 07:50:07.8, 41°S±5°×17°5E±°, h5km±5km, M2.9/34, ML3.1/33, MLv2.9/34, Error ellipse: s-maj=0.0km s-min=0.0km az=158.5, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIW	**Kapiti Island**	**0.24**	**201**	P	Pg	07 50 11.9	-0.6
MRZ	**Mangatainoka R**	**0.42**	**93**	P	Pb	07 50 17.4	-0.3
HOWZ	**Holdsworth Sta**	**0.46**	**125**	P	Pb	07 50 17.7	-0.6
CAW	**Cannon Point**	**0.47**	**176**	P	Pg	07 50 16.2	-0.7
OHWZ	**Ohakea**	**0.49**	**27**	P	Pb	07 50 18.7	-0.1
POWZ	**Post Office Ro**	**0.62**	**67**	P	Pb	07 50 21.1	0.0
MTW	**Mount Morrison**	**0.64**	**145**	P	Pg	07 50 20.4	+0.5
WEL	**Wellington**	**0.67**	**197**	P	Pg	07 50 19.0	-1.7
PRWZ	**Pori Road**	**0.73**	**84**	P	Pb	07 50 23.4	+0.5
BHW	**Baring Head**	**0.78**	**188**	P	Pg	07 50 21.1	-1.7
MSWZ	**Moikau Station**	**0.80**	**168**	P	Pg	07 50 22.6	-0.4
PAWZ	**Paruwai Farm**	**0.80**	**158**	P	Pg	07 50 23.0	-0.2
TCW	**Tory Channel**	**0.81**	**224**	P	Pg	07 50 20.3	-2.9
TMWZ	**Te Maipa**	**0.81**	**126**	P	Pb	07 50 24.6	+0.2
DUWZ	**D'Urville Isla**	**0.85**	**259**	P	Pg	07 50 21.9	-2.2
WAZ	**Wanganui**	**0.88**	**358**	P	Pb	07 50 25.5	-0.1
TRWZ	**Traveller**	**0.91**	**147**	P	Pg	07 50 25.6	+0.3
TSZ	**Takapari Road**	**0.92**	**51**	P	Pb	07 50 26.2	0.0
BFZ	**Birch Farm**	**0.93**	**93**	P	Pn	07 50 27.0	-0.5
DVHZ	**Dannevirke**	**0.94**	**69**	P	Pb	07 50 26.9	+0.5
PLWZ	**Palliser**	**0.95**	**169**	P	Pg	07 50 25.3	-0.6
ANWZ	**Angora Road**	**1.12**	**81**	P	Pn	07 50 30.8	+0.7
TUWZ	**Tuamarina**	**1.14**	**226**	P	Pg	07 50 25.6	-4.0
PNHZ	**Pukenui**	**1.16**	**52**	P	Pb	07 50 30.2	0.0
WPHZ	**Waipukurau**	**1.23**	**63**	P	Pn	07 50 32.7	+1.1
LREZ	**Lake Rotokare**	**1.27**	**338**	P	Pg	07 50 32.0	0.0
PRHZ	**Porangahau**	**1.28**	**74**	P	Pn	07 50 32.3	-0.1
MOVZ	**Moawhango**	**1.35**	**25**	P	Pn	07 50 32.6	-0.7
PKVZ	**Pokaka**	**1.37**	**11**	P	Pn	07 50 33.3	-0.2
NNZ	**Nelson**	**1.37**	**245**	P	Pn	07 50 30.6	-3.0
WNVZ	**Wahianoa**	**1.38**	**19**	P	Pn	07 50 33.6	-0.2
BSWZ	**Blackbirch Sta**	**1.38**	**218**	P	Pn	07 50 30.9	-2.8
BHHZ	**Black Hill Sta**	**1.40**	**35**	P	Pn	07 50 33.9	0.0
WHVZ	**Whangaehu Hut**	**1.42**	**18**	P	Pn	07 50 34.5	0.0
DRZ	**Dome Shelter**	**1.42**	**17**	P	Pg	07 50 35.4	+0.4
KRHZ	**Kereru**	**1.43**	**47**	P	Pb	07 50 34.7	-0.2
FWVZ	**Far West T-bar**	**1.44**	**17**	P	Pn	07 50 34.6	-0.1
TUVZ	**Tukino**	**1.45**	**20**	P	Pn	07 50 34.7	0.0
PREZ	**Palmer Road**	**1.45**	**333**	P	Pn	07 50 34.7	0.0
NMZ	**Namu Road**	**1.51**	**324**	P	Pn	07 50 35.0	-0.3
VRZ	**Vera Road**	**1.52**	**352**	P	Pn	07 50 35.4	-0.3
NGZ	**Ngauruhoe**	**1.53**	**17**	P	Pn	07 50 36.2	+0.3
PXZ	**Pawanui**	**1.53**	**67**	P	Pg	07 50 37.9	+0.8
NEZ	**North Egmont**	**1.54**	**332**	P	Pn	07 50 35.8	-0.2
KHEZ	**Kahui Hut**	**1.55**	**330**	P	Pn	07 50 35.9	-0.2
OTVZ	**Oturere**	**1.55**	**19**	P	Pn	07 50 36.5	+0.3
DREZ	**Durham Road**	**1.58**	**336**	P	Pn	07 50 36.4	+0.1
WTVZ	**West Tongariro**	**1.58**	**16**	P	Pn	07 50 36.9	+0.3
ETVZ	**East Tongariro**	**1.59**	**20**	P	Pn	07 50 37.0	+0.4
TMVZ	**Te Maari**	**1.61**	**19**	P	Pn	07 50 37.3	+0.4
KRVZ	**Karewarewa**	**1.61**	**17**	P	Pb	07 50 37.6	-0.4
KWHZ	**Kaweka Forest**	**1.62**	**42**	P	Pb	07 50 38.3	+0.2
NBEZ	**Newall Road No**	**1.63**	**327**	P	Pn	07 50 37.1	0.0
PKE	**Pukeiti**	**1.65**	**331**	P	Pn	07 50 37.3	0.0
KATZ	**Kakaramea**	**1.74**	**18**	P	Pb	07 50 40.1	-0.2
MCHZ	**McNeill Hill**	**1.75**	**48**	P	Pg	07 50 42.1	+0.7
RITZ	**Rihia Road**	**1.78**	**21**	P	Pb	07 50 41.1	+0.2
BKZ	**Black Stump Fm**	**1.85**	**38**	P	Pb	07 50 42.3	+0.1
QRZ	**Quartz Range**	**1.90**	**264**	P	Pn	07 50 38.7	-2.1
THZ	**Tophouse**	**1.95**	**234**	P	Pn	07 50 39.9	-1.8
NMHZ	**Naumai**	**2.06**	**42**	P	Pg	07 50 47.9	+0.7
KHZ	**Kahutara**	**2.10**	**212**	P	Pb	07 50 45.2	-1.1
HIZ	**Hauiti**	**2.12**	**356**	P	Pn	07 50 44.9	+1.0
TLZ	**Tolley Road**	**2.34**	**10**	P	Pb	07 50 50.2	-0.2
DSZ	**Denniston Nort**	**2.67**	**244**	P	Pn	07 50 49.6	-1.8
TOZ	**Tahuroa Road**	**2.93**	**7**	P	Pb	07 50 59.6	-0.8
LTZ	**Lake Taylor**	**2.97**	**223**	P	Pn	07 50 52.4	-3.2
INZ	**Inchbonnie**	**3.40**	**231**	P	Pn	07 50 58.6	-2.8

*NEIC **23** 07:54:23.0±1.6, 21°2S±0°1×179°16W±0°06, h626km±9km, mb4.2/15, Error ellipse: s-maj=17.6km s-min=8.6km az=176.0*
*IDC **23** 07:54:26.1±2.6, 21°18S×179°38W, h663km±32km, mb2.9/12, mb1 3.2/12, mb1mx3.1/31, mbtmp4.0/12, Error ellipse: s-maj=17.8km s-min=12.9km az=154.0*
ISC 23 07:54:21.0±0.5, 21°34S±0°08×179°19W±0°10, h602km, n48, σ1°961/50, mb3.8/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.44**	**324**	P	**P**	**07 55 52.5**	**+2.6**
OUZ	**Omahuta**	**15.21**	**203**	P	**P**	**07 57 35.0**	**+4.2**
URZ	**Urewera**	**17.16**	**190**	P	**P**	**07 57 47.2**	**-1.5**
	4.8nm,0.3s,baz=258,slow=2.7,SNR=20						
URZ				S	**S**	**08 00 31.6**	**-6.0**
	0.4nm,0.3s,baz=233,slow=20,SNR=2.2						
ETVZ	**East Tongariro**	**18.27**	**193**	P	**P**	**07 57 59.4**	**+0.4**
OTVZ	**Oturere**	**18.30**	**193**	P	**P**	**07 57 59.5**	**+0.2**
TUVZ	**Tukino**	**18.41**	**193**	P	**P**	**07 58 00.8**	**+0.6**
WNVZ	**Wahianoa**	**18.48**	**193**	P	**P**	**07 58 01.8**	**-0.1**
MRZ	**Mangatainoka R**	**19.77**	**192**	P	**P**	**07 58 11.8**	**+0.6**
KNTN	**Kanton**	**19.84**	**22**	P	**P**	**07 58 12.4**	**-1.0**
OGWZ	**Otaki Gorge**	**20.00**	**193**	P	**P**	**07 58 15.0**	**+0.5**
CAW	**Cannon Point**	**20.30**	**193**	P	**P**	**07 58 17.2**	**0.0**
TCW	**Tory Channel**	**20.57**	**194**	P	**P**	**07 58 20.5**	**+0.9**
QRZ	**Quartz Range**	**20.66**	**198**	P	**P**	**07 58 21.8**	**+1.4**
NNZ	**Nelson**	**20.79**	**196**	P	**P**	**07 58 22.3**	**+0.8**
THZ	**Tophouse**	**21.42**	**196**	P	**P**	**07 58 27.6**	**+0.3**
CTA	**Charters Tower**	**32.31**	**266**	P	**P**	**08 00 03.5**	**+1.0**
	3.9nm,0.9s,baz=90,slow=10,SNR=2.3						
CTAO	**Charters Tower**	**32.31**	**266**	P	**P**	**08 00 03.5**	**+1.0**
CTAO				IAmb	IAmb	08 00 08.6	
	comp=Z,11nm,1.1s						
TOO	**Toolangi**	**34.51**	**234**	P	**P**	**08 00 22.2**	**+1.5**
TOO				IAmb	IAmb	08 00 48.2	
	comp=Z,7.0nm,1.1s						
STKA	**Stephens Creek**	**36.43**	**245**	P	**P**	**08 00 36.9**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=61,slow=13,SNR=6.5						
STKA	**Stephens Creek**	**36.43**	**245**	P	**P**	**08 00 37.4**	**+0.8**
COEN	**Coen**	**36.54**	**275**	P	**P**	**08 00 38.9**	**+1.2**
COEN				IAmb	IAmb	08 01 07.4	
	comp=Z,13nm,1.4s						
BBOO	**Buckleboo**	**41.18**	**244**	P	**P**	**08 01 15.2**	**+0.4**
BBOO				IAmb	IAmb	08 01 44.1	
	comp=Z,16nm,1.4s						
WR0	**Warramunga Arr**	**43.20**	**263**	P	**P**	**08 01 31.2**	**+0.5**
WR0				IAmb	IAmb	08 01 57.4	
	comp=Z,9.0nm,1.5s						
ASAR	**Alice Springs**	**43.25**	**258**	P	**P**	**08 01 31.8**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=105,slow=7.5,SNR=7.4						
ASAR				S	**S**	**08 07 13.8**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=92,slow=16,SNR=7.8						
WRA	**Warramunga Arr**	**43.39**	**263**	P	**P**	**08 01 32.0**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=96,slow=7.4,SNR=7.4						
WRA				S	**S**	**08 07 13.9**	**-4.1**
	comp=Z,0.4nm,0.8s,baz=98,slow=12,SNR=2.3						
PSA00	**Pilbara Seismi**	**56.40**	**258**	P	**P**	**08 03 05.9**	**-1.1**
VNDA	**Vanda**	**56.98**	**185**	P	**P**	**08 03 12.4**	**+2.4**
	comp=Z,0.8nm,0.4s,baz=2.1,slow=6.9,SNR=16						
VNDA	**Vanda**	**56.98**	**185**	P	**P**	**08 03 12.5**	**+2.4**
MORW	**Morawa**	**58.48**	**248**	P	**P**	**08 03 22.1**	**+1.0**
MORW				IAmb	IAmb	08 03 38.0	
	comp=Z,18nm,1.4s						
QSPA	**South Pole Qui**	**68.73**	**180**	P	**P**	**08 04 27.0**	**+1.4**
QSPA				IAmb	IAmb	08 04 27.7	
	comp=Z,5.9nm,0.9s						
MJAR	**Matsushiro Arr**	**70.24**	**325**	P	**P**	**08 04 33.9**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=163,slow=5.9,SNR=6.0						
MJAR	**Matsushiro Arr**	**70.24**	**325**	P	**P**	**08 04 34.5**	**-0.3**
PETK	**Petropavlovsk-**	**76.81**	**346**	P	**P**	**08 05 11.0**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=135,slow=4.0,SNR=13						
PETK	**Petropavlovsk-**	**76.81**	**346**	P	**P**	**08 05 11.2**	**-0.4**
BELA	**Belgrano 2**	**78.87**	**173**	P	**P**	**08 05 22.4**	**-0.1**
NVAR	**Mina Array Bea**	**82.40**	**44**	P	**P**	**08 05 41.3**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=230,slow=6.8,SNR=2.9						
SNAA	**Sanae**	**87.20**	**179**	P	**P**	**08 06 03.3**	**-0.7**
SNAA	**Sanae**	**87.20**	**179**	P	**P**	**08 06 03.4**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=193,slow=14						
VNA3	**Neumayer Olymp**	**87.37**	**177**	P	**P**	**08 06 04.3**	**-0.6**
TXAR	**Lajitas Array**	**88.44**	**58**	P	**P**	**08 06 10.9**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=220,slow=8.3,SNR=4.5						
ILAR	**Eielson Array**	**89.38**	**13**	P	**P**	**08 06 12.7**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=215,slow=5.3,SNR=12						
PDAR	**Pinedale Array**	**90.33**	**44**	P	**P**	**08 06 19.6**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=215,slow=3.0,SNR=2.5						
ARCES	**ARCESS Array B**	**129.54**	**349**	PKP	**PKPdf**	**08 12 21.1**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=42,slow=2.8,SNR=6.9						
FINES	**FINESS Array B**	**136.25**	**343**	PKP	**PKPdf**	**08 12 35.0**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=26,slow=3.5,SNR=5.6						
AKASG	**Malin Array Be**	**143.19**	**330**	PKP	PKPab	08 12 44.1	-1.5
	comp=Z,2.0nm,0.6s,baz=43,slow=4.4,SNR=20						
BRTR	**Keskin Array B**	**146.56**	**311**	PKPbc	**PKPbc**	**08 12 55.4**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=133,slow=3.7,SNR=2.3						
GERES	**GERESS Array B**	**150.69**	**342**	PKPbc	**PKPbc**	**08 13 04.8**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=42,slow=2.2,SNR=5.9						
TORD	**Torodi Ar. Bea**	**171.81**	**186**		**PKPab**	**08 14 48.2**	**-0.5**

*BUL **23** 08:03:08.8±1.5, 25°67S×30°14E, h0km±16km, MD3.8*
*EAF **23** 08:03:10.0±1.8, 25°70S×30°16E, h0km±24km, MD3.8*
ISC 23 08:03:08.8±1.2, 25°68S±0°05×30°17E±0°06, h10km, n8, σ0°64/16, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POGA	**Pongola**	**2.15**	**141**	*i* P	**Pn**	**08 03 45.1**	**+0.3**
POGA				*i* S	**Sb**	**08 04 14.4**	**-0.3**
POGA	**Pongola**	**2.15**	**141**	*i* P	**Pn**	**08 03 45.1**	**+0.3**
POGA				*i* S	**Sb**	**08 04 14.4**	**-0.3**
LBTB	**Lobatse**	**4.19**	**278**	*i* P	**Pn**	**08 04 13.0**	**+0.1**
LBTB				*i* S	**Sn**	**08 05 01.8**	**-0.2**
LBTB	**Lobatse**	**4.19**	**278**	*i* P	**Pn**	**08 04 13.0**	**+0.1**
LBTB				*i* S	**Sn**	**08 05 01.8**	**-0.2**
BOSA	**Boshof**	**5.26**	**235**	*i* P	**Pn**	**08 04 27.9**	**+0.2**
BOSA				*i* S	**Sn**	**08 05 28.6**	**+0.1**
BOSA	**Boshof**	**5.26**	**235**	*i* P	**Pn**	**08 04 27.9**	**+0.2**
BOSA				*i* S	**Sn**	**08 05 28.6**	**+0.1**
BLWY	**Bulawayo**	**5.70**	**345**	*i* P	**Pn**	**08 04 34.8**	**+1.1**
BLWY				*i* S	**Sn**	**08 05 38.2**	**-1.1**
BLWY	**Bulawayo**	**5.70**	**345**	*i* P	**Pn**	**08 04 34.8**	**+1.1**
BLWY				*i* S	**Sn**	**08 05 38.2**	**-1.1**

*TIR **23** 08:12:59.8, 41°08N×20°16E, h13km±1km, Md2.5*
*SKO **23** 08:13:01.9, 41°14N×20°13E, h1km*
*BEO **23** 08:13:01.1±0.7, 41°15N×20°23E, h0km, ML2.1/7*
ISC 23 08:13:00.7±1.2, 41°08N±0°04×20°08E±0°03, h10km±9km, n20, σ1°926/34, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.31**	**330**	*e*Pn	**Pg**	**08 13 06.6**	**-0.3**
TIR				*e*Sg	**Sg**	**08 13 11.4**	**+0.3**
TIR	**Tirane**	**0.31**	**330**		**Pg**	**08 13 07.0**	**+0.1**
TIR	**Tirane**	**0.31**	**330**	P	**Pg**	**08 13 06.9**	**-0.1**
	baz=321						
TIR				S	**Sb**	**08 13 13.2**	**-0.3**
	baz=321						
OHR	**Ohrid**	**0.55**	**86**	*i* Pg	**Pg**	**08 13 10.6**	**-0.7**
OHR				*i* Sg	**Sg**	**08 13 18.5**	**0.0**
OHR				*e*Lg	Lg	08 13 18.7	
	comp=N,179nm,0.3s						
PHP	**Peshkopia**	**0.67**	**24**	P	**Pg**	**08 13 12.6**	**-1.0**
	baz=19						
PHP				S	**Sg**	**08 13 22.7**	**+0.4**
	baz=19						
PUK	**Puka**	**0.97**	**352**	P	**Pg**	**08 13 18.8**	**-0.6**
	baz=349						
PUK				S	**Sn**	**08 13 34.3**	**-0.1**
	baz=349						
LSK	**Leskovik**	**1.01**	**156**	P	**Pg**	**08 13 19.1**	**-1.0**
	baz=160						
LSK				S	**Sb**	**08 13 34.3**	**+0.7**
	baz=160						
BCI	**Bajram Curri**	**1.29**	**360**	P	**Pg**	**08 13 25.2**	**-0.1**
	baz=357						
BCI				S	**Sg**	**08 13 43.3**	**+1.2**
	baz=357						
SKO	**Skopje**	**1.36**	**48**	*e*Pn	**Pg**	**08 13 26.5**	**-0.3**
SKO				*e*Sg	**Sb**	**08 13 39.1**	**-4.6**
PDG	**Podgorica**	**1.48**	**336**	*e*Pg	**Pb**	**08 13 27.9**	**-0.4**
PDG				*e*Sg	**Sn**	**08 13 46.4**	**-0.4**
STIP	**Stip**	**1.70**	**68**	*i* Pn	**Pg**	**08 13 35.0**	**+1.6**
STIP				*i* Sn	**Sg**	**08 13 58.4**	**+2.9**
STIP				*e*Lg	Lg	08 14 02.4	
	comp=N,2.8nm,0.3s						
VAY	**Valandovo**	**1.90**	**82**	*e*Sg	**Sn**	**08 13 57.1**	**+0.1**
TREB	**Trebinje**	**2.08**	**322**	*e*Pn	**Pn**	**08 13 36.8**	**+1.2**
TREB				*e*Sg	**Sg**	**08 14 08.3**	**+0.7**
SJES	**Sjenica**	**2.18**	**358**	*e*Pg	**Pb**	**08 13 38.8**	**-1.5**
SJES				*e*Sg	**Sb**	**08 14 08.2**	**+0.7**
IVAS	**Ivanjica**	**2.50**	**1**	*e*Pg	**Pb**	**08 13 45.8**	**+0.2**
IVAS				*e*Sg	**Sb**	**08 14 17.6**	**+1.1**
STON	**Ston**	**2.52**	**316**	*e*Pn	**Pn**	**08 13 42.2**	**+0.6**
BBLS	**Lazići**	**2.83**	**350**	*e*Pg	**Pb**	**08 13 50.8**	**-0.5**
BBLS				*e*Sg	**Sg**	**08 14 30.8**	**-0.8**
LSTV	**Lastovo**	**2.92**	**306**	*e*Pn	**Pn**	**08 13 46.3**	**-0.8**
RICI	**Ricice**	**3.25**	**319**	*e*Pn	**Pn**	**08 13 52.6**	**+0.8**
KIJV	**Kijevo**	**3.99**	**318**	*e*Pn	**Pn**	**08 14 03.1**	**+1.3**

*IDC **23** 08:23:08.5±0.7, 4°49S×102°72E, h0km, mb4.4/20, mb1 4.5/20, mb1mx4.3/41, mbtmp4.4/20, MS3.1/5, Ms1 3.2/5, ms1mx2.8/45, Error ellipse: s-maj=28.2km s-min=12.6km az=52.0*
*NEIC **23** 08:23:16.6±1.3, 4°51S±0°09×102°76E±0°09, h65km±5km, mb4.5/29, Error ellipse: s-maj=14.3km s-min=11.2km az=225.0*
*DJA **23** 08:23:17.9±0.4, 5°S±3°×10°3E±°, h38km±8km, M4.2/12, mb4.0/1, MLv4.4/12*
ISC 23 08:23:16.8±1.0, 4°58S±0°07×102°70E±0°07, h65km±7km, n92, σ1°920/93, mb4.5/39, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.34**	**50**	P	**Pn**	**08 23 27.6**	**-0.1**
MNAI	**Manna**	**0.34**	**50**	Pn	**Pn**	**08 23 27.8**	**+0.1**
MNAI				Sn	**Sn**	**08 23 34.0**	**-1.6**
KSI	**Kapahiang**	**0.93**	**354**	P	**Pn**	**08 23 34.9**	**+0.7**
KSI				S	**Sn**	**08 23 48.1**	**+1.1**
LHSI	**Lahat**	**1.11**	**48**	P	**Pn**	**08 23 37.1**	**+0.6**
LHSI				S	**Sn**	**08 23 51.6**	**+0.5**
LWLI	**Liwa**	**1.43**	**108**	P	**Pn**	**08 23 40.5**	**-0.2**
LWLI				S	**Sn**	**08 23 57.8**	**-0.8**
MASI	**Maura Aman, Be**	**1.50**	**342**	P	**Pn**	**08 23 43.2**	**+1.6**
KASI	**Kota Agung**	**2.02**	**118**	P	**Pn**	**08 23 48.5**	**-0.1**
KASI				S	**Sn**	**08 24 11.0**	**-1.9**
KLSI		**2.03**	**93**	P	**Pn**	**08 23 49.2**	**+0.5**
PMBI	**Palembang**	**2.64**	**52**	Pn	**Pn**	**08 23 55.9**	**-1.2**
BLSI	**Bandar Lampung**	**2.66**	**107**	P	**Pn**	**08 23 59.6**	**+2.4**
KRJI	**Kerinci**	**2.76**	**333**	P	**Pn**	**08 24 00.5**	**+1.7**
SDSI	**Sungai Dareh**	**3.84**	**341**	P	**Pn**	**08 24 14.9**	**+1.5**
PPBI	**Pangkal Pinang**	**4.19**	**55**	P	**Pn**	**08 24 17.9**	**-0.3**
DSRI	**Dabo**	**4.49**	**25**	P	**Pn**	**08 24 24.2**	**+1.9**
SISI	**Saibi**	**4.84**	**312**	P	**Pn**	**08 24 28.8**	**+1.7**
TPI	**Tanjungpandan**	**5.27**	**70**	P	**Pn**	**08 24 33.3**	**+0.3**
LEM	**Lembang**	**5.38**	**115**	Pn	**Pn**	**08 24 34.6**	**-0.1**
	3.7nm,0.3s,baz=315,slow=19,SNR=1.5						
LEM				Sn	**Sn**	**08 25 40.2**	**+4.8**
	3.9nm,0.3s,baz=0.5,slow=20,SNR=1.6						
LEM				LR	LR	08 27 10.7	
	comp=Z,125nm,20.5s,baz=346,slow=45						
GSI	**Gunungsitoli**	**7.77**	**319**	Pn	**Pn**	**08 25 07.7**	**+0.5**
SMRI	**Semarang**	**8.08**	**108**	Pn	**Pn**	**08 25 11.7**	**+0.1**
PSI	**Prapat**	**8.24**	**333**	LR	LR	08 28 09.2	
	comp=Z,144nm,19.8s,baz=89,slow=37						
UGM	**Wanagama**	**8.45**	**113**	Pn	**Pn**	**08 25 18.5**	**+1.8**
MYLDM	**Lahad Datu**	**18.52**	**59**	Pn	**Pn**	**08 27 32.0**	**+3.0**
BATI	**Baumata**	**21.52**	**106**	P	**P**	**08 28 00.6**	**-0.1**
	64nm,0.9s,baz=8.4,slow=1.8,SNR=4.0						
CM31	**Chiang Mai Arr**	**23.19**	**351**	P	**P**	**08 28 17.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**23.19**	**351**	P	**P**	**08 28 17.2**	**-0.9**
	1.7nm,0.6s,baz=185,slow=8.0,SNR=16						
CMAR				LR	LR	08 37 37.5	
	comp=Z,33nm,20.0s,baz=194,slow=38						
CMAR	**Chiang Mai Arr**	**23.19**	**351**	P	**P**	**08 28 17.4**	**-0.8**
CHTO	**Chiang Mai**	**23.54**	**351**	P	**P**	**08 28 19.6**	**-1.8**
DAV	**Davao City (W)**	**25.60**	**63**	LR	LR	08 39 01.9	
	comp=Z,61nm,20.3s,baz=152,slow=37						
FITZ	**Fitzroy Crossi**	**26.15**	**123**	P	**P**	**08 28 45.0**	**-0.2**
	3.2nm,0.8s,baz=310,slow=5.4,SNR=9.1						
FITZ	**Fitzroy Crossi**	**26.15**	**123**	P	**P**	**08 28 44.8**	**-0.4**
KNRA	**Kununurra**	**27.89**	**115**	P	**P**	**08 29 00.1**	**-0.6**
KNRA				IAmb	IAmb	08 29 04.3	
	comp=Z,7.1nm,0.8s						
MTN	**Manton Dam**	**29.25**	**108**	P	**P**	**08 29 12.0**	**-1.0**
MTN				IAmb	IAmb	08 29 22.4	
	comp=Z,16nm,1.4s						
H08S2	**Diego Garcia H**	**30.18**	**263**	T	T	09 01 11.7	
	baz=86,slow=75,SNR=8.2						
H08S3	**Diego Garcia H**	**30.19**	**263**	T	T	09 01 12.9	
	baz=86,slow=75,SNR=8.8						
H08S1	**Diego Garcia H**	**30.20**	**263**	T	T	09 01 13.7	
	baz=86,slow=75,SNR=5.9						
SHL	**Shillong**	**31.75**	**341**	P	**P**	**08 29 33.8**	**-1.2**
SHL				IAmb	IAmb	08 29 34.5	
	comp=Z,4.7nm,0.5s						
H01W3	**Cape Leeuwin H**	**31.96**	**162**	T	T	09 03 34.0	
	baz=334,slow=74						
H01W2	**Cape Leeuwin H**	**31.97**	**162**	T	T	09 03 30.0	
	baz=334,slow=74						
H01W1	**Cape Leeuwin H**	**31.98**	**162**	T	T	09 03 25.8	
	baz=334						
WB0	**Warramunga Arr**	**34.36**	**119**	P	**P**	**08 29 56.8**	**-1.0**
WRA	**Warramunga Arr**	**34.38**	**119**	P	**P**	**08 29 57.5**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=302,slow=9.0,SNR=74						
WRA				PcP	**PcP**	**08 32 32.6**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=317,slow=1.6,SNR=4.1						
WRA	**Warramunga Arr**	**34.38**	**119**	P	**P**	**08 29 56.9**	**-1.1**
WRAB	**Tennant Creek**	**34.39**	**119**	P	**P**	**08 29 57.4**	**-0.6**
WRAB				IAmb	IAmb	08 29 58.9	
	comp=Z,5.9nm,0.7s						
WB2	**Warramunga Arr**	**34.39**	**119**	P	**P**	**08 29 57.3**	**-0.8**
WB2				IAmb	IAmb	08 29 58.9	
	comp=Z,5.4nm,0.8s						
WR0	**Warramunga Arr**	**34.56**	**119**	P	**P**	**08 29 59.2**	**-0.3**
WR0				IAmb	IAmb	08 30 00.1	
	comp=Z,4.7nm,0.7s						
CD2	**Chengdu**	**35.30**	**2**	P	**P**	**08 30 06.5**	**+0.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
AS31	**Alice Springs**	**35.57**	**125**	P	**P**	**08 30 08.2**	**0.0**
AS31				IAmb	IAmb	08 30 14.8	
	comp=Z,2.1nm,0.3s						
ASAR	**Alice Springs**	**35.57**	**125**	P	**P**	**08 30 08.4**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=296,slow=7.6,SNR=88						
ASAR				PcP	**PcP**	**08 32 36.8**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=320,slow=2.7,SNR=5.1						
NJ2	**Nanjing**	**39.54**	**22**	*e*P	**P**	**08 30 42.3**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
LZH	**Lanzhou**	**40.47**	**1**	*e*P	**P**	**08 30 53.9**	**+4.6**
LZH				pP	pP

NBG	**Las Nubes**	**1.31**	**52**	*eP*	**Pb**	**08 32 15.6**	**+0.8**
NBG				*eS*	**Sb**	**08 32 32.4**	**+0.7**
HUEH	**Huehuetenango**	**1.53**	**357**	*eS*	**Sn**	**08 32 36.3**	**-1.2**
NUBE	**Las Nubes**	**1.59**	**86**	*eP*	**Pn**	**08 32 17.8**	**-0.5**
NUBE				*eS*	**Sn**	**08 32 36.8**	**-2.2**
NUBE				IAML		08 32 40.2	
	comp=Z,131nm,0.5s						
CEVE	**Cerro Verde**	**1.74**	**88**	*eP*	**Pn**	**08 32 20.5**	**+0.1**
CEVE				*eS*	**Sn**	**08 32 41.5**	**-1.3**
CEVE				IAML		08 32 46.0	
	comp=Z,725nm,0.5s						
SBLS	**San Blas**	**1.74**	**88**	*eP*	**Pn**	**08 32 20.4**	**-0.1**
SBLS				*eS*	**Sn**	**08 32 42.8**	**0.0**
UNIC	**Universidad Ca**	**1.82**	**84**	*eP*	**Pn**	**08 32 21.2**	**-0.1**
ESQI	**Esquipulas**	**2.15**	**69**	*eP*	**Pn**	**08 32 25.6**	**-0.4**
LFRS	**El Faro**	**2.29**	**94**	*eP*	**Pn**	**08 32 28.4**	**+0.5**

NNC 23 08:42:53.5±4.1, 37.80N×71.22E, h0km, mb3.6, mpv3.2, 2C-3D, Error ellipse: s-maj=32.0km s-min=24.0km az=1.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.33**	**354**	⇑P	Pn	08 44 14.2	-0.2
	0.6nm,0.3s,baz=179,slow=12,SNR=12						
KK31				S	Sn	08 45 17.3	+0.9
	5.0nm,0.5s,baz=172,slow=29,SNR=10.0						
AAK	**Ala-Archa**	**5.45**	**26**	⇑P	Pn	08 44 16.2	+0.1
	2.4nm,0.6s						
AAK				⇓S	Sn	08 45 21.7	+2.2
	7.5nm,0.8s						
TKM2	**Tokmak 2**	**6.11**	**32**	⇓P	Pn	08 44 25.2	-0.1
	1.7nm,0.6s						
TKM2				⇓S	Sn	08 45 36.8	+0.8
	3.9nm,1.0s						

WEL 23 08:53:12.7, 39°S±3°×17°5E±°, h238km±8km, M2.9/39, mB5.0/1, MLv2.9/39, Mw(mB)4.3/1, Error ellipse: s-maj=0.0km s-min=0.0km az=97.9, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PREZ	**Palmer Road**	**0.50**	**233**	P	Pn	08 53 44.5	+0.2
NEZ	**North Egmont**	**0.50**	**243**	P	Pn	08 53 44.6	+0.2
HIZ	**Hauiti**	**0.55**	**16**	P	Pn	08 53 44.0	-0.5
PKE	**Pukeiti**	**0.55**	**254**	P	Pn	08 53 44.7	+0.3
PKVZ	**Pokaka**	**0.58**	**115**	P	Pn	08 53 44.1	-0.4
WAZ	**Wanganui**	**0.75**	**161**	P	Pn	08 53 45.2	0.0
WNVZ	**Wahianoa**	**0.78**	**112**	P	Pn	08 53 45.4	-0.1
TLZ	**Tolley Road**	**0.98**	**44**	P	Pn	08 53 46.2	-0.3
BHHZ	**Black Hill Sta**	**1.17**	**113**	P	Pn	08 53 47.3	-0.3
BKZ	**Black Stump Fm**	**1.43**	**96**	P	Pn	08 53 49.1	-0.3
TSZ	**Takapari Road**	**1.43**	**136**	P	Pn	08 53 49.5	+0.1
KRHZ	**Kereru**	**1.45**	**115**	P	Pn	08 53 50.6	+1.0
PNHZ	**Pukenui**	**1.47**	**127**	P	Pn	08 53 49.8	+0.1
MCHZ	**McNeill Hill**	**1.63**	**105**	P	Pn	08 53 51.7	+0.8
NMHZ	**Naumai**	**1.67**	**93**	P	Pn	08 53 52.1	+0.7
MTHZ	**Maungatainiwha**	**1.71**	**84**	P	Pn	08 53 51.5	-0.1
DVHZ	**Dannevirke**	**1.71**	**138**	P	Pn	08 53 51.6	0.0
WPHZ	**Waipukurau**	**1.71**	**127**	P	Pn	08 53 51.9	+0.3
MRZ	**Mangatainoka R**	**1.76**	**157**	P	Pn	08 53 52.0	0.0
OGWZ	**Otaki Gorge**	**1.81**	**168**	P	Pn	08 53 52.8	+0.3
KIW	**Kapiti Island**	**1.83**	**174**	P	Pn	08 53 52.7	+0.1
DUWZ	**D'Urville Isla**	**1.85**	**198**	P	Pn	08 53 53.1	+0.3
KAHZ	**Kahuranaki**	**1.87**	**114**	P	Pn	08 53 53.8	+0.8
PRHZ	**Porangahau**	**1.95**	**129**	P	Pn	08 53 54.2	+0.5
HOWZ	**Holdsworth Sta**	**1.96**	**161**	P	Pn	08 53 53.8	-0.1
ANWZ	**Angora Road**	**1.99**	**136**	P	Pn	08 53 54.6	+0.6
URZ	**Urewera**	**2.07**	**69**	P	Pn	08 53 54.5	-0.3
CAW	**Cannon Point**	**2.09**	**172**	P	Pn	08 53 55.2	+0.2
TCW	**Tory Channel**	**2.19**	**188**	P	Pn	08 53 56.6	+0.7
MTW	**Mount Morrison**	**2.21**	**163**	P	Pn	08 53 56.0	-0.1
WEL	**Wellington**	**2.24**	**178**	P	Pn	08 53 56.5	+0.1
TMWZ	**Te Maipa**	**2.27**	**156**	P	Pn	08 53 56.7	0.0
NNZ	**Nelson**	**2.39**	**204**	P	Pn	08 53 58.2	+0.3
MSWZ	**Moikau Station**	**2.41**	**170**	P	Pn	08 53 58.1	0.0
QRZ	**Quartz Range**	**2.42**	**222**	P	Pn	08 53 58.5	+0.2
RIGZ	**Rimuhau**	**2.44**	**83**	P	Pn	08 53 59.1	+0.5
TUWZ	**Tuamarina**	**2.45**	**193**	P	Pn	08 53 59.3	+0.8
PRGZ	**Paritu Road**	**2.51**	**88**	P	Pn	08 53 59.8	+0.6
MHGZ	**Mahia Peninsul**	**2.52**	**94**	P	Pn	08 54 00.1	+0.8
TKGZ	**Te Karaka**	**2.56**	**77**	P	Pn	08 54 00.5	+0.8
PLWZ	**Palliser**	**2.56**	**170**	P	Pn	08 53 59.6	-0.1
RUGZ	**Raukumara Rang**	**2.59**	**66**	P	Pn	08 53 59.6	-0.6
TWGZ	**Tauwhareparae**	**2.73**	**73**	P	Pn	08 53 59.6	-2.0
BSWZ	**Blackbirch Sta**	**2.74**	**193**	P	Pn	08 54 02.7	+1.2
HAZ	**Te Kaha**	**2.76**	**63**	P	Pn	08 54 01.7	-0.2
CNGZ	**Carnagh Statio**	**2.82**	**190**	P	Pn	08 54 03.5	+1.0
THZ	**Tophouse**	**3.03**	**206**	P	Pn	08 54 05.2	+0.4
WMGZ	**Waiomatatini S**	**3.19**	**69**	P	Pn	08 54 06.9	+0.3
MXZ	**Matakaoa Point**	**3.22**	**64**	P	Pn	08 54 07.6	+0.7
KHZ	**Kahutara**	**3.48**	**194**	P	Pn	08 54 10.9	+1.1
LTZ	**Lake Taylor**	**4.15**	**205**	P	Pn	08 54 18.5	+0.7
MHCZ	**Mount Hutt**	**5.06**	**206**	P	Pn	08 54 30.1	+1.4

WEL 23 08:58:20.2±1.2, 37°S±10°×177°7E±°, h33km, M2.3/4, ML2.7/7, MLv2.3/4, Error ellipse: s-maj=0.0km s-min=0.0km az=28.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUZ	**Kuaotunu**	**1.24**	**263**	P	Pn	08 58 40.2	-1.0
KUZ				S	Sn	08 58 54.9	-1.9
MXZ	**Matakaoa Point**	**1.28**	**139**	P	Pn	08 58 41.8	0.0
MXZ				S	Sn	08 58 57.7	-0.1
RUGZ	**Raukumara Rang**	**1.41**	**166**	P	Pn	08 58 44.3	+0.7
RUGZ				S	Sn	08 59 01.5	+0.4
GRZ	**Great Barrier**	**1.49**	**283**	P	Pn	08 58 44.8	+0.2
GRZ				S	Sn	08 59 04.1	+1.2
WIAZ	**Waiheke Island**	**1.71**	**263**	P	Pn	08 58 48.4	+0.7
WIAZ				S	Sn	08 59 10.2	+1.8
MKAZ	**Moumakai**	**1.75**	**253**	P	Pn	08 58 48.6	+0.4
MKAZ				S	Sn	08 59 10.4	+1.0
RITZ	**Rihia Road**	**2.62**	**204**	P	Pn	08 59 01.4	+1.2

*WEL **23** 09:00:00.8, 37°S±5°×17°7E±°, h12km, M3.9/30, ML4.1/30, MLv3.9/30, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*IDC **23** 09:00:03.9±1.9, 37.25S×176.30E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.3/38, mbtmp3.2/2, MS3.9/11, Ms1 3.9/11, ms1mx3.6/31, Error ellipse: s-maj=62.0km s-min=19.4km az=43.0*

ISC 23 08:59:59.9±1.0, 36.73S±0.05×177.11E±0.04, h10km, n83, σ1.958/68, MS3.8/10, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.80**	**176**	P	**Pn**	**09 00 16.7**	**-0.5**
WIZ				S	**Sn**	**09 00 28.3**	**-1.0**
MYRZ	**Mayor Island**	**0.89**	**231**	P	**Pn**	**09 00 18.2**	**-0.3**
KUZ	**Kuaotunu**	**1.12**	**269**	P	**Pb**	**09 00 20.1**	**-1.2**
KUZ				S	**Sb**	**09 00 35.4**	**-0.5**
HAZ	**Te Kaha**	**1.16**	**153**	P	**Pb**	**09 00 20.8**	**-1.2**
OPRZ	**Ohinepanea**	**1.20**	**202**	P	**Pb**	**09 00 22.0**	**-0.7**
TGRZ	**Tauranga**	**1.21**	**214**	P	**Pg**	**09 00 22.6**	**-0.5**
MXZ	**Matakaoa Point**	**1.27**	**132**	P	**Pn**	**09 00 22.1**	**-1.5**
MARZ	**Manawahe**	**1.30**	**195**	P	**Pg**	**09 00 24.2**	**-0.7**
RUGZ	**Raukumara Rang**	**1.32**	**160**	P	**Pn**	**09 00 23.9**	**-0.5**
LIRZ	**Lichensteins R**	**1.40**	**204**	P	**Pg**	**09 00 26.1**	**-0.7**
EDRZ	**Edgecumbe**	**1.41**	**192**	P	**Pg**	**09 00 26.2**	**-0.7**
GRZ	**Great Barrier**	**1.42**	**289**	P	**Pn**	**09 00 24.6**	**-1.1**
GRZ				S	**Sg**	**09 00 44.4**	**-1.0**
KMRZ	**Kaimai**	**1.46**	**220**	P	**Pb**	**09 00 26.3**	**-0.8**
KARZ	**Kaharoa**	**1.47**	**208**	P	**Pb**	**09 00 26.7**	**-0.6**
OMRZ	**Omania**	**1.50**	**203**	P	**Pg**	**09 00 28.4**	**-0.3**
WMGZ	**Waiomatatini S**	**1.51**	**137**	P	**Pb**	**09 00 27.6**	**-0.3**
URZ	**Urewera**	**1.53**	**180**	Pn	**Pn**	**09 00 26.8**	**-0.5**
	27nm,0.3s,baz=298,slow=4.9,SNR=60						
URZ				Sn	**Sb**	**09 00 47.6**	**-0.2**
	75nm,0.3s,baz=344,slow=7.6,SNR=5.6						
URZ	**Urewera**	**1.53**	**180**	P	**Pn**	**09 00 27.2**	**-0.1**
NGRZ	**Ngongotaha**	**1.56**	**208**	P	**Pg**	**09 00 30.0**	**+0.1**
TARZ	**Mount Tarawera**	**1.58**	**198**	P	**Pg**	**09 00 29.7**	**-0.6**
WIAZ	**Waiheke Island**	**1.59**	**267**	P	**Pn**	**09 00 27.7**	**-0.4**
TWGZ	**Tauwhareparae**	**1.60**	**155**	P	**Pg**	**09 00 30.2**	**-0.5**
MKAZ	**Moumakai**	**1.61**	**256**	P	**Pn**	**09 00 28.0**	**-0.4**
PUZ	**Puketiti**	**1.62**	**146**	P	**Pb**	**09 00 29.8**	**-0.1**
TOZ	**Tahuroa Road**	**1.63**	**232**	P	**Pb**	**09 00 29.0**	**-1.1**
MWZ	**Matawai**	**1.64**	**169**	P	**Pn**	**09 00 28.7**	**-0.1**
ETAZ	**East Tamaki Re**	**1.77**	**262**	P	**Pn**	**09 00 30.6**	**+0.1**
MUGZ	**Murupara**	**1.77**	**189**	P	**Pg**	**09 00 33.2**	**-0.7**
MBAZ	**Motutapu North**	**1.78**	**268**	P	**Pn**	**09 00 30.6**	**-0.1**
RAGZ	**Rawiri**	**1.78**	**172**	P	**Pb**	**09 00 31.3**	**-1.4**
TKGZ	**Te Karaka**	**1.81**	**161**	P	**Pb**	**09 00 32.7**	**-0.4**
ABAZ	**Army Bay**	**1.84**	**273**	P	**Pn**	**09 00 31.5**	**0.0**
RTZ	**Ruatahuna**	**1.89**	**183**	P	**Pn**	**09 00 32.6**	**+0.3**
EPAZ	**Eden Park BICE**	**1.91**	**265**	P	**Pb**	**09 00 33.7**	**-1.1**
HBAZ	**Herne Bay Bore**	**1.92**	**266**	P	**Pb**	**09 00 33.7**	**-1.2**
CNGZ	**Carnagh Statio**	**1.96**	**154**	P	**Pb**	**09 00 35.6**	**0.0**
AWAZ	**Awhitu Peninsu**	**2.01**	**260**	P	**Pn**	**09 00 34.2**	**+0.3**
TLZ	**Tolley Road**	**2.03**	**218**	P	**Pn**	**09 00 34.7**	**+0.4**
RVAZ	**Riverhead Bore**	**2.04**	**268**	P	**Pn**	**09 00 34.8**	**+0.6**
RIGZ	**Rimuhau**	**2.04**	**166**	P	**Pb**	**09 00 36.3**	**-0.8**
WTAZ	**Waiatarua**	**2.05**	**263**	P	**Pn**	**09 00 35.0**	**+0.6**
SNGZ	**Shannon Statio**	**2.06**	**175**	P	**Pb**	**09 00 35.7**	**-1.7**
MTHZ	**Maungatainiwha**	**2.13**	**186**	P	**Pb**	**09 00 36.9**	**-1.8**
RAHZ	**Arahi**	**2.19**	**181**	P	**Pb**	**09 00 39.0**	**-0.6**
PRGZ	**Paritu Road**	**2.28**	**165**	P	**Pb**	**09 00 40.4**	**-0.7**
WCZ	**Waipu Caves**	**2.37**	**289**	P	**Pn**	**09 00 38.5**	**-0.3**
BKZ	**Black Stump Fm**	**2.48**	**191**	P	**Pb**	**09 00 42.2**	**-2.4**
MHGZ	**Mahia Peninsul**	**2.50**	**166**	P	**Pb**	**09 00 43.6**	**-1.3**
HIZ	**Hauiti**	**2.53**	**224**	P	**Pn**	**09 00 41.9**	**+0.9**
BFZ	**Birch Farm**	**4.01**	**189**	P	**Pn**	**09 01 02.5**	**+1.2**
MRZ	**Mangatainoka R**	**4.11**	**197**	P	**Pn**	**09 01 03.5**	**+0.8**
HOWZ	**Holdsworth Sta**	**4.35**	**196**	P	**Pn**	**09 01 06.7**	**+0.7**
TMWZ	**Te Maipa**	**4.48**	**192**	P	**Pn**	**09 01 08.2**	**+0.4**
CAW	**Cannon Point**	**4.66**	**199**	P	**Pn**	**09 01 11.1**	**+0.9**
TRWZ	**Traveller**	**4.80**	**193**	P	**Pn**	**09 01 12.5**	**+0.3**
MSWZ	**Moikau Station**	**4.90**	**197**	P	**Pn**	**09 01 14.0**	**+0.3**
PLWZ	**Palliser**	**5.05**	**196**	P	**Pn**	**09 01 15.5**	**-0.2**
NNZ	**Nelson**	**5.34**	**212**	P	**Pn**	**09 01 23.2**	**+3.5**
QRZ	**Quartz Range**	**5.44**	**220**	P	**Pn**	**09 01 23.4**	**+2.4**
THZ	**Tophouse**	**6.00**	**212**	P	**Pn**	**09 01 31.1**	**+2.4**
KHZ	**Kahutara**	**6.32**	**205**	P	**Pn**	**09 01 33.1**	**0.0**
RPZ	**Rata Peaks**	**8.38**	**212**	LR	LR	09 05 45.0	
	comp=Z,704nm,19.6s,baz=29,slow=45						
RAO	**Raoul Island**	**8.54**	**31**	LR	LR	09 05 01.2	
	comp=Z,825nm,18.7s,baz=200,slow=32						
DZM	**Mont Dzumac**	**17.29**	**325**	*eLR*	LR	09 07 39.0	
	comp=Z,326nm,21.9s						
DZM	**Mont Dzumac**	**17.29**	**325**	LR	LR	09 09 17.1	
	comp=Z,536nm,18.8s,baz=92,slow=32						
STKA	**Stephens Creek**	**29.63**	**269**	LR	LR	09 17 49.7	
	comp=Z,174nm,18.1s,baz=96,slow=37						
TBI	**Tubuai**	**31.69**	**75**	*eLR*	LR	09 14 27.1	
	comp=Z,167nm,27.0s						
TBI	**Tubuai**	**31.69**	**75**	*eT*	T	09 39 23.5	
	24nm,0.3s						
PAE	**Paea**	**34.94**	**66**	*eT*	T	09 43 24.8	
	2.0nm,0.3s						
PPT2	**Papeete2**	**34.99**	**66**	*eLR*	LR	09 16 01.8	
	comp=Z,153nm,26.2s						
PPT2	**Papeete2**	**34.99**	**66**	*eT*	T	09 43 29.3	
	4.9nm,0.3s						
PPT	**Papeete**	**35.00**	**66**	LR	LR	09 18 08.7	
	comp=Z,36nm,19.9s,baz=292,slow=30						
TVO	**Taravao**	**35.11**	**67**	*eT*	T	09 43 37.3	
	1.0nm,0.3s						
MEH	**Mehetia**	**35.93**	**68**	*eT*	T	09 44 39.2	
	10nm,0.3s						
PMOR	**Pomariorio Ree**	**37.89**	**64**	*eT*	T	09 47 05.5	
	3.9nm,0.3s						
VAH	**Vaihoa**	**37.93**	**65**	*eT*	T	09 47 08.4	
	7.9nm,0.2s						
ASAR	**Alice Springs**	**39.23**	**277**	P	**P**	**09 07 29.8**	**+1.1**
	0.6nm,1.0s,baz=126,slow=8.9,SNR=2.2						
ASAR				LR	LR	09 24 21.5	
	comp=Z,168nm,18.6s,baz=127,slow=38						
WRA	**Warramunga Arr**	**40.83**	**282**	P	**P**	**09 07 42.6**	**+0.7**
	0.4nm,1.1s,baz=119,slow=9.8,SNR=2.0						
WRA				LR	LR	09 25 07.0	
	comp=Z,111nm,18.5s,baz=115,slow=37						
FITZ	**Fitzroy Crossi**	**48.71**	**278**	LR	LR	09 28 18.9	
	comp=Z,115nm,21.1s,baz=122,slow=35						
BATI	**Baumata**	**54.84**	**285**	LR	LR	09 32 27.6	
	comp=Z,338nm,20.0s,baz=225,slow=36						
MAW	**Mawson**	**64.94**	**203**	LR	LR	09 38 54.3	
	comp=Z,100nm,18.5s,baz=62,slow=36						
PLCA	**Paso Flores**	**81.08**	**135**	LR	LR	09 39 18.5	
	comp=Z,60nm,20.6s,baz=203,slow=29						
TXAR	**Lajitas Array**	**99.15**	**60**	P	**Pdif**	**09 13 51.5**	**+10**
	0.6nm,1.0s,baz=212,slow=3.2,SNR=3.5						

IDC 23 09:01:21.3±7.3, 18.82S×176.65W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.5/47, mbtmp3.8/2, Error ellipse: s-maj=297.3km s-min=117.8km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.12**	**260**	P	P	09 09 47.8	+0.1
	0.3nm,0.3s,baz=97,slow=7.5,SNR=26						
ASAR	**Alice Springs**	**46.16**	**255**	P	P	09 09 47.7	-0.4
	1.2nm,0.8s,baz=89,slow=8.6,SNR=8.5						
AKASG	**Malin Array Be**	**142.13**	**333**	PKP	PKPdf	09 20 54.6	-0.8
	0.6nm,0.4s,baz=44,slow=4.5,SNR=5.6						

*IDC **23** 09:03:40.2±1.3, 38.86N×142.38E, h0km, mb3.6/5, mb1 3.7/8, mb1mx3.5/63, mbtmp3.6/8, ML3.1/2, Error ellipse: s-maj=32.4km s-min=22.0km az=103.0*
*JMA **23** 09:03:44.2±0.1, 38.99N×142.39E, h33km±2km, M3.8*
JMA Felt I J1.
*NIED **23** 09:03:44.2, 38.99N×142.39E, h33km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-1.62; $M_{\theta\theta}$0.08; $M_{\phi\phi}$ 1.54; $M_{r\theta}$0.21; $M_{\theta\phi}$-0.29; $M_{\phi r}$1.10; Fault plane solution: $M_0$1.96000×10^{14} NP1: ϕ_s181.00000°, δ62.00000°, λ-79.00000°. NP2: ϕ_s339.00000°, δ29.00000°, λ-110.00000°.*

ISC 23 09:03:40.0±1.8, 38.85N±0.04×142.54E±0.07, h9km±10km, n27, σ1.969/34, mb3.7/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.72**	**289**	P	**Pb**	**09 03 55.7**	**+1.1**
OFUJ				S	**Sg**	**09 04 03.6**	**+0.4**
JKMT	**Kesennumamotoy**	**0.83**	**267**	P	**Pn**	**09 03 58.0**	**+0.1**
JKMT				S	**Sg**	**09 04 07.4**	**+0.5**
MIYJ	**Miyakonagasawa**	**0.91**	**322**	P	**Pg**	**09 03 57.7**	**+0.1**
MIYJ				S	**Sg**	**09 04 07.0**	**-2.5**
JIO	**Ouri**	**1.01**	**247**	P	**Pn**	**09 04 01.1**	**+0.8**
JIO				S	**Sg**	**09 04 12.5**	**-0.1**
JMK	**Ichinoseki**	**1.03**	**276**	P	**Pg**	**09 04 00.8**	**+0.9**
JMK				S	**Sg**	**09 04 12.7**	**-0.6**
JOM	**Ohasama**	**1.15**	**303**	P	**Pb**	**09 04 01.9**	**-0.1**
JOM				S	**Sb**	**09 04 14.7**	**-2.4**
JTH	**Tanohata**	**1.20**	**334**	P	**Pn**	**09 04 02.1**	**-0.9**
JKZ	**Kuzumaki**	**1.47**	**321**	P	**Pn**	**09 04 06.7**	**0.0**
JKZ				S	**Sn**	**09 04 23.2**	**-2.8**
JOU	**Okura**	**1.55**	**252**	P	**Pb**	**09 04 09.2**	**+0.4**
JOU				S	**Sn**	**09 04 28.4**	**+0.5**
JRG	**Rokugo**	**1.58**	**291**	P	**Pn**	**09 04 09.0**	**+0.9**
JRG				S	**Sn**	**09 04 27.9**	**-0.8**
JYK	**Kaneyama**	**1.70**	**273**	P	**Pn**	**09 04 10.8**	**+1.0**
JYK				*eS*	**Sn**	**09 04 30.6**	**-1.1**
JANG	**Nango**	**1.71**	**333**	P	**Pn**	**09 04 09.8**	**-0.2**
MJAR	**Matsushiro Arr**	**4.14**	**237**	Pn	**Pn**	**09 04 44.1**	**+0.7**
	baz=36,slow=13,SNR=2.2						
MAT	**Matsushiro**	**4.14**	**237**	P	**Pb**	**09 04 49.6**	**-3.4**
MAT				*eS*	**Sb**	**09 05 41.1**	**-2.0**
ASAJ	**Asahikawa**	**5.26**	**0**	Pn	**Pn**	**09 04 59.9**	**+1.2**
	0.2nm,0.3s,baz=18,slow=16,SNR=2.5						
ASAJ				Sn	**Sn**	**09 05 58.0**	**-1.5**
	0.4nm,0.3s,baz=248,slow=30,SNR=1.2						
JHJ	**Hachijo jima 2**	**6.14**	**202**	Pn	**Pn**	**09 05 11.9**	**+1.1**
	10nm,0.3s,baz=270,slow=13,SNR=2.4						
JHJ				Sn	**Sn**	**09 06 15.9**	**-5.3**
	1.8nm,0.3s,baz=232,slow=19,SNR=1.9						
SONM	**Songino Array**	**27.56**	**301**	P	**P**	**09 09 28.4**	**+1.1**
	0.2nm,0.4s,baz=103,slow=6.4,SNR=1.6						
H11N2	**WAKE ISLAND Hy**	**28.39**	**125**	T	T	09 40 03.0	
	baz=318,slow=76,SNR=59						
H11N1	**WAKE ISLAND Hy**	**28.40**	**125**	T	T	09 40 02.1	
	baz=318,slow=76,SNR=50						
H11N3	**WAKE ISLAND Hy**	**28.41**	**125**	T	T	09 40 04.3	
	baz=318,slow=76,SNR=64						
H11S1	**WAKE ISLAND Hy**	**29.17**	**127**	T	T	09 41 11.9	
	baz=318,slow=76,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.18**	**127**	T	T	09 41 08.9	
	baz=318,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**29.19**	**127**	T	T	09 41 12.7	
	baz=318,slow=76,SNR=9.9						
MKAR	**Makanchi Array**	**43.93**	**301**	P	**P**	**09 11 47.9**	**+0.8**
	0.4nm,0.6s,baz=85,slow=9.6,SNR=2.8						
KURBB	**Kurchatov Arra**	**45.61**	**307**	P	**P**	**09 12 00.5**	**+0.2**
	1.1nm,0.4s,baz=81,slow=8.2,SNR=10						
ILAR	**Eielson Array**	**47.48**	**33**	P	**P**	**09 12 17.2**	**+2.4**
	0.6nm,0.7s,baz=265,slow=6.3,SNR=7.5						
WRA	**Warramunga Arr**	**58.99**	**189**	P	**P**	**09 13 41.1**	**+1.2**
	0.3nm,0.5s,baz=6.0,slow=7.2,SNR=5.6						

AUST 23 09:07:28.4±1.2, 31.02S×121.32E, h11km±10km, Error ellipse: s-maj=9.3km s-min=8.3km az=62.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUKAL	**John Paul Coll**	**0.29**	**28**	P	Pg	09 07 34.6	+0.2
	baz=0.3						
AUKAL				S	Sg	09 07 38.3	-0.1
	baz=0.3						
KMBL	**Kambalda**	**0.59**	**126**	P	Pg	09 07 40.1	+0.1
	baz=0.6,SNR=22						
KMBL				S	Sg	09 07 48.0	+0.2
	baz=0.6						
KLBR	**Kellerberrin**	**3.10**	**259**	P	Pn	09 08 17.9	+0.6
	baz=3.1,SNR=20						
NWAO	**Narrogin (SRO)**	**3.96**	**240**	P	Pn	09 08 30.0	+0.8
	baz=4.0,SNR=6.8						
BLDU	**Ballidu**	**3.99**	**275**	P	Pn	09 08 29.2	-0.3
	baz=4.0,SNR=7.9						
MEEK	**Meekatharra**	**4.97**	**331**	P	Pn	09 08 42.6	-0.4
	baz=5.0,SNR=5.6						
MORW	**Morawa**	**4.97**	**292**	P	Pn	09 08 42.3	-0.8
	baz=5.0						
MORW				S	Sn	09 09 37.7	-2.9
	baz=5.0						
RKGY	**Rocky Gully**	**5.12**	**224**	P	Pn	09 08 46.2	+1.2
	baz=5.1						
RKGY				S	Sn	09 09 43.9	-0.2
	baz=5.1						
FORT	**Forrest**	**5.80**	**89**	P	Pn	09 08 55.0	+0.6
	baz=5.8						
FORT				S	Sn	09 09 58.1	-2.7
	baz=5.8						
WRKA	**Warakurna**	**8.57**	**48**	P	Pn	09 09 33.1	+0.6
	baz=8.6						
MULG	**Mulgathing**	**10.99**	**89**	P	Pn	09 10 05.2	-0.5
	baz=11						
BBOO	**Buckleboo**	**12.65**	**102**	P	Pn	09 10 27.6	-0.8
	baz=13						
OOD	**Oodnadatta**	**12.93**	**79**	P	Pn	09 10 31.8	-0.4
	baz=13						
FITZ	**Fitzroy Crossi**	**13.45**	**18**	P	Pn	09 10 36.2	-3.0
	baz=14						

*IDC **23** 09:07:23.8±2.4, 36.62N×76.00E, h0km, mb3.7/5, mb1 3.6/9, mb1mx3.4/55, mbtmp3.6/9, ML3.0/4, Error ellipse: s-maj=43.6km s-min=26.5km az=144.0*
*NNC **23** 09:07:45.6±6.0, 37.85N×76.18E, h273km±183km, mb1.9, mpv3.2, Error ellipse: s-maj=103.1km s-min=34.4km az=175.0*

ISC 23 09:07:40.0±0.8, 37.15N±0.06×76.14E±0.09, h150km, n16, σ2.966/23, mb3.6/5, 5C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**4.72**	**184**	*eP*	**Pn**	**09 08 50.0**	**+0.2**
THN				*eS*	**Sn**	**09 09 39.7**	**-4.4**
CEP	**Cherat**	**4.79**	**227**	P	**Pn**	**09 08 50.0**	**-0.8**
CEP				S	**Sn**	**09 09 43.0**	**-3.0**
AAK	**Ala-Archa**	**5.62**	**347**	Pn	**Pn**	**09 09 01.9**	**+0.1**
	0.7nm,0.3s,baz=151,slow

22nm,0.3s,baz=66,slow=23,SNR=4.8
USRK Ussuriysk Ar. 9.81 302 Pn **Pn 09 23 06.6 +1.7**
baz=96,slow=14,SNR=7.8
JNU Nakatsue 12.11 242 LR LR 09 27 59.6
comp=Z,78nm,18.3s,baz=50,slow=36
KSRS Korea Array 12.47 265 Pn **Pn 09 23 43.8 +2.5**
0.1nm,0.3s,baz=74,slow=14,SNR=2.6
KSRS LR LR 09 27 59.3
comp=Z,79nm,20.5s,baz=72,slow=35
KLR Kul'dur 12.83 323 Pn **Pn 09 23 46.3 +0.1**
0.1nm,0.3s,baz=173,slow=8.1,SNR=3.0
KLR LR LR 09 28 59.8
comp=Z,117nm,18.1s,baz=126,slow=39
MA2 Magadan 20.52 10 LR LR 09 34 48.7
comp=Z,22nm,18.1s,baz=100,slow=41
SEY Seymchan 23.98 10 P **P 09 25 59.7 +1.5**
3.4nm,0.8s,baz=171,slow=7.4,SNR=6.2
SONM Songino Array 27.91 300 P **P 09 26 34.6 +0.4**
1.6nm,0.7s,baz=94,slow=8.0,SNR=8.8
H11N2 WAKE ISLAND Hy 28.16 128 T T 09 57 45.2
baz=318,slow=75,SNR=49
H11N1 WAKE ISLAND Hy 28.17 128 T T 09 57 42.1
baz=318,slow=75,SNR=42
H11N3 WAKE ISLAND Hy 28.18 128 T T 09 57 30.6
baz=318,slow=75,SNR=45
H11S1 WAKE ISLAND Hy 28.98 130 T T 09 58 34.6
baz=322,slow=74
H11S3 WAKE ISLAND Hy 28.98 130 T T 09 58 47.3
baz=322,slow=74
H11S2 WAKE ISLAND Hy 28.99 130 T T 09 58 34.9
baz=322
TLY Talaya 30.07 307 P **P 09 26 54.9 +1.8**
1.1nm,0.5s,baz=50,slow=9.6,SNR=3.6
ZALV Zalesovo Beam 41.53 310 P **P 09 28 30.6 -0.5**
2.0nm,0.6s,baz=92,slow=8.9,SNR=3.3
MKAR Makanchi Array 44.28 300 P **P 09 28 53.9 +0.3**
2.1nm,0.7s,baz=84,slow=10,SNR=11
ILAR Eielson Array 46.42 34 P **P 09 29 11.1 +0.8**
0.3nm,0.7s,baz=279,slow=6.0,SNR=2.9
WRA Warramunga Arr 59.84 190 P **P 09 30 50.0 +0.5**
0.6nm,0.9s,baz=7.9,slow=6.9,SNR=6.2
ASAR Alice Springs 63.57 190 P **P 09 31 14.8 +0.2**
0.3nm,0.7s,baz=358,slow=4.6,SNR=2.3
FINES FINESS Array B 67.36 333 P **P 09 31 39.2 +0.5**
1.9nm,0.7s,baz=73,slow=5.1,SNR=6.6
HFS Hagfors 72.47 336 P **P 09 32 11.2 +1.0**
1.0nm,0.4s,baz=52,slow=8.0,SNR=6.1
NOA NORSAR Array B 72.49 338 P **P 09 32 11.0 +0.6**
0.7nm,0.6s,baz=39,slow=6.0,SNR=3.3
AKASG Malin Array Be 73.33 323 P **P 09 32 15.7 +0.3**
0.6nm,0.4s,baz=46,slow=6.2,SNR=2.2
BRTR Keskin Array B 78.44 312 P **P 09 32 45.5 +0.5**
1.1nm,0.9s,baz=45,slow=6.5,SNR=2.5
GERES GERESS Array B 81.44 329 P **P 09 33 00.8 -0.2**
0.3nm,0.6s,baz=26,slow=6.9,SNR=2.4

*REY **23** 09:22:46.2, 64˚.62N×17˚.43W, h4km*
*BJI **23** 09:22:47.4±0.0, 64˚.61N×17˚.46W, h5km, mB5.4/35, mb4.8/45, Ms5.0/34, Ms7 4.8/36*
*IDC **23** 09:22:48.0±0.5, 64˚.47N×17˚.64W, h0km, mb4.3/30, mb1 4.4/36, mb1mx4.4/47, mbtmp4.3/36, ML3.2/5, MS4.3/42, Ms1 4.3/42, ms1mx4.3/45, Error ellipse: s-maj=13.3km s-min=9.6km az=28.0*
*MOS **23** 09:22:48.1±0.9, 64˚.51N×17˚.59W, h10km, mb5.1/71, MS4.4/24, Error ellipse: s-maj=8.0km s-min=5.6km az=99.7*
*NEIC **23** 09:22:49±1.9, 64˚.50N±0˚.07×17˚.6W±0˚.1, h6km±3km, mb4.9/189, Error ellipse: s-maj=10.6km s-min=7.4km az=185.0*
*IEPN **23** 09:22:49.0, 64˚.38N×17˚.44W, h10km*
*DNK **23** 09:22:54.1±6.5, 64˚.83N×16˚.95W, h8km±115km, ML2.9*
*GCMT **23** 09:22:54.0±0.1, 64˚.61N±0˚.01×16˚.91W±0˚.03, h12km, MW5.0/139, Moment Tensor Solution. s63,c82; s139,c235; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.54±.06; $M_{\theta\theta}$2.83±.06; $M_{\phi\phi}$1.71±.05; $M_{r\theta}$-0.18±.20; $M_{\theta\phi}$-1.07±.05; $M_{\phi r}$-2.67±.23; Best double couple: M_{o}4.64200×10^{16} NP1:ϕ_s110.00000°, δ37.00000°, λ-120.00000°. NP2:ϕ_s326.00000°, δ58.00000°, λ-69.00000°. Principal axes: T 3.7240, Plg11.0000°, Azm41.0000°; N 1.8360, Plg18.0000°, Azm135.0000°; P -5.5600, Plg69.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 09:22:49.9±0.2, 64˚.49N±0˚.03×17.72W±0˚.02, h10km, n693, σ1§72/705, **mb4.9**/194, **MS4.4**/80, **42C-17D, Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IHAM	**Hamarinn**	**0.05**	**253**	P		**Pg**		**09 22 50.5**	**-1.6**
	baz=231								
IHAM				S		**Sg**		**09 22 54.1**	**+0.6**
	baz=231								
IVON	**Vonarskard**	**0.18**	**355**	P		Pg		09 22 49.4	-4.4
	baz=292								
IVON				S		**Sg**		**09 22 51.9**	**-4.6**
	baz=292								
IHUS	**Husbondi**	**0.20**	**172**	P		**Pg**		**09 22 52.9**	**-1.2**
	baz=197								
IGRF	**Grimsfjall**	**0.21**	**114**	P		**Pg**		**09 22 50.7**	**-3.7**
	baz=161								
IJOK	**Jokulheimar**	**0.28**	**231**	P		**Pg**		**09 22 54.6**	**-1.0**
	baz=229								
IJOK				S		**Sb**		**09 23 01.4**	**-0.5**
	baz=229								
ISKR	**Skrokkalda**	**0.30**	**283**	P		**Pg**		**09 22 53.7**	**-2.1**
	baz=263								
ISKR				S		**Sg**		**09 22 59.7**	**-0.1**
	baz=263								
IVOT	**Vottur**	**0.32**	**134**	P		**Pg**		**09 22 53.2**	**-3.1**
	baz=163								
IDYN	**Dyngjuhals**	**0.34**	**27**	P		Pg		09 22 50.0	-6.5
	baz=9.0								
IURH	**Urdarhals**	**0.41**	**37**	P		Pg		09 22 51.0	-6.9
	baz=31								
IURH				S		Sg		09 22 54.9	-8.5
	baz=31								
IIEY	**Innrieyrar**	**0.44**	**204**	P		**Pg**		**09 22 57.0**	**-1.4**
	baz=210								
IKVE	**Kverkfjoll**	**0.49**	**67**	P		Pg		09 22 52.7	-6.7
	baz=79								
IKAL	**Kalfafell**	**0.55**	**179**	P		**Pg**		**09 22 58.5**	**-2.0**
	baz=190								
IVAT	**Vatnsfell**	**0.61**	**240**	P		**Pg**		**09 23 00.0**	**-1.6**
	baz=237								
THOR	**Thorvaldshraun**	**0.63**	**45**	P		Pg		09 22 54.6	-7.4
	baz=45								
IKSK	**Karasker**	**0.64**	**121**	P		Pg		09 22 56.9	-5.3
	baz=137								
IKSK				S		**Sg**		**09 23 05.8**	**-4.7**
	baz=137								
IKRE	**Kreppuhraun**	**0.65**	**63**	P		Pg		09 22 54.9	-7.5
	baz=69								
IKRE				S		Sg		09 23 01.4	-9.4
	baz=69								
IASK	**Askja**	**0.72**	**39**	P		Pg		09 22 56.1	-7.7
	baz=37								
IMKO	**Mokollar**	**0.77**	**50**	P		Pg		09 22 57.0	-7.7
	baz=52								
IFAG	**Fagurholsmyri**	**0.78**	**143**	P		**Pg**		**09 23 00.7**	**-4.1**
	baz=155								
ISNB	**Snabyli**	**0.86**	**208**	P		**Pg**		**09 23 04.0**	**-2.4**
	baz=211								
ISVA	**Svartarkot**	**0.87**	**13**	P		Pg		09 22 58.9	-7.7
	baz=5.9								
IHVE	**Hveravellir**	**0.88**	**296**	P		**Pg**		**09 23 02.6**	**-4.2**
	baz=286								
IVSH	**V-Sauoahnukur**	**0.91**	**69**	P		Pg		09 22 59.5	-7.9
	baz=74								
IVSH				S		Sg		09 23 09.1	-10
	baz=74								
IRJU	**Rjupnafell**	**0.97**	**206**	P		**Pg**		**09 23 06.0**	**-2.6**
	baz=209								
IFED	**Fedgar**	**0.98**	**242**	P		**Pg**		**09 23 06.4**	**-2.3**
	baz=240								
IMJO	**Mjoaskard**	**1.02**	**238**	P		**Pg**		**09 23 07.2**	**-2.3**
	baz=236								
IADA	**Aoalbol**	**1.06**	**59**	P		Pg		09 23 01.7	-8.5
	baz=62								
IADA				S		Sg		09 23 13.7	-10
	baz=62								
IHVO	**Lagu-Hvolar**	**1.09**	**208**	P		**Pg**		**09 23 08.3**	**-2.5**
	baz=210								
IGYG	**Gygjarholskot**	**1.11**	**260**	P		**Pb**		**09 23 07.7**	**-3.4**
	baz=256								
IHAU	**Haukadalur**	**1.11**	**243**	P		**Pb**		**09 23 08.5**	**-2.6**
	baz=241								
IMEL	**Melhnausar**	**1.17**	**22**	P		Pn		09 23 04.2	-8.1
	baz=18								
IALF	**Alftagrof**	**1.20**	**213**	P		**Pb**		**09 23 09.9**	**-2.7**
	baz=215								
IREN	**Reynihlio**	**1.21**	**16**	P		Pn		09 23 04.5	-8.3
	baz=12								
IREN				S		Sb		09 23 18.7	-10
	baz=12								
IESK	**Eystri-Skogar**	**1.24**	**219**	P		**Pb**		**09 23 10.5**	**-2.8**
	baz=220								
IKVO	**Krokottuvotn**	**1.28**	**16**	P		Pn		09 23 05.6	-8.1
	baz=12								
IKVO				S		Sb		09 23 20.6	-10
	baz=12								
ISAU	**Saurbar**	**1.28**	**248**	P		**Pn**		**09 23 10.5**	**-3.3**
	baz=246								
ISAU				S		**Sb**		**09 23 29.2**	**-1.3**
	baz=246								
IGRS	**Grimsstaoir**	**1.33**	**30**	P		Pn		09 23 06.5	-8.0
	baz=28								
IGHA	**Grjothals**	**1.43**	**18**	P		Pn		09 23 08.0	-7.8
	baz=14								
IASM	**Asmuli**	**1.43**	**244**	P		**Pn**		**09 23 13.6**	**-2.2**
	baz=242								
IASM				S		**Sb**		**09 23 34.0**	**-0.8**
	baz=242								
IGRA	**Granastaoir**	**1.43**	**2**	P		Pn		09 23 08.7	-7.1
	baz=357								
IHLA	**Hella**	**1.48**	**349**	P		Pn		09 23 10.1	-6.5
	baz=344								
IDIM	**Dimmadalss**	**1.51**	**12**	P		Pn		09 23 09.4	-7.5
	baz=8.6								
ISOL	**Solvholt**	**1.52**	**250**	P		**Pn**		**09 23 14.6**	**-2.5**
	baz=247								
IKRO	**Krokur**	**1.54**	**257**	P		**Pn**		**09 23 14.7**	**-2.5**
	baz=254								
IHEI	**Heioarbar**	**1.56**	**261**	P		**Pn**		**09 23 14.9**	**-2.7**
	baz=258								
BORG	**Borgarnes**	**1.58**	**281**			**Pn**		**09 23 14.5**	**-3.3**
BORG						**Sg**		**09 23 39.7**	**-0.7**
IHED	**Heoinshofoi**	**1.60**	**6**	P		Pn		09 23 11.2	-7.0
	baz=13								
IBRE	**Brettingsstaoi**	**1.64**	**357**	P		Pn		09 23 12.3	-6.4
	baz=353								
IBJA	**Bjarnastaoir**	**1.66**	**252**	P		**Pn**		**09 23 16.6**	**-2.4**
	baz=250								
IGIL	**Gilhagi**	**1.69**	**19**	P		Pn		09 23 12.0	-7.4
	baz=17								
ISIG	**Siglufjorour**	**1.72**	**344**	P		Pn		09 23 13.9	-5.9
	baz=338								
ISAN	**Sandskeio**	**1.74**	**257**	P		**Pn**		**09 23 17.3**	**-2.8**
	baz=254								
IKAS	**Kald??rsel**	**1.87**	**257**	P		**Pn**		**09 23 19.8**	**-2.0**
	baz=255								
IHRN	**Hraun**	**1.91**	**329**	P		Pn		09 23 17.4	-5.1
	baz=324								
ILEI	**Leirhofn**	**1.99**	**14**	P		Pn		09 23 16.9	-6.5
	baz=12								
SCO	**Scoresbysund**	**6.23**	**347**	*e*		Pn		09 24 15.6	-6.1
	baz=167,slow=6.2								
SCO				*i*	P	**Pn**		**09 24 19.5**	**-2.2**
SCO				*i*	S	**Sn**		**09 25 32.6**	**-0.2**
SCO					IAML			09 25 39.9	
	comp=Z,5.9nm,0.6s								
ANGG	**Ammassalik, Gr**	**8.49**	**287**	P		**Pn**		**09 24 52.3**	**-0.3**
ICESG	**Greenland Ices**	**9.77**	**308**	*i*	P	Pn		09 25 19.1	+8.6
ICESG				*i*				09 27 51.2	
DBG	**Daneborg**	**9.90**	**356**	*e*	P	**Pn**		**09 25 13.0**	**+1.1**
FOO	**Floro**	**10.71**	**95**	*e*	P	**Pn**		**09 25 22.2**	**-0.8**
SUMG	**Summit**	**11.03**	**326**		P	**Pn**		**09 25 28.7**	**+0.9**
SUMG	**Summit**	**11.03**	**326**			**Pn**		**09 25 28.6**	**+0.9**
SUMG	**Summit**	**11.03**	**326**	*i*	P	**Pn**		**09 25 27.7**	**-0.1**
SUMG	**Summit**	**11.03**	**326**	*i*	P	**Pn**		**09 25 27.8**	**-0.1**
AKN	**Aaknes**	**11.31**	**91**	*e*	P	**Pn**		**09 25 30.2**	**-1.2**
EKB8	**Eskdalemuir Ar**	**11.68**	**135**		Pn	**Pn**		**09 25 34.5**	**-1.9**
EKB	**Eskdalemuir**	**11.69**	**135**		Pn	**Pn**		**09 25 34.4**	**-2.1**
EKA	**Eskdalemuir Ar**	**11.70**	**135**		Pn	**Pn**		**09 25 34.2**	**-2.5**
	baz=323,slow=13,SNR=28								
ESK	**Eskdalemuir**	**11.70**	**135**		P	**Pn**		**09 25 35.9**	**-0.8**
ESK	**Eskdalemuir**	**11.70**	**135**		Pn	**Pn**		**09 25 35.9**	**-0.8**
KMY	**Karmoy**	**12.02**	**105**	*e*	P	**Pn**		**09 25 37.6**	**-3.3**
ODD1	**Odda**	**12.21**	**101**	*e*	P	**Pn**		**09 25 41.3**	**-2.3**
DOMB	**Dombas**	**12.26**	**89**	*e*	P	**Pn**		**09 25 42.8**	**-1.5**
DAG	**Danmarks Havn**	**12.35**	**359**	*i*	P	**Pn**		**09 25 49.1**	**+3.7**
BLS5	**Blasjo**	**12.41**	**103**	*e*	P	**Pn**		**09 25 43.8**	**-2.5**
SKAR	**Skarsfia**	**12.53**	**96**	*e*	P	**Pn**		**09 25 46.5**	**-1.6**
NC204	**NORSAR Array S**	**13.32**	**91**			**Pn**		**09 25 55.0**	**-3.8**
NBO00	**NORSAR Array S**	**13.44**	**92**			**Pn**		**09 25 56.2**	**-4.2**
NAO01	**NORSAR Array S**	**13.57**	**92**			**Pn**		**09 25 58.3**	**-3.8**
NC303	**NORSAR Array S**	**13.61**	**91**			**Pn**		**09 26 00.0**	**-2.6**
NB2	**NORSAR Subarra**	**13.62**	**91**		Pn	**Pn**		**09 25 59.1**	**-3.8**
	comp=Z,12nm,1.2s,baz=298,slow=14								
NOA	**NORSAR Array B**	**13.62**	**91**		Pn	**Pn**		**09 25 58.8**	**-4.1**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=9.6								
NOA					LR	LR		09 31 12.4	
	comp=Z,1μm,20.0s,baz=295,slow=37								
NB201	**NORSAR Array S**	**13.65**	**91**		Pn	**Pn**		**09 26 01.1**	**-2.1**
NB201	**NORSAR Array S**	**13.65**	**91**	*e*	P	**Pn**		**09 26 00.9**	**-2.4**
SFJD	**Kangerlussuaq**	**13.65**	**295**		LR	LR		09 31 06.2	
	comp=Z,2μm,19.9s,baz=82,slow=36								
NC405	**NORSAR Array S**	**13.81**	**91**		Pn	**Pn**		**09 26 03.4**	**-2.0**
ILUL1	**Ilulissat**	**13.81**	**305**		P	**Pn**		**09 26 05.4**	**0.0**
ILUL1	**Ilulissat**	**13.81**	**305**		Pn	**Pn**		**09 26 05.4**	**0.0**
HFS	**Hagfors**	**15.13**	**92**		Pn	**Pn**		**09 26 20.4**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=296,slow=14,SNR=5.8								
HFS					LR	LR		09 31 59.0	
	comp=Z,2μm,21.5s,baz=298,slow=36								
MUD	**Monsted U'grnd**	**15.40**	**109**	*e*	P	**P**		**09 26 28.5**	**-2.9**
MUD	**Monsted U'grnd**	**15.40**	**109**	*i*	P	**P**		**09 26 28.5**	**-2.9**
MUD	**Monsted U'grnd**	**15.40**	**109**	*e*	P	**P**		**09 26 28.5**	**-2.9**
HSPB	**Hornsund (broa**	**16.27**	**26**	*e*	P	**Pn**		**09 26 36.4**	**-1.6**
HSPB				*e*	S	**Sn**		**09 29 37.2**	**-0.9**
KBS	**Kingsbay**	**16.84**	**19**	*e*	P	**Pn**		**09 26 42.2**	**-3.0**
KBS				*e*	S	**Sn**		**09 29 51.2**	**-0.7**
SPA0	**Spitsbergen Ar**	**17.07**	**23**		P	**Pn**		**09 26 45.6**	**-2.5**
SPA0				*e*	S	**Sn**		**09 29 54.3**	**-3.2**
SPITS	**Spitsbergen Ar**	**17.07**	**23**		P	**Pn**		**09 26 47.3**	**-0.8**
	baz=224,slow=8.0,SNR=2.0								
SPITS					LR	LR		09 31 31.6	
	comp=Z,2μm,21.8s,baz=215,slow=31								
ARD8	**ARCESS Array S**	**17.28**	**54**		P	**Pn**		**09 26 51.0**	**+0.1**
ARD8					IAmb	IAmb		09 27 04.7	
	comp=Z,108nm,1.5s								
ARD7	**ARCESS Array S**	**17.28**	**54**		P	**Pn**		**09 26 49.4**	**-1.5**
ARD9	**ARCESS Array S**	**17.29**	**54**		P	**P**		**09 26 51.5**	**-0.8**
ARC6	**ARCESS Array S**	**17.29**	**54**		P	**P**		**09 26 51.6**	**-0.8**
ARC7	**ARCESS Array S**	**17.29**	**54**		P	**Pn**		**09 26 50.9**	**-0.1**
ARD6	**ARCESS Array S**	**17.29**	**54**		P	**Pn**		**09 26 51.4**	**+0.4**
ARD6					IAmb	IAmb		09 27 03.5	
	comp=Z,85nm,1.4s								
ARB4	**ARCESS Array S**	**17.29**	**54**		P	**Pn**		**09 26 51.4**	**+0.4**
ARB5	**ARCESS Array S**	**17.29**	**54**		P	**Pn**		**09 26 51.1**	**+0.1**
ARC5	**ARCESS Array S**	**17.29**	**54**		P	**Pn**		**09 26 51.2**	**+0.2**
ARA3	**ARCESS Array S**	**17.30**	**54**		P	**Pn**		**09 26 51.4**	**+0.4**
ARA0	**ARCESS Array S**	**17.30**	**54**		P	**Pn**		**09 26 51.4**	**+0.4**
ARC1	**ARCESS Array S**	**17.30**	**54**			**Pn**		**09 26 48.9**	**-2.1**
ARCES	**ARCESS Array B**	**17.30**	**54**		P	**Pn**		**09 26 49.2**	**-1.8**
	baz=296,slow=8.9,SNR=9.3								
ARCES					LR	LR		09 32 11.6	
	comp=Z,3μm,20.9s,baz=280,slow=33								
ARA1	**ARCESS Array S**	**17.30**	**54**			**Pn**		**09 26 48.8**	**-2.3**
ARA2	**ARCESS Array S**	**17.30**	**54**			**Pn**		**09 26 49.1**	**-2.0**
ARB1	**ARCESS Array S**	**17.30**	**54**			**Pn**		**09 26 49.3**	**-1.7**
ARB3	**ARCESS Array S**	**17.30**	**54**			**Pn**		**09 26 49.2**	**-1.8**
ARB2	**ARCESS Array S**	**17.30**	**54**		P	**P**		**09 26 51.7**	**-0.8**
ARC4	**ARCESS Array S**	**17.30**	**54**		P	**P**		**09 26 51.8**	**-0.7**
ARD5	**ARCESS Array S**	**17.30**	**54**		P	**P**		**09 26 51.7**	**-0.8**
ARC2	**ARCESS Array S**	**17.30**	**54**		P	**P**		**09 26 51.8**	**-0.8**
ARC3	**ARCESS Array S**	**17.30**	**54**		P	**Pn**		**09 26 51.3**	**+0.2**
BSEG	**Bad Segeberg**	**17.65**	**114**	*e*	P	**Pn**		**09 26 52.3**	**-3.2**
	comp=Z,352nm,1.9s,baz=325,slow=11								
IBBN	**Ibbenburen**	**17.92**	**121**	*e*	P	**P**		**09 26 58.5**	**-1.0**
	comp=Z,887nm,2.7s,baz=325,slow=11								
HOPEN	**Hopen**	**18.03**	**31**	*e*	P	**Pn**		**09 26 57.7**	**-2.3**
HOPEN				*e*	S	**Sn**		**09 30 19.2**	**-1.6**
SNF	**Seneffe**	**18.18**	**130**		x	x		09 27 04.2	
SNF	**Seneffe**	**18.18**	**130**		P	P		09 27 09.7	+7.4
BEBN	**Eben Emael**	**18.41**	**127**		x	x		09 27 07.8	
BUG	**Bochum--Univer**	**18.44**	**123**	*e*	P	**Pn**		**09 27 04.5**	**-0.7**
	comp=Z,721nm,2.8s,baz=325,slow=11								
BMRD	**Maredsous**	**18.52**	**129**		Pn	**Pn**		**09 27 06.5**	**+0.3**
BMRD	**Maredsous**	**18.52**	**129**		P	Pn		09 27 13.6	+7.4
BSTI	**Sart Tilman**	**18.55**	**128**		Pn	**P**		**09 27 05.5**	**-0.9**
BSTI					x	x		09 27 09.3	
BSTI	**Sart Tilman**	**18.55**	**128**		P	**Pn**		**09 27 12.7**	**+6.1**
BGES	**Gesves**	**18.56**	**129**		Pn	**P**		**09 27 05.5**	**-1.0**
BGES					x	x		09 27 09.3	
BGES	**Gesves**	**18.56**	**129**		P	Pn		09 27 13.0	+6.3
BCLA	**Clavier**	**18.60**	**128**		x	x		09 27 09.9	
BCLA	**Clavier**	**18.60**	**128**		P	Pn		09 27 13.4	+6.2
BCLA					x	x		09 27 25.0	
DOU	**Dourbes**	**18.64**	**130**		x	x		09 27 10.0	
MEM	**Membach**	**18.68**	**127**		Pn	**Pn**		**09 27 07.1**	**-1.1**
MEM	**Membach**	**18.68**	**127**		P	**Pn**		**09 27 14.1**	**+6.0**
BTNL	**Ternell**	**18.75**	**127**		Pn	**P**		**09 27 07.5**	**-1.1**
BTNL	**Ternell**	**18.75**	**127**		P	**Pn**		**09 27 13.9**	**+4.9**
RCHB	**Rochefort**	**18.80**	**129**		Pn	**P**		**09 27 07.9**	**-1.3**
RCHB	**Rochefort**	**18.80**	**129**		P	**Pn**		**09 27 15.0**	**+5.4**
BHOU	**Houvegnez**	**18.90**	**127**		Pn	**P**		**09 27 09.5**	**-0.7**
BHOU					x	x		09 27 14.3	
ASSE	**Asse, Remlinge**	**19.17**	**117**	*e*	P	**P**		**09 27 12.5**	**-0.5**
	comp=Z,1μm,3.5s,baz=325,slow=11								
CLZ	**Clausthal**	**19.28**	**118**	*e*	P	**P**		**09 27 14.0**	**-0.4**
	comp=Z,648nm,2.8s,baz=325,slow=11								
WLF	**Walferdange**	**19.53**	**128**		P	**Pn**		**09 27 22.3**	**+3.8**
WLF					PnPn	**PnPn**		**09 27 31.2**	**-0.4**
WLF	**Walferdange**	**19.53**	**128**	*e*	P	**Pn**		**09 27 18.3**	**-0.1**
	comp=Z,175nm,1.9s,baz=325,slow=11								
FIA1	**FINESS Array S**	**19.83**	**79**		P	**P**		**09 27 17.3**	**-3.0**
FIA1					IAmb	IAmb		09 27 26.5	
	comp=Z,153nm,1.5s								
FINES	**FINESS Array B**	**19.83**	**79**		P	**P**		**09 27 19.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=316,slow=11,SNR=19								
FINES					LR	LR		09 35 15.6	
	comp=Z,269nm,20.0s,baz=297,slow=38								
FINES	**FINESS Array B**	**19.83**	**79**			**P**		**09 27 17.4**	**-2.9**
TNS	**Taunus Mts**	**19.87**	**124**	*e*	P	**Pn**		**09 27 21.5**	**-1.0**
	comp=Z,66nm,1.3s,baz=325,slow=11								
TULEG	**Thule**	**19.95**	**328**		P	**Pn**		**09 27 22.4**	**-0.8**
TULEG					IAmb	IAmb		09 27 29.1	
	comp=Z,74nm,1.4s								
TULEG	**Thule**	**19.95**	**328**	*i*	P	**Pn**		**09 27 25.1**	**+2.0**
UBBA	**Unterbreizbach**	**19.95**	**120**	*e*	P	**Pn**		**09 27 21.8**	**-1.5**
	comp=Z,342nm,2.1s,baz=325,slow=11								
RUE	**Ruedersdorf**	**20.12**	**112**	*e*	P	**P**		**09 27 23.5**	**-0.1**
SLIT	**Slitere, Latvi**	**20.24**	**91**	*e*	P	**P**		**09 27 24.1**	**-0.7**
NEUB	**Neuenburg**	**20.32**	**117**	*e*	P	**P**		**09 27 25.2**	**-0.5**
	comp=Z,424nm,2.0s,baz=325,slow=11								
MOX	**Moxa**	**20.70**	**118**	*e*	P	**P**		**09 27 29.5**	**-0.4**
	comp=Z,322nm,2.0s,baz=325,slow=11								
MOX					eL	L		09 35 32.8	
	comp=Z,2μm,21.9s								
CLL	**Collm**	**20.72**	**115**	*e*	P	**P**		**09 27 29.0**	**-1.0**
	comp=Z,177nm,1.7s								
CLL					*e*Pmax			09 27 32.0	
CLL					*i*			09 27 33.4	
	comp=Z,177nm,1.7s								
CLL					*e*S	Sn		09 31 30.0	+4.2
CLL	**Collm**	**20.72**	**115**		P	**P**		**09 27 29.2**	**-0.8**
CLL					pmax	pmax			
	comp=Z,31nm,1.1s								
CLL	**Collm**	**20.72**	**115**	*e*	P	**P**		**09 27 29.3**	**-0.7**
	comp=Z,177nm,1.7s,baz=325,slow=11								
CLL	**Collm**	**20.72**	**115**		P	**P**		**09 27 29.2**	**-0.8**
LVZ	**Lovozero**	**20.87**	**57**	*c*	P	**P**		**09 27 31.8**	**+0.2**
LVZ					pmax	pmax			
	comp=Z,174nm,2.5s								
GKP	**Gorka Klasztor**	**20.96**	**106**	*e*	P	Pn		09 27 35.5	+0.3
PLN	**Plauen**	**21.04**	**118**	*e*	P	**P**		**09 27 32.8**	**-0.7**
	comp=Z,560nm,2.3s,baz=325,slow=11								
PBUR	**Paburge**	**21.08**	**95**	*e*	P	**P**		**09 27 32.1**	**-1.8**
ECH	**Echery**	**21.12**	**129**		P	**P**		**09 27 33.3**	**-1.1**
ECH					pmax	pmax			
	comp=Z,29nm,1.0s								
ECH	**Echery**	**21.12**	**129**		P	**P**		**09 27 33.3**	**-1.1**
FBE	**Freiberg**	**21.16**	**115**	*e*	P	**P**		**09 27 34.1**	**-0.7**
	comp=Z,548nm,2.2s,baz=325,slow=11								
GUNZ	**Gunzen**	**21.20**	**118**	*e*	P	**P**		**09 27 34.6**	**-0.7**
	comp=Z,901nm,2.6s,baz=325,slow=11								
TANN	**Tannenbergstha**	**21.21**	**117**	*e*	P	**P**		**09 27 34.6**	**-0.9**
	comp=Z,827nm,2.2s,baz=325,slow=11								
WERN	**Wernitzgruen**	**21.28**	**118**	*e*	P

KSP	**Ksiaz**	22.39	111	*e*P		**P**	**09 27 46.7**	**-1.3**
KSP				*e*S		**S**	**09 31 57.1**	**+3.5**
PBCC	**Pribram**	**22.39**	**116**	*e*P		**P**	**09 27 50.6**	**+2.6**
WET	**Wettzell**	**22.40**	**119**	*e*P		**P**	**09 27 48.8**	**+0.6**
	comp=Z,186nm,1.8s,baz=325,slow=11							
PUL	**Pulkovo**	**22.48**	**80**	*e*P		**P**	**09 27 47.8**	**-1.2**
CHVC	**Chvalec**	**22.49**	**112**	*e*P		**P**	**09 27 50.3**	**+1.2**
CHVC				AMS		AMS	09 37 10.0	
	comp=Z,1μm,17.1s							
UPC	**Upice**	**22.53**	**112**	*e*P		**P**	**09 27 50.4**	**+0.8**
UPC				MLR		MLR		
	comp=Z,1μm,18.8s							
UPC	**Upice**	**22.53**	**112**	*e*P		**P**	**09 27 50.4**	**+0.8**
UPC				AMS		AMS	09 37 00.0	
	comp=Z,1μm,18.8s							
OSTC	**Ostas**	**22.58**	**112**	*e*P		**P**	**09 27 50.6**	**+0.6**
OSTC				AMS		AMS	09 37 20.0	
	comp=Z,1μm,19.9s							
UBR	**Ueberruh**	**22.60**	**125**	*e*P		**P**	**09 27 51.3**	**+1.0**
	comp=Z,310nm,1.8s,baz=325,slow=11							
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P		**P**	**09 27 49.7**	**-1.4**
KHC				*e*			09 27 57.0	
KHC				MLR		MLR		
	comp=Z,1μm,17.2s							
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P		**P**	**09 27 49.7**	**-1.4**
KHC				*ex*		x	09 27 57.0	
KHC				*e*S		Sn	09 32 10.0	-2.9
KHC				AMS		AMS	09 36 50.0	
	comp=Z,1μm,17.2s							
KHC	**Kasperske Hory**	**22.68**	**118**	P		**P**	**09 27 50.6**	**-0.5**
KHC				IAmb		IAmb	09 28 01.4	
	comp=Z,65nm,1.4s							
DPC	**Dobruska-Polom**	**22.78**	**112**	*e*P		**P**	**09 27 51.6**	**-0.6**
DPC				MLR		MLR		
	comp=Z,1μm,18.4s							
DPC	**Dobruska-Polom**	**22.78**	**112**	*e*P		**P**	**09 27 51.6**	**-0.6**
DPC				*e*S		Sn	09 32 10.6	-4.8
DPC				AMS		AMS	09 37 10.0	
	comp=Z,1μm,18.4s							
SENIN	**Lac Senin/Sane**	**22.78**	**131**	P		**P**	**09 27 53.1**	**+0.6**
DAVA	**Damuels**	**22.86**	**126**	*e*P		**P**	**09 27 52.3**	**-0.8**
	comp=Z,37nm,1.1s							
SUW	**Suwalki**	**22.95**	**98**	*e*P		**P**	**09 27 52.7**	**-1.2**
SUW				*e*S		**S**	**09 32 05.0**	**+1.2**
SUW	**Suwalki**	**22.95**	**98**	P		**P**	**09 27 51.6**	**-2.3**
SUW				pmax		pmax		
	comp=Z,64nm,1.0s							
SUW	**Suwalki**	**22.95**	**98**	P		**P**	**09 27 51.6**	**-2.3**
SUW				IAmb		IAmb	09 28 16.6	
	comp=Z,64nm,1.0s							
GEC2	**GERESS Array S**	**22.96**	**118**	*e*P		**P**	**09 27 54.3**	**+0.2**
	comp=Z,260nm,1.9s,baz=325,slow=11							
GEC2	**GERESS Array S**	**22.96**	**118**	P		**P**	**09 27 53.3**	**-0.8**
GEC2				IAmb		IAmb	09 28 18.3	
	comp=Z,70nm,1.5s							
GERES	**GERESS Array B**	**22.96**	**118**	P		**P**	**09 27 53.1**	**-1.1**
	comp=Z,3.0nm,0.8s,baz=317,slow=7.3,SNR=21							
GERES				LR		LR	09 37 12.8	
	comp=Z,1μm,20.9s,baz=330,slow=38							
GERES	**GERESS Array B**	**22.96**	**118**	P		**P**	**09 27 52.8**	**-1.3**
GERES	**GERESS Array B**	**22.96**	**118**	P		**P**	**09 27 52.8**	**-1.3**
RETA	**Reutte**	**23.00**	**124**	*e*P		**P**	**09 27 54.6**	**+0.1**
	comp=Z,65nm,1.6s,SNR=9.1							
IZAR	**Zarasai**	**23.12**	**91**	*e*P		**P**	**09 27 52.9**	**-2.7**
ISAL	**Salakas**	**23.18**	**92**	*e*P		**P**	**09 27 54.3**	**-2.0**
KRLC	**Kraliky**	**23.18**	**112**	*e*P		**P**	**09 27 55.2**	**-1.2**
KRLC				MLR		MLR		
	comp=Z,1μm,18.6s							
KRLC	**Kraliky**	**23.18**	**112**	*e*P		**P**	**09 27 55.2**	**-1.2**
KRLC				AMS		AMS	09 37 30.0	
	comp=Z,1μm,18.6s							
MOTA	**Moosalm**	**23.24**	**124**	*e*P		**P**	**09 27 56.2**	**-1.0**
	comp=Z,39nm,1.3s,SNR=8.9							
ZFI	**Zemlya Franca-**	**23.27**	**22**	*e*P		**P**	**09 27 55.1**	**-1.8**
	comp=Z,216nm,2.0s							
ZFI				*e*S		**S**	**09 32 07.4**	**-1.3**
ZFI2	**Zemlya Franca-**	**23.27**	**22**	*e*P		**P**	**09 27 56.1**	**-0.8**
	comp=Z,43nm,1.8s							
ZFI2				*e*S		**S**	**09 32 08.9**	**+0.2**
TREC	**Trest**	**23.29**	**115**	AMS		AMS	09 37 50.0	
	comp=Z,1μm,19.1s							
DAVOX	**Davos/Dischmat**	**23.29**	**126**	P		**P**	**09 27 56.9**	**-0.7**
	comp=Z,13nm,0.9s,baz=324,slow=14,SNR=7.7							
DAVOX				LR		LR	09 38 01.5	
	comp=Z,991nm,19.2s,baz=330,slow=39							
IIGN	**Ignalina**	**23.37**	**92**	*e*P		**P**	**09 27 57.4**	**-0.8**
TUE	**Stuetta**	**23.37**	**128**	P		**P**	**09 27 59.2**	**+0.7**
TUE				IAmb		IAmb	09 28 20.6	
	comp=Z,61nm,1.1s							
FETA	**Feichten**	**23.38**	**125**	*e*P		**P**	**09 27 58.3**	**-0.3**
	comp=Z,40nm,1.3s,SNR=11							
SQTA	**Sankt Quirin**	**23.38**	**124**	*e*P		**P**	**09 27 57.3**	**-1.2**
	comp=Z,44nm,1.4s							
WATA	**Walderalm**	**23.42**	**123**	*e*P		**P**	**09 27 58.7**	**-0.2**
	comp=Z,33nm,1.1s,SNR=13							
BEL	**Belsk**	**23.49**	**104**	*e*P		**P**	**09 27 59.1**	**-0.3**
WTTA	**Wattenberg**	**23.50**	**123**	*e*P		**P**	**09 27 58.9**	**-0.9**
	comp=Z,41nm,1.1s,SNR=7.0							
TMCR	**Tamitsa**	**23.50**	**65**	*e*P		**P**	**09 27 57.6**	**-1.8**
TMCR				*e*S		**S**	**09 32 11.8**	**-1.0**
TMCR	**Tamitsa**	**23.50**	**65**	*e*P		**P**	**09 27 58.1**	**-1.3**
TMCR				*e*S		**S**	**09 32 12.7**	**0.0**
TMCR				pmax		pmax		
	comp=Z,31nm,0.6s							
IDID	**Didziasalis**	**23.61**	**92**	*e*P		**P**	**09 27 59.4**	**-1.2**
VRAC	**Vranov**	**23.71**	**113**	P		**P**	**09 28 00.3**	**-1.3**
	comp=Z,5.3nm,0.9s,baz=329,slow=10,SNR=11							
VRAC				LR		LR	09 38 35.8	
	comp=Z,1μm,18.1s,baz=330,slow=40							
VRAC	**Vranov**	**23.71**	**113**	⇑P		**P**	**09 28 01.5**	**-0.1**
VRAC	**Vranov**	**23.71**	**113**	*e*P		**P**	**09 28 00.8**	**-0.8**
VRAC	**Vranov**	**23.71**	**113**	⇑P		**P**	**09 28 01.5**	**-0.1**
MORC	**Moravsky Berou**	**23.72**	**112**	⇑P		**P**	**09 28 01.2**	**-0.5**
MORC	**Moravsky Berou**	**23.72**	**112**	*e*P		**P**	**09 28 00.6**	**-1.1**
MORC	**Moravsky Berou**	**23.72**	**112**	⇑P		**P**	**09 28 01.2**	**-0.5**
MORC	**Moravsky Berou**	**23.72**	**112**	P		**P**	**09 28 01.9**	**+0.1**
MORC				IAmb		IAmb	09 28 23.1	
	comp=Z,68nm,1.5s							
BNI	**Bardonecchia**	**23.75**	**133**	P		**P**	**09 28 02.9**	**+0.8**
BNI				pmax		pmax		
	comp=Z,34nm,1.3s							
BNI	**Bardonecchia**	**23.75**	**133**	P		**P**	**09 28 02.9**	**+0.8**
BNI				IAmb		IAmb	09 28 18.4	
	comp=Z,34nm,1.3s							
EUNU	**Eureka**	**23.79**	**336**	P		**P**	**09 28 01.6**	**-0.6**
EUNU				IAmb		IAmb	09 28 20.2	
	comp=Z,27nm,1.1s							
KRUC	**Moravsky**	**23.83**	**114**	*e*P		**P**	**09 28 01.5**	**-1.2**
NACGM	**Naroch**	**23.90**	**93**	*e*P		**P**	**09 28 03.0**	**-0.4**
NACGM				*e*PP		**PnPn**	**09 28 40.0**	**+8.7**
NACGM				*e*S		**S**	**09 32 19.0**	**-0.3**
NACGM				*e*SS		SnSn	09 33 22.0	+24
NACGM				*e*LQ		LQ	09 36 52.0	
NACGM				*e*LR		LR	09 38 20.0	
NACGM				LRM		MLR	09 39 00.0	
	comp=Z,1.3nm,14.0s							
OKC	**Ostrava-Krasne**	**23.92**	**111**	*e*S		Sn	09 32 30.6	-12
OKC				AMS		AMS	09 37 30.0	
	comp=Z,700nm,17.4s							
MOA	**Molln**	**23.99**	**119**	*e*P		**P**	**09 28 03.8**	**-0.5**
	comp=Z,25nm,1.6s,SNR=7.1							
ABTA	**Abfaltersbach**	**24.26**	**123**	*e*P		**P**	**09 28 06.8**	**-0.1**
	comp=Z,22nm,1.4s							
KBA	**Koelnbreinsper**	**24.29**	**121**	*e*P		**P**	**09 28 08.8**	**+1.5**
	comp=Z,21nm,1.6s,SNR=9.8							
OJC	**Ojcow**	**24.30**	**108**	*e*P		**P**	**09 28 05.3**	**-1.7**
OJC				*e*S		**S**	**09 32 30.7**	**+5.0**
OJC	**Ojcow**	**24.30**	**108**	P		**P**	**09 28 06.1**	**-1.0**
OJC				pmax		pmax		
	comp=Z,43nm,1.4s							
OJC	**Ojcow**	**24.30**	**108**	P		**P**	**09 28 06.1**	**-1.0**
OJC				IAmb		IAmb	09 28 09.8	
	comp=Z,43nm,1.4s							
JAVC	**Velka Javorina**	**24.50**	**113**	*e*P		**P**	**09 28 09.7**	**+0.7**
CONA	**Conrad Observa**	**24.54**	**116**	*e*P		**P**	**09 28 08.7**	**-0.7**
	comp=Z,7.7nm,1.0s							
CTI	**Castel Tesino**	**24.55**	**125**	P		**P**	**09 28 08.5**	**-1.0**
CTI				pmax		pmax		
	comp=Z,37nm,1.0s							
CTI	**Castel Tesino**	**24.55**	**125**	P		**P**	**09 28 08.5**	**-1.0**
CTI				IAmb		IAmb	09 28 15.0	
	comp=Z,37nm,1.0s							
ZOU	**Zoufplan**	**24.59**	**122**	P		**P**	**09 28 10.8**	**+0.8**
ZOU				IAmb		IAmb	09 28 19.8	
	comp=Z,48nm,1.2s							

CIMO	**Cimolais**	**24.60**	**123**	P		**P**	**09 28 08.0**	**-2.0**
CIMO				IAmb		IAmb	09 28 23.5	
	comp=Z,30nm,1.1s							
MICGM	**Minsk**	**24.65**	**92**⇑	*e*P		**P**	**09 28 09.0**	**-1.2**
MICGM				PM			09 28 11.0	
	comp=Z,0.7nm,1.0s							
MICGM				PM			09 28 11.0	
	comp=N,1.1nm,1.0s							
MICGM				PM			09 28 12.0	
	comp=E,0.6nm,1.0s							
MICGM				*e*PP		**PnPn**	**09 28 35.0**	**-6.5**
MICGM				*e*S		**S**	**09 32 26.0**	**-5.2**
MICGM				*e*LR		LR	09 36 42.0	
MNK	**Minsk**	**24.65**	**92**⇑	*e*P		**P**	**09 28 09.0**	**-1.2**
MNK				*e*S		**S**	**09 32 26.0**	**-5.2**
MNK				pmax		pmax		
	comp=N,1μm,1.0s							
MNK				pmax		pmax		
	comp=Z,680nm,1.0s							
MNK				pmax		pmax		
	comp=E,640nm,1.0s							
MYKA	**Terra Mystica**	**24.77**	**121**	*e*P		**P**	**09 28 11.3**	**-0.2**
	comp=E,35nm,1.4s,SNR=5.4							
PRED	**Cave del Predi**	**24.90**	**121**	P		**P**	**09 28 12.8**	**+0.1**
PRED				IAmb		IAmb	09 28 20.2	
	comp=Z,50nm,1.4s							
ARSA	**Arzberg**	**24.96**	**118**	*e*P		**P**	**09 28 12.7**	**-0.5**
	comp=Z,19nm,1.1s,SNR=5.9							
NIE	**Niedzica**	**25.12**	**109**	*e*P		**P**	**09 28 14.4**	**-0.2**
NIE				*e*S		**S**	**09 32 41.7**	**+2.7**
TEOL	**Teolo**	**25.14**	**125**	P		**P**	**09 28 14.4**	**-0.4**
TEOL				IAmb		IAmb	09 28 22.7	
	comp=Z,20nm,0.9s							
CADS	**Cadrg**	**25.15**	**122**	*i* P		**P**	**09 28 17.6**	**+2.8**
CADS				*e*S		S	09 33 01.3	+22
OBKA	**Obir**	**25.21**	**120**	*e*P		**P**	**09 28 15.0**	**-0.5**
	comp=Z,16nm,1.5s							
SOKA	**Soboth**	**25.25**	**119**	*e*P		**P**	**09 28 15.0**	**-0.9**
	comp=Z,20nm,1.3s,SNR=8.7							
LJU	**Ljubljana**	**25.60**	**121**	*i* P		**P**	**09 28 22.0**	**+3.1**
LJU				*e*S		S	09 33 07.6	+21
KLMR	**Klimovskoe**	**25.75**	**71**	*e*P		**P**	**09 28 17.7**	**-2.4**
	comp=Z,81nm,1.3s							
KLMR				*e*S		**S**	**09 32 46.3**	**-2.4**
KLMR				LQ		LQ	09 35 47.7	
KLMR				LR		LR	09 36 24.9	
KLMR	**Klimovskoe**	**25.75**	**71**	*e*P		**P**	**09 28 17.7**	**-2.4**
KLMR				*e*S		**S**	**09 32 46.5**	**-2.1**
KLMR				pmax		pmax		
	comp=Z,81nm,1.3s							
KLMR	**Klimovskoe**	**25.75**	**71**	*e*P		**P**	**09 28 17.8**	**-2.3**
KLMR				AMP			09 28 23.5	
	comp=Z,81nm,1.3s							
KLMR				*e*S		**S**	**09 32 46.5**	**-2.1**
KLMR				*e*S		**S**	**09 32 46.5**	**-2.1**
KLMR				LQ		LQ	09 35 46.8	
KLMR				LQ		LQ	09 35 46.8	
KLMR				LR		LR	09 36 27.1	
KOGS	**Kog**	**25.91**	**118**	*i* P		**P**	**09 28 23.9**	**+2.2**
SCHQ	**Schefferville**	**25.95**	**272**	P		**P**	**09 28 22.4**	**+0.4**
	comp=Z,24nm,0.8s,baz=45,slow=10,SNR=9.3							
SCHQ				LR		LR	09 38 05.4	
	comp=Z,576nm,18.1s,baz=47,slow=35							
SCHQ	**Schefferville**	**25.95**	**272**	P		**P**	**09 28 23.2**	**+1.2**
SCHQ				IAmb		IAmb	09 28 28.7	
	comp=Z,32nm,0.9s							
KWP	**Kalwaria Pacla**	**25.95**	**106**	*e*P		**P**	**09 28 22.6**	**+0.5**
ESDC	**Sonseca Array**	**26.13**	**155**	P		**P**	**09 28 23.9**	**0.0**
	comp=Z,4.0nm,0.9s,baz=348,slow=9.0,SNR=14							
ESDC				LR		LR	09 38 26.3	
	comp=Z,385nm,18.8s,baz=340,slow=36							
ESDC	**Sonseca Array**	**26.13**	**155**	P		**P**	**09 28 24.6**	**+0.8**
LSH	**Leshukonskoye**	**26.14**	**60**	*e*P		**P**	**09 28 21.0**	**-2.5**
	comp=Z,72nm,1.1s							
LSH				*e*S		**S**	**09 32 52.4**	**-2.3**
PSZ	**Piszkesteto**	**26.14**	**111**	⇑P		**P**	**09 28 22.2**	**-1.7**
PSZ	**Piszkesteto**	**26.14**	**111**	⇑P		**P**	**09 28 22.2**	**-1.7**
PSZ	**Piszkesteto**	**26.14**	**111**	P		**P**	**09 28 22.0**	**-1.9**
LVV	**L'vov**	**26.36**	**104**	*e*P		**P**	**09 28 26.2**	**+0.4**
LVV				*e*			09 29 11.9	
LVV				*e*PPP		PPP	09 29 27.2	
LVV				*e*S		**S**	**09 32 54.6**	**-4.0**
LVV				*e*SS		**SnSn**	**09 34 04.0**	**+5.5**
LVV				pmax		pmax		
	comp=Z,800nm,1.8s							
LVV				smax		smax		
	comp=E,1μm,6.1s							
LVV				smax		smax		
	comp=N,1μm,6.0s							
LVV				MLR		MLR		
	comp=N,240nm,14.0s							
LVV				MLR		MLR		
	comp=E,500nm,14.0s							
LVV				MLR		MLR		
	comp=Z,430nm,14.0s							
RES	**Resolute Bay**	**26.55**	**325**	P		**P**	**09 28 27.6**	**+0.4**
	comp=Z,3.9nm,1.1s,baz=52,slow=5.4,SNR=4.6							
RES				LR		LR	09 38 48.8	
	comp=Z,590nm,19.0s,baz=69,slow=36							
RES	**Resolute Bay**	**26.55**	**325**	P		**P**	**09 28 26.8**	**-0.5**
UZH	**Uzhgorod**	**26.56**	**107**	*e*P		**P**	**09 28 27.7**	**+0.2**
UZH				*i*			09 28 31.5	
UZH				*e*			09 29 15.4	
UZH				*e*			09 31 55.0	
UZH				*e*S		**S**	**09 32 59.8**	**-1.8**
UZH				MLR		MLR		
	comp=N,140nm,20.0s							
UZH				MLR		MLR		
	comp=E,110nm,20.0s							
UZH				MLR		MLR		
	comp=Z,90nm,20.0s							
OSSC	**Osservatorio P**	**26.61**	**128**	P		**P**	**09 28 28.3**	**+0.2**
OSSC				IAmb		IAmb	09 28 32.2	
	comp=Z,46nm,1.2s							
MURB	**Monte Urbino**	**27.27**	**127**	P		**P**	**09 28 33.1**	**-1.0**
NRCA	**Norcia**	**27.86**	**126**	P		**P**	**09 28 38.4**	**-1.0**
NRCA				IAmb		IAmb	09 28 44.3	
	comp=Z,30nm,1.4s							
AKASG	**Malin Array Be**	**27.91**	**97**	P		**P**	**09 28 38.5**	**-1.2**
	comp=Z,4.3nm,1.0s,baz=323,slow=9.4,SNR=22							
AKASG				LR		LR	09 39 46.7	
	comp=Z,567nm,20.0s,baz=315,slow=36							
AKASG	**Malin Array Be**	**27.91**	**97**	P		**P**	**09 28 37.5**	**-2.2**
AKBB	**Malin Array Si**	**27.91**	**97**	*c i* P		**P**	**09 28 40.6**	**+0.9**
AKBB				pmax		pmax		
	comp=Z,56nm,2.0s							
AKBB	**Malin Array Si**	**27.91**	**97**	P		**P**	**09 28 36.8**	**-2.9**
AKBB				IAmb		IAmb	09 28 46.4	
	comp=Z,24nm,1.4s							
OBN	**Obninsk**	**28.00**	**84**	P		**P**	**09 28 39.6**	**-0.8**
	comp=Z,12nm,0.4s,baz=46,slow=2.4,SNR=10							
OBN				LR		LR	09 40 10.9	
	comp=Z,191nm,18.1s,baz=328,slow=37							
OBN	**Obninsk**	**28.00**	**84**	⇓*i* P		**P**	**09 28 40.0**	**-0.3**
OBN				*e*			09 29 26.6	
OBN				pmax		pmax		
	comp=Z,130nm,1.7s							
OBN				MLR		MLR		
	comp=Z,694nm,17.0s							
OBN	**Obninsk**	**28.00**	**84**	P		**P**	**09 28 39.1**	**-1.2**
MOS	**Moscow**	**28.04**	**82**	*e*P		**P**	**09 28 42.0**	**+1.3**
MOS				*e*			09 29 35.0	
MOS				*e*S		**S**	**09 33 29.1**	**+4.3**
MOS				*e*SS		**SnSn**	**09 34 44.2**	**+5.1**
MOS				pmax		pmax		
	comp=Z,38nm,0.7s							
DRGR		**28.19**	**109**	⇓P		**P**	**09 28 43.2**	**+0.9**
DRGR		**28.19**	**109**	⇓P		**P**	**09 28 43.2**	**+0.9**
BUR08	**Bucovina Ar. S**	**28.54**	**105**	P		**P**	**09 28 46.0**	**+0.5**
BUR08				IAmb		IAmb	09 29 07.1	
	comp=Z,17nm,1.3s							
BURAR	**Bucovina Array**	**28.57**	**105**	⇑P		**P**	**09 28 45.2**	**-0.5**
BURAR	**Bucovina Array**	**28.57**	**105**	⇑P		**P**	**09 28 45.2**	**-0.5**
BURAR	**Bucovina Array**	**28.57**	**105**	P		**P**	**09 28 44.5**	**-1.2**
BZS	**Buzias**	**28.70**	**112**	⇑P		**P**	**09 28 47.8**	**+1.0**
BZS	**Buzias**	**28.70**	**112**	⇑P		**P**	**09 28 47.8**	**+1.0**
DIVS	**Divibare**	**29.32**	**116**	P		**P**	**09 28 49.6**	**-2.8**
GZR	**Gura Zlata**	**29.35**	**111**	⇑P		**P**	**09 28 52.1**	**-0.5**
GZR	**Gura Zlata**	**29.35**	**111**	⇑P		**P**	**09 28 52.1**	**-0.5**
MDVR	**Moldovita**	**29.43**	**113**	⇑P		**P**	**09 28 55.2**	**+1.9**
BIZ	**Bicaz**	**29.47**	**105**	⇑P		**P**	**09 28 54.8**	**+1.2**
SORM	**Soroca**	**29.48**	**101**	⇑P		**P**	**09 28 49.5**	**-4.2**
SORM	**Soroca**	**29.48**	**101**	⇑P		**P**	**09 28 49.5**	**-4.2**
HERR	**Herculane**	**29.63**	**112**	⇑P		**P**	**09 28 55.2**	**+0.2**

ARR	**Arges**	**30.13**	**109**	⇑P		**P**	**09 28 59.8**	**+0.3**
VOIR		**30.24**	**108**	⇑P		**P**	**09 29 01.7**	**+1.2**
VOIR		**30.24**	**108**	⇑P		**P**	**09 29 01.7**	**+1.2**
PDG	**Podgorica**	**30.45**	**119**	⇑P		**P**	**09 29 01.3**	**-1.0**
PDG	**Podgorica**	**30.45**	**119**	P		**P**	**09 29 01.1**	**-1.2**
PDG				IAmb		IAmb	09 29 02.3	
	comp=Z,15nm,1.1s							
MLR	**Muntele Rosu**	**30.57**	**107**	⇑P		**P**	**09 29 04.6**	**+1.2**
MLR	**Muntele Rosu**	**30.57**	**107**	⇑P		**P**	**09 29 04.6**	**+1.2**
MLR	**Muntele Rosu**	**30.57**	**107**	P		**P**	**09 29 01.4**	**-2.1**
MLR				IAmb		IAmb	09 29 23.4	
	comp=Z,30nm,1.5s							
PLOR	**Plostina**	**30.57**	**106**	⇑P		**P**	**09 29 03.5**	**+0.1**
PLOR	**Plostina**	**30.57**	**106**	⇑P		**P**	**09 29 03.5**	**+0.1**
VRI	**Vrincioaia**	**30.59**	**106**	⇑P		**P**	**09 29 01.4**	**-2.1**
VRI	**Vrincioaia**	**30.59**	**106**	⇑P		**P**	**09 29 01.4**	**-2.1**
LPSR	**Galich'ya Gora**	**30.74**	**85**	*e*P		**P**	**09 29 03.9**	**-0.8**
LPSR				pmax		pmax		
	comp=Z,40nm,1.5s							
KIRV	**Kirov**	**31.13**	**69**	*d e*P		**P**	**09 29 07.2**	**-0.9**
CFR	**Carcaliu**	**31.73**	**105**	⇓P		**P**	**09 29 13.3**	**-0.2**
CFR	**Carcaliu**	**31.73**	**105**	⇓P		**P**	**09 29 13.3**	**-0.2**
VSR	**Storozhevoye**	**31.83**	**87**	*e*P		**P**	**09 29 13.8**	**-0.6**
VSR				pmax		pmax		
	comp=Z,70nm,1.8s							
VTS	**Vitosha**	**31.84**	**114**	*i* P		**P**	**09 29 16.2**	**+1.5**
PGB	**Panagyurishte**	**32.27**	**112**	*i* P		**P**	**09 29 20.3**	**+1.9**
CORL	**Corleone**	**32.34**	**130**	P		**P**	**09 29 19.0**	**0.0**
SZH	**Strazhica**	**32.39**	**110**	*i* P		**P**	**09 29 21.4**	**+2.1**
KKB	**Krupnik**	**32.42**	**114**	*i* P		**P**	**09 29 22.7**	**+3.1**
CLTB	**Caltabellotta**	**32.60**	**131**	P		**P**	**09 29 21.6**	**+0.3**
MMB	**Musomiste**	**32.91**	**114**	*i* P		**P**	**09 29 26.0**	**+2.1**
VRH	**Novokhopyorsk**	**32.95**	**85**	*e*P		**P**	**09 29 23.4**	**-0.7**
VRH				pmax		pmax		
	comp=Z,70nm,1.6s							
PRD	**Provadia**	**33.04**	**108**	*i* P		**P**	**09 29 27.0**	**+2.0**
KEST	**Kesra**	**33.09**	**137**	P		**P**	**09 29 26.2**	**+0.6**
	comp=Z,4.0nm,0.8s,baz=280,slow=8.4,SNR=7.7							
KEST				LR		LR	09 41 48.3	
	comp=Z,522nm,21.2s,baz=300,slow=34							
KEST	**Kesra**	**33.09**	**137**	P		**P**	**09 29 23.8**	**-1.8**
KEST				IAmb		IAmb	09 29 33.7	
	comp=Z,22nm,1.3s							
RZN	**Rozhen**	**33.22**	**113**	*i* P		**P**	**09 29 28.6**	**+1.8**
JMB	**Yambol**	**33.32**	**110**	*i* P		**P**	**09 29 28.0**	**+0.6**
KDZ	**Kurdzhali**	**33.53**	**112**	*i* P		**P**	**09 29 30.9**	**+1.6**
AGG	**Agios Georgios**	**34.57**	**118**	P		**P**	**09 29 38.5**	**+0.1**
AGG	**Agios Georgios**	**34.57**	**118**	P		**P**	**09 29 38.5**	**+0.1**
BELG	**Belogornoye**	**34.61**	**79**	*c e*P		**P**	**09 29 37.3**	**-1.2**
BELG				pmax		pmax		
	comp=Z,19nm,1.4s							
ANN	**Anapa**	**35.99**	**96**	*e*P		**P**	**09 29 49.7**	**-0.8**
ANN				*e*S		**S**	**09 35 25.2**	**-3.5**
ANN				pmax		pmax		
	comp=Z,85nm,1.5s							
ANN				MLR		MLR		
	comp=N,987nm,15.0s							
ANN				MLR		MLR		
	comp=Z,944nm,14.0s							
ARU	**Arti**	**36.24**	**66**	*c i* P		**P**	**09 29 53.7**	**+1.2**
ARU							09 31 12.5	
ARU				PPP		PPP	09 31 32.0	
ARU				S		**S**	**09 35 37.5**	**+5.1**
ARU				SS		**SnSn**	**09 38 01.0**	**+2.8**
ARU				pmax		pmax		
	comp=Z,68nm,2.3s							
ARU				MLR		MLR		
	comp=Z,2μm,20.0s							
ARU	**Arti**	**36.24**	**66**	P		**P**	**09 29 53.1**	**+0.6**
NRIK	**Noril'sk**	**36.66**	**35**	P		**P**	**09 29 55.5**	**-0.4**
	comp=Z,10.0nm,1.0s,baz=309,slow=4.4,SNR=9.9							
NRIK				LR		LR	09 46 49.6	
	comp=Z,390nm,18.3s,baz=3.0,slow=39							
NRIK	**Noril'sk**	**36.66**	**35**⇑	*e*P		**P**	**09 29 55.6**	**-0.4**
NRIK				pmax		pmax		
	comp=Z,46nm,1.5s							
SVE	**Sverdlovsk**	**36.77**	**64**	*e*P		**P**	**09 29 56.4**	**-0.7**
SVE				*e*S		**S**	**09 35 47.6**	**+7.1**
SVE				MLR		MLR		
	comp=Z,2μm,19.0s							
C36M	**Paulatuk**	**36.91**	**325**

BRVK	**Borovoye**	**43.30**	**62**	P	**P**	**09 30 50.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,16nm,1.4s						
BRVK	**Borovoye**	**43.30**	**62**	P	**P**	**09 30 50.8**	**-0.5**
MARD	**Mardin**	**43.58**	**100**	P	**P**	**09 30 53.6**	**-0.2**
O52A	**Adamsville**	**43.66**	**268**	P	**P**	**09 30 53.4**	**-1.0**
O52A				IAmb	IAmb	09 31 04.2	
	comp=Z,35nm,1.2s						
P53A	**Whipple**	**43.99**	**267**	P	**P**	**09 30 56.7**	**-0.3**
ACSO	**Alum Creek Sta**	**44.06**	**269**	P	**P**	**09 30 59.1**	**+1.6**
ACSO				IAmb	IAmb	09 31 03.9	
	comp=Z,16nm,0.8s						
SPMN	**Marine on St.**	**44.23**	**282**	P	**P**	**09 31 00.4**	**+1.5**
SPMN				IAmb	IAmb	09 31 08.2	
	comp=Z,24nm,1.3s						
COLD	**Coldfoot**	**44.24**	**336**	P	**P**	**09 30 58.6**	**0.0**
EGAK	**Eagle**	**44.58**	**329**	P	**P**	**09 31 02.9**	**+1.5**
EGAK				IAmb	IAmb	09 31 07.4	
	comp=Z,34nm,1.5s						
O49A	**Covington**	**44.68**	**270**	P	**P**	**09 31 03.1**	**+0.6**
P51A	**Williamsport**	**44.71**	**269**	P	**P**	**09 31 03.5**	**+0.8**
P51A				IAmb	IAmb	09 31 08.9	
	comp=Z,19nm,1.0s						
DAWY	**Dawson**	**44.80**	**328**	P	**P**	**09 31 03.8**	**+0.6**
F33A	**5 Mile Ranch,**	**45.21**	**285**	P	**P**	**09 31 06.4**	**-0.3**
F33A				IAmb	IAmb	09 31 14.4	
	comp=Z,20nm,1.2s						
Q51A	**Peebles**	**45.21**	**269**	P	**P**	**09 31 05.8**	**-0.9**
Q51A				IAmb	IAmb	09 31 14.5	
	comp=Z,25nm,1.1s						
K27K	**Chicken**	**45.43**	**329**	P	**P**	**09 31 07.9**	**-0.3**
SFIN	**Lafayette**	**45.72**	**273**	P	**P**	**09 31 11.7**	**+1.0**
P48A	**Milroy**	**45.75**	**271**	P	**P**	**09 31 08.8**	**-2.2**
IL31		**45.80**	**332**	P	**P**	**09 31 11.6**	**+0.6**
ILAR	**Eielson Array**	**45.80**	**332**	P	**P**	**09 31 10.3**	**-0.8**
	comp=Z,8.1nm,1.2s,baz=24,slow=6.3,SNR=20						
ILAR				PcP	**PcP**	**09 32 48.5**	**+0.2**
	comp=Z,3.7nm,1.0s,baz=351,slow=2.0,SNR=12						
ILAR				LR	LR	09 52 28.4	
	comp=Z,343nm,19.3s,baz=30,slow=39						
ILAR	**Eielson Array**	**45.80**	**332**	P	**P**	**09 31 11.2**	**+0.1**
COLA	**College**	**45.90**	**333**	P	**P**	**09 31 11.4**	**-0.4**
COLA				pmax	pmax		
	comp=Z,29nm,1.2s						
COLA	**College**	**45.90**	**333**	P	**P**	**09 31 11.4**	**-0.4**
IMAR	**Indian Mountai**	**45.98**	**337**	P	**P**	**09 31 12.3**	**-0.2**
L40A	**Anamosa**	**46.12**	**278**	P	**P**	**09 31 12.8**	**-1.1**
L40A				IAmb	IAmb	09 31 21.4	
	comp=Z,22nm,1.4s						
BCAR	**Beaver Creek A**	**46.21**	**328**	P	**P**	**09 31 15.1**	**+0.7**
R50A	**Paris**	**46.26**	**269**	P	**P**	**09 31 13.9**	**-1.1**
R50A				IAmb	IAmb	09 31 21.1	
	comp=Z,11nm,0.9s						
S51A	**Beattyville**	**46.48**	**268**	P	**P**	**09 31 18.1**	**+1.4**
S51A				IAmb	IAmb	09 31 23.1	
	comp=Z,15nm,0.9s						
O44A	**Mansfield**	**46.50**	**274**	P	**P**	**09 31 16.8**	**-0.1**
R49A	**Shelbyville**	**46.62**	**270**	P	**P**	**09 31 19.3**	**+1.5**
BRZS	**Berezniki**	**46.65**	**63**	*e*P	**P**	**09 31 17.0**	**-0.9**
	comp=Z,15nm,1.7s,baz=63						
BRZS				*e*PP	**PP**	**09 33 07.2**	**-0.1**
	baz=63						
BRZS				*e*S	**S**	**09 38 06.3**	**-0.4**
	baz=63						
BRZS	**Berezniki**	**46.65**	**63**	*e*P	**P**	**09 31 17.0**	**-0.9**
BRZS				*e*		09 33 07.1	
BRZS				*e*S	**S**	**09 38 06.3**	**-0.4**
BRZS				pmax	pmax		
	comp=Z,15nm,1.7s						
ECSD	**EROS Data Cent**	**47.05**	**284**	P	**P**	**09 31 21.3**	**+0.2**
ECSD				IAmb	IAmb	09 31 28.9	
	comp=Z,22nm,1.5s						
PAX	**Paxson**	**47.10**	**330**	P	**P**	**09 31 22.7**	**+1.3**
PAX				pmax	pmax		
	comp=Z,28nm,1.4s						
PAX	**Paxson**	**47.10**	**330**	P	**P**	**09 31 22.7**	**+1.3**
DLBC	**Dease Lake**	**47.14**	**318**	LR	LR	09 51 33.1	
	comp=Z,363nm,20.0s,baz=25,slow=37						
WCI	**Wyandotte Cave**	**47.15**	**271**	P	**P**	**09 31 23.6**	**+1.6**
WCI				pmax	pmax		
	comp=Z,25nm,0.8s						
WCI	**Wyandotte Cave**	**47.15**	**271**	P	**P**	**09 31 23.6**	**+1.6**
BILL	**Bilibino**	**47.72**	**358**	*d i*P	**P**	**09 31 27.5**	**+1.5**
BILL				*e*		09 32 56.2	
BILL				*e*		09 33 17.3	
BILL				pmax	pmax		
	comp=Z,39nm,2.5s						
ZAA0	**Zalesovo Array**	**47.82**	**51**	P	**P**	**09 31 26.1**	**-0.9**
ZAA0				IAmb	IAmb	09 31 31.4	
	comp=Z,19nm,1.4s						
ZALV	**Zalesovo Beam**	**47.82**	**51**	P	**P**	**09 31 26.9**	**0.0**
	comp=Z,1.3nm,0.3s,baz=331,slow=8.5,SNR=8.7						
ZALV				PcP	**PcP**	**09 32 56.9**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=326,slow=4.2,SNR=1.5						
ZALV				LR	LR	09 54 17.4	
	comp=Z,302nm,18.4s,baz=315,slow=40						
ZALV	**Zalesovo Beam**	**47.82**	**51**	P	**P**	**09 31 26.1**	**-0.9**
TKL	**Tuckaleechee C**	**48.22**	**266**	LR	LR	09 50 29.6	
	comp=Z,596nm,21.5s,baz=46,slow=34						
KURK	**Kurchatov**	**48.28**	**58**	P	**P**	**09 31 32.1**	**+1.5**
KURK				P	**P**	**09 31 32.1**	**+1.5**
KURK	**Kurchatov**	**48.28**	**58**	*d i*P	**P**	**09 31 30.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,26nm,1.0s						
KURK	**Kurchatov**	**48.28**	**58**	P	**P**	**09 31 29.6**	**-1.0**
T47A	**Sharon Grove**	**48.54**	**270**	P	**P**	**09 31 33.9**	**+1.1**
EGMT	**Eagleton**	**48.87**	**297**	P	**P**	**09 31 36.8**	**+1.6**
SEM	**Semipalatinsk**	**49.13**	**57**	*e*P	**P**	**09 31 36.5**	**-1.0**
	comp=Z,10.0nm,1.5s,baz=57						
SEM	**Semipalatinsk**	**49.13**	**57**	*e*P	**P**	**09 31 36.4**	**-1.0**
SEM				pmax	pmax		
	comp=Z,10.0nm,1.5s						
FVM	**French Village**	**49.15**	**274**	P	**P**	**09 31 37.6**	**+0.2**
FVM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FVM	**French Village**	**49.15**	**274**	P	**P**	**09 31 37.6**	**+0.2**
FVM				IAmb	IAmb	09 31 41.6	
	comp=Z,9.9nm,1.1s						
TTA	**Tatalina**	**49.18**	**336**	P	**P**	**09 31 36.1**	**-1.4**
TTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TTA	**Tatalina**	**49.18**	**336**	P	**P**	**09 31 36.1**	**-1.4**
R40A	**Maddies Statio**	**49.68**	**276**	P	**P**	**09 31 42.4**	**+0.9**
RSSD	**Black Hills**	**49.80**	**290**	P	**P**	**09 31 43.6**	**+1.0**
RSSD				pmax	pmax		
	comp=Z,11nm,1.2s						
RSSD	**Black Hills**	**49.80**	**290**	P	**P**	**09 31 43.6**	**+1.0**
RSSD				IAmb	IAmb	09 31 49.2	
	comp=Z,11nm,1.2s						
T42A	**Van Buren**	**50.23**	**274**	P	**P**	**09 31 46.4**	**+0.7**
T42A				IAmb	IAmb	09 31 52.8	
	comp=Z,12nm,1.2s						
GEYT	**Alibeck**	**50.54**	**83**	P	**P**	**09 31 51.0**	**+2.9**
	comp=Z,2.7nm,0.6s,baz=266,slow=8.9,SNR=6.5						
GEYT				PP	**PP**	**09 33 45.5**	**+1.9**
	comp=Z,4.8nm,0.7s,baz=104,slow=6.3,SNR=4.0						
GEYT				LR	LR	09 55 31.7	
	comp=Z,562nm,19.5s,baz=0.0,slow=39						
GEYT	**Alibeck**	**50.54**	**83**	P	**P**	**09 31 45.9**	**-2.2**
GYA0B	**ALIBECK ARRAY**	**50.54**	**83**	P	**P**	**09 31 48.7**	**+0.7**
GYA0B				IAmb	IAmb	09 31 51.9	
	comp=Z,33nm,1.4s						
S39A	**Bolivar**	**50.64**	**276**	P	**P**	**09 31 47.5**	**-1.2**
S39A				IAmb	IAmb	09 31 53.9	
	comp=Z,8.1nm,0.8s						
X48A	**Hartselle**	**50.66**	**269**	P	**P**	**09 31 47.5**	**-1.4**
X48A				IAmb	IAmb	09 31 55.9	
	comp=Z,28nm,1.3s						
KOWA	**Kowa**	**50.83**	**163**	P	**P**	**09 31 48.9**	**-1.5**
KSU1	**Kansas State U**	**50.87**	**280**	P	**P**	**09 31 50.8**	**+0.3**
KSU1				IAmb	IAmb	09 31 57.9	
	comp=Z,26nm,1.4s						
RLMT	**Red Lodge**	**51.07**	**295**	P	**P**	**09 31 53.9**	**+1.6**
RLMT				IAmb	IAmb	09 32 02.1	
	comp=Z,28nm,1.3s						
BTLS	**Baital**	**51.23**	**65**	*e*P	**P**	**09 31 52.5**	**-0.6**
	comp=Z,7.3nm,1.1s,baz=66						
BTLS				*e*PP	**PP**	**09 33 49.3**	**-0.2**
	baz=66						
BTLS				LR	LR	09 52 06.7	
	comp=Z,115nm,14.7s,baz=66						
BTLS	**Baital**	**51.23**	**65**	*e*P	**P**	**09 31 52.5**	**-0.6**
BTLS				*e*		09 33 49.3	
BTLS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BTLS				MLR	MLR		
	comp=Z,115nm,15.0s						
KK31	**Karatay Array**	**51.42**	**69**	P	**P**	**09 31 53.8**	**-0.8**
KK31				pmax	pmax		
	comp=Z,29nm,1.4s						
KK31	**Karatay Array**	**51.42**	**69**	P	**P**	**09 31 53.8**	**-0.8**
KK31				IAmb	IAmb	09 31 58.3	
	comp=Z,29nm,1.4s						
KKAR	**Karatay Array**	**51.42**	**69**	P	**P**	**09 31 53.5**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,29nm,1.4s						
KKAR	**Karatay Array**	**51.42**	**69**	P	**P**	**09 31 53.2**	**-1.4**
KKAR	**Karatay Array**	**51.42**	**69**	P	**P**	**09 31 53.5**	**-1.1**
KKAR				IAmb	IAmb	09 31 58.3	
	comp=Z,29nm,1.4s						
MSO	**Missoula**	**51.46**	**299**	P	**P**	**09 31 54.7**	**-0.2**
YNE	**Yellowstone No**	**51.46**	**295**	P	**P**	**09 31 53.9**	**-1.3**
YAK	**Yakutsk**	**51.47**	**19**	*c e*P	**P**	**09 31 55.5**	**+0.9**
YAK				pmax	pmax		
	comp=Z,17nm,1.3s						
BOZ	**Bozeman (W)**	**51.60**	**297**	P	**P**	**09 31 55.9**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,28nm,1.3s						
BOZ	**Bozeman (W)**	**51.60**	**297**	P	**P**	**09 31 55.9**	**-0.2**
BOZ				IAmb	IAmb	09 32 05.2	
	comp=Z,28nm,1.3s						
YMP	**Mirror Lake PI**	**51.74**	**295**	P	**P**	**09 31 56.1**	**-1.3**
BBB	**Bella Bella**	**51.87**	**313**	LR	LR	09 52 49.9	
	comp=Z,196nm,19.4s,baz=48,slow=35						
DZA	**Taraz**	**51.93**	**69**	*e*P	**P**	**09 31 58.3**	**-0.1**
	comp=Z,24nm,1.4s,baz=69						
DZA				LR	LR	09 53 11.5	
	comp=Z,177nm,15.8s,baz=69						
DZA	**Taraz**	**51.93**	**69**	*e*P	**P**	**09 31 58.3**	**-0.1**
DZA				pmax	pmax		
	comp=Z,24nm,1.4s						
DZA				MLR	MLR		
	comp=Z,177nm,16.0s						
IUG	**luzhnay**	**52.03**	**71**	*e*P	**P**	**09 31 59.0**	**-0.2**
	comp=Z,15nm,1.4s,baz=71						
IUG				*e*PP	**PP**	**09 33 57.3**	**+0.3**
	baz=71						
IUG				LR	LR	09 53 22.8	
	comp=Z,110nm,15.1s,baz=71						
IUG	**luzhnay**	**52.03**	**71**	*e*P	**P**	**09 31 59.0**	**-0.2**
IUG				*e*		09 33 57.2	
IUG				pmax	pmax		
	comp=Z,15nm,1.4s						
IUG				MLR	MLR		
	comp=Z,110nm,15.0s						
K22A	**Casper**	**52.04**	**291**	P	**P**	**09 31 59.6**	**+0.2**
K22A				IAmb	IAmb	09 32 07.5	
	comp=Z,20nm,1.2s						
YHL	**Hebgen Lake**	**52.05**	**296**	P	**P**	**09 32 00.7**	**+1.1**
H17A	**Grant Village**	**52.20**	**295**	P	**P**	**09 32 01.5**	**+0.9**
H17A				IAmb	IAmb	09 32 10.0	
	comp=Z,36nm,1.4s						
SEY	**Seymchan**	**52.67**	**6**	P	**P**	**09 32 03.4**	**-0.1**
	comp=Z,6.8nm,1.0s,baz=353,slow=5.4,SNR=5.0						
SEY	**Seymchan**	**52.67**	**6**	*e*P	**P**	**09 32 02.7**	**-0.9**
IMW	**Indian Meadow**	**52.75**	**295**	P	**P**	**09 32 06.6**	**+1.8**
MAKZ	**Makanchi**	**52.77**	**58**	P	**P**	**09 32 03.7**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,45nm,1.5s						
MAKZ	**Makanchi**	**52.77**	**58**	P	**P**	**09 32 03.7**	**-0.9**
SGDS	**Sogindy**	**52.78**	**66**	*e*P	**P**	**09 32 04.3**	**-0.5**
	comp=Z,10nm,1.5s,baz=66						
SGDS	**Sogindy**	**52.78**	**66**	*e*P	**P**	**09 32 04.3**	**-0.5**
SGDS				pmax	pmax		
	comp=Z,10.0nm,1.5s						
MK31	**Makanchi Array**	**52.90**	**58**	*d e*P	**P**	**09 32 05.4**	**-0.1**
MK31	**Makanchi Array**	**52.90**	**58**	P	**P**	**09 32 04.2**	**-1.3**
MKAR	**Makanchi Array**	**52.90**	**58**	P	**P**	**09 32 03.6**	**-1.9**
	comp=Z,6.2nm,1.0s,baz=319,slow=5.3,SNR=14						
MKAR				LR	LR	09 54 45.3	
	comp=Z,340nm,20.6s,baz=315,slow=36						
MKAR	**Makanchi Array**	**52.90**	**58**	*i* P	**P**	**09 32 05.3**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MKAR	**Makanchi Array**	**52.90**	**58**	P	**P**	**09 32 04.3**	**-1.3**
TDK	**Taldyqorghan**	**52.95**	**62**	*e*P	**P**	**09 32 06.6**	**+0.7**
	comp=Z,9.1nm,0.5s,baz=62						
TDK	**Taldyqorghan**	**52.95**	**62**	*e*P	**P**	**09 32 06.6**	**+0.7**
TDK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TOA0	**Torodi Ar. Sit**	**53.02**	**156**	P	**P**	**09 32 05.5**	**-1.2**
TOA0				IAmb	IAmb	09 32 13.5	
	comp=Z,11nm,1.1s						
TORD	**Torodi Ar. Bea**	**53.02**	**156**	P	**P**	**09 32 04.5**	**-2.2**
	comp=Z,3.4nm,0.9s,baz=346,slow=9.7,SNR=9.0						
TORD				LR	LR	09 54 29.5	
	comp=Z,131nm,19.7s,baz=355,slow=36						
TORD	**Torodi Ar. Bea**	**53.02**	**156**	P	**P**	**09 32 03.8**	**-2.9**
KUU	**Kurty**	**53.09**	**64**	*e*P	**P**	**09 32 06.3**	**-0.6**
	comp=Z,27nm,1.5s,baz=65						
KUU				LR	LR	09 53 07.7	
	comp=Z,558nm,14.4s,baz=65						
KUU	**Kurty**	**53.09**	**64**	*e*P	**P**	**09 32 06.3**	**-0.6**
KUU				pmax	pmax		
	comp=Z,27nm,1.5s						
KUU				MLR	MLR		
	comp=Z,558nm,14.0s						
TPAW	**Teton Pass**	**53.10**	**295**	P	**P**	**09 32 08.3**	**+0.9**
TPAW				IAmb	IAmb	09 32 15.9	
	comp=Z,12nm,1.1s						
BW06	**Boulder Array**	**53.16**	**293**	P	**P**	**09 32 07.7**	**-0.1**
PD31	**Pinedale Array**	**53.16**	**293**	P	**P**	**09 32 05.6**	**-2.2**
PD31				IAmb	IAmb	09 32 15.7	
	comp=Z,31nm,1.4s						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**09 32 06.0**	**-1.8**
	comp=Z,3.4nm,0.8s,baz=59,slow=5.8,SNR=27						
PDAR				LR	LR	09 54 36.7	
	comp=Z,402nm,18.4s,baz=32,slow=36						
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**09 32 06.2**	**-1.6**
REDW	**Red Top Meadow**	**53.17**	**295**	P	**P**	**09 32 08.5**	**+0.6**
REDW				IAmb	IAmb	09 32 15.4	
	comp=Z,25nm,1.4s						
N23A	**Red Feather La**	**53.27**	**289**	P	**P**	**09 32 10.2**	**+1.5**
ZSN	**Zaisan**	**53.27**	**56**	*e*P	**P**	**09 32 08.7**	**+0.3**
	comp=Z,11nm,1.5s,baz=56						
ZSN				LR	LR	09 54 28.4	
	comp=Z,144nm,13.1s,baz=56						
ZSN	**Zaisan**	**53.27**	**56**	*e*P	**P**	**09 32 08.6**	**+0.3**
ZSN				pmax	pmax		
	comp=Z,11nm,1.5s						
ZSN				MLR	MLR		
	comp=Z,144nm,13.0s						
CHKK	**Chushkaly**	**53.37**	**64**	*e*P	**P**	**09 32 08.8**	**-0.3**
	baz=64						
CHKK	**Chushkaly**	**53.37**	**64**	*e*P	**P**	**09 32 08.7**	**-0.3**
AAK	**Ala-Archa**	**53.41**	**67**	P	**P**	**09 32 09.5**	**-0.1**
AAK	**Ala-Archa**	**53.41**	**67**	P	**P**	**09 32 11.0**	**+1.4**
AAK				P	**P**	**09 32 11.0**	**+1.4**
AAK	**Ala-Archa**	**53.41**	**67**	*d i*P	**P**	**09 32 10.7**	**+1.1**
AAK				pmax	pmax		
	comp=Z,145nm,1.7s						
PLID	**Pearl Lake**	**53.70**	**300**	P	**P**	**09 32 12.0**	**+0.3**
PLID				IAmb	IAmb	09 32 24.9	
	comp=Z,12nm,1.4s						
AAA	**Alma-Ata**	**53.89**	**64**	*e*P	**P**	**09 32 12.8**	**-0.1**
	baz=65						
AAA				LR	LR	09 54 06.5	
	comp=Z,596nm,17.8s,baz=65						
AAA	**Alma-Ata**	**53.89**	**64**	*e*P	**P**	**09 32 12.8**	**-0.1**
AAA				MLR	MLR		
	comp=Z,596nm,18.0s						
MDOK	**Medeo**	**53.98**	**64**	*e*P	**P**	**09 32 13.6**	**-0.1**
	baz=65						
MDOK				LR	LR	09 54 06.5	
	comp=Z,556nm,15.1s,baz=65						
MDOK	**Medeo**	**53.98**	**64**	*e*P	**P**	**09 32 13.5**	**-0.1**
MDOK				MLR	MLR		
	comp=Z,556nm,15.0s						
TNSS	**Tian-Shan**	**54.05**	**65**	*e*P	**P**	**09 32 14.2**	**-0.3**
	baz=65						
TNSS	**Tian-Shan**	**54.05**	**65**	*e*P	**P**	**09 32 14.1**	**-0.4**
KPKS	**Kokpek**	**54.36**	**63**	*e*P	**P**	**09 32 15.9**	**-0.5**
	comp=Z,20nm,1.2s,baz=63						
KPKS	**Kokpek**	**54.36**	**63**	*e*P	**P**	**09 32 15.8**	**-0.5**
KPKS				pmax	pmax		
	comp=Z,20nm,1.2s						
HLID	**Hailey**	**54.39**	**297**	P	**P**	**09 32 18.0**	**+1.3**
SATY	**Saty**	**54.59**	**63**	*e*P	**P**	**09 32 17.7**	**-0.5**
	comp=Z,11nm,1.2s,baz=64						
SATY				*i* LR	LR	09 54 30.6	
	comp=Z,232nm,16.8s,baz=64						
SATY	**Saty**	**54.59**	**63**	*e*P	**P**	**09 32 17.6**	**-0.5**
SATY				pmax	pmax		
	comp=Z,11nm,1.2s						
SATY				MLR	MLR		
	comp=Z,232nm,17.0s						
CHGR	**Chuyangaron**	**54.60**	**74**	P	**P**	**09 32 18.3**	**+0.1**
GAR	**Garm**	**54.79**	**72**	P	**P**	**09 32 18.1**	**-1.6**
O20A	**White River Ci**	**54.85**	**290**	P	**P**	**09 32 21.1**	**+1.0**
MOY	**Mondy**	**54.85**	**42**	*e*P	**P**	**09 32 20.1**	**+0.2**
MOY				pmax	pmax		
	comp=Z,138nm,2.7s						
SHLS	**Shalkode**	**54.92**	**63**	*e*P	**P**	**09 32 21.6**	**+1.1**
	comp=Z,20nm,1.3s,baz=63						
SHLS	**Shalkode**	**54.92**	**63**	*e*P	**P**	**09 32 21.6**	**+1.1**
SHLS				pmax	pmax		
	comp=Z,20nm,1.3s						
TCUT	**Toone Canyon**	**55.29**	**293**	P	**P**	**09 32 23.4**	**0.0**
WMOK	**Wichita Mounta**	**55.48**	**279**	P	**P**	**09 32 25.4**	**+0.9**
WMOK				pmax	pmax		
	comp=Z,27nm,1.5s						
WMOK	**Wichita Mounta**	**55.48**	**279**	P	**P**	**09 32 25.4**	**+0.9**
WMOK				IAmb	IAmb	09 32 31.7	
	comp=Z,27nm,1.5s						
TLY	**Talaya**	**55.59**	**40**	P	**P**	**09 32 23.3**	**-1.7**
	comp=Z,2.7nm,0.8s,baz=347,slow=14,SNR=2.6						
TLY	**Talaya**	**55.59**	**40**	P	**P**	**09 32 26.5**	**+1.5**
TLY	**Talaya**	**55.59**	**40**	*c i*P	**P**	**09 32 26.6**	**+1.5**
TLY				*e*		09 33 26.8	
TLY				*e*		09 34 28.4	
TLY				*e*PPP	PPP	09 35 45.7	
TLY				*e*S	S	09 40 25.3	+15
TLY				pmax	pmax		
	comp=Z,50nm,2.0s						
TLY				MLR	MLR		
	comp=Z,1μm,14.0s						
JLU	**Jordanelle**	**55.74**	**293**	P	**P**	**09 32 28.1**	**+1.5**
SDCO	**Great Sand Dun**	**55.75**	**287**	P	**P**	**09 32 25.8**	**-1.0**
SDCO				IAmb	IAmb	09 32 43.4	
	comp=Z,14nm,1.5s						
S22A	**4UR Ranch, Cre**	**56.30**	**288**	P	**P**	**09 32 32.4**	**+1.7**
MPU	**Maple Canyon**	**56.32**	**293**	P	**P**	**09 32 31.7**	**+1.1**
P17A	**Butcher Ranch,**	**56.42**	**292**	P	**P**	**09 32 30.9**	**-0.5**
PV22	**Blue Mesa, Par**	**56.43**	**290**	P	**P**	**09 32 32.1**	**+0.6**
PV22				IAmb	IAmb	09 32 36.7	
	comp=Z,7.7nm,1.0s						
PV23	**Carpenter Ridg**	**56.59**	**290**	P	**P**	**09 32 34.1**	**+1.4**
PV23				IAmb	IAmb	09 32 38.5	
	comp=Z,12nm,0.8s						
PV12	**Saucer Basin,**	**56.62**	**290**	P	**P**	**09 32 34.5**	**+1.6**
PV12					**pP**	**09 32 34.9**	**-1.5**
PV12				IAmb	IAmb	09 32 40.0	
	comp=Z,20nm,1.3s						
DUG	**Dugway, Tooele**	**56.63**	**294**	P	**P**	**09 32 33.5**	**+0.7**
DUG	**Dugway, Tooele**	**56.63**	**294**	P	**P**	**09 32 33.5**	**+0.7**
SRU	**San Rafael Swe**	**56.64**	**292**	P	**P**	**09 32 32.9**	**-0.1**
SRU				pmax	pmax		
	comp=Z,19nm,1.1s						
SRU	**San Rafael Swe**	**56.64**	**292**	P	**P**	**09 32 32.9**	**-0.1**
KSH	**Kashi**	**56.65**	**68**	P	**P**	**09 32 35.1**	**+2.1**
KSH				pP	sP	09 32 38.8	+0.7
KSH				S	**S**	**09 40 23.8**	**-1.2**
KSH				pmax	pmax		
	comp=Z,30nm,1.1s						
KSH				pmax	pmax		
	comp=Z,760nm,5.3s						
KSH				LR	LR		
	comp=Z,420nm,7.4s						
KSH				LR	LR		
	comp=Z,460nm,10.8s						
KSH				LR	LR		
	comp=Z,1μm,18.0s						
ZAK	**Zakamensk**	**56.65**	**41**	*e*P	**P**	**09 32 32.5**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,12nm,1.5s						
PV11	**David Mesa, Pa**	**56.67**	**290**	P	**P**	**09 32 32.6**	**-0.6**
PV11					**pP**	**09 32 36.5**	**-0.2**
PV16	**Nyswonger Mesa**	**56.68**	**290**	P	**P**	**09 32 34.4**	**+1.1**
PV16				IAmb	IAmb	09 32 40.3	
	comp=Z,17nm,1.1s						
PV01	**Paradox Valley**	**56.69**	**289**	P	**P**	**09 32 33.5**	**+0.1**
PV01				IAmb	IAmb	09 32 40.5	
	comp=Z,26nm,1.4s						
PV03	**Paradox Valley**	**56.70**	**290**	P	**P**	**09 32 33.5**	**+0.1**
PV03				IAmb	IAmb	09 32 40.4	
	comp=Z,19nm,1.1s						
PV18	**Skein Mesa, Pa**	**56.73**	**290**	P	**P**	**09 32 34.5**	**+0.9**
PV18				IAmb	IAmb	09 32 40.6	
	comp=Z,21nm,1.2s						
TMUT	**Trail Mountain**	**56.76**	**292**	P	**P**	**09 32 34.9**	**+0.9**
ELK	**Elko**	**57.11**	**296**	P	**P**	**09 32 36.1**	**-0.3**
ELK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ELK	**Elko**	**57.11**	**296**	P	**P**	**09 32 36.1**	**-0.3**
WMQ	**Urumqi**	**57.41**	**56**	*e*P	**P**	**09 32 41.5**	**+3.3**
WMQ				pP	sP	09 32 45.5	+2.2
WMQ				pmax	pmax		
	comp=Z,42nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,580nm,4.5s						
WMQ				LR	LR		
	comp=Z,620nm,20.7s						
WMQ				LR	LR		
	comp=Z,910nm,16.9s						
WMQ				LR	LR		
	comp=Z,1μm,20.3s						
MSU	**Marysvale**	**57.82**	**292**	P	**P**	**09 32 38.6**	**-2.7**
MSU	**Marysvale**	**57.82**	**292**	P	**P**	**09 32 38.6**	**-2.7**
TCRU	**Three Creeks R**	**57.84**	**293**	P	**P**	**09 32 41.9**	**+0.3**
KBL	**Kabul**	**58.06**	**76**	P	**P**	**09 32 44.8**	**+1.7**
	SNR=6.7						
KBL				P	**P**	**09 32 44.8**	**+1.7**
	SNR=6.7						
MTPU	**Mount Pierson**	**58.23**	**292**	P	**P**

ULN					IAmb	IAmb	09 33 01.8		
	comp=Z,21nm,1.4s								
BANOM	**Banah**	**60.05**	**92**		P	**P**	**09 32 59.0**	**+2.3**	
BANOM	**Banah**	**60.05**	**92**		P	**P**	**09 32 58.6**	**+1.9**	
WUAZ	**Wupatki**	**60.08**	**290**		P	**P**	**09 32 58.1**	**+1.2**	
NVAR	**Mina Array Bea**	**60.30**	**297**		P	**P**	**09 32 58.5**	**0.0**	
	comp=Z,0.3nm,0.6s,baz=45,slow=6.5,SNR=2.7								
MSFE	**Esma-Masafi**	**60.48**	**93**	*i*	P	**P**	**09 33 00.9**	**+1.3**	
	SNR=8.4								
NIL	**Nilore**	**60.59**	**73**		P	**P**	**09 32 58.9**	**-1.4**	
NIL					pmax	pmax			
	comp=Z,46nm,1.4s								
NIL	**Nilore**	**60.59**	**73**		P	**P**	**09 32 58.9**	**-1.4**	
MDH	**Madha**	**60.59**	**93**	*i*	P	**P**	**09 33 02.3**	**+1.9**	
	SNR=9.5								
MDH	**Madha**	**60.59**	**93**		P	**P**	**09 33 02.2**	**+1.8**	
	SNR=5.9								
WAKR	**Walker**	**60.67**	**298**		P	**P**	**09 33 02.8**	**+1.7**	
AJN	**Ajban**	**60.67**	**94**		P	**P**	**09 33 02.8**	**+1.9**	
SHPR	**Sheep Range**	**60.74**	**294**		P	**P**	**09 33 00.5**	**-1.0**	
SHPR					IAmb	IAmb	09 33 14.5		
	comp=Z,7.5nm,1.2s								
ASUD	**Al Ashush, Dub**	**60.76**	**94**		P	**P**	**09 33 03.2**	**+1.7**	
FAQ	**Al Faqa, Dubai**	**60.77**	**94**		P	**P**	**09 33 02.9**	**+1.3**	
FAQ					P	**P**	**09 33 02.9**	**+1.3**	
UOSS	**Minazif**	**60.86**	**93**	*i*	P	**P**	**09 33 04.6**	**+2.4**	
	SNR=7.2								
UOSS	**Minazif**	**60.86**	**93**		P	**P**	**09 33 03.5**	**+1.3**	
UOSS	**Minazif**	**60.86**	**93**		P	**P**	**09 33 00.1**	**-2.2**	
HATD	**Hatta, Dubai**	**60.94**	**93**	*i*	P	**P**	**09 33 05.2**	**+2.4**	
	SNR=11								
HATD	**Hatta, Dubai**	**60.94**	**93**		P	**P**	**09 33 03.9**	**+1.2**	
	SNR=12								
ASHO	**Ashiyiah**	**61.03**	**93**	*i*	P	**P**	**09 33 06.1**	**+2.7**	
	SNR=7.1								
ASHO	**Ashiyiah**	**61.03**	**93**		P	**P**	**09 33 04.2**	**+0.8**	
	SNR=7.1								
X16A	**Lo Mia Camp, P**	**61.06**	**289**		P	**P**	**09 33 04.2**	**+0.5**	
X16A					IAmb	IAmb	09 33 13.7		
	comp=Z,14nm,1.3s								
ALNE	**Al Ain**	**61.45**	**94**	*i*	P	**P**	**09 33 09.1**	**+2.9**	
	SNR=6.0								
SOHO	**SOHO**	**61.71**	**93**		P	**P**	**09 33 10.1**	**+2.1**	
TX31	**Lajitas Ar. Si**	**62.22**	**280**		P	**P**	**09 33 10.7**	**-0.8**	
TX32	**Lajitas Array**	**62.22**	**280**		P	**P**	**09 33 12.6**	**+1.1**	
TX32					IAmb	IAmb	09 33 17.7		
	comp=Z,6.5nm,1.2s								
TXAR	**Lajitas Array**	**62.22**	**280**		P	**P**	**09 33 11.6**	**+0.1**	
	comp=Z,1.8nm,0.8s,baz=43,slow=4.3,SNR=15								
TXAR					LR	LR	09 59 33.4		
	comp=Z,580nm,20.8s,baz=0.0,slow=35								
TXAR	**Lajitas Array**	**62.22**	**280**		P	**P**	**09 33 11.2**	**-0.3**	
TUC	**Tucson**	**62.62**	**288**		P	**P**	**09 33 15.5**	**+1.4**	
TUC					pmax	pmax			
	comp=Z,7.0nm,1.2s								
TUC	**Tucson**	**62.62**	**288**		P	**P**	**09 33 15.5**	**+1.4**	
TUC					IAmb	IAmb	09 33 21.2		
	comp=Z,7.0nm,1.1s								
ISA	**Isabella, Lake**	**62.78**	**296**		P	**P**	**09 33 14.4**	**-0.7**	
ISA					pmax	pmax			
	comp=Z,12nm,1.5s								
ISA	**Isabella, Lake**	**62.78**	**296**		P	**P**	**09 33 14.4**	**-0.7**	
ISA					IAmb	IAmb	09 33 38.0		
	comp=Z,12nm,1.5s								
PET	**Petropavlovsk**	**62.78**	**2**	⇑*i*	P	**P**	**09 33 14.7**	**-0.1**	
PET					pmax	pmax			
	comp=Z,141nm,1.1s								
319A	**Douglas**	**62.81**	**286**		P	**P**	**09 33 16.8**	**+1.4**	
BIDO	**Bidbid**	**62.94**	**92**		P	**P**	**09 33 17.7**	**+1.4**	
	SNR=12								
BSY	**Bisya**	**63.22**	**93**		P	**P**	**09 33 18.7**	**+0.5**	
	SNR=7.3								
SMDO	**Samad**	**63.31**	**92**		P	**P**	**09 33 20.0**	**+1.2**	
	SNR=10.0								
SMDO					P	**P**	**09 33 20.0**	**+1.2**	
	SNR=10.0								
JMDO	**Jabal Madar**	**63.94**	**93**		P	**P**	**09 33 24.0**	**+1.1**	
	SNR=7.3								
KLR	**Kul'dur**	**64.14**	**22**	⇑*e*	P	**P**	**09 33 24.6**	**+0.8**	
KLR					pmax	pmax			
	comp=Z,22nm,2.1s								
GTA	**Gaotai**	**65.48**	**49**	⇑	P	**P**	**09 33 35.1**	**+2.2**	
GTA					pP	sP	09 33 38.8	+0.7	
GTA					sS	sS	09 42 27.8	+4.1	
GTA					pmax	pmax			
	comp=Z,15nm,1.4s								
GTA					pmax	pmax			
	comp=Z,340nm,6.4s								
GTA					LR	LR			
	comp=Z,390nm,17.4s								
GTA					LR	LR			
	comp=Z,320nm,18.5s								
GTA					LR	LR			
	comp=Z,560nm,17.8s								
HSIG		**65.56**	**286**		P	**P**	**09 33 34.3**	**+0.9**	
HSIG					IAmb	IAmb	09 33 39.0		
	comp=Z,9.4nm,1.0s								
SDV	**Santo Domingo**	**66.65**	**239**	*eP*		**P**	**09 33 43.5**	**+2.8**	
HHC	**Hu-ho-hao-te**	**67.71**	**39**	*eP*		**P**	**09 33 46.9**	**-0.1**	
HHC				S		**S**	**09 42 40.9**	**-3.3**	
HHC				pmax	pmax				
	comp=Z,27nm,0.7s								
HHC				pmax	pmax				
	comp=Z,220nm,4.3s								
HHC				LR	LR				
	comp=Z,240nm,19.6s								
HHC				LR	LR				
	comp=Z,670nm,20.4s								
HHC				LR	LR				
	comp=Z,250nm,20.4s								
OCAC	**Ocana**	**68.26**	**242**	*eP*		P	09 33 44.6	-6.2	
MOTC	**Monteria, Cord**	**68.67**	**244**	*eP*		**P**	**09 33 51.4**	**-1.8**	
PAMC	**Pamplona, Colo**	**68.85**	**241**	*eP*		P	09 33 49.5	-5.5	
USRK	**Ussuriysk Ar.**	**69.06**	**23**	P		**P**	**09 33 56.3**	**+1.0**	
	comp=Z,2.1nm,0.8s,baz=359,slow=5.8,SNR=3.0								
TAMC	**Tame, Arauca**	**69.34**	**239**	*eP*		P	09 33 52.4	-5.1	
BRRC	**Barranca, Sant**	**69.44**	**241**	*eP*		P	09 34 02.8	+4.8	
ZARC	**Zaragoza, Cauc**	**69.53**	**243**	*eP*		**P**	**09 33 57.2**	**-1.4**	
UREC	**San Jos de Ur**	**69.55**	**244**	*eP*		**P**	**09 34 01.1**	**+2.4**	
BJI	**Beijing**	**69.69**	**36**	P		**P**	**09 34 01.3**	**+2.1**	
BJI				S		**S**	**09 43 10.4**	**+2.9**	
BJI				pmax	pmax				
	comp=Z,15nm,2.3s								
BJI				LR	LR				
	comp=Z,400nm,21.1s								
BJI				LR	LR				
	comp=Z,220nm,15.7s								
BJI				LR	LR				
	comp=Z,500nm,19.6s								
BJT	**Baijiatuao**	**69.70**	**36**	P		**P**	**09 33 59.9**	**+0.5**	
BJT				pmax	pmax				
	comp=Z,5.0nm,0.7s								
BJT	**Baijiatuao**	**69.70**	**36**	P		**P**	**09 33 59.9**	**+0.5**	
BJT				IAmb	IAmb	09 34 18.0			
	comp=Z,4.9nm,0.7s								
LZH	**Lanzhou**	**69.82**	**47**	*eP*		**P**	**09 33 59.8**	**-0.5**	
LZH				pP		sP	09 34 04.5	-0.9	
LZH				sP		pP	09 34 06.5	+2.5	
LZH				pmax	pmax				
	comp=Z,16nm,1.6s								
LZH				pmax	pmax				
	comp=Z,67nm,6.2s								
LZH				LR	LR				
	comp=Z,350nm,15.1s								
LZH				LR	LR				
	comp=Z,310nm,15.4s								
LZH				LR	LR				
	comp=Z,470nm,16.6s								
PTBC	**PUERTO BERRIO,**	**70.25**	**242**	*eP*		**P**	**09 34 02.0**	**-0.9**	
DBBC	**Dabeiba**	**70.49**	**244**	*eP*		**P**	**09 34 06.0**	**+1.4**	
SPBC	**San Pablo de B**	**70.92**	**241**	*eP*		**P**	**09 34 04.0**	**-3.2**	
HELC	**Santa Helena**	**70.98**	**243**	*eP*		**P**	**09 34 08.8**	**+1.0**	
LSA	**Lhasa**	**71.18**	**60**	P		**P**	**09 34 08.6**	**-0.5**	
LSA				pmax	pmax				
	comp=Z,31nm,1.5s								
LSA	**Lhasa**	**71.18**	**60**	P		**P**	**09 34 08.6**	**-0.5**	
MALB	**Monte Alegre**	**71.42**	**219**	*eP*		**P**	**09 34 12.3**	**+2.3**	
CBOC	**Ciudad Bolivar**	**71.47**	**243**	*eP*		**P**	**09 34 13.7**	**+3.1**	
PTGC	**Puerto Gaitan,**	**71.53**	**239**	*eP*		**P**	**09 34 09.8**	**-0.9**	
ROSC	**El Rosal**	**71.76**	**241**	P		**P**	**09 34 12.8**	**+0.2**	
	comp=Z,5.3nm,0.6s,baz=135,slow=20,SNR=1.3								
ROSC				LR		LR	10 02 04.8		
	comp=Z,249nm,22.0s,baz=5.0,slow=33								
GUY2C	**Guyana, Caldas**	**71.80**	**242**	*eP*		**P**	**09 34 12.6**	**-0.4**	
RREF	**El Recreo**	**72.09**	**242**	*eP*		**P**	**09 34 16.6**	**+1.7**	
TOLC	**Tolima**	**72.37**	**242**	*eP*		**P**	**09 34 13.7**	**-2.5**	
XAN	**Xi'an**	**73.28**	**44**	P		**P**	**09 34 22.3**	**+1.2**	
XAN				S		**SKiKP**	**09 43 54.0**	**+1.9**	
XAN				pmax	pmax				
	comp=Z,19nm,2.1s								
XAN				pmax	pmax				
	comp=Z,240nm,3.0s								
XAN				LR	LR				
	comp=Z,710nm,22.8s								
XAN				LR	LR				
	comp=Z,400nm,20.6s								
XAN				LR	LR				
	comp=Z,1μm,23.9s								
XAN	**Xi'an**	**73.28**	**44**	P		**P**	**09 34 21.1**	**0.0**	
XAN				pmax	pmax				
	comp=Z,9.0nm,1.4s								
XAN	**Xi'an**	**73.28**	**44**	P		**P**	**09 34 21.1**	**0.0**	
XAN				IAmb	IAmb	09 34 26.6			
	comp=Z,9.5nm,1.4s								
BETC	**Betania**	**74.17**	**241**	*eP*		**P**	**09 34 28.1**	**+1.7**	
CD2	**Chengdu**	**74.55**	**50**	P		**P**	**09 34 30.9**	**+2.4**	
CD2				S		**S**	**09 44 02.8**	**-0.9**	
CD2				pmax	pmax				
	comp=Z,20nm,1.3s								
CD2				pmax	pmax				
	comp=Z,330nm,6.1s								
CD2				LR	LR				
	comp=Z,340nm,25.1s								
CD2				LR	LR				
	comp=Z,590nm,18.6s								
CD2				LR	LR				
	comp=Z,450nm,23.5s								
KSRS	**Korea Array**	**74.85**	**28**	P		**P**	**09 34 30.4**	**+0.3**	
	comp=Z,1.1nm,0.9s,baz=347,slow=5.0,SNR=3.5								
KSRS				LR		LR	10 08 41.6		
	comp=Z,181nm,20.9s,baz=348,slow=37								
SHL	**Shillong**	**75.19**	**62**	P		**P**	**09 34 33.5**	**+1.0**	
	SNR=8.1								
SHL	**Shillong**	**75.19**	**62**	P		**P**	**09 34 31.5**	**-0.9**	
SHL				pmax	pmax				
	comp=Z,28nm,1.3s								
SHL	**Shillong**	**75.19**	**62**	P		**P**	**09 34 31.5**	**-0.9**	
FLOC	**Florencia**	**75.26**	**241**	*eP*		P	09 34 37.3	+4.6	
KMBO	**Kilima Mbogo**	**76.65**	**123**	LR		LR	10 11 31.2		
	comp=Z,132nm,19.2s,baz=306,slow=38								
ENH	**Enshi**	**76.96**	**45**	P		**P**	**09 34 42.2**	**-0.1**	
ENH				IAmb	IAmb	09 34 48.9			
	comp=Z,21nm,1.4s								
NJ2	**Nanjing**	**77.93**	**37**	*eP*		**P**	**09 34 47.4**	**-0.3**	
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
KIBK	**Kibwezi**	**78.06**	**122**	P		**P**	**09 34 51.9**	**+3.3**	
	SNR=5.0								
GYA	**Guiyang**	**79.61**	**49**	⇑P		**P**	**09 34 58.9**	**+1.7**	
GYA				PP		**PP**	**09 38 00.6**	**+3.3**	
GYA				S		**S**	**09 45 02.8**	**+3.7**	
GYA				pmax	pmax				
	comp=Z,19nm,2.1s								
GYA				pmax	pmax				
	comp=Z,290nm,3.7s								
GYA				LR	LR				
	comp=Z,250nm,16.9s								
CLDB	**Colider**	**80.45**	**218**	*eP*		**P**	**09 35 04.7**	**+3.2**	
SAML	**Samuel**	**80.75**	**226**	P		**P**	**09 35 03.3**	**+0.2**	
SAML				pmax	pmax				
	comp=Z,13nm,1.5s								
SAML	**Samuel**	**80.75**	**226**	P		**P**	**09 35 03.3**	**+0.2**	
SAML				IAmb	IAmb	09 35 11.1			
	comp=Z,13nm,1.4s								
BDFB	**Brasilia**	**83.19**	**209**	P		**P**	**09 35 16.5**	**+0.5**	
	comp=Z,1.8nm,0.7s,baz=145,slow=5.2,SNR=3.2								
BDFB				LR		LR	10 06 08.5		
	comp=Z,250nm,22.0s,baz=347,slow=31								
CHTO	**Chiang Mai**	**83.98**	**58**	P		**P**	**09 35 20.2**	**+0.1**	
CHTO				pmax	pmax				
	comp=Z,14nm,1.4s								
CHTO	**Chiang Mai**	**83.98**	**58**	P		**P**	**09 35 20.2**	**+0.1**	
CHTO				IAmb	IAmb	09 35 25.7			
	comp=Z,14nm,1.4s								
CMAR	**Chiang Mai Arr**	**84.30**	**58**	P		**P**	**09 35 21.6**	**-0.1**	
	comp=Z,1.3nm,0.7s,baz=318,slow=6.6,SNR=9.5								
CMAR				PP		**PP**	**09 38 35.6**	**-0.3**	
	comp=Z,1.0nm,0.4s,baz=332,slow=7.4,SNR=1.8								
CMAR				LR		LR	10 15 42.9		
	comp=Z,185nm,19.9s,baz=352,slow=38								
CMAR	**Chiang Mai Arr**	**84.30**	**58**	P		**P**	**09 35 21.1**	**-0.7**	
CMAR	**Chiang Mai Arr**	**84.30**	**58**	P		**P**	**09 35 21.1**	**-0.7**	
QIZ	**Qiongzhong**	**87.57**	**49**	P		**P**	**09 35 37.5**	**-0.4**	
QIZ				S		**S**	**09 46 19.4**	**+0.2**	
QIZ				SS		**SS**	**09 52 04.9**	**+1.2**	
QIZ				LR	LR				
	comp=Z,150nm,4.7s								
QIZ				LR	LR				
	comp=Z,200nm,10.6s								
QIZ				LR	LR				
	comp=Z,170nm,13.5s								
LPAZ	**La Paz**	**89.21**	**228**	LR		LR	10 13 24.5		
	comp=Z,68nm,19.3s,baz=3.5,slow=34								
CPUP	**Villa Florida**	**95.64**	**215**	LR		LR	10 15 22.2		
	comp=Z,136nm,18.8s,baz=24,slow=33								
BOSA	**Boshof**	**98.68**	**143**	LR		LR	10 23 03.1		
	comp=Z,115nm,18.1s,baz=352,slow=37								
PPT2	**Papeete2**	**123.11**	**302**	*e*LR		LR	10 19 44.4		
	comp=Z,126nm,22.8s								
TBI	**Tubuai**	**128.33**	**299**	*e*LR		LR	10 22 22.4		
	comp=Z,197nm,26.5s								
WRA	**Warramunga Arr**	**131.72**	**36**	PKP		**PKPdf**	**09 42 02.6**	**0.0**	
	comp=Z,1.1nm,1.0s,baz=342,slow=2.4,SNR=5.9								
ASAR	**Alice Springs**	**135.16**	**38**	PKP		**PKiKP**	**09 42 10.3**	**-0.2**	
	comp=Z,1.6nm,1.0s,baz=323,slow=2.0,SNR=9.4								
ASAR	**Alice Springs**	**135.16**	**38**	PKIKP		**PKiKP**	**09 42 10.0**	**-0.6**	
ASAR	**Alice Springs**	**135.16**	**38**			**PKiKP**	**09 42 09.9**	**-0.6**	
DZM	**Mont Dzumac**	**137.50**	**354**	*e*LR		LR	10 26 39.2		
	comp=Z,203nm,24.7s								
STKA	**Stephens Creek**	**144.92**	**32**	PKP		**PKPab**	**09 42 25.1**	**-0.5**	
	comp=Z,3.6nm,1.0s,baz=339,slow=11,SNR=4.8								
STKA	**Stephens Creek**	**144.92**	**32**			**PKPdf**	**09 42 26.1**	**-0.3**	

*SSNC **23** 09:29:06.6±2.0, 19°.28N×78°.22W, h10km, MD3.2, ML3.0*
*JSN **23** 09:29:06.2±0.5, 19°.53N×78°.18W, h30km±999km, MD4.1*

ISC 23 09:29:05.3±1.4, **19°.36N**±0°.04×**78°.07W**±0°.08, **h10**km, **n12,**
σ1°32/20, 1C-4D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMGC	**Las Mercedes**	**1.22**	**55**	⇓*eP*	**Pn**	**09 29 28.1**	**-0.3**
LMGC				*eS*	**Sb**	**09 29 44.7**	**+0.4**
LMGC				IAML		09 29 45.6	
	comp=N,234nm,0.1s						
LMGC				IAML		09 29 46.0	
	comp=E,327nm,0.1s						
BBJ	**Bamboo Saint A**	**1.23**	**142**	*i* P	**Pg**	**09 29 29.1**	**+0.1**
BBJ				*i*		09 29 40.0	
BBJ				⇑*e*		09 34 31.9	
MCJ	**Malvern**	**1.48**	**166**	*i* P	**Pb**	**09 29 32.6**	**-0.3**
MCJ				*i* S	**Sg**	**09 29 52.2**	**-0.6**
BNJ	**Bonny Gate**	**1.48**	**134**	*i* P	**Pb**	**09 29 32.5**	**-0.5**
STH	**Stony Hill**	**1.75**	**137**	*i* P	**Pn**	**09 29 36.3**	**+0.5**
GWJ	**Greenwich**	**1.80**	**135**	⇓*i* P	**Pb**	**09 29 37.7**	**-0.9**
PCJ	**Portland Cotta**	**1.83**	**152**	*i* P	**Pb**	**09 29 37.8**	**-1.1**
PCJ				*i* S	**Sb**	**09 30 01.3**	**-0.6**
CCCC	**Cccc**	**1.85**	**9**	⇓*eP*	**Pn**	**09 29 36.9**	**-0.2**
CCCC				*eS*	**Sb**	**09 30 03.0**	**+0.5**
CCCC				IAML		09 30 06.7	
	comp=E,22nm,0.2s						
RCC	**Rio Carpintero**	**2.32**	**74**	⇓*eP*	**Pn**	**09 29 43.9**	**+0.3**
RCC				*eS*	**Sn**	**09 30 12.4**	**+0.1**
RCC				IAML		09 30 14.1	
	comp=N,37nm,0.3s						
RCC				IAML		09 30 14.6	
	comp=E,16nm,0.2s						
GTMO	**Guantanamo**	**2.85**	**75**	*eP*	**Pb**	**09 29 54.1**	**-2.2**
GTMO				*eS*	**Sb**	**09 30 29.4**	**-1.9**
GTMO				IAML		09 30 29.9	
	comp=E,49nm,0.2s						
GTMO				IAML		09 30 30.6	
	comp=N,113nm,0.5s						
MOAC	**Moa**	**3.19**	**66**	*eP*	**Pn**	**09 29 58.2**	**+2.6**
MOAC				*eS*	**Sn**	**09 30 35.6**	**+1.8**
MOAC				IAML		09 30 41.1	
	comp=N,16nm,0.3s						
MOAC				IAML		09 30 42.9	
	comp=E,13nm,0.4s						
MASC	**Masc**	**3.70**	**77**	*eP*	**Pn**	**09 30 05.3**	**+2.6**
MASC				*eS*	**Sn**	**09 30 47.1**	**+0.8**
MASC				IAML		09 30 54.7	
	comp=N,40nm,0.5s						
MASC				IAML		09 30 54.8	
	comp=E,28nm,0.3s						

*WEL **23** 09:43:48.6±1.0, 38°.5S×178°.0E±°, h33km, M3.6/18, ML3.9/18, MLv3.6/18, Error ellipse: s-maj=0.0km s-min=0.0km az=26.3*
*IDC **23** 09:43:54.3±3.0, 36°.85S×178°.49E, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.7/33, mbtmp3.9/2, Error ellipse: s-maj=66.3km s-min=29.2km az=113.0*

ISC 23 09:43:47.2±1.4, **37°.72S**±0°.07×**179°.92W**±0°.08, **h30**km, **n100,** σ0**93**/103, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.32**	**265**	P	**Pn**	**09 44 09.3**	**-0.2**
MXZ	**Matakaoa Point**	**1.41**	**276**	P	**Pn**	**09 44 10.2**	**-0.7**
MXZ				S	**Sn**	**09 44 27.0**	**-1.4**
PUZ	**Puketiti**	**1.48**	**256**	P	**Pn**	**09 44 11.6**	**-0.2**
CNGZ	**Carnagh Statio**	**1.66**	**242**	P	**Pn**	**09 44 15.1**	**+0.9**
TWGZ	**Tauwhareparae**	**1.72**	**254**	P	**Pn**	**09 44 15.4**	**+0.3**
TWGZ				S	**Sn**	**09 44 36.6**	**+0.5**
HAZ	**Te Kaha**	**1.82**	**268**	P	**Pn**	**09 44 16.2**	**-0.2**
HAZ				S	**Sn**	**09 44 37.1**	**-1.3**
TKGZ	**Te Karaka**	**1.90**	**247**	P	**Pn**	**09 44 17.9**	**+0.3**
TKGZ				S	**Sn**	**09 44 40.9**	**+0.4**
RUGZ	**Raukumara Rang**	**1.92**	**262**	P	**Pn**	**09 44 17.4**	**-0.4**
RIGZ	**Rimuhau**	**2.07**	**241**	P	**Pn**	**09 44 20.5**	**+0.5**
RIGZ				S	**Sn**	**09 44 45.8**	**+1.0**
PRGZ	**Paritu Road**	**2.10**	**234**	P	**Pn**	**09 44 18.3**	**-2.1**
MWZ	**Matawai**	**2.11**	**252**	P	**Pn**	**09 44 20.0**	**-0.4**
MWZ				S	**Sn**	**09 44 44.6**	**-1.0**
MHGZ	**Mahia Peninsul**	**2.23**	**229**	P	**Pn**	**09 44 23.0**	**+1.0**
KNZ	**Kokohu**	**2.29**	**235**	P	**Pn**	**09 44 23.1**	**+0.2**
SNGZ	**Shannon Statio**	**2.40**	**243**	P	**Pn**	**09 44 24.8**	**+0.3**
SNGZ				S	**Sn**	**09 44 53.0**	**+0.1**
URZ	**Urewera**	**2.41**	**256**	Pn	**Pn**	**09 44 25.2**	**+0.8**
	14nm,0.3s,baz=243,slow=1.8,SNR=138						
URZ				Sn	**Sn**	**09 44 52.3**	**-0.6**
	33nm,0.3s,baz=2.0,slow=22,SNR=16						
URZ	**Urewera**	**2.41**	**256**	P	**Pn**	**09 44 25.0**	**+0.5**
WHRZ	**Whale Island**	**2.46**	**266**	P	**Pn**	**09 44 27.1**	**+1.8**
RTZ	**Ruatahuna**	**2.60**	**249**	P	**Pn**	**09 44 28.0**	**+0.8**
RAHZ	**Arahi**	**2.64**	**242**	P	**Pn**	**09 44 28.5**	**+0.7**
EDRZ	**Edgecumbe**	**2.67**	**261**	P	**Pn**	**09 44 28.6**	**+0.4**
MARZ	**Manawahe**	**2.71**	**263**	P	**Pn**	**09 44 29.6**	**+0.9**
MUGZ	**Murupara**	**2.72**	**253**	P	**Pn**	**09 44 28.8**	**+0.1**
MTHZ	**Maungataniwha**	**2.79**	**245**	P	**Pn**	**09 44 30.3**	**+0.5**
OPRZ	**Ohinepanea**	**2.79**	**266**	P	**Pn**	**09 44 29.6**	**-0.2**
ARHZ	**Aropaoanui**	**2.87**	**236**	P	**Pn**	**09 44 31.8**	**+1.0**
TARZ	**Mount Tarawera**	**2.87**	**259**	P	**Pn**	**09 44 31.1**	**+0.2**
RRRZ	**Republican Roa**	**2.88**	**256**	P	**Pn**	**09 44 31.1**	**0.0**
NMHZ	**Naumai**	**2.92**	**241**	P	**Pn**	**09 44 32.2**	**+0.7**
OMRZ	**Omania**	**2.96**	**261**	P	**Pn**	**09 44 32.2**	**+0.1**
HLRZ	**Highlands Stat**	**2.99**	**259**	P	**Pn**	**09 44 31.2**	**-1.4**
PRRZ	**Plateau Road**	**3.01**	**254**	P	**Pn**	**09 44 32.8**	**0.0**
TGRZ	**Tauranga**	**3.03**	**269**	P	**Pn**	**09 44 32.7**	**-0.3**
CKHZ	**Cape Kidnapper**	**3.04**	**230**	P	**Pn**	**09 44 33.9**	**+0.7**
KARZ	**Kaharoa**	**3.05**	**263**	P	**Pn**	**09 44 33.1**	**-0.3**
ALRZ	**Allen Road**	**3.06**	**253**	P	**Pn**	**09 44 33.6**	**0.0**
HRRZ	**Handcock Road**	**3.07**	**256**	P	**Pn**	**09 44 33.6**	**0.0**
MYRZ	**Mayor Island**	**3.08**	**277**	P	**Pn**	**09 44 33.2**	**-0.6**
HSRZ	**Hossack Road**	**3.08**	**258**	P	**Pn**	**09 44 34.2**	**+0.4**
MRHZ	**Matea Rd**	**3.09**	**248**	P	**Pn**	**09 44 33.9**	**0.0**
NGRZ	**Ngongotaha**	**3.10**	**262**	P	**Pn**	**09 44 34.3**	**+0.2**
MCHZ	**McNeill Hill**	**3.16**	**236**	P	**Pn**	**09 44 35.1**	**+0.2**
BKZ	**Black Stump Fm**	**3.17**	**242**	P	**Pn**	**09 44 35.3**	**+0.3**
KAHZ	**Kahuranaki**	**3.25**	**229**	P	**Pn**	**09 44 36.2**	**+0.1**
KMRZ	**Kaimai**	**3.28**	**266**	P	**Pn**	**09 44 36.1**	**-0.4**
KWHZ	**Kaweka Forest**	**3.33**	**238**	P	**Pn**	**09 44 37.2**	**-0.1**
PXZ	**Pawanui**	**3.41**	**226**	P	**Pn**	**09 44 37.8**	**-0.4**
KRHZ	**Kereru**	**3.48**	**235**	P	**Pn**	**09 44 38.8**	**-0.5**
BHHZ	**Black Hill Sta**	**3.61**	**239**	P	**Pn**	**09 44 41.1**	**0.0**
KUZ	**Kuaotunu**	**3.61**	**284**	P	**Pn**	**09 44 40.2**	**-0.9**
TOZ	**Tahuroa Road**	**3.63**	**268**	P	**Pn**	**09 44 40.8**	**-0.5**
WPHZ	**Waipukurau**	**3.68**	**229**	P	**Pn**	**09 44 41.4**	**-0.6**
PRHZ	**Porangahau**	**3.70**	**225**	P	**Pn**	**09 44 41.4**	**-0.8**
TMVZ	**Te Maari**	**3.71**	**247**	P	**Pn**	**09 44 42.7**	**+0.2**
ETVZ	**East Tongariro**	**3.71**	**246**	P	**Pn**	**09 44 42.5**	**-0.1**
PNHZ	**Pukenui**	**3.74**	**233**	P	**Pn**	**09 44 42.2**	**-0.6**
OTVZ	**Oturere**	**3.75**	**246**	P	**Pn**	**09 44 42.9**	**-0.3**
MOVZ	**Moawhango**	**3.79**	**242**	P	**Pn**	**09 44 44.8**	**+1.3**
WTVZ	**West Tongariro**	**3.79**	**247**	P	**Pn**	**09 44 44.9**	**+1.3**
TUVZ	**Tukino**	**3.80**	**245**	P	**Pn**	**09 44 44.7**	**+0.9**
NGZ	**Ngauruhoe**	**3.81**	**246**	P	**Pn**	**09 44 43.3**	**-0.6**
WNVZ	**Wahianoa**	**3.86**	**244**	P	**Pn**	**09 44 44.3**	**-0.4**
F

	3.3nm,0.3s,baz=81,slow=18,SNR=3.9						
PMG				LR	LR	09 48 03.9	
	comp=Z,116nm,21.2s,baz=70,slow=39						
PMG	**Port Moresby**	**6.27 234**			**Pn**	**09 45 40.4**	**+1.5**
PMG				Sn	**Sn**	**09 46 50.4**	**+1.0**
HNR	**Honiara**	**8.43 116**		LR	LR	09 49 17.8	
	comp=Z,54nm,21.3s,baz=248,slow=38						
MTN	**Manton Dam**	**22.04 250**		P	**P**	**09 49 02.0**	**+1.4**
MTN				IAmb	IAmb	09 49 08.7	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**22.32 230**		P	**P**	**09 49 04.0**	**+0.4**
WB0				IAmb	IAmb	09 49 20.9	
	comp=Z,11nm,1.2s						
WR0	**Warramunga Arr**	**22.32 229**		P	**P**	**09 49 04.4**	**+0.7**
WRAB	**Tennant Creek**	**22.45 229**		P	**P**	**09 49 05.5**	**+0.5**
WRAB				IAmb	IAmb	09 49 21.7	
	comp=Z,4.9nm,0.7s						
WB2	**Warramunga Arr**	**22.45 229**		P	**P**	**09 49 04.3**	**-0.8**
WB2				IAmb	IAmb	09 49 21.3	
	comp=Z,9.4nm,1.1s						
WRA	**Warramunga Arr**	**22.46 229**		P	**P**	**09 49 03.8**	**-1.3**
	comp=Z,2.8nm,0.8s,baz=53,slow=10,SNR=21						
KNRA	**Kununurra**	**25.12 245**		P	**P**	**09 49 30.4**	**-0.3**
AS31	**Alice Springs**	**25.13 223**		P	**P**	**09 49 31.0**	**+0.2**
ASAR	**Alice Springs**	**25.14 223**		P	**P**	**09 49 30.5**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=55,slow=9.3,SNR=47						
ASAR	**Alice Springs**	**25.14 223**		P	**P**	**09 49 31.0**	**+0.1**
SOEI	**Soe**	**28.05 260**		P	**P**	**09 49 55.9**	**-1.4**
SOEI				IAmb	IAmb	09 50 24.9	
	comp=Z,8.7nm,0.8s						
FITZ	**Fitzroy Crossi**	**28.78 242**		P	**P**	**09 50 02.3**	**-1.3**
	comp=Z,5.1nm,0.5s,baz=76,slow=10,SNR=9.0						
FITZ	**Fitzroy Crossi**	**28.78 242**		P	**P**	**09 50 02.7**	**-0.9**
PETK	**Petropavlovsk-**	**58.79 4**		P	**P**	**09 54 04.2**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=158,slow=9.0,SNR=0.8						
SONM	**Songino Array**	**66.83 328**		P	**P**	**09 54 56.0**	**-1.2**
	comp=Z,1.0nm,0.7s,baz=124,slow=3.3,SNR=5.4						
MKAR	**Makanchi Array**	**80.69 319**		P	**P**	**09 56 17.9**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=93,slow=7.2,SNR=2.2						
ILAR	**Eielson Array**	**83.20 22**		P	**P**	**09 56 31.6**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=260,slow=3,SNR=14						
GERES	**GERESS Array B**	**124.57 328**		PKP	**PKiKP**	**10 03 05.5**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=5.7,slow=3.9,SNR=2.1						
TORD	**Torodi Ar. Bea**	**150.10 286**		PKPbc	**PKPbc**	**10 03 56.9**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=61,slow=3.2,SNR=7.5						

WEL ***23*** *09:46:16.4±0.8,38°S±6°×18°0W±°, h33km, M3.8/26, ML4.1/26, MLv3.8/26, Error ellipse: s-maj=0.0km s-min=0.0km az=27.0*
IDC ***23*** *09:46:18.6±3.5,36°.95S×179°.05E, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.8/31, mbtmp4.1/4, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/20, Error ellipse: s-maj=78.1km s-min=32.7km az=126.0*

ISC 23 09:46:12.2±2.3, 37.77S±0.06×179.93W±0.07, h10km±13km, n109, σ1§37/111, mb4.0/3, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.31**	**267**	P	**Pb**	**09 46 37.6**	**+0.7**
MXZ	**Matakaoa Point**	**1.41**	**278**	P	**Pb**	**09 46 38.6**	**-0.1**
MXZ				S	**Sn**	**09 46 56.3**	**-0.4**
PUZ	**Puketiti**	**1.46**	**258**	P	**Pb**	**09 46 39.5**	**-0.1**
PUZ				S	**Sb**	**09 46 58.1**	**-0.1**
CNGZ	**Carnagh Statio**	**1.63**	**244**	P	**Pg**	**09 46 43.4**	**-0.1**
TWGZ	**Tauwhareparae**	**1.70**	**256**	P	**Pb**	**09 46 43.5**	**-0.1**
HAZ	**Te Kaha**	**1.81**	**270**	P	**Pb**	**09 46 44.8**	**-0.7**
TKGZ	**Te Karaka**	**1.87**	**249**	P	**Pb**	**09 46 46.2**	**-0.4**
TKGZ				S	**Sb**	**09 47 09.5**	**-0.5**
RUGZ	**Raukumara Rang**	**1.90**	**263**	P	**Pb**	**09 46 46.1**	**-1.0**
RIGZ	**Rimuhau**	**2.04**	**242**	P	**Pb**	**09 46 48.8**	**-0.7**
RIGZ				S	**Sb**	**09 47 13.9**	**-1.0**
PRGZ	**Paritu Road**	**2.07**	**236**	P	**Pb**	**09 46 49.2**	**-0.6**
PRGZ				S	**Sb**	**09 47 14.6**	**-1.1**
MWZ	**Matawai**	**2.08**	**254**	P	**Pn**	**09 46 48.5**	**+1.2**
MWZ				S	**Sn**	**09 47 12.5**	**-0.8**
MHGZ	**Mahia Peninsul**	**2.19**	**230**	P	**Pb**	**09 46 51.1**	**-0.8**
MHGZ				S	**Sb**	**09 47 19.1**	**+0.1**
RAGZ	**Rawiri**	**2.21**	**250**	P	**Pb**	**09 46 51.1**	**-1.2**
RAGZ				S	**Sn**	**09 47 16.7**	**+0.1**
KNZ	**Kokohu**	**2.26**	**236**	P	**Pb**	**09 46 51.3**	**-1.8**
SNGZ	**Shannon Statio**	**2.37**	**244**	P	**Pn**	**09 46 53.1**	**+1.8**
URZ	**Urewera**	**2.38**	**257**	Pn	**Pn**	**09 46 53.2**	**+1.9**
	24nm,0.3s,baz=210,slow=1.7,SNR=17						
URZ				Sn	**Sn**	**09 47 20.2**	**-0.5**
	45nm,0.3s,baz=351,slow=20,SNR=12						
URZ	**Urewera**	**2.38**	**257**	P	**Pn**	**09 46 53.3**	**+1.9**
WHRZ	**Whale Island**	**2.45**	**267**	P	**Pn**	**09 46 54.1**	**+1.8**
RTZ	**Ruatahuna**	**2.57**	**250**	P	**Pn**	**09 46 56.1**	**+2.1**
WHZ	**Waihua**	**2.58**	**229**	P	**Pn**	**09 46 56.0**	**+2.0**
RAHZ	**Arahi**	**2.61**	**243**	P	**Pn**	**09 46 56.4**	**+2.0**
EDRZ	**Edgecumbe**	**2.65**	**262**	P	**Pn**	**09 46 56.6**	**+1.4**
MARZ	**Manawahe**	**2.69**	**264**	P	**Pn**	**09 46 57.1**	**+1.5**
MUGZ	**Murupara**	**2.69**	**254**	P	**Pn**	**09 46 57.2**	**+1.6**
MTHZ	**Maungataniwha**	**2.76**	**246**	P	**Pn**	**09 46 58.5**	**+1.9**
OPRZ	**Ohinepanea**	**2.78**	**267**	P	**Pn**	**09 46 57.6**	**+0.7**
ARHZ	**Aropaoanui**	**2.83**	**237**	P	**Pn**	**09 46 59.8**	**+2.2**
TARZ	**Mount Tarawera**	**2.85**	**260**	P	**Pn**	**09 46 59.4**	**+1.5**
RRRZ	**Republican Roa**	**2.86**	**258**	P	**Pn**	**09 46 59.1**	**+1.1**
NMHZ	**Naumai**	**2.88**	**242**	P	**Pn**	**09 47 00.3**	**+2.0**
OMRZ	**Omania**	**2.94**	**262**	P	**Pn**	**09 47 00.2**	**+1.1**
HLRZ	**Highlands Stat**	**2.97**	**260**	P	**Pn**	**09 47 01.0**	**+1.5**
PRRZ	**Plateau Road**	**2.99**	**255**	P	**Pn**	**09 47 00.9**	**+1.2**
CKHZ	**Cape Kidnapper**	**3.00**	**230**	P	**Pn**	**09 47 01.6**	**+1.7**
TGRZ	**Tauranga**	**3.02**	**270**	P	**Pn**	**09 47 00.8**	**+0.7**
KARZ	**Kaharoa**	**3.04**	**264**	P	**Pn**	**09 47 01.3**	**+0.9**
ALRZ	**Allen Road**	**3.04**	**254**	P	**Pn**	**09 47 01.8**	**+1.4**
HRRZ	**Handcock Road**	**3.05**	**257**	P	**Pn**	**09 47 01.8**	**+1.3**
MRHZ	**Matea Rd**	**3.06**	**249**	P	**Pn**	**09 47 02.4**	**+1.6**
HSRZ	**Hossack Road**	**3.07**	**259**	P	**Pn**	**09 47 02.2**	**+1.5**
MYRZ	**Mayor Island**	**3.08**	**278**	P	**Pn**	**09 47 01.4**	**+0.4**
NGRZ	**Ngongotaha**	**3.09**	**263**	P	**Pn**	**09 47 02.6**	**+1.5**
MCHZ	**McNeill Hill**	**3.12**	**237**	P	**Pn**	**09 47 03.3**	**+1.8**
BKZ	**Black Stump Fm**	**3.13**	**243**	P	**Pn**	**09 47 03.5**	**+1.7**
KAHZ	**Kahuranaki**	**3.21**	**230**	P	**Pn**	**09 47 04.4**	**+1.6**
KMRZ	**Kaimai**	**3.27**	**267**	P	**Pn**	**09 47 04.5**	**+0.9**
KWHZ	**Kaweka Forest**	**3.30**	**239**	P	**Pn**	**09 47 05.6**	**+1.6**
PXZ	**Pawanui**	**3.37**	**227**	P	**Pn**	**09 47 05.7**	**+0.8**
KRHZ	**Kereru**	**3.44**	**236**	P	**Pn**	**09 47 07.1**	**+1.1**
RITZ	**Rihia Road**	**3.52**	**249**	P	**Pn**	**09 47 08.8**	**+1.8**
BHHZ	**Black Hill Sta**	**3.57**	**240**	P	**Pn**	**09 47 09.3**	**+1.5**
KUZ	**Kuaotunu**	**3.62**	**285**	P	**Pn**	**09 47 08.5**	**+0.2**
TLZ	**Tolley Road**	**3.62**	**260**	P	**Pn**	**09 47 09.0**	**+0.6**
TOZ	**Tahuroa Road**	**3.62**	**269**	P	**Pn**	**09 47 09.1**	**+0.8**
WPHZ	**Waipukurau**	**3.64**	**230**	P	**Pn**	**09 47 09.6**	**+1.0**
KATZ	**Kakaramea**	**3.64**	**249**	P	**Pn**	**09 47 10.8**	**+2.1**
PRHZ	**Porangahau**	**3.65**	**226**	P	**Pn**	**09 47 09.5**	**+0.7**
TMVZ	**Te Maari**	**3.68**	**247**	P	**Pn**	**09 47 10.8**	**+1.5**
ETVZ	**East Tongariro**	**3.68**	**247**	P	**Pn**	**09 47 10.8**	**+1.5**
PNHZ	**Pukenui**	**3.70**	**234**	P	**Pn**	**09 47 10.4**	**+0.9**
KRVZ	**Karewarewa**	**3.72**	**248**	P	**Pn**	**09 47 11.1**	**+1.3**
OTVZ	**Oturere**	**3.72**	**247**	P	**Pn**	**09 47 11.0**	**+1.1**
MOVZ	**Moawhango**	**3.75**	**243**	P	**Pn**	**09 47 12.1**	**+1.8**
WTVZ	**West Tongariro**	**3.76**	**248**	P	**Pn**	**09 47 12.4**	**+1.9**
TUVZ	**Tukino**	**3.77**	**245**	P	**Pn**	**09 47 12.2**	**+1.6**
NGZ	**Ngauruhoe**	**3.77**	**247**	P	**Pn**	**09 47 11.9**	**+1.2**
WHVZ	**Whangaehu Hut**	**3.82**	**245**	P	**Pn**	**09 47 13.4**	**+2.1**
WNVZ	**Wahianoa**	**3.83**	**245**	P	**Pn**	**09 47 12.6**	**+1.1**
FWVZ	**Far West T-bar**	**3.84**	**246**	P	**Pn**	**09 47 13.5**	**+1.9**
TWVZ	**Taurewa**	**3.86**	**249**	P	**Pn**	**09 47 13.8**	**+2.0**
ANWZ	**Angora Road**	**3.87**	**225**	P	**Pn**	**09 47 12.9**	**+1.1**
TSZ	**Takapari Road**	**3.93**	**233**	P	**Pn**	**09 47 13.3**	**+0.6**
DVNZ	**Dannevirke**	**3.95**	**229**	P	**Pn**	**09 47 13.5**	**+0.6**
MKAZ	**Moumaki**	**3.96**	**278**	P	**Pn**	**09 47 13.6**	**+0.6**
GRZ	**Great Barrier**	**3.99**	**291**	P	**Pn**	**09 47 13.9**	**+0.4**
WIAZ	**Waiheke Island**	**4.05**	**282**	P	**Pn**	**09 47 15.2**	**+0.8**
BFZ	**Birch Farm**	**4.15**	**224**	P	**Pn**	**09 47 16.1**	**+0.4**
HIZ	**Hauiti**	**4.17**	**258**	P	**Pn**	**09 47 17.9**	**+1.9**
ETAZ	**East Tamaki Re**	**4.18**	**280**	P	**Pn**	**09 47 16.9**	**+0.9**
PRWZ	**Pori Road**	**4.22**	**228**	P	**Pn**	**09 47 17.3**	**+0.6**
MBAZ	**Motutapu North**	**4.24**	**282**	P	**Pn**	**09 47 18.0**	**+1.1**
POWZ	**Post Office Ro**	**4.25**	**231**	P	**Pn**	**09 47 18.1**	**+1.1**
EPAZ	**Eden Park BICE**	**4.34**	**280**	P	**Pn**	**09 47 19.6**	**+1.4**
HBAZ	**Herne Bay Bore**	**4.35**	**281**	P	**Pn**	**09 47 20.1**	**+1.7**
AWAZ	**Awhitu Peninsu**	**4.38**	**278**	P	**Pn**	**09 47 20.2**	**+1.4**
VRZ	**Vera Road**	**4.38**	**250**	P	**Pn**	**09 47 20.6**	**+1.8**
WAZ	**Wanganui**	**4.44**	**242**	P	**Pn**	**09 47 21.5**	**+1.9**
WTAZ	**Waiatarua**	**4.46**	**279**	P	**Pn**	**09 47 21.6**	**+1.7**
RVAZ	**Riverhead Bore**	**4.49**	**281**	P	**Pn**	**09 47 21.8**	**+1.5**
MRZ	**Mangatainoka R**	**4.52**	**229**	P	**Pn**	**09 47 21.3**	**+0.5**
HOWZ	**Holdsworth Sta**	**4.71**	**227**	P	**Pn**	**09 47 23.5**	**+0.1**
OGWZ	**Otaki Gorge**	**4.87**	**230**	P	**Pn**	**09 47 25.4**	**-0.1**
NEZ	**North Egmont**	**4.92**	**250**	P	**Pn**	**09 47 29.2**	**+2.9**
WCZ	**Waipu Caves**	**4.94**	**290**	P	**Pn**	**09 47 27.5**	**+1.0**
KHEZ	**Kahui Hut**	**4.98**	**250**	P	**Pn**	**09 47 30.1**	**+2.9**
CAW	**Cannon Point**	**5.11**	**228**	P	**Pn**	**09 47 28.7**	**-0.1**
OUZ	**Omahuta**	**5.80**	**294**	P	**Pn**	**09 47 39.7**	**+1.4**
CTZ	**Chatham Island**	**6.46**	**158**	P	Pn	09 47 52.9	+5.5
CTZ				S	**Sn**	**09 49 02.4**	**+1.2**
DZM	**Mont Dzumac**	**19.57**	**319**	LR	LR	09 55 35.2	
	comp=Z,128nm,19.7s,baz=356,slow=30						
ASAR	**Alice Springs**	**41.70**	**276**	P	**P**	**09 54 01.8**	**+0.5**
	1.6nm,0.5s,baz=123,slow=7.7,SNR=18						
WRA	**Warramunga Arr**	**43.35**	**281**	P	**P**	**09 54 15.1**	**+0.3**
	1.5nm,0.5s,baz=120,slow=7.7,SNR=24						
FITZ	**Fitzroy Crossi**	**51.19**	**277**	P	**P**	**09 55 16.8**	**+0.9**
	0.7nm,0.6s,baz=120,slow=14,SNR=3.7						
H03S2	**Juan Fernandez**	**77.75**	**123**	T	T	11 24 03.5	
	baz=230,slow=74,SNR=7.8						
H03S1	**Juan Fernandez**	**77.76**	**123**	T	T	11 24 12.4	
	baz=230,slow=74,SNR=6.1						
H03S3	**Juan Fernandez**	**77.77**	**123**	T	T	11 24 04.8	
	baz=230,slow=74,SNR=6.7						
H03N3	**Juan Fernandez**	**77.98**	**123**	T	T	11 24 17.1	
	baz=234,slow=72,SNR=40						
H03N2	**Juan Fernandez**	**77.99**	**123**	T	T	11 24 15.9	
	baz=234,slow=72,SNR=26						
H03N1	**Juan Fernandez**	**78.00**	**123**	T	T	11 24 16.1	
	baz=234,slow=72,SNR=24						
FINES	**FINESS Array B**	**151.30**	**334**	PKPbc	**PKPab**	**10 06 10.2**	**-3.1**
	1.3nm,0.9s,baz=48,slow=4.3,SNR=1.6						

IDC ***23*** *09:51:47.5±5.2,29°.71S×178°.93W, h0km, mb3.2/2, mb1 3.4/2, mb1mx3.3/22, mbtmp3.2/2, Error ellipse: s-maj=271.9km s-min=79.0km az=166.0*

ISC 23 09:52:23.6±1.1, 30°.9S±0°.1×179°.6W±0°.2, h300km, n32, σ1§57/38, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.18**	**43**	S	**S**	**09 53 50.9**	**+0.5**
RIZ	**Raoul Island**	**2.19**	**43**	S	**S**	**09 53 51.0**	**+0.4**
MWZ	**Matawai**	**7.80**	**197**	P	Pn	09 54 19.5	+4.8
RIGZ	**Rimuhau**	**8.10**	**195**	P	Pn	09 54 22.2	+3.8
RIGZ				S	**S**	**09 55 52.4**	**+0.9**
MUGZ	**Murupara**	**8.14**	**200**	P	**Pn**	**09 54 23.0**	**+4.1**
SNGZ	**Shannon Statio**	**8.27**	**197**	P	Pn	09 54 25.0	+4.6
SNGZ				S	**S**	**09 55 56.2**	**+0.9**
TLZ	**Tolley Road**	**8.44**	**207**	P	Pn	09 54 31.0	+8.5
MTHZ	**Maungataniwha**	**8.47**	**199**	S	**S**	**09 56 02.1**	**+2.3**
MTHZ				P	Pn	09 54 27.8	+4.9
MRHZ	**Matea Rd**	**8.58**	**201**	P	**P**	**09 54 29.1**	**-0.4**
MRHZ				S	**S**	**09 56 04.2**	**+1.9**
NMHZ	**Naumai**	**8.71**	**199**	P	**P**	**09 54 29.2**	**-1.8**
NMHZ				S	**S**	**09 56 05.2**	**0.0**
ARHZ	**Aropaoanui**	**8.82**	**197**	P	**P**	**09 54 30.4**	**-1.6**
ARHZ				S	**S**	**09 56 06.1**	**-1.4**
BKZ	**Black Stump Fm**	**8.86**	**200**	P	**P**	**09 54 30.7**	**-2.0**
BKZ				S	**S**	**09 56 07.1**	**-1.5**
MCHZ	**McNeill Hill**	**9.06**	**198**	P	**P**	**09 54 32.2**	**-0.5**
MCHZ				S	**S**	**09 56 13.8**	**+0.7**
OTVZ	**Oturere**	**9.13**	**204**	P	**P**	**09 54 34.8**	**-0.8**
FWVZ	**Far West T-bar**	**9.25**	**204**	P	**P**	**09 54 36.9**	**-0.2**
BHHZ	**Black Hill Sta**	**9.29**	**201**	P	**P**	**09 54 35.1**	**-2.2**
BHHZ				S	**S**	**09 56 17.9**	**-0.5**
WNVZ	**Wahianoa**	**9.30**	**204**	P	**P**	**09 54 36.4**	**-1.2**
WNVZ				S	**S**	**09 56 19.8**	**+1.2**
KRHZ	**Kereru**	**9.34**	**199**	P	**P**	**09 54 35.3**	**-2.6**
KRHZ				S	**S**	**09 56 18.4**	**-1.0**
KAHZ	**Kahuranaki**	**9.35**	**197**	S	**S**	**09 56 20.9**	**+1.4**
PXZ	**Pawanui**	**9.57**	**196**	S	**S**	**09 56 22.8**	**-1.8**
PNHZ	**Pukenui**	**9.64**	**200**	P	**P**	**09 54 38.9**	**-2.4**
PNHZ				S	**S**	**09 56 23.7**	**-2.5**
TSZ	**Takapari Road**	**9.85**	**200**	P	**Pn**	**09 54 40.0**	**+0.3**
DVHZ	**Dannevirke**	**10.01**	**199**	P	**P**	**09 54 44.2**	**-1.1**
ANWZ	**Angora Road**	**10.08**	**197**	P	**P**	**09 54 45.3**	**-0.7**
BFZ	**Birch Farm**	**10.34**	**198**	P	**P**	**09 54 47.8**	**-1.2**
MRZ	**Mangatainoka R**	**10.51**	**200**	P	**P**	**09 54 49.0**	**-1.8**
HOWZ	**Holdsworth Sta**	**10.75**	**200**	P	**P**	**09 54 51.9**	**-1.6**
OGWZ	**Otaki Gorge**	**10.78**	**202**	P	**Pn**	**09 54 52.0**	**+0.8**
CAW	**Cannon Point**	**11.08**	**201**	P	**Pn**	**09 54 55.1**	**+0.3**
ASAR	**Alice Springs**	**41.69**	**268**	P	P	09 59 42.0	-1.8
	0.3nm,0.8s,baz=101,slow=7.9,SNR=2.0						
WRA	**Warramunga Arr**	**42.72**	**274**	P	**P**	**09 59 52.2**	**+0.1**
	0.3nm,0.9s,baz=111,slow=7.8,SNR=4.6						
FINES	**FINESS Array B**	**145.09**	**339**	PKP	**PKPbc**	**10 11 24.0**	**-0.8**
	2.3nm,0.7s,baz=48,slow=4.1,SNR=15						

MAN 23 09:56:30.1, 9°.71N×123°.53E, h1km, mb4.0, ML2.8, MS2.4, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.33**	**93**	*i*P	Pg	09 56 35.9	-0.4
TBP				*i*S	Pg	09 56 40.7	+0.1
LLP	**Lapu-Lapu**	**0.74**	**35**	*i*P	Pg	09 56 43.5	-0.8
LLP				*i*S	Sg	09 56 53.7	-0.3
CNOP	**Candoni, Negro**	**0.89**	**278**	*e*P	Pg	09 57 00.2	-0.7
CNOP				*e*S	Sb	09 57 00.2	-0.4
MSLP	**Maasin**	**1.38**	**72**	*e*P	Pb	09 56 58.2	+1.6
MSLP				*e*S	Sg	09 57 14.4	0.0
OCLP	**Ormoc**	**1.71**	**38**	*e*P	Pb	09 57 01.9	-0.4
OCLP				*e*S	Sb	09 57 24.5	+0.2
PAGZ	**Pagadian**	**1.85**	**185**	*e*P	Pn	09 57 03.2	+0.2
PAGZ				*e*S	Sn	09 57 27.1	+0.1

WEL 23 10:06:41.0, 42°S±3°×17°1E±°, h9km±3km, M2.6/12, ML2.6/12, MLv2.6/12, Error ellipse: s-maj=0.0km s-min=0.0km az=64.4, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
INZ	**Inchbonnie**	**0.33**	**161**	P	Pb	10 06 48.9	-0.2
INZ				S	Sg	10 06 52.9	+0.9
DSZ	**Denniston Nort**	**0.77**	**30**	P	Pb	10 06 56.9	+0.4
DSZ				S	Sb	10 07 07.2	+0.2
WVZ	**Waitaha Valley**	**0.78**	**212**	P	Pb	10 06 57.3	+0.6
WVZ				S	Sb	10 07 07.0	-0.4
LTZ	**Lake Taylor**	**0.81**	**118**	P	Pn	10 06 58.1	-0.5
LTZ				S	Sb	10 07 08.7	+0.4
OXZ	**Oxford**	**1.06**	**149**	P	Pn	10 07 02.7	+0.6
OXZ				S	Sn	10 07 17.4	+0.4
MHCZ	**Mount Hutt**	**1.14**	**170**	P	Pn	10 07 04.1	+1.0
MHCZ				S	Sn	10 07 19.4	+0.6
RPZ	**Rata Peaks**	**1.31**	**188**	P	Sg	10 07 06.8	+0.6
RPZ				S	Sg	10 07 24.2	+0.9
THZ	**Tophouse**	**1.36**	**62**	P	Pb	10 07 06.8	+0.2
GVZ	**Greta Valley S**	**1.40**	**114**	P	Pg	10 07 08.1	+0.3
RACZ	**Rakaia**	**1.45**	**155**	P	Pb	10 07 07.8	-0.3
ARCZ	**Arundel**	**1.54**	**183**	P	Pb	10 07 09.6	-0.1
FOZ	**Fox Glacier**	**1.56**	**224**	P	Pg	10 07 11.9	+1.0
MQZ	**McQueen's Vall**	**1.63**	**143**	P	Pn	10 07 10.1	+0.2
KHZ	**Kahutara**	**1.66**	**91**	P	Pg	10 07 12.3	-0.5
QRZ	**Quartz Range**	**1.83**	**31**	P	Pn	10 07 13.2	+0.6
NNZ	**Nelson**	**1.96**	**53**	P	Pb	10 07 15.9	-0.9
ODZ	**Otahua Downs**	**2.67**	**190**	P	Pn	10 07 24.6	+0.4
MTVZ	**Mangateitei**	**4.38**	**48**	P	Pn	10 07 48.9	+1.2

RHSSO ***23*** *10:09:59.9±0.6, 44°.44N×20°.97E, h7km±2km, ML2.9/14*
BEO ***23*** *10:10:00.5±0.3, 44°.51N×20°.92E, h10km±3km, ML2.9/13*

ISC 23 10:10:00.0±1.1, 44°.50N±0°.02×20°.89E±0°.01, h6km±9km, n67, σ0§95/112, 22C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVIS	**Svilajnac**	**0.33**	**134**	*e*Pg	**Pg**	**10 10 07.1**	**+0.7**
SVIS				*e*Sg	**Sb**	**10 10 12.2**	**-1.7**
TRUS	**Trudelj**	**0.44**	**232**	*e*Pg	**Pg**	**10 10 09.1**	**+0.6**
TRUS				*e*Sg	**Sg**	**10 10 15.7**	**+1.4**
GRUS	**Gruza**	**0.62**	**192**	*e*Pg	**Pb**	**10 10 12.7**	**-0.6**
GRUS				*e*Sg	**Sb**	**10 10 23.5**	**+1.2**
MDVR	**Moldovita**	**0.65**	**64**	§P	**Pg**	**10 10 12.4**	**-0.3**
MDVR				§S	**Sg**	**10 10 21.0**	**-0.1**
DIVS	**Divibare**	**0.76**	**239**	*e*Pg	**Pg**	**10 10 14.5**	**-0.1**
DIVS				*e*Sg	**Sb**	**10 10 26.1**	**-0.2**
DIVS	**Divibare**	**0.76**	**239**	*i*Pg	**Pg**	**10 10 14.5**	**-0.1**
DIVS				*e*Sg	**Sb**	**10 10 25.8**	**-0.5**
BANR	**Banloc**	**0.90**	**11**	§P	**Pg**	**10 10 16.4**	**-1.0**
BANR				§S	**Sg**	**10 10 28.9**	**-0.2**
TEKS	**Tekeris**	**0.97**	**274**	*e*Pg	**Pg**	**10 10 18.8**	**+0.1**
TEKS				*e*Sg	**Sb**	**10 10 32.7**	**+0.2**
TEKS	**Tekeris**	**0.97**	**274**	*e*Pg	**Pg**	**10 10 18.5**	**-0.2**
TEKS				*e*Sg	**Sb**	**10 10 33.2**	**+0.7**
FRGS	**Fruska Gora**	**1.01**	**311**	*e*Pg	**Pg**	**10 10 19.0**	**-0.5**
FRGS				*e*Sg	**Sg**	**10 10 32.5**	**-0.1**
FRGS	**Fruska Gora**	**1.01**	**311**	§*i*Pg	**Pg**	**10 10 18.7**	**-0.8**
FRGS				*e*Sg	**Sn**	**10 10 35.0**	**-0.5**
BOVS	**Bovan**	**1.04**	**145**	*e*Pg	**Pg**	**10 10 19.2**	**-0.8**
BOVS				*e*Sg	**Sg**	**10 10 33.2**	**-0.4**
IVAS	**Ivanjica**	**1.06**	**210**	*e*Pg	**Pg**	**10 10 20.2**	**-0.2**
IVAS				*e*Sg	**Sb**	**10 10 35.0**	**-0.1**
HERR	**Herculane**	**1.16**	**70**	§P	**Pg**	**10 10 21.6**	**-0.6**
HERR				§S	**Sb**	**10 10 37.5**	**-0.2**
DJES	**Djerdap**	**1.18**	**81**	*e*Sg	**Sg**	**10 10 37.4**	**-0.5**
ZAGS	**Zajecar**	**1.19**	**125**	*e*Pg	**Pg**	**10 10 22.0**	**-0.7**
ZAGS				*e*Sg	**Sn**	**10 10 38.8**	**-0.8**
BZS	**Buzias**	**1.23**	**24**	§P	**Pb**	**10 10 22.6**	**-1.2**
BZS				§S	**Sg**	**10 10 38.2**	**-1.5**
BBLS	**Lazići**	**1.24**	**240**	*e*Pg	**Pb**	**10 10 23.5**	**-0.4**
BBLS				*e*Sg	**Sn**	**10 10 41.0**	**-0.1**
BBLS	**Lazići**	**1.24**	**240**	*e*Pg	**Pb**	**10 10 22.9**	**-1.0**
BBLS				*e*Sg	**Sg**	**10 10 39.7**	**-0.2**
TIM	**Timisoara**	**1.26**	**11**	§S	**Sb**	**10 10 40.8**	**+0.1**
SELS	**Selova**	**1.29**	**172**	*e*Pg	**Pn**	**10 10 23.7**	**-0.9**
SELS				*e*Sg	**Sn**	**10 10 41.6**	**-0.6**
SJES	**Sjenica**	**1.40**	**209**	*e*Pg	**Pn**	**10 10 26.3**	**0.0**
SJES				*e*Sg	**Sb**	**10 10 44.7**	**-0.2**
RUDO	**Rudo**	**1.40**	**232**	*e*Pg	**Pn**	**10 10 25.2**	**-1.0**
RUDO				*e*Sg	**Sg**	**10 10 45.2**	**+0.1**
HAPS	**Han Pijesak,Bl**	**1.45**	**254**	*e*Pg	**Pn**	**10 10 26.4**	**-0.6**
HAPS				*e*Sg	**Sg**	**10 10 46.8**	**+0.2**
PUNG	**Punghina**	**1.48**	**98**	§P	**Pg**	**10 10 30.3**	**+1.8**
PUNG				§S	**Sg**	**10 10 48.5**	**+0.9**
BLKB	**Belogradchik**	**1.56**	**124**	§S	**Sg**	**10 10 53.6**	**+3.6**
GZR	**Gura Zlata**	**1.61**	**56**	§P	**Pb**	**10

0.4nm,0.3s,baz=335,slow=23,SNR=6.5
ASAR Alice Springs 17.41 167 P Pn 10 40 25.3 0.0
0.4nm,0.3s,baz=338,slow=9.2,SNR=43
ASAR S Sn 10 43 26.8 -13
0.1nm,0.3s,baz=358,slow=30,SNR=4.2
MKAR Makanchi Array 67.77 327 P P 10 47 20.4 0.0
0.6nm,0.4s,baz=115,slow=7.8,SNR=6.9

*NDI **23** 10:45:25.4±3.5, 23°.55N×93°.51E, h14km±19km, ML4.0, mb4.5(NEIC)*
*IDC **23** 10:45:26.4±0.8, 23°.47N×93°.42E, h47km±8km, mb3.7/12, mb1 3.9/13, mb1mx3.6/45, mbtmp3.9/13, ML4.5/1, Error ellipse: s-maj=39.8km s-min=13.4km az=57.0*
*NEIC **23** 10:45:28.0±1.0, 23°.8N±0°.1×93°.8E±0°.2, h66km±13km, mb4.5/8, Error ellipse: s-maj=26.6km s-min=10.9km az=49.0*
ISC 23 10:45:27.1±0.7, 23°.59N±0°.04×93°.36E±0°.05, h56km±6km, n66, σ2s01/86, mb4.0/16, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAIH	**SAIHA**	**1.15**	**197**	*e*P	**Pn**	**10 45 47.0**	**-0.1**
SAIH				IAmb	IAmb	10 45 47.6	
	comp=Z,5μm,0.4s						
SAIH				*e*S	**Sn**	**10 46 02.8**	**+0.8**
SAIH				*e*S	**Sn**	**10 46 02.8**	**+0.8**
SAIH				IAML		10 46 05.8	
	comp=N,4μm,0.3s						
SAIH				IAML		10 46 06.3	
	comp=E,9μm,0.3s						
SILR	**SILCHAR**	**1.29**	**337**	*e*P	**Pn**	**10 45 52.5**	**+3.6**
SILR				IAmb	IAmb	10 46 08.8	
	comp=Z,977nm,0.7s						
IMP	**Imphal**	**1.34**	**23**	*e*P	**Pn**	**10 45 51.8**	**+2.1**
IMP				IAmb	IAmb	10 45 53.4	
	comp=Z,385nm,0.6s						
IMP				*e*S	**Sn**	**10 46 10.2**	**+3.6**
IMP				IAML		10 46 13.1	
	comp=E,490nm,0.5s						
BELO	**BELONIA**	**1.79**	**259**	*e*P	**Pn**	**10 45 58.0**	**+2.3**
BELO				*e*S	**Sn**	**10 46 20.7**	**+3.4**
AGT	**Agartala**	**1.95**	**279**	*e*P	Pn	10 46 02.3	+4.4
AGT				*e*S	**Sn**	**10 46 28.7**	**+7.4**
AGT				IAML		10 46 33.2	
	comp=E,1μm,0.3s						
AGT				IAML		10 46 33.7	
	comp=N,2μm,0.4s						
KOHI	**KOHIMA**	**2.23**	**18**	*e*P	**Pn**	**10 46 03.0**	**+1.2**
KOHI				IAmb	IAmb	10 46 03.7	
	comp=Z,611nm,0.6s						
KOHI				*e*S	**Sn**	**10 46 30.5**	**+2.3**
KOHI				*e*S	**Sn**	**10 46 30.6**	**+2.3**
KOHI				IAML		10 46 33.0	
	comp=E,1μm,0.4s						
KOHI				IAML		10 46 33.5	
	comp=N,1μm,0.4s						
SHL	**Shillong**	**2.38**	**326**	*e*P	**Pn**	**10 46 06.5**	**+2.6**
SHL				*e*S	Sn	10 46 40.5	+8.4
SHL	**Shillong**	**2.38**	**326**		**Pn**	**10 46 06.8**	**+2.9**
SHL				Sn	**Sn**	**10 46 34.3**	**+2.2**
MOKO	**MOKOCHONG**	**2.91**	**21**	*e*P	**Pn**	**10 46 12.4**	**+1.2**
MOKO				IAmb	IAmb	10 46 15.8	
	comp=Z,226nm,0.4s						
MOKO				*e*S	**Sn**	**10 46 47.4**	**+2.4**
MOKO				IAML		10 46 50.4	
	comp=N,511nm,0.4s						
MOKO				IAML		10 46 50.9	
	comp=E,537nm,0.5s						
GUWA	**GUWAHATI**	**3.00**	**330**	*e*P	**Pn**	**10 46 13.6**	**+1.4**
GUWA				IAmb	IAmb	10 46 27.9	
	comp=Z,36nm,0.4s						
GUWA				*e*S	**Sn**	**10 46 48.4**	**+1.5**
TEZP	**TEZPUR**	**3.05**	**351**	*e*P	**Pn**	**10 46 12.8**	**-0.2**
TEZP				IAmb	IAmb	10 46 15.2	
	comp=Z,22nm,0.2s						
ZIRO	**ZIRO**	**3.94**	**6**	*e*P	**Pn**	**10 46 25.4**	**+0.1**
ZIRO				IAmb	IAmb	10 46 27.3	
	comp=Z,92nm,0.3s						
ZIRO				*e*S	**Sn**	**10 47 08.9**	**-1.5**
ZIRO				*e*S	**Sn**	**10 47 09.2**	**-1.2**
ZIRO				IAML		10 47 11.1	
	comp=N,2μm,0.6s						
ZIRO				IAML		10 47 11.5	
	comp=E,2μm,0.4s						
GTK	**Tadong**	**5.68**	**312**	*e*P	**Pn**	**10 46 51.2**	**+2.1**
GTK				IAmb	IAmb	10 46 54.7	
	comp=Z,18nm,0.3s						
GTK				*e*S	**Sn**	**10 47 53.2**	**+0.2**
GTK				IAML		10 47 57.9	
	comp=N,126nm,0.2s						
GTK				IAML		10 47 59.0	
	comp=E,131nm,0.3s						
ODAN	**Odare**	**6.31**	**302**	*e*Pn	**Pn**	**10 46 58.9**	**+1.1**
ODAN				*e*Sn	**Sn**	**10 48 07.4**	**-1.2**
	comp=E,297nm,0.3s						
TAPN	**Taplejung**	**6.33**	**307**	*e*Pn	**Pn**	**10 46 59.4**	**+1.3**
TAPN				*e*Sn	**Sn**	**10 48 07.6**	**-1.6**
	comp=E,156nm,0.4s						
LSA	**Lhasa**	**6.40**	**342**	Pn	**Pn**	**10 46 58.5**	**-0.7**
LSA				Sn	**Sn**	**10 48 11.4**	**+0.3**
BOK	**Bokaro**	**6.85**	**273**	*e*P	**Pn**	**10 47 06.0**	**+0.9**
MHMT	**Maesarieng**	**6.88**	**141**	P	Pn	10 47 10.6	+5.2
RAMN	**Ramite**	**6.97**	**300**	*e*Pn	**Pn**	**10 47 07.8**	**+0.9**
CHTO	**Chiang Mai**	**7.05**	**131**		**Pn**	**10 47 06.8**	**-1.0**
CMMT	**Chiang Mai**	**7.06**	**131**	P	**Pn**	**10 47 07.0**	**-0.8**
CM31	**Chiang Mai Arr**	**7.30**	**133**		**Pn**	**10 47 10.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**7.30**	**133**	P	**Pn**	**10 47 10.6**	**-0.6**
	comp=E,2.3nm,0.3s,baz=312,slow=13,SNR=43						
CMAR	**Chiang Mai Arr**	**7.30**	**133**		**Pn**	**10 47 10.4**	**-0.8**
CM01	**Chiang Mai Arr**	**7.34**	**133**	P	**Pn**	**10 47 11.0**	**-0.7**
CM05	**Chiang Mai Arr**	**7.34**	**134**	P	**Pn**	**10 47 11.0**	**-0.8**
CM04	**Chiang Mai Arr**	**7.37**	**133**	P	**Pn**	**10 47 11.0**	**-1.1**
PAYA	**Payao**	**7.38**	**124**	P	**Pn**	**10 47 11.2**	**-1.2**
GUN	**Gumba**	**8.00**	**304**	*e*Pn	**Pn**	**10 47 21.5**	**+0.5**
GUN				*e*Sn	**Sn**	**10 48 46.7**	**-3.5**
	comp=E,228nm,0.5s						
PKI	**Pulchoki**	**8.20**	**301**	*e*Pn	**Pn**	**10 47 24.0**	**+0.3**
PKI				*e*Sn	**Sn**	**10 48 51.5**	**-3.6**
	comp=E,82nm,0.5s						
PKIN	**Phulchoki**	**8.21**	**301**	*e*Pn	**Pn**	**10 47 24.2**	**+0.3**
PKIN				*e*Sn	**Sn**	**10 48 51.5**	**-3.9**
	comp=E,88nm,0.4s						
KKN	**Kakani**	**8.40**	**302**	*e*Pn	**Pn**	**10 47 26.6**	**+0.2**
DMN	**Daman**	**8.45**	**300**	*e*Pn	**Pn**	**10 47 27.3**	**+0.1**
DMN				*e*Sn	**Sn**	**10 48 58.3**	**-3.0**
	comp=E,66nm,0.5s						
SUKH	**Sukhothai**	**8.45**	**135**	P	**Pn**	**10 47 27.0**	**0.0**
GKN	**Gorkha**	**9.00**	**301**	*e*Pn	**Pn**	**10 47 34.6**	**0.0**
GKN				*e*Sn	**Sn**	**10 49 10.3**	**-4.3**
	comp=E,103nm,0.3s						
PHIT	**Phitsanulok**	**9.18**	**133**	P	**Pn**	**10 47 37.5**	**+0.5**
KOLN	**Koldanda**	**9.73**	**297**	*e*Pn	**Pn**	**10 47 43.9**	**-0.8**
KOLN				*e*Sn	**Sn**	**10 49 27.4**	**-5.2**
	comp=E,98nm,0.5s						
DANN	**Dangsing**	**9.85**	**301**	*e*Pn	**Pn**	**10 47 44.9**	**-1.4**
PYUN	**Piuthan**	**10.36**	**298**	*e*Pn	**Pn**	**10 47 51.8**	**-1.4**
NIL	**Nilore**	**20.27**	**304**	P	Pn	10 49 60.0	-0.5
NIL				IAmb	IAmb	10 50 01.1	
	comp=Z,13nm,0.7s						
KBL	**Kabul**	**23.83**	**303**	P	**P**	**10 50 37.5**	**+2.2**
MKAR	**Makanchi Array**	**24.80**	**342**	P	**P**	**10 50 46.1**	**+2.3**
	comp=Z,0.6nm,0.4s,baz=75,slow=30,SNR=9.3						
MKAR	**Makanchi Array**	**24.80**	**342**	P	**P**	**10 50 44.1**	**+0.3**
SONM	**Songino Array**	**26.33**	**20**	P	**P**	**10 50 58.6**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=200,slow=10.0,SNR=6.7						
KURBB	**Kurchatov Arra**	**29.34**	**341**	P	**P**	**10 51 25.0**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=153,slow=8.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**30.99**	**350**	P	**P**	**10 51 40.7**	**+1.7**
	comp=Z,1.4nm,0.5s,baz=174,slow=6.6,SNR=4.6						
ZALV	**Zalesovo Beam**	**30.99**	**350**	P	**P**	**10 51 38.2**	**-0.8**
KSAR	**Wonju Array Be**	**32.59**	**57**	P	**P**	**10 51 49.8**	**-3.5**
KSRS	**Korea Array**	**32.63**	**57**	pP	pP	10 52 04.9	-3.3
	comp=Z,2.0nm,0.9s,baz=242,slow=9.5,SNR=4.9						
ABKAR	**Akbulak array**	**36.64**	**323**	P	**P**	**10 52 29.3**	**+1.2**
AKASG	**Malin Array Be**	**55.83**	**316**	P	**P**	**10 55 00.8**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=89,slow=7.8,SNR=1.7						
AKASG				pP	**pP**	**10 55 11.5**	**-2.5**
	comp=Z,0.7nm,0.5s,baz=83,slow=6.2,SNR=3.9						
FINES	**FINESS Array B**	**58.72**	**329**	pP	pP	10 55 33.5	-0.8
	comp=Z,1.7nm,0.8s,baz=64,slow=8.7,SNR=3.1						
WB0	**Warramunga Arr**	**58.81**	**134**	P	**P**	**10 55 19.3**	**-0.7**
WRA	**Warramunga Arr**	**58.89**	**134**	P	**P**	**10 55 19.8**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=323,slow=7.4,SNR=46						
WRA	**Warramunga Arr**	**58.89**	**134**	P	**P**	**10 55 19.0**	**-1.6**
WRAB	**Tennant Creek**	**58.90**	**134**	P	**P**	**10 55 19.4**	**-1.1**
WB2	**Warramunga Arr**	**58.90**	**134**	P	**P**	**10 55 19.2**	**-1.4**
WB2				IAmb	IAmb	10 55 26.9	
	comp=Z,6.0nm,1.4s						
WR0	**Warramunga Arr**	**59.04**	**134**	P	**P**	**10 55 20.7**	**-0.9**
ARCES	**ARCESS Array B**	**60.38**	**338**	P	**P**	**10 55 31.2**	**+1.1**
	comp=Z,5.8nm,1.2s,baz=108,slow=8.6,SNR=1.8						
AS31	**Alice Springs**	**61.29**	**137**	P	**P**	**10 55 36.1**	**-0.9**
AS31				IAmb	IAmb	10 55 37.3	
	comp=Z,1.5nm,0.5s						
ASAR	**Alice Springs**	**61.29**	**137**	P	**P**	**10 55 36.5**	**-0.5**
	comp=Z,3.2nm,0.5s,baz=318,slow=6.9,SNR=102						
ASAR	**Alice Springs**	**61.29**	**137**	P	**P**	**10 55 35.8**	**-1.2**
NOA	**NORSAR Array B**	**65.88**	**328**	P	**P**	**10 56 07.5**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=97,slow=5.7,SNR=1.9						
NOA				pP	**pP**	**10 56 22.6**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=145,slow=8.8,SNR=3.6						
GERES	**GERESS Array B**	**65.95**	**315**	P	**P**	**10 56 08.7**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=77,slow=6.0,SNR=6.1						
GERES				pP	**pP**	**10 56 21.5**	**-1.9**
	comp=Z,0.8nm,0.7s,baz=72,slow=6.4,SNR=6.0						
STKA	**Stephens Creek**	**71.90**	**138**	P	**P**	**10 56 43.5**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=355,slow=4.5,SNR=4.8						
ILAR	**Eielson Array**	**80.53**	**22**	P	**P**	**10 57 33.4**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=290,slow=4.7,SNR=7.2						

*IDC **23** 10:51:35.0±3.9, 43°.65N×128°.78W, h0km, mb3.2/3, mb1 3.6/4, mb1mx3.4/45, mbtmp3.2/4, ML2.9/1, Error ellipse: s-maj=104.1km s-min=24.2km az=53.0*
*NEIC **23** 10:51:38.8±2.6, 43°.90N±0°.09×128°.3W±0°.2, h10km±2km, ML3.4/18, Error ellipse: s-maj=21.5km s-min=13.1km az=240.0*
ISC 23 10:51:43.8±2.0, 43°.93N±0°.07×127°.5W±0°.1, h10km, n26, σ1s75/20, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**2.56**	**113**	Pn	**Pn**	**10 52 24.7**	**-0.7**
KEBM				IAML		10 52 57.5	
	comp=N,124nm,3.0s						
KEBM				Sn	**Sg**	**10 53 04.3**	**-1.6**
HUMO	**Hull Mountain**	**3.59**	**110**	Pn	**Pn**	**10 52 40.4**	**+0.9**
HUMO				Pb		10 52 41.5	-5.9
HUMO				Sn	**Sb**	**10 53 31.5**	**+0.5**
KRMB	**Red Mountain**	**3.59**	**131**	Pn	**Pn**	**10 52 41.1**	**+1.5**
KRMB				IAML		10 53 35.3	
	comp=E,40nm,4.0s						
KRMB				IAML		10 55 02.9	
	comp=N,45nm,3.8s						
E03A	**Lebam**	**3.83**	**46**	Pn	**Pn**	**10 52 42.8**	**+0.1**
F04A	**Amboy**	**4.14**	**59**		**Pn**	**10 52 49.7**	**+2.6**
F04A				IAML		10 53 48.0	
	comp=N,29nm,3.7s						
F04A				IAML		10 53 48.7	
	comp=E,36nm,4.6s						
YBH	**Yreka Blue Hor**	**4.17**	**120**	Pn	**Pn**	**10 52 48.1**	**+0.5**
NLWA	**Neilton Lookou**	**4.31**	**35**	Pn	**Pn**	**10 52 50.0**	**+0.6**
NLWA				IAML		10 53 45.4	
	comp=E,38nm,3.6s						
NLWA				IAML		10 54 27.0	
	comp=E,40nm,3.4s						
PINE	**Pine Mountain**	**4.76**	**89**		Pn	10 53 00.8	+4.9
PINE				IAML		10 54 44.3	
	comp=N,26nm,4.8s						
LON	**Longmire**	**4.92**	**53**		**Pn**	**10 52 59.6**	**+1.8**
K05A	**Summer Lake**	**4.99**	**102**	Pn	**Pn**	**10 53 01.9**	**+3.1**
D05A	**Enumclaw**	**5.07**	**48**	Pn	**Pn**	**10 53 00.4**	**+0.6**
LTY	**Liberty**	**5.85**	**53**	Pn	**Pn**	**10 53 12.5**	**+1.9**
ORV	**Oroville**	**6.28**	**132**		**Pn**	**10 53 18.1**	**+1.6**
PNTR	**Pine Nut**	**7.67**	**126**		**Pn**	**10 53 38.4**	**+2.7**
NVAR	**Mina Array Bea**	**8.86**	**125**	Pn	**Pn**	**10 53 54.7**	**+2.6**
	comp=N,0.1nm,0.3s,baz=298,slow=15,SNR=2.7						
NVAR	**Mina Array Bea**	**8.86**	**125**		**Pn**	**10 53 51.5**	**-0.5**
MCMT	**McKenzie Canyo**	**10.55**	**80**	Pn	**Pn**	**10 54 15.7**	**+0.5**
YKA	**Yellowknife Ar**	**20.07**	**18**	P	**P**	**10 56 15.6**	**-1.4**
	comp=N,1.8nm,0.8s,baz=209,slow=9.5,SNR=3.2						
ILAR	**Eielson Array**	**23.54**	**339**	P	P	10 56 46.1	-7.7
	comp=N,0.4nm,0.8s,baz=143,slow=9.1,SNR=4.4						
TXAR	**Lajitas Array**	**23.95**	**120**	P	**P**	**10 56 56.8**	**-1.4**
	comp=N,0.3nm,0.8s,baz=325,slow=8.8,SNR=2.5						
H11N3	**WAKE ISLAND Hy**	**59.11**	**268**	T	T	12 04 47.4	
	baz=49,slow=75,SNR=16						
H11N2	**WAKE ISLAND Hy**	**59.11**	**268**	T	T	12 04 42.6	
	baz=49,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**59.12**	**268**	T	T	12 04 46.3	
	baz=49,slow=75,SNR=9.4						
H11S1	**WAKE ISLAND Hy**	**60.03**	**267**	T	T	12 05 59.7	
	baz=44						
H11S2	**WAKE ISLAND Hy**	**60.04**	**267**	T	T	12 05 56.8	
	baz=44						
H11S3	**WAKE ISLAND Hy**	**60.05**	**267**	T	T	12 05 59.2	
	baz=44						

*BJI **23** 11:01:21.0±0.0, 43°.90N×128°.50W, h10km, mB5.4/46, mb5.2/55, Ms5.1/45, Ms7 4.7/43*
*IDC **23** 11:01:22.4±0.6, 43°.80N×128°.55W, h0km, mb4.7/26, mb1 4.7/34, mb1mx4.6/66, mbtmp4.6/34, ML3.8/8, MS4.4/37, Ms1 4.4/37, ms1mx4.3/51, Error ellipse: s-maj=16.7km s-min=8.4km az=32.0*
*MOS **23** 11:01:22.9±0.9, 43°.85N×128°.58W, h11km, mb5.4/72, MS4.9/14, Error ellipse: s-maj=6.0km s-min=4.2km az=125.2*
*GCMT **23** 11:01:25.1±0.1, 43°.80N±0°.01×128°.68W±0°.01, h12km, MW5.2/130, Moment Tensor Solution. s79,c126; s130,c232; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-5.81±.11; Mθθ-1.09±.12; Mφφ6.90±.09; Mrθ0.80±.35; Mθφ1.23±.09; Mφr-2.76±.26; Best double couple: M~o~7.09100×10^16^ NP1:φ~s~202.00000°, δ35.00000°, λ-69.00000°. NP2:φ~s~357.00000°, δ57.00000°, λ-104.00000°. Principal axes: T 7.5990, Plg11.0000°, Azm97.0000°; N -1.0170, Plg12.0000°, Azm5.0000°; P -6.5820, Plg73.0000°, Azm229.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **23** 11:01:25.1±2.1, 43°.82N±0°.06×128°.55W±0°.08, h10km±1km, mb5.4/283, Ms_20 4.8/115, Mww5.2 Error ellipse: s-maj=10.1km s-min=9.5km az=265.0*
*BGR **23** 11:01:27.0±0.0, 43°.26N×131°.92W, h33km, mb5.5*
*ANF **23** 11:01:26.9±0.4, 43°.91N×128°.14W, h0km, ML4.5/22, Error ellipse: s-maj=5.2km s-min=3.8km az=74.0*
*NEIC **23** 11:01:31, 43°.80N×128°.41W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr-6.67; Mθθ0.16; Mφφ6.51; Mrθ0.76; Mθφ1.29; Mφr-5.49; Fault plane solution: M~o~8.71000×10^16^ NP1:φ~s~202.00000°, δ27.00000°, λ-69.00000°. NP2:φ~s~359.00000°, δ65.00000°, λ-100.00000°. Principal axes: T 8.6099, Plg19.0000°, Azm97.0000°; N 0.1997, Plg9.0000°, Azm4.0000°; P -8.8096, Plg68.0000°, Azm250.0000°;*
ISC 23 11:01:25.3±0.7, 43°.82N±0°.03×128°.55W±0°.04, h15km±4km, n1032, σ1s44/1014, mb5.3/217, MS4.7/106, 7C-29D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
J20D	**J20D**	**1.17**	**62**	P	Pn	11 01 42.1	-4.7
J20D				S	**Sn**	**11 02 03.2**	**+0.9**
G37D	**G37D**	**1.50**	**142**	P	Pn	11 01 45.0	-6.4
G37D				S	**Sn**	**11 02 10.5**	**0.0**
J28D	**J28D**	**1.57**	**39**	P	**Pn**	**11 01 50.0**	**-2.2**
J28D				S	**Sn**	**11 02 09.3**	**-2.9**
J11D	**J11D**	**1.60**	**99**	P	**Pn**	**11 01 48.9**	**-3.9**
J19D	**J19D**	**1.68**	**77**	P	**Pn**	**11 01 52.9**	**-1.0**
J19D				S	**Sn**	**11 02 12.1**	**-2.8**
G29D	**G29D**	**1.75**	**156**	P	Pn	11 01 48.3	-6.4
G29D				S	**Sn**	**11 02 08.7**	**-7.8**
G36D	**G36D**	**1.82**	**138**	S	**Sn**	**11 02 14.9**	**-3.3**
G36D				P	Pn	11 01 46.6	-9.0
J27D	**J27D**	**1.91**	**57**	P	**Pn**	**11 01 55.1**	**-1.8**
J27D				S	**Sn**	**11 02 18.9**	**-1.7**
G35D	**G35D**	**2.02**	**128**	P	Pn	11 01 52.3	-6.2
G35D				S	**Sn**	**11 02 19.4**	**-3.8**
G22D	**G22D**	**2.42**	**171**	S	**Sn**	**11 02 28.8**	**-4.3**
G22D				P	**Pb**	**11 02 06.4**	**-1.9**
G20D	**G20D**	**2.67**	**152**	S	**Sn**	**11 02 38.1**	**-1.4**
G20D				P	**Pn**	**11 02 05.9**	**-1.6**
G21D	**G21D**	**2.82**	**163**	S	**Sn**	**11 02 42.4**	**-0.5**
G21D				P	**Pn**	**11 02 08.4**	**-1.0**
G13D	**G13D**	**3.10**	**171**	S	**Sb**	**11 02 59.0**	**+1.5**
KEBM	**Edson Butte**	**3.21**	**106**		**Pn**	**11 02 11.5**	**-3.9**
KEBM					**Sn**	**11 02 49.5**	**-4.0**
I02D	**Swisshome**	**3.41**	**84**	P	**Pn**	**11 02 14.9**	**-3.0**
	baz=267						
I02D				S	**Sn**	**11 02 54.8**	**-3.2**
	baz=267						
J01E	**Myrtle Point**	**3.42**	**100**	P	**Pn**	**11 02 15.0**	**-3.1**
	baz=282,SNR=9.6						
J01E				S	**Sn**	**11 02 56.7**	**-1.8**
	baz=282						
KBO	**Bosley Butte**	**3.55**	**115**		**Pn**	**11 02 17.1**	**-2.9**
G05D7	**G05D7**	**3.71**	**171**	S	**Sg**	**11 03 26.1**	**+1.6**
K02D	**Willamette Mer**	**3.74**	**106**	P	**Pn**	**11 02 19.0**	**-3.6**
	baz=289,SNR=9.4						
K02D				S	**Sn**	**11 03 02.8**	**-3.6**
	baz=289						
G10D	**G10D**	**3.76**	**143**	S	**Sn**	**11 03 11.4**	**+5.3**
G10D				P	**Pn**	**11 02 26.2**	**+3.8**
I03D	**Drain, OR**	**3.77**	**90**	P	**Pn**	**11 02 20.0**	**-2.8**
	baz=274,SNR=77						
I03D				S	**Sn**	**11 03 04.9**	**-2.0**
	baz=274						
G04D	**G04D**	**3.89**	**160**	S	**Sb**	**11 03 20.5**	**+0.5**
L02E	**Cave Junction**	**3.99**	**113**	P	**Pn**	**11 02 23.3**	**-2.7**
	baz=296						
L02E				S	**Sn**	**11 03 09.8**	**-2.7**
	baz=296						
G03D	**McMinnville, O**	**4.03**	**68**	P	**Pn**	**11 02 24.8**	**-1.6**
	baz=252,SNR=12						
KRMB	**Red Mountain**	**4.12**	**122**		**Pn**	**11 02 24.9**	**-3.0**
G03D7	**G03D7**	**4.16**	**154**	S	**Sn**	**11 03 21.6**	**+5.7**
FS44D	**FS44D**	**4.18**	**136**	S	**Sb**	**11 03 33.0**	**+4.2**
FS44D				P	**Pn**	**11 02 31.9**	**+3.4**
H04D	**Lebanon**	**4.24**	**78**	P	**Pn**	**11 02 27.8**	**-1.6**
	baz=262,SNR=14						
H04D				S	**Sn**	**11 03 17.2**	**-1.4**
	baz=262						
G09D	**G09D**	**4.24**	**137**	S	**Sb**	**11 03 28.4**	**-2.1**
G09D				P	**Pn**	**11 02 30.7**	**+1.4**
HUMO	**Hull Mountain**	**4.26**	**105**		**Pn**	**11 02 27.4**	**-2.4**
HUMO				Sn	**Sn**	**11 03 16.5**	**-2.8**
FS16D	**FS16D**	**4.33**	**138**	S	**Sb**	**11 03 36.1**	**+3.1**
FS13D	**FS13D**	**4.34**	**139**	S	**Sb**	**11 03 36.1**	**+3.1**
FS13D				P	Pn	11 02 35.8	+5.4
FS09D	**FS09D**	**4.38**	**139**	S	**Sb**	**11 03 29.5**	**-4.8**
FS09D				P	**Pn**	**11 02 30.4**	**-0.7**
FS06D	**FS06D**	**4.43**	**140**	P	**Pn**	**11 02 32.4**	**+0.7**
FS06D				S	**Sb**	**11 03 36.9**	**+1.0**
FS10D	**FS10D**	**4.43**	**138**	S	**Sb**	**11 03 40.8**	**+4.8**
FS10D				P	Pn	11 02 36.6	+4.7
I04A	**Tendick Farm,**	**4.44**	**88**	P	**Pn**	**11 02 30.8**	**-1.4**
	baz=272,SNR=76						
E03A	**Lebam**	**4.45**	**51**		**Pn**	**11 02 30.8**	**-1.5**
JCC	**Jacoby Creek,**	**4.50**	**130**		**Pn**	**11 02 31.7**	**-1.2**
FS07D	**FS07D**	**4.53**	**139**	S	**Sb**	**11 03 42.5**	**+3.8**
FS07D				P	**Pn**	**11 02 35.6**	**+2.4**
F04D	**Rainier, OR**	**4.53**	**58**	P	**Pn**	**11 02 31.9**	**-1.5**
	baz=242,SNR=19						
F04D				S	**Sn**	**11 03 24.5**	**-1.4**
	baz=242						
KHMM	**Horse Mountain**	**4.63**	**128**		**Pn**	**11 02 34.1**	**-0.8**
J04D	**Umpqua Nationa**	**4.72**	**95**	P	**Pn**	**11 02 35.8**	**-0.4**
	baz=279,SNR=53						
YBH	**Yreka Blue Hor**	**4.78**	**114**	Pn	**Pn**	**11 02 35.3**	**-1.5**
	2.0nm,0.3s,baz=292,slow=14,SNR=56						
YBH				Sn	**Sn**	**11 03 30.3**	**-1.7**
	0.9nm,0.3s,baz=120,slow=13,SNR=3.1						
F04A	**Amboy**	**4.84**	**62**	Pn	**Pn**	**11 02 36.7**	**-1.0**
NLWA	**Neilton Lookou**	**4.85**	**41**		**Pn**	**11 02 36.8**	**-1.0**
L04D	**Klamath Falls**	**4.85**	**107**	P	**Pn**	**11 02 37.0**	**-0.9**
	baz=291,SNR=21						
L04D				S	**Sn**	**11 03 33.3**	**-0.6**
	baz=291						
M02C	**Callahan**	**4.85**	**118**	P	**Pn**	**11 02 36.9**	**-1.0**
	baz=302						
E04D	**Cinebar**	**5.03**	**55**	P	**Pn**	**11 02 39.0**	**-1.3**
	baz=239,SNR=15						
KMRM	**Mail Ridge**	**5.09**	**133**		**Pn**	**11 02 40.4**	**-0.8**
K04D	**Chiloquin, OR**	**5.11**	**101**	P	**Pn**	**11 02 40.4**	**-1.0**
	baz=286,SNR=12						
N02D	**Trinity Center**	**5.18**	**121**	P	**Pn**	**11 02 42.5**	**+0.1**
	baz=305						
I05D	**Terrebonne, OR**	**5.22**	**82**	P	**Pn**	**11 02 41.3**	**-1.6**
	baz=267,SNR=24						
D04E	**Lakebay**	**5.27**	**48**	P	**Pn**	**11 02 43.2**	**-0.3**
	baz=232						
D03D	**Eldon**	**5.33**	**44**	P	**Pn**	**11 02 43.8**	**-0.6**
	baz=228,SNR=21						
D03D				S	**Sn**	**11 03 44.5**	**-1.0**
	baz=228						
M04C	**Macdoel**	**5.34**	**110**	P	**Pn**	**11 02 45.5**	**+0.9**
	baz=295						
J05D	**Fort Rock, OR**	**5.34**	**93**	P	**Pn**	**11 02 43.0**	**-1.7**
	baz=278,SNR=32						
G05D	**Wamic, OR**	**5.36**	**72**	P	**Pn**	**11 02 44.2**	**-0.6**
	baz=257,SNR=50						
F05D	**White Salmon**	**5.44**	**65**	P	**Pn

NEW	Newport	9.10	57	P		Pn	11 03 35.1	-1.1
NEW	Newport	9.10	57	P		Pn	11 03 34.7	-1.5
	baz=245,SNR=8.0							
NEW	Newport	9.10	57	Pn		Pn	11 03 35.0	-1.1
RYN	Ryan	9.16	121			Pn	11 03 38.1	+1.0
KVN	Kaiserville	9.18	118	P		Pn	11 03 39.1	+1.7
KVN	Kaiserville	9.18	118	Pn		Pn	11 03 39.1	+1.7
MFID	Camas Ranch	9.24	88	Pn		Pn	11 03 37.7	-0.4
LHV	Little Huntoon	9.41	123			Pn	11 03 41.0	+0.7
NVAR	Mina Array Bea	9.42	121	Pn		Pn	11 03 42.2	+1.6
	0.6nm,0.3s,baz=293,slow=14,SNR=71							
NVAR				LR		LR	11 07 18.5	
	comp=Z,5µm,20.2s,baz=280,slow=38							
NVAR	Mina Array Bea	9.42	121			Pn	11 03 41.9	+1.2
MDPB	Devils Postpil	9.47	128			Pn	11 03 43.1	+1.6
NV11	Mina Array Sit	9.51	121			Pn	11 03 43.1	+1.2
OMMB	Old Mammoth Mi	9.53	127	Pn		Pn	11 03 44.1	+1.8
MLAC	Mammoth, Mammo	9.62	127	P		Pn	11 03 46.3	+2.9
	baz=313							
HLID	Hailey	10.24	87	P		Pn	11 03 52.4	+0.4
	baz=276,SNR=14							
HLID	Hailey	10.24	87	Pn		Pn	11 03 52.7	+0.8
VOG	Valley Oaks Go	10.26	134	P		Pn	11 03 54.0	+1.9
	baz=320							
TPH	Tonopah	10.31	120	P		Pn	11 03 55.2	+2.3
TPH	Tonopah	10.31	120			Pn	11 03 55.2	+2.3
ELK	Elko	10.33	103	Pn		Pn	11 03 54.4	+1.2
	0.3nm,0.3s,baz=292,slow=12,SNR=20							
ELK				LR		LR	11 07 57.6	
	comp=Z,5µm,19.8s,baz=307,slow=38							
ELK	Elko	10.33	103	P		Pn	11 03 54.2	+1.0
ELK	Elko	10.33	103	Pn		Pn	11 03 54.2	+1.0
JTMT	Jette	10.71	64			Pn	11 03 59.3	+1.1
MSO	Missoula	10.71	69	P		Pn	11 03 57.7	-0.6
	baz=259,SNR=35							
MSO	Missoula	10.71	69	Pn		Pn	11 03 58.2	-0.1
CWC	Cottonwood Cre	10.88	129	P		Pn	11 04 03.8	+3.1
	baz=316							
BCYI	Bear Canyon	10.91	82			Pn	11 04 01.3	+0.2
R11A	Troy Canyon, C	11.20	115	P		Pn	11 04 07.4	+2.4
	baz=303,SNR=30							
R11A	Troy Canyon, C	11.20	115	Pn		Pn	11 04 05.8	+0.8
ISA	Isabella, Lake	11.24	133	P		Pn	11 04 06.7	+1.2
ISA	Isabella, Lake	11.24	133	P		Pn	11 04 06.8	+1.3
	baz=320,SNR=18							
ISA	Isabella, Lake	11.24	133	Pn		Pn	11 04 06.7	+1.2
MCMT	McKenzie Canyo	11.29	79			Pn	11 04 07.3	+0.9
WALA	Waterton Lakes	11.37	57			Pn	11 04 07.2	0.0
ARVC	Arvin	11.47	136	P		Pn	11 04 10.3	+1.7
	baz=322,SNR=22							
DLMT	Dillon	11.48	77			Pn	11 04 09.2	+0.3
MPMC	Manual Prospec	11.49	129	P		Pn	11 04 11.9	+2.9
	baz=316,SNR=16							
FURC	Furnace Creek,	11.56	125	P		Pn	11 04 13.3	+3.5
	baz=313,SNR=29							
LRM	Limekiln Ridge	11.61	74			Pn	11 04 10.2	-0.5
TPNV	Topopah Spring	11.61	122	P		Pn	11 04 12.2	+1.5
TPNV	Topopah Spring	11.61	122	P		Pn	11 04 13.3	+2.6
	baz=310,SNR=25							
TPNV	Topopah Spring	11.61	122	Pn		Pn	11 04 12.2	+1.5
SPR3	Spring Creek 3	11.71	109	Pn		Pn	11 04 14.2	+2.0
HVU	Hansel Valley	11.77	95	P		Pn	11 04 13.2	+0.4
HVU	Hansel Valley	11.77	95			Pn	11 04 13.2	+0.4
LRMC	Laurel Mtn Rad	11.80	131	P		Pn	11 04 17.4	+4.1
	baz=318							
CRAG	Craig	12.03	347			Pn	11 04 18.3	+2.3
PRN	Pahroc Range	12.09	117	Pn		Pn	11 04 18.6	+1.5
EDW2	Edwards Air Fo	12.09	134	P		Pn	11 04 18.8	+1.7
	baz=321,SNR=9.1							
HRY	Holter Researc	12.13	70			Pn	11 04 18.3	+0.6
BOZ	Bozeman (W)	12.17	76	P		Pn	11 04 19.1	+0.8
BOZ	Bozeman (W)	12.17	76	P		Pn	11 04 19.4	+1.1
	baz=268,SNR=19							
BOZ	Bozeman (W)	12.17	76			Pn	11 04 19.1	+0.8
DUG	Dugway, Tooele	12.25	102	P		Pn	11 04 19.9	+0.5
DUG	Dugway, Tooele	12.25	102	P		Pn	11 04 19.8	+0.4
	baz=292,SNR=15							
DUG	Dugway, Tooele	12.25	102	Pn		Pn	11 04 19.9	+0.5
PSUT	Pine Spring	12.26	111			Pn	11 04 21.0	+1.4
SHOC	Shoshone, Teco	12.30	126	P		Pn	11 04 23.0	+3.1
	baz=314							
QLMT	Earthquake Lak	12.30	79			Pn	11 04 21.6	+1.5
GSC	Goldstone, Bar	12.42	129	P		Pn	11 04 23.6	+2.0
GSC	Goldstone, Bar	12.42	129	P		Pn	11 04 24.3	+2.7
	baz=317,SNR=15							
GSC	Goldstone, Bar	12.42	129	Pn		Pn	11 04 23.6	+2.0
YHB	Horse Butte	12.47	80			Pn	11 04 22.2	-0.2
YHL	Hebgen Lake	12.48	79			Pn	11 04 22.6	-0.1
SHPR	Sheep Range	12.57	121	Pn		Pn	11 04 25.4	+1.6
YMR	Madison River	12.64	80			Pn	11 04 26.4	+1.7
IMW	Indian Meadow	12.71	84	Pn		Pn	11 04 27.3	+1.5
YHH	Holmes Hill	12.72	80	Pn		Pn	11 04 25.8	-0.1
TPAW	Teton Pass	12.75	85			Pn	11 04 27.9	+1.6
AHID	Auburn Hatcher	12.76	89			Pn	11 04 26.8	+0.5
BFSC	Mount Baldy Ra	12.76	135	P		Pn	11 04 28.7	+2.3
	baz=322,SNR=10							
YPP	Pitchstone Pla	12.78	82			Pn	11 04 27.8	+1.1
TUQ	Turquoise Moun	12.83	126	P		Pn	11 04 30.3	+3.0
	baz=315							
REDW	Red Top Meadow	12.84	86			Pn	11 04 28.4	+0.9
YNR	Norris Junctio	12.84	80			Pn	11 04 29.7	+2.2
WRAK	Wrangell Islan	12.84	350			Pn	11 04 27.2	+0.1
FLWY	Flagg Ranch	12.87	83			Pn	11 04 30.7	+2.9
SNOW	Snow King Moun	12.90	85			Pn	11 04 30.6	+2.3
H17A	Grant Village	12.93	81	P		Pn	11 04 31.0	+2.3
	baz=274,SNR=7.9							
H17A	Grant Village	12.93	81			Pn	11 04 30.7	+1.9
TCUT	Toone Canyon	12.94	96			Pn	11 04 30.0	+1.1
YUF	Upper Falls	12.96	80			Pn	11 04 32.0	+2.9
HEC	Hector Ludlow	13.03	129	P		Pn	11 04 31.5	+1.6
	baz=317,SNR=52							
JLU	Jordanelle	13.08	98			Pn	11 04 31.7	+0.9
CCUT	Cedar City	13.11	113	Pn		Pn	11 04 33.6	+2.4
MPU	Maple Canyon	13.16	101			Pn	11 04 32.4	+0.6
TCRU	Three Creeks R	13.19	108			Pn	11 04 34.2	+2.0
YMP	Mirror Lake Pl	13.21	80			Pn	11 04 33.8	+1.1
SZCU	Shurtz Canyon	13.27	113			Pn	11 04 36.3	+3.0
YNE	Yellowstone No	13.31	78			Pn	11 04 34.6	+0.7
MSU	Marysvale	13.42	108	P		Pn	11 04 38.1	+2.7
MSU	Marysvale	13.42	108	Pn		Pn	11 04 38.1	+2.7
GMRC	Granite Mounta	13.44	128	P		Pn	11 04 37.0	+1.4
	baz=316,SNR=35							
LCMT	Little Creek M	13.49	115			Pn	11 04 38.6	+2.3
MURC	Murrieta	13.50	135	P		Pn	11 04 37.6	+1.2
	baz=322,SNR=6.4							
GCMT	Greycliff	13.55	75			Pn	11 04 39.2	+2.1
EGMT	Eagleton	13.73	66	P		Pn	11 04 39.6	+0.1
	baz=259							
EGMT	Eagleton	13.73	66	Pn		Pn	11 04 40.4	+0.9
KNB	Kanab	13.76	114	P		Pn	11 04 42.6	+2.5
KNB	Kanab	13.76	114			Pn	11 04 42.6	+2.5
BELC	Belle Mtn. Jos	13.83	131	P		Pn	11 04 43.7	+2.8
	baz=319							
RLMT	Red Lodge	13.83	78	P		Pn	11 04 42.5	+1.5
	baz=271							
RLMT	Red Lodge	13.83	78	Pn		Pn	11 04 42.1	+1.1
BW06	Boulder Array	13.87	88	P		Pn	11 04 42.8	+1.2
	baz=281,SNR=11							
BW06	Boulder Array	13.87	88			Pn	11 04 42.0	+0.3
PD31	Pinedale Array	13.87	88			Pn	11 04 42.2	+0.6
PDAR	Pinedale Array	13.87	88	Pn		Pn	11 04 43.0	+1.4
	0.1nm,0.3s,baz=284,slow=12,SNR=29							
PDAR				LR		LR	11 10 13.8	
	comp=Z,5µm,18.6s,baz=274,slow=38							
PDAR	Pinedale Array	13.87	88	Pn		Pn	11 04 42.7	+1.1
PFO	Pinyon Flats O	13.88	133	Pn		Pn	11 04 43.5	+2.0
	0.1nm,0.3s,baz=308,slow=9.4,SNR=6.6							
PFO				LR		LR	11 09 43.1	
	comp=Z,2µm,19.0s,baz=313,slow=36							
PFO	Pinyon Flats O	13.88	133	*l,e*	P	Pn	11 04 43.3	+1.7
PFO	Pinyon Flats O	13.88	133	P		Pn	11 04 43.8	+2.3
	baz=321,SNR=5.5							
PFO	Pinyon Flats O	13.88	133			Pn	11 04 43.1	+1.5
P17A	Butcher Ranch,	14.00	102			Pn	11 04 44.2	+0.9
NEE2	Needles Airpor	14.06	125	P		Pn	11 04 46.7	+2.8
	baz=314							
109C	Camp Elliot, M	14.12	137	P		Pn	11 04 45.3	+0.6
	baz=324,SNR=6.1							
109C	Camp Elliot, M	14.12	137	Pn		Pn	11 04 45.6	+0.8
IRM	Iron Mountain	14.19	128	P		Pn	11 04 47.3	+1.5
	baz=317,SNR=12							
W13A	Hualapai Mount	14.27	123	Pn		Pn	11 04 48.5	+1.5
SRU	San Rafael Swe	14.30	103	P		Pn	11 04 49.4	+1.9
SRU	San Rafael Swe	14.30	103			Pn	11 04 49.4	+1.9
BC3	Big Chuckawall	14.38	130	P		Pn	11 04 50.0	+1.5
	baz=319,SNR=21							
U15A	North Rim	14.45	115			Pn	11 04 51.3	+1.7
MONP2	Monument Peak	14.46	135	P		Pn	11 04 50.6	+1.0
	baz=323,SNR=13							
BAR	Barrett	14.50	136	Pn		Pn	11 04 50.1	0.0
TKX	Tecate	14.62	136			Pn	11 04 50.9	-0.8
PDMCI	Parker Dam,Lak	14.66	126	P		Pn	11 04 53.9	+1.7
	baz=315,SNR=17							
DLBC	Dease Lake	14.66	357	Pn		Pn	11 04 55.7	+3.5
	0.1nm,0.3s,baz=191,slow=9.0,SNR=8.8							
DLBC				LR		LR	11 09 45.8	
	comp=Z,484nm,18.4s,baz=174,slow=34							
DLBC	Dease Lake	14.66	357	Pn		Pn	11 04 53.1	+1.0
SWSC	Sam W. Stewart	14.74	133	P		Pn	11 04 54.0	+0.8
	baz=321,SNR=7.8							
CBX	Cerro Bola	14.80	137			Pn	11 04 55.5	+1.3
IKP	In-Ko-Pah, Jac	14.81	135	P		Pn	11 04 55.2	+0.9
	baz=322,SNR=5.9							
CCX	Cicese	15.16	138			Pn	11 04 58.6	-0.3
CCX				lAmb		lAmb	11 05 06.6	
	comp=Z,210nm,1.5s							
GLA	Glamis	15.18	130	P		Pn	11 05 00.1	+0.9
GLA				pmax		pmax		
	comp=Z,168nm,1.3s							
GLA	Glamis	15.18	130	P		Pn	11 05 00.2	+0.9
	baz=319,SNR=8.6							
GLA	Glamis	15.18	130			Pn	11 05 00.1	+0.9
GLA				lAmb		lAmb	11 05 12.0	
	comp=Z,168nm,1.3s							
BESE	Bessie Mountai	15.29	347	Pn		Pn	11 04 60.0	-0.5
BESE				lAmb		lAmb	11 05 23.2	
	comp=Z,170nm,1.4s							
ESJX	Sierra Juarez	15.40	136			Pn	11 05 02.3	0.0
ESJX				lAmb		lAmb	11 05 10.0	
	comp=Z,240nm,1.4s							
O20A	White River Ci	15.54	97	P		Pn	11 05 03.6	-0.4
	baz=290,SNR=27							
O20A	White River Ci	15.54	97			Pn	11 05 03.6	-0.4
O20A				lAmb		lAmb	11 05 17.8	
	comp=Z,230nm,1.2s							
WUAZ	Wupatki	15.59	116			Pn	11 05 05.1	+0.4
WUAZ				lAmb		lAmb	11 05 19.0	
	comp=Z,238nm,1.3s							
Y14A	Wickenburg	15.59	124			Pn	11 05 04.4	-0.2
PV23	Carpenter Ridg	15.65	103			Pn	11 05 06.1	+0.5
PV19	Morning Glory	15.74	104			Pn	11 05 06.6	-0.1
PV04	Paradox Valley	15.76	103			Pn	11 05 06.5	-0.3
PV17	East Wray Mesa	15.77	104			Pn	11 05 06.4	-0.6
PV16	Nyswonger Mesa	15.78	104			Pn	11 05 07.6	+0.3
RWWY	Rawlins	15.81	90			Pn	11 05 05.5	-2.2
RWWY				lAmb		lAmb	11 05 18.2	
	comp=Z,227nm,1.4s							
PV18	Skein Mesa, Pa	15.82	104			Pn	11 05 07.7	0.0
PV11	David Mesa, Pa	15.82	104			Pn	11 05 08.4	+0.7
PV07	Paradox Valley	15.92	103			Pn	11 05 08.1	-0.9
LAO	LASA Array	15.97	72			Pn	11 05 09.2	-0.3
PV15	Paradox Valley	16.08	103			Pn	11 05 10.7	-0.3
K22A	Casper	16.09	87	P		Pn	11 05 10.9	-0.2
	baz=282							
K22A	Casper	16.09	87	Pn		Pn	11 05 09.7	-1.5
PV01	Paradox Valley	16.11	104			Pn	11 05 12.3	+0.8
SKAG	Skagway	16.20	348			Pn	11 05 12.0	-0.2
X16A	Lo Mia Camp, P	16.23	120			Pn	11 05 13.4	+0.4
SPX	San Pedro Mart	16.43	137			Pn	11 05 15.2	-0.5
MVCO	Mesa Verde	16.59	107	P		Pn	11 05 18.8	+1.1
	baz=300,SNR=12							
MVCO	Mesa Verde	16.59	107	Pn		Pn	11 05 18.1	+0.5
SFX	San Felipe	16.74	135	Pn		Pn	11 05 18.4	-0.8
SMCO	Snowmass	16.80	99			Pn	11 05 19.7	-0.7
W18A	Petrified Fore	16.90	115	P		P	11 05 23.9	+0.4
	baz=307							
W18A	Petrified Fore	16.90	115			Pn	11 05 20.3	-1.2
W18A				lAmb		lAmb	11 05 33.5	
	comp=Z,282nm,1.4s							
N23A	Red Feather La	16.95	92	P		Pn	11 05 21.1	-1.0
	baz=287,SNR=54							
N23A	Red Feather La	16.95	92	Pn		Pn	11 05 20.9	-1.3
N23A				lAmb		lAmb	11 05 32.6	
	comp=Z,407nm,1.4s							
X18A	Snowflake	17.12	117	P		P	11 05 25.8	-0.1
214A	Organ Pipe Nat	17.13	128	P		P	11 05 25.4	-0.4
	baz=318,SNR=7.3							
214A	Organ Pipe Nat	17.13	128			Pn	11 05 24.5	+0.2
PHWY	Pilot Hill	17.19	90	P		Pn	11 05 23.5	-1.7
WHY	Whitehorse	17.29	349	P		P	11 05 27.5	-0.1
DGMT	Dagmar	17.47	66	P		Pn	11 05 28.2	-0.2
	baz=264							
DGMT	Dagmar	17.47	66	P		Pn	11 05 27.8	-0.6
S22A	4UR Ranch, Cre	17.51	103	P		Pn	11 05 30.0	+0.8
	baz=297,SNR=19							
S22A	4UR Ranch, Cre	17.51	103			Pn	11 05 29.9	+0.8
RSSD	Black Hills	17.63	80	P		Pn	11 05 31.1	+0.5
RSSD				pmax		pmax		
	comp=Z,140nm,1.2s							
RSSD	Black Hills	17.63	80	P		P	11 05 31.7	+0.1
	baz=278							
RSSD	Black Hills	17.63	80			Pn	11 05 31.1	+0.5
PCA	Pinnacle	17.78	341	P		Pn	11 05 32.5	+0.4
HYT	Haines Junctio	17.86	346			P	11 05 35.1	+1.3
TUC	Tucson	18.06	124	P		P	11 05 36.9	+0.7
TUC				pmax		pmax		
	comp=Z,123nm,1.4s							
TUC	Tucson	18.06	124	P		P	11 05 37.2	+1.0
	baz=315							
TUC	Tucson	18.06	124			P	11 05 36.9	+0.7
Q24A	Divide	18.19	97	P		Pn	11 05 37.7	0.0
	baz=293,SNR=17							
Q24A	Divide	18.19	97	P		Pn	11 05 37.2	-0.4
SDCO	Great Sand Dun	18.45	101	P		Pn	11 05 41.2	+0.5
	baz=296,SNR=88							
SDCO	Great Sand Dun	18.45	101	P		Pn	11 05 41.5	+0.7
SDCO				lAmb		lAmb	11 05 49.8	
	comp=Z,325nm,1.4s							
ANMO	Albuquerque	19.19	110	P		P	11 05 49.6	+0.8
	comp=Z,0.1nm,0.3s,baz=311,slow=11,SNR=20							
ANMO				LR		LR	11 13 37.1	
	comp=Z,6µm,19.0s,baz=310,slow=38							
ANMO	Albuquerque	19.19	110	*c i*	P	Pn	11 05 50.0	+0.3
ANMO				pmax		pmax		
	comp=Z,48nm,2.5s							
ANMO	Albuquerque	19.19	110	P		P	11 05 49.6	+0.8
	baz=304							
ANMO	Albuquerque	19.19	110	P		P	11 05 49.6	+0.8
Y22D	IRIS PASSCAL I	19.38	113	P		Pn	11 05 53.4	+1.4
	baz=307,SNR=7.0							
Y22D	IRIS PASSCAL I	19.38	113	P		Pn	11 05 53.2	+1.3
Y22D				lAmb		lAmb	11 06 00.6	
	comp=Z,211nm,1.3s							
T25A	Trinidad	19.50	102	P		Pn	11 05 54.0	+0.6
	baz=298,SNR=20							
T25A	Trinidad	19.50	102	P		Pn	11 05 53.3	-0.1
T25A				lAmb		lAmb	11 06 01.1	
	comp=Z,209nm,1.2s							
BNM	Barren Site	19.54	112			Pn	11 05 54.9	+1.0
319A	Douglas	19.62	123	P		Pn	11 05 55.5	+0.8
319A				lAmb		lAmb	11 06 06.8	
	comp=Z,388nm,1.5s							
121A	Cookes Peak, D	19.78	118	P		Pn	11 05 56.3	-0.3
	baz=311,SNR=11							
121A	Cookes Peak, D	19.78	118			Pn	11 05 56.8	+0.1
121A				lAmb		lAmb	11 06 11.6	
	comp=Z,273nm,1.5s							
E28A	Huff	19.78	72	P		Pn	11 05 57.0	+0.6
KSCO	Kaye Shedlock'	19.99	95	P		Pn	11 05 59.3	+0.2
	baz=292							
KSCO	Kaye Shedlock'	19.99	95			P	11 05 58.1	+0.8
KSCO				lAmb		lAmb	11 06 06.7	
	comp=Z,340nm,1.4s							
N25K	Chitina, Valde	20.19	337	P		Pn	11 06 01.3	+0.1
	baz=145							
N25K	Chitina, Valde	20.19	337			P	11 05 59.7	+0.4
FFC	Flin Flon	20.35	48	P		P	11 06 01.7	+0.7
FFC				pmax		pmax		
	comp=Z,102nm,0.9s							
FFC	Flin Flon	20.35	48	P		P	11 06 01.7	+0.7
FFC				lAmb		lAmb	11 06 09.1	
	comp=Z,102nm,0.9s							
HSIG		20.40	131	P		P	11 06 02.3	+0.5
YKA	Yellowknife Ar	20.40	19	P		P	11 06 01.8	+0.3
	comp=Z,43nm,0.9s,baz=207,slow=10,SNR=33							
KDAK	Kodiak Island	20.49	321	lAMs_20		lAMs_20	11 11 44.0	
	comp=Z,3µm,20.0s							
MDND	Maddock	20.51	69	P		Pn	11 06 05.6	+0.7
	baz=269,SNR=8.7							
MDND	Maddock	20.51	69	P		P	11 06 04.2	+1.4
MDND				lAmb		lAmb	11 06 14.6	
	comp=Z,311nm,1.4s							
OHAK	Old Harbor	20.52	319	P		Pn	11 06 05.3	+0.3
BCAR	Beaver Creek A	20.75	343	P		P	11 06 06.8	+1.5
O22K	Cooper Landing	20.98	330	P		Pn	11 06 14.4	+4.1
	baz=133							
M24K	Tolsona, Glenn	21.04	337	P		P	11 06 11.4	+2.9
	baz=142,SNR=13							
M24K	Tolsona, Glenn	21.04	337	P		P	11 06 10.1	+1.7
M24K				lAmb		lAmb	11 06 25.7	
	comp=Z,251nm,1.4s							
L26K	Log Cabin Wild	21.06	341	P		P	11 06 11.2	+2.5
	baz=149,SNR=43							
MENT	Mentasta	21.07	341			P	11 06 11.0	+2.2
MENT				lAmb		lAmb	11 06 15.3	
	comp=Z,138nm,1.1s							
EPT	El Paso	21.09	117	lAMs_20		lAMs_20	11 14 35.5	
	comp=Z,5µm,19.0s							
SUSD	Miller	21.20	78	P		P	11 06 15.3	+5.0
	baz=279							
SUSD	Miller	21.20	78	P		P	11 06 11.2	+0.9
DAWY	Dawson	21.20	347	P		P	11 06 11.8	+1.5
PAX	Paxson	21.54	339	P		P	11 06 14.8	+0.9
PAX				pmax		pmax		
	comp=Z,94nm,1.4s							
PAX	Paxson	21.54	339	P		P	11 06 14.8	+0.9
PMR	Palmer	21.56	333	P		P	11 06 15.7	+1.7
PMR				pmax		pmax		
	comp=Z,143nm,1.3s							
PMR	Palmer	21.56	333	P		P	11 06 15.7	+1.7
PMR				lAmb		lAmb	11 06 17.2	
	comp=Z,143nm,1.3s							
GHO	Glory Hole Cre	21.62	333	P		P	11 06 16.4	+1.6
K27K	Chicken	21.66	344	P		P	11 06 17.1	+2.0
	baz=153							
K27K	Chicken	21.66	344	P		P	11 06 17.2	+2.0
DOT	Dot Lake	21.76	341	P		P	11 06 17.7	+1.5
DOT				lAmb		lAmb	11 06 19.6	
	comp=Z,132nm,1.4s							
MNTX	Cornudas Mount	21.87	116	P		P	11 06 19.1	+1.5
	baz=310,SNR=18							
MNTX	Cornudas Mount	21.87	116	P		P	11 06 18.9	+1.3
MNTX				lAMs_20		lAMs_20	11 15 10.0	
	comp=Z,5µm,19.0s							
CPRX	Cap Rock	22.05	111	P		P	11 06 22.6	+2.9
RSO	Redoubt South	22.11	327	P		P	11 06 20.9	+0.7
CBKS	Cedar Bluff	22.15	93	P		P	11 06 21.0	+0.4
CBKS				pmax		pmax		
	comp=Z,204nm,1.4s							
CBKS				MLR		MLR		
	comp=Z,6µm,18.0s							
CBKS	Cedar Bluff	22.15	93	P		P	11 06 20.9	+0.3
	baz=292,SNR=15							
CBKS	Cedar Bluff	22.15	93	P		P	11 06 21.0	+0.4
CBKS				lAmb		lAmb	11 06 31.5	
	comp=Z,204nm,1.4s							
EGAK	Eagle	22.16	346	P		P	11 06 21.1	+0.7
GDL2	Guadalupe Moun	22.22	113	P		P	11 06 23.2	+1.7
MSTX	Muleshoe	22.26	107	P		P	11 06 22.4	+0.5
	baz=304,SNR=8.1							
MSTX	Muleshoe	22.26	107	P		P	11 06 22.2	+0.3
MSTX				lAmb		lAmb	11 06 30.9	
	comp=Z,95nm,1.1s							
D32A	Dogwood Acres,	22.27	70	P		P	11 06 22.2	+0.5
D32A				lAmb		lAmb	11 06 29.9	
	comp=Z,167nm,1.1s							
BGNE	Belgrade	22.44	86	P		P	11 06 24.8	+1.1
BGNE				lAmb		lAmb	11 06 34.3	
	comp=Z,118nm,1.1s							
AMTX	Amarillo	22.53	104	P		P	11 06 25.2	+0.5
	baz=302							
AMTX	Amarillo	22.53	104	P		P	11 06 25.3	+0.5
AMTX				lAmb		lAmb	11 06 32.9	
	comp=Z,226nm,1.2s							
F33A	5 Mile Ranch,	22.88	74	P		P	11 06 29.4	+1.2
ECSD	EROS Data Cent	22.99	79	P		P	11 06 29.3	-0.1
	baz=281,SNR=15							
ECSD	EROS Data Cent	22.99	79	P		P	11 06 29.8	+0.5
ECSD				lAmb		lAmb	11 06 36.9	
	comp=Z,169nm,1.1s							
AGMN	Agassiz Nation	23.01	67	P		P	11 06 29.0	-0.6
	baz=271,SNR=18							
AGMN	Agassiz Nation	23.01	67	P		P	11 06 29.8	+0.2
R32A	Long Quarter,	23.04	93	P		P	11 06 30.4	+0.4
ULM	Lac du Bonnet	23.05	62	P		P	11 06 29.0	-0.9
	comp=Z,46nm,1.1s,baz=278

comp=Z,3µm,19.0s
WMOK Wichita Mounta 24.65 101 P P 11 06 46.5 +1.1
baz=301,SNR=60
WMOK Wichita Mounta 24.65 101 P P 11 06 47.2 +1.8
WMOK Wichita Mounta 24.65 101 IAMs_20 IAMs_20 11 16 53.7
comp=Z,3µm,19.0s
INK Inuvik 24.68 356 P P 11 06 45.4 +0.1
comp=Z,37nm,1.3s,baz=168,slow=10.0,SNR=18
INK LR LR 11 15 45.3
comp=Z,263nm,21.6s,baz=156,slow=35
INK Inuvik 24.68 356 P P 11 06 45.2 -0.1
INK pmax pmax
comp=Z,90nm,1.5s
INK Inuvik 24.68 356 P P 11 06 45.2 -0.1
INK IAmb IAmb 11 06 48.1
comp=Z,90nm,1.5s
LPIG La Paz 24.71 137 LR LR 11 16 40.9
comp=Z,791nm,18.3s,baz=328,slow=37
F36A Milaca 24.80 73 P P 11 06 47.8 +1.1
F36A IAmb IAmb 11 06 54.9
comp=Z,96nm,1.4s
TTA Tatalina 24.86 330 P P 11 06 48.0 +0.9
TTA pmax pmax
comp=Z,79nm,1.0s
TTA Tatalina 24.86 330 P P 11 06 48.0 +0.9
TTA IAmb IAmb 11 06 50.0
comp=Z,79nm,1.0s
BCOK Bluff Creek, N 25.04 98 P P 11 06 48.8 -0.1
OK029 Liberty Lake 25.08 98 P P 11 06 50.1 +0.9
OK029 IAMs_20 IAMs_20 11 16 57.0
comp=Z,3µm,21.0s
BMAR Burnt Mountain 25.17 345 P P 11 06 50.0 +0.2
ABTX Abilene, Hawle 25.18 107 P P 11 06 50.7 +0.4
baz=305,SNR=5.5
ABTX Abilene, Hawle 25.18 107 P P 11 06 51.8 +1.5
ABTX IAmb IAmb 11 07 09.8
comp=Z,88nm,1.4s
I37A Lemond, Waseca 25.20 77 P P 11 06 51.2 +0.9
I37A IAmb IAmb 11 07 10.3
comp=Z,126nm,1.1s
SLBS Sierra La Lagu 25.24 137 P P 11 06 53.4 +2.5
T35A Sooner Cattle 25.25 95 P P 11 06 51.2 +0.4
OKCFA Oklahoma City 25.27 99 P P 11 06 51.8 +0.9
OKCFA IAMs_20 IAMs_20 11 16 51.9
comp=Z,2µm,21.0s
OK025 Westminster Rd 25.27 98 P P 11 06 51.6 +0.6
OK025 IAMs_20 IAMs_20 11 17 02.9
comp=Z,3µm,22.0s
OKCSW OKLAHOMA CITY 25.28 99 P P 11 06 52.4 +1.3
FNO Franklin 25.38 99 P P 11 06 52.8 +0.9
SPMN Marine on St. 25.40 74 P P 11 06 53.0 +0.9
baz=280
SPMN Marine on St. 25.40 74 P P 11 06 53.9 +1.9
SPMN IAmb IAmb 11 07 12.8
comp=Z,88nm,1.1s
QUOK Quay 25.44 97 P P 11 06 52.7 +0.2
OK031 S. Brethren Rd 25.45 97 P P 11 06 53.7 +1.1
OK030 Cody Creek RV 25.50 97 P P 11 06 53.2 +0.2
OK030 IAMs_20 IAMs_20 11 17 19.1
comp=Z,4µm,20.0s
C36M Paulatuk 25.69 4 P P 11 06 54.4 0.0
baz=188,SNR=13
C36M Paulatuk 25.69 4 P P 11 06 54.4 0.0
W35A Tecumseh 25.81 99 P P 11 06 56.7 +0.9
SCIA State Center 25.85 82 P P 11 06 57.8 +1.6
baz=286
FCC Fort Churchill 25.85 43 P P 11 06 57.4 +1.4
FCC pmax pmax
comp=Z,145nm,1.5s
FCC Fort Churchill 25.85 43 P P 11 06 57.4 +1.4
FCC IAmb IAmb 11 07 06.4
comp=Z,145nm,1.4s
EYMN Ely 25.95 68 P P 11 06 57.1 0.0
baz=275
EYMN Ely 25.95 68 P P 11 06 58.9 +1.9
EYMN IAmb IAmb 11 07 04.9
comp=Z,64nm,1.1s
E38A The Farm, Brul 26.05 71 P P 11 06 59.4 +1.4
E38A IAmb IAmb 11 07 23.2
comp=Z,109nm,1.5s
IMAR Indian Mountai 26.16 337 P P 11 07 00.1 +1.4
N38A Joes South For 26.17 84 P P 11 07 00.2 +1.1
N38A IAmb IAmb 11 07 26.4
comp=Z,89nm,1.3s
COLD Coldfoot 26.18 341 P P 11 07 00.3 +1.4
TUL1 Leonard 26.22 96 P P 11 07 00.0 +0.4
baz=298,SNR=11
TUL1 Leonard 26.22 96 P P 11 06 59.5 -0.1
P38A Dawn 26.34 87 P P 11 07 00.6 -0.1
P38A IAmb IAmb 11 07 17.7
comp=Z,191nm,1.4s
JCT Junction City 26.35 111 P P 11 07 00.9 +0.1
JCT pmax pmax
comp=Z,93nm,1.4s
JCT MLR MLR
comp=Z,3µm,22.0s
JCT Junction City 26.35 111 P P 11 07 01.1 +0.2
baz=308,SNR=13
JCT Junction City 26.35 111 P P 11 07 00.9 +0.1
JCT IAmb IAmb 11 07 08.5
comp=Z,93nm,1.4s
JCT IAMs_20 IAMs_20 11 17 44.6
comp=Z,3µm,22.0s
Z35A Perchaven, San 26.47 103 P P 11 07 02.5 +0.6
UNV Unalaska Valle 26.62 306 P P 11 07 02.7 -0.3
U38A Gravette 27.00 94 P P 11 07 06.3 -0.3
WHTX Lake Whitney, 27.07 105 P P 11 07 10.2 +3.0
baz=305,SNR=23
WHTX Lake Whitney, 27.07 105 P P 11 07 08.6 +1.3
WHTX IAmb IAmb 11 07 18.3
comp=Z,114nm,1.4s
X37A Clayton 27.16 98 P P 11 07 08.4 +0.4
X37A IAmb IAmb 11 07 19.4
comp=Z,111nm,1.3s
I40A Norwalk 27.19 77 P P 11 07 09.4 +1.1
G40A Rib Lake 27.20 73 P P 11 07 10.0 +1.6
S39A Bolivar 27.23 91 P P 11 07 09.3 +0.6
S39A IAmb IAmb 11 07 19.4
comp=Z,101nm,1.2s
L40A Anamosa 27.23 81 P P 11 07 10.3 +1.6
L40A IAmb IAmb 11 07 26.7
comp=Z,105nm,1.1s
HHAR Hobbs 27.39 94 P P 11 07 10.8 +0.6
P40A Paris 27.45 86 P P 11 07 12.0 +1.4
JFWS Jewell Farm 27.69 78 P P 11 07 13.5 +0.7
JFWS pmax pmax
comp=Z,65nm,1.3s
JFWS Jewell Farm 27.69 78 P P 11 07 12.9 +0.1
baz=285
JFWS Jewell Farm 27.69 78 P P 11 07 13.5 +0.7
JFWS IAmb IAmb 11 07 31.8
comp=Z,65nm,1.2s
R40A Maddies Statio 27.75 89 P P 11 07 13.6 +0.2
R40A IAmb IAmb 11 07 21.6
comp=Z,142nm,1.5s
N41A Harden Midland 27.91 83 P P 11 07 15.4 +0.7
833A Chaparral WMA, 28.00 114 P P 11 07 16.1 +0.4
baz=311
W39A Magazine 28.00 96 P P 11 07 15.8 +0.2
baz=299,SNR=8.1
W39A Magazine 28.00 96 P P 11 07 17.2 +1.6
U40A Yellville 28.14 93 P P 11 07 16.7 -0.2
baz=296
U40A Yellville 28.14 93 P P 11 07 18.0 +1.1
U40A IAmb IAmb 11 07 33.0
comp=Z,99nm,1.1s
U40A IAMs_20 IAMs_20 11 18 48.9
comp=Z,3µm,18.0s
MGMO Mountain Grove 28.22 91 P P 11 07 18.1 +0.6
MGMO IAmb IAmb 11 07 27.5
comp=Z,76nm,1.4s
L42A Oliver, Polo 28.36 80 P P 11 07 18.9 +0.1
I42A Draeger Farm, 28.39 76 P P 11 07 19.4 +0.4
I42A IAmb IAmb 11 07 27.1
comp=Z,58nm,1.1s
MIAR Mount Ida 28.47 97 P P 11 07 20.4 +0.6
MIAR pmax pmax
comp=Z,182nm,1.5s
MIAR MLR MLR
comp=Z,5µm,18.0s
MIAR Mount Ida 28.47 97 P P 11 07 20.2 +0.4
baz=300,SNR=8.2
MIAR Mount Ida 28.47 97 P P 11 07 20.4 +0.6
CCM Cathedral Cave 28.59 89 P P 11 07 20.5 -0.3
CCM pmax pmax
comp=Z,172nm,1.5s
CCM MLR MLR
comp=Z,4µm,19.0s
CCM Cathedral Cave 28.59 89 P P 11 07 20.6 -0.3
baz=294
CCM Cathedral Cave 28.59 89 P P 11 07 20.5 -0.3
CCM Cathedral Cave 28.59 89 IAMs_20 IAMs_20 11 19 09.7
comp=Z,4µm,19.0s
FCAR Ozark Folk Cen 28.88 93 P P 11 07 24.0 +0.6
FCAR IAmb IAmb 11 07 40.0
comp=Z,68nm,1.3s
X40A Basin Creek Fa 29.03 96 P P 11 07 30.3 +5.5
baz=300,SNR=7.1
WHAR Wooly Hollow 29.04 95 P P 11 07 25.9 +1.1
HDIL Hopedale 29.08 83 P P 11 07 25.7 +0.6
baz=290
HDIL Hopedale 29.08 83 P P 11 07 25.8 +0.6
W41B Gary Mavity, V 29.12 95 P P 11 07 26.7 +1.1
baz=298,SNR=8.0
W41B Gary Mavity, V 29.12 95 P P 11 07 26.4 +0.9
T42A Van Buren 29.12 91 P P 11 07 25.9 +0.4
NATX Nacogdoches 29.16 103 IAMs_20 IAMs_20 11 19 16.9
comp=Z,2µm,20.0s
FVM French Village 29.21 88 P P 11 07 26.5 +0.1
FVM pmax pmax
comp=Z,58nm,1.2s
FVM French Village 29.21 88 P P 11 07 26.5 +0.1
FVM IAmb IAmb 11 07 42.6
comp=Z,58nm,1.1s
WLAR White Oak Lake 29.23 98 P P 11 07 27.4 +0.8
P43A Skaggs, Pawnee 29.23 85 P P 11 07 27.4 +0.9
HKT Hockley 29.39 107 ⇓eP P 11 07 29.0 +1.1
HKT pmax pmax
comp=Z,72nm,1.6s
HKT Hockley 29.39 107 P P 11 07 28.4 +0.6
HKT IAmb IAmb 11 07 37.8
comp=Z,63nm,1.4s
LCAR Lake Charles 29.50 92 P P 11 07 28.8 -0.1
LCAR IAmb IAmb 11 07 46.8
comp=Z,94nm,1.3s
L44A Lake County Fo 29.56 79 P P 11 07 29.8 +0.4
baz=287
L44A Lake County Fo 29.56 79 P P 11 07 30.0 +0.6
Z41A Richland Creek 29.67 99 P P 11 07 32.2 +1.8
baz=301
PBMO Poplar Bluff 29.71 91 P P 11 07 31.4 +0.6
PBMO IAmb IAmb 11 07 37.1
comp=Z,60nm,1.3s
O44A Mansfield 29.81 83 P P 11 07 32.0 +0.4
Q44A Meyer Farm, Va 29.87 86 P P 11 07 33.0 +0.9
Q44A IAmb IAmb 11 07 38.5
comp=Z,43nm,1.1s
S44A Carbondale 30.18 88 P P 11 07 35.7 +0.9
S44A IAmb IAmb 11 07 53.4
comp=Z,93nm,1.3s
SIUC Southern Illin 30.19 88 P P 11 07 35.3 +0.3
SIUC IAmb IAmb 11 07 53.4
comp=Z,102nm,1.3s
LPAR Lepanto 30.33 93 P P 11 07 37.6 +1.3
X43A Marvell 30.42 95 P P 11 07 38.7 +1.7
baz=299
HICK Hickman 30.68 90 P P 11 07 40.5 +1.1
SFIN Lafayette 30.72 82 P P 11 07 41.0 +1.4
baz=303,SNR=6.7
SFIN Lafayette 30.72 82 P P 11 07 40.5 +0.9
SFIN IAmb IAmb 11 07 47.6
comp=Z,108nm,1.2s
L46A Eue Claire 30.75 78 P P 11 07 42.0 +2.1
L46A IAmb IAmb 11 07 47.9
comp=Z,117nm,1.4s
GLAT Glass 30.76 91 P P 11 07 41.1 +1.1
A21K Barrow 30.80 343 P P 11 07 42.0 +2.0
baz=138,SNR=9.7
A21K Barrow 30.80 343 P P 11 07 41.0 +1.1
P46A Rosedale 30.91 83 P P 11 07 41.2 -0.1
P46A IAmb IAmb 11 07 59.6
comp=Z,110nm,1.4s
E46A Sault Ste Mari 31.03 70 P P 11 07 43.5 +1.1
E46A IAmb IAmb 11 07 49.7
comp=Z,48nm,1.1s
USIN University of 31.21 87 P P 11 07 43.5 -0.6
W45A Hickory Valley 31.34 92 P P 11 07 45.5 +0.4
J47A Sunmer 31.43 76 P P 11 07 46.3 +0.4
OXF Oxford 31.49 94 P P 11 07 46.8 +0.4
OXF pmax pmax
comp=Z,355nm,1.3s
OXF MLR MLR
comp=Z,3µm,18.0s
OXF Oxford 31.49 94 P P 11 07 46.9 +0.4
baz=299,SNR=15
OXF Oxford 31.49 94 P P 11 07 46.8 +0.4
OXF IAMs_20 IAMs_20 11 20 59.5
comp=Z,3µm,18.0s
BLO Bloomington 31.57 84 P P 11 07 47.0 -0.1
BLO pmax pmax
comp=Z,83nm,1.1s
BLO Bloomington 31.57 84 P P 11 07 47.0 -0.1
BLO IAmb IAmb 11 07 54.7
comp=Z,84nm,1.1s
VBMS Vicksburg 31.86 98 P P 11 07 51.8 +2.1
baz=302
VBMS Vicksburg 31.86 98 P P 11 07 51.8 +2.1
VBMS IAMs_20 IAMs_20 11 21 21.3
comp=Z,3µm,20.0s
WVT Waverly 31.88 90 P P 11 07 49.8 -0.1
WVT pmax pmax
comp=Z,95nm,1.5s
WVT MLR MLR
comp=Z,3µm,18.0s
WVT Waverly 31.88 90 P P 11 07 50.1 +0.2
baz=297
WVT Waverly 31.88 90 P P 11 07 49.8 -0.1
WVT IAmb IAmb 11 07 57.3
comp=Z,95nm,1.5s
WVT Waverly 31.88 90 IAMs_20 IAMs_20 11 21 20.8
comp=Z,3µm,18.0s
T47A Sharon Grove 32.02 88 P P 11 07 51.6 +0.4
T47A IAmb IAmb 11 07 58.6
comp=Z,99nm,1.4s
L48A N Adams 32.09 78 P P 11 07 51.9 +0.1
L48A IAmb IAmb 11 07 58.9
comp=Z,62nm,0.9s
WCI Wyandotte Cave 32.10 85 P P 11 07 53.1 +1.3
WCI pmax pmax
comp=Z,67nm,1.5s
WCI MLR MLR
comp=Z,4µm,19.0s
WCI Wyandotte Cave 32.10 85 P P 11 07 52.7 +0.9
baz=294
WCI Wyandotte Cave 32.10 85 P P 11 07 53.1 +1.3
WCI IAmb IAmb 11 08 10.1
comp=Z,67nm,1.4s
PLAL Pickwick Lake 32.23 92 P P 11 07 53.3 +0.4
P48A Milroy 32.24 83 P P 11 07 52.0 -1.1
146A Union 32.68 96 P P 11 07 57.6 +0.6
P49A Miami Univ. Ec 32.73 82 P P 11 07 57.2 -0.1
baz=292,SNR=7.3
P49A Miami Univ. Ec 32.73 82 P P 11 07 57.9 +0.6
O49A Covington 32.76 81 P P 11 07 58.0 +0.4
O49A IAmb IAmb 11 08 04.0
comp=Z,53nm,1.2s
V48A Smith Brothers 32.78 90 P P 11 07 58.7 +0.8
V48A IAmb IAmb 11 08 10.7
comp=Z,48nm,1.4s
CLTN Cedars of Leba 32.98 89 P P 11 07 59.4 -0.1
CLTN IAmb IAmb 11 08 07.4
comp=Z,51nm,1.3s
Z47A Carrollton 33.10 95 P P 11 08 00.3 -0.4
U49A Red Boiling Sp 33.19 88 P P 11 08 03.0 +1.6
U49A IAmb IAmb 11 08 09.3
comp=Z,113nm,1.5s
X48A Hartselle 33.23 92 P P 11 08 02.1 +0.3
X48A IAmb IAmb 11 08 08.9
comp=Z,111nm,1.5s
R50A Paris 33.49 84 P P 11 08 04.4 +0.4
R50A IAmb IAmb 11 08 11.4
comp=Z,66nm,1.4s
SWET Sewanee 33.67 90 P P 11 08 05.7 0.0
SWET IAmb IAmb 11 08 13.0
comp=Z,103nm,1.4s
ACSO Alum Creek Sta 33.71 80 P P 11 08 06.0 +0.1
baz=291,SNR=7.1
ACSO Alum Creek Sta 33.71 80 P P 11 08 06.0 +0.1
M51A Elyria 33.89 78 P P 11 08 08.5 +1.0
baz=290
Q51A Peebles 33.90 82 P P 11 08 08.4 +0.8
Q51A IAmb IAmb 11 08 16.3
comp=Z,94nm,1.4s
I51A Listowel 33.92 73 P P 11 08 09.4 +1.7
baz=287,SNR=5.3
P51A Williamsport 33.93 81 P P 11 08 08.0 +0.2
baz=292,SNR=8.2
P51A Williamsport 33.93 81 P P 11 08 08.9 +1.1
LRAL Lakeview Retre 33.96 94 P P 11 08 09.0 +0.9
baz=301,SNR=5.2
LRAL Lakeview Retre 33.96 94 P P 11 08 08.7 +0.6
LRAL IAmb IAmb 11 08 15.5
comp=Z,71nm,1.4s
Y49A Blount Mountai 33.97 93 P P 11 08 09.1 +0.8
Y49A IAmb IAmb 11 08 15.4
comp=Z,72nm,1.4s
O51A Pataskala 34.01 80 P P 11 08 08.6 +0.1
baz=292,SNR=6.0
W50A Signal Mountai 34.12 90 P P 11 08 09.7 +0.1
FPAL Fort Paine 34.22 91 P P 11 08 10.5 +0.1
FPAL IAmb IAmb 11 08 17.8
comp=Z,123nm,1.5s
RES Resolute Bay 34.38 15 P P 11 08 11.8 +0.6
comp=Z,20nm,0.9s,baz=230,slow=10,SNR=22
RES Resolute Bay 34.38 15 P P 11 08 10.8 -0.5
RES pmax pmax
comp=Z,25nm,1.0s
RES Resolute Bay 34.38 15 P P 11 08 10.8 -0.5
O52A Adamsville 34.57 80 P P 11 08 12.8 -0.6
baz=292
O52A Adamsville 34.57 80 P P 11 08 12.8 -0.6
O52A IAmb IAmb 11 08 20.6
comp=Z,86nm,1.3s
CPCT Cooper Cave 34.58 89 P P 11 08 13.1 -0.4
CPCT IAmb IAmb 11 08 21.1
comp=Z,73nm,1.4s
Q52A Bidwell 34.70 82 P P 11 08 15.0 +0.5
baz=293,SNR=6.4
X51A Calhoun 34.75 90 P P 11 08 15.3 +0.3
TZTN Tazewell 34.79 86 P P 11 08 16.2 +0.9
baz=296
TZTN Tazewell 34.79 86 P P 11 08 16.4 +1.0
TZTN IAmb IAmb 11 08 23.8
comp=Z,94nm,1.4s
SADO Sadowa 34.94 71 P P 11 08 17.4 +0.9
O53A New Philadelph 34.96 79 P P 11 08 16.9 +0.1
baz=292,SNR=5.8
O53A New Philadelph 34.96 79 P P 11 08 17.6 +0.8
N53A Lisbon 35.02 78 P P 11 08 17.9 +0.6
250A Grady 35.04 95 P P 11 08 17.6 +0.1
V52A Sevierville 35.07 87 P P 11 08 18.5 +0.8
V52A IAmb IAmb 11 08 25.0
comp=Z,78nm,1.5s
P53A Whipple 35.12 80 P P 11 08 22.8 +4.7
baz=293,SNR=7.6
Z51A Franklin 35.14 92 P P 11 08 18.4 +0.1
W52A Murphy 35.18 89 P P 11 08 18.3 -0.4
W52A IAmb IAmb 11 08 26.3
comp=Z,70nm,1.2s
ALLY Alegheny Colle 35.22 76 P P 11 08 20.0 +1.1
Q53A Leroy 35.27 82 P P 11 08 23.5 +4.0
baz=294,SNR=6.5
S53A Williamson 35.33 84 P P 11 08 21.0 +1.0
baz=295
T53A Wise 35.33 85 P P 11 08 22.6 +2.5
baz=296,SNR=6.6
LSQQ Lebel-sur-Quev 35.35 63 P P 11 08 20.6 +0.6
baz=282
ALGO Algonquin Park 35.36 68 P P 11 08 20.1 0.0
baz=285
G54A Lake Saint Pet 35.48 69 P P 11 08 20.7 -0.4
baz=286
N54A Moraine State 35.57 77 P P 11 08 22.3 +0.3
baz=291,SNR=6.6
N54A Moraine State 35.57 77 P P 11 08 22.1 +0.1
N54A IAmb IAmb 11 08 29.9
comp=Z,120nm,1.4s
O54A Avella 35.58 79 P P 11 08 22.7 +0.6
baz=292,SNR=7.7
O54A Avella 35.58 79 P P 11 08 22.9 +0.8
M54A Oil Creek Stat 35.60 76 P P 11 08 23.2 +0.9
baz=291,SNR=5.1
Y52A Lilburn 35.67 91 P P 11 08 23.7 +0.8
Y52A IAmb IAmb 11 08 30.0
comp=Z,54nm,1.1s
V53A Saluda 35.72 87 P P 11 08 24.6 +1.2
V53A IAmb IAmb 11 08 31.1
comp=Z,91nm,1.4s
Q54A Coxs Mills 35.72 81 P P 11 08 23.1 -0.2
baz=294,SNR=6.4
Q54A Coxs Mills 35.72 81 P P 11 08 23.1 -0.2
Q54A IAmb IAmb 11 08 30.9
comp=Z,92nm,1.1s
152A Waverly Hall 35.80 93 P P 11 08 24.8 +0.8
152A IAmb IAmb 11 08 31.4
comp=Z,96nm,1.4s
S54A Dingess, Beckl 35.86 83 P P 11 08 24.8 +0.2
baz=295,SNR=5.4
R54A Victor 35.93 82 P P 11 08 24.9 -0.3
baz=294
BG3 Lake Jocassee 35.94 88 P P 11 08 25.8 +0.6
BG3 IAmb IAmb 11 08 33.1
comp=Z,47nm,1.3s
T54A Tazewell 35.99 84 P P 11 08 26.0 +0.3
baz=296,SNR=12
U54A Nelsons Funny 36.05 85 P P 11 08 27.3 +1.0
baz=296
U54A Nelsons Funny 36.05 85 P P 11 08 27.2 +1.0
U54A IAmb IAmb 11 08 35.7
comp=Z,96nm,1.4s
MCWV Mont Chateau 36.16 79 P P 11 08 27.2 +0.2
baz=293
MCWV Mont Chateau 36.16 79 P P 11 08 27.9 +0.8
MCWV IAmb IAmb 11 08 35.0
comp=Z,58nm,1.4s
M55A Ridgway 36.25 76 P P 11 08 28.9 +1.1
Q55A Buckhannon 36.25 81 P P 11 08 28.2 +0.3
baz=294,SNR=6.4
V54A Nebo 36.29 87 P P 11 08 27.2 -1.0
baz=297
GOGA Godfrey 36.33 91 P P 11 08 28.1 -0.4
GOGA pmax pmax
comp=Z,60nm,1.1s
GOGA MLR MLR
comp=Z,3µm,18.0s
GOGA Godfrey 36.33 91 P P 11 08 28.1 -0.4
baz=300,SNR=11
GOGA Godfrey 36.33 91 P P 11 08 28.1 -0.4
GOGA IAmb IAmb 11 08 36.0
comp=Z,60nm,1.1s
S55A Lewisburg 36.45 83 P P 11 08 30.1 +0.5
baz=295,SNR=7.6
R55A Marlinton 36.52 82 P P 11 08 30.2 0.0
baz=295,SNR=7.5
R55A Marlinton 36.52 82 P P 11 08 31.2 +1.0
R55A IAmb IAmb 11 08 38.2
comp=Z,120nm,1.2s
T55A Pulaski 36.53 84 P P 11 08 31.1 +0.8
baz=296,SNR=7.4
X54A Belton 36.56 89 P P 11 08 30.0 -0.5
baz=299,SNR=9.5
M56A Emporium 36.65 76 P P 11 08 31.8 +0.5
baz=291,SNR=5.9
BLA Blacksburg 36.75 83 P P 11 08 32.2 0.0
BLA Blacksburg 36.75 83 P P 11 08 33.1 +0.9
baz=296,SNR=5.6
BLA Blacksburg 36.75 83 P P 11 08 32.2 0.0
BLA IAmb IAmb 11 08 40.3
comp=Z,97nm,1.2s
N56A West Decatur 36.78 77 P P 11 08 33.2 +0.8
baz=292,SNR=6.3
V55A Taylorsville 36.79 86 P P 11 08 33.1 +0.6
baz=297,SNR=5.3
HODGE Hodges 36.80 89 P P 11 08 32.6 +0.1
HODGE IAmb IAmb 11 08 40.0
comp=Z,100nm,1.5s
D55A Sainte-Anne-du 36.80 66 P P 11 08 32.5 +0.1
baz=285
PAULI Pauline 36.83 88 P P 11 08 33.4 +0.6
PAULI IAmb IAmb 11 08 40.3
comp=Z,132nm,1.5s
Q56A Snyder Ridge, 36.87 80 P P 11 08 33.7 +0.5
baz=294,SNR=5.6
Q56A Snyder Ridge, 36.87 80 P P 11 08 34.4 +1.3
Q56A IAmb IAmb 11 08 52.9
comp=Z,75nm,1.4s

P56A Dayton Farm, R 36.94 79 P P 11 08 34.6 +1.0
baz=293,SNR=6.8
J56A Wolcott 36.96 72 IAMs_20 IAMs_20 11 23 28.1
comp=Z,1µm,19.0s
KMSC Kings Mountain 37.03 87 P P 11 08 34.8 +0.3
baz=298
KMSC Kings Mountain 37.03 87 P P 11 08 34.8 +0.3
KMSC IAmb IAmb 11 08 41.7
comp=Z,59nm,1.2s
T56A Rocky Mt 37.11 84 P P 11 08 35.5 +0.3
baz=296,SNR=9.1
X55A Gracelyn & Ava 37.13 88 P P 11 08 35.9 +0.6
baz=299
U56A King 37.16 85 P P 11 08 36.5 +0.8
baz=297,SNR=5.8
U56A King 37.16 85 P P 11 08 36.4 +0.8
U56A IAmb IAmb 11 08 43.4
comp=Z,99nm,1.4s
U56A IAMs_20 IAMs_20 11 23 57.6
comp=Z,2µm,22.0s
SSPA Standing Stone 37.17 77 P P 11 08 35.5 -0.2
baz=292
E56A St. Veronique 37.22 67 P P 11 08 36.2 +0.3
baz=286
Y55A Saluda 37.23 89 P P 11 08 36.4 +0.2
baz=300
D56A ZEC Mazanza, M 37.26 66 P P 11 08 37.1 +0.7
baz=285
V56A Mocksville 37.32 86 P P 11 08 37.2 +0.2
baz=298,SNR=5.9
N57A Milroy 37.37 77 P P 11 08 37.6 +0.3
baz=292
Q57A Strasburg 37.43 80 P P 11 08 38.1 +0.3
baz=294,SNR=6.2
M57A Sunshine Farm, 37.45 76 P P 11 08 38.6 +0.6
baz=292,SNR=6.7
M57A Sunshine Farm, 37.45 76 P P 11 08 38.6 +0.6
M57A IAmb IAmb 11 08 45.8
comp=Z,127nm,1.4s
JSC Jenkinsville 37.49 88 P P 11 08 37.6 -0.8
JSC pmax pmax
comp=Z,34nm,1.1s
JSC Jenkinsville 37.49 88 P P 11 08 37.6 -0.8
O57A Amberson 37.51 77 P P 11 08 39.1 +0.6
baz=293
P57A Homestead Farm 37.53 79 P P 11 08 40.0 +1.3
baz=294,SNR=5.6
P57A Homestead Farm 37.53 79 P P 11 08 39.3 +0.6
P57A IAmb IAmb 11 08 47.0
comp=Z,92nm,1.3s
W56A Indian Trail 37.58 87 P P 11 08 39.0 -0.1
baz=298
H57A Richville 37.59 70 P P 11 08 40.3 +1.2
baz=288,SNR=5.3
R57A Stanardsville 37.65 81 P P 11 08 40.2 +0.5
baz=295,SNR=6.2
T57A Hurt 37.68 83 IAMs_20 IAMs_20 11 24 38.4
comp=Z,2µm,18.0s
V57A Coltrane Farms 37.81 85 P P 11 08 41.4 +0.3
baz=298,SNR=6.5
E57A Chemin Saint G 37.84 66 P P 11 08 41.6 +0.3
baz=286
Z56A Williston 37.89 90 IAMs_20 IAMs_20 11 24 39.9
comp=Z,2µm,20.0s
N58A Sunbury 37.92 76 P P 11 08 42.2 +0.3
baz=292,SNR=6.1
N58A Sunbury 37.92 76 P P 11 08 41.9 -0.1
N58A IAmb IAmb 11 08 49.7
comp=Z,129nm,1.3s
BINY Binghamton 37.93 74 IAMs_20 IAMs_20 11 23 58.9
comp=Z,1µm,21.0s
K58A Earlville 37.97 73 P P 11 08 42.6 +0.2
baz=290,SNR=5.7
K58A Earlville 37.97 73 P P 11 08 42.3 -0.1
K58A IAmb IAmb 11 08 50.6
comp=Z,111nm,1.4s
K58A IAMs_20 IAMs_20 11 24 21.8
comp=Z,1µm,19.0s
Q58A Fox Den Farm, 37.98 79 P P 11 08 43.0 +0.4
baz=294
W57A Gilead 37.99 86 P P 11 08 43.1 +0.5
baz=298
J58A Remsen 38.02 72 P P 11 08 43.2 +0.4
baz=290,SNR=6.1
J58A Remsen 38.02 72 P P 11 08 42.6 -0.2
J58A IAmb IAmb 11 08 50.4
comp=Z,142nm,1.5s
R58A Rapidan 38.02 80 P P 11 08 43.8 +0.9
baz=295,SNR=6.7
O58A Lewisberry 38.05 77 P P 11 08 43.6 +0.5
baz=293,SNR=5.6
I58A Old Forge 38.12 71 P P 11 08 43.3 -0.4
baz=289,SNR=5.2
T58A Grand View Acr 38.23 83 P P 11 08 44.3 -0.3
baz=296,SNR=5.8
R58B Mineral 38.25 81 P P 11 08 45.6 +0.8
baz=295,SNR=5.5
G58A Ormstown 38.28 68 P P 11 08 44.7 -0.2
baz=288
V58A Windy Hill, Pi 38.33 85 P P 11 08 45.8 +0.4
baz=298,SNR=7.1
V58A Windy Hill, Pi 38.33 85 P P 11 08 46.1 +0.7
V58A IAmb IAmb 11 09 04.5
comp=Z,113nm,1.4s
V58A IAMs_20 IAMs_20 11 24 43.5
comp=Z,2µm,19.0s
H58A Gabriels 38.42 70 P P 11 08 47.5 +1.3
baz=289,SNR=5.6
E58A La Victoria 38.43 66 P P 11 08 46.4 +0.2
baz=287
U58A Oxford 38.46 84 P P 11 08 46.6 0.0
baz=297,SNR=7.2
LATQ La Tuque 38.47 65 P P 11 08 46.5 -0.1
baz=286
D58A Chemin du LacG 38.48 65 P P 11 08 46.5 -0.2
baz=286
O59A Robesonia 38.50 77 P P 11 08 47.0 +0.1
baz=293,SNR=5.4
K59A Cooperstown 38.52 72 P P 11 08 47.5 +0.5
baz=291,SNR=7.0
J59A Piesco 38.52 71 P P 11 08 47.1 +0.1
baz=290
M59A Waymart 38.56 74 P P 11 08 47.2 -0.1
baz=292
R59A King George, V 38.70 80 P P 11 08 49.0 +0.5
baz=295
NHSC New Hope 38.86 89 P P 11 08 49.3 -0.6
baz=300
T59A Double "B" Far 38.92 82 P P 11 08 51.0 +0.6
baz=296,SNR=5.3
T59A Double "B" Far 38.92 82 P P 11 08 50.5 +0.1
T59A IAmb IAmb 11 08 58.4
comp=Z,72nm,1.2s
V59A Middlesex 38.97 84 P P 11 08 51.4 +0.5
baz=298,SNR=5.6
U59A Littleton 39.02 83 P P 11 08 51.8 +0.5
baz=297
U59A Littleton 39.02 83 P P 11 08 52.1 +0.8
U59A IAmb IAmb 11 09 00.1
comp=Z,92nm,1.5s
U59A IAMs_20 IAMs_20 11 25 28.9
comp=Z,2µm,19.0s
N60A Cedar Hill Far 39.04 75 P P 11 08 51.7 +0.3
baz=293
D59A Saint-Raymond 39.20 65 P P 11 08 53.4 +0.8
baz=287
H60A Morristown 39.38 69 P P 11 08 54.7 +0.5
baz=289
CNNC Cliffs of the 39.47 85 P P 11 08 55.6 +0.6
CNNC IAmb IAmb 11 09 15.5
comp=Z,54nm,1.1s
CNNC IAMs_20 IAMs_20 11 25 27.7
comp=Z,2µm,19.0s
K61A Williamstown 39.64 72 P P 11 08 57.3 +0.9
baz=291
V60A Jim Taylor Roa 39.67 84 IAMs_20 IAMs_20 11 25 33.1
comp=Z,1µm,18.0s
U61A Possum Corner 40.00 82 P P 11 09 00.2 +0.8
baz=297
U61A Possum Corner 40.00 82 P P 11 09 00.4 +0.9
V61A Roper 40.16 83 IAMs_20 IAMs_20 11 26 12.9
comp=Z,2µm,18.0s
SCHQ Schefferville 40.43 52 LR LR 11 25 04.8
comp=Z,537nm,21.4s,baz=278,slow=35
V62A Hyde County Ai 40.71 83 IAMs_20 IAMs_20 11 26 30.5
comp=Z,1µm,18.0s
E62A Clayton Lake 40.83 65 P P 11 09 06.8 +0.6
baz=288

D62A Allapoint, All 40.99 64 P P 11 09 08.6 +1.1
baz=288
BILL Bilibino 41.10 329 *c* iP P 11 09 08.2 +0.1
BILL *e* 11 09 15.9
BILL *e* 11 10 42.5
BILL *e* 11 11 08.6
BILL pmax pmax
comp=Z,497nm,2.5s
BILL MLR MLR
comp=Z,1µm,17.0s
BILL Bilibino 41.10 329 P P 11 09 08.4 +0.3
BILL IAmb IAmb 11 09 09.9
comp=Z,83nm,1.4s
BILL IAMs_20 IAMs_20 11 25 06.0
comp=Z,892nm,18.0s
D63A Stockholm 41.62 64 P P 11 09 12.3 -0.4
baz=289
E64A Bridgewater 42.00 64 P P 11 09 14.8 -1.0
baz=289
TGUH Tegucigalpa,Un 46.02 117 P P 11 09 49.8 +1.3
TGUH IAmb IAmb 11 09 58.7
comp=Z,48nm,1.1s
PET Petropavlovsk 47.22 308 *e*P P 11 10 01.9 +4.6
PET *e*S S 11 16 54.5 +5.0
PET Petropavlovsk 47.22 308 IAMs_20 IAMs_20 11 27 41.2
comp=Z,757nm,20.0s
SEY Seymchan 47.44 322 P P 11 09 57.9 -1.1
comp=Z,26nm,1.1s,baz=78,slow=6.0,SNR=16
SEY LR LR 11 29 38.8
comp=Z,726nm,18.1s,baz=83,slow=36
SEY Seymchan 47.44 322 *de*P P 11 09 58.8 -0.1
PETK Petropavlovsk- 47.73 309 P P 11 10 00.5 -0.9
comp=Z,14nm,0.9s,baz=71,slow=14,SNR=8.9
PETK LR LR 11 27 10.7
comp=Z,662nm,20.9s,baz=70,slow=32
PETK Petropavlovsk- 47.73 309 P P 11 10 00.3 -1.1
PETK Petropavlovsk- 47.73 309 P P 11 10 00.2 -1.1
SUMG Summit 48.88 24 *i* P P 11 10 10.8 +0.4
SUMG pmax pmax
comp=Z,160nm,1.1s
SUMG Summit 48.88 24 P P 11 10 11.2 +0.7
SUMG IAmb IAmb 11 10 12.3
comp=Z,65nm,1.1s
SUMG Summit 48.88 24 *i* P P 11 10 10.8 +0.4
comp=Z,159nm,1.1s
SUMG Summit 48.88 24 *i* P P 11 10 10.9 +0.4
SUMG IAmb IAmb 11 10 12.6
comp=Z,160nm,1.1s
MA2 Magadan 49.19 318 LR LR 11 30 40.8
comp=Z,565nm,18.3s,baz=73,slow=36
MA2 Magadan 49.19 318 IAMs_20 IAMs_20 11 28 32.9
comp=Z,686nm,21.0s
ESPN Las Esperanzas 49.32 116 P P 11 10 14.3 +0.3
ICESG Greenland Ices 49.53 28 *i* P P 11 10 15.7 +0.3
ICESG IAmb IAmb 11 10 16.7
comp=Z,50nm,1.0s
JTS Las Juntas de 50.33 118 ⇓ *e*P P 11 10 22.5 +0.8
JTS pmax pmax
comp=Z,16nm,1.2s
DAG Danmarks Havn 52.07 16 *i* P P 11 10 34.0 +0.1
DAG pmax pmax
comp=Z,28nm,1.1s
DAG Danmarks Havn 52.07 16 *i* P P 11 10 34.0 +0.1
comp=Z,28nm,1.1s
DAG Danmarks Havn 52.07 16 *i* P P 11 10 34.0 +0.1
DAG IAmb IAmb 11 10 35.0
comp=Z,28nm,1.1s
TIXI Tiksi 52.81 337 *d* iP P 11 10 38.7 -0.8
TIXI pmax pmax
comp=Z,194nm,2.5s
TIXI Tiksi 52.81 337 P P 11 10 38.6 -0.9
DBG Daneborg 52.99 19 ⇓ *i*P P 11 10 41.2 +0.5
DBG IAmb IAmb 11 10 42.4
comp=Z,77nm,1.1s
TAOE Nuku Hiva Isla 53.48 194 *e*T T 12 07 39.0
comp=Z,58nm,0.2s
SDDR Presa de Saban 53.59 99 IAMs_20 IAMs_20 11 35 47.1
comp=Z,962nm,19.0s
SCO Scoresbysund 54.52 23 *i* P P 11 10 52.5 +0.5
SCO Scoresbysund 54.52 23 P P 11 10 51.6 -0.5
SCO IAmb IAmb 11 11 01.8
comp=Z,31nm,1.2s
SCO Scoresbysund 54.52 23 *i* P P 11 10 52.5 +0.5
SCO Scoresbysund 54.52 23 *i* P P 11 10 52.5 +0.5
CAPC Capurgana 56.53 113 *e*P P 11 11 03.4 -3.9
YAK Yakutsk 57.39 327 LR LR 11 35 02.1
comp=Z,639nm,20.6s,baz=84,slow=35
YAK Yakutsk 57.39 327 *e*P P 11 11 11.9 -0.8
YAK *e* 11 12 02.0
YAK *e* 11 13 17.8
YAK *e*PPP PPP 11 14 35.9
YAK *e*S S 11 19 05.8 -2.8
YAK *e**SS sS 11 19 25.7 +11
YAK *e* 11 20 58.3
YAK *e*SS SS 11 22 55.2 -2.2
YAK pmax pmax
comp=Z,42nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,23nm,1.2s
YAK pmax pmax
comp=Z,110nm,2.4s
YAK pmax pmax
comp=N,42nm,2.3s
YAK pmax pmax
comp=E,25nm,2.1s
YAK smax smax
comp=E,41nm,2.3s
YAK smax smax
comp=N,22nm,2.0s
YAK Yakutsk 57.39 327 P P 11 11 11.2 -1.5
YAK IAmb IAmb 11 11 13.2
comp=Z,64nm,1.2s
YAK IAMs_20 IAMs_20 11 34 50.6
comp=Z,670nm,21.0s
MOTC Monteria, Cord 57.56 111 *e*P P 11 11 12.8 -1.8
H11N3 WAKE ISLAND Hy 58.37 268 T T 12 14 31.5
baz=49,slow=75,SNR=562
H11N2 WAKE ISLAND Hy 58.37 268 T T 12 14 40.3
baz=49,slow=75,SNR=211
H11N1 WAKE ISLAND Hy 58.38 268 T T 12 14 35.4
baz=49,slow=75,SNR=171
ZARC Zaragoza, Cauc 59.04 111 *e*P P 11 11 24.7 -0.2
YSS Yuzh-Sakhalins 59.07 307 ⇓ *e*P P 11 11 23.9 -0.8
YSS *e*S S 11 19 29.2 -1.8
YSS *e*PS PnS 11 19 42.8 -0.3
YSS pmax pmax
comp=Z,400nm,6.4s
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS MLR MLR
comp=N,300nm,14.0s
YSS MLR MLR
comp=E,200nm,14.0s
YSS Yuzh-Sakhalins 59.07 307 IAMs_20 IAMs_20 11 31 26.5
comp=Z,516nm,22.0s
H11S1 WAKE ISLAND Hy 59.29 267 T T 12 15 43.3
baz=50,slow=75,SNR=160
H11S2 WAKE ISLAND Hy 59.30 267 T T 12 15 48.8
baz=50,slow=75,SNR=106
H11S3 WAKE ISLAND Hy 59.31 267 T T 12 15 44.6
baz=50,slow=75,SNR=103
HELC Santa Helena 59.55 113 *e*P P 11 11 33.2 +4.4
PLMC San Jos del P 60.00 115 *e*P P 11 11 36.2 +4.6
PTBC PUERTO BERRIO, 60.01 112 *e*P P 11 11 29.7 -1.9
GUY2C Guyana, Caldas 60.37 113 *e*P P 11 11 34.5 -0.1
NORC Norcasia 60.45 113 *e*P P 11 11 39.7 +5.0
GRNR Gornyy 60.48 313 ⇓ *i*P P 11 11 33.9 -0.5
GRNR pmax pmax
comp=Z,20nm,0.8s
GRNR MLR MLR
comp=E,160nm,17.0s
GRNR MLR MLR
comp=N,140nm,16.0s
GRNR MLR MLR
comp=Z,230nm,20.0s
RREF El Recreo 60.62 114 *e*P P 11 11 41.3 +4.8
YOTC Yotoco, Valle 60.65 115 *e*P P 11 11 35.0 -1.1
ASAJ Asahikawa 60.72 304 P P 11 11 35.1 -1.0
comp=Z,22nm,1.0s,baz=30,slow=8.3,SNR=5.1
ASAJ LR LR 11 33 41.2
comp=Z,317nm,21.6s,baz=92,slow=32
BARC Barichara 60.83 111 *e*P P 11 11 35.1 -2.4

TOLC Tolima 60.87 114 *e*P P 11 11 38.1 +0.3
ANIL Santa Ana 60.89 114 *e*P P 11 11 35.1 -2.8
SPBC San Pablo de B 60.92 112 *e*P P 11 11 42.2 +4.3
SDV Santo Domingo 60.93 107 *e*P P 11 11 37.7 -0.4
SDV Santo Domingo 60.93 107 P P 11 11 38.3 +0.2
PMOR Pomariorio Ree 61.15 201 *e*T T 12 17 08.7
comp=Z,8.0nm,0.2s
ROSC El Rosal 61.35 113 P P 11 11 42.1 +1.0
comp=Z,4.6nm,0.4s,baz=18,slow=4.6,SNR=4.9
ROSC LR LR 11 40 46.5
comp=Z,243nm,20.7s,baz=335,slow=38
ROSC El Rosal 61.35 113 *e*P P 11 11 44.4 +3.2
ROSC El Rosal 61.35 113 P P 11 11 41.9 +0.7
ROSC IAmb IAmb 11 11 50.9
comp=Z,48nm,1.2s
RUSC La Rusia 61.41 111 *e*P P 11 11 43.5 +1.8
ORTC Ortega, Tolima 61.42 114 *e*P P 11 11 39.7 -1.6
POPC Popayan, Colom 61.52 117 *e*P P 11 11 41.8 -0.3
BBAC Balboa, Cauca 61.55 117 *e*P P 11 11 38.9 -3.3
PCON Cinco Dias 61.86 117 *e*P P 11 11 44.3 -0.5
SOTA Rioblanco 61.87 117 *e*P P 11 11 43.5 -1.3
CHIC Chingaza 61.90 113 *e*P P 11 11 49.5 +4.6
GCUF Volcan Galeras 62.09 118 *e*P P 11 11 51.2 +4.9
OTAV Otavalo 62.15 120 *e*P P 11 11 47.5 +0.9
OTAV Otavalo 62.15 120 P P 11 11 46.8 +0.2
OTAV pmax pmax
comp=Z,53nm,1.4s
OTAV MLR MLR
comp=Z,200nm,20.0s
OTAV Otavalo 62.15 120 P P 11 11 46.8 +0.2
OTAV IAmb IAmb 11 11 55.9
comp=Z,53nm,1.4s
GARC Garzon, Huila 62.55 116 *e*P P 11 11 53.7 +4.6
FLOC Florencia 62.91 116 *e*P P 11 11 53.7 +2.5
PTGC Puerto Gaitan, 63.28 112 *e*P P 11 11 55.5 +1.8
ZEA Zeya 63.29 320 *e*P P 11 11 52.6 -0.6
ZEA *e*S S 11 20 27.1 +2.7
ZEA pmax pmax
comp=Z,20nm,1.1s
ZEA pmax pmax
comp=Z,100nm,6.9s
ZEA smax smax
comp=E,100nm,8.9s
MACC Macarena, Meta 63.66 114 *e*P P 11 11 54.6 -1.6
TIAR Tiarei 63.98 202 *e*T T 12 20 39.4
comp=E,4.2nm,0.3s
NRIK Noril'sk 64.05 347 P P 11 11 57.4 -0.6
comp=E,8.6nm,1.0s,baz=39,slow=6.6,SNR=16
NRIK LR LR 11 41 04.7
comp=E,180nm,20.5s,baz=24,slow=37
NRIK Noril'sk 64.05 347 *d* iP P 11 11 57.1 -0.9
NRIK pmax pmax
comp=Z,30nm,1.3s
PPT2 Papeete2 64.08 202 *e*LR LR 11 30 48.6
comp=Z,170nm,26.5s
TVO Taravao 64.17 202 *e*T T 12 20 53.6
comp=Z,1.6nm,0.3s
ARCES ARCESS Array B 65.35 10 LR LR 11 42 02.4
comp=Z,58nm,18.1s,baz=335,slow=37
BOD Bodaibo 66.15 329 *e*P P 11 12 10.4 -1.4
BOD pmax pmax
comp=Z,36nm,1.7s
USA0B Ussuriysk Arra 66.81 309 P P 11 12 15.9 -0.3
USA0B pmax pmax
comp=Z,64nm,1.5s
USA0B Ussuriysk Arra 66.81 309 P P 11 12 15.9 -0.3
USA0B IAmb IAmb 11 12 16.8
comp=Z,64nm,1.5s
USRK Ussuriysk Ar. 66.81 309 P P 11 12 15.8 -0.4
comp=Z,16nm,1.1s,baz=56,slow=7.1,SNR=15
USRK LR LR 11 37 27.0
comp=Z,292nm,21.9s,baz=33,slow=32
USRK Ussuriysk Ar. 66.81 309 P P 11 12 15.1 -1.1
USRK Ussuriysk Ar. 66.81 309 P P 11 12 15.1 -1.1
MDJ Mudanjiang 67.87 311 IAMs_20 IAMs_20 11 40 09.2
comp=Z,408nm,20.0s
LVZ Lovozero 67.89 7 ⇓ *i*P P 11 12 23.4 +0.7
LVZ pmax pmax
comp=Z,114nm,2.5s
MAJO Matsushiro 67.91 300 ⇑ *e*P P 11 12 21.9 -1.5
MAJO pmax pmax
comp=Z,18nm,1.0s
MAJO Matsushiro 67.91 300 P P 11 12 22.0 -1.3
MAJO IAmb IAmb 11 12 23.5
comp=Z,17nm,1.0s
MAJO Matsushiro 67.91 300 IAMs_20 IAMs_20 11 39 30.9
comp=Z,321nm,19.0s
MJAR Matsushiro Arr 67.91 300 P P 11 12 22.1 -1.2
comp=Z,5.4nm,1.0s,baz=40,slow=5.3,SNR=14
MJAR LR LR 11 39 31.1
comp=Z,217nm,19.7s,baz=70,slow=34
MJAR Matsushiro Arr 67.91 300 P P 11 12 22.2 -1.2
MJAR pmax pmax
comp=Z,10.0nm,1.3s
MJAR Matsushiro Arr 67.91 300 P P 11 12 22.2 -1.2
APA Apatity 68.10 7 ⇑ *i*P P 11 12 23.6 -0.4
APA pmax pmax
comp=Z,10.0nm,1.0s
APA MLR MLR
comp=Z,500nm,16.0s
TBI Tubuai 69.54 200 *e*LR LR 11 33 11.0
comp=Z,124nm,33.0s
NB2 NORSAR Subarra 70.50 19 P P 11 12 38.5 -0.5
comp=Z,40nm,1.4s,baz=330,slow=6.2
NB2 NORSAR Subarra 70.50 19 P P 11 12 38.5 -0.5
baz=330,slow=6.2
NOA NORSAR Array B 70.50 19 P P 11 12 38.7 -0.3
comp=Z,8.0nm,1.1s,baz=332,slow=6.0,SNR=7.6
NOA LR LR 11 44 07.9
comp=Z,51nm,19.7s,baz=280,slow=36
CN2 Changchun 70.65 312 *e*P P 11 12 37.6 -2.5
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,240nm,6.0s
CN2 LR LR
comp=Z,180nm,15.0s
CN2 LR LR
comp=Z,260nm,15.0s
CN2 LR LR
comp=Z,320nm,18.0s
RAR Rarotonga 70.77 211 LR LR 11 37 20.6
comp=Z,275nm,20.6s,baz=68,slow=30
EKA Eskdalemuir Ar 70.93 30 P P 11 12 41.5 -0.2
comp=Z,3.1nm,0.9s,baz=317,slow=6.1,SNR=4.6
TMCR Tamitsa 71.84 6 *e*P P 11 12 46.2 -0.8
TMCR pmax pmax
comp=Z,16nm,1.0s
HFS Hagfors 71.88 19 P P 11 12 47.4 0.0
comp=Z,9.9nm,1.1s,baz=318,slow=4.2,SNR=6.6
NNA Nana 72.75 126 ⇓ *e*P P 11 12 54.0 +0.8
NNA pmax pmax
comp=Z,67nm,1.5s
FINES FINESS Array B 73.09 12 P P 11 12 54.2 -0.3
comp=Z,11nm,0.9s,baz=20,slow=6.3,SNR=17
FINES FINESS Array B 73.09 12 P P 11 12 53.2 -1.3
KSRS Korea Array 73.56 306 P P 11 12 57.5 -0.2
comp=Z,3.5nm,1.0s,baz=60,slow=7.0,SNR=7.9
KSRS LR LR 11 40 57.1
comp=Z,180nm,21.4s,baz=50,slow=32
KSAR Wonju Array Be 73.59 306 P P 11 12 56.3 -1.6
KSAR Wonju Array Be 73.59 306 P P 11 12 56.3 -1.6
IRK Irkutsk 74.03 329 *e*P P 11 13 00.2 0.0
IRK pmax pmax
comp=Z,141nm,1.9s
TJN Taejon 74.62 306 ⇓ *e*P P 11 13 04.0 +0.1
TLY Talaya 74.71 329 *d* iP P 11 13 04.4 +0.2
TLY pmax pmax
comp=Z,63nm,1.5s
TLY Talaya 74.71 329 P P 11 13 04.0 -0.3
TLY IAmb IAmb 11 13 05.9
comp=Z,66nm,1.4s
KLMR Klimovskoe 75.23 6 *e*P P 11 13 03.3 -3.7
KLMR pmax pmax
comp=Z,39nm,1.4s
KLMR Klimovskoe 75.23 6 *e*P P 11 13 03.4 -3.6
KLMR AMP 11 13 07.6
comp=Z,39nm,1.4s
PUL Pulkovo 75.31 11 ⇓ *e*P P 11 13 09.5 +2.0
PUL pmax pmax
comp=Z,173nm,0.5s
MOY Mondy 75.68 331 *e*P P 11 13 09.8 -0.1
MOY pmax pmax
comp=Z,66nm,1.8s
ZAK Zakamensk 75.90 329 *e*P P 11 13 10.8 -0.4

ZAK pmax pmax
comp=Z,14nm,1.5s
VSU Vasula 76.03 13‖ *e*P **P** **11 13 09.8 -1.8**
VSU pmax pmax
comp=Z,62nm,1.3s
DL2 Dalian 76.11 311 P **P** **11 13 15.3 +2.9**
DL2 S **S** **11 23 01.8 +6.2**
DL2 pmax pmax
comp=Z,110nm,4.3s
DL2 LR LR
comp=Z,330nm,20.0s
DL2 LR LR
comp=Z,390nm,18.2s
ULN Ulaanbaatar 76.42 325 *d* iP **P** **11 13 13.9 -0.4**
ULN pmax pmax
comp=Z,61nm,2.5s
ULN Ulaanbaatar 76.42 325 P **P** **11 13 13.6 -0.6**
ULN IAmb IAmb 11 13 15.5
comp=Z,40nm,1.4s
ULN Ulaanbaatar 76.42 325 IAMs_20 IAMs_20 11 46 24.9
comp=Z,689nm,20.0s
SONM Songino Array 76.72 325 P **P** **11 13 16.0 +0.1**
comp=Z,17nm,1.0s,baz=51,slow=4.3,SNR=67
SONM PP **PP** **11 16 09.5 +1.8**
comp=Z,1.9nm,1.1s,baz=12,slow=8.2,SNR=3.6
SONM Songino Array 76.72 325 P **P** **11 13 15.4 -0.5**
SONM pmax pmax
comp=Z,27nm,1.1s
SONM Songino Array 76.72 325 P **P** **11 13 15.4 -0.5**
BMRD Maredsous 77.82 29 P **P** **11 13 22.4 +0.6**
BGES Geesves 77.86 28 P **P** **11 13 22.2 +0.1**
comp=Z,25nm,1.8s
BCLA Clavier 77.90 28 P **P** **11 13 22.6 +0.3**
BCLA pP **pP** **11 13 25.2 -1.1**
DOU Dourbes 77.93 29 P **P** **11 13 21.5 -0.9**
DOU PcP **pwP** **11 13 30.7 +0.8**
KIRV Kirov 77.94 1 *de*P **P** **11 13 21.6 -0.7**
MEM Membach 77.98 28 P **P** **11 13 24.1 +1.4**
BTNL Ternell 78.04 28 P **P** **11 13 21.6 -1.6**
GUMO Guam 78.29 278 LR LR 11 44 12.1
comp=Z,132nm,18.6s,baz=44,slow=33
ZAA0 Zalesovo Array 78.51 341 P **P** **11 13 25.0 -0.6**
ZALV Zalesovo Beam 78.51 341 P **P** **11 13 25.5 -0.1**
comp=Z,4.7nm,0.8s,baz=22,slow=5.3,SNR=18
ZALV PP **PP** **11 16 26.1 +3.7**
comp=Z,0.4nm,0.3s,baz=22,slow=8.5,SNR=3.5
ZALV LR LR 11 51 59.5
comp=Z,300nm,18.1s,baz=16,slow=39
ZALV Zalesovo Beam 78.51 341 *i* P **P** **11 13 25.5 -0.1**
ZALV pmax pmax
comp=Z,6.0nm,0.9s
ZALV Zalesovo Beam 78.51 341 P **P** **11 13 24.6 -1.0**
WLF Walferdange 78.83 28 PcP **PcP** **11 13 35.9 -0.3**
SAML Samuel 78.96 114 P **P** **11 13 27.9 -0.7**
SAML pmax pmax
comp=Z,11nm,1.2s
SAML Samuel 78.96 114 P **P** **11 13 27.9 -0.7**
SVE Sverdlovsk 79.42 355 *e*P **P** **11 13 30.2 -0.4**
SVE pmax pmax
comp=Z,40nm,1.6s
CLL Collm 79.55 23 *e*P **P** **11 13 31.0 -0.4**
comp=Z,25nm,1.5s
CLL *i* (PcP) **pwP** **11 13 38.4 -0.4**
CLL *i* 11 13 44.5
CLL Lm MLR 11 48 00.0
comp=Z,200nm,18.9s
CLL Collm 79.55 23 *e*P **P** **11 13 31.0 -0.4**
CLL *i* 11 13 38.4
CLL pmax pmax
comp=Z,25nm,1.5s
CLL Collm 79.55 23 P **P** **11 13 30.7 -0.7**
SUW Suwalki 79.58 17 *e*P **P** **11 13 30.8 -0.7**
HHC Hu-ho-hao-te 79.87 318 *e*P **P** **11 13 33.3 -0.1**
HHC PP **PP** **11 16 36.0 +1.8**
HHC S **S** **11 23 35.3 -1.0**
HHC SS **SS** **11 28 46.6 +2.2**
HHC pmax pmax
comp=Z,20nm,0.9s
HHC pmax pmax
comp=Z,270nm,6.9s
HHC LR LR
comp=Z,290nm,17.0s
HHC LR LR
comp=Z,330nm,17.9s
HHC LR LR
comp=Z,410nm,18.7s
ARU Arti 79.94 356 *d* iP **P** **11 13 32.4 -1.0**
ARU 11 13 39.4
ARU 11 16 31.8
ARU PPP PPP 11 18 24.1
ARU S **S** **11 23 37.2 +1.0**
ARU SS **SS** **11 28 42.5 -1.8**
ARU pmax pmax
comp=Z,31nm,1.3s
ARU Arti 79.94 356 P **P** **11 13 31.5 -1.9**
ARU IAmb IAmb 11 13 33.8
comp=Z,35nm,1.3s
MOS Moscow 80.12 8 *e*P **P** **11 13 32.9 -1.5**
BRG Berggiesshubel 80.21 23 *i* P **P** **11 13 35.0 +0.1**
comp=Z,30nm,1.4s
BRG Berggiesshubel 80.21 23 *i* P **P** **11 13 35.0 +0.1**
BRG pmax pmax
comp=Z,30nm,1.4s
GRA1 Grafenberg Arr 80.45 25 P **P** **11 13 36.0 -0.2**
GRA1 IAmb IAmb 11 13 38.1
comp=Z,41nm,1.4s
GRF Grafenberg Arr 80.45 25 P **P** **11 13 36.1 -0.2**
GRF pmax pmax
comp=Z,41nm,1.4s
GRF Grafenberg Arr 80.45 25 *e*P **P** **11 13 36.5 +0.1**
comp=Z,58nm,1.6s,baz=340,slow=4.7
OBN Obninsk 80.63 9 *e*P **P** **11 13 36.6 -0.5**
OBN *e* 11 13 41.9
OBN pmax pmax
comp=Z,16nm,0.4s
OBN MLR MLR
comp=Z,102nm,18.0s
BFO Black Forest 80.72 28 P **P** **11 13 37.9 +0.2**
BFO pmax pmax
comp=Z,20nm,1.3s
BFO Black Forest 80.72 28 P **P** **11 13 37.9 +0.2**
BTO Baotou 80.80 319 *e*P **P** **11 13 35.6 -2.8**
KSP Ksiaz 80.88 22 *e*P **P** **11 13 39.1 +0.5**
CHVC Chvalec 81.05 22 *e*P **P** **11 13 40.0 +0.5**
PRU Pruhonice 81.17 23 *e*P **P** **11 13 40.3 +0.2**
PRU Pruhonice 81.17 23 *e*P **P** **11 13 40.3 +0.2**
PBCC Pribram 81.29 24 *e*P **P** **11 13 41.4 +0.6**
LPAZ La Paz 81.32 122 P **P** **11 13 41.0 -1.1**
comp=Z,3.3nm,0.9s,baz=329,slow=7.5,SNR=9.9
LPAZ La Paz 81.32 122 P **P** **11 13 41.1 -0.9**
LPAZ pmax pmax
comp=Z,15nm,1.1s
LPAZ La Paz 81.32 122 P **P** **11 13 41.1 -0.9**
DPC Dobruska-Polom 81.34 22 *e*P **P** **11 13 41.4 +0.3**
DPC Dobruska-Polom 81.34 22 *e*P **P** **11 13 41.4 +0.3**
KHC Kasperske Hory 81.66 24‖ *e*P **P** **11 13 43.6 +0.8**
KHC pmax pmax
comp=Z,47nm,2.5s
KHC Kasperske Hory 81.66 24 *e*P **P** **11 13 43.0 +0.2**
KHC *e*pP **PcP** **11 13 48.5 -0.1**
KHC Kasperske Hory 81.66 24 P **P** **11 13 43.7 +0.8**
KRLC Kraliky 81.71 22 *e*P **P** **11 13 43.4 +0.3**
KRLC Kraliky 81.71 22 *e*P **P** **11 13 43.4 +0.3**
GERES GERESS Array B 81.95 24 P **P** **11 13 43.9 -0.5**
comp=Z,1.8nm,0.9s,baz=292,slow=7.1,SNR=8.7
GERES LR LR 11 50 36.6
comp=Z,129nm,18.6s,baz=318,slow=36
GERES GERESS Array B 81.95 24 P **P** **11 13 43.6 -0.8**
GERES GERESS Array B 81.95 24 P **P** **11 13 43.5 -0.8**
DAVA Damuels 82.14 27 *e*P **P** **11 13 48.0 +2.5**
comp=Z,7.7nm,1.3s
BRVK Borovoye 82.15 349 *d* iP **P** **11 13 44.8 -0.4**
BRVK pmax pmax
comp=Z,47nm,2.5s
BRVK Borovoye 82.15 349 P **P** **11 13 44.2 -1.0**
MORC Moravsky Berou 82.19 21 *e*P **P** **11 13 45.7 +0.1**
OJC Ojcow 82.36 20 *e*P **P** **11 13 46.0 -0.4**
OJC Ojcow 82.36 20 P **P** **11 13 45.9 -0.5**
OJC pmax pmax
comp=Z,12nm,1.1s
OJC Ojcow 82.36 20 P **P** **11 13 45.9 -0.5**
VRAC Vranov 82.36 22 P **P** **11 13 45.3 -1.1**
comp=Z,5.7nm,1.1s,baz=331,slow=4.9,SNR=8.7
VRAC Vranov 82.36 22 *e*P **P** **11 13 46.6 +0.2**

MOTA Moosalm 82.49 26 *e*P **P** **11 13 47.9 +0.6**
comp=Z,12nm,1.7s
KRUC Moravsky 82.53 22 *e*P **P** **11 13 47.2 -0.1**
SQTA Sankt Quirin 82.63 26 *e*P **P** **11 13 48.8 +0.8**
comp=Z,11nm,1.4s
NJ2 Nanjing 82.63 308 *e*P **P** **11 13 47.3 -0.8**
NJ2 pmax pmax
comp=Z,13nm,0.5s
MNMC Minye Minye 82.64 125 P **P** **11 13 49.2 +0.7**
MNMC IAmb IAmb 11 13 55.9
comp=Z,30nm,1.2s
WATA Walderalm 82.65 26 *e*P **P** **11 13 48.0 -0.1**
comp=Z,17nm,1.4s,SNR=6.3
WTTA Wattenberg 82.73 26 *i* P **P** **11 13 49.0 +0.4**
comp=Z,9.3nm,1.1s
SEM Semipalatinsk 82.85 342 *e*P **P** **11 13 47.1 -2.1**
comp=Z,5.3nm,1.2s,baz=342
SEM Semipalatinsk 82.85 342 *e*P **P** **11 13 47.1 -2.1**
SEM pmax pmax
comp=Z,5.0nm,1.2s
KURK Kurchatov 82.92 343 *d* iP **P** **11 13 48.6 -0.7**
KURK pmax pmax
comp=Z,31nm,1.3s
KURK Kurchatov 82.92 343 P **P** **11 13 48.4 -0.8**
KURK IAmb IAmb 11 13 50.1
comp=Z,39nm,1.4s
KURK Kurchatov 82.92 343 IAMs_20 IAMs_20 11 53 38.1
comp=Z,389nm,18.0s
ESDC Sonseca Array 83.01 40 P **P** **11 13 49.3 -0.8**
comp=Z,4.2nm,1.0s,baz=307,slow=4.2,SNR=12
ESDC LR LR 11 49 12.4
comp=Z,186nm,18.1s,baz=305,slow=35
ESDC Sonseca Array 83.01 40 P **P** **11 13 48.9 -1.2**
MOA Molln 83.02 24 *e*P **P** **11 13 49.5 -0.3**
comp=Z,9.2nm,1.6s
JAVC Velka Javorina 83.06 22 *e*P **P** **11 13 51.1 +1.0**
PB11 IPOC Station P 83.09 126 P **P** **11 13 50.4 -0.3**
NIE Niedzica 83.22 20 *e*P **P** **11 13 51.5 +0.5**
LPSR Galich'ya Gora 83.35 8 *e*P **P** **11 13 48.8 -2.6**
LPSR pmax pmax
comp=Z,10.0nm,1.1s
CONA Conrad Observa 83.41 23 *e*P **P** **11 13 52.3 +0.3**
comp=Z,8.6nm,1.2s,SNR=6.0
KBA Koelnbreinsper 83.43 25 *e*P **P** **11 13 52.2 0.0**
comp=Z,11nm,1.2s,SNR=5.7
HNR Honiara 83.44 250 IAMs_20 IAMs_20 11 40 45.6
comp=Z,472nm,19.0s
ABTA Abfaltersbach 83.46 26 *e*P **P** **11 13 52.5 +0.2**
comp=Z,13nm,1.3s
CTI Castel Tesino 83.81 27 P **P** **11 13 53.7 -0.4**
CTI pmax pmax
comp=Z,20nm,1.5s
CTI Castel Tesino 83.81 27 P **P** **11 13 53.6 -0.4**
CTI IAmb IAmb 11 13 55.2
comp=Z,20nm,1.5s
CIMO Cimolais 83.83 26 P **P** **11 13 53.3 -0.8**
AKASG Malin Array Be 83.89 14 P **P** **11 13 53.0 -1.3**
comp=Z,6.6nm,0.9s,baz=349,slow=4.7,SNR=23
AKASG LR LR 11 50 05.1
comp=Z,109nm,19.2s,baz=300,slow=35
AKASG Malin Array Be 83.89 14 *i* P **P** **11 13 53.4 -0.9**
AKASG pmax pmax
comp=Z,7.0nm,0.9s
AKASG Malin Array Be 83.89 14 P **P** **11 13 52.8 -1.4**
AKBB Malin Array Si 83.89 14 *de*P **P** **11 13 52.9 -1.4**
AKBB pmax pmax
comp=Z,18nm,1.3s
AKBB Malin Array Si 83.89 14 P **P** **11 13 53.1 -1.2**
ARSA Arzberg 83.92 24 *e*P **P** **11 13 54.8 +0.2**
comp=Z,12nm,1.1s,SNR=8.0
PRED Cave del Predi 84.06 25 P **P** **11 13 54.7 -0.6**
SOKA Soboth 84.30 24 *e*P **P** **11 13 56.1 -0.5**
comp=Z,16nm,1.3s,SNR=12
OBKA Obir 84.31 25 *e*P **P** **11 13 56.2 -0.4**
comp=Z,11nm,1.0s,SNR=6.1
CADS Cadrg 84.31 25 *i* P **P** **11 13 55.5 -1.1**
PERS Pernice 84.36 24 *i* P **P** **11 13 56.1 -0.7**
UZH Uzhgorod 84.44 19 *e*P P 11 13 52.3 -4.8
UZH *e* 11 13 56.4
ZSN Zaisan 84.45 338 *e*P **P** **11 13 56.6 -0.7**
comp=Z,6.7nm,1.3s,baz=338
ZSN Zaisan 84.45 338 *e*P **P** **11 13 56.5 -0.7**
ZSN pmax pmax
comp=Z,7.0nm,1.3s
PRMA PARMA 84.50 28 P **P** **11 13 58.1 +0.7**
PSZ Piszkesteto 84.51 21 P **P** **11 13 57.7 +0.1**
PSZ pmax pmax
comp=Z,22nm,1.2s
PSZ Piszkesteto 84.51 21 P **P** **11 13 57.7 +0.1**
PSZ IAmb IAmb 11 13 59.4
comp=Z,22nm,1.2s
VSR Storozhevoye 84.74 8 *e*P **P** **11 13 55.7 -2.9**
VSR pmax pmax
comp=Z,30nm,1.9s
BRZS Berezniki 84.76 346 *e*P **P** **11 13 57.3 -1.5**
comp=Z,6.2nm,1.8s,baz=346
BRZS Berezniki 84.76 346 *e*P **P** **11 13 57.2 -1.5**
BRZS pmax pmax
comp=Z,6.0nm,1.8s
BOJS Bojanci 85.42 25 *i* P **P** **11 14 01.4 -0.7**
MK31 Makanchi Array 85.74 339 *d* iP **P** **11 14 02.5 -1.2**
MK31 Makanchi Array 85.74 339 P **P** **11 14 02.0 -1.7**
MKAR Makanchi Array 85.74 339 P **P** **11 14 02.5 -1.3**
comp=Z,5.0nm,1.1s,baz=352,slow=6.5,SNR=12
MKAR Makanchi Array 85.74 339 *i* P **P** **11 14 02.9 -0.8**
MKAR pmax pmax
comp=Z,5.0nm,1.1s
MKAR Makanchi Array 85.74 339 P **P** **11 14 02.0 -1.7**
MAKZ Makanchi 85.80 340 P **P** **11 14 02.8 -1.2**
MAKZ IAmb IAmb 11 14 04.2
comp=Z,24nm,1.1s
MAKZ IAMs_20 IAMs_20 11 54 36.4
comp=Z,528nm,19.0s
BURAR Bucovina Array 86.05 17 P **P** **11 14 04.2 -1.2**
TATO Taipei 86.25 301 IAMs_20 IAMs_20 11 40 21.3
comp=Z,277nm,20.0s
WHN Wuhan 86.31 310‖ P **P** **11 14 06.3 -0.4**
GTA Gaotai 86.35 325‖ P **P** **11 14 06.0 -1.0**
GTA pP sP 11 14 10.6 -1.8
GTA sP pwP 11 14 13.0 -1.5
GTA S **S** **11 24 39.1 -3.1**
GTA sS sS 11 24 48.5 -0.1
GTA SS **SS** **11 30 24.0 +3.7**
GTA pmax pmax
comp=Z,9.0nm,1.7s
GTA pmax pmax
comp=Z,160nm,6.2s
GTA LR LR
comp=Z,190nm,18.5s
GTA LR LR
comp=Z,330nm,18.2s
GTA LR LR
comp=Z,490nm,20.4s
XAN Xi'an 86.49 315 P **P** **11 14 06.5 -1.1**
XAN pP pwP 11 14 18.0 +2.8
XAN S **S** **11 24 47.3 +3.7**
XAN pmax pmax
comp=Z,18nm,1.6s
XAN pmax pmax
comp=Z,210nm,4.0s
XAN LR LR
comp=Z,210nm,23.9s
XAN LR LR
comp=Z,290nm,19.5s
XAN LR LR
comp=Z,370nm,24.9s
XAN Xi'an 86.49 315 P **P** **11 14 06.6 -1.1**
XAN pmax pmax
comp=Z,29nm,1.4s
XAN Xi'an 86.49 315 P **P** **11 14 06.6 -1.1**
XAN IAmb IAmb 11 14 08.0
comp=Z,29nm,1.4s
XAN Xi'an 86.49 315 IAMs_20 IAMs_20 11 48 41.0
comp=Z,310nm,22.0s
MURB Monte Urbino 86.57 27 P **P** **11 14 08.0 0.0**
MURB IAmb IAmb 11 14 10.4
comp=Z,37nm,1.4s
WMQ Urumqi 86.93 335 *e*P **P** **11 14 09.8 +0.1**
WMQ pP pwP 11 14 16.9 -0.3
WMQ pmax pmax
comp=Z,26nm,1.7s
WMQ pmax pmax
comp=Z,120nm,4.9s
WMQ LR LR
comp=Z,330nm,19.7s
WMQ LR LR
comp=Z,610nm,27.7s
WMQ LR LR
comp=Z,530nm,18.1s
WMQ Urumqi 86.93 335 IAMs_20 IAMs_20 11 52 30.6
comp=Z,225nm,20.0s
ABKAR Akbulak array 87.01 354 P **P** **11 14 09.2 -0.6**
ABKAR IAmb IAmb 11 14 10.9
comp=Z,31nm,1.4s
LZH Lanzhou 87.32 320 *e*P **P** **11 14 11.3 -0.5**
LZH pP sP 11 14 16.9 -0.3
LZH sP pwP 11 14 21.9 +2.5
LZH pmax pmax
comp=Z,30nm,1.8s
LZH pmax pmax
comp=Z,230nm,7.3s
LZH LR LR
comp=Z,290nm,18.1s
LZH LR LR
comp=Z,410nm,18.8s
LZH LR LR
comp=Z,480nm,20.8s
TDK Taldyqorghan 88.36 341 *e*P **P** **11 14 15.7 -0.8**
baz=341
TDK Taldyqorghan 88.36 341 *e*P **P** **11 14 15.7 -0.8**
DZM Mont Dzumac 88.52 237 *e*LR LR 11 42 02.0
comp=Z,417nm,22.8s
ENH Enshi 89.17 313 P **P** **11 14 18.9 -1.6**
ENH IAmb IAmb 11 14 21.8
comp=Z,38nm,1.4s
ENH IAMs_20 IAMs_20 11 56 24.7
comp=Z,255nm,20.0s
BTLS Baital 89.27 344 *e*P **P** **11 14 19.6 -1.1**
comp=Z,4.0nm,1.3s,baz=344
BTLS Baital 89.27 344 *e*P **P** **11 14 19.6 -1.1**
BTLS pmax pmax
comp=Z,4.0nm,1.3s
KPKS Kokpek 89.75 341 *e*P **P** **11 14 21.8 -1.4**
comp=Z,6.0nm,1.4s,baz=340
KPKS Kokpek 89.75 341 *e*P **P** **11 14 21.7 -1.4**
KPKS pmax pmax
comp=Z,6.0nm,1.4s
CHKK Chushkaly 89.78 342 *e*P **P** **11 14 21.7 -1.5**
baz=342
CHKK Chushkaly 89.78 342 *e*P **P** **11 14 21.6 -1.5**
SHLS Shalkode 89.85 340 *e*P **P** **11 14 22.3 -1.3**
comp=Z,11nm,1.0s,baz=340
SHLS *e*S **SKSac** **11 24 52.3 -1.6**
baz=340
SHLS Shalkode 89.85 340 *e*P **P** **11 14 22.3 -1.3**
SHLS *e*S **SKSac** **11 24 52.3 -1.6**
SHLS pmax pmax
comp=Z,11nm,1.0s
KUU Kurty 89.89 342 *e*P **P** **11 14 22.0 -1.6**
comp=Z,5.4nm,1.0s,baz=342
KUU Kurty 89.89 342 *e*P **P** **11 14 22.0 -1.6**
KUU pmax pmax
comp=Z,5.0nm,1.0s
SATY Saty 90.20 341 *e*P **P** **11 14 24.3 -1.0**
comp=Z,8.5nm,1.2s,baz=341
SATY Saty 90.20 341 *e*P **P** **11 14 24.2 -1.0**
SATY pmax pmax
comp=Z,8.0nm,1.2s
AAA Alma-Ata 90.41 342 *e*P **P** **11 14 25.7 -0.5**
comp=Z,19nm,0.8s,baz=342
AAA Alma-Ata 90.41 342 *e*P **P** **11 14 25.6 -0.5**
AAA pmax pmax
comp=Z,19nm,0.8s
MDOK Medeo 90.42 342 *e*P **P** **11 14 24.9 -1.4**
baz=342
MDOK Medeo 90.42 342 *e*P **P** **11 14 24.9 -1.4**
TNSS Tian-Shan 90.56 342 *e*P **P** **11 14 26.4 -0.9**
baz=342
TNSS Tian-Shan 90.56 342 *e*P **P** **11 14 26.4 -0.9**
SGDS Sogindy 90.67 343 *e*P **P** **11 14 26.6 -0.8**
comp=Z,2.7nm,0.9s,baz=343
SGDS Sogindy 90.67 343 *e*P **P** **11 14 26.6 -0.8**
SGDS pmax pmax
comp=Z,3.0nm,0.9s
USP Ospenovka 90.88 343 P **P** **11 14 28.1 -0.2**
SNR=5.1
TKM2 Tokmak 2 90.97 343 P **P** **11 14 29.0 0.0**
SNR=5.2
KBK Karagaybulak 91.37 343 P **P** **11 14 31.0 +0.2**
SNR=5.2
AAK Ala-Archa 91.48 343 *d* iP **P** **11 14 30.8 -0.5**
AAK pmax pmax
comp=Z,29nm,1.3s
AAK Ala-Archa 91.48 343 IAMs_20 IAMs_20 11 59 15.5
comp=Z,223nm,20.0s
CD2 Chengdu 91.59 317 P **P** **11 14 31.6 -0.2**
CD2 PP **PP** **11 18 08.9 -0.4**
CD2 S **S** **11 25 30.6 -0.9**
CD2 sS sS 11 25 36.9 -1.1
CD2 SS **SS** **11 31 37.5 +0.8**
CD2 pmax pmax
comp=Z,10.0nm,1.0s
CD2 pmax pmax
comp=Z,160nm,11.3s
CD2 LR LR
comp=Z,300nm,22.1s
CD2 LR LR
comp=Z,480nm,16.2s
CD2 LR LR
comp=Z,380nm,19.1s
EKS2 Erkin-Say 91.61 344 P **P** **11 14 32.2 +0.4**
SNR=5.3
KK31 Karatay Array 91.79 346 P **P** **11 14 31.2 -1.3**
KK31 pmax pmax
comp=Z,5.0nm,1.1s
KK31 Karatay Array 91.79 346 P **P** **11 14 31.2 -1.3**
KKAR Karatay Array 91.79 346 P **P** **11 14 31.7 -0.8**
KKAR pmax pmax
comp=Z,5.0nm,1.1s
KKAR Karatay Array 91.79 346 P **P** **11 14 31.7 -0.8**
KKAR Karatay Array 91.79 346 P **P** **11 14 30.8 -1.7**
DZA Taraz 91.85 346 *e*P **P** **11 14 32.1 -0.7**
baz=346
DZA Taraz 91.85 346 *e*P **P** **11 14 32.1 -0.7**
KEST Kesra 92.05 33 LR LR 11 54 08.4
comp=Z,103nm,21.7s,baz=258,slow=34
AML Almayashu 92.13 344 P **P** **11 14 35.1 +0.6**
SNR=7.3
KIV Kislovodsk 92.26 6 *e*P **P** **11 14 36.3 +1.6**
KIV pmax pmax
comp=Z,34nm,1.1s
JAY Jayapura 92.27 269 LR LR 11 50 44.6
comp=Z,234nm,18.9s,baz=20,slow=32
PMG Port Moresby 92.35 259 LR LR 11 47 58.8
comp=Z,330nm,22.0s,baz=47,slow=30
PMG Port Moresby 92.35 259 IAMs_20 IAMs_20 11 47 02.3
comp=Z,593nm,22.0s
KBZ Khabaz 92.50 6 LR LR 11 59 55.7
comp=Z,88nm,18.0s,baz=347,slow=38
IUG Iuzhnay 92.81 346 *e*P **P** **11 14 36.6 -0.8**
comp=Z,8.5nm,1.8s,baz=346
IUG *e*S **SKSac** **11 25 10.0 -0.7**
baz=346
IUG Iuzhnay 92.81 346 *e*P **P** **11 14 36.5 -0.8**
IUG *e*S **SKSac** **11 25 10.0 -0.7**
IUG pmax pmax
comp=Z,8.0nm,1.8s
MAK Makhachkala 93.53 3 *i* P P 11 14 35.0 -5.5
MAK *e* 11 18 20.7
MAK *e* 11 25 05.5
MAK *e*SS SS 11 32 06.2 +2.9
MAK pmax pmax
comp=Z,331nm,1.4s
MAK MLR MLR
comp=Z,283nm,16.0s
GYA Guiyang 93.69 312‖ *e*P **P** **11 14 42.1 +0.4**
GYA pmax pmax
comp=Z,8.0nm,1.3s
GYA LR LR
comp=Z,170nm,18.5s
BDFB Brasilia 94.02 108 LR LR 12 01 00.5
comp=Z,440nm,18.8s,baz=303,slow=38
KMI Kunming 96.84 315‖ *e*P **P** **11 14 55.1 -1.1**
KMI pmax pmax
comp=Z,10.0nm,0.6s
KMI LR LR

comp=Z,170nm,18.3s
KMI LR LR
comp=Z,170nm,17.4s
KMI LR LR
comp=Z,230nm,20.3s
KMI Kunming 96.84 315 IAMs_20 IAMs_20 11 55 52.9
comp=Z,210nm,18.0s
LSA Lhasa 98.30 326 IAMs_20 IAMs_20 12 00 08.2
comp=Z,384nm,22.0s
GEYT Alibeck 98.40 355 LR LR 12 05 00.3
comp=Z,89nm,18.8s,baz=10.0,slow=39
FAKI Fak Fak 98.66 274 IAMs_20 IAMs_20 11 50 12.9
comp=Z,503nm,21.0s
NIL Nilore 100.37 342 IAMs_20 IAMs_20 12 03 46.8
comp=Z,236nm,19.0s
KKM Kota Kinabalu 103.58 292 IAMs_20 IAMs_20 11 58 49.2
comp=Z,213nm,21.0s
CHTO Chiang Mai 104.01 314 IAMs_20 IAMs_20 11 59 17.0
comp=Z,160nm,19.0s
TOLI2 Tolitoli 104.02 285 IAMs_20 IAMs_20 11 53 48.3
comp=Z,206nm,22.0s
TORD Torodi Ar. Bea 107.43 51 PP **PP** **11 20 09.3 -0.9**
comp=Z,1.0nm,1.0s,baz=337,slow=2.5,SNR=2.8
WRA Warramunga Arr 108.56 260 PKiKP **PKiKP** **11 19 51.4 -2.3**
comp=Z,0.5nm,0.7s,baz=38,slow=1.7,SNR=5.3
SBUM Sibu 108.90 293 IAMs_20 IAMs_20 11 56 59.2
comp=Z,234nm,18.0s
KSM Kuching 110.89 294 IAMs_20 IAMs_20 11 56 56.0
comp=Z,230nm,20.0s
ASAR Alice Springs 111.26 257 PKiKP **PKiKP** **11 19 55.9 -2.9**
comp=Z,0.8nm,0.9s,baz=42,slow=2.2,SNR=6.5
ASAR Alice Springs 111.26 257 *i* PKiKP **PKiKP** **11 19 55.5 -3.2**
ASAR Alice Springs 111.26 257 **PKiKP** **11 19 55.5 -3.2**
IPM Ipoh 114.48 303 IAMs_20 IAMs_20 12 04 32.4
comp=Z,228nm,18.0s
PMBI Palembang 117.83 295 IAMs_20 IAMs_20 12 16 13.5
comp=Z,240nm,18.0s
VNDA Vanda 128.21 195 PKiKP **PKPdf** **11 20 29.0 -0.5**
VNDA Vanda 128.21 195 **PKPdf** **11 20 29.0 -0.5**
BELA Belgrano 2 133.22 163 **PKPdf** **11 20 36.2 -2.9**
QSPA South Pole Qui 133.62 180 **PKPdf** **11 20 38.4 -1.8**
KMBO Kilima Mbogo 135.65 21 PKP **PKPdf** **11 20 46.9 +1.0**
comp=Z,0.6nm,0.4s,baz=75,slow=2.4,SNR=4.3
SNAA Sanae 142.02 155 *c i* PKiKP **PKiKP** **11 20 57.9 -0.5**
SNAA pmax pmax
comp=Z,7.0nm,2.5s
LSZ Lusaka 145.33 42 PKiKP **PKPbc** **11 21 02.6 -0.2**
LSZ Lusaka 145.33 42 **PKPbc** **11 21 02.6 -0.2**
NVL N'lazarevskaya 146.70 157 *e* PKHKP PKPpre 11 20 59.9
NVL pmax pmax
comp=Z,19nm,1.1s
LBTB Lobatse 151.78 57 PKiKP **PKPdf** **11 21 13.7 +0.5**
LBTB Lobatse 151.78 57 **PKPdf** **11 21 13.7 +0.5**
SYO Syowa Base 154.01 170 ‖ *e* PKiKP **PKiKP** **11 21 26.4 +3.3**
SYO Syowa Base 154.01 170 ‖ *e* PKPab **PKPab** **11 21 39.3 +2.8**

*IDC **23** 11:02:27.6±0.8,37°.22N×141°.49E, h0km, mb3.8/10, mb1 3.9/14,mb1mx3.8/48,mbtmp3.8/14,ML3.5/4,MS3.1/4, Ms1 3.1/4,ms1mx2.6/59,Error ellipse: s-maj=20.7km s-min=16.3km az=116.0*
*NIED **23** 11:02:32.7,37°.17N×141°.41E,h48km,MW4.0,Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr0.94; Mϑϑ-0.46; Mϕϕ-0.48; Mrϑ0.13; Mrϕ-0.52; Mϑϕ0.72; Fault plane solution: M0 1.21000×10^15^ NP1:ϕs25.00000°, δ64.00000°,λ72.00000°. NP2:ϕs242.00000°,ß31.00000°, λ122.00000°.*
*JMA **23** 11:02:32.6±0.1,37°.17N×141°.41E,h48km±1km,M3.9*
JMA Felt II J1.
ISC 23 11:02:31.1±1.7,**37°.15N**±0°.04×**141°.55E**±0°.07,**h24**km±11km, **n36**,σ1°**11**/44,**mb3.7**/10,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.58**	**292**	P	**Pb**	**11 02 43.2**	**+0.5**
JFK				S	**Sb**	**11 02 50.5**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.60**	**266**	P	**Pb**	**11 02 43.6**	**+0.6**
ONAJ				S	**Sb**	**11 02 51.1**	**0.0**
JMST	**Minamisoumatoc**	**0.78**	**318**	P	**Pb**	**11 02 46.0**	**0.0**
JMST				S	**Sb**	**11 02 55.5**	**-0.7**
JFFD	**Fukushimafurud**	**0.79**	**266**	P	**Pb**	**11 02 46.1**	**-0.1**
JFFD				S	**Sb**	**11 02 55.0**	**-1.5**
JMM	**Marumori**	**0.94**	**320**	P	**Pn**	**11 02 48.3**	**-0.4**
JMM				S	**Sb**	**11 02 59.5**	**-1.2**
JHO	**Hitachi**	**0.95**	**236**	P	**Pn**	**11 02 48.1**	**-0.8**
JHO				S	**Sb**	**11 02 59.2**	**-1.8**
JFT	**Otama**	**1.04**	**291**	P	**Pn**	**11 02 50.1**	**0.0**
JFT				S	**Sn**	**11 03 02.6**	**-1.3**
JIO	**Ouri**	**1.32**	**353**	P	**Pn**	**11 02 54.0**	**0.0**
JIO				S	**Sn**	**11 03 09.1**	**-1.6**
JOU	**Okura**	**1.41**	**330**	P	**Pn**	**11 02 55.4**	**+0.2**
JOU				S	**Sn**	**11 03 12.8**	**-0.2**
JFY	**Yanaizu**	**1.49**	**281**	P	**Pn**	**11 02 56.2**	**-0.2**
JFY				S	**Sn**	**11 03 13.9**	**-1.3**
JYS	**Shirataka**	**1.59**	**313**	P	**Pn**	**11 02 58.1**	**+0.3**
JYS				S	**Sn**	**11 03 17.3**	**-0.3**
MJAR	**Matsushiro Arr**	**2.75**	**258**	Pn	**Pn**	**11 03 14.3**	**+0.6**
	3.0nm,0.3s,baz=85,slow=14,SNR=33						
MJAR				Sn	**Sn**	**11 03 46.0**	**0.0**
	3.1nm,0.3s,baz=88,slow=12,SNR=6.2						
MJAR				LR	LR	11 04 33.8	
	comp=Z,232nm,19.2s,baz=95,slow=47						
MAT	**Matsushiro**	**2.75**	**258**	P	**Pn**	**11 03 14.7**	**+1.0**
MAT				S	**Sn**	**11 03 47.3**	**+1.2**
JHJ	**Hachijo jima 2**	**4.27**	**200**	Pn	**Pn**	**11 03 35.8**	**+1.2**
	33nm,0.3s,baz=162,slow=23,SNR=16						
JHJ				Sn	**Sn**	**11 04 21.6**	**-2.1**
	60nm,0.3s,baz=131,slow=22,SNR=7.4						
JHJ				LR	LR	11 05 17.1	
	comp=Z,58nm,18.5s,baz=100,slow=39						
ASAJ	**Asahikawa**	**7.01**	**6**	Pn	**Pn**	**11 04 11.9**	**-0.3**
	2.1nm,0.3s,baz=213,slow=14,SNR=21						
ASAJ				Sn	**Sn**	**11 05 30.8**	**-0.3**
	1.0nm,0.3s,baz=117,slow=27,SNR=2.2						
JNU	**Nakatsue**	**9.62**	**248**	Pn	**Pn**	**11 04 48.7**	**+0.7**
	0.2nm,0.3s,baz=24,slow=22,SNR=1.6						
USRK	**Ussuriysk Ar.**	**10.11**	**317**	Pn	**Pn**	**11 04 56.4**	**+1.7**
	baz=124,slow=14,SNR=6.3						
KSRS	**Korea Array**	**10.86**	**276**	Pn	**Pn**	**11 05 08.2**	**+3.2**
	0.1nm,0.3s,baz=86,slow=15,SNR=2.9						
KSRS				LR	LR	11 09 08.1	
	comp=Z,64nm,18.7s,baz=116,slow=37						
SONM	**Songino Array**	**27.81**	**304**	P	**P**	**11 08 17.8**	**-0.6**
	1.5nm,0.7s,baz=108,slow=9.9,SNR=9.5						
H11N2	**WAKE ISLAND Hy**	**28.11**	**121**	T	T	11 38 37.6	
	baz=314,slow=75,SNR=73						
H11N1	**WAKE ISLAND Hy**	**28.12**	**121**	T	T	11 38 35.5	
	baz=314,slow=75,SNR=58						
H11N3	**WAKE ISLAND Hy**	**28.13**	**121**	T	T	11 38 36.2	
	baz=314,slow=75,SNR=69						
H11S1	**WAKE ISLAND Hy**	**28.83**	**123**	T	T	11 39 21.9	
	baz=314,slow=75,SNR=41						
H11S3	**WAKE ISLAND Hy**	**28.83**	**123**	T	T	11 39 22.4	
	baz=314,slow=75,SNR=43						
H11S2	**WAKE ISLAND Hy**	**28.84**	**123**	T	T	11 39 22.3	
	baz=314,slow=75,SNR=20						
CMAR	**Chiang Mai Arr**	**41.63**	**255**	P	**P**	**11 10 17.7**	**+0.1**
	0.5nm,0.4s,baz=42,slow=6.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.92**	**312**	P	**P**	**11 10 19.1**	**-0.4**
	3.0nm,0.7s,baz=92,slow=7.9,SNR=12						
MKAR	**Makanchi Array**	**44.15**	**302**	P	**P**	**11 10 36.7**	**-1.0**
	1.1nm,0.6s,baz=98,slow=9.2,SNR=7.9						
ILAR	**Eielson Array**	**49.34**	**32**	P	**P**	**11 11 18.4**	**+0.4**
	0.6nm,0.8s,baz=260,slow=5.2,SNR=5.4						
WRA	**Warramunga Arr**	**57.19**	**188**	P	**P**	**11 12 15.3**	**-0.9**
	0.5nm,0.6s,baz=6.5,slow=7.4,SNR=8.7						
ASAR	**Alice Springs**	**60.91**	**188**	P	**P**	**11 12 43.2**	**+1.3**
	0.1nm,0.5s,baz=350,slow=4.5,SNR=2.0						
NEW	**Newport**	**69.97**	**44**	LR	LR	11 38 20.7	
	comp=Z,82nm,21.6s,baz=112,slow=31						
AKASG	**Malin Array Be**	**74.28**	**322**	P	**P**	**11 14 04.5**	**-1.6**
	0.9nm,0.4s,baz=46,slow=6.1,SNR=10						
NVAR	**Mina Array Bea**	**74.83**	**53**	P	**P**	**11 14 11.5**	**+1.7**
	0.3nm,0.6s,baz=276,slow=4.4,SNR=2.4						
GERES	**GERESS Array B**	**82.67**	**328**	P	**P**	**11 14 51.6**	**-1.0**
	0.2nm,0.4s,baz=31,slow=4.8,SNR=1.1						
LPAZ	**La Paz**	**146.54**	**60**	PKPbc	**PKPdf**	**11 22 11.4**	**+1.3**
	0.6nm,0.6s,baz=341,slow=11,SNR=2.0						

*MAN **23** 11:22:49.5,5°.91N×127°.98E,h3km,mb4.6,ML3.5,MS3.3*
*IDC **23** 11:22:51.0±1.2,5°.81N×127°.79E,h0km,mb3.8/6,*
mb1 4.0/6,mb1mx3.6/50,mbtmp3.8/6,Error ellipse: s-maj=64.9km s-min=21.6km az=78.0
ISC 23 11:22:55.9±1.0,**5°.9N**±0°.1×**127°.91E**±0°.10,**h35**km,**n13**, σ1°**46**/18,**mb3.6**/6,**1C-1D**,**Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.96**	**303**	*e* P	**Pn**	**11 23 25.1**	**-1.5**
MATI				*e* S	**Sn**	**11 23 47.6**	**-2.3**
DDMP	**Don Marcelino,**	**2.20**	**276**	*e* P	**Pn**	**11 23 28.9**	**-1.1**
DDMP				*e* S	**Sn**	**11 23 56.8**	**+0.8**
KCP	**Kidapawan**	**3.02**	**292**	*e* P	**Pn**	**11 23 42.3**	**+1.0**
SKMP	**Bagumbayan, Su**	**3.41**	**281**	*e* P	**Pn**	**11 23 46.0**	**-0.6**
SKMP				*e* S	**Sn**	**11 24 28.2**	**+2.3**
BUKP	**Musuan**	**3.46**	**305**	*e* P	**Pn**	**11 23 45.3**	**-2.0**
BUKP				*e* S	**Sn**	**11 24 28.9**	**+1.7**
CGP	**Cagayan de Oro**	**4.09**	**309**	*e* P	**Pn**	**11 23 57.7**	**+1.7**
CGP				*e* S	**Sn**	**11 24 41.6**	**-1.1**
PAGZ	**Pagadian**	**4.90**	**294**	*e* P	**Pn**	**11 24 05.8**	**-1.4**
FITZ	**Fitzroy Crossi**	**23.93**	**185**	P	**P**	**11 28 06.5**	**-0.3**
	2.0nm,0.9s,baz=4.9,slow=9.8,SNR=2.5						
WRA	**Warramunga Arr**	**26.43**	**166**	P	**P**	**11 28 29.1**	**-0.5**
	1.0nm,0.6s,baz=345,slow=10,SNR=20						
ASAR	**Alice Springs**	**29.94**	**169**	P	**P**	**11 29 00.8**	**-0.1**
	1.2nm,0.5s,baz=352,slow=8.1,SNR=53						
STKA	**Stephens Creek**	**39.75**	**162**	P	**P**	**11 30 24.9**	**-0.4**
	0.8nm,0.3s,baz=341,slow=8.3,SNR=3.2						
MKAR	**Makanchi Array**	**56.50**	**324**	P	**P**	**11 32 35.0**	**+0.3**
	0.3nm,0.5s,baz=119,slow=5.5,SNR=4.8						
ILAR	**Eielson Array**	**82.67**	**26**	P	**P**	**11 35 16.7**	**+1.1**
	0.4nm,0.8s,baz=257,slow=5.8,SNR=4.5						

*ANF **23** 11:32:04.6±1.6,43°.78N×128°.23W,h0km,Error ellipse: s-maj=20.0km s-min=14.3km az=4.0*
*IDC **23** 11:32:06.6±3.8,43°.76N×128°.03W,h0km,mb3.0/3, mb1 3.5/5,mb1mx3.3/52,mbtmp3.1/5,ML2.6/2,MS3.0/3, Ms1 3.0/3,ms1mx2.8/11,Error ellipse: s-maj=99.8km s-min=21.1km az=53.0*
ISC 23 11:32:07.9±1.9,**43°.8N**±0°.1×**128°.1W**±0°.1,**h10**km,**n23**, σ1°**57**/16,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I02D	**Swisshome**	**3.09**	**83**	P	**Pn**	**11 32 56.1**	**-0.5**
	baz=266,SNR=5.5						
I02D				S	**Sn**	**11 33 35.3**	**+1.7**
	baz=266						
J01E	**Myrtle Point**	**3.11**	**101**	P	**Pn**	**11 32 54.4**	**-2.6**
	baz=283						
J01E				S	**Sn**	**11 33 36.1**	**+2.0**
	baz=283						
K02D	**Willamette Mer**	**3.43**	**108**	P	**Pn**	**11 32 58.7**	**-2.8**
	baz=290,SNR=20						
K02D				S	**Sn**	**11 33 41.4**	**-0.9**
	baz=290						
I03D	**Drain, OR**	**3.45**	**90**	P	**Pn**	**11 33 00.1**	**-1.5**
	baz=273,SNR=48						
G03D	**McMinnville, O**	**3.73**	**66**	P	**Pn**	**11 33 04.3**	**-1.2**
	baz=250,SNR=10						
H04D	**Lebanon**	**3.92**	**78**	P	**Pn**	**11 33 07.3**	**-0.9**
	baz=261,SNR=7.6						
I04A	**Tendick Farm,**	**4.12**	**88**	P	**Pn**	**11 33 10.2**	**-0.7**
	baz=272						
J04D	**Umpqua Nationa**	**4.40**	**96**	P	**Pn**	**11 33 15.1**	**+0.2**
	baz=279						
YBH	**Yreka Blue Hor**	**4.49**	**116**	Pn	**Pn**	**11 33 14.7**	**-1.3**
	0.3nm,0.3s,baz=295,slow=11,SNR=7.6						
L04D	**Klamath Falls**	**4.54**	**109**	P	**Pn**	**11 33 17.2**	**+0.4**
	baz=292,SNR=8.3						
NVAR	**Mina Array Bea**	**9.15**	**123**	Pn	**Pn**	**11 34 21.5**	**+1.4**
	0.1nm,0.3s,baz=296,slow=15,SNR=4.1						
ELK	**Elko**	**10.02**	**103**	LR	LR	11 37 56.8	
	comp=Z,29nm,21.3s,baz=44,slow=35						
PDAR	**Pinedale Array**	**13.55**	**88**	LR	LR	11 40 40.4	
	comp=Z,115nm,19.6s,baz=130,slow=38						
ANMO	**Albuquerque**	**18.89**	**111**	LR	LR	11 42 57.8	
	comp=Z,91nm,19.5s,baz=175,slow=35						
YKA	**Yellowknife Ar**	**20.30**	**18**	P	Pn	11 36 44.0	-1.5
	1.6nm,0.9s,baz=205,slow=10,SNR=2.9						
ILAR	**Eielson Array**	**23.49**	**340**	P	**P**	**11 37 18.2**	**+0.7**
	0.3nm,0.7s,baz=156,slow=6.9,SNR=2.3						
TXAR	**Lajitas Array**	**24.26**	**118**	P	**P**	**11 37 24.8**	**-0.4**
	0.2nm,0.6s,baz=310,slow=7.0,SNR=2.0						
H11N3	**WAKE ISLAND Hy**	**58.68**	**268**	T	T	12 45 14.2	
	baz=50,slow=75,SNR=24						
H11N2	**WAKE ISLAND Hy**	**58.69**	**268**	T	T	12 45 19.7	
	baz=50,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**58.70**	**268**	T	T	12 45 16.1	
	baz=50,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**59.61**	**267**	T	T	12 46 14.8	
	baz=50,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**59.62**	**267**	T	T	12 46 24.1	
	baz=50,slow=75,SNR=9.9						
H11S3	**WAKE ISLAND Hy**	**59.63**	**267**	T	T	12 46 16.1	
	baz=50,slow=75,SNR=6.9						

*IDC **23** 11:36:55.5±0.7,37°.36S×179°.63E,h0km,mb4.7/12, mb1 4.8/14,mb1mx4.4/38,mbtmp4.7/14,ML4.2/2,MS3.7/9, Ms1 3.7/9,ms1mx3.4/29,Error ellipse: s-maj=24.5km s-min=17.0km az=23.0*
*NEIC **23** 11:36:57.9±1.1,37°.90S±0°.09×179°.7E±0°.1,h25km±6km, mb4.9/16,Error ellipse: s-maj=16.8km s-min=11.5km az=65.0*
*WEL **23** 11:36:57.4±0.8,38°S±6°×18°0E±°,h33km,M4.7/18, ML5.0/18,MLv4.7/18,Error ellipse: s-maj=0.0km s-min=0.0km az=21.7*
ISC 23 11:36:55.0±0.6,**37°.81S**±0°.05×**179°.95E**±0°.05,**h10**km,**n214**, σ1°**26**/208,**mb4.8**/19,**MS3.6**/10,**1C-1D**,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.21**	**269**	P	**Pg**	**11 37 18.3**	**0.0**
WMGZ				S	**Sn**	**11 37 34.8**	**+0.3**
MXZ	**Matakaoa Point**	**1.32**	**280**	P	**Pn**	**11 37 19.2**	**-0.2**
MXZ				S	**Sb**	**11 37 36.4**	**-0.5**
MXZ	**Matakaoa Point**	**1.32**	**280**	Pn	**Pn**	**11 37 19.3**	**-0.2**
PUZ	**Puketiti**	**1.36**	**258**	P	**Pb**	**11 37 20.5**	**-0.1**
PUZ				S	**Sn**	**11 37 38.6**	**+0.5**
CNGZ	**Carnagh Statio**	**1.53**	**243**	P	**Pg**	**11 37 24.1**	**-0.2**
CNGZ				S	**Sb**	**11 37 43.2**	**+0.4**
TWGZ	**Tauwhareparae**	**1.60**	**256**	P	**Pb**	**11 37 24.1**	**-0.5**
TWGZ				S	**Sb**	**11 37 44.7**	**-0.1**
HAZ	**Te Kaha**	**1.71**	**271**	P	**Pn**	**11 37 25.0**	**+0.1**
HAZ				S	**Sn**	**11 37 47.1**	**+0.3**
TKGZ	**Te Karaka**	**1.77**	**249**	P	**Pb**	**11 37 26.7**	**-0.8**
TKGZ				S	**Sn**	**11 37 48.8**	**+0.5**
RUGZ	**Raukumara Rang**	**1.80**	**264**	P	**Pn**	**11 37 26.4**	**+0.2**
RUGZ				S	**Sn**	**11 37 48.7**	**-0.5**
RIGZ	**Rimuhau**	**1.94**	**242**	P	**Pb**	**11 37 29.3**	**-1.1**
RIGZ				S	**Sb**	**11 37 54.5**	**-0.2**
PRGZ	**Paritu Road**	**1.97**	**235**	P	**Pb**	**11 37 29.9**	**-0.9**
PRGZ				S	**Sb**	**11 37 55.8**	**+0.3**
MWZ	**Matawai**	**1.98**	**254**	P	**Pn**	**11 37 28.9**	**+0.3**
MWZ				S	**Sn**	**11 37 53.1**	**-0.3**
MHGZ	**Mahia Peninsul**	**2.09**	**229**	P	**Pb**	**11 37 31.6**	**-1.4**
MHGZ				S	**Sb**	**11 37 59.2**	**+0.2**
RAGZ	**Rawiri**	**2.11**	**250**	P	**Pn**	**11 37 31.6**	**+1.1**
RAGZ				S	**Sn**	**11 37 57.3**	**+0.6**
KNZ	**Kokohu**	**2.16**	**235**	P	**Pn**	**11 37 32.0**	**+1.1**
WIZ	**White Island**	**2.21**	**277**	P	**Pn**	**11 37 32.1**	**+0.5**
SNGZ	**Shannon Statio**	**2.27**	**244**	P	**Pn**	**11 37 33.7**	**+1.2**
URZ	**Urewera**	**2.28**	**258**	Pn	**Pn**	**11 37 33.5**	**+0.8**
	107nm,0.3s,baz=77,slow=1.5,SNR=787						
URZ				Sn	**Sn**	**11 38 01.8**	**+0.9**
	412nm,0.3s,baz=244,slow=19,SNR=26						
URZ	**Urewera**	**2.28**	**258**	P	**Pn**	**11 37 33.7**	**+0.9**
URZ	**Urewera**	**2.28**	**258**	Pn	**Pn**	**11 37 33.7**	**+0.9**
WHRZ	**Whale Island**	**2.35**	**268**	P	**Pn**	**11 37 34.9**	**+1.2**
RTZ	**Ruatahuna**	**2.47**	**250**	P	**Pn**	**11 37 37.0**	**+1.6**
WHHZ	**Waihua**	**2.48**	**238**	P	**Pn**	**11 37 36.7**	**+1.3**
RAHZ	**Arahi**	**2.50**	**243**	P	**Pn**	**11 37 37.1**	**+1.3**
EDRZ	**Edgecumbe**	**2.55**	**262**	P	**Pn**	**11 37 37.2**	**+0.7**
MUGZ	**Murupara**	**2.59**	**254**	P	**Pn**	**11 37 38.0**	**+1.0**
MARZ	**Manawahe**	**2.59**	**265**	P	**Pn**	**11 37 37.5**	**+0.5**
MTHZ	**Maungataniwha**	**2.66**	**246**	P	**Pn**	**11 37 39.2**	**+1.3**
OPRZ	**Ohinepanea**	**2.69**	**268**	P	**Pn**	**11 37 38.2**	**0.0**
ARHZ	**Aropaoanui**	**2.73**	**237**	P	**Pn**	**11 37 40.4**	**+1.5**
TARZ	**Mount Tarawera**	**2.75**	**260**	P	**Pn**	**11 37 40.1**	**+0.9**
RRRZ	**Republican Roa**	**2.76**	**258**	P	**Pn**	**11 37 40.0**	**+0.7**
MKRZ	**Makatiti**	**2.77**	**262**	P	**Pn**	**11 37 40.6**	**+1.1**
NMHZ	**Naumai**	**2.78**	**241**	P	**Pn**	**11 37 41.0**	**+1.4**
LIRZ	**Lichensteins R**	**2.82**	**265**	P	**Pn**	**11 37 40.9**	**+0.7**
OMRZ	**Omania**	**2.84**	**263**	P	**Pn**	**11 37 40.9**	**+0.5**
HLRZ	**Highlands Stat**	**2.87**	**260**	P	**Pn**	**11 37 41.8**	**+1.0**
PRRZ	**Plateau Road**	**2.88**	**255**	P	**Pn**	**11 37 41.7**	**+0.7**
CKHZ	**Cape Kidnapper**	**2.91**	**230**	P	**Pn**	**11 37 42.2**	**+0.9**
TGRZ	**Tauranga**	**2.92**	**270**	P	**Pn**	**11 37 41.3**	**-0.2**
KARZ	**Kaharoa**	**2.94**	**265**	P	**Pn**	**11 37 42.0**	**+0.3**
ALRZ	**Allen Road**	**2.94**	**254**	P	**Pn**	**11 37 42.5**	**+0.8**
HRRZ	**Handcock Road**	**2.95**	**258**	P	**Pn**	**11 37 42.6**	**+0.8**
MRHZ	**Matea Rd**	**2.96**	**249**	P	**Pn**	**11 37 43.1**	**+1.0**
HSRZ	**Hossack Road**	**2.96**	**259**	P	**Pn**	**11 37 42.9**	**+0.8**
NGRZ	**Ngongotaha**	**2.98**	**263**	P	**Pn**	**11 37 43.3**	**+0.9**
UTU	**Utuhina**	**2.99**	**262**	P	**Pn**	**11 37 43.7**	**+1.3**
MYRZ	**Mayor Island**	**2.99**	**279**	P	**Pn**	**11 37 42.3**	**-0.2**
MCHZ	**McNeill Hill**	**3.02**	**236**	P	**Pn**	**11 37 44.0**	**+1.1**
BKZ	**Black Stump Fm**	**3.03**	**242**	P	**Pn**	**11 37 44.2**	**+1.2**
BKZ	**Black Stump Fm**	**3.03**	**242**	Pn	**Pn**	**11 37 43.2**	**+0.2**
WPRZ	**Whakapapataran**	**3.06**	**255**	P	**Pn**	**11 37 44.5**	**+1.0**
GRRZ	**Galatos Road**	**3.08**	**259**	P	**Pn**	**11 37 44.5**	**+0.8**
KAHZ	**Kahuranaki**	**3.11**	**229**	P	**Pn**	**11 37 45.0**	**+0.9**
KMRZ	**Kaimai**	**3.17**	**268**	P	**Pn**	**11 37 45.1**	**+0.2**
KWHZ	**Kaweka Forest**	**3.20**	**239**	P	**Pn**	**11 37 46.2**	**+0.8**
HATZ	**Hinemaiaia**	**3.22**	**249**	P	**Pn**	**11 37 46.8**	**+1.2**
WHTZ	**Whakaora**	**3.25**	**254**	P	**Pn**	**11 37 48.1**	**+1.9**
PXZ	**Pawanui**	**3.27**	**226**	P	**Pn**	**11 37 46.5**	**+0.2**
KUTZ	**Kaahu Road**	**3.32**	**257**	P	**Pn**	**11 37 47.8**	**+0.8**
KRHZ	**Kereru**	**3.34**	**236**	P	**Pn**	**11 37 47.7**	**+0.4**
RITZ	**Rihia Road**	**3.42**	**249**	P	**Pn**	**11 37 49.3**	**+1.0**
WATZ	**Wairara**	**3.44**	**254**	P	**Pn**	**11 37 49.6**	**+1.0**
RATZ	**Rangitukua**	**3.45**	**251**	P	**Pn**	**11 37 50.1**	**+1.3**
BHHZ	**Black Hill Sta**	**3.47**	**240**	P	**Pn**	**11 37 50.0**	**+0.9**
TLZ	**Tolley Road**	**3.52**	**260**	P	**Pn**	**11 37 50.0**	**+0.2**
TOZ	**Tahuroa Road**	**3.52**	**270**	P	**Pn**	**11 37 50.2**	**+0.4**
KUZ	**Kuaotunu**	**3.53**	**286**	P	**Pn**	**11 37 49.1**	**-0.8**
KATZ	**Kakaramea**	**3.54**	**249**	P	**Pn**	**11 37 50.9**	**+0.8**
WPHZ	**Waipukurau**	**3.54**	**229**	P	**Pn**	**11 37 50.3**	**+0.2**
PRHZ	**Porangahau**	**3.56**	**225**	P	**Pn**	**11 37 50.2**	**-0.1**
TMVZ	**Te Maari**	**3.58**	**247**	P	**Pn**	**11 37 51.1**	**+0.5**
ETVZ	**East Tongariro**	**3.58**	**247**	P	**Pn**	**11 37 51.1**	**+0.5**
PNHZ	**Pukenui**	**3.60**	**233**	P	**Pn**	**11 37 50.9**	**0.0**
KRVZ	**Karewarewa**	**3.62**	**248**	P	**Pn**	**11 37 51.7**	**+0.6**
OTVZ	**Oturere**	**3.62**	**247**	P	**Pn**	**11 37 51.7**	**+0.4**
MOVZ	**Moawhango**	**3.65**	**243**	P	**Pn**	**11 37 52.5**	**+0.8**
WTVZ	**West Tongariro**	**3.66**	**248**	P	**Pn**	**11 37 52.6**	**+0.9**
TUVZ	**Tukino**	**3.67**	**245**	P	**Pn**	**11 37 52.8**	**+0.9**
NGZ	**Ngauruhoe**	**3.67**	**247**	P	**Pn**	**11 37 52.4**	**+0.5**
WHVZ	**Whangaehu Hut**	**3.72**	**245**	P	**Pn**	**11 37 53.6**	**+0.9**
WNVZ	**Wahianoa**	**3.73**	**245**	P	**Pn**	**11 37 53.2**	**+0.5**
DRZ	**Dome Shelter**	**3.73**	**246**	P	**Pn**	**11 37 54.4**	**+1.5**
FWVZ	**Far West T-bar**	**3.73**	**246**	P	**Pn**	**11 37 54.0**	**+1.1**
TWVZ	**Taurewa**	**3.76**	**249**	P	**Pn**	**11 37 53.8**	**+0.7**
ANWZ	**Angora Road**	**3.78**	**224**	P	**Pn**	**11 37 53.1**	**-0.2**
TSZ	**Takapari Road**	**3.83**	**233**	P	**Pn**	**11 37 53.6**	**-0.4**
MTVZ	**Mangateitei**	**3.84**	**244**	P	**Pn**	**11 37 55.7**	**+1.4**
DVHZ	**Dannevirke**	**3.85**	**229**	P	**Pn**	**11 37 54.1**	**-0.2**
MKAZ	**Moumakai**	**3.87**	**279**	P	**Pn**	**11 37 54.6**	**0.0**
PKVZ	**Pokaka**	**3.90**	**246**	P	**Pn**	**11 37 56.5**	**+1.5**
GRZ	**Great Barrier**	**3.91**	**292**	P	**Pn**	**11 37 54.7**	**-0.4**
WIAZ	**Waiheke Island**	**3.97**	**283**	P	**Pn**	**11 37 55.9**	**0.0**
BFZ	**Birch Farm**	**4.06**	**224**	P	**Pn**	**11 37 56.1**	**-1.0**
BFZ	**Birch Farm**	**4.06**	**224**			**11 37 56.3**	**-0.8**
HIZ	**Hauiti**	**4.07**	**259**	P	**Pn**	**11 37 58.5**	**+1.1**
HIZ	**Hauiti**	**4.07**	**259**			**11 37 56.4**	**-1.0**
ETAZ	**East Tamaki Re**	**4.09**

comp=Z,16nm,0.9s,baz=90,slow=10,SNR=3.0
AS31 Alice Springs 41.60 276 P **P 11 44 43.0 -0.3**
ASAR Alice Springs 41.60 276 P **P 11 44 42.8 -0.6**
comp=Z,17nm,0.6s,baz=122,slow=8.1,SNR=380
ASAR PcP **PcP 11 46 40.4 0.0**
comp=Z,0.5nm,0.6s,baz=118,slow=4.4,SNR=1.5
RABL Rabaul 41.99 316 P **P 11 44 45.2 -1.3**
FORT Forrest 42.98 263 P **P 11 44 54.3 -0.1**
FORT IAmb IAmb 11 45 04.2
comp=Z,39nm,0.9s
WR0 Warramunga Arr 43.09 281 P **P 11 44 54.4 -1.1**
WR0 IAmb IAmb 11 45 06.4
comp=Z,13nm,0.8s
WB2 Warramunga Arr 43.25 281 P **P 11 44 56.4 -0.4**
WB2 IAmb IAmb 11 44 56.9
comp=Z,21nm,0.7s
WRAB Tennant Creek 43.26 281 P **P 11 44 56.1 -0.7**
WRAB IAmb IAmb 11 44 56.8
comp=Z,20nm,0.7s
WRA Warramunga Arr 43.26 281 P **P 11 44 56.1 -0.7**
comp=Z,18nm,0.6s,baz=123,slow=7.6,SNR=145
WRA PcP **PcP 11 46 46.8 +0.9**
comp=Z,1.0nm,0.8s,baz=108,slow=3.1,SNR=4.2
WRA Warramunga Arr 43.26 281 P **P 11 44 55.2 -1.6**
WB0 Warramunga Arr 43.32 281 P **P 11 44 56.2 -1.1**
WB0 IAmb IAmb 11 44 57.3
comp=Z,21nm,0.7s
KNRA Kununurra 50.05 282 P **P 11 45 49.1 -0.9**
KNRA IAmb IAmb 11 45 58.3
comp=Z,9.8nm,0.8s
JAY Jayapura 50.25 305 P **P 11 45 49.4 -2.2**
comp=Z,8.3nm,0.9s,baz=11,slow=9.7,SNR=2.9
NWAO Narrogin (SRO) 50.53 256 P **P 11 45 53.6 +0.1**
comp=Z,7.7nm,0.8s,baz=139,slow=7.9,SNR=5.4
NWAO Narrogin (SRO) 50.53 256 P **P 11 45 53.1 -0.4**
FITZ Fitzroy Crossi 51.09 277 P **P 11 45 57.7 -0.2**
comp=Z,13nm,0.7s,baz=182,slow=6.6,SNR=49
FITZ Fitzroy Crossi 51.09 277 P **P 11 45 57.4 -0.5**
FITZ IAmb IAmb 11 45 58.7
comp=Z,14nm,0.7s
QSPA South Pole Qui 52.32 180 P P 11 46 12.1 +5.5
comp=Z,5.7nm,1.0s,baz=34,slow=2.8,SNR=14
QSPA South Pole Qui 52.32 180 P **P 11 46 06.9 +0.3**
QSPA IAmb IAmb 11 46 23.2
comp=Z,10nm,1.0s
SIJI Sorong 57.85 298 P **P 11 46 46.7 -0.4**
comp=Z,18nm,0.8s,baz=122,slow=7.0,SNR=6.3
GUMO Guam 60.81 320 LR LR 12 10 15.2
comp=Z,45nm,21.4s,baz=134,slow=33
SYO Syowa Base 69.53 194‖*eX* **P 11 48 06.4 +3.1**
SYO Syowa Base 69.53 194‖*eX* P 11 48 09.4 +6.1
PLCA Paso Flores 78.70 133 P **P 11 49 01.1 +3.5**
comp=Z,3.2nm,0.9s,baz=223,slow=5.5,SNR=5.4
PLCA LR LR 12 16 50.8
comp=Z,53nm,18.3s,baz=340,slow=30
PLCA Paso Flores 78.70 133 P **P 11 48 58.6 +1.0**
ASAJ Asahikawa 88.28 334 LR LR 12 22 35.9
comp=Z,531nm,20.7s,baz=256,slow=31
KSRS Korea Array 88.96 321 P **P 11 49 47.9 -1.7**
comp=Z,1.2nm,0.7s,baz=148,slow=7.4,SNR=3.4
CMAR Chiang Mai Arr 94.28 290 LR LR 12 36 36.0
comp=Z,20nm,18.4s,baz=75,slow=38
LPAZ La Paz 96.54 116 P P 11 50 30.9 +4.9
comp=Z,0.6nm,0.5s,baz=155,slow=9.3,SNR=7.7
CPUP Villa Florida 96.60 131 LR LR 12 27 18.0
comp=Z,112nm,18.1s,baz=226,slow=31
KURBB Kurchatov Arra 124.78 311 PKP **PKiKP 11 55 56.1 +1.4**
comp=Z,0.8nm,0.5s,baz=119,slow=1.5,SNR=4.1
ARCES ARCESS Array B 145.36 345 PKP **PKPab 11 56 33.0 +0.9**
comp=Z,4.5nm,0.7s,baz=0.0,slow=3.6,SNR=12
MARD Mardin 147.81 282 PKiKP 11 56 41.3 -0.9
DBIC Dimbokro 148.70 171 PKPbc **PKPab 11 56 46.7 +0.2**
comp=Z,3.3nm,1.0s,baz=183,slow=2.7,SNR=4.8
FINES FINESS Array B 151.29 334 PKPbc **PKiKP 11 56 48.9 +0.6**
comp=Z,2.8nm,0.7s,baz=36,slow=3.5,SNR=9.3
FINES FINESS Array B 151.29 334 PKiKP 11 56 48.3 0.0
BRTR Keskin Array B 153.75 285 PKPbc **PKiKP 11 56 56.5 +2.2**
comp=Z,1.9nm,0.9s,baz=129,slow=3.9,SNR=6.8
BRTR Keskin Array B 153.75 285 PKPbc 11 56 53.6 -0.7
TORD Torodi Ar. Bea 155.39 184 PKPbc PKPbc 11 57 01.3
comp=Z,0.9nm,0.9s,baz=90,slow=1.4,SNR=2.1
TORD Torodi Ar. Bea 155.39 184 PKPdf 11 56 58.6 +9.4
AKASG Malin Array Be 155.57 311 PKPbc PKPbc 11 57 00.8
comp=Z,0.3nm,0.4s,baz=53,slow=3.0,SNR=2.1
NB2 NORSAR Subarra155.69 347 PKP **PKPab 11 57 20.9 +6.3**
comp=Z,3.5nm,0.8s,baz=25,slow=4.1
GERES GERESS Array B 165.13 322 PKPab **PKPab 11 57 55.9 -0.3**
comp=Z,0.5nm,0.7s,baz=56,slow=3.6,SNR=4.2
GERES GERESS Array B 165.13 322 PKPab 11 57 56.1 -0.1

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*IDC **23** 11:44:01.5±0.9, 9.˚73N×123.˚97E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.6/41, mbtmp3.6/8, Error ellipse: s-maj=47.2km s-min=18.7km az=64.0*
*MAN **23** 11:44:04.0, 9.˚74N×123.˚59E, h16km, mb4.9, ML3.8, MS3.8 MAN Intensity III - Dauis, Bohol; Intensity II - Tagbilaran City; Argao, Cebu.*
ISC 23 11:44:04.3±1.4, 9.˚73N±0.˚04×123.˚60E±0.˚04, h14km±9km, n25, σ1°55/33, mb3.4/8, 4D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.26**	**98**	⇓*iP*	**Pb**	**11 44 10.1**	**-0.7**
TBP				*iS*	**Sb**	**11 44 14.7**	**-0.4**
LLP	**Lapu-Lapu**	**0.69**	**31**	⇓*iP*	**Pg**	**11 44 17.4**	**-0.4**
LLP				*iS*	**Sg**	**11 44 27.1**	**+0.3**
CNOP	**Candoni, Negro**	**0.95**	**276**	*eP*	**Pb**	**11 44 20.9**	**-1.7**
CNOP				*eS*	**Sb**	**11 44 35.4**	**+0.2**
MSLP	**Maasin**	**1.30**	**72**	*eP*	**Pn**	**11 44 27.5**	**-0.6**
MSLP				*eS*	**Sg**	**11 44 47.9**	**+1.5**
OCLP	**Ormoc**	**1.65**	**37**	*eP*	**Pn**	**11 44 32.4**	**-0.5**
OCLP				*eS*	**Sg**	**11 44 58.5**	**+1.1**
CGP	**Cagayan de Oro**	**1.66**	**139**	⇓*eP*	**Pn**	**11 44 32.1**	**-1.0**
CGP				*eS*	**Sb**	**11 44 54.3**	**-1.3**
PAGZ	**Pagadian**	**1.88**	**187**	*eP*	**Pn**	**11 44 35.4**	**-0.7**
PAGZ				*eS*	**Sb**	**11 45 01.5**	**-0.4**
BUKP	**Musuan**	**2.34**	**142**	*eP*	**Pn**	**11 44 43.1**	**+0.7**
BUKP				*eS*	**Sb**	**11 45 16.0**	**+0.9**
GLSP	**General Luna,**	**2.49**	**89**	*eP*	**Pn**	**11 44 43.7**	**-0.8**
GLSP				*eS*	**Sn**	**11 45 15.8**	**+1.1**
KCP	**Kidapawan**	**3.08**	**151**	⇓*iP*	**Pb**	**11 44 58.4**	**-0.6**
SKMP	**Bagumbayan, Su**	**3.32**	**164**	*eP*	**Pn**	**11 44 58.2**	**+2.3**
PAYA	**Payao**	**24.86**	**295**	P	**P**	**11 49 27.1**	**+0.4**
CM34	**Chiang Mai Arr**	**25.34**	**294**	P	**P**	**11 49 35.5**	**+4.4**
CM02	**Chiang Mai Arr**	**25.41**	**293**	P	P	11 49 42.3	+11
CM31	**Chiang Mai Arr**	**25.41**	**293**	P	P	11 49 41.9	+10
CMAR	**Chiang Mai Arr**	**25.41**	**293**	P	**P**	**11 49 34.3**	**+2.5**
	0.3nm,0.3s,baz=102,slow=7.6,SNR=7.4						
CM33	**Chiang Mai Arr**	**25.52**	**293**	P	**P**	**11 49 36.0**	**+3.3**
MHMT	**Maesarieng**	**26.26**	**291**	P	P	11 49 52.0	+13
WRA	**Warramunga Arr**	**31.32**	**160**	P	**P**	**11 50 22.3**	**-2.2**
	0.3nm,1.0s,baz=340,slow=9.3,SNR=1.8						
ASAR	**Alice Springs**	**34.69**	**163**	P	**P**	**11 50 52.7**	**-1.1**
	0.3nm,0.7s,baz=336,slow=6.6,SNR=11						
ASAR				PcP	**PcP**	**11 53 26.6**	**-1.4**
	0.2nm,0.7s,baz=356,slow=2.6,SNR=1.1						
SONM	**Songino Array**	**40.67**	**342**	P	**P**	**11 51 45.7**	**+1.3**
	0.2nm,0.3s,baz=159,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	**50.90**	**324**	P	**P**	**11 53 06.1**	**+1.0**
	1.4nm,0.7s,baz=124,slow=6.0,SNR=6.9						
MKAR				PcP	**PcP**	**11 54 21.0**	**-0.5**
	0.5nm,0.7s,baz=98,slow=5.1,SNR=2.5						
ZALV	**Zalesovo Beam**	**53.87**	**333**	P	**P**	**11 53 27.1**	**+0.1**
	0.6nm,0.3s,baz=106,slow=11,SNR=1.5						
KURBB	**Kurchatov Arra**	**55.05**	**327**	P	**P**	**11 53 36.1**	**+0.5**
	2.3nm,0.8s,baz=129,slow=6.7,SNR=5.6						
ILAR	**Eielson Array**	**81.07**	**26**	P	**P**	**11 56 17.4**	**-1.4**
	0.2nm,0.5s,baz=258,slow=3.9,SNR=4.2						

DJA 23 11:47:11.7±0.7, 3.˚5S±5.˚5×127.˚7E±.˚, h50km±7km, M2.4/4, MLv2.4/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.23**	**320**	P	Pn	11 47 21.8	+1.5
NLAI				S	Sn	11 47 29.3	+2.9
AAI	**Ambon**	**0.98**	**106**	P	Pn	11 47 42.8	+14
AAI				S	Sn	11 47 42.6	+0.6
SANI	**Sanana**	**1.85**	**317**	P	Pn	11 47 41.5	+0.4
SANI				S	Sn	11 48 03.3	-0.1

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*ISU **23** 12:07:47.0, 41.˚40N×72.˚60E, h15km*

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*NNC **23** 12:07:49.9±1.5, 41.˚22N×72.˚67E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=13.5km s-min=5.9km az=176.0*
*KRNET **23** 12:07:49.5±0.1, 41.˚19N×72.˚78E, h35km, mb3.0*
*SOME **23** 12:07:50.1, 41.˚22N×72.˚80E, h20km*
ISC 23 12:07:49.4±0.9, 41.˚20N±0.˚02×72.˚82E±0.˚02, h16km±7km, n53, σ1°58/87, 21C-16D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARSB	**Arslanbob**	**0.18**	**44**	*eP*	**Pg**	**12 07 53.0**	**-1.0**
ARSB				*eS*	**Sb**	**12 07 57.7**	**-0.2**
ANR	**Andizhan**	**0.56**	**218**	*eP*	**Pg**	**12 07 59.5**	**-1.0**
ANR				*eS*	**Sg**	**12 08 09.2**	**+1.3**
OHH	**Osh**	**0.67**	**182**	⇑*iP*	**Pg**	**12 08 02.7**	**+0.1**
	baz=80						
OHH				⇑*iS*	**Sg**	**12 08 12.6**	**+1.1**
	baz=80						
AML	**Almayashu**	**1.14**	**35**	⇑*iP*	**Pb**	**12 08 11.1**	**0.0**
	baz=36						
AML				⇑*iS*	**Sb**	**12 08 25.9**	**0.0**
	baz=36						
AML	**Almayashu**	**1.14**	**35**	P	**Pg**	**12 08 12.3**	**+0.7**
	SNR=27						
SFK	**Sufi-Kurgan**	**1.29**	**156**	⇑*iP*	**Pn**	**12 08 12.2**	**-0.9**
	baz=55						
SFK				⇑*iS*	**Sb**	**12 08 29.7**	**-0.2**
	baz=55						
TRKS	**Terek-Say**	**1.30**	**285**	⇑*iP*	**Pn**	**12 08 11.8**	**-1.4**
	baz=83						
TRKS				⇑*iS*	**Sb**	**12 08 28.5**	**-1.8**
	baz=83						
ARLS	**Aral**	**1.31**	**59**	⇓*iP*	**Pn**	**12 08 13.7**	**+0.4**
	baz=59						
ARLS				⇓*iS*	**Sg**	**12 08 31.6**	**-0.3**
	baz=59						
MRKS	**Merke**	**1.58**	**11**	*eP*	**Pb**	**12 08 19.2**	**+0.9**
	36nm,0.2s						
MRKS				*eS*	**Sg**	**12 08 40.8**	**+0.5**
	32nm,0.4s						
MRKS	**Merke**	**1.58**	**11**	P	**Pb**	**12 08 19.2**	**+0.9**
	36nm,0.2s						
MRKS				S	**Sg**	**12 08 40.8**	**+0.5**
	32nm,0.4s						
EKS2	**Erkin-Say**	**1.63**	**26**	⇓*iP*	**Pn**	**12 08 18.3**	**+0.6**
	baz=26						
EKS2				⇓*iS*	**Sn**	**12 08 38.3**	**-0.1**
	baz=26						
EKS2	**Erkin-Say**	**1.63**	**26**	P	**Pg**	**12 08 20.9**	**+0.1**
	SNR=11						
UCH	**Uchtor**	**1.64**	**50**	⇓*iP*	**Pn**	**12 08 19.0**	**+1.0**
	baz=51						
UCH				⇓*iS*	**Sn**	**12 08 38.9**	**-0.1**
	baz=51						
UCH	**Uchtor**	**1.64**	**50**	P	**Pg**	**12 08 20.8**	**-0.1**
	SNR=18						
DRK	**Karamyk**	**1.88**	**205**	⇑*iP*	**Pn**	**12 08 21.2**	**0.0**
	baz=4.0						
DRK				⇑*iS*	**Sn**	**12 08 43.6**	**-1.2**
	baz=4.0						
BTK	**Batken**	**1.90**	**234**	⇓*iP*	**Pn**	**12 08 21.7**	**+0.4**
	baz=34						
BTK				⇓*iS*	**Sn**	**12 08 44.1**	**-0.8**
	baz=34						
BTK	**Batken**	**1.90**	**234**	*eP*	**Pn**	**12 08 21.1**	**-0.2**
BTK				*eS*	**Sn**	**12 08 44.4**	**-0.5**
AAK	**Ala-Archa**	**1.91**	**40**	⇓*iP*	**Pn**	**12 08 22.5**	**+1.0**
	baz=41						
AAK				⇓*iS*	**Sn**	**12 08 45.0**	**-0.3**
	baz=41						
AAK	**Ala-Archa**	**1.91**	**40**	P	**Pb**	**12 08 25.1**	**+1.0**
	SNR=21						
AAK	**Ala-Archa**	**1.91**	**40**	⇓Pn	**Pb**	**12 08 24.7**	**+0.7**
	17nm,0.8s						
AAK				⇑Sn	**Sg**	**12 08 51.9**	**+1.0**
	19nm,0.3s						
DZA	**Taraz**	**2.02**	**327**	*eP*	**Pb**	**12 08 27.0**	**+1.1**
	68nm,0.1s						
DZA				*eS*	**Sg**	**12 08 53.7**	**-0.8**
	218nm,0.3s						
DZA	**Taraz**	**2.02**	**327**	Pg	**Pb**	**12 08 27.0**	**+1.1**
	68nm,0.1s						
DZA				Lg	Lg	12 08 53.7	
	218nm,0.3s						
FRU1	**Bishkek**	**2.11**	**39**	⇓*iP*	**Pn**	**12 08 25.0**	**+0.9**
	baz=40						
FRU1				⇓*iS*	**Sn**	**12 08 49.4**	**-0.6**
	baz=40						
KBK	**Karagaybulak**	**2.16**	**47**	⇑*iP*	**Pb**	**12 08 25.7**	**+0.7**
	baz=47						
KBK				⇑*iS*	**Sn**	**12 08 51.0**	**-0.5**
	baz=47						
KBK	**Karagaybulak**	**2.16**	**47**	P	**Pb**	**12 08 29.1**	**+0.8**
	SNR=12						
IUG	**Iuzhnay**	**2.29**	**295**	*eP*	**Pb**	**12 08 30.4**	**-0.1**
	26nm,0.1s						
IUG				*eS*	**Sb**	**12 08 59.5**	**+0.8**
	123nm,0.2s						
CHMS	**Chumysh**	**2.31**	**38**	⇓*iP*	**Pn**	**12 08 27.9**	**+1.0**
	baz=38						
CHMS				⇓*iS*	**Sn**	**12 08 54.4**	**-0.6**
	baz=38						
KK31	**Karatay Array**	**2.56**	**319**	Pn	**Pn**	**12 08 31.4**	**+1.0**
	0.9nm,0.4s,baz=124,slow=13,SNR=65						
KK31				⇓Pg	**Pb**	**12 08 34.5**	**-0.6**
	1.3nm,0.2s,baz=226,slow=30,SNR=5.2						
KK31				⇑Lg	Lg	12 09 07.4	
	13nm,0.3s,baz=130,slow=25,SNR=16						
SGDS	**Sogindy**	**2.63**	**30**	Pg	**Pb**	**12 08 36.6**	**+0.4**
	1.7nm,0.2s						
SGDS				Lg	Lg	12 09 10.1	
	12nm,0.4s						
CHM	**Chimkent**	**2.65**	**296**	*eP*	**Pb**	**12 08 37.7**	**+1.1**
	3.4nm,0.3s						
CHM				*eS*	**Sb**	**12 09 11.9**	**+3.0**
	234nm,0.2s						
TKM2	**Tokmak 2**	**2.69**	**49**	⇑*iP*	**Pn**	**12 08 33.5**	**+1.2**
	baz=50						
TKM2				⇑*iS*	**Sn**	**12 09 04.1**	**-0.7**
	baz=50						
TKM2	**Tokmak 2**	**2.69**	**49**	P	**Pb**	**12 08 35.8**	**-1.6**
	SNR=6.0						
TKM2	**Tokmak 2**	**2.69**	**49**	⇑Pn	**Pb**	**12 08 35.5**	**-1.9**
	2.7nm,0.4s						
TKM2				⇑Sn	**Sg**	**12 09 13.3**	**-2.8**
	21nm,0.6s						
KST	**Kastek**	**2.98**	**51**	*eP*	**Pg**	**12 08 44.9**	**-1.7**
	2.5nm,0.3s						
KST				*eS*	**Sg**	**12 09 24.5**	**-0.8**
	12nm,0.4s						
KST	**Kastek**	**2.98**	**51**	Pg	**Pg**	**12 08 44.9**	**-1.7**
	2.5nm,0.3s						
KST				Lg	Lg	12 09 24.5	
	12nm,0.4s						
KRBS	**Karabastau**	**3.27**	**39**	*eP*	**Pb**	**12 08 49.9**	**+2.7**
	1.6nm,0.4s						
KRBS				*eS*	**Sg**	**12 09 33.3**	**-1.3**
	6.6nm,0.4s						
KRBS	**Karabastau**	**3.27**	**39**	Pg	**Pb**	**12 08 49.9**	**+2.7**
	1.6nm,0.4s						
KRBS				Lg	Lg	12 09 33.3	
	6.6nm,0.4s						
IZV	**Izvestkoviy**	**3.37**	**56**	*eP*	**Pg**	**12 08 52.8**	**-1.2**
	1.9nm,0.3s						
IZV				*eS*	**Sg**	**12 09 38.1**	**+0.4**
	8.5nm,0.4s						
IZV	**Izvestkoviy**	**3.37**	**56**	Pg	**Pg**	**12 08 52.8**	**-1.2**
	1.9nm,0.3s						
IZV				Lg	Lg	12 09 38.1	
	8.5nm,0.4s						
TNSS	**Tian-Shan**	**3.58**	**58**	*eP*	**Pb**	**12 08 54.4**	**+1.8**
	1.4nm,0.3s						
TNSS				*eS*	**Sg**	**12 09 41.1**	**-3.4**
	2.8nm,0.5s						
TNSS	**Tian-Shan**	**3.58**	**58**	Pg	**Pb**	**12 08 54.4**	**+1.8**
	1.4nm,0.3s						
TNSS				Lg	Lg	12 09 41.1	
	2.8nm,0.5s						
MDOK	**Medeo**	**3.71**	**57**	*eP*	**Pb**	**12 08 57.9**	**+3.2**
	1.1nm,0.1s						
MDOK				*eS*	**Sg**	**12 09 46.8**	**-1.7**
	5.0nm,0.7s						
MDOK	**Medeo**	**3.71**	**57**	Pg	**Pb**	**12 08 57.9**	**+3.2**
	1.1nm,0.1s						
MDOK				Lg	Lg	12 09 46.8	
	5.0nm,0.7s						
KUU	**Kurty**	**3.75**	**43**	*eP*	**Pg**	**12 08 59.5**	**-1.7**
	1.4nm,0.2s						
KUU				*eS*	**Sg**	**12 09 49.9**	**+0.2**
	5.1nm,0.2s						
KUU	**Kurty**	**3.75**	**43**	Pg	**Pg**	**12 08 59.5**	**-1.7**
	1.4nm,0.2s						
KUU				Lg	Lg	12 09 49.9	
	5.1nm,0.2s						
CHGR	**Chuyangaron**	**3.79**	**229**	⇑*iP*	**Pn**	**12 08 48.2**	**+1.0**
	baz=29						
CHGR				⇑*iS*	**Sn**	**12 09 30.0**	**-1.5**
	baz=29						
KOTS	**Kotyrbulak**	**3.79**	**56**	*eP*	**Pb**	**12 08 59.2**	**+3.3**
	4.1nm,0.4s						
KOTS				*eS*	**Sg**	**12 09 49.5**	**-1.5**
	8.6nm,0.6s						
KOTS	**Kotyrbulak**	**3.79**	**56**	Pg	**Pb**	**12 08 59.2**	**+3.3**
	4.1nm,0.4s						
KOTS				Lg	Lg	12 09 49.5	
	8.6nm,0.6s						
KTBS	**Karatobe**	**3.81**	**47**	*eP*	**Pb**	**12 08 59.1**	**+2.8**
	0.8nm,0.3s						
KTBS				*eS*	**Sg**	**12 09 49.1**	**-2.6**
	12nm,0.4s						
KTBS	**Karatobe**	**3.81**	**47**	Pg	**Pb**	**12 08 59.1**	**+2.8**
	0.8nm,0.3s						
KTBS				Lg	Lg	12 09 49.1	
	12nm,0.4s						
BTLS	**Baital**	**3.95**	**13**	*eP*	**Pb**	**12 09 01.6**	**+3.0**
	1.1nm,0.4s						
BTLS				*eS*	**Sg**	**12 09 52.9**	**-3.2**
	6.1nm,0.6s						
BTLS	**Baital**	**3.95**	**13**	Pg	**Pb**	**12 09 01.6**	**+3.0**
	1.1nm,0.4s						
BTLS				Lg	Lg	12 09 52.9	
	6.1nm,0.6s						
PDGK	**Podgornoye**	**5.39**	**64**	⇑Lg	Lg	12 10 45.1	
	4.5nm,0.9s						

ATH 23 12:08:03.0, 37.˚88N×21.˚42E, h26km±2km, ML1.7/2, Error ellipse: s-maj=2.9km s-min=1.1km az=96.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.19**	**11**	P	Pb	12 08 08.8	+0.1
RLS				S	Sb	12 08 12.8	+0.3
RLS				AML	AML	12 08 13.3	
	comp=N,669μm,0.2s						
RLS				AML	AML	12 08 13.4	
	comp=E,449μm,0.1s						
DRO	**Drossia**	**0.24**	**71**	P	Pb	12 08 09.3	-0.1
DRO				S	Sb	12 08 14.1	+0.4
DRO				AML	AML	12 08 15.3	
	comp=N,550μm,0.2s						
DRO				AML	AML	12 08 15.4	
	comp=E,246μm,0.2s						
AMT	**Artemida-Makis**	**0.41**	**146**	P	Pb	12 08 12.3	+0.4
AMT				S	Sb	12 08 18.4	+0.6
KLV	**Kalavryta, Ach**	**0.60**	**73**	P	Pb	12 08 15.0	0.0
KLV				S	Sb	12 08 23.7	+0.5
VLMS	**Volimes, Zakyn**	**0.60**	**270**	P	Pb	12 08 15.0	0.0
EFP	**Efpalio**	**0.67**	**34**	P	Pb	12 08 16.4	+0.3
TRIZ	**Trizonia**	**0.71**	**46**	P	Pn	12 08 17.4	0.0
GUR	**Goura**	**0.73**	**85**	P	Pb	12 08 17.2	0.0
PDO	**Prodromos**	**0.75**	**345**	P	Pn	12 08 18.0	+0.1
KALE	**Kalithea**	**0.77**	**47**	P	Pn	12 08 18.0	-0.2
ITM	**Ithomi**	**0.80**	**150**	P	Pn	12 08 19.1	+0.4
KEF5	**Kardakata, Kep**	**0.85**	**298**	P	Pb	12 08 19.3	0.0
EVGi	**Lefkada island**	**0.96**	**321**	P	Pb	12 08 21.9	+0.8

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*IDC **23** 12:18:44.9±1.2, 8.˚79S×157.˚96E, h0km, mb3.9/5, mb1 4.1/7, mb1mx3.8/39, mbtmp4.0/7, ML4.2/2, MS2.9/4, Ms1 2.9/4, ms1mx2.7/34, Error ellipse: s-maj=33.9km s-min=20.7km az=10.0*
ISC 23 12:18:48.3±0.9, 8.˚8S±0.˚2×158.˚02E±0.˚09, h23km, n11, σ0°90/11, mb3.9/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.01**	**109**	P	**Pn**	**12 19 20.1**	**-0.8**
	58nm,0.3s,baz=240,slow=8.7,SNR=9.1						
HNR				Sn	**Sb**	**12 19 49.5**	**+0.7**
	128nm,0.3s,baz=262,slow=7.6,SNR=8.9						
HNR				LR	LR	12 19 53.2	
	comp=Z,136nm,20.5s,baz=224,slow=33						
KRVT	**Keravat (AS076**	**7.43**	**306**	LR	LR	12 23 27.6	
	comp=Z,69nm,21.7s,baz=78,slow=38						
PMG	**Port Moresby**	**10.75**	**266**	LR	LR	12 25 16.3	
	comp=Z,168nm,19.2s,baz=126,slow=37						
CTA	**Charters Tower**	**16.00**	**224**	Pn	**P**	**12 22 36.0**	**+0.6**
	0.3nm,0.3s,baz=52,slow=12,SNR=6.7						
JAY	**Jayapura**	**18.31**	**289**	P	**Pn**	**12 23 01.6**	**+0.6**
	1.1nm,0.3s,baz=98,slow=5.9,SNR=5.7						
WRA	**Warramunga Arr**	**25.45**	**242**	P	**P**	**12 24 13.9**	**-0.9**
	4.4nm,0.6s,baz=68,slow=10,SNR=49						
WRA				PcP	**PcP**	**12 27 47.1**	**+0.4**
	0.3nm,0.7s,baz=67,slow=3.0,SNR=2.2						
GUMO	**Guam**	**25.77**	**329**	LR	LR	12 32 21.4	
	comp=Z,28nm,21.2s,baz=124,slow=32						
ASAR	**Alice Springs**	**27.42**	**234**	P	**P**	**12 24 30.9**	**-1.7**
	0.9nm,0.8s,baz=67,slow=8.7,SNR=10						
ASAR				PcP	**PcP**	**12 27 51.2**	**+0.1**
	0.2nm,0.8s,baz=60,slow=3.7,SNR=1.4						
STKA	**Stephens Creek**	**27.60**	**211**	P	**P**	**12 24 34.8**	**+0.8**
	1.7nm,0.6s,baz=16,slow=15,SNR=5.1						
CMAR	**Chiang Mai Arr**	**64.25**	**295**	P	**P**	**12 29 21.9**	**-0.2**
	0.3nm,0.3s,baz=111,slow=4.0,SNR=4.1						
MKAR	**Makanchi Array**	**86.72**	**318**	P	**P**	**12 31 30.7**	**+0.2**
	0.2nm,0.5s,baz=99,slow=7.1,SNR=1.4						

WEL 23 12:23:55.3±0.8, 38.˚5S±6.˚×178.˚0E±.˚, h33km, M3.3/19, ML3.6/19, MLv3.3/19, Error ellipse: s-maj=0.0km s-min=0.0km az=10.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.23**	**268**	P	Pn	12 24 15.6	-0.6
MXZ	**Matakaoa Point**	**1.33**	**279**	P	Pn	12 24 16.7	-0.9
PUZ	**Puketiti**	**1.38**	**257**	P	Pn	12 24 18.0	-0.3
PUZ				S	Sn	12 24 36.2	+0.7
CNGZ	**Carnagh Statio**	**1.56**	**242**	P	Pn	12 24 21.5	+0.9
TWGZ	**Tauwhareparae**	**1.62**	**255**	P	Pn	12 24 21.9	+0.3
TWGZ				S	Sn	12 24 42.7	+1.4
HAZ	**Te Kaha**	**1.73**	**270**	P	Pn	12 24 22.5	-0.5
TKGZ	**Te Karaka**	**1.80**	**248**	P	Pn	12 24 24.1	+0.2
TKGZ				S	Sn	12 24 45.

BKZ	Black Stump Fm	3.06	242	P		Pn	12 24 41.5	+0.2
KAHZ	Kahuranaki	3.14	229	P		Pn	12 24 42.6	+0.1
KMRZ	Kaimai	3.19	268	P		Pn	12 24 42.8	-0.3
KWHZ	Kaweka Forest	3.23	238	P		Pn	12 24 43.5	-0.2
HATZ	Hinemaiaia	3.24	249	P		Pn	12 24 44.3	+0.5
PXZ	Pawanui	3.31	226	P		Pn	12 24 44.3	-0.4
KRHZ	Kereru	3.37	235	P		Pn	12 24 45.1	-0.6
BHHZ	Black Hill Sta	3.50	240	P		Pn	12 24 47.3	-0.2
TOZ	Tahuroa Road	3.54	269	P		Pn	12 24 47.4	-0.5
KUZ	Kuaotunu	3.54	286	P		Pn	12 24 46.7	-1.2
WPHZ	Waipukurau	3.57	229	P		Pn	12 24 48.0	-0.4
PRHZ	Porangahau	3.59	225	P		Pn	12 24 47.5	-1.1
TMVZ	Te Maari	3.60	247	P		Pn	12 24 48.9	0.0
ETVZ	East Tongariro	3.60	247	P		Pn	12 24 48.8	-0.2
PNHZ	Pukenui	3.63	233	P		Pn	12 24 48.6	-0.7
OTVZ	Oturere	3.65	246	P		Pn	12 24 50.7	+1.1
WNVZ	Wahianoa	3.76	244	P		Pn	12 24 52.4	+1.3
ANWZ	Angora Road	3.81	224	P		Pn	12 24 52.0	+0.3
TSZ	Takapari Road	3.87	233	P		Pn	12 24 51.2	-1.3
MKAZ	Moumakai	3.88	278	P		Pn	12 24 52.0	-0.6
DVHZ	Dannevirke	3.88	228	P		Pn	12 24 52.1	-0.6
GRZ	Great Barrier	3.92	292	P		Pn	12 24 52.3	-0.8
WIAZ	Waiheke Island	3.98	283	P		Pn	12 24 53.4	-0.5
BFZ	Birch Farm	4.09	224	P		Pn	12 24 53.4	-2.1
HIZ	Hauiti	4.09	258	P		Pn	12 24 55.6	0.0
ETAZ	East Tamaki Re	4.10	280	P		Pn	12 24 55.4	-0.1
MBAZ	Motutapu North	4.16	282	P		Pn	12 24 56.2	-0.2
POWZ	Post Office Ro	4.18	230	P		Pn	12 24 56.6	-0.2
EPAZ	Eden Park BICE	4.26	281	P		Pn	12 24 58.1	+0.3
HBAZ	Herne Bay Bore	4.27	281	P		Pn	12 24 58.3	+0.4
AWAZ	Awhitu Peninsu	4.30	278	P		Pn	12 24 58.6	+0.3
RVAZ	Riverhead Bore	4.41	282	P		Pn	12 24 59.9	+0.1
MRZ	Mangatainoka R	4.46	228	P		Pn	12 24 58.3	-1.3
TMWZ	Te Maipa	4.58	222	P		Pn	12 25 01.1	-1.2
HOWZ	Holdsworth Sta	4.65	227	P		Pn	12 25 01.5	-1.7
OGWZ	Otaki Gorge	4.80	229	P		Pn	12 25 03.6	-1.7
WCZ	Waipu Caves	4.87	290	P		Pn	12 25 05.9	-0.2
PKE	Pukeiti	4.90	251	P		Pn	12 25 08.8	+2.1
CAW	Cannon Point	5.04	227	P		Pn	12 25 07.2	-1.4
OUZ	Omahuta	5.73	295	P		Pn	12 25 18.2	+0.3
NNZ	Nelson	6.14	234	P		Pn	12 25 21.9	-1.7
CTZ	Chatham Island	6.49	158	P		Pn	12 25 31.6	+3.1
CTZ				S		Sn	12 26 38.7	-2.6
QRZ	Quartz Range	6.52	240	P		Pn	12 25 27.3	-1.5

IDC ***23*** *12:32:08.0±2.1, 43˚.61N×128˚.60W, h0km, mb3.3/4, mb1 3.6/7, mb1mx3.5/36, mbtmp3.3/7, ML2.6/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/24, Error ellipse: s-maj=62.7km s-min=17.1km az=41.0*

NEIC ***23*** *12:32:10.7±1.6, 43˚.8N±0˚.1×128˚.46W±0˚.06, h10km±2km, ML3.3/10, Error ellipse: s-maj=24.5km s-min=5.4km az=192.0*

ISC 23 12:32:10.0±1.4, 43˚.7N±0˚.1×128˚.5W±0˚.1, h10km, n19, σ0$73/18, mb3.0/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KEBM	**Edson Butte**	**3.15**	**104**	Pn	**Pn**		**12 32 58.2**	**-1.6**
KEBM				Sn	**Sn**		**12 33 38.5**	**+1.0**
KEBM				IAML			12 33 54.3	
	comp=N,120nm,2.0s							
HUMO	**Hull Mountain**	**4.20**	**103**	Pn	**Pn**		**12 33 15.0**	**+0.9**
HUMO				Sn	**Sn**		**12 34 02.2**	**-1.1**
YBH	**Yreka Blue Hor**	**4.70**	**113**	Pn	**Pn**		**12 33 21.5**	**+0.4**
	comp=N,0.1nm,0.3s,baz=243,slow=22,SNR=2.6							
YBH				Sn	**Sn**		**12 34 16.0**	**+0.4**
	baz=211,slow=23,SNR=1.5							
YBH	**Yreka Blue Hor**	**4.70**	**113**		**Pn**		**12 33 20.9**	**-0.2**
YBH				IAML			12 34 02.4	
	comp=E,22nm,4.6s							
YBH				IAML			12 34 08.1	
	comp=N,17nm,3.9s							
F04A	**Amboy**	**4.86**	**61**		**Pn**		**12 33 23.2**	**+0.1**
F04A				IAML			12 35 23.8	
	comp=N,33nm,4.6s							
LON	**Longmire**	**5.62**	**55**		**Pn**		**12 33 33.6**	**0.0**
K05A	**Summer Lake**	**5.64**	**97**	Pn	**Pn**		**12 33 34.9**	**+0.7**
D05A	**Enumclaw**	**5.75**	**91**	Pn	**Pn**		**12 33 35.1**	**-0.2**
NVAR	**Mina Array Bea**	**9.33**	**121**	Pn	**Pn**		**12 34 25.6**	**+0.8**
	comp=N,0.1nm,0.3s,baz=293,slow=14,SNR=2.5							
ELK	**Elko**	**10.27**	**102**	LR	LR		12 38 22.1	
	comp=N,131nm,20.2s,baz=9.5,slow=36							
ANMO	**Albuquerque**	**19.12**	**110**	P	**Pn**		**12 36 33.7**	**-0.4**
	comp=N,0.1nm,0.3s,baz=301,slow=5.9,SNR=1.8							
ANMO	**Albuquerque**	**19.12**	**110**	P	**Pn**		**12 36 34.4**	**+0.3**
YKA	**Yellowknife Ar**	**20.49**	**19**	P	**P**		**12 36 48.1**	**+0.3**
	comp=N,2.3nm,1.0s,baz=200,slow=11,SNR=2.4							
ILAR	**Eielson Array**	**23.50**	**340**	P	**P**		**12 37 19.9**	**+0.2**
	comp=N,0.4nm,0.8s,baz=158,slow=8.9,SNR=5.3							
TXAR	**Lajitas Array**	**24.46**	**118**	P	**P**		**12 37 28.4**	**-0.8**
	comp=N,0.1nm,0.7s,baz=282,slow=4.5,SNR=1.5							
H11N3	**WAKE ISLAND Hy**	**58.40**	**268**	T	T		13 45 20.1	
	baz=49,slow=75,SNR=16							
H11N2	**WAKE ISLAND Hy**	**58.40**	**268**	T	T		13 45 16.4	
	baz=49,slow=75,SNR=6.7							
H11N1	**WAKE ISLAND Hy**	**58.41**	**268**	T	T		13 45 13.9	
	baz=49,slow=75,SNR=7.2							
SONM	**Songino Array**	**76.83**	**326**	P	**P**		**12 44 02.0**	**0.0**
	comp=N,1.5nm,1.1s,baz=27,slow=6.6,SNR=4.0							

IDC ***23*** *12:49:21.8±1.8, 6˚.75S×146˚.87E, h88km±19km, mb3.9/14, mb1 4.0/17, mb1mx3.9/46, mbtmp4.2/17, MS3.1/1, Ms1 3.1/1, ms1mx2.5/33, Error ellipse: s-maj=26.1km s-min=9.6km az=109.0*

NEIC ***23*** *12:49:23.3±1.4, 6˚.84S±0˚.07×146˚.9E±0˚.1, h112km±19km, mb4.0/8, Error ellipse: s-maj=18.0km s-min=10.5km az=94.0*

DJA ***23*** *12:49:23.3±0.5, 7˚S±4˚×14˚7E±˚, h86km±9km, M4.6/6, mb4.6/6, mB4.7/4, MLv4.8/4, Mw(mB)4.0/4, Mwp5.0/1*

ISC 23 12:49:22.6±0.6, 6˚.82S±0˚.05×146˚.82E±0˚.09, h100km, n34, σ1$73/37, mb4.1/12, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
PMG	**Port Moresby**	**2.59**	**173**	P	**Pn**		**12 50 03.8**	**+1.0**
	55nm,0.3s,baz=355,slow=4.8,SNR=205							
PMG				S	**Sn**		**12 50 34.4**	**+0.6**
	99nm,0.3s,baz=312,slow=18,SNR=14							
PMG				LR	LR		12 51 00.3	
	comp=Z,364nm,18.5s,baz=214,slow=37							
PMG	**Port Moresby**	**2.59**	**173**	Pn	**Pn**		**12 50 03.9**	**+1.0**
PMG				Sn	**Sn**		**12 50 34.0**	**+0.2**
MANU	**Manus Island**	**4.78**	**7**		**Pn**		**12 50 33.1**	**+0.7**
KRVT	**Keravat (AS076**	**5.75**	**65**	P	**Pn**		**12 50 45.5**	**-0.1**
	7.4nm,0.3s,baz=265,slow=1.0,SNR=6.4							
RABL	**Rabaul**	**5.93**	**64**		**Pn**		**12 50 47.3**	**-0.7**
COEN	**Coen**	**7.94**	**207**		**Pn**		**12 51 16.4**	**+1.0**
COEN				Sn	**Sn**		**12 52 44.4**	**+0.7**
CTA	**Charters Tower**	**13.20**	**182**	P	**P**		**12 52 31.1**	**-1.4**
	2.3nm,0.3s,baz=357,slow=14,SNR=35							
CTAO	**Charters Tower**	**13.20**	**182**	Pn	**Pn**		**12 52 27.1**	**+0.9**
WB0	**Warramunga Arr**	**17.64**	**222**	P	**P**		**12 53 21.1**	**-0.5**
WB0				IAmb	IAmb		12 53 25.4	
	comp=Z,7.0nm,0.7s							
WR0	**Warramunga Arr**	**17.68**	**221**	P	**P**		**12 53 22.5**	**+0.4**
WR0				IAmb	IAmb		12 53 26.4	
	comp=Z,6.6nm,0.8s							
WRAB	**Tennant Creek**	**17.78**	**222**	P	**P**		**12 53 24.3**	**+1.1**
WRAB				IAmb	IAmb		12 53 27.5	
	comp=Z,10.0nm,1.1s							
WB2	**Warramunga Arr**	**17.79**	**222**	P	**P**		**12 53 24.5**	**+1.1**
WRA	**Warramunga Arr**	**17.80**	**222**	P	**P**		**12 53 24.3**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=49,slow=10,SNR=56							
WRA				S	**Sn**		**12 56 34.9**	**-7.7**
	comp=Z,0.5nm,0.3s,baz=46,slow=23,SNR=5.3							
WRA	**Warramunga Arr**	**17.80**	**222**	P	**P**		**12 53 24.1**	**+0.7**
EIDS	**Eidsvold**	**18.89**	**168**	P	**P**		**12 53 34.3**	**-1.0**
EIDS				IAmb	IAmb		12 53 50.9	
	comp=Z,4.9nm,0.7s							
AS31	**Alice Springs**	**20.84**	**215**		**P**		**12 53 56.7**	**+0.1**
AS31				IAmb	IAmb		12 54 03.5	
	comp=Z,3.9nm,0.6s							
ASAR	**Alice Springs**	**20.84**	**215**	P	**P**		**12 53 57.6**	**+1.1**
	comp=Z,6.6nm,0.5s,baz=40,slow=8.3,SNR=149							
ASAR				S	**S**		**12 57 48.3**	**+4.7**
	comp=Z,0.9nm,0.5s,baz=23,slow=27,SNR=7.1							
ASAR	**Alice Springs**	**20.84**	**215**		**P**		**12 53 57.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**23.49**	**240**	P	**P**		**12 54 23.5**	**-0.2**
	comp=Z,8.2nm,0.9s,baz=56,slow=10,SNR=16							
FITZ	**Fitzroy Crossi**	**23.49**	**240**	P	**P**		**12 54 23.2**	**-0.5**
STKA	**Stephens Creek**	**25.40**	**190**	P	**P**		**12 54 40.1**	**-0.7**
	comp=Z,5.1nm,0.7s,baz=343,slow=7.6,SNR=8.4							
MRSI	**Marisa**	**25.86**	**285**	P	P		12 54 53.5	+8.3
KSRS	**Korea Array**	**47.45**	**340**	P	**P**		**12 57 47.3**	**0.0**
	comp=Z,3.2nm,0.8s,baz=157,slow=9.5,SNR=12							
ASAJ	**Asahikawa**	**50.85**	**356**	P	**P**		**12 58 13.2**	**+0.1**
	comp=Z,5.3nm,0.7s,baz=338,slow=14,SNR=2.1							
USRK	**Ussuriysk Ar.**	**52.52**	**347**	P	**P**		**12 58 24.9**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=171,slow=3.5,SNR=4.1							
PETK	**Petropavlovsk-**	**60.41**	**8**	P	**P**		**12 59 21.5**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=127,slow=4.2,SNR=6.9							
SONM	**Songino Array**	**65.03**	**331**	P	**P**		**12 59 52.7**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=152,slow=9.5,SNR=3.6							
SEY	**Seymchan**	**69.69**	**3**	P	**P**		**13 00 21.5**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=16,slow=23,SNR=1.9							
VNDA	**Vanda**	**71.11**	**177**	P	**P**		**13 00 30.7**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=334,slow=6.2,SNR=7.8							
MKAR	**Makanchi Array**	**78.02**	**321**	P	**P**		**13 01 11.0**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=105,slow=7.1,SNR=5.3							
ZALV	**Zalesovo Beam**	**79.61**	**328**	P	**P**		**13 01 18.0**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=109,slow=5.2,SNR=2.2							
ILAR	**Eielson Array**	**86.31**	**23**	P	**P**		**13 01 51.9**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=251,slow=4.7,SNR=29							
NVAR	**Mina Array Bea**	**98.01**	**52**	P		Pdif	13 02 49.5	+1.3
	comp=Z,0.6nm,0.8s,baz=265,slow=7.2,SNR=2.1							
TORD	**Torodi Ar. Bea**	**145.11**	**283**	PKPbc		**PKPdf**	**13 08 50.2**	**+0.8**
	comp=Z,3.0nm,0.8s,baz=75,slow=3.8,SNR=15							

IDC ***23*** *12:50:43.6±0.7, 43˚.90N×128˚.62W, h0km, mb4.1/22, mb1 4.2/31, mb1mx4.1/64, mbtmp4.1/31, ML3.4/9, MS4.1/25, Ms1 4.1/25, ms1mx4.0/48, Error ellipse: s-maj=19.5km s-min=9.6km az=36.0*

BJI ***23*** *12:50:44.3±0.0, 43˚.90N×128˚.40W, h10km, mB5.3/29, mb4.9/37, Ms4.9/9, Ms7 4.6/10*

NEIC ***23*** *12:50:48.0±2.4, 43˚.87N±0˚.07×128˚.5W±0˚.1, h10km±1km, mb4.9/125, Error ellipse: s-maj=14.5km s-min=10.6km az=238.0*

GCMT ***23*** *12:50:48.0±0.1, 43˚.80N±0˚.02×128˚.72W±0˚.01, h12km, MW5.0/127, Moment Tensor Solution. s72,c101; s127,c217; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=4.24±.09; Mθθ 0.07±.09; Mϕϕ 4.17±.07; Mrθ 0.01±.29; Mθϕ 1.04±.07; Mϕr-1.87±.23; Best double couple: Mo4.71700×10^16 NP1:ϕs199.00000°, δ34.00000°, λ-81.00000°. NP2:ϕs8.00000°, δ57.00000°, λ-96.00000°. Principal axes: T 4.7860, Plg11.0000°, Azm102.0000°; N -0.1340, Plg5.0000°, Azm11.0000°; P -4.6480, Plg77.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ANF ***23*** *12:50:48.2±0.7, 43˚.88N×128˚.19W, h0km, ML4.1/16 Error ellipse: s-maj=7.6km s-min=6.4km az=68.0*

ISC 23 12:50:47.3±1.5, 43˚.88N±0˚.03×128˚.54W±0˚.04, h14km±8km, n432, σ1$70/427, mb4.8/70, MS4.1/24, 1C, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
J20D	**J20D**	**1.14**	**64**	S	**Sn**		**12 51 25.1**	**+1.3**
J20D				P	**Pb**		**12 51 05.4**	**-3.2**
J28D	**J28D**	**1.52**	**40**	S	**Sg**		**12 51 35.6**	**-0.8**
J28D				P	**Pg**		**12 51 16.5**	**-0.1**
G37D	**G37D**	**1.54**	**143**	P	Pn		12 51 08.6	-5.4
G37D				S	**Sn**		**12 51 33.5**	**-0.1**
J11D	**J11D**	**1.61**	**101**	P	**Pn**		**12 51 12.2**	**-2.7**
J11D				S	**Sn**		**12 51 32.7**	**-2.6**
J19D	**J19D**	**1.67**	**79**	S	**Sn**		**12 51 36.4**	**-0.3**
J19D				P	**Pn**		**12 51 13.9**	**-1.9**
G29D	**G29D**	**1.79**	**157**	P	Pn		12 51 13.1	-4.4
G29D				S	**Sn**		**12 51 36.4**	**-3.4**
G36D	**G36D**	**1.86**	**139**	P	Pn		12 51 13.1	-5.2
G36D				S	**Sn**		**12 51 39.2**	**-2.0**
J27D	**J27D**	**1.88**	**58**	S	**Sn**		**12 51 40.8**	**-1.1**
J27D				P	**Pn**		**12 51 15.9**	**-2.8**
G35D	**G35D**	**2.05**	**129**	P	Pn		12 51 15.9	-5.1
G35D				S	**Sn**		**12 51 44.4**	**-1.8**
G22D	**G22D**	**2.47**	**171**	P	Pn		12 51 20.4	-6.4
G22D				S	**Sn**		**12 51 49.4**	**-7.1**
G20D	**G20D**	**2.72**	**152**	S	**Sn**		**12 51 60.0**	**-2.7**
G21D	**G21D**	**2.87**	**163**	S	**Sn**		**12 52 02.6**	**-3.7**
G21D				P	**Pn**		**12 51 31.5**	**-0.7**
G13D	**G13D**	**3.16**	**172**	S	**Sn**		**12 52 16.5**	**+3.1**
G13D				P	**Pn**		**12 51 37.2**	**+1.1**
KEBM	**Edson Butte**	**3.23**	**107**		**Pn**		**12 51 35.8**	**-1.8**
I02D	**Swisshome**	**3.40**	**84**	P	**Pn**		**12 51 37.3**	**-2.6**
	baz=268,SNR=54							
I02D				S	**Sn**		**12 52 18.2**	**-1.7**
	baz=268							
J01E	**Myrtle Point**	**3.43**	**100**	P	**Pn**		**12 51 37.8**	**-2.6**
	baz=284,SNR=17							
J01E				S	**Sn**		**12 52 17.4**	**-3.4**
	baz=284							
KBO	**Bosley Butte**	**3.58**	**116**	Pn	**Pn**		**12 51 39.3**	**-3.1**
K02D	**Willamette Mer**	**3.75**	**107**	P	**Pn**		**12 51 41.3**	**-3.5**
	baz=290,SNR=70							
K02D				S	**Sn**		**12 52 26.1**	**-2.8**
	baz=290							
I03D	**Drain, OR**	**3.77**	**91**	P	**Pn**		**12 51 42.6**	**-2.3**
	baz=274,SNR=129							
I03D				S	**Sn**		**12 52 28.5**	**-0.6**
	baz=274							
G05D7	**G05D7**	**3.77**	**172**	S	**Sn**		**12 52 33.8**	**+5.6**
G10D	**G10D**	**3.80**	**143**	S	**Sb**		**12 52 35.4**	**-4.1**
G10D				P	**Pn**		**12 51 43.1**	**-1.9**
G04D	**G04D**	**3.94**	**160**	S	**Sn**		**12 52 37.5**	**+5.0**
G04D				P	**Pn**		**12 51 48.9**	**+2.1**
G03D	**McMinnville, O**	**4.00**	**69**	P	**Pn**		**12 51 46.8**	**-1.5**
	baz=252,SNR=56							
G03D				S	**Sn**		**12 52 34.9**	**0.0**
	baz=252							
L02E	**Cave Junction**	**4.01**	**114**	P	**Pn**		**12 51 45.9**	**-2.4**
	baz=297,SNR=14							
L02E				S	**Sn**		**12 52 31.9**	**-3.2**
	baz=297							
KRMB	**Red Mountain**	**4.15**	**123**	Pn	**Pn**		**12 51 49.2**	**-1.1**
G03D7	**G03D7**	**4.21**	**154**	S	**Sb**		**12 52 45.9**	**-5.3**
G03D7				P	Pn		12 51 56.1	+5.6
H04D	**Lebanon**	**4.22**	**79**	P	**Pn**		**12 51 49.9**	**-1.4**
	baz=263,SNR=44							
H04D				S	**Sn**		**12 52 40.4**	**0.0**
	baz=263							
HUMO	**Hull Mountain**	**4.27**	**105**		**Pn**		**12 51 49.6**	**-2.4**
HUMO				Sn	**Sn**		**12 52 38.0**	**-3.7**
FS13D	**FS13D**	**4.38**	**139**	S	**Sb**		**12 52 55.5**	**-0.7**
FS13D				P	**Pn**		**12 51 55.4**	**+2.4**
E03A	**Lebam**	**4.42**	**51**		**Pn**		**12 51 53.5**	**-0.4**
E03A				Sn	**Sn**		**12 52 45.8**	**+0.7**
I04A	**Tendick Farm,**	**4.44**	**89**	P	**Pn**		**12 51 52.7**	**-1.6**
	baz=273,SNR=9.1							
I04A				S	**Sn**		**12 52 45.6**	**-0.1**
	baz=273							
F04D	**Rainier, OR**	**4.50**	**59**	P	**Pn**		**12 51 54.1**	**-1.0**
	baz=242							
F04D				S	**Sn**		**12 52 47.9**	**+0.6**
	baz=242							
JCC	**Jacoby Creek,**	**4.53**	**131**	Pn	**Pn**		**12 51 55.2**	**-0.3**
FS07D	**FS07D**	**4.57**	**139**	S	**Sb**		**12 53 07.5**	**+5.7**
KHMM	**Horse Mountain**	**4.66**	**128**		**Pn**		**12 51 56.8**	**-0.6**
J04D	**Umpqua Nationa**	**4.72**	**96**	P	**Pn**		**12 51 57.5**	**-0.7**
	baz=280,SNR=25							
YBH	**Yreka Blue Hor**	**4.80**	**115**	Pn	**Pn**		**12 51 57.1**	**-2.1**
	1.6nm,0.3s,baz=313,slow=10,SNR=47							
YBH				Sn	**Sn**		**12 52 50.4**	**-4.2**
	baz=85,slow=18,SNR=0.7							
YBH	**Yreka Blue Hor**	**4.80**	**115**		**Pn**		**12 51 58.1**	**-1.1**
NLWA	**Neilton Lookou**	**4.81**	**41**		**Pn**		**12 51 59.8**	**+0.5**
F04A	**Amboy**	**4.81**	**63**		**Pn**		**12 51 59.0**	**-0.3**
L04D	**Klamath Falls**	**4.86**	**108**	P	**Pn**		**12 51 59.7**	**-0.5**
	baz=292,SNR=9.5							
L04D				S	**Sn**		**12 52 55.8**	**-0.6**
	baz=292							
E04D	**Cinebar**	**5.00**	**56**	P	**Pn**		**12 52 01.0**	**-0.9**
	baz=239,SNR=27							
KMRM	**Mail Ridge**	**5.13**	**134**		**Pn**		**12 52 02.7**	**-1.1**
I05D	**Terrebonne, OR**	**5.21**	**82**	P	**Pn**		**12 52 03.3**	**-1.6**
	baz=267							
D03D	**Eldon**	**5.29**	**44**	P	**Pn**		**12 52 05.6**	**-0.3**
	baz=228,SNR=6.4							
G05D	**Wamic, OR**	**5.34**	**73**	P	**Pn**		**12 52 06.3**	**-0.4**
	baz=257,SNR=13							
J05D	**Fort Rock, OR**	**5.34**	**94**	P	**Pn**		**12 52 05.3**	**-1.5**
	baz=279,SNR=15							
F05D	**White Salmon**	**5.42**	**66**	P		**Pn**	**12 52 07.5**	**-0.2**
	baz=250,SNR=28							
F05D				S		Sn	**12 53 10.9**	**+1.0**
	baz=250							
PINE	**Pine Mountain**	**5.50**	**88**			**Pn**	**12 52 08.7**	**-0.3**
WDC	**Whiskeytown Da**	**5.54**	**124**			**Pn**	**12 52 11.6**	**+2.3**
LON	**Longmire**	**5.55**	**56**			**Pn**	**12 52 08.9**	**-0.6**
KCPM	**Cahto Peak**	**5.59**	**137**	Pn		**Pn**	**12 52 10.7**	**+0.5**
O02D	**Mt. Diablo Mer**	**5.66**	**129**	P		**Pn**	**12 52 11.7**	**+0.7**
	baz=313							
D05A	**Enumclaw**	**5.67**	**52**			**Pn**	**12 52 11.3**	**+0.1**
K05A	**Summer Lake**	**5.70**	**99**			**Pn**	**12 52 10.4**	**-1.3**
PGC	**Sidney**	**5.94**	**35**	Pn		**Pn**	**12 52 15.7**	**+0.9**
O03E	**Paynes Creek**	**6.16**	**123**	P		**Pn**	**12 52 19.1**	**+1.1**
	baz=308							
B05A	**Bryant**	**6.28**	**43**	P		**Pn**	**12 52 20.2**	**+0.8**
	baz=228							
MOD	**Modoc Plateau**	**6.37**	**105**	Pn		**Pn**	**12 52 19.2**	**-1.7**
HOPS	**Hopland Field**	**6.38**	**138**			**Pn**	**12 52 20.8**	**-0.1**
F07A	**Phinny Hill Vi**	**6.45**	**69**			**Pn**	**12 52 20.1**	**-1.6**
LTY	**Liberty**	**6.48**	**56**			**Pn**	**12 52 22.5**	**+0.2**
I07A	**Izee**	**6.53**	**85**			**Pn**	**12 52 23.6**	**+0.6**
GDXM	**Geysers**	**6.66**	**138**			**Pn**	**12 52 25.3**	**+0.6**
C06D	**Leavenworth**	**6.70**	**50**	P		**Pn**	**12 52 25.3**	**+0.1**
	baz=235							
E07A	**Sunnyside**	**6.70**	**63**			**Pn**	**12 52 25.6**	**+0.4**
B06A	**Marblemount**	**6.75**	**44**			**Pn**	**12 52 27.1**	**+1.2**
ORV	**Oroville**	**6.81**	**127**			**Pn**	**12 52 27.6**	**+0.8**
HAWA	**Hanford**	**6.85**	**65**			**Pn**	**12 52 27.1**	**-0.3**
G08A	**Pilot Rock**	**6.99**	**75**			**Pn**	**12 52 27.8**	**-1.6**
BEKR	**Beckworth**	**7.30**	**120**	Pn		**Pn**	**12 52 35.4**	**+1.6**
J08A	**Circle Bar Ran**	**7.33**	**91**			**Pn**	**12 52 33.4**	**-0.6**
WVOR	**Wild Horse Val**	**7.39**	**98**			**Pn**	**12 52 35.2**	**+0.4**
D08A	**Wollman Farm,**	**7.48**	**61**			**Pn**	**12 52 35.1**	**-0.8**
AFDM	**Forest Hills D**	**7.52**	**128**			**Pn**	**12 52 37.5**	**+0.9**
B08A	**Colville Reser**	**7.81**	**52**	Pn		**Pn**	**12 52 37.9**	**-2.7**
PAHR	**Pah Rah Range**	**8.01**	**118**			**Pn**	**12 52 46.3**	**+2.9**
VCNR	**Virginia City**	**8.08**	**121**			**Pn**	**12 52 46.5**	**+2.1**
BMO	**Blue Mountains**	**8.11**	**79**			**Pn**	**12 52 46.8**	**+2.0**
C09A	**Chrisman Ranch**	**8.17**	**58**			**Pn**	**12 52 45.4**	**-0.1**
PNTR	**Pine Nut**	**8.24**	**122**			**Pn**	**12 52 48.0**	**+1.3**
F10A	**Beach Ranch, E**	**8.30**	**71**			**Pn**	**12 52 47.7**	**+0.3**
BBB	**Bella Bella**	**8.32**	**2**	Pn		**Pn**	**12 52 45.8**	**-1.6**
	0.3nm,0.3s,baz=74,slow=23,SNR=1.5							
CMB	**Columbia Colle**	**8.49**	**131**	Pn		**Pn**	**12 52 51.7**	**+1.8**
WAKR	**Walker**	**8.71**	**125**			**Pn**	**12 52 55.4**	**+2.3**
PLID	**Pearl Lake**	**9.05**	**78**			**Pn**	**12 52 59.4**	**+1.7**
NEW	**Newport**	**9.07**	**57**	Pn		**Pn**	**12 52 55.8**	**-2.1**
	0.8nm,0.3s,baz=243,slow=13,SNR=13							
NEW						LR	12 56 33.8	
	comp=Z,2μm,18.5s,baz=243,slow=38							
NEW	**Newport**	**9.07**	**57**	P		**Pn**	**12 52 56.4**	**-1.4**
	baz=245							
NEW	**Newport**	**9.07**	**57**			**Pn**	**12 52 57.0**	**-0.8**
RYN	**Ryan**	**9.19**	**121**			**Pn**	**12 53 00.5**	**+0.9**
KVN	**Kaiserville**	**9.20**	**118**	Pn		**Pn**	**12 53 01.6**	**+1.8**
MFID	**Camas Ranch**	**9.23**	**88**	Pn		**Pn**	**12 52 59.8**	**-0.4**
LHV	**Little Huntoon**	**9.43**	**123**			**Pn**	**12 53 04.1**	**+1.3**
NVAR	**Mina Array Bea**	**

TPFO **Pinon Flats** 13.92 133 P Pn 12 54 05.7 +1.5
baz=321
P17A **Butcher Ranch,** 14.01 102 Pn 12 54 07.1 +1.6
109C **Camp Elliot, M** 14.15 137 Pn Pn 12 54 08.4 +1.1
IRM **Iron Mountain** 14.22 129 P Pn 12 54 09.6 +1.3
baz=317
W13A **Hualapai Mount** 14.30 123 Pn Pn 12 54 11.2 +1.6
SRU **San Rafael Swe** 14.31 103 Pn 12 54 11.5 +1.8
U15A **North Rim** 14.47 115 Pn Pn 12 54 12.3 +0.4
MONP2 **Monument Peak** 14.49 135 P Pn 12 54 13.3 +1.1
baz=323
BAR **Barrett** 14.54 136 Pn Pn 12 54 10.3 -2.4
DLBC **Dease Lake** 14.61 357 Pn Pn 12 54 12.5 -1.0
0.0nm,0.3s,baz=16,slow=19,SNR=1.9
DLBC LR LR 12 59 20.8
comp=Z,322nm,18.8s,baz=175,slow=36
PDMCI **Parker Dam,Lak** 14.69 126 P Pn 12 54 16.8 +2.1
baz=315
SWSC **Sam W. Stewart** 14.78 133 P Pn 12 54 17.5 +1.6
baz=322
CBX **Cerro Bola** 14.84 137 Pn Pn 12 54 16.0 -0.8
IKP **In-Ko-Pah, Jac** 14.85 135 P Pn 12 54 17.9 +1.0
baz=323
CCX **Cicese** 15.20 138 Pn 12 54 22.2 +0.7
CCX IAmb IAmb 12 54 29.5
comp=Z,108nm,1.4s
GLA **Glamis** 15.22 131 P Pn 12 54 23.3 +1.5
baz=319
GLA **Glamis** 15.22 131 Pn 12 54 22.1 +0.3
GLA IAmb IAmb 12 54 31.2
comp=Z,77nm,1.3s
ESJX **Sierra Juarez** 15.44 136 Pn 12 54 24.6 -0.2
ESJX IAmb IAmb 12 54 32.9
comp=Z,114nm,1.4s
O20A **White River Ci** 15.54 97 P Pn 12 54 28.1 +1.9
baz=291
O20A **White River Ci** 15.54 97 Pn 12 54 25.9 -0.3
O20A IAmb IAmb 12 54 40.4
comp=Z,171nm,1.4s
WUAZ **Wupatki** 15.61 116 Pn 12 54 27.4 +0.3
WUAZ IAmb IAmb 12 54 41.8
comp=Z,75nm,1.2s
Y14A **Wickenburg** 15.62 124 Pn 12 54 26.8 -0.3
Y14A IAmb IAmb 12 54 40.8
comp=Z,54nm,1.2s
PV23 **Carpenter Ridg** 15.66 104 Pn 12 54 28.0 +0.1
PV23 IAmb IAmb 12 54 44.3
comp=Z,92nm,1.2s
PV19 **Morning Glory** 15.75 104 Pn 12 54 29.6 +0.7
PV04 **Paradox Valley** 15.77 104 Pn 12 54 30.3 +1.2
PV04 IAmb IAmb 12 54 38.2
comp=Z,92nm,1.5s
PV17 **East Wray Mesa** 15.78 104 Pn 12 54 29.2 0.0
PV22 **Blue Mesa, Par** 15.79 103 Pn Pn 12 54 28.8 -0.5
PV22 IAmb IAmb 12 54 38.3
comp=Z,87nm,1.5s
PV16 **Nyswonger Mesa** 15.79 104 Pn 12 54 30.1 +0.6
PV16 IAmb IAmb 12 54 42.4
comp=Z,79nm,1.5s
RWWY **Rawlins** 15.81 91 Pn 12 54 27.9 -1.8
PV18 **Skein Mesa, Pa** 15.83 104 Pn 12 54 29.3 -0.6
PV11 **David Mesa, Pa** 15.83 104 Pn 12 54 29.8 -0.2
PV03 **Paradox Valley** 15.87 104 Pn 12 54 29.7 -0.7
PV12 **Saucer Basin,** 15.87 104 Pn 12 54 30.0 -0.5
PV12 IAmb IAmb 12 54 44.1
comp=Z,118nm,1.4s
PV07 **Paradox Valley** 15.93 103 Pn 12 54 30.4 -0.8
PV13 **Radium Mtn., P** 15.93 104 Pn 12 54 30.6 -0.6
K22A **Casper** 16.09 87 P Pn 12 54 33.6 +0.5
baz=282
K22A **Casper** 16.09 87 Pn 12 54 33.0 -0.2
X16A **Lo Mia Camp, P** 16.26 120 P Pn 12 54 36.2 +0.8
SPX **San Pedro Mart** 16.47 137 P Pn 12 54 39.2 +1.0
MVCO **Mesa Verde** 16.61 107 P Pn 12 54 41.4 +1.5
baz=300
MVCO **Mesa Verde** 16.61 107 Pn 12 54 40.9 +1.0
MVCO IAmb IAmb 12 54 53.3
comp=Z,96nm,1.4s
SMCO **Snowmass** 16.81 99 P Pn 12 54 42.8 +0.2
W18A **Petrified Fore** 16.92 115 P Pn 12 54 45.3 +1.5
baz=307
W18A **Petrified Fore** 16.92 115 P P 12 54 46.1 +0.3
W18A IAmb IAmb 12 55 01.4
comp=Z,136nm,1.4s
N23A **Red Feather La** 16.95 92 P Pn 12 54 43.3 -1.0
baz=288
N23A **Red Feather La** 16.95 92 Pn 12 54 44.2 -0.1
N23A IAmb IAmb 12 55 00.5
comp=Z,110nm,1.2s
X18A **Snowflake** 17.14 117 P P 12 54 49.0 +0.8
214A **Organ Pipe Nat** 17.16 129 P Pn 12 54 47.1 +0.4
baz=319
214A **Organ Pipe Nat** 17.16 129 Pn 12 54 47.9 +1.2
PHWY **Pilot Hill** 17.18 91 P Pn 12 54 47.0 -0.2
S22A **4UR Ranch, Cre** 17.52 103 P Pn 12 54 52.3 +0.9
baz=297
S22A **4UR Ranch, Cre** 17.52 103 P 12 54 52.6 +0.1
S22A IAmb IAmb 12 55 03.0
comp=Z,142nm,1.5s
RSSD **Black Hills** 17.62 81 P Pn 12 54 53.3 +0.7
baz=278
RSSD **Black Hills** 17.62 81 P P 12 54 53.7 +0.2
RSSD IAmb IAmb 12 55 10.0
comp=Z,89nm,1.4s
HYT **Haines Junctio** 17.81 346 P Pn 12 54 56.0 +1.4
TUC **Tucson** 18.09 124 P P 12 55 00.1 +1.5
baz=315
TUC **Tucson** 18.09 124 P 12 54 59.3 +0.7
Q24A **Divide** 18.20 98 P Pn 12 54 59.9 +0.1
baz=293
Q24A **Divide** 18.20 98 P Pn 12 54 59.4 -0.4
SDCO **Great Sand Dun** 18.46 101 P P 12 55 04.1 +1.3
baz=297
SDCO **Great Sand Dun** 18.46 101 P 12 55 04.2 +1.3
SDCO IAmb IAmb 12 55 12.6
comp=Z,174nm,1.4s
ANMO **Albuquerque** 19.21 110 P P 12 55 11.6 +0.6
comp=Z,0.0nm,0.3s,baz=305,slow=12,SNR=9.2
ANMO LR LR 13 03 00.8
comp=Z,3µm,19.1s,baz=310,slow=38
ANMO **Albuquerque** 19.21 110 P Pn 12 55 12.6 +0.6
baz=304
ANMO **Albuquerque** 19.21 110 P Pn 12 55 12.2 +0.3
T25A **Trinidad** 19.51 102 P Pn 12 55 16.7 +1.2
baz=298
T25A **Trinidad** 19.51 102 P Pn 12 55 15.9 +0.4
T25A IAmb IAmb 12 55 25.2
comp=Z,101nm,1.1s
BNM **Barren Site** 19.55 112 P P 12 55 16.0 +1.2
319A **Douglas** 19.65 123 P Pn 12 55 18.4 +1.2
319A IAmb IAmb 12 55 37.9
comp=Z,151nm,1.5s
E28A **Huff** 19.76 72 P Pn 12 55 18.7 +0.3
E28A IAmb IAmb 12 55 30.5
comp=Z,199nm,1.4s
121A **Cookes Peak, D** 19.80 118 P Pn 12 55 19.9 +0.9
baz=311
121A **Cookes Peak, D** 19.80 118 P Pn 12 55 19.7 +0.7
121A IAmb IAmb 12 55 27.9
comp=Z,68nm,1.2s
KSCO **Kaye Shedlock'** 19.99 95 P Pn 12 55 22.0 +0.8
baz=292
KSCO **Kaye Shedlock'** 19.99 95 Pn 12 55 21.7 +0.5
FFC **Flin Flon** 20.32 48 P P 12 55 23.3 +0.6
FFC IAmb IAmb 12 55 32.9
comp=Z,58nm,0.9s
YKA **Yellowknife Ar** 20.35 19 P P 12 55 22.8 -0.2
comp=Z,4.1nm,0.9s,baz=209,slow=11,SNR=7.4
YKA LR LR 13 03 02.5
comp=Z,278nm,21.9s,baz=0.0,slow=36
HSIG 20.43 131 P Pn 12 55 26.0 -0.3
OHAK **Old Harbor** 20.48 319 P Pn 12 55 27.2 +0.6
OHAK IAmb IAmb 12 55 32.4
comp=Z,61nm,1.3s
BCAR **Beaver Creek A** 20.70 343 P P 12 55 28.2 +1.3
M24K **Tolsona, Glenn** 20.99 337 P P 12 55 32.6 +2.6
M24K IAmb IAmb 12 55 46.2
comp=Z,80nm,1.4s
L26K **Log Cabin Wild** 21.01 341 P P 12 55 33.0 +2.8
baz=149
MENT **Mentasta** 21.02 341 P P 12 55 32.7 +2.3
DAWY **Dawson** 21.15 347 P P 12 55 33.3 +1.5
SUSD **Miller** 21.19 78 P P 12 55 33.2 +0.9
PMR **Palmer** 21.52 333 P P 12 55 38.0 +2.5
PMR IAmb IAmb 12 55 53.0
comp=Z,77nm,1.5s
K27K **Chicken** 21.61 344 P P 12 55 38.9 +2.2
baz=153
K27K **Chicken** 21.61 344 P P 12 55 38.5 +1.9
DOT **Dot Lake** 21.71 341 P P 12 55 39.9 +2.1
MNTX **Cornudas Mount** 21.89 116 P P 12 55 42.3 +2.4
baz=310
MNTX **Cornudas Mount** 21.89 116 P P 12 55 42.6 +2.7
MNTX IAmb IAmb 12 55 49.6
comp=Z,54nm,1.5s
CPRX **Cap Rock** 22.07 111 P P 12 55 42.1 +0.1
EGAK **Eagle** 22.11 346 P P 12 55 43.1 +1.2
F33A **5 Mile Ranch,** 22.87 74 P P 12 55 51.1 +0.9
F33A IAmb IAmb 12 56 00.2
comp=Z,31nm,0.9s
ECSD **EROS Data Cent** 22.97 79 P P 12 55 51.4 +0.1
baz=282
ECSD **EROS Data Cent** 22.97 79 P P 12 55 50.6 -0.8
ECSD IAmb IAmb 12 56 09.5
comp=Z,55nm,1.2s
AGMN **Agassiz Nation** 22.99 67 P P 12 55 50.9 -0.5
baz=271
AGMN **Agassiz Nation** 22.99 67 P P 12 55 52.2 +0.8
AGMN IAmb IAmb 12 56 00.0
comp=Z,42nm,1.4s
ULM **Lac du Bonnet** 23.02 62 P P 12 55 51.1 -0.6
comp=Z,19nm,1.1s,baz=273,slow=9.6,SNR=9.4
ULM LR LR 13 05 08.9
comp=Z,964nm,18.2s,baz=259,slow=38
ULM **Lac du Bonnet** 23.02 62 P P 12 55 50.8 -0.9
ULM IAmb IAmb 12 56 01.0
comp=Z,91nm,1.4s
IL31 23.33 340 P P 12 55 55.6 +0.9
ILAR **Eielson Array** 23.33 340 P P 12 55 53.1 -1.7
comp=Z,3.3nm,1.1s,baz=146,slow=7.0,SNR=13
ILAR PcP PcP 12 59 40.6 -0.6
comp=Z,1.7nm,1.1s,baz=176,slow=3.1,SNR=5.3
ILAR LR LR 13 03 41.5
comp=Z,577nm,19.2s,baz=158,slow=33
ILAR **Eielson Array** 23.33 340 P P 12 55 54.9 +0.1
PPLA **Purkeypile** 23.45 333 P P 12 55 57.9 +1.8
PPLA IAmb IAmb 12 56 15.2
comp=Z,57nm,1.4s
BWN **Browne** 23.54 337 P P 12 55 57.1 +0.3
BWN IAmb IAmb 12 56 04.2
comp=Z,56nm,1.4s
L34A **Svendsen Farm,** 23.56 83 P P 12 55 56.8 -0.5
SVW2 **Sparrevohn** 23.56 326 P P 12 55 58.3 +1.2
SVW2 IAmb IAmb 12 56 07.3
comp=Z,71nm,1.4s
U32A **Winter Ranch,** 23.71 98 P P 12 55 59.6 +0.9
U32A IAmb IAmb 12 56 01.7
comp=Z,36nm,1.0s
KAN10 **Anthony SW Sta** 24.03 96 P P 12 56 03.3 +1.5
KAN08 **Anthony NE Sta** 24.07 95 P P 12 56 03.2 +1.0
KAN05 **Bluff City Nor** 24.19 96 P P 12 56 05.3 +2.0
I23K **Minto, Yukon-K** 24.27 339 P P 12 56 05.0 +1.3
baz=141
I23K **Minto, Yukon-K** 24.27 339 P P 12 56 05.2 +1.5
I23K IAmb IAmb 12 56 17.3
comp=Z,61nm,1.5s
KSU1 **Kansas State U** 24.30 90 P P 12 56 05.4 +1.1
baz=292
CROK **Carrier** 24.38 97 P P 12 56 06.2 +1.1
KAN13 **South Haven SW** 24.52 96 P P 12 56 07.7 +1.5
TX31 **Lajitas Ar. Si** 24.56 118 P P 12 56 09.7 +2.9
TX32 **Lajitas Array** 24.56 118 P P 12 56 09.0 +2.2
TX32 IAmb IAmb 12 56 20.6
comp=Z,60nm,1.4s
TXAR **Lajitas Array** 24.56 118 P P 12 56 07.3 +0.5
comp=Z,9.6nm,1.1s,baz=305,slow=4.4,SNR=26
TXAR PcP PcP 12 59 42.5 -2.1
comp=Z,0.6nm,0.9s,baz=315,slow=0.5,SNR=2.1
TXAR LR LR 13 06 20.2
comp=Z,937nm,19.3s,baz=0.0,slow=38
TXAR **Lajitas Array** 24.56 118 P P 12 56 07.6 +0.7
INK **Inuvik** 24.63 356 P P 12 56 05.3 -1.6
comp=Z,13nm,1.3s,baz=162,slow=9.1,SNR=7.2
INK LR LR 13 05 14.4
comp=Z,331nm,20.4s,baz=170,slow=35
INK **Inuvik** 24.63 356 P P 12 56 08.4 +1.5
WMOK **Wichita Mounta** 24.66 102 P P 12 56 09.3 +1.7
baz=301
WMOK **Wichita Mounta** 24.66 102 S 13 00 33.0 +4.3
F36A **Milaca** 24.78 73 P P 12 56 09.5 +1.0
F36A IAmb IAmb 12 56 29.3
comp=Z,24nm,1.1s
TTA **Tatalina** 24.81 330 P P 12 56 09.7 +0.9
TTA IAmb IAmb 12 56 13.2
comp=Z,35nm,1.3s
BCOK **Bluff Creek, N** 25.04 99 P P 12 56 12.0 +1.0
BMAR **Burnt Mountain** 25.12 345 P P 12 56 12.9 +1.5
OKCFA **Oklahoma City** 25.27 99 P P 12 56 14.8 +1.7
OK025 **Westminster Rd** 25.27 98 P P 12 56 14.8 +1.7
FNO **Franklin** 25.39 99 P P 12 56 16.3 +2.2
QUOK **Quay** 25.45 97 P P 12 56 16.4 +1.7
OK031 **S. Brethren Rd** 25.46 97 P P 12 56 16.2 +1.5
C36M **Paulatuk** 25.64 4 P P 12 56 17.2 +1.1
baz=187
W35A **Tecumseh** 25.81 99 P P 12 56 20.9 +2.9
EYMN **Ely** 25.93 68 P P 12 56 19.4 +0.4
baz=275
IMAR **Indian Mountai** 26.11 337 P P 12 56 21.4 +1.1
COLD **Coldfoot** 26.12 341 P P 12 56 21.8 +1.3
TUL1 **Leonard** 26.23 96 P P 12 56 24.4 +2.7
baz=298
U38A **Gravette** 27.00 94 P P 12 56 29.8 +1.1
U38A IAmb IAmb 12 56 41.3
comp=Z,49nm,1.1s
WHTX **Lake Whitney,** 27.08 105 P P 12 56 31.6 +2.2
WHTX IAmb IAmb 12 56 40.2
comp=Z,61nm,1.4s
TOLK **Toolik Lake Re** 27.14 343 P P 12 56 31.9 +2.3
baz=145
TOLK **Toolik Lake Re** 27.14 343 P P 12 56 31.1 +1.4
TOLK IAmb IAmb 12 56 40.0
comp=Z,46nm,1.5s
W39A **Magazine** 28.01 96 P P 12 56 40.5 +2.8
baz=299
HDIL **Hopedale** 29.07 83 P P 12 56 48.2 +1.1
HKT **Hockley** 29.40 107 P P 12 56 52.4 +2.3
HKT IAmb IAmb 12 57 03.5
comp=Z,23nm,1.4s
USIN **University of** 31.21 87 P P 12 57 06.5 +0.4
OXF **Oxford** 31.49 94 P P 12 57 10.0 +1.4
baz=299
OXF **Oxford** 31.49 94 P P 12 57 09.4 +0.8
BLO **Bloomington** 31.56 84 P P 12 57 09.6 +0.4
WVT **Waverly** 31.88 90 P P 12 57 13.3 +1.3
WVT IAmb IAmb 12 57 20.4
comp=Z,25nm,1.1s
PLAL **Pickwick Lake** 32.23 92 P P 12 57 15.4 +0.3
PLAL IAmb IAmb 12 57 23.6
comp=Z,23nm,0.8s
P49A **Miami Univ. Ec** 32.72 82 P P 12 57 19.8 +0.4
baz=292
P49A **Miami Univ. Ec** 32.72 82 P 12 57 20.9 +1.6
P49A IAmb IAmb 12 57 27.4
comp=Z,29nm,1.1s
V48A **Smith Brothers** 32.78 90 P P 12 57 21.0 +1.1
Z47A **Carrollton** 33.11 95 P P 12 57 22.4 -0.4
Z47A IAmb IAmb 12 57 31.3
comp=Z,24nm,0.8s
U49A **Red Boiling Sp** 33.19 88 P P 12 57 22.2 -1.2
U49A IAmb IAmb 12 57 31.8
comp=Z,44nm,1.4s
X48A **Hartselle** 33.23 92 P P 12 57 23.1 -0.7
M50A **Fremont** 33.24 78 P P 12 57 24.3 +0.4
R50A **Paris** 33.49 84 P P 12 57 26.5 +0.4
R50A IAmb IAmb 12 57 46.3
comp=Z,18nm,1.2s
ACSO **Alum Creek Sta** 33.70 80 P P 12 57 28.8 +0.9
baz=292
ACSO **Alum Creek Sta** 33.70 80 P P 12 57 29.6 +1.7
N51A **Ashland** 33.88 79 P P 12 57 29.3 -0.2
N51A IAmb IAmb 12 57 37.4
comp=Z,40nm,1.2s
Q51A **Peebles** 33.90 82 P P 12 57 30.5 +0.9
Q51A IAmb IAmb 12 57 54.0
comp=Z,21nm,1.4s
P51A **Williamsport** 33.92 81 P P 12 57 30.4 +0.5
baz=292
P51A **Williamsport** 33.92 81 P P 12 57 29.4 -0.5
LRAL **Lakeview Retre** 33.97 94 P P 12 57 32.5 +2.2
baz=301
W50A **Signal Mountai** 34.12 90 P P 12 57 31.9 +0.2
FPAL **Fort Paine** 34.22 91 P P 12 57 32.7 +0.2
RES **Resolute Bay** 34.33 15 P P 12 57 31.4 -1.5
comp=Z,2.4nm,0.7s,baz=34,slow=22,SNR=4.1
RES **Resolute Bay** 34.33 15 P P 12 57 33.3 +0.3
RES IAmb IAmb 12 57 46.4
comp=Z,18nm,1.4s
X51A **Calhoun** 34.75 90 P P 12 57 37.9 +0.8
SADO **Sadowa** 34.92 71 P P 12 57 39.9 +1.5
SADO IAmb IAmb 12 57 46.6
comp=Z,32nm,1.1s
250A **Grady** 35.04 95 P P 12 57 42.0 +2.4
Z51A **Franklin** 35.14 92 P P 12 57 42.7 +2.2
W52A **Murphy** 35.17 89 P P 12 57 42.0 +1.3
W52A IAmb IAmb 12 57 48.7
comp=Z,47nm,1.4s
LSQQ **Lebel-sur-Quev** 35.32 63 P P 12 57 41.6 -0.2
baz=282
O54A **Avella** 35.57 79 P P 12 57 46.6 +2.5
O54A IAmb IAmb 12 57 52.2
comp=Z,35nm,1.2s
Y52A **Lilburn** 35.67 91 P P 12 57 45.5 +0.6
Q54A **Coxs Mills** 35.71 81 P P 12 57 45.8 +0.6
baz=294
MCWV **Mont Chateau** 36.15 79 P P 12 57 52.4 +3.4
baz=293
MCWV **Mont Chateau** 36.15 79 P P 12 57 50.5 +1.5
MCWV IAmb IAmb 12 57 57.4
comp=Z,28nm,1.4s
GOGA **Godfrey** 36.33 91 P P 12 57 53.5 +2.9
baz=300
GOGA **Godfrey** 36.33 91 P P 12 57 52.4 +1.8
S55A **Lewisburg** 36.45 83 P P 12 57 54.9 +3.2
baz=295
R55A **Marlinton** 36.51 82 P P 12 57 54.4 +2.2
baz=295
R55A **Marlinton** 36.51 82 P P 12 57 52.4 +0.2
R55A IAmb IAmb 12 58 01.3
comp=Z,44nm,1.2s
X54A **Belton** 36.56 89 P P 12 57 55.3 +2.7
baz=299
N56A **West Decatur** 36.77 77 P P 12 57 56.6 +2.3
baz=292
P56A **Dayton Farm, R** 36.92 79 P P 12 57 59.3 +3.7
baz=293
T56A **Rocky Mt** 37.10 84 P P 12 58 00.5 +3.2
baz=296
X55A **Gracelyn & Ava** 37.13 88 P P 12 57 58.9 +1.5
baz=299
Y55A **Saluda** 37.23 89 P P 12 57 59.9 +1.6
baz=300
E57A **Chemin Saint G** 37.82 67 P P 12 58 02.7 -0.5
baz=286
SCHQ **Schefferville** 40.39 52 LR LR 13 15 05.5
comp=Z,429nm,19.5s,baz=288,slow=36
BILL **Bilibino** 41.05 329 P P 12 58 29.8 -0.1
BILL IAmb IAmb 12 58 38.5
comp=Z,25nm,1.5s
TGUH **Tegucigalpa,Un** 46.04 117 P P 12 59 12.3 +1.6
SEY **Seymchan** 47.40 322 P P 12 59 19.7 -1.0
comp=Z,8.3nm,1.1s,baz=61,slow=10,SNR=5.2
PETK **Petropavlovsk-** 47.70 309 LR LR 13 16 31.9
comp=Z,359nm,20.8s,baz=77,slow=32
ESPN **Las Esperanzas** 49.35 116 P P 12 59 37.9 +1.6
TIXI **Tiksi** 52.76 337 P P 13 00 00.9 -0.4
TAOE **Nuku Hiva Isla** 53.53 194 eT T 13 57 32.8
comp=Z,37nm,0.2s
YAK **Yakutsk** 57.35 327 P P 13 00 32.3 -2.2
comp=Z,2.7nm,0.3s,baz=90,slow=3.4,SNR=2.2
H11N3 **WAKE ISLAND Hy** 58.37 268 T T 14 03 51.0
baz=49,slow=75,SNR=185
H11N2 **WAKE ISLAND Hy** 58.37 268 T T 14 03 51.0
baz=49,slow=75,SNR=197
H11N1 **WAKE ISLAND Hy** 58.38 268 T T 14 03 49.9
baz=49,slow=75,SNR=206
H11S1 **WAKE ISLAND Hy** 59.30 267 T T 14 04 55.0
baz=50,slow=75,SNR=68
H11S2 **WAKE ISLAND Hy** 59.30 267 T T 14 04 57.2
baz=50,slow=75,SNR=46
H11S3 **WAKE ISLAND Hy** 59.31 267 T T 14 04 58.6
baz=50,slow=75,SNR=43
SDV **Santo Domingo** 60.95 107 P P 13 00 59.3 -1.1
SDV IAmb IAmb 13 01 09.2
comp=Z,11nm,0.9s
PMOR **Pomariorio Ree** 61.20 201 eT T 14 07 00.9
comp=Z,6.6nm,0.2s
ROSC **El Rosal** 61.37 113 LR LR 13 29 48.9
comp=Z,127nm,21.7s,baz=6.0,slow=38
OTAV **Otavalo** 62.17 120 P P 13 01 10.2 +1.3
OTAV IAmb IAmb 13 01 21.4
comp=Z,21nm,1.4s
NRIK **Noril'sk** 64.00 347 P P 13 01 16.2 -3.6
comp=Z,0.9nm,0.3s,baz=28,slow=6.4,SNR=5.3
TIAR **Tiarei** 64.03 202 eT T 14 10 32.1
comp=Z,2.4nm,0.2s
PPT **Papeete** 64.11 202 LR LR 13 21 22.4
comp=Z,70nm,21.5s,baz=354,slow=29
PPT2 **Papeete2** 64.13 202 eLR LR 13 20 09.2
comp=Z,206nm,30.2s
TVO **Taravao** 64.22 202 eT T 14 10 47.0
comp=Z,1.6nm,0.4s
ARCES **ARCESS Array B** 65.30 10 LR LR 13 34 07.7
comp=Z,24nm,18.6s,baz=230,slow=40
USRK **Ussuriysk Ar.** 66.78 309 P P 13 01 34.5 -3.6
comp=Z,1.3nm,0.6s,baz=62,slow=45,SNR=2.3
USRK **Ussuriysk Ar.** 66.78 309 P P 13 01 37.3 -0.8
MJAR **Matsushiro Arr** 67.89 300 P P 13 01 41.9 -3.4
comp=Z,1.5nm,0.9s,baz=27,slow=8.6,SNR=4.1
TBI **Tubuai** 69.59 200 eLR LR 13 22 50.7
comp=Z,117nm,29.2s
NOA **NORSAR Array B** 70.45 19 P P 13 01 57.5 -3.3
comp=Z,0.9nm,0.8s,baz=328,slow=6.3,SNR=2.6
NOA LR LR 13 32 05.2
comp=Z,55nm,18.4s,baz=350,slow=35
FINES **FINESS Array B** 73.04 12 P P 13 02 15.0 -1.3
comp=Z,1.1nm,0.9s,baz=273,slow=34,SNR=2.2
KSRS **Korea Array** 73.53 306 P P 13 02 17.7 -1.9
comp=Z,1.0nm,1.0s,baz=69,slow=5.9,SNR=2.5
KSAR **Wonju Array Be** 73.56 306 P P 13 02 18.2 -1.6
KLMR **Klimovskoe** 75.17 6 eP P 13 02 27.8 -1.0
KLMR AMP 13 02 29.4
comp=Z,26nm,1.5s
ULN **Ulaanbaatar** 76.38 325 P P 13 02 36.0 -0.1
ULN IAmb IAmb 13 02 45.2
comp=Z,13nm,1.4s
SONM **Songino Array** 76.67 325 P P 13 02 37.1 -0.7
comp=Z,6.1nm,1.1s,baz=49,slow=2.5,SNR=17
SONM **Songino Array** 76.67 325 P P 13 02 37.1 -0.7
ZALV **Zalesovo Beam** 78.46 341 P P 13 02 46.2 -1.2
comp=Z,0.5nm,0.3s,baz=24,slow=8.1,SNR=4.1
ZALV **Zalesovo Beam** 78.46 341 P P 13 02 46.5 -0.9
HHC **Hu-ho-hao-te** 79.83 318 eP P 13 02 58.3 +3.0
HHC pmax pmax
comp=Z,18nm,0.6s
HHC pmax pmax
comp=Z,190nm,6.0s
ARU **Arti** 79.89 356 P P 13 02 54.1 -1.1
comp=Z,0.4nm,0.3s,baz=27,slow=4.5
BRG **Berggiesshubel** 80.16 23 eP P 13 02 57.3 +0.5
comp=Z,11nm,1.4s
LPAZ **La Paz** 81.35 122 P P 13 03 03.6 -0.6
comp=Z,2.4nm,0.8s,baz=326,slow=4.2,SNR=6.7
LPAZ **La Paz** 81.35 122 P P 13 03 04.5 +0.2
LPAZ IAmb IAmb 13 03 12.8
comp=Z,10nm,1.2s
GERES **GERESS Array B** 81.91 24 P P 13 03 05.8 -0.5
comp=Z,0.1nm,0.2s,baz=345,slow=3.5,SNR=1.8
NJ2 **Nanjing** 82.60 308 eP P 13 03 12.8 +2.7
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
SEM **Semipalatinsk** 82.80 342 eP P 13 03 09.1 -1.9
comp=Z,2.5nm,1.8s,baz=342
ESDC **Sonseca Array** 82.97 40 P P 13 03 12.5 +0.6
comp=Z,1.8nm,1.2s,baz=296,slow=6.5,SNR=3.0
ESDC LR LR 13 36 22.7
comp=Z,59nm,21.6s,baz=325,slow=33
KBA **Koelnbreinsper** 83.38 25 eP P 13 03 20.6 +6.5
comp=Z,8.3nm,1.5s
ABTA **Abfaltersbach** 83.42 26 eP P 13 03 15.8 +1.6
comp=Z,6.8nm,1.3s
AKASG **Malin Array Be** 83.84 14 P P 13 03 14.6 -1.5
comp=Z,1.1nm,0.7s,baz=341,slow=4.6,SNR=4.7
AKASG LR LR 13 40 09.1
comp=Z,78nm,18.3s,baz=300,slow=35
ARSA **Arzberg** 83.88 24 eP P 13 03 17.4 +1.0
comp=Z,5.6nm,1.4s
SOKA **Soboth** 84.25 24 eP P 13 03 18.4 0.0

	comp=Z,4.0nm,1.2s								
OBKA	**Obir**		**84.26**	**25**	*e*P		**P**	**13 03 19.9**	**+1.5**
	comp=Z,6.0nm,1.2s								
ZSN	**Zaisan**		**84.40**	**338**	*e*P		**P**	**13 03 17.6**	**-1.4**
	comp=Z,5.5nm,1.6s,baz=338								
BRZS	**Berezniki**		**84.70**	**346**	*e*P		**P**	**13 03 18.9**	**-1.6**
	baz=346								
MKAR	**Makanchi Array**		**85.69**	**339**	P		**P**	**13 03 23.1**	**-2.5**
	comp=Z,1.4nm,1.1s,baz=22,slow=8.0,SNR=3.6								
GTA	**Gaotai**		**86.30**	**325**	⇑P		**P**	**13 03 28.5**	**-0.4**
GTA					sP	pwP		13 03 37.9	+1.5
GTA					pmax	pmax			
	comp=Z,3.0nm,1.7s								
GTA					pmax	pmax			
	comp=Z,90nm,6.2s								
GTA					LR	LR			
	comp=Z,200nm,18.5s								
GTA					LR	LR			
	comp=Z,220nm,17.5s								
GTA					LR	LR			
	comp=Z,290nm,20.7s								
XAN	**Xi'an**		**86.45**	**315**	P		**P**	**13 03 29.5**	**-0.1**
XAN					S		**S**	**13 13 59.8**	**-5.5**
XAN					pmax	pmax			
	comp=Z,7.0nm,2.5s								
XAN					pmax	pmax			
	comp=Z,170nm,5.9s								
XAN					LR	LR			
	comp=Z,110nm,24.9s								
XAN					LR	LR			
	comp=Z,260nm,18.4s								
XAN					LR	LR			
	comp=Z,250nm,22.8s								
WMQ	**Urumqi**		**86.88**	**335**	*e*P		P	13 03 36.8	+5.2
WMQ					pmax	pmax			
	comp=Z,14nm,0.7s								
WMQ					pmax	pmax			
	comp=Z,140nm,5.5s								
LZH	**Lanzhou**		**87.28**	**320**	*e*P		**P**	**13 03 33.9**	**+0.2**
LZH					pP	sP		13 03 39.0	+0.2
LZH					sP	pwP		13 03 41.5	+0.2
LZH					sS	sS		13 14 18.9	-1.0
LZH					pmax	pmax			
	comp=Z,15nm,1.0s								
LZH					pmax	pmax			
	comp=Z,83nm,6.9s								
LZH					LR	LR			
	comp=Z,230nm,18.8s								
LZH					LR	LR			
	comp=Z,260nm,18.2s								
LZH					LR	LR			
	comp=Z,290nm,20.1s								
TDK	**Taldyqorghan**		**88.31**	**341**	*e*P		**P**	**13 03 37.4**	**-0.9**
	baz=341								
DZM	**Mont Dzumac**		**88.55**	**237**	*e*LR		LR	13 31 29.6	
	comp=Z,243nm,22.9s								
BTLS	**Baital**		**89.21**	**344**	*e*P		**P**	**13 03 41.6**	**-1.0**
	baz=344								
KPKS	**Kokpek**		**89.70**	**341**	*e*P		**P**	**13 03 43.6**	**-1.3**
	baz=340								
SHLS	**Shalkode**		**89.80**	**340**	*e*P		**P**	**13 03 43.8**	**-1.7**
	baz=340								
SATY	**Saty**		**90.15**	**341**	*e*P		**P**	**13 03 46.1**	**-1.0**
	comp=Z,2.2nm,1.2s,baz=340								
KEST	**Kesra**		**92.00**	**33**	LR		LR	13 44 03.5	
	comp=Z,50nm,19.6s,baz=304,slow=35								
PMG	**Port Moresby**		**92.36**	**259**	LR		LR	13 37 31.2	
	comp=Z,128nm,21.5s,baz=26,slow=30								
BDFB	**Brasilia**		**94.04**	**108**	LR		LR	13 50 23.7	
	comp=Z,236nm,18.9s,baz=307,slow=38								
CPUP	**Villa Florida**		**95.49**	**121**	LR		LR	13 48 27.2	
	comp=Z,68nm,18.6s,baz=0.5,slow=36								
PLCA	**Paso Flores**		**99.07**	**139**	LR		LR	13 40 15.9	
	comp=Z,51nm,21.5s,baz=339,slow=30								
TORD	**Torodi Ar. Bea**		**107.39**	**51**	PKiKP		**PKiKP**	**13 09 13.3**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=65,slow=3.2,SNR=8.0								
TORD	**Torodi Ar. Bea**		**107.39**	**51**			**PKiKP**	**13 09 16.9**	**+3.1**

BJI ***23*** *12:52:03.3±0.0,5.°52N×125.°69E, h90km, mB4.9/20, mb4.7/29, Ms4.3/6, Ms7 4.0/6*

MAN ***23*** *12:52:05.9, 5.°83N×125.°37E, h88km, mb5.1, ML4.1, MS4.2*

IDC ***23*** *12:52:09.9±0.7, 6.°05N×125.°36E, h102km±6km, mb4.1/30, mb1 4.2/33, mb1mx4.1/60, mbtmp4.5/33, MS2.9/3, Ms1 2.9/3, ms1mx2.6/38, Error ellipse: s-maj=16.3km s-min=7.8km az=81.0*

NEIC ***23*** *12:52:10.1±1.0, 6.°02N±0.°05×125.°34E±0.°09, h100km±7km, mb4.7/39, Error ellipse: s-maj=13.3km s-min=7.6km az=86.0*

DJA ***23*** *12:52:11.8±0.6, 6.°N±5.°×12.°6E±.°, h67km±7km, M5.0/26, mb5.0/26, mB5.4/18, MLv5.3/12, Mw(mB)4.8/18*

ISC 23 12:52:09.6±0.6, 6.°01N±0.°04×125.°41E±0.°04, h97km±5km**, n153,σ1s57/174, mb4.5/53, 5C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.31**	**73**	*e*P		**Pn**	**12 52 21.9**	**-2.1**
DDMP				*e*S		**Sn**	**12 52 33.7**	**-1.0**
SKMP	**Bagumbayan, Su**	**1.00**	**300**	*e*P		**Pn**	**12 52 27.2**	**-2.6**
SKMP				*e*S		**Sn**	**12 52 42.2**	**-2.8**
KCP	**Kidapawan**	**1.04**	**342**	⇑*i*P		**Pn**	**12 52 30.0**	**-0.4**
DAV	**Davao City (W)**	**1.06**	**9**	P		**Pn**	**12 52 30.0**	**-0.6**
	1µm,0.3s,baz=217,slow=2.1,SNR=105							
DAV				S		**Sn**	**12 52 47.3**	**+1.0**
	1µm,0.3s,baz=25,slow=23,SNR=6.1							
DAV	**Davao City (W)**	**1.06**	**9**			**Pn**	**12 52 30.6**	**0.0**
DAV					Sn	**Sn**	**12 52 48.4**	**+2.0**
DAV	**Davao City (W)**	**1.06**	**9**	⇑*i*P		**Pn**	**12 52 28.4**	**-2.2**
MATI	**Mati**	**1.25**	**42**	*e*P		**Pn**	**12 52 30.2**	**-2.6**
MATI				*e*S		**Sn**	**12 52 45.7**	**-4.4**
BUKP	**Musuan**	**1.89**	**349**	*e*P		**Pn**	**12 52 39.8**	**-0.9**
BUKP				*e*S		**Sn**	**12 53 04.6**	**+0.2**
SGSI	**Sangihe**	**2.31**	**177**	P		**Pn**	**12 52 46.2**	**-0.1**
BIP	**Bislig**	**2.35**	**21**	⇑*e*P		**Pn**	**12 52 48.2**	**+1.5**
BIP				*e*S		**Sn**	**12 53 20.8**	**+5.7**
CGP	**Cagayan de Oro**	**2.53**	**344**	⇓*e*P		**Pn**	**12 52 49.5**	**+0.4**
CGP				*e*S		Sn	12 53 28.9	+10
PAGZ	**Pagadian**	**2.72**	**312**	*e*P		**Pn**	**12 52 50.1**	**-1.5**
PAGZ				*e*S		**Sn**	**12 53 22.1**	**-1.7**
GLSP	**General Luna,**	**3.81**	**11**	*e*P		**Pn**	**12 53 04.9**	**-1.4**
GLSP				*e*S		**Sn**	**12 53 52.9**	**+2.8**
MSLP	**Maasin**	**4.13**	**352**	*e*P		**Pn**	**12 53 09.8**	**-0.7**
MSLP				*e*S		**Sn**	**12 53 51.6**	**-6.2**
LLP	**Lapu-Lapu**	**4.51**	**342**	⇑*e*P		**Pn**	**12 53 16.2**	**+0.5**
OCLP	**Ormoc**	**5.07**	**351**	*e*P		**Pn**	**12 53 23.6**	**+0.4**
OCLP				*e*S		**Pn**	**12 53 24.6**	**+1.3**
TNTI	**Ternate**	**5.56**	**159**	P		**Pn**	**12 53 29.7**	**-0.3**
	0.8nm3µm170nm,0.6s							
TNTI	**Ternate**	**5.56**	**159**			**Pn**	**12 53 30.0**	**0.0**
TNTI					Sn	**Sn**	**12 54 32.8**	**+0.2**
KMSI	**Cibinong**	**5.59**	**195**	P		**Pn**	**12 53 30.5**	**+0.1**
	2.8nm6µm481nm,0.8s							
GTOI	**Gorontalo**	**5.85**	**204**	P		**Pn**	**12 53 33.3**	**-0.7**
	2.6nm8µm675nm,0.7s							
MRSI	**Marisa**	**6.50**	**212**	P		**Pn**	**12 53 43.0**	**+0.3**
	5.7nm13µm636nm,0.7s							
TOLI2	**Tolitoli**	**6.71**	**224**	Pn		**Pn**	**12 53 44.6**	**-1.0**
MYLDM	**Lahad Datu**	**6.93**	**263**			**Pn**	**12 53 48.4**	**-0.2**
LUWI	**Luwuk**	**7.49**	**201**	P		**Pn**	**12 53 58.1**	**+1.9**
	3.1nm7µm755nm,0.8s							
LUWI	**Luwuk**	**7.49**	**201**			**Pn**	**12 53 57.3**	**+1.1**
APSI	**Ampana**	**7.84**	**209**	P		**Pn**	**12 54 03.6**	**+2.6**
	0.9nm4µm214nm,0.8s							
MPSI	**Mapaga**	**7.88**	**225**	P		**Pn**	**12 54 00.8**	**-0.7**
	0.3nm868nm29nm,0.9s							
SANI	**Sanana**	**8.03**	**176**	P		**Pn**	**12 54 00.7**	**-2.9**
	1.5nm7µm335nm,0.7s							
SIJI	**Sorong**	**8.99**	**139**	P		**Pn**	**12 54 16.2**	**-0.5**
	4.3nm,0.3s,baz=334,slow=23,SNR=8.4							
SIJI				S		**Sn**	**12 55 51.5**	**-4.8**
	0.9nm,0.3s,baz=167,slow=21,SNR=1.5							
SIJI				LR		LR	12 56 51.7	
	comp=Z,46nm,20.9s,baz=206,slow=31							
NLAI	**Namlea**	**9.34**	**170**	P		**Pn**	**12 54 19.7**	**-1.8**
	3µm198nm,0.8s							
MSAI	**Masohi**	**9.94**	**159**	P		**Pn**	**12 54 29.2**	**-0.4**
	547nm15nm,0.9s							
TTSI	**Tana Toraja**	**10.59**	**212**	P		**Pn**	**12 54 40.6**	**+2.1**
	1µm56nm,0.6s							
FAKI	**Fak Fak**	**11.20**	**142**	P		**Pn**	**12 54 46.4**	**-0.3**
	26nm,1.0s							
FAKI	**Fak Fak**	**11.20**	**142**			**Pn**	**12 54 46.9**	**+0.2**
SPSI	**Sidrap Palu**	**11.40**	**210**	P		**Pn**	**12 54 52.3**	**+2.9**
	31nm,0.7s							
BNSI	**Bone**		**11.62**	**207**	P		**Pn**	**12 54 55.0**	**+2.6**
	1µm121nm,1.1s								
KAPI	**Kappang**		**12.33**	**207**	P		**Pn**	**12 55 03.6**	**+1.8**
	2.0nm,0.3s,baz=65,slow=7.0,SNR=7.0								
KAPI					LR		LR	13 00 25.5	
	comp=Z,63nm,18.6s,baz=66,slow=40								
KAPI	**Kappang**		**12.33**	**207**	Pn		**Pn**	**12 55 02.7**	**+0.9**
BKSI	**Bulukumba**		**12.44**	**205**	P		**Pn**	**12 55 06.0**	**+2.7**
	922mm29nm,1.4s								
KBKI	**Kotabaru**		**13.07**	**225**	P		P	12 55 27.3	+9.1
SBUM	**Sibu**		**13.62**	**255**	Pn		**Pn**	**12 55 17.4**	**-1.5**
BBKI	**Banjar Baru**		**14.14**	**229**	P		**P**	**12 55 30.0**	**-0.2**
	5µm55nm,0.9s								
MMRI	**Maumere**		**14.89**	**192**	Pn		**Pn**	**12 55 35.7**	**+0.5**
EDFI	**Ende, Flores**		**15.13**	**194**	P		P	12 55 49.4	+8.2
SOEI	**Soe**		**15.71**	**184**	P		**P**	**12 55 47.5**	**-0.1**
	927nm82nm,1.0s								
SOEI	**Soe**		**15.71**	**184**	Pn		**Pn**	**12 55 46.0**	**+0.4**
SOEI					IAmb		IAmb	12 55 59.6	
	comp=Z,56nm,0.7s								
BATI	**Baumata**		**16.21**	**186**	P		**P**	**12 55 53.3**	**+0.2**
	comp=Z,16nm,0.3s,baz=359,slow=1.2,SNR=27								
BATI	**Baumata**		**16.21**	**186**	P		**P**	**12 55 53.3**	**+0.2**
	comp=Z,821nmcomp=Z,100nm,0.8s								
PLAI	**Plampang**		**16.59**	**207**	P		**P**	**12 55 59.3**	**+2.0**
	comp=Z,66nm,0.8s								
TWSI	**Taliwang, Sumb**		**16.94**	**210**	P		**P**	**12 56 03.9**	**+2.7**
	comp=Z,35nm,0.7s								
SRBI	**Singaraja**		**17.31**	**216**	P		**Pn**	**12 56 09.9**	**+4.6**
	comp=Z,61nm,1.4s								
JAY	**Jayapura**		**17.46**	**119**	P		**Pn**	**12 56 07.3**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=310,slow=6.9,SNR=4.8								
TPUB	**Ta-pu**		**17.80**	**345**	P		**Pn**	**12 56 10.9**	**-0.2**
MTN	**Manton Dam**		**19.58**	**163**			**P**	**12 56 30.9**	**+0.9**
MTN					IAmb		IAmb	12 56 32.6	
	comp=Z,51nm,0.6s								
KNRA	**Kununurra**		**21.80**	**171**	P		**P**	**12 56 54.3**	**+0.3**
LEM	**Lembang**		**21.86**	**235**	P		**P**	**12 56 58.0**	**+3.2**
	comp=Z,40nm,0.8s,baz=29,slow=18,SNR=8.4								
MANU	**Manus Island**		**23.34**	**109**	P		**P**	**12 57 10.7**	**+1.1**
FITZ	**Fitzroy Crossi**		**23.96**	**179**	P		**P**	**12 57 15.5**	**+0.5**
	comp=Z,15nm,0.5s,baz=3.7,slow=8.3,SNR=44								
FITZ	**Fitzroy Crossi**		**23.96**	**179**	P		**P**	**12 57 15.7**	**+0.6**
LWLI	**Liwa**		**23.97**	**243**	P		**P**	**12 57 19.7**	**+4.3**
PMG	**Port Moresby**		**26.54**	**125**	P		**P**	**12 57 37.1**	**-1.5**
	comp=Z,13nm,1.0s,baz=302,slow=13,SNR=2.9								
COEN	**Coen**		**26.54**	**138**	P		**P**	**12 57 39.4**	**+0.9**
NJ2	**Nanjing**		**26.62**	**348**	*e*P		**P**	**12 57 40.3**	**+1.2**
NJ2					pmax	pmax			
	comp=Z,9.0nm,0.5s								
WB0	**Warramunga Arr**		**27.10**	**161**	P		**P**	**12 57 43.8**	**+0.3**
WB0					IAmb		IAmb	12 58 13.2	
	comp=Z,8.9nm,0.7s								
WRAB	**Tennant Creek**		**27.24**	**161**	P		**P**	**12 57 44.8**	**+0.1**
WRA	**Warramunga Arr**		**27.25**	**161**	P		**P**	**12 57 44.7**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=342,slow=10.0,SNR=14								
WRA					S		**S**	**13 02 14.2**	**-2.9**
	comp=Z,1.4nm,0.8s,baz=335,slow=16,SNR=5.3								
WRA					ScP		**ScP**	**13 04 33.0**	**-1.4**
	comp=Z,0.6nm,0.7s,baz=334,slow=3.3,SNR=2.7								
WRA	**Warramunga Arr**		**27.25**	**161**	P		**P**	**12 57 44.9**	**0.0**
WB2	**Warramunga Arr**		**27.25**	**161**	P		**P**	**12 57 45.6**	**+0.7**
WR0	**Warramunga Arr**		**27.33**	**161**	P		**P**	**12 57 46.4**	**+0.8**
WR0					IAmb		IAmb	12 58 09.4	
	comp=Z,15nm,1.2s								
JNU	**Nakatsue**		**27.45**	**10**	P		**P**	**12 57 45.4**	**-1.1**
	comp=Z,5.0nm,0.8s,baz=259,slow=7.6,SNR=4.3								
PSA00	**Pilbara Seismi**		**27.95**	**191**	P		**P**	**12 57 51.0**	**-0.1**
PSA00					IAmb		IAmb	12 57 51.6	
	comp=Z,15nm,0.9s								
CMAR	**Chiang Mai Arr**		**28.62**	**298**	P		**P**	**12 57 57.0**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=114,slow=6.6,SNR=17								
AS31	**Alice Springs**		**30.64**	**165**	P		**P**	**12 58 15.3**	**+0.3**
ASAR	**Alice Springs**		**30.64**	**165**	P		**P**	**12 58 15.1**	**+0.1**
	comp=Z,1.7nm,0.4s,baz=340,slow=6.8,SNR=18								
ASAR					PcP		**PcP**	**13 01 10.9**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=304,slow=1.9,SNR=4.6								
ASAR					S		**S**	**13 03 08.5**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=332,slow=13,SNR=3.3								
ASAR					ScP		**ScP**	**13 04 43.5**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=335,slow=2.5,SNR=6.4								
KSRS	**Korea Array**		**31.38**	**4**	P		**P**	**12 58 21.6**	**+0.4**
	comp=Z,4.9nm,0.7s,baz=184,slow=9.9,SNR=21								
KSRS					PcP		**PcP**	**13 01 13.2**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=171,slow=2.9,SNR=5.8								
KSRS					LR		LR	13 12 22.9	
	comp=Z,22nm,19.0s,baz=134,slow=39								
XAN	**Xi'an**		**31.80**	**333**	P		**P**	**12 58 24.9**	**-0.2**
XAN					pmax	pmax			
	comp=Z,11nm,0.9s								
CD2	**Chengdu**		**32.04**	**323**	P		**P**	**12 58 29.0**	**+1.8**
CD2					S		**S**	**13 03 33.8**	**+1.6**
CD2					pmax	pmax			
	comp=Z,20nm,0.5s								
CD2					pmax	pmax			
	comp=Z,60nm,5.7s								
CD2					LR	LR			
	comp=Z,110nm,10.6s								
CD2					LR	LR			
	comp=Z,170nm,15.3s								
CD2					LR	LR			
	comp=Z,200nm,14.9s								
MJAR	**Matsushiro Arr**		**32.57**	**19**	P		**P**	**12 58 30.4**	**-1.3**
	comp=Z,2.3nm,0.7s,baz=195,slow=9.5,SNR=5.3								
JSD	**Sado**		**33.95**	**18**	P		**P**	**12 58 41.0**	**-2.6**
LZH	**Lanzhou**		**35.88**	**329**	*e*P		**P**	**12 59 02.3**	**+1.8**
LZH					pP		pP	12 59 24.4	+1.4
LZH					sP		sP	12 59 37.9	+3.6
LZH					pmax	pmax			
	comp=Z,15nm,1.5s								
LZH					pmax	pmax			
	comp=Z,100nm,6.1s								
MORW	**Morawa**		**36.03**	**194**	P		**P**	**12 59 01.7**	**+0.1**
MORW					IAmb		IAmb	12 59 02.5	
	comp=Z,29nm,1.2s								
FORT	**Forrest**		**36.67**	**176**	P		**P**	**12 59 07.4**	**+0.3**
HHC	**Hu-ho-hao-te**		**36.84**	**342**	*e*P		**P**	**12 59 09.4**	**+0.9**
HHC					pmax	pmax			
	comp=Z,14nm,0.6s								
HHC					pmax	pmax			
	comp=Z,110nm,4.3s								
HHC					LR	LR			
	comp=Z,130nm,12.8s								
HHC					LR	LR			
	comp=Z,170nm,13.6s								
HHC					LR	LR			
	comp=Z,130nm,12.8s								
SHL	**Shillong**		**37.49**	**305**	P		**P**	**12 59 15.2**	**+0.9**
SHL					IAmb		IAmb	12 59 17.2	
	comp=Z,13nm,0.8s								
USRK	**Ussuriysk Ar.**		**38.47**	**8**	P		**P**	**12 59 22.0**	**-0.1**
	comp=Z,4.3nm,0.7s,baz=204,slow=7.2,SNR=7.9								
USRK	**Ussuriysk Ar.**		**38.47**	**8**	P		**P**	**12 59 22.1**	**+0.1**
NWAO	**Narrogin (SRO)**		**39.50**	**191**	P		**P**	**12 59 30.5**	**-0.3**
	comp=Z,4.8nm,0.4s,baz=29,slow=7.9,SNR=11								
NWAO	**Narrogin (SRO)**		**39.50**	**191**	P		**P**	**12 59 31.3**	**+0.5**
NWAO	**Narrogin (SRO)**		**39.50**	**191**	P		**P**	**12 59 31.1**	**+0.3**
NWAO					IAmb		IAmb	12 59 52.0	
	comp=Z,32nm,1.2s								
BBOO	**Buckleboo**		**39.91**	**166**	P		**P**	**12 59 35.6**	**+1.3**
GTA	**Gaotai**		**40.48**	**329**	⇑P		**P**	**12 59 39.4**	**+0.4**
GTA					pP		pP	13 00 04.3	+2.5
GTA					sP		sP	13 00 15.0	+2.0
GTA					PcP		**PcP**	**13 01 39.8**	**-0.2**
GTA					pmax	pmax			
	comp=Z,3.0nm,0.8s								
GTA					pmax	pmax			
	comp=Z,65nm,5.3s								
GTA					LR	LR			
	comp=Z,71nm,17.8s								
GTA					LR	LR			
	comp=Z,81nm,18.5s								
GTA					LR	LR			
	comp=Z,68nm,16.0s								
STKA	**Stephens Creek**		**40.72**	**159**	P		**P**	**12 59 41.9**	**+1.0**
	comp=Z,4.2nm,0.5s,baz=331,slow=8.1,SNR=7.2								
STKA	**Stephens Creek**		**40.72**	**159**	P		**P**	**12 59 42.2**	**+1.2**
ASAJ	**Asahikawa**		**40.84**	**19**	P		**P**	**12 59 42.1**	**+0.3**
	comp=Z,8.4nm,0.8s,baz=234,slow=17,SNR=7.8								
TAPN	**Taplejung**		**41.63**	**305**	*e*P		**P**	**12 59 50.3**	**+1.4**
	comp=Z,26nm,1.0s								
ODAN	**Odare**		**41.70**	**304**	*e*P		**P**	**12 59 50.5**	**+1.1**
	comp=Z,24nm,0.8s								
RAMN	**Ramite**		**42.38**	**304**	*e*P		**P**	**12 59 56.2**	**+1.3**
GUN	**Gumba**		**43.34**	**305**	*e*P		**P**	**13 00 04.0**	**+1.2**
PKI	**Pulchoki**		**43.60**	**304**	*e*P		**P**	**13 00 05.4**	**+0.6**
PKIN	**Phulchoki**		**43.61**	**304**	*e*P		**P**	**13 00 05.3**	**+0.4**
	comp=Z,8.7nm,0.5s								
KKN	**Kakani**		**43.78**	**304**	*e*P		**P**	**13 00 07.0**	**+0.8**
DMN	**Daman**		**43.86**	**304**	*e*P		**P**	**13 00 07.8**	**+0.9**
GKN	**Gorkha**		**44.39**	**304**	*e*P		**P**	**13 00 11.4**	**+0.4**
SONM	**Songino Array**		**44.73**	**342**	P		**P**	**13 00 12.3**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=150,slow=9.3,SNR=4.7								
KOLN	**Koldanda**		**45.16**	**304**	*e*P		**P**	**13 00 18.3**	**+1.1**
DANN	**Dangsing**		**45.24**	**304**	*e*P		**P**	**13 00 18.7**	**+0.8**
	comp=Z,24nm,0.6s								
PYUN	**Piuthan**		**45.78**	**304**	*e*P		**P**	**13 00 23.3**	**+1.2**
	comp=Z,14nm,0.6s								
TOO	**Toolangi**		**47.23**	**158**	P		**P**	**13 00 35.0**	**+2.0**
TOO					IAmb		IAmb	13 00 44.1	
	comp=Z,9.7nm,1.4s								
DZM	**Mont Dzumac**		**48.93**	**126**	P		**P**	**13 00 47.1**	**+0.7**
	comp=Z,4.8nm,0.9s,baz=75,slow=21,SNR=1.2								
WMQ	**Urumqi**		**50.11**	**325**	*e*P		**P**	**13 00 57.1**	**+2.1**
PEA0B	**Petropavlovsk-**		**53.85**	**24**	P		**P**	**13 01 23.8**	**+1.3**
PETK	**Petropavlovsk-**		**53.85**	**24**	P		**P**	**13 01 23.1**	**+0.6**
	comp=Z,10nm,0.8s,baz=198,slow=2.9,SNR=18								
PETK					PcP		**PcP**	**13 02 26.7**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=285,slow=1.4,SNR=5.6								
PET	**Petropavlovsk**		**54.17**	**24**	P		**P**	**13 01 25.3**	**+0.5**
MK31	**Makanchi Array**		**54.94**	**325**	P		**P**	**13 01 30.6**	**-0.1**
MK31					IAmb		IAmb	13 01 56.8	
	comp=Z,6.3nm,1.4s								
MKAR	**Makanchi Array**		**54.94**	**325**	P		**P**	**13 01 30.2**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=120,slow=7.4,SNR=15								
MKAR					PcP		**PcP**	**13 02 30.2**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=122,slow=2.6,SNR=2.6								
MKAR	**Makanchi Array**		**54.94**	**325**	P		**P**	**13 01 30.6**	**0.0**
KSH	**Kashi**		**55.51**	**315**	*e*P		**P**	**13 01 37.5**	**+2.5**
KSH					pmax	pmax			
	comp=Z,130nm,4.0s								
YAK	**Yakutsk**		**55.99**	**2**	P		**P**	**13 01 37.6**	**-0.1**
	comp=Z,14nm,0.5s,baz=334,slow=0.7,SNR=12								
YAK	**Yakutsk**		**55.99**	**2**	P		**P**	**13 01 36.5**	**-1.2**
ZALV	**Zalesovo Beam**		**57.97**	**333**	P		**P**	**13 01 50.3**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=131,slow=5.9,SNR=1.8								
KBL	**Kabul**		**59.11**	**307**	P		**P**	**13 02 00.3**	**-0.1**
KBL					IAmb		IAmb	13 02 01.5	
	comp=Z,6.5nm,0.8s								
KURK	**Kurchatov**		**59.12**	**327**	P		**P**	**13 01 59.6**	**-0.4**
KURK					IAmb		IAmb	13 02 25.2	
	comp=Z,5.4nm,1.1s								
SEY	**Seymchan**		**60.13**	**14**	P		**P**	**13 02 08.4**	**+1.8**
	comp=Z,1.0nm,0.3s,baz=132,slow=4.5,SNR=6.9								
SEY					PcP		**PcP**	**13 02 51.3**	**0.0**
	comp=Z,4.7nm,0.8s,baz=149,slow=6.3,SNR=5.2								
KK31	**Karatay Array**		**60.68**	**317**	P		**P**	**13 02 10.2**	**-0.6**
KK31					IAmb		IAmb	13 02 11.8	
	comp=Z,3.9nm,0.8s								
KKAR	**Karatay Array**		**60.68**	**317**	P		**P**	**13 02 10.4**	**-0.4**
KKAR					IAmb		IAmb	13 02 11.8	
	comp=Z,3.9nm,0.8s								
KKAR	**Karatay Array**		**60.68**	**317**	P		**P**	**13 02 11.1**	**+0.3**
TIXI	**Tiksi**		**65.60**	**1**	P		**P**	**13 02 41.9**	**-0.8**
TIXI					IAmb		IAmb	13 02 42.5	
	comp=Z,6.5nm,1.1s								
NRIK	**Noril'sk**		**67.92**	**346**	P		**P**	**13 02 56.9**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=139,slow=9.3,SNR=3.8								
ABKAR	**Akbulak array**		**69.56**	**320**	P		**P**	**13 03 08.1**	**0.0**
ABKAR	**Akbulak array**		**69.56**	**320**	P		**P**	**13 03 08.0**	**-0.1**
SOCY	**Socotra**		**70.63**	**281**	P		**P**	**13 03 13.8**	**-1.6**
SOCY					IAmb		IAmb	13 03 17.4	
	comp=Z,5.9nm,0.8s								
AKTO	**Aktyubinsk**		**71.07**	**321**	P		**P**	**13 03 16.4**	**-0.9**
	comp=Z,2.7nm,0.7s,baz=102,slow=7.6,SNR=10								

UMQ Umm Al-Quwin 1.27 221 *e*P **Pg 13 18 27.0 +2.7**
SNR=46
UMQ Umm Al-Quwin 1.27 221 P **Pg 13 18 27.1 +2.7**
SNR=60
UMQ P **Pg 13 18 27.1 +2.7**
SNR=60
UMQ S **Sg 13 18 48.6 +7.7**
SNR=6.1
UMQ S **Sg 13 18 48.6 +7.7**
SNR=6.1
UMQ Umm Al-Quwin 1.27 221 *e*Pg **Pg 13 18 27.1 +2.7**
JSK1 Jask 1.36 128 *e*Pg **Pg 13 18 26.3 +0.2**
UOSS Minazif 1.58 193 *e*P **Pn 13 18 26.6 -1.3**
SNR=32
UOSS Minazif 1.58 193 P **Pn 13 18 26.7 -1.3**
UOSS S **Sg 13 18 53.1 +2.4**
UOSS Minazif 1.58 193 *e*Pn **Pn 13 18 26.7 -1.2**
UOSS Minazif 1.58 193 Pn **Pn 13 18 26.3 -1.6**
HATD Hatta, Dubai 1.71 194 *e*P **Pn 13 18 28.6 -1.0**
SNR=192
HATD Hatta, Dubai 1.71 194 P **Pn 13 18 28.7 -1.0**
SNR=198
HATD S **Sg 13 18 57.8 +2.9**
HATD Hatta, Dubai 1.71 194 *e*Pn **Pn 13 18 29.0 -0.7**
NAZ Nazwa, Dubai 1.71 209 *e*P **Pg 13 18 33.4 +0.6**
SNR=52
NAZ Nazwa, Dubai 1.71 209 P **Pg 13 18 33.4 +0.6**
SNR=52
NAZ S **Sg 13 18 57.0 +2.0**
NAZ Nazwa, Dubai 1.71 209 *e*Pn **Pg 13 18 33.2 +0.4**
KHNJ Kahnooj 1.76 34 *e*Pn **Pn 13 18 31.2 +0.7**
ASHO Ashiyiah 1.86 195 *e*P **Pn 13 18 31.4 -0.4**
SNR=50
ASHO Ashiyiah 1.86 195 P **Pb 13 18 33.7 -0.3**
SNR=330
ASHO S **Sg 13 19 01.4 +1.6**
ASHO Ashiyiah 1.86 195 *e*Pn **Pn 13 18 31.5 -0.4**
FAQ Al Faqa, Dubai 1.96 208 *e*P **Pg 13 18 36.9 -0.6**
SNR=107
FAQ Al Faqa, Dubai 1.96 208 P **Pb 13 18 36.0 +0.4**
SNR=107
FAQ P **Pb 13 18 36.0 +0.4**
SNR=107
FAQ Al Faqa, Dubai 1.96 208 *e*Pn **Pb 13 18 36.2 +0.6**
ASUD Al Ashush, Dub 2.18 212 *e*P **Pb 13 18 40.2 +0.8**
SNR=512
ASUD Al Ashush, Dub 2.18 212 P **Pb 13 18 40.3 +0.9**
SNR=512
ASUD P **Pb 13 18 40.3 +0.9**
SNR=512
ASUD S **Sg 13 19 11.0 +1.1**
ASUD S **Sg 13 19 11.0 +1.1**
ASUD Al Ashush, Dub 2.18 212 *e*Pn **Pb 13 18 39.4 0.0**
LAR1 LAR 2.30 301 *e*Pn **Pn 13 18 38.6 +0.7**
LAR1 *e* 13 19 34.0
SOHO SOHO 2.34 181 *e*P **Pn 13 18 38.0 -0.4**
SNR=107
SOHO SOHO 2.34 181 *e*Pn **Pn 13 18 37.1 -1.4**
AJN Ajban 2.40 217 *e*P **Pb 13 18 42.5 -0.8**
SNR=58
AJN Ajban 2.40 217 P **Pb 13 18 42.4 -0.8**
SNR=25
AJN S **Sg 13 19 15.3 -1.9**
ALNE Al Ain 2.54 198 *e*P **Pb 13 18 44.2 -1.4**
SNR=44
ALNE Al Ain 2.54 198 *e*Pn **Pb 13 18 44.6 -1.0**
HOQ Hoqain 2.97 167 P **Pn 13 18 46.4 -0.7**
SNR=41
HOQ S **Sn 13 19 25.2 +2.5**
KBAM BAM 3.11 32 *e*Pn **Pn 13 18 51.4 +2.3**
ARQ Araqi 3.14 181 P **Pn 13 18 51.8 +2.4**
SNR=252
NGRK Negar Kerman 3.15 2 *e*Pn **Pn 13 18 51.2 +1.4**
NGRK *e* 13 19 44.1
LMD1 Lamerd 3.17 286 *e*Pn **Pn 13 18 51.4 +1.5**
LMD1 *e* 13 19 58.4
BIDO Bidbid 3.27 154 P **Pn 13 18 51.7 +0.5**
SNR=19
BIDO Bidbid 3.27 154 *e*Pn **Pn 13 18 51.4 +0.2**
JHRM Jahrom 3.34 308 *e*Pn **Pn 13 18 53.2 +0.9**
JHRM *e* 13 20 01.0
CHMN Cheshme madani 3.46 14 *e*Pn **Pn 13 18 56.0 +1.8**
CHMN *e* 13 19 56.3
KRBR Kerman 3.48 2 *e*Pn **Pn 13 18 55.9 +1.5**
KRBR Kerman 3.48 2 *e*Pn **Pn 13 18 55.9 +1.5**
TVBK TV Kerman 3.49 2 *e*Pn **Pn 13 18 56.2 +1.7**
TVBK *e* 13 20 08.5
CHBR Chabahar 3.61 103 *e*Pn **Pn 13 18 57.1 +1.2**
CHBR Chabahar 3.61 103 *e*Pn **Pn 13 18 57.1 +1.2**
GHIR Ghir-Karzin 3.67 300 *e*Pn **Pn 13 18 58.3 +1.5**
GHIR Ghir-Karzin 3.67 300 *e*Pn **Pn 13 18 58.3 +1.5**
JRN Qarnain Island 3.71 246 *e*Pn **Pn 13 18 58.6 +1.4**
QIR1 Qir 3.72 303 *e*Pn **Pn 13 18 59.1 +1.7**
QIR1 *e* 13 20 28.5
WSAR Wadi Sarin 3.73 150 Pn **Pn 13 18 59.4 +1.8**
comp=N,114nm,0.3s,baz=330,slow=9.3,SNR=782
WSAR Sn **Sn 13 19 40.2 -1.3**
comp=N,36nm,0.3s,baz=47,slow=21,SNR=1.7
WSAR LR LR 13 21 02.3
comp=N,539nm,19.2s,baz=355,slow=49
KHGB Koh Gabri 3.87 359 *e*Pn **Pn 13 19 01.4 +1.7**
KHGB *e* 13 19 21.2
UMZA Um Al Zommool 3.98 199 *e*Pn **Pn 13 19 02.4 +1.5**
SHI Shiraz 4.78 312 *e*Pn **Pn 13 19 12.1 0.0**
SZD1 Zahaedan-tmp 4.82 51 *e*Pn **Pn 13 19 15.1 +2.5**
ZHSF Zahedan 4.83 49 *e*Pn **Pn 13 19 14.6 +1.7**
ZHSF Zahedan 4.83 49 *e*Pn **Pn 13 19 14.6 +1.7**
SLWR Sila 5.04 243 *e*Pn **Pn 13 19 15.1 -0.5**
IMEH Mehriz 5.18 341 *e*Pn **Pn 13 19 18.7 +1.0**
AHBU AHRAM 5.26 298 *e*Pn **Pn 13 19 20.1 +1.6**
NHDN Nehbandan 5.75 31 *e*Pn **Pn 13 19 27.5 +2.1**
BSRN Basiran 5.89 22 *e*Pn **Pn 13 19 29.1 +1.8**
BSRN Basiran 5.89 22 *e*Pn **Pn 13 19 29.1 +1.8**
ISAD Sadrabad 5.97 336 *e*Pn **Pn 13 19 30.1 +1.5**
ICHK Chekchek 6.04 342 *e*Pn **Pn 13 19 30.5 +1.0**
IKOO Kooshah 6.28 19 *e*Pn **Pn 13 19 34.2 +1.4**
KLNJ Kolanjah 6.29 317 *e*Pn **Pn 13 19 32.5 -0.5**
IRAM Rameshe h 6.45 326 *e*Pn **Pn 13 19 35.4 +0.3**
TPRV Parvadeh(Tabas 6.52 1 *e*Pn **Pn 13 19 37.8 +1.9**
ITEG Tejag 6.66 16 *e*Pn **Pn 13 19 40.9 +3.0**
IDAH Dahanechah 6.85 24 *e*Pn **Pn 13 19 43.9 +3.2**
IGAR Gharneh 7.10 327 *e*Pn **Pn 13 19 44.2 +0.1**
TKDS Koohdasht(Taba 7.12 4 *e*Pn **Pn 13 19 47.2 +3.0**
ANAR Anarak 7.12 340 *e*Pn **Pn 13 19 44.7 +0.4**
TABS Tabas 7.15 4 *e*Pn **Pn 13 19 46.6 +2.0**
TABS Tabas 7.15 4 *e*Pn **Pn 13 19 46.6 +2.0**
IMON Monand 7.20 21 *e*Pn **Pn 13 19 47.9 +2.5**
AFRZ Afriz 7.23 16 *e*Pn **Pn 13 19 47.8 +2.1**
IZEF Zefreh 7.38 331 *e*Pn **Pn 13 19 47.1 -0.8**
TNSJ Nastanj 7.45 0 *e*Pn **Pn 13 19 50.2 +1.5**
IPIR Pirpir 7.92 323 *e*Pn **Pn 13 19 54.8 -0.5**
IKLH Kolahrood 8.08 329 *e*Pn **Pn 13 19 57.2 -0.3**
KRSH Karshahi 8.39 334 *e*Pn **Pn 13 20 02.4 +0.7**
QAM Ghamsar 8.51 330 *e*Pn **Pn 13 20 03.0 -0.3**
KHMZ Khomeyn 9.23 323 IAML 13 21 58.3
comp=E,89nm,0.8s
IANJ Anjilo 9.24 346 *e*Pn **Pn 13 20 14.3 +0.9**
HRA Herat 9.26 30 Pn **Pn 13 20 14.4 +0.7**
IQOM Qom 9.58 332 *e*Pn **Pn 13 20 19.8 +1.6**
ISHM Shahmirzad 9.71 344 *e*Pn **Pn 13 20 20.8 +0.9**
IDMV Damavand 9.87 338 *e*Pn **Pn 13 20 22.4 +0.4**
SBZV Sabzevar 9.91 5 *e*Pn **Pn 13 20 25.6 +3.0**
IKMR Kamar-syah 9.98 317 *e*Pn **Pn 13 20 20.7 -2.6**
IALA Alasht 10.09 342 *e*Pn **Pn 13 20 27.4 +2.2**
IGLO Ghaloghah 10.26 347 *e*Pn **Pn 13 20 31.2 +3.9**
IDOB Doab 10.29 317 *e*Pn **Pn 13 20 25.2 -2.6**
IKFM Kafar-mosalman 10.32 315 *e*Pn **Pn 13 20 25.5 -2.5**
HSAM Samen 10.33 320 *e*Pn **Pn 13 20 27.2 -1.2**
IPRN Peran 10.38 341 *e*Pn **Pn 13 20 30.6 +1.7**
RAYN Ar Rayn 10.48 256 P **Pn 13 20 27.5 -2.8**
RAYN Ar Rayn 10.48 256 Pn **Pn 13 20 27.5 -2.8**
IRAZ Razeghan 10.56 329 *e*Pn **Pn 13 20 30.1 -1.4**
IKOM Komasi 10.96 317 *e*Pn **Pn 13 20 34.4 -2.5**
QABG Abgarm-Qazvin 10.97 329 *e*Pn **Pn 13 20 34.9 -2.3**
IALM Almabolaq 11.05 321 *e*Pn **Pn 13 20 37.2 -1.0**
HSRG Sareghieh 11.27 323 *e*Pn **Pn 13 20 39.5 -1.7**
KCHF Cheshme Sefid, 11.32 316 *e*Pn **Pn 13 20 38.7 -3.1**
KER Kermanshah 11.33 316 *e*Pn **Pn 13 20 40.1 -1.9**
GEYT Alibeck 11.48 6 Pn **Pn 13 20 44.3 +0.4**
comp=E,0.2nm,0.3s,baz=201,slow=20,SNR=2.6
GEYT LR LR 13 25 17.9
comp=E,112nm,19.5s,baz=30,slow=38
GEYT Alibeck 11.48 6 Pn **Pn 13 20 42.1 -1.8**

GYA0B ALIBECK ARRAY 11.48 6 Pn **Pn 13 20 46.1 +2.2**
ASHT Ashkhabad 11.52 7 P **Pn 13 20 46.4 +2.0**
ASHT Ashkhabad 11.52 7 Pn **Pn 13 20 46.4 +2.0**
IVIS Veis 11.60 316 *e*Pn **Pn 13 20 43.3 -2.3**
IGHG Ghaleghazi 11.65 315 *e*Pn **Pn 13 20 44.1 -2.3**
QSDN Sirdan 11.81 329 *e*Pn **Pn 13 20 49.4 +0.7**
IDHR Dehrash 12.00 315 *e*Pn **Pn 13 20 48.4 -2.8**
KBL Kabul 13.39 50 P **Pn 13 21 12.4 +2.1**
KBL Kabul 13.39 50 Pn **Pn 13 21 12.3 +2.1**
SOCY Socotra 14.44 190 Pn **Pn 13 21 20.8 -3.7**
THW Thamme Wali 14.59 61 P **Pn 13 21 24.7 -1.8**
CEP Cherat 15.12 57 P **Pn 13 21 33.6 -0.2**
CUKT Cukurca 15.37 317 *e*P **Pn 13 21 33.2 -3.7**
NIL Nilore 16.08 60 P **Pn 13 21 45.6 -0.6**
NIL pmax pmax
comp=Z,25nm,0.9s
NIL Nilore 16.08 60 Pn **Pn 13 21 45.6 -0.6**
CHGR Chuyangaron 16.09 38 **Pn 13 21 45.5 -0.7**
GEVA Gevas 16.39 319 **Pn 13 21 46.9 -3.4**
VANB Van 16.40 321 *e*P **Pn 13 21 50.2 0.0**
AKDM Akdamar-Van 16.45 319 *e*P **Pn 13 21 49.3 -1.7**
CLDR Caldiran 16.49 323 *e*P **Pn 13 21 51.1 -0.4**
GNI Garni 16.82 327 Pn **Pn 13 21 54.5 -1.1**
comp=Z,1.4nm,0.3s,baz=229,slow=9.2,SNR=2.0
GNI Garni 16.82 327 *e*P **P 13 21 57.5 -0.3**
GNI Garni 16.82 327⇓ *e*P **P 13 21 57.4 -0.3**
GNI pmax pmax
comp=Z,54nm,0.8s
GNI Garni 16.82 327 Pn **Pn 13 21 54.6 -1.0**
GNI IAmb IAmb 13 22 06.0
comp=Z,48nm,0.8s
GAR Garm 16.97 39 Pn **Pn 13 21 56.1 -1.5**
GAR IAmb IAmb 13 22 02.3
comp=Z,97nm,1.5s
MARD Mardin 17.20 313 Pn **Pn 13 21 58.4 -2.0**
MARD IAmb IAmb 13 22 05.5
comp=Z,95nm,0.8s
AGRB Hanur-Agry 17.30 322 *e*P **P 13 22 02.5 -0.6**
MAZI Mazidag 17.50 313 *e*P **Pn 13 22 02.9 -1.2**
MAK Makhachkala 18.03 338 *e*P **Pn 13 22 07.0 -3.5**
MAK *e*S **Sn 13 25 27.5 -4.0**
MAK pmax pmax
comp=Z,342nm,1.3s
MAK MLR MLR
comp=Z,264nm,17.0s
BNGB Bingl 18.26 317 *e*P **P 13 22 17.5 +3.9**
SENK Senkaya-Erzuru 18.35 323 *e*P **P 13 22 16.4 +1.7**
URFA Urfa 18.58 310 *e*P **P 13 22 17.2 0.0**
YEDI Yedisu-Bingol 18.62 318 *e*P **P 13 22 16.6 -1.0**
SVRC Sivrice-ELAZID 18.76 313 *e*P **P 13 22 19.1 -0.1**
PTK Pertek 19.00 315 *e*P **P 13 22 22.1 +0.2**
IUG Iuzhnay 19.12 32 *e*P **P 13 22 23.5 +0.3**
comp=Z,5.0nm,0.7s,baz=32
IUG Iuzhnay 19.12 32 *e*P **P 13 22 23.4 +0.3**
IUG pmax pmax
comp=Z,5.0nm,0.7s
ZEI Tsey 19.29 331 *e*P **Pn 13 22 25.7 -0.3**
ZEI pmax pmax
comp=Z,19nm,0.6s
MALT Malatya 19.30 312 *e*P **P 13 22 25.5 +0.4**
EIL Elat 19.35 284 P **P 13 22 25.9 +0.3**
comp=Z,1.9nm,0.3s,baz=115,slow=3.4,SNR=14
MMAI Mount Meron Ar 19.50 295 P **P 13 22 27.1 -0.1**
comp=Z,2.6nm,0.3s,baz=105,slow=16,SNR=9.3
GAZ Gaziantep 19.57 308 P **P 13 22 27.1 -0.9**
ATD Arta Tunnel 19.73 224 P **Pn 13 22 31.9 +0.7**
comp=Z,2.2nm,0.3s,baz=19,slow=12,SNR=20
ARPR Arapgir-MALATY 19.79 314 *e*P **Pn 13 22 33.7 +1.7**
TAHT Tahtakopru-Hat 19.97 305 *e*P **P 13 22 30.6 -1.7**
KK07 Karatay Array 20.07 31 P **P 13 22 32.0 -1.4**
KK31 Karatay Array 20.09 31 P **P 13 22 34.0 +0.5**
KK31 pmax pmax
comp=Z,24nm,1.3s
KK31 Karatay Array 20.09 31 **P 13 22 34.0 +0.5**
KKAR Karatay Array 20.09 31 P **P 13 22 32.5 -1.1**
KKAR Karatay Array 20.09 31 **P 13 22 30.7 -2.9**
KKAR Karatay Array 20.09 31 P **P 13 22 32.5 -1.1**
DZA Taraz 20.31 33 *e*P **P 13 22 36.3 +0.3**
baz=32
DZA Taraz 20.31 33 *e*P **P 13 22 36.3 +0.3**
KBZ Khabaz 20.48 331 P **P 13 22 38.6 +0.9**
comp=Z,11nm,0.8s,baz=135,slow=9.2,SNR=13
KBZ Khabaz 20.48 331 *de*P **Pn 13 22 39.2 -0.7**
KBZ pmax pmax
comp=Z,16nm,0.9s
KRTS Karatas 20.65 304 *e*P **Pn 13 22 41.9 -0.1**
KOZT Kozan 20.70 307 *e*P **Pn 13 22 41.9 -0.6**
SARI SarD1z-Kayseri 20.71 310 *e*P **Pn 13 22 42.4 -0.5**
KVAR Kislovodsk Arr 20.75 331 P **P 13 22 41.6 +0.8**
comp=Z,7.0nm,0.5s,baz=83,slow=16,SNR=3.1
KIV Kislovodsk 20.75 331 *e*P **Pn 13 22 42.1 -1.1**
KIV pmax pmax
comp=Z,193nm,0.9s
KIV MLR MLR
comp=Z,93nm,14.0s
KIV Kislovodsk 20.75 331 **P 13 22 38.0 -2.8**
KIV IAmb IAmb 13 22 48.6
comp=Z,53nm,0.7s
KSH Kashi 20.75 46 *e*P **P 13 22 34.8 -6.2**
KSH pmax pmax
comp=Z,41nm,0.8s
KSH pmax pmax
comp=Z,170nm,4.2s
AML Almayashu 20.99 38 P **P 13 22 43.6 -0.1**
SNR=58
SVSK Karacayir 21.11 314 *e*P **P 13 22 45.4 +0.8**
BNN Bunyan 21.32 310 *e*P **P 13 22 47.9 +0.9**
EKS2 Erkin-Say 21.39 37 P **P 13 22 48.6 +0.8**
SNR=51
GOF Gofitskoye 21.49 333⇑ *e*P **P 13 22 48.4 -0.2**
GOF pmax pmax
comp=Z,54nm,0.7s
UCH Uchtor 21.51 39 P **P 13 22 49.8 +0.4**
SNR=7.9
TOKT Tokat 21.62 315 *e*P **P 13 22 51.8 +1.6**
TOKA Tokat 21.66 315 P **P 13 22 49.0 -1.6**
TOKA IAmb IAmb 13 22 56.5
comp=Z,26nm,0.9s
CSS Mathiatis 21.67 299 *e*P **P 13 22 52.4 +1.7**
CSS Mathiatis 21.67 299 P **P 13 22 50.4 -0.3**
CSS IAmb IAmb 13 22 57.6
comp=Z,46nm,0.8s
AAK Ala-Archa 21.77 38 P **P 13 22 52.4 +0.5**
comp=Z,13nm,0.6s,baz=215,slow=5.9,SNR=56
AAK Ala-Archa 21.77 38 *d* P **P 13 22 52.6 +0.7**
SNR=21
AAK Ala-Archa 21.77 38 *d* P **P 13 22 52.6 +0.7**
AAK pmax pmax
comp=Z,102nm,1.3s
IKL Isikli 21.79 302 *e*P **P 13 22 51.8 -0.2**
KEBE Keben-Mersin 21.84 303 *e*P **P 13 22 53.1 +0.5**
CHMS Chumysh 22.15 37 P **P 13 22 57.6 +1.8**
SNR=6.8
BERE Bereket-Mersin 22.18 302 *e*P **P 13 22 54.9 -1.5**
TEKE Tekeli-Mersin 22.20 301 *e*P **P 13 22 56.6 +0.3**
YESY Yesilyurt 22.32 306 *e*P **P 13 22 58.2 +0.4**
KVT Kavak 22.36 316 *e*P **P 13 22 59.3 +1.2**
SGDS Sogindy 22.39 36 *e*P **P 13 22 58.8 +0.3**
comp=Z,6.3nm,1.2s,baz=36
SGDS Sogindy 22.39 36 *e*P **P 13 22 58.7 +0.3**
SGDS pmax pmax
comp=Z,6.0nm,1.2s
ULHL Ulahol 22.51 41 P **P 13 23 00.9 +1.1**
SNR=7.5
TKM2 Tokmak 2 22.56 39 P **P 13 23 21.5 +21**
SNR=6.6
SULT Sultanhani-AKS 22.66 307 *e*P **P 13 23 02.9 +1.5**
YAYX Yaylak 22.76 309 *e*P **P 13 23 02.0 -0.5**
CORM Corum 22.79 312 *e*P **P 13 23 03.9 +1.1**
GAZI Gazipasa 22.84 301 *e*P **P 13 23 04.5 +1.3**
ABKAR Akbulak array 22.88 6 P **P 13 23 02.9 -0.5**
ABKAR Akbulak array 22.88 6 P **P 13 23 02.9 -0.5**
SERE Serefiikochisa 22.94 309 *e*P **P 13 23 05.5 +1.2**
BTLS Baital 23.22 33 *e*P **P 13 23 07.3 +0.3**
comp=Z,4.3nm,1.0s,baz=32
BTLS Baital 23.22 33 *e*P **P 13 23 07.3 +0.3**
BTLS pmax pmax
comp=Z,4.0nm,1.0s
BR131 Keskin Array S 23.24 310 P **P 13 23 06.3 -1.1**
BR131 pmax pmax
comp=Z,38nm,0.9s
BR131 Keskin Array S 23.24 310 P **P 13 23 06.3 -1.1**
BR131 IAmb IAmb 13 23 09.9
comp=Z,38nm,0.9s

BRTR Keskin Array B 23.24 310 P **P 13 23 07.5 +0.1**
comp=Z,16nm,0.7s,baz=134,slow=10,SNR=66
BRTR PcP **PcP 13 26 56.0 +0.8**
comp=Z,0.8nm,0.7s,baz=207,slow=0.3,SNR=3.2
BRTR LR LR 13 32 57.1
comp=Z,63nm,21.0s,baz=123,slow=39
BRTR Keskin Array B 23.24 310 *e*P **P 13 23 07.5 +0.1**
CHBY Cihanbeyli 23.26 307 *e*P **P 13 23 08.9 +1.2**
KONT Konya--Tatoy 23.40 305 *e*P **P 13 23 09.3 +0.4**
TNSS Tian-Shan 23.40 40 *e*P **P 13 23 10.1 +0.7**
baz=40
TNSS Tian-Shan 23.40 40 *e*P **P 13 23 10.0 +0.7**
LADK Ladik-KONYA 23.49 306 *e*P **P 13 23 10.9 +1.0**
AAA Alma-Ata 23.49 40 *e*P **P 13 23 10.1 +0.2**
baz=39
AAA Alma-Ata 23.49 40 *e*P **P 13 23 10.0 +0.2**
PYUN Piuthan 23.50 80 *e*P **P 13 23 12.9 +2.6**
comp=Z,26nm,0.6s
MDOK Medeo 23.54 40 *e*P **P 13 23 10.3 -0.1**
baz=40
MDOK Medeo 23.54 40 *e*P **P 13 23 10.3 -0.1**
SEYD Seydisehir-KON 23.59 304 *e*P **P 13 23 11.9 +1.0**
KUU Kurty 23.61 38 *e*P **P 13 23 11.1 +0.2**
comp=Z,10nm,0.8s,baz=37
KUU Kurty 23.61 38 *e*P **P 13 23 11.1 +0.2**
KUU pmax pmax
comp=Z,10.0nm,0.8s
ANTO Ankara 23.88 310⇓ P **P 13 23 16.9 +3.2**
ANTO Ankara 23.88 310 P **P 13 23 12.6 -1.1**
ANTO Ankara 23.88 310 P **P 13 23 12.6 -1.1**
ANN Anapa 23.90 325 *e*P **P 13 23 16.3 +2.6**
ANN *e*S **S 13 27 33.3 +3.5**
ANN pmax pmax
comp=Z,124nm,1.8s
LOD Lodumlu 23.91 310 *e*P P 13 23 00.1 -14
AKTO Aktyubinsk 23.93 2 P **P 13 23 13.9 0.0**
comp=Z,20nm,0.7s,baz=185,slow=9.9,SNR=26
AKTO Aktyubinsk 23.93 2 P **P 13 23 14.0 0.0**
KOLN Koldanda 24.06 81 *e*P **P 13 23 17.3 +1.7**
comp=Z,51nm,0.9s
KIZT Kizilcal 24.11 307 *e*P **P 13 23 15.5 -0.4**
DANN Dangsing 24.17 79 *e*P **P 13 23 18.8 +2.0**
comp=Z,94nm,0.8s
SATY Saty 24.27 42 *e*P **P 13 23 16.9 -0.5**
comp=Z,3.6nm,0.9s,baz=41
SATY Saty 24.27 42 *e*P **P 13 23 16.8 -0.5**
SATY pmax pmax
comp=Z,4.0nm,0.9s
KPKS Kokpek 24.67 41 *e*P **P 13 23 20.8 -0.3**
baz=41
KPKS Kokpek 24.67 41 *e*P **P 13 23 20.7 -0.3**
ISP Isparta 24.71 304 P **P 13 23 20.3 -1.1**
ISP pmax pmax
comp=Z,36nm,0.6s
ISP Isparta 24.71 304 P **P 13 23 20.3 -1.1**
ELL Elmali 24.84 301 P **P 13 23 22.4 -0.2**
ELL pmax pmax
comp=Z,115nm,0.7s
ELL Elmali 24.84 301 P **P 13 23 22.4 -0.2**
AKAS Kas 24.94 300 P **P 13 23 23.1 -0.4**
AKAS IAmb IAmb 13 23 30.6
comp=Z,19nm,0.8s
SHLS Shalkode 24.96 42 *e*P **P 13 23 26.5 +2.9**
baz=43
SHLS Shalkode 24.96 42 *e*P **P 13 23 26.5 +2.9**
GKN Gorkha 24.96 80 *e*P **P 13 23 25.1 +1.3**
comp=Z,41nm,1.0s
MDUB Mudurnu 25.25 310 P **P 13 23 25.6 -0.6**
DMN Daman 25.40 81 *e*P **P 13 23 29.4 +1.5**
TDK Taldyqorghan 25.45 38 *e*P **P 13 23 28.0 0.0**
baz=38
TDK Taldyqorghan 25.45 38 *e*P **P 13 23 27.9 0.0**
KKN Kakani 25.54 81 *e*P **P 13 23 30.9 +1.8**
PKIN Phulchoki 25.66 81 *e*P **P 13 23 31.6 +1.3**
comp=Z,26nm,0.7s
PKI Pulchoki 25.67 81 *e*P **P 13 23 31.9 +1.4**
GUN Gumba 26.07 80 *e*P **P 13 23 35.4 +1.4**
comp=Z,49nm,0.9s
MANT Manisa 26.39 304 P **P 13 23 36.2 -0.6**
KARP Karpathos 26.71 297 P **P 13 23 39.5 +0.1**
BELG Belogornoye 26.74 348⇑ *e*P **P 13 23 41.3 +1.9**
BELG pmax pmax
comp=Z,6.0nm,0.9s
VRH Novokhopyorsk 27.15 339 *e*P **P 13 23 43.8 +0.7**
VRH pmax pmax
comp=Z,80nm,0.8s
VSR Storozhevoye 28.03 336 *e*P **P 13 23 53.1 +2.1**
VSR pmax pmax
comp=Z,10.0nm,0.9s
BVAR Borovoye Array 28.45 18 P **P 13 23 54.8 +0.1**
comp=Z,0.5nm,0.4s,baz=191,slow=2.9,SNR=5.2
BVAR PcP **PcP 13 27 07.2 +0.6**
comp=Z,0.4nm,0.5s,baz=172,slow=2.2,SNR=2.3
BRVK Borovoye 28.45 17⇑ *e*P **P 13 23 57.2 +2.5**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 28.45 17 P **P 13 23 55.5 +0.8**
IDI Anoyia 28.49 296 P **P 13 23 56.1 +0.7**
comp=Z,6.1nm,0.3s,baz=290,slow=15,SNR=17
IDI Anoyia 28.49 296 P **P 13 23 55.9 +0.5**
MAKZ Makanchi 28.53 38 P **P 13 23 56.1 +0.5**
MAKZ pmax pmax
comp=Z,10.0nm,1.4s
MAKZ Makanchi 28.53 38 P **P 13 23 56.1 +0.5**
MK31 Makanchi Array 28.70 38 *c i* P **P 13 23 57.8 +0.7**
MK31 Makanchi Array 28.70 38 P **P 13 23 57.2 +0.1**
MKAR Makanchi Array 28.70 38 P **P 13 23 58.0 +0.9**
comp=Z,1.7nm,0.6s,baz=222,slow=8.0,SNR=21
MKAR PcP **PcP 13 27 07.2 -0.2**
comp=Z,0.8nm,0.8s,baz=212,slow=2.1,SNR=2.5
MKAR Makanchi Array 28.70 38 P **P 13 23 58.0 +0.9**
TIRR Tirgusor 28.91 316 P **P 13 23 57.6 -1.3**
TIRR pmax pmax
comp=Z,34nm,1.2s
TIRR Tirgusor 28.91 316 P **P 13 23 57.6 -1.3**
TIRR IAmb IAmb 13 24 15.4
comp=Z,34nm,1.2s
ALN Alexandroupoli 29.02 307 P **P 13 23 59.5 -0.5**
ALN pmax pmax
comp=Z,16nm,1.1s
ALN Alexandroupoli 29.02 307 P **P 13 23 59.5 -0.5**
ALN IAmb IAmb 13 24 00.7
comp=Z,16nm,1.1s
TPGR Topolog 29.10 316⇑ P **P 13 23 59.8 -0.9**
LPSR Galich'ya Gora 29.26 338 *e*P **P 13 24 01.9 0.0**
LPSR pmax pmax
comp=Z,20nm,0.7s
KURBB Kurchatov Arra 29.37 29 P **P 13 24 03.4 +0.5**
comp=Z,1.8nm,0.8s,baz=228,slow=8.5,SNR=20
KURBB PcP **PcP 13 27 09.4 +0.5**
comp=Z,0.4nm,0.7s,baz=233,slow=2.9,SNR=2.3
CFR Carcaliu 29.43 317⇑ P **P 13 24 02.5 -1.1**
KURK Kurchatov 29.47 29 *de*P **P 13 24 05.6 +1.7**
KURK pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 29.47 29 P **P 13 24 04.9 +1.0**
KURK Kurchatov 29.47 29 **PcP 13 27 09.4 +0.2**
PALK Pallekele 29.85 125 P **P 13 24 08.1 +0.5**
PALK pmax pmax
comp=Z,43nm,1.5s
PALK Pallekele 29.85 125 P **P 13 24 08.1 +0.5**
PALK IAmb IAmb 13 24 36.9
comp=Z,43nm,1.5s
ARU Arti 29.95 2 P **P 13 24 08.2 +0.2**
comp=Z,0.4nm,0.3s,baz=209,slow=9.6,SNR=3.1
ARU Arti 29.95 2 *c i* P **P 13 24 08.8 +0.8**
ARU 13 25 05.6
ARU S **S 13 29 11.1 +5.7**
ARU SS **SnSn 13 30 44.1 +7.5**
ARU pmax pmax
comp=Z,5.0nm,1.1s
ARU Arti 29.95 2 P **P 13 24 08.0 0.0**
WMQ Urumqi 30.51 47 *e*P **P 13 24 14.6 +1.3**
WMQ pP sP 13 24 20.3 +2.4
WMQ pmax pmax
comp=Z,24nm,0.7s
WMQ pmax pmax
comp=Z,110nm,4.3s
WMQ Urumqi 30.51 47 P **P 13 24 12.0 -1.3**
WMQ pmax pmax
comp=Z,10.0nm,0.8s
WMQ Urumqi 30.51 47 P **P 13 24 12.0 -1.3**
WMQ IAmb IAmb 13 24 17.5
comp=Z,10nm,0.8s
LSA Lhasa 30.59 76 P **P 13 24 14.2 -0.4**

LSA pmax pmax
comp=Z,4.0nm,0.6s
LSA Lhasa 30.59 76 P **P 13 24 14.2 -0.4**
VRI Vrincioaia 30.63 317 ⇑P **P 13 24 13.8 -0.4**
PLOR Plostina 30.68 317 ⇑P **P 13 24 15.5 +0.9**
NEHR Nehoiu 30.69 316 ⇓P **P 13 24 16.1 +1.3**
SORM Soroca 30.88 322 ⇑P **P 13 24 14.6 -1.6**
MLR Muntele Rosu 30.94 316 ⇑P **P 13 24 18.2 +1.1**
MLR Muntele Rosu 30.94 316 P **P 13 24 17.1 0.0**
MLR pmax pmax
comp=Z,18nm,1.1s
MLR Muntele Rosu 30.94 316 P **P 13 24 17.1 0.0**
MLR IAmb IAmb 13 24 23.1
comp=Z,18nm,1.1s
TESR Tescani 31.00 318 ⇑P **P 13 24 17.4 0.0**
ITM Ithomi 31.16 299 P **P 13 24 18.0 -1.0**
AGG Agios Georgios 31.22 302 P **P 13 24 18.4 -1.1**
AGG pmax pmax
comp=Z,29nm,1.4s
AGG Agios Georgios 31.22 302 P **P 13 24 18.4 -1.1**
AGG IAmb IAmb 13 24 32.3
comp=Z,29nm,1.4s
VOIR 31.48 315 ⇑P **P 13 24 22.1 +0.4**
BIZ Bicaz 31.54 318 ⇑P **P 13 24 21.9 -0.2**
SHL Shillong 31.67 84 P **P 13 24 22.6 -1.2**
SHL pmax pmax
comp=Z,5.0nm,0.7s
SHL Shillong 31.67 84 P **P 13 24 22.6 -1.2**
ARR Arges 31.71 315 ⇑P **P 13 24 23.8 0.0**
AKASG Malin Array Be 31.95 326 P **P 13 24 24.7 -1.0**
comp=Z,6.0nm,0.4s,baz=133,slow=8.4,SNR=41
AKASG PcP **PcP 13 27 15.6 -0.1**
comp=Z,2.2nm,0.7s,baz=95,slow=2.4,SNR=6.4
AKASG Malin Array Be 31.95 326 P **P 13 24 23.9 -1.8**
AKASG **PcP 13 27 15.4 -0.3**
AKBB Malin Array Si 31.95 326 *ce*P **P 13 24 24.6 -1.1**
AKBB pmax pmax
comp=Z,24nm,0.8s
AKBB Malin Array Si 31.95 326 P **P 13 24 24.4 -1.3**
AKBB IAmb IAmb 13 24 28.1
comp=Z,23nm,0.8s
OBN Obninsk 32.12 338 *e*P **P 13 24 27.7 +0.5**
OBN *e* 13 25 33.5
OBN *e*PPP PPP 13 25 43.0
OBN *e* 13 27 16.2
OBN pmax pmax
comp=Z,27nm,0.7s
LOT Lotru 32.30 314 ⇑P **P 13 24 29.4 +0.3**
MOS Moscow 32.31 340 *e*P **P 13 24 31.5 +2.7**
MOS *e* 13 25 41.3
MOS pmax pmax
comp=Z,32nm,0.7s
BURAR Bucovina Array 32.39 319 ⇑P **P 13 24 29.7 -0.1**
BURAR Bucovina Array 32.39 319 P **P 13 24 29.1 -0.7**
BUR08 Bucovina Ar. S 32.42 319 P **P 13 24 29.4 -0.6**
KIRV Kirov 32.47 353 *de*P **P 13 24 32.9 +2.7**
GZR Gura Zlata 32.91 314 ⇑P **P 13 24 32.8 -1.6**
HERR Herculane 32.95 313 ⇓P **P 13 24 34.6 0.0**
KMBO Kilima Mbogo 33.19 217 P **P 13 24 38.3 +1.1**
comp=Z,1.4nm,0.4s,baz=50,slow=17,SNR=3.0
KMBO LR LR 13 39 08.7
comp=Z,50nm,20.7s,baz=90,slow=38
KMBO Kilima Mbogo 33.19 217 P **P 13 24 36.4 -0.8**
KMBO pmax pmax
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 33.19 217 P **P 13 24 36.4 -0.8**
MDVR Moldovita 33.38 312 ⇑P **P 13 24 38.2 -0.2**
DRGR 33.53 316 ⇓P **P 13 24 39.8 +0.1**
BZS Buzias 33.75 314 ⇑P **P 13 24 41.3 -0.2**
SIRR Siria 33.98 315 ⇑P **P 13 24 44.4 +0.8**
PDG Podgorica 34.33 307 ⇑P **P 13 24 45.5 -1.1**
PDG Podgorica 34.33 307 P **P 13 24 45.4 -1.3**
PDG IAmb IAmb 13 25 05.7
comp=Z,11nm,1.1s
SCTE Santa Cesarea 34.36 303 P **P 13 24 44.8 -2.1**
ZAA0 Zalesovo Array 34.45 30 P **P 13 24 46.8 -0.8**
ZALV Zalesovo Beam 34.45 30 P **P 13 24 47.5 0.0**
comp=Z,4.1nm,0.4s,baz=239,slow=10.0,SNR=15
ZALV PcP **PcP 13 27 21.7 -1.0**
comp=Z,1.1nm,0.3s,baz=204,slow=3.2,SNR=4.1
ZALV Zalesovo Beam 34.45 30 P **P 13 24 46.9 -0.6**
UZH Uzhgorod 34.60 319 *e*P P 13 24 55.4 +6.5
UZH *e* 13 25 05.6
KWP Kalwaria Pacla 34.83 321 *e*P **P 13 24 50.5 -0.4**
KWP Kalwaria Pacla 34.83 321 P **P 13 24 50.5 -0.4**
KWP pmax pmax
comp=Z,16nm,1.2s
KWP Kalwaria Pacla 34.83 321 P **P 13 24 50.5 -0.4**
KWP IAmb IAmb 13 24 54.0
comp=Z,16nm,1.2s
TIP Timpagrande 35.51 301 ⇑P **P 13 24 56.7 -0.2**
TIP Timpagrande 35.51 301 P **P 13 24 56.8 -0.1**
TIP IAmb IAmb 13 24 58.8
comp=Z,22nm,1.4s
PSZ Piszkesteto 35.74 317 ⇑P **P 13 24 57.9 -1.0**
PSZ Piszkesteto 35.74 317 P **P 13 24 58.2 -0.6**
PSZ pmax pmax
comp=Z,10.0nm,1.0s
PSZ Piszkesteto 35.74 317 P **P 13 24 58.2 -0.6**
PSZ IAmb IAmb 13 25 02.6
comp=Z,9.8nm,1.0s
NACGM Naroch 35.78 331 *e* **P 13 25 01.0 +2.1**
IDID Didziasalis 36.06 331 *e*P **P 13 25 01.6 +0.2**
NIE Niedzica 36.13 319 *e*P **P 13 25 00.7 -1.4**
KLMR Klimovskoe 36.27 346 *e*P **P 13 25 01.3 -1.8**
KLMR pmax pmax
comp=Z,31nm,1.3s
KLMR Klimovskoe 36.27 346 *e*P **P 13 25 01.3 -1.8**
KLMR AMP 13 25 06.7
comp=Z,31nm,1.3s
IIGN Ignalina 36.31 331 *e*P **P 13 25 03.7 +0.2**
ISAL Salakas 36.50 331 *e*P **P 13 25 04.0 -1.1**
IZAR Zarasai 36.56 331 *e*P **P 13 25 04.5 -1.1**
SGRT San Giovanni R 36.72 305 P **P 13 25 06.5 -0.8**
SGRT IAmb IAmb 13 25 11.1
comp=Z,10nm,1.0s
OJC Ojcow 36.77 320 *e*P **P 13 25 06.5 -1.0**
OJC Ojcow 36.77 320 P **P 13 25 06.9 -0.6**
OJC pmax pmax
comp=Z,17nm,0.8s
OJC Ojcow 36.77 320 P **P 13 25 06.9 -0.6**
OJC IAmb IAmb 13 25 10.6
comp=Z,18nm,0.8s
SUW Suwalki 36.90 327 *e*P **P 13 25 07.7 -0.9**
SUW Suwalki 36.90 327 P **P 13 25 07.2 -1.3**
SUW pmax pmax
comp=Z,22nm,0.7s
SUW Suwalki 36.90 327 P **P 13 25 07.2 -1.3**
SUW IAmb IAmb 13 25 10.6
comp=Z,22nm,0.7s
PABE Paberze 37.41 330 *e*P **P 13 25 12.4 -0.4**
PAOL Paolisi 37.46 304 P **P 13 25 12.9 -0.6**
PAOL IAmb IAmb 13 25 17.2
comp=Z,15nm,1.1s
JAVC Velka Javorina 37.48 317 *e*P **P 13 25 14.9 +1.3**
KOGS Kog 37.55 313 *i*P **P 13 25 13.8 -0.4**
OKC Ostrava-Krasne 37.57 319 *e*P **P 13 25 14.2 -0.1**
OKC Ostrava-Krasne 37.57 319 *e*P **P 13 25 14.2 -0.1**
MORC Moravsky Berou 37.91 318 ⇓P **P 13 25 16.4 -0.8**
MORC Moravsky Berou 37.91 318 *e*P **P 13 25 16.6 -0.6**
MORC Moravsky Berou 37.91 318 P **P 13 25 16.7 -0.5**
MORC pmax pmax
comp=Z,8.0nm,0.8s
MORC Moravsky Berou 37.91 318 P **P 13 25 16.7 -0.5**
INTR Introdacqua 38.12 305 P **P 13 25 18.7 -0.4**
INTR IAmb IAmb 13 25 23.9
comp=Z,19nm,1.1s
GTA Gaotai 38.15 59 *e*P **P 13 25 20.8 +1.3**
GTA pP sP 13 25 26.0 +1.9
GTA sP pP 13 25 29.4 +6.6
GTA S **S 13 31 16.8 +4.1**
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,49nm,6.2s
GTA LR LR
comp=Z,230nm,16.0s
GTA LR LR
comp=Z,230nm,16.0s
GTA LR LR
comp=Z,290nm,15.3s
VSU Vasula 38.19 335 *e*P **P 13 25 18.9 -0.4**
ARSA Arzberg 38.27 314 *e*P **P 13 25 20.1 -0.2**
comp=Z,1.6nm,0.7s
CONA Conrad Observa 38.27 315 *e*P **P 13 25 19.6 -0.8**
comp=Z,2.0nm,0.6s
VRAC Vranov 38.30 317 ⇑P **P 13 25 18.9 -1.6**
VRAC Vranov 38.30 317 *e*P **P 13 25 19.9 -0.6**
KRUC Moravsky 38.33 317 *e*P **P 13 25 20.2 -0.5**
SOKA Soboth 38.42 313 *e*P **P 13 25 21.1 -0.5**
comp=Z,2.8nm,0.9s
KRLC Kraliky 38.48 318 *e*P **P 13 25 21.5 -0.5**
KRLC Kraliky 38.48 318 *e*P **P 13 25 21.5 -0.5**
AQU L'Aquila 38.54 305 P **P 13 25 22.4 -0.3**
AQU pmax pmax
comp=Z,22nm,1.0s
AQU L'Aquila 38.54 305 P **P 13 25 22.4 -0.3**
AQU IAmb IAmb 13 25 47.0
comp=Z,22nm,1.0s
GBAS Gorenja Brezov 38.61 311 *i*P **P 13 25 22.9 -0.2**
NRCA Norcia 38.84 306 P **P 13 25 24.9 -0.3**
NRCA IAmb IAmb 13 25 31.1
comp=Z,13nm,0.8s
JAVS Javornik 38.85 311 *i*P **P 13 25 24.6 -0.6**
DPC Dobruska-Polom 38.85 319 *e*P **P 13 25 24.9 -0.3**
DPC Dobruska-Polom 38.85 319 *e*P **P 13 25 24.9 -0.3**
TREC Trest 38.97 317 *e*P **P 13 25 28.2 +2.1**
TREC Trest 38.97 317 *e*P **P 13 25 28.2 +2.1**
OSTC Ostas 39.00 319 *e*P **P 13 25 26.3 -0.1**
CHVC Chvalec 39.10 319 *e*P **P 13 25 27.2 -0.1**
MOA Molln 39.27 314 *e*P **P 13 25 28.0 -0.6**
comp=Z,5.7nm,0.8s
MYKA Terra Mystica 39.33 312 *e*P **P 13 25 28.8 -0.5**
comp=Z,2.8nm,0.5s
PRED Cave del Predi 39.33 312 P **P 13 25 28.3 -0.9**
MURB Monte Urbino 39.34 307 P **P 13 25 29.1 -0.3**
MURB IAmb IAmb 13 25 43.1
comp=Z,15nm,0.9s
KBA Koelnbreinsper 39.64 313 *e*P **P 13 25 31.8 -0.2**
comp=Z,6.4nm,0.7s,SNR=5.8
CHTO Chiang Mai 39.69 92 P **P 13 25 33.3 +0.8**
CHTO pmax pmax
comp=Z,5.0nm,1.1s
CHTO Chiang Mai 39.69 92 P **P 13 25 33.3 +0.8**
ZOU Zoufplan 39.75 312 P **P 13 25 31.6 -1.4**
CMAR Chiang Mai Arr 39.80 93 P **P 13 25 33.9 +0.4**
comp=Z,0.8nm,0.3s,baz=306,slow=6.1,SNR=5.5
CMAR PcP **PcP 13 27 40.2 +0.6**
comp=Z,0.8nm,0.6s,baz=282,slow=4.2,SNR=4.2
STAL STALIGIAL 39.85 311 P **P 13 25 32.0 -1.5**
GEC2 GERESS Array S 39.93 316 P **P 13 25 33.3 -0.9**
GERES GERESS Array B 39.93 316 P **P 13 25 33.2 -1.0**
comp=Z,2.2nm,0.5s,baz=105,slow=7.1,SNR=39
GERES GERESS Array B 39.93 316 P **P 13 25 32.6 -1.7**
GERES GERESS Array B 39.93 316 P **P 13 25 32.6 -1.7**
PBCC Pribram 40.02 317 *e*P **P 13 25 34.4 -0.5**
CIMO Cimolais 40.05 311 P **P 13 25 33.9 -1.3**
KHC Kasperske Hory 40.10 316 *e*P **P 13 25 34.8 -0.8**
KHC Kasperske Hory 40.10 316 *e*P **P 13 25 34.8 -0.8**
KHC *ex* x 13 26 05.5
KHC Kasperske Hory 40.10 316 P **P 13 25 34.4 -1.1**
ABTA Abfaltersbach 40.11 312 *i*P **P 13 25 35.2 -0.5**
comp=Z,10nm,0.7s
OSSC Osservatorio P 40.30 307 P **P 13 25 35.2 -2.1**
TEOL Teolo 40.36 310 P **P 13 25 36.2 -1.6**
TEOL IAmb IAmb 13 25 40.8
comp=Z,15nm,0.8s
BRG Berggiesshubel 40.46 319 *e*P **P 13 25 38.1 -0.4**
comp=Z,5.5nm,1.1s
BRG Berggiesshubel 40.46 319 *e*P **P 13 25 38.1 -0.4**
BRG pmax pmax
comp=Z,6.0nm,1.1s
CTI Castel Tesino 40.52 311 P **P 13 25 37.6 -1.6**
CTI pmax pmax
comp=Z,15nm,0.8s
CTI Castel Tesino 40.52 311 P **P 13 25 37.6 -1.6**
CTI IAmb IAmb 13 25 41.9
comp=Z,15nm,0.8s
FIA1 FINESS Array S 40.53 338 P **P 13 25 38.3 -0.6**
FIA1 IAmb IAmb 13 25 42.1
comp=Z,15nm,0.9s
FINES FINESS Array B 40.53 338 P **P 13 25 38.4 -0.5**
comp=Z,9.5nm,0.7s,baz=135,slow=8.3,SNR=34
FINES FINESS Array B 40.53 338 *i*P **P 13 25 39.2 +0.3**
FINES pmax pmax
comp=Z,10.0nm,0.7s
FINES FINESS Array B 40.53 338 P **P 13 25 38.2 -0.7**
WTTA Wattenberg 40.82 313 *e*P **P 13 25 40.8 -0.9**
comp=Z,15nm,0.5s,SNR=8.3
WATA Walderalm 40.88 313 *e*P **P 13 25 40.9 -1.3**
comp=Z,11nm,0.8s,SNR=9.1
VLC Villacollemand 41.02 308 P **P 13 25 42.2 -1.1**
VLC IAmb IAmb 13 26 09.0
comp=Z,23nm,1.2s
SQTA Sankt Quirin 41.09 312 *e*P **P 13 25 42.8 -1.1**
comp=Z,23nm,0.4s,SNR=15
KEST Kesra 41.15 295 P **P 13 25 45.6 +1.1**
comp=Z,2.6nm,0.6s,baz=41,slow=1.9,SNR=4.7
KEST Kesra 41.15 295 P **P 13 25 43.2 -1.3**
LZH Lanzhou 41.16 65 *e*P **P 13 25 47.0 +2.3**
LZH pP sP 13 25 51.8 +2.5
LZH sP pP 13 25 54.1 +6.1
LZH pmax pmax
comp=Z,24nm,1.1s
LZH pmax pmax
comp=Z,92nm,5.2s
LZH LR LR
comp=Z,280nm,15.1s
LZH LR LR
comp=Z,260nm,15.1s
LZH LR LR
comp=Z,270nm,18.5s
CLL Collm 41.16 319 *i*P **P 13 25 44.2 -0.1**
comp=Z,21nm,1.7s
CLL Collm 41.16 319 P **P 13 25 41.9 -2.4**
CLL pmax pmax
comp=Z,19nm,1.5s
CLL Collm 41.16 319 P **P 13 25 41.9 -2.4**
CLL IAmb IAmb 13 25 48.8
comp=Z,19nm,1.5s
MOTA Moosalm 41.19 313 *e*P **P 13 25 43.2 -1.5**
comp=Z,11nm,0.6s,SNR=5.4
SALO Salr 41.20 310 P **P 13 25 43.6 -1.1**
VSL Villasalto 41.23 301 P **P 13 25 44.7 -0.3**
VSL IAmb IAmb 13 25 50.4
comp=Z,24nm,1.1s
FETA Feichten 41.36 312 *e*P **P 13 25 45.4 -0.8**
comp=Z,8.6nm,0.4s,SNR=13
CD2 Chengdu 41.37 72 P **P 13 25 47.4 +1.0**
CD2 S **S 13 31 59.1 -2.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,90nm,4.9s
CD2 LR LR
comp=Z,270nm,20.1s
CD2 LR LR
comp=Z,320nm,15.7s
CD2 LR LR
comp=Z,350nm,21.1s
RETA Reutte 41.45 313 *i*P **P 13 25 45.3 -1.5**
comp=Z,6.0nm,0.6s
MSSA Maissana 41.67 308 P **P 13 25 46.6 -2.0**
MSSA IAmb IAmb 13 26 02.3
comp=Z,27nm,1.1s
GRA1 Grafenberg Arr 41.73 316 P **P 13 25 47.5 -1.5**
GRA1 IAmb IAmb 13 25 52.0
comp=Z,15nm,0.8s
GRF Grafenberg Arr 41.73 316 P **P 13 25 47.5 -1.5**
GRF pmax pmax
comp=Z,15nm,0.8s
DAVA Damuels 41.98 312 *e*P **P 13 25 50.2 -1.1**
comp=Z,42nm,0.4s,SNR=22
TUE Stuetta 42.17 311 P **P 13 25 51.7 -1.1**
TUE IAmb IAmb 13 25 59.0
comp=Z,9.6nm,0.7s
RGN Rugen 42.20 324 P **P 13 25 50.7 -2.0**
BFO Black Forest 43.23 313 P **P 13 26 00.0 -1.3**
BFO pmax pmax
comp=Z,4.0nm,0.9s
BFO Black Forest 43.23 313 P **P 13 25 60.0 -1.3**
SLVN Son La 43.37 86 P **P 13 26 03.9 +1.1**
LVZ Lovozero 43.51 348 P **P 13 26 03.4 +0.2**
LVZ pmax pmax
comp=Z,57nm,1.3s
LVZ Lovozero 43.51 348 P **P 13 26 03.4 +0.2**
SENIN Lac Senin/Sane 43.55 310 P **P 13 26 02.5 -1.5**
SENIN IAmb IAmb 13 26 06.6
comp=Z,6.3nm,0.6s
BNI Bardonecchia 43.78 308 P **P 13 26 04.6 -1.2**
BNI pmax pmax
comp=Z,9.0nm,0.9s
BNI Bardonecchia 43.78 308 P **P 13 26 04.6 -1.2**
ECH Echery 43.98 313 P **P 13 26 05.6 -1.7**
ECH pmax pmax
comp=Z,7.0nm,0.9s
ECH Echery 43.98 313 P **P 13 26 05.5 -1.7**
SONM Songino Array 44.15 48 P **P 13 26 09.9 +1.1**
comp=Z,6.9nm,0.9s,baz=255,slow=8.7,SNR=36
SONM Songino Array 44.15 48 P **P 13 26 08.8 0.0**
SONM Songino Array 44.15 48 P **P 13 26 08.8 0.0**
ULN Ulaanbaatar 44.59 48 *d*P **P 13 26 13.2 +0.9**
ULN pmax pmax
comp=Z,10.0nm,1.3s
ULN Ulaanbaatar 44.59 48 P **P 13 26 12.6 +0.2**
WLF Walferdange 44.92 315 pP **pP 13 26 16.9 -1.1**
WLF PcP **PcP 13 27 52.4 -3.7**
WLF Walferdange 44.92 315 P **P 13 26 14.1 -0.6**
WLF pmax pmax
comp=Z,17nm,0.9s
WLF Walferdange 44.92 315 P **P 13 26 14.1 -0.6**
WLF IAmb IAmb 13 26 17.5
comp=Z,17nm,0.9s
BTNL Ternell 45.13 316 P **P 13 26 14.1 -2.4**
BTNL x x 13 26 30.1
BTNL PcP **PcP 13 27 52.7 -4.1**
SSB Saint Sauveur 45.31 308 P **P 13 26 16.4 -1.5**
SSB pmax pmax
comp=Z,7.0nm,0.7s
SSB Saint Sauveur 45.31 308 P **P 13 26 16.4 -1.5**
SSB IAmb IAmb 13 26 20.3
comp=Z,7.1nm,0.7s
XAN Xi'an 45.42 67 P **P 13 26 20.3 +1.3**
XAN pP sP 13 26 24.3 +0.7
XAN pmax pmax
comp=Z,15nm,0.8s
BCLA Clavier 45.61 316 PcP **PcP 13 27 56.3 -2.2**
BGES Gesves 45.74 316 P **P 13 26 19.4 -1.8**
BGES pP **pP 13 26 24.1 -0.5**
BGES PcP **PcP 13 27 56.9 -2.0**
NC602 NORSAR Array S 45.77 331 P **P 13 26 20.7 -0.6**
NC602 NORSAR Array S 45.77 331 *e*P **P 13 26 21.0 -0.3**
NC405 NORSAR Array S 45.88 331 P **P 13 26 21.2 -0.9**
BMRD Maredsous 45.92 315 P **P 13 26 21.5 -1.1**
BMRD PcP **PcP 13 27 55.2 -4.3**
DOU Dourbes 45.99 315 P **P 13 26 18.6 -4.5**
DOU pP **pP 13 26 25.8 -0.7**
NB201 NORSAR Array S 46.03 331 P **P 13 26 22.5 -0.9**
NB201 IAmb IAmb 13 26 31.4
comp=Z,19nm,1.0s
NB2 NORSAR Subarra 46.06 331 P **P 13 26 22.7 -0.9**
comp=Z,10nm,1.0s,baz=114,slow=7.9
NB2 NORSAR Subarra 46.06 331 P **P 13 26 22.7 -0.9**
baz=114,slow=7.9
NOA NORSAR Array B 46.06 331 P **P 13 26 22.6 -0.9**
comp=Z,4.7nm,0.8s,baz=117,slow=7.9,SNR=12
NOA LR LR 13 49 46.8
comp=Z,36nm,18.1s,baz=100,slow=42
NC303 NORSAR Array S 46.08 332 P **P 13 26 23.7 0.0**
NAO01 NORSAR Array S 46.11 331 P **P 13 26 23.4 -0.6**
NBO00 NORSAR Array S 46.24 331 P **P 13 26 24.0 -1.1**
NC204 NORSAR Array S 46.36 331 P **P 13 26 24.9 -1.1**
NC204 IAmb IAmb 13 26 45.1
comp=Z,28nm,1.2s
NRIK Noril'sk 46.57 15 P **P 13 26 27.4 -0.1**
comp=Z,1.0nm,0.3s,baz=213,slow=8.7,SNR=2.3
NRIK Noril'sk 46.57 15 ‖*e*P **P 13 26 27.9 +0.5**
NRIK pmax pmax
comp=Z,3.0nm,0.9s
KEV Kevo 46.59 346 P **P 13 26 27.7 +0.1**
KEV pmax pmax
comp=Z,27nm,0.8s
KEV Kevo 46.59 346 P **P 13 26 27.7 +0.1**
ARD4 ARCESS Array S 46.73 346 P **P 13 26 29.0 +0.3**
ARD5 ARCESS Array S 46.73 346 P **P 13 26 29.0 +0.3**
ARD3 ARCESS Array S 46.74 346 P **P 13 26 29.1 +0.3**
ARC3 ARCESS Array S 46.74 346 P **P 13 26 28.9 +0.1**
ARC4 ARCESS Array S 46.74 346 P **P 13 26 29.0 +0.2**
ARC4 IAmb IAmb 13 26 52.4
comp=Z,23nm,1.1s
ARD6 ARCESS Array S 46.74 346 P **P 13 26 29.1 +0.3**
ARB3 ARCESS Array S 46.74 346 P **P 13 26 28.9 0.0**
ARA0 ARCESS Array S 46.75 346 *e*P **P 13 26 29.7 +0.8**
ARCES ARCESS Array B 46.75 346 P **P 13 26 29.2 +0.4**
comp=Z,11nm,0.7s,baz=121,slow=5.8,SNR=22
KTK1 Kautokeino 46.88 344 *e*P **P 13 26 30.4 +0.5**
PSI Prapat 46.90 113 P **P 13 26 31.5 +0.6**
PSI pmax pmax
comp=Z,6.0nm,1.0s
RPSI Rantau Prapat 46.96 113 P **P 13 26 31.4 +0.2**
RPSI IAmb IAmb 13 26 52.0
comp=Z,6.3nm,1.0s
KULM Kulim 47.01 109 P **P 13 26 33.3 +1.7**
KULM IAmb IAmb 13 27 00.2
comp=Z,8.5nm,1.2s
SKAR Skarslia 47.18 330 *e*P **P 13 26 32.9 +0.4**
HHC Hu-ho-hao-te 47.22 58 *e*P **P 13 26 33.3 +0.2**
HHC pmax pmax
comp=Z,17nm,0.7s
HHC pmax pmax
comp=Z,72nm,6.6s
DOMB Dombas 47.43 332 *e*P **P 13 26 32.7 -1.7**
NSS Namsos 47.48 336 *e*P **P 13 26 33.5 -1.1**
MOR8 Moi Rana 47.52 338 *e*P **P 13 26 34.7 -0.3**
BLS5 Blasjo 47.55 328 *e*P **P 13 26 35.2 -0.1**
IPM Ipoh 47.75 109 P **P 13 26 36.6 -0.8**
IPM IAmb IAmb 13 26 37.9
comp=Z,7.1nm,0.8s
FAUS Fauske 47.97 340 *e*P **P 13 26 38.1 -0.3**
HAMF Hammerfest 48.00 346 *e*P **P 13 26 39.7 +1.1**
KONS Konsvik 48.15 338 *e*P **P 13 26 39.6 -0.1**
STEI Steigen 48.32 340 *e*P **P 13 26 41.1 0.0**
HYA Hoyanger 48.32 330 *e*P **P 13 26 40.8 -0.4**
TRO Tromso 48.40 343 *e*P **P 13 26 41.8 +0.1**
LOF Lofoten 48.95 340 *e*P **P 13 26 44.7 -1.2**
BOD Bodaibo 50.73 36 *e*P **P 13 26 59.5 -0.1**
BOD pmax pmax
comp=Z,11nm,1.2s
ESBB Sonseca Array 51.52 301 P **P 13 27 05.1 -0.9**
ESBB IAmb IAmb 13 27 09.8
comp=Z,24nm,1.5s
ESDC Sonseca Array 51.53 301 P **P 13 27 05.5 -0.5**
comp=Z,3.4nm,0.5s,baz=76,slow=7.1,SNR=53
ESK Eskdalemuir 51.56 321 P **P 13 27 04.9 -1.0**
ESK pmax pmax
comp=Z,44nm,1.5s
ESK Eskdalemuir 51.56 321 P **P 13 27 04.9 -1.0**
ESK IAmb IAmb 13 27 27.5
comp=Z,44nm,1.5s
PAB San Pablo 51.83 301 P **P 13 27 07.4 -0.9**
PAB pmax pmax
comp=Z,5.0nm,0.6s
PAB San Pablo 51.83 301 P **P 13 27 07.4 -0.9**
PAB IAmb IAmb 13 27 08.2
comp=Z,4.8nm,0.6s
TOA0 Torodi Ar. Sit 52.96 267 P **P 13 27 15.8 -1.1**
TOA0 IAmb IAmb 13 27 21.6
comp=Z,11nm,0.7s
TORD Torodi Ar. Bea 52.96 267 P **P 13 27 16.4 -0.6**
comp=Z,10nm,0.5s,baz=65,slow=7.6,SNR=77
TORD LR LR 13 52 05.0
comp=Z,185nm,19.4s,baz=310,slow=39
TORD Torodi Ar. Bea 52.96 267 P **P 13 27 15.8 -1.2**
HIA Hailar 53.11 47 P **P 13 27 17.5 -0.1**
HIA pmax pmax
comp=Z,5.0nm,0.8s
HIA Hailar 53.11 47 P **P 13 27 17.5 -0.1**
DSB Dublin 53.17 318 P **P 13 27 17.5 -0.4**
DSB IAmb IAmb 13 27 22.3
comp=Z,29nm,1.1s
PBRG Braganca 53.46 304 *e*P **P 13 27 20.1 -0.2**
comp=Z,73nm,1.9s
MVO Moncorvo 53.73 303 *e*P **P 13 27 22.4 +0.1**
comp=Z,49nm,1.9s
NJ2 Nanjing 53.95 68 *e*P **P 13 27 23.3 -0.7**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
PMRV Marv??o 54.19 301 *e*P **P 13 27 25.1 -0.5**
comp=Z,43nm,1.9s
MTE Manteigas 54.20 302 *e*P **P 13 27 25.5 -0.2**
comp=Z,45nm,1.8s
MTE Manteigas 54.20 302 P **P 13 27 25.1 -0.6**

PCBR Castelo Branco 54.21 301 eP P 13 27 26.0 +0.3
comp=Z,56nm,1.6s
PVRL Vila Real 54.24 303 eP P 13 27 26.1 +0.1
comp=Z,70nm,1.5s
POLO Lamas de Olo 54.29 303 eP P 13 27 26.6 +0.2
comp=Z,29nm,1.7s
PVIS Viseu 54.43 303 eP P 13 27 27.9 +0.5
PGAV Gavieira, Arco 54.58 304 eP P 13 27 28.9 +0.3
PBEJ Beja 54.74 299 eP P 13 27 28.9 -0.7
EVO Evora 54.78 300 eP P 13 27 27.9 -2.0
COI Coimbra 54.88 302 P P 13 27 28.8 -1.8
COI pmax pmax
comp=Z,57nm,1.3s
COI Coimbra 54.88 302 eP P 13 27 29.6 -1.0
COI Coimbra 54.88 302 P P 13 27 28.8 -1.8
SPA0 Spitsbergen Ar 54.89 351 P P 13 27 30.9 +0.8
PCAS Casmilo, Conde 54.96 302 eP P 13 27 31.5 +0.3
KOWA Kowa 57.56 271 P P 13 27 49.0 -1.1
KOWA IAmb IAmb 13 27 55.6
comp=Z,8.9nm,0.8s
ZEA Zeya 57.78 41 eP P 13 27 52.3 +1.2
YAK Yakutsk 59.06 32⇓eP P 13 27 59.5 -0.3
YAK pmax pmax
comp=Z,7.0nm,0.5s
LBTB Lobatse 59.30 213 P P 13 28 02.7 +0.6
LBTB pmax pmax
comp=Z,4.0nm,0.7s
LBTB Lobatse 59.30 213 P P 13 28 02.7 +0.6
LBTB IAmb IAmb 13 28 08.1
comp=Z,4.3nm,0.7s
TIXI Tiksi 59.52 20⇓iP P 13 28 03.1 +0.2
TIXI pmax pmax
comp=Z,28nm,1.7s
TIXI Tiksi 59.52 20 P P 13 28 02.5 -0.3
TIXI IAmb IAmb 13 28 06.1
comp=Z,3.6nm,0.5s
KS19 Wonju Array Si 60.15 60 P P 13 28 07.0 -0.8
KSRS Korea Array 60.20 60 P P 13 28 08.1 -0.1
comp=Z,3.3nm,0.8s,baz=283,slow=6.3,SNR=13
SCO Scoresbysund 61.47 338 P P 13 28 17.1 +0.9
SCO pmax pmax
comp=Z,12nm,1.0s
SCO Scoresbysund 61.47 338 P P 13 28 17.1 +0.9
SCO IAmb IAmb 13 28 20.9
comp=Z,12nm,1.0s
DBIC Dimbokro 61.53 263 P P 13 28 17.2 -0.3
comp=Z,3.7nm,0.5s,baz=32,slow=7.0,SNR=6.9
DBIC Dimbokro 61.53 263 P P 13 28 16.5 -1.0
DBIC pmax pmax
comp=Z,6.0nm,0.9s
DBIC Dimbokro 61.53 263 P P 13 28 16.5 -1.0
DBIC IAmb IAmb 13 28 22.7
comp=Z,6.0nm,0.8s
KIC Kosan Boka 61.56 263 eP P 13 28 17.4 -0.3
comp=Z,8.8nm,0.8s
TIC Toumodi 61.69 263 eP P 13 28 18.1 -0.5
LIC Lamto 61.88 263 eP P 13 28 19.3 -0.6
comp=Z,17nm,0.9s
BOSA Boshof 62.50 211 P P 13 28 24.5 +0.7
comp=Z,2.8nm,0.5s,baz=28,slow=7.9,SNR=9.9
BOSA Boshof 62.50 211 P P 13 28 24.0 +0.2
BOSA pmax pmax
comp=Z,11nm,1.2s
BOSA Boshof 62.50 211 P P 13 28 24.0 +0.2
BOSA IAmb IAmb 13 28 28.8
comp=Z,11nm,1.2s
MYLDM Lahad Datu 62.61 98 P P 13 28 23.9 -0.9
MYLDM IAmb IAmb 13 28 26.9
comp=Z,8.8nm,0.9s
JNU Nakatsue 63.58 64 P P 13 28 31.5 +0.5
comp=Z,3.8nm,0.8s,baz=25,slow=22,SNR=1.6
JNU Nakatsue 63.58 64 P P 13 28 31.3 +0.3
JNU IAmb IAmb 13 28 56.9
comp=Z,19nm,1.3s
JSU Suzuyama 63.68 66 P P 13 28 31.6 0.0
JHS Saijyo 64.87 62 P P 13 28 39.4 0.0
JMZ Minamidaito 2 66.03 72 P P 13 28 46.8 -0.2
SUMG Summit 66.47 341 P P 13 28 48.9 -0.7
SUMG pmax pmax
comp=Z,13nm,0.8s
SUMG Summit 66.47 341 P P 13 28 48.9 -0.7
SUMG IAmb IAmb 13 28 53.0
comp=Z,13nm,0.8s
JWT Wachi 66.59 61 P P 13 28 50.3 -0.2
YSS Yuzh-Sakhalins 68.64 47 P P 13 29 02.5 -0.7
YSS pmax pmax
comp=Z,13nm,0.9s
YSS Yuzh-Sakhalins 68.64 47 P P 13 29 02.5 -0.7
YSS IAmb IAmb 13 29 02.9
comp=Z,13nm,0.9s
SEY Seymchan 69.32 29⇑iP P 13 29 08.1 +0.9
ASAJ Asahikawa 69.35 50 P P 13 29 08.9 +1.2
ASAJ pmax pmax
comp=Z,12nm,1.0s
JKA Kamikawa-asahi 69.35 50 P P 13 29 08.9 +1.2
JKA IAmb IAmb 13 29 10.7
comp=Z,12nm,1.0s
ILULI Ilulissat 71.51 339 P P 13 29 20.6 +0.2
ILULI pmax pmax
comp=Z,50nm,1.3s
ILULI Ilulissat 71.51 339 P P 13 29 20.6 +0.2
EUNU Eureka 71.80 354 P P 13 29 22.4 +0.3
EUNU IAmb IAmb 13 29 27.1
comp=Z,5.7nm,0.9s
TULEG Thule 71.97 348 P P 13 29 23.2 +0.1
BILL Bilibino 72.69 22 eP P 13 29 28.4 +0.8
BILL e 13 29 47.1
BILL ePPP PPP 13 33 53.1
BILL pmax pmax
comp=Z,31nm,2.8s
GIRL Giralia 74.14 126 P P 13 29 36.8 0.0
SOEI Soe 74.88 109 P P 13 29 40.8 -0.6
SOEI IAmb IAmb 13 29 51.5
comp=Z,23nm,1.0s
A21K Barrow 79.72 10 P P 13 30 08.6 +1.2
NWAO Narrogin (SRO) 82.56 132 P P 13 30 22.8 -0.3
comp=Z,14nm,0.9s,baz=298,slow=6.9,SNR=2.7
NWAO Narrogin (SRO) 82.56 132 P P 13 30 22.8 -0.3
NWAO pmax pmax
comp=Z,15nm,1.0s
NWAO Narrogin (SRO) 82.56 132 IAmb IAmb 13 30 23.3
comp=Z,15nm,1.0s
COLD Coldfoot 84.42 10 P P 13 30 32.8 +0.6
COLD IAmb IAmb 13 30 39.5
comp=Z,3.5nm,0.8s
C36M Paulatuk 84.44 0 P P 13 30 31.4 -0.8
C36M IAmb IAmb 13 30 35.2
comp=Z,5.7nm,0.8s
SCHQ Schefferville 85.63 331 P P 13 30 37.5 -1.0
comp=Z,32nm,1.4s,baz=18,slow=3.2,SNR=3.6
IL31 87.22 10 P P 13 30 45.1 -1.0
IL31 IAmb IAmb 13 30 48.8
comp=Z,3.6nm,0.8s
ILAR Eielson Array 87.22 10 P P 13 30 45.4 -0.8
comp=Z,1.6nm,0.7s,baz=321,slow=4.4,SNR=21
ILAR Eielson Array 87.22 10 P P 13 30 45.2 -1.0
ILAR Eielson Array 87.22 10 P P 13 30 45.1 -1.0
EGAK Eagle 87.99 8 P P 13 30 49.1 -0.7
EGAK IAmb IAmb 13 30 56.7
comp=Z,6.1nm,1.0s
WB0 Warramunga Arr 88.33 113 P P 13 30 51.8 -0.4
WB0 IAmb IAmb 13 30 53.4
comp=Z,8.1nm,1.0s
WRA Warramunga Arr 88.37 113 P P 13 30 52.8 +0.4
comp=Z,6.0nm,0.8s,baz=313,slow=4.2,SNR=67
WRA Warramunga Arr 88.37 113 P P 13 30 50.6 -1.8
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 88.37 113 P P 13 30 50.6 -1.8
WRAB Tennant Creek 88.37 113 deP P 13 30 52.6 +0.2
WRAB pmax pmax
comp=Z,11nm,1.3s
WRAB Tennant Creek 88.37 113 P P 13 30 52.5 +0.2
WRAB IAmb IAmb 13 30 53.8
comp=Z,7.9nm,0.8s
WB2 Warramunga Arr 88.38 113 P P 13 30 52.3 -0.1
WB2 IAmb IAmb 13 30 53.8
comp=Z,8.3nm,0.8s
ASAR Alice Springs 89.81 117 P P 13 30 59.6 +0.5
comp=Z,2.1nm,0.7s,baz=302,slow=4.7,SNR=25
ASAR Alice Springs 89.81 117 P P 13 30 59.2 +0.1
ASAR Alice Springs 89.81 117 P P 13 30 59.2 +0.1
YKA Yellowknife Ar 91.05 356 P P 13 31 04.0 -0.2
comp=Z,1.4nm,0.8s,baz=20,slow=4.9,SNR=1.7
TXAR Lajitas Array 121.35 340 PKP PKPdf 13 36 53.5 -0.5

comp=Z,0.6nm,0.8s,baz=100,slow=0.2,SNR=7.3

*BJI **23** 13:34:51.2±0.0, 39.52N×143.29E, h11km, mB5.2/55, mb5.1/83, Ms5.0/86, Ms7 4.9/81*
*JMA **23** 13:34:52.8±0.2, 39.61N×143.57E, h31km, M5.1*
JMA Felt II J1.
*NIED **23** 13:34:52.8, 39.61N×143.57E, h31km, MW5.0, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁶Nm; Mrr1.99; Mθθ0.01; Mφφ-2.00; Mrθ0.99; Mθφ-0.94; Mφr1.90; Fault plane solution: M₀3.05000×10¹⁶ NP1:φs26.00000°, δ67.00000°, λ94.00000°. NP2:φs195.00000°, δ23.00000°, λ80.00000°.*
*NEIC **23** 13:34:54.8±1.3, 39.60N±0.05×143.26E±0.09, h18km±3km, mb5.0/158 Error ellipse: s-maj=10.6km s-min=5.6km az=116.0*
*MOS **23** 13:34:55.0±0.9, 39.68N×143.29E, h31km, mb5.3/73, MS4.4/21, Error ellipse: s-maj=5.8km s-min=3.8km az=111.1*
*IDC **23** 13:34:56.8±3.4, 39.54N×143.34E, h33km±26km, mb4.5/33, mb1 4.6/40, mb1mx4.5/54, mbtmp4.7/40, ML4.0/6, MS4.4/38, Ms1 4.4/38, ms1mx4.3/58, Error ellipse: s-maj=13.2km s-min=9.6km az=96.0*
*GCMT **23** 13:34:57.8±0.3, 39.59N±0.02×143.56E±0.03, h28km±1km, MW5.0/95, Moment Tensor Solution. s48, c58; s95, c147; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.50±.15; Mθθ-0.17±.09; Mφφ-2.33±.10; Mrθ1.54±.15; Mθφ-0.70±.05; Mφr2.78±.17; Best double couple: M₀4.05400×10¹⁶ NP1:φs187.00000°, δ20.00000°, λ72.00000°. NP2: φs26.00000°, δ71.00000°, λ96.00000°. Principal axes: T 4.0740, Plg63.0000°, Azm306.0000°; N -0.0400, Plg6.0000°, Azm204.0000°; P -4.0340, Plg26.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **23** 13:35:04.4±0.0, 40.40N×142.35E, h33km, mb5.2, Ms4.8*
ISC 23 13:34:55.3±0.6, 39.58N±0.03×143.43E±0.03, h25km±3km, h25km:pP-P, n620, σ1s43/651, mb5.0/198, MS4.7/79, 72C-13D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.24	270	⇑P	Pn	13 35 16.2	-0.8
MIYJ				eS	Sn	13 35 32.8	-0.2
JTH	Tanohata	1.26	287	⇑P	Pn	13 35 16.2	-1.1
JTH				eS	Sn	13 35 33.4	0.0
OFUJ	Ofunato	1.45	250	⇑P	Pn	13 35 19.2	-0.7
JKEN	Kujiedanarisaw	1.46	296	⇑P	Pn	13 35 18.5	-1.6
JOM	Ohasama	1.65	267	⇑P	Pn	13 35 22.6	-0.1
JOM				eS	Sn	13 35 44.0	+0.8
JANG	Nango	1.67	299	⇑P	Pn	13 35 21.7	-1.2
JANG				eS	Sn	13 35 42.8	-0.8
JKMT	Kesennumamotoy	1.70	244	⇑P	Pn	13 35 22.6	-0.7
JMK	Ichinoseki	1.82	251	⇑P	Pn	13 35 24.7	-0.3
JSZI	Iwateshizukuis	1.92	276	⇑P	Pn	13 35 26.8	+0.5
JIO	Ouri	1.97	236	⇑P	Pn	13 35 26.1	-0.9
JIO				eS	Sn	13 35 51.1	+0.2
JIKH	Ishinomakikobu	1.98	231	⇑P	Pn	13 35 26.1	-1.2
JARK	Aomorirokkasho	2.12	313	⇑P	Pn	13 35 28.4	-0.8
JRG	Rokugo	2.17	266	⇑P	Pn	13 35 30.0	+0.2
JTM	Tenmabayashi	2.17	304	⇑P	Pn	13 35 29.5	-0.3
JTM				eS	Sn	13 35 56.8	+0.9
JTM	Tenmabayashi	2.17	304	Pn	Pn	13 35 29.2	-0.6
JOFO	Osakifurukawao	2.19	244	⇑P	Pn	13 35 30.3	+0.3
ERM	Erimo	2.44	355	c iP	Pn	13 35 32.2	-1.3
ERM				pmax	pmax		
	comp=Z,188nm,1.3s						
ERM	Erimo	2.44	355	Pn	Pn	13 35 32.0	-1.5
JOU	Okura	2.47	241	⇑P	Pn	13 35 33.7	-0.3
JYK	Kaneyama	2.47	255	⇑P	Pn	13 35 34.2	+0.2
JYW	Yuwa	2.49	270	P	Pn	13 35 34.8	+0.6
JOT	Ohata	2.56	316	P	Pn	13 35 34.9	-0.2
JOT				eS	Sn	13 36 05.5	+0.1
JHHS	Hirosakihyakuz	2.58	295	⇑P	Pn	13 35 36.3	+0.8
JMM	Marumori	2.68	231	⇑P	Pn	13 35 35.7	-1.1
JMM	Marumori	2.68	231	Pn	Pn	13 35 35.6	-1.1
JMM				Sn	Sn	13 36 07.7	-0.7
JMST	Minamisoumatoc	2.72	228	⇑P	Pn	13 35 36.2	-1.1
JNBK	Urakawa-nobuka	2.75	350	P	Pn	13 35 37.7	0.0
JKB	Kayabe	2.94	323	P	Pn	13 35 40.3	0.0
JKB				eS	Sn	13 36 15.8	+1.0
JCH	Churui	3.03	359	P	Pn	13 35 40.4	-1.3
JCH				eS	Sn	13 36 16.0	-1.2
JFT	Otama	3.18	231	⇑P	Pn	13 35 43.4	-0.3
JFT				eS	Sn	13 36 22.0	+1.2
JEW	Eniwo	3.58	336	Pn	Pn	13 35 47.5	-1.8
NMR	Nemuro--Hokkai	4.16	24	⇑iP	Pn	13 35 55.2	-2.0
NMR				eS	Sn	13 36 40.6	-4.4
JYT	Yasato	4.21	218	Pn	Pn	13 35 55.8	-2.1
JSD	Sado	4.32	251	Pn	Pn	13 35 58.5	-0.9
GLVR	Golovnino	4.44	20	eP	Pn	13 35 59.7	-1.3
GLVR				eS	Sn	13 36 48.1	-3.8
GLVR				pmax	pmax		
	comp=Z,196nm,0.1s						
GLVR				smax	smax		
	comp=N,2μm,0.3s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
GLVR				MLR	MLR		
	comp=Z,16μm,15.0s						
JKA	Kamikawa-asahi	4.58	353	Pn	Pn	13 36 01.4	-1.5
JKA	Kamikawa-asahi	4.58	353		Sn	13 36 53.1	-2.0
ASAJ	Asahikawa	4.58	352	Pn	Pn	13 36 02.9	0.0
	comp=Z,8.2nm,0.3s,baz=202,slow=17,SNR=78						
ASAJ				Sn	Sn	13 36 53.1	-2.1
	comp=Z,5.7nm,0.3s,baz=234,slow=28,SNR=1.8						
ASAJ				LR	LR	13 38 00.2	
	comp=Z,2μm,21.9s,baz=183,slow=40						
RUSJ	Misakicho	4.72	16	d iP	Pn	13 36 04.0	-0.9
RUSJ				eS	Sn	13 36 56.4	-2.4
GRPR	Tuman	4.75	21	⇑iP	Pn	13 36 03.4	-1.8
GRPR				eS	Sn	13 36 55.2	-4.2
GRPR				pmax	pmax		
	comp=Z,381nm,0.3s						
GRPR				pmax	pmax		
	comp=N,126nm,0.2s						
GRPR				pmax	pmax		
	comp=E,96nm,0.2s						
GRPR				smax	smax		
	comp=N,2μm,0.3s						
GRPR				smax	smax		
	comp=E,858nm,0.3s						
GRPR				MLR	MLR		
	comp=Z,4μm,11.0s						
YUK	Yuzh-Kuril'sk	4.81	21	c iP	Pn	13 36 04.5	-1.6
YUK				eS	Sn	13 36 56.4	-4.5
YUK				pmax	pmax		
	comp=Z,386nm,0.2s						
YUK				pmax	pmax		
	comp=E,105nm,0.1s						
YUK				pmax	pmax		
	comp=N,251nm,0.2s						
YUK				smax	smax		
	comp=N,667nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.6s						
YUK				MLR	MLR		
	comp=Z,2μm,15.0s						
MAJO	Matsushiro	5.11	235	c iP	Pn	13 36 11.4	+1.1
MAJO				pmax	pmax		
	comp=Z,557nm,0.7s						
MAJO	Matsushiro	5.11	235	Pn	Pn	13 36 11.2	+0.9
MAT	Matsushiro	5.11	235	P	Pn	13 36 11.3	+1.0
MAT				eS	Sn	13 37 11.5	+3.0
MJAR	Matsushiro Arr	5.11	235	Pn	Pn	13 36 11.3	+1.0
	comp=Z,4.0nm,0.3s,baz=39,slow=12,SNR=684						
MJAR				LR	LR	13 38 23.2	
	comp=Z,4μm,18.3s,baz=35,slow=41						
MJAR	Matsushiro Arr	5.11	235		Pn	13 36 10.8	+0.5
MJB9	Matsu-Tunnel	5.11	235		Pn	13 36 11.2	+0.9
JNG	Nsakai	5.26	235	⇑P	Pn	13 36 13.4	+0.9
JGF	Kuroka	6.24	232	Pn	Pn	13 36 26.7	+0.9
JSG	Sagara	6.44	222		Pn	13 36 29.7	+1.2
KUR	Kuril'sk	6.54	29	eP	Pn	13 36 28.6	-1.2
KUR				eS	Sn	13 37 39.0	-4.4
KUR				pmax	pmax		
	comp=Z,115nm,0.3s						
KUR				pmax	pmax		
	comp=E,106nm,0.5s						
KUR				pmax	pmax		
	comp=N,57nm,0.2s						
KUR				smax	smax		
	comp=N,220nm,0.5s						
KUR				smax	smax		
	comp=E,207nm,0.5s						
KUR				MLR	MLR		
	comp=Z,2μm,10.0s						
KUR				MLR	MLR		
	comp=N,3μm,9.0s						
KUR				MLR	MLR		
	comp=E,2μm,9.0s						
INU	Inuyama	6.62	232	Pn	Pn	13 36 30.7	-0.3
JHJ2	Mitsune	7.08	205	Pn	Pn	13 36 35.6	-1.7
JHJ	Hachijo jima 2	7.08	206	Pn	Pn	13 36 35.9	-1.5
	comp=E,34nm,0.3s,baz=146,slow=24,SNR=19						
JHJ				Sn	Sn	13 37 49.9	-7.1
	comp=E,76nm,0.3s,baz=42,slow=23,SNR=11						
JHJ				LR	LR	13 39 31.4	
	comp=E,1μm,21.3s,baz=50,slow=39						
YSS	Yuzh-Sakhalins	7.39	356	⇓iP	Pn	13 36 41.8	+0.3
YSS				eS	Sn	13 38 01.0	-3.4
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				MLR	MLR		
	comp=Z,3μm,15.0s						
YSS				MLR	MLR		
	comp=N,3μm,13.0s						
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
YSS	Yuzh-Sakhalins	7.39	356	Pn	Pn	13 36 40.8	-0.7
TEY	Ternei	7.43	319	⇑iP	Pn	13 36 44.2	+2.1
TEY				pmax	pmax		
	comp=Z,100nm,1.1s						
TEY				pmax	pmax		
	comp=N,60nm,1.0s						
TEY				pmax	pmax		
	comp=E,90nm,1.0s						
TEY				pmax	pmax		
	comp=Z,200nm,1.8s						
TEY				MLR	MLR		
	comp=N,300nm,15.0s						
TEY				MLR	MLR		
	comp=E,300nm,15.0s						
TEY				MLR	MLR		
	comp=Z,500nm,15.0s						
JWT	Wachi	7.69	239	Pn	Pn	13 36 44.5	-1.1
VLA	Vladivostok	9.37	296	⇑eP	Pn	13 37 07.3	-1.4
VLA				pmax	pmax		
	comp=Z,152nm,1.5s						
JHS	Saijyo	9.40	244		Pn	13 37 08.1	-1.1
JMN	Monobe	9.64	236		Pn	13 37 11.2	-1.3
USA0B	Ussuriysk Arra	9.70	302	P	Pn	13 37 12.4	-0.7
USA0B	Ussuriysk Arra	9.70	302	Pn	Pn	13 37 12.4	-0.7
USRK	Ussuriysk Ar.	9.70	302	Pn	Pn	13 37 14.8	+1.7
	baz=117,slow=14,SNR=63						
USRK				LR	LR	13 40 58.5	
	comp=Z,4μm,18.1s,baz=108,slow=38						
USRK	Ussuriysk Ar.	9.70	302		Pn	13 37 12.1	-1.0
TYV	Tymovskoe	11.30	358	eP	Pn	13 37 39.7	+4.7
TYV				pmax	pmax		
	comp=Z,100nm,2.6s						
TYV				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TYV				MLR	MLR		
	comp=E,4μm,15.0s						
TYV				MLR	MLR		
	comp=Z,4μm,19.0s						
MDJ	Mudanjiang	11.44	301	P	Pn	13 37 39.6	+2.6
MDJ				S	Sn	13 39 50.3	+6.4
MDJ				sS		13 39 57.3	
MDJ				pmax	pmax		
	comp=Z,36nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,1μm,8.6s						
MDJ				LR	LR		
	comp=Z,3μm,13.7s						
MDJ				LR	LR		
	comp=Z,6μm,15.3s						
MDJ				LR	LR		
	comp=Z,8μm,15.7s						
MDJ	Mudanjiang	11.44	301	Pn	Pn	13 37 37.2	+0.2
JNU	Nakatsue	11.99	241	Pn	Pn	13 37 44.6	0.0
	comp=Z,0.9nm,0.3s,baz=61,slow=5.1,SNR=15						
JNU				LR	LR	13 42 40.8	
	comp=Z,4μm,19.0s,baz=50,slow=39						
JNU	Nakatsue	11.99	241		Pn	13 37 42.5	-2.1
GRNR	Gornyy	12.22	339	⇑iP	Pn	13 37 47.6	-0.1
GRNR				eS	Sn	13 40 05.9	+2.8
GRNR				pmax	pmax		
	comp=N,20nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,20nm,1.0s						
GRNR				smax	smax		
	comp=E,2.0nm,0.7s						
GRNR				MLR	MLR		
	comp=E,2μm,16.0s						
GRNR				MLR	MLR		
	comp=N,970nm,18.0s						
GRNR				MLR	MLR		
	comp=Z,2μm,13.0s						
JTU	Tsushima	12.29	250	Pn	Pn	13 37 48.5	-0.1
KSRS	Korea Array	12.33	265	Pn	Pn	13 37 50.3	+1.1
	comp=Z,0.5nm,0.3s,baz=89,slow=13,SNR=58						
KSRS				LR	LR	13 42 16.5	
	comp=Z,3μm,18.5s,baz=76,slow=36						
KS19	Wonju Array Si	12.36	265		Pn	13 37 50.0	+0.4
TJN	Taejon	13.07	261	c iP	Pn	13 38 00.1	+0.8
JSU	Suzuyama	13.27	237	Pn	Pn	13 38 01.8	-0.3
CN2	Changchun	14.08	293	eP	Pn	13 38 12.3	-0.7
CN2				S	S	13 40 57.1	-12
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,560nm,5.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,13.0s						
CN2				LR	LR		
	comp=Z,2μm,15.0s						
SKR	Severo-Kuril's	14.24	35	eP	P	13 38 24.1	+1.8
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
PEA0B	Petropavlovsk-	16.69	31	P	P	13 38 50.5	+1.0
PEA0B				pmax	pmax		
	comp=Z,150nm,1.4s						
PEA0B	Petropavlovsk-	16.69	31	P	P	13 38 50.5	+1.0
PEA0B				IAmb	IAmb	13 39 01.1	
	comp=Z,150nm,1.4s						
PETK	Petropavlovsk-	16.69	31	Pn	P	13 38 49.9	+0.4
	comp=Z,0.1nm,0.3s,baz=224,slow=6.2,SNR=7.4						
PETK				LR	LR	13 46 24.5	
	comp=Z,726nm,18.1s,baz=218,slow=41						
PETK	Petropavlovsk-	16.69	31	P	P	13 38 50.6	+1.1
PETK	Petropavlovsk-	16.69	31	P	P	13 38 50.6	+1.1
DL2	Dalian	16.90	275	P	Pn	13 38 48.6	-1.4
DL2				S	Sn	13 41 58.4	+1.4
DL2				pmax	pmax		
	comp=Z,61nm,0.8s						
DL2				pmax	pmax		
	comp=Z,330nm,5.5s						
DL2				LR	LR		
	comp=Z,2μm,14.3s						
DL2				LR	LR		
	comp=Z,2μm,16.3s						
DL2				LR	LR		
	comp=Z,3μm,16.7s						
PET	Petropavlovsk	17.02	33	eP	P	13 38 54.7	+1.6
PET				eS	S	13 42 05.0	-4.2
PET				pmax	pmax		
	comp=Z,149nm,1.2s						
PET				MLR	MLR		
	comp=Z,1μm,16.0s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
PET	Petropavlovsk	17.02	33	P	Pn	13 38 51.4	-0.1
PET				IAmb	IAmb	13 39 04.8	
	comp=Z,151nm,1.2s						
ZEA	Zeya	17.93	327	eP	Pn	13 38 59.5	-3.2
ZEA				pmax	pmax		
	comp=E,20nm,0.6s						
ZEA				pmax	pmax		
	comp=N,30nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,50nm,0.7s						

ZEA pmax pmax
comp=E,100nm,3.2s
ZEA pmax pmax
comp=N,100nm,3.0s
ZEA pmax pmax
comp=Z,200nm,3.1s
ZEA MLR MLR
comp=E,900nm,13.0s
ZEA MLR MLR
comp=N,2μm,14.0s
ZEA MLR MLR
comp=Z,2μm,13.0s
HIA Hailar 19.42 308 *ce*P **P 13 39 17.4 -2.2**
HIA pmax pmax
comp=Z,40nm,0.7s
HIA Hailar 19.42 308 P **P 13 39 17.3 -2.3**
SSE Sheshan 19.98 252 P **P 13 39 24.6 -1.2**
SSE S **S 13 43 05.5 -3.8**
SSE pmax pmax
comp=Z,11nm,0.8s
SSE LR LR
comp=Z,970nm,15.8s
SSE LR LR
comp=Z,710nm,12.5s
SSE Sheshan 19.98 252 P **P 13 39 23.8 -2.0**
SSE IAmb IAmb 13 39 40.0
comp=Z,79nm,0.9s
MA2 Magadan 20.55 11 P **P 13 39 32.3 +0.5**
comp=Z,46nm,1.1s,baz=196,slow=9.0,SNR=8.4
MA2 LR LR 13 48 24.4
comp=Z,669nm,18.4s,baz=196,slow=39
MA2 Magadan 20.55 11 ⇓ *e*P **P 13 39 32.5 +0.8**
MA2 pmax pmax
comp=Z,46nm,1.3s
MA2 Magadan 20.55 11 P **P 13 39 32.5 +0.8**
MA2 IAmb IAmb 13 39 33.6
comp=Z,54nm,1.0s
BJI Beijing 20.91 280 P **P 13 39 33.3 -2.5**
BJI S **S 13 43 26.8 -0.9**
BJI pmax pmax
comp=Z,35nm,1.1s
BJI LR LR
comp=Z,920nm,12.9s
BJI LR LR
comp=Z,3μm,15.8s
BJI LR LR
comp=Z,1μm,16.3s
BJT Baijiatuau 20.92 280 P **P 13 39 34.4 -1.6**
BJT pmax pmax
comp=Z,35nm,1.0s
BJT Baijiatuau 20.92 280 P **P 13 39 34.4 -1.6**
TIA Tai'an 21.00 269 P **P 13 39 34.4 -2.4**
TIA pmax pmax
comp=Z,28nm,1.2s
TIA LR LR
comp=Z,860nm,13.7s
TIA LR LR
comp=Z,4μm,14.4s
TIA LR LR
comp=Z,5μm,14.7s
NJ2 Nanjing 21.25 257 *e*P **P 13 39 38.1 -1.4**
NJ2 pmax pmax
comp=Z,23nm,0.5s
NJ2 LR LR
comp=Z,2μm,16.3s
NJ2 LR LR
comp=Z,1μm,16.6s
NJ2 LR LR
comp=Z,2μm,17.1s
YOJ Yonaguni jima 22.88 235 P **P 13 39 55.8 -1.1**
YOJ pmax pmax
comp=Z,64nm,1.0s
YOJ Yonaguni jima 22.88 235 P **P 13 39 55.8 -1.1**
YOJ IAmb IAmb 13 39 57.8
comp=Z,64nm,1.0s
YHNB Yeheng 23.78 238 P **P 13 40 03.5 -2.5**
YHNB IAmb IAmb 13 40 04.9
comp=Z,34nm,0.7s
NACB Ninganchiao 23.98 237 P **P 13 40 05.4 -2.4**
NACB IAmb IAmb 13 40 06.2
comp=Z,34nm,0.8s
YAK Yakutsk 24.00 344 P **P 13 40 07.0 -0.6**
comp=Z,27nm,0.7s,baz=146,slow=3.2,SNR=24
YAK LR LR 13 50 14.4
comp=Z,499nm,20.8s,baz=142,slow=38
YAK Yakutsk 24.00 344 *c i*P **P 13 40 06.1 -1.5**
YAK *e**PP **pP 13 40 15.2 +0.9**
YAK *e*PPP PPP 13 40 45.5
YAK *e* 13 43 45.4
YAK *e*S **S 13 44 21.1 -1.7**
YAK *e**SS **sS 13 44 35.6 +1.4**
YAK *e*SS Sn 13 45 03.0 +16
YAK *e*SSS SSS 13 45 17.4
YAK pmax pmax
comp=Z,83nm,1.0s
YAK pmax pmax
comp=N,31nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=Z,85nm,1.6s
YAK pmax pmax
comp=N,44nm,1.5s
YAK pmax pmax
comp=E,51nm,1.5s
YAK smax smax
comp=N,145nm,2.3s
YAK smax smax
comp=E,77nm,2.2s
YAK MLR MLR
comp=Z,643nm,17.0s
YAK MLR MLR
comp=N,495nm,18.0s
YAK MLR MLR
comp=E,270nm,18.0s
YAK Yakutsk 24.00 344 P **P 13 40 06.6 -1.0**
YAK IAmb IAmb 13 40 13.0
comp=Z,75nm,0.9s
SEY Seymchan 24.00 10 P **P 13 40 08.2 +0.5**
comp=Z,61nm,1.2s,baz=199,slow=8.8,SNR=25
SEY LR LR 13 51 10.3
comp=Z,929nm,18.1s,baz=196,slow=40
SEY Seymchan 24.00 10 *de*P **P 13 40 08.7 +1.0**
CIT Chita 24.07 311 *e*P **P 13 40 06.9 -1.6**
CIT *e* 13 40 13.1
CIT *e* 13 40 22.2
CIT *e* 13 40 36.7
CIT *e* 13 40 52.6
CIT pmax pmax
comp=Z,233nm,1.1s
TIY Taiyuan 24.22 276 *e*P **P 13 40 10.3 +0.2**
TIY pP **pP 13 40 15.3 -1.5**
TIY sP **pwP 13 40 18.1 -1.6**
TIY S **S 13 44 24.5 -2.6**
TIY sS **pS 13 44 35.4 +0.9**
TIY pmax pmax
comp=Z,34nm,0.9s
TIY LR LR
comp=Z,1μm,18.0s
TIY LR LR
comp=Z,950nm,13.7s
TIY LR LR
comp=Z,2μm,17.5s
HHC Hu-ho-hao-te 24.30 283 *e*P **P 13 40 08.8 -2.0**
HHC PP **PnPn 13 40 37.8 -3.2**
HHC S **S 13 44 19.3 -9.0**
HHC sS pS 13 44 30.4 -5.3
HHC pmax pmax
comp=Z,29nm,0.7s
HHC LR LR
comp=Z,800nm,12.3s
HHC LR LR
comp=Z,3μm,12.8s
HHC LR LR
comp=Z,4μm,13.6s
SSLB Suanglung 24.67 237 P **P 13 40 12.3 -1.9**
SSLB IAmb IAmb 13 40 14.3
comp=Z,49nm,0.7s
YULB Yu-li 24.73 236 P **P 13 40 11.6 -3.2**
YULB IAmb IAmb 13 40 15.4
comp=Z,110nm,1.5s
TPUB Ta-pu 25.22 237 P **P 13 40 17.2 -2.0**
TPUB IAmb IAmb 13 40 40.9
comp=Z,81nm,1.2s
TWG Pinlang 25.28 235 P **P 13 40 18.0 -1.7**
TWG IAmb IAmb 13 40 30.1
comp=Z,79nm,1.2s
WHN Wuhan 25.36 258 ⇑ P **P 13 40 20.1 -0.2**
WHN S **S 13 44 47.5 +2.2**
WHN pmax pmax
comp=Z,380nm,0.9s
WHN LR LR
comp=Z,3μm,14.7s
WHN LR LR
comp=Z,4μm,14.2s
WHN LR LR
comp=Z,4μm,18.3s
QZH Quanzhou 25.46 242 ⇓ *i*P **P 13 40 22.3 +1.0**
QZH S **S 13 44 45.8 -1.2**
QZH sS **pS 13 44 54.8 -0.1**
QZH LR LR
comp=Z,1μm,17.1s
QZH LR LR
comp=Z,490nm,15.6s
QZH LR LR
comp=Z,1μm,15.1s
BTO Baotou 25.49 283 *e*P **P 13 40 19.8 -1.8**
BTO S **S 13 44 40.6 -6.9**
BOD Bodaibo 26.32 324 *e*P **P 13 40 27.9 -0.9**
BOD pmax pmax
comp=Z,68nm,0.9s
ULN Ulaanbaatar 27.35 300 *c i*P **P 13 40 38.6 +0.2**
ULN pmax pmax
comp=Z,86nm,1.3s
ULN Ulaanbaatar 27.35 300 P **P 13 40 37.9 -0.5**
SONM Songino Array 27.79 300 P **P 13 40 42.9 +0.5**
comp=Z,23nm,0.8s,baz=91,slow=8.7,SNR=97
SONM LR LR 13 52 23.0
comp=Z,3μm,19.2s,baz=89,slow=38
SONM Songino Array 27.79 300 P **P 13 40 41.7 -0.6**
XAN Xi'an 28.06 270 P **P 13 40 43.6 -1.1**
XAN S **S 13 45 20.1 -7.9**
XAN SS **SnSn 13 46 46.5 +2.8**
XAN pmax pmax
comp=Z,43nm,1.1s
XAN pmax pmax
comp=Z,310nm,8.6s
XAN LR LR
comp=Z,1μm,15.5s
XAN LR LR
comp=Z,3μm,14.9s
XAN LR LR
comp=Z,3μm,16.1s
XAN Xi'an 28.06 270 P **P 13 40 44.1 -0.6**
XAN pmax pmax
comp=Z,34nm,0.9s
XAN Xi'an 28.06 270 P **P 13 40 44.1 -0.6**
XAN IAmb IAmb 13 40 46.3
comp=Z,34nm,0.9s
H11N2 WAKE ISLAND Hy 28.27 128 T T 14 11 41.7
baz=318,slow=75,SNR=541
H11N1 WAKE ISLAND Hy 28.28 128 T T 14 11 42.4
baz=318,slow=75,SNR=403
H11N3 WAKE ISLAND Hy 28.28 128 T T 14 11 39.0
baz=318,slow=75,SNR=379
H11S1 WAKE ISLAND Hy 29.08 130 T T 14 12 44.7
baz=318,slow=76,SNR=60
H11S3 WAKE ISLAND Hy 29.09 130 T T 14 12 45.8
baz=318,slow=76,SNR=50
H11S2 WAKE ISLAND Hy 29.10 130 T T 14 12 43.6
baz=318,slow=76,SNR=45
IRK Irkutsk 29.66 308 *e*P **P 13 40 56.4 -2.3**
IRK *e* 13 41 12.2
IRK pmax pmax
comp=Z,51nm,1.6s
TLY Talaya 29.96 307 P **P 13 41 01.1 -0.3**
comp=Z,11nm,0.8s,baz=129,slow=8.1,SNR=4.5
ZAK Zakamensk 30.04 304 *e*P **P 13 41 01.7 -0.5**
ZAK pmax pmax
comp=Z,21nm,1.0s
BILL Bilibino 31.14 16 *e*P **P 13 41 12.1 +0.5**
BILL *e* 13 41 19.7
BILL *e* 13 42 11.5
BILL *e* 13 44 02.7
BILL pmax pmax
comp=Z,76nm,1.7s
BILL MLR MLR
comp=Z,617nm,16.0s
BILL Bilibino 31.14 16 P **P 13 41 11.8 +0.2**
BILL IAmb IAmb 13 41 23.5
comp=Z,28nm,1.4s
LZH Lanzhou 31.28 276 *e*P **P 13 41 13.6 +0.2**
LZH pP pP 13 41 19.3 -0.9
LZH sP pwP 13 41 22.3 -0.8
LZH sS sS 13 46 29.9 -0.4
LZH pmax pmax
comp=Z,59nm,1.3s
LZH pmax pmax
comp=Z,200nm,6.0s
LZH LR LR
comp=Z,2μm,15.7s
LZH LR LR
comp=Z,3μm,15.1s
LZH LR LR
comp=Z,3μm,16.6s
MOY Mondy 31.60 307 *e*P **P 13 41 15.7 -0.3**
MOY pmax pmax
comp=Z,58nm,1.8s
TIXI Tiksi 32.98 352 ⇑ *e*P **P 13 41 26.8 -0.9**
TIXI pmax pmax
comp=Z,23nm,1.0s
TIXI Tiksi 32.98 352 P **P 13 41 27.1 -0.6**
GYA Guiyang 33.25 258 ⇑ P **P 13 41 30.3 -0.4**
GYA S **S 13 46 45.6 -3.9**
GYA pmax pmax
comp=Z,78nm,0.9s
GYA pmax pmax
comp=Z,190nm,3.5s
GYA LR LR
comp=Z,820nm,13.3s
GYA LR LR
comp=Z,880nm,12.5s
GYA LR LR
comp=Z,1μm,13.0s
CD2 Chengdu 33.31 267 P **P 13 41 30.6 -0.5**
CD2 S **S 13 46 48.3 -2.0**
CD2 sS pS 13 46 56.9 -1.2
CD2 SS **SnSn 13 48 47.3 -4.3**
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,340nm,12.0s
CD2 LR LR
comp=Z,3μm,13.6s
CD2 LR LR
comp=Z,2μm,15.2s
CD2 LR LR
comp=Z,4μm,13.8s
GTA Gaotai 33.41 284 ⇑ P **P 13 41 32.3 +0.3**
GTA pP pP 13 41 36.8 -1.9
GTA sP pwP 13 41 39.4 -2.3
GTA PcP **PcP 13 44 14.3 +1.3**
GTA S **S 13 46 51.4 -0.4**
GTA sS pS 13 46 59.8 +0.3
GTA ScP **ScP 13 47 57.3 +1.5**
GTA PcS **PcS 13 47 59.6 +0.8**
GTA pmax pmax
comp=Z,25nm,1.3s
GTA pmax pmax
comp=Z,260nm,6.7s
GTA LR LR
comp=Z,890nm,17.8s
GTA LR LR
comp=Z,3μm,16.4s
GTA LR LR
comp=Z,4μm,16.4s
QIZ Qiongzhong 35.44 244 P **P 13 41 46.1 -3.4**
QIZ PP **PP 13 43 07.0 -3.2**
QIZ S **S 13 47 19.4 -3.7**
QIZ LR LR
comp=Z,740nm,16.0s
QIZ LR LR
comp=Z,750nm,15.9s
QIZ LR LR
comp=Z,1μm,13.9s
KMI Kunming 36.95 259 ⇑ *e*P **P 13 42 02.6 -0.1**
KMI pP pP 13 42 07.4 -2.1
KMI sP pwP 13 42 09.3 -3.2
KMI PP **PnPn 13 43 27.3 +0.1**
KMI S **S 13 47 44.5 -2.1**
KMI pmax pmax
comp=Z,41nm,1.1s
KMI pmax pmax
comp=Z,270nm,8.6s
KMI LR LR
comp=Z,1μm,15.8s
KMI LR LR
comp=Z,880nm,20.4s
KMI LR LR
comp=Z,1μm,16.8s
KMI Kunming 36.95 259 P **P 13 42 02.1 -0.6**
KMI pmax pmax
comp=Z,55nm,1.1s
KMI Kunming 36.95 259 P **P 13 42 02.0 -0.6**
SLVN Son La 38.25 253 P **P 13 42 13.1 -0.4**
NONG Nongkai 40.85 250 P **P 13 42 36.1 +1.0**
comp=Z,8μmcomp=Z,28nm,0.7s
MYLDM Lahad Datu 40.98 220 P **P 13 42 35.2 -1.0**
MYLDM IAmb IAmb 13 42 59.4
comp=Z,40nm,1.0s
WMQ Urumqi 41.16 295 P **P 13 42 38.8 +1.2**
WMQ pP pP 13 42 44.4 -0.1
WMQ sP pwP 13 42 48.3 +1.0
WMQ pmax pmax
comp=Z,120nm,1.1s
WMQ pmax pmax
comp=Z,450nm,4.1s
WMQ LR LR
comp=Z,1μm,15.5s
WMQ LR LR
comp=Z,910nm,14.7s
WMQ LR LR
comp=Z,980nm,17.9s
WMQ Urumqi 41.16 295 P **P 13 42 38.0 +0.4**
WMQ pmax pmax
comp=Z,82nm,1.0s
WMQ Urumqi 41.16 295 P **P 13 42 38.0 +0.4**
ZAA0 Zalesovo Array 41.42 310 P **P 13 42 38.9 -0.6**
ZAA0 IAmb IAmb 13 42 40.7
comp=Z,21nm,0.8s
ZALV Zalesovo Beam 41.42 310 P **P 13 42 39.6 +0.1**
comp=Z,23nm,0.8s,baz=86,slow=7.7,SNR=72
ZALV PcP **PcP 13 44 36.0 -1.0**
comp=Z,7.8nm,0.8s,baz=93,slow=3.7,SNR=4.3
ZALV LR LR 14 00 38.3
comp=Z,741nm,18.7s,baz=96,slow=37
ZALV Zalesovo Beam 41.42 310 P **P 13 42 38.9 -0.6**
SMPI Sarmi 41.59 187 P **P 13 42 43.1 +1.9**
comp=Z,13nm,1.3s
NRIK Noril'sk 41.65 334 P **P 13 42 41.0 -0.1**
comp=Z,4.4nm,0.9s,baz=97,slow=6.5,SNR=11
NRIK LR LR 14 01 35.0
comp=Z,1μm,18.1s,baz=119,slow=38
NRIK Noril'sk 41.65 334 *c i*P **P 13 42 40.9 -0.3**
NRIK pmax pmax
comp=Z,21nm,1.5s
SIJI Sorong 41.77 198 P **P 13 42 41.1 -1.5**
comp=Z,7.3nm,0.7s,baz=120,slow=23,SNR=2.6
JAY Jayapura 41.96 184 P **P 13 42 45.1 +0.8**
comp=Z,7.6nm,0.9s,baz=316,slow=9.0,SNR=3.2
ZSN Zaisan 42.30 301 *e*P **P 13 42 47.0 +0.3**
comp=Z,18nm,1.0s,baz=301
ZSN LR LR 14 00 47.2
comp=Z,169nm,11.6s,baz=301
ZSN Zaisan 42.30 301 *e*P **P 13 42 47.0 +0.3**
ZSN pmax pmax
comp=Z,18nm,1.0s
ZSN MLR MLR
comp=Z,169nm,12.0s
PAYA Payao 42.45 255 P **P 13 42 51.3 +3.0**
comp=Z,2μmcomp=Z,167nm,0.8s
SVW2 Sparrevohn 42.55 39 P **P 13 42 50.6 +2.0**
UTTA Uttaradit 42.94 252 P **P 13 42 52.9 +0.7**
comp=Z,250nmcomp=Z,28nm,0.9s
GTOI Gorontalo 43.01 211 P **P 13 42 52.2 -0.6**
comp=Z,16nm,0.9s
CHAI Chaiyaphum 43.09 249 P **P 13 42 53.8 +0.3**
comp=Z,541nmcomp=Z,47nm,0.8s
LAMP Lampang 43.14 254 P **P 13 42 55.0 +1.1**
comp=Z,36nm,0.8s
CMMT Chiang Mai 43.47 255 P **P 13 42 56.8 +0.3**
comp=Z,181nmcomp=Z,12nm,0.9s
CHTO Chiang Mai 43.47 255 P **P 13 42 56.1 -0.4**
CHTO pmax pmax
comp=Z,15nm,0.8s
CHTO Chiang Mai 43.47 255 P **P 13 42 56.1 -0.4**
FAKI Fak Fak 43.52 196 P **P 13 42 57.6 +0.8**
LSA Lhasa 43.59 274 P **P 13 42 58.8 +0.8**
LSA pmax pmax
comp=Z,28nm,1.0s
LSA Lhasa 43.59 274 P **P 13 42 59.1 +1.1**
LSA Lhasa 43.59 274 P **P 13 42 57.6 -0.4**
LSA pmax pmax
comp=Z,19nm,0.9s
LSA Lhasa 43.59 274 P **P 13 42 57.6 -0.4**
LSA IAmb IAmb 13 43 01.4
comp=Z,19nm,0.9s
IMAR Indian Mountai 43.66 32 P **P 13 42 59.1 +1.6**
CM31 Chiang Mai Arr 43.69 254 P **P 13 42 57.9 -0.5**
CMAR Chiang Mai Arr 43.69 254 P **P 13 42 58.8 +0.5**
comp=Z,5.7nm,0.7s,baz=44,slow=7.2,SNR=43
CMAR LR LR 14 03 05.9
comp=Z,350nm,19.1s,baz=95,slow=39
CMAR Chiang Mai Arr 43.69 254 P **P 13 42 57.8 -0.5**
SUKH Sukhothai 43.79 253 P **P 13 43 00.1 +1.0**
comp=Z,44nm,0.8s
OHAK Old Harbor 43.82 45 P **P 13 42 59.7 +0.8**
OHAK IAmb IAmb 13 43 08.2
comp=Z,32nm,1.3s
RSO Redoubt South 43.93 40 P **P 13 43 01.3 +1.3**
MK31 Makanchi Array 44.16 300 *i*P **P 13 43 01.7 -0.1**
MK31 Makanchi Array 44.16 300 P **P 13 43 01.6 -0.1**
MK31 IAmb IAmb 13 43 03.2
comp=Z,33nm,0.9s
MKAR Makanchi Array 44.16 300 P **P 13 43 02.3 +0.5**
comp=Z,27nm,0.8s,baz=83,slow=9.0,SNR=114
MKAR LR LR 14 02 20.6
comp=Z,1μm,18.4s,baz=78,slow=37
MKAR Makanchi Array 44.16 300 *ce*P **P 13 43 01.9 +0.1**
MKAR pmax pmax
comp=Z,28nm,0.8s
MKAR Makanchi Array 44.16 300 P **P 13 43 01.7 -0.1**
KDAK Kodiak Island 44.16 44 P **P 13 43 03.3 +1.7**
KDAK pmax pmax
comp=Z,38nm,1.2s
KDAK Kodiak Island 44.16 44 P **P 13 43 03.3 +1.7**
KDAK IAmb IAmb 13 43 11.2
comp=Z,38nm,1.2s
PPLA Purkeypile 44.18 36 P **P 13 43 04.0 +2.1**
SRAK Srakaew 44.31 247 P **P 13 43 00.0 -3.3**
comp=Z,2μmcomp=Z,263nm,0.9s
MAKZ Makanchi 44.36 300 P **P 13 43 03.3 -0.1**
MAKZ pmax pmax
comp=Z,43nm,1.0s
MAKZ Makanchi 44.36 300 P **P 13 43 03.3 -0.1**
MAKZ IAmb IAmb 13 43 04.9
comp=Z,43nm,1.0s
SANI Sanana 44.41 205 P **P 13 43 03.6 -0.4**
comp=Z,24nm,0.8s
MHMT Maesarieng 44.62 255 P **P 13 43 06.8 +1.1**
SEM Semipalatinsk 44.70 306 *e*P **P 13 43 04.9 -1.4**
comp=Z,11nm,0.9s,baz=306
SEM LR LR 14 02 09.0
comp=Z,168nm,12.6s,baz=306
SEM Semipalatinsk 44.70 306 *e*P **P 13 43 04.9 -1.4**
SEM pmax pmax
comp=Z,11nm,0.9s
SEM MLR MLR
comp=Z,168nm,13.0s
SHL Shillong 45.05 268 P **P 13 43 11.6 +2.3**
SNR=10
SHL Shillong 45.05 268 P **P 13 43 08.0 -1.3**
SHL pmax pmax
comp=Z,22nm,0.9s
SHL Shillong 45.05 268 P **P 13 43 08.0 -1.3**
SHL IAmb IAmb 13 43 15.6
comp=Z,22nm,0.9s
I23K Minto, Yukon-K 45.44 33 P **P 13 43 13.7 +2.0**
I23K IAmb IAmb 13 43 30.1
comp=Z,19nm,1.3s
PMR Palmer 45.65 38 P **P 13 43 14.3 +1.0**
PMR pmax pmax
comp=Z,17nm,1.4s
PMR Palmer 45.65 38 P **P 13 43 14.3 +1.0**
KURK Kurchatov 45.65 306 P **P 13 43 13.7 +0.1**
KURK Kurchatov 45.65 306 *c i*P **P 13 43 13.4 -0.2**
KURK pmax pmax

	comp=Z,66nm,0.8s							
KURK	**Kurchatov**	**45.65**	**306**	P	**P**	**13**	**43**	**13.3 -0.2**
KURBB	**Kurchatov Arra**	**45.73**	**306**	P	**P**	**13**	**43**	**14.2 0.0**
	comp=Z,47nm,0.8s,baz=81,slow=8.2,SNR=239							
KURBB	**Kurchatov Arra**	**45.73**	**306**	P	**P**	**13**	**43**	**13.9 -0.3**
IL31		**46.50**	**34**	P	**P**	**13**	**43**	**20.6 +0.5**
ILAR	**Eielson Array**	**46.50**	**34**	P	**P**	**13**	**43**	**20.9 +0.8**
	comp=Z,2.8nm,0.7s,baz=260,slow=5.4,SNR=31							
ILAR	**Eielson Array**	**46.50**	**34**	P	**P**	**13**	**43**	**20.4 +0.3**
M24K	**Tolsona, Glenn**	**47.00**	**37**	P	**P**	**13**	**43**	**25.1 +1.0**
PDGK	**Podgornoye**	**47.02**	**296**	P	**P**	**13**	**43**	**24.1 -0.5**
SHLS	**Shalkode**	**47.10**	**296**	*e*P	**P**	**13**	**43**	**22.2 -3.0**
	comp=Z,7.4nm,0.8s,baz=296							
SHLS				LR	LR	14	04	39.3
	comp=Z,447nm,15.1s,baz=296							
SHLS	**Shalkode**	**47.10**	**296**	*e*P	**P**	**13**	**43**	**22.2 -3.0**
SHLS				pmax	pmax			
	comp=Z,7.0nm,0.8s							
SHLS				MLR	MLR			
	comp=Z,447nm,15.0s							
TDK	**Taldyqorghan**	**47.25**	**299**	*e*P	**P**	**13**	**43**	**26.1 -0.1**
	comp=Z,35nm,0.8s,baz=299							
TDK				LR	LR	14	03	09.0
	comp=Z,630nm,14.5s,baz=299							
TDK	**Taldyqorghan**	**47.25**	**299**	*e*P	**P**	**13**	**43**	**26.1 -0.1**
TDK				pmax	pmax			
	comp=Z,35nm,0.8s							
TDK				MLR	MLR			
	comp=Z,630nm,15.0s							
TAPN	**Taplejung**	**47.37**	**273**	*e*P	**P**	**13**	**43**	**28.2 +0.4**
	comp=Z,109nm,1.2s							
KPKS	**Kokpek**	**47.54**	**297**	*e*P	**P**	**13**	**43**	**28.1 -0.6**
	comp=Z,20nm,1.2s,baz=297							
KPKS				LR	LR	14	03	57.1
	comp=Z,587nm,15.3s,baz=297							
KPKS	**Kokpek**	**47.54**	**297**	*e*P	**P**	**13**	**43**	**28.0 -0.6**
KPKS				pmax	pmax			
	comp=Z,20nm,1.2s							
KPKS				MLR	MLR			
	comp=Z,587nm,15.0s							
SATY	**Saty**	**47.86**	**296**	*e*P	**P**	**13**	**43**	**30.7 -0.4**
	comp=Z,4.7nm,0.9s,baz=297							
SATY				LR	LR	14	03	24.2
	comp=Z,274nm,14.7s,baz=297							
SATY	**Saty**	**47.86**	**296**	*e*P	**P**	**13**	**43**	**30.7 -0.4**
SATY				pmax	pmax			
	comp=Z,5.0nm,0.9s							
SATY				MLR	MLR			
	comp=Z,274nm,15.0s							
ODAN	**Odare**	**47.86**	**272**	*e*P	**P**	**13**	**43**	**31.9 +0.4**
	comp=Z,91nm,0.9s							
MTKI	**Muara Teweh, K**	**48.05**	**220**	P	**P**	**13**	**43**	**33.7 +1.0**
RAMN	**Ramite**	**48.43**	**273**	*e*P	**P**	**13**	**43**	**36.1 +0.2**
	comp=Z,140nm,0.9s							
KSM	**Kuching**	**48.45**	**227**	P	**P**	**13**	**43**	**36.1 +0.3**
KSM				IAmb	IAmb	13	43	55.5
	comp=Z,18nm,1.0s							
GUN	**Gumba**	**48.51**	**274**	*e*P	**P**	**13**	**43**	**37.0 +0.4**
	comp=Z,177nm,0.7s							
CHKK	**Chushkaly**	**48.58**	**298**	*e*P	**P**	**13**	**43**	**35.9 -0.6**
	baz=298							
CHKK	**Chushkaly**	**48.58**	**298**	*e*P	**P**	**13**	**43**	**35.9 -0.6**
BNSI	**Bone**	**48.76**	**212**	P	**P**	**13**	**43**	**39.1 +1.0**
	comp=Z,32nm,1.0s							
MDOK	**Medeo**	**48.76**	**297**	*e*P	**P**	**13**	**43**	**38.2 0.0**
	baz=297							
MDOK				LR	LR	14	03	43.6
	comp=Z,850nm,16.8s,baz=297							
MDOK	**Medeo**	**48.76**	**297**	*e*P	**P**	**13**	**43**	**38.1 0.0**
MDOK				MLR	MLR			
	comp=Z,850nm,17.0s							
AAA	**Alma-Ata**	**48.84**	**297**	*e*P	**P**	**13**	**43**	**38.8 +0.1**
	comp=Z,19nm,1.0s,baz=297							
AAA				LR	LR	14	04	17.3
	comp=Z,780nm,17.8s,baz=297							
AAA	**Alma-Ata**	**48.84**	**297**	*e*P	**P**	**13**	**43**	**38.7 +0.1**
AAA				pmax	pmax			
	comp=Z,19nm,1.0s							
AAA				MLR	MLR			
	comp=Z,780nm,18.0s							
TNSS	**Tian-Shan**	**48.88**	**297**	*e*P	**P**	**13**	**43**	**39.3 -0.1**
	baz=297							
TNSS	**Tian-Shan**	**48.88**	**297**	*e*P	**P**	**13**	**43**	**39.2 -0.1**
KUU	**Kurty**	**49.01**	**298**	*e*P	**P**	**13**	**43**	**39.1 -0.8**
	comp=Z,34nm,0.8s,baz=298							
KUU				LR	LR	14	04	46.9
	comp=Z,708nm,17.1s,baz=298							
KUU	**Kurty**	**49.01**	**298**	*e*P	**P**	**13**	**43**	**39.0 -0.8**
KUU				pmax	pmax			
	comp=Z,34nm,0.8s							
KUU				MLR	MLR			
	comp=Z,708nm,17.0s							
KKN	**Kakani**	**49.03**	**275**	*e*P	**P**	**13**	**43**	**41.0 +0.6**
	comp=Z,142nm,0.7s							
PKI	**Pulchoki**	**49.04**	**274**	*e*P	**P**	**13**	**43**	**40.8 +0.1**
	comp=Z,38nm,0.9s							
PKIN	**Phulchoki**	**49.05**	**274**	*e*P	**P**	**13**	**43**	**40.5 -0.1**
	comp=Z,32nm,0.7s							
DMN	**Daman**	**49.25**	**275**	*e*P	**P**	**13**	**43**	**42.6 +0.4**
	comp=Z,100nm,1.1s							
GKN	**Gorkha**	**49.42**	**275**	*e*P	**P**	**13**	**43**	**43.5 +0.1**
	comp=Z,71nm,0.8s							
KAPI	**Kappang**	**49.46**	**212**	LR	LR	14	05	41.0
	comp=Z,115nm,18.5s,baz=29,slow=37							
BRZS	**Berezniki**	**49.52**	**307**	*e*P	**P**	**13**	**43**	**42.8 -0.9**
	comp=Z,6.8nm,0.7s,baz=307							
BRZS	**Berezniki**	**49.52**	**307**	*e*P	**P**	**13**	**43**	**42.8 -0.9**
BRZS				pmax	pmax			
	comp=Z,7.0nm,0.7s							
ULHL	**Ulahol**	**49.64**	**296**	P	P	**13**	**43**	**45.9 +1.0**
	SNR=5.5							
TKM2	**Tokmak 2**	**49.85**	**297**	P	**P**	**13**	**43**	**47.4 +0.9**
	SNR=24							
TKM2	**Tokmak 2**	**49.85**	**297**	P	**P**	**13**	**43**	**46.8 +0.3**
DANN	**Dangsing**	**49.92**	**276**	*e*P	**P**	**13**	**43**	**48.0 +0.6**
	comp=Z,292nm,0.7s							
BVAR	**Borovoye Array**	**50.06**	**311**	P	**P**	**13**	**43**	**47.4 -0.4**
	comp=Z,20nm,0.9s,baz=222,slow=26,SNR=84							
BRVK	**Borovoye**	**50.12**	**311**	*c i*P	**P**	**13**	**43**	**48.5 +0.4**
BRVK				pmax	pmax			
	comp=Z,37nm,1.0s							
BRVK	**Borovoye**	**50.12**	**311**	P	**P**	**13**	**43**	**48.1 0.0**
BTLS	**Baital**	**50.17**	**300**	*e*P	**P**	**13**	**43**	**47.9 -0.7**
	comp=Z,6.9nm,1.0s,baz=300							
BTLS				LR	LR	14	05	32.5
	comp=Z,194nm,14.0s,baz=300							
BTLS	**Baital**	**50.17**	**300**	*e*P	**P**	**13**	**43**	**47.9 -0.7**
BTLS				pmax	pmax			
	comp=Z,7.0nm,1.0s							
BTLS				MLR	MLR			
	comp=Z,194nm,14.0s							
SGDS	**Sogindy**	**50.32**	**298**	*e*P	**P**	**13**	**43**	**49.6 -0.4**
	comp=Z,6.8nm,0.9s,baz=298							
SGDS				LR	LR	14	05	34.1
	comp=Z,234nm,14.5s,baz=298							
SGDS	**Sogindy**	**50.32**	**298**	*e*P	**P**	**13**	**43**	**49.5 -0.4**
SGDS				pmax	pmax			
	comp=Z,7.0nm,0.9s							
SGDS				MLR	MLR			
	comp=Z,234nm,15.0s							
KOLN	**Koldanda**	**50.33**	**276**	*e*P	**P**	**13**	**43**	**50.7 +0.3**
	comp=Z,230nm,1.3s							
KBK	**Karagaybulak**	**50.39**	**297**	P	**P**	**13**	**43**	**51.2 +0.6**
	SNR=47							
CHMS	**Chumysh**	**50.40**	**298**	P	**P**	**13**	**43**	**50.5 0.0**
	SNR=7.7							
PYUN	**Piuthan**	**50.64**	**276**	*e*P	**P**	**13**	**43**	**53.2 +0.5**
	comp=Z,234nm,1.1s							
AAK	**Ala-Archa**	**50.71**	**297**	LR	LR	14	06	26.0
	comp=Z,1μm,19.3s,baz=83,slow=37							
AAK	**Ala-Archa**	**50.71**	**297**	P	**P**	**13**	**43**	**53.3 +0.3**
	SNR=11							
AAK	**Ala-Archa**	**50.71**	**297**	*i* P	**P**	**13**	**43**	**53.3 +0.3**
	SNR=16							
AAK	**Ala-Archa**	**50.71**	**297**	P	**P**	**13**	**43**	**53.0 +0.1**
AAK	**Ala-Archa**	**50.71**	**297**	*c i*P	**P**	**13**	**43**	**53.1 +0.1**
AAK				pmax	pmax			
	comp=Z,80nm,1.7s							
KSH	**Kashi**	**50.85**	**293**	P	P	13	43	58.6 +4.6
KSH				pP	pP	13	44	03.4 +2.4
KSH				PP	**PP**	**13**	**45**	**56.5 +6.4**
KSH				S	**S**	**13**	**51**	**11.1 +2.4**
KSH				pmax	pmax			
	comp=Z,60nm,1.1s							
KSH				pmax	pmax			
	comp=Z,280nm,4.6s							
KSH				LR	LR			
	comp=Z,460nm,7.8s							
KSH				LR	LR			
	comp=Z,640nm,8.2s							
KSH				LR	LR			
	comp=Z,540nm,9.4s							
HNR	**Honiara**	**51.12**	**159**	P	**P**	**13**	**43**	**56.9 +0.9**
	comp=Z,33nm,0.3s,baz=105,slow=6.0,SNR=1.8							
HNR	**Honiara**	**51.12**	**159**	P	**P**	**13**	**43**	**56.9 +0.9**
HNR				pmax	pmax			
	comp=Z,105nm,1.2s							
EKS2	**Erkin-Say**	**51.19**	**297**	P	**P**	**13**	**43**	**56.5 -0.1**
	SNR=23							
HYT	**Haines Junctio**	**51.32**	**38**	P	**P**	**13**	**43**	**58.8 +1.6**
HYT				IAmb	IAmb	13	44	27.0
	comp=Z,22nm,1.0s							
AML	**Almayashu**	**51.44**	**297**	P	**P**	**13**	**43**	**59.6 +0.9**
	SNR=31							
KULM	**Kulim**	**51.46**	**240**	P	**P**	**13**	**43**	**58.5 -0.2**
IPM	**Ipoh**	**51.81**	**239**	P	**P**	**13**	**44**	**00.7 -0.6**
IPM				IAmb	IAmb	13	44	16.5
	comp=Z,21nm,1.3s							
MYKOM	**Kota Tinggi**	**52.04**	**234**	P	**P**	**13**	**44**	**02.5 -0.5**
MYKOM				IAmb	IAmb	13	44	04.5
	comp=Z,24nm,1.2s							
EDFI	**Ende, Flores**	**52.14**	**208**	P	**P**	**13**	**44**	**03.0 -0.8**
	comp=Z,8.0nm,0.8s							
DZA	**Taraz**	**52.77**	**299**	*e*P	**P**	**13**	**44**	**08.1 -0.2**
	comp=Z,13nm,0.8s,baz=299							
DZA	**Taraz**	**52.77**	**299**	*e*P	**P**	**13**	**44**	**08.0 -0.2**
DZA				pmax	pmax			
	comp=Z,13nm,0.8s							
BATI	**Baumata**	**52.83**	**205**	LR	LR	14	06	00.2
	comp=Z,184nm,20.4s,baz=28,slow=35							
KK31	**Karatay Array**	**53.25**	**299**	*i* P	**P**	**13**	**44**	**11.2 -0.5**
KK31	**Karatay Array**	**53.25**	**299**	P	**P**	**13**	**44**	**11.0 -0.7**
KK31				IAmb	IAmb	13	44	12.8
	comp=Z,16nm,0.9s							
KKAR	**Karatay Array**	**53.25**	**299**	P	**P**	**13**	**44**	**11.2 -0.5**
KKAR				pmax	pmax			
	comp=Z,16nm,0.9s							
KKAR	**Karatay Array**	**53.25**	**299**	P	**P**	**13**	**44**	**11.1 -0.6**
KKAR				IAmb	IAmb	13	44	12.8
	comp=Z,16nm,0.9s							
KKAR	**Karatay Array**	**53.25**	**299**	P	**P**	**13**	**44**	**11.2 -0.5**
COEN	**Coen**	**53.26**	**180**	P	**P**	**13**	**44**	**12.6 +0.7**
MTN	**Manton Dam**	**53.40**	**195**	P	**P**	**13**	**44**	**13.1 +0.2**
MTN				IAmb	IAmb	13	44	16.7
	comp=Z,11nm,0.8s							
PPBI	**Pangkal Pinang**	**53.80**	**229**	P	**P**	**13**	**44**	**17.6 +1.7**
IUG	**Iuzhnay**	**53.95**	**298**	*e*P	**P**	**13**	**44**	**16.8 -0.2**
	comp=Z,12nm,1.4s,baz=298							
IUG				LR	LR	14	07	55.1
	comp=Z,94nm,13.2s,baz=298							
IUG	**Iuzhnay**	**53.95**	**298**	*e*P	**P**	**13**	**44**	**16.7 -0.2**
IUG				pmax	pmax			
	comp=Z,12nm,1.4s							
IUG				MLR	MLR			
	comp=Z,94nm,13.0s							
LHMI	**Lhok Sumawe**	**54.02**	**243**	P	**P**	**13**	**44**	**15.6 -2.1**
SVE	**Sverdlovsk**	**54.31**	**318**	*de*P	**P**	**13**	**44**	**19.9 +0.7**
SVE				pmax	pmax			
	comp=Z,66nm,1.1s							
SVE				MLR	MLR			
	comp=Z,3μm,15.0s							
PSI	**Prapat**	**54.45**	**239**	LR	LR	14	09	32.0
	comp=Z,307nm,18.2s,baz=89,slow=38							
C36M	**Paulatuk**	**54.45**	**26**	P	**P**	**13**	**44**	**20.2 +0.1**
C36M				IAmb	IAmb	13	44	43.5
	comp=Z,21nm,1.4s							
BKNI	**Bangkinang**	**54.94**	**235**	P	**P**	**13**	**44**	**23.9 -0.4**
GAR	**Garm**	**55.06**	**295**	P	**P**	**13**	**44**	**24.3 -0.8**
GAR				IAmb	IAmb	13	44	25.8
	comp=Z,32nm,1.1s							
NIL	**Nilore**	**55.34**	**287**	P	**P**	**13**	**44**	**28.1 +1.0**
NIL	**Nilore**	**55.34**	**287**	P	**P**	**13**	**44**	**26.9 -0.2**
NIL				pmax	pmax			
	comp=Z,56nm,1.1s							
NIL	**Nilore**	**55.34**	**287**	P	**P**	**13**	**44**	**26.9 -0.2**
ARU	**Arti**	**55.52**	**318**	LR	LR	14	10	48.8
	comp=Z,2μm,18.1s,baz=63,slow=39							
ARU	**Arti**	**55.52**	**318**	*c i*P	**P**	**13**	**44**	**28.4 +0.4**
ARU						13	45	31.0
ARU						13	46	31.8
ARU				S	**S**	**13**	**52**	**13.4 +1.9**
ARU						13	54	13.1
ARU				pmax	pmax			
	comp=Z,70nm,0.9s							
ARU				MLR	MLR			
	comp=Z,2μm,15.0s							
ARU	**Arti**	**55.52**	**318**	P	**P**	**13**	**44**	**27.9 0.0**
DLBC	**Dease Lake**	**55.65**	**39**	P	**P**	**13**	**44**	**31.3 +2.3**
	comp=Z,1.5nm,0.8s,baz=304,slow=11,SNR=3.9							
SDSI	**Sungai Dareh**	**55.67**	**234**	P	**P**	**13**	**44**	**30.1 +0.6**
	comp=Z,47nm,1.1s							
PWJI	**Pagerwojo**	**55.68**	**219**	P	**P**	**13**	**44**	**29.0 -0.6**
	comp=Z,67nm,0.8s							
SDHHI	**Sand Hill**	**55.95**	**92**	P	**P**	**13**	**44**	**32.7 +1.0**
CHGR	**Chuyangaron**	**56.02**	**295**	P	**P**	**13**	**44**	**31.4 -0.6**
GSI	**Gunungsitoli**	**56.46**	**239**	P	**P**	**13**	**44**	**37.4 +2.2**
GSI	**Gunungsitoli**	**56.46**	**239**	P	**P**	**13**	**44**	**34.5 -0.7**
KNRA	**Kununurra**	**56.65**	**197**	P	**P**	**13**	**44**	**36.2 -0.1**
KNRA				IAmb	IAmb	13	44	45.0
	comp=Z,16nm,1.0s							
KLSI		**56.66**	**228**	P	**P**	**13**	**44**	**37.3 +0.7**
	comp=Z,10nm,1.4s							
LHSI	**Lahat**	**56.67**	**230**	P	**P**	**13**	**44**	**37.4 +0.8**
	comp=Z,62nm,1.0s							
MDSI	**Maura Dua**	**56.81**	**229**	P	**P**	**13**	**44**	**37.9 +0.2**
	comp=Z,27nm,1.4s							
EUNU	**Eureka**	**57.43**	**9**	P	**P**	**13**	**44**	**41.3 0.0**
AB31	**Akbulak array**	**57.53**	**310**	*i* P	**P**	**13**	**44**	**42.4 0.0**
ABKAR	**Akbulak array**	**57.53**	**310**	P	**P**	**13**	**44**	**42.2 -0.2**
KBL	**Kabul**	**58.00**	**290**	P	**P**	**13**	**44**	**45.8 -0.4**
	SNR=16							
KBL	**Kabul**	**58.00**	**290**	P	**P**	**13**	**44**	**45.3 -0.9**
KBL				pmax	pmax			
	comp=Z,27nm,0.9s							
KBL	**Kabul**	**58.00**	**290**	P	**P**	**13**	**44**	**45.2 -0.9**
KBL				IAmb	IAmb	13	45	03.1
	comp=Z,26nm,0.9s							
AKTO	**Aktyubinsk**	**58.17**	**311**	LR	LR	14	11	02.9
	comp=Z,435nm,19.9s,baz=66,slow=37							
KIRV	**Kirov**	**59.18**	**323**	*c i*P	**P**	**13**	**44**	**54.0 +0.3**
WB0	**Warramunga Arr**	**59.64**	**190**	P	**P**	**13**	**44**	**56.9 -0.4**
WB0				IAmb	IAmb	13	45	02.4
	comp=Z,11nm,0.8s							
FITZ	**Fitzroy Crossi**	**59.73**	**200**	P	**P**	**13**	**44**	**57.0 -1.0**
	comp=Z,4.4nm,0.9s,baz=12,slow=7.6,SNR=8.8							
FITZ				LR	LR	14	10	16.0
	comp=Z,72nm,20.5s,baz=26,slow=36							
FITZ	**Fitzroy Crossi**	**59.73**	**200**	P	**P**	**13**	**44**	**58.2 +0.2**
RES	**Resolute Bay**	**59.74**	**15**	P	**P**	**13**	**44**	**57.1 -0.2**
	comp=Z,6.0nm,0.9s,baz=318,slow=4.5,SNR=6.8							
RES	**Resolute Bay**	**59.74**	**15**	P	**P**	**13**	**44**	**57.6 +0.2**
RES				pmax	pmax			
	comp=Z,10.0nm,1.1s							
RES	**Resolute Bay**	**59.74**	**15**	P	**P**	**13**	**44**	**57.5 +0.2**
RES				IAmb	IAmb	13	45	10.7
	comp=Z,10nm,1.1s							
WRAB	**Tennant Creek**	**59.81**	**190**	*de*P	**P**	**13**	**44**	**58.0 -0.4**
WRAB				pmax	pmax			
	comp=Z,16nm,1.7s							
WRAB	**Tennant Creek**	**59.81**	**190**	P	**P**	**13**	**44**	**57.7 -0.8**
WR0	**Warramunga Arr**	**59.81**	**190**	P	**P**	**13**	**44**	**57.7 -0.7**
WR0				IAmb	IAmb	13	45	03.2
	comp=Z,8.3nm,0.8s							
WB2	**Warramunga Arr**	**59.81**	**190**	P	**P**	**13**	**44**	**57.9 -0.6**
WB2				IAmb	IAmb	13	45	03.3
	comp=Z,7.5nm,0.8s							
WRA	**Warramunga Arr**	**59.82**	**190**	P	**P**	**13**	**44**	**57.5 -1.0**
	comp=Z,4.0nm,0.7s,baz=7.3,slow=7.0,SNR=28							
WRA	**Warramunga Arr**	**59.82**	**190**	P	**P**	**13**	**44**	**57.3 -1.2**
HYB	**Hyderabad**	**59.86**	**268**	*i* P	**P**	**13**	**44**	**58.0 -1.1**
LVZ	**Lovozero**	**60.44**	**336**	P	**P**	**13**	**45**	**02.8 +0.5**
LVZ				pmax	pmax			
	comp=Z,39nm,1.2s							
LVZ	**Lovozero**	**60.44**	**336**	P	**P**	**13**	**45**	**02.8 +0.5**
YKA	**Yellowknife Ar**	**60.81**	**31**	P	**P**	**13**	**45**	**05.7 +0.8**
	comp=Z,2.6nm,1.0s,baz=311,slow=4.7,SNR=1.7							
TMCR	**Tamitsa**	**61.28**	**331**	*e*P	**P**	**13**	**45**	**08.3 +0.3**
TMCR				pmax	pmax			
	comp=Z,81nm,1.3s							
ARD2	**ARCESS Array S**	**62.16**	**339**	P	**P**	**13**	**45**	**14.5 +0.6**
ARD2				IAmb	IAmb	13	45	36.1
	comp=Z,18nm,1.2s							
ARC2	**ARCESS Array S**	**62.17**	**339**	P	**P**	**13**	**45**	**14.5 +0.6**
ARC2				IAmb	IAmb	13	45	36.3
	comp=Z,18nm,1.1s							
ARC1	**ARCESS Array S**	**62.17**	**339**	P	**P**	**13**	**45**	**14.7 +0.7**
ARC1				IAmb	IAmb	13	45	15.1
	comp=Z,17nm,1.2s							
ARCES	**ARCESS Array B**	**62.17**	**339**	P	**P**	**13**	**45**	**14.9 +0.9**
	comp=Z,4.6nm,0.8s,baz=50,slow=8.0,SNR=7.8							
ARCES				LR	LR	14	14	53.7
	comp=Z,509nm,21.9s,baz=65,slow=38							
KLMR	**Klimovskoe**	**62.46**	**328**	*e*P	**P**	**13**	**45**	**14.9 -1.1**
KLMR				*e*		13	47	30.9
KLMR				pmax	pmax			
	comp=Z,54nm,1.5s							
KLMR	**Klimovskoe**	**62.46**	**328**	*e*P	**P**	**13**	**45**	**14.9 -1.1**
KLMR				AMP		13	45	17.4
	comp=Z,54nm,1.5s							
KLMR				*e*PP	**PP**	**13**	**47**	**31.0 -2.0**
KLMR				LQ	LQ	14	07	31.8
KLMR				LQ	LQ	14	07	31.8
KLMR				LR	LR	14	10	36.0
HRA	**Herat**	**62.95**	**293**	P	**P**	**13**	**45**	**18.6 -1.4**
HRA				IAmb	IAmb	13	45	21.1
	comp=Z,9.0nm,0.9s							
BELG	**Belogornoye**	**63.02**	**317**	*e*P	**P**	**13**	**45**	**19.2 -0.7**
BELG				pmax	pmax			
	comp=Z,15nm,0.9s							
DAG	**Danmarks Havn**	**63.37**	**355**	*i* P	**P**	**13**	**45**	**22.0 +0.2**
DAG				pmax	pmax			
	comp=Z,13nm,1.0s							
DAG	**Danmarks Havn**	**63.37**	**355**	*i* P	**P**	**13**	**45**	**22.0 +0.2**
	comp=Z,13nm,1.0s							
DAG				*i*		13	45	41.9
DAG	**Danmarks Havn**	**63.37**	**355**	*i* P	**P**	**13**	**45**	**22.0 +0.2**
DAG				IAmb	IAmb	13	45	23.1
	comp=Z,13nm,1.0s							
DAG				*i*		13	45	42.0
AS31	**Alice Springs**	**63.54**	**190**	P	**P**	**13**	**45**	**23.8 +0.2**
ASAR	**Alice Springs**	**63.54**	**190**	P	**P**	**13**	**45**	**23.6 0.0**
	comp=Z,2.8nm,0.8s,baz=9.3,slow=6.7,SNR=22							
ASAR				LR	LR	14	12	47.9
	comp=Z,88nm,20.2s,baz=27,slow=36							
ASAR	**Alice Springs**	**63.54**	**190**	P	**P**	**13**	**45**	**23.7 +0.1**
ASAR	**Alice Springs**	**63.54**	**190**	P	**P**	**13**	**45**	**23.7 +0.1**
GEYT	**Alibeck**	**64.00**	**299**	P	**P**	**13**	**45**	**26.8 +0.1**
	comp=Z,10nm,0.8s,baz=354,slow=1.5,SNR=15							
GEYT				LR	LR	14	15	12.1
	comp=Z,347nm,19.9s,baz=70,slow=38							
GEYT	**Alibeck**	**64.00**	**299**	IAmb	IAmb	13	45	27.9
	comp=Z,8.0nm,0.8s							
GYA0B	**ALIBECK ARRAY**	**64.00**	**299**	P	**P**	**13**	**45**	**26.3 -0.4**
GYA0B				IAmb	IAmb	13	45	27.8
	comp=Z,13nm,0.9s							
PSA00	**Pilbara Seismi**	**64.70**	**204**	P	**P**	**13**	**45**	**31.4 +0.2**
PSA00				IAmb	IAmb	13	45	38.9
	comp=Z,33nm,1.5s							
DZM	**Mont Dzumac**	**64.99**	**156**	*e*S	**S**	**13**	**54**	**16.0 +2.3**
	comp=Z,124nm,25.5s							
DZM	**Mont Dzumac**	**64.99**	**156**	*e*LR	LR	14	05	03.5
	comp=Z,454nm,22.2s							
EIDS	**Eidsvold**	**65.01**	**172**	P	**P**	**13**	**45**	**34.3 +1.2**
MOS	**Moscow**	**66.15**	**323**	*e*P	**P**	**13**	**45**	**39.2 -1.0**
MOS				*e*		13	45	55.6
MOS				pmax	pmax			
	comp=Z,34nm,0.6s							
MOS				MLR	MLR			
	comp=Z,1μm,16.0s							
VRH	**Novokhopyorsk**	**66.76**	**318**	*e*P	**P**	**13**	**45**	**43.0 -1.2**
VRH				pmax	pmax			
	comp=Z,20nm,0.7s							
VRH				MLR	MLR			
	comp=Z,2μm,16.0s							
C09A	**Chrisman Ranch**	**66.83**	**47**	P	**P**	**13**	**45**	**46.2 +1.4**
C09A				IAmb	IAmb	13	45	56.9
	comp=Z,9.8nm,1.1s							
OBN	**Obninsk**	**67.00**	**323**	LR	LR	14	15	18.6
	comp=Z,36nm,19.3s,baz=12,slow=36							
OBN	**Obninsk**	**67.00**	**323**	*e*P	**P**	**13**	**45**	**46.4 +0.7**
OBN				*e*		13	46	01.0
OBN				*e*		13	46	15.3
OBN				*e*		13	48	13.5
OBN				*e*PPP	PPP	13	49	49.2
OBN				pmax	pmax			
	comp=Z,77nm,2.5s							
OBN				MLR	MLR			
	comp=Z,1μm,15.0s							
OBN	**Obninsk**	**67.00**	**323**	P	**P**	**13**	**45**	**45.5 -0.2**
NEW	**Newport**	**67.21**	**46**	P	**P**	**13**	**45**	**47.3 +0.1**
NEW				pmax	pmax			
	comp=Z,16nm,1.4s							
NEW	**Newport**	**67.21**	**46**	P	**P**	**13**	**45**	**47.3 +0.1**
NEW				IAmb	IAmb	13	45	53.8
	comp=Z,16nm,1.4s							
FIA1	**FINESS Array S**	**67.30**	**332**	P	**P**	**13**	**45**	**47.4 -0.1**
FINES	**FINESS Array B**	**67.30**	**332**	P	**P**	**13**	**45**	**47.5 0.0**
	comp=Z,14nm,0.7s,baz=48,slow=7.4,SNR=48						

comp=Z,16nm,1.5s
PNTR Pine Nut 71.00 55 P **P** **13 46 12.3 +1.2**
PNTR IAmb IAmb 13 46 34.7
comp=Z,14nm,1.3s
IZAR Zarasai 71.11 328 *e*P **P** **13 46 12.4 +1.2**
STKA Stephens Creek 71.11 182 P **P** **13 46 11.4 +0.1**
comp=Z,2.7nm,1.0s,baz=326,slow=15,SNR=2.8
STKA Stephens Creek 71.11 182 P **P** **13 46 11.4 +0.1**
IDID Didziasalis 71.20 327 *e*P **P** **13 46 12.8 +1.1**
ISAL Salakas 71.28 328 *e*P **P** **13 46 13.5 +1.3**
SLIT Slitere, Latvi 71.34 331 *e*P **P** **13 46 12.8 +0.3**
IIGN Ignalina 71.39 328 *e*P **P** **13 46 14.0 +1.1**
DLMT Dillon 71.43 46 P **P** **13 46 13.9 +0.4**
NACGM Naroch 71.46 327 *e* **P** **13 46 14.0 +0.7**
NACGM *e*LR LR 14 19 57.0
MCMT McKenzie Canyo 71.62 47 P **P** **13 46 14.8 0.0**
BOZ Bozeman (W) 71.82 46 P **P** **13 46 16.5 +0.6**
BOZ pmax pmax
comp=Z,6.0nm,0.9s
BOZ Bozeman (W) 71.82 46 P **P** **13 46 16.5 +0.6**
WBK Wadi Bani Khal 71.85 285 P **P** **13 46 18.0 +1.8**
SNR=6.1
BANOM Banah 71.89 289 P **P** **13 46 17.1 +0.7**
SHME Shamm 71.93 289 P **P** **13 46 17.1 +0.3**
KVN Kaiserville 71.97 54 P **P** **13 46 18.2 +1.3**
KVN pmax pmax
comp=Z,10.0nm,1.1s
KVN Kaiserville 71.97 54 P **P** **13 46 18.2 +1.3**
PABE Paberze 72.20 329 *e*P **P** **13 46 18.4 +0.7**
NVAR Mina Array Bea 72.21 55 P **P** **13 46 19.5 +1.1**
comp=Z,4.1nm,1.0s,baz=289,slow=6.0,SNR=13
NVAR LR LR 14 10 25.5
comp=Z,90nm,21.8s,baz=282,slow=29
NVAR Mina Array Bea 72.21 55 P **P** **13 46 19.1 +0.7**
NC405 NORSAR Array S 72.24 338 P **P** **13 46 18.3 +0.4**
NC303 NORSAR Array S 72.25 338 P **P** **13 46 18.4 +0.4**
SMDO Samad 72.27 285 P **P** **13 46 19.5 +0.6**
MSFE Esma-Masafi 72.32 288 P **P** **13 46 19.4 +0.3**
BBOO Buckleboo 72.35 187 P **P** **13 46 19.5 +0.8**
BBOO IAmb IAmb 13 46 47.7
comp=Z,26nm,1.4s
SOC Sochi 72.37 312 *e*P **P** **13 46 18.0 -1.0**
SOC *e*PPP PPP 13 50 48.1
SOC *e*S **S** **13 55 42.2 +1.3**
SOC *e*SS **SS** **14 00 22.5 +4.0**
SOC MLR MLR
comp=Z,448nm,15.0s
NC204 NORSAR Array S 72.38 338 P **P** **13 46 19.0 +0.1**
NB201 NORSAR Array S 72.41 338 P **P** **13 46 19.4 +0.4**
NB2 NORSAR Subarra 72.44 338 P **P** **13 46 19.3 +0.1**
comp=Z,23nm,0.9s,baz=38,slow=6.2
NB2 NORSAR Subarra 72.44 338 P **P** **13 46 19.3 +0.1**
baz=38,slow=6.2
NOA NORSAR Array B 72.44 338 P **P** **13 46 19.4 +0.3**
comp=Z,12nm,0.8s,baz=38,slow=6.0,SNR=33
NOA LR LR 14 23 52.3
comp=Z,474nm,18.2s,baz=30,slow=40
UOSS Minazif 72.53 288 *i*P **P** **13 46 20.7 +0.5**
SNR=7.0
UOSS Minazif 72.53 288 P **P** **13 46 20.2 -0.1**
UOSS Minazif 72.53 288 P **P** **13 46 20.0 -0.3**
UOSS IAmb IAmb 13 46 21.4
comp=Z,18nm,0.8s
NBO00 NORSAR Array S 72.58 338 P **P** **13 46 20.4 +0.5**
NC602 NORSAR Array S 72.59 337 P **P** **13 46 20.2 +0.3**
NC602 IAmb IAmb 13 46 33.2
comp=Z,30nm,1.5s
JMDO Jabal Madar 72.63 285 P **P** **13 46 21.6 +0.7**
SNR=5.8
PBUR Paburge 72.64 330 *e*P **P** **13 46 21.2 +0.8**
HATD Hatta, Dubai 72.66 288 *i*P **P** **13 46 21.7 +0.7**
SNR=6.1
NAO01 NORSAR Array S 72.70 338 P **P** **13 46 21.4 +0.8**
SOHO SOHO 72.76 287 P **P** **13 46 22.0 +0.4**
ASHO Ashiyiah 72.79 288 P **P** **13 46 22.4 +0.5**
BSY Bisya 73.09 286 P **P** **13 46 24.1 +0.4**
SNR=6.2
TPH Tonopah 73.11 54 P **P** **13 46 25.7 +2.0**
TPH pmax pmax
comp=Z,34nm,1.1s
TPH Tonopah 73.11 54 P **P** **13 46 25.7 +2.0**
AKASG Malin Array Be 73.24 323 P **P** **13 46 24.1 0.0**
comp=Z,6.1nm,0.5s,baz=43,slow=6.2,SNR=5.5
AKASG LR LR 14 22 27.3
comp=Z,381nm,18.2s,baz=60,slow=39
AKASG Malin Array Be 73.24 323 P **P** **13 46 23.7 -0.3**
AKBB Malin Array Si 73.24 323 *ce*P **P** **13 46 24.0 0.0**
AKBB pmax pmax
comp=Z,17nm,0.9s
AKBB Malin Array Si 73.24 323 P **P** **13 46 23.7 -0.3**
AKBB IAmb IAmb 13 46 25.2
comp=Z,14nm,0.8s
ASUD Al Ashush, Dub 73.36 288 P **P** **13 46 25.9 +0.7**
MHTO MHTO 73.55 284 P **P** **13 46 26.6 +0.2**
SNR=15
SUW Suwalki 73.59 328 *e*P **P** **13 46 26.3 +0.3**
SUW Suwalki 73.59 328 P **P** **13 46 26.4 +0.4**
SUW pmax pmax
comp=Z,45nm,1.2s
SUW Suwalki 73.59 328 P **P** **13 46 26.4 +0.4**
PDAR Pinedale Array 74.76 47 P **P** **13 46 34.5 +1.1**
comp=Z,1.0nm,0.6s,baz=274,slow=2.5,SNR=9.4
PDAR Pinedale Array 74.76 47 P **P** **13 46 34.9 +1.5**
PRN Pahroc Range 74.88 54 P **P** **13 46 35.1 +1.1**
MWC Mount Wilson 74.90 58 P **P** **13 46 35.7 +1.4**
MWC pmax pmax
comp=Z,43nm,1.1s
MWC Mount Wilson 74.90 58 P **P** **13 46 35.7 +1.4**
PSUT Pine Spring 74.91 52 P **P** **13 46 36.1 +1.8**
MPU Maple Canyon 75.32 50 P **P** **13 46 37.3 +0.7**
SHPR Sheep Range 75.36 55 P **P** **13 46 38.2 +1.3**
SORM Soroca 75.42 321 ⇑P **P** **13 46 37.3 +0.6**
MARD Mardin 75.63 307 P **P** **13 46 37.9 -0.5**
CCUT Cedar City 75.83 53 P **P** **13 46 41.1 +1.4**
BEL Belsk 76.17 327 *e*P **P** **13 46 41.8 +0.8**
P17A Butcher Ranch, 76.20 50 P **P** **13 46 40.0 -1.6**
GKP Gorka Klasztor 76.51 330 *e*P **P** **13 46 43.4 +0.6**
TOO Toolangi 76.80 178 P **P** **13 46 45.5 +1.0**
TOO pmax pmax
comp=Z,9.0nm,1.2s
TOO Toolangi 76.80 178 P **P** **13 46 45.5 +1.0**
KWP Kalwaria Pacla 76.97 325 *e*P **P** **13 46 46.4 +0.8**
KWP Kalwaria Pacla 76.97 325 P **P** **13 46 46.4 +0.8**
KWP pmax pmax
comp=Z,38nm,0.9s
KWP Kalwaria Pacla 76.97 325 P **P** **13 46 46.4 +0.8**
U15A North Rim 77.21 53 P **P** **13 46 49.0 +1.5**
U15A IAmb IAmb 13 47 15.1
comp=Z,16nm,1.4s
BUR08 Bucovina Ar. S 77.27 322 P **P** **13 46 47.6 +0.2**
BUR08 IAmb IAmb 13 46 49.3
comp=Z,8.5nm,0.7s
BURAR Bucovina Array 77.28 322 ⇑P **P** **13 46 48.3 +0.8**
BURAR Bucovina Array 77.28 322 P **P** **13 46 47.8 +0.3**
BIZ Bicaz 77.34 321 ⇑P **P** **13 46 48.2 +0.5**
TESR Tescani 77.38 321 ⇓P **P** **13 46 48.1 +0.2**
CFR Carcaliu 77.58 319 ⇑P **P** **13 46 48.9 -0.1**
TPGR Topolog 77.66 319 ⇓P **P** **13 46 49.7 +0.1**
OJC Ojcow 77.80 327 *e*P **P** **13 46 51.1 +1.0**
OJC Ojcow 77.80 327 P **P** **13 46 50.3 +0.1**
OJC pmax pmax
comp=Z,34nm,1.1s
OJC Ojcow 77.80 327 P **P** **13 46 50.3 +0.1**
VRI Vrincioaia 77.80 320 ⇑P **P** **13 46 51.2 +0.9**
UZH Uzhgorod 77.89 324 *e*P **P** **13 46 49.5 -1.2**
UZH *i* 13 47 01.8
GAZ Gaziantep 77.91 308 P **P** **13 46 51.1 0.0**
GAZ IAmb IAmb 13 46 53.8
comp=Z,22nm,1.0s
PV10 Paradox Valley 77.92 50 P **P** **13 46 52.3 +0.9**
PV10 IAmb IAmb 13 47 08.0
comp=Z,14nm,0.8s
PV22 Blue Mesa, Par 77.96 50 P **P** **13 46 53.3 +1.7**
PV16 Nyswonger Mesa 78.03 50 P **P** **13 46 53.1 +1.1**
OZUR 78.10 321 ⇑P **P** **13 46 53.0 +1.0**
NIE Niedzica 78.18 326 *e*P **P** **13 46 53.7 +1.3**
BR131 Keskin Array S 78.33 312 P **P** **13 46 53.1 -0.4**
BR131 pmax pmax
comp=Z,20nm,1.3s
BR131 Keskin Array S 78.33 312 P **P** **13 46 53.1 -0.4**
BR131 IAmb IAmb 13 47 09.7
comp=Z,20nm,1.3s
BRTR Keskin Array B 78.33 312 P **P** **13 46 53.7 +0.2**
comp=Z,5.4nm,1.1s,baz=90,slow=3.7,SNR=12
BRTR LR LR 14 26 57.2
comp=Z,173nm,18.8s,baz=35,slow=40
BRTR Keskin Array B 78.33 312 *ce*P **P** **13 46 54.0 +0.5**
BRTR pmax pmax
comp=Z,5.0nm,1.0s
BRTR Keskin Array B 78.33 312 P **P** **13 46 53.4 -0.2**
DOPR Dopca 78.38 321 ⇑P **P** **13 46 54.8 +1.3**
ISR Istrita 78.42 320 ⇑P **P** **13 46 55.7 +1.9**
MLR Muntele Rosu 78.45 320 ⇑P **P** **13 46 55.1 +1.1**
MLR Muntele Rosu 78.45 320 P **P** **13 46 54.1 +0.1**
MLR pmax pmax
comp=Z,12nm,1.2s
MLR Muntele Rosu 78.45 320 P **P** **13 46 54.1 +0.1**
ICOR Ion Corvin 78.49 318 ⇑P **P** **13 46 55.9 +1.8**
WHFO Wadi Hawf 78.55 284 P **P** **13 46 54.1 -0.8**
SNR=6.9
KSP Ksiaz 78.76 329 *e*P **P** **13 46 56.2 +0.7**
VOIR 78.93 321 ⇑P **P** **13 46 58.0 +1.4**
OSTC Ostas 79.01 329 *e*P **P** **13 46 58.7 +1.8**
OSTC AMS AMS 14 25 20.0
comp=Z,600nm,16.8s
X16A Lo Mia Camp, P 79.03 54 P **P** **13 47 00.0 +2.5**
CHVC Chvalec 79.05 329 *e*P **P** **13 46 58.4 +1.3**
DRGR 79.06 323 ⇓P **P** **13 46 57.4 +0.1**
MORC Moravsky Berou 79.08 328 ⇑P **P** **13 46 58.2 +0.9**
MORC Moravsky Berou 79.08 328 *e*P **P** **13 46 58.1 +0.8**
MORC Moravsky Berou 79.08 328 P **P** **13 46 57.7 +0.4**
MORC pmax pmax
comp=Z,17nm,1.0s
MORC Moravsky Berou 79.08 328 P **P** **13 46 57.6 +0.4**
MORC IAmb IAmb 13 46 59.5
comp=Z,17nm,1.0s
DPC Dobruska-Polom 79.13 329 *e*P **P** **13 46 59.1 +1.5**
DPC MLR MLR
comp=Z,600nm,13.9s
DPC Dobruska-Polom 79.13 329 *e*P **P** **13 46 59.1 +1.5**
DPC AMS AMS 14 28 10.0
comp=Z,600nm,13.9s
UPC Upice 79.13 329 *e*P **P** **13 46 58.7 +1.2**
UPC MLR MLR
comp=Z,800nm,20.0s
UPC Upice 79.13 329 *e*P **P** **13 46 58.7 +1.2**
UPC AMS AMS 14 26 20.0
comp=Z,800nm,20.0s
KRLC Kraliky 79.16 328 *e*P **P** **13 46 58.9 +1.2**
KRLC MLR MLR
comp=Z,700nm,15.8s
KRLC Kraliky 79.16 328 *e*P **P** **13 46 58.9 +1.2**
KRLC AMS AMS 14 26 20.0
comp=Z,700nm,15.8s
ARR Arges 79.18 321 ⇑P **P** **13 46 58.9 +0.9**
ABTO Aybut 79.25 284 P **P** **13 46 58.6 -0.2**
SNR=5.8
PSZ Piszkesteto 79.49 325 ⇑P **P** **13 47 00.2 +0.5**
PSZ Piszkesteto 79.49 325 P **P** **13 46 59.9 +0.3**
PSZ pmax pmax
comp=Z,22nm,1.1s
PSZ Piszkesteto 79.49 325 P **P** **13 46 59.9 +0.3**
PSZ IAmb IAmb 13 47 02.0
comp=Z,22nm,1.1s
S22A 4UR Ranch, Cre 79.64 49 P **P** **13 47 01.9 +0.9**
BRG Berggiesshubel 79.65 330 *e*P **P** **13 47 00.0 -0.3**
comp=Z,7.1nm,1.0s
BRG *e* 13 47 14.5
comp=Z,13nm,1.3s
comp=N,598nm,17.9s
comp=E,280nm,17.2s
comp=Z,766nm,16.4s
BRG Berggiesshubel 79.65 330 *e*P **P** **13 47 00.0 -0.3**
BRG *e* 13 47 14.5
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG pmax pmax
comp=Z,13nm,1.3s
BRG MLR MLR
comp=N,598nm,17.9s
BRG MLR MLR
comp=E,280nm,17.2s
BRG MLR MLR
comp=Z,766nm,16.4s
CLL Collm 79.66 331 ⇑ *i*P **P** **13 47 00.6 +0.2**
comp=Z,15nm,0.9s
CLL *e* 13 47 11.0
CLL *e*S **S** **13 57 00.0 -0.9**
CLL *e* 14 03 24.0
CLL *e*SSS SSS 14 05 36.0
CLL *e*SSSS 14 08 30.0
CLL LmV 14 25 00.0
comp=N,500nm,18.1s
CLL LmV 14 25 00.0
comp=E,300nm,20.0s
CLL LmV 14 25 00.0
comp=Z,600nm,20.0s
CLL Collm 79.66 331 ⇑ *i*P **P** **13 47 00.6 +0.2**
CLL *e* 13 47 11.0
CLL *e*S **S** **13 57 00.0 -0.9**
CLL pmax pmax
comp=Z,15nm,0.9s
CLL MLR MLR
comp=Z,600nm,20.0s
CLL Collm 79.66 331 P **P** **13 47 00.1 -0.3**
CLL IAmb IAmb 13 47 01.9
comp=Z,14nm,0.9s
PVCC Panska Ves 79.68 330 *e*P **P** **13 47 01.9 +1.4**
PVCC Panska Ves 79.68 330 *e*P **P** **13 47 01.9 +1.4**
JAVC Velka Javorina 79.73 327 *e*P **P** **13 47 02.4 +1.5**
VRAC Vranov 79.83 328 *e*P **P** **13 47 02.4 +1.0**
SIRR Siria 79.93 323 ⇑P **P** **13 47 03.3 +1.3**
GZR Gura Zlata 80.06 322 ⇑P **P** **13 47 03.4 +0.7**
PRA Prague 80.10 329 AMS AMS 14 29 10.0
comp=Z,300nm,14.1s
KRUC Moravsky 80.10 328 *e*P **P** **13 47 03.5 +0.7**
PRU Pruhonice 80.12 329 *e*P **P** **13 47 04.2 +1.3**
PRU MLR MLR
comp=Z,800nm,15.6s
PRU Pruhonice 80.12 329 *e*P **P** **13 47 04.2 +1.3**
PRU AMS AMS 14 27 00.0
comp=Z,800nm,15.6s
TREC Trest 80.29 328 AMS AMS 14 27 10.0
comp=Z,900nm,15.3s
BZS Buzias 80.44 323 ⇑P **P** **13 47 04.5 -0.2**
PBCC Pribram 80.58 329 *e*P **P** **13 47 06.4 +1.0**
PBCC *e*P **P** **13 47 06.4 +1.0**
HERR Herculane 80.61 322 ⇑P **P** **13 47 06.3 +0.6**
MOX Moxa 80.72 331 *e*L L 14 28 01.9
comp=Z,510nm,18.8s
NKC Novy Kostel 80.74 331 *e*P **P** **13 47 07.6 +1.3**
NKC Novy Kostel 80.74 331 *e*P **P** **13 47 07.6 +1.3**
MDVR Moldovita 81.02 322 ⇑P **P** **13 47 07.7 -0.1**
RAYN Ar Rayn 81.14 293 *i*P **P** **13 47 09.3 +0.4**
SNR=10
RAYN Ar Rayn 81.14 293 P **P** **13 47 08.4 -0.5**
RAYN pmax pmax
comp=Z,15nm,1.0s
RAYN Ar Rayn 81.14 293 P **P** **13 47 08.4 -0.5**
RAYN IAmb IAmb 13 47 10.2
comp=Z,15nm,1.0s
KHC Kasperske Hory 81.19 329 *e*P **P** **13 47 09.4 +0.7**
KHC *e* 13 47 22.0
KHC MLR MLR
comp=Z,1μm,18.5s
KHC Kasperske Hory 81.19 329 *e*P **P** **13 47 09.4 +0.7**
KHC *ex* x 13 47 22.0
KHC AMS AMS 14 27 20.0
comp=Z,1μm,18.5s
KHC Kasperske Hory 81.19 329 P **P** **13 47 08.7 0.0**
CONA Conrad Observa 81.21 327 *e*P **P** **13 47 10.1 +1.2**
comp=Z,6.3nm,1.0s,SNR=7.3
GEC2 GERESS Array S 81.36 329 P **P** **13 47 10.0 +0.2**
GERES GERESS Array B 81.36 329 P **P** **13 47 09.9 +0.2**
comp=Z,2.4nm,0.7s,baz=35,slow=4.9,SNR=20
GERES PP **PP** **13 50 19.0 +4.1**
comp=Z,0.4nm,0.8s,baz=46,slow=8.4,SNR=4.0
GERES LR LR 14 28 03.5
comp=Z,557nm,18.1s,baz=12,slow=39
GERES GERESS Array B 81.36 329 P **P** **13 47 09.7 -0.1**
GRA1 Grafenberg Arr 81.64 331 P **P** **13 47 11.2 +0.1**
GRA1 IAmb IAmb 13 47 13.3
comp=Z,23nm,1.0s
GRF Grafenberg Arr 81.64 331 P **P** **13 47 11.2 +0.1**
GRF pmax pmax
comp=Z,23nm,1.0s
GRF Grafenberg Arr 81.64 331 *e*P **P** **13 47 12.0 +0.9**
comp=Z,25nm,1.1s,baz=37,slow=4.5
GRF *e*L L 14 28 28.3
comp=Z,359nm,18.6s
ANMO Albuquerque 81.75 51 ⇓ *e*P **P** **13 47 15.0 +2.9**
ANMO pmax pmax
comp=Z,4.0nm,1.3s
ARSA Arzberg 81.89 327 *e*P **P** **13 47 13.1 +0.7**
comp=Z,5.7nm,0.8s
SOCY Socotra 81.92 279 P **P** **13 47 11.1 -2.0**
MOA Molln 81.93 328 *e*P **P** **13 47 13.3 +0.7**
comp=Z,3.8nm,1.1s
PERS Pernice 82.54 327 *i*P **P** **13 47 16.4 +0.5**
SOKA Soboth 82.55 327 *e*P **P** **13 47 16.5 +0.6**
comp=Z,19nm,0.9s,SNR=16
OBKA Obir 82.88 327 *e*P **P** **13 47 17.6 -0.1**
comp=Z,7.0nm,1.3s
KBA Koelnbreinsper 82.92 328 *e*P **P** **13 47 18.6 +0.5**
comp=Z,9.2nm,0.9s,SNR=7.2
MYKA Terra Mystica 83.16 328 *e*P **P** **13 47 19.9 +0.8**
comp=Z,21nm,1.8s
LJU Ljubljana 83.26 327 *i*P **P** **13 47 19.6 0.0**
PRED Cave del Predi 83.34 328 P **P** **13 47 19.3 -0.8**
PRED IAmb IAmb 13 47 20.7
comp=Z,8.4nm,0.9s
BOJS Bojanci 83.38 326 *i*P **P** **13 47 20.4 +0.2**
URZ Urewera 83.40 154 LR LR 14 22 06.6
comp=Z,162nm,18.6s,baz=21,slow=34
WATA Walderalm 83.42 329 *e*P **P** **13 47 21.1 +0.5**
comp=Z,11nm,1.2s,SNR=5.0
WTTA Wattenberg 83.46 329 *e*P **P** **13 47 21.2 +0.4**
comp=Z,11nm,1.1s
ZOU Zoufplan 83.50 328 P **P** **13 47 19.7 -1.3**
ZOU IAmb IAmb 13 47 32.0
comp=Z,10nm,1.2s
ABTA Abfaltersbach 83.53 328 *e*P **P** **13 47 20.4 -0.6**
comp=Z,4.6nm,0.8s
MOTA Moosalm 83.60 330 *e*P **P** **13 47 22.0 +0.5**
comp=Z,17nm,1.0s,SNR=9.1
RETA Reutte 83.62 330 *e*P **P** **13 47 22.1 +0.6**
comp=Z,16nm,1.1s,SNR=6.7
SQTA Sankt Quirin 83.66 329 *e*P **P** **13 47 22.1 +0.3**
comp=Z,15nm,1.4s,SNR=5.4
PMOR Pomariorio Ree 83.78 115 *e*T T 15 19 13.5
comp=Z,8.2nm,0.2s
STAL STALIGIAL 83.84 328 P **P** **13 47 21.4 -1.2**
CIMO Cimolais 83.91 328 P **P** **13 47 21.8 -1.2**
CIMO IAmb IAmb 13 47 23.2
comp=Z,8.6nm,1.1s
PDG Podgorica 83.96 322 ⇑P **P** **13 47 23.3 +0.1**
PDG Podgorica 83.96 322 P **P** **13 47 22.4 -0.8**
FETA Feichten 84.02 330 *e*P **P** **13 47 24.1 +0.4**
comp=Z,9.9nm,1.0s,SNR=5.2
DAVA Damuels 84.12 330 *e*P **P** **13 47 24.6 +0.4**
comp=Z,17nm,1.1s,SNR=5.8
PPT Papeete 84.39 118 LR LR 14 23 19.6
comp=Z,174nm,19.5s,baz=315,slow=34
PPT2 Papeete2 84.41 118 *e*LR LR 14 13 52.3
comp=Z,490nm,22.5s,baz=315
PPT2 Papeete2 84.41 118 *e*T T 15 20 01.7
comp=Z,3.7nm,0.3s
CTI Castel Tesino 84.45 329 P **P** **13 47 24.3 -1.5**
CTI pmax pmax
comp=Z,15nm,1.3s
CTI Castel Tesino 84.45 329 P **P** **13 47 24.3 -1.5**
CTI IAmb IAmb 13 47 26.3
comp=Z,15nm,1.3s
TUE Stuetta 85.00 330 P **P** **13 47 28.5 -0.2**
TUE IAmb IAmb 13 47 43.8
comp=Z,21nm,1.2s
MEH Mehetia 85.64 117 *e*T T 15 21 32.9
comp=Z,25nm,0.3s
SENIN Lac Senin/Sane 85.87 331 P **P** **13 47 32.6 -0.4**
SENIN IAmb IAmb 13 47 44.6
comp=Z,9.6nm,1.2s
MURB Monte Urbino 86.35 326 P **P** **13 47 35.0 -0.2**
MURB IAmb IAmb 13 47 37.5
comp=Z,14nm,1.0s
NRCA Norcia 86.44 326 P **P** **13 47 35.3 -0.4**
NRCA IAmb IAmb 13 47 37.5
comp=Z,19nm,1.0s
TX31 Lajitas Ar. Si 87.33 54 P **P** **13 47 41.2 +0.9**
TX32 Lajitas Array 87.33 54 P **P** **13 47 41.2 +0.9**
TX32 IAmb IAmb 13 47 53.0
comp=Z,12nm,1.5s
TXAR Lajitas Array 87.33 54 P **P** **13 47 41.8 +1.4**
comp=Z,2.4nm,1.1s,baz=313,slow=3.0,SNR=7.1
TXAR LR LR 14 21 16.7
comp=Z,66nm,21.9s,baz=0.0,slow=32
TXAR Lajitas Array 87.33 54 P **P** **13 47 41.1 +0.8**
TBI Tubuai 88.50 122 *e*S **S** **13 58 30.8 +0.7**
comp=Z,180nm,29.0s
TBI Tubuai 88.50 122 *e*LR LR 14 15 37.7
comp=Z,220nm,28.2s,baz=320
TBI Tubuai 88.50 122 *e*T T 15 25 08.8
comp=Z,14nm,0.4s
KEST Kesra 93.93 324 LR LR 14 35 22.4
comp=Z,376nm,18.7s,baz=323,slow=39
ESDC Sonseca Array 95.68 335 LR LR 14 37 09.2
comp=Z,450nm,18.1s,baz=10.0,slow=39
TORD Torodi Ar. Bea 116.59 318 PP PP 13 54 43.1 -1.0
comp=Z,4.3nm,1.0s,baz=38,slow=6.9,SNR=9.4
SNAA Sanae 143.64 197 PKPdf PKPbc 13 54 24.0 -0.3
SNAA Sanae 143.64 197 PKHKP PKPpre 13 54 22.4
SNAA Sanae 143.64 197 PKPpre 13 54 22.4
LPAZ La Paz 144.03 59 PKP **PKPdf** **13 54 30.4 +0.6**
comp=Z,1.4nm,0.8s,baz=337,slow=4.5,SNR=4.5
VNA2 Neumayer--Watz 145.20 196 PKPdf **PKPdf** **13 54 29.3 -0.2**
baz=120,slow=5.0
PB11 IPOC Station P 145.40 65 **PKPab** **13 54 31.9 +0.3**
VNA3 Neumayer Olymp 145.43 195 PKPdf **PKPdf** **13 54 29.5 -0.3**
VNA1 Neumayer--Stat 145.60 196 PKPdf **PKPbc** **13 54 30.3 0.0**
PB08 IPOC Station P 146.01 65 PKPbc **PKPab** **13 54 34.5 +0.3**
AC05 El Transito 150.30 79 **PKiKP** **13 54 45.5 +0.2**
BO02 Sierra Bellavi 152.44 91 **PKiKP** **13 54 49.9 +0.5**
IPMB Ipameri, GO 156.23 28 *e*P **PKPdf** **13 54 54.1 +6.1**

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*IDC **23** 13:37:45.2±1.0, 12°.11N×142°.33E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.7/43, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=40.6km s-min=20.8km az=111.0*
*NEIC **23** 13:37:51.3±0.9, 12°.03N±0°.10×142°.5E±0°.1, h45km±6km, mb4.3/9, Error ellipse: s-maj=22.2km s-min=11.6km az=115.0*
ISC 23 13:37:51.3±0.8, **12°.1N**±0°.1×**142°.5E**±0°.1, **h42**km, **n16**, σ**0°78**/16, **mb4.0**/10, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
GUMO	**Guam**	**2.79**	**57**	Pn	**Pn**	**13 38 33.7**	**+0.3**
	15nm,0.3s,baz=152,slow=7.1,SNR=6.8						
GUMO				Sn	**Sn**	**13 39 05.6**	**-0.4**
	8.4nm,0.3s,baz=186,slow=23,SNR=1.8						
SSLB	**Suanglung**	**23.52**	**303**	P	**P**	**13 42 57.9**	**+0.1**
TOLI2	**Tolitoli**	**24.10**	**245**	P	**P**	**13 43 03.9**	**+0.6**
TOLI2				IAmb	IAmb	13 43 05.7	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**32.61**	**194**	P	**P**	**13 44 18.8**	**-0.3**
WR0	**Warramunga Arr**	**32.76**	**194**	P	**P**	**13 44 19.8**	**-0.6**
WR0				IAmb	IAmb	13 44 39.4	
	comp=Z,4.9nm,1.3s						
WRAB	**Tennant Creek**	**32.78**	**194**	P	**P**	**13 44 20.0**	**-0.6**
WRAB				IAmb	IAmb	13 44 43.2	
	comp=Z,7.5nm,1.4s						
WB2	**Warramunga Arr**	**32.79**	**194**	P	**P**	**13 44 20.0**	**-0.7**
WB2				IAmb	IAmb	13 44 43.1	
	comp=Z,6.6nm,1.2s						
WRA	**Warramunga Arr**	**32.79**	**194**	P	**P**	**13 44 20.1**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=14,slow=9.4,SNR=11						
WRA	**Warramunga Arr**	**32.79**	**194**	IAmb	IAmb	13 44 20.4	
	comp=Z,0.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**34.26**	**209**	P	**P**	**13 44 33.7**	**+0.2**
AS31	**Alice Springs**	**36.48**	**193**	P	**P**	**13 44 52.6**	**0.0**
ASAR	**Alice Springs**	**36.48**	**193**	P	**P**	**13 44 52.4**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=20,slow=12,SNR=14						
MKAR	**Makanchi Array**	**60.99**	**317**	P	**P**	**13 48 00.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=95,slow=8.2,SNR=2.2						
ILAR	**Eielson Array**	**70.94**	**25**	P	**P**	**13 49 02.9**	**-1.2**
	comp=Z,0.2nm,0.4s,baz=244,slow=6.0,SNR=6.6						
NVAR	**Mina Array Bea**	**89.70**	**51**	P	**P**	**13 50 47.4**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=267,slow=5.4,SNR=3.7						
FINES	**FINESS Array B**	**91.54**	**334**	P	**P**	**13 50 52.4**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=14,slow=6.2,SNR=1.9						

IDC 23 13:57:22.3±2.7, **20°.01S**×**176°.58W**, **h0**km, **mb3.9**/6, **mb1 4.2**/6, **mb1mx3.9**/39, **mbtmp3.9**/6, **MS3.7**/7, **Ms1 3.7**/7,

ms1mx3.3/36, Error ellipse: s-maj=195.6km s-min=24.1km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**9.29**	**187**	LR	LR	14 02 07.4	
	comp=Z,216nm,21.2s,baz=8.5,slow=31						
DZM	**Mont Dzumac**	**15.98**	**260**	*e*LR	LR	14 05 13.9	
	comp=Z,763nm,25.2s						
TBI	**Tubuai**	**25.41**	**102**	*e*LQ	LQ	14 07 48.2	
	402nm,22.2s						
TBI				*e*LR	LR	14 08 50.8	
	comp=Z,155nm,27.5s						
PPT2	**Papeete2**	**25.67**	**89**	*e*LQ	LQ	14 08 00.8	
	255nm,23.2s						
PPT2				*e*LR	LR	14 08 59.8	
	comp=Z,335nm,27.2s						
CTA	**Charters Tower**	**34.87**	**263**	P	P	14 04 14.8	-0.7
	2.5nm,0.7s,baz=110,slow=12,SNR=1.9						
ASAR	**Alice Springs**	**45.93**	**256**	P	P	14 05 47.0	-0.2
	3.6nm,0.8s,baz=97,slow=8.1,SNR=40						
ASAR				LR	LR	14 24 16.6	
	comp=Z,97nm,18.1s,baz=70,slow=35						
WRA	**Warramunga Arr**	**45.99**	**261**	P	P	14 05 47.4	-0.4
	3.3nm,1.0s,baz=96,slow=7.6,SNR=12						
WRA				LR	LR	14 23 53.5	
	comp=Z,133nm,18.7s,baz=105,slow=35						
FITZ	**Fitzroy Crossi**	**54.42**	**262**	P	P	14 06 52.0	+0.4
	3.5nm,1.1s,baz=114,slow=10.0,SNR=2.5						
FITZ				LR	LR	14 29 14.2	
	comp=Z,88nm,19.9s,baz=316,slow=35						
ASAJ	**Asahikawa**	**73.94**	**331**	LR	LR	14 33 50.8	
	comp=Z,40nm,20.8s,baz=246,slow=30						
NVAR	**Mina Array Bea**	**79.75**	**43**	P	P	14 09 31.7	-0.9
	0.3nm,0.6s,baz=220,slow=9.4,SNR=2.1						
MA2	**Magadan**	**83.67**	**344**	LR	LR	14 42 21.5	
	comp=Z,33nm,19.5s,baz=131,slow=32						
TXAR	**Lajitas Array**	**85.67**	**57**	P	P	14 10 03.2	-0.2
	0.8nm,1.0s,baz=230,slow=7.0,SNR=3.9						
ULM	**Lac du Bonnet**	**99.39**	**40**	LR	LR	14 48 12.8	
	comp=Z,72nm,19.1s,baz=320,slow=31						
GERES	**GERESS Array B**	**150.06**	**346**	PKPbc	PKiKP	14 17 16.2	+0.3
	0.3nm,0.4s,baz=38,slow=5.4,SNR=4.3						

*DNK **23** 14:02:16.1±1.6, 78.65N×6.62E, h45km±114km, ML2.6*
*BER **23** 14:02:16.3±1.4, 78.51N×6.71E, h24km±19km, ML2.0, ML2.6(DNK)*
*IEPN **23** 14:02:18.0, 78.43N×7.87E, h15km*

ISC 23 14:02:10.4±0.8, 78.47N±0.07×6.36E±0.04, h10km, n11, σ2.85/22, 3C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.19**	**65**	⇑*i*P	**Pg**	**14 02 35.1**	**+1.8**
KBS				*i* S	**Sb**	**14 02 47.2**	**-1.3**
KBS	**Kingsbay**	**1.19**	**65**	⇑*i*P	**Pg**	**14 02 35.2**	**+1.9**
KBS				*i* S	**Sb**	**14 02 48.0**	**-0.5**
KBS				IAML		14 02 49.8	
	comp=Z,234nm,0.3s						
KBS	**Kingsbay**	**1.19**	**65**	⇑*i*P	**Pg**	**14 02 35.2**	**+1.9**
KBS				*i* S	**Sb**	**14 02 48.0**	**-0.5**
KBS				IAML		14 02 49.8	
	comp=Z,234nm,0.3s						
HSPB	**Hornsund (broa**	**2.45**	**122**	P	**Pb**	**14 02 53.5**	**-1.0**
HSPB				*e*S	**Sn**	**14 03 20.0**	**-0.2**
HSPB	**Hornsund (broa**	**2.45**	**122**	*e*P	**Pn**	**14 02 52.2**	**+1.8**
HSPB				*e*S	**Sn**	**14 03 20.1**	**-0.2**
HOPEN	**Hopen**	**4.49**	**107**	P	**Pn**	**14 03 19.3**	**+0.9**
HOPEN				*e*S	**Sn**	**14 04 04.9**	**-5.6**
DAG	**Danmarks Havn**	**5.61**	**265**	*e*	**Pn**	**14 03 34.9**	**+1.2**
	baz=65,slow=16						
DAG				*i* P	Pb	14 03 36.6	-12
DAG				*i* S	**Sn**	**14 04 36.7**	**-1.4**
DAG				IAML		14 04 39.5	
	comp=Z,1.5nm,0.4s						
DAG	**Danmarks Havn**	**5.61**	**265**	*e*	**Pn**	**14 03 34.9**	**+1.2**
	baz=65,slow=16						
DAG				*i* P	Pb	14 03 36.6	-12
DAG				*i* S	**Sn**	**14 04 36.7**	**-1.4**
DAG				IAML		14 04 39.5	
	comp=Z,1.5nm,0.4s						
DBG	**Daneborg**	**7.46**	**250**	*i* P	**Pn**	**14 04 02.3**	**+3.3**
DBG				*i* S	**Sn**	**14 05 19.6**	**-3.9**
DBG				IAML		14 05 28.9	
	comp=Z,0.9nm,0.3s						
DBG	**Daneborg**	**7.46**	**250**	*i* P	**Pn**	**14 04 02.3**	**+3.3**
DBG				*i* S	**Sn**	**14 05 19.6**	**-3.9**
DBG				IAML		14 05 28.9	
	comp=Z,0.9nm,0.3s						
ZFI2	**Zemlya Franca-**	**7.64**	**53**	*e*P	**Pn**	**14 04 04.5**	**+2.9**
ZFI2				*e*S	**Sn**	**14 05 21.9**	**-6.2**
	comp=Z,3.6nm,0.8s						

*NNC **23** 14:03:06.5±3.8, 36.54N×70.32E, h88km±78km, mb3.5, mpv3.8, Error ellipse: s-maj=31.5km s-min=28.1km az=99.0*
*IDC **23** 14:03:06.1±9.1, 36.48N×70.47E, h127km±62km, mb3.5/4, mb1 3.4/9, mb1mx3.0/58, mbtmp3.8/9, Error ellipse: s-maj=82.9km s-min=46.6km az=168.0*

ISC 23 14:03:10.2±2.0, 36.7N±0.1×70.4E±0.1, h150km, n13, σ1.937/18, mb3.9/3, 4C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.36**	**1**	P	**Pn**	**14 04 40.3**	**-1.3**
	2.0nm,0.3s,baz=172,slow=11,SNR=91						
KK31				⇑S	**Sn**	**14 05 54.9**	**+1.7**
	10nm,0.8s,baz=180,slow=21,SNR=7.6						
AAK	**Ala-Archa**	**6.69**	**27**	P	**Pn**	**14 04 44.4**	**-1.7**
	2.6nm,0.3s,baz=192,slow=5.2,SNR=23						
AAK				S	**Sn**	**14 06 01.8**	**+0.5**
	0.6nm,0.3s,baz=18,slow=17,SNR=4.1						
AAK	**Ala-Archa**	**6.69**	**27**	⇑P	**Pn**	**14 04 45.0**	**-1.1**
	3.2nm,0.4s						
AAK				⇓S	**Sn**	**14 06 02.2**	**+0.9**
	11nm,0.6s						
MKAR	**Makanchi Array**	**13.39**	**38**	P	**Pn**	**14 06 14.2**	**-0.1**
	0.1nm,0.3s,baz=209,slow=10,SNR=6.3						
AB31	**Akbulak array**	**14.64**	**332**	P	**Pn**	**14 06 29.6**	**-0.3**
	0.7nm,0.3s,baz=166,slow=12,SNR=59						
AB31				⇑S	**Sn**	**14 09 12.6**	**+0.3**
	1.4nm,0.6s,baz=152,slow=24,SNR=4.4						
KURBB	**Kurchatov Arra**	**15.06**	**20**	P	**Pn**	**14 06 35.3**	**+0.2**
	0.1nm,0.3s,baz=207,slow=10,SNR=4.5						
BVAR	**Borovoye Array**	**16.29**	**360**	P	**P**	**14 06 51.1**	**+0.7**
	0.3nm,0.3s,baz=140,slow=11,SNR=8.0						
AKTO	**Aktyubinsk**	**16.33**	**331**	P	**P**	**14 06 51.5**	**+0.5**
	0.3nm,0.3s,baz=148,slow=9.5,SNR=5.8						
AKTO				S	**S**	**14 09 49.5**	**-2.5**
	0.1nm,0.3s,baz=223,slow=19,SNR=1.8						
AKTO	**Aktyubinsk**	**16.33**	**331**	⇑P	**P**	**14 06 54.1**	**+3.2**
	3.0nm,1.1s						
ZALV	**Zalesovo Beam**	**19.91**	**26**	P	**P**	**14 07 29.6**	**-0.2**
	5.3nm,0.6s,baz=215,slow=11,SNR=17						
FINES	**FINESS Array B**	**37.01**	**326**	P	**P**	**14 10 05.1**	**+0.2**
	2.4nm,1.1s,baz=122,slow=7.2,SNR=4.6						
ARCES	**ARCESS Array B**	**40.74**	**338**	P	**P**	**14 10 36.5**	**+0.6**
	4.2nm,1.1s,baz=117,slow=7.2,SNR=2.2						
NOA	**NORSAR Array B**	**43.90**	**323**	P	**P**	**14 11 00.8**	**-0.7**
	0.8nm,0.9s,baz=89,slow=8.0,SNR=1.7						

IDC 23 14:08:06.3±2.9, 10.22S×112.44E, h0km, mb3.1/3, mb1 3.4/4, mb1mx3.2/42, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=151.2km s-min=25.8km az=46.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.00**	**123**	Pn	Pn	14 11 38.1	-1.6
	0.2nm,0.3s,baz=306,slow=8.6,SNR=6.8						
FITZ				Sn	Sn	14 14 12.4	-14
	0.1nm,0.3s,baz=300,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**23.22**	**117**	P	P	14 13 15.2	-0.1
	0.3nm,0.8s,baz=289,slow=12,SNR=2.2						
ASAR	**Alice Springs**	**24.45**	**126**	P	P	14 13 27.9	+0.8
	0.2nm,0.6s,baz=300,slow=9.3,SNR=7.9						
MKAR	**Makanchi Array**	**62.82**	**337**	P	P	14 18 33.5	-0.3
	0.3nm,0.4s,baz=144,slow=7.7,SNR=6.2						

*NEIC **23** 14:15:22.1±0.5, 15.1S±0.1×173.2W±0.2, h25km±12km, mb4.3/4, Error ellipse: s-maj=22.5km s-min=17.0km az=82.0*
*IDC **23** 14:15:32.3±8.3, 15.50S×174.98W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/34, mbtmp3.6/2, Error ellipse: s-maj=348.7km s-min=65.8km az=139.0*

ISC 23 14:15:19.9±1.1, 15.05S±0.1×173.1W±0.1, h10km, n12, σ0.675/11, mb4.0/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.72**	**50**	Pn	**Pb**	**14 15 51.2**	**-0.5**
NIUE	**Niue**	**5.07**	**143**	Pn	**Pn**	**14 16 36.1**	**-0.1**
RAR	**Rarotonga**	**14.12**	**118**	Pn	**Pn**	**14 18 40.1**	**0.0**
WB0	**Warramunga Arr**	**50.13**	**257**	P	**P**	**14 24 15.9**	**-0.1**
WB0				IAmb	IAmb	14 24 25.1	
	comp=Z,4.8nm,1.2s						
WB2	**Warramunga Arr**	**50.16**	**256**	P	**P**	**14 24 16.0**	**-0.2**
WB2				IAmb	IAmb	14 24 28.9	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**50.18**	**256**	P	**P**	**14 24 15.9**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=92,slow=7.0,SNR=9.3						
WRA	**Warramunga Arr**	**50.18**	**256**	P	**P**	**14 24 15.7**	**-0.6**
AS31	**Alice Springs**	**50.47**	**252**	P	**P**	**14 24 18.0**	**-0.4**
AS31				IAmb	IAmb	14 24 26.9	
	comp=Z,1.3nm,1.0s						
ASAR	**Alice Springs**	**50.47**	**252**	P	**P**	**14 24 18.2**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=88,slow=8.3,SNR=28						
ASAR	**Alice Springs**	**50.47**	**252**	P	**P**	**14 24 17.8**	**-0.7**
PMPB	**Monarch Peak**	**70.97**	**43**		**PcP**	**14 27 00.2**	**+1.8**
BRTR	**Keskin Array B**	**146.02**	**322**	PKPbc	PKiKP	14 35 11.4	+7.4
	comp=Z,0.9nm,0.8s,baz=67,slow=4.8,SNR=3.6						

JMA 23 14:17:21.1, 36.83N×137.82E, h0km, M1.8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSZ	**Suzu**	**0.72**	**330**	P	Pg	14 17 35.5	+0.6
JGN	**Niukaw**	**0.73**	**214**	P	Pg	14 17 35.3	+0.2

JMA 23 14:17:24.5, 36.72N×137.98E, h14km±1km, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**0.25**	**134**	P	Pg	14 17 29.5	-0.5
MAT				S	Sg	14 17 33.2	-0.5
MAT	**Matsushiro**	**0.25**	**134**	P	Pg	14 17 29.6	-0.4
MAT				S	Sg	14 17 33.2	-0.5
JNG	**Nsakai**	**0.33**	**163**	P	Pg	14 17 30.0	-0.4
JNG				S	Sg	14 17 35.4	-0.4
JGK	**Kuni**	**0.55**	**106**	P	Pg	14 17 35.3	-0.1
JGK				S	Sg	14 17 42.7	-0.1

*IDC **23** 14:17:49.4±1.7, 37.48S×179.76E, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.9/33, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=39.2km s-min=30.3km az=18.0*
*WEL **23** 14:17:52.1±1.0, 38.3S±8.1×18.0W±1.1, h33km, M3.7/26, ML4.0/26, MLv3.7/26, Error ellipse: s-maj=0.0km s-min=0.0km az=30.0*
*NEIC **23** 14:17:54.9±1.9, 37.7S±0.1×179.6E±0.2, h35km±9km, mb4.2/10, Error ellipse: s-maj=26.0km s-min=13.6km az=64.0*

ISC 23 14:17:53.2±1.1, 37.81S±0.07×179.99E±0.08, h35km, n110, σ1.944/116, mb4.2/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.25**	**269**	P	**Pn**	**14 18 12.9**	**-1.2**
WMGZ				S	**Sn**	**14 18 30.0**	**+0.3**
MXZ	**Matakaoa Point**	**1.35**	**280**	P	**Pn**	**14 18 13.8**	**-1.8**
MXZ				S	**Sn**	**14 18 31.8**	**-0.6**
MXZ	**Matakaoa Point**	**1.35**	**280**		**Pn**	**14 18 13.6**	**-2.1**
PUZ	**Puketiti**	**1.39**	**259**	P	**Pn**	**14 18 15.2**	**-0.9**
PUZ				S	**Sn**	**14 18 34.1**	**+0.7**
CNGZ	**Carnagh Statio**	**1.56**	**244**	P	**Pn**	**14 18 19.0**	**+0.6**
TWGZ	**Tauwhareparae**	**1.63**	**256**	P	**Pn**	**14 18 19.3**	**-0.1**
HAZ	**Te Kaha**	**1.75**	**271**	P	**Pn**	**14 18 20.2**	**-0.8**
TKGZ	**Te Karaka**	**1.80**	**249**	P	**Pn**	**14 18 21.6**	**-0.1**
TKGZ				S	**Sn**	**14 18 45.0**	**+1.6**
RUGZ	**Raukumara Rang**	**1.83**	**264**	P	**Pn**	**14 18 21.1**	**-1.2**
RUGZ				S	**Sn**	**14 18 46.2**	**+1.9**
RIGZ	**Rimuhau**	**1.97**	**242**	P	**Pn**	**14 18 24.3**	**+0.2**
RIGZ				S	**Sn**	**14 18 49.0**	**+1.4**
PRGZ	**Paritu Road**	**1.99**	**235**	P	**Pn**	**14 18 24.7**	**+0.3**
MWZ	**Matawai**	**2.01**	**254**	P	**Pn**	**14 18 23.7**	**-1.0**
MHGZ	**Mahia Peninsul**	**2.11**	**230**	P	**Pn**	**14 18 26.6**	**+0.5**
KNZ	**Kokohu**	**2.19**	**236**	P	**Pn**	**14 18 27.0**	**0.0**
SNGZ	**Shannon Statio**	**2.30**	**244**	P	**Pn**	**14 18 28.8**	**+0.1**
URZ	**Urewera**	**2.31**	**258**	Pn	**Pn**	**14 18 28.5**	**-0.3**
	12nm,0.3s,baz=78,slow=4.5,SNR=61						
URZ				Sn	**Sn**	**14 18 56.6**	**+0.5**
	27nm,0.3s,baz=309,slow=20,SNR=23						
URZ	**Urewera**	**2.31**	**258**	P	**Pn**	**14 18 28.7**	**-0.1**
URZ	**Urewera**	**2.31**	**258**	Pn	**Pn**	**14 18 28.1**	**-0.7**
WHRZ	**Whale Island**	**2.38**	**268**	P	**Pn**	**14 18 29.8**	**0.0**
RTZ	**Ruatahuna**	**2.50**	**250**	P	**Pn**	**14 18 31.9**	**+0.4**
WHHZ	**Waihua**	**2.50**	**239**	P	**Pn**	**14 18 31.9**	**+0.5**
RAHZ	**Arahi**	**2.54**	**243**	P	**Pn**	**14 18 32.7**	**+0.8**
EDRZ	**Edgecumbe**	**2.58**	**262**	P	**Pn**	**14 18 32.2**	**-0.4**
MUGZ	**Murupara**	**2.62**	**254**	P	**Pn**	**14 18 32.7**	**-0.3**
MARZ	**Manawahe**	**2.63**	**265**	P	**Pn**	**14 18 33.5**	**+0.3**
MTHZ	**Maungataniwha**	**2.69**	**246**	P	**Pn**	**14 18 34.1**	**+0.1**
ARHZ	**Aropaoanui**	**2.76**	**237**	P	**Pn**	**14 18 35.3**	**+0.4**
TARZ	**Mount Tarawera**	**2.78**	**260**	P	**Pn**	**14 18 35.8**	**+0.4**
RRRZ	**Republican Roa**	**2.79**	**258**	P	**Pn**	**14 18 36.2**	**+0.7**
NMHZ	**Naumai**	**2.81**	**242**	P	**Pn**	**14 18 36.2**	**+0.5**
OMRZ	**Omania**	**2.87**	**263**	P	**Pn**	**14 18 37.1**	**+0.5**
HLRZ	**Highlands Stat**	**2.90**	**260**	P	**Pn**	**14 18 38.0**	**+1.1**
PRRZ	**Plateau Road**	**2.92**	**255**	P	**Pn**	**14 18 36.5**	**-0.6**
CKHZ	**Cape Kidnapper**	**2.93**	**230**	P	**Pn**	**14 18 37.4**	**+0.1**
TGRZ	**Tauranga**	**2.95**	**270**	P	**Pn**	**14 18 36.4**	**-1.2**
KARZ	**Kaharoa**	**2.97**	**265**	P	**Pn**	**14 18 36.8**	**-1.1**
ALRZ	**Allen Road**	**2.97**	**254**	P	**Pn**	**14 18 37.6**	**-0.3**
HRRZ	**Handcock Road**	**2.98**	**258**	P	**Pn**	**14 18 38.6**	**+0.6**
MRHZ	**Matea Rd**	**2.99**	**249**	P	**Pn**	**14 18 37.8**	**-0.3**
HSRZ	**Hossack Road**	**3.00**	**259**	P	**Pn**	**14 18 38.5**	**+0.3**
NGRZ	**Ngongotaha**	**3.02**	**263**	P	**Pn**	**14 18 38.4**	**-0.2**
MCHZ	**McNeill Hill**	**3.05**	**237**	P	**Pn**	**14 18 38.9**	**-0.1**
BKZ	**Black Stump Fm**	**3.06**	**243**	P	**Pn**	**14 18 38.9**	**-0.2**
BKZ	**Black Stump Fm**	**3.06**	**243**		**Pn**	**14 18 38.7**	**-0.5**
KAHZ	**Kahuranaki**	**3.14**	**250**	P	**Pn**	**14 18 40.3**	**+0.1**
KMRZ	**Kaimai**	**3.20**	**268**	P	**Pn**	**14 18 40.4**	**+0.5**
KWHZ	**Kaweka Forest**	**3.23**	**239**	P	**Pn**	**14 18 41.0**	**-0.4**
PXZ	**Pawanui**	**3.30**	**227**	P	**Pn**	**14 18 41.6**	**-0.7**
KRHZ	**Kereru**	**3.37**	**236**	P	**Pn**	**14 18 42.9**	**-0.5**
RITZ	**Rihia Road**	**3.45**	**249**	P	**Pn**	**14 18 46.4**	**+1.9**
BHHZ	**Black Hill Sta**	**3.50**	**240**	P	**Pn**	**14 18 45.0**	**-0.2**
TOZ	**Tahuroa Road**	**3.55**	**270**	P	**Pn**	**14 18 44.7**	**-1.2**
KUZ	**Kuaotunu**	**3.56**	**286**	P	**Pn**	**14 18 43.8**	**-2.2**
WPHZ	**Waipukurau**	**3.57**	**230**	P	**Pn**	**14 18 45.5**	**-0.6**
KATZ	**Kakaramea**	**3.57**	**250**	P	**Pn**	**14 18 49.9**	**+3.7**
PRHZ	**Porangahau**	**3.58**	**226**	P	**Pn**	**14 18 45.4**	**-0.9**
TMVZ	**Te Maari**	**3.61**	**247**	P	**Pn**	**14 18 46.5**	**-0.2**
ETVZ	**East Tongariro**	**3.61**	**247**	P	**Pn**	**14 18 46.4**	**-0.4**
PNHZ	**Pukenui**	**3.63**	**233**	P	**Pn**	**14 18 46.3**	**-0.6**
KRVZ	**Karewarewa**	**3.65**	**248**	P	**Pn**	**14 18 47.6**	**+0.4**
MOVZ	**Moawhango**	**3.68**	**243**	P	**Pn**	**14 18 48.3**	**+0.6**
WTVZ	**West Tongariro**	**3.69**	**248**	P	**Pn**	**14 18 49.7**	**+1.8**
TUVZ	**Tukino**	**3.70**	**245**	P	**Pn**	**14 18 49.3**	**+1.3**
NGZ	**Ngauruhoe**	**3.70**	**247**	P	**Pn**	**14 18 48.4**	**+0.4**
WNVZ	**Wahianoa**	**3.76**	**245**	P	**Pn**	**14 18 48.7**	**-0.2**
FWVZ	**Far West T-bar**	**3.77**	**246**	P	**Pn**	**14 18 51.2**	**+2.2**
ANWZ	**Angora Road**	**3.80**	**225**	P	**Pn**	**14 18 49.7**	**+0.4**
TSZ	**Takapari Road**	**3.86**	**233**	P	**Pn**	**14 18 48.9**	**-1.2**
DVHZ	**Dannevirke**	**3.88**	**229**	P	**Pn**	**14 18 49.2**	**-1.1**
MKAZ	**Moumakai**	**3.90**	**279**	P	**Pn**	**14 18 49.3**	**-1.4**
GRZ	**Great Barrier**	**3.94**	**292**	P	**Pn**	**14 18 49.4**	**-1.8**
WIAZ	**Waiheke Island**	**4.00**	**283**	P	**Pn**	**14 18 50.7**	**-1.3**
BFZ	**Birch Farm**	**4.08**	**224**	Pn	**Pn**	**14 18 50.9**	**-2.3**
HIZ	**Hauiti**	**4.11**	**259**	P	**Pn**	**14 18 53.9**	**+0.4**
ETAZ	**East Tamaki Re**	**4.12**	**280**	P	**Pn**	**14 18 52.5**	**-1.1**
PRWZ	**Pori Road**	**4.16**	**227**	P	**Pn**	**14 18 53.8**	**-0.4**
POWZ	**Post Office Ro**	**4.17**	**231**	P	**Pn**	**14 18 55.1**	**+0.6**
MBAZ	**Motutapu North**	**4.19**	**283**	P	**Pn**	**14 18 53.7**	**-0.9**
HBAZ	**Herne Bay Bore**	**4.30**	**281**	P	**Pn**	**14 18 57.2**	**+1.2**
VRZ	**Vera Road**	**4.31**	**251**	P	**Pn**	**14 18 56.6**	**+0.3**
AWAZ	**Awhitu Peninsu**	**4.32**	**278**	P	**Pn**	**14 18 55.8**	**-0.5**
NEZ	**North Egmont**	**4.84**	**251**	P	**Pn**	**14 19 05.9**	**+2.2**
WCZ	**Waipu Caves**	**4.89**	**291**	P	**Pn**	**14 19 03.1**	**-1.1**
PKE	**Pukeiti**	**4.91**	**252**	P	**Pn**	**14 19 04.9**	**+0.4**
MSWZ	**Moikau Station**	**5.13**	**224**	Pn	**Pn**	**14 19 04.7**	**-2.9**
WEL	**Wellington**	**5.32**	**228**	P	Pn	14 19 16.5	+6.4
SNZO	**South Karori**	**5.38**	**228**	Pn	**Pn**	**14 19 10.7**	**-0.2**
NNZ	**Nelson**	**6.14**	**234**	Pn	**Pn**	**14 19 19.6**	**-1.7**
CTZ	**Chatham Island**	**6.46**	**158**	P	**Pn**	**14 19 28.4**	**+2.6**
CTZ				S	**Sn**	**14 20 36.4**	**-1.8**
THZ	**Tophouse**	**6.73**	**232**	P	**Pn**	**14 19 28.0**	**-1.6**
THZ	**Tophouse**	**6.73**	**232**	Pn	**Pn**	**14 19 27.9**	**-1.7**
MQZ	**McQueen's Vall**	**8.10**	**221**	Pn	**Pn**	**14 19 46.7**	**-1.6**
RPZ	**Rata Peaks**	**8.98**	**226**	Sn	**Sn**	**14 21 32.5**	**-7.8**
	0.4nm,0.3s,baz=336,slow=23,SNR=8.0						
RPZ	**Rata Peaks**	**8.98**	**226**	Pn	**Pn**	**14 20 01.1**	**+0.7**
ODZ	**Otahua Downs**	**10.07**	**221**	Pn	**Pn**	**14 20 14.1**	**-1.2**
MCQ	**Macquarie Isla**	**22.02**	**214**	P	**P**	**14 22 46.6**	**+2.3**
TOO	**Toolangi**	**27.21**	**260**	P	**P**	**14 23 31.7**	**-2.1**
TOO				IAmb	IAmb	14 23 35.2	
	comp=Z,6.6nm,1.1s						
COEN	**Coen**	**40.36**	**296**	P	**P**	**14 25 26.9**	**-0.9**
AS31	**Alice Springs**	**41.63**	**276**	P	**P**	**14 25 36.7**	**-1.5**
ASAR	**Alice Springs**	**41.63**	**276**	P	**P**	**14 25 37.5**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=117,slow=7.1,SNR=9.8						
ASAR	**Alice Springs**	**41.63**	**276**	P	**P**	**14 25 37.0**	**-1.2**
WR0	**Warramunga Arr**	**43.12**	**281**	P	**P**	**14 25 49.0**	**-1.4**
WB2	**Warramunga Arr**	**43.28**	**281**	P	**P**	**14 25 50.3**	**-1.3**
WB2				IAmb	IAmb	14 25 57.1	
	comp=Z,6.1nm,1.1s						
WRAB	**Tennant Creek**	**43.29**	**281**	P	**P**	**14 25 50.4**	**-1.3**
WRAB				IAmb	IAmb	14 26 03.0	
	comp=Z,4.9nm,1.1s						
WRA	**Warramunga Arr**	**43.29**	**281**	P	**P**	**14 25 50.7**	**-1.0**
	comp=Z,4.3nm,1.2s,baz=121,slow=7.8,SNR=11						
WRA	**Warramunga Arr**	**43.29**	**281**	IAmb	IAmb	14 25 57.1	
	comp=Z,0.2nm,1.0s						
WB0	**Warramunga Arr**	**43.35**	**281**	P	**P**	**14 25 51.1**	**-1.0**
WB0				IAmb	IAmb	14 25 58.8	
	comp=Z,3.1nm,0.8s						
QSPA	**South Pole Qui**	**52.32**	**180**	P	**P**	**14 27 04.5**	**+3.3**
	comp=Z,2.9nm,0.9s,baz=30,slow=1.6,SNR=10						
QSPA	**South Pole Qui**	**52.32**	**180**	P	**P**	**14 27 04.7**	**+3.5**
FINES	**FINESS Array B**	**151.30**	**334**	PKPbc	**PKiKP**	**14 37 43.8**	**+1.3**
	comp=Z,1.8nm,0.9s,baz=29,slow=3.2,SNR=1.9						

*NEIC **23** 14:31:46.5±1.1, 6.8S±0.1×127.16E±0.07, h404km±10km, mb4.1/14, Error ellipse: s-maj=15.1km s-min=10.0km az=170.0*
*DJA **23** 14:31:46.9±0.4, 7.3S±3.1×12.7E±.9°, h383km±6km, M3.8/12, mB4.3/7, mb4.0/9, MLv4.1/12, Mw(mB)3.4/7*
*IDC **23** 14:31:47.7±1.4, 6.88S×126.99E, h420km±17km, mb3.2/10, mb1 3.1/15, mb1mx3.0/49, mbtmp3.9/15, Error ellipse: s-maj=24.2km s-min=10.3km az=64.0*

ISC 23 14:31:46.6±0.5, 6.81S±0.05×127.15E±0.07, h407km, n62, σ1.920/69, mb3.8/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**3.55**	**359**	P	**P**	**14 32 55.2**	**+0.3**
NLAI				S	**S**	**14 33 48.8**	**-1.6**
BNDI	**Bandanaira**	**3.56**	**50**	P	**P**	**14 32 55.1**	**+0.1**
MSAI	**Masohi**	**3.87**	**27**	P	**P**	**14 32 56.7**	**-1.1**
SOEI	**Soe**	**4.09**	**224**	P	**P**	**14 32 59.9**	**0.0**
SOEI				S	**S**	**14 33 55.7**	**-3.9**
SOEI	**Soe**	**4.09**	**224**		**P**	**14 32 59.8**	**-0.1**
SAUI	**Saumlaki**	**4.28**	**106**	P	**P**	**14 33 00.6**	**-1.0**
SAUI	**Saumlaki**	**4.28**	**106**	Pn	**P**	**14 33 01.4**	**-0.2**
BATI	**Baumata**	**4.83**	**225**	P	**P**	**14 33 08.0**	**+1.0**
	44nm,0.3s,baz=90,slow=4.0,SNR=42						
BATI				S	**S**	**14 34 11.7**	**-1.1**
	25nm,0.3s,baz=132,slow=3.0,SNR=18						
BATI	**Baumata**	**4.83**	**225**	P	**P**	**14

TIXI				IAmb	IAmb	14 43 10.2	
	comp=Z,3.0nm,0.5s						
AKTO	**Aktyubinsk**	**82.20 323**		P	**P**	**14 43 23.1**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=104,slow=8.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**126.00 281**		PKP	**PKPdf**	**14 50 02.0**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=89,slow=2.4,SNR=2.0						

WEL 23 14:33:23.0±1.1, 38°S±9°×18°0E±°, h33km, M3.2/14, ML3.5/14, MLv3.2/14, Error ellipse: s-maj=0.0km s-min=0.0km az=25.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.34**	**281**	P	Pn	14 33 43.8	-1.6
MXZ				S	Sn	14 34 00.9	-1.2
PUZ	**Puketiti**	**1.37**	**259**	P	Pn	14 33 45.6	-0.2
PUZ				S	Sn	14 34 03.4	+0.5
CNGZ	**Carnagh Statio**	**1.54**	**244**	P	Pn	14 33 49.1	+1.0
TWGZ	**Tauwhareparae**	**1.61**	**257**	P	Pn	14 33 49.1	-0.1
TWGZ				S	Sn	14 34 08.6	-0.2
TKGZ	**Te Karaka**	**1.78**	**249**	S	Sn	14 34 13.3	+0.4
RUGZ	**Raukumara Rang**	**1.82**	**265**	P	Pn	14 33 53.8	+1.8
RIGZ	**Rimuhau**	**1.95**	**242**	P	Pn	14 33 54.0	+0.2
RIGZ				S	Sn	14 34 18.4	+1.3
PRGZ	**Paritu Road**	**1.97**	**235**	P	Pn	14 33 54.6	+0.4
MWZ	**Matawai**	**1.99**	**254**	P	Pn	14 33 54.8	+0.4
MHGZ	**Mahia Peninsul**	**2.09**	**230**	P	Pn	14 33 56.0	+0.2
MTHZ	**Maungataniwha**	**2.66**	**246**	P	Pn	14 34 03.8	+0.2
MTHZ				S	Sn	14 34 35.8	+0.9
ARHZ	**Aropaoanui**	**2.74**	**237**	P	Pn	14 34 06.3	+1.7
MRHZ	**Matea Rd**	**2.97**	**249**	P	Pn	14 34 07.8	0.0
MCHZ	**McNeill Hill**	**3.03**	**237**	P	Pn	14 34 09.3	+0.6
BKZ	**Black Stump Fm**	**3.04**	**243**	P	Pn	14 34 08.9	+0.1
KAHZ	**Kahuranaki**	**3.12**	**230**	P	Pn	14 34 09.6	-0.2
KWHZ	**Kaweka Forest**	**3.20**	**239**	P	Pn	14 34 10.6	-0.4
BHHZ	**Black Hill Sta**	**3.48**	**240**	P	Pn	14 34 14.2	-0.7
CTZ	**Chatham Island**	**6.45**	**157**	P	Pn	14 34 57.4	+1.8
CTZ				S	Sn	14 36 06.2	-1.8

IDC 23 14:47:50.4±4.7, 6°58S×132°44E, h0km, mb3.4/1, mb1 3.4/3, mb1mx3.2/30, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=303.4km s-min=33.4km az=75.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.41**	**172**	Pn	Pn	14 51 02.4	+0.2
	0.1nm,0.3s,baz=351,slow=13,SNR=8.5						
WRA				Sn	Sn	14 53 24.0	-8.1
	0.2nm,0.3s,baz=359,slow=24,SNR=6.0						
ASAR	**Alice Springs**	**17.05**	**175**	P	Pn	14 51 50.2	-0.2
	0.1nm,0.3s,baz=358,slow=11,SNR=9.9						
ASAR				S	Sn	14 54 52.8	-7.9
	0.1nm,0.3s,baz=351,slow=28,SNR=1.3						
MKAR	**Makanchi Array**	**69.22**	**326**	P	P	14 58 59.2	0.0
	0.2nm,0.6s,baz=124,slow=6.3,SNR=4.1						

WEL 23 14:50:29.6±1.0, 38°S±7°×18°0W±°, h33km, M3.2/20, ML3.6/20, MLv3.2/20, Error ellipse: s-maj=0.0km s-min=0.0km az=28.7, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.33**	**264**	P	Pn	14 50 51.5	-0.3
WMGZ				S	Sn	14 51 08.3	0.0
MXZ	**Matakaoa Point**	**1.42**	**275**	P	Pn	14 50 52.4	-0.6
MXZ				S	Sn	14 51 10.4	-0.2
PUZ	**Puketiti**	**1.49**	**255**	P	Pn	14 50 53.8	-0.3
CNGZ	**Carnagh Statio**	**1.67**	**242**	P	Pn	14 50 57.4	+0.8
TWGZ	**Tauwhareparae**	**1.73**	**253**	P	Pn	14 50 57.8	+0.4
TWGZ				S	Sn	14 51 18.4	0.0
HAZ	**Te Kaha**	**1.82**	**268**	P	Pn	14 50 58.8	+0.1
HAZ				S	Sn	14 51 20.1	-0.6
TKGZ	**Te Karaka**	**1.91**	**247**	P	Pn	14 51 00.2	+0.4
TKGZ				S	Sn	14 51 24.0	+1.2
RUGZ	**Raukumara Rang**	**1.92**	**261**	P	Pn	14 50 59.7	-0.5
RIGZ	**Rimuhau**	**2.08**	**241**	P	Pn	14 51 02.8	+0.5
RIGZ				S	Sn	14 51 28.1	+1.0
MWZ	**Matawai**	**2.11**	**252**	P	Pn	14 51 02.2	-0.5
MWZ				S	Sn	14 51 27.3	-0.6
PRGZ	**Paritu Road**	**2.12**	**234**	P	Pn	14 51 03.2	+0.5
PRGZ				S	Sn	14 51 29.4	+1.5
MHGZ	**Mahia Peninsul**	**2.24**	**229**	P	Pn	14 51 05.6	+1.2
SNGZ	**Shannon Statio**	**2.41**	**243**	P	Pn	14 51 07.2	+0.4
URZ	**Urewera**	**2.41**	**256**	P	Pn	14 51 07.3	+0.5
WHRZ	**Whale Island**	**2.47**	**265**	P	Pn	14 51 08.7	+1.2
RTZ	**Ruatahuna**	**2.61**	**249**	P	Pn	14 51 09.1	-0.5
RAHZ	**Arahi**	**2.65**	**242**	P	Pn	14 51 10.7	+0.6
MARZ	**Manawahe**	**2.71**	**263**	P	Pn	14 51 11.7	+0.7
MUGZ	**Murupara**	**2.73**	**252**	P	Pn	14 51 10.9	-0.2
MTHZ	**Maungataniwha**	**2.80**	**245**	P	Pn	14 51 12.5	+0.4
OPRZ	**Ohinepanea**	**2.80**	**266**	P	Pn	14 51 11.8	-0.2
TARZ	**Mount Tarawera**	**2.88**	**258**	P	Pn	14 51 13.4	+0.1
ARHZ	**Aropaoanui**	**2.88**	**236**	P	Pn	14 51 13.9	+0.7
RRRZ	**Republican Roa**	**2.89**	**256**	P	Pn	14 51 13.7	+0.3
NMHZ	**Naumai**	**2.93**	**241**	P	Pn	14 51 14.6	+0.7
KARZ	**Kaharoa**	**3.05**	**263**	P	Pn	14 51 15.3	-0.3
MRHZ	**Matea Rd**	**3.10**	**247**	P	Pn	14 51 16.4	+0.1
MCHZ	**McNeill Hill**	**3.17**	**236**	P	Pn	14 51 17.6	+0.4
BKZ	**Black Stump Fm**	**3.17**	**242**	P	Pn	14 51 17.5	+0.2
KAHZ	**Kahuranaki**	**3.26**	**229**	P	Pn	14 51 18.3	-0.2
KWHZ	**Kaweka Forest**	**3.34**	**238**	P	Pn	14 51 19.5	-0.2
KRHZ	**Kereru**	**3.49**	**235**	P	Pn	14 51 21.2	-0.5
KUZ	**Kuaotunu**	**3.61**	**284**	P	Pn	14 51 22.5	-0.7
BHHZ	**Black Hill Sta**	**3.62**	**239**	P	Pn	14 51 23.2	-0.2
TOZ	**Tahuroa Road**	**3.63**	**268**	P	Pn	14 51 23.2	-0.3
WPHZ	**Waipukurau**	**3.69**	**229**	P	Pn	14 51 24.6	+0.2
TMVZ	**Te Maari**	**3.72**	**246**	P	Pn	14 51 24.9	0.0
PNHZ	**Pukenui**	**3.75**	**233**	P	Pn	14 51 24.5	-0.7
TSZ	**Takapari Road**	**3.98**	**233**	P	Pn	14 51 27.4	-1.0
DVHZ	**Dannevirke**	**4.00**	**228**	P	Pn	14 51 28.1	-0.6
WIAZ	**Waiheke Island**	**4.05**	**281**	P	Pn	14 51 29.1	-0.2
ETAZ	**East Tamaki Re**	**4.18**	**279**	P	Pn	14 51 31.0	0.0
BFZ	**Birch Farm**	**4.21**	**224**	P	Pn	14 51 30.6	-0.9
MBAZ	**Motutapu North**	**4.24**	**281**	P	Pn	14 51 32.1	+0.2
VRZ	**Vera Road**	**4.42**	**250**	P	Pn	14 51 35.6	+1.3
MRZ	**Mangatainoka R**	**4.58**	**228**	P	Pn	14 51 35.3	-1.3
WCZ	**Waipu Caves**	**4.93**	**289**	P	Pn	14 51 41.9	+0.5
OUZ	**Omahuta**	**5.79**	**293**	P	Pn	14 51 53.9	+0.7
CTZ	**Chatham Island**	**6.53**	**158**	P	Pn	14 52 07.2	+4.0
CTZ				S	Sn	14 53 15.3	-1.2

IDC 23 14:58:02.6±2.2, 39°48N×143°96E, h0km, mb3.7/5, mb1 3.7/8, mb1mx3.5/43, mbtmp3.7/8, ML2.6/3, MS2.8/4, Ms1 2.9/4, ms1mx2.5/37, Error ellipse: s-maj=49.3km s-min=24.8km az=85.0
JMA 23 14:58:05.0±0.2, 39°60N×143°61E, h20km±4km, M3.8
NIED 23 14:58:05.1, 39°60N×143°61E, h20km, MW3.7, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}3.69; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-3.23; $M_{r\theta}$1.69; $M_{\theta\phi}$-1.14; $M_{\phi r}$1.98; Fault plane solution: $M_0$4.49000×10^{14} NP1:ϕ_s31.00000°, δ63.00000°, λ.100.00000°. NP2:ϕ_s189.00000°, δ29.00000°, λ.71.00000°.

ISC 23 14:58:05.1±2.3, 39°55N±0°.06×143°48E±0°.07, h4km±13km, n29, σ1$ 37/32, mb3.7/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.28**	**272**	P	**Pg**	**14 58 29.5**	**-0.2**
MIYJ				*eS*	**Sn**	**14 58 46.8**	**-0.6**
JTH	**Tanohata**	**1.30**	**288**	P	**Pg**	**14 58 29.5**	**-0.6**
JTH				*eS*	**Sn**	**14 58 47.3**	**-0.7**
OFUJ	**Ofunato**	**1.48**	**252**	P	**Pn**	**14 58 32.5**	**0.0**
JKEN	**Kujiedanarisaw**	**1.51**	**296**	P	**Pn**	**14 58 32.1**	**-0.8**
JKEN				*eS*	**Sb**	**14 58 52.0**	**-1.1**
JOM	**Ohasama**	**1.69**	**268**	P	**Pn**	**14 58 35.9**	**+0.4**
JOM				*eS*	**Sb**	**14 58 58.2**	**-0.3**
JANG	**Nango**	**1.72**	**299**	P	**Pn**	**14 58 35.2**	**-0.6**
JMK	**Ichinoseki**	**1.85**	**252**	P	**Pn**	**14 58 38.2**	**+0.5**
JIO	**Ouri**	**1.99**	**237**	P	**Pn**	**14 58 39.4**	**-0.1**
JRG	**Rokugo**	**2.21**	**267**	P	**Pn**	**14 58 43.5**	**+1.0**
JTM	**Tenmabayashi**	**2.22**	**304**	P	**Pn**	**14 58 43.0**	**+0.3**
JTM				*eS*	**Sn**	**14 59 10.7**	**+0.1**
JAH	**Hinai**	**2.28**	**287**	P	**Pn**	**14 58 44.0**	**+0.5**
JAH				*eS*	**Sn**	**14 59 12.4**	**+0.4**
JYK	**Kaneyama**	**2.50**	**256**	P	**Pn**	**14 58 47.6**	**+1.0**
JYK				*eS*	**Sn**	**14 59 18.4**	**+0.8**
JNBK	**Urakawa-nobuka**	**2.78**	**349**	P	**Pn**	**14 58 51.5**	**+1.1**
JNBK				*eS*	**Sn**	**14 59 23.0**	**-1.4**
JCH	**Churui**	**3.06**	**358**	*eS*	**Sn**	**14 59 29.5**	**-1.8**
ASAJ	**Asahikawa**	**4.61**	**352**	Pn	**Pn**	**14 59 16.3**	**+0.8**
	0.5nm,0.3s,baz=213,slow=12,SNR=9.0						
ASAJ				Sn	**Sn**	**15 00 11.4**	**+2.0**
	0.6nm,0.3s,baz=352,slow=19,SNR=2.0						
MJAR	**Matsushiro Arr**	**5.13**	**236**	Pn	**Pn**	**14 59 24.8**	**+2.0**
	0.1nm,0.3s,baz=38,slow=12,SNR=11						
MJAR				LR	LR	15 01 36.4	
	comp=Z,57nm,21.6s,baz=85,slow=40						
MAT	**Matsushiro**	**5.13**	**236**	P	**Pn**	**14 59 24.8**	**+2.0**
USRK	**Ussuriysk Ar.**	**9.74**	**302**	Pn	**Pn**	**15 00 30.6**	**+4.6**
	baz=107,slow=14,SNR=4.5						
KSRS	**Korea Array**	**12.37**	**265**	LR	LR	15 05 18.5	
	comp=Z,34nm,20.4s,baz=250,slow=34						
MA2	**Magadan**	**20.57**	**11**	LR	LR	15 10 17.7	
	comp=Z,34nm,21.7s,baz=258,slow=36						
SONM	**Songino Array**	**27.84**	**300**	P	**P**	**15 03 56.9**	**+1.2**
	0.8nm,0.9s,baz=108,slow=9.3,SNR=4.4						
H11N2	**WAKE ISLAND Hy**	**28.22**	**128**	T	T	15 33 35.8	
	baz=320,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**28.23**	**128**	T	T	15 33 58.2	
	baz=320,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.24**	**128**	T	T	15 34 01.1	
	baz=320						
ZALV	**Zalesovo Beam**	**41.47**	**310**	P	**P**	**15 05 52.7**	**-0.1**
	0.8nm,0.5s,baz=86,slow=6.5,SNR=2.1						
CMAR	**Chiang Mai Arr**	**43.72**	**254**	LR	LR	15 25 32.1	
	comp=Z,18nm,19.1s,baz=105,slow=37						
MKAR	**Makanchi Array**	**44.20**	**300**	P	**P**	**15 06 15.3**	**+0.1**
	0.9nm,0.8s,baz=80,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**59.80**	**190**	P	**P**	**15 08 09.5**	**-2.0**
	0.4nm,1.0s,baz=8.2,slow=7.0,SNR=1.0						
FINES	**FINESS Array B**	**67.34**	**332**	P	**P**	**15 09 01.0**	**+0.1**
	0.7nm,0.7s,baz=15,slow=5.8,SNR=3.3						

IDC 23 15:58:16.3±8.7, 21°70N×143°41E, h145km±81km, mb3.3/10, mb1 3.5/10, mb1mx3.2/43, mbtmp3.7/10, MS2.7/1, Ms1 2.7/1, ms1mx2.2/27, Error ellipse: s-maj=33.0km s-min=15.5km az=86.0

ISC 23 15:58:16.7±0.9, 21°7N±0°.1×143°4E±0°.2, h150km, n18, σ0$80/11, mb3.6/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.66**	**323**	P	**P**	**16 02 45.9**	**+1.3**
	1.3nm,0.5s,baz=144,slow=8.8,SNR=10						
H11N1	**WAKE ISLAND Hy**	**22.05**	**91**	T	T	16 25 32.0	
	baz=279,slow=74,SNR=16						
H11N2	**WAKE ISLAND Hy**	**22.05**	**91**	T	T	16 25 33.1	
	baz=279,slow=74,SNR=11						
H11N3	**WAKE ISLAND Hy**	**22.06**	**91**	T	T	16 25 34.3	
	baz=279,slow=74,SNR=15						
H11S3	**WAKE ISLAND Hy**	**22.08**	**94**	T	T	16 25 30.5	
	baz=283,slow=74,SNR=59						
H11S1	**WAKE ISLAND Hy**	**22.09**	**94**	T	T	16 25 33.7	
	baz=283,slow=74,SNR=83						
H11S2	**WAKE ISLAND Hy**	**22.10**	**94**	T	T	16 25 34.3	
	baz=283,slow=74,SNR=48						
JAY	**Jayapura**	**24.19**	**187**	LR	LR	16 12 26.6	
	comp=Z,17nm,18.1s,baz=346,slow=35						
SONM	**Songino Array**	**39.49**	**320**	P	**P**	**16 05 32.7**	**0.0**
	0.3nm,0.4s,baz=128,slow=9.3,SNR=2.1						
WRA	**Warramunga Arr**	**42.31**	**193**	P	**P**	**16 05 55.6**	**-0.1**
	0.6nm,0.9s,baz=19,slow=9.3,SNR=6.9						
ASAR	**Alice Springs**	**46.01**	**192**	P	**P**	**16 06 25.2**	**0.0**
	0.5nm,0.8s,baz=17,slow=9.8,SNR=3.8						
ZALV	**Zasovo Beam**	**54.36**	**322**	P	**P**	**16 07 26.7**	**-1.0**
	0.5nm,0.3s,baz=96,slow=7.8,SNR=3.6						
KURBB	**Kurchatov Arra**	**57.69**	**317**	P	**P**	**16 07 51.2**	**-0.2**
	1.9nm,0.9s,baz=93,slow=7.8,SNR=9.7						
ILAR	**Eielson Array**	**61.96**	**27**	P	**P**	**16 08 19.2**	**-1.1**
	0.7nm,0.9s,baz=263,slow=5.2,SNR=8.1						
YKA	**Yellowknife Ar**	**76.37**	**28**	P	**P**	**16 09 49.4**	**+0.3**
	0.6nm,0.6s,baz=296,slow=4.8,SNR=5.3						
NVAR	**Mina Array Bea**	**82.99**	**52**	P	**P**	**16 10 26.5**	**+1.0**
	0.6nm,0.6s,baz=278,slow=6.1,SNR=6.6						
FINES	**FINESS Array B**	**83.29**	**335**	P	**P**	**16 10 26.0**	**-0.3**
	1.2nm,1.0s,baz=15,slow=5.8,SNR=1.1						
LPAZ	**La Paz**	**149.72**	**85**	PKPbc	**PKiKP**	**16 17 51.5**	**+0.2**
	1.5nm,1.1s,baz=17,slow=1.5,SNR=3.6						

NEIC 23 16:25:10.5±1.7, 23°.95N±0°.04×122°.72E±0°.04, h27km±5km, mb4.2/18, Error ellipse: s-maj=6.6km s-min=3.8km az=135.0
TAP 23 16:25:11.0, 23°.93N×122°.68E, h22km, ML4.0, D
JMA 23 16:25:11.4±0.2, 23°.99N×122°.64E, h33km±4km, M3.6
NIED 23 16:25:11.5, 23°.99N×122°.64E, h33km, MW3.9, Moment Tensor Solution. s2 Moment tensor: Scale 10^{14}Nm; M_{rr}4.16; $M_{\theta\theta}$-4.55; $M_{\phi\phi}$0.39; $M_{r\theta}$6.59; $M_{\theta\phi}$-0.02; $M_{\phi r}$3.79; Fault plane solution: $M_0$8.75000×10^{14} NP1:ϕ_s65.00000°, δ76.00000°, λ.77.00000°. NP2:ϕ_s289.00000°, δ19.00000°, λ.133.00000°.
IDC 23 16:25:19.9±7.7, 24°.01N×122°.51E, h109km±77km, mb3.4/9, mb1 3.6/10, mb1mx3.3/35, mbtmp3.8/10, ML3.6/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/22 Error ellipse: s-maj=72.5km s-min=14.8km az=68.0

ISC 23 16:25:11.0±1.0, 23°91N±0°.02×122°68E±0°.02, h29km±7km, n188, σ1$25/321, mb4.1/15, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.59**	**24**	P	**Pb**	**16 25 22.4**	**-0.5**
JYNG				S	**Sb**	**16 25 29.6**	**-1.5**
YOJ	**Yonaguni jima**	**0.63**	**29**	P	**Pn**	**16 25 23.2**	**-0.8**
	baz=39						
YOJ				S	**Sb**	**16 25 30.8**	**-1.3**
	baz=39						
YOJ	**Yonaguni jima**	**0.63**	**29**	P	**Pn**	**16 25 23.1**	**-0.9**
YOJ				*eS*	**Sb**	**16 25 30.6**	**-1.5**
YOJ	**Yonaguni jima**	**0.63**	**29**		**Pb**	**16 25 23.0**	**-0.6**
YOJ				Sn	**Sn**	**16 25 31.1**	**-2.0**
ENAH	**Nanao**	**0.96**	**305**	*eP*	**Pb**	**16 25 29.0**	**+0.1**
	baz=303						
ENAH				*eS*	**Sb**	**16 25 42.4**	**+1.1**
	baz=303						
HWA	**Hwalien**	**0.98**	**274**	P	**Pn**	**16 25 27.5**	**-1.2**
	baz=259						
HWA				S	**Sb**	**16 25 42.7**	**+0.7**
	baz=259						
ENA	**Nanau**	**1.00**	**301**	P	**Pb**	**16 25 29.2**	**-0.4**
	baz=300						
ENA				S	**Sb**	**16 25 43.5**	**+1.1**
	baz=300						
TWD	**Chiawan**	**1.00**	**280**	*eP*	**Pn**	**16 25 28.6**	**-0.5**
	baz=278						
TWD				S	**Sn**	**16 25 41.7**	**-0.5**
	baz=278						
NACB	**Ninganchiao**	**1.02**	**285**	P	**Pn**	**16 25 29.1**	**-0.3**
	baz=267						
NACB				*eS*	**Sb**	**16 25 43.0**	**-0.2**
	baz=267						
NACB	**Ninganchiao**	**1.02**	**285**		**Pn**	**16 25 28.9**	**-0.5**
NACB				Sn	**Sn**	**16 25 42.6**	**-0.1**
TWC	**Suao**	**1.03**	**313**	P	**Pb**	**16 25 29.5**	**-0.7**
	baz=312						
TWC				S	**Sb**	**16 25 43.5**	**+0.2**
	baz=312						
HATJ	**Hateruma jima**	**1.04**	**82**	P	**Pb**	**16 25 30.6**	**+0.2**
HATJ				*eS*	**Sb**	**16 25 44.6**	**+0.8**
IRIF	**Iriomote-Funau**	**1.05**	**66**	P	**Pb**	**16 25 30.2**	**-0.4**
IRIF				S	**Sb**	**16 25 45.1**	**+1.1**
ETLH	**Xiulin Townshi**	**1.13**	**286**	*eP*	**Pn**	**16 25 30.8**	**-0.1**
	baz=271						
ETLH				*eS*	**Sn**	**16 25 45.6**	**+0.1**
	baz=271						
ESL	**Shilin**	**1.14**	**266**	P	**Pn**	**16 25 30.4**	**-0.6**
	baz=263						
ESL				*eS*	**Sn**	**16 25 44.6**	**-1.1**
	baz=263						
EGFH	**Guangfu**	**1.17**	**258**	P	**Pn**	**16 25 30.9**	**-0.4**
	baz=257						
EGFH				S	**Sb**	**16 25 47.9**	**+0.6**
	baz=257						
ILA	**Ilan**	**1.20**	**315**	P	**Pb**	**16 25 33.5**	**+0.4**
	baz=314						
ILA				S	**Sb**	**16 25 50.0**	**+1.7**
	baz=314						
NTC	**Toucheng**	**1.22**	**321**	P	**Pb**	**16 25 33.1**	**-0.3**
	baz=320						
NTC				*eS*	**Sb**	**16 25 50.6**	**+1.9**
	baz=320						
HGSD	**Ruisui**	**1.22**	**250**	*eP*	**Pn**	**16 25 31.4**	**-0.6**
	baz=249						
HGSD				*eS*	**Sn**	**16 25 47.6**	**0.0**
	baz=249						
TWE	**Neicheng**	**1.23**	**312**	*eP*	**Pb**	**16 25 32.7**	**-0.8**
	baz=311						
TWE				*eS*	**Sb**	**16 25 50.2**	**+1.2**
	baz=311						
ENTT	**Nioudou**	**1.25**	**306**	*eP*	**Pb**	**16 25 33.1**	**-0.8**
	baz=288						
ENTT				*eS*	**Sb**	**16 25 51.0**	**+1.3**
	baz=288						
TWB1	**Santiao Chiao**	**1.26**	**330**	*eP*	**Pb**	**16 25 34.0**	**-0.2**
	baz=345						
TWB1				S	**Sb**	**16 25 51.1**	**+1.1**
	baz=345						
JKRS	**Kuro-shima**	**1.26**	**75**	P	**Pb**	**16 25 33.7**	**-0.4**
JKRS				S	**Sb**	**16 25 50.5**	**+0.5**
NDT	**Datong Townshi**	**1.27**	**303**	*eP*	**Pn**	**16 25 32.7**	**0.0**
	baz=287						
NDT				*eS*	**Sb**	**16 25 51.1**	**+1.0**
	baz=287						
NNSB	**Datong**	**1.29**	**294**	*i P*	**Pn**	**16 25 33.6**	**+0.5**
	baz=292						
NNSB				*eS*	**Sb**	**16 25 50.4**	**-0.6**
	baz=292						
NNSH	**Datong**	**1.29**	**294**	*eP*	**Pn**	**16 25 33.5**	**+0.3**
	baz=292						
NNSH				*eS*	**Sb**	**16 25 51.8**	**+0.8**
	baz=292						
NNS	**Nan Shan**	**1.30**	**294**	*eP*	**Pb**	**16 25 33.9**	**-1.0**
	baz=293						
NNS				S	**Sb**	**16 25 51.1**	**-0.2**
	baz=293						
EHY	**Hungye**	**1.30**	**252**	P	**Pn**	**16 25 33.6**	**+0.3**
	baz=251						
EHY				S	**Sn**	**16 25 50.0**	**+0.3**
	baz=251						
WHF	**Hehuan Shan**	**1.31**	**281**	*eP*	**Pn**	**16 25 33.8**	**+0.1**
	baz=279						
WHF				*eS*	**Sb**	**16 25 51.4**	**-0.4**
	baz=279						
TIPB	**Shuangxi**	**1.31**	**324**	P	**Pb**	**16 25 34.9**	**-0.1**
	baz=339						
TIPB				S	**Sb**	**16 25 52.2**	**+0.8**
	baz=339						
FUSS	**Fushou**	**1.35**	**285**	P	**Pn**	**16 25 34.6**	**+0.5**
	baz=283						
FUSS				*eS*	**Sb**	**16 25 52.6**	**-0.2**
	baz=283						
EYUL	**Yuli**	**1.36**	**246**	P	**Pn**	**16 25 34.4**	**+0.4**
	baz=245						
EYUL				*eS*	**Sn**	**16 25 52.3**	**+1.1**
	baz=245						
YULB	**Yu-li**	**1.36**	**248**	*i P*	**Pn**	**16 25 34.5**	**+0.4**
	baz=247						
YULB				S	**Sn**	**16 25 51.3**	**+0.1**
	baz=247						
YULB	**Yu-li**	**1.36**	**248**		**Pn**	**16 25 34.1**	**0.0**
OWD	**Renai**	**1.37**	**272**	*eP*	**Pn**	**16 25 34.7**	**+0.4**
	baz=270						
OWD				S	**Sb**	**16 25 53.1**	**-0.2**
	baz=270						
NWLT	**Wulai**	**1.38**	**309**	*i P*	**Pb**	**16 25 35.7**	**-0.4**
	baz=293						
NWLT				*eS*	**Sb**	**16 25 55.0**	**+1.7**
	baz=293						
TWF1	**Yuli**	**1.38**	**247**	P	**Pn**	**16 25 34.8**	**+0.5**
	baz=245						
TWF1				S	**Sn**	**16 25 52.2**	**+0.7**
	baz=245						
CHGB	**Renai**	**1.38**	**277**	*i P*	**Pn**	**16 25 34.9**	**+0.4**
	baz=275						
CHGB				S	**Sn**	**16 25 52.3**	**+0.4**
	baz=275						
YHNB	**Yeheng**	**1.41**	**303**	*i P*	**Pb**	**16 25 35.4**	**-1.3**
	baz=286						
YHNB				*eS*	**Sb**	**16 25 56.2**	**+1.9**
	baz=286						
YHNB	**Yeheng**	**1.41**	**303**		**Pn**	**16 25 34.6**	**-0.1**
JIJ	**Ishigaki jima**	**1.42**	**71**	P	**Pn**	**16 25 35.3**	**+0.5**
JIJ				*eS*	**Sn**	**16 25 52.8**	**+0.4**
NWF	**Wu-fen Shan**	**1.42**	**325**	*eP*	**Pb**	**16 25 37.1**	**+0.3**
	baz=324						
NWF				*eS*	**Sb**	**16 25 55.9**	**+1.4**
	baz=324						
WFSB	**Wu-fen Shan**	**1.42**	**325**	P	**Pb**	**16 25 36.2**	**-0.5**
	baz=324						
WFSB				S	**Sb**	**16 25 55.9**	**+1.4**
	baz=324						
NSK	**Sanguang**	**1.42**	**303**	*eP*	**Pb**	**16 25 35.6**	**-1.4**
	baz=285						
NSK				*eS*	**Sb**	**16 25 55.0**	**+0.3**
	baz=285						
TDCB	**Techi**	**1.43**	**284**	*i P*	**Pn**	**16 25 35.8**	**+0.8**
	baz=270						
TDCB				*eS*	**Sb**	**16 25 55.4**	**+0.5**
	baz=270						
CHKT	**Chengkung**	**1.45**	**236**	*eP*	**Pn**	**16 25 34.8**	**-0.4**
	baz=222						
CHKT				S	**Sn**	**16 25 51.6**	**-1.5**
	baz=222						
FULB

YM03				*e*S		**Sb**	**16 26 01.4**	**+0.6**
	baz=320								
JISG	**Ishigakijimahi**	**1.64**	**65**	P		**Pn**	**16 25 38.1**	**+0.3**
JISG				*e*S		**Sn**	**16 25 58.5**	**+0.6**
TWS1	**Kuangyinshan**	**1.65**	**316**	P		**Pb**	**16 25 39.7**	**-1.1**
	baz=332								
TWS1				*e*S		**Sb**	**16 26 00.8**	**-0.3**
	baz=332								
ANP	**Anpu**	**1.65**	**321**	*e*P		**Pb**	**16 25 39.7**	**-1.1**
	baz=320								
LDUT	**Ludao**	**1.66**	**222**	*e*P		**Pn**	**16 25 37.5**	**-0.5**
	baz=221								
LDUT				S		**Sn**	**16 25 57.2**	**-1.1**
	baz=221								
NTST	**Danshui**	**1.68**	**319**	*e*P		**Pb**	**16 25 40.0**	**-1.1**
	baz=333								
NTST				S		**Sb**	**16 26 02.5**	**+0.6**
	baz=333								
TWY	**Chenhua**	**1.68**	**325**	P		**Pb**	**16 25 40.1**	**-1.1**
	baz=323								
TWY				*e*S		**Sb**	**16 26 01.4**	**-0.6**
	baz=323								
ELDTW	**Lidau**	**1.68**	**245**	*e*P		**Pn**	**16 25 38.6**	**+0.1**
	baz=244								
ELDTW				*e*S		**Sn**	**16 25 59.5**	**+0.4**
	baz=244								
WHYT	**Xinyi Township**	**1.68**	**263**	*e*P		**Pn**	**16 25 39.4**	**+0.9**
	baz=250								
WHYT				*e*S		**Sn**	**16 25 59.8**	**+0.7**
	baz=250								
LIOB	**Emei**	**1.68**	**296**	*e*P		**Pb**	**16 25 39.9**	**-1.4**
	baz=295								
LIOB				S		**Sb**	**16 26 02.1**	**0.0**
	baz=295								
NSTT	**Nanjuang**	**1.69**	**296**	*e*P		**Pb**	**16 25 40.2**	**-1.2**
	baz=294								
NSTT				*e*S		**Sb**	**16 26 03.1**	**+0.9**
	baz=294								
NCU	**National Centr**	**1.72**	**308**	*e*P		**Pb**	**16 25 40.2**	**-1.7**
	baz=307								
NCU				*e*S		**Sb**	**16 26 04.2**	**+1.1**
	baz=307								
NCUH	**Zhongli**	**1.72**	**308**	*e*P		**Pb**	**16 25 40.7**	**-1.2**
	baz=307								
NCUH				*e*S		**Sb**	**16 26 05.2**	**+2.1**
	baz=307								
LONT	**Longtian**	**1.73**	**235**	P		**Pn**	**16 25 39.7**	**+0.5**
	baz=225								
LONT				*e*S		**Sn**	**16 26 01.1**	**+0.7**
	baz=225								
ALS	**Alishan**	**1.76**	**257**	P		**Pn**	**16 25 41.2**	**+1.5**
	baz=256								
ALS				S		**Sn**	**16 26 02.9**	**+1.6**
	baz=256								
SBCB	**Hsinchu**	**1.77**	**300**	*e*P		**Pb**	**16 25 41.0**	**-1.9**
	baz=299								
SBCB				*e*S		**Sb**	**16 26 05.0**	**+0.3**
	baz=299								
WJS	**Zhushan**	**1.79**	**268**	*e*P		**Pb**	**16 25 42.0**	**-1.0**
	baz=266								
WJS				*e*S		**Sb**	**16 26 05.2**	**+0.2**
	baz=266								
HSN	**Hsinchu**	**1.79**	**300**	*e*P		**Pb**	**16 25 41.2**	**-1.9**
	baz=300								
HSN				*e*S		**Sb**	**16 26 05.0**	**-0.2**
	baz=300								
PCYT	**Pengchaiyu**	**1.80**	**342**	*e*P		**Pn**	**16 25 40.7**	**+0.6**
	baz=342								
PCYT				*e*S		**Sb**	**16 26 03.7**	**-1.8**
	baz=342								
TTN	**Taitung**	**1.81**	**231**	*e*P		**Pn**	**16 25 40.7**	**+0.5**
	baz=230								
TTN				*e*S		**Sn**	**16 26 03.7**	**+1.4**
	baz=230								
NSY	**Sanyi**	**1.82**	**287**	*e*P		**Pn**	**16 25 41.5**	**+1.1**
	baz=285								
NSY				*e*S		**Sb**	**16 26 04.6**	**-1.5**
	baz=285								
WNT	**Mingjian**	**1.82**	**269**	*e*P		**Pn**	**16 25 42.2**	**+1.9**
	baz=268								
WNT				S		**Sb**	**16 26 06.0**	**-0.1**
	baz=268								
TWGBT	**Beinan**	**1.82**	**234**	*e*P		**Pn**	**16 25 40.5**	**+0.1**
	baz=223								
TWGBT				*e*S		**Sn**	**16 26 03.4**	**+0.9**
	baz=223								
TWG	**Pinlang**	**1.83**	**234**	P		**Pn**	**16 25 40.7**	**+0.3**
	baz=223								
TWG				*e*S		**Sn**	**16 26 02.4**	**-0.2**
	baz=223								
TWG	**Pinlang**	**1.83**	**234**			**Pn**	**16 25 40.5**	**0.0**
NMLH	**Miaoli**	**1.83**	**290**	P		**Pb**	**16 25 42.9**	**-0.9**
	baz=289								
NMLH				*e*S		**Sb**	**16 26 05.1**	**-1.2**
	baz=289								
TCU	**Taichung**	**1.84**	**278**	*e*P		**Pb**	**16 25 43.0**	**-1.0**
	baz=276								
TCU				*e*S		**Sb**	**16 26 06.5**	**-0.2**
	baz=276								
CHN5	**Tsauling**	**1.86**	**261**	*e*P		**Pn**	**16 25 42.0**	**+1.1**
	baz=260								
CHN5				*e*S		**Sn**	**16 26 04.5**	**+1.0**
	baz=260								
STYT	**Tauyuan**	**1.91**	**248**	P		**Pn**	**16 25 43.1**	**+1.4**
	baz=237								
STYT				*e*S		**Sn**	**16 26 05.7**	**+0.9**
	baz=237								
WDJ	**Dajia District**	**1.91**	**284**	*e*P		**Pn**	**16 25 43.3**	**+1.7**
	baz=282								
WDJ				S		**Sb**	**16 26 08.1**	**-0.5**
	baz=282								
WCHH	**Zhanghua**	**1.94**	**275**	*e*P		**Pb**	**16 25 44.3**	**-1.4**
	baz=274								
WCHH				*e*S		**Sn**	**16 26 07.5**	**+2.0**
	baz=274								
WGK	**Gukeng**	**1.95**	**264**	*e*P		**Pn**	**16 25 43.2**	**+1.2**
	baz=263								
WGK				*e*S		**Sb**	**16 26 09.1**	**-0.6**
	baz=263								
WDLH	**Douliu**	**1.97**	**264**	*e*P		**Pb**	**16 25 45.6**	**-0.6**
	baz=263								
WDLH				*e*S		**Sb**	**16 26 09.6**	**-0.7**
	baz=263								
TPUB	**Ta-pu**	**1.97**	**253**	*e*P		**Pn**	**16 25 43.5**	**+1.0**
	baz=242								
TPUB				*e*S		**Sb**	**16 26 09.3**	**-1.0**
	baz=242								
TPUB	**Ta-pu**	**1.97**	**253**			**Pn**	**16 25 44.5**	**+2.1**
JTJ	**Tarama**	**1.99**	**68**	P		**Pn**	**16 25 44.0**	**+1.4**
WTP	**Ta-pu**	**2.00**	**251**	*e*P		**Pn**	**16 25 44.3**	**+1.4**
	baz=241								
WTP				*e*S		**Sn**	**16 26 08.0**	**+1.0**
	baz=241								
CHN2	**Minshiung**	**2.05**	**260**	*e*P		**Pn**	**16 25 44.7**	**+1.2**
	baz=259								
CHN2				*e*S		**Sb**	**16 26 11.7**	**-0.9**
	baz=259								
SLGT	**Liugui**	**2.07**	**244**	*e*P		**Pn**	**16 25 45.4**	**+1.5**
	baz=235								
SLGT				*e*S		**Sn**	**16 26 12.2**	**+3.5**
	baz=235								
SGST	**Jiashian**	**2.09**	**247**	*e*P		**Pn**	**16 25 46.4**	**+2.3**
	baz=235								
SGST				*e*S		**Sn**	**16 26 11.9**	**+2.8**
	baz=235								
CHN1	**Nanshi**	**2.10**	**250**	*e*P		**Pn**	**16 25 46.6**	**+2.5**
	baz=249								
CHN1				*e*S		**Sb**	**16 26 14.2**	**+0.2**
	baz=249								
CHY	**Chiayi**	**2.10**	**259**	*e*P		**Pn**	**16 25 45.3**	**+1.1**
	baz=258								
CHY				*e*S		**Sb**	**16 26 13.0**	**-1.2**
	baz=258								
TWK	**Hsinying**	**2.10**	**253**	*e*P		**Pb**	**16 25 48.4**	**-0.1**
	baz=252								
TWK				*e*S		**Sb**	**16 26 13.4**	**-0.9**
	baz=252								
WTK	**Tuku**	**2.11**	**264**	*e*P		**Pn**	**16 25 45.5**	**+1.3**
	baz=264								
WTK				*e*S		**Sb**	**16 26 13.2**	**-1.0**
	baz=264								
SNST	**Tainan City**	**2.11**	**252**	*e*P		**Pb**	**16 25 48.4**	**-0.2**
	baz=250								
SNST				*e*S		**Sb**	**16 26 13.5**	**-0.9**
	baz=250								
RLNB	**Erlin**	**2.12**	**270**	*e*P		**Pn**	**16 25 45.8**	**+1.4**
	baz=269								
RLNB				*e*S		**Sb**	**16 26 14.0**	**-0.6**
	baz=269								
LAY	**Lan-yu**	**2.13**	**209**	*e*P		**Pn**	**16 25 43.8**	**-0.8**
	baz=208								
LAY				*e*S		**Sn**	**16 26 10.6**	**+0.5**
	baz=208								
WTCT	**Ta-ch'eng**	**2.19**	**269**	*e*S		**Sb**	**16 26 15.3**	**-1.4**
	baz=269								
SSD	**Sandimen**	**2.21**	**239**	*e*P		**Pn**	**16 25 46.3**	**+0.7**
	baz=231								
SSD				*e*S		**Sn**	**16 26 12.4**	**+0.5**
	baz=231								
TSMG	**Majia**	**2.22**	**238**	*e*P		**Pn**	**16 25 46.5**	**+0.7**
	baz=230								
TSMG				*e*S		**Sn**	**16 26 12.8**	**+0.6**
	baz=230								
WLGB	**Puzi**	**2.22**	**259**	*e*P		**Pn**	**16 25 47.9**	**+2.1**
	baz=259								
WLGB				*e*S		**Sb**	**16 26 15.5**	**-1.9**
	baz=259								
SCST	**Cishan**	**2.25**	**244**	P		**Pn**	**16 25 47.1**	**+0.9**
	baz=232								
SCST				*e*S		**Sb**	**16 26 17.6**	**-0.7**
	baz=232								
TAW	**Tawu**	**2.25**	**227**	*e*P		**Pn**	**16 25 46.4**	**+0.2**
	baz=237								
TAW				*e*S		**Sn**	**16 26 11.9**	**-1.1**
	baz=237								
WSF	**Szhu**	**2.26**	**264**	*e*P		**Pn**	**16 25 48.7**	**+2.3**
	baz=263								
WSF				*e*S		**Sb**	**16 26 17.6**	**-1.1**
	baz=263								
EAST	**Anshuo**	**2.27**	**228**	P		**Pn**	**16 25 46.8**	**+0.3**
	baz=238								
EAST				*e*S		**Sn**	**16 26 13.4**	**0.0**
	baz=238								
CHN3	**Shinhua**	**2.28**	**249**	*e*P		**Pb**	**16 25 49.7**	**-1.7**
	baz=249								
CHN3				*e*S		**Sb**	**16 26 19.9**	**+0.8**
	baz=249								
MASBT	**Mashibuluo**	**2.28**	**236**	P		**Pn**	**16 25 47.7**	**+1.1**
	baz=228								
MASBT				*e*S		**Sn**	**16 26 15.3**	**+1.5**
	baz=228								
SGLT	**Jiouru**	**2.33**	**240**	*e*P		**Pn**	**16 25 50.3**	**+3.0**
	baz=234								
SGLT				*e*S		**Sb**	**16 26 19.9**	**-0.7**
	baz=234								
CHN8	**Yiju**	**2.33**	**257**	P		**Pn**	**16 25 49.6**	**+2.3**
	baz=256								
CHN8				S		**Sn**	**16 26 18.1**	**+3.2**
	baz=256								
TWM1	**Shoushan**	**2.33**	**243**	*e*P		**Pb**	**16 25 51.5**	**-0.8**
	baz=242								
TWM1				*e*S		**Sb**	**16 26 20.7**	**-0.1**
	baz=242								
SCLT	**Jiali**	**2.39**	**253**	*e*P		**Pn**	**16 25 50.8**	**+2.6**
	baz=253								
SCLT				S		**Sn**	**16 26 19.9**	**+3.4**
	baz=253								
SSPT	**Xinbi**	**2.40**	**234**	*e*P		**Pn**	**16 25 50.5**	**+2.2**
	baz=233								
SSPT				*e*S		**Sn**	**16 26 19.2**	**+2.4**
	baz=233								
SLIU	**Shizi**	**2.41**	**226**	*e*P		**Pn**	**16 25 49.0**	**+0.5**
	baz=225								
SLIU				*e*S		**Sn**	**16 26 18.4**	**+1.3**
	baz=225								
SCZT	**Fangliau**	**2.43**	**231**	*e*P		**Pn**	**16 25 49.3**	**+0.6**
	baz=230								
SCZT				*e*S		**Sn**	**16 26 17.6**	**0.0**
	baz=230								
JIRB	**Irabujima**	**2.46**	**68**	P		**Pn**	**16 25 50.4**	**+1.3**
JIRB				*e*S		**Sn**	**16 26 19.7**	**+1.6**
JMJ	**Miyako jima 2**	**2.55**	**69**	*e*P		**Pn**	**16 25 52.6**	**+2.2**
	baz=70								
JMJ				S		**Sn**	**16 26 22.0**	**+1.5**
	baz=70								
TSEB	**Hengchuen, Pin**	**2.58**	**220**	*e*P		**Pn**	**16 25 52.1**	**+1.2**
	baz=230								
TSEB				S		**Sn**	**16 26 24.3**	**+3.1**
	baz=230								
HEN	**Hengchun**	**2.60**	**224**	*e*P		**Pn**	**16 25 51.5**	**+0.4**
	baz=223								
HEN				*e*S		**Sn**	**16 26 23.8**	**+2.1**
	baz=223								
TWKBT	**Hengchun**	**2.60**	**222**	*e*P		**Pn**	**16 25 52.0**	**+0.9**
	baz=221								
TWKBT				*e*S		**Sn**	**16 26 24.1**	**+2.3**
	baz=221								
TWK1	**Hengchun**	**2.61**	**222**	*e*P		**Pn**	**16 25 52.3**	**+1.2**
	baz=221								
TWK1				S		**Sn**	**16 26 23.0**	**+1.2**
	baz=221								
WLCH	**Liuqiu**	**2.62**	**234**	*e*P		**Pb**	**16 25 56.4**	**-0.8**
	baz=233								
WLCH				*e*S		**Sb**	**16 26 30.0**	**+1.0**
	baz=233								
TWP	**Hsiaoliuchiu**	**2.64**	**234**	*e*P		**Pb**	**16 25 56.2**	**-1.3**
	baz=234								
TWP				*e*S		**Sb**	**16 26 30.0**	**+0.5**
	baz=234								
WDGT	**Dungji**	**2.84**	**257**	*e*P		**Pn**	**16 25 56.2**	**+1.8**
	baz=258								
WDGT				*e*S		**Sn**	**16 26 29.5**	**+1.9**
	baz=258								
PHUB	**P'eng-hu**	**2.87**	**263**	*e*P		**Pn**	**16 25 55.9**	**+1.2**
	baz=278								
PHUB				*e*S		**Sn**	**16 26 30.5**	**+2.2**
	baz=278								
PNG	**Penghu**	**2.88**	**264**	*e*P		**Pn**	**16 25 57.0**	**+2.1**
	baz=264								
PNG				*e*S		**Sn**	**16 26 30.3**	**+1.7**
	baz=264								
VCHM	**Qimei**	**3.06**	**257**	*e*P		**Pn**	**16 25 59.0**	**+1.7**
	baz=258								
VCHM				*e*S		**Sn**	**16 26 33.4**	**+0.4**
	baz=258								
PTTC	**Pingtan**	**3.08**	**302**	*e*P		**Pn**	**16 25 59.5**	**+1.9**
	ba301								
VWUC	**VWUC**	**3.13**	**291**	*e*P		**Pn**	**16 25 58.5**	**+0.2**
	baz=290								
MATB	**Ma-tsu**	**3.33**	**313**	*e*S		**Sb**	**16 26 43.4**	**-6.1**
	baz=298								
PTMZ	**Houxiangcun**	**3.43**	**290**	*e*P		**Pn**	**16 26 04.2**	**+1.7**
	baz=289								
LYJJ	**Jianjiangzhen**	**3.73**	**316**	*e*P		**Pn**	**16 26 08.6**	**+2.0**
	baz=326								
XPSS	**Dashiqiu**	**3.76**	**324**	*e*P		**Pn**	**16 26 08.8**	**+1.9**
	baz=323								
KNM	**Kinmen**	**3.91**	**278**	*e*P		**Pn**	**16 26 11.2**	**+2.1**
	baz=278								
KNM				*e*S		**Sn**	**16 26 58.9**	**+5.0**
	baz=278								
KNMB	**Chin-men Tao**	**3.95**	**279**	*e*P		**Pn**	**16 26 11.7**	**+2.0**
	baz=279								
KNMB				*e*S		**Sn**	**16 26 55.8**	**+0.7**
	baz=279								
KNMB	**Chin-men Tao**	**3.95**	**279**	Pn		**Pn**	**16 26 09.8**	**+0.1**
AXDP	**Jialang**	**4.40**	**284**	*e*P		**Pn**	**16 26 18.1**	**+2.3**
	baz=283								
AXDP				*e*S		**Sn**	**16 27 07.9**	**+1.8**
	baz=283								
ZPLA	**Ao Xicun**	**4.51**	**271**	*e*P		**Pn**	**16 26 19.4**	**+2.1**
	baz=271								
ZPLA				*e*S		**Sn**	**16 27 10.3**	**+1.5**
	baz=271								
KSAR	**Wonju Array Be**	**14.21**	**17**	P		**P**	**16 28 35.7**	**-1.6**
KSRS	**Korea Array**	**14.23**	**17**	P		**P**	**16 28 36.3**	**-1.2**
	0.3nm,0.3s,baz=198,slow=11,SNR=13								
KSRS					LR	LR	16 34 29.8		
	comp=Z,40nm,20.0s,baz=181,slow=39								
KS19	**Wonju Array Si**	**14.26**	**17**	P		**P**	**16 28 36.4**	**-1.5**
MDJ	**Mudanjiang**	**21.42**	**14**	P		**P**	**16 29 55.7**	**-0.8**
MDJ					IAmb	IAmb	16 30 05.9		
	comp=Z,13nm,1.4s								
SONM	**Songino Array**	**27.17**	**336**	P		**P**	**16 30 51.1**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=144,slow=10,SNR=3.7								
SONM					LR	LR	16 43 03.6		
	comp=Z,53nm,18.1s,baz=258,slow=39								
SONM	**Songino Array**	**27.17**	**336**		IAmb	IAmb	16 30 51.2		
	comp=Z,0.8nm,0.8s								
MK31	**Makanchi Array**	**39.49**	**316**	P		**P**	**16 32 38.5**	**-0.4**
MKAR	**Makanchi Array**	**39.49**	**316**	P		**P**	**16 32 38.5**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=99,slow=9.7,SNR=8.4								
MAKZ	**Makanchi**	**39.69**	**315**	P		**P**	**16 32 40.3**	**-0.3**
MAKZ					IAmb	IAmb	16 32 48.2		
	comp=Z,5.4nm,1.2s								
KNRA	**Kununurra**	**39.79**	**171**	P		**P**	**16 32 42.0**	**+0.4**
ZALV	**Zalesovo Beam**	**41.22**	**327**	P		**P**	**16 32 51.7**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=135,slow=8.7,SNR=2.4								
WRA	**Warramunga Arr**	**45.04**	**164**	P		**P**	**16 33 25.6**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=346,slow=8.9,SNR=17								
WB2	**Warramunga Arr**	**45.05**	**164**	P		**P**	**16 33 25.4**	**+1.1**
WB2					IAmb	IAmb	16 33 37.0		
	comp=Z,8.3nm,1.4s								
WR0	**Warramunga Arr**	**45.11**	**164**	P		**P**	**16 33 25.7**	**+0.9**
WR0					IAmb	IAmb	16 33 40.5		
	comp=Z,5.1nm,1.2s								
GAR	**Garm**	**46.52**	**302**	P		**P**	**16 33 36.8**	**+0.8**
KK31	**Karatay Array**	**46.72**	**307**	P		**P**	**16 33 37.9**	**+0.5**
KK31					IAmb	IAmb	16 34 04.6		
	comp=Z,3.1nm,1.4s								
KKAR	**Karatay Array**	**46.72**	**307**	P		**P**	**16 33 38.0**	**+0.5**
KKAR	**Karatay Array**	**46.72**	**307**	P		**P**	**16 33 37.8**	**+0.4**
KKAR					IAmb	IAmb	16 34 04.6		
	comp=Z,3.1nm,1.4s								
AS31	**Alice Springs**	**48.53**	**166**	P		**P**	**16 33 53.5**	**+2.0**
ASAR	**Alice Springs**	**48.53**	**166**	P		**P**	**16 33 53.4**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=346,slow=7.5,SNR=28								
ABKAR	**Akbulak array**	**54.61**	**314**	P		**P**	**16 34 36.4**	**-0.3**
GEYT	**Alibeck**	**56.11**	**301**	P		**P**	**16 34 48.8**	**+0.9**
BBOO	**Buckleboo**	**57.83**	**167**	P		**P**	**16 35 00.6**	**+0.8**
STKA	**Stephens Creek**	**58.35**	**161**	P		**P**	**16 35 02.9**	**-0.6**
IMAR	**Indian Mountai**	**65.82**	**26**	P		**P**	**16 35 52.5**	**-0.7**
BMAR	**Burnt Mountain**	**69.22**	**24**	P		**P**	**16 36 16.0**	**+1.2**
ARCES	**ARCESS Array B**	**70.30**	**338**	P		**P**	**16 36 20.6**	**-0.8**
	comp=Z,3.4nm,1.0s,baz=69,slow=4.9,SNR=1.5								
BCAR	**Beaver Creek A**	**71.42**	**29**	P		**P**	**16 36 28.4**	**0.0**
FINES	**FINESS Array B**	**72.37**	**330**	P		**P**	**16 36 33.1**	**-0.8**
	comp=Z,1.7nm,0.9s,baz=50,slow=4.3,SNR=5.3								
FINES	**FINESS Array B**	**72.37**	**330**	P		**P**	**16 36 33.2**	**-0.7**
BRTR	**Keskin Array B**	**74.43**	**307**	P		**P**	**16 36 45.8**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=107,slow=4.7,SNR=2.2								
BRTR	**Keskin Array B**	**74.43**	**307**	P		**P**	**16 36 46.7**	**0.0**
BESE	**Bessie Mountai**	**76.13**	**32**	P		**P**	**16 36 55.6**	**-0.4**
BURAR	**Bucovina Array**	**77.50**	**317**	P		**P**	**16 37 04.1**	**+0.1**
NC405	**NORSAR Array S**	**78.85**	**332**	P		**P**	**16 37 09.8**	**-1.3**
NOA	**NORSAR Array B**	**79.10**	**333**	P		**P**	**16 37 11.1**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=58,slow=5.4,SNR=2.0								
NC204	**NORSAR Array S**	**79.17**	**333**	P		**P**	**16 37 11.9**	**-1.0**

ARE 23 16:25:48±1.3,**14.5S**±0.1×**75.91W**±0.08,**h41**km±10km,
ML4.2, Error ellipse: s-maj=20.9km s-min=2.5km az=211.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.66**	**340**	Pn	Pn	16 26 28.6	+0.2
PB16	**IPOC Station P**	**7.23**	**123**	Pn	Pn	16 27 33.3	+1.6
PSGCX	**Pisagua**	**7.50**	**133**	Pn	Pn	16 27 34.7	-0.3
MNMC	**Minye Minye**	**7.60**	**128**	Pn	Pn	16 27 36.3	-0.2
LPAZ	**La Paz**	**7.71**	**104**	Pn	Pn	16 27 38.2	-0.2
PB11	**IPOC Station P**	**7.94**	**132**	Pn	Pn	16 27 40.4	-0.8
PB08	**IPOC Station P**	**8.55**	**132**	Pn	Pn	16 27 50.8	+1.1
SAML	**Samuel**	**13.62**	**68**	Pn	Pn	16 28 55.7	-3.1
AC04	**Llanos de Chal**	**14.36**	**163**	Pn	Pn	16 29 07.9	-0.8

IDC ***23*** *17:16:10.0±1.6,23.67S×179.91W,h516km±18km, mb3.8/17,mb1 4.0/20,mb1rmx3.7/33,mbtmp4.7/20,Error ellipse: s-maj=15.8km s-min=11.6km az=19.0*
NEIC ***23*** *17:16:12.8±1.8,23.7S±0.1×180.0E±0.1,h546km±8km, mb4.6/30,Error ellipse: s-maj=19.1km s-min=13.3km az=176.0*
ISC 23 17:16:11.2±0.6,**23.81S**±0.06×**179.71W**±0.09,**h550**km,
n90,σ1**66**/79,**mb4.5**/35,**1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.64**	**164**	S	**S**	**17 19 03.5**	**-0.9**
RAO	**Raoul Island**	**5.65**	**164**	P	**P**	**17 17 44.3**	**-2.2**
	35nm,0.3s,baz=253,slow=19,SNR=1.8						
RAO				S	**S**	**17 19 02.5**	**-2.0**
	45nm,0.3s,baz=53,slow=20,SNR=2.4						
GLKZ	**Green Lake**	**5.66**	**164**	P	**P**	**17 17 47.6**	**+1.0**
GLKZ				S	**S**	**17 18 59.4**	**-5.3**
MSVF	**Nonsavu**	**6.40**	**340**	P	**P**	**17 17 51.4**	**-2.3**
NIUE	**Niue**	**10.26**	**64**	P	P	17 18 37.3	+5.5
DZM	**Mont Dzumac**	**12.88**	**275**	P	**P**	**17 18 57.6**	**-1.3**
	0.9nm,0.3s,baz=174,slow=17,SNR=8.4						
DZM	**Mont Dzumac**	**12.88**	**275**	P	**P**	**17 18 58.5**	**-0.4**
KUZ	**Kuaotunu**	**13.48**	**196**	P	**P**	**17 19 07.3**	**+2.5**
MBAZ	**Motutapu North**	**13.72**	**199**	P	P	17 19 16.8	+10
MXZ	**Matakaoa Point**	**13.81**	**187**	P	**P**	**17 19 11.3**	**+3.1**
MXZ				S	**S**	**17 21 29.5**	**-4.4**
MXZ	**Matakaoa Point**	**13.81**	**187**	P	**P**	**17 19 11.3**	**+3.1**
ETAZ	**East Tamaki Re**	**13.88**	**198**	P	P	17 19 18.3	+9.4
HAZ	**Te Kaha**	**14.06**	**188**	P	**P**	**17 19 13.4**	**+2.6**
RUGZ	**Raukumara Rang**	**14.28**	**188**	P	**P**	**17 19 15.5**	**+2.3**
RUGZ				S	**S**	**17 21 40.4**	**-2.7**
TWGZ	**Tauwhareparae**	**14.45**	**187**	P	**P**	**17 19 17.9**	**+3.0**
TWGZ				S	**S**	**17 21 47.9**	**+1.6**
URZ	**Urewera**	**14.65**	**190**	P	**P**	**17 19 16.9**	**+0.1**
	4.8nm,0.3s,baz=28,slow=1.7,SNR=29						
URZ				S	**S**	**17 21 48.9**	**-1.0**
	1.7nm,0.3s,baz=70,slow=21,SNR=10						
URZ	**Urewera**	**14.65**	**190**	P	**P**	**17 19 17.6**	**+0.8**
URZ				S	**S**	**17 21 49.3**	**-0.6**
URZ	**Urewera**	**14.65**	**190**	P	**P**	**17 19 17.2**	**+0.3**
MWZ	**Matawai**	**14.66**	**189**	P	**P**	**17 19 19.9**	**+2.8**
MWZ				S	**S**	**17 21 48.2**	**-2.1**
TLZ	**Tolley Road**	**15.03**	**195**	P	**P**	**17 19 23.9**	**+3.1**
RATZ	**Rangitukua**	**15.49**	**193**	P	**P**	**17 19 26.1**	**+0.6**
BKZ	**Black Stump Fm**	**15.64**	**191**	P	**P**	**17 19 26.8**	**-0.2**
BKZ					IAmb	IAmb	17 19 32.2	
	comp=Z,20nm,0.7s						
RPZ	**Rata Peaks**	**21.25**	**199**	P	**P**	**17 20 19.6**	**+1.3**
	comp=Z,7.0nm,0.5s,baz=294,slow=2.3,SNR=8.9						
ARMA	**Armidale**	**26.30**	**249**	P	**P**	**17 21 05.1**	**+1.6**

FITZ					IAmb	IAmb	17 24 25.0			
	comp=Z,9.7nm,0.7s									
SIJI	**Sorong**	**52.66**	**288**		P	**P**	**17 24 34.7**	**-0.2**		
	comp=Z,35nm,0.7s,baz=112,slow=4.1,SNR=30									
SOEI	**Soe**	**55.10**	**275**		P	**P**	**17 24 52.7**	**+0.4**		
	comp=Z,33nm,1.0s									
NWAO	**Narrogin (SRO)**	**55.51**	**245**		P	**P**	**17 24 55.1**	**+0.4**		
	comp=Z,5.7nm,0.8s,baz=75,slow=16,SNR=1.5									
SANI	**Sanana**	**56.75**	**284**		P	**P**	**17 25 03.0**	**-0.5**		
	comp=Z,9.0nm,0.8s									
TNTI	**Ternate**	**56.86**	**288**		P	**P**	**17 25 05.0**	**+0.8**		
TOLI2	**Tolitoli**	**62.81**	**284**		P	**P**	**17 25 44.2**	**+0.4**		
QSPA	**South Pole Qui**	**66.27**	**180**		P	P	17 26 08.4	+3.4		
	comp=Z,2.0nm,0.7s,baz=44,slow=1.3,SNR=15									
QSPA	**South Pole Qui**	**66.27**	**180**		P	P	17 26 08.5	+3.6		
PETK	**Petropavlovsk-**	**79.08**	**346**		P	**P**	**17 27 19.5**	**+1.1**		
	comp=Z,1.0nm,0.6s,baz=142,slow=7.4,SNR=5.6									
NJ2	**Nanjing**	**80.80**	**311**		*eP*	**P**	**17 27 29.1**	**+1.2**		
NJ2					pmax	pmax				
	comp=Z,3.0nm,0.5s									
GO09	**Cerro Castillo**	**81.92**	**143**		P	**P**	**17 27 33.3**	**-0.1**		
CMB	**Columbia Colle**	**82.96**	**43**		P	P	17 27 41.3	+2.5		
BEKR	**Beckworth**	**84.09**	**42**		P	P	17 27 47.7	+3.1		
NVAR	**Mina Array Bea**	**84.51**	**44**		P	P	17 27 49.5	+2.7		
	comp=Z,1.4nm,0.6s,baz=225,slow=8.1,SNR=11									
NVAR	**Mina Array Bea**	**84.51**	**44**		P	P	17 27 49.3	+2.5		
J08A	**Circle Bar Ran**	**87.32**	**40**			P	17 28 02.6	+2.8		
G08A	**Pilot Rock**	**88.20**	**38**			P	17 28 06.4	+2.4		
G08A					IAmb	IAmb	17 28 07.9			
	comp=Z,5.1nm,0.8s									
KMI	**Kunming**	**89.46**	**298**	↓	*eP*	**P**	**17 28 11.9**	**+1.5**		
KMI					pmax	pmax				
	comp=Z,7.0nm,0.5s									
CMAR	**Chiang Mai Arr**	**89.75**	**290**		P	**P**	**17 28 12.5**	**+0.9**		
	comp=Z,0.5nm,0.6s,baz=144,slow=3.2,SNR=1.5									
HVU	**Hansel Valley**	**89.89**	**43**		P	P	17 28 14.4	+2.5		
TX31	**Lajitas Ar. Sí**	**90.16**	**58**		P	P	17 28 16.8	+3.4		
TX31					IAmb	IAmb	17 28 18.1			
	comp=Z,9.2nm,0.8s									
TX32	**Lajitas Array**	**90.16**	**58**		P	P	17 28 16.2	+2.7		
TX32					IAmb	IAmb	17 28 18.1			
	comp=Z,3.2nm,0.8s									
TXAR	**Lajitas Array**	**90.16**	**58**		P	P	17 28 17.2	+3.8		
	comp=Z,2.7nm,0.7s,baz=214,slow=6.3,SNR=36									
HHC	**Hu-ho-hao-te**	**90.55**	**315**		*eP*	P	17 28 17.3	+2.4		
HHC					pmax	pmax				
	comp=Z,15nm,0.7s									
HHC					pmax	pmax				
	comp=Z,92nm,6.4s									
ILAR	**Eielson Array**	**91.89**	**13**		P	**P**	**17 28 21.2**	**+0.8**		
	comp=Z,0.5nm,0.6s,baz=213,slow=6.3,SNR=7.2									
PDAR	**Pinedale Array**	**92.44**	**44**		P	**P**	**17 28 25.6**	**+1.9**		
	comp=Z,1.5nm,0.7s,baz=206,slow=3.0,SNR=10									
LZH	**Lanzhou**	**93.53**	**308**		*eP*	P	17 28 31.1	+2.3		
LZH					pP	pwP	17 30 31.3	-2.4		
LZH					sP	sP	17 31 24.4	+1.2		
LZH					pmax	pmax				
	comp=Z,23nm,1.6s									
LZH					pmax	pmax				
	comp=Z,100nm,7.6s									
MKAR	**Makanchi Array**	**112.29**	**313**		PKiKP	**PKiKP**	**17 33 45.3**	**+0.7**		
	comp=Z,2.0nm,0.4s,baz=210,slow=2.6,SNR=1.7									
KURBB	**Kurchatov Arra**	**115.37**	**316**		PKP	**PKiKP**	**17 33 51.2**	**+0.9**		
	comp=Z,0.4nm,0.3s,baz=108,slow=1.4,SNR=5.9									
BVAR	**Borovoye Array**	**120.55**	**319**		PKP	**PKiKP**	**17 34 00.7**	**+0.3**		
	comp=Z,0.4nm,0.5s,baz=98,slow=5.0,SNR=4.5									
ARU	**Arti**	**126.97**	**324**		PKP	**PKiKP**	**17 34 13.2**	**+0.2**		
	comp=Z,0.6nm,0.4s,baz=184,slow=14,SNR=3.8									
ARCES	**ARCESS Array B**	**131.86**	**348**		PKP	**PKiKP**	**17 34 22.6**	**+0.1**		
	comp=Z,1.3nm,0.7s,baz=27,slow=1.4,SNR=6.3									
FINES	**FINESS Array B**	**138.45**	**342**		PKhKP	PKPpre	17 34 28.9			
	comp=Z,0.5nm,0.6s,baz=54,slow=9.7,SNR=3.7									
FINES					PKP	**PKiKP**	**17 34 35.3**	**-0.7**		
	comp=Z,0.6nm,0.6s,baz=74,slow=4.9,SNR=1.6									
NB2	**NORSAR Subarra**	**142.04**	**351**		PKP	**PKPdf**	**17 34 37.8**	**-2.6**		
	comp=Z,0.6nm,0.6s,baz=13,slow=3.1									
NOA	**NORSAR Array B**	**142.04**	**351**		PKhKP	PKPpre	17 34 37.5			
	comp=Z,0.4nm,0.6s,baz=3.4,slow=1.6,SNR=4.3									
HFS	**Hagfors**	**142.51**	**349**		PKhKP	PKPpre	17 34 38.9			
	comp=Z,3.5nm,0.5s,baz=62,slow=3.5,SNR=20									
AKASG	**Malin Array Be**	**145.04**	**328**		PKP	**PKiKP**	**17 34 47.2**	**-2.7**		
	comp=Z,1.6nm,0.5s,baz=42,slow=4.2,SNR=13									
BRTR	**Keskin Array B**	**147.74**	**307**		PKPbc	**PKPab**	**17 34 55.3**	**-3.7**		
	comp=Z,0.5nm,0.7s,baz=100,slow=5.0,SNR=1.9									
GERES	**GERESS Array B**	**152.87**	**340**		PKPbc	**PKiKP**	**17 35 06.5**	**+0.2**		
	comp=Z,0.6nm,0.8s,baz=4.8,slow=1.6,SNR=3.5									
TORD	**Torodi Ar. Bea**	**169.31**	**187**		PKP	**PKPdf**	**17 35 17.6**	**+1.3**		
	comp=Z,0.3nm,0.5s,baz=221,slow=1.3,SNR=2.8									

*NEIC **23** 17:22:14.9±0.6, 6°.49S±0°.10×155°.12E±0°.10, h67km±11km, mb4.3/7, Error ellipse: s-maj=16.5km s-min=11.1km az=133.0*

*IDC **23** 17:22:16.0±1.8, 6°.66S×155°.08E, h70km±17km, mb3.8/16, mb1 4.0/21, mb1mx3.8/48, mbtmp4.2/21, MS3.2/8, Ms1 3.2/8, ms1mx2.9/40, Error ellipse: s-maj=15.1km s-min=11.7km az=25.0*

ISC 23 17:22:14.5±0.5, 6°.64S±0°.07×155°.12E±0°.06, h56km, n37, σ1°38/42, mb3.9/19, MS3.3/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.85**	**307**	P	**Pn**	**17 23 11.9**	**+0.6**
	4.0nm,0.3s,baz=343,slow=1.5,SNR=16						
KRVT				S	**Sn**	**17 24 00.2**	**+4.9**
	39nm,0.3s,baz=190,slow=22,SNR=4.8						
KRVT				LR	LR	17 24 52.2	
	comp=Z,198nm,20.8s,baz=107,slow=41						
HNR	**Honiara**	**5.53**	**120**	P	**Pn**	**17 23 34.9**	**+0.6**
	baz=243,slow=2.3,SNR=0.8						
HNR				S	**Sn**	**17 24 40.8**	**+4.3**
	baz=238,slow=12,SNR=3.7						
HNR				LR	LR	17 25 43.3	
	comp=Z,326nm,18.4s,baz=254,slow=37						
HNR	**Honiara**	**5.53**	**120**	Pn	**Pn**	**17 23 35.5**	**+1.2**
PMG	**Port Moresby**	**8.35**	**250**	P	**Pn**	**17 24 13.3**	**+0.3**
	3.6nm,0.3s,baz=86,slow=6.2,SNR=8.4						
PMG				S	**Sn**	**17 25 48.2**	**+2.3**
	5.0nm,0.3s,baz=84,slow=20,SNR=4.6						
PMG				LR	LR	17 27 38.3	
	comp=Z,171nm,18.2s,baz=54,slow=39						
PMG	**Port Moresby**	**8.35**	**250**		**Pn**	**17 24 14.0**	**+1.0**
CTA	**Charters Tower**	**15.90**	**212**	P	**Pn**	**17 25 54.8**	**-0.1**
	0.3nm,0.3s,baz=52,slow=19,SNR=2.6						
DZM	**Mont Dzumac**	**18.84**	**146**	P	**P**	**17 26 30.0**	**-0.1**
	0.8nm,0.3s,baz=277,slow=12,SNR=8.0						
DZM				LR	LR	17 32 28.7	
	comp=Z,93nm,20.0s,baz=226,slow=32						
DZM	**Mont Dzumac**	**18.84**	**146**	P	**P**	**17 26 28.7**	**-1.4**
DZM				IAmb	IAmb	17 26 34.8	
	comp=Z,26nm,1.3s						
GUMO	**Guam**	**22.52**	**333**	LR	LR	17 35 31.5	
	comp=Z,26nm,20.7s,baz=91,slow=35						
WB0	**Warramunga Arr**	**23.99**	**235**	P	**P**	**17 27 24.4**	**+0.3**
WB0				IAmb	IAmb	17 27 38.1	
	comp=Z,8.5nm,0.9s						
WRAB	**Tennant Creek**	**24.11**	**235**	P	**P**	**17 27 25.4**	**+0.2**
WRAB				IAmb	IAmb	17 27 39.2	
	comp=Z,9.6nm,0.9s						
WB2	**Warramunga Arr**	**24.11**	**235**	P	**P**	**17 27 25.7**	**+0.5**
WRA	**Warramunga Arr**	**24.12**	**235**	P	**P**	**17 27 25.4**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=61,slow=9.7,SNR=17						
WRA				PcP	**PcP**	**17 31 05.5**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=66,slow=2.5,SNR=12						
WRA	**Warramunga Arr**	**24.12**	**235**	P	**P**	**17 27 24.4**	**-0.9**
SIJI	**Sorong**	**24.47**	**283**	P	**P**	**17 27 29.1**	**+0.6**
	comp=Z,6.8nm,0.4s,baz=113,slow=6.4,SNR=9.2						
ASAR	**Alice Springs**	**26.50**	**228**	P	**P**	**17 27 46.3**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=62,slow=8.9,SNR=8.4						
ASAR				PcP	**PcP**	**17 31 10.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=63,slow=3.3,SNR=4.2						
ASAR	**Alice Springs**	**26.50**	**228**	P	**P**	**17 27 47.6**	**+0.6**
STKA	**Stephens Creek**	**28.11**	**205**	P	**P**	**17 27 59.9**	**-1.3**
	comp=Z,1.8nm,0.9s,baz=7.5,slow=16,SNR=2.1						
STKA				LR	LR	17 39 02.5	
	comp=Z,124nm,18.1s,baz=25,slow=36						
FITZ	**Fitzroy Crossi**	**30.91**	**246**	P	**P**	**17 28 25.4**	**-0.8**
	comp=Z,2.3nm,0.9s,baz=50,slow=9.3,SNR=3.2						
FITZ				PcP	**PcP**	**17 31 21.7**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=226,slow=2.8,SNR=4.1						
DAV	**Davao City (W)**	**32.46**	**294**	LR	LR	17 39 54.1	
	comp=Z,37nm,21.3s,baz=156,slow=33						
RPZ	**Rata Peaks**	**39.50**	**162**	P	**P**	**17 29 40.1**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=270,slow=1.0,SNR=2.2						
KSRS	**Korea Array**	**50.68**	**332**	P	**P**	**17 31 07.4**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=134,slow=6.6,SNR=2.1						
PETK	**Petropavlovsk-**	**59.55**	**2**	P	**P**	**17 32 12.8**	**+0.7**
	comp=Z,4.9nm,0.8s,baz=147,slow=6.9,SNR=8.0						
CMAR	**Chiang Mai Arr**	**60.74**	**295**	P	**P**	**17 32 22.1**	**+1.2**
	comp=Z,5.9nm,0.7s,baz=123,slow=5.2,SNR=63						
CMAR	**Chiang Mai Arr**	**60.74**	**295**	P	**P**	**17 32 19.6**	**-1.3**
CHTO	**Chiang Mai**	**60.85**	**296**	P	**P**	**17 32 20.6**	**-1.1**
SONM	**Songino Array**	**69.10**	**327**	P	**P**	**17 33 15.2**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=107,slow=3.1,SNR=5.6						
VNDA	**Vanda**	**70.94**	**178**	P	**P**	**17 33 25.2**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=333,slow=7.4,SNR=3.7						
MKAR	**Makanchi Array**	**83.22**	**319**	P	**P**	**17 34 33.7**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=98,slow=8.0,SNR=6.1						
QSPA	**South Pole Qui**	**83.34**	**180**	P	**P**	**17 34 35.0**	**-0.3**
QSPA				IAmb	IAmb	17 34 35.8	
	comp=Z,3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**83.95**	**326**	P	**P**	**17 34 36.5**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=72,slow=9.4,SNR=1.9						
NVAR	**Mina Array Bea**	**91.40**	**52**	P	**P**	**17 35 15.3**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=274,slow=5.0,SNR=3.4						
YKA	**Yellowknife Ar**	**95.96**	**28**	P	**P**	**17 35 35.2**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=260,slow=3.9,SNR=4.1						
PDAR	**Pinedale Array**	**98.37**	**48**	P	**P**	**17 35 46.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=201,slow=4.7,SNR=1.9						
PDAR				LR	LR	18 19 05.3	
	comp=Z,16nm,19.2s,baz=340,slow=35						
GERES	**GERESS Array B**	**126.81**	**329**	PKP	**PKiKP**	**17 41 12.0**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=66,slow=1.2,SNR=2.9						
BDFB	**Brasília**	**148.14**	**134**	PKPbc	**PKPbc**	**17 41 54.2**	**-1.1**
	comp=Z,2.8nm,0.6s,baz=178,slow=8.7,SNR=6.2						
TORD	**Torodi Ar. Bea**	**153.05**	**286**	PKPbc	**PKPbc**	**17 42 05.8**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=53,slow=2.4,SNR=11						
TORD				PKPab	**PKPab**	**17 42 17.1**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=67,slow=3.4,SNR=6.9						

*AEIC **23** 17:32:43.1±1.5, 60°.45N±0°.04×151°.04W±0°.06, h68km±5km, ML4.1, mb4.5/17(NEIC), Error ellipse: s-maj=6.2km s-min=2.8km az=145.0*

*NEIC **23** 17:32:43.1±2.0, 60°.48N±0°.04×151°.13W±0°.10, h61km±6km, Error ellipse: s-maj=7.2km s-min=4.9km az=109.0*

*IDC **23** 17:32:45.0±0.7, 60°.78N×151°.09W, h69km±6km, mb3.7/17, mb1 3.9/20, mb1mx3.7/59, mbtmp4.0/20, MS3.1/8, Ms1 3.1/8, ms1mx2.8/46, Error ellipse: s-maj=15.3km s-min=11.1km az=36.0*

ISC 23 17:32:43.0±0.5, 60°.47N±0°.04×151°.07W±0°.04, h57km±4km, n119, σ1°41/129, mb4.2/28, MS2.9/4, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
O22K	**Cooper Landing**	**0.67**	**88**		**Pn**	**17 32 57.5**	**+0.9**
O22K					**Sn**	**17 33 08.9**	**+2.3**
BRLK	**Bradley Lake**	**0.71**	**173**		**Pn**	**17 32 57.7**	**+0.4**
BRLK					**Sn**	**17 33 09.7**	**+2.1**
FIS	**Fire Island**	**0.80**	**31**		**Pn**	**17 32 59.2**	**+0.9**
FIS					**Sn**	**17 33 12.1**	**+2.6**
RSO	**Redoubt South**	**0.84**	**271**		**Pn**	**17 32 57.0**	**-2.0**
RC01	**Rabbit Creek A**	**0.91**	**46**		**Pn**	**17 32 59.7**	**0.0**
RC01					**Sn**	**17 33 12.9**	**+1.0**
PWL	**Port Wells**	**1.40**	**72**		**Pn**	**17 33 06.5**	**+0.2**
PMR	**Palmer**	**1.47**	**39**	Pn	**Pn**	**17 33 07.2**	**0.0**
GHO	**Glory Hole Cre**	**1.67**	**38**		**Pn**	**17 33 10.2**	**+0.1**
GHO					**Sn**	**17 33 31.7**	**+1.2**
GLI	**Glacier Island**	**2.00**	**76**		**Pn**	**17 33 13.7**	**-0.7**
GLI					**Sn**	**17 33 37.5**	**-0.7**
HIN	**Hinchinbrook I**	**2.27**	**90**		**Pn**	**17 33 17.6**	**-0.4**
SCM	**Sheep Creek Mo**	**2.27**	**51**		**Pn**	**17 33 18.4**	**+0.2**
FID	**Port Fidalgo**	**2.28**	**81**		**Pn**	**17 33 17.1**	**-1.1**
SVW2	**Sparrevohn**	**2.30**	**288**	Pn	**Pn**	**17 33 17.3**	**-1.2**
VMT	**TAPS TI Valdez**	**2.39**	**73**		**Pn**	**17 33 19.6**	**0.0**
VMT					**Sn**	**17 33 47.6**	**-0.1**
PPLA	**Purkeypile**	**2.50**	**348**		**Pn**	**17 33 22.4**	**+1.0**
EYAK	**Cordova Ski Ar**	**2.63**	**86**		**Pn**	**17 33 22.2**	**-0.8**
DIV	**Divide**	**2.68**	**73**		**Pn**	**17 33 23.5**	**-0.2**
KLU	**Klutina**	**2.71**	**65**	Pn	**Pn**	**17 33 24.3**	**+0.1**
KDAK	**Kodiak Island**	**2.80**	**197**	Pn	**Pn**	**17 33 25.2**	**-0.1**
M24K	**Tolsona, Glenn**	**2.88**	**53**	Pn	**Pn**	**17 33 27.1**	**+0.6**
TRF	**Thorofare Moun**	**3.02**	**7**		**Pn**	**17 33 29.6**	**+1.1**
KTH	**Kantishna Hill**	**3.10**	**1**		**Pn**	**17 33 30.6**	**+1.1**
GOAT	**Goat Mountain**	**3.11**	**85**		**Pn**	**17 33 29.1**	**-0.8**
PS11	**TAPS Pump St11**	**3.15**	**57**		**Pn**	**17 33 30.9**	**+0.8**
RAGM	**Ragged Mountai**	**3.17**	**89**		**Pn**	**17 33 29.3**	**-1.1**
BMRM	**Bremner River**	**3.22**	**78**		**Pn**	**17 33 30.5**	**-0.6**
N25K	**Chitina, Valde**	**3.35**	**67**		**Pn**	**17 33 32.9**	**0.0**
TT01	**Tatalina**	**3.40**	**318**		**Pn**	**17 33 33.4**	**-0.1**
TTA	**Tatalina**	**3.42**	**319**	Pn	**Pn**	**17 33 33.6**	**-0.2**
OHAK	**Old Harbor**	**3.45**	**200**	Pn	**Pn**	**17 33 33.6**	**-0.6**
BPAW	**Bear Paw Mtn.**	**3.65**	**1**		**Pn**	**17 33 38.1**	**+1.1**
PAX	**Paxson**	**3.66**	**44**		**Pn**	**17 33 37.7**	**+0.5**
GLB	**Gilahina Butte**	**3.67**	**71**		**Pn**	**17 33 36.9**	**-0.4**
BWN	**Browne**	**3.79**	**11**		**Pn**	**17 33 41.0**	**+2.1**
VRDI	**Verde Repeater**	**3.80**	**75**		**Pn**	**17 33 39.0**	**-0.2**
CRQM	**Cirque**	**3.92**	**82**		**Pn**	**17 33 41.5**	**+0.7**
MCARA	**McCarthy VSAT**	**4.03**	**73**		**Pn**	**17 33 42.1**	**0.0**
TGL	**Tana Glacier**	**4.07**	**82**		**Pn**	**17 33 41.5**	**-1.3**
NEA2	**Nenana**	**4.25**	**12**		**Pn**	**17 33 45.7**	**+0.6**
WRH	**Wood River Hil**	**4.25**	**18**		**Pn**	**17 33 45.4**	**+0.3**
MENT	**Mentasta**	**4.29**	**51**	Pn	**Pn**	**17 33 45.1**	**-0.5**
ISLE	**Juniper Island**	**4.32**	**84**		**Pn**	**17 33 45.0**	**-1.2**
BALM	**Baldy**	**4.32**	**79**		**Pn**	**17 33 46.1**	**-0.1**
CCB	**Clear Creek Bu**	**4.46**	**18**		**Pn**	**17 33 48.5**	**+0.6**
PS08	**TAPS Pump Stn8**	**4.54**	**24**		**Pn**	**17 33 49.7**	**+0.6**
MESA	**MESA**	**4.54**	**90**		**Pn**	**17 33 49.9**	**+0.5**
MLY	**Manley**	**4.59**	**2**		**Pn**	**17 33 49.6**	**-0.2**
DOT	**Dot Lake**	**4.59**	**43**	Pn	**Pn**	**17 33 50.2**	**+0.4**
YAH	**Yahtse**	**4.62**	**87**		**Pn**	**17 33 50.5**	**0.0**
BARN	**Barnard Glacie**	**4.65**	**79**		**Pn**	**17 33 51.0**	**+0.2**
TCOL	**CIGO, UAF Yank**	**4.67**	**17**		**Pn**	**17 33 51.7**	**+0.9**
COLA	**College**	**4.67**	**17**		**Pn**	**17 33 51.2**	**+0.4**
MDM	**Murphy Dome**	**4.70**	**15**		**Pn**	**17 33 52.3**	**+1.1**
IL31		**4.73**	**22**		**Pn**	**17 33 52.0**	**+0.3**
ILAR	**Eielson Array**	**4.73**	**22**	P	**Pn**	**17 33 51.8**	**0.0**
	6.5nm,0.3s,baz=206,slow=14,SNR=296						
ILAR				S	**Sn**	**17 34 41.2**	**-4.0**
	8.8nm,0.3s,baz=200,slow=15,SNR=2.5						
ILAR	**Eielson Array**	**4.73**	**22**		**Pn**	**17 33 51.9**	**+0.1**
I23K	**Minto, Yukon-K**	**4.76**	**9**		**Pn**	**17 33 52.8**	**+0.7**
POKR	**Poker Plat Res**	**4.96**	**18**		**Pn**	**17 33 55.5**	**+0.6**
PS07	**TAPS Pump Stn7**	**5.03**	**13**		**Pn**	**17 33 57.0**	**+1.2**
BC03		**5.12**	**55**		**Pn**	**17 33 57.5**	**+0.5**
BCAR	**Beaver Creek A**	**5.12**	**55**		**Pn**	**17 33 57.0**	**-0.1**
PCA	**Pinnacle**	**5.39**	**89**		**Pn**	**17 33 59.7**	**-1.2**
K27K	**Chicken**	**5.51**	**46**		**Pn**	**17 34 02.9**	**+0.5**
IM03		**5.67**	**349**		**Pn**	**17 34 05.2**	**+0.7**
IMAR	**Indian Mountai**	**5.67**	**349**		**Pn**	**17 34 04.8**	**+0.3**
PNL	**Peninsula**	**5.90**	**93**		**Pn**	**17 34 07.4**	**-0.3**
EGAK	**Eagle**	**6.29**	**42**		**Pn**	**17 34 13.1**	**+0.1**
DAWY	**Dawson**	**6.54**	**51**		**Pn**	**17 34 16.9**	**+0.4**
BMAR	**Burnt Mountain**	**7.55**	**19**		**Pn**	**17 34 29.1**	**-1.2**
WHY	**Whitehorse**	**7.98**	**82**		**Pn**	**17 34 36.8**	**+0.5**
TOLK	**Tolovik Lake Re**	**8.23**	**4**		**Pn**	**17 34 40.8**	**+1.2**
INK	**Inuvik**	**10.89**	**36**	LR	LR	17 39 17.2	
	comp=Z,90nm,21.6s,baz=156,slow=37						
DLBC	**Dease Lake**	**10.89**	**92**	P	**Pn**	**17 35 18.5**	**+2.5**
	0.3nm,0.3s,baz=284,slow=6.9,SNR=7.1						
DLBC				S	**Sn**	**17 37 09.9**	**-6.2**
	0.3nm,0.3s,baz=155,slow=22,SNR=1.8						
DLBC				LR	LR	17 39 35.3	
	comp=Z,192nm,20.7s,baz=320,slow=38						
DLBC	**Dease Lake**	**10.89**	**92**		**Pn**	**17 35 17.8**	**+1.8**
C36M	**Paulatuk**	**14.36**	**40**	Pn	**Pn**	**17 35 59.4**	**-3.5**
BBB	**Bella Bella**	**15.12**	**113**	LR	LR	17 40 58.5	
	comp=Z,84nm,18.6s,baz=231,slow=32						
YKA	**Yellowknife Ar**	**17.38**	**67**	P	**Pn**	**17 36 40.7**	**-0.5**
	0.3nm,0.3s,baz=278,slow=10,SNR=9.6						
YKA				LR	LR	17 43 26.1	
	comp=Z,63nm,19.2s,baz=0.0,slow=37						
NEW	**Newport**	**22.94**	**107**	P	**P**	**17 37 43.9**	**+1.8**
	6.2nm,0.8s,baz=318,slow=8.6,SNR=15						
NEW	**Newport**	**22.94**	**107**	P	**P**	**17 37 43.9**	**+1.8**
RES	**Resolute Bay**	**24.40**	**32**	P	**P**	**17 37 53.6**	**-1.8**
	1.5nm,0.8s,baz=238,slow=22,SNR=2.2						
RES	**Resolute Bay**	**24.40**	**32**	P	**P**	**17 37 54.6**	**-0.8**
YBH	**Yreka Blue Hor**	**25.53**	**124**	P	**P**	**17 38 09.0**	**+2.9**
	3.3nm,0.8s,baz=339,slow=2.4,SNR=7.2						
YBH				LR	LR	17 45 29.4	
	comp=Z,32nm,20.1s,baz=356,slow=30						
PETK	**Petropavlovsk-**	**28.35**	**278**	LR	LR	17 49 10.1	
	comp=Z,39nm,19.8s,baz=79,slow=35						
ELK	**Elko**	**29.55**	**116**	P	**P**	**17 38 44.6**	**+2.4**
	4.4nm,0.7s,baz=323,slow=8.9,SNR=20						
NVAR	**Mina Array Bea**	**30.13**	**122**	P	**P**	**17 38 49.8**	**+2.4**
	0.6nm,0.3s,baz=320,slow=9.4,SNR=5.1						
NVAR				PcP	**PcP**	**17 41 48.3**	**+0.8**
	0.4nm,0.5s,baz=306,slow=2.1,SNR=2.6						
PDAR	**Pinedale Array**	**30.58**	**106**	P	**P**	**17 38 52.8**	**+1.4**
	0.8nm,0.5s,baz=336,slow=4.9,SNR=7.8						
DUG	**Dugway, Tooele**	**31.08**	**113**	P	**P**	**17 38 57.0**	**+1.3**
R11A	**Troy Canyon, C**	**31.36**	**119**	P	**P**	**17 39 00.0**	**+1.9**
ULM	**Lac du Bonnet**	**32.05**	**83**	P	**P**	**17 39 04.4**	**+0.5**
	3.7nm,0.6s,baz=316,slow=9.0,SNR=8.0						
ULM	**Lac du Bonnet**	**32.05**	**83**	P	**P**	**17 39 02.6**	**-1.3**
ULM				IAmb	IAmb	17 39 15.4	
	comp=Z,9.0nm,1.4s						
RSSD	**Black Hills**	**32.24**	**99**	P	**P**	**17 39 06.9**	**+1.0**
RSSD				IAmb	IAmb	17 39 08.8	
	comp=Z,3.9nm,0.6s						
CCUT	**Cedar City**	**33.00**	**117**	P	**P**	**17 39 13.6**	**+1.0**
PV13	**Radium Mtn., P**	**34.56**	**111**	P	**P**	**17 39 26.8**	**+0.7**
PV13				IAmb	IAmb	17 39 28.8	
	comp=Z,13nm,1.1s						
PV01	**Paradox Valley**	**34.69**	**111**	P	**P**	**17 39 27.3**	**0.0**
PV01				IAmb	IAmb	17 39 29.5	
	comp=Z,5.4nm,0.8s						
I37A	**Lemond, Waseca**	**37.57**	**89**	P	**P**	**17 39 51.8**	**+0.4**
L40A	**Anamosa**	**40.08**	**89**	P	**P**	**17 40 11.7**	**-0.8**
WMOK	**Wichita Mounta**	**42.07**	**104**	P	**P**	**17 40 29.4**	**+0.5**
WMOK				IAmb	IAmb	17 40 30.8	
	comp=Z,4.5nm,0.8s						
U38A	**Gravette**	**42.85**	**98**	P	**P**	**17 40 34.8**	**-0.4**
U38A				IAmb	IAmb	17 40 35.7	
	comp=Z,7.3nm,0.7s						
NRIK	**Noril'sk**	**43.90**	**334**	LR	LR	18 00 22.9	
	comp=Z,40nm,19.0s,baz=16,slow=38						
TX32	**Lajitas Array**	**44.26**	**113**	P	**P**	**17 40 45.5**	**-1.2**
TX32				IAmb	IAmb	17 40 49.6	
	comp=Z,4.5nm,1.0s						
TXAR	**Lajitas Array**

PB15	**IPOC Station P**	**4.65**	**21**	*eP*	**Pn**	17 50 04.3	+1.5
PB15	**IPOC Station P**	**4.65**	**21**		**Pn**	17 50 04.2	+1.5
PB05	**IPOC Station P**	**4.81**	**12**	⇓*iP*	**Pn**	17 50 05.0	+0.1
PB06	**IPOC Station P**	**5.09**	**18**	*eP*	**Pn**	17 50 09.0	+0.2
PB06	**IPOC Station P**	**5.09**	**18**		**Pn**	17 50 09.1	+0.2
VA03	**San Esteban**	**5.19**	**174**	*eP*	**Pn**	17 50 11.3	+1.2
VA03	**San Esteban**	**5.19**	**174**		**Pn**	17 50 11.4	+1.2
ROC1	**El Roble**	**5.37**	**178**		**Pn**	17 50 12.9	+0.2
LVC	**Limon Verde**	**5.39**	**24**	Pn	**Pn**	17 50 14.2	+1.1
PEL	**Peldehue**	**5.56**	**175**	Pn	**Pn**	17 50 15.6	+0.5
MT02	**Curacav**	**5.65**	**179**		**Pn**	17 50 16.1	-0.3
PB07	**IPOC Station P**	**5.97**	**12**		**Pn**	17 50 20.5	-0.3
PB09	**IPOC Station P**	**6.05**	**18**		**Pn**	17 50 22.8	+0.8
PB01	**IPOC Station P**	**6.71**	**14**	Pn	**Pn**	17 50 30.4	-0.6
BO02	**Sierra Bellavi**	**7.19**	**177**	Pn	**Pn**	17 50 37.1	-0.4
PB08	**IPOC Station P**	**7.66**	**15**	Pn	**Pn**	17 50 43.9	-0.3
PSGCX	**Pisagua**	**8.02**	**8**	Pn	Pn	17 50 47.6	-1.3
MNMC	**Minye Minye**	**8.55**	**11**	Pn	Pn	17 50 55.4	-1.0
BI02	**San Fabin de**	**9.05**	**180**	Pn	**Pn**	17 51 02.1	-0.8
PB16	**IPOC Station P**	**9.35**	**10**	Pn	**Pn**	17 51 07.0	-0.6
LC01	**Cunco**	**11.29**	**183**	Pn	**Pn**	17 51 31.1	-2.5
LPAZ	**La Paz**	**11.61**	**15**	Pn	**Pn**	17 51 38.2	-0.4

KRNET ***23*** *17:53:26.7±0.1, 43.˚19N×76.˚73E, h20km, mb3.3*
NNC ***23*** *17:53:26.7±0.1, 43.˚21N×76.˚70E, h5km±1km, mb3.5, mpv3.6, Error ellipse: s-maj=2.1km s-min=0.8km az=168.0*
SOME ***23*** *17:53:26.7, 43.˚20N×76.˚72E, h15km*
KNET ***23*** *17:53:27.8±0.5, 43.˚18N×76.˚63E, h15km±2km, ml2.2, Error ellipse: s-maj=4.9km s-min=2.8km az=170.0*

ISC 23 17:53:27.4±0.8, **43.˚19N**±0.˚02×**76.˚72E**±0.˚01, **h8**km±6km, **n95**, σ1.**913**/173, **38C-22D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AAA	**Alma-Ata** baz=83	**0.15**	**84**	*eP*		**Pg**		**17 53 30.9**	**+0.3**
AAA				*eS*		**Sg**		**17 53 33.4**	**+0.5**
AAA	**Alma-Ata** 444nm,0.0s	**0.15**	**84**	*eP*		**Pg**		**17 53 30.9**	**+0.3**
AAA				*eS*		**Sg**		**17 53 33.4**	**+0.5**
AAA	**Alma-Ata** 444nm,0.0s	**0.15**	**84**	P		**Pg**		**17 53 30.9**	**+0.3**
AAA				S		**Sg**		**17 53 33.4**	**+0.5**
IZV	**Izvestkoviy** baz=8.0	**0.17**	**206**	*eP*		**Pg**		**17 53 31.3**	**+0.2**
IZV				*eS*		**Sg**		**17 53 34.3**	**+0.6**
IZV	**Izvestkoviy** 102nm,0.1s	**0.17**	**206**	*eP*		**Pg**		**17 53 31.3**	**+0.2**
IZV				*eS*		**Sg**		**17 53 34.3**	**+0.6**
IZV	**Izvestkoviy** 102nm,0.1s	**0.17**	**206**	P		**Pg**		**17 53 31.3**	**+0.2**
IZV				S		**Sg**		**17 53 34.3**	**+0.6**
KNDC	**Almaty** 62nm,0.2s	**0.18**	**83**	⇓P		**Pg**		**17 53 31.3**	**0.0**
KNDC				⇑S		**Sg**		**17 53 34.6**	**+0.7**
MTBS	**Maitube** baz=54	**0.22**	**253**	⇓*iP*		**Pg**		**17 53 32.1**	**+0.2**
MTBS				⇓*eS*		**Sg**		**17 53 35.7**	**+0.7**
MTBS	**Maitube** 318nm,0.1s	**0.22**	**253**	⇓*iP*		**Pg**		**17 53 32.1**	**+0.2**
MTBS				*eS*		**Sg**		**17 53 35.7**	**+0.7**
MTBS	**Maitube** 318nm,0.1s	**0.22**	**253**	P		**Pg**		**17 53 32.1**	**+0.2**
MTBS				S		**Sg**		**17 53 35.7**	**+0.7**
MDOK	**Medeo** baz=97	**0.24**	**97**	*eP*		**Pg**		**17 53 32.1**	**-0.3**
MDOK				*eS*		**Sg**		**17 53 35.5**	**-0.2**
MDOK	**Medeo** 144nm,0.2s	**0.24**	**97**	*eP*		**Pg**		**17 53 32.1**	**-0.3**
MDOK				*eS*		**Sg**		**17 53 35.5**	**-0.2**
MDOK	**Medeo** 144nm,0.2s	**0.24**	**97**	Pg		**Pg**		**17 53 32.1**	**-0.3**
MDOK				Lg		Lg		17 53 35.6	
KOTS	**Kotyrbulak** baz=81	**0.29**	**82**	*eP*		**Pg**		**17 53 33.1**	**-0.2**
KOTS				*eS*		**Sg**		**17 53 37.4**	**+0.1**
KOTS	**Kotyrbulak** 314nm,0.2s	**0.29**	**82**	*eP*		**Pg**		**17 53 33.1**	**-0.2**
KOTS				*eS*		**Sg**		**17 53 37.4**	**+0.1**
KOTS	**Kotyrbulak** 314nm,0.2s	**0.29**	**82**	P		**Pg**		**17 53 33.1**	**-0.2**
KOTS				S		**Sg**		**17 53 37.4**	**+0.1**
KTBS	**Karatobe** baz=56	**0.52**	**357**	*eP*		**Pg**		**17 53 37.1**	**-0.4**
KTBS				*eS*		**Sg**		**17 53 44.0**	**-0.3**
KTBS	**Karatobe** 9.2nm,0.1s	**0.52**	**357**	*eP*		**Pg**		**17 53 37.1**	**-0.4**
KTBS				*eS*		**Sg**		**17 53 44.0**	**-0.3**
KTBS	**Karatobe** 9.2nm,0.1s	**0.52**	**357**	P		**Pg**		**17 53 37.1**	**-0.4**
KTBS				S		**Sg**		**17 53 44.0**	**-0.3**
KST	**Kastek** baz=55	**0.57**	**255**	*eP*		**Pg**		**17 53 38.2**	**-0.3**
KST				*eS*		**Sg**		**17 53 46.1**	**0.0**
KST	**Kastek** 73nm,0.2s	**0.57**	**255**	*eP*		**Pg**		**17 53 38.2**	**-0.3**
KST				*eS*		**Sg**		**17 53 46.1**	**0.0**
KST	**Kastek** 73nm,0.2s	**0.57**	**255**	P		**Pg**		**17 53 38.2**	**-0.3**
KST				S		**Sg**		**17 53 46.1**	**0.0**
CHKK	**Chushkaly** 16nm,0.1s	**0.69**	**17**	*eP*		**Pg**		**17 53 40.0**	**-0.7**
CHKK				*eS*		**Sg**		**17 53 49.2**	**-0.6**
CHKK	**Chushkaly** 16nm,0.1s	**0.69**	**17**	P		**Pg**		**17 53 40.0**	**-0.7**
CHKK				S		**Sg**		**17 53 49.2**	**-0.6**
DGS	**Degeres** baz=74	**0.69**	**274**	*eP*		**Pg**		**17 53 40.4**	**-0.4**
DGS				*eS*		**Sg**		**17 53 49.9**	**0.0**
DGS	**Degeres** 63nm,0.1s	**0.69**	**274**	*eP*		**Pg**		**17 53 40.4**	**-0.4**
DGS				*eS*		**Sg**		**17 53 49.8**	**0.0**
DGS	**Degeres** 63nm,0.1s	**0.69**	**274**	P		**Pg**		**17 53 40.3**	**-0.4**
DGS				S		**Sg**		**17 53 49.8**	**0.0**
ANVS	**Anan'yevo** baz=20	**0.81**	**120**	⇑*iP*		**Pb**		**17 53 41.8**	**-2.0**
ANVS				⇑*iS*		**Sb**		**17 53 52.6**	**-2.4**
TKM2	**Tokmak 2** baz=52	**0.86**	**252**	⇑*iP*		**Pb**		**17 53 43.3**	**-1.6**
TKM2				⇑*iS*		**Sb**		**17 53 55.2**	**-1.4**
TKM2	**Tokmak 2** 16nm,0.1s,SNR=16	**0.86**	**252**	⇓P		**Pb**		**17 53 43.5**	**-1.3**
TKM2				⇑S		**Sb**		**17 53 56.0**	**-0.6**
TKM2	**Tokmak 2** 56nm,0.1s	**0.86**	**252**	⇑P		**Pb**		**17 53 43.2**	**-1.6**
TKM2				⇓S		**Sb**		**17 53 55.4**	**-1.2**
BOOM	**Boomskoye usch** baz=20	**0.91**	**219**	⇑*iP*		**Pb**		**17 53 43.7**	**-1.8**
BOOM				⇑*iS*		**Sb**		**17 53 56.0**	**-1.8**
KRBS	**Karabastau** baz=4.0	**0.91**	**304**	*eP*		**Pb**		**17 53 44.0**	**-1.5**
KRBS				*eS*		**Sb**		**17 53 56.0**	**-1.7**
KRBS	**Karabastau** 15nm,0.1s	**0.91**	**304**	*eP*		**Pb**		**17 53 44.0**	**-1.5**
KRBS				*eS*		**Sb**		**17 53 56.0**	**-1.7**
KRBS	**Karabastau** 15nm,0.1s	**0.91**	**304**	P		**Pb**		**17 53 44.0**	**-1.5**
KRBS				S		**Sb**		**17 53 56.1**	**-1.7**
ULHL	**Ulahol** baz=1.0	**1.01**	**200**	⇑*iP*		**Pb**		**17 53 45.7**	**-1.6**
ULHL				⇑*iS*		**Sb**		**17 53 59.1**	**-1.7**
ULHL	**Ulahol** 7.5nm,0.1s,SNR=42	**1.01**	**200**	⇑P		**Pb**		**17 53 46.0**	**-1.3**
KURS	**Kuram** baz=74	**1.10**	**74**	*eP*		**Pb**		**17 53 47.3**	**-1.4**
KURS				*eS*		**Sb**		**17 54 01.8**	**-1.4**
KURS	**Kuram** 9.2nm,0.2s	**1.10**	**74**	*eP*		**Pb**		**17 53 47.3**	**-1.4**
KURS				*eS*		**Sb**		**17 54 01.8**	**-1.4**
KURS	**Kuram** 9.2nm,0.2s	**1.10**	**74**	P		**Pb**		**17 53 47.3**	**-1.4**
KURS				S		**Sb**		**17 54 01.8**	**-1.4**
KDJ	**Kajisay** baz=62	**1.12**	**162**	⇑*iP*		**Pb**		**17 53 47.7**	**-1.4**
KDJ				⇑*iS*		**Sb**		**17 54 02.3**	**-1.5**
SATY	**Saty** baz=96	**1.24**	**96**	⇑*iP*		**Pn**		**17 53 49.7**	**-1.5**
SATY				⇑*eS*		**Sb**		**17 54 06.0**	**-1.4**
SATY	**Saty** 18nm,0.1s	**1.24**	**96**	⇑*iP*		**Pn**		**17 53 49.7**	**-1.5**
SATY				*eS*		**Sb**		**17 54 06.0**	**-1.4**
SATY	**Saty** 18nm,0.1s	**1.24**	**96**	P		**Pn**		**17 53 49.7**	**-1.5**
SATY				S		**Sb**		**17 54 06.0**	**-1.4**
ZHN	**Zhinishke** baz=91	**1.26**	**91**	*eP*		**Pn**		**17 53 50.0**	**-1.4**
ZHN				*eS*		**Sb**		**17 54 06.4**	**-1.4**
ZHN	**Zhinishke** 61nm,0.3s	**1.26**	**91**	*eP*		**Pn**		**17 53 50.0**	**-1.4**
ZHN				*eS*		**Sb**		**17 54 06.4**	**-1.4**
ZHN	**Zhinishke** 61nm,0.3s	**1.26**	**91**	P		**Pn**		**17 53 50.0**	**-1.4**
ZHN				S		**Sb**		**17 54 06.4**	**-1.4**
ARXS	**Arharly** 36nm,0.2s	**1.30**	**38**	*eP*		**Pn**		**17 53 50.7**	**-1.3**
ARXS				*eS*		**Sb**		**17 54 07.7**	**-1.3**
ARXS	**Arharly** 36nm,0.2s	**1.30**	**38**	P		**Pn**		**17 53 50.7**	**-1.3**
ARXS				S		**Sb**		**17 54 07.7**	**-1.3**
KBK	**Karagaybulak** baz=48	**1.41**	**248**	⇑*iP*		**Pn**		**17 53 52.9**	**-0.6**
KBK				⇑*iS*		**Sn**		**17 54 11.5**	**-0.8**
KBK	**Karagaybulak** 14nm,0.1s,SNR=8.8	**1.41**	**248**	⇓P		**Pn**		**17 53 53.4**	**-0.1**
KBK				⇑S		**Sb**		**17 54 12.8**	**+0.6**
PRZ	**Przheval'sk** baz=19	**1.43**	**119**	⇓*iP*		**Pn**		**17 53 53.1**	**-0.7**
PRZ				⇓*iS*		**Sn**		**17 54 12.2**	**-0.6**
CHMS	**Chumysh** baz=63	**1.45**	**263**	⇑*iP*		**Pn**		**17 53 53.4**	**-0.6**
CHMS				⇑*iS*		**Sn**		**17 54 12.9**	**-0.3**
CHMS	**Chumysh** 7.8nm,0.1s,SNR=5.7	**1.45**	**263**	⇓P		**Pn**		**17 53 53.3**	**-0.6**
CHMS				⇑S		**Sn**		**17 54 12.7**	**-0.6**
KPKS	**Kokpek** baz=78	**1.46**	**79**	*eP*		**Pn**		**17 53 53.6**	**-0.6**
KPKS				*eS*		**Sn**		**17 54 12.6**	**-0.9**
KPKS	**Kokpek** 83nm,0.1s	**1.46**	**79**	*eP*		**Pn**		**17 53 53.6**	**-0.6**
KPKS				*eS*		**Sn**		**17 54 12.6**	**-0.9**
MNBS	**Baschi** 13nm,0.1s	**1.51**	**54**	*eP*		**Pn**		**17 53 54.9**	**0.0**
MNBS				*eS*		**Sn**		**17 54 14.7**	**-0.1**
MNBS	**Baschi** 13nm,0.1s	**1.51**	**54**	P		**Pn**		**17 53 54.9**	**0.0**
MNBS				S		**Sn**		**17 54 14.7**	**-0.1**
SGDS	**Sogindy** 6.8nm,0.1s	**1.54**	**280**	P		**Pn**		**17 53 55.6**	**+0.3**
SGDS				S		**Sn**		**17 54 15.9**	**+0.4**
USP	**Ospenovka** baz=73	**1.62**	**273**	⇑*iP*		**Pn**		**17 53 56.3**	**0.0**
USP				⇑*iS*		**Sn**		**17 54 18.0**	**+0.6**
USP	**Ospenovka** 5.5nm,0.1s,SNR=27	**1.62**	**273**	⇓P		**Pn**		**17 53 56.6**	**+0.2**
USP				⇓S		**Sb**		**17 54 18.3**	**+0.1**
UZB	**Uzynbulak** baz=91	**1.69**	**91**	*eP*		**Pn**		**17 53 57.7**	**+0.3**
UZB				*eS*		**Sn**		**17 54 19.6**	**+0.4**
UZB	**Uzynbulak** 9.0nm,0.1s	**1.69**	**91**	*eP*		**Pn**		**17 53 57.7**	**+0.3**
UZB				*eS*		**Sn**		**17 54 19.6**	**+0.4**
UZB	**Uzynbulak** 9.0nm,0.1s	**1.69**	**91**	P		**Pn**		**17 53 57.7**	**+0.3**
UZB				S		**Sn**		**17 54 19.6**	**+0.4**
AAK	**Ala-Archa** baz=52	**1.73**	**252**	⇓*iP*		**Pn**		**17 53 58.1**	**+0.2**
AAK				⇓*iS*		**Sn**		**17 54 21.0**	**+0.9**
AAK	**Ala-Archa** 6.9nm,0.3s,SNR=15	**1.73**	**252**	⇓P		**Pn**		**17 53 58.4**	**+0.5**
AAK				⇑S		**Sb**		**17 54 21.7**	**+0.4**
AAK	**Ala-Archa** 1.4nm,0.2s	**1.73**	**252**	⇓P		**Pn**		**17 53 58.3**	**+0.5**
AAK				⇓S		**Sn**		**17 54 20.6**	**+0.4**
UCH	**Uchtor** baz=40	**1.89**	**240**	⇑*iP*		**Pn**		**17 54 00.7**	**+0.3**
UCH				⇑*iS*		**Sn**		**17 54 25.3**	**+0.7**
UCH	**Uchtor** 1.7nm,0.1s,SNR=7.5	**1.89**	**240**	⇑P		**Pn**		**17 54 01.7**	**+1.3**
SHLS	**Shalkode** 5.1nm,0.2s	**2.01**	**90**	*eP*		**Pg**		**17 54 09.2**	**+3.2**
SHLS				*eS*		**Sg**		**17 54 39.1**	**+7.1**
SHLS	**Shalkode** 5.1nm,0.2s	**2.01**	**90**	Pg		**Pg**		**17 54 09.2**	**+3.2**
SHLS				Lg		Lg		17 54 39.1	
PDGK	**Podgornoye** 2.8nm,0.2s	**2.03**	**85**	Pg		**Pn**		**17 54 03.8**	**+1.7**
PDGK				Lg		Lg		17 54 29.8	
PDGK	**Podgornoye** 5.8nm,0.6s	**2.03**	**85**	⇓Pn		**Pn**		**17 54 02.8**	**+0.8**
PDGK				⇑Sn		**Sb**		**17 54 29.8**	**-0.3**
TDK	**Taldyqorghan** 20nm,0.4s	**2.18**	**33**	*eP*		**Pb**		**17 54 06.3**	**-0.8**
TDK				*eS*		**Sb**		**17 54 34.4**	**+0.1**
TDK	**Taldyqorghan** 20nm,0.4s	**2.18**	**33**	Pg		**Pb**		**17 54 06.3**	**-0.8**
TDK				Lg		Lg		17 54 34.4	
ARLS	**Aral** baz=34	**2.21**	**234**	⇑*iP*		**Pn**		**17 54 04.9**	**+0.3**
ARLS				⇑*iS*		**Sn**		**17 54 32.7**	**+0.5**
EKS2	**Erkin-Say** baz=57	**2.22**	**257**	⇑*iP*		**Pn**		**17 54 05.1**	**+0.4**
EKS2				⇑*iS*		**Sn**		**17 54 33.2**	**+0.8**
EKS2	**Erkin-Say** 2.9nm,0.2s,SNR=14	**2.22**	**257**	⇑P		**Pn**		**17 54 06.5**	**+1.9**
AML	**Almayashu** baz=46	**2.47**	**246**	⇑*iP*		**Pn**		**17 54 09.0**	**+0.7**
AML				⇑*iS*		**Sn**		**17 54 39.5**	**+0.7**
DJR	**Jarkent** 7.8nm,0.2s	**2.50**	**62**	*eP*		**Pb**		**17 54 12.8**	**+0.2**
DJR				*eS*		**Sb**		**17 54 45.2**	**+1.7**
DJR	**Jarkent** 7.8nm,0.2s	**2.50**	**62**	Pg		**Pb**		**17 54 12.8**	**+0.2**
DJR				Lg		Lg		17 54 45.2	
MRKS	**Merke** 8.6nm,0.4s	**2.60**	**261**	*eP*		**Pb**		**17 54 14.1**	**-0.3**
MRKS				*eS*		**Sb**		**17 54 47.6**	**+1.1**
MRKS	**Merke** 8.6nm,0.4s	**2.60**	**261**	Pg		**Pb**		**17 54 14.1**	**-0.3**
MRKS				Lg		Lg		17 54 47.6	
KTMS	**Ketmen** 8.9nm,0.2s	**2.67**	**83**	*eP*		**Pb**		**17 54 14.6**	**-0.9**
KTMS				*eS*		**Sb**		**17 54 48.5**	**+0.1**
KTMS	**Ketmen** 8.9nm,0.2s	**2.67**	**83**	Pg		**Pb**		**17 54 14.6**	**-0.9**
KTMS				Lg		Lg		17 54 48.5	
BTLS	**Baital** 1.4nm,0.1s	**2.67**	**315**	*eP*		**Pb**		**17 54 15.4**	**0.0**
BTLS				*eS*		**Sb**		**17 54 50.0**	**+1.7**
BTLS	**Baital** 1.4nm,0.1s	**2.67**	**315**	Pg		**Pb**		**17 54 15.4**	**0.0**
BTLS				Lg		Lg		17 54 49.9	
KAPS	**Kapalarasan** 3.9nm,0.3s	**2.82**	**41**	*eP*		**Pb**		**17 54 18.4**	**+0.3**
KAPS				*eS*		**Sb**		**17 54 54.6**	**+1.8**
KAPS	**Kapalarasan** 3.9nm,0.3s	**2.82**	**41**	Pg		**Pb**		**17 54 18.4**	**+0.3**
KAPS				Lg		Lg		17 54 54.6	
KK31	**Karatay Array** 0.3nm,0.4s,baz=88,slow=17,SNR=9.5	**4.54**	**271**	Pg		**Pb**		**17 54 49.5**	**+2.1**
KK31				Lg		Lg		17 55 50.4	
MK31	**Makanchi Array** 1.2nm,0.6s,baz=331,slow=17,SNR=2.8	**5.34**	**46**	⇑Lg		Lg		17 56 17.0	
KURBB	**Kurchatov Arra** 3.5nm,0.6s	**7.54**	**9**	⇓Lg		Lg		17 57 26.2	

TAP ***23*** *17:53:27.8, 24.˚92N×122.˚48E, h15km, ML2.6, C*
JMA ***23*** *17:53:28.2±0.1, 24.˚84N×122.˚45E, h2km±2km, M2.3*

ISC 23 17:53:28.2±1.0, **24.˚87N**±0.˚03×**122.˚46E**±0.˚02, **h10**km±9km, **n57**, σ0.**948**/89, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=282	**0.45**	**288**	P		**Pg**		**17 53 37.5**	**+0.4**
TWB1				S		**Sg**		**17 53 43.3**	**+0.2**
EGS	baz=250	**0.48**	**268**	*i* P		**Pb**		**17 53 38.2**	**-0.6**
EGS				S		**Sb**		**17 53 46.0**	**+0.1**
TIPB	**Shuangxi** baz=275	**0.59**	**281**	P		**Pb**		**17 53 40.5**	**-0.1**
TIPB				*eS*		**Sb**		**17 53 49.0**	**0.0**
JYNG	**Yonagunijimaku**	**0.60**	**133**	P		**Pg**		**17 53 40.0**	**+0.1**
JYNG				S		**Sg**		**17 53 48.3**	**+0.5**
TWC	**Suao** baz=241	**0.61**	**246**	P		**Pb**		**17 53 40.6**	**-0.4**
TWC				*eS*		**Sg**		**17 53 48.4**	**+0.3**
YOJ	**Yonaguni jima** baz=122	**0.64**	**129**	*i* P		**Pg**		**17 53 40.6**	**0.0**
YOJ				S		**Sg**		**17 53 49.4**	**+0.4**
YOJ	**Yonaguni jima**	**0.64**	**129**	P		**Pg**		**17 53 40.8**	**+0.2**
YOJ				S		**Sg**		**17 53 49.2**	**+0.2**
NWF	**Wu-fen Shan** baz=284	**0.65**	**288**	*eP*		**Pb**		**17 53 41.6**	**-0.1**
NWF				*eS*		**Sb**		**17 53 50.0**	**-0.9**
WFSB	**Wu-fen Shan** baz=284	**0.65**	**288**	*eP*		**Pb**		**17 53 41.5**	**-0.2**
WFSB				*eS*		**Sb**		**17 53 50.3**	**-0.5**
TWE	**Neicheng** baz=245	**0.74**	**259**	*eP*		**Pb**		**17 53 42.8**	**-0.4**
TWE				*eS*		**Sb**		**17 53 53.0**	**-0.3**
ENA	**Nanau** baz=233	**0.79**	**237**	*eP*		**Pg**		**17 53 43.6**	**+0.3**
ENA				*eS*		**Sb**		**17 53 54.9**	**+0.2**
PCYT	**Pengchaiyu** baz=333	**0.84**	**335**	*eP*		**Pg**		**17 53 44.2**	**-0.1**
ENTT	**Nioudou** baz=251	**0.85**	**255**	*eP*		**Pb**		**17 53 45.2**	**+0.2**
ENTT				*eS*		**Sg**		**17 53 56.0**	**+0.4**
YM08	**YM08** baz=289	**0.85**	**292**	*eP*		**Pb**		**17 53 45.1**	**-0.1**
NHDH	**Xindian Distri** baz=273	**0.86**	**277**	*eP*		**Pg**		**17 53 44.8**	**0.0**
NHDH				*eS*		**Sg**		**17 53 56.1**	**+0.2**
YM01	**YM01** baz=286	**0.86**	**289**	*eP*		**Pb**		**17 53 45.5**	**+0.3**
YM11	**YM11** baz=287	**0.86**	**291**	*eP*		**Pn**		**17 53 46.0**	**-0.5**
YM05	**YM05** baz=287	**0.87**	**290**	*eP*		**Pb**		**17 53 45.6**	**+0.2**
YM10	**YM10** baz=286	**0.87**	**290**	*eP*		**Pb**		**17 53 45.8**	**+0.4**
NWLT	**Wulai** baz=261	**0.88**	**264**	*eP*		**Pb**		**17 53 45.5**	**0.0**
NWLT				*eS*		**Sg**		**17 53 56.6**	**0.0**
TWY	**Chenhua** baz=295	**0.88**	**298**	*eP*		**Pb**		**17 53 45.7**	**+0.1**
YM04	**YM04** baz=286	**0.89**	**289**	*eP*		**Pb**		**17 53 46.1**	**+0.3**
TATO	**Taipei** baz=274	**0.89**	**277**	*eP*		**Pg**		**17 53 45.2**	**-0.2**
YM03	**YM03** baz=287	**0.89**	**291**	*eP*		**Pb**		**17 53 46.3**	**+0.4**
ANP	**Anpu** baz=287	**0.91**	**291**	P		**Pb**		**17 53 46.3**	**+0.1**
TWS1	**Kuangyinshan** baz=281	**0.98**	**284**	*eP*		**Pn**		**17 53 48.4**	**+0.4**
YHNB	**Yeheng** baz=271	**1.01**	**259**	P		**Pb**		**17 53 47.7**	**-0.1**
YHNB				*eS*		**Sg**		**17 54 00.1**	**-0.6**
NSK	**Sanguang** baz=271	**1.02**	**260**	P		**Pg**		**17 53 47.4**	**-0.5**
NSK				*eS*		**Sg**		**17 54 00.8**	**-0.3**
NACB	**Ninganchiao** baz=238	**1.05**	**229**	P		**Pg**		**17 53 48.2**	**-0.1**
NACB				*eS*		**Sg**		**17 54 01.4**	**-0.7**
NNSB	**Datong**	**1.07**	**246**	P		**Pg**		**17 53 48.5**	**-0.3**

baz=243
NNSB eS Sg 17 54 02.8 0.0
baz=243
NNSH Datong 1.07 246 eP Pg 17 53 48.6 -0.3
baz=244
NNSH eS Sb 17 54 03.1 0.0
baz=244
NNS Nan Shan 1.08 247 P Pg 17 53 48.9 0.0
baz=244
NNS eS Sg 17 54 02.5 -0.5
baz=244
ETLH Xiulin Townshi 1.11 234 P Pg 17 53 49.4 -0.2
baz=232
ETLH eS Sg 17 54 03.3 -0.6
baz=232
TWD Chiawan 1.11 225 eP Pb 17 53 49.7 +0.2
baz=233
IRIF Iriomote-Funau 1.27 114 P Pg 17 53 52.5 -0.1
IRIF eS Sg 17 54 09.1 +0.1
FUSS Fushou 1.27 241 P Pb 17 53 52.4 0.0
baz=239
FUSS eS Sg 17 54 09.1 0.0
baz=239
WHF Hehuan Shan 1.31 237 P Pg 17 53 53.4 +0.1
baz=234
WHF eS Sb 17 54 09.3 -0.8
baz=234
TWT Tachien 1.32 243 eP Pg 17 53 53.7 +0.1
baz=231
TWT eS Sn 17 54 11.4 +0.8
baz=231
TDCB Techi 1.33 243 eP Pn 17 53 53.1 +0.1
baz=232
TDCB eS Sn 17 54 11.2 +0.2
baz=232
NSTT Nanjuang 1.35 260 eP Pb 17 53 53.8 +0.2
baz=257
NSTT eS Sb 17 54 11.0 +0.1
baz=257
ESL Shilin 1.41 222 eP Pn 17 53 52.9 -1.0
baz=220
CHGB Renai 1.42 236 eP Pg 17 53 55.5 0.0
baz=234
CHGB eS Sn 17 54 13.7 +0.5
baz=234
HATJ Hateruma jima 1.46 123 P Pg 17 53 55.9 -0.4
OWD Renai 1.48 233 eP Pn 17 53 55.4 +0.4
baz=239
OWD eS Sb 17 54 15.5 +0.6
baz=239
WHP Taichung City 1.50 247 eP Pg 17 53 57.0 0.0
baz=237
WHP eS Sg 17 54 16.5 0.0
baz=237
EGFH Guangfu 1.52 219 eP Pn 17 53 55.4 -0.1
baz=201
JKRS Kuro-shima 1.54 114 P Pb 17 53 56.9 +0.1
JKRS eS Sb 17 54 17.0 +0.6
JIJ Ishigaki jima 1.61 108 P Pb 17 53 57.4 -0.6
JIJ eS Sb 17 54 18.2 -0.1
TWQ1 Liyutan 1.62 252 eP Pn 17 53 56.8 -0.1
baz=265
DPDB Guoxing 1.63 240 eP Pg 17 53 59.8 +0.4
baz=238
JISG Ishigakijimahi 1.70 99 P Pb 17 53 58.9 -0.7
SMLT Sun Moon Lake 1.73 236 eP Pb 17 54 00.7 +0.6
baz=216
TYC Yuchr 1.75 237 eP Pb 17 54 00.0 -0.4
baz=218
YULB Yu-li 1.81 216 eP Pn 17 53 57.3 -2.2
baz=215
ALS Alishan 2.03 229 eP Pb 17 54 05.4 +0.1
baz=210
CHN5 Tsauling 2.06 233 eP Pb 17 54 05.4 -0.4
baz=214
TPUB Ta-pu 2.29 227 eP Pn 17 54 07.9 +1.8
baz=210

*IDC **23** 18:01:27.7±3.1,35.75N×179.88E,h0km,mb3.5/2, mb1 3.8/3,mb1mx3.6/22,mbtmp3.5/3,ML3.6/1,Error ellipse: s-maj=72.7km s-min=35.3km az=121.0*
*WEL **23** 18:01:32.1±1.3,36.9°S×18.0°W±°,h33km,M3.7/8, ML4.0/8,MLv3.7/8,Error ellipse: s-maj=0.0km s-min=0.0km az=0.3*
ISC 23 18:01:26.9±1.5,**36.01S**±0.10×**179.65W**±0.08,**h10**km,**n15**, σ**2.502/23**,**East of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.26**	**226**	P	**Pn**	**18 02 05.0**	**+0.8**
MXZ				S	**Sb**	**18 02 34.0**	**-1.7**
WMGZ	**Waiomatatini S**	**2.38**	**220**	P	**Pn**	**18 02 08.4**	**-1.4**
WMGZ				S	**Sn**	**18 02 36.5**	**+1.3**
PUZ	**Puketiti**	**2.66**	**219**	P	**Pn**	**18 02 11.8**	**+2.0**
PUZ				S	**Sn**	**18 02 43.2**	**+1.1**
HAZ	**Te Kaha**	**2.70**	**229**	S	**Sn**	**18 02 44.8**	**+1.8**
TWGZ	**Tauwhareparae**	**2.88**	**221**	P	**Pn**	**18 02 14.8**	**+1.9**
TWGZ				S	**Sn**	**18 02 49.0**	**+1.4**
RUGZ	**Raukumara Rang**	**2.90**	**227**	P	**Pn**	**18 02 15.0**	**+1.8**
CNGZ	**Carnagh Statio**	**3.01**	**214**	P	**Pn**	**18 02 17.1**	**+2.5**
MWZ	**Matawai**	**3.24**	**223**	P	**Pn**	**18 02 19.5**	**+1.7**
MWZ				S	**Sn**	**18 02 58.1**	**+1.7**
URZ	**Urewera**	**3.43**	**228**	Pn	**Pn**	**18 02 21.2**	**+0.9**
	6.3nm,0.3s,baz=265,slow=2.9,SNR=30						
URZ				Sn	**Sn**	**18 03 01.0**	**-0.1**
	1.8nm,0.3s,baz=198,slow=20,SNR=1.4						
URZ	**Urewera**	**3.43**	**228**	P	**Pn**	**18 02 21.5**	**+1.1**
URZ				S	**Sn**	**18 02 59.7**	**-1.3**
MYRZ	**Mayor Island**	**3.54**	**248**	P	**Pn**	**18 02 24.1**	**+2.1**
CTZ	**Chatham Island**	**8.06**	**164**	P	**Pn**	**18 03 27.9**	**+4.0**
CTZ				S	**Sn**	**18 04 50.8**	**-4.3**
ASAR	**Alice Springs**	**41.77**	**274**	P	**P**	**18 09 15.7**	**-0.9**
	0.4nm,0.7s,baz=120,slow=7.9,SNR=6.5						
WRA	**Warramunga Arr**	**43.27**	**279**	P	**P**	**18 09 27.7**	**-1.0**
	0.4nm,0.6s,baz=119,slow=7.7,SNR=14						
FINES	**FINESS Array B**	**149.80**	**336**	PKPbc	**PKiKP**	**18 21 17.2**	**0.0**
	1.8nm,0.8s,baz=30,slow=3.9,SNR=5.0						

*BJI **23** 18:26:21.3±0.0,1.72N×126.42E,h65km,mB4.9/14, mb4.4/23,Ms4.1/3,Ms7 3.9/2*
*KLM **23** 18:26:22.0,2.06N×126.62E,h43km,mb4.5*
*NEIC **23** 18:26:22.8±1.4,1.85N±0.08×126.50E±0.07,h56km±9km, mb4.7/31,Error ellipse: s-maj=14.3km s-min=7.6km az=220.0*
*IDC **23** 18:26:24.1±2.6,1.80N×126.47E,h64km±24km,mb4.0/24, mb1 4.1/26,mb1mx4.0/54,mbtmp4.3/26,ML3.6/2,Error ellipse: s-maj=23.0km s-min=9.1km az=75.0*
*DJA **23** 18:26:24.3±0.2,2.1°N±3°×127.7E±°,h59km±3km,M4.4/16, mb4.5/16,mB5.1/8,MLv4.2/15,Mw(mB)4.5/8,Mwp6.8/1*
ISC 23 18:26:24.3±1.0,**1.86N**±0.05×**126.51E**±0.06,**h67**km±10km, **n92**,σ1°**29**/96,**mb4.5**/41,**1D**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.38**	**142**	P	**Pn**	**18 26 46.4**	**-1.3**
TNTI				S	**Sn**	**18 27 05.7**	**+0.5**
TNTI	**Ternate**	**1.38**	**142**	Pn	**Pn**	**18 26 46.4**	**-1.3**
SGSI	**Sangihe**	**2.06**	**332**	P	**Pn**	**18 26 55.6**	**-1.2**
KMSI	**Cibinong**	**2.83**	**243**	P	**Pn**	**18 27 07.8**	**+0.5**
GTOI	**Gorontalo**	**3.71**	**251**	P	**Pn**	**18 27 19.7**	**+0.5**
SANI	**Sanana**	**3.92**	**188**	P	**Pn**	**18 27 20.4**	**-1.7**
LUWI	**Luwuk**	**4.72**	**232**	P	**Pn**	**18 27 34.5**	**+1.4**
LUWI	**Luwuk**	**4.72**	**232**	Pn	**Pn**	**18 27 35.4**	**+2.3**
MRSI	**Marisa**	**4.77**	**253**	P	**Pn**	**18 27 35.5**	**+1.7**
NLAI	**Namlea**	**5.10**	**173**	P	**Pn**	**18 27 37.4**	**-0.9**
	0.2nm2µm27nm,0.5s						
SIJI	**Sorong**	**5.47**	**120**	P	**Pn**	**18 27 44.1**	**+0.7**
	0.5nm,0.3s,baz=309,slow=17,SNR=2.5						
APSI	**Ampana**	**5.59**	**241**	P	**Pn**	**18 27 46.0**	**+1.1**
	0.3nm768nm56nm,0.5s						
TOLI2	**Tolitoli**	**5.78**	**263**	Pn	**Pn**	**18 27 46.2**	**-1.3**
MPSI	**Mapaga**	**6.78**	**257**	P	**Pn**	**18 28 02.1**	**+0.8**
	0.1nm395nm33nm,0.9s						
TTSI	**Tana Toraja**	**8.28**	**234**	P	**Pn**	**18 28 19.3**	**-2.5**
	366nm19nm,1.1s						
MYLDM	**Lahad Datu**	**8.65**	**293**			**18 28 29.3**	**+2.5**
SPSI	**Sidrap Palu**	**8.88**	**229**	P	**Pn**	**18 28 29.6**	**-0.4**
	18nm,0.7s						
BNSI	**Bone**	**8.93**	**226**	P	**Pn**	**18 28 30.9**	**+0.3**
	19nm,1.1s						
SPMM	**Sapulut**	**10.42**	**286**	P	**Pn**	**18 28 53.0**	**+1.9**
KKM	**Kota Kinabalu**	**11.08**	**292**		**Pn**	**18 29 02.7**	**+2.6**
SOEI	**Soe**	**11.76**	**191**	P	Pn	18 29 16.7	+7.3
TWSI	**Taliwang, Sumb**	**14.25**	**222**	P	**P**	**18 29 50.6**	**+2.4**
SBUM	**Sibu**	**14.29**	**273**	P	**P**	**18 29 47.3**	**-1.4**
SBUM	**Sibu**	**14.29**	**273**	P	Pn	18 29 37.0	-6.5
GENI	**Genyem**	**14.35**	**108**	P	**P**	**18 29 53.1**	**+3.7**
JAY	**Jayapura**	**14.84**	**107**	P	P	18 30 01.3	+6.4
MTN	**Manton Dam**	**15.31**	**163**		**Pn**	**18 29 54.5**	**-2.1**
KSM	**Kuching**	**16.20**	**269**	P	Pn	18 29 59.0	-8.9
KNRA	**Kununurra**	**17.57**	**173**	P	**Pn**	**18 30 24.4**	**-0.4**
KNRA				IAmb	IAmb	18 30 25.8	
	comp=Z,30nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.85**	**182**	P	**P**	**18 30 48.7**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=8.9,slow=10,SNR=16						
FITZ	**Fitzroy Crossi**	**19.85**	**182**	P	**P**	**18 30 49.0**	**-1.0**
TNG	**Tangerang**	**21.38**	**248**	P	**P**	**18 31 09.0**	**+2.4**
	comp=Z,576nm,0.5s						
YULB	**Yu-li**	**21.99**	**347**	P	**P**	**18 31 10.1**	**-2.9**
YULB				IAmb	IAmb	18 31 13.4	
	comp=Z,14nm,0.8s						
TPUB	**Ta-pu**	**22.06**	**345**	P	**P**	**18 31 11.8**	**-1.9**
SSLB	**Suanglung**	**22.45**	**347**	P	**P**	**18 31 15.5**	**-2.5**
WB0	**Warramunga Arr**	**22.84**	**161**	P	**P**	**18 31 20.9**	**-1.3**
WB0				IAmb	IAmb	18 31 22.6	
	comp=Z,40nm,1.2s						
WRAB	**Tennant Creek**	**22.99**	**161**	P	**P**	**18 31 22.4**	**-1.1**
WRAB				IAmb	IAmb	18 31 24.8	
	comp=Z,25nm,0.7s						
WRA	**Warramunga Arr**	**22.99**	**161**	P	**P**	**18 31 22.2**	**-1.5**
	comp=Z,18nm,0.5s,baz=339,slow=11,SNR=156						
WRA				PcP	**PcP**	**18 35 12.4**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=321,slow=2.4,SNR=2.4						
WRA				S	**S**	**18 35 28.6**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=334,slow=20,SNR=4.6						
WRA	**Warramunga Arr**	**22.99**	**161**	P	**P**	**18 31 21.3**	**-2.3**
WB2	**Warramunga Arr**	**23.00**	**161**	P	**P**	**18 31 22.6**	**-1.1**
WB2				IAmb	IAmb	18 31 26.4	
	comp=Z,29nm,0.8s						
WR0	**Warramunga Arr**	**23.07**	**160**	P	**P**	**18 31 23.4**	**-1.1**
WR0				IAmb	IAmb	18 31 25.4	
	comp=Z,16nm,0.5s						
YHNB	**Yeheng**	**23.21**	**348**	P	**P**	**18 31 25.9**	**+0.2**
YHNB				IAmb	IAmb	18 31 28.8	
	comp=Z,29nm,1.2s						
AS31	**Alice Springs**	**26.38**	**165**	P	**P**	**18 31 54.3**	**-0.2**
ASAR	**Alice Springs**	**26.38**	**165**	P	**P**	**18 31 54.4**	**-0.2**
	comp=Z,2.5nm,0.4s,baz=346,slow=12,SNR=82						
ASAR				PcP	**PcP**	**18 35 19.6**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=335,slow=2.0,SNR=3.5						
ASAR	**Alice Springs**	**26.38**	**165**	P	**P**	**18 31 54.1**	**-0.5**
ASAR					**PcP**	**18 35 20.3**	**+1.4**
GSI	**Gunungsitoli**	**28.93**	**269**	P	**P**	**18 32 15.3**	**-2.1**
GYA	**Guiyang**	**31.01**	**324**	eP	**P**	**18 32 36.1**	**+0.2**
GYA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JNU	**Nakatsue**	**31.36**	**7**	P	**P**	**18 32 39.7**	**+0.9**
	comp=Z,7.3nm,0.8s,baz=107,slow=7.1,SNR=5.4						
JNU	**Nakatsue**	**31.36**	**7**	P	**P**	**18 32 37.3**	**-1.5**
JNU				IAmb	IAmb	18 32 42.2	
	comp=Z,9.6nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.66**	**303**	P	**P**	**18 32 42.3**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=115,slow=6.2,SNR=14						
CHTO	**Chiang Mai**	**31.83**	**304**	P	**P**	**18 32 41.8**	**-1.3**
MORW	**Morawa**	**32.35**	**197**	P	**P**	**18 32 44.5**	**-3.0**
MORW				IAmb	IAmb	18 32 52.6	
	comp=Z,20nm,1.3s						
FORT	**Forrest**	**32.49**	**178**	P	**P**	**18 32 48.0**	**-0.6**
JWT	**Wachi**	**34.26**	**13**	P	**P**	**18 33 05.2**	**+1.2**
JGF	**Kuroka**	**35.05**	**15**	P	**P**	**18 33 11.1**	**+0.2**
JGF				IAmb	IAmb	18 33 20.6	
	comp=Z,11nm,1.2s						
KSRS	**Korea Array**	**35.44**	**2**	P	**P**	**18 33 14.9**	**+0.8**
	comp=Z,1.9nm,0.6s,baz=175,slow=10,SNR=12						
BBOO	**Buckleboo**	**35.65**	**166**	P	**P**	**18 33 15.8**	**-0.2**
XAN	**Xi'an**	**35.99**	**335**	P	**P**	**18 33 18.0**	**-0.9**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
XAN				LR	LR		
	comp=Z,110nm,15.2s						
XAN				LR	LR		
	comp=Z,130nm,14.1s						
MAJO	**Matsushiro**	**36.16**	**16**	P	**P**	**18 33 19.7**	**-0.7**
MAJO				IAmb	IAmb	18 33 28.4	
	comp=Z,12nm,1.4s						
MJAR	**Matsushiro Arr**	**36.16**	**16**	P	**P**	**18 33 20.6**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=184,slow=9.4,SNR=9.5						
STKA	**Stephens Creek**	**36.48**	**158**	P	**P**	**18 33 22.8**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=339,slow=9.5,SNR=12						
STKA	**Stephens Creek**	**36.48**	**158**	P	**P**	**18 33 23.3**	**+0.2**
JMM	**Marumori**	**38.16**	**18**	P	**P**	**18 33 36.9**	**-0.3**
USRK	**Ussuriysk Ar.**	**42.44**	**6**	P	**P**	**18 34 12.4**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=174,slow=4.8,SNR=4.4						
LSA	**Lhasa**	**43.52**	**313**	P	**P**	**18 34 22.0**	**-0.1**
LSA				IAmb	IAmb	18 34 24.7	
	comp=Z,5.4nm,0.6s						
ASAJ	**Asahikawa**	**44.43**	**17**	P	**P**	**18 34 28.9**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=210,slow=8.1,SNR=1.8						
GTA	**Gaotai**	**44.59**	**330**	eP	**P**	**18 34 30.0**	**-0.1**
GTA				pP	pP	18 34 47.3	+0.7
GTA				sP	sP	18 34 54.6	+0.5
GTA				PcP	**PP**	**18 36 14.3**	**-1.0**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,38nm,5.6s						
GTA				LR	LR		
	comp=Z,77nm,17.1s						
GTA				LR	LR		
	comp=Z,87nm,16.0s						
GTA				LR	LR		
	comp=Z,73nm,17.1s						
SONM	**Songino Array**	**48.99**	**342**	P	**P**	**18 35 04.4**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=156,slow=9.3,SNR=9.7						
SONM				PcP	**PcP**	**18 36 28.6**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=164,slow=5.7,SNR=2.5						
SONM	**Songino Array**	**48.99**	**342**	P	**P**	**18 35 04.2**	**-0.1**
PETK	**Petropavlovsk-**	**57.23**	**22**	P	**P**	**18 36 06.0**	**+1.4**
	comp=Z,1.6nm,0.5s,baz=181,slow=4.5,SNR=8.0						
MK31	**Makanchi Array**	**58.96**	**326**	P	**P**	**18 36 16.7**	**-0.2**
MK31				IAmb	IAmb	18 36 18.3	
	comp=Z,3.4nm,1.0s						
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**18 36 16.8**	**-0.1**
	comp=Z,3.8nm,0.5s,baz=122,slow=8.3,SNR=49						
MKAR				PcP	**PcP**	**18 37 04.6**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=120,slow=5.8,SNR=2.4						
MKAR	**Makanchi Array**	**58.96**	**326**	P	**P**	**18 36 16.5**	**-0.4**
MAKZ	**Makanchi**	**59.15**	**326**	P	**P**	**18 36 18.1**	**-0.1**
MAKZ				IAmb	IAmb	18 36 19.6	
	comp=Z,10nm,1.1s						
YAK	**Yakutsk**	**60.07**	**2**	P	**P**	**18 36 25.4**	**+1.2**
	comp=Z,6.3nm,0.5s,baz=174,slow=0.6,SNR=8.7						
ZALV	**Zalesovo Beam**	**62.15**	**334**	P	**P**	**18 36 37.4**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=130,slow=6.0,SNR=5.0						
GAR	**Garm**	**63.03**	**313**	P	**P**	**18 36 43.6**	**-1.2**
KURK	**Kurchatov**	**63.19**	**328**	P	**P**	**18 36 45.4**	**0.0**
KKAR	**Karatay Array**	**64.45**	**318**	P	**P**	**18 36 53.4**	**-0.4**
NRIK	**Noril'sk**	**72.18**	**346**	P	**P**	**18 37 42.8**	**+1.2**
	comp=Z,4.2nm,0.5s,baz=122,slow=5.6,SNR=13						
ABKAR	**Akbulak array**	**73.45**	**321**	P	**P**	**18 37 49.6**	**0.0**
AKTO	**Aktyubinsk**	**74.98**	**322**	P	**P**	**18 37 58.8**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=106,slow=7.1,SNR=10						
ARU	**Arti**	**76.39**	**328**	P	**P**	**18 38 06.1**	**-0.2**
ARU				IAmb	IAmb	18 38 06.9	
	comp=Z,7.6nm,0.6s						
VNDA	**Vanda**	**81.61**	**173**	P	**P**	**18 38 35.5**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=323,slow=7.3,SNR=9.2						
KBZ	**Khabaz**	**84.10**	**314**	P	**P**	**18 38 48.5**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=27,slow=3.9,SNR=4.1						
ILAR	**Eielson Array**	**86.87**	**25**	P	**P**	**18 39 01.1**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=236,slow=5.4,SNR=4.2						
MMAI	**Mount Meron Ar**	**89.93**	**303**	P	**P**	**18 39 17.3**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=59,slow=5.6,SNR=2.5						
BRTR	**Keskin Array B**	**91.04**	**310**	P	**P**	**18 39 22.4**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=142,slow=4.8,SNR=1.7						
ARCES	**ARCESS Array B**	**92.11**	**340**	P	**P**	**18 39 25.6**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=65,slow=6.4,SNR=4.3						
AKASG	**Malin Array Be**	**93.19**	**321**	P	**P**	**18 39 30.9**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=78,slow=4.8,SNR=2.3						
FINES	**FINESS Array B**	**93.36**	**332**	P	**P**	**18 39 31.3**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=162,slow=1.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**123.27**	**287**	PKP	**PKiKP**	**18 45 15.4**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=49,slow=1.8,SNR=2.5						

TAP 23 18:28:27.8,23.01N×120.91E,h5km±1km**,ML1.1,C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STYT	**Tauyuan**	**0.21**	**319**	P	Pg	18 28 33.1	+1.2
	baz=319						
STYT				*i* S	Sg	18 28 36.4	+1.7
	baz=319						
ELDTW	**Lidau**	**0.21**	**29**	*i* P	Pg	18 28 33.0	+1.0
	baz=31						
ELDTW				*i* S	Sg	18 28 36.4	+1.7
	baz=31						
LONT	**Longtian**	**0.23**	**116**	*e*P	Pg	18 28 33.4	+1.1
	baz=115						
LONT				*i* S	Sg	18 28 37.3	+2.0
	baz=115						
SLGT	**Liugui**	**0.24**	**267**	P	Pg	18 28 33.9	+1.4
	baz=266						
SLGT				*i* S	Sg	18 28 37.4	+1.7
	baz=266						
TWG	**Pinlang**	**0.24**	**140**	P	Pg	18 28 33.8	+1.3
	baz=139						
TWG				S	Sg	18 28 38.4	+2.8
	baz=139						
TWGBT	**Beinan**	**0.25**	**140**	P	Pg	18 28 34.1	+1.5
	baz=139						
TWGBT				S	Sg	18 28 37.8	+1.9
	baz=139						
SGST	**Jiashian**	**0.31**	**284**	P	Pb	18 28 35.2	-0.6
	baz=284						
SGST				*i* S	Sb	18 28 40.2	-1.0
	baz=284						
WTP	**Ta-pu**	**0.36**	**312**	P	Pb	18 28 36.9	+0.2
	baz=312						
WTP				S	Sb	18 28 41.5	-1.2
	baz=312						
SSD	**Sandimen**	**0.36**	**224**	*i* P	Pg	18 28 35.6	+0.8
	baz=223						
TSMG	**Majia**	**0.39**	**219**	*e*P	Pg	18 28 35.7	+0.5
	baz=218						
TPUB	**Ta-pu**	**0.39**	**319**	P	Pb	18 28 37.4	+0.2
	baz=318						
CHN1	**Nanshi**	**0.39**	**297**	*e*P	Pg	18 28 36.3	+0.9
	baz=297						
CHN1				S	Sb	18 28 42.5	-1.1
	baz=297						
CHN4	**Tsaushan**	**0.45**	**320**	P	Pb	18 28 38.6	+0.4
	baz=320						
CHN4				S	Sb	18 28 45.6	+0.4
	baz=320						
TWF1	**Yuli**	**0.50**	**46**	P	Pb	18 28 38.4	-0.6
	baz=46						
TWF1				*e*S	Sb	18 28 46.8	+0.2
	baz=46						
ALS	**Alishan**	**0.51**	**350**	P	Pb	18 28 39.1	-0.3
	baz=350						
ALS				S	Sb	18 28 46.5	-0.7
	baz=350						
YULB	**Yu-li**	**0.53**	**43**	P	Pg	18 28 38.6	+0.6
	baz=43						
YULB				*e*S	Sb	18 28 47.1	-0.4
	baz=43						
HGSD	**Ruisui**	**0.68**	**45**	*e*P	Pb	18 28 42.6	+0.5
	baz=44						
HGSD				S	Sb	18 28 52.9	+1.1
	baz=44						

IDC 23 18:36:05.6±1.5,**21.58N**×**144.24E**,**h0**km,**mb3.4**/4, **mb1 3.8**/5,**mb1mx3.4**/59,**mbtmp3.7**/5,**ML4.4**/1,**Error ellipse: s-maj=61.0km s-min=24.8km az=88.0**,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**7.97**	**176**	Pn	Pn	18 38 01.4	-1.5
	5.6nm,0.3s,baz=40,slow=16,SNR=1.4						
KSRS	**Korea Array**	**21.20**	**322**	P	P	18 40 52.7	-0.1
	0.9nm,0.8s,baz=147,slow=8.7,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**21.31**	**94**	T	T	19 03 37.0	
	baz=283,slow=74						
H11S1	**WAKE ISLAND Hy**	**21.32**	**94**	T	T	19 03 38.9	
	baz=283,slow=74						
H11S2	**WAKE ISLAND Hy**	**21.33**	**94**	T	T	19 03 40.3	
	baz=283,slow=74						
WRA	**Warramunga Arr**	**42.39**	**194**	P	P	18 44 02.0	-0.1
	0.3nm,0.6s,baz=17,slow=9.2,SNR=2.0						
ASAR	**Alice Springs**	**46.09**	**193**	P	P	18 44 32.0	+0.4
	0.3nm,0.7s,baz=15,slow=8.9,SNR=6.7						
YKA	**Yellowknife Ar**	**76.09**	**28**	P	P	18 47 54.9	0.0
	0.7nm,0.8s,baz=300,slow=4.8,SNR=1.5						

*IDC **23** 18:42:17.0±2.1,39.09N×141.33E,h0km,mb3.5/1, mb1 3.5/4,mb1mx3.3/54,mbtmp3.4/4,ML2.6/3,MS2.8/1, Ms1 2.8/1,ms1mx2.0/41,Error ellipse: s-maj=49.3km s-min=32.6km az=110.0*
*JMA **23** 18:42:19.6,39.05N×140.88E,h7km±1km,M3.1*
JMA Felt I J1.
ISC 23 18:42:18.3±1.0,**39.02N**±0.05×**140.82E**±0.05,**h16**km±10km, **n18**,σ1°**33**/16,**Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.32**	**103**	P	**Pg**	**18 42 25.1**	**+0.1**
JMK				*e*S	**Sg**	**18 42 29.2**	**-0.5**
JYK	**Kaneyama**	**0.37**	**254**	P	**Pn**	**18 42 28.0**	**-1.0**
JRG	**Rokugo**	**0.40**	**339**	P	**Pg**	**18 42 27.5**	**+1.1**
JRG				S	**Sg**	**18 42 33.3**	**+1.4**
JOM	**Ohasama**	**0.58**	**39**	P	**Pg**	**18 42 29.8**	**0.0**
JOM				S	**Sg**	**18 42 37.1**	**-0.5**
OFUJ	**Ofunato**	**0.67**	**85**	P	**Pg**	**18 42 31.3**	**-0.1**
OFUJ				S	**Sg**	**18 42 40.1**	**-0.1**
JOU	**Okura**	**0.67**	**190**	P	**Pn**	**18 42 33.2**	**+0.1**
JOU				S	**Sn**	**18 42 42.5**	**-0.7**
JIO	**Ouri**	**0.70**	**144**	P	**Pb**	**18 42 32.7**	**+0.6**
JIO				S	**Sb**	**18 42 42.1**	**+0.5**
MJAR	**Matsushiro Arr**	**3.23**	**221**	Pn	**Pb**	**18 43 12.6**	**-2.6**
	0.1nm,0.3s,baz=44,slow=16,SNR=6.8						
ASAJ	**Asahikawa**	**5.26**	**14**	Pn	**Pn**	**18 43 34.3**	**-1.9**
	0.2nm,0.3s,baz=117,slow=9.0,SNR=2.2						
USRK	**Ussuriysk Ar.**	**8.39**	**311**	LR	LR	18 47 16.3	
	comp=Z,64nm,21.7s,baz=90,slow=35						
KSRS	**Korea Array**	**10.26**	**265**	Pn	Pn	18 44 52.0	+7.2
	0.2nm,0.3s,baz=80,slow=15,SNR=4.3						
H11N2	**WAKE ISLAND Hy**	**29.60**	**123**	T	T	19 18 49.8	
	baz=317,slow=75						
H11N1	**WAKE ISLAND Hy**	**29.61**	**123**	T	T	19 18 51.8	
	baz=317,slow=75						
H11N3	**WAKE ISLAND Hy**	**29.62**	**123**	T	T	19 18 55.8	
	baz=317,slow=75						
H11S1	**WAKE ISLAND Hy**	**30.36**	**125**	T	T	19 19 47.7	
	baz=318,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.36**	**125**	T	T	19

CTZ				S		Sn	18 49 14.7	-1.4		

*IDC **23** 18:47:56.6±3.7, 37.°16S×179.°37E, h0^{km}, mb4.1/2, mb1 4.3/3, mb1mx3.8/35, mbtmp4.1/3, ML3.5/1, Error ellipse: s-maj=95.7km s-min=34.7km az=138.0*
*WEL **23** 18:47:56.5±0.7, 38.°5S×18.°0W±.°, h33^{km}, M3.7/34, ML3.9/34, MLv3.7/34, Error ellipse: s-maj=0.0km s-min=0.0km az=38.2*
*NEIC **23** 18:48:01.1±0.6, 37.°7S±0.°2×179.°5E±0.°1, h50^{km}±14^{km}, mb4.1/8, Error ellipse: s-maj=25.3km s-min=11.4km az=192.0*

ISC 23 18:47:55.5±2.8, 37.°71S±0.°07×179.°89E±0.°09, h14^{km}±14^{km}, n64, σ0.98/73, mb4.0/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.17**	**264**	P	**Pb**	**18 48 17.5**	**0.0**
WMGZ				S	**Sg**	**18 48 35.2**	**+1.8**
MXZ	**Matakaoa Point**	**1.26**	**276**	P	**Pn**	**18 48 18.6**	**-0.1**
MXZ				S	**Sg**	**18 48 35.8**	**-0.5**
MXZ	**Matakaoa Point**	**1.26**	**276**		**Pn**	**18 48 18.6**	**-0.1**
PUZ	**Puketiti**	**1.34**	**254**	P	**Pn**	**18 48 19.9**	**+0.1**
PUZ				S	**Sg**	**18 48 38.5**	**-0.2**
CNGZ	**Carnagh Statio**	**1.54**	**239**	P	**Pn**	**18 48 23.4**	**+1.0**
TWGZ	**Tauwhareparae**	**1.58**	**252**	P	**Pn**	**18 48 23.9**	**+0.9**
TWGZ				S	**Sg**	**18 48 44.9**	**-1.5**
HAZ	**Te Kaha**	**1.67**	**268**	P	**Pn**	**18 48 24.8**	**+0.5**
HAZ				S	**Sb**	**18 48 46.6**	**-0.2**
RUGZ	**Raukumara Rang**	**1.77**	**261**	P	**Pn**	**18 48 25.7**	**0.0**
RIGZ	**Rimuhau**	**1.95**	**239**	P	**Pn**	**18 48 28.8**	**+0.6**
RIGZ				S	**Sn**	**18 48 53.4**	**+1.0**
MWZ	**Matawai**	**1.97**	**251**	P	**Pn**	**18 48 28.4**	**0.0**
MWZ				S	**Sn**	**18 48 52.5**	**-0.3**
PRGZ	**Paritu Road**	**1.99**	**232**	P	**Pn**	**18 48 29.3**	**+0.6**
MHGZ	**Mahia Peninsul**	**2.12**	**227**	P	**Pn**	**18 48 31.4**	**+0.9**
MHGZ				S	**Sn**	**18 48 58.8**	**+2.1**
KNZ	**Kokohu**	**2.18**	**232**	P	**Pn**	**18 48 31.3**	**0.0**
URZ	**Urewera**	**2.26**	**255**	Pn	**Pn**	**18 48 33.3**	**+0.9**
	16nm,0.3s,baz=66,slow=4.1,SNR=11						
URZ				Sn	**Sn**	**18 49 00.3**	**+0.3**
	27nm,0.3s,baz=135,slow=20,SNR=4.0						
URZ	**Urewera**	**2.26**	**255**	P	**Pn**	**18 48 33.3**	**+0.9**
URZ	**Urewera**	**2.26**	**255**		**Pn**	**18 48 33.2**	**+0.8**
SNGZ	**Shannon Statio**	**2.27**	**241**	P	**Pn**	**18 48 33.2**	**+0.5**
WHRZ	**Whale Island**	**2.31**	**266**	P	**Pn**	**18 48 34.1**	**+1.0**
RTZ	**Ruatahuna**	**2.46**	**248**	P	**Pn**	**18 48 36.2**	**+0.9**
MARZ	**Manawahe**	**2.56**	**263**	P	**Pn**	**18 48 37.5**	**+1.0**
OPRZ	**Ohinepanea**	**2.65**	**266**	P	**Pn**	**18 48 37.8**	**+0.1**
MTHZ	**Maungataniwha**	**2.66**	**244**	P	**Pn**	**18 48 38.5**	**+0.6**
TARZ	**Mount Tarawera**	**2.72**	**258**	P	**Pn**	**18 48 39.4**	**+0.5**
RRRZ	**Republican Roa**	**2.74**	**256**	P	**Pn**	**18 48 39.7**	**+0.7**
ARHZ	**Aropaoanui**	**2.75**	**235**	P	**Pn**	**18 48 43.8**	**+0.6**
OMNZ	**Omania**	**2.81**	**261**	P	**Pn**	**18 48 40.3**	**+0.3**
KARZ	**Kaharoa**	**2.90**	**263**	P	**Pn**	**18 48 41.4**	**+0.2**
MYRZ	**Mayor Island**	**2.93**	**277**	P	**Pn**	**18 48 43.2**	**+1.5**
CKHZ	**Cape Kidnapper**	**2.94**	**228**	P	**Pn**	**18 48 41.6**	**-0.1**
BKZ	**Black Stump Fm**	**3.04**	**240**	P	**Pn**	**18 48 43.5**	**+0.4**
BKZ	**Black Stump Fm**	**3.04**	**240**		**Pn**	**18 48 42.8**	**-0.3**
MCHZ	**McNeill Hill**	**3.04**	**234**	P	**Pn**	**18 48 43.7**	**+0.5**
KAHZ	**Kahuranaki**	**3.14**	**228**	P	**Pn**	**18 48 44.6**	**+0.1**
PXZ	**Pawanui**	**3.31**	**225**	P	**Pn**	**18 48 45.9**	**-0.9**
KRHZ	**Kereru**	**3.36**	**234**	P	**Pn**	**18 48 47.1**	**-0.5**
KUZ	**Kuaotunu**	**3.46**	**285**	P	**Pn**	**18 48 48.7**	**-0.2**
BHHZ	**Black Hill Sta**	**3.48**	**238**	P	**Pn**	**18 48 49.3**	**0.0**
TMVZ	**Te Maari**	**3.57**	**246**	P	**Pn**	**18 48 50.9**	**+0.3**
ETVZ	**East Tongariro**	**3.58**	**245**	P	**Pn**	**18 48 50.8**	**+0.1**
MOVZ	**Moawhango**	**3.66**	**241**	P	**Pn**	**18 48 52.8**	**+1.1**
MKAZ	**Moumakai**	**3.81**	**278**	P	**Pn**	**18 48 54.0**	**+0.3**
GRZ	**Great Barrier**	**3.83**	**291**	P	**Pn**	**18 48 54.1**	**+0.1**
TSZ	**Takapari Road**	**3.86**	**235**	P	**Pn**	**18 48 53.7**	**-0.7**
WIAZ	**Waiheke Island**	**3.90**	**282**	P	**Pn**	**18 48 55.3**	**+0.4**
HIZ	**Hauiti**	**4.05**	**257**	P	**Pn**	**18 48 58.0**	**+1.0**
AWAZ	**Awhitu Peninsu**	**4.23**	**277**	P	**Pn**	**18 49 00.5**	**+1.1**
MRZ	**Mangatainoka R**	**4.46**	**227**	P	**Pn**	**18 49 01.4**	**-1.3**
WCZ	**Waipu Caves**	**4.79**	**290**	P	**Pn**	**18 49 07.8**	**+0.7**
KHEZ	**Kahui Hut**	**4.87**	**249**	P	**Pn**	**18 49 11.5**	**+3.1**
OUZ	**Omahuta**	**5.65**	**294**	P	**Pn**	**18 49 20.0**	**+1.1**
CTZ	**Chatham Island**	**6.58**	**157**	P	**Pn**	**18 49 33.4**	**+1.7**
CTZ				S	Sn	18 50 42.1	-4.3
VNDA	**Vanda**	**40.66**	**186**	P	**P**	**18 55 35.8**	**+1.1**
VNDA				IAmb	IAmb	18 55 42.2	
	comp=Z,4.8nm,1.5s						
AS31	**Alice Springs**	**41.55**	**276**	P	**P**	**18 55 41.2**	**-1.5**
ASAR	**Alice Springs**	**41.55**	**276**	P	**P**	**18 55 42.0**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=124,slow=8.0,SNR=31						
ASAR	**Alice Springs**	**41.55**	**276**	P	**P**	**18 55 41.7**	**-1.0**
WR0	**Warramunga Arr**	**43.03**	**281**	P	**P**	**18 55 54.0**	**-0.7**
WR0				IAmb	IAmb	18 56 06.2	
	comp=Z,3.9nm,1.1s						
WB2	**Warramunga Arr**	**43.19**	**281**	P	**P**	**18 55 55.2**	**-0.8**
WB2				IAmb	IAmb	18 56 11.5	
	comp=Z,6.6nm,1.4s						
WRAB	**Tennant Creek**	**43.19**	**281**	P	**P**	**18 55 55.0**	**-1.1**
WRAB				IAmb	IAmb	18 56 06.3	
	comp=Z,6.4nm,1.3s						
WRA	**Warramunga Arr**	**43.20**	**281**	P	**P**	**18 55 55.3**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=123,slow=8.6,SNR=33						
WRA	**Warramunga Arr**	**43.20**	**281**	P	**P**	**18 55 55.1**	**-1.0**
WB0	**Warramunga Arr**	**43.25**	**281**	P	**P**	**18 55 55.8**	**-0.8**
WB0				IAmb	IAmb	18 55 56.4	
	comp=Z,2.7nm,0.7s						
FITZ	**Fitzroy Crossi**	**51.04**	**277**	P	**P**	**18 56 57.2**	**-0.1**
MBWA	**Marble Bar**	**54.06**	**270**	P	**P**	**18 57 16.9**	**-2.8**
FINES	**FINESS Array B**	**151.18**	**334**	PKPbc	**PKPbc**	**19 07 48.9**	**+1.6**
	comp=Z,1.6nm,0.9s,baz=45,slow=3.1,SNR=2.0						

WEL 23 18:48:19.9±0.9, 38.°5S±6.°×18.°0E±.°, h33^{km}, M3.7/21, ML4.0/9, MLv3.7/21, Error ellipse: s-maj=0.0km s-min=0.0km az=20.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.26**	**263**	S	Sb	18 48 58.4	-0.7
MXZ	**Matakaoa Point**	**1.35**	**274**	P	Pn	18 48 43.2	+0.8
MXZ				S	Sn	18 48 59.0	-0.2
PUZ	**Puketiti**	**1.43**	**254**	S	Sb	18 49 01.2	-0.1
CNGZ	**Carnagh Statio**	**1.63**	**240**	S	Sb	18 49 08.5	-1.0
TWGZ	**Tauwhareparae**	**1.67**	**252**	P	Pn	18 48 43.5	-3.5
TWGZ				S	Sn	18 49 09.0	+1.7
HAZ	**Te Kaha**	**1.76**	**267**	P	Pn	18 48 48.9	+0.9
HAZ				S	Sn	18 49 08.5	-0.9
RIGZ	**Rimuhau**	**2.04**	**239**	S	Sn	18 49 17.1	+0.7
MWZ	**Matawai**	**2.06**	**251**	S	Sn	18 49 16.7	-0.1
PRGZ	**Paritu Road**	**2.08**	**233**	S	Sn	18 49 18.0	+0.8
KNZ	**Kokohu**	**2.27**	**233**	S	Sn	18 49 22.8	+1.0
URZ	**Urewera**	**2.36**	**255**	P	Pn	18 48 56.6	+0.3
URZ				S	Sn	18 49 24.4	+0.4
SNGZ	**Shannon Statio**	**2.37**	**241**	P	Pn	18 48 56.8	+0.4
SNGZ				S	Sn	18 49 24.3	-0.1
WHRZ	**Whale Island**	**2.40**	**265**	S	Sn	18 49 26.1	+0.9
RTZ	**Ruatahuna**	**2.56**	**248**	S	Sn	18 49 30.1	+0.9
OPRZ	**Ohinepanea**	**2.73**	**265**	P	Pn	18 49 01.0	-0.5
MTHZ	**Maungataniwha**	**2.75**	**244**	P	Pn	18 49 02.2	+0.5
MTHZ				S	Sn	18 49 34.2	+0.4
ARHZ	**Aropaoanui**	**2.84**	**235**	S	Sn	18 49 37.4	+1.4
CKHZ	**Cape Kidnapper**	**3.02**	**228**	P	Pn	18 49 05.7	+0.3
CKHZ				S	Sn	18 49 40.5	0.0
BKZ	**Black Stump Fm**	**3.13**	**241**	P	Pn	18 49 07.7	+0.7
BKZ				S	Sn	18 49 43.0	-0.3
MCHZ	**McNeill Hill**	**3.13**	**235**	P	Pn	18 49 08.3	+1.3
MCHZ				S	Sn	18 49 43.6	+0.4
KAHZ	**Kahuranaki**	**3.23**	**228**	S	Sn	18 49 47.8	+2.1
CTZ	**Chatham Island**	**6.57**	**158**	P	Pn	18 49 57.1	+2.9
CTZ				S	Sn	18 51 05.8	-2.2

*BJI **23** 18:57:56.8±0.0, 11.°40S×166.°84E, h220^{km}, mB4.9/44, mb5.2/65*
*IDC **23** 18:57:56.9±1.5, 11.°69S×166.°80E, h215^{km}±13^{km}, mb4.6/28, mb1 4.7/32, mb1mx4.6/41, mbtmp5.1/32, Error ellipse: s-maj=11.2km s-min=8.2km az=86.0*
*NEIC **23** 18:57:57.3±1.4, 11.°68S±0.°08×166.°68E±0.°09, h217^{km}±5^{km}, mb4.9/171, Error ellipse: s-maj=12.8km s-min=11.5km az=73.0*
*GCMT **23** 18:58:00.3±0.3, 11.°74S±0.°02×166.°64E±0.°02, h226^{km}±2^{km}, MW5.0/88, Moment Tensor Solution. s34,c36; s88,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.71±.12;*
M$_{\theta\theta}$0.64±.13; M$_{\phi\phi}$-3.34±.12; M$_{r\theta}$1.85±.11; M$_{\theta\phi}$0.27±.16; M$_{r\phi}$0.05±.12; Best double couple: M$_0$3.57800×10^{16} NP1:ϕ_s23.00000°, δ52.00000°, λ130.00000°. NP2: ϕ_s149.00000°, δ53.00000°, λ51.00000°. Principal axes: T 3.7980, Plg60.0000°, Azm357.0000°; N -0.4340, Plg30.0000°, Azm175.0000°; P -3.3590, Plg1.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 23 18:57:57.4±0.8, 11.°72S±0.°05×166.°77E±0.°05, h222^{km}±7^{km}, n488, σ1.03/467, mb4.9/144, 26C-5D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.73**	**174**	Pn	**Pn**	**18 58 57.0**	**+0.2**
HNR	**Honiara**	**7.08**	**288**	P	**Pn**	**18 59 40.4**	**+1.6**
	5.9nm,0.3s,baz=222,slow=6.0,SNR=20						
HNR	**Honiara**	**7.08**	**288**	Pn	**Pn**	**18 59 37.0**	**-1.8**
DZM	**Mont Dzumac**	**10.30**	**182**	*e*Pn	**Pn**	**19 00 22.8**	**+2.5**
	39nm,0.2s						
DZM				*e*Sn	**S**	**19 02 14.5**	**-1.4**
	5.3nm,0.3s						
DZM				*e*LR	LR	19 02 43.0	
	comp=Z,304nm,26.7s						
DZM	**Mont Dzumac**	**10.30**	**182**	P	**Pn**	**19 00 21.9**	**+1.6**
	1.2nm,0.3s,baz=44,slow=18,SNR=5.0						
DZM				S	**S**	**19 02 17.2**	**+1.3**
	0.9nm,0.3s,baz=130,slow=19,SNR=1.6						
DZM	**Mont Dzumac**	**10.30**	**182**	Pn	**Pn**	**19 00 20.6**	**+0.3**
MSVF	**Nonsavu**	**12.44**	**120**		**P**	**19 00 50.5**	**-0.1**
FUNA	**Funafuti**	**12.64**	**77**	Pn	**P**	**19 00 51.8**	**-1.0**
TARA	**Tarawa**	**14.35**	**26**		**P**	**19 01 12.7**	**+0.9**
RABL	**Rabaul**	**16.27**	**296**	P	**P**	**19 01 32.0**	**-1.0**
RABL				IAmb	IAmb	19 01 44.9	
	comp=Z,47nm,0.6s						
KRVT	**Keravat (AS076**	**16.34**	**296**	P	**Pn**	**19 01 35.4**	**+0.5**
	comp=Z,9.6nm,0.3s,baz=35,slow=4.1,SNR=6.3						
KRVT				S	**S**	**19 04 34.9**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=3.2,slow=18,SNR=1.4						
PMG	**Port Moresby**	**19.41**	**275**	P	**P**	**19 02 07.9**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=96,slow=7.6,SNR=8.7						
PMG	**Port Moresby**	**19.41**	**275**	P	**P**	**19 02 06.8**	**-0.3**
PMG				IAmb	IAmb	19 02 11.1	
	comp=Z,49nm,1.0s						
EIDS	**Eidsvold**	**20.11**	**225**	P	**P**	**19 02 15.4**	**+1.0**
PATS	**Pohnpei**	**20.26**	**335**	P	**P**	**19 02 16.0**	**-0.2**
LHI	**Lord Howe Isla**	**20.95**	**199**	P	**P**	**19 02 24.3**	**+0.9**
CTA	**Charters Tower**	**21.39**	**245**	P	**P**	**19 02 28.8**	**+0.7**
	comp=Z,26nm,0.7s,baz=77,slow=12,SNR=37						
CTA				PcP	**PcP**	**19 06 22.6**	**+0.1**
	comp=Z,3.6nm,0.8s,baz=63,slow=2.3,SNR=2.4						
CTAO	**Charters Tower**	**21.39**	**245**	P	**P**	**19 02 28.3**	**+0.3**
CTAO				IAmb	IAmb	19 02 29.8	
	comp=Z,28nm,0.8s						
MANU	**Manus Island**	**21.51**	**295**	P	**P**	**19 02 28.9**	**-0.3**
MANU				IAmb	IAmb	19 02 29.9	
	comp=Z,31nm,0.6s						
COEN	**Coen**	**23.11**	**262**	P	**P**	**19 02 45.1**	**+1.1**
ARMA	**Armidale**	**23.32**	**215**	P	**P**	**19 02 47.3**	**+1.5**
ARMA				IAmb	IAmb	19 02 49.4	
	comp=Z,47nm,0.8s						
OUZ	**Omahuta**	**24.21**	**166**	P	**P**	**19 02 56.6**	**+2.8**
OUZ				IAmb	IAmb	19 02 57.3	
	comp=Z,15nm,0.6s						
TOZ	**Tahuroa Road**	**27.06**	**165**	P	**P**	**19 03 20.0**	**+0.7**
JAY	**Jayapura**	**27.40**	**287**	P	**P**	**19 03 22.1**	**-0.7**
	comp=Z,13nm,0.6s,baz=185,slow=6.4,SNR=7.5						
JAY	**Jayapura**	**27.40**	**287**	P	**P**	**19 03 21.8**	**-1.0**
	comp=Z,10nm,0.8s						
HIZ	**Hauiti**	**27.64**	**166**	P	**P**	**19 03 27.2**	**+2.7**
HIZ				IAmb	IAmb	19 03 44.3	
	comp=Z,34nm,1.0s						
MXZ	**Matakaoa Point**	**27.74**	**160**	P	**P**	**19 03 26.1**	**+0.7**
MXZ	**Matakaoa Point**	**27.74**	**160**	P	**P**	**19 03 26.8**	**+1.4**
MXZ				IAmb	IAmb	19 03 28.3	
	comp=Z,32nm,1.1s						
HAZ	**Te Kaha**	**27.75**	**161**	P	**P**	**19 03 26.7**	**+1.3**
RUGZ	**Raukumara Rang**	**27.90**	**161**	P	**P**	**19 03 28.2**	**+1.2**
URZ	**Urewera**	**28.00**	**162**	P	**P**	**19 03 27.3**	**-0.4**
	comp=Z,5.0nm,0.4s,baz=22,slow=1.3,SNR=4.2						
URZ				S	**S**	**19 07 54.8**	**-0.5**
	comp=Z,3.5nm,0.6s,baz=34,slow=13,SNR=3.3						
WMGZ	**Waiomatatini S**	**28.01**	**160**	P	**P**	**19 03 30.9**	**+3.1**
RATZ	**Rangitukua**	**28.20**	**165**	P	**P**	**19 03 32.5**	**+2.9**
RTZ	**Ruatahuna**	**28.30**	**163**	P	**P**	**19 03 28.2**	**-2.2**
TWVZ	**Taurewa**	**28.31**	**166**	P	**P**	**19 03 33.3**	**+2.7**
WTVZ	**West Tongariro**	**28.39**	**165**	P	**P**	**19 03 34.7**	**+3.4**
SNGZ	**Shannon Statio**	**28.55**	**163**	P	**P**	**19 03 34.0**	**+1.4**
BKZ	**Black Stump Fm**	**28.67**	**164**	P	**P**	**19 03 34.5**	**+0.8**
NMHZ	**Naumai**	**28.69**	**164**	P	**P**	**19 03 36.1**	**+2.1**
SMPI	**Sarmi**	**29.45**	**287**	P	**P**	**19 03 40.5**	**-0.3**
	comp=Z,41nm,0.8s						
BFZ	**Birch Farm**	**30.04**	**166**	P	**P**	**19 03 46.0**	**+0.3**
TUWZ	**Tuamarina**	**30.26**	**169**	P	**P**	**19 03 47.9**	**+0.3**
SNZO	**South Karori**	**30.29**	**168**	P	**P**	**19 03 49.2**	**+1.3**
THZ	**Tophouse**	**30.41**	**171**	IAmb	IAmb	19 03 53.2	
	comp=Z,17nm,0.7s						
STKA	**Stephens Creek**	**30.66**	**225**	P	**P**	**19 03 51.8**	**+0.5**
	comp=Z,8.1nm,0.7s,baz=46,slow=8.7,SNR=18						
STKA				PcP	**PcP**	**19 06 44.0**	**+0.1**
	comp=Z,13nm,0.7s,baz=72,slow=3.3,SNR=13						
STKA				ScP	**ScP**	**19 10 06.8**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=51,slow=5.2,SNR=4.9						
STKA	**Stephens Creek**	**30.66**	**225**	P	**P**	**19 03 51.6**	**+0.3**
STKA					**PcP**	**19 06 44.0**	**+0.1**
TOO	**Toolangi**	**32.04**	**213**	P	**P**	**19 04 03.7**	**+0.4**
RPZ	**Rata Peaks**	**32.10**	**174**	P	**P**	**19 04 04.1**	**+0.4**
	comp=Z,21nm,0.7s,baz=247,slow=1.0,SNR=13						
RPZ	**Rata Peaks**	**32.10**	**174**	P	**P**	**19 04 04.2**	**+0.5**
RPZ				IAmb	IAmb	19 04 12.2	
	comp=Z,26nm,0.6s						
WB0	**Warramunga Arr**	**32.13**	**251**	P	**P**	**19 04 04.1**	**-0.2**
WB0				IAmb	IAmb	19 04 05.1	
	comp=Z,24nm,0.6s						
WRAB	**Tennant Creek**	**32.19**	**251**	P	**P**	**19 04 04.4**	**-0.5**
WB2	**Warramunga Arr**	**32.20**	**251**	P	**P**	**19 04 04.3**	**-0.6**
WRA	**Warramunga Arr**	**32.21**	**251**	P	**P**	**19 04 04.6**	**-0.4**
	comp=Z,8.1nm,0.5s,baz=85,slow=9.1,SNR=176						
WRA				PcP	**PcP**	**19 06 48.2**	**0.0**
	comp=Z,5.6nm,0.7s,baz=78,slow=3.2,SNR=12						
WRA				S	**S**	**19 08 57.8**	**-3.7**
	comp=Z,2.5nm,0.9s,baz=85,slow=14,SNR=6.1						
WRA				ScP	**ScP**	**19 10 13.1**	**+2.3**
	comp=Z,3.0nm,0.7s,baz=81,slow=3.7,SNR=15						
WRA				PKiKP	**PKiKP**	**19 14 14.8**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=5.1,slow=0.5,SNR=14						
WRA	**Warramunga Arr**	**32.21**	**251**	P	**P**	**19 04 03.8**	**-1.2**
WRA					**PcP**	**19 06 47.9**	**-0.3**
AS31	**Alice Springs**	**33.40**	**245**	P	**P**	**19 04 14.3**	**-1.1**
AS31					**PcP**	**19 06 51.5**	**-0.1**
ASAR	**Alice Springs**	**33.40**	**245**	P	**P**	**19 04 14.8**	**-0.5**
	comp=Z,8.2nm,0.6s,baz=71,slow=10,SNR=112						
ASAR				PcP	**PcP**	**19 06 51.8**	**+0.2**
	comp=Z,3.7nm,0.4s,baz=83,slow=2.3,SNR=13						
ASAR				S	**S**	**19 09 17.1**	**-2.9**
	comp=Z,3.3nm,1.2s,baz=73,slow=16,SNR=6.5						
ASAR				ScP	**ScP**	**19 10 16.9**	**+2.0**
	comp=Z,5.8nm,0.8s,baz=81,slow=3.3,SNR=22						
ASAR				PKiKP	**PKiKP**	**19 14 15.7**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=125,slow=1.6,SNR=5.5						
ASAR	**Alice Springs**	**33.40**	**245**	P	**P**	**19 04 14.1**	**-1.3**
ASAR					**PcP**	**19 06 51.1**	**-0.4**
KNRA	**Kununurra**	**37.10**	**260**	P	**P**	**19 04 47.4**	**+0.5**
KNRA				IAmb	IAmb	19 04 49.7	
	comp=Z,31nm,1.2s						
BNDI	**Bandanaira**	**37.16**	**278**	P	**P**	**19 04 47.4**	**0.0**
	comp=Z,2µmcomp=Z,162nm,1.0s						
NLAI	**Namlea**	**40.18**	**279**	P	**P**	**19 05 13.6**	**+1.1**
	comp=Z,79nm,1.0s						
FITZ	**Fitzroy Crossi**	**40.18**	**256**	PcP	**PcP**	**19 07 12.8**	**+0.7**
	comp=Z,7.7nm,0.6s,baz=116,slow=2.7,SNR=6.3						
FITZ	**Fitzroy Crossi**	**40.18**	**256**	P	**P**	**19 05 12.3**	**-0.2**
FITZ					**PcP**	**19 07 12.7**	**+0.5**
FORT	**Forrest**	**40.49**	**236**	P	**P**	**19 05 14.9**	**0.0**
FORT				IAmb	IAmb	19 05 16.1	
	comp=Z,39nm,0.6s						
TNTI	**Ternate**	**41.06**	**285**	P	**P**	**19 05 20.4**	**+0.7**
	comp=Z,21nm,1.1s						
TNTI	**Ternate**	**41.06**	**285**	P	**P**	**19 05 18.9**	**-0.7**
SANI	**Sanana**	**41.55**	**280**	P	**P**	**19 05 23.5**	**-0.2**
	comp=Z,36nm,0.9s						
SOEI	**Soe**	**41.77**	**268**	P	**P**	**19 05 25.9**	**+0.3**
	comp=Z,23nm,1.1s						
SOEI	**Soe**	**41.77**	**268**	P	**P**	**19 05 25.8**	**+0.2**
BATI	**Baumata**	**42.32**	**268**	P	**P**	**19 05 29.3**	**-0.6**
	comp=Z,38nm,0.8s						
PPT2	**Papeete2**	**42.56**	**103**	*e*LR	LR	19 16 14.6	
	comp=Z,144nm,29.2s						
TBI	**Tubuai**	**43.15**	**112**	*e*LR	LR	19 16 25.5	
	comp=Z,128nm,31.0s						
SGSI	**Sangihe**	**43.77**	**288**	P	**P**	**19 05 42.2**	**+0.7**
	comp=Z,2µmcomp=Z,247nm,0.7s						
KMSI	**Cibinong**	**44.21**	**283**	P	**P**	**19 05 45.7**	**+0.7**
	comp=Z,2µmcomp=Z,108nm,0.6s						
EDFI	**Ende, Flores**	**44.42**	**269**	P	**P**	**19 05 46.7**	**-0.1**
	comp=Z,11nm,0.8s						
LUWI	**Luwuk**	**44.92**	**280**	P	**P**	**19 05 51.8**	**+1.2**
	comp=Z,707nmcomp=Z,52nm,1.3s						
LUWI	**Luwuk**	**44.92**	**280**	P	**P**	**19 05 49.9**	**-0.7**
LUWI				IAmb	IAmb	19 05 52.0	
	comp=Z,48nm,1.0s						
PSA00	**Pilbara Seismi**	**45.86**	**251**	P	**P**	**19 05 58.1**	**+0.2**
PSA00				IAmb	IAmb	19 05 59.3	
	comp=Z,48nm,1.2s						
PSA00	**Pilbara Seismi**	**45.86**	**251**	P	**P**	**19 05 57.5**	**-0.3**
PSA00				IAmb	IAmb	19 05 59.4	
	comp=Z,10nm,0.6s						
MRSI	**Marisa**	**46.14**	**282**	P	P	19 06 11.7	+12
BNSI	**Bone**	**46.72**	**275**	P	**P**	**19 06 05.5**	**+0.9**
	comp=Z,66nm,1.1s						
KAPI	**Kappang**	**46.94**	**274**	P	**P**	**19 06 06.7**	**+0.4**
	comp=Z,3.9nm,0.3s,baz=120,slow=6.0,SNR=8.2						
KAPI	**Kappang**	**46.94**	**274**	P	**P**	**19 06 06.2**	**-0.2**
KAPI				IAmb	IAmb	19 06 07.8	
	comp=Z,28nm,0.8s						
TOLI2	**Tolitoli**	**47.43**	**282**	P	**P**	**19 06 09.0**	**-1.1**
MPSI	**Mapaga**	**48.06**	**281**	P	**P**	**19 06 14.6**	**-0.3**
	comp=Z,574nmcomp=Z,62nm,0.8s						
TWSI	**Taliwang, Sumb**	**49.13**	**269**	P	**P**	**19 06 23.7**	**+0.5**
	comp=Z,24nm,0.7s						
MYLDM	**Lahad Datu**	**50.86**	**287**	IAmb	IAmb	19 06 39.1	
	comp=Z,43nm,1.3s						
SRBI	**Singaraja**	**50.86**	**269**	P	**P**	**19 06 36.3**	**+0.2**
	comp=Z,100nm,0.8s						
BBKI	**Banjar Baru**	**52.05**	**275**	P	**P**	**19 06 46.1**	**+1.2**
	comp=Z,49nm,1.6s						
SPMM	**Sapulut**	**52.62**	**285**	P	**P**	**19 06 50.0**	**+0.8**
KKM	**Kota Kinabalu**	**53.29**	**287**	IAmb	IAmb	19 06 56.0	
	comp=Z,41nm,0.7s						
INU	**Inuyama**	**54.62**	**330**	IAmb	IAmb	19 07 05.2	
	comp=Z,26nm,1.1s						
JGF	**Kuroka**	**54.66**	**331**	IAmb	IAmb	19 07 04.3	
	comp=Z,25nm,0.6s						
MJAR	**Matsushiro Arr**	**55.03**	**332**	P	**P**	**19 07 05.5**	**-0.6**
	comp=Z,24nm,0.7s,baz=167,slow=8.4,SNR=68						
MJAR				PcP	**PcP**	**19 08 05.1**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=148,slow=4.1,SNR=4.1						
MJAR	**Matsushiro Arr**	**55.03**	**332**	P	**P**	**19 07 05.1**	**-1.0**
MAJO	**Matsushiro**	**55.03**	**332**	P	**P**	**19 07 05.6**	**-0.5**
MAJO				IAmb	IAmb	19 07 06.8	
	comp=Z,34nm,0.7s						
MAT	**Matsushiro**	**55.03**	**332**	P	**P**	**19 07 05.8**	**-0.3**
JSU	**Suzuyama**	**55.31

comp=Z,46nm,1.0s
TIY Taiyuan 70.73 317 *e*P **P 19 08 51.0 +1.4**
TIY pmax pmax
comp=Z,59nm,1.0s
XAN Xi'an 71.31 312 P **P 19 08 53.8 +0.7**
XAN pmax pmax
comp=Z,50nm,0.9s
XAN pmax pmax
comp=Z,170nm,6.7s
XAN LR LR
comp=Z,120nm,15.5s
XAN LR LR
comp=Z,150nm,15.1s
XAN LR LR
comp=Z,130nm,14.1s
MA2 Magadan 72.21 352 P **P 19 08 57.5 -0.4**
comp=Z,8.0nm,0.4s,baz=323,slow=23,SNR=1.6
KMI Kunming 72.32 301⇑ *e*P **P 19 09 00.9 +1.3**
KMI pmax pmax
comp=Z,45nm,1.2s
HHC Hu-ho-hao-te 72.99 319 *e*P **P 19 09 04.3 +1.3**
HHC pmax pmax
comp=Z,33nm,1.0s
HHC pmax pmax
comp=Z,110nm,4.9s
CM31 Chiang Mai Arr 73.30 293 IAmb IAmb 19 09 07.4
comp=Z,37nm,0.8s
CMAR Chiang Mai Arr 73.30 293 P **P 19 09 06.3 +1.2**
comp=Z,32nm,0.9s,baz=120,slow=4.6,SNR=218
CMAR Chiang Mai Arr 73.30 293 P **P 19 09 05.7 +0.6**
CHTO Chiang Mai 73.41 294 P **P 19 09 06.1 +0.3**
CHTO IAmb IAmb 19 09 07.7
comp=Z,60nm,1.4s
CD2 Chengdu 73.80 307⇑ *i*P **P 19 09 08.6 +0.7**
CD2 pmax pmax
comp=Z,60nm,0.7s
BTO Baotou 73.85 318 *e*P **P 19 09 09.8 +1.8**
LZH Lanzhou 75.95 312 *e*P **P 19 09 22.0 +1.8**
LZH pP pP 19 10 15.6 +3.5
LZH sP sP 19 10 39.3 +3.9
LZH pmax pmax
comp=Z,28nm,1.5s
LZH pmax pmax
comp=Z,120nm,5.4s
OHAK Old Harbor 76.16 21 IAmb IAmb 19 09 22.0
comp=Z,32nm,1.0s
KDAK Kodiak Island 76.84 21 P **P 19 09 24.5 0.0**
KDAK IAmb IAmb 19 09 29.3
comp=Z,30nm,1.1s
SVW2 Sparrevohn 78.44 18 IAmb IAmb 19 09 36.0
comp=Z,24nm,1.0s
YAK Yakutsk 79.02 343 P **P 19 09 36.5 +0.2**
comp=Z,40nm,0.6s,baz=2.2,slow=0.2,SNR=68
YAK Yakutsk 79.02 343 P **P 19 09 36.2 -0.2**
ULN Ulaanbaatar 79.43 324 P **P 19 09 39.5 +0.3**
BILL Bilibino 79.55 360 P **P 19 09 39.0 -0.1**
TTA Tatalina 79.78 16 P **P 19 09 41.2 +0.6**
TTA IAmb IAmb 19 09 42.5
comp=Z,24nm,1.0s
SONM Songino Array 79.80 323 P **P 19 09 41.6 +0.6**
comp=Z,15nm,0.7s,baz=138,slow=5.8,SNR=47
SONM Songino Array 79.80 323 P **P 19 09 41.7 +0.6**
O22K Cooper Landing 79.83 20 P **P 19 09 41.5 +0.7**
baz=223
GTA Gaotai 80.24 314⇑ P **P 19 09 44.8 +1.1**
GTA pP pP 19 10 39.8 +3.5
GTA sP sP 19 11 02.8 +3.2
GTA S **S 19 19 31.1 +0.7**
GTA pmax pmax
comp=Z,23nm,1.0s
GTA pmax pmax
comp=Z,67nm,6.9s
GTA LR LR
comp=Z,67nm,19.6s
GTA LR LR
comp=Z,56nm,20.4s
GTA LR LR
comp=Z,92nm,16.7s
PMR Palmer 80.84 20 IAmb IAmb 19 09 49.4
comp=Z,23nm,0.8s
CUT Chulitna 81.07 19 P **P 19 09 47.3 0.0**
baz=223
SHL Shillong 81.72 298 IAmb IAmb 19 09 53.1
comp=Z,26nm,0.7s
M24K Tolsona, Glenn 82.20 20 P **P 19 09 54.7 +1.4**
baz=226,SNR=9.8
N25K Chitina, Valde 82.40 21 P **P 19 09 55.2 +0.8**
baz=228,SNR=12
N25K Chitina, Valde 82.40 21 IAmb IAmb 19 09 56.1
comp=Z,38nm,0.9s
MCK McKinley 82.46 18 P **P 19 09 54.7 +0.1**
baz=224
GDXM Geysers 82.51 48 IAmb IAmb 19 10 01.6
comp=Z,12nm,0.7s
MLY Manley 82.88 17 P **P 19 09 57.1 +0.3**
baz=222
O02D Mt. Diablo Mer 83.02 47 P **P 19 09 59.6 +1.5**
baz=248
PAX Paxson 83.03 20 IAmb IAmb 19 09 58.3
comp=Z,20nm,1.2s
NEA2 Nenana 83.05 18 P **P 19 09 57.4 -0.2**
baz=224
K02D Willamette Mer 83.35 44 P **P 19 10 00.7 +1.0**
baz=248
I23K Minto, Yukon-K 83.36 17 P **P 19 09 59.1 0.0**
baz=223
N02D Trinity Center 83.37 46 P **P 19 10 01.3 +1.4**
baz=248
M02C Callahan 83.42 46 P **P 19 10 01.7 +1.6**
baz=248
LSA Lhasa 83.56 302 P **P 19 10 02.3 +0.7**
LSA pmax pmax
comp=Z,69nm,1.1s
MENT Mentasta 83.60 20 IAmb IAmb 19 10 02.3
comp=Z,26nm,0.6s
TCOL CIGO, UAF Yank 83.61 18 P **P 19 10 00.5 +0.1**
baz=225
YBH Yreka Blue Hor 83.65 45 P **P 19 10 02.4 +1.1**
YBH IAmb IAmb 19 10 03.7
comp=Z,13nm,0.9s
ORV Oroville 83.72 48 P **P 19 10 01.9 +0.3**
O03E Paynes Creek 83.77 47 P **P 19 10 02.8 +0.9**
baz=249
L26K Log Cabin Wild 83.79 21 P **P 19 10 02.4 +1.0**
baz=229,SNR=20
IL31 83.83 18 P **P 19 10 01.1 -0.4**
ILAR Eielson Array 83.83 18 P **P 19 10 01.4 -0.2**
comp=Z,44nm,0.7s,baz=237,slow=5.1,SNR=588
ILAR Eielson Array 83.83 18 P **P 19 10 01.9 +0.3**
AFDM Forest Hills D 83.89 48 IAmb IAmb 19 10 04.3
comp=Z,18nm,1.1s
POKR Poker Plat Res 83.91 18 P **P 19 10 01.9 -0.1**
baz=225
POKR Poker Plat Res 83.91 18 P **P 19 10 02.1 +0.1**
L04D Klamath Falls 84.11 45 P **P 19 10 04.8 +1.1**
baz=249
SCRK Sand Creek 84.20 20 P **P 19 10 04.6 +1.0**
baz=228
M04C Macdoel 84.27 45 P **P 19 10 05.8 +1.3**
baz=249
BESE Bessie Mountai 84.42 27 IAmb IAmb 19 10 06.5
comp=Z,22nm,0.9s
WRAK Wrangell Islan 84.43 29 IAmb IAmb 19 10 06.3
comp=Z,27nm,0.7s
HYT Haines Junctio 84.58 24 IAmb IAmb 19 10 07.1
comp=Z,22nm,0.8s
I04A Tendick Farm, 84.61 43 P **P 19 10 06.6 +0.6**
baz=248
J04D Umpqua Nationa 84.61 44 P **P 19 10 07.4 +1.1**
baz=249
COLD Coldfoot 84.67 15 P **P 19 10 07.3 +1.6**
baz=222
ISA Isabella, Lake 84.69 52 P **P 19 10 07.5 +0.8**
baz=252
EDW2 Edwards Air Fo 84.82 53 P **P 19 10 08.4 +1.1**
baz=252,SNR=5.4
MDPB Devils Postpil 84.86 50 IAmb IAmb 19 10 09.6
comp=Z,13nm,0.9s
K27K Chicken 84.88 20 P **P 19 10 08.1 +1.2**
baz=230
PNTR Pine Nut 84.95 49 IAmb IAmb 19 10 10.2
comp=Z,14nm,0.9s
J05D Fort Rock, OR 85.23 44 P **P 19 10 10.8 +1.6**
baz=249
CWC Cottonwood Cre 85.23 51 P **P 19 10 10.4 +1.0**
baz=252
LRMC Laurel Mtn Rad 85.25 52 P **P 19 10 10.4 +0.9**
baz=252
K05A Summer Lake 85.26 45 P **P 19 10 10.3 +0.8**
K05A IAmb IAmb 19 10 11.6
comp=Z,14nm,0.9s
PAHR Pah Rah Range 85.31 48 P **P 19 10 10.2 +0.5**
MOD Modoc Plateau 85.39 46 P **P 19 10 10.6 +0.5**
MONP2 Monument Peak 85.47 55 P **P 19 10 11.4 +0.7**
baz=253
LHV Little Huntoon 85.48 50 IAmb IAmb 19 10 12.8
comp=Z,15nm,1.1s
I05D Terrebonne, OR 85.53 43 P **P 19 10 11.7 +1.1**
baz=249
MPMC Manual Prospec 85.57 52 P **P 19 10 12.1 +1.0**
baz=252,SNR=8.4
PINE Pine Mountain 85.61 44 IAmb IAmb 19 10 13.3
comp=Z,11nm,0.8s
TPFO Pinon Flats 85.65 55 P **P 19 10 12.0 +0.5**
baz=253
NVAR Mina Array Bea 85.69 50 P **P 19 10 12.3 +0.6**
comp=Z,5.4nm,0.8s,baz=232,slow=8.3,SNR=43
NVAR Mina Array Bea 85.69 50 P **P 19 10 11.7 0.0**
NV11 Mina Array Sit 85.80 50 IAmb IAmb 19 10 14.2
comp=Z,14nm,1.1s
TAPN Taplejung 85.80 299 *e*P **P 19 10 12.9 +0.3**
comp=Z,57nm,1.0s
DAWY Dawson 85.82 21 IAmb IAmb 19 10 13.0
comp=Z,15nm,0.8s
TOLK Toolik Lake Re 85.88 15 P **P 19 10 13.0 +1.2**
baz=223
TOLK Toolik Lake Re 85.88 15 IAmb IAmb 19 10 14.1
comp=Z,19nm,0.9s
ODAN Odare 85.95 298 *e*P **P 19 10 13.7 +0.4**
comp=Z,65nm,0.8s
GRAC Grapevine Rang 85.95 51 P **P 19 10 14.2 +1.3**
baz=252
HEC Hector,Ludlow 86.10 53 P **P 19 10 14.1 +0.5**
baz=253
BELC Belle Mtn. Jos 86.13 54 P **P 19 10 14.9 +1.0**
baz=253
FURC Furnace Creek, 86.18 52 P **P 19 10 15.0 +1.2**
baz=253
A21K Barrow 86.43 11 P **P 19 10 15.5 +1.3**
baz=216
B05A Bryant 86.47 39 P **P 19 10 16.2 +1.2**
baz=248
DLBC Dease Lake 86.52 28 IAmb IAmb 19 10 17.0
comp=Z,22nm,1.2s
TUQ Turquoise Moun 86.60 53 P **P 19 10 17.0 +0.9**
baz=253
GMRC Granite Mounta 86.62 54 P **P 19 10 17.0 +0.7**
baz=253,SNR=5.8
RAMN Ramite 86.66 298 *e*P **P 19 10 17.0 +0.3**
comp=Z,28nm,0.7s
WVOR Wild Horse Val 86.73 46 IAmb IAmb 19 10 18.7
comp=Z,15nm,1.1s
TPNV Topopah Spring 86.79 51 P **P 19 10 17.9 +0.8**
baz=253,SNR=5.6
IRM Iron Mountain 86.85 54 P **P 19 10 18.5 +1.2**
baz=254
TIXI Tiksi 86.94 349 P **P 19 10 14.8 -1.9**
TIXI IAmb IAmb 19 10 17.8
comp=Z,29nm,1.2s
J08A Circle Bar Ran 87.15 45 IAmb IAmb 19 10 20.4
comp=Z,18nm,1.1s
E07A Sunnyside 87.29 41 IAmb IAmb 19 10 21.0
comp=Z,16nm,1.0s
HAWA Hanford 87.44 42 IAmb IAmb 19 10 21.8
comp=Z,12nm,0.9s
GUN Gumba 87.52 299 *e*P **P 19 10 21.0 0.0**
comp=Z,44nm,0.8s
PDMCI Parker Dam,Lak 87.69 54 P **P 19 10 22.8 +1.6**
baz=254
R11A Troy Canyon, C 87.70 50 P **P 19 10 22.4 +1.0**
baz=253,SNR=12
PKI Pulchoki 87.84 299 *e*P **P 19 10 22.3 -0.2**
comp=Z,43nm,0.7s
PKIN Phulchoki 87.85 299 *e*P **P 19 10 22.3 -0.1**
comp=Z,37nm,0.6s
KKN Kakani 88.00 299 *e*P **P 19 10 23.1 0.0**
comp=Z,65nm,0.9s
DMN Daman 88.11 299 *e*P **P 19 10 23.8 +0.2**
comp=Z,108nm,0.7s
W13A Hualapai Mount 88.11 54 IAmb IAmb 19 10 25.7
comp=Z,11nm,1.5s
B08A Colville Reser 88.23 40 P **P 19 10 23.5 +0.1**
BMO Blue Mountains 88.42 44 P **P 19 10 24.9 +0.4**
GKN Gorkha 88.61 299 *e*P **P 19 10 25.3 -0.5**
ELK Elko 88.65 48 P **P 19 10 26.4 +0.5**
F10A Beach Ranch, E 88.82 43 IAmb IAmb 19 10 27.4
comp=Z,11nm,0.9s
SPR3 Spring Creek 3 88.83 50 IAmb IAmb 19 10 28.8
comp=Z,12nm,0.8s
MFID Camas Ranch 89.00 45 IAmb IAmb 19 10 29.2
comp=Z,9.2nm,0.9s
PLID Pearl Lake 89.37 44 IAmb IAmb 19 10 30.6
comp=Z,12nm,0.9s
DANN Dangsing 89.44 299 *e*P **P 19 10 29.3 -0.6**
comp=Z,53nm,0.7s
KOLN Koldanda 89.44 298 *e*P **P 19 10 29.1 -0.7**
comp=Z,47nm,0.9s
NEW Newport 89.60 40 P **P 19 10 30.5 +0.7**
baz=252,SNR=6.0
NEW Newport 89.60 40 IAmb IAmb 19 10 31.4
comp=Z,13nm,0.9s
U15A North Rim 89.71 53 IAmb IAmb 19 10 33.5
comp=Z,17nm,0.8s
BELA Belgrano 2 89.75 176 P **P 19 10 29.3 -0.8**
TUC Tucson 89.90 57 P **P 19 10 33.4 +1.7**
baz=256
TUC Tucson 89.90 57 P **P 19 10 32.9 +1.1**
HLID Hailey 90.03 45 P **P 19 10 33.5 +1.4**
baz=254,SNR=16
HLID Hailey 90.03 45 P **P 19 10 32.8 +0.6**
HLID IAmb IAmb 19 10 34.4
comp=Z,9.0nm,0.9s
PYUN Piuthan 90.04 299 *e*P **P 19 10 31.5 -1.1**
comp=Z,54nm,0.9s
DUG Dugway, Tooele 90.28 49 P **P 19 10 34.2 +0.9**
baz=255,SNR=6.0
WMQ Urumqi 90.28 315 *e*P **P 19 10 33.5 +0.3**
WMQ sP sP 19 11 47.0 -3.0
WMQ pmax pmax
comp=Z,20nm,0.9s
WMQ pmax pmax
comp=Z,170nm,5.1s
319A Douglas 90.93 58 IAmb IAmb 19 10 39.2
comp=Z,22nm,1.2s
MSO Missoula 91.24 42 P **P 19 10 38.1 +0.5**
baz=254
SYO Syowa Base 91.44 197⇓ *e*P **P 19 10 36.7 -1.3**
SYO Syowa Base 91.44 197⇓ *e*PcP **PcP 19 10 39.3 +0.5**
DLMT Dillon 91.76 44 IAmb IAmb 19 10 42.1
comp=Z,9.1nm,0.8s
121A Cookes Peak, D 92.42 57 P **P 19 10 45.0 +1.5**
baz=255
BOZ Bozeman (W) 92.48 44 P **P 19 10 44.3 +0.8**
baz=256
PV23 Carpenter Ridg 92.72 51 IAmb IAmb 19 10 46.6
comp=Z,9.0nm,0.7s
ZSN Zaisan 93.13 318 *e*P **P 19 10 45.8 -0.4**
comp=Z,6.5nm,1.3s,baz=318
PDAR Pinedale Array 93.27 47 P **P 19 10 48.1 +0.9**
comp=Z,1.1nm,0.7s,baz=247,slow=3.1,SNR=9.9
PDAR Pinedale Array 93.27 47 P **P 19 10 46.6 -0.6**
O20A White River Ci 93.67 50 P **P 19 10 49.9 +0.8**
baz=258
C36M Paulatuk 93.73 19 P **P 19 10 47.8 -0.5**
baz=247
C36M Paulatuk 93.73 19 P **P 19 10 47.1 -1.2**
C36M IAmb IAmb 19 10 48.5
comp=Z,13nm,0.7s
ANMO Albuquerque 94.00 55 P **P 19 10 51.4 +0.6**
baz=259
S22A 4UR Ranch, Cre 94.26 52 P **P 19 10 52.7 +0.7**
baz=259
ZAA0 Zalesovo Array 94.68 324 P **P 19 10 51.8 -1.3**
ZAA0 IAmb IAmb 19 10 53.2
comp=Z,9.8nm,1.0s
ZALV Zalesovo Beam 94.68 324 P **P 19 10 52.1 -1.0**
comp=Z,6.7nm,0.9s,baz=105,slow=3.4,SNR=23
ZALV Zalesovo Beam 94.68 324 P **P 19 10 51.5 -1.6**
MK31 Makanchi Array 94.69 317 P **P 19 10 53.2 -0.3**
MKAR Makanchi Array 94.69 317 P **P 19 10 53.6 +0.2**
comp=Z,31nm,0.7s,baz=99,slow=5.4,SNR=200
MKAR PP **PP 19 14 42.4 -2.6**
comp=Z,1.2nm,1.0s,baz=98,slow=8.7,SNR=3.5
MKAR PKiKP **PKiKP 19 15 34.4 -0.3**
comp=Z,0.7nm,0.6s,baz=76,slow=1.9,SNR=4.8
MKAR Makanchi Array 94.69 317 P **P 19 10 53.2 -0.2**
MAKZ Makanchi 94.91 317 P **P 19 10 53.9 -0.5**
YKA Yellowknife Ar 95.11 27 P **P 19 10 53.9 -0.9**
comp=Z,6.5nm,0.6s,baz=252,slow=3.9,SNR=70
TXAR Lajitas Array 95.27 61 P **P 19 10 56.2 -0.4**
comp=Z,0.8nm,0.7s,baz=211,slow=4.4,SNR=6.1
SHLS Shalkode 95.96 313 *e*P **P 19 10 57.7 -1.7**
comp=Z,3.0nm,1.0s,baz=313
SNAA Sanae 96.51 183 P **P 19 11 00.1 -1.1**
KPKS Kokpek 96.57 313 *e*P **P 19 11 01.4 -0.7**
comp=Z,2.0nm,0.8s,baz=313
SATY Saty 96.70 312 *e*P **P 19 11 02.0 -0.7**
baz=312
SEM Semipalatinsk 96.72 320 *e*P **P 19 11 00.8 -2.0**
comp=Z,4.8nm,1.7s,baz=320
TDK Taldygorghan 97.03 314 *e*P **P 19 11 03.4 -0.7**
comp=Z,4.9nm,0.9s,baz=314
NRIK Noril'sk 97.10 339 P **P 19 11 02.0 -1.8**
comp=Z,4.8nm,0.7s,baz=90,slow=5.7,SNR=6.8
VNA3 Neumayer Olymp 97.20 181 P **P 19 11 03.0 -1.3**
MDOK Medeo 97.70 312 *e*P **P 19 11 05.3 -2.0**
baz=312
BTLS Baital 100.09 314 *e*P **Pdif 19 11 16.4 -1.3**
baz=314
HAMF Hammerfest 116.83 347 *e*PKPdf **PKPdf 19 16 14.6 -0.2**
YOTC Yotoco, Valle 117.12 92 *e*P **PKPdf 19 16 14.1 -3.0**
ARA0 ARCESS Array S 117.23 346 *e*PKPdf **PKPdf 19 16 15.5 -0.2**
ARCES ARCESS Array B 117.23 346 PKP **PKPdf 19 16 15.5 -0.1**
comp=Z,13nm,0.6s,baz=76,slow=2.0,SNR=89
KLMR Klimovskoe 117.78 334 *e*PKPdf **PKPdf 19 16 15.6 -1.3**
KLMR AMP 19 16 28.1
comp=Z,20nm,1.4s
D56A ZEC Mazanza, M 117.81 43 P **PKPdf 19 16 16.8 -0.6**
baz=283
KTK1 Kautokeino 118.16 346 *e*PKPdf **PKPdf 19 16 16.8 -0.6**
TOLC Tolima 118.23 91 *e*P **PKPdf 19 16 19.2 -0.4**
GUY2C Guyana, Caldas 118.31 90 *e*P **PKPdf 19 16 19.4 -0.5**
E57A Chemin Saint G 118.36 43 P **PKPdf 19 16 17.7 -0.8**
baz=284
TRO Tromso 118.64 348 *e*PKPdf **PKPdf 19 16 17.9 -0.3**
NORC Norcasia 118.85 90 *e*P **PKPdf 19 16 19.4 -1.1**
LPAZ La Paz 118.99 116 PKP **PKiKP 19 16 21.6 +0.2**
comp=Z,4.0nm,0.6s,baz=315,slow=1.8,SNR=18
LPAZ La Paz 118.99 116 *e*P **PKPdf 19 16 20.6 -0.7**
LPAZ La Paz 118.99 116 PKPdf **PKiKP 19 16 21.9 +0.5**
D58A Chemin du LacG 119.04 42 P **PKPdf 19 16 19.0 -0.7**
baz=285
ZARC Zaragoza, Cauc 119.19 88 *e*P **PKPdf 19 16 18.5 -2.5**
BRNJ Basking Ridge 119.23 50 PKPdf **PKPdf 19 16 20.2 0.0**
ROSC El Rosal 119.26 91 PKP **PKPdf 19 16 21.1 -0.5**
comp=Z,7.1nm,0.4s,baz=27,slow=19,SNR=2.4
M61A Granite Spring 119.71 49 P **PKPdf 19 16 20.9 -0.3**
baz=281
CHIC Chingaza 119.80 91 *e*P **PKPdf 19 16 21.1 -1.6**
F60A Warwick 119.95 43 P **PKPdf 19 16 21.1 -0.4**
baz=285
SCHQ Schefferville 120.05 33 PKP **PKPdf 19 16 20.9 -0.5**
comp=Z,3.1nm,0.7s,baz=238,slow=19,SNR=1.7
E60A Ste Agathe de 120.19 43 P **PKPdf 19 16 21.4 -0.5**
baz=286
RUSC La Rusia 120.66 90 *e*P **PKPdf 19 16 23.0 -1.4**
STEI Steigen 120.81 348 *e*PKPdf **PKPdf 19 16 22.3 -0.2**
FAUS Fauske 121.26 348 *e*PKPdf **PKPdf 19 16 23.4 0.0**
D62A Allapoint, All 121.56 42 P **PKPdf 19 16 24.0 -0.6**
baz=288
KBZ Khabaz 122.32 315 PKP **PKPdf 19 16 25.9 -0.2**
comp=Z,3.6nm,0.8s,baz=131,slow=5.9,SNR=5.3
MOR8 Moi Rana 122.46 347 *e*PKPdf **PKPdf 19 16 25.1 -0.7**
FINES FINESS Array B 122.76 339 PKP **PKPdf 19 16 26.1 -0.3**
comp=Z,5.5nm,0.4s,baz=50,slow=1.9,SNR=73
CPUP Villa Florida 122.84 132 PKP **PKPdf 19 16 26.8 -0.9**
comp=Z,3.2nm,0.7s,baz=338,slow=0.9,SNR=6.4
RAYN Ar Rayn 123.14 290 PKPdf **PKiKP 19 16 29.2 +0.6**
SDV Santo Domingo 123.53 87 *e*P **PKPdf 19 16 28.9 -0.7**
NSS Namsos 124.41 347 *e*PKPdf **PKPdf 19 16 29.4 -0.1**
VSU Vasula 124.48 336 *e*P **PKiKP 19 16 30.2 +0.1**
BOSA Boshof 125.31 222 PKP **PKiKP 19 16 32.9 +0.3**
comp=Z,15nm,0.7s,baz=154,slow=1.8,SNR=39
BOSA Boshof 125.31 222 PKPdf **PKiKP 19 16 33.1 +0.2**
TBLU Trondheim 125.90 347 *e*PKPdf **PKPdf 19 16 32.4 0.0**
SAML Samuel 126.26 110 *e*P **PKPdf 19 16 32.8 -1.8**
SAML Samuel 126.26 110 PKPdf **PKPdf 19 16 34.5 -0.1**
IDID Didziasalis 126.49 333 *e*P **PKiKP 19 16 34.7 +0.5**
ISAL Salakas 126.60 333 *e*P **PKiKP 19 16 34.6 +0.1**
IIGN Ignalina 126.69 333 *e*P **PKiKP 19 16 35.2 +0.6**
DOMB Dombas 127.23 347 *e*PKPdf **PKPdf 19 16 35.2 +0.2**
LBTB Lobatse 127.40 226 PKPdf **PKiKP 19 16 37.3 +0.1**
NC303 NORSAR Array S 127.41 345 PKPdf **PKiKP 19 16 36.0 +0.1**
AKN Aaknes 127.54 348 *e*PKPdf **PKPdf 19 16 35.7 +0.1**
PABE Paberze 127.57 334 *e*P **PKiKP 19 16 36.4 +0.1**
NB2 NORSAR Subarra 127.60 345 PKPdf **PKPdf 19 16 35.7 -0.1**
comp=Z,2.2nm,0.6s,baz=31,slow=1.9
NB2 NORSAR Subarra 127.60 345 PKPdf **PKPdf 19 16 35.7 -0.1**
comp=Z,2.2nm,0.6s,baz=31,slow=1.9
NOA NORSAR Array B 127.60 345 PKP **PKPdf 19 16 36.1 +0.3**
comp=Z,3.1nm,0.7s,baz=30,slow=1.9,SNR=13
NC602 NORSAR Array S 127.78 345 *e*PKPdf **PKPdf 19 16 36.3 +0.2**
AKASG Malin Array Be 127.97 327 PKP **PKPdf 19 16 36.5 -0.2**
comp=Z,3.6nm,0.7s,baz=58,slow=2.0,SNR=16
PBUR Paburge 128.06 336 *e*P **PKPdf 19 16 36.9 +0.2**
KMBO Kilima Mbogo 128.25 259 PKP **PKiKP 19 16 40.0 +0.6**
comp=Z,1.4nm,0.6s,baz=32,slow=6.4,SNR=6.9
SUW Suwalki 128.91 333 *e*PKP **PKiKP 19 16 39.1 0.0**
SORM Soroca 129.83 325⇑ P **PKPdf 19 16 40.7 +0.3**
BRTR Keskin Array B 130.15 313 PKP **PKiKP 19 16 41.3 -0.2**
comp=Z,2.3nm,0.5s,baz=139,slow=4.5,SNR=22
TLCR 131.07 321⇑ P **PKPdf 19 16 43.3 +0.5**
BEL Belsk 131.45 332 *e*PKP **PKiKP 19 16 45.2 +1.0**
CFR Carcaliu 131.49 321⇑ P **PKPdf 19 16 43.7 +0.1**
TESR Tescani 131.68 324⇑ P **PKPdf 19 16 43.8 -0.2**
BIZ Vricaz 131.76 324⇑ P **PKiKP 19 16 45.5 +0.3**
MFTR Murfatlar 131.81 320⇑ P **PKPdf 19 16 44.7 +0.5**
TLBR Topalu 131.86 321⇑ P **PKiKP 19 16 46.0 +0.6**
BURAR Bucovina Array 131.88 326⇑ P **PKiKP 19 16 45.9 +0.4**
KWP Kalwaria Pacla 131.98 329 *e*PKP **PKiKP 19 16 46.0 +0.5**
VRI Vrincioaia 131.98 323⇓ P **PKPdf 19 16 43.2 -1.3**
OZUR 132.41 324⇓ P **PKPdf 19 16 41.8 -3.6**
NEHR Nehoiu 132.47 323⇑ P **PKiKP 19 16 47.2 +0.6**
MLR Muntele Rosu 132.65 323⇑ P **PKPdf 19 16 45.2 -0.8**
DOPR Dopca 132.71 324⇑ P **PKiKP 19 16 47.1 0.0**
OJC Ojcow 133.01 331 *e*PKP **PKiKP 19 16 47.8 +0.3**
VOIR 133.20 323⇓ P **PKiKP 19 16 48.5 +0.3**
CJR Cluj-Napoca 133.30 325⇑ P **PKiKP 19 16 48.3 0.0**
NIE Niedzica 133.31 330 *e*PKP **PKiKP 19 16 48.3 +0.1**
ARR Arges 133.49 323⇓ P **PKiKP 19 16 48.6 -0.2**
DRGR 133.74 326⇑ P **PKPdf 19 16 47.9 0.0**
KSP Ksiaz 134.13 334 *e*PKP **PKiKP 19 16 50.6 +0.8**
DEV Deva 134.18 325⇑ P **PKPdf 19 16 48.2 0.0**
MORC Moravsky Berou 134.36 332⇑ P **PKiKP 19 16 50.2 +0.2**
MORC Moravsky Berou 134.36 332 *e*PKP **PKiKP 19 16 50.9 +0.5**
OSTC Ostas 134.38 334 *e*PKPDF **PKPdf 19 16 49.6 +0.7**
CHVC Chvalec 134.43 334 *e*PKPDF **PKiKP 19 16 49.9 -0.5**
DPC Dobruska-Polom 134.49 334 *e*PKPDF **PKiKP 19 16 51.4 +0.8**
UPC Upice 134.50 334 *e*PKPDF **PKiKP 19 16 51.3 +0.7**
GZR Gura Zlata 134.54 324⇑ P **PKPdf 19 16 49.9 +0.4**
SIRR Siria 134.64 326⇑ P **PKiKP 19 16 50.6 -0.4**
JAVC Velka Javorina 134.95 331 *e*PKP **PKiKP 19 16 51.8 +0.2**
BZS Buzias 135.06 325⇑ P **PKPdf 19 16 49.4 -0.9**
BRG Berggiesshubel 135.09 336 *e*PKP **PKiKP 19 16 51.4 -0.3**
comp=Z,32nm,1.9s
PVCC Panska Ves 135.09 335 *e*PKPDF **PKiKP 19 16 52.5 +0.8**
CLL Collm 135.11 337 *i*PKPdf **PKiKP 19 16 52.0 +0.3**
comp=Z,14nm,1.2s
VRAC Vranov 135.13 333 *e*PKP **PKiKP 19 16 51.3 -0.6**
KRUC Moravsky 135.40 332 *e*PKP **PKPdf 19 16 51.2 +0.4**
PRU Pruhonice 135.52 335 *e*PKPDF **PKPdf 19 16 51.6 +0.6**
PBCC Pribram 135.98 335 *e*PKPDF **PKiKP 19 16 53.9 +0.3**
BDFB Brasilia 136.13 128 PKP **PKPdf 19 16 53.6 +0.3**
comp=Z,5.3nm,0.8s,baz=173,slow=1.5,SNR=6.1
CONA Conrad Observa 136.46 332 *e*P **PKPdf 19 16 51.6 -1.4**
comp=Z,4.3nm,0.5s
KHC Kasperske Hory 136.58 334 *e*PKPpre PKPpre 19 16 43.0
KHC *e*PKPDF **PKPdf 19 16 53.7 +0.6**
GERES GERESS Array B 136.74 334 PKhKP PKPpre 19 16 43.9
comp=Z,0.7nm,0.6s,baz=45,slow=2.8,SNR=6.6
GERES PKP **PKPdf 19 16 53.5 0.0**
comp=Z,3.5nm,0.6s,baz=49,slow=4.5,SNR=17
GERES GERESS Array B 136.74 334 PKPdf **PKiKP 19 16 55.2 -0.1**
TSUM Tsumeb 136.80 225 PKPdf **PKPdf 19 16 55.6 +1.1**
MOA Molln 137.25 333 *e*P **PKPdf 19 16 54.3 0.0**
comp=Z,4.3nm,0.5s
LIT Litokhoron 137.68 318 PKPdf **PKPdf 19 16 56.4 +1.0**
SOKA Soboth 137.75 331 *e*P **PKPdf 19 16 56.0 +0.6**

	comp=Z,9.3nm,1.1s							
OBKA	**Obir**	**138.11 331**	*e*P		**PKPdf**	**19 16 56.5**	**+0.4**
	comp=Z,4.9nm,0.9s							
BTNL	**Ternell**	**138.12 342**	PKiKP		**PKiKP**	**19 16 58.3**	**+0.3**
MEM	**Membach**	**138.13 342**	PKiKP		**PKiKP**	**19 16 58.2**	**+0.3**
KBA	**Koelnbreinsper**	**138.24 333**	*i* P		**PKPdf**	**19 16 56.9**	**+0.5**
	comp=Z,6.2nm,0.6s							
MYKA	**Terra Mystica**	**138.44 332**	*e*P		**PKPdf**	**19 16 56.9**	**+0.3**
	comp=Z,3.8nm,0.5s							
BMRD	**Maredsous**	**138.78 342**	PKiKP		**PKiKP**	**19 16 59.6**	**+0.3**
WATA	**Walderalm**	**138.82 334**	*i* P		**PKPdf**	**19 16 53.5**	**-3.9**
	comp=Z,1.3nm,0.5s							
WATA			*e*P		**PKiKP**	**19 16 58.2**	**-1.5**
	comp=Z,4.5nm,0.5s,SNR=4.4							
WTTA	**Wattenberg**	**138.85 334**	*e*P		**PKPdf**	**19 16 53.9**	**-3.6**
	comp=Z,2.0nm,0.6s							
WTTA			*e*P		**PKiKP**	**19 16 58.4**	**-1.4**
	comp=Z,6.7nm,0.4s							
ABTA	**Abfaltersbach**	**138.86 333**	*e*P		**PKPdf**	**19 16 57.6**	**+0.2**
	comp=Z,9.7nm,0.6s							
WLF	**Walferdange**	**138.91 341**	PKiKP		**PKiKP**	**19 17 00.6**	**+1.1**
MOTA	**Moosalm**	**139.01 335**	*e*P		**PKPdf**	**19 16 58.5**	**+0.7**
	comp=Z,5.9nm,0.5s,SNR=4.3							
SQTA	**Sankt Quirin**	**139.06 335**	*e*P		**PKPdf**	**19 16 58.6**	**+0.7**
	comp=Z,5.1nm,0.5s							
FETA	**Feichten**	**139.42 335**	*i* P		**PKPdf**	**19 16 59.8**	**+1.3**
	comp=Z,11nm,0.9s							
SENIN	**Lac Senin/Sane**	**141.33 337**	PKPdf		**PKPdf**	**19 16 57.0**	**-5.1**
OSSC	**Osservatorio P**	**141.89 331**			PKPpre	19 16 57.3		
MSSA	**Maissana**	**142.08 333**			PKPpre	19 16 58.1		
BNI	**Bardonecchia**	**142.66 337**	PKPdf		**PKPdf**	**19 17 01.9**	**-2.5**
SSB	**Saint Sauveur**	**143.26 339**	PKPdf		PKPbc	19 17 04.0	+1.0
VSL	**Villasalto**	**145.83 328**	PKPdf		**PKPbc**	**19 17 11.3**	**+0.4**
KEST	**Kesra**	**148.55 323**	PKPbc		**PKPbc**	**19 17 19.3**	**+0.7**
	comp=Z,35nm,0.7s,baz=117,slow=0.2,SNR=45							
KEST	**Kesra**	**148.55 323**	PKPbc		**PKiKP**	**19 17 19.6**	**-0.3**
PBRG	**Braganca**	**149.49 350**	*e*PKPbc		**PKPbc**	**19 17 20.2**	**-0.4**
PBRG	**Braganca**	**149.49 350**	*e*PKPab		**PKPab**	**19 17 27.4**	**+1.2**
PGAV	**Gavieira, Arco**	**149.56 353**	*e*PKPbc		**PKiKP**	**19 17 21.5**	**-0.3**
POLO	**Lamas de Olo**	**150.07 352**	*e*PKPbc		**PKiKP**	**19 17 23.0**	**+0.1**
POLO	**Lamas de Olo**	**150.07 352**	*e*PKPab		**PKPab**	**19 17 30.1**	**+1.5**
PVRL	**Vila Real**	**150.16 352**	*e*PKPbc		**PKiKP**	**19 17 23.1**	**+0.1**
PVRL	**Vila Real**	**150.16 352**	*e*PKPab		**PKPab**	**19 17 30.4**	**+1.5**
MVO	**Moncorvo**	**150.16 351**	*e*PKPbc		**PKiKP**	**19 17 23.2**	**+0.1**
PVIS	**Viseu**	**150.73 352**	*e*PKPbc		**PKiKP**	**19 17 24.6**	**+0.4**
ESDC	**Sonseca Array**	**150.97 345**	PKPbc		**PKiKP**	**19 17 24.8**	**+0.1**
	comp=Z,12nm,0.8s,baz=11,slow=2.2,SNR=41							
ESDC			PKPab		**PKPab**	**19 17 33.1**	**+0.7**
	comp=Z,11nm,0.6s,baz=10,slow=3.1,SNR=16							
ESDC			PP		**PP**	**19 21 01.7**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=16,slow=5.5,SNR=4.1							
ESDC	**Sonseca Array**	**150.97 345**	PKPbc		**PKiKP**	**19 17 25.0**	**+0.3**
MTE	**Manteigas**	**150.99 351**	*e*PKPbc		**PKiKP**	**19 17 25.3**	**+0.5**
MTE	**Manteigas**	**150.99 351**	PKPbc		**PKiKP**	**19 17 25.3**	**+0.5**
PAB	**San Pablo**	**151.18 346**	PKPbc		**PKiKP**	**19 17 25.6**	**+0.4**
COI	**Coimbra**	**151.30 352**	*e*PKPbc		**PKiKP**	**19 17 25.5**	**+0.2**
COI	**Coimbra**	**151.30 352**	*e*PKPab		**PKPab**	**19 17 35.8**	**+2.2**
PCAS	**Casmilo, Conde**	**151.47 352**	*e*PKPbc		**PKiKP**	**19 17 25.6**	**-0.1**
PCAS	**Casmilo, Conde**	**151.47 352**	*e*PKPab		**PKPab**	**19 17 35.0**	**+0.7**
PCBR	**Castelo Branco**	**151.53 351**	*e*PKPbc		**PKiKP**	**19 17 26.1**	**+0.3**
PCBR	**Castelo Branco**	**151.53 351**	*e*PKPab		**PKPab**	**19 17 35.6**	**+1.0**
PMRV	**Marv??o**	**151.92 350**	*e*PKPbc		**PKiKP**	**19 17 27.2**	**+0.5**
PSBE	**So Bento**	**152.04 353**	*e*PKPbc		**PKiKP**	**19 17 27.3**	**+0.4**
PSBE	**So Bento**	**152.04 353**	*e*PKPab		**PKPab**	**19 17 38.1**	**+1.3**
PMTG	**Montargil**	**152.40 352**	*e*PKPbc		**PKiKP**	**19 17 27.9**	**+0.3**
PMAFR	**Mafra**	**152.65 353**	*e*PKPbc		**PKPab**	**19 17 40.7**	**+1.4**
EVO	**Evora**	**152.89 351**	*e*PKPbc		**PKiKP**	**19 17 29.2**	**+0.5**
EVO	**Evora**	**152.89 351**	*e*PKPab		**PKPab**	**19 17 41.4**	**+1.0**
PBEJ	**Beja**	**153.36 351**	*e*PKPbc		**PKiKP**	**19 17 30.4**	**+0.7**
PBEJ	**Beja**	**153.36 351**	*e*PKPab		**PKPab**	**19 17 44.2**	**+1.8**
PNCL	**Nicolau / Gran**	**153.38 352**	*e*PKPbc		**PKiKP**	**19 17 30.3**	**+0.6**
PNCL	**Nicolau / Gran**	**153.38 352**	*e*PKPab		**PKPab**	**19 17 42.3**	**-0.1**
PCVE	**Castro Verde**	**153.78 351**	*e*PKPab		**PKPab**	**19 17 45.9**	**+1.8**
TORD	**Torodi Ar. Bea**	**165.35 277**	PKP		**PKPdf**	**19 17 36.0**	**-0.2**
	comp=Z,7.0nm,1.0s,baz=11,slow=1.5,SNR=22							
TORD			PKPab		**PKPab**	**19 18 35.1**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=78,slow=5.0,SNR=7.6							
TORD	**Torodi Ar. Bea**	**165.35 277**			**PKPdf**	**19 17 36.4**	**+0.2**
KIC	**Kosan Boka**	**170.07 238**	*e*PKIKP		**PKPdf**	**19 17 38.9**	**-0.6**
	comp=Z,24nm,1.4s							
KIC	**Kosan Boka**	**170.07 238**	*e*P		**PKPab**	**19 18 56.0**	**-0.2**
	comp=Z,31nm,0.8s							
LIC	**Lamto**	**170.23 237**	*e*PKIKP		**PKPdf**	**19 17 38.9**	**-0.7**
	comp=Z,4.0nm,0.4s							
LIC	**Lamto**	**170.23 237**	*e*P		**PKPab**	**19 18 56.8**	**-0.1**
	comp=Z,38nm,0.9s							
DBIC	**Dimbokro**	**170.33 239**	PKP		**PKPdf**	**19 17 39.0**	**-0.7**
	comp=Z,4.5nm,0.9s,baz=203,slow=2.4,SNR=5.7							
DBIC			PKPab		**PKPab**	**19 18 57.4**	**+0.1**
	comp=Z,10nm,0.8s,baz=112,slow=6.5,SNR=12							
TIC	**Toumodi**	**170.46 239**	*e*PKIKP		**PKPdf**	**19 17 39.2**	**-0.6**
TIC	**Toumodi**	**170.46 239**	*e*P		**PKPab**	**19 18 57.7**	**-0.2**

*IDC **23** 19:06:49.6±2.5,5°.55S×151°.40E, h65km±20km, mb3.3/3, mb1 3.5/4, mb1mx3.1/34, mbtmp3.6/4, Error ellipse: s-maj=95.2km s-min=11.9km az=127.0*

ISC 23 19:06:46.4±2.3,5°.8S±0°.2×151°.9E±0°.3,h50km,n6,σ1s0.0/8, mb3.3/3,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.51**	**5**	P	**Pn**	**19 07 10.9**	**-0.2**
	64nm,0.3s,baz=197,slow=19,SNR=87						
KRVT				S	**Sn**	**19 07 30.6**	**+0.9**
	114nm,0.3s,baz=113,slow=23,SNR=17						
PMG	**Port Moresby**	**5.90**	**233**	P	**Pn**	**19 08 12.5**	**+1.2**
	0.5nm,0.3s,baz=87,slow=19,SNR=2.5						
PMG				S	**Sn**	**19 09 16.8**	**-0.8**
	1.5nm,0.3s,baz=336,slow=23,SNR=2.7						
WRA	**Warramunga Arr**	**22.10**	**229**	P	**P**	**19 11 37.0**	**-0.7**
	0.5nm,0.4s,baz=54,slow=10.0,SNR=6.7						
ASAR	**Alice Springs**	**24.80**	**222**	P	**P**	**19 12 04.7**	**+0.7**
	0.4nm,0.4s,baz=53,slow=9.4,SNR=1.6						
FITZ	**Fitzroy Crossi**	**28.39**	**242**	P	**P**	**19 12 35.3**	**-1.0**
	0.8nm,0.3s,baz=49,slow=6.1,SNR=22						
TORD	**Torodi Ar. Bea**	**149.75**	**286**	PKPbc	**PKPbc**	**19 26 31.7**	**-0.2**
	0.2nm,0.3s,baz=80,slow=2.1,SNR=2.2						

*IDC **23** 19:12:04.7±1.5,37°.33S×178°.86E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/43, mbtmp3.8/4, MS3.4/2, Ms1 3.3/2, ms1mx2.8/26, Error ellipse: s-maj=37.0km s-min=28.7km az=137.0*

*WEL **23** 19:12:06.3±0.8, 38°.5±7°.×17°.9E±°, h33km, M4.0/24, ML4.3/24, MLv4.0/24, Error ellipse: s-maj=0.0km s-min=0.0km az=21.8*

*NEIC **23** 19:12:10.3±2.1, 37°.63S±0°.09×178°.9E±0°.1, h35km±2km, mb4.1/7, Error ellipse: s-maj=19.4km s-min=13.6km az=60.0*

ISC 23 19:12:02.5±2.1,37°.71S±0°.06×179°.45E±0°.07,h7km±11km, n104,σ1s11/103,mb4.0/8,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.92**	**279**		**Pg**	**19 12 17.7**	**-2.4**
PUZ	**Puketiti**	**1.01**	**248**	P	**Pb**	**19 12 22.7**	**+0.3**
PUZ				S	**Sg**	**19 12 35.8**	**+0.8**
CNGZ	**Carnagh Statio**	**1.25**	**231**	P	**Pn**	**19 12 28.1**	**+1.6**
TWGZ	**Tauwhareparae**	**1.25**	**247**	P	**Pn**	**19 12 26.8**	**+0.3**
TWGZ				S	**Sg**	**19 12 43.5**	**+0.7**
RUGZ	**Raukumara Rang**	**1.43**	**259**	P	**Pn**	**19 12 28.1**	**-0.9**
TKGZ	**Te Karaka**	**1.46**	**239**	P	**Pn**	**19 12 29.9**	**+0.6**
MWZ	**Matawai**	**1.64**	**247**	P	**Pn**	**19 12 31.6**	**-0.3**
MWZ				S	**Sn**	**19 12 51.5**	**-1.8**
RIGZ	**Rimuhau**	**1.66**	**233**	P	**Pn**	**19 12 33.0**	**+0.9**
PRGZ	**Paritu Road**	**1.73**	**225**	P	**Pb**	**19 12 34.3**	**-0.4**
RAGZ	**Rawiri**	**1.79**	**243**	P	**Pn**	**19 12 34.1**	**+0.2**
MHGZ	**Mahia Peninsul**	**1.89**	**219**	P	**Pb**	**19 12 36.8**	**-0.5**
KNZ	**Kokohu**	**1.92**	**226**	P	**Pn**	**19 12 36.5**	**+0.9**
URZ	**Urewera**	**1.93**	**253**	Pn	**Pn**	**19 12 35.5**	**-0.2**
	34nm,0.3s,baz=109,slow=2.4,SNR=122						
URZ				Sn	**Sn**	**19 12 57.1**	**-3.2**
	51nm,0.3s,baz=282,slow=16,SNR=3.4						
URZ	**Urewera**	**1.93**	**253**	P	**Pn**	**19 12 35.9**	**+0.1**
URZ	**Urewera**	**1.93**	**253**		**Pn**	**19 12 35.9**	**+0.1**
WHRZ	**Whale Island**	**1.96**	**265**	P	**Pn**	**19 12 36.5**	**+0.2**
SNGZ	**Shannon Statio**	**1.98**	**236**	P	**Pn**	**19 12 36.7**	**+0.2**
SNGZ				S	**Sn**	**19 13 00.3**	**-1.3**
RTZ	**Ruatahuna**	**2.15**	**244**	P	**Pn**	**19 12 39.4**	**+0.5**
RTZ				S	**Sn**	**19 13 04.4**	**-1.4**
EDRZ	**Edgecumbe**	**2.18**	**259**	P	**Pn**	**19 12 40.9**	**+1.6**
MARZ	**Manawahe**	**2.21**	**262**	P	**Pn**	**19 12 39.5**	**-0.2**
WHHZ	**Waihua**	**2.21**	**231**	P	**Pn**	**19 12 40.8**	**+1.1**
WHHZ				S	**Sn**	**19 13 05.6**	**-1.8**
RAHZ	**Arahi**	**2.22**	**236**	P	**Pn**	**19 12 40.6**	**+0.8**
OPRZ	**Ohinepanea**	**2.30**	**266**	P	**Pn**	**19 12 40.1**	**-0.8**
MTHZ	**Maungataniwha**	**2.35**	**240**	P	**Pn**	**19 12 42.3**	**+0.6**
MTHZ				S	**Sn**	**19 13 09.8**	**-1.0**
TARZ	**Mount Tarawera**	**2.38**	**256**	P	**Pn**	**19 12 43.3**	**+1.1**
RRRZ	**Republican Roa**	**2.40**	**254**	P	**Pb**	**19 12 44.9**	**-1.2**
LIRZ	**Lichensteins R**	**2.44**	**262**	P	**Pn**	**19 12 44.8**	**+2.0**
ARHZ	**Aropaoanui**	**2.47**	**230**	P	**Pn**	**19 12 44.5**	**+1.2**
NMHZ	**Naumai**	**2.50**	**235**	P	**Pn**	**19 12 44.8**	**+1.1**
PRRZ	**Plateau Road**	**2.54**	**251**	P	**Pn**	**19 12 44.3**	**+0.1**
KARZ	**Kaharoa**	**2.56**	**262**	P	**Pn**	**19 12 44.0**	**-0.4**
MYRZ	**Mayor Island**	**2.59**	**278**	P	**Pn**	**19 12 46.0**	**+1.1**
ALRZ	**Allen Road**	**2.59**	**250**	P	**Pn**	**19 12 46.3**	**+1.4**
CKHZ	**Cape Kidnapper**	**2.69**	**223**	P	**Pn**	**19 12 46.8**	**+0.5**
BKZ	**Black Stump Fm**	**2.74**	**237**	P	**Pn**	**19 12 47.3**	**+0.3**
BKZ	**Black Stump Fm**	**2.74**	**237**		**Pn**	**19 12 47.2**	**+0.3**
MCHZ	**McNeill Hill**	**2.77**	**230**	P	**Pn**	**19 12 47.9**	**+0.5**
KMRZ	**Kaimai**	**2.78**	**266**	P	**Pn**	**19 12 46.9**	**-0.7**
HATZ	**Hinemaiaia**	**2.89**	**245**	P	**Pn**	**19 12 48.8**	**-0.3**
KAHZ	**Kahuranaki**	**2.90**	**223**	P	**Pn**	**19 12 49.5**	**+0.4**
PXZ	**Pawanui**	**3.08**	**220**	P	**Pn**	**19 12 51.5**	**0.0**
KRHZ	**Kereru**	**3.09**	**230**	P	**Pn**	**19 12 51.6**	**-0.2**
RITZ	**Rihia Road**	**3.10**	**245**	P	**Pn**	**19 12 51.9**	**+0.1**
RATZ	**Rangitukua**	**3.12**	**247**	P	**Pn**	**19 12 52.3**	**+0.2**
KUZ	**Kuaotunu**	**3.12**	**287**	P	**Pn**	**19 12 51.1**	**-1.2**
TOZ	**Tahuroa Road**	**3.13**	**268**	P	**Pn**	**19 12 51.6**	**-0.7**
BHHZ	**Black Hill Sta**	**3.19**	**235**	P	**Pn**	**19 12 53.1**	**-0.2**
KATZ	**Kakaramea**	**3.21**	**246**	P	**Pn**	**19 12 53.8**	**+0.2**
TMVZ	**Te Maari**	**3.26**	**243**	P	**Pn**	**19 12 53.9**	**-0.4**
ETVZ	**East Tongariro**	**3.26**	**243**	P	**Pn**	**19 12 54.0**	**-0.3**
KRVZ	**Korowarewa**	**3.30**	**244**	P	**Pn**	**19 12 54.4**	**-0.3**
WTVZ	**West Tongariro**	**3.34**	**244**	P	**Pn**	**19 12 55.6**	**+0.3**
MOVZ	**Moawhango**	**3.36**	**238**	P	**Pn**	**19 12 55.6**	**0.0**
NGZ	**Ngauruhoe**	**3.36**	**243**	P	**Pn**	**19 12 55.3**	**-0.3**
TUVZ	**Tukino**	**3.36**	**241**	P	**Pn**	**19 12 56.0**	**+0.4**
WHVZ	**Whangaehu Hut**	**3.41**	**241**	P	**Pn**	**19 12 56.6**	**+0.2**
FWVZ	**Far West T-bar**	**3.43**	**242**	P	**Pn**	**19 12 55.4**	**-1.2**
WNVZ	**Wahianoa**	**3.43**	**241**	P	**Pn**	**19 12 56.2**	**-0.4**
TWVZ	**Taurewa**	**3.43**	**245**	P	**Pn**	**19 12 56.7**	**+0.2**
MKAZ	**Moumakai**	**3.47**	**279**	P	**Pn**	**19 12 56.0**	**-0.9**
GRZ	**Great Barrier**	**3.51**	**293**	P	**Pn**	**19 12 56.9**	**-0.6**
WIAZ	**Waiheke Island**	**3.56**	**284**	P	**Pn**	**19 12 57.5**	**-0.7**
PKVZ	**Pokaka**	**3.58**	**243**	P	**Pn**	**19 12 58.8**	**+0.2**
TSZ	**Takapari Road**	**3.59**	**228**	P	**Pn**	**19 12 57.5**	**-1.2**
DVHZ	**Dannevirke**	**3.64**	**224**	P	**Pn**	**19 12 58.4**	**-0.9**
HIZ	**Hauiti**	**3.71**	**256**		**Pn**	**19 13 01.2**	**+0.9**
MBAZ	**Motutapu North**	**3.75**	**283**	P	**Pn**	**19 13 00.5**	**-0.3**
BFZ	**Birch Farm**	**3.88**	**219**	Pn	**Pn**	**19 13 02.1**	**-0.4**
AWAZ	**Awhitu Peninsu**	**3.88**	**278**	P	**Pn**	**19 13 03.2**	**+0.6**
PRWZ	**Pori Road**	**3.92**	**222**	P	**Pn**	**19 13 02.9**	**-0.3**
VRZ	**Vera Road**	**3.95**	**248**	P	**Pn**	**19 13 04.1**	**+0.5**
WAZ	**Wanganui**	**4.04**	**238**	P	**Pn**	**19 13 05.9**	**+1.0**
MRZ	**Mangatainoka R**	**4.21**	**224**	P	**Pn**	**19 13 06.2**	**-1.0**
LREZ	**Lake Rotokare**	**4.32**	**245**	P	**Pn**	**19 13 09.0**	**+0.3**
WCZ	**Waipu Caves**	**4.46**	**292**	P	**Pn**	**19 13 11.1**	**+0.6**
NEZ	**North Egmont**	**4.48**	**248**	P	**Pn**	**19 13 12.3**	**+1.4**
PKE	**Pukeiti**	**4.54**	**249**	P	**Pn**	**19 13 12.8**	**+1.1**
OGWZ	**Otaki Gorge**	**4.55**	**226**	P	**Pn**	**19 13 11.0**	**-0.8**
KHEZ	**Kahui Hut**	**4.55**	**248**	P	**Pn**	**19 13 13.0**	**+1.1**
MSWZ	**Moikau Station**	**4.92**	**220**	Pn	**Pn**	**19 13 15.7**	**-1.3**
OUZ	**Omahuta**	**5.33**	**296**	P	**Pn**	**19 13 23.3**	**+0.8**
CTZ	**Chatham Island**	**6.72**	**155**	P	**Pn**	**19 13 43.1**	**+1.4**
CTZ				S	**Sn**	**19 14 53.4**	**-5.1**
RPZ	**Rata Peaks**	**8.75**	**224**	Pn	**Pn**	**19 14 07.5**	**-2.1**
	0.9nm,0.3s,baz=160,slow=20,SNR=2.2						
RPZ				Sn	Sn	19 15 37.2	-11
	1.7nm,0.3s,baz=208,slow=4.7,SNR=11						
DZM	**Mont Dzumac**	**19.20**	**321**	LR	LR	19 21 47.5	
	comp=Z,91nm,18.6s,baz=52,slow=31						
STKA	**Stephens Creek**	**31.47**	**269**	LR	LR	19 31 08.5	
	comp=Z,62nm,18.3s,baz=16,slow=37						
VNDA	**Vanda**	**40.63**	**186**	P	**P**	**19 19 44.4**	**+1.7**
VNDA				IAmb	IAmb	19 19 49.3	
	comp=Z,6.2nm,1.5s						
AS31	**Alice Springs**	**41.20**	**276**	P	**P**	**19 19 47.3**	**-0.8**
ASAR	**Alice Springs**	**41.20**	**276**	P	**P**	**19 19 46.5**	**-1.6**
	comp=Z,0.7nm,0.9s,baz=122,slow=8.1,SNR=2.2						
WB2	**Warramunga Arr**	**42.84**	**281**	P	**P**	**19 20 03.1**	**+1.6**
WB2				IAmb	IAmb	19 20 14.5	
	comp=Z,4.0nm,1.0s						
WRAB	**Tennant Creek**	**42.85**	**282**	P	**P**	**19 20 02.4**	**+0.9**
WRAB				IAmb	IAmb	19 20 20.3	
	comp=Z,4.9nm,1.4s						
WRA	**Warramunga Arr**	**42.85**	**281**	P	**P**	**19 20 00.4**	**-1.2**
	comp=Z,1.3nm,1.0s,baz=121,slow=7.7,SNR=10						
WRA	**Warramunga Arr**	**42.85**	**281**	P	**P**	**19 20 01.9**	**+0.3**
WB0	**Warramunga Arr**	**42.91**	**282**	P	**P**	**19 20 01.8**	**-0.2**
WB0				IAmb	IAmb	19 20 02.0	
	comp=Z,6.7nm,1.4s						
QSPA	**South Pole Qui**	**52.42**	**180**	P	P	19 21 21.0	+5.6
	comp=Z,0.6nm,0.3s,baz=45,slow=3.4,SNR=4.0						
QSPA	**South Pole Qui**	**52.42**	**180**	P	P	19 21 20.1	+4.6
H03S2	**Juan Fernandez**	**78.20**	**124**	T	T	20 50 17.0	
	baz=230,slow=74,SNR=8.5						
H03S1	**Juan Fernandez**	**78.21**	**124**	T	T	20 50 23.9	
	baz=230,slow=74,SNR=12						
H03S3	**Juan Fernandez**	**78.22**	**124**	T	T	20 50 21.2	
	baz=230,slow=74,SNR=13						
H03N3	**Juan Fernandez**	**78.43**	**123**	T	T	20 50 34.5	
	baz=234,slow=72,SNR=121						
H03N2	**Juan Fernandez**	**78.44**	**123**	T	T	20 50 32.7	
	baz=234,slow=72,SNR=87						
H03N1	**Juan Fernandez**	**78.45**	**123**	T	T	20 50 39.1	
	baz=234,slow=72,SNR=118						
CMAR	**Chiang Mai Arr**	**93.87**	**290**	P	**P**	**19 25 22.1**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=149,slow=4.8,SNR=2.4						
ARCES	**ARCESS Array B**	**145.16**	**344**	PKP	**PKPdf**	**19 31 41.1**	**+1.3**
	comp=Z,2.9nm,0.9s,baz=53,slow=3.5,SNR=5.1						
FINES	**FINESS Array B**	**151.02**	**334**	PKPbc	**PKiKP**	**19 31 57.3**	**+1.4**
	comp=Z,1.5nm,0.8s,baz=51,slow=5.5,SNR=4.3						

*IDC **23** 19:15:59.7±3.5,24°.36S×69°.43W, h83km±31km, mb3.4/3, mb1 3.5/4, mb1mx3.3/38, mbtmp3.8/4, Error ellipse: s-maj=44.0km s-min=31.3km az=100.0*

*GUC **23** 19:16:00.2±0.6,24°.33S×69°.52W, h83km±5km, ML3.8*

ISC 23 19:16:00.0±0.8,24°.32S±0°.03×69°.58W±0°.07,h94km±7km, n31,σ0s95/37,mb3.8/3,14C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB14	**IPOC Station P**	**0.81**	**248**	*e*P	**Pn**	**19 16 18.8**	**+0.4**
PB14				*i* S	**Sn**	**19 16 32.7**	**+0.6**
PB14				IAML		19 16 33.5	
	comp=E,2μm,0.3s						
GO02	**Mina Guanaco**	**0.84**	**181**	*e*P	**Pn**	**19 16 18.2**	**-0.4**
GO02				*e*S	**Sn**	**19 16 32.0**	**-0.6**
GO02				IAML		19 16 33.4	
	comp=N,12μm,0.1s						
PB15	**IPOC Station P**	**1.11**	**5**	⇑*i*P	**Pn**	**19 16 22.0**	**+0.4**
PB15				*i* S	**Sn**	**19 16 38.1**	**+0.5**
PB10	**IPOC Station P**	**1.20**	**312**	⇑*i*P	**Pn**	**19 16 23.1**	**+0.7**
PB10				*i* S	**Sn**	**19 16 39.9**	**+0.7**
PB06	**IPOC Station P**	**1.61**	**0**	⇑*i*P	**Pn**	**19 16 27.8**	**+0.3**
PB06				*e*S	**Sn**	**19 16 47.9**	**-0.4**
PB06				IAML		19 16 50.6	
	comp=E,1μm,0.2s						
LVC	**Limon Verde**	**1.81**	**20**	P	**Pn**	**19 16 30.6**	**+0.3**
	comp=E,53nm,0.3s,baz=159,slow=8.9,SNR=503						
LVC				S	**Sn**	**19 16 51.8**	**-1.4**
	comp=E,130nm,0.3s,baz=189,slow=10,SNR=14						
LVC	**Limon Verde**	**1.81**	**20**	*e*P	**Pn**	**19 16 30.8**	**+0.5**
LVC				*i* S	**Sn**	**19 16 53.9**	**+0.7**
AC01	**Pan de Azucar**	**2.04**	**207**	⇑*i*P	**Pn**	**19 16 32.5**	**-0.5**
AC01				*e*S	**Sn**	**19 16 59.1**	**+1.1**
AC01				IAML		19 17 00.7	
	comp=E,797nm,0.2s						
PB04	**IPOC Station P**	**2.05**	**345**	⇑*i*P	**Pn**	**19 16 33.0**	**-0.1**
PB04				IAML		19 17 04.8	
	comp=E,365nm,0.2s						
PB03	**IPOC Station P**	**2.27**	**356**	⇑*i*P	**Pn**	**19 16 36.0**	**-0.1**
PB03				IAML		19 17 09.3	
	comp=E,388nm,0.2s						
PB09	**IPOC Station P**	**2.53**	**7**	*e*P	**Pn**	**19 16 40.1**	**+0.6**
PB09				IAML		19 17 26.0	
	comp=E,228nm,0.7s						
AC02	**Maricunga**	**2.54**	**171**	⇑*i*P	**Pn**	**19 16 41.2**	**+1.3**
AC02				*i* S	**Sn**	**19 17 12.2**	**+1.8**
AC02				IAML		19 17 15.0	
	comp=N,434nm,0.1s						
PB07	**IPOC Station P**	**2.60**	**354**	⇑*i*P	**Pn**	**19 16 40.2**	**-0.2**
PB07				IAML		19 17 28.4	
	comp=E,309nm,0.2s						
PB02	**IPOC Station P**	**3.00**	**354**	⇑*i*P	**Pn**	**19 16 45.3**	**-0.5**
PB02				IAML		19 17 49.2	
	comp=E,472nm,0.2s						
PB01	**IPOC Station P**	**3.26**	**1**	⇑*i*P	**Pn**	**19 16 48.9**	**-0.4**
PB01				IAML		19 17 52.2	
	comp=E,315nm,0.5s						
GO03	**Copiap**	**3.31**	**190**	⇑*i*P	**Pn**	**19 16 48.7**	**-1.2**
GO03				IAML		19 17 49.7	
	comp=E,193nm,0.3s						
PATCX	**Punta Patache**	**3.52**	**351**	⇑*i*P	**Pn**	**19 16 51.5**	**-1.3**
AC04	**Llanos de Chal**	**4.09**	**199**	*e*P	**Pn**	**19 16 57.6**	**-2.8**
PB08	**IPOC Station P**	**4.18**	**5**	⇑*i*P	**Pn**	**19 17 01.0**	**-1.0**
AC05	**El Transito**	**4.54**	**188**	⇑*i*P	**Pn**	**19 17 05.3**	**-1.3**
LPAZ	**La Paz**	**8.11**	**10**	P	**Pn**	**19 17 56.4**	**+0.8**
	comp=E,0.9nm,0.3s,baz=201,slow=7.7,SNR=18						
BDFB	**Brasilia**	**22.00**	**71**	P	**P**	**19 20 46.5**	**-0.3**
	comp=E,1.8nm,0.7s,baz=240,slow=11,SNR=4.7						
SNAA	**Sanae**	**59.84**	**160**	P	**P**	**19 25 55.0**	**-0.2**
	comp=E,0.8nm,1.0s,baz=256,slow=13,SNR=6.0						
TORD	**Torodi Ar. Bea**	**78.89**	**70**	P	**P**	**19 27 53.8**	**+0.4**
	comp=E,0.3nm,0.3s,baz=243,slow=6.8,SNR=3.0						
TORD				pP	**pP**	**19 28 17.5**	**-1.3**
	comp=E,0.9nm,0.6s,baz=254,slow=5.2,SNR=5.1						
ASAR	**Alice Springs**	**127.14**	**207**	PKP	**PKPdf**	**19 34 54.2**	**+0.2**
	comp=E,0.4nm,0.9s,baz=132,slow=1.4,SNR=2.2						
H11S2	**WAKE ISLAND Hy**	**27.57**	**275**	T	T	21 54 57.9	
	baz=108,slow=75,S

comp=E,14089µm,0.4s
PDO Prodromos 0.33 170 P Pg 19 28 24.9 -0.3
TSLK Tsoukalades, L 0.37 255 P Pg 19 28 25.8 0.0
TSLK S Sg **19 28 31.0 0.0**
TSLK AML AML 19 28 38.4
comp=N,8622µm,0.5s
TSLK AML AML 19 28 43.7
comp=E,8519µm,0.5s
TSLK Tsoukalades, L 0.37 255 P Pg 19 28 25.9 0.0
LKD2 Lefkada island 0.38 250 P Pg 19 28 25.8 -0.1
LKD2 S Sg **19 28 31.0 -0.3**
LKD2 Lefkada island 0.38 250 P Pg 19 28 26.0 0.0
baz=253
LKD2 S Sb **19 28 32.6 +0.7**
baz=253
LKD2 Lefkada island 0.38 250 P Pg 19 28 25.9 -0.1
LKD2 S Sb **19 28 32.3 +0.4**
comp=E,5µm,0.4s
AST1 Astakos 0.38 182 P Pg 19 28 25.9 -0.1
AST1 S Sb **19 28 32.6 +0.7**
NYDR Nydri-Lefkada 0.38 237 P Pg 19 28 25.9 -0.2
NYDR S Sb **19 28 32.3 +0.3**
NYDR Nydri-Lefkada 0.38 237 P Pg 19 28 25.8 -0.3
NYDR S Sb **19 28 32.7 +0.7**
comp=E,2µm,0.4s
EVGI Lefkada island 0.46 230 P Pg 19 28 27.4 -0.1
EVGI Lefkada island 0.46 230 P Pg 19 28 27.2 -0.4
EVGI S Sb **19 28 35.4 +1.0**
comp=E,2µm,0.1s
EVR Evrytania 0.55 90 P Pg 19 28 29.0 -0.1
EVR S Sb **19 28 37.6 +0.7**
EVR AML AML 19 28 38.8
comp=E,9207µm,0.4s
EVR AML AML 19 28 39.7
comp=N,10489µm,0.4s
EVR Evrytania 0.55 90 P Pg 19 28 28.4 -0.8
EVR S Sb **19 28 37.4 +0.5**
comp=N,5µm,0.5s
VSK1 VASILIKIADES 0.67 220 P Pg 19 28 30.4 -0.9
ANX Ano Chora 0.71 117 P Pb 19 28 31.4 -0.9
ANX S Sn **19 28 43.1 -1.1**
ANX AML AML 19 28 45.7
comp=N,11557µm,0.4s
ANX AML AML 19 28 47.7
comp=E,9801µm,0.4s
ANX Ano Chora 0.71 117 P Pb 19 28 31.3 -0.9
ANX S Sg **19 28 42.6 +0.8**
comp=E,5µm,0.4s
JAN Janina 0.76 345 P Pb 19 28 33.2 +0.2
JAN S Sb **19 28 42.5 -0.6**
JAN AML AML 19 28 47.2
comp=N,7188µm,0.5s
JAN AML AML 19 28 47.4
comp=E,9512µm,0.4s
JAN Janina 0.76 345 P Pb 19 28 32.6 -0.4
JAN S Sn **19 28 44.8 -0.4**
comp=E,4µm,0.5s
EFP Efpalio 0.80 128 P Pb 19 28 32.7 -0.8
EFP AML AML 19 28 49.4
comp=E,6333µm,0.4s
EFP AML AML 19 28 53.7
comp=N,5929µm,0.9s
EFP Efpalio 0.80 128 P Pb 19 28 33.0 -0.5
EFP S Sn **19 28 45.6 -0.4**
comp=N,3µm,0.6s
MAKR Makrakomi, Fth 0.80 83 P Pb 19 28 33.5 -0.1
MAKR S Sn **19 28 46.0 -0.2**
MAKR AML AML 19 28 47.3
comp=N,3977µm,0.3s
MAKR AML AML 19 28 50.5
comp=E,4458µm,0.4s
MAKR Makrakomi, Fth 0.80 83 P Pb 19 28 33.0 -0.7
MAKR S Sn **19 28 45.6 -0.7**
comp=E,7µm,0.4s
KEF5 Kardakata, Kep 0.81 218 P Pb 19 28 33.1 -0.8
KEF5 S Sn **19 28 46.4 -0.1**
KEF5 Kardakata, Kep 0.81 218 P Pb 19 28 32.9 -0.9
VLS Valsamata 0.85 209 P Pb 19 28 33.5 -0.9
VLS S Sn **19 28 47.4 +0.2**
VLS AML AML 19 28 50.3
comp=E,2734µm,0.3s
VLS AML AML 19 28 58.9
comp=N,3929µm,0.3s
VLS Valsamata 0.85 209 P Pb 19 28 33.5 -0.9
VLS S Sn **19 28 47.3 0.0**
comp=N,2µm,0.2s
KEF4 Livadi, Kephal 0.85 219 P Pb 19 28 33.8 -0.7
KEF4 S Sn **19 28 47.4 +0.1**
KEF4 Livadi, Kephal 0.85 219 P Pb 19 28 33.6 -0.8
KEF4 S Sn **19 28 47.5 +0.1**
ARGA Argostoli. Kep 0.89 214 P Pb 19 28 33.7 -1.4
ARGA S Sn **19 28 48.7 +0.4**
LXRA Lixouri, Kepha 0.89 216 P Pb 19 28 34.5 -0.6
DMLN Damoulianata-K 0.89 220 P Pb 19 28 34.6 -0.6
DMLN Damoulianata-K 0.89 220 P Pb 19 28 34.2 -1.0
DMLN S Sn **19 28 49.0 +0.6**
comp=N,3µm,0.3s
PSDA Pessada-Kefalo 0.90 207 P Pb 19 28 35.2 -0.1
PSDA S Sn **19 28 48.9 +0.3**
PSDA Pessada-Kefalo 0.90 207 P Pb 19 28 34.4 -1.0
PSDA S Sn **19 28 48.8 +0.2**
comp=N,350nm,0.4s
RLS Riolos of Patr 0.91 162 P Pb 19 28 35.2 -0.2
RLS S Sn **19 28 49.8 +1.1**
RLS AML AML 19 28 53.1
comp=E,1656µm,0.5s
RLS AML AML 19 28 57.4
comp=N,1890µm,0.4s
RLS Riolos of Patr 0.91 162 P Pb 19 28 35.0 -0.4
KEF3 Kipouria, Keph 0.93 220 P Pb 19 28 35.5 -0.3
KEF3 Kipouria, Keph 0.93 220 P Pb 19 28 34.4 -1.4
TRIZ Trizonia 0.94 126 P Pg 19 28 35.9 -0.5
TRIZ Trizonia 0.94 126 P Pb 19 28 35.6 -0.3
THL Klokotos Trika 0.95 47 P Pb 19 28 35.9 -0.3
THL S Sn **19 28 49.6 -0.2**
THL AML AML 19 28 54.7
comp=N,2854µm,0.6s
THL AML AML 19 28 56.8
comp=E,3768µm,0.6s
THL Klokotos Trika 0.95 47 P Pb 19 28 35.6 -0.6
THL S Sg **19 28 49.3 0.0**
comp=E,2µm,0.6s
AGG Agios Georgios 0.96 84 P Pb 19 28 36.3 -0.1
AGG S Sn **19 28 50.7 +0.6**
AGG AML AML 19 28 51.9
comp=E,8187µm,0.4s
AGG AML AML 19 28 55.1
comp=N,4835µm,0.5s
AGG Agios Georgios 0.96 84 P Pb 19 28 35.8 -0.5
AGG S Sn **19 28 51.7 +1.6**
comp=N,3µm,0.4s
LAKA Lakka 0.96 135 P Pn 19 28 37.0 +0.1
KALE Kalithea 0.97 123 P Pb 19 28 36.1 -0.3
KALE S Sn **19 28 51.1 +0.9**
KALE AML AML 19 28 59.9
comp=N,3470µm,0.7s
KALE AML AML 19 29 02.5
comp=E,3667µm,0.8s
KALE Kalithea 0.97 123 P Pb 19 28 36.1 -0.3
ALIK Aliki, Aigiali 1.03 130 P Pg 19 28 37.9 -0.2
KPRO Kipourio 1.05 11 P Pn 19 28 38.4 +0.2
KPRO S Sn **19 28 52.6 +0.1**
KPRO AML AML 19 28 56.6
comp=N,6002µm,0.6s
KPRO AML AML 19 29 02.0
comp=E,3628µm,0.6s
KPRO Kipourio 1.05 11 P Pb 19 28 38.1 +0.1
DRO Drossia 1.08 154 P Pb 19 28 38.0 -0.3
DRO AML AML 19 28 58.0
comp=E,4090µm,0.6s
DRO AML AML 19 29 02.2
comp=N,6384µm,0.6s
DRO Drossia 1.08 154 P Pb 19 28 37.8 -0.5
DRO S Sg **19 28 56.0 +2.8**
comp=N,3µm,0.6s
VLMS Volimes, Zakyn 1.10 199 P Pn 19 28 38.7 -0.1
VLMS S Sg **19 28 53.9 0.0**
VLMS AML AML 19 28 59.1
comp=E,3702µm,0.9s
VLMS AML AML 19 29 02.8
comp=N,4137µm,0.6s
VLMS Volimes, Zakyn 1.10 199 P Pb 19 28 38.0 -0.7
DLFA Delphi 1.17 112 P Pb 19 28 40.1 +0.2
DLFA S Sg **19 28 55.9 -0.3**
DLFA AML AML 19 28 59.7
comp=N,2880µm,0.7s
DLFA AML AML 19 29 00.7
comp=E,3730µm,0.9s
KLV Kalavryta, Ach 1.20 137 P Pn 19 28 40.1 -0.1
KLV S Sg **19 28 57.7 +0.6**
KLV AML AML 19 29 10.7
comp=E,1485µm,0.6s
KLV AML AML 19 29 12.2
comp=N,1395µm,0.7s
KLV Kalavryta, Ach 1.20 137 P Pn 19 28 39.8 -0.4
AXAR Agios Charalam 1.22 97 P Pg 19 28 41.3 -0.6
AXAR S Sg **19 28 58.4 +0.7**
AXAR AML AML 19 29 04.0
comp=N,6220µm,0.4s
AXAR AML AML 19 29 04.5
comp=E,6690µm,0.5s
AXAR Agios Charalam 1.22 97 P Pg 19 28 41.2 -0.6
AXAR S Sg **19 28 57.8 0.0**
comp=E,3µm,0.6s
DSF Desfina 1.22 114 P Pn 19 28 40.2 -0.3
DSF Desfina 1.22 114 P Pn 19 28 40.1 -0.3
KASA Kassiopi 1.23 313 P Pn 19 28 40.7 +0.3
KASA AML AML 19 29 01.4
comp=E,4125µm,0.6s
KASA AML AML 19 29 03.3
comp=N,1621µm,0.4s
LRSO Larissa Observ 1.25 53 P Pb 19 28 41.2 0.0
LRSO S Sg **19 28 59.0 +0.4**
LRSO AML AML 19 29 06.1
comp=E,8934µm,0.9s
LRSO AML AML 19 29 06.6
comp=N,10000µm,0.5s
LRSO Larissa Observ 1.25 53 P Pn 19 28 40.9 +0.1
LRSO S Sg **19 29 00.4 +1.8**
comp=N,5µm,0.7s
PENT Pentalofos 1.27 1 P Pg 19 28 42.6 -0.3
PENT S Sg **19 28 59.9 +0.4**
PENT AML AML 19 29 02.5
comp=N,1677µm,0.5s
PENT AML AML 19 29 11.1
comp=E,1524µm,0.6s
PENT Pentalofos 1.27 1 P Pn 19 28 41.6 +0.3
SRN Sarande 1.29 319 P Pg 19 28 43.1 0.0
baz=317
SRN S Sg **19 29 02.6 +2.8**
baz=317
SRN Sarande 1.29 319 P Pg 19 28 42.7 -0.3
SRN S Sg **19 29 02.2 +2.4**
comp=E,538nm,0.6s
KEK Kerkira 1.29 308 P Pb 19 28 41.9 0.0
KEK AML AML 19 29 03.8
comp=N,1839µm,1.0s
KEK AML AML 19 29 05.0
comp=E,2877µm,0.6s
KEK Kerkira 1.29 308 P Pg 19 28 42.9 -0.2
KEK S Sg **19 29 02.6 +2.7**
comp=E,1µm,0.6s
LSK Leskovik 1.29 342 P Pb 19 28 42.4 +0.4
baz=340
LSK S Sg **19 29 02.1 +2.2**
baz=340
LSK Leskovik 1.29 342 P Pn 19 28 41.8 +0.4
GUR Goura 1.38 135 P Pg 19 28 44.2 -0.6
GUR AML AML 19 29 11.4
comp=N,3472µm,0.6s
GUR AML AML 19 29 14.5
comp=E,4123µm,0.5s
GUR Goura 1.38 135 P Pb 19 28 43.2 -0.4
GUR S Sg **19 29 04.8 +1.9**
comp=E,2µm,0.6s
AMT Artemida-Makis 1.47 161 P Pb 19 28 45.2 +0.2
AMT Artemida-Makis 1.47 161 P Pb 19 28 44.7 -0.2
KZN Kozani 1.48 20 P Pb 19 28 45.5 +0.2
KZN AML AML 19 29 08.5
comp=E,2823µm,0.5s
KZN AML AML 19 29 08.7
comp=N,1468µm,0.5s
KZN Kozani 1.48 20 P Pb 19 28 45.4 +0.2
KZN S Sg **19 29 05.1 -0.8**
comp=N,1µm,0.5s
NEST Nestorio 1.49 358 P Pb 19 28 46.3 +0.8
NEST Nestorio 1.49 358 P Pg 19 28 46.5 -0.5
LKR Lokris 1.50 100 P Pb 19 28 45.8 +0.2
LKR AML AML 19 29 11.4
comp=N,1491µm,0.4s
LKR AML AML 19 29 11.9
comp=E,1252µm,0.7s
LKR Lokris 1.50 100 P Pb 19 28 45.6 0.0
THAL Thalero 1.51 125 P Pg 19 28 47.1 -0.1
THAL AML AML 19 29 14.9
comp=E,3435µm,0.7s
THAL AML AML 19 29 25.4
comp=N,2891µm,0.9s
THAL Thalero 1.51 125 P Pg 19 28 47.5 +0.3
ATAL Atalanti 1.51 98 P Pb 19 28 46.0 +0.3
ATAL S Sg **19 29 07.5 +0.5**
ATAL AML AML 19 29 12.1
comp=N,1467µm,1.1s
ATAL AML AML 19 29 17.2
comp=E,882µm,0.6s
ATAL Atalanti 1.51 98 P Pb 19 28 46.2 +0.5
ATAL S Sg **19 29 11.9 +4.9**
comp=E,578nm,0.8s
LIT Litokhoron 1.59 42 P Pb 19 28 46.7 -0.4
LIT S Sg **19 29 09.1 -0.5**
LIT AML AML 19 29 14.2
comp=N,2930µm,0.9s
LIT AML AML 19 29 15.1
comp=E,3090µm,0.9s
LIT Litokhoron 1.59 42 P Pb 19 28 47.0 -0.1
TRIP Tripoli 1.67 146 P Pg 19 28 49.4 -0.8
TRIP S Sg **19 29 11.8 -0.1**
TRIP AML AML 19 29 19.5
comp=E,1183µm,0.8s
TRIP AML AML 19 29 19.5
comp=N,975µm,0.8s
TRIP Tripoli 1.67 146 P Pb 19 28 48.6 +0.2
XOR Xorichti 1.68 74 P Pb 19 28 48.6 -0.1
XOR S Sg **19 29 11.3 -1.1**
XOR AML AML 19 29 16.7
comp=E,1600µm,0.9s
XOR AML AML 19 29 16.7
comp=N,3057µm,0.5s
XOR Xorichti 1.68 74 P Pb 19 28 48.7 +0.1
XOR S Sg **19 29 11.4 -1.0**
comp=N,1µm,0.7s
NEO Neokhori 1.69 76 P Pb 19 28 48.6 -0.2
NEO S Sg **19 29 11.7 -1.0**
NEO AML AML 19 29 15.0
comp=E,1943µm,0.5s
NEO AML AML 19 29 15.6
comp=N,2240µm,0.4s
NEO Neokhori 1.69 76 P Pb 19 28 48.8 0.0
NEO S Sg **19 29 12.1 -0.6**
comp=N,1µm,0.4s
LTK Loutraki 1.71 121 P Pg 19 28 50.4 -0.8
LTK AML AML 19 29 22.0
comp=N,868µm,0.4s
LTK AML AML 19 29 23.7
comp=E,1288µm,0.9s
LTK Loutraki 1.71 121 P Pg 19 28 50.3 -0.8
LOUT Loutraki 1.74 122 P Pg 19 28 50.4 -1.1
LOUT AML AML 19 29 25.7
comp=E,202µm,0.7s
LOUT AML AML 19 29 26.1
comp=N,240µm,0.7s
VIL2 Platees 1.83 112 P Pg 19 28 52.8 -0.7
VIL2 S Sg **19 29 17.7 +0.4**
VIL2 AML AML 19 29 23.8
comp=N,1251µm,0.8s
VIL2 AML AML 19 29 29.5
comp=E,2024µm,0.7s
VLX Vlachokerasia 1.84 147 P Pb 19 28 51.4 -0.1
VLX Vlachokerasia 1.84 147 P Pb 19 28 52.2 +0.7
ITM Ithomi 1.85 159 P Pb 19 28 52.0 +0.4
ITM AML AML 19 29 32.1
comp=N,726µm,0.6s
ITM AML AML 19 29 33.8
comp=E,662µm,1.0s
ITM Ithomi 1.85 159 P Pb 19 28 52.2 +0.6
VLO Vlora 1.98 322 P Pb 19 28 54.0 +0.3
baz=321
VLO S Sg **19 29 23.3 +1.2**
baz=321

EPID Epidavros 2.05 129 P Pb 19 28 55.3 +0.4
PYL PYLOS 2.08 166 P Pb 19 28 55.6 +0.1
PYL PYLOS 2.08 166 P Pb 19 28 55.2 -0.3
AOS Alonnisos 2.17 83 P Pb 19 28 55.4 -1.6
AOS S Sb **19 29 22.2 -1.5**
OHR Ohrid 2.20 354 *i* Pn **Pb 19 28 57.8 +0.3**
KRND KRANIDI 2.23 133 P Pb 19 28 57.2 -0.7
THE Thessaloniki 2.23 39 P Pb 19 28 56.8 -1.2
baz=37
THE S Sb **19 29 26.4 +1.1**
baz=37
PAIG Paliouri 2.23 62 P Pn 19 28 55.3 +1.0
PAIG S Sb **19 29 23.7 -1.5**
PAIG Paliouri 2.23 62 P Pn 19 28 55.3 +1.0
ATH Athens Observa 2.26 114 P Pb 19 28 58.1 -0.3
ATH S Sb **19 29 24.5 -1.5**
ATH AML AML 19 29 38.5
comp=N,826µm,0.7s
ATH AML AML 19 29 39.0
comp=E,1057µm,1.0s
GRG Griva 2.26 26 P Pn 19 28 56.5 +1.7
GRG S Sb **19 29 26.1 -0.2**
comp=E,310nm,1.1s
EREA Eretria 2.27 102 P Pb 19 28 57.5 -1.1
EREA AML AML 19 29 35.6
comp=E,645µm,0.8s
EREA AML AML 19 29 45.5
comp=N,561µm,0.9s
HORT Hortiatis 2.27 42 P Pn 19 28 56.2 +1.3
ATHU Athens Univers 2.31 114 P Pb 19 28 58.3 -1.0
ATHU AML AML 19 29 38.2
comp=N,218µm,0.9s
ATHU AML AML 19 29 40.0
comp=E,224µm,0.7s
PLG Polygyros 2.32 50 P Pn 19 28 56.4 +0.9
PLG S Sb **19 29 26.1 -1.7**
PLG AML AML 19 29 36.8
comp=E,593µm,0.9s
PLG AML AML 19 29 37.3
comp=N,503µm,0.7s
PLG Polygyros 2.32 50 P Pn 19 28 56.5 +0.9
PLG S Sb **19 29 26.0 -1.8**
comp=N,265nm,0.8s
PTL Penteli 2.33 111 P Pb 19 28 58.0 -1.7
PTL S Sb **19 29 27.4 -0.8**
PTL AML AML 19 29 35.4
comp=N,450µm,0.7s
PTL AML AML 19 29 40.1
comp=E,478µm,0.6s
KYMI Kymi, Euboea I 2.36 96 P Pb 19 28 59.5 -0.7
KYMI S Sb **19 29 28.8 -0.1**
VLY Voula,Athens 2.37 116 P Pb 19 28 59.3 -0.9
DION Dionisos Attik 2.37 110 P Pb 19 28 59.1 -1.3
DION AML AML 19 29 40.5
comp=N,1604µm,0.9s
DION AML AML 19 29 44.0
comp=E,1416µm,0.7s
SOH Sokhos 2.57 42 P Pb 19 29 01.9 -1.9
SOH S Sn **19 29 32.3 +2.5**
SOH Sokhos 2.57 42 P Pb 19 29 01.4 -2.4
TIR Tirane 2.60 339 *e*Pn **Pn 19 29 00.8 +1.4**
TIR *e*Sn **Sn 19 29 33.2 +2.6**
TIR Tirane 2.60 339 ⇑P **Pb 19 29 02.1 -2.3**
TIR ⇑S **Sn 19 29 32.9 +2.3**
TIR Tirane 2.60 339 P Pb 19 29 03.7 -0.7
baz=338
TIR S Sb **19 29 36.9 +0.8**
baz=338
KNT Kendrikon 2.63 31 P Pn 19 29 02.2 +2.4
KNT S Sb **19 29 34.6 -2.1**
KNT Kendrikon 2.63 31 P Pn 19 29 01.9 +2.1
OUR Ouranopolis 2.63 57 P Pn 19 29 01.8 +2.0
OUR S Sn **19 29 33.7 +2.4**
VLI Veliai 2.63 146 P Pb 19 29 02.7 -2.1
VAY Valandovo 2.65 25 *e*Pn **Pb 19 29 03.1 -2.0**
VAY *e*Sn **Sb 19 29 38.0 +0.7**
VAY Valandovo 2.65 25 *i* Pn **Pb 19 29 03.0 -2.0**
KARY Karystos 2.76 108 P Pb 19 29 04.4 -2.6
KARY S Sb **19 29 37.6 -2.9**
PHP Peshkopia 2.81 350 P Pb 19 29 05.9 -2.0
baz=349
PHP S Sb **19 29 42.0 0.0**
baz=349
PHP Peshkopia 2.81 350 P Pb 19 29 05.2 -2.7
STIP Stip 2.89 16 *i* Pn **Pb 19 29 08.8 -0.4**
SRS Serrai 2.91 40 *e*Pn **Pb 19 29 08.5 -1.0**
SRS Serrai 2.91 40 P Pn 19 29 05.5 +1.9
SRS S Sn **19 29 41.3 +3.2**
SKO Skopje 3.06 5 *i* Pn **Pb 19 29 12.4 +0.3**
KTHA Kythira Island 3.08 149 P Pb 19 29 09.8 -2.7
NVR Nevrokopi 3.22 40 P Pn 19 29 11.2 +3.3
PUK Puka 3.25 344 P Pn 19 29 11.5 +3.1
baz=343
PUK S Sb **19 29 53.2 -1.6**
baz=343
THAS Thassos island 3.25 58 P Pn 19 29 09.8 +1.5
LIA Limnos Island 3.30 72 P Pn 19 29 10.6 +1.6
LIA S Sn **19 29 50.8 +3.0**
KAVA Kavala 3.34 51 P Pn 19 29 11.6 +2.1
KAVA S Sn **19 29 52.4 +3.6**
TAR1 Taranto 3.36 300 *e*Pn **Pn 19 29 11.3 +1.6**
TIP Timpagrande 3.40 276 ⇑P **Pn 19 29 12.4 +2.0**
TIP ⇓S **Sn 19 29 51.4 +1.2**
BCI Bajram Curri 3.53 347 P Pn 19 29 16.1 +3.9
baz=347
BCI S Sb **19 29 59.8 -3.0**
baz=347
DRME Dracevica, Mon 3.58 336 *e*Pn **Pn 19 29 14.5 +1.7**
PRVS Prvonek 3.66 11 *e*Pn **Pn 19 29 17.6 +3.6**
BOSS Bosilegrad 3.72 16 *e*Pn **Pn 19 29 17.5 +2.7**
SMTH Samothraki Isl 3.75 64 P Pn 19 29 17.5 +2.3
PDG Podgorica 3.78 339 *e*Pn **Pn 19 29 18.7 +3.2**
PDG *e*Sn **Sn 19 30 02.9 +3.3**
PDG Podgorica 3.78 339 ⇑P **Pn 19 29 18.8 +3.3**
PDG ⇑S **Sn 19 30 01.9 +2.3**
PDG Podgorica 3.78 339 *e*Pn **Pn 19 29 17.7 +2.2**
PRK Paraskevi 4.03 84 P Pn 19 29 21.2 +2.1
HCY Herceg Novi 4.04 331 *e*Pn **Pn 19 29 19.5 +0.3**
RDO Rodhopi 4.06 55 P Pn 19 29 21.1 +1.7
IMMV Iera Moni Meta 4.15 146 P Pn 19 29 23.2 +2.6
ALN Alexandroupoli 4.28 61 P Pn 19 29 24.1 +1.7
SELS Selova 4.29 0 *e*Pn **Pn 19 29 25.6 +2.9**
TREB Trebinje 4.33 332 *e*Pn **Pn 19 29 23.2 0.0**
SJES Sjenica 4.42 349 *e*Pn **Pn 19 29 27.1 +2.6**
BRY Bratogost 4.43 335 *e*Pn **Pn 19 29 24.8 +0.2**
ZAPS Zavoj 4.50 14 *e*Pn **Pn 19 29 30.2 +4.7**
IVAS Ivanjica 4.71 352 *e*Pn **Pn 19 29 30.4 +2.0**
STON Ston 4.72 328 *e*Pn **Pn 19 29 28.7 +0.3**
STON *e*Sn **Sn 19 30 22.3 -0.4**
STON Ston 4.72 328 *e*Pn **Pn 19 29 28.1 -0.3**
STON Ston 4.72 328 *e*Pn **Pn 19 29 28.6 +0.2**
STON Sn **Sn 19 30 20.3 -2.3**
IDI Anoyia 4.72 139 Pn **Pn 19 29 30.5 +1.9**
comp=E,0.9nm,0.3s,baz=231,slow=11,SNR=1.5
IDI Sn **Sn 19 30 21.5 -1.4**
baz=294,slow=20,SNR=1.9
IDI Anoyia 4.72 139 P Pn 19 29 30.9 +2.3
BOVS Bovan 4.73 5 *e*Pn **Pn 19 29 31.4 +2.7**
BOVS *e*Sn **Sn 19 30 25.2 +2.1**
ZAGS Zajecar 4.96 9 *e*Pn **Pn 19 29 35.1 +3.3**
GRUS Gruza 4.97 357 *e*Pn **Pn 19 29 35.6 +3.6**
LSTV Lastovo 5.00 322 *e*Pn **Pn 19 29 32.5 +0.2**
LSTV Sn **Sn 19 30 26.6 -3.1**
BBLS Lazići 5.10 346 *e*Pn **Pn 19 29 36.4 +2.5**
BBLS Lazići 5.10 346 *e*Pn **Pn 19 29 35.5 +1.6**
DIVS Divibare 5.24 351 *e*Pn **Pn 19 29 37.3 +1.6**
DIVS *e*Sn **Sn 19 30 36.2 +0.4**
DIVS Divibare 5.24 351 *e*Pn **Pn 19 29 36.6 +0.9**
TRUS Trudelj 5.33 355 *e*Pn **Pn 19 29 40.1 +3.3**
MAKA Makarska 5.34 326 *e*Pn **Pn 19 29 37.5 +0.4**
MAKA Sn **Sn 19 30 35.2 -2.9**
HAPS Han Pijesak,BI 5.41 343 *e*Pn **Pn 19 29 40.8 +2.7**
HAPS *e*Sn **Sn 19 30 39.4 -0.5**
HAPS Han Pijesak,BI 5.41 343 *e*Pn **Pn 19 29 38.4 +0.3**
RICI Ricice 5.46 328 *e*Pn **Pn 19 29 39.3 +0.5**
RICI Sn **Sn 19 30 39.6 -1.6**
VAE Valguarnera 5.47 257 Sn **Sn 19 30 38.7 -2.6**
comp=E,1.0nm,0.3s,baz=49,slow=4.0,SNR=1.7
MDVR Moldovita 5.87 4 ⇓P **Pn 19 29 48.2 +3.8**
HERR Herculane 6.04 9 ⇑P **Pn 19 29 49.5 +2.9**
KIJV Kijevo 6.19 327 *e*Pn **Pn 19 29 49.3 +0.6**
KIJV Sn **Sn 19 30 58.1 -0.9**

ZIRJ	**Zirje**	**6.27**	**321**	*e*Pn		**Pn**	**19 29 50.1**	**+0.4**
ZIRJ				Sn		**Sn**	**19 30 58.2**	**-2.7**
FRGS	**Fruska Gora**	**6.31**	**352**	*e*Pn		**Pn**	**19 29 51.7**	**+1.4**
FRGS	**Fruska Gora**	**6.31**	**352**	*e*Pn		**Pn**	**19 29 51.0**	**+0.7**
MORI	**Morici**	**6.39**	**322**	*e*Pn		**Pn**	**19 29 52.3**	**+0.8**
MORI				Sn		**Sn**	**19 31 01.8**	**-2.2**
BLY	**Banja Luka**	**6.52**	**335**	*e*Pn		**Pn**	**19 29 53.6**	**+0.4**
BLY	**Banja Luka**	**6.52**	**335**	*e*Pn		**Pn**	**19 29 52.8**	**-0.4**
GZR	**Gura Zlata**	**6.59**	**10**	⇓P		**Pn**	**19 29 58.5**	**+4.3**
BZS	**Buzias**	**6.70**	**3**	*e*Pn		**Pn**	**19 29 58.2**	**+2.5**
BZS	**Buzias**	**6.70**	**3**	⇑P		**Pn**	**19 29 59.8**	**+4.1**
DUGI	**Dugi Otok**	**6.80**	**320**	*e*Pn		**Pn**	**19 29 58.1**	**+0.9**
DUGI				Sn		**Sn**	**19 31 11.8**	**-2.4**
ARR	**Arges**	**6.95**	**21**	⇑P		**Pn**	**19 30 02.9**	**+3.7**
VOIR		**7.14**	**23**	⇓P		**Pn**	**19 30 06.4**	**+4.7**
NVLJ	**Novalja**	**7.32**	**322**	*e*Pn		**Pn**	**19 30 04.8**	**+0.7**
NVLJ				Sn		**Sn**	**19 31 22.3**	**-4.4**
ISR	**Istrita**	**7.40**	**31**	⇑P		**Pn**	**19 30 09.1**	**+3.8**
MOSL	**Moslavina**	**7.42**	**336**	*e*Pn		**Pn**	**19 30 05.4**	**-0.3**
MOSL				Sn		**Sn**	**19 31 27.0**	**-2.4**
MLR	**Muntele Rosu**	**7.48**	**27**	Pn		**Pn**	**19 30 10.8**	**+4.2**
	baz=210,slow=6.1							
MLR	**Muntele Rosu**	**7.48**	**27**	⇓P		**Pn**	**19 30 11.0**	**+4.5**
MORH	**Mrgy, Hungar**	**7.51**	**347**	*e*Pn		**Pn**	**19 30 06.1**	**-0.7**
NEHR	**Nehoiu**	**7.56**	**29**	⇑P		**Pn**	**19 30 11.9**	**+4.5**
DOPR	**Dopca**	**7.72**	**23**	⇓P		**Pn**	**19 30 13.3**	**+3.6**
BISRR	**Bisoca**	**7.82**	**30**	⇑P		**Pn**	**19 30 15.0**	**+3.9**
KALN	**Kalnik**	**7.98**	**336**	*e*Pn		**Pn**	**19 30 13.2**	**-0.1**
CRES	**Cresnjev**	**8.07**	**331**	*e*Pn		**Pn**	**19 30 14.2**	**-0.3**
CEY	**Cerknica**	**8.42**	**326**	*e*Pn		**Pn**	**19 30 19.1**	**-0.2**
SOKA	**Soboth**	**8.94**	**332**	*e*Pn		**Pn**	**19 30 27.0**	**+0.5**
	comp=E,0.4nm,0.2s							
SOKA				*e*Sn		**Sn**	**19 32 00.8**	**-6.0**
	comp=E,2.0nm,0.6s							
OBKA	**Obir**	**8.99**	**330**	*e*Pn		**Pn**	**19 30 28.4**	**+1.3**
	comp=E,3.6nm,0.5s							
OBKA				*e*Sn		**Sn**	**19 32 05.5**	**-2.5**
	comp=E,4.0nm,0.5s							
ARSA	**Arzberg**	**9.27**	**336**	*e*Pn		**Pn**	**19 30 32.5**	**+1.5**
	comp=E,1.4nm,0.4s							
BRTR	**Keskin Array B**	**9.74**	**81**	Pn		**Pn**	**19 30 41.5**	**+3.9**
	comp=E,0.2nm,0.3s,baz=282,slow=12,SNR=5.4							
BRTR				Sn		**Sn**	**19 32 26.9**	**+0.2**
	comp=E,0.1nm,0.3s,baz=275,slow=24,SNR=1.7							
KBA	**Koelnbreinsper**	**9.94**	**328**	*e*Pn		**Pn**	**19 30 41.4**	**+1.2**
	comp=E,0.9nm,0.3s							
KBA				*e*Sn		**Sn**	**19 32 29.5**	**-1.8**
	comp=E,0.8nm,0.4s							
ABTA	**Abfaltersbach**	**10.05**	**324**	*e*Pn		**Pn**	**19 30 43.2**	**+1.5**
	comp=E,1.0nm,0.4s							
ABTA				*e*Sn		**Sn**	**19 32 28.5**	**-5.4**
	comp=E,5.1nm,0.6s							
MOA	**Molln**	**10.21**	**333**	*e*Pn		**Pn**	**19 30 46.4**	**+2.5**
	comp=E,0.8nm,0.4s							
VRAC	**Vranov**	**10.88**	**344**	LR		LR	19 36 12.7	
	comp=E,66nm,18.9s,baz=184,slow=44							
MOTA	**Moosalm**	**11.14**	**322**	*e*Pn		**Pn**	**19 30 58.3**	**+1.6**
	comp=E,1.4nm,0.5s							
MOTA				*e*Sn		**Sn**	**19 32 56.1**	**-4.8**
	comp=E,2.9nm,0.7s							
GERES	**GERESS Array B**	**11.26**	**334**	Pn		**Pn**	**19 31 00.0**	**+1.7**
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=4.6							
GERES				Sn		**Sn**	**19 33 00.1**	**-3.6**
	comp=E,0.2nm,0.3s,baz=156,slow=22,SNR=5.3							
GERES				LR		LR	19 35 53.1	
	comp=E,63nm,20.3s,baz=40,slow=40							
DAVOX	**Davos/Dischmat**	**11.38**	**317**	Pn		**Pn**	**19 31 00.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=88,slow=8.0,SNR=2.2							
DAVOX				Sn		**Sn**	**19 33 01.3**	**-5.3**
	comp=E,0.1nm,0.3s,baz=344,slow=23,SNR=1.4							
MMAI	**Mount Meron Ar**	**12.99**	**113**	Pn		**Pn**	**19 31 20.9**	**-1.0**
	comp=E,0.2nm,0.3s,baz=321,slow=11,SNR=1.5							
ESDC	**Sonseca Array**	**19.41**	**280**	P		**P**	**19 32 43.6**	**+0.3**
	comp=E,0.1nm,0.3s,baz=66,slow=13,SNR=1.8							
HFS	**Hagfors**	**21.75**	**350**	P		**P**	**19 33 08.9**	**+0.5**
	comp=E,3.4nm,0.8s,baz=156,slow=11,SNR=2.5							
FINES	**FINESS Array B**	**22.76**	**6**	P		**P**	**19 33 19.9**	**+0.6**
	comp=E,1.5nm,0.9s,baz=174,slow=13,SNR=1.7							
NOA	**NORSAR Array B**	**22.99**	**348**	P		**P**	**19 33 21.9**	**+0.2**
	comp=E,1.3nm,0.9s,baz=157,slow=9.1,SNR=2.9							
EKA	**Eskdalemuir Ar**	**23.10**	**323**	P		**P**	**19 33 22.3**	**-0.5**
	comp=E,0.9nm,0.7s,baz=112,slow=12,SNR=1.4							
KIRV	**Kirov**	**26.78**	**33**	LR		LR	19 46 33.6	
	comp=E,58nm,19.7s,baz=46,slow=41							
ARCES	**ARCESS Array B**	**30.77**	**3**	P		**P**	**19 34 32.0**	**-0.2**
	comp=E,2.4nm,1.0s,baz=190,slow=9.7,SNR=5.3							
TORD	**Torodi Ar. Bea**	**30.90**	**219**	P		**P**	**19 34 34.5**	**+0.7**
	comp=E,0.9nm,0.6s,baz=30,slow=9.6,SNR=7.9							
MKAR	**Makanchi Array**	**44.52**	**59**	P		**P**	**19 36 28.4**	**-0.3**
	comp=E,0.4nm,0.4s,baz=278,slow=7.4,SNR=8.7							
ZALV	**Zalesovo Beam**	**44.85**	**49**	P		**P**	**19 36 31.2**	**+0.1**
	comp=E,5.5nm,0.4s,baz=278,slow=8.2,SNR=18							

*IDC **23** 19:43:42.0±0.8,21°.74N×143°.48E,h0km,mb3.7/9, mb1 3.9/10,mb1mx3.7/35,mbtmp3.7/10,MS2.9/4, Ms1 2.9/4,ms1mx2.5/52, Error ellipse: s-maj=34.9km s-min=21.1km az=96.0*

ISC 23 19:43:47.4±0.1,21°.8N±0°.1×143°.4E±0°.2,h35km,n21, σ1§14/11,mb3.8/9,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**8.24**	**170**	LR	LR	19 48 23.4	
	comp=Z,50nm,18.5s,baz=13,slow=34						
JHJ	**Hachijo jima 2**	**11.77**	**345**	LR	LR	19 50 39.9	
	comp=Z,54nm,18.4s,baz=66,slow=36						
MJAR	**Matsushiro Arr**	**15.41**	**344**	Pn	**Pn**	**19 47 20.8**	**-1.4**
	baz=160,slow=11,SNR=1.6						
MJAR				LR	LR	19 52 31.6	
	comp=Z,34nm,19.7s,baz=175,slow=34						
KSRS	**Korea Array**	**20.60**	**323**	P	Pn	19 48 27.2	+1.4
	1.7nm,0.7s,baz=150,slow=8.8,SNR=8.9						
H11N1	**WAKE ISLAND Hy**	**22.05**	**91**	T	T	20 11 17.7	
	baz=279,slow=75,SNR=7.8						
H11N2	**WAKE ISLAND Hy**	**22.05**	**91**	T	T	20 11 17.5	
	baz=279,slow=75,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**22.06**	**91**	T	T	20 11 21.8	
	baz=279,slow=75,SNR=7.0						
H11S3	**WAKE ISLAND Hy**	**22.09**	**94**	T	T	20 11 20.3	
	baz=283,slow=74,SNR=35						
H11S1	**WAKE ISLAND Hy**	**22.10**	**94**	T	T	20 11 17.0	
	baz=283,slow=74,SNR=36						
H11S2	**WAKE ISLAND Hy**	**22.10**	**94**	T	T	20 11 21.7	
	baz=283,slow=74,SNR=24						
WRA	**Warramunga Arr**	**42.38**	**193**	P	**P**	**19 51 37.5**	**-1.1**
	0.6nm,0.8s,baz=13,slow=9.5,SNR=5.6						
ASAR	**Alice Springs**	**46.09**	**192**	P	**P**	**19 52 08.2**	**0.0**
	0.5nm,0.7s,baz=15,slow=7.7,SNR=7.6						
ZALV	**Zalesovo Beam**	**54.30**	**322**	P	**P**	**19 53 10.4**	**+0.4**
	0.4nm,0.4s,baz=93,slow=7.2,SNR=1.3						
MKAR	**Makanchi Array**	**54.81**	**313**	P	**P**	**19 53 13.0**	**-0.9**
	0.7nm,0.8s,baz=90,slow=9.0,SNR=2.4						
AAK	**Ala-Archa**	**60.30**	**308**	LR	LR	20 19 59.8	
	comp=Z,26nm,21.1s,baz=204,slow=36						
ILAR	**Eielson Array**	**61.89**	**27**	P	**P**	**19 54 01.8**	**-1.3**
	0.8nm,0.9s,baz=264,slow=5.4,SNR=6.8						
YKA	**Yellowknife Ar**	**76.30**	**28**	P	**P**	**19 55 32.6**	**+0.3**
	1.1nm,0.7s,baz=297,slow=4.8,SNR=3.1						
NVAR	**Mina Array Bea**	**82.94**	**52**	P	**P**	**19 56 10.0**	**+0.8**
	0.8nm,0.6s,baz=279,slow=6.0,SNR=7.1						
FINES	**FINESS Array B**	**83.22**	**335**	P	**P**	**19 56 11.0**	**+1.1**
	0.6nm,0.8s,baz=66,slow=5.8,SNR=1.0						
AKASG	**Malin Array Be**	**87.58**	**325**	P	**P**	**19 56 33.4**	**+1.6**
	0.1nm,0.3s,baz=58,slow=5.2,SNR=1.0						
LPAZ	**La Paz**	**149.72**	**85**	PKPbc	**PKPbc**	**20 03 34.5**	**-0.6**
	1.6nm,0.8s,baz=348,slow=4.1,SNR=5.4						

*REY **23** 20:04:36.7,64°.68N×17°.44W,h9km*
*NEIC **23** 20:04:37.5±1.2,64°.7N±0°.1×17°.8W±0°.2,h8km±5km, mb4.1/4,Error ellipse: s-maj=15.2km s-min=10.8km az=191.0*
*IDC **23** 20:04:37.7±1.3,64°.49N×17°.73W,h0km,mb3.5/7, mb1 3.8/8,mb1mx3.5/52,mbtmp3.6/8,ML3.9/1,MS3.2/1, Ms1 3.2/1,ms1mx2.4/45,Error ellipse: s-maj=45.6km s-min=21.8km az=51.0*

ISC 23 20:04:37.4±0.5,64°.68N±0°.02×17°.49W±0°.03,h10km,n71, σ2§04/78,mb3.6/11,Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVON	**Vonarskard**	**0.11**	**265**	P	**Pg**	**20 04 39.6**	**-0.7**
	baz=268						
IDYN	**Dyngjuhals**	**0.12**	**27**	P	**Pg**	**20 04 39.5**	**-0.9**
	baz=16						
IDYN				S	**Sg**	**20 04 42.2**	**-0.3**
	baz=16						
IURH	**Urdarhals**	**0.20**	**47**	P	**Pg**	**20 04 40.7**	**-0.9**
	baz=41						
IHAM	**Hamarinn**	**0.25**	**215**	P	**Pg**	**20 04 41.6**	**-0.9**
	baz=220						
IHAM				S	**Sg**	**20 04 45.9**	**0.0**
	baz=220						
IGRF	**Grimsfjall**	**0.29**	**161**	P	**Pg**	**20 04 42.3**	**-1.1**
	baz=164						
IKVE	**Kverkfjoll**	**0.35**	**91**	P	**Pg**	**20 04 43.2**	**-1.2**
	baz=90						
IKVE				S	**Sg**	**20 04 47.9**	**-1.2**
	baz=90						
IHUS	**Husbondi**	**0.40**	**190**	P	**Pb**	**20 04 44.2**	**-2.3**
	baz=194						
IHUS				S	**Sb**	**20 04 50.3**	**-2.4**
	baz=194						
ISKR	**Skrokkalda**	**0.41**	**252**	P	**Pb**	**20 04 44.5**	**-2.1**
	baz=254						
IVOT	**Vottur**	**0.44**	**162**	P	**Pg**	**20 04 44.5**	**-1.4**
	baz=164						
IKRE	**Kreppuhraun**	**0.49**	**78**	P	**Pg**	**20 04 45.1**	**-1.8**
	baz=76						
IKRE				S	**Sg**	**20 04 52.2**	**-1.1**
	baz=76						
IJOK	**Jokulheimar**	**0.49**	**221**	P	**Pb**	**20 04 45.8**	**-2.2**
	baz=223						
IASK	**Askja**	**0.52**	**44**	P	**Pg**	**20 04 46.0**	**-1.4**
	baz=42						
IMKO	**Mokollar**	**0.57**	**59**	P	**Pg**	**20 04 46.9**	**-1.7**
	baz=57						
IMKO				S	**Sg**	**20 04 55.1**	**-1.0**
	baz=57						
IIEY	**Innrieyrar**	**0.65**	**205**	P	**Pb**	**20 04 48.5**	**-2.3**
	baz=207						
ISVA	**Svartarkot**	**0.66**	**9**	P	**Pg**	**20 04 48.6**	**-1.6**
	baz=6.7						
ISVA				S	**Sb**	**20 04 58.4**	**-1.9**
	baz=6.7						
IKSK	**Karasker**	**0.69**	**139**	P	**Pg**	**20 04 48.1**	**-2.5**
	baz=140						
IKAL	**Kalfafell**	**0.74**	**187**	P	**Pg**	**20 04 50.0**	**-1.6**
	baz=188						
IVSH	**V-Sauoahnukur**	**0.77**	**80**	P	**Pg**	**20 04 49.7**	**-2.5**
	baz=79						
IVAT	**Vatnsfell**	**0.80**	**232**	P	**Pb**	**20 04 51.2**	**-2.0**
	baz=233						
IADA	**Aoalbol**	**0.89**	**67**	P	**Pg**	**20 04 51.7**	**-2.7**
	baz=66						
IADA				S	**Sg**	**20 05 04.0**	**-1.9**
	baz=66						
IFAG	**Fagurholsmyri**	**0.89**	**155**	P	**Pg**	**20 04 52.1**	**-2.4**
	baz=157						
IHVE	**Hveravellir**	**0.91**	**283**	P	**Pb**	**20 04 52.9**	**-2.4**
	baz=283						
IMEL	**Melhnausar**	**0.96**	**21**	P	**Pg**	**20 04 53.4**	**-2.4**
	baz=20						
IREN	**Reynihlio**	**1.00**	**14**	P	**Pg**	**20 04 54.2**	**-2.3**
	baz=13						
IKVO	**Krokottuvotn**	**1.07**	**14**	P	**Pg**	**20 04 55.2**	**-2.6**
	baz=12						
ISNB	**Snabyli**	**1.07**	**208**	P	**Pg**	**20 04 55.6**	**-2.4**
	baz=209						
IGRS	**Grimsstaoir**	**1.12**	**30**	P	**Pb**	**20 04 56.2**	**-2.6**
	baz=29						
IFED	**Fedgar**	**1.16**	**236**	P	**Pn**	**20 04 57.7**	**-2.0**
	baz=237						
IRJU	**Rjupnafell**	**1.19**	**206**	P	**Pb**	**20 04 57.7**	**-2.3**
	baz=207						
IMJO	**Mjoaskard**	**1.21**	**233**	P	**Pg**	**20 04 58.5**	**-2.1**
	baz=234						
IGHA	**Grjothals**	**1.22**	**16**	P	**Pn**	**20 04 57.9**	**-2.6**
	baz=15						
IGRA	**Granastoir**	**1.24**	**358**	P	**Pn**	**20 04 58.4**	**-2.3**
	baz=357						
IGYG	**Gygjarholskot**	**1.25**	**252**	P	**Pn**	**20 04 58.5**	**-2.3**
	baz=253						
IHAU	**Haukadalur**	**1.29**	**237**	P	**Pb**	**20 04 59.5**	**-2.2**
	baz=238						
IDIM	**Dimmadalss**	**1.30**	**10**	P	**Pn**	**20 04 59.4**	**-2.3**
	baz=9.2						
IHVO	**Lagu-Hvolar**	**1.31**	**208**	P	**Pn**	**20 04 59.8**	**-1.9**
	baz=209						
IHLA	**Hella**	**1.32**	**344**	P	**Pn**	**20 04 59.9**	**-1.9**
	baz=343						
IHED	**Heoinshofoi**	**1.41**	**3**	P	**Pn**	**20 05 00.8**	**-2.2**
	baz=2.2						
IALF	**Alftagrof**	**1.41**	**213**	P	**Pn**	**20 05 01.2**	**-1.8**
	baz=214						
IESK	**Eystri-Skogar**	**1.45**	**217**	P	**Pn**	**20 05 01.8**	**-1.8**
	baz=218						
ISAU	**Saurbar**	**1.45**	**243**	P	**Pn**	**20 05 01.5**	**-2.1**
	baz=243						
IBRE	**Brettingsstaoi**	**1.46**	**353**	P	**Pn**	**20 05 01.6**	**-2.1**
	baz=352						
IMID	**Miomork**	**1.47**	**227**	P	**Pb**	**20 05 02.6**	**-2.2**
	baz=227						
IGIL	**Gilhagi**	**1.48**	**18**	P	**Pn**	**20 05 01.7**	**-2.3**
	baz=18						
ISIG	**Siglufjorour**	**1.57**	**338**	P	**Pn**	**20 05 03.5**	**-1.8**
	baz=338						
BORG	**Borgarnes**	**1.65**	**274**		**Pb**	**20 05 04.9**	**-2.9**
SCO	**Scoresbysund**	**6.07**	**346**	Pn	**Pn**	**20 06 07.6**	**+0.6**
SCO	**Scoresbysund**	**6.07**	**346**	*e*	**Pn**	**20 06 04.3**	**-2.7**
	baz=152,slow=9.3						
SCO				*i* P	**Pn**	**20 06 07.7**	**+0.7**
SCO				*i* S	**Sn**	**20 07 19.9**	**+3.5**
SCO				IAML		20 07 29.9	
	comp=Z,1.1nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.77**	**136**	Pn	**Pn**	**20 07 25.2**	**+0.1**
	baz=324,slow=13,SNR=6.3						
ESK	**Eskdalemuir**	**11.77**	**136**	Pn	**Pn**	**20 07 26.6**	**+1.5**
NAO01	**NORSAR Array S**	**13.48**	**93**	Pn	**Pn**	**20 07 49.3**	**+0.8**
SFJD	**Kangerlussuaq**	**13.66**	**295**	Pn	**Pn**	**20 07 48.4**	**-2.5**
CLL	**Collm**	**20.71**	**116**	*e*P	Pn	20 09 20.0	+0.2
BRG	**Berggiesshubel**	**21.42**	**115**	*e*P	**P**	**20 09 26.5**	**+1.4**
	comp=Z,5.3nm,0.8s						
CHVC	**Chvalec**	**22.47**	**113**	*e*P	**P**	**20 09 39.0**	**+2.6**
KHC	**Kasperske Hory**	**22.68**	**118**	*e*P	**P**	**20 09 40.4**	**+1.7**
DPC	**Dobruska-Polom**	**22.77**	**113**	*e*P	**P**	**20 09 42.4**	**+2.8**
GERES	**GERESS Array B**	**22.96**	**119**	P	**P**	**20 09 43.4**	**+1.7**
	comp=Z,0.8nm,0.8s,baz=311,slow=10.0,SNR=4.5						
TREC	**Trest**	**23.28**	**116**	*e*P	**P**	**20 09 49.9**	**+5.1**
TUE	**Stuetta**	**23.41**	**128**	P	**P**	**20 09 47.6**	**+1.2**
TUE				IAmb	IAmb	20 10 06.8	
	comp=Z,5.9nm,1.3s						
EUNU	**Eureka**	**23.66**	**336**	P	**P**	**20 09 50.3**	**+1.9**
EUNU				IAmb	IAmb	20 09 54.2	
	comp=Z,7.3nm,1.4s						
ESDC	**Sonseca Array**	**26.27**	**156**	P	**P**	**20 10 13.3**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=345,slow=9.3,SNR=3.2						
AKASG	**Malin Array Be**	**27.84**	**98**	P	**P**	**20 10 28.7**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=327,slow=10.0,SNR=2.2						
KIRV	**Kirov**	**30.97**	**69**	LR	LR	20 22 04.0	
	comp=Z,43nm,21.2s,baz=222,slow=34						
BRTR	**Keskin Array B**	**38.48**	**105**	P	P	20 12 02.6	+3.2
	comp=Z,1.0nm,0.8s,baz=341,slow=5.5,SNR=3.9						
ABKAR	**Akbulak array**	**41.98**	**73**	P	**P**	**20 12 28.3**	**+0.2**
ILAR	**Eielson Array**	**45.67**	**332**	P	P	20 13 00.5	+2.9
	comp=Z,0.8nm,1.0s,baz=29,slow=4.6,SNR=5.0						
ILAR				PcP	**PcP**	**20 14 37.5**	**+2.2**
	comp=Z,0.6nm,1.0s,baz=20,slow=2.9,SNR=4.4						
KURK	**Kurchatov**	**48.10**	**58**	P	**P**	**20 13 17.9**	**+1.2**
KURK				IAmb	IAmb	20 13 19.4	
	comp=Z,3.6nm,0.9s						
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	**P**	**20 13 55.8**	**+0.5**
	comp=Z,1.8nm,1.2s,baz=331,slow=7.1,SNR=3.7						
TORD	**Torodi Ar. Bea**	**53.16**	**156**	P	**P**	**20 13 56.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**84.12**	**59**	P	**P**	**20 17 10.6**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=318,slow=6.6,SNR=4.6						

*IDC **23** 20:10:23.4±1.7,43°.91N×105°.71W,h0km,mb1 3.5/3, mb1mx3.2/52,mbtmp3.2/3,ML2.9/3,Error ellipse: s-maj=53.4km s-min=9.1km az=148.0*
*NEIC **23** 20:10:24.0±1.7,43°.73N±0°.06×105°.10W±0°.05,h0km±2km, ML3.2/21,Error ellipse: s-maj=11.7km s-min=3.1km az=332.0*

ISC 23 20:10:23.8±1.1,43°.73N±0°.07×105°.13W±0°.08,h0km,n18, σ1§35/18,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.88**	**64**	Pg	**Pg**	**20 10 40.4**	**-0.3**
PHWY	**Pilot Hill**	**2.44**	**186**	Pn	**Pn**	**20 11 04.7**	**-0.5**
RWWY	**Rawlins**	**2.55**	**218**	Pn	**Pn**	**20 11 07.5**	**+0.8**
RWWY				IAML		20 11 40.3	
	186nm,1.0s						
N23A	**Red Feather La**	**2.90**	**192**	Pn	**Pn**	**20 11 11.9**	**+0.4**
N23A				IAML		20 11 55.7	
	comp=E,90nm,0.8s						
N23A				IAML		20 11 57.0	
	comp=N,74nm,0.7s						
RLMT	**Red Lodge**	**3.27**	**297**	Pn	**Pn**	**20 11 15.0**	**-1.6**
RLMT				IAML		20 12 53.9	
	comp=N,46nm,1.4s						
RLMT				IAML		20 12 57.4	
	comp=N,37nm,1.7s						
BW06	**Boulder Array**	**3.38**	**255**		**Pn**	**20 11 19.2**	**+1.2**
BW06				IAML		20 12 06.2	
	comp=N,52nm,0.8s						
PD31	**Pinedale Array**	**3.38**	**255**	Pn	**Pn**	**20 11 17.4**	**-0.6**
PDAR	**Pinedale Array**	**3.38**	**255**	Pn	**Pn**	**20 11 15.0**	**-3.0**
	comp=N,1.0nm,0.3s,baz=72,slow=15,SNR=27						
PDAR				Lg	Lg	20 11 58.9	
	comp=N,3.9nm,0.3s,baz=70,slow=28,SNR=13						
PDAR	**Pinedale Array**	**3.38**	**255**		**Pn**	**20 11 19.6**	**+1.7**
GCMT	**Greycliff**	**3.83**	**304**	Pn	**Pn**	**20 11 24.5**	**+0.4**
H17A	**Grant Village**	**3.98**	**281**	Pn	**Pn**	**20 11 26.1**	**-0.2**
H17A				IAML		20 12 30.0	
	comp=E,29nm,1.4s						
H17A				IAML		20 12 30.3	
	comp=N,37nm,1.4s						
REDW	**Red Top Meadow**	**4.17**	**267**		**Pn**	**20 11 29.4**	**+0.5**
REDW				IAML		20 12 38.5	
	comp=N,57nm,0.9s						
O20A	**White River Ci**	**4.28**	**214**	Pn	**Pn**	**20 11 30.6**	**+0.3**
YHB	**Horse Butte**	**4.47**	**285**	Pn	**Pn**	**20 11 35.4**	**+2.3**
RDMU	**Red Mountain**	**4.57**	**228**	Pn	**Pn**	**20 11 32.8**	**-1.5**
P17A	**Butcher Ranch,**	**5.98**	**227**	Pn	**Pn**	**20 11 54.5**	**+0.8**
ULM	**Lac du Bonnet**	**9.08**	**41**	Pn	**Pn**	**20 12 36.1**	**+0.2**
	comp=N,0.5nm,0.3s,baz=235,slow=12,SNR=6.1						
ULM				Lg	Lg	20 15 06.2	
	comp=N,0.2nm,0.3s,baz=314,slow=16,SNR=2.0						
NVAR	**Mina Array Bea**	**11.26**	**246**	Pn	**Pn**	**20 13 04.9**	**-1.2**
	comp=N,0.0nm,0.3s,baz=58,slow=15,SNR=1.9						

JMA 23 20:11:20.1±0.1,26°.74N×129°.66E,h42km,M2.2,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYRO	**Yoronjima**	**1.12**	**285**	P	Pn	20 11 39.5	+0.2
JYRO				*e*S	Sn	20 11 53.6	+0.1
JOKE	**Okinoerabujima**	**1.15**	**303**	P	Pn	20 11 40.4	+0.6
JOKE				*e*S	Sn	20 11 54.5	+0.1
JTK	**Tokunoshima**	**1.22**	**329**	P	Pn	20 11 41.4	+0.7
JOW	**Kunigami**	**1.24**	**275**	P	Pn	20 11 41.8	+0.8
JOW				S	Sn	20 11 56.9	+0.3
JIH	**Iheya**	**1.54**	**281**	P	Pn	20 11 46.4	+1.3
JIH				S	Sn	20 12 04.7	+0.8
JAMN	**Amaminishikomi**	**1.56**	**344**	P	Pn	20 11 46.4	+1.1
JAM	**Amami Oshima**	**1.67**	**358**	P	Pn	20 11 47.4	+0.6
JAM				*e*S	Sn	20 12 06.9	-0.1
JKDJ	**Kitadaitoujima**	**1.67**	**118**	P	Pn	20 11 47.7	+0.9
JKDJ				*e*S	Sn	20 12 08.1	+1.1
JMZ	**Minamidaito 2**	**1.68**	**123**	P	Pn	20 11 47.5	+0.6
JAGN	**Aguni-jima**	**2.17**	**267**	P	Pn	20 11 54.6	+0.9
JAGN				S	Sn	20 12 20.5	+1.1

IDC 23 20:11:35.2±7.4,22°.74N×142°.30E,h0km,mb3.4/4, mb1 3.5/4,mb1mx3.2/50,mbtmp3.4/4,Error ellipse: s-maj=295.7km s-min=27.5km az=74.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.13**	**191**	P	P	20 19 37.6	0.0
	0.5nm,0.7s,baz=15,slow=9.0,SNR=5.8						
ASAR	**Alice Springs**	**46.85**	**191**	P	P	20 20 06.8	-0.3
	0.3nm,0.7s,baz=7.5,slow=15,SNR=1.5						
MKAR	**Makanchi Array**	**53.39**	**312**	P	P	20 20 56.9	+0.2
	0.3nm,0.6s,baz=93,slow=8.9,SNR=1.8						
KURBB	**Kurchatov Arra**	**56.20**	**317**	P	P	20 21 16.6	-0.3

RUGZ S S 20 52 24.4 -7.5
OPRZ Ohinepanea 15.75 192 P P 20 49 52.9 0.0
TWGZ Tauwhareparae 15.86 187 P P 20 49 53.2 -0.8
TWGZ S S 20 52 31.9 -2.6
TOZ Tahuroa Road 15.86 195 P P 20 49 55.9 +2.0
MARZ Manawahe 15.87 191 P P 20 49 54.9 +0.9
KARZ Kaharoa 15.98 192 P P 20 49 57.2 +2.1
MKRZ Makatiti 16.05 192 P P 20 49 58.9 +3.1
URZ Urewera 16.06 190 P P 20 49 53.3 -2.4
7.3nm,0.3s,baz=14,slow=6.3,SNR=48
URZ S S 20 52 32.3 -5.4
1.4nm,0.3s,baz=100,slow=19,SNR=3.0
URZ Urewera 16.06 190 P P 20 49 53.6 -2.1
URZ S S 20 52 34.9 -2.7
URZ Urewera 16.06 190 P P 20 49 53.6 -2.1
MWZ Matawai 16.07 189 P P 20 49 55.1 -0.8
MWZ S S 20 52 33.8 -4.2
RTZ Ruatahuna 16.43 190 P P 20 49 58.3 -0.9
RTZ S S 20 52 38.7 -5.1
SNGZ Shannon Statio 16.54 189 P P 20 50 00.1 -0.1
SNGZ S S 20 52 44.9 -0.7
MTHZ Maungataniwha 16.68 190 P P 20 50 01.2 -0.2
MTHZ S S 20 52 48.6 +0.7
RAHZ Arahi 16.71 189 P P 20 50 01.9 +0.2
RAHZ S S 20 52 48.4 +0.1
KNZ Kokohu 16.73 188 P P 20 50 02.0 +0.2
KNZ S S 20 52 40.7 -7.8
MRHZ Matea Rd 16.74 191 P P 20 50 01.7 -0.2
WATZ Wairara 16.75 193 P P 20 50 03.6 +1.5
HIZ Hauiti 16.76 196 P P 20 50 05.1 +2.9
HIZ Hauiti 16.76 196 P P 20 50 03.8 +1.7
RATZ Rangitukua 16.89 193 P P 20 50 04.0 +0.7
NMHZ Naumai 16.93 190 P P 20 50 03.7 -0.1
NMHZ S S 20 52 51.9 -0.1
KATZ Kakaramea 17.01 193 P P 20 50 05.6 +1.0
BKZ Black Stump Fm 17.05 191 P P 20 50 03.5 -1.3
BKZ Black Stump Fm 17.05 191 P P 20 50 03.3 -1.5
BKZ IAmb IAmb 20 50 04.6
comp=Z,27nm,0.9s
ARHZ Aropaoanui 17.06 189 P P 20 50 05.3 +0.4
KRVZ Karewarewa 17.14 193 P P 20 50 05.4 -0.3
TMVZ Te Maari 17.15 193 P P 20 50 05.9 +0.2
TWVZ Taurewa 17.16 194 P P 20 50 06.4 +0.6
ETVZ East Tongariro 17.16 193 P P 20 50 05.9 -0.1
WTVZ West Tongariro 17.17 193 P P 20 50 06.1 +0.1
OTVZ Oturere 17.20 193 P P 20 50 06.7 +0.4
NGZ Ngauruhoe 17.23 193 P P 20 50 07.1 +0.6
MCHZ McNeill Hill 17.28 190 P P 20 50 05.4 -1.5
TUVZ Tukino 17.30 193 P P 20 50 07.2 0.0
FWVZ Far West T-bar 17.31 193 P P 20 50 08.3 +0.9
WHVZ Whangaehu Hut 17.33 193 P P 20 50 07.5 -0.1
VRZ Vera Road 17.37 195 P P 20 50 10.6 +3.0
WNVZ Wahianoa 17.37 193 P P 20 50 07.3 -0.6
PKVZ Pokaka 17.39 194 P P 20 50 08.4 +0.4
MOVZ Moawhango 17.42 192 P P 20 50 07.5 -0.7
CKHZ Cape Kidnapper 17.43 189 P P 20 50 08.0 -0.2
BHHZ Black Hill Sta 17.44 192 P P 20 50 06.8 -1.6
KRHZ Kereru 17.53 191 P P 20 50 08.6 -0.5
KAHZ Kahuranaki 17.60 189 P P 20 50 10.1 +0.3
PKE Pukeiti 17.63 197 P P 20 50 15.4 +5.3
NEZ North Egmont 17.67 197 P P 20 50 14.4 +3.9
KHEZ Kahui Hut 17.72 197 P P 20 50 15.5 +4.6
PREZ Palmer Road 17.72 196 P P 20 50 13.6 +2.6
NBEZ Newall Road No 17.73 197 P P 20 50 15.4 +4.5
LREZ Lake Rotokare 17.77 196 P P 20 50 14.7 +3.3
PNHZ Pukenui 17.82 191 P P 20 50 11.1 -0.8
PXZ Pawanui 17.83 189 P P 20 50 11.9 +0.1
WAZ Wanganui 17.91 194 P P 20 50 14.6 +1.9
WPHZ Waipukurau 17.93 190 P P 20 50 13.6 +0.8
WPHZ Waipukurau 17.93 190 P S 20 53 16.3 +8.1
TSZ Takapari Road 18.01 191 P P 20 50 13.5 -0.1
TSZ Takapari Road 18.01 191 P S 20 53 11.0 +1.6
DVHZ Dannevirke 18.20 191 P P 20 50 15.3 0.0
DVHZ Dannevirke 18.20 191 P S 20 53 15.1 +2.5
ANWZ Angora Road 18.31 190 P P 20 50 17.5 +1.3
PRWZ Pori Road 18.49 191 P P 20 50 18.7 +0.9
BFZ Birch Farm 18.56 190 P P 20 50 18.5 -0.1
BFZ Birch Farm 18.56 190 P S 20 53 22.7 +4.3
BFZ Birch Farm 18.56 190 P P 20 50 16.4 -0.2
MRZ Mangatainoka R 18.66 192 P P 20 50 19.0 -0.5
MRZ Mangatainoka R 18.66 192 P S 20 53 24.4 +4.4
CPWZ Castlepoint 18.79 190 P S 20 53 29.1 +7.0
OGWZ Otaki Gorge 18.89 193 P P 20 50 21.0 -0.5
OGWZ Otaki Gorge 18.89 193 P S 20 53 27.9 +4.3
HOWZ Holdsworth Sta 18.90 192 P P 20 50 21.2 -0.4
HOWZ Holdsworth Sta 18.90 192 P S 20 53 25.6 +1.8
KIW Kapiti Island 18.99 193 P P 20 50 22.4 0.0
KIW Kapiti Island 18.99 193 P S 20 53 26.9 +1.7
TMWZ Te Maipa 19.04 191 P P 20 50 23.1 +0.2
TMWZ Te Maipa 19.04 191 P S 20 53 31.9 +5.8
MTW Mount Morrison 19.16 192 P P 20 50 23.9 0.0
MTW Mount Morrison 19.16 192 P S 20 53 31.1 +3.2
CAW Cannon Point 19.19 193 P S 20 53 31.8 +3.4
TRWZ Traveller 19.36 191 P S 20 53 34.0 +2.9
PAWZ Paruwai Farm 19.39 192 P P 20 50 26.3 +0.2
PAWZ Paruwai Farm 19.39 192 P S 20 53 35.2 +3.5
MSWZ Moikau Station 19.45 192 P S 20 53 32.6 +1.0
TCW Tory Channel 19.46 194 P S 20 53 37.7 +5.0
BHW Baring Head 19.52 193 P S 20 53 37.6 +3.9
BHW Baring Head 19.52 193 P P 20 50 28.9 +1.6
QRZ Quartz Range 19.56 198 P P 20 50 29.1 +1.6
PLWZ Palliser 19.60 192 P S 20 53 41.6 +6.5
NNZ Nelson 19.69 196 P P 20 50 30.2 +1.5
TUWZ Tuamarina 19.75 195 P P 20 50 31.0 +1.8
THZ Tophouse 20.32 197 P P 20 50 36.1 +1.5
KHZ Kahutara 20.78 195 P P 20 50 42.2 +3.7
KHZ IAmb IAmb 20 50 45.2
comp=Z,45nm,0.9s
LTZ Lake Taylor 21.44 197 P P 20 50 46.1 +1.5
OXZ Oxford 22.01 197 P P 20 50 51.0 +1.4
RPZ Rata Peaks 22.64 198 P P 20 50 56.3 +1.0
comp=Z,15nm,0.6s,baz=42,slow=18,SNR=3.1
RPZ Rata Peaks 22.64 198 IAmb IAmb 20 51 01.3
comp=Z,17nm,0.8s
ARMA Armidale 27.03 247 P P 20 51 36.1 +1.8
baz=27,SNR=19
ARMA Armidale 27.03 247 P P 20 51 35.9 +1.6
ARMA IAmb IAmb 20 51 36.4
comp=Z,23nm,0.7s
EIDS Eidsvold 27.06 258 P P 20 51 35.0 +0.5
baz=27,SNR=15
EIDS Eidsvold 27.06 258 P P 20 51 35.0 +0.5
EIDS IAmb IAmb 20 51 35.9
comp=Z,31nm,0.7s
MGCD Mangrove Creek 28.07 241 P P 20 51 45.2 +2.1
baz=28,SNR=4.9
PPT Papeete 28.48 86 P P 20 51 47.5 +0.6
comp=Z,14nm,0.6s,baz=347,slow=16,SNR=4.1
RMQ Roma 29.16 256 P P 20 51 54.4 +1.5
baz=29,SNR=32
CNB Canberra Magne 30.03 238 P P 20 52 02.2 +1.9
baz=30,SNR=27
YNG Young 30.53 240 P P 20 52 06.2 +1.7
baz=31,SNR=5.2
CTA Charters Tower 31.99 268 P P 20 52 17.1 0.0
comp=Z,22nm,0.4s,baz=96,slow=12,SNR=46
CTAO Charters Tower 31.99 268 P P 20 52 17.3 +0.2
CMSA Cobar Meteorol 32.24 246 P P 20 52 20.0 +1.0
baz=32,SNR=74
QLP Quilpie 33.22 255 P P 20 52 27.9 +0.5
baz=33,SNR=8.6
TOO Toolangi 33.67 235 P P 20 52 32.4 +1.4
baz=34,SNR=16
TOO Toolangi 33.67 235 P P 20 52 31.8 +0.7
TOO IAmb IAmb 20 52 33.2
comp=Z,25nm,0.7s
MTSU Mount Surprise 34.18 270 P P 20 52 35.7 +0.2
baz=34,SNR=14
PMG Port Moresby 34.51 287 P P 20 52 37.8 -0.5
comp=Z,41nm,0.8s,baz=81,slow=6.1,SNR=12
PMG Port Moresby 34.51 287 P P 20 52 36.7 -1.6
STKA Stephens Creek 35.74 246 P P 20 52 49.1 +0.8
comp=Z,21nm,0.5s,baz=92,slow=10,SNR=88
STKA Stephens Creek 35.74 246 P P 20 52 49.4 +1.1
baz=36,SNR=59
STKA Stephens Creek 35.74 246 P P 20 52 49.4 +1.1
ARPS Mount Arapiles 36.30 238 P P 20 52 53.9 +1.1
baz=36,SNR=7.7
COEN Coen 36.39 277 P P 20 52 54.0 +0.1
baz=36,SNR=9.4
COEN Coen 36.39 277 P P 20 52 54.3 +0.4
COEN IAmb IAmb 20 52 55.2
comp=Z,14nm,0.8s
QIS Mount Isa 38.05 265 P P 20 53 06.9 -0.5
baz=38,SNR=5.4
HTT Hallett 38.14 244 P P 20 53 08.6 +0.6
baz=38,SNR=16
BBOO Buckleboo 40.49 245 P P 20 53 27.0 +0.2
baz=40,SNR=32
BBOO Buckleboo 40.49 245 P P 20 53 26.9 +0.2
BBOO IAmb IAmb 20 53 27.7
comp=Z,32nm,0.8s
AS31 Alice Springs 42.78 259 P P 20 53 44.8 -0.2
ASAR Alice Springs 42.78 259 P P 20 53 45.0 0.0
comp=Z,42nm,0.8s,baz=99,slow=7.8,SNR=309
ASAR ScP ScP 20 58 21.6 +2.3
comp=Z,1.8nm,0.9s,baz=101,slow=4.8,SNR=4.7
ASAR S S 20 59 25.3 -2.7
comp=Z,3.1nm,0.8s,baz=96,slow=15,SNR=14
ASAR Alice Springs 42.78 259 P P 20 53 44.6 -0.3
WR0 Warramunga Arr 42.83 264 P P 20 53 44.6 -0.7
WB0 Warramunga Arr 43.00 265 P P 20 53 46.1 -0.6
WB0 IAmb IAmb 20 53 46.8
comp=Z,32nm,0.7s
WB2 Warramunga Arr 43.00 264 P P 20 53 45.8 -0.9
baz=43
WB2 Warramunga Arr 43.00 264 P P 20 53 46.0 -0.7
WB2 IAmb IAmb 20 53 46.9
comp=Z,36nm,0.8s
WRAB Tennant Creek 43.01 264 P P 20 53 46.1 -0.7
WRAB IAmb IAmb 20 53 46.9
comp=Z,36nm,0.9s
WRA Warramunga Arr 43.01 264 P P 20 53 46.0 -0.7
comp=Z,16nm,0.6s,baz=97,slow=7.8,SNR=278
WRA ScP ScP 20 58 23.1 +2.8
comp=Z,3.5nm,1.0s,baz=97,slow=4.2,SNR=6.9
WRA S S 20 59 27.2 -4.2
comp=Z,1.9nm,0.7s,baz=99,slow=14,SNR=6.1
WRA Warramunga Arr 43.01 264 P P 20 53 46.1 -0.7
JAY Jayapura 43.41 291 P P 20 53 49.0 -0.9
comp=Z,22nm,0.7s,baz=132,slow=5.0,SNR=11
JAY Jayapura 43.41 291 P P 20 53 49.9 0.0
comp=Z,17nm,0.8s
GENI Genyem 43.83 291 P P 20 53 53.7 +0.5
KDU Kakadu 46.66 274 P P 20 54 14.0 -0.7
baz=46,SNR=31
FORT Forrest 47.30 248 P P 20 54 19.2 -0.1
baz=47,SNR=18
FORT Forrest 47.30 248 P P 20 54 19.2 -0.1
WRKA Warakurna 47.65 256 P P 20 54 22.2 +0.1
baz=48,SNR=44
KHLU Kahalu`u 47.69 31 P P 20 54 21.9 -0.5
MTN Manton Dam 47.85 273 P P 20 54 21.7 -2.0
MTN IAmb IAmb 20 54 23.7
comp=Z,16nm,0.7s
KNRA Kununurra 49.20 268 P P 20 54 33.6 0.0
baz=49,SNR=13
KNRA Kununurra 49.20 268 P P 20 54 33.1 -0.5
KNRA IAmb IAmb 20 54 34.2
comp=Z,32nm,0.7s
FITZ Fitzroy Crossi 51.45 264 S S 21 01 26.5 -1.2
comp=Z,4.5nm,1.0s,baz=282,slow=23,SNR=8.4
FITZ Fitzroy Crossi 51.45 264 P P 20 54 50.2 +0.3
baz=51,SNR=17
FITZ Fitzroy Crossi 51.45 264 P P 20 54 50.3 +0.3
SIJI Sorong 52.45 287 P P 20 54 56.6 -0.6
comp=Z,45nm,0.7s,baz=97,slow=6.4,SNR=44
SOEI Soe 55.22 274 P P 20 55 18.4 +1.5
comp=Z,55nm,1.1s
SOEI Soe 55.22 274 P P 20 55 16.8 0.0
SOEI IAmb IAmb 20 55 19.1
comp=Z,39nm,0.8s
BATI Baumata 55.62 273 P P 20 55 20.8 +1.3
comp=Z,8.6nm,0.4s,baz=189,slow=3.8,SNR=4.2
VNDA Vanda 55.89 185 P P 20 55 21.1 +0.8
MEEK Meekatharra 56.01 252 P P 20 55 21.9 -0.2
baz=56,SNR=4.8
SANI Sanana 56.64 283 P P 20 55 26.3 -0.2
comp=Z,10nm,0.8s
EDFI Ende, Flores 57.95 274 P P 20 55 35.1 -0.5
comp=Z,14nm,0.8s
MJAR Matsuhiro Arr 70.96 325 P P 20 56 56.4 -0.7
comp=Z,8.2nm,0.8s,baz=157,slow=5.9,SNR=22
MAJO Matsushiro 70.97 325 P P 20 56 56.4 -0.6
MAT Matsushiro 70.97 325 P P 20 56 56.5 -0.5
MAT eS S 21 05 28.6 +1.2
JWT Wachi 71.58 322 P P 20 57 00.3 -0.3
JWT IAmb IAmb 20 57 01.7
comp=Z,23nm,1.0s
JHS Saijyo 72.69 321 P P 20 57 07.1 0.0
JHS IAmb IAmb 20 57 08.5
comp=Z,28nm,0.9s
JNU Nakatsue 72.75 318 P P 20 57 08.7 +1.2
comp=Z,7.3nm,0.9s,baz=231,slow=1.9,SNR=4.3
ASAJ Asahikawa 74.78 333 P P 20 57 20.0 +1.4
comp=Z,14nm,0.8s,baz=228,slow=6.0,SNR=7.1
KSRS Korea Array 77.44 320 P P 20 57 34.2 +0.8
comp=Z,2.1nm,0.8s,baz=129,slow=5.5,SNR=6.8
PETK Petropavlovsk- 77.78 346 P P 20 57 34.8 -0.1
comp=Z,16nm,0.7s,baz=123,slow=5.6,SNR=15
PETK Petropavlovsk- 77.78 346 P P 20 57 34.9 0.0
USRK Ussuriysk Ar. 79.79 327 P P 20 57 45.5 -0.2
comp=Z,6.7nm,0.8s,baz=136,slow=4.0,SNR=9.8
NJ2 Nanjing 80.06 311 eP P 20 57 49.3 +1.8
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
VES Vestal, Richgr 81.35 46 P P 20 57 55.3 +1.3
baz=235
MONP2 Monument Peak 81.49 49 P P 20 57 56.7 +1.6
baz=237
EDW2 Edwards Air Fo 81.52 47 P P 20 57 56.5 +1.5
baz=235
IKP In-Ko-Pah, Jac 81.58 50 P P 20 57 56.6 +1.1
baz=237
O02D Mt. Diablo Mer 81.62 40 P P 20 57 57.7 +2.3
baz=232
ISA Isabella, Lake 81.65 46 P P 20 57 57.1 +1.4
baz=235
CMB Columbia Colle 81.79 43 P P 20 57 56.8 +0.5
LRMC Laurel Mtn Rad 82.07 47 P P 20 57 59.2 +1.3
baz=236
N02D Trinity Center 82.17 40 P P 20 58 00.1 +1.9
baz=232,SNR=6.1
O03E Paynes Creek 82.28 41 P P 20 58 00.2 +1.3
baz=232,SNR=6.4
M02C Callahan 82.34 39 P P 20 58 01.3 +2.3
baz=231,SNR=6.5
CWC Cottonwood Cre 82.36 46 P P 20 57 59.9 +0.5
baz=235
MDPB Devils Postpil 82.39 44 P P 20 58 00.3 +0.6
BELC Belle Mtn. Jos 82.40 49 P P 20 58 00.4 +0.8
baz=237
MPMC Manual Prospec 82.53 46 P P 20 58 01.6 +1.3
baz=236
GSC Goldstone, Bar 82.56 47 P P 20 58 01.5 +1.2
baz=236
YBH Yreka Blue Hor 82.64 39 P P 20 58 01.8 +1.3
WAKR Walker 82.67 43 P P 20 58 02.7 +1.7
K02D Willamette Mer 82.69 38 P P 20 58 02.6 +1.8
baz=231
BEKR Beckworth 82.91 42 P P 20 58 03.2 +1.1
CN2 Changchun 83.00 323 eP P 20 58 02.8 +0.6
CN2 pmax pmax
comp=Z,20nm,1.0s
HUMO Hull Mountain 83.04 38 P P 20 58 03.8 +1.3
GRAC Grapevine Rang 83.14 45 P P 20 58 04.8 +1.7
baz=236
L04D Klamath Falls 83.17 39 P P 20 58 04.8 +1.5
baz=232
M04C Macdoel 83.18 40 P P 20 58 04.2 +0.9
baz=232
NVAR Mina Array Bea 83.35 44 P P 20 58 04.3 -0.1
comp=Z,6.5nm,0.9s,baz=224,slow=8.7,SNR=34
NVAR Mina Array Bea 83.35 44 P P 20 58 05.0 +0.6
I03D Drain, OR 83.51 37 P P 20 58 06.5 +1.8
baz=231
KVN Kaiserville 83.84 43 P P 20 58 06.8 +0.1
J04D Umpqua Nationa 83.92 38 P P 20 58 09.0 +2.0
baz=232,SNR=6.8
I04A Tendick Farm, 84.10 38 P P 20 58 08.8 +1.2
baz=231
MOD Modoc Plateau 84.16 40 P P 20 58 09.7 +1.5
K05A Summer Lake 84.31 39 P P 20 58 10.4 +1.4
K05A IAmb IAmb 20 58 12.2
comp=Z,17nm,1.1s
J05D Fort Rock, OR 84.45 39 P P 20 58 11.4 +1.9
baz=232,SNR=9.8
I05D Terrebonne, OR 85.04 38 P P 20 58 13.7 +1.4
baz=232
TUC Tucson 85.23 52 P P 20 58 15.5 +1.9
baz=240
NONG Nongkai 85.68 291 P P 20 58 18.3 +2.5
I07A Izee 85.94 39 P P 20 58 16.1 -0.5
I07A IAmb IAmb 20 58 19.2
comp=Z,17nm,1.1s
BJI Beijing 86.30 316 P P 20 58 19.3 +1.0
BJI pmax pmax
comp=Z,5.0nm,0.8s
B05A Bryant 87.06 34 P P 20 58 23.1 +1.5
baz=231
KNK Knik Glacier 87.19 14 IAmb IAmb 20 58 22.6
comp=Z,23nm,0.8s
PMR Palmer 87.20 14 P P 20 58 21.4 -0.6
PMR IAmb IAmb 20 58 22.7
comp=Z,20nm,1.0s
E08A Dider Farm, El 87.62 37 IAmb IAmb 20 58 26.6
comp=Z,15nm,1.0s
BSI Banda Aceh 87.68 277 P P 20 58 39.4 +14
DUG Dugway, Tooele 87.88 45 P P 20 58 27.5 +1.5
baz=236
SEY Seymchan 87.94 348 P P 20 58 25.4 -0.1
comp=Z,1.8nm,0.3s,baz=183,slow=5.4,SNR=10.0
E09A Wood Farm, Sta 88.14 37 IAmb IAmb 20 58 28.7
comp=Z,16nm,1.1s
XAN Xi'an 88.22 308 P P 20 58 28.8 +1.3
XAN pmax pmax
comp=Z,11nm,1.0s
VRDI Verde Repeater 88.27 17 IAmb IAmb 20 58 28.4
comp=Z,16nm,0.9s
N25K Chitina, Valde 88.29 16 P P 20 58 27.1 -0.2
baz=212
N25K Chitina, Valde 88.29 16 IAmb IAmb 20 58 28.5
comp=Z,12nm,0.7s
M24K Tolsona, Glenn 88.33 15 P P 20 58 28.2 +0.8
baz=211
F10A Beach Ranch, E 88.35 38 IAmb IAmb 20 58 29.6
comp=Z,13nm,0.9s
BALM Baldy 88.40 17 IAmb IAmb 20 58 29.1
comp=Z,17nm,0.8s
KTH Kantishna Hill 88.57 12 IAmb IAmb 20 58 28.3
comp=Z,21nm,0.9s
B08A Colville Reser 88.58 35 IAmb IAmb 20 58 30.4
comp=Z,16nm,1.1s
CTGM Chitina Glacie 88.62 18 IAmb IAmb 20 58 30.3
comp=Z,19nm,0.9s
HLID Hailey 88.67 41 P P 20 58 31.1 +1.6
baz=237
HLID Hailey 88.67 41 IAmb IAmb 20 58 32.0
comp=Z,8.3nm,0.9s
LAMP Lampang 88.90 290 P P 20 58 34.0 +3.0
MNTX Cornudas Mount 88.97 55 P P 20 58 33.3 +2.3
baz=243
KMI Kunming 89.01 298 eP P 20 58 30.8 -0.8
KMI pmax pmax
comp=Z,8.0nm,0.6s
MCK McKinley 89.14 13 P P 20 58 30.7 -0.3
baz=208
TX32 Lajitas Array 89.23 58 IAmb IAmb 20 58 35.4
comp=Z,11nm,1.1s
TXAR Lajitas Array 89.24 58 P P 20 58 33.5 +1.1
comp=Z,4.6nm,0.9s,baz=224,slow=4.9,SNR=23
TXAR Lajitas Array 89.24 58 P P 20 58 33.0 +0.6
CM36 Chiang Mai Arr 89.37 290 P P 20 58 35.0 +1.9
CM35 Chiang Mai Arr 89.38 290 P P 20 58 35.0 +1.8
CM04 Chiang Mai Arr 89.42 290 P P 20 58 36.0 +2.6
CM09 Chiang Mai Arr 89.43 290 P P 20 58 36.3 +2.9
CM01 Chiang Mai Arr 89.45 290 P P 20 58 36.3 +2.8
CM05 Chiang Mai Arr 89.45 290 P P 20 58 35.0 +1.5
CM34 Chiang Mai Arr 89.45 291 P P 20 58 35.0 +1.5
CM02 Chiang Mai Arr 89.46 290 P P 20 58 36.0 +2.4
CM31 Chiang Mai Arr 89.47 290 P P 20 58 36.1 +2.5
CMAR Chiang Mai Arr 89.47 290 P P 20 58 35.5 +1.9
comp=Z,4.3nm,0.8s,baz=134,slow=3.3,SNR=32
CMAR PP PP 21 02 16.1 0.0
comp=Z,0.6nm,0.9s,baz=103,slow=5.6,SNR=4.6
CMAR Chiang Mai Arr 89.47 290 P P 20 58 35.1 +1.5
CM15 Chiang Mai Arr 89.49 290 P P 20 58 36.2 +2.5
CM13 Chiang Mai Arr 89.49 290 P P 20 58 36.2 +2.5
CMMT Chiang Mai 89.61 290 P P 20 58 36.1 +1.8
CM33 Chiang Mai Arr 89.62 290 P P 20 58 35.0 +0.7
CHTO Chiang Mai 89.62 290 P P 20 58 34.9 +0.6
CHTO IAmb IAmb 20 58 36.7
comp=Z,7.0nm,0.8s
CM32 Chiang Mai Arr 89.64 290 P P 20 58 37.0 +2.6
ANMO Albuquerque 89.67 52 P P 20 58 35.7 +1.3
baz=242
HHC Hu-ho-hao-te 89.72 315 eP P 20 58 35.8 +1.4
HHC pmax pmax
comp=Z,18nm,0.8s
HHC pmax pmax
comp=Z,86nm,6.3s
MLY Manley 89.94 12 P P 20 58 33.8 -0.9
baz=206
WRH Wood River Hil 89.97 13 IAmb IAmb 20 58 35.2
comp=Z,15nm,0.9s
HDA Harding Lake 90.16 14 P P 20 58 35.1 -0.6
baz=210
HDA Harding Lake 90.16 14 IAmb IAmb 20 58 36.1
comp=Z,6.0nm,0.6s
DOT Dot Lake 90.16 15 IAmb IAmb 20 58 36.2
comp=Z,14nm,1.0s
CCB Clear Creek Bu 90.18 13 IAmb IAmb 20 58 35.9
comp=Z,9.5nm,0.8s
IMAR Indian Mountai 90.28 10 P P 20 58 36.0 -0.3
I23K Minto, Yukon-K 90.31 12 P P 20 58 35.9 -0.5
baz=208
MDM Murphy Dome 90.37 13 IAmb IAmb 20 58 36.9
comp=Z,15nm,1.0s
ILAR Eielson Array 90.48 13 P P 20 58 36.2 -1.0
comp=Z,2.4nm,0.7s,baz=228,slow=4.1,SNR=16
POKR Poker Plat Res 90.67 13 P P 20 58 37.8 -0.4
baz=210
O20A White River Ci 90.87 47 P P 20 58 40.5 +0.6
baz=241
K27K Chicken 90.96 16 P P 20 58 39.8 +0.3
baz=214
PDAR Pinedale Array 91.29 44 P P 20 58 41.9 +0.1
comp=Z,2.6nm,0.8s,baz=204,slow=3.3,SNR=14
BOZ Bozeman (W) 91.43 41 P P 20 58 43.3 +1.1
baz=239
SDCO Great Sand Dun 91.64 50 P P 20 58 44.5 +0.9
baz=243
T25A Trinidad 92.14 51 P P 20 58 46.7 +0.9
baz=244
LZH Lanzhou 92.85 308 eP P 20 58 49.6 +0.6
LZH pP pP 21 00 50.9 -3.1
LZH sP sP 21 01 43.6 -7.6
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,82nm,6.6s
YAK Yakutsk 93.38 339 P P 20 58 49.9 -0.7
comp=Z,4.1nm,0.3s,baz=49,slow=1.0,SNR=8.3
ZALV Zalesovo Beam 111.12 321 PKiKP **PKiKP** 21 04 03.9 -1.2
comp=Z,1.2nm,0.5s,baz=156,slow=2.1,SNR=6.4
MKAR Makanchi Array 111.51 313 PKiKP **PKiKP** 21 04 05.2 -0.9
comp=Z,0.9nm,0.5s,baz=164,slow=0.9,SNR=16
KURBB **Kurchatov Arra 114.51 317** PKP PKPdf 21 04 10.4 -1.3
comp=Z,1.2nm,0.5s,baz=111,slow=2.1,SNR=9.3
ARU Arti 125.98 324 **PKPdf** 21 04 33.7 +0.2
KIRV Kirov 129.92 329 SKPbc SKPab 21 07 10.6 +0.3
comp=Z,17nm,0.7s,baz=24,slow=0.8,SNR=6.4
ARCES **ARCESS Array B 130.54 349** PKhKP PKPpre 21 04 30.4
comp=Z,4.3nm,1.1s,baz=50,slow=2.8,SNR=3.9
ARCES PKP **PKPdf** 21 04 41.2 -0.7
comp=Z,2.2nm,0.6s,baz=31,slow=2.1,SNR=17
ARCES SKPbc **SKPab** 21 07 13.1 +0.3
comp=Z,2.4nm,0.9s,baz=53,slow=3.5,SNR=5.0
KLMR Klimovskoe 133.06 335 ePKPdf **PKPdf** 21 04 46.6 -0.3
KLMR AMP 21 04 48.4
comp=Z,20nm,1.5s
KLMR ePP PP 21 07 20.4 -1.4
FINES FINESS Array B 137.20 342 PKhKP PKPpre 21 04 41.9
comp=Z,1.9nm,0.7s,baz=47,slow=3.2,SNR=8.0
FINES PKP **PKPdf** 21 04 54.0 -0.5
comp=Z,2.5nm,0.6s,baz=102,slow=3.6,SNR=8.0
FINES SKPbc **SKPbc** 21 07 33.0 -0.9
comp=Z,2.1nm,0.8s,baz=111,slow=4.3,SNR=4.1
KMBO Kilima Mbogo 137.23 242 PKP **PKiKP** 21 04 58.2 -0.2
comp=Z,0.9nm,0.7s,baz=60,slow=2.9,SNR=2.3
KMBO SKP 21 07 40.3
comp=Z,1.7nm,0.8s,baz=201,slow=2.2,SNR=6.6
NB2 NORSAR Subarra 140.70 352 PKP **PKPdf** 21 04 55.1 -5.9
comp=Z,4.8nm,1.1s,baz=16,slow=3.2
NOA NORSAR Array B 140.70 352 PKhKP PKPpre 21 04 54.7
comp=Z,0.8nm,0.6s,baz=4.3,slow=3.5,SNR=5.1

HFS	**Hagfors**	**141.19**	**350**	PKhKP	PKPpre	21 04 55.7		
	comp=Z,5.4nm,0.4s,baz=68,slow=3.9,SNR=64							
AKASG	**Malin Array Be**	**143.98**	**329**	PKP	PKPbc	21 05 05.6	-0.9	
	comp=Z,7.2nm,0.4s,baz=44,slow=4.1,SNR=60							
AKASG				SKPbc	**SKPbc**	**21 07 51.6**	**-0.2**	
	comp=Z,0.3nm,0.3s,baz=40,slow=3.2,SNR=4.6							
AKASG	**Malin Array Be**	**143.98**	**329**		PKPbc	21 05 05.9	-0.6	
AKBB	**Malin Array Si**	**143.98**	**329**		PKPbc	21 05 05.9	-0.6	
SUW	**Suwalki**	**144.11**	**337**	*e*PKP	PKPbc	21 05 06.6	-0.2	
BSD	**Bornholm Skovb**	**145.62**	**345**	*i* P	**PKPbc**	**21 05 11.3**	**0.0**	
	comp=Z,4.8nm,0.4s							
BSD	**Bornholm Skovb**	**145.62**	**345**	*e*P	**PKPbc**	**21 05 11.3**	**0.0**	
BSD				IAmb	IAmb	21 05 13.3		
	comp=Z,4.8nm,0.4s							
SORM	**Soroca**	**146.07**	**326**	⇑P	**PKPbc**	**21 05 12.6**	**-0.2**	
MILM	**Milestii Mici**	**146.58**	**324**	⇓P	**PKPbc**	**21 05 13.6**	**-0.7**	
GKP	**Gorka Klasztor**	**146.67**	**342**	*e*PKP	**PKPbc**	**21 05 14.5**	**+0.2**	
BEL	**Belsk**	**146.72**	**337**	*e*PKP	**PKPbc**	**21 05 15.1**	**+0.7**	
BRTR	**Keskin Array B**	**147.05**	**309**	PKPbc	**PKPbc**	**21 05 15.7**	**-0.3**	
	comp=Z,4.8nm,0.7s,baz=139,slow=4.3,SNR=24							
VASR	**Vaslui**	**147.31**	**324**	⇑P	**PKPbc**	**21 05 16.4**	**+0.2**	
MMAI	**Mount Meron Ar**	**147.51**	**297**	PKPbc	**PKPbc**	**21 05 17.9**	**+0.7**	
	comp=Z,10nm,0.5s,baz=77,slow=7.8,SNR=55							
TLCR		**147.60**	**321**	⇑P	**PKPbc**	**21 05 16.5**	**-0.4**	
KWP	**Kalwaria Pacla**	**147.70**	**333**	*e*PKP	**PKPbc**	**21 05 17.5**	**+0.4**	
KWP	**Kalwaria Pacla**	**147.70**	**333**		**PKPbc**	**21 05 17.6**	**+0.4**	
CFR	**Carcaliu**	**148.00**	**322**	⇑P	**PKPbc**	**21 05 17.9**	**0.0**	
TESR	**Tescani**	**148.00**	**325**	⇓P	**PKPbc**	**21 05 18.0**	**0.0**	
BURAR	**Bucovina Array**	**148.00**	**328**	⇓P	**PKiKP**	**21 05 18.8**	**-0.6**	
BIZ	**Bicaz**	**148.01**	**326**	⇑P	**PKiKP**	**21 05 18.7**	**-0.5**	
TPGR	**Topolog**	**148.02**	**321**	⇑P	**PKiKP**	**21 05 19.0**	**-0.4**	
EIL	**Elat**	**148.33**	**290**	PKPbc	**PKPbc**	**21 05 19.7**	**+0.4**	
	comp=Z,9.1nm,0.7s,baz=90,slow=5.1,SNR=7.4							
VRI	**Vrincioaia**	**148.37**	**324**	⇑P	**PKPbc**	**21 05 18.5**	**-0.4**	
OJC	**Ojcow**	**148.40**	**336**	*e*PKP	**PKPbc**	**21 05 19.1**	**+0.2**	
PLOR	**Plostina**	**148.42**	**324**	⇑P	**PKPbc**	**21 05 19.4**	**+0.3**	
OZUR		**148.72**	**325**	⇑P	**PKPbc**	**21 05 19.8**	**0.0**	
NIE	**Niedzica**	**148.85**	**335**	*e*PKP	**PKiKP**	**21 05 21.0**	**0.0**	
DOPR	**Dopca**	**149.02**	**325**	⇑P	**PKiKP**	**21 05 21.5**	**+0.1**	
MLR	**Muntele Rosu**	**149.03**	**324**	PKPbc	**PKPbc**	**21 05 20.2**	**-0.5**	
	comp=Z,5.9nm,0.7s,baz=335,slow=14,SNR=9.5							
MLR	**Muntele Rosu**	**149.03**	**324**	⇑P	**PKPbc**	**21 05 20.3**	**-0.4**	
MLR	**Muntele Rosu**	**149.03**	**324**		**PKPbc**	**21 05 20.7**	**0.0**	
KSP	**Ksiaz**	**149.07**	**340**	*e*PKP	**PKiKP**	**21 05 21.2**	**-0.1**	
SECR		**149.25**	**323**	⇓P	**PKPbc**	**21 05 21.5**	**+0.4**	
OKC	**Ostrava-Krasne**	**149.32**	**337**	⇑*e*PKP	**PKiKP**	**21 05 22.0**	**+0.1**	
OSTC	**Ostas**	**149.35**	**340**	⇑*e*PKP	**PKiKP**	**21 05 21.8**	**-0.1**	
CHVC	**Chvalec**	**149.37**	**340**	⇑*e*PKP	**PKiKP**	**21 05 21.9**	**-0.1**	
CJR	**Cluj-Napoca**	**149.42**	**328**	⇓P	**PKPbc**	**21 05 20.9**	**-0.6**	
UPC	**Upice**	**149.46**	**340**	⇑*e*PKP	**PKiKP**	**21 05 22.1**	**0.0**	
DPC	**Dobruska-Polom**	**149.50**	**340**	⇑*e*PKP	**PKiKP**	**21 05 22.3**	**0.0**	
VOIR		**149.54**	**325**	⇑P	**PKPbc**	**21 05 21.8**	**-0.1**	
CLL	**Collm**	**149.58**	**344**	⇑*i*PKPbc	**PKPbc**	**21 05 21.9**	**+0.3**	
	comp=Z,41nm,0.9s							
CLL				⇓*i*PKPab	**PKPab**	**21 05 29.1**	**-0.1**	
	comp=Z,19nm,0.8s							
CLL	**Collm**	**149.58**	**344**		**PKiKP**	**21 05 22.1**	**-0.2**	
MORC	**Moravsky Berou**	**149.58**	**338**	⇑P	**PKiKP**	**21 05 22.3**	**-0.2**	
MORC	**Moravsky Berou**	**149.58**	**338**	*e*PKP	**PKPbc**	**21 05 21.9**	**+0.1**	
KRLC	**Kraliky**	**149.58**	**339**	⇑*e*PKP	**PKiKP**	**21 05 22.6**	**+0.1**	
BRG	**Berggiesshubel**	**149.73**	**343**	*e*PKP	**PKPdf**	**21 05 17.1**	**+0.6**	
	comp=Z,24nm,1.9s							
BRG	**Berggiesshubel**	**149.73**	**343**	*i* PKP	**PKiKP**	**21 05 22.5**	**-0.2**	
	comp=Z,28nm,0.6s							
BRG	**Berggiesshubel**	**149.73**	**343**	*i* PKP	**PKPab**	**21 05 29.8**	**-0.1**	
	comp=Z,15nm,0.8s							
DRGR		**149.80**	**329**	⇓P	**PKPbc**	**21 05 22.4**	**0.0**	
ARR	**Arges**	**149.81**	**325**	⇓P	**PKiKP**	**21 05 23.8**	**+0.7**	
PVCC	**Panska Ves**	**149.87**	**342**	⇑*e*PKP	**PKiKP**	**21 05 23.1**	**+0.1**	
HUMR	**Humele**	**150.17**	**323**	⇓P	**PKPbc**	**21 05 22.5**	**-0.7**	
PSZ	**Piszkesteto**	**150.21**	**333**	⇑P	**PKPbc**	**21 05 23.0**	**-0.3**	
VRAC	**Vranov**	**150.31**	**339**	⇓P	**PKPbc**	**21 05 23.5**	**0.0**	
VRAC	**Vranov**	**150.31**	**339**	*e*PKP	**PKPbc**	**21 05 23.4**	**0.0**	
VRAC				*e*		21 05 32.8		
JAVC	**Velka Javorina**	**150.31**	**337**	*e*PKP	**PKiKP**	**21 05 24.8**	**+0.8**	
JAVC				*e*		21 05 34.0		
PRU	**Pruhonice**	**150.36**	**342**	⇑*e*PKP	**PKiKP**	**21 05 23.9**	**-0.1**	
PRU				*e*PKPAB	**PKPab**	**21 05 33.1**	**+0.6**	
KRUC	**Moravsky**	**150.58**	**339**	*e*PKP	**PKPbc**	**21 05 24.3**	**+0.2**	
KRUC				*e*		21 05 33.5		
SIRR	**Siria**	**150.68**	**329**	⇑P	**PKiKP**	**21 05 24.7**	**-0.1**	
NKC	**Novy Kostel**	**150.70**	**344**	⇑*e*PKP	**PKiKP**	**21 05 25.0**	**+0.3**	
NKC				*e*PKPAB	**PKPab**	**21 05 34.2**	**+0.2**	
GZR	**Gura Zlata**	**150.75**	**327**	⇓P	**PKPbc**	**21 05 24.4**	**-0.3**	
PBCC	**Pribram**	**150.79**	**342**	⇑*e*PKP	**PKiKP**	**21 05 24.8**	**-0.1**	
BZS	**Buzias**	**151.17**	**328**	⇑P	**PKPbc**	**21 05 25.5**	**0.0**	
HERR	**Herculane**	**151.29**	**327**	⇑P	**PKPbc**	**21 05 25.6**	**-0.2**	
KHC	**Kasperske Hory**	**151.41**	**342**	*e*PKPDF	**PKPdf**	**21 05 19.1**	**-0.2**	
KHC				⇑*e*PKP	**PKiKP**	**21 05 26.4**	**+0.2**	
KHC				*e*PKPAB	**PKPab**	**21 05 37.3**	**+0.3**	
KHC	**Kasperske Hory**	**151.41**	**342**		**PKiKP**	**21 05 26.4**	**+0.2**	
GRF	**Grafenberg Arr**	**151.50**	**345**	*e*PKPab	**PKPab**	**21 05 37.7**	**+0.3**	
	baz=28,slow=3.9							
MEM	**Membach**	**151.54**	**353**	PKPbc	**PKPbc**	**21 05 26.3**	**+0.2**	
BTNL	**Ternell**	**151.55**	**352**	PKPbc	**PKPbc**	**21 05 26.0**	**-0.2**	
GERES	**GERESS Array B**	**151.63**	**342**	PKPbc	**PKPbc**	**21 05 26.5**	**-0.1**	
	comp=Z,4.2nm,0.7s,baz=35,slow=2.4,SNR=30							
GERES				PKPab	**PKPab**	**21 05 37.8**	**-0.2**	
	comp=Z,1.6nm,0.5s,baz=40,slow=4.4,SNR=8.6							
GERES	**GERESS Array B**	**151.63**	**342**		**PKPbc**	**21 05 26.6**	**0.0**	
MDVR	**Moldovita**	**151.72**	**327**	⇑P	**PKPbc**	**21 05 26.7**	**-0.1**	
CONA	**Conrad Observa**	**151.74**	**338**	*e*P	**PKPbc**	**21 05 26.9**	**+0.1**	
	comp=Z,8.4nm,0.8s							
CONA				*e*P	**PKPab**	**21 05 38.4**	**-0.1**	
	comp=Z,5.5nm,0.8s							
BMRD	**Maredsous**	**151.97**	**354**	PKPbc	**PKPbc**	**21 05 27.1**	**0.0**	
BMRD				PKPab	**PKPab**	**21 05 38.9**	**-0.4**	
MOA	**Molln**	**152.34**	**340**	*e*P	**PKPbc**	**21 05 27.9**	**-0.1**	
	comp=Z,2.1nm,0.7s							
MOA				*e*P	**PKPab**	**21 05 41.3**	**+0.3**	
	comp=Z,6.2nm,1.0s							
SOKA	**Soboth**	**153.10**	**338**	*i* P	**PKPbc**	**21 05 29.5**	**-0.3**	
	comp=Z,1.6nm,0.6s							
SOKA				*e*P	**PKPab**	**21 05 43.6**	**-0.7**	
	comp=Z,2.9nm,1.0s							
KBA	**Koelnbreinsper**	**153.31**	**340**	*e*P	**PKPbc**	**21 05 30.0**	**-0.4**	
	comp=Z,3.9nm,0.9s							
KBA				*e*P	**PKPab**	**21 05 44.6**	**-0.7**	
	comp=Z,1.0nm,0.5s							
OBKA	**Obir**	**153.42**	**338**	*e*P	**PKPab**	**21 05 45.0**	**-0.7**	
	comp=Z,3.8nm,0.9s							
WATA	**Walderalm**	**153.60**	**343**	*i* P	**PKPbc**	**21 05 30.6**	**-0.3**	
	comp=Z,2.1nm,0.6s							
WATA				*e*P	**PKPab**	**21 05 46.6**	**+0.1**	
	comp=Z,3.5nm,0.5s							
WTTA	**Wattenberg**	**153.65**	**343**	*i* P	**PKPbc**	**21 05 30.8**	**-0.3**	
	comp=Z,2.5nm,0.5s							
WTTA				*e*P	**PKPab**	**21 05 47.1**	**+0.3**	
	comp=Z,8.1nm,0.5s							
RETA	**Reutte**	**153.67**	**344**	*e*P	**PKPab**	**21 05 46.7**	**0.0**	
	comp=Z,2.3nm,0.5s,SNR=5.1							
MOTA	**Moosalm**	**153.71**	**344**	*e*P	**PKPab**	**21 05 46.9**	**-0.2**	
	comp=Z,7.0nm,0.8s,SNR=5.9							
SQTA	**Sankt Quirin**	**153.80**	**343**	*i* P	**PKPbc**	**21 05 31.1**	**-0.2**	
	comp=Z,2.0nm,0.5s							
SQTA				*e*P	**PKPab**	**21 05 46.8**	**-0.5**	
	comp=Z,11nm,1.0s,SNR=4.4							
ABTA	**Abfaltersbach**	**153.86**	**341**	*e*P	**PKPbc**	**21 05 31.1**	**-0.4**	
	comp=Z,2.2nm,0.6s							
ABTA				*e*P	**PKPab**	**21 05 47.2**	**-0.4**	
	comp=Z,6.7nm,0.6s,SNR=5.9							
GBAS	**Gorenja Brezov**	**153.95**	**338**	*i* PKPbc	**PKPbc**	**21 05 31.2**	**-0.3**	
GBAS				*i* PKPab	**PKPab**	**21 05 47.1**	**-0.8**	
BOJS	**Bojanci**	**154.02**	**336**	*i* PKPbc	**PKPbc**	**21 05 31.3**	**-0.4**	
DAVA	**Damuels**	**154.07**	**345**	*e*P	**PKiKP**	**21 05 32.7**	**+0.7**	
	comp=Z,6.4nm,1.2s							
DAVA				*e*P	**PKPab**	**21 05 48.4**	**-0.2**	
	comp=Z,5.9nm,0.6s							
FETA	**Feichten**	**154.11**	**344**	*e*P	**PKPab**	**21 05 48.9**	**+0.2**	
	comp=Z,3.7nm,0.8s							
CEY	**Cerknica**	**154.12**	**337**	*i* PKPbc	**PKPbc**	**21 05 31.1**	**-0.9**	
STAL	**STALIGIAL**	**154.24**	**340**		**PKPab**	**21 05 48.4**	**-0.8**	
CIMO	**Cimolais**	**154.28**	**341**		**PKiKP**	**21 05 31.8**	**-0.5**	
CTI	**Castel Tesino**	**154.75**	**342**		**PKPab**	**21 05 51.3**	**-0.2**	
ESDC	**Sonseca Array**	**162.38**	**12**	PKPab	**PKPab**	**21 06 23.7**	**-1.1**	
	comp=Z,4.4nm,1.1s,baz=348,slow=5.3,SNR=8.7							
DBIC	**Dimbokro**	**163.50**	**161**	PKP	**PKPdf**	**21 05 34.6**	**-0.4**	
	comp=Z,3.5nm,1.1s,baz=160,slow=1.2,SNR=3.6							
TORD	**Torodi Ar. Bea**	**170.71**	**187**	PKP	**PKPdf**	**21 05 39.3**	**-0.9**	
	comp=Z,1.6nm,0.9s,baz=266,slow=0.7,SNR=9.0							
TORD				PKPab	**PKPab**	**21 07 02.4**	**+0.4**	
	comp=Z,0.7nm,0.9s,baz=178,slow=3.6,SNR=3.4							

*IDC **23** 20:47:55.1±0.6, 21°.78N×143°.50E, h0km, mb4.3/20, mb1 4.4/22, mb1mx4.2/69, mbtmp4.3/22, ML3.3/2, MS3.5/31, Ms1 3.5/31, ms1mx3.4/42, Error ellipse: s-maj=20.6km s-min=14.9km az=86.0*

*NEIC **23** 20:48:00.7±1.5, 21°.9N±0°.1×143°.5E±0°.1, h35km±2km, mb4.4/15, Error ellipse: s-maj=26.6km s-min=5.4km az=221.0*

ISC 23 20:48:00.4±0.6, **21°.81N**±0°.09×**143°.5E**±0°.1, **h35**km, **n71**, σ0**92**/48, **mb4.4**/23, **MS3.6**/27, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
GUMO	**Guam**	**8.28**	**171**	LR	LR	20 52 36.8		
	comp=Z,238nm,19.7s,baz=344,slow=34							
JHJ	**Hachijo jima 2**	**11.73**	**345**	LR	LR	20 55 05.2		
	comp=Z,286nm,19.8s,baz=102,slow=37							
MJAR	**Matsushiro Arr**	**15.38**	**344**	Pn	**Pn**	**20 51 34.3**	**-0.5**	
	0.1nm,0.3s,baz=158,slow=9.8,SNR=4.2							
MJAR				LR	LR	20 57 06.7		
	comp=Z,212nm,21.1s,baz=165,slow=36							
MJAR	**Matsushiro Arr**	**15.38**	**344**		**P**	**20 51 36.7**	**-2.4**	
MAJO	**Matsushiro**	**15.38**	**344**		**Pn**	**20 51 34.5**	**-0.3**	
JNU	**Nakatsue**	**15.86**	**318**	Pn	**Pn**	**20 51 41.3**	**+0.3**	
	0.1nm,0.3s,baz=107,slow=17,SNR=1.8							
JNU				LR	LR	20 57 24.0		
	comp=Z,44nm,18.4s,baz=72,slow=36							
JNU	**Nakatsue**	**15.86**	**318**		**P**	**20 51 42.0**	**-2.4**	
JNU				IAmb	IAmb	20 51 51.6		
	comp=Z,27nm,1.4s							
JHS	**Saijyo**	**15.97**	**328**		**P**	**20 51 45.3**	**-0.4**	
JMM	**Marumori**	**16.17**	**352**	Pn	**Pn**	**20 51 45.1**	**+0.2**	
JMM				IAmb	IAmb	20 51 56.3		
	comp=Z,26nm,0.8s							
JTU	**Tsushima**	**17.71**	**319**		**P**	**20 52 05.2**	**+0.4**	
JTU				IAmb	IAmb	20 52 23.8		
	comp=Z,44nm,1.4s							
YOJ	**Yonaguni jima**	**19.00**	**282**	P	**Pn**	**20 52 19.9**	**-0.2**	
YHNB	**Yeheng**	**20.50**	**282**	P	**P**	**20 52 35.1**	**-0.5**	
YHNB				IAmb	IAmb	20 52 45.5		
	comp=Z,15nm,0.8s							
KSRS	**Korea Array**	**20.59**	**323**	P	Pn	20 52 41.6	+2.9	
	comp=Z,3.7nm,0.7s,baz=145,slow=9.2,SNR=16							
KSRS				LR	LR	20 59 41.1		
	comp=Z,49nm,18.7s,baz=145,slow=34							
H11N1	**WAKE ISLAND Hy**	**21.99**	**91**	T	T	21 15 36.3		
	baz=279,slow=75,SNR=13							
H11N2	**WAKE ISLAND Hy**	**22.00**	**91**	T	T	21 15 39.6		
	baz=279,slow=75,SNR=11							
H11N3	**WAKE ISLAND Hy**	**22.01**	**91**	T	T	21 15 33.6		
	baz=279,slow=75,SNR=14							
H11S3	**WAKE ISLAND Hy**	**22.04**	**94**	T	T	21 15 30.3		
	baz=282,slow=75,SNR=105							
H11S1	**WAKE ISLAND Hy**	**22.05**	**94**	T	T	21 15 35.7		
	baz=282,slow=75,SNR=60							
H11S2	**WAKE ISLAND Hy**	**22.05**	**94**	T	T	21 15 34.7		
	baz=282,slow=75,SNR=32							
ASAJ	**Asahikawa**	**22.26**	**358**	LR	LR	21 01 13.0		
	comp=Z,102nm,21.8s,baz=186,slow=36							
DAV	**Davao City (W)**	**22.65**	**232**	LR	LR	20 59 52.9		
	comp=Z,249nm,20.4s,baz=80,slow=32							
TGY	**Tagaytay City**	**22.75**	**254**	LR	LR	21 00 53.9		
	comp=Z,156nm,18.4s,baz=66,slow=34							
USRK	**Ussuriysk Ar.**	**24.27**	**340**	P	**P**	**20 53 16.1**	**+1.9**	
	comp=Z,3.7nm,0.9s,baz=176,slow=8.7,SNR=4.3							
USRK				LR	LR	21 02 13.1		
	comp=Z,91nm,18.8s,baz=145,slow=35							
JAY	**Jayapura**	**24.33**	**187**	LR	LR	21 00 40.1		
	comp=Z,93nm,21.4s,baz=352,slow=32							
KRVT	**Keravat (AS076**	**27.27**	**161**	LR	LR	21 05 21.2		
	comp=Z,22nm,18.7s,baz=1.6,slow=38							
PETK	**Petropavlovsk-**	**33.09**	**16**	LR	LR	21 05 48.0		
	comp=Z,93nm,21.0s,baz=206,slow=32							
HNR	**Honiara**	**35.00**	**151**	LR	LR	21 06 25.6		
	comp=Z,53nm,20.7s,baz=351,slow=32							
MA2	**Magadan**	**38.09**	**6**	P	**P**	**20 55 15.7**	**+0.1**	
	comp=Z,8.1nm,0.7s,baz=276,slow=22,SNR=1.5							
SONM	**Songino Array**	**39.42**	**320**	P	**P**	**20 55 27.0**	**-0.2**	
	comp=Z,1.8nm,0.9s,baz=122,slow=7.3,SNR=9.0							
YAK	**Yakutsk**	**41.30**	**350**	P	**P**	**20 55 42.3**	**+0.1**	
	comp=Z,3.1nm,0.4s,baz=144,slow=0.7,SNR=6.7							
YAK				LR	LR	21 13 33.9		
	comp=Z,55nm,19.7s,baz=147,slow=37							
SEY	**Seymchan**	**41.55**	**6**	P	**P**	**20 55 45.5**	**+1.3**	
	comp=Z,7.0nm,1.0s,baz=190,slow=7.8,SNR=6.3							
CMAR	**Chiang Mai Arr**	**41.84**	**274**	P	**P**	**20 55 48.7**	**+1.4**	
	comp=Z,0.8nm,1.0s,baz=65,slow=7.1,SNR=3.3							
CMAR				LR	LR	21 13 51.8		
	comp=Z,28nm,18.6s,baz=169,slow=37							
WRA	**Warramunga Arr**	**42.45**	**193**	P	**P**	**20 55 51.5**	**-0.6**	
	comp=Z,3.2nm,0.9s,baz=12,slow=8.9,SNR=7.5							
WRA				LR	LR	21 13 25.5		
	comp=Z,45nm,18.1s,baz=230,slow=36							
ASAR	**Alice Springs**	**46.15**	**192**	P	**P**	**20 56 21.1**	**-0.6**	
	comp=Z,1.7nm,0.8s,baz=7.8,slow=8.9,SNR=6.0							
ASAR				LR	LR	21 14 30.0		
	comp=Z,66nm,20.0s,baz=356,slow=35							
STKA	**Stephens Creek**	**53.41**	**182**	P	**P**	**20 57 17.4**	**+0.6**	
	comp=Z,1.8nm,0.7s,baz=352,slow=11,SNR=2.4							
STKA				LR	LR	21 20 39.6		
	comp=Z,14nm,19.1s,baz=19,slow=37							
ZALV	**Zalesovo Beam**	**54.29**	**322**	P	**P**	**20 57 21.4**	**-1.6**	
	comp=Z,2.8nm,0.7s,baz=98,slow=6.7,SNR=11							
ZALV	**Zalesovo Beam**	**54.29**	**322**	P	**P**	**20 57 22.5**	**-0.5**	
MKAR	**Makanchi Array**	**54.82**	**313**	P	**P**	**20 57 27.0**	**0.0**	
	comp=Z,2.0nm,0.9s,baz=88,slow=8.7,SNR=6.1							
MKAR	**Makanchi Array**	**54.82**	**313**	P	**P**	**20 57 26.6**	**-0.4**	
SVW2	**Sparrevohn**	**57.17**	**30**	P	**P**	**20 57 44.5**	**+0.9**	
KURK	**Kurchatov**	**57.58**	**317**	P	**P**	**20 57 46.5**	**0.0**	
KURBB	**Kurchatov Arra**	**57.63**	**317**	P	**P**	**20 57 47.0**	**+0.1**	
	comp=Z,4.6nm,0.8s,baz=94,slow=7.5,SNR=43							
NRIK	**Noril'sk**	**57.98**	**340**	P	**P**	**20 57 48.8**	**-0.3**	
	comp=Z,4.1nm,0.8s,baz=114,slow=10.0,SNR=5.1							
NRIK				LR	LR	21 23 42.1		
	comp=Z,54nm,18.4s,baz=22,slow=37							
ILAR	**Eielson Array**	**61.82**	**27**	P	**P**	**20 58 14.8**	**-0.8**	
	comp=Z,3.3nm,0.9s,baz=261,slow=5.5,SNR=27							
ILAR				LR	LR	21 22 01.5		
	comp=Z,47nm,21.9s,baz=272,slow=33							
ILAR	**Eielson Array**	**61.82**	**27**	P	**P**	**20 58 14.9**	**-0.7**	
BMAR	**Burnt Mountain**	**63.13**	**24**	P	**P**	**20 58 25.0**	**+0.6**	
KKAR	**Karatay Array**	**63.20**	**308**	P	**P**	**20 58 25.9**	**+0.7**	
BARN	**Barnard Glacie**	**63.85**	**32**	P	**P**	**20 58 29.5**	**+0.1**	
INK	**Inuvik**	**67.36**	**24**	P	**P**	**20 58 52.0**	**+0.5**	
	comp=Z,7.0nm,1.1s,baz=247,slow=7.1,SNR=9.8							
INK	**Inuvik**	**67.36**	**24**	P	**P**	**20 58 51.6**	**+0.1**	
ABKAR	**Akbulak array**	**69.66**	**316**	P	**P**	**20 59 06.0**	**-0.3**	
C36M	**Paulatuk**	**70.66**	**22**	P	**P**	**20 59 11.6**	**-0.4**	
C36M				IAmb	IAmb	20 59 12.7		
	comp=Z,6.2nm,0.9s							
EUNU	**Eureka**	**74.95**	**8**	P	**P**	**20 59 37.9**	**+0.4**	
EUNU				IAmb	IAmb	20 59 46.1		
	comp=Z,5.9nm,0.9s							
YKA	**Yellowknife Ar**	**76.23**	**28**	P	**P**	**20 59 45.4**	**+0.4**	
	comp=Z,2.0nm,0.6s,baz=296,slow=4.8,SNR=10							
YKA				LR	LR	21 32 04.6		
	comp=Z,60nm,20.4s,baz=0.0,slow=35							
PPT	**Papeete**	**76.33**	**115**	LR	LR	21 26 43.6		
	comp=Z,21nm,19.0s,baz=320,slow=30							
KLMR	**Klimovskoe**	**77.74**	**331**	*e*P	**P**	**20 59 51.3**	**-2.2**	
KLMR				AMP		20 59 56.2		
	comp=Z,14nm,1.4s							
ARCES	**ARCESS Array B**	**78.90**	**342**	P	**P**	**21 00 00.8**	**+1.0**	
	comp=Z,2.1nm,0.7s,baz=61,slow=6.3,SNR=2.0							
ARCES				LR	LR	21 39 45.4		
	comp=Z,27nm,18.3s,baz=175,slow=39							
CMB	**Columbia Colle**	**81.48**	**53**	P	**P**	**21 00 15.2**	**+0.8**	
CMB				IAmb	IAmb	21 00 27.6		
	comp=Z,4.3nm,1.0s							
KBZ	**Khabaz**	**82.48**	**314**	P	**P**	**21 00 20.1**	**+0.7**	
	comp=Z,7.0nm,1.0s,baz=93,slow=15,SNR=5.4							
NVAR	**Mina Array Bea**	**82.86**	**52**	P	**P**	**21 00 22.7**	**+0.8**	
	comp=Z,3.0nm,0.8s,baz=269,slow=5.6,SNR=13							
NVAR				LR	LR	21 29 59.1		
	comp=Z,69nm,20.2s,baz=270,slow=30							
NVAR	**Mina Array Bea**	**82.86**	**52**	P	**P**	**21 00 21.4**	**-0.5**	
FINES	**FINESS Array B**	**83.20**	**335**	P	**P**	**21 00 22.4**	**-0.4**	
	comp=Z,2.0nm,0.7s,baz=64,slow=6.0,SNR=5.7							
FINES				LR	LR	21 38 01.1		
	comp=Z,31nm,19.1s,baz=15,slow=36							
PDAR	**Pinedale Array**	**87.12**	**45**	LR	LR	21 35 41.9		
	comp=Z,58nm,19.9s,baz=318,slow=33							
AKASG	**Malin Array Be**	**87.57**	**325**	LR	LR	21 41 35.7		
	comp=Z,48nm,18.4s,baz=350,slow=37							
NOA	**NORSAR Array B**	**88.94**	**339**	LR	LR	21 44 22.3		
	comp=Z,24nm,19.1s,baz=335,slow=38							
ULM	**Lac du Bonnet**	**91.20**	**34**	LR	LR	21 41 34.0		
	comp=Z,34nm,19.9s,baz=12,slow=35							
TXAR	**Lajitas Array**	**97.77**	**54**	LR	LR	21 38 56.1		
	comp=Z,24nm,21.6s,baz=0.0,slow=31							
VNDA	**Vanda**	**99.71**	**176**	LR	LR	21 46 09.8		
	comp=Z,21nm,18.2s,baz=328,slow=35							
MDP	**Montagnes des**	**148.94**	**32**	PKPbc	**PKPbc**	**21 07 45.3**	**-0.2**	
	comp=Z,7.8nm,0.8s,baz=22,slow=5.4,SNR=2.0							
LPAZ	**La Paz**	**149.66**	**85**	PKPbc	**PKiKP**	**21 07 48.1**	**-0.9**	
	comp=Z,4.8nm,0.9s,baz=344,slow=4.1,SNR=12							
LVC	**Limon Verde**	**150.04**	**98**	PKPbc	**PKPbc**	**21 07 47.0**	**-1.5**	
	comp=Z,2.2nm,0.4s,baz=344,slow=7.4,SNR=2.3							

*PRU **23** 20:52:13.7±0.0, 46°.06N×6°.84E, h0km*

*GEN **23** 20:52:15.8, 46°.03N×6°.86E, h9km±1km, Ml3.1*

*ZUR **23** 20:52:15.7, 46°.04N×6°.87E, h10km, MLh3.3/87, Error ellipse: s-maj=0.8km s-min=0.6km az=218.0*

*LDG **23** 20:52:15.8±0.0, 46°.02N×6°.87E, h7km, Md3.5/3, Ml3.5/72, Error ellipse: s-maj=0.4km s-min=0.4km az=117.0*

*STR **23** 20:52:15.6±0.3, 46°.0N±1.0×°±°, h9km±2km, mb3.9/1, MLv3.4/11, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*

*BGR **23** 20:52:15.8±0.5, 46°.05N×6°.75E, h10km, ML3.4/16, Error ellipse: s-maj=3.3km s-min=3.3km az=101.0*

*ROM **23** 20:52:16.2±0.2, 46°.010N±0°.006×6°.92E±0°.01, h15km±2km, ML2.9/34, Error ellipse: s-maj=0.9km s-min=0.6km az=309.0*

ISC 23 20:52:14.2±0.7, **46°.028N**±0°.010×**6°.82E**±0°.01,

SIOM **Sion-Mayennets 0.43 62** ⇑Pg **Pb 20 52 23.8 +0.2**
SIOM ⇑Pg **Pb 20 52 23.8 +0.2**
comp=E,3.2nm,SNR=27
SIOV Sion-Valere 0.43 61 ⇑Pg **Pb 20 52 23.8 +0.1**
comp=E,1.3nm,SNR=12
SIOV ⇑Pg **Pb 20 52 23.8 +0.1**
SIOV Sg **Sg 20 52 29.1 +0.4**
SIOV Sion-Valere 0.43 61 ⇑Pg **Pb 20 52 23.8 +0.1**
comp=E,1.3nm,SNR=12
SIOV ⇑Pg **Pb 20 52 23.8 +0.1**
SIOV Sg **Sg 20 52 29.1 +0.4**
SIOV Sion-Valere 0.43 61 ⇑Pg **Pb 20 52 23.8 +0.1**
SIOV ⇑Pg **Pb 20 52 23.8 +0.1**
comp=E,1.3nm,SNR=12
SIOV Sg **Sg 20 52 29.2 +0.5**
SIOO Sion-Ophtalmol 0.44 62 ⇑Pg **Pb 20 52 24.2 +0.3**
SIOO ⇑Pg **Pb 20 52 24.2 +0.3**
comp=E,3.1nm,SNR=19
SIOO Sion-Ophtalmol 0.44 62 ⇑Pg **Pb 20 52 24.2 +0.3**
comp=E,3.1nm,SNR=19
SIOO ⇑Pg **Pb 20 52 24.2 +0.3**
SIOO Sion-Ophtalmol 0.44 62 ⇑Pg **Pb 20 52 24.2 +0.3**
comp=E,3.5nm,SNR=22
SIOO ⇑Pg **Pb 20 52 24.2 +0.3**
SENIN Lac Senin/Sane 0.47 45 ⇑Pg **Pb 20 52 24.7 +0.1**
SENIN ⇑Pg **Pb 20 52 24.7 +0.1**
comp=E,1.2nm,SNR=19
SENIN Sg **Sg 20 52 30.7 +0.7**
SENIN Lac Senin/Sane 0.47 45 ⇑Pg **Pb 20 52 24.7 +0.1**
SENIN ⇑Pg **Pb 20 52 24.7 +0.1**
comp=E,1.2nm,SNR=19
SENIN Sg **Sg 20 52 30.7 +0.7**
SENIN Lac Senin/Sane 0.47 45 ⇑Pg **Pb 20 52 24.6 +0.1**
SENIN ⇑Pg **Pb 20 52 24.6 +0.1**
comp=E,1.2nm,SNR=19
SENIN Sg **Sg 20 52 30.8 +0.7**
LPL La Plagne 0.52 187 *e*Pg **Pb 20 52 26.1 +0.9**
LPL La Plagne 0.52 187 *e*Pn **Pn 20 52 27.7 +0.3**
LPL *e*Sg **Sb 20 52 32.7 +0.1**
comp=E,743nm,0.3s
LPG La Plagne 0.53 185 *e*Pg **Pb 20 52 26.4 +0.8**
LPG *e*Sg **Sb 20 52 33.2 0.0**
comp=E,1µm,0.2s
SIEB Ecole de Borzu 0.56 61 ⇑Pg **Pb 20 52 26.4 +0.5**
comp=E,2.3nm,SNR=24
SIEB ⇑Pg **Pb 20 52 26.4 +0.5**
SIEB Ecole de Borzu 0.56 61 ⇑Pg **Pb 20 52 26.4 +0.5**
SIEB ⇑Pg **Pb 20 52 26.4 +0.5**
comp=E,2.3nm,SNR=24
SIEB Ecole de Borzu 0.56 61 ⇑Pg **Pb 20 52 26.5 +0.5**
SIEB ⇑Pg **Pb 20 52 26.5 +0.5**
comp=E,2.3nm,SNR=24
VANNI Vissoie, Val d 0.57 71 ⇑Pg **Pb 20 52 26.4 +0.2**
VANNI ⇑Pg **Pb 20 52 26.4 +0.2**
comp=E,1.4nm,SNR=19
VANNI Sg **Sg 20 52 33.7 +0.6**
VANNI Vissoie, Val d 0.57 71 ⇑Pg **Pb 20 52 26.4 +0.2**
VANNI ⇑Pg **Pb 20 52 26.4 +0.2**
comp=E,1.4nm,SNR=19
VANNI Sg **Sg 20 52 33.7 +0.6**
VANNI Vissoie, Val d 0.57 71 ⇑Pg **Pb 20 52 26.3 +0.2**
VANNI ⇑Pg **Pb 20 52 26.3 +0.2**
comp=E,1.4nm,SNR=19
VANNI Sg **Sg 20 52 33.7 +0.6**
LSD Lago del Serru 0.61 159 ⇓Pg **Pb 20 52 27.5 +0.6**
LSD ⇓Pg **Pb 20 52 27.5 +0.6**
comp=E,1.9nm,SNR=36
LSD Sg **Sb 20 52 35.1 -0.3**
LSD Lago del Serru 0.61 159 ⇓Pg **Pb 20 52 27.5 +0.6**
LSD ⇓Pg **Pb 20 52 27.5 +0.6**
comp=E,1.9nm,SNR=36
LSD Sg **Sb 20 52 35.2 -0.2**
LSD Lago del Serru 0.61 159 P **Pb 20 52 27.5 +0.6**
LSD S **Sb 20 52 35.2 -0.3**
LSD Lago del Serru 0.61 159 ⇓P **Pb 20 52 27.5 +0.6**
LSD S **Sb 20 52 34.9 -0.5**
LSD AML AML
comp=E,3055µm,0.3s
LSD AML AML
comp=N,1430µm,1.1s
GIMEL St. Georges / 0.64 323 ⇓Pg **Pn 20 52 28.7 -0.3**
GIMEL ⇓Pg **Pn 20 52 28.7 -0.3**
comp=N,0.9nm,SNR=12
GIMEL St. Georges / 0.64 323 ⇓Pg **Pn 20 52 28.7 -0.3**
comp=N,0.9nm,SNR=12
GIMEL ⇓Pg **Pn 20 52 28.7 -0.3**
GIMEL St. Georges / 0.64 323 ⇓Pg **Pn 20 52 28.7 -0.3**
comp=N,0.9nm,SNR=12
GIMEL ⇓Pg **Pn 20 52 28.7 -0.3**
GIMEL St. Georges / 0.64 323 ⇓P **Pn 20 52 28.7 -0.3**
GIMEL AML AML
comp=N,678µm,0.2s
GIMEL AML AML
comp=E,726µm,0.3s
GIMEL AML AML
comp=E,726µm,0.3s
GIMEL AML AML
comp=N,678µm,0.2s
LKBD Leukerbad 0.67 57 ⇑Pg **Pb 20 52 28.0 +0.2**
LKBD ⇑Pg **Pb 20 52 28.0 +0.2**
comp=N,1.2nm,SNR=14
LKBD Sg **Sg 20 52 36.6 +0.5**
LKBD Leukerbad 0.67 57 ⇑Pg **Pb 20 52 28.0 +0.2**
LKBD ⇑Pg **Pb 20 52 28.0 +0.2**
comp=N,1.2nm,SNR=14
LKBD Sg **Sg 20 52 36.6 +0.5**
LKBD Leukerbad 0.67 57 ⇑Pg **Pb 20 52 28.0 +0.2**
LKBD ⇑Pg **Pb 20 52 28.0 +0.2**
comp=N,1.2nm,SNR=14
LKBD Sg **Sg 20 52 36.6 +0.5**
CIRO Champorcher 0.68 129 ⇓Pg **Pb 20 52 28.2 +0.2**
comp=N,0.5nm,SNR=12
CIRO ⇓Pg **Pb 20 52 28.2 +0.2**
CIRO Champorcher 0.68 129 ⇓Pg **Pb 20 52 28.2 +0.2**
CIRO ⇓Pg **Pb 20 52 28.2 +0.2**
comp=N,0.5nm,SNR=12
CIRO Champorcher 0.68 129 ⇓Pg **Pb 20 52 28.2 +0.2**
CIRO ⇓Pg **Pb 20 52 28.2 +0.2**
comp=N,0.5nm,SNR=12
CIRO Champorcher 0.68 129 P **Pb 20 52 28.2 +0.2**
CIRO S **Sg 20 52 36.9 +0.5**
CIRO Champorcher 0.68 129 ⇓P **Pb 20 52 28.2 +0.2**
CIRO AML AML
comp=E,460µm,0.4s
CIRO AML AML
comp=N,444µm,0.6s
SNIB St. Niklaus Ba 0.70 77 ⇑Pg **Pb 20 52 28.5 +0.2**
comp=N,2.7nm,SNR=25
SNIB ⇑Pg **Pb 20 52 28.5 +0.2**
SNIB St. Niklaus Ba 0.70 77 ⇑Pg **Pb 20 52 28.5 +0.2**
SNIB ⇑Pg **Pb 20 52 28.5 +0.2**
comp=N,2.7nm,SNR=25
SNIB St. Niklaus Ba 0.70 77 Pg **Pb 20 52 28.6 +0.2**
SNIB Pg **Pb 20 52 28.6 +0.2**
comp=N,2.7nm,SNR=25
SGRA Graechen Ausbl 0.73 76 ⇑Pg **Pb 20 52 29.1 +0.3**
SGRA ⇑Pg **Pb 20 52 29.1 +0.3**
comp=N,1.5nm,SNR=5.6
SGRA Graechen Ausbl 0.73 76 ⇑Pg **Pb 20 52 29.1 +0.3**
comp=N,1.5nm,SNR=5.6
SGRA ⇑Pg **Pb 20 52 29.1 +0.3**
SGRA Graechen Ausbl 0.73 76 ⇑Pg **Pb 20 52 29.1 +0.3**
SGRA ⇑Pg **Pb 20 52 29.1 +0.3**
comp=N,1.5nm,SNR=5.6
SATI Passo dei Sala 0.75 101 ⇓Pg **Pg 20 52 29.0 +0.2**
SATI ⇓Pg **Pg 20 52 29.0 +0.2**
comp=N,0.6nm,SNR=17
SATI Passo dei Sala 0.75 101 ⇓Pg **Pg 20 52 29.0 +0.2**
comp=N,0.6nm,SNR=17
SATI ⇓Pg **Pg 20 52 29.0 +0.2**
SATI Passo dei Sala 0.75 101 ⇓Pg **Pg 20 52 29.0 +0.2**
comp=N,0.6nm,SNR=17
SATI ⇓Pg **Pg 20 52 29.0 +0.2**
SATI Sg **Sg 20 52 38.2 -0.5**
SATI Passo dei Sala 0.75 101 P **Pg 20 52 29.0 +0.2**
SATI S **Sg 20 52 38.8 +0.1**
SATI Passo dei Sala 0.75 101 P **Pg 20 52 29.0 +0.2**
SATI S **Sg 20 52 38.4 -0.3**
SATI AML AML
comp=E,732µm,1.2s
SATI AML AML
comp=N,725µm,1.0s
TORNY Torny/Romont 0.75 7 Pg **Pn 20 52 30.4 -0.2**
comp=N,4.3nm,SNR=46
TORNY Pg **Pn 20 52 30.4 -0.2**
TORNY Torny/Romont 0.75 7 Pg **Pn 20 52 30.4 -0.2**
TORNY Torny/Romont 0.75 7 ⇑Pg **Pn 20 52 30.3 -0.2**
TORNY PmP 20 52 33.4
TORNY Sg **Sn 20 52 41.2 -0.7**
TORNY SmS 20 52 45.6
LAUCH Lauchernalp 0.77 59 ⇑Pg **Pb 20 52 29.8 +0.2**
comp=N,1.3nm,SNR=31
LAUCH ⇑Pg **Pb 20 52 29.8 +0.2**
LAUCH Lauchernalp 0.77 59 ⇑Pg **Pb 20 52 29.8 +0.2**
LAUCH Lauchernalp 0.77 59 ⇑Pg **Pb 20 52 29.8 +0.2**
CABF La Chapelle 0.77 319 *e*Pg **Pn 20 52 31.2 +0.3**
CABF La Chapelle 0.77 319 *e*P **Pn 20 52 32.4 +1.5**
CABF *e*Sg **Sn 20 52 41.5 -0.9**
comp=N,104nm,0.2s
CABF *e*Sn **Sb 20 52 43.6 +3.6**
comp=N,439nm,0.4s
SVIO Visp Obere Sta 0.78 70 ⇑Pg **Pb 20 52 30.1 +0.4**
comp=N,1.2nm,SNR=7.9
SVIO ⇑Pg **Pb 20 52 30.1 +0.4**
SVIO Visp Obere Sta 0.78 70 ⇑Pg **Pb 20 52 30.1 +0.4**
SVIT Visp-Terbiners 0.79 70 Pg **Pb 20 52 30.1 +0.4**
SVIT Pg **Pb 20 52 30.1 +0.4**
comp=N,1.1nm,SNR=5.5
SVIT Visp-Terbiners 0.79 70 Pg **Pb 20 52 30.1 +0.4**
MMK Mattmark 0.80 88 ⇑Pg **Pb 20 52 30.1 +0.1**
MMK ⇑Pg **Pb 20 52 30.1 +0.1**
comp=N,1.1nm,SNR=34
MMK Sg **Sg 20 52 39.4 -0.8**
MMK Mattmark 0.80 88 ⇑Pg **Pb 20 52 30.1 +0.1**
MMK Sg **Sg 20 52 39.4 -0.8**
MMK Mattmark 0.80 88 Pg **Pb 20 52 30.1 +0.1**
MMK Mattmark 0.80 88 P **Pb 20 52 30.1 +0.1**
MMK S **Sg 20 52 39.5 -0.8**
MMK AML AML
comp=E,492µm,0.2s
MMK AML AML
comp=N,756µm,0.3s
MMK AML AML
comp=E,492µm,0.2s
MMK AML AML
comp=N,756µm,0.3s
BIBA Brigerbad 0.82 70 Pg **Pb 20 52 30.7 +0.4**
BIBA Pg **Pb 20 52 30.7 +0.4**
comp=N,0.7nm,SNR=3.9
BIBA Brigerbad 0.82 70 Pg **Pb 20 52 30.7 +0.4**
BIBA Brigerbad 0.82 70 ⇑Pg **Pb 20 52 30.7 +0.4**
OGMO Fort Saint-Gob 0.82 187 Pg **Pn 20 52 31.5 0.0**
OGMO Sg **Sn 20 52 43.0 -0.6**
TRAV Traversella 0.83 128 ⇓Pg **Pb 20 52 30.9 +0.5**
TRAV ⇓Pg **Pb 20 52 30.9 +0.5**
comp=N,0.6nm,SNR=15
TRAV Traversella 0.83 128 ⇓Pg **Pb 20 52 30.9 +0.5**
TRAV Traversella 0.83 128 ⇓Pg **Pb 20 52 30.9 +0.5**
TRAV Traversella 0.83 128 P **Pb 20 52 30.9 +0.5**
TRAV S **Sg 20 52 41.1 -0.1**
TRAV Traversella 0.83 128 ⇓P **Pb 20 52 30.9 +0.5**
TRAV AML AML
comp=N,891µm,0.2s
TRAV AML AML
comp=E,680µm,0.8s
TRAV AML AML
comp=E,679µm,0.8s
WIMIS Wimmis 0.85 41 ⇑Pg **Pb 20 52 31.5 +0.7**
comp=E,0.8nm,SNR=8.1
WIMIS ⇑Pg **Pb 20 52 31.5 +0.7**
WIMIS Wimmis 0.85 41 ⇑Pg **Pb 20 52 31.5 +0.7**
WIMIS Wimmis 0.85 41 ⇑Pg **Pb 20 52 31.5 +0.7**
SIMPL Simplonpass 0.86 75 ⇑Pg **Pb 20 52 31.4 +0.3**
comp=E,1.7nm,SNR=33
SIMPL ⇑Pg **Pb 20 52 31.4 +0.3**
SIMPL Simplonpass 0.86 75 ⇑Pg **Pb 20 52 31.4 +0.3**
SIMPL Simplonpass 0.86 75 ⇑Pg **Pb 20 52 31.4 +0.3**
OG35 Corcelles 0.87 272 ⇓Pg **Pn 20 52 33.3 +1.1**
OG35 Corcelles 0.87 272 ⇓Pg **Pn 20 52 33.3 +1.1**
OG35 Corcelles 0.87 272 ⇓Pg **Pn 20 52 33.3 +1.1**
OG35 Corcelles 0.87 272 Pg **Pn 20 52 33.3 +1.1**
OG35 Sg **Sn 20 52 45.4 +0.7**
OGSM Saint Maurice 0.89 242 Pg **Pn 20 52 33.8 +1.4**
OGSM Sg **Sn 20 52 46.2 +1.1**
RSP Reno Superiore 0.93 160 ⇓Pg **Pn 20 52 33.2 +0.1**
comp=E,1.2nm,SNR=24
RSP ⇓Pg **Pn 20 52 33.2 +0.1**
RSP Reno Superiore 0.93 160 ⇓Pg **Pn 20 52 33.2 +0.1**
RSP Reno Superiore 0.93 160 ⇓Pg **Pn 20 52 33.2 +0.1**
RSP Reno Superiore 0.93 160 P **Pn 20 52 33.2 +0.1**
RSP S **Sb 20 52 45.0 +0.4**
RSP Reno Superiore 0.93 160 P **Pn 20 52 33.2 +0.1**
RSP S **Sb 20 52 45.2 +0.6**
RSP AML AML
comp=E,1360µm,0.5s
RSP AML AML
comp=N,1008µm,1.1s
RSP AML AML
comp=N,1005µm,1.1s
RSP AML AML
comp=E,1430µm,0.5s
RSP AML AML
comp=N,1040µm,1.1s
BRANT Les Verrieres 0.94 345 Pg **Pn 20 52 34.1 +0.9**
comp=N,1.5nm,SNR=19
BRANT Pg **Pn 20 52 34.1 +0.9**
BRANT Les Verrieres 0.94 345 Pg **Pn 20 52 34.1 +0.9**
BRANT Les Verrieres 0.94 345 ⇓Pg **Pn 20 52 34.1 +0.9**
GDM Grand'Maison 0.96 211 Pg **Pn 20 52 34.1 +0.6**
GDM Sg **Sn 20 52 48.4 +1.3**
SINS Interlaken, Sc 0.98 47 Pg **Pn 20 52 34.3 +0.7**
BNI Bardonecchia 0.98 186 ⇑Pg **Pn 20 52 34.3 +0.5**
BNI Bardonecchia 0.98 186 ⇑Pg **Pn 20 52 34.3 +0.5**
BNI Bardonecchia 0.98 186 ⇑Pg **Pn 20 52 34.3 +0.5**
BNI Bardonecchia 0.98 186 P **Pn 20 52 34.3 +0.5**
BNI S **Sn 20 52 47.7 +0.2**
BNI AML AML
comp=E,285µm,1.2s
BNI AML AML
comp=N,306µm,0.5s
BNI AML AML
comp=N,402µm,0.5s
BNI AML AML
comp=E,358µm,1.2s
BNI AML AML
comp=E,286µm,1.2s
FIESA Fiescheralp 0.98 65 ⇑Pg **Pg 20 52 33.8 +0.5**
comp=E,0.8nm,SNR=14
FIESA ⇑Pg **Pg 20 52 33.8 +0.5**
FIESA Fiescheralp 0.98 65 ⇑Pg **Pg 20 52 33.8 +0.5**
FIESA Fiescheralp 0.98 65 ⇑Pg **Pg 20 52 33.8 +0.5**
FIESA PmP 20 52 37.6
GRN Grenoble 1.09 224 Pg **Pn 20 52 37.3 +2.1**
GRN Sg **Sn 20 52 52.9 +2.8**
RRL Rocca Remolon 1.11 181 P **Pn 20 52 36.7 +1.1**
RRL S **Sn 20 52 50.9 +0.2**
RRL AML AML
comp=N,458µm,0.7s
RRL AML AML
comp=E,577µm,0.9s
HASLI Hasliberg/Brie 1.18 51 Pg **Pg 20 52 37.5 +0.6**
HASLI Pg **Pg 20 52 37.5 +0.6**
comp=E,1.4nm,SNR=30
HASLI Hasliberg/Brie 1.18 51 Pg **Pg 20 52 37.5 +0.6**
HASLI Hasliberg/Brie 1.18 51 ⇑Pg **Pg 20 52 37.5 +0.6**
GRIMS Grimsel Gerste 1.18 62 Pg **Pg 20 52 37.3 +0.4**
BHB Bricherasio 1.23 165 P **Pg 20 52 38.9 +1.1**
BHB S **Sg 20 52 54.3 +0.5**
BHB AML AML
comp=N,680µm,1.4s
BHB AML AML
comp=N,681µm,1.4s
BHB AML AML
comp=E,560µm,0.3s
CHMF Charmoille 1.23 355 ⇑Pg **Pg 20 52 39.3 +1.4**
comp=E,1.1nm,SNR=16
CHMF ⇑Pg **Pg 20 52 39.3 +1.4**
CHMF Charmoille 1.23 355 ⇑Pg **Pg 20 52 39.3 +1.4**
CHMF Charmoille 1.23 355 ⇑Pg **Pg 20 52 39.3 +1.4**
CHMF PmP 20 52 40.7
CHMF Sg **Sg 20 52 55.9 +2.0**
CHMF Charmoille 1.23 355 Pg **Pg 20 52 39.3 +1.4**
CHMF Sg **Sg 20 52 55.9 +2.0**
MONC Moncucco Torin 1.23 140 AML AML
comp=N,544µm,0.5s
MONC AML AML
comp=E,559µm,0.4s
ORIF Oris-en-Rattie 1.29 211 Pn **Pg 20 52 40.0 +0.9**
ORIF Sn **Sg 20 52 58.0 +2.1**
ORIF Oris-en-Rattie 1.29 211 *e*Pg **Pg 20 52 39.9 +0.8**
ORIF Oris-en-Rattie 1.29 211 *e*P **Pg 20 52 40.8 +1.7**
ORIF *e*Sg **Sg 20 52 57.3 +1.4**
comp=E,202nm,0.3s
ORIF Oris-en-Rattie 1.29 211 P **Pg 20 52 39.9 +0.8**
ORIF S **Sg 20 52 56.8 +0.9**
ORIF AML AML
comp=E,756µm,0.6s
ORIF AML AML
comp=N,498µm,1.0s
MBDF Montbardon 1.30 182 *e*Pg **Pg 20 52 40.1 +0.8**
MBDF Montbardon 1.30 182 *e*P **Pg 20 52 41.1 +1.8**
MBDF *e*Sg **Sg 20 52 57.0 +0.8**
comp=N,597nm,0.6s
LOMF Lomont 1.32 0 Pn **Pg 20 52 40.4 +0.7**
LOMF Sn **Sg 20 52 58.9 +1.9**
FUSIO Fusio 1.35 71 ⇑Pg **Pg 20 52 40.1 -0.1**
FUSIO PmP 20 52 43.5
FUSIO Fusio 1.35 71 P **Pg 20 52 40.0 -0.1**
FUSIO AML AML
comp=N,324µm,0.7s
FUSIO AML AML
comp=E,568µm,0.2s
MTI03 Mont Terri (fr 1.37 10 Pg **Pg 20 52 41.0 +0.5**
VARE Varese 1.37 96 Pg **Pg 20 52 40.6 0.0**
VARE Varese 1.37 96 P **Pg 20 52 40.6 0.0**
VARE AML AML
comp=N,640µm,0.3s
VARE AML AML
comp=E,390µm,0.7s
MTI02 Mont Terri, (H 1.37 10 ⇑Pg **Pg 20 52 41.0 +0.3**
MTI02 PmP 20 52 42.6
BNALP Bannalp 1.39 52 Pg **Pg 20 52 41.6 +0.5**
BNALP Pg **Pg 20 52 41.6 +0.5**
comp=E,1.2nm,SNR=24
BNALP Bannalp 1.39 52 Pg **Pg 20 52 41.6 +0.5**
BNALP Bannalp 1.39 52 ⇑Pg **Pg 20 52 41.6 +0.5**
BNALP PmP 20 52 42.8
BNALP Bannalp 1.39 52 P **Pg 20 52 41.8 +0.8**
BNALP AML AML
comp=N,525µm,0.5s
BNALP AML AML
comp=E,340µm,0.4s
BOURR Bourrignon 1.40 12 Pn **Pg 20 52 41.3 +0.2**
BOURR Pn **Pg 20 52 41.3 +0.2**
comp=E,2.3nm,SNR=25
BOURR Bourrignon 1.40 12 Pn **Pg 20 52 41.3 +0.2**
BOURR Bourrignon 1.40 12 ⇑Pn **Pg 20 52 41.3 +0.2**
BALST Balsthal 1.44 24 Pn **Pg 20 52 41.8 -0.1**
BALST Pn **Pg 20 52 41.8 -0.1**
comp=E,1.5nm,SNR=20
BALST Balsthal 1.44 24 Pn **Pg 20 52 41.8 -0.1**
BALST Balsthal 1.44 24 ⇑Pn **Pg 20 52 41.8 -0.1**
BALST Balsthal 1.44 24 *e*Pn **Pg 20 52 41.8 -0.1**
BALST *e*Pg **Pb 20 52 43.3 +2.3**
BALST *e*Sg **Sg 20 53 02.8 +2.1**
NALPS Val Nalps 1.45 66 Pn **Pg 20 52 42.6 +0.4**
comp=E,0.7nm,SNR=16
NALPS Pn **Pg 20 52 42.6 +0.4**
NALPS Val Nalps 1.45 66 Pn **Pg 20 52 42.6 +0.4**
NALPS Val Nalps 1.45 66 Pg **Pg 20 52 42.5 +0.4**
SLUW Luzern Werkhof 1.45 45 Pg **Pg 20 52 43.7 +1.6**
SLUB Luzern Bramber 1.45 44 Pg **Pg 20 52 42.5 +0.4**
SLUB PmP 20 52 43.7
DAGMA Lutertal, Dagm 1.46 34 ⇑Pn **Pg 20 52 42.3 0.0**
DAGMA ⇑Pn **Pg 20 52 42.3 0.0**
comp=E,1.7nm,SNR=25
DAGMA Lutertal, Dagm 1.46 34 ⇑Pn **Pg 20 52 42.3 0.0**
DAGMA Lutertal, Dagm 1.46 34 ⇑Pn **Pg 20 52 42.3 0.0**
DAGMA PmP 20 52 44.1
PZZ Stroppo 1.54 172 P **Pg 20 52 44.3 +0.6**
PZZ AML AML
comp=E,726µm,0.3s
PZZ AML AML
comp=N,781µm,0.4s
MUGIO Muggio 1.55 93 ⇑Pn **Pg 20 52 43.9 -0.1**
comp=N,0.7nm,SNR=13
MUGIO ⇑Pn **Pg 20 52 43.9 -0.1**
MUGIO Muggio 1.55 93 ⇑Pn **Pg 20 52 43.9 -0.1**
MUGIO Muggio 1.55 93 Pg **Pg 20 52 43.8 -0.3**
MUGIO Muggio 1.55 93 ⇓P **Pg 20 52 44.3 +0.2**
MUGIO S **Sg 20 53 05.0 +0.7**
MUGIO AML AML
comp=E,484µm,0.2s
MUGIO AML AML
comp=N,662µm,0.7s
MUGIO AML AML
comp=E,484µm,0.2s
MUGIO AML AML
comp=N,662µm,0.8s
MUO Muotathal 1.57 53 ⇑Pn **Pg 20 52 44.8 +0.4**
comp=N,0.8nm,SNR=13
MUO ⇑Pn **Pg 20 52 44.8 +0.4**
MUO Muotathal 1.57 53 ⇑Pn **Pg 20 52 44.8 +0.4**
MUO Muotathal 1.57 53 ⇑Pg **Pg 20 52 44.8 +0.4**
MUO PmP 20 52 46.0
HAMIK Hmikon, Dlik 1.58 39 ⇑Pn **Pb 20 52 43.9 +0.7**
comp=N,2.4nm,SNR=3.2
HAMIK ⇑Pn **Pb 20 52 43.9 +0.7**
HAMIK Hmikon, Dlik 1.58 39 ⇑Pn **Pb 20 52 43.9 +0.7**
HAMIK Hmikon, Dlik 1.58 39 ⇑Pn **Pb 20 52 43.9 +0.7**
HAMIK PmP 20 52 45.6
OGAG Argentiere 1.58 187 Pg **Pn 20 52 39.4 -2.6**
OGAG Sg **Sn 20 52 56.8 -5.6**
ROTM Rocchetta Tana 1.60 137 AML AML
comp=N,537µm,0.4s
ROTM AML AML
comp=N,594µm,1.4s
ROTM AML AML
comp=E,470µm,0.4s
EMMET Emmethof 1.63 30 ⇑Pn **Pb 20 52 44.2 0.0**
EMMET ⇑Pn **Pb 20 52 44.2 0.0**
comp=E,2.7nm,SNR=44
EMMET Emmethof 1.63 30 ⇑Pn **Pb 20 52 44.2 0.0**
EMMET Emmethof 1.63 30 ⇑Pn **Pb 20 52 44.2 0.0**
ROTHE Rothenfluh 1.64 27 ⇑Pn **Pb 20 52 44.3 +0.1**
comp=E,3.3nm,SNR=43
ROTHE ⇑Pn **Pb 20 52 44.3 +0.1**
ROTHE Rothenfluh 1.64 27 ⇑Pn **Pb 20 52 44.3 +0.1**
ROTHE Rothenfluh 1.64 27 ⇑Pn **Pb 20 52 44.3 +0.1**
LLS Linth-Limmern 1.72 61 ⇑Pn **Pg 20 52 47.4 +0.1**
comp=E,0.5nm,SNR=11
LLS ⇑Pn **Pg 20 52 47.4 +0.1**
LLS Linth-Limmern 1.72 61 ⇑Pn **Pg 20 52 47.4 +0.1**
LLS Linth-Limmern 1.72 61 ⇑Pg **Pg 20 52 47.4 +0.1**
SULZ Cheisacher 1.74 30 ⇑Pn **Pb 20 52 45.7 -0.4**
comp=E,2.4nm,SNR=58
SULZ ⇑Pn **Pb 20 52 45.7 -0.4**
SULZ Cheisacher 1.74 30 ⇑Pn **Pb 20 52 45.7 -0.4**
SULZ Cheisacher 1.74 30 ⇑Pn **Pb 20 52 45.7 -0.4**
SULZ Cheisacher 1.74 30 *e*Pn **Pb 20 52 45.7 -0.4**
SULZ *e*Pg **Pg 20 52 49.1 +1.4**
SULZ *e*Sg **Sg 20 53 11.8 +1.5**
EWZT2 Wettswil, ZR 1.75 41 ⇑Pn **Pb 20 52 46.2 +0.1**
PANIX Pigniu (Panix) 1.77 62 ⇑Pn **Pg 20 52 48.3 0.0**
PANIX ⇑Pn **Pg 20 52 48.3 0.0**
comp=E,0.6nm,SNR=15
PANIX Pigniu (Panix) 1.77 62 ⇑Pn **Pg 20 52 48.3 0.0**
PANIX Pigniu (Panix) 1.77 62 ⇑Pg **Pg 20 52 48.3 0.0**
HINF Hinteralfeld 1.79 1 *e*Pn **Pb 20 52 46.4 -0.5**
HINF Hinteralfeld 1.79 1 *e*Pg **Pg 20 52 49.5 +0.9**
HINF *e*Sn **Sn 20 53 07.0 -0.4**
comp=E,34nm,0.2s
HINF *e*Sg **Sg 20 53 12.6 +0.8**
comp=E,186nm,0.2s
TUE Stuetta 1.81 75 Pn **Pg 20 52 49.0 0.0**
comp=E,0.9nm,SNR=20
TUE Pn **Pg 20 52 49.0 0.0**
TUE Stuetta 1.81 75 Pn **Pg 20 52 49.0 0.0**
TUE Stuetta 1.81 75 Pg **Pg 20 52 49.1 0.0**
TUE Stuetta 1.81 75 ⇑P **Pg 20 52 49.0 0.0**
TUE AML AML
comp=N,320µm,0.4s
TUE AML AML
comp=E,276µm,0.6s
TUE AML AML
comp=N,426µm,0.4s
TUE AML AML

| | | |

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.28**	**181**	Pn	Pn	20 59 34.7	0.0
	0.2nm,0.3s,baz=4.2,slow=15,SNR=11						
VNDA				LR	LR	21 04 27.8	
	comp=Z,171nm,19.8s,baz=359,slow=33						
RPZ	**Rata Peaks**	**19.22**	**18**	LR	LR	21 06 25.1	
	comp=Z,154nm,18.8s,baz=214,slow=33						
URZ	**Urewera**	**25.59**	**26**	LR	LR	21 11 00.9	
	comp=Z,112nm,18.0s,baz=211,slow=35						
MAW	**Mawson**	**38.27**	**218**	LR	LR	21 19 28.9	
	comp=Z,62nm,18.3s,baz=150,slow=37						
H01W1	**Cape Leeuwin H**	**40.89**	**289**	T	T	21 48 29.8	
	baz=146,slow=76,SNR=45						
H01W2	**Cape Leeuwin H**	**40.90**	**289**	T	T	21 48 30.0	
	baz=146,slow=76,SNR=50						
H01W3	**Cape Leeuwin H**	**40.91**	**289**	T	T	21 48 31.0	
	baz=146,slow=76,SNR=44						
ASAR	**Alice Springs**	**43.37**	**319**	P	P	21 04 01.6	-0.4
	1.3nm,0.9s,baz=162,slow=8.9,SNR=6.7						
WRA	**Warramunga Arr**	**46.75**	**322**	P	P	21 04 29.1	+0.2
	0.7nm,1.0s,baz=158,slow=7.6,SNR=3.3						
RAR	**Rarotonga**	**48.30**	**49**	LR	LR	21 18 43.7	
	comp=Z,420nm,20.8s,baz=334,slow=28						
H03S2	**Juan Fernandez**	**72.09**	**129**	T	T	22 25 56.5	
	baz=204,slow=74,SNR=226						
H03S1	**Juan Fernandez**	**72.10**	**129**	T	T	22 25 57.8	
	baz=204,slow=74,SNR=228						
H03S3	**Juan Fernandez**	**72.11**	**129**	T	T	22 25 55.2	
	baz=204,slow=74,SNR=185						
H08S2	**Diego Garcia H**	**83.55**	**266**	T	T	22 42 15.4	
	baz=152,slow=76						
H08S1	**Diego Carcia H**	**83.56**	**266**	T	T	22 42 17.2	
	baz=152						
H08S3	**Diego Garcia H**	**83.57**	**266**	T	T	22 42 18.7	
	baz=152,slow=76						

SSS ***23*** *21:04:17.1, 13°.55N×90°.17W, h66km, ML4.2*
NEIC ***23*** *21:04:17.4±1.8, 13°.55N±0°.07×90°.08W±0°.04, h88km±5km, mb4.3/11, Md4.2(SNET), Error ellipse: s-maj=10.7km s-min=3.9km az=210.0*
SNET ***23*** *21:04:17.1±1.0, 13°.55N×90°.17W, h66km±5km, ML4.2*
UCR ***23*** *21:04:17.5±1.0, 13°.57N×90°.15W, h66km±5km, ML4.1, mb4.3(NEIC)*
IDC ***23*** *21:04:18.9±2.2, 13°.90N×89°.86W, h83km±20km, mb3.6/6, mb1 3.8/10, mb1mx3.5/43, mbtmp3.9/10, MS2.9/4, Ms1 2.9/4, ms1mx2.7/32, Error ellipse: s-maj=33.0km s-min=15.2km az=32.0*
INET ***23*** *21:04:19.1, 13°.59N×90°.08W, h43km, ML4.2*
GCG ***23*** *21:04:27.1±0.3, 14°.40N×90°.38W, h50km, MD4.1*

ISC 23 21:04:17.0±0.8, 13°.58N±0°.06×90°.08W±0°.04, h78km±6km, n109,σ1s25/133, mb4.2/11, 3D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NUBE	**Las Nubes**	**0.43**	**43**	⇓*i*P	**Pn**	**21 04 30.3**	**+0.1**
NUBE				IAML		21 04 31.2	
	comp=Z,6μm,0.5s						
NUBE				*e*S	**Sn**	**21 04 40.0**	**+0.2**
NUBE	**Las Nubes**	**0.43**	**43**	⇓*i*P	**Pn**	**21 04 30.3**	**+0.1**
NUBE				IAML		21 04 31.2	
	comp=Z,6μm,0.5s						
NUBE				*e*S	**Sn**	**21 04 40.0**	**+0.2**
SBLS	**San Blas**	**0.51**	**60**	*e*P	**Pn**	**21 04 31.1**	**+0.2**
SBLS	**San Blas**	**0.51**	**60**	*e*P	**Pn**	**21 04 31.1**	**+0.2**
RTR	**El Retiro**	**0.53**	**54**	*e*P	**Pn**	**21 04 31.3**	**+0.3**
RTR	**El Retiro**	**0.53**	**54**	*e*P	**Pn**	**21 04 31.3**	**+0.3**
SNJE	**San Jose**	**0.54**	**58**	*e*P	**Pn**	**21 04 31.4**	**+0.3**
SNJE	**San Jose**	**0.54**	**58**	*e*P	**Pn**	**21 04 31.4**	**+0.3**
UNIC	**Universidad Ca**	**0.65**	**53**	*e*P	**Pn**	**21 04 32.1**	**+0.1**
UNIC				IAML		21 04 32.5	
	comp=Z,3μm,0.1s						
UNIC	**Universidad Ca**	**0.65**	**53**	*e*P	**Pn**	**21 04 32.1**	**+0.1**
UNIC				IAML		21 04 32.5	
	comp=Z,3μm,0.1s						
CEDA	**San Andres**	**0.70**	**72**	*e*P	**Pn**	**21 04 33.0**	**+0.4**
CEDA				*e*S	**Sn**	**21 04 45.2**	**+1.2**
CEDA	**San Andres**	**0.70**	**72**	*e*P	**Pn**	**21 04 33.0**	**+0.4**
CEDA				*e*S	**Sn**	**21 04 45.2**	**+1.2**
LALI	**Alcalda de L**	**0.75**	**97**	*e*P	**Pn**	**21 04 33.4**	**+0.4**
LALI				*e*S	**Sn**	**21 04 45.7**	**+0.9**
LALI	**Alcalda de L**	**0.75**	**97**	*e*P	**Pn**	**21 04 33.4**	**+0.4**
LALI				*e*S	**Sn**	**21 04 45.7**	**+0.9**
BOQS	**Boqueron**	**0.79**	**79**	*e*P	**Pn**	**21 04 34.2**	**+0.4**
BOQS	**Boqueron**	**0.79**	**79**	*e*P	**Pn**	**21 04 34.2**	**+0.4**
TACO	**Tacachico**	**0.81**	**61**	*e*P	**Pn**	**21 04 33.8**	**+0.2**
TACO	**Tacachico**	**0.81**	**61**	*e*P	**Pn**	**21 04 33.8**	**+0.2**
UEES	**Universidad Ev**	**0.83**	**81**	*e*P	**Pn**	**21 04 34.4**	**+0.4**
UEES	**Universidad Ev**	**0.83**	**81**	*e*P	**Pn**	**21 04 34.4**	**+0.4**
SNET	**Serv Nac Est T**	**0.83**	**83**	*e*P	**Pn**	**21 04 34.6**	**+0.5**
SNET				*e*S	**Sn**	**21 04 47.6**	**+0.9**
SNET				IAML		21 05 00.2	
	comp=Z,6μm,0.3s						
SNET	**Serv Nac Est T**	**0.83**	**83**	*e*P	**Pn**	**21 04 34.6**	**+0.5**
SNET				*e*S	**Sn**	**21 04 47.6**	**+0.9**
SNET				IAML		21 05 00.2	
	comp=Z,6μm,0.3s						
SNET	**Serv Nac Est T**	**0.83**	**83**		**Pn**	**21 04 34.5**	**+0.5**
SNET				Sn	**Sn**	**21 04 48.0**	**+1.2**
OPAM	**Oficina de Pla**	**0.87**	**81**	*e*P	**Pn**	**21 04 35.0**	**+0.6**
OPAM				*e*S	**Sn**	**21 04 49.7**	**+2.3**
OPAM	**Oficina de Pla**	**0.87**	**81**	*e*P	**Pn**	**21 04 35.0**	**+0.6**
OPAM				*e*S	**Sn**	**21 04 49.7**	**+2.3**
UDBS	**Universidad Do**	**0.91**	**82**	*e*P	**Pn**	**21 04 35.5**	**+0.6**
UDBS				IAML		21 04 53.5	
	comp=Z,8μm,0.4s						
UDBS	**Universidad Do**	**0.91**	**82**	*e*P	**Pn**	**21 04 35.5**	**+0.6**
UDBS				IAML		21 04 53.5	
	comp=Z,8μm,0.4s						
AEIL	**Aeropuerto Ilo**	**0.94**	**83**	*e*P	**Pn**	**21 04 36.2**	**+0.9**
AEIL				IAML		21 04 57.3	
	comp=Z,8μm,0.5s						
AEIL	**Aeropuerto Ilo**	**0.94**	**83**	*e*P	**Pn**	**21 04 36.2**	**+0.9**
AEIL				IAML		21 04 57.3	
	comp=Z,8μm,0.5s						
PCG	**Pacaya**	**0.95**	**328**	*e*P	**Pn**	**21 04 36.5**	**+0.9**
LFRS	**El Faro**	**0.99**	**88**	*e*P	**Pn**	**21 04 36.6**	**+0.7**
LFRS	**El Faro**	**0.99**	**88**	*e*P	**Pn**	**21 04 36.6**	**+0.7**
LBRS	**Las Brisas**	**1.02**	**81**	*e*P	**Pn**	**21 04 37.0**	**+0.8**
LBRS	**Las Brisas**	**1.02**	**81**	*e*P	**Pn**	**21 04 37.0**	**+0.8**
NBG	**Las Nubes**	**1.03**	**346**	*e*P	**Pn**	**21 04 38.1**	**+1.5**
MTO3	**Montecristo**	**1.07**	**41**	*e*P	**Pn**	**21 04 37.5**	**+0.4**
MTO3	**Montecristo**	**1.07**	**41**	*e*P	**Pn**	**21 04 37.5**	**+0.4**
MTO3	**Montecristo**	**1.07**	**41**		**Pn**	**21 04 37.5**	**+0.4**
MTO3				Sn	**Sn**	**21 04 52.7**	**+0.8**
PAVA	**Las Pavas**	**1.12**	**83**	*e*P	**Pn**	**21 04 38.3**	**+0.8**
PAVA	**Las Pavas**	**1.12**	**83**	*e*P	**Pn**	**21 04 38.3**	**+0.8**
FUG	**Fuego 3**	**1.13**	**319**	*e*P	**Pn**	**21 04 38.3**	**+0.6**
COEG	**Centro de Oper**	**1.17**	**88**	*e*P	**Pn**	**21 04 39.0**	**+1.0**
COEG				*e*S	**Sn**	**21 04 55.9**	**+2.1**
COEG				IAML		21 05 05.0	
	comp=Z,5μm,0.5s						
COEG	**Centro de Oper**	**1.17**	**88**	*e*P	**Pn**	**21 04 39.0**	**+1.0**
COEG				*e*S	**Sn**	**21 04 55.9**	**+2.1**
COEG				IAML		21 05 05.0	
	comp=Z,5μm,0.5s						
ESQI	**Esquipulas**	**1.21**	**36**	⇓*i*P	**Pn**	**21 04 39.5**	**+0.8**
ESQI	**Esquipulas**	**1.21**	**36**		**Pn**	**21 04 39.4**	**+0.8**
ESQI				Sn	**Sn**	**21 04 55.8**	**+1.0**
LLGN	**La Laguna**	**1.25**	**62**	*e*P	**Pn**	**21 04 39.5**	**+0.4**
LLGN	**La Laguna**	**1.25**	**62**	*e*P	**Pn**	**21 04 39.5**	**+0.4**
ALJI	**Alcalda de J**	**1.49**	**100**	*e*P	**Pn**	**21 04 43.0**	**+0.8**
ALJI				*e*S	**Sn**	**21 05 03.6**	**+2.5**
ALJI	**Alcalda de J**	**1.49**	**100**	*e*P	**Pn**	**21 04 43.0**	**+0.8**
ALJI				*e*S	**Sn**	**21 05 03.6**	**+2.5**
COEB	**Comit de Eme**	**1.51**	**93**	*e*P	**Pn**	**21 04 43.5**	**+1.0**
COEB				IAML		21 05 08.2	
	comp=Z,2μm,0.3s						
COEB	**Comit de Eme**	**1.51**	**93**	*e*P	**Pn**	**21 04 43.5**	**+1.0**
COEB				IAML		21 05 08.2	
	comp=Z,2μm,0.3s						
MRL	**Marmol**	**1.54**	**14**	*e*P	**Pn**	**21 04 43.9**	**+0.9**
MRL	**Marmol**	**1.54**	**14**	*e*P	**Pn**	**21 04 43.9**	**+0.9**
MRL	**Marmol**	**1.54**	**14**	*e*P	**Pn**	**21 04 44.9**	**+1.9**
TECA	**Tecapa**	**1.54**	**93**	*e*P	**Pn**	**21 04 44.0**	**+1.0**
TECA	**Tecapa**	**1.54**	**93**	*e*P	**Pn**	**21 04 44.0**	**+1.0**
PACA	**Pacayal**	**1.71**	**94**	*e*P	**Pn**	**21 04 47.1**	**+2.0**
PACA	**Pacayal**	**1.71**	**94**	*e*P	**Pn**	**21 04 47.1**	**+2.0**
LCY	**Lacayo**	**1.75**	**95**	*e*P	**Pn**	**21 04 46.8**	**+1.2**
LCY	**Lacayo**	**1.75**	**95**	*e*P	**Pn**	**21 04 46.8**	**+1.2**
RANC	**El Ranchito**	**1.75**	**95**	*e*P	**Pn**	**21 04 47.3**	**+1.7**
RANC	**El Ranchito**	**1.75**	**95**	*e*P	**Pn**	**21 04 47.3**	**+1.7**
RTAL	**Retalhuleu**	**1.82**	**301**	*e*P	**Pn**	**21 04 46.6**	**+0.1**
RTAL	**Retalhuleu**	**1.82**	**301**		**Pn**	**21 04 46.7**	**+0.1**
RTAL				Sn	**Sn**	**21 05 10.1**	**+1.1**
LCND	**La Caada**	**2.15**	**97**	*e*P	**Pn**	**21 04 52.1**	**+1.2**
LCND				*e*S	**Sn**	**21 05 19.6**	**+2.9**
LCND	**La Caada**	**2.15**	**97**	*e*P	**Pn**	**21 04 52.1**	**+1.2**
LCND				*e*S	**Sn**	**21 05 19.6**	**+2.9**
HUEH	**Huehuetenango**	**2.21**	**322**		**Pn**	**21 04 52.8**	**+0.9**
HUEH				Sn	**Sn**	**21 05 20.4**	**+2.0**
THIG		**2.49**	**302**		**Pn**	**21 04 56.4**	**+0.9**
CSGN	**Cosiguina Volc**	**2.53**	**104**		**Pn**	**21 04 56.2**	**+0.1**
TGUH	**Tegucigalpa,Un**	**2.77**	**80**	*e*P	**Pn**	**21 05 00.3**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.77**	**80**	*e*P	**Pn**	**21 05 00.3**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.77**	**80**	Pn	**Pn**	**21 04 59.8**	**+0.4**
CRIN	**San Cristobal**	**3.08**	**106**		**Pn**	**21 05 04.4**	**+0.9**
CRIN				Sn	**Sn**	**21 05 37.9**	**-1.5**
PETF	**Flores**	**3.32**	**4**	*e*P	**Pn**	**21 05 08.6**	**+1.9**
PETF	**Flores**	**3.32**	**4**		**Pn**	**21 05 07.8**	**+1.1**
CCIG	**Comitan**	**3.34**	**324**		**Pn**	**21 05 08.3**	**+1.2**
PCIG		**3.70**	**305**		**Pn**	**21 05 13.2**	**+1.5**
ACON	**Acoyapa**	**5.05**	**108**		**Pn**	**21 05 30.8**	**+0.5**
CMIG	**Matías Romero**	**5.80**	**308**	P	**Pn**	**21 05 41.4**	**+0.9**
	comp=Z,2.8nm,0.3s,baz=119,slow=12,SNR=27						
CMIG				S	**Sn**	**21 06 47.4**	**+1.7**
	comp=Z,6.4nm,0.3s,baz=57,slow=20,SNR=7.0						
CMIG				LR	LR	21 08 17.4	
	comp=Z,54nm,21.2s,baz=77,slow=41						
ESPN	**Las Esperanzas**	**5.80**	**103**	Pn	**Pn**	**21 05 42.4**	**+1.8**
JTS	**Las Juntas de**	**5.99**	**123**	P	**Pn**	**21 05 45.2**	**+2.0**
	comp=Z,3.6nm,0.3s,baz=11,slow=21,SNR=15						
JTS				S	**Sn**	**21 06 46.6**	**-3.9**
	baz=22,slow=19,SNR=1.2						
JTS	**Las Juntas de**	**5.99**	**123**	Pn	**Pn**	**21 05 45.9**	**+2.8**
TEIG	**Tepich**	**6.83**	**14**	Pn	**Pn**	**21 05 55.5**	**+1.0**
SDV	**Santo Domingo**	**19.63**	**102**	P	**P**	**21 08 39.4**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=313,slow=9.9,SNR=4.7						
SDV				LR	LR	21 16 22.6	
	comp=Z,38nm,18.9s,baz=254,slow=37						
TX31	**Lajitas Ar. Si**	**20.11**	**323**	P	**P**	**21 08 43.9**	**-0.9**
TX31				IAmb	IAmb	21 08 49.2	
	comp=Z,7.4nm,0.9s						
TXAR	**Lajitas Array**	**20.11**	**323**	P	**P**	**21 08 46.8**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=147,slow=10,SNR=8.1						
TXAR	**Lajitas Array**	**20.11**	**323**	P	**P**	**21 08 44.9**	**+0.2**
PLAL	**Pickwick Lake**	**21.38**	**5**	P	**P**	**21 08 59.2**	**+1.0**
PLAL				IAmb	IAmb	21 09 17.4	
	comp=Z,12nm,0.9s						
FNO	**Franklin**	**22.57**	**344**	P	**P**	**21 09 10.8**	**-0.2**
TKL	**Tuckaleechee C**	**22.70**	**13**	P	**P**	**21 09 11.2**	**-1.2**
	comp=Z,6.3nm,0.9s,baz=188,slow=8.0,SNR=5.8						
TKL				LR	LR	21 18 11.8	
	comp=Z,69nm,18.1s,baz=168,slow=37						
TKL	**Tuckaleechee C**	**22.70**	**13**	P	**P**	**21 09 11.2**	**-1.2**
BCOK	**Bluff Creek, N**	**23.00**	**344**	P	**P**	**21 09 14.8**	**-0.6**
SJG	**San Juan**	**23.45**	**76**	LR	LR	21 18 32.9	
	comp=Z,19nm,19.7s,baz=222,slow=37						
T47A	**Sharon Grove**	**23.46**	**6**	P	**P**	**21 09 20.0**	**+0.3**
T47A				IAmb	IAmb	21 09 21.5	
	comp=Z,12nm,0.7s						
WCI	**Wyandotte Cave**	**24.78**	**7**	P	**P**	**21 09 31.8**	**+0.3**
WCI				IAmb	IAmb	21 09 34.0	
	comp=Z,15nm,0.8s						
PHWY	**Pilot Hill**	**30.70**	**337**	P	**P**	**21 10 25.1**	**+0.3**
SAML	**Samuel**	**34.84**	**129**	P	**P**	**21 11 00.8**	**-0.2**
SAML				IAmb	IAmb	21 11 01.8	
	comp=Z,2.6nm,0.8s						
AGMN	**Agassiz Nation**	**34.94**	**353**	P	**P**	**21 11 00.3**	**-1.1**
AGMN				IAmb	IAmb	21 11 01.3	
	comp=Z,4.5nm,0.7s						
NVAR	**Mina Array Bea**	**35.18**	**320**	P	**P**	**21 11 05.5**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=139,slow=8.3,SNR=12						
NVAR				PcP	**PcP**	**21 13 34.3**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=142,slow=3.1,SNR=4.7						
NVAR	**Mina Array Bea**	**35.18**	**320**	P	**P**	**21 11 04.1**	**+0.2**
ULM	**Lac du Bonnet**	**36.87**	**354**	P	**P**	**21 11 15.9**	**-1.9**
	comp=Z,1.9nm,0.5s,baz=171,slow=11,SNR=6.8						
ULM	**Lac du Bonnet**	**36.87**	**354**	P	**P**	**21 11 16.0**	**-1.8**
SCHQ	**Schefferville**	**44.99**	**19**	P	**P**	**21 12 22.8**	**-1.7**
	comp=Z,3.3nm,0.4s,baz=219,slow=8.0,SNR=9.4						
SCHQ	**Schefferville**	**44.99**	**19**	P	**P**	**21 12 23.1**	**-1.4**
YKA	**Yellowknife Ar**	**51.87**	**346**	P	**P**	**21 13 15.8**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=142,slow=8.8,SNR=2.2						
ILAR	**Eielson Array**	**63.96**	**336**	P	**P**	**21 14 40.2**	**-1.6**
	comp=Z,0.1nm,0.5s,baz=113,slow=6.9,SNR=1.7						
WRA	**Warramunga Arr**	**137.09**	**255**	PKP	**PKPdf**	**21 23 34.5**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=86,slow=2.4,SNR=10.0						
ASAR	**Alice Springs**	**137.28**	**250**	PKP	**PKPdf**	**21 23 34.8**	**+2.4**
	comp=Z,0.4nm,0.9s,baz=96,slow=2.1,SNR=1.9						
CMAR	**Chiang Mai Arr**	**146.94**	**344**	PKPbc	**PKPdf**	**21 23 50.3**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=333,slow=3.2,SNR=4.5						

IDC ***23*** *21:12:16.9±1.4, 36°.85N×137°.85E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.2/39, mbtmp3.3/3, MS2.8/4, Ms1 2.9/4, ms1mx2.7/21, Error ellipse: s-maj=12.5km s-min=9.8km az=26.0*
JMA ***23*** *21:12:19.3, 36°.79N×137°.91E, h5km±1km, M3.6 Broadband fault plane solution: P waves. NP1: ϕs216.00000°, δ69.00000°, λ165.00000°. NP2: ϕs311.00000°, δ76.00000°, λ22.00000°. Principal axes: T Plg25.0000°, Azm175.0000°; N Plg64.0000°, Azm341.0000°; P Plg5.0000°, Azm82.0000°;*
JMA Felt IV J1.
NIED ***23*** *21:12:19.4, 36°.79N×137°.90E, h5km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14Nm; Mrr0.88; Mθθ5.81; Mϕϕ-6.69; Mrθ-4.96; Mθϕ0.31; Mrϕ2.34; Fault plane solution: M08.27000×10^14 NP1: ϕs315.00000°, δ82.00000°, λ39.00000°. NP2: ϕs219.00000°, δ52.00000°, λ170.00000°.*

ISC 23 21:12:18.9±1.2, 36°.79N±0°.05×137°.90E±0°.05, h13km±11km, n17,σ0s42/19, mb3.6/3, 2C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.35**	**135**	P	**Pg**	**21 12 25.8**	**-0.1**
MAT				S	**Sg**	**21 12 30.6**	**-0.1**
MAT	**Matsushiro**	**0.35**	**135**	P	**Pg**	**21 12 25.8**	**-0.1**
MAT				S	**Sg**	**21 12 30.4**	**-0.3**
MJAR	**Matsushiro Arr**	**0.35**	**135**	Pg	**Pg**	**21 12 26.5**	**+0.5**
	42nm,0.3s,baz=317,slow=18,SNR=943						
MJAR				Lg	Lg	21 12 31.3	
	203nm,0.3s,baz=315,slow=27,SNR=90						
JNG	**Nsakai**	**0.42**	**157**	⇑P	**Pg**	**21 12 27.2**	**0.0**
JNG				S	**Sg**	**21 12 32.8**	**0.0**
JTT	**Ttatey**	**0.49**	**248**	⇓P	**Pb**	**21 12 29.2**	**-0.2**
JGK	**Kuni**	**0.64**	**111**	⇓P	**Pg**	**21 12 31.4**	**+0.1**
JGK				S	**Sg**	**21 12 40.1**	**+0.4**
JGN	**Niukaw**	**0.74**	**220**	P	**Pb**	**21 12 33.3**	**-0.4**
JGN				*e*S	**Sg**	**21 12 43.2**	**+0.3**
JSZ	**Suzu**	**0.78**	**327**	⇑P	**Pb**	**21 12 34.4**	**0.0**
JSZ				S	**Sb**	**21 12 45.5**	**+0.6**
JIZZ	**Izumozaki**	**0.98**	**41**	P	**Pn**	**21 12 38.7**	**+0.3**
JHK	**Hiroka**	**1.00**	**63**	⇓P	**Pg**	**21 12 37.7**	**-0.5**
KSRS	**Korea Array**	**8.00**	**278**	LR	LR	21 16 25.9	
	comp=Z,45nm,21.5s,baz=60,slow=31						
ASAJ	**Asahikawa**	**8.14**	**25**	LR	LR	21 17 29.9	
	comp=Z,64nm,20.8s,baz=180,slow=39						
MA2	**Magadan**	**24.27**	**16**	LR	LR	21 27 44.2	
	comp=Z,19nm,18.2s,baz=112,slow=38						
SONM	**Songino Array**	**25.61**	**305**	P	**P**	**21 17 47.1**	**-0.9**
	0.2nm,0.3s,baz=118,slow=7.8,SNR=1.8						
CMAR	**Chiang Mai Arr**	**38.73**	**253**	LR	LR	21 35 40.7	
	comp=Z,22nm,18.4s,baz=30,slow=36						
WRA	**Warramunga Arr**	**56.53**	**184**	P	**P**	**21 22 00.7**	**-0.2**
	0.3nm,0.4s,baz=0.4,slow=7.6,SNR=15						
ASAR	**Alice Springs**	**60.25**	**184**	P	**P**	**21 22 27.6**	**+0.6**
	0.2nm,0.4s,baz=358,slow=6.4,SNR=2.6						

KNET ***23*** *21:19:53.4±0.9, 41°.73N×74°.75E, h0km, ml2.3, Error ellipse: s-maj=6.2km s-min=3.5km az=15.0*
KRNET ***23*** *21:19:53.2±0.1, 41°.66N×74°.70E, h19km, mb3.0*
SOME ***23*** *21:19:53.6, 41°.68N×74°.70E, h15km*
NNC ***23*** *21:19:54.5±0.5, 41°.73N×74°.70E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=3.4km s-min=2.0km az=22.0*

ISC 23 21:19:54.2±1.2, 41°.70N±0°.03×74°.67E±0°.02, h5km±10km, n84,σ1s32/142, 49C-23D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.31**	**302**	⇑*i*P	**Pg**	**21 20 00.1**	**-0.2**
ARLS				⇑*i*S	**Sg**	**21 20 04.9**	**+0.5**
	baz=7.0						
UCH	**Uchtor**	**0.54**	**348**	⇑*i*P	**Pg**	**21 20 04.6**	**-0.1**
	baz=46						
UCH				⇑*i*S	**Sg**	**21 20 12.7**	**+0.8**
	baz=46						
UCH	**Uchtor**	**0.54**	**348**	P	**Pg**	**21 20 04.8**	**0.0**
	122nm,0.1s,SNR=388						
UCH				⇑S	**Sg**	**21 20 13.1**	**+1.2**
	102nm,0.1s						
AML	**Almayashu**	**0.85**	**301**	⇑*i*P	**Pg**	**21 20 09.9**	**-0.6**
	baz=2.0						
AML				⇑*i*S	**Sg**	**21 20 22.0**	**+0.4**
	baz=2.0						
AML	**Almayashu**	**0.85**	**301**	P	**Pg**	**21 20 10.1**	**-0.4**
	36nm,0.2s,SNR=266						
AML				⇓S	**Sg**	**21 20 21.9**	**+0.4**
	191nm,0.2s						
AAK	**Ala-Archa**	**0.95**	**352**	⇑*i*P	**Pg**	**21 20 11.7**	**-0.7**
	baz=51						
AAK				⇑*i*S	**Sg**	**21 20 24.9**	**+0.2**
	baz=51						
AAK	**Ala-Archa**	**0.95**	**352**	⇓P	**Pg**	**21 20 11.9**	**-0.5**
	14nm,0.2s,SNR=36						
AAK				⇑S	**Sg**	**21 20 25.2**	**+0.4**
	37nm,0.3s						
AAK	**Ala-Archa**	**0.95**	**352**	⇓P	**Pg**	**21 20 11.9**	**-0.5**
	14nm,0.5s						
AAK				⇑S	**Sg**	**21 20 25.0**	**+0.2**
	17nm,0.3s						
KBK	**Karagaybulak**	**0.98**	**12**	⇑*i*P	**Pg**	**21 20 12.3**	**-0.7**
	baz=11						
KBK				⇑*i*S	**Sg**	**21 20 25.9**	**+0.1**
	baz=11						
KBK	**Karagaybulak**	**0.98**	**12**	⇓P	**Pg**	**21 20 12.5**	**-0.5**
	71nm,0.1s,SNR=309						
KBK				⇑S	**Sg**	**21 20 26.2**	**+0.4**
	237nm,0.1s						
FRU1	**Bishkek**	**1.11**	**358**	⇑*i*P	**Pg**	**21 20 14.6**	**-1.0**
	baz=57						
FRU1				⇑*i*S	**Sg**	**21 20 30.1**	**+0.1**
	baz=57						
EKS2	**Erkin-Say**	**1.17**	**326**	⇑*i*P	**Pg**	**21 20 15.8**	**-0.9**
	baz=26						
EKS2				⇑*i*S	**Sg**	**21 20 31.8**	**-0.1**
	baz=26						
EKS2	**Erkin-Say**	**1.17**	**326**	⇓P	**Pg**	**21 20 16.0**	**-0.7**
	5.8nm,0.1s,SNR=61						
BOOM	**Boomskoye usch**	**1.23**	**50**	⇑*e*P	**Pb**	**21 20 16.0**	**-2.1**
	baz=48						
BOOM				⇑*i*S	**Sb**	**21 20 32.7**	**-1.7**
	baz=48						
ULHL	**Ulahol**	**1.29**	**64**	⇓*i*P	**Pn**	**21 20 16.8**	**-2.3**
	baz=63						
ULHL				⇓*i*S	**Sb**	**21 20 34.2**	**-2.0**
	baz=63						
ULHL	**Ulahol**	**1.29**	**64**	⇓P	**Pn**	**21 20 17.0**	**-2.2**
	12nm,0.2s,SNR=6.4						
ULHL				⇑S	**Sb**	**21 20 34.1**	**-2.0**
	33nm,0.2s						
CHMS	**Chumysh**	**1.30**	**3**	⇑*i*P	**Pn**	**21 20 18.0**	**-1.1**
	baz=2.0						
CHMS				⇑*i*S	**Sb**	**21 20 35.8**	**-0.4**
	baz=2.0						
CHMS	**Chumysh**	**1.30**	**3**	⇓P	**Pn**	**21 20 18.3**	**-0.8**
	10nm,0.1s,SNR=33						
CHMS				⇑S	**Sg**	**21 20 36.1**	**0.0**
	21nm,0.1s						
ARSB	**Arslanbob**	**1.32**	**254**	⇑*i*P	**Pn**	**21 20 18.1**	**-1.3**
	baz=56						
ARSB				⇑*i*S	**Sb**	**21 20 35.8**	**-1.1**
	baz=56						
TKM2	**Tokmak 2**	**1.40**	**29**	⇑*i*P	**Pn**	**21 20 19.5**	**-1.1**
	baz=28						
TKM2				⇑*i*S	**Sb**	**21 20 38.3**	**-1.0**
	baz=28						
TKM2	**Tokmak 2**	**1.40**

KNDC				⇑Lg		Lg	21 21 07.3			
	37nm,0.6s									
MDOK	**Medeo**	**2.29**	**49**	⇑*i*P		**Pb**	**21 20 35.6**	**-0.5**		
	9.3nm,0.2s									
MDOK				*e*S		**Sb**	**21 21 05.6**	**+0.9**		
	16nm,0.3s									
MDOK	**Medeo**	**2.29**	**49**	Pg		**Pb**	**21 20 35.6**	**-0.5**		
	9.3nm,0.2s									
MDOK				Lg		Lg	21 21 05.6			
	16nm,0.3s									
KOTS	**Kotyrbulak**	**2.37**	**49**	*e*P		**Pb**	**21 20 37.2**	**-0.3**		
	52nm,0.5s									
KOTS				*e*S		**Sb**	**21 21 08.4**	**+1.3**		
	38nm,0.4s									
KOTS	**Kotyrbulak**	**2.37**	**49**	Pg		**Pb**	**21 20 37.2**	**-0.3**		
	52nm,0.5s									
KOTS				Lg		Lg	21 21 08.4			
	38nm,0.4s									
ANVS	**Anan'yevo**	**2.48**	**63**	⇓*i*P		**Pn**	**21 20 35.5**	**+0.1**		
	baz=62									
ANVS				⇓*i*S		**Sn**	**21 21 06.4**	**+0.4**		
	baz=62									
KTBS	**Karatobe**	**2.50**	**36**	*e*P		**Pb**	**21 20 39.2**	**-0.4**		
	6.8nm,0.1s									
KTBS				*e*S		**Sb**	**21 21 11.9**	**+1.2**		
	84nm,0.4s									
KTBS	**Karatobe**	**2.50**	**36**	Pg		**Pb**	**21 20 39.2**	**-0.4**		
	6.8nm,0.1s									
KTBS				Lg		Lg	21 21 11.9			
	84nm,0.4s									
TRKS	**Terek-Say**	**2.65**	**268**	⇑*i*P		**Pn**	**21 20 38.1**	**+0.3**		
	baz=67									
TRKS				⇑*i*S		**Sn**	**21 21 10.4**	**0.0**		
	baz=67									
CHKK	**Chushkaly**	**2.75**	**38**	*e*P		**Pb**	**21 20 43.9**	**+0.1**		
	4.6nm,0.1s									
CHKK				*e*S		**Sb**	**21 21 19.9**	**+2.0**		
	36nm,0.2s									
CHKK	**Chushkaly**	**2.75**	**38**	Pg		**Pb**	**21 20 43.9**	**+0.1**		
	4.6nm,0.1s									
CHKK				Lg		Lg	21 21 19.9			
	36nm,0.2s									
DZA	**Taraz**	**2.75**	**297**	⇑*i*P		**Pb**	**21 20 44.6**	**+0.8**		
	36nm,0.2s									
DZA				*e*S		**Sg**	**21 21 21.0**	**-1.6**		
	89nm,0.3s									
DZA	**Taraz**	**2.75**	**297**	Pg		**Pb**	**21 20 44.6**	**+0.8**		
	36nm,0.2s									
DZA				Lg		Lg	21 21 21.0			
	89nm,0.3s									
SATY	**Saty**	**3.08**	**63**	*e*P		**Pb**	**21 20 49.8**	**+0.2**		
	3.7nm,0.3s									
SATY				*e*S		**Sb**	**21 21 30.1**	**+2.5**		
	26nm,0.6s									
SATY	**Saty**	**3.08**	**63**	Pg		**Pb**	**21 20 49.8**	**+0.2**		
	3.7nm,0.3s									
SATY				Lg		Lg	21 21 30.1			
	26nm,0.6s									
DRK	**Karamyk**	**3.11**	**226**	⇓*i*P		**Pn**	**21 20 44.2**	**0.0**		
	baz=26									
DRK				⇓*i*S		**Sn**	**21 21 21.3**	**-0.6**		
	baz=26									
KURS	**Kuram**	**3.14**	**54**	*e*P		**Pb**	**21 20 51.3**	**+0.8**		
	8.2nm,0.9s									
KURS				*e*S		**Sg**	**21 21 32.3**	**-2.8**		
	7.5nm,0.4s									
KURS	**Kuram**	**3.14**	**54**	Pg		**Pb**	**21 20 51.3**	**+0.8**		
	8.2nm,0.9s									
KURS				Lg		Lg	21 21 32.3			
	7.5nm,0.4s									
ZHN	**Zhinishke**	**3.15**	**61**	*e*P		**Pb**	**21 20 51.0**	**+0.3**		
	28nm,0.1s									
ZHN				*e*S		**Sb**	**21 21 32.2**	**+2.7**		
	12nm,0.1s									
ZHN	**Zhinishke**	**3.15**	**61**	Pg		**Pb**	**21 20 51.0**	**+0.3**		
	28nm,0.1s									
ZHN				Lg		Lg	21 21 32.2			
	12nm,0.1s									
BTK	**Batken**	**3.35**	**242**	⇓*i*P		**Pn**	**21 20 47.2**	**-0.1**		
	baz=43									
BTK				⇓*i*S		**Sn**	**21 21 26.7**	**-0.7**		
	baz=43									
BTLS	**Baital**	**3.37**	**352**	*e*P		**Pb**	**21 20 55.5**	**+1.1**		
	3.0nm,0.3s									
BTLS				*e*S		**Sg**	**21 21 39.6**	**-3.0**		
	13nm,0.5s									
BTLS	**Baital**	**3.37**	**352**	Pg		**Pb**	**21 20 55.5**	**+1.1**		
	3.0nm,0.3s									
BTLS				Lg		Lg	21 21 39.6			
	13nm,0.5s									
KK31	**Karatay Array**	**3.38**	**296**	⇑Pg		**Pb**	**21 20 55.5**	**+0.8**		
	0.8nm,0.3s,baz=107,slow=17,SNR=17									
KK31				Lg		Lg	21 21 40.6			
	20nm,0.6s,baz=119,slow=27,SNR=14									
ARXS	**Arharly**	**3.42**	**42**	*e*P		**Pb**	**21 20 55.3**	**0.0**		
	7.5nm,0.3s									
ARXS				*e*S		**Sb**	**21 21 39.5**	**+2.3**		
	36nm,0.3s									
ARXS	**Arharly**	**3.42**	**42**	Pg		**Pb**	**21 20 55.3**	**0.0**		
	7.5nm,0.3s									
ARXS				Lg		Lg	21 21 39.5			
	36nm,0.3s									
KPKS	**Kokpek**	**3.45**	**58**	*e*P		**Pb**	**21 20 55.4**	**-0.4**		
	9.9nm,0.3s									
KPKS				*e*S		**Sb**	**21 21 39.9**	**+1.8**		
	25nm,0.3s									
UZB	**Uzynbulak**	**3.53**	**64**	*e*P		**Pb**	**21 20 57.7**	**+0.5**		
	3.6nm,0.2s									
UZB				*e*S		**Sb**	**21 21 43.5**	**+3.0**		
	11nm,0.6s									
UZB	**Uzynbulak**	**3.53**	**64**	Pg		**Pb**	**21 20 57.7**	**+0.5**		
	3.6nm,0.2s									
UZB				Lg		Lg	21 21 43.5			
	11nm,0.6s									
MNBS	**Baschi**	**3.63**	**48**	*e*P		**Pb**	**21 21 00.2**	**+1.3**		
	5.9nm,0.2s									
MNBS				*e*S		**Sg**	**21 21 47.6**	**-3.2**		
	33nm,0.3s									
MNBS	**Baschi**	**3.63**	**48**	Pg		**Pb**	**21 21 00.2**	**+1.3**		
	5.9nm,0.2s									
MNBS				Lg		Lg	21 21 47.6			
	33nm,0.3s									
SHLS	**Shalkode**	**3.83**	**66**	*e*P		**Pg**	**21 21 08.5**	**+0.8**		
	4.2nm,0.1s									
SHLS				*e*S		**Sg**	**21 22 02.2**	**+4.9**		
	6.3nm,0.6s									
SHLS	**Shalkode**	**3.83**	**66**	Pg		**Pg**	**21 21 08.5**	**+0.8**		
	4.2nm,0.1s									
SHLS				Lg		Lg	21 22 02.2			
	6.3nm,0.6s									
PDGK	**Podgornoye**	**3.92**	**64**	⇑Pg		**Pb**	**21 21 04.7**	**+0.8**		
	1.8nm,0.6s									
PDGK				⇓Lg		Lg	21 21 57.7			
	13nm,0.8s									
KTMS	**Ketmen**	**4.54**	**65**	*e*P		**Pb**	**21 21 16.7**	**+2.2**		
	7.4nm,0.3s									
KTMS				*e*S		**Sg**	**21 22 16.1**	**-4.0**		
	6.1nm,0.2s									
KTMS	**Ketmen**	**4.54**	**65**	Pg		**Pb**	**21 21 16.7**	**+2.2**		
	7.4nm,0.3s									
KTMS				Lg		Lg	21 22 16.2			
	6.1nm,0.2s									
DJR	**Jarkent**	**4.58**	**53**	*e*P		**Pb**	**21 21 17.5**	**+2.4**		
	2.0nm,0.4s									
DJR				*e*S		**Sg**	**21 22 18.0**	**-3.4**		
	7.9nm,0.8s									
DJR	**Jarkent**	**4.58**	**53**	Pg		**Pb**	**21 21 17.5**	**+2.4**		
	2.0nm,0.4s									
DJR				Lg		Lg	21 22 18.0			
	7.9nm,0.8s									
KAPS	**Kapalarasan**	**4.95**	**42**	*e*P		**Pb**	**21 21 22.9**	**+1.6**		
	1.2nm,0.5s									
KAPS				*e*S		**Sb**	**21 22 26.4**	**+5.2**		
	5.7nm,0.5s									
KAPS	**Kapalarasan**	**4.95**	**42**	Pg		**Pb**	**21 21 22.9**	**+1.6**		
	1.2nm,0.5s									
KAPS				Lg		Lg	21 22 26.4			
	5.7nm,0.5s									
KURBB	**Kurchatov Arra**	**9.32**	**15**	⇓Lg		Lg	21 24 50.0			
	5.0nm,0.7s									

WEL 23 21:34:42.9,46°S±2°×16°9E±°,h5km±2km,M2.7/11, ML2.7/10,MLv2.7/11,Error ellipse: s-maj=0.0km s-min=0.0km az=98.6,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EAZ	**Earnscleugh**	**0.39**	**358**	P	Pb	21 34 52.0	-0.3
TUZ	**Tuapeka**	**0.39**	**147**	P	Pb	21 34 52.3	-0.1
WKZ	**Wanaka**	**0.82**	**345**	P	Pb	21 35 00.3	+0.6
MLZ	**Mavora Lakes**	**0.89**	**286**	P	Pb	21 35 01.0	+0.3
SYZ	**Scrubby Hill**	**0.92**	**188**	P	Pb	21 35 01.9	+0.5
HHSZ	**Highcliff Hill**	**0.93**	**107**	P	Pn	21 35 02.4	-0.2
WHZ	**Wether Hill Ro**	**1.00**	**254**	P	Pb	21 35 03.1	+0.4
ODZ	**Otahua Downs**	**1.09**	**59**	P	Pn	21 35 04.9	+0.1
LBZ	**Lake Benmore**	**1.38**	**26**	P	Pg	21 35 09.2	-0.1
APZ	**The Paps**	**1.52**	**217**	P	Pb	21 35 11.3	-0.4
DCZ	**Deep Cove**	**1.54**	**275**	P	Pg	21 35 12.6	+0.3
JCZ	**Jackson Bay**	**1.60**	**346**	P	Pg	21 35 14.8	+1.3
PYZ	**Puysegur Point**	**1.93**	**253**	P	Pb	21 35 18.3	-0.2
FOZ	**Fox Glacier**	**2.12**	**10**	P	Pb	21 35 20.8	-0.9
DVHZ	**Dannevirke**	**7.31**	**46**	P	Pn	21 36 36.4	+6.1
FWVZ	**Far West T-bar**	**7.85**	**38**	P	Pn	21 36 36.9	-1.0
KUZ	**Kuaotunu**	**10.09**	**31**	P	Pn	21 37 13.4	+5.1

TAP ***23*** *21:38:05.8,23.00N×120.90E,h5km,ML3.7,C*
JMA ***23*** *21:38:06.1,23.01N×121.04E,h14km±1km,M3.3*
ISC 23 21:38:06.0±0.8,23.00N±0.01×120.95E±0.01,h12km±6km, n127,σ0.88/192,16C-8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LONT	**Longtian**	**0.19**	**119**	⇓*i*P	**Pb**	**21 38 11.2**	**-0.3**
	baz=114						
LONT				*i* S	**Sb**	**21 38 14.9**	**+1.8**
	baz=114						
ELDTW	**Lidau**	**0.20**	**19**	⇑*i*P	**Pg**	**21 38 10.2**	**-0.1**
	baz=33						
ELDTW				S	**Sg**	**21 38 13.8**	**+0.4**
	baz=33						
TWG	**Pinlang**	**0.21**	**147**	⇓*i*P	**Pg**	**21 38 11.5**	**+0.9**
	baz=138						
TWG				*i* S	**Sb**	**21 38 15.1**	**+1.5**
	baz=138						
TWGBT	**Beinan**	**0.22**	**146**	⇓*i*P	**Pg**	**21 38 11.4**	**+0.8**
	baz=138						
TWGBT				*i* S	**Sg**	**21 38 15.0**	**+1.2**
	baz=138						
STYT	**Tauyuan**	**0.24**	**313**	⇓*i*P	**Pg**	**21 38 10.5**	**-0.5**
	baz=323						
STYT				*i* S	**Sg**	**21 38 13.6**	**-0.8**
	baz=323						
SLGT	**Liugui**	**0.28**	**268**	⇑*i*P	**Pg**	**21 38 11.3**	**-0.4**
	baz=268						
SLGT				*i* S	**Sg**	**21 38 14.8**	**-0.7**
	baz=268						
TTN	**Taitung**	**0.31**	**143**	⇓*i*P	**Pb**	**21 38 14.0**	**+0.6**
	baz=137						
TTN				*i* S	**Sb**	**21 38 19.8**	**+1.3**
	baz=137						
EDH	**Donghe**	**0.33**	**95**	⇑*i*P	**Pb**	**21 38 14.2**	**+0.4**
	baz=87						
EDH				S	**Sb**	**21 38 20.0**	**+0.9**
	baz=87						
SGST	**Jiashian**	**0.34**	**284**	⇑*i*P	**Pg**	**21 38 12.0**	**-0.9**
	baz=291						
SGST				*i* S	**Sg**	**21 38 16.9**	**-0.7**
	baz=291						
FULB	**Fuli**	**0.38**	**58**	⇑*i*P	**Pb**	**21 38 14.7**	**+0.1**
	baz=63						
FULB				S	**Sb**	**21 38 20.8**	**+0.3**
	baz=63						
SSD	**Sandimen**	**0.39**	**229**	⇑*i*P	**Pg**	**21 38 13.1**	**-0.5**
	baz=218						
SSD				*i* S	**Sg**	**21 38 17.6**	**-1.2**
	baz=218						
WTP	**Ta-pu**	**0.39**	**309**	⇓*i*P	**Pg**	**21 38 14.0**	**+0.3**
	baz=314						
WTP				*e*S	**Sg**	**21 38 18.4**	**-0.6**
	baz=314						
CHKT	**Chengkung**	**0.40**	**76**	P	**Pb**	**21 38 15.7**	**+0.7**
	baz=69						
CHKT				S	**Sn**	**21 38 22.8**	**+3.7**
	baz=69						
ECL	**Taimali**	**0.40**	**179**	*i* P	**Pg**	**21 38 14.2**	**+0.3**
	baz=171						
ECL				S	**Sg**	**21 38 18.7**	**-0.6**
	baz=171						
TSMG	**Majia**	**0.41**	**223**	⇑*i*P	**Pg**	**21 38 13.5**	**-0.5**
	baz=217						
TSMG				*i* S	**Sg**	**21 38 18.3**	**-1.1**
	baz=217						
TPUB	**Ta-pu**	**0.42**	**316**	⇓*i*P	**Pg**	**21 38 14.6**	**+0.3**
	baz=321						
TPUB				*i* S	**Sg**	**21 38 20.3**	**+0.5**
	baz=321						
CHN1	**Nanshi**	**0.43**	**295**	*i* P	**Pg**	**21 38 15.2**	**+0.7**
	baz=306						
CHN1				*i* S	**Sg**	**21 38 21.3**	**+1.2**
	baz=306						
SCST	**Cishan**	**0.43**	**255**	P	**Pg**	**21 38 14.9**	**+0.4**
	baz=244						
SCST				*e*S	**Sb**	**21 38 21.6**	**-0.4**
	baz=244						
SNST	**Tainan City**	**0.47**	**298**	*e*P	**Pb**	**21 38 16.3**	**+0.1**
	baz=304						
SNST				*e*S	**Sb**	**21 38 23.3**	**+0.3**
	baz=304						
TWF1	**Yuli**	**0.47**	**43**	⇑*i*P	**Pg**	**21 38 15.6**	**+0.3**
	baz=57						
TWF1				S	**Sg**	**21 38 22.0**	**+0.4**
	baz=57						
CHN4	**Tsaushan**	**0.48**	**317**	⇓*i*P	**Pg**	**21 38 15.9**	**+0.6**
	baz=331						
CHN4				*e*S	**Sg**	**21 38 22.0**	**+0.3**
	baz=331						
MASBT	**Mashibuluo**	**0.48**	**217**	⇑*i*P	**Pg**	**21 38 15.0**	**-0.4**
	baz=211						
MASBT				*e*S	**Sg**	**21 38 20.7**	**-1.2**
	baz=211						
EYUL	**Yuli**	**0.49**	**45**	*e*P	**Pg**	**21 38 15.9**	**+0.4**
	baz=49						
EYUL				*e*S	**Sb**	**21 38 23.9**	**+0.3**
	baz=49						
TWK	**Hsinying**	**0.50**	**302**	⇑*i*P	**Pg**	**21 38 16.4**	**+0.6**
	baz=312						
TWK				S	**Sb**	**21 38 24.2**	**+0.2**
	baz=312						
SGLT	**Jiouru**	**0.50**	**237**	*i* P	**Pg**	**21 38 16.6**	**+0.8**
	baz=225						
SGLT				*e*S	**Sg**	**21 38 22.2**	**-0.3**
	baz=225						
YULB	**Yu-li**	**0.51**	**40**	⇑*i*P	**Pg**	**21 38 15.9**	**0.0**
	baz=56						
YULB				*e*S	**Sg**	**21 38 22.6**	**-0.1**
	baz=56						
TWM1	**Shoushan**	**0.52**	**250**	*e*P	**Pb**	**21 38 17.2**	**+0.2**
	baz=236						
TWM1				*e*S	**Sb**	**21 38 24.6**	**+0.1**
	baz=236						
ALS	**Alishan**	**0.52**	**346**	P	**Pg**	**21 38 16.3**	**+0.1**
	baz=352						
ALS				*e*S	**Sg**	**21 38 23.4**	**+0.1**
	baz=352						
CHN3	**Shinhua**	**0.54**	**278**	*e*P	**Pn**	**21 38 18.8**	**-0.7**
	baz=279						
LDUT	**Ludao**	**0.58**	**124**	P	**Pb**	**21 38 18.3**	**+0.2**
	baz=123						
LDUT				*e*S	**Sn**	**21 38 28.3**	**-1.3**
	baz=123						
EHY	**Hungye**	**0.61**	**34**	⇑*i*P	**Pg**	**21 38 17.8**	**-0.1**
	baz=39						
EHY				*e*S	**Sg**	**21 38 25.7**	**-0.2**
	baz=39						
SNJT	**Kaohsiung City**	**0.62**	**246**	*e*P	**Pn**	**21 38 20.1**	**-0.5**
	baz=244						
EAST	**Anshuo**	**0.62**	**188**	⇑*i*P	**Pg**	**21 38 18.4**	**+0.3**
	baz=183						
EAST				*e*S	**Sg**	**21 38 25.8**	**-0.5**
	baz=183						
SSPT	**Xinbi**	**0.62**	**214**	⇑*i*P	**Pg**	**21 38 18.4**	**+0.3**
	baz=207						
SSPT				*e*S	**Sg**	**21 38 26.6**	**+0.3**
	baz=207						
CHN5	**Tsauling**	**0.64**	**337**	*i* P	**Pg**	**21 38 18.9**	**+0.4**
	baz=351						
CHN5				*e*S	**Sb**	**21 38 28.2**	**0.0**
	baz=351						
TAW	**Tawu**	**0.64**	**184**	P	**Pg**	**21 38 18.7**	**+0.2**
	baz=179						
TAW				*e*S	**Sg**	**21 38 26.6**	**-0.3**
	baz=179						
HGSD	**Ruisui**	**0.66**	**42**	*i* P	**Pb**	**21 38 19.5**	**+0.1**
	baz=38						
HGSD				S	**Sn**	**21 38 29.9**	**-1.5**
	baz=38						
TAI1	**Yung-k'ang**	**0.66**	**273**	*e*P	**Pn**	**21 38 21.5**	**+0.3**
	baz=274						
CHN2	**Minshiung**	**0.68**	**321**	*e*P	**Pb**	**21 38 20.0**	**+0.1**
	baz=324						
CHN2				*e*S	**Sn**	**21 38 31.1**	**-1.0**
	baz=324						
CHY	**Chiayi**	**0.69**	**316**	*e*P	**Pb**	**21 38 20.1**	**+0.1**
	baz=319						
CHY				S	**Sn**	**21 38 30.9**	**-1.4**
	baz=319						
SCZT	**Fangliau**	**0.69**	**206**	⇑*i*P	**Pg**	**21 38 19.2**	**-0.2**
	baz=191						
SCZT				*e*S	**Sg**	**21 38 28.2**	**-0.4**
	baz=191						
WHYT	**Xinyi Township**	**0.70**	**353**	*i* P	**Pg**	**21 38 19.5**	**0.0**
	baz=6.0						
ICHU	**Yijhu**	**0.71**	**300**	*e*P	**Pb**	**21 38 20.8**	**+0.4**
	baz=316						
ICHU				*e*S	**Sn**	**21 38 32.7**	**0.0**
	baz=316						
SCLT	**Jiali**	**0.71**	**284**	*e*P	**Pn**	**21 38 21.4**	**-0.5**
	baz=301						
SCLT				*e*S	**Sn**	**21 38 33.9**	**+1.0**
	baz=301						
KAU	**Kaohsiung**	**0.73**	**234**	*e*P	**Pn**	**21 38 23.1**	**+1.0**
	baz=222						
CHN8	**Yiju**	**0.76**	**297**	*e*P	**Pg**	**21 38 20.5**	**-0.1**
	baz=314						
CHN8				*e*S	**Sb**	**21 38 31.7**	**+0.3**
	baz=314						
WLGB	**Puzi**	**0.76**	**309**	*e*P	**Pg**	**21 38 20.7**	**0.0**
	baz=312						
WGK	**Gukeng**	**0.77**	**333**	*e*P	**Pb**	**21 38 22.0**	**+0.7**
	baz=337						
WDLH	**Douliu**	**0.78**	**331**	*e*P	**Pn**	**21 38 22.3**	**-0.6**
	baz=335						
SSLB	**Suanglung**	**0.78**	**0**	P	**Pg**	**21 38 20.7**	**-0.4**
	baz=5.0						
SLIU	**Shizi**	**0.79**	**190**	⇑*i*P	**Pg**	**21 38 21.4**	**+0.1**
	baz=186						
EGFH	**Guangfu**	**0.80**	**34**	P	**Pg**	**21 38 21.0**	**-0.4**
	baz=37						
EGFH				*e*S	**Sg**	**21 38 32.0**	**+0.2**
	baz=37						
WLCH	**Liuqiu**	**0.83**	**219**	*e*P	**Pn**	**21 38 25.4**	**+1.8**
	baz=216						
WJS	**Zhushan**	**0.84**	**346**	*e*P	**Pb**	**21 38 23.0**	**+0.4**
	baz=350						
TWP	**Hsiaoliuchiu**	**0.85**	**220**	*e*P	**Pn**	**21 38 25.4**	**+1.6**
	baz=216						
WTK	**Tuku**	**0.85**	**323**	*e*P	**Pg**	**21 38 22.7**	**+0.2**
	baz=326						
WTK				*e*S	**Sn**	**21 38 35.4**	**-1.0**
	baz=326						
SMLT	**Sun Moon Lake**	**0.88**	**357**	P	**Pg**	**21 38 22.8**	**-0.1**
	baz=10.0						
SMLT				*e*S	**Sb**	**21 38 35.1**	**+0.1**
	baz=10.0						
TYC	**Yuchr**	**0.90**	**355**	*e*P	**Pg**	**21 38 23.7**	**+0.4**
	baz=6.0						
WNT	**Mingjian**	**0.91**	**345**	*e*P	**Pg**	**21 38 23.9**	**+0.4**
	baz=349						
WSF	**Szhu**	**0.92**	**314**	*e*P	**Pb**	**21 38 23.9**	**0.0**
	baz=317						
ESL	**Shilin**	**0.92**	**29**	*e*P	**Pb**	**21 38 23.2**	**-0.7**
	baz=39						
ESL				*e*S	**Sb**	**21 38 34.9**	**-1.3**
	baz=39						
OWD	**Renai**	**0.97**	**12**	*e*P	**Pb**	**21 38 23.4**	**-1.4**
	baz=6.0						
OWD				*e*S	**Sn**	**21 38 38.6**	**-0.9**
	baz=6.0						
HEN	**Hengchun**	**1.01**	**191**	*e*P	**Pn**	**21 38 26.4**	**+0.4**
	baz=187						
DPDB	**Guoxing**	**1.03**	**359**	*e*P	**Pn**	**21 38 27.3**	**+0.9**
	baz=12						
RLNB	**Erlin**	**1.04**	**329**	*e*P	**Pb**	**21 38 26.1**	**+0.2**
	baz=332						
TWK1	**Hengchun**	**1.06**	**187**	*e*P	**Pg**	**21 38 27.0**	**+0.6**
	baz=183						
TWK1				*e*S	**Sn**	**21 38 43.2**	**+1.8**
	baz=183						
TWKBT	**Hengchun**	**1.06**	**187**	*e*P	**Pg**	**21 38 27.0**	**+0.6**
	baz=183						
TWKBT				*e*S	**Sn**	**21 38 41.5**	**0.0**
	baz=183						
CHGB	**Renai**	**1.07**	**11**	*e*P	**Pb**	**21 38 25.7**	**-1.0**
	baz=15						
TSEB	**Hengchuen, Pin**	**1.10**	**182**	*e*P	**Pg**	**21 38 27.8**	**+0.7**
	baz=190						
LAY	**Lan-yu**	**1.11**	**150**	*e*P	**Pb**	**21 38 25.8**	**-1.3**
	baz=147						
WCHH	**Zhanghua**	**1.13**	**342**	*e*P	**Pg**	**21 38 28.0**	**+0.2**
	baz=345						
TCU	**Taichung**	**1.17**	**348**	*e*P	**Pg**	**21 38 29.5**	**+1.1**
	baz=338						
WHF	**Hehuan Shan**	**1.18**	**14**	*e*P	**Pb**	**21 38 27.4**	**-1.1**
	baz=9.0						
WHF				*e*S	**Sn**	**21 38 46.5**	**+1.7**
	baz=9.0						
WDGT	**Dungji**	**1.21**	**283**	P	**Pn**	**21 38 28.6**	**-0.1**
	baz=283						
WDGT				*e*S	**Sn**	**21 38 45.2**	**0.0**
	baz=283						
TWD	**Chiawan**	**1.23**	**29**	*e*P	**Pb**	**21 38 29.1**	**-0.1**
	baz=47						
TDCB	**Techi**	**1.26**	**9**	*e*P	**Pn**	**21 38 29.1**	**-0.5**
	baz=358						
TDCB				*e*S	**Sg**	**21 38 47.3**	**+0.6**
	baz=358						
FUSS	**Fushou**	**1.27**	**12**	*e*P	**Pb**	**21 38 30.2**	**+0.2**
	baz=14						
FUSS				*e*S	**Sg**	**21 38 49.3**	**+2.3**
	baz=14						
WHP	**Taichung City**	**1.27**	**360**	*e*P	**Pg**	**21 38 31.0**	**+0.6**
	baz=10.0						
WHP				*e*S	**Sg**	**21 38 50.4**	**+3.4**
	baz=10.0						
ETLH	**Xiulin Townshi**	**1.30**	**22**	*e*P	**Pn**	**21 38 30.0**	**-0.1**
	baz=43						
NACB	**Ninganchiao**	**1.31**	**27**	*e*P	**Pn**	**21 38 29.2**	**-0.9**
	baz=28						
NACB				*e*S	**Sn**	**21 38 47.8**	**+0.2**
	baz=28						
TWQ1	**Liyutan**	**1.35**	**353**	*e*P	**Pg**	**21 38 33.7**	**+1.8**
	baz=358						
PHUB	**P'eng-hu**	**1.36**	**292**	*e*P	**Pn**	**21 38 30.0**	**-0.9**
	baz=293						
PHUB				*e*S	**Sn**	**21 38 47.4**	**-1.5**
	baz=293						
PNG	**Penghu**	**1.40**	**294**	*e*P	**Pn**	**21 38 31.3**	**0.0**
	baz=295						
PNG				*e*S	**Sn**	**21 38 48.4**	**-1.4**
	baz=295						
VCHM	**Qimei**	**1.41**	**279**	P	**Pn**	**21 38 31.3**	**-0.2**
	baz=294						
VCHM				*e*S	**Sn**	**21 38 49.2**	**-0.9**
	baz=294						
NSY	**Sanyi**	**1.42**	**353**	*e*P	**Pg**	**21 38 33.8**	**+0.6**
	baz=359						
NNSB	**Datong**	**1.48**	**16**	*e*P	**Pn**	**21 38 32.9**	**+0.3**

NSK				*e*S	**Sb**	**21 38 59.5**	**+0.6**
	baz=13						
ENTT	**Nioudou**	**1.73**	**19**	*e*P	**Pb**	**21 38 37.8**	**+0.1**
	baz=38						
TWC	**Suao**	**1.80**	**27**	*e*P	**Pg**	**21 38 40.0**	**-0.6**
	baz=31						
TWE	**Neicheng**	**1.83**	**21**	*e*P	**Pb**	**21 38 40.2**	**+0.7**
	baz=38						
TWE				*e*S	**Sg**	**21 39 04.8**	**-0.2**
	baz=38						
NWLT	**Wulai**	**1.84**	**16**	*e*P	**Pb**	**21 38 39.3**	**-0.3**
	baz=20						
NHDH	**Xindian Distri**	**2.02**	**15**	*e*P	**Pg**	**21 38 46.1**	**+1.3**
	baz=19						
TATO	**Taipei**	**2.03**	**14**	*e*P	**Pg**	**21 38 45.2**	**+0.4**
	baz=18						
EGS		**2.04**	**26**	*e*P	**Pb**	**21 38 43.3**	**+0.2**
	baz=43						
TWA	**Mucha**	**2.05**	**16**	*e*P	**Pg**	**21 38 46.0**	**+0.6**
	baz=35						
TAP1	**Taipei**	**2.10**	**14**	*e*P	**Pg**	**21 38 45.6**	**-0.6**
	baz=2.0						
TIPB	**Shuangxi**	**2.12**	**22**	*e*P	**Pb**	**21 38 43.1**	**-1.2**
	baz=40						
NWF	**Wu-fen Shan**	**2.20**	**20**	*e*P	**Pb**	**21 38 46.6**	**+0.9**
	baz=41						
WFSB	**Wu-fen Shan**	**2.20**	**20**	*e*P	**Pg**	**21 38 47.2**	**-0.9**
	baz=41						
YM04	**YM04**	**2.21**	**14**	*e*P	**Pb**	**21 38 45.7**	**-0.2**
	baz=3.0						
YM10	**YM10**	**2.22**	**15**	*e*P	**Pg**	**21 38 47.5**	**-1.0**
	baz=2.0						
YM05	**YM05**	**2.23**	**15**	*e*P	**Pb**	**21 38 47.1**	**+0.9**
	baz=2.0						
YM11	**YM11**	**2.23**	**15**	*e*P	**Pb**	**21 38 47.2**	**+1.0**
	baz=21						
YM03	**YM03**	**2.23**	**14**	*e*P	**Pg**	**21 38 48.2**	**-0.6**
	baz=3.0						
JYNG	**Yonagunijimaku**	**2.33**	**51**	S	**Sn**	**21 39 12.9**	**+0.1**
YOJ	**Yonaguni jima**	**2.38**	**52**	*e*P	**Pn**	**21 38 44.4**	**-0.5**
	baz=54						
VWUC	**VWUC**	**2.41**	**326**	*e*P	**Pn**	**21 38 46.0**	**+0.7**
	baz=331						
PTMZ	**Houxiangcun**	**2.63**	**321**	*e*P	**Pn**	**21 38 48.8**	**+0.5**
	baz=326						
KNMB	**Chin-men Tao**	**2.76**	**302**	*e*P	**Pn**	**21 38 49.7**	**-0.4**
	baz=306						
HATJ	**Hateruma jima**	**2.83**	**68**	*e*S	**Sn**	**21 39 24.7**	**-0.3**
IRIF	**Iriomote-Funau**	**2.88**	**62**	P	**Pn**	**21 38 51.5**	**-0.2**
IRIF				*e*S	**Sn**	**21 39 26.9**	**+0.7**
JKRS	**Kuro-shima**	**3.07**	**66**	*e*S	**Sn**	**21 39 28.4**	**-2.5**
ZPLA	**Ao Xicun**	**3.08**	**288**	*e*P	**Pn**	**21 38 53.9**	**-0.6**
	baz=290						
JIJ	**Ishigaki jima**	**3.23**	**65**	P	**Pn**	**21 38 56.7**	**+0.2**
JIJ				*e*S	**Sn**	**21 39 33.6**	**-1.3**
MATB	**Ma-tsu**	**3.27**	**344**	*e*P	**Pn**	**21 38 57.8**	**+0.8**
	baz=349						
AXDP	**Jialang**	**3.31**	**305**	*e*P	**Pn**	**21 38 56.7**	**-1.0**
	baz=309						
JISG	**Ishigakijimahi**	**3.46**	**62**	P	**Pn**	**21 38 56.8**	**-2.9**
JISG				*e*S	**Sn**	**21 39 39.2**	**-1.5**
LYJJ	**Jianjiangzhen**	**3.69**	**343**	*e*P	**Pn**	**21 39 03.6**	**+0.7**
	baz=349						
VDOS	**Pratas Island**	**4.54**	**240**	*e*P	**Pn**	**21 39 16.1**	**+1.6**
	baz=242						

MOS ***23*** *21:49:02.7±0.8, 49°.23N×155°.90E, h25km, mb4.2/4, Error ellipse: s-maj=18.7km s-min=3.5km az=77.6*
KRSC ***23*** *21:49:11.1±1.9, 49°.85N×156°.90E, h17km±25km, ML4.5*
NEIC ***23*** *21:49:12.1±0.7, 49°.74N±0°.10×155°.9E±0°.2, h68km±6km, mb4.1/5, Error ellipse: s-maj=21.3km s-min=12.2km az=113.0*
IDC ***23*** *21:49:14.1±3.4, 49°.85N×155°.82E, h81km±27km, mb3.5/11, mb1 3.7/15, mb1mx3.5/36, mbtmp3.9/15, MS3.2/5, Ms1 3.2/5, ms1mx2.7/42, Error ellipse: s-maj=26.3km s-min=18.3km az=154.0*

ISC 23 21:49:10.5±0.7, 49°.69N±0°.08×156°.19E±0°.08, h50km, n114, σ1s95/124, mb4.0/14, MS3.4/4, 1C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.00**	**357**	*e*P	**Pn**	**21 49 28.1**	**-0.1**
SKR				*e*S	**Sn**	**21 49 40.3**	**-0.9**
SKR	**Severo-Kuril's**	**1.00**	**357**	*i*PN	**Pn**	**21 49 28.2**	**0.0**
SKR				pmax	pmax		
	comp=Z,514nm,0.6s						
PAU	**Pauzhetka**	**1.83**	**12**	*e*P	**Pn**	**21 49 39.7**	**+0.3**
PAU				*e*S	**Sn**	**21 50 00.4**	**-1.0**
PAU	**Pauzhetka**	**1.83**	**12**	PN	**Pn**	**21 49 39.7**	**+0.3**
KDTR	**Khodutka, Kamc**	**2.44**	**29**	*e*P	**Pn**	**21 49 47.5**	**-0.3**
KDTR				*e*S	**Sn**	**21 50 13.6**	**-2.8**
KDTR	**Khodutka, Kamc**	**2.44**	**29**	PN	**Pn**	**21 49 47.5**	**-0.3**
ASAK	**Asacha**	**2.91**	**21**	*e*P	**Pn**	**21 49 55.5**	**+1.2**
ASAK	**Asacha**	**2.91**	**21**	PN	**Pn**	**21 49 55.5**	**+1.2**
MTVR	**Mutnovka**	**3.07**	**23**	*e*P	**Pn**	**21 49 57.3**	**+0.7**
MTVR				*e*S	**Sn**	**21 50 31.5**	**-0.6**
MTVR	**Mutnovka**	**3.07**	**23**	PN	**Pn**	**21 49 57.3**	**+0.7**
GRL	**Gorelyy**	**3.10**	**22**	*e*P	**Pn**	**21 49 58.4**	**+1.3**
GRL				*e*S	**Sn**	**21 50 31.5**	**-1.5**
GRL	**Gorelyy**	**3.10**	**22**	PN	**Pn**	**21 49 58.4**	**+1.3**
RUS	**Russkaya**	**3.12**	**27**	*e*P	**Pn**	**21 49 57.1**	**0.0**
RUS				*e*S	**Sn**	**21 50 31.1**	**-1.9**
RUS	**Russkaya**	**3.12**	**27**	PN	**Pn**	**21 49 57.1**	**0.0**
APC	**Apacha**	**3.30**	**10**	*e*P	**Pn**	**21 50 00.9**	**+1.3**
APC				*e*S	**Sn**	**21 50 37.2**	**-0.3**
APC	**Apacha**	**3.30**	**10**	PN	**Pn**	**21 50 00.9**	**+1.3**
KRMR	**Karymshinskiy**	**3.38**	**20**	*e*P	**Pn**	**21 50 02.4**	**+1.8**
KRMR				*e*S	**Sn**	**21 50 39.5**	**+0.1**
KRMR	**Karymshinskiy**	**3.38**	**20**	PN	**Pn**	**21 50 02.4**	**+1.8**
PEA0B	**Petropavlovsk-**	**3.56**	**15**	PN	**Pn**	**21 50 05.2**	**+2.1**
PEA0B	**Petropavlovsk-**	**3.56**	**15**		**Pn**	**21 50 05.2**	**+2.1**
PETK	**Petropavlovsk-**	**3.56**	**15**	P	**Pn**	**21 50 04.8**	**+1.8**
	comp=Z,5.7nm,0.3s,baz=183,slow=12,SNR=44						
PETK				S	**Sn**	**21 50 46.4**	**+2.5**
	comp=Z,2.7nm,0.3s,baz=190,slow=23,SNR=2.0						
PETK	**Petropavlovsk-**	**3.56**	**15**		**Pn**	**21 50 04.9**	**+1.8**
PETK					**Sn**	**21 50 46.0**	**+2.1**
PET	**Petropavlovsk**	**3.68**	**24**	*e*P	**Pn**	**21 50 05.9**	**+1.1**
PET				*e*S	**Sn**	**21 50 46.7**	**-0.2**
PET	**Petropavlovsk**	**3.68**	**24**	*e*PN	**Pn**	**21 50 06.2**	**+1.4**
DALK	**Dalny**	**3.71**	**25**	*e*P	**Pn**	**21 50 06.3**	**+1.0**
DALK				*e*S	**Sn**	**21 50 47.0**	**-0.7**
DALK	**Dalny**	**3.71**	**25**	PN	**Pn**	**21 50 06.3**	**+1.0**
UGLR	**Uglovaya**	**3.89**	**24**	*e*P	**Pn**	**21 50 10.1**	**+2.3**
UGLR				*e*S	**Sn**	**21 50 53.3**	**+1.0**
UGLR	**Uglovaya**	**3.89**	**24**	PN	**Pn**	**21 50 10.1**	**+2.3**
AVH	**Avacha**	**3.92**	**23**	*e*P	**Pn**	**21 50 10.3**	**+2.1**
AVH				*e*S	**Sn**	**21 50 53.4**	**+0.4**
AVH	**Avacha**	**3.92**	**23**	PN	**Pn**	**21 50 10.3**	**+2.1**
KOK	**Koryaka**	**3.92**	**22**	*e*P	**Pn**	**21 50 10.0**	**+1.8**
KOK	**Koryaka**	**3.92**	**22**	PN	**Pn**	**21 50 10.0**	**+1.8**
SMAR	**Somma**	**3.94**	**23**	*e*P	**Pn**	**21 50 10.8**	**+2.3**
SMAR				*e*S	**Sn**	**21 50 53.8**	**+0.3**
SMAR	**Somma**	**3.94**	**23**	PN	**Pn**	**21 50 10.8**	**+2.3**
KRER	**Koryakskii**	**3.96**	**23**	*e*P	**Pn**	**21 50 10.2**	**+1.4**
KRER	**Koryakskii**	**3.96**	**23**	PN	**Pn**	**21 50 10.2**	**+1.4**
KRX	**Arik**	**3.98**	**22**	*e*P	**Pn**	**21 50 11.5**	**+2.4**
KRX	**Arik**	**3.98**	**22**	PN	**Pn**	**21 50 11.5**	**+2.4**
NLC	**Nalytchevo**	**4.01**	**28**	*e*S	**Sn**	**21 50 53.1**	**-1.8**
GNL	**Ganaly**	**4.16**	**14**	*e*P	**Pn**	**21 50 13.9**	**+2.4**
GNL	**Ganaly**	**4.16**	**14**	PN	**Pn**	**21 50 13.9**	**+2.4**
SPN	**Mys Shipunski**	**4.17**	**34**	*e*P	**Pn**	**21 50 11.9**	**+0.3**
SPN				*e*S	**Sn**	**21 50 57.9**	**-1.1**
SPN	**Mys Shipunski**	**4.17**	**34**	PN	**Pn**	**21 50 11.9**	**+0.3**
KII	**Karymskiy**	**4.80**	**24**	*e*P	**Pn**	**21 50 22.9**	**+2.6**
KII				*e*S	**Sn**	**21 51 13.4**	**-1.2**
KII	**Karymskiy**	**4.80**	**24**	PN	**Pn**	**21 50 22.9**	**+2.6**
MKZ	**Mys Kozlova**	**5.95**	**33**	P	**Pn**	**21 50 37.2**	**+1.3**
MKZ	**Mys Kozlova**	**5.95**	**33**	PN	**Pn**	**21 50 37.2**	**+1.3**
KZV	**Kizimen**	**5.99**	**23**	*e*P	**Pn**	**21 50 39.6**	**+3.0**
KZV	**Kizimen**	**5.99**	**23**	PN	**Pn**	**21 50 39.6**	**+3.0**
TUMD	**Tumrok D**	**6.09**	**23**	*e*P	**Pn**	**21 50 40.8**	**+2.9**
TUMD				*e*S	**Sn**	**21 51 45.6**	**-0.7**
TUMR	**Tumrok**	**6.10**	**22**	*e*P	**Pn**	**21 50 39.0**	**+0.9**
TUMR	**Tumrok**	**6.10**	**22**	PN	**Pn**	**21 50 40.8**	**+2.7**
KMNR	**Kamenistaya**	**6.56**	**20**	*e*P	**Pn**	**21 50 48.6**	**+4.3**
KMNR	**Kamenistaya**	**6.56**	**20**	PN	**Pn**	**21 50 48.6**	**+4.3**
BZWR	**Bezymyannyi-We**	**6.81**	**21**	*e*P	**Pn**	**21 50 50.4**	**+2.6**
BZWR	**Bezymyannyi-We**	**6.81**	**21**	PN	**Pn**	**21 50 50.4**	**+2.6**
BZGR	**Bezymyannyi-Gr**	**6.83**	**22**	*e*P	**Pn**	**21 50 52.4**	**+4.3**
BZGR	**Bezymyannyi-Gr**	**6.83**	**22**	PN	**Pn**	**21 50 52.4**	**+4.3**
ZLN	**Zelenaya**	**6.93**	**22**	*e*P	**Pn**	**21 50 51.9**	**+2.5**
ZLN	**Zelenaya**	**6.93**	**22**	PN	**Pn**	**21 50 51.9**	**+2.5**
LGNR	**Loginova**	**6.96**	**21**	*e*P	**Pn**	**21 50 53.7**	**+3.7**
LGNR	**Loginova**	**6.96**	**21**	PN	**Pn**	**21 50 53.7**	**+3.7**
SRDR	**Sredinnyy**	**6.97**	**16**	*e*P	**Pn**	**21 50 53.8**	**+3.8**
SRDR	**Sredinnyy**	**6.97**	**16**	PN	**Pn**	**21 50 53.8**	**+3.8**
CIRR	**Tsirk**	**7.00**	**21**	*e*P	**Pn**	**21 50 53.4**	**+2.9**
CIRR	**Tsirk**	**7.00**	**21**	PN	**Pn**	**21 50 53.4**	**+2.9**
SRKR	**Sorokina**	**7.59**	**21**	*e*P	**Pn**	**21 51 03.2**	**+4.7**
SRKR	**Sorokina**	**7.59**	**21**	PN	**Pn**	**21 51 03.2**	**+4.7**
KBTR	**Krutoberegovo**	**7.66**	**29**	*e*P	**Pn**	**21 51 00.3**	**+1.0**
KBTR	**Krutoberegovo**	**7.66**	**29**	PN	**Pn**	**21 51 00.3**	**+1.0**
MA2	**Magadan**	**10.39**	**345**	P	**Pn**	**21 51 37.4**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=233,slow=12,SNR=1.8						
MA2				LR	LR	21 55 27.5	
	comp=Z,58nm,20.9s,baz=264,slow=37						
MA2	**Magadan**	**10.39**	**345**		**Pn**	**21 51 36.9**	**+0.1**
ERM	**Erimo**	**11.88**	**235**	*e*PN	**Pn**	**21 51 58.7**	**+1.6**
SEY	**Seymchan**	**13.44**	**352**	P	**Pn**	**21 52 20.5**	**+2.2**
	comp=Z,0.2nm,0.3s,baz=198,slow=20,SNR=2.6						
BILL	**Bilibino**	**19.08**	**12**	*i*eP	**Pn**	**21 53 30.0**	**+0.3**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
BILL	**Bilibino**	**19.08**	**12**	P	**Pn**	**21 53 29.5**	**-0.3**
YAK	**Yakutsk**	**19.17**	**320**	P	**P**	**21 53 28.1**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=204,slow=0.2,SNR=4.4						
YAK	**Yakutsk**	**19.17**	**320**	*i*eP	**P**	**21 53 29.0**	**-0.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK	**Yakutsk**	**19.17**	**320**	P	**P**	**21 53 27.8**	**-1.7**
YAK				IAmb	IAmb	21 53 32.7	
	comp=Z,9.1nm,0.7s						
TIXI	**Tiksi**	**25.31**	**340**	*i*eP	**P**	**21 54 30.3**	**-1.7**
TIXI	**Tiksi**	**25.31**	**340**	P	**P**	**21 54 31.3**	**-0.7**
TIXI				IAmb	IAmb	21 54 31.8	
	comp=Z,4.8nm,0.8s						
TTA	**Tatalina**	**28.87**	**45**	P	**P**	**21 55 04.8**	**+0.7**
TTA	**Tatalina**	**28.87**	**45**	P	**P**	**21 55 04.8**	**+0.7**
IMAR	**Indian Mountai**	**30.18**	**39**	P	**P**	**21 55 16.0**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**31.09**	**160**	T	T	22 28 30.1	
	baz=347,slow=76,SNR=17						
H11N1	**WAKE ISLAND Hy**	**31.10**	**160**	T	T	22 28 19.2	
	baz=347,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**31.10**	**160**	T	T	22 28 28.9	
	baz=347,slow=76,SNR=38						
H11S1	**WAKE ISLAND Hy**	**32.23**	**161**	T	T	22 29 44.2	
	baz=347,slow=76,SNR=250						
H11S3	**WAKE ISLAND Hy**	**32.24**	**161**	T	T	22 29 48.0	
	baz=347,slow=76,SNR=80						
H11S2	**WAKE ISLAND Hy**	**32.25**	**161**	T	T	22 29 45.6	
	baz=347,slow=76,SNR=303						
COLA	**College**	**32.56**	**41**	*i*eP	**P**	**21 55 37.7**	**+1.3**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ILAR	**Eielson Array**	**32.97**	**41**	P	**P**	**21 55 40.0**	**0.0**
	comp=Z,0.7nm,0.6s,baz=262,slow=6.0,SNR=14						
ILAR	**Eielson Array**	**32.97**	**41**	*e*P	**P**	**21 55 40.6**	**+0.5**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**32.97**	**41**	P	**P**	**21 55 40.5**	**+0.5**
BCAR	**Beaver Creek A**	**35.34**	**44**	P	**P**	**21 56 01.7**	**+1.0**
INK	**Inuvik**	**38.06**	**35**	P	**P**	**21 56 24.6**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=273,slow=8.2,SNR=7.2						
ZALV	**Zalesovo Beam**	**42.62**	**304**	P	**P**	**21 56 59.7**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=48,slow=8.6,SNR=1.6						
ZALV	**Zalesovo Beam**	**42.62**	**304**	P	**P**	**21 56 59.3**	**-2.1**
YKA	**Yellowknife Ar**	**47.34**	**39**	P	**P**	**21 57 39.6**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=297,slow=7.8,SNR=3.6						
MKAR	**Makanchi Array**	**47.45**	**296**	P	**P**	**21 57 37.2**	**-2.7**
	comp=Z,0.6nm,0.7s,baz=56,slow=5.7,SNR=4.6						
MKAR				LR	LR	22 18 42.7	
	comp=Z,55nm,18.7s,baz=40,slow=38						
MKAR	**Makanchi Array**	**47.45**	**296**	*e*P	**P**	**21 57 38.6**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**47.45**	**296**	P	**P**	**21 57 37.7**	**-2.3**
KURK	**Kurchatov**	**47.48**	**303**	*i*eP	**P**	**21 57 39.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**47.48**	**303**	P	**P**	**21 57 38.7**	**-1.4**
ARCES	**ARCESS Array B**	**55.75**	**341**	P	**P**	**21 58 40.1**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=42,slow=9.7,SNR=1.4						
ARCES				LR	LR	22 24 54.8	
	comp=Z,22nm,19.5s,baz=275,slow=39						
FINES	**FINESS Array B**	**62.24**	**335**	P	**P**	**21 59 24.8**	**-1.7**
	comp=Z,1.5nm,0.9s,baz=23,slow=9.0,SNR=5.1						
SCHQ	**Schefferville**	**69.79**	**25**	P	**P**	**22 00 15.2**	**+0.1**
	comp=Z,4.7nm,0.8s,baz=8.1,slow=7.1,SNR=1.8						
WRA	**Warramunga Arr**	**71.98**	**202**	P	**P**	**22 00 28.7**	**0.0**
	comp=Z,0.4nm,0.9s,baz=16,slow=6.7,SNR=2.4						
WRA	**Warramunga Arr**	**71.98**	**202**	P	**P**	**22 00 28.3**	**-0.4**
TXAR	**Lajitas Array**	**74.29**	**63**	P	**P**	**22 00 43.7**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=313,slow=4.2,SNR=6.5						
TXAR	**Lajitas Array**	**74.29**	**63**	P	**P**	**22 00 43.0**	**+0.4**
VRAC	**Vranov**	**75.45**	**334**	LR	LR	22 35 35.7	
	comp=Z,31nm,19.4s,baz=30,slow=37						
ASAR	**Alice Springs**	**75.67**	**201**	P	**P**	**22 00 51.7**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=3.8,slow=5.6,SNR=1.8						
BRTR	**Keskin Array B**	**77.62**	**318**	LR	LR	22 41 05.0	
	comp=Z,11nm,18.6s,baz=82,slow=40						

LDG ***23*** *21:58:05.6±0.1, 49°.76N×8°.49E, h10km, Ml1.9/3, Error ellipse: s-maj=1.2km s-min=1.0km az=125.0*

STR 23 21:58:07.1±1.7, 50°N±7°×±1°0, h11km±6km, MLv1.4/3, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/haslach_taup-2.11 preliminary, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABH	**Alteburg**	**0.56**	**290**	Pg	Pg	21 58 17.4	-0.7
ABH				Sg	Sg	21 58 25.9	+0.5
OPP	**Oppenau**	**1.20**	**186**	Pg	Pb	21 58 29.9	0.0
OPP				Sg	Sn	21 58 46.4	+0.1
CDF	**Champ du Feu**	**1.47**	**209**	*e*Pg	Pb	21 58 34.8	+0.3
CDF				*e*Sg	Sg	21 58 55.1	+0.7
	0.8nm,0.2s						
HINF	**Hinteralfeld**	**2.13**	**209**	*e*Pg	Pg	21 58 46.9	-1.0
HINF				*e*Sg	Sg	21 59 15.7	+0.2
	1.5nm,0.3s						
HAU	**Haudompre**	**2.15**	**219**	*e*Pg	Pg	21 58 47.5	-0.8
HAU				*e*Sg	Sg	21 59 16.5	+0.3
	1.5nm,0.2s						

BER ***23*** *21:58:58.5±1.8, 80°.39N×2°.01W, h10km, ML2.2, ML2.8(DNK), Confirmed Earthquake*
DNK ***23*** *21:58:59.5±1.5, 80.07N×1°.49W, h22km±53km, ML2.8*
IEPN ***23*** *21:59:01.0, 80°.52N×0°.05W, h15km*

ISC 23 21:58:53.9±1.7, 80°.4N±0°.1×2°.10W±0°.06, h12km, n15, σ2s48/27, 1D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**2.94**	**114**	*e*P	**Pn**	**21 59 42.4**	**+2.1**
KBS				*e*S	**Sn**	**22 00 13.2**	**-2.2**
KBS	**Kingsbay**	**2.94**	**114**	*e*P	**Pn**	**21 59 42.4**	**+2.1**
KBS				*e*S	**Sn**	**22 00 14.4**	**-1.0**
KBS				IAML		22 00 19.7	
	comp=Z,11nm,0.4s						
KBS	**Kingsbay**	**2.94**	**114**	*i*P	**Pn**	**21 59 42.4**	**+2.1**
KBS				*i*S	**Sn**	**22 00 13.3**	**-2.2**
KBS				IAML		22 00 19.8	
	comp=Z,21nm,0.3s						
BRBB	**Barentsburg B**	**3.84**	**119**	*e*P	**Pn**	**21 59 56.3**	**+3.7**
BRBB				*e*S	**Sn**	**22 00 37.3**	**-0.2**
SPA0	**Spitsbergen Ar**	**4.10**	**114**	*i*P	**Pn**	**21 59 58.8**	**+2.5**
SPA0				*e*S	**Sn**	**22 00 41.9**	**-2.2**
SPA0	**Spitsbergen Ar**	**4.10**	**114**	*e*P	**Pn**	**21 59 58.8**	**+2.5**
SPA0				*e*S	**Sn**	**22 00 42.9**	**-1.2**
SPA0				IAML		22 00 49.5	
	comp=Z,6.5nm,0.8s						
HSPB	**Hornsund (broa**	**4.86**	**126**	*e*P	**Pn**	**22 00 09.4**	**+2.8**
HSPB				S	**Sn**	**22 00 59.3**	**-3.4**
HSPB	**Hornsund (broa**	**4.86**	**126**	*e*P	**Pn**	**22 00 09.6**	**+3.0**
HSPB				*e*S	**Sn**	**22 01 01.9**	**-0.7**
HSPB				IAML		22 01 12.1	
	comp=Z,6.3nm,0.8s						
DAG	**Danmarks Havn**	**4.91**	**230**	*e*	**Pn**	**22 00 08.4**	**+1.1**
	baz=40,slow=16						
DAG				*i*P	**Pn**	**22 00 09.6**	**+2.3**
DAG				*i*S	**Sn**	**22 01 02.5**	**-1.3**
DAG				IAML		22 01 07.7	
	comp=Z,7.9nm,0.3s						
HOPEN	**Hopen**	**6.63**	**112**	P	**Pn**	**22 00 31.7**	**+0.8**
HOPEN				*e*S	**Sn**	**22 01 42.1**	**-4.1**
HOPEN	**Hopen**	**6.63**	**112**	*e*S	**Sn**	**22 01 43.7**	**-2.5**
HOPEN				IAML		22 01 47.3	
	comp=Z,21nm,0.7s						
DBG	**Daneborg**	**7.27**	**222**	*e*P	**Pn**	**22 00 42.0**	**+2.3**
DBG				*e*S	**Sn**	**22 01 57.6**	**-4.4**
DBG				IAML		22 02 02.7	
	comp=Z,2.4nm,0.4s						
DBG	**Daneborg**	**7.27**	**222**	*i*P	**Pn**	**22 00 41.9**	**+2.3**
DBG				*i*		22 01 58.8	
DBG				IAML		22 02 02.7	
	comp=Z,2.4nm,0.4s						
ZFI2	**Zemlya Franca-**	**7.92**	**63**	*i*P	**Pn**	**22 00 48.1**	**-0.5**
ZFI2				*e*S	Sn	22 02 07.0	-11
	comp=Z,3.3nm,1.7s						
ZFI	**Zemlya Franca-**	**7.92**	**63**	*e*P	**Pn**	**22 00 48.8**	**+0.2**
ZFI				*e*S	Sn	22 02 07.2	-11

IDC 23 22:00:37.9±11.0, 21°.25N×143°.45E, h122km±103km, mb3.2/7, mb1 3.4/7, mb1mx3.2/42, mbtmp3.6/7, MS2.9/1, Ms1 2.9/1, ms1mx2.2/20, Error ellipse: s-maj=50.4km s-min=20.9km az=90.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**21.02**	**324**	P	P	22 05 13.1	+1.3
	1.3nm,0.5s,baz=146,slow=9.3,SNR=5.3						
MA2	**Magadan**	**38.65**	**6**	LR	LR	22 25 49.1	
	comp=Z,14nm,18.0s,baz=256,slow=39						
WRA	**Warramunga Arr**	**41.90**	**193**	P	P	22 08 15.7	-0.7
	0.2nm,0.8s,baz=18,slow=7.1,SNR=1.5						
ASAR	**Alice Springs**	**45.60**	**192**	P	P	22 08 46.5	+0.4
	0.3nm,0.7s,baz=27,slow=9.3,SNR=2.3						
ZALV	**Zalesovo Beam**	**54.72**	**322**	P	P	22 09 52.4	-2.0
	0.3nm,0.3s,baz=125,slow=7.2,SNR=1.5						
ILAR	**Eielson Array**	**62.33**	**27**	P	P	22 10 46.1	-0.9
	0.5nm,0.9s,baz=247,slow=5.0,SNR=4.9						
YKA	**Yellowknife Ar**	**76.74**	**28**	P	P	22 12 16.6	+1.1
	0.3nm,0.4s,baz=295,slow=4.8,SNR=2.3						
FINES	**FINESS Array B**	**83.69**	**335**	P	P	22 12 53.7	+0.9
	3.5nm,1.1s,baz=70,slow=6.3,SNR=5.2						

IDC ***23*** *22:07:24.2±3.5, 21°.84N×143°.58E, h196km±29km, mb3.3/10, mb1 3.5/11, mb1mx3.2/58, mbtmp3.8/11, Error ellipse: s-maj=28.5km s-min=18.4km az=77.0*

ISC 23 22:07:24.4±0.8, 21°.8N±0°.1×143°.6E±0°.2, h200km, n15, σ0s89/17, mb3.5/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.39**	**343**	P	**Pn**	**22 10 51.1**	**-0.2**
	0.1nm,0.3s,baz=168,slow=9.4,SNR=2.6						
KSRS	**Korea Array**	**20.64**	**322**	P	**P**	**22 11 48.0**	**-0.6**
	1.7nm,0.6s,baz=141,slow=9.5,SNR=7.7						
SONM	**Songino Array**	**39.49**	**320**	P	**P**	**22 14 36.0**	**+0.5**
	0.5nm,0.6s,baz=108,slow=9.3,SNR=2.9						
WRA	**Warramunga Arr**	**42.49**	**193**	P	**P**	**22 15 00.1**	**0.0**
	0.2nm,0.3s,baz=15,slow=9.4,SNR=6.1						
WRA				ScP	**ScP**	**22 20 20.5**	**-0.3**
	0.3nm,0.7s,baz=13,slow=5.4,SNR=2.3						
ZALV	**Zalesovo Beam**	**54.35**	**322**	P	**P**	**22 16 28.8**	**-1.3**
	0.5nm,0.4s,baz=120,slow=8.5,SNR=2.1						
MKAR	**Makanchi Array**	**54.89**	**313**	P	**P**	**22 16 35.4**	**+1.1**
	1.2nm,

GRL	Gorelyy	2.70	214	*e*P		Pn	22 25 01.4	+1.4
MTVR	Mutnovka	2.73	212	*e*P		Pn	22 25 01.0	+0.6
MTVR				*e*S		Sn	22 25 34.0	+0.8
APC	Apacha	2.75	228	*e*P		Pn	22 25 01.7	+1.1
APC				*e*S		Sn	22 25 34.2	+0.5
ASAK	Asacha	2.90	214	*e*P		Pn	22 25 03.7	+1.1
KDTR	Khodutka, Kamc	3.35	207	*e*P		Pn	22 25 08.1	-0.4
KDTR				*e*S		Sn	22 25 45.7	-2.0
PAU	Pauzhetka	4.04	215	*e*P		Pn	22 25 19.0	+1.5
MA2	Magadan	7.13	316	P		Pn	22 26 00.5	+1.3
	0.6nm,0.3s,baz=162,slow=20,SNR=2.1							
ASAJ	Asahikawa	15.78	235	P		P	22 27 55.5	+1.0
	0.7nm,0.3s,baz=52,slow=13,SNR=4.1							
ILAR	Eielson Array	27.44	48	P		P	22 29 51.3	-0.6
	0.3nm,0.9s,baz=271,slow=7.0,SNR=2.1							
SONM	Songino Array	33.80	281	P		P	22 30 46.8	-1.3
	0.4nm,0.5s,baz=60,slow=10,SNR=2.1							
H11N2	WAKE ISLAND Hy	35.36	170	T		T	23 08 34.6	
	baz=355,slow=76,SNR=12							
H11N3	WAKE ISLAND Hy	35.37	170	T		T	23 08 36.3	
	baz=355,slow=76,SNR=6.6							
H11N1	WAKE ISLAND Hy	35.38	170	T		T	23 08 33.5	
	baz=355,slow=76,SNR=19							
YKA	Yellowknife Ar	41.73	44	P		P	22 31 55.3	+0.9
	0.5nm,0.7s,baz=301,slow=8.5,SNR=1.5							
MKAR	Makanchi Array	47.66	294	P		P	22 32 39.9	-1.8
	0.3nm,0.6s,baz=50,slow=6.4,SNR=4.6							
BVAR	Borovoye Array	49.53	307	P		P	22 32 53.4	-2.5
	0.2nm,0.5s,baz=82,slow=10,SNR=2.0							
NVAR	Mina Array Bea	54.93	71	P		P	22 33 37.2	+1.0
	0.6nm,0.6s,baz=304,slow=7.8,SNR=5.8							
TXAR	Lajitas Array	69.73	68	P		P	22 35 15.9	+1.2
	0.5nm,0.5s,baz=291,slow=5.1,SNR=7.1							
WRA	Warramunga Arr	77.76	205	P		P	22 36 01.2	-0.1
	0.5nm,0.6s,baz=18,slow=5.9,SNR=5.5							
ASAR	Alice Springs	81.44	205	P		P	22 36 21.1	-0.2
	0.8nm,1.0s,baz=14,slow=5.1,SNR=4.3							

KRSC ***23*** *22:26:19.4±2.2, 48°.38N×154°.29E, h200km±24km, ML4.7*
MOS ***23*** *22:26:22.7±1.0, 49°.02N×153°.13E, h183km, mb4.2/6, Error ellipse: s-maj=11.7km s-min=3.8km az=64.7*
SKHL ***23*** *22:26:22.2±0.4, 48°.93N×153°.40E, h170km±9km, mb5.0/4, msh5.4/3*
NEIC ***23*** *22:26:23.8±0.8, 49°.1N±0°.1×152°.9E±0°.1, h175km±7km, mb4.3/14, Error ellipse: s-maj=18.2km s-min=10.1km az=142.0*
IDC ***23*** *22:26:25.3±1.5, 49°.10N×152°.99E, h188km±13km, mb3.5/23, mb1 3.6/28, mb1mx3.5/53, mbtmp4.0/28, Error ellipse: s-maj=15.1km s-min=8.6km az=140.0*

ISC 23 22:26:22.3±0.5, **48°.84N**±0°.07×**153°.24E**±0°.06, **h174**km, **n207**, σ1°**89**/237, **mb4.1**/46, **4C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.62**	**44**	*e*P		**Pn**	**22 27 05.6**	**-0.5**
SKR				*e*S		**Sn**	**22 27 39.8**	**-0.4**
SKR	**Severo-Kuril's**	**2.62**	**44**	*e*P		**Pn**	**22 27 05.5**	**-0.5**
SKR				AMB		AMB	22 27 06.5	
	270nm,0.7s							
SKR				*e*S		**Sn**	**22 27 39.0**	**-1.1**
SKR				A		A	22 27 43.4	
	78nm,0.3s							
SKR				A		A	22 27 43.4	
	140nm,0.3s							
SKR	**Severo-Kuril's**	**2.62**	**44**	*e*PN		**Pn**	**22 27 05.7**	**-0.4**
SKR				*e*S		**Sn**	**22 27 39.7**	**-0.4**
SKR				pmax		pmax		
	comp=Z,517nm,0.8s							
SKR				smax		smax		
	comp=E,157nm,0.6s							
SKR				smax		smax		
	comp=N,288nm,0.9s							
PAU	**Pauzhetka**	**3.49**	**40**	*e*P		**Pn**	**22 27 16.1**	**-0.6**
PAU				*e*S		**Sn**	**22 27 57.4**	**-1.8**
PAU	**Pauzhetka**	**3.49**	**40**	*e*P		**Pn**	**22 27 16.1**	**-0.6**
PAU				AMB		AMB	22 27 16.6	
	comp=N,122nm,0.6s							
PAU				*e*S		**Sn**	**22 27 58.0**	**-1.2**
PAU				A		A	22 27 59.1	
	comp=N,72nm,0.7s							
PAU				A		A	22 27 59.1	
	comp=N,421nm,0.7s							
PAU	**Pauzhetka**	**3.49**	**40**	PN		**Pn**	**22 27 16.1**	**-0.6**
PAU				S		**Sn**	**22 27 57.4**	**-1.8**
KDTR	**Khodutka, Kamc**	**4.29**	**44**	*e*P		**Pn**	**22 27 24.9**	**-2.0**
KDTR				*e*S		**Sn**	**22 28 12.0**	**-5.5**
KDTR	**Khodutka, Kamc**	**4.29**	**44**	PN		**Pn**	**22 27 24.9**	**-2.0**
KDTR				S		**Sn**	**22 28 12.0**	**-5.5**
ASAK	**Asacha**	**4.63**	**38**	*e*P		**Pn**	**22 27 31.0**	**-0.3**
ASAK				*e*S		**Sn**	**22 28 25.5**	**+0.2**
ASAK	**Asacha**	**4.63**	**38**	PN		**Pn**	**22 27 31.0**	**-0.3**
ASAK				S		**Sn**	**22 28 25.5**	**+0.2**
APC	**Apacha**	**4.78**	**30**	*e*P		**Pn**	**22 27 33.3**	**+0.1**
APC	**Apacha**	**4.78**	**30**	PN		**Pn**	**22 27 33.3**	**+0.1**
MTVR	**Mutnovka**	**4.82**	**39**	*e*P		**Pn**	**22 27 33.3**	**-0.5**
MTVR				*e*S		**Sn**	**22 28 27.4**	**-2.4**
MTVR	**Mutnovka**	**4.82**	**39**	PN		**Pn**	**22 27 33.3**	**-0.5**
MTVR				S		**Sn**	**22 28 27.4**	**-2.4**
GRL	**Gorelyy**	**4.82**	**38**	*e*P		**Pn**	**22 27 33.7**	**-0.2**
GRL				*e*S		**Sn**	**22 28 29.2**	**-0.8**
GRL	**Gorelyy**	**4.82**	**38**	PN		**Pn**	**22 27 33.7**	**-0.2**
GRL				S		**Sn**	**22 28 29.2**	**-0.8**
RUS	**Russkaya**	**4.92**	**41**	*e*P		**Pn**	**22 27 33.2**	**-1.8**
RUS				*e*S		**Sn**	**22 28 26.6**	**-5.4**
RUS	**Russkaya**	**4.92**	**41**	*e*P		**Pn**	**22 27 33.2**	**-1.8**
RUS	**Russkaya**	**4.92**	**41**	PN		**Pn**	**22 27 33.2**	**-1.8**
RUS				S		**Sn**	**22 28 26.6**	**-5.4**
KRMR	**Karymshinskiy**	**5.06**	**36**	*e*P		**Pn**	**22 27 37.1**	**+0.3**
KRMR	**Karymshinskiy**	**5.06**	**36**	PN		**Pn**	**22 27 37.1**	**+0.3**
PEA0B	**Petropavlovsk-**	**5.12**	**32**	‖*e*PN		**Pn**	**22 27 37.6**	**0.0**
PEA0B	**Petropavlovsk-**	**5.12**	**32**	Pn		**Pn**	**22 27 37.9**	**+0.3**
PETK	**Petropavlovsk-**	**5.12**	**32**	P		**Pn**	**22 27 38.0**	**+0.4**
	comp=N,14nm,0.3s,baz=206,slow=12,SNR=65							
PETK				S		**Sn**	**22 28 38.4**	**+1.7**
	baz=193,slow=19,SNR=0.7							
PETK	**Petropavlovsk-**	**5.12**	**32**	PN		**Pn**	**22 27 38.0**	**+0.4**
PETK							22 28 36.4	
PETK	**Petropavlovsk-**	**5.12**	**32**	Pn		**Pn**	**22 27 38.0**	**+0.4**
PETK						**Sn**	**22 28 36.4**	**-0.4**
KUR	**Kuril'sk**	**5.15**	**227**	*i* P		**Pn**	**22 27 40.0**	**+2.0**
KUR				AMB		AMB	22 27 40.9	
	comp=N,280nm,0.7s							
KUR				*e*S		**Sn**	**22 28 41.0**	**+3.6**
KUR				A		A	22 28 51.5	
	comp=N,140nm,0.7s							
KUR				A		A	22 28 51.5	
	comp=N,160nm,0.7s							
KUR	**Kuril'sk**	**5.15**	**227**	*c i* PN		**Pn**	**22 27 40.3**	**+2.3**
KUR				*e*S		**Sn**	**22 28 39.5**	**+2.1**
KUR				pmax		pmax		
	comp=Z,161nm,0.8s							
KUR				smax		smax		
	comp=N,115nm,0.7s							
KUR				smax		smax		
	comp=E,100nm,0.5s							
PET	**Petropavlovsk**	**5.41**	**37**	*e*P		**Pn**	**22 27 42.4**	**+1.0**
PET				*e*S		**Sn**	**22 28 41.2**	**-2.3**
PET	**Petropavlovsk**	**5.41**	**37**	*e*P		Pn	22 27 38.0	-3.4
PET	**Petropavlovsk**	**5.41**	**37**	‖*e*PN		**Pn**	**22 27 41.6**	**+0.2**
DALK	**Dalny**	**5.46**	**38**	*e*P		**Pn**	**22 27 40.9**	**-1.1**
DALK				*e*S		**Sn**	**22 28 40.0**	**-4.6**
DALK	**Dalny**	**5.46**	**38**	PN		**Pn**	**22 27 40.9**	**-1.1**
DALK				S		**Sn**	**22 28 40.0**	**-4.6**
KOK	**Koryaka**	**5.61**	**35**	*e*P		**Pn**	**22 27 44.7**	**+0.6**
KOK	**Koryaka**	**5.61**	**35**	*e*P		**Pn**	**22 27 44.7**	**+0.6**
KOK	**Koryaka**	**5.61**	**35**	PN		**Pn**	**22 27 44.7**	**+0.6**
UGLR	**Uglovaya**	**5.62**	**37**	*e*P		**Pn**	**22 27 44.7**	**+0.5**
UGLR	**Uglovaya**	**5.62**	**37**	PN		**Pn**	**22 27 44.7**	**+0.5**
AVH	**Avacha**	**5.63**	**36**	*e*P		**Pn**	**22 27 44.6**	**+0.3**
AVH				*e*S		**Sn**	**22 28 48.2**	**-0.5**
AVH	**Avacha**	**5.63**	**36**	*e*P		**Pn**	**22 27 44.6**	**+0.3**
AVH	**Avacha**	**5.63**	**36**	PN		**Pn**	**22 27 44.6**	**+0.3**
AVH				S		**Sn**	**22 28 48.2**	**-0.5**
SMAR	**Somma**	**5.65**	**36**	*e*P		**Pn**	**22 27 45.0**	**+0.3**
SMAR	**Somma**	**5.65**	**36**	PN		**Pn**	**22 27 45.0**	**+0.3**
KRER	**Koryakskii**	**5.66**	**36**	*e*P		**Pn**	**22 27 45.0**	**+0.1**
KRER				*e*S		**Sn**	**22 28 48.6**	**-1.1**
KRER	**Koryakskii**	**5.66**	**36**	PN		**Pn**	**22 27 45.0**	**+0.1**
KRER				S		**Sn**	**22 28 48.6**	**-1.1**
KRX	**Arik**	**5.67**	**35**	*e*P		**Pn**	**22 27 45.7**	**+0.8**
KRX	**Arik**	**5.67**	**35**	PN		**Pn**	**22 27 45.7**	**+0.8**
GNL	**Ganaly**	**5.69**	**29**	*e*P		**Pn**	**22 27 45.5**	**+0.4**
GNL	**Ganaly**	**5.69**	**29**	PN		**Pn**	**22 27 45.5**	**+0.4**
SDLR	**Sedlovina**	**5.69**	**37**	*e*P		**Pn**	**22 27 44.8**	**-0.4**
SDLR				*e*S		**Sn**	**22 28 47.9**	**-2.5**
SDLR	**Sedlovina**	**5.69**	**37**	PN		**Pn**	**22 27 44.8**	**-0.4**
SDLR				S		**Sn**	**22 28 47.9**	**-2.5**
SPN	**Mys Shipunski**	**6.04**	**43**	*e*P		**Pn**	**22 27 47.6**	**-2.1**
SPN				*e*S		Sn	22 28 51.9	-6.6
SPN	**Mys Shipunski**	**6.04**	**43**	*e*P		**Pn**	**22 27 47.6**	**-2.1**
SPN	**Mys Shipunski**	**6.04**	**43**	PN		**Pn**	**22 27 47.6**	**-2.1**
SPN				S		Sn	22 28 51.9	-6.6
KII	**Karymskiy**	**6.49**	**34**	*e*P		**Pn**	**22 27 55.8**	**+0.1**
KII	**Karymskiy**	**6.49**	**34**	PN		**Pn**	**22 27 55.8**	**+0.1**
YSS	**Yuzh-Sakhalins**	**7.29**	**259**	*e*P		**Pn**	**22 28 09.1**	**+2.9**
YSS				AMB		AMB	22 28 09.7	
	comp=E,30nm,0.8s							
YSS	**Yuzh-Sakhalins**	**7.29**	**259**	*e*PN		**Pn**	**22 28 09.1**	**+2.9**
YSS				pmax		pmax		
	comp=Z,30nm,0.8s							
JRA	**Rausu**	**7.45**	**232**	P		**Pn**	**22 28 09.1**	**+0.8**
NEM2	**Nemuro 2**	**7.55**	**226**	P		**Pn**	**22 28 07.6**	**-2.1**
NEM2				*e*S		**Sn**	**22 29 27.8**	**-6.7**
NMR	**Nemuro--Hokkai**	**7.56**	**226**	*e*P		**Pn**	**22 28 07.6**	**-2.1**
NMR	**Nemuro--Hokkai**	**7.56**	**226**	*e*PN		**Pn**	**22 28 07.6**	**-2.1**
KZV	**Kizimen**	**7.64**	**32**	*e*P		**Pn**	**22 28 12.1**	**+1.2**
KZV	**Kizimen**	**7.64**	**32**	PN		**Pn**	**22 28 12.1**	**+1.2**
TUMR	**Tumrok**	**7.73**	**31**	*e*P		**Pn**	**22 28 12.2**	**+0.2**
TUMR	**Tumrok**	**7.73**	**31**	PN		**Pn**	**22 28 12.2**	**+0.4**
TUMR				S		**Sn**	**22 29 35.9**	**-2.7**
TUMD	**Tumrok D**	**7.75**	**32**	*e*P		**Pn**	**22 28 12.4**	**+0.2**
TUMD				*e*S		**Sn**	**22 29 35.9**	**-3.1**
MKZ	**Mys Kozlova**	**7.78**	**39**	*e*P		Pn	22 28 09.8	-2.8
MKZ				*e*S		Sn	22 29 30.3	-9.4
MKZ	**Mys Kozlova**	**7.78**	**39**	PN		Pn	22 28 09.8	-2.8
ESO	**Esso**	**7.84**	**23**	*e*P		**Pn**	**22 28 14.7**	**+1.3**
ESO	**Esso**	**7.84**	**23**	*e*P		**Pn**	**22 28 14.7**	**+1.3**
ESO	**Esso**	**7.84**	**23**	PN		**Pn**	**22 28 14.7**	**+1.3**
JNK	**Nakash**	**7.90**	**232**	P		**Pn**	**22 28 14.7**	**+0.4**
JTKR	**Abashiri--Toko**	**8.08**	**236**	P		**Pn**	**22 28 18.0**	**+1.4**
KMNR	**Kamenistaya**	**8.14**	**29**	*e*P		**Pn**	**22 28 17.9**	**+0.4**
KMNR	**Kamenistaya**	**8.14**	**29**	PN		**Pn**	**22 28 17.9**	**+0.4**
JAK	**Akkeshi**	**8.34**	**229**	P		**Pn**	**22 28 18.1**	**-1.9**
JAK				*e*S		**Sn**	**22 29 46.3**	**-6.9**
JMP	**Maruseppu**	**8.36**	**238**	P		**Pn**	**22 28 22.5**	**+2.2**
BZGR	**Bezymyannyi-Gr**	**8.44**	**30**	*e*P		**Pn**	**22 28 20.0**	**-1.4**
BZGR	**Bezymyannyi-Gr**	**8.44**	**30**	PN		**Pn**	**22 28 20.0**	**-1.4**
SRDR	**Sredinnyy**	**8.46**	**25**	*e*P		**Pn**	**22 28 22.9**	**+1.3**
SRDR	**Sredinnyy**	**8.46**	**25**	PN		**Pn**	**22 28 22.9**	**+1.3**
JAR	**Ashorobuto**	**8.60**	**233**	P		**Pn**	**22 28 24.4**	**+0.9**
JKA	**Kamikawa-asahi**	**8.73**	**241**	*e*P		**Pn**	**22 28 28.4**	**+3.3**
JKA	**Kamikawa-asahi**	**8.73**	**241**	Pn		**Pn**	**22 28 26.9**	**+1.8**
ASAJ	**Asahikawa**	**8.73**	**241**	P		**Pn**	**22 28 28.4**	**+3.2**
	comp=Z,10nm,0.3s,baz=67,slow=13,SNR=82							
ASAJ	**Asahikawa**	**8.73**	**241**	P		**Pn**	**22 28 28.3**	**+3.1**
JKK2	**Kamakawa 2**	**8.79**	**239**	P		**Pn**	**22 28 27.9**	**+1.9**
JOB	**Onbets**	**8.84**	**231**	P		**Pn**	**22 28 25.9**	**-0.8**
JOB				*e*S		**Sn**	**22 29 59.9**	**-5.4**
BDR	**Baidarnaya**	**9.12**	**29**	*e*P		**Pn**	**22 28 30.0**	**-0.3**
BDR	**Baidarnaya**	**9.12**	**29**	PN		**Pn**	**22 28 30.0**	**-0.3**
SRKR	**Sorokina**	**9.18**	**29**	*e*P		**Pn**	**22 28 31.3**	**+0.2**
SRKR	**Sorokina**	**9.18**	**29**	PN		**Pn**	**22 28 31.3**	**+0.2**
SMKR	**Semkarok**	**9.22**	**30**	*e*P		**Pn**	**22 28 32.4**	**+0.8**
SMKR	**Semkarok**	**9.22**	**30**	PN		**Pn**	**22 28 32.4**	**+0.8**
JCH	**Churui**	**9.29**	**232**	P		**Pn**	**22 28 30.2**	**-2.4**
JCH				*e*S		**Sn**	**22 30 08.8**	**-7.2**
JAB	**Ashibetsu**	**9.31**	**239**	P		**Pn**	**22 28 36.4**	**+3.5**
KBTR	**Krutoberegovo**	**9.40**	**35**	*e*P		**Pn**	**22 28 31.5**	**-2.4**
KBTR				*e*S		Sn	22 30 11.2	-7.3
KBTR	**Krutoberegovo**	**9.40**	**35**	PN		**Pn**	**22 28 31.5**	**-2.4**
JBT2	**Biratori 2**	**9.71**	**235**	P		**Pn**	**22 28 37.3**	**-0.8**
ERM	**Erimo**	**9.83**	**230**	*de*PN		**Pn**	**22 28 39.6**	**-0.1**
ERM	**Erimo**	**9.83**	**230**	Pn		**Pn**	**22 28 40.0**	**+0.3**
JEM	**Erimo**	**9.83**	**230**	P		**Pn**	**22 28 37.9**	**-1.8**
JNBK	**Urakawa-nobuka**	**9.85**	**232**	P		**Pn**	**22 28 38.1**	**-1.8**
JSR	**Shiriuchi**	**11.62**	**236**	P		**Pn**	**22 29 01.0**	**-1.9**
JOSM	**Okushiri--Mats**	**11.78**	**240**	P		**Pn**	**22 29 05.0**	**0.0**
JTM	**Tenmabayashi**	**11.80**	**232**	P		Pn	22 29 01.1	-4.2
JANG	**Nango**	**11.88**	**229**	P		Pn	22 29 01.5	-4.8
JANG				*e*S		Sn	22 31 03.2	-15
TEY	**Ternei**	**11.99**	**258**	*e*P		**P**	**22 29 13.5**	**+0.2**
TEY				AMB		AMB	22 29 14.6	
	comp=Z,40nm,0.7s							
TEY	**Ternei**	**11.99**	**258**	‖*e*PN		**P**	**22 29 13.5**	**+0.2**
TEY				pmax		pmax		
	comp=E,50nm,0.8s							
TEY				pmax		pmax		
	comp=Z,50nm,0.9s							
EKMR	**Ekimchan**	**13.46**	**296**	*e*P		**P**	**22 29 28.5**	**-1.1**
EKMR				AMB		AMB	22 29 33.5	
	comp=Z,8.0nm,0.6s							
SMY	**Shemya**	**13.75**	**66**	P		**Pn**	**22 29 32.5**	**+2.6**
SMY	**Shemya**	**13.75**	**66**	Pn		**Pn**	**22 29 32.5**	**+2.6**
SEY	**Seymchan**	**14.13**	**358**	P		**Pn**	**22 29 33.4**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=261,slow=22,SNR=5.2							
JSD	**Sado**	**15.30**	**231**	P		**Pn**	**22 29 49.7**	**+0.5**
USA0B	**Ussuriysk Arra**	**15.33**	**260**	P		**Pn**	**22 29 49.6**	**+0.1**
USA0B				pmax		pmax		
	comp=Z,9.0nm,0.6s							
USA0B	**Ussuriysk Arra**	**15.33**	**260**	P		**Pn**	**22 29 49.6**	**+0.1**
USA0B				IAmb		IAmb	22 29 54.2	
	comp=Z,9.5nm,0.6s							
USRK	**Ussuriysk Ar.**	**15.33**	**260**	P		**P**	**22 29 51.4**	**+1.0**
	baz=67,slow=11,SNR=25							
USRK	**Ussuriysk Ar.**	**15.33**	**260**	P		**Pn**	**22 29 49.6**	**+0.1**
BMKR	**Bomnak**	**16.15**	**301**	*e*P		**Pn**	**22 29 58.0**	**-1.5**
BMKR				AMB		AMB	22 30 05.0	
	comp=Z,6.0nm,0.9s							
MJA0	**Matsu Arr-Jizo**	**16.47**	**227**	*e*P		**Pn**	**22 30 07.1**	**+3.6**
MJA0				pmax		pmax		
	comp=Z,5.0nm,0.7s							
MAJO	**Matsushiro**	**16.49**	**227**	*ce*P		**Pn**	**22 30 05.8**	**+2.1**
MAJO				pmax		pmax		
	comp=Z,18nm,1.0s							
MAJO	**Matsushiro**	**16.49**	**227**	P		**P**	**22 30 04.8**	**+1.5**
MAJO				IAmb		IAmb	22 30 07.5	
	comp=Z,18nm,1.0s							
MAT	**Matsushiro**	**16.49**	**227**	P		**P**	**22 30 04.5**	**+1.2**
MJAR	**Matsushiro Arr**	**16.49**	**227**	P		**P**	**22 30 04.0**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=24,slow=11,SNR=6.3							
MJAR	**Matsushiro Arr**	**16.49**	**227**	P		**P**	**22 30 04.0**	**+0.7**
MJAR	**Matsushiro Arr**	**16.49**	**227**	P		**Pn**	**22 30 05.5**	**+1.7**
KROS	**Kirovskiy**	**17.18**	**299**	*e*P		**Pn**	**22 30 12.0**	**+0.2**
YAK	**Yakutsk**	**18.64**	**324**	P		**P**	**22 30 25.1**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=84,slow=0.1,SNR=1.6							
CN2	**Changchun**	**19.79**	**266**	*e*P		**P**	**22 30 37.3**	**-1.7**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
JHS	**Saijyo**	**20.30**	**234**	P		**P**	**22 30 46.3**	**+1.7**
BILL	**Bilibino**	**20.34**	**14**	*e*P		**P**	**22 30 44.8**	**+0.1**
BILL	**Bilibino**	**20.34**	**14**	*e*P		**P**	**22 30 44.8**	**+0.1**
BILL				pmax		pmax		
	comp=Z,3.0nm,1.0s							
KSRS	**Korea Array**	**21.59**	**248**	P		**P**	**22 31 00.2**	**+2.0**
	comp=Z,5.9nm,0.5s,baz=47,slow=9.9,SNR=20							
KS19	**Wonju Array Si**	**21.59**	**248**	P		**P**	**22 30 59.2**	**+0.9**
KS19				IAmb		IAmb	22 31 03.4	
	comp=Z,12nm,0.9s							
JNU	**Nakatsue**	**22.93**	**235**	P		**P**	**22 31 13.2**	**+2.0**
	comp=Z,9.6nm,0.8s,baz=29,slow=7.2,SNR=8.1							
H11N2	**WAKE ISLAND Hy**	**31.05**	**154**	T		T	23 04 43.2	
	baz=343							
H11N1	**WAKE ISLAND Hy**	**31.07**	**154**	T		T	23 04 42.5	
	baz=343							
H11N3	**WAKE ISLAND Hy**	**31.07**	**154**	T		T	23 04 42.5	
	baz=343							
IMAR	**Indian Mountai**	**32.05**	**38**	P		**P**	**22 32 32.8**	**+0.7**
H11S1	**WAKE ISLAND Hy**	**32.16**	**155**	T		T	23 06 03.6	
	baz=344,slow=76,SNR=8.7							
H11S3	**WAKE ISLAND Hy**	**32.17**	**156**	T		T	23 06 05.7	
	baz=344,slow=76,SNR=10							
H11S2	**WAKE ISLAND Hy**	**32.18**	**155**	T		T	23 06 05.7	
	baz=344,slow=76,SNR=10							
COLA	**College**	**34.47**	**40**	‖*e*P		**P**	**22 32 54.5**	**+1.5**
COLA				pmax		pmax		
	comp=Z,9.0nm,1.0s							
IL31		**34.88**	**40**	P		**P**	**22 32 57.6**	**+1.1**
ILAR	**Eielson Array**	**34.88**	**40**	P		**P**	**22 32 57.6**	**+1.0**
	comp=Z,1.0nm,0.5s,baz=261,slow=4.9,SNR=24							
BMAR	**Burnt Mountain**	**35.76**	**36**	P		**P**	**22 33 05.0**	**+0.9**
XAN	**Xi'an**	**35.83**	**262**	P		**P**	**22 33 06.8**	**+1.7**
XAN				pP		sP	22 33 56.5	-3.7
XAN				pmax		pmax		
	comp=Z,4.0nm,1.6s							
BCAR	**Beaver Creek A**	**37.29**	**43**	P		**P**	**22 33 18.5**	**+1.4**
INK	**Inuvik**	**39.85**	**34**	P		**P**	**22 33 39.1**	**+0.9**
	comp=Z,2.6nm,0.7s,baz=317,slow=4.3,SNR=5.9							
INK	**Inuvik**	**39.85**	**34**	P		**P**	**22 33 39.2**	**+0.9**
ZALV	**Zalesovo Beam**	**41.48**	**304**	P		**P**	**22 33 51.4**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=60,slow=6.8,SNR=2.0							
GYA	**Guiyang**	**42.28**	**255**	‖P		**P**	**22 34 00.4**	**+1.6**
GYA				pmax		pmax		
	comp=Z,8.0nm,1.0s							
MK31	**Makanchi Array**	**46.08**	**296**	‖*e*P		**P**	**22 34 29.2**	**+0.6**
MKAR	**Makanchi Array**	**46.08**	**296**	P		**P**	**22 34 28.5**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=66,slow=8.1,SNR=18							
MKAR				PcP		**PcP**	**22 36 03.3**	**+1.5**
	comp=Z,0.3nm,0.5s,baz=68,slow=5.4,SNR=1.6							
MKAR	**Makanchi Array**	**46.08**	**296**	*e*P		**P**	**22 34 28.2**	**-0.4**
MKAR	**Makanchi Array**	**46.08**	**296**	P		**P**	**22 34 27.8**	**-0.8**
MKAR						**PcP**	**22 36 02.4**	**+0.6**
KURK	**Kurchatov**	**46.30**	**302**	*e*P		**P**	**22 34 29.5**	**-0.7**
KURK	**Kurchatov**	**46.30**	**302**	‖*e*P		**P**	**22 34 29.5**	**-0.7**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.8s							
RES	**Resolute Bay**	**48.83**	**19**	P		**P**	**22 34 50.1**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=256,slow=17,SNR=1.5							
YKA	**Yellowknife Ar**	**49.21**	**38**	P		**P**	**22 34 53.7**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=303,slow=5.5,SNR=7.9							
BVAR	**Borovoye Array**	**49.61**	**308**	P		**P**	**22 34 54.4**	**-1.2**
	comp=Z,0.7nm,0.5s,baz=59,slow=17,SNR=6.9							
BVAR				PcP		**PcP**	**22 36 14.4**	**0.0**
	comp=Z,0.7nm,0.4s,baz=119,slow=5.1,SNR=7.9							
NONG	**Nongkai**	**50.61**	**251**	P		**P**	**22 35 05.7**	**+2.2**
	comp=Z,21μmcomp=Z,20nm,0.8s							
UTTA	**Uttaradit**	**52.48**	**253**	P		**P**	**22 35 20.0**	**+2.7**
	comp=Z,166nmcomp=Z,13nm,0.9s							
LAMP	**Lampang**	**52.48**	**254**	P		**P**	**22 35 21.0**	**+3.6**
	comp=Z,17nm,0.8s							
CMMT	**Chiang Mai**	**52.70**	**255**	P		**P**	**22 35 20.9**	**+1.9**
	comp=Z,4.0nm,0.8s							
CHTO	**Chiang Mai**	**52.71**	**255**	P		**P**	**22 35 19.7**	**+0.7**
CHTO				pmax		pmax		
	comp=Z,5.0nm,0.8s							
CHTO	**Chiang Mai**	**52.71**	**255**	P		**P**	**22 35 19.7**	**+0.7**
CHTO				IAmb		IAmb	22 35 21.5	
	comp=Z,5.0nm,0.8s							
CM09	**Chiang Mai Arr**	**52.95**	**255**	P		**P**	**22 35 24.2**	**+3.4**
	comp=Z,4.9nm,0.8s							
CHAI	**Chaiyaphum**	**52.96**	**250**	P		**P**

BW06					IAML			22 37 15.9	
	comp=E,12nm,4.8s								
PD31	**Pinedale Array**	**2.96**	**40**			**Pn**	**Pb**	**22 35 59.3**	**+0.4**
PDAR	**Pinedale Array**	**2.96**	**40**		Pn	**Pb**		**22 36 02.6**	**-1.6**
	comp=E,0.7nm,0.3s,baz=208,slow=16,SNR=19								
PDAR					Lg	Lg		22 36 42.3	
	comp=E,0.9nm,0.3s,baz=211,slow=35,SNR=9.6								
PDAR	**Pinedale Array**	**2.96**	**40**			**Pn**		**22 35 59.3**	**+0.4**
REDW	**Red Top Meadow**	**2.99**	**18**			**Pn**		**22 35 59.1**	**-0.2**
REDW					IAML			22 36 55.4	
	comp=E,19nm,4.3s								
REDW					IAML			22 37 21.6	
	comp=E,15nm,2.8s								
O20A	**White River Ci**	**3.01**	**96**		Pn	**Pn**		**22 35 58.7**	**-0.9**
O20A					IAML			22 36 42.7	
	comp=E,23nm,4.0s								
O20A					IAML			22 37 47.2	
	comp=N,21nm,4.5s								
TPAW	**Teton Pass**	**3.09**	**16**			**Pn**		**22 36 01.1**	**+0.3**
TPAW					IAML			22 36 59.9	
	comp=N,14nm,4.1s								
CCUT	**Cedar City**	**3.12**	**198**			**Pn**		**22 36 01.1**	**-0.1**
PV23	**Carpenter Ridg**	**3.19**	**130**			**Pn**		**22 36 02.1**	**-0.1**
PV22	**Blue Mesa, Par**	**3.27**	**126**		Pn	**Pn**		**22 36 04.0**	**+0.8**
PV22					IAML			22 37 04.2	
	comp=E,10nm,1.2s								
PV22					IAML			22 37 09.9	
	comp=N,13nm,4.4s								
PV20	**West Nyswonger**	**3.29**	**131**		Pn	**Pn**		**22 36 04.1**	**+0.6**
PV20					IAML			22 37 07.3	
	comp=N,18nm,1.0s								
PV04	**Paradox Valley**	**3.29**	**129**			**Pn**		**22 36 03.2**	**-0.3**
PV04					IAML			22 37 34.0	
	comp=N,20nm,4.4s								
PV17	**East Wray Mesa**	**3.34**	**131**			**Pn**		**22 36 04.6**	**+0.4**
PV17					IAML			22 36 57.4	
	comp=N,17nm,4.9s								
PV17					IAML			22 37 15.4	
	comp=E,14nm,4.3s								
PV16	**Nyswonger Mesa**	**3.34**	**131**			**Pn**		**22 36 04.9**	**+0.7**
PV16					IAML			22 37 48.7	
	comp=E,13nm,4.4s								
PV12	**Saucer Basin,**	**3.40**	**129**			**Pn**		**22 36 05.2**	**+0.1**
R11A	**Troy Canyon, C**	**3.44**	**232**			**Pn**		**22 36 05.8**	**+0.2**
HLID	**Hailey**	**3.47**	**332**		Pn	**Pn**		**22 36 06.1**	**+0.2**
PV01	**Paradox Valley**	**3.66**	**130**			**Pn**		**22 36 09.2**	**+0.5**
PV01					IAML			22 38 28.0	
	comp=E,14nm,4.4s								
PRN	**Pahroc Range**	**3.86**	**217**			**Pn**		**22 36 11.4**	**+0.2**
PRN					IAML			22 37 21.2	
	comp=N,8.9nm,2.7s								
MFID	**Camas Ranch**	**3.98**	**318**			**Pn**		**22 36 13.4**	**+0.5**
MFID					IAML			22 36 49.9	
	comp=N,9.2nm,5.0s								
MFID					IAML			22 37 10.8	
	comp=N,9.0nm,4.8s								
U15A	**North Rim**	**4.10**	**182**			**Pn**		**22 36 16.5**	**+1.8**
U15A					IAML			22 36 54.9	
	comp=N,5.7nm,3.3s								
NVAR	**Mina Array Bea**	**5.21**	**248**		Pn	**Pn**		**22 36 33.0**	**+3.1**
	comp=N,0.1nm,0.3s,baz=87,slow=9.1,SNR=2.8								
NVAR					Pg	**Pg**		**22 36 47.2**	**-3.1**
	comp=N,0.1nm,0.3s,baz=69,slow=19,SNR=5.5								
NVAR					Lg	Lg		22 37 57.4	
	comp=N,0.1nm,0.3s,baz=72,slow=20,SNR=4.8								
TXAR	**Lajitas Array**	**13.15**	**146**		Pn	**Pn**		**22 38 18.8**	**+0.2**
	baz=324,slow=12,SNR=1.1								

*KNET **23** 22:49:37.9±0.5, 43.°14N×74.°62E, h20km±2km, ml1.7, Error ellipse: s-maj=4.0km s-min=2.2km az=162.0*
*KRNET **23** 22:49:37.8±0.1, 43.°18N×74.°59E, h17km, mb2.6*
*NNC **23** 22:49:37.9±0.3, 43.°18N×74.°63E, h0km, mb3.1, mpv3.1, Error ellipse: s-maj=2.3km s-min=1.6km az=139.0*
*SOME **23** 22:49:38.7, 43.°18N×74.°63E, h10km*
ISC 23 22:49:37.9±0.9, 43.°18N±0.°02×74.°59E±0.°02, h14km±6km, n71, σ1.9s22/134, 42C-21D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMS	**Chumysh**	**0.22**	**148**	⇑*i*P	**Pg**	**22 49 42.4**	**-0.3**
	baz=47						
CHMS				⇑*i*S	**Sg**	**22 49 46.0**	**0.0**
	baz=47						
CHMS	**Chumysh**	**0.22**	**148**	⇑P	**Pg**	**22 49 42.6**	**-0.2**
	76nm,0.2s,SNR=152						
CHMS				⇑S	**Sg**	**22 49 46.1**	**0.0**
	119nm,0.2s						
SGDS	**Sogindy**	**0.27**	**6**	P	**Pg**	**22 49 43.4**	**-0.3**
	22nm,0.1s						
SGDS				S	**Sg**	**22 49 47.1**	**-0.6**
	203nm,0.1s						
FRU1	**Bishkek**	**0.37**	**176**	⇓*i*P	**Pg**	**22 49 45.2**	**-0.2**
	baz=76						
FRU1				⇓*i*S	**Sg**	**22 49 50.6**	**0.0**
	baz=76						
AAK	**Ala-Archa**	**0.55**	**188**	⇓*i*P	**Pg**	**22 49 48.6**	**-0.1**
	baz=88						
AAK				⇓*i*S	**Sg**	**22 49 56.4**	**+0.4**
	baz=88						
AAK	**Ala-Archa**	**0.55**	**188**	P	**Pg**	**22 49 48.8**	**+0.1**
	21nm,0.1s,SNR=95						
AAK				⇓S	**Sb**	**22 49 56.7**	**-0.5**
	59nm,0.2s						
AAK	**Ala-Archa**	**0.55**	**188**	⇓P	**Pg**	**22 49 48.8**	**+0.1**
	3.5nm,0.2s						
AAK				⇑S	**Sg**	**22 49 56.6**	**+0.5**
	39nm,0.5s						
KBK	**Karagaybulak**	**0.59**	**153**	⇑*i*P	**Pg**	**22 49 49.1**	**-0.3**
	baz=53						
KBK				⇑*i*S	**Sb**	**22 49 57.6**	**-0.6**
	baz=53						
KBK	**Karagaybulak**	**0.59**	**153**	⇑P	**Pg**	**22 49 49.4**	**0.0**
	10nm,0.1s,SNR=10.0						
KBK				⇓S	**Sb**	**22 49 58.2**	**0.0**
	18nm,0.1s						
TKM2	**Tokmak 2**	**0.78**	**109**	⇑*i*P	**Pg**	**22 49 52.1**	**-1.0**
	baz=9.0						
TKM2				⇑*i*S	**Sg**	**22 50 02.7**	**-0.6**
	baz=9.0						
TKM2	**Tokmak 2**	**0.78**	**109**	⇑P	**Pg**	**22 49 52.1**	**-1.0**
	5.6nm,0.1s,SNR=35						
TKM2				⇓S	**Sg**	**22 50 02.8**	**-0.6**
	64nm,0.1s						
TKM2	**Tokmak 2**	**0.78**	**109**	⇓P	**Pg**	**22 49 52.1**	**-1.0**
	2.3nm,0.5s						
TKM2				⇑S	**Sg**	**22 50 02.8**	**-0.5**
	9.7nm,0.2s						
EKS2	**Erkin-Say**	**0.79**	**229**	⇓*i*P	**Pb**	**22 49 52.9**	**-0.6**
	baz=29						
EKS2				⇓*i*S	**Sb**	**22 50 03.8**	**-0.4**
	baz=29						
EKS2	**Erkin-Say**	**0.79**	**229**	⇑P	**Pb**	**22 49 53.0**	**-0.5**
	3.7nm,0.2s,SNR=23						
EKS2				⇓S	**Sb**	**22 50 04.2**	**0.0**
	8.8nm,0.3s						
DGS	**Degeres**	**0.86**	**86**	*e*P	**Pg**	**22 49 54.3**	**-0.4**
	baz=86						
DGS				*e*S	**Sg**	**22 50 05.6**	**-0.4**
	baz=86						
DGS	**Degeres**	**0.86**	**86**	*e*P	**Pg**	**22 49 54.3**	**-0.4**
	3.9nm,0.1s						
DGS				*e*S	**Sg**	**22 50 05.6**	**-0.4**
	26nm,0.2s						
DGS	**Degeres**	**0.86**	**86**	P	**Pg**	**22 49 54.3**	**-0.4**
	3.9nm,0.1s						
DGS				S	**Sg**	**22 50 05.6**	**-0.4**
	26nm,0.2s						
KRBS	**Karabastau**	**0.94**	**56**	*e*P	**Pb**	**22 49 55.5**	**-0.5**
	6.4nm,0.1s						
KRBS				*e*S	**Sg**	**22 50 07.8**	**-0.7**
KRBS	**Karabastau**	**0.94**	**56**	P	**Pb**	**22 49 55.5**	**-0.5**
	6.4nm,0.1s						
KRBS				S	**Sg**	**22 50 07.8**	**-0.7**
UCH	**Uchtor**	**0.95**	**184**	⇑*i*P	**Pb**	**22 49 55.8**	**-0.7**
	baz=83						
UCH				⇑*i*S	**Sb**	**22 50 08.9**	**-0.3**
	baz=83						
UCH	**Uchtor**	**0.95**	**184**	⇓P	**Pb**	**22 49 56.0**	**-0.5**
	1.0nm,0.1s,SNR=6.3						
UCH				⇓S	**Sb**	**22 50 08.9**	**-0.3**
	8.9nm,0.1s						
KST	**Kastek**	**1.01**	**97**	⇓*i*P	**Pg**	**22 49 56.9**	**-0.5**
	baz=97						
KST				⇑*i*S	**Sg**	**22 50 10.3**	**-0.4**
	baz=97						
KST	**Kastek**	**1.01**	**97**	⇓*i*P	**Pg**	**22 49 56.9**	**-0.5**
	3.3nm,0.1s						
KST				⇑*i*S	**Sg**	**22 50 10.3**	**-0.4**
	24nm,0.3s						
KST	**Kastek**	**1.01**	**97**	P	**Pg**	**22 49 56.9**	**-0.5**
	3.3nm,0.1s						
KST				S	**Sg**	**22 50 10.3**	**-0.4**
	24nm,0.3s						
MRKS	**Merke**	**1.09**	**247**	*e*P	**Pb**	**22 49 58.1**	**-0.6**
	baz=47						
MRKS				⇓*i*S	**Sb**	**22 50 12.3**	**-0.5**
	baz=47						
MRKS	**Merke**	**1.09**	**247**	*e*P	**Pb**	**22 49 58.1**	**-0.6**
	2.3nm,0.1s						
MRKS				⇓*i*S	**Sb**	**22 50 12.3**	**-0.5**
	15nm,0.1s						
MRKS	**Merke**	**1.09**	**247**	P	**Pb**	**22 49 58.1**	**-0.6**
	2.3nm,0.1s						
MRKS				S	**Sb**	**22 50 12.3**	**-0.5**
	15nm,0.1s						
BOOM	**Boomskoye usch**	**1.21**	**124**	⇑*i*P	**Pb**	**22 50 00.2**	**-0.4**
	baz=24						
BOOM				⇑*i*S	**Sg**	**22 50 16.2**	**-0.7**
	baz=24						
AML	**Almayashu**	**1.24**	**213**	⇑*i*P	**Pn**	**22 50 01.0**	**-0.2**
	baz=13						
AML				⇑*i*S	**Sn**	**22 50 17.6**	**-0.3**
	baz=13						
AML	**Almayashu**	**1.24**	**213**	⇓P	**Pb**	**22 50 01.3**	**-0.1**
	1.6nm,0.2s,SNR=9.1						
AML				⇓S	**Sn**	**22 50 17.8**	**-0.1**
	4.8nm,0.3s						
ARLS	**Aral**	**1.33**	**189**	⇑*i*P	**Pn**	**22 50 02.2**	**-0.1**
	baz=89						
ARLS				⇑*i*S	**Sb**	**22 50 20.2**	**+0.4**
	baz=89						
MTBS	**Maitube**	**1.34**	**92**	*e*P	**Pg**	**22 50 03.3**	**-0.5**
	baz=92						
MTBS				*e*S	**Sg**	**22 50 21.1**	**-0.2**
	baz=92						
MTBS	**Maitube**	**1.34**	**92**	*e*P	**Pg**	**22 50 03.3**	**-0.5**
	4.4nm,0.1s						
MTBS				*e*S	**Sg**	**22 50 21.1**	**-0.2**
	16nm,0.2s						
MTBS	**Maitube**	**1.34**	**92**	P	**Pg**	**22 50 03.3**	**-0.5**
	4.4nm,0.1s						
MTBS				S	**Sg**	**22 50 21.1**	**-0.2**
	16nm,0.2s						
IZV	**Izvestkoviy**	**1.49**	**95**	*e*P	**Pg**	**22 50 06.0**	**-0.5**
	baz=95						
IZV				*e*S	**Sg**	**22 50 25.9**	**+0.1**
	baz=95						
IZV	**Izvestkoviy**	**1.49**	**95**	*e*P	**Pg**	**22 50 06.0**	**-0.5**
	7.9nm,0.1s						
IZV				*e*S	**Sg**	**22 50 25.9**	**+0.1**
	15nm,0.1s						
IZV	**Izvestkoviy**	**1.49**	**95**	P	**Pg**	**22 50 06.0**	**-0.5**
	7.9nm,0.1s						
IZV				S	**Sg**	**22 50 25.8**	**+0.1**
	15nm,0.1s						
ULHL	**Ulahol**	**1.53**	**127**	⇑*i*P	**Pb**	**22 50 05.9**	**-0.3**
	baz=27						
ULHL				⇑*i*S	**Sg**	**22 50 26.2**	**-1.1**
	baz=27						
ULHL	**Ulahol**	**1.53**	**127**	⇓P	**Pb**	**22 50 06.0**	**-0.3**
	2.7nm,0.2s,SNR=12						
KTBS	**Karatobe**	**1.61**	**70**	*e*P	**Pb**	**22 50 07.6**	**+0.2**
	baz=70						
KTBS				*e*S	**Sg**	**22 50 28.5**	**-1.2**
	baz=70						
KTBS	**Karatobe**	**1.61**	**70**	*e*P	**Pb**	**22 50 07.6**	**+0.2**
	2.2nm,0.2s						
KTBS				*e*S	**Sg**	**22 50 28.5**	**-1.2**
	17nm,0.4s						
KTBS	**Karatobe**	**1.61**	**70**	P	**Pb**	**22 50 07.6**	**+0.2**
	2.2nm,0.2s						
KTBS				S	**Sg**	**22 50 28.5**	**-1.2**
	17nm,0.4s						
MNAS	**Manas**	**1.69**	**246**	⇑*i*P	**Pb**	**22 50 08.1**	**-0.7**
	baz=46						
MNAS				⇑*i*S	**Sb**	**22 50 30.5**	**+0.6**
	baz=46						
TNSS	**Tian-Shan**	**1.73**	**94**	*e*P	**Pb**	**22 50 09.8**	**+0.1**
	baz=94						
TNSS				*e*S	**Sg**	**22 50 32.5**	**-1.1**
	baz=94						
TNSS	**Tian-Shan**	**1.73**	**94**	*e*P	**Pb**	**22 50 09.8**	**+0.1**
	2.7nm,0.1s						
TNSS				*e*S	**Sg**	**22 50 32.5**	**-1.1**
	13nm,0.3s						
TNSS	**Tian-Shan**	**1.73**	**94**	P	**Pb**	**22 50 09.8**	**+0.1**
	2.7nm,0.1s						
TNSS				S	**Sg**	**22 50 32.5**	**-1.1**
	13nm,0.3s						
KNDC	**Almaty**	**1.73**	**88**	⇑Pg	**Pg**	**22 50 09.9**	**-1.3**
	3.4nm,0.3s						
KNDC				⇑Lg	Lg	22 50 32.3	
	13nm,0.5s						
MDOK	**Medeo**	**1.80**	**90**	⇑*i*P	**Pb**	**22 50 10.7**	**0.0**
	baz=90						
MDOK				⇑*e*S	**Sg**	**22 50 33.8**	**-1.9**
	baz=90						
MDOK	**Medeo**	**1.80**	**90**	⇑*i*P	**Pb**	**22 50 10.7**	**0.0**
	3.1nm,0.1s						
MDOK				*e*S	**Sg**	**22 50 33.8**	**-1.9**
	13nm,0.3s						
MDOK	**Medeo**	**1.80**	**90**	Pg	**Pb**	**22 50 10.7**	**0.0**
	3.1nm,0.1s						
MDOK				Lg	Lg	22 50 33.8	
	13nm,0.3s						
KOTS	**Kotyrbulak**	**1.84**	**87**	*e*P	**Pg**	**22 50 12.4**	**-0.9**
	5.4nm,0.2s						
KOTS				*e*S	**Sg**	**22 50 36.6**	**-0.5**
	16nm,0.2s						
KOTS	**Kotyrbulak**	**1.84**	**87**	P	**Pg**	**22 50 12.4**	**-0.9**
	5.4nm,0.2s						
KOTS				S	**Sg**	**22 50 36.7**	**-0.5**
	16nm,0.2s						
CHKK	**Chushkaly**	**1.87**	**68**	*e*P	**Pg**	**22 50 12.5**	**-1.2**
	baz=68						
CHKK				*e*S	**Sg**	**22 50 36.9**	**-1.0**
	baz=68						
CHKK	**Chushkaly**	**1.87**	**68**	*e*P	**Pg**	**22 50 12.5**	**-1.2**
	2.6nm,0.0s						
CHKK				*e*S	**Sg**	**22 50 37.0**	**-1.0**
	24nm,0.1s						
CHKK	**Chushkaly**	**1.87**	**68**	P	**Pg**	**22 50 12.5**	**-1.2**
	2.6nm,0.0s						
CHKK				S	**Sg**	**22 50 37.0**	**-1.0**
	24nm,0.1s						
BTLS	**Baital**	**1.90**	**348**	*e*P	**Pb**	**22 50 12.4**	**0.0**
	2.2nm,0.1s						
BTLS				*e*S	**Sb**	**22 50 36.9**	**+0.9**
	11nm,0.2s						
BTLS	**Baital**	**1.90**	**348**	P	**Pb**	**22 50 12.4**	**0.0**
	2.2nm,0.1s						
BTLS				S	**Sb**	**22 50 36.9**	**+0.9**
	11nm,0.2s						
KDJ	**Kajisay**	**2.18**	**118**	⇑*i*P	**Pb**	**22 50 15.4**	**-1.8**
	baz=18						
KDJ				⇑*i*S	**Sb**	**22 50 43.0**	**-1.1**
	baz=18						
ARSB	**Arslanbob**	**2.21**	**213**	⇑*i*P	**Pn**	**22 50 15.4**	**+1.1**
	baz=13						
ARSB				⇑*i*S	**Sb**	**22 50 43.5**	**-1.4**
	baz=13						
ANVS	**Anan'yevo**	**2.29**	**99**	⇑*e*P	**Pn**	**22 50 16.5**	**+1.1**
	baz=99						
ANVS				⇑*i*S	**Sb**	**22 50 45.4**	**-1.9**
	baz=99						
SATY	**Saty**	**2.79**	**91**	*e*P	**Pb**	**22 50 28.7**	**+1.1**
	1.1nm,0.1s						
SATY				*e*S	**Sg**	**22 51 04.9**	**-2.7**
	9.5nm,0.1s						
SATY	**Saty**	**2.79**	**91**	Pg	**Pb**	**22 50 28.7**	**+1.1**
	1.1nm,0.1s						
SATY				Lg	Lg	22 51 04.9	
	9.5nm,0.1s						
KK31	**Karatay Array**	**2.99**	**270**	⇑Pg	**Pg**	**22 50 33.5**	**-1.7**
	0.2nm,0.3s,baz=88,slow=16,SNR=4.2						
KK31				⇑Lg	Lg	22 51 12.2	
	0.8nm,0.3s,baz=234,slow=68,SNR=14						
KPKS	**Kokpek**	**3.00**	**83**	*e*P	**Pb**	**22 50 32.6**	**+1.4**
	2.7nm,0.3s						
KPKS				*e*S	**Sg**	**22 51 10.9**	**-3.3**
	11nm,0.4s						
TRKS	**Terek-Say**	**3.04**	**238**	⇑*i*P	**Pn**	**22 50 27.6**	**+1.8**
	baz=37						
TRKS				⇑*i*S	**Sn**	**22 51 03.9**	**+1.8**
	baz=37						
UZB	**Uzynbulak**	**3.24**	**89**	*e*P	**Pb**	**22 50 36.9**	**+1.6**
	1.2nm,0.2s						
UZB				*e*S	**Sg**	**22 51 18.2**	**-3.8**
	3.6nm,0.2s						
UZB	**Uzynbulak**	**3.24**	**89**	Pg	**Pb**	**22 50 36.8**	**+1.6**
	1.2nm,0.2s						
UZB				Lg	Lg	22 51 18.2	
	3.6nm,0.2s						
SHLS	**Shalkode**	**3.56**	**89**	*e*P	**Pg**	**22 50 48.4**	**+2.3**
	1.8nm,0.2s						
SHLS				*e*S	**Sg**	**22 51 38.7**	**+6.5**
	3.5nm,0.3s						
SHLS	**Shalkode**	**3.56**	**89**	Pg	**Pg**	**22 50 48.4**	**+2.3**
	1.8nm,0.2s						
SHLS				Lg	Lg	22 51 38.7	
	3.5nm,0.3s						
KAPS	**Kapalarasan**	**4.02**	**57**	*e*P	**Pb**	**22 50 50.7**	**+2.2**
	1.0nm,0.2s						
KAPS				*e*S	**Sg**	**22 51 42.3**	**-4.6**
	1.2nm,0.2s						
KAPS	**Kapalarasan**	**4.02**	**57**	Pg	**Pb**	**22 50 50.7**	**+2.2**
	1.0nm,0.2s						
KAPS				Lg	Lg	22 51 42.3	
	1.2nm,0.2s						

*IDC **23** 22:55:07.2±0.7, 21.°80N×143.°55E, h0km, mb4.0/23, mb1 4.2/24, mb1mx4.0/67, mbtmp4.0/24, ML2.8/1, MS3.2/7, Ms1 3.2/7, ms1mx2.8/49, Error ellipse: s-maj=21.9km s-min=15.0km az=93.0*
*NEIC **23** 22:55:12.0±0.7, 21.°6N±0.°1×143.°4E±0.°2, h35km±2km, mb4.5/13, Error ellipse: s-maj=29.9km s-min=16.4km az=75.0*
ISC 23 22:55:12.2±0.6, 21.°74N±0.°09×143.°5E±0.°1, h35km, n58, σ0.9s95/47, mb4.1/28, MS3.0/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.46**	**348**	Pn	**Pn**	**22 56 31.5**	**+0.4**
JGF	**Kuroka**	**14.82**	**340**	Pn	**Pn**	**22 58 37.0**	**-2.2**
MJAR	**Matsushiro Arr**	**15.45**	**344**	Pn	**Pn**	**22 58 44.0**	**-3.6**
	0.0nm,0.3s,baz=165,slow=9.9,SNR=1.2						
JTM	**Tenmabayashi**	**19.10**	**354**	P	**Pn**	**22 59 32.6**	**-0.3**
JTM				IAmb	IAmb	22 59 47.2	
	comp=Z,21nm,1.0s						
PATS	**Pohnpei**	**20.60**	**134**	P	**P**	**22 59 47.4**	**-1.1**
KSRS	**Korea Array**	**20.66**	**323**	P	Pn	22 59 53.9	+2.5
	comp=Z,4.2nm,0.7s,baz=145,slow=9.4,SNR=14						
KSRS				LR	LR	23 07 15.0	
	comp=Z,45nm,19.1s,baz=150,slow=35						
H11N1	**WAKE ISLAND Hy**	**21.97**	**91**	T	T	23 22 41.2	
	baz=272,slow=72,SNR=13						
H11N2	**WAKE ISLAND Hy**	**21.98**	**91**	T	T	23 22 42.1	
	baz=272,slow=72,SNR=17						
H11N3	**WAKE ISLAND Hy**	**21.99**	**91**	T	T	23 22 43.4	
	baz=272,slow=72,SNR=12						
H11S3	**WAKE ISLAND Hy**	**22.01**	**94**	T	T	23 22 41.9	
	baz=282,slow=74,SNR=83						
H11S1	**WAKE ISLAND Hy**	**22.02**	**94**	T	T	23 22 42.5	
	baz=282,slow=74,SNR=62						
H11S2	**WAKE ISLAND Hy**	**22.03**	**94**	T	T	23 22 44.1	
	baz=282,slow=74,SNR=39						
DAV	**Davao City (W)**	**22.63**	**233**	LR	LR	23 07 24.8	
	comp=Z,65nm,21.0s,baz=45,slow=32						
JAY	**Jayapura**	**24.26**	**187**	LR	LR	23 09 11.7	
	comp=Z,41nm,20.4s,baz=1.0,slow=35						
USRK	**Ussuriysk Ar.**	**24.34**	**340**	P	**P**	**23 00 26.9**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=120,slow=8.5,SNR=4.3						
USRK	**Ussuriysk Ar.**	**24.34**	**340**	P	**P**	**23 00 26.5**	**-0.2**
KLR	**Kul'dur**	**28.98**	**344**	P	**P**	**23 01 09.0**	**+0.6**
	comp=Z,6.5nm,0.7s,baz=144,slow=7.3,SNR=24						
KLR				LR	LR	23 11 43.2	
	comp=Z,30nm,18.1s,baz=152,slow=34						
PETK	**Petropavlovsk-**	**33.16**	**16**	LR	LR	23 12 25.2	
	comp=Z,37nm,21.1s,baz=119,slow=31						
SONM	**Songino Array**	**39.49**	**320**	P	**P**	**23 02 38.2**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=127,slow=5.9,SNR=4.2						
SONM	**Songino Array**	**39.49**	**320**	P	**P**	**23 02 39.2**	**-0.3**
SEY	**Seymchan**	**41.61**	**6**	P	**P**	**23 02 56.2**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=176,slow=23,SNR=2.9						
CMAR	**Chiang Mai Arr**	**41.86**	**274**	P	**P**	**23 03 00.2**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=72,slow=8.6,SNR=1.3						
WR0	**Warramunga Arr**	**42.36**	**193**	P	**P**	**23 03 01.7**	**-1.5**
WB2	**Warramunga Arr**	**42.38**	**193**	P	**P**	**23 03 02.0**	**-1.3**
WRA	**Warramunga Arr**	**42.38**	**193**	P	**P**	**23 03 03.7**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=15,slow=8.8,SNR=11						
WRA	**Warramunga Arr**	**42.38**	**193**	P	**P**	**23 03 02.1**	**-1.3**
FITZ	**Fitzroy Crossi**	**43.28**	**205**	P	**P**	**23 03 11.1**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=25,slow=14,SNR=1.2						
FITZ	**Fitzroy Crossi**	**43.28**	**205**	P	**P**	**23 03 09.6**	**-1.1**
LEM	**Lembang**	**45.20**	**235**	LR	LR	23 23 33.3	
	comp=Z,51nm,20.0s,baz=170,slow=38						
ASAR	**Alice Springs**	**46.09**	**192**	P	**P**	**23 03 33.6**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=14,slow=9.5,SNR=14						
ASAR	**Alice Springs**	**46.09**	**192**	P	**P**	**23 03 32.5**	**-0.6**
ZAA0	**Zalesovo Array**	**54.36**	**322**	P	**P**	**23 04 35.7**	**+0.4**
ZAA0				IAmb	IAmb	23 04 41.7	
	comp=Z,3.6nm,0.8s						
ZALV	**Zalesovo Beam**	**54.36**	**322**	P	**P**	**23 04 35.4**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=106,slow=8.9,SNR=8.5						
MKAR	**Makanchi Array**	**54.88**	**313**	P	**P**	**23 04 39.7**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=84,slow=7.5,SNR=4.7						
MKAR				LR	LR	23 28 00.9	
	comp=Z,19nm,19.1s,baz=314,slow=36						
MKAR	**Makanchi Array**	**54.88**	**313**	P	**P**	**23 04 39.2**	**-0.1**
KURK	**Kurchatov**	**57.64**	**317**	P	**P**	**23 04 59.0**	**+0.2**
KURK				IAmb	IAmb	23 05 05.7	
	comp=Z,3.2nm,0.8s						
KURBB	**Kurchatov Arra**	**57.69**	**317**	P	**P**	**23 04 59.6**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=93,slow=7.6,SNR=18						
NRIK	**Noril'sk**	**58.06**	**340**	P	**P**	**23 05 01.6**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=109,slow=9.2,SNR=3.7						
AAK	**Ala-Archa**	**60.37**	**308**	P	**P**	**23 05 18.2**	**0.0**
	comp=Z,1.2nm,0.8s,baz=153,slow=9.8,SNR=4.3						
ILAR	**Eielson Array**	**61.87**	**27**	P	**P**	**23 05 26.8**	**-1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.89**	**344**	P	**P**	**23 02 09.4**	**-2.7**
NIUE	**Niue**	**10.73**	**62**	P	**P**	**23 02 55.4**	**+2.0**
OUZ	**Omahuta**	**12.14**	**206**	P	**P**	**23 03 08.6**	**+0.1**
DZM	**Mont Dzumac**	**12.71**	**278**	P	**P**	**23 03 16.1**	**+1.1**
	0.2nm,0.3s,baz=66,slow=22,SNR=1.8						
DZM	**Mont Dzumac**	**12.71**	**278**	P	**P**	**23 03 15.8**	**+0.8**
AFI	**Afiamalu**	**12.99**	**38**	P	**P**	**23 03 19.6**	**+1.5**
MXZ	**Matakaoa Point**	**13.20**	**186**	P	**P**	**23 03 17.6**	**-2.3**
URZ	**Urewera**	**14.04**	**190**	P	**P**	**23 03 29.3**	**+0.4**
	0.6nm,0.3s,baz=92,slow=18,SNR=1.7						
URZ				S	**S**	**23 05 56.3**	**-1.9**
	0.7nm,0.3s,baz=100,slow=16,SNR=2.2						
HIZ	**Hauiti**	**14.74**	**196**	P	**P**	**23 03 36.7**	**+0.2**
SANVU	**Saraoutou**	**14.98**	**304**	P	**P**	**23 03 38.8**	**-0.6**
BKZ	**Black Stump Fm**	**15.02**	**191**	P	**P**	**23 03 40.9**	**+1.4**
BFZ	**Birch Farm**	**16.54**	**190**	P	**P**	**23 03 56.2**	**+0.6**
MSWZ	**Moikau Station**	**17.43**	**192**	P	**P**	**23 04 05.3**	**+0.3**
BHW	**Baring Head**	**17.50**	**193**	P	**P**	**23 04 05.8**	**+0.2**
QRZ	**Quartz Range**	**17.54**	**199**	P	**P**	**23 04 07.3**	**+1.1**
PLWZ	**Palliser**	**17.58**	**192**	P	**P**	**23 04 06.9**	**+0.4**
NNZ	**Nelson**	**17.66**	**197**	P	**P**	**23 04 07.9**	**+0.5**
NNZ				IAmb	IAmb	23 04 16.0	
	comp=Z,21nm,1.1s						
TUWZ	**Tuamarina**	**17.72**	**195**	P	**P**	**23 04 07.8**	**-0.2**
CMWZ	**Cape Campbell**	**17.96**	**194**	P	**P**	**23 04 09.9**	**-0.5**
BSWZ	**Blackbirch Sta**	**18.01**	**195**	P	**P**	**23 04 11.9**	**+1.0**
THZ	**Tophouse**	**18.30**	**197**	P	**P**	**23 04 14.0**	**+0.2**
THZ				IAmb	IAmb	23 04 25.3	
	comp=Z,13nm,1.1s						
KHZ	**Kahutara**	**18.75**	**195**	P	**P**	**23 04 18.3**	**+0.3**
KHZ				IAmb	IAmb	23 04 37.4	
	comp=Z,18nm,1.1s						
LTZ	**Lake Taylor**	**19.42**	**197**	P	**P**	**23 04 23.6**	**-0.7**
LTZ				IAmb	IAmb	23 04 24.1	
	comp=Z,8.1nm,0.9s						
OXZ	**Oxford**	**19.99**	**197**	P	**P**	**23 04 28.2**	**-1.2**
OXZ				IAmb	IAmb	23 04 35.4	
	comp=Z,10nm,1.0s						
MQZ	**McQueen's Vall**	**20.18**	**196**	P	**P**	**23 04 28.0**	**-3.1**
RPZ	**Rata Peaks**	**20.62**	**199**	P	**P**	**23 04 34.8**	**-0.4**
	comp=Z,5.0nm,0.4s,baz=0.9,slow=3.7,SNR=6.1						
RPZ	**Rata Peaks**	**20.62**	**199**	P	**P**	**23 04 35.1**	**-0.1**
RPZ				IAmb	IAmb	23 04 50.8	
	comp=Z,19nm,1.2s						
FOZ	**Fox Glacier**	**20.85**	**201**	P	**P**	**23 04 37.3**	**+0.1**
FOZ				IAmb	IAmb	23 04 55.0	
	comp=Z,19nm,1.2s						
LBZ	**Lake Benmore**	**21.50**	**200**	P	**P**	**23 04 42.2**	**-0.9**
LBZ				IAmb	IAmb	23 04 46.2	
	comp=Z,10nm,1.2s						
KNTN	**Kanton**	**22.93**	**22**	P	**P**	**23 04 57.2**	**+0.8**
DCZ	**Deep Cove**	**23.46**	**203**	P	**P**	**23 05 01.0**	**+0.2**
DCZ				IAmb	IAmb	23 05 18.9	
	comp=Z,7.8nm,1.0s						
ARMA	**Armidale**	**25.88**	**250**	P	**P**	**23 05 24.8**	**+2.1**
ARMA				IAmb	IAmb	23 05 25.7	
	comp=Z,4.3nm,0.6s						
EIDS	**Eidsvold**	**26.26**	**262**	P	**P**	**23 05 27.5**	**+1.5**
EIDS				IAmb	IAmb	23 05 28.1	
	comp=Z,4.9nm,0.6s						
CTA	**Charters Tower**	**31.51**	**271**	P	**P**	**23 06 13.7**	**+1.8**
	comp=Z,18nm,0.4s,baz=94,slow=10,SNR=37						
CTAO	**Charters Tower**	**31.51**	**271**		**P**	**23 06 13.8**	**+1.8**
TOO	**Toolangi**	**32.20**	**238**	P	**P**	**23 06 18.2**	**+0.5**
TOO				IAmb	IAmb	23 06 19.7	
	comp=Z,5.5nm,0.8s						
TAU	**Tasmania Unive**	**32.61**	**227**	P	**P**	**23 06 21.9**	**+0.8**
TAU				IAmb	IAmb	23 06 33.7	
	comp=Z,9.4nm,1.1s						
STKA	**Stephens Creek**	**34.56**	**249**	P	**P**	**23 06 38.9**	**+1.0**
	comp=Z,6.3nm,0.4s,baz=98,slow=12,SNR=25						
STKA	**Stephens Creek**	**34.56**	**249**	P	**P**	**23 06 39.0**	**+1.2**
BBOO	**Buckleboo**	**39.27**	**247**	P	**P**	**23 07 16.6**	**-0.2**
BBOO				IAmb	IAmb	23 07 17.3	
	comp=Z,9.1nm,0.8s						
AS31	**Alice Springs**	**41.98**	**261**	P	**P**	**23 07 39.3**	**+0.5**
ASAR	**Alice Springs**	**41.98**	**261**	P	**P**	**23 07 39.1**	**+0.4**
	comp=Z,2.3nm,0.4s,baz=97,slow=8.5,SNR=21						
ASAR	**Alice Springs**	**41.98**	**261**	P	**P**	**23 07 38.6**	**-0.2**
WR0	**Warramunga Arr**	**42.22**	**267**	P	**P**	**23 07 39.9**	**-0.7**
WR0				IAmb	IAmb	23 07 40.9	
	comp=Z,6.3nm,0.5s						
WB2	**Warramunga Arr**	**42.39**	**267**	P	**P**	**23 07 41.3**	**-0.7**
WRAB	**Tennant Creek**	**42.40**	**267**	P	**P**	**23 07 41.2**	**-0.8**
WRAB				IAmb	IAmb	23 07 42.7	
	comp=Z,16nm,1.0s						
WB0	**Warramunga Arr**	**42.40**	**267**	P	**P**	**23 07 41.3**	**-0.7**
WB0				IAmb	IAmb	23 07 42.7	
	comp=Z,12nm,0.6s						
WRA	**Warramunga Arr**	**42.40**	**267**	P	**P**	**23 07 41.9**	**-0.2**
	comp=Z,8.3nm,0.4s,baz=102,slow=8.0,SNR=20						
WRA				ScP	**ScP**	**23 12 29.8**	**-3.0**
	comp=Z,3.6nm,0.9s,baz=101,slow=4.1,SNR=12						
JAY	**Jayapura**	**43.74**	**294**	P	**P**	**23 07 53.3**	**+0.6**
	comp=Z,7.4nm,0.6s,baz=167,slow=5.3,SNR=6.4						
FORT	**Forrest**	**46.16**	**250**	P	**P**	**23 08 10.2**	**-0.9**
MTN	**Manton Dam**	**47.52**	**275**	P	**P**	**23 08 22.0**	**+0.3**
KNRA	**Kununurra**	**48.71**	**270**	P	**P**	**23 08 31.0**	**+0.4**
KNRA				IAmb	IAmb	23 08 31.7	
	comp=Z,26nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.82**	**266**	P	**P**	**23 08 46.5**	**+0.3**
	comp=Z,7.1nm,0.6s,baz=155,slow=7.2,SNR=4.1						
SIJI	**Sorong**	**52.62**	**289**	P	**P**	**23 08 59.7**	**+0.3**
	comp=Z,25nm,1.0s,baz=92,slow=6.9,SNR=7.3						
NWAO	**Narrogin (SRO)**	**55.05**	**246**	P	**P**	**23 09 14.9**	**-1.6**
NWAO				IAmb	IAmb	23 09 24.3	
	comp=Z,11nm,1.1s						
PSA00	**Pilbara Seismi**	**55.10**	**260**	P	**P**	**23 09 15.6**	**-1.4**
PSA00				IAmb	IAmb	23 09 22.7	
	comp=Z,11nm,1.1s						
BATI	**Baumata**	**55.29**	**274**	P	**P**	**23 09 19.6**	**+1.3**
	comp=Z,13nm,0.5s,baz=155,slow=1.5,SNR=2.1						
MORW	**Morawa**	**56.73**	**250**	P	**P**	**23 09 27.6**	**-0.6**
QSPA	**South Pole Qui**	**65.68**	**180**	P	**P**	**23 10 26.8**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=115,slow=18,SNR=5.1						
QSPA	**South Pole Qui**	**65.68**	**180**	P	**P**	**23 10 26.9**	**+0.1**
MJAR	**Matsushiro Arr**	**72.33**	**326**	P	**P**	**23 11 06.8**	**-0.4**
MAJO	**Matsushiro**	**72.33**	**326**	P	**P**	**23 11 07.0**	**-0.2**
BELA	**Belgrano 2**	**75.94**	**173**	P	**P**	**23 11 26.5**	**-0.7**
KCPM	**Cahto Peak**	**82.64**	**40**	P	**P**	**23 12 05.0**	**+1.5**
SLBS	**Sierra La Lagu**	**83.03**	**60**	P	**P**	**23 12 07.0**	**+1.3**
SLBS				IAmb	IAmb	23 12 08.0	
	comp=Z,8.7nm,0.9s						
GSI	**Gunungsitoli**	**83.66**	**274**	P	**P**	**23 12 08.6**	**-0.5**
GSI				IAmb	IAmb	23 12 14.5	
	comp=Z,11nm,0.9s						
NVAR	**Mina Array Bea**	**85.09**	**44**	P	**P**	**23 12 16.4**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=216,slow=6.9,SNR=5.3						
NVAR	**Mina Array Bea**	**85.09**	**44**	P	**P**	**23 12 15.5**	**-0.4**
PAHR	**Pah Rah Range**	**85.18**	**42**	P	**P**	**23 12 16.5**	**+0.3**
TPNV	**Topopah Spring**	**85.56**	**46**	P	**P**	**23 12 17.9**	**-0.2**
KVN	**Kaiserville**	**85.59**	**44**	P	**P**	**23 12 18.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**89.73**	**290**	P	**P**	**23 12 38.1**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=119,slow=2.5,SNR=5.9						
NLU	**North Lily Min**	**89.95**	**45**	P	**P**	**23 12 39.8**	**+1.0**
HVU	**Hansel Valley**	**90.48**	**44**	P	**P**	**23 12 41.8**	**+0.7**
MCARA	**McCarthy VSAT**	**90.53**	**17**	P	**P**	**23 12 39.9**	**-0.7**
TRF	**Thorofare Moun**	**90.63**	**13**	P	**P**	**23 12 40.1**	**-1.2**
TRF				IAmb	IAmb	23 12 46.7	
	comp=Z,3.3nm,1.1s						
TX31	**Lajitas Ar. Si**	**90.67**	**58**	P	**P**	**23 12 42.5**	**+0.3**
TX32	**Lajitas Array**	**90.67**	**58**	P	**P**	**23 12 43.6**	**+1.4**
TXAR	**Lajitas Array**	**90.67**	**58**	P	**P**	**23 12 43.5**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=215,slow=6.8,SNR=12						
KAN14	**Manchester OK**	**98.30**	**53**		pP	23 15 01.3	+2.6
ARCES	**ARCESS Array B**	**132.38**	**348**	SKPbc	**SKPbc**	**23 21 28.0**	**-5.8**
	comp=Z,2.1nm,0.9s,baz=46,slow=3.5,SNR=5.4						
FINES	**FINESS Array B**	**138.93**	**341**	SKPbc	**SKPbc**	**23 21 49.0**	**-5.0**
	comp=Z,2.1nm,1.0s,baz=70,slow=1.6,SNR=6.8						
BRTR	**Keskin Array B**	**147.90**	**307**	PKPbc	**PKPdf**	**23 19 20.4**	**+1.9**
	comp=Z,0.7nm,1.1s,baz=157,slow=4.9,SNR=1.6						
BRTR				PKPab	**PKPab**	**23 19 26.3**	**0.0**
	comp=Z,0.8nm,0.6s,baz=126,slow=2.6,SNR=7.6						

*IDC **23** 23:01:39.0±1.9, 7.14S×131.46E, h0km, **mb3.8**/1, **mb1 4.4**/6, **mb1mx3.8**/41, **mbtmp4.2**/6, **ML4.2**/5, Error ellipse: s-maj=53.1km s-min=23.8km az=90.0, Tanimbar Islands region*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.23**	**358**	Pn	Pn	23 03 13.0	+0.7
	4.2nm,0.3s,baz=168,slow=14,SNR=27						
SIJI				Sn	Sn	23 04 16.9	-7.4
	5.8nm,0.3s,baz=239,slow=23,SNR=9.3						
BATI	**Baumata**	**8.28**	**248**	Pn	Pn	23 03 41.3	+0.8
	3.9nm,0.3s,baz=65,slow=3.0,SNR=2.1						
BATI				Sn	Sn	23 05 06.2	-8.7
	3.4nm,0.3s,baz=90,slow=2.0,SNR=1.6						
FITZ	**Fitzroy Crossi**	**12.28**	**207**	Pn	Pn	23 04 34.7	-0.5
	1.2nm,0.3s,baz=26,slow=13,SNR=50						
FITZ				Sn	Sn	23 06 42.6	-10
	3.5nm,0.3s,baz=9.9,slow=2.2,SNR=14						
WRA	**Warramunga Arr**	**13.03**	**168**	Pn	Pn	23 04 46.0	+0.5
	0.9nm,0.3s,baz=348,slow=12,SNR=32						
WRA				Sn	Sn	23 07 06.2	-5.1
	0.9nm,0.3s,baz=354,slow=17,SNR=5.8						
ASAR	**Alice Springs**	**16.60**	**172**	Pn	Pn	23 05 33.3	0.0
	0.9nm,0.3s,baz=351,slow=14,SNR=23						
ASAR				Sn	Sn	23 08 32.0	-6.4
	0.1nm,0.3s,baz=359,slow=29,SNR=2.3						
MKAR	**Makanchi Array**	**69.14**	**326**	P	P	23 12 47.0	-0.2
	0.6nm,0.6s,baz=116,slow=8.0,SNR=12						

*IDC **23** 23:16:19.5±2.2, 23.54S×179.80W, h491km±23km, mb3.5/11, mb1 3.7/12, mb1mx3.5/37, mbtmp4.3/12, Error ellipse: s-maj=18.0km s-min=16.8km az=167.0*
*NEIC **23** 23:16:22.1±1.9, 23.6S±0.1×179.86W±0.09, h523km±8km, mb4.3/59, Error ellipse: s-maj=18.5km s-min=11.6km az=187.0*
ISC 23 23:16:22.8±0.5, 23.68S±0.08×179.88W±0.10, h532km, n108, σ1s16/111, mb4.2/36, 10C-3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.76**	**189**	P	**P**	**23 19 29.2**	**-0.7**
	0.9nm,0.3s,baz=306,slow=8.7,SNR=2.1						
URZ				S	**S**	**23 22 00.6**	**-3.5**
	baz=0.0,slow=20,SNR=1.4						
THZ	**Tophouse**	**19.02**	**197**	P	**P**	**23 20 11.1**	**+0.5**
KHZ	**Kahutara**	**19.47**	**195**	P	**P**	**23 20 13.8**	**-0.9**
KHZ				IAmb	IAmb	23 20 16.7	
	comp=Z,10nm,0.8s						
LTZ	**Lake Taylor**	**20.14**	**197**	P	**P**	**23 20 21.3**	**+0.5**
OXZ	**Oxford**	**20.70**	**197**	P	**P**	**23 20 26.7**	**+0.8**
MQZ	**McQueen's Vall**	**20.90**	**195**	P	**P**	**23 20 26.7**	**-1.0**
MQZ				IAmb	IAmb	23 20 40.1	
	comp=Z,15nm,1.1s						
RPZ	**Rata Peaks**	**21.34**	**198**	P	**P**	**23 20 30.9**	**-0.7**
	comp=Z,5.0nm,0.4s,baz=21,slow=9.5,SNR=7.2						
RPZ	**Rata Peaks**	**21.34**	**198**	IAmb	IAmb	23 20 40.1	
	comp=Z,11nm,1.2s						
FOZ	**Fox Glacier**	**21.55**	**201**	P	**P**	**23 20 33.2**	**-0.3**
LBZ	**Lake Benmore**	**22.20**	**199**	P	**P**	**23 20 39.5**	**+0.1**
LBZ				IAmb	IAmb	23 20 58.6	
	comp=Z,9.8nm,1.2s						
MLZ	**Mavora Lakes**	**23.74**	**201**	P	**P**	**23 20 53.7**	**+0.6**
DCZ	**Deep Cove**	**24.16**	**203**	P	**P**	**23 20 56.9**	**+0.2**
WHZ	**Wether Hill Ro**	**24.26**	**201**	P	**P**	**23 20 59.1**	**+1.4**
WHZ				IAmb	IAmb	23 20 59.6	
	comp=Z,17nm,1.0s						
ARMA	**Armidale**	**26.20**	**249**	P	**P**	**23 21 16.8**	**+1.6**
ARMA				IAmb	IAmb	23 21 18.0	
	comp=Z,8.1nm,0.9s						
EIDS	**Eidsvold**	**26.45**	**260**	P	**P**	**23 21 17.8**	**+0.5**
EIDS				IAmb	IAmb	23 21 19.0	
	comp=Z,6.0nm,0.5s						
CTA	**Charters Tower**	**31.58**	**270**	P	**P**	**23 22 02.9**	**+0.8**
	comp=Z,18nm,0.5s,baz=94,slow=11,SNR=38						
CTAO	**Charters Tower**	**31.58**	**270**	P	**P**	**23 22 03.0**	**+1.0**
TOO	**Toolangi**	**32.66**	**237**	P	**P**	**23 22 11.8**	**+0.8**
TAU	**Tasmania Unive**	**33.17**	**227**	P	**P**	**23 22 16.2**	**+1.1**
TAU				IAmb	IAmb	23 22 32.2	
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	**34.91**	**248**	P	**P**	**23 22 29.4**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=92,slow=13,SNR=3.0						
COEN	**Coen**	**36.19**	**279**	P	**P**	**23 22 41.1**	**+0.3**
BBOO	**Buckleboo**	**39.63**	**247**	P	**P**	**23 23 08.3**	**-0.3**
BBOO				IAmb	IAmb	23 23 26.9	
	comp=Z,9.7nm,1.1s						
AS31	**Alice Springs**	**42.18**	**260**	P	**P**	**23 23 29.5**	**+0.4**
ASAR	**Alice Springs**	**42.18**	**260**	P	**P**	**23 23 29.5**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=98,slow=8.0,SNR=32						
ASAR				ScP	**ScP**	**23 28 15.4**	**+4.4**
	comp=Z,1.1nm,0.8s,baz=109,slow=3.9,SNR=6.0						
ASAR	**Alice Springs**	**42.18**	**260**	P	**P**	**23 23 28.6**	**-0.5**
WR0	**Warramunga Arr**	**42.34**	**266**	P	**P**	**23 23 30.1**	**-0.2**
WB2	**Warramunga Arr**	**42.52**	**266**	P	**P**	**23 23 31.5**	**-0.2**
WB2				IAmb	IAmb	23 23 31.9	
	comp=Z,5.7nm,0.5s						
WB0	**Warramunga Arr**	**42.52**	**266**	P	**P**	**23 23 31.6**	**-0.1**
WB0				IAmb	IAmb	23 23 32.3	
	comp=Z,6.1nm,0.7s						
WRA	**Warramunga Arr**	**42.53**	**266**	P	**P**	**23 23 31.7**	**-0.1**
	comp=Z,4.3nm,0.5s,baz=95,slow=8.4,SNR=60						
WRA				ScP	**ScP**	**23 28 17.1**	**+4.6**
	comp=Z,1.0nm,0.9s,baz=94,slow=4.0,SNR=2.6						
WRA				S	**S**	**23 29 13.2**	**-2.7**
	comp=Z,0.6nm,0.7s,baz=97,slow=13,SNR=4.8						
WRA	**Warramunga Arr**	**42.53**	**266**	P	**P**	**23 23 31.3**	**-0.6**
FORT	**Forrest**	**46.49**	**249**	P	**P**	**23 24 02.3**	**+0.1**
MTN	**Manton Dam**	**47.55**	**274**	P	**P**	**23 24 10.1**	**-0.2**
KNRA	**Kununurra**	**48.80**	**270**	P	**P**	**23 24 19.6**	**0.0**
KNRA				IAmb	IAmb	23 24 35.3	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.95**	**265**	P	**P**	**23 24 36.2**	**+0.7**
MORW	**Morawa**	**57.05**	**250**	P	**P**	**23 25 17.8**	**-0.6**
MORW				IAmb	IAmb	23 25 19.6	
	comp=Z,21nm,1.1s						
QSPA	**South Pole Qui**	**66.41**	**180**	P	**P**	**23 26 20.7**	**+1.8**
	comp=Z,3.2nm,0.6s,baz=308,slow=0.6,SNR=15						
QSPA	**South Pole Qui**	**66.41**	**180**	P	**P**	**23 26 20.6**	**+1.8**
QSPA				IAmb	IAmb	23 26 21.5	
	comp=Z,4.1nm,0.8s						
BELA	**Belgrano 2**	**76.64**	**173**	P	**P**	**23 27 18.7**	**+0.4**
UNV	**Unalaska Valle**	**78.06**	**8**	P	**P**	**23 27 24.7**	**-1.4**
PEA0B	**Petropavlovsk-**	**78.91**	**346**		**P**	**23 27 30.9**	**+0.2**
PEA0B				IAmb	IAmb	23 27 45.5	
	comp=Z,21nm,1.1s						
PETK	**Petropavlovsk-**	**78.91**	**346**	P	**P**	**23 27 29.1**	**-1.5**
CHGN	**Chignik**	**81.72**	**12**	P	**P**	**23 27 44.1**	**-1.1**
CHGN				IAmb	IAmb	23 27 54.9	
	comp=Z,17nm,0.9s						
SLBS	**Sierra La Lagu**	**82.60**	**60**	P	**P**	**23 27 49.7**	**-0.9**
OHAK	**Old Harbor**	**83.63**	**14**	P	**P**	**23 27 53.9**	**-0.9**
OHAK				IAmb	IAmb	23 27 54.4	
	comp=Z,10.0nm,1.0s						
WAKR	**Walker**	**83.84**	**43**	P	**P**	**23 27 57.7**	**+1.0**
BEKR	**Beckworth**	**84.09**	**42**	P	**P**	**23 27 58.0**	**+0.3**
PNTR	**Pine Nut**	**84.09**	**43**	P	**P**	**23 27 57.8**	**-0.1**
NVAR	**Mina Array Bea**	**84.52**	**44**	P	**P**	**23 27 59.6**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=222,slow=6.2,SNR=4.6						
NVAR	**Mina Array Bea**	**84.52**	**44**	P	**P**	**23 28 00.8**	**+0.8**
SNAA	**Sanae**	**84.89**	**179**	P	**P**	**23 28 01.1**	**0.0**
SNAA	**Sanae**	**84.89**	**179**	P	**P**	**23 28 01.1**	**0.0**
TPNV	**Topopah Spring**	**85.00**	**46**	P	**P**	**23 28 02.6**	**+0.3**
VNA3	**Neumayer Olymp**	**85.09**	**177**	P	**P**	**23 28 01.9**	**-0.1**
K05A	**Summer Lake**	**85.52**	**39**	P	**P**	**23 28 05.6**	**+0.8**
K05A				IAmb	IAmb	23 28 10.9	
	comp=Z,6.7nm,1.2s						
BRLK	**Bradley Lake**	**86.48**	**14**	P	**P**	**23 28 08.4**	**-0.2**
SVW2	**Sparrevohn**	**86.74**	**12**	P	**P**	**23 28 08.7**	**-1.1**
SVW2				IAmb	IAmb	23 28 13.4	
	comp=Z,5.5nm,1.1s						
SUA	**Susitna One**	**88.03**	**14**	P	**P**	**23 28 15.8**	**-0.3**
MTPU	**Mount Pierson**	**88.30**	**47**	P	**P**	**23 28 17.9**	**-0.3**
SKT	**Skwentna**	**88.33**	**13**	P	**P**	**23 28 16.1**	**-1.2**
SKT				IAmb	IAmb	23 28 35.2	
	comp=Z,4.5nm,1.2s						
TTA	**Tatalina**	**88.37**	**11**	P	**P**	**23 28 16.4**	**-1.1**
GHO	**Glory Hole Cre**	**88.71**	**14**	P	**P**	**23 28 18.8**	**-0.3**
SEY	**Seymchan**	**89.07**	**348**	P	**P**	**23 28 20.4**	**-0.2**
	comp=Z,1.4nm,0.4s,baz=215,slow=19,SNR=3.6						
SCM	**Sheep Creek Mo**	**89.13**	**15**	P	**P**	**23 28 21.6**	**+0.6**
SCM				IAmb	IAmb	23 28 33.8	
	comp=Z,2.7nm,0.9s						
KLU	**Klutina**	**89.17**	**16**	P	**P**	**23 28 21.9**	**+0.7**
KLU				IAmb	IAmb	23 28 40.7	
	comp=Z,2.6nm,0.9s						
VRDI	**Verde Repeater**	**89.57**	**17**	P	**P**	**23 28 23.7**	**+0.4**
VRDI				IAmb	IAmb	23 28 34.1	
	comp=Z,4.8nm,1.1s						
N25K	**Chitina, Valde**	**89.60**	**16**	P	**P**	**23 28 23.6**	**+0.4**
N25K				IAmb	IAmb	23 28 33.8	
	comp=Z,3.8nm,1.1s						
HVU	**Hansel Valley**	**89.90**	**44**	P	**P**	**23 28 25.9**	**+0.7**
TRF	**Thorofare Moun**	**89.91**	**13**	P	**P**	**23 28 23.9**	**-0.8**
CTGM	**Chitina Glacie**	**89.93**	**18**	P	**P**	**23 28 23.3**	**-1.5**
CTGM				IAmb	IAmb	23 28 35.2	
	comp=Z,2.0nm,0.8s						
TXAR	**Lajitas Array**	**90.22**	**58**	P	**P**	**23 28 27.9**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=210,slow=6.6,SNR=16						
TXAR	**Lajitas Array**	**90.22**	**58**	P	**P**	**23 28 28.6**	**+1.6**
BPAW	**Bear Paw Mtn.**	**90.36**	**12**	P	**P**	**23 28 28.1**	**+1.5**
BPAW				IAmb	IAmb	23 28 29.8	
	comp=Z,2.3nm,0.6s						
CCB	**Clear Creek Bu**	**91.48**	**13**	P	**P**	**23 28 31.1**	**-0.7**
CCB				IAmb	IAmb	23 28 31.8	
	comp=Z,1.7nm,0.7s						
IMAR	**Indian Mountai**	**91.57**	**10**	P	**P**	**23 28 31.9**	**-0.3**
ILAR	**Eielson Array**	**91.79**	**14**	P	**P**	**23 28 32.0**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=211,slow=5.5,SNR=4.5						
K27K	**Chicken**	**92.27**	**16**	P	**P**	**23 28 36.0**	**+0.6**
K27K				IAmb	IAmb	23 28 36.5	
	comp=Z,2.0nm,0.9s						
PDAR	**Pinedale Array**	**92.45**	**44**	P	**P**	**23 28 36.5**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=216,slow=4.5,SNR=2.6						
EGAK	**Eagle**	**93.11**	**16**	P	**P**	**23 28 39.3**	**+0.1**
EGAK				IAmb	IAmb	23 28 39.4	
	comp=Z,5.2nm,1.1s						
ARCES	**ARCESS Array B**	**131.69**	**348**	PKP	**PKPdf**	**23 34 33.6**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=54,slow=2.1,SNR=12						
FINES	**FINESS Array B**	**138.27**	**342**	PKP	**PKPdf**	**23 34 46.5**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=96,slow=1.9,SNR=4.1						
NB2	**NORSAR Subarra**	**141.88**	**351**	PKP	**PKPdf**	**23 34 48.7**	**-4.8**
	comp=Z,8.1nm,1.2s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**141.88**	**351**	PKhKP	PKPpre	23 34 48.6	
	comp=Z,0.7nm,0.7s,baz=16,slow=4.7,SNR=3.8						
AKASG	**Malin Array Be**	**144.84**	**328**	PKP	**PKPdf**	**23 34 58.9**	**0.0**
	comp=Z,5.2nm,0.6s,baz=43,slow=4.2,SNR=19						
AKBB	**Malin Array Si**	**144.84**	**328**		**PKPdf**	**23 34 59.1**	**+0.2**
SORM	**Soroca**	**146.88**	**325**	↑P	**PKPbc**	**23 35 05.1**	**-0.1**
BRTR	**Keskin Array B**	**147.53**	**308**	PKPbc	**PKPbc**	**23 35 07.5**	**0.0**
	comp=Z,0.6nm,0.4s,baz=151,slow=5.0,SNR=7.1						
BRTR				PKPab	**PKPab**	**23 35 11.6**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=98,slow=2.9,SNR=8.5						
KWP	**Kalwaria Pacla**	**148.62**	**331**		**PKPbc**	**23 35 10.4**	**+0.7**
TESR	**Tescani**	**148.79**	**323**	↑P	**PKPbc**	**23 35 10.1**	**-0.1**
BIZ	**Bicaz**	**148.82**	**325**	↓P	**PKiKP**	**23 35 11.4**	**+0.1**
BUR08	**Bucovina Ar. S**	**148.83**	**326**		**PKPbc**	**23 35 11.1**	**+0.6**
BURAR	**Bucovina Array**	**148.84**	**326**	↑P	**PKiKP**	**23 35 11.4**	**0.0**
MLR	**Muntele Rosu**	**149.80**	**322**	↑P	**PKPdf**	**23 35 10.0**	**+2.5**
DOPR	**Dopca**	**149.81**	**324**	↓P	**PKiKP**	**23 35 13.6**	**+0.2**
VOIR		**150.33**	**323**	↑P	**PKPbc**	**23 35 12.1**	**-1.9**
OSTC	**Ostas**	**150.39**	**339**	*e*PKP	**PKiKP**	**23 35 14.6**	**+0.2**
CHVC	**Chvalec**	**150.41**	**339**	*e*PKP	**PKiKP**	**23 35 14.5**	**0.0**
DPC	**Dobruska-Polom**	**150.53**	**

comp=Z,23nm,0.6s
833A Chaparral WMA, 16.01 336 Pn Pn 00 05 25.0 -0.5
HKT Hockley 16.48 348 Pn Pn 00 05 31.8 +0.6
342A Flagon Creek P 17.52 359 Pn 00 05 44.0 -0.1
342A IAmb IAmb 00 05 58.9
comp=Z,95nm,1.6s
435B Jarrell 17.68 344 Pn 00 05 46.3 +0.1
NATX Nacogdoches 18.06 353 Pn 00 05 51.3 +0.5
NATX IAmb IAmb 00 05 53.7
comp=Z,44nm,1.4s
VBMS Vicksburg 18.41 4 P P 00 05 55.2 +0.6
VBMS IAmb IAmb 00 06 32.1
comp=Z,39nm,1.1s
GUY2C Guyana, Caldas 18.50 116 eP Pn 00 05 58.0 +1.2
RREF El Recreo 18.67 117 eP Pn 00 06 01.1 +2.1
H06E1 SOCORRO T-PHAS 18.79 288 T T 00 25 12.9
SNR=166
H06S1 SOCORRO T 18.81 288 T T 00 25 10.4
SNR=4.1
TOLC Tolima 18.85 117 eP Pn 00 06 01.4 +0.5
TX31 Lajitas Ar. Si 18.86 327 Pn 00 06 00.9 +0.3
TX31 IAmb IAmb 00 06 04.5
comp=Z,56nm,1.2s
TX32 Lajitas Array 18.86 327 P Pn 00 06 01.5 +0.8
TXAR Lajitas Array 18.86 327 P Pn 00 06 02.2 +1.6
comp=Z,0.3nm,0.3s,baz=153,slow=8.6,SNR=38
TXAR LR LR 00 13 50.1
comp=Z,32nm,19.0s,baz=0.0,slow=38
TXAR Lajitas Array 18.86 327 Pn 00 06 01.9 +1.2
250A Grady 18.88 15 P P 00 06 00.5 +0.9
146A Union 18.98 8 P P 00 06 01.2 +0.5
146A IAmb IAmb 00 06 22.0
comp=Z,113nm,1.9s
OTAV Otavalo 19.03 134 P P 00 06 02.7 +0.8
LGNH Logne 19.25 73 P P 00 06 03.4 -0.4
Z41A Richland Creek 19.41 358 P Pn 00 06 06.9 -0.1
Z41A IAmb IAmb 00 06 12.1
comp=Z,19nm,0.8s
ROSC El Rosal 19.60 115 P P 00 06 04.8 -3.3
comp=Z,1.1nm,0.3s,baz=303,slow=23,SNR=1.9
ROSC El Rosal 19.60 115 P P 00 06 09.3 +1.2
Z47A Carrollton 19.68 10 P P 00 06 09.1 +0.8
Z47A IAmb IAmb 00 06 11.6
comp=Z,32nm,0.7s
LRAL Lakeview Retre 19.72 13 Pn 00 06 10.4 -0.2
WLAR White Oak Lake 19.85 357 P P 00 06 10.4 +0.2
WLAR IAmb IAmb 00 06 15.3
comp=Z,45nm,1.3s
152A Waverly Hall 19.96 18 P P 00 06 11.6 +0.1
152A IAmb IAmb 00 06 16.9
comp=Z,12nm,0.5s
ABTX Abilene, Hawle 20.01 341 P P 00 06 12.2 +0.2
LPIG La Paz 20.08 303 LR LR 00 14 12.6
comp=Z,101nm,18.2s,baz=170,slow=37
CHIC Chingaza 20.21 115 eP P 00 06 16.2 +1.5
RUSC La Rusia 20.24 111 eP P 00 06 15.0 -0.2
VILC Villavicencio, 20.49 116 eP Pn 00 06 19.7 -0.4
MIAR Mount Ida 20.73 356 P P 00 06 20.7 +1.0
MIAR IAmb IAmb 00 06 29.8
comp=Z,54nm,2.0s
X37A Clayton 20.94 352 P P 00 06 23.6 +1.5
X37A IAmb IAmb 00 06 31.4
comp=Z,25nm,1.4s
GOGA Godfrey 21.05 20 P P 00 06 24.3 +1.1
GOGA IAmb IAmb 00 06 33.0
comp=Z,67nm,1.6s
X48A Hartselle 21.08 12 P P 00 06 24.4 +0.9
PLAL Pickwick Lake 21.42 9 P P 00 06 27.1 -0.1
PLAL IAmb IAmb 00 06 30.2
comp=Z,27nm,1.6s
GDL2 Guadalupe Moun 21.53 330 P P 00 06 29.6 +1.1
MNTX Cornudas Mount 21.63 328 P P 00 06 30.5 +1.0
W35A Tecumseh 21.73 349 P P 00 06 29.9 -0.6
WMOK Wichita Mounta 21.75 345 P P 00 06 29.6 -1.1
CPRX Cap Rock 21.99 333 P P 00 06 34.0 +0.5
FCAR Ozark Folk Cen 22.02 360 P P 00 06 34.6 +1.0
FCAR IAmb IAmb 00 07 27.4
comp=Z,29nm,1.8s
SWET Sewanee 22.05 13 P P 00 06 34.1 +0.1
SWET IAmb IAmb 00 06 34.4
comp=Z,65nm,1.7s
OK025 Westminster Rd 22.23 349 P P 00 06 34.9 -1.0
OK025 IAmb IAmb 00 06 36.1
comp=Z,25nm,0.7s
MSTX Muleshoe 22.34 336 IAmb IAmb 00 06 39.1
comp=Z,16nm,0.5s
OK029 Liberty Lake 22.46 348 P P 00 06 37.1 -1.3
OK029 IAmb IAmb 00 06 38.0
comp=Z,17nm,0.6s
U38A Gravette 22.67 355 P P 00 06 40.9 +0.3
AMTX Amarillo 22.75 339 P P 00 06 41.5 -0.1
HICK Hickman 22.81 6 P P 00 06 41.0 -1.0
HICK IAmb IAmb 00 06 42.1
comp=Z,38nm,1.0s
TKL Tuckaleechee C 23.03 17 P P 00 06 42.4 -1.8
comp=Z,6.6nm,0.9s,baz=175,slow=8.9,SNR=6.2
TKL LR LR 00 16 51.0
comp=Z,218nm,18.2s,baz=213,slow=40
U49A Red Boiling Sp 23.33 13 IAmb IAmb 00 06 57.1
comp=Z,22nm,1.2s
T47A Sharon Grove 23.54 10 IAmb IAmb 00 06 48.5
comp=Z,37nm,1.4s
121A Cookes Peak, D 23.57 325 P P 00 06 50.7 +1.0
319A Douglas 23.61 321 P P 00 06 51.7 +1.7
S39A Bolivar 23.85 357 IAmb IAmb 00 07 04.8
comp=Z,38nm,1.9s
KAN08 Anthony NE Sta 23.95 348 P P 00 06 50.8 -2.2
S44A Carbondale 23.95 5 IAmb IAmb 00 06 53.5
comp=Z,25nm,0.8s
SIUC Southern Illin 23.98 6 IAmb IAmb 00 06 54.1
comp=Z,27nm,0.9s
T50A Nancy 24.03 14 IAmb IAmb 00 07 28.6
comp=Z,50nm,1.8s
CCM Cathedral Cave 24.20 2 P P 00 06 54.8 -0.4
CCM IAmb IAmb 00 06 56.4
comp=Z,29nm,1.4s
BNM Barren Site 24.22 329 P P 00 06 57.6 +1.9
MLPR Magueyes Islan 24.40 77 P P 00 06 57.6 +0.5
ANMO Albuquerque 24.78 331 P P 00 07 02.1 +1.4
comp=Z,4.2nm,0.6s,baz=152,slow=11,SNR=17
ANMO Albuquerque 24.78 331 P P 00 07 02.1 +1.4
ATAH Atahualpa 24.80 146 LR LR 00 15 19.6
comp=Z,113nm,18.6s,baz=353,slow=33
WCI Wyandotte Cave 24.89 11 P P 00 07 00.3 -1.1
WCI IAmb IAmb 00 07 02.2
comp=Z,56nm,1.6s
SJG San Juan 25.26 77 LR LR 00 17 49.7
comp=Z,113nm,19.3s,baz=268,slow=39
CBYP Canovanas 25.55 76 P P 00 07 05.3 -2.5
T25A Trinidad 25.76 337 P P 00 07 10.8 +1.1
X18A Snowflake 26.26 325 P P 00 07 14.3 +0.1
Q51A Peebles 26.30 15 P P 00 07 13.0 -1.3
Q51A IAmb IAmb 00 07 47.4
comp=Z,37nm,1.6s
X16A Lo Mia Camp, P 27.03 323 P P 00 07 22.0 +0.8
S22A 4UR Ranch, Cre 27.26 334 P P 00 07 23.9 +0.6
MVCO Mesa Verde 27.58 331 P P 00 07 26.6 +0.5
MVCO IAmb IAmb 00 07 29.3
comp=Z,13nm,1.1s
WUAZ Wupatki 27.78 325 P P 00 07 28.8 +1.0
SEUS St. Eustatius 28.21 79 P P 00 07 31.8 +0.1
PV01 Paradox Valley 28.36 332 P P 00 07 34.6 +1.6
PV15 Paradox Valley 28.48 332 P P 00 07 34.8 +0.6
PV13 Radium Mtn., P 28.49 332 IAmb IAmb 00 07 37.5
comp=Z,14nm,1.0s
PV05 Paradox Valley 28.56 331 P P 00 07 35.6 +0.9
PV05 IAmb IAmb 00 07 37.8
comp=Z,9.3nm,0.9s
PV03 Paradox Valley 28.58 332 P P 00 07 36.3 +1.4
PV03 IAmb IAmb 00 07 38.3
comp=Z,10nm,1.0s
PV18 Skein Mesa, Pa 28.60 331 P P 00 07 36.1 +0.9
PV18 IAmb IAmb 00 07 38.5
comp=Z,11nm,1.0s
PV12 Saucer Basin, 28.61 332 P P 00 07 36.5 +1.2
PV12 IAmb IAmb 00 07 38.7
comp=Z,20nm,1.1s
PV11 David Mesa, Pa 28.63 332 P P 00 07 36.3 +0.9
PV11 IAmb IAmb 00 07 38.8
comp=Z,22nm,1.3s
PV07 Paradox Valley 28.64 332 P P 00 07 36.9 +1.4
PV17 East Wray Mesa 28.65 331 P P 00 07 36.1 +0.5
PV17 IAmb IAmb 00 07 38.8
comp=Z,13nm,1.0s
PV16 Nyswonger Mesa 28.66 332 P P 00 07 36.9 +1.2
PV16 IAmb IAmb 00 07 39.0
comp=Z,15nm,1.2s
PV19 Morning Glory 28.69 331 P P 00 07 37.0 +1.1
PV20 West Nyswonger 28.71 332 P P 00 07 36.3 +0.2
PV04 Paradox Valley 28.72 332 P P 00 07 37.1 +0.9
PV04 IAmb IAmb 00 07 39.5
comp=Z,16nm,1.1s
PV14 Lion Creek, Pa 28.76 332 P P 00 07 38.0 +1.5
PV14 IAmb IAmb 00 07 39.7
comp=Z,9.8nm,1.1s
PV10 Paradox Valley 28.77 331 P P 00 07 37.2 +0.5
PV10 IAmb IAmb 00 07 39.1
comp=Z,9.6nm,0.9s
PV22 Blue Mesa, Par 28.78 332 P P 00 07 37.4 +0.7
PV23 Carpenter Ridg 28.82 332 P P 00 07 38.4 +1.3
PV23 IAmb IAmb 00 07 40.2
comp=Z,11nm,1.0s
L48A N Adams 28.84 12 P P 00 07 35.7 -1.2
U15A North Rim 28.95 325 P P 00 07 39.1 +0.8
M52A Chesterland 29.19 17 P P 00 07 38.7 -1.4
KNB Kanab 29.67 325 P P 00 07 44.4 -0.2
PFO Pinyon Flats O 29.70 316 LR LR 00 19 57.8
comp=Z,59nm,19.2s,baz=76,slow=37
NNA Nana 29.70 149 LR LR 00 17 12.8
comp=Z,54nm,20.6s,baz=299,slow=32
PHWY Pilot Hill 29.82 339 P P 00 07 43.4 -2.6
PHWY IAmb IAmb 00 08 26.2
comp=Z,9.2nm,0.9s
LCMT Little Creek M 29.90 325 P P 00 07 47.9 +1.3
MTPU Mount Pierson 30.07 327 P P 00 07 48.7 +0.3
Q16A Castle Valley 30.22 329 P P 00 07 50.4 +0.9
SZCU Shurtz Canyon 30.23 325 P P 00 07 50.1 +0.5
CCUT Cedar City 30.35 325 P P 00 07 51.4 +0.7
MSU Marysvale 30.42 328 P P 00 07 52.9 +1.6
P17A Butcher Ranch, 30.44 331 P P 00 07 52.0 +0.6
MPU Maple Canyon 31.29 330 P P 00 07 59.9 +0.9
PSUT Pine Spring 31.32 326 P P 00 08 00.0 +0.8
JLU Jordanelle 31.67 331 P P 00 08 01.8 -0.5
CTU Camp Tracy 31.88 331 P P 00 08 05.0 +1.0
SPR3 Spring Creek 3 31.92 326 P P 00 08 04.7 +0.1
SPR3 IAmb IAmb 00 08 07.8
comp=Z,7.8nm,1.2s
TCUT Toone Canyon 32.05 332 P P 00 08 06.0 +0.3
J57A Williamstown 32.60 22 P P 00 08 09.6 -0.5
PDAR Pinedale Array 32.61 336 P P 00 08 11.7 +1.2
comp=Z,0.5nm,0.5s,baz=138,slow=10,SNR=6.2
PDAR PcP PcP 00 10 57.0 +1.3
comp=Z,0.4nm,0.6s,baz=116,slow=3.4,SNR=3.6
BGU Big Grassy Mou 32.67 330 P P 00 08 11.8 +0.8
SADO Sadowa 32.79 17 P P 00 08 09.3 -2.4
comp=Z,1.8nm,0.4s,baz=290,slow=21,SNR=1.4
HVU Hansel Valley 33.21 331 P P 00 08 16.1 +0.5
REDW Red Top Meadow 33.63 335 P P 00 08 20.1 +0.7
ELK Elko 33.66 327 P P 00 08 20.4 +0.8
SNOW Snow King Moun 33.67 335 P P 00 08 20.0 +0.2
NV11 Mina Array Sit 33.73 322 P P 00 08 21.1 +0.8
NV11 IAmb IAmb 00 08 24.3
comp=Z,6.0nm,1.0s
TPAW Teton Pass 33.78 335 P P 00 08 21.6 +0.9
TPAW IAmb IAmb 00 08 23.5
comp=Z,21nm,1.5s
MDPB Devils Postpil 33.81 320 P P 00 08 21.9 +0.8
NVAR Mina Array Bea 33.82 321 P P 00 08 24.1 +2.9
comp=Z,3.3nm,0.7s,baz=135,slow=8.6,SNR=33
NVAR PcP PcP 00 11 01.7 +2.4
comp=Z,0.7nm,0.7s,baz=72,slow=6.0,SNR=2.9
NVAR Mina Array Bea 33.82 321 P P 00 08 22.9 +1.8
LHV Little Huntoon 33.83 321 P P 00 08 22.6 +1.8
LHV IAmb IAmb 00 08 26.3
comp=Z,8.0nm,1.3s
RYN Ryan 34.08 321 P P 00 08 24.5 +1.2
RYN IAmb IAmb 00 08 30.6
comp=Z,15nm,1.7s
KVN Kaiserville 34.10 322 P P 00 08 24.5 +1.1
KVN IAmb IAmb 00 08 27.2
comp=Z,7.8nm,1.2s
HLID Hailey 35.35 331 P P 00 08 35.1 +0.9
HLID IAmb IAmb 00 08 37.3
comp=Z,3.8nm,0.8s
BCYI Bear Canyon 35.48 333 P P 00 08 36.5 +1.1
MCMT McKenzie Canyo 35.66 334 P P 00 08 38.9 +2.0
MFID Camas Ranch 35.91 330 P P 00 08 39.4 +0.4
MFID IAmb IAmb 00 08 44.0
comp=Z,13nm,1.6s
DLMT Dillon 35.99 335 P P 00 08 38.8 -0.8
DLMT IAmb IAmb 00 08 42.2
comp=Z,8.2nm,1.4s
WVL Waterville 36.14 27 P P 00 08 40.9 +0.3
LRM Limekiln Ridge 36.30 336 P P 00 08 43.1 +0.7
ULM Lac du Bonnet 36.51 356 P P 00 08 42.9 -0.9
comp=Z,0.9nm,0.4s,baz=308,slow=21,SNR=1.4
ULM LR LR 00 26 29.6
comp=Z,61nm,18.5s,baz=124,slow=41
EGMT Eagleton 37.19 340 IAmb IAmb 00 08 51.9
comp=Z,6.5nm,0.6s
J08A Circle Bar Ran 37.21 328 P P 00 08 51.9 +1.9
MOD Modoc Plateau 37.22 324 P P 00 08 51.5 +1.3
MOD IAmb IAmb 00 08 52.9
comp=Z,16nm,1.6s
PLID Pearl Lake 37.25 332 IAmb IAmb 00 08 52.4
comp=Z,14nm,1.3s
EMMW East Machias 37.26 29 P P 00 08 50.5 +0.3
LPAZ La Paz 38.09 141 LR LR 00 23 31.0
comp=Z,54nm,19.6s,baz=336,slow=35
LTY Liberty 41.05 330 P P 00 09 20.3 -1.7
LTY IAmb IAmb 00 09 26.5
comp=Z,8.6nm,0.8s
SIV San Ignacio 42.57 133 P P 00 09 34.4 -0.3
comp=Z,2.7nm,0.7s,baz=314,slow=7.2,SNR=15
SCHQ Schefferville 45.45 20 P P 00 09 54.6 -2.6
comp=Z,6.4nm,0.8s,baz=207,slow=8.6,SNR=3.6
SCHQ LR LR 00 29 58.1
comp=Z,193nm,19.3s,baz=249,slow=38
H03N2 Juan Fernandez 48.59 165 T T 01 02 50.6
baz=350,slow=73
H03N1 Juan Fernandez 48.59 165 T T 01 02 54.5
baz=350,slow=73
H03N3 Juan Fernandez 48.60 165 T T 01 02 57.3
baz=350,slow=73
YKA Yellowknife Ar 51.24 347 P P 00 10 41.6 0.0
comp=Z,1.1nm,0.5s,baz=135,slow=10.0,SNR=11
YKA PcP PcP 00 11 56.7 +0.5
comp=Z,0.7nm,0.7s,baz=178,slow=28,SNR=2.7
CPUP Villa Florida 52.24 140 P P 00 10 47.7 -1.9
comp=Z,1.1nm,0.7s,baz=349,slow=8.9,SNR=2.8
CPUP LR LR 00 34 48.0
comp=Z,59nm,18.4s,baz=14,slow=38
DLBC Dease Lake 52.84 336 P P 00 10 56.8 +3.0
INK Inuvik 60.64 344 P P 00 11 50.0 +1.3
INK IAmb IAmb 00 11 50.6
comp=Z,7.0nm,0.9s
EGAK Eagle 60.91 338 P P 00 11 52.0 +1.3
EGAK IAmb IAmb 00 11 52.4
comp=Z,8.0nm,1.1s
DOT Dot Lake 61.41 336 P P 00 11 55.8 +1.6
PAX Paxson 61.65 335 P P 00 11 56.5 +0.7
PMR Palmer 62.60 333 P P 00 12 03.5 +1.4
IL18 Eielson Array 62.98 337 P P 00 12 05.8 +1.1
IL31 63.03 337 P P 00 12 06.0 +1.1
ILAR Eielson Array 63.03 337 P P 00 12 06.3 +1.4
comp=Z,2.5nm,0.8s,baz=172,slow=4.4,SNR=26
ILAR Eielson Array 63.03 337 P P 00 12 05.6 +0.7
RND Reindeer 63.22 335 P P 00 12 06.8 +0.5
BMAR Burnt Mountain 63.49 340 P P 00 12 08.9 +0.9
BWN Browne 63.78 336 P P 00 12 10.2 +0.3
TRF Thorofare Moun 63.83 335 P P 00 12 09.1 -1.3
I23K Minto, Yukon-K 64.14 337 P P 00 12 13.1 +0.9
PPT Papeete 64.75 243 LR LR 00 35 26.4
comp=Z,24nm,18.3s,baz=118,slow=31
COLD Coldfoot 65.33 339 P P 00 12 21.9 +2.0
TOLK Toolik Lake Re 65.72 340 IAmb IAmb 00 12 24.9
comp=Z,5.7nm,0.7s
EUNU Eureka 66.35 1 P P 00 12 26.4 -0.1
EUNU IAmb IAmb 00 12 26.8
comp=Z,5.7nm,0.7s
ESDC Sonseca Array 79.89 52 P P 00 13 44.6 -2.4
comp=Z,0.9nm,0.8s,baz=283,slow=5.0,SNR=4.8
SPITS Spitsbergen Ar 80.32 11 P P 00 13 47.8 -0.8
comp=Z,18nm,1.0s,baz=177,slow=3.1,SNR=7.4
NOA NORSAR Array B 84.36 28 LR LR 00 50 06.7
comp=Z,18nm,20.4s,baz=330,slow=35
HFS Hagfors 85.82 29 P P 00 14 16.4 -0.9
comp=Z,1.7nm,0.6s,baz=304,slow=3.4,SNR=4.7
ARCES ARCESS Array B 86.36 18 P P 00 14 19.1 -0.7
comp=Z,2.4nm,0.8s,baz=308,slow=6.0,SNR=8.1
GERES GERESS Array B 89.80 39 P P 00 14 36.5 -0.3
comp=Z,0.2nm,0.6s,baz=276,slow=12,SNR=3.6
TIXI Tiksi 90.47 348 P P 00 14 39.3 0.0
TORD Torodi Ar. Bea 90.47 76 P P 00 14 39.0 -1.4
comp=Z,0.3nm,0.6s,baz=296,slow=4.6,SNR=6.4
FINES FINESS Array B 90.72 25 LR LR 00 55 52.1
comp=Z,32nm,18.5s,baz=254,slow=36
AQU L'Aquila 91.89 46 P P 00 14 44.1 -2.4
NRIK Noril'sk 97.10 0 LR LR 01 03 26.6
comp=Z,65nm,18.3s,baz=20,slow=38
LZH Lanzhou 128.19 344 ePKP PKiKP 00 20 47.3 +1.9
LZH sPKP PKPdf 00 21 02.3
WRA Warramunga Arr 135.30 256 PKP PKPdf 00 20 59.4 +1.0
comp=Z,0.7nm,0.8s,baz=88,slow=2.4,SNR=6.1
ASAR Alice Springs 135.55 250 PKP PKPdf 00 21 00.3 +1.6
comp=Z,1.3nm,1.1s,baz=187,slow=26,SNR=4.7
CMAR Chiang Mai Arr 146.19 341 PKPbc PKPab 00 21 21.3 +1.7
comp=Z,8.7nm,0.7s,baz=341,slow=4.0,SNR=36
CMAR Chiang Mai Arr 146.19 341 PKPbc 00 21 19.7 +0.7

WEL 24 00:10:58.9, 43.°S±1.°, 171.9°E±1.°, 0, h5km, ρ2km, M2.2/12, ML2.3/12, MLv2.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=3.6, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LTZ	Lake Taylor	0.34	57	P	Pb		00 11 07.0	-0.5
OXZ	Oxford	0.38	162	P	Pb		00 11 08.4	+0.4
INZ	Inchbonnie	0.41	307	P	Pb		00 11 08.4	-0.1
AMCZ	Amberley	0.60	111	P	Pb		00 11 12.9	+1.0
MHCZ	Mount Hutt	0.61	202	P	Pb		00 11 12.9	+0.8
RACZ	Rakaia	0.78	166	P	Pn		00 11 16.2	-0.4
GVZ	Greta Valley S	0.84	90	P	Pn		00 11 17.4	0.0
WVZ	Waitaha Valley	0.85	262	P	Pn		00 11 16.9	-0.6
MQZ	McQueen's Vall	0.93	143	P	Pn		00 11 18.3	-0.2
RPZ	Rata Peaks	0.96	219	P	Pn		00 11 19.3	+0.3
WACZ	Wakanui South	0.97	182	P	Pn		00 11 19.7	+0.5
ARCZ	Arundel	1.10	208	P	Pn		00 11 21.6	+0.5
AKCZ	Akaroa Harbour	1.17	141	P	Pn		00 11 21.9	0.0
DSZ	Denniston Nort	1.22	357	P	Pn		00 11 23.1	+0.4
THZ	Tophouse	1.42	32	P	Pb		00 11 25.8	-0.1
LBZ	Lake Benmore	1.88	220	P	Pg		00 11 37.0	+2.1
TUWZ	Tuamarina	2.17	46	P	Pg		00 11 40.1	-0.4
QRZ	Quartz Range	2.19	13	P	Pg		00 11 40.4	-0.5
ODZ	Otahua Downs	2.26	203	P	Pg		00 11 43.2	+1.1

KRNET 24 00:14:10.0±0.1, 40.°26N±77.°30E, mb2.5
SOME 24 00:14:16.4, 40.°62N±77.°10E, h15km
NNC 24 00:14:17.2±1.8, 40.°67N±77.°12E, h0km, mb3.2, mpv2.8,
Error ellipse: s-maj=12.3km s-min=9.0km az=13.0
ISC 24 00:14:14.2±2.0, 40.°43N±0.°10, 77.°08E±0.°04, h10km, n31,
σ0.98/50, 17C-3D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
KDJ	Kajisay	1.70	3	⇑iP	Pn		00 14 44.2	0.0
KDJ	baz=58			⇑iS	Sg		00 15 09.6	+0.6
ULHL	Ulahol	1.92	341	⇓iP	Pn		00 14 47.8	+0.6
ULHL	baz=38			⇓iS	Sg		00 15 16.0	0.0
BOOM	Boomskoye usch	2.23	338	⇑iP	Pn		00 14 52.4	+1.0
BOOM	baz=36			⇑iS	Sb		00 15 23.4	+1.0
ANVS	Anan'yevo	2.40	10	⇑iP	Pn		00 14 53.9	+0.2
ANVS	baz=6.0			⇑iS	Sb		00 15 26.1	-1.1
ARLS	Aral	2.52	305	⇑eP	Pn		00 14 56.9	+1.5
ARLS	baz=7.0			⇑iS	Sb		00 15 31.2	+0.3
TNSS	Tian-Shan	2.61	358	eP	Pb		00 15 01.1	-0.2
TNSS	2.9nm,0.2s			eS	Sb		00 15 33.4	-0.2
TNSS	Tian-Shan	2.61	358	Pg	Pb		00 15 01.1	-0.2
TNSS	2.9nm,0.2s			Lg	Lg		00 15 33.9	
UCH	Uchtor	2.64	314	⇑eP	Pn		00 14 58.9	+1.7
UCH	baz=14			⇑eS	Sb		00 15 34.0	-0.4
MDOK	Medeo	2.73	360	eP	Pb		00 15 03.7	+0.4
MDOK	0.9nm,0.3s			eS	Sb		00 15 37.7	+0.8
MDOK	Medeo	2.73	360	Pg	Pb		00 15 03.5	+0.2
MDOK	1.5nm,0.4s			Lg	Lg		00 15 37.7	
KBK	Karagaybulak	2.74	325	⇑eP	Pn		00 14 59.8	+1.4
KBK	baz=24			⇑iS	Sb		00 15 35.9	-1.2
KST	Kastek	2.74	343	eP	Pb		00 15 04.0	+0.5
KST	1.3nm,0.3s			eS	Sb		00 15 38.2	+1.1
KST	Kastek	2.74	343	Pg	Pb		00 15 03.9	+0.5
KST	1.3nm,0.3s			Lg	Lg		00 15 38.2	
KOTS	Kotyrbulak	2.80	1	eP	Pb		00 15 04.3	-0.2
KOTS	6.3nm,0.3s			eS	Sb		00 15 38.9	-0.1
KOTS	Kotyrbulak	2.80	1	Pg	Pb		00 15 04.3	-0.2
KOTS	6.3nm,0.3s			Lg	Lg		00 15 38.9	
SATY	Saty	2.81	20	eP	Pb		00 15 05.3	+0.8
SATY	2.2nm,0.5s			eS	Sb		00 15 40.5	+1.4
SATY	Saty	2.81	20	Pg	Pb		00 15 05.3	+0.8
SATY	2.2nm,0.5s			Lg	Lg		00 15 40.5	
AAK	Ala-Archa	2.94	320	⇑eP	Pn		00 15 03.0	+1.9
AAK	baz=19			⇑iS	Sb		00 15 41.4	-1.4
DGS	Degeres	2.98	341	eP	Pb		00 15 06.3	-1.1
DGS	0.8nm,0.2s			eS	Sb		00 15 42.3	-1.6
DGS	Degeres	2.98	341	Pg	Pb		00 15 06.3	-1.1
DGS	0.8nm,0.2s			Lg	Lg		00 15 42.4	
AML	Almayashu	3.06	305	⇑eP	Pn		00 15 04.3	+1.3
AML	baz=6.0			⇑eS	Sb		00 15 44.3	-2.3
UZB	Uzynbulak	3.08	28	eP	Pb		00 15 09.8	+0.5
UZB	2.0nm,0.4s			eS	Sb		00 15 48.3	+1.3
UZB	Uzynbulak	3.08	28	Pg	Pb		00 15 09.8	+0.5
UZB	2.0nm,0.4s			Lg	Lg		00 15 48.6	
SHLS	Shalkode	3.26	32	eP	Pg		00 15 15.4	-1.3
SHLS	2.5nm,0.3s			eS	Sg		00 15 57.6	-1.3
SHLS	Shalkode	3.26	32	Pg	Pg		00 15 15.4	-1.3
SHLS	2.5nm,0.3s			Lg	Lg		00 15 57.6	
KTBS	Karatobe	3.29	355	eP	Pb		00 15 13.2	+0.4
KTBS	1.4nm,0.3s			eS	Sb		00 15 54.0	+1.0
KTBS	Karatobe	3.29	355	Pg	Pb		00 15 13.2	+0.4
KTBS	1.4nm,0.3s			Lg	Lg		00 15 54.0	
PDGK	Podgornoye	3.41	31	Pg	Pb		00 15 14.3	-0.5

		0.8nm,0.6s							
PDGK					Lg	Lg	00 15 55.9		
		1.2nm,0.5s							
PDGK	**Podgornoye**		**3.41**	**31**	⇑Pg	**Pb**	**00 15 14.3**	**-0.5**	
		0.8nm,0.5s							
PDGK					⇓Lg	Lg	00 15 56.0		
		2.7nm,0.6s							
KRBS	**Karabastau**		**3.43**	**343**	*e*P	**Pb**	**00 15 15.2**	**+0.2**	
		1.4nm,0.6s							
KRBS					*e*S	**Sb**	**00 15 57.5**	**+0.7**	
		0.9nm,0.4s							
KRBS	**Karabastau**		**3.43**	**343**	Pg	**Pb**	**00 15 15.2**	**+0.2**	
		1.4nm,0.6s							
KRBS					Lg	Lg	00 15 57.5		
		0.9nm,0.4s							

NIC ***24*** *00:25:10.0±0.0, 37°.17N×28°.39E, h0km±2km, Ml4.0/4*
IDC ***24*** *00:25:10.3±1.1, 37°.07N×28°.46E, h0km, mb3.6/4, mb1 3.9/11, mb1mx3.7/44, mbtmp3.8/11, ML3.7/7, MS2.7/2, Ms1 2.7/2, ms1mx2.2/42, Error ellipse: s-maj=20.0km s-min=17.0km az=150.0*
DDA ***24*** *00:25:10.8, 37°.11N×28°.44E, h6km±3km, MW3.8*
ISK ***24*** *00:25:10.7, 37°.14N×28°.41E, h8km, ML3.8/33*
THE ***24*** *00:25:11.8, 37°.16N×28°.42E, h4km±1km, ML3.8/7, Error ellipse: s-maj=1.9km s-min=0.9km az=205.0*
ATH ***24*** *00:25:11.7, 37°.10N×28°.38E, h26km±2km, ML3.9/5, Error ellipse: s-maj=3.4km s-min=1.4km az=207.0*
HLW ***24*** *00:25:15.0, 36°.96N×28°.58E, h29km±22km, Ml4.5*
GII ***24*** *00:25:16.0±0.0, 36°.74N×28°.77E, h3km, mb4.1/1, MD3.8/2, Mm3.8/4*

ISC 24 00:25:11.5±0.8, 37°.12N±0°.02×28°.43E±0°.01, h11km±5km, n179, σ1°.66/233, mb3.6/4, 13C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
YER	**Yerkesik**	**0.12**	**277**	PG		**Pg**	**00 25 13.7**	**-0.8**
YER				SG		**Sg**	**00 25 15.8**	**-0.8**
YER	**Yerkesik**	**0.12**	**277**	P		**Pg**	**00 25 14.4**	**-0.1**
YER				S		**Sg**	**00 25 16.6**	**0.0**
DALY	**Dalyan (Mula)**	**0.35**	**149**	PG		**Pg**	**00 25 18.1**	**-0.5**
DALY				SG		**Sb**	**00 25 24.3**	**-1.1**
DALY	**Dalyan (Mula)**	**0.35**	**149**	*i* P		**Pg**	**00 25 18.0**	**-0.5**
DALY				*i* S		**Sg**	**00 25 23.5**	**+0.2**
TURN	**Turunc**	**0.38**	**203**	PG		**Pg**	**00 25 18.4**	**-0.6**
TURN	**Turunc**	**0.38**	**203**	*i* P		**Pg**	**00 25 18.3**	**-0.6**
TURN				*i* S		**Sg**	**00 25 24.2**	**+0.3**
TAVA	**DENIZLI_Tavas**	**0.52**	**48**	*i* P		**Pg**	**00 25 21.1**	**-0.5**
TAVA				*i* S		**Sg**	**00 25 27.9**	**-0.7**
MLSB	**Milas**	**0.55**	**289**	PG		**Pb**	**00 25 23.6**	**+0.4**
AYDN	**Tasoluk**	**0.69**	**321**	*i* P		**Pg**	**00 25 24.8**	**-0.2**
AYDN				*i* S		**Sg**	**00 25 31.4**	**-2.7**
DATC	**Datca-Mugla**	**0.71**	**240**	PG		**Pg**	**00 25 24.7**	**-0.6**
DATC				SG		**Sg**	**00 25 35.2**	**+0.6**
FETY	**Fethiye**	**0.72**	**132**	PG		**Pg**	**00 25 24.8**	**-0.6**
FETY	**Fethiye**	**0.72**	**132**	*i* P		**Pg**	**00 25 25.1**	**-0.3**
FETY				*i* S		**Sg**	**00 25 34.3**	**-0.5**
FETY	**Fethiye**	**0.72**	**132**	P		**Pb**	**00 25 26.6**	**+0.5**
FETY				S		**Sb**	**00 25 37.0**	**+1.1**
CAME	**Cameli-Denizli**	**0.72**	**104**	PG		**Pg**	**00 25 25.5**	**0.0**
CAME				SG		**Sb**	**00 25 36.4**	**+0.1**
BDRM	**Kayabasi**	**0.79**	**266**	*i* P		**Pg**	**00 25 26.3**	**-0.4**
BODT	**Bodrum**	**0.90**	**267**	PG		**Pg**	**00 25 28.0**	**-0.8**
BODT	**Bodrum**	**0.90**	**267**	P		**Pg**	**00 25 29.1**	**+0.3**
BODT				S		**Sg**	**00 25 41.4**	**+1.0**
GOLH	**Golhisar**	**0.91**	**82**	*i* P		**Pg**	**00 25 28.9**	**-0.2**
GOLH				*i* S		**Sg**	**00 25 40.7**	**-0.4**
YKAV	**Yalikavak-Bodr**	**0.92**	**271**	PG		**Pg**	**00 25 28.8**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.93**	**333**	PG		**Pg**	**00 25 28.7**	**-0.7**
AYDB				SG		**Sg**	**00 25 41.8**	**+0.3**
ARG	**Arkhangelos**	**0.94**	**195**	P		**Pg**	**00 25 28.5**	**-1.1**
ARG				S		**Sb**	**00 25 42.5**	**+0.2**
ARG				AML		AML	00 25 47.2	
	comp=E,15322μm,0.4s							
ARG				AML		AML	00 25 47.4	
	comp=N,14044μm,0.4s							
ARG	**Arkhangelos**	**0.94**	**195**	PG		**Pg**	**00 25 29.1**	**-0.4**
ARG	**Arkhangelos**	**0.94**	**195**	⇑P		**Pg**	**00 25 28.8**	**-0.7**
ARG				S		**Sn**	**00 25 44.5**	**+0.4**
ARG	**Arkhangelos**	**0.94**	**195**	P		**Pg**	**00 25 28.9**	**-0.7**
ARG				S		**Sn**	**00 25 44.6**	**+0.5**
	comp=N,7μm,0.4s							
GCAM	**G?zelcaml?**	**1.11**	**302**	PN		**Pg**	**00 25 32.4**	**-0.5**
GCAM	**G?zelcaml?**	**1.11**	**302**	*i* P		**Pg**	**00 25 32.9**	**-0.1**
NIS1	**Nisyros Isl.**	**1.13**	**243**	P		**Pg**	**00 25 32.7**	**-0.6**
NIS1				AML		AML	00 25 59.2	
	comp=E,27420μm,0.6s							
NIS1				AML		AML	00 26 00.7	
	comp=N,27385μm,0.5s							
NIS1	**Nisyros Isl.**	**1.13**	**243**	PN		**Pg**	**00 25 32.6**	**-0.6**
NIS1	**Nisyros Isl.**	**1.13**	**243**	P		**Pg**	**00 25 32.4**	**-0.8**
NIS1				S		**Sn**	**00 25 49.4**	**+0.5**
	comp=N,14μm,0.8s							
NISR	**Nisiros**	**1.16**	**244**	P		**Pg**	**00 25 33.5**	**-0.3**
NISR				AML		AML	00 25 56.4	
	comp=N,7214μm,0.5s							
NISR				AML		AML	00 25 56.7	
	comp=E,9983μm,0.5s							
NISR	**Nisiros**	**1.16**	**244**	P		**Pg**	**00 25 32.9**	**-0.9**
NISR				S		**Sn**	**00 25 50.6**	**+1.0**
	comp=E,4μm,0.5s							
KOSK	**Kos Island**	**1.22**	**253**	PN		**Pg**	**00 25 34.4**	**-0.5**
KOSK	**Kos Island**	**1.22**	**253**	P		**Pg**	**00 25 34.3**	**-0.6**
KOSK				S		**Sb**	**00 25 51.6**	**+1.3**
	comp=E,3μm,0.4s							
ELL	**Elmali**	**1.24**	**107**	PN		**Pn**	**00 25 35.6**	**+0.6**
ELL	**Elmali**	**1.24**	**107**	P		**Pg**	**00 25 35.1**	**-0.3**
ELL				S		**Sn**	**00 25 54.8**	**+2.9**
AKAS	**Kas**	**1.30**	**133**	PN		**Pn**	**00 25 36.2**	**+0.4**
AKAS	**Kas**	**1.30**	**133**	*i* P		**Pg**	**00 25 36.7**	**+0.2**
AKAS				*i* S		**Sn**	**00 25 54.5**	**+1.3**
KSL	**Kastellorizon**	**1.34**	**136**	P		**Pb**	**00 25 37.1**	**+0.3**
KSL				AML		AML	00 26 00.6	
	comp=E,5264μm,0.4s							
KSL				AML		AML	00 26 01.2	
	comp=N,4021μm,0.4s							
KSL	**Kastellorizon**	**1.34**	**136**	⇑P		**Pb**	**00 25 37.1**	**+0.3**
KSL				S		**Sn**	**00 25 58.6**	**+4.5**
KSL	**Kastellorizon**	**1.34**	**136**	P		**Pb**	**00 25 37.0**	**+0.3**
KSL				S		**Sn**	**00 25 55.2**	**+1.1**
	comp=N,2μm,0.4s							
MANT	**Manisa**	**1.37**	**4**	*i* P		**Pn**	**00 25 36.9**	**0.0**
MANT				*i* S		**Sb**	**00 25 53.9**	**-1.2**
SMG	**Samos**	**1.40**	**295**	P		**Pn**	**00 25 36.7**	**-0.3**
SMG	**Samos**	**1.40**	**295**	P		**Pn**	**00 25 36.6**	**-0.4**
SMG				S		**Sb**	**00 25 54.1**	**-1.4**
	comp=N,2μm,0.3s							
KULA	**Kula-Manisa**	**1.40**	**8**	PN		**Pn**	**00 25 36.9**	**-0.3**
KULA	**Kula-Manisa**	**1.40**	**8**	P		**Pn**	**00 25 36.9**	**-0.3**
KULA				S		**Sb**	**00 25 54.0**	**-1.8**
BRDR	**BURDUR-Merkez**	**1.42**	**66**	*i* P		**Pg**	**00 25 39.1**	**+0.2**
BRDR				*i* S		**Sg**	**00 25 57.6**	**+0.3**
DEMR	**Demre-Antalya**	**1.48**	**126**	PN		**Pn**	**00 25 38.8**	**+0.6**
KHL	**Karahalli**	**1.48**	**36**	PN		**Pn**	**00 25 38.8**	**+0.5**
BASM	**Basmaki-Afyon**	**1.52**	**58**	PN		**Pn**	**00 25 39.2**	**+0.4**
DGB	**zmir**	**1.54**	**308**	*i* P		**Pn**	**00 25 38.7**	**-0.2**
DGB				*i* S		**Sn**	**00 25 54.3**	**-4.6**
KORT	**Korkueli**	**1.54**	**94**	PN		**Pn**	**00 25 39.8**	**+0.6**
KORT	**Korkueli**	**1.54**	**94**	*i* P		**Pg**	**00 25 41.2**	**0.0**
KORT				*i* S		**Sg**	**00 26 03.0**	**+1.8**
GOMA	**Golmarmara-Man**	**1.63**	**346**	PN		**Pn**	**00 25 40.2**	**-0.1**
USAK	**Uak-Merkez**	**1.66**	**16**	*i* P		**Pn**	**00 25 40.7**	**0.0**
USAK				*i* S		**Sn**	**00 26 00.8**	**-1.2**
BCK	**Bucak**	**1.76**	**78**	PN		**Pn**	**00 25 42.6**	**+0.5**
KZIL	**AFYON_Kizioren**	**1.77**	**50**	*i* P		**Pn**	**00 25 41.6**	**-0.7**
KEMT	**Kemer-ANTALYA**	**1.78**	**106**	PN		**Pn**	**00 25 42.8**	**+0.5**
ISP	**Isparta**	**1.81**	**67**	P		**Pn**	**00 25 44.2**	**+1.4**
ISP	**Isparta**	**1.81**	**67**	PN		**Pn**	**00 25 42.8**	**0.0**
AKHS	**Akhisar**	**1.82**	**345**	*i* P		**Pn**	**00 25 41.7**	**-1.1**
AKHS				*i* S		**Sn**	**00 26 03.1**	**-2.8**
AKS	**Akhisar**	**1.82**	**345**	PN		**Pn**	**00 25 41.9**	**-1.0**
KARP	**Karpathos**	**1.87**	**213**	P		**Pn**	**00 25 43.6**	**0.0**
KARP				AML		AML	00 26 13.1	
	comp=E,3316μm,0.4s							
KARP				AML		AML	00 26 17.9	
	comp=N,3532μm,0.3s							
KARP	**Karpathos**	**1.87**	**213**	PN		**Pn**	**00 25 43.9**	**+0.3**
KARP	**Karpathos**	**1.87**	**213**	⇑P		**Pn**	**00 25 43.6**	**0.0**
KARP				S		**Sb**	**00 26 10.0**	**+0.7**
KARP				AML		AML	00 26 12.7	
	comp=N,3.3nm,0.4s							
KARP				AML		AML	00 26 12.7	
	comp=N,3.4nm,0.4s							
KARP				AML		AML	00 26 17.4	
	comp=N,3.5nm,0.3s							
KARP				AML		AML	00 26 17.4	
	comp=N,3.5nm,0.3s							
KARP	**Karpathos**	**1.87**	**213**	P		**Pn**	**00 25 43.5**	**-0.1**
KARP				S		**Sn**	**00 26 08.8**	**+1.5**
	comp=N,2μm,0.3s							
URLA	**Izmir**	**1.91**	**311**	PN		**Pn**	**00 25 43.2**	**-0.9**
URLA	**Izmir**	**1.91**	**311**	*i* P		**Pn**	**00 25 46.0**	**+1.9**
URLA				*i* S		**Sn**	**00 26 07.8**	**-0.3**
SHAP	**Saphane-Kutahy**	**2.00**	**18**	PN		**Pn**	**00 25 45.4**	**0.0**
SIMA	**Simav-Kutahya**	**2.01**	**12**	PN		**Pn**	**00 25 45.2**	**-0.3**
AMGA	**Amorgos Island**	**2.05**	**263**	P		**Pn**	**00 25 45.7**	**-0.3**
AMGA	**Amorgos Island**	**2.05**	**263**	P		**Pn**	**00 25 45.6**	**-0.4**
BAGO	**Egridir - ISPA**	**2.07**	**64**	*i* P		**Pn**	**00 25 47.3**	**+0.9**
GEDZ	**Gediz**	**2.07**	**22**	PN		**Pn**	**00 25 46.5**	**+0.1**
ZEDA	**zmir-Bergama**	**2.13**	**330**	*i* P		**Pn**	**00 25 46.1**	**-1.0**
ZEDA				*i* S		**Sn**	**00 26 15.9**	**+2.4**
GDZ	**Gediz**	**2.13**	**23**	*i* P		**Pn**	**00 25 45.9**	**-1.4**
SHUT	**Suhut-Afyon**	**2.21**	**49**	PN		**Pn**	**00 25 49.1**	**+0.8**
AFYO	**Afyonkarahisar**	**2.23**	**41**	*i* P		**Pn**	**00 25 49.9**	**+1.3**
DKL	**Dikili**	**2.29**	**329**	PN		**Pn**	**00 25 49.0**	**-0.2**
APE	**Apeiranthos**	**2.32**	**270**	P		**Pn**	**00 25 49.7**	**-0.1**
APE	**Apeiranthos**	**2.32**	**270**	⇑P		**Pn**	**00 25 50.0**	**+0.3**
APE	**Apeiranthos**	**2.32**	**270**	PN		**Pn**	**00 25 49.6**	**-0.1**
APE	**Apeiranthos**	**2.32**	**270**	P		**Pn**	**00 25 49.6**	**-0.1**
STEP	**BALIKESIR_Sava**	**2.32**	**346**	*i* P		**Pn**	**00 25 48.6**	**-1.1**
TVSB	**Tavsanli**	**2.46**	**19**	PN		**Pn**	**00 25 51.8**	**0.0**
DST	**Dursunbey**	**2.48**	**3**	PN		**Pn**	**00 25 52.3**	**+0.3**
THT2	**Imerovigli**	**2.51**	**255**	PN		**Pn**	**00 25 52.7**	**+0.4**
BALB	**Balikesir**	**2.55**	**350**	PN		**Pn**	**00 25 52.7**	**-0.2**
KEPZ	**Antalya-Kepez**	**2.55**	**94**	*i* P		**Pb**	**00 25 55.9**	**-1.6**
AYVA	**Ayvalik**	**2.58**	**328**	*i* P		**Pn**	**00 25 52.7**	**-0.6**
ZKR	**Zakros**	**2.69**	**222**	P		**Pn**	**00 25 55.9**	**+1.1**
ZKR	**Zakros**	**2.69**	**222**	PN		**Pn**	**00 25 55.4**	**+0.7**
ZKR	**Zakros**	**2.69**	**222**	P		**Pn**	**00 25 56.0**	**+1.3**
BALY	**Balya**	**2.69**	**347**	*i* P		**Pn**	**00 25 54.5**	**-0.3**
AUKIR	**Kirka- Seyitga**	**2.72**	**37**	*i* P		**Pn**	**00 25 57.3**	**+2.0**
PRK	**Paraskevi**	**2.72**	**322**	P		**Pn**	**00 25 56.4**	**+1.2**
SEYD	**Seydisehir-KON**	**2.74**	**83**	PN		**Pn**	**00 25 56.8**	**+1.2**
DOGA	**KONYA_Doganhis**	**2.75**	**68**	*i* P		**Pn**	**00 25 57.9**	**+2.0**
SIGR	**SIGRI**	**2.91**	**317**	PN		**Pn**	**00 25 58.1**	**+0.3**
NPS	**Neapolis**	**2.94**	**232**	P		**Pn**	**00 25 58.8**	**+0.6**
BAYC	**CANAKKALE_Bayr**	**3.00**	**331**	*i* P		**Pn**	**00 25 59.3**	**+0.1**
AUBOZ	**BOZOYUK**	**3.06**	**24**	*i* P		**Pn**	**00 26 01.0**	**+1.1**
LAST	**Lasithi**	**3.08**	**232**	P		**Pn**	**00 26 01.1**	**+0.8**
EZN	**Ezine**	**3.16**	**329**	P		**Pn**	**00 26 00.4**	**-0.9**
BORA	**Eskisehir**	**3.18**	**29**	*i* P		**Pn**	**00 25 57.6**	**-4.0**
IGD	**Bursa**	**3.20**	**11**	*i* P		**Pn**	**00 26 01.9**	**+0.1**
KMER	**Konya-Meram**	**3.20**	**77**	*i* P		**Pn**	**00 26 02.4**	**+0.4**
KONT	**Konya--Tatoy**	**3.23**	**74**	*i* P		**Pn**	**00 26 04.9**	**+2.6**
KDHN	**Kadinhani**	**3.24**	**63**	*i* P		**Pn**	**00 26 02.8**	**+0.3**
GAZI	**Gazipasa**	**3.25**	**105**	*i* P		**Pn**	**00 26 02.9**	**+0.4**
GAZI				*i* S		**Sn**	**00 26 42.3**	**+1.1**
AUSIV	**SIVRIHISAR**	**3.37**	**46**	*i* P		**Pn**	**00 26 05.8**	**+1.5**
IDI	**Anoyia**	**3.40**	**238**	Pn		**Pn**	**00 26 06.1**	**+1.6**
	comp=N,4.8nm,0.3s,baz=347,slow=8.0,SNR=42							
IDI				Sn		**Sn**	**00 26 45.3**	**+0.4**
	comp=N,6.5nm,0.3s,baz=56,slow=7.8,SNR=4.5							
IDI	**Anoyia**	**3.40**	**238**	P		**Pn**	**00 26 05.6**	**+1.0**
IDI	**Anoyia**	**3.40**	**238**	⇑P		**Pb**	**00 26 10.0**	**-1.7**
ERMK	**Ermenek**	**3.63**	**96**	*i* P		**Pn**	**00 26 11.0**	**+3.1**
GOKA	**anakkale-Gk**	**3.64**	**328**	*i* P		**Pn**	**00 26 05.7**	**-2.2**
GOKA				*i* S		Sn	00 26 43.1	-7.8
GEYV	**SAKARYA_Geyve**	**3.66**	**23**	*i* P		**Pn**	**00 26 09.7**	**+1.5**
LIA	**Limnos Island**	**3.76**	**318**	P		**Pn**	**00 26 09.8**	**+0.2**
EREA	**Eretria**	**3.79**	**291**	P		**Pn**	**00 26 11.2**	**+1.2**
AKMS	**Akamas**	**3.80**	**122**	P		**Pn**	**00 26 10.9**	**+0.9**
AKMS				AML		AML	00 26 57.0	
	comp=N,0.6nm,0.4s							
AKMS				AML		AML	00 26 57.8	
	comp=N,0.5nm,0.6s							
ALFC	**Alefka**	**3.91**	**119**	⇓P		**Pn**	**00 26 12.3**	**+0.7**
ALFC				AML		AML	00 26 59.2	
	comp=N,0.5nm,0.7s							
ALFC				AML		AML	00 27 08.8	
	comp=N,0.5nm,0.5s							
NATA	**Nata**	**4.09**	**124**	P		**Pn**	**00 26 15.1**	**+1.0**
NATA				AML		AML	00 27 09.2	
	comp=N,1.8nm,0.5s							
NATA				AML		AML	00 27 12.9	
	comp=N,1.4nm,0.5s							
LEF	**Lefka**	**4.13**	**118**	⇑P		**Pn**	**00 26 14.7**	**+0.2**
GULN	**MERSIN_Gulnar**	**4.22**	**101**	*i* P		**Pn**	**00 26 17.9**	**+2.1**
OSC1	**CSNet OBS 1**	**4.30**	**146**	P		**Pn**	**00 26 18.2**	**+1.3**
SZAC	**Souni**	**4.32**	**122**	⇓P		**Pn**	**00 26 17.9**	**+0.7**
CSS	**Mathiatis**	**4.52**	**117**	P		**Pn**	**00 26 20.6**	**+0.6**
ASGA	**Asgata**	**4.55**	**119**	P		**Pn**	**00 26 20.6**	**+0.2**
BRTR	**Keskin Array B**	**4.85**	**56**	Pn		**Pn**	**00 26 26.4**	**+1.8**
	comp=N,4.3nm,0.3s,baz=242,slow=18,SNR=204							
BRTR				Sn		**Sn**	**00 27 19.7**	**-1.2**
	comp=N,0.2nm,0.3s,baz=220,slow=15,SNR=1.0							
OSC2	**CSNet OBS 4**	**5.12**	**141**	P		**Pn**	**00 26 30.4**	**+2.2**
MATC	**Matruh**	**5.85**	**190**	P		**Pn**	**00 26 38.7**	**+0.5**
	baz=192							
VAY	**Valandovo**	**6.18**	**314**	*e*Pn		**Pn**	**00 26 44.8**	**+2.0**
SLUM	**Salum**	**6.21**	**206**	P		**Pn**	**00 26 43.9**	**+0.6**
	baz=209							
SLUM				AMP			00 27 00.0	
	baz=209							
SLUM				S		**Sn**	**00 27 49.1**	**-5.2**
	baz=209							
STIP	**Stip**	**6.65**	**315**	*i* Pn		**Pn**	**00 26 50.1**	**+0.9**
HNTI	**Hanita**	**6.84**	**124**	Pn		**Pn**	**00 26 52.3**	**+0.4**
OFRI	**`Ofer**	**7.01**	**128**	Pn		**Pn**	**00 26 53.5**	**-0.8**
MMC7	**Mount Meron ar**	**7.02**	**124**	Pn		**Pn**	**00 26 53.7**	**-0.7**
MMA0B	**Mount Meron ar**	**7.03**	**124**	Pn		**Pn**	**00 26 53.2**	**-1.4**
MMA0B				Sn		**Sn**	**00 28 10.1**	**-4.5**
MMAI	**Mount Meron Ar**	**7.03**	**124**	Pn		**Pn**	**00 26 53.8**	**-0.8**
	comp=N,12nm,0.3s,baz=301,slow=12,SNR=74							
MMAI				Sn		**Sn**	**00 28 10.4**	**-4.2**
	comp=N,7.5nm,0.3s,baz=307,slow=21,SNR=8.4							
GEM	**Giv'at Ha'Em**	**7.09**	**121**	Pn		**Pn**	**00 26 55.4**	**+0.1**
GEM				Sn		**Sn**	**00 28 11.9**	**-4.1**
NATI	**Neve Ativ**	**7.12**	**121**	Pn		**Pn**	**00 26 55.1**	**-0.5**
NATI				Sn		**Sn**	**00 28 12.4**	**-4.1**
MMLI	**Mount Malkishu**	**7.41**	**127**	Pn		**Pn**	**00 26 59.3**	**-0.4**
MMLI				Sn		**Sn**	**00 28 19.6**	**-4.3**
HMDT	**Nahal Hemdat**	**7.60**	**128**	Pn		**Pn**	**00 27 02.3**	**0.0**
HMDT				Sn		**Sn**	**00 28 24.7**	**-3.7**
HNAT	**Natroun**	**7.69**	**166**	P		**Pn**	**00 27 02.9**	**-0.6**
	baz=166							
HNAT				AMP			00 28 00.0	
	baz=166							
HNAT				S		Sn	00 28 21.5	-9.2
	baz=166							
KOT	**Kottamia**	**7.72**	**157**	P		**Pn**	**00 27 03.8**	**-0.2**
	baz=157							
KOT				AMP			00 28 00.0	
	baz=157							
AMAZ	**Amatzia**	**7.74**	**134**	Pn		**Pn**	**00 27 03.5**	**-0.7**
AMAZ				Sn		**Sn**	**00 28 27.2**	**-4.6**
HHAG	**Hagoal**	**7.78**	**156**	P		**Pn**	**00 27 04.3**	**-0.4**
	baz=156							
HHAG				AMP			00 28 00.0	
	baz=156							
KZIT	**Kziot**	**7.94**	**140**	Pn		**Pn**	**00 27 06.1**	**-0.8**
KZIT				Sn		**Sn**	**00 28 30.9**	**-5.8**
YTIR	**Yattir**	**7.98**	**134**	Pn		**Pn**	**00 27 07.0**	**-0.5**
YTIR				Sn		**Sn**	**00 28 33.4**	**-4.4**
DSI	**Dead Sea**	**7.98**	**132**	Pn		**Pn**	**00 27 06.9**	**-0.6**
SUZ	**Suez**	**8.14**	**152**	P		**Pn**	**00 27 09.4**	**-0.3**
	baz=152							
RYAN	**Fayoum**	**8.17**	**169**	P		**Pn**	**00 27 09.4**	**-0.6**
	baz=169							
RYAN				AMP			00 28 00.0	
	baz=169							
SWA2		**8.24**	**198**	P		**Pn**	**00 27 10.9**	**-0.2**
	baz=200							
SWA2				AMP			00 28 00.0	
	baz=200							
ZAF	**Zafarana**	**8.54**	**155**	P		**Pn**	**00 27 15.2**	**-0.1**
	baz=155							
MLR	**Muntele Rosu**	**8.57**	**348**	Pn		**Pn**	**00 27 16.5**	**+0.9**
	comp=N,0.3nm,0.3s,baz=173,slow=11,SNR=6.1							
MLR	**Muntele Rosu**	**8.57**	**348**	⇑P		**Pn**	**00 27 18.5**	**+2.9**
ZFRI	**Zfri**	**8.62**	**137**	Pn		**Pn**	**00 27 15.9**	**-0.4**
ZFRI				Sn		**Sn**	**00 28 48.2**	**-5.4**
PRNI	**Paran**	**8.69**	**139**	Pn		**Pn**	**00 27 16.7**	**-0.6**
KRMI	**Paran Flat**	**8.74**	**141**	Pn		**Pn**	**00 27 17.6**	**-0.3**
KRMI				Sn		**Sn**	**00 28 52.4**	**-4.1**
NBNS	**Bani Suef**	**8.81**	**163**	P		**Pn**	**00 27 18.3**	**-0.6**
	baz=163							
PLOR	**Plostina**	**8.82**	**352**	⇑P		**Pn**	**00 27 21.5**	**+2.4**
VRI	**Vrincioaia**	**8.83**	**352**	⇑P		**Pn**	**00 27 20.2**	**+1.1**
HRFI	**Mount Harif**	**8.96**	**140**	Pn		**Pn**	**00 27 20.1**	**-0.9**
HRFI				Sn		**Sn**	**00 28 56.2**	**-5.8**
HERR	**Herculane**	**8.98**	**332**	⇑P		**Pn**	**00 27 24.9**	**+3.7**
MBRI	**Mt Berech**	**9.10**	**142**	Pn		**Pn**	**00 27 21.8**	**-1.1**
MBRI				Sn		**Sn**	**00 29 01.4**	**-3.9**
MDVR	**Moldovita**	**9.18**	**329**	⇑P		**Pn**	**00 27 26.6**	**+2.6**
EIL	**Elat**	**9.21**	**142**	Pn		**Pn**	**00 27 23.1**	**-1.4**
	comp=N,1.5nm,0.3s,baz=330,slow=2.0,SNR=27							
EIL				Sn		**Sn**	**00 29 03.3**	**-4.8**
	comp=N,2.7nm,0.3s,baz=56,slow=12,SNR=5.9							
EIL				LR		LR	00 32 41.0	
	comp=N,30nm,18.2s,baz=6.0,slow=49							
EIL	**Elat**	**9.21**	**142**	Pn		**Pn**	**00 27 23.6**	**-0.8**
EIL				Sn		**Sn**	**00 29 03.2**	**-5.0**
TESR	**Tescani**	**9.48**	**353**	⇑P		**Pn**	**00 27 28.3**	**+0.4**
GRB	**Gharib**	**9.56**	**156**	P		**Pn**	**00 27 28.6**	**-0.5**
	baz=156							
TAMRE	**El Minia**	**9.64**	**167**	P		**Pn**	**00 27 29.6**	**-0.8**
	baz=167							
HFRF	**Wahat Farafira**	**9.94**	**181**	P		**Pn**	**00 27 33.8**	**-0.6**
	baz=182							
BIZ	**Bicaz**	**9.96**	**351**	⇑P		**Pn**	**00 27 36.0**	**+1.3**
KEST	**Kesra**	**15.43**	**271**	Pn		**Pn**	**00 28 51.7**	**+2.5**
	comp=N,0.0nm,0.3s,baz=40,slow=14,SNR=1.9							
GERES	**GERESS Array B**	**15.88**	**322**	P		**P**	**00 28 58.3**	**-0.5**
	comp=N,0.1nm,0.3s,baz=114,slow=13,SNR=2.4							
FINES	**FINESS Array B**	**24.39**	**357**	P		**P**	**00 30 30.5**	**+0.9**
	comp=N,2.9nm,0.9s,baz=141,slow=12,SNR=2.5							
AKTO	**Aktyubinsk**	**24.98**	**48**	LR		LR	00 42 39.7	
	comp=N,21nm,20.2s,baz=216,slow=42							
ESDC	**Sonseca Array**	**25.44**	**286**	P		**P**	**00 30 39.6**	**+0.2**
	comp=N,0.9nm,1.0s,baz=84,slow=11,SNR=4.3							
TORD	**Torodi Ar. Bea**	**33.77**	**232**	P		**P**	**00 31 53.1**	**-0.4**
	comp=N,0.4nm,0.4s,baz=34,slow=8.9,SNR=12							
MKAR	**Makanchi Array**	**40.49**	**59**	P		**P**	**00 32 51.7**	**+1.3**
	comp=N,0.4nm,0.7s,baz=289,slow=7.6,SNR=1.6							

WEL 24 01:56:35.9, 43°.5S±2°.5×17°.2E±°, h5km±3km, M2.7/19, ML2.9/18, MLv2.7/19, Error ellipse: s-maj=0.0km s-min=0.0km az=109.1, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LTZ	**Lake Taylor**	**0.31**	**60**	P		Pb	01 56 43.2	-0.7
INZ

	comp=Z,5.7nm,1.4s							
TORD	**Torodi Ar. Bea**	**74.33**	**28**	P		**P**	**02 31 44.7**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=199,slow=6.2,SNR=25							
TORD				pP		**pwP**	**02 32 01.2**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=197,slow=6.4,SNR=4.6							
TORD	**Torodi Ar. Bea**	**74.33**	**28**	P		**P**	**02 31 44.9**	**+0.5**
ASAR	**Alice Springs**	**96.92**	**161**	P		**P**	**02 33 37.4**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=186,slow=3.7,SNR=4.6							
ASAR	**Alice Springs**	**96.92**	**161**	P		**P**	**02 33 37.7**	**-0.6**
DUG	**Dugway, Tooele**	**121.57**	**296**	PKPdf		**PKiKP**	**02 39 00.3**	**+0.5**
PD31	**Pinedale Array**	**122.04**	**300**	PKPdf		**PKPdf**	**02 38 59.9**	**-0.7**
PDAR	**Pinedale Array**	**122.04**	**300**	PKP		**PKPdf**	**02 38 59.2**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=106,slow=6.2,SNR=5.0							
PDAR	**Pinedale Array**	**122.04**	**300**	PKPdf		**PKPdf**	**02 38 59.9**	**-0.7**
NVAR	**Mina Array Bea**	**122.88**	**291**	PKP		**PKiKP**	**02 39 02.7**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=238,slow=1.7,SNR=3.7							
PLID	**Pearl Lake**	**126.82**	**298**	PKPdf		**PKPdf**	**02 39 10.0**	**+0.3**
K05A	**Summer Lake**	**127.42**	**292**	PKPdf		**PKiKP**	**02 39 11.9**	**+0.5**
ARCES	**ARCESS Array B**	**132.41**	**22**	PKP		**PKPdf**	**02 39 18.5**	**-0.8**
	comp=Z,3.8nm,1.1s,baz=222,slow=1.6,SNR=5.2							
YKA	**Yellowknife Ar**	**138.13**	**316**	PKP		**PKPdf**	**02 39 29.6**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=124,slow=2.8,SNR=7.3							
YKA				pPKP		**pPKPdf**	**02 39 46.1**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=122,slow=2.7,SNR=3.0							
HYT	**Haines Junctio**	**146.58**	**304**	PKPbc		**PKPab**	**02 39 48.5**	**+0.3**
INK	**Inuvik**	**147.79**	**318**	PKPbc		**PKPbc**	**02 39 49.8**	**-0.1**
YAH	**Yahtse**	**148.28**	**302**	PKPbc		**PKPbc**	**02 39 52.2**	**+0.4**
CTGM	**Chitina Glacie**	**148.34**	**303**	PKPbc		**PKPbc**	**02 39 52.1**	**+0.3**
DAWY	**Dawson**	**148.66**	**309**	PKPbc		**PKPbc**	**02 39 51.9**	**-0.5**
TGL	**Tana Glacier**	**148.92**	**302**	PKPbc		**PKPbc**	**02 39 53.4**	**+0.2**
VRDI	**Verde Repeater**	**149.39**	**303**	PKPbc		**PKPbc**	**02 39 54.7**	**+0.2**
K27K	**Chicken**	**149.77**	**308**	PKPbc		**PKPbc**	**02 39 55.5**	**+0.4**
SONM	**Songino Array**	**149.98**	**89**	PKPbc		**PKPbc**	**02 39 55.7**	**-0.6**
	comp=Z,1.2nm,0.4s,baz=216,slow=4.3,SNR=6.0							
SONM				pPKPbc		**sPKPdf**	**02 40 12.6**	**+2.5**
	comp=Z,0.7nm,0.4s,baz=227,slow=3.7,SNR=4.5							
SONM	**Songino Array**	**149.98**	**89**	PKPbc		**PKPbc**	**02 39 55.9**	**-0.4**
N25K	**Chitina, Valde**	**150.04**	**303**	PKPbc		**PKPbc**	**02 39 56.4**	**+0.5**
DOT	**Dot Lake**	**150.48**	**307**	PKPbc		**PKiKP**	**02 39 57.6**	**0.0**
RIDG	**Independent Ri**	**150.84**	**307**	PKPbc		**PKiKP**	**02 39 58.6**	**+0.2**
BMAR	**Burnt Mountain**	**151.63**	**315**	PKPbc		**PKiKP**	**02 40 00.1**	**+0.3**
DHY	**Denali Highway**	**151.74**	**305**	PKPbc		**PKiKP**	**02 40 00.4**	**+0.1**
IL31		**151.98**	**309**	PKPbc		**PKPbc**	**02 40 00.2**	**+0.1**
ILAR	**Eielson Array**	**151.98**	**309**	PKPbc		**PKPbc**	**02 39 59.9**	**-0.4**
	comp=Z,11nm,1.1s,baz=140,slow=4.0,SNR=35							
ILAR				pPKPbc		**sPKPbc**	**02 40 17.1**	**-1.9**
	comp=Z,0.8nm,0.8s,baz=150,slow=3.8,SNR=2.3							
ILAR	**Eielson Array**	**151.98**	**309**	PKPbc		**PKPbc**	**02 40 00.1**	**-0.2**
GHO	**Glory Hole Cre**	**152.04**	**302**	PKPbc		**PKPbc**	**02 40 00.6**	**0.0**
CCB	**Clear Creek Bu**	**152.33**	**308**	PKPbc		**PKPbc**	**02 40 00.8**	**-0.2**
RND	**Reindeer**	**152.47**	**305**	PKPbc		**PKiKP**	**02 40 02.0**	**+0.3**
SUA	**Susitna One**	**152.77**	**301**	PKPbc		**PKiKP**	**02 40 02.9**	**+0.4**
TRF	**Thorofare Moun**	**153.11**	**305**	PKPbc		**PKPbc**	**02 40 03.0**	**0.0**
SKT	**Skwentna**	**153.28**	**302**	PKPbc		**PKPbc**	**02 40 03.2**	**-0.1**
KTH	**Kantishna Hill**	**153.41**	**305**	PKPbc		**PKPbc**	**02 40 03.8**	**+0.2**
TOLK	**Toolik Lake Re**	**153.65**	**317**	PKPbc		**PKiKP**	**02 40 04.2**	**+0.2**
PPLA	**Purkeypile**	**153.81**	**303**	PKPbc		**PKPbc**	**02 40 04.5**	**0.0**
IMAR	**Indian Mountai**	**155.02**	**310**	PKPbc			02 40 07.3	

WEL 24 02:27:54.4,39°S±3°×17°5E±°, h96km±8km, M2.3/35, MLv2.3/35, Error ellipse: s-maj=0.0km s-min=0.0km az=95.6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.13**	**37**	P	Pn	02 28 08.2	+0.1
MTVZ	**Mangateitei**	**0.18**	**87**	P	Pn	02 28 08.4	+0.2
DRZ	**Dome Shelter**	**0.28**	**64**	P	Pn	02 28 09.1	+0.2
FWVZ	**Far West T-bar**	**0.28**	**60**	P	Pn	02 28 08.8	0.0
WNVZ	**Wahianoa**	**0.28**	**76**	P	Pn	02 28 08.8	+0.1
WHVZ	**Whangaehu Hut**	**0.29**	**67**	P	Pn	02 28 08.9	+0.1
TUVZ	**Tukino**	**0.34**	**68**	P	Pn	02 28 09.3	+0.3
NGZ	**Ngauruhoe**	**0.35**	**52**	P	Pn	02 28 09.0	-0.1
TWVZ	**Taurewa**	**0.36**	**25**	P	Pn	02 28 08.8	-0.3
WTVZ	**West Tongariro**	**0.39**	**44**	P	Pn	02 28 09.1	-0.1
MOVZ	**Moawhango**	**0.40**	**92**	P	Pn	02 28 09.1	-0.2
OTVZ	**Oturere**	**0.40**	**55**	P	Pn	02 28 09.5	+0.1
WAZ	**Wanganui**	**0.41**	**209**	P	Pn	02 28 10.3	+1.0
KRVZ	**Karewarewa**	**0.43**	**46**	P	Pn	02 28 09.3	-0.2
ETVZ	**East Tongariro**	**0.45**	**55**	P	Pn	02 28 09.7	+0.1
TMVZ	**Te Maari**	**0.45**	**52**	P	Pn	02 28 09.8	+0.1
VRZ	**Vera Road**	**0.46**	**306**	P	Pn	02 28 09.7	+0.1
KATZ	**Kakaramea**	**0.55**	**40**	P	Pn	02 28 10.3	-0.1
BHHZ	**Black Hill Sta**	**0.64**	**99**	P	Pn	02 28 10.7	-0.3
PREZ	**Palmer Road**	**0.84**	**273**	P	Pn	02 28 13.9	+0.9
TSZ	**Takapari Road**	**0.86**	**140**	P	Pn	02 28 13.9	+0.7
NEZ	**North Egmont**	**0.90**	**278**	P	Pn	02 28 14.2	+0.7
PNHZ	**Pukenui**	**0.90**	**122**	P	Pn	02 28 14.3	+0.7
KRHZ	**Kereru**	**0.91**	**106**	P	Pn	02 28 13.8	+0.2
KWHZ	**Kaweka Forest**	**0.92**	**92**	P	Pn	02 28 14.0	+0.2
KHEZ	**Kahui Hut**	**0.96**	**276**	P	Pn	02 28 14.8	+0.6
PKE	**Pukeiti**	**0.99**	**281**	P	Pn	02 28 14.9	+0.4
BKZ	**Black Stump Fm**	**1.00**	**77**	P	Pn	02 28 14.1	-0.5
NBEZ	**Newall Road No**	**1.07**	**276**	P	Pn	02 28 15.7	+0.3
MCHZ	**McNeill Hill**	**1.13**	**93**	P	Pn	02 28 17.0	+1.0
NMHZ	**Naumai**	**1.25**	**77**	P	Pn	02 28 18.3	+0.7
PRWZ	**Pori Road**	**1.29**	**154**	P	Pn	02 28 18.7	+0.8
MRZ	**Mangatainoka R**	**1.29**	**169**	P	Pn	02 28 18.4	+0.4
KAHZ	**Kahuranaki**	**1.32**	**108**	P	Pn	02 28 19.0	+0.6
ARHZ	**Aropaoanui**	**1.37**	**85**	P	Pn	02 28 19.4	+0.5
PRHZ	**Porangahau**	**1.38**	**130**	P	Pn	02 28 19.5	+0.5
OGWZ	**Otaki Gorge**	**1.42**	**182**	P	Pn	02 28 20.1	+0.6
ANWZ	**Angora Road**	**1.42**	**139**	P	Pn	02 28 20.1	+0.6
CKHZ	**Cape Kidnapper**	**1.44**	**101**	P	Pn	02 28 20.1	+0.3
KIW	**Kapiti Island**	**1.49**	**190**	P	Pn	02 28 20.6	+0.2
BFZ	**Birch Farm**	**1.50**	**149**	P	Pn	02 28 20.6	+0.2
HOWZ	**Holdsworth Sta**	**1.52**	**172**	P	Pn	02 28 21.0	+0.2
DUWZ	**D'Urville Isla**	**1.73**	**215**	P	Pn	02 28 23.4	-0.1
MTW	**Mount Morrison**	**1.77**	**174**	P	Pn	02 28 23.7	-0.3
TCW	**Tory Channel**	**1.96**	**202**	P	Pn	02 28 26.0	-0.3
MSWZ	**Moikau Station**	**2.02**	**180**	P	Pn	02 28 26.0	-1.1
BHW	**Baring Head**	**2.03**	**188**	P	Pn	02 28 26.7	-0.5
PLWZ	**Palliser**	**2.17**	**180**	P	Pn	02 28 28.4	-0.8
TUWZ	**Tuamarina**	**2.26**	**206**	P	Pn	02 28 29.6	-0.6
NNZ	**Nelson**	**2.31**	**217**	P	Pn	02 28 30.5	-0.4
QRZ	**Quartz Range**	**2.52**	**235**	P	Pn	02 28 33.1	-0.6
BSWZ	**Blackbirch Sta**	**2.54**	**204**	P	Pn	02 28 33.0	-1.0
THZ	**Tophouse**	**2.96**	**216**	P	Pn	02 28 38.5	-1.1
KHZ	**Kahutara**	**3.28**	**203**	P	Pn	02 28 42.3	-1.5
DSZ	**Denniston Nort**	**3.52**	**227**	P	Pn	02 28 45.9	-1.2
LTZ	**Lake Taylor**	**4.06**	**213**	P	Pn	02 28 51.8	-2.6
MQZ	**McQueen's Vall**	**4.72**	**203**	P	Pn	02 28 59.7	-3.6
ODZ	**Otahua Downs**	**6.59**	**210**	P	Pn	02 29 25.5	-3.3

*IDC **24** 02:47:18.2±1.1, 23°.77S×66°.60W, h201km±13km, mb3.0/2, mb1 3.2/8, mb1mx3.1/24, mbtmp3.6/8, Error ellipse: s-maj=19.2km s-min=16.3km az=7.0*
*GUC **24** 02:47:19.7±0.5, 23°.84S×67°.02W, h237km±8km, ML3.7*
ISC 24 02:47:17.8±0.8, 23°.85S±0°.05×66°.73W±0°.08, h212km±11km, n29, σ1§29/45, 12C-3D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.36**	**301**	P	**Pn**	**02 48 02.7**	**+1.4**
	12nm,0.3s,baz=128,slow=6.9,SNR=51						
LVC				S	**S**	**02 48 35.3**	**+0.4**
	23nm,0.3s,baz=270,slow=23,SNR=18						
LVC	**Limon Verde**	**2.36**	**301**	⇓P	**Pn**	**02 48 02.6**	**+1.3**
LVC				*i* S	**S**	**02 48 35.1**	**+0.2**
PB15	**IPOC Station P**	**2.60**	**284**	⇑P	**Pn**	**02 48 05.0**	**+1.2**
PB15				*eS*	**S**	**02 48 39.0**	**-0.3**
PB06	**IPOC Station P**	**2.85**	**293**	⇑P	**Pn**	**02 48 07.8**	**+1.2**
PB06				*i* S	**S**	**02 48 43.9**	**-0.5**
GO02	**Mina Guanaco**	**2.92**	**243**	⇑P	**Pn**	**02 48 08.4**	**+1.0**
GO02				*i* S	**S**	**02 48 46.2**	**+0.4**
PB09	**IPOC Station P**	**3.10**	**311**	⇑P	**Pn**	**02 48 11.1**	**+1.7**
PB09				*eS*	**S**	**02 48 49.2**	**-0.2**
PB09				IAML		02 48 53.5	
	comp=E,98nm,0.2s						
PB03	**IPOC Station P**	**3.32**	**302**	⇑P	**Pn**	**02 48 12.8**	**+0.8**
PB03				*i* S	**S**	**02 48 52.9**	**-1.2**
PB05	**IPOC Station P**	**3.35**	**287**	⇑P	**Pn**	**02 48 12.8**	**+0.5**
PB05				*i* S	**S**	**02 48 52.8**	**-1.8**
PB14	**IPOC Station P**	**3.44**	**256**	⇑P	**Pn**	**02 48 14.1**	**+0.5**
PB14				*i* S	**S**	**02 48 55.7**	**-1.2**
PB04	**IPOC Station P**	**3.50**	**295**	⇑P	**Pn**	**02 48 14.8**	**+0.6**
PB04				*i* S	**S**	**02 48 56.8**	**-1.0**
PB10	**IPOC Station P**	**3.52**	**275**	⇑P	**Pn**	**02 48 15.0**	**+0.7**
PB10				*i* S	**S**	**02 48 56.6**	**-1.6**
PB07	**IPOC Station P**	**3.60**	**305**	⇑P	**Pn**	**02 48 16.0**	**+0.6**
PB07				*i* S	**S**	**02 48 58.4**	**-1.8**
AC02	**Maricunga**	**3.68**	**216**	⇑P	**Pn**	**02 48 17.8**	**+1.2**
PB01	**IPOC Station P**	**3.79**	**317**	⇓P	**Pn**	**02 48 18.3**	**+0.7**
PB01				*i* S	**S**	**02 49 03.1**	**-1.0**
AC01	**Pan de Azucar**	**4.19**	**236**	⇑P	**Pn**	**02 48 21.9**	**-0.5**
AC01				*i* S	**S**	**02 49 10.3**	**-2.6**
PB08	**IPOC Station P**	**4.33**	**328**	*eP*	**Pn**	**02 48 25.9**	**+1.4**
PB08				*i* S	**S**	**02 49 16.2**	**-0.5**
PATCX	**Punta Patache**	**4.38**	**313**	⇓P	**Pn**	**02 48 25.6**	**+0.8**
GO03	**Copiap**	**4.89**	**220**	*eP*	**Pn**	**02 48 30.4**	**-0.6**
PB11	**IPOC Station P**	**4.90**	**326**	*eP*	**Pn**	**02 48 31.0**	**-0.4**
PB11				*i* S	**S**	**02 49 26.0**	**-3.3**
MNMC	**Minye Minye**	**5.41**	**330**	*eP*	Pn	02 48 33.1	-4.9
LPAZ	**La Paz**	**7.64**	**350**	P	**Pn**	**02 49 08.4**	**+1.3**
	comp=E,0.2nm,0.3s,baz=199,slow=8.9,SNR=8.1						
LPAZ				S	**S**	**02 50 32.2**	**-1.9**
	comp=E,0.1nm,0.3s,baz=63,slow=3.9,SNR=1.9						
CPUP	**Villa Florida**	**8.87**	**108**	P	**Pn**	**02 49 20.7**	**-1.5**
	comp=E,0.1nm,0.3s,baz=298,slow=13,SNR=3.4						
SIV	**San Ignacio**	**9.46**	**35**	P	**Pn**	**02 49 29.3**	**-0.7**
	comp=E,0.1nm,0.3s,baz=223,slow=13,SNR=7.9						
PLCA	**Paso Flores**	**17.13**	**190**	P	**Pn**	**02 51 06.4**	**+1.4**
	comp=E,0.1nm,0.3s,baz=148,slow=21,SNR=1.7						
BDFB	**Brasília**	**19.40**	**69**	P	**P**	**02 51 29.0**	**+0.9**
	comp=E,0.3nm,0.3s,baz=248,slow=12,SNR=6.8						
TXAR	**Lajitas Array**	**63.71**	**324**	P	**P**	**02 57 28.9**	**+2.0**
	comp=E,0.1nm,0.5s,baz=144,slow=7.8,SNR=1.6						
TORD	**Torodi Ar. Bea**	**76.28**	**69**	P	**P**	**02 58 42.8**	**-0.8**
	comp=E,0.6nm,0.7s,baz=260,slow=6.2,SNR=13						
ZALV	**Zalesovo Beam**	**143.15**	**28**	PKP	**PKiKP**	**03 06 28.3**	**-1.1**
	comp=E,0.6nm,0.3s,baz=340,slow=42,SNR=2.2						
MKAR	**Makanchi Array**	**146.25**	**40**	PKPbc	**PKPab**	**03 06 35.1**	**+0.7**
	comp=E,0.7nm,0.9s,baz=300,slow=2.8,SNR=1.8						

IDC 24 03:11:58.9±61.0, 21°.22S×177°.87W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/30, mbtmp3.8/3, Error ellipse: s-maj=1124.0km s-min=172.7km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.59**	**245**	P	P	03 19 13.6	-1.8
	0.7nm,0.3s,baz=82,slow=7.1,SNR=1.7						
ASAR	**Alice Springs**	**44.48**	**257**	P	P	03 20 13.6	+1.2
	1.5nm,0.7s,baz=88,slow=8.0,SNR=13						
WRA	**Warramunga Arr**	**44.63**	**263**	P	P	03 20 13.1	-0.5
	0.3nm,0.3s,baz=97,slow=7.4,SNR=9.2						

*NNC **24** 03:31:03.6±1.9, 37°.66N×71°.80E, h130km±35km, mb3.2, mpv3.8, Error ellipse: s-maj=17.1km s-min=12.4km az=9.0*
*IDC **24** 03:31:06.9±14.0, 37°.23N×71°.84E, h216km±172km, mb3.2/3, mb1 3.1/5, mb1mx2.8/29, mbtmp3.7/5, Error ellipse: s-maj=111.2km s-min=58.7km az=101.0*
ISC 24 03:30:58.8±0.9, 37°.32N±0°.07×71°.87E±0°.10, h130km, n16, σ1§41/20, mb3.5/3, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.00**	**16**	P	**Pn**	**03 32 13.3**	**+1.0**
	SNR=35						
UCH	**Uchtor**	**5.30**	**22**	P	**Pn**	**03 32 17.6**	**+1.2**
	SNR=9.7						
EKS2	**Erkin-Say**	**5.53**	**15**	P	**Pn**	**03 32 20.1**	**+1.0**
	SNR=7.1						
AAK	**Ala-Archa**	**5.68**	**20**	P	**Pn**	**03 32 22.4**	**+1.3**
	SNR=12						
AAK	**Ala-Archa**	**5.68**	**20**	⇑P	**Pn**	**03 32 22.2**	**+1.1**
	5.2nm,0.4s						
AAK				⇑S	**Sn**	**03 33 23.4**	**-1.9**
	17nm,0.7s						
THN	**Thein Dam**	**5.81**	**146**	*eP*	**Pn**	**03 32 24.0**	**+1.2**
THN				*eS*	**Sn**	**03 33 26.0**	**-2.3**
KK31	**Karatay Array**	**5.87**	**350**	P	**Pn**	**03 32 24.3**	**+0.8**
	5.1nm,0.3s,baz=168,slow=9.8,SNR=102						
KK31				⇑S	**Sn**	**03 33 26.6**	**-3.0**
	33nm,0.5s,baz=168,slow=21,SNR=34						
TKM2	**Tokmak 2**	**6.28**	**26**	P	**Pn**	**03 32 30.0**	**+0.8**
	SNR=5.6						
TKM2	**Tokmak 2**	**6.28**	**26**	⇓P	**Pn**	**03 32 29.5**	**+0.3**
	2.9nm,0.6s						
TKM2				⇑S	**Sn**	**03 33 39.1**	**-0.7**
	1.7nm,0.5s						
MKAR	**Makanchi Array**	**12.22**	**36**	P	**P**	**03 33 54.6**	**-0.8**
	0.1nm,0.3s,baz=209,slow=11,SNR=1.5						
AB31	**Akbulak array**	**14.73**	**328**	⇑P	**Pn**	**03 34 20.6**	**0.0**
	1.3nm,0.4s,baz=137,slow=13,SNR=56						
AKTO	**Aktyubinsk**	**16.44**	**327**	⇓P	**P**	**03 34 43.6**	**+1.4**
	4.1nm,0.8s						
ZALV	**Zalesovo Beam**	**18.88**	**24**	P	**Pn**	**03 35 12.3**	**+1.4**
	0.6nm,0.3s,baz=208,slow=9.1,SNR=4.2						
FINES	**FINESS Array B**	**37.20**	**325**	P	**P**	**03 37 57.6**	**+0.5**
	2.0nm,0.9s,baz=127,slow=8.2,SNR=4.3						
ARCES	**ARCESS Array B**	**40.66**	**337**	P	**P**	**03 38 25.8**	**0.0**
	0.8nm,0.7s,baz=122,slow=8.7,SNR=4.3						
TORD	**Torodi Ar. Bea**	**66.43**	**269**	P	**P**	**03 41 33.3**	**-1.2**
	0.5nm,1.1s,baz=57,slow=5.1,SNR=2.3						

RSNC 24 03:47:59.0±1.0, 6°.78N×73°.13W, h146km±5km, ML2.1, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.20**	**195**	*eP*	Pn	03 48 18.8	-0.3
BARC				*eS*	Sn	03 48 33.4	-0.9
BARC				*i*		03 48 35.2	
	comp=Z,47nm,0.6s						
BRRC	**Barranca, Sant**	**0.66**	**299**	⇑*eP*	Pn	03 48 20.7	-0.1
BRRC				*eS*	Sn	03 48 37.4	+0.1
BRRC				*i*		03 48 42.5	
	comp=Z,21nm,0.1s						
PAMC	**Pamplona, Colo**	**0.70**	**38**	*eP*	Pn	03 48 21.6	0.0
PAMC				*eS*	Sn	03 48 38.8	0.0
PAMC				*i*		03 48 41.2	
	comp=Z,20nm,0.6s						
RUSC	**La Rusia**	**0.89**	**177**	*eP*	Pn	03 48 22.8	-0.2
RUSC				*eS*	Sn	03 48 41.3	0.0
RUSC				*i*		03 48 41.8	
	comp=Z,20nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.34**	**260**	*eP*	Pn	03 48 25.7	-0.9
PTBC				*eS*	Sn	03 48 46.2	-1.4
PTBC				*i*		03 48 51.2	
	comp=Z,12nm,0.4s						
TAMC	**Tame, Arauca**	**1.38**	**104**	*eP*	Pn	03 48 25.9	-1.0
TAMC				*eS*	Sn	03 48 47.9	-0.4
TAMC				*i*		03 48 49.1	
	comp=Z,10nm,0.4s						
OCAC	**Ocana**	**1.46**	**353**	*eP*	Pn	03 48 27.0	-1.0
OCAC				*eS*	Sn	03 48 49.4	-0.8
OCAC				*i*		03 48 53.7	
	comp=Z,19nm,0.1s						
SPBC	**San Pablo de B**	**1.46**	**220**	*eP*	Pn	03 48 27.3	-0.7
SPBC				*eS*	Sn	03 48 49.4	-0.7
SPBC				*i*		03 48 52.0	
	comp=Z,15nm,0.1s						
ZARC	**Zaragoza, Cauc**	**1.85**	**292**	*eP*	Pn	03 48 31.2	-1.0
ZARC				*eS*	Sn	03 48 57.2	-0.4
NORC	**Norcasia**	**2.11**	**235**	*eP*	Pn	03 48 35.2	0.0
NORC				*eS*	Sn	03 49 02.5	-0.6
NORC				*i*		03 49 04.2	
	comp=Z,12nm,0.2s						
CHIC	**Chingaza**	**2.22**	**196**	*eP*	Pn	03 48 36.6	-0.3
CHIC				*eS*	Sn	03 49 06.5	+0.4
CHIC				*i*		03 49 13.3	
	comp=Z,5.2nm,0.5s						
HELC	**Santa Helena**	**2.45**	**256**	*eP*	Pn	03 48 40.4	+0.7
HELC				*eS*	Sn	03 49 10.5	-0.4
HELC				*i*		03 49 18.1	
	comp=Z,6.7nm,0.1s						
GUY2C	**Guyana, Caldas**	**2.71**	**235**	*eP*	Pn	03 48 44.6	+1.6
GUY2C				*eS*	Sn	03 49 17.0	+0.2
GUY2C				*i*		03 49 27.0	
	comp=Z,5.4nm,0.5s						
MOTC	**Monteria, Cord**	**3.20**	**308**	*eP*	Pn	03 48 45.1	-3.6
MOTC				*eS*	Sn	03 49 24.3	-2.9

*NEIC **24** 03:47:57.9±2.1, 19°.28N±0°.06×64°.58W±0°.07, h8km±12km, Error ellipse: s-maj=11.7km s-min=6.0km az=52.0*
*RSPR **24** 03:47:59.0, 19°.38N×64°.40W, h48km±26km, MD3.6/15*

*TRN **24** 03:47:59.7, 19°.35N×63°.80W, h3km, MD4.4*
ISC 24 03:48:00.3±2.2, 19°.3N±0°.1×64°.48W±0°.05, h45km±26km, n62, σ1§09/75, 16C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUPR	**Culebra, Puert**	**1.27**	**217**		**Pn**	**03 48 19.4**	**-2.1**
CDVI	**St. Croix**	**1.59**	**190**	⇑*eP*	**Pn**	**03 48 25.1**	**-0.8**
CDVI	**St. Croix**	**1.59**	**190**		**Pn**	**03 48 24.9**	**-1.1**
MTP	**Monte Pirata**	**1.59**	**220**	⇑*eP*	**Pn**	**03 48 24.4**	**-1.6**
MTP	**Monte Pirata**	**1.59**	**220**	*eS*	**Sn**	**03 48 45.6**	**+0.3**
MTP	**Monte Pirata**	**1.59**	**220**		**Pn**	**03 48 24.2**	**-1.8**
MTP					**Sn**	**03 48 45.4**	**+0.1**
CBYP	**Canovanas**	**1.68**	**232**	⇑*eP*	**Pn**	**03 48 25.6**	**-1.6**
CBYP	**Canovanas**	**1.68**	**232**		**Pn**	**03 48 25.4**	**-1.8**
HUMP	**Col San Antoni**	**1.75**	**228**	⇑*eP*	**Pn**	**03 48 26.8**	**-1.5**
HUMP	**Col San Antoni**	**1.75**	**228**	*eS*	**Sn**	**03 48 48.9**	**-0.5**
HUMP	**Col San Antoni**	**1.75**	**228**		**Pn**	**03 48 26.6**	**-1.6**
HUMP					**Sn**	**03 48 48.2**	**-1.2**
GCPR	**Guaynabo City**	**1.83**	**237**	⇑*eP*	**Pn**	**03 48 27.4**	**-1.8**
GCPR	**Guaynabo City**	**1.83**	**237**		**Pn**	**03 48 27.2**	**-1.8**
PDPR	**Patillas Dam,**	**1.96**	**229**	⇑*eP*	**Pn**	**03 48 30.6**	**-0.5**
PDPR	**Patillas Dam,**	**1.96**	**229**		**Pn**	**03 48 29.3**	**-1.7**
SJG	**San Juan**	**1.99**	**233**	*eS*	**Sn**	**03 48 54.4**	**-0.9**
SJG	**San Juan**	**1.99**	**233**		**Pn**	**03 48 30.0**	**-1.5**
SJG	**San Juan**	**1.99**	**233**	*eP*	**Pn**	**03 48 30.0**	**-1.5**
IGPR	**InterUniversit**	**2.05**	**229**	⇑*eP*	**Pn**	**03 48 31.7**	**-0.6**
IGPR	**InterUniversit**	**2.05**	**229**	*eS*	**Sn**	**03 48 56.1**	**-0.6**
IGPR	**InterUniversit**	**2.05**	**229**		**Pn**	**03 48 31.7**	**-0.6**
EMPR	**Esperanza - Ma**	**2.12**	**247**	⇑*eP*	**Pn**	**03 48 32.4**	**-0.8**
EMPR	**Esperanza - Ma**	**2.12**	**247**		**Pn**	**03 48 32.3**	**-0.8**
SEUS	**St. Eustatius**	**2.31**	**142**	*eP*	**Pn**	**03 48 36.4**	**+0.5**
SEUS				*eS*	**Sn**	**03 49 04.4**	**+1.4**
CELP	**Cerrillos**	**2.35**	**238**	⇑*eP*	**Pn**	**03 48 35.7**	**-0.6**
CELP	**Cerrillos**	**2.35**	**238**	*eS*	**Sn**	**03 49 04.4**	**+0.4**
CELP	**Cerrillos**	**2.35**	**238**		**Pn**	**03 48 35.7**	**-0.6**
CELP					**Sn**	**03 49 04.4**	**+0.4**
AOPR	**Arecibo Observ**	**2.37**	**246**	⇑*eP*	**Pn**	**03 48 35.8**	**-1.0**
AOPR	**Arecibo Observ**	**2.37**	**246**	*eS*	**Sn**	**03 49 04.2**	**-0.3**
AOPR	**Arecibo Observ**	**2.37**	**246**		**Pn**	**03 48 35.6**	**-1.0**
AOPR					**Sn**	**03 49 03.5**	**-0.9**
OBIP	**Obispado Ponce**	**2.39**	**238**	⇑*eP*	**Pn**	**03 48 36.3**	**-0.6**
OBIP	**Obispado Ponce**	**2.39**	**238**	*eS*	**Sn**	**03 49 05.2**	**+0.2**
OBIP	**Obispado Pon

comp=Z,1.3nm,0.3s,baz=320,slow=20,SNR=12
ASAR Alice Springs 17.00 160 P **Pn** **03 54 31.0 +1.2**
SBUM Sibu 18.44 302 P **Pn** **03 54 47.7 +0.7**
SBUM IAmb IAmb 03 54 48.6
comp=Z,15nm,1.1s
PMG Port Moresby 19.29 97 P **Pn** **03 54 59.7 +2.8**
comp=Z,1.7nm,0.3s,baz=289,slow=2.7,SNR=4.7
PMG Port Moresby 19.29 97 P **Pn** **03 54 58.7 +1.8**
PMG IAmb IAmb 03 55 00.4
comp=Z,17nm,0.8s
KSM Kuching 19.60 297 P **Pn** **03 54 59.3 -1.3**
KSM IAmb IAmb 03 55 06.4
comp=Z,17nm,0.8s
GIRL Giralia 19.78 220 P **P** **03 55 00.7 +1.4**
TGY Tagaytay City 22.63 343 P **P** **03 55 30.0 +1.0**
comp=Z,238nm,0.4s,baz=191,slow=4.2,SNR=4.6
FORT Forrest 23.02 179 P **P** **03 55 33.6 +1.2**
FORT IAmb IAmb 03 55 45.4
comp=Z,18nm,0.8s
MORW Morawa 23.99 206 P **P** **03 55 42.5 +1.2**
BBOO Buckleboo 26.21 164 P **P** **03 56 02.3 +1.0**
NWAO Narrogin (SRO) 26.98 200 P **P** **03 56 09.4 +1.2**
STKA Stephens Creek 27.35 154 P **P** **03 56 12.6 +1.0**
comp=Z,2.3nm,0.5s,baz=314,slow=13,SNR=6.6
STKA Stephens Creek 27.35 154 P **P** **03 56 12.8 +1.2**
STKA PcP **PcP** **03 59 26.8 +0.1**
RPSI Rantau Prapat 30.53 289 P **P** **03 56 40.1 +0.3**
RPSI Rantau Prapat 30.53 289 P **P** **03 56 39.5 -0.3**
PSI Prapat 30.56 289 P **P** **03 56 39.5 -0.7**
comp=Z,22nm,0.8s,baz=180,slow=5.7,SNR=15
ARMA Armidale 31.85 138 P **P** **03 56 52.4 +1.0**
CMAR Chiang Mai Arr 38.47 313 P **P** **03 57 47.2 -0.7**
comp=Z,2.1nm,0.4s,baz=142,slow=6.9,SNR=8.7
CMAR PcP **PcP** **03 59 56.7 -1.2**
comp=Z,1.3nm,0.3s,baz=185,slow=3.4,SNR=6.0
CMAR Chiang Mai Arr 38.47 313 P **P** **03 57 47.8 -0.2**
JMN Monobe 41.55 8 P **P** **03 58 12.5 -0.7**
JMN IAmb IAmb 03 58 20.2
comp=Z,27nm,1.5s
JHS Saijyo 42.71 7 P **P** **03 58 22.2 -0.4**
JWT Wachi 43.30 9 P **P** **03 58 26.1 -1.2**
JWT IAmb IAmb 03 58 31.9
comp=Z,16nm,1.2s
KSRS Korea Array 44.86 0 P **P** **03 58 39.0 -0.6**
comp=Z,1.5nm,0.6s,baz=177,slow=9.9,SNR=4.2
XAN Xi'an 45.13 338 P **P** **03 58 40.7 -1.2**
XAN IAmb IAmb 03 58 41.0
comp=Z,6.4nm,0.6s
BJI Beijing 48.63 348 P **P** **03 59 11.6 +2.7**
BJI pmax pmax
comp=Z,10.0nm,0.6s
LZH Lanzhou 48.96 334 *e*P **P** **03 59 13.4 +1.7**
LZH pP pwP 03 59 50.6 -2.2
LZH sP sP 04 00 07.8 +3.7
LZH pmax pmax
comp=Z,17nm,1.5s
LZH pmax pmax
comp=Z,110nm,7.7s
HHC Hu-ho-hao-te 50.50 344 *e*P **P** **03 59 23.8 +0.7**
HHC pmax pmax
comp=Z,25nm,0.7s
HHC pmax pmax
comp=Z,170nm,5.7s
RAMN Ramite 52.64 312 *e*P **P** **03 59 39.2 -0.3**
comp=Z,22nm,0.6s
KHZ Kahutara 53.09 138 P **P** **03 59 43.8 +1.5**
KHZ IAmb IAmb 03 59 59.8
comp=Z,10nm,1.1s
GTA Gaotai 53.49 333 *e*P **P** **03 59 45.3 0.0**
GTA pP pP 04 00 21.5 +0.5
GTA sP sP 04 00 39.8 +1.5
GTA pmax pmax
comp=Z,6.0nm,0.9s
GUN Gumba 53.71 313 *e*P **P** **03 59 46.6 -0.8**
comp=Z,19nm,0.6s
BKZ Black Stump Fm 53.76 134 P **P** **03 59 48.3 +1.0**
BKZ IAmb IAmb 03 59 52.1
comp=Z,8.5nm,1.0s
PKI Pulchoki 53.86 312 *e*P **P** **03 59 47.4 -1.1**
PKIN Phulchoki 53.88 312 *e*P **P** **03 59 47.5 -1.0**
KKN Kakani 54.08 312 *e*P **P** **03 59 48.9 -1.1**
DMN Daman 54.11 312 *e*P **P** **03 59 49.6 -0.6**
GKN Gorkha 54.67 312 *e*P **P** **03 59 53.1 -1.0**
KOLN Koldanda 55.31 311 *e*P **P** **03 59 58.0 -0.8**
comp=Z,30nm,0.7s
DANN Dangsing 55.51 312 *e*P **P** **03 59 59.3 -1.0**
comp=Z,19nm,0.7s
PYUN Piuthan 55.94 311 *e*P **P** **04 00 02.6 -0.7**
comp=Z,32nm,0.7s
SONM Songino Array 58.37 343 P **P** **04 00 18.7 -1.1**
comp=Z,2.1nm,0.7s,baz=163,slow=8.1,SNR=8.5
SONM Songino Array 58.37 343 P **P** **04 00 20.3 +0.4**
WMQ Urumqi 62.73 328 *e*P **P** **04 00 51.4 +2.0**
KSH Kashi 66.99 319 *e*P **P** **04 01 17.5 +0.3**
KSH pmax pmax
comp=Z,12nm,0.6s
KSH pmax pmax
comp=Z,180nm,5.0s
MK31 Makanchi Array 67.55 328 P **P** **04 01 20.7 +0.3**
MKAR Makanchi Array 67.55 328 P **P** **04 01 19.7 -0.7**
comp=Z,2.0nm,0.5s,baz=125,slow=8.0,SNR=14
MKAR PcP **PcP** **04 01 45.4 -1.0**
comp=Z,1.4nm,0.6s,baz=119,slow=6.0,SNR=3.9
MKAR Makanchi Array 67.55 328 P **P** **04 01 20.1 -0.3**
MAKZ Makanchi 67.73 328 P **P** **04 01 21.7 +0.2**
MAKZ IAmb IAmb 04 01 40.2
comp=Z,6.1nm,1.1s
BOOM Boomskoye usch 68.62 321 P **P** **04 01 27.6 +0.2**
BOOM IAmb IAmb 04 01 28.4
comp=Z,2.8nm,0.6s
AAK Ala-Archa 69.60 321 P **P** **04 01 32.5 -0.9**
comp=Z,2.0nm,0.6s,baz=115,slow=6.0,SNR=5.2
AAK Ala-Archa 69.60 321 P **P** **04 01 32.1 -1.3**
ZAA0 Zalesovo Array 71.18 335 P **P** **04 01 41.3 -1.1**
ZALV Zalesovo Beam 71.18 335 P **P** **04 01 41.3 -1.2**
comp=Z,3.5nm,0.7s,baz=116,slow=4.1,SNR=14
KURK Kurchatov 71.91 330 P **P** **04 01 46.7 -0.2**
KURK IAmb IAmb 04 01 48.1
comp=Z,6.6nm,0.7s
VNDA Vanda 72.09 173 P **P** **04 01 48.8 +1.2**
comp=Z,1.6nm,0.7s,baz=314,slow=9.7,SNR=13
VNDA Vanda 72.09 173 P **P** **04 01 48.6 +1.0**
SOCY Socotra 75.91 285 P **P** **04 02 09.8 -1.2**
SOCY IAmb IAmb 04 02 12.1
comp=Z,9.9nm,1.1s
BVAR Borovoye Array 77.42 329 P **P** **04 02 18.9 +0.3**
comp=Z,0.6nm,0.4s,baz=64,slow=6.8,SNR=7.4
BRVK Borovoye 77.49 329 P **P** **04 02 18.6 -0.4**
HATHI Halema'uma'u T 80.40 69 P **P** **04 02 34.7 -1.0**
ABKAR Akbulak array 81.62 322 P **P** **04 02 40.2 -1.2**
QSPA South Pole Qui 82.34 180 P **P** **04 02 46.0 +1.0**
QSPA IAmb IAmb 04 02 46.5
comp=Z,6.7nm,0.8s
SNAA Sanae 94.51 194 P **P** **04 03 44.5 +1.4**
GERES GERESS Array B 111.46 320 PKiKP **PKiKP** **04 08 55.8 -0.9**
comp=Z,0.5nm,0.6s,baz=80,slow=1.5,SNR=6.1
GERES GERESS Array B 111.46 320 **PKiKP** **04 08 56.1 -0.6**
BNI Bardonecchia 117.11 317 PKPdf **PKPdf** **04 09 07.5 -0.1**
PV01 Paradox Valley 120.99 50 PKPdf **PKiKP** **04 09 16.3 +0.7**
TORD Torodi Ar. Bea 126.73 281 PKP **PKPdf** **04 09 25.9 -0.8**
comp=Z,1.6nm,0.7s,baz=59,slow=1.2,SNR=12
TORD Torodi Ar. Bea 126.73 281 **PKPdf** **04 09 26.2 -0.6**
TXAR Lajitas Array 127.18 59 PKP **PKPdf** **04 09 27.6 +0.1**
comp=Z,0.5nm,1.0s,baz=68,slow=0.7,SNR=3.9
SCHQ Schefferville 131.51 11 PKPdf **PKiKP** **04 09 35.6 -0.1**
KOWA Kowa 132.24 283 PKPdf **PKiKP** **04 09 38.1 -0.3**
GO02 Mina Guanaco 143.29 153 PKPdf PKPbc 04 09 55.8 +0.6
CSU Charleston Sou 143.95 42 PKPdf **PKiKP** **04 10 00.1 -1.6**
LVC Limon Verde 145.80 152 PKPdf **PKPab** **04 10 04.7 +1.2**
CPUP Villa Florida 145.87 172 PKPbc **PKPbc** **04 10 02.9 +0.3**
comp=Z,2.6nm,0.5s,baz=189,slow=1.8,SNR=15
CPUP Villa Florida 145.87 172 **PKPab** **04 10 03.4 +0.2**
PB01 IPOC Station P 146.85 150 PKPbc **PKPab** **04 10 06.9 -0.4**
JTS Las Juntas de 147.61 83 PKPbc **PKPbc** **04 10 08.6 +0.7**
GO01 Chusmiza 148.15 149 PKPbc **PKiKP** **04 10 10.9 -0.5**
MNMC Minye Minye 148.38 148 PKPbc **PKiKP** **04 10 11.2 -0.4**
PB16 IPOC Station P 149.08 147 PKPbc **PKPbc** **04 10 12.2 -0.1**
LPAZ La Paz 151.50 147 PKPbc **PKiKP** **04 10 19.0 +0.4**
comp=Z,1.8nm,0.4s,baz=44,slow=4.0,SNR=22
LPAZ PKPab **PKPab** **04 10 28.6 +1.7**
comp=Z,8.4nm,0.6s,baz=212,slow=6.8,SNR=30

*IDC **24** 04:17:25.7±0.5, 15°.63S×179°.95W, h0km, mb4.4/22,*
mb1 4.6/23, mb1mx4.5/40, mbtmp4.4/23, ML2.8/1, MS4.4/30, Ms1 4.4/30, ms1mx4.3/42, Error ellipse: s-maj=19.2km s-min=14.6km az=137.0
*NEIC **24** 04:17:27.5±1.9, 15°.98S±0°.09×179°.92W±0°.09, h9km±3km, mb4.8/103, Error ellipse: s-maj=16.9km s-min=5.5km az=135.0*
*BJI **24** 04:17:28.6±0.0, 15°.90S×179°.80W, h10km, mB5.3/14, mb4.9/19, Ms5.0/12, Ms7 4.7/12*
*GCMT **24** 04:17:31.5±0.1, 15°.63S±0°.01×179°.59W±0°.01, h19km, MW5.3/129, Moment Tensor Solution. s96,c160; s129,c247; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr-0.06±.01; Mθθ-0.81±.01; Mϕϕ0.86±.01; Mrθ-0.08±.03; Mrϕ0.69±.01; Mθϕ0.18±.03; Best double couple: Mo1.10100×10^17 NP1:ϕs65.00000°, δ79.00000°, λ-1.00000°. NP2:ϕs155.00000°, δ89.00000°, λ-169.00000°. Principal axes: T 1.1280, Plg7.0000°, Azm289.0000°; N -0.0530, Plg79.0000°, Azm158.0000°; P -1.0750, Plg8.0000°, Azm20.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 24 04:17:32.0±0.3, 15°.98S±0°.06×179°.86W±0°.06, h35km, n218, σ1s69/202, mb4.7/64, MS4.6/36, 2C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.65**	**229**	Pn	**Pn**	**Pn**	**04 18 13.3**	**+1.0**
MSVF					**Sn**	**Sn**	**04 18 46.9**	**+3.7**
RAO	**Raoul Island**	**13.33**	**173**	LR	LR	LR	04 25 04.3	
	comp=Z,2μm,18.4s,baz=356,slow=34							
RAO	**Raoul Island**	**13.33**	**173**	Pn	**Pn**	**Pn**	**04 20 35.5**	**-3.2**
DZM	**Mont Dzumac**	**14.29**	**243**	*e*P	**P**	**P**	**04 21 02.3**	**+3.6**
	83nm,1.4s							
DZM				*e*LQ	LQ	LQ	04 23 37.1	
	14μm,28.2s							
DZM				*e*LR	LR	LR	04 24 15.8	
	comp=Z,3μm,25.9s							
DZM	**Mont Dzumac**	**14.29**	**243**	Pn	**Pn**	**Pn**	**04 20 48.8**	**-3.1**
	0.0nm,0.3s,baz=98,slow=20,SNR=1.7							
DZM				LR	LR	LR	04 25 03.6	
	comp=Z,994nm,19.2s,baz=38,slow=32							
OUZ	**Omahuta**	**20.03**	**196**	P	**Pn**	**04 22 05.5**	**+1.6**	
OUZ					IAmb	IAmb	04 22 06.8	
	comp=Z,70nm,1.1s							
HNR	**Honiara**	**20.73**	**286**	LR	LR	LR	04 28 51.5	
	comp=Z,5μm,21.9s,baz=130,slow=33							
URZ	**Urewera**	**22.35**	**186**	P	**P**	**04 22 25.4**	**-1.4**	
	comp=Z,21nm,1.0s,baz=26,slow=6.3,SNR=5.0							
URZ				LR	LR	LR	04 29 41.0	
	comp=Z,2μm,18.7s,baz=30,slow=32							
URZ	**Urewera**	**22.35**	**186**	P	**P**	**04 22 25.9**	**-1.0**	
URZ					IAmb	IAmb	04 22 40.5	
	comp=Z,30nm,1.2s							
BKZ	**Black Stump Fm**	**23.32**	**187**	P	**P**	**04 22 34.6**	**-2.3**	
BFZ	**Birch Farm**	**24.84**	**187**	P	**P**	**04 22 47.8**	**-3.2**	
BFZ					IAmb	IAmb	04 22 58.5	
	comp=Z,46nm,1.2s							
QRZ	**Quartz Range**	**25.62**	**193**	P	**P**	**04 22 56.6**	**-1.5**	
MSWZ	**Moikau Station**	**25.69**	**188**	P	**P**	**04 22 58.1**	**-0.7**	
NNZ	**Nelson**	**25.82**	**192**	P	**P**	**04 22 58.9**	**-1.0**	
THZ	**Tophouse**	**26.44**	**192**	P	**P**	**04 23 05.3**	**-0.3**	
THZ					IAmb	IAmb	04 23 09.4	
	comp=Z,52nm,1.3s							
KHZ	**Kahutara**	**26.95**	**191**	P	**P**	**04 23 07.7**	**-2.4**	
KHZ					IAmb	IAmb	04 23 20.4	
	comp=Z,18nm,0.8s							
LTZ	**Lake Taylor**	**27.55**	**193**	P	**P**	**04 23 13.3**	**-2.2**	
LTZ					IAmb	IAmb	04 23 16.6	
	comp=Z,31nm,0.9s							
OXZ	**Oxford**	**28.12**	**193**	P	**P**	**04 23 18.5**	**-2.1**	
MQZ	**McQueen's Vall**	**28.36**	**191**	P	**P**	**04 23 21.1**	**-1.6**	
MQZ					IAmb	IAmb	04 23 37.6	
	comp=Z,45nm,1.5s							
RPZ	**Rata Peaks**	**28.70**	**194**	P	**P**	**04 23 26.0**	**+0.3**	
	comp=Z,4.8nm,0.6s,baz=29,slow=20,SNR=2.1							
RPZ				LR	LR	LR	04 34 58.2	
	comp=Z,1μm,18.7s,baz=26,slow=36							
PPT2	**Papeete2**	**29.03**	**98**	*e*S	**S**	**S**	**04 28 22.9**	**+4.6**
	comp=Z,184nm,21.0s							
PPT2				*e*LQ	LQ	LQ	04 29 33.6	
	comp=Z,2μm,25.5s							
PPT2				*e*LR	LR	LR	04 30 50.2	
	comp=Z,4μm,27.5s,baz=261							
TBI	**Tubuai**	**29.51**	**109**	*e*S	**S**	**S**	**04 28 27.7**	**+2.1**
	comp=Z,528nm,26.8s							
TBI				*e*LQ	LQ	LQ	04 29 46.0	
	comp=Z,915nm,28.0s							
TBI				*e*LR	LR	LR	04 30 58.9	
	comp=Z,3μm,30.5s,baz=283							
KRVT	**Keravat (AS076**	**29.95**	**290**	LR	LR	LR	04 34 42.8	
	comp=Z,2μm,18.7s,baz=122,slow=35							
MLZ	**Mavora Lakes**	**30.99**	**197**	P	**P**	**04 23 45.7**	**-0.3**	
WHZ	**Wether Hill Ro**	**31.52**	**196**	P	**P**	**04 23 50.1**	**-0.6**	
CTA	**Charters Tower**	**32.44**	**258**	LR	LR	LR	04 35 32.6	
	comp=Z,917nm,19.9s,baz=83,slow=34							
PMG	**Port Moresby**	**32.80**	**277**	P	**P**	**04 24 00.5**	**-1.8**	
	comp=Z,7.4nm,0.4s,baz=26,slow=22,SNR=3.3							
PMG				LR	LR	LR	04 36 06.3	
	comp=Z,576nm,18.3s,baz=98,slow=34							
PMG	**Port Moresby**	**32.80**	**277**	P	**P**	**04 24 01.9**	**-0.4**	
PMG					IAmb	IAmb	04 24 02.5	
	comp=Z,17nm,1.0s							
MANU	**Manus Island**	**35.12**	**290**	P	**P**	**04 24 20.9**	**-1.6**	
MANU					IAmb	IAmb	04 24 33.0	
	comp=Z,11nm,0.6s							
H11S2	**WAKE ISLAND Hy**	**36.72**	**338**	T	T	T	05 03 30.3	
	baz=155,slow=76,SNR=23							
H11S3	**WAKE ISLAND Hy**	**36.73**	**338**	T	T	T	05 03 32.4	
	baz=155,slow=76,SNR=16							
H11S1	**WAKE ISLAND Hy**	**36.74**	**338**	T	T	T	05 03 28.9	
	baz=155,slow=76,SNR=17							
H11N3	**WAKE ISLAND Hy**	**37.78**	**339**	T	T	T	05 04 44.8	
	baz=154,slow=76,SNR=17							
H11N1	**WAKE ISLAND Hy**	**37.79**	**339**	T	T	T	05 04 44.3	
	baz=154,slow=76,SNR=34							
H11N2	**WAKE ISLAND Hy**	**37.80**	**339**	T	T	T	05 04 48.0	
	baz=154,slow=76,SNR=38							
STKA	**Stephens Creek**	**38.39**	**239**	P	**P**	**04 24 50.2**	**+0.2**	
	comp=Z,5.2nm,0.9s,baz=74,slow=11,SNR=5.8							
STKA				LR	LR	LR	04 39 23.8	
	comp=Z,450nm,20.5s,baz=72,slow=34							
STKA	**Stephens Creek**	**38.39**	**239**	P	**P**	**04 24 49.7**	**-0.3**	
TAOE	**Nuku Hiva Isla**	**39.37**	**84**	*e*LR	LR	LR	04 35 29.2	
	comp=Z,3μm,27.7s,baz=252							
JAY	**Jayapura**	**41.05**	**285**	LR	LR	LR	04 42 11.0	
	comp=Z,382nm,18.6s,baz=132,slow=36							
OBL	**Observatory Le**	**42.68**	**35**	P	**P**	**04 25 27.4**	**+1.6**	
WR0	**Warramunga Arr**	**43.45**	**258**	P	**P**	**04 25 31.5**	**-0.5**	
WB0	**Warramunga Ar**	**43.60**	**258**	P	**P**	**04 25 31.4**	**-1.8**	
WB2	**Warramunga Ar**	**43.63**	**258**	P	**P**	**04 25 32.6**	**-0.8**	
WRA	**Warramunga Ar**	**43.64**	**258**	P	**P**	**04 25 30.7**	**-2.9**	
	comp=Z,2.0nm,0.8s,baz=90,slow=8.8,SNR=14							
WRA				PP	**PP**		**04 27 16.1**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=92,slow=6.6,SNR=1.8							
WRA				LR	LR	LR	04 43 42.2	
	comp=Z,671nm,18.5s,baz=125,slow=36							
WRA	**Warramunga Arr**	**43.64**	**258**	P	**P**	**04 25 31.0**	**-2.5**	
AS31	**Alice Springs**	**44.01**	**252**	P	**P**	**04 25 36.4**	**0.0**	
ASAR	**Alice Springs**	**44.01**	**252**	P	**P**	**04 25 35.0**	**-1.4**	
	comp=Z,13nm,0.9s,baz=86,slow=8.7,SNR=29							
ASAR				LR	LR	LR	04 42 36.6	
	comp=Z,1μm,20.6s,baz=92,slow=34							
ASAR	**Alice Springs**	**44.01**	**252**	P	**P**	**04 25 33.7**	**-2.7**	
FORT	**Forrest**	**49.60**	**243**	P	**P**	**04 26 21.1**	**+1.0**	
SIJI	**Sorong**	**50.45**	**282**	P	**P**	**04 26 25.1**	**-1.6**	
	comp=Z,6.6nm,0.5s,baz=213,slow=23,SNR=2.0							
FITZ	**Fitzroy Crossi**	**51.99**	**259**	P	**P**	**04 26 37.1**	**-1.1**	
	comp=Z,2.5nm,1.0s,baz=38,slow=17,SNR=4.1							
FITZ				LR	LR	LR	04 47 10.4	
	comp=Z,878nm,20.7s,baz=95,slow=34							
FITZ	**Fitzroy Crossi**	**51.99**	**259**	P	**P**	**04 26 37.5**	**-0.7**	
FITZ					IAmb	IAmb	04 26 50.2	
	comp=Z,16nm,1.5s							
SOEI	**Soe**	**54.69**	**269**	P	**P**	**04 26 57.9**	**-0.4**	
JHJ	**Hachijo jima 2**	**62.20**	**322**	LR	LR	LR	04 49 13.0	
	comp=Z,81nm,20.1s,baz=136,slow=31							
VNDA	**Vanda**	**62.24**	**184**	P	**P**	**04 27 52.2**	**+2.4**	
	comp=Z,2.2nm,1.0s,baz=346,slow=9.4,SNR=6.3							
VNDA				LR	LR	LR	04 51 47.2	
	comp=Z,130nm,18.0s,baz=11,slow=33							
VNDA	**Vanda**	**62.24**	**184**	P	**P**	**04 27 52.8**	**+3.0**	
VNDA					IAmb	IAmb	04 28 09.7	
	comp=Z,6.0nm,1.1s							
MJAR	**Matsushiro Arr**	**65.54**	**324**	P	**P**	**04 28 08.4**	**-3.7**	
	comp=Z,2.6nm,0.8s,baz=155,slow=6.5,SNR=6.1							
MJAR					LR	LR	04 51 36.9	
	comp=Z,197nm,22.0s,baz=125,slow=32							
MJAR	**Matsushiro Arr**	**65.54**	**324**	P	**P**	**04 28 09.4**	**-2.7**	
MAT	**Matsushiro**	**65.54**	**324**	P	**P**	**04 28 11.9**	**-0.2**	
MAT					S	**S**	**04 36 57.2**	**+2.3**
TGY	**Tagaytay City**	**65.69**	**294**	LR	LR	LR	04 52 21.4	
	comp=Z,562nm,21.8s,baz=104,slow=32							
PETK	**Petropavlovsk-**	**71.48**	**346**	LR	LR	LR	04 55 16.1	
	comp=Z,180nm,20.3s,baz=156,slow=32							
KSRS	**Korea Array**	**72.34**	**319**	P	**P**	**04 28 52.1**	**-2.2**	
	comp=Z,0.4nm,0.4s,baz=210,slow=42,SNR=2.4							
QSPA	**South Pole Qui**	**74.06**	**180**	P	**P**	**04 29 05.5**	**+1.2**	
	comp=Z,12nm,0.8s,baz=4.3,slow=2.3,SNR=15							
QSPA	**South Pole Qui**	**74.06**	**180**	P	**P**	**04 29 04.1**	**-0.1**	
USRK	**Ussuriysk Ar.**	**74.25**	**326**	P	**P**	**04 29 03.8**	**-1.6**	
	comp=Z,1.7nm,0.7s,baz=146,slow=44,SNR=2.6							
USRK					LR	LR	05 00 01.3	
	comp=Z,112nm,18.2s,baz=130,slow=35							
H06S1	**SOCORRO T**	**76.07**	**66**	T	T	T	05 52 24.6	
	SNR=21							
H06E1	**SOCORRO T-PHAS**	**76.12**	**66**	T	T	T	05 52 16.1	
	SNR=24							
KMRM	**Mail Ridge**	**76.46**	**41**	P	**P**	**04 29 18.5**	**+0.2**	
KRMB	**Red Mountain**	**77.08**	**40**	P	**P**	**04 29 21.8**	**-0.1**	
WDC	**Whiskeytown Da**	**77.39**	**41**	P	**P**	**04 29 24.7**	**+1.2**	
WDC					IAmb	IAmb	04 29 41.3	
	comp=Z,12nm,1.2s							
QIZ	**Qiongzhong**	**77.40**	**294**	P	**P**	**04 29 23.8**	**-0.2**	
QIZ					S	**S**	**04 39 16.3**	**+3.8**
QIZ					LR	LR		
	comp=Z,200nm,17.1s							
QIZ					LR	LR		
	comp=Z,270nm,18.6s							
QIZ					LR	LR		
	comp=Z,340nm,21.4s							
ORV	**Oroville**	**77.50**	**42**	P	**P**	**04 29 23.8**	**-0.3**	
ISA	**Isabella, Lake**	**77.51**	**47**	P	**P**	**04 29 24.1**	**-0.2**	
ISA					IAmb	IAmb	04 29 30.5	
	comp=Z,6.1nm,1.0s							
AFDM	**Forest Hills D**	**77.51**	**43**	P	**P**	**04 29 22.3**	**-1.9**	
AFDM					IAmb	IAmb	04 29 30.4	
	comp=Z,6.5nm,1.1s							
KLR	**Kul'dur**	**77.75**	**330**	LR	LR	LR	04 58 40.1	
	comp=Z,254nm,21.5s,baz=158,slow=32							
YBH	**Yreka Blue Hor**	**77.94**	**40**	P	**P**	**04 29 25.5**	**-1.1**	
	comp=Z,5.3nm,0.9s,baz=198,slow=3.2,SNR=8.9							
YBH	**Yreka Blue Hor**	**77.94**	**40**	P	**P**	**04 29 27.0**	**+0.4**	
YBH					IAmb	IAmb	04 29 35.9	
	comp=Z,10nm,1.1s							
MDPB	**Devils Postpil**	**78.09**	**45**	P	**P**	**04 29 27.3**	**-0.4**	
MDPB					IAmb	IAmb	04 29 34.8	
	comp=Z,7.6nm,1.1s							
WAKR	**Walker**	**78.30**	**44**	P	**P**	**04 29 28.8**	**-0.1**	
WAKR					IAmb	IAmb	04 29 32.8	
	comp=Z,5.8nm,0.9s							
BEKR	**Beckworth**	**78.41**	**43**	P	**P**	**04 29 29.0**	**-0.3**	
PNTR	**Pine Nut**	**78.50**	**44**	P	**P**	**04 29 30.0**	**0.0**	
PNTR					IAmb	IAmb	04 29 34.3	
	comp=Z,8.7nm,0.8s							
LHV	**Little Huntoon**	**78.80**	**45**	P	**P**	**04 29 31.2**	**0.0**	
LHV					IAmb	IAmb	04 29 43.1	
	comp=Z,8.9nm,1.2s							
PAHR	**Pah Rah Range**	**78.96**	**43**	P	**P**	**04 29 30.6**	**-1.8**	
RYN	**Ryan**	**78.98**	**44**	P	**P**	**04 29 32.3**	**-0.2**	
NVAR	**Mina Array Bea**	**79.02**	**45**	P	**P**	**04 29 30.3**	**-2.6**	
	comp=Z,3.2nm,0.8s,baz=228,slow=9.3,SNR=14							
NVAR	**Mina Array Bea**	**79.02**	**45**	P	**P**	**04 29 30.1**	**-2.8**	
KVN	**Kaiserville**	**79.48**	**44**	P	**P**	**04 29 34.3**	**-0.9**	
MOD	**Modoc Plateau**	**79.53**	**41**	P	**P**	**04 29 33.9**	**-1.5**	
MOD					IAmb	IAmb	04 29 42.5	
	comp=Z,11nm,1.4s							
TPH	**Tonopah**	**79.58**	**45**	P	**P**	**04 29 35.2**	**-0.6**	
TPNV	**Topopah Spring**	**79.71**	**47**	P	**P**	**04 29 35.6**	**-0.9**	
H02S1	**DAWSON INLET T**	**80.03**	**27**	T	T	T	05 57 24.6	
	SNR=47							
PINE	**Pine Mountain**	**80.16**	**39**	P	**P**	**04 29 37.1**	**-1.8**	
PINE					IAmb	IAmb	04 29 51.2	
	comp=Z,22nm,1.4s							
SHPR	**Sheep Range**	**80.27**	**48**	P	**P**	**04 29 40.1**	**+0.5**	
W13A	**Hualapai Mount**	**80.53**	**49**	P	**P**	**04 29 40.6**	**-0.5**	
PRN	**Pahroc Range**	**80.77**	**47**	P	**P**	**04 29 41.9**	**-0.3**	
TTA	**Tatalina**	**80.84**	**11**	P	**P**	**04 29 41.3**	**-0.6**	
TTA					IAmb	IAmb	04 29 47.9	
	comp=Z,22nm,1.3s							
WVOR	**Wild Horse Val**	**80.86**	**41**	P	**P**	**04 29 38.2**	**-4.4**	
WVOR					IAmb	IAmb	04 29 51.9	
	comp=Z,9.5nm,1.2s							
GLI	**Glacier Island**	**80.97**	**16**	P	**P**	**04 29 42.5**	**0.0**	
SEY	**Seymchan**	**81.60**	**348**	LR	LR	LR	04 59 35.2	
	comp=Z,125nm,21.7s,baz=160,slow=31							
TUC	**Tucson**	**81.65**	**53**	P	**P**	**04 29 46.9**	**0.0**	
TUC					IAmb	IAmb	04 29 50.2	
	comp=Z,7.7nm,1.3s							
LCMT	**Little Creek M**	**81.86**	**48**	P	**P**	**04 29 48.5**	**+0.5**	
CCUT	**Cedar City**	**82.02**	**47**	P	**P**	**04 29 48.7**	**-0.3**	
X16A	**Lo Mia Camp, P**	**82.04**	**51**	P	**P**	**04 29 49.4**	**+0.3**	
PSUT	**Pine Spring**	**82.13**	**46**	P	**P**	**04 29 46.8**	**-2.7**	
G08A	**Pilot Rock**	**82.16**	**39**	P	**P**	**04 29 46.9**	**-2.5**	
G08A					IAmb	IAmb	04 29 53.7	
	comp=Z,13nm,1.2s							
ELK	**Elko**	**82.22**	**44**	P	**P**	**04 29 49.8**	**-0.1**	
U15A	**North Rim**	**82.29**	**49**	P	**P**	**04 29 50.8**	**+0.3**	
U15A					IAmb	IAmb	04 29 56.7	
	comp=Z,8.9nm,1.3s							
RPSI	**Rantau Prapat**	**82.30**	**275**	P	**P**	**04 29 49.8**	**-0.8**	
RPSI	**Rantau Prapat**	**82.30**	**275**	P	**P**	**04 29 49.3**	**-1.3**	
PSI	**Prapat**	**82.33**	**275**	P	**P**	**04 29 49.3**	**-1.6**	
	comp=Z,4.8nm,0.8s,baz=180,slow=8.5,SNR=4.5							
MFID	**Camas Ranch**	**83.14**	**41**	P	**P**	**04 29 54.3**	**-0.2**	
MFID

HHC					pmax	pmax		
	comp=Z,170nm,7.1s							
HHC					LR	LR		
	comp=Z,200nm,15.3s							
HHC					LR	LR		
	comp=Z,250nm,15.3s							
HHC					LR	LR		
	comp=Z,240nm,16.2s							
TCUT	**Toone Canyon**	**84.97**	**45**		P	**P**	**04 30 03.6**	**-0.5**
HWUT	**Hardware Ranch**	**85.08**	**44**		P	**P**	**04 30 03.9**	**-0.6**
HWUT					IAmb	IAmb	04 30 09.6	
	comp=Z,4.0nm,0.9s							
MAW	**Mawson**	**85.19**	**200**		P	**P**	**04 30 04.6**	**+0.2**
	comp=Z,7.8nm,1.1s,baz=106,slow=9.2,SNR=5.4							
MAW					LR	LR	05 04 59.1	
	comp=Z,252nm,19.5s,baz=82,slow=33							
MAW	**Mawson**	**85.19**	**200**			**P**	**04 30 06.8**	**+2.5**
PV14	**Lion Creek, Pa**	**85.47**	**48**		P	**P**	**04 30 07.6**	**+0.9**
PV14					IAmb	IAmb	04 30 25.5	
	comp=Z,14nm,1.4s							
PV17	**East Wray Mesa**	**85.48**	**48**		P	**P**	**04 30 07.0**	**+0.4**
PV17					IAmb	IAmb	04 30 11.6	
	comp=Z,6.0nm,0.8s							
MNTX	**Cornudas Mount**	**85.62**	**55**		P	**P**	**04 30 07.5**	**+0.3**
DAWY	**Dawson**	**85.64**	**17**		P	**P**	**04 30 06.1**	**-0.5**
DAWY					IAmb	IAmb	04 30 11.8	
	comp=Z,14nm,1.4s							
KMI	**Kunming**	**85.72**	**297**	ǁ	*e*P	P	04 30 15.4	+7.3
KMI					pP	pP	04 30 18.5	-0.2
KMI					sP	pwP	04 30 21.3	+0.5
KMI					pmax	pmax		
	comp=Z,7.0nm,0.9s							
KMI					pmax	pmax		
	comp=Z,98nm,4.8s							
KMI					LR	LR		
	comp=Z,250nm,19.5s							
KMI					LR	LR		
	comp=Z,390nm,18.8s							
KMI					LR	LR		
	comp=Z,510nm,19.7s							
EGAK	**Eagle**	**85.73**	**16**		P	**P**	**04 30 06.7**	**-0.3**
EGAK					IAmb	IAmb	04 30 10.4	
	comp=Z,7.6nm,1.1s							
COLD	**Coldfoot**	**85.80**	**11**		P	**P**	**04 30 08.1**	**+0.9**
COLD					IAmb	IAmb	04 30 11.1	
	comp=Z,11nm,1.3s							
ANMO	**Albuquerque**	**86.01**	**52**		P	**P**	**04 30 09.6**	**+0.3**
DLMT	**Dillon**	**86.10**	**41**		P	**P**	**04 30 10.0**	**+0.5**
DLMT					IAmb	IAmb	04 30 14.8	
	comp=Z,7.7nm,1.1s							
TX31	**Lajitas Ar. Si**	**86.16**	**58**		P	**P**	**04 30 10.4**	**+0.4**
TX32	**Lajitas Array**	**86.16**	**58**		P	**P**	**04 30 10.7**	**+0.7**
TX32					IAmb	IAmb	04 30 29.0	
	comp=Z,9.5nm,1.3s							
TXAR	**Lajitas Array**	**86.16**	**58**		P	**P**	**04 30 07.7**	**-2.3**
	comp=Z,1.5nm,1.0s,baz=226,slow=5.0,SNR=11							
TXAR					LR	LR	05 02 56.6	
	comp=Z,213nm,18.0s,baz=0.0,slow=32							
TXAR	**Lajitas Array**	**86.16**	**58**			**P**	**04 30 10.2**	**+0.1**
SNOW	**Snow King Moun**	**86.44**	**43**			**P**	**04 30 09.1**	**-2.2**
SNOW					IAmb	IAmb	04 30 15.6	
	comp=Z,7.2nm,0.9s							
IMW	**Indian Meadow**	**86.50**	**43**			**P**	**04 30 11.1**	**-0.6**
IMW					IAmb	IAmb	04 30 17.2	
	comp=Z,5.9nm,0.9s							
YHB	**Horse Butte**	**86.71**	**42**			**P**	**04 30 13.5**	**+0.9**
YHL	**Hebgen Lake**	**86.77**	**42**		P	**P**	**04 30 14.0**	**+1.1**
YMR	**Madison River**	**86.83**	**42**		P	**P**	**04 30 14.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**86.92**	**290**		P	**P**	**04 30 11.4**	**-2.5**
	comp=Z,1.6nm,0.3s,baz=122,slow=4.4,SNR=1.4							
CMAR					LR	LR	05 09 39.0	
	comp=Z,75nm,18.0s,baz=156,slow=36							
CMAR	**Chiang Mai Arr**	**86.92**	**290**		P	**P**	**04 30 13.8**	**-0.1**
PD31	**Pinedale Array**	**86.93**	**44**		P	**P**	**04 30 14.3**	**+0.6**
PDAR	**Pinedale Array**	**86.93**	**44**		P	**P**	**04 30 10.3**	**-3.4**
	comp=Z,0.7nm,0.9s,baz=178,slow=40,SNR=4.2							
PDAR					LR	LR	05 01 42.4	
	comp=Z,215nm,19.7s,baz=264,slow=31							
PDAR	**Pinedale Array**	**86.93**	**44**		P	**P**	**04 30 11.7**	**-2.0**
LZH	**Lanzhou**	**88.62**	**308**		*e*P	**P**	**04 30 22.6**	**+0.8**
LZH					pP	PcP	04 30 27.4	+4.0
LZH					sP	pP	04 30 29.6	-2.8
LZH					pmax	pmax		
	comp=Z,18nm,1.4s							
LZH					pmax	pmax		
	comp=Z,70nm,6.5s							
LZH					LR	LR		
	comp=Z,160nm,15.5s							
LZH					LR	LR		
	comp=Z,190nm,15.2s							
LZH					LR	LR		
	comp=Z,160nm,17.9s							
SYO	**Syowa Base**	**90.71**	**193**	ǁ	*e*P	**P**	**04 30 28.3**	**-2.5**
SYO	**Syowa Base**	**90.71**	**193**	ǁ	*e*PcP	**P**	**04 30 29.9**	**-0.9**
SONM	**Songino Array**	**91.19**	**320**		P	**P**	**04 30 32.2**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=158,slow=43,SNR=2.7							
SONM					LR	LR	05 05 56.3	
	comp=Z,95nm,21.7s,baz=146,slow=32							
SONM	**Songino Array**	**91.19**	**320**		P	**P**	**04 30 32.7**	**-0.8**
SNAA	**Sanae**	**92.54**	**179**		P	**P**	**04 30 37.4**	**-2.0**
SNAA	**Sanae**	**92.54**	**179**			**P**	**04 30 38.4**	**-1.0**
SNAA					IAmb	IAmb	04 30 48.4	
	comp=Z,11nm,1.4s							
VNA3	**Neumayer Olymp**	**92.73**	**177**		P	**P**	**04 30 38.5**	**-1.7**
VNA2	**Neumayer--Watz**	**93.16**	**178**		P	**P**	**04 30 40.4**	**-1.8**
	baz=164,slow=4.7							
YKA	**Yellowknife Ar**	**93.18**	**25**		LR	LR	05 05 31.2	
	comp=Z,315nm,21.0s,baz=0.0,slow=31							
VNA1	**Neumayer--Stat**	**93.39**	**177**		P	**P**	**04 30 42.2**	**-1.0**
PLCA	**Paso Flores**	**93.66**	**134**		P	**P**	**04 30 47.7**	**+2.5**
	comp=Z,2.6nm,1.0s,baz=278,slow=4.3,SNR=2.9							
PLCA					LR	LR	05 05 50.1	
	comp=Z,78nm,19.9s,baz=248,slow=31							
U40A	**Yellville**	**96.95**	**54**			**P**	**04 30 58.6**	**-1.5**
ULM	**Lac du Bonnet**	**98.34**	**40**		LR	LR	05 10 27.1	
	comp=Z,161nm,18.4s,baz=287,slow=32							
WMQ	**Urumqi**	**102.62**	**312**		*e*P	**Pdif**	**04 31 26.8**	**+1.5**
KURBB	**Kurchatov Arra**	**109.52**	**319**		PKiKP	**PKiKP**	**04 35 58.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=94,slow=1.8,SNR=4.5							
ABKAR	**Akbulak array**	**121.58**	**318**		PKPdf	**PKiKP**	**04 36 22.0**	**0.0**
SCO	**Scoresbysund**	**123.86**	**9**		PKPdf	**PKiKP**	**04 36 26.0**	**+0.1**
ARCES	**ARCESS Array B**	**124.18**	**350**		PKP	**PKPdf**	**04 36 25.6**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=342,slow=12,SNR=1.9							
AKASG	**Malin Array Be**	**138.22**	**332**		PKP	**PKPdf**	**04 36 54.0**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=40,slow=3.8,SNR=2.0							
BIZ	**Bicaz**	**142.36**	**331**	ǁ	P	**PKiKP**	**04 37 03.4**	**-0.6**
CFR	**Carcaliu**	**142.57**	**327**	ǁ	P	**PKiKP**	**04 37 04.5**	**+0.1**
VRI	**Vrincioaia**	**142.82**	**329**	ǁ	P	**PKiKP**	**04 37 10.5**	**+5.5**
DPC	**Dobruska-Polom**	**143.31**	**343**		*e*PKP	**PKiKP**	**04 37 07.4**	**+1.5**
DRGR		**144.00**	**333**	ǁ	P	**PKiKP**	**04 37 07.7**	**+0.2**
VRAC	**Vranov**	**144.16**	**342**		PKP	**PKPdf**	**04 37 03.6**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=208,slow=1.1,SNR=3.6							
SIRR	**Siria**	**144.87**	**334**	ǁ	P	**PKPab**	**04 37 04.3**	**-0.2**
GZR	**Gura Zlata**	**145.05**	**332**	ǁ	P	**PKPdf**	**04 37 07.2**	**+1.4**
KHC	**Kasperske Hory**	**145.16**	**344**		*e*PKP	**PKPdf**	**04 37 06.5**	**+0.6**
GRF	**Grafenberg Arr**	**145.19**	**347**		*e*PKP	**PKPdf**	**04 37 07.5**	**+1.6**
	baz=19,slow=3.0							
GERES	**GERESS Array B**	**145.40**	**344**		PKPbc	**PKPbc**	**04 37 05.3**	**-0.9**
	comp=Z,3.1nm,0.9s,baz=29,slow=3.0,SNR=10.0							
GERES	**GERESS Array B**	**145.40**	**344**			**PKPab**	**04 37 06.3**	**-0.1**
BZS	**Buzias**	**145.40**	**333**	ǁ	P	**PKPdf**	**04 37 05.0**	**-1.3**
CONA	**Conrad Observa**	**145.60**	**341**		*e*P	**PKiKP**	**04 37 09.4**	**-1.4**
	comp=Z,16nm,1.8s							
HERR	**Herculane**	**145.61**	**331**	ǁ	P	**PKPab**	**04 37 07.5**	**+0.3**
MDVR	**Moldovita**	**146.00**	**332**	ǁ	P	**PKiKP**	**04 37 10.5**	**-1.1**
MOA	**Molln**	**146.15**	**343**		*e*P	**PKPbc**	**04 37 08.3**	**-0.3**
	comp=Z,5.0nm,1.1s							
ARSA	**Arzberg**	**146.31**	**341**		*e*P	**PKPbc**	**04 37 08.3**	**-0.8**
	comp=Z,4.0nm,0.8s							
SOKA	**Soboth**	**146.98**	**341**		*e*P	**PKiKP**	**04 37 14.9**	**+1.3**
	comp=Z,4.0nm,0.8s							
KBA	**Koelnbreinsper**	**147.11**	**343**		*e*P	**PKPbc**	**04 37 12.2**	**+0.6**
	comp=Z,5.2nm,0.8s							
OBKA	**Obir**	**147.28**	**341**		*e*P	**PKPab**	**04 37 13.2**	**-0.5**
	comp=Z,3.8nm,1.3s							
WATA	**Walderalm**	**147.33**	**346**		*e*P	**PKiKP**	**04 37 15.0**	**+0.6**
	comp=Z,6.7nm,1.1s							
RETA	**Reutte**	**147.38**	**347**		*e*P	**PKiKP**	**04 37 15.4**	**+1.0**
	comp=Z,4.9nm,0.9s							
WTTA	**Wattenberg**	**147.38**	**345**		*e*P	**PKiKP**	**04 37 14.4**	**-0.2**
	comp=Z,8.4nm,0.9s							
MOTA	**Moosalm**	**147.43**	**346**		*e*P	**PKiKP**	**04 37 17.1**	**+2.5**
	comp=Z,9.4nm,1.1s							
MYKA	**Terra Mystica**	**147.44**	**343**		*e*P	**PKPab**	**04 37 14.2**	**-0.1**
	comp=Z,1.0nm,0.4s							
SQTA	**Sankt Quirin**	**147.53**	**346**		*e*P	**PKPab**	**04 37 16.4**	**+1.7**
	comp=Z,9.2nm,1.0s							
ABTA	**Abfaltersbach**	**147.64**	**344**		*e*P	**PKiKP**	**04 37 14.5**	**-0.5**
	comp=Z,7.4nm,1.0s							
DAVA	**Damuels**	**147.76**	**348**		*e*P	**PKPab**	**04 37 18.0**	**+2.3**
	comp=Z,8.0nm,1.1s							
FETA	**Feichten**	**147.82**	**346**		*e*P	**PKiKP**	**04 37 14.8**	**-0.6**
	comp=Z,5.8nm,0.9s							
DAVOX	**Davos/Dischmat**	**148.24**	**347**		PKPbc	**PKPbc**	**04 37 14.3**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=26,slow=7.4,SNR=5.0							
PDG	**Podgorica**	**148.96**	**332**	ǁ	P	**PKiKP**	**04 37 16.9**	**-0.8**
MURB	**Monte Urbino**	**150.82**	**341**		PKPbc	**PKiKP**	**04 37 21.4**	**-0.3**
NRCA	**Norcia**	**151.02**	**340**		PKPbc	**PKiKP**	**04 37 21.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**176.80**	**208**		PKP	**PKPdf**	**04 37 40.5**	**+1.0**
	comp=Z,1.9nm,0.9s,baz=342,slow=1.3,SNR=7.6							
TORD					PKPab	**PKPab**	**04 39 23.2**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=180,slow=1.0,SNR=4.9							
TORD	**Torodi Ar. Bea**	**176.80**	**208**		PKPdf	**PKPdf**	**04 37 42.7**	**+3.1**

IDC 24 04:35:14.8±1.9, 7°.23N×124°.84E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.6/58, mbtmp3.9/5, MS3.9/2, Ms1 3.9/2, ms1mx3.0/41, Error ellipse: s-maj=211.3km s-min=19.6km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**26.37**	**11**	LR		LR	04 53 17.1	
	comp=Z,85nm,18.4s,baz=106,slow=41							
WRA	**Warramunga Arr**	**28.57**	**161**	P		P	04 41 13.4	+0.7
	1.3nm,0.5s,baz=340,slow=9.5,SNR=12							
ASAR	**Alice Springs**	**31.96**	**164**	P		P	04 41 43.0	+0.3
	0.5nm,0.3s,baz=339,slow=7.5,SNR=10							
STKA	**Stephens Creek**	**42.05**	**159**	P		P	04 43 06.8	-1.6
	1.7nm,0.7s,baz=345,slow=16,SNR=2.9							
MKAR	**Makanchi Array**	**53.63**	**325**	P		P	04 44 38.5	+0.4
	0.6nm,0.5s,baz=120,slow=8.1,SNR=7.0							
KURBB	**Kurchatov Arra**	**57.80**	**327**	P		P	04 45 07.4	-0.5
	0.8nm,0.6s,baz=123,slow=5.7,SNR=8.4							
FINES	**FINESS Array B**	**87.88**	**332**	LR		LR	05 30 13.1	
	comp=Z,138nm,19.4s,baz=38,slow=38							

*TAP **24** 04:49:22.9,24°.94N×122°.46E, h16km, ML3.5, C*
*JMA **24** 04:49:23.6,24°.88N×122°.48E, h40km±2km, M3.2*
*IDC **24** 04:49:44.8±9.4, 24°.86N×122°.41E, h230km±104km, mb3.0/6, mb1 3.1/7, mb1mx2.8/56, mbtmp3.6/7, MS3.7/1, Ms1 3.7/1, ms1mx2.9/17, Error ellipse: s-maj=54.0km s-min=17.7km az=64.0*

ISC 24 04:49:23.0±1.0, 24°.90N±0°.03×122°.48E±0°.02, h17km±7km, n113, σ0°83/137, mb3.5/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46**	**284**	*i* P		**Pb**	**04 49 32.0**	**-0.7**
	baz=279							
TWB1				S		**Sb**	**04 49 38.7**	**-0.6**
	baz=279							
EGS		**0.50**	**264**	P		**Pb**	**04 49 33.2**	**-0.2**
	baz=247							
EGS				*e*S		**Sb**	**04 49 41.0**	**+0.6**
	baz=247							
NTC	**Toucheng**	**0.59**	**266**	*i* P		**Pb**	**04 49 34.9**	**-0.1**
	baz=262							
TIPB	**Shangxi**	**0.60**	**277**	*i* P		**Pb**	**04 49 35.3**	**+0.2**
	baz=273							
TIPB				S		**Sb**	**04 49 43.1**	**-0.2**
	baz=273							
JYNG	**Yonagunijimaku**	**0.61**	**136**	P		**Pg**	**04 49 35.6**	**+0.4**
JYNG				S		**Sg**	**04 49 43.8**	**+0.5**
TWC	**Suao**	**0.64**	**244**	*i* P		**Pg**	**04 49 35.3**	**-0.4**
	baz=239							
TWC				S		**Sg**	**04 49 44.3**	**0.0**
	baz=239							
YOJ	**Yonaguni jima**	**0.65**	**132**	P		**Pg**	**04 49 36.0**	**+0.2**
	baz=124							
YOJ				S		**Sg**	**04 49 45.2**	**+0.8**
	baz=124							
YOJ	**Yonaguni jima**	**0.65**	**132**	P		**Pg**	**04 49 36.0**	**+0.2**
YOJ				S		**Sg**	**04 49 44.8**	**+0.4**
NWF	**Wu-fen Shan**	**0.66**	**285**	P		**Pb**	**04 49 36.4**	**+0.3**
	baz=282							
NWF				S		**Sb**	**04 49 44.9**	**-0.1**
	baz=282							
WFSB	**Wu-fen Shan**	**0.66**	**285**	P		**Pb**	**04 49 36.2**	**+0.2**
	baz=282							
WFSB				S		**Sb**	**04 49 45.5**	**+0.5**
	baz=282							
ENAH	**Nanao**	**0.76**	**234**	P		**Pg**	**04 49 37.6**	**-0.3**
	baz=231							
ENAH				*e*S		**Sb**	**04 49 48.3**	**+0.6**
	baz=231							
TWE	**Neicheng**	**0.76**	**257**	*i* P		**Pb**	**04 49 37.9**	**+0.1**
	baz=252							
TWE				*e*S		**Sn**	**04 49 48.9**	**-1.2**
	baz=252							
PCYT	**Pengchaiyu**	**0.82**	**333**	*i* P		**Pg**	**04 49 38.4**	**-0.6**
	baz=333							
PCYT				*e*S		**Sn**	**04 49 49.4**	**-2.1**
	baz=333							
ENA	**Nanau**	**0.82**	**235**	*i* P		**Pb**	**04 49 38.8**	**-0.1**
	baz=231							
ENA				S		**Sg**	**04 49 50.0**	**0.0**
	baz=231							
TWA	**Mucha**	**0.82**	**276**	P		**Pg**	**04 49 38.8**	**-0.3**
	baz=273							
YM08	**YM08**	**0.86**	**290**	P		**Pg**	**04 49 39.4**	**-0.4**
	baz=288							
YM01	**YM01**	**0.86**	**287**	P		**Pg**	**04 49 39.5**	**-0.5**
	baz=285							
YM11	**YM11**	**0.87**	**288**	*e*P		**Pg**	**04 49 39.5**	**-0.5**
	baz=286							
ENTT	**Nioudou**	**0.87**	**253**	*i* P		**Pn**	**04 49 40.2**	**-0.3**
	baz=236							
ENTT				S		**Sg**	**04 49 51.7**	**+0.1**
	baz=236							
NHDH	**Xindian Distri**	**0.87**	**275**	P		**Pn**	**04 49 39.9**	**-0.5**
	baz=271							
NHDH				*e*S		**Sg**	**04 49 51.1**	**-0.5**
	baz=271							
YM05	**YM05**	**0.87**	**288**	P		**Pg**	**04 49 39.7**	**-0.4**
	baz=286							
YM10	**YM10**	**0.88**	**287**	P		**Pg**	**04 49 39.4**	**-0.7**
	baz=285							
TAP1	**Taipei**	**0.88**	**279**	*e*P		**Pn**	**04 49 40.6**	**0.0**
	baz=277							
TWY	**Chenhua**	**0.89**	**295**	*i* P		**Pn**	**04 49 40.2**	**-0.5**
	baz=294							
YM04	**YM04**	**0.90**	**287**	P		**Pg**	**04 49 40.0**	**-0.5**
	baz=285							
NWLT	**Wulai**	**0.90**	**263**	*i* P		**Pg**	**04 49 40.1**	**-0.4**
	baz=260							
TAP	**Taipei**	**0.90**	**279**	*e*P		**Pn**	**04 49 40.8**	**-0.1**
	baz=277							
YM03	**YM03**	**0.90**	**288**	P		**Pg**	**04 49 40.0**	**-0.6**
	baz=286							
TATO	**Taipei**	**0.91**	**275**	P		**Pn**	**04 49 40.5**	**-0.5**
	baz=272							
ANP	**Anpu**	**0.92**	**288**	*e*P		**Pn**	**04 49 40.8**	**-0.4**
	baz=286							
NDT	**Datong Townshi**	**0.93**	**252**	*i* P		**Pn**	**04 49 41.2**	**-0.1**
	baz=232							
NDT				*e*S		**Sg**	**04 49 53.0**	**-0.3**
	baz=232							
NTST	**Danshui**	**0.97**	**286**	P		**Pg**	**04 49 41.2**	**-0.7**
	baz=284							
TWS1	**Kuangyinshan**	**0.99**	**282**	P		**Pg**	**04 49 41.6**	**-0.6**
	baz=280							
YHNB	**Yeheng**	**1.03**	**258**	P		**Pb**	**04 49 42.2**	**-0.2**
	baz=268							
NSK	**Sanguang**	**1.05**	**258**	*i* P		**Pb**	**04 49 42.3**	**-0.4**
	baz=268							
NACB	**Ninganchiao**	**1.08**	**229**	P		**Pb**	**04 49 43.0**	**-0.3**
	baz=226							
NNSB	**Datong**	**1.10**	**245**	P		**Pb**	**04 49 43.4**	**-0.3**
	baz=242							
NNSB				S		**Sb**	**04 49 57.6**	**-0.3**
	baz=242							
NNSH	**Datong**	**1.10**	**245**	*i* P		**Pn**	**04 49 43.8**	**0.0**
	baz=243							
NNS	**Nan Shan**	**1.11**	**246**	*i* P		**Pb**	**04 49 43.8**	**0.0**
	baz=242							
NNS				*e*S		**Sb**	**04 49 58.1**	**+0.1**
	baz=242							
ETLH	**Xiulin Townshi**	**1.14**	**233**	P		**Pn**	**04 49 44.1**	**-0.2**
	baz=230							
TWD	**Chiawan**	**1.15**	**225**	*i* P		**Pn**	**04 49 44.3**	**+0.1**
	baz=233							
NCUH	**Zhongli**	**1.18**	**274**	*e*P		**Pb**	**04 49 44.9**	**-0.1**
	baz=271							
HWA	**Hwalien**	**1.22**	**221**	*e*P		**Pg**	**04 49 46.4**	**-0.2**
	baz=218							
IRIF	**Iriomote-Funau**	**1.27**	**116**	P		**Pn**	**04 49 45.2**	**-0.7**
FUSS	**Fushou**	**1.30**	**240**	*i* P		**Pb**	**04 49 47.6**	**+0.4**
	baz=237							
FUSS				*e*S		**Sg**	**04 50 05.0**	**-0.3**
	baz=237							
WHF	**Hehuan Shan**	**1.34**	**236**	*i* P		**Pb**	**04 49 48.1**	**+0.2**
	baz=233							
WHF				S		**Sb**	**04 50 05.1**	**+0.1**
	baz=233							
TWT	**Tachien**	**1.35**	**242**	*i* P		**Pb**	**04 49 48.2**	**+0.2**
	baz=239							
LIOB	**Emei**	**1.36**	**260**	P		**Pb**	**04 49 47.5**	**-0.5**
	baz=257							
TDCB	**Techi**	**1.36**	**242**	P		**Pn**	**04 49 47.8**	**+0.4**
	baz=239							
TDCB				S		**Sn**	**04 50 05.3**	**+0.1**
	baz=239							
NSTT	**Nanjuang**	**1.37**	**259**	*i* P		**Pg**	**04 49 48.6**	**-0.9**
	baz=256							
ESL	**Shilin**	**1.44**	**222**	*e*P		**Pn**	**04 49 48.1**	**-0.2**
	baz=219							
CHGB	**Renai**	**1.45**	**235**	P		**Pb**	**04 49 50.1**	**+0.4**
	baz=232							
CHGB				S		**Sb**	**04 50 08.9**	**+0.8**
	baz=232							
HATJ	**Hateruma jima**	**1.47**	**124**	P		**Pn**	**04 49 47.9**	**-0.8**
HATJ				S		**Sn**	**04 50 06.4**	**-1.1**
OWD	**Renai**	**1.52**	**232**	P		**Pb**	**04 49 50.6**	**-0.2**
	baz=242							
OWD				S		**Sb**	**04 50 10.1**	**+0.3**
	baz=242							
WHP	**Taichung City**	**1.53**	**247**	*i* P		**Pb**	**04 49 50.9**	**-0.1**
	baz=259							
JKRS	**Kuro-shima**	**1.54**	**115**	P		**Pn**	**04 49 49.0**	**-0.6**
JKRS				S		**Sn**	**04 50 07.3**	**-1.9**
EGFH	**Guangfu**	**1.56**	**218**	*e*P		**Pn**	**04 49 48.8**	**-1.1**
	baz=199							
NMLH	**Miaoli**	**1.58**	**257**	*e*P		**Pb**	**04 49 51.9**	**+0.1**
	baz=269							
JIJ	**Ishigaki jima**	**1.60**	**109**	P		**Pn**	**04 49 50.2**	**-0.3**
NSY	**Sanyi**	**1.64**	**253**	*e*P		**Pb**	**04 49 52.3**	**-0.5**
	baz=266							
TWQ1	**Liyutan**	**1.65**	**251**	*e*P		**Pb**	**04 49 52.2**	**-0.7**
	baz=248							
DPDB	**Guoxing**	**1.66**	**239**	P		**Pb**	**04 49 53.3**	**+0.2**
	baz=237							
JISG	**Ishigakijimahi**	**1.69**	**100**	S		**Sn**	**04 50 11.8**	**-1.2**
HGSD	**Ruisui**	**1.70**	**215**	P		**Pn**	**04 49 52.3**	**+0.4**
	baz=198							
EHY	**Hungye**	**1.74**	**218**	*i* P		**Pn**	**04 49 52.7**	**+0.2**
	baz=215							
SMLT	**Sun Moon Lake**	**1.76**	**235**	*i* P		**Pb**	**04 49 55.1**	**+0.2**
	baz=216							
WDJ	**Dajia District**	**1.76**	**252**	*e*P		**Pb**	**04 49 54.1**	**-0.8**
	baz=250							
SSLB	**Suanglung**	**1.78**	**232**	P		**Pb**	**04 49 54.7**	**-0.5**
	baz=213							
TYC	**Yuchr**	**1.78**	**237**	*i* P		**Pb**	**04 49 55.4**	**+0.1**
	baz=217							
TCU	**Taichung**	**1.81**	**246**	*e*P		**Pb**	**04 49 54.7**	**-0.9**
	baz=243							
YULB	**Yu-li**	**1.85**	**216**	P		**Pn**	**04 49 53.7**	**-0.2**
	baz=214							
EYUL	**Yuli**	**1.87**	**215**	P		**Pn**	**04 49 54.7**	**+0.4**
	baz=212							
TWF1	**Yuli**	**1.88**	**215**	*i* P		**Pn**	**04 49 54.3**	**-0.1**
	baz=213							
WJS	**Zhushan**	**1.93**	**237**	*e*P		**Pb**	**04 49 57.4**	**-0.3**
	baz=234							
FULB	**Fuli**	**2.01**	**213**	*i* P		**Pn**	**04 49 55.8**	**-0.4**
	baz=195							
ALS	**Alishan**	**2.06**	**228**	*i* P		**Pn**	**04 49 58.4**	**+1.3**
	baz=209							
CHN5	**Tsauling**	**2.10**	**232**	*i* P		**Pb**	**04 49 59.4**	**-1.2**
	baz=213							
ELDTW	**Lidau**	**2.17**	**219**	P		**Pn**	**04 49 57.8**	**-0.6**
	baz=203							
EDH	**Donghe**	**2.20**	**210**	P		**Pn**	**04 49 58.2**	**-0.5**
	baz=195							
CHN4	**Tsaushan**	**2.31**	**229**	*i* P		**Pb**	**04 50 03.5**	**-0.8**
	baz=211							
TPUB	**Ta-pu**	**2.32**	**227**	P		**Pb**	**04 50 02.7**	**-1.8**
	baz=209							
LONT	**Longtian**	**2.34**	**212**	*e*P		**Pn**	**04 50 00.2**	**-0.4**
	baz=210							
STYT	**Tauyuan**	**2.34**	**223**	*i* P		**Pn**	**04 50 02.7**	**+2.0**
	baz=205							
WTP	**Ta-pu**	**2.37**	**226**	*i* P		**Pb**	**04 50 03.5**	**-1.8**
	baz=209							
LDUT	**Ludao**	**2.40**	**203**	P		**Pn**	**04 50 00.7**	**-0.9**
	baz=201							
TWGBT	**Beinan**

	baz=278							
TIPB	**Shuangxi**	**0.52 279**	*e*P		Pb	04 49 54.5	+0.2	
	baz=280							
TIPB			S		Sb	04 50 02.7	+0.6	
	baz=280							
TWC	**Suao**	**0.57 241**	P		Pb	04 49 54.5	-0.6	
	baz=239							
TWC			S		Sb	04 50 02.4	-0.9	
	baz=239							
NWF	**Wu-fen Shan**	**0.59 288**	*i* P		Pb	04 49 55.7	+0.3	
	baz=289							
NWF			S		Sb	04 50 05.4	+1.4	
	baz=289							
WFSB	**Wu-fen Shan**	**0.59 288**	P		Pb	04 49 55.8	+0.5	
	baz=289							
WFSB			S		Sb	04 50 04.9	+1.0	
	baz=289							
TWE	**Neicheng**	**0.68 256**	P		Pb	04 49 57.4	+0.4	
	baz=244							
TWE			S		Sb	04 50 07.0	+0.4	
	baz=244							
ENAH	**Nanao**	**0.69 231**	*e*S		Sb	04 50 07.1	+0.3	
	baz=230							
TWA	**Mucha**	**0.74 277**	*e*S		Sn	04 50 09.9	-1.3	
	baz=277							
ENA	**Nanau**	**0.75 233**	*e*S		Sb	04 50 09.1	+0.5	
	baz=231							
YM08	**YM08**	**0.79 292**	*e*P		Pn	04 49 59.8	-0.5	
	baz=293							
YM08			*e*S		Sn	04 50 11.1	-1.3	
	baz=293							
YM01	**YM01**	**0.79 289**	*e*P		Pn	04 50 00.2	-0.2	
	baz=290							
YM01			*e*S		Sb	04 50 11.1	+1.3	
	baz=290							
ENTT	**Nioudou**	**0.79 252**	*e*S		Sb	04 50 11.0	+1.2	
	baz=251							
TWY	**Chenhua**	**0.82 298**	*e*S		Sn	04 50 13.0	0.0	
	baz=299							
NNSB	**Datong**	**1.03 244**	S		Sn	04 50 17.7	-0.7	
	baz=243							
NNSH	**Datong**	**1.03 244**	*e*S		Sb	04 50 17.5	+0.8	
	baz=229							
NNS	**Nan Shan**	**1.03 245**	*e*S		Sn	04 50 18.6	+0.1	
	baz=228							

*TAP **24** 04:55:46.5,24˚.87N×122˚.42E,h3km,ML3.0,D*
*JMA **24** 04:55:46.8±0.2,24˚.87N×122˚.43E,h11km,M2.9*

ISC 24 04:55:46.2±1.2,24˚.90N±0˚.03×122˚.48E±0˚.03,h11km±9km, n69,σ0˚.80/113,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.46 284**		*i* P			**Pg**	**04 55 55.7**	**+0.5**
	baz=290								
TWB1				S			**Sb**	**04 56 02.6**	**-0.6**
	baz=290								
EGS		**0.50 264**		P			**Pb**	**04 55 56.6**	**-0.5**
	baz=266								
EGS				*e*S			**Sb**	**04 56 04.1**	**-0.3**
	baz=266								
NTC	**Toucheng**	**0.59 266**		P			**Pb**	**04 55 58.2**	**-0.4**
	baz=268								
TIPB	**Shuangxi**	**0.60 277**		*i* P			**Pb**	**04 55 58.9**	**+0.1**
	baz=281								
TIPB				*i* S			**Sb**	**04 56 07.4**	**+0.1**
	baz=281								
JYNG	**Yonagunijimaku**	**0.61 137**		P			**Pb**	**04 55 59.0**	**+0.1**
JYNG				*e*S			**Sb**	**04 56 06.9**	**-0.6**
TWC	**Suao**	**0.65 244**		*i* P			**Pg**	**04 55 58.9**	**+0.2**
	baz=243								
TWC				S			**Sb**	**04 56 08.7**	**+0.2**
	baz=243								
YOJ	**Yonaguni jima**	**0.65 132**		P			**Pb**	**04 55 59.5**	**0.0**
YOJ				*e*S			**Sb**	**04 56 07.6**	**-0.9**
NWF	**Wu-fen Shan**	**0.66 285**		*i* P			**Pb**	**04 56 00.2**	**+0.4**
	baz=289								
NWF				S			**Sb**	**04 56 09.1**	**+0.1**
	baz=289								
WFSB	**Wu-fen Shan**	**0.66 285**		P			**Pb**	**04 55 59.9**	**+0.2**
	baz=289								
WFSB				S			**Sb**	**04 56 09.4**	**+0.4**
	baz=289								
ENAH	**Nanao**	**0.76 234**		P			**Pb**	**04 56 01.3**	**-0.1**
	baz=233								
ENAH				S			**Sb**	**04 56 12.1**	**+0.4**
	baz=233								
TWE	**Neicheng**	**0.76 257**		P			**Pb**	**04 56 01.4**	**-0.1**
	baz=257								
TWE				S			**Sb**	**04 56 12.0**	**+0.1**
	baz=257								
PCYT	**Pengchaiyu**	**0.82 333**		*i* P			**Pn**	**04 56 03.4**	**-0.2**
	baz=337								
TWA	**Mucha**	**0.82 276**		P			**Pg**	**04 56 02.1**	**0.0**
	baz=278								
ENA	**Nanau**	**0.82 235**		*i* P			**Pb**	**04 56 02.2**	**-0.3**
	baz=234								
ENA				*i* S			**Sb**	**04 56 14.1**	**+0.6**
	baz=234								
YM08	**YM08**	**0.86 290**		P			**Pn**	**04 56 03.7**	**-0.5**
	baz=293								
YM01	**YM01**	**0.86 287**		P			**Pn**	**04 56 04.3**	**-0.1**
	baz=289								
YM11	**YM11**	**0.87 288**		P			**Pn**	**04 56 03.8**	**-0.6**
	baz=291								
ENTT	**Nioudou**	**0.87 253**		*i* P			**Pn**	**04 56 03.8**	**-0.7**
	baz=253								
ENTT				S			**Sn**	**04 56 15.8**	**-1.4**
	baz=253								
NHDH	**Xindian Distri**	**0.87 274**		*e*P			**Pn**	**04 56 03.8**	**-0.6**
	baz=276								
NHDH				*e*S			**Sn**	**04 56 16.0**	**-1.1**
	baz=276								
YM05	**YM05**	**0.87 288**		P			**Pn**	**04 56 04.2**	**-0.3**
	baz=290								
YM10	**YM10**	**0.88 287**		P			**Pn**	**04 56 04.0**	**-0.5**
	baz=290								
TWY	**Chenhua**	**0.89 295**		*i* P			**Pn**	**04 56 04.2**	**-0.3**
	baz=298								
TWY				S			**Sn**	**04 56 16.8**	**-0.6**
	baz=298								
YM04	**YM04**	**0.90 287**		P			**Pn**	**04 56 04.1**	**-0.7**
	baz=289								
NWLT	**Wulai**	**0.90 262**		*i* P			**Pg**	**04 56 03.9**	**+0.4**
	baz=263								
NWLT				*e*S			**Sn**	**04 56 16.6**	**-1.2**
	baz=263								
YM03	**YM03**	**0.90 288**		*e*P			**Pg**	**04 56 03.8**	**+0.2**
	baz=291								
TATO	**Taipei**	**0.91 275**		*e*S			**Sn**	**04 56 17.2**	**-0.7**
	baz=277								
ANP	**Anpu**	**0.92 288**		P			**Pn**	**04 56 05.0**	**-0.2**
	baz=291								
ANP				*e*S			**Sn**	**04 56 18.4**	**-0.1**
	baz=291								
NDT	**Datong Townshi**	**0.93 252**		*i* P			**Pn**	**04 56 04.8**	**-0.5**
	baz=252								
NDT				S			**Sn**	**04 56 18.4**	**-0.2**
	baz=252								
YHNB	**Yeheng**	**1.03 257**		P			**Pn**	**04 56 06.4**	**-0.3**
	baz=258								
YHNB				*e*S			**Sg**	**04 56 19.8**	**+0.3**
	baz=258								
NSK	**Sanguang**	**1.05 258**		*i* P			**Pb**	**04 56 06.2**	**-0.1**
	baz=258								
NSK				*e*S			**Sn**	**04 56 20.7**	**-0.8**
	baz=258								
NACB	**Ninganchiao**	**1.08 228**		P			**Pb**	**04 56 06.5**	**-0.5**
	baz=227								
NACB				*e*S			**Sg**	**04 56 21.4**	**+0.2**
	baz=227								
NNSB	**Datong**	**1.10 245**		P			**Pb**	**04 56 07.1**	**-0.3**
	baz=245								
NNSB				S			**Sn**	**04 56 22.6**	**-0.5**
	baz=245								
NNSH	**Datong**	**1.10 245**		*i* P			**Pn**	**04 56 07.3**	**-0.4**
	baz=245								
NNSH				*i* S			**Sg**	**04 56 22.3**	**+0.4**
	baz=245								
NNS	**Nan Shan**	**1.11 246**		*i* P			**Pg**	**04 56 07.6**	**0.0**
	baz=245								
NNS				S			**Sg**	**04 56 22.3**	**+0.3**
	baz=245								
ETLH	**Xiulin Townshi**	**1.14 233**		P			**Pb**	**04 56 07.7**	**-0.3**
	baz=232								
ETLH				*e*S			**Sn**	**04 56 23.6**	**-0.3**
	baz=232								
TWD	**Chiawan**	**1.15 225**		*e*P			**Pg**	**04 56 08.4**	**+0.2**
	baz=223								
FUSS	**Fushou**	**1.30 240**		*i* P			**Pn**	**04 56 10.3**	**-0.2**
	baz=240								
FUSS				S			**Sg**	**04 56 28.6**	**+0.5**
	baz=240								
WHF	**Hehuan Shan**	**1.34 236**		*i* P			**Pg**	**04 56 11.7**	**-0.3**
	baz=235								
WHF				S			**Sg**	**04 56 29.6**	**+0.2**
	baz=235								
TWT	**Tachien**	**1.35 242**		*i* P			**Pb**	**04 56 11.4**	**-0.2**
	baz=241								
TWT				S			**Sg**	**04 56 30.4**	**+0.6**
	baz=241								
LIOB	**Emei**	**1.36 260**		P			**Pb**	**04 56 11.8**	**+0.1**
	baz=260								
TDCB	**Techi**	**1.37 242**		P			**Pb**	**04 56 11.7**	**-0.2**
	baz=241								
TDCB				S			**Sg**	**04 56 30.6**	**+0.4**
	baz=241								
NSTT	**Nanjuang**	**1.37 259**		*e*P			**Pb**	**04 56 11.4**	**-0.5**
	baz=259								
NSTT				S			**Sg**	**04 56 30.8**	**+0.3**
	baz=259								
ESL	**Shilin**	**1.44 222**		P			**Pn**	**04 56 12.1**	**-0.2**
	baz=220								
CHGB	**Renai**	**1.46 235**		P			**Pg**	**04 56 13.8**	**-0.4**
	baz=234								
CHGB				*e*S			**Sg**	**04 56 32.6**	**-0.5**
	baz=234								
HATJ	**Hateruma jima**	**1.47 125**		P			**Pg**	**04 56 14.1**	**-0.3**
OWD	**Renai**	**1.52 232**		P			**Pb**	**04 56 14.3**	**-0.2**
	baz=231								
OWD				S			**Sg**	**04 56 34.6**	**-0.5**
	baz=231								
WHP	**Taichung City**	**1.53 247**		*i* P			**Pg**	**04 56 15.1**	**-0.5**
	baz=246								
WHP				*e*S			**Sb**	**04 56 34.1**	**0.0**
	baz=246								
TWQ1	**Liyutan**	**1.65 251**		*e*P			**Pb**	**04 56 15.8**	**-0.8**
	baz=250								
DPDB	**Guoxing**	**1.66 239**		*e*P			**Pb**	**04 56 16.1**	**-0.7**
	baz=238								
DPDB				*e*S			**Sb**	**04 56 38.2**	**+0.5**
	baz=238								
HGSD	**Ruisui**	**1.70 215**		P			**Pn**	**04 56 16.0**	**+0.2**
	baz=213								
EHY	**Hungye**	**1.75 218**		P			**Pb**	**04 56 17.3**	**-0.9**
	baz=216								
SMLT	**Sun Moon Lake**	**1.76 235**		*e*P			**Pn**	**04 56 17.3**	**+0.6**
	baz=234								
SMLT				*e*S			**Sb**	**04 56 40.4**	**-0.4**
	baz=234								
SSLB	**Suanglung**	**1.78 232**		P			**Pn**	**04 56 17.4**	**+0.4**
	baz=231								
SSLB				S			**Sb**	**04 56 41.6**	**+0.4**
	baz=231								
TYC	**Yuchr**	**1.78 237**		*e*P			**Pb**	**04 56 17.8**	**-1.0**
	baz=235								
TYC				*e*S			**Sb**	**04 56 40.8**	**-0.4**
	baz=235								
YULB	**Yu-li**	**1.85 216**		P			**Pn**	**04 56 18.0**	**+0.1**
	baz=214								
FULB	**Fuli**	**2.01 213**		P			**Pn**	**04 56 20.4**	**+0.3**
	baz=211								
FULB				S			**Sb**	**04 56 46.6**	**-1.2**
	baz=211								
ALS	**Alishan**	**2.06 228**		P			**Pn**	**04 56 22.1**	**+1.0**
	baz=227								
ALS				S			**Sn**	**04 56 47.7**	**+0.7**
	baz=227								
CHN5	**Tsauling**	**2.10 232**		P			**Pn**	**04 56 22.5**	**+1.1**
	baz=231								
CHN5				S			**Sn**	**04 56 48.4**	**+0.9**
	baz=231								
EDH	**Donghe**	**2.20 210**		P			**Pn**	**04 56 23.6**	**+0.9**
	baz=208								
EDH				*e*S			**Sn**	**04 56 50.5**	**+0.6**
	baz=208								
WTP	**Ta-pu**	**2.37 226**		P			**Pn**	**04 56 26.1**	**+1.0**
	baz=225								
WTP				*e*S			**Sn**	**04 56 55.5**	**+1.3**
	baz=225								
TWK	**Hsinying**	**2.44 229**		*e*P			**Pb**	**04 56 27.9**	**-2.3**
	baz=227								
CHN1	**Nanshi**	**2.47 227**		*e*P			**Pn**	**04 56 27.4**	**+1.0**
	baz=225								
CHN1				S			**Sn**	**04 56 57.8**	**+1.2**
	baz=225								
SLGT	**Liugui**	**2.53 222**		P			**Pb**	**04 56 29.2**	**-2.5**
	baz=221								
SLGT				*e*S			**Sn**	**04 56 59.0**	**+0.9**
	baz=221								
MATB	**Ma-tsu**	**2.61 299**		*e*P			**Pn**	**04 56 29.7**	**+1.4**
	baz=299								
MASBT	**Mashibuluo**	**2.84 217**		*e*P			**Pn**	**04 56 33.7**	**+2.3**
	baz=216								
XPSS	**Dashiqiu**	**2.89 315**		*e*P			**Pn**	**04 56 33.7**	**+1.5**
	baz=315								
XPSS				*e*S			**Sn**	**04 57 09.3**	**+2.4**
	baz=315								
EAST	**Anshuo**	**2.92 211**		*e*P			**Pn**	**04 56 33.7**	**+1.1**
	baz=210								
LYJJ	**Jianjiangzhen**	**2.96 304**		*e*P			**Pb**	**04 56 36.3**	**-2.6**
	baz=304								
WDGT	**Dungji**	**3.05 238**		*e*P			**Pn**	**04 56 36.1**	**+1.7**
	baz=237								

IDC 24 04:55:46.7±6.3,17˚.02S×171˚.36W,h0km,mb4.2/3, mb1 4.4/3,mb1mx3.8/47,mbtmp4.2/3,Error ellipse: s-maj=320.0km s-min=54.0km az=146.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**51.40**	**258**	P			P	05 04 52.8	-1.1
	0.8nm,0.5s,baz=97,slow=6.9,SNR=25								
ASAR	**Alice Springs**	**51.50**	**253**	P			P	05 04 54.8	+0.2
	9.0nm,0.8s,baz=88,slow=8.2,SNR=145								
FITZ	**Fitzroy Crossi**	**59.80**	**259**	P			P	05 05 55.3	+1.0
	1.6nm,0.8s,baz=91,slow=8.7,SNR=2.4								
GERES	**GERESS Array B**	**147.99**	**354**	PKPbc			PKPbc	05 15 33.4	-0.8
	0.2nm,0.3s,baz=299,slow=26,SNR=1.8								

*NNC **24** 04:58:40.5±11.0,36˚.78N×70˚.74E,h157km±263km,mb3.0, mpv3.9,Error ellipse: s-maj=106.2km s-min=59.1km az=7.0*

ISC 24 04:58:39.1±3.5,36˚.7N±0˚.2×70˚.9E±0˚.1,h150km,n10, σ1§19/13,5D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.89**	**21**	P			**Pn**	**05 00 05.5**	**+0.9**
	SNR=42								
UCH	**Uchtor**	**6.24**	**26**	P			**Pn**	**05 00 10.2**	**+0.9**
	SNR=12								
EKS2	**Erkin-Say**	**6.41**	**19**	P			**Pn**	**05 00 13.0**	**+1.7**
	SNR=13								
KK31	**Karatay Array**	**6.46**	**358**	P			**Pn**	**05 00 11.9**	**+0.1**
	2.1nm,0.3s,baz=180,slow=13,SNR=28								
KK31				⇓S			**Sn**	**05 01 24.3**	**-0.1**
	2.4nm,0.5s,baz=184,slow=20								
AAK	**Ala-Archa**	**6.60**	**24**	P			**Pn**	**05 00 14.7**	**+0.9**
	SNR=8.6								
AAK	**Ala-Archa**	**6.60**	**24**	⇓P			**Pn**	**05 00 14.7**	**+0.9**
	7.2nm,0.6s								
AAK				⇓S			**Sn**	**05 01 29.3**	**+1.3**
	2.6nm,0.5s								
ULHL	**Ulahol**	**6.96**	**35**	P			**Pn**	**05 00 18.6**	**-0.1**
	SNR=6.1								
TKM2	**Tokmak 2**	**7.24**	**29**	P			**Pn**	**05 00 22.7**	**+0.3**
	SNR=12								
TKM2	**Tokmak 2**	**7.24**	**29**	⇓P			**Pn**	**05 00 22.7**	**+0.3**
	8.6nm,0.8s								
TKM2				⇓S			**Sn**	**05 01 41.0**	**-2.4**
	0.3nm,0.3s								
AB31	**Akbulak array**	**14.91**	**331**	P			**Pn**	**05 02 01.6**	**-0.6**
	0.3nm,0.3s,baz=152,slow=12,SNR=9.9								

*BJI **24** 05:02:28.1±0.0,2˚.31N×127˚.03E,h44km,mB5.1/30, mb4.9/45,Ms4.3/7,Ms7 4.1/7*
*IDC **24** 05:02:29.8±1.7,2˚.23N×127˚.00E,h46km±17km,mb4.3/22, mb1 4.4/25,mb1mx4.2/45,mbtmp4.5/25,ML4.3/3,MS3.5/13, Ms1 3.5/13,ms1mx3.3/39,Error ellipse: s-maj=18.5km s-min=9.6km az=73.0*
*NEIC **24** 05:02:30.2±2.4,2˚.25N±0˚.06×127˚.10E±0˚.07,h50km±6km, mb4.8/73,Error ellipse: s-maj=11.0km s-min=7.7km az=62.0*
*DJA **24** 05:02:30.7±0.2,2˚.N±2˚×127˚.7E±˚,h44km±6km,M4.8/28, mb4.8/28,mB5.4/11,MLv4.6/19,Mw(mB)4.9/11,Mwp4.8/1*
*MAN **24** 05:02:31.3,3˚.08N×127˚.46E,h224km,mb5.0,ML3.9, MS4.0*

ISC 24 05:02:30.5±0.3,2˚.27N±0˚.04×127˚.06E±0˚.05,h53km,n206, σ1§42/205,mb4.7/80,MS3.5/13,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.52 168**		P			**Pn**	**05 02 54.6**	**-0.7**
TNTI	**Ternate**	**1.52 168**		Pn			**Pn**	**05 02 55.0**	**-0.3**
SGSI	**Sangihe**	**2.08 313**		P			**Pn**	**05 03 03.4**	**+0.4**
SGSI				S			**Sn**	**05 03 28.6**	**+0.9**
KMSI	**Cibinong**	**3.51 241**		P			**Pn**	**05 03 24.9**	**+2.4**
DDMP	**Don Marcelino,**	**4.04 341**		*e*P			**Pn**	**05 03 28.1**	**-1.8**
DDMP				*e*S			**Sn**	**05 04 12.8**	**-3.1**
GTOI	**Gorontalo**	**4.36 248**		P			**Pn**	**05 03 37.0**	**+2.8**
SKMP	**Bagumbayan, Su**	**4.91 329**		*e*P			**Pn**	**05 03 40.3**	**-1.6**
SKMP				*e*S			**Sn**	**05 04 34.1**	**-3.2**
DAV	**Davao City (W)**	**4.99 343**		P			**Pn**	**05 03 43.4**	**+0.5**
	46nm,0.3s,baz=32,slow=6.4,SNR=1.6								
DAV				S			**Sn**	**05 04 47.3**	**+7.9**
	58nm,0.3s,baz=102,slow=23,SNR=1.9								
SIJI	**Sorong**	**5.24 126**		P			**Pn**	**05 03 47.0**	**+0.6**
	9.4nm,0.3s,baz=338,slow=20,SNR=8.3								
SIJI				S			**Sn**	**05 04 44.8**	**-0.7**
	baz=170,slow=22,SNR=1.4								
SIJI				LR			LR	05 06 08.6	
	comp=Z,797nm,21.5s,baz=269,slow=42								
LUWI	**Luwuk**	**5.40 233**		P			**Pn**	**05 03 49.5**	**+0.9**
	1.1nm199nm,1.0s								
LUWI	**Luwuk**	**5.40 233**		Pn			**Pn**	**05 03 49.4**	**+0.9**
MRSI	**Marisa**	**5.42 251**		P			**Pn**	**05 03 50.8**	**+2.0**
	1.2nm3μm317nm,0.7s								
NLAI	**Namlea**	**5.47 180**		P			**Pn**	**05 03 51.2**	**+1.7**
	0.3nm64nm,1.2s								
MSAI	**Masohi**	**5.88 161**		P			**Pn**	**05 03 56.6**	**+1.4**
	0.3nm1μm18nm,0.8s								
BUKP	**Musuan**	**5.92 340**		*e*P			**Pn**	**05 03 56.3**	**+0.6**
BUKP				*e*S			Sn	05 04 48.3	-14
AAI	**Ambon**	**6.02 169**		P			**Pn**	**05 03 59.2**	**+2.1**
	0.4nm7μm78nm,0.7s								
APSI	**Ampana**	**6.26 240**		P			**Pn**	**05 04 03.1**	**+2.7**
	0.6nm2μm119nm,0.7s								
TOLI2	**Tolitoli**	**6.38 260**		Pn			**Pn**	**05 04 03.3**	**+1.3**
CGP	**Cagayan de Oro**	**6.58 339**		*e*P			**Pn**	**05 04 06.4**	**+1.7**
PAGZ	**Pagadian**	**6.64 327**		*e*P			**Pn**	**05 04 03.3**	**-2.3**
FAKI	**Fak Fak**	**7.31 135**		P			**Pn**	**05 04 15.4**	**+0.6**
	0.1nm40nm,1.1s								
FAKI	**Fak Fak**	**7.31 135**		Pn			**Pn**	**05 04 11.1**	**-3.7**
MPSI	**Mapaga**	**7.41 255**		P			**Pn**	**05 04 18.9**	**+2.8**
	0.5nm61nm,1.2s								
KDI	**Kendari**	**7.61 216**		P			**Pn**	**05 04 21.3**	**+2.4**
	0.3nm72nm,0.7s								
TTSI	**Tana Toraja**	**8.96 234**		P			**Pn**	**05 04 35.6**	**-1.7**
	2μm38nm,0.9s								
MYLDM	**Lahad Datu**	**9.02 289**		Pn			**Pn**	**05 04 41.0**	**+2.9**
SPSI	**Sidrap Palu**	**9.56 230**		P			**Pn**	**05 04 47.7**	**+2.1**
	28nm,0.6s								
BNSI	**Bone**	**9.60 226**		P			**Pn**	**05 04 47.3**	**+1.2**
	22nm,0.8s								
BAKI	**Biak**	**9.68 111**		P			**Pn**	**05 04 50.2**	**+3.0**
	3μm254nm,1.2s								
BSSI	**Bau Bau, Buton**	**10.62 218**		P			**Pn**	**05 05 01.2**	**+1.1**
	22nm,0.9s								
EDFI	**Ende, Flores**	**12.18 206**		P			**Pn**	**05 05 23.5**	**+1.9**
	18nm,0.8s								
SOEI	**Soe**	**12.27 193**		P			Pn	05 05 27.6	+4.9
	85nm,1.1s								
SOEI	**Soe**	**12.27 193**		Pn			Pn	05 05 16.5	-6.2
SMPI	**Sarmi**	**12.39 110**		P			**P**	**05 05 33.4**	**-1.4**
MTKI	**Muara Teweh, K**	**12.57 255**		P			**Pn**	**05 05 29.7**	**+2.9**
	27nm,0.4s								
GENI	**Genyem**	**13.97 110**		P			**Pn**	**05 05 47.2**	**+1.4**
	59nm,0.5s								
PLAI	**Plampang**	**14.39 220**		P			**Pn**	**05 05 53.8**	**+2.4**
	1μm152nm,1.2s								
JAY	**Jayapura**	**14.45 109**		P			**Pn**	**05 05 53.9**	**+1.7**
	0.3nm,0.3s,baz=321,slow=12,SNR=1.9								
JAY				LR			LR	05 10 29.5	
	comp=Z,277nm,19.9s,baz=302,slow=33								
JAY	**Jayapura**	**14.45 109**		P			**Pn**	**05 05 51.3**	**-0.9**
	14nm,0.8s								
SBUM	**Sibu**	**14.83 271**		Pn			**Pn**	**05 05 59.7**	**+2.6**
MTN	**Manton Dam**	**15.55 165**		P			**P**	**05 06 10.6**	**+0.7**
SRBI	**Singaraja**	**15.66 229**		P			**Pn**	**05 06 09.0**	**+1.1**
	114nm,1.0s								
BLJI	**Banyuglugur**	**16.71 233**		P			**P**	**05 06 23.7**	**+0.9**
	5μm144nm,0.9s								
JAGI	**Jajag, Banyuwa**	**16.72 230**		P			**Pn**	**05 06 22.1**	**+0.8**
JAGI				IAmb			IAmb	05 06 27.5	
	comp=Z,66nm,0.9s								
KSM	**Kuching**	**16.76 268**		P			**Pn**	**05 06 20.9**	**-1.0**
GRJI	**Gresik**	**17.18 238**		P			**Pn**	**05 06 28.2**	**+1.3**
	comp=Z,46nm,0.7s								
KNRA	**Kununurra**	**17.91 175**		P			**P**	**05 06 36.1**	**+0.1**
KNRA				IAmb			IAmb	05 06 37.3	
	comp=Z,64nm,0.8s								
FITZ	**Fitzroy Crossi**	**20.29 184**		P			**P**	**05 07 01.3**	**-0.7**
	comp=Z,7.0nm,0.7s,baz=24,slow=9.5,SNR=20								
FITZ	**Fitzroy Crossi**	**20.29 184**		P			**P**	**05 07 01.5**	**-0.5**
DLV	**T Lat**	**20.77 298**		P			**P**	**05 07 05.3**	**-2.1**
GUMO	**Guam**	**20.90 56**		LR			LR	05 13 50.9	
	comp=Z,193nm,21.5s,baz=232,slow=32								
TWG	**Pinlang**	**21.24 345**		P			**P**	**05 07 09.2**	**-3.1**
TWG				IAmb			IAmb	05 07 11.5	
	comp=Z,26nm,0.7s								
YULB	**Yu-li**	**21.73 346**		P			**P**	**05 07 16.6**	**-0.8**
TPUB	**Ta-pu**	**21.82 344**		P			**P**	**05 07 16.9**	**-1.5**
TPUB				IAmb			IAmb	05 07 23.6	
	comp=Z,42nm,0.7s								
SSLB	**Suanglung**	**22.19 345**		P			**P**	**05 07 20.8**	**-1.7**
SSLB				IAmb			IAmb	05 07 28.3	
	comp=Z,17nm,0.6s								
WB0	**Warramunga Arr**	**23.05 162**		P			**P**	**05 07 29.7**	**-1.9**
PMG	**Port Moresby**	**23.14 120**		LR			LR	05 17 41.2	
	comp=Z,153nm,18.3s,baz=260,slow=39								
WRAB	**Tennant Creek**	**23.20 162**		P			**P**	**05 07 31.6**	**-1.4**
WRA	**Warramunga Arr**	**23.20 162**		P			**P**	**05 07 32.1**	**-0.9**
	comp=Z,17nm,0.8s

	comp=Z,25nm,0.8s							
JNU	**Nakatsue**	**30.90**	**6**	P		**P**	**05 08 42.5**	**+0.3**
	comp=Z,24nm,0.8s,baz=180,slow=1.3,SNR=10							
JNU				LR		LR	05 25 00.5	
	comp=Z,68nm,18.5s,baz=152,slow=44							
JNU	**Nakatsue**	**30.90**	**6**	P		**P**	**05 08 42.5**	**+0.3**
CM04	**Chiang Mai Arr**	**31.85**	**302**	P		**P**	**05 08 51.0**	**+0.3**
	comp=Z,7.7nm,0.7s							
CM09	**Chiang Mai Arr**	**31.86**	**302**	P		**P**	**05 08 52.0**	**+1.1**
	comp=Z,9.5nm,1.0s							
CM01	**Chiang Mai Arr**	**31.88**	**302**	P		**P**	**05 08 52.1**	**+1.1**
	comp=Z,127nmcomp=Z,7.0nm,1.1s							
CM05	**Chiang Mai Arr**	**31.88**	**302**	P		**P**	**05 08 52.0**	**+1.0**
	comp=Z,4.4nm,1.2s							
CM02	**Chiang Mai Arr**	**31.89**	**302**	P		**P**	**05 08 52.0**	**+0.9**
	comp=Z,6.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**31.91**	**302**	P		**P**	**05 08 50.5**	**-0.7**
	comp=Z,2.3nm,0.4s,baz=121,slow=7.2,SNR=26							
CMAR	**Chiang Mai Arr**	**31.91**	**302**	P		**P**	**05 08 51.3**	**0.0**
CM15	**Chiang Mai Arr**	**31.92**	**302**	P		**P**	**05 08 52.8**	**+1.4**
CM13	**Chiang Mai Arr**	**31.92**	**302**	P		**P**	**05 08 52.0**	**+0.6**
	comp=Z,5.0nm,0.9s							
CMMT	**Chiang Mai**	**32.06**	**303**	P		**P**	**05 08 52.0**	**-0.6**
	comp=Z,196nmcomp=Z,5.8nm,0.7s							
CHTO	**Chiang Mai**	**32.07**	**303**	P		**P**	**05 08 52.1**	**-0.6**
CHTO				IAmb		IAmb	05 08 53.3	
	comp=Z,8.3nm,0.7s							
ENH	**Enshi**	**32.45**	**331**	P		**P**	**05 08 55.6**	**-0.3**
ENH				IAmb		IAmb	05 08 56.8	
	comp=Z,11nm,0.7s							
MHMT	**Maesarieng**	**32.64**	**301**	P		**P**	**05 08 59.3**	**+1.6**
MORW	**Morawa**	**32.90**	**198**	P		**P**	**05 08 59.9**	**+0.1**
JHJ	**Hachijo jima 2**	**32.93**	**20**	LR		LR	05 22 34.5	
	comp=Z,43nm,18.6s,baz=180,slow=36							
JWT	**Wachi**	**33.75**	**12**	P		**P**	**05 09 05.3**	**-1.8**
INU	**Inuyama**	**34.19**	**15**	P		**P**	**05 09 10.0**	**-0.9**
KSRS	**Korea Array**	**35.02**	**1**	P		**P**	**05 09 18.9**	**+0.8**
	comp=Z,11nm,0.8s,baz=179,slow=10,SNR=31							
KSRS				LR		LR	05 28 21.2	
	comp=Z,37nm,18.4s,baz=180,slow=44							
KS19	**Wonju Array Si**	**35.07**	**1**	P		**P**	**05 09 18.8**	**+0.3**
KS19				IAmb		IAmb	05 09 31.6	
	comp=Z,23nm,1.1s							
MJAR	**Matsushiro Arr**	**35.63**	**16**	P		**P**	**05 09 22.0**	**-1.3**
	comp=Z,7.1nm,0.9s,baz=182,slow=9.2,SNR=15							
MJAR				LR		LR	05 24 09.3	
	comp=Z,74nm,19.3s,baz=220,slow=36							
MJAR	**Matsushiro Arr**	**35.63**	**16**	P		**P**	**05 09 20.9**	**-2.4**
MAJO	**Matsushiro**	**35.63**	**16**	P		**P**	**05 09 22.1**	**-1.2**
MAJO				IAmb		IAmb	05 09 24.9	
	comp=Z,18nm,0.9s							
MAT	**Matsushiro**	**35.63**	**16**	P		**P**	**05 09 22.3**	**-1.0**
XAN	**Xi'an**	**35.86**	**334**	P		**P**	**05 09 24.5**	**-0.9**
XAN				pmax		pmax		
	comp=Z,8.0nm,0.9s							
XAN				LR		LR		
	comp=Z,200nm,14.1s							
XAN				LR		LR		
	comp=Z,97nm,11.9s							
XAN				LR		LR		
	comp=Z,160nm,13.0s							
XAN	**Xi'an**	**35.86**	**334**	P		**P**	**05 09 24.5**	**-0.9**
EIDS	**Eidsvold**	**36.01**	**141**	P		**P**	**05 09 24.9**	**-1.8**
EIDS				IAmb		IAmb	05 09 45.9	
	comp=Z,8.2nm,0.9s							
CD2	**Chengdu**	**36.01**	**325**	P		**P**	**05 09 26.5**	**-0.3**
CD2				pmax		pmax		
	comp=Z,20nm,0.7s							
NWAO	**Narrogin (SRO)**	**36.22**	**194**	P		**P**	**05 09 28.5**	**+0.1**
NWAO				IAmb		IAmb	05 09 33.0	
	comp=Z,15nm,1.1s							
STKA	**Stephens Creek**	**36.66**	**159**	P		**P**	**05 09 32.6**	**+0.5**
	comp=Z,17nm,0.8s,baz=334,slow=7.4,SNR=25							
STKA	**Stephens Creek**	**36.66**	**159**	P		**P**	**05 09 32.5**	**+0.3**
JSD	**Sado**	**37.05**	**15**	P		**P**	**05 09 34.5**	**-1.0**
JSD				IAmb		IAmb	05 09 35.5	
	comp=Z,19nm,0.9s							
JMM	**Marumori**	**37.60**	**18**	P		**P**	**05 09 39.4**	**-0.7**
BJT	**Baijiatuan**	**38.85**	**347**	P		**P**	**05 09 50.9**	**+0.3**
BJI	**Beijing**	**38.87**	**347**	P		**P**	**05 09 50.6**	**-0.1**
BJI				pmax		pmax		
	comp=Z,20nm,0.9s							
LZH	**Lanzhou**	**39.92**	**330**	*eP*		**P**	**05 10 01.5**	**+1.7**
LZH				pP		pP	05 10 13.8	+0.9
LZH				sP		sP	05 10 19.4	+0.5
LZH				pmax		pmax		
	comp=Z,19nm,1.6s							
LZH				pmax		pmax		
	comp=Z,70nm,5.8s							
HHC	**Hu-ho-hao-te**	**40.88**	**342**	*eP*		**P**	**05 10 09.8**	**+2.2**
HHC				pmax		pmax		
	comp=Z,11nm,0.7s							
HHC				pmax		pmax		
	comp=Z,160nm,6.9s							
SHL	**Shillong**	**41.01**	**308**	P		**P**	**05 10 08.0**	**-1.0**
SHL				IAmb		IAmb	05 10 27.4	
	comp=Z,16nm,0.8s							
USA0B	**Ussuriysk Arra**	**41.98**	**5**	P		**P**	**05 10 17.0**	**+0.6**
USA0B				IAmb		IAmb	05 10 18.7	
	comp=Z,17nm,0.9s							
USRK	**Ussuriysk Ar.**	**41.98**	**5**	P		**P**	**05 10 17.4**	**+1.1**
	comp=Z,15nm,0.8s,baz=192,slow=8.1,SNR=25							
USRK	**Ussuriysk Ar.**	**41.98**	**5**	P		**P**	**05 10 16.7**	**+0.3**
MDJ	**Mudanjiang**	**42.23**	**3**	P		**P**	**05 10 19.8**	**+1.4**
MDJ				pmax		pmax		
	comp=Z,30nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,150nm,3.7s							
MDJ	**Mudanjiang**	**42.23**	**3**	P		**P**	**05 10 18.6**	**+0.2**
MDJ				IAmb		IAmb	05 10 20.4	
	comp=Z,22nm,0.9s							
LSA	**Lhasa**	**43.65**	**312**	P		**P**	**05 10 31.4**	**+0.7**
ASAJ	**Asahikawa**	**43.89**	**16**	P		**P**	**05 10 32.2**	**+0.4**
	comp=Z,9.1nm,0.7s,baz=210,slow=8.5,SNR=5.4							
ASAJ				LR		LR	05 27 04.8	
	comp=Z,85nm,20.9s,baz=304,slow=34							
JKA	**Kamikawa-asahi**	**43.89**	**16**	P		**P**	**05 10 30.6**	**-1.2**
JKA				IAmb		IAmb	05 10 56.7	
	comp=Z,26nm,1.2s							
GTA	**Gaotai**	**44.51**	**330**	*eP*		**P**	**05 10 37.8**	**+0.7**
GTA				pP		pP	05 10 49.4	-0.9
GTA				sP		pwP	05 10 54.5	+0.9
GTA				pmax		pmax		
	comp=Z,5.0nm,0.7s							
GTA				pmax		pmax		
	comp=Z,98nm,6.7s							
GTA				LR		LR		
	comp=Z,100nm,17.8s							
GTA				LR		LR		
	comp=Z,130nm,16.7s							
GTA				LR		LR		
	comp=Z,140nm,16.7s							
TAPN	**Taplejung**	**45.15**	**307**	*eP*		**P**	**05 10 42.4**	**-0.1**
	comp=Z,16nm,0.7s							
ODAN	**Odare**	**45.19**	**307**	*eP*		**P**	**05 10 42.3**	**-0.5**
	comp=Z,28nm,0.8s							
RAMN	**Ramite**	**45.86**	**306**	*eP*		**P**	**05 10 47.7**	**-0.4**
	comp=Z,18nm,0.7s							
GUN	**Gumba**	**46.85**	**307**	*eP*		**P**	**05 10 55.7**	**-0.3**
	comp=Z,31nm,0.7s							
KLR	**Kul'dur**	**46.96**	**4**	P		**P**	**05 10 56.5**	**+0.5**
	comp=Z,9.0nm,0.9s,baz=209,slow=5.0,SNR=18							
PKI	**Pulchoki**	**47.09**	**306**	*eP*		**P**	**05 10 56.6**	**-1.2**
PKIN	**Phulchoki**	**47.10**	**306**	*eP*		**P**	**05 10 56.7**	**-1.1**
DMN	**Daman**	**47.34**	**306**	*eP*		**P**	**05 10 59.1**	**-0.7**
GKN	**Gorkha**	**47.89**	**306**	*eP*		**P**	**05 11 03.2**	**-0.6**
ULN	**Ulaanbaatar**	**48.60**	**342**	P		**P**	**05 11 10.4**	**+1.4**
ULN				IAmb		IAmb	05 11 28.3	
	comp=Z,15nm,1.0s							
KOLN	**Koldanda**	**48.63**	**306**	*eP*		**P**	**05 11 09.4**	**-0.2**
	comp=Z,14nm,0.4s							
DANN	**Dangsing**	**48.73**	**306**	*eP*		**P**	**05 11 10.0**	**-0.5**
	comp=Z,26nm,0.6s							
SONM	**Songino Array**	**48.78**	**342**	P		**P**	**05 11 11.5**	**+1.1**
	comp=Z,6.9nm,0.7s,baz=155,slow=9.1,SNR=34							
SONM	**Songino Array**	**48.78**	**342**	P		**P**	**05 11 11.7**	**+1.4**
PYUN	**Piuthan**	**49.26**	**306**	*eP*		**P**	**05 11 14.3**	**-0.1**
WMQ	**Urumqi**	**54.10**	**325**	*eP*		**P**	**05 11 52.5**	**+2.3**
WMQ				pmax		pmax		
	comp=Z,24nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,250nm,5.9s							
PETK	**Petropavlovsk-**	**56.65**	**22**	LR		LR	05 34 49.0	
	comp=Z,25nm,21.7s,baz=213,slow=34							
SHLS	**Shalkode**	**58.67**	**321**	*eP*		**P**	**05 12 21.3**	**-1.5**
	baz=321							
MK31	**Makanchi Array**	**58.94**	**326**	P		**P**	**05 12 25.1**	**+0.6**
MKAR	**Makanchi Array**	**58.94**	**326**	P		**P**	**05 12 24.8**	**+0.4**
	comp=Z,2.8nm,0.5s,baz=121,slow=8.3,SNR=46							
MKAR	**Makanchi Array**	**58.94**	**326**	P		**P**	**05 12 24.7**	**+0.3**
KPKS	**Kokpek**	**59.32**	**321**	*eP*		**P**	**05 12 27.2**	**0.0**
	comp=Z,2.8nm,0.8s,baz=321							
YAK	**Yakutsk**	**59.65**	**1**	P		**P**	**05 12 29.4**	**+0.4**
KDJ	**Kajisay**	**59.65**	**319**	P		**P**	**05 12 30.4**	**+0.7**
KDJ				IAmb		IAmb	05 12 31.5	
	comp=Z,4.1nm,0.6s							
MDOK	**Medeo**	**60.22**	**320**	*eP*		**P**	**05 12 33.9**	**+0.4**
	baz=320							
TNSS	**Tian-Shan**	**60.23**	**320**	*eP*		**P**	**05 12 34.4**	**+0.5**
	baz=320							
KUU	**Kurty**	**61.02**	**320**	*eP*		**P**	**05 12 39.0**	**+0.3**
	comp=Z,3.8nm,0.7s,baz=320							
KHZ	**Kahutara**	**61.11**	**142**	P		**P**	**05 12 39.1**	**-0.2**
BKZ	**Black Stump Fm**	**61.29**	**138**	P		**P**	**05 12 39.6**	**-1.0**
BKZ				IAmb		IAmb	05 12 39.7	
	comp=Z,19nm,1.4s							
ZAA0	**Zalesovo Array**	**62.03**	**333**	P		**P**	**05 12 45.7**	**+0.4**
ZAA0				IAmb		IAmb	05 13 03.7	
	comp=Z,9.3nm,0.9s							
ZALV	**Zalesovo Beam**	**62.03**	**333**	P		**P**	**05 12 45.5**	**+0.2**
	comp=Z,4.7nm,0.6s,baz=120,slow=6.1,SNR=21							
ZALV	**Zalesovo Beam**	**62.03**	**333**	P		**P**	**05 12 45.0**	**-0.3**
BTLS	**Baital**	**63.00**	**321**	*eP*		**P**	**05 12 51.9**	**-0.1**
	baz=320							
KURK	**Kurchatov**	**63.14**	**328**	P		**P**	**05 12 53.5**	**+0.8**
GAR	**Garm**	**63.15**	**313**	P		**P**	**05 12 53.0**	**-0.3**
GAR				IAmb		IAmb	05 13 13.3	
	comp=Z,9.7nm,0.8s							
SEY	**Seymchan**	**63.38**	**13**	P		**P**	**05 12 55.3**	**+1.2**
	comp=Z,4.8nm,0.8s,baz=240,slow=5.8,SNR=6.4							
IUG	**Iuzhnay**	**64.49**	**316**	*eP*		**P**	**05 13 01.9**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=316							
KK31	**Karatay Array**	**64.52**	**317**	P		**P**	**05 13 02.3**	**+0.2**
KKAR	**Karatay Array**	**64.52**	**317**	P		**P**	**05 13 02.1**	**+0.1**
BRZS	**Berezniki**	**66.06**	**325**	*eP*		**P**	**05 13 12.4**	**+0.5**
	comp=Z,2.1nm,0.8s,baz=325							
BRVK	**Borovoye**	**68.79**	**327**	P		**P**	**05 13 30.2**	**+1.2**
TIXI	**Tiksi**	**69.29**	**1**	P		**P**	**05 13 31.2**	**-0.6**
TIXI				IAmb		IAmb	05 13 33.1	
	comp=Z,9.4nm,1.0s							
ATKA	**Atka Island**	**69.51**	**34**	P		**P**	**05 13 33.4**	**-0.1**
NRIK	**Noril'sk**	**71.92**	**346**	P		**P**	**05 13 48.0**	**+0.2**
	comp=Z,2.8nm,0.4s,baz=131,slow=6.5,SNR=5.5							
SOCY	**Socotra**	**72.98**	**282**	P		**P**	**05 13 54.2**	**-1.1**
SOCY				IAmb		IAmb	05 13 56.6	
	comp=Z,22nm,1.2s							
AB31	**Akbulak array**	**73.48**	**321**	P		**P**	**05 13 57.8**	**+0.2**
AB31				IAmb		IAmb	05 13 59.5	
	comp=Z,11nm,0.8s							
ABKAR	**Akbulak array**	**73.48**	**321**	P		**P**	**05 13 56.7**	**-0.8**
ABKAR				IAmb		IAmb	05 13 59.5	
	comp=Z,11nm,0.8s							
ABKAR	**Akbulak array**	**73.48**	**321**	P		**P**	**05 13 58.1**	**+0.6**
ARU	**Arti**	**76.34**	**328**	P		**P**	**05 14 14.1**	**+0.2**
ARU				IAmb		IAmb	05 14 19.3	
	comp=Z,9.4nm,0.9s							
RAYN	**Ar Rayn**	**81.36**	**293**	P		**P**	**05 14 43.2**	**+1.0**
RAYN				IAmb		IAmb	05 14 44.4	
	comp=Z,16nm,0.9s							
SVW2	**Sparrevohn**	**81.92**	**29**	P		**P**	**05 14 46.1**	**+1.8**
VNDA	**Vanda**	**81.95**	**173**	P		**P**	**05 14 44.1**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=315,slow=6.0,SNR=8.4							
VNDA	**Vanda**	**81.95**	**173**	P		**P**	**05 14 44.0**	**-0.1**
TTA	**Tatalina**	**82.05**	**27**	P		**P**	**05 14 46.6**	**+1.6**
OHAK	**Old Harbor**	**82.50**	**33**	P		**P**	**05 14 48.3**	**+1.0**
KDAK	**Kodiak Island**	**82.94**	**32**	P		**P**	**05 14 49.9**	**+0.3**
KDAK				IAmb		IAmb	05 14 51.7	
	comp=Z,9.9nm,0.7s							
A21K	**Barrow**	**83.49**	**18**	P		**P**	**05 14 54.1**	**+2.0**
IMAR	**Indian Mountai**	**83.54**	**24**	P		**P**	**05 14 54.2**	**+1.6**
PPLA	**Purkeypile**	**83.77**	**27**	P		**P**	**05 14 55.4**	**+1.4**
PPLA				IAmb		IAmb	05 15 01.4	
	comp=Z,13nm,1.2s							
ATD	**Arta Tunnel**	**83.88**	**281**	P		**P**	**05 14 55.1**	**-0.3**
SKT	**Skwentna**	**83.96**	**28**	P		**P**	**05 14 53.6**	**-1.3**
SKT				IAmb		IAmb	05 14 55.9	
	comp=Z,9.3nm,0.9s							
BRLK	**Bradley Lake**	**84.04**	**30**	P		**P**	**05 14 55.3**	**0.0**
SUA	**Susitna One**	**84.28**	**29**	P		**P**	**05 14 56.1**	**-0.4**
PPT	**Papeete**	**84.36**	**108**	LR		LR	05 48 07.0	
	comp=Z,31nm,19.0s,baz=320,slow=32							
COLD	**Coldfoot**	**85.10**	**23**	P		**P**	**05 14 59.9**	**-0.5**
COLD				IAmb		IAmb	05 15 06.3	
	comp=Z,4.2nm,0.8s							
TOLK	**Toolik Lake Re**	**85.48**	**21**	P		**P**	**05 15 01.7**	**-0.7**
TOLK				IAmb		IAmb	05 15 11.6	
	comp=Z,10.0nm,1.2s							
ILAR	**Eielson Array**	**86.27**	**25**	P		**P**	**05 15 05.3**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=243,slow=5.4,SNR=14							
ILAR				LR		LR	05 50 23.0	
	comp=Z,28nm,20.3s,baz=296,slow=33							
ILAR	**Eielson Array**	**86.27**	**25**	P		**P**	**05 15 05.9**	**-0.4**
KLMR	**Klimovskoe**	**86.83**	**331**	*eP*		**P**	**05 15 07.6**	**-1.5**
KLMR				AMP			05 15 15.8	
	comp=Z,12nm,1.2s							
BMAR	**Burnt Mountain**	**87.29**	**23**	P		**P**	**05 15 13.0**	**+1.7**
BCAR	**Beaver Creek A**	**88.52**	**27**	P		**P**	**05 15 18.4**	**+1.2**
KMBO	**Kilima Mbogo**	**89.85**	**269**	P		**P**	**05 15 23.7**	**-1.1**
KMBO				IAmb		IAmb	05 15 32.5	
	comp=Z,4.2nm,1.1s							
BRTR	**Keskin Array B**	**91.20**	**310**	P		**P**	**05 15 29.6**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=76,slow=21,SNR=2.8							
ARCES	**ARCESS Array B**	**91.92**	**340**	P		**P**	**05 15 31.2**	**-1.7**
	comp=Z,1.9nm,0.6s,baz=78,slow=3.8,SNR=10							
AKASG	**Malin Array Be**	**93.22**	**321**	P		**P**	**05 15 38.4**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=76,slow=4.3,SNR=4.5							
BURAR	**Buovina Array**	**96.30**	**318**	P		**P**	**05 15 54.3**	**+0.7**
TXAR	**Lajitas Array**	**122.22**	**53**	PKP		**PKPdf**	**05 21 20.6**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=264,slow=1.5,SNR=5.8							
TXAR	**Lajitas Array**	**122.22**	**53**	PKPdf		**PKPdf**	**05 21 20.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**123.67**	**287**	PKP		**PKPdf**	**05 21 23.6**	**+0.3**
	comp=Z,1.0nm,0.7s,baz=28,slow=1.7,SNR=6.8							

*IDC **24** 05:07:55.0±0.8, 1°.03N×127°.41E, h0km, mb4.2/10, mb1 4.3/13, mb1mx4.0/42, mbtmp4.2/13, ML3.9/3, Error ellipse: s-maj=28.7km s-min=13.9km az=75.0*
*DJA **24** 05:07:55.8±0.4, 1°.N±2°×12°.7E±°, h10km±3km, M4.4/12, mB5.1/3, mb4.8/8, MLv4.2/12, Mw(mB)4.5/3*
*NEIC **24** 05:07:59.0±2.0, 0°.97N±0°.06×127°.34E±0°.07, h35km±2km, mb4.5/24, Error ellipse: s-maj=12.6km s-min=9.5km az=239.0*

ISC 24 05:07:59.2±0.5, **0°.94N**±0°.05×**127°.43E**±0°.06, **h35**km, **n70, σ18 85/73, mb4.3/26, 2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**0.18**	**201**	P		**Pn**	**05 08 02.5**	**-3.4**
TNTI				S		**Sn**	**05 08 07.0**	**-3.4**
TNTI	**Ternate**	**0.18**	**201**			**Pn**	**05 08 02.3**	**-3.6**
TNTI						**Sn**	**05 08 07.2**	**-3.2**
SGSI	**Sangihe**	**3.33**	**325**	P		**Pn**	**05 08 46.6**	**-2.2**
KMSI	**Cibinong**	**3.47**	**264**	P		**Pn**	**05 08 50.0**	**-0.8**
NLAI	**Namlea**	**4.16**	**185**	P		**Pn**	**05 09 01.1**	**+0.8**
SIJI	**Sorong**	**4.23**	**115**	Pn		**Pn**	**05 09 02.4**	**+1.1**
	5.0nm,0.3s,baz=308,slow=12,SNR=9.8							
SIJI						**Sn**	**05 09 43.7**	**-5.9**
	1.1nm,0.3s,baz=188,slow=22,SNR=1.5							
GTOI	**Gorontalo**	**4.43**	**266**	P		**Pn**	**05 09 05.1**	**+1.1**
AAI	**Ambon**	**4.66**	**171**	P		**Pn**	**05 09 08.0**	**+0.9**
LUWI	**Luwuk**	**5.06**	**247**	Pn		**Pn**	**05 09 10.1**	**-2.5**
MRSI	**Marisa**	**5.51**	**265**	P		Pn	05 09 23.3	+4.5
APSI	**Ampana**	**6.07**	**252**	P		**Pn**	**05 09 26.4**	**-0.1**
	0.3nm1μm80nm,0.5s							
FAKI	**Fak Fak**	**6.15**	**129**	P		**Pn**	**05 09 29.4**	**+1.7**
	0.1nm30nm,0.8s							
FAKI	**Fak Fak**	**6.15**	**129**	Pn		**Pn**	**05 09 30.1**	**+2.4**
KCP	**Kidapawan**	**6.47**	**339**	*eP*		**Pn**	**05 09 33.3**	**+1.2**
KCP				*i* S		**Sn**	**05 10 47.5**	**+2.8**
TOLI2	**Tolitoli**	**6.65**	**272**	Pn		**Pn**	**05 09 32.4**	**-2.2**
MPSI	**Mapaga**	**7.56**	**266**	P		**Pn**	**05 09 50.3**	**+3.3**
TTSI	**Tana Toraja**	**8.58**	**243**	P		**Pn**	**05 10 00.5**	**-0.5**
	52nm,0.6s							
BNSI	**Bone**	**9.04**	**234**	P		**Pn**	**05 10 06.4**	**-0.9**
	61nm,0.8s							
SPSI	**Sidrap Palu**	**9.07**	**238**	P		**Pn**	**05 10 08.1**	**+0.3**
	1μm75nm,0.6s							
BKSI	**Bulukumba**	**9.59**	**230**	P		**Pn**	**05 10 15.6**	**+0.7**
	1μm47nm,0.6s							
KAPI	**Kappang**	**9.68**	**232**	Pn		**Pn**	**05 10 17.6**	**+1.4**
	4.5nm,0.3s,baz=69,slow=6.0,SNR=7.6							
KAPI	**Kappang**	**9.68**	**232**	Pn		**Pn**	**05 10 17.2**	**+1.0**
KAPI				Sn		**Sn**	**05 12 06.2**	**+2.4**
MYLDM	**Lahad Datu**	**9.86**	**295**	Pn		**Pn**	**05 10 16.7**	**-1.9**
BSSI	**Bau Bau, Buton**	**9.87**	**224**	P		**Pn**	**05 10 18.4**	**-0.4**
EDFI	**Ende, Flores**	**11.19**	**211**	P		**Pn**	**05 10 40.5**	**+3.5**
SBUM	**Sibu**	**15.28**	**276**			**Pn**	**05 11 30.7**	**-1.8**
KSM	**Kuching**	**17.13**	**272**			**Pn**	**05 11 54.3**	**-1.8**
FITZ	**Fitzroy Crossi**	**19.00**	**185**	P		**Pn**	**05 12 19.6**	**+0.7**
	0.1nm,0.3s,baz=305,slow=13,SNR=1.6							
FITZ	**Fitzroy Crossi**	**19.00**	**185**	P		**Pn**	**05 12 20.1**	**+1.2**
CISI	**Cisompet, Garu**	**21.31**	**246**	P		**P**	**05 12 40.5**	**-2.8**
WB0	**Warramunga Arr**	**21.68**	**162**	P		**P**	**05 12 48.7**	**+1.6**
WB0				IAmb		IAmb	05 12 55.2	
	comp=Z,9.7nm,0.8s							
WRAB	**Tennant Creek**	**21.82**	**162**	P		**P**	**05 12 50.8**	**+2.1**
WRAB				IAmb		IAmb	05 12 59.5	
	comp=Z,10nm,0.8s							
WRA	**Warramunga Arr**	**21.83**	**162**	P		**P**	**05 12 49.9**	**+1.2**
	comp=Z,5.5nm,0.6s,baz=342,slow=11,SNR=21							
WRA	**Warramunga Arr**	**21.83**	**162**	P		**P**	**05 12 49.5**	**+0.8**
WB2	**Warramunga Arr**	**21.83**	**162**	P		**P**	**05 12 50.8**	**+2.1**
WB2				IAmb		IAmb	05 12 60.0	
	comp=Z,9.6nm,0.8s							
WR0	**Warramunga Arr**	**21.91**	**162**	P		**P**	**05 12 49.4**	**-0.2**
WR0				IAmb		IAmb	05 13 00.3	
	comp=Z,8.7nm,0.8s							
YULB	**Yu-li**	**23.10**	**346**	P		**P**	**05 12 58.3**	**-3.9**
YULB				IAmb		IAmb	05 13 15.6	
	comp=Z,13nm,1.1s							
AS31	**Alice Springs**	**25.25**	**166**	P		**P**	**05 13 23.8**	**+1.5**
ASAR	**Alice Springs**	**25.25**	**166**	P		**P**	**05 13 23.6**	**+1.3**
	comp=Z,4.0nm,0.6s,baz=355,slow=16,SNR=19							
ASAR	**Alice Springs**	**25.25**	**166**	P		**P**	**05 13 22.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**32.94**	**304**	P		**P**	**05 14 30.5**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=128,slow=7.3,SNR=5.1							
CMAR	**Chiang Mai Arr**	**32.94**	**304**	P		**P**	**05 14 29.2**	**-1.5**
KMI	**Kunming**	**33.87**	**317**	*eP*		P	05 14 45.3	+6.3
KMI				pP		pP	05 14 47.8	-1.1
KMI				pmax		pmax		
	comp=Z,13nm,0.5s							
KMI				pmax		pmax		
	comp=Z,89nm,4.5s							
KMI				LR		LR		
	comp=N,100nm,13.5s							
KMI				LR		LR		
	comp=E,120nm,14.4s							
KMI				LR		LR		
	comp=Z,170nm,20.7s							
STKA	**Stephens Creek**	**35.29**	**159**	P		**P**	**05 14 52.4**	**+1.5**
	comp=Z,1.2nm,0.5s,baz=326,slow=15,SNR=2.8							
STKA	**Stephens Creek**	**35.29**	**159**	P		**P**	**05 14 51.8**	**+0.9**
KSRS	**Korea Array**	**36.34**	**1**	P		**P**	**05 14 59.6**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=176,slow=10.0,SNR=5.7							
MJAR	**Matsushiro Arr**	**36.81**	**15**	P		**P**	**05 15 03.5**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=190,slow=9.7,SNR=5.9							
MJAR	**Matsushiro Arr**	**36.81**	**15**	P		**P**	**05 15 03.0**	**-1.0**
XAN	**Xi'an**	**37.22**	**334**	P		**P**	**05 15 09.3**	**+1.8**
XAN				pP		sP	05 15 31.6	+10
XAN				pmax		pmax		
	comp=Z,5.0nm,1.2s							
LZH	**Lanzhou**	**41.26**	**331**	*eP*		**P**	**05 15 42.3**	**+1.0**
LZH				pP		pP	05 15 46.8	-4.8
LZH				sP		sP	05 15 49.3	-6.4
LZH				pmax		pmax		
	comp=Z,17nm,1.5s							
LZH				pmax		pmax		
	comp=Z,78nm,7.0s							
**HHC

	baz=353								
ENTT	**Nioudou**	**0.24**	**40**	*e*P		Pg	05 26 18.7	+0.7
	baz=42								
FUSS	**Fushou**	**0.25**	**213**	P		Pg	05 26 19.2	+1.1
	baz=213								
FUSS				*e*S		Sg	05 26 22.9	+1.3
	baz=213								
ETLH	**Xiulin Townshi**	**0.26**	**162**	*e*P		Pb	05 26 19.7	-0.5
	baz=162								
ETLH				*e*S		Sg	05 26 23.1	+1.3
	baz=162								
TWT	**Tachien**	**0.28**	**225**	*e*P		Pb	05 26 20.5	-0.1
	baz=225								
TDCB	**Techi**	**0.29**	**227**	P		Pb	05 26 20.0	-0.7
	baz=226								
ENA	**Nanau**	**0.32**	**95**	*e*P		Pg	05 26 20.2	+0.8
	baz=95								
WHF	**Hehuan Shan**	**0.33**	**201**	P		Pb	05 26 20.9	-0.6
	baz=199								
WHF				*e*S		Sb	05 26 26.4	-0.7
	baz=199								
NACB	**Ninganchiao**	**0.34**	**147**	*e*P		Pb	05 26 21.0	-0.3
	baz=146								
NACB				*e*S		Sb	05 26 25.7	-1.1
	baz=146								
NWLT	**Wulai**	**0.34**	**17**	P		Pb	05 26 20.7	-0.7
	baz=17								
CHGB	**Renai**	**0.44**	**207**	P		Pb	05 26 22.7	-0.6
	baz=207								
CHGB				*e*S		Sg	05 26 28.8	+1.2
	baz=207								
WHP	**Taichung City**	**0.45**	**247**	*e*P		Pb	05 26 23.2	-0.1
	baz=246								
WHP				*e*S		Sb	05 26 29.2	-1.0
	baz=246								
OWD	**Renai**	**0.54**	**202**	*e*P		Pb	05 26 24.9	+0.1
	baz=201								

*BER **24** 05:42:27.0±1.5, 79.67N×3.40E, h10km, ML1.7, ML2.5(DNK), Confirmed Earthquake*
ISC 24 05:42:29.6±3.8, 79.7N±0.3×5.4E±0.2, h10km, n8, σ0.59/10, 1C, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBS	**Kingsbay**	**1.44**	**118**	*e*P		**Pn**	**05 42 55.1**	**-0.5**
KBS				*e*S		**Sb**	**05 43 14.8**	**+0.1**
KBS				IAML			05 43 25.3	
	comp=Z,11nm,0.6s							
KBS	**Kingsbay**	**1.44**	**118**	*i*P		**Pn**	**05 42 55.2**	**-0.5**
KBS				*i* S		**Sg**	**05 43 15.1**	**-0.6**
KBS				IAML			05 43 22.9	
	comp=Z,21nm,0.3s							
BRBB	**Barentsburg B**	**2.33**	**128**	*e*P		**Pn**	**05 43 08.4**	**+0.5**
BRBB				*e*S		**Sn**	**05 43 37.3**	**+0.8**
SPA0	**Spitsbergen Ar**	**2.59**	**119**	*e*P		**Pn**	**05 43 11.9**	**+0.4**
SPA0				*e*S		**Sn**	**05 43 43.6**	**+0.5**
SPA0				IAML			05 43 54.1	
	comp=Z,5.4nm,1.1s							
HSPB	**Hornsund (broa**	**3.37**	**137**	*e*P		**Pn**	**05 43 21.8**	**-0.4**
HSPB				*e*S		**Sn**	**05 44 02.1**	**-0.1**
HSPB				IAML			05 44 06.9	
	comp=Z,6.3nm,0.8s							
DAG	**Danmarks Havn**	**5.67**	**252**	*e*		Pn	05 43 41.7	-12
	baz=52,slow=14							
DAG				*i* P		Pn	05 43 44.0	-10
DAG				*i* S		Sn	05 44 39.9	-19
DAG				IAML			05 44 43.9	
	comp=Z,3.0nm,0.4s							
DBG	**Daneborg**	**7.79**	**240**	*e*P		Pn	05 44 14.0	-8.8
DBG				*e*S		Sn	05 45 31.2	-20
DBG				IAML			05 45 37.1	
	comp=Z,0.9nm,0.3s							
DBG	**Daneborg**	**7.79**	**240**	*i* P		Pn	05 44 14.4	-8.4
DBG				*i* S		Sn	05 45 29.8	-21
DBG				IAML			05 45 37.1	
	comp=Z,0.9nm,0.3s							

*TAP **24** 05:46:42.3, 24.91N×122.45E, h17km, ML3.0, C*
*JMA **24** 05:46:42.4±0.1, 24.81N×122.43E, h0km, M2.8*
ISC 24 05:46:42.5±1.1, 24.86N±0.03×122.45E±0.03, h12km±10km, n57, σ0.47/76, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.45**	**290**	P		**Pg**	**05 46 51.5**	**+0.1**
	baz=282							
TWB1				S		**Sg**	**05 46 57.6**	**+0.4**
	baz=282							
EGS		**0.47**	**268**	P		**Pb**	**05 46 52.5**	**-0.3**
	baz=250							
EGS				S		**Sg**	**05 46 58.3**	**+0.2**
	baz=250							
NTC	**Toucheng**	**0.56**	**270**	P		**Pb**	**05 46 54.2**	**-0.2**
	baz=264							
TIPB	**Shuangxi**	**0.58**	**281**	P		**Pb**	**05 46 54.4**	**-0.3**
	baz=276							
TIPB				S		**Sb**	**05 47 02.3**	**-0.5**
	baz=276							
TWC	**Suao**	**0.60**	**246**	P		**Pb**	**05 46 54.5**	**-0.5**
	baz=240							
TWC				*e*S		**Sb**	**05 47 02.8**	**-0.7**
	baz=240							
NWF	**Wu-fen Shan**	**0.64**	**289**	P		**Pb**	**05 46 55.5**	**-0.3**
	baz=284							
NWF				S		**Sb**	**05 47 04.6**	**-0.2**
	baz=284							
WFSB	**Wu-fen Shan**	**0.64**	**289**	P		**Pb**	**05 46 55.5**	**-0.3**
	baz=284							
WFSB				S		**Sb**	**05 47 04.6**	**-0.1**
	baz=284							
ILA	**Ilan**	**0.65**	**262**	*e*P		**Pb**	**05 46 55.4**	**-0.4**
	baz=257							
YOJ	**Yonaguni jima**	**0.65**	**128**	P		**Pg**	**05 46 55.3**	**+0.3**
	baz=123							
YOJ				S		**Sg**	**05 47 03.9**	**+0.4**
	baz=123							
YOJ	**Yonaguni jima**	**0.65**	**128**	P		**Pg**	**05 46 55.2**	**+0.1**
YOJ				*e*S		**Sg**	**05 47 04.0**	**+0.4**
ENAH	**Nanao**	**0.71**	**235**	P		**Pb**	**05 46 56.7**	**-0.2**
	baz=232							
TWE	**Neicheng**	**0.72**	**259**	*e*P		**Pb**	**05 46 57.0**	**-0.1**
	baz=246							
TWE				*e*S		**Sb**	**05 47 06.8**	**-0.2**
	baz=246							
ENA	**Nanau**	**0.78**	**237**	P		**Pb**	**05 46 57.7**	**-0.2**
	baz=232							
ENA				*e*S		**Sb**	**05 47 08.4**	**-0.1**
	baz=232							
TWA	**Mucha**	**0.80**	**279**	*e*P		**Pb**	**05 46 58.6**	**+0.2**
	baz=274							
TWA				*e*S		**Sb**	**05 47 09.6**	**+0.5**
	baz=274							
ENTT	**Nioudou**	**0.83**	**255**	P		**Pb**	**05 46 59.1**	**+0.1**
	baz=251							
ENTT				*e*S		**Sb**	**05 47 10.5**	**+0.3**
	baz=251							
PCYT	**Pengchaiyu**	**0.84**	**336**	*e*P		**Pg**	**05 46 57.8**	**-1.0**
	baz=335							
NHDH	**Xindian Distri**	**0.85**	**277**	*e*P		**Pb**	**05 46 59.1**	**-0.1**
	baz=273							
YM08	**YM08**	**0.85**	**293**	*e*P		**Pb**	**05 46 59.3**	**+0.1**
	baz=289							
YM01	**YM01**	**0.85**	**290**	*e*P		**Pb**	**05 46 59.7**	**+0.5**
	baz=286							
YM11	**YM11**	**0.85**	**291**	*e*P		**Pn**	**05 47 00.2**	**-0.3**
	baz=288							
YM05	**YM05**	**0.86**	**291**	*e*P		**Pb**	**05 46 59.7**	**+0.2**
	baz=287							
YM10	**YM10**	**0.86**	**290**	*e*P		**Pb**	**05 46 59.9**	**+0.4**
	baz=287							
NWLT	**Wulai**	**0.86**	**265**	*e*P		**Pb**	**05 46 59.4**	**-0.1**
	baz=261							
TWY	**Chenhua**	**0.88**	**298**	*e*P		**Pb**	**05 46 59.9**	**+0.2**
	baz=295							
TWY				S		**Sb**	**05 47 11.6**	**+0.2**
	baz=295							
YM04	**YM04**	**0.88**	**290**	*e*P		**Pb**	**05 46 59.9**	**+0.1**
	baz=286							
TATO	**Taipei**	**0.88**	**278**	*e*S		**Sb**	**05 47 12.0**	**+0.5**
	baz=274							
YM03	**YM03**	**0.89**	**291**	*e*P		**Pb**	**05 47 00.0**	**+0.1**
	baz=288							
NDT	**Datong Townshi**	**0.89**	**254**	*e*P		**Pb**	**05 47 00.1**	**+0.1**
	baz=250							
NDT				S		**Sb**	**05 47 12.4**	**+0.6**
	baz=250							
YHNB	**Yeheng**	**0.99**	**259**	*e*P		**Pb**	**05 47 01.7**	**-0.1**
	baz=266							
NSK	**Sanguang**	**1.01**	**260**	P		**Pb**	**05 47 01.9**	**-0.2**
	baz=256							
NACB	**Ninganchiao**	**1.04**	**229**	P		**Pb**	**05 47 02.5**	**0.0**
	baz=237							
NACB				*e*S		**Sg**	**05 47 15.7**	**-0.3**
	baz=237							
NNSB	**Datong**	**1.06**	**246**	P		**Pb**	**05 47 02.9**	**-0.1**
	baz=243							
NNSH	**Datong**	**1.06**	**246**	P		**Pg**	**05 47 02.8**	**-0.2**
	baz=235							
NNS	**Nan Shan**	**1.07**	**247**	*e*P		**Pn**	**05 47 03.6**	**+0.2**
	baz=233							
NNS				*e*S		**Sb**	**05 47 17.1**	**+0.2**
	baz=233							
ETLH	**Xiulin Townshi**	**1.09**	**234**	*e*P		**Pg**	**05 47 03.4**	**-0.2**
	baz=231							
ETLH				S		**Sb**	**05 47 18.6**	**+0.8**
	baz=231							
TWD	**Chiawan**	**1.10**	**225**	P		**Pb**	**05 47 03.7**	**+0.2**
	baz=233							
HWA	**Hwalien**	**1.17**	**221**	*e*P		**Pb**	**05 47 04.6**	**-0.1**
	baz=219							
FUSS	**Fushou**	**1.26**	**241**	P		**Pb**	**05 47 06.3**	**0.0**
	baz=239							
IRIF	**Iriomote-Funau**	**1.28**	**114**	P		**Pg**	**05 47 06.9**	**-0.2**
WHF	**Hehuan Shan**	**1.29**	**237**	P		**Pg**	**05 47 07.2**	**-0.3**
	baz=234							
TWT	**Tachien**	**1.31**	**243**	*e*P		**Pg**	**05 47 07.9**	**+0.2**
	baz=231							
LIOB	**Emei**	**1.32**	**261**	*e*P		**Pg**	**05 47 09.6**	**+1.6**
	baz=258							
TDCB	**Techi**	**1.32**	**243**	*e*P		**Pb**	**05 47 07.3**	**-0.1**
	baz=240							
TDCB				*e*S		**Sn**	**05 47 25.1**	**+0.5**
	baz=240							
NSTT	**Nanjuang**	**1.34**	**261**	*e*P		**Pg**	**05 47 09.3**	**+1.0**
	baz=257							
ESL	**Shilin**	**1.39**	**222**	*e*P		**Pn**	**05 47 07.9**	**0.0**
	baz=219							
CHGB	**Renai**	**1.41**	**236**	*e*P		**Pb**	**05 47 08.8**	**-0.1**
	baz=234							
OWD	**Renai**	**1.47**	**232**	*e*P		**Pb**	**05 47 09.9**	**-0.1**
	baz=238							
OWD				*e*S		**Sg**	**05 47 29.4**	**-0.5**
	baz=238							
WHP	**Taichung City**	**1.49**	**247**	*e*P		**Pn**	**05 47 08.3**	**-0.9**
	baz=259							
EGFH	**Guangfu**	**1.51**	**218**	*e*P		**Pn**	**05 47 09.7**	**+0.3**
	baz=200							
JKRS	**Kushima**	**1.55**	**113**	P		**Pb**	**05 47 10.9**	**-0.3**
HGSD	**Ruisui**	**1.65**	**215**	*e*P		**Pn**	**05 47 11.7**	**+0.3**
	baz=199							
SMLT	**Sun Moon Lake**	**1.72**	**236**	*e*P		**Pg**	**05 47 15.0**	**-0.5**
	baz=234							
TYC	**Yuchr**	**1.74**	**237**	*e*P		**Pg**	**05 47 15.0**	**-0.9**
	baz=235							
YULB	**Yu-li**	**1.80**	**216**	*e*P		**Pn**	**05 47 13.1**	**-0.4**
	baz=214							
CHN5	**Tsauling**	**2.05**	**233**	*e*P		**Pb**	**05 47 18.9**	**-0.9**
	baz=214							
EDH	**Donghe**	**2.15**	**209**	*e*P		**Pn**	**05 47 18.9**	**+0.7**
	baz=195							
CHN4	**Tsaushan**	**2.27**	**229**	*e*P		**Pb**	**05 47 21.9**	**-1.5**
	baz=211							

*IDC **24** 06:04:49.6±4.2, 37.05S×179.33E, h0km, mb3.4/2, mb1 3.6/3, mb1mx3.5/38, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=96.9km s-min=37.2km az=131.0*
*WEL **24** 06:04:51.8±1.0, 38.5S×178.0E±˚, h33km, M3.5/24, ML3.9/24, MLv3.5/24, Error ellipse: s-maj=0.0km s-min=0.0km az=25.6*
ISC 24 06:04:48.9±2.7, 37.68S±0.09×179.97E±0.08, h29km±18km, n62, σ1.13/71, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.24**	**263**	P		**Pn**	**06 05 10.9**	**+0.6**
MXZ	**Matakaoa Point**	**1.32**	**274**	P		**Pn**	**06 05 11.3**	**-0.1**
MXZ				S		**Sn**	**06 05 26.8**	**-1.3**
PUZ	**Puketiti**	**1.41**	**253**	P		**Pn**	**06 05 13.4**	**+0.7**
PUZ				S		**Sn**	**06 05 30.5**	**+0.1**
CNGZ	**Carnagh Statio**	**1.61**	**239**	P		**Pb**	**06 05 17.4**	**-0.5**
TWGZ	**Tauwhareparae**	**1.65**	**252**	S		**Sn**	**06 05 36.5**	**+0.3**
HAZ	**Te Kaha**	**1.73**	**267**	P		**Pn**	**06 05 17.9**	**+0.8**
HAZ				S		**Sn**	**06 05 37.1**	**-1.1**
RUGZ	**Raukumara Rang**	**1.84**	**260**	P		**Pn**	**06 05 19.0**	**+0.3**
RIGZ	**Rimuhau**	**2.02**	**239**	P		**Pn**	**06 05 22.5**	**+1.4**
RIGZ				S		**Sn**	**06 05 46.2**	**+0.8**
MWZ	**Matawai**	**2.04**	**250**	P		**Pn**	**06 05 21.7**	**+0.4**
MWZ				S		**Sn**	**06 05 44.5**	**-1.3**
PRUZ	**Paritu Road**	**2.06**	**232**	P		**Pn**	**06 05 21.1**	**+1.4**
RAGZ	**Rawiri**	**2.17**	**247**	P		**Pn**	**06 05 24.4**	**+1.2**
RAGZ				S		**Sn**	**06 05 49.0**	**-0.3**
MHGZ	**Mahia Peninsul**	**2.19**	**227**	P		**Pn**	**06 05 24.9**	**+1.5**
KNZ	**Kokohu**	**2.25**	**233**	P		**Pn**	**06 05 25.1**	**+0.9**
URZ	**Urewera**	**2.33**	**255**	Pn		**Pn**	**06 05 26.6**	**+1.3**
	5.9nm,0.3s,baz=239,slow=2.8,SNR=76							
URZ						Sn		
	18nm,0.3s,baz=356,slow=11,SNR=8.2							
URZ	**Urewera**	**2.33**	**255**	P		**Pn**	**06 05 26.6**	**+1.3**
URZ				S		**Sn**	**06 05 52.9**	**-0.1**
SNGZ	**Shannon Statio**	**2.34**	**241**	P		**Pn**	**06 05 26.9**	**+1.4**
WHRZ	**Whale Island**	**2.38**	**265**	P		**Pn**	**06 05 27.5**	**+1.5**
RTZ	**Ruatahuna**	**2.54**	**247**	P		**Pn**	**06 05 29.6**	**+1.4**
WHNZ	**Waihua**	**2.56**	**236**	P		**Pn**	**06 05 30.3**	**+1.8**
MUGZ	**Murupara**	**2.65**	**251**	P		**Pn**	**06 05 30.7**	**+1.1**
MTHZ	**Maungataniwha**	**2.73**	**244**	P		**Pn**	**06 05 32.0**	**+1.2**
TARZ	**Mount Tarawera**	**2.79**	**257**	P		**Pn**	**06 05 32.7**	**+1.0**
RRRZ	**Republican Roa**	**2.81**	**255**	P		**Pn**	**06 05 33.1**	**+1.2**
ARHZ	**Aropaoanui**	**2.82**	**235**	P		**Pn**	**06 05 34.0**	**+1.9**
NMHZ	**Naumai**	**2.86**	**239**	P		**Pn**	**06 05 34.0**	**+1.3**
ALRZ	**Allen Road**	**2.99**	**252**	P		**Pn**	**06 05 35.7**	**+1.3**
CKHZ	**Cape Kidnapper**	**3.01**	**228**	P		**Pn**	**06 05 35.6**	**+1.0**
BKZ	**Black Stump Fm**	**3.11**	**240**	P		**Pn**	**06 05 37.0**	**+1.0**
MCHZ	**McNeill Hill**	**3.11**	**234**	P		**Pn**	**06 05 37.0**	**+0.9**
KAHZ	**Kahuranaki**	**3.21**	**228**	P		**Pn**	**06 05 38.4**	**+0.9**
KWHZ	**Kaweka Forest**	**3.28**	**237**	P		**Pn**	**06 05 39.3**	**+0.8**
PXZ	**Pawanui**	**3.38**	**225**	P		**Pn**	**06 05 39.6**	**-0.1**
KRHZ	**Kereru**	**3.43**	**234**	P		**Pn**	**06 05 40.8**	**+0.3**
BHHZ	**Black Hill Sta**	**3.56**	**238**	P		**Pn**	**06 05 42.9**	**+0.6**
WPHZ	**Waipukurau**	**3.64**	**228**	P		**Pn**	**06 05 43.7**	**+0.4**
TMVZ	**Te Maari**	**3.65**	**245**	P		**Pn**	**06 05 43.9**	**+0.4**
PRHZ	**Porangahau**	**3.67**	**224**	P		**Pn**	**06 05 43.5**	**-0.2**
OTVZ	**Oturere**	**3.69**	**245**	P		**Pn**	**06 05 44.6**	**+0.4**
PNHZ	**Pukenui**	**3.70**	**232**	P		**Pn**	**06 05 44.4**	**+0.3**
MOVZ	**Moawhango**	**3.73**	**241**	P		**Pn**	**06 05 45.0**	**+0.4**
NGZ	**Ngauruhoe**	**3.74**	**245**	P		**Pn**	**06 05 45.2**	**+0.3**
WNVZ	**Wahianoa**	**3.80**	**243**	P		**Pn**	**06 05 46.2**	**+0.5**
FWVZ	**Far West T-bar**	**3.81**	**244**	P		**Pn**	**06 05 46.4**	**+0.6**
TSZ	**Takapari Road**	**3.93**	**231**	P		**Pn**	**06 05 47.2**	**-0.1**
DVHZ	**Dannevirke**	**3.95**	**227**	P		**Pn**	**06 05 47.5**	**-0.2**
MBAZ	**Motutapu North**	**4.15**	**281**	P		**Pn**	**06 05 52.4**	**+2.1**
BFZ	**Birch Farm**	**4.17**	**223**	P		**Pn**	**06 05 49.7**	**-0.9**
PRWZ	**Pori Road**	**4.23**	**226**	P		**Pn**	**06 05 51.9**	**+0.4**
POWZ	**Post Office Ro**	**4.25**	**229**	P		**Pn**	**06 05 52.5**	**+0.9**
WAZ	**Wanganui**	**4.42**	**240**	P		**Pn**	**06 05 55.1**	**+1.1**
TIWZ	**Tintock**	**4.43**	**224**	P		**Pn**	**06 05 54.6**	**+0.4**
MRZ	**Mangatainoka R**	**4.53**	**227**	P		**Pn**	**06 05 54.9**	**-0.6**
HOWZ	**Holdsworth Sta**	**4.72**	**226**	P		**Pn**	**06 05 57.7**	**-0.5**
OGWZ	**Otaki Gorge**	**4.87**	**228**	P		**Pn**	**06 05 59.5**	**-0.7**
NEZ	**North Egmont**	**4.88**	**249**	P		**Pn**	**06 06 03.1**	**+2.7**
PKE	**Pukeiti**	**4.93**	**250**	P		**Pn**	**06 06 02.6**	**+1.4**
KIW	**Kapiti Island**	**5.05**	**229**	P		**Pn**	**06 06 01.7**	**-1.0**
CAW	**Cannon Point**	**5.11**	**226**	P		**Pn**	**06 06 02.5**	**-1.1**
CTZ	**Chatham Island**	**6.59**	**158**	P		**Pn**	**06 06 27.8**	**+4.1**
CTZ				S		**Sn**	**06 07 37.3**	**-0.5**
ASAR	**Alice Springs**	**41.61**	**276**	P		**P**	**06 12 35.0**	**+0.4**
	0.4nm,0.6s,baz=129,slow=8.7,SNR=5.4							
WRA	**Warramunga Arr**	**43.25**	**281**	P		**P**	**06 12 48.0**	**+0.1**
	0.1nm,0.3s,baz=120,slow=7.9,SNR=5.1							
ARCES	**ARCESS Array B**	**145.24**	**345**	PKP		**PKiKP**	**06 24 25.5**	**-1.0**
	1.8nm,0.8s,baz=38,slow=4.6,SNR=4.0							

*NEIC **24** 06:13:08.7±1.2, 13.02N±0.10×144.2E±0.1, h122km±5km, mb4.6/29, Error ellipse: s-maj=19.1km s-min=13.8km az=86.0*
*IDC **24** 06:13:08.8±0.7, 13.07N×144.16E, h120km±6km, mb3.8/16, mb1 4.0/16, mb1mx3.8/42, mbtmp4.2/16, MS3.8/3, Ms1 3.8/3, ms1mx2.8/48, Error ellipse: s-maj=18.6km s-min=12.1km az=87.0*
ISC 24 06:13:09.0±0.9, 13.05N±0.08×144.2E±0.1, h125km±9km, n69, σ0.79/66, mb4.3/30, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.85**	**51**	P		**Pn**	**06 13 30.4**	**+0.3**
	810nm,0.3s,baz=261,slow=3.3,SNR=445							
GUMO				S		**Sn**	**06 13 45.9**	**-0.2**
	542nm,0.3s,baz=295,slow=22,SNR=59							
GUMO	**Guam**	**0.85**	**51**	Pn		**Pn**	**06 13 30.3**	**+0.2**
PATS	**Pohnpei**	**15.21**	**113**	Pn		**Pn**	**06 16 36.5**	**-0.8**
H11S3	**WAKE ISLAND Hy**	**22.30**	**73**	T		T	06 41 01.4	
	baz=259,slow=75,SNR=7.8							
H11S1	**WAKE ISLAND Hy**	**22.32**	**73**	T		T	06 41 02.8	
	baz=259,slow=75,SNR=7.1							
H11S2	**WAKE ISLAND Hy**	**22.32**	**73**	T		T	06 41 00.1	
	baz=259,slow=75,SNR=5.8							
H11N1	**WAKE ISLAND Hy**	**22.75**	**70**	T		T	06 41 36.0	
	baz=256,slow=75,SNR=14							
H11N2	**WAKE ISLAND Hy**	**22.76**	**70**	T		T	06 41 33.8	
	baz=256,slow=75,SNR=4.0							
H11N3	**WAKE ISLAND Hy**	**22.77**	**70**	T		T	06 41 37.2	
	baz=256,slow=75,SNR=12							
JNU	**Nakatsue**	**23.39**	**331**	P		**P**	**06 18 06.2**	**-0.4**
	9.5nm,0.7s,baz=158,slow=2.5,SNR=6.4							
JNU				LR		LR	06 25 29.3	
	comp=Z,161nm,18.6s,baz=18,slow=32							
JNU	**Nakatsue**	**23.39**	**331**	P		**P**	**06 18 06.9**	**+0.3**
JNU				IAmb		IAmb	06 18 12.2	
	comp=Z,32nm,1.1s							
YULB	**Yu-li**	**24.02**	**299**	P		**P**	**06 18 13.2**	**+0.7**
YULB				IAmb		IAmb	06 18 21.3	
	comp=Z,32nm,1.5s							
KSRS	**Korea Array**	**28.32**	**332**	P		**P**	**06 18 50.6**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=134,slow=10,SNR=4.4							
WB0	**Warramunga Arr**	**34.01**	**197**	P		**P**	**06 19 40.9**	**-0.2**
WB0				IAmb		IAmb	06 19 41.5	
	comp=Z,11nm,1.1s							
WR0	**Warramunga Arr**	**34.15**	**196**	P		**P**	**06 19 42.1**	**-0.2**
WR0				IAmb		IAmb	06 19 42.4	
	comp=Z,3.8nm,0.6s							
WRAB	**Tennant Creek**	**34.18**	**197**	P		**P**	**06 19 42.5**	**0.0**
WRAB				IAmb		IAmb	06 19 43.2	
	comp=Z,14nm,1.1s							
WB2	**Warramunga Arr**	**34.19**	**197**	P		**P**	**06 19 42.7**	**+0.1**
WB2				IAmb		IAmb	06 19 43.3	
	comp=Z,12nm,0.9s							
WRA	**Warramunga Arr**	**34.19**	**197**	P		**P**	**06 19 42.4**	**-0.3**
	comp=Z,6.6nm,0.8s,baz=21,slow=9.6,SNR=42							
WRA				PcP		**PcP**	**06 22 17.5**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=9.5,slow=3.5,SNR=5.1							
WRA	**Warramunga Arr**	**34.19**	**197**	P		**P**	**06 19 41.2**	**-1.4**
AS31	**Alice Springs**	**37.85**	**195**	P		**P**	**06 20 13.1**	**-0.8**
ASAR	**Alice Springs**	**37.85**	**195**	P		**P**	**06 20 13.1**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=21,slow=12,SNR=18							
ASAR				PcP		**PcP**	**06 22 28.6**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=45,slow=2.8,SNR=6.8							
ASAR	**Alice Springs**	**37.85**	**195**	P		**P**	**06 20 12.9**	**-1.0**
ASAR						**PcP**	**06 22 28.4**	**+0.6**
PSA00	**Pilbara Seismi**	**41.90**	**215**	P		**P**	**06 20 47.1**	**-0.1**
PSA00				IAmb		IAmb	06 20 47.9	
	comp=Z,7.9nm,0.8s							
CMAR	**Chiang Mai Arr**	**43.80**	**283**	P		**P**	**06 21 03.2**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=76,slow=6.8,SNR=12							
CMAR				PcP		**PcP**	**06 22 48.4**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=111,slow=1.9,SNR=6.6							
STKA	**Stephens Creek**	**44.74**	**183**	P		**P**	**06 21 09.7**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=2.2,slow=8.3,SNR=6.8							
STKA	**Stephens Creek**	**44.74**	**183**	P		**P**	**06 21 09.1**	**-0.8**
FORT	**Forrest**	**46.26**	**199**	P		**P**	**06 21 21.3**	**-0.6**
BBOO	**Buckleboo**	**46.26**	**189**	P		**P**	**06 21 21.6**	**-0.3**
BBOO				IAmb		IAmb	06 21 34.1	
	comp=Z,20nm,1.3s							
SONM	**Songino Array**	**46.79**	**325**	P		**P**	**06 21 27.3**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=148,slow=8.1,SNR=9.0							
SONM				PcP		**PcP**	**06 22 57.2**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=159,slow=5.7,SNR=3.5							
SONM	**Songino Array**	**46.79**	**325**	P		**P**	**06 21 28.2**	**+2.1**
SONM						**PcP**	**06 22 57.5**	**+0.2**
MORW	**Morawa**	**49.93**	**213**	P		**P**	**06 21 49.9**	**-0.3**
TOO	**Toolangi**	**50.37**	**179**	P		**P**	**06 21 54.5**	**+1.2**
SHL	**Shillong**	**50.62**	**292**	P		**P**	**06 21 55.2**	**-0.6**
MK31	**Makanchi Array**	**61.42**	**316**	P		**P**	**06 23 12.6**	**+0.5**
MKAR	**Makanchi Array**	**61.42**	**316**	P		**P**	**06 23 12.6**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=87,slow=8.5,SNR=20							
MKAR				PcP		**PcP**	**06 23 52.1**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=78,slow=8.1,SNR=5.3							
ZALV	**Zalesovo Beam**	**61.68**	**325**	P		**P**	**06 23 13.2**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=111,slow=6.7,SNR=5.0							
ZALV				PcP		**

0.6nm,0.4s,baz=338,slow=11,SNR=3.1
ASAR Alice Springs 28.08 166 P P 06 20 54.1 +1.4
0.3nm,0.6s,baz=351,slow=11,SNR=2.1
SONM Songino Array 47.35 341 P P 06 23 33.1 -1.8
0.4nm,0.6s,baz=156,slow=11,SNR=2.8
MKAR Makanchi Array 57.67 325 P P 06 24 53.1 +1.7
0.5nm,0.5s,baz=109,slow=7.7,SNR=4.7

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*NEIC **24** 06:33:40.7±0.8,53°.6N±0°.1×165°.22W±0°.09,h49km±28km, Error ellipse: s-maj=18.7km s-min=1.2km az=155.0*
AEIC 24 06:33:39±0.8,53°.52N±0°.09×165°.16W±0°.10,h50km±9km, ML3.5,Error ellipse: s-maj=14.4km s-min=6.6km az=156.0,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKSA	**Akutan Strait**	**0.69**	**333**		Pn	06 33 52.9	+0.2
AKSA	**Akutan Strait**	**0.69**	**333**		Pn	06 33 52.8	+0.2
AHB	**Akutan Harbor**	**0.71**	**327**		Pn	06 33 53.4	+0.5
AKUT	**Akutan**	**0.72**	**330**		Pn	06 33 53.3	+0.4
AKBBA	**Akutan Broad B**	**0.74**	**322**		Pn	06 33 53.8	+0.5
ZRO	**Akutan Zero**	**0.75**	**320**		Pn	06 33 53.9	+0.5
AKMO	**Akutan Morgan**	**0.76**	**319**		Pn	06 33 54.0	+0.4
AKV	**Akutan Volcano**	**0.77**	**322**		Pn	06 33 54.4	+0.6
AKLV	**Akutan Long Va**	**0.80**	**324**		Pn	06 33 54.5	+0.4
AKRB	**Akutan Reef Bi**	**0.82**	**319**		Pn	06 33 55.1	+0.9
LVA	**Lava Point**	**0.83**	**321**		Pn	06 33 55.1	+0.7
AKGG	**Akutan Green G**	**0.84**	**324**		Pn	06 33 55.2	+0.6
UNV	**Unalaska Valle**	**0.86**	**293**		Pn	06 33 55.0	+0.1
MNAT	**Makushin Natee**	**0.98**	**292**		Pn	06 33 57.0	+0.5
MREP	**Makushin Rep't**	**0.99**	**288**		Pn	06 33 56.8	+0.2
WESP	**Westdahl Peak**	**1.01**	**15**		Pn	06 33 57.0	+0.1
MTBL	**Makushin Table**	**1.01**	**297**		Pn	06 33 57.6	+0.7
WESE	**West Dahl East**	**1.01**	**19**		Pn	06 33 57.2	+0.3
MSW	**Makushin Switc**	**1.04**	**293**		Pn	06 33 58.0	+0.7
MGOD	**Makushin Gods**	**1.06**	**286**		Pn	06 33 58.0	+0.4
WEBT	**Westdahl Beart**	**1.10**	**12**		Pn	06 33 58.5	+0.4
MAPS	**Pakushin South**	**1.10**	**286**		Pn	06 33 58.5	+0.5
MCIR	**Makushin Cirqu**	**1.12**	**293**		Pn	06 33 59.4	+1.1
SSBA	**Shishaldin**	**1.39**	**25**		Pn	06 34 03.1	+1.0
SSLW	**Shishaldin Wes**	**1.39**	**25**		Pn	06 34 03.2	+1.1
WTUG	**Tugumak**	**1.41**	**18**		Pn	06 34 03.6	+1.4
SSLN	**Shishaldin Nor**	**1.46**	**27**		Pn	06 34 04.6	+1.6
OKFG	**Magazine Ridge**	**1.65**	**267**		Pn	06 34 07.1	+1.6
FALS	**False Pass**	**1.68**	**37**		Pn	06 34 05.8	-0.1
OKSP	**Okmok Steeple**	**1.90**	**263**		Pn	06 34 10.6	+1.6
NIKH	**Nikolski High**	**2.29**	**258**		Pn	06 34 16.0	+1.8
SDPT	**Sand Point**	**3.29**	**54**		Pn	06 34 28.9	+1.0
CNBA	**Chernabura Isl**	**3.52**	**66**	Pn	Pn	06 34 31.4	+0.3
SPIA	**Saint Paul Isl**	**4.68**	**324**	Pn	Pn	06 34 47.4	+0.5
CHGN	**Chignik**	**4.79**	**52**	Pn	Pn	06 34 49.7	+1.3
ADK	**Adak**	**7.20**	**261**	Pn	Pn	06 35 22.6	+1.1
OHAK	**Old Harbor**	**7.71**	**57**	Pn	Pn	06 35 28.9	+0.4
KDAK	**Kodiak Island**	**8.29**	**54**	Pn	Pn	06 35 37.0	+0.6
SEW	**Seward**	**10.82**	**46**	Pn	Pn	06 36 17.7	+0.6
SUA	**Susitna One**	**11.09**	**38**	Pn	Pn	06 36 15.8	+1.0
KLU	**Klutina**	**13.02**	**45**	Pn	Pn	06 36 40.0	-1.1
GLB	**Gilahina Butte**	**13.90**	**47**	Pn	Pn	06 36 54.5	+1.4

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*ANF **24** 06:36:07.9±0.2,36°.33N×97°.53W,h5km,ML5.0/17,Error ellipse: s-maj=2.8km s-min=2.3km az=20.0*
*NEIC **24** 06:36:08.8±1.4,36°.328N±0°.007×97°.53W±0°.02,h7km±5km, Error ellipse: s-maj=2.8km s-min=0.3km az=68.0*
*NEIC **24** 06:36:08.6,36°.33N×97°.53W,h4km,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.02; $M_{\theta\theta}$=5.09; $M_{\phi\phi}$=-4.07; $M_{r\theta}$=1.66; $M_{r\phi}$=2.78; $M_{\theta r}$=0.73; Fault plane solution: M_0=5.73000×10^{14} NP1:ϕ_S=330.43000°, δ=70.50000°,λ=-3.54000°. NP2:ϕ_{S2}=61.61000°,δ=86.66000°, λ=-160.47000°. Principal axes: T 6.1463, Plg11.0000°, Azm194.0000°; N -0.9639, Plg70.0000°, Azm71.0000°; P -5.1825, Plg16.0000°, Azm288.0000°;*
*TUL **24** 06:36:08.6±1.6,36°.33N±0°.01×97°.53W±0°.01,h5km±5km, ML4.0,Mwr3.8/24(NEIC) Error ellipse: s-maj=1.9km s-min=1.4km az=211.0*
*IDC **24** 06:36:08.1±0.9,36°.40N×97°.60W,h0km,mb3.9/2, mb1 4.1/9,mb1mx3.8/61,mbtmp3.8/9,ML3.7/7,MS3.3/6, Ms1 3.3/6,ms1mx2.9/60,Error ellipse: s-maj=11.9km s-min=10.7km az=118.0*
ISC 24 06:36:08.8±0.9,36°.33N±0°.02×97°.53W±0°.02,h12km±7km, n211,σ1$\hat{1}$9/244,MS3.8/5,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CROK	**Carrier**	**0.41**	**296**		**Pg**	**06 36 16.9**	**0.0**
CROK				Sg	**Sg**	**06 36 22.6**	**+0.3**
GC02	**Grant County #**	**0.59**	**333**		**Pg**	**06 36 20.1**	**-0.1**
GC02				Sg	**Sg**	**06 36 28.2**	**+0.1**
OK031	**S. Brethren Rd**	**0.67**	**124**		**Pg**	**06 36 21.8**	**0.0**
OK031				Sg	**Sg**	**06 36 30.7**	**+0.1**
BCOK	**Bluff Creek, N**	**0.67**	**186**		**Pg**	**06 36 21.7**	**-0.1**
BCOK				Sg	**Sg**	**06 36 31.0**	**+0.4**
QUOK	**Quay**	**0.68**	**103**		**Pg**	**06 36 21.9**	**0.0**
QUOK				Sg	**Sg**	**06 36 30.8**	**-0.1**
KAN13	**South Haven SW**	**0.69**	**3**		**Pg**	**06 36 22.0**	**-0.1**
KAN13				Sg	**Sg**	**06 36 31.1**	**-0.1**
KAN14	**Manchester OK**	**0.72**	**331**		**Pg**	**06 36 22.5**	**-0.2**
KAN14				Sg	**Sg**	**06 36 32.6**	**+0.4**
OK030	**Cody Creek RV**	**0.72**	**123**		**Pg**	**06 36 22.8**	**0.0**
OK030				Sg	**Sg**	**06 36 32.4**	**+0.2**
OK005	**Luther M Schoo**	**0.72**	**158**	Pg	**Pb**	**06 36 23.3**	**0.0**
OK009	**Oakdale Elemen**	**0.75**	**173**		**Pg**	**06 36 23.2**	**-0.1**
OK009				Sg	**Sg**	**06 36 33.5**	**+0.4**
OK025	**Westminster Rd**	**0.76**	**168**		**Pg**	**06 36 23.4**	**-0.1**
OK025				Sg	**Sg**	**06 36 33.8**	**+0.4**
KAN09	**Caldwell North**	**0.81**	**355**		**Pg**	**06 36 24.3**	**-0.2**
KAN09				Sg	**Sg**	**06 36 35.3**	**+0.2**
KAN05	**Bluff City Nor**	**0.83**	**341**		**Pg**	**06 36 24.6**	**-0.2**
KAN05				Sg	**Sg**	**06 36 35.8**	**+0.2**
KAN01	**Argonia South**	**0.85**	**347**		**Pg**	**06 36 24.8**	**-0.3**
KAN01				Sg	**Sg**	**06 36 36.4**	**+0.2**
KS20	**Mayfield South**	**0.90**	**359**		**Pg**	**06 36 25.9**	**-0.3**
KS20				Sg	**Sg**	**06 36 38.1**	**+0.1**
OKCFA	**Oklahoma City**	**0.91**	**176**		**Pg**	**06 36 26.0**	**-0.4**
OKCFA				Sg	**Sg**	**06 36 38.5**	**+0.2**
KAN10	**Anthony SW Sta**	**0.92**	**330**		**Pg**	**06 36 26.0**	**-0.4**
KAN10				Sg	**Sg**	**06 36 38.5**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**0.92**	**175**		**Pg**	**06 36 26.2**	**-0.3**
OKCSW				Sg	**Sg**	**06 36 38.9**	**+0.3**
KS21	**Milan North St**	**0.96**	**354**		**Pg**	**06 36 27.0**	**-0.3**
KAN08	**Anthony NE Sta**	**0.97**	**339**		**Pg**	**06 36 27.3**	**-0.1**
KAN08				Sg	**Sg**	**06 36 40.1**	**+0.1**
T35A	**Sooner Cattle**	**1.01**	**54**	Pg	**Pg**	**06 36 27.8**	**-0.4**
T35A				Sg	**Sg**	**06 36 41.1**	**-0.2**
KAN12	**Harper NE Stat**	**1.04**	**339**		**Pg**	**06 36 28.4**	**-0.4**
KAN12				Sg	**Sg**	**06 36 42.3**	**-0.1**
KAN12					**Sb**	**06 36 42.4**	**+0.1**
FNO	**Franklin**	**1.07**	**174**		**Pg**	**06 36 28.8**	**-0.6**
OK011	**Prague**	**1.08**	**141**		**Pg**	**06 36 28.7**	**-0.9**
OK011				Sg	**Sg**	**06 36 43.7**	**0.0**
U32A	**Winter Ranch,**	**1.19**	**273**		**Pg**	**06 36 30.8**	**-0.9**
U32A				Sg	**Sb**	**06 36 47.1**	**+0.5**
W35A	**Tecumseh**	**1.29**	**155**		**Pn**	**06 36 32.3**	**-0.3**
W35A				Sg	**Sg**	**06 36 49.8**	**-0.4**
TUL1	**Leonard** baz=287,SNR=760	**1.47**	**106**	P	**Pn**	**06 36 35.2**	**+0.2**
TUL1				S	**Sn**	**06 36 54.5**	**+0.4**
	baz=287						
TUL1	**Leonard**	**1.47**	**106**		**Pn**	**06 36 35.2**	**+0.2**
WMOK	**Wichita Mounta** baz=32,SNR=777	**1.89**	**213**	P	**Pn**	**06 36 41.9**	**+1.0**
WMOK				Sb	**Sb**	**06 37 07.7**	**+1.1**
	baz=32						
WMOK	**Wichita Mounta**	**1.89**	**213**	Pn	**Pn**	**06 36 41.8**	**+1.0**
R32A	**Long Quarter,**	**2.29**	**336**	Pn	**Pn**	**06 36 47.5**	**+1.0**
X37A	**Clayton**	**2.47**	**134**		**Pn**	**06 36 50.3**	**+1.5**
U38A	**Gravette**	**2.54**	**87**	Pn	**Pn**	**06 36 51.2**	**+1.5**
KSU1	**Kansas State U** baz=195,SNR=42	**2.86**	**14**	P	**Pn**	**06 36 55.2**	**+1.0**
KSU1				Sb	**Sb**	**06 37 36.8**	**+2.0**
	baz=195						
KSU1	**Kansas State U**	**2.86**	**14**	Pn	**Pn**	**06 36 55.4**	**+1.2**
HHAR	**Hobbs**	**2.90**	**90**		**Pn**	**06 36 55.8**	**+1.0**
Z35A	**Perchaven, San**	**3.00**	**176**	Pn	**Pn**	**06 36 57.6**	**+1.5**
CBKS	**Cedar Bluff** baz=144,SNR=20	**3.04**	**325**	P	**Pn**	**06 36 57.3**	**+0.5**
CBKS				Sb	**Sb**	**06 37 42.8**	**+2.8**
	baz=144						
CBKS	**Cedar Bluff**	**3.04**	**325**	Pn	**Pn**	**06 36 57.7**	**+0.9**
W39A	**Magazine** baz=292,SNR=46	**3.25**	**109**	P	**Pn**	**06 36 60.0**	**+0.5**
W39A				Sb	**Sb**	**06 37 48.5**	**+2.7**
	baz=292						
W39A	**Magazine**	**3.25**	**109**		**Pn**	**06 37 01.1**	**+1.6**
S39A	**Bolivar**	**3.63**	**67**	Pn	**Pn**	**06 37 06.1**	**+1.3**
AMTX	**Amarillo** baz=66	**3.68**	**248**	P	**Pn**	**06 37 06.0**	**+0.5**
AMTX	**Amarillo**	**3.68**	**248**	Pn	**Pn**	**06 37 06.8**	**+1.3**
MIAR	**Mount Ida** baz=300	**3.68**	**118**	P	**Pn**	**06 37 05.9**	**+0.4**
MIAR				S	**Sn**	**06 37 49.7**	**+0.8**
	baz=300						
MIAR	**Mount Ida**	**3.68**	**118**		**Pn**	**06 37 07.0**	**+1.5**
Z38A	**Mt. Pleasant**	**3.71**	**145**		**Pn**	**06 37 06.5**	**+0.7**
U40A	**Yellville** baz=271	**3.77**	**88**	P	**Pn**	**06 37 07.0**	**+0.2**
U40A	**Yellville**	**3.77**	**88**	Pn	**Pn**	**06 37 08.1**	**+1.4**
ABTX	**Abilene, Hawle** baz=25,SNR=67	**4.09**	**206**	P	**Pn**	**06 37 11.4**	**+0.3**
ABTX	**Abilene, Hawle**	**4.09**	**206**		**Pn**	**06 37 11.7**	**+0.6**
X40A	**Basin Creek Fa** baz=297	**4.25**	**114**	P	**Pn**	**06 37 14.2**	**+0.9**
X40A	**Basin Creek Fa**	**4.25**	**114**		**Pn**	**06 37 14.9**	**+1.6**
MGMO	**Mountain Grove**	**4.30**	**77**		**Pn**	**06 37 15.6**	**+1.5**
WHTX	**Lake Whitney,** baz=359,SNR=5.9	**4.33**	**179**	P	**Pn**	**06 37 15.0**	**+0.7**
WHTX				S	**Sn**	**06 38 05.1**	**+0.4**
	baz=359						
WHTX	**Lake Whitney,**	**4.33**	**179**		**Pn**	**06 37 15.1**	**+0.7**
WHAR	**Wooly Hollow**	**4.38**	**102**	Pn	**Pn**	**06 37 16.5**	**+1.4**
N33A	**J Bar K, Exete**	**4.41**	**1**		**Pn**	**06 37 15.8**	**+0.3**
W41B	**Gary Mavity, V** baz=287	**4.45**	**103**	P	**Pn**	**06 37 16.3**	**+0.3**
W41B				S	**Sn**	**06 38 08.4**	**+0.8**
	baz=287						
W41B	**Gary Mavity, V**	**4.45**	**103**		**Pn**	**06 37 17.2**	**+1.2**
WLAR	**White Oak Lake**	**4.48**	**125**	Pn	**Pn**	**06 37 17.8**	**+1.4**
237A	**Washetta, Mont**	**4.54**	**161**	Pn	**Pn**	**06 37 17.8**	**+0.5**
P38A	**Dawn**	**4.56**	**43**		**Pn**	**06 37 18.4**	**+0.9**
R40A	**Maddies Statio**	**4.63**	**63**		**Pn**	**06 37 19.4**	**+0.9**
N35A	**Tabor**	**4.76**	**17**		**Pn**	**06 37 20.8**	**+0.4**
KSCO	**Kaye Shedlock'** baz=142,SNR=5.7	**4.85**	**305**	P	**Pn**	**06 37 21.8**	**+0.1**
KSCO	**Kaye Shedlock'**	**4.85**	**305**		**Pn**	**06 37 22.6**	**+0.8**
MSTX	**Muleshoe** baz=60,SNR=11	**4.90**	**243**	P	**Pn**	**06 37 22.6**	**+0.2**
MSTX				S	**Sn**	**06 38 19.8**	**+0.8**
	baz=60						
MSTX	**Muleshoe**	**4.90**	**243**		**Pn**	**06 37 23.7**	**+1.4**
Z41A	**Richland Creek** baz=310,SNR=19	**4.95**	**127**	P	**Pn**	**06 37 23.1**	**+0.2**
Z41A				S	**Sn**	**06 38 20.3**	**+0.2**
	baz=310						
Z41A	**Richland Creek**	**4.95**	**127**		**Pn**	**06 37 23.5**	**+0.6**
BGNE	**Belgrade** baz=174,SNR=7.7	**5.10**	**355**	P	**Pn**	**06 37 25.3**	**+0.4**
BGNE				S	**Sn**	**06 38 23.8**	**+0.1**
	baz=174						
BGNE	**Belgrade**	**5.10**	**355**		**Pn**	**06 37 25.4**	**+0.4**
NATX	**Nacogdoches**	**5.14**	**152**		**Pn**	**06 37 26.5**	**+1.0**
LCAR	**Lake Charles**	**5.16**	**91**		**Pn**	**06 37 26.2**	**+0.5**
T42A	**Van Buren**	**5.22**	**80**		**Pn**	**06 37 27.4**	**+0.8**
CCM	**Cathedral Cave** baz=253	**5.30**	**69**	P	**Pn**	**06 37 28.0**	**+0.3**
CCM				S	**Sn**	**06 38 28.6**	**-0.2**
	baz=253						
CCM	**Cathedral Cave**	**5.30**	**69**	Pn	**Pn**	**06 37 28.7**	**+0.9**
P40A	**Paris**	**5.38**	**52**		**Pn**	**06 37 30.1**	**+1.3**
435B	**Jarrell** baz=0.5,SNR=16	**5.53**	**181**	P	**Pn**	**06 37 31.6**	**+0.7**
435B				S	**Sn**	**06 38 33.7**	**-0.7**
	baz=0.5						
435B	**Jarrell**	**5.53**	**181**	Pn	**Pn**	**06 37 31.9**	**+0.9**
N38A	**Joes South For**	**5.58**	**36**	Pn	**Pn**	**06 37 32.5**	**+0.8**
T25A	**Trinidad** baz=96,SNR=10	**5.59**	**280**	P	**Pn**	**06 37 32.2**	**+0.3**
T25A	**Trinidad**	**5.59**	**280**		**Pn**	**06 37 32.6**	**+0.7**
X43A	**Marvell**	**5.72**	**106**	Pn	**Pn**	**06 37 32.7**	**-0.8**
PBMO	**Poplar Bluff**	**5.73**	**83**		**Pn**	**06 37 34.1**	**+0.4**
FVM	**French Village**	**5.91**	**72**		**Pn**	**06 37 37.7**	**+1.6**
JCT	**Junction City** baz=17	**6.13**	**199**	P	**Pn**	**06 37 39.3**	**0.0**
JCT	**Junction City**	**6.13**	**199**	Pn	**Pn**	**06 37 39.2**	**0.0**
CPRX	**Cap Rock**	**6.17**	**240**		**Pn**	**06 37 40.9**	**+1.0**
143A	**Socs Landing,**	**6.21**	**124**		**Pn**	**06 37 40.9**	**+0.6**
SCIA	**State Center** baz=212	**6.50**	**30**	S	**Sn**	**06 38 58.4**	**+0.1**
SCIA	**State Center**	**6.50**	**30**	Pn	**Pn**	**06 37 44.8**	**+0.6**
HKT	**Hockley**	**6.52**	**167**	Pn	**Pn**	**06 37 44.1**	**-0.3**
SDCO	**Great Sand Dun** baz=100,SNR=34	**6.53**	**285**	P	**Pn**	**06 37 45.1**	**+0.2**
SDCO	**Great Sand Dun**	**6.53**	**285**	Pn	**Pn**	**06 37 45.9**	**+1.0**
Q24A	**Divide** baz=111,SNR=8.0	**6.59**	**296**	P	**Pn**	**06 37 45.9**	**+0.1**
Q24A	**Divide**	**6.59**	**296**		**Pn**	**06 37 46.4**	**+0.6**
S44A	**Carbondale**	**6.76**	**76**		**Pn**	**06 37 48.5**	**+0.8**
SIUC	**Southern Illin**	**6.79**	**76**		**Pn**	**06 37 49.0**	**+0.8**
N41A	**Harden Midland**	**6.82**	**48**	Pn	**Pn**	**06 37 49.8**	**+1.2**
OXF	**Oxford** baz=288	**6.87**	**103**	P	**Pn**	**06 37 49.5**	**+0.2**
OXF	**Oxford**	**6.87**	**103**		**Pn**	**06 37 49.6**	**+0.3**
W45A	**Hickory Valley**	**6.88**	**97**	Pn	**Pn**	**06 37 50.2**	**+0.7**
Y45A	**Yeager Farm, C**	**6.99**	**108**	Pn	**Pn**	**06 37 51.7**	**+0.7**
VBMS	**Vicksburg** baz=307	**7.10**	**123**	P	**Pn**	**06 37 53.1**	**+0.6**
VBMS	**Vicksburg**	**7.10**	**123**		**Pn**	**06 37 53.4**	**+0.9**
P43A	**Skaggs, Pawnee**	**7.14**	**60**	Pn	**Pn**	**06 37 54.5**	**+1.6**
Q44A	**Meyer Farm, Va**	**7.23**	**67**		**Pn**	**06 37 54.8**	**+0.6**
ANMO	**Albuquerque** 0.2nm,0.3s,baz=99,slow=14,SNR=3.6	**7.40**	**262**	Pn	**Pn**	**06 37 58.9**	**+2.1**
ANMO				Pg	**Pb**	06 38 22.2	+5.0
	2.6nm,0.3s,baz=82,slow=14,SNR=13						
ANMO				Lg	Lg	06 39 57.6	
	6.1nm,0.3s,baz=356,slow=17,SNR=3.8						
ANMO				LR	LR	06 41 09.1	
	comp=Z,75nm,21.7s,baz=76,slow=41						
ECSD	**EROS Data Cent** baz=186,SNR=17	**7.43**	**5**	P	**Pn**	**06 37 56.6**	**-0.4**
ECSD	**EROS Data Cent**	**7.43**	**5**	Pn	**Pn**	**06 37 57.0**	**0.0**
344A	**Westbrook Farm**	**7.45**	**129**		**Pn**	**06 37 55.8**	**-1.5**
735A	**Kenedy**	**7.45**	**182**		**Pn**	**06 37 58.1**	**+0.8**
L40A	**Anamosa**	**7.53**	**39**		**Pn**	**06 37 57.0**	**-1.3**
S22A	**4UR Ranch, Cre**	**7.57**	**284**	Pn	**Pn**	**06 38 01.2**	**+2.0**
PLAL	**Pickwick Lake**	**7.81**	**97**		**Pn**	**06 38 05.5**	**+3.3**
WVT	**Waverly**	**7.84**	**89**	Pn	**Pn**	**06 38 04.7**	**+2.1**
146A	**Union**	**7.90**	**115**		**Pn**	**06 38 02.9**	**-0.5**
PHWY	**Pilot Hill**	**7.94**	**311**		**Pn**	**06 38 04.4**	**+0.2**
MNTX	**Cornudas Mount** baz=52,SNR=10	**7.99**	**237**	P	**Pn**	**06 38 04.8**	**+0.1**
MNTX				S	**Sn**	**06 39 32.7**	**-2.2**
	baz=52						
MNTX	**Cornudas Mount**	**7.99**	**237**	Pn	**Pn**	**06 38 04.5**	**-0.2**
N23A	**Red Feather La** baz=122	**8.01**	**307**	P	**Pn**	**06 38 05.7**	**+0.5**
N23A	**Red Feather La**	**8.01**	**307**	Pn	**Pn**	**06 38 05.5**	**+0.2**
O44A	**Mansfield**	**8.09**	**59**	Pn	**Pn**	**06 38 05.9**	**-0.1**
833A	**Chaparral WMA,** baz=11	**8.13**	**192**	P	**Pn**	**06 38 07.2**	**+0.6**
I37A	**Lemond, Waseca**	**8.30**	**21**		**Pn**	**06 38 06.9**	**-2.0**
L42A	**Oliver, Polo**	**8.33**	**45**	Pn	**Pn**	**06 38 08.8**	**-0.5**
T47A	**Sharon Grove**	**8.40**	**82**	Pn	**Pn**	**06 38 11.8**	**+1.5**
JFWS	**Jewell Farm** baz=223,SNR=21	**8.65**	**38**	P	**Pn**	**06 38 12.5**	**-1.1**
JFWS	**Jewell Farm**	**8.65**	**38**	Pn	**Pn**	**06 38 13.8**	**+0.2**
TX31	**Lajitas Ar. Si**	**8.68**	**218**	Pn	**Pn**	**06 38 13.9**	**-0.3**
TXAR	**Lajitas Array** 1.8nm,0.3s,baz=44,slow=11,SNR=27	**8.68**	**218**	Pn	**Pn**	**06 38 13.8**	**-0.4**
TXAR				Lg	Lg	06 40 38.2	
	4.6nm,0.3s,baz=33,slow=25,SNR=4.4						
TXAR				LR	LR	06 42 21.4	
	comp=Z,12nm,20.8s,baz=0.0,slow=43						
TXAR	**Lajitas Array**	**8.68**	**218**	Pn	**Pn**	**06 38 13.6**	**-0.6**
TX32	**Lajitas Array**	**8.68**	**218**		**Pn**	**06 38 13.7**	**-0.5**
P46A	**Rosedale**	**8.79**	**65**	Pn	**Pn**	**06 38 16.3**	**+0.7**
M44A	**Midewin, Midew**	**8.96**	**53**	Pn	**Pn**	**06 38 18.4**	**+0.5**
CLTN	**Cedars of Leba**	**9.05**	**88**	Pn	**Pn**	**06 38 22.0**	**+2.7**
SFIN	**Lafayette** baz=247	**9.14**	**61**	P	**Pn**	**06 38 20.8**	**+0.5**
SFIN	**Lafayette**	**9.14**	**61**	Pn	**Pn**	**06 38 21.7**	**+1.4**
WCI	**Wyandotte Cave** baz=261	**9.15**	**75**	P	**Pn**	**06 38 20.5**	**-0.1**
WCI	**Wyandotte Cave**	**9.15**	**75**	Pn	**Pn**	**06 38 22.3**	**+1.7**
BLO	**Bloomington**	**9.17**	**69**		**Pn**	**06 38 21.9**	**+1.1**
I40A	**Norwalk**	**9.22**	**33**		**Pn**	**06 38 20.6**	**-0.9**
RSSD	**Black Hills** baz=145	**9.24**	**329**	P	**Pn**	**06 38 22.1**	**+0.2**
RSSD	**Black Hills**	**9.24**	**329**	Pn	**Pn**	**06 38 21.4**	**-0.5**
LRAL	**Lakeview Retre** baz=294	**9.27**	**108**	P	**Pn**	**06 38 23.2**	**+0.9**
K22A	**Casper** baz=129	**9.39**	**315**	P	**Pn**	**06 38 24.2**	**+0.2**
K22A				S	**Sn**	**06 40 08.0**	**-1.5**
	baz=129						
K22A	**Casper**	**9.39**	**315**		**Pn**	**06 38 23.8**	**-0.2**
L44A	**Lake County Fo** baz=235	**9.47**	**49**	P	**Pn**	**06 38 24.6**	**-0.4**
K43A	**Burlington**	**9.54**	**45**	Pn	**Pn**	**06 38 25.3**	**-0.5**
F33A	**5 Mile Ranch,**	**9.55**	**5**	Pn	**Pn**	**06 38 25.3**	**-0.7**
SPMN	**Marine on St.** baz=204,SNR=12	**9.58**	**20**	P	**Pn**	**06 38 24.6**	**-1.8**
SPMN	**Marine on St.**	**9.58**	**20**		**Pn**	**06 38 24.4**	**-2.0**
F36A	**Milaca**	**9.99**	**16**	Pn	**Pn**	**06 38 29.9**	**-2.2**
I42A	**Draeger Farm,**	**10.03**	**38**	Pn	**Pn**	**06 38 32.0**	**-0.5**
L46A	**Eue Claire**	**10.40**	**54**		**Pn**	**06 38 36.5**	**-1.2**
G40A	**Rib Lake**	**10.51**	**30**		**Pn**	**06 38 38.0**	**-1.2**
H43A	**Windswept, Lux**	**11.02**	**39**	Pn	**Pn**	**06 38 45.0**	**-1.1**
TKL	**Tuckaleechee C** 0.3nm,0.3s,baz=187,slow=6.9,SNR=4.1	**11.16**	**89**	Pn	**Pn**	**06 38 49.2**	**+1.0**
TKL				Sn	Sn	06 41 05.4	+12
	0.9nm,0.3s,baz=202,slow=15,SNR=3.5						
TKL				Lg	Lg	06 41 54.9	
	1.9nm,0.3s,baz=355,slow=23,SNR=3.8						
TKL	**Tuckaleechee C**	**11.16**	**89**	Pn	**Pn**	**06 38 49.4**	**+1.2**
152A	**Waverly Hall**	**11.18**	**105**	Pn	**Pn**	**06 38 50.3**	**+1.9**
E38A	**Yreka Farm, Brul**	**11.20**	**22**	Pn	**Pn**	**06 38 47.7**	**-1.4**
S51A	**Beattyville**	**11.22**	**79**	Pn	**Pn**	**06 38 48.7**	**-0.3**
TZTN	**Tazewell**	**11.27**	**85**	Pn	**Pn**	**06 38 50.2**	**+0.7**
V52A	**Sevierville**	**11.29**	**88**	Pn	**Pn**	**06 38 51.8**	**+2.0**
BW06	**Boulder Array**	**11.29**	**308**	Pn	**Pn**	**06 38 50.2**	**+0.1**
PD31	**Pinedale Array**	**11.29**	**308**		**Pn**	**06 38 49.0**	**-1.1**
PDAR	**Pinedale Array** 0.5nm,0.3s,baz=125,slow=15,SNR=16	**11.29**	**308**	Pn	**Pn**	**06 38 49.7**	**-0.4**
PDAR				Pg		06 39 30.2	
	1.2nm,0.3s,baz=118,slow=17,SNR=5.1						
PDAR				Lg	Lg	06 41 58.3	
	1.0nm,0.3s,baz=130,slow=14,SNR=1.6						
PDAR	**Pinedale Array**	**11.29**	**308**		**Pn**	**06 38 50.1**	**0.0**
Y52A	**Lilburn**	**11.30**	**99**	Pn	**Pn**	**06 38 50.6**	**+0.6**
L48A	**N Adams**	**11.61**	**57**	Pn	**Pn**	**06 38 53.7**	**-0.6**
F42A	**Maple Grove Fa**	**11.78**	**34**		**Pn**	**06 38 55.1**	**-1.5**
U15A	**North Rim**	**11.90**	**275**	Pn	**Pn**	**06 39 01.9**	**+3.4**
J47A	**Sunmer**	**11.96**	**51**		**Pn**	**06 38 56.4**	**-2.5**
AGMN	**Agassiz Nation**	**12.03**	**5**	Pn	**Pn**	**06 38 57.3**	**-2.6**
TCRU	**Three Creeks R**	**12.07**	**285**		**Pn**	**06 38 57.5**	**-3.3**
HWUT	**Hardware Ranch**	**12.13**	**300**		**Pn**	**06 39 03.2**	**+1.7**
B35A	**Bob, Littlefor**	**12.35**	**12**	Pn	**Pn**	**06 39 02.0**	**-2.3**
EYMN	**Ely** baz=203	**12.44**	**19**	P	**Pn**	**06 39 02.2**	**-3.3**
EYMN	**Ely**	**12.44**	**19**	Pn	**Pn**	**06 39 02.8**	**-2.7**
P52A	**Corning** baz=260	**12.59**	**70**	P	**Pn**	**06 39 07.7**	**+0.1**
D41A	**Chassel**	**12.63**	**29**		**Pn**	**06 39 06.6**	**-1.6**
E43A	**Lone Tree Farm**	**12.77**	**35**	Pn	**Pn**	**06 39 07.8**	**-2.3**
Q53A	**Leroy** baz=

T35A	**Sooner Cattle**	**1.02**	**54**	Pg	**Pg**	**06 56 12.6**	**-0.7**
T35A				Sg	**Sg**	**06 56 25.9**	**-0.7**
KAN12	**Harper NE Stat**	**1.04**	**340**		**Pg**	**06 56 13.5**	**-0.1**
KAN12				Sg	**Sg**	**06 56 27.2**	**0.0**
FNO	**Franklin**	**1.07**	**174**		**Pg**	**06 56 13.6**	**-0.5**
FNO				Sg	**Sg**	**06 56 28.4**	**+0.4**
U32A	**Winter Ranch,**	**1.18**	**273**		**Pg**	**06 56 15.7**	**-0.6**
W35A	**Tecumseh**	**1.29**	**155**	Pn	**Pn**	**06 56 17.1**	**-0.6**
W35A				Sg	**Sb**	**06 56 34.3**	**-0.2**
TUL1	**Leonard** baz=287	**1.48**	**106**	P	**Pn**	**06 56 20.1**	**-0.3**
TUL1				S	**Sn**	**06 56 40.0**	**+0.3**
TUL1	**Leonard** baz=287	**1.48**	**106**		**Pn**	**06 56 20.0**	**-0.3**
WMOK	**Wichita Mounta** baz=32	**1.87**	**213**	P	**Pn**	**06 56 26.8**	**+1.0**
WMOK				S	**Sb**	**06 56 52.5**	**+1.0**
WMOK	**Wichita Mounta** baz=32	**1.87**	**213**	Pn	**Pn**	**06 56 26.7**	**+0.9**
WMOK				Sn	**Sb**	**06 56 52.5**	**+1.0**
R32A	**Long Quarter,**	**2.29**	**336**		**Pn**	**06 56 32.4**	**+0.8**
X37A	**Clayton**	**2.48**	**134**		**Pn**	**06 56 35.2**	**+1.2**
U38A	**Gravette**	**2.55**	**86**		**Pn**	**06 56 35.9**	**+0.8**
KSU1	**Kansas State U**	**2.87**	**15**	Pn	**Pn**	**06 56 40.3**	**+0.8**
HHAR	**Hobbs**	**2.91**	**90**		**Pn**	**06 56 41.4**	**+1.3**
Z35A	**Perchaven, San**	**2.99**	**175**	Pn	**Pn**	**06 56 41.1**	**0.0**
CBKS	**Cedar Bluff** baz=144	**3.04**	**326**	P	**Pb**	**06 56 46.3**	**-1.6**
CBKS	**Cedar Bluff**	**3.04**	**326**	Pn	**Pn**	**06 56 43.8**	**+2.0**
W39A	**Magazine** baz=292	**3.26**	**109**	Pb	**Pb**	**06 56 52.6**	**+1.0**
W39A	**Magazine**	**3.26**	**109**		**Pn**	**06 56 47.4**	**+2.6**
S39A	**Bolivar**	**3.65**	**67**	Pn	**Pn**	**06 56 51.0**	**+0.8**
AMTX	**Amarillo** baz=66	**3.66**	**248**	Sb	**Sg**	**06 57 48.3**	**-2.9**
AMTX	**Amarillo**	**3.66**	**248**		**Pn**	**06 56 52.4**	**+2.0**
MIAR	**Mount Ida** baz=300	**3.69**	**118**	P	**Pn**	**06 56 51.9**	**+1.2**
MIAR	**Mount Ida**	**3.69**	**118**	Pn	**Pn**	**06 56 52.0**	**+1.2**
Z38A	**Mt. Pleasant**	**3.71**	**145**	Pn	**Pn**	**06 56 51.5**	**+0.5**
U40A	**Yellville**	**3.79**	**88**	Pn	**Pn**	**06 56 54.3**	**+2.2**
ABTX	**Abilene, Hawle**	**4.08**	**206**	Pn	**Pn**	**06 56 56.0**	**-0.1**
X40A	**Basin Creek Fa** baz=297	**4.26**	**114**	P	**Pn**	**06 56 60.0**	**+1.4**
X40A	**Basin Creek Fa**	**4.26**	**114**		**Pn**	**06 57 00.1**	**+1.5**
MGMO	**Mountain Grove**	**4.32**	**77**	Pn	**Pn**	**06 57 00.7**	**+1.3**
WHTX	**Lake Whitney,** baz=359	**4.32**	**179**	P	**Pn**	**06 57 00.2**	**+0.8**
WHTX				S	**Sn**	**06 57 50.2**	**+0.4**
WHTX	**Lake Whitney,** baz=359	**4.32**	**179**	Pn	**Pn**	**06 57 00.7**	**+1.3**
WHAR	**Wooly Hollow**	**4.39**	**102**	Pn	**Pn**	**06 57 01.7**	**+1.2**
W41B	**Gary Mavity, V** baz=287	**4.46**	**103**	P	**Pn**	**06 57 02.4**	**+1.1**
W41B	**Gary Mavity, V**	**4.46**	**103**	Pn	**Pn**	**06 57 02.2**	**+1.0**
WLAR	**White Oak Lake**	**4.49**	**125**	Pn	**Pn**	**06 57 02.2**	**+0.5**
237A	**Washetta, Mont**	**4.54**	**161**	Pn	**Pn**	**06 57 03.0**	**+0.6**
P38A	**Dawn**	**4.58**	**43**	Pn	**Pn**	**06 57 05.2**	**+2.4**
R40A	**Maddies Statio**	**4.64**	**63**	Pn	**Pn**	**06 57 04.6**	**+0.8**
Z41A	**Richland Creek**	**4.96**	**127**	Pn	**Pn**	**06 57 07.7**	**-0.4**
435B	**Jarrell** baz=0.6	**5.52**	**180**	S	**Sn**	**06 58 18.6**	**-0.9**
SDCO	**Great Sand Dun**	**6.52**	**285**	Pn	**Pn**	**06 57 31.5**	**+1.5**
Q24A	**Divide**	**6.58**	**296**	Pn	**Pn**	**06 57 30.3**	**-0.5**
ECSD	**EROS Data Cent**	**7.44**	**5**		**Pn**	**06 57 43.1**	**+0.9**
L40A	**Anamosa**	**7.55**	**39**	Pn	**Pn**	**06 57 43.3**	**-0.4**
PLAL	**Pickwick Lake**	**7.82**	**97**	Pn	**Pn**	**06 57 45.8**	**-1.7**
MNTX	**Cornudas Mount**	**7.97**	**237**	Pn	**Pn**	**06 57 50.6**	**+1.0**
N23A	**Red Feather La**	**8.00**	**307**	Pn	**Pn**	**06 57 51.3**	**+1.0**
TX31	**Lajitas Ar. Si**	**8.66**	**218**	Pn	**Pn**	**06 57 59.0**	**-0.2**
TX32	**Lajitas Array**	**8.66**	**218**	Pn	**Pn**	**06 57 56.3**	**-2.9**
TXAR	**Lajitas Array**	**8.66**	**218**	Pn	**Pn**	**06 57 56.7**	**-2.4**
K43A	**Burlington**	**9.55**	**45**	Pn	**Pn**	**06 58 12.8**	**+1.6**
SPMN	**Marine on St.**	**9.59**	**21**	Pn	**Pn**	**06 58 10.6**	**-1.2**
F36A	**Milaca**	**10.00**	**16**	Pn	**Pn**	**06 58 15.2**	**-2.2**
I42A	**Draeger Farm,**	**10.04**	**38**	Pn	**Pn**	**06 58 18.0**	**+0.1**
G40A	**Rib Lake**	**10.53**	**30**	Pn	**Pn**	**06 58 24.6**	**0.0**

IDC 24 06:57:57.8±3.1, 54°22N×87°06E, h0km, mb1 2.9/2, mb1mx2.9/56, mbtmp2.9/2, ML2.5/2, Error ellipse: s-maj=27.9km s-min=15.8km az=64.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA** baz=79,slow=357,SNR=0.7	**1.35**	**259**	*i*		07 05 43.3	
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=77,slow=18,SNR=9.0	**1.35**	**259**	Pg	Pg	06 58 22.2	-1.4
ZALV	1.1nm,0.3s,baz=76,slow=28,SNR=6.3			Lg	Lg	06 58 40.9	
ZALV	2.4nm,0.4s,baz=86,slow=25,SNR=8.6			Rg	Rg	06 58 54.2	
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=43,slow=19,SNR=3.0	**6.34**	**239**	Pn	Pn	06 59 33.2	+0.8
KURBB	0.1nm,0.3s,baz=53,slow=30,SNR=6.0			Lg	Lg	07 01 25.8	
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=28,slow=14,SNR=7.4	**8.03**	**204**	Pn	Pn	06 59 56.9	+1.3
MKAR	0.2nm,0.3s,baz=26,slow=27,SNR=4.5			Sn	Sn	07 01 26.7	-0.4

*BJI **24** 07:07:21.8±0.0, 30°.86N×141°.93E, h8km, mB4.8/28, mb4.6/40, Ms4.1/12, Ms7 3.8/12*
*JMA **24** 07:07:22.9±0.2, 30°.86N×142°.15E, h33km, M4.5*
*MOS **24** 07:07:22.3±0.9, 30°.82N×141°.96E, h15km, mb4.8/28, Error ellipse: s-maj=14.6km s-min=6.0km az=117.4*
*NIED **24** 07:07:23.0, 30°.86N×142°.15E, h33km, MW4.3, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; M_{rr}1.80; $M_{\theta\theta}$0.13; $M_{\phi\phi}$-1.93; $M_{r\theta}$1.77; $M_{\theta\phi}$-0.88; $M_{r\phi}$0.44; Fault plane solution: $M_0$2.74000×10¹⁵ NP1:ϕ$_s$50.00000°, δ66.00000°, λ121.00000°. NP2:ϕ$_s$175.00000°, δ38.00000°, λ41.00000°.*
*IDC **24** 07:07:22.1±0.6, 30°.81N×141°.98E, h0km, mb4.2/23, mb1 4.3/26, mb1mx4.2/68, mbtmp4.2/26, ML3.2/4, MS3.5/11, Ms1 3.5/11, ms1mx3.2/46 Error ellipse: s-maj=18.9km s-min=13.1km az=78.0*
*NEIC **24** 07:07:23.4±1.6, 30°.83N±0°.06×142°.0E±0°.1, h10km±1km, mb4.7/48, Error ellipse: s-maj=15.6km s-min=9.2km az=249.0*

ISC 24 07:07:25.3±0.4, 30°.83N±0°.05×141°.97E±0°.07, h24km, n165, σ1s24/170, mb4.6/63, MS3.6/9, 13C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.92**	**322**	P	**Pn**	**07 08 09.9**	**-0.4**
JHJ2				S	**Sn**	**07 08 44.3**	**-0.4**
JHJ2	**Mitsune**	**2.92**	**322**	Pn	**Pn**	**07 08 10.2**	**-0.1**
JHJ	**Hachijo jima 2** 9.5nm,0.3s,baz=246,slow=20,SNR=1.7	**2.95**	**321**	Pn	**Pn**	**07 08 10.2**	**-0.5**
JHJ	47nm,0.3s,baz=226,slow=20,SNR=4.4			Sn	**Sn**	**07 08 44.5**	**-0.8**
JHJ	comp=Z,463nm,21.0s,baz=110,slow=39			LR	LR	07 09 15.9	
CBIJ	**Chichi jima**	**3.73**	**177**	P	**Pn**	**07 08 20.6**	**-0.8**
CBIJ				*e*S	**Sn**	**07 09 02.8**	**-1.7**
JCJ	**Chichijima**	**3.73**	**177**	Pn	**Pn**	**07 08 20.4**	**-0.9**
BSO1	**Boso 1**	**3.91**	**348**	P	**Pn**	**07 08 22.4**	**-0.9**
BSO3	**Boso 3**	**4.15**	**343**	P	**Pn**	**07 08 25.9**	**-1.0**
BSO4	**Boso 4**	**4.37**	**342**	P	**Pn**	**07 08 31.7**	**+1.6**
JSG	**Sagara**	**4.99**	**321**	Pn	**Pn**	**07 08 38.0**	**-0.7**
JOD2	**Odawara 2**	**5.04**	**332**	P	**Pn**	**07 08 40.5**	**+1.0**
JHU	**Hanno**	**5.49**	**336**	P	**Pn**	**07 08 45.9**	**+0.3**
JNY	**Yasuok**	**5.68**	**324**	P	**Pn**	**07 08 51.2**	**+2.9**
JIE	**Ise**	**5.69**	**310**	P	**Pn**	**07 08 49.8**	**+1.5**
JRY	**Ryogami san**	**5.78**	**334**	P	**Pn**	**07 08 50.1**	**+0.5**
JRY				S	**Sn**	**07 09 55.8**	**+0.7**
JHO	**Hitachi**	**5.88**	**349**	P	**Pn**	**07 08 49.8**	**-1.2**
JAG	**Ashikaga**	**5.96**	**340**	P	**Pn**	**07 08 51.5**	**-0.6**
JGF	**Kuroka**	**6.13**	**322**		**Pn**	**07 08 57.8**	**+3.4**
INU	**Inuyama**	**6.13**	**319**		**Pn**	**07 08 53.3**	**-1.1**
MJAR	**Matsushiro Arr** 1.2nm,0.3s,baz=152,slow=11,SNR=84	**6.50**	**332**	Pn	**Pn**	**07 09 00.2**	**+0.7**
MJAR	comp=Z,260nm,18.2s,baz=160,slow=40			LR	LR	07 11 44.0	
MJAR	**Matsushiro Arr**	**6.50**	**332**		**Pn**	**07 08 60.0**	**+0.4**
MAJO	**Matsushiro**	**6.50**	**332**	*i* P	**Pn**	**07 09 00.5**	**+0.9**
MAJO	**Matsushiro**	**6.50**	**332**		**Pn**	**07 09 00.9**	**+1.3**
MAT	**Matsushiro**	**6.51**	**332**	P	**Pn**	**07 09 00.2**	**+0.6**
MAT				*e*S	**Sn**	**07 10 11.5**	**-1.5**
MJB9	**Matsu-Tunnel**	**6.51**	**332**	Pn	**Pn**	**07 08 59.9**	**+0.2**
JMM	**Marumori**	**7.09**	**352**	Pn	**Pn**	**07 09 07.0**	**-0.5**
JSD	**Sado**	**7.82**	**338**	Pn	**Pn**	**07 09 15.9**	**-1.6**
JNU	**Nakatsue** comp=Z,352nm,18.2s,baz=82,slow=34	**9.70**	**287**	LR	LR	07 12 49.3	
JTM	**Tenmabayashi**	**9.96**	**356**	Pn	**Pn**	**07 09 45.0**	**-2.0**
ERM	**Erimo**	**11.20**	**5**	*i* P	**Pn**	**07 10 01.5**	**-2.4**
ERM	**Erimo**	**11.20**	**5**	Pn	**Pn**	**07 10 00.7**	**-3.2**
ASAJ	**Asahikawa** comp=Z,152nm,21.1s,baz=174,slow=40	**13.27**	**2**	LR	LR	07 16 19.6	
KSRS	**Korea Array** 0.3nm,0.3s,baz=112,slow=12,SNR=7.9	**13.38**	**303**	Pn	**Pn**	**07 10 37.1**	**+3.5**
KSRS	comp=Z,132nm,20.0s,baz=113,slow=36			LR	LR	07 15 29.5	
USRK	**Ussuriysk Ar.** baz=133,slow=12,SNR=3.7	**15.50**	**332**	Pn	**Pn**	**07 11 00.4**	**-2.0**
USRK	**Ussuriysk Ar.**	**15.50**	**332**	P	**Pn**	**07 11 00.6**	**-1.7**
USRK	**Ussuriysk Ar.**	**15.50**	**332**		**Pn**	**07 11 00.6**	**-1.7**
YSS	**Yuzh-Sakhalins**	**16.11**	**2**	*e*P	**Pn**	**07 11 10.7**	**+0.5**
YSS	comp=Z,300nm,14.0s			MLR	MLR		
MDJ	**Mudanjiang**	**16.86**	**328**	P	**Pn**	**07 11 18.3**	**-1.4**
MDJ	comp=Z,10.0nm,1.1s			pmax	pmax		
MDJ	comp=Z,210nm,3.6s			pmax	pmax		
CN2	**Changchun**	**18.41**	**319**	*e*P	**Pn**	**07 11 40.3**	**+1.5**
CN2				*es*P	pwP	07 11 48.8	-2.1
CN2				*eS*	**Sn**	**07 15 02.0**	**-1.7**
CN2	comp=Z,10.0nm,0.6s			pmax	pmax		
CN2	comp=Z,200nm,4.0s			pmax	pmax		
CN2	comp=Z,200nm,12.0s			LR	LR		
CN2	comp=Z,200nm,12.0s			LR	LR		
CN2	comp=Z,300nm,13.0s			LR	LR		
YHNB	**Yeheng**	**19.22**	**256**	P	**Pn**	**07 11 48.7**	**-0.3**
NACB	**Ninganchiao**	**19.24**	**255**	P	**P**	**07 11 47.2**	**-0.8**
NJ2	**Nanjing**	**19.76**	**280**	*e*P	**P**	**07 11 54.1**	**+0.5**
NJ2	comp=Z,9.0nm,0.5s			pmax	pmax		
YULB	**Yu-li**	**19.82**	**253**	P	**P**	**07 11 55.2**	**+0.8**
YULB	comp=Z,26nm,0.8s			IAmb	IAmb	07 12 01.2	
SSLB	**Suanglung**	**19.93**	**255**	P	**Pn**	**07 11 56.6**	**-0.8**
SSLB	comp=Z,60nm,1.0s			IAmb	IAmb	07 12 10.3	
KLR	**Kul'dur** comp=Z,0.3nm,0.3s,baz=193,slow=3.3,SNR=13	**19.94**	**340**	P	**P**	**07 11 56.1**	**+0.7**
KLR	**Kul'dur**	**19.94**	**340**	*ce*P	**P**	**07 11 54.7**	**-0.8**
KLR	comp=Z,2.0nm,0.6s			pmax	pmax		
TPUB	**Ta-pu**	**20.41**	**254**	P	**P**	**07 12 00.6**	**-0.2**
TPUB	comp=Z,29nm,0.9s			IAmb	IAmb	07 12 15.6	
KNMB	**Chin-men Tao**	**21.81**	**259**	P	**P**	**07 12 13.9**	**-1.9**
KNMB	comp=Z,37nm,1.0s			IAmb	IAmb	07 12 16.2	
BJT	**Baijiatuau**	**22.88**	**301**	P	**P**	**07 12 25.4**	**-1.7**
BJT	comp=Z,16nm,1.1s			pmax	pmax		
BJT	**Baijiatuau**	**22.88**	**301**	P	**P**	**07 12 25.4**	**-1.7**
BJI	**Beijing**	**22.88**	**301**	P	**P**	**07 12 25.5**	**-1.6**
BJI	comp=Z,13nm,0.8s			pmax	pmax		
HIA	**Hailar**	**24.92**	**324**	P	**P**	**07 12 44.8**	**-1.7**
HIA	comp=Z,13nm,1.0s			pmax	pmax		
HIA	**Hailar**	**24.92**	**324**	P	**P**	**07 12 44.8**	**-1.7**
PETK	**Petropavlovsk-** comp=Z,66nm,20.6s,baz=229,slow=38	**25.04**	**23**	LR	LR	07 23 17.7	
ZEA	**Zeya**	**25.25**	**339**	*e*P	**P**	**07 12 50.1**	**+0.7**
ZEA	comp=N,20nm,1.3s			pmax	pmax		
ZEA	comp=Z,30nm,1.0s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**26.49**	**301**	*e*P	**P**	**07 13 03.8**	**+2.9**
HHC				S	**S**	**07 17 34.3**	**+0.7**
HHC	comp=Z,19nm,0.7s			pmax	pmax		
HHC	comp=Z,92nm,6.4s			pmax	pmax		
HHC	comp=Z,180nm,13.6s			LR	LR		
HHC	comp=Z,240nm,13.6s			LR	LR		
HHC	comp=Z,160nm,15.3s			LR	LR		
XAN	**Xi'an**	**28.01**	**285**	P	**P**	**07 13 13.3**	**-1.3**
XAN				pP	pP	07 13 15.6	-4.4
XAN	comp=Z,6.0nm,1.2s			pmax	pmax		
XAN	comp=Z,130nm,15.2s			LR	LR		
XAN	comp=Z,160nm,15.2s			LR	LR		
XAN	comp=Z,140nm,14.1s			LR	LR		
ULN	**Ulaanbaatar**	**31.58**	**313**	*ce*P	**P**	**07 13 46.3**	**+0.2**
ULN	comp=Z,27nm,1.7s			pmax	pmax		
ULN	**Ulaanbaatar**	**31.58**	**313**	P	**P**	**07 13 45.9**	**-0.2**
ULN	comp=Z,11nm,0.9s			IAmb	IAmb	07 13 48.7	
SONM	**Songino Array** comp=Z,4.6nm,0.8s,baz=116,slow=8.3,SNR=25	**31.98**	**312**	P	**P**	**07 13 51.5**	**+1.8**
SONM	comp=Z,104nm,20.1s,baz=104,slow=38			LR	LR	07 27 27.2	
SONM	**Songino Array**	**31.98**	**312**	P	**P**	**07 13 50.2**	**+0.5**
LZH	**Lanzhou**	**32.10**	**290**	*e*P	**P**	**07 13 51.6**	**+0.8**
LZH				pP	pP	07 13 56.5	+0.1
LZH				sP	sP	07 13 59.6	+0.8
LZH	comp=Z,13nm,1.4s			pmax	pmax		
LZH	comp=Z,97nm,6.5s			pmax	pmax		
SEY	**Seymchan** comp=Z,2.7nm,0.8s,baz=210,slow=7.2,SNR=4.2	**32.81**	**9**	P	**P**	**07 13 56.8**	**+0.3**
MYLDM	**Lahad Datu**	**33.74**	**226**	P	**P**	**07 14 05.5**	**+0.3**
ZAK	**Zakamensk**	**34.76**	**315**	*e*P	**P**	**07 14 13.3**	**-0.5**
ZAK	comp=Z,13nm,1.4s			pmax	pmax		
GTA	**Gaotai**	**35.27**	**296**	⇑P	**P**	**07 14 18.1**	**-0.3**
GTA				pP	pP	07 14 22.6	-1.3
GTA	comp=Z,5.0nm,1.0s			pmax	pmax		
GTA	comp=Z,58nm,7.1s			pmax	pmax		
GTA	comp=Z,140nm,16.4s			LR	LR		
GTA	comp=Z,130nm,18.5s			LR	LR		
GTA	comp=Z,200nm,16.4s			LR	LR		
MOY	**Mondy**	**36.54**	**317**	*e*P	**P**	**07 14 30.3**	**+1.2**
MOY	comp=Z,22nm,1.6s			pmax	pmax		
BILL	**Bilibino**	**39.88**	**14**	*i* P	**P**	**07 14 58.1**	**+1.3**
BILL	comp=Z,3.0nm,1.1s			pmax	pmax		
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.3s,baz=61,slow=7.3,SNR=1.6	**40.77**	**263**	P	**P**	**07 15 03.3**	**-1.5**
CMAR	comp=Z,59nm,18.9s,baz=128,slow=39			LR	LR	07 33 54.2	
WMQ	**Urumqi**	**44.33**	**303**	*e*P	**P**	**07 15 36.3**	**+2.8**
WMQ	comp=Z,37nm,1.3s			pmax	pmax		
WMQ	comp=Z,190nm,5.5s			pmax	pmax		
COEN	**Coen**	**44.54**	**178**	P	**P**	**07 15 35.1**	**-0.2**
COEN	comp=Z,12nm,1.2s			IAmb	IAmb	07 15 54.9	
MTN	**Manton Dam**	**44.66**	**195**	P	**P**	**07 15 35.5**	**-0.7**
MTN	comp=Z,17nm,1.2s			IAmb	IAmb	07 15 37.2	
ZAA0	**Zalesovo Array** comp=Z,8.1nm,1.2s	**46.60**	**317**	P	**P**	**07 15 51.3**	**0.0**
ZAA0				IAmb	IAmb	07 16 04.8	
ZALV	**Zalesovo Beam** comp=Z,3.3nm,0.9s,baz=99,slow=7.7,SNR=11	**46.60**	**317**	P	**P**	**07 15 52.1**	**+0.8**
ZALV	comp=Z,1.1nm,0.5s,baz=75,slow=3.4,SNR=2.4			PcP	**PcP**	**07 17 25.8**	**+0.8**
ZALV	comp=Z,62nm,20.1s,baz=66,slow=37			LR	LR	07 36 04.1	
ZALV	**Zalesovo Beam**	**46.60**	**317**	P	**P**	**07 15 51.3**	**0.0**
ZALV					**PcP**	**07 17 25.2**	**+0.3**
MK31	**Makanchi Array**	**48.02**	**307**	*ce*P	**P**	**07 16 03.2**	**+0.7**
MK31	**Makanchi Array**	**48.02**	**307**	P	**P**	**07 16 02.9**	**+0.4**
MK31				IAmb	IAmb	07 16 04.2	
MKAR	**Makanchi Array** comp=Z,6.8nm,0.7s,baz=92,slow=9.4,SNR=40	**48.02**	**307**	P	**P**	**07 16 03.4**	**+0.8**
MKAR	**Makanchi Array**	**48.02**	**307**	P	**P**	**07 16 03.0**	**+0.5**
MAKZ	**Makanchi**	**48.24**	**307**	P	**P**	**07 16 05.1**	**+1.0**
MAKZ	comp=Z,7.0nm,0.8s			pmax	pmax		
MAKZ	**Makanchi** comp=Z,7.5nm,0.8s	**48.24**	**307**	P	**P**	**07 16 05.1**	**+1.0**
MAKZ				IAmb	IAmb	07 16 05.9	
NRIK	**Noril'sk** comp=Z,1.0nm,0.4s,baz=120,slow=5.0,SNR=4.1	**49.13**	**338**	P	**P**	**07 16 10.9**	**+0.3**
NRIK	**Noril'sk**	**49.13**	**338**	*ce*P	**P**	**07 16 09.6**	**-1.0**
NRIK	comp=Z,4.0nm,1.0s			pmax	pmax		
KURK	**Kurchatov**	**50.29**	**312**	*ce*P	**P**	**07 16 19.3**	**-0.4**
KURK	comp=Z,17nm,1.3s			pmax	pmax		
KURK	**Kurchatov**	**50.29**	**312**	P	**P**	**07 16 19.4**	**-0.3**
KURK	comp=Z,11nm,0.8s			IAmb	IAmb	07 16 33.1	
KURBB	**Kurchatov Arra** comp=Z,5.7nm,0.7s,baz=86,slow=7.5,SNR=59	**50.35**	**312**	P	**P**	**07 16 20.2**	**0.0**
WB0	**Warramunga Arr**	**50.83**	**189**	P	**P**	**07 16 23.9**	**-0.2**
WB0	comp=Z,8.6nm,0.7s			IAmb	IAmb	07 16 37.2	
WR0	**Warramunga Arr**	**51.00**	**189**	P	**P**	**07 16 25.8**	**+0.4**
WR0	comp=Z,5.5nm,0.7s			IAmb	IAmb	07 16 38.5	
WRAB	**Tennant Creek**	**51.00**	**189**	P	**P**	**07 16 25.9**	**+0.5**
WRAB	comp=Z,9.0nm,1.0s			pmax	pmax		
WRAB	**Tennant Creek**	**51.00**	**189**	P	**P**	**07 16 25.9**	**+0.5**
WRAB	comp=Z,8.9nm,1.0s			IAmb	IAmb	07 16 38.5	
WB2	**Warramunga Arr**	**51.01**	**189**	P	**P**	**07 16 26.2**	**+0.8**
WB2	comp=Z,7.9nm,0.9s			IAmb	IAmb	07 16 38.6	
WRA	**Warramunga Arr** comp=Z,2.6nm,0.4s,baz=5.0,slow=7.4,SNR=106	**51.01**	**189**	P	**P**	**07 16 25.6**	**+0.2**
WRA	**Warramunga Arr**	**51.01**	**189**	P	**P**	**07 16 25.2**	**-0.2**
FITZ	**Fitzroy Crossi** comp=Z,0.8nm,0.6s,baz=204,slow=2.5,SNR=4.3	**51.12**	**200**	P	**P**	**07 16 27.2**	**+1.0**
FITZ	**Fitzroy Crossi**	**51.12**	**200**	P	**P**	**07 16 27.0**	**+0.8**
IMAR	**Indian Mountai**	**51.82**	**28**	P	**P**	**07 16 32.3**	**+1.2**
BOOM	**Boomskoye usch**	**53.01**	**302**	P	**P**	**07 16 41.6**	**+1.2**
BOOM	comp=Z,6.0nm,1.3s			pmax	pmax		
BOOM	**Boomskoye usch**	**53.01**	**302**	P	**P**	**07 16 41.6**	**+1.2**
MDM	**Murphy Dome**	**53.99**	**30**	P	**P**	**07 16 48.5**	**+1.4**
AAK	**Ala-Archa**	**54.04**	**303**	*ce*P	**P**	**07 16 48.8**	**+0.8**
AAK	comp=Z,12nm,1.7s			pmax	pmax		
HDA	**Harding Lake**	**54.52**	**30**	P	**P**	**07 16 50.7**	**-0.2**
IL31		**54.55**	**30**	P	**P**	**07 16 50.1**	**-1.0**
IL31	comp=Z,9.2nm,1.4s			IAmb	IAmb	07 17 04.4	
ILAR	**Eielson Array** comp=Z,1.5nm,0.8s,baz=259,slow=6.3,SNR=12	**54.55**	**30**	P	**P**	**07 16 51.1**	**0.0**
ILAR	**Eielson Array**	**54.55**	**30**	P	**P**	**07 16 50.9**	**-0.3**
AS31	**Alice Springs**	**54.73**	**189**	P	**P**	**07 16 52.5**	**-0.4**
ASAR	**Alice Springs** comp=Z,1.2nm,0.6s,baz=353,slow=5.1,SNR=24	**54.73**	**189**	P	**P**	**07 16 53.4**	**+0.4**
ASAR	**Alice Springs**	**54.73**	**189**	P	**P**	**07 16 52.7**	**-0.3**
BRVK	**Borovoye**	**55.27**	**316**	*ce*P	**P**	**07 16 56.7**	**+0.2**
BRVK	comp=Z,2.0nm,0.6s			pmax	pmax		
BRVK	**Borovoye**	**55.27**	**316**	P	**P**	**07 16 56.0**	**-0.6**
KK31	**Karatay Array**	**56.80**	**304**	P	**P**	**07 17 08.8**	**+1.1**
KK31	comp=Z,10.0nm,0.9s			pmax	pmax		
KK31	**Karatay Array**	**56.80**	**304**	P	**P**	**07 17 08.8**	**+1.1**
KK31	comp=Z,9.7nm,0.9s			IAmb	IAmb	07 17 09.7	
KKAR	**Karatay Array**	**56.80**	**304**	P	**P**	**07 17 08.5**	**+0.8**
KKAR	comp=Z,10.0nm,0.9s			pmax	pmax		
KKAR	**Karatay Array**	**56.80**	**304**	P	**P**	**07 17 08.5**	**+0.8**
KKAR	comp=Z,9.7nm,0.9s			IAmb	IAmb	07 17 09.6	
BCAR	**Beaver Creek A**	**56.83**	**32**	P	**P**	**07 17 08.2**	**+0.6**
NIL	**Nilore**	**57.20**	**292**	P	**P**	**07 17 11.3**	**+0.6**
NIL	comp=Z,15nm,1.0s			pmax	pmax		
NIL	**Nilore**	**57.20**	**292**	P	**P**	**07 17 11.2**	**+0.6**
CHGR	**Chuyangaron**	**58.92**	**299**	P	**P**	**07 17 23.4**	**+0.7**
INK	**Inuvik** comp=Z,1.6nm,0.6s,baz=293,slow=24,SNR=3.2	**59.73**	**25**	P	**P**	**07 17 28.3**	**+0.6**
INK	**Inuvik**	**59.73**	**25**	P	**P**	**07 17 28.3**	**+0.6**
INK	comp=Z,9.5nm,1.5s			IAmb	IAmb	07 17 30.8	
KBL	**Kabul**	**60.25**	**295**	P	**P**	**07 17 33.0**	**+0.9**
KBL	comp=Z,8.0nm,1.2s			pmax	pmax		
KBL	**Kabul**	**60.25**	**295**	P	**P**	**07 17 33.0**	**+0.9**
KBL	comp=Z,8.0nm,1.2s			IAmb	IAmb	07 17 33.6	
ARU	**Arti** comp=Z,1.6nm,0.4s,baz=106,slow=3.2,SNR=9.6	**61.39**	**321**	P	**P**	**07 17 40.0**	**+0.8**
ARU	**Arti**	**61.39**	**321**	*c i*P	**P**	**07 17 39.9**	**+0.7**
ARU				S	**S**	**07 25 53.3**	**-5.1**
ARU	comp=Z,18nm,1.3s			pmax	pmax		
ARU	**Arti**	**61.39**	**321**	P	**P**	**07 17 39.7**	**+0.5**
STKA	**Stephens Creek** comp=Z,1.6nm,0.4s,baz=23,slow=5.6,SNR=4.3	**62.37**	**180**	P	**P**	**07 17 45.6**	**-0.3**
STKA	**Stephens Creek**	**62.37**	**180**	P	**P**	**07 17 45.4**	**-0.5**
ABKAR	**Akbulak array**	**62.40**	**313**	P	**P**	**07 17 46.6**	**+0.6**
ABKAR	**Akbulak array**	**62.40**	**313**	P	**P**	**07 17 46.7**	**+0.6**
FORT	**Forrest**	**62.68**	**193**	P	**P**	**07 17 49.0**	**+0.9**
AKTO	**Aktyubinsk** comp=Z,3.4nm,0.7s,baz=76,slow=13,SNR=13	**63.26**	**315**	P	**P**	**07 17 52.4**	**+0.5**
KLMR	**Klimovskoe**	**69.28**	**329**	*e*P	P	07 18 25.4	-4.8
KLMR	comp=Z,

AKBB	**Malin Array Si**	**79.51**	**323**	P	**P**	**07 19 30.0**	**+0.1**
AKBB				IAmb	IAmb	07 19 43.0	
	comp=Z,7.3nm,0.8s						
NOA	**NORSAR Array B**	**80.09**	**338**	P	**P**	**07 19 32.9**	**0.0**
	comp=Z,0.6nm,0.7s,baz=36,slow=3.3,SNR=1.7						
PDAR	**Pinedale Array**	**81.70**	**45**	P	**P**	**07 19 42.6**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=224,slow=1.8,SNR=3.9						
PDAR	**Pinedale Array**	**81.70**	**45**	P	**P**	**07 19 42.5**	**+0.4**
SOCY	**Socotra**	**82.15**	**279**	P	**P**	**07 19 44.2**	**-0.6**
BRTR	**Keskin Array B**	**83.34**	**313**	P	**P**	**07 19 50.6**	**0.0**
	comp=Z,1.2nm,0.8s,baz=110,slow=6.7,SNR=4.6						
BRTR	**Keskin Array B**	**83.34**	**313** *ce*	P	**P**	**07 19 54.2**	**+3.5**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BUR08	**Bucovina Ar. S**	**83.47**	**323**	P	**P**	**07 19 52.0**	**+0.9**
BUR08				IAmb	IAmb	07 20 04.9	
	comp=Z,4.5nm,1.0s						
BURAR	**Bucovina Array**	**83.48**	**323**	P	**P**	**07 19 52.1**	**+0.9**
RAYN	**Ar Rayn**	**83.49**	**293**	P	**P**	**07 19 52.8**	**+1.2**
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RAYN	**Ar Rayn**	**83.49**	**293**		**P**	**07 19 52.8**	**+1.2**
TXAR	**Lajitas Array**	**93.51**	**53**	P	**P**	**07 20 41.6**	**+2.0**
	comp=Z,1.1nm,0.9s,baz=282,slow=1.2,SNR=4.4						
TXAR	**Lajitas Array**	**93.51**	**53**	P	**P**	**07 20 39.7**	**+0.1**
TXAR	**Lajitas Array**	**93.51**	**53**	P	**P**	**07 20 39.7**	**+0.1**
T45A	**Paducah**	**97.53**	**39**	P	**P**	**07 20 56.8**	**-0.9**
V48A	**Smith Brothers**	**99.47**	**38**	P	**Pdif**	**07 21 05.2**	**-1.1**
LPAZ	**La Paz**	**148.96**	**69**	PKPbc	**PKiKP**	**07 27 14.0**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=356,slow=4.7,SNR=3.7						

WEL 24 07:17:34.0±0.9, 38°S±7°×18°0W±°, h33km, M3.4/24, ML3.8/24, MLv3.4/24, Error ellipse: s-maj=0.0km s-min=0.0km az=25.1, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.26**	**266**	P	Pn	07 17 54.6	-0.6
MXZ	**Matakaoa Point**	**1.36**	**277**	P	Pn	07 17 55.6	-1.0
MXZ				S	Sn	07 18 12.4	-1.1
PUZ	**Puketiti**	**1.42**	**256**	P	Pn	07 17 57.0	-0.5
CNGZ	**Carnagh Statio**	**1.60**	**242**	P	Pn	07 18 00.9	+0.8
TWGZ	**Tauwhareparae**	**1.66**	**254**	P	Pn	07 18 00.9	+0.2
TWGZ				S	Sn	07 18 22.0	+1.2
HAZ	**Te Kaha**	**1.76**	**269**	P	Pn	07 18 02.2	+0.1
TKGZ	**Te Karaka**	**1.83**	**247**	P	Pn	07 18 03.4	+0.3
TKGZ				S	Sn	07 18 25.0	-0.2
RUGZ	**Raukumara Rang**	**1.85**	**263**	P	Pn	07 18 02.8	-0.8
RIGZ	**Rimuhau**	**2.01**	**241**	P	Pn	07 18 05.9	+0.4
RIGZ				S	Sn	07 18 31.2	+1.6
PRGZ	**Paritu Road**	**2.04**	**234**	P	Pn	07 18 06.4	+0.4
MWZ	**Matawai**	**2.04**	**253**	P	Pn	07 18 05.4	-0.6
MWZ				S	Sn	07 18 30.6	+0.3
MHGZ	**Mahia Peninsul**	**2.16**	**229**	P	Pn	07 18 08.2	+0.5
MHGZ				S	Sn	07 18 35.8	+2.4
RAGZ	**Rawiri**	**2.17**	**249**	P	Pn	07 18 08.4	+0.5
RAGZ				S	Sn	07 18 33.2	-0.5
KNZ	**Kokohu**	**2.23**	**234**	P	Pn	07 18 08.4	-0.2
URZ	**Urewera**	**2.34**	**256**	P	Pn	07 18 10.4	+0.3
URZ				S	Sn	07 18 37.3	-0.4
WHRZ	**Whale Island**	**2.40**	**266**	P	Pn	07 18 11.4	+0.5
RTZ	**Ruatahuna**	**2.54**	**249**	P	Pn	07 18 13.4	+0.5
MUGZ	**Murupara**	**2.65**	**253**	P	Pn	07 18 15.5	+1.1
MTHZ	**Maungataniwha**	**2.72**	**245**	P	Pn	07 18 15.6	+0.2
ARHZ	**Aropaoanui**	**2.80**	**236**	P	Pn	07 18 17.5	+1.0
TARZ	**Mount Tarawera**	**2.81**	**259**	P	Pn	07 18 16.6	0.0
NMHZ	**Naumai**	**2.85**	**241**	P	Pn	07 18 17.7	+0.5
CKHZ	**Cape Kidnapper**	**2.98**	**229**	P	Pn	07 18 18.9	0.0
KARZ	**Kaharoa**	**2.99**	**264**	P	Pn	07 18 18.7	-0.3
MRHZ	**Matea Rd**	**3.02**	**248**	P	Pn	07 18 19.5	0.0
MCHZ	**McNeill Hill**	**3.10**	**236**	P	Pn	07 18 21.2	+0.7
BKZ	**Black Stump Fm**	**3.10**	**242**	P	Pn	07 18 20.7	+0.2
KAHZ	**Kahuranaki**	**3.19**	**229**	P	Pn	07 18 21.9	+0.2
KWHZ	**Kaweka Forest**	**3.27**	**238**	P	Pn	07 18 22.6	-0.3
KRHZ	**Kereru**	**3.42**	**235**	P	Pn	07 18 24.2	-0.7
BHHZ	**Black Hill Sta**	**3.54**	**239**	P	Pn	07 18 26.5	-0.2
KUZ	**Kuaotunu**	**3.56**	**285**	P	Pn	07 18 25.5	-1.3
TOZ	**Tahuroa Road**	**3.57**	**269**	P	Pn	07 18 26.3	-0.6
PRHZ	**Porangahau**	**3.63**	**225**	P	Pn	07 18 26.7	-1.2
TMVZ	**Te Maari**	**3.64**	**247**	P	Pn	07 18 28.2	+0.1
ETVZ	**East Tongariro**	**3.65**	**246**	P	Pn	07 18 28.0	-0.2
PNHZ	**Pukenui**	**3.67**	**233**	P	Pn	07 18 27.8	-0.7
OTVZ	**Oturere**	**3.69**	**246**	P	Pn	07 18 29.0	+0.3
TUVZ	**Tukino**	**3.73**	**245**	P	Pn	07 18 30.2	+0.8
NGZ	**Ngauruhoe**	**3.74**	**246**	P	Pn	07 18 30.2	+0.8
WNVZ	**Wahianoa**	**3.80**	**244**	P	Pn	07 18 29.9	-0.4
MKAZ	**Moumakai**	**3.91**	**278**	P	Pn	07 18 30.9	-0.7
TSZ	**Takapari Road**	**3.91**	**233**	P	Pn	07 18 30.6	-1.1
GRZ	**Great Barrier**	**3.93**	**291**	P	Pn	07 18 31.1	-0.9
ETAZ	**East Tamaki Re**	**4.12**	**280**	P	Pn	07 18 34.3	-0.3
HIZ	**Hauiti**	**4.13**	**258**	P	Pn	07 18 35.0	+0.3
MBAZ	**Motutapu North**	**4.19**	**282**	P	Pn	07 18 35.4	-0.1
PRWZ	**Pori Road**	**4.21**	**227**	P	Pn	07 18 35.2	-0.6
AWAZ	**Awhitu Peninsu**	**4.32**	**277**	P	Pn	07 18 37.4	+0.1
MRZ	**Mangatainoka R**	**4.50**	**228**	P	Pn	07 18 38.4	-1.4
MTW	**Mount Morrison**	**4.87**	**224**	P	Pn	07 18 44.9	0.0
WCZ	**Waipu Caves**	**4.88**	**290**	P	Pn	07 18 44.9	-0.1
OUZ	**Omahuta**	**5.74**	**294**	P	Pn	07 18 56.9	+0.1
CTZ	**Chatham Island**	**6.51**	**158**	P	Pn	07 19 10.6	+3.3
CTZ				S	Sn	07 20 17.0	-3.5
LTZ	**Lake Taylor**	**7.76**	**227**	P	Pn	07 19 23.3	-1.3
LTZ	**Lake Taylor**	**7.76**	**227**	P	Pn	07 19 23.4	-1.2

*PDG **24** 07:20:31.9±0.5, 38°35N×20°32E, h13km±1km, MD6.0/1, ML4.1/12, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*
*NEIC **24** 07:20:31.6±2.1, 38°32N±0°02×20°37E±0°07, h11km±4km, Error ellipse: s-maj=7.5km s-min=3.3km az=87.0*
*THE **24** 07:20:32.5, 38°31N×20°39E, h14km, ML4.0/10, Error ellipse: s-maj=1.0km s-min=0.3km az=251.0*
*ATH **24** 07:20:32.1, 38°30N×20°36E, h15km±1km, ML4.1/11, Error ellipse: s-maj=1.7km s-min=0.8km az=269.0*
*TIR **24** 07:20:32.6, 38°34N×20°46E, h28km±1km, Ml4.4*
*MED_RC **24** 07:20:32.0±0.4, 38°34N×20°35E, h19km±1km, MW4.2/11, Moment Tensor Solution.Mantle waves: s11,c14; Duration: 1‡0 Moment tensor: Scale 10^15^Nm; Mrr2.25±.45; Mθθ0.66±.27; Mϕϕ-2.91±.26; Mrθ0.56±.34; Mrϕ0.86±.19; Mθϕ-0.05±.23; Best double couple: M◎2.77000×10^15^ NP1:φs5.00000°, δ46.00000°, λ116.00000°. NP2:φs150.00000°, δ50.00000°, λ65.00000°. Principal axes: T 2.4400, Plg71.0000°, Azm352.0000°; N 0.6800, Plg19.0000°, Azm166.0000°; P -3.1100, Plg2.0000°, Azm257.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*MOS **24** 07:20:33.8±1.4, 38°51N×20°32E, h30km, mb4.6/12 Error ellipse: s-maj=8.5km s-min=4.9km az=69.2*
*IDC **24** 07:20:36.1±2.4, 38°50N×20°35E, h33km±19km, mb4.1/19, mb1 4.1/32, mb1mx4.1/49, mbtmp4.2/32, ML3.8/12, MS3.0/12, Ms1 3.0/12, ms1mx2.8/50, Error ellipse: s-maj=12.6km s-min=11.1km az=160.0*

ISC 24 07:20:32.5±0.7, 38°32N±0°02×20°35E±0°03, h13km±4km, n313, σ1‡51/369, mb4.4/46, MS2.8/6, 45C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMLN	**Damoulianata-K**	**0.09**	**167**	P	**Pg**	**07 20 35.2**	**-0.1**
DMLN	**Damoulianata-K**	**0.09**	**167**	P	**Pg**	**07 20 35.2**	**-0.1**
DMLN				S	**Sg**	**07 20 37.2**	**-0.2**
	367μm,0.3s						
KEF4	**Livadi, Kephal**	**0.09**	**138**	P	**Pg**	**07 20 35.0**	**-0.3**
KEF5	**Kardakata, Kep**	**0.10**	**116**	P	**Pg**	**07 20 35.1**	**-0.5**
KEF5	**Kardakata, Kep**	**0.10**	**116**	P	**Pg**	**07 20 35.1**	**-0.5**
KEF3	**Kipouria, Keph**	**0.12**	**180**	P	**Pg**	**07 20 34.2**	**-1.6**
LXR1	**Lixouri, Cepha**	**0.14**	**150**	P	**Pg**	**07 20 35.9**	**-0.1**
LXR1				S	**Sg**	**07 20 38.4**	**-0.1**
LXRA	**Lixouri, Kepha**	**0.14**	**151**	P	**Pg**	**07 20 35.9**	**-0.1**
LXRA				S	**Sg**	**07 20 38.1**	**-0.3**
ARGA	**Argostoli. Kep**	**0.18**	**145**	P	**Pg**	**07 20 36.2**	**-0.4**
ARGA				S	**Sg**	**07 20 38.9**	**-0.5**
ARG2	**Argostoli**	**0.18**	**143**	P	**Pg**	**07 20 36.3**	**-0.3**
ARG2				S	**Sg**	**07 20 39.0**	**-0.5**
	710μm,0.1s						
VSK1	**VASILIKIADES**	**0.19**	**63**	P	**Pg**	**07 20 36.6**	**-0.2**
VSK1				S	**Sg**	**07 20 39.7**	**-0.1**
	138μm,0.4s						
FSK	**Fiskardo**	**0.22**	**51**	P	**Pg**	**07 20 37.1**	**-0.1**
FSK				S	**Sg**	**07 20 40.8**	**+0.3**
FSK				AML	AML	07 20 41.0	
FSK				AML	AML	07 20 41.1	
FSK	**Fiskardo**	**0.22**	**51**	P	**Pg**	**07 20 37.1**	**-0.1**
FSK				S	**Sg**	**07 20 40.5**	**+0.1**
	142μm,0.5s						
VLS	**Valsamata**	**0.24**	**128**	P	**Pg**	**07 20 37.0**	**-0.6**
VLS				S	**Sg**	**07 20 40.4**	**-0.7**
VLS				AML	AML	07 20 40.8	
VLS				AML	AML	07 20 41.1	
VLS	**Valsamata**	**0.24**	**128**	P	**Pg**	**07 20 37.0**	**-0.6**
VLS				S	**Sg**	**07 20 40.4**	**-0.7**
	212μm,0.2s						
PSDA	**Pessada-Kefalo**	**0.28**	**138**	P	**Pg**	**07 20 37.8**	**-0.5**
PSDA	**Pessada-Kefalo**	**0.28**	**138**	P	**Pg**	**07 20 37.8**	**-0.5**
PSDA				S	**Sg**	**07 20 41.8**	**-0.4**
	20μm,0.2s						
EVGI	**Lefkada island**	**0.38**	**39**	P	**Pg**	**07 20 40.1**	**-0.1**
EVGI				S	**Sg**	**07 20 45.8**	**+0.5**
EVGI	**Lefkada island**	**0.38**	**39**	P	**Pg**	**07 20 40.1**	**-0.1**
EVGI				S	**Sb**	**07 20 46.3**	**-0.7**
	10μm,0.1s						
NYDR	**Nydri-Lefkada**	**0.48**	**35**	P	**Pg**	**07 20 41.6**	**-0.2**
NYDR	**Nydri-Lefkada**	**0.48**	**35**	P	**Pg**	**07 20 41.5**	**-0.4**
NYDR				S	**Sg**	**07 20 48.5**	**+0.2**
	13μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.51**	**151**	P	**Pg**	**07 20 41.8**	**-0.7**
VLMS				S	**Sg**	**07 20 49.5**	**+0.1**
VLMS				AML	AML	07 20 50.8	
	comp=E,49038μm,0.1s						
VLMS				AML	AML	07 20 54.5	
	comp=N,52946μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.51**	**151**	P	**Pg**	**07 20 41.7**	**-0.8**
VLMS				S	**Sg**	**07 20 49.7**	**+0.3**
LKD2	**Lefkada island**	**0.52**	**28**	P	**Pg**	**07 20 42.6**	**-0.3**
LKD2				S	**Sb**	**07 20 51.0**	**-0.1**
LKD2				AML	AML	07 20 58.4	
	comp=N,22858μm,0.3s						
LKD2				AML	AML	07 20 58.6	
	comp=E,17658μm,0.4s						
LKD2	**Lefkada island**	**0.52**	**28**	P	**Pg**	**07 20 42.7**	**-0.1**
	baz=18						
LKD2				S	**Sb**	**07 20 50.8**	**-0.3**
	baz=18						
LKD2	**Lefkada island**	**0.52**	**28**	P	**Pg**	**07 20 42.5**	**-0.3**
LKD2				S	**Sb**	**07 20 50.6**	**-0.5**
	comp=E,10μm,0.3s						
TSLK	**Tsoukalades, L**	**0.56**	**26**	P	**Pg**	**07 20 43.4**	**0.0**
TSLK				AML	AML	07 20 54.7	
	comp=E,22828μm,0.7s						
TSLK				AML	AML	07 20 57.5	
	comp=N,26039μm,0.6s						
TSLK	**Tsoukalades, L**	**0.56**	**26**	P	**Pg**	**07 20 43.2**	**-0.2**
TSLK				S	**Sb**	**07 20 52.1**	**+0.2**
	comp=N,12μm,0.7s						
PDO	**Prodromos**	**0.71**	**67**	P	**Pg**	**07 20 45.8**	**-0.5**
PDO				AML	AML	07 21 01.6	
	comp=E,29826μm,0.5s						
PDO				AML	AML	07 21 05.7	
	comp=N,35322μm,0.6s						
PDO	**Prodromos**	**0.71**	**67**	P	**Pg**	**07 20 45.4**	**-0.9**
RLS	**Riolos of Patr**	**0.92**	**106**	P	**Pb**	**07 20 48.8**	**-1.5**
RLS	**Riolos of Patr**	**0.92**	**106**	P	**Pb**	**07 20 48.6**	**-1.7**
DRO	**Drossia**	**1.14**	**109**	P	**Pb**	**07 20 52.9**	**-1.1**
DRO				S	**Sn**	**07 21 09.3**	**-0.2**
DRO	**Drossia**	**1.14**	**109**	P	**Pb**	**07 20 52.9**	**-1.1**
EFP	**Efpalio**	**1.23**	**85**	P	**Pn**	**07 20 54.3**	**-1.0**
EFP				AML	AML	07 21 19.5	
	comp=E,14996μm,0.8s						
EFP				AML	AML	07 21 21.8	
	comp=N,10738μm,0.9s						
ANX	**Ano Chora**	**1.26**	**77**	P	**Pn**	**07 20 54.8**	**-1.1**
ANX	**Ano Chora**	**1.26**	**77**	P	**Pn**	**07 20 54.8**	**-1.1**
EVR	**Evrytania**	**1.29**	**62**	P	**Pn**	**07 20 55.5**	**-0.7**
AMT	**Artemida-Makis**	**1.33**	**126**	P	**Pb**	**07 20 57.6**	**+0.2**
AMT	**Artemida-Makis**	**1.33**	**126**	P	**Pg**	**07 20 57.8**	**-0.4**
JAN	**Janina**	**1.39**	**16**	P	**Pg**	**07 20 59.1**	**0.0**
KLV	**Kalavryta, Ach**	**1.45**	**101**	P	**Pn**	**07 20 58.1**	**-0.4**
KLV				AML	AML	07 21 30.8	
	comp=N,5916μm,0.8s						
KLV				AML	AML	07 21 31.1	
	comp=E,7121μm,0.9s						
KEK	**Kerkira**	**1.45**	**343**	P	**Pb**	**07 20 59.3**	**0.0**
KEK	**Kerkira**	**1.45**	**343**	P	**Pb**	**07 20 59.4**	**0.0**
MAKR	**Makrakomi, Fth**	**1.56**	**63**	P	**Pb**	**07 21 00.9**	**-0.3**
SRN	**Sarande**	**1.58**	**350**	P	**Pb**	**07 21 01.3**	**-0.2**
	baz=347						
SRN				S	**Sg**	**07 21 22.7**	**-0.5**
	baz=347						
SRN				AMP			
	comp=E,9.1nm,0.6s,baz=347						
SRN	**Sarande**	**1.58**	**350**	P	**Pb**	**07 21 01.3**	**-0.2**
ITM	**Ithomi**	**1.69**	**132**	P	**Pb**	**07 21 02.9**	**-0.6**
ITM	**Ithomi**	**1.69**	**132**	P	**Pg**	**07 21 04.4**	**-0.6**
ITM	**Ithomi**	**1.69**	**132**	P	**Pb**	**07 21 02.8**	**-0.7**
AGG	**Agios Georgios**	**1.70**	**65**	P	**Pb**	**07 21 04.1**	**+0.5**
AGG				AML	AML	07 21 33.7	
	comp=N,6198μm,0.9s						
AGG				AML	AML	07 21 33.8	
	comp=E,6917μm,1.1s						
AGG	**Agios Georgios**	**1.70**	**65**	P	**Pg**	**07 21 04.3**	**-0.8**
AGG	**Agios Georgios**	**1.70**	**65**	Pn	**Pg**	**07 21 04.3**	**-0.8**
AGG	**Agios Georgios**	**1.70**	**65**	P	**Pb**	**07 21 04.2**	**+0.5**
DSF	**Desfina**	**1.71**	**86**	P	**Pb**	**07 21 04.3**	**+0.5**
THL	**Klokotos Trika**	**1.79**	**46**	P	**Pb**	**07 21 05.3**	**+0.1**
THL				AML	AML	07 21 41.1	
	comp=E,8937μm,0.7s						
THL				AML	AML	07 21 41.6	
	comp=N,6277μm,0.7s						
THL	**Klokotos Trika**	**1.79**	**46**	P	**Pb**	**07 21 05.3**	**+0.1**
PYL	**PYLOS**	**1.81**	**142**	P	**Pn**	**07 21 03.8**	**+0.5**
KPRO	**Kipourio**	**1.81**	**26**	P	**Pb**	**07 21 05.9**	**+0.4**
LSK	**Leskovik**	**1.83**	**6**	P	**Pb**	**07 21 05.0**	**-0.9**
	baz=3.0						
LSK				S	**Sb**	**07 21 28.7**	**-0.1**
	baz=3.0						
LSK				AMP			
	comp=N,15nm,0.5s,baz=3.0						
LSK	**Leskovik**	**1.83**	**6**	P	**Pb**	**07 21 05.5**	**-0.4**
AXAR	**Agios Charalam**	**1.86**	**76**	P	**Pb**	**07 21 06.1**	**-0.3**
AXAR	**Agios Charalam**	**1.86**	**76**	P	**Pg**	**07 21 07.3**	**-1.0**
VLX	**Viachokerasia**	**1.87**	**120**	P	**Pn**	**07 21 05.1**	**+0.9**
VLX				AML	AML	07 21 40.3	
	comp=N,7413μm,0.8s						
VLX				AML	AML	07 21 44.1	
	comp=E,8104μm,0.7s						
PENT	**Pentalofos**	**1.97**	**18**	P	**Pb**	**07 21 08.0**	**-0.2**
PENT	**Pentalofos**	**1.97**	**18**	P	**Pb**	**07 21 08.8**	**+0.6**
LTK	**Loutraki**	**2.09**	**97**	P	**Pb**	**07 21 08.5**	**-1.7**
LTK	**Loutraki**	**2.09**	**97**	P	**Pb**	**07 21 08.7**	**-1.5**
LKR	**Lokris**	**2.11**	**80**	P	**Pb**	**07 21 09.4**	**-1.1**
ATAL	**Atalanti**	**2.13**	**79**	P	**Pb**	**07 21 09.7**	**-1.2**
VLO	**Vlora**	**2.24**	**343**	P	**Pn**	**07 21 10.7**	**+1.4**
	baz=341						
VLO				AMP			
	comp=E,12nm,1.4s,baz=341						
KZN	**Kozani**	**2.27**	**29**	P	**Pb**	**07 21 11.8**	**-1.5**
SCTE	**Santa Cesarea**	**2.28**	**321**		**Pn**	**07 21 10.6**	**+0.8**
SCTE	**Santa Cesarea**	**2.28**	**321**	P	**Pn**	**07 21 10.9**	**+1.1**
	baz=319						
KRND	**KRANIDI**	**2.41**	**112**	P	**Pn**	**07 21 12.6**	**+1.0**
KTI	**Kastanea**	**2.48**	**33**	P	**Pb**	**07 21 15.1**	**-1.9**
ATH	**Athens Observa**	**2.68**	**97**	P	**Pn**	**07 21 16.1**	**+0.8**
ATH	**Athens Observa**	**2.68**	**97**	P	**Pn**	**07 21 16.5**	**+1.2**
VLY	**Voula,Athens**	**2.76**	**99**	P	**Pn**	**07 21 17.4**	**+1.0**
PTL	**Penteli**	**2.78**	**95**	P	**Pn**	**07 21 17.5**	**+0.7**
OHR	**Ohrid**	**2.81**	**7**	*i* Pn	**Pn**	**07 21 19.4**	**+2.4**
TIP	**Timpagrande**	**2.93**	**288**	‡P	**Pn**	**07 21 19.6**	**+0.8**
TIP				‡S	**Sn**	**07 21 54.9**	**+1.0**
TIP	**Timpagrande**	**2.93**	**288**		**Pn**	**07 21 19.5**	**+0.6**
TIR	**Tirane**	**3.04**	**353**	‡P	**Pn**	**07 21 21.5**	**+1.2**
TIR				‡S	**Sn**	**07 21 56.3**	**-0.3**
TIR	**Tirane**	**3.04**	**353**	P	**Pn**	**07 21 20.9**	**+0.6**
TIR	**Tirane**	**3.04**	**353**		**Pn**	**07 21 20.9**	**+0.6**
TIR	**Tirane**	**3.04**	**353**	P	**Pn**	**07 21 22.0**	**+1.8**
	baz=352						
THE	**Thessaloniki**	**3.07**	**40**	P	**Pn**	**07 21 19.6**	**-1.0**
	baz=39						
PLG	**Polygyros**	**3.15**	**49**	P	**Pn**	**07 21 22.8**	**+0.9**
TAR1	**Taranto**	**3.23**	**314**	*e*Pn	**Pn**	**07 21 24.1**	**+1.2**
TAR1				Sn	**Sn**	**07 22 01.9**	**+0.6**
PHP	**Peshkopia**	**3.36**	**1**	P	**Pn**	**07 21 26.3**	**+1.6**
	baz=0.0						
PHP				AMP			
	comp=N,1.3nm,0.9s,baz=0.0						
PHP	**Peshkopia**	**3.36**	**1**	P	**Pn**	**07 21 26.1**	**+1.4**
CEL	**Celeste**	**3.50**	**270**		**Pn**	**07 21 27.1**	**+0.4**
STIP	**Stip**	**3.65**	**22**	*i* Pn	**Pn**	**07 21 31.3**	**+2.6**
MATE	**Matera**	**3.65**	**311**	‡P	**Pn**	**07 21 29.7**	**+1.1**
PUK	**Puka**	**3.73**	**355**	P	**Pn**	**07 21 30.8**	**+1.0**
	baz=354						
ULC	**Ulcinj**	**3.73**	**347**	‡*i* Pn	**Pn**	**07 21 29.8**	**0.0**
ULC				*i* Sn	**Sn**	**07 22 14.3**	**+0.7**
SKO	**Skopje**	**3.74**	**13**	*e*Pn	**Pn**	**07 21 31.8**	**+1.9**
BAI	**Bari**	**3.86**	**317**	*e*Pn	**Pn**	**07 21 32.5**	**+1.0**
BAI				Sn	**Sn**	**07 22 17.0**	**+0.4**
DRME	**Dracevica, Mon**	**3.96**	**347**	*e*Pn	**Pn**	**07 21 33.0**	**+0.1**
DRME				*i* Sn	**Sn**	**07 22 19.5**	**+0.3**
DRME	**Dracevica, Mon**	**3.96**	**347**	*e*Pn	**Pn**	**07 21 33.0**	**+0.1**
KKB	**Krupnik**	**4.11**	**30**	*i* P	**Pn**	**07 21 36.1**	**+1.1**
BUM	**Brajici-Budva**	**4.12**	**345**	‡*i* Pn	**Pn**	**07 21 35.1**	**-0.1**
BUM				*i* Sn	**Sn**	**07 22 23.3**	**0.0**
MMB	**Musomiste**	**4.17**	**37**	*i* P	**Pn**	**07 21 37.8**	**+2.0**
PDG	**Podgorica**	**4.18**	**349**	‡P	**Pn**	**07 21 36.6**	**+0.6**
PDG				‡S	**Sn**	**07 22 24.0**	**-0.7**
PDG	**Podgorica**	**4.18**	**349**	*e*Pn	**Pn**	**07 21 35.9**	**-0.1**
PDG	**Podgorica**	**4.18**	**349**	Pn	**Pn**	**07 21 35.8**	**-0.1**
TTG	**Podgorica**	**4.18**	**349**	*e*Pn	**Pn**	**07 21 36.2**	**+0.2**
TTG				*i* Sn	**Sn**	**07 22 24.6**	**-0.1**
PVY	**Plav**	**4.28**	**356**	*e*Pn	**Pn**	**07 21 37.8**	**+0.4**
PVY				*i* Sn	**Sn**	**07 22 27.0**	**-0.2**
APE	**Apeiranthos**	**4.30**	**105**	*i* P	**Pn**	**07 21 39.0**	**+1.4**
HCY	**Herceg Novi**	**4.36**	**342**	‡*i* Pn	**Pn**	**07 21 37.8**	**-0.5**
HCY				*i* Sn	**Sn**	**07 22 29.1**	**+0.2**
HCY	**Herceg Novi**	**4.36**	**342**	‡*i* Pn	**Pn**	**07 21 37.4**	**-0.9**
CEME	**Cevo**	**4.36**	**346**	‡*i* Pn	**Pn**	**07 21 38.4**	**0.0**
CEME				*e*Sn	**Sn**	**07 22 28.4**	**-0.7**
IVA	**Berane**	**4.56**	**356**	*e*Pn	**Pn**	**07 21 41.8**	**+0.6**
IVA				*i* Sn	**Sn**	**07 22 33.8**	**-0.2**
NKME	**Niksic**	**4.56**	**347**	‡*i* Pn	**Pn**	**07 21 41.8**	**+0.6**
NKME				*i* Sn	**Sn**	**07 22 33.8**	**-0.3**
KOME	**Kolasin**	**4.57**	**352**	*e*Pn	**Pn**	**07 21 42.1**	**+0.8**
KOME				*i* Sn	**Sn**	**07 22 33.7**	**-0.6**
NKY	**Niksic**	**4.60**	**347**	*e*Pn	**Pn**	**07 21 42.0**	**+0.2**
NKY				*i* Sn	**Sn**	**07 22 33.8**	**-1.3**
TREB	**Trebinje**	**4.64**	**341**	‡*i* Pn	**Pn**	**07 21 41.2**	**-1.1**
IDI	**Anoyia**	**4.74**	**128**	Pn	**Pn**	**07 21 46.0**	**+2.3**
	comp=N,1.7nm,0.3s,baz=316,slow=13,SNR=8.4						
IDI				Sn	**Sn**	**07 22 39.9**	**+1.4**
	comp=N,3.7nm,0.3s,baz=29,slow=19,SNR=1.7						
IDI				LR	LR	07 23 32.5	
	comp=N,189nm,18.5s,baz=274,slow=36						
IDI	**Anoyia**	**4.74**	**128**	‡P	**Pn**	**07 21 47.3**	**+3.7**
IDI				‡S	**Sn**	**07 22 43.1**	**+4.6**
IDI	**Anoyia**	**4.74**	**128**	Pn	**Pn**	**07 21 39.8**	**-3.9**
RZN	**Rozhen**	**4.75**	**44**	*i* P	**Pn**	**07 21 45.2**	**+1.3**
VAE	**Valguarnera**	**4.77**	**262**	Pn	**Pn**	**07 21 45.5**	**+1.4**
	comp=N,1.6nm,0.3s,baz=56,slow=7.3,SNR=3.4						
VAE				Sn	**Sn**	**07 22 40.8**	**+1.5**
	comp=N,3.7nm,0.3s,baz=5.7,slow=4.7,SNR=4.2						
BRY	**Bratogost**	**4.78**	**344**	‡*i* Pn	**Pn**	**07 21 43.8**	**-0.4**
BRY				*i* Sn	**Sn**	**07 22 38.0**	**-1.5**
BRY	**Bratogost**	**4.78**	**344**	‡*i* Pn	**Pn**	**07 21 43.2**	**-1.0**
VTS	**Vitosha**	**4.82**	**26**	*i* P	**Pn**	**07 21 46.1**	**+1.2**
SGRT	**San Giovanni R**	**4.92**	**316**	Pn	**Pn**

comp=N,10.0nm,0.4s,SNR=5.1
SQTA Sankt Quirin 11.13 326 *e*Pn **Pn 07 23 13.6 +2.2**
comp=N,4.9nm,0.3s
FETA Feichten 11.20 324 *e*Pn **Pn 07 23 15.2 +2.8**
comp=N,1.1nm,0.3s
MOTA Moosalm 11.28 326 *i* Pn **Pn 07 23 15.1 +1.7**
comp=N,5.5nm,0.4s,SNR=4.6
VRAC Vranov 11.31 347 LR LR 07 28 20.8
comp=N,45nm,19.8s,baz=170,slow=42
DAVOX Davos/Dischmat 11.44 321 Pn **Pn 07 23 14.4 -1.3**
comp=N,0.2nm,0.3s,baz=131,slow=20,SNR=1.8
DAVOX Sn **Sn 07 25 15.7 -7.6**
comp=N,0.5nm,0.3s,baz=142,slow=19,SNR=2.1
TUE Stuetta 11.50 319 Pn **Pn 07 23 18.4 +1.9**
RETA Reutte 11.54 326 *e*Pn **Pn 07 23 17.6 +0.8**
comp=N,1.2nm,0.3s
GEC2 GERESS Array S 11.56 338 Pn **Pn 07 23 16.7 -0.6**
GERES GERESS Array B 11.56 338 Pn **Pn 07 23 15.8 -1.4**
comp=N,0.8nm,0.3s,baz=155,slow=14,SNR=13
GERES Sn **Sn 07 25 17.4 -8.8**
comp=N,0.5nm,0.3s,baz=136,slow=33,SNR=3.8
GERES LR LR 07 28 54.4
comp=N,92nm,21.1s,baz=208,slow=44
GERES GERESS Array B 11.56 338 P **Pn 07 23 15.9 -1.3**
DAVA Damuels 11.79 323 *e*Pn **Pn 07 23 20.9 +0.4**
comp=N,2.3nm,0.2s
KHC Kasperske Hory 11.85 338 P **Pn 07 23 20.4 -0.8**
KHC Kasperske Hory 11.85 338 Pn **Pn 07 23 20.4 -0.8**
SENIN Lac Senin/Sane 12.55 314 Pn **Pn 07 23 33.5 +2.7**
MMAI Mount Meron Ar 13.33 109 Pn **Pn 07 23 45.6 +4.1**
comp=N,1.5nm,0.3s,baz=268,slow=4.3,SNR=2.5
AKASG Malin Array Be 13.89 24 Pn **Pn 07 23 48.4 -0.5**
comp=N,0.8nm,0.3s,baz=212,slow=11,SNR=4.6
AKASG Malin Array Be 13.89 24*ce*P **Pn 07 23 49.0 +0.2**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB Malin Array Si 13.89 24*ce*P **Pn 07 23 50.4 +1.6**
CLL Collm 13.98 341 *i* PP **P 07 24 00.4 +2.3**
CLL Collm 13.98 341 *i* P **P 07 24 00.4 +2.3**
EIL Elat 14.86 121 Pn **P 07 24 06.6 -1.5**
comp=Z,0.4nm,0.3s,baz=343,slow=13,SNR=4.6
KIV Kislovodsk 17.72 64 *e*P **P 07 24 39.6 -0.2**
KIV pmax pmax
comp=Z,41nm,1.1s
KBZ Khabaz 17.83 65 P **P 07 24 42.3 +1.4**
comp=Z,0.2nm,0.3s,baz=272,slow=11,SNR=7.1
KBZ Khabaz 17.83 65*ce*P **P 07 24 41.9 +1.1**
KBZ pmax pmax
comp=Z,7.0nm,0.9s
VORD Divnogorie 18.41 41 *e*P **P 07 24 45.0 -2.2**
VORD pmax pmax
comp=Z,7.0nm,0.9s
VSR Storozhevoye 18.50 40 *e*P **P 07 24 45.5 -2.6**
VSR pmax pmax
comp=Z,7.0nm,0.9s
ESDC Sonseca Array 18.93 282 P **Pn 07 24 53.8 +0.1**
comp=Z,0.1nm,0.3s,baz=78,slow=11,SNR=9.6
ESDC LR LR 07 33 01.9
comp=Z,27nm,18.5s,baz=345,slow=40
GNI Garni 18.97 77 P **Pn 07 24 55.3 +1.0**
comp=Z,1.5nm,0.3s,baz=27,slow=6.9,SNR=4.0
GNI Garni 18.97 77*ce*P **Pn 07 24 54.6 +0.3**
GNI pmax pmax
comp=Z,53nm,1.7s
LPSR Galich'ya Gora 19.25 36 *e*P **P 07 24 54.1 -2.3**
LPSR pmax pmax
comp=Z,20nm,1.0s
VRH Novokhopyorsk 19.81 43 *e*P **P 07 25 02.7 +0.2**
VRH pmax pmax
comp=Z,10.0nm,0.9s
OBN Obninsk 20.06 28 LR LR 07 32 59.8
comp=Z,20nm,19.9s,baz=226,slow=37
OBN Obninsk 20.06 28 *i* P **P 07 25 04.8 -0.4**
OBN pmax pmax
comp=Z,10.0nm,0.9s
OBN MLR MLR
comp=Z,93nm,14.0s
MOS Moscow 20.92 28 *e*P **P 07 25 12.8 -1.8**
MDT Midelt 21.00 262 P **P 07 25 20.4 +4.6**
comp=Z,3.4nm,0.9s,baz=128,slow=3.4,SNR=3.8
MDT LR LR 07 34 24.8
comp=Z,26nm,21.3s,baz=64,slow=39
HFS Hagfors 22.23 351 P **P 07 25 28.0 -0.6**
comp=Z,13nm,0.8s,baz=171,slow=10,SNR=12
HFS Hagfors 22.23 351 P **P 07 25 28.0 -0.6**
PUL Pulkovo 22.39 13*ce*P **P 07 25 29.1 -1.2**
PUL pmax pmax
comp=Z,105nm,0.5s
KONO Kongsberg 22.42 346*ce*P **P 07 25 30.8 +0.2**
KONO pmax pmax
comp=Z,28nm,1.2s
EKA Eskdalemuir Ar 23.23 325 P **P 07 25 38.1 -1.0**
comp=Z,5.9nm,0.9s,baz=126,slow=11,SNR=8.0
NAO01 NORSAR Array S 23.31 348 P **P 07 25 39.3 -0.6**
NAO01 IAmb IAmb 07 25 41.0
comp=Z,25nm,1.0s
FINES FINES Array B 23.42 7 P **P 07 25 39.5 -1.4**
comp=Z,8.7nm,0.7s,baz=171,slow=9.1,SNR=31
FINES LR LR 07 36 44.1
comp=Z,64nm,18.9s,baz=221,slow=42
FINES FINESS Array B 23.42 7 P **P 07 25 39.6 -1.3**
FINES FINESS Array B 23.42 7 P **P 07 25 39.6 -1.3**
FIA1 FINESS Array S 23.42 7 P **P 07 25 39.7 -1.2**
FIA1 IAmb IAmb 07 25 52.5
comp=Z,16nm,1.1s
NC405 NORSAR Array S 23.44 349 P **P 07 25 40.6 -0.6**
NB201 NORSAR Array S 23.45 349 P **P 07 25 40.9 -0.4**
NB201 IAmb IAmb 07 25 55.9
comp=Z,14nm,0.9s
NB2 NORSAR Subarra 23.45 349 P **P 07 25 40.8 -0.5**
comp=Z,7.5nm,0.9s,baz=158,slow=10
NOA NORSAR Array B 23.45 349 P **P 07 25 39.9 -1.4**
comp=Z,3.4nm,0.8s,baz=159,slow=9.0,SNR=8.0
NOA LR LR 07 36 21.2
comp=Z,28nm,19.2s,baz=160,slow=41
NBO00 NORSAR Array S 23.51 348 P **P 07 25 42.3 +0.4**
NC303 NORSAR Array S 23.60 349 P **P 07 25 42.4 -0.4**
NC303 IAmb IAmb 07 25 43.5
comp=Z,25nm,1.1s
NC204 NORSAR Array S 23.74 348 P **P 07 25 42.9 -1.3**
NC204 IAmb IAmb 07 25 44.7
comp=Z,13nm,1.1s
KLMR Klimovskoe 25.55 22 *e*P **P 07 25 59.8 -0.9**
KLMR pmax pmax
comp=Z,14nm,0.8s
KLMR Klimovskoe 25.55 22 *e*P **P 07 25 59.9 -0.8**
KLMR AMP 07 26 01.3
comp=Z,14nm,0.8s
KIRV Kirov 27.61 33 LR LR 07 39 35.3
comp=Z,24nm,20.2s,baz=187,slow=42
KIRV Kirov 27.61 33*ce*P **P 07 26 17.4 -1.8**
AKTO Aktyubinsk 29.20 53 P **P 07 26 32.2 -1.3**
comp=Z,1.7nm,0.8s,baz=260,slow=14,SNR=4.0
TORD Torodi Ar. Bea 30.06 218 P **P 07 26 41.9 +0.5**
comp=Z,2.5nm,0.7s,baz=29,slow=9.4,SNR=11
ABKAR Akbulak array 30.27 56 P **P 07 26 42.0 -1.1**
ARC5 ARCESS Array S 31.39 3 P **P 07 26 52.1 -0.6**
ARCES ARCESS Array B 31.39 3 P **P 07 26 52.2 -0.5**
comp=Z,3.4nm,0.9s,baz=187,slow=10,SNR=7.0
ARC2 ARCESS Array S 31.40 3 P **P 07 26 51.9 -0.9**
ARC2 IAmb IAmb 07 26 56.9
comp=Z,6.4nm,0.9s
ARD1 ARCESS Array S 31.41 3 P **P 07 26 51.7 -1.2**
KEV Kevo 31.70 4 P **P 07 26 54.8 -0.5**
KEV pmax pmax
comp=Z,6.0nm,0.7s
KEV Kevo 31.70 4 P **P 07 26 54.8 -0.5**
KEV IAmb IAmb 07 26 55.3
comp=Z,6.2nm,0.7s
BRVK Borovoye 37.07 50*ce*P **P 07 27 40.2 -1.8**
BRVK pmax pmax
comp=Z,9.0nm,1.7s
KK31 Karatay Array 37.86 66 P **P 07 27 48.5 -0.4**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 37.86 66 P **P 07 27 48.5 -0.4**
KK31 IAmb IAmb 07 27 50.1
comp=Z,4.8nm,0.8s
KKAR Karatay Array 37.86 66 P **P 07 27 48.4 -0.5**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 37.86 66 P **P 07 27 48.4 -0.5**
KKAR IAmb IAmb 07 27 50.1
comp=Z,4.8nm,0.8s
GAR Garm 38.62 73 P **P 07 27 55.1 -0.4**
GAR IAmb IAmb 07 27 58.1
comp=Z,9.2nm,0.8s
DBIC Dimbokro 38.91 222 P **P 07 28 00.6 +2.6**
comp=Z,2.2nm,0.7s,baz=5.0,slow=14,SNR=4.7
DBIC LR LR 07 44 04.7
comp=Z,42nm,18.6s,baz=12,slow=36
DBIC Dimbokro 38.91 222 P **P 07 27 56.3 -1.6**
TIC Toumodi 39.02 223 *e*P **P 07 27 57.9 -1.0**
KIC Kosan Boka 39.11 222 *e*P **P 07 28 01.8 +2.2**
comp=Z,7.1nm,0.8s
LIC Lamto 39.37 222 *e*P **P 07 28 01.1 -0.7**
comp=Z,27nm,0.9s
SOCY Socotra 39.66 122 P **P 07 28 01.0 -3.4**
SOCY IAmb IAmb 07 28 03.3
comp=Z,8.8nm,0.9s
SPA0 Spitsbergen Ar 40.00 359 P **P 07 28 06.8 +0.4**
AAK Ala-Archa 40.82 66*ce*P **P 07 28 13.3 -0.6**
AAK pmax pmax
comp=Z,9.0nm,1.0s
BOOM Boomskoye usch 41.90 66 P **P 07 28 21.7 -1.0**
BOOM pmax pmax
comp=Z,2.0nm,0.7s
BOOM Boomskoye usch 41.90 66 P **P 07 28 21.7 -1.0**
BOOM IAmb IAmb 07 28 28.4
comp=Z,2.1nm,0.7s
KURK Kurchatov 42.30 53*ce*P **P 07 28 23.3 -2.3**
KURK pmax pmax
comp=Z,5.0nm,1.7s
KURK Kurchatov 42.30 53 P **P 07 28 23.3 -2.3**
MK31 Makanchi Array 45.34 58*ce*P **P 07 28 49.2 -1.0**
MK31 Makanchi Array 45.34 58 P **P 07 28 49.4 -0.8**
MK31 IAmb IAmb 07 28 49.7
comp=Z,2.9nm,0.7s
MKAR Makanchi Array 45.34 58 P **P 07 28 49.5 -0.7**
comp=Z,3.0nm,0.5s,baz=276,slow=7.1,SNR=22
MKAR Makanchi Array 45.34 58*ce*P **P 07 28 49.2 -1.0**
MKAR pmax pmax
comp=Z,3.0nm,0.5s
ZAA0 Zalesovo Array 45.70 48 P **P 07 28 52.1 -0.7**
ZALV Zalesovo Beam 45.70 48 P **P 07 28 51.8 -1.0**
comp=Z,13nm,0.5s,baz=276,slow=8.6,SNR=46
ZALV Zalesovo Beam 45.70 48 P **P 07 28 52.2 -0.6**
ZALV Zalesovo Beam 45.70 48 P **P 07 28 52.2 -0.6**
NRIK Noril'sk 46.73 27*ce*P **P 07 29 01.2 +0.5**
NRIK pmax pmax
comp=Z,2.0nm,0.6s
EUNU Eureka 55.34 348 P **P 07 30 06.8 +1.3**
SCHQ Schefferville 58.26 317 P **P 07 30 27.6 +1.1**
comp=Z,4.9nm,0.9s,baz=63,slow=9.0,SNR=1.4
SCHQ Schefferville 58.26 317 P **P 07 30 27.9 +1.4**
SONM Songino Array 60.47 51 P **P 07 30 41.4 -0.6**
comp=Z,2.2nm,0.9s,baz=292,slow=7.8,SNR=9.0
SONM PcP **PcP 07 31 27.9 +1.2**
comp=Z,2.2nm,1.2s,baz=301,slow=3.0,SNR=2.7
SONM Songino Array 60.47 51 P **P 07 30 41.1 -0.9**
ULN Ulaanbaatar 60.86 50*ce*P **P 07 30 43.8 -0.8**
ULN pmax pmax
comp=Z,9.0nm,2.5s
YAK Yakutsk 65.05 29*ce*P **P 07 31 11.2 -0.8**
YAK pmax pmax
comp=Z,9.0nm,0.6s
BOSA Boshof 66.75 175 P **P 07 31 26.7 +3.3**
comp=Z,1.6nm,0.6s,baz=356,slow=5.4,SNR=4.1
XAN Xi'an 68.88 63 P **P 07 31 34.9 -2.1**
XAN pmax pmax
comp=Z,7.0nm,1.5s
CMAR Chiang Mai Arr 70.00 82 P **P 07 31 42.7 -1.4**
comp=Z,1.0nm,0.3s,baz=303,slow=7.7,SNR=9.9
CMAR Chiang Mai Arr 70.00 82 P **P 07 31 43.3 -0.8**
CMAR Chiang Mai Arr 70.00 82 P **P 07 31 43.3 -0.8**
TOLK Toolik Lake Re 73.09 356 P **P 07 32 02.5 +0.5**
KLR Kul'dur 73.85 39*ce*P **P 07 32 06.9 +0.2**
BMAR Burnt Mountain 73.95 354 P **P 07 32 07.0 0.0**
ULM Lac du Bonnet 75.50 323 P **P 07 32 17.6 +1.3**
comp=Z,2.5nm,0.7s,baz=44,slow=6.1,SNR=4.0
IMAR Indian Mountai 75.92 358 P **P 07 32 19.6 +1.2**
ILAR Eielson Array 76.75 354 P **P 07 32 24.4 +1.3**
comp=Z,0.8nm,0.9s,baz=351,slow=4.8,SNR=9.8
USRK Ussuriysk Ar. 77.27 43 P **P 07 32 26.3 0.0**
comp=Z,5.3nm,1.0s,baz=291,slow=4.2,SNR=6.2
KSRS Korea Array 79.34 51 P **P 07 32 38.1 +0.1**
comp=Z,1.2nm,0.3s,baz=317,slow=5.3,SNR=6.0
YSS Yuzh-Sakhalins 80.73 36 *e*P **P 07 32 45.9 +0.6**
YSS pmax pmax
comp=Z,20nm,0.9s
MJAR Matsushiro Arr 85.98 46 P **P 07 33 12.1 -0.5**
comp=Z,1.9nm,0.8s,baz=316,slow=3.5,SNR=6.5

WEL 24 07:26:01.9±1.1, 38°S±8°×18°0W±°, h33km, M3.2/11, ML3.5/11, MLv3.2/11, Error ellipse: s-maj=0.0km s-min=0.0km az=22.2, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.65**	**264**	P		Pn		07 26 28.3	-0.2
MXZ	**Matakaoa Point**	**1.73**	**273**	P		Pn		07 26 29.1	-0.6
MXZ				S		Sn		07 26 49.0	-1.7
PUZ	**Puketiti**	**1.81**	**257**	P		Pn		07 26 30.7	-0.1
PUZ				S		Sn		07 26 52.9	+0.3
CNGZ	**Carnagh Statio**	**1.97**	**245**	P		Pn		07 26 34.1	+1.2
TWGZ	**Tauwhareparae**	**2.04**	**255**	P		Pn		07 26 34.2	+0.2
TWGZ				S		Sn		07 26 59.9	+1.5
HAZ	**Te Kaha**	**2.14**	**267**	P		Pn		07 26 35.4	0.0
TKGZ	**Te Karaka**	**2.22**	**249**	P		Pn		07 26 36.8	+0.4
TKGZ				S		Sn		07 27 03.3	+0.7
RUGZ	**Raukumara Rang**	**2.24**	**262**	P		Pn		07 26 36.5	-0.4
RIGZ	**Rimuhau**	**2.38**	**243**	P		Pn		07 26 39.3	+0.6
RIGZ				S		Sn		07 27 07.7	+1.0
PRGZ	**Paritu Road**	**2.40**	**238**	P		Pn		07 26 39.4	+0.5
PRGZ				S		Sn		07 27 09.1	+2.0
MWZ	**Matawai**	**2.43**	**253**	P		Pn		07 26 39.0	-0.2
MWZ				S		Sn		07 27 07.3	-0.6
MHGZ	**Mahia Peninsul**	**2.51**	**233**	P		Pn		07 26 40.7	+0.3
RAGZ	**Rawiri**	**2.56**	**250**	P		Pn		07 26 41.7	+0.6
RAGZ				S		Sn		07 27 11.8	+0.7
CTZ	**Chatham Island**	**6.44**	**161**	P		Pn		07 27 37.1	+2.6
CTZ				S		Sn		07 28 44.6	-2.2

*THE **24** 07:27:18.6, 38°.31N×20°.38E, h13km, ML3.1/10, Error ellipse: s-maj=1.1km s-min=0.3km az=266.0*
*ATH **24** 07:27:18.4, 38°.30N×20°.42E, h17km±1km, ML3.1/11, Error ellipse: s-maj=2.4km s-min=0.9km az=84.0*
*IDC **24** 07:27:20.6±16.0, 38°.81N×20°.87E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.6/35, mbtmp4.1/4, Error ellipse: s-maj=315.7km s-min=49.9km az=41.0*

ISC 24 07:27:17.8±0.8, 38°.30N±0°.02×20°.32E±0°.03, h18km±4km, n73, σ1s08/103, mb4.2/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DMLN	**Damoulianata-K**	**0.07**	**149**	P		**Pg**		**07 27 21.3**	**0.0**
DMLN				S		**Sg**		**07 27 22.9**	**-0.7**
	59μm,0.3s								
KEF4	**Livadi, Kephal**	**0.09**	**120**	P		**Pg**		**07 27 21.1**	**-0.2**
LXR1	**Lixouri, Cepha**	**0.14**	**139**	P		**Pg**		**07 27 22.0**	**+0.2**
LXR1				S		**Sg**		**07 27 24.5**	**0.0**
ARG2	**Argostoli**	**0.18**	**134**	P		**Pg**		**07 27 22.4**	**0.0**
ARG2				S		**Sg**		**07 27 24.9**	**-0.6**
FSK	**Fiskardo**	**0.24**	**50**	P		**Pg**		**07 27 23.2**	**-0.2**
FSK				S		**Sg**		**07 27 26.7**	**-0.6**
FSK				AML	AML			07 27 27.0	
	comp=N,16646μm,0.4s								
FSK				AML	AML			07 27 27.1	
	comp=E,30862μm,0.2s								
FSK	**Fiskardo**	**0.24**	**50**	P		**Pg**		**07 27 23.2**	**-0.2**
FSK				S		**Sg**		**07 27 26.6**	**-0.6**
	comp=E,11μm,0.2s								
VLS	**Valsamata**	**0.24**	**121**	P		**Pg**		**07 27 23.1**	**-0.4**
VLS				S		**Sg**		**07 27 26.4**	**-0.8**
VLS				AML	AML			07 27 26.7	
	comp=E,56407μm,0.2s								
VLS				AML	AML			07 27 26.7	
	comp=N,78785μm,0.3s								
VLS	**Valsamata**	**0.24**	**121**	P		**Pg**		**07 27 23.0**	**-0.4**
VLS				S		**Sg**		**07 27 26.5**	**-0.8**
	comp=N,34μm,0.2s								
PSDA	**Pessada-Kefalo**	**0.28**	**133**	P		**Pg**		**07 27 23.9**	**-0.1**
PSDA				S		**Sg**		**07 27 27.7**	**-0.4**
PSDA	**Pessada-Kefalo**	**0.28**	**133**	P		**Pg**		**07 27 23.8**	**-0.1**
PSDA				S		**Sg**		**07 27 27.9**	**-0.2**
	comp=N,2μm,0.2s								
EVGI	**Lefkada island**	**0.41**	**39**	P		**Pg**		**07 27 26.3**	**0.0**
EVGI				S		**Sg**		**07 27 32.0**	**0.0**
EVGI	**Lefkada island**	**0.41**	**39**	P		**Pg**		**07 27 26.2**	**0.0**
EVGI				S		**Sg**		**07 27 32.1**	**+0.1**
	comp=N,4μm,0.1s								
VLMS	**Volimes, Zakyn**	**0.50**	**148**	P		**Pg**		**07 27 27.8**	**-0.1**
VLMS				S		**Sb**		**07 27 35.5**	**+0.4**
VLMS				AML	AML			07 27 38.4	
	comp=E,5591μm,0.4s								
VLMS				AML	AML			07 27 39.8	
	comp=N,8105μm,0.3s								
VLMS	**Volimes, Zakyn**	**0.50**	**148**	P		**Pg**		**07 27 27.8**	**-0.1**
VLMS				S		**Sb**		**07 27 35.6**	**+0.5**
NYDR	**Nydri-Lefkada**	**0.50**	**35**	P		**Pg**		**07 27 27.6**	**-0.3**
NYDR				S		**Sb**		**07 27 35.5**	**+0.4**
	comp=N,2μm,0.4s								
MGNA	**Meganis**	**0.51**	**46**	P		**Pg**		**07 27 27.6**	**-0.4**
MGNA				S		**Sg**		**07 27 34.9**	**0.0**
MGNA				AML	AML			07 27 35.7	
	comp=E,6913μm,0.1s								
MGNA				AML	AML			07 27 38.5	
	comp=N,5932μm,0.2s								
LKD2	**Lefkada island**	**0.55**	**28**	P		**Pg**		**07 27 28.6**	**-0.3**
LKD2				S		**Sg**		**07 27 35.4**	**-0.8**
LKD2				AML	AML			07 27 37.4	
	comp=N,2301μm,0.5s								
LKD2				AML	AML			07 27 42.6	
	comp=E,3080μm,0.2s								
LKD2	**Lefkada island**	**0.55**	**28**	P		**Pg**		**07 27 28.6**	**-0.3**
LKD2				S		**Sb**		**07 27 37.1**	**+0.6**
	comp=E,1μm,0.2s								
TSLK	**Tsoukalades, L**	**0.58**	**26**	P		**Pg**		**07 27 29.3**	**-0.1**
TSLK				S		**Sg**		**07 27 37.7**	**+0.5**
TSLK	**Tsoukalades, L**	**0.58**	**26**	P		**Pg**		**07 27 29.3**	**-0.1**
TSLK				S		**Sg**		**07 27 37.7**	**+0.5**
	comp=E,1μm,0.4s								
PDO	**Prodromos**	**0.74**	**66**	P		**Pg**		**07 27 31.7**	**-0.5**
PDO				AML	AML			07 27 46.9	
	comp=E,5299μm,0.3s								
PDO				AML	AML			07 27 47.0	
	comp=N,5178μm,0.3s								
PDO	**Prodromos**	**0.74**	**66**	P		**Pg**		**07 27 31.4**	**-0.8**
PDO				S		**Sb**		**07 27 42.0**	**+0.2**
	comp=N,4μm,0.3s								
RLS	**Riolos of Patr**	**0.93**	**105**	P		**Pg**		**07 27 35.0**	**-1.0**
RLS				AML	AML			07 27 55.1	
	comp=N,1452μm,0.5s								
RLS				AML	AML			07 27 58.3	
	comp=E,1348μm,0.4s								
RLS	**Riolos of Patr**	**0.93**	**105**	P		**Pg**		**07 27 34.9**	**-1.0**
RLS				S		**Sn**		**07 27 49.0**	**+0.1**
	comp=E,710nm,0.6s								
DRO	**Drossia**	**1.15**	**107**	P		**Pb**		**07 27 38.9**	**-0.2**
DRO				AML	AML			07 28 02.2	
	comp=E,2172μm,0.6s								
DRO				AML	AML			07 28 03.8	
	comp=N,3256μm,0.5s								
DRO	**Drossia**	**1.15**	**107**	P		**Pb**		**07 27 38.9**	**-0.2**
EFP	**Efpalio**	**1.25**	**84**	P		**Pn**		**07 27 40.2**	**-0.2**
EFP	**Efpalio**	**1.25**	**84**	P		**Sn**		**07 27 40.2**	**-0.2**
ANX	**Ano Chora**	**1.29**	**76**	P		**Pn**		**07 27 41.3**	**+0.3**
ANX				AML	AML			07 28 06.0	
	comp=N,3339μm,0.5s								
ANX				AML	AML			07 28 06.4	
	comp=E,3082μm,0.7s								
ANX	**Ano Chora**	**1.29**	**76**	P		**Pn**		**07 27 41.4**	**+0.4**
EVR	**Evrytania**	**1.31**	**62**	P		**Pn**		**07 27 42.1**	**+0.7**
AMT	**Artemida-Makis**	**1.34**	**125**	P		**Pg**		**07 27 45.0**	**+1.4**
SERG	**Sergoula**	**1.37**	**85**	P		**Pn**		**07 27 42.2**	**+0.1**
SERG	**Sergoula**	**1.37**	**85**	P		**Pn**		**07 27 42.1**	**+0.1**
TRIZ	**Trizonia**	**1.38**	**87**	P		**Pn**		**07 27 42.1**	**0.0**
TRIZ	**Trizonia**	**1.38**	**87**	P		**Pn**		**07 27 42.2**	**0.0**
ALIK	**Aliki, Aigiali**	**1.41**	**91**	P		**Pn**		**07 27 43.1**	**+0.6**
KALE	**Kalithea**	**1.43**	**86**	P		**Pn**		**07 27 43.0**	**+0.1**
KALE				AML	AML			07 28 14.1	
	comp=E,837μm,0.5s								
KALE				AML	AML			07 28 14.6	
	comp=N,1093μm,0.5s								
KALE	**Kalithea**	**1.43**	**86**	P		**Pn**		**07 27 43.1**	**+0.1**
KLV	**Kalavryta, Ach**	**1.46**	**100**	P		**Pn**		**07 27 43.9**	**+0.5**
KLV	**Kalavryta, Ach**	**1.46**	**100**	P		**Pn**		**07 27 44.0**	**+0.6**
KEK	**Kerkira**	**1.47**	**344**	P		**Pb**		**07 27 45.5**	**+0.9**
KEK				AML	AML			07 28 13.4	
	comp=E,672μm,0.2s								
KEK				AML	AML			07 28 19.5	
	comp=N,447μm,0.4s								
KEK	**Kerkira**	**1.47**	**344**	P		**Pb**		**07 27 45.5**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.58**	**63**	P		**Pg**		**07 27 48.7**	**+0.4**
GUR	**Goura**	**1.63**	**102**	P		**Pn**		**07 27 46.9**	**+1.1**
GUR	**Goura**	**1.63**	**102**	P		**Pn**		**07 27 46.6**	**+0.8**
ITM	**Ithomi**	**1.69**	**131**	P		**Pb**		**07 27 48.6**	**+0.1**
TRIP	**Tripoli**	**1.72**	**116**	P		**Pb**		**07 27 49.8**	**+0.8**
TRIP	**Tripoli**	**1.72**	**116**	P		**Pg**		**07 27 50.3**	**-0.7**
AGG	**Agios Georgios**	**1.73**	**65**	P		**Pn**		**07 27 49.4**	**+0.3**
AGG	**Agios Georgios**	**1.73**	**65**	P		**Pg**		**07 27 50.7**	**-0.3**
DSF	**Desfina**	**1.73**	**86**	P		**Pb**		**07 27 49.9**	**+0.7**
DSF	**Desfina**	**1.73**	**86**	P		**Pb**		**07 27 50.1**	**+0.9**
PYL	**PYLOS**	**1.80**	**141**	P		**Pb**		**07 27 50.0**	**-0.2**
THL	**Klokotos Trika**	**1.82**	**46**	P		**Pb**		**07 27 51.1**	**+0.5**
KPRO	**Kipourio**	**1.84**	**26**	P		**Pb**		**07 27 52.1**	**+1.2**
KPRO	**Kipourio**	**1.84**	**26**	P		**Pb**		**07 27 52.2**	**+1.3**
LTK	**Loutraki**	**2.10**	**97**	P		**Pn**		**07 27 54.1**	**+2.0**
LKR	**Lokris**	**2.13**	**80**	P		**Pb**		**07 27 55.4**	**-0.4**
VIL2	**Platees**	**2.32**	**91**	P		**Pn**		**07 27 57.6**	**+2.5**
STON	**Ston**	**4.98**	**337**	*e*Pn		**Pn**		**07 28 32.3**	**+0.7**
STON				Sn		**Sn**		**07 29 26.3**	**-2.4**
LSTV	**Lastovo**	**5.17**	**331**	*e*Pn		**Pn**		**07 28 34.4**	**+0.2**
LSTV				Sn		**Sn**		**07 29 29.7**	**-3.7**
MAKA	**Makarska**	**5.58**	**334**	*e*Pn		**Pn**		**07 28 40.5**	**+0.7**
MAKA				Sn		**Sn**		**07 29 40.5**	**-2.9**
RICI	**Ricice**	**5.72**	**336**	*e*Pn		**Pn**		**07 28 43.1**	**+1.2**
RICI				Sn		**Sn**		**07 29 43.7**	**-3.3**
ZIRJ	**Zirje**	**6.41**	**328**	*e*Pn		**Pn**		**07 28 51.9**	**+0.6**
ZIRJ				Sn		**Sn**		**07 30 00.8**	**-3.2**
KIJV	**Kijevo**	**6.42**	**334**	*e*Pn		**Pn**		**07 28 52.9**	**+1.5**
KIJV				Sn		**Sn**		**07 30 03.3**	**-0.9**
MORI	**Morici**	**6.56**	**329**	*e*Pn		**Pn**		**07 28 55.1**	**+1.8**
MORI				Sn		**Sn**		**07 30 06.2**	**-1.5**
DUGI	**Dugi Otok**	**6.93**	**327**	*e*Pn		**Pn**		**07 29 00.8**	**+2.3**
DUGI				Sn		**Sn**		**07 30 13.9**	**-3.0**
NVLJ	**Novalja**	**7.47**	**329**	*e*Pn		**Pn**		**07 29 07.1**	**+1.2**
NVLJ				Sn		**Sn**		**07 30 27.6**	**-2.5**
FINES	**FINESS Array B**	**23.44**	**7**	P		**P**		**07 32 25.8**	**0.0**
	comp=N,9.9nm,1.1s,baz=177,slow=11,SNR=4.9								
ARCES	**ARCESS Array B**	**31.42**	**3**	P		**P**		**07 33 38.1**	**+0.6**
	comp=N,3.2nm,1.0s,baz=188,slow=12,SNR=2.6								
MKAR	**Makanchi Array**	**45.37**	**58**	P		**P**		**07 35 35.4**	**+0.4**
	comp=N,0.5nm,0.4s,baz=278,slow=7.3,SNR=5.8								
ZALV	**Zalesovo Beam**	**45.72**	**48**	P		**P**		**07 35 37.9**	**+0.2**
	comp=N,1.8nm,0.4s,baz=271,slow=8.2,SNR=6.1								

*IDC **24** 07:32:59.9±0.9, 9°.46S×155°.40E, h0km, mb4.3/11, mb1 4.5/13, mb1mx4.3/29, mbtmp4.3/13, ML4.1/2, MS3.4/14, Ms1 3.5/14, ms1mx3.3/30, Error ellipse: s-maj=28.7km s-min=18.4km az=107.0*
*NEIC **24** 07:33:00.6±2.6, 9°.60S±0°.09×155°.46E±0°.08, h10km±1km, mb4.5/19, Error ellipse: s-maj=19.6km s-min=6.9km az=222.0*

ISC 24 07:33:03.6±0.6, 9°.58S±0°.09×155°.49E±0°.09, h29km, n47, σ1s23/41, mb4.4/19, MS3.5/11, D'Entrecasteaux Islands region

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

ARMA				IAmb	IAmb	07 37 50.2	
	comp=Z,50nm,1.3s						
WR0	**Warramunga Arr**	**22.70**	**241**	P	**P**	**07 38 01.5**	**-1.7**
WR0				IAmb	IAmb	07 38 17.2	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**22.75**	**241**	P	**P**	**07 38 02.0**	**-1.7**
WB0				IAmb	IAmb	07 38 06.3	
	comp=Z,7.5nm,1.1s						
WC3	**Warramunga Arr**	**22.85**	**241**	P	**P**	**07 38 05.5**	**+0.8**
WC3				IAmb	IAmb	07 38 18.6	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**22.86**	**241**	P	**P**	**07 38 03.9**	**-0.9**
WB2	**Warramunga Arr**	**22.86**	**241**	P	**P**	**07 38 02.3**	**-2.6**
WRA	**Warramunga Arr**	**22.87**	**241**	P	**P**	**07 38 05.0**	**0.0**
	comp=Z,4.2nm,0.9s,baz=64,slow=9.7,SNR=16						
WRA				LR	LR	07 46 32.3	
	comp=Z,85nm,19.9s,baz=355,slow=36						
AS31	**Alice Springs**	**24.92**	**233**	P	**P**	**07 38 24.0**	**-0.5**
ASAR	**Alice Springs**	**24.92**	**233**	P	**P**	**07 38 24.4**	**-0.2**
	comp=Z,5.6nm,0.9s,baz=65,slow=9.8,SNR=25						
ASAR	**Alice Springs**	**24.92**	**233**	P	**P**	**07 38 22.2**	**-2.3**
STKA	**Stephens Creek**	**25.66**	**208**	P	**P**	**07 38 32.5**	**+1.6**
	comp=Z,10nm,0.9s,baz=42,slow=18,SNR=11						
STKA				LR	LR	07 48 08.5	
	comp=Z,147nm,20.4s,baz=27,slow=35						
STKA	**Stephens Creek**	**25.66**	**208**	P	**P**	**07 38 30.6**	**-0.4**
URZ	**Urewera**	**34.54**	**149**	LR	LR	07 51 37.2	
	comp=Z,140nm,19.5s,baz=31,slow=32						
RPZ	**Rata Peaks**	**36.61**	**161**	LR	LR	07 55 38.3	
	comp=Z,125nm,18.7s,baz=330,slow=37						
KSRS	**Korea Array**	**53.44**	**333**	P	**P**	**07 42 20.6**	**-0.4**
	comp=Z,5.4nm,1.1s,baz=153,slow=8.7,SNR=8.7						
KSAR	**Wonju Array Be**	**53.45**	**333**	P	**P**	**07 42 22.7**	**+1.6**
PPT	**Papeete**	**53.84**	**105**	LR	LR	08 02 26.1	
	comp=Z,35nm,19.0s,baz=340,slow=33						
USRK	**Ussuriysk Ar.**	**57.61**	**340**	P	**P**	**07 42 50.3**	**-0.7**
	comp=Z,4.4nm,1.0s,baz=170,slow=10.0,SNR=5.1						
USRK	**Ussuriysk Ar.**	**57.61**	**340**	P	**P**	**07 42 51.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**62.35**	**297**	P	**P**	**07 43 25.3**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=120,slow=3.6,SNR=4.9						
CMAR				LR	LR	08 09 46.7	
	comp=Z,13nm,20.4s,baz=191,slow=36						
VNDA	**Vanda**	**68.00**	**179**	LR	LR	08 07 47.6	
	comp=Z,39nm,21.5s,baz=358,slow=31						
SONM	**Songino Array**	**71.76**	**328**	P	**P**	**07 44 24.5**	**+1.1**
	comp=Z,3.4nm,0.9s,baz=138,slow=5.6,SNR=14						
SONM				LR	LR	08 13 27.7	
	comp=Z,35nm,22.0s,baz=82,slow=34						
SONM	**Songino Array**	**71.76**	**328**	P	**P**	**07 44 24.2**	**+0.8**
QSPA	**South Pole Qui**	**80.41**	**180**	P	**P**	**07 45 12.7**	**+0.3**
QSPA				IAmb	IAmb	07 45 21.5	
	comp=Z,15nm,1.5s						
IMAR	**Indian Mountai**	**84.00**	**19**	P	**P**	**07 45 31.2**	**+0.3**
TCOL	**CIGO, UAF Yank**	**85.30**	**21**	P	**P**	**07 45 36.5**	**-1.0**
COLA	**College**	**85.30**	**21**	P	**P**	**07 45 36.6**	**-0.9**
IL31		**85.59**	**21**	P	**P**	**07 45 38.0**	**-0.8**
IL31				IAmb	IAmb	07 45 46.8	
	comp=Z,7.5nm,1.2s						
ILAR	**Eielson Array**	**85.59**	**21**	P	**P**	**07 45 38.4**	**-0.6**
	comp=Z,2.1nm,0.9s,baz=257,slow=5.4,SNR=15						
ILAR				LR	LR	08 18 30.2	
	comp=Z,28nm,21.3s,baz=232,slow=32						
MKAR	**Makanchi Array**	**85.65**	**319**	P	**P**	**07 45 39.4**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=98,slow=6.6,SNR=4.5						
MKAR	**Makanchi Array**	**85.65**	**319**	P	**P**	**07 45 40.7**	**+1.0**
ZALV	**Zalesovo Beam**	**86.58**	**326**	P	**P**	**07 45 43.0**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=104,slow=6.3,SNR=5.4						
ZALV				LR	LR	08 22 54.8	
	comp=Z,18nm,21.9s,baz=69,slow=35						
K27K	**Chicken**	**86.99**	**23**	P	**P**	**07 45 45.9**	**0.0**
K27K				IAmb	IAmb	07 45 48.8	
	comp=Z,7.8nm,1.2s						
EGAK	**Eagle**	**87.70**	**23**	P	**P**	**07 45 50.9**	**+1.7**
BMAR	**Burnt Mountain**	**87.81**	**20**	P	**P**	**07 45 51.8**	**+2.0**
NRIK	**Noril'sk**	**91.32**	**341**	LR	LR	08 25 30.6	
	comp=Z,19nm,21.9s,baz=18,slow=35						
NVAR	**Mina Array Bea**	**92.93**	**52**	P	**P**	**07 46 16.6**	**+2.0**
	comp=Z,1.8nm,0.9s,baz=235,slow=7.5,SNR=9.5						
NVAR	**Mina Array Bea**	**92.93**	**52**	P	**P**	**07 46 16.1**	**+1.5**
NV11	**Mina Array Sit**	**93.05**	**52**	P	**P**	**07 46 15.2**	**+0.1**
NV11				IAmb	IAmb	07 46 17.6	
	comp=Z,3.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**154.07**	**280**	PKPbc	**PKPbc**	**07 53 00.9**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=48,slow=2.1,SNR=1.8						

WEL 24 07:48:27.7±1.1, 38°S±9°, 178°0E±°, h33km, M3.4/10, ML3.7/10, MLv3.4/10, Error ellipse: s-maj=0.0km s-min=0.0km az=28.5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.25**	**268**	P	Pn	07 48 48.0	-0.8
MXZ	**Matakaoa Point**	**1.36**	**279**	P	Pn	07 48 49.3	-1.1
MXZ				S	Sn	07 49 06.3	-0.9
PUZ	**Puketiti**	**1.40**	**258**	P	Pn	07 48 50.7	-0.2
PUZ				S	Sn	07 49 08.8	+0.5
TWGZ	**Tauwhareparae**	**1.64**	**256**	P	Pn	07 48 54.7	+0.5
HAZ	**Te Kaha**	**1.75**	**270**	P	Pn	07 48 56.1	+0.4
HAZ				S	Sn	07 49 17.6	+0.7
TKGZ	**Te Karaka**	**1.81**	**248**	P	Pn	07 48 57.4	+0.8
TKGZ				S	Sn	07 49 19.9	+1.5
RUGZ	**Raukumara Rang**	**1.84**	**264**	P	Pn	07 48 57.6	+0.5
RIGZ	**Rimuhau**	**1.98**	**242**	P	Pn	07 48 59.6	+0.6
RIGZ				S	Sn	07 49 23.8	+1.1
MHGZ	**Mahia Peninsul**	**2.13**	**230**	P	Pn	07 49 01.4	+0.4
KNZ	**Kokohu**	**2.20**	**235**	P	Pn	07 49 01.8	0.0
URZ	**Urewera**	**2.33**	**258**	P	Pn	07 49 03.9	+0.3
URZ				S	Sn	07 49 31.5	+0.4
CTZ	**Chatham Island**	**6.47**	**158**	P	Pn	07 50 03.8	+3.2
CTZ				S	Sn	07 51 10.9	-2.3

IDC 24 07:56:59.8±1.3, 15°48N×121°15E, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.6/38, mbtmp4.2/4, MS3.2/4, Ms1 3.2/4, ms1mx2.6/51, Error ellipse: s-maj=279.3km s-min=22.9km az=68.0

MAN 24 07:57:20.9, 14°97N×120°32E, h16km, mb4.1, ML2.9, MS2.5

ISC 24 07:57:01.5±1.4, 15°59N±0°09×121°3E±0°2, h10km, n11, σ0°84/7, mb4.1/4, MS3.3/3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**1.51**	**192**	Lg	Lg	07 58 01.1	
	48nm,0.3s,baz=339,slow=14,SNR=3.1						
LUBP	**Lubang**	**2.09**	**208**	*e*P	Pg	07 57 46.5	+4.8
LUBP				eS	**Sg**	**07 58 08.2**	**-0.5**
SJMP	**San Jose**	**3.11**	**183**	*e*P	**Pg**	**07 58 02.0**	**+0.8**
SJMP				eS	**Sb**	**07 58 35.2**	**+0.2**
DAV	**Davao City (W)**	**9.46**	**153**	LR	LR	08 03 29.9	
	comp=Z,21nm,20.1s,baz=355,slow=41						
KAPI	**Kappang**	**20.52**	**184**	LR	LR	08 09 41.9	
	comp=Z,32nm,19.3s,baz=29,slow=37						
BATI	**Baumata**	**25.74**	**175**	LR	LR	08 13 38.8	
	comp=Z,81nm,18.2s,baz=220,slow=39						
WRA	**Warramunga Arr**	**37.58**	**160**	P	**P**	**08 04 15.7**	**-0.7**
	0.7nm,0.4s,baz=340,slow=9.4,SNR=8.0						
ASAR	**Alice Springs**	**40.92**	**162**	P	**P**	**08 04 43.5**	**-0.9**
	1.1nm,0.5s,baz=339,slow=6.8,SNR=23						
ARCES	**ARCESS Array B**	**77.53**	**339**	P	**P**	**08 08 58.0**	**+0.7**
	2.9nm,0.8s,baz=76,slow=7.5,SNR=6.6						
FINES	**FINESS Array B**	**78.91**	**331**	P	**P**	**08 09 04.8**	**-0.1**
	3.9nm,1.0s,baz=74,slow=5.9,SNR=5.5						
YBH	**Yreka Blue Hor**	**98.01**	**43**	LR	LR	08 45 29.2	
	comp=Z,91nm,21.6s,baz=96,slow=30						

VIE 24 08:21:00.8±0.4, 50°04N×19°04E, h0km, mb2.3/5, ml2.6/5, ms3.3/1, Error ellipse: s-maj=4.3km s-min=2.2km az=151.0 24 km S of Katowice Suspected Mining induced.

IPEC 24 08:21:01.3±0.2, 50°20N×19°03E, h2km±1km, ML2.6/3, Error ellipse: s-maj=2.5km s-min=1.1km az=168.0

PRU 24 08:21:01.3±0.0, 50°21N×18°98E, h0km

IDC 24 08:21:01.5±1.6, 50°17N×18°94E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.2/52, mbtmp3.5/4, ML2.7/3, Error ellipse: s-maj=29.1km s-min=8.4km az=138.0

ISC 24 08:21:01.1±0.7, 50°18N±0°04×19°00E±0°03, h0km, n31, σ1°00/53, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.51**	**85**	*e*Pg	**Pg**	**08 21 10.8**	**-0.1**
OJC				*e*Sg	**Sg**	**08 21 18.4**	**+0.8**
OKC	**Ostrava-Krasne**	**0.65**	**239**	*e*PG	**Pb**	**08 21 14.8**	**-0.5**
OKC				*e*SG	**Sg**	**08 21 21.7**	**-0.1**
	comp=Z,77nm,0.7s						
MORC	**Moravsky Berou**	**1.02**	**248**	*e*PG	**Pb**	**08 21 21.4**	**-0.3**
MORC				*e*SG	**Sg**	**08 21 34.5**	**+0.5**
MORC	**Moravsky Berou**	**1.02**	**248**	*e*Pg	**Pg**	**08 21 21.3**	**+0.6**
	baz=66						
MORC				*e*Sg	**Sg**	**08 21 34.4**	**+0.5**
	104nm,0.4s,baz=66						
NIE	**Niedzica**	**1.13**	**132**	*e*Pg	**Pg**	**08 21 23.0**	**+0.2**
NIE				*e*Sg	**Sb**	**08 21 39.3**	**+0.5**
KRLC	**Kraliky**	**1.43**	**267**	*e*PG	**Pn**	**08 21 27.8**	**-0.6**
KRLC				*e*SG	**Sg**	**08 21 46.7**	**-0.4**
	comp=Z,73nm,0.6s						
JAVC	**Velka Javorina**	**1.58**	**214**	*e*PN	**Pn**	**08 21 30.8**	**+0.4**
JAVC	**Velka Javorina**	**1.58**	**214**	*e*Pn	**Pn**	**08 21 30.7**	**+0.4**
	baz=33						
DPC	**Dobruska-Polom**	**1.73**	**277**	*e*PG	**Pn**	**08 21 32.2**	**-0.2**
DPC				*e*SG	**Sn**	**08 21 55.7**	**+0.5**
	comp=Z,73nm,0.7s						
VRAC	**Vranov**	**1.79**	**242**	Pg	**Pb**	**08 21 34.5**	**-0.2**
	12nm,0.3s,baz=57,slow=13,SNR=20						
VRAC				Lg	Lg	08 21 56.9	
	8.8nm,0.3s,baz=306,slow=23,SNR=12						
VRAC	**Vranov**	**1.79**	**242**	*e*PN	**Pn**	**08 21 33.8**	**+0.5**
VRAC				*e*SG	**Sg**	**08 21 58.2**	**-0.3**
VRAC	**Vranov**	**1.79**	**242**	*e*Pn	**Pn**	**08 21 33.7**	**+0.5**
	baz=60						
VRAC				*e*Sg	**Sg**	**08 21 58.1**	**-0.4**
	41nm,0.6s,baz=60						
OSTC	**Ostas**	**1.82**	**283**	*e*PG	**Pn**	**08 21 33.8**	**+0.1**
OSTC				*e*SG	**Sg**	**08 22 00.0**	**+0.3**
KSP	**Ksiaz**	**1.85**	**292**	*e*Pb	**Pn**	**08 21 34.1**	**0.0**
KSP				*e*Pg	**Pb**	**08 21 36.5**	**+0.6**
KSP				*e*Sg	**Sg**	**08 22 01.1**	**+0.5**
CHVC	**Chvalec**	**1.93**	**283**	*e*PG	**Pn**	**08 21 35.2**	**0.0**
UPC	**Upice**	**1.94**	**281**	*e*PG	**Pn**	**08 21 35.7**	**+0.3**
UPC				*e*SG	**Sg**	**08 22 04.0**	**+0.5**
	comp=Z,30nm,0.5s						
KRUC	**Moravsky**	**2.03**	**238**	*e*PN	**Pn**	**08 21 37.2**	**+0.7**
KRUC				*e*SG	**Sg**	**08 22 05.7**	**-0.5**
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn	**Pn**	**08 21 37.2**	**+0.7**
	baz=55						
KRUC				*e*Sg	**Sg**	**08 22 05.6**	**-0.6**
	33nm,0.7s,baz=55						
PRU	**Pruhonice**	**2.88**	**268**	*e*PN	**Pn**	**08 21 47.3**	**-0.9**
PRU				*e*PG	**Pb**	**08 21 54.0**	**+0.7**
PRU				*e*SG	**Sb**	**08 22 30.9**	**+1.9**
	comp=Z,16nm,0.8s						
CONA	**Conrad Observa**	**3.05**	**224**	*e*Pn	**Pn**	**08 21 49.7**	**-1.0**
	0.9nm,0.4s						
CONA				*e*Sn	**Sn**	**08 22 26.6**	**-1.3**
	3.0nm,0.4s						
BRG	**Berggiesshubel**	**3.30**	**284**	PG	**Pb**	**08 22 02.4**	**+1.9**
BRG				SG	**Sg**	**08 22 47.9**	**+0.8**
	17nm,0.5s						
KHC	**Kasperske Hory**	**3.68**	**256**	*e*PN	**Pn**	**08 21 58.7**	**-0.5**
KHC				*e*SG	**Sg**	**08 22 58.4**	**-0.7**
	comp=Z,19nm,0.7s						
GERES	**GERESS Array B**	**3.70**	**251**	Pn	**Pn**	**08 22 00.4**	**+0.8**
	0.5nm,0.3s,baz=68,slow=16,SNR=5.1						
GERES				Pg	**Pb**	**08 22 07.2**	**-0.1**
	1.1nm,0.3s,baz=64,slow=18,SNR=8.3						
GERES				Sn	**Sn**	**08 22 43.8**	**-0.2**
	0.9nm,0.3s,baz=66,slow=27,SNR=2.7						
GERES				Lg	Lg	08 22 56.1	
	1.4nm,0.3s,baz=68,slow=27,SNR=4.1						
ARSA	**Arzberg**	**3.73**	**220**	*e*Sg	**Sg**	**08 23 01.9**	**+1.2**
	3.3nm,0.7s						
MOA	**Molln**	**3.89**	**235**	*e*Sg	**Sg**	**08 23 05.7**	**-0.3**
	2.8nm,0.3s						
CLL	**Collm**	**3.98**	**289**	*e*Pg	**Pg**	**08 22 17.0**	**-0.2**
CLL				*e*Sg	**Sg**	**08 23 08.0**	**-0.7**
	comp=Z,14nm,0.7s						
WTTA	**Wattenberg**	**5.68**	**242**	*e*Sg	**Sg**	**08 24 05.6**	**+2.2**
	comp=Z,6.1nm,0.5s						
AKASG	**Malin Array Be**	**6.55**	**81**	Pg	**Pb**	**08 22 58.9**	**+3.1**
	comp=Z,0.9nm,0.3s,baz=270,slow=15,SNR=1.7						
AKASG				Lg	Lg	08 24 21.8	
	comp=Z,0.7nm,0.3s,baz=272,slow=25,SNR=1.6						
FINES	**FINESS Array B**	**11.96**	**17**	Pn	Pn	08 23 48.5	-4.1
	comp=Z,0.1nm,0.3s,baz=196,slow=12,SNR=3.9						
FINES				Sn	Sn	08 25 55.0	-12
	comp=Z,0.2nm,0.3s,baz=207,slow=23,SNR=2.3						
ARCES	**ARCESS Array B**	**19.67**	**7**	Pn	**P**	**08 25 27.6**	**-3.7**
	baz=190,slow=13,SNR=1.9						
SONM	**Songino Array**	**54.15**	**56**	P	**P**	**08 30 27.9**	**0.0**
	comp=Z,0.4nm,0.6s,baz=294,slow=7.1,SNR=3.0						

ANF 24 08:28:30.6±0.3, 35°81N×97°43W, h5km, ML4.4/16, Error ellipse: s-maj=3.5km s-min=2.8km az=171.0

TUL 24 08:28:31±1.8, 35°82N±0°01×97°43W±0°01, h6km±4km, ML3.5, Error ellipse: s-maj=1.8km s-min=1.2km az=204.0

NEIC 24 08:28:31.4±1.4, 35°830N±0°009×97°44W±0°02, h8km±5km, Error ellipse: s-maj=2.3km s-min=0.9km az=63.0

IDC 24 08:28:33.2±1.9, 35°80N×97°82W, h0km, mb3.1/1, mb1 3.5/5, mb1mx3.4/51, mbtmp3.2/5, ML3.1/4, Error ellipse: s-maj=25.5km s-min=13.6km az=102.0

ISC 24 08:28:31.5±0.9, 35°82N±0°02×97°44W±0°02, h11km±7km, n109, σ0°96/143, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCOK	**Bluff Creek, N**	**0.22**	**220**		**Pg**	**08 28 35.7**	**-0.4**
BCOK				Sg	**Sg**	**08 28 39.0**	**-0.2**
OK009	**Oakdale Elemen**	**0.24**	**177**		**Pg**	**08 28 36.0**	**-0.5**
OK025	**Westminster Rd**	**0.26**	**161**	Pg	**Pg**	**08 28 36.3**	**-0.5**
OK025				Sg	**Sg**	**08 28 40.3**	**0.0**
OKCFA	**Oklahoma City**	**0.41**	**181**	Pg	**Pg**	**08 28 39.0**	**-0.6**
OKCFA				Sg	**Sg**	**08 28 45.1**	**+0.2**
OKCSW	**OKLAHOMA CITY**	**0.42**	**180**		**Pg**	**08 28 39.2**	**-0.5**
OKCSW				Sg	**Sg**	**08 28 45.6**	**+0.3**
OK031	**S. Brethren Rd**	**0.50**	**75**		**Pg**	**08 28 41.0**	**-0.3**
OK031				Sg	**Sg**	**08 28 48.2**	**+0.1**
OK030	**Cody Creek RV**	**0.54**	**79**		**Pg**	**08 28 41.7**	**-0.4**
OK030				Sg	**Sg**	**08 28 49.4**	**+0.1**
FNO	**Franklin**	**0.57**	**177**	Pg	**Pg**	**08 28 41.9**	**-0.7**
FNO				Sg	**Sg**	**08 28 49.8**	**-0.2**
QUOK	**Quay**	**0.69**	**59**		**Pg**	**08 28 44.4**	**-0.5**
QUOK				Sg	**Sg**	**08 28 53.5**	**-0.4**
CROK	**Carrier**	**0.81**	**327**	Pg	**Pg**	**08 28 46.6**	**-0.6**
CROK				Sg	**Sg**	**08 28 57.8**	**0.0**
W35A	**Tecumseh**	**0.81**	**145**	Pg	**Pg**	**08 28 46.1**	**-1.1**
W35A				Sg	**Sg**	**08 28 56.8**	**-1.0**
GC02	**Grant County #**	**1.08**	**342**		**Pg**	**08 28 51.4**	**-1.0**
GC02				Sg	**Sg**	**08 29 06.4**	**0.0**
KAN13	**South Haven SW**	**1.19**	**358**		**Pg**	**08 28 53.4**	**-1.0**
KAN13				Sg	**Sg**	**08 29 09.2**	**-0.6**
KAN14	**Manchester OK**	**1.21**	**340**		**Pg**	**08 28 53.6**	**-1.2**
KAN14				Sg	**Sg**	**08 29 10.1**	**-0.3**
KAN09	**Caldwell North**	**1.32**	**354**		**Pn**	**08 28 55.7**	**-0.2**
KAN09					**Sb**	**08 29 13.8**	**+0.5**
T35A	**Sooner Cattle**	**1.32**	**34**		**Pn**	**08 28 55.5**	**-0.5**
T35A					**Sb**	**08 29 13.6**	**+0.2**
KAN05	**Bluff City Nor**	**1.33**	**345**		**Pn**	**08 28 55.8**	**-0.3**
KAN05					**Sb**	**08 29 14.1**	**+0.5**
TUL1	**Leonard**	**1.34**	**86**	P	**Pn**	**08 28 55.2**	**-1.0**
	baz=267,SNR=92						
TUL1				S	**Sb**	**08 29 13.4**	**-0.5**
	baz=267						
TUL1	**Leonard**	**1.34**	**86**		**Pn**	**08 28 55.1**	**-1.0**
TUL1				Sg	**Sb**	**08 29 13.7**	**-0.1**
KAN01	**Argonia South**	**1.35**	**349**		**Pn**	**08 28 56.2**	**-0.2**
KAN01					**Sb**	**08 29 14.4**	**+0.2**
U32A	**Winter Ranch,**	**1.38**	**294**		**Pn**	**08 28 56.3**	**-0.5**
U32A					**Sb**	**08 29 15.8**	**+0.8**
KAN10	**Anthony SW Sta**	**1.40**	**338**	Pn	**Pn**	**08 28 56.8**	**-0.3**
KS20	**Mayfield South**	**1.41**	**356**		**Pn**	**08 28 57.2**	**0.0**
KAN08	**Anthony NE Sta**	**1.47**	**343**		**Pn**	**08 28 58.0**	**+0.1**
KAN12	**Harper NE Stat**	**1.54**	**343**		**Pn**	**08 28 59.3**	**+0.3**
WMOK	**Wichita Mounta**	**1.54**	**226**	P	**Pn**	**08 28 59.0**	**-0.1**
	baz=44,SNR=331						
WMOK				S	**Sn**	**08 29 19.3**	**+0.3**
	baz=44						
WMOK	**Wichita Mounta**	**1.54**	**226**	Pn	**Pn**	**08 28 58.9**	**-0.1**
X37A	**Clayton**	**2.09**	**125**		**Pn**	**08 29 07.3**	**+0.8**
Z35A	**Perchaven, San**	**2.49**	**176**		**Pn**	**08 29 12.7**	**+0.7**
U38A	**Gravette**	**2.55**	**75**	Pn	**Pn**	**08 29 13.7**	**+0.9**
R32A	**Long Quarter,**	**2.79**	**339**	Pn	**Pn**	**08 29 15.8**	**-0.3**
HHAR	**Hobbs**	**2.87**	**80**		**Pn**	**08 29 18.0**	**+0.7**
W39A	**Magazine**	**3.05**	**101**	P	**Pn**	**08 29 20.1**	**+0.5**
	baz=283,SNR=6.1						
W39A				S	**Sn**	**08 29 56.8**	**+0.7**
	baz=283						
W39A	**Magazine**	**3.05**	**101**		**Pn**	**08 29 20.5**	**+0.9**
Z38A	**Mt. Pleasant**	**3.26**	**141**	Pn	**Pn**	**08 29 25.1**	**+2.5**
KSU1	**Kansas State U**	**3.34**	**11**	P	**Pn**	**08 29 23.9**	**+0.2**
	baz=192,SNR=8.8						
KSU1				S	**Sn**	**08 30 03.3**	**0.0**
	baz=192						
KSU1	**Kansas State U**	**3.34**	**11**	Pn	**Pn**	**08 29 24.2**	**+0.6**
MIAR	**Mount Ida**	**3.41**	**111**	P	**Pn**	**08 29 25.3**	**+0.7**
	baz=293,SNR=9.0						
MIAR				S	**Sn**	**08 30 06.1**	**+1.0**
	baz=293						
MIAR	**Mount Ida**	**3.41**	**111**	Pn	**Pn**	**08 29 25.6**	**+1.0**
CBKS	**Cedar Bluff**	**3.50**	**329**	P	**Pn**	**08 29 26.6**	**+0.6**
	baz=148						
CBKS				S	**Sn**	**08 30 08.0**	**+0.6**
	baz=148						
AMTX	**Amarillo**	**3.59**	**256**	P	**Pn**	**08 29 27.7**	**+0.5**
	baz=73						
AMTX				S	**Sn**	**08 30 10.3**	**+0.6**
	baz=73						
AMTX	**Amarillo**	**3.59**	**256**	Pn	**Pn**	**08 29 28.2**	**+0.9**
ABTX	**Abilene, Hawle**	**3.68**	**210**	P	**Pn**	**08 29 28.2**	**-0.2**
	baz=29,SNR=17						
ABTX				S	**Sn**	**08 30 12.2**	**+0.5**
	baz=29						
ABTX	**Abilene, Hawle**	**3.68**	**210**	Pn	**Pn**	**08 29 28.3**	**0.0**
U40A	**Yellville**	**3.75**	**81**	P	**Pn**	**08 29 29.8**	**+0.5**
	baz=263,SNR=6.9						
U40A	**Yellville**	**3.75**	**81**		**Pn**	**08 29 29.6**	**+0.2**
S39A	**Bolivar**	**3.79**	**59**		**Pn**	**08 29 29.4**	**-0.5**
WHTX	**Lake Whitney,**	**3.82**	**180**	P	**Pn**	**08 29 30.8**	**+0.5**
	baz=0.2,SNR=5.4						
WHTX				S	**Sn**	**08 30 15.5**	**+0.2**
	baz=0.2						
WHTX	**Lake Whitney,**	**3.82**	**180**	Pn	**Pn**	**08 29 29.5**	**-0.8**
X40A	**Basin Creek Fa**	**4.00**	**108**	P	**Pn**	**08 29 33.1**	**+0.4**
	baz=291,SNR=11						
X40A	**Basin Creek Fa**	**4.00**	**108**		**Pn**	**08 29 33.8**	**+1.1**
237A	**Washetta, Mont**	**4.05**	**160**	Pn	**Pn**	**08 29 33.1**	**-0.2**
WLAR	**White Oak Lake**	**4.15**	**120**	Pn	**Pn**	**08 29 33.4**	**-1.4**
WHAR	**Wooly Hollow**	**4.23**	**96**	Pn	**Pn**	**08 29 37.3**	**+1.4**
W41B	**Gary Mavity, V**	**4.28**	**97**	P	**Pn**	**08 29 36.9**	**+0.3**
	baz=280,SNR=7.7						
W41B				S	**Sn**	**08 30 27.0**	**+0.4**
	baz=280						
W41B	**Gary Mavity, V**	**4.28**	**97**		**Pn**	**08 29 37.2**	**+0.6**
MGMO	**Mountain Grove**	**4.37**	**71**		**Pn**	**08 29 38.9**	**+1.0**
Z41A	**Richland Creek**	**4.60**	**122**	S	**Sn**	**08 30 33.8**	**-0.7**
	baz=305						
MSTX	**Muleshoe**	**4.76**	**249**	P	**Pn**	**08 29 43.4**	**+0.1**
	baz=65,SNR=6.9						
MSTX	**Muleshoe**	**4.76**	**249**		**Pn**	**08 29 43.9**	**+0.7**
R40A	**Maddies Statio**	**4.81**	**58**		**Pn**	**08 29 44.4**	**+0.5**
P38A	**Dawn**	**4.90**	**38**	Pn	**Pn**	**08 29 46.3**	**+1.2**
435B	**Jarrell**	**5.03**	**181**	S	**Sn**	**08 30 44.8**	**-0.2**
	baz=1.3						
LCAR	**Lake Charles**	**5.10**	**85**	Pn	**Pn**	**08 29 48.7**	**+0.8**
KSCO	**Kaye Shedlock'**	**5.21**	**309**	S	**Sn**	**08 30 48.4**	**-1.3**
	baz=126						
KSCO	**Kaye Shedlock'**	**5.21**	**309**	Pn	**Pn**	**08 29 51.2**	**+1.7**
N35A	**Tabor**	**5.22**	**15**		**Pn**	**08 29 48.7**	**-0.9**
T42A	**Van Buren**	**5.26**	**75**	Pn	**Pn**	**08 29 50.9**	**+0.9**
CCM	**Cathedral Cave**	**5.44**	**64**	P	**Pn**	**08 29 53.1**	**+0.6**
	baz=248						
CCM				S	**Sn**	**08 30 55.5**	**+0.4**
	baz=248						
CCM	**Cathedral Cave**	**5.44**	**64**	Pn	**Pn**	**08 29 50.3**	**-2.3**
HBAR	**Harrisburg**	**5.53**	**91**	Pn	**Pn**	**08 29 53.6**	**-0.1**
BGNE	**Belgrade**	**5.60**	**355**	Pn	**Pn**	**08 29 54.5**	**-0.3**
P40A	**Paris**	**5.65**	**48**	Pn	**Pn**	**08 29 55.5**	**0.0**
JCT	**Junction City**	**5.69**	**201**	P	**Pn**	**08 29 56.0**	**0.0**
	baz=20,SNR=8.3						
J

KURBB					Lg	Lg	08 32 54.7			
	0.0nm,0.3s,baz=49,slow=28,SNR=1.7									
MKAR	**Makanchi Array**	**8.12**	**205**		Pn	Pn	08 31 31.1	**+1.4**		
	0.1nm,0.3s,baz=26,slow=12,SNR=5.9									
MKAR					Sn	Sn	08 33 00.1	**-2.2**		
	0.1nm,0.3s,baz=26,slow=27,SNR=4.0									
MKAR					Lg	Lg	08 33 51.1			
	0.1nm,0.3s,baz=15,slow=34,SNR=1.6									

NNC 24 08:38:39.1±8.1, 54.03N×86.96E, h29km±52km, mb3.7, mpv3.3, 6C-3D, Error ellipse: s-maj=63.3km s-min=42.5km az=176.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KURK	**Kurchatov**	**6.09**	**240**	⇑Pn		Pn	08 40 06.7	-0.4
	1.5nm,0.5s							
KURK				⇑Sn		Sn	08 41 16.0	+0.3
	0.8nm,0.4s							
KURK				⇑Lg		Lg	08 41 51.9	
	4.1nm,0.8s							
KURBB	**Kurchatov Arra**	**6.19**	**240**	⇓Pn		Pn	08 40 07.6	-0.9
	4.6nm,0.6s,baz=54,slow=14							
KURBB				⇑Sn		Sn	08 41 17.9	-0.3
	6.8nm,0.5s							
KURBB				⇑Lg		Lg	08 41 55.5	
	7.6nm,0.7s							
MK31	**Makanchi Array**	**7.83**	**204**	⇓Pn		Pn	08 40 32.9	+1.9
	0.1nm,0.2s,baz=28,slow=14,SNR=22							
MK31				⇓Sn		Sn	08 42 02.3	+3.7
	0.8nm,0.6s,baz=24,slow=25,SNR=3.2							
MK31				⇑Lg		Lg	08 42 47.6	
	1.1nm,0.8s							

IDC 24 08:54:56.0±1.9, 6.97S×149.35E, h0km, mb3.5/2, mb1 3.8/5, mb1mx3.5/45, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=88.9km s-min=26.1km az=133.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**3.25**	**222**	Pn		Pn	08 55 48.5	+0.2
	2.0nm,0.3s,baz=61,slow=7.9,SNR=2.4							
PMG				Sn		Sb	08 56 33.2	-1.6
	3.3nm,0.3s,baz=334,slow=9.5,SNR=7.2							
KRVT	**Keravat (AS076**	**3.75**	**45**	Pn		Pn	08 55 55.5	+0.2
	3.5nm,0.3s,baz=243,slow=6.8,SNR=1.2							
KRVT				Sn		Sn	08 56 34.3	-5.9
	14nm,0.3s,baz=100,slow=20,SNR=8.1							
WRA	**Warramunga Arr**	**19.45**	**227**	P		P	08 59 24.6	+0.2
	0.3nm,0.3s,baz=53,slow=11,SNR=27							
ASAR	**Alice Springs**	**22.26**	**220**	P		P	08 59 54.0	-0.8
	0.3nm,0.5s,baz=51,slow=9.6,SNR=10.0							
FITZ	**Fitzroy Crossi**	**25.61**	**242**	P		P	09 00 28.1	+0.7
	2.0nm,0.6s,baz=67,slow=9.5,SNR=11							
TORD	**Torodi Ar. Bea**	**147.59**	**284**	PKPbc		PKPbc	09 14 42.2	-1.2
	0.6nm,0.6s,baz=69,slow=4.4,SNR=1.7							

*REY **24** 09:03:24.2, 64.68N×17.50W, h4km*
*MOS **24** 09:03:25.9±1.1, 64.66N×17.57W, h8km, mb5.4/58, MS4.9/25, Error ellipse: s-maj=8.5km s-min=5.2km az=102.9*
*IDC **24** 09:03:25.4±0.5, 64.61N×17.76W, h0km, mb4.2/36, mb1 4.3/42, mb1mx4.2/62, mbtmp4.2/42, ML3.4/5, MS5.0/43, Ms1 5.0/43, ms1mx5.0/47, Error ellipse: s-maj=12.6km s-min=9.5km az=20.0*
*BJI **24** 09:03:26.4±0.0, 65.10N×17.97W, h6km, mB5.4/36, mb4.8/40, Ms5.4/38, Ms7 5.2/38*
*BGS **24** 09:03:26.4±2.5, 64.67N×17.56W, h5km, MS5.0, mb5.2(NEIC)*
*NEIC **24** 09:03:28.4±1.9, 64.67N±0.07×17.6W±0.1, h10km±1km, mb5.2/246, Error ellipse: s-maj=11.3km s-min=9.7km az=194.0*
*GCMT **24** 09:03:35.4±0.1, 64.62N±0.01×17.37W±0.01, h12km, MW5.4/148, Moment Tensor Solution. s95,c150; s148,c309; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}=2.10±.02; $M_{\theta\theta}$=1.24±.02; $M_{\phi\phi}$=0.85±.02; $M_{r\theta}$=0.23±.05; $M_{\theta\phi}$=0.15±.02; $M_{\phi r}$=0.15±.05; Best double couple: M_0=1.71700×10^{17} NP1:ϕ_s108.00000°, δ41.00000°, λ-92.00000°. NP2:ϕ_s291.00000°, δ49.00000°, λ-88.00000°. Principal axes: T 1.3130, Plg4.0000°, Azm20.0000°; N 0.8080, Plg1.0000°, Azm110.0000°; P -2.1220, Plg85.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DNK **24** 09:03:38.2±9.7, 65.05N×16.58W, h0km±161km, ML2.9*
*BGR **24** 09:03:49.0±0.0, 63.55N×14.65W, h10km, mb5.3, Ms4.7*

ISC 24 09:03:28.1±0.5, 64.74N±0.03×17.66W±0.03, h8km±2km, n711, s219/673, mb5.2/218, MS5.0/87, 23C-26D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IVON	**Vonarskard**	**0.08**	**211**	P		**Pg**	**09 03 26.7**	**-3.5**
	baz=270							
IDYN	**Dyngjuhals**	**0.14**	**68**	P		**Pg**	**09 03 27.1**	**-3.9**
	baz=26							
IDYN				S		**Sg**	**09 03 29.5**	**-3.6**
	baz=26							
IHAM	**Hamarinn**	**0.27**	**195**	P		Pg	09 03 28.6	-4.8
	baz=216							
IHAM				S		**Sg**	**09 03 32.5**	**-4.5**
	baz=216							
IDJK	**Dyngjujokull**	**0.30**	**142**	P		Pg	09 03 28.6	-5.4
	baz=146							
ISKR	**Skrokkalda**	**0.36**	**240**	P		**Pg**	**09 03 31.8**	**-3.3**
	baz=254							
IKVE	**Kverkfjoll**	**0.43**	**98**	P		Pg	09 03 31.3	-5.1
	baz=89							
IHUS	**Husbondi**	**0.45**	**180**	P		Pg	09 03 31.6	-5.1
	baz=190							
IJOK	**Jokulheimar**	**0.49**	**210**	P		**Pg**	**09 03 33.2**	**-4.3**
	baz=222							
IJOK				S		**Sg**	**09 03 40.0**	**-4.0**
	baz=222							
IASK	**Askja**	**0.53**	**54**	P		Pg	09 03 34.1	-4.3
	baz=43							
IKRE	**Kreppuhraun**	**0.55**	**85**	P		Pg	09 03 33.0	-5.7
	baz=77							
IMKO	**Mokollar**	**0.61**	**67**	P		Pg	09 03 34.6	-5.3
	baz=58							
IIEY	**Innrieyrar**	**0.68**	**197**	P		Pg	09 03 35.9	-5.2
	baz=205							
IKSK	**Karasker**	**0.78**	**138**	P		Pg	09 03 36.0	-6.9
	baz=139							
IVAT	**Vatnsfell**	**0.78**	**225**	P		**Pg**	**09 03 38.9**	**-4.1**
	baz=232							
IKAL	**Kalfafell**	**0.80**	**181**	P		Pg	09 03 37.3	-6.0
	baz=186							
IADA	**Aoalbol**	**0.93**	**72**	P		Pg	09 03 39.8	-6.2
	baz=66							
IMEL	**Melhnausar**	**0.93**	**27**	P		Pg	09 03 41.1	-4.8
	baz=21							
IREN	**Reynihlio**	**0.96**	**19**	P		Pg	09 03 41.9	-4.6
	baz=14							
IKVO	**Krokottuvotn**	**1.03**	**18**	P		Pg	09 03 43.0	-4.9
	baz=14							
ISNB	**Snabyli**	**1.09**	**203**	P		Pg	09 03 43.3	-5.7
	baz=208							
IGRS	**Grimsstaoir**	**1.11**	**35**	P		Pb	09 03 43.8	-5.7
	baz=30							
BORG	**Borgarnes**	**1.57**	**272**	P		**Pn**	**09 03 53.5**	**-2.8**
BORG	**Borgarnes**	**1.57**	**272**			**Pn**	**09 03 53.5**	**-2.8**
SOFL	**Sornfelli, Far**	**5.50**	**114**	*e*P		**Pn**	**09 04 49.1**	**-1.1**
SCO	**Scoresbysund**	**6.00**	**346**	Pn		**Pn**	**09 04 56.6**	**-0.4**
SCO	**Scoresbysund**	**6.00**	**346**	*i* P		**Pn**	**09 04 57.5**	**+0.6**
SCO				*i* S		**Sb**	**09 06 17.8**	**-6.7**
SCO	**Scoresbysund**	**6.00**	**346**	*e*		**Pn**	**09 04 54.1**	**-2.8**
	baz=164,slow=7.9							
SCO				*i* P		**Pn**	**09 04 57.6**	**+0.6**
SCO				*i* S		**Sb**	**09 06 17.8**	**-6.7**
SCO				IAML			09 06 40.7	
	comp=Z,6.4nm,0.5s							
JMIC	**Jan Mayen**	**7.15**	**25**	Pn		**Pn**	**09 05 12.7**	**-0.2**
	baz=41,slow=22,SNR=1.5							
JMIC				Sn		**Sn**	**09 06 32.3**	**-1.8**
	baz=54,slow=16,SNR=1.4							
LEWI	**Lewis, Hebride**	**8.39**	**137**	*e*P		**Pn**	**09 05 27.4**	**-2.4**
WAL1	**Walls**	**8.67**	**114**	*e*P		**Pn**	**09 05 31.0**	**-2.6**
LRW	**Lerwick**	**8.91**	**114**	*e*P		**Pn**	**09 05 35.9**	**-1.0**
LRW					IAMs_20	IAMs_20	09 08 59.7	
	comp=Z,13μm,16.2s							
KAC	**Achnashellach**	**9.39**	**135**	*e*P		**Pn**	**09 05 40.5**	**-3.0**
KPL	**Plockton**	**9.42**	**136**	*e*P		**Pn**	**09 05 40.8**	**-3.1**
KPL					IAMs_20	IAMs_20	09 09 58.7	
	comp=Z,14μm,10.5s							
DBG	**Daneborg**	**9.65**	**356**	*i* P		Pn	09 05 58.7	+12
DBG				*e*P		Pn	09 05 59.2	+12
MDO	**Dochfour**	**9.73**	**133**	*e*P		**Pn**	**09 05 46.5**	**-1.7**
MCD	**Coleburn Disti**	**9.97**	**129**	*e*P		**Pn**	**09 05 50.2**	**-1.3**
LAWE	**Loch Awe, Argy**	**10.41**	**139**	*e*P		**Pn**	**09 05 56.4**	**-1.1**
LAWE					IAMs_20	IAMs_20	09 10 39.0	
	comp=Z,10μm,10.8s							
INVG	**Invergeldie, C**	**10.67**	**135**	*e*P		**Pn**	**09 05 58.2**	**-2.7**
INVG					IAMs_20	IAMs_20	09 10 30.2	
	comp=Z,11μm,11.4s							
EAB	**Aberfoyle**	**10.78**	**136**	*e*P		**Pn**	**09 05 59.8**	**-2.7**
SUMG	**Summit**	**10.84**	**325**	P		**Pn**	**09 06 05.7**	**+2.0**
SUMG	**Summit**	**10.84**	**325**	Pn		**Pn**	**09 06 05.7**	**+2.0**
SUMG	**Summit**	**10.84**	**325**	*i* P		Pn	09 06 16.0	+12
SUMG	**Summit**	**10.84**	**325**	*i* P		Pn	09 06 16.0	+12
PGBU	**Glenifferbraes**	**11.06**	**138**	*e*P		**Pn**	**09 06 04.2**	**-2.2**
PGBU					IAMs_20	IAMs_20	09 10 51.4	
	comp=Z,11μm,12.4s							
NEWG	**New Galloway**	**11.74**	**139**	*e*P		**Pn**	**09 06 14.3**	**-1.3**
NEWG					IAMs_20	IAMs_20	09 11 26.2	
	comp=Z,14μm,12.0s							
EKA	**Eskdalemuir Ar**	**11.86**	**136**	Pn		**Pn**	**09 06 14.8**	**-2.6**
	baz=320,slow=13,SNR=13							
EKA				Sn		**Sn**	**09 08 27.9**	**-1.8**
	baz=328,slow=20,SNR=1.6							
EKA				LR		LR	09 10 28.3	
	comp=Z,6μm,21.2s,baz=320,slow=36							
ESK	**Eskdalemuir**	**11.86**	**136**	*e*P		**Pn**	**09 06 14.2**	**-3.1**
ESK					IAMs_20	IAMs_20	09 11 16.7	
	comp=Z,9μm,11.3s							
ESK	**Eskdalemuir**	**11.86**	**136**	P		**Pn**	**09 06 15.4**	**-1.9**
ESK	**Eskdalemuir**	**11.86**	**136**			**Pn**	**09 06 15.4**	**-1.9**
DAG	**Danmarks Havn**	**12.10**	**359**	*i* P		**Pn**	**09 06 24.2**	**+3.8**
DAG	**Danmarks Havn**	**12.10**	**359**	*i* P		**Pn**	**09 06 24.2**	**+3.8**
DAG	**Danmarks Havn**	**12.10**	**359**	*i* P		**Pn**	**09 06 24.2**	**+3.8**
DSB	**Dublin**	**12.88**	**148**	Pn		**Pn**	**09 06 31.6**	**+0.3**
NC204	**NORSAR Array S**	**13.30**	**92**	Pn		**Pn**	**09 06 34.2**	**-2.8**
NBO00	**NORSAR Array S**	**13.42**	**93**			**Pn**	**09 06 35.7**	**-2.9**
NAO01	**NORSAR Array S**	**13.56**	**94**	Pn		**Pn**	**09 06 39.3**	**-1.2**
NC303	**NORSAR Array S**	**13.59**	**92**	Pn		**Pn**	**09 06 40.3**	**-0.5**
NOA	**NORSAR Array B**	**13.61**	**92**	Pn		Pn	09 06 35.7	-5.5
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.9							
NOA				Sn		**Sn**	**09 09 05.3**	**-7.0**
	baz=308,slow=24,SNR=1.9							
NOA				LR		LR	09 12 15.3	
	comp=Z,3μm,18.1s,baz=300,slow=39							
KONO	**Kongsberg**	**13.63**	**99**	*i* P		**Pn**	**09 06 36.9**	**-4.5**
FOEL	**Foel Wylfa**	**13.99**	**141**	*e*P		**Pn**	**09 06 43.2**	**-3.2**
FOEL					IAMs_20	IAMs_20	09 12 34.5	
	comp=Z,14μm,13.3s							
HFS	**Hagfors**	**15.12**	**93**	Pn		**Pn**	**09 06 58.7**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=295,slow=11,SNR=2.1							
HFS				LR		LR	09 12 43.0	
	comp=Z,3μm,20.0s,baz=288,slow=37							
MUD	**Monsted U'grnd**	**15.46**	**110**	*i* P		P	09 07 17.9	+7.2
MUD	**Monsted U'grnd**	**15.46**	**110**	*i* P		P	09 07 17.9	+7.2
UPNV	**Upernavik**	**15.78**	**317**	*e*P		P	09 07 24.3	+10
KBS	**Kingsbay**	**16.59**	**20**	*i* P		**Pn**	**09 07 20.6**	**0.0**
KBS	**Kingsbay**	**16.59**	**20**	P		**P**	**09 07 24.3**	**+1.1**
SPITS	**Spitsbergen Ar**	**16.83**	**23**	Pn		**Pn**	**09 07 24.2**	**+0.5**
	baz=228,slow=15,SNR=1.4							
SPITS				LR		LR	09 12 24.0	
	comp=Z,7μm,19.6s,baz=230,slow=32							
ARD8	**ARCESS Array S**	**17.12**	**55**	Pn		**Pn**	**09 07 27.7**	**+0.4**
ARD7	**ARCESS Array S**	**17.12**	**55**			**P**	**09 07 29.2**	**+0.1**
ARD9	**ARCESS Array S**	**17.12**	**55**			**Pn**	**09 07 27.9**	**+0.5**
ARC6	**ARCESS Array S**	**17.13**	**55**			**P**	**09 07 28.5**	**-0.6**
ARC7	**ARCESS Array S**	**17.13**	**55**			**P**	**09 07 29.5**	**+0.3**
ARD6	**ARCESS Array S**	**17.13**	**55**			**P**	**09 07 29.1**	**-0.1**
ARB5	**ARCESS Array S**	**17.13**	**55**			**P**	**09 07 29.6**	**+0.5**
ARA3	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 29.4**	**+0.2**
ARB4	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 29.9**	**+0.7**
ARC5	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 30.3**	**+1.2**
ARC5					IAmb	IAmb	09 07 38.4	
	comp=Z,397nm,2.0s							
ARA0	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 29.7**	**+0.5**
ARA1	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 30.1**	**+0.9**
ARB1	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 29.4**	**+0.2**
ARC1	**ARCESS Array S**	**17.13**	**55**	P		**Pn**	**09 07 28.1**	**+0.7**
ARCES	**ARCESS Array B**	**17.13**	**55**	P		**Pn**	**09 07 28.3**	**+0.8**
	baz=270,slow=8.5,SNR=9.9							
ARCES				LR		LR	09 13 04.3	
	comp=Z,6μm,18.1s,baz=275,slow=34							
ARD1	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 29.4**	**+0.2**
ARA2	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 30.1**	**+0.9**
ARB2	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 31.4**	**+2.1**
ARB3	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 31.5**	**+2.3**
ARB3					IAmb	IAmb	09 07 38.4	
	comp=Z,384nm,2.0s							
ARC4	**ARCESS Array S**	**17.13**	**55**	P		**P**	**09 07 30.4**	**+1.2**
ARC4					IAmb	IAmb	09 07 38.5	
	comp=Z,374nm,1.9s							
ARD5	**ARCESS Array S**	**17.14**	**55**	P		**P**	**09 07 31.1**	**+1.9**
ARD5					IAmb	IAmb	09 07 38.5	
	comp=Z,380nm,1.9s							
ARC2	**ARCESS Array S**	**17.14**	**55**	P		**P**	**09 07 31.3**	**+2.0**
ARC2					IAmb	IAmb	09 07 39.6	
	comp=Z,288nm,1.9s							
ARC3	**ARCESS Array S**	**17.14**	**55**	P		**P**	**09 07 31.6**	**+2.3**
ARC3					IAmb	IAmb	09 07 38.5	
	comp=Z,369nm,2.0s							
ARD2	**ARCESS Array S**	**17.14**	**55**	P		**P**	**09 07 32.5**	**+3.3**
ARD4	**ARCESS Array S**	**17.14**	**55**	P		**P**	**09 07 31.1**	**+1.7**
ARD3	**ARCESS Array S**	**17.15**	**55**	P		**P**	**09 07 31.1**	**+1.7**
ARD3					IAmb	IAmb	09 07 39.6	
	comp=Z,298nm,2.0s							
COP	**Copenhagen**	**17.31**	**107**	*i* P		**P**	**09 07 35.4**	**+4.2**
COP	**Copenhagen**	**17.31**	**107**	*i* P		**P**	**09 07 35.4**	**+4.2**
COP	**Copenhagen**	**17.31**	**107**	*i* P		**P**	**09 07 35.5**	**+4.2**
KEV	**Kevo**	**17.64**	**54**	P		**P**	**09 07 35.0**	**+0.3**
KEV					pmax	pmax		
	comp=Z,65nm,1.0s							
KEV	**Kevo**	**17.64**	**54**			**P**	**09 07 35.0**	**+0.3**
BSEG	**Bad Segeberg**	**17.73**	**114**	*e*P		**P**	**09 07 34.8**	**-1.0**
	comp=Z,1μm,2.4s,baz=325,slow=11							
IBBN	**Ibbenburen**	**18.03**	**122**	*e*P		**Pn**	**09 07 37.9**	**-0.8**
	comp=Z,653nm,2.2s,baz=325,slow=11							
UCC	**Uccle**	**18.10**	**130**	P		**Pn**	**09 07 36.1**	**-3.5**
UCC					pmax	pmax		
	comp=Z,101nm,1.4s							
UCC	**Uccle**	**18.10**	**130**	P		**Pn**	**09 07 36.1**	**-3.5**
SNF	**Seneffe**	**18.32**	**131**	Pn		**Pn**	**09 07 39.1**	**-3.2**
SNF	**Seneffe**	**18.32**	**131**	P		**P**	**09 07 48.6**	**+6.1**
BEBN	**Eben Emael**	**18.54**	**128**	x		x	09 07 48.8	
BUG	**Bochum--Univer**	**18.56**	**124**	*e*P		**P**	**09 07 44.1**	**-0.9**
	comp=Z,286nm,2.0s,baz=325,slow=11							
BMRD	**Mambach**	**18.66**	**130**	Pn		**P**	**09 07 44.5**	**-1.7**
	comp=Z,66nm,2.2s							
BSTI	**Sart Tilman**	**18.69**	**128**	P		**Pn**	**09 07 51.0**	**+4.3**
BGES	**Gesves**	**18.70**	**129**	Pn		**P**	**09 07 45.2**	**-1.3**
BGES	**Gesves**	**18.70**	**129**	P		**Pn**	**09 07 52.5**	**+5.6**
BSD	**Bornholm Skovb**	**18.73**	**106**	*i* P		**Pn**	**09 07 52.4**	**+5.2**
BSD	**Bornholm Skovb**	**18.73**	**106**	*i* P		**Pn**	**09 07 52.4**	**+5.2**
BSD	**Bornholm Skovb**	**18.73**	**106**	*i* P		**Pn**	**09 07 52.5**	**+5.2**
BCLA	**Clavier**	**18.74**	**129**	Pn		**P**	**09 07 44.1**	**-2.8**
BCLA	**Clavier**	**18.74**	**129**	P		Pn	**09 07 52.1**	**+4.7**
BCLA						pP	**09 07 55.7**	**+5.1**
NRDL	**Niedersach Rie**	**18.76**	**118**	*e*P		**P**	**09 07 45.8**	**-1.3**
	comp=Z,881nm,2.7s,baz=325,slow=11							
DOU	**Dourbes**	**18.78**	**131**	x		x	09 07 50.1	
MEM	**Membach**	**18.81**	**128**	Pn		**P**	**09 07 45.9**	**-1.9**
MEM	**Membach**	**18.81**	**128**	P		**Pn**	**09 07 53.7**	**+5.4**
	comp=Z,65nm,2.0s							
BTNL	**Ternell**	**18.88**	**127**	P		**Pn**	**09 07 54.5**	**+5.4**
	comp=Z,145nm,2.1s							
RCHB	**Rochefort**	**18.94**	**130**	x		x	09 07 53.3	
BHOU	**Houvegnez**	**19.03**	**128**	Pn		**P**	**09 07 49.5**	**-0.7**
BHOU	**Houvegnez**	**19.03**	**128**	P		**Pn**	**09 07 56.0**	**+5.1**
AHRW	**Bad Neuenahr-A**	**19.24**	**126**	*e*P		**Pn**	**09 07 52.8**	**-0.6**
	comp=Z,361nm,1.7s,baz=325,slow=11							
ASSE	**Asse, Remlinge**	**19.26**	**117**	*e*P		**P**	**09 07 51.4**	**-1.2**
	comp=Z,764nm,2.6s,baz=325,slow=11							
CLZ	**Clausthal**	**19.37**	**118**	*e*P		**P**	**09 07 53.2**	**-0.8**
	comp=Z,321nm,1.9s,baz=325,slow=11							
WLF	**Walferdange**	**19.67**	**129**	Pn		**P**	**09 07 56.0**	**-1.2**
WLF	**Walferdange**	**19.67**	**129**	P		**P**	**09 07 54.3**	**-2.9**
WLF					pmax	pmax		
	comp=Z,161nm,1.6s							
WLF	**Walferdange**	**19.67**	**129**			**P**	**09 07 54.2**	**-2.9**
WLF					IAmb	IAmb	09 08 08.9	
	comp=Z,162nm,1.6s							
TULEG	**Thule**	**19.75**	**327**	*i* P		Pn	09 08 10.0	+11
FINES	**FINESS Array B**	**19.76**	**79**	P		**P**	**09 07 57.6**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=316,slow=13,SNR=5.4							
FINES					LR	LR	09 15 14.3	
	comp=Z,3μm,20.0s,baz=301,slow=36							
FINES	**FINESS Array B**	**19.76**	**79**	P		**P**	**09 07 55.4**	**-2.6**
FIA1	**FINESS Array S**	**19.76**	**79**	P		**P**	**09 07 57.0**	**-1.1**
FIA1					IAmb	IAmb	09 08 10.7	
	comp=Z,202nm,1.4s							
CLF	**Chambon-Foret**	**19.90**	**138**	P		**P**	**09 07 56.9**	**-2.8**
CLF					IAmb	IAmb	09 08 11.2	
	comp=Z,243nm,1.4s							
UBBA	**Unterbreizbach**	**20.06**	**121**	*e*P		**P**	**09 08 00.7**	**-0.6**
	comp=Z,372nm,2.0s,baz=325,slow=11							
RUE	**Ruedersdorf**	**20.20**	**112**	*e*P		Pn	09 08 03.6	-1.1
APA	**Apatity**	**20.35**	**59**	⇓*i*P		**P**	**09 08 05.4**	**+0.9**
APA					pmax	pmax		
	comp=Z,27nm,1.0s							
APA					MLR	MLR		
	comp=Z,6μm,17.0s							
NEUB	**Neuenburg**	**20.41**	**118**	*e*P		**P**	**09 08 04.4**	**-0.8**
	comp=Z,546nm,1.6s,baz=325,slow=11							
LVZ	**Lovozero**	**20.71**	**58**	P		**P**	**09 08 07.9**	**-0.5**
LVZ					pmax	pmax		
	comp=Z,214nm,1.5s							
LVZ	**Lovozero**	**20.71**	**58**	P		**P**	**09 08 07.9**	**-0.5**
LVZ					IAmb	IAmb	09 08 32.6	
	comp=Z,214nm,1.5s							
CLL	**Collm**	**20.80**	**116**	*i* P		**P**	**09 08 08.5**	**-0.9**
	comp=Z,119nm,1.7s							
CLL					*e*Pmax		09 08 13.0	
CLL					*e*pP	**sP**	**09 08 14.0**	**+0.9**
CLL					*i* sP	**pP**	**09 08 17.8**	**+5.8**
	comp=Z,186nm,1.6s							
CLL					*e*S	Sn	09 12 12.0	+5.5
CLL					Lmax		09 19 00.0	
CLL	**Collm**	**20.80**	**116**	*i* P		**P**	**09 08 08.5**	**-0.9**
CLL					*e*		09 08 14.0	
CLL					*e*S	Sn	09 12 12.0	+5.5
CLL					pmax	pmax		
	comp=Z,119nm,1.7s							
CLL	**Collm**	**20.80**	**116**	*e*P		**P**	**09 08 08.4**	**-1.1**
	comp=Z,186nm,1.6s,baz=325,slow=11							
CLL	**Collm**	**20.80**	**116**	P		**P**	**09 08 08.6**	**-0.8**
CLL					IAmb	IAmb	09 08 19.4	
	comp=Z,210nm,1.7s							
MOX	**Moxa**	**20.80**	**119**	*e*P		**P**	**09 08 08.8**	**-0.7**
	comp=Z,260nm,1.7s,baz=325,slow=11							
MOX					*e*L	L	09 16 26.0	
	comp=Z,4μm,21.5s							
GKP	**Gorka Klasztor**	**21.00**	**107**	*e*P		**P**	**09 08 12.8**	**+1.2**
PBUR	**Paburge**	**21.07**	**96**	*e*P		**P**	**09 08 11.9**	**-0.5**
PLN	**Plauen**	**21.13**	**118**	*e*P		**P**	**09 08 12.1**	**-1.0**
	comp=Z,440nm,2.0s,baz=325,slow=11							
FBE	**Freiberg**	**21.24**	**116**	*e*P		**P**	**09 08 12.8**	**-1.4**
	comp=Z,570nm,2.0s,baz=325,slow=11							
ECH	**Echery**	**21.25**	**129**	P		**P**	**09 08 12.4**	**-2.0**
ECH					pmax	pmax		
	comp=Z,182nm,1.8s							
ECH	**Echery**	**21.25**	**129**	P		**P**	**09 08 12.4**	**-2.0**
ECH					IAmb	IAmb	09 08 22.9	
	comp=Z,182nm,1.8s							
GUNZ	**Gunzen**	**21.30**	**118**	*e*P		**P**	**09 08 13.5**	**-1.4**
	comp=Z,585nm,2.3s,baz=325,slow=11							
TANN	**Tannenbergstha**	**21.30**	**118**	*e*P		**P**	**09 08 13.9**	**-1.0**
	comp=Z,1μm,2.4s,baz=325,slow=11							
WERN	**Wernitzgruen**	**21.38**	**118**	*e*P		**P**	**09 08 14.7**	**-1.1**
	comp=Z,193nm,1.5s,baz=325,slow=11							
GRA1	**Grafenberg Arr**	**21.43**	**121**	P		**P**	**09 08 14.6**	**-1.7**
GRA1					IAmb	IAmb	09 08 25.8	
	comp=Z,251nm,1.9s							
GRF	**Grafenberg Arr**	**21.43**	**121**	P		**P**	**09 08 14.6**	**-1.7**
GRF					pmax	pmax		
	comp=Z,251nm,1.9s							
GRF	**Grafenberg Arr**	**21.43**	**121**	*e*P		**P**	**

DPC Dobruska-Polom 22.85 113 *e*P **P** **09 08 30.0 -1.5**
DPC *e*S Sn 09 12 47.3 -8.5
DPC AMS AMS 09 20 10.0
comp=Z,2µm,12.6s
DPC Dobruska-Polom 22.85 113 *e*P **P** **09 08 30.5 -1.1**
comp=Z,508nm,1.5s,baz=325,slow=11
SENIN Lac Senin/Sane 22.93 131 P **P** **09 08 32.2 -0.3**
SENIN IAmb IAmb 09 09 02.5
comp=Z,138nm,1.5s
SUW Suwalki 22.96 98 *e*P **P** **09 08 33.1 +0.6**
SUW Suwalki 22.96 98 P **P** **09 08 31.0 -1.5**
SUW pmax pmax
comp=Z,183nm,1.2s
SUW Suwalki 22.96 98 P **P** **09 08 31.0 -1.5**
DAVA Damuels 22.98 126 *e*P **P** **09 08 33.5 +0.5**
comp=Z,50nm,1.8s
GEC2 GERESS Array S 23.05 119 P **P** **09 08 33.9 +0.3**
GEC2 IAmb IAmb 09 08 41.8
comp=Z,179nm,1.7s
GERES GERESS Array B 23.05 119 P **P** **09 08 32.1 -1.6**
comp=Z,3.5nm,0.9s,baz=332,slow=10,SNR=8.5
GERES LR LR 09 18 26.8
comp=Z,4µm,19.0s,baz=331,slow=39
SSB Saint Sauveur 23.05 137 P **P** **09 08 31.9 -1.7**
SSB pmax pmax
comp=Z,208nm,1.7s
SSB Saint Sauveur 23.05 137 P **P** **09 08 31.9 -1.7**
RETA Reutte 23.12 125 *e*P **P** **09 08 35.2 +0.9**
comp=Z,84nm,1.9s
ISAL Salakas 23.17 93 *e*P **P** **09 08 35.0 +0.4**
KRLC Kraliky 23.25 113 *e*P **P** **09 08 41.6 +6.0**
KRLC MLR MLR
comp=Z,3µm,12.6s
KRLC Kraliky 23.25 113 *e*P **P** **09 08 41.6 +6.0**
KRLC *e*S **S** **09 12 53.9 +6.1**
KRLC AMS AMS 09 21 20.0
comp=Z,3µm,12.6s
IIGN Ignalina 23.35 93 *e*P **P** **09 08 36.7 +0.1**
MOTA Moosalm 23.36 124 *i* P **P** **09 08 36.3 -0.6**
comp=Z,100nm,2.0s,SNR=19
TREC Trest 23.37 116 AMS AMS 09 20 20.0
comp=Z,3µm,11.5s
TMCR Tamitsa 23.38 66 *e*P **P** **09 08 34.2 -2.5**
TMCR *e*S **S** **09 12 48.5 -1.0**
TMCR pmax pmax
comp=Z,126nm,1.2s
DAVOX Davos/Dischmat 23.42 127 P **P** **09 08 35.5 -1.9**
comp=Z,3.6nm,0.9s,baz=343,slow=9.9,SNR=6.7
DAVOX LR LR 09 18 23.7
comp=Z,2µm,19.2s,baz=318,slow=38
PGAV Gavieira, Arco 23.44 162 *e*P **P** **09 08 41.5 +3.8**
PGAV *e*S Sn 09 13 00.5 -10
PGAV *e*LR LR 09 14 54.5
comp=Z,6µm,22.0s
SQTA Sankt Quirin 23.50 124 *e*P **P** **09 08 37.9 -0.3**
comp=Z,65nm,1.9s
FETA Feichten 23.50 125 *e*P **P** **09 08 40.0 +1.7**
comp=Z,36nm,1.9s
TUE Stuetta 23.51 128 P **P** **09 08 38.2 -0.2**
BEL Belsk 23.53 105 *e*P **P** **09 08 38.1 -0.2**
WATA Walderalm 23.54 124 *e*P **P** **09 08 37.5 -1.1**
comp=Z,41nm,1.5s
EUNU Eureka 23.57 336 P **P** **09 08 39.1 +0.5**
EUNU IAmb IAmb 09 08 52.9
comp=Z,121nm,1.4s
IDID Didziasalis 23.60 92 *e*P **P** **09 08 39.1 +0.2**
WTTA Wattenberg 23.62 124 *i* P **P** **09 08 39.3 -0.2**
comp=Z,80nm,1.6s,SNR=12
RJOB Jochberg 23.64 121 *e*P **P** **09 08 37.7 -1.8**
comp=Z,159nm,2.0s,baz=325,slow=11
PCAB Cabril 23.73 162 *e*P **P** **09 08 44.6 +4.2**
comp=Z,74nm,2.0s
VRAC Vranov 23.79 114 P **P** **09 08 39.1 -1.8**
comp=Z,4.7nm,0.7s,baz=327,slow=11,SNR=13
VRAC LR LR 09 19 11.3
comp=Z,4µm,18.5s,baz=326,slow=40
VRAC Vranov 23.79 114 ⇑P **P** **09 08 46.9 +6.0**
VRAC Vranov 23.79 114 *e*P **P** **09 08 40.0 -0.9**
VRAC *e*S Sn 09 13 07.6 -10
MORC Moravsky Berou 23.79 112 ⇓P **P** **09 08 40.5 -0.4**
MORC Moravsky Berou 23.79 112 *e*P **P** **09 08 39.7 -1.2**
MORC *e*S Sn 09 13 06.8 -11
MORC Moravsky Berou 23.79 112 ⇓P **P** **09 08 40.5 -0.4**
MORC Moravsky Berou 23.79 112 *e*P **P** **09 08 39.8 -1.2**
comp=Z,1µm,1.9s,baz=325,slow=11
PBRG Braganca 23.82 159 *e*P **P** **09 08 44.6 +3.3**
comp=Z,125nm,1.7s
PBRG *e*S **S** **09 13 05.6 +8.6**
NACGM Naroch 23.89 93 *e*P **P** **09 08 40.0 -1.8**
NACGM *e*S **S** **09 12 56.0 -1.9**
NACGM *e*SS **SnSn** **09 13 36.0 -0.5**
NACGM *e*LQ LQ 09 15 36.0
NACGM *e*LR LR 09 17 12.0
NACGM LRM MLR 09 19 48.0
comp=Z,12nm,14.0s
BNI Bardonecchia 23.90 134 P **P** **09 08 41.4 -0.8**
BNI pmax pmax
comp=Z,83nm,1.5s
BNI Bardonecchia 23.90 134 P **P** **09 08 41.4 -0.8**
BNI IAmb IAmb 09 09 23.0
comp=Z,84nm,1.5s
KRUC Moravsky 23.91 115 *e*P **P** **09 08 40.6 -1.4**
KRUC *e*S Sn 09 13 09.3 -12
OKC Ostrava-Krasne 23.98 111 *e*P **P** **09 08 40.5 -2.3**
comp=Z,111nm,1.8s,baz=325,slow=11
MOA Molln 24.09 119 *e*P **P** **09 08 42.3 -1.5**
comp=Z,56nm,1.9s
POLO Lamas de Olo 24.09 162 *e*P **P** **09 08 46.3 +2.4**
POLO *e*S S 09 13 12.1 +11
OJC Ojcow 24.35 109 *e*P **P** **09 08 45.1 -1.0**
OJC *e*S S 09 13 16.8 +11
OJC Ojcow 24.35 109 P **P** **09 08 44.9 -1.2**
OJC pmax pmax
comp=Z,102nm,1.5s
OJC Ojcow 24.35 109 *e*P **P** **09 08 44.4 -1.7**
comp=Z,337nm,2.4s,baz=325,slow=11
OJC Ojcow 24.35 109 P **P** **09 08 44.9 -1.2**
OJC IAmb IAmb 09 09 21.4
comp=Z,102nm,1.5s
ABTA Abfaltersbach 24.37 123 *i* P **P** **09 08 47.9 +1.4**
comp=Z,36nm,1.6s,SNR=10
KBA Koelnbreinsper 24.39 122 *e*P **P** **09 08 47.9 +1.2**
comp=Z,38nm,1.7s
MVO Moncorvo 24.40 160 *e*P **P** **09 08 51.4 +4.7**
comp=Z,97nm,2.4s
MVO *e*S S 09 13 17.4 +11
MVO *e*LR LR 09 15 25.7
comp=Z,4µm,18.0s
JAVC Velka Javorina 24.57 113 *e*P **P** **09 08 48.0 -0.2**
JAVC *e*S S 09 13 27.6 +19
CONA Conrad Observa 24.63 117 *e*P **P** **09 08 48.5 -0.2**
comp=Z,22nm,1.1s
MICGM Minsk 24.63 93⇑ *e*P **P** **09 08 48.0 -0.6**
MICGM PM 09 09 00.0
comp=Z,0.8nm,1.0s
MICGM *e*PP **PnPn** **09 09 23.0 +3.3**
MICGM *e*PPP PPP 09 09 34.0
MICGM *e*S **S** **09 13 11.0 +1.2**
MICGM *e*LR LR 09 17 16.0
MICGM LRM MLR 09 20 34.0
comp=Z,5.1nm,14.0s
MICGM LRM MLR 09 20 44.0
comp=E,3.8nm,14.0s
MNK Minsk 24.63 93⇑ *e*P **P** **09 08 48.0 -0.6**
MNK *e* 09 09 23.0
MNK *e* 09 09 34.0
MNK *e*S **S** **09 13 11.0 +1.2**
MNK pmax pmax
comp=Z,750nm,1.0s
MNK MLR MLR
comp=Z,6µm,14.0s
MNK MLR MLR
comp=E,4µm,14.0s
SALO Salr 24.65 127 P **P** **09 08 47.9 -1.1**
CTI Castel Tesino 24.67 125 P **P** **09 08 48.9 -0.3**
CTI pmax pmax
comp=Z,146nm,1.7s
CTI Castel Tesino 24.67 125 P **P** **09 08 48.9 -0.3**
CTI IAmb IAmb 09 09 39.0
comp=Z,146nm,1.7s
ZOU Zoufplan 24.70 123 P **P** **09 08 49.3 -0.3**
CIMO Cimolais 24.72 124 P **P** **09 08 49.2 -0.3**
PVIS Viseu 24.72 162 *e*P **P** **09 08 56.0 +6.4**
comp=Z,92nm,1.7s
STAL STALIGIAL 24.86 123 P **P** **09 08 50.5 -0.3**

MYKA Terra Mystica 24.88 122 *e*P **P** **09 08 55.0 +3.9**
comp=Z,52nm,1.7s
PRED Cave del Predi 25.01 122 P **P** **09 08 51.5 -0.8**
ARSA Arzberg 25.06 118 *e*P **P** **09 08 54.8 +2.2**
comp=Z,27nm,1.3s
MTE Manteigas 25.08 162 *e*P **P** **09 08 53.9 +1.0**
comp=Z,97nm,1.8s
MTE *e*S S 09 13 37.6 +20
MTE *e*LR LR 09 15 42.1
comp=Z,6µm,20.0s
COI Coimbra 25.16 163 P **P** **09 08 52.9 -0.5**
COI pmax pmax
comp=Z,71nm,1.2s
COI Coimbra 25.16 163 *e*S S 09 13 36.3 +18
COI Coimbra 25.16 163 P **P** **09 08 52.9 -0.5**
COI IAmb IAmb 09 09 01.5
comp=Z,70nm,1.1s
NIE Niedzica 25.18 109 *e*P **P** **09 08 53.7 0.0**
NIE *e*S **S** **09 13 26.8 +8.0**
CADS Cadrg 25.26 122 *e*P **P** **09 08 55.4 +1.0**
TEOL Teolo 25.27 126 P **P** **09 08 53.0 -1.5**
TEOL IAmb IAmb 09 09 21.9
comp=Z,119nm,1.8s
PCAS Casmilo, Conde 25.30 163 *e*P **P** **09 08 59.6 +4.8**
comp=Z,162nm,1.7s
PCAS *e*S S 09 13 37.3 +17
OBKA Obir 25.32 121 *e*P **P** **09 08 56.8 +1.8**
comp=Z,25nm,1.4s
SOKA Soboth 25.35 120 *i* P **P** **09 08 54.1 -1.2**
comp=Z,37nm,1.5s,SNR=13
PERS Pernice 25.42 120 *e*P **P** **09 08 55.0 -0.9**
KLMR Klimovskoe 25.65 72 *e*P **P** **09 08 54.7 -3.0**
KLMR *e*S **S** **09 13 22.6 -3.2**
KLMR pmax pmax
comp=Z,206nm,1.4s
KLMR MLR MLR
comp=Z,1µm,13.0s
KLMR Klimovskoe 25.65 72 *e*P **P** **09 08 54.7 -3.0**
KLMR AMP 09 09 07.8
comp=Z,206nm,1.4s
KLMR *e*S **S** **09 13 22.7 -3.1**
KLMR *e*S **S** **09 13 22.7 -3.1**
KLMR LQ LQ 09 16 12.7
KLMR LQ LQ 09 16 12.7
KLMR LR LR 09 17 10.2
KLMR AMP 09 18 43.0
comp=Z,1µm,13.3s
GROS Grobnik 25.71 119 *e*P **P** **09 08 57.4 -1.1**
PSBE So Bento 25.79 164 *e*S S 09 13 49.0 +20
UCM Universidad Co 25.87 154 *e*P **P** **09 09 00.1 +0.1**
UCM *e*S S 09 13 45.5 +16
VLC Villacollemand 25.89 129 P **P** **09 09 00.3 +0.2**
ZCCA Zocca 25.92 128 P **P** **09 08 59.1 -1.3**
SCHQ Schefferville 25.97 271 P **P** **09 08 59.0 -1.8**
comp=Z,8.5nm,0.7s,baz=37,slow=8.2,SNR=7.3
SCHQ LR LR 09 18 26.3
comp=Z,3µm,18.8s,baz=73,slow=35
SCHQ Schefferville 25.97 271 P **P** **09 09 02.3 +1.6**
KWP Kalwaria Pacla 26.00 106 *e*P **P** **09 09 01.2 +0.2**
KWP Kalwaria Pacla 26.00 106 P **P** **09 09 01.2 +0.2**
KWP pmax pmax
comp=Z,453nm,1.7s
KWP Kalwaria Pacla 26.00 106 P **P** **09 09 01.2 +0.2**
PMRV Marv??o 26.06 162 *e*P P 09 09 08.2 +6.5
comp=Z,126nm,1.8s
PMRV *e*S S 09 13 49.7 +17
PMRV *e*LR LR 09 16 02.5
comp=Z,6µm,20.0s
PSZ Piszkesteto 26.21 112 ⇑P **P** **09 09 05.5 +2.5**
PSZ Piszkesteto 26.21 112 P **P** **09 09 02.4 -0.7**
PSZ pmax pmax
comp=Z,139nm,1.5s
PSZ Piszkesteto 26.21 112 P **P** **09 09 02.4 -0.7**
PMAFR Mafra 26.29 165 *e*S **S** **09 13 39.2 +2.8**
PMTG Montargil 26.30 163 *e*P **P** **09 09 08.4 +4.5**
comp=Z,101nm,1.8s
PMTG *e*S S 09 13 51.1 +15
ESBB Sonseca Array 26.35 156 P **P** **09 09 03.4 -1.0**
ESDC Sonseca Array 26.35 156 P **P** **09 09 02.2 -2.1**
comp=Z,1.9nm,0.8s,baz=346,slow=8.4,SNR=7.2
ESDC LR LR 09 19 35.6
comp=Z,5µm,18.0s,baz=345,slow=37
ESDC Sonseca Array 26.35 156 P **P** **09 09 04.1 -0.2**
RES Resolute Bay 26.36 324 LR LR 09 19 52.9
comp=Z,3µm,18.7s,baz=77,slow=37
LVV L'vov 26.40 104 *e*P **P** **09 09 03.7 -1.0**
LVV *e*S **S** **09 13 32.4 -5.6**
LVV pmax pmax
comp=Z,320nm,1.4s
LVV smax smax
comp=E,1µm,8.0s
LVV smax smax
comp=N,2µm,7.0s
LVV MLR MLR
comp=N,2µm,14.0s
LVV MLR MLR
comp=E,2µm,14.0s
LVV MLR MLR
comp=Z,2µm,14.0s
PAB San Pablo 26.41 156 P **P** **09 09 04.8 -0.1**
PAB pmax pmax
comp=Z,128nm,1.9s
PAB San Pablo 26.41 156 P **P** **09 09 04.8 -0.1**
PAB IAmb IAmb 09 09 15.3
comp=Z,128nm,1.9s
LIS Lisbon 26.54 165 *e*P **P** **09 09 08.2 +2.2**
LIS *e*S **S** **09 13 44.1 +3.8**
LIS AMS AMS 09 18 26.9
comp=Z,5µm,25.5s
LIS Lisbon 26.54 165 *e*P **P** **09 09 08.2 +2.2**
LIS *e*S **S** **09 13 44.1 +3.8**
UZH Uzhgorod 26.61 108 *e*P **P** **09 09 05.1 -1.5**
UZH *e* 09 09 08.3
UZH *i* 09 09 10.6
UZH *e* 09 09 43.9
UZH *e*S **S** **09 13 34.2 -7.0**
UZH MLR MLR
comp=N,700nm,14.0s
UZH MLR MLR
comp=E,900nm,14.0s
UZH MLR MLR
comp=Z,300nm,14.0s
OSSC Osservatorio P 26.74 129 P **P** **09 09 07.8 0.0**
OSSC IAmb IAmb 09 09 51.3
comp=Z,116nm,1.6s
EVO Evora 26.86 163 *e*P **P** **09 09 12.3 +3.4**
EVO *e*S S 09 13 55.6 +10
PNCL Nicolau / Gran 27.21 164 *e*S S 09 14 08.7 +18
MURB Monte Urbino 27.40 127 P **P** **09 09 13.3 -0.5**
MURB IAmb IAmb 09 09 33.1
comp=Z,72nm,1.2s
LATE Laterza 27.74 129 P **P** **09 09 17.6 +0.8**
PCVE Castro Verde 27.74 163 *e*S S 09 14 14.3 +15
AKASG Malin Array Be 27.92 98 P **P** **09 09 16.3 -2.0**
comp=Z,2.6nm,0.8s,baz=324,slow=9.5,SNR=12
AKASG LR LR 09 20 09.0
comp=Z,2µm,21.0s,baz=315,slow=36
AKASG Malin Array Be 27.92 98 P **P** **09 09 18.7 +0.4**
AKASG pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 27.92 98 P **P** **09 09 18.6 +0.4**
AKBB Malin Array Si 27.92 98 P **P** **09 09 16.7 -1.6**
AKBB pmax pmax
comp=Z,50nm,1.4s
AKBB Malin Array Si 27.92 98 P **P** **09 09 16.7 -1.6**
AKBB IAmb IAmb 09 09 35.3
comp=Z,50nm,1.4s
OBN Obninsk 27.94 84 P **P** **09 09 17.4 -1.0**
comp=Z,6.2nm,0.3s,baz=47,slow=3.5,SNR=6.4
OBN LR LR 09 19 59.9
comp=Z,320nm,20.0s,baz=330,slow=36
OBN Obninsk 27.94 84 *i* P **P** **09 09 17.9 -0.5**
OBN *i* 09 10 07.2
OBN *i* 09 12 36.7
OBN *i* S **S** **09 14 09.7 +7.6**
OBN pmax pmax
comp=Z,62nm,1.3s
OBN MLR MLR
comp=Z,1µm,16.0s
OBN Obninsk 27.94 84 P **P** **09 09 17.6 -0.8**
MAHO Mahon 27.96 142 *e*P **P** **09 09 23.7 +5.0**
MAHO *e*S S 09 14 12.4 +10
MOS Moscow 27.98 82 *e*P P 09 09 25.9 +7.1
MOS *e* 09 10 18.2
MOS pmax pmax
comp=Z,99nm,1.7s
MOS MLR MLR
comp=Z,2µm,15.0s
NRCA Norcia 27.99 127 P **P** **09 09 18.1 -0.9**
NRCA IAmb IAmb 09 09 32.4
comp=Z,44nm,1.4s
MORF Marmelete 27.99 165 *e*P **P** **09 09 21.2 +2.1**
MORF *e*S **S** **09 14 07.0 +3.7**
MORF AMS AMS 09 19 00.1
comp=Z,4µm,22.0s
MORF Marmelete 27.99 165 *e*P **P** **09 09 21.2 +2.1**
MORF *e*S **S** **09 14 07.0 +3.7**
MORF Marmelete 27.99 165 *e*S S 09 14 19.0 +16
PVAQ Vaqueiros 28.01 163 *e*S S 09 14 19.2 +16
PVAQ *e*LR LR 09 17 07.5
comp=Z,5µm,22.0s
PBDV Barranco-do-Ve 28.14 163 *e*S S 09 14 23.1 +18
PFVI Vila Bisbo 28.14 165 *e*S S 09 14 24.2 +19
SIRR Siria 28.25 112 ⇓P **P** **09 09 23.4 +2.1**
AQU L'Aquila 28.51 127 P **P** **09 09 24.3 +0.6**
AQU pmax pmax
comp=Z,37nm,1.2s
AQU L'Aquila 28.51 127 P **P** **09 09 24.3 +0.6**
BUR08 Bucovina Ar. S 28.58 106 P **P** **09 09 22.7 -1.7**
BUR08 IAmb IAmb 09 09 43.2
comp=Z,73nm,1.7s
BURAR Bucovina Array 28.61 106 ⇑P P 09 09 29.5 +4.9
BURAR Bucovina Array 28.61 106 ⇑P **P** **09 09 29.5 +4.9**
BURAR Bucovina Array 28.61 106 P **P** **09 09 24.7 +0.1**
BZS Buzias 28.77 113 ⇑P **P** **09 09 29.7 +3.8**
BZS Buzias 28.77 113 ⇑P **P** **09 09 29.7 +3.8**
CART Cartagena 28.93 152 *e*P **P** **09 09 31.2 +3.8**
CART *e*S S 09 14 34.7 +17
EMAL Malaga-Limoner 29.11 158 *e*P P 09 09 33.6 +4.7
EMAL *e*S S 09 14 36.2 +15
SFS San Fernando 29.13 161 *e*P **P** **09 09 32.8 +3.6**
SFS *e*S S 09 14 35.8 +15
DIVS Divibare 29.41 116 P **P** **09 09 29.8 -2.0**
GZR Gura Zlata 29.42 111 ⇓P **P** **09 09 32.4 +0.6**
GZR Gura Zlata 29.42 111 ⇓P **P** **09 09 32.4 +0.6**
MDVR Moldovita 29.50 113 ⇓P **P** **09 09 31.8 -0.7**
SORM Soroca 29.51 102 ⇑P **P** **09 09 32.4 0.0**
SORM Soroca 29.51 102 ⇑P **P** **09 09 32.4 0.0**
BIZ Bicaz 29.52 106 ⇓P **P** **09 09 32.9 +0.4**
HERR Herculane 29.70 113 ⇓P **P** **09 09 35.7 +1.5**
CEU Ceuta 29.81 160 *e*P **P** **09 09 37.2 +2.0**
CEU *e*S S 09 14 46.8 +15
PAOL Paolisi 30.08 126 P **P** **09 09 37.3 -0.4**
PAOL IAmb IAmb 09 09 49.2
comp=Z,44nm,1.4s
TESR Tescani 30.08 106 ⇓P **P** **09 09 40.8 +3.2**
ARR Arges 30.19 109 ⇑P P 09 09 47.9 +9.3
VOIR 30.30 109 ⇓P P 09 09 44.3 +4.8
VOIR 30.30 109 ⇓P P 09 09 44.3 +4.7
MTUR Matau 30.48 109 ⇓P P 09 09 48.0 +6.8
MTUR Matau 30.48 109 ⇓P P 09 09 48.0 +6.8
PDG Podgorica 30.55 119 ⇓P **P** **09 09 41.2 -0.5**
KIS Kishinev 30.60 103⇓ *i*P **P** **09 09 44.0 +1.9**
comp=Z,290nm,5.4s
KIS *e*S **S** **09 14 48.0 +4.0**
KIS *e*SS SnSn 09 15 24.0 -56
KIS *e*LQ LQ 09 22 09.0
comp=Z,1µm,16.0s
KIS LRM MLR 09 24 41.0
comp=Z,700nm,12.0s
KIS Kishinev 30.60 103*d i*P **P** **09 09 44.0 +1.9**
KIS *e*S **S** **09 14 48.0 +4.0**
KIS pmax pmax
comp=Z,290nm,5.4s
KIS MLR MLR
comp=Z,700nm,12.0s
PLOR Plostina 30.62 107 ⇓P P 09 09 51.2 +8.9
PLOR Plostina 30.62 107 ⇓P **P** **09 09 51.2 +8.9**
MLR Muntele Rosu 30.62 108 ⇓P **P** **09 09 44.7 +2.2**
MLR Muntele Rosu 30.62 108 ⇓P **P** **09 09 44.7 +2.2**
MLR Muntele Rosu 30.62 108 P **P** **09 09 41.9 -0.5**
MLR IAmb IAmb 09 10 08.1
comp=Z,44nm,1.3s
VRI Vrincioaia 30.64 106 ⇓P **P** **09 09 46.0 +3.5**
VRI Vrincioaia 30.64 106 ⇓P **P** **09 09 46.0 +3.5**
PVLZ Peæn de 30.68 158 *e*P **P** **09 09 45.0 +2.0**
PVLZ *e*S **S** **09 14 52.0 +6.6**
LPSR Galich'ya Gora 30.69 86 *e*P **P** **09 09 41.6 -1.3**
LPSR pmax pmax
comp=Z,70nm,1.8s
LPSR MLR MLR
comp=Z,1µm,15.0s
MELI Melilla 30.80 156 *e*P **P** **09 09 45.5 +1.6**
KIRV Kirov 31.02 69 P **P** **09 09 44.1 -1.5**
comp=Z,8.6nm,0.5s,baz=194,slow=4.3,SNR=5.1
KIRV LR LR 09 21 46.4
comp=Z,4µm,19.6s,baz=309,slow=35
KIRV Kirov 31.02 69*c e*P **P** **09 09 45.5 -0.2**
CFR Carcaliu 31.77 106 ⇑P **P** **09 09 53.1 +0.7**
CFR Carcaliu 31.77 106 ⇑P **P** **09 09 53.1 +0.7**
VSR Storozhevoye 31.80 88 *e*P **P** **09 09 51.4 -1.2**
VSR *e*S **S** **09 14 59.0 -3.7**
VSR pmax pmax
comp=Z,80nm,1.4s
VSR smax smax
comp=N,520nm,4.0s
VSR MLR MLR
comp=Z,2µm,19.0s
VORD Divnogorie 32.04 88 *e*P **P** **09 09 53.1 -1.6**
VORD pmax pmax
comp=Z,50nm,1.2s
AVE Averroes 32.09 164 *e*P **P** **09 09 51.6 -3.8**
AVE *e*S S 09 15 16.3 +8.7
IFR Ifrane 32.18 160 *e*P **P** **09 09 55.2 -1.2**
IFR *e*S S 09 15 18.4 +9.1
CORL Corleone 32.48 131 P **P** **09 09 59.0 +0.2**
TIP Timpagrande 32.49 125 P **P** **09 09 56.9 -2.0**
TIP IAmb IAmb 09 10 22.0
comp=Z,32nm,1.4s
CLTB Caltabellotta 32.74 131 P **P** **09 09 57.5 -3.6**
VRH Novokhopyorsk 32.90 85 *e*P **P** **09 10 01.2 -1.1**
VRH pmax pmax
comp=Z,100nm,1.5s
VRH MLR MLR
comp=Z,2µm,14.0s
MDT Midelt 32.95 160 P **P** **09 10 00.6 -2.4**
comp=Z,9.2nm,1.1s,baz=2.3,slow=9.7,SNR=3.7
KEST Kesra 33.26 138 P **P** **09 10 04.0 -1.7**
comp=Z,1.3nm,0.5s,baz=277,slow=5.5,SNR=6.7
KEST LR LR 09 24 22.7
comp=Z,2µm,18.8s,baz=277,slow=38
KEST Kesra 33.26 138 P **P** **09 10 04.0 -1.7**
ALN Alexandroupoli 34.49 112 P **P** **09 10 16.8 +0.6**
ALN IAmb IAmb 09 10 25.3
comp=Z,49nm,1.3s
BELG Belogornoye 34.54 79 *i* P **P** **09 10 15.9 -0.6**
BELG pmax pmax
comp=Z,20nm,1.3s
AGG Agios Georgios 34.67 118 P **P** **09 10 18.6 +0.8**
AGG pmax pmax
comp=Z,103nm,1.4s
AGG Agios Georgios 34.67 118 P **P** **09 10 18.6 +0.8**
ANN Anapa 35.99 97 *e*P P 09 10 20.3 -8.7
ANN *e**PP pP 09 10 25.5 -6.4
ANN *e* 09 12 48.9
ANN pmax pmax
comp=Z,133nm,1.1s
ANN MLR MLR
comp=E,949nm,11.0s
ANN MLR MLR
comp=Z,3µm,15.0s
ANN MLR MLR
comp=N,742nm,10.0s
ARU Arti 36.12 66 P **P** **09 10 29.3 -0.7**
comp=N,3.4nm,0.2s,baz=316,slow=7.6,SNR=5.2
ARU LR LR 09 24 45.1
comp=N,4µm,18.7s,baz=310,slow=35
ARU Arti 36.12 66*c i*P **P** **09 10 28.4 -1.6**
ARU *e* 09 11 47.2
ARU PPP PPP 09 12 05.4
ARU *e* 09 12 52.0
ARU S **S** **09 16 07.5 -1.8**
ARU SS **SnSn** **09 18 25.8 -8.1**
ARU pmax pmax
comp=Z,22nm,1.8s
ARU MLR MLR
comp=Z,4µm,17.0s

ARU Arti 36.12 66 P **P** **09 10 29.2 -0.8**
ARU IAmb IAmb 09 10 42.3
comp=Z,69nm,1.5s
NRIK Noril'sk 36.44 35 P **P** **09 10 31.9 -0.7**
comp=Z,3.5nm,0.9s,baz=319,slow=8.0,SNR=10
NRIK LR LR 09 27 31.6
comp=Z,3µm,18.1s,baz=346,slow=40
NRIK Noril'sk 36.44 35 *ce*P **P** **09 10 31.8 -0.8**
NRIK pmax pmax
comp=Z,5.0nm,1.3s
SVE Sverdlovsk 36.64 64 *e*P **P** **09 10 39.0 +4.5**
SVE *e* 09 18 38.8
SVE pmax pmax
comp=Z,47nm,1.5s
SVE MLR MLR
comp=Z,4µm,17.0s
C36M Paulatuk 36.73 325 P **P** **09 10 36.6 +1.6**
baz=44
C36M Paulatuk 36.73 325 P **P** **09 10 36.0 +0.9**
C36M IAmb IAmb 09 10 48.0
comp=Z,50nm,1.2s
SOC Sochi 37.94 96 *e*P **P** **09 10 44.7 -1.0**
SOC *e* 09 12 09.8
SOC *e*S **S** **09 16 37.6 +0.2**
SOC MLR MLR
comp=Z,2µm,18.0s
ANTO Ankara 38.10 106 P **P** **09 10 45.3 -1.8**
ANTO Ankara 38.10 106 P **P** **09 10 45.3 -1.8**
GOF Gofitskoye 38.19 91 *i*P **P** **09 10 47.6 -0.1**
GOF pmax pmax
comp=Z,141nm,1.0s
BR131 Keskin Array S 38.57 105 P **P** **09 10 49.1 -2.0**
BR131 pmax pmax
comp=Z,126nm,2.0s
BR131 Keskin Array S 38.57 105 P **P** **09 10 49.1 -2.0**
BR131 IAmb IAmb 09 11 01.6
comp=Z,126nm,1.9s
BRTR Keskin Array B 38.57 105 P **P** **09 10 49.4 -1.8**
comp=Z,2.7nm,0.7s,baz=335,slow=5.5,SNR=7.3
BRTR LR LR 09 29 23.3
comp=Z,573nm,18.2s,baz=312,slow=40
BRTR Keskin Array B 38.57 105 *ce*P **P** **09 10 53.2 +2.0**
BRTR pmax pmax
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 38.57 105 P **P** **09 10 50.2 -0.9**
KIV Kislovodsk 38.91 92 *e*P **P** **09 10 52.3 -1.7**
KIV *e* 09 12 21.5
KIV *e*S **S** **09 16 49.9 -2.3**
KIV pmax pmax
comp=Z,34nm,1.1s
KIV MLR MLR
comp=Z,3µm,16.0s
IDI Anoyia 38.92 118 LR LR 09 28 32.8
comp=Z,1µm,21.3s,baz=328,slow=39
YKA Yellowknife Ar 39.11 313 P **P** **09 10 53.3 -2.0**
comp=Z,1.3nm,0.8s,baz=40,slow=8.9,SNR=3.6
YKA LR LR 09 27 12.6
comp=Z,2µm,18.0s,baz=0.0,slow=36
KBZ Khabaz 39.19 92 P **P** **09 10 55.6 -0.5**
comp=Z,6.6nm,1.0s,baz=300,slow=6.1,SNR=4.5
KBZ LR LR 09 27 31.4
comp=Z,2µm,21.6s,baz=332,slow=37
AKTO Aktyubinsk 40.33 73 P **P** **09 11 04.8 -0.8**
comp=Z,6.1nm,1.1s,baz=329,slow=8.6,SNR=10
FFC Flin Flon 40.50 297 P **P** **09 11 07.8 +0.9**
FFC pmax pmax
comp=Z,78nm,1.7s
FFC Flin Flon 40.50 297 P **P** **09 11 07.8 +0.9**
FFC IAmb IAmb 09 11 24.9
comp=Z,78nm,1.6s
GROC Groznyy 40.86 90 P **P** **09 11 10.8 +0.8**
GROC *e* 09 12 45.5
GROC *e*S **S** **09 17 15.9 -5.2**
GROC pmax pmax
comp=Z,19nm,0.4s
GROC MLR MLR
comp=Z,305nm,11.0s
AKH Akhalkalaki 41.33 94 P **P** **09 11 11.8 -2.3**
AKH pmax pmax
comp=Z,195nm,1.5s
AKH Akhalkalaki 41.33 94 P **P** **09 11 11.8 -2.3**
A21K Barrow 41.34 341 P **P** **09 11 16.8 +3.3**
baz=25
A21K Barrow 41.34 341 P **P** **09 11 16.8 +3.3**
ULM Lac du Bonnet 41.51 289 P **P** **09 11 14.1 -1.3**
comp=Z,2.0nm,0.8s,baz=7.8,slow=13,SNR=1.9
ULM LR LR 09 28 33.6
comp=Z,1µm,19.2s,baz=44,slow=36
MAK Makhachkala 41.78 89 *e*P P 09 11 11.5 -6.1
MAK *e* 09 12 50.9
MAK *e*PPP PPP 09 13 17.8
MAK *e*S S 09 17 25.0 -10
MAK *e*SS **SS** **09 20 33.1 -7.1**
MAK pmax pmax
comp=Z,198nm,1.4s
MAK MLR MLR
comp=Z,2µm,18.0s
TIXI Tiksi 41.98 15 *ce*P **P** **09 11 19.3 +0.5**
TIXI pmax pmax
comp=Z,193nm,2.5s
TIXI Tiksi 41.98 15 P **P** **09 11 19.1 +0.3**
TIXI IAmb IAmb 09 11 31.1
comp=Z,80nm,1.4s
ABKAR Akbulak array 42.03 73 P **P** **09 11 19.2 -0.4**
ABKAR IAmb IAmb 09 11 29.6
comp=Z,59nm,1.4s
ABKAR Akbulak array 42.03 73 P **P** **09 11 18.6 -1.0**
GAZ Gaziantep 42.21 104 P **P** **09 11 20.2 -1.1**
GAZ IAmb IAmb 09 11 46.4
comp=Z,38nm,0.8s
GNI Garni 42.91 94 P **P** **09 11 26.2 -0.8**
comp=Z,4.0nm,0.3s,baz=315,slow=19,SNR=2.0
GNI LR LR 09 30 09.8
comp=Z,1µm,20.2s,baz=357,slow=37
AGMN Agassiz Nation 43.03 287 P **P** **09 11 28.6 +0.8**
baz=38
G40A Rib Lake 43.07 279 P **P** **09 11 29.2 +1.1**
BRVK Borovoye 43.16 62 *i*P **P** **09 11 28.3 -0.4**
BRVK pmax pmax
comp=Z,6.0nm,1.3s
BRVK Borovoye 43.16 62 P **P** **09 11 28.7 0.0**
BRVK IAmb IAmb 09 11 39.2
comp=Z,74nm,1.7s
BVAR Borovoye Array 43.22 62 P **P** **09 11 28.6 -0.6**
comp=Z,1.8nm,1.0s,baz=1.0,slow=8.6,SNR=5.8
MARD Mardin 43.59 100 P **P** **09 11 32.8 +0.3**
I42A Draeger Farm, 43.64 277 P **P** **09 11 33.1 +0.4**
GEVA Gevas 43.72 97 P **P** **09 11 34.9 +1.4**
SPMN Marine on St. 44.21 282 P **P** **09 11 39.9 +2.7**
SPMN IAmb IAmb 09 11 58.6
comp=Z,67nm,1.7s
K43A Burlington 44.35 276 P **P** **09 11 38.8 +0.4**
K43A IAmb IAmb 09 11 51.5
comp=Z,54nm,1.2s
TAM Tamanrasset 44.61 149 P **P** **09 11 40.0 -0.8**
TAM pmax pmax
comp=Z,46nm,1.7s
TAM Tamanrasset 44.61 149 P **P** **09 11 40.0 -0.8**
TAM IAmb IAmb 09 11 53.1
comp=Z,46nm,1.7s
O49A Covington 44.70 270 IAmb IAmb 09 11 53.9
comp=Z,40nm,1.1s
P51A Williamsport 44.74 268 P **P** **09 11 42.8 +1.2**
baz=34
RDOG Red Dog Mine 45.21 342 P **P** **09 11 46.0 +1.0**
Q51A Peebles 45.24 268 P **P** **09 11 45.6 0.0**
Q51A IAmb IAmb 09 11 55.3
comp=Z,65nm,1.5s
ILAR Eielson Array 45.59 332 P **P** **09 11 47.7 -0.3**
comp=Z,1.4nm,0.4s,baz=28,slow=6.5,SNR=0.4
PcP **PcP** **09 13 24.6 -1.5**
ILAR
comp=Z,1.6nm,0.9s,baz=5.7,slow=3.6,SNR=2.3
ILAR LR LR 09 33 41.4
comp=Z,2µm,19.1s,baz=26,slow=40
DGMT Dagmar 46.25 293 P **P** **09 11 54.0 +0.6**
BRZS Berezniki 46.51 63 *e*P **P** **09 11 53.5 -2.0**
BRZS *i* LR LR 09 30 57.7
comp=Z,6.6nm,1.8s,baz=63
comp=Z,398nm,15.8s,baz=63
ECSD EROS Data Cent 47.01 283 P **P** **09 11 59.2 -0.2**
ECSD IAmb IAmb 09 12 08.7
comp=Z,28nm,1.6s
WCI Wyandotte Cave 47.18 270 P **P** **09 12 01.2 +0.5**
WCI pmax pmax
comp=Z,105nm,2.0s

WCI Wyandotte Cave 47.18 270 P **P** **09 12 02.0 +1.3**
baz=33
WCI Wyandotte Cave 47.18 270 P **P** **09 12 01.2 +0.5**
P43A Skaggs, Pawnee 47.38 274 P **P** **09 12 02.6 +0.2**
BILL Bilibino 47.47 358 *i*P **P** **09 12 03.8 +1.1**
BILL *i* 09 13 53.1
BILL *i*S **S** **09 18 56.3 -0.6**
BILL pmax pmax
comp=Z,5.0nm,0.9s
BILL MLR MLR
comp=Z,1µm,16.0s
ZAA0 Zalesovo Array 47.64 51 P **P** **09 12 03.5 -0.6**
ZAA0 IAmb IAmb 09 12 14.5
comp=Z,46nm,1.5s
ZALV Zalesovo Beam 47.64 51 P **P** **09 12 02.9 -1.2**
comp=Z,0.7nm,0.3s,baz=318,slow=11,SNR=2.3
ZALV LR LR 09 35 09.6
comp=Z,955nm,18.1s,baz=326,slow=40
ZALV Zalesovo Beam 47.64 51 P **P** **09 12 02.6 -1.6**
USIN University of 47.99 271 P **P** **09 12 05.8 -1.2**
KURK Kurchatov 48.13 58 *ce*P **P** **09 12 07.2 -0.8**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURK Kurchatov 48.13 58 P **P** **09 12 07.6 -0.4**
KURBB Kurchatov Arra 48.18 58 P **P** **09 12 07.6 -0.7**
comp=Z,4.3nm,0.7s,baz=322,slow=7.5,SNR=16
LAO LASA Array 48.50 293 P **P** **09 12 12.5 +1.5**
baz=35
LAO LASA Array 48.50 293 P **P** **09 12 12.1 +1.1**
SLM Saint Louis 48.52 274 P **P** **09 12 12.5 +1.3**
SLM pmax pmax
comp=Z,77nm,1.7s
SLM Saint Louis 48.52 274 P **P** **09 12 12.5 +1.3**
T47A Sharon Grove 48.57 270 P **P** **09 12 12.0 +0.4**
EGMT Eagleton 48.78 297 P **P** **09 12 14.7 +1.5**
SEM Semipalatinsk 48.98 57 *e*P **P** **09 12 12.7 -2.1**
baz=57
SEM LR LR 09 32 18.0
comp=Z,757nm,17.0s,baz=57
FVM French Village 49.15 274 P **P** **09 12 16.5 +0.5**
FVM pmax pmax
comp=Z,36nm,1.5s
FVM French Village 49.15 274 P **P** **09 12 16.5 +0.5**
FVM IAmb IAmb 09 12 36.1
comp=Z,36nm,1.4s
WALA Waterton Lakes 49.49 301 P **P** **09 12 20.1 +1.5**
WALA IAmb IAmb 09 12 35.9
comp=Z,64nm,1.8s
V48A Smith Brothers 49.50 269 P **P** **09 12 20.6 +1.9**
V48A IAmb IAmb 09 12 36.7
comp=Z,56nm,1.6s
RSSD Black Hills 49.74 290 P **P** **09 12 21.7 +1.0**
baz=34
GEYT Alibeck 50.49 84 P **P** **09 12 25.3 -0.9**
comp=Z,2.4nm,0.3s,baz=339,slow=7.7,SNR=1.7
GEYT LR LR 09 36 15.7
comp=Z,2µm,18.1s,baz=355,slow=39
GYA0B ALIBECK ARRAY 50.49 84 P **P** **09 12 25.6 -0.7**
GYA0B IAmb IAmb 09 12 36.7
comp=Z,61nm,1.6s
S39A Bolivar 50.64 276 P **P** **09 12 27.3 0.0**
HRY Holter Researc 50.66 297 P **P** **09 12 28.1 +0.6**
JTMT Jette 50.72 300 P **P** **09 12 28.5 +0.5**
RLMT Red Lodge 50.99 294 P **P** **09 12 31.7 +1.5**
baz=34
RLMT Red Lodge 50.99 294 P **P** **09 12 31.4 +1.2**
RLMT IAmb IAmb 09 12 43.7
comp=Z,63nm,1.5s
KOWA Kowa 51.06 163 P **P** **09 12 29.3 -1.4**
KOWA IAmb IAmb 09 12 36.1
comp=Z,36nm,1.4s
BTLS Baital 51.10 66 *e*P **P** **09 12 29.3 -1.4**
baz=66
KK31 Karatay Array 51.31 70 P **P** **09 12 32.6 +0.2**
KK31 pmax pmax
comp=Z,82nm,1.6s
KK31 Karatay Array 51.31 70 P **P** **09 12 32.6 +0.2**
KKAR Karatay Array 51.31 70 P **P** **09 12 32.2 -0.2**
KKAR Karatay Array 51.31 70 P **P** **09 12 32.2 -0.2**
KKAR Karatay Array 51.31 70 P **P** **09 12 32.2 -0.2**
NEW Newport 51.33 302 P **P** **09 12 31.3 -1.1**
comp=Z,0.5nm,0.4s,baz=22,slow=7.2,SNR=2.0
NEW Newport 51.33 302 P **P** **09 12 34.7 +2.2**
baz=33
MSO Missoula 51.36 299 P **P** **09 12 33.1 +0.3**
baz=33
BOZ Bozeman (W) 51.51 297 P **P** **09 12 34.4 +0.4**
BOZ pmax pmax
comp=Z,45nm,1.2s
BOZ Bozeman (W) 51.51 297 P **P** **09 12 35.4 +1.4**
baz=33
BOZ Bozeman (W) 51.51 297 P **P** **09 12 34.4 +0.4**
BOZ IAmb IAmb 09 12 47.3
comp=Z,45nm,1.1s
U40A Yellville 51.56 275 P **P** **09 12 34.1 -0.2**
U40A IAmb IAmb 09 12 54.0
comp=Z,47nm,1.6s
LRM Limekiln Ridge 51.64 297 P **P** **09 12 35.6 +0.6**
YMP Mirror Lake Pl 51.66 295 P **P** **09 12 35.4 +0.1**
DZA Taraz 51.82 69 *e*P **P** **09 12 34.9 -1.3**
baz=70
DZA LR LR 09 33 59.8
comp=Z,462nm,15.9s,baz=70
YUF Upper Falls 51.82 295 P **P** **09 12 39.6 +3.2**
YNR Norris Junctio 51.88 295 P **P** **09 12 36.2 -0.7**
YHH Holmes Hill 51.89 295 P **P** **09 12 37.5 +0.5**
IUG Iuzhnay 51.92 71 *e*P **P** **09 12 35.3 -1.8**
comp=Z,7.5nm,1.3s,baz=71
IUG LR LR 09 33 57.7
comp=Z,425nm,17.2s,baz=71
YHL Hebgen Lake 51.97 296 P **P** **09 12 38.8 +1.2**
K22A Casper 51.97 291 P **P** **09 12 37.2 -0.3**
baz=33
K22A Casper 51.97 291 P **P** **09 12 36.7 -0.8**
K22A IAmb IAmb 09 12 49.0
comp=Z,42nm,1.4s
YMR Madison River 52.03 295 P **P** **09 12 38.3 +0.3**
QLMT Earthquake Lak 52.08 296 P **P** **09 12 39.5 +1.2**
DLMT Dillon 52.08 297 P **P** **09 12 38.5 +0.3**
DLMT IAmb IAmb 09 12 48.6
comp=Z,64nm,1.9s
H17A Grant Village 52.11 295 P **P** **09 12 40.3 +1.6**
H17A IAmb IAmb 09 12 53.1
comp=Z,29nm,1.1s
YPP Pitchstone Pla 52.30 295 P **P** **09 12 41.7 +1.6**
W41B Gary Mavity, V 52.31 274 P **P** **09 12 41.1 +1.3**
W41B IAmb IAmb 09 12 58.6
comp=Z,62nm,1.6s
BOD Bodaibo 52.38 30 *e*P **P** **09 12 43.9 +3.8**
BOD pmax pmax
comp=Z,18nm,1.4s
SEY Seymchan 52.42 6 P **P** **09 12 40.0 -0.3**
comp=Z,3.7nm,1.0s,baz=348,slow=7.0,SNR=3.3
FLWY Flagg Ranch 52.42 295 P **P** **09 12 40.5 -0.4**
SGDS Sogindy 52.66 66 *e*P **P** **09 12 40.9 -1.5**
baz=66
IMW Indian Meadow 52.67 295 P **P** **09 12 43.6 +0.8**
IMW IAmb IAmb 09 12 55.8
comp=Z,39nm,1.6s
PHWY Pilot Hill 52.67 289 P **P** **09 12 43.0 +0.1**
PHWY IAmb IAmb 09 13 41.0
comp=Z,33nm,0.8s
MKAR Makanchi Array 52.74 58 LR LR 09 35 18.7
comp=Z,968nm,19.9s,baz=320,slow=36
SNOW Snow King Moun 52.97 294 P **P** **09 12 46.6 +1.6**
TPAW Teton Pass 53.02 295 P **P** **09 12 45.3 -0.1**
BW06 Boulder Array 53.08 293 P **P** **09 12 45.8 0.0**
baz=32
BW06 Boulder Array 53.08 293 IAmb IAmb 09 12 58.0
comp=Z,30nm,1.1s
PD31 Pinedale Array 53.08 293 IAmb IAmb 09 12 58.0
comp=Z,28nm,1.1s
PDAR Pinedale Array 53.08 293 P **P** **09 12 44.6 -1.2**
comp=Z,4.7nm,1.0s,baz=57,slow=5.5,SNR=21
PDAR LR LR 09 34 40.1
comp=Z,2µm,19.8s,baz=30,slow=35
PDAR Pinedale Array 53.08 293 P **P** **09 12 44.8 -1.0**
REDW Red Top Meadow 53.09 294 IAmb IAmb 09 12 59.2
comp=Z,33nm,1.3s
N23A Red Feather La 53.22 289 P **P** **09 12 47.8 +0.9**
baz=32
N23A Red Feather La 53.22 289 P **P** **09 12 46.7 -0.1**
N23A IAmb IAmb 09 12 56.1
comp=Z,59nm,1.6s
KAN14 Manchester OK 53.23 280 P **P** **09 12 46.2 -0.5**

TOA0 Torodi Ar. Sit 53.24 156 P **P** **09 12 44.7 -2.2**
TORD Torodi Ar. Bea 53.24 156 P **P** **09 12 44.1 -2.7**
comp=Z,9.1nm,1.1s,baz=341,slow=9.3,SNR=15
TORD LR LR 09 35 32.7
comp=Z,1µm,19.3s,baz=325,slow=36
BCYI Bear Canyon 53.27 297 P **P** **09 12 46.1 -1.1**
KSCO Kaye Shedlock' 53.44 285 P **P** **09 12 48.6 +0.3**
KSCO IAmb IAmb 09 13 00.6
comp=Z,33nm,1.1s
PLID Pearl Lake 53.60 299 P **P** **09 12 49.7 +0.2**
BCOK Bluff Creek, N 54.18 279 P **P** **09 12 54.0 +0.3**
BMO Blue Mountains 54.28 300 P **P** **09 12 53.6 -0.8**
BMO pmax pmax
comp=Z,33nm,1.7s
BMO Blue Mountains 54.28 300 P **P** **09 12 53.6 -0.8**
BMO IAmb IAmb 09 13 11.9
comp=Z,33nm,1.6s
HLID Hailey 54.30 297 P **P** **09 12 54.5 -0.1**
HLID IAmb IAmb 09 13 05.0
comp=Z,40nm,1.8s
SATY Saty 54.46 64 *e*P **P** **09 12 53.9 -1.9**
baz=64
MOY Mondy 54.65 42 *e*P **P** **09 12 58.6 +1.6**
MOY pmax pmax
comp=Z,109nm,1.7s
GAR Garm 54.69 73 P **P** **09 12 57.4 -0.1**
SHLS Shalkode 54.78 63 *e*P **P** **09 12 57.7 -0.3**
baz=63
O20A White River Ci 54.79 290 P **P** **09 12 58.9 +0.6**
baz=32
HWUT Hardware Ranch 54.86 294 IAmb IAmb 09 13 11.0
comp=Z,43nm,1.2s
RDMU Red Mountain 54.95 292 P **P** **09 12 59.8 +0.4**
SMCO Snowmass 55.09 289 P **P** **09 13 00.8 +0.1**
HVU Hansel Valley 55.18 295 P **P** **09 13 01.1 +0.1**
HVU pmax pmax
comp=Z,23nm,1.5s
HVU Hansel Valley 55.18 295 P **P** **09 13 01.1 +0.1**
TCUT Toone Canyon 55.21 293 P **P** **09 13 02.5 +1.2**
HRA Herat 55.25 82 P **P** **09 13 01.4 -0.2**
HRA IAmb IAmb 09 13 12.0
comp=Z,46nm,1.6s
WMOK Wichita Mounta 55.46 279 P **P** **09 13 03.8 +0.8**
WMOK pmax pmax
comp=Z,22nm,1.4s
WMOK Wichita Mounta 55.46 279 P **P** **09 13 03.1 +0.1**
baz=31
WMOK Wichita Mounta 55.46 279 P **P** **09 13 03.8 +0.8**
JLU Jordanelle 55.67 293 P **P** **09 13 04.4 -0.2**
SDCO Great Sand Dun 55.71 286 P **P** **09 13 04.7 -0.3**
SDCO IAmb IAmb 09 13 15.2
comp=Z,38nm,1.9s
CTU Camp Tracy 55.71 293 P **P** **09 13 06.0 +1.1**
T25A Trinidad 55.77 285 P **P** **09 13 06.5 +1.1**
baz=31
T25A Trinidad 55.77 285 P **P** **09 13 05.1 -0.3**
T25A IAmb IAmb 09 13 18.7
comp=Z,36nm,1.6s
BGU Big Grassy Mou 56.01 295 P **P** **09 13 07.8 +0.8**
Z35A Perchaven, San 56.02 277 P **P** **09 13 06.4 -0.5**
MPU Maple Canyon 56.24 293 P **P** **09 13 09.1 +0.4**
S22A 4UR Ranch, Cre 56.25 288 P **P** **09 13 09.8 +0.9**
S22A IAmb IAmb 09 13 22.4
comp=Z,55nm,2.0s
P17A Butcher Ranch, 56.35 292 P **P** **09 13 09.5 0.0**
PV22 Blue Mesa, Par 56.37 290 P **P** **09 13 10.8 +1.2**
PV07 Paradox Valley 56.40 289 P **P** **09 13 08.3 -1.5**
PV07 IAmb IAmb 09 13 28.2
comp=Z,52nm,1.8s
PV15 Paradox Valley 56.41 289 P **P** **09 13 11.8 +1.8**
PV15 IAmb IAmb 09 13 18.7
comp=Z,39nm,1.7s
ZAK Zakamensk 56.45 41 *e*P **P** **09 13 09.9 0.0**
ZAK pmax pmax
comp=Z,20nm,1.4s
NLU North Lily Min 56.47 293 P **P** **09 13 10.9 +0.5**
PV23 Carpenter Ridg 56.53 290 P **P** **09 13 11.7 +0.8**
KSH Kashi 56.53 68 P **P** **09 13 13.1 +2.4**
KSH sP sP 09 13 22.1 +7.4
KSH S **S** **09 21 02.0 -0.2**
KSH sS sS 09 21 11.1 +4.5
KSH ScS **ScS** **09 22 57.8 -2.2**
KSH pmax pmax
comp=Z,16nm,0.6s
KSH pmax pmax
comp=Z,500nm,4.4s
KSH LR LR
comp=Z,3µm,14.6s
KSH LR LR
comp=Z,2µm,15.1s
KSH LR LR
comp=Z,6µm,20.0s
PV04 Paradox Valley 56.54 290 P **P** **09 13 10.7 -0.2**
DUG Dugway, Tooele 56.55 294 P **P** **09 13 12.4 +1.6**
DUG pmax pmax
comp=Z,53nm,1.6s
DUG Dugway, Tooele 56.55 294 P **P** **09 13 12.5 +1.7**
baz=31
DUG Dugway, Tooele 56.55 294 P **P** **09 13 12.4 +1.6**
DUG IAmb IAmb 09 13 24.5
comp=Z,53nm,1.6s
PV12 Saucer Basin, 56.56 290 P **P** **09 13 11.5 +0.5**
PV12 IAmb IAmb 09 13 23.9
comp=Z,55nm,1.6s
SRU San Rafael Swe 56.58 291 P **P** **09 13 11.5 +0.4**
SRU pmax pmax
comp=Z,30nm,1.4s
SRU San Rafael Swe 56.58 291 P **P** **09 13 11.5 +0.4**
PV14 Lion Creek, Pa 56.61 290 P **P** **09 13 11.1 -0.3**
PV14 IAmb IAmb 09 13 23.3
comp=Z,23nm,1.0s
PV11 David Mesa, Pa 56.61 290 P **P** **09 13 11.1 -0.2**
PV10 Paradox Valley 56.61 290 P **P** **09 13 12.4 +1.0**
PV10 IAmb IAmb 09 13 24.0
comp=Z,26nm,1.0s
PV20 West Nyswonger 56.61 290 P **P** **09 13 11.3 -0.1**
PV16 Nyswonger Mesa 56.62 290 P **P** **09 13 11.5 +0.1**
PV01 Paradox Valley 56.63 289 P **P** **09 13 11.8 +0.3**
PV01 IAmb IAmb 09 13 24.5
comp=Z,30nm,1.1s
PV02 Paradox Valley 56.63 289 P **P** **09 13 11.0 -0.5**
PV02 IAmb IAmb 09 13 24.4
comp=Z,29nm,1.0s
PV03 Paradox Valley 56.64 290 P **P** **09 13 11.9 +0.3**
PV03 IAmb IAmb 09 13 24.3
comp=Z,27nm,1.3s
PV19 Morning Glory 56.64 290 P **P** **09 13 10.7 -0.9**
PV17 East Wray Mesa 56.66 290 IAmb IAmb 09 13 23.7
comp=Z,22nm,1.0s
PV18 Skein Mesa, Pa 56.67 290 IAmb IAmb 09 13 24.6
comp=Z,31nm,1.1s
PV05 Paradox Valley 56.89 290 IAmb IAmb 09 13 24.8
comp=Z,31nm,1.0s
ELK Elko 57.02 296 IAmb IAmb 09 13 28.2
comp=Z,44nm,1.8s
J05D Fort Rock, OR 57.07 302 P **P** **09 13 16.2 +1.7**
baz=30
WMQ Urumqi 57.25 56 *e*P **P** **09 13 19.4 +3.8**
WMQ pmax pmax
comp=Z,72nm,0.9s
WMQ pmax pmax
comp=Z,450nm,5.3s
WMQ LR LR
comp=Z,2µm,13.9s
WMQ LR LR
comp=Z,2µm,20.1s
WMQ LR LR
comp=Z,3µm,21.3s
MVCO Mesa Verde 57.39 289 P **P** **09 13 17.8 +0.9**
baz=31
MVU Marysvale 57.77 292 P **P** **09 13 20.8 +1.1**
TCRU Three Creeks R 57.77 293 P **P** **09 13 19.8 +0.2**
MSTX Muleshoe 57.81 282 P **P** **09 13 20.3 +0.6**
baz=30
MOD Modoc Plateau 57.93 301 P **P** **09 13 22.1 +1.5**
KBL Kabul 57.98 76 P **P** **09 13 19.6 -1.5**
KBL pmax pmax
comp=Z,17nm,1.2s
KBL Kabul 57.98 76 P **P** **09 13 19.6 -1.5**
MTPU Mount Pierson 58.16 292 P **P** **09 13 23.6 +1.1**
SPR3 Spring Creek 3 58.18 294 P **P** **09 13 24.3 +1.8**
SPR3 IAmb IAmb 09 13 36.6
comp=Z,38nm,1.3s
PSUT Pine Spring 58.39 294 P **P** **09 13 25.4 +1.5**
ANMO Albuquerque 58.50 286 P **P** **09 13 25.9 +1.2**

ANMO pmax pmax
comp=Z,33nm,2.0s
ANMO Albuquerque 58.50 286 P **P** **09 13 25.6 +0.8**
baz=30
ANMO Albuquerque 58.50 286 P **P** **09 13 25.9 +1.2**
ANMO IAmb IAmb 09 13 35.6
comp=Z,33nm,2.0s
DBIC Dimbokro 58.68 165 P **P** **09 13 24.0 -1.8**
comp=Z,2.7nm,0.7s,baz=349,slow=5.2,SNR=2.3
DBIC LR LR 09 39 26.3
comp=Z,2μm,18.5s,baz=344,slow=37
DBIC Dimbokro 58.68 165 P **P** **09 13 28.0 +2.2**
DBIC IAmb IAmb 09 13 31.4
comp=Z,39nm,1.4s
TIC Toumodi 58.69 165 *e*P **P** **09 13 24.6 -1.3**
KIC Kosan Boka 59.00 165 *e*P **P** **09 13 26.8 -1.3**
comp=Z,60nm,1.2s
LIC Lamto 59.10 165 *e*P **P** **09 13 25.6 -3.2**
comp=Z,68nm,1.3s
R11A Troy Canyon, C 59.23 295 P **P** **09 13 30.8 +1.1**
baz=30
BNM Barren Site 59.26 285 P **P** **09 13 30.1 +0.1**
KNB Kanab 59.30 292 P **P** **09 13 30.7 +0.5**
KNB pmax pmax
comp=Z,58nm,1.6s
KNB Kanab 59.30 292 P **P** **09 13 30.7 +0.5**
JCT Junction City 59.57 277 P **P** **09 13 31.8 -0.2**
JCT pmax pmax
comp=Z,69nm,1.7s
JCT Junction City 59.57 277 P **P** **09 13 32.4 +0.5**
baz=30
JCT Junction City 59.57 277 P **P** **09 13 31.8 -0.2**
KVN Kaiserville 59.59 297 IAmb IAmb 09 13 50.5
comp=Z,27nm,1.4s
U15A North Rim 59.59 291 IAmb IAmb 09 13 44.0
comp=Z,23nm,1.1s
SONM Songino Array 59.63 40 P **P** **09 13 32.2 0.0**
comp=Z,1.0nm,0.9s,baz=337,slow=7.1,SNR=6.4
SONM LR LR 09 41 46.4
comp=Z,3μm,20.2s,baz=344,slow=38
SONM Songino Array 59.63 40 P **P** **09 13 32.0 -0.2**
W18A Petrified Fore 59.70 288 IAmb IAmb 09 13 53.5
comp=Z,18nm,1.1s
ULN Ulaanbaatar 59.78 40 *ce*P **P** **09 13 33.1 -0.3**
ULN pmax pmax
comp=Z,1.0nm,0.4s
ULN Ulaanbaatar 59.78 40 P **P** **09 13 33.7 +0.3**
ULN IAmb IAmb 09 13 44.2
comp=Z,31nm,1.8s
PRN Pahroc Range 59.84 294 P **P** **09 13 35.5 +1.7**
PRN IAmb IAmb 09 14 05.9
comp=Z,32nm,1.4s
VCNR Virginia City 59.96 299 P **P** **09 13 35.9 +1.1**
VCNR IAmb IAmb 09 13 47.2
comp=Z,22nm,1.5s
WUAZ Wupatki 60.02 290 P **P** **09 13 35.4 +0.2**
baz=30
WUAZ Wupatki 60.02 290 P **P** **09 13 34.9 -0.2**
TPH Tonopah 60.10 296 P **P** **09 13 35.6 -0.2**
TPH pmax pmax
comp=Z,117nm,1.5s
TPH Tonopah 60.10 296 P **P** **09 13 35.6 -0.2**
RYN Ryan 60.12 297 P **P** **09 13 33.9 -1.9**
NV11 Mina Array Sit 60.15 297 IAmb IAmb 09 13 59.2
comp=Z,26nm,1.7s
NVAR Mina Array Bea 60.21 297 P **P** **09 13 35.2 -1.2**
comp=Z,0.2nm,0.4s,baz=47,slow=5.8,SNR=4.5
NVAR LR LR 09 39 53.7
comp=Z,5μm,18.4s,baz=26,slow=36
NVAR Mina Array Bea 60.21 297 P **P** **09 13 36.6 +0.1**
NIL Nilore 60.49 73 P **P** **09 13 38.6 +0.3**
NIL pmax pmax
comp=Z,76nm,1.3s
NIL Nilore 60.49 73 P **P** **09 13 38.6 +0.3**
WAKR Walker 60.57 298 IAmb IAmb 09 13 52.5
comp=Z,50nm,1.8s
TPNV Topopah Spring 60.71 295 P **P** **09 13 40.6 +0.7**
baz=29
TPNV Topopah Spring 60.71 295 IAmb IAmb 09 13 58.4
comp=Z,36nm,1.6s
MNTX Cornudas Mount 60.87 283 P **P** **09 13 41.0 +0.2**
baz=29
MNTX Cornudas Mount 60.87 283 P **P** **09 13 40.0 -0.8**
X16A Lo Mia Camp, P 61.00 289 IAmb IAmb 09 13 54.6
comp=Z,21nm,1.1s
OMMB Old Mammoth Mi 61.19 297 IAmb IAmb 09 13 57.2
comp=Z,29nm,1.5s
MDPB Devils Postpil 61.20 297 P **P** **09 13 44.3 +1.0**
MDPB IAmb IAmb 09 13 56.2
comp=Z,19nm,1.3s
TX31 Lajitas Ar. Si 62.20 280 IAmb IAmb 09 14 42.1
comp=Z,33nm,1.4s
TXAR Lajitas Array 62.20 280 P **P** **09 13 48.5 -1.5**
comp=Z,1.3nm,0.9s,baz=64,slow=5.7,SNR=6.6
TXAR LR LR 09 40 17.5
comp=Z,2μm,19.6s,baz=0.0,slow=36
PETK Petropavlovsk- 62.43 3 LR LR 09 40 34.3
comp=Z,580nm,20.4s,baz=7.1,slow=36
PET Petropavlovsk 62.53 3 *e*P **P** **09 13 52.4 +0.7**
PET *e*S **S** **09 22 15.2 -3.7**
PET *e*SS **SS** **09 26 25.6 +3.8**
PET MLR MLR
comp=Z,1μm,22.0s
TUC Tucson 62.57 288 P **P** **09 13 53.9 +1.5**
TUC pmax pmax
comp=Z,26nm,1.4s
TUC Tucson 62.57 288 P **P** **09 13 53.8 +1.4**
baz=29
TUC Tucson 62.57 288 P **P** **09 13 53.9 +1.5**
TUC IAmb IAmb 09 14 05.2
comp=Z,26nm,1.4s
ISA Isabella, Lake 62.69 296 P **P** **09 13 53.8 +0.7**
ISA pmax pmax
comp=Z,35nm,1.6s
ISA Isabella, Lake 62.69 296 P **P** **09 13 54.2 +1.1**
baz=28
ISA Isabella, Lake 62.69 296 P **P** **09 13 53.8 +0.7**
ISA IAmb IAmb 09 14 12.1
comp=Z,35nm,1.6s
319A Douglas 62.77 286 P **P** **09 13 53.8 0.0**
BELC Belle Mtn. Jos 63.19 293 P **P** **09 13 58.2 +1.7**
baz=28
TPFO Pinon Flats 63.71 293 P **P** **09 14 00.8 +0.9**
baz=28
KLR Kul'dur 63.90 22 P **P** **09 14 00.6 -0.2**
comp=Z,0.3nm,0.3s,baz=349,slow=5.2,SNR=1.4
GTA Gaotai 65.30 49 ⇑P **P** **09 14 10.6 +0.3**
GTA pP sP 09 14 15.3 +1.0
GTA sP pP 09 14 18.0 +5.0
GTA S **S** **09 22 58.3 +4.3**
GTA sS sS 09 23 03.8 +5.3
GTA SS **SS** **09 27 10.8 +4.9**
GTA pmax pmax
comp=Z,6.0nm,1.5s
GTA pmax pmax
comp=Z,93nm,6.7s
GTA LR LR
comp=Z,840nm,17.8s
GTA LR LR
comp=Z,1μm,17.8s
GTA LR LR
comp=Z,2μm,18.2s
SDV Santo Domingo 66.80 239 P **P** **09 14 20.7 +0.4**
ZAIG Zacatecas 67.50 276 P **P** **09 14 25.4 +0.6**
HHC Hu-ho-hao-te 67.50 40 *e*P **P** **09 14 27.0 +2.7**
HHC S **S** **09 23 21.3 +0.7**
HHC sS sS 09 23 31.5 +6.4
HHC ScS **SKSac** **09 24 21.8 -0.3**
HHC pmax pmax
comp=Z,16nm,0.7s
HHC pmax pmax
comp=Z,180nm,5.4s
HHC LR LR
comp=Z,1μm,17.9s
HHC LR LR
comp=Z,750nm,15.3s
HHC LR LR
comp=Z,1μm,17.9s
YSS Yuzh-Sakhalins 67.60 14 *e*P **P** **09 14 26.9 +2.2**
YSS *e**SP **sP** **09 14 31.2 +2.5**
YSS *e*S **S** **09 23 26.1 +4.8**
YSS *e*PS **PnS** **09 23 43.3 +0.9**
YSS MLR MLR
comp=Z,700nm,14.0s
YSS MLR MLR
comp=N,600nm,19.0s

YSS MLR MLR
comp=E,800nm,15.0s
CN2 Changchun 68.00 28 *e*P **P** **09 14 27.6 +0.3**
CN2 *es*P sP 09 14 34.6 +3.3
CN2 *e*S **S** **09 23 22.6 -3.7**
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 pmax pmax
comp=E,100nm,4.0s
CN2 LR LR
comp=E,900nm,16.0s
CN2 LR LR
comp=E,700nm,16.0s
CN2 LR LR
comp=E,1μm,18.0s
MOTC Monteria, Cord 68.80 244 *e*P **P** **09 14 36.5 +3.9**
USRK Ussuriysk Ar. 68.82 23 LR LR 09 46 50.2
comp=E,487nm,18.7s,baz=330,slow=38
BRRC Barranca, Sant 69.58 241 *e*P **P** **09 14 40.3 +2.9**
LZH Lanzhou 69.63 47 *e*P **P** **09 14 37.3 -0.5**
LZH sP sP 09 14 46.3 +4.5
LZH SS SS 09 28 11.8 -1.2
LZH pmax pmax
comp=E,18nm,1.5s
LZH pmax pmax
comp=E,280nm,6.0s
LZH LR LR
comp=E,950nm,16.7s
LZH LR LR
comp=E,1μm,16.1s
LZH LR LR
comp=E,2μm,18.1s
ZARC Zaragoza, Cauc 69.67 243 *e*P **P** **09 14 38.5 +0.5**
PTBC PUERTO BERRIO, 70.39 242 *e*P **P** **09 14 42.3 -0.2**
SPBC San Pablo de B 71.06 241 *e*P **P** **09 14 45.2 -1.4**
ROSC El Rosal 71.90 241 P **P** **09 14 50.1 -1.9**
comp=E,4.3nm,0.4s,baz=105,slow=5.2,SNR=3.8
ROSC El Rosal 71.90 241 ⇑*e*P **P** **09 14 52.0 -0.1**
GUY2C Guyana, Caldas 71.94 242 *e*P **P** **09 14 52.9 +0.6**
RREF El Recreo 72.23 242 *e*P **P** **09 14 52.9 -1.4**
TOLC Tolima 72.51 242 *e*P **P** **09 14 52.0 -3.7**
XAN Xi'an 73.08 44 P **P** **09 14 57.1 -1.4**
XAN pmax pmax
comp=Z,35nm,1.4s
XAN Xi'an 73.08 44 P **P** **09 14 57.1 -1.4**
XAN IAmb IAmb 09 15 08.4
comp=Z,35nm,1.4s
YOTC Yotoco, Valle 73.45 243 *e*P P 09 14 54.9 -6.1
CD2 Chengdu 74.37 50 P **P** **09 15 06.3 +0.2**
CD2 S **S** **09 24 39.8 -0.7**
CD2 SKS **SKSac** **09 25 09.8 -4.3**
CD2 pmax pmax
comp=Z,40nm,1.1s
CD2 pmax pmax
comp=Z,260nm,4.9s
CD2 LR LR
comp=Z,2μm,17.1s
CD2 LR LR
comp=Z,1μm,20.0s
CD2 LR LR
comp=Z,2μm,20.2s
KSRS Korea Array 74.61 28 P **P** **09 15 07.0 -0.3**
comp=Z,0.4nm,0.5s,baz=336,slow=5.3,SNR=1.5
KSRS LR LR 09 51 33.2
comp=Z,887nm,18.1s,baz=338,slow=39
KSRS Korea Array 74.61 28 P **P** **09 15 07.0 -0.3**
SHL Shillong 75.05 62 P **P** **09 15 09.4 -0.8**
SHL pmax pmax
comp=Z,33nm,1.2s
SHL Shillong 75.05 62 P **P** **09 15 09.4 -0.8**
SHL IAmb IAmb 09 15 19.7
comp=Z,33nm,1.2s
MAT Matsushiro 77.28 20 P P 09 15 28.2 +5.6
MAT S **S** **09 25 16.0 +3.6**
MJAR Matsushiro Arr 77.28 20 P **P** **09 15 21.1 -1.5**
comp=Z,0.9nm,0.8s,baz=340,slow=5.8,SNR=1.9
OTAV Otavalo 77.70 243 P **P** **09 15 23.2 -2.5**
OTAV pmax pmax
comp=Z,26nm,1.5s
OTAV Otavalo 77.70 243 P **P** **09 15 23.2 -2.5**
OTAV IAmb IAmb 09 15 40.5
comp=Z,26nm,1.5s
NJ2 Nanjing 77.72 37 *e*P **P** **09 15 25.1 0.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=Z,2μm,17.1s
NJ2 LR LR
comp=Z,580nm,16.1s
NJ2 LR LR
comp=Z,2μm,17.1s
WHN Wuhan 77.94 41 P **P** **09 15 30.8 +4.5**
WHN LR LR
comp=Z,2μm,13.3s
WHN LR LR
comp=Z,1μm,16.0s
WHN LR LR
comp=Z,3μm,20.3s
KMI Kunming 79.36 53 ⇓*e*P **P** **09 15 35.8 +1.2**
KMI pP sP 09 15 40.3 +1.7
KMI S **S** **09 25 34.1 -1.4**
KMI sS sS 09 25 41.6 +1.5
KMI pmax pmax
comp=Z,20nm,0.5s
KMI pmax pmax
comp=Z,170nm,5.1s
KMI LR LR
comp=Z,640nm,15.8s
KMI LR LR
comp=Z,330nm,16.8s
KMI LR LR
comp=Z,880nm,16.6s
SAML Samuel 80.94 226 P **P** **09 15 41.9 -0.9**
SAML pmax pmax
comp=Z,28nm,1.7s
SAML Samuel 80.94 226 P **P** **09 15 41.9 -0.9**
BDFB Brasilia 83.41 209 LR LR 09 48 03.3
comp=Z,767nm,18.0s,baz=351,slow=32
PAYA Payao 83.66 57 P P 09 16 06.3 +9.2
CM33 Chiang Mai Arr 83.82 58 P **P** **09 16 01.0 +3.1**
CHTO Chiang Mai 83.83 58 P **P** **09 15 57.1 -0.9**
CHTO pmax pmax
comp=Z,39nm,1.6s
CHTO Chiang Mai 83.83 58 P **P** **09 15 57.1 -0.9**
CMMT Chiang Mai 83.83 58 P **P** **09 16 02.1 +4.2**
CM34 Chiang Mai Arr 83.87 58 P **P** **09 16 01.0 +2.8**
CM32 Chiang Mai Arr 83.94 59 P P 09 16 08.0 +9.5
CM35 Chiang Mai Arr 84.03 58 P P 09 16 05.0 +6.0
CM36 Chiang Mai Arr 84.15 58 P P **09 16 00.0 +0.4**
CMAR Chiang Mai Arr 84.15 59 P **P** **09 15 58.4 -1.2**
comp=Z,1.1nm,0.3s,baz=328,slow=5.9,SNR=6.1
CMAR LR LR 09 56 16.3
comp=Z,598nm,19.3s,baz=2.5,slow=38
CM13 Chiang Mai Arr 84.17 59 P P 09 16 08.3 +8.6
CM02 Chiang Mai Arr 84.17 59 P P 09 16 08.6 +8.9
CM09 Chiang Mai Arr 84.18 59 P P 09 16 09.3 +10
CM01 Chiang Mai Arr 84.19 59 P P 09 16 08.7 +8.8
CM05 Chiang Mai Arr 84.20 59 P P 09 16 08.2 +8.4
CM04 Chiang Mai Arr 84.22 59 P **P** **09 16 04.1 +4.1**
PHRA Phrae 84.58 57 P P 09 16 10.1 +8.3
QIZ Qiongzhong 87.38 49 P **P** **09 16 15.0 -0.6**
QIZ S **S** **09 26 55.4 -0.9**
QIZ SS **SS** **09 32 40.3 +0.4**
QIZ LR LR
comp=Z,800nm,19.2s
QIZ LR LR
comp=Z,540nm,18.0s
QIZ LR LR
comp=Z,1μm,16.5s
LPAZ La Paz 89.40 228 LR LR 09 53 57.7
comp=Z,349nm,19.5s,baz=6.5,slow=34
CPUP Villa Florida 95.86 215 LR LR 09 56 23.3
comp=Z,768nm,18.1s,baz=18,slow=33
BOSA Boshof 98.86 143 LR LR 10 04 13.6
comp=Z,2μm,18.4s,baz=342,slow=37
TAOE Nuku Hiva Isla 111.46 296 *e*SS SS 09 38 22.6 +5.1
comp=Z,162nm,31.9s
TAOE Nuku Hiva Isla 111.46 296 *e*LR LR 09 55 15.5
comp=Z,711nm,25.7s
PPT2 Papeete2 123.00 302 *e*SS SS 09 40 54.4 +6.8
comp=Z,672nm,32.2s
PPT2 Papeete2 123.00 302 *e*LR LR 10 00 35.4
comp=Z,806nm,22.2s
TBI Tubuai 128.23 299 *e*SS SS 09 42 00.0 +6.9
comp=Z,365nm,39.2s

TBI Tubuai 128.23 299 *e*LR LR 10 02 48.1
comp=Z,667nm,23.5s
WRA Warramunga Arr 131.50 36 PKP **PKPdf** **09 22 38.6 -2.2**
comp=Z,0.9nm,1.1s,baz=1.3,slow=3.3,SNR=4.1
ASAR Alice Springs 134.95 38 PKP **PKPdf** **09 22 45.7 -1.6**
comp=Z,0.9nm,0.9s,baz=326,slow=2.7,SNR=4.5
DZM Mont Dzumac 137.26 354 *e*LR LR 10 07 11.9
comp=Z,1μm,25.6s
SYO Syowa Base 139.37 152 ⇓*e*PKPdf **PKiKP** **09 22 55.6 -0.6**
SYO Syowa Base 139.37 152 ⇓*ep*PKiKP **PKiKP** **09 23 02.0 +5.8**
QSPA South Pole Qui 154.66 180 PKPbc **PKPbc** **09 23 25.8 -2.0**
comp=Z,5.7nm,1.1s,baz=215,slow=2.2,SNR=8.0
QSPA South Pole Qui 154.66 180 **PKPbc** **09 23 24.5 -3.4**

ATH 24 09:07:20.3, 38.41N×20.47E, h10km±4km, ML1.2/2, Error ellipse: s-maj=4.8km s-min=1.3km az=39.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.09**	**55**	P	Pg	09 07 23.2	+0.4
FSK				S	Sg	09 07 24.3	-0.3
FSK				AML	AML	09 07 25.8	
	comp=E,385μm,0.1s						
FSK				AML	AML	09 07 27.0	
	comp=N,146μm,0.2s						
KEF5	**Kardakata, Kep**	**0.13**	**182**	P	Pg	09 07 23.5	+0.1
KEF5				S	Sg	09 07 25.9	+0.3
KEF3	**Kipouria, Keph**	**0.23**	**206**	P	Pg	09 07 24.6	-0.4
KEF3				S	Sg	09 07 28.0	-0.2
VLS	**Valsamata**	**0.25**	**159**	P	Pg	09 07 25.2	-0.2
VLS				S	Sg	09 07 29.2	+0.4
VLS				AML	AML	09 07 29.4	
	comp=N,211μm,0.2s						
VLS				AML	AML	09 07 29.4	
	comp=E,242μm,0.1s						

MAN 24 09:09:29.1, 17.84N×120.31E, h28km, mb3.9, ML2.6, MS2.2, Luzon

*BJI **24** 09:10:17.1±0.0, 44.95N×82.63E, h5km, mb3.9/1, ML3.8/10*
*NNC **24** 09:10:18.1±1.0, 44.94N×82.54E, h0km, mb4.8, mpv4.4,*
Error ellipse: s-maj=10.0km s-min=3.8km az=127.0
ISC 24 09:10:16.8±0.9, 44.83N±0.05×82.48E±0.05, h10km, n33, σ1§25/32, 10C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**1.97**	**356**	Pn	**Pn**	**09 10 50.8**	**+0.4**
	48nm,0.3s,baz=165,slow=17,SNR=2671						
MK31				⇑Sn	**Sn**	**09 11 14.9**	**-0.2**
	2μm,0.5s,baz=174,slow=27,SNR=70						
DJR	**Jarkent**	**1.98**	**256**	Pg	**Pg**	**09 10 57.2**	**+2.3**
	106nm,0.2s						
DJR				Lg	Lg	09 11 23.6	
	338nm,0.4s						
MAKZ	**Makanchi**	**2.01**	**350**	⇑Pn	**Pn**	**09 10 51.6**	**+0.8**
	6.8nm,0.2s						
MAKZ				⇑Sn	**Sn**	**09 11 17.2**	**+1.1**
	121nm,0.3s						
KAPS	**Kapalarasan**	**2.26**	**283**	Pg	**Pg**	**09 11 02.3**	**+2.2**
	80nm,0.2s						
KAPS				Lg	Lg	09 11 32.2	
	446nm,0.3s						
PDGK	**Podgornoye**	**2.62**	**236**	Pg	**Pg**	**09 11 08.4**	**+1.2**
	18nm,0.3s						
PDGK				Lg	Lg	09 11 43.0	
	418nm,0.5s						
PDGK	**Podgornoye**	**2.62**	**236**	⇓Pg	**Pg**	**09 11 08.7**	**+1.6**
	45nm,0.6s						
PDGK				⇑Lg	Lg	09 11 41.5	
	589nm,0.6s						
SHLS	**Shalkode**	**2.75**	**234**	Pg	**Pb**	**09 11 06.2**	**+0.1**
	89nm,0.2s						
SHLS				Lg	Lg	09 11 38.9	
	835nm,0.3s						
TDK	**Taldyqorghan**	**2.90**	**275**	Pg	**Pg**	**09 11 13.3**	**+0.9**
	280nm,0.7s						
TDK				Lg	Lg	09 11 51.0	
	803nm,0.5s						
UZB	**Uzynbulak**	**3.01**	**237**	Pg	**Pg**	**09 11 14.6**	**+0.1**
	35nm,0.2s						
UZB				Lg	Lg	09 11 53.2	
	417nm,0.3s						
MNBS	**Baschi**	**3.02**	**257**	Pg	**Pg**	**09 11 14.8**	**+0.2**
	115nm,0.3s						
MNBS				Lg	Lg	09 11 53.8	
	594nm,0.5s						
ZSN	**Zaisan**	**3.10**	**31**	Pg	**Pb**	**09 11 11.9**	**-0.3**
	114nm,0.3s						
ZSN				Lg	Lg	09 11 48.5	
ARXS	**Arharly**	**3.38**	**261**	Pg	**Pg**	**09 11 21.6**	**0.0**
	192nm,0.3s						
ARXS				Lg	Lg	09 12 05.4	
	508nm,0.4s						
SATY	**Saty**	**3.43**	**240**	Pg	**Pg**	**09 11 22.9**	**+0.3**
	45nm,0.4s						
SATY				Lg	Lg	09 12 06.5	
	719nm,0.3s						
WMQ	**Urumqi**	**3.88**	**103**	*e*Pn	**Pn**	**09 11 18.1**	**+1.6**
WMQ				Sn	**Sn**	**09 12 02.8**	**+0.6**
WMQ				smax	smax		
	comp=N,260nm,0.9s						
WMQ				smax	smax		
	comp=E,200nm,0.7s						
CHKK	**Chushkaly**	**4.06**	**258**	Pg	**Pg**	**09 11 34.5**	**0.0**
	20nm,0.4s						
CHKK				Lg	Lg	09 12 27.0	
	328nm,0.2s						
KOTS	**Kotyrbulak**	**4.19**	**249**	Pg	**Pg**	**09 11 36.1**	**-0.9**
	74nm,0.2s						
KOTS				Lg	Lg	09 12 29.4	
	580nm,0.4s						
MDOK	**Medeo**	**4.26**	**249**	Pg	**Pg**	**09 11 39.3**	**+0.9**
	35nm,0.6s						
MDOK				Lg	Lg	09 12 35.4	
	198nm,0.6s						
KTBS	**Karatobe**	**4.31**	**257**	Pg	**Pg**	**09 11 38.3**	**-1.1**
	24nm,0.5s						
KTBS				Lg	Lg	09 12 34.1	
	246nm,0.5s						
AAA	**Alma-Ata**	**4.33**	**250**	Pg	**Pg**	**09 11 38.8**	**-0.9**
	70nm,0.2s						
AAA				Lg	Lg	09 12 34.4	
	140nm,0.5s						
TNSS	**Tian-Shan**	**4.38**	**248**	Pg	**Pg**	**09 11 41.3**	**+0.5**
	28nm,0.4s						
TNSS				Lg	Lg	09 12 38.9	
	78nm,0.5s						
KUU	**Kurty**	**4.50**	**260**	Pg	**Pg**	**09 11 42.0**	**-1.1**
	13nm,0.3s						
KUU				Lg	Lg	09 12 40.2	
	143nm,0.5s						
MTBS	**Maitube**	**4.69**	**251**	Pg	**Pg**	**09 11 45.7**	**-0.8**
	26nm,0.3s						
MTBS				Lg	Lg	09 12 46.6	
KST	**Kastek**	**5.03**	**252**	Pg	**Pg**	**09 11 51.8**	**-1.5**
	30nm,0.4s						
KST				Lg	Lg	09 12 56.8	
	100nm,0.6s						
DGS	**Degeres**	**5.09**	**254**	Pg	**Pg**	**09 11 53.7**	**-0.6**
	28nm,0.4s						
DGS				Lg	Lg	09 13 00.8	
	176nm,0.5s						
TKM2	**Tokmak 2**	**5.33**	**251**	⇑Pg	**Pg**	**09 11 56.9**	**-1.9**
	9.9nm,0.6s						
TKM2				⇑Lg	Lg	09 13 07.4	
	81nm,0.7s						
SEM	**Semipalatinsk**	**5.78**	**346**	Pg	**Pg**	**09 12 06.0**	**-1.5**
	13nm,0.4s						
SEM				Lg	Lg	09 13 21.1	
AAK	**Ala-Archa**	**6.19**	**252**	⇑Pg	**Pg**	**09 12 12.9**	**-2.4**
	7.9nm,0.7s						
AAK				⇓Lg	Lg	09 13 35.8	
	50nm,0.8s						
KURBB	**Kurchatov Arra**	**6.38**	**337**	⇑Lg	Lg	09 13 37.3	
	203nm,0.6s						
KURK	**Kurchatov**	**6.44**	**338**	⇑Lg	Lg	09 13 37.0	
MRKS	**Merke**	**7.01**	**256**	Pg	**Pg**	**09 12 29.4**	**-1.6**
	6.4nm,0.4s						
MRKS				Lg	Lg	09 14 01.7	
	23nm,0.6s						
OTUK	**Ortayu**	**7.78**	**300**	⇑Lg	Lg	09 14 26.1	
	23nm,0.5s						
KK31	**Karatay Array**	**8.80**	**263**	⇓Lg	Lg	09 14 57.0	

12nm,0.6s,baz=69,slow=12,SNR=5.1
GTA Gaotai 13.95 107 *e*P **Pn 09 13 33.1 -1.6**
GTA pP P 09 13 37.0 -5.8
GTA sP 09 13 39.8
GTA pmax pmax
comp=Z,2.0nm,0.7s

*WEL **24** 09:13:01.9, 37°S±6°×17°8E±°, h189km±6km, M3.5/32, MLv3.5/32, Error ellipse: s-maj=0.0km s-min=0.0km az=2.4*
*IDC **24** 09:13:02.5±2.4, 37°42S×178°25E, h222km±10km, mb3.2/2, mb1 3.4/3, mb1mx3.2/25, mbtmp3.8/3, Error ellipse: s-maj=52.6km s-min=32.3km az=125.0*
ISC 24 09:13:03.8±1.2, 36°89S±0°06×177°58E±0°07, h205km±7km, n137, σ1$54/148, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
HAZ	**Te Kaha**	**0.88**	**169**	P		**Pn**	**09 13 31.5**	**-1.7**
HAZ				S		**S**	**09 13 53.3**	**-2.9**
MXZ	**Matakaoa Point**	**0.89**	**139**	P		**Pn**	**09 13 31.2**	**-2.2**
MXZ				S		**S**	**09 13 52.7**	**-3.6**
WHRZ	**Whale Island**	**1.08**	**206**	P		**Pn**	**09 13 36.0**	**+1.3**
WMGZ	**Waiomatatini S**	**1.14**	**145**	P		**Pn**	**09 13 33.7**	**-1.3**
WMGZ				S		**S**	**09 13 57.5**	**-1.7**
OPRZ	**Ohinepanea**	**1.25**	**220**	P		**Pn**	**09 13 35.5**	**-0.4**
PUZ	**Puketiti**	**1.30**	**156**	P		**Pn**	**09 13 35.0**	**-1.2**
PUZ				S		**S**	**09 13 59.8**	**-1.0**
MARZ	**Manawahe**	**1.31**	**213**	P		**Pn**	**09 13 36.4**	**0.0**
TWGZ	**Tauwhareparae**	**1.32**	**166**	P		**Pn**	**09 13 36.5**	**-0.1**
TWGZ				S		**S**	**09 14 01.3**	**-0.6**
TGRZ	**Tauranga**	**1.34**	**231**	P		**Pn**	**09 13 36.2**	**-0.4**
URZ	**Urewera**	**1.42**	**195**	P		**Pn**	**09 13 36.7**	**-0.4**
	17nm,0.3s,baz=273,slow=3.8,SNR=89							
URZ				S		**S**	**09 14 02.4**	**-0.7**
	41nm,0.3s,baz=204,slow=23,SNR=7.4							
URZ	**Urewera**	**1.42**	**195**	P		**Pn**	**09 13 36.8**	**-0.4**
URZ				S		**S**	**09 14 03.0**	**0.0**
MWZ	**Matawai**	**1.44**	**182**	P		**Pn**	**09 13 37.0**	**-0.5**
MWZ				S		**S**	**09 14 03.3**	**-0.2**
KUZ	**Kuaotunu**	**1.50**	**275**	P		**Pn**	**09 13 35.5**	**-2.4**
ONRZ	**Omania**	**1.55**	**218**	P		**Pn**	**09 13 38.9**	**+1.4**
KARZ	**Kaharoa**	**1.55**	**223**	P		**Pn**	**09 13 38.8**	**+0.4**
TKGZ	**Te Karaka**	**1.56**	**172**	P		**Pn**	**09 13 38.3**	**-0.2**
TKGZ				S		**S**	**09 14 05.7**	**+0.5**
RAGZ	**Rawiri**	**1.61**	**185**	P		**Pn**	**09 13 39.3**	**+0.3**
KMRZ	**Kaimai**	**1.62**	**233**	P		**Pn**	**09 13 39.3**	**+0.3**
CNGZ	**Carnagh Statio**	**1.67**	**163**	P		**Pn**	**09 13 39.9**	**+0.5**
MUGZ	**Murupara**	**1.71**	**202**	P		**Pn**	**09 13 40.0**	**+0.1**
HSRZ	**Hossack Road**	**1.77**	**216**	P		**Pn**	**09 13 43.0**	**+2.5**
RTZ	**Ruatahuna**	**1.79**	**195**	P		**Pn**	**09 13 40.6**	**0.0**
HRRZ	**Handcock Road**	**1.82**	**214**	P		**Pn**	**09 13 43.5**	**+2.6**
RIGZ	**Rimuhau**	**1.82**	**175**	P		**Pn**	**09 13 41.1**	**+0.2**
GRZ	**Great Barrier**	**1.82**	**290**	P		**Pn**	**09 13 37.9**	**-3.0**
TOZ	**Tahuroa Road**	**1.86**	**242**	P		**Pn**	**09 13 41.8**	**+0.6**
PRRZ	**Plateau Road**	**1.86**	**210**	P		**Pn**	**09 13 42.8**	**+1.5**
SNGZ	**Shannon Statio**	**1.90**	**186**	P		**Pn**	**09 13 41.9**	**+0.2**
SNGZ				S		**S**	**09 14 12.7**	**+1.8**
ALRZ	**Allen Road**	**1.94**	**210**	P		**Pn**	**09 13 43.4**	**+1.3**
MKAZ	**Moumakai**	**1.95**	**263**	P		**Pn**	**09 13 41.5**	**-0.6**
WIAZ	**Waiheke Island**	**1.96**	**272**	P		**Pn**	**09 13 40.9**	**-1.4**
PRGZ	**Paritu Road**	**2.04**	**173**	P		**Pn**	**09 13 43.5**	**+0.4**
MTHZ	**Maungataniwha**	**2.05**	**196**	P		**Pn**	**09 13 44.2**	**+1.0**
RAHZ	**Arahi**	**2.06**	**191**	P		**Pn**	**09 13 44.4**	**+1.1**
KUTZ	**Kaahu Road**	**2.12**	**221**	P		**Pn**	**09 13 46.1**	**+2.2**
ETAZ	**East Tamaki Re**	**2.12**	**267**	P		**Pn**	**09 13 43.4**	**-0.6**
KNZ	**Kokohu**	**2.13**	**178**	P		**Pn**	**09 13 44.3**	**+0.3**
MRHZ	**Matea Rd**	**2.15**	**205**	P		**Pn**	**09 13 45.0**	**+0.7**
MBAZ	**Motutapu North**	**2.15**	**272**	P		**Pn**	**09 13 43.2**	**-1.1**
TLZ	**Tolley Road**	**2.17**	**228**	P		**Pn**	**09 13 46.0**	**+1.6**
WHHZ	**Waihua**	**2.20**	**187**	P		**Pn**	**09 13 45.6**	**+0.8**
MHGZ	**Mahia Peninsul**	**2.27**	**174**	P		**Pn**	**09 13 46.3**	**+0.8**
NMHZ	**Naumai**	**2.29**	**195**	P		**Pn**	**09 13 47.1**	**+1.3**
AWAZ	**Awhitu Peninsu**	**2.36**	**265**	P		**Pn**	**09 13 46.3**	**-0.2**
WTAZ	**Waiatarua**	**2.41**	**268**	P		**Pn**	**09 13 46.7**	**-0.3**
ARHZ	**Aropaoanui**	**2.42**	**191**	P		**Pn**	**09 13 48.0**	**+1.0**
BKZ	**Black Stump Fm**	**2.43**	**200**	P		**Pn**	**09 13 47.8**	**+0.5**
MCHZ	**McNeill Hill**	**2.67**	**195**	P		**Pn**	**09 13 50.7**	**+1.1**
TMVZ	**Te Maari**	**2.67**	**213**	P		**Pn**	**09 13 51.6**	**+1.6**
KRVZ	**Karewarewa**	**2.68**	**214**	P		**Pn**	**09 13 51.9**	**+1.8**
ETVZ	**East Tongariro**	**2.69**	**213**	P		**Pn**	**09 13 51.4**	**+1.3**
KWHZ	**Kaweka Forest**	**2.69**	**199**	P		**Pn**	**09 13 50.8**	**+0.6**
HIZ	**Hauiti**	**2.70**	**232**	P		**Pn**	**09 13 52.6**	**+2.4**
WTVZ	**West Tongariro**	**2.72**	**215**	P		**Pn**	**09 13 52.4**	**+1.8**
OTVZ	**Oturere**	**2.73**	**213**	P		**Pn**	**09 13 52.1**	**+1.4**
TWVZ	**Taurewa**	**2.76**	**217**	P		**Pn**	**09 13 52.4**	**+1.4**
NGZ	**Ngauruhoe**	**2.77**	**214**	P		**Pn**	**09 13 52.8**	**+1.6**
WCZ	**Waipu Caves**	**2.77**	**289**	P		**Pn**	**09 13 48.8**	**-2.3**
CKHZ	**Cape Kidnapper**	**2.79**	**188**	P		**Pn**	**09 13 52.0**	**+0.7**
TUVZ	**Tukino**	**2.82**	**212**	P		**Pn**	**09 13 52.9**	**+1.2**
FWVZ	**Far West T-bar**	**2.85**	**213**	P		**Pn**	**09 13 53.4**	**+1.2**
BHHZ	**Black Hill Sta**	**2.86**	**204**	P		**Pn**	**09 13 52.6**	**+0.5**
WHVZ	**Whangaehu Hut**	**2.86**	**213**	P		**Pn**	**09 13 53.6**	**+1.3**
WNVZ	**Wahianoa**	**2.89**	**212**	P		**Pn**	**09 13 53.5**	**+0.9**
MOVZ	**Moawhango**	**2.90**	**208**	P		**Pn**	**09 13 53.8**	**+0.5**
KRHZ	**Kereru**	**2.91**	**199**	P		**Pn**	**09 13 52.9**	**+0.3**
KAHZ	**Kahuranaki**	**2.95**	**191**	P		**Pn**	**09 13 53.9**	**+0.8**
PKVZ	**Pokaka**	**2.97**	**216**	P		**Pn**	**09 13 54.9**	**+1.4**
MTVZ	**Mangateitei**	**3.00**	**213**	P		**Pn**	**09 13 54.9**	**+1.2**
VRZ	**Vera Road**	**3.15**	**224**	P		**Pn**	**09 13 58.0**	**+2.5**
PXZ	**Pawanui**	**3.19**	**190**	P		**Pn**	**09 13 56.1**	**+0.3**
PNHZ	**Pukenui**	**3.21**	**199**	P		**Pn**	**09 13 56.2**	**0.0**
WPHZ	**Waipukurau**	**3.29**	**195**	P		**Pn**	**09 13 57.5**	**+0.3**
TSZ	**Takapari Road**	**3.41**	**201**	P		**Pn**	**09 13 58.4**	**-0.1**
PRHZ	**Porangahau**	**3.45**	**192**	P		**Pn**	**09 13 59.5**	**+0.4**
DVHZ	**Dannevirke**	**3.58**	**198**	P		**Pn**	**09 14 00.7**	**+0.1**
OUZ	**Omahuta**	**3.63**	**296**	P		**Pn**	**09 13 58.8**	**-2.4**
NEZ	**North Egmont**	**3.63**	**228**	P		**Pn**	**09 14 04.4**	**+3.1**
PKE	**Pukeiti**	**3.65**	**230**	P		**Pn**	**09 14 04.7**	**+3.2**
ANWZ	**Angora Road**	**3.67**	**193**	P		**Pn**	**09 14 01.8**	**+0.2**
KHEZ	**Kahui Hut**	**3.70**	**228**	P		**Pn**	**09 14 04.9**	**+2.8**
POWZ	**Post Office Ro**	**3.77**	**202**	P		**Pn**	**09 14 03.2**	**+0.2**
PRWZ	**Peri Road**	**3.87**	**198**	P		**Pn**	**09 14 04.5**	**+0.5**
BFZ	**Birch Farm**	**3.93**	**195**	P		**Pn**	**09 14 04.5**	**+0.3**
MRZ	**Mangatainoka R**	**4.08**	**202**	P		**Pn**	**09 14 06.1**	**-0.6**
TIWZ	**Tintock**	**4.10**	**198**	P		**Pn**	**09 14 06.9**	**-0.1**
CPWZ	**Castlepoint**	**4.16**	**195**	P		**Pn**	**09 14 08.2**	**+0.6**
CPWZ	**Castlepoint**	**4.16**	**195**	P		**S**	**09 14 56.1**	**-1.4**
HOWZ	**Holdsworth Sta**	**4.31**	**201**	P		**Pn**	**09 14 08.9**	**-0.8**
HOWZ	**Holdsworth Sta**	**4.31**	**201**	P		**S**	**09 15 00.5**	**-0.6**
OGWZ	**Otaki Gorge**	**4.35**	**205**	P		**Pn**	**09 14 09.7**	**-0.4**
TMWZ	**Te Maipa**	**4.41**	**197**	P		**Pn**	**09 14 10.4**	**-0.5**
TMWZ	**Te Maipa**	**4.41**	**197**	P		**S**	**09 14 59.2**	**-4.1**
KIW	**Kapiti Island**	**4.48**	**207**	P		**Pn**	**09 14 11.0**	**-0.7**
MTW	**Mount Morrison**	**4.56**	**200**	P		**Pn**	**09 14 11.9**	**-0.8**
MTW	**Mount Morrison**	**4.56**	**200**	P		**S**	**09 15 03.0**	**-3.6**
CAW	**Cannon Point**	**4.64**	**204**	P		**Pn**	**09 14 12.8**	**-1.0**
TRWZ	**Traveller**	**4.74**	**197**	P		**Pn**	**09 14 14.3**	**-0.6**
TRWZ	**Traveller**	**4.74**	**197**	P		**S**	**09 15 07.5**	**-3.2**
PAWZ	**Paruwai Farm**	**4.79**	**200**	P		**Pn**	**09 14 14.7**	**-0.9**
PAWZ	**Paruwai Farm**	**4.79**	**200**	P		**S**	**09 15 10.6**	**-1.3**
DUWZ	**D'Urville Isla**	**4.84**	**215**	P		**Pn**	**09 14 15.3**	**-0.9**
MSWZ	**Moikau Station**	**4.87**	**201**	P		**Pn**	**09 14 15.5**	**-1.2**
MSWZ	**Moikau Station**	**4.87**	**201**	P		**S**	**09 15 12.3**	**-1.5**
WEL	**Wellington**	**4.90**	**206**	P		**Pn**	**09 14 16.1**	**-0.9**
BHW	**Baring Head**	**4.98**	**204**	P		**Pn**	**09 14 16.7**	**-1.2**
BHW	**Baring Head**	**4.98**	**204**	P		**S**	**09 15 15.5**	**-0.7**
PLWZ	**Palliser**	**5.01**	**200**	P		**Pn**	**09 14 17.2**	**-1.2**
PLWZ	**Palliser**	**5.01**	**200**	P		**S**	**09 15 13.4**	**-3.6**
TCW	**Tory Channel**	**5.02**	**210**	P		**Pn**	**09 14 17.4**	**-1.1**
TCW	**Tory Channel**	**5.02**	**210**	P		**S**	**09 15 17.4**	**+0.2**
TUWZ	**Tuamarina**	**5.34**	**211**	P		**Pn**	**09 14 21.3**	**-1.3**
TUWZ	**Tuamarina**	**5.34**	**211**	P		**S**	**09 15 23.7**	**-0.9**
NNZ	**Nelson**	**5.42**	**216**	P		**Pn**	**09 14 22.9**	**-0.7**
QRZ	**Quartz Range**	**5.56**	**224**	P		**Pn**	**09 14 24.2**	**-1.3**
BSWZ	**Blackbirch Sta**	**5.61**	**210**	P		**Pn**	**09 14 25.2**	**-0.8**
THZ	**Tophouse**	**6.07**	**215**	P		**Pn**	**09 14 30.6**	**-1.4**
KHZ	**Kahutara**	**6.34**	**208**	P		**Pn**	**09 14 34.0**	**-1.4**
DSZ	**Denniston Nort**	**6.60**	**221**	P		**Pn**	**09 14 37.4**	**-1.4**
GVZ	**Greta Valley S**	**7.00**	**208**	P		**Pn**	**09 14 42.5**	**-1.5**
LTZ	**Lake Taylor**	**7.16**	**213**	P		**Pn**	**09 14 44.0**	**-2.1**
INZ	**Inchbonnie**	**7.50**	**217**	P		**Pn**	**09 14 49.6**	**-0.9**
OKCZ	**Okains Bay**	**7.65**	**205**	P		**Pn**	**09 14 51.5**	**-0.9**
OXZ	**Oxford**	**7.70**	**212**	P		**Pn**	**09 14 50.8**	**-2.3**
MQZ	**McQueen's Vall**	**7.78**	**207**	P		**Pn**	**09 14 51.4**	**-2.6**
AKCZ	**Akaroa Harbour**	**7.83**	**206**	P		**Pn**	**09 14 53.2**	**-1.6**
RACZ	**Rakaia**	**7.99**	**210**	P		**Pn**	**09 14 54.4**	**-2.4**
MHCZ	**Mount Hutt**	**8.07**	**213**	P		**Pn**	**09 14 56.7**	**-1.3**
WACZ	**Wakanui South**	**8.29**	**210**	P		**Pn**	**09 14 59.2**	**-1.5**
RPZ	**Rata Peaks**	**8.44**	**214**	P		**Pn**	**09 15 00.3**	**-2.4**
	0.6nm,0.3s,baz=129,slow=20,SNR=1.8							
RPZ				S		**S**	**09 16 33.1**	**-4.7**
	0.9nm,0.3s,baz=299,slow=20,SNR=7.3							
RPZ	**Rata Peaks**	**8.44**	**214**	P		**Pn**	**09 15 01.7**	**-1.0**
ARCZ	**Arundel**	**8.57**	**213**	P		**Pn**	**09 15 03.3**	**-1.1**
ODZ	**Otahua Downs**	**9.68**	**211**	P		**Pn**	**09 15 17.4**	**-1.4**
JCZ	**Jackson Bay**	**9.81**	**220**	P		**Pn**	**09 15 19.4**	**-1.1**
ASAR	**Alice Springs**	**39.62**	**277**	P		**P**	**09 20 18.1**	**+2.3**
	0.8nm,0.5s,baz=117,slow=7.9,SNR=22							
WRA	**Warramunga Arr**	**41.23**	**282**	P		**P**	**09 20 30.6**	**+1.7**
	0.6nm,0.4s,baz=121,slow=7.5,SNR=14							
FINES	**FINESS Array B**	**149.62**	**333**	PKPbc		**PKPdf**	**09 32 25.7**	**+2.4**
	3.8nm,1.1s,baz=64,slow=6.5,SNR=1.8							

*NEIC **24** 09:16:28.3±1.7, 38°79N±0°05×25°66E±0°06, h9km±12km, Error ellipse: s-maj=8.2km s-min=6.2km az=210.0*
*ATH **24** 09:16:28.3, 38°78N×25°72E, h30km, ML3.8/19, Error ellipse: s-maj=1.6km s-min=0.8km az=109.0*
*THE **24** 09:16:28.9, 38°80N×25°70E, h4km±1km, ML3.8/12, Error ellipse: s-maj=1.7km s-min=0.5km az=354.0*
*ISK **24** 09:16:28.4, 38°82N×25°66E, h12km, ML4.1/31*
*DDA **24** 09:16:29.1, 38°83N×25°74E, h34km±1km, MW3.9*
*IDC **24** 09:16:29.0±5.3, 38°76N×25°92E, h0km, mb3.8/2, mb1 3.8/3, mb1mx3.4/43, mbtmp3.8/3, ML3.6/1, Error ellipse: s-maj=147.4km s-min=35.7km az=180.0*
ISC 24 09:16:29.5±0.9, 38°80N±0°02×25°71E±0°02, h14km±7km, n211, σ0$79/240, 10C-12D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
PSRA	**Psara**	**0.28**	**204**	P		**Pg**	**09 16 35.4**	**0.0**
PSRA				S		**Sg**	**09 16 40.2**	**+0.8**
PSRA				AML		AML	09 16 40.4	
PSRA				AML		AML	09 16 41.8	
SIGR	**SIGRI**	**0.43**	**15**	P		**Pg**	**09 16 37.9**	**-0.2**
SIGR				S		**Sg**	**09 16 44.1**	**+0.3**
SIGR				AML		AML	09 16 44.9	
	comp=N,66429μm,0.4s							
SIGR				AML		AML	09 16 45.0	
	comp=E,75090μm,0.4s							
SIGR	**SIGRI**	**0.43**	**15**	PG		**Pg**	**09 16 37.9**	**-0.2**
SIGR				SG		**Sg**	**09 16 43.6**	**-0.2**
SIGR	**SIGRI**	**0.43**	**15**	P		**Pg**	**09 16 37.9**	**-0.2**
SIGR				S		**Sg**	**09 16 44.0**	**+0.2**
	comp=E,35μm,0.4s							
PRK	**Paraskevi**	**0.62**	**44**	P		**Pb**	**09 16 42.4**	**+0.2**
PRK				S		**Sb**	**09 16 50.2**	**-0.6**
	comp=E,20μm,0.4s							
URLA	**Izmir**	**0.82**	**122**	PG		**Pb**	**09 16 45.5**	**-0.1**
URLA				SG		**Sn**	**09 16 58.1**	**-0.5**
URLA	**Izmir**	**0.82**	**122**	*i* P		**Pb**	**09 16 45.4**	**-0.1**
URLA				*i* S		**Sb**	**09 16 56.5**	**0.0**
URLA				IAML			09 16 58.0	
	comp=E,2μm,0.7s							
URLA				IAML			09 17 01.0	
	comp=N,2μm,0.2s							
SKY	**Skiros Island**	**0.91**	**275**	P		**Pb**	**09 16 47.1**	**-0.1**
SKY				AML		AML	09 17 06.4	
	comp=E,7998μm,0.2s							
SKY				AML		AML	09 17 08.6	
	comp=N,8302μm,0.5s							
SKY	**Skiros Island**	**0.91**	**275**	P		**Pb**	**09 16 47.0**	**-0.1**
SKY				S		**Sb**	**09 16 59.0**	**-0.1**
	comp=N,4μm,0.5s							
AYVA	**Ayvalik**	**0.92**	**56**	*i* P		**Pg**	**09 16 47.1**	**-0.1**
AYVA				*i* S		**Sb**	**09 16 58.4**	**-0.9**
AYVA				IAML			09 17 01.0	
	comp=E,4μm,1.0s							
AYVA				IAML			09 17 01.0	
	comp=N,6μm,0.5s							
EFSA	**Agios Efstrati**	**0.93**	**323**	P		**Pb**	**09 16 47.2**	**-0.2**
EFSA				AML		AML	09 17 01.3	
	comp=E,31662μm,0.7s							
EFSA				AML		AML	09 17 01.3	
	comp=N,20006μm,0.5s							
DKL	**Dikili**	**0.97**	**73**	PG		**Pg**	**09 16 48.2**	**-0.1**
BOZC	**Bozcaada**	**1.07**	**14**	PG		**Pb**	**09 16 48.9**	**-1.0**
BOZC				SG		**Sg**	**09 17 04.5**	**+0.2**
BOZC	**Bozcaada**	**1.07**	**14**	*i* P		**Pb**	**09 16 49.0**	**-1.0**
BOZC				*i* S		**Sb**	**09 17 03.5**	**-0.3**
BOZC				IAML			09 17 07.0	
	comp=N,2μm,0.2s							
BOZC				IAML			09 17 08.0	
	comp=E,2μm,0.2s							
ZEDA	**zmir-Bergama**	**1.08**	**81**	*i* P		**Pb**	**09 16 49.5**	**-0.4**
ZEDA				*i* S		**Sg**	**09 17 03.8**	**-0.6**
ZEDA				IAML			09 17 04.0	
	comp=N,2μm,0.7s							
ZEDA				IAML			09 17 06.0	
	comp=E,2μm,0.3s							
EZN	**Ezine**	**1.13**	**25**	PN		**Pb**	**09 16 50.1**	**-0.8**
EZN				SN		**Sg**	**09 17 06.3**	**+0.2**
EZN	**Ezine**	**1.13**	**25**	P		**Pb**	**09 16 50.0**	**-0.8**
EZN				S		**Sg**	**09 17 06.5**	**+0.4**
	comp=E,6μm,0.5s							
BAYC	**CANAKKALE_Bayr**	**1.14**	**34**	*i* P		**Pb**	**09 16 49.9**	**-1.2**
BAYC				*i* S		**Sb**	**09 17 05.7**	**-0.1**
BAYC				IAML			09 17 08.0	
	comp=E,5μm,0.5s							
BAYC				IAML			09 17 10.0	
	comp=N,2μm,0.3s							
LIA	**Limnos Island**	**1.17**	**340**	P		**Pn**	**09 16 50.9**	**-0.6**
LIA				AML		AML	09 17 08.1	
	comp=N,8685μm,0.7s							
LIA				AML		AML	09 17 09.7	
	comp=E,11221μm,0.6s							
LIA	**Limnos Island**	**1.17**	**340**	P		**Pn**	**09 16 50.8**	**-0.7**
LIA				S		**Sb**	**09 17 06.3**	**-0.3**
	comp=E,5μm,0.6s							
DGB	**zmir**	**1.18**	**129**	*i* P		**Pn**	**09 16 51.4**	**-0.3**
DGB				*i* S		**Sg**	**09 17 07.4**	**-0.4**
DGB				IAML			09 17 10.0	
	comp=E,4μm,0.4s							
DGB				IAML			09 17 11.0	
	comp=N,2μm,0.6s							
KYMI	**Kymi, Euboea I**	**1.27**	**263**	P		**Pn**	**09 16 51.7**	**-1.2**
KYMI				AML		AML	09 17 20.1	
	comp=E,3108μm,0.6s							
KYMI				AML		AML	09 17 20.7	
	comp=N,3387μm,0.5s							
KYMI	**Kymi, Euboea I**	**1.27**	**263**	P		**Pn**	**09 16 52.1**	**-0.8**
GADA	**Gvkgeada**	**1.40**	**6**	PN		**Pn**	**09 16 53.9**	**-0.7**
GADA	**Gvkgeada**	**1.40**	**6**	P		**Pn**	**09 16 53.6**	**-1.0**
GADA				S		**Sb**	**09 17 14.0**	**+0.9**
	comp=N,2μm,0.8s							
GOKA	**anakkale-Gk**	**1.40**	**6**	*i* P		**Pn**	**09 16 53.8**	**-0.8**
GOKA				*i* S		**Sn**	**09 17 12.4**	**-0.4**
GOKA				IAML			09 17 16.0	
	comp=N,3μm,0.6s							
GOKA				IAML			09 17 21.0	
	comp=E,2μm,0.5s							
SMG	**Samos**	**1.40**	**141**	P		**Pn**	**09 16 54.2**	**-0.5**
SMG				AML		AML	09 17 17.1	
	comp=E,23749μm,0.4s							
SMG				AML		AML	09 17 17.3	
	comp=N,16222μm,0.6s							
SMG	**Samos**	**1.40**	**141**	P		**Pn**	**09 16 54.2**	**-0.5**
SMG				S		**Sg**	**09 17 14.6**	**-0.2**
	comp=N,10μm,0.5s							
EREA	**Eretria**	**1.45**	**255**	P		**Pn**	**09 16 54.6**	**-0.7**
EREA				AML		AML	09 17 24.8	
	comp=N,3931μm,0.8s							
EREA				AML		AML	09 17 25.0	
	comp=E,3770μm,0.5s							
EREA	**Eretria**	**1.45**	**255**	P		**Pn**	**09 16 54.6**	**-0.7**
AOS	**Alonnisos**	**1.48**	**285**	P		**Pn**	**09 16 55.0**	**-0.7**
AOS	**Alonnisos**	**1.48**	**285**	PN		**Pn**	**09 16 55.0**	**-0.7**
AOS	**Alonnisos**	**1.48**	**285**	P		**Pn**	**09 16 55.2**	**-0.5**
DION	**Dionisos Attik**	**1.57**	**243**	P		**Pn**	**09 16 56.3**	**-0.8**
DION				AML		AML	09 17 22.2	
	comp=N,11278μm,0.5s							
DION				AML		AML	09 17 27.9	
	comp=E,10788μm,0.6s							
DION	**Dionisos Attik**	**1.57**	**243**	P		**Pn**	**09 16 56.4**	**-0.7**
DION				S		**Sn**	**09 17 18.4**	**+1.2**
	comp=E,5μm,0.5s							

GCAM	**G?zelcaml?**	**1.62**	**132**	PN		**Pn**	**09 16 58.0**	**+0.3**
GCAM	**G?zelcaml?**	**1.62**	**132**	*i* P		**Pb**	**09 16 59.3**	**+0.1**
GCAM				*i* S		**Sg**	**09 17 20.6**	**-1.2**
GCAM				IAML			09 17 23.0	
	comp=N,5μm,0.5s							
GCAM				IAML			09 17 24.0	
	comp=E,2μm,0.6s							
PTL	**Penteli**	**1.63**	**243**	P		**Pn**	**09 16 57.2**	**-0.7**
PTL				AML		AML	09 17 26.2	
	comp=N,4439μm,0.8s							
PTL				AML		AML	09 17 28.7	
	comp=E,3411μm,0.6s							
PTL	**Penteli**	**1.63**	**243**	P		**Pn**	**09 16 57.2**	**-0.7**
AKS	**Akhisar**	**1.64**	**87**	PN		**Pn**	**09 16 58.2**	**+0.2**
AKHS	**Akhisar**	**1.64**	**87**	*i* P		**Pn**	**09 16 57.8**	**-0.2**
AKHS				IAML			09 17 25.0	
	comp=E,370nm,0.5s							
STEP	**BALIKESIR_Sava**	**1.66**	**69**	*i* P		**Pn**	**09 16 58.4**	**+0.1**
STEP				*i* S		**Sn**	**09 17 19.4**	**-0.1**
STEP				IAML			09 17 25.0	
	comp=E,3μm,0.5s							
STEP				IAML			09 17 29.0	
	comp=N,3μm,1.0s							
SMTH	**Samothraki Isl**	**1.68**	**355**	P		**Pn**	**09 16 57.5**	**-1.0**
SMTH	**Samothraki Isl**	**1.68**	**355**	P		**Pn**	**09 16 57.4**	**-1.0**
GELI	**Tayfur-Gelibol**	**1.70**	**20**	PN		**Pn**	**09 16 58.5**	**-0.3**
GOMA	**Golmarmara-Man**	**1.73**	**92**	PN		**Pn**	**09 16 59.4**	**+0.3**
ATHU	**Athens Univers**	**1.73**	**242**	P		**Pn**	**09 16 58.4**	**-0.8**
APE	**Apeiranthos**	**1.73**	**185**	P		**Pn**	**09 16 58.2**	**-1.1**
APE				AML		AML	09 17 28.5	
	comp=N,2083μm,0.3s							
APE				AML		AML	09 17 30.6	
	comp=E,2202μm,0.4s							
APE	**Apeiranthos**	**1.73**	**185**	⇓P		**Pn**	**09 16 58.1**	**-1.1**
APE	**Apeiranthos**	**1.73**	**185**	PN		**Pn**	**09 16 58.4**	**-0.9**
APE	**Apeiranthos**	**1.73**	**185**	P		**Pn**	**09 16 58.2**	**-1.1**
APE				S		**Sn**	**09 17 20.6**	**-0.6**
	comp=E,1μm,0.4s							
BALY	**Balya**	**1.75**	**57**	*i* P		**Pn**	**09 16 59.4**	**-0.1**
BALY				*i* S		**Sb**	**09 17 22.0**	**-1.4**
BALY				IAML			09 17 27.0	
	comp=E,841nm,0.5s							
LPK	**Lapseki**	**1.77**	**27**	PN		**Pn**	**09 16 59.4**	**-0.3**
ATH	**Athens Observa**	**1.77**	**243**	P		**Pn**	**09 16 58.9**	**-0.9**
ATH				AML		AML	09 17 28.4	
	comp=E,4309μm,0.3s							
ATH				AML		AML	09 17 32.2	
	comp=N,3879μm,0.7s							
ATH	**Athens Observa**	**1.77**	**243**	P		**Pn**	**09 16 59.1**	**-0.7**
ATH				S		**Sn**	**09 17 23.3**	**+1.2**
	comp=N,2μm,0.5s							
VLY	**Voula,Athens**	**1.78**	**239**	P		**Pn**	**09 16 58.9**	**-1.0**
VLY				AML		AML	09 17 32.8	
	comp=N,3811μm,1.0s							
VLY				AML		AML	09 17 33.3	
	comp=E,3768μm,0.5s							
VLY	**Voula,Athens**	**1.78**	**239**	P		**Pn**	**09 16 59.2**	**-0.7**
BALB	**Balikesir**	**1.88**	**63**	PN		**Pn**	**09 17 01.4**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.91**	**116**	PN		**Pn**	**09 17 01.9**	**+0.1**
PAIG	**Palíouri**	**1.94**	**306**	P		**Pn**	**09 17 01.4**	**-0.6**
PAIG				AML		AML	09 17 33.

SRS	**Serrai**	**2.83**	**326**	P	**Pn**	**09 17 13.7**	**-0.6**
TURN	**Turunc**	**2.85**	**134**	*e*P	**Pn**	**09 17 12.6**	**-2.0**
TAVA	**DENIZLI_Tavas**	**2.85**	**117**	*i* P	**Pn**	**09 17 15.6**	**+0.8**
TAVA				IAML		09 18 05.0	
	comp=N,109nm,1.4s						
TAVA				IAML		09 18 07.0	
	comp=E,112nm,1.1s						
KDZ	**Kurdzhali**	**2.86**	**356**	PN	**Pn**	**09 17 14.2**	**-0.5**
TRIZ	**Trizonia**	**2.88**	**262**	P	**Pn**	**09 17 15.1**	**0.0**
TRIZ	**Trizonia**	**2.88**	**262**	P	**Pn**	**09 17 15.1**	**0.0**
SERG	**Sergoula**	**2.89**	**263**	P	**Pn**	**09 17 15.2**	**0.0**
KLV	**Kalavryta, Ach**	**2.90**	**256**	P	**Pn**	**09 17 15.0**	**-0.3**
MDNY	**Mudanya-Bursa**	**2.91**	**56**	PN	**Pn**	**09 17 16.2**	**+0.8**
NVR	**Nevrokopi**	**2.92**	**331**	P	**Pn**	**09 17 15.5**	**-0.1**
GDZ	**Gediz**	**2.95**	**83**	*i* P	**Pn**	**09 17 17.0**	**+0.8**
GDZ				IAML		09 18 05.0	
	comp=E,54nm,0.4s						
GDZ				IAML		09 18 17.0	
	comp=N,59nm,0.5s						
ANX	**Ano Chora**	**2.97**	**267**	P	**Pn**	**09 17 16.9**	**+0.5**
ANX	**Ano Chora**	**2.97**	**267**	P	**Pn**	**09 17 16.7**	**+0.3**
THL	**Klokotos Trika**	**2.97**	**286**	P	**Pn**	**09 17 16.8**	**+0.5**
ARMT	**Armutlu**	**3.00**	**53**	PN	**Pn**	**09 17 17.8**	**+1.1**
EFP	**Efpalio**	**3.00**	**264**	P	**Pn**	**09 17 16.7**	**0.0**
VLI	**Veliai**	**3.03**	**227**	P	**Pn**	**09 17 16.3**	**-0.7**
DALY	**Dalyan (Mula)**	**3.06**	**129**	*e*P	**Pn**	**09 17 18.4**	**+1.0**
IGD	**Bursa**	**3.07**	**60**	*e*P	**Pn**	**09 17 18.6**	**+1.0**
ARG	**Arkhangelos**	**3.21**	**143**	P	**Pn**	**09 17 19.2**	**-0.4**
ITM	**Ithomi**	**3.40**	**243**		**Pn**	**09 17 22.5**	**+0.3**
GOLH	**Golhisar**	**3.42**	**116**	*i* P	**Pn**	**09 17 24.1**	**+1.6**
FETY	**Fethiye**	**3.44**	**128**	*i* P	**Pn**	**09 17 24.6**	**+1.9**
KARP	**Karpathos**	**3.45**	**160**		**Pn**	**09 17 22.9**	**+0.1**
VAY	**Valandovo**	**3.49**	**317**	*i* Pn	**Pn**	**09 17 24.2**	**+0.8**
KZIL	**AFYON_Kizioren**	**3.52**	**97**	*i* P	**Pn**	**09 17 24.4**	**+0.5**
NPS	**Neapolis**	**3.53**	**181**	P	**Pn**	**09 17 23.5**	**-0.5**
IDI	**Anoyia**	**3.57**	**191**	⇓P	**Pn**	**09 17 24.2**	**-0.3**
IDI	**Anoyia**	**3.57**	**191**		**Pn**	**09 17 23.3**	**-1.2**
BRDR	**BURDUR-Merkez**	**3.60**	**106**	*i* P	**Pn**	**09 17 25.5**	**+0.6**
ZKR	**Zakros**	**3.70**	**174**	P	**Pn**	**09 17 25.9**	**-0.4**
BORA	**Eskisehir**	**3.83**	**72**	*i* P	**Pn**	**09 17 27.4**	**-0.8**
ELL	**Elmali**	**3.91**	**120**		**Pn**	**09 17 29.0**	**-0.3**
ISP	**Isparta**	**3.91**	**103**	Pn	**Pn**	**09 17 28.9**	**-0.4**
GEYV	**SAKARYA_Geyve**	**3.92**	**63**	*e*P	**Pn**	**09 17 30.4**	**+1.1**
STIP	**Stip**	**3.95**	**318**	*i* Pn	**Pn**	**09 17 29.4**	**-0.4**
AKAS	**Kas**	**4.02**	**128**	*i* P	**Pn**	**09 17 32.9**	**+2.1**
AKAS	**Kas**	**4.02**	**128**		**Pn**	**09 17 32.9**	**+2.1**
KAND	**Kocaeli-Kandir**	**4.14**	**55**	*i* P	**Pn**	**09 17 32.6**	**+0.3**
OHR	**Ohrid**	**4.43**	**303**	*e*Pn	Pn	09 17 41.3	+5.0
SAHE	**Sakarya_HENDEK**	**4.46**	**61**	*i* P	**Pn**	**09 17 37.0**	**+0.3**
MDUB	**Mudurnu**	**4.55**	**67**	Pn	**Pn**	**09 17 37.8**	**-0.3**
AUMIH	**MIHALICIK**	**4.60**	**75**	*i* P	**Pn**	**09 17 39.6**	**+0.8**
RAZG	**Razgrad**	**4.80**	**7**	⇑P	**Pn**	**09 17 41.1**	**-0.3**
ICOR	**Ion Corvin**	**5.54**	**16**	⇓P	**Pn**	**09 17 51.7**	**+0.2**
SCTE	**Santa Cesarea**	**5.75**	**285**	Pn	**Pn**	**09 17 52.9**	**-1.5**
TIRR	**Tirgusor**	**6.00**	**19**		**Pn**	**09 17 57.0**	**-0.9**
SRE	**Strehaia**	**6.15**	**343**	⇑P	**Pn**	**09 18 00.3**	**+0.4**
BR131	**Keskin Array S**	**6.22**	**79**		**Pn**	**09 18 02.4**	**+1.4**
BRTR	**Keskin Array B**	**6.22**	**79**	Pn	**Pn**	**09 18 02.5**	**+1.4**
	comp=N,1.6nm,0.3s,baz=256,slow=12,SNR=18						
BRTR				Sn	**Sn**	**09 19 09.9**	**-2.1**
	baz=264,slow=12,SNR=1.0						
BRTR				Lg	Lg	09 19 42.5	
	comp=N,0.1nm,0.3s,baz=264,slow=16,SNR=1.3						
BRTR	**Keskin Array B**	**6.22**	**79**		**Pn**	**09 18 00.6**	**-0.5**
TPGR	**Topolog**	**6.38**	**18**	⇓P	**Pn**	**09 18 04.6**	**+1.5**
HERR	**Herculane**	**6.55**	**339**	⇑P	**Pn**	**09 18 05.0**	**-0.4**
VOIR		**6.65**	**356**	⇑P	**Pn**	**09 18 06.5**	**-0.4**
MDVR	**Moldovita**	**6.68**	**335**	⇓P	**Pn**	**09 18 07.6**	**+0.3**
MLR	**Muntele Rosu**	**6.69**	**1**	⇓P	**Pn**	**09 18 08.3**	**+0.8**
MLR	**Muntele Rosu**	**6.69**	**1**		**Pn**	**09 18 08.2**	**+0.8**
BISRR	**Bisoca**	**6.78**	**6**	⇑P	**Pn**	**09 18 10.2**	**+1.5**
GZR	**Gura Zlata**	**6.94**	**343**	⇑P	**Pn**	**09 18 10.6**	**-0.3**
TIP	**Timpagrande**	**6.99**	**276**	⇑P	**Pn**	**09 18 10.9**	**-0.6**
TIP	**Timpagrande**	**6.99**	**276**		**Pn**	**09 18 12.1**	**+0.6**
PLOR	**Plostina**	**7.08**	**5**	⇓P	**Pn**	**09 18 13.9**	**+1.2**
VRI	**Vrincioaia**	**7.10**	**6**	⇓P	**Pn**	**09 18 14.0**	**+1.0**
DOPR	**Dopca**	**7.17**	**358**	⇓P	**Pn**	**09 18 15.1**	**+1.2**
BZS	**Buzias**	**7.46**	**337**	⇑P	**Pn**	**09 18 18.6**	**+0.7**
TESR	**Tescani**	**7.74**	**5**	⇑P	**Pn**	**09 18 22.8**	**+1.1**
SIRR	**Siria**	**8.04**	**339**	⇓P	**Pn**	**09 18 25.4**	**-0.5**
BIZ	**Bicaz**	**8.14**	**2**	⇑P	**Pn**	**09 18 28.9**	**+1.6**
DRGR		**8.29**	**346**	⇑P	**Pn**	**09 18 30.7**	**+1.4**
BURAR	**Bucovina Array**	**8.82**	**358**	⇓P	**Pn**	**09 18 39.0**	**+2.4**
BUR08	**Bucovina Ar. S**	**8.85**	**358**		**Pn**	**09 18 38.8**	**+1.7**
NRCA	**Norcia**	**10.36**	**297**	Pn	**Pn**	**09 18 57.4**	**-0.4**
MKAR	**Makanchi Array**	**41.48**	**60**	P	**P**	**09 24 17.1**	**+1.1**
	comp=N,0.5nm,0.5s,baz=263,slow=8.9,SNR=5.5						
ZALV	**Zalesovo Beam**	**42.23**	**49**	P	**P**	**09 24 22.0**	**+0.1**
	comp=N,0.5nm,0.3s,baz=286,slow=5.8,SNR=2.0						

*GUC **24** 09:17:31.5±0.7,22°.16S×67°.67W,h210km±5km,ML4.0*
*SCB **24** 09:17:35.5±2.2,22°.11S×67°.45W,h145km±17km,ML3.6/3,*
Error ellipse: s-maj=7.0km s-min=5.9km az=0.0

ISC 24 09:17:30.0±1.6,22°.16S±0°.04×67°.45W±0°.05,
h190km±13km,n37,σ1§60/60,14C-4D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.43**	**251**	⇓*i*P	**Pn**	**09 18 03.8**	**+1.2**
LVC				*i* S	**Sn**	**09 18 28.1**	**+0.3**
PB09	**IPOC Station P**	**1.70**	**282**	⇑*i*P	**Pn**	**09 18 06.5**	**+1.5**
PB09				*i* S	**Sn**	**09 18 32.7**	**+0.6**
PB09	**IPOC Station P**	**1.70**	**282**	P	**Pn**	**09 18 06.5**	**+1.5**
YJA	**Yavi**	**1.79**	**91**	P	**Pn**	**09 18 07.4**	**+1.2**
MOCB	**Mochara**	**1.91**	**62**	P	**Pn**	**09 18 08.5**	**+1.1**
MOCB				S	**Sn**	**09 18 32.3**	**-4.0**
PB06	**IPOC Station P**	**2.04**	**254**	⇑*i*P	**Pn**	**09 18 09.3**	**+0.9**
PB06				*i* S	**Sn**	**09 18 38.1**	**-0.1**
PB06				IAML		09 18 39.7	
	comp=N,527nm,0.1s						
PB06	**IPOC Station P**	**2.04**	**254**	P	**Pn**	**09 18 09.3**	**+0.9**
PB15	**IPOC Station P**	**2.14**	**240**	⇑*i*P	**Pn**	**09 18 10.9**	**+1.4**
PB15				*i* S	**Sn**	**09 18 40.6**	**+0.3**
PB03	**IPOC Station P**	**2.14**	**273**	*e*P	**Pn**	**09 18 10.3**	**+0.8**
PB03				*i* S	**Sn**	**09 18 39.4**	**-0.8**
PB03				IAML		09 18 40.2	
	comp=N,1μm,0.2s						
PB01	**IPOC Station P**	**2.20**	**300**	⇑*i*P	**Pn**	**09 18 11.0**	**+0.9**
PB01				*i* S	**Sn**	**09 18 40.7**	**-0.5**
PB01				IAML		09 18 42.0	
	comp=E,569nm,0.4s						
PB01	**IPOC Station P**	**2.20**	**300**	P	**Pn**	**09 18 11.1**	**+1.0**
PB01				S	**Sn**	**09 18 39.0**	**-2.2**
PB01				IAML		09 18 42.6	
	comp=E,385nm,0.2s						
PB07	**IPOC Station P**	**2.31**	**280**	⇑*i*P	**Pn**	**09 18 12.3**	**+1.0**
PB07				*i* S	**Sn**	**09 18 42.3**	**-1.1**
PB07				IAML		09 18 43.2	
	comp=N,685nm,0.3s						
PB04	**IPOC Station P**	**2.51**	**266**	⇑*i*P	**Pn**	**09 18 14.4**	**+0.8**
PB04				*i* S	**Sn**	**09 18 46.5**	**-1.0**
PB04				IAML		09 18 48.7	
	comp=N,879nm,0.2s						
PB04	**IPOC Station P**	**2.51**	**266**	P	**Pn**	**09 18 14.4**	**+0.8**
PB04				S	**Sn**	**09 18 44.4**	**-3.1**
PB04				IAML		09 18 49.0	
	comp=N,495nm,0.2s						
PB08	**IPOC Station P**	**2.56**	**321**	⇑*i*P	**Pn**	**09 18 16.3**	**+1.8**
PB08				*i* S	**Sn**	**09 18 50.3**	**+1.3**
PB08				IAML		09 18 50.9	
	comp=N,104nm,0.3s						
PB08	**IPOC Station P**	**2.56**	**321**	P	**Pn**	**09 18 16.4**	**+1.9**
PB08				⇓S	**Sn**	**09 18 45.8**	**-3.3**
PB08				IAML		09 18 51.2	
	comp=N,69nm,0.3s						
PB05	**IPOC Station P**	**2.64**	**254**	⇑*i*P	**Pn**	**09 18 15.8**	**+0.7**
PB05				*i* S	**Sn**	**09 18 48.6**	**-1.5**
PB05				IAML		09 18 49.1	
	comp=N,298nm,0.3s						
PATCX	**Punta Patache**	**2.85**	**297**	⇑*i*P	**Pn**	**09 18 17.9**	**+0.3**
PATCX				*i* S	**Sn**	**09 18 52.9**	**-1.6**
PATCX				IAML		09 18 54.5	
	comp=N,397nm,0.2s						
GO01	**Chusmiza**	**2.97**	**326**	⇑*i*P	**Pn**	**09 18 20.7**	**+1.4**
GO01				*e*S	**Sn**	**09 18 58.7**	**+0.9**
TA01	**Diego Aracena**	**3.00**	**301**	⇑*i*P	**Pn**	**09 18 19.2**	**0.0**
TA01				*i* S	**Sn**	**09 18 55.5**	**-2.0**
TA01				IAML		09 18 57.5	
	comp=E,266nm,0.4s						
SLA	**San Lorenzo**	**3.11**	**145**	P	**Pn**	**09 18 21.9**	**+1.2**
TA02	**Huaiquique**	**3.13**	**306**	*e*P	**Pn**	**09 18 20.6**	**-0.1**
PB11	**IPOC Station P**	**3.16**	**319**	⇑*i*P	**Pn**	**09 18 21.4**	**+0.2**
PB11	**IPOC Station P**	**3.16**	**319**	P	**Pn**	**09 18 22.0**	**+0.7**
PB10	**IPOC Station P**	**3.17**	**244**	⇓*i*P	**Pn**	**09 18 22.0**	**+0.8**
PB10				*i* S	**Sn**	**09 18 58.8**	**-2.3**
PB10	**IPOC Station P**	**3.17**	**244**	P	**Pn**	**09 18 22.4**	**+1.2**
PSGC	**Pisagua**	**3.57**	**315**	*e*P	**Pn**	**09 18 25.7**	**-0.6**
GO02	**Mina Guanaco**	**3.58**	**213**	⇓*i*P	**Pn**	**09 18 27.7**	**+1.3**
GO02				*i* S	**Sn**	**09 19 09.9**	**-0.8**
MNMC	**Minye Minye**	**3.62**	**326**	⇑*i*P	**Pn**	**09 18 27.9**	**+0.8**
MNMC				*i* S	**Sn**	**09 19 11.1**	**-0.6**
MNMC	**Minye Minye**	**3.62**	**326**	P	**Pn**	**09 18 28.0**	**+0.8**
PB14	**IPOC Station P**	**3.66**	**227**	*e*P	**Pn**	**09 18 28.5**	**+1.0**
PB14				*i* S	**Sn**	**09 19 10.2**	**-2.3**
PB16	**IPOC Station P**	**4.27**	**333**	⇑*i*P	**Pn**	**09 18 36.7**	**+1.2**
PB16				*i* S	**Sn**	**09 19 26.3**	**-0.5**
BBOJ	**La Paz, Jacaqu**	**5.21**	**352**	P	**Pn**	**09 18 49.9**	**+2.4**
BBOE	**La Paz, Chanca**	**5.34**	**354**	P	**Pn**	**09 18 51.5**	**+2.2**
BBOD	**La Paz, Gloria**	**5.60**	**349**	P	**Pn**	**09 18 54.9**	**+2.3**
LPAZ	**La Paz**	**5.88**	**354**	P	**Pn**	**09 18 58.0**	**+1.8**
LPAZ				S	**Sn**	**09 20 00.1**	**-4.0**
BBOB	**La Paz, Bander**	**6.02**	**354**	P	**Pn**	**09 18 59.8**	**+1.8**

IDC 24 09:20:59.5±2.7,11°.21S×66°.30E,h0km,mb3.5/3,
mb1 3.7/3,mb1mx3.3/49,mbtmp3.5/3,Error ellipse:
s-maj=108.4km s-min=43.3km az=50.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**7.04**	**60**	T	T	09 29 43.5	
	baz=232,slow=75						
H08S2	**Diego Garcia H**	**7.06**	**60**	T	T	09 29 40.8	
	baz=232,slow=75						
H08S3	**Diego Garcia H**	**7.06**	**60**	T	T	09 29 44.0	
	baz=232,slow=75						
H01W3	**Cape Leeuwin H**	**49.35**	**127**	T	T	10 22 46.0	
H01W2	**Cape Leeuwin H**	**49.35**	**127**	T	T	10 22 46.5	
	baz=287,slow=75,SNR=18						
H01W1	**Cape Leeuwin H**	**49.37**	**127**	T	T	10 22 49.2	
	baz=287,slow=75,SNR=14						
ASAR	**Alice Springs**	**65.17**	**111**	P	P	09 31 42.7	-0.3
	0.3nm,0.7s,baz=272,slow=6.0,SNR=1.8						
WRA	**Warramunga Arr**	**65.75**	**107**	P	P	09 31 46.9	+0.2
	0.5nm,0.6s,baz=277,slow=5.4,SNR=4.6						
SONM	**Songino Array**	**68.72**	**28**	P	P	09 32 05.1	0.0
	0.2nm,0.3s,baz=222,slow=7.0,SNR=1.9						
PDAR	**Pinedale Array**	**148.36**	**354**	PKPbc	PKPbc	09 40 47.9	-0.5
	0.3nm,0.7s,baz=52,slow=5.9,SNR=2.3						
NVAR	**Mina Array Bea**	**152.58**	**8**	PKPbc	PKPbc	09 40 58.6	-0.1
	0.2nm,0.6s,baz=298,slow=1.9,SNR=2.1						

*SKHL **24** 09:22:58.0±0.1,43°.66N×147°.42E,h42km±6km,mb4.4/3*
*JMA **24** 09:22:58.0±0.2,43°.64N×147°.31E,h30km,M3.5*

ISC 24 09:22:53.8±2.4,43°.70N±0°.08×147°.43E±0°.09,h6km±12km,
n16,σ1§39/28,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.18**	**287**	*i* P	**Pg**	**09 23 17.0**	**+0.6**
YUK				AMB	AMB	09 23 17.0	
	360nm,0.5s						
YUK				*e*S	**Sg**	**09 23 31.3**	**-0.4**
YUK				A	A	09 23 32.0	
	683nm,0.4s						
YUK				A	A	09 23 32.0	
	530nm,0.4s						
GRPR	**Tuman**	**1.23**	**284**	*i* P	**Pg**	**09 23 18.0**	**+0.6**
GRPR				AMB	AMB	09 23 19.0	
	226nm,0.2s						
GRPR				*e*S	**Sg**	**09 23 32.0**	**-1.4**
GRPR				A	A	09 23 36.0	
	789nm,0.2s						
GRPR				A	A	09 23 36.0	
	351nm,0.2s						
NEM2	**Nemuro 2**	**1.27**	**255**	P	**Pg**	**09 23 18.7**	**+0.5**
NEM2				*e*S	**Sg**	**09 23 33.6**	**-1.0**
NMR	**Nemuro--Hokkai**	**1.28**	**256**	*i* P	**Pg**	**09 23 18.0**	**-0.3**
NMR				*e*S	**Sg**	**09 23 33.0**	**-1.9**
KUR	**Kuril'sk**	**1.56**	**12**	*e*P	**Pn**	**09 23 23.2**	**+1.0**
KUR				AMB	AMB	09 23 24.3	
	30nm,0.5s						
KUR				*e*S	**Sn**	**09 23 40.5**	**-2.2**
KUR				A	A	09 23 42.5	
	117nm,0.2s						
KUR				A	A	09 23 42.5	
	170nm,0.2s						
JRA	**Rausu**	**1.68**	**279**	P	**Pn**	**09 23 25.0**	**+1.2**
JNSB	**Nemuroshibetsu**	**1.75**	**273**	P	**Pn**	**09 23 26.3**	**+1.5**
JNSB				*e*S	**Sn**	**09 23 47.0**	**-0.5**
JKHN	**Kushirohamanak**	**1.76**	**250**	P	**Pn**	**09 23 26.1**	**+1.2**
JKHN				*e*S	**Sn**	**09 23 46.6**	**-1.0**
JNK	**Nakash**	**1.97**	**268**	P	**Pn**	**09 23 28.8**	**+1.1**
JNK				*e*S	**Sn**	**09 23 51.3**	**-1.4**
JAK	**Akkeshi**	**2.11**	**251**	P	**Pn**	**09 23 30.6**	**+0.9**
JAK				*e*S	**Sn**	**09 23 54.6**	**-1.6**
JTKR	**Abashiri--Toko**	**2.56**	**277**	P	**Pn**	**09 23 37.7**	**+1.9**
JAR	**Ashorobuto**	**2.69**	**263**	P	**Pn**	**09 23 39.7**	**+2.0**
JAR				*e*S	**Sn**	**09 24 10.4**	**-0.1**
JOB	**Onbets**	**2.74**	**254**	P	**Pn**	**09 23 39.8**	**+1.5**
JOB				*e*S	**Sn**	**09 24 11.1**	**-0.6**
JMP	**Maruseppu**	**2.96**	**277**	P	**Pn**	**09 23 43.5**	**+2.1**
JCH	**Churui**	**3.17**	**251**	P	**Pn**	**09 23 45.4**	**+1.2**
JCH				*e*S	**Sn**	**09 24 21.0**	**-1.2**
JNBK	**Urakawa-nobuka**	**3.71**	**249**	P	**Pn**	**09 23 52.9**	**+1.2**

*SKHL **24** 09:31:19.2±0.9,45°.41N×131°.96E,h9km,mb4.3/3*
*BJI **24** 09:31:21.0±0.0,45°.46N×131°.81E,h6km,ML3.7/9*

ISC 24 09:31:18.3±0.8,45°.47N±0°.03×132°.06E±0°.04,h10km,n11,
σ1§92/18,2D,Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRTR	**Gornotajezhnoj**	**1.76**	**178**	⇓*i*Pn	**Pn**	**09 31 49.6**	**+0.8**
GRTR				*e*Pg	**Pb**	**09 31 50.9**	**+0.3**
GRTR				AMB	AMB	09 31 53.7	
	233nm,0.6s						
GRTR				*e*Sn	**Sb**	**09 32 13.1**	**+0.3**
GRTR				*e*Sg	**Sg**	**09 32 14.0**	**-0.8**
GRTR				A	A	09 32 15.2	
	546nm,0.4s						
GRTR				A	A	09 32 15.2	
	633nm,0.4s						
MDJ	**Mudanjiang**	**1.95**	**245**	Pg	**Pb**	**09 31 53.3**	**-0.5**
MDJ				Sg	**Sg**	**09 32 19.8**	**-1.0**
MDJ				smax	smax		
	comp=N,300nm,0.7s						
MDJ				smax	smax		
	comp=E,400nm,0.4s						
TEY	**Ternei**	**3.23**	**96**	⇓*i*Pn	**Pn**	**09 32 10.9**	**+1.8**
TEY				Pn	**Pb**	**09 32 14.2**	**-1.6**
TEY				*e*Pg	**Pg**	**09 32 19.0**	**-1.2**
TEY				AMB	AMB	09 32 20.8	
	51nm,0.5s						
TEY				*e*Sg	**Sg**	**09 33 01.7**	**-0.4**
TEY				A	A	09 33 03.1	
	267nm,0.9s						
KHBR	**Khabarovsk**	**3.64**	**33**	*e*Sg	**Sg**	**09 33 14.5**	**-0.6**
KHBR				A	A	09 33 17.7	
	142nm,0.6s						
KLR	**Kul'dur**	**3.77**	**357**	*e*Pn	**Pn**	**09 32 18.5**	**+2.1**
KLR				*e*Pg	**Pg**	**09 32 29.3**	**-1.2**
KLR				*e*Sn	**Sn**	**09 33 04.8**	**+3.9**
KLR				*e*Sg	Sg	09 33 18.5	-0.8
GRNR	**Gornyy**	**6.05**	**27**	*e*Sg	**Sg**	**09 34 31.0**	**-1.5**
GRNR				A	A	09 34 35.8	
	12nm,0.6s						
EKMR	**Ekimchan**	**7.63**	**4**	*e*Pg	Pb	09 33 38.5	+7.9
EKMR				*e*Sg	**Sg**	**09 35 20.9**	**-2.1**
EKMR				A	A	09 35 28.5	
	11nm,0.8s						
ZEA	**Zeya**	**8.85**	**341**	*e*Sg	**Sg**	**09 35 58.0**	**-3.9**
BMKR	**Bomnak**	**9.48**	**349**	*e*Sg	Sn	09 36 17.8	+56
BMKR				A	A	09 36 19.3	
	8.0nm,0.8s						
KROS	**Kirovskiy**	**9.55**	**342**	*e*Sg	Sn	09 36 20.0	+57
KROS				A	A	09 36 25.0	
	5.0nm,0.8s						
WMQ	**Urumqi**	**31.31**	**283**	*e*P	**P**	**09 37 39.5**	**+0.9**

JMA 24 09:37:16.5±0.3,24°.85N×122°.46E,h1km±5km,M2.3,
Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.59**	**132**	P	Pg	09 37 28.5	+0.6
JYNG				*e*S	Sg	09 37 36.7	+1.1
YOJ	**Yonaguni jima**	**0.63**	**128**	P	Pg	09 37 28.9	+0.3
YOJ				*e*S	Sg	09 37 37.7	+0.9
IRIF	**Iriomote-Funau**	**1.27**	**114**	P	Pn	09 37 41.3	0.0

TAP 24 09:37:27.0,24°.83N×121°.21E,h17km±1km,ML1.6,A,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NCU	**National Centr**	**0.14**	**351**	*e*P	Pb	09 37 31.7	+0.5
	baz=353						
NCU				*e*S	Sb	09 37 34.7	+0.6
	baz=353						
NSK	**Sanguang**	**0.20**	**139**	P	Pb	09 37 32.5	+0.2
	baz=137						
NSK				S	Sb	09 37 36.5	+0.7
	baz=137						
YHNB	**Yeheng**	**0.22**	**136**	*e*P	Pb	09 37 32.4	-0.2
	baz=136						
YHNB				*e*S	Sb	09 37 37.4	+1.2
	baz=136						
NHW	**Xinwu Township**	**0.23**	**320**	*e*S	Sb	09 37 37.5	+0.9
	baz=320						
NWLT	**Wulai**	**0.27**	**101**	P	Pb	09 37 33.5	+0.1
	baz=100						
NWLT				*e*S	Sb	09 37 39.0	+1.2
	baz=100						
NSTT	**Nanjuang**	**0.27**	**225**	*e*P	Pb	09 37 33.8	+0.3
	baz=223						
NSTT				*e*S	Sb	09 37 38.3	+0.5
	baz=223						
TATO	**Taipei**	**0.29**	**59**	*e*P	Pb	09 37 34.1	+0.3
	baz=60						
TATO				*e*S	Sb	09 37 39.1	+0.8
	baz=60						
TWS1	**Kuangyinshan**	**0.33**	**34**	*e*S	Sb	09 37 40.5	+1.0
	baz=35						
NNSB	**Datong**	**0.43**	**159**	*e*P	Pb	09 37 36.6	+0.5
	baz=158						
NNSH	**Datong**	**0.43**	**159**	*e*P	Pb	09 37 36.2	+0.1
	baz=158						
TWE	**Neicheng**	**0.43**	**104**	*e*P	Pb	09 37 36.9	+0.8
	baz=104						
TWE				*e*S	Sn	09 37 44.2	-1.5
	baz=104						
YM04	**YM04**	**0.44**	**42**	*e*P	Pb	09 37 36.2	-0.1
	baz=42						
ANP	**Anpu**	**0.45**	**38**	*e*S	Sb	09 37 43.9	+0.7
	baz=39						
NMLH	**Miaoli**	**0.48**	**233**	*e*P	Pb	09 37 37.5	+0.6
	baz=233						
YM08	**YM08**	**0.50**	**44**	*e*P	Pb	09 37 37.4	+0.1
	baz=43						
YM08				*e*S	Sg	09 37 43.9	+0.2
	baz=43						
TWY	**Chenhua**	**0.57**	**38**	*e*P	Pb	09 37 38.8	+0.3
	baz=38						
TWY				*e*S	Sn	09 37 47.9	-1.4
	baz=38						
TDCB	**Techi**	**0.57**	**185**	*e*P	Pb	09 37 39.0	+0.3
	baz=184						
TDCB				*e*S	Sb	09 37 46.7	+0.1
	baz=184						
TWC	**Suao**	**0.62**	**110**	P	Pb	09 37 39.7	+0.4
	baz=110						
WHF	**Hehuan Shan**	**0.68**	**176**	*e*P	Pb	09 37 41.3	+0.6
	baz=175						
CHGB	**Renai**	**0.76**	**183**	*e*P	Pb	09 37 41.9	-0.1
	baz=182						
CHGB				*e*S	Sg	09 37 52.3	+0.1
	baz=182						
OWD	**Renai**	**0.87**	**182**	*e*P	Pb	09 37 43.7	0.0
	baz=182						

*JMA **24** 09:57:45.7±0.2,39°.60N×143°.63E,h22km,M3.9*
*IDC **24** 09:57:45.5±1.4,39°.65N×143°.46E,h0km,mb3.7/7,*
mb1 3.8/10,mb1mx3.6/50,mbtmp3.7/10,ML2.8/3,MS3.8/2,
Ms1 3.8/2,ms1mx2.9/54,Error ellipse: s-maj=36.3km
s-min=21.0km az=87.0
*NIED **24** 09:57:45.8,39°.60N×143°.63E,h22km,MW3.9,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}6.41; $M_{\theta\theta}$-1.52; $M_{\phi\phi}$-4.89; $M_{r\theta}$0.97; $M_{\theta\phi}$-2.77; $M_{r\phi}$2.59;
*Fault plane solution: $M_0$7.00000×10^{14}

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.12**	**157**	Pn	**Pn**	**10 37 50.0**	**-0.7**
	0.4nm,0.3s,baz=334,slow=12,SNR=1.9						
MKAR	**Makanchi Array**	**16.31**	**333**	Pn	**Pn**	**10 38 05.1**	**-1.0**
	0.1nm,0.3s,baz=144,slow=14,SNR=2.6						
SONM	**Songino Array**	**18.38**	**30**	P	**Pn**	**10 38 31.9**	**0.0**
	0.3nm,0.3s,baz=215,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**65.62**	**137**	P	**P**	**10 45 01.3**	**+0.2**
	0.5nm,0.9s,baz=334,slow=6.4,SNR=5.0						
ASAR	**Alice Springs**	**68.32**	**140**	P	**P**	**10 45 18.3**	**0.0**
	0.4nm,0.7s,baz=322,slow=6.3,SNR=4.9						
ILAR	**Eielson Array**	**72.44**	**23**	P	**P**	**10 45 43.3**	**+0.4**
	0.3nm,0.6s,baz=306,slow=5.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**83.96**	**282**	P	**P**	**10 46 48.1**	**+0.6**
	1.5nm,0.9s,baz=47,slow=4.6,SNR=3.9						

IDC 24 10:46:56.8±2.0, 14°.96S×173°.78W, h0km, mb3.9/6, mb1 4.3/6, mb1mx3.9/39, mbtmp3.9/6, Error ellipse: s-maj=142.2km s-min=22.3km az=151.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**38.40**	**329**	T	T	11 34 55.4	
	baz=146,slow=76,SNR=22						
H11S3	**WAKE ISLAND Hy**	**38.41**	**329**	T	T	11 34 55.1	
	baz=146,slow=76,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**38.42**	**329**	T	T	11 34 55.6	
	baz=146,slow=76,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**39.35**	**331**	T	T	11 36 57.8	
	baz=151						
H11N1	**WAKE ISLAND Hy**	**39.36**	**331**	T	T	11 37 23.3	
	baz=151,slow=74						
H11N2	**WAKE ISLAND Hy**	**39.37**	**331**	T	T	11 37 24.4	
	baz=151,slow=74,SNR=4.1						
WRA	**Warramunga Arr**	**49.59**	**256**	P	P	10 55 50.0	-0.2
	1.1nm,0.5s,baz=95,slow=7.2,SNR=22						
ASAR	**Alice Springs**	**49.90**	**252**	P	P	10 55 52.5	-0.1
	4.0nm,0.6s,baz=86,slow=7.9,SNR=35						
NVAR	**Mina Array Bea**	**74.25**	**42**	P	P	10 58 36.0	-0.1
	1.1nm,0.8s,baz=226,slow=7.5,SNR=10						
TXAR	**Lajitas Array**	**80.67**	**56**	P	P	10 59 12.6	+0.4
	0.4nm,0.9s,baz=215,slow=6.1,SNR=3.2						
ILAR	**Eielson Array**	**82.08**	**11**	P	P	10 59 19.0	+0.3
	0.4nm,0.6s,baz=201,slow=4.5,SNR=2.7						
PDAR	**Pinedale Array**	**82.18**	**42**	P	P	10 59 19.7	-0.3
	0.3nm,0.6s,baz=234,slow=3.1,SNR=3.5						
H03S2	**Juan Fernandez**	**85.75**	**124**	T	T	12 33 41.9	
	baz=251						
H03S1	**Juan Fernandez**	**85.76**	**124**	T	T	12 33 36.7	
	baz=251						
H03S3	**Juan Fernandez**	**85.76**	**124**	T	T	12 33 38.1	
	baz=251						

*IDC **24** 10:49:48.0±2.1, 7°.86S×123°.08E, h240km±20km, mb3.1/1, mb1 3.3/5, mb1mx3.0/35, mbtmp3.8/5, Error ellipse: s-maj=86.4km s-min=22.5km az=59.0*
*DJA **24** 10:49:48.9±0.5, 8°S±5°×12°E±°, h236km±6km, M3.8/9, mb4.2/3, MLv3.6/9*
ISC 24 10:49:48.3±1.0, 7°.80S±0°.07×123°.14E±0°.08, h250km, n14, σ1s97/21, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.22**	**227**	P	**Pn**	**10 50 25.8**	**+1.1**
MMRI				S	**S**	**10 50 52.5**	**-0.8**
EDFI	**Ende, Flores**	**1.71**	**236**	P	**Pn**	**10 50 28.7**	**+0.2**
EDFI				S	**S**	**10 50 59.6**	**-0.5**
SOEI	**Soe**	**2.25**	**150**	P	**Pn**	**10 50 33.3**	**+0.1**
SOEI				S	**S**	**10 51 07.6**	**-1.1**
BATI	**Baumata**	**2.45**	**168**	P	**Pn**	**10 50 35.1**	**0.0**
	47nm,0.3s,baz=359,slow=1.4,SNR=20						
BATI				S	**S**	**10 51 09.7**	**-2.5**
	38nm,0.3s,baz=355,slow=19,SNR=16						
BATI	**Baumata**	**2.45**	**168**	P	**Pn**	**10 50 35.1**	**0.0**
BASI	**Baing, Sumba**	**3.49**	**226**	P	**Pn**	**10 50 46.5**	**+0.3**
KDI	**Kendari**	**3.85**	**352**	P	**Pn**	**10 50 49.4**	**-1.0**
WBSI	**Waikabubak, Su**	**4.13**	**243**	P	**Pn**	**10 50 53.8**	**+0.1**
PLAI	**Plampang**	**5.40**	**259**	P	**Pn**	**10 51 09.7**	**+0.6**
	0.1nm29nm,1.1s						
TWSI	**Taliwang, Sumb**	**6.26**	**261**	P	**Pn**	**10 51 20.3**	**+0.6**
	0.1nm12nm,0.9s						
FITZ	**Fitzroy Crossi**	**10.53**	**167**	P	**Pn**	**10 52 11.7**	**-1.9**
	0.3nm,0.3s,baz=353,slow=12,SNR=2.1						
FITZ				S	**S**	**10 54 07.6**	**-4.1**
	0.4nm,0.3s,baz=199,slow=4.3,SNR=5.7						
WRA	**Warramunga Arr**	**16.24**	**139**	P	**Pn**	**10 53 22.0**	**-1.3**
	0.3nm,0.3s,baz=315,slow=13,SNR=20						
WRA				S	**S**	**10 56 23.0**	**+3.7**
	0.2nm,0.3s,baz=321,slow=25,SNR=1.9						
ASAR	**Alice Springs**	**18.86**	**148**	P	**P**	**10 53 51.1**	**+0.7**
	0.3nm,0.3s,baz=326,slow=10,SNR=18						
ASAR				S	**S**	**10 57 16.0**	**+4.7**
	0.0nm,0.3s,baz=322,slow=23,SNR=1.7						
MKAR	**Makanchi Array**	**65.35**	**330**	P	**P**	**11 00 04.5**	**+0.6**
	0.4nm,0.5s,baz=121,slow=6.1,SNR=2.9						

*JMA **24** 10:50:03.4±0.2, 24°.89N×122°.45E, h7km, M2.6*
*TAP **24** 10:50:04.3, 24°.91N×122°.44E, h18km, ML2.5, D*
ISC 24 10:50:03.7±1.2, 24°.89N±0°.04×122°.46E±0°.03, h13km±9km, n30, σ0s38/56, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.45**	**286**	P	**Pb**	**10 50 13.6**	**+0.2**
	baz=283						
TWB1				S	**Sb**	**10 50 19.5**	**-0.4**
	baz=283						
EGS		**0.48**	**265**	*eP*	**Pb**	**10 50 14.4**	**+0.3**
	baz=253						
EGS				*i* S	**Sb**	**10 50 21.2**	**+0.2**
	baz=253						
TIPB	**Shuangxi**	**0.58**	**278**	*eP*	**Pb**	**10 50 15.6**	**-0.2**
	baz=276						
TIPB				*eS*	**Sb**	**10 50 23.3**	**-0.7**
	baz=276						
JYNG	**Yonagunijimaku**	**0.62**	**135**	P	**Pg**	**10 50 15.6**	**-0.1**
JYNG				*eS*	**Sg**	**10 50 24.2**	**+0.3**
TWC	**Suao**	**0.62**	**244**	P	**Pg**	**10 50 16.1**	**+0.2**
	baz=240						
TWC				S	**Sg**	**10 50 24.5**	**+0.4**
	baz=240						
WFSB	**Wu-fen Shan**	**0.65**	**287**	*eP*	**Pb**	**10 50 16.8**	**0.0**
	baz=285						
WFSB				*eS*	**Sb**	**10 50 26.1**	**+0.4**
	baz=285						
YOJ	**Yonaguni jima**	**0.66**	**130**	P	**Pg**	**10 50 16.1**	**-0.3**
YOJ				*eS*	**Sg**	**10 50 25.1**	**0.0**
ILA	**Ilan**	**0.66**	**260**	*eP*	**Pg**	**10 50 16.8**	**+0.2**
	baz=257						
ILA				*eS*	**Sb**	**10 50 27.1**	**+1.0**
	baz=257						
ENAH	**Nanao**	**0.74**	**234**	*eP*	**Pb**	**10 50 18.5**	**+0.2**
	baz=231						
ENAH				S	**Sb**	**10 50 28.3**	**0.0**
	baz=231						
TWE	**Neicheng**	**0.74**	**257**	*eP*	**Pb**	**10 50 18.3**	**-0.1**
	baz=246						
TWE				*eS*	**Sb**	**10 50 29.0**	**+0.5**
	baz=246						
ENA	**Nanau**	**0.80**	**235**	P	**Pg**	**10 50 19.2**	**0.0**
	baz=232						
ENA				*eS*	**Sg**	**10 50 29.5**	**-0.2**
	baz=232						
TWA	**Mucha**	**0.80**	**277**	*eP*	**Pb**	**10 50 20.0**	**+0.6**
	baz=275						
TWA				*eS*	**Sb**	**10 50 30.5**	**+0.3**
	baz=275						
YM08	**YM08**	**0.85**	**291**	*eP*	**Pn**	**10 50 20.9**	**-0.4**
	baz=290						
YM01	**YM01**	**0.85**	**288**	*eP*	**Pn**	**10 50 20.9**	**-0.4**
	baz=287						
ENTT	**Nioudou**	**0.85**	**253**	*eP*	**Pb**	**10 50 20.4**	**+0.1**
	baz=251						
ENTT				*eS*	**Sb**	**10 50 32.2**	**+0.6**
	baz=251						
YM05	**YM05**	**0.86**	**289**	*eP*	**Pb**	**10 50 20.9**	**+0.4**
	baz=274						
YM05				*eS*	**Sb**	**10 50 32.4**	**+0.5**
	baz=274						
YM10	**YM10**	**0.86**	**288**	*eP*	**Pb**	**10 50 20.9**	**+0.4**
	baz=273						
YM10				*eS*	**Sb**	**10 50 32.6**	**+0.6**
	baz=273						
NWLT	**Wulai**	**0.88**	**263**	*eP*	**Pg**	**10 50 20.4**	**-0.3**
	baz=261						
NWLT				*eS*	**Sb**	**10 50 33.3**	**+0.8**
	baz=261						
YM04	**YM04**	**0.88**	**288**	*eP*	**Pg**	**10 50 20.4**	**-0.3**
	baz=273						
YM04				*eS*	**Sb**	**10 50 32.2**	**-0.3**
	baz=273						
NDT	**Datong Townshi**	**0.91**	**252**	*eP*	**Pn**	**10 50 21.9**	**-0.2**
	baz=237						
NDT				S	**Sn**	**10 50 35.0**	**-0.1**
	baz=237						
YHNB	**Yeheng**	**1.01**	**258**	*eP*	**Pb**	**10 50 22.9**	**-0.1**
	baz=270						
YHNB				*eS*	**Sb**	**10 50 36.5**	**+0.2**
	baz=270						
NSK	**Sanguang**	**1.03**	**258**	*eP*	**Pg**	**10 50 23.5**	**0.0**
	baz=270						
NSK				*eS*	**Sg**	**10 50 36.5**	**-0.3**
	baz=270						
NACB	**Ninganchiao**	**1.06**	**228**	*eP*	**Pb**	**10 50 23.1**	**-0.8**
	baz=237						
NACB				*eS*	**Sg**	**10 50 38.1**	**0.0**
	baz=237						
NNSB	**Datong**	**1.08**	**245**	*eP*	**Pg**	**10 50 24.7**	**+0.1**
	baz=243						
NNSB				*eS*	**Sn**	**10 50 39.5**	**-0.1**
	baz=243						
NNSH	**Datong**	**1.08**	**245**	*eP*	**Pb**	**10 50 24.3**	**0.0**
	baz=243						
NNSH				*eS*	**Sg**	**10 50 38.8**	**0.0**
	baz=243						
ETLH	**Xiulin Townshi**	**1.12**	**233**	*eP*	**Pb**	**10 50 24.7**	**-0.3**
	baz=231						
ETLH				S	**Sb**	**10 50 39.6**	**+0.2**
	baz=231						
IRIF	**Iriomote-Funau**	**1.28**	**115**	P	**Pn**	**10 50 27.4**	**+0.2**
FUSS	**Fushou**	**1.28**	**240**	*eP*	**Pn**	**10 50 27.3**	**-0.2**
	baz=238						
FUSS				*eS*	**Sn**	**10 50 44.6**	**0.0**
	baz=238						
WHF	**Hehuan Shan**	**1.32**	**236**	P	**Pb**	**10 50 28.8**	**+0.3**
	baz=234						
WHF				*eS*	**Sn**	**10 50 45.9**	**+0.1**
	baz=234						
LIOB	**Emei**	**1.34**	**260**	*eP*	**Pn**	**10 50 27.4**	**-0.6**
	baz=258						

IDC 24 11:11:20.1±53.0, 15°.80S×176°.17W, h0km, mb4.4/3, mb1 4.6/3, mb1mx3.7/36, mbtmp4.4/3, Error ellipse: s-maj=994.5km s-min=155.0km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.53**	**240**	P	P	11 19 09.3	-0.1
	1.6nm,0.3s,baz=75,slow=8.5,SNR=12						
WRA	**Warramunga Arr**	**47.15**	**257**	P	P	11 19 54.2	-0.4
	0.7nm,0.3s,baz=91,slow=8.0,SNR=39						
ASAR	**Alice Springs**	**47.45**	**252**	P	P	11 19 57.1	+0.2
	10nm,0.6s,baz=90,slow=7.9,SNR=216						

*IDC **24** 11:34:56.1±1.2, 16°.14N×48°.82W, h0km, mb3.7/6, mb1 4.1/7, mb1mx3.8/50, mbtmp3.8/7, ML4.8/1, MS3.3/7, Ms1 3.3/7, ms1mx2.9/49, Error ellipse: s-maj=32.5km s-min=27.3km az=81.0*
ISC 24 11:34:57.5±1.0, 16°.1N±0°.1×48°.8W±0°.2, h10km, n14, σ0s65/7, mb3.6/6, MS3.3/6, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.53**	**199**	Pn	**Pn**	**11 37 41.7**	**-0.7**
	6.2nm,0.3s,baz=15,slow=16,SNR=23						
MDP				Sn	Sn	11 39 41.2	-10
	0.4nm,0.3s,baz=72,slow=3.3,SNR=2.2						
MDP				LR	LR	11 41 16.5	
	comp=Z,91nm,20.6s,baz=212,slow=33						
RCBR	**Riachuelo**	**25.25**	**149**	LR	LR	11 47 33.5	
	comp=Z,80nm,18.8s,baz=342,slow=30						
BDFB	**Brasilia**	**31.53**	**178**	LR	LR	11 54 03.6	
	comp=Z,59nm,18.6s,baz=323,slow=36						
LPAZ	**La Paz**	**37.38**	**212**	P	**P**	**11 42 12.5**	**+1.0**
	1.0nm,0.7s,baz=18,slow=6.5,SNR=4.9						
LPAZ				LR	LR	11 56 38.0	
	comp=Z,34nm,18.7s,baz=52,slow=35						
H10N3	**ASCENSION HYDR**	**41.47**	**122**	T	T	12 26 40.8	
	baz=305,slow=75,SNR=10						
H10N2	**ASCENSION HYDR**	**41.47**	**122**	T	T	12 26 41.9	
	baz=305,slow=75,SNR=12						
H10N1	**ASCENSION HYDR**	**41.49**	**122**	T	T	12 26 42.6	
	baz=305,slow=75,SNR=9.2						
TORD	**Torodi Ar. Bea**	**48.88**	**86**	P	**P**	**11 43 44.0**	**0.0**
	0.6nm,1.0s,baz=281,slow=6.9,SNR=2.6						
TXAR	**Lajitas Array**	**51.86**	**295**	P	**P**	**11 44 06.3**	**-0.2**
	0.4nm,0.6s,baz=103,slow=8.4,SNR=7.4						
PDAR	**Pinedale Array**	**57.84**	**311**	P	**P**	**11 44 49.6**	**-0.2**
	0.3nm,0.6s,baz=77,slow=14,SNR=3.7						
PDAR				LR	LR	12 06 49.9	
	comp=Z,22nm,21.4s,baz=118,slow=33						
NOA	**NORSAR Array B**	**61.70**	**29**	LR	LR	12 07 21.1	
	comp=Z,24nm,19.7s,baz=290,slow=32						
NVAR	**Mina Array Bea**	**64.21**	**305**	P	**P**	**11 45 33.4**	**+0.2**
	0.5nm,0.7s,baz=110,slow=6.5,SNR=5.4						
ILAR	**Eielson Array**	**78.99**	**334**	P	**P**	**11 47 01.3**	**-0.1**
	2.2nm,0.9s,baz=76,slow=4.5,SNR=16						
LBTB	**Lobatse**	**83.20**	**118**	LR	LR	12 17 08.2	
	comp=Z,23nm,19.1s,baz=300,slow=30						

*IDC **24** 11:56:43.2±0.8, 32°.65N×93°.00E, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.7/56, mbtmp3.7/12, ML3.3/3, MS3.1/3, Ms1 3.2/3, ms1mx2.7/53, Error ellipse: s-maj=34.9km s-min=16.5km az=58.0*
*BJI **24** 11:56:43.6±0.0, 32°.67N×92°.89E, h8km, mb3.9/6, ML3.9/3*
ISC 24 11:56:45.0±0.6, 32°.53N±0°.06×93°.13E±0°.09, h17km, n17, σ2s07/19, mb3.8/9, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**3.29**	**212**	Pg	**Pb**	**11 57 42.8**	**-0.5**
LSA				Pg	**Pg**	**11 57 46.0**	**-2.2**
LSA				Sn	**Sb**	**11 58 26.3**	**+3.0**
LSA				Sg	**Sg**	**11 58 31.3**	**+0.4**
LSA				smax	smax		
	comp=N,350nm,1.4s						
LSA				smax	smax		
	comp=E,460nm,0.8s						
GTA	**Gaotai**	**8.74**	**36**	*eP*	**Pn**	**11 58 54.8**	**+4.0**
GTA				pP		11 58 59.0	
GTA				sP		11 59 01.8	
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LZH	**Lanzhou**	**9.54**	**65**	*eP*	**Pn**	**11 58 58.3**	**-3.5**
LZH				pP		11 59 01.8	
LZH				sP		11 59 04.8	
LZH				pmax	pmax		
	comp=Z,30nm,1.6s						
LZH				pmax	pmax		
	comp=Z,190nm,6.2s						
LZH				LR	LR		
	comp=N,500nm,9.7s						
LZH				LR	LR		
	comp=E,250nm,9.6s						
LZH				LR	LR		
	comp=Z,140nm,10.8s						
WMQ	**Urumqi**	**12.05**	**341**	*eP*	**Pn**	**11 59 36.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**14.96**	**158**	Pn	**Pn**	**12 00 16.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=327,slow=13,SNR=6.6						
CMAR				LR	LR	12 06 48.0	
	comp=Z,41nm,18.3s,baz=44,slow=40						
MKAR	**Makanchi Array**	**16.48**	**333**	Pn	**Pn**	**12 00 32.0**	**-3.4**
	comp=Z,0.0nm,0.3s,baz=142,slow=12,SNR=1.7						
AAK	**Ala-Archa**	**17.85**	**310**	LR	LR	12 08 56.7	
	comp=Z,74nm,18.4s,baz=89,slow=42						
SONM	**Songino Array**	**18.30**	**29**	P	**P**	**12 00 57.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=6.7						
SONM				LR	LR	12 08 39.6	
	comp=Z,73nm,19.4s,baz=191,slow=39						
KURBB	**Kurchatov Arra**	**21.05**	**333**	P	**P**	**12 01 26.6**	**-1.5**
	comp=Z,2.3nm,0.7s,baz=139,slow=11,SNR=20						
ZALV	**Zalesovo Beam**	**22.22**	**347**	P	**P**	**12 01 39.9**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=172,slow=12,SNR=3.8						
AKASG	**Malin Array Be**	**49.51**	**311**	P	**P**	**12 05 34.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=76,slow=7.2,SNR=1.9						
FINES	**FINESS Array B**	**51.13**	**325**	P	**P**	**12 05 45.9**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=93,slow=5.6,SNR=1.6						
GERES	**GERESS Array B**	**59.73**	**311**	P	**P**	**12 06 49.0**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=58,slow=7.5,SNR=2.1						
WRA	**Warramunga Arr**	**65.39**	**137**	P	**P**	**12 07 28.5**	**+1.7**
	comp=Z,1.1nm,0.9s,baz=319,slow=8.3,SNR=13						
ASAR	**Alice Springs**	**68.10**	**140**	P	**P**	**12 07 46.6**	**+2.5**
	comp=Z,0.7nm,0.6s,baz=321,slow=6.2,SNR=19						
ILAR	**Eielson Array**	**72.39**	**23**	P	**P**	**12 08 10.5**	**+0.7**
	comp=Z,0.5nm,0.7s,baz=304,slow=5.5,SNR=8.0						
TORD	**Torodi Ar. Bea**	**84.24**	**282**	P	**P**	**12 09 16.4**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=39,slow=4.3,SNR=8.5						

IDC 24 12:00:59.2±844.0, 52°.57N×33°.33E, h0km, Error ellipse: s-maj=337.1km s-min=110.9km az=33.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.74**	**27**	*i*		12 25 10.0	
	baz=209,slow=321,SNR=1.3						
I31KZ	**AKTYUBINSK INF**	**15.52**	**88**	*i*		13 35 30.0	
	baz=288,slow=339,SNR=2.8						
I46RU	**ZALESOVO INFRA**	**30.28**	**67**	*i*		15 12 50.0	
	baz=283,slow=348,SNR=0.8						

WEL 24 12:01:13.0±1.2, 32°S±23°×18°0W±5°9, h411km±23km, M4.4/6, mB4.0/1, MLv4.4/6, Mw(mB)3.0/1, Error ellipse: s-maj=0.1km s-min=0.0km az=110.6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**5.64**	**194**	P	P	12 02 44.0	+2.1
MXZ				S	S	12 03 53.4	-1.3
HAZ	**Te Kaha**	**5.95**	**198**	P	P	12 02 45.3	+0.2
HAZ				S	S	12 04 00.4	-0.3
TWGZ	**Tauwhareparae**	**6.31**	**195**	S	S	12 04 10.3	+2.5
CNGZ	**Carnagh Statio**	**6.55**	**193**	S	S	12 04 12.6	-0.1
MWZ	**Matawai**	**6.56**	**198**	P	P	12 02 51.2	-1.3
MWZ				S	S	12 04 12.1	-0.8
TKGZ	**Te Karaka**	**6.59**	**195**	S	S	12 04 13.7	+0.4
NMHZ	**Naumai**	**7.48**	**200**	P	P	12 03 02.2	-0.3
NMHZ				S	S	12 04 33.8	+2.3
MCHZ	**McNeill Hill**	**7.83**	**200**	P	P	12 03 07.8	+1.4
MCHZ				S	S	12 04 39.1	+0.4
KWHZ	**Kaweka Forest**	**7.89**	**201**	P	P	12 03 06.2	-0.9
KWHZ				S	S	12 04 40.9	+0.8
KRHZ	**Kereru**	**8.11**	**201**	P	P	12 03 09.0	-0.3
KRHZ				S	S	12 04 44.4	-0.2
PXZ	**Pawanui**	**8.33**	**197**	P	P	12 03 11.2	-0.6
PXZ				S	S	12 04 49.2	+0.1
PNHZ	**Pukenui**	**8.41**	**201**	P	P	12 03 12.5	-0.1
PNHZ				S	S	12 04 50.1	-0.7
TSZ	**Takapari Road**	**8.62**	**202**	S	S	12 04 55.4	+0.3
ANWZ	**Angora Road**	**8.84**	**198**	P	P	12 03 18.1	+0.8
ANWZ				S	S	12 05 01.0	+1.4
BFZ	**Birch Farm**	**9.11**	**199**	P	P	12 03 19.2	-1.1
BFZ				S	S	12 05 05.5	+0.2
MRZ	**Mangatainoka R**	**9.28**	**202**	P	P	12 03 19.1	-3.1
MRZ				S	S	12 05 06.7	-2.2

*DJA **24** 12:07:33.5±0.8, 7°N±7°×12°7E±°, h10km, M4.6/15, mb4.7/15, mB5.0/7, MLv4.8/7, Mw(mB)4.3/7, Mwp5.5/1*
*NEIC **24** 12:07:35.3±1.5, 7°.06N±0°.08×126°.9E±0°.1, h46km±9km, mb4.3/12, Error ellipse: s-maj=15.8km s-min=9.1km az=61.0*
*IDC **24** 12:07:37.5±3.1, 6°.87N×126°.78E, h61km±27km, mb3.6/8, mb1 3.8/9, mb1mx3.5/55, mbtmp4.0/9, ML4.5/1, MS3.2/9, Ms1 3.3/9, ms1mx2.9/34, Error ellipse: s-maj=39.6km s-min=12.2km az=58.0*
*MAN **24** 12:07:37.8, 6°.88N×126°.56E, h29km, mb5.2, ML4.1, MS4.2*
ISC 24 12:07:37.4±0.9, 6°.87N±0°.05×126°.69E±0°.07, h56km±10km, n66, σ1s73/58, mb4.0/14, MS3.1/7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.44**	**280**	*eP*	**Pn**	**12 07 45.9**	**-2.5**
MATI				*eS*	**Sn**	**12 07 53.2**	**-3.2**
DAV	**Davao City (W)**	**1.12**	**280**	P	**Pn**	**12 07 58.0**	**+1.1**
	278nm,0.3s,baz=80,slow=4.1,SNR=38						
DAV				S	**Sn**	**12 08 13.8**	**+2.3**
	589nm,0.3s,baz=298,slow=23,SNR=8.6						
DAV	**Davao City (W)**	**1.12**	**280**		**Pn**	**12 07 57.4**	**+0.4**
DDMP	**Don Marcelino,**	**1.23**	**232**	*eP*	**Pn**	**12 07 57.3**	**-1.1**
DDMP				*eS*	**Sn**	**12 08 13.0**	**-1.1**
KCP	**Kidapawan**	**1.60**	**275**	*eP*	**Pn**	**12 08 03.7**	**+0.3**
KCP				*i* S	**Sn**	**12 08 23.5**	**+0.5**
BUKP	**Musuan**	**1.91**	**302**	*eP*	**Pn**	**12 08 24.0**	**+0.4**
BUKP				*eS*	**Sn**	**12 08 36.5**	**+5.9**
SKMP	**Bagumbayan, Su**	**2.16**	**261**	*eP*	**Pn**	**12 08 09.5**	**-1.5**
SKMP				*eS*	**Sn**	**12 08 35.0**	**-1.8**
CGP	**Cagayan de Oro**	**2.53**	**309**	*eP*	**Pn**	**12 08 17.0**	**+0.9**
GLSP	**General Luna,**	**2.95**	**349**	*eP*	**Pn**	**12 08 22.0**	**+0.1**
GLSP				*eS*	**Sn**	**12 08 56.9**	**+0.8**
SGSI	**Sangihe**	**3.37**	**200**	P	**Pn**	**12 08 29.1**	**+1.6**
PAGZ	**Pagadian**	**3.43**	**287**	*eP*	**Pn**	**12 08 27.8**	**-0.6**
OCLP	**Ormoc**	**4.64**	**334**	*eP*	Pn	12 08 48.2	+3.2
CNOP	**Candoni, Negro**	**4.97**	**307**	*eP*	**Pn**	**12 08 49.1**	**-0.4**
TNTI	**Ternate**	**6.09**	**174**	P	**Pn**	**12 09 07.7**	**+2.8**
	0.2nm974nm84nm,1.0s						
TNTI	**Ternate**	**6.09**	**174**		**Pn**	**12 09 06.0**	**+1.1**
KMSI	**Cibinong**	**6.81**	**204**	P	**Pn**	**12 09 17.1**	**+2.3**
	0.4nm93nm,0.6s						
GTOI	**Gorontalo**	**7.20**	**211**	P	**Pn**	**12 09 19.9**	**-0.2**
	0.3nm664nm81nm,0.7s						
MRSI	**Marisa**	**7.92**	**217**	P	**Pn**	**12 09 31.1**	**+1.1**
	57nm,1.1s						
TOLI2	**Tolitoli**	**8.21**	**226**		**Pn**	**12 09 33.1**	**-0.9**
LUWI	**Luwuk**	**8.78**	**207**	P	**Pn**	**12 09 42.8**	**+1.1**
	2µm88nm,1.2s						
LUWI	**Luwuk**	**8.78**	**207**		**Pn**	**12 09 43.7**	**+2.0**
LQP	**Lukban**	**8.80**	**325**	*eP*	**Pn**	**12 09 40.6**	**-1.6**
SIJI	**Sorong**	**8.94**	**149**	P	**Pn**	**12 09 43.9**	**0.0**
	5.2nm,0.3s,baz=331,slow=15,SNR=14						
APSI	**Ampana**	**9.22**	**213**	P	**Pn**	**12 09 51.9**	**+

AS31	**Alice Springs**	**31.15**	**167**	P	**P**	**12 13 51.9**	**+0.8**
ASAR	**Alice Springs**	**31.15**	**167**	P	**P**	**12 13 50.5**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=345,slow=6.9,SNR=6.6						
ASAR	**Alice Springs**	**31.15**	**167**	P	**P**	**12 13 51.1**	**-0.1**
MJAR	**Matsushiro Arr**	**31.36**	**18**	LR	LR	12 28 05.2	
	comp=Z,19nm,18.9s,baz=245,slow=39						
FORT	**Forrest**	**37.45**	**178**	P	**P**	**12 14 46.5**	**+1.0**
BBOO	**Buckleboo**	**40.45**	**168**	P	**P**	**12 15 09.9**	**-0.7**
BBOO				IAmb	IAmb	12 15 11.2	
	comp=Z,14nm,1.2s						
NWAO	**Narrogin (SRO)**	**40.58**	**192**	P	**P**	**12 15 11.5**	**-0.1**
NWAO				IAmb	IAmb	12 15 13.1	
	comp=Z,16nm,1.1s						
H11S3	**WAKE ISLAND Hy**	**40.59**	**70**	T	T	12 59 00.2	
	baz=262,slow=74,SNR=18						
H11S1	**WAKE ISLAND Hy**	**40.61**	**70**	T	T	12 58 54.2	
	baz=262,slow=74,SNR=7.1						
H11S2	**WAKE ISLAND Hy**	**40.61**	**70**	T	T	12 58 42.8	
	baz=262,slow=74,SNR=11						
H11N1	**WAKE ISLAND Hy**	**41.03**	**68**	T	T	12 59 13.1	
	baz=259,slow=75						
H11N2	**WAKE ISLAND Hy**	**41.04**	**68**	T	T	12 59 11.2	
	baz=259,slow=75						
H11N3	**WAKE ISLAND Hy**	**41.05**	**68**	T	T	12 59 14.1	
	baz=259,slow=75						
STKA	**Stephens Creek**	**41.07**	**161**	P	**P**	**12 15 14.6**	**-1.0**
	comp=Z,2.7nm,0.9s,baz=328,slow=9.5,SNR=3.6						
STKA				LR	LR	12 36 54.4	
	comp=Z,31nm,18.0s,baz=307,slow=43						
STKA	**Stephens Creek**	**41.07**	**161**	IAmb	IAmb	12 15 15.6	
	comp=Z,2.3nm,1.3s						
SONM	**Songino Array**	**44.34**	**340**	P	**P**	**12 15 42.3**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=145,slow=5.3,SNR=2.1						
PETK	**Petropavlovsk-**	**52.57**	**23**	P	**P**	**12 16 41.8**	**-3.4**
MKAR	**Makanchi Array**	**54.99**	**324**	P	**P**	**12 17 02.4**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=122,slow=6.1,SNR=10						
MKAR	**Makanchi Array**	**54.99**	**324**	P	**P**	**12 17 01.6**	**-1.5**
ZALV	**Zalesovo Beam**	**57.80**	**332**	P	**P**	**12 17 22.8**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=110,slow=7.8,SNR=1.8						
KURK	**Kurchatov**	**59.11**	**327**	P	**P**	**12 17 30.8**	**-1.3**
KURBB	**Kurchatov Arra**	**59.11**	**326**	P	**P**	**12 17 32.1**	**0.0**
	comp=Z,2.0nm,0.4s,baz=126,slow=6.1,SNR=26						
FINES	**FINESS Array B**	**89.07**	**332**	LR	LR	13 06 59.6	
	comp=Z,38nm,21.1s,baz=348,slow=40						
NOA	**NORSAR Array B**	**95.98**	**334**	LR	LR	13 07 42.4	
	comp=Z,27nm,18.5s,baz=260,slow=38						

*IDC **24** 12:12:56.1±0.8, 13°.73S×66°.20E, h0km, mb4.0/11, mb1 4.2/12, mb1mx3.9/62, mbtmp4.0/12, ML4.4/1, MS3.7/21, Ms1 3.7/21, ms1mx3.5/47, Error ellipse: s-maj=25.0km s-min=19.0km az=178.0*

*NEIC **24** 12:12:57.1±2.7, 13°.76S±0°.06×66°.2E±0°.1, h10km±1km, mb4.6/13, Error ellipse: s-maj=23.6km s-min=8.3km az=109.0*

*GCMT **24** 12:12:59.1±0.4, 13°.76S±0°.03×66°.07E±0°.02, h19km±2km, MW4.8/77, Moment Tensor Solution. s11,c11; s77,c96; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=0.30±.10; Mθθ=1.16±.07; Mφφ 1.46±.09; Mrθ 0.28±.18; Mrφ=0.89±.08; Mθφ 0.71±.20; Best double couple: M0 1.75900×1016 NP1:φ=298.00000°, δ63.00000°, λ=-176.00000°. NP2: φ=206.00000°, δ86.00000°, λ=-27.00000°. Principal axes: T 1.9010, Plg16.0000°, Azm255.0000°; N -0.2860, Plg63.0000°, Azm19.0000°; P -1.6180, Plg21.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 12:12:57.7±0.7, 13°.7S±0°.1×66°.2E±0°.1, h10km, n56, σ1s09/35, mb4.3/16, MS3.8/21, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**8.63**	**46**	T	T	12 23 50.7	
	baz=225,slow=75,SNR=244						
H08S2	**Diego Garcia H**	**8.64**	**47**	T	T	12 23 50.8	
	baz=225,slow=75,SNR=394						
H08S3	**Diego Garcia H**	**8.65**	**46**	T	T	12 23 52.4	
	baz=225,slow=75,SNR=760						
RER	**Riviere de l'E**	**12.41**	**232**	Pn	**Pn**	**12 15 54.6**	**0.0**
OPO	**Ambohidratompo**	**18.87**	**253**	P	**P**	**12 17 19.9**	**+1.5**
	1.2nm,0.3s,baz=87,slow=11,SNR=9.4						
ABPO	**Ambohimpanom**	**18.93**	**251**		**P**	**12 17 18.5**	**-0.6**
KMBO	**Kilima Mbogo**	**31.22**	**291**	LR	LR	12 29 46.7	
	comp=Z,98nm,19.9s,baz=97,slow=32						
MBAR	**Mbarara**	**37.41**	**287**	LR	LR	12 33 34.7	
	comp=Z,104nm,18.1s,baz=99,slow=33						
BOSA	**Boshof**	**40.73**	**242**	P	**P**	**12 20 38.9**	**-0.2**
	1.8nm,0.7s,baz=64,slow=5.6,SNR=4.3						
BOSA				LR	LR	12 34 38.7	
	comp=Z,126nm,21.0s,baz=74,slow=32						
BOSA	**Boshof**	**40.73**	**242**	IAmb	IAmb	12 20 47.1	
	comp=Z,18nm,1.4s						
RAYN	**Ar Rayn**	**42.15**	**331**	P	**P**	**12 20 51.3**	**+0.7**
CMAR	**Chiang Mai Arr**	**45.43**	**46**	P	**P**	**12 21 17.9**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=234,slow=7.7,SNR=5.1						
CMAR				LR	LR	12 38 41.7	
	comp=Z,106nm,18.8s,baz=229,slow=34						
H01W3	**Cape Leeuwin H**	**48.01**	**125**	T	T	13 12 48.8	
	baz=283,slow=75,SNR=32						
H01W2	**Cape Leeuwin H**	**48.02**	**125**	T	T	13 12 48.9	
	baz=283,slow=75,SNR=47						
H01W1	**Cape Leeuwin H**	**48.03**	**125**	T	T	13 12 50.0	
	baz=283,slow=75,SNR=56						
GEYT	**Albeck**	**51.90**	**352**	LR	LR	12 42 07.9	
	comp=Z,53nm,19.5s,baz=230,slow=34						
EIL	**Elat**	**52.59**	**325**	LR	LR	12 41 09.4	
	comp=Z,121nm,20.9s,baz=118,slow=32						
MAW	**Mawson**	**53.91**	**182**	LR	LR	12 39 29.0	
	comp=Z,50nm,21.0s,baz=50,slow=30						
MMAI	**Mount Meron Ar**	**54.96**	**328**	LR	LR	12 43 45.5	
	comp=Z,87nm,20.1s,baz=180,slow=34						
GNI	**Garni**	**57.15**	**341**	LR	LR	12 45 18.1	
	comp=Z,78nm,21.2s,baz=162,slow=34						
FITZ	**Fitzroy Crossi**	**57.16**	**103**	LR	LR	12 43 19.1	
	comp=Z,133nm,20.9s,baz=262,slow=32						
KBZ	**Khabaz**	**60.97**	**341**	LR	LR	12 48 19.0	
	comp=Z,59nm,21.3s,baz=166,slow=35						
BRTR	**Keskin Array B**	**61.17**	**332**	P	**P**	**12 23 13.5**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=142,slow=5.4,SNR=3.9						
BRTR				LR	LR	12 48 45.5	
	comp=Z,39nm,18.9s,baz=116,slow=35						
MKAR	**Makanchi Array**	**61.92**	**12**	P	**P**	**12 23 16.9**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=205,slow=7.4,SNR=7.8						
MKAR				LR	LR	12 49 32.6	
	comp=Z,54nm,18.8s,baz=214,slow=36						
MKAR	**Makanchi Array**	**61.92**	**12**	P	**P**	**12 23 15.5**	**-1.9**
ABKAR	**Akbulak array**	**62.91**	**355**	P	**P**	**12 23 22.4**	**-1.6**
ABKAR				IAmb	IAmb	12 23 28.3	
	comp=Z,6.8nm,1.4s						
ABKAR	**Akbulak array**	**62.91**	**355**	P	**P**	**12 23 22.7**	**-1.3**
AB02	**Akbulak array**	**62.91**	**355**	P	**P**	**12 23 22.6**	**-1.4**
AB04	**Akbulak array**	**62.91**	**355**	P	**P**	**12 23 22.6**	**-1.4**
AB06	**Akbulak array**	**62.91**	**355**	P	**P**	**12 23 22.6**	**-1.4**
AB09	**Akbulak array**	**62.92**	**355**	P	**P**	**12 23 22.6**	**-1.4**
AB05	**Akbulak array**	**62.93**	**355**	P	**P**	**12 23 22.7**	**-1.4**
ASAR	**Alice Springs**	**64.43**	**110**	P	**P**	**12 23 33.7**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=275,slow=5.7,SNR=11						
ASAR				LR	LR	12 48 51.3	
	comp=Z,72nm,18.1s,baz=266,slow=34						
ASAR	**Alice Springs**	**64.43**	**110**	P	**P**	**12 23 34.6**	**-0.1**
WRA	**Warramunga Arr**	**65.18**	**106**	P	**P**	**12 23 39.4**	**-0.2**
	comp=Z,2.7nm,1.0s,baz=271,slow=5.7,SNR=12						
WRA				LR	LR	12 52 11.8	
	comp=Z,47nm,18.1s,baz=285,slow=36						
WRA	**Warramunga Arr**	**65.18**	**106**	P	**P**	**12 23 38.8**	**-0.9**
WB2	**Warramunga Arr**	**65.19**	**106**	P	**P**	**12 23 39.2**	**-0.4**
WC3	**Warramunga Arr**	**65.20**	**106**	P	**P**	**12 23 38.9**	**-0.9**
WB0	**Warramunga Arr**	**65.25**	**106**	P	**P**	**12 23 38.4**	**-1.7**
WB0				IAmb	IAmb	12 23 42.0	
	comp=Z,3.3nm,1.1s						
WR0	**Warramunga Arr**	**65.36**	**106**	P	**P**	**12 23 40.1**	**-0.7**
WR0				IAmb	IAmb	12 23 49.1	
	comp=Z,7.3nm,1.3s						
BRVK	**Borovoye**	**66.57**	**3**	P	**P**	**12 23 46.6**	**-1.2**
BRVK				IAmb	IAmb	12 23 51.8	
	comp=Z,3.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**69.22**	**290**	P	**P**	**12 24 05.3**	**0.0**
	comp=Z,1.2nm,0.9s,baz=117,slow=4.6,SNR=5.1						
ZAA0	**Zalesovo Array**	**69.23**	**12**	P	**P**	**12 24 04.1**	**-0.4**
ZAA0				IAmb	IAmb	12 24 07.6	
	comp=Z,6.7nm,1.2s						
ZALV	**Zalesovo Beam**	**69.23**	**12**	P	**P**	**12 24 03.8**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=207,slow=6.4,SNR=13						
ZALV				LR	LR	12 51 58.0	
	comp=Z,53nm,21.4s,baz=140,slow=34						
ZALV	**Zalesovo Beam**	**69.23**	**12**	P	**P**	**12 24 03.5**	**-1.0**
SONM	**Songino Array**	**70.96**	**27**	P	**P**	**12 24 16.5**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=217,slow=6.3,SNR=6.1						
SONM				LR	LR	12 54 28.0	
	comp=Z,73nm,21.0s,baz=284,slow=35						
SONM	**Songino Array**	**70.96**	**27**	IAmb	IAmb	12 24 17.2	
	comp=Z,1.3nm,0.8s						
AKASG	**Malin Array Be**	**71.80**	**336**	LR	LR	12 56 37.2	
	comp=Z,47nm,18.8s,baz=270,slow=36						
KSRS	**Korea Array**	**77.07**	**46**	LR	LR	12 58 59.4	
	comp=Z,36nm,19.5s,baz=214,slow=36						
GERES	**GERESS Array B**	**77.61**	**328**	P	**P**	**12 24 53.5**	**-0.7**
	comp=Z,0.2nm,0.2s,baz=155,slow=5.4,SNR=3.5						
MJAR	**Matsushiro Arr**	**84.15**	**50**	P	**P**	**12 25 31.4**	**+2.1**
	comp=Z,1.5nm,0.8s,baz=262,slow=3.3,SNR=4.7						
NRIK	**Noril'sk**	**84.19**	**7**	LR	LR	13 03 46.7	
	comp=Z,53nm,18.4s,baz=210,slow=36						
ARCES	**ARCESS Array B**	**87.76**	**347**	LR	LR	13 05 04.9	
	comp=Z,33nm,20.1s,baz=305,slow=36						
NEW	**Newport**	**145.42**	**4**	PKPbc	**PKPbc**	**12 32 36.1**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=313,slow=1.3,SNR=4.5						
PDAR	**Pinedale Array**	**150.79**	**354**	PKPbc	**PKPbc**	**12 32 50.9**	**0.0**
	comp=Z,1.3nm,0.7s,baz=76,slow=2.2,SNR=11						
TXAR	**Lajitas Array**	**161.81**	**330**	PKPab	**PKPab**	**12 33 44.8**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=29,slow=3.4,SNR=4.5						

*IDC **24** 12:18:44.3±1.0, 4°.00S×102°.79W, h0km, mb3.9/10, mb1 4.2/10, mb1mx4.0/37, mbtmp3.9/10, MS3.6/10, Ms1 3.6/10, ms1mx3.4/28, Error ellipse: s-maj=37.1km s-min=19.8km az=60.0*

ISC 24 12:18:45.6±1.0, 4°.0S±0°.2×102°.8W±0°.2, h10km, n31, σ0s70/15, mb3.9/10, MS3.6/10, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**22.39**	**20**	P	**P**	**12 23 44.5**	**+0.2**
	0.7nm,0.4s,baz=225,slow=13,SNR=2.0						
JTS	**Las Juntas de**	**22.77**	**51**	P	**P**	**12 23 48.7**	**+0.2**
	2.2nm,0.6s,baz=261,slow=13,SNR=4.0						
ATAH	**Atahualpa**	**24.49**	**98**	LR	LR	12 31 09.9	
	comp=Z,179nm,20.2s,baz=273,slow=30						
NNA	**Nana**	**26.88**	**109**	LR	LR	12 32 11.1	
	comp=Z,148nm,20.7s,baz=284,slow=30						
TXAR	**Lajitas Array**	**33.17**	**359**	P	**P**	**12 25 22.7**	**+0.1**
	1.2nm,1.0s,baz=184,slow=12,SNR=6.8						
TXAR				PcP	**PcP**	**12 28 06.7**	**+1.1**
	0.3nm,0.8s,baz=193,slow=3.7,SNR=2.4						
LPAZ	**La Paz**	**36.17**	**112**	P	**P**	**12 25 49.2**	**-0.1**
	1.4nm,0.6s,baz=275,slow=6.6,SNR=7.0						
LPAZ				LR	LR	12 38 07.1	
	comp=Z,56nm,20.1s,baz=303,slow=32						
H03N2	**Juan Fernandez**	**36.78**	**146**	T	T	13 05 07.0	
	baz=322,slow=77,SNR=15						
H03N1	**Juan Fernandez**	**36.79**	**146**	T	T	13 05 05.4	
	baz=322,slow=77,SNR=28						
H03N3	**Juan Fernandez**	**36.79**	**146**	T	T	13 05 08.1	
	baz=322,slow=77,SNR=20						
ANMO	**Albuquerque**	**38.91**	**355**	LR	LR	12 39 39.5	
	comp=Z,49nm,18.1s,baz=114,slow=32						
TKL	**Tuckaleechee C**	**43.32**	**23**	LR	LR	12 46 17.1	
	comp=Z,73nm,18.0s,baz=170,slow=38						
NVAR	**Mina Array Bea**	**44.61**	**343**	P	**P**	**12 26 59.6**	**+1.1**
	0.7nm,0.9s,baz=170,slow=8.9,SNR=4.2						
PLCA	**Paso Flores**	**46.66**	**146**	P	**P**	**12 27 14.7**	**+0.2**
	2.7nm,0.8s,baz=311,slow=8.2,SNR=5.1						
PLCA				LR	LR	12 41 57.7	
	comp=Z,89nm,19.9s,baz=336,slow=30						
PDAR	**Pinedale Array**	**46.97**	**353**	P	**P**	**12 27 16.4**	**-0.7**
	0.5nm,0.8s,baz=149,slow=6.9,SNR=3.8						
PPT	**Papeete**	**47.73**	**250**	LR	LR	12 41 43.8	
	comp=Z,65nm,19.6s,baz=77,slow=29						
CPUP	**Villa Florida**	**48.82**	**122**	LR	LR	12 44 48.0	
	comp=Z,48nm,19.1s,baz=276,slow=32						
YBH	**Yreka Blue Hor**	**49.01**	**340**	P	**P**	**12 27 32.9**	**+0.2**
	2.6nm,1.0s,baz=157,slow=7.7,SNR=3.7						
YKA	**Yellowknife Ar**	**66.94**	**354**	P	**P**	**12 29 37.1**	**-0.9**
	2.0nm,0.9s,baz=166,slow=5.7,SNR=5.1						
ILAR	**Eielson Array**	**75.87**	**342**	P	**P**	**12 30 31.9**	**-0.1**
	2.8nm,0.9s,baz=151,slow=4.5,SNR=22						
URZ	**Urewera**	**79.74**	**232**	LR	LR	12 58 56.0	
	comp=Z,71nm,18.6s,baz=210,slow=30						
H11N3	**WAKE ISLAND Hy**	**91.61**	**290**	T	T	14 13 21.1	
	baz=94,slow=75,SNR=9.3						
H11N2	**WAKE ISLAND Hy**	**91.62**	**290**	T	T	14 13 19.3	
	baz=94,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**91.62**	**290**	T	T	14 13 26.5	
	baz=94,slow=75,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	**91.72**	**288**	T	T	14 13 24.8	
	baz=94,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**91.73**	**288**	T	T	14 13 27.8	
	baz=94,slow=75,SNR=14						
H11S3	**WAKE ISLAND Hy**	**91.74**	**288**	T	T	14 13 25.1	
	baz=94,slow=75,SNR=18						
PETK	**Petropavlovsk-**	**98.91**	**323**	LR	LR	13 09 34.6	
	comp=Z,29nm,19.5s,baz=292,slow=31						
ZALV	**Zalesovo Beam**	**129.84**	**354**	PKP	**PKPdf**	**12 37 55.0**	**-0.4**
	0.8nm,0.7s,baz=29,slow=3.4,SNR=3.7						
KURBB	**Kurchatov Arra**	**133.55**	**359**	PKP	**PKiKP**	**12 38 03.3**	**-0.4**
	0.5nm,0.3s,baz=17,slow=2.1,SNR=1.1						
MKAR	**Makanchi Array**	**137.16**	**355**	PKP	**PKiKP**	**12 38 10.1**	**-1.2**
	0.7nm,0.7s,baz=349,slow=0.7,SNR=3.4						
CMAR	**Chiang Mai Arr**	**154.34**	**306**	PKPbc	**PKiKP**	**12 38 48.0**	**+0.6**
	0.8nm,0.8s,baz=90,slow=0.9,SNR=5.1						

ROM 24 12:32:05.1±0.3, 38°.37N±0°.01×15°.44E±0°.02, h120km±1km, ML2.2/13, 3C-1D, Error ellipse: s-maj=1.9km s-min=1.1km az=133.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSRU	**Castanea**	**0.12**	**154**	P	Pn	12 32 21.3	-0.3
MSRU				S	Sn	12 32 33.4	-0.7
MSRU				AML	AML		
	comp=E,188μm,0.5s						
MSRU				AML	AML		
	comp=N,187μm,1.2s						
MILZ	**Milazzo**	**0.19**	**239**	P	Pn	12 32 21.5	-0.2
MILZ				S	Sn	12 32 34.0	-0.2
MILZ				AML	AML		
	comp=E,77μm,0.6s						
MILZ				AML	AML		
	comp=N,77μm,0.6s						
MILZ				AML	AML		
	comp=N,77μm,0.6s						
MILZ				AML	AML		
	comp=E,77μm,0.6s						
MPNC	**Port Mandanici**	**0.24**	**198**	P	Pn	12 32 21.7	-0.2
MPNC				AML	AML		
	comp=E,98μm,0.3s						
MPNC				AML	AML		
	comp=N,102μm,1.0s						
MSCL	**Scilla**	**0.31**	**117**	P	Pn	12 32 22.1	-0.1
VPL	**Vulcano Piano**	**0.36**	**272**	⇑P	Pn	12 32 22.5	+0.1
VPL				AML	AML		
	comp=N,296μm,0.2s						
VPL				AML	AML		
	comp=E,447μm,0.2s						
GMB	**Gambarie**	**0.36**	**123**	P	Pn	12 32 22.8	+0.2
GMB				S	Sn	12 32 35.9	+0.2
GMB				AML	AML		
	comp=N,830μm,0.4s						
GMB				AML	AML		
	comp=E,762μm,0.4s						
GMB				AML	AML		
	comp=N,830μm,0.4s						
CEL	**Celeste**	**0.37**	**107**	P	Pn	12 32 22.8	+0.3
LLI	**Lipari**	**0.40**	**281**	P	Pn	12 32 23.1	+0.6
MTTG	**Motta San Giov**	**0.42**	**152**	P	Pn	12 32 23.1	+0.4
MTTG				S	Sn	12 32 36.6	+0.7
MTTG				AML	AML		
	comp=E,136μm,0.5s						
MTTG				AML	AML		
	comp=N,258μm,0.5s						
NOV	**Novara**	**0.42**	**215**	P	Pn	12 32 23.3	+0.6
NOV				S	Sn	12 32 37.8	+1.8
NOV				AML	AML		
	comp=N,150μm,0.8s						
NOV				AML	AML		
	comp=E,153μm,1.4s						
NOV				AML	AML		
	comp=N,150μm,0.8s						
JOPP	**Joppolo**	**0.42**	**56**	⇑P	Pn	12 32 22.7	+0.1
JOPP				S	Sn	12 32 35.5	-0.5
JOPP				AML	AML		
	comp=E,76μm,0.3s						
JOPP				AML	AML		
	comp=N,97μm,0.1s						
AIO	**Antillo**	**0.43**	**203**	P	Pn	12 32 23.2	+0.4
AIO				S	Sn	12 32 37.2	+1.1
AIO				AML	AML		
	comp=E,59μm,0.7s						
AIO				AML	AML		
	comp=N,63μm,1.5s						
IST3	**Stromboli F**	**0.46**	**339**	P	Pn	12 32 23.6	+0.7
MUCR	**Ucria**	**0.56**	**234**	P	Pn	12 32 23.6	0.0
MUCR				AML	AML		
	comp=N,58μm,1.6s						
MUCR				AML	AML		
	comp=E,52μm,1.2s						
SOI	**Samo**	**0.57**	**122**	P	Pn	12 32 23.8	+0.3
SOI				S	Sn	12 32 37.3	-0.1
MPAZ	**Palizzi**	**0.61**	**133**	P	Pn	12 32 24.2	+0.3
MPAZ				S	Sn	12 32 37.7	-0.3
MPAZ				AML	AML		
	comp=E,100μm,0.3s						
MPAZ				AML	AML		
	comp=N,106μm,0.3s						
PLAC	**Placanica**	**0.79**	**84**	⇑P	Pn	12 32 25.9	+0.6
PLAC				S	Sn	12 32 40.2	-0.2
PLAC				AML	AML		
	comp=N,122μm,0.3s						
PLAC				AML	AML		
	comp=E,83μm,1.2s						
CAR1	**CAROLEI**	**1.07**	**34**	AML	AML		
	comp=E,55μm,0.9s						
CAR1				AML	AML		
	comp=N,42μm,0.4s						
HAGA	**Augusta**	**1.11**	**192**	P	Pn	12 32 27.4	-0.9
CET2	**Cetraro**	**1.22**	**19**	P	Pn	12 32 30.0	+0.5
CET2				S	Sn	12 32 48.2	+0.1
CELI	**Celico**	**1.32**	**39**	P	Pn	12 32 31.5	+0.8
T0702	**Acquaformosa (**	**1.44**	**20**	P	Pn	12 32 32.4	+0.5
T0702				S	Sn	12 32 52.2	-0.1
USI	**Ustica**	**1.81**	**281**	P	Pn	12 32 41.7	+5.5
MRB1	**Monte Rocchett**	**2.78**	**353**	S	Sn	12 33 30.0	+8.1
TRIV	**Trivento**	**3.46**	**349**	S	Sn	12 33 42.0	+4.0
VVLD	**Villa Vallelon**	**3.77**	**339**	P	Pn	12 33 01.4	-0.2
LAV9	**Lanuvio**	**3.92**	**328**	⇓P	Pn	12 33 17.4	+14
STON	**Ston**	**4.81**	**20**	P	Pn	12 33 30.0	+15
FDMO	**Fiordimonte**	**4.99**	**340**	P	Pn	12 33 20.7	+2.8
ARVD	**Arcevia**	**5.46**	**341**	P	Pn	12 33 40.8	+17
PE3	**Peglio**	**5.77**	**338**	P	Pn	12 33 28.4	0.0

*IDC **24** 12:39:20.4±0.9, 14°.95N×97°.23W, h0km, mb4.0/10, mb1 4.3/13, mb1mx4.1/42, mbtmp4.1/13, ML4.1/3, MS3.3/9, Ms1 3.4/9, ms1mx3.2/23, Error ellipse: s-maj=26.8km s-min=17.4km az=61.0*

*MEX **24** 12:39:22.6±0.8, 14°.92N×97°.50W, h17km±21km, MD4.4*

*NEIC **24** 12:39:23.1±2.9, 15°.04N±0°.07×97°.45W±0°.04, h20km±6km, Error ellipse: s-maj=10.9km s-min=1.6km az=209.0*

ISC 24 12:39:22.6±2.9, 15°.05N±0°.06×97°.51W±0°.04, h17km±18km, n90, σ1s81/87, mb4.4/31, MS3.4/6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PEIG	**Puerto Escondi**	**1.01**	**20**	*e*P	**Pb**	**12 39 39.7**	**-2.0**
PEIG				*i* P	**Pb**	**12 39 39.7**	**-2.0**
PEIG				*i* S	**Sn**	**12 39 54.0**	**-2.0**
PNIG	**Pinotepa**	**1.47**	**336**	*i* P	**Pn**	**12 39 46.7**	**-1.9**
PNIG				*i* S	**Sn**	**12 40 04.7**	**-2.6**
PNIG	**Pinotepa**	**1.47**	**336**		**Pn**	**12 39 46.5**	**-1.9**
PNIG					**Sn**	**12 40 04.7**	**-2.6**
HUIG	**Huatulco**	**1.53**	**62**	*e*P	**Pn**	**12 39 46.1**	**-3.1**
HUIG				*e*S	**Sn**	**12 40 05.1**	**-3.6**
HUIG	**Huatulco**	**1.53**	**62**		**Pn**	**12 39 46.1**	**-3.1**
HUIG					**Sn**	**12 40 05.1**	**-3.6**
VHO	**Vista Hermosa**	**2.15**	**20**	*e*P	**Pn**	**12 39 57.3**	**-0.7**
VHO				*e*S	**Sn**	**12 40 23.3**	**-1.0**
TXIG	**Tlaxiaco**	**2.21**	**353**	*i* P	**Pn**	**12 39 58.4**	**-0.5**
TXIG				*i* S	**Sn**	**12 40 24.6**	**-1.3**
TLIG	**Tlapa**	**2.70**	**338**	Pn	**Pn**	**12 40 05.7**	**+0.2**
HLIG	**Huajuapan de L**	**2.78**	**354**	*e*P	**Pn**	**12 40 06.5**	**-0.2**
HLIG				*i* S	**Sn**	**12 40 39.1**	**-1.0**
FTIG	**Fresnillo de T**	**2.91**	**348**	*i* P	**Pn**	**12 40 07.7**	**-0.7**
FTIG				*i* S	**Sn**	**12 40 42.2**	**-0.8**
TOIG	**Toxpalan**	**3.06**	**8**	*i* P	**Pn**	**12 40 09.6**	**-0.8**
TOIG				*i* S	**Sn**	**12 40 46.1**	**-0.7**
CMIG	**Matias Romero**	**3.24**	**51**	Pn	**Pn**	**12 40 10.8**	**-1.9**
	61nm,0.3s,baz=223,slow=13,SNR=202						
CMIG				Sn	**Sn**	**12 40 50.3**	**-0.7**
	212nm,0.3s,baz=115,slow=21,SNR=36						
CMIG				LR	LR	12 41 04.8	
	comp=Z,253nm,21.6s,baz=330,slow=34						
CAIG	**El Cayaco**	**3.32**	**307**	*e*P	**Pn**	**12 40 12.9**	**-0.9**
CAIG				*i* S	**Sn**	**12 40 47.9**	**-5.1**
CAIG	**El Cayaco**	**3.32**	**307**		**Pn**	**12 40 12.9**	**-0.9**
CAIG					**Sn**	**12 40 47.9**	**-5.1**
MEIG	**Mezcala**	**3.51**	**325**	*e*P

WVT						IAmb	IAmb	12 44 26.5		
	comp=Z,19nm,1.1s									
V48A	**Smith Brothers**	**22.72**	**23**	IAmb	IAmb	12 44 30.6				
	comp=Z,21nm,1.1s									
T25A	**Trinidad**	**22.85**	**346**	IAmb	IAmb	12 44 30.6				
	comp=Z,17nm,1.1s									
S39A	**Bolivar**	**22.86**	**9**	P	**P**	**12 44 25.6**	**+0.3**			
W52A	**Murphy**	**23.40**	**29**	IAmb	IAmb	12 44 33.5				
	comp=Z,14nm,0.8s									
R40A	**Maddies Statio**	**23.61**	**10**	P	**P**	**12 44 34.1**	**+1.3**			
R40A				IAmb	IAmb	12 44 37.8				
	comp=Z,12nm,0.9s									
SDCO	**Great Sand Dun**	**23.70**	**344**	P	**P**	**12 44 37.5**	**+3.6**			
U49A	**Red Boiling Sp**	**23.80**	**24**	P	**P**	**12 44 35.7**	**+1.0**			
GUY2C	**Guyana, Caldas**	**23.85**	**112**	*eP*	**P**	**12 44 36.9**	**+1.0**			
TKL	**Tuckaleechee C**	**23.93**	**28**	P	**P**	**12 44 35.9**	**0.0**			
	comp=Z,4.3nm,0.7s,baz=195,slow=10,SNR=4.8									
TOLC	**Tolima**	**24.18**	**113**	*eP*	**P**	**12 44 40.8**	**+2.0**			
T50A	**Nancy**	**24.62**	**25**	P	**P**	**12 44 42.8**	**+0.5**			
T50A				IAmb	IAmb	12 44 44.3				
	comp=Z,10nm,0.8s									
P38A	**Dawn**	**24.73**	**7**	IAmb	IAmb	12 44 46.0				
	comp=Z,13nm,0.9s									
PV01	**Paradox Valley**	**24.99**	**339**	IAmb	IAmb	12 44 51.2				
	comp=Z,12nm,1.2s									
PV04	**Paradox Valley**	**25.34**	**339**	IAmb	IAmb	12 44 57.9				
	comp=Z,11nm,1.2s									
CHIC	**Chingaza**	**25.58**	**111**	*eP*	P	12 45 01.9	+10			
MTPU	**Mount Pierson**	**26.33**	**333**	P	**P**	**12 44 59.5**	**+1.3**			
CCUT	**Cedar City**	**26.46**	**331**	P	**P**	**12 44 59.4**	**+0.2**			
PDAR	**Pinedale Array**	**29.50**	**342**	P	**P**	**12 45 28.6**	**+2.3**			
	comp=Z,0.4nm,0.3s,baz=141,slow=9.6,SNR=6.2									
PDAR				LR	LR	12 58 57.7				
	comp=Z,81nm,18.0s,baz=158,slow=40									
NVAR	**Mina Array Bea**	**29.65**	**326**	P	**P**	**12 45 30.9**	**+3.2**			
	comp=Z,0.4nm,0.6s,baz=147,slow=8.9,SNR=5.2									
J08A	**Circle Bar Ran**	**33.44**	**332**	IAmb	IAmb	12 46 04.2				
	comp=Z,4.7nm,1.1s									
LPAZ	**La Paz**	**42.55**	**136**	P	**P**	**12 47 17.5**	**-1.1**			
	comp=Z,1.2nm,0.7s,baz=307,slow=9.3,SNR=5.9									
LPAZ	**La Paz**	**42.55**	**136**	IAmb	IAmb	12 47 18.7				
	comp=Z,2.0nm,0.9s									
YKA	**Yellowknife Ar**	**48.91**	**350**	P	**P**	**12 48 08.2**	**+0.7**			
	comp=Z,1.5nm,0.9s,baz=151,slow=8.8,SNR=3.9									
H03N2	**Juan Fernandez**	**51.37**	**160**	T	T	13 43 35.8				
	baz=338,slow=77,SNR=12									
H03N1	**Juan Fernandez**	**51.38**	**160**	T	T	13 43 37.0				
	baz=338,slow=77,SNR=11									
H03N3	**Juan Fernandez**	**51.39**	**160**	T	T	13 43 36.0				
	baz=338,slow=77,SNR=8.0									
RAGM	**Ragged Mountai**	**56.62**	**334**	P	**P**	**12 49 04.2**	**-0.5**			
CPUP	**Villa Florida**	**56.72**	**136**	LR	LR	13 11 41.2				
	comp=Z,78nm,19.4s,baz=34,slow=34									
ILAR	**Eielson Array**	**59.83**	**338**	P	**P**	**12 49 28.2**	**+1.3**			
	comp=Z,2.5nm,1.0s,baz=137,slow=4.7,SNR=19									
ILAR	**Eielson Array**	**59.83**	**338**	P	**P**	**12 49 27.6**	**+0.7**			
PLCA	**Paso Flores**	**60.87**	**157**	P	**P**	**12 49 33.9**	**-0.6**			
	comp=Z,3.0nm,0.9s,baz=324,slow=6.4,SNR=4.3									
PLCA				LR	LR	13 09 29.6				
	comp=Z,27nm,19.4s,baz=150,slow=30									
PLCA	**Paso Flores**	**60.87**	**157**	IAmb	IAmb	12 49 34.7				
	comp=Z,4.6nm,0.9s									
ESDC	**Sonseca Array**	**83.22**	**51**	P	**P**	**12 51 48.8**	**+0.3**			
	comp=Z,2.2nm,0.8s,baz=306,slow=4.9,SNR=10									
ESDC	**Sonseca Array**	**83.22**	**51**	P	**P**	**12 51 48.1**	**-0.4**			
NOA	**NORSAR Array B**	**85.73**	**28**	LR	LR	13 30 28.6				
	comp=Z,18nm,19.4s,baz=275,slow=36									
GERES	**GERESS Array B**	**92.13**	**38**	LR	LR	13 34 44.1				
	comp=Z,24nm,18.6s,baz=178,slow=36									
TORD	**Torodi Ar. Bea**	**95.29**	**103**	P	**P**	**12 52 44.5**	**-2.0**			
	comp=Z,0.4nm,0.7s,baz=257,slow=3.8,SNR=2.4									
TORD				LR	LR	13 31 12.6				
	comp=Z,6.8nm,20.9s,baz=300,slow=33									
LZH	**Lanzhou**	**125.28**	**339**	PKP	**PKiKP**	**12 58 23.3**	**-0.3**			
LZH				sPKP		12 58 38.4				
WRA	**Warramunga Arr**	**130.47**	**256**	PKP	**PKPdf**	**12 58 33.0**	**-0.3**			
	comp=Z,0.7nm,0.9s,baz=89,slow=2.4,SNR=7.1									
CMAR	**Chiang Mai Arr**	**142.97**	**333**	PKP	**PKPdf**	**12 58 56.8**	**+0.3**			
	comp=Z,0.3nm,0.3s,baz=7.6,slow=2.7,SNR=4.2									

*NEIC **24** 12:40:39.0±1.4,0°.97N±0°.05×123°.9E±0°.1,h275$^{km}_{\pm 9}$km, mb4.1/15, Error ellipse: s-maj=16.3km s-min=5.1km az=70.0*

*IDC **24** 12:40:39.8±1.8,1°.00N×123°.92E,h281$^{km}_{\pm 19}$km,mb3.3/12, mb1 3.5/16,mb1mx3.3/51,mbtmp4.1/16, Error ellipse: s-maj=23.1km s-min=10.0km az=68.0*

*DJA **24** 12:40:40.2±0.5,1°.N±3°×12°.4E±°,h256$^{km}_{\pm 5}$km,M4.3/12, mB4.5/2,mb4.4/2,MLv4.2/12,Mw(mB)3.7/2*

ISC 24 12:40:39.2±0.5,0°.92N±0°.05×123°.87E±0°.06,h281km,n50, σ1°26/58,mb3.7/19,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.35**	**162**	P	**Pn**	**12 41 14.8**	**-0.6**
GTOI	**Gorontalo**	**0.91**	**252**	P	**Pn**	**12 41 17.1**	**0.0**
GTOI				S	**S**	**12 41 45.5**	**-1.6**
MRSI	**Marisa**	**1.98**	**257**	P	**Pn**	**12 41 23.5**	**-0.7**
LUWI	**Luwuk**	**2.23**	**210**	P	**Pn**	**12 41 25.0**	**-1.4**
LUWI				S	**S**	**12 41 59.2**	**-4.7**
LUWI	**Luwuk**	**2.23**	**210**	Pn	**Pn**	**12 41 24.8**	**-1.5**
APSI	**Ampana**	**2.87**	**231**	P	**Pn**	**12 41 31.6**	**-0.8**
APSI				S	**S**	**12 42 12.2**	**-2.5**
TOLI2	**Tolitoli**	**3.10**	**274**		**Pn**	**12 41 34.5**	**-0.3**
SGSI	**Sangihe**	**3.21**	**31**	P	**Pn**	**12 41 35.1**	**-0.8**
TNTI	**Ternate**	**3.50**	**92**	P	**Pn**	**12 41 38.5**	**-0.4**
TNTI				S	**S**	**12 42 24.3**	**-2.2**
TNTI	**Ternate**	**3.50**	**92**		**Pn**	**12 41 38.2**	**-0.7**
MPSI	**Mapaga**	**4.02**	**262**	P	**Pn**	**12 41 44.4**	**-0.3**
DDMP	**Don Marcelino,**	**5.47**	**20**	*eP*	**Pn**	**12 42 01.1**	**-0.6**
DDMP				*eS*	**S**	**12 43 05.4**	**-2.5**
TTSI	**Tana Toraja**	**5.65**	**226**	P	**Pn**	**12 42 04.8**	**+1.0**
	0.5nm1μm160nm,0.8s						
BNSI	**Bone**	**6.48**	**215**	P	**Pn**	**12 42 14.9**	**+0.9**
KAPI	**Kappang**	**7.19**	**215**	P	**Pn**	**12 42 23.8**	**+1.1**
	1.1nm,0.3s,baz=221,slow=21,SNR=4.1						
SIJI	**Sorong**	**7.60**	**103**	P	**Pn**	**12 42 28.4**	**+0.6**
	1.1nm,0.3s,baz=292,slow=12,SNR=4.2						
BATI	**Baumata**	**11.05**	**181**	P	**P**	**12 43 14.2**	**+0.5**
	7.0nm,0.3s,baz=258,slow=1.3,SNR=4.8						
KNRA	**Kununurra**	**17.18**	**164**	P	**P**	**12 44 22.2**	**+1.0**
KNRA				IAmb	IAmb	12 44 28.7	
	comp=Z,10.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**18.97**	**175**	P	**P**	**12 44 41.2**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=357,slow=8.8,SNR=33						
FITZ	**Fitzroy Crossi**	**18.97**	**175**	P	**P**	**12 44 40.4**	**-0.1**
PSA00	**Pilbara Seismi**	**22.69**	**190**	P	**P**	**12 45 16.6**	**-0.6**
WB0	**Warramunga Arr**	**23.00**	**154**	P	**P**	**12 45 20.3**	**+0.3**
WB0				IAmb	IAmb	12 45 23.1	
	comp=Z,3.2nm,0.8s						
WRAB	**Tennant Creek**	**23.13**	**154**	P	**P**	**12 45 21.7**	**+0.6**
WRAB				IAmb	IAmb	12 45 22.2	
	comp=Z,4.5nm,0.4s						
WRA	**Warramunga Arr**	**23.13**	**154**	P	**P**	**12 45 21.8**	**+0.6**
	comp=Z,3.1nm,0.5s,baz=337,slow=10,SNR=78						
WRA				PcP	**PcP**	**12 49 02.1**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=310,slow=2.8,SNR=2.0						
WRA				S	**S**	**12 49 08.2**	**-3.1**
	comp=Z,0.9nm,0.8s,baz=334,slow=16,SNR=5.2						
WRA	**Warramunga Arr**	**23.13**	**154**	P	**P**	**12 45 21.0**	**-0.2**
WB2	**Warramunga Arr**	**23.13**	**154**	P	**P**	**12 45 21.8**	**+0.6**
WB2				IAmb	IAmb	12 45 22.5	
	comp=Z,8.1nm,1.3s						
WR0	**Warramunga Arr**	**23.23**	**154**	P	**P**	**12 45 22.6**	**+0.6**
WR0				IAmb	IAmb	12 45 26.9	
	comp=Z,7.7nm,1.4s						
AS31	**Alice Springs**	**26.31**	**159**	P	**P**	**12 45 50.7**	**+0.9**
ASAR	**Alice Springs**	**26.31**	**159**	P	**P**	**12 45 50.6**	**+0.9**
	comp=Z,0.9nm,0.4s,baz=336,slow=7.1,SNR=58						
ASAR				PcP	**PcP**	**12 49 09.2**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=350,slow=2.1,SNR=12						
CMAR	**Chiang Mai Arr**	**30.05**	**307**	P	**P**	**12 46 24.1**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=137,slow=7.0,SNR=8.1						
FORT	**Forrest**	**31.77**	**173**	P	**P**	**12 46 39.0**	**+1.2**
NWAO	**Narrogin (SRO)**	**34.24**	**190**	P	**P**	**12 46 57.7**	**-1.3**
BBOO	**Buckleboo**	**35.46**	**162**	P	**P**	**12 47 10.5**	**+1.0**
BBOO				IAmb	IAmb	12 47 14.6	
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	**36.68**	**154**	P	**P**	**12 47 20.9**	**+1.1**
	comp=Z,1.6nm,0.4s,baz=336,slow=9.9,SNR=7.5						
STKA	**Stephens Creek**	**36.68**	**154**	P	**P**	**12 47 20.8**	**+1.1**
USRK	**Ussuriysk Ar.**	**43.70**	**8**	P	**P**	**12 48 17.0**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=200,slow=5.3,SNR=2.7						
SONM	**Songino Array**	**49.13**	**344**	P	**P**	**12 48 59.2**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=152,slow=9.6,SNR=5.2						
MK31	**Makanchi Array**	**58.31**	**328**	P	**P**	**12 50 04.6**	**-0.5**
MK31				IAmb	IAmb	12 50 07.9	
	comp=Z,2.6nm,1.1s						
MKAR	**Makanchi Array**	**58.31**	**328**	P	**P**	**12 50 05.2**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=123,slow=8.3,SNR=17						
MKAR				PcP	**PcP**	**12 50 53.2**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=154,slow=2.9,SNR=8.6						
MKAR	**Makanchi Array**	**58.31**	**328**	P	**P**	**12 50 06.0**	**+0.9**
ZALV	**Zalesovo Beam**	**61.85**	**335**	P	**P**	**12 50 27.2**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=132,slow=5.8,SNR=3.0						
KURBB	**Kurchatov Arra**	**62.62**	**329**	P	**P**	**12 50 33.6**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=125,slow=6.4,SNR=6.0						
KURK	**Kurchatov**	**62.63**	**329**	P	**P**	**12 50 33.6**	**-0.4**
KURK	**Kurchatov**	**62.63**	**329**	IAmb	IAmb	12 50 36.2	
	comp=Z,3.3nm,0.5s						
ABKAR	**Akbulak array**	**72.55**	**322**	P	**P**	**12 51 35.5**	**-0.4**
MAW	**Mawson**	**80.15**	**200**	P	**P**	**12 52 19.5**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=45,slow=4.3,SNR=1.8						
VNDA	**Vanda**	**81.03**	**172**	P	**P**	**12 52 23.4**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=301,slow=7.9,SNR=1.8						
VNDA	**Vanda**	**81.03**	**172**	P	**P**	**12 52 23.0**	**+0.6**
ILAR	**Eielson Array**	**88.85**	**25**	P	**P**	**12 53 00.7**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=242,slow=4.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**121.01**	**286**	PKP	**PKPdf**	**12 58 59.2**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=101,slow=2.1,SNR=8.2						

JMA 24 12:41:50.3±0.3,37°.25N×144°.63E,h42km,M4.0,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.72**	**294**	P	Pn	12 42 33.1	+1.6
JIKH				*eS*	Sn	12 43 04.8	+1.7
JIO	**Ouri**	**2.86**	**296**	P	Pn	12 42 35.1	+1.7
JIO				*eS*	Sn	12 43 08.1	+1.5
JKMT	**Kesennumamotoy**	**2.94**	**303**	P	Pn	12 42 36.0	+1.5
JKMT				*eS*	Sn	12 43 10.0	+1.5
OFUJ	**Ofunato**	**2.96**	**309**	P	Pn	12 42 36.3	+1.5
OFUJ				*eS*	Sn	12 43 10.9	+1.8
JFK	**Kawauchi**	**3.00**	**273**	P	Pn	12 42 36.6	+1.3
JFK				*eS*	Sn	12 43 11.0	+1.0
JMK	**Ichinoseki**	**3.18**	**303**	P	Pn	12 42 39.8	+2.0
JOU	**Okura**	**3.33**	**291**	P	Pn	12 42 42.3	+2.4
JFT	**Otama**	**3.43**	**276**	P	Pn	12 42 43.8	+2.6
JFT				*eS*	Sn	12 43 23.3	+2.6
JRG	**Rokugo**	**3.80**	**306**	P	Pn	12 42 48.9	+2.5
JRY	**Ryogami san**	**4.77**	**257**	P	Pn	12 43 00.6	+0.9
JRY				*eS*	Sn	12 43 53.2	-0.5
JOD2	**Odawara 2**	**4.90**	**248**	P	Pn	12 43 02.5	+1.1
JCH	**Churui**	**5.45**	**350**	P	Pn	12 43 08.7	-0.2
JCH				*eS*	Sn	12 44 07.9	-2.3
JHJ2	**Mitsune**	**5.71**	**225**	*eS*	Sn	12 44 14.6	-2.1
NEM2	**Nemuro 2**	**6.17**	**8**	P	Pn	12 43 15.9	-2.9
JTKR	**Abashiri--Toko**	**6.74**	**356**	P	Pn	12 43 26.2	-0.4
JTKR				*eS*	Sn	12 44 38.0	-3.9

*IDC **24** 12:44:10.1±1.1,1°.56N×123°.93E,h0km,mb3.8/5, mb1 4.1/7,mb1mx3.7/46,mbtmp3.9/7,ML3.9/2,MS2.9/2, Ms1 2.9/2,ms1mx2.5/37, Error ellipse: s-maj=55.9km s-min=19.7km az=73.0*

*DJA **24** 12:44:11.4±0.3,2°.N±3°×12°.3E±°,h10km,M4.3/13,mB4.9/2, mb4.6/4,MLv4.2/13,Mw(mB)4.2/2*

ISC 24 12:44:14.9±0.9,1°.46N±0°.07×123°.34E±0°.06,h32km,n18, σ1°43/21,mb3.9/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.88**	**202**	P	**Pn**	**12 44 29.0**	**-2.1**
GTOI				S	**Sn**	**12 44 41.5**	**-1.3**
KMSI	**Cibinong**	**1.08**	**144**	P	**Pn**	**12 44 33.5**	**-0.4**
KMSI				S	**Sb**	**12 44 50.5**	**+1.5**
MRSI	**Marisa**	**1.71**	**235**	P	**Pn**	**12 44 42.3**	**-0.2**
MRSI				S	**Sb**	**12 45 05.7**	**-1.1**
LUWI	**Luwuk**	**2.55**	**193**	P	**Pn**	**12 44 53.7**	**-0.3**
APSI	**Ampana**	**2.90**	**216**	P	**Pn**	**12 44 59.7**	**+0.8**
SGSI	**Sangihe**	**3.11**	**45**	P	**Pn**	**12 44 59.3**	**-2.4**
MPSI	**Mapaga**	**3.62**	**252**	P	**Pn**	**12 45 08.2**	**-0.6**
TTSI	**Tana Toraja**	**5.70**	**218**	P	**Pn**	**12 45 38.8**	**+1.5**
	0.4nm1μm147nm,0.8s						
DAV	**Davao City (W)**	**6.00**	**22**	LR	LR	12 48 49.6	
	comp=Z,142nm,18.1s,baz=208,slow=49						
BNSI	**Bone**	**6.66**	**209**	P	**Pn**	**12 45 51.3**	**+0.7**
	0.2nm696nm66nm,1.2s						
KAPI	**Kappang**	**7.36**	**209**	Pn	**Pn**	**12 46 03.4**	**+3.2**
	1.6nm,0.3s,baz=52,slow=17,SNR=5.4						
KAPI				LR	LR	12 48 48.6	
	comp=Z,48nm,18.2s,baz=20,slow=36						
BSSI	**Bau Bau, Buton**	**8.07**	**201**	P	**Pn**	**12 46 11.1**	**+1.1**
FITZ	**Fitzroy Crossi**	**19.56**	**173**	P	**P**	**12 48 39.4**	**-0.8**
	0.2nm,0.3s,baz=356,slow=10,SNR=14						
WRA	**Warramunga Arr**	**23.85**	**154**	P	**P**	**12 49 24.2**	**-1.3**
	2.6nm,0.6s,baz=337,slow=10,SNR=19						
ASAR	**Alice Springs**	**27.00**	**158**	P	**P**	**12 49 53.5**	**-0.7**
	0.4nm,0.8s,baz=337,slow=6.5,SNR=4.4						
ASAR				PcP	**PcP**	**12 53 15.0**	**-0.4**
	0.3nm,0.6s,baz=352,slow=2.1,SNR=4.8						
SONM	**Songino Array**	**48.47**	**345**	P	**P**	**12 52 55.7**	**+1.0**
	0.5nm,0.4s,baz=150,slow=8.1,SNR=4.7						
MKAR	**Makanchi Array**	**57.57**	**328**	P	**P**	**12 54 02.9**	**+1.3**
	0.7nm,0.7s,baz=115,slow=7.9,SNR=3.8						
VNDA	**Vanda**	**81.63**	**172**	P	**P**	**12 56 29.0**	**-0.4**
	0.9nm,0.8s,baz=329,slow=7.7,SNR=3.5						

*NEIC **24** 13:21:19.3±2.1,5°.8S±0°.1×151°.5E±0°.1,h67$^{km}_{\pm 4}$km, mb4.2/11, Error ellipse: s-maj=22.6km s-min=9.8km az=129.0*

*IDC **24** 13:21:21.1±1.1,5°.57S×151°.14E,h74$^{km}_{\pm 10}$km,mb3.7/8, mb1 3.9/9,mb1mx3.7/27,mbtmp4.0/9,MS3.2/4,Ms1 3.2/4, ms1mx2.8/33,Error ellipse: s-maj=41.7km s-min=8.7km az=130.0*

ISC 24 13:21:18.6±0.8,5°.7S±0°.1×151°.3E±0°.2,h50km,n32, σ1°42/30,mb4.0/15,MS3.1/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.55**	**28**	P	**Pn**	**13 21 45.5**	**+1.7**
	566nm,0.3s,baz=234,slow=0.8,SNR=172						
KRVT				S	**Sn**	**13 22 06.1**	**+3.4**
	375nm,0.3s,baz=94,slow=19,SNR=12						
KRVT				LR	LR	13 22 33.0	
	comp=Z,523nm,18.4s,baz=185,slow=47						
RABL	**Rabaul**	**1.72**	**31**		**Pn**	**13 21 47.8**	**+1.7**
MANU	**Manus Island**	**5.32**	**313**	Pn	Pn	13 22 41.0	+5.5
PMG	**Port Moresby**	**5.52**	**228**	P	**Pn**	**13 22 40.2**	**+2.0**
	7.5nm,0.3s,baz=51,slow=17,SNR=15						
PMG				S	**Sn**	**13 23 42.0**	**+1.6**
	11nm,0.3s,baz=246,slow=21,SNR=7.5						
PMG	**Port Moresby**	**5.52**	**228**		**Pn**	**13 22 40.6**	**+2.4**
COEN	**Coen**	**11.46**	**224**	Pn	**Pn**	**13 24 00.8**	**+1.1**
GUMO	**Guam**	**20.18**	**342**	LR	LR	13 32 12.7	
	comp=Z,38nm,19.9s,baz=136,slow=32						
GUMO	**Guam**	**20.18**	**342**		**P**	**13 25 49.9**	**+0.8**
MTN	**Manton Dam**	**21.11**	**249**	P	**P**	**13 25 59.4**	**+0.1**
MTN				IAmb	IAmb	13 26 15.6	
	comp=Z,11nm,0.9s						
WB0	**Warramunga Arr**	**21.59**	**228**	P	**P**	**13 26 04.5**	**+0.1**
WR0	**Warramunga Arr**	**21.60**	**227**	P	**P**	**13 26 05.0**	**+0.5**
WR0				IAmb	IAmb	13 26 24.4	
	comp=Z,7.6nm,1.1s						
WB2	**Warramunga Arr**	**21.73**	**228**	P	**P**	**13 26 06.1**	**+0.2**
WB2				IAmb	IAmb	13 26 22.9	
	comp=Z,4.9nm,0.7s						
WRA	**Warramunga Arr**	**21.74**	**228**	P	**P**	**13 26 05.9**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=52,slow=10.0,SNR=22						
WRA				PcP	**PcP**	**13 30 05.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=48,slow=1.8,SNR=7.0						
DZM	**Mont Dzumac**	**21.92**	**139**	LR	LR	13 33 40.7	
	comp=Z,94nm,18.4s,baz=227,slow=34						
KNRA	**Kununurra**	**24.23**	**244**	P	**P**	**13 26 30.7**	**-0.3**
KNRA				IAmb	IAmb	13 26 49.0	
	comp=Z,15nm,1.0s						
AS31	**Alice Springs**	**24.49**	**221**	P	**P**	**13 26 33.7**	**+0.4**
ASAR	**Alice Springs**	**24.49**	**221**	P	**P**	**13 26 34.0**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=54,slow=9.0,SNR=41						
ASAR				LR	LR	13 37 02.6	
	comp=Z,34nm,18.3s,baz=72,slow=38						
ASAR	**Alice Springs**	**24.49**	**221**	P	**P**	**13 26 33.5**	**+0.2**
BATI	**Baumata**	**27.72**	**259**	P	**P**	**13 27 02.2**	**-0.4**
	comp=Z,16nm,0.4s,baz=129,slow=19,SNR=4.0						
FITZ	**Fitzroy Crossi**	**27.92**	**242**	P	**P**	**13 27 03.8**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=62,slow=6.3,SNR=7.3						
FITZ	**Fitzroy Crossi**	**27.92**	**242**	IAmb	IAmb	13 27 04.3	
	comp=Z,3.1nm,0.8s						
SONM	**Songino Array**	**66.28**	**329**	P	**P**	**13 32 01.6**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=150,slow=6.6,SNR=3.3						
SII	**Sitkinak Islan**	**76.24**	**28**	P	**P**	**13 33 01.0**	**-0.6**
TTA	**Tatalina**	**79.14**	**22**	P	**P**	**13 33 17.0**	**-0.8**
TTA				IAmb	IAmb	13 33 17.3	
	comp=Z,3.7nm,1.3s						
BRLK	**Bradley Lake**	**79.43**	**26**	P	**P**	**13 33 18.2**	**-1.2**
BRLK				IAmb	IAmb	13 33 44.9	
	comp=Z,23nm,1.2s						
ZALV	**Zalesovo Beam**	**81.05**	**327**	P	**P**	**13 33 25.9**	**-2.2**
	comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=2.6						
ILAR	**Eielson Array**	**83.54**	**22**	P	**P**	**13 33 38.6**	**-2.3**
	comp=Z,0.6nm,0.6s,baz=250,slow=4.9,SNR=7.0						
MAW	**Mawson**	**84.18**	**203**	P	**P**	**13 33 44.2**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=90,slow=4.0,SNR=1.5						
NVAR	**Mina Array Bea**	**93.81**	**52**	P	**P**	**13 34 31.3**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=252,slow=6.9,SNR=5.6						
ARU	**Arti**	**96.20**	**326**	LR	LR	14 21 12.8	
	comp=Z,23nm,20.1s,baz=246,slow=37						
GERES	**GERESS Array B**	**124.00**	**327**	PKP	**PKPdf**	**13 40 08.6**	**-3.0**
	comp=Z,0.4nm,0.5s,baz=37,slow=4.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**149.12**	**286**	PKPbc	**PKPbc**	**13 41 02.0**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=67,slow=3.1,SNR=24						

IDC 24 13:38:06.3±5.5,18°.77S×173°.71W,h183km±50km, mb3.1/4,mb1 3.3/4,mb1mx3.1/40,mbtmp3.6/4,Error ellipse: s-maj=40.4km s-min=18.4km az=107.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**21.00**	**201**	P	P	13 42 35.3	-0.1
	2.6nm,0.4s,baz=322,slow=5.1,SNR=9.3						
URZ				S	S	13 46 19.6	+0.8
	1.3nm,0.5s,baz=78,slow=20,SNR=1.4						
ASAR	**Alice Springs**	**48.86**	**255**	P	P	13 46 34.1	+0.4
	0.6nm,0.5s,baz=88,slow=7.8,SNR=17						
WRA	**Warramunga Arr**	**48.87**	**260**	P	P	13 46 33.3	-0.5
	0.2nm,0.4s,baz=96,slow=8.0,SNR=14						
H03S2	**Juan Fernandez**	**83.60**	**123**	T	T	15 22 55.9	
	baz=250,slow=75,SNR=4.3						
H03S1	**Juan Fernandez**	**83.61**	**123**	T	T	15 23 00.0	
	baz=250,slow=75,SNR=3.4						
H03S3	**Juan Fernandez**	**83.61**	**123**	T	T	15 22 57.6	
	baz=250,slow=75,SNR=4.6						
ILAR	**Eielson Array**	**85.79**	**11**	P	P	13 50 24.4	-0.1
	0.3nm,0.8s,baz=231,slow=6.3,SNR=10.0						

*MAN **24** 13:46:48.4,9°.57N×122°.85E,h129km,mb4.7,ML3.5, MS3.4*

*NEIC **24** 13:46:49.8±1.1,9°.50N±0°.09×123°.1E±0°.1,h158$^{km}_{\pm 6}$km, mb4.4/35,Error ellipse: s-maj=15.6km s-min=12.4km az=63.0*

*IDC **24** 13:46:50.5±2.2,9°.53N×123°.13E,h161$^{km}_{\pm 20}$km,mb3.

ASAR			ScP		**ScP**	**13 59 25.1**	**-2.8**
	comp=Z,0.3nm,1.0s,baz=347,slow=3.5,SNR=5.2						
ASAR	**Alice Springs**	**34.73 162**	P		**P**	**13 53 24.6**	**-0.5**
USRK	**Ussuriysk Ar.**	**35.37 11**	P		**P**	**13 53 31.0**	**+0.7**
	comp=Z,2.5nm,0.6s,baz=175,slow=6.1,SNR=6.3						
USRK	**Ussuriysk Ar.**	**35.37 11**	P		**P**	**13 53 30.9**	**+0.5**
CTA	**Charters Tower**	**37.35 142**	P		**P**	**13 53 47.3**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=292,slow=12,SNR=2.0						
CTAO	**Charters Tower**	**37.35 142**	P		**P**	**13 53 47.3**	**-0.1**
CTAO			IAmb		IAmb	13 53 49.9	
	comp=Z,14nm,1.4s						
KLR	**Kul'dur**	**40.20 9**	P		**P**	**13 54 10.9**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=191,slow=5.8,SNR=5.4						
FORT	**Forrest**	**40.42 173**	P		**P**	**13 54 12.0**	**-0.8**
SONM	**Songino Array**	**40.62 343**	P		**P**	**13 54 15.5**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=140,slow=9.1,SNR=1.9						
SONM	**Songino Array**	**40.62 343**	P		**P**	**13 54 14.8**	**+0.4**
WAKE	**Wake Island**	**43.29 72**	P		**P**	**13 54 34.4**	**-2.0**
BBOO	**Buckleboo**	**43.96 164**	P		**P**	**13 54 40.8**	**-0.7**
BBOO			IAmb		IAmb	13 54 53.2	
	comp=Z,16nm,1.4s						
EIDS	**Eidsvold**	**44.24 142**	P		**P**	**13 54 43.0**	**-0.8**
EIDS			IAmb		IAmb	13 54 50.0	
	comp=Z,17nm,1.4s						
STKA	**Stephens Creek**	**44.91 157**	P		**P**	**13 54 48.5**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=344,slow=7.3,SNR=4.9						
STKA	**Stephens Creek**	**44.91 157**	P		**P**	**13 54 48.5**	**-0.6**
WMQ	**Urumqi**	**45.82 324**	*eP*		**P**	**13 54 59.4**	**+3.2**
MK31	**Makanchi Array**	**50.65 325**	P		**P**	**13 55 35.1**	**+2.0**
MKAR	**Makanchi Array**	**50.65 325**	P		**P**	**13 55 35.0**	**+1.8**
	comp=Z,1.1nm,0.8s,baz=128,slow=8.0,SNR=5.4						
MKAR			PcP		**PcP**	**13 56 48.7**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=108,slow=5.0,SNR=8.3						
MKAR	**Makanchi Array**	**50.65 325**	P		**P**	**13 55 34.1**	**+1.0**
TOO	**Toolangi**	**51.43 157**	P		**P**	**13 55 37.6**	**-1.4**
NIL	**Nilore**	**51.45 306**	P		**P**	**13 55 40.0**	**+0.7**
NIL			IAmb		IAmb	13 55 41.6	
	comp=Z,9.1nm,0.8s						
GAR	**Garm**	**55.26 311**	P		**P**	**13 56 08.1**	**+0.9**
GAR			IAmb		IAmb	13 56 09.3	
	comp=Z,7.3nm,0.7s						
CHGR	**Chuyangaron**	**56.02 310**	P		**P**	**13 56 13.8**	**+1.1**
CHGR			IAmb		IAmb	13 56 15.2	
	comp=Z,4.8nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**64.36 307**	P		**P**	**13 57 10.0**	**+0.7**
GYA0B			IAmb		IAmb	13 57 10.9	
	comp=Z,6.7nm,1.1s						
ABKAR	**Akbulak array**	**65.29 320**	P		**P**	**13 57 15.8**	**+0.8**
ABKAR	**Akbulak array**	**65.29 320**	P		**P**	**13 57 15.7**	**+0.6**
ABKAR			IAmb		IAmb	13 57 16.8	
	comp=Z,1.6nm,0.8s						
KHZ	**Kahutara**	**69.35 142**	P		**P**	**13 57 39.2**	**-1.4**
BKZ	**Black Stump Fm**	**69.41 138**	P		**P**	**13 57 40.0**	**-1.1**
PLWZ	**Palliser**	**69.92 141**	P		**P**	**13 57 43.0**	**-1.2**
MCQ	**Macquarie Isla**	**70.66 159**	P		**P**	**13 57 47.7**	**-0.6**
TTA	**Tatalina**	**77.45 28**	P		**P**	**13 58 27.9**	**+0.1**
SVW2	**Sparrevohn**	**77.55 29**	P		**P**	**13 58 28.0**	**-0.3**
BPAW	**Bear Paw Mtn.**	**79.73 26**	P		**P**	**13 58 40.5**	**+0.2**
ILAR	**Eielson Array**	**81.48 26**	P		**P**	**13 58 49.0**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=257,slow=4.6,SNR=4.6						
ARCES	**ARCESS Array B**	**83.70 339**	P		**P**	**13 59 01.0**	**0.0**
	comp=Z,3.1nm,0.7s,baz=69,slow=6.6,SNR=9.0						
TORD	**Torodi Ar. Bea**	**117.47 290**	PKP		**PKPdf**	**14 05 17.6**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=75,slow=0.4,SNR=2.6						
TXAR	**Lajitas Array**	**120.72 48**	PKP		**PKPdf**	**14 05 24.3**	**0.0**
	comp=Z,0.2nm,0.6s,baz=243,slow=0.4,SNR=3.8						
PLCA	**Paso Flores**	**146.74 161**	PKPbc		**PKPbc**	**14 06 13.2**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=221,slow=2.4,SNR=4.3						

KRSC 24 13:51:33.6±1.9, 53.84N×168.72E, h10km±17km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.10**	**312**	*eP*	Pn	13 52 08.5	-0.4
BKI				*eS*	Sb	13 52 36.8	-1.2
KBTR	**Krutoberegovo**	**4.14**	**307**	*eP*	Pn	13 52 39.3	+2.4
MKZ	**Mys Kozlova**	**4.17**	**283**	*eP*	Pn	13 52 40.8	+3.6
MKZ				*eS*	Sn	13 53 29.6	+3.7
TUMD	**Tumrok D**	**5.03**	**289**	*eP*	Pn	13 52 53.2	+4.0
ZLN	**Zelenaya**	**5.06**	**299**	*eP*	Pn	13 52 53.8	+4.2
ZLN				*eS*	Sn	13 53 52.9	+4.9
KZV	**Kizimen**	**5.07**	**288**	*eP*	Pn	13 52 53.3	+3.4
KZV				*eS*	Sn	13 53 52.3	+3.7
BZGR	**Bezymyannyi-Gr**	**5.08**	**298**	*eP*	Pn	13 52 54.1	+4.2
BZGR				*eS*	Sn	13 53 51.9	+3.2
BDR	**Baidarnaya**	**5.09**	**305**	*eP*	Pn	13 52 54.7	+4.6
CIRR	**Tsirk**	**5.12**	**300**	*eP*	Pn	13 52 55.1	+4.6
TUMR	**Tumrok**	**5.19**	**290**	*eP*	Pn	13 52 55.9	+4.5
TUMR				*eS*	Sn	13 53 57.4	+6.0
BZWR	**Bezymyannyi-We**	**5.20**	**297**	*eP*	Pn	13 52 56.4	+4.8
BZWR				*eS*	Sn	13 53 57.4	+5.8
SPN	**Mys Shipunski**	**5.25**	**265**	*eP*	Pn	13 52 55.8	+3.7
SPN				*eS*	Sn	13 53 55.6	+3.0
KRSR	**Krestovskiy**	**5.26**	**300**	*eP*	Pn	13 52 57.5	+5.2
KMNR	**Kamenistaya**	**5.27**	**295**	*eP*	Pn	13 52 56.4	+3.9
KMNR				*eS*	Sn	13 53 58.1	+4.9
KOZ	**Kozyrevsk**	**5.56**	**297**	*eP*	Pn	13 53 02.3	+5.9
NLC	**Nalytchevo**	**5.63**	**267**	*eP*	Pn	13 53 01.4	+4.0
SRDR	**Sredinnyy**	**5.73**	**299**	*eP*	Pn	13 53 03.6	+4.8
SDLR	**Sedlovina**	**5.89**	**268**	*eP*	Pn	13 53 05.5	+4.5
UGLR	**Uglovaya**	**5.94**	**268**	*eP*	Pn	13 53 06.2	+4.6
SMAR	**Somma**	**5.94**	**268**	*eP*	Pn	13 53 06.0	+4.2
KRER	**Koryakskii**	**5.96**	**269**	*eP*	Pn	13 53 06.7	+4.6
AVH	**Avacha**	**5.98**	**268**	*eP*	Pn	13 53 06.8	+4.6
DALK	**Dalny**	**6.01**	**266**	*eP*	Pn	13 53 06.8	+4.3
DALK				*eS*	Sn	13 54 15.1	+3.7
KRX	**Arik**	**6.01**	**269**	*eP*	Pn	13 53 07.1	+4.3
KRX				*eS*	Sn	13 54 16.3	+4.6
PET	**Petropavlovsk**	**6.07**	**266**	*eP*	Pn	13 53 07.6	+4.2
ESO	**Esso**	**6.15**	**294**	*eP*	Pn	13 53 08.9	+4.5
GNL	**Ganaly**	**6.39**	**273**	*eP*	Pn	13 53 13.1	+5.2
KRMR	**Karymshinskiy**	**6.42**	**265**	*eP*	Pn	13 53 14.2	+6.0
KRMR				*eS*	Sn	13 54 28.6	+7.1
GRL	**Gorelyy**	**6.53**	**263**	*eP*	Pn	13 53 15.5	+5.7
KDTR	**Khodutka, Kamc**	**6.76**	**257**	*eP*	Pn	13 53 17.6	+4.7

*BEO **24** 14:20:36.6±0.3, 43.21N×20.83E, h0km, ML2.7/13*
*RHSSO **24** 14:20:38.5±0.7, 43.22N×20.64E, h3km±3km, ML2.5/9*
ISC 24 14:20:36.2±0.7, 43.24N±0.02×20.77E±0.02, h10km, n42, σ1s38/78, 14C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SELS	**Selova**	**0.25**	**94**	*ePg*	**Pg**	**14 20 40.2**	**-1.2**
SELS				*eSg*	**Sg**	**14 20 41.7**	**-3.2**
IVAS	**Ivanjica**	**0.56**	**307**	*ePg*	**Pg**	**14 20 46.8**	**-0.4**
IVAS				*eSg*	**Sg**	**14 20 54.8**	**+0.1**
SJES	**Sjenica**	**0.58**	**273**	*ePg*	**Pb**	**14 20 47.9**	**-0.7**
SJES				*eSg*	**Sb**	**14 20 56.5**	**-0.5**
GRUS	**Gruza**	**0.65**	**356**	*ePg*	**Pg**	**14 20 48.4**	**-0.5**
GRUS				*eSg*	**Sb**	**14 20 59.1**	**+0.2**
BOVS	**Bovan**	**0.79**	**59**	*ePg*	**Pg**	**14 20 49.8**	**-1.6**
BOVS				*eSg*	**Sg**	**14 21 01.1**	**-0.6**
BARS	**Barje**	**0.87**	**118**	*ePg*	**Pn**	**14 20 57.9**	**+3.3**
BARS				*eSg*	**Sn**	**14 21 14.2**	**+6.8**
TRUS	**Trudelj**	**1.02**	**345**	*ePg*	**Pb**	**14 20 56.0**	**0.0**
TRUS				*eSg*	**Sn**	**14 21 11.7**	**+0.7**
DIVS	**Divibare**	**1.03**	**327**	*ePg*	**Pn**	**14 20 56.7**	**-0.2**
DIVS				*eSg*	**Sn**	**14 21 11.2**	**-0.2**
DIVS	**Divibare**	**1.03**	**327**	*ePg*	**Pg**	**14 20 55.3**	**-0.8**
DIVS				*eSg*	**Sb**	**14 21 09.9**	**0.0**
SVIS	**Svilajnac**	**1.08**	**17**	*ePg*	**Pn**	**14 20 57.6**	**+0.2**
SVIS				*eSg*	**Sb**	**14 21 11.8**	**+0.7**
RUDO	**Rudo**	**1.09**	**291**	*ePg*	**Pg**	**14 20 55.9**	**-1.3**
RUDO				*eSg*	**Sg**	**14 21 10.4**	**-1.0**
BBLS	**Lazići**	**1.18**	**303**	*ePg*	**Pn**	**14 20 58.9**	**+0.1**
BBLS				*eSg*	**Sn**	**14 21 15.2**	**+0.2**
BBLS	**Lazići**	**1.18**	**303**	*ePg*	**Pg**	**14 20 58.4**	**-0.4**
BBLS				*eSg*	**Sg**	**14 21 13.8**	**-0.3**
ZAGS	**Zajecar**	**1.21**	**61**	*ePg*	**Pn**	**14 20 57.4**	**-1.8**
ZAGS				*eSg*	**Sb**	**14 21 13.5**	**-1.4**
ZAPS	**Zavoj**	**1.36**	**88**	*ePg*	**Pn**	**14 21 01.6**	**+0.3**
ZAPS				*eSg*	**Sb**	**14 21 19.9**	**+0.6**
UPM	**Unac-Piva**	**1.37**	**269**	*ePg*	**Pg**	**14 21 01.7**	**-0.8**
PDG	**Podgorica**	**1.38**	**235**	⇑P	**Pg**	**14 21 02.3**	**-0.4**
PDG				⇑S	**Sg**	**14 21 23.0**	**+2.5**
PDG	**Podgorica**	**1.38**	**235**	*ePg*	**Pb**	**14 21 01.7**	**-0.4**
PDG				*eSg*	**Sg**	**14 21 19.4**	**-1.1**
BLKB	**Belogradchik**	**1.44**	**74**	⇓S	**Sn**	**14 21 21.7**	**+0.4**
BOSS	**Bosilegrad**	**1.46**	**120**	*ePg*	**Pn**	**14 21 02.2**	**-0.4**
BOSS				*eSg*	**Sn**	**14 21 20.6**	**-1.2**
HAPS	**Han Pijesak,Bl**	**1.57**	**303**	*ePg*	**Pg**	**14 21 05.6**	**-0.8**
HAPS				*eSg*	**Sg**	**14 21 26.3**	**-0.5**
DRME	**Dracevica, Mon**	**1.57**	**229**	*ePg*	**Pb**	**14 21 05.1**	**-0.3**
DRME				*eSg*	**Sg**	**14 21 25.8**	**-1.0**
TEKS	**Tekeris**	**1.59**	**326**	*ePg*	**Pg**	**14 21 06.5**	**-0.3**
TEKS				*eSg*	**Sg**	**14 21 27.6**	**+0.2**
TEKS	**Tekeris**	**1.59**	**326**	*ePn*	**Pg**	**14 21 06.5**	**-0.3**
TEKS				*eSg*	**Sg**	**14 21 27.5**	**+0.2**
BRY	**Bratogost**	**1.67**	**259**	*ePn*	**Pb**	**14 21 06.6**	**-0.6**
MDVR	**Moldovita**	**1.69**	**23**	⇑P	**Pn**	**14 21 05.0**	**-0.8**
MDVR				⇑S	**Sb**	**14 21 29.3**	**+0.6**
HCY	**Herceg Novi**	**1.85**	**246**	*ePn*	**Pb**	**14 21 09.5**	**-0.6**
TREB	**Trebinje**	**1.85**	**255**	*ePn*	**Pb**	**14 21 09.8**	**-0.4**
TREB				*eSn*	**Sb**	**14 21 32.4**	**-1.0**
PUNG	**Punghina**	**1.88**	**56**	⇑P	**Pn**	**14 21 09.4**	**+1.0**
PUNG				⇑S	**Sb**	**14 21 34.0**	**-0.2**
HERR	**Herculane**	**2.03**	**35**	⇑P	**Pn**	**14 21 10.0**	**-0.4**
HERR				⇓S	**Sb**	**14 21 37.8**	**-0.6**
FRGS	**Fruska Gora**	**2.04**	**341**	*ePg*	**Pg**	**14 21 14.6**	**-0.8**
FRGS				*eSg*	**Sg**	**14 21 42.9**	**+1.1**
FRGS	**Fruska Gora**	**2.04**	**341**	*ePn*	**Pb**	**14 21 13.7**	**+0.3**
FRGS				*eSn*	**Sb**	**14 21 39.2**	**+0.3**
SRE	**Strehaia**	**2.26**	**50**	⇑P	**Pn**	**14 21 14.6**	**+0.9**
SRE				⇑S	**Sn**	**14 21 43.8**	**+2.2**
STON	**Ston**	**2.28**	**262**	*ePn*	**Pb**	**14 21 16.1**	**-1.4**
STON				*eSn*	**Sn**	**14 21 42.7**	**+0.6**
STON	**Ston**	**2.28**	**262**	*ePn*	**Pb**	**14 21 16.5**	**-1.0**
STON				Sn	**Sg**	**14 21 47.3**	**-2.2**
BZS	**Buzias**	**2.46**	**14**	⇑P	**Pn**	**14 21 16.0**	**-0.4**
BZS				⇑S	**Sn**	**14 21 48.7**	**+2.3**
GZR	**Gura Zlata**	**2.59**	**33**	⇑P	**Pn**	**14 21 18.7**	**+0.4**
GZR				⇑S	**Sn**	**14 21 51.3**	**+1.4**
RICI	**Ricice**	**2.67**	**277**	*ePn*	**Pb**	**14 21 22.2**	**-1.9**
RICI				Sn	**Sb**	**14 21 57.1**	**+0.2**
LOT	**Lotru**	**3.08**	**43**	⇑P	**Pn**	**14 21 25.9**	**+0.8**
LOT				⇓S	**Sn**	**14 22 03.2**	**+1.2**
KIJV	**Kijevo**	**3.26**	**285**	*ePn*	**Pn**	**14 21 29.6**	**+2.2**
MORH	**Mrgy, Hungar**	**3.34**	**334**	*eSn*	**Sn**	**14 22 10.6**	**+2.4**
VOIR		**3.77**	**53**	⇓P	**Pn**	**14 21 34.8**	**+0.2**
VOIR				⇑S	**Sn**	**14 22 20.8**	**+1.8**

NNC 24 14:24:34.0±2.2, 36.85N×70.87E, h115km±40km, mb3.0, mpv3.6, 5C-1D, Error ellipse: s-maj=21.0km s-min=15.8km az=139.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.25**	**358**	P	Pn	14 26 03.8	0.0
	3.1nm,0.5s,baz=177,slow=13,SNR=45						
KK31				⇑S	Sn	14 27 14.9	+1.1
	0.7nm,0.3s,baz=183,slow=24,SNR=7.0						
AAK	**Ala-Archa**	**6.42**	**25**	⇑P	Pn	14 26 05.7	-0.5
	4.5nm,0.8s						
AAK				⇑S	Sn	14 27 17.9	-0.1
	4.9nm,0.8s						
TKM2	**Tokmak 2**	**7.07**	**29**	⇑P	Pn	14 26 15.5	+0.5
	2.0nm,0.6s						
TKM2				⇓S	Sn	14 27 35.0	+1.1
	1.7nm,0.7s						
AB31	**Akbulak array**	**14.72**	**331**	P	Pn	14 27 56.0	-0.4
	0.2nm,0.4s,baz=79,slow=22,SNR=13						
AKTO	**Aktyubinsk**	**16.42**	**330**	⇑P	Pn	14 28 17.7	+0.2
	1.6nm,0.7s						

*WEL **24** 14:30:32.5±0.5, 33˚S±5˚×17˚9W±1˚1, h139km±15km, M4.2/49, mB4.8/41, ML5.4/37, MLv5.0/49, Mw(mB)4.1/41, Error ellipse: s-maj=0.0km s-min=0.0km az=111.1*
*NEIC **24** 14:30:33.1±0.2, 32.45±0.1×179.8W±0.3, h150km±16km, mb4.2/8, Error ellipse: s-maj=33.3km s-min=9.2km az=113.0*
*IDC **24** 14:30:34.9±2.1, 32.32S×179.87W, h161km±20km, mb4.0/3, mb1 4.1/5, mb1mx3.6/27, mbtmp4.5/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/37, Error ellipse: s-maj=21.8km s-min=20.5km az=152.0*
ISC 24 14:30:31.4±0.6, 32.82S±0.05×179.22W±0.09, h150km, n126, σ2s83/156, mb4.4/7, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.71**	**18**	P	**Pn**	**14 31 26.7**	**-1.2**
GLKZ				S	**Sn**	**14 32 09.2**	**-2.6**
RAO	**Raoul Island**	**3.72**	**18**	P	**Pn**	**14 31 28.4**	**+0.3**
	40nm,0.3s,baz=73,slow=19,SNR=2.1						
RAO				S	**Sn**	**14 32 11.2**	**-0.9**
	169nm,0.3s,baz=54,slow=18,SNR=7.1						
RAO	**Raoul Island**	**3.72**	**18**	Pn	**Pn**	**14 31 27.6**	**-0.4**
RIZ	**Raoul Island**	**3.73**	**18**	P	**Pn**	**14 31 27.4**	**-0.7**
RIZ				S	**Sn**	**14 32 11.6**	**-0.5**
MXZ	**Matakaoa Point**	**5.15**	**202**	P	**Pn**	**14 31 48.3**	**+1.7**
MXZ				S	**Sn**	**14 32 48.1**	**+2.6**
MXZ	**Matakaoa Point**	**5.15**	**202**		**Pn**	**14 31 48.5**	**+1.8**
WMGZ	**Waiomatatini S**	**5.35**	**201**	P	**Pn**	**14 31 51.8**	**+2.4**
WMGZ				S	**Sn**	**14 32 52.4**	**+2.1**
HAZ	**Te Kaha**	**5.50**	**206**	P	**Pn**	**14 31 53.2**	**+1.8**
GRZ	**Great Barrier**	**5.57**	**231**	P	**Pn**	**14 31 55.6**	**+3.3**
PUZ	**Puketiti**	**5.63**	**201**	P	**Pn**	**14 31 54.3**	**+1.1**
PUZ				S	**Sn**	**14 32 58.2**	**+1.1**
RUGZ	**Raukumara Rang**	**5.73**	**205**	P	**Pn**	**14 31 56.3**	**+1.8**
RUGZ				S	**Sn**	**14 32 60.0**	**+0.5**
TWGZ	**Tauwhareparae**	**5.82**	**202**	P	**Pn**	**14 31 57.2**	**+1.6**
TWGZ				S	**Sn**	**14 33 08.0**	**+4.5**
WHRZ	**Whale Island**	**5.91**	**211**	P	Pn	14 32 02.6	+5.8
WHRZ				S	**Sn**	**14 33 08.1**	**+4.4**
CNGZ	**Carnagh Station**	**6.03**	**200**	P	Pn	14 32 04.6	+6.2
TKGZ	**Te Karaka**	**6.10**	**202**	P	**Pn**	**14 31 60.0**	**+0.7**
TKGZ				S	**Sn**	**14 33 11.0**	**+2.8**
WIAZ	**Waiheke Island**	**6.11**	**228**	P	**Pn**	**14 32 03.5**	**+4.0**
MWZ	**Matawai**	**6.11**	**205**	P	**Pn**	**14 32 00.2**	**+0.6**
MWZ				S	**Sn**	**14 33 08.5**	**0.0**
WCZ	**Waipu Caves**	**6.17**	**238**	P	**Pn**	**14 32 02.8**	**+2.6**
URZ	**Urewera**	**6.20**	**208**	P	**Pn**	**14 32 01.1**	**+0.5**
	3.3nm,0.3s,baz=269,slow=4.1,SNR=42						
URZ				S	**Sn**	**14 33 08.6**	**-1.9**
	85nm,0.3s,baz=196,slow=20,SNR=15						
URZ	**Urewera**	**6.20**	**208**	P	**Pn**	**14 32 01.2**	**+0.5**
URZ				S	**Sn**	**14 33 10.4**	**-0.2**
MKAZ	**Moumakai**	**6.29**	**226**	P	**Pn**	**14 32 05.5**	**+3.6**
RAGZ	**Rawiri**	**6.29**	**205**	P	**Pn**	**14 32 02.8**	**+0.8**
RAGZ				S	**Sn**	**14 33 13.3**	**+0.3**
LIRZ	**Lichensteins R**	**6.30**	**214**	P	Pn	14 32 08.7	+6.7
OMRZ	**Omania**	**6.39**	**213**	P	Pn	14 32 08.5	+5.3
EPAZ	**Eden Park BICE**	**6.41**	**229**	P	Pn	14 31 47.5	-16
OUZ	**Omahuta**	**6.43**	**246**	Pn	**Pn**	**14 32 04.4**	**+0.6**
TARZ	**Mount Tarawera**	**6.43**	**212**	P	Pn	14 32 08.9	+5.0
HLRZ	**Highlands Stat**	**6.51**	**212**	P	Pn	14 32 09.6	+4.7
TOZ	**Tahuroa Road**	**6.53**	**220**	P	**Pn**	**14 32 08.8**	**+3.7**
SNGZ	**Shannon Statio**	**6.58**	**204**	P	**Pn**	**14 32 06.3**	**+0.6**
HSRZ	**Hossack Road**	**6.61**	**213**	P	Pn	14 32 11.4	+5.2
KNZ	**Kokohu**	**6.69**	**201**	P	**Pn**	**14 32 08.3**	**+1.2**
KNZ				S	**Sn**	**14 33 17.1**	**-5.1**
PRRZ	**Plateau Road**	**6.70**	**211**	P	**Pn**	**14 32 09.7**	**+2.5**
PRRZ				S	Sn	14 33 21.1	+1.5
MHGZ	**Mahia Peninsul**	**6.74**	**199**	P	**Pn**	**14 32 08.1**	**+0.3**
MHGZ				S	**Sn**	**14 33 19.9**	**-3.5**
ALRZ	**Allen Road**	**6.78**	**211**	P	**Pn**	**14 32 10.8**	**+2.5**
RAHZ	**Arahi**	**6.79**	**205**	P	**Pn**	**14 32 09.2**	**+0.7**
RAHZ				S	**Sn**	**14 33 21.9**	**-2.8**
MTHZ	**Maungataniwha**	**6.82**	**207**	P	**Pn**	**14 32 09.2**	**+0.3**
MTHZ				S	**Sn**	**14 33 24.1**	**-1.4**
WPRZ	**Whakapapatarin**	**6.82**	**212**	P	**Pn**	**14 32 12.9**	**+4.0**
WHHZ	**Waihua**	**6.88**	**204**	P	**Pn**	**14 32 12.9**	**+3.2**
WHHZ				S	**Sn**	**14 33 25.6**	**-1.2**
KUTZ	**Kaahu Road**	**6.95**	**214**	P	**Pn**	**14 32 15.2**	**+4.5**
MRHZ	**Matea Rd**	**6.97**	**209**	P	**Pn**	**14 32 11.4**	**+0.4**
NMHZ	**Naumai**	**7.05**	**206**	P	**Pn**	**14 32 12.0**	**-0.1**
NMHZ				S	**Sn**	**14 33 29.3**	**-1.7**
ARHZ	**Aropaoanui**	**7.13**	**204**	P	**Pn**	**14 32 13.8**	**+0.8**
ARHZ				S	**Sn**	**14 33 31.8**	**-1.0**
WAIZ	**Wairara**	**7.17**	**213**	P	**Pn**	**14 32 17.1**	**+3.5**
BKZ	**Black Stump Fm**	**7.23**	**208**	P	**Pn**	**14 32 13.9**	**-0.5**
BKZ				S	**Sn**	**14 33 32.5**	**-2.7**
BKZ	**Black Stump Fm**	**7.23**	**208**	Pn	**Pn**	**14 32 13.3**	**-1.1**
RATZ	**Rangitukua**	**7.28**	**213**	P	**Pn**	**14 32 18.8**	**+3.7**
RITZ	**Rihia Road**	**7.33**	**212**	P	**Pn**	**14 32 19.6**	**+3.8**
MCHZ	**McNeill Hill**	**7.39**	**205**	P	**Pn**	**14 32 16.1**	**-0.5**
MCHZ				S	**Sn**	**14 33 38.2**	**-1.0**
KATZ	**Kakaramea**	**7.40**	**212**	P	**Pn**	**14 32 20.2**	**+3.4**
HIZ	**Hauiti**	**7.45**	**219**	Pn	**Pn**	**14 32 19.8**	**+2.5**
CKHZ	**Cape Kidnapper**	**7.45**	**203**	P	**Pn**	**14 32 17.9**	**+0.5**
CKHZ				S	**Sn**	**14 33 37.9**	**-2.8**
KWHZ	**Kaweka Forest**	**7.48**	**207**	P	**Pn**	**14 32 16.7**	**-1.0**
KWHZ				S	**Sn**	**14 33 38.6**	**-2.7**
KRVZ	**Karewarewa**	**7.52**	**212**	P	**Pn**	**14 32 20.6**	**+2.2**
WTVZ	**West Tongariro**	**7.56**	**212**	P	**Pn**	**14 32 21.0**	**+2.0**
OTVZ	**Oturere**	**7.57**	**212**	P	**Pn**	**14 32 20.2**	**+1.1**
OTVZ				S	**Sn**	**14 33 44.9**	**+1.3**
TWVZ	**Taurewa**	**7.60**	**213**	P	**Pn**	**14 32 22.0**	**+2.6**
NGZ	**Ngauruhoe**	**7.61**	**212**	P	**Pn**	**14 32 21.2**	**+1.6**
KAHZ	**Kahuranaki**	**7.64**	**203**	P	**Pn**	**14 32 18.9**	**-1.1**
KAHZ				S	**Sn**	**14 33 40.8**	**-4.5**
TUVZ	**Tukino**	**7.66**	**211**	P	**Pn**	**14 32 22.0**	**+1.7**
BHHZ	**Black Hill Sta**	**7.67**	**208**	P	**Pn**	**14 32 20.0**	**-0.4**
BHHZ				S	**Sn**	**14 33 42.4**	**-3.7**
KRHZ	**Kereru**	**7.69**	**206**	P	**Pn**	**14 32 20.0**	**-0.6**
KRHZ				S	**Sn**	**14 33 42.5**	**-3.8**
FWVZ	**Far West T-bar**	**7.69**	**212**	P	**Pn**	**14 32 22.8**	**+2.0**
WHVZ	**Whangaehu Hut**	**7.70**	**212**	P	**Pn**	**14 32 23.6**	**+2.7**
MOVZ	**Moawhango**	**7.73**	**210**	P	**Pn**	**14 32 22.4**	**+1.2**
MOVZ				S	**Sn**	**14 33 42.1**	**-5.4**
WNVZ	**Wahianoa**	**7.73**	**211**	P	**Pn**	**14 32 20.2**	**-1.1**
PKVZ	**Pokaka**	**7.81**	**213**	P	**Pn**	**14 32 23.3**	**+1.0**
PXZ	**Pawanui**	**7.86**	**203**	P	**Pn**	**14 32 20.3**	**-2.5**
PXZ				S	**Sn**	**14 33 46.1**	**-4.3**
VRZ	**Vera Road**	**7.96**	**216**	P	**Pn**	**14 32 27.9**	**+3.7**
PNHZ	**Pukenui**	**7.99**	**206**	P	**Pn**	**14 32 23.3**	**-1.2**
PNHZ				S	**Sn**	**14 33 49.0**	**-4.6**
WPHZ	**Waipukurau**	**8.03**	**205**	P	**Pn**	**14 32 26.4**	**+1.3**
PRHZ	**Porangahau**	**8.15**	**203**	P	**Pn**	**14 32 24.0**	**-2.7**
PRHZ				S	**Sn**	**14 33 50.5**	**-6.9**
DVHZ	**Dannevirke**	**8.34**	**205**	P	**Pn**	**14 32 28.6**	**-0.6**
DVHZ				S	**Sn**	**14 33 54.5**	**-7.5**
WAZ	**Wanganui**	**8.36**	**212**	P	**Pn**	**14 32 30.8**	**+1.4**
WAZ				S	**Sn**	**14 34 01.7**	**-0.7**
ANWZ	**Angora Road**	**8.38**	**203**	P	**Pn**	**14 32 28.6**	**-1.0**
ANWZ				S	**Sn**	**14 33 58.0**	**-4.8**
LREZ	**Lake Rotokare**	**8.40**	**216**	P	**Pn**	**14 32 33.1**	**+3.1**
PREZ	**Palmer Road**	**8.43

comp=Z,159nm,20.0s,baz=165,slow=35

MJAR	**Matsushiro Arr**	**15.54**	**344**	Pn	**Pn**	**14 51 32.1**	**+1.2**
JHS	**Saijyo**	**16.11**	**328**	P	**P**	**14 51 42.4**	**+1.1**
JMM	**Marumori**	**16.33**	**352**	P	**P**	**14 51 44.4**	**+0.8**
KSRS	**Korea Array**	**20.72**	**323**	P	Pn	14 52 34.0	-0.3
	1.8nm,0.6s,baz=148,slow=9.2,SNR=7.4						
KSRS				LR	LR	14 59 29.1	
	comp=Z,43nm,19.9s,baz=128,slow=33						
H11N1	**WAKE ISLAND Hy**	**21.99**	**91**	T	T	15 15 22.2	
	baz=272,slow=73,SNR=8.0						
H11N2	**WAKE ISLAND Hy**	**21.99**	**91**	T	T	15 15 25.0	
	baz=272,slow=73,SNR=8.0						
H11N3	**WAKE ISLAND Hy**	**22.01**	**91**	T	T	15 15 27.3	
	baz=272,slow=73,SNR=10						
H11S3	**WAKE ISLAND Hy**	**22.02**	**94**	T	T	15 15 21.1	
	baz=283,slow=74,SNR=27						
H11S1	**WAKE ISLAND Hy**	**22.03**	**94**	T	T	15 15 21.7	
	baz=283,slow=74,SNR=38						
H11S2	**WAKE ISLAND Hy**	**22.04**	**94**	T	T	15 15 25.9	
	baz=283,slow=74,SNR=28						
ASAJ	**Asahikawa**	**22.43**	**358**	LR	LR	15 01 29.1	
	comp=Z,66nm,21.6s,baz=194,slow=36						
TGY	**Tagaytay City**	**22.70**	**254**	LR	LR	15 00 56.9	
	comp=Z,72nm,20.8s,baz=127,slow=34						
JAY	**Jayapura**	**24.16**	**187**	LR	LR	15 01 45.0	
	comp=Z,39nm,20.1s,baz=352,slow=34						
USRK	**Ussuriysk Ar.**	**24.43**	**340**	P	**P**	**14 53 16.1**	**+6.4**
	1.6nm,0.8s,baz=153,slow=16,SNR=1.9						
USRK				LR	LR	15 02 58.6	
	comp=Z,51nm,18.9s,baz=146,slow=37						
SIJI	**Sorong**	**25.35**	**210**	LR	LR	15 00 55.4	
	comp=Z,46nm,19.4s,baz=329,slow=30						
KLR	**Kul'dur**	**29.07**	**344**	P	**P**	**14 53 51.0**	**-0.4**
	3.0nm,0.8s,baz=169,slow=5.4,SNR=8.0						
PETK	**Petropavlovsk-**	**33.26**	**16**	LR	LR	15 06 03.8	
	comp=Z,44nm,20.0s,baz=195,slow=33						
SONM	**Songino Array**	**39.55**	**320**	P	**P**	**14 55 22.6**	**+0.4**
	0.2nm,0.3s,baz=104,slow=6.1,SNR=1.7						
SONM	**Songino Array**	**39.55**	**320**	IAmb	IAmb	14 55 31.5	
	comp=Z,1.7nm,1.4s						
WB2	**Warramunga Arr**	**42.28**	**193**	P	**P**	**14 55 45.7**	**+0.9**
WB2				IAmb	IAmb	14 56 06.5	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**42.28**	**193**	P	**P**	**14 55 45.2**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=15,slow=9.1,SNR=7.3						
WRA				LR	LR	15 13 14.3	
	comp=Z,25nm,19.2s,baz=340,slow=36						
WRA	**Warramunga Arr**	**42.28**	**193**	IAmb	IAmb	14 55 46.7	
	comp=Z,0.2nm,1.1s						
ASAR	**Alice Springs**	**45.99**	**192**	P	**P**	**14 56 15.4**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=15,slow=10,SNR=13						
ASAR				LR	LR	15 15 10.7	
	comp=Z,38nm,18.9s,baz=0.0,slow=35						
LSA	**Lhasa**	**47.51**	**291**	P	**P**	**14 56 27.1**	**+0.1**
LSA				IAmb	IAmb	14 56 27.4	
	comp=Z,1.9nm,0.6s						
BILL	**Bilibino**	**48.52**	**11**	P	**P**	**14 56 33.5**	**-0.1**
ZALV	**Zalesovo Beam**	**54.42**	**322**	P	**P**	**14 57 17.1**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=100,slow=7.7,SNR=4.0						
MKAR	**Makanchi Array**	**54.93**	**313**	P	**P**	**14 57 21.3**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=110,slow=9.2,SNR=3.5						
KURK	**Kurchatov**	**57.70**	**317**	P	**P**	**14 57 40.8**	**-0.7**
KURK	**Kurchatov**	**57.70**	**317**	IAmb	IAmb	14 57 49.5	
	comp=Z,5.6nm,1.4s						
KURBB	**Kurchatov Arra**	**57.75**	**317**	P	**P**	**14 57 40.8**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=96,slow=7.9,SNR=10.0						
IMAR	**Indian Mountai**	**59.42**	**25**	P	**P**	**14 57 53.3**	**+0.1**
BPAW	**Bear Paw Mtn.**	**60.09**	**27**	P	**P**	**14 57 57.9**	**0.0**
BPAW				IAmb	IAmb	14 57 58.5	
	comp=Z,1.9nm,0.8s						
ILAR	**Eielson Array**	**61.97**	**27**	P	**P**	**14 58 08.7**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=262,slow=5.0,SNR=7.8						
ILAR				LR	LR	15 21 55.2	
	comp=Z,23nm,21.9s,baz=294,slow=33						
KKAR	**Karatay Array**	**63.30**	**308**	P	**P**	**14 58 18.8**	**-1.1**
BCAR	**Beaver Creek A**	**64.03**	**29**	P	**P**	**14 58 23.6**	**-0.8**
ABKAR	**Akbulak array**	**69.78**	**316**	P	**P**	**14 59 00.4**	**-0.7**
EUNU	**Eureka**	**75.12**	**8**	P	**P**	**14 59 31.6**	**-0.9**
YKA	**Yellowknife Ar**	**76.38**	**28**	P	**P**	**14 59 39.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=296,slow=4.9,SNR=5.6						
YKA				LR	LR	15 31 50.1	
	comp=Z,26nm,20.8s,baz=0.0,slow=34						
ARCES	**ARCESS Array B**	**79.06**	**342**	P	**P**	**14 59 53.0**	**-1.8**
	comp=Z,3.0nm,1.0s,baz=45,slow=9.3,SNR=1.2						
NVAR	**Mina Array Bea**	**82.97**	**52**	P	**P**	**15 00 17.1**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=286,slow=5.3,SNR=12						
TXAR	**Lajitas Array**	**97.87**	**54**	PP	**PP**	**15 05 26.9**	**+1.6**
	comp=Z,0.2nm,0.8s,baz=281,slow=8.8,SNR=4.2						
LPAZ	**La Paz**	**149.68**	**85**	PKPbc	**PKPbc**	**15 07 42.0**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=298,slow=2.4,SNR=4.3						

IDC 24 14:50:07.3±3.1, 31°.22N×111°.43E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.5/63, mbtmp4.1/3, Error ellipse: s-maj=808.7km s-min=31.6km az=61.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**55.42**	**154**	P	P	14 59 44.9	+1.3
	0.5nm,0.7s,baz=346,slow=7.1,SNR=3.4						
ASAR	**Alice Springs**	**58.66**	**156**	P	P	15 00 05.4	-1.2
	0.3nm,0.6s,baz=332,slow=6.7,SNR=4.8						
FINES	**FINESS Array B**	**60.95**	**327**	P	P	15 00 21.9	0.0
	1.6nm,0.7s,baz=86,slow=6.0,SNR=3.7						

IDC 24 15:01:13.8±6.1, 8°.40S×155°.96E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/34, mbtmp4.1/3, MS2.9/5, Ms1 2.9/5, ms1mx2.6/35, Error ellipse: s-maj=106.8km s-min=81.4km az=3.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.07**	**105**	LR	LR	15 03 55.5	
	comp=Z,61nm,18.3s,baz=16,slow=40						
KRVT	**Keravat (AS076**	**5.64**	**316**	LR	LR	15 04 54.3	
	comp=Z,56nm,20.8s,baz=188,slow=39						
PMG	**Port Moresby**	**8.75**	**263**	LR	LR	15 06 46.1	
	comp=Z,54nm,19.6s,baz=82,slow=38						
DZM	**Mont Dzumac**	**16.93**	**145**	LR	LR	15 10 41.6	
	comp=Z,102nm,18.6s,baz=212,slow=34						
WRA	**Warramunga Arr**	**23.86**	**239**	P	P	15 06 29.3	+0.1
	1.3nm,0.9s,baz=64,slow=9.7,SNR=6.9						
ASAR	**Alice Springs**	**26.01**	**232**	P	P	15 06 48.8	0.0
	6.0nm,0.3s,baz=61,slow=10,SNR=11						
STKA	**Stephens Creek**	**26.91**	**208**	P	P	15 06 56.7	-0.1
	1.6nm,0.6s,baz=37,slow=8.1,SNR=3.2						
STKA				LR	LR	15 16 33.3	
	comp=Z,72nm,19.0s,baz=24,slow=34						

*IDC **24** 15:09:40.9±1.8, 8°.15N×104°.23W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.8/24, mbtmp3.7/5, MS3.4/5, Ms1 3.4/5, ms1mx3.0/25, Error ellipse: s-maj=85.7km s-min=22.3km az=59.0*

ISC 24 15:09:45.7±1.8, 8°.1N±0°.3×104°.3W±0°.5, h35km, n10, σ0s74/6, mb3.6/5, MS3.4/4, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**12.82**	**45**	LR	LR	15 16 14.4	
	comp=Z,252nm,21.3s,baz=192,slow=31						
TXAR	**Lajitas Array**	**21.12**	**2**	P	**P**	**15 14 27.4**	**-0.2**
	1.1nm,1.0s,baz=169,slow=10,SNR=5.4						
TXAR				LR	LR	15 21 58.1	
	comp=Z,119nm,18.7s,baz=0.0,slow=35						
PDAR	**Pinedale Array**	**34.83**	**353**	P	**P**	**15 16 34.2**	**+0.7**
	0.3nm,0.6s,baz=186,slow=8.0,SNR=4.1						
RPN	**Rapa Nui**	**35.36**	**188**	LR	LR	15 27 31.1	
	comp=Z,41nm,18.9s,baz=195,slow=30						
ULM	**Lac du Bonnet**	**42.59**	**8**	LR	LR	15 34 04.0	
	comp=Z,49nm,18.1s,baz=42,slow=34						
LPAZ	**La Paz**	**43.25**	**124**	P	**P**	**15 17 44.5**	**-0.3**
	2.1nm,0.8s,baz=322,slow=7.1,SNR=9.3						
PPT	**Papeete**	**51.47**	**240**	LR	LR	15 33 49.7	
	comp=Z,41nm,19.6s,baz=47,slow=28						
CPUP	**Villa Florida**	**57.02**	**129**	P	**P**	**15 19 28.6**	**+0.2**
	2.4nm,0.8s,baz=288,slow=6.5,SNR=4.7						
ILAR	**Eielson Array**	**63.95**	**341**	P	**P**	**15 20 14.2**	**-0.8**
	0.6nm,1.0s,baz=145,slow=3.3,SNR=4.2						
CMAR	**Chiang Mai Arr**	**145.02**	**319**	PKPbc	**PKPdf**	**15 29 20.8**	**+0.5**
	0.6nm,0.8s,baz=41,slow=2.9,SNR=5.4						

IDC 24 15:18:59.5±4.0, 12°.93S×167°.41E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/42, mbtmp3.2/3, Error ellipse: s-maj=226.6km s-min=32.8km az=142.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.44**	**253**	P	P	15 25 31.8	+0.1
	0.2nm,0.9s,baz=82,slow=9.0,SNR=1.1						
ASAR	**Alice Springs**	**33.48**	**247**	P	P	15 25 41.0	+0.2
	0.2nm,0.5s,baz=73,slow=9.9,SNR=8.1						
ILAR	**Eielson Array**	**84.78**	**18**	P	P	15 31 36.3	+1.0
	0.2nm,0.4s,baz=245,slow=4.9,SNR=5.6						
ARCES	**ARCESS Array B**	**118.55**	**346**	PKP	PKPdf	15 37 47.1	-1.7
	2.5nm,1.0s,baz=64,slow=2.1,SNR=8.4						

*DJA **24** 15:30:05.6±0.8, 3°.N±2°.×9°.6E±°, h27km±6km, M4.9/43, mb5.2/43, mB5.4/30, MLv5.3/10, Mw(mB)4.8/30, Mwp5.0/3*

*BJI **24** 15:30:05.6±0.0, 2°.56N×96°.25E, h46km, mB5.1/52, mb5.1/77, Ms4.9/69, Ms7 4.7/65*

*GCMT **24** 15:30:07.7±0.2, 2°.69N±0°.02×96°.15E±0°.02, h29km, MW5.0/94, Moment Tensor Solution. s68,c92; s94,c132; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.51±.14; Mθθ3.23±.10; Mθθ0.27±.10; Mrθ-2.03±.15; Mθθ-2.05±.07; Mθr0.15±.19; Best double couple: M0 4.41500×10^16 NP1:ϕs311.00000°, δ34.00000°, λ-67.00000°. NP2: ϕs105.00000°, δ59.00000°, λ-104.00000°. Principal axes: T 4.7120, Plg13.0000°, Azm205.0000°; N -0.6030, Plg12.0000°, Azm112.0000°; P -4.1170, Plg72.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **24** 15:30:08.1±0.9, 2°.91N×96°.22E, h49km, mb5.5/82, MS4.8/6 Error ellipse: s-maj=7.0km s-min=3.8km az=111.9*

*NEIC **24** 15:30:08.7±1.5, 2°.77N±0°.06×96°.16E±0°.07, h46km±5km, mb5.3/143, Error ellipse: s-maj=10.9km s-min=8.3km az=60.0*

*KLM **24** 15:30:09.0, 2°.70N×96°.05E, h44km, mb5.3*

*IDC **24** 15:30:10.1±2.4, 2°.88N×96°.22E, h50km±21km, mb4.7/39, mb1 4.7/41, mb1mx4.6/50, mbtmp4.9/41, ML4.4/2, MS4.3/37, Ms1 4.3/37, ms1mx4.2/45, Error ellipse: s-maj=14.8km s-min=10.6km az=40.0*

ISC 24 15:30:08.7±0.4, 2.79N±0°.03×96°.15E±0°.04, h44km±3km, h44km:pP-P, n788, σ1s33/831, mb5.2/205, MS4.5/64, 45C-22D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPTI		**1.13**	**66**	P	**Pn**	**15 30 27.9**	**-0.2**
TPTI				S	**Sn**	**15 30 43.3**	**+0.8**
GSI	**Gunungsitoli**	**2.06**	**136**	P	**Pn**	**15 30 40.6**	**-0.3**
GSI	**Gunungsitoli**	**2.06**	**136**	Pn	**Pn**	**15 30 40.5**	**-0.3**
LHMI	**Lhok Sumawe**	**2.55**	**18**	P	**Pn**	**15 30 48.4**	**+0.8**
LHMI				S	**Sn**	**15 31 19.5**	**+2.1**
LHMI	**Lhok Sumawe**	**2.55**	**18**	Pn	**Pn**	**15 30 48.5**	**+0.9**
PSI	**Prapat**	**2.77**	**90**	P	**Pn**	**15 30 52.2**	**+1.4**
	28nm,0.3s,baz=358,slow=1.6,SNR=150						
PSI				S	**Sn**	**15 31 23.9**	**+0.7**
	82nm,0.3s,baz=360,slow=10,SNR=8.0						
PSI				LR	LR	15 32 16.4	
	comp=Z,9μm,18.1s,baz=270,slow=47						
RPSI	**Rantau Prapat**	**2.78**	**92**	Pn	**Pn**	**15 30 52.0**	**+1.3**
RPSI	**Rantau Prapat**	**2.78**	**92**		**Pn**	**15 30 52.2**	**+1.5**
RPSI					**Sn**	**15 31 23.9**	**+0.9**
SISI	**Saibi**	**5.04**	**144**	P	**Pn**	**15 31 21.3**	**-0.5**
	3μm85nm,0.6s						
KULM	**Kulim**	**5.13**	**61**	Pn	**Pn**	**15 31 24.1**	**+1.0**
KULM	**Kulim**	**5.13**	**61**	P	**Pn**	**15 31 25.0**	**+1.9**
IPM	**Ipoh**	**5.15**	**71**	Pn	**Pn**	**15 31 24.4**	**+1.0**
IPM	**Ipoh**	**5.15**	**71**	P	**Pn**	**15 31 25.0**	**+1.6**
BKNI	**Bangkinang**	**5.47**	**117**	P	**Pn**	**15 31 28.4**	**+0.6**
	4.9nm2μm5μm321nm,0.8s						
BKNI	**Bangkinang**	**5.47**	**117**	Pn	**Pn**	**15 31 27.6**	**-0.2**
PKDT	**Phuket**	**5.51**	**23**	P	**Pn**	**15 31 30.5**	**+2.1**
	8μm517nm,0.8s						
TRTT	**Trang**	**6.13**	**35**	P	**Pn**	**15 31 37.5**	**+0.7**
	4μm437nm,1.2s						
SDSI	**Sungai Dareh**	**6.45**	**125**	P	**Pn**	**15 31 42.9**	**+1.7**
	1μm53nm,0.8s						
MNAI	**Manna**	**9.84**	**136**	P	**Pn**	**15 32 27.0**	**-0.7**
	10μm375nm,0.6s						
MNAI	**Manna**	**9.84**	**136**	Pn	**Pn**	**15 32 26.7**	**-1.0**
LHSI	**Lahat**	**9.88**	**132**	P	**Pn**	**15 32 28.8**	**+0.5**
	2μm120nm,0.9s						
PHET	**Kaeng Krachan**	**10.63**	**19**	P	Pn	15 32 44.6	+6.1
	728nm90nm,0.8s						
DGPR	**DIGLIPUR**	**10.80**	**343**	*e*P	Pn	15 32 36.2	-4.6
DGPR				IAmb	IAmb	15 33 06.9	
	comp=Z,194nm,1.2s						
MDSI	**Maura Dua**	**10.80**	**132**	P	**Pn**	**15 32 40.1**	**-0.8**
	comp=Z,1μmcomp=Z,208nm,0.8s						
LWLI	**Liwa**	**11.07**	**134**	P	**Pn**	**15 32 44.5**	**-0.3**
	comp=Z,3μmcomp=Z,271nm,0.7s						
PATY	**Pattaya**	**11.10**	**25**	P	Pn	15 32 50.7	+5.8
	comp=Z,80nm,0.8s						
KLSI		**11.35**	**131**	P	**Pn**	**15 32 47.6**	**-0.8**
	comp=Z,339nmcomp=Z,38nm,0.7s						
KASI	**Kota Agung**	**11.74**	**135**	P	**Pn**	**15 32 52.0**	**-1.7**
	comp=Z,76nm,0.6s						
SRDT	**SRDT**	**11.85**	**14**	P	Pn	15 33 05.0	+10
	comp=Z,26nm,1.3s						
SRAK	**Srakaew**	**12.58**	**27**	P	**P**	**15 33 11.7**	**-4.0**
	comp=Z,14μmcomp=Z,948nm,0.5s						
TPI	**Tanjungpandan**	**12.75**	**116**	P	**Pn**	**15 33 08.8**	**+1.2**
	comp=Z,636nmcomp=Z,28nm,1.0s						
UTHA	**Uthaitani**	**13.10**	**14**	P	**P**	**15 33 18.4**	**-3.1**
	comp=Z,790nmcomp=Z,94nm,0.8s						
KSM	**Kuching**	**14.21**	**95**	Pn	**Pn**	**15 33 25.8**	**-1.7**
KSM	**Kuching**	**14.21**	**95**	P	**Pn**	**15 33 29.0**	**+1.5**
CHAI	**Chaiyaphum**	**14.24**	**23**	P	**P**	**15 33 34.0**	**-0.2**
	comp=Z,936nmcomp=Z,96nm,0.8s						
PHIT	**Phitsanulok**	**14.91**	**16**	P	**P**	**15 33 41.6**	**0.0**
	comp=Z,4μmcomp=Z,452nm,0.9s						
LEM	**Lembang**	**14.91**	**130**	P	**P**	**15 33 45.0**	**+3.1**
	comp=Z,1.8nm,0.3s,baz=173,slow=15,SNR=4.8						
SUKH	**Sukhothai**	**14.99**	**13**	P	**P**	**15 33 42.4**	**-0.2**
	comp=Z,12nm,0.8s						
MHMT	**Masarieng**	**15.39**	**6**	P	**Pn**	**15 33 42.6**	**-0.4**
	comp=Z,934nmcomp=Z,81nm,1.1s						
UBPT	**Khong Chiam**	**15.44**	**36**	P	**Pn**	**15 33 44.9**	**+1.2**
	comp=Z,97nm,0.9s						
UBPT	**Khong Chiam**	**15.44**	**36**		**Pn**	**15 33 42.9**	**-0.8**
UBPT				IAmb	IAmb	15 33 56.5	
	comp=Z,114nm,0.8s						
UTTA	**Uttaradit**	**15.47**	**16**	P	**Pn**	**15 33 46.0**	**+1.9**
	comp=Z,998nmcomp=Z,130nm,0.8s						
STKI	**Sintang**	**15.56**	**100**	P	**Pn**	**15 33 46.7**	**+1.4**
CM05	**Chiang Mai Arr**	**15.75**	**10**	P	**Pn**	**15 33 49.0**	**+1.3**
	comp=Z,378nmcomp=Z,50nm,0.8s						
CM04	**Chiang Mai Arr**	**15.76**	**10**	P	**Pn**	**15 33 47.0**	**-0.8**
	comp=Z,536nmcomp=Z,78nm,0.8s						
CM13	**Chiang Mai Arr**	**15.77**	**10**	P	**Pn**	**15 33 49.5**	**+1.7**
	comp=Z,414nmcomp=Z,56nm,0.8s						
CM01	**Chiang Mai Arr**	**15.77**	**10**	P	**Pn**	**15 33 49.8**	**+1.8**
	comp=Z,548nmcomp=Z,83nm,0.9s						
CM02	**Chiang Mai Arr**	**15.79**	**10**	P	**Pn**	**15 33 50.0**	**+1.8**
	comp=Z,433nmcomp=Z,65nm,0.8s						
CM15	**Chiang Mai Arr**	**15.80**	**10**	P	**Pn**	**15 33 50.0**	**+1.7**
	comp=Z,449nmcomp=Z,61nm,0.8s						
CM09	**Chiang Mai Arr**	**15.80**	**10**	P	**Pn**	**15 33 48.9**	**+0.5**
	comp=Z,722nmcomp=Z,104nm,1.1s						
CM31	**Chiang Mai Arr**	**15.81**	**10**	P	**P**	**15 33 51.1**	**-0.6**
	comp=Z,15μmcomp=Z,2μm,0.8s						
CM31	**Chiang Mai Arr**	**15.81**	**10**	P	**P**	**15 33 50.8**	**-0.8**
CMAR	**Chiang Mai Arr**	**15.81**	**10**	P	**Pn**	**15 33 48.5**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=198,slow=11,SNR=78						
CMAR				LR	LR	15 40 38.4	
	comp=Z,3μm,18.6s,baz=222,slow=40						
CMAR	**Chiang Mai Arr**	**15.81**	**10**	P	**Pn**	**15 33 47.1**	**-1.3**
CMAR	**Chiang Mai Arr**	**15.81**	**10**	Pn	**Pn**	**15 33 47.1**	**-1.3**
CM36	**Chiang Mai Arr**	**15.89**	**10**	P	**Pn**	**15 33 49.0**	**-0.5**
CM32	**Chiang Mai Arr**	**15.98**	**9**	P	**Pn**	**15 33 50.0**	**-0.7**
LAMP	**Lampang**	**16.00**	**12**	P	**Pn**	**15 33 51.6**	**+0.7**
	comp=Z,686nmcomp=Z,101nm,0.9s						
PALK	**Pallekele**	**16.01**	**287**	P	**Pn**	**15 33 49.9**	**-1.2**
PALK				pmax	pmax		
	comp=Z,65nm,1.2s						
PALK	**Pallekele**	**16.01**	**287**	Pn	**Pn**	**15 33 49.9**	**-1.2**
CM35	**Chiang Mai Arr**	**16.06**	**10**	P	**Pn**	**15 33 50.0**	**-1.6**
SBUM	**Sibu**	**16.06**	**91**	Pn	**Pn**	**15 33 50.0**	**-1.7**
SBUM	**Sibu**	**16.06**	**91**	P	**P**	**15 33 54.0**	**-0.5**
PHRA	**Phrae**	**16.11**	**14**	P	**Pn**	**15 33 52.0**	**-0.3**
	comp=Z,567nm,1.1s						
CHTO	**Chiang Mai**	**16.16**	**10**	P	**Pn**	**15 33 51.0**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,70nm,1.1s						
CHTO	**Chiang Mai**	**16.16**	**10**		**Pn**	**15 33 51.0**	**-1.9**
CMMT	**Chiang Mai**	**16.16**	**10**	P	**Pn**	**15 33 52.0**	**-0.9**
	comp=Z,291nmcomp=Z,34nm,1.1s						
CM33	**Chiang Mai Arr**	**16.16**	**10**	P	**Pn**	**15 33 52.0**	**-0.9**
KPJI	**Karang Pucung**	**16.25**	**128**	P	**Pn**	**15 33 54.3**	**+0.3**
	comp=Z,33nm,1.1s						
NONG	**Nongkai**	**16.66**	**24**	P	**Pn**	**15 33 58.0**	**-1.2**
	comp=Z,93nm,0.8s						
PAYA	**Payao**	**16.86**	**12**	P	**Pn**	**15 34 01.7**	**-0.1**
	comp=Z,8μmcomp=Z,1μm,0.9s						
SMRI	**Semarang**	**17.30**	**124**	P	**Pn**	**15 34 07.4**	**+0.2**
	comp=Z,74nm,1.1s						
SMRI	**Semarang**	**17.30**	**124**	Pn	**Pn**	**15 34 06.2**	**-1.0**
UGM	**Wanagama**	**17.85**	**127**	P	**Pn**	**15 34 13.0**	**-1.1**
UGM				IAmb	IAmb	15 34 24.6	
	comp=Z,286nm,1.4s						
WOJI	**Wonogiri, Jawa**	**18.13**	**126**	P	**Pn**	**15 34 18.2**	**+0.7**
	comp=Z,34nm,2.3s						
PWJI	**Pagerwojo**	**18.96**	**125**	P	**Pn**	**15 34 28.5**	**+1.1**
	comp=Z,44nm,0.7s						
SAIH	**SAIHA**	**19.82**	**351**	*e*P	**P**	**15 34 34.4**	**-1.5**
SAIH				IAmb	IAmb	15 34 41.4	
	comp=Z,39nm,0.7s						
SLVN	**Son La**	**19.92**	**22**		**P**	**15 34 35.8**	**-1.2**
SLVN				IAmb	IAmb	15 34 50.5	
	comp=Z,118nm,1.1s						
BWNR	**Bhubaneshwar**	**20.11**	**331**	*e*P	**P**	**15 34 37.8**	**-1.2**
BWNR				IAmb	IAmb	15 34 40.7	
	comp=Z,49nm,0.6s						
KKM	**Kota Kinabalu**	**20.27**	**80**		**P**	**15 34 41.7**	**+0.8**
KKM				IAmb	IAmb	15 34 47.5	
	comp=Z,118nm,0.9s						
KMMI	**Kalianget**	**20.30**	**119**	P	**P**	**15 34 40.2**	**-0.9**
	comp=Z,100nm,0.9s						
SPMM	**Sapulut**	**20.36**	**84**	P	Pn	15 34 44.0	-0.2
BELO	**BELONIA**	**20.84**	**348**	*e*P	**P**	**15 34 45.5**	**-1.3**
KBKI	**Kotabaru**	**20.91**	**107**	P	**P**	**15 34 48.5**	**+0.8**
	comp=Z,384nmcomp=Z,29nm,1.1s						
QIZ	**Qiongzhong**	**20.98**	**39**	P	**P**	**15 34 48.8**	**+0.4**
QIZ				sP	**sP**	**15 35 04.5**	**+0.5**
QIZ				S	**S**	**15 38 41.3**	**+1.4**
QIZ				sS	**sS**	**15 38 58.5**	**+1.6**
QIZ				pmax	pmax		
	comp=Z,33nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,250nm,4.2s						
QIZ				LR	LR		
	comp=Z,1μm,12.7s						
QIZ				LR	LR		
	comp=Z,2μm,15.0s						
QIZ				LR	LR		
	comp=Z,2μm,18.0s						
QIZ	**Qiongzhong**	**20.98**	**39**	P	**P**	**15 34 48.0**	**-0.4**
BKB	**Balikpapan**	**21.13**	**101**	P	**P**	**15 34 52.4**	**+2.3**
	comp=Z,3μmcomp=Z,314nm,1.1s						
BKB	**Balikpapan**	**21.13**	**101**	P	**P**	**15 34 49.3**	**-0.8**
SRBI	**Singaraja**	**21.87**	**120**	P	**P**	**15 34 59.4**	**+1.4**
	comp=Z,101nm,1.2s						
SILR	**SILCHAR**	**22.10**	**352**	*e*P	**P**	**15 34 58.5**	**-1.8**
SILR				IAmb	IAmb	15 35 15.2	
	comp=Z,434nm,1.2s						
MYLDM	**Lahad Datu**	**22.42**	**83**	P	**P**	**15 35 04.7**	**+0.6**
HYB	**Hyderabad**	**22.57**	**311**	*i* P	**P**	**15 35 06.0**	**+0.4**
HYB				*e*S	**S**	**15 39 17.0**	**+6.7**
KOHI	**KOHIMA**	**22.88**	**355**	*e*P	**P**	**15 35 04.5**	**-4.3**
KOHI				IAmb	IAmb	15 35 10.1	
	comp=Z,154nm,0.8s						
KOHI				*e*S	**S**	**15 39 10.1**	**-5.5**
SHL	**Shillong**	**23.01**	**350**	*e*P	**P**	**15 35 06.6**	**-3.6**
SHL				IAmb	IAmb	15 35 21.7	
	comp=Z,93nm,0.7s						
SHL				*e*S	**S**	**15 39 14.4**	**-3.5**
SHL	**Shillong**	**23.01**	**350**	P	**P**	**15 35 07.3**	**-3.0**
	SNR=37						
SHL	**Shillong**	**23.01**	**350**	P	**P**	**15 35 06.5**	**-3.7**
SHL				pmax	pmax		
	comp=Z,120nm,0.7s						
SHL	**Shillong**	**23.01**	**350**	P	**P**	**15 35 06.5**	**-3.7**
SHL				IAmb	IAmb	15 35 21.9	
	comp=Z,120nm,0.7s						

comp=Z,1µm,13.9s
GYA LR LR
comp=Z,3µm,17.1s
RAMN Ramite 25.70 340 *e*P **P 15 35 36.0 +0.7**
comp=Z,101nm,0.6s
TAPN Taplejung 25.72 342 *e*P **P 15 35 35.2 -0.3**
comp=Z,272nm,0.8s
H08S2 Diego Garcia H 25.78 246 T T 16 02 12.1
baz=67,slow=75,SNR=2855
H08S3 Diego Garcia H 25.78 246 T T 16 02 12.2
baz=67,slow=75,SNR=7700
H08S1 Diego Carcia H 25.79 246 T T 16 02 13.5
baz=67,slow=75,SNR=355
BSSI Bau Bau, Buton 25.88 110 P **P 15 35 37.2 +0.5**
comp=Z,591nmcomp=Z,50nm,0.9s
WBSI Waikabubak, Su 26.25 118 P **P 15 35 38.9 -1.2**
comp=Z,86nm,0.7s
PKI Pulchoki 26.69 338 *e*P **P 15 35 44.1 -0.2**
PKIN Phulchoki 26.70 338 *e*P **P 15 35 44.2 -0.1**
GUN Gumba 26.83 340 *e*P **P 15 35 45.8 +0.2**
DMN Daman 26.84 338 *e*P **P 15 35 46.1 +0.5**
comp=Z,114nm,0.8s
LUWI Luwuk 26.89 98 P **P 15 35 47.0 +1.1**
comp=Z,1µmcomp=Z,132nm,1.1s
LUWI **Luwuk 26.89 98** P **P 15 35 45.4 -0.5**
LUWI IAmb IAmb 15 36 08.6
comp=Z,102nm,0.9s
TGY Tagaytay City 26.93 64 P **P 15 35 46.0 -0.3**
comp=Z,143nm,0.3s,baz=93,slow=2.7,SNR=5.5
TGY LR LR 15 46 58.9
comp=Z,578nm,19.2s,baz=284,slow=38
GTOI Gorontalo 26.93 94 P **P 15 35 45.8 -0.5**
comp=Z,386nmcomp=Z,39nm,1.0s
KKN Kakani 26.94 338 *e*P **P 15 35 46.5 +0.1**
comp=Z,169nm,0.9s
LSA Lhasa 27.18 350 P **P 15 35 48.8 0.0**
LSA sP **sP 15 36 07.8 +2.4**
LSA pmax pmax
comp=Z,130nm,0.9s
LSA LR LR
comp=Z,1µm,19.9s
LSA LR LR
comp=Z,1µm,23.5s
LSA LR LR
comp=Z,3µm,27.8s
LSA Lhasa 27.18 350 *i* P **P 15 35 48.6 -0.2**
SNR=12
LSA Lhasa 27.18 350 P **P 15 35 49.1 +0.3**
LSA P **P 15 35 49.1 +0.3**
LSA Lhasa 27.18 350 P **P 15 35 48.6 -0.2**
LSA pmax pmax
comp=Z,63nm,0.9s
LSA Lhasa 27.18 350 P **P 15 35 48.6 -0.2**
LSA IAmb IAmb 15 36 01.2
comp=Z,63nm,0.9s
BHPL Bhopal 27.24 320 *e*P **P 15 35 50.5 +1.6**
BHPL IAmb IAmb 15 35 56.1
comp=Z,25nm,0.6s
GKN Gorkha 27.37 337 *e*P **P 15 35 50.9 +0.7**
KOLN Koldanda 27.58 335 *e*P **P 15 35 52.9 +0.8**
comp=Z,400nm,1.0s
EDFI Ende, Flores 27.93 114 P **P 15 35 54.1 -1.2**
comp=Z,9.4nm,0.9s
DANN Dangsing 28.03 336 *e*P **P 15 35 56.7 +0.5**
PYUN Piuthan 28.13 335 *e*P **P 15 35 57.6 +0.6**
CD2 Chengdu 28.88 14 P **P 15 36 02.5 -1.0**
CD2 pP pP 15 36 13.6 -1.3
CD2 sP sP 15 36 18.4 -1.6
CD2 S **S 15 40 53.3 +2.4**
CD2 sS sS 15 41 14.5 +4.0
CD2 ScS **ScS 15 46 43.5 -0.6**
CD2 pmax pmax
comp=Z,30nm,1.2s
CD2 pmax pmax
comp=Z,150nm,6.8s
CD2 LR LR
comp=Z,2µm,15.0s
CD2 LR LR
comp=Z,2µm,16.4s
CD2 LR LR
comp=Z,3µm,15.4s
SGSI Sangihe 29.35 87 P P 15 36 02.7 -5.1
DAV Davao City (W) 29.62 81 P **P 15 36 11.0 +0.7**
comp=Z,182nm,0.6s,baz=295,slow=2.6,SNR=4.1
DAV LR LR 15 51 21.4
comp=Z,357nm,18.2s,baz=284,slow=43
BATI Baumata 30.29 116 LR LR 15 50 13.2
comp=Z,1µm,20.7s,baz=278,slow=40
KNMB Chin-men Tao 30.41 43 P **P 15 36 16.6 -0.5**
SOEI Soe 30.66 114 P **P 15 36 17.8 -1.8**
SOEI Soe 30.66 114 P **P 15 36 16.9 -2.7**
QZH Quanzhou 30.87 42 *e*P P 15 36 33.0 +12
QZH S S 15 41 45.3 +23
QZH LR LR
comp=N,840nm,15.4s
QZH LR LR
comp=E,1µm,16.1s
QZH LR LR
comp=Z,2µm,16.1s
NDI New Delhi 31.43 327 *e*P **P 15 36 26.0 -0.1**
NLAI Namlea 31.51 101 P P 15 36 32.3 +5.3
SSLB Suanglung 31.79 47 P **P 15 36 29.1 -0.2**
YULB Yu-li 31.81 48 P **P 15 36 30.0 +0.5**
DDI Dehra Dun 32.30 330 *e*P **P 15 36 33.5 -0.2**
DDI IAmb IAmb 15 36 38.0
comp=Z,63nm,0.9s
WHN Wuhan 32.53 30 P **P 15 36 36.0 +0.3**
WHN LR LR
comp=Z,2µm,12.1s
WHN LR LR
comp=Z,1µm,10.8s
WHN LR LR
comp=Z,4µm,14.0s
XAN Xi'an 33.30 20 P **P 15 36 40.9 -1.5**
XAN pmax pmax
comp=Z,49nm,0.9s
XAN pmax pmax
comp=Z,230nm,3.9s
XAN LR LR
comp=Z,2µm,18.0s
XAN LR LR
comp=Z,2µm,14.5s
XAN LR LR
comp=Z,3µm,18.8s
XAN Xi'an 33.30 20 P **P 15 36 41.2 -1.2**
XAN pmax pmax
comp=Z,33nm,0.7s
XAN Xi'an 33.30 20 P **P 15 36 41.2 -1.2**
XAN IAmb IAmb 15 36 54.2
comp=Z,33nm,0.7s
SMLA Simla 33.40 330 *e*P **P 15 36 43.6 +0.3**
SMLA IAmb IAmb 15 36 56.1
comp=Z,83nm,0.7s
PSA00 Pilbara Seismi 33.53 137 P **P 15 36 45.1 +0.6**
PSA00 IAmb IAmb 15 37 08.9
comp=Z,62nm,1.4s
LZH Lanzhou 33.89 11 *e*P **P 15 36 47.3 -0.3**
LZH pP pP 15 36 59.5 +0.4
LZH sP sP 15 37 04.5 +0.3
LZH PP **PnPn 15 38 01.0 -0.5**
LZH pmax pmax
comp=Z,23nm,1.6s
LZH pmax pmax
comp=Z,100nm,5.4s
LZH LR LR
comp=Z,840nm,15.1s
LZH LR LR
comp=Z,940nm,15.8s
LZH LR LR
comp=Z,1µm,16.7s
DHRM DHARAMSHALA 34.74 330 *e*P **P 15 36 54.7 -0.4**
DHRM IAmb IAmb 15 37 08.9
comp=Z,91nm,0.8s
SIJI Sorong 35.30 95 LR LR 15 53 44.7
comp=Z,192nm,19.8s,baz=258,slow=40
FITZ Fitzroy Crossi 35.71 127 LR LR 15 53 50.6
comp=Z,244nm,20.4s,baz=309,slow=40
FITZ Fitzroy Crossi 35.71 127 P **P 15 37 02.8 -0.6**
baz=36,SNR=18
FITZ Fitzroy Crossi 35.71 127 P **P 15 37 02.4 -1.0**
NJ2 Nanjing 36.10 34 *e*P **P 15 37 06.3 -0.2**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
NJ2 LR LR
comp=Z,970nm,12.8s
NJ2 LR LR
comp=Z,1µm,15.2s
NJ2 LR LR
comp=Z,1µm,16.1s
FAKI Fak Fak 36.53 99 P **P 15 37 11.7 +1.2**
comp=Z,561nmcomp=Z,36nm,0.9s
FAKI Fak Fak 36.53 99 P **P 15 37 09.5 -1.0**
FAKI IAmb IAmb 15 37 11.3
comp=Z,69nm,1.3s
GTA Gaotai 36.60 5 ||P **P 15 37 10.3 -0.6**
GTA pP pP 15 37 22.8 +0.3
GTA sP sP 15 37 27.5 -0.1
GTA PcP **PcP 15 39 35.1 +1.6**
GTA S **S 15 42 50.8 0.0**
GTA sS sS 15 43 11.6 +0.9
GTA SS **SnSn 15 45 19.3 -4.2**
GTA pmax pmax
comp=Z,65nm,1.2s
GTA pmax pmax
comp=Z,130nm,8.0s
GTA LR LR
comp=Z,670nm,16.7s
GTA LR LR
comp=Z,400nm,18.2s
GTA LR LR
comp=Z,970nm,16.7s
SSE Sheshan 36.76 37 P **P 15 37 09.6 -2.6**
SSE S **S 15 42 48.6 -4.6**
SSE pmax pmax
comp=Z,17nm,0.7s
SSE pmax pmax
comp=Z,220nm,3.6s
SSE LR LR
comp=Z,530nm,20.2s
SSE LR LR
comp=Z,400nm,27.3s
KNRA Kununurra 37.12 121 P **P 15 37 14.7 -0.7**
baz=37,SNR=6.4
KNRA Kununurra 37.12 121 P **P 15 37 14.3 -1.1**
KNRA IAmb IAmb 15 37 15.5
comp=Z,28nm,1.1s
NIL Nilore 37.42 328 P **P 15 37 17.5 -0.3**
NIL P **P 15 37 17.5 -0.3**
NIL Nilore 37.42 328 P **P 15 37 16.9 -0.9**
NIL pmax pmax
comp=Z,124nm,0.8s
NIL Nilore 37.42 328 P **P 15 37 16.9 -0.9**
MTN Manton Dam 38.05 115 P **P 15 37 22.7 -0.6**
baz=38,SNR=4.5
MTN Manton Dam 38.05 115 P **P 15 37 21.7 -1.7**
MTN IAmb IAmb 15 37 23.6
comp=Z,51nm,1.2s
KDU Kakadu 39.22 114 P **P 15 37 32.3 -0.8**
baz=39,SNR=6.7
BTO Baotou 39.68 17 *e*P **P 15 37 36.8 0.0**
BTO S **S 15 43 32.1 -5.2**
HHC Hu-ho-hao-te 40.36 18 *e*P **P 15 37 42.9 +0.5**
HHC S **S 15 43 46.5 -1.0**
HHC sS sS 15 44 05.3 -2.2
HHC pmax pmax
comp=Z,65nm,1.2s
HHC pmax pmax
comp=Z,330nm,4.0s
HHC LR LR
comp=Z,1µm,17.9s
HHC LR LR
comp=Z,1µm,16.2s
HHC LR LR
comp=Z,860nm,16.2s
KBL Kabul 40.42 325 P **P 15 37 42.8 -0.3**
SNR=11
KBL Kabul 40.42 325 P **P 15 37 42.6 -0.6**
KBL pmax pmax
comp=Z,18nm,1.1s
KBL Kabul 40.42 325 P **P 15 37 42.6 -0.6**
JLN Jalan Bani Buh 40.52 301 P **P 15 37 45.8 +1.9**
SNR=12
JLN P **P 15 37 45.8 +1.9**
SNR=12
NWAO Narrogin (SRO) 40.75 152 LR LR 15 52 34.1
comp=Z,652nm,21.8s,baz=335,slow=33
KSH Kashi 40.90 336 P **P 15 37 46.1 -0.8**
KSH pP pP 15 37 54.5 -4.3
KSH S **S 15 43 54.6 -1.0**
KSH sS sS 15 44 17.4 +1.8
KSH pmax pmax
comp=Z,71nm,1.1s
KSH pmax pmax
comp=Z,460nm,6.1s
KSH LR LR
comp=Z,320nm,5.2s
KSH LR LR
comp=Z,380nm,4.6s
KSH LR LR
comp=Z,380nm,5.4s
WBK Wadi Bani Khal 41.07 302 P **P 15 37 50.7 +2.3**
WBK P **P 15 37 50.7 +2.3**
H01W3 Cape Leeuwin H 41.11 157 T T 16 21 12.8
baz=333,slow=76,SNR=338
H01W2 Cape Leeuwin H 41.12 157 T T 16 21 26.8
baz=333,slow=76,SNR=630
H01W1 Cape Leeuwin H 41.12 157 T T 16 21 13.0
baz=333,slow=76,SNR=342
BJT Baijiatuao 41.26 23 P **P 15 37 50.6 +0.8**
BJT pmax pmax
comp=Z,102nm,1.1s
BJT Baijiatuao 41.26 23 P **P 15 37 50.5 +0.8**
BJI Beijing 41.28 23 P **P 15 37 50.8 +0.9**
BJI pmax pmax
comp=Z,94nm,1.2s
BJI LR LR
comp=Z,330nm,15.3s
BJI LR LR
comp=Z,430nm,16.5s
MHTO MHTO 41.33 299 P **P 15 37 51.4 +0.9**
SNR=5.7
MHTO P **P 15 37 51.4 +0.9**
SNR=5.7
WMQ Urumqi 41.54 351 *e*P **P 15 37 52.9 +0.9**
WMQ pP pP 15 38 05.0 +1.2
WMQ sP sP 15 38 10.8 +2.0
WMQ pmax pmax
comp=Z,76nm,1.3s
WMQ pmax pmax
comp=Z,340nm,5.1s
WMQ LR LR
comp=Z,670nm,16.9s
WMQ LR LR
comp=Z,790nm,21.9s
WMQ LR LR
comp=Z,690nm,19.3s
WMQ Urumqi 41.54 351 P **P 15 37 52.4 +0.4**
WMQ pmax pmax
comp=Z,84nm,1.2s
WMQ Urumqi 41.54 351 P **P 15 37 52.4 +0.4**
WMQ IAmb IAmb 15 37 53.8
comp=Z,84nm,1.2s
WRKA Warakurna 41.69 133 P **P 15 37 54.0 +0.5**
baz=42,SNR=14
KMBL Kambalda 41.88 146 P **P 15 37 57.2 +2.3**
baz=42,SNR=4.9
SMDO Samad 42.03 302 P **P 15 37 58.5 +2.0**
SNR=5.4
SMDO P **P 15 37 58.5 +2.0**
SNR=5.4
BIDO Bidbid 42.14 303 P **P 15 37 59.4 +2.2**
SNR=7.5
PRZ Przheval'sk 42.59 341 P **P 15 38 01.8 +1.0**
PRZ Przheval'sk 42.59 341 P **P 15 38 01.8 +1.0**
BSY Bisya 42.63 301 P **P 15 38 03.2 +1.9**
SNR=16
BSY P **P 15 38 03.2 +1.9**
SNR=16
KDJ Kajisay 42.69 339 P **P 15 38 02.6 +1.0**
KDJ pmax pmax
comp=Z,143nm,1.0s
KDJ Kajisay 42.69 339 P **P 15 38 02.6 +1.0**
SOCY Socotra 42.77 285 P **P 15 38 04.3 +1.8**
HOQ Hoqain 42.86 302 P **P 15 38 04.7 +1.7**
SNR=6.8
HOQ P **P 15 38 04.7 +1.7**
SNR=6.8
PDGK Podgornoye 43.00 342 P **P 15 38 03.8 -0.2**
DMTO DMTO 43.03 293 P **P 15 38 06.7 +2.2**
DMTO P **P 15 38 06.7 +2.2**
GAR Garm 43.04 330 P **P 15 38 04.3 -0.1**
SATY Saty 43.10 341 *i* P **P 15 38 05.7 +0.9**
comp=Z,62nm,1.2s,baz=341
SATY *i* PP **PP 15 39 45.9 +0.3**
baz=341
SATY *i* S **S 15 44 29.3 +1.3**
baz=341
SATY *e*S **S 15 44 29.4 +1.3**
baz=341
SATY *i* LR LR 15 56 07.2
baz=341
SATY *i* LRM MLR 15 57 52.6
baz=341
SATY Saty 43.10 341 *i* P **P 15 38 05.7 +0.9**
SATY *e*S **S 15 44 29.3 +1.3**
SATY pmax pmax
comp=Z,62nm,1.2s
ULHL Ulahol 43.13 338 P **P 15 38 06.5 +1.2**
SNR=9.9
CHGR Chuyangaron 43.37 329 P **P 15 38 06.3 -0.8**
KPKS Kokpek 43.37 341 *e*P **P 15 38 07.6 +0.6**
comp=Z,72nm,1.2s,baz=341
KPKS *i* LR LR 15 56 17.2
baz=341
KPKS *i* LRM MLR 15 58 02.1
baz=341
KPKS Kokpek 43.37 341 *e*P **P 15 38 07.6 +0.6**
KPKS pmax pmax
comp=Z,72nm,1.2s
ARQ Araqi 43.43 301 P **P 15 38 09.5 +1.9**
SNR=6.3
ARQ P **P 15 38 09.5 +1.9**
SNR=6.3
BOOM Boomskoye usch 43.46 338 P **P 15 38 07.7 -0.1**
BOOM pmax pmax
comp=Z,60nm,0.9s
BOOM Boomskoye usch 43.46 338 P **P 15 38 07.7 -0.1**
BOOM IAmb IAmb 15 38 17.9
comp=Z,60nm,0.9s
TNSS Tian-Shan 43.57 340 *e*P **P 15 38 09.3 +0.3**
baz=339
TNSS *i* LR LR 15 56 24.6
baz=339
TNSS *i* LRM MLR 15 58 09.2
baz=339
TNSS Tian-Shan 43.57 340 *e*P **P 15 38 09.3 +0.3**
BTK Batken 43.62 332 P **P 15 38 09.6 +0.6**
BTK pmax pmax
comp=Z,110nm,1.0s
BTK Batken 43.62 332 P **P 15 38 09.6 +0.6**
MDOK Medeo 43.65 340 *i* P **P 15 38 09.6 +0.3**
baz=339
MDOK *i* S **S 15 44 36.9 +0.8**
baz=339
MDOK *i* LR LR 15 56 27.4
baz=339
MDOK *i* LRM MLR 15 58 11.9
baz=339
MDOK Medeo 43.65 340 *i* P **P 15 38 09.6 +0.3**
RBK Rabkut 43.66 293 P **P 15 38 11.4 +1.7**
SNR=8.9
RBK P **P 15 38 11.4 +1.7**
SNR=8.9
SOHO SOHO 43.73 303 P **P 15 38 11.5 +1.5**
SOHO P **P 15 38 11.5 +1.5**
AAA Alma-Ata 43.73 340 *e*P **P 15 38 10.6 +0.7**
comp=Z,86nm,1.5s,baz=339
AAA *i* S **S 15 44 38.4 +1.2**
baz=339
AAA *i* LR LR 15 56 30.5
baz=339
AAA *i* LRM MLR 15 58 14.9
baz=339
AAA Alma-Ata 43.73 340 *e*P **P 15 38 10.5 +0.7**
AAA pmax pmax
comp=Z,86nm,1.5s
WB0 Warramunga Arr 43.74 123 P **P 15 38 09.7 -0.5**
WB0 IAmb IAmb 15 38 11.4
comp=Z,57nm,1.1s
WRA Warramunga Arr 43.77 123 P **P 15 38 10.6 +0.1**
comp=Z,13nm,0.5s,baz=301,slow=9.2,SNR=377
WRA S **S 15 44 34.1 -4.2**
comp=Z,0.9nm,1.1s,baz=293,slow=15,SNR=2.5
WRA LR LR 15 56 33.2
comp=Z,423nm,22.0s,baz=285,slow=36
WRA Warramunga Arr 43.77 123 *i* P **P 15 38 10.6 +0.1**
WRA pmax pmax
comp=Z,15nm,0.4s
WRA Warramunga Arr 43.77 123 P **P 15 38 10.1 -0.4**
WRAB Tennant Creek 43.78 123 *ce*P **P 15 38 10.8 +0.3**
WRAB pmax pmax
comp=Z,57nm,1.3s
WRAB Tennant Creek 43.78 123 P **P 15 38 10.5 0.0**
WRAB IAmb IAmb 15 38 37.6
comp=Z,38nm,0.9s
UCH Uchtor 43.78 337 P **P 15 38 12.3 +1.6**
SNR=19
WB2 Warramunga Arr 43.78 123 P **P 15 38 11.0 +0.4**
baz=44
WB2 Warramunga Arr 43.78 123 P **P 15 38 10.5 0.0**
WB2 IAmb IAmb 15 38 11.8
comp=Z,61nm,1.2s
WR0 Warramunga Arr 43.95 123 P **P 15 38 12.0 +0.1**
WR0 IAmb IAmb 15 38 13.3
comp=Z,62nm,1.1s
TKM2 Tokmak 2 43.96 338 P **P 15 38 12.7 +0.9**
SNR=58
TKM2 Tokmak 2 43.96 338 P **P 15 38 12.3 +0.5**
KBK Karagaybulak 43.98 337 P **P 15 38 13.3 +1.4**
SNR=54
AML Almayashu 44.03 336 P **P 15 38 14.3 +1.7**
SNR=5.8
TJN Taejon 44.12 37 *ce*P **P 15 38 11.9 -1.0**
AAK Ala-Archa 44.13 337 P **P 15 38 14.4 +1.2**
SNR=23
AAK Ala-Archa 44.13 337 *i* P **P 15 38 14.5 +1.2**
SNR=42
AAK Ala-Archa 44.13 337 P **P 15 38 13.3 +0.1**
WHFO Wadi Hawf 44.17 293 P **P 15 38 15.0 +1.3**
SNR=11
WHFO P **P 15 38 15.0 +1.3**
SNR=11
CHKK Chushkaly 44.28 340 *e*P **P 15 38 14.0 -0.1**
baz=340
CHKK *i* LR LR 15 56 50.0
baz=340
CHKK *i* LRM MLR 15 58 34.1
baz=340
CHKK Chushkaly 44.28 340 *e*P **P 15 38 14.0 -0.1**
UOSS Minazif 44.32 303 P **P 15 38 16.1 +1.3**
UOSS Minazif 44.32 303 P **P 15 38 15.6 +0.8**
UOSS Minazif 44.32 303 P **P 15 38 15.5 +0.7**
GENI Genyem 44.33 97 P **P** 15 38 23.7 +8.7
HATD Hatta, Dubai 44.33 303 P **P 15 38 16.4 +1.5**
HATD P **P 15 38 16.4 +1.5**
ASHO Ashiyiah 44.34 303 P **P 15 38 16.4 +1.4**
CHMS Chumysh 44.34 337 P **P 15 38 15.3 +0.6**
SNR=16
JNU Nakatsue 44.34 43 LR LR 15 58 51.1
comp=Z,554nm,18.2s,baz=206,slow=39
ALNE Al Ain 44.36 302 *i* P **P 15 38 17.7 +2.6**
SNR=7.0
EKS2 Erkin-Say 44.44 336 P **P 15 38 17.0 +1.4**
SNR=29
ABTO Aybut 44.46 292 P **P 15 38 17.4 +1.4**
SNR=7.9
ABTO P **P 15 38 17.4 +1.4**
SNR=7.9
KUU Kurty 44.53 340 *e*P **P 15 38 16.3 0.0**
comp=Z,143nm,1.6s,baz=339
KUU *i* S **S 15 44 49.4 +0.6**
baz=339
KUU *e*S S 15 44 49.4 +0.7
baz=339
KUU *i* LR LR 15 56 59.6
baz=339
KUU *i* LRM MLR 15 58 43.7
baz=339
KUU Kurty 44.53 340 *e*P **P 15 38 16.2 0.0**
KUU *e*S **S 15 44 49.4 +0.6**
KUU pmax pmax
comp=Z,143nm,1.6s
HRA Herat 44.54 319 P **P 15 38 16.7 +0.1**
USP Ospenovka 44.67 337 P **P 15 38 18.1 +0.8**
SNR=46
FAQ Al Faqa, Dubai 44.75 303 P **P 15 38 20.0 +1.8**
SGDS Sogindy 44.78 338 *i* P **P 15 38 18.6 +0.3**
comp=Z,49nm,2.4s,baz=337

SGDS *i* S **S** **15 44 53.3 +0.9**
baz=337
SGDS *e*S S 15 44 53.3 +0.9
baz=337
SGDS *i* LR LR 15 57 08.6
baz=337
SGDS *i* LRM MLR 15 58 52.8
baz=337
SGDS Sogindy 44.78 338 *i* P **P** **15 38 18.5 +0.3**
SGDS *e*S **S** **15 44 53.3 +0.9**
SGDS pmax pmax
comp=Z,49nm,2.4s
TDK Taldyqorghan 44.84 342 *e*P **P** **15 38 19.0 +0.3**
comp=Z,84nm,1.2s,baz=342
TDK *i* S **S** **15 44 53.1 -0.1**
baz=342
TDK *i* LR LR 15 57 10.5
baz=342
TDK *i* LRM MLR 15 58 54.8
baz=342
TDK Taldyqorghan 44.84 342 *e*P **P** **15 38 18.9 +0.3**
TDK pmax pmax
comp=Z,84nm,1.2s
JAY Jayapura 44.85 96 LR LR 15 59 36.0
comp=Z,111nm,21.5s,baz=220,slow=39
ASUD Al Ashush, Dub 44.93 303 P **P** **15 38 22.7 +3.1**
FORT Forrest 45.16 140 P **P** **15 38 23.3 +1.9**
baz=45,SNR=12
FORT Forrest 45.16 140 P **P** **15 38 22.7 +1.3**
FORT IAmb IAmb 15 38 24.1
comp=Z,74nm,1.1s
KS19 Wonju Array Si 45.17 36 P **P** **15 38 20.5 -0.9**
KS19 IAmb IAmb 15 38 34.0
comp=Z,82nm,1.5s
KSRS Korea Array 45.17 36 P **P** **15 38 20.6 -0.7**
comp=Z,11nm,0.9s,baz=227,slow=9.3,SNR=23
KSRS LR LR 15 59 34.2
comp=Z,967nm,18.2s,baz=219,slow=39
AS31 Alice Springs 45.19 128 P **P** **15 38 21.9 +0.1**
ASAR Alice Springs 45.19 128 P **P** **15 38 22.1 +0.3**
comp=Z,9.1nm,0.5s,baz=298,slow=7.5,SNR=356
ASAR LR LR 15 59 35.6
comp=Z,260nm,20.8s,baz=301,slow=39
ASAR Alice Springs 45.19 128 P **P** **15 38 21.5 -0.3**
ASAR Alice Springs 45.19 128 P **P** **15 38 21.5 -0.3**
TAS Tashkent 45.33 331 P **P** **15 38 23.1 +0.5**
TAS Tashkent 45.33 331 P **P** **15 38 23.1 +0.5**
MK31 Makanchi Array 45.46 347 *i* P **P** **15 38 23.3 -0.2**
MK31 Makanchi Array 45.46 347 P **P** **15 38 23.0 -0.5**
MKAR Makanchi Array 45.46 347 P **P** **15 38 23.4 -0.1**
comp=Z,96nm,0.9s,baz=161,slow=7.6,SNR=284
MKAR LR LR 16 01 10.1
comp=Z,312nm,19.8s,baz=161,slow=41
MKAR Makanchi Array 45.46 347 P **P** **15 38 22.9 -0.6**
MAKZ Makanchi 45.54 346 P **P** **15 38 23.9 -0.3**
MAKZ pmax pmax
comp=Z,87nm,1.0s
MAKZ Makanchi 45.54 346 P **P** **15 38 23.9 -0.3**
ZSN Zaisan 45.55 349 *e*P **P** **15 38 24.3 0.0**
comp=Z,71nm,1.2s,baz=349
ZSN *i* LR LR 15 57 35.5
baz=349
ZSN *i* LRM MLR 15 59 21.3
baz=349
ZSN Zaisan 45.55 349 *e*P **P** **15 38 24.2 0.0**
ZSN pmax pmax
comp=Z,71nm,1.2s
IUG Iuzhnay 45.63 333 *e*P **P** **15 38 26.0 +0.9**
comp=Z,37nm,1.0s,baz=332
IUG *i* S **S** **15 45 06.4 +1.5**
baz=332
IUG *e*S S 15 45 06.4 +1.6
baz=332
IUG *i* LR LR 15 57 40.3
baz=332
IUG *i* LRM MLR 15 59 26.5
baz=332
IUG Iuzhnay 45.63 333 *e*P **P** **15 38 25.9 +0.9**
IUG *e*S **S** **15 45 06.3 +1.5**
IUG pmax pmax
comp=Z,37nm,1.0s
DZA Taraz 45.65 334 *e*P **P** **15 38 25.3 +0.2**
comp=Z,9.2nm,0.7s,baz=334
DZA *i* LR LR 15 57 40.7
baz=334
DZA *i* LRM MLR 15 59 26.9
baz=334
DZA Taraz 45.65 334 *e*P **P** **15 38 25.3 +0.2**
DZA pmax pmax
comp=Z,9.0nm,0.7s
SONM Songino Array 45.73 10 P **P** **15 38 25.8 0.0**
comp=Z,34nm,0.8s,baz=190,slow=8.8,SNR=157
SONM PcP **PcP** **15 40 04.1 +1.0**
comp=Z,6.0nm,0.5s,baz=202,slow=4.1,SNR=11
SONM LR LR 15 59 51.7
SONM Songino Array 45.73 10 P **P** **15 38 25.5 -0.3**
SONM pmax pmax
comp=Z,39nm,0.8s
SONM Songino Array 45.73 10 P **P** **15 38 25.5 -0.3**
ULN Ulaanbaatar 45.88 10 *ce*P **P** **15 38 26.7 -0.3**
ULN pmax pmax
comp=Z,65nm,1.7s
ULN Ulaanbaatar 45.88 10 P **P** **15 38 26.3 -0.6**
ULN IAmb IAmb 15 38 28.1
comp=Z,31nm,0.9s
SNY Shenyang 45.99 29 ⇑P **P** **15 38 27.4 -0.4**
SNY S **S** **15 45 12.6 +2.8**
SNY pmax pmax
comp=Z,27nm,1.4s
SNY pmax pmax
comp=Z,110nm,4.1s
SNY LR LR
comp=Z,580nm,16.2s
SNY LR LR
comp=Z,460nm,17.2s
SNY LR LR
comp=Z,750nm,16.2s
KK31 Karatay Array 46.17 334 *i* P **P** **15 38 29.8 +0.6**
KK31 Karatay Array 46.17 334 P **P** **15 38 29.5 +0.3**
KK31 IAmb IAmb 15 38 31.0
comp=Z,50nm,1.2s
KKAR Karatay Array 46.17 334 P **P** **15 38 29.5 +0.3**
KKAR pmax pmax
comp=Z,50nm,1.2s
KKAR Karatay Array 46.17 334 P **P** **15 38 29.5 +0.3**
KKAR IAmb IAmb 15 38 31.0
comp=Z,50nm,1.2s
BTLS Baital 46.35 338 *e*P **P** **15 38 30.8 +0.3**
comp=Z,15nm,1.1s,baz=338
BTLS *i* S **S** **15 45 15.8 +0.9**
baz=338
BTLS *i* LR LR 15 58 05.8
baz=338
BTLS *i* LRM MLR 15 59 55.0
baz=338
BTLS Baital 46.35 338 *e*P **P** **15 38 30.8 +0.3**
BTLS pmax pmax
comp=Z,15nm,1.1s
JMN Monobe 46.76 44 P **P** **15 38 33.8 -0.2**
JMN IAmb IAmb 15 38 35.9
comp=Z,35nm,0.9s
JHS Saijyo 46.94 43 P **P** **15 38 35.3 -0.1**
JHS IAmb IAmb 15 38 36.4
comp=Z,44nm,1.0s
ZAK Zakamensk 47.80 6 *e*P **P** **15 38 41.9 0.0**
ZAK pmax pmax
comp=Z,25nm,1.6s
ZAK pmax pmax
comp=Z,11nm,1.3s
CN2 Changchun 48.39 28 ⇓P **P** **15 38 45.8 -0.6**
CN2 *e*pP pP 15 38 56.8 -1.6
CN2 *e*S **S** **15 45 42.9 -1.0**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,400nm,16.0s
CN2 LR LR
comp=Z,700nm,17.0s
QIS Mount Isa 48.51 121 P **P** **15 38 48.4 +0.7**
baz=48,SNR=7.9
JWT Wachi 48.65 44 P **P** **15 38 48.1 -0.5**

MOY Mondy 48.88 4 *e*P **P** **15 38 49.9 -0.3**
MOY pmax pmax
comp=Z,45nm,2.5s
SEM Semipalatinsk 49.32 347 *e*P **P** **15 38 53.3 -0.5**
comp=Z,26nm,1.2s,baz=346
SEM *i* LR LR 15 59 52.5
baz=346
SEM *i* LRM MLR 16 02 00.7
baz=346
SEM Semipalatinsk 49.32 347 *e*P **P** **15 38 53.2 -0.5**
SEM pmax pmax
comp=Z,26nm,1.2s
GEYT Alibeck 49.33 320 P **P** **15 38 54.6 +0.9**
comp=Z,47nm,0.8s,baz=134,slow=11,SNR=58
GEYT LR LR 16 03 36.0
comp=Z,157nm,18.5s,baz=85,slow=41
GEYT Alibeck 49.33 320 P **P** **15 38 53.6 -0.2**
GYA0B ALIBECK ARRAY 49.33 320 P **P** **15 38 54.3 +0.6**
COEN Coen 49.50 111 P **P** **15 38 54.8 -0.6**
OTUK Ortayu 49.70 339 P **P** **15 38 56.6 +0.2**
IRK Irkutsk 49.75 7 *e*P **P** **15 38 55.7 -1.0**
IRK pmax pmax
comp=Z,79nm,2.0s
INU Inuyama 49.81 44 P **P** **15 38 56.4 -1.1**
KURBB Kurchatov Arra 49.93 345 P **P** **15 38 58.1 0.0**
KURK Kurchatov 49.99 346 P **P** **15 38 59.0 +0.4**
KURK Kurchatov 49.99 346 *ce*P **P** **15 38 58.8 +0.2**
KURK pmax pmax
comp=Z,111nm,1.7s
KURK Kurchatov 49.99 346 P **P** **15 38 57.9 -0.6**
JGF Kuroka 50.18 44 P **P** **15 38 59.3 -1.0**
HIA Hailar 50.49 20 P **P** **15 39 02.3 -0.1**
HIA pmax pmax
comp=Z,32nm,0.8s
HIA Hailar 50.49 20 P **P** **15 39 02.3 -0.1**
HIA IAmb IAmb 15 39 15.1
comp=Z,32nm,0.8s
MDJ Mudanjiang 51.02 30 P **P** **15 39 06.6 +0.2**
MDJ pP pP 15 39 19.6 +1.1
MDJ sP sP 15 39 25.3 +1.8
MDJ S **S** **15 46 24.0 +3.4**
MDJ pmax pmax
comp=Z,25nm,0.9s
MDJ pmax pmax
comp=Z,120nm,3.5s
MDJ LR LR
comp=Z,680nm,15.7s
MDJ LR LR
comp=Z,500nm,17.1s
MDJ LR LR
comp=Z,790nm,15.7s
MDJ Mudanjiang 51.02 30 P **P** **15 39 05.9 -0.5**
MDJ IAmb IAmb 15 39 08.1
comp=Z,31nm,1.2s
BRZS Berezniki 51.07 341 *i* P **P** **15 39 06.9 +0.1**
comp=Z,20nm,1.4s,baz=340
BRZS *e*S **S** **15 46 21.8 +0.7**
baz=340
BRZS *i* S S 15 46 21.9 +0.8
baz=340
BRZS *i* LR LR 16 00 56.8
baz=340
BRZS *i* LRM MLR 16 03 13.8
baz=340
BRZS Berezniki 51.07 341 *i* P **P** **15 39 06.8 +0.1**
BRZS *e*S **S** **15 46 21.8 +0.7**
BRZS pmax pmax
comp=Z,20nm,1.4s
MAT Matsushiro 51.25 44 P **P** **15 39 07.3 -1.0**
MAT *e*S **S** **15 46 26.0 +1.8**
MJAR Matsushiro Arr 51.25 44 P **P** **15 39 07.7 -0.7**
comp=Z,3.7nm,1.1s,baz=195,slow=6.3,SNR=4.7
MJAR PcP **PcP** **15 40 24.4 +1.3**
comp=Z,7.1nm,1.1s,baz=253,slow=4.8,SNR=6.4
MJAR LR LR 16 03 12.4
comp=Z,390nm,18.1s,baz=240,slow=39
MJAR Matsushiro Arr 51.25 44 IAmb IAmb 15 39 11.6
comp=Z,4.0nm,1.2s
BBOO Buckleboo 51.75 137 P **P** **15 39 12.8 +0.7**
baz=52,SNR=10.0
BBOO Buckleboo 51.75 137 P **P** **15 39 11.8 -0.4**
MTSU Mount Surprise 51.79 116 P **P** **15 39 13.6 +0.9**
baz=52,SNR=5.4
ZAA0 Zalesovo Array 51.83 352 P **P** **15 39 12.0 -0.4**
ZALV Zalesovo Beam 51.83 352 P **P** **15 39 12.3 0.0**
comp=Z,60nm,1.0s,baz=177,slow=5.8,SNR=155
ZALV LR LR 16 05 09.1
comp=Z,270nm,18.6s,baz=179,slow=41
ZALV Zalesovo Beam 51.83 352 *i* P **P** **15 39 12.3 0.0**
ZALV pmax pmax
comp=Z,33nm,0.8s
ZALV Zalesovo Beam 51.83 352 P **P** **15 39 11.9 -0.4**
USA0B Ussuriysk Arra 51.98 32 P **P** **15 39 13.6 0.0**
USA0B pmax pmax
comp=Z,44nm,1.4s
USA0B Ussuriysk Arra 51.98 32 P **P** **15 39 13.6 0.0**
USA0B IAmb IAmb 15 39 14.7
comp=Z,44nm,1.4s
USRK Ussuriysk Ar. 51.98 32 P **P** **15 39 13.8 +0.2**
comp=Z,9.5nm,0.8s,baz=240,slow=4.0,SNR=17
USRK LR LR 16 03 36.5
comp=Z,308nm,18.8s,baz=201,slow=39
USRK Ussuriysk Ar. 51.98 32 P **P** **15 39 13.1 -0.5**
USRK Ussuriysk Ar. 51.98 32 P **P** **15 39 13.1 -0.5**
PMG Port Moresby 52.25 104 P **P** **15 39 16.0 -0.1**
PMG pmax pmax
comp=Z,25nm,0.8s
PMG Port Moresby 52.25 104 P **P** **15 39 16.0 -0.1**
PMG IAmb IAmb 15 39 33.4
comp=Z,25nm,0.8s
RAYN Ar Rayn 53.09 297 *i* P **P** **15 39 23.3 +1.0**
SNR=20
RAYN Ar Rayn 53.09 297 P **P** **15 39 23.0 +0.7**
RAYN pmax pmax
comp=Z,17nm,0.8s
RAYN Ar Rayn 53.09 297 P **P** **15 39 22.9 +0.7**
RAYN IAmb IAmb 15 39 24.5
comp=Z,18nm,0.8s
HTT Hallett 54.09 135 P **P** **15 39 30.6 +1.2**
baz=54,SNR=7.9
CTAO Charters Tower 54.16 117 P **P** **15 39 30.3 +0.2**
CTAO pmax pmax
comp=Z,36nm,1.0s
CTAO Charters Tower 54.16 117 P **P** **15 39 30.3 +0.2**
CTAO IAmb IAmb 15 39 31.9
comp=Z,36nm,0.9s
BRVK Borovoye 54.47 341 *ce*P **P** **15 39 31.6 -0.2**
BRVK pmax pmax
comp=Z,26nm,1.0s
BRVK Borovoye 54.47 341 P **P** **15 39 31.2 -0.6**
BRVK IAmb IAmb 15 39 46.6
comp=Z,38nm,0.8s
QLP Quilpie 54.83 125 P **P** **15 39 35.8 +1.0**
baz=55,SNR=9.0
STKA Stephens Creek 55.20 132 P **P** **15 39 38.2 +0.8**
comp=Z,16nm,0.8s,baz=308,slow=8.3,SNR=22
STKA LR LR 16 02 59.2
comp=Z,186nm,21.7s,baz=320,slow=36
STKA Stephens Creek 55.20 132 P **P** **15 39 38.2 +0.8**
baz=55,SNR=11
STKA Stephens Creek 55.20 132 P **P** **15 39 37.6 +0.2**
STKA pmax pmax
comp=Z,5.0nm,1.0s
STKA Stephens Creek 55.20 132 P **P** **15 39 37.6 +0.2**
KLR Kul'dur 55.33 28 *d* P **P** **15 39 37.8 -0.2**
comp=Z,11nm,0.7s,baz=246,slow=6.8,SNR=30
KLR Kul'dur 55.33 28 *d* iP **P** **15 39 38.4 +0.4**
KLR pmax pmax
comp=Z,33nm,1.1s
AB31 Akbulak array 55.62 332 P **P** **15 39 40.0 -0.1**
ABKAR Akbulak array 55.62 332 P **P** **15 39 40.0 -0.1**
BOD Bodaibo 56.66 11 *e*P **P** **15 39 46.4 -1.0**
BOD pmax pmax
comp=Z,46nm,1.4s
ZEA Zeya 56.84 22 *e*P **P** **15 39 48.8 +0.1**
ZEA pmax pmax
comp=E,10.0nm,0.4s
ZEA pmax pmax
comp=N,10.0nm,1.0s
ZEA pmax pmax
comp=Z,20nm,0.9s
ZEA pmax pmax
comp=Z,100nm,4.1s
ZEA MLR MLR
comp=E,400nm,18.0s
ZEA MLR MLR
comp=N,500nm,15.0s
ZEA MLR MLR
comp=Z,700nm,16.0s
ASAJ Asahikawa 58.05 38 P **P** **15 39 58.1 +0.7**
comp=Z,13nm,1.1s,baz=271,slow=14,SNR=5.9
ASAJ Asahikawa 58.05 38 P **P** **15 39 58.1 +0.7**
ASAJ pmax pmax
comp=Z,15nm,0.8s
JKA Kamikawa-asahi 58.05 38 P **P** **15 39 58.1 +0.7**
JKA Kamikawa-asahi 58.05 38 IAmb IAmb 15 40 12.0
comp=Z,15nm,0.8s
CMSA Cobar Meteorol 58.12 130 P **P** **15 39 59.3 +1.2**
baz=58,SNR=40
KIBK Kibwezi 58.30 266 P **P** **15 40 01.7 +1.8**
SNR=5.2
RMQ Roma 58.53 123 P **P** **15 40 02.8 +1.7**
baz=59,SNR=15
GRNR Gornyy 58.58 29 ⇑*i*P **P** **15 40 00.7 -0.4**
GRNR pmax pmax
comp=Z,9.0nm,1.2s
GRNR MLR MLR
comp=E,320nm,17.0s
GRNR MLR MLR
comp=N,280nm,18.0s
GRNR MLR MLR
comp=Z,570nm,16.0s
MAK Makhachkala 58.84 320 *e*P **P** **15 40 00.7 -2.3**
MAK *e*S **S** **15 48 03.4 -2.2**
MAK pmax pmax
comp=Z,67nm,0.8s
KMBO Kilima Mbogo 59.01 267 P **P** **15 40 09.0 +4.0**
comp=Z,19nm,1.2s,baz=52,slow=7.3,SNR=17
KMBO LR LR 16 03 04.6
comp=Z,534nm,18.8s,baz=94,slow=33
KMBO Kilima Mbogo 59.01 267 *i* P **P** **15 40 07.0 +2.1**
SNR=11
KMBO Kilima Mbogo 59.01 267 *i* P **P** **15 40 09.0 +4.0**
KMBO pmax pmax
comp=Z,19nm,1.3s
KMBO Kilima Mbogo 59.01 267 P **P** **15 40 06.5 +1.5**
KMBO IAmb IAmb 15 40 08.2
comp=Z,18nm,1.2s
GNI Garni 59.42 316 P **P** **15 40 07.9 +0.6**
GNI Garni 59.42 316 *ce*P **P** **15 40 07.7 +0.4**
GNI pmax pmax
comp=Z,57nm,1.3s
GNI Garni 59.42 316 P **P** **15 40 07.4 0.0**
YSS Yuzh-Sakhalins 59.65 35 *e*P **P** **15 40 08.6 +0.2**
YSS *e* 15 40 29.2
YSS pmax pmax
comp=Z,30nm,1.2s
YSS MLR MLR
comp=Z,500nm,12.0s
YSS MLR MLR
comp=N,300nm,17.0s
YSS MLR MLR
comp=E,500nm,15.0s
YSS Yuzh-Sakhalins 59.65 35 P **P** **15 40 08.7 +0.2**
YSS IAmb IAmb 15 40 31.4
comp=Z,24nm,0.9s
GEVA Gevas 59.88 313 P **P** **15 40 10.4 -0.2**
GEVA IAmb IAmb 15 40 21.1
comp=Z,20nm,0.9s
GROC Groznyy 60.06 319 *e*P **P** **15 40 12.3 +0.9**
GROC *e* 15 40 59.7
GROC pmax pmax
comp=Z,34nm,0.4s
EIDS Eidsvold 60.10 121 P **P** **15 40 11.7 -0.3**
EIDS IAmb IAmb 15 40 30.5
comp=Z,20nm,1.2s
LODK Lodwar 60.69 272 P **P** **15 40 17.2 +0.9**
SNR=8.4
AKH Akhalkalaki 60.81 317 P **P** **15 40 17.1 +0.2**
AKH pmax pmax
comp=Z,107nm,1.2s
AKH Akhalkalaki 60.81 317 P **P** **15 40 17.1 +0.2**
SVE Sverdlovsk 60.83 339 *ce*P **P** **15 40 16.6 +0.2**
SVE pmax pmax
comp=Z,73nm,1.3s
ZEI Tsey 61.12 318 *e*P **P** **15 40 18.5 -0.4**
ZEI pmax pmax
comp=Z,31nm,1.5s
MARD Mardin 61.20 312 P **P** **15 40 19.5 +0.1**
ARU Arti 61.32 337 *d* iP **P** **15 40 19.2 -0.5**
ARU **15 42 34.6**
ARU S **S** **15 48 39.2 +2.3**
ARU pmax pmax
comp=Z,61nm,1.3s
ARU Arti 61.32 337 P **P** **15 40 19.1 -0.6**
TYV Tymovskoe 61.77 31 *e*P **P** **15 40 23.6 +0.8**
TYV pmax pmax
comp=Z,300nm,2.8s
TYV pmax pmax
comp=Z,22nm,1.5s
KBZ Khabaz 62.19 319 P **P** **15 40 25.8 0.0**
comp=Z,11nm,0.9s,baz=116,slow=4.9,SNR=15
KBZ LR LR 16 12 14.5
comp=Z,59nm,18.5s,baz=129,slow=41
KIV Kislovodsk 62.42 319 *i* P **P** **15 40 28.2 +0.7**
SNR=6.2
KIV Kislovodsk 62.42 319 P **P** **15 40 27.8 +0.2**
KIV Kislovodsk 62.42 319 *e*P **P** **15 40 27.7 +0.2**
KIV pmax pmax
comp=Z,103nm,1.1s
KIV MLR MLR
comp=Z,253nm,17.0s
KIV Kislovodsk 62.42 319 P **P** **15 40 27.4 -0.1**
KIV IAmb IAmb 15 40 29.0
comp=Z,34nm,1.0s
EIL Elat 63.73 302 P **P** **15 40 37.0 +0.7**
comp=Z,13nm,0.9s,baz=144,slow=3.5,SNR=4.4
GAZ Gaziantep 63.84 310 P **P** **15 40 36.6 -0.5**
GAZ IAmb IAmb 15 40 58.6
comp=Z,38nm,0.9s
MMAI Mount Meron Ar 64.13 305 P **P** **15 40 41.2 +2.2**
comp=Z,13nm,1.0s,baz=90,slow=7.4,SNR=6.5
YAK Yakutsk 64.20 17 P **P** **15 40 38.4 -0.3**
comp=Z,8.4nm,0.3s,baz=195,slow=0.2,SNR=26
YAK Yakutsk 64.20 17 *e*P **P** **15 40 37.7 -1.1**
YAK *e**PP **pP** **15 40 46.9 -4.3**
YAK *e* 15 41 12.4
YAK *e* 15 43 05.8
YAK *e*S **S** **15 49 13.0 +0.2**
YAK *e**SS **pS** **15 49 30.6 +3.0**
YAK *e*SS **SS** **15 53 28.4 +5.6**
YAK pmax pmax
comp=Z,66nm,1.0s
YAK pmax pmax
comp=N,16nm,1.1s
YAK pmax pmax
comp=E,16nm,1.3s
YAK pmax pmax
comp=Z,122nm,3.6s
YAK pmax pmax
comp=N,117nm,3.3s
YAK pmax pmax
comp=E,101nm,3.3s
YAK smax smax
comp=E,89nm,3.2s
YAK smax smax
comp=N,48nm,2.7s
YAK MLR MLR
comp=Z,1μm,17.0s
YAK MLR MLR
comp=N,449nm,15.0s
YAK MLR MLR
comp=E,364nm,16.0s
YAK Yakutsk 64.20 17 P **P** **15 40 37.3 -1.5**
SOC Sochi 64.24 318 *e*P **P** **15 40 36.6 -2.8**
SOC *e* 15 42 58.5
SOC *e*PPP PPP 15 44 29.3
SOC *e*S **S** **15 49 10.8 -3.2**
SOC *e*SSS SSS 15 56 18.0
SOC MLR MLR
comp=Z,132nm,15.0s
TOKA Tokat 65.36 313 P **P** **15 40 46.8 -0.1**
TOKA IAmb IAmb 15 40 48.8
comp=Z,34nm,1.1s
MBAR Mbarara 65.47 268 P **P** **15 40 49.4 +1.2**
MBAR P **P** **15 40 49.4 +1.2**
MBAR Mbarara 65.47 268 *ce*P **P** **15 40 50.6 +2.4**
MBAR pmax pmax
comp=Z,30nm,1.7s
ANN Anapa 66.22 318 *e*P **P** **15 40 50.0 -2.2**
ANN *e**PP **pP** **15 41 00.6 -4.3**
ANN *e*S **S** **15 49 37.5 -0.6**

ANN pmax pmax
comp=Z,30nm,0.7s
VRH Novokhopyorsk 66.22 326 *e*P **P** **15 40 51.1 -1.0**
VRH *e**SP **pP** **15 41 03.0 -1.6**
VRH pmax pmax
comp=Z,50nm,0.8s
CSS Mathiatis 66.27 307 P **P** **15 40 53.4 +0.6**
KIRV Kirov 66.43 335*d* *i*P **P** **15 40 53.2 -0.1**
NRIK Noril'sk 66.69 357 P **P** **15 40 54.5 -0.3**
comp=Z,30nm,1.0s,baz=164,slow=6.3,SNR=39
NRIK LR LR 16 13 15.7
comp=Z,354nm,20.5s,baz=198,slow=39
NRIK Noril'sk 66.69 357*d* *i*P **P** **15 40 54.5 -0.3**
NRIK pmax pmax
comp=Z,42nm,1.0s
BR131 Keskin Array S 67.27 312 P **P** **15 40 58.4 -0.8**
BR131 pmax pmax
comp=Z,26nm,0.9s
BR131 Keskin Array S 67.27 312 P **P** **15 40 58.4 -0.8**
BR131 lAmb lAmb 15 41 19.2
comp=Z,26nm,0.9s
BRTR Keskin Array B 67.27 312 P **P** **15 40 59.0 -0.2**
comp=Z,9.0nm,1.0s,baz=118,slow=7.4,SNR=22
BRTR LR LR 16 11 54.5
comp=Z,68nm,21.9s,baz=116,slow=37
BRTR Keskin Array B 67.27 312 *i* P **P** **15 40 59.0 -0.2**
BRTR pmax pmax
comp=Z,7.0nm,0.8s
BRTR Keskin Array B 67.27 312 P **P** **15 40 58.5 -0.8**
VORD Divnogorie 67.49 325 *e*P **P** **15 40 59.2 -1.0**
VORD *e**SP **pP** **15 41 11.8 -0.9**
VORD pmax pmax
comp=Z,30nm,1.0s
BZK Bozkurt 67.65 315 ⇓P **P** **15 41 01.8 +0.5**
VSR Storozhevoye 67.67 325 *e*P **P** **15 40 59.5 -1.8**
VSR *e**SP **pP** **15 41 12.2 -1.7**
VSR pmax pmax
comp=Z,20nm,0.6s
LPSR Galich'ya Gora 68.39 327 *e*P **P** **15 41 04.6 -1.2**
LPSR *e**SP **pP** **15 41 17.7 -0.7**
LPSR pmax pmax
comp=Z,30nm,1.0s
SIM Simferopol' 68.49 318 *e*P P 15 41 16.2 +10
SIM pmax pmax
comp=Z,66nm,0.6s
MDUB Mudurnu 69.27 312 P **P** **15 41 11.1 -0.6**
MA2 Magadan 70.37 26 P **P** **15 41 17.8 0.0**
comp=Z,3.2nm,0.4s,baz=157,slow=7.6,SNR=4.1
MA2 Magadan 70.37 26 P **P** **15 41 17.9 0.0**
MA2 pmax pmax
comp=Z,53nm,1.2s
MA2 Magadan 70.37 26 P **P** **15 41 17.9 0.0**
MA2 lAmb lAmb 15 41 36.0
comp=Z,53nm,1.2s
MOS Moscow 70.44 329 *e*P **P** **15 41 17.1 -1.3**
MOS *e* 15 41 36.4
MOS *e* 15 43 53.9
MOS pmax pmax
comp=Z,142nm,1.4s
OBN Obninsk 70.72 328 P **P** **15 41 20.4 +0.3**
comp=Z,3.6nm,0.4s,baz=121,slow=5.9
OBN Obninsk 70.72 328*d* *i*P **P** **15 41 19.9 -0.2**
OBN *i* 15 41 35.2
OBN *i* 15 44 00.3
OBN pmax pmax
comp=Z,61nm,1.2s
OBN Obninsk 70.72 328 P **P** **15 41 20.0 -0.2**
MANT Manisa 70.80 310 P **P** **15 41 20.4 -0.9**
PETK Petropavlovsk- 71.01 34 LR LR 16 16 06.7
comp=Z,334nm,18.0s,baz=251,slow=39
PURM Purcari 71.79 318 ⇑P **P** **15 41 29.0 +2.2**
TIXI Tiksi 71.81 10*d* *i*P **P** **15 41 25.5 -0.9**
TIXI pmax pmax
comp=Z,306nm,1.7s
TIXI Tiksi 71.81 10 P **P** **15 41 25.4 -1.1**
TIXI lAmb lAmb 15 41 26.7
comp=Z,49nm,1.1s
KLMR Klimovskoe 71.87 335 *e*P **P** **15 41 23.2 -3.7**
KLMR pmax pmax
comp=Z,90nm,1.5s
KLMR Klimovskoe 71.87 335 *e*P **P** **15 41 23.3 -3.7**
KLMR AMP 15 41 28.6
comp=Z,90nm,1.5s
KLMR *e*PP **PP** **15 44 00.3 -6.6**
TLCR 72.16 317 ⇑P P 15 41 36.2 +7.2
TLCR 72.16 317 ⇑P P 15 41 36.2 +7.2
TIRR Tirgusor 72.25 316 ⇑P **P** **15 41 28.7 -0.9**
TIRR Tirgusor 72.25 316 ⇑P **P** **15 41 28.7 -0.9**
TIRR Tirgusor 72.25 316 P **P** **15 41 29.4 -0.2**
MILM Milestii Mici 72.60 318 ⇓P **P** **15 41 31.0 -0.6**
CFR Carcaliu 72.62 317 ⇑P **P** **15 41 32.7 +1.0**
CFR Carcaliu 72.62 317 ⇑P **P** **15 41 32.7 +1.0**
SEY Seymchan 72.72 23 P **P** **15 41 32.2 +0.2**
comp=Z,16nm,0.9s,baz=241,slow=4.0,SNR=19
DZM Mont Dzumac 72.89 114 *e*LR LR 16 04 01.5
comp=Z,448nm,24.4s
IDI Anoyia 73.12 306 P **P** **15 41 35.4 +0.4**
comp=Z,18nm,0.8s,baz=52,slow=5.5,SNR=2.7
VASR Vaslui 73.21 318 ⇑P **P** **15 41 35.8 +0.5**
SORM Soroca 73.22 320 ⇓P **P** **15 41 34.7 -0.5**
SORM Soroca 73.22 320 ⇓P **P** **15 41 34.7 -0.5**
LOZB Loznitsa 73.29 314 ⇑P P 15 41 50.1 +14
AKASG Malin Array Be 73.36 322 P **P** **15 41 35.4 -0.7**
comp=Z,8.8nm,0.5s,baz=88,slow=4.9,SNR=43
AKASG LR LR 16 19 44.1
comp=Z,49nm,18.3s,baz=240,slow=41
AKASG Malin Array Be 73.36 322 P **P** **15 41 35.2 -0.8**
AKASG pmax pmax
comp=Z,11nm,1.0s
AKASG Malin Array Be 73.36 322 P **P** **15 41 35.2 -0.8**
AKBB Malin Array Si 73.36 322*ce* P **P** **15 41 35.8 -0.2**
AKBB Malin Array Si 73.36 322 P **P** **15 41 35.3 -0.7**
AKBB lAmb lAmb 15 41 57.3
comp=Z,23nm,0.9s
RAZG Razgrad 73.39 315 ⇓P **P** **15 41 37.1 +0.7**
LBTB Lobatse 73.66 243 P **P** **15 41 37.6 -0.8**
LBTB pmax pmax
comp=Z,12nm,0.9s
LBTB Lobatse 73.66 243 P **P** **15 41 37.6 -0.8**
VRI Vrincioaia 73.74 317 ⇑P **P** **15 41 39.5 +1.1**
VRI Vrincioaia 73.74 317 ⇑P **P** **15 41 39.5 +1.1**
PLOR Plostina 73.79 317 ⇑P **P** **15 41 39.6 +0.9**
PLOR Plostina 73.79 317 ⇑P **P** **15 41 39.6 +0.9**
TESR Tescani 73.94 318 ⇑P **P** **15 41 40.1 +0.5**
MAW Mawson 74.02 193 LR LR 16 10 35.0
comp=Z,184nm,18.0s,baz=58,slow=33
TMCR Tamitsa 74.06 337 *e*P **P** **15 41 39.9 +0.1**
TMCR pmax pmax
comp=Z,33nm,0.6s
MLR Muntele Rosu 74.19 317 P **P** **15 41 42.3 +1.0**
comp=Z,42nm,1.2s,baz=61,slow=4.0,SNR=16
MLR Muntele Rosu 74.19 317 ⇑P **P** **15 41 42.2 +1.0**
MLR Muntele Rosu 74.19 317 P **P** **15 41 41.7 +0.4**
MLR lAmb lAmb 15 41 43.1
comp=Z,61nm,1.2s
BIZ Bicaz 74.40 318 ⇑P **P** **15 41 43.0 +0.8**
PRAR RASCA 74.42 318 ⇑P **P** **15 41 42.7 +0.4**
BOSA Boshof 74.67 239 P **P** **15 41 45.5 +1.2**
comp=Z,6.6nm,1.1s,baz=99,slow=2.7,SNR=3.6
BOSA LR LR 16 12 02.5
comp=Z,361nm,18.2s,baz=62,slow=34
BOSA Boshof 74.67 239 P **P** **15 41 45.5 +1.2**
BOSA pmax pmax
comp=Z,17nm,1.2s
DOPR Dopca 74.68 317 ⇓P **P** **15 41 44.9 +1.0**
VOIR 74.80 316 ⇓P **P** **15 41 44.1 -0.6**
VOIR 74.80 316 ⇓P **P** **15 41 44.1 -0.6**
ARR Arges 75.07 316 ⇓P **P** **15 41 48.5 +2.3**
BURAR Bucovina Array 75.14 319 ⇑P **P** **15 41 48.1 +1.5**
BURAR Bucovina Array 75.14 319 ⇑P **P** **15 41 48.1 +1.5**
BURAR Bucovina Array 75.14 319 P **P** **15 41 47.0 +0.3**
BUR08 Bucovina Ar. S 75.16 319 P **P** **15 41 47.4 +0.7**
MICGM Minsk 75.22 326 *e*P **P** **15 41 47.0 +0.2**
MNK Minsk 75.22 326 *e*P **P** **15 41 48.0 +1.2**
ITM Ithomi 75.75 308 P **P** **15 41 49.6 -0.6**
ITM lAmb lAmb 15 41 50.9
comp=Z,28nm,1.2s
IDID Didziasalis 76.08 327 *e*P **P** **15 41 52.8 +1.1**
DEV Deva 76.36 317 ⇓P **P** **15 41 55.2 +1.8**
DEV Deva 76.36 317 ⇓P **P** **15 41 55.3 +1.8**
IIGN Ignalina 76.38 326 *e*P **P** **15 41 54.4 +1.1**
LVV L'vov 76.38 321 *e*P **P** **15 41 53.4 -0.1**
ISAL Salakas 76.49 327 *e*P **P** **15 41 55.0 +1.1**
HERR Herculane 76.53 315 ⇑P **P** **15 41 54.8 +0.3**

DRGR 76.66 317 ⇑P **P** **15 41 56.5 +1.3**
DRGR 76.66 317 ⇑P **P** **15 41 56.5 +1.3**
VSU Vasula 76.95 330 *e*P **P** **15 41 56.0 -0.6**
LVZ Lovozero 76.99 340 P **P** **15 41 56.3 -0.3**
LVZ pmax pmax
comp=Z,87nm,1.3s
LVZ Lovozero 76.99 340 P **P** **15 41 56.3 -0.3**
KWP Kalwaria Pacla 77.18 320 *e*P **P** **15 41 58.8 +0.7**
KWP Kalwaria Pacla 77.18 320 P **P** **15 41 58.1 +0.1**
KWP pmax pmax
comp=Z,78nm,1.2s
KWP Kalwaria Pacla 77.18 320 P **P** **15 41 58.1 +0.1**
BZS Buzias 77.20 316 ⇑P **P** **15 41 58.1 -0.2**
BZS Buzias 77.20 316 ⇑P **P** **15 41 58.1 -0.2**
UZH Uzhgorod 77.26 319 ⇑*i*P **P** **15 41 59.0 +0.5**
UZH *i* 15 42 11.2
APA Apatity 77.28 340 ⇑*i*P **P** **15 41 55.5 -2.7**
APA pmax pmax
comp=Z,24nm,1.0s
APA MLR MLR
comp=Z,600nm,21.0s
SIRR Siria 77.28 317 ⇓P **P** **15 41 59.1 +0.4**
KOLS Kolonicke sedl 77.33 320 *e*P **P** **15 42 00.2 +1.3**
KOLS pmax pmax
comp=Z,43nm,1.2s
KOLS Kolonicke sedl 77.33 320 *e*P **P** **15 42 00.2 +1.3**
PABE Paberze 77.66 326 *e*P **P** **15 42 01.4 +0.9**
SUW Suwalki 77.78 325 *e*P **P** **15 42 01.1 -0.2**
SUW *e*pP **PcP** **15 42 10.7 -0.4**
SUW Suwalki 77.78 325 P **P** **15 42 00.9 -0.3**
SUW pmax pmax
comp=Z,101nm,1.0s
SUW Suwalki 77.78 325 P **P** **15 42 00.9 -0.3**
CRVS Cervenica-Dubn 77.85 319 *e*P **P** **15 42 02.8 +1.0**
CRVS pmax pmax
comp=Z,52nm,1.2s
CRVS Cervenica-Dubn 77.85 319 *e*P **P** **15 42 02.8 +1.0**
FIA1 FINESS Array S 78.11 333 P **P** **15 42 02.1 -0.8**
FINES FINESS Array B 78.11 333 P **P** **15 42 03.1 +0.2**
comp=Z,19nm,1.0s,baz=94,slow=4.6,SNR=13
FINES LR LR 16 20 05.4
comp=Z,135nm,20.2s,baz=110,slow=38
DIVS Divibare 78.13 314 P **P** **15 42 02.9 -0.6**
PDG Podgorica 78.45 313 P **P** **15 42 04.1 -1.2**
NIE Niedzica 78.69 320 *e*P **P** **15 42 07.7 +1.2**
NIE *e*PP **PP** **15 45 05.1 +0.2**
PSZ Piszkesteto 78.73 318 ⇑P **P** **15 42 07.2 +0.4**
PSZ Piszkesteto 78.73 318 ⇑P **P** **15 42 07.2 +0.4**
PSZ Piszkesteto 78.73 318 P **P** **15 42 06.6 -0.1**
PSZ lAmb lAmb 15 42 28.0
comp=Z,27nm,0.9s
SCTE Santa Cesarea 78.78 310 P **P** **15 42 06.2 -1.0**
SCTE lAmb lAmb 15 42 08.4
comp=Z,44nm,0.9s
OJC Ojcow 79.13 321 *e*P **P** **15 42 09.4 +0.5**
OJC *e*pP **PcP** **15 42 18.4 +1.3**
OJC Ojcow 79.13 321 P **P** **15 42 08.0 -0.9**
OJC pmax pmax
comp=Z,19nm,1.0s
OJC Ojcow 79.13 321 P **P** **15 42 08.0 -0.9**
LANS Liptovska Anna 79.19 319 *e*P **P** **15 42 10.5 +1.3**
LANS pmax pmax
comp=Z,3.0nm,0.9s
LANS Liptovska Anna 79.19 319 *e*P **P** **15 42 10.5 +1.3**
VYHS Vyhne 79.51 319 *e*P **P** **15 42 11.6 +0.6**
VYHS pmax pmax
comp=Z,32nm,1.5s
VYHS Vyhne 79.51 319 *e*P **P** **15 42 11.6 +0.6**
TIP Timpagrande 80.01 309 P **P** **15 42 13.6 -0.4**
BILL Bilibino 80.06 21 *i*P **P** **15 42 12.6 -0.9**
BILL *i* 15 42 18.0
BILL *i* 15 45 11.7
BILL pmax pmax
comp=Z,7.0nm,1.1s
BILL MLR MLR
comp=Z,1μm,17.0s
BILL Bilibino 80.06 21 P **P** **15 42 12.4 -1.1**
JAVC Velka Javorina 80.32 319 *e*P **P** **15 42 16.7 +1.3**
MORC Moravsky Berou 80.52 320 ⇑P **P** **15 42 17.4 +1.0**
MORC Moravsky Berou 80.52 320 *e*P **P** **15 42 17.0 +0.6**
MORC Moravsky Berou 80.52 320 ⇑P **P** **15 42 17.4 +1.0**
MORC Moravsky Berou 80.52 320 P **P** **15 42 16.0 -0.4**
MORC lAmb lAmb 15 42 18.5
comp=Z,28nm,1.3s
MODS Modra-Piesok 80.52 318 *e*P **P** **15 42 16.8 +0.3**
MODS pmax pmax
comp=Z,36nm,1.5s
MODS Modra-Piesok 80.52 318 *e*P **P** **15 42 16.8 +0.3**
ZST Bratislava 80.62 318 *e*P **P** **15 42 18.0 +1.1**
ZST pmax pmax
comp=Z,136nm,1.4s
ZST Bratislava 80.62 318 *e*P **P** **15 42 18.0 +1.1**
ARD5 ARCESS Array S 80.69 340 P **P** **15 42 17.4 +0.6**
ARD5 lAmb lAmb 15 42 33.6
comp=Z,32nm,1.0s
ARD2 ARCESS Array S 80.69 340 P **P** **15 42 17.3 +0.5**
ARC2 ARCESS Array S 80.69 340 P **P** **15 42 17.1 +0.3**
ARB2 ARCESS Array S 80.69 340 P **P** **15 42 17.3 +0.4**
ARB2 lAmb lAmb 15 42 18.1
comp=Z,57nm,1.4s
ARA0 ARCESS Array S 80.69 340 *e*P **P** **15 42 17.7 +0.8**
ARA1 ARCESS Array S 80.69 340 P **P** **15 42 17.1 +0.2**
ARA1 lAmb lAmb 15 42 29.5
comp=Z,45nm,1.3s
ARCES ARCESS Array B 80.69 340 P **P** **15 42 17.4 +0.5**
comp=Z,3.6nm,0.4s,baz=96,slow=5.6,SNR=39
ARCES LR LR 16 21 27.6
comp=Z,209nm,18.5s,baz=240,slow=38
ARD1 ARCESS Array S 80.69 340 P **P** **15 42 17.4 +0.5**
ARD1 lAmb lAmb 15 42 30.1
comp=Z,46nm,1.1s
KOGS Kog 81.02 316 *e*P **P** **15 42 19.6 +0.5**
KRLC Kraliky 81.04 320 *e*P **P** **15 42 19.8 +0.6**
KRLC Kraliky 81.04 320 *e*P **P** **15 42 19.8 +0.6**
VRAC Vranov 81.08 319 P **P** **15 42 20.4 +1.0**
comp=Z,1.8nm,0.5s,baz=95,slow=7.0,SNR=4.6
VRAC Vranov 81.08 319 *e*P **P** **15 42 19.6 +0.2**
KRUC Moravsky 81.18 319 *e*P **P** **15 42 20.3 +0.4**
SYO Syowa Base 81.19 198⇑*e*P **P** **15 42 20.8 +1.4**
SYO Syowa Base 81.19 198⇓*e*pP pP 15 42 34.7 +2.2
KTK1 Kautokeino 81.32 340 *e*P **P** **15 42 20.8 +0.6**
DPC Dobruska-Polom 81.36 320 *e*P **P** **15 42 22.2 +1.3**
DPC Dobruska-Polom 81.36 320 *e*P **P** **15 42 22.2 +1.3**
DPC *ex* x 15 42 30.2
CONA Conrad Observa 81.42 318 *e*P **P** **15 42 22.0 +0.7**
comp=Z,8.1nm,1.2s,SNR=5.1
KSP Ksiaz 81.43 321 *e*P **P** **15 42 22.0 +0.8**
OSTC Ostas 81.45 321 *e*P **P** **15 42 23.0 +1.6**
CRES Cresnjev 81.51 316 *e*P **P** **15 42 22.0 +0.2**
CHVC Chvalec 81.56 321 *e*P **P** **15 42 23.0 +1.1**
ARSA Arzberg 81.59 317 *e*P **P** **15 42 23.4 +1.3**
comp=Z,25nm,1.2s,SNR=9.8
HAMF Hammerfest 81.61 341 *e*P **P** **15 42 22.7 +1.0**
VAE Valguarnera 81.75 307 P **P** **15 42 25.6 +2.4**
comp=Z,8.9nm,0.3s,baz=352,slow=6.8,SNR=3.3
PERS Pernice 81.81 317 *e*P **P** **15 42 24.0 +0.6**
SOKA Soboth 81.88 317 *e*P **P** **15 42 25.0 +1.2**
comp=Z,36nm,1.3s,SNR=18
LJU Ljubljana 82.18 316 *i*P **P** **15 42 26.1 +0.9**
OBKA Obir 82.19 316 *e*P **P** **15 42 25.3 -0.2**
comp=Z,24nm,1.4s,SNR=9.1
INTR Introdacqua 82.37 312 P **P** **15 42 26.3 -0.2**
INTR lAmb lAmb 15 42 28.5
comp=Z,24nm,1.1s
PRU Pruhonice 82.47 320 *e*P **P** **15 42 27.7 +1.0**
PRU Pruhonice 82.47 320 *e*P **P** **15 42 27.7 +1.0**
MOA Molln 82.48 318 *e*P **P** **15 42 27.2 +0.4**
comp=Z,13nm,1.4s,SNR=5.2
AQU L'Aquila 82.76 312 P **P** **15 42 28.6 +0.1**
AQU pmax pmax
comp=Z,87nm,1.4s
AQU L'Aquila 82.76 312 P **P** **15 42 28.6 +0.1**
MYKA Terra Mystica 82.83 316 *e*P **P** **15 42 27.8 -0.9**
comp=Z,20nm,1.6s
PRED Cave del Predi 82.87 316 P **P** **15 42 29.1 +0.1**
PRED lAmb lAmb 15 42 30.5
comp=Z,27nm,1.1s
BRG Berggiesshubel 82.92 321 *e*P **P** **15 42 29.4 +0.4**
comp=Z,29nm,1.5s
BRG *e* 15 42 46.1
comp=Z,12nm,1.3s
BRG Berggiesshubel 82.92 321 *e*P **P** **15 42 29.4 +0.4**
BRG *e* 15 42 46.2

BRG pmax pmax
comp=Z,29nm,1.5s
BRG pmax pmax
comp=Z,12nm,1.3s
GEC2 GERESS Array S 82.93 319 P **P** **15 42 29.4 +0.2**
GEC2 lAmb lAmb 15 42 31.2
comp=Z,41nm,1.2s
GERES GERESS Array B 82.93 319 P **P** **15 42 29.6 +0.4**
comp=Z,11nm,1.0s,baz=95,slow=6.7,SNR=59
TRO Tromso 82.95 340 *e*P **P** **15 42 28.8 +0.1**
NRCA Norcia 83.00 313 P **P** **15 42 29.7 0.0**
NRCA lAmb lAmb 15 42 31.3
comp=Z,33nm,1.2s
KHC Kasperske Hory 83.03 319 *e*P **P** **15 42 30.2 +0.5**
KHC Kasperske Hory 83.03 319 *e*P **P** **15 42 30.2 +0.5**
KHC *ex* x 15 42 38.5
KHC Kasperske Hory 83.03 319 P **P** **15 42 29.9 +0.3**
KBA Koelnbreinsper 83.06 317 *e*P **P** **15 42 30.1 0.0**
comp=Z,14nm,1.4s
ZOU Zoufplan 83.28 316 P **P** **15 42 31.3 0.0**
ZOU lAmb lAmb 15 42 32.7
comp=Z,39nm,1.3s
STAL STALIGIAL 83.45 316 P **P** **15 42 32.0 +0.1**
CLL Collm 83.54 321 *i*P **P** **15 42 32.1 -0.1**
comp=Z,11nm,1.0s
CLL *es*P **sP** **15 42 49.0 -1.1**
CLL *e*S **S** **15 52 52.0 +1.2**
CLL *e*SS SS 15 58 30.0 +13
CLL Collm 83.54 321 *i*P **P** **15 42 32.1 -0.1**
CLL *e*S **S** **15 52 52.0 +1.2**
CLL pmax pmax
comp=Z,11nm,1.0s
ABTA Abfaltersbach 83.61 317 *i*P **P** **15 42 32.9 +0.2**
comp=Z,11nm,1.0s
CIMO Cimolais 83.64 316 P **P** **15 42 32.6 -0.3**
HFS Hagfors 83.83 330 P **P** **15 42 33.6 +0.1**
comp=Z,9.8nm,1.0s,baz=119,slow=5.2,SNR=9.6
FAUS Fauske 83.92 337 *e*P **P** **15 42 34.2 +0.5**
LATE Laterza 83.95 312 P **P** **15 42 34.4 -0.2**
STEI Steigen 84.00 338 *e*P **P** **15 42 34.9 +0.7**
MOR8 Moi Rana 84.10 336 *e*P **P** **15 42 35.1 +0.3**
CTI Castel Tesino 84.18 316 P **P** **15 42 36.1 +0.4**
CTI pmax pmax
comp=Z,40nm,1.1s
CTI Castel Tesino 84.18 316 P **P** **15 42 36.1 +0.4**
CTI lAmb lAmb 15 42 37.6
comp=Z,40nm,1.1s
WTTA Wattenberg 84.23 317 *e*P **P** **15 42 36.2 +0.1**
comp=Z,30nm,1.4s,SNR=9.0
WATA Walderalm 84.28 317 *e*P **P** **15 42 36.0 -0.3**
comp=Z,18nm,1.2s,SNR=5.7
SQTA Sankt Quirin 84.52 317 *e*P **P** **15 42 37.6 +0.2**
comp=Z,12nm,1.0s,SNR=5.2
GRF Grafenberg Arr 84.60 319 *e*P **P** **15 42 38.6 +1.0**
comp=Z,27nm,0.7s,baz=92,slow=4.5
MOTA Moosalm 84.60 317 *e*P **P** **15 42 37.7 -0.1**
comp=Z,26nm,1.3s,SNR=7.7
LOF Lofoten 84.66 338 *e*P **P** **15 42 38.3 +0.8**
RETA Reutte 84.83 317 *e*P **P** **15 42 39.3 +0.3**
comp=Z,30nm,1.5s,SNR=6.3
FETA Feichten 84.84 317 *e*P **P** **15 42 39.7 +0.5**
comp=Z,16nm,1.2s,SNR=5.6
NC602 NORSAR Array S 84.94 331 *e*P **P** **15 42 39.6 +0.6**
NSS Namsos 84.98 334 *e*P **P** **15 42 39.0 -0.2**
NB2 NORSAR Subarra 85.11 331 P **P** **15 42 39.7 -0.3**
comp=Z,72nm,1.7s,baz=90,slow=5.3
NB2 NORSAR Subarra 85.11 331 P **P** **15 42 39.7 -0.3**
baz=90,slow=5.3
NOA NORSAR Array B 85.11 331 P **P** **15 42 39.9 -0.1**
comp=Z,11nm,1.2s,baz=90,slow=5.8,SNR=7.1
NOA PP **PP** **15 45 57.2 -0.3**
comp=Z,2.5nm,1.1s,baz=89,slow=8.5,SNR=2.8
NOA LR LR 16 24 22.5
comp=Z,122nm,20.3s,baz=255,slow=38
SPA0 Spitsbergen Ar 85.19 348 *e*P **P** **15 42 40.5 +0.5**
DAVOX Davos/Dischmat 85.42 317 P **P** **15 42 42.5 +0.5**
comp=Z,11nm,0.5s,baz=100,slow=4.0,SNR=16
DAVA Damuels 85.43 317 *e*P **P** **15 42 42.9 +0.8**
comp=Z,23nm,1.1s,SNR=5.8
TUE Stuetta 85.78 316 P **P** **15 42 43.1 -0.8**
TUE lAmb lAmb 15 43 09.4
comp=Z,15nm,1.0s
KEST Kesra 85.79 305 P **P** **15 42 45.3 +1.3**
comp=Z,15nm,0.9s,baz=270,slow=2.9,SNR=14
KEST LR LR 16 28 14.8
comp=Z,28nm,18.6s,baz=329,slow=41
KEST Kesra 85.79 305 P **P** **15 42 42.6 -1.3**
KEST lAmb lAmb 15 42 46.7
comp=Z,22nm,0.9s
DOMB Dombas 86.18 332 *e*P **P** **15 42 46.0 +0.7**
BFO Black Forest 86.48 318 P **P** **15 42 46.5 -0.6**
BFO pmax pmax
comp=Z,8.0nm,0.9s
BFO Black Forest 86.48 318 P **P** **15 42 46.5 -0.6**
SKAR Skarslia 86.52 330 *e*P **P** **15 42 47.6 +0.6**
MOL Molde 86.89 332 *e*P **P** **15 42 50.0 +1.3**
SENIN Lac Senin/Sane 87.20 316 P **P** **15 42 50.1 -0.8**
SENIN lAmb lAmb 15 43 14.9
comp=Z,9.4nm,0.8s
BLS5 Blasjo 87.46 329 *e*P **P** **15 42 52.6 +1.0**
VNDA Vanda 87.58 169 LR LR 16 19 44.5
comp=Z,256nm,18.1s,baz=302,slow=34
BTNL Ternell 87.87 320 PcP **PcP** **15 42 54.6 -0.9**
BMRD Maredsous 88.76 320 PcP **PcP** **15 42 58.9 -0.5**
DOU Dourbes 88.88 320 PcP **PcP** **15 42 59.2 -0.7**
SNF Seneffe 89.05 320 PcP **PcP** **15 43 00.3 -0.4**
A21K Barrow 92.84 18 P **P** **15 43 15.7 -0.7**
EKA Eskdalemuir Ar 93.01 326 P **P** **15 43 18.1 +0.5**
comp=Z,0.6nm,0.4s,baz=97,slow=12,SNR=2.0
TOA0 Toroi Ar. Sit 93.70 283 P **P** **15 43 20.5 -1.1**
TORD Toroi Ar. Bea 93.70 283 P **P** **15 43 22.4 +0.9**
comp=Z,4.3nm,1.1s,baz=79,slow=5.1,SNR=13
TORD LR LR 16 25 38.0
comp=Z,131nm,18.1s,baz=85,slow=36
TORD Torodi Ar. Bea 93.70 283 P **P** **15 43 20.5 -1.1**
SNAA Sanae 95.47 198 LR LR 16 19 48.2
comp=Z,70nm,19.8s,baz=26,slow=31
TTA Tatalina 95.56 26 P **P** **15 43 28.7 -0.5**
TTA pmax pmax
comp=Z,14nm,1.3s
TTA Tatalina 95.56 26 P **P** **15 43 28.6 -0.5**
TTA lAmb lAmb 15 43 31.2
comp=Z,14nm,1.3s
ESDC Sonseca Array 96.00 310 P **P** **15 43 32.7 +1.0**
comp=Z,2.6nm,1.1s,baz=78,slow=4.8,SNR=6.7
ESDC LR LR 16 30 09.9
comp=Z,72nm,20.0s,baz=0.0,slow=38
ESDC Sonseca Array 96.00 310 lAmb lAmb 15 43 33.3
comp=Z,12nm,1.4s
TOLK Toolik Lake Re 96.05 20 P **P** **15 43 32.3 +1.0**
baz=294
TOLK Toolik Lake Re 96.05 20 P **P** **15 43 31.8 +0.5**
TOLK lAmb lAmb 15 43 33.1
comp=Z,8.4nm,1.1s
MLY Manley 97.04 23 P Pdif 15 43 36.3 +0.4
baz=292
BPAW Bear Paw Mtn. 97.30 24 P Pdif 15 43 37.4 +0.3
MCK McKinley 98.27 24 P Pdif 15 43 41.6 +0.1
baz=294
ILAR Eielson Array 98.65 23 P **P** **15 43 41.8 -1.2**
comp=Z,0.7nm,1.1s,baz=296,slow=4.7,SNR=4.9
ILAR PP **PP** **15 47 43.5 -0.3**
comp=Z,1.2nm,0.9s,baz=299,slow=7.2,SNR=6.2
ILAR PKKPbc **PKKPbc** **16 00 11.9 -2.4**
comp=Z,0.7nm,0.9s,baz=106,slow=2.2,SNR=5.3
ILAR LR LR 16 31 25.0
comp=Z,166nm,18.4s,baz=316,slow=37
INK Inuvik 101.27 17 P **Pdif** **15 43 51.5 -3.0**
comp=Z,0.7nm,0.5s,baz=315,slow=4.3,SNR=1.9
C36M Paulatuk 103.02 14 P **Pdif** **15 44 03.3 +1.0**
baz=319
YKA Yellowknife Ar 110.83 15 PP **PP** **15 49 13.4 -0.6**
comp=Z,1.9nm,1.0s,baz=328,slow=8.0,SNR=3.3
TBI Tubuai 113.47 114 *e*LR LR 16 22 50.3
comp=Z,171nm,24.8s
PPT2 Papeete2 113.97 108 *e*LR LR 16 23 01.5
comp=Z,103nm,22.0s
HAWA Hanford 121.78 28 **PKPdf** **15 48 58.0 -0.2**
I05D Terrebonne, OR 122.34 31 P **PKiKP** **15 49 00.1 +0.4**
baz=314
J05D Fort Rock, OR 123.13 32 P **PKiKP** **15 49 02.8 +1.5**
baz=314
M02C Callahan 123.52 35 P **PKiKP** **15 49 03.4 +1.3**
baz=311
M04C Macdoel 123.82 34 P **PKiKP** **15 49 03.6 +0.8**
baz=312

MSO	Missoula	123.93	25	P	PKiKP	15 49 02.9	+0.1	
	baz=323							
MSO	Missoula	123.93	25	PKPdf	PKPdf	15 49 02.2	-0.3	
PLID	Pearl Lake	124.40	27	PKPdf	PKPdf	15 49 03.5	-0.2	
J08A	Circle Bar Ran	124.50	30	PKPdf	PKiKP	15 49 04.6	+0.5	
EGMT	Eagleton	124.56	21	P	PKiKP	15 49 04.4	+0.4	
	baz=328							
MOD	Modoc Plateau	124.58	33	PKPdf	PKiKP	15 49 04.7	+0.4	
O03E	Paynes Creek	124.84	35	P	PKiKP	15 49 04.7	-0.1	
	baz=312							
ORV	Oroville	125.50	35	PKIKP	PKiKP	15 49 05.9	-0.1	
ORV	Oroville	125.50	35	PKPdf	PKiKP	15 49 05.9	-0.1	
DLMT	Dillon	125.67	25		PKiKP	15 49 06.6	+0.3	
MFID	Camas Ranch	125.75	28	PKPdf	PKiKP	15 49 06.9	+0.4	
BOZ	Bozeman (W)	125.87	24	PKIKP	PKiKP	15 49 06.9	+0.2	
BOZ	Bozeman (W)	125.87	24	P	PKiKP	15 49 06.9	+0.2	
	baz=325							
BOZ	Bozeman (W)	125.87	24		PKiKP	15 49 06.9	+0.2	
BEKR	Beckworth	125.94	34	PKPdf	PKiKP	15 49 07.2	+0.1	
ULM	Lac du Bonnet	126.16	10	PKP	PKPdf	15 49 06.5	-0.1	
	comp=Z,11nm,1.0s,baz=353,slow=3.6,SNR=7.2							
ULM	Lac du Bonnet	126.16	10	PKIKP	PKPdf	15 49 06.0	-0.5	
ULM	Lac du Bonnet	126.16	10		PKPdf	15 49 06.0	-0.5	
BCYI	Bear Canyon	126.16	26		PKiKP	15 49 07.5	0.0	
AFDM	Forest Hills D	126.21	36		PKiKP	15 49 07.6	+0.1	
HLID	Hailey	126.30	27	P	PKiKP	15 49 08.3	+0.6	
	baz=321							
HLID	Hailey	126.30	27	PKPdf	PKPdf	15 49 07.0	-0.2	
PAHR	Pah Rah Range	126.60	34		PKPdf	15 49 07.2	-0.8	
CHGQ	Chibougamau	126.87	352	P	PKiKP	15 49 08.4	0.0	
	baz=12							
WAKR	Walker	127.40	35		PKPdf	15 49 08.9	-0.6	
KVN	Kaiserville	127.77	34	PKIKP	PKPdf	15 49 10.4	+0.1	
KVN	Kaiserville	127.77	34	PKPdf	PKPdf	15 49 10.4	+0.1	
LSQQ	Lebel-sur-Quev	128.01	354	P	PKiKP	15 49 11.2	+0.5	
	baz=8.7							
REDW	Red Top Meadow	128.02	25		PKPdf	15 49 10.8	+0.2	
ELK	Elko	128.05	30	PKIKP	PKPdf	15 49 10.0	-0.8	
ELK	Elko	128.05	30	PKPdf	PKPdf	15 49 10.0	-0.8	
NVAR	Mina Array Bea	128.09	34	PKP	PKiKP	15 49 12.6	+1.0	
	comp=Z,3.7nm,0.9s,baz=268,slow=1.1,SNR=17							
NV11	Mina Array Sit	128.18	34		PKiKP	15 49 11.4	-0.2	
BW06	Boulder Array	129.05	24	P	PKiKP	15 49 13.2	-0.1	
	baz=326							
BW06	Boulder Array	129.05	24		PKPdf	15 49 11.9	-0.7	
PD31	Pinedale Array	129.05	24		PKPdf	15 49 11.3	-1.3	
PDAR	Pinedale Array	129.05	24	PKP	PKPdf	15 49 12.2	-0.4	
	comp=Z,1.5nm,0.8s,baz=23,slow=1.9,SNR=14							
PDAR	Pinedale Array	129.05	24	PKPdf	PKPdf	15 49 11.8	-0.8	
E61A	Lac Etchemin	129.58	348	P	PKiKP	15 49 14.6	+0.6	
	baz=17							
CWC	Cottonwood Cre	129.59	36	P	PKiKP	15 49 15.8	+1.4	
	baz=313							
R11A	Troy Canyon, C	129.65	32	P	PKiKP	15 49 15.0	+0.4	
	baz=317							
R11A	Troy Canyon, C	129.65	32	PKPdf	PKPdf	15 49 13.8	-0.1	
DUG	Dugway, Tooele	129.67	29	P	PKiKP	15 49 15.6	+1.1	
	baz=321							
SPR3	Spring Creek 3	129.82	31	PKPdf	PKPdf	15 49 14.1	-0.3	
D55A	Sainte-Anne-du	129.85	353	P	PKiKP	15 49 14.5	0.0	
	baz=11							
MPMC	Manual Prospec	130.20	36	P	PKiKP	15 49 17.2	+1.4	
	baz=314							
E56A	St. Veronique	130.26	352	P	PKiKP	15 49 15.4	+0.1	
	baz=12							
TPNV	Topopah Spring	130.29	34	P	PKiKP	15 49 16.6	+0.7	
	baz=316							
LRMC	Laurel Mtn Rad	130.48	37	P	PKiKP	15 49 17.5	+1.3	
	baz=313							
F36A	Milaca	130.80	9		PKPdf	15 49 15.5	0.0	
GSC	Goldstone, Bar	131.12	36	PKIKP	PKPdf	15 49 15.7	-0.9	
GSC	Goldstone, Bar	131.12	36	PKPdf	PKPdf	15 49 15.7	-0.9	
GMRC	Granite Mounta	132.16	36	P	PKiKP	15 49 20.5	+0.9	
	baz=315							
ECSD	EROS Data Cent	132.28	12	P	PKiKP	15 49 19.4	-0.1	
	baz=343							
ECSD	EROS Data Cent	132.28	12	PKPdf	PKPdf	15 49 17.9	-0.5	
PFO	Pinyon Flats O	132.49	38	P	PKiKP	15 49 22.5	+2.2	
	baz=313							
PV14	Lion Creek, Pa	132.89	27		PKPdf	15 49 18.8	-1.3	
PV13	Radium Mtn., P	133.16	27		PKPdf	15 49 20.2	-0.4	
MVCO	Mesa Verde	134.08	28	P	PKiKP	15 49 24.1	+0.4	
	baz=325							
ANMO	Albuquerque	136.88	28	P	PKiKP	15 49 28.7	-0.7	
	baz=326							
MNTX	Cornudas Mount	140.06	29	PKPdf	PKPdf	15 49 31.2	-2.0	
U40A	Yellville	140.16	11		PKPdf	15 49 31.5	-1.8	
PLCA	Paso Flores	140.37	196	PKP	PKiKP	15 49 35.1	-1.0	
	comp=Z,2.0nm,0.8s,baz=260,slow=3.8,SNR=3.3							
ABTX	Abilene, Hawle	141.73	22	P	PKPdf	15 49 31.5	-4.7	
	baz=334							
BDFB	Brasilia	142.47	248	PKP	PKPdf	15 49 36.7	-1.3	
	comp=Z,1.5nm,0.3s,baz=114,slow=4.8,SNR=4.2							
TX31	Lajitas Ar. Si	142.84	29		PKPdf	15 49 36.1	-2.3	
TX32	Lajitas Array	142.84	29		PKPdf	15 49 36.1	-2.3	
TXAR	Lajitas Array	142.84	29	PKhKP	PKPdf	15 49 35.3	-3.1	
	comp=Z,3.6nm,0.8s,baz=182,slow=0.8,SNR=10							
SLBS	Sierra La Lagu	143.42	43		PKPbc	15 49 37.8	+1.1	
JCT	Junction City	143.58	24	PKIKP	PKPbc	15 49 37.8	+0.9	
JCT	Junction City	143.58	24	P	PKPbc	15 49 37.4	+0.5	
	baz=333							
JCT	Junction City	143.58	24	PKPdf	PKPbc	15 49 37.8	+0.9	
143A	Socs Landing,	143.98	11		PKPbc	15 49 38.6	+0.7	
BI02	San Fabin de	144.35	197	PKPdf	PKPdf	15 49 39.9	-0.9	
VBMS	Vicksburg	144.61	10	P	PKPdf	15 49 41.3	+0.1	
	baz=348							
VBMS	Vicksburg	144.61	10		PKPdf	15 49 40.6	-0.6	
152A	Waverly Hall	144.72	1		PKPbc	15 49 40.4	+0.1	
342A	Flagon Creek P	145.08	13		PKPbc	15 49 40.8	-0.7	
CPUP	Villa Florida	145.43	225	PKPbc	PKPab	15 49 43.2	+0.3	
	comp=Z,16nm,1.1s,baz=102,slow=3.9,SNR=15							
CPUP	Villa Florida	145.43	225	PKP2	PKPdf	15 49 42.8	0.0	
CPUP	Villa Florida	145.43	225		PKPdf	15 49 42.8	0.0	
CPUP	Villa Florida	145.43	225	*eP*	PKPab	15 49 43.7	+0.7	
346A	Big Creek Wild	145.59	9		PKPab	15 49 43.3	-0.1	
833A	Chaparral WMA,	145.64	25	P	PKPab	15 49 45.1	+1.4	
	baz=332							
833A	Chaparral WMA,	145.64	25		PKPab	15 49 43.9	+0.2	
352A	Blakely	145.90	2		PKPdf	15 49 43.7	+0.2	
BO02	Sierra Bellavi	145.92	199		PKPdf	15 49 43.7	+0.1	
ARAG	Araguaiana, MT	145.94	246	*eP*	PKPab	15 49 46.2	+1.0	
TIGA	Tifton	145.96	360	P	PKPab	15 49 45.4	+0.7	
	baz=0.5							
SNDB	Serra Nova Dou	146.49	253	*eP*	PKPab	15 49 47.4	+0.1	
AQDB	Aquidauana	147.41	235	*eP*	PKPbc	15 49 47.8	-1.0	
VA03	San Esteban	147.68	201	PKPbc	PKPdf	15 49 47.8	+1.2	
PP1B	Ponte de Pedra	147.99	241	*eP*	PKPbc	15 49 49.1	-1.3	
MCPB	Macapa, AP	148.13	274	*eP*	PKPbc	15 49 49.6	-1.4	
ZAIG	Zacatecas	148.71	35	PKPbc	PKPdf	15 49 50.6	+1.8	
CO03	El Pedregal	149.45	203		PKPbc	15 49 53.4	-0.6	
MALB	Monte Alegre	150.42	271	*eP*	PKPdf	15 49 53.3	+2.0	
CLDB	Colider	151.03	253	*eP*	PKPdf	15 49 54.7	+2.4	
LCO	Las Campanas	151.08	204	PKIKP	PKPbc	15 49 58.3	+0.1	
LCO	Las Campanas	151.08	204		PKPbc	15 49 58.3	+0.1	
NPGB	Novo Progresso	151.31	260	*eP*	PKPdf	15 49 54.5	+1.8	
ITTB	Itaituba	151.89	266	*eP*	PKPdf	15 49 56.6	+3.0	
PTLB	Pontes e Lacer	152.59	241	*eP*	PKPdf	15 49 56.6	+2.1	
LPAZ	La Paz	159.53	228	PKP	PKPdf	15 50 05.1	+0.7	
	comp=Z,3.3nm,1.0s,baz=50,slow=1.9,SNR=9.6							
LPAZ				PKPab	PKPab	15 50 43.1	+0.5	
	comp=Z,2.6nm,0.7s,baz=91,slow=8.0,SNR=4.5							
LPAZ	La Paz	159.53	228	PKIKP	PKPdf	15 50 02.5	-2.0	
LPAZ	La Paz	159.53	228	PKPdf	PKPdf	15 50 02.5	-2.0	
LPAZ	La Paz	159.53	228	*eP*	PKPdf	15 50 05.3	+0.9	
OTAV	Otavalo	173.82	299	PKIKP	PKPdf	15 50 12.9	-2.3	
OTAV	Otavalo	173.82	299		PKPdf	15 50 12.9	-2.3	

*ISK **24** 15:31:20.3,38.10N×25.68E,h10km, ML2.6/11*
*ATH **24** 15:31:21.3,38.12N×25.82E, h26km±3km, ML2.8/2, Error ellipse: s-maj=3.6km s-min=1.2km az=74.0*
*THE **24** 15:31:21.7,38.10N×25.83E, h8km±1km, ML2.3/5, Error ellipse: s-maj=1.4km s-min=0.5km az=256.0*
*DDA **24** 15:31:22.4,38.13N×25.87E, h7km±6km, ML2.2*
ISC 24 15:31:22.2±1.0, 38.10N±0.02×25.79E±0.03, h16km±9km, n31, σ0978/48, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSRA	Psara	0.48	338	P	Pg	15 31 31.2	-0.6
PSRA				S	Sg	15 31 37.9	-0.3
PSRA				AML	AML	15 31 39.2	
	comp=E,4238μm,0.3s						
PSRA				AML	AML	15 31 39.2	
	comp=N,2774μm,0.2s						
URLA	Izmir	0.68	67	PG	Pb	15 31 35.4	-0.4
URLA	Izmir	0.68	67	*i* P	Pb	15 31 35.0	-0.8
URLA				*i* S	Sb	15 31 44.7	-0.3
URLA				IAML		15 31 47.0	
	comp=N,205nm,0.4s						
URLA				IAML		15 31 47.0	
	comp=E,140nm,0.4s						
TNSA	Tinos	0.75	222	P	Pg	15 31 37.3	+0.5
TNSA				S	Sg	15 31 47.4	+0.8
DGB	zmir	0.86	93	*i* P	Pb	15 31 37.2	-1.5
DGB				*i* S	Sb	15 31 48.8	-1.2
DGB				IAML		15 31 50.0	
	comp=N,60nm,0.6s						
SMG	Samos	0.91	115	P	Pb	15 31 39.2	-0.4
SMG				S	Sb	15 31 51.1	-0.5
SMG				AML	AML	15 31 52.0	
	comp=N,1070μm,0.5s						
SMG				AML	AML	15 31 52.0	
	comp=E,602μm,0.6s						
SMG	Samos	0.91	115	P	Pb	15 31 38.6	-1.0
SMG				S	Sb	15 31 51.2	-0.4
	comp=E,420nm,0.6s						
APE	Apeiranthos	1.05	192	P	Pb	15 31 41.7	-0.3
APE				S	Sg	15 31 56.8	+0.7
APE	Apeiranthos	1.05	192	PG	Pb	15 31 40.4	-1.6
APE				SG	Sb	15 31 55.6	+0.1
APE	Apeiranthos	1.05	192	P	Pb	15 31 41.6	-0.4
APE				S	Sg	15 31 56.5	+0.4
	comp=E,130nm,0.2s						
KARY	Karystos	1.07	267	P	Pb	15 31 42.2	-0.2
KARY	Karystos	1.07	267	P	Pb	15 31 42.2	-0.2
KARY				S	Sg	15 31 57.5	+0.6
	comp=E,68nm,0.2s						
SIGR	SIGRI	1.11	2	P	Pn	15 31 42.1	-1.1
SIGR	SIGRI	1.11	2	PN	Pn	15 31 42.3	-0.9
SIGR	SIGRI	1.11	2	P	Pn	15 31 42.0	-1.1
SIGR				S	Sg	15 31 58.5	+0.2
	comp=E,122nm,0.3s						
GCAM	G?zelcaml?	1.21	109	PN	Pb	15 31 45.1	+0.5
PRK	Paraskevi	1.21	18	P	Pn	15 31 44.3	-0.1
PRK	Paraskevi	1.21	18	P	Pn	15 31 43.4	-1.0
PRK				S	Sn	15 32 00.9	+0.4
	comp=E,220nm,0.3s						
AMGA	Amorgos Island	1.27	176	P	Pn	15 31 44.5	-0.8
AMGA				S	Sn	15 32 01.9	0.0
DKL	Dikili	1.31	42	PN	Pb	15 31 46.1	-0.3
ZEDA	zmir-Bergama	1.33	49	*i* P	Pn	15 31 46.2	+0.1
ZEDA				*i* S	Sn	15 32 03.3	-0.2
ZEDA				IAML		15 32 07.0	
	comp=E,40nm,0.4s						
ZEDA				IAML		15 32 09.0	
	comp=N,72nm,1.0s						
DION	Dionisos Attik	1.47	270	P	Pn	15 31 48.0	-0.1
AYDB	Zeytinkoy-Aydi	1.66	95	PN	Pb	15 31 51.7	-0.8
BAYC	CANAKKALE_Bayr	1.74	19	*i* P	Pn	15 31 52.3	+0.5
BAYC				*i* S	Sb	15 32 17.1	+1.5
BAYC				IAML		15 32 21.0	
	comp=N,25nm,0.3s						
BAYC				IAML		15 32 22.0	
	comp=E,24nm,0.4s						
BOZC	Bozcaada	1.75	7	PN	Pn	15 31 51.7	-0.3
EZN	Ezine	1.78	13	PN	Pn	15 31 51.9	-0.3
STEP	BALIKESIR_Sava	1.98	49	*i* P	Pb	15 31 57.2	-0.6
STEP				*i* S	Sb	15 32 23.1	+0.9
STEP				IAML		15 32 28.0	
	comp=N,37nm,0.4s						
STEP				IAML		15 32 29.0	
	comp=E,54nm,0.4s						
GADA	Gvkgeada	2.09	2	PN	Pn	15 31 56.4	-0.2
MANT	Manisa	2.21	79	*i* P	Pb	15 32 02.9	+1.0
MANT				*i* S	Sb	15 32 31.0	+1.9
MANT				IAML		15 32 33.0	
	comp=N,13nm,0.3s						
MANT				IAML		15 32 34.0	
	comp=E,16nm,0.4s						
BALB	Balikesir	2.24	46	PN	Pn	15 31 59.2	+0.5
KULA	Kula-Manisa	2.29	79	PN	Pn	15 32 00.4	+0.9

*JMA **24** 15:39:25.0±0.3, 37.76N×133.98E, h436km±4km, M2.9*
*IDC **24** 15:39:26.4±1.0, 37.82N×134.11E, h425km±14km, mb2.9/6, mb1 3.0/11, mb1mx2.8/59, mbtmp3.7/11, Error ellipse: s-maj=21.4km s-min=14.7km az=68.0*
ISC 24 15:39:26.6±0.8, 37.76N±0.09×134.16E±0.08, h436km, n22, σ1§12/25, mb3.2/6, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOI	OKI	1.64	207	P	P	15 40 22.1	-2.0
JKY	Yasaka	2.26	160	P	P	15 40 26.2	-1.3
JWT	Wachi	2.67	158	P	P	15 40 29.6	-0.6
JWT				S	S	15 41 19.7	-2.0
JTT	Ttatey	2.79	114	P	P	15 40 30.8	-0.2
JSD	Sado	3.26	84	P	P	15 40 34.4	-0.1
JNG	Nsakai	3.43	112	P	P	15 40 36.2	+0.1
MJAR	Matsushiro Arr	3.46	109	P	P	15 40 36.3	+0.1
	0.3nm,0.3s,baz=268,slow=7.7,SNR=14						
JOD2	Odawara 2	4.69	121	P	P	15 40 47.3	0.0
JOD2				*eS*	S	15 41 52.1	-0.9
JFT	Otama	4.91	91	P	P	15 40 50.2	+0.8
KSRS	Korea Array	4.96	268	P	P	15 40 48.5	-1.4
	0.5nm,0.3s,baz=84,slow=9.8,SNR=13						
JMM	Marumori	5.25	87	P	P	15 40 52.9	+0.2
JRG	Rokugo	5.33	70	P	P	15 40 53.9	+0.4
JRG				*eS*	S	15 42 02.7	-1.7
JNU	Nakatsue	5.35	211	P	P	15 40 52.5	-1.4
	0.4nm,0.3s,baz=27,slow=4.5,SNR=0.9						
JFK	Kawauchi	5.35	92	P	P	15 40 53.3	-0.5
USRK	Ussuriysk Ar.	6.64	346	P	P	15 41 06.8	-0.3
	baz=168,slow=10.0,SNR=4.9						
ASAJ	Asahikawa	9.00	43	P	P	15 41 33.5	+0.9
	3.3nm,0.3s,baz=242,slow=12,SNR=28						
CMAR	Chiang Mai Arr	36.24	248	P	P	15 45 53.1	+1.8
	0.7nm,0.4s,baz=43,slow=7.4,SNR=4.2						
MKAR	Makanchi Array	38.80	300	P	P	15 46 11.6	-0.5
	0.3nm,0.5s,baz=83,slow=12,SNR=7.1						
NRIK	Noril'sk	40.24	336	P	P	15 46 22.1	-1.2
	1.3nm,0.3s,baz=98,slow=5.5,SNR=4.3						
WRA	Warramunga Arr	57.40	180	P	P	15 48 32.9	+0.8
	0.2nm,0.4s,baz=360,slow=7.6,SNR=9.5						
GEYT	Alibeck	58.37	296	P	P	15 48 39.6	+0.9
	1.3nm,0.5s,baz=65,slow=11,SNR=1.6						
ASAR	Alice Springs	61.10	180	P	P	15 48 58.2	+1.2
	0.1nm,0.4s,baz=0.5,slow=6.6,SNR=7.2						

RSNC 24 15:42:03.4±1.1, 6.82N×73.15W, h143km±4km, ML3.3, Mw3.6, 7C-4D, Fault plane solution: NP1:ϕs118.00000°, δ64.00000°, λ-24.00000°., Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.23	188	*i* P	Pn	15 42 22.9	-0.2
BARC				*eS*	Sn	15 42 37.1	-1.1
BARC				*i*		15 42 38.7	
	comp=Z,771nm,0.3s						
BRRC	Barranca, Sant	0.63	297	*i* P	Pn	15 42 24.7	+0.1
BRRC				*eS*	Sn	15 42 40.4	-0.4
BRRC				*i*		15 42 45.4	
	comp=Z,436nm,0.1s						
PAMC	Pamplona, Colo	0.68	41	*eP*	Pn	15 42 25.7	+0.2
PAMC				*eS*	Sn	15 42 42.3	-0.1
PAMC				*i*		15 42 44.8	
	comp=Z,637nm,0.5s						
RUSC	La Rusia	0.93	176	*eP*	Pn	15 42 26.9	-0.6
RUSC				*eS*	Sn	15 42 45.2	-0.5
RUSC				*i*		15 42 47.4	
	comp=Z,264nm,0.2s						
PTBC	PUERTO BERRIO,	1.33	258	*eP*	Pn	15 42 29.5	-1.2
PTBC				*eS*	Sn	15 42 50.5	-0.9
PTBC				*i*		15 42 53.6	
	comp=Z,243nm,0.1s						
TAMC	Tame, Arauca	1.40	106	*i* P	Pn	15 42 31.3	-0.1
TAMC				*eS*	Sn	15 42 52.5	-0.3
TAMC				*i*		15 42 53.7	
	comp=Z,65nm,0.2s						
OCAC	Ocana	1.42	353	*eP*	Pn	15 42 31.0	-0.7
OCAC				*eS*	Sn	15 42 52.9	-0.4
OCAC				*i*		15 42 55.9	
	comp=Z,390nm,0.2s						
SPBC	San Pablo de B	1.48	218	*eP*	Pn	15 42 31.9	-0.5
SPBC				*eS*	Sn	15 42 54.5	+0.1
SPBC				*i*		15 42 59.9	
	comp=Z,357nm,0.2s						
ZARC	Zaragoza, Cauc	1.82	291	*eP*	Pn	15 42 35.9	-0.1
ZARC				*eS*	Sn	15 43 01.1	+0.1
ZARC				*i*		15 43 07.5	
	comp=Z,202nm,0.4s						
NORC	Norcasia	2.12	234	*eP*	Pn	15 42 39.1	-0.5
NORC				*eS*	Sn	15 43 06.5	-0.8
NORC				*i*		15 43 13.2	
	comp=Z,125nm,0.2s						
CHIC	Chingaza	2.26	195	*eP*	Pn	15 42 41.0	-0.6
CHIC				*eS*	Sn	15 43 10.4	-0.5
CHIC				*i*		15 43 13.9	
	comp=Z,78nm,0.4s						
ROSC	El Rosal	2.29	211	*eP*	Pn	15 42 42.5	+0.5
ROSC				*eS*	Sn	15 43 12.9	+1.3
ROSC				*i*		15 43 20.7	
	comp=Z,138nm,0.2s						
HELC	Santa Helena	2.45	255	*eP*	Pn	15 42 43.9	0.0
HELC				*eS*	Sn	15 43 14.8	-0.1
HELC				*i*		15 43 23.1	
	comp=Z,110nm,0.3s						
UREC	San Jos de Ur	2.54	291	*eP*	Pn	15 42 43.7	-0.9
UREC				*eS*	Sn	15 43 13.7	-2.8
UREC				*i*		15 43 18.2	
	comp=Z,157nm,0.1s						
GUY2C	Guyana, Caldas	2.72	234	*eP*	Pn	15 42 47.3	-0.1
GUY2C				*eS*	Sn	15 43 24.4	+3.2
GUY2C				*i*		15 43 28.8	
	comp=Z,88nm,0.2s						
VILC	Villavicencio,	2.75	191	*eP*	Pn	15 42 46.9	-0.6
VILC				*eS*	Sn	15 43 20.7	-0.7
VILC				*i*		15 43 25.1	
	comp=Z,127nm,0.6s						
PTGC	Puerto Gaitan,	2.80	159	*eP*	Pn	15 42 46.1	-1.8
PTGC				*eS*	Sn	15 43 19.2	-3.1
PTGC				*i*		15 43 22.2	
	comp=Z,87nm,0.4s						
RREF	El Recreo	2.90	229	*eP*	Pn	15 42 50.0	+0.1
RREF				*eS*	Sn	15 43 27.8	+2.1
RREF				*i*		15 43 34.7	
	comp=Z,87nm,0.2s						
CBOC	Ciudad Bolivar	3.00	252	*eP*	Pn	15 42 50.8	+0.1
CBOC				*eS*	Sn	15 43 26.9	-0.2
CBOC				*i*		15 43 36.2	
	comp=Z,33nm,0.7s						
DBBC	Dabeiba	3.04	274	*eP*	Pn	15 42 50.7	-0.4
DBBC				*eS*	Sn	15 43 26.9	-1.1
TOLC	Tolima	3.10	224	*eP*	Pn	15 42 52.5	+0.4
TOLC				*eS*	Sn	15 43 30.0	+0.3
TOLC				*i*		15 43 37.5	
	comp=Z,205nm,0.4s						
MOTC	Monteria, Cord	3.16	308	*eP*	Pn	15 42 50.4	-2.1
MOTC				*eS*	Sn	15 43 29.2	-1.4
MOTC				*i*		15 43 31.4	
	comp=Z,39nm,0.1s						
ARGC	Ariguani, Magd	3.20	340	*eP*	Pn	15 42 53.2	+0.1
ARGC				*eS*	Sn	15 43 30.8	-0.8
ARGC				*i*		15 43 38.0	
	comp=Z,46nm,0.4s						
ANIL	Santa Ana	3.23	224	*eP*	Pn	15 42 54.5	+0.8
ANIL				*eS*	Sn	15 43 35.1	+2.6
ANIL				*i*		15 43 37.8	
	comp=Z,23nm,0.3s						
SDV	Santo Domingo	3.23	50	*eP*	Pn	15 42 52.4	-1.2
SDV				*eS*	Sn	15 43 29.3	-3.1
SDV				*i*		15 43 34.9	
	comp=Z,35nm,0.6s						
ORTC	Ortega, Tolima	3.57	216	*eP*	Pn	15 42 57.4	-0.5
ORTC				*eS*	Sn	15 43 41.2	+1.1
ORTC				*i*		15 43 45.4	
	comp=Z,55nm,0.4s						
PLMC	San Jos del P	3.65	239	*eP*	Pn	15 42 58.7	-0.3
PLMC				*eS*	Sn	15 43 41.2	-0.9
PLMC				*i*		15 43 45.2	
	comp=Z,24nm,0.2s						
SJCC	San Jacinto, C	3.66	327	*eP*	Pn	15 42 56.9	-2.1
SJCC				*eS*	Sn	15 43 38.0	-4.1
SJCC				*i*		15 43 42.5	
	comp=Z,78nm,0.5s						
LCBC	Los crdobas,	3.77	303	*eP*	Pn	15 42 59.4	-1.2
LCBC				*eS*	Sn	15 43 44.0	-0.8
LCBC				*i*		15 43 47.9	
	comp=Z,60nm,0.3s						
YOTC	Yotoco, Valle	4.25	229	*eP*	Pn	15 43 04.9	-2.0
YOTC				*eS*	Sn	15 43 59.4	+3.1
SMRC	Santa Marta, M	4.44	346	*eP*	Pn	15 43 07.2	-2.1
SMRC				*eS*	Sn	15 43 55.6	-5.0
SMRC				*i*		15 44 01.9	
	comp=Z,18nm,0.2s						
CAPC	Capurgana	4.54	294	*eP*	Pn	15 43 08.5	-2.1
CAPC				*eS*	Sn	15 43 56.9	-6.0
CAPC				*i*		15 44 01.2	
	comp=Z,37nm,0.4s						
MACC	Macarena, Meta	4.70	189	*eP*	Pn	15 43 10.3	-2.5
MACC				*eS*	Sn	15 44 01.1	-5.7
MACC				*i*		15 44 09.2	
	comp=Z,15nm,0.4s						
MARP	Paez Belalcaza	4.84	215	*eP*

PSDA	**Pessada-Kefalo**	**0.29**	**149**	P	**Pg**	15 42 26.8	**0.0**
PSDA				S	**Sg**	**15 42 30.6**	**-0.3**
EVGI	**Lefkada island**	**0.33**	**39**	P	**Pb**	15 42 29.3	+0.8
EVGI				S	**Sb**	**15 42 35.4**	**+1.5**
EVGI	**Lefkada island**	**0.33**	**39**	P	**Pb**	15 42 29.4	+0.8
EVGI				S	**Sb**	**15 42 35.2**	**+1.4**
	comp=E,4μm,0.1s						
NYDR	**Nydri-Lefkada**	**0.42**	**34**	P	**Pb**	**15 42 30.8**	**+0.6**
MGNA	**Meganis**	**0.43**	**47**	P	**Pb**	15 42 30.7	+0.4
MGNA				S	**Sb**	**15 42 38.3**	**+1.7**
LKD2	**Lefkada island**	**0.47**	**26**	P	**Pb**	15 42 31.8	+0.7
LKD2				S	**Sn**	**15 42 39.9**	**-1.7**
LKD2				AML	AML	15 42 46.2	
	comp=N,4463μm,0.3s						
LKD2				AML	AML	15 42 47.9	
	comp=E,4039μm,0.2s						
LKD2	**Lefkada island**	**0.47**	**26**	P	**Pb**	**15 42 31.8**	**+0.7**
LKD2				S	**Sn**	**15 42 40.2**	**-1.4**
	comp=E,2μm,0.4s						
TSLK	**Tsoukalades, L**	**0.50**	**24**	P	**Pb**	**15 42 32.3**	**+0.7**
TSLK				AML	AML	15 42 45.9	
	comp=E,5085μm,0.3s						
TSLK				AML	AML	15 42 50.5	
	comp=N,6180μm,0.4s						
TSLK	**Tsoukalades, L**	**0.50**	**24**	P	**Pb**	**15 42 32.5**	**+0.9**
TSLK				S	**Sn**	**15 42 41.5**	**-0.8**
	comp=N,3μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.53**	**156**	P	**Pg**	**15 42 30.9**	**-0.4**
VLMS				S	**Sg**	**15 42 37.9**	**-0.5**
VLMS				AML	AML	15 42 39.2	
	comp=N,16758μm,0.4s						
VLMS				AML	AML	15 42 40.1	
	comp=E,8501μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.53**	**156**	P	**Pg**	**15 42 30.8**	**-0.4**
VLMS				S	**Sg**	**15 42 37.8**	**-0.5**
	comp=E,7μm,0.4s						
AST1	**Astakos**	**0.57**	**72**	P	**Pb**	**15 42 33.0**	**+0.3**
PDO	**Prodromos**	**0.66**	**69**	P	**Pb**	**15 42 34.8**	**+0.5**
PDO				AML	AML	15 42 49.2	
	comp=E,12282μm,0.6s						
PDO				AML	AML	15 42 51.0	
	comp=N,12854μm,0.4s						
PDO	**Prodromos**	**0.66**	**69**	P	**Pb**	**15 42 34.8**	**+0.5**
PDO				S	**Sn**	**15 42 45.2**	**-1.0**
	comp=N,9μm,0.5s						
RLS	**Riolos of Patr**	**0.90**	**110**	P	**Pg**	**15 42 37.8**	**-0.5**
RLS				AML	AML	15 42 58.0	
	comp=N,3836μm,0.7s						
RLS				AML	AML	15 42 59.7	
	comp=E,2811μm,0.6s						
RLS	**Riolos of Patr**	**0.90**	**110**	P	**Pg**	**15 42 37.9**	**-0.3**
DRO	**Drossia**	**1.12**	**111**	P	**Pb**	**15 42 41.9**	**-0.1**
DRO				AML	AML	15 43 05.6	
	comp=E,5260μm,0.5s						
DRO				AML	AML	15 43 09.4	
	comp=N,6746μm,0.5s						
DRO	**Drossia**	**1.12**	**111**	P	**Pb**	**15 42 42.1**	**+0.1**
IGT	**Igoumenitsa**	**1.17**	**358**	P	**Pg**	**15 42 44.2**	**+0.8**
IGT				AML	AML	15 43 05.3	
	comp=E,1763μm,0.4s						
IGT				AML	AML	15 43 13.4	
	comp=N,1462μm,0.5s						
IGT	**Igoumenitsa**	**1.17**	**358**	P	**Pg**	**15 42 43.5**	**+0.2**
EFP	**Efpalio**	**1.19**	**86**	P	**Pg**	**15 42 44.3**	**+0.6**
EFP				AML	AML	15 43 07.6	
	comp=N,4857μm,0.4s						
EFP				AML	AML	15 43 07.8	
	comp=E,7248μm,0.5s						
ANX	**Ano Chora**	**1.22**	**79**	P	**Pg**	**15 42 44.6**	**+0.2**
ANX				AML	AML	15 43 08.2	
	comp=E,5151μm,0.4s						
ANX				AML	AML	15 43 09.2	
	comp=N,7088μm,0.5s						
SERG	**Sergoula**	**1.31**	**87**	P	**Pn**	**15 42 45.1**	**+0.3**
SERG				AML	AML	15 43 11.5	
	comp=N,3641μm,0.4s						
SERG				AML	AML	15 43 12.5	
	comp=E,2884μm,0.6s						
SERG	**Sergoula**	**1.31**	**87**	P	**Pn**	**15 42 45.1**	**+0.3**
TRIZ	**Trizonia**	**1.32**	**89**	P	**Pn**	**15 42 45.2**	**+0.2**
AMT	**Artemida-Makis**	**1.33**	**128**	P	**Pg**	**15 42 46.9**	**+0.5**
AMT				AML	AML	15 43 16.9	
	comp=E,2862μm,0.6s						
AMT				AML	AML	15 43 17.5	
	comp=N,2779μm,0.6s						
KALE	**Kalithea**	**1.37**	**88**	P	**Pn**	**15 42 46.2**	**+0.4**
KALE				AML	AML	15 43 14.4	
	comp=E,1646μm,0.9s						
KALE				AML	AML	15 43 15.6	
	comp=N,2420μm,0.4s						
KALE	**Kalithea**	**1.37**	**88**	P	**Pn**	**15 42 46.0**	**+0.2**
KLV	**Kalavryta, Ach**	**1.42**	**102**	P	**Pn**	**15 42 47.0**	**+0.6**
KLV	**Kalavryta, Ach**	**1.42**	**102**	P	**Pn**	**15 42 46.8**	**+0.4**
KEK	**Kerkira**	**1.43**	**341**	P	**Pg**	**15 42 48.5**	**+0.3**
KEK				AML	AML	15 43 18.0	
	comp=E,1136μm,0.3s						
KEK				AML	AML	15 43 18.6	
	comp=N,926μm,0.5s						
KEK	**Kerkira**	**1.43**	**341**	P	**Pb**	**15 42 47.7**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.51**	**64**	P	**Pg**	**15 42 51.4**	**+1.6**
MAKR				AML	AML	15 43 18.2	
	comp=N,1954μm,1.2s						
MAKR				AML	AML	15 43 21.1	
	comp=E,1727μm,0.5s						
GUR	**Goura**	**1.59**	**105**	P	**Pn**	**15 42 49.9**	**+1.0**
GUR				AML	AML	15 43 20.9	
	comp=E,2829μm,0.4s						
GUR				AML	AML	15 43 25.4	
	comp=N,3855μm,0.6s						
AGG	**Agios Georgios**	**1.65**	**66**	P	**Pg**	**15 42 53.1**	**+0.6**
AGG				AML	AML	15 43 22.7	
	comp=N,1860μm,0.7s						
AGG				AML	AML	15 43 22.9	
	comp=E,2469μm,0.4s						
AGG	**Agios Georgios**	**1.65**	**66**		**Pb**	**15 42 52.1**	**+1.0**
DSF	**Desfina**	**1.68**	**88**	P	**Pg**	**15 42 53.1**	**0.0**
DSF				AML	AML	15 43 22.8	
	comp=N,1557μm,0.5s						
DSF				AML	AML	15 43 23.9	
	comp=E,779μm,0.7s						
ITM	**Ithomi**	**1.69**	**134**	P	**Pb**	**15 42 52.8**	**+0.9**
ITM				AML	AML	15 43 31.7	
	comp=E,746μm,0.9s						
ITM				AML	AML	15 43 34.4	
	comp=N,865μm,0.7s						
ITM	**Ithomi**	**1.69**	**134**		**Pg**	**15 42 53.7**	**+0.4**
TRIP	**Tripoli**	**1.70**	**119**	P	**Pb**	**15 42 53.2**	**+1.2**
TRIP				AML	AML	15 43 24.4	
	comp=N,1406μm,0.6s						
TRIP				AML	AML	15 43 29.4	
	comp=E,1506μm,0.6s						
THL	**Klokotos Trika**	**1.74**	**46**	P	**Pg**	**15 42 54.0**	**-0.2**
THL				AML	AML	15 43 28.9	
	comp=N,1350μm,0.8s						
THL				AML	AML	15 43 30.2	
	comp=E,1971μm,0.7s						
KPRO	**Kipourio**	**1.76**	**25**	P	**Pg**	**15 42 55.1**	**+0.5**
KPRO				AML	AML	15 43 28.8	
	comp=E,1394μm,0.6s						
KPRO				AML	AML	15 43 38.4	
	comp=N,974μm,0.8s						
PYL	**PYLOS**	**1.81**	**143**	P	**Pn**	**15 42 52.6**	**+0.8**
PYL				AML	AML	15 43 37.5	
	comp=E,449μm,0.5s						
PYL				AML	AML	15 43 38.7	
	comp=N,528μm,1.1s						
THAL	**Thalero**	**1.82**	**100**	P	**Pb**	**15 42 54.2**	**+0.3**
AXAR	**Agios Charalam**	**1.82**	**77**	P	**Pg**	**15 42 55.5**	**-0.3**
VLX	**Vlachokerasia**	**1.86**	**122**	P	**Pb**	**15 42 55.7**	**+1.0**
PENT	**Pentalofos**	**1.92**	**17**	P	**Pg**	**15 42 57.6**	**-0.1**
LTK	**Loutraki**	**2.06**	**99**	P	**Pb**	**15 42 57.4**	**-0.6**
LTK				AML	AML	15 43 31.5	
	comp=E,900μm,0.8s						
LTK				AML	AML	15 43 37.9	
	comp=N,696μm,0.5s						
LKR	**Lokris**	**2.06**	**81**	P	**Pb**	**15 42 58.1**	**0.0**
LOUT	**Loutraki**	**2.07**	**100**	P	**Pb**	**15 42 57.8**	**-0.5**
ATAL	**Atalanti**	**2.09**	**80**	P	**Pb**	**15 42 58.8**	**+0.2**
NEST	**Nestorio**	**2.11**	**14**	P	**Pg**	**15 43 00.3**	**-1.0**
KZN	**Kozani**	**2.21**	**28**	P	**Pb**	**15 43 01.5**	**+0.7**
VIL2	**Platees**	**2.27**	**93**	P	**Pb**	**15 43 00.9**	**-0.8**
VIL2				AML	AML	15 43 32.6	
	comp=N,949μm,0.4s						
VIL2				AML	AML	15 43 48.2	
	comp=E,1551μm,0.8s						
SCTE	**Santa Cesarea**	**2.27**	**319**	P	**Pn**	**15 42 59.9**	**+1.8**
SCTE	**Santa Cesarea**	**2.27**	**319**		**Pn**	**15 42 59.9**	**+1.8**
EPID	**Epidavros**	**2.28**	**108**	P	**Pb**	**15 43 00.8**	**-1.0**
XOR	**Xorichti**	**2.40**	**65**	P	**Pb**	**15 43 03.3**	**-0.6**
EREA	**Eretria**	**2.78**	**88**	P	**Pn**	**15 43 07.6**	**+2.5**
DION	**Dionisos Attik**	**2.80**	**95**	P	**Pn**	**15 43 07.6**	**+2.2**
TIP	**Timpagrande**	**2.96**	**287**	P	**Pn**	**15 43 08.9**	**+1.4**
TIP	**Timpagrande**	**2.96**	**287**		**Pn**	**15 43 08.8**	**+1.2**
TIR	**Tirane**	**3.01**	**352**	Pn	**Pn**	**15 43 09.1**	**+0.9**
CEL	**Celeste**	**3.54**	**270**	Pn	**Pn**	**15 43 16.6**	**+1.0**
ULC	**Ulcinj**	**3.70**	**347**	⇓*i*Pn	**Pn**	**15 43 19.2**	**+1.4**
ULC				*e*Sn	**Sn**	**15 44 02.4**	**+1.1**
DRME	**Dracevica, Mon**	**3.93**	**347**	⇑*i*Pn	**Pn**	**15 43 22.3**	**+1.4**
DRME				*i* Sn	**Sn**	**15 44 07.6**	**+0.8**
BUM	**Brajici-Budva**	**4.10**	**344**	⇑*i*Pn	**Pn**	**15 43 24.2**	**+1.0**
BUM				*i* Sn	**Sn**	**15 44 11.5**	**+0.5**
PDG	**Podgorica**	**4.15**	**348**	Pn	**Pn**	**15 43 25.1**	**+1.2**
TTG	**Podgorica**	**4.15**	**348**	⇑*i*Pn	**Pn**	**15 43 25.1**	**+1.2**
TTG				*i* Sn	**Sn**	**15 44 12.5**	**+0.2**
CEME	**Cevo**	**4.33**	**345**	⇓*i*Pn	**Pn**	**15 43 27.6**	**+1.2**
CEME				*i* Sn	**Sn**	**15 44 17.0**	**+0.3**
HCY	**Herceg Novi**	**4.33**	**341**	⇓*i*Pn	**Pn**	**15 43 26.8**	**+0.4**
HCY				*i* Sn	**Sn**	**15 44 16.9**	**+0.2**
IVA	**Berane**	**4.52**	**355**	*e*Pn	**Pn**	**15 43 30.7**	**+1.7**
IVA				*i* Sn	**Sn**	**15 44 21.7**	**+0.2**
KOME	**Kolasin**	**4.53**	**352**	*e*Pn	**Pn**	**15 43 30.5**	**+1.3**
KOME				*i* Sn	**Sn**	**15 44 21.8**	**0.0**
NKY	**Niksic**	**4.57**	**347**	*e*Pn	**Pn**	**15 43 30.5**	**+0.7**
NKY				*i* Sn	**Sn**	**15 44 21.9**	**-0.9**
IDI	**Anoyia**	**4.74**	**129**	Pn	Pn	15 43 38.1	+6.1
	comp=E,0.5nm,0.3s,baz=324,slow=18,SNR=1.4						
IDI				Sn	**Sn**	**15 44 29.0**	**+2.1**
	comp=E,1.1nm,0.3s,baz=120,slow=22,SNR=5.7						
IDI	**Anoyia**	**4.74**	**129**		Pn	15 43 37.2	+5.2
BRY	**Bratogost**	**4.75**	**343**	*e*Pn	**Pn**	**15 43 33.0**	**+0.8**
BRY				*i* Sn	**Sn**	**15 44 26.1**	**-1.1**
SGRT	**San Giovanni R**	**4.92**	**315**	Pn	**Pn**	**15 43 35.9**	**+1.4**
STON	**Ston**	**4.95**	**336**	*e*Pn	**Pn**	**15 43 35.6**	**+0.8**
STON				Sn	**Sn**	**15 44 29.8**	**-2.1**
UPM	**Unac-Piva**	**4.96**	**347**	⇑*i*Pn	**Pn**	**15 43 36.6**	**+1.3**
UPM				*i* Sn	**Sn**	**15 44 32.2**	**-0.4**
PLE	**Pljevlja**	**5.02**	**352**	⇓*i*Pn	**Pn**	**15 43 37.2**	**+1.3**
PLE				*i* Sn	**Sn**	**15 44 33.9**	**0.0**
ALN	**Alexandroupoli**	**5.04**	**58**	Pn	**Pn**	**15 43 37.8**	**+1.7**
LSTV	**Lastovo**	**5.14**	**330**	*e*Pn	**Pn**	**15 43 38.0**	**+0.5**
LSTV				Sn	**Sn**	**15 44 33.8**	**-2.9**
PAOL	**Paolisi**	**5.22**	**302**		**Pn**	**15 43 41.1**	**+2.4**
MAKA	**Makarska**	**5.54**	**334**	*e*Pn	**Pn**	**15 43 43.9**	**+0.9**
MAKA				Sn	**Sn**	**15 44 44.4**	**-2.2**
RICI	**Ricice**	**5.69**	**335**	*e*Pn	**Pn**	**15 43 46.1**	**+1.1**
RICI				Sn	**Sn**	**15 44 47.9**	**-2.3**
DIVS	**Divibare**	**5.74**	**357**	Pn	**Pn**	**15 43 46.4**	**+0.6**
INTR	**Introdacqua**	**6.16**	**308**	Pn	**Pn**	**15 43 54.9**	**+3.3**
KIJV	**Kijevo**	**6.39**	**333**	*e*Pn	**Pn**	**15 43 56.1**	**+1.5**
KIJV				Sn	**Sn**	**15 45 04.8**	**-2.6**
ZIRJ	**Zirje**	**6.39**	**327**	*e*Pn	**Pn**	**15 43 55.6**	**+1.0**
ZIRJ				Sn	**Sn**	**15 45 04.1**	**-3.3**
MORI	**Morici**	**6.54**	**329**	*e*Pn	**Pn**	**15 43 57.9**	**+1.3**
MORI				Sn	**Sn**	**15 45 09.0**	**-2.0**
DUGI	**Dugi Otok**	**6.91**	**326**	*e*Pn	**Pn**	**15 44 03.5**	**+1.7**
DUGI				Sn	**Sn**	**15 45 17.1**	**-3.2**
NRCA	**Norcia**	**7.11**	**311**		**Pn**	**15 44 07.8**	**+3.2**
NVLJ	**Novalja**	**7.45**	**328**	*e*Pn	**Pn**	**15 44 10.6**	**+1.4**
NVLJ				Sn	**Sn**	**15 45 31.5**	**-2.0**
MOSL	**Moslavina**	**7.73**	**341**	*e*Pn	**Pn**	**15 44 13.6**	**+0.5**
MOSL				Sn	**Sn**	**15 45 36.8**	**-3.7**
OZLJ	**Ozalj**	**8.12**	**335**	*e*Pn	**Pn**	**15 44 19.6**	**+1.3**
OZLJ				Sn	**Sn**	**15 45 46.8**	**-3.1**
MLR	**Muntele Rosu**	**8.23**	**28**	Pn	**Pn**	**15 44 19.0**	**-1.1**
	comp=E,0.2nm,0.3s,baz=205,slow=14,SNR=1.7						
SOKA	**Soboth**	**9.20**	**336**	*e*Pn	**Pn**	**15 44 33.9**	**+0.7**
	comp=E,1.3nm,0.2s						
OBKA	**Obir**	**9.21**	**334**	*i* Pn	**Pn**	**15 44 34.7**	**+1.3**
	comp=E,2.0nm,0.3s						
OBKA				*e*Sn	**Sn**	**15 46 13.4**	**-3.6**
	comp=E,3.1nm,0.3s						
ZOU	**Zoufplan**	**9.85**	**329**	Pn	**Pn**	**15 44 43.0**	**+0.7**
GERES	**GERESS Array B**	**11.54**	**337**	Pn	**Pn**	**15 45 04.9**	**-0.4**
	comp=E,0.2nm,0.3s,baz=146,slow=16,SNR=2.1						
AKASG	**Malin Array Be**	**13.84**	**24**	Pn	**Pn**	**15 45 32.0**	**-4.6**
	comp=E,0.3nm,0.3s,baz=215,slow=14,SNR=1.4						
KOPT	**Kop Dagi**	**15.68**	**78**	Pn	**Pn**	**15 46 02.8**	**+1.1**
KOPT				IAmb	IAmb	15 46 05.4	
	comp=Z,15nm,1.3s						
KIV	**Kislovodsk**	**17.67**	**64**	Pn	**Pn**	**15 46 24.1**	**-2.6**
HFS	**Hagfors**	**22.20**	**351**	P	**P**	**15 47 17.6**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=171,slow=19,SNR=1.8						
NC602	**NORSAR Array S**	**23.08**	**349**	P	**P**	**15 47 27.9**	**+2.0**
FINES	**FINESS Array B**	**23.38**	**7**	P	**P**	**15 47 28.5**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=169,slow=11,SNR=9.3						
FINES	**FINESS Array B**	**23.38**	**7**	P	**P**	**15 47 28.8**	**-0.1**
FIA1	**FINESS Array S**	**23.38**	**7**	P	**P**	**15 47 29.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**30.11**	**218**	P	**P**	**15 48 33.1**	**+2.9**
	comp=Z,0.6nm,0.8s,baz=27,slow=7.4,SNR=1.8						
KKAR	**Karatay Array**	**37.81**	**66**	P	**P**	**15 49 35.2**	**-1.7**
SPITS	**Spitsbergen Ar**	**39.96**	**359**	P	**P**	**15 49 52.1**	**-2.3**
	comp=Z,5.8nm,0.9s,baz=169,slow=18,SNR=5.9						
MK31	**Makanchi Array**	**45.29**	**59**	P	**P**	**15 50 37.8**	**-0.4**
MK31				IAmb	IAmb	15 50 42.8	
	comp=Z,5.9nm,1.2s						
MKAR	**Makanchi Array**	**45.29**	**59**	P	**P**	**15 50 38.2**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=277,slow=7.0,SNR=16						
MKAR	**Makanchi Array**	**45.29**	**59**	P	**P**	**15 50 37.9**	**-0.2**
ZAA0	**Zalesovo Array**	**45.64**	**48**	P	**P**	**15 50 40.4**	**-0.4**
ZAA0				IAmb	IAmb	15 50 41.7	
	comp=Z,3.8nm,0.5s						
ZALV	**Zalesovo Beam**	**45.64**	**48**	P	**P**	**15 50 41.2**	**+0.4**
	comp=Z,4.0nm,0.5s,baz=272,slow=8.8,SNR=17						
ZALV	**Zalesovo Beam**	**45.64**	**48**	P	**P**	**15 50 40.5**	**-0.3**
RES	**Resolute Bay**	**59.56**	**344**	P	**P**	**15 52 25.7**	**+2.2**
CMAR	**Chiang Mai Arr**	**69.96**	**82**	P	**P**	**15 53 32.1**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=306,slow=7.7,SNR=4.4						
KLR	**Kul'dur**	**73.79**	**39**	P	**P**	**15 53 56.0**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=311,slow=5.9,SNR=5.0						

TAP ***24*** *15:54:15.2,22.˚14N×120.˚55E,h43km,ML3.7,D*
JMA ***24*** *15:54:15.9±0.1,22.˚09N×120.˚64E,h49km±2km,M3.3*
ISC 24 15:54:14.8±1.5**,22.˚07N**±0.˚05×**120.˚48E**±0.˚03**, h47**km±7km,**
n107,d0§**88**/199**,10C-4D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
HEN	**Hengchun**	**0.25**	**105**	⇑*i*P	**Pn**	**15 54 23.2**	**-0.1**
	baz=117						
HEN				*i* S	**Sn**	**15 54 29.5**	**+0.3**
	baz=117						
TWP	**Hsiaoliuchiu**	**0.29**	**339**	⇑*i*P	**Pn**	**15 54 24.1**	**+0.4**
	baz=322						
TWP				*i* S	**Sn**	**15 54 31.5**	**+1.5**
	baz=322						
WLCH	**Liuqiu**	**0.29**	**342**	⇑*i*P	**Pn**	**15 54 24.2**	**+0.5**
	baz=324						
WLCH				*i* S	**Sn**	**15 54 31.7**	**+1.7**
	baz=324						
SCZT	**Fangliau**	**0.33**	**24**	⇓*i*P	**Pn**	**15 54 23.0**	**-1.1**
	baz=11						
SCZT				*i* S	**Sn**	**15 54 28.2**	**-2.3**
	baz=11						
TWK1	**Hengchun**	**0.33**	**113**	⇑*i*P	**Pn**	**15 54 24.4**	**+0.3**
	baz=129						
TWK1				*i* S	**Sn**	**15 54 31.0**	**+0.5**
	baz=129						
SLIU	**Shizi**	**0.33**	**64**	⇑*i*P	**Pn**	**15 54 23.1**	**-1.0**
	baz=76						
SLIU				*i* S	**Sn**	**15 54 29.0**	**-1.6**
	baz=76						
TWKBT	**Hengchun**	**0.34**	**113**	⇑P	**Pn**	**15 54 24.3**	**+0.2**
	baz=129						
TWKBT				S	**Sn**	**15 54 30.9**	**+0.3**
	baz=129						
SSPT	**Xinbi**	**0.42**	**11**	⇓*i*P	**Pn**	**15 54 24.7**	**-0.3**
	baz=6.0						
SSPT				*i* S	**Sn**	**15 54 31.9**	**-0.3**
	baz=6.0						
TSEB	**Hengchuen, Pin**	**0.43**	**113**	⇑*i*P	**Pn**	**15 54 25.3**	**+0.3**
	baz=133						
TSEB				*i* S	**Sn**	**15 54 33.0**	**+0.7**
	baz=133						
EAST	**Anshuo**	**0.46**	**48**	⇑*i*P	**Pn**	**15 54 25.1**	**-0.5**
	baz=40						
EAST				*i* S	**Sn**	**15 54 32.1**	**-1.1**
	baz=40						
TAW	**Tawu**	**0.48**	**53**	⇑*i*P	**Pn**	**15 54 25.2**	**-0.5**
	baz=47						
TAW				*i* S	**Sn**	**15 54 32.2**	**-1.2**
	baz=47						
KAU	**Kaohsiung**	**0.52**	**342**	P	**Pn**	**15 54 27.0**	**+0.8**
	baz=333						
KAU				S	**Sn**	**15 54 36.3**	**+2.0**
	baz=333						
MASBT	**Mashibuluo**	**0.56**	**15**	⇓P	**Pn**	**15 54 26.1**	**-0.6**
	baz=19						
MASBT				S	**Sn**	**15 54 33.5**	**-1.7**
	baz=19						
TSMG	**Majia**	**0.65**	**14**	*i* P	**Pn**	**15 54 27.4**	**-0.4**
	baz=18						
TSMG				*i* S	**Sn**	**15 54 36.3**	**-0.9**
	baz=18						
SGLT	**Jiouru**	**0.65**	**1**	*i* P	**Pn**	**15 54 29.0**	**+1.1**
	baz=355						
SGLT				S	**Sn**	**15 54 36.9**	**-0.4**
	baz=355						
ECL	**Taimali**	**0.68**	**40**	⇑*i*P	**Pn**	**15 54 28.0**	**-0.3**
	baz=34						
ECL				*i* S	**Sn**	**15 54 36.1**	**-1.9**
	baz=34						
SSD	**Sandimen**	**0.69**	**12**	⇓*i*P	**Pn**	**15 54 28.0**	**-0.3**
	baz=16						
SSD				*i* S	**Sn**	**15 54 36.9**	**-1.2**
	baz=16						
SNJT	**Kaohsiung City**	**0.69**	**349**	*e*P	**Pn**	**15 54 29.1**	**+0.7**
	baz=331						
SNJT				*e*S	**Sn**	**15 54 39.1**	**+1.0**
	baz=331						
TWM1	**Shoushan**	**0.75**	**356**	*i* P	**Pn**	**15 54 30.4**	**+1.2**
	baz=351						
TWM1				S	**Sn**	**15 54 39.4**	**-0.2**
	baz=351						
SCST	**Cishan**	**0.81**	**1**	P	**Pn**	**15 54 32.2**	**+2.2**
	baz=345						
SCST				S	**Sn**	**15 54 42.7**	**+1.7**
	baz=345						
TTN	**Taitung**	**0.92**	**42**	*e*P	**Pn**	**15 54 31.6**	**+0.1**
	baz=31						
TTN				*e*S	**Sn**	**15 54 43.8**	**+0.2**
	baz=31						
TWG	**Pinlang**	**0.93**	**36**	*i* P	**Pn**	**15 54 31.6**	**+0.1**
	baz=35						
TWG				*i* S	**Sn**	**15 54 43.2**	**-0.6**
	baz=35						
TWGBT	**Beinan**	**0.93**	**37**	P	**Pn**	**15 54 31.7**	**+0.1**
	baz=35						
TWGBT				S	**Sn**	**15 54 43.3**	**-0.6**
	baz=35						
SLGT	**Liugui**	**0.93**	**10**	*i* P	**Pn**	**15 54 31.8**	**+0.2**
	baz=6.0						
SLGT				S	**Sn**	**15 54 44.1**	**+0.2**
	baz=6.0						
TAI1	**Yung-k'ang**	**0.99**	**347**	S	**Sn**	**15 54 46.8**	**+1.5**
	baz=343						
LAY	**Lan-yu**	**1.00**	**92**	*e*P	**Pn**	**15 54 32.2**	**-0.2**
	baz=85						
LAY				*e*S	**Sn**	**15 54 45.1**	**-0.3**
	baz=85						
CHN3	**Shinhua**	**1.01**	**354**	S	**Sn**	**15 54 47.2**	**+1.6**
	baz=350						
SGST	**Jiashian**	**1.01**	**5**	P	**Pn**	**15 54 32.1**	**-0.6**
	baz=2.0						
SGST				*i* S	**Sn**	**15 54 45.5**	**-0.4**
	baz=2.0						
LONT	**Longtian**	**1.03**	**36**	P	**Pn**	**15 54 33.9**	**+1.0**
	baz=43						
LONT				*i* S	**Sn**	**15 54 46.7**	**+0.5**
	baz=43						
LDUT	**Ludao**	**1.10**	**57**	P	**Pn**	**15 54 33.8**	**-0.1**
	baz=57						
LDUT				S	**Sn**	**15 54 47.4**	**-0.5**
	baz=57						
CHN1	**Nanshi**	**1.11**	**2**	*i* P	**Pn**	**15 54 34.3**	**+0.2**
	baz=347						
CHN1				*i* S	**Sn**	**15 54 48.1**	**-0.2**
	baz=347						
SCLT	**Jiali**	**1.13**	**347**	P	**Pn**	**15 54 34.3**	**0.0**
	baz=343						
SCLT				*i* S	**Sn**	**15 54 49.1**	**+0.5**
	baz=343						
SNST	**Tainan City**	**1.14**	**1**	P	**Pn**	**15 54 36.0**	**+1.5**
	baz=358						
SNST				S	**Sn**	**15 54 49.1**	**+0.1**
	baz=358						
WTP	**Ta-pu**	**1.18**	**6**	*i* P	**Pn**	**15 54 34.8**	**-0.1**
	baz=4.0						
WTP				*i* S	**Sn**	**15 54 50.0**	**+0.1**
	baz=4.0						
EDH	**Donghe**	**1.18**	**40**	P	**Pn**	**15 54 35.5**	**+0.5**
	baz=39						
EDH				S	**Sn**	**15 54 50.0**	**+0.1**
	baz=39						
TWK	**Hsinying**	**1.19**	**0**	*i* P	**Pn**	**15 54 35.0**	**-0.2**
	baz=358						
TWK				*i* S	**Sn**	**15 54 50.0**	**-0.3**
	baz=358						
ELDTW	**Lidau**	**1.22**	**24**	*i* P	**Pn**	**15 54 36.2**	**+0.5**
	baz=12						
ELDTW				S	**Sn**	**15 54 50.7**	**-0.4**
	baz=12						
TPUB	**Ta-pu**	**1.23**	**6**	P	**Pn**	**15 54 35.5**	**-0.2**
	baz=4.0						
TPUB				S	**Sn**	**15 54 50.

baz=350
WTK **Tuku** 1.61 357 P Pn 15 54 40.3 -0.6
baz=355
WTK S Sn 15 54 59.9 -0.6
baz=355
EHY **Hungye** 1.63 28 P Pn 15 54 41.7 +0.6
baz=15
EHY *i* S Sn 15 55 01.5 +0.6
baz=15
WHYT **Xinyi Township** 1.65 12 P Pn 15 54 41.9 +0.4
baz=360
WHYT S Sn 15 55 01.7 +0.1
baz=360
HGSD **Ruisui** 1.66 31 *e*P Pn 15 54 42.4 +0.9
baz=18
HGSD *e*S Sn 15 55 01.3 -0.4
baz=18
PHUB **P'eng-hu** 1.66 330 P Pn 15 54 41.0 -0.5
baz=326
PNG **Penghu** 1.72 330 *i* P Pn 15 54 41.7 -0.6
baz=339
PNG S Sn 15 55 03.1 +0.1
baz=339
WJS **Zhushan** 1.76 7 P Pn 15 54 42.8 0.0
baz=355
WJS S Sn 15 55 03.8 -0.3
baz=355
SSLB **Suanglung** 1.76 14 P Pn 15 54 42.8 -0.2
baz=13
SSLB S Sn 15 55 04.0 -0.3
baz=13
WTCT **Ta-ch'eng** 1.79 354 S Sn 15 55 04.5 -0.5
baz=353
WNT **Mingjian** 1.81 6 *i* P Pn 15 54 43.5 0.0
baz=5.0
WNT *i* S Sn 15 55 04.7 -0.6
baz=5.0
RLNB **Erlin** 1.81 357 S Sn 15 55 05.7 +0.2
baz=355
EGFH **Guangfu** 1.82 29 *e*P Pn 15 54 43.5 -0.1
baz=16
EGFH *e*S Sn 15 55 06.8 +1.3
baz=16
SMLT **Sun Moon Lake** 1.84 12 *i* P Pn 15 54 44.5 +0.3
baz=359
SMLT S Sn 15 55 07.3 +0.9
baz=359
ESL **Shilin** 1.95 27 P Pn 15 54 46.3 +0.8
baz=14
ESL S Sn 15 55 08.4 -0.3
baz=14
OWD **Renai** 1.98 19 *e*P Pn 15 54 46.1 0.0
baz=7.0
OWD *e*S Sn 15 55 09.1 -0.7
baz=7.0
DPDB **Guoxing** 2.00 12 P Pn 15 54 46.8 +0.5
DPDB S Sn 15 55 10.0 0.0
WCHH **Zhanghua** 2.00 2 *e*P Pn 15 54 45.4 -0.8
baz=1.0
WCHH S Sn 15 55 10.0 0.0
baz=1.0
TCU **Taichung** 2.08 5 S Sn 15 55 12.3 +0.5
baz=4.0
CHGB **Renai** 2.08 18 *e*P Pn 15 54 48.6 +1.1
baz=5.0
CHGB *e*S Sn 15 55 13.0 +0.7
baz=5.0
WHF **Hehuan Shan** 2.19 19 P Pn 15 54 50.4 +1.2
baz=19
WHF S Sn 15 55 13.2 -2.0
baz=19
WHP **Taichung City** 2.24 11 P Pn 15 54 50.2 +0.7
baz=10.0
WHP S Sn 15 55 16.9 +0.9
baz=10.0
TDCB **Techi** 2.26 16 *e*P Pn 15 54 51.8 +1.9
baz=5.0
TDCB *e*S Sn 15 55 16.7 +0.1
baz=5.0
TWT **Tachien** 2.27 16 *e*P Pn 15 54 52.1 +2.1
baz=5.0
TWT S Sn 15 55 17.4 +0.6
baz=5.0
WDJ **Dajia District** 2.27 4 *e*P Pn 15 54 49.8 -0.2
baz=3.0
WDJ *e*S Sn 15 55 15.6 -1.2
baz=3.0
FUSS **Fushou** 2.28 18 *e*P Pn 15 54 50.7 +0.4
baz=7.0
FUSS *e*S Sn 15 55 16.0 -1.2
baz=7.0
TWQ1 **Liyutan** 2.28 7 P Pn 15 54 50.2 +0.1
baz=355
TWQ1 S Sn 15 55 17.4 +0.4
baz=355
ETLH **Xiulin Townshi** 2.32 23 *e*P Pn 15 54 51.8 +1.2
baz=12
ETLH *e*S Sn 15 55 17.9 -0.1
baz=12
NACB **Ninganchiao** 2.33 26 P Pn 15 54 51.1 +0.4
baz=36
NACB *e*S Sn 15 55 16.5 -1.7
baz=36
NNSB **Datong** 2.49 19 P Pn 15 54 54.4 +1.3
baz=19
NNSB S Sn 15 55 22.2 0.0
baz=19
NNSH **Datong** 2.49 19 *e*P Pn 15 54 54.1 +1.1
baz=18
NNSH *e*S Sn 15 55 21.1 -1.2
baz=18
NNS **Nan Shan** 2.50 19 P Pn 15 54 54.4 +1.2
baz=19
NNS S Sn 15 55 22.7 +0.2
baz=19
NSTT **Nanjuang** 2.59 11 *i* P Pn 15 54 54.6 +0.3
baz=358
NSTT S Sn 15 55 23.1 -1.5
baz=358
LIOB **Emei** 2.61 11 P Pn 15 54 55.3 +0.7
baz=358
LIOB S Sn 15 55 24.8 -0.3
baz=358
ENA **Nanau** 2.62 26 P Pn 15 54 56.0 +1.3
baz=26
ENA *e*S Sn 15 55 24.3 -0.9
baz=26
NDT **Datong Townshi** 2.69 20 *e*P Pn 15 54 57.6 +1.9
baz=7.0
YHNB **Yeheng** 2.71 18 *e*P Pn 15 54 57.8 +1.7
baz=17
YHNB *e*S Sn 15 55 28.2 +0.5
baz=17
NSK **Sanguang** 2.72 17 *e*P Pn 15 54 56.7 +0.6
baz=15
ENTT **Nioudou** 2.75 21 *e*P Pn 15 54 58.0 +1.6
baz=10.0
ENTT *e*S Sn 15 55 29.1 +0.7
baz=10.0
NWLT **Wulai** 2.85 19 *e*P Pn 15 54 58.0 +0.1
baz=5.0
TWE **Neicheng** 2.85 22 *e*P Pn 15 54 58.3 +0.4
baz=35
VWUC **VWUC** 3.06 342 *e*P Pn 15 55 00.1 -0.6
baz=342
VWUC *e*S Sn 15 55 34.4 -1.6
baz=342
KNMB **Chin-men Tao** 3.06 322 *e*P Pn 15 55 00.6 -0.2
baz=321
KNMB *e*S Sn 15 55 35.1 -1.0
baz=321
TIPB **Shuangxi** 3.14 23 *e*P Pn 15 55 03.3 +1.5
baz=32
YM10 **YM10** 3.23 18 *e*P Pn 15 55 03.3 +0.3
baz=4.0
YM05 **YM05** 3.24 18 *e*P Pn 15 55 03.3 +0.1
baz=4.0
JYNG **Yonaguni jima** 3.28 43 P Pn 15 55 05.7 +2.0
JYNG *e*S Sn 15 55 41.7 +0.2
YOJ **Yonaguni jima** 3.33 44 P Pn 15 55 06.1 +1.7
YOJ S Sn 15 55 42.8 +0.1
HATJ **Hateruma jima** 3.65 57 P Pn 15 55 09.6 +0.8
HATJ *e*S Sn 15 55 49.4 -1.1
IRIF **Iriomote-Funau** 3.75 52 P Pn 15 55 11.3 +1.2
IRIF *e*S Sn 15 55 53.0 0.0
JKRS **Kuro-shima** 3.90 56 P Pn 15 55 13.4 +1.2
JKRS *e*S Sn 15 55 55.5 -1.3
JIJ **Ishigaki jima** 4.07 55 P Pn 15 55 15.2 +0.6
JIJ *e*S Sn 15 55 59.2 -1.8
JISG **Ishigakijimahi** 4.32 54 P Pn 15 55 18.7 +0.7
JISG *e*S Sn 15 56 06.0 -1.2

*IDC **24** 16:08:45.6±0.7,56°.23S×27°.22W,h0km,mb4.3/7, mb1 4.4/8,mb1mx4.2/22,mbtmp4.3/8,ML4.2/1, Error ellipse: s-maj=27.7km s-min=18.0km az=71.0*
*NEIC **24** 16:09:00.0±1.6,56°.4S×0°.1×27°.3W×0°.2,h121km±8km, mb4.5/25,Error ellipse: s-maj=20.1km s-min=13.3km az=206.0*

ISC 24 16:08:59.0±0.6,**56°.37S**±0°.09×**27°.3W**±0°.1,**h112km**,**n44,** σ0**.81**/42,**mb4.5**/16,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.66**	**288**	Pn	**Pn**	**16 10 22.1**	**+1.5**
VNA3	**Neumayer Olymp**	**16.70**	**160**	P	**Pn**	**16 12 45.8**	**-0.1**
VNA2	**Neumayer--Watz**	**16.91**	**157**	P	**P**	**16 12 48.7**	**+0.1**
	baz=313,slow=12						
SNAA	**Sanae**	**18.47**	**156**	P	**P**	**16 13 05.6**	**-0.1**
SNAA	**Sanae**	**18.47**	**156**	P	**P**	**16 13 05.6**	**-0.1**
	0.7nm,0.3s,baz=305,slow=10,SNR=62						
SNAA	**Sanae**	**18.47**	**156**	P	**P**	**16 13 05.3**	**-0.4**
PMSA	**Palmer Station**	**19.65**	**230**	P	**P**	**16 13 16.5**	**-2.1**
PMSA				IAmb	IAmb	16 13 24.9	
	comp=Z,17nm,0.7s						
BELA	**Belgrano 2**	**21.75**	**184**	P	**P**	**16 13 40.4**	**-0.6**
QSPA	**South Pole Qui**	**33.88**	**180**	P	**P**	**16 15 31.3**	**+0.7**
	comp=Z,5.4nm,0.5s,baz=212,slow=2.3,SNR=86						
QSPA				PcP	**PcP**	**16 18 06.4**	**0.0**
	comp=Z,1.3nm,0.5s,baz=210,slow=1.6,SNR=6.6						
QSPA	**South Pole Qui**	**33.88**	**180**	P	**P**	**16 15 31.2**	**+0.6**
QSPA				IAmb	IAmb	16 15 32.7	
	comp=Z,5.4nm,0.6s						
CPUP	**Villa Florida**	**36.99**	**312**	P	**P**	**16 15 56.1**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=193,slow=13,SNR=2.8						
MT02	**Curacav**	**37.84**	**289**	P	**P**	**16 16 03.4**	**-1.2**
CO02	**Combarbal**	**39.38**	**291**	P	**P**	**16 16 16.8**	**-0.8**
CO01	**Juntas del Tor**	**39.90**	**293**	P	**P**	**16 16 22.4**	**+0.3**
CO01				IAmb	IAmb	16 16 40.7	
	comp=Z,7.1nm,1.1s						
MAW	**Mawson**	**39.92**	**143**	P	**P**	**16 16 21.7**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=243,slow=6.8,SNR=1.7						
LCO	**Las Campanas**	**40.99**	**293**	P	**P**	**16 16 30.9**	**-0.2**
LCO				IAmb	IAmb	16 16 52.9	
	comp=Z,16nm,1.4s						
AC01	**Pan de Azucar**	**43.28**	**296**	P	**P**	**16 16 48.7**	**-0.6**
GO02	**Mina Guanaco**	**43.60**	**298**	P	**P**	**16 16 52.2**	**-0.1**
GO02				IAmb	IAmb	16 16 56.1	
	comp=Z,8.9nm,1.1s						
PB15	**IPOC Station P**	**45.18**	**299**	P	**P**	**16 17 03.7**	**-1.1**
PB15				IAmb	IAmb	16 17 08.4	
	comp=Z,13nm,1.0s						
LVC	**Limon Verde**	**45.42**	**300**	P	**P**	**16 17 08.9**	**+2.1**
LVC				IAmb	IAmb	16 17 09.6	
	comp=Z,5.9nm,0.7s						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**16 17 13.3**	**+1.1**
	comp=Z,3.4nm,0.6s,baz=188,slow=6.2,SNR=33						
VNDA	**Vanda**	**46.25**	**183**	P	**P**	**16 17 13.1**	**+0.9**
PB07	**IPOC Station P**	**46.64**	**300**	P	**P**	**16 17 16.5**	**+0.3**
PB01	**IPOC Station P**	**47.03**	**301**	P	**P**	**16 17 19.5**	**+0.4**
PB01				IAmb	IAmb	16 17 20.3	
	comp=Z,5.7nm,0.7s						
PB08	**IPOC Station P**	**47.65**	**302**	P	**P**	**16 17 25.1**	**+0.9**
PB08				IAmb	IAmb	16 17 25.8	
	comp=Z,4.7nm,0.7s						
GO01	**Chusmiza**	**48.08**	**302**	P	**P**	**16 17 28.3**	**+0.7**
GO01				IAmb	IAmb	16 17 29.0	
	comp=Z,6.1nm,0.8s						
PSGCX	**Pisagua**	**48.58**	**301**	P	**P**	**16 17 30.8**	**-0.2**
MNMC	**Minye Minye**	**48.73**	**302**	P	**P**	**16 17 32.5**	**0.0**
LBTB	**Lobatse**	**49.15**	**73**	P	**P**	**16 17 35.4**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=207,slow=7.3,SNR=4.0						
LBTB	**Lobatse**	**49.15**	**73**	P	**P**	**16 17 34.8**	**-0.6**
PB16	**IPOC Station P**	**49.38**	**303**	P	**P**	**16 17 38.0**	**+0.3**
PB16				IAmb	IAmb	16 17 50.1	
	comp=Z,9.4nm,1.5s						
H10N1	**ASCENSION HYDR**	**49.44**	**17**	T	T	17 11 20.0	
	baz=188,slow=76,SNR=2.2						
H10N3	**ASCENSION HYDR**	**49.44**	**17**	T	T	17 11 48.0	
	baz=188,slow=76,SNR=2.7						
H10N2	**ASCENSION HYDR**	**49.46**	**17**	T	T	17 11 48.3	
	baz=188,slow=76,SNR=2.1						
LPAZ	**La Paz**	**50.52**	**306**	P	**P**	**16 17 47.4**	**+1.0**
	comp=Z,5.1nm,0.5s,baz=120,slow=5.6,SNR=27						
LPAZ	**La Paz**	**50.52**	**306**	P	**P**	**16 17 47.2**	**+0.7**
LPAZ				IAmb	IAmb	16 17 47.9	
	comp=Z,5.3nm,0.6s						
TOA0	**Torodi Ar. Sit**	**73.36**	**30**	P	**P**	**16 20 18.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**73.36**	**30**	P	**P**	**16 20 18.7**	**+0.3**
	comp=Z,1.8nm,0.4s,baz=202,slow=6.2,SNR=18						
NVAR	**Mina Array Bea**	**121.48**	**293**	PKP	**PKiKP**	**16 27 39.5**	**+0.7**
	comp=Z,3nm,0.6s,baz=158,slow=2.6,SNR=2.3						
ARCES	**ARCESS Array B**	**131.26**	**22**	PKP	**PKPdf**	**16 27 56.5**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=242,slow=1.9,SNR=1.6						
YKA	**Yellowknife Ar**	**136.38**	**318**	PKP	**PKPdf**	**16 28 05.4**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=121,slow=2.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**142.55**	**64**	PKP	**PKiKP**	**16 28 19.4**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=212,slow=5.1,SNR=2.5						
ILAR	**Eielson Array**	**150.29**	**311**	PKPbc	**PKPbc**	**16 28 35.2**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=133,slow=2.0,SNR=30						
SONM	**Songino Array**	**150.79**	**87**	PKPbc	**PKPbc**	**16 28 37.3**	**0.0**
	comp=Z,0.5nm,0.5s,baz=220,slow=5.0,SNR=3.5						

*IDC **24** 16:16:36.8±0.7,0°.50S×129°.67E,h0km,mb4.1/9, mb1 4.3/11,mb1mx4.1/30,mbtmp4.1/11,ML4.0/2,MS3.3/17, Ms1 3.3/17,ms1mx3.2/39,Error ellipse: s-maj=16.4km s-min=10.7km az=49.0*
*DJA **24** 16:16:39.2±0.2,0°.S±2°×13°.0E±°,h10km,M4.6/15, mb4.8/13,mB5.1/7,MLv4.5/15,Mw(mB)4.5/7*
*NEIC **24** 16:16:41.4±2.0,0°.52S±0°.07×129°.62E±0°.06,h36km±8km, mb4.4/24,Error ellipse: s-maj=12.7km s-min=5.0km az=217.0*

ISC 24 16:16:41.8±0.5,**0°.43S**±0°.05×**129°.72E**±0°.06,**h35km**,**n82,** σ1**95**/81,**mb4.3**/18,**MS3.3**/11,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**1.60**	**106**	Pg	**Pn**	**16 17 07.2**	**-0.4**
	203nm,0.3s,baz=309,slow=12,SNR=430						
SIJI				Lg	Lg	16 17 28.2	
	125nm,0.3s,baz=327,slow=17,SNR=7.3						
TNTI	**Ternate**	**2.64**	**297**	P	**Pn**	**16 17 20.2**	**-1.7**
TNTI				S	**Sn**	**16 17 54.2**	**+1.5**
TNTI	**Ternate**	**2.64**	**297**	Pn	**Pn**	**16 17 20.5**	**-1.4**
MSAI	**Masohi**	**3.01**	**195**	P	**Pn**	**16 17 29.2**	**+2.2**
MSAI				S	**Sn**	**16 18 06.3**	**+4.5**
FAKI	**Fak Fak**	**3.54**	**134**	P	**Pn**	**16 17 34.8**	**+0.6**
FAKI				S	**Sn**	**16 18 18.9**	**+4.0**
FAKI	**Fak Fak**	**3.54**	**134**	Pn	**Pn**	**16 17 34.7**	**+0.4**
NLAI	**Namlea**	**3.83**	**223**	P	**Pn**	**16 17 38.5**	**+0.2**
NLAI				S	**Sn**	**16 18 26.0**	**+3.9**
BNDI	**Bandanaira**	**4.07**	**177**	P	**Pn**	**16 17 42.5**	**+0.9**
BNDI				S	**Sn**	**16 18 32.3**	**+4.2**
KMSI	**Cibinong**	**5.83**	**280**	P	**Pn**	**16 18 04.9**	**-0.8**
	0.7nm2μm186nm,0.6s						
SGSI	**Sangihe**	**5.85**	**314**	P	**Pn**	**16 18 05.7**	**-0.4**
BAKI	**Biak**	**6.43**	**97**	P	Pn	16 18 23.7	+10
GTOI	**Gorontalo**	**6.79**	**279**	P	**Pn**	**16 18 21.1**	**+2.1**
	0.1nm406nm27nm,0.5s						
GTOI				S	**Sn**	**16 19 40.9**	**+5.7**
	0.1nm406nm27nm,0.5s						
LUWI	**Luwuk**	**6.98**	**265**	P	**Pn**	**16 18 21.3**	**-0.3**
	0.5nm1μm98nm,0.7s						
LUWI				S	**Sn**	**16 19 43.4**	**+3.6**
	0.5nm1μm98nm,0.7s						
LUWI	**Luwuk**	**6.98**	**265**		**Pn**	**16 18 19.8**	**-1.8**
SAUI	**Saumlaki**	**7.67**	**168**	Pn	**Pn**	**16 18 29.7**	**-1.4**
MRSI	**Marisa**	**7.83**	**277**	P	**Pn**	**16 18 31.6**	**-1.7**
	0.2nm48nm,0.8s						
APSI	**Ampana**	**8.09**	**267**	P	**Pn**	**16 18 36.7**	**-0.1**
	2μm134nm,0.6s						
APSI				S	**Sn**	**16 20 07.3**	**+0.2**
	2μm134nm,0.6s						
TOLI2	**Tolitoli**	**9.07**	**280**	Pn	**Pn**	**16 18 49.4**	**-0.9**
MPSI	**Mapaga**	**9.85**	**274**	P	**Pn**	**16 19 00.2**	**-0.8**
	20nm,0.9s						
TTSI	**Tana Toraja**	**10.23**	**255**	P	**Pn**	**16 19 06.9**	**+0.6**
	25nm,1.0s						
BNSI	**Bone**	**10.39**	**248**	P	**Pn**	**16 19 09.1**	**+0.8**
	13nm,0.7s						
SPSI	**Sidrap Palu**	**10.55**	**250**	P	**Pn**	**16 19 12.5**	**+1.9**
	2μm110nm,0.4s						
SOEI	**Soe**	**10.74**	**210**	Pn	**Pn**	**16 19 09.4**	**-3.9**
BKSI	**Bulukumba**	**10.75**	**243**	P	**Pn**	**16 19 14.7**	**+1.4**
	27nm,0.7s						
KAPI	**Kappang**	**10.95**	**245**	Pn	**Pn**	**16 19 17.5**	**+1.4**
	0.9nm,0.3s,baz=67,slow=5.3,SNR=4.0						
KAPI				LR	LR	16 23 50.6	
	comp=Z,288nm,18.0s,baz=74,slow=40						
MMRI	**Maumere**	**11.05**	**222**	Pn	**Pn**	**16 19 13.3**	**-4.1**
JAY	**Jayapura**	**11.17**	**101**	LR	LR	16 24 15.2	
	comp=Z,170nm,21.2s,baz=266,slow=41						
BATI	**Baumata**	**11.43**	**212**	LR	LR	16 24 37.0	
	comp=Z,295nm,18.1s,baz=48,slow=42						
MTN	**Manton Dam**	**12.42**	**174**	Pn	**Pn**	**16 19 33.9**	**-2.2**
MYLDM	**Lahad Datu**	**12.52**	**297**	Pn	**Pn**	**16 19 37.3**	**-0.2**
KNRA	**Kununurra**	**15.18**	**184**	Pn	**Pn**	**16 20 10.1**	**-3.7**
KNRA				IAmb	IAmb	16 20 19.8	
	comp=Z,17nm,0.9s						
TGY	**Tagaytay City**	**16.86**	**329**	LR	LR	16 26 54.2	
	comp=Z,116nm,20.4s,baz=88,slow=37						
SBUM	**Sibu**	**17.73**	**279**		**Pn**	**16 20 45.4**	**-0.6**
SBUM				IAmb	IAmb	16 20 49.2	
	comp=Z,36nm,1.0s						
FITZ	**Fitzroy Crossi**	**18.01**	**193**	P	**Pn**	**16 20 47.0**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=29,slow=10,SNR=23						
FITZ				LR	LR	16 28 02.1	
	comp=Z,75nm,20.0s,baz=40,slow=38						
FITZ	**Fitzroy Crossi**	**18.01**	**193**		**Pn**	**16 20 47.3**	**-2.2**
COEN	**Coen**	**18.92**	**136**	P	**P**	**16 20 58.8**	**-1.0**
COEN				IAmb	IAmb	16 21 18.7	
	comp=Z,21nm,1.2s						
KSM	**Kuching**	**19.50**	**276**	P	**P**	**16 21 04.4**	**-1.8**
KSM				IAmb	IAmb	16 21 10.3	
	comp=Z,23nm,1.1s						
PMG	**Port Moresby**	**19.51**	**118**	LR	LR	16 30 56.7	
	comp=Z,131nm,20.4s,baz=326,slow=44						
WB0	**Warramunga Arr**	**19.76**	**167**	P	**P**	**16 21 06.6**	**-2.3**
WRAB	**Tennant Creek**	**19.91**	**167**	P	**P**	**16 21 08.4**	**-2.2**
WRA	**Warramunga Arr**	**19.92**	**167**	P	**P**	**16 21 09.4**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=347,slow=12,SNR=32						
WRA				S	S	16 24 37.1	-16
	baz=343,slow=21,SNR=2.9						
WRA	**Warramunga Arr**	**19.92**	**167**	P	**P**	**16 21 08.6**	**-2.1**
WB2	**Warramunga Arr**	**19.92**	**167**	P	**P**	**16 21 08.9**	**-1.7**
WB2				IAmb	IAmb	16 21 13.1	
	comp=Z,11nm,0.8s						
WR0	**Warramunga Arr**	**19.98**	**167**		**P**	**16 21 10.3**	**-0.9**
GUMO	**Guam**	**20.47**	**47**	LR	LR	16 28 00.3	
	comp=Z,29nm,21.7s,baz=225,slow=33						
CISI	**Cisompet, Garu**	**22.96**	**251**	P	**P**	**16 21 41.9**	**-1.5**
PSA00	**Pilbara Seismi**	**23.12**	**204**	P	**P**	**16 21 42.8**	**-2.1**
AS31	**Alice Springs**	**23.45**	**170**	P	**P**	**16 21 48.0**	**-0.2**
AS31				IAmb	IAmb	16 22 12.5	
	comp=Z,6.3nm,0.7s						
ASAR	**Alice Springs**	**23.45**	**170**	P	**P**	**16 21 48.4**	**+0.2**
	comp=Z,15nm,0.8s,baz=350,slow=9.6,SNR=114						
ASAR				S	**S**	**16 26 01.9**	**+2.3**
	comp=Z,1.3nm,0.9s,baz=345,slow=14,SNR=3.4						
ASAR				LR	LR	16 31 41.5	
	comp=Z,115nm,18.7s,baz=342,slow=39						
ASAR	**Alice Springs**	**23.45**	**170**	P	**P**	**16 21 48.0**	**-0.3**
TPUB	**Ta-pu**	**25.19**	**340**	P	**P**	**16 22 03.5**	**-0.7**
TPUB				IAmb	IAmb	16 22 24.5	
	comp=Z,34nm,1.4s						
FORT	**Forrest**	**30.23**	**183**	P	**P**	**16 22 48.2**	**-1.0**
MORW	**Morawa**	**31.34**	**203**	P	**P**	**16 22 58.4**	**-0.7**
HNR	**Honiara**	**31.38**	**107**	LR	LR	16 35 43.7	
	comp=Z,56nm,18.6s,baz=208,slow=36						
STKA	**Stephens Creek**	**33.23**	**161**	P	**P**	**16 23 16.9**	**+1.2**
	comp=Z,2.4nm,0.4s,baz=346,slow=8.1,SNR=11						
STKA				LR	LR	16 37 52.5	
	comp=Z,55nm,21.7s,baz=345,slow=38						
STKA	**Stephens Creek**	**33.23**	**161**	P	**P**	**16 23 15.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**35.60**	**303**	P	**P**	**16 23 37.1**	**+0.8**
	comp=Z,1.9nm,1.1s,baz=126,slow=6.8,SNR=11						
CMAR				LR	LR	16 40 31.2	
	comp=Z,33nm,18.1s,baz=280,slow=40						
CMAR	**Chiang Mai Arr**	**35.60**	**303**	P	**P**	**16 23 35.0**	**-1.3**
MJAR	**Matsushiro Arr**	**37.62**	**11**	P	**P**	**16 23 53.0**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=198,slow=8.5,SNR=4.4						
MJAR				LR	LR	16 37 50.7	
	comp=Z,46nm,21.1s,baz=185,slow=34						
KSRS	**Korea Array**	**37.73**	**358**	P	**P**	**16 23 55.5**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=177,slow=9.8,SNR=5.6						
KSRS				LR	LR	16 40 43.4	
	comp=Z,35nm,18.2s,baz=173,slow=38						
LZH	**Lanzhou**	**43.58**	**329**	*e*P	**P**	**16 24 44.3**	**+1.5**
LZH				pP	pP	16 24 54.4	+1.7
LZH				sP	sP	16 25 01.6	+4.8
LZH				pmax	pmax		
	comp=Z,12nm,1.5s						
LZH				pmax	pmax		
	comp=Z,61nm,5.4s						
HHC	**Hu-ho-hao-te**	**44.28**	**340**	*e*P	**P**	**16 24 50.3**	**+2.1**
HHC				pmax	pmax		
	comp=Z,14nm,0.8s						
HHC				pmax	pmax		
	comp=Z,84nm,6.7s						
ASAJ	**Asahikawa**	**45.81**	**13**	LR	LR	16 42 01.4	
	comp=Z,53nm,21.5s,baz=160,slow=33						
GTA	**Gaotai**	**48.18**	**329**	*e*P	**P**	**16 25 22.9**	**+3.9**
GTA				pP	sP	16 25 33.6	+0.5
GTA				sP	pP	16 25 37.3	+8.3
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KLR	**Kul'dur**	**49.49**	**2**	LR	LR	16 46 13.5	
	comp=Z,32nm,18.6s,baz=197,slow=36						
ULN	**Ulaanbaatar**	**51.99**	**341**	P	**P**	**16 25 49.4**	**+1.7**
ULN				IAmb	IAmb	16 26 05.7	
	comp=Z,4.6nm,0.9s						
SONM	**Songino Array**	**52.18**	**340**	P	**P**	**16 25 49.2**	**+0.1**
	comp=Z,1.5nm,0.9s,baz=150,slow=7.8,SNR=6.4						
SONM				LR	LR	16 49 41.8	
	comp=Z,26nm,20.2s,baz=200,slow=38						
SONM	**Songino Array**	**52.18**	**340**	P	**P**	**16 25 49.3**	**+0.1**
THZ	**Tophouse**	**56.60**	**142**	P	**P**	**16 26 22.2**	**+0.8**
THZ				IAmb	IAmb	16 26 24.5	
	comp=Z,7.3nm,1.0s						
WMQ	**Urumqi**	**57.82**	**325**	*e*P	**P**	**16 26 31.8**	**+1.9**
MK31	**Makanchi Array**	**62.65**	**325**	P	**P**	**16 27 02.7**	**-0.2**
MK31				IAmb	IAmb	16 27 09.2	
	comp=Z,4.5nm,1.1s						
MKAR	**Makanchi Array**	**62.65**	**325**	P	**P**	**16 27 02.5**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=117,slow=7.9,SNR=11						
MKAR	**Makanchi Array**	**62.65**	**325**	P	**P**	**16 27 02.2**	**-0.7**
MAKZ	**Makanchi**	**62.84**	**325**	P	**P**	**16 27 03.7**	**-0.4**
ZALV	**Zalesovo Beam**	**65.63**	**333**	P	**P**	**16 27 24.8**	**+2.6**
	comp=Z,0.9nm,0.8s,baz=108,slow=4.7,SNR=2.6						
KKAR	**Karatay Array**	**68.29**	**317**	P	**P**	**16 27 39.2**	**-0.2**
BRVK	**Borovoye**	**72.48**	**327**	P	**P**	**16 28 04.8**	**0.0**
BRVK				IAmb	IAmb	16 28 16.3	
	comp=Z,4.4nm,0.9s						
NRIK	**Noril'sk**	**75.16**	**346**	LR	LR	17 04 14.8	
	comp=Z,22nm,21.0s,baz=218,slow=38						
SOCY	**Socotra**	**76.15**	**283**	P	**P**	**16 28 26.9**	**-0.1**
ABKAR	**Akbulak array**	**77.24**	**321**	P	**P**	**16 28 31.1**	**-1.3**
VNDA	**Vanda**	**78.96**	**173**	P	**P**	**16 28 41.0**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=306,slow=5.2,SNR=6.5						
TORD	**Torodi Ar. Bea**	**127.00**	**286**	PKP	**PKPdf**	**16 35 42.9**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=343,slow=1.5,SNR=3.0						

IDC 24 16:34:20.8±1.8,**5°.48S**×**152°.88E**,**h0km**,**mb3.2**/3, **mb1 3.6**/3,**mb1mx3.3**/40,**mbtmp3.3**/3,**Error ellipse: s-maj=34.9km s-min=16.8km az=72.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.44**	**324**	Pg	Pn	16 34 48.2	0.0
	188nm,0.3s,baz=197,slow=1.8,SNR=309						
KRVT				Lg	Lg	16 35 06.5	
	164nm,0.3s,baz=313,slow=22,SNR=8.8						
PMG	**Port Moresby**	**6.89**	**235**	Sn	Sn	16 37 22.1	-0.2
	0.9nm,0.3s,baz=109,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**23.06**	**230**	P	P	16 39 28.6	+0.4
	0.5nm,0

mb1 2.9/4, mb1mx2.5/38, mbtmp3.7/4, Error ellipse: s-maj=91.5km s-min=69.3km az=138.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.35**	**189**	P	P	16 44 57.4	-1.8
	0.1nm,0.3s,baz=2.6,slow=9.8,SNR=3.1						
FITZ				S	S	16 47 22.3	0.0
	0.1nm,0.3s,baz=324,slow=16,SNR=3.0						
WRA	**Warramunga Arr**	**16.30**	**158**	P	P	16 45 31.6	+1.0
	0.4nm,0.3s,baz=338,slow=11,SNR=28						
WRA				S	S	16 48 19.0	-0.8
	0.1nm,0.3s,baz=334,slow=22,SNR=1.6						
ASAR	**Alice Springs**	**19.61**	**163**	P	P	16 46 04.0	+0.6
	0.2nm,0.3s,baz=342,slow=7.6,SNR=20						
STKA	**Stephens Creek**	**29.84**	**156**	P	P	16 47 33.3	-1.0
	0.9nm,0.4s,baz=331,slow=19,SNR=1.5						

*BEO **24** 17:20:19.1±0.6, 40.50N×19.58E, h0km, ML2.6/11*
*TIR **24** 17:20:19.6, 40.72N×19.72E, h3km±1km, Md3.3, Ml3.1*
*THE **24** 17:20:20.9, 40.72N×19.69E, h0km±1km, ML2.7/3, Error ellipse: s-maj=1.9km s-min=0.4km az=332.0*
*ATH **24** 17:20:20.6, 40.73N×19.70E, h16km±3km, ML2.4/3, Error ellipse: s-maj=3.4km s-min=1.3km az=213.0*
*PDG **24** 17:20:20.3±0.1, 40.73N×19.57E, h17km, ML2.6/11, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

ISC 24 17:20:20.6±1.0, 40.73N±0.02×19.65E±0.02, h8km±9km, n69, σt1s10/104, 2C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLO	**Vlora**	**0.28**	**205**	P	**Pg**	**17 20 26.1**	**-0.1**
	baz=215						
VLO				S	**Sg**	**17 20 31.0**	**+1.0**
	baz=215						
VLO				AMP			
	comp=N,32nm,0.3s,baz=215						
VLO	**Vlora**	**0.28**	**205**	P	**Pg**	**17 20 26.3**	**+0.1**
VLO				S	**Sg**	**17 20 31.0**	**+1.0**
	comp=N,10μm,0.4s						
TIR	**Tirane**	**0.64**	**15**	*e*Pg	**Pb**	**17 20 34.8**	**+0.8**
TIR				*e*Sg	**Sn**	**17 20 47.2**	**+0.8**
TIR	**Tirane**	**0.64**	**15**	P	**Pg**	**17 20 33.0**	**+0.1**
TIR				AML	AML	17 21 04.9	
	comp=E,1239μm,0.6s						
TIR				AML	AML	17 21 07.8	
	comp=N,1708μm,0.7s						
TIR	**Tirane**	**0.64**	**15**	P	**Pg**	**17 20 32.7**	**-0.3**
	baz=9.0						
TIR				S	**Sg**	**17 20 42.1**	**+0.8**
	baz=9.0						
TIR	**Tirane**	**0.64**	**15**	P	**Pg**	**17 20 33.1**	**+0.1**
SRN	**Sarande**	**0.89**	**162**	P	**Pg**	**17 20 36.8**	**-0.8**
	baz=165						
SRN				S	**Sb**	**17 20 50.1**	**-0.1**
	baz=165						
SRN	**Sarande**	**0.89**	**162**	P	**Pg**	**17 20 37.4**	**-0.2**
SRN				S	**Sb**	**17 20 50.6**	**+0.4**
LSK	**Leskovik**	**0.93**	**128**	P	**Pg**	**17 20 37.0**	**-1.3**
	baz=129						
LSK				S	**Sg**	**17 20 50.1**	**-0.3**
	baz=129						
LSK	**Leskovik**	**0.93**	**128**	P	**Pg**	**17 20 37.6**	**-0.8**
KASA	**Kassiopi**	**1.00**	**167**	P	**Pg**	**17 20 39.4**	**-0.4**
KASA				S	**Sb**	**17 20 53.4**	**-0.1**
KEK	**Kerkira**	**1.02**	**174**	P	**Pb**	**17 20 40.6**	**+0.2**
KEK				S	**Sb**	**17 20 54.3**	**+0.3**
KEK				AML	AML	17 20 59.9	
	comp=N,276μm,0.6s						
KEK				AML	AML	17 21 01.6	
	comp=E,746μm,0.8s						
KEK	**Kerkira**	**1.02**	**174**	P	**Pb**	**17 20 40.2**	**-0.3**
KEK				S	**Sb**	**17 20 54.7**	**+0.7**
	comp=E,245nm,0.6s						
NEST	**Nestorio**	**1.11**	**106**	P	**Pg**	**17 20 40.5**	**-1.4**
NEST	**Nestorio**	**1.11**	**106**	P	**Pg**	**17 20 40.6**	**-1.3**
SCTE	**Santa Cesarea**	**1.12**	**234**	P	**Pg**	**17 20 41.7**	**-0.3**
SCTE				S	**Sb**	**17 20 58.2**	**+1.4**
SCTE				AML	AML	17 21 02.2	
	comp=E,173μm,0.5s						
SCTE				AML	AML	17 21 03.3	
	comp=N,126μm,0.4s						
SCTE	**Santa Cesarea**	**1.12**	**234**	P	**Pg**	**17 20 42.1**	**+0.1**
	baz=237						
SCTE				S	**Sn**	**17 20 59.2**	**+1.2**
	baz=237						
PHP	**Peshkopia**	**1.13**	**32**	P	**Pg**	**17 20 41.8**	**-0.5**
	baz=29						
PHP				S	**Sn**	**17 20 58.2**	**-0.3**
	baz=29						
PHP	**Peshkopia**	**1.13**	**32**	P	**Pg**	**17 20 41.6**	**-0.6**
PHP				S	**Sn**	**17 20 58.5**	**+0.1**
PENT	**Pentalofos**	**1.25**	**115**	P	**Pg**	**17 20 43.5**	**-1.1**
ULC	**Ulcinj**	**1.27**	**346**	*e*Pg	**Pg**	**17 20 44.1**	**-0.9**
ULC				*i* Sg	**Sn**	**17 21 03.5**	**+1.5**
IGT	**Igoumenitsa**	**1.30**	**156**	P	**Pg**	**17 20 44.6**	**-0.9**
IGT	**Igoumenitsa**	**1.30**	**156**	P	**Pg**	**17 20 44.8**	**-0.7**
	baz=158						
IGT				S	**Sn**	**17 21 03.7**	**+1.0**
	baz=158						
IGT	**Igoumenitsa**	**1.30**	**156**	P	**Pb**	**17 20 45.1**	**-0.2**
IGT				S	**Sn**	**17 21 03.7**	**+1.0**
	comp=N,158nm,0.8s						
PUK	**Puka**	**1.33**	**8**	P	**Pb**	**17 20 46.2**	**+0.5**
	baz=5.0						
PUK				S	**Sn**	**17 21 05.8**	**+2.4**
	baz=5.0						
PUK				AMP			
	comp=E,0.6nm,0.3s,baz=5.0						
DRME	**Dracevica, Mon**	**1.50**	**347**	*e*Pg	**Pn**	**17 20 47.2**	**-0.6**
DRME				*i* Sg	**Sg**	**17 21 08.7**	**-0.1**
KPRO	**Kipourio**	**1.52**	**120**	P	**Pb**	**17 20 48.7**	**-0.3**
KPRO	**Kipourio**	**1.52**	**120**	P	**Pn**	**17 20 48.2**	**+0.1**
BCI	**Bajram Curri**	**1.67**	**11**	P	**Pg**	**17 20 52.1**	**-0.4**
	baz=8.0						
BCI				AMP			
	comp=N,0.6nm,0.7s,baz=8.0						
KZN	**Kozani**	**1.67**	**104**	P	**Pg**	**17 20 51.6**	**-1.0**
BUM	**Brajici-Budva**	**1.67**	**340**	*i* Pn	**Pn**	**17 20 49.9**	**-0.3**
BUM				*i* Sn	**Sn**	**17 21 12.5**	**+0.6**
PDG	**Podgorica**	**1.73**	**350**	*e*Pn	**Pg**	**17 20 54.8**	**+1.1**
PDG				*e*Sn	**Sg**	**17 21 18.0**	**+1.9**
TTG	**Podgorica**	**1.73**	**350**	*i* Pn	**Pn**	**17 20 50.6**	**-0.3**
TTG				*i* Sn	**Sn**	**17 21 14.0**	**+0.9**
SKO	**Skopje**	**1.83**	**47**	*e*Pn	**Pb**	**17 20 54.5**	**+0.1**
PVY	**Plav**	**1.88**	**7**	*e*Pn	**Pn**	**17 20 53.3**	**+0.2**
PVY				*i* Sn	**Sn**	**17 21 18.4**	**+1.3**
CEME	**Cevo**	**1.90**	**343**	*e*Pn	**Pn**	**17 20 52.8**	**-0.5**
CEME				*i* Sn	**Sn**	**17 21 18.1**	**+0.6**
HCY	**Herceg Novi**	**1.93**	**334**	*e*Pn	**Pn**	**17 20 53.1**	**-0.5**
HCY				*i* Sn	**Sn**	**17 21 18.6**	**+0.5**
NOCI	**Noci**	**1.97**	**273**	P	**Pb**	**17 20 56.3**	**-0.3**
TSLK	**Tsoukalades, L**	**2.05**	**158**	P	**Pn**	**17 20 55.6**	**+0.2**
LKD2	**Lefkada island**	**2.09**	**158**	P	**Pn**	**17 20 56.1**	**+0.2**
LKD2	**Lefkada island**	**2.09**	**158**	P	**Pn**	**17 20 56.3**	**+0.4**
GRG	**Griva**	**2.10**	**83**	P	**Pn**	**17 20 56.5**	**+0.4**
NKME	**Niksic**	**2.10**	**346**	*e*Pn	**Pn**	**17 20 55.7**	**-0.4**
NKME				*i* Sn	**Sn**	**17 21 23.1**	**+0.6**
KOME	**Kolasin**	**2.12**	**357**	*e*Pn	**Pn**	**17 20 56.5**	**0.0**
KOME				*i* Sn	**Sn**	**17 21 24.1**	**+1.0**
IVA	**Berane**	**2.15**	**5**	*e*Pn	**Pn**	**17 20 56.5**	**-0.3**
IVA				*e*Sn	**Sn**	**17 21 24.9**	**+1.2**
TREB	**Trebinje**	**2.21**	**334**	*e*Pn	**Pn**	**17 20 59.1**	**+1.5**
LIT	**Litokhoron**	**2.26**	**105**	P	**Pb**	**17 20 59.7**	**-1.8**
VAY	**Valandovo**	**2.29**	**74**	*e*Pn	**Pb**	**17 21 00.4**	**-1.7**
BRY	**Bratogost**	**2.33**	**339**	*i* Pn	**Pn**	**17 20 58.3**	**-1.0**
BRY				*i* Sn	**Sn**	**17 21 27.6**	**-0.5**
KNT	**Kendrikon**	**2.50**	**79**	P	**Pn**	**17 21 02.2**	**+0.7**
UPM	**Unac-Piva**	**2.54**	**348**	*e*Pn	**Pn**	**17 21 01.7**	**-0.5**
UPM				*i* Sn	**Sn**	**17 21 33.5**	**+0.1**
SJES	**Sjenica**	**2.54**	**5**	*e*Pn	**Pn**	**17 21 04.1**	**+1.9**
SJES				*e*Sn	**Sg**	**17 21 40.3**	**-2.0**
STON	**Ston**	**2.59**	**326**	*e*Pn	**Pn**	**17 21 03.6**	**+0.8**
STON	**Ston**	**2.59**	**326**	*e*Pn	**Pn**	**17 21 01.6**	**-1.1**
SELS	**Selova**	**2.72**	**23**	*e*Pn	**Pb**	**17 21 07.5**	**-2.0**
BOSS	**Bosilegrad**	**2.76**	**49**	*e*Pn	**Pn**	**17 21 06.7**	**+1.6**
IVAS	**Ivanjica**	**2.87**	**7**	*e*Pn	**Pn**	**17 21 08.9**	**+2.2**
LSTV	**Lastovo**	**2.90**	**316**	*e*Pn	**Pn**	**17 21 04.6**	**-2.4**
MAKA	**Makarska**	**3.22**	**323**	*e*Pn	**Pn**	**17 21 09.9**	**-1.5**
GRUS	**Gruza**	**3.26**	**14**	*e*Pn	**Pn**	**17 21 13.6**	**+1.7**
KLV	**Kalavryta, Ach**	**3.31**	**143**	P	**Pn**	**17 21 14.2**	**+1.5**
RICI	**Ricice**	**3.34**	**327**	*e*Pn	**Pn**	**17 21 11.5**	**-1.6**
RICI				Sn	**Sn**	**17 21 53.1**	**+0.2**
HAPS	**Han Pijesak,Bl**	**3.40**	**351**	*e*Pn	**Pn**	**17 21 16.6**	**+2.6**
ZAGS	**Zajecar**	**3.63**	**31**	*e*Pn	**Pn**	**17 21 19.1**	**+2.0**
KIJV	**Kijevo**	**4.06**	**325**	*e*Pn	**Pn**	**17 21 22.6**	**-0.5**
KIJV				Sn	**Sn**	**17 22 10.5**	**-0.3**
ZIRJ	**Zirje**	**4.17**	**316**	Sn	**Sn**	**17 22 12.4**	**-1.1**
MORI	**Morici**	**4.29**	**318**	*e*Pn	**Pn**	**17 21 25.7**	**-0.4**
MORI				Sn	**Sn**	**17 22 15.1**	**-1.2**
DUGI	**Dugi Otok**	**4.71**	**315**	Sn	**Sn**	**17 22 26.1**	**-0.8**
NVLJ	**Novalja**	**5.21**	**319**	*e*Pn	**Pn**	**17 21 35.1**	**-3.6**
NVLJ				Sn	**Sn**	**17 22 37.6**	**-1.3**

*IDC **24** 17:28:51.0±0.8, 21.58N×142.87E, h0km, mb3.7/15, mb1 3.9/16, mb1mx3.8/65, mbtmp3.7/16, ML2.7/1, MS3.0/6, Ms1 3.0/6, ms1mx2.7/42, Error ellipse: s-maj=28.3km s-min=19.0km az=80.0*
*NEIC **24** 17:28:55.5±1.8, 21.6N±0.1×143.0E±0.2, h34km±6km, mb4.3/4, Error ellipse: s-maj=25.0km s-min=18.2km az=95.0*

ISC 24 17:28:56.1±0.8, 21.6N±0.1×142.8E±0.2, h35km, n36, σt93s/26, mb3.9/16, MS2.8/4, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.51**	**354**	Pn	**Pn**	**17 30 15.5**	**-0.3**
GUMO	**Guam**	**8.19**	**166**	LR	LR	17 33 27.5	
	comp=Z,68nm,19.1s,baz=8.5,slow=34						
MJAR	**Matsushiro Arr**	**15.44**	**346**	Pn	**Pn**	**17 32 31.8**	**+0.5**
	0.0nm,0.3s,baz=175,slow=6.4,SNR=2.9						
JNU	**Nakatsue**	**15.63**	**320**	LR	LR	17 37 24.3	
	comp=Z,81nm,21.1s,baz=147,slow=33						
KSRS	**Korea Array**	**20.41**	**324**	P	**P**	**17 33 30.5**	**+0.3**
	0.7nm,0.7s,baz=145,slow=8.7,SNR=2.2						
KSRS				LR	LR	17 40 46.9	
	comp=Z,38nm,18.2s,baz=148,slow=35						
KSAR	**Wonju Array Be**	**20.43**	**324**	P	**P**	**17 33 29.3**	**-1.1**
DAV	**Davao City (W)**	**22.05**	**232**	LR	LR	17 44 07.2	
	comp=Z,35nm,18.1s,baz=164,slow=42						
H11N1	**WAKE ISLAND Hy**	**22.58**	**90**	T	T	17 56 27.7	
	baz=279,slow=74,SNR=14						
H11N2	**WAKE ISLAND Hy**	**22.58**	**90**	T	T	17 56 25.9	
	baz=279,slow=74,SNR=16						
H11N3	**WAKE ISLAND Hy**	**22.59**	**90**	T	T	17 56 26.3	
	baz=279,slow=74,SNR=17						
H11S3	**WAKE ISLAND Hy**	**22.61**	**94**	T	T	17 56 23.9	
	baz=282,slow=75,SNR=47						
H11S1	**WAKE ISLAND Hy**	**22.61**	**94**	T	T	17 56 26.4	
	baz=282,slow=75,SNR=55						
H11S2	**WAKE ISLAND Hy**	**22.62**	**94**	T	T	17 56 24.4	
	baz=282,slow=75,SNR=36						
KLR	**Kul'dur**	**28.96**	**345**	P	**P**	**17 34 51.5**	**-0.7**
	1.9nm,0.6s,baz=154,slow=8.2,SNR=5.7						
PETK	**Petropavlovsk-**	**33.47**	**16**	LR	LR	17 52 31.1	
	comp=Z,12nm,18.0s,baz=99,slow=42						
SONM	**Songino Array**	**39.22**	**321**	P	**P**	**17 36 20.2**	**-0.9**
	0.3nm,0.6s,baz=115,slow=7.8,SNR=2.9						
SONM				LR	LR	17 51 45.8	
	comp=Z,40nm,20.0s,baz=166,slow=35						
WRA	**Warramunga Arr**	**42.11**	**192**	P	**P**	**17 36 45.4**	**+0.4**
	0.6nm,0.9s,baz=15,slow=8.8,SNR=2.8						
ASAR	**Alice Springs**	**45.82**	**191**	P	**P**	**17 37 14.6**	**-0.2**
	0.4nm,0.7s,baz=16,slow=8.9,SNR=10						
ASAR	**Alice Springs**	**45.82**	**191**	P	**P**	**17 37 14.3**	**-0.5**
ZAA0	**Zalesovo Array**	**54.10**	**322**	P	**P**	**17 38 16.9**	**-0.4**
ZAA0				IAmb	IAmb	17 38 17.4	
	comp=Z,2.3nm,0.9s						
ZALV	**Zalesovo Beam**	**54.10**	**322**	P	**P**	**17 38 17.2**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=117,slow=8.5,SNR=4.4						
MKAR	**Manchi Array**	**54.53**	**313**	P	**P**	**17 38 21.9**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=92,slow=8.5,SNR=1.5						
KURK	**Kurchatov**	**57.34**	**317**	P	**P**	**17 38 41.0**	**+0.4**
KURBB	**Kurchatov Arra**	**57.39**	**317**	P	**P**	**17 38 41.4**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=94,slow=7.6,SNR=4.7						
IL31		**62.28**	**27**	P	**P**	**17 39 14.6**	**+0.3**
IL31				IAmb	IAmb	17 39 31.5	
	comp=Z,4.1nm,1.4s						
ILAR	**Eielson Array**	**62.28**	**27**	P	**P**	**17 39 14.4**	**+0.1**
	comp=Z,1.1nm,0.9s,baz=254,slow=5.4,SNR=7.4						
BRVK	**Borovoye**	**62.61**	**320**	P	**P**	**17 39 17.4**	**+0.6**
KKAR	**Karatay Array**	**62.87**	**308**	P	**P**	**17 39 19.0**	**+0.2**
YKA	**Yellowknife Ar**	**76.70**	**28**	P	**P**	**17 40 44.4**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=302,slow=5.8,SNR=3.2						
ARCES	**ARCESS Array B**	**78.92**	**341**	P	**P**	**17 40 56.7**	**+1.0**
	comp=Z,1.2nm,0.6s,baz=62,slow=8.3,SNR=5.9						
FINES	**FINESS Array B**	**83.14**	**334**	P	**P**	**17 41 18.0**	**-0.3**
	comp=Z,2.7nm,0.9s,baz=89,slow=10,SNR=1.3						
NVAR	**Mina Array Bea**	**83.46**	**51**	P	**P**	**17 41 20.7**	**0.0**
	comp=Z,0.4nm,0.6s,baz=303,slow=5.2,SNR=4.2						
NVAR	**Mina Array Bea**	**83.46**	**51**	P	**P**	**17 41 17.8**	**-2.9**
AKASG	**Malin Array Be**	**87.61**	**324**	P	**P**	**17 41 40.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=26,slow=7.6,SNR=1.7						
PDAR	**Pinedale Array**	**87.69**	**45**	P	**P**	**17 41 43.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=291,slow=5.7,SNR=1.8						
LPAZ	**La Paz**	**150.26**	**85**	PKPbc	**PKPbc**	**17 48 44.1**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=304,slow=7.3,SNR=2.4						

*JMA **24** 18:05:28.0±0.1, 24.30N×121.93E, h50km±3km, M2.3*
*TAP **24** 18:05:28.3, 24.36N×122.01E, h18km, ML3.2, B*

ISC 24 18:05:28.3±0.9, 24.33N±0.02×121.99E±0.02, h33km±5km, n119, σt19/224, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.20**	**306**	P	**Pb**	**18 05 34.5**	**-0.3**
	baz=296						
ENAH				S	**Sb**	**18 05 38.0**	**-1.3**
	baz=296						
ENA	**Nanao**	**0.24**	**293**	*e*P	**Pb**	**18 05 34.9**	**-0.4**
	baz=285						
ENA				*e*S	**Sb**	**18 05 39.0**	**-1.1**
	baz=285						
TWC	**Suao**	**0.30**	**336**	*i* P	**Pb**	**18 05 35.5**	**-0.6**
	baz=331						
TWC				*i* S	**Sn**	**18 05 40.0**	**-1.6**
	baz=331						
NACB	**Ninganchiao**	**0.39**	**246**	*i* P	**Pn**	**18 05 37.4**	**-0.3**
	baz=243						
NACB				S	**Sn**	**18 05 44.8**	**+0.8**
	baz=243						
TWD	**Chiawan**	**0.43**	**235**	P	**Pn**	**18 05 38.2**	**-0.1**
	baz=233						
TWD				*e*S	**Sn**	**18 05 45.2**	**+0.2**
	baz=233						
ETLH	**Xiulin Townshi**	**0.48**	**255**	*i* P	**Pn**	**18 05 38.8**	**-0.2**
	baz=252						
ETLH				S	**Sn**	**18 05 46.8**	**+0.6**
	baz=252						
ILA	**Ilan**	**0.48**	**333**	*e*P	**Pb**	**18 05 38.2**	**-0.4**
	baz=330						
ILA				S	**Sn**	**18 05 46.2**	**-0.1**
	baz=330						
TWE	**Neicheng**	**0.48**	**323**	*i* P	**Pb**	**18 05 38.3**	**-0.3**
	baz=320						
TWE				S	**Sb**	**18 05 44.6**	**-1.1**
	baz=320						
ENTT	**Nioudou**	**0.49**	**309**	P	**Pb**	**18 05 38.6**	**-0.2**
	baz=305						
ENTT				S	**Sb**	**18 05 45.3**	**-0.6**
	baz=305						
HWA	**Hwalien**	**0.49**	**224**	*e*P	**Pn**	**18 05 39.3**	**+0.2**
	baz=223						
HWA				*e*S	**Sn**	**18 05 46.8**	**+0.3**
	baz=223						
NDT	**Datong Townshi**	**0.51**	**302**	P	**Pb**	**18 05 38.7**	**-0.3**
	baz=298						
NDT				S	**Sn**	**18 05 46.5**	**-0.4**
	baz=298						
EGS		**0.51**	**355**	*e*P	**Pb**	**18 05 38.8**	**-0.3**
	baz=353						
EGS				*e*S	**Sb**	**18 05 46.4**	**-0.1**
	baz=353						
NTC	**Toucheng**	**0.54**	**345**	*e*P	**Pb**	**18 05 38.9**	**-0.7**
	baz=341						
NTC				*e*S	**Sb**	**18 05 46.8**	**-0.5**
	baz=341						
NNSB	**Datong**	**0.56**	**280**	P	**Pn**	**18 05 39.9**	**-0.2**
	baz=276						
NNSB				S	**Sn**	**18 05 48.0**	**-0.2**
	baz=276						
NNSH	**Datong**	**0.56**	**280**	P	**Pn**	**18 05 39.9**	**-0.2**
	baz=276						
NNSH				S	**Sn**	**18 05 48.0**	**-0.3**
	baz=276						
NNS	**Nan Shan**	**0.57**	**281**	P	**Pb**	**18 05 40.0**	**-0.1**
	baz=277						
NNS				S	**Sn**	**18 05 48.4**	**-0.1**
	baz=277						
NWLT	**Wulai**	**0.62**	**315**	*e*P	**Pn**	**18 05 40.5**	**-0.4**
	baz=312						
NWLT				S	**Sn**	**18 05 49.1**	**-0.7**
	baz=312						
YHNB	**Yeheng**	**0.65**	**301**	P	**Pb**	**18 05 41.1**	**-0.2**
	baz=298						
YHNB				S	**Sb**	**18 05 50.3**	**0.0**
	baz=298						
TIPB	**Shuangxi**	**0.65**	**347**	P	**Pn**	**18 05 40.9**	**-0.4**
	baz=344						
TIPB				S	**Sn**	**18 05 50.1**	**-0.5**
	baz=344						
NSK	**Sanguang**	**0.67**	**301**	P	**Pb**	**18 05 41.7**	**+0.1**
	baz=298						
NSK				*i* S	**Sb**	**18 05 50.6**	**-0.1**
	baz=298						
TWB1	**Santiao Chiao**	**0.67**	**0**	*e*P	**Pn**	**18 05 41.4**	**-0.2**
	baz=359						
TWB1				*e*S	**Sn**	**18 05 50.1**	**-0.8**
	baz=359						
FUSS	**Fushou**	**0.68**	**263**	P	**Pb**	**18 05 42.3**	**+0.3**
	baz=260						
FUSS				*e*S	**Sb**	**18 05 52.5**	**+1.1**
	baz=260						
WHF	**Hehuan Shan**	**0.68**	**254**	P	**Pb**	**18 05 42.1**	**-0.1**
	baz=252						
WHF				*e*S	**Sn**	**18 05 52.6**	**+0.8**
	baz=252						
ESL	**Shilin**	**0.72**	**224**	*e*P	**Pb**	**18 05 42.6**	**+0.1**
	baz=223						
ESL				*e*S	**Sb**	**18 05 53.4**	**+1.2**
	baz=223						
TWA	**Mucha**	**0.74**	**331**	*e*P	**Pb**	**18 05 43.1**	**+0.2**
	baz=328						
TWA				*e*S	**Sb**	**18 05 53.5**	**+0.8**
	baz=328						
TWT	**Tachien**	**0.74**	**264**	*e*P	**Pb**	**18 05 43.0**	**+0.1**
	baz=261						
TWT				S	**Sb**	**18 05 54.1**	**+1.2**
	baz=261						
NHDH	**Xindian Distri**	**0.75**	**326**	*e*P	**Pb**	**18 05 43.0**	**0.0**
	baz=323						
NHDH				*e*S	**Sb**	**18 05 53.9**	**+0.8**
	baz=323						
NWF	**Wu-fen Shan**	**0.76**	**346**	*e*P	**Pb**	**18 05 42.8**	**-0.4**
	baz=343						
NWF				*e*S	**Sb**	**18 05 53.2**	**-0.1**
	baz=343						
TDCB	**Techi**	**0.76**	**264**	*e*P	**Pb**	**18 05 43.6**	**+0.4**
	baz=262						
TDCB				*e*S	**Sb**	**18 05 54.1**	**+0.8**
	baz=262						
WFSB	**Wu-fen Shan**	**0.76**	**346**	*e*P	**Pb**	**18 05 42.9**	**-0.2**
	baz=343						
WFSB				*e*S	**Sb**	**18 05 53.1**	**-0.1**
	baz=343						
TATO	**Taipei**	**0.78**	**325**	*e*P	**Pb**	**18 05 43.7**	**+0.1**
	baz=322						
TATO				*e*S	**Sb**	**18 05 54.6**	**+0.7**
	baz=322						
CHGB	**Renai**	**0.79**	**250**	P	**Pb**	**18 05 43.9**	**+0.1**
	baz=248						
CHGB				*e*S	**Sb**	**18 05 56.1**	**+1.8**
	baz=248						
TAP1	**Taipei**	**0.82**	**329**	*e*P	**Pb**	**18 05 43.8**	**-0.4**
	baz=326						
TAP1				*e*S	**Sb**	**18 05 55.9**	**+1.0**
	baz=326						
TAP	**Taipei**	**0.83**	**328**	*e*P	**Pb**	**18 05 43.8**	**-0.6**
	baz=326						
TAP				*e*S	**Sb**	**18 05 56.2**	**+1.1**
	baz=326						
OWD	**Renai**	**0.83**	**243**	*e*P	**Pb**	**18 05 44.5**	**+0.1**
	baz=242						
OWD				*e*S	**Sb**	**18 05 57.3**	**+2.0**
	baz=242						
EGFH	**Guangfu**	**0.83**	**218**	*e*P	**Pb**	**18 05 44.4**	**0.0**
	baz=217						
EGFH				*e*S	**Sb**	**18 05 57.5**	**+2.1**
	baz=217						
JYNG	**Yonagunijimaku**	**0.88**	**82**	P	**Pb**	**18 05 45.3**	**+0.1**
JYNG				S	**Sb**	**18 05 57.7**	**+1.0**
YM01	**YM01**	**0.89**	**335**	*e*P	**Pb**	**18 05 45.1**	**-0.4**
	baz=333						
YM01				*e*S	**Sb**	**18 05 57.9**	**+0.8**
	baz=333						
YM10	**YM10**	**0.91**	**335**	*e*P	**Pb**	**18 05 45.0**	**-0.6**
	baz=332						
YM10				*e*S	**Sb**	**18 05 58.4**	**+1.0**
	baz=332						
YM11	**YM11**	**0.91**	**336**	*e*P	**Pb**	**18 05 45.9**	**+0.2**
	baz=333						
YM11				*e*S	**Sb**	**18 05 58.5**	**+0.9**
	baz=333						
YM05	**YM05**	**0.91**	**335**	*e*P	**Pb**	**18 05 45.4**	**-0.3**
	baz=333						
YM05				*e*S	**Sb**	**18 05 58.0**	**+0.4**
	baz=333						
YM04	**YM04**	**0.91**	**334**	*e*P	**Pb**	**18 05 45.4**	**-0.4**
	baz=331						
YM04				*e*S	**Sb**	**18 05 58.1**	**+0.5**
	baz=331						
TWS1	**Kuangyinshan**	**0.92**	**326**	P	**Pb**	**18 05 45.8**	**-0.1**
	baz=324						
TWS1				*e*S	**Sb**	**18 05 58.2**	**+0.3**
	baz=324						
YM08	**YM08**	**0.92**	**337**	*e*P	**Pn**	**18 05 45.1**	**+0.1**
	baz=335						
YM08				*e*S	**Sb**	**18 05 58.4**	**+0.4**
	baz=335						
YM03	**YM03**	**0.94**	**334**	*e*P	**Pb**	**18 05 45.6**	**-0.5**
	baz=332						
YM03				*e*S	**Sb**	**18 05 59.3**	**+1.0**
	baz=332						
LIOB	**Emei**	**0.94**	**290**	P	**Pb**	**18 05 46.7**

	baz=297								
HSN				*e*S		**Sb**	**18 06 01.6**	**+0.6**	
	baz=297								
NHW	**Xinwu Township**	**1.08**	**308**	*e*S		**Sb**	**18 06 03.8**	**+1.3**	
	baz=306								
SMLT	**Sun Moon Lake**	**1.09**	**246**	*e*P		**Pb**	**18 05 48.9**	**+0.2**	
	baz=244								
SMLT				*e*S		**Sb**	**18 06 04.1**	**+1.4**	
	baz=244								
SSLB	**Suanglung**	**1.09**	**240**	*e*P		**Pb**	**18 05 48.5**	**-0.1**	
	baz=239								
SSLB				*e*S		**Sb**	**18 06 04.4**	**+1.8**	
	baz=239								
TWQ1	**Liyutan**	**1.10**	**271**	*e*P		**Pb**	**18 05 49.7**	**+0.8**	
	baz=269								
TWQ1				S		**Sb**	**18 06 05.0**	**+1.9**	
	baz=269								
NMLH	**Miaoli**	**1.11**	**281**	*e*P		**Pb**	**18 05 49.2**	**+0.2**	
	baz=279								
NMLH				*e*S		**Sb**	**18 06 04.4**	**+1.3**	
	baz=279								
TYC	**Yuchr**	**1.11**	**248**	*e*P		**Pb**	**18 05 49.1**	**0.0**	
	baz=246								
TYC				*e*S		**Sb**	**18 06 05.4**	**+2.1**	
	baz=246								
NSY	**Sanyi**	**1.12**	**275**	*e*P		**Pb**	**18 05 49.5**	**+0.3**	
	baz=272								
NSY				*e*S		**Sb**	**18 06 04.5**	**+1.0**	
	baz=272								
YULB	**Yu-li**	**1.13**	**214**	*e*P		**Pb**	**18 05 49.7**	**+0.4**	
	baz=214								
YULB				*e*S		**Sb**	**18 06 05.7**	**+2.0**	
	baz=214								
EYUL	**Yuli**	**1.16**	**212**	*e*P		**Pb**	**18 05 50.2**	**+0.5**	
	baz=212								
EYUL				*e*S		**Sb**	**18 06 06.6**	**+2.1**	
	baz=212								
TWF1	**Yuli**	**1.16**	**213**	*e*P		**Pb**	**18 05 49.7**	**-0.2**	
	baz=212								
TWF1				*e*S		**Sb**	**18 06 06.3**	**+1.7**	
	baz=212								
TCU	**Taichung**	**1.21**	**262**	*e*P		**Pb**	**18 05 51.0**	**+0.4**	
	baz=260								
TCU				*e*S		**Sb**	**18 06 07.4**	**+1.4**	
	baz=260								
WDJ	**Dajia District**	**1.23**	**271**	*e*P		**Pb**	**18 05 52.0**	**+1.0**	
	baz=269								
WDJ				*e*S		**Sb**	**18 06 08.2**	**+1.7**	
	baz=269								
WJS	**Zhushan**	**1.26**	**246**	*e*P		**Pb**	**18 05 51.9**	**+0.4**	
	baz=245								
WJS				*e*S		**Sb**	**18 06 09.2**	**+1.8**	
	baz=245								
WNT	**Mingjian**	**1.27**	**249**	*e*P		**Pb**	**18 05 52.0**	**+0.2**	
	baz=248								
WNT				*e*S		**Sb**	**18 06 08.9**	**+1.1**	
	baz=248								
FULB	**Fuli**	**1.29**	**209**	*e*P		**Pb**	**18 05 51.9**	**-0.2**	
	baz=209								
FULB				*e*S		**Sb**	**18 06 10.1**	**+1.6**	
	baz=209								
WCHH	**Zhanghua**	**1.33**	**259**	*e*S		**Sb**	**18 06 10.8**	**+1.4**	
	baz=255								
CHKT	**Chengkung**	**1.35**	**205**	*e*S		**Sb**	**18 06 11.0**	**+0.9**	
	baz=204								
ALS	**Alishan**	**1.35**	**233**	*e*P		**Pb**	**18 05 53.1**	**-0.2**	
	baz=232								
ALS				*e*S		**Sb**	**18 06 11.9**	**+1.5**	
	baz=232								
CHN5	**Tsauling**	**1.40**	**239**	*e*P		**Pb**	**18 05 53.9**	**-0.1**	
	baz=238								
CHN5				*e*S		**Sb**	**18 06 12.8**	**+1.2**	
	baz=238								
ELDTW	**Lidau**	**1.44**	**218**	*e*P		**Pb**	**18 05 53.7**	**-1.0**	
	baz=217								
ELDTW				*e*S		**Sb**	**18 06 13.2**	**+0.5**	
	baz=217								
WGK	**Gukeng**	**1.45**	**244**	*e*P		**Pb**	**18 05 54.5**	**-0.3**	
	baz=242								
WGK				*e*S		**Sb**	**18 06 13.5**	**+0.6**	
	baz=242								
WDLH	**Douliu**	**1.47**	**244**	*e*P		**Pb**	**18 05 54.4**	**-0.7**	
	baz=243								
WDLH				*e*S		**Sb**	**18 06 14.5**	**+1.1**	
	baz=243								
EDH	**Donghe**	**1.49**	**205**	*e*P		**Pb**	**18 05 54.9**	**-0.5**	
	baz=205								
EDH				*e*S		**Sb**	**18 06 14.4**	**+0.4**	
	baz=205								
RLNB	**Erlin**	**1.55**	**254**	*e*P		**Pb**	**18 05 55.5**	**-0.9**	
	baz=252								
RLNB				*e*S		**Sb**	**18 06 16.4**	**+0.8**	
	baz=252								
IRIF	**Iriomote-Funau**	**1.59**	**90**	P		**Pn**	**18 05 55.0**	**+0.8**	
IRIF				*e*S		**Sn**	**18 06 15.2**	**+1.6**	
WTK	**Tuku**	**1.59**	**247**	*e*P		**Pb**	**18 05 56.2**	**-1.0**	
	baz=245								
WTK				*e*S		**Sb**	**18 06 17.5**	**+0.5**	
	baz=245								
CHN2	**Minshiung**	**1.59**	**240**	*e*S		**Sb**	**18 06 17.5**	**+0.5**	
	baz=239								
TPUB	**Ta-pu**	**1.61**	**231**	*e*P		**Pb**	**18 05 56.7**	**-0.8**	
	baz=230								
TPUB				*e*S		**Sb**	**18 06 18.1**	**+0.7**	
	baz=230								
STYT	**Tauyuan**	**1.62**	**224**	*e*P		**Pb**	**18 05 56.9**	**-0.8**	
	baz=223								
STYT				*e*S		**Sb**	**18 06 17.9**	**+0.2**	
	baz=223								
CHY	**Chiayi**	**1.65**	**240**	*e*P		**Pb**	**18 05 57.4**	**-0.8**	
	baz=239								
CHY				*e*S		**Sb**	**18 06 18.8**	**+0.2**	
	baz=239								
WTP	**Ta-pu**	**1.66**	**230**	*e*P		**Pb**	**18 05 57.3**	**-1.0**	
	baz=228								
WTP				*e*S		**Sb**	**18 06 19.0**	**+0.2**	
	baz=228								
LDUT	**Ludao**	**1.72**	**196**	*e*S		**Sb**	**18 06 20.5**	**0.0**	
	baz=196								
TWGBT	**Beinan**	**1.72**	**209**	*e*P		**Pb**	**18 05 57.8**	**-1.5**	
	baz=209								
TWGBT				*e*S		**Sb**	**18 06 19.8**	**-0.9**	
	baz=209								
TWG	**Pinlang**	**1.72**	**209**	*e*P		**Pb**	**18 05 58.4**	**-1.0**	
	baz=209								
TWG				*e*S		**Sb**	**18 06 20.2**	**-0.4**	
	baz=209								
TWK	**Hsinying**	**1.73**	**233**	*e*P		**Pb**	**18 05 58.5**	**-1.1**	
	baz=231								
TWK				*e*S		**Sb**	**18 06 20.9**	**-0.1**	
	baz=231								
WSF	**Szhu**	**1.75**	**247**	*e*P		**Pb**	**18 05 58.7**	**-1.2**	
	baz=246								
WSF				*e*S		**Sb**	**18 06 21.6**	**+0.1**	
	baz=246								
CHN1	**Nanshi**	**1.76**	**230**	*e*P		**Pb**	**18 05 59.0**	**-1.0**	
	baz=229								
CHN1				*e*S		**Sb**	**18 06 21.2**	**-0.4**	
	baz=229								
WLGB	**Puzi**	**1.76**	**241**	*e*P		**Pb**	**18 05 58.5**	**-1.5**	
	baz=240								
WLGB				*e*S		**Sb**	**18 06 21.6**	**-0.2**	
	baz=240								
SGST	**Jiashian**	**1.79**	**226**	*e*P		**Pb**	**18 05 59.2**	**-1.3**	
	baz=225								
SGST				*e*S		**Sb**	**18 06 22.7**	**+0.1**	
	baz=225								
SLGT	**Liugui**	**1.81**	**223**	*e*P		**Pb**	**18 06 00.1**	**-0.8**	
	baz=222								
SLGT				*e*S		**Sb**	**18 06 22.6**	**-0.6**	
	baz=222								
ICHU	**Yijhu**	**1.84**	**239**	*e*P		**Pb**	**18 06 00.4**	**-0.9**	
	baz=237								
ICHU				*e*S		**Sb**	**18 06 23.9**	**0.0**	
	baz=237								
JKRS	**Kuro-shima**	**1.85**	**93**	P		**Pn**	**18 05 59.4**	**+1.7**	
JKRS				*e*S		**Sb**	**18 06 22.7**	**-1.6**	
CHN8	**Yiju**	**1.90**	**239**	*e*S		**Sb**	**18 06 24.3**	**-1.4**	
	baz=238								
JIJ	**Ishigaki jima**	**1.97**	**89**	P		**Pn**	**18 06 00.4**	**+1.0**	
JIJ				S		**Sn**	**18 06 24.1**	**+1.1**	
ECL	**Taimali**	**1.97**	**209**	*e*S		**Sb**	**18 06 26.4**	**-1.3**	
	baz=208								
SSD	**Sandimen**	**2.01**	**218**	*e*P		**Pb**	**18 06 02.6**	**-1.7**	
	baz=217								
SSD				*e*S		**Sb**	**18 06 27.6**	**-1.2**	
	baz=217								
TWM1	**Shoushan**	**2.08**	**224**	*e*S		**Sb**	**18 06 29.4**	**-1.5**	
	baz=223								
MASBT	**Mashibuluo**	**2.12**	**216**	*e*P		**Pb**	**18 06 03.8**	**-2.2**	
	baz=215								
MASBT				*e*S		**Sb**	**18 06 30.3**	**-1.6**	
	baz=215								
JISG	**Ishigakijimahi**	**2.13**	**83**	P		**Pn**	**18 06 02.6**	**+0.9**	
JISG				*e*S		**Sn**	**18 06 28.5**	**+1.4**	
EAST	**Anshuo**	**2.20**	**209**	*e*P		**Pb**	**18 06 05.6**	**-2.0**	
	baz=208								
EAST				*e*S		**Sb**	**18 06 32.1**	**-2.4**	
	baz=208								
LAY	**Lan-yu**	**2.32**	**190**	*e*S		**Sb**	**18 06 35.0**	**-2.7**	
	baz=190								
SCZT	**Fangliau**	**2.32**	**213**	*e*P		**Pb**	**18 06 06.7**	**-2.8**	
	baz=212								
SCZT				*e*S		**Sb**	**18 06 35.4**	**-2.3**	
	baz=212								
PTTC	**Pingtan**	**2.32**	**300**	*e*S		**Sn**	**18 06 34.1**	**+2.4**	
	baz=299								
PNG	**Penghu**	**2.35**	**252**	*e*S		**Sb**	**18 06 35.3**	**-3.3**	
	baz=250								
PHUB	**P'eng-hu**	**2.35**	**250**	*e*P		**Pb**	**18 06 07.0**	**-3.1**	
	baz=249								
PHUB				*e*S		**Sb**	**18 06 35.2**	**-3.5**	
	baz=249								
WDGT	**Dungji**	**2.38**	**244**	*e*P		**Pb**	**18 06 07.8**	**-2.7**	
	baz=242								
WDGT				*e*S		**Sb**	**18 06 36.4**	**-3.2**	
	baz=242								
TWP	**Hsiaoliuchiu**	**2.48**	**217**	*e*S		**Sb**	**18 06 38.8**	**-3.5**	
	baz=216								
TSEB	**Hengchuen, Pin**	**2.62**	**203**	*e*P		**Pn**	**18 06 11.1**	**+2.7**	
	baz=203								
TSEB				*e*S		**Sb**	**18 06 42.4**	**-3.9**	
	baz=203								
PTMZ	**Houxiangcun**	**2.70**	**286**	*e*P		**Pb**	**18 06 12.5**	**-3.5**	
	baz=284								
PTMZ				*e*S		**Sn**	**18 06 44.1**	**+3.1**	
	baz=284								

*RSPR **24** 18:27:05.8, 19°.26N×64°.34W, h43km±8km, MD3.7/10*
*NEIC **24** 18:27:05.3±0.6, 19°.2N±0°.1×64°.3W±0°.1, h36km±56km, Error ellipse: s-maj=24.7km s-min=14.5km az=138.0*
ISC 24 18:27:05.3±2.4, 19°.2N±0°.1×64°.3W±0°.1, h42km, n65, σ0965/77, 7C-7D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.85**	**198**	P	*e*	**Pn**		**18 27 20.6**	**-0.2**
TBVI	**Tortola**	**0.85**	**198**		*e*S	**Sn**		**18 27 30.4**	**-1.7**
TBVI	**Tortola**	**0.85**	**198**			**Pn**		**18 27 20.6**	**-0.2**
TBVI						**Sn**		**18 27 30.4**	**-1.7**
CUPR	**Culebra, Puert**	**1.28**	**225**	P	*e*	**Pn**		**18 27 26.2**	**-0.5**
CUPR	**Culebra, Puert**	**1.28**	**225**		*e*S	**Sn**		**18 27 42.8**	**+0.1**
CUPR	**Culebra, Puert**	**1.28**	**225**			**Pn**		**18 27 26.2**	**-0.5**
CUPR						**Sn**		**18 27 42.8**	**+0.1**
CDVI	**St. Croix**	**1.52**	**196**			**Pn**		**18 27 31.2**	**+1.1**
MTP	**Monte Pirata**	**1.61**	**226**	P	*e*	**Pn**		**18 27 31.0**	**-0.3**
MTP	**Monte Pirata**	**1.61**	**226**		*e*S	**Sn**		**18 27 50.9**	**0.0**
MTP	**Monte Pirata**	**1.61**	**226**			**Pn**		**18 27 31.0**	**-0.3**
MTP						**Sn**		**18 27 50.9**	**0.0**
CBYP	**Canovanas**	**1.73**	**237**	P	*e*	**Pn**		**18 27 32.5**	**-0.5**
CBYP	**Canovanas**	**1.73**	**237**			**Pn**		**18 27 32.5**	**-0.5**
HUMP	**Col San Antoni**	**1.79**	**233**	P	*e*	**Pn**		**18 27 33.4**	**-0.4**
HUMP	**Col San Antoni**	**1.79**	**233**		*e*S	**Sn**		**18 27 55.1**	**-0.3**
HUMP	**Col San Antoni**	**1.79**	**233**			**Pn**		**18 27 33.4**	**-0.4**
HUMP						**Sn**		**18 27 55.1**	**-0.3**
GCPR	**Guaynabo City**	**1.89**	**241**	P	*e*	**Pn**		**18 27 35.1**	**-0.1**
GCPR	**Guaynabo City**	**1.89**	**241**		*e*S	**Sn**		**18 27 57.6**	**-0.2**
GCPR	**Guaynabo City**	**1.89**	**241**			**Pn**		**18 27 35.1**	**-0.1**
GCPR						**Sn**		**18 27 57.6**	**-0.2**
SJG	**San Juan**	**2.05**	**237**			**Pn**		**18 27 36.8**	**-0.5**
IGPR	**InterUniversit**	**2.10**	**234**	P	*e*	**Pn**		**18 27 38.0**	**+0.1**
IGPR	**InterUniversit**	**2.10**	**234**		*e*S	**Sn**		**18 28 02.6**	**-0.2**
IGPR	**InterUniversit**	**2.10**	**234**			**Pn**		**18 27 38.2**	**+0.2**
IGPR	**InterUniversit**	**2.10**	**234**			**Sn**		**18 28 02.6**	**-0.2**
EMPR	**Esperanza - Ma**	**2.21**	**251**	P	*e*	**Pn**		**18 27 39.4**	**0.0**
EMPR	**Esperanza - Ma**	**2.21**	**251**		*e*S	**Sn**		**18 28 05.5**	**-0.1**
EMPR	**Esperanza - Ma**	**2.21**	**251**			**Pn**		**18 27 39.4**	**0.0**
EMPR						**Sn**		**18 28 05.5**	**-0.1**
CELP	**Cerrillos**	**2.42**	**242**	P	*e*	**Pn**		**18 27 42.3**	**-0.1**
CELP	**Cerrillos**	**2.42**	**242**		*e*S	**Sn**		**18 28 10.6**	**-0.1**
CELP	**Cerrillos**	**2.42**	**242**			**Pn**		**18 27 42.3**	**-0.1**
CELP						**Sn**		**18 28 10.6**	**-0.1**
AOPR	**Arecibo Observ**	**2.45**	**249**	P	*e*	**Pn**		**18 27 42.4**	**-0.5**
AOPR	**Arecibo Observ**	**2.45**	**249**		*e*S	**Sn**		**18 28 11.2**	**-0.5**
AOPR	**Arecibo Observ**	**2.45**	**249**			**Pn**		**18 27 42.4**	**-0.5**
AOPR						**Sn**		**18 28 11.2**	**-0.5**
OBIP	**Obispado Ponce**	**2.45**	**242**	P	*e*	**Pn**		**18 27 42.9**	**+0.1**
OBIP	**Obispado Ponce**	**2.45**	**242**		*e*S	**Sn**		**18 28 11.3**	**-0.3**
OBIP	**Obispado Ponce**	**2.45**	**242**			**Pn**		**18 27 42.9**	**+0.1**
OBIP						**Sn**		**18 28 11.3**	**-0.3**
ICMP	**Isla Caja de M**	**2.47**	**238**			**Pn**		**18 27 43.4**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.71**	**243**	P	*e*	**Pn**		**18 27 46.7**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.71**	**243**		*e*S	**Sn**		**18 28 18.1**	**+0.1**
GBPR	**Guanica, Bosqu**	**2.71**	**243**			**Pn**		**18 27 46.7**	**+0.3**
GBPR						**Sn**		**18 28 18.1**	**+0.1**
MLPR	**Magueyes Islan**	**2.86**	**244**	P	*e*	**Pn**		**18 27 48.3**	**-0.1**
MLPR	**Magueyes Islan**	**2.86**	**244**		*e*S	**Sn**		**18 28 21.7**	**+0.2**
MLPR	**Magueyes Islan**	**2.86**	**244**			**Pn**		**18 27 48.3**	**-0.1**
MLPR						**Sn**		**18 28 21.7**	**+0.2**
CRPR	**Cabo Rojo, PR**	**2.90**	**246**	P	*e*	**Pn**		**18 27 48.9**	**0.0**
CRPR	**Cabo Rojo, PR**	**2.90**	**246**		*e*S	**Sn**		**18 28 22.4**	**-0.2**
CRPR	**Cabo Rojo, PR**	**2.90**	**246**			**Pn**		**18 27 48.9**	**0.0**
CRPR						**Sn**		**18 28 22.4**	**-0.2**
DR12	**Loma Pena Alta**	**4.79**	**266**			**Pn**		**18 28 14.2**	**-0.8**
SDDR	**Presa de Saban**	**6.58**	**269**			**Pn**		**18 28 39.6**	**+0.1**
PAMC	**Pamplona, Colo**	**14.34**	**216**	*e*P		**Pn**		**18 30 27.8**	**+1.5**
MOTC	**Monteria, Cord**	**15.11**	**228**	*e*P		**P**		**18 30 39.9**	**-0.7**
BARC	**Barichara**	**15.22**	**216**	*e*P		**Pn**		**18 30 35.9**	**-1.9**
ZARC	**Zaragoza, Cauc**	**15.51**	**223**	*e*P		**Pn**		**18 30 40.5**	**-0.7**
RUSC	**La Rusia**	**15.76**	**214**	*e*P		**Pn**		**18 30 46.3**	**+1.5**
URDC	**San Jos de Ur**	**15.76**	**225**	*e*P		**Pn**		**18 30 44.9**	**+0.5**
PTBC	**PUERTO BERRIO,**	**16.00**	**219**	*e*P		**Pn**		**18 30 47.7**	**+0.1**
SPBC	**San Pablo de B**	**16.49**	**216**	*e*P		**P**		**18 30 57.3**	**+1.2**
DBBC	**Dabeiba**	**16.75**	**225**	*e*P		**P**		**18 30 59.8**	**+0.9**
NORC	**Norcasia**	**17.02**	**218**	*e*P		**Pn**		**18 31 01.3**	**+0.8**
CHIC	**Chingaza**	**17.16**	**213**	*e*P		**Pn**		**18 31 02.1**	**-0.4**
CBOC	**Ciudad Bolivar**	**17.48**	**222**	*e*P		**P**		**18 31 07.3**	**+0.3**
GUY2C	**Guyana, Caldas**	**17.59**	**219**	*e*P		**Pn**		**18 31 06.3**	**-1.5**
RREF	**El Recreo**	**17.84**	**218**	*e*P		**Pn**		**18 31 10.7**	**-0.3**
TOLC	**Tolima**	**18.07**	**218**	*e*P		**Pn**		**18 31 13.5**	**-0.2**
PLMC	**San Jos del P**	**18.39**	**221**	*e*P		**P**		**18 31 17.7**	**+0.7**
PCON	**Cinco Dias**	**20.53**	**217**	*e*P		**P**		**18 31 42.2**	**+1.4**
BBAC	**Balboa, Cauca**	**21.26**	**218**	*e*P		**P**		**18 31 47.0**	**-1.4**

*NEIC **24** 18:37:36.2±1.2, 37°.9S±0°.1×179°.7W±0°.1, h10km±2km, Error ellipse: s-maj=19.9km s-min=16.0km az=58.0*
*IDC **24** 18:37:41.3±4.7, 37°.50S×179°.66E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.9/39, mbtmp4.0/4, ML3.6/1, Error ellipse: s-maj=137.3km s-min=34.6km az=148.0*
*WEL **24** 18:37:43.1±0.9, 38°.5±7°.×18°.0E±°, h33km, M3.8/18, ML4.0/18, MLv3.8/18, Error ellipse: s-maj=0.0km s-min=0.0km az=24.8*
ISC 24 18:37:39.0±2.0, 37°.96S±0°.05×179°.99W±0°.07, h15km±10km, n107, σ2902/117, mb4.2/6, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.27**	**276**	P		**Pg**		**18 38 03.5**	**0.0**
WMGZ				S		**Sg**		**18 38 19.4**	**-0.5**
PUZ	**Puketiti**	**1.39**	**265**	P		**Pg**		**18 38 06.5**	**+0.8**
PUZ				S		**Sg**		**18 38 23.3**	**-0.4**
MXZ	**Matakaoa Point**	**1.40**	**286**	P		**Pb**		**18 38 04.5**	**-0.5**
MXZ				S		**Sn**		**18 38 21.5**	**-0.8**
MXZ	**Matakaoa Point**	**1.40**	**286**			**Pn**		**18 38 04.3**	**+0.3**
CNGZ	**Carnagh Statio**	**1.51**	**249**	P		**Pg**		**18 38 09.2**	**+1.2**
TWGZ	**Tauwhareparae**	**1.61**	**262**	P		**Pb**		**18 38 09.4**	**+0.8**
TKGZ	**Te Karaka**	**1.77**	**254**	P		**Pb**		**18 38 12.1**	**+1.0**
TKGZ				S		**Sb**		**18 38 32.5**	**-0.6**
HAZ	**Te Kaha**	**1.77**	**276**	P		**Pb**		**18 38 10.9**	**-0.3**
HAZ				S		**Sb**		**18 38 33.1**	**-0.1**
RUGZ	**Raukumara Rang**	**1.84**	**269**	P		**Pb**		**18 38 11.9**	**-0.6**
RIGZ	**Rimuhau**	**1.92**	**246**	P		**Pb**		**18 38 14.7**	**+1.0**
RIGZ				S		**Sg**		**18 38 39.6**	**-1.1**
PRGZ	**Paritu Road**	**1.93**	**239**	P		**Pb**		**18 38 14.9**	**+1.0**
MWZ	**Matawai**	**1.99**	**258**	P		**Pb**		**18 38 14.1**	**-0.9**
MWZ				S		**Sb**		**18 38 38.9**	**-0.7**

MHGZ	**Mahia Peninsul**	**2.03**	**233**	P		**Pb**	**18 38 16.4**	**+0.8**	
RAGZ	**Rawiri**	**2.11**	**254**	P		**Pb**	**18 38 17.2**	**+0.2**	
KNZ	**Kokohu**	**2.12**	**239**	P		**Pb**	**18 38 17.0**	**-0.1**	
KNZ				S		**Sb**	**18 38 44.0**	**+0.9**	
SNGZ	**Shannon Statio**	**2.25**	**248**	P		**Pb**	**18 38 19.2**	**-0.2**	
SNGZ				S		**Sb**	**18 38 46.9**	**-0.2**	
URZ	**Urewera**	**2.30**	**262**	Pn		**Pb**	**18 38 18.7**	**-1.6**	
	16nm,0.3s,baz=76,slow=4.2,SNR=53								
URZ				Sn		**Sn**	**18 38 46.3**	**+1.7**	
	32nm,0.3s,baz=180,slow=20,SNR=4.6								
URZ	**Urewera**	**2.30**	**262**	P		**Pb**	**18 38 19.2**	**-1.1**	
URZ				S		**Sn**	**18 38 46.2**	**+1.7**	
WHRZ	**Whale Island**	**2.40**	**272**	P		**Pb**	**18 38 21.0**	**-0.9**	
RTZ	**Ruatahuna**	**2.47**	**254**	P		**Pb**	**18 38 22.0**	**-1.2**	
RTZ				S		**Sb**	**18 38 52.1**	**-1.3**	
RAHZ	**Arahi**	**2.48**	**246**	P		**Pb**	**18 38 22.5**	**-0.9**	
EDRZ	**Edgecumbe**	**2.58**	**266**	P		**Pb**	**18 38 23.6**	**-1.5**	
MTHZ	**Maungataniwha**	**2.64**	**249**	P		**Pn**	**18 38 24.0**	**+2.9**	
ARHZ	**Aropaoanui**	**2.69**	**240**	P		**Pb**	**18 38 25.2**	**-1.7**	
NMHZ	**Naumai**	**2.75**	**245**	P		**Pb**	**18 38 26.3**	**-1.8**	
RRRZ	**Republican Roa**	**2.78**	**261**	P		**Pb**	**18 38 26.6**	**-1.8**	
CKHZ	**Cape Kidnapper**	**2.85**	**233**	P		**Pn**	**18 38 27.2**	**+3.2**	
OMRZ	**Omania**	**2.87**	**266**	P		**Pn**	**18 38 27.2**	**+2.8**	
PRRZ	**Plateau Road**	**2.90**	**258**	P		**Pn**	**18 38 27.1**	**+2.5**	
ALRZ	**Allen Road**	**2.95**	**257**	P		**Pb**	**18 38 29.0**	**-2.3**	
MRHZ	**Matea Rd**	**2.95**	**252**	P		**Pn**	**18 38 28.4**	**+2.9**	
KARZ	**Kaharoa**	**2.97**	**268**	P		**Pn**	**18 38 27.0**	**+1.3**	
MCHZ	**McNeill Hill**	**2.98**	**239**	P		**Pn**	**18 38 29.5**	**+3.6**	
BKZ	**Black Stump Fm**	**3.01**	**245**	P		**Pn**	**18 38 29.2**	**+3.1**	
BKZ	**Black Stump Fm**	**3.01**	**245**			**Pn**	**18 38 29.0**	**+2.8**	
KAHZ	**Kahuranaki**	**3.05**	**232**	P		**Pn**	**18 38 30.2**	**+3.4**	
MYRZ	**Mayor Island**	**3.06**	**282**	P		**Pn**	**18 38 28.8**	**+1.8**	
KWHZ	**Kaweka Forest**	**3.16**	**241**	P		**Pn**	**18 38 31.3**	**+3.0**	
PXZ	**Pawanui**	**3.21**	**229**	P		**Pn**	**18 38 31.2**	**+2.3**	
KRHZ	**Kereru**	**3.30**	**238**	P		**Pn**	**18 38 32.8**	**+2.5**	
RITZ	**Rihia Road**	**3.41**	**251**	P		**Pb**	**18 38 37.3**	**-1.9**	
BHHZ	**Black Hill Sta**	**3.44**	**242**	P		**Pn**	**18 38 34.9**	**+2.7**	
RATZ	**Rangitukua**	**3.45**	**253**	P		**Pb**	**18 38 38.4**	**-1.4**	
WPHZ	**Waipukurau**	**3.48**	**232**	P		**Pn**	**18 38 35.4**	**+2.7**	
PRHZ	**Porangahau**	**3.49**	**228**	P		**Pn**	**18 38 35.2**	**+2.4**	
KATZ	**Kakaramea**	**3.53**	**252**	P		**Pb**	**18 38 38.2**	**-3.1**	
PNHZ	**Pukenui**	**3.55**	**235**	P		**Pn**	**18 38 36.6**	**+2.9**	
TMVZ	**Te Maari**	**3.57**	**250**	P		**Pn**	**18 38 36.7**	**+2.7**	
ETVZ	**East Tongariro**	**3.57**	**249**	P		**Pn**	**18 38 36.6**	**+2.6**	
TOZ	**Tahuroa Road**	**3.57**	**272**	P		**Pn**	**18 38 35.5**	**+1.5**	
KRVZ	**Karewarewa**	**3.61**	**250**	P		**Pn**	**18 38 37.9**	**+3.4**	
OTVZ	**Oturere**	**3.61**	**249**	P		**Pn**	**18 38 37.6**	**+3.0**	
KUZ	**Kuaotunu**	**3.62**	**288**	P		**Pn**	**18 38 34.5**	**-0.1**	
MOVZ	**Moawhango**	**3.63**	**245**	P		**Pn**	**18 38 39.0**	**+4.2**	
TUVZ	**Tukino**	**3.65**	**248**	P		**Pn**	**18 38 39.1**	**+3.9**	
WTVZ	**West Tongariro**	**3.65**	**250**	P		**Pn**	**18 38 39.5**	**+4.4**	
NGZ	**Ngauruhoe**	**3.66**	**249**	P		**Pn**	**18 38 39.9**	**+4.6**	
WHVZ	**Whangaehu Hut**	**3.70**	**248**	P		**Pn**	**18 38 40.0**	**+4.0**	
WNVZ	**Wahianoa**	**3.71**	**247**	P		**Pn**	**18 38 39.3**	**+3.3**	
FWVZ	**Far West T-bar**	**3.72**	**248**	P		**Pb**	**18 38 41.2**	**-3.4**	
TSZ	**Takapari Road**	**3.79**	**235**	P		**Pn**	**18 38 39.0**	**+2.1**	
DVHZ	**Dannevirke**	**3.79**	**231**	P		**Pn**	**18 38 39.3**	**+2.4**	
MKAZ	**Moumakai**	**3.94**	**281**	P		**Pn**	**18 38 40.3**	**+1.3**	
BFZ	**

	0.7nm,0.7s,baz=14,slow=9.2,SNR=5.6								
CMAR	**Chiang Mai Arr**	**42.29**	**274**		LR		LR	19 14 28.8	
	comp=Z,15nm,18.9s,baz=192,slow=36								
ASAR	**Alice Springs**	**45.96**	**193**		P		**P**	**18 57 19.5**	**+0.3**
	0.8nm,0.7s,baz=15,slow=9.9,SNR=13								
ZALV	**Zalesovo Beam**	**54.79**	**322**		P		**P**	**18 58 25.2**	**-0.4**
	1.0nm,0.7s,baz=98,slow=7.6,SNR=5.0								
MKAR	**Makanchi Array**	**55.34**	**313**		P		**P**	**18 58 29.1**	**-0.7**
	0.3nm,0.6s,baz=86,slow=7.4,SNR=2.3								
MKAR					LR		LR	19 21 38.2	
	comp=Z,21nm,21.9s,baz=345,slow=36								
ILAR	**Eielson Array**	**61.88**	**27**		P		**P**	**18 59 14.9**	**-0.1**
	0.6nm,1.0s,baz=320,slow=35,SNR=3.3								
YKA	**Yellowknife Ar**	**76.29**	**28**		P		**P**	**19 00 43.5**	**-0.8**
	0.3nm,0.7s,baz=298,slow=4.8,SNR=3.3								
NVAR	**Mina Array Bea**	**82.70**	**52**		P		**P**	**19 01 21.7**	**+1.6**
	0.2nm,0.4s,baz=291,slow=5.3,SNR=1.7								

IDC ***24*** *19:00:10.0±1.2, 7°.11S×125°.48E, h484km±16km, mb2.7/2, mb1 3.2/7, mb1mx2.8/57, mbtmp3.9/7, Error ellipse: s-maj=32.3km s-min=11.9km az=62.0*

NEIC ***24*** *19:00:09.1±1.9, 7°.1S±0°.1×125°.45E±0°.05, h473km±14km, mb4.2/13, Error ellipse: s-maj=16.0km s-min=7.3km az=175.0*

DJA ***24*** *19:00:09.3±0.7, 7°.S±6°×12°.5E±°, h490km±8km, M3.9/13, mb3.8/7, mB4.9/3, MLv4.0/13, Mw(mB)4.1/3*

ISC 24 19:00:09.7±0.6, 7°.17S±0°.06×125°.35E±0°.08, h511km, n44, σ2.932/50, mb3.3/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SOEI	**Soe**	**2.79**	**202**	P		**P**	**19 01 18.9**		**-1.5**
SOEI				S		**S**	**19 02 14.1**		**-3.7**
SOEI	**Soe**	**2.79**	**202**	P		**P**	**19 01 18.8**		**-1.5**
MMRI	**Maumere**	**3.41**	**244**	P		**P**	**19 01 22.0**		**-2.4**
MMRI	**Maumere**	**3.41**	**244**	P		**P**	**19 01 21.9**		**-2.6**
BATI	**Baumata**	**3.45**	**209**	P		**P**	**19 01 23.7**		**-1.1**
	61nm,0.3s,baz=15,slow=1.9,SNR=90								
BATI				S		**S**	**19 02 17.4**		**-8.3**
	18nm,0.3s,baz=28,slow=5.1,SNR=7.8								
BATI	**Baumata**	**3.45**	**209**	P		**P**	**19 01 23.9**		**-0.8**
BATI				S		**S**	**19 02 22.9**		**-2.9**
EDFI	**Ende, Flores**	**3.95**	**246**	P		**P**	**19 01 26.2**		**-2.4**
NLAI	**Namlea**	**4.27**	**24**	P		**P**	**19 01 29.9**		**-1.3**
MSAI	**Masohi**	**5.21**	**43**	P		**P**	**19 01 36.1**		**-3.1**
	0.0nm659nm4.5nm,0.6s								
MSAI				S		**S**	**19 02 50.6**		**-1.6**
	0.0nm659nm4.5nm,0.6s								
BNDI	**Bandanaira**	**5.24**	**60**	P		**P**	**19 01 39.4**		**-0.1**
	0.2nm28nm,1.4s								
BKSI	**Bulukumba**	**5.51**	**289**	P		**P**	**19 01 41.8**		**-0.1**
	0.1nm24nm,0.9s								
WSI	**Waingapu**	**5.58**	**243**	P		**P**	**19 01 40.9**		**-1.7**
	0.7nm57µm116nm,0.4s								
BASI	**Baing, Sumba**	**5.61**	**237**	P		**P**	**19 01 41.7**		**-1.1**
	0.4nm83nm,0.6s								
BNSI	**Bone**	**5.89**	**298**	P		**P**	**19 01 43.1**		**-2.5**
	0.1nm11nm,1.2s								
KAPI	**Kappang**	**5.96**	**291**	P		**P**	**19 01 46.6**		**+0.4**
	1.8nm,0.3s,baz=114,slow=4.3,SNR=7.0								
KAPI	**Kappang**	**5.96**	**291**	P		**P**	**19 01 46.0**		**-0.2**
WBSI	**Waikabubak, Su**	**6.38**	**247**	P		**P**	**19 01 47.9**		**-2.4**
LUWI	**Luwuk**	**6.60**	**337**	P		**P**	**19 01 52.2**		**-0.3**
MTN	**Manton Dam**	**8.02**	**135**	P		**P**	**19 02 06.5**		**-0.1**
FAKI	**Fak Fak**	**8.07**	**59**	P		**P**	**19 02 04.1**		**-3.1**
TNTI	**Ternate**	**8.14**	**14**	P		P	19 02 00.3		-7.6
SIJI	**Sorong**	**8.60**	**44**	P		**P**	**19 02 11.2**		**-1.5**
	0.7nm,0.3s,baz=284,slow=22,SNR=5.1								
SIJI				S		**S**	**19 03 48.0**		**-5.6**
	0.4nm,0.3s,baz=217,slow=20,SNR=1.8								
KNRA	**Kununurra**	**9.10**	**159**	P		**P**	**19 02 18.1**		**+0.4**
TOLI2	**Tolitoli**	**9.40**	**331**	P		**P**	**19 02 20.6**		**-0.3**
FITZ	**Fitzroy Crossi**	**10.87**	**179**	P		**P**	**19 02 37.0**		**+0.6**
	2.9nm,0.3s,baz=5.3,slow=8.6,SNR=223								
FITZ				S		**S**	**19 04 35.4**		**-1.6**
	0.2nm,0.3s,baz=176,slow=18,SNR=3.7								
FITZ	**Fitzroy Crossi**	**10.87**	**179**	P		**P**	**19 02 37.1**		**+0.7**
WB0	**Warramunga Arr**	**15.30**	**146**	P		**P**	**19 03 22.8**		**-0.1**
WB0				IAmb		IAmb	19 03 43.4		
	comp=Z,7.4nm,1.4s								
WRAB	**Tennant Creek**	**15.41**	**146**	P		**P**	**19 03 24.2**		**+0.1**
WRAB				IAmb		IAmb	19 03 27.9		
	comp=Z,6.0nm,1.1s								
WRA	**Warramunga Arr**	**15.41**	**146**	P		**P**	**19 03 24.0**		**-0.1**
	comp=Z,0.6nm,0.3s,baz=322,slow=11,SNR=58								
WRA	**Warramunga Arr**	**15.41**	**146**	P		**P**	**19 03 23.3**		**-0.8**
WB2	**Warramunga Arr**	**15.42**	**146**	P		**P**	**19 03 23.8**		**-0.3**
WB2				IAmb		IAmb	19 03 25.6		
	comp=Z,8.5nm,1.2s								
WR0	**Warramunga Arr**	**15.54**	**146**	P		**P**	**19 03 25.6**		**+0.2**
WR0				IAmb		IAmb	19 03 34.2		
	comp=Z,15nm,1.5s								
SBUM	**Sibu**	**16.21**	**306**	P		**P**	**19 03 32.3**		**-0.2**
SBUM				IAmb		IAmb	19 03 48.6		
	comp=Z,5.9nm,1.2s								
AS31	**Alice Springs**	**18.35**	**154**	P		**P**	**19 03 53.9**		**+1.1**
ASAR	**Alice Springs**	**18.35**	**154**	P		**P**	**19 03 55.0**		**+2.1**
	comp=Z,0.6nm,0.3s,baz=343,slow=14,SNR=42								
ASAR				S		**S**	**19 06 58.2**		**+3.6**
	comp=Z,0.0nm,0.3s,baz=338,slow=20,SNR=14								
ASAR	**Alice Springs**	**18.35**	**154**	P		**P**	**19 03 55.1**		**+2.3**
FORT	**Forrest**	**23.63**	**174**	P		**P**	**19 04 42.7**		**+2.3**
BBOO	**Buckleboo**	**27.39**	**160**	P		**P**	**19 05 16.0**		**+2.4**
STKA	**Stephens Creek**	**28.88**	**150**	P		**P**	**19 05 28.2**		**+1.5**
TPUB	**Ta-pu**	**30.63**	**351**	P		**P**	**19 05 42.1**		**+0.1**
CMAR	**Chiang Mai Arr**	**36.42**	**315**	P		**P**	**19 06 33.3**		**+2.3**
	comp=Z,0.4nm,0.5s,baz=144,slow=6.3,SNR=4.3								
MK31	**Makanchi Array**	**65.91**	**329**	P		**P**	**19 10 07.1**		**+2.4**
MKAR	**Makanchi Array**	**65.91**	**329**	P		**P**	**19 10 07.2**		**+2.5**
	comp=Z,0.5nm,0.6s,baz=118,slow=8.0,SNR=8.8								
TIXI	**Tiksi**	**78.69**	**1**	P		**P**	**19 11 20.1**		**+2.0**
TIXI				IAmb		IAmb	19 11 23.4		
	comp=Z,4.5nm,0.4s								

IDC ***24*** *19:05:00.7±0.5, 43°.09N×45°.68E, h0km, mb3.9/16, mb1 4.0/24, mb1mx3.8/60, mbtmp4.0/24, ML3.7/7, MS2.9/2, Ms1 2.9/2, ms1mx2.3/52, Error ellipse: s-maj=7.4km s-min=6.9km az=175.0*

NEIC ***24*** *19:05:01.4±3.0, 43°.12N±0°.07×45°.89E±0°.05, h10km±1km, mb4.7/39, Error ellipse: s-maj=11.5km s-min=6.2km az=356.0*

NORS ***24*** *19:05:01.6±0.0, 42°.93N×45°.85E, h14km, MPVA5.0, FELT I=III-IV MSK at Chechen-aul, Prigorodnoe, Komsomolskoe, Argun, Atagi, Avtury, Shali*

MOS ***24*** *19:05:01.1±0.0, 43°.02N×45°.85E, h6km, MPVA5.0*

DRS ***24*** *19:05:01.5±0.0, 43°.02N×45°.70E, h14km*

TIF ***24*** *19:05:01.5, 43°.06N×45°.78E, h6km±1km*

NNC ***24*** *19:05:09.5±1.9, 43°.36N×46°.82E, h0km, mb4.1, Error ellipse: s-maj=19.6km s-min=14.4km az=76.0*

ISC 24 19:05:01.7±0.4, 43°.06N±0°.02×45°.86E±0°.01, h12km, n260, σ1.997/345, mb4.2/44, MS3.7/3, 11C-17D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
GROC	**Groznyy**	**0.15**	**343**	*i* Pg		**Pb**	**19 05 07.0**		**+0.5**
GROC				*e*Sg		**Sg**	**19 05 11.2**		**+3.3**
GROC	**Groznyy**	**0.15**	**343**	*i*↓*i*PG		**Pb**	**19 05 07.0**		**+0.5**
GROC				*e*S		**Sg**	**19 05 11.2**		**+3.3**
DVE	**Vedeno**	**0.22**	**116**	*i* Pg		**Pb**	**19 05 07.8**		**+0.2**
DVE				*e*Sg		**Sg**	**19 05 12.3**		**+2.7**
DVE	**Vedeno**	**0.22**	**116**	*i*↓*i*PG		**Pb**	**19 05 07.8**		**+0.2**
DVE				*e*S		**Sg**	**19 05 12.3**		**+2.7**
BTLR	**Botlikh**	**0.47**	**145**	*i* Pg		**Pg**	**19 05 12.0**		**+1.1**
	1µm,0.4s								
BTLR				*e*Sg		**Sb**	**19 05 19.6**		**+0.6**
	15µm,0.5s								
BTLR	**Botlikh**	**0.47**	**145**	*i*↓PG		**Pg**	**19 05 12.1**		**+1.1**
BTLR				*e*S		**Sb**	**19 05 19.6**		**+0.6**
DLMR	**Dylym**	**0.57**	**88**	*e*Pg		**Pb**	**19 05 14.5**		**+1.0**
DLMR				*e*Sg		**Sn**	**19 05 24.1**		**-0.8**
DLMR	**Dylym**	**0.57**	**88**	*e*PG		**Pb**	**19 05 14.5**		**+1.0**
DLMR				*e*S		**Sn**	**19 05 24.0**		**-0.8**
DBC	**Dubki**	**0.71**	**92**	*i* Pg		**Pb**	**19 05 16.7**		**+0.6**
	501nm,0.6s								
DBC				*e*Sg		**Sb**	**19 05 27.5**		**+1.6**
	3µm,0.4s								
DBC	**Dubki**	**0.71**	**92**	*i*↑*i*PG		**Pb**	**19 05 16.7**		**+0.6**
DBC				*e*S		**Sb**	**19 05 27.5**		**+1.6**
DBC				pmax		pmax			
	comp=Z,501nm,0.6s								
KMGR	**Komgaron**	**0.73**	**271**	*e*Pg		**Pb**	**19 05 17.3**		**+1.0**
KMGR				*e*Sg		**Sn**	**19 05 28.0**		**-0.9**
KMGR	**Komgaron**	**0.73**	**271**	*e*PG		**Pb**	**19 05 17.3**		**+1.0**
KMGR				*e*S		**Sn**	**19 05 28.0**		**-0.9**
UNCR	**Uncukul**	**0.77**	**116**	*i* Pg		**Pb**	**19 05 17.8**		**+0.8**
UNCR				*e*Sg		**Sn**	**19 05 29.5**		**-0.4**
UNCR	**Uncukul**	**0.77**	**116**	*i*↓*i*PG		**Pb**	**19 05 17.8**		**+0.8**
UNCR				*e*S		**Sn**	**19 05 29.5**		**-0.4**
UNCR				pmax		pmax			
	comp=Z,604nm,0.4s								
KRNR	**Karanay**	**0.80**	**106**	*i* Pg		**Pb**	**19 05 18.1**		**+0.5**
KRNR				*i* Pg		**Pb**	**19 05 18.1**		**+0.5**
KRNR	**Karanay**	**0.80**	**106**	*i*↓*e*PG		**Pb**	**19 05 18.6**		**+1.0**
KRNR				*e*			19 05 29.7		
XNZR	**Khunzakh**	**0.81**	**129**	*e*Pg		**Pg**	**19 05 18.1**		**+0.8**
XNZR				*e*Sg		**Sb**	**19 05 29.8**		**+1.2**
XNZR	**Khunzakh**	**0.81**	**129**	*e*PG		**Pg**	**19 05 18.1**		**+0.8**
XNZR				*e*S		**Sb**	**19 05 29.8**		**+1.2**
VLKR	**Vladikavkaz**	**0.87**	**270**	*i* Pg		**Pn**	**19 05 20.3**		**+0.5**
VLKR				*e*Sg		**Sn**	**19 05 34.0**		**+1.7**
VLKR	**Vladikavkaz**	**0.87**	**270**	*e*PG		**Pn**	**19 05 20.0**		**+0.3**
VLKR				*e*S		**Sn**	**19 05 34.0**		**+1.7**
BUJR	**Buynaksk**	**0.95**	**104**	*i* Pg		**Pn**	**19 05 22.5**		**+1.7**
	comp=Z,981nm,0.6s								
BUJR				*e*Sg		**Sn**	**19 05 37.6**		**+3.4**
	comp=Z,7µm,0.5s								
BUJR	**Buynaksk**	**0.95**	**104**	*e*PG		**Pn**	**19 05 22.3**		**+1.5**
BUJR				*e*			19 05 36.9		
BUJR				pmax		pmax			
	comp=Z,981nm,0.5s								
BUJR				smax		smax			
	comp=N,5µm,0.3s								
ARKR	**Arakani**	**0.95**	**118**	*e*Pg		**Pb**	**19 05 21.1**		**+0.9**
ARKR				*e*Sg		**Sn**	**19 05 34.9**		**+0.5**
ARKR	**Arakani**	**0.95**	**118**	*i*↓*i*PG		**Pb**	**19 05 21.0**		**+0.9**
ARKR				*e*			19 05 34.8		
BTKR	**Batakoyurt**	**1.01**	**289**	*e*Pg		**Pn**	**19 05 23.1**		**+1.4**
BTKR				*e*Sg		**Sn**	**19 05 38.9**		**+3.0**
BTKR	**Batakoyurt**	**1.01**	**289**	*e*PG		**Pn**	**19 05 23.0**		**+1.3**
BTKR				*e*S		**Sn**	**19 05 38.8**		**+2.9**
GNBR	**Gunib**	**1.05**	**129**	*i* Pg		**Pn**	**19 05 23.6**		**+1.3**
	comp=N,1µm,0.4s								
GNBR				*e*Sg		**Sn**	**19 05 39.0**		**+2.1**
	comp=N,7µm,0.5s								
GNBR	**Gunib**	**1.05**	**129**	*i*↓*e*PG		**Pn**	**19 05 23.3**		**+1.0**
GNBR				*e*S		**Sn**	**19 05 38.4**		**+1.5**
TRKR	**Terskaya**	**1.06**	**310**	*e*Pg		**Pn**	**19 05 24.1**		**+1.8**
TRKR				*e*Sg		**Sn**	**19 05 39.7**		**+2.7**
TRKR	**Terskaya**	**1.06**	**310**	*e*PG		**Pn**	**19 05 23.1**		**+0.8**
TRKR				*e*S		**Sn**	**19 05 39.6**		**+2.7**
ARNR	**Ardon**	**1.16**	**277**	*i* Pg		**Pg**	**19 05 25.2**		**+1.2**
ARNR				*e*Sg		**Sn**	**19 05 43.0**		**+3.5**
ARNR	**Ardon**	**1.16**	**277**	*i*↓*i*PG		**Pg**	**19 05 25.2**		**+1.2**
ARNR				*e*S		**Sn**	**19 05 43.0**		**+3.5**
LACR	**Lac**	**1.17**	**259**	*e*Pg		**Pb**	**19 05 23.7**		**-0.2**
LACR	**Lac**	**1.17**	**259**	*e*PG		**Pb**	**19 05 23.7**		**-0.2**
LACR				*e*S		**Sg**	**19 05 39.8**		**+0.4**
GUDG	**Gudauri**	**1.18**	**240**	P		**Pb**	**19 05 24.1**		**0.0**
GUDG				S		**Sb**	**19 05 39.0**		**-0.3**
GUDG	**Gudauri**	**1.18**	**240**	*i*↑*i*PG		**Pb**	**19 05 24.2**		**+0.2**
MAK	**Makhachkala**	**1.21**	**94**	*d i*PG		**Pg**	**19 05 27.2**		**+2.2**
MAK				*e*			19 05 45.6		
MAK				pmax		pmax			
	comp=Z,840nm,0.2s								
MAK				smax		smax			
	comp=E,6µm,0.4s								
MAK				smax		smax			
	comp=E,7µm,0.3s								
LGD	**Lagodekhi**	**1.25**	**167**	P		**Pg**	**19 05 26.2**		**+0.5**
LGD				S		**Sg**	**19 05 43.3**		**+1.4**
LGD	**Lagodekhi**	**1.25**	**167**	*e*Pg		**Pg**	**19 05 26.2**		**+0.5**
LGD				*e*Sg		**Sg**	**19 05 43.3**		**+1.4**
LGD	**Lagodekhi**	**1.25**	**167**	*e*PG		**Pg**	**19 05 26.2**		**+0.5**
KMKR	**Kumukh**	**1.30**	**135**	*i* Pg		**Pg**	**19 05 28.0**		**+1.3**
	comp=E,552nm,0.3s								
KMKR				*e*Sg		**Sg**	**19 05 46.0**		**+2.4**
	comp=E,3µm,0.8s								
KMKR	**Kumukh**	**1.30**	**135**	*i*↓*i*PG		**Pg**	**19 05 28.0**		**+1.3**
KMKR				*e*S		**Sg**	**19 05 46.0**		**+2.4**
KMKR				pmax		pmax			
	comp=Z,552nm,0.3s								
KORR	**Kora**	**1.31**	**272**	*e*Pg		**Pg**	**19 05 27.0**		**+0.1**
KORR				*e*Sg		**Sg**	**19 05 46.5**		**+2.5**
KORR	**Kora**	**1.31**	**272**	*e*PG		**Pb**	**19 05 26.8**		**+0.5**
KORR				*e*S		**Sg**	**19 05 46.5**		**+2.5**
PRTR	**Priterechnaya**	**1.34**	**302**	*e*Pg		**Pg**	**19 05 28.1**		**+0.7**
PRTR				*e*Sg		**Sg**	**19 05 48.0**		**+3.0**
PRTR	**Priterechnaya**	**1.34**	**302**	*e*PG		**Pg**	**19 05 28.2**		**+0.7**
PRTR				*e*S		**Sg**	**19 05 47.8**		**+2.9**
STDR	**Stavd-Durt**	**1.35**	**284**	*e*Pg		**Pg**	**19 05 28.5**		**+0.9**
STDR				*e*Sg		**Sg**	**19 05 48.1**		**+3.0**
STDR	**Stavd-Durt**	**1.35**	**284**	*e*PG		**Pg**	**19 05 28.5**		**+0.9**
STDR				*e*S		**Sg**	**19 05 48.0**		**+3.0**
SGKR	**Sergokala**	**1.45**	**114**	*i* Pg		**Pg**	**19 05 31.2**		**+1.6**
SGKR				*e*Sg		**Sg**	**19 05 51.7**		**+3.3**
SGKR	**Sergokala**	**1.45**	**114**	*i*↓*i*PG		**Pg**	**19 05 30.8**		**+1.2**
SGKR				*e*			19 05 53.4		
ZEI	**Tsey**	**1.46**	**260**	*e*PG		**Pn**	**19 05 28.5**		**+0.4**
LSNR	**Lesken**	**1.50**	**279**	*i* Pg		**Pg**	**19 05 30.6**		**+0.1**
LSNR				*e*Sg		**Sg**	**19 05 51.7**		**+1.6**
LSNR	**Lesken**	**1.50**	**279**	*i*↓*i*PG		**Pg**	**19 05 30.6**		**+0.1**
LSNR				*e*S		**Sg**	**19 05 51.7**		**+1.6**
SEAG	**Tbilisi Sea**	**1.51**	**212**	P		**Pg**	**19 05 31.4**		**+0.8**
SEAG				S		**Sg**	**19 05 52.2**		**+2.0**
SEAG	**Tbilisi Sea**	**1.51**	**212**	*e*Pg		**Pg**	**19 05 31.4**		**+0.8**
SEAG				*e*Sg		**Sg**	**19 05 52.2**		**+2.0**
SEAG	**Tbilisi Sea**	**1.51**	**212**	PN		**Pg**	**19 05 31.4**		**+0.8**
URKR	**Urkarakh**	**1.58**	**124**	*e*Pg		**Pg**	**19 05 32.9**		**+0.9**
	comp=Z,653nm,0.5s								
URKR				*e*Sg		**Sg**	**19 05 54.9**		**+2.3**
	comp=Z,1µm,0.6s								
URKR	**Urkarakh**	**1.58**	**124**	*e*PN		**Pg**	**19 05 32.7**		**+0.6**
URKR				*e*S		**Sg**	**19 05 54.1**		**+1.5**
DIGR	**Digorskoe uzhe**	**1.68**	**265**	*e*Pg		**Pb**	**19 05 32.3**		**-0.3**
DIGR	**Digorskoe uzhe**	**1.68**	**265**	*e*PN		**Pb**	**19 05 32.3**		**-0.3**
ONI	**Oni**	**1.83**	**256**	P		**Pb**	**19 05 34.9**		**-0.2**
ONI				S		**Sb**	**19 05 58.9**		**+0.9**
ONI	**Oni**	**1.83**	**256**	*e*Pg		**Pb**	**19 05 35.2**		**+0.1**
ONI				*e*Sg		**Sg**	**19 05 59.8**		**-0.7**
ONI	**Oni**	**1.83**	**256**	*e*PN		**Pb**	**19 05 35.2**		**+0.1**
KZRT	**Kazreti**	**1.99**	**214**	P		**Pb**	**19 05 37.6**		**-0.2**
KZRT				S		**Sb**	**19 06 04.5**		**+2.0**
KZRT	**Kazreti**	**1.99**	**214**	*e*Pg		**Pb**	**19 05 37.6**		**-0.2**
KZRT				*e*Sg		**Sb**	**19 06 04.5**		**+2.0**
KZRT	**Kazreti**	**1.99**	**214**	PN		**Pb**	**19 05 37.6**		**-0.2**
SEKA	**Sheki**	**2.10**	**151**	PN		**Pb**	**19 05 40.0**		**+0.4**
AKT	**Akhty**	**2.10**	**138**	*i* Pg		**Pb**	**19 05 40.5**		**+0.7**
	comp=Z,372nm,0.4s								
AKT				*e*Sg		**Sb**	**19 06 08.2**		**+2.4**
	comp=Z,1µm,0.3s								
AKT	**Akhty**	**2.10**	**138**	*i*↓*i*PN		**Pb**	**19 05 40.4**		**+0.7**
AKT				S		**Sb**	**19 06 08.2**		**+2.4**
AKT				pmax		pmax			
	comp=Z,372nm,0.4s								
BKRG	**Bakuriani**	**2.16**	**234**	P		**Pn**	**19 05 39.6**		**+2.0**
BKRG				S		**Sb**	**19 06 08.5**		**+0.9**
BKRG	**Bakuriani**	**2.16**	**234**	*e*Pg		**Pn**	**19 05 39.6**		**+2.0**
BKRG				*e*Sg		**Sb**	**19 06 08.5**		**+0.9**
BKRG	**Bakuriani**	**2.16**	**234**	PN		**Pn**	**19 05 39.6**		**+2.0**
BKRG				S		**Sb**	**19 06 08.5**		**+0.9**
TKB	**Tkibuli**	**2.23**	**253**	P		**Pb**	**19 05 40.6**		**-1.2**
TKB				S		**Sb**	**19 06 10.7**		**+1.3**
TKB	**Tkibuli**	**2.23**	**253**	*e*Pg		**Pb**	**19 05 40.6**		**-1.2**
TKB				*e*Sg		**Sb**	**19 06 10.7**		**+1.3**
TKB	**Tkibuli**	**2.23**	**253**	PN		**Pb**	**19 05 40.6**		**-1.2**
TKB				S		**Sb**	**19 06 10.7**		**+1.3**
KBZ	**Khabaz**	**2.26**	**288**	Pn		**Pn**	**19 05 39.0**		**+0.2**
	comp=Z,8.5nm,0.3s,baz=104,slow=5.3,SNR=187								
KBZ				Pg		**Pb**	**19 05 42.3**		**-0.1**
	comp=Z,26nm,0.3s,baz=128,slow=12,SNR=40								
KBZ				Lg		Lg	19 06 08.8		
	comp=Z,28nm,0.3s,baz=126,slow=19,SNR=4.2								
AKH	**Akhalkalaki**	**2.41**	**228**	P		**Pb**	**19 05 44.0**		**-1.0**
AKH				S		**Sb**	**19 06 14.2**		**-0.4**
AKH	**Akhalkalaki**	**2.41**	**228**	P		**Pn**	**19 05 43.4**		**+2.4**
AKH				S		**Sb**	**19 06 15.3**		**+0.6**
AKH	**Akhalkalaki**	**2.41**	**228**	*e*Pn		**Pb**	**19 05 44.0**		**-1.0**
AKH				*e*Sn		**Sb**	**19 06 14.2**		**-0.4**
AKH	**Akhalkalaki**	**2.41**	**228**	PN		**Pb**	**19 05 44.0**		**-1.0**
AKH				S		**Sb**	**19 06 14.2**		**-0.4**
AKH	**Akhalkalaki**	**2.41**	**228**	Pn		**Pn**	**19 05 43.5**		**+2.4**
BEYR	**Belyy Ugol+**	**2.41**	**294**	*e*PN		**Pn**	**19 05 41.3**		**+0.4**
BEYR				*e*S		**Sn**	**19 06 10.3**		**-0.1**
GANJ	**Ganja**	**2.43**	**172**	PN		**Pb**	**19 05 44.0**		**-1.3**
BGD	**Bogdanovka**	**2.45**	**224**	P		**Pb**	**19 05 44.6**		**-1.2**
BGD				S		**Sb**	**19 06 16.1**		**0.0**
BGD	**Bogdanovka**	**2.45**	**224**	*e*Pn		**Pb**	**19 05 44.6**		**-1.2**
BGD				*e*Sn		**Sb**	**19 06 16.1**		**0.0**
BGD	**Bogdanovka**	**2.45**	**224**	PN		**Pb**	**19 05 44.6**		**-1.2**
BGD				S		**Sb**	**19 06 16.1**		**0.0**
MNGR	**Mingechevir, A**	**2.46**	**158**	PN		**Pb**	**19 05 45.9**		**+0.2**
KVAR	**Kislovodsk Arr**	**2.47**	**292**	Pn		**Pn**	**19 05 43.2**		**+1.4**
	baz=90,slow=20,SNR=20								
KVAR				Sn		**Sn**	**19 06 12.3**		**+0.3**
	baz=175,slow=12,SNR=7.6								
KIV	**Kislovodsk**	**2.48**	**292**	P		**Pn**	**19 05 41.9**		**0.0**
KIV				S		**Sn**	**19 06 11.2**		**-0.9**
KIV	**Kislovodsk**	**2.48**	**292**	PN		**Pn**	**19 05 42.2**		**+0.3**
KIV	**Kislovodsk**	**2.48**	**292**			**Pn**	**19 05 42.2**		**+0.3**
ALER	**Alexandrovskoy**	**2.73**	**310**	*e*PN		**Pn**	**19 05 46.6**		**+1.3**
ALER				*e*S		**Sn**	**19 06 19.6**		**+1.4**
GOF	**Gofitskoye**	**2.85**	**316**	*i*↑*i*PN		**Pn**	**19 05 48.8**		**+1.8**
GOF				*e*S		**Sn**	**19 06 24.3**		**+3.1**
GOF				pmax		pmax			
	comp=Z,99nm,0.2s								
GOF				smax		smax			
	comp=E,2µm,0.2s								
GOF				smax		smax			
	comp=N,1µm,0.2s								
GNI	**Garni**	**3.02**	**196**	Pn		**Pb**	**19 05 53.1**		**-2.4**
	comp=N,19nm,0.3s,baz=327,slow=3.6,SNR=69								
GNI				Pg		**Pg**	**19 05 57.7**		**-1.8**
	comp=N,42nm,0.3s,baz=14,slow=6.5,SNR=33								
GNI				Lg		Lg	19 06 36.6		
	comp=N,44nm,0.3s,baz=35,slow=11,SNR=4.4								
GNI	**Garni**	**3.02**	**196**	P		**Pn**	**19 05 52.7**		**+3.2**
GNI				S		**Sb**	**19 06 31.6**		**-0.8**
GNI	**Garni**	**3.02**	**196**			**Pn**	**19 05 50.8**		**+1.3**
KARS	**Kars**	**3.19**	**222**	*e*P		**Pn**	**19 05 54.7**		**+2.9**
TASB	**TASBURUN-IGDIR**	**3.30**	**202**	P		**Pn**	**19 05 56.6**		**+3.4**
ARXR	**Arkhyz**	**3.38**	**280**	*i*↓*e*PN		**Pn**	**19 05 56.6**		**+2.2**
ARXR				*e*S		**Sn**	**19 06 37.6**		**+3.0**
SENK	**Senkaya-Erzuru**	**3.62**	**228**	P		**Pn**	**19 06 00.2**		**+2.5**
NAX	**Nakhchivan**	**3.89**	**184**	PN		**Pn**	**19

KLMR	**Klimovskoe**	**18.23**	**350**	*e*Pn		**Pn**	**19 09 10.8**	**-3.5**
KLMR				AMP			19 09 21.9	
	comp=Z,9.0nm,0.8s							
KLMR				*e*Sn		**Sn**	**19 12 31.2**	**-6.3**
KLMR				*e*Sn		**Sn**	**19 12 31.2**	**-6.3**
BTK	**Batken**	**18.90**	**91**	P		**P**	**19 09 21.3**	**-0.8**
BTK				pmax	pmax			
	comp=Z,8.0nm,0.5s							
BTK	**Batken**	**18.90**	**91**	P		**P**	**19 09 21.3**	**-0.8**
BTK				IAmb	IAmb		19 09 25.0	
	comp=Z,7.7nm,0.5s							
BRVK	**Borovoye**	**19.06**	**50**	⇑P		**Pn**	**19 09 25.3**	**+0.9**
	comp=Z,6.6nm,0.6s							
BRVK	**Borovoye**	**19.06**	**50**	*i* P		**Pn**	**19 09 25.5**	**+1.1**
BRVK				pmax	pmax			
	comp=Z,7.0nm,0.6s							
BRVK	**Borovoye**	**19.06**	**50**			**P**	**19 09 22.5**	**-1.1**
BRVK				IAmb	IAmb		19 09 29.4	
	comp=Z,9.3nm,0.7s							
BVAR	**Borovoye Array**	**19.11**	**50**	P		**Pn**	**19 09 25.1**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=270,slow=16,SNR=7.8							
BVAR				S		Sn	19 12 48.4	-10
	comp=Z,0.5nm,0.3s,baz=307,slow=18,SNR=4.2							
DRK	**Karamyk**	**19.80**	**92**			**P**	**19 09 31.7**	**-0.5**
DRK				IAmb	IAmb		19 09 37.7	
	comp=Z,25nm,0.3s							
KBL	**Kabul**	**19.92**	**108**	P		**P**	**19 09 31.4**	**-2.1**
KBL				pmax	pmax			
	comp=Z,7.0nm,1.2s							
KBL	**Kabul**	**19.92**	**108**	P		**P**	**19 09 31.4**	**-2.1**
ARSB	**Arslanbob**	**20.14**	**86**	P		**P**	**19 09 36.4**	**+0.6**
ARSB				pmax	pmax			
	comp=Z,5.0nm,0.9s							
ARSB	**Arslanbob**	**20.14**	**86**	P		**P**	**19 09 36.4**	**+0.6**
AAK	**Ala-Archa**	**20.96**	**81**	P		Pn	19 09 46.5	-0.7
	comp=Z,6.7nm,0.7s,baz=253,slow=7.7,SNR=21							
VRAC	**Vranov**	**21.12**	**297**	LR		LR	19 20 44.1	
	comp=Z,62nm,18.1s,baz=52,slow=45							
TKM2	**Tokmak 2**	**21.71**	**80**	⇑P		**P**	**19 09 53.4**	**+0.7**
	comp=Z,4.2nm,0.7s							
TKM2	**Tokmak 2**	**21.71**	**80**	P		**P**	**19 09 53.4**	**+0.7**
FINES	**FINESS Array B**	**21.88**	**334**	P		**P**	**19 09 53.8**	**-0.3**
	comp=Z,2.3nm,0.4s,baz=144,slow=11,SNR=18							
FINES	**FINESS Array B**	**21.88**	**334**	*i* P		**P**	**19 09 54.5**	**+0.4**
FINES				pmax	pmax			
	comp=Z,2.0nm,0.4s							
FINES	**FINESS Array B**	**21.88**	**334**	P		**P**	**19 09 53.6**	**-0.5**
KSH	**Kashi**	**22.84**	**89**	*e*P		**P**	**19 10 05.0**	**+0.2**
KSH				pmax	pmax			
	comp=Z,17nm,0.9s							
KSH				pmax	pmax			
	comp=Z,200nm,5.0s							
GEC2B	**GERESS ARRAY S**	**22.98**	**296**	P		**P**	**19 10 07.4**	**+1.3**
GERES	**GERESS Array B**	**22.98**	**296**	P		**P**	**19 10 05.9**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=101,slow=9.5,SNR=7.7							
NIL	**Nilore**	**23.36**	**105**	P		**P**	**19 10 09.8**	**-0.2**
NIL				pmax	pmax			
	comp=Z,10.0nm,1.1s							
NIL	**Nilore**	**23.36**	**105**	P		**P**	**19 10 09.8**	**-0.2**
NIL				IAmb	IAmb		19 10 14.0	
	comp=Z,10nm,1.1s							
KURBB	**Kurchatov Arra**	**23.45**	**60**	P		**P**	**19 10 11.9**	**+1.2**
	comp=Z,1.3nm,0.6s,baz=269,slow=12,SNR=20							
KURBB	**Kurchatov Arra**	**23.45**	**60**	⇓P		**P**	**19 10 12.3**	**+1.6**
	comp=Z,2.9nm,0.7s							
KURBB	**Kurchatov Arra**	**23.45**	**60**	P		**P**	**19 10 12.3**	**+1.6**
KURK	**Kurchatov**	**23.52**	**60**	P		**P**	**19 10 11.9**	**+0.5**
KURK	**Kurchatov**	**23.52**	**60**	P		**P**	**19 10 11.8**	**+0.5**
CLL	**Collm**	**23.65**	**302**	*e*P		**P**	**19 10 14.0**	**+1.4**
CLL				*e*			19 10 34.0	
CLL	**Collm**	**23.65**	**302**	*e*P		**P**	**19 10 14.0**	**+1.4**
AQU	**L'Aquila**	**23.79**	**279**	P		**P**	**19 10 15.0**	**+0.9**
AQU				pmax	pmax			
	comp=Z,21nm,1.4s							
AQU	**L'Aquila**	**23.79**	**279**	P		**P**	**19 10 15.0**	**+0.9**
AQU				IAmb	IAmb		19 10 22.6	
	comp=Z,21nm,1.4s							
MURB	**Monte Urbino**	**24.23**	**282**	P		**P**	**19 10 15.7**	**-2.6**
MURB				IAmb	IAmb		19 10 36.1	
	comp=Z,10nm,0.9s							
WTTA	**Wattenberg**	**24.37**	**292**	*i* P		**P**	**19 10 19.8**	**+0.1**
	comp=Z,2.7nm,0.6s							
WATA	**Walderalm**	**24.41**	**292**	*e*P		**P**	**19 10 20.4**	**+0.4**
	comp=Z,5.2nm,1.2s							
CTI	**Castel Tesino**	**24.45**	**289**	P		**P**	**19 10 19.6**	**-0.7**
CTI				pmax	pmax			
	comp=Z,4.0nm,0.8s							
CTI	**Castel Tesino**	**24.45**	**289**	P		**P**	**19 10 19.6**	**-0.7**
CTI				IAmb	IAmb		19 10 28.9	
	comp=Z,3.7nm,0.8s							
SQTA	**Sankt Quirin**	**24.67**	**292**	*i* P		**P**	**19 10 22.9**	**+0.6**
	comp=Z,5.6nm,1.1s							
MOTA	**Moosalm**	**24.73**	**292**	*e*P		**P**	**19 10 24.4**	**+1.5**
	comp=Z,2.5nm,0.8s							
FETA	**Feichten**	**25.01**	**291**	*i* P		**P**	**19 10 27.3**	**+1.8**
	comp=Z,2.3nm,0.5s							
DAVOX	**Davos/Dischmat**	**25.61**	**291**	P		**P**	**19 10 30.9**	**0.0**
	comp=Z,2.0nm,0.6s,baz=113,slow=13,SNR=4.7							
HFS	**Hagfors**	**25.91**	**322**	P		**P**	**19 10 33.4**	**+0.1**
	comp=Z,3.6nm,0.6s,baz=131,slow=11,SNR=11							
MK31	**Makanchi Array**	**25.91**	**69**	P		**P**	**19 10 34.3**	**+0.8**
MK31				pmax	pmax			
	comp=Z,5.0nm,1.3s							
MK31	**Makanchi Array**	**25.91**	**69**	P		**P**	**19 10 34.3**	**+0.8**
MK31				IAmb	IAmb		19 10 42.8	
	comp=Z,5.3nm,1.2s							
MKAR	**Makanchi Array**	**25.91**	**69**	P		**P**	**19 10 34.7**	**+1.2**
	comp=Z,1.1nm,0.3s,baz=267,slow=8.4,SNR=28							
MKAR	**Makanchi Array**	**25.91**	**69**	P		**P**	**19 10 34.2**	**+0.7**
MKAR	**Makanchi Array**	**25.91**	**69**	P		**P**	**19 10 34.2**	**+0.7**
NB2	**NORSAR Subarra**	**27.41**	**323**	P		**P**	**19 10 46.1**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=118,slow=9.3							
NOA	**NORSAR Array B**	**27.41**	**323**	P		**P**	**19 10 46.6**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=118,slow=8.5,SNR=3.0							
ZALV	**Zalesovo Beam**	**27.68**	**53**	P		**P**	**19 10 52.0**	**+2.8**
	comp=Z,0.3nm,0.3s,baz=269,slow=12,SNR=2.4							
ZALV	**Zalesovo Beam**	**27.68**	**53**	P		**P**	**19 10 52.0**	**+2.8**
ARD4	**ARCESS Array S**	**28.53**	**345**	P		**P**	**19 10 55.8**	**-0.9**
ARD4				IAmb	IAmb		19 11 03.0	
	comp=Z,14nm,1.1s							
ARD5	**ARCESS Array S**	**28.53**	**345**	P		**P**	**19 10 56.2**	**-0.5**
ARD5				IAmb	IAmb		19 11 00.9	
	comp=Z,39nm,1.4s							
ARD6	**ARCESS Array S**	**28.53**	**345**	P		**P**	**19 10 55.4**	**-1.3**
ARD6				IAmb	IAmb		19 11 00.9	
	comp=Z,27nm,1.4s							
ARC4	**ARCESS Array S**	**28.53**	**345**	P		**P**	**19 10 55.2**	**-1.6**
ARD3	**ARCESS Array S**	**28.53**	**345**	P		**P**	**19 10 55.6**	**-1.2**
ARD3				IAmb	IAmb		19 11 23.9	
	comp=Z,21nm,1.3s							
ARC3	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 54.9**	**-1.9**
ARC3				IAmb	IAmb		19 11 03.4	
	comp=Z,14nm,1.1s							
ARB3	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.3**	**-1.4**
ARC5	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.1**	**-1.7**
ARC5				IAmb	IAmb		19 11 00.7	
	comp=Z,41nm,1.4s							
ARA2	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.1**	**-1.7**
ARB2	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.2**	**-1.6**
ARB2				IAmb	IAmb		19 11 03.3	
	comp=Z,32nm,1.4s							
ARA0	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.1**	**-1.7**
ARB4	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.2**	**-1.6**
ARC2	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.1**	**-1.7**
ARC2				IAmb	IAmb		19 11 03.2	
	comp=Z,31nm,1.4s							
ARCES	**ARCESS Array B**	**28.54**	**345**	P		**P**	**19 10 57.5**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=74,slow=5.2,SNR=6.3							
ARA1	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.2**	**-1.6**
ARA3	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.1**	**-1.7**
ARB1	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.9**	**-0.9**
ARB1				IAmb	IAmb		19 11 03.2	
	comp=Z,35nm,1.4s							
ARB5	**ARCESS Array S**	**28.54**	**345**	P		**P**	**19 10 55.9**	**-0.9**
ARB5				IAmb	IAmb		19 11 03.3	
	comp=Z,34nm,1.4s							
ARC1	**ARCESS Array S**	**28.55**	**345**	P		**P**	**19 10 56.0**	**-0.9**
ARC1				IAmb	IAmb		19 11 03.2	
	comp=Z,40nm,1.4s							
KEST	**Kesra**	**28.98**	**268**	P		**P**	**19 11 01.5**	**+0.4**
	comp=Z,2.1nm,0.6s,baz=334,slow=3.9,SNR=4.7							
KEST	**Kesra**	**28.98**	**268**	P		**P**	**19 11 01.4**	**+0.4**
KEST				IAmb	IAmb		19 11 25.2	
	comp=Z,9.9nm,1.4s							
WMQ	**Urumqi**	**30.16**	**74**	*e*P		**P**	**19 11 13.8**	**+2.3**
WMQ				pP	pP		19 11 16.6	+1.2
WMQ				sP	sP		19 11 20.4	+3.5
WMQ				pmax	pmax			
	comp=Z,18nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,160nm,4.9s							
PYUN	**Piuthan**	**33.39**	**104**	*e*P		P	19 11 32.7	-7.5
	comp=Z,11nm,0.3s							
EKB3	**Eskdalemuir Ar**	**33.60**	**309**	P		**P**	**19 11 40.2**	**-1.3**
EKB2	**Eskdalemuir Ar**	**33.61**	**309**	P		**P**	**19 11 40.2**	**-1.3**
SPITS	**Spitsbergen Ar**	**37.14**	**350**	P		**P**	**19 12 12.7**	**+1.0**
	comp=Z,1.6nm,0.4s,baz=142,slow=11,SNR=23							
GTA	**Gaotai**	**40.16**	**76**	⇓P		**P**	**19 12 38.9**	**+1.2**
GTA				pP	sP		19 12 43.6	+0.5
GTA				sP	pP		19 12 46.0	+4.4
GTA				pmax	pmax			
	comp=Z,2.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,47nm,5.5s							
GTA				LR	LR			
	comp=N,61nm,14.9s							
GTA				LR	LR			
	comp=E,83nm,14.9s							
GTA				LR	LR			
	comp=Z,97nm,16.0s							
SONM	**Songino Array**	**41.79**	**62**	P		**P**	**19 12 51.7**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=274,slow=8.5,SNR=1.6							
LZH	**Lanzhou**	**44.47**	**79**	*e*P		**P**	**19 13 12.0**	**-0.8**
LZH				pP	pP		19 13 16.3	-0.5
LZH				sP	sP		19 13 19.5	+1.2
LZH				pmax	pmax			
	comp=Z,16nm,1.6s							
LZH				pmax	pmax			
	comp=Z,83nm,5.3s							
HHC	**Hu-ho-hao-te**	**47.78**	**69**	*e*P		**P**	**19 13 38.8**	**0.0**
HHC				pmax	pmax			
	comp=Z,13nm,0.7s							
HHC				pmax	pmax			
	comp=Z,120nm,6.2s							
TORD	**Torodi Ar. Bea**	**48.24**	**245**	P		**P**	**19 13 42.2**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=31,slow=8.1,SNR=9.9							
CHTO	**Chiang Mai**	**50.58**	**101**	P		**P**	**19 13 59.3**	**-1.0**
CHTO				pmax	pmax			
	comp=Z,2.0nm,0.9s							
CHTO	**Chiang Mai**	**50.58**	**101**	P		**P**	**19 13 59.3**	**-1.0**
CMAR	**Chiang Mai Arr**	**50.80**	**102**	P		**P**	**19 14 04.2**	**+2.2**
	comp=Z,0.5nm,0.6s,baz=299,slow=8.7,SNR=5.1							
DBIC	**Dimbokro**	**57.35**	**246**	P		**P**	**19 14 49.6**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=48,slow=6.6,SNR=1.9							
DBIC	**Dimbokro**	**57.35**	**246**	P		**P**	**19 14 49.4**	**-0.4**
DBIC				IAmb	IAmb		19 15 07.7	
	comp=Z,15nm,1.4s							
BILL	**Bilibino**	**60.61**	**22**	*i* P		**P**	**19 15 16.5**	**+4.8**
BILL				*i*			19 15 56.8	
BILL				*i*			19 17 24.5	
BILL				pmax	pmax			
	comp=Z,4.0nm,1.3s							
BILL				MLR	MLR			
	comp=Z,39nm,15.0s							

IDC ***24*** *19:05:57.5±0.6,36.91N×98.22W,h0km,mb4.1/8, mb1 4.2/15,mb1mx3.9/57,mbtmp4.0/15,ML3.2/5,MS3.1/6, Ms1 3.1/6,ms1mx2.7/48,Error ellipse: s-maj=13.2km s-min=9.8km az=127.0*

NEIC ***24*** *19:05:57.1±2.2,36.84N±0.04×98.33W±0.04,h5km±1km, Error ellipse: s-maj=6.8km s-min=5.8km az=1.0*

TUL ***24*** *19:05:57.5±2.0,36.87N±0.03×98.34W±0.04,h5km±5km, ML4.2,Mwr3.7/32(NEIC),Error ellipse: s-maj=4.8km s-min=3.2km az=65.0*

NEIC ***24*** *19:05:57.5,36.87N×98.34W,h3km,Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=4.45; Mθθ=3.84; Mθθ 0.61; Mθθ 0.86; Mθθ 1.60; Mθθ 2.10; Fault plane solution: M0 5.02000×10¹⁴ NP1:θθ=83.51000°, δ37.46000°, λ=-62.50000°. NP2:θθ=230.25000°, δ57.35000°, λ=-109.49000°. Principal axes: T 4.7921, Plg10.0000°, Azm334.0000°; N 0.4259, Plg16.0000°, Azm241.0000°; P -5.2179, Plg71.0000°, Azm95.0000°;*

ANF ***24*** *19:05:57.3±0.2,36.87N×98.28W,h5km,ML5.0/16 Error ellipse: s-maj=2.3km s-min=1.8km az=23.0*

ISC 24 19:05:57.5±0.4,**36.87N**±0.02×**98.37W**±0.02,**h10**km,**n249,** σ1**922**/265,**mb4.1**/8,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAN10	**Anthony SW Sta**	**0.34**	**41**			Pg	**Pg**	**19 06 04.1**	**-0.2**
KAN14	**Manchester OK**	**0.34**	**75**				**Pg**	**19 06 04.0**	**-0.3**
GC02	**Grant County #**	**0.41**	**92**				**Pg**	**19 06 05.2**	**-0.4**
KAN05	**Bluff City Nor**	**0.47**	**59**				**Pg**	**19 06 06.5**	**-0.2**
CROK	**Carrier**	**0.48**	**139**				**Pg**	**19 06 06.7**	**-0.2**
KAN08	**Anthony NE Sta**	**0.48**	**42**				**Pg**	**19 06 06.8**	**-0.1**
KAN12	**Harper NE Stat**	**0.52**	**35**				**Pg**	**19 06 07.6**	**-0.1**
KAN01	**Argonia South**	**0.57**	**60**	Pg			**Pg**	**19 06 08.3**	**-0.2**
KAN09	**Caldwell North**	**0.66**	**66**				**Pg**	**19 06 09.9**	**-0.4**
KS21	**Milan North St**	**0.70**	**53**				**Pg**	**19 06 10.8**	**-0.3**
U32A	**Winter Ranch,**	**0.70**	**226**				**Pg**	**19 06 11.5**	**+0.4**
KAN13	**South Haven SW**	**0.73**	**78**				**Pg**	**19 06 11.2**	**-0.4**
KS20	**Mayfield South**	**0.75**	**61**				**Pg**	**19 06 11.6**	**-0.3**
OK029	**Liberty Lake**	**1.30**	**145**				**Pn**	**19 06 21.4**	**-0.4**
BCOK	**Bluff Creek, N**	**1.36**	**153**				**Pb**	**19 06 22.4**	**-0.7**
T35A	**Sooner Cattle**	**1.49**	**88**				**Pb**	**19 06 24.6**	**-0.8**
OK009	**Oakdale Elemen**	**1.50**	**149**				**Pb**	**19 06 25.0**	**-0.4**
QUOK	**Quay**	**1.51**	**117**				**Pb**	**19 06 24.9**	**-0.8**
OK025	**Westminster Rd**	**1.53**	**147**				**Pb**	**19 06 25.3**	**-0.7**
OK031	**S. Brethren Rd**	**1.54**	**126**				**Pb**	**19 06 25.5**	**-0.6**
R32A	**Long Quarter,**	**1.57**	**350**				**Pb**	**19 06 26.8**	**0.0**
OK039	**Cody Creek RV**	**1.59**	**126**				**Pb**	**19 06 26.1**	**-0.9**
OKCFA	**Oklahoma City**	**1.63**	**153**				**Pb**	**19 06 27.0**	**-0.7**
OKCSW	**OKLAHOMA CITY**	**1.64**	**152**				**Pb**	**19 06 27.4**	**-0.5**
FNO	**Franklin**	**1.79**	**154**				**Pb**	**19 06 29.4**	**-1.1**
OK011	**Prague**	**1.94**	**135**	Pn			**Pn**	**19 06 30.9**	**+0.3**
W35A	**Tecumseh**	**2.10**	**144**				**Pn**	**19 06 33.2**	**+0.5**
WMOK	**Wichita Mounta**	**2.15**	**189**	P			**Pn**	**19 06 34.5**	**+1.0**
	baz=9.5,SNR=148								
WMOK						S	**Sb**	**19 07 02.6**	**-0.8**
	baz=9.5								
WMOK	**Wichita Mounta**	**2.15**	**189**				**Pn**	**19 06 34.3**	**+0.8**
CBKS	**Cedar Bluff**	**2.22**	**331**	P			**Pn**	**19 06 36.1**	**+1.6**
	baz=150,SNR=69								
CBKS						S	**Sb**	**19 07 05.2**	**-0.3**
	baz=150								
CBKS	**Cedar Bluff**	**2.22**	**331**				**Pn**	**19 06 36.1**	**+1.6**
TUL1	**Leonard**	**2.29**	**114**	P			**Pn**	**19 06 35.6**	**+0.2**
	baz=296,SNR=169								
TUL1						Sb	**Sb**	**19 07 07.7**	**+0.4**
	baz=296								
TUL1	**Leonard**	**2.29**	**114**				**Pn**	**19 06 35.4**	**+0.1**
KSU1	**Kansas State U**	**2.63**	**31**	P			**Pn**	**19 06 41.2**	**+1.2**
	baz=212,SNR=28								
KSU1						S	**Sn**	**19 07 13.2**	**+1.2**
	baz=212								
KSU1	**Kansas State U**	**2.63**	**31**				**Pn**	**19 06 40.5**	**+0.5**
U38A	**Gravette**	**3.23**	**96**	Pn			**Pn**	**19 06 48.9**	**+0.5**
X37A	**Clayton**	**3.33**	**132**				**Pn**	**19 06 50.5**	**+0.8**
AMTX	**Amarillo**	**3.34**	**235**	P			**Pn**	**19 06 51.2**	**+1.3**
	baz=53								
AMTX						Sb	**Sg**	**19 07 42.5**	**-2.3**
	baz=53								
AMTX	**Amarillo**	**3.34**	**235**				**Pn**	**19 06 52.2**	**+2.3**
HHAR	**Hobbs**	**3.61**	**98**				**Pn**	**19 06 54.0**	**+0.4**
Z35A	**Perchaven, San**	**3.65**	**165**	Pn			**Pn**	**19 06 55.0**	**+1.0**
N33A	**J Bar K, Exete**	**3.93**	**10**				**Pn**	**19 06 58.4**	**+0.4**
KSCO	**Kaye Shedlock'**	**3.99**	**304**	P			**Pn**	**19 07 00.4**	**+1.6**
	baz=121,SNR=13								
KSCO						Sb	**Sg**	**19 08 02.5**	**-3.1**
	baz=121								
KSCO	**Kaye Shedlock'**	**3.99**	**304**	Pn			**Pn**	**19 07 00.6**	**+1.7**
W39A	**Magazine**	**4.07**	**113**	P			**Pn**	**19 07 00.3**	**+0.4**
	baz=296,SNR=19								
W39A						S	**Sn**	**19 07 47.9**	**+0.3**
	baz=296								
W39A	**Magazine**	**4.07**	**113**	Pn			**Pn**	**19 07 00.6**	**+0.7**
S39A	**Bolivar**	**4.11**	**77**	Pn			**Pn**	**19 07 00.7**	**+0.3**
ABTX	**Abilene, Hawle**	**4.36**	**194**	P			**Pn**	**19 07 04.7**	**+0.8**
	baz=14,SNR=13								
ABTX						S	**Sn**	**19 07 56.4**	**+1.6**
	baz=14								
ABTX	**Abilene, Hawle**	**4.36**	**194**	Pn			**Pn**	**19 07 05.1**	**+1.2**
U40A	**Yellville**	**4.47**	**95**	P			**Pn**	**19 07 05.3**	**0.0**
	baz=278,SNR=39								
U40A						S	**Sn**	**19 07 56.2**	**-1.1**
	baz=278								
U40A	**Yellville**	**4.47**	**95**	Pn			**Pn**	**19 07 05.5**	**+0.2**
N35A	**Tabor**	**4.52**	**27**				**Pn**	**19 07 07.0**	**+0.9**
BGNE	**Belgrade**	**4.54**	**2**	P			**Pn**	**19 07 07.0**	**+0.7**
	baz=182,SNR=9.0								
BGNE						S	**Sn**	**19 07 59.4**	**+0.3**
	baz=182								
BGNE	**Belgrade**	**4.54**	**2**	Pn			**Pn**	**19 07 07.3**	**+1.0**
MIAR	**Mount Ida**	**4.54**	**119**	P			**Pn**	**19 07 06.3**	**0.0**
	baz=302,SNR=15								
MIAR						Sb	**Sb**	**19 08 15.4**	**+3.4**
	baz=302								
MIAR	**Mount Ida**	**4.54**	**119**	Pn			**Pn**	**19 07 07.1**	**+0.8**
Z38A	**Mt. Pleasant**	**4.55**	**141**				**Pn**	**19 07 06.8**	**+0.5**
MSTX	**Muleshoe**	**4.61**	**232**	P			**Pn**	**19 07 09.0**	**+1.6**
	baz=50,SNR=9.0								
MSTX						S	**Sn**	**19 08 04.2**	**+3.1**
	baz=50								
MSTX	**Muleshoe**	**4.61**	**232**	Pn			**Pn**	**19 07 09.4**	**+2.0**
P38A	**Dawn**	**4.70**	**53**	Pn			**Pn**	**19 07 09.1**	**+0.6**
T25A	**Trinidad**	**4.84**	**275**	P			**Pn**	**19 07 11.8**	**+1.1**
	baz=91,SNR=16								
T25A						S	**Sn**	**19 08 08.1**	**+1.2**
	baz=91								
T25A	**Trinidad**	**4.84**	**275**				**Pn**	**19 07 12.1**	**+1.5**
MGMO	**Mountain Grove**	**4.89**	**85**				**Pn**	**19 07 11.6**	**+0.4**
WHTX	**Lake Whitney,**	**4.92**	**171**	P			**Pn**	**19 07 12.2**	**+0.6**
	baz=352,SNR=19								
WHTX						Sb	**Sb**	**19 08 27.9**	**+4.7**
	baz=352								
WHTX	**Lake Whitney,**	**4.92**	**171**	Pn			**Pn**	**19 07 12.2**	**+0.6**
R40A	**Maddies Statio**	**5.05**	**72**				**Pn**	**19 07 13.5**	**+0.1**
X40A	**Basin Creek Fa**	**5.09**	**116**	P			**Pn**	**19 07 14.5**	**+0.6**
	baz=300,SNR=77								
X40A	**Basin Creek Fa**	**5.09**	**116**				**Pn**	**19 07 14.2**	**+0.3**
FCAR	**Ozark Folk Cen**	**5.13**	**99**				**Pn**	**19 07 14.2**	**-0.2**
WHAR	**Wooly Hollow**	**5.17**	**106**	Pn			**Pn**	**19 07 15.1**	**+0.1**
W41B	**Gary Mavity, V**	**5.24**	**107**	P			**Pn**	**19 07 15.8**	**-0.1**
	baz=291,SNR=16								
W41B						S	**Sn**	**19 08 15.5**	**-0.9**
	baz=291								
W41B	**Gary Mavity, V**	**5.24**	**107**	Pn			**Pn**	**19 07 16.2**	**+0.3**
237A	**Washetta, Mont**	**5.30**	**156**	Pn			**Pn**	**19 07 16.6**	**-0.1**
L34A	**Svendsen Farm,**	**5.32**	**16**				**Pn**	**19 07 18.2**	**+1.2**
WLAR	**White Oak Lake**	**5.34**	**125**	Pn			**Pn**	**19 07 17.9**	**+0.6**
N38A	**Joes South For**	**5.61**	**44**	Pn			**Pn**	**19 07 21.3**	**+0.4**
P40A	**Paris**	**5.64**	**60**				**Pn**	**19 07 21.1**	**-0.3**
SDCO	**Great Sand Dun**	**5.75**	**281**	P			**Pn**	**19 07 25.3**	**+2.1**
	baz=96,SNR=15								
SDCO	**Great Sand Dun**	**5.75**	**281**	Pn			**Pn**	**19 07 25.2**	**+1.9**
Q24A	**Divide**	**5.75**	**293**	P			**Pn**	**19 07 24.0**	**+0.8**
	baz=109								
Q24A						S	**Sn**	**19 08 31.2**	**+1.7**
	baz=109								
Q24A	**Divide**	**5.75**	**293**				**Pn**	**19 07 24.2**	**+0.9**
K31A	**O'Neill**	**5.75**	**357**				**Pn**	**19 07 23.4**	**+0.3**
CCM	**Cathedral Cave**	**5.79**	**76**	P			**Pn**	**19 07 22.9**	**-0.6**
	baz=260								
CCM						S	**Sn**	**19 08 29.0**	**-1.0**
	baz=260								
CCM	**Cathedral Cave**	**5.79**	**76**	Pn			**Pn**	**19 07 23.1**	**-0.4**
Z41A	**Richland Creek**	**5.81**	**127**	P			**Pn**	**19 07 23.6**	**-0.2**
	baz=310								
Z41A						S	**Sn**	**19 08 28.8**	**-1.8**
	baz=310								
Z41A	**Richland Creek**	**5.81**	**127**				**Pn**	**19 07 23.0**	**-0.8**
T42A	**Van Buren**	**5.83**	**86**				**Pn**	**19 07 25.0**	**+0.9**
LCAR	**Lake Charles**	**5.87**	**96**				**Pn**	**19 07 24.4**	**-0.2**
CPRX	**Cap Rock**	**5.92**	**231**	Pn			**Pn**	**19 07 27.2**	**+1.8**
NATX	**Nacogdoches**	**5.95**	**148**	S			**Sn**	**19 08 31.5**	**-2.4**
	baz=330								

	1.8nm,0.3s,baz=36,slow=11,SNR=60								
TXAR					Pg		Pg	19 08 34.2	-10
	1.9nm,0.3s,baz=19,slow=14,SNR=3.5								
TXAR					Lg		Lg	19 10 30.8	
	5.1nm,0.3s,baz=35,slow=24,SNR=8.9								
TXAR					LR		LR	19 11 41.0	
	comp=Z,107nm,20.5s,baz=0.0,slow=39								
TXAR	**Lajitas Array**	**8.73**	**212**		Pn		**Pn**	**19 08 04.5**	**+0.5**
146A	**Union**	**8.75**	**116**		Pn		**Pn**	**19 08 02.9**	**-1.2**
121A	**Cookes Peak, D**	**8.88**	**244**		Pn		**Pn**	**19 08 06.5**	**+0.5**
T47A	**Sharon Grove**	**9.02**	**86**		Pn		**Pn**	**19 08 06.6**	**-1.2**
F33A	**5 Mile Ranch,**	**9.10**	**9**		Pn		**Pn**	**19 08 07.8**	**-1.0**
I40A	**Norwalk**	**9.17**	**38**		Pn		**Pn**	**19 08 09.9**	**0.0**
P46A	**Rosedale**	**9.20**	**69**		Pn		**Pn**	**19 08 09.5**	**-0.8**
M44A	**Midewin, Midew**	**9.20**	**57**		Pn		**Pn**	**19 08 09.7**	**-0.6**
SPMN	**Marine on St.**	**9.34**	**25**		Pn		**Pn**	**19 08 10.4**	**-1.8**
SFIN	**Lafayette**	**9.49**	**65**		P		**Pn**	**19 08 13.7**	**-0.5**
	baz=252,SNR=5.7								
SFIN	**Lafayette**	**9.49**	**65**				**Pn**	**19 08 14.1**	**-0.2**
X48A	**Hartselle**	**9.53**	**101**		Pn		**Pn**	**19 08 13.8**	**-0.9**
BLO	**Bloomington**	**9.63**	**73**				**Pn**	**19 08 14.5**	**-1.6**
K43A	**Burlington**	**9.67**	**50**		Pn		**Pn**	**19 08 16.3**	**-0.5**
WCI	**Wyandotte Cave**	**9.69**	**78**		P		**Pn**	**19 08 16.5**	**-0.5**
	baz=266								
WCI	**Wyandotte Cave**	**9.69**	**78**		Pn		**Pn**	**19 08 16.3**	**-0.7**
F36A	**Milaca**	**9.69**	**21**		Pn		**Pn**	**19 08 17.1**	**+0.1**
CLTN	**Cedars of Leba**	**9.73**	**91**		Pn		**Pn**	**19 08 17.5**	**0.0**
I42A	**Draeger Farm,**	**10.06**	**43**		Pn		**Pn**	**19 08 20.9**	**-1.1**
LRAL	**Lakeview Retre**	**10.09**	**109**		Pn		**Pn**	**19 08 21.7**	**-0.7**
U49A	**Red Boiling Sp**	**10.12**	**88**		Pn		**Pn**	**19 08 22.3**	**-0.6**
SWET	**Sewanee**	**10.21**	**96**				**Pn**	**19 08 24.1**	**0.0**
Y49A	**Blount Mountai**	**10.22**	**104**		Pn		**Pn**	**19 08 23.6**	**-0.6**
G40A	**Rib Lake**	**10.41**	**34**				**Pn**	**19 08 26.3**	**-0.5**
BW06	**Boulder Array**	**10.42**	**308**				**Pn**	**19 08 27.6**	**+0.3**
PD31	**Pinedale Array**	**10.42**	**308**		Pn		**Pn**	**19 08 26.8**	**-0.5**
PDAR	**Pinedale Array**	**10.42**	**308**		Pn		**Pn**	**19 08 27.2**	**-0.1**
	0.5nm,0.3s,baz=118,slow=14,SNR=12								
PDAR					Pg			19 09 08.0	
	1.4nm,0.3s,baz=116,slow=17,SNR=4.2								
PDAR					Lg		Lg	19 11 24.1	
	3.4nm,0.3s,baz=110,slow=30,SNR=5.6								
P48A	**Milroy**	**10.52**	**72**		Pn		**Pn**	**19 08 26.6**	**-1.7**
319A	**Douglas**	**10.57**	**242**		Pn		**Pn**	**19 08 26.8**	**-2.4**
WUAZ	**Wupatki**	**10.60**	**267**		Pn		**Pn**	**19 08 29.8**	**+0.2**
FPAL	**Fort Paine**	**10.63**	**99**		Pn		**Pn**	**19 08 28.6**	**-1.4**
N47A	**Urbana**	**10.66**	**64**		Pn		**Pn**	**19 08 28.4**	**-1.9**
W50A	**Signal Mountai**	**10.71**	**95**		Pn		**Pn**	**19 08 31.5**	**+0.5**
JLU	**Jordanelle**	**10.88**	**294**		Pn		**Pn**	**19 08 33.0**	**-0.4**
X16A	**Lo Mia Camp, P**	**10.91**	**261**		Pn		**Pn**	**19 08 34.2**	**+0.2**
H43A	**Windswept, Lux**	**11.06**	**43**		Pn		**Pn**	**19 08 34.2**	**-1.5**
X51A	**Calhoun**	**11.20**	**98**				**Pn**	**19 08 36.8**	**-1.2**
R50A	**Paris**	**11.23**	**79**		Pn		**Pn**	**19 08 36.8**	**-1.3**
CPCT	**Cooper Cave**	**11.29**	**93**				**Pn**	**19 08 38.7**	**-0.1**
V51A	**Loudon**	**11.36**	**91**				**Pn**	**19 08 40.5**	**+0.7**
Z51A	**Franklin**	**11.38**	**104**		Pn		**Pn**	**19 08 38.3**	**-1.8**
O49A	**Covington**	**11.48**	**69**		Pn		**Pn**	**19 08 39.8**	**-1.7**
REDW	**Red Top Meadow**	**11.54**	**308**		Pn		**Pn**	**19 08 42.2**	**-0.3**
AGMN	**Agassiz Nation**	**11.57**	**8**		Pn		**Pn**	**19 08 40.9**	**-1.8**
RLMT	**Red Lodge**	**11.64**	**318**		Pn		**Pn**	**19 08 44.1**	**+0.2**
TPAW	**Teton Pass**	**11.67**	**308**		Pn		**Pn**	**19 08 46.0**	**+1.7**
F42A	**Maple Grove Fa**	**11.74**	**38**		Pn		**Pn**	**19 08 43.2**	**-1.9**
S51A	**Beattyville**	**11.80**	**82**				**Pn**	**19 08 44.3**	**-1.6**
TKL	**Tuckaleechee C**	**11.85**	**92**		Pn		**Pn**	**19 08 46.0**	**-0.6**
	2.4nm,0.3s,baz=225,slow=9.0,SNR=20								
TKL					Lg		Lg	19 11 60.0	
	1.6nm,0.3s,baz=156,slow=14,SNR=5.5								
TKL	**Tuckaleechee C**	**11.85**	**92**		Pn		**Pn**	**19 08 46.1**	**-0.4**
IMW	**Indian Meadow**	**11.87**	**310**		Pn		**Pn**	**19 08 47.5**	**+0.4**
V52A	**Sevierville**	**11.96**	**91**				**Pn**	**19 08 47.5**	**-0.5**
YNE	**Yellowstone No**	**11.97**	**316**		Pn		**Pn**	**19 08 45.9**	**-2.6**
B35A	**Bob, Littlefor**	**11.98**	**15**		Pn		**Pn**	**19 08 46.3**	**-2.0**
Q51A	**Peebles**	**12.06**	**75**				**Pn**	**19 08 47.8**	**-1.6**
N51A	**Ashland**	**13.10**	**67**				**Pn**	**19 09 01.3**	**-2.3**
ULM	**Lac du Bonnet**	**13.50**	**7**		Pn		**Pn**	**19 09 05.8**	**-3.2**
	0.9nm,0.3s,baz=202,slow=13,SNR=5.2								
ULM					Sn		Sn	19 11 26.3	-13
	1.9nm,0.3s,baz=273,slow=22,SNR=6.4								
ULM					Lg		Lg	19 12 56.0	
	0.6nm,0.3s,baz=270,slow=20,SNR=6.8								
ULM					LR		LR	19 14 26.4	
	comp=Z,85nm,19.7s,baz=119,slow=38								
ULM	**Lac du Bonnet**	**13.50**	**7**		Pn		**Pn**	**19 09 06.5**	**-2.5**
PAULI	**Pauline**	**13.59**	**94**		Pn		**Pn**	**19 09 08.6**	**-1.7**
S54A	**Dingess, Beckl**	**13.61**	**81**		Pn		**Pn**	**19 09 09.0**	**-1.6**
EGMT	**Eagleton**	**13.94**	**327**		Pn		**Pn**	**19 09 12.7**	**-2.5**
NV11	**Mina Array Sit**	**15.75**	**282**		Pn		**Pn**	**19 09 39.0**	**-0.6**
NVAR	**Mina Array Bea**	**15.87**	**282**		Pn		**P**	**19 09 44.7**	**-0.2**
	0.1nm,0.3s,baz=89,slow=12,SNR=7.1								
NVAR	**Mina Array Bea**	**15.87**	**282**		P		**P**	**19 09 43.9**	**-1.1**
LHV	**Little Huntoon**	**16.03**	**281**		P		**P**	**19 09 48.4**	**+1.9**
RYN	**Ryan**	**16.04**	**282**				**Pn**	**19 09 43.7**	**+0.4**
LPIG	**La Paz**	**16.34**	**222**		LR		LR	19 15 35.7	
	comp=Z,54nm,19.7s,baz=28,slow=35								
WVOR	**Wild Horse Val**	**16.56**	**296**		P		**P**	**19 09 55.6**	**+3.1**
BEKR	**Beckworth**	**17.50**	**287**		P		**P**	**19 10 03.9**	**+1.0**
NEW	**Newport**	**17.85**	**316**		LR		LR	19 16 57.6	
	comp=Z,58nm,20.7s,baz=358,slow=37								
YBH	**Yreka Blue Hor**	**19.43**	**292**		P		**Pn**	**19 10 27.1**	**+1.9**
	0.1nm,0.3s,baz=71,slow=6.0,SNR=6.2								
CMIG	**Matias Romero**	**19.94**	**170**		P		**Pn**	**19 10 31.0**	**-0.4**
	0.1nm,0.3s,baz=355,slow=11,SNR=1.8								
YKA	**Yellowknife Ar**	**27.55**	**344**		P		**P**	**19 11 45.6**	**+1.4**
	1.2nm,0.8s,baz=142,slow=8.4,SNR=8.2								
JTS	**Las Juntas de**	**29.11**	**152**		LR		LR	19 25 55.1	
	comp=Z,20nm,18.6s,baz=74,slow=41								
DLBC	**Dease Lake**	**29.87**	**326**		LR		LR	19 25 25.0	
	comp=Z,81nm,18.4s,baz=305,slow=39								
ILAR	**Eielson Array**	**39.88**	**330**		P		**P**	**19 13 33.0**	**+1.9**
	2.4nm,0.8s,baz=107,slow=6.8,SNR=32								
ILAR					PcP		**PcP**	**19 15 38.4**	**+1.8**
	0.5nm,0.9s,baz=210,slow=1.6,SNR=5.1								
ILAR	**Eielson Array**	**39.88**	**330**		P		**P**	**19 13 33.1**	**+2.0**
ARCES	**ARCESS Array B**	**66.30**	**19**		P		**P**	**19 16 46.0**	**+0.4**
	2.8nm,0.9s,baz=323,slow=3.8,SNR=5.6								
FINES	**FINESS Array B**	**72.18**	**25**		P		**P**	**19 17 23.1**	**+0.9**
	1.8nm,0.6s,baz=316,slow=3.8,SNR=2.0								
GERES	**GERESS Array B**	**75.56**	**39**		P		**P**	**19 17 42.7**	**+0.4**
	0.5nm,0.6s,baz=335,slow=5.9,SNR=4.2								
AKASG	**Malin Array Be**	**81.38**	**31**		P		**P**	**19 18 14.7**	**+0.5**
	0.6nm,0.5s,baz=317,slow=4.3,SNR=5.1								
ZALV	**Zalesovo Beam**	**89.51**	**358**		P		**P**	**19 18 55.7**	**+0.9**
	1.0nm,0.6s,baz=350,slow=6.0,SNR=5.5								
MKAR	**Makanchi Array**	**96.71**	**360**		P		**P**	**19 19 28.4**	**+0.3**
	1.0nm,1.0s,baz=6.8,slow=3.6,SNR=2.8								
WRA	**Warramunga Arr**	**131.27**	**275**		PKP		**PKiKP**	**19 25 11.7**	**+0.4**
	0.1nm,0.6s,baz=57,slow=2.1,SNR=1.0								

*IDC **24** 19:06:32.2±2.7, 8.45N×92.10E, h0km, mb3.1/3, mb1 3.3/4, mb1mx3.1/59, mbtmp3.1/4, ML3.4/1, Error ellipse: s-maj=83.8km s-min=29.7km az=68.0*

ISC 24 19:06:46.4±2.5, 10.7N±0.7×96.1E±0.9, h10km, n18, σ1↓21/14, mb3.3/3, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
CMAR	**Chiang Mai Arr**	**8.14**	**19**	Pn		Pg	19 09 25.4	+3.0
	0.1nm,0.3s,baz=229,slow=14,SNR=5.2							
ODAN	**Odare**	**18.04**	**334**	*e*P		**Pn**	**19 10 58.5**	**+0.9**
	12nm,0.3s							
TAPN	**Taplejung**	**18.33**	**336**	*e*P		**P**	**19 11 03.9**	**+2.5**
	8.5nm,0.3s							
RAMN	**Ramite**	**18.47**	**332**	*e*P		**P**	**19 11 02.5**	**-0.3**
PKI	**Pulchoki**	**19.55**	**330**	*e*P		**P**	**19 11 14.8**	**0.0**
	10nm,0.3s							
PKIN	**Phulchoki**	**19.57**	**330**	*e*P		**P**	**19 11 14.9**	**0.0**
	11nm,0.3s							
GUN	**Gumba**	**19.62**	**332**	*e*P		**P**	**19 11 16.7**	**+1.2**
DMN	**Daman**	**19.73**	**330**	*e*P		**P**	**19 11 16.8**	**+0.1**
KKN	**Kakani**	**19.80**	**330**	*e*P		**P**	**19 11 18.0**	**+0.6**
GKN	**Gorkha**	**20.29**	**329**	*e*P		**P**	**19 11 23.3**	**+0.6**
	19nm,0.4s							
KOLN	**Koldanda**	**20.64**	**327**	*e*P		**P**	**19 11 25.7**	**-0.8**
DANN	**Dangsing**	**21.02**	**328**	*e*P		**P**	**19 11 32.1**	**+1.4**
H08S3	**Diego Garcia H**	**29.79**	**233**	T		T	19 38 27.2	
	baz=50,slow=76,SNR=104							
H08S2	**Diego Garcia H**	**29.79**	**233**	T		T	19 38 29.7	
	baz=50,slow=76,SNR=28							
H08S1	**Diego Carcia H**	**29.81**	**233**	T		T	19 38 26.2	
	baz=50,slow=76,SNR=8.0							
MKAR	**Makanchi Array**	**37.81**	**344**	P		**P**	**19 14 01.1**	**-1.9**
	0.4nm,0.7s,baz=175,slow=7.5,SNR=2.0							
WRA	**Warramunga Arr**	**48.41**	**129**	P		**P**	**19 15 29.1**	**-0.1**
	0.3nm,0.5s,baz=307,slow=8.5,SNR=8.5							

ASAR	**Alice Springs**	**50.33**	**133**		P		**P**	**19 15 44.4**	**+0.6**
	0.1nm,0.5s,baz=306,slow=7.4,SNR=1.2								

*MOS **24** 19:09:40.1±0.0, 42.99N×45.83E, h6km, MPVA3.5*
*DRS **24** 19:09:40.3±0.0, 43.06N×45.72E, h13km*
*NORS **24** 19:09:42.0±0.0, 42.95N×45.81E, h9km, MPVA3.5*
*TIF **24** 19:09:43.0, 42.91N×45.72E, h4km±2km*

ISC 24 19:09:42.2±1.0, 42.98N±0.03×45.81E±0.02, h7km±9km, n28, σ0.74/53, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
GROC	**Groznyy**	**0.22**	**358**	*e*Pg		**Pg**	**19 09 46.0**	**-0.6**
GROC				*e*Sg		**Sg**	**19 09 50.2**	**+0.6**
DVE	**Vedeno**	**0.24**	**96**	*i* Pg		**Pg**	**19 09 47.0**	**0.0**
DVE				*e*Sg		**Sg**	**19 09 51.3**	**+1.1**
BTLR	**Botlikh**	**0.44**	**136**	*e*Pg		**Pg**	**19 09 51.2**	**+0.4**
BTLR				*e*Sg		**Sb**	**19 09 58.6**	**-0.6**
DBC	**Dubki**	**0.75**	**87**	*e*Pg		**Pg**	**19 09 56.3**	**-0.4**
DBC				*e*Sg		**Sb**	**19 10 07.7**	**-0.5**
UNCR	**Uncukul**	**0.78**	**110**	*e*Pg		**Pg**	**19 09 57.0**	**-0.1**
UNCR				*e*Sg		**Sb**	**19 10 09.0**	**+0.2**
XNZR	**Khunzakh**	**0.80**	**123**	*e*Pg		**Pg**	**19 09 57.7**	**+0.1**
XNZR				*e*Sg		**Sb**	**19 10 09.7**	**+0.2**
KRNR	**Karanay**	**0.82**	**100**	*e*Pg		**Pg**	**19 09 57.6**	**-0.5**
KRNR				*e*Sg		**Sb**	**19 10 09.4**	**-0.8**
ARKR	**Arakani**	**0.95**	**113**	*e*Pg		**Pg**	**19 09 59.0**	**-0.6**
ARKR				*e*Sg		**Sb**	**19 10 13.1**	**-0.8**
BUJR	**Buynaksk**	**0.97**	**99**	*e*Pg		**Pn**	**19 10 01.6**	**-0.7**
BUJR				*e*Sg		**Sn**	**19 10 16.6**	**+0.4**
BTKR	**Batakoyurt**	**1.00**	**293**	*e*Pg		**Pn**	**19 10 02.7**	**0.0**
BTKR				*e*Sg		**Sn**	**19 10 17.3**	**+0.2**
GNBR	**Gunib**	**1.04**	**124**	*e*Pg		**Pn**	**19 10 02.7**	**-0.5**
GNBR				*e*Sg		**Sn**	**19 10 18.1**	**+0.1**
TRKR	**Terskaya**	**1.08**	**314**	*e*Pg		**Pn**	**19 10 03.4**	**-0.3**
TRKR				*e*Sg		**Sn**	**19 10 20.5**	**+1.6**
GUDG	**Gudauri**	**1.11**	**243**	P		**Pg**	**19 10 03.2**	**-0.2**
GUDG				S		**Sg**	**19 10 18.1**	**+0.3**
GUDG	**Gudauri**	**1.11**	**243**	*i* Pg		**Pg**	**19 10 03.4**	**-0.1**
LACR	**Lac**	**1.12**	**263**	*i* Pg		**Pg**	**19 10 02.8**	**-0.9**
LGD	**Lagodekhi**	**1.19**	**164**	P		**Pg**	**19 10 05.8**	**+0.7**
LGD				S		**Sn**	**19 10 22.2**	**+0.5**
LGD	**Lagodekhi**	**1.19**	**164**	*e*Pg		**Pg**	**19 10 05.8**	**+0.7**
LGD				*e*Sg		**Sn**	**19 10 22.2**	**+0.5**
KORR	**Kora**	**1.28**	**275**	*e*Pg		**Pb**	**19 10 06.2**	**-0.4**
KORR				*e*Sg		**Sn**	**19 10 25.5**	**+1.6**
KMKR	**Kumukh**	**1.28**	**131**	*e*Pg		**Pg**	**19 10 07.0**	**+0.2**
KMKR				*e*Sg		**Sn**	**19 10 25.5**	**+1.3**
PRTR	**Priterechnaya**	**1.35**	**305**	*e*Pg		**Pb**	**19 10 07.5**	**-0.3**
PRTR				*e*Sg		**Sg**	**19 10 28.0**	**+2.4**
ZEI	**Tsey**	**1.41**	**263**	*e*Pg		**Pn**	**19 10 07.7**	**-0.8**
LSNR	**Lesken**	**1.48**	**282**	*e*Pg		**Pb**	**19 10 09.7**	**-0.3**
LSNR				*e*Sg		**Sg**	**19 10 30.6**	**+0.8**
DIGR	**Digorskoe uzhe**	**1.64**	**268**	*e*Pg		**Pn**	**19 10 11.6**	**0.0**
DIGR				*e*Sg		**Sb**	**19 10 33.4**	**-0.2**
ONI	**Oni**	**1.78**	**258**	P		**Pb**	**19 10 14.7**	**-0.4**
ONI				S		**Sg**	**19 10 39.2**	**-0.1**
ONI	**Oni**	**1.78**	**258**	*e*Pg		**Pb**	**19 10 14.7**	**-0.4**
ONI				*e*Sg		**Sg**	**19 10 39.2**	**-0.1**
KZRT	**Kazreti**	**1.91**	**214**	P		**Pb**	**19 10 17.4**	**+0.1**
KZRT				S		**Sg**	**19 10 44.0**	**+0.5**
KZRT	**Kazreti**	**1.91**	**214**	*e*Pg		**Pb**	**19 10 17.4**	**+0.1**
KZRT				*e*Sg		**Sg**	**19 10 44.0**	**+0.5**
DMNI	**Dmanisi**	**2.04**	**217**	P		**Pb**	**19 10 18.3**	**-1.4**
DMNI				S		**Sg**	**19 10 46.8**	**-1.0**

*RSPR **24** 19:17:03.9, 18.69N×68.81W, h167km±1km, MD3.7/8*
*NEIC **24** 19:17:03.8±0.8, 18.6N±0.2×68.90W±0.09, h159km±15km, Error ellipse: s-maj=30.8km s-min=8.9km az=196.0*
*OSPL **24** 19:17:05.3±1.8, 18.24N×68.99W, h165km±16km, ML3.4*

ISC 24 19:17:03.7±1.8, 18.5N±0.1×68.93W±0.04, h159km±1.4km, n54, σ0.83/70, 12C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
DR12	**Loma Pena Alta**	**0.50**	**300**	Pn		**Pn**	**19 17 25.7**	**-0.5**
SDD	**Santo Domingo**	**0.94**	**266**	Pn		**Pn**	**19 17 28.4**	**-0.5**
SDD	**Santo Domingo**	**0.94**	**266**	*i* P		**Pn**	**19 17 28.4**	**-0.5**
SDD				*e*S		**Sn**	**19 17 46.8**	**-1.3**
SDD				IAML			19 17 47.4	
	comp=Z,149nm,0.3s							
BANI	**BANI**	**1.37**	**264**	Pn		**Pn**	**19 17 32.4**	**-0.4**
BON1	**Bonao**	**1.45**	**287**	*e*S		**Sn**	**19 17 56.5**	**+0.2**
BON1				IAML			19 18 01.2	
	comp=Z,292nm,0.3s							
AGPR	**Aguadilla, PR**	**1.72**	**92**	*e*P		**Pn**	**19 17 36.4**	**+0.1**
AGPR	**Aguadilla, PR**	**1.72**	**92**			**Pn**	**19 17 36.4**	**+0.1**
AGPR						**Sn**	**19 18 01.5**	**+0.1**
AGPR	**Aguadilla, PR**	**1.72**	**92**	*i* P		**Pn**	**19 17 38.2**	**+1.9**
AGPR				*e*S		**Sn**	**19 18 02.0**	**+0.6**
AGPR				IAML			19 18 07.8	
	comp=Z,171nm,0.2s							
LSP	**Las Mesas**	**1.78**	**101**	*e*P		**Pn**	**19 17 36.8**	**-0.2**
LSP	**Las Mesas**	**1.78**	**101**	*e*S		**Sn**	**19 18 03.3**	**+0.7**
LSP	**Las Mesas**	**1.78**	**101**			**Pn**	**19 17 36.8**	**-0.2**
LSP						**Sn**	**19 18 03.3**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.80**	**107**	*e*P		**Pn**	**19 17 37.6**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.80**	**107**	*e*S		**Sn**	**19 18 03.4**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.80**	**107**			**Pn**	**19 17 37.6**	**+0.4**
CRPR						**Sn**	**19 18 03.4**	**+0.5**
MLPR	**Magueyes Islan**	**1.87**	**107**	*e*P		**Pn**	**19 17 38.2**	**+0.2**
MLPR	**Magueyes Islan**	**1.87**	**107**	*e*S		**Sn**	**19 18 04.8**	**+0.5**
MLPR	**Magueyes Islan**	**1.87**	**107**			**Pn**	**19 17 38.2**	**+0.2**
MLPR						**Sn**	**19 18 04.8**	**+0.5**
SC01	**Santiago de lo**	**1.92**	**298**	Pn		**Pn**	**19 17 38.3**	**-0.2**
SC01	**Santiago de lo**	**1.92**	**298**	*i* P		**Pn**	**19 17 39.1**	**+0.6**
SC01				*e*S		**Sn**	**19 18 06.9**	**+1.6**
SC01				IAML			19 18 10.0	
	comp=Z,390nm,0.3s							
GBPR	**Guanica, Bosqu**	**2.02**	**106**	*e*P		**Pn**	**19 17 40.1**	**+0.5**
GBPR	**Guanica, Bosqu**	**2.02**	**106**	*e*S		**Sn**	**19 18 07.8**	**+0.6**
GBPR	**Guanica, Bosqu**	**2.02**	**106**			**Pn**	**19 17 40.1**	**+0.5**
GBPR						**Sn**	**19 18 07.8**	**+0.6**
AOPR	**Arecibo Observ**	**2.07**	**95**	*e*P		**Pn**	**19 17 39.9**	**-0.3**
AOPR	**Arecibo Observ**	**2.07**	**95**	*e*S		**Sn**	**19 18 07.9**	**-0.5**
AOPR	**Arecibo Observ**	**2.07**	**95**			**Pn**	**19 17 39.9**	**-0.3**
AOPR						**Sn**	**19 18 07.9**	**-0.5**
LOBA1	**Barahona**	**2.09**	**258**	*i* P		**Pn**	**19 17 40.2**	**-0.2**
LOBA1				IAML			19 18 06.2	
	comp=Z,1μm,1.4s							
LOBA1				*e*S		**Sn**	**19 18 06.2**	**-2.5**
OBIP	**Obispado Ponce**	**2.26**	**102**	*e*P		**Pn**	**19 17 42.7**	**+0.3**
OBIP	**Obispado Ponce**	**2.26**	**102**	*e*S		**Sn**	**19 18 12.3**	**+0.1**
OBIP	**Obispado Ponce**	**2.26**	**102**			**Pn**	**19 17 42.7**	**+0.3**
OBIP						**Sn**	**19 18 12.3**	**+0.1**
EMPR	**Esperanza - Ma**	**2.27**	**91**	*e*P		**Pn**	**19 17 42.6**	**0.0**
EMPR	**Esperanza - Ma**	**2.27**	**91**	*e*S		**Sn**	**19 18 12.1**	**-0.5**
EMPR	**Esperanza - Ma**	**2.27**	**91**			**Pn**	**19 17 42.6**	**0.0**
EMPR						**Sn**	**19 18 12.1**	**-0.5**
CELP	**Cerrillos**	**2.27**	**101**	*e*P		**Pn**	**19 17 42.5**	**-0.1**
CELP	**Cerrillos**	**2.27**	**101**	*e*S		**Sn**	**19 18 12.8**	**+0.2**
CELP	**Cerrillos**	**2.27**	**101**			**Pn**	**19 17 42.5**	**-0.1**
CELP						**Sn**	**19 18 12.8**	**+0.2**
SDDR	**Presa de Saban**	**2.28**	**282**	*e*P		**Pn**	**19 17 44.6**	**+1.9**
SDDR	**Presa de Saban**	**2.28**	**282**	*e*S		**Sn**	**19 18 16.1**	**+3.2**
SDDR	**Presa de Saban**	**2.28**	**282**			**Pn**	**19 17 44.6**	**+1.9**
SDDR	**Presa de Saban**	**2.28**	**282**	*i* P		**Pn**	**19 17 42.9**	**+0.2**
SDDR				*e*S		**Sn**	**19 18 11.3**	**-1.5**
SDDR				IAML			19 18 17.9	
	comp=Z,161nm,0.4s							
SJG	**San Juan**	**2.67**	**99**			**Pn**	**19 17 46.5**	**-0.8**
GCPR	**Guaynabo City**	**2.71**	**94**	*e*P		**Pn**	**19 17 47.2**	**-0.6**
GCPR	**Guaynabo City**	**2.71**	**94**	*e*S		**Sn**	**19 18 21.3**	**-0.6**
GCPR	**Guaynabo City**	**2.71**	**94**			**Pn**	**19 17 47.2**	**-0.6**
GCPR						**Sn**	**19 18 21.3**	**-0.6**
IGPR	**InterUniversit**	**2.74**	**101**	*e*P		**Pn**	**19 17 48.3**	**+0.1**
IGPR	**InterUniversit**	**2.74**	**101**	*e*S		**Sn**	**19 18 22.9**	**+0.4**
IGPR	**InterUniversit**	**2.74**	**101**			**Sn**	**19 18 22.9**	**+0.4**
CBYP	**Canovanas**	**2.93**	**95**	*e*P		**Pn**	**19 17 49.9**	**-0.6**
CBYP	**Canovanas**	**2.93**	**95**			**Pn**	**19 17 49.9**	**-0.6**
HUMP	**Col San Antoni**	**2.95**	**97**	*e*P		**Pn**	**19 17 51.1**	**+0.3**
HUMP	**Col San Antoni**	**2.95**	**97**			**Pn**	**19 17 51.1**	**+0.3**
MTP	**Monte Pirata**	**3.23**	**97**	*e*P		**Pn**	**19 17 54.0**	**-0.4**
MTP	**Monte Pirata**	**3.23**	**97**	*e*S		**Sn**	**19 18 33.3**	**-0.4**
MTP	**Monte Pirata**	**3.23**	**97**			**Pn**	**19 17 54.0**	**-0.4**
MTP						**Sn**	**19 18 33.3**	**-0.4**
GRTK	**Grand Turk**	**3.62**	**325**	Pn		**Pn**	**19 17 58.1**	**-1.2**

*NEIC **24** 19:23:44.4±3.9, 20.09S±0.04×69.35W±0.08, h94km±4km, Error ellipse: s-maj=10.4km s-min=6.3km az=94.0*
*IDC **24** 19:23:46.2±0.4, 20.04S×69.04W, h105km±3km, mb4.1/12, mb1 4.3/16, mb1mx4.2/26, mbtmp4.5/16, MS3.0/6, Ms1 3.0/6, ms1mx2.8/30, Error ellipse: s-maj=14.2km s-min=7.7km az=80.0*
*GUC **24** 19:23:46.6±0.6, 20.09S×69.23W, h98km±2km, ML4.6, MW4.6*
*VAO **24** 19:23:47.4±0.4, 20.07S×68.95W, h107km, mb4.6*

ISC 24 19:23:44.9±0.4, 20.11S±0.03×69.24W±0.05, h101km±3km, h101km:pP-P, n251, σ1↑46/270, mb4.6/52, 13C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
PB08	**IPOC Station P**	**0.08**	**110**	*e*P		**Pn**	**19 24 00.9**	**+1.4**
PB08				*e*S		**Sn**	**19 24 11.5**	**+1.2**
PB08				IAML			19 24 13.3	
	comp=N,48μm,0.3s							
PB08	**IPOC Station P**	**0.08**	**110**			**Pn**	**19 23 59.8**	**+0.3**
GO01	**Chusmiza**	**0.44**	**5**	*e*P		**Pn**	**19 24 02.0**	**+1.0**
GO01				*e*S		**Sn**	**19 24 13.9**	**+0.8**
GO01				IAML			19 24 15.6	
	comp=N,189μm,0.2s							
GO01	**Chusmiza**	**0.44**	**5**	Pn		**Pn**	**19 24 01.8**	**+0.8**
PB11	**IPOC Station P**	**0.53**	**311**	*i* P		**Pn**	**19 24 02.0**	**+0.8**

NPGB	Novo Progresso	18.71	48	eP		P	19 27 54.2	-1.4
LC01	Cunco	18.86	186			P	19 27 55.2	-1.9
SNDB	Serra Nova Dou	19.03	68	eP		P	19 27 58.2	-1.0
BB19B	Bebedouro	19.41	96	eP		P	19 28 02.8	-0.5
IPMB	Ipameri, GO	19.99	87	eP		P	19 28 09.0	-0.6
ITTB	Itaituba	20.44	42	eP		P	19 28 12.8	-1.7
PLCA	Paso Flores	20.58	183	P		P	19 28 17.6	+1.8
	comp=E,5.8nm,0.6s,baz=0.6,slow=12,SNR=20							
PLCA	Paso Flores	20.58	183	P		P	19 28 16.2	+0.4
PLCA	Paso Flores	20.58	183	eP		Pn	19 28 18.2	-0.8
BDFB	Brasilia	20.68	81	P		P	19 28 16.1	-1.0
	comp=E,23nm,0.6s,baz=267,slow=12,SNR=24							
BDFB				LR		LR	19 37 18.9	
	comp=E,71nm,19.1s,baz=115,slow=40							
BDFB	Brasilia	20.68	81	P		P	19 28 16.5	-0.6
BDFB				IAmb		IAmb	19 28 20.1	
	comp=Z,22nm,0.7s							
PET01	Itanhaem-SP	20.75	106	eP		P	19 28 17.5	-0.1
VAO	Valinhos	20.91	102	eP		P	19 28 18.3	-1.2
PEXB	Peixe	21.61	72	eP		P	19 28 26.3	-0.7
OTAV	Otavalo	22.15	335	P		P	19 28 31.0	-2.2
OTAV	Otavalo	22.15	335	eP		P	19 28 36.2	+3.0
PARB	Paraibuna	22.16	103	eP		P	19 28 31.7	-1.2
LL01	San Ignacio de	22.36	186	P		P	19 28 34.1	-0.5
BSCB	Bom Sucesso	22.92	96	eP		P	19 28 39.5	-1.1
BBAC	Balboa, Cauca	23.36	339	eP		P	19 28 46.6	+1.7
PCON	Cinco Dias	23.38	342	eP		P	19 28 45.4	-0.2
PRPB	Parauapebas	23.40	56	eP		P	19 28 43.9	-1.3
MAN01	Angra dos Reis	23.67	101	eP		P	19 28 47.4	-0.1
POPC	Popayan, Colom	23.67	341	eP		P	19 28 50.0	+2.3
SMTB	Santa Maria do	23.72	65	eP		P	19 28 46.8	-1.3
JANB	Januaria	24.27	82	eP		P	19 28 52.1	-0.9
SDBA	SAO DESIDERIO	24.56	76	eP		P	19 28 54.9	-0.7
ORTC	Ortega, Tolima	24.59	345	eP		P	19 28 55.8	-0.1
DUB01	Friburgo-RJ	25.13	99	eP		P	19 29 00.0	-0.7
RREF	El Recreo	25.57	346	eP		P	19 29 07.2	+1.8
MCPB	Macapa, AP	25.85	43	eP		P	19 29 07.8	+0.6
GUY2C	Guyana, Caldas	25.89	346	eP		P	19 29 08.7	+0.6
NORC	Norcasia	26.11	347	eP		P	19 29 09.2	-0.4
RUSC	La Rusia	26.12	351	eP		P	19 29 09.7	-0.5
SJMB	Sao Joao De Ma	26.48	92	eP		P	19 29 12.7	-0.3
PTBC	PUERTO BERRIO,	26.98	349	eP		P	19 29 14.5	-2.9
GDU01	Guandu, BA	29.05	82	eP		P	19 29 35.0	-0.9
RCBR	Riachuelo	35.35	71	P		P	19 30 31.8	+0.7
255A	Hazlehurst	53.28	346	P		P	19 32 51.6	-1.8
352A	Blakely	53.46	343	P		P	19 32 52.9	-1.9
ZAIG	Zacatecas	53.62	321	P		P	19 32 54.0	-2.4
ZAIG				IAmb		IAmb	19 32 59.2	
	comp=Z,8.6nm,0.7s							
BIRD	Birdtown, Kers	55.49	349	P		P	19 33 07.2	-2.1
LRAL	Lakeview Retre	55.51	342	P		P	19 33 06.7	-2.8
LRAL				IAmb		IAmb	19 33 12.7	
	comp=Z,17nm,1.4s							
W57A	Gilead	55.90	349	P		P	19 33 11.6	-0.7
W57A				IAmb		IAmb	19 33 13.1	
	comp=Z,11nm,0.8s							
X48A	Hartselle	56.85	342	P		P	19 33 18.5	-0.6
X48A				IAmb		IAmb	19 33 19.0	
	comp=Z,6.8nm,0.8s							
WVT	Waverly	58.64	342	P		P	19 33 30.0	-1.6
WVT				IAmb		IAmb	19 33 31.4	
	comp=Z,11nm,0.8s							
T50A	Nancy	58.70	345	P		P	19 33 29.6	-2.4
T50A				IAmb		IAmb	19 33 29.9	
	comp=Z,10nm,1.4s							
S54A	Dingess, Becki	58.71	349	P		P	19 33 30.6	-1.5
T47A	Sharon Grove	59.24	343	P		P	19 33 33.9	-1.9
TXAR	Lajitas Array	59.32	325	P		P	19 33 37.1	+0.6
	comp=Z,1.0nm,0.6s,baz=154,slow=8.6,SNR=9.1							
TXAR				pP		pP	19 34 02.5	+0.6
	comp=Z,0.5nm,0.7s,baz=151,slow=10.0,SNR=2.6							
TXAR	Lajitas Array	59.32	325	P		P	19 33 35.9	-0.7
TX31	Lajitas Ar. Si	59.32	325	P		P	19 33 35.8	-0.7
TX31				IAmb		IAmb	19 33 36.9	
	comp=Z,4.2nm,0.9s							
TX32	Lajitas Array	59.32	325	P		P	19 33 35.9	-0.7
Q56A	Snyder Ridge,	59.58	351	P		P	19 33 38.1	+0.1
LCAR	Lake Charles	59.61	339	P		P	19 33 38.1	-0.1
LCAR				IAmb		IAmb	19 33 38.3	
	comp=Z,5.7nm,0.8s							
T45A	Paducah	59.70	342	P		P	19 33 37.8	-1.1
Q54A	Coxs Mills	59.78	350	P		P	19 33 39.6	+0.2
PBMO	Poplar Bluff	60.02	340	P		P	19 33 39.0	-2.1
BELA	Belgrano 2	60.16	172	P		P	19 33 39.4	-2.1
S44A	Carbondale	60.51	342	P		P	19 33 41.9	-2.4
SIUC	Southern Illin	60.52	342	P		P	19 33 42.5	-1.9
P52A	Corning	60.65	349	P		P	19 33 45.0	-0.3
P52A				IAmb		IAmb	19 33 45.6	
	comp=Z,19nm,1.2s							
O53A	New Philadelph	61.08	350	P		P	19 33 48.5	+0.3
O53A				IAmb		IAmb	19 33 51.4	
	comp=Z,17nm,1.3s							
FVM	French Village	61.13	341	P		P	19 33 48.3	-0.3
VNA3	Neumayer Olymp	61.48	161	P		P	19 33 52.5	+1.9
N53A	Lisbon	61.56	350	P		P	19 33 49.9	-1.5
Q44A	Meyer Farm, Va	61.56	343	P		P	19 33 50.3	-1.2
MNTX	Cornudas Mount	62.09	325	P		P	19 33 54.6	-0.6
MNTX				IAmb		IAmb	19 33 55.8	
	comp=Z,2.8nm,0.8s							
P43A	Skaggs, Pawnee	62.39	342	P		P	19 33 55.7	-1.3
SFIN	Lafayette	62.44	345	P		P	19 33 56.1	-1.2
MSTX	Muleshoe	62.56	329	P		P	19 33 58.3	-0.1
MSTX				IAmb		IAmb	19 33 59.3	
	comp=Z,11nm,1.0s							
P40A	Paris	63.05	340	P		P	19 34 00.6	-0.8
P40A				IAmb		IAmb	19 34 01.7	
	comp=Z,10nm,0.7s							
P38A	Dawn	63.62	339	P		P	19 34 04.9	-0.2
SNAA	Sanae	63.68	161	P		P	19 34 06.4	+1.1
SNAA	Sanae	63.68	161	P		P	19 34 06.5	+1.2
	comp=Z,2.1nm,0.9s,baz=276,slow=6.6,SNR=14							
SNAA				pP		pP	19 34 32.9	+1.3
	comp=Z,1.6nm,0.8s,baz=263,slow=3.9,SNR=2.6							
SNAA	Sanae	63.68	161	P		P	19 34 05.0	-0.2
319A	Douglas	64.01	322	P		P	19 34 09.2	+1.2
319A				IAmb		IAmb	19 34 10.3	
	comp=Z,11nm,0.9s							
121A	Cookes Peak, D	64.03	324	P		P	19 34 05.7	-2.6
121A				IAmb		IAmb	19 34 12.2	
	comp=Z,9.7nm,1.5s							
N35A	Tabor	65.44	338	P		P	19 34 16.0	-1.0
SDCO	Great Sand Dun	66.90	329	P		P	19 34 27.8	+1.0
SDCO				IAmb		IAmb	19 34 28.6	
	comp=Z,8.9nm,1.4s							
X16A	Lo Mia Camp, P	67.47	323	P		P	19 34 30.9	+0.6
I37A	Lemond, Waseca	67.55	341	P		P	19 34 30.2	-0.1
I37A				IAmb		IAmb	19 34 30.8	
	comp=Z,13nm,0.7s							
WUAZ	Wupatki	68.24	324	P		P	19 34 35.3	+0.2
WUAZ				IAmb		IAmb	19 34 37.9	
	comp=Z,7.4nm,0.9s							
LIC	Lamto	68.30	74	ePKP2		P	19 34 35.4	-0.3
	comp=Z,2.3nm,0.2s							
TIC	Toumodi	68.48	74	ePKP2		P	19 34 36.7	-0.2
KIC	Kosan Boka	68.62	74	ePKP2		P	19 34 36.5	-1.2
	comp=Z,5.0nm,0.4s							
DBIC	Dimbokro	68.64	74	P		P	19 34 37.0	-0.8
	comp=Z,5.6nm,0.6s,baz=226,slow=4.7,SNR=9.0							
DBIC				pP		PcP	19 35 03.9	+1.7
	comp=Z,4.3nm,0.6s,baz=216,slow=7.6,SNR=3.2							
DBIC	Dimbokro	68.64	74	P		P	19 34 36.8	-1.0
DBIC				IAmb		IAmb	19 34 41.5	
	comp=Z,8.1nm,0.8s							
SMCO	Snowmass	68.74	329	P		P	19 34 37.0	-1.4
SMCO				IAmb		IAmb	19 34 45.7	
	comp=Z,14nm,0.7s							
F36A	Milaca	69.27	342	P		P	19 34 40.5	-0.5
F36A				IAmb		IAmb	19 34 41.4	
	comp=Z,7.1nm,0.9s							
U15A	North Rim	69.41	324	P		P	19 34 43.7	+1.3
U15A				IAmb		IAmb	19 34 45.1	
	comp=Z,5.9nm,0.7s							
PFO	Pinyon Flats O	69.86	319	LR		LR	20 04 08.4	
	comp=Z,22nm,18.2s,baz=248,slow=35							
QSPA	South Pole Qui	70.07	180	P		P	19 34 48.1	+2.1
QSPA				IAmb		IAmb	19 34 48.9	
	comp=Z,9.8nm,1.2s							
F33A	5 Mile Ranch,	70.09	340	P		P	19 34 45.4	-0.7
F33A				IAmb		IAmb	19 34 58.6	
	comp=Z,8.9nm,0.9s							
KNB	Kanab	70.13	324	P		P	19 34 48.9	+2.1
LCMT	Little Creek M	70.36	324	P		P	19 34 49.3	+1.2
CCUT	Cedar City	70.81	324	P		P	19 34 53.0	+2.0
SHPR	Sheep Range	71.08	322	P		P	19 34 51.3	-1.2
RSSD	Black Hills	71.42	334	P		P	19 34 54.8	+0.3
B35A	Bob, Littlefor	71.60	343	P		P	19 34 54.7	-0.5
B35A				IAmb		IAmb	19 34 56.0	
	comp=Z,22nm,1.2s							
PSUT	Pine Spring	71.79	325	P		P	19 34 58.9	+2.1
TPNV	Topopah Spring	72.02	322	P		P	19 34 59.6	+1.4
TPNV				IAmb		IAmb	19 35 01.2	
	comp=Z,5.1nm,0.8s							
JLU	Jordanelle	72.04	327	P		P	19 34 59.6	+1.3
AGMN	Agassiz Nation	72.15	342	P		P	19 34 58.3	-0.2
AGMN				IAmb		IAmb	19 34 58.7	
	comp=Z,6.0nm,0.7s							
SPR3	Spring Creek 3	72.38	325	P		P	19 35 01.9	+1.4
SPR3				IAmb		IAmb	19 35 02.8	
	comp=Z,4.9nm,0.9s							
DUG	Dugway, Tooele	72.44	326	P		P	19 35 02.1	+1.5
ISA	Isabella, Lake	72.47	320	P		P	19 35 02.5	+1.7
ISA				IAmb		IAmb	19 35 03.3	
	comp=Z,5.9nm,0.8s							
R11A	Troy Canyon, C	72.61	323	P		P	19 35 03.0	+1.3
KOWA	Kowa	72.75	67	P		P	19 35 03.5	+0.7
KOWA				IAmb		IAmb	19 35 30.9	
	comp=Z,6.0nm,0.6s							
PDAR	Pinedale Array	72.76	330	P		P	19 35 03.3	+0.7
	comp=Z,0.7nm,0.7s,baz=127,slow=7.4,SNR=5.4							
PDAR	Pinedale Array	72.76	330	P		P	19 35 03.1	+0.6
HWUT	Hardware Ranch	72.85	328	P		P	19 35 02.6	-0.4
MDND	Maddock	72.93	339	P		P	19 35 03.3	+0.2
BGU	Big Grassy Mou	73.09	327	P		P	19 35 05.4	+1.0
TPH	Tonopah	73.35	322	P		P	19 35 06.5	+0.4
HVU	Hansel Valley	73.58	328	P		P	19 35 06.5	-0.8
ULM	Lac du Bonnet	73.91	343	P		P	19 35 08.4	-0.3
	comp=Z,5.1nm,0.5s,baz=158,slow=5.6,SNR=11							
ULM	Lac du Bonnet	73.91	343	P		P	19 35 08.6	-0.2
ULM				IAmb		IAmb	19 35 09.1	
	comp=Z,7.7nm,0.7s							
OMMB	Old Mammoth Mi	74.08	321	P		P	19 35 11.9	+1.4
OMMB				IAmb		IAmb	19 35 13.1	
	comp=Z,5.6nm,0.8s							
ELK	Elko	74.11	325	P		P	19 35 11.7	+1.1
NV11	Mina Array Sit	74.14	322	P		P	19 35 12.0	+1.4
LHV	Little Huntoon	74.22	322	P		P	19 35 12.8	+2.0
LHV				IAmb		IAmb	19 35 13.9	
	comp=Z,8.9nm,1.1s							
NVAR	Mina Array Bea	74.22	322	P		P	19 35 12.6	+1.5
	comp=Z,2.2nm,0.8s,baz=157,slow=6.6,SNR=16							
NVAR				pP		pP	19 35 39.0	+1.4
	comp=Z,1.0nm,0.7s,baz=141,slow=6.8,SNR=3.4							
NVAR	Mina Array Bea	74.22	322	P		P	19 35 12.1	+0.9
RYN	Ryan	74.48	322	P		P	19 35 13.7	+1.2
KVN	Kaiserville	74.52	323	P		P	19 35 14.1	+1.3
KVN				IAmb		IAmb	19 35 15.1	
	comp=Z,5.1nm,0.9s							
YHH	Holmes Hill	74.91	331	P		P	19 35 17.0	+1.9
YHL	Hebgen Lake	75.11	331	P		P	19 35 18.1	+1.9
PAHR	Pah Rah Range	75.70	322	P		P	19 35 21.4	+1.9
PAHR				IAmb		IAmb	19 35 22.5	
	comp=Z,9.3nm,0.8s							
HLID	Hailey	75.71	328	P		P	19 35 20.2	+0.6
HLID				IAmb		IAmb	19 35 23.0	
	comp=Z,6.8nm,1.1s							
BCYI	Bear Canyon	75.76	329	P		P	19 35 19.5	-0.4
MCMT	McKenzie Canyo	75.88	330	P		P	19 35 22.2	+1.6
BOZ	Bozeman (W)	75.89	331	P		P	19 35 21.6	+1.1
AFDM	Forest Hills D	76.13	321	P		P	19 35 22.1	+0.2
MFID	Camas Ranch	76.32	327	P		P	19 35 23.7	+0.7
MFID				IAmb		IAmb	19 35 25.8	
	comp=Z,7.2nm,1.1s							
ORV	Oroville	76.83	321	P		P	19 35 27.4	+1.7
ORV				IAmb		IAmb	19 35 28.6	
	comp=Z,9.9nm,1.1s							
EGMT	Eagleton	76.93	333	P		P	19 35 24.6	-1.6
EGMT				IAmb		IAmb	19 35 27.7	
	comp=Z,5.1nm,0.9s							
TOA0	Torodi Ar. Sit	77.18	71	P		P	19 35 27.4	-0.9
TOA0				pP		pP	19 35 54.3	-1.3
TOA0				IAmb		IAmb	19 35 56.0	
	comp=Z,10nm,1.1s							
TORD	Torodi Ar. Bea	77.18	71	P		P	19 35 27.2	-1.1
	comp=Z,3.9nm,0.4s,baz=254,slow=5.3,SNR=69							
TORD				pP		pP	19 35 55.0	-0.5
	comp=Z,5.2nm,0.8s,baz=258,slow=5.4,SNR=6.0							
TORD	Torodi Ar. Bea	77.18	71	P		P	19 35 27.0	-1.3
PLID	Pearl Lake	77.60	328	P		P	19 35 30.1	-0.2
MOD	Modoc Plateau	77.68	324	P		P	19 35 31.4	+0.7
BMO	Blue Mountains	78.09	327	P		P	19 35 34.1	+1.3
HAWA	Hanford	80.28	327	P		P	19 35 45.6	+1.0
HAWA				IAmb		IAmb	19 35 47.1	
	comp=Z,4.9nm,0.9s							
C09A	Chrisman Ranch	80.63	329	P		P	19 35 45.7	-0.7
C09A				IAmb		IAmb	19 35 48.7	
	comp=Z,8.0nm,0.9s							
BOSA	Boshof	84.37	118	P		P	19 36 07.4	+0.8
	comp=Z,4.9nm,1.1s,baz=230,slow=7.0,SNR=2.7							
BOSA				pP		pP	19 36 35.0	+0.7
	comp=Z,2.4nm,0.7s,baz=237,slow=3.3,SNR=2.3							
BOSA	Boshof	84.37	118	P		P	19 36 06.1	-0.4
BOSA				IAmb		IAmb	19 36 19.7	
	comp=Z,21nm,1.5s							
ESDC	Sonseca Array	85.06	45	P		P	19 36 09.8	+0.2
	comp=Z,0.4nm,0.9s,baz=250,slow=6.4,SNR=1.6							
YKA	Yellowknife Ar	89.78	341	P		P	19 36 32.1	+0.5
	comp=Z,9.3nm,0.8s,baz=130,slow=4.6,SNR=51							
YKA				pP		pP	19 36 59.9	+1.1
	comp=Z,2.6nm,0.7s,baz=134,slow=5.4,SNR=5.5							
H11S2	WAKE ISLAND Hyl	27.39	278	T		T	22 02 20.0	
	baz=100,slow=75,SNR=102							
H11S1	WAKE ISLAND Hyl	27.40	278	T		T	22 02 01.6	
	baz=100,slow=75,SNR=112							
H11S3	WAKE ISLAND Hyl	27.41	278	T		T	22 02 02.0	
	baz=100,slow=75,SNR=87							
H11N3	WAKE ISLAND Hyl	27.44	280	T		T	22 02 07.3	
	baz=101,slow=74,SNR=44							
H11N2	WAKE ISLAND Hyl	27.45	280	T		T	22 02 03.8	
	baz=101,slow=74,SNR=39							
H11N1	WAKE ISLAND Hyl	27.45	280	T		T	22 02 04.0	
	baz=101,slow=74,SNR=49							
ASAR	Alice Springs	130.99	209	PKP		PKPdf	19 42 45.7	+0.1
	comp=Z,0.9nm,0.5s,baz=132,slow=1.8,SNR=32							
ASAR				pPKP		pPKPdf	19 43 14.4	+0.4
	comp=Z,0.2nm,0.5s,baz=125,slow=1.7,SNR=1.3							
ASAR	Alice Springs	130.99	209			PKPdf	19 42 45.5	-0.1
WRA	Warramunga Arr	133.98	212	PKP		PKPdf	19 42 51.9	+0.7
	comp=Z,1.3nm,0.7s,baz=155,slow=1.7,SNR=24							
WRA				SKPbc		SKPbc	19 46 11.5	+0.1
	comp=Z,0.2nm,0.6s,baz=146,slow=3.7,SNR=5.1							
WRA	Warramunga Arr	133.98	212			PKPdf	19 42 51.6	+0.4
KURBB	Kurchatov Arra	140.34	32	PKP		PKPdf	19 43 02.9	+1.0
	comp=Z,1.0nm,0.2s,baz=296,slow=2.7,SNR=2.1							
ZALV	Zalesovo Beam	140.83	24	PKhKP		PKPpre	19 42 58.6	
	comp=Z,0.8nm,0.5s,baz=308,slow=5.3,SNR=2.4							
ZALV				PKP		PKPdf	19 43 03.4	+0.7
	comp=Z,2.6nm,0.7s,baz=291,slow=2.5,SNR=14							
ZALV				pPKP		pPKPdf	19 43 31.3	-0.1
	comp=Z,1.0nm,0.7s,baz=277,slow=1.2,SNR=1.8							
ZALV	Zalesovo Beam	140.83	24			PKPpre	19 42 56.9	
MK31	Makanchi Array	144.68	35	PKPdf		PKPab	19 43 09.2	+0.4
MKAR	Makanchi Array	144.68	35	PKP		PKPab	19 43 09.2	+0.4
	comp=Z,2.4nm,0.7s,baz=316,slow=2.6,SNR=14							
MKAR				pPKP		pPKPdf	19 43 38.1	-0.4
	comp=Z,0.6nm,0.6s,baz=326,slow=2.1,SNR=2.2							
KLR	Kul'dur	146.44	335	PKPbc		PKPbc	19 43 14.4	+0.2
	comp=Z,2.1nm,0.5s,baz=55,slow=3.1,SNR=8.8							
USRK	Ussuriysk Ar.	150.18	328	PKPbc		PKPbc	19 43 25.2	+1.1
	comp=Z,7.1nm,0.8s,baz=293,slow=1.3,SNR=12							
MJAR	Matsushiro Arr	150.96	310	PKPbc		PKPbc	19 43 27.1	+0.8
	comp=Z,4.6nm,0.8s,baz=77,slow=2.1,SNR=8.6							
MAT	Matsushiro	150.96	310	PKP		PKPbc	19 43 26.8	+0.5
SONM	Songino Array	152.12	6	PKP		PKPdf	19 43 23.1	+1.1
	comp=Z,1.1nm,0.9s,baz=243,slow=0.7,SNR=4.1							
SONM				PKPbc		PKPbc	19 43 29.4	+0.7
	comp=Z,3.6nm,0.5s,baz=308,slow=1.0,SNR=18							
SONM				pPKPbc		sPKPdf	19 43 58.4	-3.2
	comp=Z,1.2nm,0.4s,baz=312,slow=1.2,SNR=3.5							
GTA	Gaotai	158.58	24	ePKP		PKPdf	19 43 32.3	+1.3
GTA				pPKP		pPKPdf	19 43 59.1	-0.7
GTA				sPKP			19 44 09.8	
LZH	Lanzhou	162.97	19	PKP		PKPdf	19 43 34.5	-1.4
LZH				pPKP		pPKPdf	19 44 01.1	-3.7
LZH				sPKP			19 44 12.3	

*MAN **24** 19:48:23.4, 8.°60N×125.°47E, h52km, mb5.1, ML4.0, MS4.1*

*NEIC **24** 19:48:23.6±1.1, 8.°65N±0.°08×125.°7E±0.°1, h65km±7km, mb4.5/49, Error ellipse: s-maj=16.5km s-min=10.3km az=58.0*

*IDC **24** 19:48:25.1±1.3, 8.°59N×125.°67E, h80km±14km, mb3.9/19, mb1 4.0/22, mb1mx3.9/43, mbtmp4.2/22, MS3.1/7, Ms1 3.1/7, ms1mx2.8/31, Error ellipse: s-maj=22.9km s-min=10.8km az=83.0*

*DJA **24** 19:48:50.7±1.5, 7.°N±14.°×12.°6E±.°, h113km±12km, M4.3/19, mb4.4/19, mB4.8/7, MLv4.3/7, Mw(mB)4.1/7*

ISC 24 19:48:23.8±0.8, 8.°59N±0.°03×125.°53E±0.°05, h69km±8km, n124, σ1°33/137, mb4.5/42, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
CGP	Cagayan de Oro	0.84	261	⇑eP		Pn	19 48 39.5	-0.8
CGP				⇑S		Sn	19 48 50.8	-1.7
BUKP	Musuan	0.84	214	eP		Pn	19 48 40.2	-0.2
BUKP				eS		Sn	19 48 53.0	+0.3
GLSP	General Luna,	1.32	26	eP		Pn	19 48 46.1	-0.4
GLSP				eS		Sn	19 49 03.2	-0.3
DAV	Davao City (W)	1.51	178	P		Pn	19 48 50.0	+1.1
	245nm,0.3s,baz=280,slow=5.3,SNR=18							
DAV				S		Sn	19 49 10.1	+2.3
	271nm,0.3s,baz=267,slow=22,SNR=4.5							
DAV				LR		LR	19 49 36.8	
	comp=Z,831nm,20.8s,baz=318,slow=47							
DAV	Davao City (W)	1.51	178			Pn	19 48 49.5	+0.6
KCP	Kidapawan	1.63	196	⇑iP		Pn	19 48 51.1	+0.5
KCP				⇑S		Sn	19 49 11.9	+1.1
MSLP	Maasin	1.68	337	eP		Pn	19 48 50.2	-0.9
MSLP				eS		Sn	19 49 12.9	+1.1
MATI	Mati	1.78	156	eP		Pn	19 48 52.9	+0.3
MATI				eS		Sn	19 49 16.4	+2.1
PAGZ	Pagadian	2.25	251	eP		Pn	19 48 59.0	+0.1
PAGZ				eS		Sn	19 49 28.1	+2.4
SKMP	Bagumbayan, Su	2.28	206	eP		Pn	19 48 58.5	-0.7
SKMP				eS		Sn	19 49 22.7	-3.6
LLP	Lapu-Lapu	2.31	318	⇓iP		Pn	19 49 00.0	+0.3
LLP				⇓S		Sn	19 49 27.8	+0.6
DDMP	Don Marcelino,	2.47	176	eP		Pn	19 49 01.3	-0.6
DDMP				eS		Sn	19 49 28.8	-2.3
OCLP	Ormoc	2.61	340	eP		Pn	19 49 04.0	+0.2
CNOP	Candoni, Negro	3.11	294	eP		Pn	19 49 10.3	-0.2
CNOP				eS		Sn	19 49 44.8	-1.9
GUIM	Jordan	3.54	305	eP		Pn	19 49 15.4	-1.0
CNP	Catarman	3.99	348	eP		Pn	19 49 24.5	+1.9
JAP	San Jose, Anti	4.14	302	eP		Pn	19 49 22.8	-1.7
SGSI	Sangihe	4.87	180	P		Pn	19 49 34.5	-0.1
LQP	Lukban	6.74	325	eP		Pn	19 50 00.1	-0.4
TNTI	Ternate	7.98	167	P		Pn	19 50 18.0	+0.9
	0.1nm521nm37nm,1.0s							
TNTI	Ternate	7.98	167			Pn	19 50 15.7	-1.4
KMSI	Cibinong	8.11	191	P		Pn	19 50 21.2	+2.3
	0.2nm45nm,0.6s							
GTOI	Gorontalo	8.29	198	P		Pn	19 50 21.5	+0.1
	0.2nm562nm666nm,0.8s							
TOLI2	Tolitoli	8.81	213		Pn	Pn	19 50 29.8	+1.3
MRSI	Marisa	8.82	204	P		Pn	19 50 31.5	+2.9
	0.1nm26nm,0.5s							
LUWI	Luwuk	9.95	196	P		Pn	19 50 47.5	+3.4
	916nm100nm,1.1s							
LUWI	Luwuk	9.95	196		Pn	Pn	19 50 46.8	+2.6
APSI	Ampana	10.20	202	P		Pn	19 50 52.3	+4.8
	30nm,1.1s							
SANI	Sanana	10.58	178	P		Pn	19 50 49.6	-3.0
	731nm42nm,1.0s							
SIJI	Sorong	10.99	148	P		Pn	19 50 58.2	-0.2
	2.2nm,0.3s,baz=335,slow=16,SNR=12							
NLAI	Namlea	11.85	172	P		Pn	19 51 07.2	-2.9
	2µm28nm,0.7s							
TTSI	Tana Toraja	12.88	206	P		Pn	19 51 27.7	+3.6
	581nm20nm,0

MAKZ	**Makanchi**	**53.12**	**324**	P		**P**	**19 57 33.4**	**-1.1**
NIL	**Nilore**	**54.09**	**305**	P		**P**	**19 57 42.4**	**+0.5**
ZAA0	**Zalesovo Array**	**55.76**	**332**			**P**	**19 57 53.4**	**0.0**
ZALV	**Zalesovo Beam**	**55.76**	**332**	P		**P**	**19 57 53.5**	**0.0**
	comp=Z,1.9nm,0.7s,baz=121,slow=6.1,SNR=11							
ZALV				PcP		**PcP**	**19 58 50.8**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=129,slow=4.0,SNR=6.6							
ZALV				LR		LR	20 23 38.3	
	comp=Z,12nm,18.2s,baz=360,slow=38							
ZALV	**Zalesovo Beam**	**55.76**	**332**	P		**P**	**19 57 53.1**	**-0.3**
KURK	**Kurchatov**	**57.05**	**326**	P		**P**	**19 58 03.5**	**+0.8**
MIDW	**Midway**	**57.05**	**62**	P		**P**	**19 58 00.6**	**-2.5**
KBL	**Kabul**	**57.70**	**305**	P		**P**	**19 58 08.8**	**+0.9**
KBL				IAmb		IAmb	19 58 09.7	
	comp=Z,5.0nm,0.9s							
BTK	**Batken**	**57.76**	**312**	P		**P**	**19 58 09.5**	**+1.5**
BTK				IAmb		IAmb	19 58 10.3	
	comp=Z,4.1nm,0.8s							
KK06	**Karatay Array**	**58.91**	**316**	P		**P**	**19 58 16.5**	**+0.6**
KK05	**Karatay Array**	**58.92**	**316**	P		**P**	**19 58 16.4**	**+0.4**
KK31	**Karatay Array**	**58.92**	**316**	P		**P**	**19 58 17.0**	**+1.0**
KK31				IAmb		IAmb	19 58 17.9	
	comp=Z,4.5nm,0.8s							
KKAR	**Karatay Array**	**58.92**	**316**	P		**P**	**19 58 16.9**	**+0.8**
KKAR				IAmb		IAmb	19 58 17.9	
	comp=Z,4.5nm,0.8s							
KKAR	**Karatay Array**	**58.92**	**316**	P		**P**	**19 58 16.8**	**+0.8**
BRVK	**Borovoye**	**62.71**	**326**	P		**P**	**19 58 42.3**	**+0.8**
TIXI	**Tiksi**	**63.04**	**1**	P		**P**	**19 58 42.7**	**-0.6**
TIXI				IAmb		IAmb	19 58 43.6	
	comp=Z,4.6nm,0.8s							
NRIK	**Noril'sk**	**65.46**	**346**	P		**P**	**19 58 59.5**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=108,slow=6.2,SNR=4.5							
AB01	**Akbulak array**	**67.68**	**320**	P		**P**	**19 59 13.7**	**-0.1**
AB31	**Akbulak array**	**67.68**	**320**	P		**P**	**19 59 13.9**	**+0.2**
AB31				IAmb		IAmb	19 59 15.2	
	comp=Z,10.0nm,1.4s							
ABKAR	**Akbulak array**	**67.68**	**320**	P		**P**	**19 59 14.3**	**+0.6**
ABKAR				IAmb		IAmb	19 59 15.2	
	comp=Z,10.0nm,1.4s							
ABKAR	**Akbulak array**	**67.68**	**320**	P		**P**	**19 59 14.1**	**+0.4**
ARU	**Arti**	**70.23**	**327**	P		**P**	**19 59 29.4**	**-0.1**
IMAR	**Indian Mountai**	**78.43**	**24**	P		**P**	**20 00 17.2**	**+0.3**
BPAW	**Bear Paw Mtn.**	**79.48**	**26**	P		**P**	**20 00 23.2**	**+0.5**
BPAW				IAmb		IAmb	20 00 23.6	
	comp=Z,5.8nm,0.6s							
COLD	**Coldfoot**	**79.92**	**23**	P		**P**	**20 00 26.1**	**+1.1**
COLD				IAmb		IAmb	20 00 26.8	
	comp=Z,3.6nm,0.8s							
O22K	**Cooper Landing**	**79.99**	**30**	P		**P**	**20 00 25.8**	**+0.3**
TOLK	**Toolik Lake Re**	**80.20**	**22**	P		**P**	**20 00 27.4**	**+0.9**
TOLK				IAmb		IAmb	20 00 28.3	
	comp=Z,3.6nm,0.8s							
I23K	**Minto, Yukon-K**	**80.21**	**25**	P		**P**	**20 00 27.1**	**+0.5**
I23K				IAmb		IAmb	20 00 30.3	
	comp=Z,6.1nm,1.4s							
RND	**Reindeer**	**80.42**	**27**	P		**P**	**20 00 27.4**	**-0.4**
KNK	**Knik Glacier**	**80.61**	**29**	P		**P**	**20 00 28.7**	**-0.2**
KLMR	**Klimovskoe**	**80.62**	**330**	*eP*		**P**	**20 00 27.7**	**-1.2**
KLMR				AMP			20 00 29.2	
	comp=Z,10.0nm,0.9s							
SML	**Sawmill**	**80.67**	**29**	P		**P**	**20 00 29.2**	**0.0**
MDM	**Murphy Dome**	**80.69**	**25**	P		**P**	**20 00 29.1**	**-0.2**
CCB	**Clear Creek Bu**	**80.87**	**26**	P		**P**	**20 00 30.0**	**-0.1**
HDA	**Harding Lake**	**81.24**	**26**	P		**P**	**20 00 31.3**	**-0.9**
HDA				IAmb		IAmb	20 00 31.6	
	comp=Z,3.1nm,0.7s							
IL31		**81.26**	**26**	P		**P**	**20 00 31.3**	**-0.9**
IL31				IAmb		IAmb	20 00 54.3	
	comp=Z,5.8nm,1.3s							
ILAR	**Eielson Array**	**81.26**	**26**	P		**P**	**20 00 31.2**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=237,slow=4.7,SNR=19							
BMAR	**Burnt Mountain**	**82.09**	**23**	P		**P**	**20 00 37.7**	**+1.1**
RIDG	**Independent Ri**	**82.20**	**27**	P		**P**	**20 00 37.2**	**-0.1**
MENT	**Mentasta**	**82.76**	**27**	P		**P**	**20 00 40.5**	**+0.3**
MENT				IAmb		IAmb	20 00 41.6	
	comp=Z,4.6nm,0.8s							
K27K	**Chicken**	**83.39**	**26**	P		**P**	**20 00 44.9**	**+1.5**
K27K				IAmb		IAmb	20 00 45.8	
	comp=Z,11nm,1.4s							
BCAR	**Beaver Creek A**	**83.63**	**27**	P		**P**	**20 00 45.8**	**+1.1**
DAWY	**Dawson**	**84.56**	**26**	P		**P**	**20 00 49.8**	**+0.4**
DAWY				IAmb		IAmb	20 00 51.1	
	comp=Z,8.2nm,1.3s							
ARCES	**ARCESS Array B**	**85.51**	**340**	P		**P**	**20 00 54.1**	**+0.1**
	comp=Z,4.4nm,1.1s,baz=67,slow=9.3,SNR=3.6							
INK	**Inuvik**	**86.11**	**21**	P		**P**	**20 00 56.1**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=236,slow=11,SNR=5.4							
INK	**Inuvik**	**86.11**	**21**	P		**P**	**20 00 55.9**	**-1.0**
FINES	**FINESS Array B**	**87.02**	**332**	P		**P**	**20 01 01.2**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=55,slow=4.1,SNR=11							
VNDA	**Vanda**	**88.36**	**173**	LR		LR	20 41 41.1	
	comp=Z,18nm,18.3s,baz=297,slow=36							
NOA	**NORSAR Array B**	**93.94**	**334**	P		**P**	**20 01 32.8**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=66,slow=4.4,SNR=2.5							
NOA				LR		LR	20 47 34.2	
	comp=Z,12nm,20.6s,baz=55,slow=38							
GERES	**GERESS Array B**	**97.56**	**322**	P		Pdif	20 01 51.4	+0.6
	comp=Z,0.3nm,0.8s,baz=64,slow=6.1,SNR=3.5							

*SNET **24** 19:49:22.6±0.7, 12°.95N×88°.48W, h68km±4km, ML3.9*
*UCR **24** 19:49:22.7±0.8, 12°.96N×88°.48W, h68km±5km, ML3.9*
*INET **24** 19:49:23.3, 12°.97N×88°.47W, h58km, MW3.2*
*IDC **24** 19:49:27.6±3.4, 13°.49N×87°.92W, h123km±51km, mb3.0/3, mb1 3.4/4, mb1mx3.1/31, mbtmp3.5/4, Error ellipse: s-maj=135.0km s-min=32.3km az=46.0*

ISC 24 19:49:22.7±1.1, 13°.05N±0°.09×88°.45W±0°.04, h75km±6km, n59, σ1§10/79, mb3.2/3, 2C-2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JUCU	**Jucuarˌn**	**0.28**	**45**	*eP*	**Pn**	**19 49 34.0**	**-0.3**
JUCU				*eS*	**Sn**	**19 49 43.3**	**+0.4**
JUCU				IAML		19 49 45.7	
	comp=Z,11μm,0.2s						
JUCU	**Jucuarˌn**	**0.28**	**45**	*eP*	**Pn**	**19 49 34.0**	**-0.3**
JUCU				*eS*	**Sn**	**19 49 43.3**	**+0.4**
JUCU				IAML		19 49 45.7	
	comp=Z,11μm,0.2s						
ALJI	**Alcalda de J**	**0.30**	**337**	*eP*	**Pn**	**19 49 34.5**	**+0.1**
ALJI				*eS*	**Sn**	**19 49 43.4**	**+0.4**
ALJI				IAML		19 49 47.6	
	comp=Z,5μm,0.2s						
ALJI	**Alcalda de J**	**0.30**	**337**	*eP*	**Pn**	**19 49 34.5**	**+0.1**
ALJI				*eS*	**Sn**	**19 49 43.4**	**+0.4**
ALJI				IAML		19 49 47.6	
	comp=Z,5μm,0.2s						
LCY	**Lacayo**	**0.40**	**22**	*eP*	**Pn**	**19 49 35.6**	**+0.3**
LCY	**Lacayo**	**0.40**	**22**	*eP*	**Pn**	**19 49 35.6**	**+0.3**
RANC	**El Ranchito**	**0.41**	**23**	*iP*	**Pn**	**19 49 35.9**	**+0.5**
RANC				IAML		19 49 36.4	
	comp=Z,5μm,0.4s						
RANC	**El Ranchito**	**0.41**	**23**	*iP*	**Pn**	**19 49 35.9**	**+0.5**
RANC				IAML		19 49 36.4	
	comp=Z,5μm,0.4s						
VSM	**San Miguel**	**0.41**	**25**	*eP*	**Pn**	**19 49 35.9**	**+0.4**
VSM	**San Miguel**	**0.41**	**25**	*eP*	**Pn**	**19 49 35.9**	**+0.4**
PACA	**Pacayal**	**0.43**	**17**	*eP*	**Pn**	**19 49 36.1**	**+0.6**
PACA	**Pacayal**	**0.43**	**17**	*eP*	**Pn**	**19 49 36.1**	**+0.6**
TECA	**Tecapa**	**0.44**	**354**	*eP*	**Pn**	**19 49 36.0**	**+0.4**
TECA	**Tecapa**	**0.44**	**354**	*eP*	**Pn**	**19 49 36.0**	**+0.4**
COEB	**Comit de Eme**	**0.45**	**350**	*eP*	**Pn**	**19 49 35.9**	**+0.3**
COEB				IAML		19 49 36.8	
	comp=Z,3μm,0.4s						
COEB				*eS*	**Sn**	**19 49 46.6**	**+1.5**
COEB	**Comit de Eme**	**0.45**	**350**	*eP*	**Pn**	**19 49 35.9**	**+0.3**
COEB				IAML		19 49 36.8	
	comp=Z,3μm,0.4s						
COEB				*eS*	**Sn**	**19 49 46.6**	**+1.5**
LCND	**La Caada**	**0.60**	**65**	*iP*	**Pn**	**19 49 37.0**	**+0.1**
LCND				*eS*	**Sn**	**19 49 48.6**	**+1.1**
LCND				IAML		19 49 51.1	
	comp=Z,3μm,0.2s						
LCND	**La Caada**	**0.60**	**65**	*iP*	**Pn**	**19 49 37.0**	**+0.1**
LCND				*eS*	**Sn**	**19 49 48.6**	**+1.1**
LCND				IAML		19 49 51.1	
	comp=Z,3μm,0.2s						
COEG	**Centro de Oper**	**0.70**	**324**	*eP*	**Pn**	**19 49 38.4**	**+0.3**
COEG				*eS*	**Sn**	**19 49 50.8**	**+1.4**
COEG				IAML		19 49 56.9	
	comp=Z,3μm,0.3s						
COEG	**Centro de Oper**	**0.70**	**324**	*eP*	**Pn**	**19 49 38.4**	**+0.3**
				eS	**Sn**	**19 49 50.8**	**+1.4**
COEG				IAML		19 49 56.9	
	comp=Z,3μm,0.3s						
PAVA	**Las Pavas**	**0.81**	**324**	*eP*	**Pn**	**19 49 39.2**	**-0.1**
PAVA				*eS*	**Sn**	**19 49 53.4**	**+1.8**
PAVA	**Las Pavas**	**0.81**	**324**	*eP*	**Pn**	**19 49 39.2**	**-0.1**
PAVA				*eS*	**Sn**	**19 49 53.4**	**+1.8**
LFRS	**El Faro**	**0.82**	**314**	*eP*	**Pn**	**19 49 39.9**	**+0.4**
LFRS	**El Faro**	**0.82**	**314**	*eP*	**Pn**	**19 49 39.9**	**+0.4**
LBRS	**Las Brisas**	**0.89**	**320**	*eP*	**Pn**	**19 49 40.8**	**+0.6**
LBRS	**Las Brisas**	**0.89**	**320**	*eP*	**Pn**	**19 49 40.8**	**+0.6**
UDBS	**Universidad Do**	**0.95**	**314**	*eS*	**Sn**	**19 49 56.2**	**+1.7**
UDBS	**Universidad Do**	**0.95**	**314**	*eS*	**Sn**	**19 49 56.2**	**+1.7**
LALI	**Alcalda de L**	**0.95**	**297**	*eP*	**Pn**	**19 49 40.4**	**-0.4**
LALI	**Alcalda de L**	**0.95**	**297**	*eP*	**Pn**	**19 49 40.4**	**-0.4**
OPAM	**Oficina de Pla**	**0.98**	**312**	*eP*	**Pn**	**19 49 42.0**	**+0.8**
OPAM				*eS*	**Sn**	**19 49 56.8**	**+1.7**
OPAM				IAML		19 50 00.3	
	comp=Z,2μm,0.2s						
OPAM	**Oficina de Pla**	**0.98**	**312**	*eP*	**Pn**	**19 49 42.0**	**+0.8**
OPAM				*eS*	**Sn**	**19 49 56.8**	**+1.7**
OPAM				IAML		19 50 00.3	
	comp=Z,2μm,0.2s						
SNET	**Serv Nac Est T**	**0.99**	**310**	*eS*	**Sn**	**19 49 56.3**	**+1.0**
SNET	**Serv Nac Est T**	**0.99**	**310**	*eS*	**Sn**	**19 49 56.3**	**+1.0**
UEES	**Universidad Ev**	**1.01**	**311**	*eP*	**Pn**	**19 49 42.1**	**+0.4**
UEES	**Universidad Ev**	**1.01**	**311**	*eP*	**Pn**	**19 49 42.1**	**+0.4**
BOQS	**Boqueron**	**1.05**	**310**	*eP*	**Pn**	**19 49 43.1**	**+0.8**
BOQS	**Boqueron**	**1.05**	**310**	*eP*	**Pn**	**19 49 43.1**	**+0.8**
TACO	**Tacachico**	**1.27**	**316**	*eP*	**Pn**	**19 49 45.3**	**+0.5**
TACO				*eS*	**Sn**	**19 50 03.1**	**+1.6**
TACO	**Tacachico**	**1.27**	**316**	*eP*	**Pn**	**19 49 45.3**	**+0.5**
TACO				*eS*	**Sn**	**19 50 03.1**	**+1.6**
CEVE	**Cerro Verde**	**1.38**	**304**	*eP*	**Pn**	**19 49 47.2**	**+0.8**
CEVE				*eS*	**Sn**	**19 50 06.3**	**+2.0**
CEVE				IAML		19 50 10.5	
	comp=Z,3μm,0.4s						
CEVE	**Cerro Verde**	**1.38**	**304**	*eP*	**Pn**	**19 49 47.2**	**+0.8**
CEVE				*eS*	**Sn**	**19 50 06.3**	**+2.0**
CEVE				IAML		19 50 10.5	
	comp=Z,3μm,0.4s						
SBLS	**San Blas**	**1.38**	**305**	*eP*	**Pn**	**19 49 47.3**	**+0.8**
SBLS	**San Blas**	**1.38**	**305**	*eP*	**Pn**	**19 49 47.3**	**+0.8**
SNJE	**San Jose**	**1.39**	**306**	*eP*	**Pn**	**19 49 47.2**	**+0.7**
SNJE	**San Jose**	**1.39**	**306**	*eP*	**Pn**	**19 49 47.2**	**+0.7**
RTR	**El Retiro**	**1.43**	**306**	*eP*	**Pn**	**19 49 48.0**	**+0.9**
RTR	**El Retiro**	**1.43**	**306**	*eP*	**Pn**	**19 49 48.0**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.52**	**49**	*eP*	**Pn**	**19 49 49.2**	**+1.0**
TGUH	**Tegucigalpa,Un**	**1.52**	**49**	*eP*	**Pn**	**19 49 49.2**	**+1.0**
NUBE	**Las Nubes**	**1.54**	**303**	*eP*	**Pn**	**19 49 49.2**	**+0.6**
NUBE				*eS*	**Sn**	**19 50 09.0**	**+0.9**
NUBE				IAML		19 50 11.2	
	comp=Z,625nm,0.4s						
NUBE	**Las Nubes**	**1.54**	**303**	*eP*	**Pn**	**19 49 49.2**	**+0.6**
NUBE				*eS*	**Sn**	**19 50 09.0**	**+0.9**
NUBE				IAML		19 50 11.2	
	comp=Z,625nm,0.4s						
MTO3	**Montecristo**	**1.60**	**327**	*eP*	**Pn**	**19 49 50.3**	**+0.9**
MTO3	**Montecristo**	**1.60**	**327**	*eP*	**Pn**	**19 49 50.3**	**+0.9**
JTS	**Las Juntas de**	**4.39**	**128**	P	Pn	19 50 32.0	+5.0
	comp=Z,7.1nm,0.3s,baz=17,slow=11,SNR=19						
JTS				S	**Sn**	**19 51 21.1**	**+4.2**
	comp=Z,2.1nm,0.3s,baz=319,slow=19,SNR=1.6						
TXAR	**Lajitas Array**	**21.49**	**321**	P	**P**	**19 54 06.5**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=141,slow=10,SNR=7.0						
YKA	**Yellowknife Ar**	**52.78**	**345**	P	**P**	**19 58 27.4**	**-2.5**
	comp=Z,0.3nm,0.5s,baz=141,slow=8.0,SNR=2.2						
ILAR	**Eielson Array**	**65.08**	**336**	P	**P**	**19 59 53.6**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=160,slow=5.3,SNR=4.8						
WRA	**Warramunga Arr**	**138.49**	**255**	PKP	**PKPdf**	**20 08 40.4**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=92,slow=2.5,SNR=6.6						

*IDC **24** 19:53:06.0±1.1, 14°.23N×145°.21E, h129km±6km, mb3.4/5, mb1 3.6/5, mb1mx3.2/47, mbtmp3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.4/18, Error ellipse: s-maj=50.4km s-min=18.6km az=99.0*
*NEIC **24** 19:53:06.9±0.6, 14°.3N±0°.1×144°.9E±0°.2, h136km±8km, mb4.3/9, Error ellipse: s-maj=36.7km s-min=9.7km az=111.0*

ISC 24 19:53:07.7±1.0, 14°.2N±0°.1×145°.0E±0°.4, h150km, n21, σ1§46/18, mb4.0/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.58**	**191**	P	**Pn**	**19 53 28.2**	**-1.3**
	324nm,0.3s,baz=350,slow=6.1,SNR=220						
GUMO				LR	LR	19 53 34.4	
	comp=Z,30nm,19.6s,baz=328,slow=40						
GUMO				S	**Sn**	**19 53 42.8**	**-3.4**
	155nm,0.3s,baz=109,slow=22,SNR=16						
GUMO	**Guam**	**0.58**	**191**		**Pn**	**19 53 28.1**	**-1.4**
H11S3	**WAKE ISLAND Hy**	**21.27**	**75**	T	T	20 19 49.3	
	baz=283,slow=74,SNR=3.9						
H11S1	**WAKE ISLAND Hy**	**21.28**	**75**	T	T	20 19 58.9	
	baz=261,slow=74,SNR=5.1						
H11S2	**WAKE ISLAND Hy**	**21.28**	**75**	T	T	20 19 59.8	
	baz=261,slow=74,SNR=2.7						
ASAJ	**Asahikawa**	**29.93**	**357**	LR	LR	20 09 01.6	
	comp=Z,22nm,20.4s,baz=216,slow=32						
WB0	**Warramunga Arr**	**35.29**	**197**	P	**P**	**19 59 49.5**	**+1.0**
WB0				IAmb	IAmb	20 00 13.0	
	comp=Z,9.6nm,1.5s						
WR0	**Warramunga Arr**	**35.43**	**197**		**P**	**19 59 50.6**	**+1.0**
WRAB	**Tennant Creek**	**35.46**	**197**	P	**P**	**19 59 50.7**	**+0.8**
WRAB				IAmb	IAmb	20 00 00.1	
	comp=Z,9.8nm,1.5s						
WB2	**Warramunga Arr**	**35.47**	**197**	P	**P**	**19 59 50.9**	**+1.0**
WB2				IAmb	IAmb	19 59 51.7	
	comp=Z,3.5nm,0.8s						
WRA	**Warramunga Arr**	**35.47**	**197**	P	**P**	**19 59 51.2**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=22,slow=9.7,SNR=39						
WRA	**Warramunga Arr**	**35.47**	**197**	P	**P**	**19 59 50.2**	**+0.2**
ASAR	**Alice Springs**	**39.12**	**196**	P	**P**	**20 00 22.0**	**+1.2**
	comp=Z,0.6nm,0.4s,baz=18,slow=12,SNR=14						
ASAR	**Alice Springs**	**39.12**	**196**	P	**P**	**20 00 22.0**	**+1.2**
STKA	**Stephens Creek**	**45.89**	**184**	P	**P**	**20 01 16.4**	**+1.2**
	comp=Z,2.2nm,0.9s,baz=24,slow=9.1,SNR=3.6						
STKA	**Stephens Creek**	**45.89**	**184**	P	**P**	**20 01 16.2**	**+1.0**
BBOO	**Buckleboo**	**47.48**	**190**	P	**P**	**20 01 29.0**	**+1.4**
MK31	**Makanchi Array**	**61.16**	**316**	P	**P**	**20 03 05.3**	**-1.1**
MK31				IAmb	IAmb	20 03 12.7	
	comp=Z,3.7nm,1.2s						
MKAR	**Makanchi Array**	**61.16**	**316**	P	**P**	**20 03 07.6**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=94,slow=8.3,SNR=4.5						
SCM	**Sheep Creek Mo**	**67.13**	**28**	P	**P**	**20 03 46.1**	**+0.9**
ILAR	**Eielson Array**	**68.01**	**25**	P	**P**	**20 03 49.6**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=251,slow=5.9,SNR=7.0						

IDC 24 20:04:37.2±2.6, 5°.22S×150°.61E, h64km±34km, mb2.9/2, mb1 3.3/3, mb1mx3.1/21, mbtmp3.4/3, ML1.9/1, Error ellipse: s-maj=109.4km s-min=10.3km az=136.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.68**	**57**	P	Pn	20 05 03.3	-1.1
	117nm,0.3s,baz=259,slow=5.2,SNR=30						
KRVT				S	Sn	20 05 25.1	+0.3
	47nm,0.3s,baz=48,slow=22,SNR=8.7						
PMG	**Port Moresby**	**5.39**	**219**	P	Pn	20 05 55.5	+0.5
	2.4nm,0.3s,baz=45,slow=4.3,SNR=3.0						
PMG				S	Sn	20 06 57.0	+1.3
	4.9nm,0.3s,baz=156,slow=22,SNR=6.7						
WRA	**Warramunga Arr**	**21.56**	**226**	P	P	20 09 21.1	-0.5
	0.5nm,0.6s,baz=52,slow=10,SNR=11						
ASAR	**Alice Springs**	**24.40**	**220**	P	P	20 09 49.5	-0.4
	0.2nm,0.4s,baz=57,slow=8.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**148.35**	**287**	PKPbc	PKPbc	20 24 17.2	-0.3
	0.5nm,0.4s,baz=86,slow=2.8,SNR=7.7						

WEL 24 20:07:59.1, 43°.6S±1°.0×177°.3E±°, h9km±2km, M2.3/11, ML2.3/8, MLv2.3/11, Error ellipse: s-maj=0.0km s-min=0.0km az=113.5, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.12**	**196**	P	Pg	20 08 03.3	+1.4
OKCZ	**Okains Bay**	**0.29**	**117**	P	Pb	20 08 06.4	-0.1
AKCZ	**Akaroa Harbour**	**0.32**	**152**	P	Pb	20 08 07.1	+0.1
AMCZ	**Amberley**	**0.41**	**355**	P	Pb	20 08 08.7	+0.2
RACZ	**Rakaia**	**0.43**	**251**	P	Pb	20 08 09.7	+0.9
OXZ	**Oxford**	**0.55**	**298**	P	Pb	20 08 11.0	+0.2
GVZ	**Greta Valley S**	**0.67**	**22**	P	Pb	20 08 13.4	+0.5
WACZ	**Wakanui South**	**0.72**	**240**	P	Pn	20 08 15.1	-0.3
MHCZ	**Mount Hutt**	**0.82**	**274**	P	Pn	20 08 16.6	-0.3
LTZ	**Lake Taylor**	**0.87**	**339**	P	Pn	20 08 17.0	-0.4
RPZ	**Rata Peaks**	**1.20**	**263**	P	Pg	20 08 23.5	+1.4
INZ	**Inchbonnie**	**1.26**	**313**	P	Pg	20 08 24.1	+0.8
KHZ	**Kahutara**	**1.32**	**28**	P	Pn	20 08 23.1	-0.6
THZ	**Tophouse**	**1.83**	**5**	P	Pn	20 08 31.2	+0.4
ODZ	**Otahua Downs**	**2.07**	**225**	P	Pg	20 08 39.8	+1.1

*IDC **24** 20:30:57.0±0.8, 21°.27N×143°.94E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/40, mbtmp3.9/12, MS3.1/6, Ms1 3.1/6, ms1mx2.8/38, Error ellipse: s-maj=31.4km s-min=18.6km az=88.0*
*NEIC **24** 20:31:14.6±2.4, 22°.8N±0°.1×143°.2E±0°.2, h67km±11km, mb4.5/3, Error ellipse: s-maj=24.8km s-min=11.0km az=129.0*

ISC 24 20:31:02.4±0.9, 21°.2N±0°.1×143°.8E±0°.2, h35km, n33, σ1§18/21, mb3.9/13, MS3.1/4, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**6.02**	**346**	Pn	Pn	20 32 18.9	-10
JHJ	**Hachijo jima 2**	**12.36**	**344**	LR	LR	20 38 02.2	
	comp=Z,108nm,18.6s,baz=87,slow=34						
MJAR	**Matsushiro Arr**	**16.01**	**344**	LR	LR	20 40 03.5	
	comp=Z,91nm,19.0s,baz=205,slow=34						
JMM	**Marumori**	**16.78**	**352**	Pn	Pn	20 34 44.1	-11
JMM				IAmb	IAmb	20 34 58.1	
	comp=Z,29nm,1.2s						
KSRS	**Korea Array**	**21.22**	**323**	P	**P**	**20 35 46.0**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=142,slow=8.9,SNR=2.8						
KSRS				LR	LR	20 42 52.1	
	comp=Z,56nm,20.1s,baz=130,slow=34						
H11N1	**WAKE ISLAND Hy**	**21.70**	**90**	T	T	20 58 58.6	
	baz=279,slow=75,SNR=14						
H11N2	**WAKE ISLAND Hy**	**21.70**	**90**	T	T	20 59 02.5	
	baz=279,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**21.70**	**93**	T	T	20 58 55.3	
	baz=283,slow=74,SNR=53						
H11N3	**WAKE ISLAND Hy**	**21.71**	**90**	T	T	20 59 00.2	
	baz=279,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**21.71**	**93**	T	T	20 59 02.8	
	baz=283,slow=74,SNR=30						
H11S2	**WAKE ISLAND Hy**	**21.72**	**93**	T	T	20 59 03.4	
	baz=283,slow=74,SNR=24						
KLR	**Kul'dur**	**29.54**	**344**	P	**P**	**20 37 02.6**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=155,slow=8.5,SNR=8.1						
PETK	**Petropavlovsk-**	**33.57**	**15**	LR	LR	20 47 48.3	
	comp=Z,49nm,21.8s,baz=198,slow=30						
SONM	**Songino Array**	**40.05**	**321**	P	**P**	**20 38 34.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=112,slow=7.3,SNR=2.0						
SONM				LR	LR	20 54 24.2	
	comp=Z,32nm,20.1s,baz=60,slow=35						
WRA	**Warramunga Arr**	**41.95**	**193**	P	**P**	**20 38 50.3**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=15,slow=8.9,SNR=7.9						
CMAR	**Chiang Mai Arr**	**42.17**	**274**	LR	LR	20 58 16.4	
	comp=Z,7.5nm,18.2s,baz=176,slow=39						
ASAR	**Alice Springs**	**45.66**	**193**	P	**P**	**20 39 20.1**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=14,slow=9.5,SNR=11						
ZALV	**Zalesovo Beam**	**54.92**	**322**	P	**P**	**20 40 29.7**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=102,slow=6.1,SNR=4.9						
MKAR	**Makanchi Array**	**55.43**	**313**	P	**P**	**20 40 33.8**	**+0.3**
	comp=Z,0.9nm,0.8s,baz=88,slow=8.1,SNR=4.8						
ILAR	**Eielson Array**	**62.19**	**27**	P	**P**	**20 41 19.8**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=254,slow=5.

MOS ***24*** *20:53:54.9±0.0, 43.02N×45.87E, h6km, MPVA3.6*
NORS ***24*** *20:53:55.3±0.0, 42.98N×45.86E, h14km, MPVA3.6*
DRS ***24*** *20:53:55.5±0.0, 43.05N×45.76E, h13km*
TIF ***24*** *20:53:57.2, 42.91N×45.77E, h5km±4km*
ISC 24 20:53:57.3±0.9, 42.98N±0.03×45.86E±0.02, h8km±8km, n34, σ0988/66, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DVE	**Vedeno**	**0.20**	**97**	*i* Pg	**Pg**	**20 54 01.5**	**+0.2**
DVE				*e*Sg	**Sg**	**20 54 05.8**	**+1.7**
GROC	**Groznyy**	**0.23**	**348**	*e*Pg	**Pg**	**20 54 00.6**	**-1.2**
GROC				*e*Sg	**Sg**	**20 54 04.9**	**0.0**
BTLR	**Botlikh**	**0.41**	**140**	*i* Pg	**Pb**	**20 54 05.8**	**-1.0**
BTLR				*e*Sg	**Sb**	**20 54 13.1**	**-0.1**
DBC	**Dubki**	**0.71**	**87**	*i* Pg	**Pg**	**20 54 10.4**	**-0.6**
DBC				*e*Sg	**Sb**	**20 54 21.3**	**-0.6**
UNCR	**Uncukul**	**0.73**	**111**	*e*Pg	**Pb**	**20 54 11.5**	**-0.8**
UNCR				*e*Sg	**Sb**	**20 54 22.0**	**-0.5**
XNZR	**Khunzakh**	**0.76**	**125**	*i* Pg	**Pb**	**20 54 12.5**	**-0.3**
XNZR				*e*Sg	**Sn**	**20 54 24.6**	**-1.5**
KRNR	**Karanay**	**0.78**	**101**	*e*Pg	**Pb**	**20 54 12.1**	**-1.0**
KRNR				*e*Sg	**Sb**	**20 54 23.8**	**-0.1**
VLKR	**Vladikavkaz**	**0.87**	**275**	*e*Pg	**Pg**	**20 54 14.1**	**+0.1**
VLKR				*e*Sg	**Sb**	**20 54 27.9**	**+1.5**
ARKR	**Arakani**	**0.92**	**114**	*i* Pg	**Pb**	**20 54 14.9**	**-0.4**
ARKR				*e*Sg	**Sn**	**20 54 28.5**	**-1.3**
BUJR	**Buynaksk**	**0.93**	**99**	*i* Pg	**Pn**	**20 54 16.1**	**-0.5**
BUJR				*e*Sg	**Sn**	**20 54 30.6**	**+0.6**
GNBR	**Gunib**	**1.00**	**126**	*i* Pg	**Pn**	**20 54 17.2**	**-0.4**
GNBR				*e*Sg	**Sn**	**20 54 32.5**	**+0.5**
BTKR	**Batakoyurt**	**1.04**	**292**	*e*Pg	**Pg**	**20 54 16.9**	**-0.3**
BTKR				*e*Sg	**Sb**	**20 54 32.7**	**+1.4**
TRKR	**Terskaya**	**1.11**	**312**	*e*Pg	**Pb**	**20 54 17.8**	**-0.8**
TRKR				*e*Sg	**Sn**	**20 54 35.4**	**+0.9**
GUDG	**Gudauri**	**1.14**	**244**	P	**Pg**	**20 54 17.9**	**-1.3**
GUDG				S	**Sg**	**20 54 33.0**	**-1.0**
ARNR	**Ardon**	**1.17**	**280**	*e*Pg	**Pb**	**20 54 19.2**	**-0.6**
ARNR				*e*Sg	**Sn**	**20 54 37.3**	**+1.2**
LGD	**Lagodekhi**	**1.18**	**166**	P	**Pn**	**20 54 20.0**	**0.0**
LGD				S	**Sn**	**20 54 35.5**	**-0.7**
LGD	**Lagodekhi**	**1.18**	**166**	*e*Pg	**Pn**	**20 54 20.0**	**0.0**
KMKR	**Kumukh**	**1.25**	**133**	*e*Pg	**Pn**	**20 54 21.0**	**-0.1**
KMKR				*e*Sg	**Sn**	**20 54 39.5**	**+1.3**
KORR	**Kora**	**1.32**	**275**	*e*Pg	**Pn**	**20 54 21.2**	**-0.8**
KORR				*e*Sg	**Sb**	**20 54 40.3**	**+1.0**
STDR	**Stavd-Durt**	**1.37**	**287**	*i* Pg	**Pn**	**20 54 22.6**	**-0.1**
STDR				*e*Sg	**Sg**	**20 54 42.3**	**+0.9**
SGKR	**Sergokala**	**1.42**	**111**	*i* Pg	**Pg**	**20 54 24.8**	**+0.3**
SGKR				*e*Sg	**Sg**	**20 54 45.0**	**+2.0**
LSNR	**Lesken**	**1.52**	**282**	*e*Pg	**Pn**	**20 54 24.3**	**-0.4**
LSNR				*e*Sg	**Sb**	**20 54 46.0**	**+0.9**
URKR	**Urkarakh**	**1.54**	**121**	*i* Pg	**Pg**	**20 54 26.8**	**0.0**
URKR				*e*Sg	**Sg**	**20 54 48.8**	**+2.0**
DIGR	**Digorskoe uzhe**	**1.68**	**268**	*e*Pg	**Pn**	**20 54 26.4**	**-0.7**
ONI	**Oni**	**1.82**	**258**	P	**Pn**	**20 54 29.1**	**+0.3**
ONI				S	**Sb**	**20 54 54.2**	**+0.5**
ONI	**Oni**	**1.82**	**258**	*e*Pg	**Pn**	**20 54 29.1**	**+0.3**
ONI				*e*Sg	**Sb**	**20 54 54.2**	**+0.5**
KZRT	**Kazreti**	**1.93**	**215**	P	**Pb**	**20 54 32.2**	**-0.5**
KZRT				S	**Sg**	**20 54 58.2**	**-1.0**
KZRT	**Kazreti**	**1.93**	**215**	*e*Pg	**Pb**	**20 54 32.2**	**-0.5**
KZRT				*e*Sg	**Sg**	**20 54 58.2**	**-1.0**
DMNI	**Dmanisi**	**2.07**	**218**	P	**Pn**	**20 54 33.3**	**+1.0**
DMNI				S	**Sb**	**20 55 00.6**	**-0.3**
DMNI	**Dmanisi**	**2.07**	**218**	*e*Pg	**Pn**	**20 54 33.3**	**+1.0**
DMNI				*e*Sg	**Sb**	**20 55 00.6**	**-0.3**
BKRG	**Bakuriani**	**2.12**	**236**	P	**Pn**	**20 54 33.6**	**+0.5**
BKRG				S	**Sb**	**20 55 02.6**	**+0.1**
BKRG	**Bakuriani**	**2.12**	**236**	*e*Pg	**Pn**	**20 54 33.6**	**+0.5**
BKRG				*e*Sg	**Sb**	**20 55 02.6**	**+0.1**
AKH	**Akhalkalaki**	**2.36**	**229**	P	**Pb**	**20 54 39.8**	**-0.2**
AKH				S	**Sb**	**20 55 09.7**	**+0.3**
BGD	**Bogdanovka**	**2.40**	**225**	P	**Pn**	**20 54 38.6**	**+1.6**
BGD				S	**Sb**	**20 55 12.1**	**+1.4**

BJI ***24*** *21:02:18.8±0.0, 5.73S×155.08E, h177km, mB5.5/65, mb5.4/85*
MOS ***24*** *21:02:19.7±1.0, 5.90S×154.89E, h181km, mb5.5/18, Error ellipse: s-maj=8.7km s-min=5.5km az=115.2*
NEIC ***24*** *21:02:19.5±1.7, 5.96S±0.08×154.96E±0.07, h170km±1km, mb5.4/207, Mwb5.6/38, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=13.7km s-min=11.2km az=35.0*
IDC ***24*** *21:02:20.2±0.4, 6.02S×154.87E, h175km±3km, mb5.1/35, mb1 5.2/39, mb1mx5.1/43, mbtmp5.6/39, MS4.3/15, Ms1 4.3/15, ms1mx4.0/41, Error ellipse: s-maj=8.0km s-min=6.4km az=89.0*
NEIC ***24*** *21:02:21.1, 5.98S×154.96E, h172km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.08; Mθθ=0.33; Mφφ 0.41; Mrθ=-2.10; Mθφ=0.33; Mφr=2.67; Fault plane solution: M₀3.43000×10¹⁷ NP1:φs217.34000°, δ89.63000°, λ82.55000°. NP2:φs124.55000°, δ7.46000°, λ177.18000°. Principal axes: T 3.2865, Plg45.0000°, Azm120.0000°; N 0.2675, Plg7.0000°, Azm217.0000°; P -3.5541, Plg44.0000°, Azm315.0000°;*
GCMT ***24*** *21:02:21.5±0.1, 6.04S±0.01×154.98E±0.01, h179km, MW5.7/152, Moment Tensor Solution. s140,c254; s152,c317; Duration: 1s7 Moment tensor: Scale 10¹⁷ Nm; Mrr0.91±.04; Mθθ-1.57±.04; Mφφ 0.66±.04; Mrθ-1.96±.03; Mθφ-1.08±.04; Mφr-3.10±.03; Best double couple: M₀4.05700×10¹⁷ NP1:φs105.00000°, δ22.00000°, λ160.00000°. NP2:φs214.00000°, δ83.00000°, λ69.00000°. Principal axes: T 3.9780, Plg48.0000°, Azm102.0000°; N 0.1560, Plg21.0000°, Azm217.0000°; P -4.1370, Plg34.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***24*** *21:02:22.6, 6.05S×154.99E, h179km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.81; Mθθ-1.59; Mφφ 0.78; Mrθ-1.99; Mθφ-0.99; Mφr-3.09; Fault plane solution: M₀4.05000×10¹⁷ NP1:φs108.00000°, δ22.00000°, λ163.00000°. NP2:φs214.00000°, δ84.00000°, λ69.00000°. Principal axes: T 3.9892, Plg47.0000°, Azm102.0000°; N 0.1133, Plg21.0000°, Azm217.0000°; P -4.1025, Plg35.0000°, Azm323.0000°;*
DJA ***24*** *21:02:22.3±0.3, 6.3S±2.2×15.5E±1.1, h200km±3km, M5.4/84, mB5.8/72, mb5.8/84, MLv5.7/2, Mw(mB)5.4/72, Mwp5.5/27*
NEIC ***24*** *21:02:23.5, 5.88S×154.76E, h170km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.66; Mθθ-1.14; Mφφ 0.48; Mrθ-1.50; Mθφ-0.65; Mφr-2.47; Fault plane solution: M₀3.12000×10¹⁷ NP1:φs106.00000°, δ20.00000°, λ161.00000°. NP2:φs214.00000°, δ84.00000°, λ71.00000°. Principal axes: T 3.1430, Plg48.0000°, Azm104.0000°; N -0.0444, Plg19.0000°, Azm216.0000°; P -3.0987, Plg36.0000°, Azm320.0000°;*
ISC 24 21:02:20.8±0.3, 5.92S±0.03×154.97E±0.03, h184km±2km, h185km:pP-P, n780, σ1947/814, mb5.5/253, 28C-27D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**3.28**	**302**	Pn	**Pn**	**21 03 13.6**	**+0.5**
KRVT	**Keravat (AS076**	**3.34**	**299**	P	**Pn**	**21 03 14.2**	**+0.4**
	218nm,0.3s,baz=358,slow=1.0,SNR=141						
KRVT				S	**Sn**	**21 04 01.2**	**+6.0**
	1μm,0.3s,baz=202,slow=20,SNR=10						
KRVT				LR	LR	21 04 38.5	
	comp=Z,9μm,19.4s,baz=106,slow=42						
HNR	**Honiara**	**6.04**	**126**	P	**Pn**	**21 03 47.0**	**-1.5**
	87nm,0.3s,baz=179,slow=1.4,SNR=17						
HNR				S	Sn	21 05 10.7	+13
	baz=187,slow=19,SNR=1.9						
PMG	**Port Moresby**	**8.47**	**245**	P	**Pn**	**21 04 21.4**	**+1.0**
	37nm,0.3s,baz=67,slow=8.4,SNR=46						
PMG				S	**Sn**	**21 06 00.5**	**+5.1**
	baz=46,slow=4.6,SNR=1.1						
PMG				LR	LR	21 06 28.7	
	comp=Z,3μm,21.2s,baz=358,slow=30						
PMG	**Port Moresby**	**8.47**	**245**	*ce*P	**Pn**	**21 04 22.7**	**+2.3**
PMG				pmax	pmax		
	comp=Z,255nm,0.6s						
PMG	**Port Moresby**	**8.47**	**245**		**Pn**	**21 04 22.9**	**+2.5**
MANU	**Manus Island**	**8.50**	**297**		**Pn**	**21 04 21.6**	**+0.8**
PATS	**Pohnpei**	**13.11**	**15**	P	**P**	**21 05 22.7**	**-1.2**
	baz=13,SNR=6.0						
PATS	**Pohnpei**	**13.11**	**15**	P	**P**	**21 05 27.1**	**+3.3**
COEN	**Coen**	**14.09**	**235**	P	**P**	**21 05 34.4**	**-0.3**
	baz=14,SNR=81						
COEN	**Coen**	**14.09**	**235**		**P**	**21 05 36.1**	**+1.4**
JAY	**Jayapura**	**14.62**	**283**	P	**Pn**	**21 05 39.8**	**+0.6**
	comp=Z,33nm,0.3s,baz=114,slow=5.2,SNR=103						
JAY	**Jayapura**	**14.62**	**283**	P	**Pn**	**21 05 39.9**	**+0.7**
	comp=Z,3μmcomp=Z,5μmcomp=Z,557nm,0.8s						
JAY				S	**Sn**	**21 08 21.3**	**-1.2**
	comp=Z,3μmcomp=Z,5μmcomp=Z,557nm,0.8s						
MMPI	**Merauke**	**14.69**	**259**	P	**P**	**21 05 42.3**	**+0.9**
	comp=Z,13μmcomp=Z,1μm,0.9s						
MMPI				S	**S**	**21 08 26.0**	**+0.7**
	comp=Z,13μmcomp=Z,1μm,0.9s						
GENI	**Genyem**	**15.12**	**282**	P	**P**	**21 05 46.2**	**0.0**
	comp=Z,8μmcomp=Z,9μmcomp=Z,415nm,0.8s						
GENI				S	**S**	**21 08 35.8**	**+0.9**
	comp=Z,8μmcomp=Z,9μmcomp=Z,415nm,0.8s						
SANVU	**Saraoutou**	**15.29**	**129**		**Pn**	**21 05 47.1**	**-0.3**
MTSU	**Mount Surprise**	**15.98**	**220**	P	**Pn**	**21 05 58.9**	**+3.1**
	baz=16,SNR=85						
CTA	**Charters Tower**	**16.43**	**210**	P	**Pn**	**21 06 02.4**	**+1.2**
	comp=Z,5.1nm,0.3s,baz=37,slow=12,SNR=95						
CTAO	**Charters Tower**	**16.43**	**210**	P	**Pn**	**21 06 02.9**	**+1.7**
CTAO				pmax	pmax		
	comp=Z,98nm,0.7s						
CTAO	**Charters Tower**	**16.43**	**210**	Pn	**Pn**	**21 06 02.9**	**+1.7**
CTAO				IAmb	IAmb	21 06 05.0	
	comp=Z,98nm,0.7s						
SMPI	**Sarmi**	**16.68**	**283**	P	**Pn**	**21 06 04.8**	**+0.6**
	comp=Z,8μmcomp=Z,18μmcomp=Z,1μm,0.9s						
SMPI				S	**S**	**21 09 07.1**	**-1.0**
	comp=Z,8μmcomp=Z,18μmcomp=Z,1μm,0.9s						
TARA	**Tarawa**	**19.34**	**69**	P	**P**	**21 06 33.0**	**+0.6**
BAKI	**Biak**	**19.39**	**283**	P	**P**	**21 06 33.7**	**+0.7**
	comp=Z,8μmcomp=Z,13μmcomp=Z,1μm,0.8s						
DZM	**Mont Dzumac**	**19.52**	**146**	*e*P	**P**	**21 06 34.2**	**-0.1**
	comp=Z,1μm,0.9s						
DZM	**Mont Dzumac**	**19.52**	**146**	P	**P**	**21 06 34.3**	**-0.1**
	comp=Z,46nm,0.3s,baz=269,slow=7.4,SNR=284						
DZM	**Mont Dzumac**	**19.52**	**146**	P	**P**	**21 06 34.2**	**-0.1**
EIDS	**Eidsvold**	**19.69**	**190**	P	**P**	**21 06 37.2**	**+1.2**
	baz=20,SNR=66						
EIDS	**Eidsvold**	**19.69**	**190**	P	**P**	**21 06 37.0**	**+1.0**
EIDS				IAmb	IAmb	21 06 43.4	
	comp=Z,152nm,0.9s						
QIS	**Mount Isa**	**20.83**	**224**	P	**P**	**21 06 49.6**	**+1.3**
	baz=21,SNR=24						
RMQ	**Roma**	**21.29**	**195**	P	**P**	**21 06 53.9**	**+0.8**
	baz=21,SNR=214						
GUMO	**Guam**	**21.82**	**333**	P	**P**	**21 06 58.9**	**+0.2**
	comp=Z,263nm,0.9s,baz=189,slow=8.7,SNR=11						
GUMO				pP	**pwP**	**21 07 31.8**	**-0.7**
	comp=Z,250nm,1.1s,baz=150,slow=6.4,SNR=2.7						
FAKI	**Fak Fak**	**22.84**	**277**	P	**P**	**21 07 08.5**	**+0.1**
	comp=Z,6μmcomp=Z,11μmcomp=Z,1μm,0.9s						
FAKI				S	**S**	**21 11 04.6**	**+0.7**
	comp=Z,6μmcomp=Z,11μmcomp=Z,1μm,0.9s						
FAKI	**Fak Fak**	**22.84**	**277**	P	**P**	**21 07 08.2**	**-0.1**
QLP	**Quilpie**	**22.95**	**205**	P	**P**	**21 07 09.3**	**+0.1**
	baz=23,SNR=200						
KDU	**Kakadu**	**23.18**	**252**	P	**P**	**21 07 11.3**	**-0.1**
	baz=23,SNR=697						
SAUI	**Saumlaki**	**23.58**	**264**	P	**P**	**21 07 17.0**	**+2.0**
	comp=Z,6μmcomp=Z,17μmcomp=Z,2μm,0.8s						
SAUI				S	**S**	**21 11 16.0**	**+0.2**
	comp=Z,6μmcomp=Z,17μmcomp=Z,2μm,0.8s						
SAUI	**Saumlaki**	**23.58**	**264**	P	**P**	**21 07 15.1**	**+0.1**
FUNA	**Funafuti**	**24.18**	**98**	P	**P**	**21 07 20.7**	**+0.2**
SIJI	**Sorong**	**24.18**	**281**	P	**P**	**21 07 20.5**	**0.0**
	comp=Z,725nm,0.7s,baz=85,slow=8.3,SNR=208						
SIJI				LR	LR	21 18 24.8	
	comp=Z,1μm,18.1s,baz=112,slow=40						
WR0	**Warramunga Arr**	**24.26**	**233**	P	**P**	**21 07 21.6**	**+0.4**
WB0	**Warramunga Arr**	**24.28**	**234**	P	**P**	**21 07 21.8**	**+0.5**
WB0				IAmb	IAmb	21 07 23.0	
	comp=Z,158nm,0.7s						
WRAB	**Tennant Creek**	**24.40**	**233**	*ce*P	**P**	**21 07 22.9**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,184nm,0.7s						
WRAB	**Tennant Creek**	**24.40**	**233**	P	**P**	**21 07 23.0**	**+0.5**
WRAB				IAmb	IAmb	21 07 24.1	
	comp=Z,189nm,0.7s						
WB2	**Warramunga Arr**	**24.40**	**233**	P	**P**	**21 07 22.8**	**+0.3**
WB2				IAmb	IAmb	21 07 24.2	
	comp=Z,181nm,0.7s						
WRA	**Warramunga Arr**	**24.41**	**233**	P	**P**	**21 07 22.2**	**-0.4**
	comp=Z,166nm,0.6s,baz=58,slow=9.9,SNR=248						
WRA				pP	**pP**	**21 07 55.7**	**-1.6**
	comp=Z,45nm,0.7s,baz=57,slow=11,SNR=3.1						
WRA				S	**S**	**21 11 26.1**	**-3.0**
	comp=Z,84nm,0.9s,baz=61,slow=14,SNR=12						
WRA				ScP	**ScP**	**21 14 15.4**	**-2.9**
	comp=Z,4.0nm,0.9s,baz=52,slow=3.6,SNR=2.2						
WRA				P3KPbc		21 40 33.1	
	comp=Z,1.2nm,1.1s,baz=231,slow=3.4,SNR=4.5						
WRA				P3KP		21 41 32.6	
	comp=Z,1.6nm,0.9s,baz=167,slow=2.2,SNR=7.9						
WRA	**Warramunga Arr**	**24.41**	**233**	*i* P	**P**	**21 07 22.2**	**-0.4**
WRA				pmax	pmax		
	comp=Z,161nm,0.6s						
WRA	**Warramunga Arr**	**24.41**	**233**	P	**P**	**21 07 21.9**	**-0.8**
MTN	**Manton Dam**	**24.48**	**252**	P	**P**	**21 07 23.6**	**+0.4**
	baz=24,SNR=46						
MTN	**Manton Dam**	**24.48**	**252**	P	**P**	**21 07 23.5**	**+0.2**
ARMA	**Armidale**	**24.57**	**187**	P	**P**	**21 07 24.8**	**+0.8**
	baz=25,SNR=138						
ARMA	**Armidale**	**24.57**	**187**	P	**P**	**21 07 24.6**	**+0.6**
BNDI	**Bandanaira**	**24.99**	**272**	P	**P**	**21 07 27.3**	**-0.6**
	comp=Z,6μmcomp=Z,6μmcomp=Z,400nm,0.8s						
LHI	**Lord Howe Isla**	**25.75**	**172**	P	**P**	**21 07 35.0**	**+0.5**
	baz=26,SNR=7.6						
LHI	**Lord Howe Isla**	**25.75**	**172**	P	**P**	**21 07 34.0**	**-0.5**
MSAI	**Masohi**	**26.07**	**274**	P	**P**	**21 07 38.6**	**+0.9**
	comp=Z,1μmcomp=Z,92nm,0.8s						
AS31	**Alice Springs**	**26.87**	**227**	P	**P**	**21 07 44.6**	**-0.1**
ASAR	**Alice Springs**	**26.87**	**227**	P	**P**	**21 07 44.4**	**-0.3**
	comp=Z,19nm,0.6s,baz=58,slow=8.8,SNR=266						
ASAR				pP	**pP**	**21 08 18.9**	**-1.6**
	comp=Z,20nm,0.5s,baz=59,slow=9.6,SNR=5.3						
ASAR				S	**S**	**21 12 04.7**	**-3.0**
	comp=Z,6.0nm,0.7s,baz=267,slow=25,SNR=4.5						
ASAR				ScP	**ScP**	**21 14 25.2**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=49,slow=42,SNR=3.5						
ASAR				P3KPbc		21 40 24.1	
	comp=Z,0.9nm,0.8s,baz=211,slow=3.7,SNR=6.2						
ASAR				P3KP		21 41 24.2	
	comp=Z,0.8nm,0.7s,baz=126,slow=3.1,SNR=4.9						
ASAR	**Alice Springs**	**26.87**	**227**	P	**P**	**21 07 44.1**	**-0.6**
H11S3	**WAKE ISLAND Hy**	**26.88**	**25**	T	T	21 36 38.6	
	baz=206,slow=74,SNR=56						
H11S2	**WAKE ISLAND Hy**	**26.88**	**25**	T	T	21 37 10.8	
	SNR=415						
H11S1	**WAKE ISLAND Hy**	**26.89**	**25**	T	T	21 36 32.7	
	baz=239,slow=74,SNR=32						
CMSA	**Cobar Meteorol**	**26.92**	**198**	P	**P**	**21 07 45.1**	**+0.1**
	baz=27,SNR=60						
MGCD	**Mangrove Creek**	**27.39**	**187**	P	**P**	**21 07 50.2**	**+1.1**
	baz=28,SNR=24						
KNRA	**Kununurra**	**27.47**	**247**	P	**P**	**21 07 50.1**	**0.0**
	baz=28,SNR=63						
KNRA	**Kununurra**	**27.47**	**247**	P	**P**	**21 07 50.0**	**0.0**
NLAI	**Namlea**	**27.90**	**274**	P	**P**	**21 07 54.7**	**+0.8**
	comp=Z,4μmcomp=Z,324nm,0.9s						
RIV	**Riverview**	**27.99**	**187**	P	**P**	**21 07 55.7**	**+1.2**
	baz=28,SNR=11						
TNTI	**Ternate**	**28.35**	**283**	P	**P**	**21 07 58.6**	**+0.7**
	comp=Z,2μmcomp=Z,177nm,0.9s						
TNTI	**Ternate**	**28.35**	**283**	P	**P**	**21 07 58.3**	**+0.4**
TNTI				IAmb	IAmb	21 08 04.2	
	comp=Z,141nm,0.9s						
STKA	**Stephens Creek**	**28.69**	**204**	P	**P**	**21 08 00.6**	**-0.1**
	comp=Z,47nm,0.9s,baz=8.8,slow=8.8,SNR=50						
STKA				ScP	**ScP**	**21 14 30.1**	**-0.7**
	comp=Z,16nm,0.8s,baz=6.8,slow=5.1,SNR=6.0						
STKA				LR	LR	21 19 09.3	
	comp=Z,805nm,20.4s,baz=19,slow=35						
STKA	**Stephens Creek**	**28.69**	**204**	P	**P**	**21 08 00.6**	**-0.1**
	baz=29,SNR=47						
STKA	**Stephens Creek**	**28.69**	**204**	P	**P**	**21 08 00.3**	**-0.5**
YNG	**Young**	**28.88**	**191**	P	**P**	**21 08 03.2**	**+0.8**
	baz=29,SNR=17						
SANI	**Sanana**	**29.16**	**276**	P	**P**	**21 08 05.6**	**+0.5**
	comp=Z,3μmcomp=Z,6μmcomp=Z,781nm,0.9s						
CNB	**Canberra Magne**	**29.70**	**189**	P	**P**	**21 08 10.6**	**+1.0**
	baz=30,SNR=21						
SOEI	**Soe**	**30.64**	**261**	P	**P**	**21 08 18.9**	**+0.6**
	comp=Z,3μmcomp=Z,3μmcomp=Z,464nm,0.8s						
SGSI	**Sangihe**	**30.91**	**287**	P	**P**	**21 08 21.1**	**+0.6**
	comp=Z,3μmcomp=Z,227nm,0.7s						
FITZ	**Fitzroy Crossi**	**31.07**	**245**	P	**P**	**21 08 21.3**	**-0.5**
	comp=Z,269nm,0.7s,baz=68,slow=7.6,SNR=596						
FITZ				pP	**pP**	**21 08 55.6**	**-2.5**
	comp=Z,27nm,0.4s,baz=56,slow=9.1,SNR=2.2						
FITZ				LR	LR	21 21 03.8	
	comp=Z,562nm,20.8s,baz=74,slow=36						
FITZ	**Fitzroy Crossi**	**31.07**	**245**	P	**P**	**21 08 21.3**	**-0.5**
	baz=31,SNR=397						
HTT	**Hallett**	**31.17**	**207**	P	**P**	**21 08 22.9**	**+0.3**
	baz=31,SNR=21						
BATI	**Baumata**	**31.27**	**260**	P	**P**	**21 08 25.0**	**+1.2**
	comp=Z,629nm,0.7s,baz=146,slow=1.2,SNR=187						
BATI	**Baumata**	**31.27**	**260**	P	**P**	**21 08 24.5**	**+0.8**
	comp=Z,1μmcomp=Z,4μmcomp=Z,438nm,0.8s						
KMSI	**Cibinong**	**31.60**	**281**	P	**P**	**21 08 27.3**	**+0.7**
	comp=Z,11μmcomp=Z,2μm,0.7s						
WRKA	**Warakurna**	**31.84**	**231**	P	**P**	**21 08 28.1**	**-0.5**
	baz=32,SNR=219						
BBOO	**Buckleboo**	**32.03**	**211**	P	**P**	**21 08 29.9**	**-0.2**
	baz=32,SNR=59						
BBOO	**Buckleboo**	**32.03**	**211**	IAmb	IAmb	21 08 30.8	
	comp=Z,58nm,0.7s						
KDI	**Kendari**	**32.28**	**272**	P	**P**	**21 08 33.3**	**+0.8**
	comp=Z,2μmcomp=Z,111nm,1.0s						
LUWI	**Luwuk**	**32.49**	**277**	P	**P**	**21 08 35.0**	**+0.7**
	comp=Z,10μmcomp=Z,1μm,0.9s						
GTOI	**Gorontalo**	**32.56**	**280**	P	**P**	**21 08 36.6**	**+1.6**
	comp=Z,4μmcomp=Z,437nm,0.7s						
MMRI	**Maumere**	**32.57**	**263**	P	**P**	**21 08 34.8**	**-0.2**
	comp=Z,4μmcomp=Z,10μmcomp=Z,1μm,0.7s						
TOO	**Toolangi**	**32.66**	**194**	P	**P**	**21 08 36.6**	**+1.0**
	baz=33,SNR=11						
TOO	**Toolangi**	**32.66**	**194**	IAmb	IAmb	21 08 38.0	
	comp=Z,35nm,0.8s						
ARPS	**Mount Arapiles**	**32.97**	**200**	P	**P**	**21 08 38.8**	**+0.6**
	baz=33,SNR=30						
EDFI	**Ende, Flores**	**33.11**	**263**	P	**P**	**21 08 38.9**	**-1.0**
	comp=Z,1μmcomp=Z,3μmcomp=Z,465nm,0.8s						
KNTN	**Kanton**	**33.36**	**86**	P	**P**	**21 08 42.0**	**+0.1**
KNTN				IAmb	IAmb	21 08 43.6	
	comp=Z,152nm,0.8s						
MRSI	**Marisa**	**33.58**	**280**	P	**P**	**21 08 43.7**	**-0.1**
	comp=Z,2μmcomp=Z,2μmcomp=Z,196nm,0.6s						
APSI	**Ampana**	**33.62**	**277**	P	**P**	**21 08 44.8**	**+0.7**
	comp=Z,7μmcomp=Z,941nm,0.9s						
AFI	**Afiamalu**	**33.67**	**106**	P	**P**	**21 08 44.6**	**-0.1**
AFI				pmax	pmax		
	comp=Z,199nm,0.9s						
AFI	**Afiamalu**	**33.67**	**106**	P	**P**	**21 08 44.5**	**-0.1**
AFI				IAmb	IAmb	21 08 45.8	
	comp=Z,199nm,0.9s						
BASI	**Baing, Sumba**	**34.30**	**261**	P	**P**	**21 08 50.7**	**+0.7**
	comp=Z,2μmcomp=Z,6μmcomp=Z,735nm,0.9s						
WSI	**Waingapu**	**34.54**	**262**	P	**P**	**21 08 52.3**	**+0.3**
	comp=Z,212μmcomp=Z,28μmcomp=Z,2μm,0.7s						
RAO	**Raoul Island**	**34.56**	**135**	P	**P**	**21 08 51.5**	**-0.5**
	comp=Z,717nm,0.8s,baz=89,slow=2.6,SNR=7.7						
RAO	**Raoul Island**	**34.56**	**135**	P	**P**	**21 08 51.0**	**-1.0**
BKSI	**Bulukumba**	**34.68**	**269**	P	**P**	**21 08 53.7**	**+0.4**
	comp=Z,2μmcomp=Z,2μmcomp=Z,209nm,0.9s						
BNSI	**Bone**	**34.75**	**271**	P	**P**	**21 08 54.6**	**+0.7**
	comp=Z,3μmcomp=Z,344nm,0.9s						
TOLI2	**Tolitoli**	**34.84**	**280**	P	**P**	**21 08 53.6**	**-1.0**
TOLI2				IAmb	IAmb	21 08 57.0	
	comp=Z,88nm,0.6s						
KAPI	**Kappang**	**35.06**	**270**	P	**P**	**21 08 57.0**	**+0.5**
	comp=Z,317nm,0.9s,baz=101,slow=5.3,SNR=124						
KAPI				pP	**pP**	**21 09 31.5**	**-1.5**
	comp=Z,121nm,0.8s,baz=129,slow=6.9,SNR=4.2						
KAPI	**Kappang**	**35.06**	**270**	P	**P**	**21 08 56.8**	**+0.3**
SPSI	**Sidrap Palu**	**35

baz=43,SNR=9.4
GIRL Giralia 42.64 243 P P 21 09 59.0 -0.4
GIRL IAmb IAmb 21 10 01.1
comp=Z,239nm,1.0s
PWJI Pagerwojo 42.88 265 P P 21 10 01.5 +0.1
comp=Z,8µmcomp=Z,1µm,0.8s
KLBR Kellerberrin 43.16 229 P P 21 10 02.7 -0.7
baz=43,SNR=23
MORW Morawa 43.36 233 P P 21 10 04.9 -0.2
baz=43,SNR=17
MORW Morawa 43.36 233 P P 21 10 04.3 -0.8
MORW IAmb IAmb 21 10 05.7
comp=Z,62nm,0.8s
YOJ Yonaguni jima 43.37 315 IAmb IAmb 21 10 07.8
comp=Z,211nm,0.9s
SBUM Sibu 43.49 280 P P 21 10 08.0 +1.6
BLDU Ballidu 43.50 231 P P 21 10 05.9 -0.3
baz=44,SNR=18
TWG Pinlang 43.76 312 P P 21 10 07.9 -0.4
YULB Yu-li 43.93 313 IAmb IAmb 21 10 12.9
comp=Z,111nm,0.8s
NWAO Narrogin (SRO) 44.18 228 P P 21 10 11.4 -0.2
comp=Z,25nm,0.8s,baz=71,slow=6.2,SNR=12
NWAO Narrogin (SRO) 44.18 228 P P 21 10 11.5 -0.2
baz=44,SNR=4.3
NWAO Narrogin (SRO) 44.18 228 P P 21 10 11.1 -0.5
NWAO Narrogin (SRO) 44.18 228 P P 21 10 11.2 -0.4
NWAO IAmb IAmb 21 11 21.0
comp=Z,83nm,1.4s
NACB Ninganchiao 44.19 314 IAmb IAmb 21 10 14.0
comp=Z,161nm,0.9s
SMRI Semarang 44.24 266 P P 21 10 12.3 -0.1
TPUB Ta-pu 44.37 312 IAmb IAmb 21 10 14.4
comp=Z,118nm,0.8s
INU Inuyama 44.39 339 P P 21 10 13.1 0.0
SSLB Suanglung 44.42 313 P P 21 10 14.2 +0.6
SSLB IAmb IAmb 21 10 16.2
comp=Z,106nm,0.7s
JGF Kuroka 44.50 339 P P 21 10 14.9 +0.8
JGF IAmb IAmb 21 10 16.0
comp=Z,62nm,1.0s
MUN Mundaring 44.50 229 P P 21 10 14.3 +0.2
baz=45,SNR=8.7
YHNB Yeheng 44.66 314 IAmb IAmb 21 10 18.0
comp=Z,153nm,0.9s
TATO Taipei 44.77 315 P P 21 10 17.1 +0.8
TATO IAmb IAmb 21 10 18.4
comp=Z,108nm,0.9s
JWT Wachi 44.94 337 IAmb IAmb 21 10 20.9
comp=Z,64nm,0.8s
JNU Nakatsue 45.06 331 P P 21 10 19.1 +0.6
comp=Z,106nm,0.8s,baz=99,slow=3.2,SNR=41
JNU Nakatsue 45.06 331 IAmb IAmb 21 10 20.4
comp=Z,121nm,0.8s
MJAR Matsushiro Arr 45.07 341 P P 21 10 18.0 -0.5
comp=Z,63nm,0.8s,baz=165,slow=7.9,SNR=108
MJAR Matsushiro Arr 45.07 341 P P 21 10 18.0 -0.5
MJAR Matsushiro Arr 45.07 341 P P 21 10 17.5 -1.0
MAJO Matsushiro 45.07 341 *i* P P 21 10 18.3 -0.2
MAJO pmax pmax
comp=Z,81nm,0.9s
MAJO Matsushiro 45.07 341 P P 21 10 18.2 -0.2
MAJO IAmb IAmb 21 10 19.9
comp=Z,66nm,0.8s
MAT Matsushiro 45.07 341 P P 21 10 17.9 -0.6
MAT S **S 21 16 39.8 -3.7**
KSM Kuching 45.19 278 IAmb IAmb 21 10 21.2
comp=Z,65nm,0.8s
KSM Kuching 45.19 278 P P 21 10 20.0 +0.1
RKGY Rocky Gully 45.20 226 P P 21 10 20.4 +0.8
baz=45,SNR=18
KNMB Chin-men Tao 46.71 312 P P 21 10 32.6 +1.1
KNMB IAmb IAmb 21 10 33.9
comp=Z,113nm,0.9s
CISI Cisompet, Garu 46.84 265 P P 21 10 31.4 -1.4
QZH Quanzhou 46.84 312 ⇓*i* P **P 21 10 33.9 +1.4**
QZH pP **pP 21 11 12.9 +0.8**
QZH sP **sP 21 11 33.3 +1.0**
QZH PP **PP 21 12 26.6 +1.8**
QZH S **S 21 17 08.8 -0.2**
QZH pmax pmax
comp=Z,140nm,0.8s
QZH pmax pmax
comp=Z,550nm,11.4s
QZH LR LR
comp=Z,480nm,15.6s
QZH LR LR
comp=Z,290nm,10.8s
QZH LR LR
comp=Z,410nm,14.6s
XMAS Kiritimati 48.18 82 P P 21 10 44.4 +1.4
MCQ Macquarie Isla 48.54 177 P P 21 10 46.4 +1.3
baz=49,SNR=9.6
MCQ Macquarie Isla 48.54 177 P P 21 10 46.4 +1.3
MCQ pmax pmax
comp=Z,275nm,0.9s
MCQ Macquarie Isla 48.54 177 P P 21 10 46.4 +1.3
TJN Taejon 49.39 330 *ce* P **P 21 10 51.9 0.0**
KSRS Korea Array 49.98 332 P P 21 10 57.1 +0.8
comp=Z,54nm,0.9s,baz=149,slow=8.5,SNR=70
KSAR Wonju Array Be 49.99 332 P P 21 10 56.9 +0.5
KSAR Wonju Array Be 49.99 332 P P 21 10 56.9 +0.5
INCN Inchon 50.62 331 P P 21 11 01.9 +0.7
INCN pmax pmax
comp=Z,192nm,1.0s
INCN Inchon 50.62 331 P P 21 11 01.9 +0.7
INCN IAmb IAmb 21 11 03.5
comp=Z,192nm,0.9s
QIZ Qiongzhong 50.89 300 P P 21 11 05.1 +1.6
QIZ pP **pP 21 11 44.3 +0.1**
QIZ sP **sP 21 12 06.5 +2.1**
QIZ S **S 21 18 07.9 +2.0**
QIZ sS **sS 21 19 18.8 +0.5**
QIZ pmax pmax
comp=Z,33nm,1.2s
JKA Kamikawa-asahi 51.04 349 IAmb IAmb 21 11 07.4
comp=Z,104nm,0.8s
ASAJ Asahikawa 51.05 349 P P 21 11 05.8 +1.6
comp=Z,95nm,0.8s,baz=216,slow=11,SNR=44
ASAJ LR LR 21 29 41.6
comp=Z,205nm,21.7s,baz=163,slow=32
NJ2 Nanjing 51.08 320 ⇓P **P 21 11 06.3 +1.7**
NJ2 pP **pP 21 11 44.9 -0.2**
NJ2 S **S 21 18 10.3 +2.3**
NJ2 pmax pmax
comp=Z,65nm,1.1s
NJ2 pmax pmax
comp=Z,820nm,4.0s
MYKOM Kota Tinggi 51.61 277 P P 21 11 09.0 +0.1
VLA Vladivostok 53.11 339 *i* P **P 21 11 21.2 +1.8**
VLA pmax pmax
comp=Z,146nm,1.0s
WHN Wuhan 53.16 315 ⇓*i* P **P 21 11 21.3 +1.3**
WHN pP **pP 21 12 02.3 +1.6**
WHN S **S 21 18 37.3 +0.9**
WHN pmax pmax
comp=Z,190nm,0.9s
WHN pmax pmax
comp=Z,1µm,4.4s
WHN LR LR
comp=Z,880nm,17.9s
UBPT Khong Chiam 53.37 294 P P 21 11 22.8 +1.1
comp=Z,749nmcomp=Z,33nm,1.1s
UBPT Khong Chiam 53.37 294 IAmb IAmb 21 11 24.8
comp=Z,51nm,0.9s
YSS Yuzh-Sakhalins 53.75 350 *e* P **P 21 11 25.3 +1.3**
YSS *e**PP **pP 21 12 06.4 +1.5**
YSS *e**SP **sP 21 12 25.8 +0.9**
YSS *e* 21 13 24.3
YSS *e*PPP PPP 21 14 39.2
YSS *e*S **S 21 18 43.7 -0.1**
YSS pmax pmax
comp=Z,120nm,0.8s
YSS pmax pmax
comp=Z,500nm,5.1s
YSS MLR MLR
comp=Z,500nm,16.0s
YSS Yuzh-Sakhalins 53.75 350 P **P 21 11 25.1 +1.2**
YSS IAmb IAmb 21 11 26.6
comp=Z,103nm,0.8s
USA0B Ussuriysk Arra 54.02 340 ⇓*i* P **P 21 11 27.4 +1.4**
USA0B Ussuriysk Arra 54.02 340 IAmb IAmb 21 11 28.6
comp=Z,123nm,0.9s
USRK Ussuriysk Ar. 54.02 340 P P 21 11 27.3 +1.3
comp=Z,106nm,0.9s,baz=165,slow=7.7,SNR=97
USRK Ussuriysk Ar. 54.02 340 P P 21 11 26.5 +0.5
BKNI Bangkinang 54.19 275 P P 21 11 27.1 -0.7
BKNI IAmb IAmb 21 11 28.6
comp=Z,140nm,0.8s
DL2 Dalian 54.25 328 P P 21 11 27.3 -0.4
DL2 pP **pP 21 12 07.4 -1.9**
DL2 S **S 21 18 43.8 -7.0**
DL2 pmax pmax
comp=Z,150nm,0.9s
DL2 pmax pmax
comp=Z,370nm,8.5s
IPM Ipoh 54.84 280 IAmb IAmb 21 11 33.7
comp=Z,99nm,0.8s
IPM Ipoh 54.84 280 P P 21 11 33.0 +0.4
TIA Tai'an 54.90 323 P P 21 11 32.8 +0.3
TIA pmax pmax
comp=Z,50nm,1.1s
MDJ Mudanjiang 55.24 338 P P 21 11 36.1 +1.3
MDJ pP pP 21 12 14.8 -1.5
MDJ sP PcP 21 12 34.3 +1.0
MDJ PP **PP 21 13 39.9 -0.6**
MDJ S **S 21 19 06.6 +2.7**
MDJ pmax pmax
comp=Z,110nm,1.0s
MDJ pmax pmax
comp=Z,760nm,3.7s
MDJ LR LR
comp=Z,600nm,17.0s
MDJ LR LR
comp=Z,740nm,13.8s
MDJ LR LR
comp=Z,460nm,20.6s
MDJ Mudanjiang 55.24 338 IAmb IAmb 21 11 37.3
comp=Z,97nm,1.0s
PPT Papeete 55.33 107 P **P 21 11 36.6 +0.6**
comp=Z,22nm,0.5s,baz=297,slow=22,SNR=2.6
PPT2 Papeete2 55.34 107 *e* P **P 21 11 37.3 +1.2**
comp=Z,54nm,1.0s
PPT2 *e*S **S 21 19 05.7 -0.5**
comp=Z,697nm,26.5s
PPT2 *e*LQ LQ 21 25 38.7
comp=Z,1µm,26.0s
PAE Paea 55.34 107 *e* P **P 21 11 37.0 +1.0**
comp=Z,10nm,1.1s
KULM Kulim 55.36 281 IAmb IAmb 21 11 36.7
comp=Z,68nm,0.7s
KULM Kulim 55.36 281 P **P 21 11 36.0 -0.2**
TIAR Tiarei 55.55 107 *e* P **P 21 11 38.9 +1.3**
comp=Z,40nm,0.9s
TVO Taravao 55.66 107 *e* P **P 21 11 39.8 +1.4**
comp=Z,24nm,1.0s
SRAK Srakaew 56.12 291 P **P 21 11 38.0 -3.6**
comp=Z,4µmcomp=Z,389nm,0.8s
TBI Tubuai 56.13 114 *e* S **S 21 19 16.6 +0.1**
comp=Z,706nm,29.8s
TBI *e*LQ LQ 21 25 58.0
comp=Z,2µm,31.0s
TBI *e*LR LR 21 28 19.6
comp=Z,923nm,39.5s
CN2 Changchun 56.22 335 ⇓P **P 21 11 42.3 +0.6**
CN2 *e*S **S 21 19 15.8 -1.0**
CN2 pmax pmax
comp=Z,100nm,1.1s
CN2 pmax pmax
comp=Z,600nm,4.0s
NONG Nongkai 56.40 296 P **P 21 11 44.0 +0.5**
comp=Z,113nm,0.8s
ENH Enshi 56.50 312 IAmb IAmb 21 11 45.7
comp=Z,117nm,1.1s
CHAI Chaiyaphum 56.74 293 P **P 21 11 46.5 +0.6**
comp=Z,707nmcomp=Z,84nm,0.7s
PMOR Pomariorio Ree 56.77 104 *e* P **P 21 11 47.4 +1.2**
comp=Z,423nm,0.9s
PMOR *e*pP **pP 21 12 27.8 +0.2**
comp=Z,225nm,1.2s
GYA Guiyang 56.79 307 ⇓P **P 21 11 47.1 +0.8**
GYA pP pP 21 12 27.6 +0.1
GYA sP PcP 21 12 42.9 +2.9
GYA PP **PP 21 13 52.3 -2.4**
GYA S **S 21 19 26.6 +1.4**
GYA pmax pmax
comp=Z,24nm,1.1s
GYA pmax pmax
comp=Z,360nm,4.3s
GYA LR LR
comp=Z,180nm,13.3s
GYA LR LR
comp=Z,220nm,13.4s
GYA LR LR
comp=Z,220nm,18.4s
MEH Mehetia 56.79 107 *e* P **P 21 11 47.3 +1.0**
comp=Z,40nm,1.0s
TRTT Trang 56.80 283 P **P 21 11 46.3 -0.2**
comp=Z,2µmcomp=Z,63nm,1.0s
PATY Pattaya 56.91 289 P **P 21 11 48.4 +1.2**
comp=Z,3µmcomp=Z,219nm,0.8s
SLVN Son La 56.92 300 IAmb IAmb 21 12 31.8
comp=Z,103nm,1.8s
VAH Vaihoa 57.04 104 *e* P **P 21 11 49.0 +0.9**
comp=Z,194nm,0.9s
TYV Tymovskoe 57.55 351 *e* P **P 21 11 52.7 +1.8**
TYV pmax pmax
comp=Z,108nm,0.8s
GSI Gunungsitoli 57.75 275 P P 21 11 51.1 -2.0
SURT Suratani 57.91 284 P P 21 11 54.0 -0.2
comp=Z,2.7nm,1.0s
BJI Beijing 58.02 325 P P 21 11 54.8 +0.3
BJI S **S 21 19 40.4 -0.2**
BJI pmax pmax
comp=Z,31nm,1.2s
BJI LR LR
comp=Z,450nm,15.3s
BJI LR LR
comp=Z,260nm,17.3s
BJI LR LR
comp=Z,440nm,28.9s
PHET Kaeng Krachan 58.07 289 P **P 21 11 56.6 +1.4**
comp=Z,2µmcomp=Z,245nm,0.8s
PKDT Phuket 58.13 283 P **P 21 11 55.5 -0.2**
comp=Z,2µmcomp=Z,182nm,0.8s
KLR Kul'ur 58.54 342 P **P 21 11 58.5 +0.6**
KLR Kul'dur 58.54 342 *ce* P **P 21 11 59.2 +1.3**
KLR pmax pmax
comp=Z,134nm,1.0s
PHIT Phitsanulok 58.57 294 P **P 21 12 00.4 +1.7**
comp=Z,2µmcomp=Z,263nm,0.9s
UTTA Uttaradit 58.62 295 P **P 21 12 00.3 +1.3**
comp=Z,686nmcomp=Z,94nm,0.8s
GRNR Gornyy 58.69 346 ⇓*i* P **P 21 12 00.5 +1.6**
GRNR *e*S **S 21 19 53.8 +4.9**
GRNR pmax pmax
comp=N,30nm,0.9s
GRNR pmax pmax
comp=Z,50nm,0.9s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=E,130nm,13.0s
GRNR MLR MLR
comp=N,250nm,17.0s
GRNR MLR MLR
comp=Z,140nm,14.0s
TIY Taiyuan 58.74 321 *e* P **P 21 12 00.3 +0.7**
TIY S **S 21 19 51.5 +1.3**
TIY sS **sS 21 21 01.5 -1.4**
TIY pmax pmax
comp=Z,28nm,0.7s
TIY pmax pmax
comp=Z,410nm,3.9s
PET Petropavlovsk 58.81 3 *e* P **P 21 12 01.1 +1.5**
PET *e*S **S 21 19 51.7 +1.5**
PET pmax pmax
comp=Z,244nm,0.7s
PET Petropavlovsk 58.81 3 P **P 21 12 00.6 +1.0**
NANT Nan 58.84 296 P **P 21 12 03.1 +2.6**
comp=Z,19µmcomp=Z,831nm,0.8s
PEA0B Petropavlovsk- 58.85 2 *ce* P **P 21 12 01.7 +1.7**
PEA0B Petropavlovsk- 58.85 2 P **P 21 12 02.0 +2.1**
PETK Petropavlovsk- 58.85 2 P **P 21 12 01.5 +1.5**
comp=Z,236nm,0.9s,baz=162,slow=6.8,SNR=126
PETK pP **pP 21 12 41.3 -0.2**
comp=Z,12nm,0.9s,baz=187,slow=11,SNR=0.8
PETK LR LR 21 36 11.3
comp=Z,140nm,19.5s,baz=178,slow=34
PETK Petropavlovsk- 58.85 2 P **P 21 12 02.0 +2.1**
XAN Xi'an 58.92 316 P **P 21 12 01.0 +0.1**
XAN pP pP 21 12 39.8 -2.7
XAN sP sP 21 13 00.8 -1.5
XAN S **S 21 19 50.3 -2.3**
XAN pmax pmax
comp=Z,130nm,0.9s
XAN pmax pmax
comp=Z,710nm,3.9s
XAN LR LR
comp=Z,300nm,15.4s
XAN LR LR
comp=Z,260nm,17.3s
XAN LR LR
comp=Z,500nm,21.7s
XAN Xi'an 58.92 316 IAmb IAmb 21 12 02.3
comp=Z,82nm,0.8s
SRDT SRDT 58.93 291 P **P 21 12 03.1 +1.8**
comp=Z,7µmcomp=Z,60nm,1.0s
UTHA Uthaitani 58.97 292 P **P 21 12 02.5 +1.0**
comp=Z,790nmcomp=Z,85nm,0.7s
PHRA Phrae 59.16 296 P **P 21 12 03.9 +1.2**
comp=Z,444nm,1.2s
SUKH Sukhothai 59.38 294 P **P 21 12 05.0 +0.8**
comp=Z,82nm,0.8s
KMI Kunming 59.40 304 ⇑*i* P **P 21 12 05.0 +0.4**
KMI pP pP 21 12 46.4 0.0
KMI S **S 21 19 58.4 -0.9**
KMI pmax pmax
comp=Z,43nm,0.8s
KMI LR LR
comp=Z,400nm,27.6s
KMI LR LR
comp=Z,310nm,24.9s
KMI LR LR
comp=Z,270nm,21.9s
KMI Kunming 59.40 304 IAmb IAmb 21 12 07.3
comp=Z,42nm,1.0s
LAMP Lampang 59.70 295 P **P 21 12 08.0 +1.5**
comp=Z,686nmcomp=Z,74nm,0.8s
PAYA Payao 59.76 296 P **P 21 12 08.0 +1.1**
comp=Z,503nm,0.9s
CM35 Chiang Mai Arr 60.18 295 P P 21 12 10.0 +0.3
CM36 Chiang Mai Arr 60.18 295 P P 21 12 10.0 +0.2
CM34 Chiang Mai Arr 60.24 296 P P 21 12 10.9 +0.8
CM04 Chiang Mai Arr 60.25 295 P P 21 12 11.5 +1.3
comp=Z,340nmcomp=Z,42nm,1.0s
CM09 Chiang Mai Arr 60.26 295 P P 21 12 11.8 +1.5
comp=Z,375nmcomp=Z,47nm,0.9s
CM01 Chiang Mai Arr 60.28 295 P P 21 12 11.8 +1.4
comp=Z,398nmcomp=Z,35nm,1.0s
CM05 Chiang Mai Arr 60.28 295 P P 21 12 11.6 +1.2
comp=Z,288nmcomp=Z,31nm,1.0s
CM02 Chiang Mai Arr 60.29 295 P P 21 12 11.0 +0.5
comp=Z,338nmcomp=Z,41nm,0.9s
CM31 Chiang Mai Arr 60.30 295 P P 21 12 11.8 +1.2
comp=Z,9µmcomp=Z,923nm,0.9s
CMAR Chiang Mai Arr 60.30 295 P P 21 12 11.0 +0.4
comp=Z,26nm,0.9s,baz=121,slow=5.0,SNR=113
CMAR PKPPKP **P'P'df 21 41 32.2 -0.4**
comp=Z,3.1nm,1.0s,baz=284,slow=4.2,SNR=12
CM15 Chiang Mai Arr 60.32 295 P P 21 12 12.0 +1.3
comp=Z,330nmcomp=Z,43nm,0.9s
CM13 Chiang Mai Arr 60.32 295 P P 21 12 11.8 +1.1
comp=Z,303nmcomp=Z,39nm,0.9s
CMMT Chiang Mai 60.41 295 P P 21 12 12.1 +0.8
comp=Z,434nmcomp=Z,12nm,1.2s
CM33 Chiang Mai Arr 60.41 295 P P 21 12 11.0 -0.3
CHTO Chiang Mai 60.41 295 P P 21 12 11.7 +0.4
CHTO pmax pmax
comp=Z,87nm,1.4s
CHTO Chiang Mai 60.41 295 P P 21 12 11.7 +0.4
CHTO IAmb IAmb 21 12 56.5
comp=Z,87nm,1.4s
CM32 Chiang Mai Arr 60.45 295 P P 21 12 12.0 +0.4
CD2 Chengdu 61.10 310 ⇓*i* P **P 21 12 16.5 +0.7**
CD2 pP PcP 21 12 55.3 -1.7
CD2 sP sP 21 13 15.8 -1.7
CD2 PcS **PcS 21 16 56.6 -3.5**
CD2 S **S 21 20 22.8 +2.3**
CD2 sS sS 21 21 34.6 +0.2
CD2 pmax pmax
comp=Z,110nm,0.9s
CD2 pmax pmax
comp=Z,760nm,5.5s
CD2 LR LR
comp=Z,520nm,22.4s
CD2 LR LR
comp=Z,470nm,15.3s
CD2 LR LR
comp=Z,510nm,17.5s
MHMT Maesarieng 61.13 294 P P 21 12 17.1 +1.0
HHC Hu-ho-hao-te 61.22 324 *e* P **P 21 12 17.4 +0.9**
HHC S **S 21 20 19.6 -2.1**
HHC sS sS 21 21 33.6 -0.6
HHC ScS **ScS 21 21 49.8 0.0**
HHC SS **SS 21 24 27.1 +1.6**
HHC pmax pmax
comp=Z,47nm,0.9s
HHC pmax pmax
comp=Z,500nm,6.6s
HHC LR LR
comp=Z,290nm,18.7s
HHC LR LR
comp=Z,350nm,17.0s
HHC LR LR
comp=Z,590nm,19.6s
BTO Baotou 61.99 322 *e* P **P 21 12 22.5 +0.9**
HIA Hailar 62.95 335 IAmb IAmb 21 12 30.6
comp=Z,63nm,0.8s
LZH Lanzhou 63.54 315 *e* P **P 21 12 33.6 +1.6**
LZH pP pP 21 13 14.8 +0.6
LZH sP sP 21 13 33.9 0.0
LZH PP **PP 21 14 58.8 +4.6**
LZH S **S 21 20 51.8 +0.8**
LZH sS sS 21 22 03.0 -2.1
LZH SS **SS 21 25 04.8 +2.8**
LZH pmax pmax
comp=Z,130nm,1.5s
LZH pmax pmax
comp=Z,140nm,6.0s
LZH LR LR
comp=Z,310nm,16.6s
LZH LR LR
comp=Z,260nm,18.4s
LZH LR LR
comp=Z,220nm,19.0s
ZEA Zeya 63.85 342 *de* P **P 21 12 35.1 +1.6**
ZEA *e* 21 13 15.5
ZEA pmax pmax
comp=E,20nm,0.8s
ZEA pmax pmax
comp=N,60nm,0.9s
ZEA pmax pmax
comp=Z,100nm,0.9s
ZEA pmax pmax
comp=Z,200nm,5.5s
TAOE Nuku Hiva Isla 64.35 97 P P 21 12 37.5 -0.1
TAOE IAmb IAmb 21 12 39.4
comp=Z,120nm,0.9s
MA2 Magadan 65.38 358 P P 21 12 44.1 +0.9
MA2 pmax pmax
comp=Z,174nm,0.7s
MA2 Magadan 65.38 358 P P 21 12 44.1 +0.9
LKP Lekhapani 65.96 303 *e* P **P 21 12 47.8 +0.1**
LKP IAmb IAmb 21 12 54.9
comp=Z,27nm,1.0s
MOKO MOKOCHONG 66.73 302 *e* P **P 21 12 52.7 0.0**
MOKO IAmb IAmb 21 12 56.4
comp=Z,39nm,0.7s
SAIH SAIHA 66.84 297 *e* P **P 21 12 54.3 +0.8**
SAIH IAmb IAmb 21 13 00.1
comp=Z,131nm,0.7s
KOHI KOHIMA 66.88 301 *e* P **P 21 12 53.0 -0.7**
KOHI IAmb IAmb 21 12 56.9
comp=Z,86nm,0.8s
CIT Chita 67.64 334 *e* P **P 21 12 58.1 +0.3**
CIT *e* 21 13 39.5
CIT pmax pmax
comp=Z,111nm,2.7s
GTA Gaotai 67.94 317 ⇓P **P 21 13 01.4 +1.3**
GTA pP pP 21 13 42.5 -0.4
GTA sP sP 21 14 04.4 +1.9
GTA S **S 21 21 45.8 +1.6**
GTA pmax pmax
comp=Z,51nm,1.3s
GTA pmax pmax
comp=Z,410nm,8.9s

GTA LR LR
comp=Z,230nm,20.0s
GTA LR LR
comp=Z,280nm,20.0s
GTA LR LR
comp=Z,380nm,17.8s
ULN Ulaanbaatar 68.09 327 *ce*P **P 21 13 01.4 +0.5**
ULN pmax pmax
comp=Z,98nm,1.3s
ULN Ulaanbaatar 68.09 327 P **P 21 13 02.0 +1.1**
ULN IAmb IAmb 21 13 03.7
comp=Z,61nm,0.9s
TEZP TEZPUR 68.28 302 *e*P **P 21 13 02.0 -0.3**
TEZP IAmb IAmb 21 13 05.3
comp=Z,40nm,0.5s
SONM Songino Array 68.43 327 P **P 21 13 04.2 +1.3**
comp=Z,77nm,1.0s,baz=137,slow=5.5,SNR=196
SONM pP **pP 21 13 45.5 -1.1**
comp=Z,8.1nm,0.8s,baz=142,slow=5.6,SNR=1.5
SONM PKPPKP **P'P'df 21 41 16.9 -0.5**
comp=Z,2.3nm,1.1s,baz=325,slow=1.8,SNR=4.5
SONM Songino Array 68.43 327 P **P 21 13 03.8 +0.9**
SEY Seymchan 68.69 359 LR LR 21 40 59.3
comp=Z,153nm,21.4s,baz=178,slow=34
SHL Shillong 68.73 300 *e*P **P 21 13 05.5 +0.2**
SHL IAmb IAmb 21 13 09.3
comp=Z,79nm,0.9s
SHL Shillong 68.73 300 P **P 21 13 05.5 +0.2**
SHL pmax pmax
comp=Z,94nm,0.8s
SHL Shillong 68.73 300 P **P 21 13 05.5 +0.2**
SHL IAmb IAmb 21 13 09.1
comp=Z,94nm,0.8s
GUWA GUWAHATI 69.09 301 *e*P **P 21 13 08.1 +0.8**
GUWA IAmb IAmb 21 13 11.0
comp=Z,58nm,0.8s
YAK Yakutsk 70.51 348 P **P 21 13 15.7 +0.5**
comp=Z,106nm,0.9s,baz=341,slow=2.4,SNR=66
YAK Yakutsk 70.51 348 *d* P **P 21 13 16.2 +1.0**
YAK *e* 21 13 36.0
YAK *e**PP **pP 21 13 59.3 +0.8**
YAK *e* 21 15 58.9
YAK *e*PPP PPP 21 17 40.0
YAK *e*S **S 21 22 14.8 +1.7**
YAK *e* 21 22 55.7
YAK *e*SS **SS 21 26 52.9 +4.5**
YAK pmax pmax
comp=Z,205nm,0.9s
YAK pmax pmax
comp=E,15nm,1.0s
YAK pmax pmax
comp=N,26nm,1.0s
YAK pmax pmax
comp=Z,146nm,3.7s
YAK pmax pmax
comp=N,116nm,3.0s
YAK pmax pmax
comp=E,62nm,2.8s
YAK smax smax
comp=N,585nm,4.7s
YAK smax smax
comp=E,439nm,4.3s
LSA Lhasa 70.65 304 P **P 21 13 17.9 +0.6**
LSA Lhasa 70.65 304 IAmb IAmb 21 14 02.0
comp=Z,98nm,1.4s
ZAK Zakamensk 71.57 328 *e*P **P 21 13 22.4 +0.4**
ZAK pmax pmax
comp=Z,76nm,1.0s
BOD Bodaibo 71.62 338 *e*P **P 21 13 21.6 -0.3**
BOD pmax pmax
comp=Z,35nm,2.0s
VNDA Vanda 71.64 178 P **P 21 13 22.4 +0.6**
comp=Z,12nm,0.9s,baz=333,slow=6.5,SNR=32
VNDA Vanda 71.64 178 P **P 21 13 22.3 +0.4**
GTK Tadong 72.06 301 *e*P **P 21 13 25.8 +0.4**
GTK IAmb IAmb 21 13 30.8
comp=Z,20nm,0.5s
IRK Irkutsk 72.15 330 *e*P **P 21 13 25.6 +0.4**
IRK *e* 21 14 11.6
IRK pmax pmax
comp=Z,81nm,2.3s
TAPN Taplejung 72.83 301 *e*P **P 21 13 30.6 +0.4**
comp=Z,94nm,0.9s
ODAN Odare 72.97 300 *e*P **P 21 13 31.1 +0.2**
comp=Z,119nm,0.7s
BOK Bokaro 73.49 297 *e*P **P 21 13 34.5 +0.7**
BOK IAmb IAmb 21 13 38.4
comp=Z,25nm,1.0s
MOY Mondy 73.49 328 *e*P **P 21 13 34.2 +0.9**
MOY pmax pmax
comp=Z,85nm,1.4s
RAMN Ramite 73.67 300 *e*P **P 21 13 35.1 0.0**
comp=Z,24nm,0.6s
BILL Bilibino 74.22 4 *c* iP **P 21 13 38.3 +1.2**
BILL *i* *PP **pP 21 14 21.0 +0.7**
BILL *i* 21 16 21.2
BILL *i* S **SKiKP 21 22 48.5 +3.1**
BILL pmax pmax
comp=Z,141nm,0.9s
BILL Bilibino 74.22 4 P **P 21 13 38.8 +1.7**
BILL IAmb IAmb 21 13 40.0
comp=Z,122nm,0.9s
GUN Gumba 74.54 301 *e*P **P 21 13 40.3 +0.1**
comp=Z,108nm,0.8s
PKI Pulchoki 74.86 300 *e*P **P 21 13 41.7 -0.3**
comp=Z,54nm,0.9s
PKIN Phulchoki 74.87 300 *e*P **P 21 13 41.6 -0.4**
comp=Z,40nm,0.7s
KKN Kakani 75.02 301 *e*P **P 21 13 42.8 0.0**
comp=Z,49nm,0.7s
DMN Daman 75.13 300 *e*P **P 21 13 43.5 0.0**
comp=Z,147nm,0.9s
GKN Gorkha 75.63 301 *e*P **P 21 13 45.8 -0.4**
comp=Z,94nm,0.9s
KOLN Koldanda 76.46 300 *e*P **P 21 13 50.7 -0.3**
comp=Z,74nm,0.8s
DANN Dangsing 76.47 301 *e*P **P 21 13 50.5 -0.6**
comp=Z,46nm,0.8s
SVW2 Sparrevohn 77.03 22 P **P 21 13 54.2 +1.1**
SVW2 IAmb IAmb 21 14 42.4
comp=Z,110nm,1.7s
PYUN Piuthan 77.06 300 *e*P **P 21 13 53.8 -0.5**
comp=Z,143nm,0.9s
WMQ Urumqi 78.03 317 *e*P **P 21 14 00.3 +1.1**
WMQ pP pP 21 14 42.6 -0.8
WMQ sP sP 21 15 00.8 -1.9
WMQ S **S 21 23 39.5 +1.8**
WMQ pmax pmax
comp=Z,45nm,1.1s
WMQ pmax pmax
comp=Z,410nm,4.7s
WMQ LR LR
comp=Z,490nm,22.5s
WMQ LR LR
comp=Z,480nm,27.5s
TTA Tatalina 78.04 21 P **P 21 14 00.2 +1.4**
TTA pmax pmax
comp=Z,55nm,1.3s
TTA Tatalina 78.04 21 P **P 21 14 00.2 +1.4**
HYB Hyderabad 78.89 289 *i* P **P 21 14 04.0 -0.4**
HYB *e*pP **pP 21 14 45.0 -3.9**
TIXI Tiksi 79.30 352 *ce*P **P 21 14 04.9 -0.5**
TIXI pmax pmax
comp=Z,90nm,1.3s
TIXI Tiksi 79.30 352 P **P 21 14 05.6 +0.3**
TIXI IAmb IAmb 21 14 53.2
comp=Z,76nm,1.7s
RC01 Rabbit Creek A 79.31 24 P **P 21 14 06.6 +1.0**
baz=236,SNR=8.3
CUT Chulitna 79.83 23 P **P 21 14 09.2 +0.8**
baz=236,SNR=5.8
TRF Thorofare Moun 80.42 22 P **P 21 14 12.6 +0.7**
BPAW Bear Paw Mtn. 80.54 21 P **P 21 14 12.7 +0.4**
BPAW IAmb IAmb 21 14 58.9
comp=Z,64nm,1.5s
IMAR Indian Mountai 80.73 19 P **P 21 14 14.4 +1.2**
RND Reindeer 80.93 22 IAmb IAmb 21 15 01.1
comp=Z,96nm,1.4s
BHPL Bhopal 80.96 295 *e*P **P 21 14 14.5 -0.9**
BHPL IAmb IAmb 21 14 18.0
comp=Z,17nm,0.7s
MCK McKinley 81.08 22 P **P 21 14 16.1 +1.0**
baz=237,SNR=12
KLU Klutina 81.08 25 IAmb IAmb 21 15 03.9
comp=Z,108nm,1.2s
ZSN Zaisan 81.11 320 *e*P **P 21 14 15.6 -0.1**
comp=Z,17nm,1.1s,baz=320
ZSN pmax pmax
comp=Z,17nm,1.1s
MLY Manley 81.17 20 P **P 21 14 16.8 +1.2**
baz=235
M24K Tolsona, Glenn 81.29 24 P **P 21 14 17.0 +0.7**
baz=239,SNR=8.0
NEA2 Nenana 81.51 21 P **P 21 14 17.9 +0.6**
baz=236,SNR=10
N25K Chitina, Valde 81.69 25 P **P 21 14 19.3 +0.9**
baz=241,SNR=9.9
I23K Minto, Yukon-K 81.71 21 P **P 21 14 19.0 +0.7**
baz=236
WRH Wood River Hil 81.80 22 IAmb IAmb 21 15 05.4
comp=Z,82nm,1.3s
CCB Clear Creek Bu 81.99 21 P **P 21 14 19.7 -0.1**
MDM Murphy Dome 82.01 21 IAmb IAmb 21 15 07.2
comp=Z,90nm,1.5s
COLA College 82.10 21 *i* P **P 21 14 21.7 +1.3**
COLA pmax pmax
comp=Z,16nm,0.8s
HDA Harding Lake 82.18 22 P **P 21 14 21.4 +0.5**
baz=238,SNR=5.8
HDA Harding Lake 82.18 22 IAmb IAmb 21 15 08.4
comp=Z,81nm,1.6s
POKR Poker Plat Res 82.38 21 P **P 21 14 22.2 +0.3**
baz=238,SNR=6.9
ILAR Eielson Array 82.39 22 P **P 21 14 21.9 0.0**
comp=Z,10nm,1.0s,baz=237,slow=6.2,SNR=45
ILAR pP **pP 21 15 06.2 +0.1**
comp=Z,23nm,1.1s,baz=251,slow=4.1,SNR=7.2
ILAR LR LR 21 47 44.7
comp=Z,261nm,20.1s,baz=249,slow=33
ILAR Eielson Array 82.39 22 P **P 21 14 21.5 -0.4**
MK31 Makanchi Array 82.59 319 *ce*P **P 21 14 23.7 +0.3**
MK31 Makanchi Array 82.59 319 P **P 21 14 23.4 0.0**
MK31 IAmb IAmb 21 14 25.4
comp=Z,56nm,0.8s
MKAR Makanchi Array 82.59 319 P **P 21 14 23.7 +0.3**
comp=Z,68nm,0.8s,baz=104,slow=4.9,SNR=259
MKAR pP **pP 21 15 06.1 -2.4**
comp=Z,15nm,1.0s,baz=93,slow=8.7,SNR=1.9
MKAR LR LR 21 49 13.0
comp=Z,153nm,21.8s,baz=91,slow=34
COLD Coldfoot 82.61 19 P **P 21 14 24.0 +1.0**
baz=235
SMLA Simla 82.67 302 *e*P **P 21 14 24.0 -0.1**
SMLA IAmb IAmb 21 14 27.5
comp=Z,29nm,1.2s
BARN Barnard Glacie 82.69 26 IAmb IAmb 21 15 12.7
comp=Z,95nm,1.2s
MAKZ Makanchi 82.80 319 P **P 21 14 24.2 -0.3**
MAKZ pmax pmax
comp=Z,94nm,0.9s
MAKZ Makanchi 82.80 319 P **P 21 14 24.2 -0.3**
MAKZ IAmb IAmb 21 14 26.5
comp=Z,94nm,0.9s
L26K Log Cabin Wild 82.88 24 P **P 21 14 25.6 +1.0**
baz=242,SNR=7.4
DOT Dot Lake 82.90 23 IAmb IAmb 21 15 12.9
comp=Z,105nm,1.2s
SCRK Sand Creek 83.08 23 P **P 21 14 26.5 +0.8**
baz=241,SNR=12
ZAA0 Zalesovo Array 83.28 326 IAmb IAmb 21 14 27.4
comp=Z,33nm,0.8s
ZALV Zalesovo Beam 83.28 326 P **P 21 14 26.1 -0.6**
comp=Z,39nm,0.9s,baz=110,slow=5.4,SNR=126
ZALV pP **pP 21 15 09.7 -2.3**
comp=Z,4.3nm,0.5s,baz=117,slow=5.7,SNR=2.1
ZALV PKPPKP **P'P'df 21 40 46.9 -3.9**
comp=Z,0.5nm,0.5s,baz=239,slow=0.9,SNR=5.2
ZALV LR LR 21 53 00.6
comp=Z,93nm,19.9s,baz=113,slow=36
ZALV Zalesovo Beam 83.28 326 P **P 21 14 25.7 -1.1**
A21K Barrow 83.36 14 P **P 21 14 27.7 +1.0**
baz=228
BCAR Beaver Creek A 83.53 24 P **P 21 14 29.5 +1.6**
DHRM DHARAMSHALA 83.61 303 *e*P **P 21 14 28.7 -0.5**
TOLK Toolik Lake Re 83.61 18 P **P 21 14 29.8 +1.6**
baz=236
TOLK Toolik Lake Re 83.61 18 IAmb IAmb 21 15 16.1
comp=Z,70nm,1.4s
K27K Chicken 83.85 23 IAmb IAmb 21 15 18.9
comp=Z,99nm,1.4s
QSPA South Pole Qui 84.04 180 P **P 21 14 29.9 -0.7**
QSPA IAmb IAmb 21 14 31.4
comp=Z,37nm,0.8s
KPKS Kokpek 84.17 315 *e*P **P 21 14 31.4 -0.3**
comp=Z,8.0nm,0.9s,baz=315
KPKS *i* pP **pP 21 15 13.6 -2.9**
baz=315
KPKS Kokpek 84.17 315 *e*P **P 21 14 31.3 -0.3**
KPKS *i* *PP **pP 21 15 13.5 -2.9**
KPKS pmax pmax
comp=Z,8.0nm,0.9s
SATY Saty 84.28 314 *e*P **P 21 14 31.9 -0.3**
comp=Z,8.2nm,0.9s,baz=314
SATY *e*S **S 21 24 38.3 -4.1**
baz=314
SATY Saty 84.28 314 *e*P **P 21 14 31.9 -0.3**
SATY *e*S **S 21 24 38.3 -4.1**
SATY pmax pmax
comp=Z,8.0nm,0.9s
HYT Haines Junctio 84.44 27 IAmb IAmb 21 15 22.0
comp=Z,133nm,1.2s
BMAR Burnt Mountain 84.56 20 P **P 21 14 34.7 +1.7**
TDK Taldyqorghan 84.73 316 *e*P **P 21 14 34.0 -0.3**
comp=Z,21nm,1.0s,baz=316
TDK *i* pP **pP 21 15 16.2 -3.5**
baz=316
TDK Taldyqorghan 84.73 316 *e*P **P 21 14 34.0 -0.3**
TDK *i* *PP **pP 21 15 16.1 -3.5**
TDK pmax pmax
comp=Z,21nm,1.0s
SEM Semipalatinsk 84.89 322 *e*P **P 21 14 33.6 -1.7**
comp=Z,11nm,1.0s,baz=322
SEM Semipalatinsk 84.89 322 *e*P **P 21 14 33.5 -1.7**
SEM pmax pmax
comp=Z,11nm,1.0s
DAWY Dawson 84.93 24 IAmb IAmb 21 15 23.5
comp=Z,68nm,1.3s
KDJ Kajisay 84.95 313 IAmb IAmb 21 16 06.6
comp=Z,40nm,0.9s
MDOK Medeo 85.27 314 *i* P **P 21 14 36.9 -0.3**
baz=314
MDOK *i* pP **pP 21 15 19.2 -3.4**
baz=314
MDOK *e*S **S 21 24 44.5 -7.7**
baz=314
MDOK Medeo 85.27 314 *i* P **P 21 14 36.9 -0.3**
MDOK *i* *PP **pP 21 15 19.2 -3.4**
MDOK *e*S **S 21 24 44.5 -7.7**
KSH Kashi 85.30 310 P **P 21 14 39.5 +2.1**
KSH pP pP 21 15 23.3 +0.9
KSH SKS S 21 24 42.8 -10
KSH S **SKKSac 21 24 51.3 -0.9**
KSH pmax pmax
comp=Z,65nm,1.0s
KSH pmax pmax
comp=Z,340nm,3.9s
KSH LR LR
comp=Z,250nm,8.2s
KSH LR LR
comp=Z,290nm,4.8s
KSH LR LR
comp=Z,440nm,6.5s
TNSS Tian-Shan 85.31 314 *e*P **P 21 14 37.8 0.0**
baz=314
TNSS Tian-Shan 85.31 314 *e*P **P 21 14 37.7 0.0**
MAW Mawson 85.37 203 P **P 21 14 36.7 -0.2**
comp=Z,36nm,0.9s,baz=94,slow=4.9,SNR=52
MAW pP **pP 21 15 20.8 -0.7**
comp=Z,7.9nm,0.5s,baz=97,slow=4.1,SNR=2.4
MAW LR LR 21 48 57.7
comp=Z,173nm,21.2s,baz=68,slow=33
MAW Mawson 85.37 203 P **P 21 14 37.1 +0.1**
baz=85,SNR=38
MAW Mawson 85.37 203 P **P 21 14 36.7 -0.2**
MAW pmax pmax
comp=Z,7.0nm,0.9s
MAW Mawson 85.37 203 P **P 21 14 36.7 -0.2**
AAA Alma-Ata 85.37 314 *e*P **P 21 14 37.5 -0.1**
baz=314
AAA Alma-Ata 85.37 314 *e*P **P 21 14 37.5 -0.1**
CHKK Chushkaly 85.46 315 *e*P **P 21 14 37.0 -1.0**
baz=315
CHKK Chushkaly 85.46 315 *e*P **P 21 14 37.0 -1.0**
KUU Kurty 85.93 315 *e*P **P 21 14 39.7 -0.6**
comp=Z,35nm,1.0s,baz=315
KUU *e*S S 21 24 48.1 -10
baz=315
KUU Kurty 85.93 315 *e*P **P 21 14 39.7 -0.6**
KUU *e*S S 21 24 48.0 -10
KUU pmax pmax
comp=Z,35nm,1.0s
KURK Kurchatov 85.98 322 *ce*P **P 21 14 39.3 -1.0**
KURK pmax pmax
comp=Z,23nm,1.3s
KURK Kurchatov 85.98 322 P **P 21 14 39.2 -1.1**
KURK IAmb IAmb 21 15 39.8
comp=Z,54nm,1.4s
KURBB Kurchatov Arra 86.01 322 P **P 21 14 39.8 -0.6**
comp=Z,6.7nm,0.7s,baz=106,slow=3.6,SNR=38
KURBB pP **pP 21 15 23.3 -2.4**
comp=Z,7.3nm,1.0s,baz=99,slow=4.2,SNR=3.4
TKM2 Tokmak 2 86.26 314 P **P 21 14 42.2 +0.1**
SNR=10
NIL Nilore 86.39 304 P **P 21 14 41.9 -0.9**
NIL pmax pmax
comp=Z,96nm,1.5s
NIL Nilore 86.39 304 P **P 21 14 41.9 -0.9**
NIL IAmb IAmb 21 15 27.8
comp=Z,96nm,1.5s
KBK Karagaybulak 86.68 313 P **P 21 14 44.7 +0.5**
SNR=7.1
CHMS Chumysh 86.88 314 P **P 21 14 44.9 -0.1**
SNR=14
AAK Ala-Archa 87.00 313 P **P 21 14 45.7 0.0**
comp=Z,8.0nm,0.8s,baz=134,slow=4.2,SNR=32
AAK pP **pP 21 15 30.5 -0.7**
comp=Z,6.3nm,0.8s,baz=116,slow=7.1,SNR=3.4
AAK Ala-Archa 87.00 313 P **P 21 14 46.4 +0.7**
SNR=10
AAK Ala-Archa 87.00 313 P **P 21 14 45.6 -0.1**
SGDS Sogindy 87.06 314 *e*P **P 21 14 45.2 -0.6**
baz=314
SGDS Sogindy 87.06 314 *e*P **P 21 14 45.2 -0.6**
USP Ospenovka 87.11 314 P **P 21 14 46.1 0.0**
SNR=14
AML Almayashu 87.49 313 P **P 21 14 49.3 +1.0**
SNR=20
EKS2 Erkin-Say 87.53 313 P **P 21 14 48.3 +0.1**
SNR=14
J01E Myrtle Point 87.55 46 P **P 21 14 49.2 +1.1**
baz=260
K02D Willamette Mer 87.66 47 P **P 21 14 50.1 +1.3**
baz=260
NRIK Noril'sk 87.72 341 P **P 21 14 48.3 0.0**
comp=Z,31nm,1.2s,baz=113,slow=4.6,SNR=15
NRIK pP **pP 21 15 31.3 -2.5**
comp=Z,6.2nm,0.5s,baz=77,slow=5.7,SNR=1.9
NRIK LR LR 21 53 14.8
comp=Z,117nm,21.3s,baz=163,slow=35
BTLS Baital 87.77 316 *e*P **P 21 14 48.5 -0.6**
comp=Z,8.3nm,1.2s,baz=316
BTLS Baital 87.77 316 *e*P **P 21 14 48.4 -0.6**
BTLS pmax pmax
comp=Z,8.0nm,1.2s
ARSB Arslanbob 87.88 312 IAmb IAmb 21 15 50.0
comp=Z,108nm,1.7s
O02D Mt. Diablo Mer 87.88 49 P **P 21 14 51.4 +1.5**
baz=260
M02C Callahan 88.03 48 P **P 21 14 51.5 +0.9**
baz=260
N02D Trinity Center 88.08 49 P **P 21 14 51.5 +0.7**
baz=260
YBH Yreka Blue Hor 88.20 48 P **P 21 14 52.0 +0.7**
YBH pmax pmax
comp=Z,11nm,1.3s
YBH Yreka Blue Hor 88.20 48 P **P 21 14 52.0 +0.7**
G03D McMinnville, O 88.39 44 P **P 21 14 53.0 +1.0**
baz=260
L04D Klamath Falls 88.58 47 P **P 21 14 53.4 +0.3**
baz=261
O03E Paynes Creek 88.65 49 P **P 21 14 53.8 +0.3**
baz=261
INK Inuvik 88.73 21 P **P 21 14 53.3 +0.3**
INK pmax pmax
comp=Z,73nm,1.4s
INK Inuvik 88.73 21 P **P 21 14 53.3 +0.3**
INK IAmb IAmb 21 15 41.4
comp=Z,73nm,1.4s
I04A Tendick Farm, 88.75 46 P **P 21 14 54.8 +1.0**
baz=261
M04C Macdoel 88.85 48 P **P 21 14 55.0 +0.6**
baz=261
E04D Cinebar 89.10 43 P **P 21 14 55.3 +0.1**
baz=260
BTK Batken 89.31 310 IAmb IAmb 21 15 55.2
comp=Z,33nm,1.3s
DZA Taraz 89.34 313 *e*P **P 21 14 55.8 -0.8**
baz=313
DZA Taraz 89.34 313 *e*P **P 21 14 55.8 -0.8**
J05D Fort Rock, OR 89.52 47 P **P 21 14 57.9 +0.4**
baz=261
BRZS Berezniki 89.55 320 *e*P **P 21 14 55.7 -1.7**
baz=320
BRZS Berezniki 89.55 320 *e*P **P 21 14 55.6 -1.7**
I05D Terrebonne, OR 89.60 45 P **P 21 14 58.0 +0.2**
baz=261
BEKR Beckworth 89.68 50 P **P 21 14 59.6 +1.2**
B05A Bryant 89.69 42 P **P 21 14 58.8 +0.8**
baz=261
KKAR Karatay Array 89.97 313 P **P 21 14 58.7 -0.8**
KKAR Karatay Array 89.97 313 P **P 21 14 58.7 -0.8**
KBL Kabul 89.97 305 P **P 21 14 58.0 -1.9**
KBL pmax pmax
comp=Z,8.0nm,1.0s
KBL Kabul 89.97 305 P **P 21 14 58.0 -1.9**
IUG Iuzhnay 90.19 312 *e*P **P 21 14 60.0 -0.7**
baz=312
IUG Iuzhnay 90.19 312 *e*P **P 21 14 59.9 -0.7**
WAKR Walker 90.21 51 IAmb IAmb 21 15 50.8
comp=Z,53nm,1.9s
MDPB Devils Postpil 90.38 52 P **P 21 15 03.0 +1.2**
CIS Catalina Islan 90.41 57 P **P 21 15 03.0 +1.2**
baz=263
ISA Isabella, Lake 90.63 54 P **P 21 15 03.6 +0.8**
baz=263
PASC Pasadena Art C 90.69 56 IAmb IAmb 21 15 06.2
comp=Z,44nm,1.1s
MWC Mount Wilson 90.80 56 IAmb IAmb 21 15 07.1
comp=Z,66nm,1.1s
EDW2 Edwards Air Fo 90.93 55 P **P 21 15 05.7 +1.6**
baz=263,SNR=9.3
RYN Ryan 90.94 51 IAmb IAmb 21 15 07.2
comp=Z,18nm,0.9s
E07A Sunnyside 90.95 43 IAmb IAmb 21 15 53.5
comp=Z,45nm,1.6s
CWC Cottonwood Cre 91.03 54 P **P 21 15 06.2 +1.5**
baz=263
NVAR Mina Array Bea 91.08 52 P **P 21 15 06.9 +1.9**
comp=Z,27nm,0.9s,baz=254,slow=6.6,SNR=33
NVAR pP **pP 21 15 51.5 +1.6**
comp=Z,10nm,1.1s,baz=246,slow=6.4,SNR=2.4
NVAR Mina Array Bea 91.08 52 P **P 21 15 06.6 +1.5**
BFSC Mount Baldy Ra 91.13 56 P **P 21 15 06.5 +1.3**
baz=264,SNR=5.9
NV11 Mina Array Sit 91.20 52 IAmb IAmb 21 15 08.5
comp=Z,29nm,1.0s
LRMC Laurel Mtn Rad 91.25 55 P **P 21 15 07.3 +1.6**
baz=264,SNR=13
KVN Kaiserville 91.31 51 IAmb IAmb 21 15 08.9
comp=Z,19nm,0.9s
G08A Pilot Rock 91.41 45 P **P 21 15 06.4 +0.2**
109C Camp Elliot, M 91.44 57 P **P 21 15 08.2 +1.7**
baz=264
109C Camp Elliot, M 91.44 57 IAmb IAmb 21 15 10.1
comp=Z,27nm,1.0s
MURC Murrieta 91.44 57 P **P 21 15 07.3 +0.7**
baz=264
MPMC Manual Prospec 91.47 54 P **P 21 15 08.3 +1.5**
baz=264,SNR=8.9
BRVK Borovoye 91.50 323 *ce*P **P 21 15 05.1 -1.2**
BRVK *i* *PP **pP 21 15 48.8 -3.4**
BRVK pmax pmax
comp=Z,15nm,1.0s
BRVK Borovoye 91.50 323 P **P 21 15 05.3 -1.0**
GRAC Grapevine Rang 91.66 53 P **P 21 15 09.0 +1.5**
baz=264
GSC Goldstone, Bar 91.94 55 P **P 21 15 10.5 +1.6**
baz=264
FURC Furnace Creek, 92.01 54 P **P 21 15 11.0 +1.9**

baz=264,SNR=6.3
MONP2 **Monument Peak** 92.02 57 P P 21 15 11.2 +1.7
baz=264,SNR=9.9
PFO **Pinyon Flats O** 92.06 57 P P 21 15 11.2 +1.7
PFO pmax pmax
comp=Z,19nm,1.0s
PFO **Pinyon Flats O** 92.06 57 P P 21 15 11.0 +1.5
baz=264,SNR=8.8
PFO **Pinyon Flats O** 92.06 57 P P 21 15 11.2 +1.7
PFO lAmb lAmb 21 15 12.7
comp=Z,19nm,0.9s
TPFO **Pinon Flats** 92.06 57 P P 21 15 11.0 +1.5
baz=264,SNR=9.3
E09A **Wood Farm, Sta** 92.11 44 lAmb lAmb 21 15 58.6
comp=Z,34nm,1.5s
IKP **In-Ko-Pah, Jac** 92.25 58 P P 21 15 11.9 +1.5
baz=264,SNR=6.9
HEC **Hector,Ludlow** 92.28 55 P P 21 15 12.1 +1.6
baz=264,SNR=11
SHOC **Shoshone, Teco** 92.43 54 P P 21 15 13.1 +2.1
baz=264
BELC **Belle Mtn. Jos** 92.47 56 P P 21 15 13.5 +2.0
baz=264,SNR=14
SWSC **Sam W. Stewart** 92.54 57 P P 21 15 13.5 +1.9
baz=265
TPNV **Topopah Spring** 92.55 53 P P 21 15 13.2 +1.4
baz=264
TPNV **Topopah Spring** 92.55 53 lAmb lAmb 21 15 14.8
comp=Z,16nm,0.9s
TUQ **Turquoise Moun** 92.67 55 P P 21 15 13.4 +1.1
baz=265
GMRC **Granite Mounta** 92.83 55 P P 21 15 14.6 +1.6
baz=265,SNR=12
BC3 **Big Chuckawall** 92.89 57 P P 21 15 15.3 +1.9
baz=265,SNR=9.6
NEW **Newport** 92.98 42 P P 21 15 14.3 +0.9
baz=264
IRM **Iron Mountain** 93.19 56 P P 21 15 16.7 +2.0
baz=265,SNR=25
R11A **Troy Canyon, C** 93.20 52 P P 21 15 16.4 +1.6
baz=265,SNR=7.4
SYO **Syowa Base** 93.32 199 ⇓*i* X P 21 15 12.0 -2.4
SYO **Syowa Base** 93.32 199 ⇓*i* PcP PcP 21 15 14.8 -0.1
SYO **Syowa Base** 93.32 199 ⇓*i* pP pP 21 15 57.4 -2.8
GLA **Glamis** 93.36 57 P P 21 15 17.1 +1.7
baz=265
SHPR **Sheep Range** 93.38 54 lAmb lAmb 21 16 08.7
comp=Z,29nm,1.3s
NEE2 **Needles Airpor** 93.68 56 P P 21 15 18.6 +1.8
baz=265
PDMCI **Parker Dam,Lak** 94.03 56 P P 21 15 19.9 +1.4
baz=266
SPR3 **Spring Creek 3** 94.23 51 P P 21 15 21.8 +2.1
SPR3 lAmb lAmb 21 16 12.4
comp=Z,60nm,1.4s
W13A **Hualapai Mount** 94.30 55 lAmb lAmb 21 15 23.3
comp=Z,13nm,0.9s
HLID **Hailey** 94.49 47 P P 21 15 21.9 +1.4
baz=266
YKA **Yellowknife Ar** 95.41 28 P P 21 15 24.6 +0.5
comp=Z,3.0nm,0.7s,baz=260,slow=3.8,SNR=16
YKA pP pP 21 16 09.6 +0.6
comp=Z,10nm,1.1s,baz=272,slow=4.4,SNR=9.2
YKA LR LR 21 55 04.6
comp=Z,183nm,20.4s,baz=0.0,slow=33
HRA **Herat** 95.55 304 P P 21 15 24.0 -1.7
U15A **North Rim** 95.68 54 lAmb lAmb 21 16 23.3
comp=Z,13nm,1.1s
WUAZ **Wupatki** 96.38 55 P P 21 15 29.9 +0.6
baz=267
WUAZ **Wupatki** 96.38 55 lAmb lAmb 21 15 35.6
comp=Z,8.0nm,0.8s
BOZ **Bozeman (W)** 96.57 45 P P 21 15 30.1 +0.1
BOZ pmax pmax
comp=Z,3.0nm,0.9s
BOZ **Bozeman (W)** 96.57 45 P P 21 15 31.2 +1.2
baz=268
BOZ **Bozeman (W)** 96.57 45 P P 21 15 30.1 +0.1
TUC **Tucson** 96.72 58 P P 21 15 31.8 +1.0
baz=267
H17A **Grant Village** 97.29 46 P Pdif 21 15 34.9 +1.5
baz=269
ABKAR **Akbulak array** 97.73 319 P P 21 15 31.8 -3.0
EGMT **Eagleton** 97.90 42 P Pdif 21 15 36.7 +0.9
baz=270
BW06 **Boulder Array** 98.01 48 P Pdif 21 15 37.2 +0.6
baz=269
PDAR **Pinedale Array** 98.01 48 P Pdif 21 15 36.8 +0.1
comp=Z,2.0nm,0.8s,baz=233,slow=2.1,SNR=18
PDAR LR LR 21 54 26.3
comp=Z,110nm,21.5s,baz=275,slow=32
PDAR **Pinedale Array** 98.01 48 P P 21 15 36.2 -0.3
PV14 **Lion Creek, Pa** 98.35 52 lAmb lAmb 21 16 30.1
comp=Z,33nm,1.7s
PV23 **Carpenter Ridg** 98.36 52 lAmb lAmb 21 16 31.0
comp=Z,17nm,1.2s
ARU **Arti** 98.45 326 P P 21 15 36.5 -1.4
comp=Z,1.8nm,0.9s,baz=140,slow=22,SNR=5.7
ARU **Arti** 98.45 326 P P 21 15 36.1 -1.8
ARU 21 19 38.8
ARU S **SKSac** 21 25 57.5 -0.5
ARU SP **SP** 21 28 17.7 +2.1
ARU SS **SS** 21 33 34.0 -4.8
PV12 **Saucer Basin,** 98.53 52 P Pdif 21 15 40.9 +1.9
PV12 lAmb lAmb 21 16 30.9
comp=Z,28nm,1.5s
121A **Cookes Peak, D** 99.26 58 P Pdif 21 15 43.4 +1.0
baz=269
ANMO **Albuquerque** 100.39 56 P Pdif 21 15 48.7 +1.4
baz=270
N23A **Red Feather La** 100.72 50 P Pdif 21 15 50.1 +1.3
baz=271
SNAA **Sanae** 101.19 187 Pdiff Pdif 21 15 52.1 +2.1
VNA3 **Neumayer Olymp** 102.31 185 Pdiff Pdif 21 15 54.3 -0.6
VNA2 **Neumayer--Watz** 102.41 186 Pdiff Pdif 21 15 55.1 -0.2
TXAR **Lajitas Array** 102.78 61 P Pdif 21 15 60.0 +2.0
comp=Z,0.1nm,0.4s,baz=229,slow=53,SNR=3.6
TXAR PP PP 21 20 12.3 -1.9
comp=Z,0.7nm,0.9s,baz=274,slow=7.4,SNR=3.7
TXAR **Lajitas Array** 102.78 61 P Pdif 21 16 00.0 +2.0
MAK **Makhachkala** 106.78 313 *eP* Pdif 21 16 10.5 -4.8
MAK *e* 21 20 40.8
MAK *e*SSS SSS 21 39 38.6
MAK pmax pmax
comp=Z,134nm,1.2s
MAK MLR MLR
comp=Z,154nm,21.0s
APA **Apatity** 107.13 340 ⇑*iP* Pdif 21 16 05.2 -11
APA pmax pmax
comp=Z,7.0nm,1.2s
APA MLR MLR
comp=Z,600nm,22.0s
KLMR **Klimovskoe** 107.38 332 *e*PP PP 21 20 44.0 -2.8
KLMR AMP 21 20 46.6
comp=Z,15nm,1.6s
KIV **Kislovodsk** 110.08 315 *i* PKIKP PKiKP 21 20 28.3 -2.6
KIV *e* 21 21 04.9
KIV *e*PS PS 21 30 36.8 -2.3
KIV pmax pmax
comp=Z,12nm,1.1s
KIV MLR MLR
comp=Z,286nm,21.0s
U40A **Yellville** 111.33 53 P PKiKP 21 20 33.3 -0.1
baz=279
SOC **Sochi** 112.26 315 *i* PKIKP PKiKP 21 20 32.6 -2.3
SOC *e* 21 21 19.9
SOC *e*SS SS 21 36 49.8 +2.4
SOC *e*SSS SSS 21 41 01.4
FINES **FINESS Array B** 112.95 336 PP PP 21 21 24.2 -2.5
comp=Z,13nm,0.9s,baz=151,slow=4.4,SNR=6.5
AKASG **Malin Array Be** 116.66 325 PKP PKPdf 21 20 42.5 -0.5
comp=Z,3.9nm,0.8s,baz=59,slow=2.5,SNR=11
AKASG PP PP 21 21 53.1 0.0
comp=Z,2.2nm,1.0s,baz=62,slow=6.0,SNR=4.4
AKASG PKKPbc **PKKPbc** 21 31 10.6 -2.1
comp=Z,0.7nm,0.4s,baz=260,slow=4.0,SNR=5.1
AKBB **Malin Array Si** 116.66 325*c* *i* PKIKP PKiKP 21 20 43.4 +0.3
AKBB **Malin Array Si** 116.66 325 PKPdf PKPdf 21 20 42.0 -1.1
PLCA **Paso Flores** 117.58 142 PKP PKPdf 21 20 45.0 -0.3
comp=Z,1.9nm,0.7s,baz=225,slow=0.6,SNR=7.1
PLCA PKKPab **PKKPab** 21 31 12.6 -0.3
comp=Z,1.5nm,0.9s,baz=82,slow=13,SNR=2.8
BRTR **Keskin Array B** 117.65 312 PKP PKPdf 21 20 45.1 -0.4
comp=Z,1.7nm,0.8s,baz=102,slow=4.2,SNR=4.9
BRTR PP PP 21 22 01.8 +1.1
comp=Z,6.5nm,1.1s,baz=104,slow=4.1,SNR=5.8

BRTR **Keskin Array B** 117.65 312 PKPdf PKPdf 21 20 44.2 -1.4
NB2 **NORSAR Subarra** 118.69 341 PKPdf PKPdf 21 20 46.0 -0.8
comp=Z,9.8nm,2.0s,baz=44,slow=1.9
NB2 **NORSAR Subarra** 118.69 341 PKPdf PKPdf 21 20 46.0 -0.8
baz=44,slow=1.9
NOA **NORSAR Array B** 118.69 341 PKP PKPdf 21 20 46.0 -0.8
comp=Z,1.0nm,0.7s,baz=45,slow=1.9,SNR=4.9
NOA PP sPKPdf 21 21 58.4 +4.3
comp=Z,1.8nm,0.8s,baz=34,slow=7.9,SNR=4.0
NOA **NORSAR Array B** 118.69 341 PKIKP PKPdf 21 20 46.0 -0.8
BI02 **San Fabin de** 119.49 138 PKPdf PKPdf 21 20 48.1 -1.0
EFOR **EFORIE** 119.72 318 ⇓P PKiKP 21 20 50.6 +1.4
X54A **Belton** 120.06 53 P PKiKP 21 20 50.3 0.0
baz=285
BIZ **Bicaz** 120.16 322 ⇓P PKiKP 21 20 50.2 +0.2
VRI **Vrincioaia** 120.23 321 ⇓P PKiKP 21 20 59.9 +10
VRI **Vrincioaia** 120.23 321 ⇓PKIKP PKiKP 21 20 59.9 +10
BURAR **Bucovina Array** 120.39 323 ⇑P PKiKP 21 20 51.3 +0.7
BURAR **Bucovina Array** 120.39 323 ⇑PKIKP PKiKP 21 20 51.3 +0.7
BURAR **Bucovina Array** 120.39 323 PKiKP 21 20 50.9 +0.3
BOSA **Boshof** 120.66 232 PKP PKPdf 21 20 51.4 -0.3
comp=Z,1.2nm,0.6s,baz=68,slow=2.3,SNR=5.3
ISR **Istrita** 120.67 320 ⇑P PKiKP 21 20 57.9 +6.7
ISR **Istrita** 120.67 320 ⇑PKIKP PKiKP 21 20 57.9 +6.7
DOPR **Dopca** 121.03 321 ⇑P PKPdf 21 20 50.8 -0.9
N56A **West Decatur** 121.19 45 P PKiKP 21 20 52.3 0.0
baz=291
MATP **Matopo** 121.26 242 PKP PKPdf 21 20 52.9 -0.1
comp=Z,1.6nm,0.4s,baz=176,slow=3.9,SNR=6.2
KOLS **Kolonicke sedl** 121.46 325 *e*PKIKP PKiKP 21 20 53.6 +1.0
KOLS **Kolonicke sedl** 121.46 325 *e*PKP PKiKP 21 20 53.6 +1.0
G57A **Newington** 121.71 40 P PKiKP 21 20 53.3 +0.2
baz=296
ARR **Arges** 121.77 321 ⇓P PKiKP 21 20 54.8 +1.5
M57A **Sunshine Farm,** 121.85 44 P PKiKP 21 20 53.5 0.0
baz=292
HUMR **Humele** 121.93 320 ⇑P PKPdf 21 20 53.1 -0.3
CRVS **Cervenica-Dubn** 121.93 326 *e*PKIKP PKPdf 21 20 52.4 -0.9
CRVS **Cervenica-Dubn** 121.93 326 *e*PKP PKPdf 21 20 52.4 -0.9
COPA **Copaceanca** 121.95 319 ⇓P PKPdf 21 20 48.1 -5.3
LONY **Lake Ozonia** 122.19 40 P PKiKP 21 20 55.1 +1.0
baz=297
DRGR 122.28 323 ⇑P PKPdf 21 20 54.2 +0.1
DRGR 122.28 323 ⇑PKIKP PKPdf 21 20 54.2 +0.1
N58A **Sunbury** 122.33 45 P PKPdf 21 20 54.3 0.0
baz=293
LANS **Liptovska Anna** 122.90 327 *e*PKIKP PKiKP 21 20 56.9 +1.5
LANS **Liptovska Anna** 122.90 327 *e*PKP PKiKP 21 20 56.9 +1.5
GZR **Gura Zlata** 122.92 322 ⇑P PKPdf 21 20 54.8 -0.6
GZR **Gura Zlata** 122.92 322 ⇑PKIKP PKPdf 21 20 54.8 -0.6
I59A **Olmsteadville** 123.01 41 P PKiKP 21 20 56.4 +0.7
baz=297
LSZ **Lusaka** 123.22 248 PKP PKiKP 21 20 57.6 +0.5
comp=Z,2.5nm,0.9s,baz=102,slow=2.3,SNR=5.0
PSZ **Piszkesteto** 123.34 325 ⇓P PKiKP 21 20 56.5 +0.1
PSZ **Piszkesteto** 123.34 325 ⇓PKIKP PKiKP 21 20 56.5 +0.1
G60A **Masonville** 123.38 39 P PKiKP 21 20 57.4 +0.9
baz=299
N60A **Cedar Hill Far** 123.44 44 P PKiKP 21 20 56.6 -0.1
baz=294
BZS **Buzias** 123.52 322 ⇓P PKiKP 21 20 56.6 -0.1
BZS **Buzias** 123.52 322 ⇓PKIKP PKiKP 21 20 56.6 -0.1
MORC **Moravsky Berou** 123.57 328 ⇓P PKiKP 21 20 57.1 +0.4
MORC **Moravsky Berou** 123.57 328 *e*PKP PKiKP 21 20 57.3 +0.6
MORC **Moravsky Berou** 123.57 328 ⇓PKIKP PKiKP 21 20 57.1 +0.4
MORC **Moravsky Berou** 123.57 328 PKPdf PKPdf 21 20 56.4 -0.1
OSTC **Ostas** 123.78 330 *e*PKPDF PKiKP 21 20 58.0 +0.9
KRLC **Kraliky** 123.78 329 *e*PKIKP PKiKP 21 20 57.8 +0.6
KRLC **Kraliky** 123.78 329 *e*PKPDF PKiKP 21 20 57.8 +0.6
E61A **Lac Etchemin** 123.83 36 P PKiKP 21 20 58.3 +1.0
baz=302
MDVR **Moldovita** 123.88 321 ⇑P PKiKP 21 20 57.9 +0.4
L61A **Hillsdale 1, H** 123.93 42 P PKiKP 21 20 58.3 +0.7
baz=296
JAVC **Velka Javorina** 124.04 327 *e*PKP PKiKP 21 20 59.2 +1.5
V61A **Roper** 124.24 50 P PKiKP 21 20 58.6 +0.2
baz=290
VRAC **Vranov** 124.34 328 *e*PKP PKiKP 21 20 58.7 +0.4
L61B **Northampton** 124.40 42 P PKiKP 21 20 59.1 +0.5
baz=297
AC05 **El Transito** 124.43 131 PKPdf PKiKP 21 20 59.1 -0.1
MODS **Modra-Piesok** 124.53 327 *e*PKIKP PKiKP 21 20 58.6 -0.1
MODS **Modra-Piesok** 124.53 327 *e*PKP PKiKP 21 20 58.6 -0.1
KRUC **Moravsky** 124.60 328 *e*PKP PKiKP 21 20 59.0 +0.3
BRG **Berggiesshubel** 124.70 331 *e*PKIKP PKPdf 21 20 58.5 0.0
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG pmax pmax
comp=Z,11nm,1.4s
CLL **Collm** 124.86 332 ⇓*i* PKPdf PKiKP 21 20 59.2 0.0
comp=Z,9.0nm,0.9s
CLL *i* 21 21 52.3
CLL *e* 21 22 10.0
CLL *e*PP PP 21 22 46.0 -2.7
CLL *e*SPP 21 23 44.0
CLL *e*PPP PPP 21 25 24.0
CLL *e*(SP) 21 32 21.0
CLL *e* 21 33 39.0
CLL *e*PPS PPS 21 34 16.0
CLL *e*SKKSdf SKKSdf 21 38 10.0 -8.2
CLL *e*SS SS 21 39 22.0 -6.6
CLL **Collm** 124.86 332 ⇓*i* PKIKP PKiKP 21 20 59.2 0.0
CLL pmax pmax
comp=Z,9.0nm,0.9s
CLL **Collm** 124.86 332 PKPdf PKPdf 21 20 58.8 0.0
PRU **Pruhonice** 124.97 330 *e*PKIKP PKiKP 21 20 59.8 +0.3
PRU **Pruhonice** 124.97 330 *e*PKPDF PKiKP 21 20 59.8 +0.3
AZU **Azuero** 125.16 85 *eP* PKPdf 21 20 57.9 -2.6
CONA **Conrad Observa** 125.56 327 *i* P PKiKP 21 21 00.7 -0.1
comp=Z,3.9nm,0.9s
CONA *eP* pPKPdf 21 21 48.8 -0.1
comp=Z,3.4nm,0.9s
NKC **Novy Kostel** 125.84 331 *e*PKIKP PKiKP 21 21 01.7 +0.5
NKC **Novy Kostel** 125.84 331 *e*PKPDF PKiKP 21 21 01.7 +0.5
KHC **Kasperske Hory** 126.00 330 *e*PKIKP PKPdf 21 21 01.2 0.0
KHC **Kasperske Hory** 126.00 330 *e*PKPDF PKPdf 21 21 01.2 0.0
KHC *ex* x 21 21 55.0
KHC *es*PKP 21 22 00.0
H65A **Eastbrook** 126.08 37 P PKiKP 21 21 02.0 +0.2
baz=303
GERES **GERESS Array B** 126.12 329 PKP PKiKP 21 21 02.1 +0.2
comp=Z,4.6nm,0.8s,baz=50,slow=2.1,SNR=34
GERES pPKP pPKPdf 21 21 48.7 -1.2
comp=Z,1.3nm,0.8s,baz=64,slow=3.1,SNR=3.1
GERES **GERESS Array B** 126.12 329 PKPdf PKPdf 21 21 01.2 -0.3
OTAV **Otavalo** 126.39 94 *eP* PKiKP 21 21 05.9 +2.0
OTAV **Otavalo** 126.39 94 *eP* PKiKP 21 21 04.3 +0.4
OTAV **Otavalo** 126.39 94 *eP* PKiKP 21 21 07.5 +3.6
MOA **Molln** 126.46 328 *eP* PKPdf 21 21 00.7 -1.4
comp=Z,1.5nm,0.7s
PDG **Podgorica** 126.59 320 ⇑P PKiKP 21 21 02.7 -0.2
GO02 **Mina Guanaco** 126.80 127 PKPdf PKiKP 21 21 04.1 -0.2
OBKA **Obir** 127.13 326 *eP* PKiKP 21 21 04.3 +0.4
comp=Z,4.2nm,1.2s
KBA **Koelnbreinsper** 127.43 328 *eP* PKPdf 21 21 03.5 -0.6
comp=Z,4.9nm,1.1s
MYKA **Terra Mystica** 127.55 327 *eP* PKiKP 21 21 04.9 +0.1
comp=Z,2.5nm,0.8s
GCUF **Volcan Galeras** 127.61 93 *eP* PKiKP 21 21 06.7 +0.3
BBAC **Balboa, Cauca** 127.79 92 *eP* PKPdf 21 21 05.4 -0.4
CRUC **La Cruz** 128.03 93 *eP* PKPdf 21 21 06.2 -0.3
ABTA **Abfaltersbach** 128.08 328 *eP* PKPdf 21 21 05.0 -0.2
comp=Z,6.9nm,0.9s
WATA **Walderalm** 128.19 329 *eP* PKPdf 21 21 05.5 0.0
comp=Z,7.5nm,0.9s
WATA *eP* pPKPdf 21 21 53.6 -0.4
comp=Z,7.0nm,1.4s
WTTA **Wattenberg** 128.20 329 *i* P PKiKP 21 21 06.0 -0.2
comp=Z,11nm,1.0s
WTTA *eP* pPKPdf 21 21 55.2 +1.2
comp=Z,15nm,1.9s
PUAC **Puerto Asis, P** 128.29 94 *eP* PKiKP 21 21 07.2 +0.1
CIMO **Cimolais** 128.40 327 PKPdf PKPdf 21 21 05.2 -0.6
POPC **Popayan, Colom** 128.41 91 *eP* PKPdf 21 21 07.0 0.0
MOTA **Monsalm** 128.42 329 *i* P PKPdf 21 21 06.3 +0.3
comp=Z,11nm,0.9s
BTNL **Ternell** 128.43 335 PKiKP PKiKP 21 21 06.2 -0.2
SQTA **Sankt Quirin** 128.45 329 P PKPdf 21 21 06.4 -0.2
comp=Z,8.1nm,1.0s
RETA **Reutte** 128.50 330 *eP* PKPdf 21 21 05.6 -0.4
comp=Z,4.7nm,1.0s
LVC **Limon Verde** 128.56 125 SKPbc SKPbc 21 24 11.7
comp=Z,7.5nm,1.0s,baz=294,slow=2.6,SNR=2.9
LVC **Limon Verde** 128.56 125 PKIKP PKiKP 21 21 07.9 0.0

LVC **Limon Verde** 128.56 125 PKPdf PKiKP 21 21 07.8 0.0
LVC **Limon Verde** 128.56 125 *eP* PKiKP 21 21 08.6 +0.6
PCON **Cinco Dias** 128.66 92 *eP* PKPdf 21 21 08.0 +0.1
FETA **Feichten** 128.83 329 *eP* PKiKP 21 21 07.4 -0.1
comp=Z,9.3nm,1.0s
YOTC **Yotoco, Valle** 128.86 90 *eP* PKPdf 21 21 07.0 -0.8
PLMC **San Jos del P** 128.99 88 *eP* PKPdf 21 21 06.5 -1.5
WLF **Walferdange** 129.12 334 PKiKP PKiKP 21 21 08.4 +0.6
MARP **Paez Belalcaza** 129.15 91 *eP* PKiKP 21 21 09.8 +0.6
DBBC **Dabeiba** 129.16 86 *eP* PKPdf 21 21 08.5 +0.3
BMRD **Maredsous** 129.21 336 PKiKP PKiKP 21 21 08.8 +0.9
PB11 **IPOC Station P** 129.23 121 PKPdf PKiKP 21 21 08.5 +0.2
SNF **Seneffe** 129.25 336 PKiKP PKiKP 21 21 07.5 +0.3
CBOC **Ciudad Bolivar** 129.31 87 *eP* PKPdf 21 21 08.3 -0.4
FLOC **Florencia** 129.32 93 *eP* PKiKP 21 21 09.1 -0.2
GARC **Garzon, Huila** 129.55 92 *eP* PKiKP 21 21 10.1 +0.1
BETC **Betania** 129.65 91 *eP* PKiKP 21 21 10.3 +0.4
GO01 **Chusmiza** 129.66 121 PKPdf PKPdf 21 21 09.5 0.0
MOTC **Monteria, Cord** 129.74 84 *eP* PKPdf 21 21 07.5 -1.7
HELC **Santa Helena** 129.80 87 *eP* PKPdf 21 21 09.1 -0.8
ANIL **Santa Ana** 129.83 89 *eP* PKiKP 21 21 11.1 +0.5
UREC **San Jos de Ur** 129.85 85 *eP* PKPdf 21 21 08.8 -0.7
TIP **Timpagrande** 129.86 318 ⇑P PKiKP 21 21 10.5 +0.8
TIP **Timpagrande** 129.86 318 PKPdf PKiKP 21 21 09.7 0.0
RREF **El Recreo** 129.91 89 *eP* PKiKP 21 21 11.9 +0.7
GUY2C **Guyana, Caldas** 129.92 88 *eP* PKPdf 21 21 10.1 -0.1
TOLC **Tolima** 129.92 89 *eP* PKPdf 21 21 09.8 -0.2
ORTC **Ortega, Tolima** 129.95 90 *eP* PKPdf 21 21 09.3 -0.4
PB16 **IPOC Station P** 129.95 120 PKPdf PKPdf 21 21 10.1 -0.2
PTLC **Puerto Leguiza** 130.01 95 *eP* PKPdf 21 21 09.8 0.0
SJCC **San Jacinto, C** 130.21 82 *eP* PKPdf 21 21 03.6 -6.6
NORC **Norcasia** 130.43 88 *eP* PKPdf 21 21 09.8 -0.8
ZARC **Zaragoza, Cauc** 130.51 85 *eP* PKPdf 21 21 10.3 -0.4
CZSB **Cruzeiro do Su** 130.55 105 *eP* PKPdf 21 21 11.0 +0.3
ROSC **El Rosal** 130.93 89 PKP PKiKP 21 21 13.1 +0.2
comp=Z,21nm,0.5s,baz=150,slow=22,SNR=3.8
ROSC SKPbc **SKPab** 21 24 21.2 +1.6
MACC **Macarena, Meta** 131.18 92 *eP* PKPdf 21 21 11.4 -0.6
SPBC **San Pablo de B** 131.22 88 *eP* PKPdf 21 21 11.7 -0.5
CHIC **Chingaza** 131.50 89 *eP* PKPdf 21 21 12.7 -0.4
VILC **Villavicencio,** 131.51 90 *eP* PKPdf 21 21 12.4 -0.3
LPAZ **La Paz** 131.99 118 PKP PKiKP 21 21 14.9 -0.4
comp=Z,11nm,0.6s,baz=0.1,slow=2.5,SNR=30
LPAZ SKPbc **SKPab** 21 24 24.6 +0.3
comp=Z,22nm,0.8s,baz=270,slow=1.9,SNR=25
LPAZ **La Paz** 131.99 118 *eP* PKPdf 21 21 14.5 +0.3
LPAZ **La Paz** 131.99 118 PKPdf PKPdf 21 21 14.3 +0.2
LPAZ **La Paz** 131.99 118 *eP* PKiKP 21 21 15.2 -0.1
BARC **Barichara** 132.15 86 *eP* PKiKP 21 21 15.5 +0.4
RUSC **La Rusia** 132.22 87 *eP* PKPdf 21 21 13.5 -1.1
PAMC **Pamplona, Colo** 132.65 85 *eP* PKPdf 21 21 15.8 +0.5
SDV **Santo Domingo** 134.71 83 *eP* PKPdf 21 21 19.2 +0.3
SDV **Santo Domingo** 134.71 83 PKPdf PKPdf 21 21 18.8 -0.1
SDV **Santo Domingo** 134.71 83 *eP* PKiKP 21 21 19.7 -0.6
CPUP **Villa Florida** 135.19 137 PKP PKPdf 21 21 19.2 0.0
comp=Z,8.3nm,0.8s,baz=247,slow=1.4,SNR=16
CPUP SKPbc **SKPbc** 21 24 34.3 +1.4
comp=Z,3.8nm,1.0s,baz=214,slow=6.6,SNR=3.7
CPUP **Villa Florida** 135.19 137 PKPdf PKPdf 21 21 18.8 -0.4
CPUP **Villa Florida** 135.19 137 *eP* PKiKP 21 21 20.3 -0.4
ETMB **Extrema** 136.10 111 *eP* PKPdf 21 21 21.3 +0.2
KEST **Kesra** 136.68 318 SKPbc **SKPbc** 21 24 37.9 +0.6
comp=Z,11nm,1.1s,baz=230,slow=5.3,SNR=5.2
SIV **San Ignacio** 138.21 122 SKPbc **SKPbc** 21 24 42.5 +0.3
comp=Z,8.5nm,0.9s,baz=240,slow=4.7,SNR=7.3
HUMP **Col San Antoni** 138.38 69 PKPpre 21 21 17.1
SAML **Samuel** 139.20 111 *eP* PKPpre 21 21 16.6
SAML **Samuel** 139.20 111 PKHKP PKPpre 21 21 16.2
SAML **Samuel** 139.20 111 PKPpre 21 21 16.2
SAML **Samuel** 139.20 111 *eP* PKPdf 21 21 27.5 +0.6
SAML **Samuel** 139.20 111 *eP* PKPdf 21 21 25.9 -1.0
PTGB **Pitanga** 139.75 140 *eP* PKPdf 21 21 30.0 -0.2
PTLB **Pontes e Lacer** 140.10 123 *eP* PKPdf 21 21 29.0 +0.5
TRCB **Terra Rica** 140.72 138 *eP* PKPdf 21 21 30.4 +0.9
ESDC **Sonseca Array** 141.41 334 PKhKP PKPpre 21 21 26.5
comp=Z,0.9nm,0.8s,baz=34,slow=2.4,SNR=3.4
ESDC PP **PP** 21 24 31.7 -2.3
comp=Z,3.2nm,1.1s,baz=31,slow=6.6,SNR=6.0
PMRV **Marv??o** 143.04 337 *e*PKP PKPbc 21 21 31.1 +0.6
MACA **Manacapuru-AM** 143.27 103 *eP* PKPbc 21 21 31.9 +0.1
EVO **Evora** 144.06 337 *e*PKP PKPdf 21 21 34.3 -0.6
LIJA **Lijar** 144.32 333 *i* P PKPbc 21 21 34.8 +0.5
ITRB **Iturama** 144.37 136 *eP* PKPbc 21 21 35.3 +0.4
PBEJ **Beja** 144.44 336 *e*PKP PKPdf 21 21 35.5 -0.1
TOSP **Sopeyside** 144.52 79 PKPab 21 21 34.3 -1.0
PNCL **Nicolau / Gran** 144.62 337 *e*PKP PKPdf 21 21 36.4 +0.5
BB19B **Bebedouro** 144.63 140 *eP* PKPbc 21 21 36.0 +0.4
PARB **Paraibuna** 144.64 146 *eP* PKPab 21 21 35.4 -0.1
PCVE **Castro Verde** 144.84 336 *e*PKP PKPdf 21 21 37.2 +0.9
PVAQ **Vaqueiros** 144.91 336 *e*PKP PKPdf 21 21 37.4 +1.0
CLDB **Colider** 145.13 119 *eP* PKPbc 21 21 36.3 -1.0
PBDV **Barranco-do-Ve** 145.13 336 *e*PKP PKPab 21 21 38.6 +1.7
MORF **Marmelete** 145.37 337 *e*PKP PKPab 21 21 39.1 +1.2
ESAR **Angra dos Reis** 145.54 147 *eP* PKPab 21 21 39.1 +0.3
PFVI **Vila Bisbo** 145.59 337 *e*PKP PKiKP 21 21 40.8 -0.9
MAN01 **Angra dos Reis** 145.92 148 *eP* PKPbc 21 21 39.8 +0.1
TAM **Tamanrasset** 146.10 303 PKP2 PKPbc 21 21 39.8 -0.5
TAM **Tamanrasset** 146.10 303 PKPbc 21 21 39.8 -0.5
ITTB **Itaituba** 147.69 108 *eP* PKPdf 21 21 42.3 +0.5
BDFB **Brasilia** 148.74 134 PKP PKPdf 21 21 44.0 +0.4
comp=Z,54nm,0.9s,baz=162,slow=2.5,SNR=16
BDFB PKPbc **PKPbc** 21 21 47.6 0.0
comp=Z,46nm,0.8s,baz=258,slow=0.9,SNR=30
RIB01 **Linhares ES** 150.71 149 *eP* PKPbc 21 21 52.2 +0.1
SJMB **Sao Joao De Ma** 150.81 147 *eP* PKPdf 21 21 49.0 +2.4
JANB **Januaria** 151.72 138 *eP* PKPdf 21 21 48.6 +0.4
JANB **Januaria** 151.72 138 *eP* PKPbc 21 21 53.7 -0.9
MCPB **Macapa, AP** 152.31 102 *eP* PKPdf 21 21 49.7 +0.7
PRPB **Paraiupebas** 152.50 116 *eP* PKiKP 21 21 56.6 0.0
PRPB **Paraiupebas** 152.50 116 *eP* PKPdf 21 21 50.3 +1.0
TORD **Torodi Ar. Bea** 152.70 287 PKPbc PKPbc 21 21 55.9 -0.9
comp=Z,15nm,0.8s,baz=52,slow=2.2,SNR=65
TORD pPKPbc **pPKPbc** 21 22 41.5 -3.2
comp=Z,10nm,0.7s,baz=58,slow=2.2,SNR=3.9
SDBA **SAO DESIDERIO** 153.13 133 *eP* PKPdf 21 21 50.2 0.0
SDBA **SAO DESIDERIO** 153.13 133 *eP* PKPdf 21 21 50.7 +0.4
SMTB **Santa Maria do** 153.14 123 *eP* PKPdf 21 21 53.0 +2.7
SMTB **Santa Maria do** 153.14 123 *eP* PKPdf 21 21 51.3 +1.0
TMAB **Tom-Au,PA,Br** 155.54 109 *eP* PKPdf 21 21 54.8 +1.2
GDU01 **Guandu, BA** 155.72 144 *eP* PKPdf 21 21 53.9 +0.2
GDU01 **Guandu, BA** 155.72 144 *eP* PKPdf 21 22 00.3 +6.5
KOWA **Kowa** 157.65 294 PKPab PKPab 21 22 29.3 -0.1
comp=Z,6.1nm,0.8s,baz=36,slow=1.8,SNR=9.5
KOWA **Kowa** 157.65 294 PKPab 21 22 28.3 -1.1
ROSB **Rosrio** 159.02 114 *eP* PKPdf 21 21 59.0 +1.0
KIC **Kosan Boka** 159.82 272 *eP* PKPab 21 22 38.3 -0.6
comp=Z,25nm,1.1s
DBIC **Dimbokro** 159.93 273 PKPab PKPab 21 22 38.7 -0.7
comp=Z,8.6nm,1.1s,baz=62,slow=5.7,SNR=4.4
TIC **Toumodi** 160.09 273 *eP* PKPab 21 22 40.3 +0.2
LIC **Lamto** 160.10 272 *eP* PKPab 21 22 39.6 -0.6
comp=Z,32nm,1.1s

IDC 24 21:06:22.8±426.0, 8.99S×41.44E, h0km, Error ellipse: s-maj=296.3km s-min=145.4km az=142.0, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I32KE	**NAIROBI INFRAS**	8.96	329	*i*		22 02 40.0	
	baz=148,slow=314,SNR=4.0						
I19DJ	**I19DJ**	20.40	5	*i*		23 13 40.0	
	baz=185,slow=317,SNR=0.9						
I35NA	**TSUMEB INFRASO**	25.24	244	*i*		23 40 10.0	
	baz=70,slow=328,SNR=1.2						

ATH 24 21:19:23.5, 38.65N×23.40E, h13km±8km, ML1.2/1, Error ellipse: s-maj=8.5km s-min=1.0km az=266.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAL	**Atalanti**	0.30	279	P	Pg	21 19 29.3	-0.4
LKR	**Lokris**	0.31	271	P	Pg	21 19 29.4	-0.5
LKR				S	Sg	21 19 34.5	+0.3
LKR				AML	AML	21 19 37.5	
	comp=E,142μm,0.2s						
LKR				AML	AML	21 19 38.0	
	comp=N,122μm,0.1s						
VIL2	**Platees**	0.45	193	P	Pg	21 19 32.4	0.0
VIL2				S	Sb	21 19 39.6	-0.3
KYMI	**Kymi, Euboea I**	0.55	91	P	Pg	21 19 33.7	-0.5

KYMI S Sg 21 19 42.0 +0.5
AXAR Agios Charalam 0.59 282 P Pg 21 19 35.3 +0.3
AOS Alonnisos 0.64 36 P Pg 21 19 35.7 -0.4
NEO Neokhori 0.67 348 P Pg 21 19 36.5 -0.1
NEO S Sg 21 19 45.4 -0.1
DION Dionisos Attik 0.71 143 P Pb 21 19 37.5 -0.2
LTK Loutraki 0.71 209 P Pb 21 19 37.7 -0.1
DSF Desfina 0.72 251 P Pg 21 19 36.0 -1.5
XOR Xorichti 0.73 347 P Pg 21 19 37.7 -0.1
ATHU Athens Univers 0.74 156 P Pg 21 19 37.6 -0.4
AGG Agios Georgios 0.92 294 P Pg 21 19 41.2 0.0
KALE Kalithea 1.02 256 P Pg 21 19 43.4 +0.2
KARY Karystos 1.02 127 P Pb 21 19 42.5 -0.6
GUR Goura 1.09 230 P Pb 21 19 44.3 -0.1
KLV Kalavryta, Ach 1.15 239 P Pb 21 19 45.3 0.0
ANX Ano Chora 1.16 268 P Pb 21 19 44.5 -0.9

*IDC **24** 21:26:54.5±0.8, 36°.77N×137°.80E, h0km, mb3.8/9, mb1 4.1/10, mb1mx3.7/62, mbtmpb3.8/10, ML3.8/1, MS3.6/4, Ms1 3.7/4, ms1mx3.1/54, Error ellipse: s-maj=19.7km s-min=7.4km az=37.0*
*JMA **24** 21:26:55.4±0.1, 36°.77N×137°.90E, h1km±2km, M3.9 Broadband fault plane solution: P waves. NP1: φs127.00000°, δ54.00000°, λ-7.00000°. NP2: φs222.00000°, δ84.00000°, λ-144.00000°. Principal axes: T Plg20.0000°, Azm349.0000°; N Plg54.0000°, Azm230.0000°; P Plg29.0000°, Azm91.0000°;*
JMA Felt IV J1.
*NIED **24** 21:26:55.4, 36°.77N×137°.90E, h1km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15 Nm; Mrr0.06; Mθθ1.58; Mφφ-1.64; Mrθ-1.23; Mθφ0.10; Mrφ1.10; Fault plane solution: M0 2.30000×10^15 NP1: φs314.00000°, δ89.00000°, λ46.00000°. NP2: φs223.00000°, δ44.00000°, λ178.00000°.*
*NEIC **24** 21:26:57.2±2.1, 36°.77N±0°.02×138°.04E±0°.05, h9km±2km, mb4.5/24 Error ellipse: s-maj=5.7km s-min=3.4km az=85.0*

ISC 24 21:26:55.9±1.2, 36°.77N±0°.03×137°.92E±0°.04, h4km±8km, n72, σ1s29/77, mb4.3/22, MS4.0/3, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJB9	**Matsu-Tunnel**	**0.32**	**134**	Pg	**Pg**	**21 27 02.2**	**+0.2**
MJB9				Sg	**Sg**	**21 27 06.7**	**+0.5**
MAJO	**Matsushiro**	**0.32**	**134**	Pg	**Pg**	**21 27 01.8**	**-0.3**
MAJO				Sg	**Sg**	**21 27 06.5**	**+0.2**
MAT	**Matsushiro**	**0.32**	**134**	P	**Pg**	**21 27 01.6**	**-0.5**
MAT				S	**Sg**	**21 27 06.3**	**0.0**
MAT	**Matsushiro**	**0.32**	**134**	P	**Pg**	**21 27 01.6**	**-0.5**
MAT				S	**Sg**	**21 27 06.3**	**0.0**
MJAR	**Matsushiro Arr**	**0.32**	**134**	Pg	**Pg**	**21 27 02.4**	**+0.2**
	99nm,0.3s,baz=305,slow=18,SNR=1970						
MJAR				Lg	Lg	21 27 08.3	
	466nm,0.3s,baz=266,slow=21,SNR=48						
MJAR	**Matsushiro Arr**	**0.32**	**134**	Pg	**Pg**	**21 27 01.8**	**-0.3**
JNG	**Nsakai**	**0.39**	**158**	↑P	**Pg**	**21 27 02.8**	**+0.6**
JNG				S	**Sg**	**21 27 08.2**	**-0.2**
JTT	**Ttatey**	**0.50**	**251**	↓P	**Pg**	**21 27 05.1**	**-0.3**
JGK	**Kuni**	**0.61**	**109**	P	**Pg**	**21 27 07.4**	**-0.2**
JGK				S	**Sg**	**21 27 16.3**	**+0.7**
JGN	**Niukaw**	**0.73**	**222**	P	**Pg**	**21 27 09.1**	**-0.8**
JGF	**Kuroka**	**1.25**	**202**		**Pb**	**21 27 19.6**	**-0.5**
JGF				Sn	**Sn**	**21 27 37.0**	**-0.5**
JSD	**Sado**	**1.30**	**12**	Pn	**Pg**	**21 27 18.7**	**-2.0**
JSD				Sn	**Sg**	**21 27 36.4**	**-1.1**
INU	**Inuyama**	**1.59**	**208**	Pn	**Pn**	**21 27 24.8**	**-0.1**
JYT	**Yasato**	**1.91**	**106**	Pn	**Pn**	**21 27 28.3**	**-0.9**
JSG	**Sagara**	**2.10**	**174**	Pn	**Pb**	**21 27 33.8**	**-0.8**
JWT	**Wachi**	**2.52**	**235**	Pn	**Pn**	**21 27 38.1**	**+0.5**
JMM	**Marumori**	**2.54**	**64**	Pn	**Pn**	**21 27 37.5**	**-0.3**
JHJ	**Hachijo jima 2**	**3.95**	**157**	Pn	**Pn**	**21 27 58.2**	**+0.9**
	18nm,0.3s,baz=258,slow=22,SNR=2.3						
JHJ				LR	LR	21 29 46.5	
	comp=E,290nm,21.6s,baz=278,slow=43						
JHJ2	**Mitsune**	**3.97**	**156**	Pn	**Pn**	**21 27 59.8**	**+2.4**
JHS	**Saijyo**	**4.28**	**247**	Pn	**Pn**	**21 28 02.9**	**+1.0**
JTM	**Tenmabayashi**	**4.71**	**31**	Pn	**Pn**	**21 28 08.8**	**+1.1**
KSRS	**Korea Array**	**8.02**	**278**	Pn	**Pn**	**21 28 54.9**	**+1.7**
	0.4nm,0.3s,baz=91,slow=14,SNR=4.3						
KSAR	**Wonju Array Be**	**8.05**	**278**	Pn	**Pn**	**21 28 57.4**	**+3.8**
KS19	**Wonju Array Si**	**8.06**	**278**	Pn	**Pn**	**21 28 57.6**	**+3.8**
ASAJ	**Asahikawa**	**8.16**	**24**	Pn	**Pn**	**21 28 57.9**	**+2.9**
	0.6nm,0.3s,baz=114,slow=9.3,SNR=2.4						
JKA	**Kamikawa-asahi**	**8.16**	**24**	Pn	**Pn**	**21 28 59.2**	**+4.1**
KLR	**Kul'dur**	**13.24**	**342**	Pn	**P**	**21 30 12.6**	**-2.1**
	0.1nm,0.3s,baz=143,slow=14,SNR=2.2						
SONM	**Songino Array**	**25.63**	**305**	P	**P**	**21 32 27.0**	**+0.4**
	0.4nm,0.7s,baz=107,slow=8.3,SNR=3.0						
SEY	**Seymchan**	**27.67**	**14**	P	**P**	**21 32 45.9**	**+1.4**
	1.6nm,0.7s,baz=209,slow=9.4,SNR=4.2						
CMAR	**Chiang Mai Arr**	**38.73**	**253**	LR	LR	21 50 48.3	
	comp=Z,54nm,20.5s,baz=135,slow=37						
IMAR	**Indian Mountai**	**48.31**	**31**	P	**P**	**21 35 37.9**	**-0.1**
PPLA	**Purkeypile**	**48.98**	**35**	P	**P**	**21 35 44.7**	**+1.3**
PPLA				IAmb	IAmb	21 35 54.9	
	comp=Z,14nm,1.5s						
KDAK	**Kodiak Island**	**49.16**	**42**	P	**P**	**21 35 44.4**	**-0.2**
BPAW	**Bear Paw Mtn.**	**49.48**	**33**	P	**P**	**21 35 47.5**	**+0.5**
MDM	**Murphy Dome**	**50.63**	**32**	P	**P**	**21 35 56.2**	**+0.4**
WRH	**Wood River Hil**	**50.72**	**33**	P	**P**	**21 35 57.8**	**+1.5**
DHY	**Denali Highway**	**51.16**	**34**	P	**P**	**21 36 00.0**	**+0.1**
DHY				IAmb	IAmb	21 36 06.0	
	comp=Z,5.3nm,1.2s						
ILAR	**Eielson Array**	**51.21**	**32**	P	**P**	**21 35 59.0**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=254,slow=5.1,SNR=6.5						
ILAR	**Eielson Array**	**51.21**	**32**	P	**P**	**21 35 60.0**	**-0.1**
HDA	**Harding Lake**	**51.22**	**33**	P	**P**	**21 36 00.1**	**0.0**
SCM	**Sheep Creek Mo**	**51.33**	**36**	P	**P**	**21 36 01.5**	**+0.4**
M24K	**Tolsona, Glenn**	**51.83**	**35**	P	**P**	**21 36 05.8**	**+0.9**
KLU	**Klutina**	**52.04**	**36**	P	**P**	**21 36 06.9**	**+0.5**
KLU				IAmb	IAmb	21 36 22.9	
	comp=Z,16nm,1.3s						
N25K	**Chitina, Valde**	**52.65**	**36**	P	**P**	**21 36 11.8**	**+0.9**
N25K				IAmb	IAmb	21 36 17.5	
	comp=Z,8.5nm,1.4s						
K27K	**Chicken**	**53.38**	**33**	P	**P**	**21 36 16.3**	**+0.1**
K27K				IAmb	IAmb	21 36 22.8	
	comp=Z,4.0nm,1.1s						
MCARA	**McCarthy VSAT**	**53.43**	**36**	P	**P**	**21 36 17.6**	**+1.0**
MCARA				IAmb	IAmb	21 36 18.8	
	comp=Z,6.9nm,1.0s						
PCA	**Pinnacle**	**55.04**	**37**	P	**P**	**21 36 28.0**	**-0.5**
WB0	**Warramunga Arr**	**56.33**	**184**	P	**P**	**21 36 36.7**	**-1.3**
WB0				IAmb	IAmb	21 36 49.4	
	comp=Z,8.2nm,1.4s						
WRAB	**Tennant Creek**	**56.49**	**184**	P	**P**	**21 36 37.1**	**-2.1**
WB2	**Warramunga Arr**	**56.50**	**184**	P	**P**	**21 36 37.4**	**-1.9**
WB2				IAmb	IAmb	21 36 49.9	
	comp=Z,5.4nm,1.1s						
WRA	**Warramunga Arr**	**56.50**	**184**	P	**P**	**21 36 37.3**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=0.2,slow=7.6,SNR=35						
WRA	**Warramunga Arr**	**56.50**	**184**	P	**P**	**21 36 37.1**	**-2.2**
WR0	**Warramunga Arr**	**56.51**	**184**	P	**P**	**21 36 37.3**	**-2.0**
WR0				IAmb	IAmb	21 36 39.6	
	comp=Z,10nm,1.5s						
ASAR	**Alice Springs**	**60.23**	**184**	P	**P**	**21 37 04.1**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=12,slow=7.1,SNR=6.6						
YKA	**Yellowknife Ar**	**65.42**	**29**	P	**P**	**21 37 38.5**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=39,slow=11,SNR=3.6						
FINES	**FINESS Array B**	**67.72**	**331**	P	**P**	**21 37 55.0**	**+0.8**
FORT	**Forrest**	**67.83**	**189**	P	**P**	**21 37 54.5**	**-0.5**
GNI	**Garni**	**69.60**	**305**	LR	LR	22 09 18.8	
	comp=Z,89nm,20.5s,baz=93,slow=37						
LRM	**Limekiln Ridge**	**76.27**	**43**	P	**P**	**21 38 46.9**	**+0.9**
DLMT	**Dillon**	**76.47**	**43**	P	**P**	**21 38 47.9**	**+0.8**
DLMT				IAmb	IAmb	21 38 50.1	
	comp=Z,5.8nm,1.4s						
BOZ	**Bozeman (W)**	**76.86**	**42**	P	**P**	**21 38 49.9**	**+0.7**
BOZ				IAmb	IAmb	21 38 51.4	
	comp=Z,3.6nm,1.4s						
KVN	**Kaiserville**	**77.12**	**51**	P	**P**	**21 38 51.3**	**+0.5**
KVN				IAmb	IAmb	21 38 52.0	
	comp=Z,1.9nm,0.7s						
NVAR	**Mina Array Bea**	**77.36**	**51**	P	**P**	**21 38 51.2**	**-1.1**
	comp=Z,0.4nm,0.7s,baz=345,slow=4.6,SNR=4.1						
NVAR	**Mina Array Bea**	**77.36**	**51**	P	**P**	**21 38 52.7**	**+0.4**
RLMT	**Red Lodge**	**78.43**	**42**	P	**P**	**21 38 58.5**	**+0.4**
PD31	**Pinedale Array**	**79.82**	**44**	P	**P**	**21 39 06.6**	**+0.8**
PDAR	**Pinedale Array**	**79.82**	**44**	P	**P**	**21 39 05.3**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=237,slow=1.8,SNR=10						
PDAR	**Pinedale Array**	**79.82**	**44**	P	**P**	**21 39 05.8**	**0.0**
PV19	**Morning Glory**	**83.10**	**47**	P	**P**	**21 39 24.0**	**+0.7**
PV19				IAmb	IAmb	21 39 24.7	
	comp=Z,4.5nm,0.7s						
TXAR	**Lajitas Array**	**92.47**	**50**	P	**P**	**21 40 08.5**	**0.0**
	comp=Z,0.6nm,0.8s,baz=289,slow=3.8,SNR=4.1						
TXAR	**Lajitas Array**	**92.47**	**50**	P	**P**	**21 40 07.7**	**-0.8**
ESDC	**Sonseca Array**	**96.23**	**331**	LR	LR	22 25 16.8	
	comp=Z,58nm,21.9s,baz=315,slow=36						

IDC 24 21:31:31.1±1.4, 21°.21N×144°.43E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/52, mbtmpb3.5/6, MS3.0/1, Ms1 3.0/1, ms1mx2.5/45, Error ellipse: s-maj=49.5km s-min=24.7km az=79.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**21.09**	**90**	T	T	21 58 58.2	
	SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**21.10**	**90**	T	T	21 59 02.2	
H11S3	**WAKE ISLAND Hy**	**21.10**	**93**	T	T	21 59 05.0	
	baz=283,slow=74,SNR=20						
H11N3	**WAKE ISLAND Hy**	**21.11**	**90**	T	T	21 59 00.6	
	SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**21.11**	**93**	T	T	21 59 03.9	
	baz=283,slow=74,SNR=9.6						
H11S2	**WAKE ISLAND Hy**	**21.12**	**93**	T	T	21 59 00.1	
	baz=283,slow=74,SNR=8.6						
KSRS	**Korea Array**	**21.61**	**322**	P	P	21 36 22.0	-0.6
	1.0nm,0.4s,baz=145,slow=9.2,SNR=4.2						
JAY	**Jayapura**	**23.86**	**189**	LR	LR	21 44 13.4	
	comp=Z,42nm,20.9s,baz=148,slow=32						
WRA	**Warramunga Arr**	**42.08**	**194**	P	P	21 39 24.5	-0.4
	0.5nm,0.9s,baz=16,slow=9.2,SNR=2.5						
ASAR	**Alice Springs**	**45.77**	**194**	P	P	21 39 54.6	0.0
	0.4nm,0.8s,baz=14,slow=8.5,SNR=4.9						
ZALV	**Zalesovo Beam**	**55.31**	**322**	P	P	21 41 06.7	+0.3
	0.5nm,0.5s,baz=76,slow=6.3,SNR=3.5						
MKAR	**Makanchi Array**	**55.88**	**313**	P	P	21 41 10.9	+0.2
	0.3nm,0.6s,baz=90,slow=9.5,SNR=1.6						
NVAR	**Mina Array Bea**	**82.53**	**52**	P	P	21 43 56.3	0.0
	0.2nm,0.5s,baz=327,slow=5.7,SNR=1.8						

IDC 24 21:32:26.2±2.1, 0°.78N×126°.89E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.4/42, mbtmpb3.4/3, Error ellipse: s-maj=156.8km s-min=28.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.85**	**161**	P	P	21 37 19.9	-0.6
	0.7nm,0.7s,baz=339,slow=11,SNR=12						
ASAR	**Alice Springs**	**25.24**	**165**	P	P	21 37 54.6	+0.5
	0.7nm,0.7s,baz=354,slow=15,SNR=7.0						
MKAR	**Makanchi Array**	**60.07**	**326**	P	P	21 42 35.1	-0.1
	0.1nm,0.3s,baz=121,slow=8.3,SNR=1.8						

IDC 24 21:39:03.9±2.1, 1°.65N×125°.85E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/34, mbtmpb3.3/3, Error ellipse: s-maj=181.0km s-min=27.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.02**	**159**	P	P	21 44 10.0	-0.8
	0.7nm,0.8s,baz=338,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.36**	**163**	P	P	21 44 42.9	+0.9
	0.2nm,0.3s,baz=346,slow=12,SNR=2.1						
MKAR	**Makanchi Array**	**58.77**	**326**	P	P	21 49 03.9	-0.1
	0.4nm,0.7s,baz=117,slow=7.6,SNR=4.3						

*IDC **24** 22:04:02.3±0.7, 30°.37N×67°.46E, h0km, mb4.0/22, mb1 4.2/24, mb1mx4.0/51, mbtmp4.1/24, ML3.9/2, MS3.7/4, Ms1 3.7/4, ms1mx3.0/44, Error ellipse: s-maj=16.5km s-min=14.3km az=11.0*
*MOS **24** 22:04:02.9±0.9, 30°.37N×67°.50E, h13km, mb4.6/4, Error ellipse: s-maj=9.4km s-min=5.7km az=78.2*
*NEIC **24** 22:04:05.3±1.7, 30°.24N±0°.07×67°.52E±0°.07, h18km±3km, mb4.5/31, Error ellipse: s-maj=9.8km s-min=8.6km az=198.0*

ISC 24 22:04:04.5±0.3, 30°.27N±0°.05×67°.55E±0°.04, h14km, n167, σ1s81/172, mb4.4/56, MS3.6/4, 8C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**4.44**	**16**	P	**Pn**	**22 05 13.9**	**+2.3**
	SNR=19						
KBL	**Kabul**	**4.44**	**16**	P	**Pn**	**22 05 13.3**	**+1.7**
KBL	**Kabul**	**4.44**	**16**	Pn	**Pn**	**22 05 13.3**	**+1.7**
NIL	**Nilore**	**5.90**	**54**	P	**Pn**	**22 05 32.7**	**+1.2**
NIL	**Nilore**	**5.90**	**54**	P	**Pn**	**22 05 32.7**	**+1.2**
NIL	**Nilore**	**5.90**	**54**	Pn	**Pn**	**22 05 32.7**	**+1.2**
HRA	**Herat**	**6.08**	**314**	Pn	**Pn**	**22 05 36.2**	**+2.1**
BHUJ	**Bhuj**	**7.24**	**164**	*e*P	**Pn**	**22 05 52.6**	**+2.7**
BHUJ				*e*S	**Sn**	**22 07 13.5**	**+1.6**
BHUJ				IAML		22 07 18.1	
	comp=N,96nm,0.5s						
BHUJ				IAML		22 07 19.1	
	comp=E,120nm,0.6s						
DHRM	**DHARAMSHALA**	**7.75**	**73**	*e*P	**Pn**	**22 05 58.2**	**+1.2**
DHRM				*e*S	**Sn**	**22 07 20.6**	**-4.1**
DHRM				IAML		22 07 27.8	
	comp=E,148nm,0.4s						
DHRM				IAML		22 07 29.6	
	comp=N,131nm,0.6s						
SMLA	**Simla**	**8.33**	**82**	*e*P	**Pn**	**22 06 05.7**	**+0.9**
SMLA				*e*S	**Sn**	**22 07 34.5**	**-4.1**
SMLA				*e*S	**Sn**	**22 07 34.7**	**-3.9**
SMLA				IAML		22 07 39.7	
	comp=N,105nm,0.5s						
SMLA				IAML		22 07 40.9	
	comp=E,96nm,0.4s						
DDI	**Dehra Dun**	**9.09**	**87**	*e*P	**Pn**	**22 06 16.4**	**+1.1**
DDI				*e*S	**Sn**	**22 07 50.4**	**-7.1**
DDI				IAML		22 07 58.4	
	comp=E,86nm,0.3s						
DDI				IAML		22 07 58.6	
	comp=N,98nm,0.2s						
BTK	**Batken**	**10.12**	**14**	P	**Pn**	**22 06 29.9**	**+0.5**
BTK	**Batken**	**10.12**	**14**	Pn	**Pn**	**22 06 29.9**	**+0.5**
WSAR	**Wadi Sarin**	**10.61**	**231**	Pn	**Pn**	**22 06 36.2**	**+0.2**
	comp=N,0.9nm,0.3s,baz=91,slow=7.6,SNR=11						
WSAR				Sn	**Sn**	**22 08 26.8**	**-7.9**
	comp=N,0.2nm,0.3s,baz=188,slow=9.1,SNR=2.8						
WBK	**Wadi Bani Khal**	**10.83**	**227**	P	**Pn**	**22 06 39.9**	**+0.8**
	SNR=11						
WBK				S	**Sn**	**22 08 34.4**	**-5.7**
BANOM	**Banah**	**10.83**	**249**	P	**Pn**	**22 06 41.5**	**+2.3**
BANOM				S	**Sn**	**22 08 38.0**	**-2.3**
JLN	**Jalan Bani Buh**	**10.89**	**224**	P	**Pn**	**22 06 41.0**	**+1.0**
	SNR=12						
JLN				S	**Sn**	**22 08 37.2**	**-4.6**
GEYT	**Alibeck**	**10.92**	**317**	LR	LR	22 10 42.2	
	comp=N,174nm,18.2s,baz=110,slow=37						
SMDO	**Samad**	**11.12**	**232**	P	**Pn**	**22 06 46.4**	**+3.2**
SMDO				P	**Pn**	**22 06 46.4**	**+3.2**
MDH	**Madha**	**11.12**	**246**	P	**Pn**	**22 06 43.5**	**+0.4**
BHPL	**Bhopal**	**11.26**	**126**	*e*P	**Pn**	**22 06 46.1**	**+1.0**
BHPL				*e*S	**Sn**	**22 08 47.0**	**-3.9**
HOQ	**Hoqain**	**11.30**	**236**	P	**Pn**	**22 06 45.6**	**0.0**
HOQ				P	**Pn**	**22 06 45.6**	**0.0**
UOSS	**Minazif**	**11.37**	**245**	P	**Pn**	**22 06 47.3**	**+0.8**
KSH	**Kashi**	**11.52**	**35**	P	Pn	22 06 43.1	-5.5
KSH				pP		22 06 49.1	
KSH				S	Sn	22 08 43.1	-14
KSH				pmax	pmax		
	comp=Z,23nm,0.6s						
KSH				pmax	pmax		
	comp=Z,510nm,4.5s						
KSH				LR	LR		
	comp=N,1μm,10.8s						
KSH				LR	LR		
	comp=E,940nm,6.6s						
KSH				LR	LR		
	comp=Z,800nm,10.4s						
SOHO	**SOHO**	**11.55**	**241**	P	**Pn**	**22 06 48.9**	**0.0**
SOHO				P	**Pn**	**22 06 48.9**	**0.0**
ASHO	**Ashiyiah**	**11.62**	**244**	P	**Pn**	**22 06 52.5**	**+2.6**
KK31	**Karatay Array**	**13.02**	**10**	P	**Pn**	**22 07 08.5**	**-0.5**
KK31	**Karatay Array**	**13.02**	**10**	Pn	**Pn**	**22 07 08.5**	**-0.5**
KKAR	**Karatay Array**	**13.02**	**10**	P	**Pn**	**22 07 08.1**	**-0.9**
KKAR	**Karatay Array**	**13.02**	**10**	Pn	**Pn**	**22 07 08.1**	**-0.9**
KKAR	**Karatay Array**	**13.02**	**10**	Pn	**Pn**	**22 07 08.3**	**-0.7**
AAK	**Ala-Archa**	**13.54**	**22**	Pn	**Pn**	**22 07 14.6**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=222,slow=12,SNR=14						
AAK	**Ala-Archa**	**13.54**	**22**	*ce*P	**Pn**	**22 07 14.7**	**-1.5**
AAK				pmax	pmax		
	comp=Z,57nm,1.7s						
AAK	**Ala-Archa**	**13.54**	**22**	Pn	**Pn**	**22 07 15.2**	**-1.0**
PYUN	**Piuthan**	**13.67**	**95**	*e*P	**Pn**	**22 07 15.8**	**-2.3**
	comp=Z,94nm,0.5s						
FRU1	**Bishkek**	**13.74**	**22**	P	**Pn**	**22 07 18.7**	**-0.2**
FRU1	**Bishkek**	**13.74**	**22**	Pn	**Pn**	**22 07 18.7**	**-0.2**
BOOM	**Boomskoye usch**	**13.93**	**27**	P	**Pn**	**22 07 21.5**	**-0.1**
BOOM	**Boomskoye usch**	**13.93**	**27**	Pn	**Pn**	**22 07 21.5**	**-0.1**
KOLN	**Koldanda**	**14.27**	**96**	*e*P	**Pn**	**22 07 23.7**	**-2.6**
	comp=Z,31nm,0.7s						
DANN	**Dangsing**	**14.28**	**94**	*e*P	**Pn**	**22 07 24.2**	**-2.3**
	comp=Z,85nm,0.7s						
GKN	**Gorkha**	**15.11**	**94**	*e*P	**Pn**	**22 07 33.8**	**-3.9**
	comp=Z,24nm,0.4s						
KKN	**Kakani**	**15.71**	**95**	*e*P	**Pn**	**22 07 42.2**	**-3.4**
	comp=Z,40nm,0.6s						
PKIN	**Phulchoki**	**15.86**	**95**	*e*P	**Pn**	**22 07 45.2**	**-2.4**
PKI	**Pulchoki**	**15.87**	**95**	*e*P	**Pn**	**22 07 45.2**	**-2.6**
GUN	**Gumba**	**16.20**	**94**	*e*P	**Pn**	**22 07 49.0**	**-3.1**
	comp=Z,214nm,0.9s						
HYB	**Hyderabad**	**16.27**	**139**	*i* P	**P**	**22 07 57.0**	**+1.3**
HYB				*e*S	**S**	**22 11 06.0**	**+0.2**
RAMN	**Ramite**	**17.06**	**97**	*e*P	**Pn**	**22 08 02.0**	**-0.8**
	comp=Z,71nm,0.7s						
ODAN	**Odare**	**17.76**	**96**	*e*P	**Pn**	**22 08 11.0**	**-0.6**
	comp=Z,53nm,0.7s						
TAPN	**Taplejung**	**17.91**	**94**	*e*P	**Pn**	**22 08 13.7**	**+0.2**
ABKAR	**Akbulak array**	**19.82**	**345**		**P**	**22 08 35.0**	**+0.5**
ABKAR	**Akbulak array**	**19.82**	**345**		**P**	**22 08 34.4**	**-0.1**
ABKAR				IAmb	IAmb	22 08 40.9	
	comp=Z,7.0nm,1.1s						
MAKZ	**Makanchi**	**19.94**	**30**	P	**Pn**	**22 08 37.6**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MAKZ	**Makanchi**	**19.94**	**30**	P	**Pn**	**22 08 37.6**	**-0.1**
MK31	**Makanchi Array**	**20.07**	**31**	*ce*P	**P**	**22 08 35.8**	**-1.6**
MK31	**Makanchi Array**	**20.07**	**31**	P	**P**	**22 08 36.0**	**-1.4**
MKAR	**Makanchi Array**	**20.07**	**31**	P	**P**	**22 08 36.0**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=206,slow=10,SNR=19						
MKAR				LR	LR	22 17 06.0	
	comp=Z,136nm,19.1s,baz=196,slow=39						
MKAR	**Makanchi Array**	**20.07**	**31**	*ce*P	**P**	**22 08 36.0**	**-1.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**20.07**	**31**		**P**	**22 08 35.0**	**-2.4**
LSA	**Lhasa**	**20.45**	**86**	P	Pn	22 08 43.8	-0.4
LSA				pmax	pmax		
	comp=Z,35nm,1.1s						
LSA	**Lhasa**	**20.45**	**86**	P	Pn	22 08 44.5	+0.3
LSA				pmax	pmax		
	comp=Z,16nm,0.9s						
LSA	**Lhasa**	**20.45**	**86**	Pn	Pn	22 08 44.5	+0.3
LSA				IAmb	IAmb	22 08 50.7	
	comp=Z,16nm,0.9s						
RAYN	**Ar Rayn**	**20.76**	**256**	P	**P**	**22 08 44.7**	**-0.3**
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RAYN	**Ar Rayn**	**20.76**	**256**	P	**P**	**22 08 44.7**	**-0.3**
WMQ	**Urumqi**	**20.94**	**44**	*e*P	Pn	22 08 50.8	+1.4
WMQ				pP	sP	22 08 52.9	-0.5
WMQ				sP	pP	22 09 00.4	+8.8
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.9s						
AKTO	**Aktyubinsk**	**21.37**	**343**	P	**P**	**22 08 51.0**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=164,slow=18,SNR=7.4						
AKTO	**Aktyubinsk**	**21.37**	**343**	P	**P**	**22 08 51.0**	**-0.4**
GROC	**Groznyy**	**21.61**	**313**	*e*P	**P**	**22 08 53.9**	**-0.1**
GROC				*e*		22 09 13.8	
GROC				pmax	pmax		
	comp=Z,19nm,0.7s						
KURBB	**Kurchatov Arra**	**21.93**	**19**	P	**P**	**22 08 55.8**	**-1.6**
	comp=Z,2.5nm,0.6s,baz=212,slow=8.9,SNR=26						
SHL	**Shillong**	**22.00**	**96**	P	**P**	**22 08 59.5**	**+1.0**
SHL				pmax	pmax		
	comp=Z,46nm,1.4s						
SHL	**Shillong**	**22.00**	**96**	P	**P**	**22 08 59.5**	**+1.0**
SHL				IAmb	IAmb	22 09 01.8	
	comp=Z,46nm,1.4s						
KURK	**Kurchatov**	**22.04**	**19**	*i* P	**P**	**22 08 56.7**	**-1.8**
KURK				pmax	pmax		
	comp=Z,19nm,1.3s						
KURK	**Kurchatov**	**22.04**	**19**	P	**P**	**22 08 59.7**	**+1.2**
KURK				IAmb	IAmb	22 09 06.7	
	comp=Z,18nm,1.2s						
BVAR	**Borovoye Array**	**22.83**	**4**	P	**P**	**22

AKASG	**Malin Array Be**	35.04	317	*ce*P		**P**		**22 10 56.5**	**-0.1**
AKBB	**Malin Array Si**	35.04	317	*ce*P		**P**		**22 10 57.6**	**+1.0**
XAN	**Xi'an**	35.06	73	P		**P**		**22 10 57.1**	**0.0**
XAN				pP		sP		22 11 06.4	+2.3
XAN				pmax		pmax			
	comp=Z,6.0nm,1.3s								
BURAR	**Bucovina Array**	36.67	310	P		**P**		**22 11 11.5**	**+0.7**
HHC	**Hu-ho-hao-te**	36.99	61	*e*P		**P**		**22 11 14.8**	**+1.2**
HHC				pmax		pmax			
	comp=Z,22nm,0.7s								
HHC				pmax		pmax			
	comp=Z,100nm,4.3s								
VSU	**Vasula**	39.57	327	*i* P		**P**		**22 11 35.2**	**+0.3**
VSU				pmax		pmax			
	comp=Z,69nm,1.2s								
WHN	**Wuhan**	40.14	77	⇑P		P		22 11 46.3	+6.3
NRIK	**Noril'sk**	40.76	11	P		**P**		**22 11 44.6**	**0.0**
	comp=Z,0.8nm,0.4s,baz=134,slow=12,SNR=1.5								
FINES	**FINESS Array B**	41.29	331	P		**P**		**22 11 48.0**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=197,slow=6.0,SNR=5.1								
FINES	**FINESS Array B**	41.29	331	P		**P**		**22 11 48.7**	**-0.4**
FINES	**FINESS Array B**	41.29	331	P		**P**		**22 11 48.7**	**-0.4**
ARSA	**Arzberg**	43.12	308	*i* P		**P**		**22 12 05.2**	**+0.8**
	comp=Z,4.8nm,0.9s								
SOKA	**Soboth**	43.42	307	*i* P		**P**		**22 12 07.6**	**+0.8**
	comp=Z,2.5nm,1.0s								
NJ2	**Nanjing**	43.60	74	*e*P		**P**		**22 12 07.5**	**-0.8**
NJ2				pmax		pmax			
	comp=Z,3.0nm,0.5s								
OBKA	**Obir**	43.75	307	*e*P		**P**		**22 12 09.7**	**+0.2**
	comp=Z,3.5nm,0.8s								
MOA	**Molln**	44.02	309	*i* P		**P**		**22 12 12.7**	**+1.2**
	comp=Z,4.2nm,0.9s								
PRED	**Cave del Predi**	44.43	307	P		**P**		**22 12 15.7**	**+0.8**
GERES	**GERESS Array B**	44.46	310	P		**P**		**22 12 13.8**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=97,slow=8.3,SNR=5.3								
GERES	**GERESS Array B**	44.46	310	P		**P**		**22 12 16.0**	**+0.8**
KBA	**Koelnbreinsper**	44.60	308	*e*P		**P**		**22 12 16.2**	**-0.2**
	comp=Z,4.6nm,1.4s								
ZOU	**Zoufplan**	44.84	307	P		**P**		**22 12 18.6**	**+0.3**
ZOU				IAmb		IAmb		22 12 19.8	
	comp=Z,6.2nm,1.1s								
ABTA	**Abfaltersbach**	45.16	307	*i* P		**P**		**22 12 20.6**	**-0.2**
	comp=Z,3.9nm,0.9s								
MURB	**Monte Urbino**	45.18	302	P		**P**		**22 12 23.4**	**+2.4**
CIMO	**Cimolais**	45.20	307	P		**P**		**22 12 21.4**	**+0.3**
CIMO				IAmb		IAmb		22 12 31.4	
	comp=Z,4.6nm,1.0s								
CTI	**Castel Tesino**	45.75	306	P		**P**		**22 12 25.7**	**+0.3**
CTI				pmax		pmax			
	comp=Z,5.0nm,1.0s								
CTI	**Castel Tesino**	45.75	306	P		**P**		**22 12 25.7**	**+0.3**
CTI				IAmb		IAmb		22 12 26.3	
	comp=Z,5.1nm,1.0s								
ARB3	**ARCESS Array S**	45.93	341	P		**P**		**22 12 26.3**	**0.0**
ARCES	**ARCESS Array B**	45.93	341	P		**P**		**22 12 24.6**	**-1.8**
	comp=Z,5.5nm,1.0s,baz=107,slow=7.8,SNR=7.9								
SQTA	**Sankt Quirin**	46.06	308	*e*P		**P**		**22 12 28.1**	**+0.2**
	comp=Z,3.6nm,1.0s								
FETA	**Feichten**	46.39	308	*e*P		**P**		**22 12 31.0**	**+0.4**
	comp=Z,6.7nm,1.5s								
NB2	**NORSAR Subarra**	47.81	327	P		**P**		**22 12 40.4**	**-0.9**
	comp=Z,4.2nm,1.1s,baz=103,slow=8.6								
NOA	**NORSAR Array B**	47.81	327	P		**P**		**22 12 39.2**	**-2.1**
	comp=Z,1.1nm,1.0s,baz=104,slow=7.9,SNR=3.6								
SENIN	**Lac Senin/Sane**	48.76	307	P		**P**		**22 12 48.8**	**-0.2**
SENIN				IAmb		IAmb		22 12 49.9	
	comp=Z,7.1nm,1.3s								
KSRS	**Korea Array**	49.91	65	P		**P**		**22 12 59.2**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=335,slow=31,SNR=2.8								
YAK	**Yakutsk**	50.73	33	*e*P		**P**		**22 13 03.1**	**-0.4**
YAK				pmax		pmax			
	comp=Z,10.0nm,0.9s								
YAK				pmax		pmax			
	comp=E,4.0nm,1.1s								
YAK				pmax		pmax			
	comp=N,2.0nm,0.9s								
OPO	**Ambohidratompo**	52.37	205	LR		LR		22 32 21.8	
	comp=N,161nm,19.8s,baz=226,slow=32								
ESDC	**Sonseca Array**	57.95	300	P		**P**		**22 13 56.1**	**-0.4**
	comp=N,2.4nm,0.9s,baz=67,slow=8.1,SNR=12								
SEY	**Seymchan**	61.21	31	P		**P**		**22 14 18.6**	**+0.1**
	comp=N,2.4nm,0.5s,baz=337,slow=22,SNR=5.5								
TOA0	**Torodi Ar. Sit**	62.73	270	P		**P**		**22 14 29.4**	**-0.1**
TOA0				IAmb		IAmb		22 14 30.3	
	comp=Z,3.5nm,0.8s								
TORD	**Torodi Ar. Bea**	62.73	270	P		**P**		**22 14 28.9**	**-0.5**
	comp=Z,3.4nm,0.7s,baz=56,slow=6.7,SNR=25								
KOWA	**Kowa**	67.06	274	P		**P**		**22 14 58.2**	**+0.5**
BOSA	**Boshof**	71.11	219	P		**P**		**22 15 22.4**	**-0.2**
BOSA				pmax		pmax			
	comp=Z,2.0nm,0.8s								
BOSA	**Boshof**	71.11	219	P		**P**		**22 15 22.4**	**-0.2**
DBIC	**Dimbokro**	71.48	267	P		**P**		**22 15 25.7**	**+0.6**
	comp=Z,4.5nm,1.0s,baz=28,slow=16,SNR=3.0								
DBIC	**Dimbokro**	71.48	267	P		**P**		**22 15 25.1**	**0.0**
FITZ	**Fitzroy Crossi**	73.74	123	P		**P**		**22 15 39.0**	**+0.6**
FITZ				IAmb		IAmb		22 15 40.0	
	comp=Z,5.9nm,1.4s								
SMY	**Shemya**	75.62	37	P		**P**		**22 15 50.0**	**+1.2**
SMY				pmax		pmax			
	comp=Z,160nm,1.2s								
SMY	**Shemya**	75.62	37	P		**P**		**22 15 50.0**	**+1.2**
BMAR	**Burnt Mountain**	79.64	12	P		**P**		**22 16 12.2**	**+1.1**
WB0	**Warramunga Arr**	81.27	119	P		**P**		**22 16 20.6**	**+0.1**
WB0				IAmb		IAmb		22 16 31.6	
	comp=Z,4.4nm,1.1s								
WRA	**Warramunga Arr**	81.34	119	P		**P**		**22 16 20.9**	**0.0**
	comp=Z,1.1nm,0.6s,baz=324,slow=4.8,SNR=18								
WRA	**Warramunga Arr**	81.34	119	P		**P**		**22 16 21.4**	**+0.5**
WRA	**Warramunga Arr**	81.34	119	P		**P**		**22 16 21.4**	**+0.5**
WRAB	**Tennant Creek**	81.34	119	P		**P**		**22 16 21.6**	**+0.7**
WRAB				pmax		pmax			
	comp=Z,6.0nm,1.2s								
WRAB	**Tennant Creek**	81.34	119	P		**P**		**22 16 21.6**	**+0.7**
WRAB				IAmb		IAmb		22 16 27.8	
	comp=Z,5.5nm,1.1s								
WB2	**Warramunga Arr**	81.35	119	P		**P**		**22 16 21.5**	**+0.6**
WB2				IAmb		IAmb		22 16 32.8	
	comp=Z,5.3nm,1.1s								
WR0	**Warramunga Arr**	81.50	119	P		**P**		**22 16 21.3**	**-0.4**
WR0				IAmb		IAmb		22 16 22.9	
	comp=Z,7.7nm,1.4s								
PPLA	**Purkeypile**	81.88	17	P		**P**		**22 16 23.2**	**-0.1**
PPLA				IAmb		IAmb		22 16 30.1	
	comp=Z,4.8nm,1.1s								
ASAR	**Alice Springs**	83.23	122	P		**P**		**22 16 31.4**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=307,slow=4.8,SNR=20								
ASAR	**Alice Springs**	83.23	122	P		**P**		**22 16 31.7**	**+1.0**
GHO	**Glory Hole Cre**	83.65	17	P		**P**		**22 16 33.0**	**+0.5**
YKA	**Yellowknife Ar**	87.54	1	P		**P**		**22 16 51.5**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=352,slow=4.7,SNR=8.6								
TXAR	**Lajitas Array**	120.13	351	PKP		**PKiKP**		**22 22 56.0**	**+0.4**
	comp=Z,0.6nm,1.1s,baz=24,slow=3.1,SNR=2.9								
TXAR	**Lajitas Array**	120.13	351	PKiKP		**PKiKP**		**22 22 56.0**	**+0.4**

*IDC **24** 22:23:17.9±0.4, 18.°56S×65.°48E, h0km, mb4.4/24, mb1 4.5/25, mb1mx4.4/46, mbtmp4.4/25, ML4.0/1, MS4.0/18, Ms1 4.0/18, ms1mx3.8/28, Error ellipse: s-maj=14.6km s-min=13.7km az=89.0*

*NEIC **24** 22:23:19.3±1.7, 18.°6S±0.°1×65.°46E±0.°10, h10km±1km, mb4.8/42, Error ellipse: s-maj=19.2km s-min=14.6km az=154.0*

*BJI **24** 22:23:21.0±0.0, 18.°60S×65.°40E, h30km, mB5.1/19, mb4.7/34, Ms4.6/5, Ms7 4.4/7*

*GCMT **24** 22:23:21.3±0.3, 18.°39S±0.°03×65.°24E±0.°02, h15km±1km, MW4.9/96, Moment Tensor Solution. s18,c21; s96,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=2.67±.20; $M_{\theta\theta}$0.33±.11; $M_{\phi\phi}$2.34±.14; $M_{r\theta}$0.53±.28; $M_{\phi\theta}$-0.67±.08; M_{rf}1.37±.26; Best double couple: M_o2.97900×10^{16} NP1:ϕ_s330.00000°, δ35.00000°, λ-115.00000°. NP2: ϕ_s179.00000°, δ59.00000°, λ-74.00000°. Principal axes: T 2.8030, Plg13.0000°, Azm257.0000°; N 0.3520, Plg14.0000°, Azm351.0000°; P -3.1560, Plg71.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 22:23:20.3±0.4, 18.°61S±0.°08×65.°39E±0.°07, h15km, n140, σ0.°94/128, mb4.6/63, MS4.1/22, 6C-10D, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	**Riviere de l'E**	**9.42**	**253**	Pn	**Pn**	**22 25 31.6**	**-4.0**
H08S1	**Diego Garcia H**	**12.90**	**33**	T	T	22 39 32.1	
	baz=211,slow=76,SNR=119						
H08S2	**Diego Garcia H**	**12.91**	**33**	T	T	22 39 32.7	
	baz=211,slow=76,SNR=168						
H08S3	**Diego Garcia H**	**12.92**	**33**	T	T	22 39 34.2	
	baz=211,slow=76,SNR=1375						
ABPO	**Ambohimpanom**	**17.20**	**266**	P	**P**	**22 27 22.9**	**+1.1**
OPO	**Ambohidratompo**	**17.25**	**267**	P	**P**	**22 27 23.4**	**+0.9**
	0.5nm,0.3s,baz=75,slow=14,SNR=9.7						
KMBO	**Kilima Mbogo**	**32.61**	**299**	P	**P**	**22 29 54.2**	**+2.3**
	0.9nm,0.4s,baz=104,slow=8.3,SNR=5.9						
KMBO				LR	LR	22 40 50.2	
	comp=Z,342nm,19.3s,baz=96,slow=32						
LSZ	**Lusaka**	**35.70**	**270**	P	**P**	**22 30 18.4**	**-0.1**
LBTB	**Lobatse**	**37.38**	**253**	P	**P**	**22 30 33.5**	**+0.6**
	9.8nm,1.0s,baz=89,slow=8.4,SNR=5.9						
LBTB	**Lobatse**	**37.38**	**253**	P	**P**	**22 30 32.7**	**-0.2**
LBTB				IAmb	IAmb	22 30 39.9	
	comp=Z,12nm,0.8s						
BOSA	**Boshof**	**37.94**	**247**	P	**P**	**22 30 37.5**	**-0.1**
	comp=Z,4.4nm,1.0s,baz=95,slow=5.9,SNR=3.7						
BOSA	**Boshof**	**37.94**	**247**	P	**P**	**22 30 37.5**	**-0.1**
MBAR	**Mbarara**	**38.42**	**294**	P	**P**	**22 30 45.3**	**+3.5**
MNAI	**Manna**	**39.33**	**74**	P	**P**	**22 30 50.9**	**+1.6**
	comp=Z,131nm,1.4s						
H01W2	**Cape Leeuwin H**	**46.00**	**121**	T	T	23 20 49.0	
	baz=278,slow=75,SNR=4.2						
H01W3	**Cape Leeuwin H**	**46.00**	**121**	T	T	23 20 51.2	
	baz=278,slow=75,SNR=5.0						
H01W1	**Cape Leeuwin H**	**46.02**	**121**	T	T	23 20 52.2	
	baz=278,slow=75,SNR=5.3						
RAYN	**Ar Rayn**	**46.16**	**334**	P	**P**	**22 31 45.5**	**+1.0**
RAYN				IAmb	IAmb	22 31 51.8	
	comp=Z,6.8nm,0.9s						
MAW	**Mawson**	**49.00**	**181**	P	**P**	**22 32 07.1**	**+1.2**
	comp=Z,4.9nm,0.9s,baz=318,slow=10.0,SNR=8.3						
MAW				LR	LR	22 47 52.4	
	comp=Z,129nm,20.7s,baz=50,slow=30						
CM31	**Chiang Mai Arr**	**49.44**	**44**	P	**P**	**22 32 10.8**	**+0.8**
CM31				IAmb	IAmb	22 32 11.7	
	comp=Z,9.7nm,1.0s						
CMAR	**Chiang Mai Arr**	**49.44**	**44**	P	**P**	**22 32 10.3**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=232,slow=8.1,SNR=27						
CMAR				LR	LR	22 49 50.1	
	comp=Z,199nm,21.1s,baz=252,slow=32						
CMAR	**Chiang Mai Arr**	**49.44**	**44**	P	**P**	**22 32 10.6**	**+0.6**
CHTO	**Chiang Mai**	**49.70**	**43**	P	**P**	**22 32 12.2**	**+0.2**
SBUM	**Sibu**	**50.60**	**71**	P	**P**	**22 32 19.7**	**+0.7**
SBUM				IAmb	IAmb	22 32 20.9	
	comp=Z,15nm,1.0s						
SHL	**Shillong**	**50.92**	**31**	P	**P**	**22 32 21.4**	**+0.1**
UBPT	**Khong Chiam**	**51.89**	**52**	P	**P**	**22 32 28.4**	**-0.1**
UBPT				IAmb	IAmb	22 32 29.8	
	comp=Z,19nm,1.0s						
HRA	**Herat**	**52.79**	**357**	P	**P**	**22 32 34.9**	**-0.3**
SYO	**Syowa Base**	**52.87**	**191**	⇓*e*PcP	**PcP**	**22 33 43.1**	**-1.0**
KBL	**Kabul**	**52.97**	**4**	P	**P**	**22 32 37.1**	**+0.5**
LSA	**Lhasa**	**54.08**	**28**	P	**P**	**22 32 45.8**	**+0.7**
LSA				IAmb	IAmb	22 32 48.6	
	comp=Z,14nm,1.5s						
SLVN	**Son La**	**54.76**	**45**	P	**P**	**22 32 49.9**	**+0.2**
SLVN				IAmb	IAmb	22 32 51.6	
	comp=Z,8.1nm,1.0s						
KSH	**Kashi**	**58.67**	**10**	*e*P	**P**	**22 33 14.3**	**-2.9**
KSH				pmax	pmax		
	comp=Z,33nm,1.1s						
KSH				pmax	pmax		
	comp=Z,180nm,4.1s						
GYA	**Guiyang**	**60.11**	**43**	⇑P	**P**	**22 33 27.4**	**0.0**
GYA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CD2	**Chengdu**	**61.52**	**37**	P	**P**	**22 33 36.8**	**0.0**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
KK31	**Karatay Array**	**61.59**	**4**	P	**P**	**22 33 37.2**	**+0.2**
KKAR	**Karatay Array**	**61.59**	**4**	P	**P**	**22 33 36.3**	**-0.7**
AKH	**Akhalkalaki**	**63.08**	**342**	P	**P**	**22 33 46.8**	**-0.4**
AKH				IAmb	IAmb	22 33 51.2	
	comp=Z,7.1nm,0.9s						
ASAR	**Alice Springs**	**63.57**	**108**	P	**P**	**22 33 50.4**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=260,slow=6.3,SNR=7.5						
ASAR				LR	LR	22 57 35.8	
	comp=Z,513nm,20.9s,baz=270,slow=32						
ASAR	**Alice Springs**	**63.57**	**108**	P	**P**	**22 33 50.1**	**-0.8**
ENH	**Enshi**	**64.53**	**42**	P	**P**	**22 33 56.0**	**-0.9**
WRA	**Warramunga Arr**	**64.66**	**104**	P	**P**	**22 33 57.5**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=262,slow=5.9,SNR=8.1						
WRA				LR	LR	22 59 57.5	
	comp=Z,253nm,18.8s,baz=260,slow=34						
WRA	**Warramunga Arr**	**64.66**	**104**	P	**P**	**22 33 57.5**	**-0.5**
BRTR	**Keskin Array B**	**65.17**	**333**	P	**P**	**22 34 01.1**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=108,slow=4.0,SNR=4.4						
BRTR				LR	LR	22 59 56.8	
	comp=Z,30nm,21.5s,baz=124,slow=34						
KBZ	**Khabaz**	**65.38**	**342**	P	**P**	**22 34 02.0**	**+0.1**
	comp=Z,4.5nm,1.0s,baz=72,slow=12,SNR=4.6						
KBZ				LR	LR	23 02 28.5	
	comp=Z,41nm,19.2s,baz=173,slow=36						
WMQ	**Urumqi**	**65.41**	**18**	*e*P	**P**	**22 34 02.8**	**+0.5**
WMQ				pP	pwP	22 34 13.1	+2.9
WMQ				sP	sP	22 34 16.3	+8.6
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.7s						
WMQ				LR	LR		
	comp=Z,320nm,20.9s						
WMQ				LR	LR		
	comp=Z,310nm,24.5s						
LZH	**Lanzhou**	**65.45**	**34**	*e*P	P	22 34 07.6	+4.7
LZH				pP	pwP	22 34 18.0	+7.2
LZH				sP	PcP	22 34 22.4	-12
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
LZH				pmax	pmax		
	comp=Z,97nm,5.7s						
SNAA	**Sanae**	**65.65**	**199**	P	**P**	**22 34 04.3**	**+0.7**
SNAA	**Sanae**	**65.65**	**199**	P	**P**	**22 34 04.0**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=120,slow=5.3,SNR=18						
SNAA	**Sanae**	**65.65**	**199**	P	**P**	**22 34 04.2**	**+0.6**
SNAA				IAmb	IAmb	22 34 10.7	
	comp=Z,4.9nm,0.9s						
GTA	**Gaotai**	**66.09**	**29**	⇓P	**P**	**22 34 06.8**	**-0.1**
GTA				pP	pwP	22 34 16.3	+1.5
GTA				sP	sP	22 34 20.6	+8.4
GTA				S	**S**	**22 42 53.6**	**-1.2**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,71nm,6.0s						
GTA				LR	LR		
	comp=Z,110nm,17.8s						
GTA				LR	LR		
	comp=Z,74nm,16.7s						
GTA				LR	LR		
	comp=Z,150nm,18.2s						
XAN	**Xi'an**	**66.79**	**38**	P	**P**	**22 34 10.8**	**-0.6**
XAN				pP	pwP	22 34 25.3	+6.0
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN				LR	LR		
	comp=Z,180nm,19.5s						
XAN				LR	LR		
	comp=Z,140nm,19.5s						
XAN				LR	LR		
	comp=Z,170nm,23.9s						
XAN	**Xi'an**	**66.79**	**38**	P	**P**	**22 34 10.2**	**-1.2**
MKAR	**Makanchi Array**	**66.87**	**13**	P	**P**	**22 34 11.1**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=210,slow=7.0,SNR=17						
MKAR				LR	LR	23 01 24.2	
	comp=Z,113nm,20.5s,baz=192,slow=34						
SIJI	**Sorong**	**66.91**	**83**	P	**P**	**22 34 12.6**	**+0.1**
	comp=Z,2.5nm,0.4s,baz=356,slow=5.3,SNR=4.5						
VNA2	**Neumayer--Watz**	**66.92**	**200**	P	**P**	**22 34 13.1**	**+1.4**
	baz=97,slow=8.1						
VNA3	**Neumayer Olymp**	**67.71**	**200**	P	**P**	**22 34 17.1**	**+0.4**
ABKAR	**Akbulak array**	**67.74**	**356**	P	**P**	**22 34 16.7**	**-0.3**
KURK	**Kurchatov**	**70.00**	**9**	P	**P**	**22 34 30.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**70.26**	**292**	P	**P**	**22 34 34.1**	**+0.7**
	comp=Z,2.2nm,1.1s,baz=104,slow=3.7,SNR=4.5						
TORD				LR	LR	23 02 57.4	
	comp=Z,106nm,20.7s,baz=235,slow=34						
TORD	**Torodi Ar. Bea**	**70.26**	**292**		**P**	**22 34 34.0**	**+0.5**

QSPA	**South Pole Qui**	**71.49**	**180**	P		**P**		**22 34 40.8**	**+0.6**
	comp=Z,4.2nm,0.7s,baz=271,slow=1.7,SNR=15								
QSPA	**South Pole Qui**	**71.49**	**180**	P		**P**		**22 34 40.3**	**+0.1**
TLBR	**Topalu**	**71.50**	**333**	⇓P		**P**		**22 34 41.2**	**+0.9**
BRVK	**Borovoye**	**71.50**	**3**	P		**P**		**22 34 39.0**	**-1.1**
BRVK				IAmb		IAmb		22 34 40.6	
	comp=Z,7.9nm,0.9s								
NJ2	**Nanjing**	**71.83**	**46**	*e*P		**P**		**22 34 43.5**	**+0.9**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.5s								
HHC	**Hu-ho-hao-te**	**73.06**	**35**	*e*P		**P**		**22 34 51.0**	**+1.1**
HHC				pmax		pmax			
	comp=Z,12nm,0.7s								
HHC				pmax		pmax			
	comp=Z,210nm,6.0s								
HHC				LR		LR			
	comp=Z,140nm,14.5s								
HHC				LR		LR			
	comp=Z,210nm,15.3s								
HHC				LR		LR			
	comp=Z,170nm,16.2s								
VRI	**Vrincioaia**	**73.11**	**333**	⇑P		**P**		**22 34 51.1**	**+1.1**
PLOR	**Plostina**	**73.14**	**333**	⇓P		**P**		**22 34 51.1**	**+1.0**
MLR	**Muntele Rosu**	**73.16**	**332**	⇓P		**P**		**22 34 51.4**	**+0.9**
VNDA	**Vanda**	**73.36**	**167**	P		**P**		**22 34 51.3**	**+0.3**
	comp=Z,2.3nm,1.0s,baz=290,slow=7.3,SNR=4.2								
VNDA				LR		LR		23 03 37.1	
	comp=Z,98nm,19.1s,baz=250,slow=33								
VOIR		**73.52**	**332**	⇑P		**P**		**22 34 52.6**	**+0.1**
DBIC	**Dimbokro**	**73.63**	**283**	P		**P**		**22 34 54.0**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=88,slow=8.5,SNR=3.5								
DBIC				LR		LR		23 04 38.7	
	comp=Z,140nm,21.4s,baz=102,slow=34								
ARR	**Arges**	**73.66**	**331**	⇓P		**P**		**22 34 52.4**	**-0.8**
LOT	**Lotru**	**74.11**	**331**	⇑P		**P**		22 35 02.9	+6.9
ZAA0	**Zalesovo Array**	**74.17**	**12**	P		**P**		**22 34 55.2**	**-0.8**
ZALV	**Zalesovo Beam**	**74.17**	**12**	P		**P**		**22 34 55.2**	**-0.8**
	comp=Z,10nm,0.6s,baz=204,slow=5.9,SNR=58								
ZALV				LR		LR		23 07 21.7	
	comp=Z,68nm,18.1s,baz=238,slow=36								
ZALV	**Zalesovo Beam**	**74.17**	**12**	P		**P**		**22 34 54.6**	**-1.3**
SORM	**Soroca**	**74.24**	**335**	⇓P		**P**		**22 34 55.1**	**-1.4**
HERR	**Herculane**	**74.32**	**330**	⇓P		**P**		**22 34 57.6**	**+0.6**
GZR	**Gura Zlata**	**74.53**	**330**	⇑P		**P**		**22 34 58.7**	**+0.3**
DIVS	**Divibare**	**74.94**	**328**	P		**P**		**22 35 01.3**	**+0.5**
DIVS				IAmb		IAmb		22 35 02.4	
	comp=Z,9.1nm,0.9s								
ARU	**Arti**	**74.97**	**356**			**P**		**22 35 00.0**	**-0.5**
BZS	**Buzias**	**75.25**	**330**	⇑P		**P**		**22 35 02.5**	**+0.1**
CTA	**Charters Tower**	**75.54**	**107**	LR		LR		23 05 16.2	
	comp=Z,217nm,21.6s,baz=258,slow=33								
DRGR		**75.61**	**331**	⇓P		**P**		**22 35 05.3**	**+0.7**
SONM	**Songino Array**	**75.66**	**27**	P		**P**		**22 35 05.2**	**+0.3**
	comp=Z,3.9nm,0.9s,baz=215,slow=5.7,SNR=22								
SONM				LR		LR		23 06 58.1	
	comp=Z,132nm,20.9s,baz=186,slow=35								
SONM	**Songino Array**	**75.66**	**27**	P		**P**		**22 35 04.6**	**-0.3**
KEST	**Kesra**	**75.73**	**316**	P		**P**		**22 35 06.9**	**+1.4**
	comp=Z,3.5nm,0.9s,baz=313,slow=3.3,SNR=3.9								
KEST	**Kesra**	**75.73**	**316**	P		**P**		**22 35 06.2**	**+0.7**
KEST				IAmb		IAmb		22 35 13.8	
	comp=Z,6.1nm,0.9s								
KOWA	**Kowa**	**75.86**	**291**	P		**P**		**22 35 07.0**	**+0.4**
KOWA				IAmb		IAmb		22 35 13.8	
	comp=Z,6.9nm,1.1s								
BMR	**Baia Mare**	**75.92**	**332**	⇓P		**P**		**22 35 07.0**	**+0.7**
ULN	**Ulaanbaatar**	**75.97**	**27**	P		**P**		**22 35 05.6**	**-1.1**
AKASG	**Malin Array Be**	**75.99**	**337**	P		**P**		**22 35 06.2**	**-0.3**
	comp=Z,5.9nm,0.8s,baz=141,slow=4.8,SNR=22								
AKASG	**Malin Array Be**	**75.99**	**337**	P		**P**		**22 35 05.8**	**-0.8**
AKBB	**Malin Array Si**	**75.99**	**337**	P		**P**		**22 35 05.8**	**-0.7**
AKBB				IAmb		IAmb		22 35 07.2	
	comp=Z,11nm,0.8s								
INTR	**Introdacqua**	**76.79**	**323**	P		**P**		**22 35 11.3**	**-0.1**
KOLS	**Kolonicke sedl**	**77.41**	**332**	*e*P		**P**		**22 35 15.0**	**+0.4**
CRVS	**Cervenica-Dubn**	**77.74**	**332**	*e*P		**P**		**22 35 17.2**	**+0.7**
VSL	**Vill

IDC ***24*** *22:26:54.2±0.7, 4.7°69S×153.7°51E, h90km±5km, mb4.2/17, mb1 4.3/20, mb1mx4.2/35, mbtmp4.6/20, MS3.0/3, Ms1 3.0/3, ms1mx2.7/22, Error ellipse: s-maj=12.7km s-min=9.2km az=29.0*

DJA ***24*** *22:27:00.9±0.8, 5.7°S±4.1°×15.7°3E±.1°, h123km±5km, M5.4/15, mb4.5/15, mB5.5/3, MLv5.9/2, Mw(mB)4.9/3*

ISC 24 22:26:54.2±0.7, 4.72S±0.07×153.56E±0.07, h88km±5km, n98, σ0.97/112, mb4.7/43, 2C, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.48**	**291**	Pn	**Pn**	**22 27 19.7**	**0.0**
RABL				Sn	**Sn**	**22 27 39.1**	**+0.2**
KRVT	**Keravat (AS076**	**1.58**	**285**	P	**Pn**	**22 27 20.9**	**0.0**
	608nm,0.3s,baz=118,slow=1.3,SNR=122						
KRVT				S	**Sn**	**22 27 39.9**	**-1.2**
KRVT				LR	LR	22 27 49.0	
	comp=Z,471nm,19.4s,baz=91,slow=36						
MANU	**Manus Island**	**6.73**	**293**	Pn	**Pn**	**22 28 31.9**	**+1.5**
PMG	**Port Moresby**	**7.87**	**233**	P	**Pn**	**22 28 46.9**	**+0.9**
	23nm,0.3s,baz=17,slow=4.5,SNR=34						
PMG	**Port Moresby**	**7.87**	**233**	Pn	**Pn**	**22 28 46.7**	**+0.7**
JAY	**Jayapura**	**13.01**	**279**	P	**Pn**	**22 29 56.0**	**+0.2**
	0.3nm,0.3s,baz=206,slow=3.4,SNR=4.5						
JAY	**Jayapura**	**13.01**	**279**	P	**Pn**	**22 29 55.8**	**0.0**
	14nm,0.9s						
COEN	**Coen**	**13.75**	**227**	Pn	**Pn**	**22 30 06.9**	**+1.5**
SMPI	**Sarmi**	**15.07**	**280**	P	**P**	**22 30 23.8**	**-1.9**
	51nm,0.7s						
CTA	**Charters Tower**	**16.85**	**204**	P	**Pn**	**22 30 44.7**	**0.0**
	0.3nm,0.3s,baz=60,slow=9.7,SNR=2.9						
EIDS	**Eidsvold**	**20.67**	**186**	P	Pn	22 31 29.4	-0.8
DZM	**Mont Dzumac**	**21.29**	**145**	P	**P**	**22 31 33.8**	**-0.1**
	7.0nm,0.4s,baz=102,slow=23,SNR=13						
DZM				LR	LR	22 37 42.5	
	comp=Z,26nm,21.2s,baz=81,slow=30						
DZM	**Mont Dzumac**	**21.29**	**145**	P	**P**	**22 31 33.9**	**-0.1**
FAKI	**Fak Fak**	**21.33**	**274**	P	**P**	**22 31 34.7**	**+0.3**
FAKI				IAmb	IAmb	22 31 40.5	
	comp=Z,52nm,0.9s						
SIJI	**Sorong**	**22.59**	**279**	P	**P**	**22 31 47.0**	**-0.7**
	comp=Z,5.1nm,0.3s,baz=333,slow=10,SNR=4.9						
MTN	**Manton Dam**	**23.57**	**249**	P	**P**	**22 31 57.1**	**0.0**
MTN				PcP	**PcP**	**22 35 40.6**	**+0.5**
WB0	**Warramunga Arr**	**23.92**	**230**	P	**P**	**22 32 00.3**	**0.0**
WB0				IAmb	IAmb	22 32 01.6	
	comp=Z,18nm,0.5s						
WB0				PcP	**PcP**	**22 35 42.5**	**+1.7**
WR0	**Warramunga Arr**	**23.92**	**229**	P	**P**	**22 32 00.4**	**+0.1**
WR0				IAmb	IAmb	22 32 08.5	
	comp=Z,16nm,0.7s						
WR0				PcP	**PcP**	**22 35 41.5**	**+0.6**
WRAB	**Tennant Creek**	**24.05**	**229**	P	**P**	**22 32 01.7**	**+0.2**
WRAB				IAmb	IAmb	22 32 02.8	
	comp=Z,21nm,0.7s						
WRAB				PcP	**PcP**	**22 35 41.7**	**+0.6**
WB2	**Warramunga Arr**	**24.06**	**229**	P	**P**	**22 32 01.7**	**+0.2**
WB2				IAmb	IAmb	22 32 09.7	
	comp=Z,32nm,0.5s						
WB2				PcP	**PcP**	**22 35 41.7**	**+0.5**
WRA	**Warramunga Arr**	**24.07**	**229**	P	**P**	**22 32 01.4**	**-0.1**
	comp=Z,19nm,0.5s,baz=53,slow=9.8,SNR=190						
WRA				PcP	**PcP**	**22 35 41.3**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=48,slow=2.2,SNR=8.3						
WRA	**Warramunga Arr**	**24.07**	**229**	P	**P**	**22 32 01.1**	**-0.5**
WRA				PcP	**PcP**	**22 35 41.6**	**+0.4**
ARMA	**Armidale**	**25.63**	**184**	P	**P**	**22 32 17.0**	**+1.3**
ARMA				IAmb	IAmb	22 32 17.7	
	comp=Z,11nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**26.45**	**29**	T	T	22 59 24.8	
	baz=200						
H11S2	**WAKE ISLAND Hy**	**26.46**	**29**	T	T	22 59 21.5	
	baz=200,slow=74						
H11S1	**WAKE ISLAND Hy**	**26.47**	**29**	T	T	22 59 24.2	
	baz=200,slow=74						
KNRA	**Kununurra**	**26.68**	**244**	P	**P**	**22 32 25.1**	**-0.2**
KNRA				IAmb	IAmb	22 32 42.6	
	comp=Z,18nm,0.6s						
AS31	**Alice Springs**	**26.72**	**223**	P	**P**	**22 32 25.3**	**-0.3**
ASAR	**Alice Springs**	**26.72**	**223**	P	**P**	**22 32 23.7**	**-1.9**
	comp=Z,8.2nm,0.5s,baz=56,slow=8.9,SNR=20						
ASAR				PcP	**PcP**	**22 35 47.4**	**+0.2**
	comp=Z,3.4nm,0.7s,baz=63,slow=2.6,SNR=12						
ASAR				LR	LR	22 43 27.3	
	comp=Z,42nm,19.8s,baz=19,slow=37						
ASAR	**Alice Springs**	**26.72**	**223**	P	**P**	**22 32 25.4**	**-0.2**
ASAR				PcP	**PcP**	**22 35 47.5**	**+0.3**
STKA	**Stephens Creek**	**29.25**	**201**	P	**P**	**22 32 46.6**	**-1.5**
	comp=Z,2.5nm,0.6s,baz=8.0,slow=7.9,SNR=8.7						
STKA				LR	LR	22 45 27.6	
	comp=Z,46nm,18.0s,baz=292,slow=38						
STKA	**Stephens Creek**	**29.25**	**201**	P	**P**	**22 32 48.3**	**+0.2**
BATI	**Baumata**	**30.12**	**258**	P	**P**	**22 32 56.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**30.36**	**242**	P	**P**	**22 32 57.4**	**-0.6**
FITZ				IAmb	IAmb	22 32 58.1	
	comp=Z,10nm,0.7s						
BBOO	**Buckleboo**	**32.38**	**208**	P	**P**	**22 33 16.0**	**+0.4**
BBOO				IAmb	IAmb	22 33 23.1	
	comp=Z,18nm,1.4s						
BBOO				PcP	**PcP**	**22 36 01.1**	**-0.3**
FORT	**Forrest**	**35.33**	**220**	P	**P**	**22 33 40.6**	**-0.6**
FORT				IAmb	IAmb	22 33 41.6	
	comp=Z,20nm,1.0s						
PSA00	**Pilbara Seismi**	**36.72**	**240**	P	**P**	**22 33 52.8**	**-0.4**
PSA00				IAmb	IAmb	22 33 56.6	
	comp=Z,29nm,1.4s						
TAU	**Tasmania Unive**	**38.43**	**187**	P	**P**	**22 34 09.0**	**+1.7**
JAGI	**Jajag, Banyuwa**	**39.31**	**262**	P	**P**	**22 34 14.3**	**-0.7**
URZ	**Urewera**	**39.68**	**150**	P	**P**	**22 34 18.5**	**+0.7**
	comp=Z,1.7nm,0.4s,baz=99,slow=6.0,SNR=4.1						
URZ	**Urewera**	**39.68**	**150**	P	**P**	**22 34 19.0**	**+1.2**
QRZ	**Quartz Range**	**39.78**	**157**	P	**P**	**22 34 19.6**	**+1.0**
QRZ				IAmb	IAmb	22 34 20.6	
	comp=Z,16nm,0.9s						
THZ	**Tophouse**	**40.73**	**158**	P	**P**	**22 34 26.4**	**-0.1**
BFZ	**Birch Farm**	**41.20**	**154**	P	**P**	**22 34 29.3**	**-1.0**
BFZ				IAmb	IAmb	22 34 36.3	
	comp=Z,20nm,1.2s						
LTZ	**Lake Taylor**	**41.39**	**159**	P	**P**	**22 34 32.1**	**+0.3**
KHZ	**Kahutara**	**41.54**	**158**	P	**P**	**22 34 31.8**	**-1.2**
KHZ				IAmb	IAmb	22 34 42.5	
	comp=Z,39nm,1.4s						
OXZ	**Oxford**	**41.78**	**160**	P	**P**	**22 34 34.5**	**-0.5**
OXZ				IAmb	IAmb	22 34 35.3	
	comp=Z,15nm,0.7s						
RPZ	**Rata Peaks**	**41.80**	**161**	P	**P**	**22 34 35.4**	**+0.2**
	comp=Z,46nm,0.6s,baz=313,slow=3.8,SNR=39						
RPZ	**Rata Peaks**	**41.80**	**161**	P	**P**	**22 34 35.4**	**+0.2**
LBZ	**Lake Benmore**	**42.12**	**162**	P	**P**	**22 34 37.4**	**-0.4**
DCZ	**Deep Cove**	**42.29**	**166**	P	**P**	**22 34 39.4**	**+0.3**
MQZ	**McQueen's Vall**	**42.33**	**159**	P	**P**	**22 34 39.9**	**+0.5**
MLZ	**Mavora Lakes**	**42.44**	**165**	P	**P**	**22 34 40.5**	**+0.1**
ODZ	**Otahua Downs**	**42.86**	**162**	P	**P**	**22 34 43.5**	**-0.3**
ODZ				IAmb	IAmb	22 34 44.8	
	comp=Z,12nm,0.8s						
CISI	**Cisompet, Garu**	**45.55**	**264**	P	**P**	**22 35 05.1**	**-0.7**
KULM	**Kulim**	**53.77**	**280**	P	**P**	**22 36 08.6**	**+0.4**
KULM				IAmb	IAmb	22 36 13.5	
	comp=Z,16nm,1.5s						
PETK	**Petropavlovsk-**	**57.72**	**3**	P	**P**	**22 36 36.0**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=186,slow=10.0,SNR=1.9						
CMAR	**Chiang Mai Arr**	**58.53**	**295**	P	**P**	**22 36 42.8**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=124,slow=5.6,SNR=1.8						
CMAR				pP	**pP**	**22 37 02.2**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=114,slow=5.1,SNR=2.0						
CD2	**Chengdu**	**59.26**	**310**	P	**P**	**22 36 46.9**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				LR	LR		
	comp=Z,240nm,18.0s						
CD2				LR	LR		
	comp=Z,180nm,17.7s						
CD2				LR	LR		
	comp=Z,230nm,16.1s						
HHC	**Hu-ho-hao-te**	**59.42**	**324**	*e*P	**P**	**22 36 48.6**	**+0.7**
HHC				pmax	pmax		
	comp=Z,18nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,6.6s						
LZH	**Lanzhou**	**61.70**	**315**	*e*P	**P**	**22 37 05.8**	**+2.2**
LZH				pP	pwP	22 37 28.8	-0.8
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
LZH				pmax	pmax		
	comp=Z,70nm,6.1s						
GTA	**Gaotai**	**66.11**	**317**	⇑P	**P**	**22 37 33.8**	**+1.4**
GTA				pP	pP	22 37 52.5	-1.1
GTA				sP	PcP	22 38 01.6	-0.6
GTA				S	**S**	**22 46 18.5**	**+4.2**
GTA				sS	sS	22 46 52.1	-0.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,60nm,5.6s						
GTA				LR	LR		
	comp=Z,100nm,15.3s						
GTA				LR	LR		
	comp=Z,97nm,16.0s						
GTA				LR	LR		
	comp=Z,110nm,17.8s						
SONM	**Songino Array**	**66.66**	**327**	P	**P**	**22 37 35.7**	**0.0**
	comp=Z,0.7nm,0.5s,baz=142,slow=5.9,SNR=7.7						
SONM	**Songino Array**	**66.66**	**327**	P	**P**	**22 37 35.4**	**-0.3**
VNDA	**Vanda**	**72.88**	**178**	P	**P**	**22 38 13.7**	**+0.4**
	comp=Z,10nm,0.7s,baz=327,slow=6.7,SNR=50						
VNDA	**Vanda**	**72.88**	**178**	P	**P**	**22 38 14.1**	**+0.8**
VNDA				IAmb	IAmb	22 38 14.6	
	comp=Z,12nm,0.8s						
WMQ	**Urumqi**	**76.19**	**317**	*e*P	**P**	**22 38 34.3**	**+1.2**
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.1s						
WMQ				LR	LR		
	comp=Z,290nm,19.3s						
WMQ				LR	LR		
	comp=Z,300nm,23.5s						
RSO	**Redoubt South**	**77.21**	**24**	P	**P**	**22 38 39.8**	**+1.2**
IMAR	**Indian Mountai**	**80.06**	**19**	P	**P**	**22 38 53.6**	**-0.3**
RND	**Reindeer**	**80.36**	**23**	P	**P**	**22 38 55.0**	**-0.7**
MK31	**Makanchi Array**	**80.76**	**319**	P	**P**	**22 38 57.5**	**-0.7**
MKAR	**Makanchi Array**	**80.76**	**319**	P	**P**	**22 38 58.1**	**0.0**
	comp=Z,2.4nm,0.5s,baz=92,slow=8.1,SNR=51						
MKAR				pP	**pP**	**22 39 18.9**	**-1.1**
	comp=Z,1.8nm,0.9s,baz=112,slow=5.9,SNR=3.2						
MKAR	**Makanchi Array**	**80.76**	**319**	P	**P**	**22 38 58.3**	**+0.1**
MAKZ	**Makanchi**	**80.97**	**319**	P	**P**	**22 38 59.7**	**+0.4**
MAKZ				IAmb	IAmb	22 39 00.4	
	comp=Z,3.5nm,0.6s						
ZAA0	**Zalesovo Array**	**81.50**	**326**	P	**P**	**22 39 01.3**	**-0.5**
ZALV	**Zalesovo Beam**	**81.50**	**326**	P	**P**	**22 39 01.1**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=119,slow=6.5,SNR=8.2						
ZALV	**Zalesovo Beam**	**81.50**	**326**	P	**P**	**22 39 00.4**	**-1.5**
ILAR	**Eielson Array**	**81.80**	**22**	P	**P**	**22 39 01.6**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=255,slow=5.2,SNR=9.8						
ILAR				pP	**pP**	**22 39 24.7**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=243,slow=6.3,SNR=2.7						
BCAR	**Beaver Creek A**	**83.02**	**24**	P	**P**	**22 39 09.1**	**-0.6**
KURK	**Kurchatov**	**84.17**	**322**	P	**P**	**22 39 15.6**	**-0.1**
KURK				IAmb	IAmb	22 39 17.6	
	comp=Z,4.3nm,0.8s						
NIL	**Nilore**	**84.55**	**304**	P	**P**	**22 39 17.5**	**-0.6**
NIL				IAmb	IAmb	22 39 19.3	
	comp=Z,3.3nm,0.7s						
QSPA	**South Pole Qui**	**85.24**	**180**	P	**P**	**22 39 21.1**	**0.0**
	comp=Z,12nm,0.4s,baz=206,slow=0.4,SNR=40						
QSPA	**South Pole Qui**	**85.24**	**180**	P	**P**	**22 39 20.5**	**-0.6**
MAW	**Mawson**	**85.93**	**203**	P	**P**	**22 39 24.6**	**+0.4**
	comp=Z,5.3nm,0.7s,baz=113,slow=5.8,SNR=16						
MAW	**Mawson**	**85.93**	**203**	P	**P**	**22 39 24.1**	**-0.1**
KKAR	**Karatay Array**	**88.12**	**313**	P	**P**	**22 39 35.1**	**-0.3**
BRVK	**Borovoye**	**89.70**	**323**	P	**P**	**22 39 41.4**	**-1.1**
OMMB	**Old Mammoth Mi**	**90.82**	**53**	P	**P**	**22 39 49.4**	**+0.9**
OMMB				IAmb	IAmb	22 39 52.4	
	comp=Z,4.0nm,0.5s						
NVAR	**Mina Array Bea**	**91.44**	**52**	P	**P**	**22 39 50.9**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=245,slow=5.7,SNR=4.1						
SYO	**Syowa Base**	**93.99**	**199**	⇑*e*P	**P**	**22 40 00.0**	**-2.1**
BOSA	**Boshof**	**120.28**	**233**	PKP	**PKPdf**	**22 45 35.0**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=145,slow=5.1,SNR=3.8						
GERES	**GERESS Array B**	**124.38**	**329**	PKP	**PKPdf**	**22 45 42.7**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=90,slow=2.0,SNR=5.6						
GERES				pPKP	**pPKPdf**	**22 46 08.4**	**+2.1**
	comp=Z,0.7nm,0.7s,baz=94,slow=1.9,SNR=3.9						
GERES	**GERESS Array B**	**124.38**	**329**	PKPdf	**PKPdf**	**22 45 42.0**	**-1.3**
LPAZ	**La Paz**	**133.79**	**118**	PKP	**PKPdf**	**22 46 02.6**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=284,slow=3.5,SNR=3.8						
LPAZ	**La Paz**	**133.79**	**118**	PKPdf	**PKPdf**	**22 46 01.7**	**-1.0**
BDFB	**Brasilia**	**150.58**	**134**	PKPbc	**PKPbc**	**22 46 35.6**	**-1.6**
	comp=Z,5.4nm,0.4s,baz=220,slow=3.4,SNR=12						
TORD	**Torodi Ar. Bea**	**151.00**	**289**	PKPbc	**PKPbc**	**22 46 37.3**	**-0.7**
	comp=Z,11nm,0.7s,baz=66,slow=2.2,SNR=76						
TORD				pPKPbc	**pPKPbc**	**22 47 03.6**	**+2.8**
	comp=Z,8.9nm,0.8s,baz=55,slow=2.0,SNR=9.3						
TORD	**Torodi Ar. Bea**	**151.00**	**289**	PKPbc	**PKPbc**	**22 46 36.8**	**-1.3**

WEL 24 22:55:57.3, 42.7°S±2.1°×17.3°3E±.1°, h72km±5km, M2.4/16, ML2.6/16, MLv2.4/16, Error ellipse: s-maj=0.0km s-min=0.0km az=86.4, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THZ	**Tophouse**	**0.12**	**220**	P	Pn	22 56 08.4	+0.4
NNZ	**Nelson**	**0.53**	**32**	P	Pn	22 56 11.2	+0.6
BSWZ	**Blackbirch Sta**	**0.65**	**94**	P	Pn	22 56 13.2	+1.4
TUWZ	**Tuamarina**	**0.74**	**71**	P	Pn	22 56 13.6	+0.7
KHZ	**Kahutara**	**0.84**	**152**	P	Pn	22 56 14.9	+0.9
DSZ	**Denniston Nort**	**0.90**	**265**	P	Pn	22 56 15.6	+0.8
QRZ	**Quartz Range**	**0.92**	**337**	P	Pn	22 56 15.7	+0.8
TCW	**Tory Channel**	**1.06**	**65**	P	Pn	22 56 17.7	+1.0
DUWZ	**D'Urville Isla**	**1.11**	**39**	P	Pn	22 56 18.6	+1.3
LTZ	**Lake Taylor**	**1.24**	**206**	P	Pn	22 56 19.8	+0.8
GVZ	**Greta Valley S**	**1.29**	**179**	P	Pn	22 56 20.2	+0.6
INZ	**Inchbonnie**	**1.57**	**227**	P	Pn	22 56 24.0	+0.8
KIW	**Kapiti Island**	**1.65**	**61**	P	Pn	22 56 24.9	+0.6
CAW	**Cannon Point**	**1.65**	**71**	P	Pn	22 56 24.4	+0.1
MSWZ	**Moikau Station**	**1.70**	**82**	P	Pn	22 56 29.3	+4.3
OGWZ	**Otaki Gorge**	**1.84**	**63**	P	Pn	22 56 27.3	+0.4
MQZ	**McQueen's Vall**	**2.05**	**187**	P	Pn	22 56 28.6	-1.0
MHCZ	**Mount Hutt**	**2.14**	**209**	P	Pn	22 56 31.0	+0.1
RACZ	**Rakaia**	**2.15**	**197**	P	Pn	22 56 30.3	-0.8
WVZ	**Waitaha Valley**	**2.19**	**229**	P	Pn	22 56 32.8	+1.2
RPZ	**Rata Peaks**	**2.50**	**215**	P	Pn	22 56 37.3	+1.6
TSZ	**Takapari Road**	**2.76**	**55**	P	Pn	22 56 44.1	+4.8
FOZ	**Fox Glacier**	**3.00**	**231**	P	Pn	22 56 43.4	+0.9

DJA 24 23:16:06.4±0.9, 2.7°N±12.1°×12.7°3E±.1°, h459km±8km, M3.2/7, MLv3.2/7, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**1.49**	**175**	P	P	23 17 05.3	0.0
GTOI				S	S	23 17 52.7	-0.3
MRSI	**Marisa**	**1.89**	**210**	P	P	23 17 07.6	+0.4
MRSI				S	S	23 17 56.6	+0.2
LUWI	**Luwuk**	**3.15**	**182**	P	P	23 17 14.3	-1.0
APSI	**Ampana**	**3.26**	**202**	P	P	23 17 16.8	+0.7
MPSI	**Mapaga**	**3.46**	**239**	P	P	23 17 17.9	+0.2
MPSI				S	S	23 18 16.2	+0.6

PRU 24 23:18:12.5±0.0, 50.2°16N×19.1°13E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.43**	**82**	*e*Pg	Pg	23 18 20.3	-0.5
OJC				*e*Sg	Sg	23 18 26.2	-0.2
OKC	**Ostrava-Krasne**	**0.71**	**243**	*e*PG	Pg	23 18 26.5	+0.4
OKC				*e*SG	Sg	23 18 36.3	+1.0
LANS	**Liptovska Anna**	**1.03**	**168**	*e*PG	Pg	23 18 31.6	-0.7
LANS				*e*SG	Sg	23 18 45.4	-0.3
LANS				*e*LG	Lg	23 18 50.9	
NIE	**Niedzica**	**1.06**	**134**	*e*Pg	Pg	23 18 32.9	+0.1
NIE				*e*Sg	Sg	23 18 46.4	-0.2
MORC	**Moravsky Berou**	**1.09**	**250**	*e*PG	Pg	23 18 33.1	-0.4
MORC				*e*SG	Sb	23 18 49.2	0.0
KRLC	**Kraliky**	**1.51**	**268**	*e*PG	Pn	23 18 39.2	-1.7
KRLC				*e*SG	Sg	23 19 00.8	-0.3
	comp=Z,5.6nm,0.6s						
VYHS	**Vyhne**	**1.68**	**187**	*e*PN	Pn	23 18 42.0	-1.1
VYHS				*e*SN	Sn	23 19 03.6	-1.7
DPC	**Dobruska-Polom**	**1.81**	**277**	*e*PG	Pb	23 18 46.1	-0.5
DPC				*e*SG	Sb	23 19 09.5	-0.3
	comp=Z,3.6nm,0.5s						
VRAC	**Vranov**	**1.85**	**244**	*e*PN	Pn	23 18 46.2	+0.7
VRAC				*e*SG	Sb	23 19 10.9	-0.1
KHC	**Kasperske Hory**	**3.75**	**256**	*e*SG	Sg	23 20 11.9	-1.1

MAN 25 00:40:59.6, 13.50N×120.61E, h72km, mb4.0, ML2.8, MS2.5, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.33**	**89**	⇑*e*P	Pn	00 41 13.1	+1.8
PGP				*e*S	Sn	00 41 23.1	+3.3
LUBP	**Lubang**	**0.43**	**304**	*e*P	Pn	00 41 12.7	+0.7
LUBP				*e*S	Sn	00 41 24.9	+3.9
TGY	**Tagaytay City**	**0.68**	**28**	⇑*e*P	Pn	00 41 14.4	-0.1
LQP	**Lukban**	**1.09**	**56**	*e*P	Pn	00 41 18.8	-0.8
SJMP	**San Jose**	**1.14**	**154**	*e*P	Pn	00 41 22.1	+2.1
SJMP				*e*S	Sn	00 41 39.9	+4.7
BUSP	**Coron**	**1.54**	**195**	*e*P	Pn	00 41 26.1	+1.0
OTRP	**Odiongan**	**1.78**	**129**	*e*P	Pn	00 41 28.4	0.0
OTRP				*e*S	Sn	00 41 51.0	+0.9

MOS ***25*** *01:16:36.9±0.9, 44.7°58N×149.7°25E, h58km, mb4.0/7, Error ellipse: s-maj=8.0km s-min=7.1km az=83.4*

SKHL ***25*** *01:16:36.7±0.3, 44.4°44N×149.3°39E, h58km±7km, mb5.4/1, msh4.7/2*

JMA ***25*** *01:16:37.5±0.4, 44.6°69N×149.1°16E, h30km, M5.0*

NIED ***25*** *01:16:37.5, 44.6°69N×149.1°16E, h30km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.10; $M_{\theta\theta}$2.21; $M_{\phi\phi}$-2.11; $M_{r\theta}$2.40; $M_{\theta\phi}$-2.62; $M_{\phi r}$0.98; Fault plane solution: $M_0$4.27000×10^{15} NP1: ϕ_s251.00000°, δ89.00000°, λ-143.00000°. NP2: ϕ_s160.00000°, δ53.00000°, λ-2.00000°.*

IDC ***25*** *01:16:39.4±0.7, 44.1°61N×149.2°20E, h61km±6km, mb3.7/19, mb1 4.0/25, mb1mx3.8/46, mbtmp4.0/25, MS3.1/12, Ms1 3.1/12, ms1mx2.9/54 Error ellipse: s-maj=16.2km s-min=11.7km az=133.0*

NEIC ***25*** *01:16:40.3±0.8, 44.5°7N±0.0°.4×149.2°E±0.1°.1, h69km±7km, mb4.4/18, Error ellipse: s-maj=11.3km s-min=4.4km az=70.0*

ISC 25 01:16:36.5±0.7, 44.39N±0.05×149.34E±0.06, h44km±6km, n161, σ1.43/173, mb4.2/40, MS3.4/5, 4C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.34**	**309**	*i* P	**Pn**	**01 16 58.0**	**-0.8**
KUR				AMB	AMB	01 16 58.8	
	1μm,0.7s						
KUR				*i* S	**Sn**	**01 17 13.8**	**-1.6**
KUR				A	A	01 17 16.9	
	10μm,0.4s						
KUR				A	A	01 17 16.9	
	8μm,0.4s						
KUR	**Kuril'sk**	**1.34**	**309**	*e*PN	**Pn**	**01 16 58.3**	**-0.5**
YUK	**Yuzh-Kuril'sk**	**2.53**	**263**	*i* P	**Pn**	**01 17 15.9**	**+0.9**
YUK				AMB	AMB	01 17 17.0	
	620nm,0.6s						
YUK				*i* S	**Sn**	**01 17 44.0**	**-0.5**
YUK				A	A	01 17 46.0	
	4μm,0.6s						
YUK				A	A	01 17 46.0	
	5μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.53**	**263**	*d* iPN	**Pn**	**01 17 16.0**	**+0.9**
YUK				*i* S	**Sn**	**01 17 45.0**	**+0.5**
YUK				pmax	pmax		
	comp=Z,512nm,0.2s						
YUK				pmax	pmax		
	comp=E,152nm,0.1s						
YUK				pmax	pmax		
	comp=N,181nm,0.2s						
YUK				smax	smax		
	comp=E,3μm,0.5s						
YUK				smax	smax		
	comp=N,3μm,0.4s						
GRPR	**Tuman**	**2.60**	**262**	*i* P	**Pn**	**01 17 16.0**	**0.0**
GRPR				AMB	AMB	01 17 20.0	
	comp=N,481nm,0.3s						
GRPR				*i* S	**Sn**	**01 17 47.0**	**+0.7**
GRPR				A	A	01 17 49.0	
	comp=N,3μm,0.5s						
GRPR				A	A	01 17 49.0	
	comp=N,2μm,0.5s						
GRPR	**Tuman**	**2.60**	**262**	⇑iPN	**Pn**	**01 17 16.6**	**+0.6**
GRPR				*i* S	**Sn**	**01 17 47.2**	**+0.9**
GRPR				pmax	pmax		
	comp=Z,481nm,0.3s						
GRPR				pmax	pmax		
	comp=E,144nm,0.2s						
GRPR				pmax	pmax		
	comp=N,231nm,0.3s						
GRPR				smax	smax		
	comp=N,3μm,0.4s						
GRPR				smax	smax		
	comp=E,2μm,0.4s						
NEM2	**Nemuro 2**	**2.80**	**250**	P	**Pn**	**01 17 19.1**	**+0.4**
NEM2				*e*S	**Sn**	**01 17 50.6**	**-0.6**
NMR	**Nemuro--Hokkai**	**2.80**	**250**	*i* P	**Pn**	**01 17 19.0**	**+0.2**
NMR				*i* S	**Sn**	**01

JEW	**Eniwo**	**5.93**	**258**	P		**Pn**	**01 18 04.7**	**+2.9**
JEW	**Eniwo**	**5.93**	**258**	Pn		**Pn**	**01 18 04.2**	**+2.4**
JRBN	**Rebuntou**	**5.97**	**283**	P		**Pn**	**01 18 04.8**	**+2.6**
JNB	**Noboribetsu**	**6.34**	**255**	P		**Pn**	**01 18 08.8**	**+1.4**
JNB				*e*S		**Sn**	**01 19 18.5**	**0.0**
JKB	**Kayabe**	**6.57**	**250**	P		**Pn**	**01 18 11.5**	**+1.0**
JKB				*e*S		**Sn**	**01 19 20.7**	**-3.4**
JOT	**Ohata**	**6.79**	**247**	P		**Pn**	**01 18 14.0**	**+0.4**
UGL	**Uglegorsk**	**6.85**	**316**	*e*P		**Pn**	**01 18 16.2**	**+1.9**
UGL				AMB		AMB	01 18 17.5	
	comp=Z,90nm,0.4s							
JYM2	**Yakumo 2**	**6.93**	**254**	P		**Pn**	**01 18 16.6**	**+1.1**
JANG	**Nango**	**7.05**	**238**	P		**Pn**	**01 18 16.3**	**-0.8**
JANG				*e*S		Sn	01 19 29.0	-6.9
JTM	**Tenmabayashi**	**7.09**	**242**	P		**Pn**	**01 18 17.9**	**+0.3**
JTM				*e*S		**Sn**	**01 19 31.0**	**-5.8**
JTM	**Tenmabayashi**	**7.09**	**242**	Pn		**Pn**	**01 18 18.3**	**+0.6**
JOSM	**Okushiri--Mats**	**7.56**	**256**	P		**Pn**	**01 18 25.5**	**+1.4**
SKR	**Severo-Kuril's**	**7.78**	**34**	*e*P		**Pn**	**01 18 28.0**	**+0.9**
SKR				AMB		AMB	01 18 30.0	
	comp=Z,111nm,0.8s							
SKR	**Severo-Kuril's**	**7.78**	**34**	*e*PN		**Pn**	**01 18 28.3**	**+1.2**
SKR				pmax		pmax		
	comp=Z,111nm,0.8s							
OFUJ	**Ofunato**	**7.81**	**230**	P		**Pn**	**01 18 26.2**	**-1.4**
TYV	**Tymovskoe**	**7.89**	**327**	*e*P		**Pn**	**01 18 29.3**	**+0.7**
TYV				AMB		AMB	01 18 31.0	
	comp=Z,13nm,0.5s							
TYV				*e*S		**Sn**	**01 19 53.5**	**-2.9**
TYV				A		A	01 19 59.5	
	comp=Z,8.0nm,0.7s							
TYV				A		A	01 19 59.5	
	comp=Z,7.0nm,0.7s							
TYV				A		A	01 20 02.7	
	comp=Z,500nm,4.0s							
TYV	**Tymovskoe**	**7.89**	**327**	*e*PN		**Pn**	**01 18 30.3**	**+1.7**
TYV				*e*S		**Sn**	**01 20 00.1**	**+3.7**
TYV				pmax		pmax		
	comp=Z,12nm,0.5s							
TYV				smax		smax		
	comp=N,13nm,0.9s							
TYV				smax		smax		
	comp=N,500nm,4.1s							
JRG	**Rokugo**	**8.19**	**235**	P		**Pn**	**01 18 32.1**	**-0.6**
PAU	**Pauzhetka**	**8.67**	**33**	*e*P		**Pn**	**01 18 40.1**	**+0.8**
PAU				AMB		AMB	01 18 42.9	
	comp=N,68nm,0.6s							
PAU				*e*S		**Sn**	**01 20 13.5**	**-2.1**
PAU				A		A	01 20 15.2	
	comp=N,128nm,0.6s							
PAU				A		A	01 20 15.2	
	comp=N,111nm,0.6s							
TEY	**Ternei**	**9.09**	**279**	*e*P		**Pn**	**01 18 46.9**	**+1.8**
TEY				AMB		AMB	01 18 49.2	
	comp=N,6.0nm,0.5s							
TEY	**Ternei**	**9.09**	**279**	*e*PN		Pn	01 18 35.0	-10
OKH	**Okha**	**10.08**	**338**	*e*P		**Pn**	**01 19 01.5**	**+3.0**
OKH				*e*S		**Sn**	**01 20 50.1**	**0.0**
PEA0B	**Petropavlovsk-**	**10.31**	**29**	*i* PN		**Pn**	**01 19 02.0**	**+0.2**
PETK	**Petropavlovsk-**	**10.31**	**29**	P		**Pn**	**01 19 02.5**	**+0.7**
	comp=N,1.7nm,0.3s,baz=205,slow=14,SNR=11							
PETK				LR		LR	01 23 16.6	
	comp=N,39nm,19.1s,baz=232,slow=39							
PETK	**Petropavlovsk-**	**10.31**	**29**	PN		**Pn**	**01 19 02.7**	**+0.9**
PETK	**Petropavlovsk-**	**10.31**	**29**			**Pn**	**01 19 02.7**	**+0.9**
GRNR	**Gornyy**	**10.80**	**311**	*e*P		Pn	01 19 02.1	-6.3
GRNR				AMB		AMB	01 19 02.9	
	comp=N,5.0nm,0.8s							
GRNR	**Gornyy**	**10.80**	**311**	⇑ *i* PN		Pn	01 19 02.1	-6.3
GRNR				pmax		pmax		
	comp=Z,5.0nm,0.8s							
GRNR				MLR		MLR		
	comp=E,110nm,16.0s							
GRNR				MLR		MLR		
	comp=N,110nm,17.0s							
GRNR				MLR		MLR		
	comp=Z,190nm,17.0s							
MJAR	**Matsushiro Arr**	**11.54**	**231**	LR		LR	01 24 09.0	
	comp=Z,33nm,20.0s,baz=35,slow=39							
USA0B	**Ussuriysk Arra**	**12.44**	**275**	*i* PN		**Pn**	**01 19 31.0**	**+0.2**
USRK	**Ussuriysk Ar.**	**12.44**	**275**	P		**Pn**	**01 19 32.4**	**+1.6**
	baz=78,slow=14,SNR=6.8							
USRK				LR		LR	01 23 51.9	
	comp=Z,54nm,21.8s,baz=86,slow=35							
KLR	**Kul'dur**	**12.98**	**298**	P		**Pn**	**01 19 40.1**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=102,slow=14,SNR=8.9							
KLR				LR		LR	01 24 33.0	
	comp=Z,107nm,20.7s,baz=139,slow=37							
KLR	**Kul'dur**	**12.98**	**298**	*e*P		**Pn**	**01 19 38.0**	**-0.1**
KLR	**Kul'dur**	**12.98**	**298**	*i* PN		**Pn**	**01 19 38.0**	**-0.1**
KLR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
EKMR	**Ekimchan**	**13.84**	**315**	*e*P		**Pn**	**01 19 49.0**	**-1.0**
EKMR				AMB		AMB	01 19 55.0	
	comp=Z,10.0nm,1.0s							
MA2	**Magadan**	**15.23**	**3**	LR		LR	01 26 12.7	
	comp=Z,38nm,18.9s,baz=172,slow=38							
BMKR	**Bomnak**	**16.77**	**315**	*e*P		**Pn**	**01 20 25.0**	**-3.0**
KSRS	**Korea Array**	**17.58**	**254**	P		**P**	**01 20 41.2**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=59,slow=10,SNR=4.1							
KSRS				LR		LR	01 26 46.0	
	comp=Z,31nm,18.1s,baz=65,slow=34							
KROS	**Kirovskiy**	**17.61**	**313**	*e*P		**Pn**	**01 20 36.0**	**-2.4**
SEY	**Seymchan**	**18.66**	**4**	P		**P**	**01 20 48.9**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=194,slow=12,SNR=6.4							
YAK	**Yakutsk**	**21.07**	**334**	LR		LR	01 29 04.7	
	comp=Z,52nm,20.4s,baz=95,slow=36							
YAK	**Yakutsk**	**21.07**	**334**	*e*P		**P**	**01 21 15.8**	**-0.9**
YAK	**Yakutsk**	**21.07**	**334**	*e*P		**P**	**01 21 15.8**	**-0.9**
YAK				pmax		pmax		
	comp=N,6.0nm,1.3s							
YAK				pmax		pmax		
	comp=Z,17nm,0.8s							
YAK				pmax		pmax		
	comp=E,12nm,1.4s							
BILL	**Bilibino**	**25.32**	**15**	*e*P		**P**	**01 21 59.3**	**+0.6**
BILL	**Bilibino**	**25.32**	**15**	*e*P		**P**	**01 21 59.3**	**+0.6**
BILL				pmax		pmax		
	comp=Z,1.0nm,0.4s							
H11N2	**WAKE ISLAND Hy**	**28.62**	**144**	T		T	01 53 30.5	
	baz=334,slow=76,SNR=654							
H11N1	**WAKE ISLAND Hy**	**28.63**	**144**	T		T	01 53 31.6	
	baz=334,slow=76,SNR=405							
H11N3	**WAKE ISLAND Hy**	**28.64**	**144**	T		T	01 53 28.0	
	baz=334,slow=76,SNR=364							
H11S1	**WAKE ISLAND Hy**	**29.63**	**145**	T		T	01 54 43.2	
	baz=335,slow=76,SNR=544							
H11S3	**WAKE ISLAND Hy**	**29.64**	**145**	T		T	01 54 44.7	
	baz=335,slow=76,SNR=345							
H11S2	**WAKE ISLAND Hy**	**29.64**	**145**	T		T	01 54 44.5	
	baz=335,slow=76,SNR=349							
SONM	**Songino Array**	**29.68**	**292**	P		**P**	**01 22 38.2**	**0.0**
	comp=Z,0.5nm,0.5s,baz=96,slow=5.8,SNR=2.6							
SONM				LR		LR	01 35 15.5	
	comp=Z,70nm,18.1s,baz=35,slow=38							
SONM	**Songino Array**	**29.68**	**292**	P		**P**	**01 22 38.0**	**-0.2**
SONM				pmax		pmax		
	comp=Z,1.0nm,1.1s							
SONM	**Songino Array**	**29.68**	**292**	P		**P**	**01 22 38.0**	**-0.2**
A21K	**Barrow**	**37.29**	**25**	P		**P**	**01 23 44.1**	**+0.4**
COLD	**Coldfoot**	**38.76**	**33**	P		**P**	**01 23 57.1**	**+0.9**
COLD				IAmb		IAmb	01 23 57.6	
	comp=Z,3.8nm,0.6s							
TOLK	**Toolik Lake Re**	**39.13**	**31**	P		**P**	**01 23 60.0**	**+0.6**
TOLK				IAmb		IAmb	01 24 03.3	
	comp=Z,3.2nm,0.6s							
MDM	**Murphy Dome**	**39.46**	**36**	P		**P**	**01 24 02.9**	**+0.8**
MDM				IAmb		IAmb	01 24 03.9	
	comp=Z,3.1nm,0.7s							
NRIK	**Noril'sk**	**39.46**	**331**	*i* P		**P**	**01 24 00.8**	**-1.2**
NRIK				pmax		pmax		
	comp=Z,1.0nm,1.5s							
POKR	**Poker Plat Res**	**39.80**	**36**	P		**P**	**01 24 05.9**	**+1.0**
IL31		**40.03**	**37**	P		**P**	**01 24 07.2**	**+0.4**
IL31				IAmb		IAmb	01 24 09.3	
	comp=Z,3.1nm,0.8s							
ILAR	**Eielson Array**	**40.03**	**37**	P		**P**	**01 24 07.2**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=270,slow=7.8,SNR=25							
ILAR				pP		**pwP**	**01 24 22.9**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=273,slow=10,SNR=3.5							
ILAR	**Eielson Array**	**40.03**	**37**	P		**P**	**01 24 07.5**	**+0.6**
BMAR	**Burnt Mountain**	**40.95**	**33**	P		**P**	**01 24 15.4**	**+1.0**
ZALV	**Zalesovo Beam**	**41.87**	**307**	P		**P**	**01 24 22.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=56,slow=7.8,SNR=2.0							
ZALV				PcP		**PcP**	**01 26 16.5**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=84,slow=4.9,SNR=4.9							
ZALV				LR		LR	01 41 56.5	
	comp=Z,52nm,19.2s,baz=88,slow=36							
ZALV	**Zalesovo Beam**	**41.87**	**307**	P		**P**	**01 24 21.9**	**-0.2**
K27K	**Chicken**	**42.16**	**38**	P		**P**	**01 24 24.6**	**+0.2**
K27K				IAmb		IAmb	01 24 26.4	
	comp=Z,7.7nm,1.1s							
BCAR	**Beaver Creek A**	**42.41**	**39**	P		**P**	**01 24 27.5**	**+1.0**
INK	**Inuvik**	**45.05**	**31**	P		**P**	**01 24 48.0**	**+0.6**
	comp=Z,2.2nm,0.6s,baz=300,slow=5.8,SNR=7.0							
INK	**Inuvik**	**45.05**	**31**	P		**P**	**01 24 48.2**	**+0.7**
MK31	**Makanchi Array**	**45.68**	**298**	P		**P**	**01 24 52.6**	**-0.3**
MK31				pmax		pmax		
	comp=Z,3.0nm,0.9s							
MK31	**Makanchi Array**	**45.68**	**298**	P		**P**	**01 24 52.6**	**-0.3**
MKAR	**Makanchi Array**	**45.68**	**298**	P		**P**	**01 24 52.7**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=75,slow=7.5,SNR=10							
MKAR	**Makanchi Array**	**45.68**	**298**	P		**P**	**01 24 52.4**	**-0.4**
KURK	**Kurchatov**	**46.48**	**304**	*e*P		**P**	**01 24 58.9**	**-0.1**
KURK	**Kurchatov**	**46.48**	**304**	*i* P		**P**	**01 24 58.9**	**-0.1**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
C36M	**Paulatuk**	**48.17**	**28**	P		**P**	**01 25 12.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**49.22**	**255**	P		**P**	**01 25 21.9**	**+1.3**
	comp=Z,2.1nm,0.4s,baz=38,slow=8.0,SNR=4.5							
CMAR	**Chiang Mai Arr**	**49.22**	**255**	*e*P		**P**	**01 25 21.1**	**+0.5**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
BRVK	**Borovoye**	**50.36**	**310**	*e*P		**P**	**01 25 28.5**	**-0.3**
BRVK	**Borovoye**	**50.36**	**310**	*i* P		**P**	**01 25 28.5**	**-0.3**
BRVK				pmax		pmax		
	comp=Z,1.0nm,1.1s							
GUN	**Gumba**	**52.55**	**274**	*e*P		**P**	**01 25 46.4**	**+0.4**
	comp=Z,12nm,0.4s							
RAMN	**Ramite**	**52.60**	**273**	*e*P		**P**	**01 25 46.5**	**+0.3**
	comp=Z,23nm,0.4s							
DANN	**Dangsing**	**53.80**	**276**	*e*P		**P**	**01 25 55.9**	**+0.8**
	comp=Z,12nm,0.6s							
RES	**Resolute Bay**	**53.89**	**17**	P		**P**	**01 25 54.6**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=293,slow=7.7,SNR=5.0							
YKA	**Yellowknife Ar**	**54.38**	**35**	P		**P**	**01 25 59.4**	**+0.9**
	comp=Z,1.6nm,0.6s,baz=301,slow=6.6,SNR=7.1							
PYUN	**Piuthan**	**54.50**	**276**	*e*P		**P**	**01 26 00.4**	**+0.3**
	comp=Z,6.9nm,0.4s							
ABKAR	**Akbulak array**	**57.88**	**309**	P		**P**	**01 26 23.4**	**-0.3**
ABKAR	**Akbulak array**	**57.88**	**309**	P		**P**	**01 26 23.3**	**-0.4**
ARCES	**ARCESS Array B**	**59.19**	**340**	P		**P**	**01 26 30.1**	**-2.4**
	comp=Z,5.6nm,1.1s,baz=34,slow=9.8,SNR=2.0							
FINES	**FINESS Array B**	**65.01**	**334**	P		**P**	**01 27 09.8**	**-1.7**
	comp=Z,3.1nm,0.8s,baz=23,slow=6.2,SNR=4.5							
BOZ	**Bozeman (W)**	**65.33**	**50**	P		**P**	**01 27 14.6**	**+0.5**
BOZ				pmax		pmax		
	comp=Z,6.0nm,1.1s							
BOZ	**Bozeman (W)**	**65.33**	**50**	P		**P**	**01 27 14.6**	**+0.5**
WB2	**Warramunga Arr**	**65.47**	**196**	P		**P**	**01 27 16.7**	**+1.7**
WB2				IAmb		IAmb	01 27 17.9	
	comp=Z,5.7nm,1.1s							
WRA	**Warramunga Arr**	**65.48**	**196**	P		**P**	**01 27 16.8**	**+1.8**
	comp=Z,2.3nm,0.8s,baz=14,slow=6.7,SNR=16							
WRA				pP		**pwP**	**01 27 32.9**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=16,slow=7.0,SNR=7.9							
WRA	**Warramunga Arr**	**65.48**	**196**	P		**P**	**01 27 17.0**	**+2.0**
WC3	**Warramunga Arr**	**65.49**	**195**	P		**P**	**01 27 16.3**	**+1.2**
GEYT	**Alibeck**	**65.50**	**300**	LR		LR	01 57 19.5	
	comp=Z,26nm,18.1s,baz=250,slow=37							
NVAR	**Mina Array Bea**	**65.90**	**59**	P		**P**	**01 27 19.4**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=310,slow=7.0,SNR=3.7							
NVAR	**Mina Array Bea**	**65.90**	**59**	P		**P**	**01 27 18.8**	**+0.8**
PDAR	**Pinedale Array**	**68.28**	**51**	P		**P**	**01 27 33.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=289,slow=2.8,SNR=2.4							
ASAR	**Alice Springs**	**69.19**	**195**	P		**P**	**01 27 41.0**	**+2.5**
	comp=Z,1.3nm,0.8s,baz=11,slow=5.4,SNR=15							
ASAR				pP		**pwP**	**01 27 57.1**	**+1.0**
	comp=Z,1.6nm,0.9s,baz=11,slow=6.3,SNR=6.1							
ASAR	**Alice Springs**	**69.19**	**195**	P		**P**	**01 27 41.1**	**+2.6**
NB2	**NORSAR Subarra**	**69.56**	**340**	P		**P**	**01 27 38.7**	**-1.7**
	comp=Z,2.2nm,0.9s,baz=31,slow=6.5							
NOA	**NORSAR Array B**	**69.56**	**340**	P		**P**	**01 27 39.0**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=32,slow=6.6,SNR=9.5							
ULM	**Lac du Bonnet**	**70.03**	**38**	P		**P**	**01 27 43.1**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=333,slow=7.6,SNR=2.0							
KBZ	**Khabaz**	**70.54**	**312**	P		**P**	**01 27 46.7**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=115,slow=2.6,SNR=4.0							
KBZ				LR		LR	02 02 32.1	
	comp=Z,38nm,18.7s,baz=83,slow=39							
AKASG	**Malin Array Be**	**71.98**	**325**	P		**P**	**01 27 54.6**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=36,slow=5.9,SNR=4.1							
KRLC	**Kraliky**	**77.25**	**331**	*e*P		P	01 28 18.3	-7.6
KRLC	**Kraliky**	**77.25**	**331**	*e*P		P	01 28 18.3	-7.6
CLL	**Collm**	**77.45**	**334**	*e*P		**P**	**01 28 27.0**	**+0.1**
CLL	**Collm**	**77.45**	**334**	*e*P		**P**	**01 28 27.0**	**+0.1**
KHC	**Kasperske Hory**	**79.14**	**332**	*e*P		**P**	**01 28 35.9**	**-0.5**
KHC	**Kasperske Hory**	**79.14**	**332**	*e*P		**P**	**01 28 35.9**	**-0.5**
GERES	**GERESS Array B**	**79.35**	**332**	P		**P**	**01 28 37.3**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=32,slow=7.8,SNR=4.2							
GERES	**GERESS Array B**	**79.35**	**332**	P		**P**	**01 28 36.9**	**-0.7**
GERES	**GERESS Array B**	**79.35**	**332**	P		**P**	**01 28 36.9**	**-0.7**
MOA	**Molln**	**80.01**	**331**	*e*P		**P**	**01 28 41.9**	**+0.8**
	comp=Z,3.1nm,1.1s							
SOKA	**Soboth**	**80.75**	**330**	*e*P		**P**	**01 28 45.7**	**+0.5**
	comp=Z,4.3nm,1.0s							
KBA	**Koelnbreinsper**	**81.00**	**331**	*e*P		**P**	**01 28 47.3**	**+0.7**
	comp=Z,4.4nm,1.1s							
WATA	**Walderalm**	**81.37**	**332**	*i* P		**P**	**01 28 49.5**	**+0.9**
	comp=Z,5.0nm,1.1s							
WTTA	**Wattenberg**	**81.41**	**332**	*i* P		**P**	**01 28 49.8**	**+1.0**
	comp=Z,3.6nm,0.9s							
MOTA	**Moosalm**	**81.52**	**333**	*e*P		**P**	**01 28 50.9**	**+1.6**
	comp=Z,5.2nm,0.9s							
FETA	**Feichten**	**81.92**	**333**	*e*P		**P**	**01 28 53.8**	**+2.3**
	comp=Z,3.1nm,1.2s							
NRCA	**Norcia**	**84.75**	**329**	P		**P**	**01 29 05.1**	**-0.9**
NRCA				IAmb		IAmb	01 29 07.5	
	comp=Z,3.9nm,0.8s							
H03N2	**Juan Fernandez**	**141.39**	**90**	T		T	04 14 12.5	
	baz=304,slow=74,SNR=6.9							
H03N3	**Juan Fernandez**	**141.40**	**90**	T		T	04 14 03.1	
	baz=304,slow=74,SNR=12							
H03N1	**Juan Fernandez**	**141.40**	**90**	T		T	04 14 12.6	
	baz=304,SNR=12							

*IDC **25** 01:33:32.4±0.8,21°.53N×143°.82E,h0km,mb3.9/14, mb1 4.1/15,mb1mx3.9/56,mbtmp3.9/15,ML3.2/1,MS3.3/7, Ms1 3.3/7,ms1mx3.0/40,Error ellipse: s-maj=27.9km s-min=17.9km az=79.0*

ISC 25 01:33:34.0±0.9,21°.6N±0°.1×143°.8E±0°.2,h10km,n26, σ1s14/16,mb4.0/13,MS3.2/5,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**12.06**	**344**	LR		LR	LR	01 40 28.8	
	comp=Z,180nm,18.1s,baz=116,slow=34								
MJAR	**Matsushiro Arr**	**15.71**	**343**	Pn		**Pn**	**Pn**	**01 37 13.9**	**-1.4**
	0.1nm,0.3s,baz=159,slow=10,SNR=6.8								
MJAR				LR		LR	LR	01 42 39.6	
	comp=Z,140nm,19.6s,baz=155,slow=35								
KSRS	**Korea Array**	**20.96**	**323**	P		**P**	**P**	**01 38 16.5**	**-0.6**
	1.6nm,0.6s,baz=137,slow=15,SNR=2.3								
KSRS				LR		LR	LR	01 46 03.0	
	comp=Z,106nm,18.0s,baz=138,slow=36								
H11N1	**WAKE ISLAND Hy**	**21.72**	**91**	T		T	T	02 01 04.8	
	baz=279,slow=75,SNR=8.1								
H11N2	**WAKE ISLAND Hy**	**21.72**	**91**	T		T	T	02 01 03.0	
	baz=279,slow=75,SNR=6.3								
H11N3	**WAKE ISLAND Hy**	**21.74**	**91**	T		T	T	02 01 06.4	
	baz=279,slow=75,SNR=8.1								
H11S3	**WAKE ISLAND Hy**	**21.75**	**94**	T		T	T	02 01 04.8	
	baz=282,slow=75,SNR=22								
H11S1	**WAKE ISLAND Hy**	**21.76**	**94**	T		T	T	02 01 07.0	
	baz=282,slow=75,SNR=24								
H11S2	**WAKE ISLAND Hy**	**21.77**	**94**	T		T	T	02 01 03.4	
	baz=282,slow=75,SNR=21								
DAV	**Davao City (W)**	**22.71**	**233**	LR		LR	LR	01 45 29.1	
	comp=Z,92nm,21.6s,baz=80,slow=32								
USRK	**Ussuriysk Ar.**	**24.61**	**339**	P		**P**	**P**	**01 38 54.7**	**+0.3**
	5.1nm,1.1s,baz=157,slow=7.8,SNR=2.5								
KLR	**Kul'dur**	**29.23**	**344**	P		**P**	**P**	**01 39 38.1**	**+2.2**
	8.5nm,0.6s,baz=160,slow=6.8,SNR=26								
PETK	**Petropavlovsk-**	**33.27**	**15**	LR		LR	LR	01 52 09.0	
	comp=Z,32nm,20.5s,baz=191,slow=34								
SONM	**Songino Array**	**39.80**	**320**	P		**P**	**P**	**01 41 06.0**	**-1.4**
	0.3nm,0.5s,baz=111,slow=7.9,SNR=1.8								
SONM				LR		LR	LR	01 58 13.3	
	comp=Z,54nm,18.2s,baz=342,slow=37								
WRA	**Warramunga Arr**	**42.25**	**193**	P		**P**	**P**	**01 41 27.7**	**0.0**
	1.1nm,1.0s,baz=15,slow=8.6,SNR=5.4								
ASAR	**Alice Springs**	**45.95**	**193**	P		**P**	**P**	**01 41 57.1**	**-0.2**
	0.5nm,0.5s,baz=18,slow=11,SNR=8.7								
PSI	**Prapat**	**47.38**	**253**	LR		LR	LR	02 03 11.2	
	comp=Z,26nm,18.6s,baz=90,slow=38								
ZALV	**Zalesovo Beam**	**54.66**	**322**	P		**P**	**P**	**01 43 02.8**	**-0.2**
	2.4nm,0.8s,baz=98,slow=7.4,SNR=7.1								
MKAR	**Makanchi Array**	**55.20**	**313**	P		**P**	**P**	**01 43 08.8**	**+1.8**
	1.0nm,0.7s,baz=90,slow=8.2,SNR=7.7								
ILAR	**Eielson Array**	**61.93**	**27**	P		**P**	**P**	**01 43 52.9**	**-0.7**
	0.4nm,0.8s,baz=254,slow=5.5,SNR=5.9								
BVAR	**Borovoye Array**	**63.13**	**320**	P		**P**	**P**	**01 44 01.1**	**-0.8**
	1.2nm,0.7s,baz=36,slow=21,SNR=7.3								
YKA	**Yellowknife Ar**	**76.33**	**28**	P		**P**	**P**	**01 45 23.7**	**+0.7**
	0.7nm,0.5s,baz=295,slow=5.0,SNR=2.1								
ARCES	**ARCESS Array B**	**79.23**	**342**	P		**P**	**P**	**01 45 40.4**	**+1.4**
	2.2nm,0.6s,baz=72,slow=8.0,SNR=11								
NVAR	**Mina Array Bea**	**82.81**	**52**	P		**P**	**P**	**01 45 58.5**	**-0.5**
	0.3nm,0.5s,baz=285,slow=5.7,SNR=14								
FINES	**FINESS Array B**	**83.55**	**335**	P		**P**	**P**	**01 46 02.7**	**+0.6**
	2.7nm,0.9s,baz=48,slow=4.1,SNR=2.0								
LPAZ	**La Paz**	**149.41**	**86**	PKPbc		**PKPbc**	**PKPbc**	**01 53 24.4**	**-0.5**
	1.8nm,1.0s,baz=308,slow=2.0,SNR=3.8								

*DRS **25** 01:36:42.3±0.0,43°.08N×45°.66E,h14km*
*NORS **25** 01:36:43.2±0.0,42°.97N×45°.86E,h14km,MPVA3.7*
*TIF **25** 01:36:44.7,43°.02N×45°.86E,h12km±2km*

ISC 25 01:36:45.2±0.9,43°.09N±0°.03×45°.92E±0°.02,h14km±6km, n35,σ1s59/74,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.15**	**323**	*i* Pg		**Pb**	**Pb**	**01 36 48.7**	**-1.0**
GROC				*e*Sg		**Sg**	**Sg**	**01 36 53.0**	**+1.5**
DVE	**Vedeno**	**0.20**	**130**	*e*Pg		**Pg**	**Pg**	**01 36 49.6**	**-0.3**
DVE				*e*Sg		**Sg**	**Sg**	**01 36 53.9**	**+0.9**
BTLR	**Botlikh**	**0.48**	**152**	*i* Pg		**Pg**	**Pg**	**01 36 53.8**	**-0.8**
	66nm,0.2s								
BTLR				*i* Pg		**Pg**	**Pg**	**01 36 53.9**	**-0.8**
BTLR				*e*Sg		**Sg**	**Sg**	**01 37 01.1**	**0.0**
	483nm,0.6s								
BTLR				*e*Sg		**Sb**	**Sb**	**01 37 01.3**	**-1.0**
DLMR	**Dylym**	**0.52**	**92**	*e*Pg		**Pn**	**Pn**	**01 36 55.8**	**-2.4**
DLMR				*e*Sg		**Sb**	**Sb**	**01 37 04.8**	**+1.3**
DBC	**Dubki**	**0.67**	**95**	*e*Pg		**Pn**	**Pn**	**01 36 58.5**	**-1.8**
	25nm,0.5s								
DBC				*e*Pg		**Pn**	**Pn**	**01 36 58.6**	**-1.8**
DBC				*e*Sg		**Sn**	**Sn**	**01 37 09.3**	**-1.3**
	50nm,0.4s								
DBC				*e*Sg		**Sn**	**Sn**	**01 37 09.4**	**-1.3**
KMGR	**Komgaron**	**0.77**	**268**	*e*Pg		**Pg**	**Pg**	**01 36 59.0**	**-1.1**
KMGR				*e*Sg		**Sg**	**Sg**	**01 37 09.6**	**-0.7**
KRNR	**Karanay**	**0.77**	**109**	*e*Pg		**Pn**	**Pn**	**01 36 60.0**	**-1.8**
KRNR				*e*Sg		**Sn**	**Sn**	**01 37 11.9**	**-1.2**
XNZR	**Khunzakh**	**0.80**	**

H11S1 WAKE ISLAND Hy 22.08 94 T T 02 18 22.4
baz=282,slow=75,SNR=102
H11S2 WAKE ISLAND Hy 22.09 94 T T 02 18 25.4
baz=282,slow=75,SNR=75
TGY Tagaytay City 22.70 254 LR LR 02 02 54.9
comp=Z,178nm,19.7s,baz=24,slow=32
USRK Ussuriysk Ar. 24.31 340 P **P** **01 56 07.1 +1.4**
7.5nm,1.0s,baz=149,slow=8.9,SNR=6.7
USRK Ussuriysk Ar. 24.31 340 P **P** **01 56 05.6 -0.1**
KLR Kul'dur 28.95 344 P **P** **01 56 48.2 +0.8**
13nm,0.8s,baz=149,slow=7.6,SNR=36
PETK Petropavlovsk- 33.16 16 LR LR 02 08 39.8
comp=Z,86nm,20.1s,baz=200,slow=32
SONM Songino Array 39.44 320 P **P** **01 58 18.9 +0.5**
2.3nm,0.8s,baz=144,slow=9.6,SNR=11
SONM LR LR 02 14 04.8
comp=Z,56nm,19.4s,baz=166,slow=36
SONM Songino Array 39.44 320 P **P** **01 58 18.0 -0.4**
SEY Seymchan 41.60 6 P **P** **01 58 36.1 +0.3**
1.9nm,0.4s,baz=186,slow=5.1,SNR=5.6
CMAR Chiang Mai Arr 41.80 274 LR LR 02 14 04.1
comp=Z,26nm,21.9s,baz=70,slow=33
WRA Warramunga Arr 42.38 193 P **P** **01 58 42.4 -0.3**
3.0nm,0.8s,baz=14,slow=8.7,SNR=15
WRA LR LR 02 16 09.9
comp=Z,40nm,18.6s,baz=345,slow=36
WRA Warramunga Arr 42.38 193 P **P** **01 58 43.1 +0.4**
AS31 Alice Springs 46.09 192 P **P** **01 59 13.4 +1.1**
ASAR Alice Springs 46.09 192 P **P** **01 59 13.3 +1.0**
0.9nm,0.6s,baz=13,slow=8.6,SNR=11
ASAR LR LR 02 17 22.2
comp=Z,58nm,19.9s,baz=9.5,slow=35
STKA Stephens Creek 53.36 182 P **P** **02 00 08.5 +1.1**
3.3nm,0.9s,baz=358,slow=9.0,SNR=3.8
STKA Stephens Creek 53.36 182 P **P** **02 00 08.8 +1.3**
ZAA0 Zalesovo Array 54.31 322 P **P** **02 00 14.3 +0.1**
ZAA0 IAmb IAmb 02 00 15.0
comp=Z,5.8nm,0.8s
ZALV Zalesovo Beam 54.31 322 P **P** **02 00 14.4 +0.1**
comp=Z,5.1nm,0.7s,baz=102,slow=6.9,SNR=24
MKAR Makanchi Array 54.83 313 P **P** **02 00 19.0 +0.8**
comp=Z,2.7nm,0.8s,baz=98,slow=8.7,SNR=14
MKAR Makanchi Array 54.83 313 P **P** **02 00 18.4 +0.2**
KURK Kurchatov 57.59 317 P **P** **02 00 38.0 +0.2**
KURK IAmb IAmb 02 00 39.0
comp=Z,6.3nm,0.8s
NRIK Noril'sk 58.02 340 P **P** **02 00 40.2 -0.3**
comp=Z,6.1nm,0.8s,baz=108,slow=9.9,SNR=8.7
NRIK LR LR 02 25 40.5
comp=Z,54nm,19.3s,baz=240,slow=36
IMAR Indian Mountai 59.34 25 P **P** **02 00 50.5 +0.8**
BPAW Bear Paw Mtn. 60.01 27 P **P** **02 00 55.1 +0.7**
TRF Thorofare Moun 60.18 28 P **P** **02 00 56.0 +0.2**
SML Sawmill 60.79 30 P **P** **02 01 00.3 +0.5**
COLD Coldfoot 61.02 24 P **P** **02 01 01.4 +0.2**
COLD IAmb IAmb 02 01 03.5
comp=Z,5.6nm,0.9s
TOLK Toolik Lake Re 61.58 23 P **P** **02 01 06.0 +0.9**
TOLK IAmb IAmb 02 01 07.2
comp=Z,6.8nm,1.0s
IL31 61.88 27 P **P** **02 01 06.2 -0.8**
IL31 IAmb IAmb 02 01 07.2
comp=Z,4.2nm,0.8s
ILAR Eielson Array 61.88 27 P **P** **02 01 06.2 -0.9**
comp=Z,3.7nm,0.9s,baz=262,slow=5.7,SNR=30
ILAR LR LR 02 24 42.5
comp=Z,46nm,21.5s,baz=271,slow=33
ILAR Eielson Array 61.88 27 P **P** **02 01 06.4 -0.7**
KLU Klutina 61.89 31 P **P** **02 01 08.0 +0.7**
BVAR Borovoye Array 62.78 319 P **P** **02 01 12.7 -0.6**
comp=Z,4.0nm,0.8s,baz=213,slow=29,SNR=23
BRVK Borovoye 62.84 320 P **P** **02 01 13.8 +0.1**
KK31 Karatay Array 63.20 308 P **P** **02 01 16.5 +0.1**
KKAR Karatay Array 63.20 308 P **P** **02 01 16.4 +0.1**
KKAR Karatay Array 63.20 308 P **P** **02 01 16.4 +0.1**
K27K Chicken 63.88 28 P **P** **02 01 21.1 +0.8**
K27K IAmb IAmb 02 01 24.1
comp=Z,3.9nm,0.9s
BCAR Beaver Creek A 63.95 29 P **P** **02 01 21.4 +0.5**
DAWY Dawson 65.06 28 P **P** **02 01 28.9 +0.7**
KBL Kabul 65.51 299 P **P** **02 01 31.6 -0.3**
KBL IAmb IAmb 02 01 47.8
comp=Z,5.3nm,0.8s
HYT Haines Junctio 65.94 32 P **P** **02 01 34.6 +0.6**
INK Inuvik 67.42 24 P **P** **02 01 43.2 +0.1**
comp=Z,5.6nm,0.8s,baz=259,slow=5.3,SNR=14
INK Inuvik 67.42 24 P **P** **02 01 42.9 -0.2**
INK IAmb IAmb 02 01 44.3
comp=Z,9.3nm,1.1s
ARU Arti 69.36 324 P **P** **02 01 55.3 -0.2**
comp=Z,0.6nm,0.3s,baz=67,slow=7.7,SNR=3.4
ABKAR Akbulak array 69.67 316 P **P** **02 01 57.4 -0.1**
ABKAR IAmb IAmb 02 01 58.4
comp=Z,6.1nm,0.8s
AKTO Aktyubinsk 70.68 318 P **P** **02 02 02.9 -0.8**
comp=Z,1.7nm,0.8s,baz=73,slow=10,SNR=5.8
C36M Paulatuk 70.72 22 P **P** **02 02 03.9 +0.4**
C36M IAmb IAmb 02 02 04.4
comp=Z,6.3nm,0.9s
YKA Yellowknife Ar 76.30 28 P **P** **02 02 36.8 +0.3**
comp=Z,5.4nm,0.8s,baz=296,slow=5.0,SNR=12
KLMR Klimovskoe 77.77 331 P **P** **02 02 42.3 -2.5**
KLMR AMP 02 02 59.9
comp=Z,21nm,1.5s
B08A Colville Reser 78.67 42 P **P** **02 02 50.3 +0.2**
B08A IAmb IAmb 02 02 51.6
comp=Z,4.5nm,0.9s
ARCES ARCESS Array B 78.94 342 P **P** **02 02 51.4 +0.2**
comp=Z,1.4nm,0.7s,baz=38,slow=2.9,SNR=3.5
PINE Pine Mountain 79.16 47 P **P** **02 02 53.2 +0.1**
BEKR Beckworth 80.92 51 P **P** **02 03 02.6 -0.1**
BEKR IAmb IAmb 02 03 04.0
comp=Z,5.7nm,0.8s
J08A Circle Bar Ran 80.99 47 P **P** **02 03 03.1 +0.2**
J08A IAmb IAmb 02 03 04.3
comp=Z,4.6nm,0.9s
BMO Blue Mountains 81.22 45 P **P** **02 03 04.5 +0.4**
CMB Columbia Colle 81.54 53 P **P** **02 03 06.0 +0.2**
CMB IAmb IAmb 02 03 07.4
comp=Z,4.4nm,0.8s
PNTR Pine Nut 81.74 51 P **P** **02 03 07.2 +0.1**
PNTR IAmb IAmb 02 03 08.9
comp=Z,5.8nm,0.9s
WAKR Walker 82.07 52 P **P** **02 03 09.0 +0.2**
KBZ Khabaz 82.50 314 P **P** **02 03 11.2 +0.6**
comp=Z,8.5nm,0.9s,baz=98,slow=4.2,SNR=13
RYN Ryan 82.69 51 P **P** **02 03 12.2 +0.2**
KVN Kaiserville 82.84 51 P **P** **02 03 12.9 +0.1**
NVAR Mina Array Bea 82.93 52 P **P** **02 03 14.3 +1.0**
comp=Z,3.2nm,0.6s,baz=277,slow=5.7,SNR=28
NVAR Mina Array Bea 82.93 52 P **P** **02 03 13.0 -0.3**
FINES FINESS Array B 83.23 335 P **P** **02 03 13.4 -0.7**
comp=Z,5.8nm,1.1s,baz=72,slow=2.4,SNR=7.2
FINES FINESS Array B 83.23 335 P **P** **02 03 14.1 0.0**
ELK Elko 84.21 48 P **P** **02 03 19.8 -0.1**
ELK IAmb IAmb 02 03 21.5
comp=Z,4.6nm,1.1s
R11A Troy Canyon, C 84.93 51 P **P** **02 03 23.7 +0.2**
TPNV Topopah Spring 85.00 52 P **P** **02 03 23.7 -0.2**
TPNV IAmb IAmb 02 03 25.5
comp=Z,4.1nm,0.9s
GSC Goldstone, Bar 85.24 54 P **P** **02 03 25.2 +0.2**
GSC IAmb IAmb 02 03 26.0
comp=Z,3.8nm,0.8s
YHH Holmes Hill 85.45 43 P **P** **02 03 26.0 -0.1**
HVU Hansel Valley 85.48 47 P **P** **02 03 26.1 0.0**
FFC Flin Flon 85.66 32 P **P** **02 03 27.2 +0.6**
PRN Pahroc Range 85.69 51 P **P** **02 03 27.2 0.0**
PRN IAmb IAmb 02 03 29.4
comp=Z,6.2nm,1.2s
SHPR Sheep Range 85.98 52 P **P** **02 03 28.8 +0.1**
SHPR IAmb IAmb 02 03 30.6
comp=Z,4.0nm,1.0s
PSUT Pine Spring 86.09 50 P **P** **02 03 29.3 0.0**
DUG Dugway, Tooele 86.12 48 P **P** **02 03 29.7 +0.3**
DUG IAmb IAmb 02 03 30.9
comp=Z,7.0nm,1.1s
HWUT Hardware Ranch 86.37 47 P **P** **02 03 30.3 -0.3**
HWUT IAmb IAmb 02 03 32.0
comp=Z,4.7nm,0.9s
TCUT Toone Canyon 86.69 47 P **P** **02 03 32.0 -0.3**
LCMT Little Creek M 87.17 51 P **P** **02 03 34.3 -0.2**
PDAR Pinedale Array 87.19 45 P **P** **02 03 35.0 +0.4**
comp=Z,0.3nm,0.5s,baz=193,slow=1.8,SNR=5.2
PDAR LR LR 02 35 03.3
comp=Z,52nm,20.2s,baz=316,slow=30
AKASG Malin Array Be 87.59 325 P **P** **02 03 34.9 -1.1**
comp=Z,0.7nm,0.5s,baz=47,slow=5.0,SNR=4.9
NOA NORSAR Array B 88.97 339 LR LR 02 46 06.9
comp=Z,34nm,19.1s,baz=245,slow=37
PV14 Lion Creek, Pa 89.57 49 P **P** **02 03 45.9 -0.1**
PV16 Nyswonger Mesa 89.67 49 P **P** **02 03 46.1 -0.3**
PV16 IAmb IAmb 02 03 47.4
comp=Z,2.9nm,0.8s
ULM Lac du Bonnet 91.27 34 LR LR 02 43 54.8
comp=Z,34nm,20.5s,baz=338,slow=35
GERES GERESS Array B 96.65 329 P **P** **02 04 17.0 -1.2**
comp=Z,0.1nm,0.2s,baz=22,slow=8.5,SNR=1.7
TXAR Lajitas Array 97.83 54 P **P** **02 04 23.9 0.0**
comp=Z,0.1nm,0.5s,baz=284,slow=3.6,SNR=2.2
TXAR LR LR 02 41 57.8
comp=Z,19nm,21.1s,baz=0.0,slow=31
TXAR Lajitas Array 97.83 54 P **P** **02 04 23.8 -0.2**
VNDA Vanda 99.66 176 LR LR 02 47 36.1
comp=Z,24nm,18.6s,baz=319,slow=34
PLCA Paso Flores 145.62 131 PKPbc **PKPab 02 10 26.9 -0.1**
comp=Z,3.0nm,1.0s,baz=179,slow=2.2,SNR=4.3
PLCA Paso Flores 145.62 131 **PKPdf 02 10 26.4 -0.1**
LPAZ La Paz 149.70 85 PKPbc **PKiKP 02 10 40.0 -0.2**
comp=Z,6.8nm,0.8s,baz=307,slow=5.1,SNR=15
LPAZ La Paz 149.70 85 **PKPbc 02 10 37.5 -1.7**

*IDC **25** 01:52:20.7±1.3,45.88N×27.38E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.3/36, mbtmp3.6/8, ML2.8/4, Error ellipse: s-maj=21.3km s-min=7.7km az=139.0*
*BEO **25** 01:52:23.8±1.2, 45.88N×27.19E, h45km±5km, ML3.1/9*
*SOF **25** 01:52:23.1, 45.92N×27.09E, h70km, MD4.0*
*SIGU **25** 01:52:25.1±0.1, 45.9N±0.6×27.1E±0.6, h35km±1km, mb3.0/10*
*BUC **25** 01:52:25.2±0.1, 45.85N×27.16E, h39km±2km, ml3.2/54, Error ellipse: s-maj=1.3km s-min=1.2km az=17.0*
ISC 25 01:52:24.3±0.8, **45.84N**±0.02×**27.16E**±0.02, **h35**km, **n173, s155/258, mb3.5/4, 98C-97D, Romania**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ODBI	**Odobesti**	**0.11**	**222**	⇓P			**Pn**	**01 52 31.7**	**+1.2**
ODBI				⇓S			**Sn**	**01 52 37.5**	**+2.9**
ODBI	**Odobesti**	**0.11**	**222**	⇓P			**Pn**	**01 52 31.7**	**+1.2**
ODBI				⇓S			**Sn**	**01 52 37.5**	**+2.9**
PETR	**Petresti**	**0.13**	**157**	⇑P			**Pn**	**01 52 31.6**	**+1.1**
PETR				⇓S			**Sn**	**01 52 37.5**	**+2.7**
PETR	**Petresti**	**0.13**	**157**	⇑P			**Pn**	**01 52 31.6**	**+1.1**
PETR				⇓S			**Sn**	**01 52 37.5**	**+2.7**
GHRR		**0.28**	**39**	⇑P			**Pn**	**01 52 32.7**	**+0.7**
GHRR				⇓S			**Sn**	**01 52 39.3**	**+2.1**
GHRR		**0.28**	**39**	⇑P			**Pn**	**01 52 32.7**	**+0.7**
GHRR				⇓S			**Sn**	**01 52 39.3**	**+2.1**
VRI	**Vrincioaia**	**0.30**	**274**	⇓P			**Pn**	**01 52 32.1**	**-0.2**
VRI	**Vrincioaia**	**0.30**	**274**	⇓P			**Pn**	**01 52 32.1**	**-0.2**
PLOR	**Plostina**	**0.36**	**271**	⇓P			**Pn**	**01 52 33.1**	**+0.1**
PLOR				⇓S			**Sn**	**01 52 40.0**	**+1.0**
PLOR	**Plostina**	**0.36**	**271**	⇓P			**Pn**	**01 52 33.1**	**+0.1**
PLOR				⇓S			**Sn**	**01 52 40.0**	**+1.0**
BISRR	**Bisoca**	**0.43**	**227**	⇓P			**Pn**	**01 52 35.2**	**+1.1**
BISRR				⇓S			**Sn**	**01 52 42.7**	**+1.9**
BISRR	**Bisoca**	**0.43**	**227**	⇓P			**Pn**	**01 52 35.2**	**+1.1**
BISRR				⇓S			**Sn**	**01 52 42.7**	**+1.9**
TUDR		**0.44**	**125**	⇑P			**Pn**	**01 52 34.5**	**+0.4**
TUDR				⇑S			**Sn**	**01 52 42.3**	**+1.5**
TUDR		**0.44**	**125**	⇑P			**Pn**	**01 52 34.5**	**+0.4**
TUDR				⇑S			**Sn**	**01 52 42.3**	**+1.5**
GRER		**0.48**	**196**	⇓P			**Pn**	**01 52 36.4**	**+1.7**
GRER		**0.48**	**196**	⇓P			**Pn**	**01 52 36.4**	**+1.7**
VARL	**Varlezi**	**0.48**	**83**	⇑P			**Pn**	**01 52 35.4**	**+0.6**
VARL				⇑S			**Sn**	**01 52 43.8**	**+1.8**
VARL	**Varlezi**	**0.48**	**83**	⇑P			**Pn**	**01 52 35.4**	**+0.6**
VARL				⇑S			**Sn**	**01 52 43.8**	**+1.8**
BIR	**Birlad**	**0.53**	**37**	⇑P			**Pn**	**01 52 35.7**	**+0.2**
BIR				⇑S			**Sn**	**01 52 44.3**	**+1.1**
BIR	**Birlad**	**0.53**	**37**	⇑P			**Pn**	**01 52 35.7**	**+0.2**
BIR				⇑S			**Sn**	**01 52 44.3**	**+1.1**
SCHL	**Schela**	**0.58**	**126**	⇑P			**Pn**	**01 52 36.3**	**+0.2**
SCHL				⇑S			**Sn**	**01 52 45.0**	**+0.6**
SCHL	**Schela**	**0.58**	**126**	⇑P			**Pn**	**01 52 36.3**	**+0.2**
SCHL				⇑S			**Sn**	**01 52 45.0**	**+0.6**
NEHR	**Nehoiu**	**0.74**	**236**	⇑P			**Pn**	**01 52 39.7**	**+1.4**
NEHR	**Nehoiu**	**0.74**	**236**	⇑P			**Pn**	**01 52 39.7**	**+1.4**
GISR	**Galati**	**0.75**	**122**	⇑P			**Pn**	**01 52 38.8**	**+0.5**
GISR				⇑S			**Sn**	**01 52 49.2**	**+0.8**
GISR	**Galati**	**0.75**	**122**	⇑P			**Pn**	**01 52 38.8**	**+0.5**
GISR				⇑S			**Sn**	**01 52 49.2**	**+0.8**
TESR	**Tescani**	**0.76**	**332**	⇓P			**Pn**	**01 52 38.9**	**+0.4**
TESR				⇓S			**Sn**	**01 52 49.2**	**+0.5**
TESR	**Tescani**	**0.76**	**332**	⇓P			**Pn**	**01 52 38.9**	**+0.4**
TESR				⇓S			**Sn**	**01 52 49.2**	**+0.5**
GIUM	**Giurgiulesti**	**0.82**	**116**	⇑P			**Pn**	**01 52 41.2**	**+1.9**
GIUM				S			**Sn**	**01 52 51.5**	**+1.3**
GIUM	**Giurgiulesti**	**0.82**	**116**	⇑P			**Pn**	**01 52 41.3**	**+1.9**
GIUM				⇓S			**Sn**	**01 52 51.6**	**+1.3**
GIUM	**Giurgiulesti**	**0.82**	**116**	⇑P			**Pn**	**01 52 41.3**	**+1.9**
GIUM				⇓S			**Sn**	**01 52 51.6**	**+1.3**
ISR	**Istrita**	**0.84**	**211**	⇓P			**Pn**	**01 52 41.4**	**+1.6**
ISR	**Istrita**	**0.84**	**211**	⇓P			**Pn**	**01 52 41.4**	**+1.6**
VASR	**Vaslui**	**0.91**	**29**	⇓P			**Pn**	**01 52 41.8**	**+1.2**
VASR				⇑S			**Sn**	**01 52 54.5**	**+2.0**
VASR	**Vaslui**	**0.91**	**29**	⇓P			**Pn**	**01 52 41.8**	**+1.2**
VASR				⇑S			**Sn**	**01 52 54.5**	**+2.0**
MLR	**Muntele Rosu**	**0.92**	**248**	Pg			**Pn**	**01 52 42.6**	**+1.7**
	151nm,0.3s,baz=16,slow=8.6,SNR=3038								
MLR				Lg			Lg	01 52 55.9	
	170nm,0.3s,baz=154,slow=12,SNR=29								
MLR	**Muntele Rosu**	**0.92**	**248**	*e*Pg			**Pn**	**01 52 42.4**	**+1.5**
MLR				*e*Sg			**Sn**	**01 52 54.7**	**+1.7**
MLR	**Muntele Rosu**	**0.92**	**248**	⇑P			**Pn**	**01 52 42.4**	**+1.5**
MLR				⇑S			**Sn**	**01 52 55.2**	**+2.2**
MLR	**Muntele Rosu**	**0.92**	**248**	⇑P			**Pn**	**01 52 42.4**	**+1.5**
MLR				⇑S			**Sn**	**01 52 55.2**	**+2.2**
PGOR	**Pogoanele**	**0.94**	**188**	⇓P			**Pn**	**01 52 42.3**	**+1.2**
PGOR	**Pogoanele**	**0.94**	**188**	⇓P			**Pn**	**01 52 42.3**	**+1.2**
CFR	**Carcaliu**	**0.96**	**134**	⇑P			**Pn**	**01 52 41.4**	**+0.1**
CFR				⇑S			**Sn**	**01 52 54.9**	**+1.3**
CFR	**Carcaliu**	**0.96**	**134**	⇑P			**Pn**	**01 52 41.4**	**+0.1**
CFR				⇑S			**Sn**	**01 52 54.9**	**+1.3**
OZUR		**0.99**	**285**	⇓P			**Pn**	**01 52 42.1**	**+0.3**
OZUR		**0.99**	**285**	⇓P			**Pn**	**01 52 42.1**	**+0.3**
SECR		**1.12**	**224**	⇓P			**Pn**	**01 52 45.2**	**+1.7**
SECR		**1.12**	**224**	⇓P			**Pn**	**01 52 45.2**	**+1.7**
GIRR	**Girov**	**1.20**	**338**	⇑P			**Pn**	**01 52 45.2**	**+0.6**
GIRR	**Girov**	**1.20**	**338**	⇑P			**Pn**	**01 52 45.2**	**+0.6**
AMRR	**Amara**	**1.24**	**174**	⇓P			**Pn**	**01 52 46.0**	**+0.8**
AMRR				⇑S			**Sn**	**01 53 02.3**	**+1.7**
AMRR	**Amara**	**1.24**	**174**	⇓P			**Pn**	**01 52 46.0**	**+0.8**
AMRR				⇑S			**Sn**	**01 53 02.3**	**+1.7**
DOPR	**Dopca**	**1.24**	**276**	⇓P			**Pn**	**01 52 46.0**	**+0.8**
DOPR	**Dopca**	**1.24**	**276**	⇓P			**Pn**	**01 52 46.0**	**+0.8**
HARR	**Harsova**	**1.28**	**154**	⇑P			**Pn**	**01 52 46.5**	**+0.9**
HARR	**Harsova**	**1.28**	**154**	⇑P			**Pn**	**01 52 46.5**	**+0.9**
BIZ	**Bicaz**	**1.32**	**327**	⇓P			**Pn**	**01 52 46.9**	**+0.7**
BIZ	**Bicaz**	**1.32**	**327**	⇓P			**Pn**	**01 52 46.9**	**+0.7**
SULR		**1.33**	**209**	⇑P			**Pn**	**01 52 47.9**	**+1.5**
SULR				⇑S			**Sn**	**01 53 05.6**	**+2.8**
SULR		**1.33**	**209**	⇑P			**Pn**	**01 52 47.9**	**+1.5**
SULR				⇑S			**Sn**	**01 53 05.6**	**+2.8**
TPGR	**Topolog**	**1.33**	**138**	⇑P			**Pn**	**01 52 48.0**	**+1.6**
TPGR				⇑S			**Sn**	**01 53 05.4**	**+2.6**
TPGR	**Topolog**	**1.33**	**138**	⇑P			**Pn**	**01 52 48.0**	**+1.6**
TPGR				⇑S			**Sn**	**01 53 05.4**	**+2.6**
TLCR		**1.34**	**119**	⇑P			**Pn**	**01 52 48.6**	**+2.1**
TLCR		**1.34**	**119**	⇑P			**Pn**	**01 52 48.6**	**+2.1**
IAS	**Iasi**	**1.38**	**11**	⇑P			**Pn**	**01 52 48.3**	**+1.2**
IAS				⇑S			**Sn**	**01 53 05.0**	**+1.0**
IAS	**Iasi**	**1.38**	**11**	⇑P			**Pn**	**01 52 48.3**	**+1.2**
IAS				⇑S			**Sn**	**01 53 05.0**	**+1.0**
LEHL	**Lehliu**	**1.39**	**190**	⇓P			**Pn**	**01 52 48.4**	**+1.2**
LEHL				⇓S			**Sn**	**01 53 06.5**	**+2.1**
LEHL	**Lehliu**	**1.39**	**190**	⇓P			**Pn**	**01 52 48.4**	**+1.2**
LEHL				⇓S			**Sn**	**01 53 06.5**	**+2.1**
JOSR	**Joseni**	**1.43**	**308**	⇑P			**Pn**	**01 52 49.5**	**+1.6**
JOSR	**Joseni**	**1.43**	**308**	⇑P			**Pn**	**01 52 49.5**	**+1.6**
TLBR	**Topalu**	**1.44**	**154**	⇓P			**Pn**	**01 52 49.2**	**+1.3**
TLBR				⇑S			**Sn**	**01 53 07.3**	**+1.7**
TLBR	**Topalu**	**1.44**	**154**	⇓P			**Pn**	**01 52 49.2**	**+1.3**
TLBR				⇑S			**Sn**	**01 53 07.3**	**+1.7**
VOIR		**1.54**	**255**	⇑P			**Pn**	**01 52 49.8**	**+0.5**
VOIR				⇓S			**Sn**	**01 53 10.0**	**+1.9**
VOIR		**1.54**	**255**	⇑P			**Pn**	**01 52 49.8**	**+0.5**
VOIR				⇓S			**Sn**	**01 53 10.0**	**+1.9**
MILM	**Milestii Mici**	**1.57**	**46**	P			**Pn**	**01 52 50.4**	**+0.8**
MILM				S			**Sn**	**01 53 10.5**	**+1.8**
MILM	**Milestii Mici**	**1.57**	**46**	⇑P			**Pn**	**01 52 50.5**	**+0.8**
MILM				⇑S			**Sn**	**01 53 10.6**	**+1.8**
MILM	**Milestii Mici**	**1.57**	**46**	⇑P			**Pn**	**01 52 50.5**	**+0.8**
MILM				⇑S			**Sn**	**01 53 10.6**	**+1.8**
MTUR	**Matau**	**1.60**	**248**	⇓P			**Pn**	**01 52 51.8**	**+1.6**
MTUR	**Matau**	**1.60**	**248**	⇓P			**Pn**	**01 52 51.8**	**+1.6**
KIS	**Kishinev**	**1.63**	**44**	*e*P			**Pn**	**01 52 50.0**	**-0.5**
	10.0nm,0.2s								
KIS				*e*S			**Sn**	**01 53 11.0**	**+0.8**
	700nm,0.5s								
KIS	**Kishinev**	**1.63**	**44**	*i* P			**Pn**	**01 52 53.3**	**+2.8**
KIS				Pm				01 52 53.4	
KIS				*e*S			**Sn**	**01 53 14.0**	**+3.8**
KIS				Sm				01 53 14.8	
KIS	**Kishinev**	**1.63**	**44**	⇑P			**Pn**	**01 52 52.1**	**+1.6**
KIS				⇑S			**Sn**	**01 53 12.6**	**+2.4**
KIS	**Kishinev**	**1.63**	**44**	⇑P			**Pn**	**01 52 52.1**	**+1.6**
KIS				⇑S			**Sn**	**01 53 12.6**	**+2.4**
RASA	**Rasa**	**1.63**	**180**	⇑P			**Pn**	**01 52 51.0**	**+0.5**
RASA	**Rasa**	**1.63**	**180**	⇑P			**Pn**	**01 52 51.0**	**+0.5**
CVDA	**Cernavoda**	**1.63**	**157**	⇑P			**Pn**	**01 52 52.3**	**+1.7**
CVDA				⇓S			**Sn**	**01 53 11.0**	**+0.6**
CVDA	**Cernavoda**	**1.63**	**157**	⇑P			**Pn**	**01 52 52.3**	**+1.7**
CVDA				⇓S			**Sn**	**01 53 11.0**	**+0.6**
TIRR	**Tirgusor**	**1.65**	**147**	⇓P			**Pn**	**01 52 51.7**	**+0.9**
TIRR				⇓S			**Sn**	**01 53 12.0**	**+1.3**
TIRR	**Tirgusor**	**1.65**	**147**	⇓P			**Pn**	**01 52 51.7**	**+0.9**
TIRR				⇓S			**Sn**	**01 53 12.0**	**+1.3**
PRAR	**RASCA**	**1.65**	**337**	⇓P			**Pn**	**01 52 52.0**	**+1.2**
PRAR	**RASCA**	**1.65**	**337**	⇓P			**Pn**	**01 52 52.0**	**+1.2**
BUC1	**Bucharest**	**1.70**	**209**	⇓P			**Pn**	**01 52 52.5**	**+1.0**
BUC1				⇓S			**Sn**	**01 53 14.3**	**+2.4**
BUC1	**Bucharest**	**1.70**	**209**	⇓P			**Pn**	**01 52 52.5**	**+1.0**
BUC1				⇓S			**Sn**	**01 53 14.3**	**+2.4**
ICOR	**Ion Corvin**	**1.79**	**165**	⇑P			**Pn**	**01 52 53.6**	**+0.9**
ICOR	**Ion Corvin**	**1.79**	**165**	⇑P			**Pn**	**01 52 53.6**	**+0.9**
SGRR	**Singureni**	**1.83**	**208**	⇑P			**Pn**	**01 52 53.9**	**+0.7**
SGRR	**Singureni**	**1.83**	**208**	⇑P			**Pn**	**01 52 53.9**	**+0.7**
STFAR	**Stefanesti-Arg**	**1.83**	**238**	⇑P			**Pn**	**01 52 55.8**	**+2.5**
STFAR	**Stefanesti-Arg**	**1.83**	**238**	⇑P			**Pn**	**01 52 55.8**	**+2.5**
ARR	**Arges**	**1.84**	**256**	⇑P			**Pn**	**01 52 54.5**	**+1.1**
ARR	**Arges**	**1.84**	**256**	⇑P			**Pn**	**01 52 54.5**	**+1.1**
MFTR	**Murfatlar**	**1.89**	**151**	⇑P			**Pn**	**01 52 55.3**	**+1.2**
MFTR				⇑S			**Sn**	**01 53 17.9**	**+1.2**
MFTR	**Murfatlar**	**1.89**	**151**	⇑P			**Pn**	**01 52 55.3**	**+1.2**
MFTR				⇑S			**Sn**	**01 53 17.9**	**+1.2**
MDB	**Medias**	**1.96**	**280**	⇑P			**Pn**	**01 52 56.0**	**+1.0**
MDB	**Medias**	**1.96**	**280**	⇑P			**Pn**	**01 52 56.0**	**+1.0**
HUMR	**Humele**	**2.03**	**230**	⇓P			**Pn**	**01 52 56.5**	**+0.5**
HUMR				⇓S			**Sn**	**01 53 22.7**	**+2.7**
HUMR	**Humele**	**2.03**	**230**	⇓P			**Pn**	**01 52 56.5**	**+0.5**
HUMR				⇓S			**Sn**	**01 53 22.7**	**+2.7**
EFOR	**EFORIE**	**2.05**	**149**	⇑S			**Sn**	**01 53 21.6**	**+1.0**
EFOR	**EFORIE**	**2.05**	**149**	⇑S			**Sn**	**01 53 21.6**	**+1.0**
COPA	**Copaceanca**	**2.20**	**220**	⇓P			**Pn**	**01 52 58.7**	**+0.4**
COPA	**Copaceanca**	**2.20**	**220**	⇓P			**Pn**	**01 52 58.7**	**+0.4**
BURAR	**Bucovina Array**	**2.22**	**324**	⇑P			**Pn**	**01 53 00.5**	**+1.8**
BURAR	**Bucovina Array**	**2.22**	**324**	⇑P			**Pn**	**01 53 00.5**	**+1.8**
ARCR	**ARCALIA**	**2.30**	**304**	⇓P			**Pn**	**01 53 01.1**	**+1.3**
ARCR	**ARCALIA**	**2.30**	**304**	⇓P			**Pn**	**01 53 01.1**	**+1.3**
RAZG	**Razgrad**	**2.33**	**192**	⇓P			**Pn**	**01 53 00.5**	**+0.4**
RAZG	**Razgrad**	**2.33**	**192**	⇓P			**Pn**	**01 53 00.5**	**+0.4**
LOT	**Lotru**	**2.41**	**262**	⇑P			**Pn**	**01 53 01.9**	**+0.5**
LOT	**Lotru**	**2.41**	**262**	⇑P			**Pn**	**01 53 01.9**	**+0.5**
SORM	**Soroca**	**2.43**	**19**	⇑P			**Pn**	**01 53 01.7**	**+0.1**
SORM	**Soroca**	**2.43**	**19**	⇑P			**Pn**	**01 53 01.7**	**+0.1**
ZIMR		**2.53**	**211**	⇓P			**Pn**	**01 53 03.2**	**+0.2**
ZIMR				⇑S			**Sn**	**01 53 32.5**	**0.0**
ZIMR		**2.53**	**211**	⇓P			**Pn**	**01 53 03.2**	**+0.2**
ZIMR				⇑S	

IVAS	**Ivanjica**	**5.48**	**248**	*e*Pn		**Pn**	**01 53 42.4**	**-1.1**
SUDU	**Sudak**	**5.61**	**97**	⇓*e*P		**Pn**	**01 53 45.8**	**+0.7**
SUDU				Pm			01 53 46.2	
SUDU				*i* S		**Sn**	**01 54 48.9**	**+0.6**
SUDU				Sm			01 54 49.4	
FINES	**FINES Array B**	**15.64**	**358**	Pn		Pn	01 55 55.8	-6.0
	0.1nm,0.3s,baz=165,slow=12,SNR=1.5							
FINES				Sn		Sn	01 58 40.1	-14
	0.2nm,0.3s,baz=180,slow=22,SNR=1.8							
HFS	**Hagfors**	**16.40**	**336**	Pn		**Pn**	**01 56 07.0**	**-4.5**
	0.1nm,0.3s,baz=149,slow=11,SNR=1.7							
NOA	**NORSAR Array B**	**17.86**	**334**	Pn		**Pn**	**01 56 28.1**	**-1.7**
	0.0nm,0.3s,baz=142,slow=11,SNR=2.7							
ARU	**Arti**	**22.17**	**50**	P		**P**	**01 57 15.9**	**-1.1**
	1.0nm,0.6s,baz=260,slow=11,SNR=3.1							
ARCES	**ARCESS Array B**	**23.77**	**359**	P		**P**	**01 57 32.2**	**-0.9**
	1.6nm,0.8s,baz=182,slow=9.8,SNR=5.8							
ZALV	**Zalesovo Beam**	**37.08**	**56**	P		**P**	**01 59 30.7**	**-0.2**
	0.6nm,0.5s,baz=290,slow=10,SNR=2.1							
MKAR	**Makanchi Array**	**37.42**	**68**	P		**P**	**01 59 34.2**	**+0.3**
	0.3nm,0.6s,baz=298,slow=6.9,SNR=1.9							

TAP 25 02:23:59.5,24.94N×122.47E,h20km±1km,ML2.7,C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.44**	**279**	P		Pb	02 24 08.9	+0.2
	baz=279							
TWB1				S		Sb	02 24 15.4	+0.5
	baz=279							
TIPB	**Shuangxi**	**0.59**	**273**	*e*P		Pb	02 24 11.8	+0.6
	baz=273							
TIPB				*e*S		Sb	02 24 19.7	+0.6
	baz=273							
NTC	**Toucheng**	**0.59**	**262**	*e*P		Pn	02 24 12.6	-0.2
	baz=262							
NWF	**Wu-fen Shan**	**0.64**	**282**	*e*P		Pn	02 24 12.8	-0.7
	baz=282							
NWF				*e*S		Sb	02 24 21.8	+1.2
	baz=282							
WFSB	**Wu-fen Shan**	**0.64**	**282**	*e*P		Pn	02 24 12.8	-0.6
	baz=282							
WFSB				*e*S		Sb	02 24 21.7	+1.1
	baz=282							
TWC	**Suao**	**0.65**	**240**	P		Pb	02 24 11.9	-0.4
	baz=239							
TWC				*e*S		Sb	02 24 20.4	-0.5
	baz=239							
ILA	**Ilan**	**0.68**	**255**	*e*P		Pn	02 24 13.6	-0.4
	baz=255							
YOJ	**Yonaguni jima**	**0.68**	**134**	*e*P		Pb	02 24 13.0	+0.2
	baz=125							
YOJ				*e*S		Sb	02 24 21.3	-0.5
	baz=125							
PCYT	**Pengchaiyu**	**0.78**	**332**	*e*P		Pn	02 24 16.3	+0.9
	baz=316							
ENA	**Nanau**	**0.84**	**233**	*e*P		Pb	02 24 15.4	0.0
	baz=232							
YM01	**YM01**	**0.84**	**284**	*e*P		Pn	02 24 17.0	+0.6
	baz=284							

JMA 25 02:24:25.9±0.4,25.00N×123.53E,h22km,M1.2, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.69**	**165**	P		Pb	02 24 39.0	-0.2
IRIF				*e*S		Sb	02 24 48.2	-0.1
YOJ	**Yonaguni jima**	**0.71**	**221**	*e*S		Sb	02 24 49.2	+0.2
JISG	**Ishigakijimahi**	**0.82**	**120**	P		Pb	02 24 41.4	-0.1
JISG				*e*S		Sb	02 24 52.8	+0.7
JIJ	**Ishigaki jima**	**0.84**	**139**	P		Pb	02 24 41.0	-0.9
JIJ				*e*S		Sb	02 24 52.5	-0.3
JKRS	**Kuro-shima**	**0.88**	**150**	P		Pn	02 24 42.8	-0.1
JKRS				S		Sb	02 24 53.9	+0.2
HATJ	**Hateruma jima**	**0.97**	**165**	P		Pb	02 24 43.6	-0.4
HATJ				*e*S		Sb	02 24 56.1	-0.3

*NNC **25** 02:46:16.2±4.3,37.0N×71.0E,h167km±56km,mb2.8, mpv3.6,Error ellipse: s-maj=36.4km s-min=25.0km az=22.0*

ISC 25 02:46:09.5±1.2,36.65N±0.09×71.0E±0.1,h150km±13, σ1883/18,2C-7D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KK31	**Karatay Array**	**6.46**	**357**	⇑P		**Pn**	**02 47 45.0**	**+2.8**
	1.4nm,0.3s,baz=172,slow=12,SNR=13							
KK31				⇓S		**Sn**	**02 48 53.4**	**-1.4**
	6.9nm,0.4s,baz=179,slow=22,SNR=10							
AAK	**Ala-Archa**	**6.55**	**23**	⇓P		**Pn**	**02 47 45.1**	**+1.5**
	2.9nm,0.3s							
AAK				⇑S		**Sn**	**02 48 56.7**	**-0.6**
	12nm,0.8s							
TKM2	**Tokmak 2**	**7.18**	**28**	⇓P		**Pn**	**02 47 53.4**	**+1.3**
	1.8nm,0.5s							
TKM2				⇓S		**Sn**	**02 49 12.4**	**-0.1**
	3.2nm,0.7s							
PYUN	**Piuthan**	**13.22**	**127**	*e*P		**Pn**	**02 49 10.9**	**-0.7**
	8.4nm,0.3s							
DANN	**Dangsing**	**13.55**	**124**	*e*P		**Pn**	**02 49 14.5**	**-1.5**
	12nm,0.3s							
KOLN	**Koldanda**	**13.84**	**126**	*e*P		**Pn**	**02 49 19.3**	**-0.2**
GKN	**Gorkha**	**14.37**	**123**	*e*P		**Pn**	**02 49 26.2**	**0.0**
	14nm,0.3s							
DMN	**Daman**	**14.94**	**123**	*e*P		**P**	**02 49 34.2**	**-1.1**
KKN	**Kakani**	**14.94**	**122**	*e*P		**Pn**	**02 49 33.7**	**+0.3**
AB31	**Akbulak array**	**14.96**	**331**	⇓P		**P**	**02 49 36.6**	**+1.6**
	0.4nm,0.4s,baz=157,slow=11,SNR=9.0							
AB31				S		**Sn**	**02 52 14.6**	**-4.7**
	2.4nm,0.7s,baz=144,slow=24,SNR=7.4							
PKI	**Pulchoki**	**15.17**	**123**	*e*P		**P**	**02 49 36.6**	**-1.3**
	12nm,0.5s							
GUN	**Gumba**	**15.28**	**121**	*e*P		**P**	**02 49 38.3**	**-0.8**
	11nm,0.5s							
AKTO	**Aktyubinsk**	**16.66**	**330**	⇓P		**Pn**	**02 49 55.9**	**+1.9**
	1.2nm,0.6s							
AKTO				⇓S		**S**	**02 52 57.7**	**-1.3**
	2.0nm,0.9s							

*TAP **25** 03:05:18.6,24.86N×122.45E,h5km,ML2.9,C*
*JMA **25** 03:05:18.2±0.1,24.81N×122.43E,h0km,M2.4*

ISC 25 03:05:18.1±1.1,24.83N±0.03×122.41E±0.02,h10km±10km, n53,σ0970/88,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.42**	**295**	P		**Pb**	**03 05 26.9**	**-0.8**
	baz=290							
TWB1				*e*S		**Sb**	**03 05 32.6**	**-1.6**
	baz=290							
NTC	**Toucheng**	**0.53**	**273**	*e*P		**Pb**	**03 05 29.6**	**+0.2**
	baz=269							
NTC				*e*S		**Sb**	**03 05 37.6**	**+0.5**
	baz=269							
TIPB	**Shuangxi**	**0.55**	**285**	P		**Pb**	**03 05 29.6**	**-0.3**
	baz=281							
TIPB				*e*S		**Sb**	**03 05 38.4**	**+0.5**
	baz=281							
TWC	**Suao**	**0.55**	**247**	*i* P		**Pb**	**03 05 29.9**	**0.0**
	baz=245							
TWC				*e*S		**Sb**	**03 05 38.0**	**+0.1**
	baz=245							
JYNG	**Yonagunijimaku**	**0.61**	**127**	P		**Pb**	**03 05 30.3**	**-0.7**
JYNG				*e*S		**Sg**	**03 05 38.6**	**+0.5**
NWF	**Wu-fen Shan**	**0.62**	**293**	*e*P		**Pb**	**03 05 31.2**	**+0.1**
	baz=289							
NWF				S		**Sb**	**03 05 40.0**	**+0.1**
	baz=289							
WFSB	**Wu-fen Shan**	**0.62**	**293**	*e*P		**Pb**	**03 05 31.2**	**+0.1**
	baz=289							
WFSB				*i* S		**Sb**	**03 05 40.0**	**+0.2**
	baz=289							
YOJ	**Yonaguni jima**	**0.66**	**124**	P		**Pg**	**03 05 30.9**	**0.0**
	baz=127							
YOJ				*i* S		**Sg**	**03 05 39.6**	**+0.2**
	baz=127							
YOJ	**Yonaguni jima**	**0.66**	**124**	P		**Pg**	**03 05 30.7**	**-0.1**
YOJ				*e*S		**Sg**	**03 05 39.8**	**+0.3**
ENAH	**Nanao**	**0.66**	**235**	*e*P		**Pb**	**03 05 32.0**	**+0.2**
	baz=235							
ENAH				*e*S		**Sn**	**03 05 42.1**	**-2.0**
	baz=235							
TWE	**Neicheng**	**0.68**	**261**	*e*P		**Pb**	**03 05 32.4**	**+0.3**
	baz=258							
TWE				S		**Sb**	**03 05 42.3**	**+0.7**
	baz=258							
ENA	**Nanau**	**0.73**	**237**	P		**Pn**	**03 05 33.2**	**-1.2**
	baz=236							
ENA				*e*S		**Sn**	**03 05 43.7**	**-1.9**
	baz=236							
TWA	**Mucha**	**0.77**	**282**	*e*P		**Pb**	**03 05 33.6**	**+0.1**
	baz=278							
TWA				*e*S		**Sb**	**03 05 44.4**	**+0.3**
	baz=278							
ENTT	**Nioudou**	**0.79**	**256**	*e*P		**Pn**	**03 05 34.9**	**-0.5**
	baz=254							
ENTT				*e*S		**Sn**	**03 05 46.2**	**-1.0**
	baz=254							
NHDH	**Xindian Distri**	**0.81**	**280**	*e*P		**Pn**	**03 05 35.1**	**-0.6**
	baz=277							
NHDH				*e*S		**Sb**	**03 05 45.7**	**+0.3**
	baz=277							
NWLT	**Wulai**	**0.82**	**267**	P		**Pn**	**03 05 35.1**	**-0.7**
	baz=264							
NWLT				*e*S		**Sb**	**03 05 46.5**	**+0.7**
	baz=264							
YM01	**YM01**	**0.82**	**293**	*e*P		**Pb**	**03 05 35.1**	**+0.5**
	baz=290							
YM08	**YM08**	**0.82**	**296**	P		**Pb**	**03 05 34.8**	**+0.2**
	baz=293							
YM08				S		**Sb**	**03 05 46.5**	**+0.7**
	baz=293							
YM11	**YM11**	**0.83**	**294**	*e*P		**Pb**	**03 05 35.2**	**+0.5**
	baz=291							
YM05	**YM05**	**0.83**	**294**	*e*P		**Pb**	**03 05 35.2**	**+0.4**
	baz=291							
YM10	**YM10**	**0.84**	**293**	*e*P		**Pn**	**03 05 35.3**	**-0.7**
	baz=290							
YM10				*e*S		**Sb**	**03 05 47.0**	**+0.9**
	baz=290							
NDT	**Datong Townshi**	**0.84**	**255**	P		**Pn**	**03 05 35.7**	**-0.4**
	baz=253							
NDT				*e*S		**Sn**	**03 05 47.6**	**-1.0**
	baz=253							
TATO	**Taipei**	**0.85**	**280**	*e*P		**Pb**	**03 05 34.3**	**-0.7**
	baz=277							
PCYT	**Pengchaiyu**	**0.85**	**339**	P		**Pg**	**03 05 34.5**	**-0.1**
	baz=336							
PCYT				*e*S		**Sg**	**03 05 46.1**	**+0.4**
	baz=336							
YM04	**YM04**	**0.86**	**292**	P		**Pb**	**03 05 35.5**	**+0.4**
	baz=289							
TWY	**Chenhua**	**0.86**	**301**	P		**Pb**	**03 05 35.1**	**0.0**
	baz=298							
TWY				S		**Sb**	**03 05 47.1**	**+0.4**
	baz=298							
YM03	**YM03**	**0.86**	**294**	*e*P		**Pb**	**03 05 35.6**	**+0.3**
	baz=291							
ANP	**Anpu**	**0.88**	**294**	P		**Pb**	**03 05 35.7**	**+0.1**
	baz=291							
YHNB	**Yeheng**	**0.95**	**261**	P		**Pn**	**03 05 37.2**	**-0.4**
	baz=259							
NSK	**Sanguang**	**0.97**	**261**	P		**Pn**	**03 05 37.5**	**-0.4**
	baz=259							
NSK				*e*S		**Sn**	**03 05 50.4**	**-1.3**
	baz=259							
NACB	**Ninganchiao**	**0.99**	**229**	*e*P		**Pn**	**03 05 37.4**	**-0.7**
	baz=228							
NACB				*e*S		**Sn**	**03 05 51.5**	**-0.5**
	baz=228							
NNSB	**Datong**	**1.01**	**247**	P		**Pn**	**03 05 38.4**	**-0.2**
	baz=246							
NNSB				S		**Sn**	**03 05 53.1**	**+0.1**
	baz=246							
NNSH	**Datong**	**1.01**	**247**	P		**Pn**	**03 05 38.4**	**-0.2**
	baz=246							
NNSH				S		**Sn**	**03 05 52.8**	**-0.1**
	baz=246							
NNS	**Nan Shan**	**1.02**	**248**	*e*P		**Pn**	**03 05 38.1**	**-0.5**
	baz=246							
NNS				*e*S		**Sn**	**03 05 52.6**	**-0.4**
	baz=246							
ETLH	**Xiulin Townshi**	**1.05**	**234**	P		**Pn**	**03 05 38.9**	**-0.1**
	baz=233							
ETLH				*e*S		**Sn**	**03 05 54.1**	**+0.4**
	baz=233							
TWD	**Chiawan**	**1.05**	**225**	*e*P		**Pn**	**03 05 39.1**	**+0.2**
	baz=224							
TWD				S		**Sn**	**03 05 53.6**	**0.0**
	baz=224							
HWA	**Hwalien**	**1.12**	**221**	*e*P		**Pn**	**03 05 40.1**	**+0.3**
	baz=220							
FUSS	**Fushou**	**1.21**	**242**	*e*P		**Pn**	**03 05 42.3**	**+1.0**
	baz=241							
FUSS				S		**Sn**	**03 05 58.4**	**+0.5**
	baz=241							
WHF	**Hehuan Shan**	**1.24**	**237**	*e*P		**Pn**	**03 05 42.5**	**+0.5**
	baz=236							
WHF				S		**Sn**	**03 05 59.4**	**+0.3**
	baz=236							
TDCB	**Techi**	**1.27**	**244**	P		**Pn**	**03 05 42.9**	**+0.7**
	baz=242							
TDCB				S		**Sn**	**03 06 00.5**	**+1.1**
	baz=242							
IRIF	**Iriomote-Funau**	**1.30**	**112**	P		**Pb**	**03 05 42.9**	**+0.3**
IRIF				*e*S		**Sg**	**03 05 59.5**	**-0.4**
CHGB	**Renai**	**1.36**	**236**	*e*P		**Pb**	**03 05 44.7**	**+0.9**
	baz=235							
CHGB				S		**Sn**	**03 06 02.9**	**+1.3**
	baz=235							
OWD	**Renai**	**1.42**	**233**	*e*P		**Pg**	**03 05 45.4**	**0.0**
	baz=232							
OWD				S		**Sn**	**03 06 04.7**	**+1.7**
	baz=232							
WHP	**Taichung City**	**1.44**	**248**	*e*P		**Pg**	**03 05 46.4**	**+0.6**
	baz=247							
WHP				S		**Sn**	**03 06 05.1**	**+1.7**
	baz=247							
HATJ	**Hateruma jima**	**1.49**	**121**	*e*S		**Sg**	**03 06 05.8**	**-0.1**
JKRS	**Kuro-shima**	**1.57**	**112**	P		**Pb**	**03 05 47.2**	**-0.1**
HGSD	**Ruisui**	**1.61**	**214**	*e*P		**Pg**	**03 05 48.2**	**-0.7**
	baz=214							
JIJ	**Ishigaki jima**	**1.65**	**106**	P		**Pb**	**03 05 48.4**	**-0.1**
EHY	**Hungye**	**1.65**	**217**	*e*P		**Pg**	**03 05 48.8**	**-1.0**
	baz=217							
SMLT	**Sun Moon Lake**	**1.67**	**236**	*e*P		**Pg**	**03 05 50.2**	**+0.1**
	baz=235							
TYC	**Yuchr**	**1.69**	**237**	*e*P		**Pg**	**03 05 50.1**	**-0.4**
	baz=236							
JISG	**Ishigakijimahi**	**1.75**	**98**	*e*S		**Sn**	**03 06 12.0**	**+1.2**
YULB	**Yu-li**	**1.75**	**216**	*e*P		**Pb**	**03 05 49.8**	**-0.6**
	baz=215							

*ATH **25** 03:11:32.9,38.11N×20.46E,h20km±1km,ML2.3/6,Error ellipse: s-maj=1.8km s-min=0.9km az=242.0*
*THE **25** 03:11:33.4,38.10N×20.47E,h16km,ML2.7/10,Error ellipse: s-maj=0.7km s-min=0.4km az=248.0*

ISC 25 03:11:33.3±1.0,38.11N±0.03×20.48E±0.04,h18km±2km, n40,σ0934/62,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG2	**Argostoli**	**0.07**	**8**	P		**Pg**	**03 11 36.5**	**-0.2**
ARG2				S		**Sg**	**03 11 38.6**	**-0.4**
	14μm,0.1s							
PSDA	**Pessada-Kefalo**	**0.09**	**90**	P		**Pg**	**03 11 36.7**	**-0.3**
PSDA				S		**Sg**	**03 11 39.1**	**-0.2**
PSDA	**Pessada-Kefalo**	**0.09**	**90**	P		**Pg**	**03 11 36.6**	**-0.3**
PSDA				S		**Sg**	**03 11 39.0**	**-0.3**
	1μm,0.2s							
LXR1	**Lixouri, Cepha**	**0.09**	**341**	P		**Pg**	**03 11 36.9**	**-0.1**
LXR1				S		**Sg**	**03 11 39.7**	**+0.3**
VLS	**Valsamata**	**0.11**	**55**	P		**Pg**	**03 11 37.0**	**-0.2**
VLS				S		**Sg**	**03 11 39.7**	**0.0**
VLS				AML	AML		03 11 39.8	
	comp=E,22048μm,0.1s							
VLS				AML	AML		03 11 39.9	
	comp=N,23835μm,0.2s							
VLS	**Valsamata**	**0.11**	**55**	P		**Pg**	**03 11 37.1**	**-0.1**
VLS				S		**Sg**	**03 11 39.6**	**-0.2**
	comp=N,12μm,0.1s							
KEF3	**Kipouria, Keph**	**0.14**	**311**	P		**Pg**	**03 11 37.1**	**-0.3**
KEF3				S		**Sg**	**03 11 40.1**	**-0.1**
KEF3	**Kipouria, Keph**	**0.14**	**311**	P		**Pg**	**03 11 37.1**	**-0.3**
KEF3				S		**Sg**	**03 11 40.1**	**-0.1**
	comp=N,11μm,0.2s							
DMLN	**Damoulianata-K**	**0.15**	**327**	P		**Pg**	**03 11 37.4**	**-0.2**
DMLN				S		**Sg**	**03 11 40.6**	**+0.1**
DMLN	**Damoulianata-K**	**0.15**	**327**	P		**Pg**	**03 11 37.3**	**-0.3**
DMLN				S		**Sg**	**03 11 40.7**	**+0.1**
	comp=N,6μm,0.2s							
KEF4	**Livadi, Kephal**	**0.15**	**344**	P		**Pg**	**03 11 37.5**	**-0.1**
KEF4				S		**Sg**	**03 11 40.8**	**+0.3**
KEF4	**Livadi, Kephal**	**0.15**	**344**	P		**Pg**	**03 11 37.5**	**-0.1**
KEF4				S		**Sg**	**03 11 40.8**	**+0.3**
KEF5	**Kardakata, Kep**	**0.16**	**358**	P		**Pg**	**03 11 37.7**	**-0.1**
KEF5				S		**Sg**	**03 11 40.9**	**0.0**
KEF5	**Kardakata, Kep**	**0.16**	**358**	P		**Pg**	**03 11 37.7**	**-0.1**
KEF5				S		**Sg**	**03 11 40.9**	**0.0**
	comp=N,11μm,0.1s							
VLMS	**Volimes, Zakyn**	**0.28**	**148**	P		**Pg**	**03 11 39.2**	**-0.4**
VLMS				S		**Sb**	**03 11 43.9**	**-0.2**
VLMS				AML	AML		03 11 46.3	
	comp=E,2890μm,0.1s							
VLMS				AML	AML		03 11 52.0	
	comp=N,3369μm,0.2s							
VLMS	**Volimes, Zakyn**	**0.28**	**148**	P		**Pg**	**03 11 39.2**	**-0.4**
VLMS				S		**Sb**	**03 11 43.8**	**-0.2**
	comp=N,1μm,0.1s							
VSK1	**VASILIKIADES**	**0.30**	**13**	P		**Pg**	**03 11 39.8**	**-0.2**
VSK1				S		**Sb**	**03 11 45.0**	**+0.2**
	comp=N,1μm,0.2s							
FSK	**Fiskardo**	**0.35**	**11**	P		**Pg**	**03 11 40.6**	**-0.2**
FSK				S		**Sb**	**03 11 46.4**	**0.0**
FSK				AML	AML		03 11 48.9	
	comp=N,596μm,0.3s							
FSK				AML	AML		03 11 49.4	
	comp=E,1159μm,0.2s							
FSK	**Fiskardo**	**0.35**	**11**	P		**Pg**	**03 11 40.6**	**-0.2**
FSK				S		**Sb**	**03 11 46.4**	**0.0**
	comp=E,445nm,0.2s							
EVGI	**Lefkada island**	**0.53**	**16**	P		**Pg**	**03 11 43.6**	**-0.3**
EVGI				S		**Sb**	**03 11 51.9**	**+0.7**
EVGI	**Lefkada island**	**0.53**	**16**	P		**Pg**	**03 11 43.5**	**-0.4**
EVGI				S		**Sb**	**03 11 51.9**	**+0.7**
NYDR	**Nydri-Lefkada**	**0.62**	**16**	P		**Pb**	**03 11 45.0**	**-0.7**
NYDR	**Nydri-Lefkada**	**0.62**	**16**	P		**Pb**	**03 11 45.2**	**-0.4**
LKD2	**Lefkada island**	**0.69**	**12**	P		**Pb**	**03 11 46.3**	**-0.5**
LKD2	**Lefkada island**	**0.69**	**12**	P		**Pb**	**03 11 46.4**	**-0.4**
LKD2				S		**Sn**	**03 11 57.4**	**-1.1**
	comp=E,185nm,0.3s							
TSLK	**Tsoukalades, L**	**0.72**	**11**	P		**Pb**	**03 11 47.3**	**-0.1**
TSLK	**Tsoukalades, L**	**0.72**	**11**	P		**Pb**	**03 11 47.1**	**-0.3**
PDO	**Prodromos**	**0.74**	**49**	P		**Pb**	**03 11 47.6**	**-0.1**
PDO	**Prodromos**	**0.74**	**49**	P		**Pb**	**03 11 47.5**	**-0.1**
RLS	**Riolos of Patr**	**0.78**	**94**	P		**Pg**	**03 11 48.9**	**+0.2**
RLS				AML	AML		03 12 05.8	
	comp=E,198μm,0.5s							
RLS				AML	AML		03 12 06.2	
	comp=N,204μm,0.4s							
DRO	**Drossia**	**0.99**	**99**	P		**Pb**	**03 11 52.0**	**+0.1**
DRO				AML	AML		03 12 20.7	
	comp=E,165μm,0.6s							
DRO				AML	AML		03 12 22.0	
	comp=N,313μm,0.5s							
AMT	**Artemida-Makis**	**1.14**	**120**	P		**Pg**	**03 11 54.9**	**-0.4**
EFP	**Efpalio**	**1.17**	**74**	P		**Pb**	**03 11 55.1**	**+0.1**
EFP				AML	AML		03 12 20.9	
	comp=E,113μm,0.5s							
EFP				AML	AML		03 12 21.0	
	comp=N,160μm,0.5s							
ANX	**Ano Chora**	**1.23**	**67**	P		**Pg**	**03 11 56.9**	**-0.3**
SERG	**Sergoula**	**1.28**	**76**	P		**Pb**	**03 11 56.9**	**0.0**
TRIZ	**Trizonia**	**1.28**	**78**	P		**Pb**	**03 11 56.7**	**-0.2**
KLV	**Kalavryta, Ach**	**1.32**	**93**	P		**Pb**	**03 11 57.9**	**+0.3**
IGT	**Igoumenitsa**	**1.42**	**355**	P		**Pb**	**03 11 59.3**	**0.0**
PYL	**PYLOS**	**1.58**	**140**	P		**Pb**	**03 12 02.5**	**+0.5**
KEK	**Kerkira**	**1.68**	**342**	P		**Pn**	**03 12 02.7**	**+0.8**

DJA 25 03:56:29.7±0.6,1.N±4.×12.3E±.,h12km±4km,M4.3/8, mB5.3/2,mb4.9/2,MLv4.0/8,Mw(mB)4.8/2,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GTOI	**Gorontalo**	**0.72**	**208**	P		Pb	03 56 44.3	+0.2
GTOI				S		Sg	03 56 53.0	0.0
KMSI	**Cibinong**	**0.94**	**138**	P		Pb	03 56 48.0	+0.1
KMSI				S		Sb	03 57 00.4	+0.2
MRSI	**Marisa**	**1.61**	**241**	P		Pn	03 56 58.6	+0.6
MRSI				S		Sn	03 57 17.4	-1.4
LUWI	**Luwuk**	**2.37**	**194**	P		Pn	03 57 08.8	+0.4
LUWI				S		Sn	03 57 39.1	+1.7
APSI	**Ampana**	**2.75**	**218**	P		Pn	03 57 14.5	+0.8
MPSI	**Mapaga**	**3.57**	**255**	P		Pn	03 57 26.5	+1.5
MPSI				S		Sn	03 58 08.0	+0.8
TTSI	**Tana Toraja**	**5.55**	**219**	P		Pn	03 57 53.3	+1.1
	0.1nm1μm19nm,0.6s							
KBKI	**Kotabaru**	**8.49**	**238**	P		Pn	03 58 31.5	-1.2

*ARE **25** 04:05:56±2.8,16.8S±0.1×72.4W±0.2,h42km±9km,Error ellipse: s-maj=22.3km s-min=13.9km az=65.0*

NEIC 25 04:06:01.1±1.6,17.4S±0.1×72.4W±0.1,h52km±5km, mb3.8/2,ML4.2(ARE),Error ellipse: s-maj=20.5km s-min=13.8km az=68.0,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PB16	**IPOC Station P**	**2.90**	**110**	Pn		Pn	04 06 45.4	0.0
PB16						Sn	04 07 18.6	-0.8
PSGCX	**Pisagua**	**3.09**	**136**	Pn		Pn	04 06 47.4	-0.1
MNMC	**Minye Minye**	**3.18**	**124**	Pn		Pn	04 06 49.2	+0.3
PB11	**IPOC Station P**	**3.52**	**133**	Pn		Pn	04 06 53.4	0.0
PB11						Sn	04 07 32.5	-1.4
PATCX	**Punta Patache**	**4.03**	**149**	Pn		Pn	04 07 00.2	-0.2
PB08	**IPOC Station P**	**4.12**	**133**	Pn		Pn	04 07 03.0	+1.1
PB08						Sn	04 07 48.2	-0.9
PB01	**IPOC Station P**	**4.57**	**144**	Pn		Pn	04 07 08.4	+0.6
PB07	**IPOC Station P**	**4.94**	**152**	Pn		Pn	04 07 13.8	+0.9
PB07						Sn	04 08 08.1	-0.8
PB09	**IPOC Station P**	**5.31**	**147**	Pn		Pn	04 07 17.5	-0.5
PB06	**IPOC Station P**	**5.93**	**154**	Pn		Pn	04 07 26.9	+0.3
LVC	**Limon Verde**	**6.16**	**149**	Pn		Pn	04 07 31.4	+1.6
LC01	**Cunco**	**21.46**	**179**	P		P	04 10 45.7	+0.6
LC01				IAmb		IAmb	04 11 04.9	
	comp=Z,5.0nm,1.1s

CMAR				LR	LR	04 35 09.0	
	comp=Z,21nm,18.8s,baz=322,slow=36						
BRTR	**Keskin Array B**	**41.82**	**328**	LR	LR	04 36 59.4	
	comp=Z,19nm,18.9s,baz=114,slow=36						
AKTO	**Aktyubinsk**	**44.74**	**358**	LR	LR	04 38 26.6	
	comp=Z,56nm,19.9s,baz=186,slow=36						
MKAR	**Makanchi Array**	**45.06**	**21**	LR	LR	04 39 20.8	
	comp=Z,22nm,21.7s,baz=254,slow=37						
BOSA	**Boshof**	**48.19**	**223**	LR	LR	04 39 32.5	
	comp=Z,47nm,18.4s,baz=38,slow=35						
MLR	**Muntele Rosu**	**49.90**	**328**	LR	LR	04 43 20.5	
	comp=Z,53nm,18.1s,baz=105,slow=38						
ARU	**Arti**	**50.72**	**358**	LR	LR	04 41 38.6	
	comp=Z,33nm,18.6s,baz=201,slow=36						
ZALV	**Zalesovo Beam**	**52.04**	**18**	P	P	04 20 50.0	0.0
	0.3nm,0.3s,baz=208,slow=9.0,SNR=1.5						
ZALV				LR	LR	04 42 42.5	
	comp=Z,29nm,21.7s,baz=44,slow=36						
KSRS	**Korea Array**	**68.57**	**52**	LR	LR	04 52 28.5	
	comp=Z,17nm,20.6s,baz=205,slow=36						
MAW	**Mawson**	**73.05**	**179**	LR	LR	04 52 42.9	
	comp=Z,38nm,18.1s,baz=64,slow=34						
WRA	**Warramunga Arr**	**76.65**	**112**	P	P	04 23 31.8	-0.3
	1.5nm,0.9s,baz=282,slow=5.0,SNR=9.0						
ASAR	**Alice Springs**	**76.99**	**116**	P	P	04 23 34.5	+0.4
	1.4nm,1.0s,baz=278,slow=6.0,SNR=9.3						
PETK	**Petropavlovsk-**	**89.75**	**37**	LR	LR	05 06 28.8	
	comp=Z,15nm,21.5s,baz=37,slow=37						

NEIC ***25*** *04:20:39.8±0.5,2.6°N×128.5°E±0.05,h238km±11km, mb4.1/8,Error ellipse: s-maj=17.2km s-min=7.7km az=171.0*
IDC ***25*** *04:20:40.6±3.0,2.56°N×128.53°E,h239km±29km,mb3.3/5, mb1 3.5/6,mb1mx3.0/55,mbtmp3.9/6,Error ellipse: s-maj=49.5km s-min=22.5km az=73.0*
DJA ***25*** *04:20:40.6±0.5,3°N±4°×12°8E±°,h222km±4km,M4.5/11, mb4.4/8,mB4.9/4,MLv4.5/11,Mw(mB)4.1/4*

ISC 25 04:20:40.5±1.1,2.68N±0.10×128.44E±0.10,h250km,n31, σ1ᵎ19/34,mb3.9/7,1D,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.18**	**210**		**Pn**	**04 21 23.2**	**-1.4**
SGSI	**Sangihe**	**3.08**	**289**	P	**Pn**	**04 21 32.9**	**-0.9**
SGSI				S	**S**	**04 22 12.0**	**-4.0**
SlJI	**Sorong**	**4.52**	**141**	P	**Pn**	**04 21 48.2**	**-2.3**
	1.1nm,0.3s,baz=330,slow=16,SNR=4.9						
KMSI	**Cibinong**	**4.93**	**245**	P	**Pn**	**04 21 54.2**	**-1.2**
KMSI				S	**S**	**04 22 54.2**	**-0.9**
KCP	**Kidapawan**	**5.44**	**322**	*i*P	**Pn**	**04 22 02.2**	**+0.3**
GTOI	**Gorontalo**	**5.80**	**250**	P	**Pn**	**04 22 07.2**	**+1.1**
	0.2nm54nm,0.6s						
NLAI	**Namlea**	**6.03**	**193**	P	**Pn**	**04 22 09.3**	**+0.2**
	0.1nm19nm,0.6s						
LUWI	**Luwuk**	**6.77**	**237**	P	**Pn**	**04 22 18.2**	**-0.1**
	0.6nm8µm119nm,0.6s						
LUWI	**Luwuk**	**6.77**	**237**		**Pn**	**04 22 18.7**	**+0.4**
MRSI	**Marisa**	**6.86**	**251**	P	**Pn**	**04 22 20.1**	**+0.7**
	0.3nm51nm,0.5s						
APSI	**Ampana**	**7.67**	**242**	P	**Pn**	**04 22 30.6**	**+0.9**
	0.3nm825nm86nm,0.8s						
TOLI2	**Tolitoli**	**7.81**	**259**		**Pn**	**04 22 31.8**	**+0.3**
TTSI	**Tana Toraja**	**10.33**	**237**	P	**Pn**	**04 23 03.8**	**+0.5**
	908nm30nm,0.8s						
SPSI	**Sidrap Palu**	**10.89**	**233**	P	**Pn**	**04 23 11.7**	**+1.3**
	20nm,0.9s						
BKSI	**Bulukumba**	**11.50**	**226**	P	**Pn**	**04 23 19.5**	**+1.5**
	556nm19nm,0.7s						
BKB	**Balikpapan**	**12.19**	**251**	P	Pn	04 23 21.0	-5.5
MTN	**Manton Dam**	**15.65**	**170**	P	**P**	**04 24 06.8**	**-0.8**
MTN				IAmb	IAmb	04 24 09.4	
	comp=Z,12nm,1.0s						
KNRA	**Kununurra**	**18.24**	**179**	P	**P**	**04 24 36.3**	**+0.5**
FITZ	**Fitzroy Crossi**	**20.83**	**188**	P	**P**	**04 25 03.8**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=18,slow=11,SNR=18						
FITZ	**Fitzroy Crossi**	**20.83**	**188**	P	**P**	**04 25 03.5**	**0.0**
FITZ				IAmb	IAmb	04 25 13.8	
	comp=Z,3.7nm,1.1s						
WB0	**Warramunga Arr**	**23.06**	**166**	P	**P**	**04 25 23.8**	**-0.5**
WB0				IAmb	IAmb	04 25 26.6	
	comp=Z,6.1nm,0.4s						
WRA	**Warramunga Arr**	**23.22**	**166**	P	**P**	**04 25 24.9**	**-0.9**
	comp=Z,2.6nm,0.3s,baz=340,slow=10,SNR=44						
WRA	**Warramunga Arr**	**23.22**	**166**	P	**P**	**04 25 25.4**	**-0.3**
WB2	**Warramunga Arr**	**23.22**	**166**	P	**P**	**04 25 25.5**	**-0.3**
WB2				IAmb	IAmb	04 25 28.1	
	comp=Z,3.1nm,0.8s						
WR0	**Warramunga Arr**	**23.28**	**165**	P	**P**	**04 25 25.8**	**-0.5**
WR0				IAmb	IAmb	04 25 27.3	
	comp=Z,4.7nm,1.1s						
ASAR	**Alice Springs**	**26.72**	**169**	P	**P**	**04 25 57.0**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=349,slow=6.9,SNR=21						
ASAR				PcP	**PcP**	**04 29 15.0**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=348,slow=2.1,SNR=3.1						
ASAR	**Alice Springs**	**26.72**	**169**	P	**P**	**04 25 57.0**	**-0.3**
ASAR					**PcP**	**04 29 14.3**	**+0.4**
STKA	**Stephens Creek**	**36.57**	**161**	P	**P**	**04 27 22.4**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=335,slow=11,SNR=13						
STKA	**Stephens Creek**	**36.57**	**161**	P	**P**	**04 27 22.5**	**-0.3**
MKAR	**Makanchi Array**	**59.39**	**325**	P	**P**	**04 30 18.9**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=120,slow=7.6,SNR=2.1						
MKAR	**Makanchi Array**	**59.39**	**325**	P	**P**	**04 30 18.2**	**+1.4**

IDC ***25*** *04:30:34.6±1.4,35.09°N×52.26°E,h0km,mb3.8/11, mb1 3.9/13,mb1mx3.7/46,mbtmp3.8/13,ML3.3/2,MS3.0/3, Ms1 3.0/3,ms1mx2.4/54,Error ellipse: s-maj=30.0km s-min=15.1km az=168.0*
TEH ***25*** *04:30:35.2,35.30°N×52.27°E,h8km,ML3.8*
THR ***25*** *04:30:36.0±0.6,35.33°N×52.29°E,h14km±4km,ML3.8*

ISC 25 04:30:37.1±0.6,35.33N±0.03×52.27E±0.02,h10km,n89, σ0ᵎ94/91,mb3.8/11,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDMV	**Damavand**	**0.32**	**321**	*e*Pg	**Pg**	**04 30 42.7**	**-0.9**
IDMV				*e*Sg	**Sg**	**04 30 47.6**	**-0.3**
IDMV				*e*		04 30 52.0	
DAMV	**Damavand**	**0.39**	**321**	*e*Pg	**Pg**	**04 30 44.0**	**-0.9**
DAMV				IAML		04 30 55.4	
	comp=E,9µm,0.1s						
DAMV	**Damavand**	**0.39**	**321**	*e*Pg	**Pg**	**04 30 44.0**	**-0.9**
IFIR	**Firoozkooh**	**0.50**	**51**	*e*Pg	**Pg**	**04 30 45.5**	**-1.4**
IFIR				*e*		04 30 56.6	
ILAS	**Lasjerd**	**0.56**	**84**	*e*Pg	**Pg**	**04 30 46.8**	**-1.3**
ILAS				*e*Sg	**Sg**	**04 30 55.6**	**+0.1**
IHSB	**Hasanabad**	**0.82**	**278**	*e*Pg	**Pg**	**04 30 51.6**	**-1.4**
IHSB				*e*		04 30 56.0	
TEH	**Tehran**	**0.83**	**299**	*e*Pg	**Pg**	**04 30 52.3**	**-0.9**
IALA	**Alasht**	**0.87**	**30**	*e*Pg	**Pg**	**04 30 52.6**	**-1.3**
IALA				*e*		04 31 12.5	
IPRN	**Peran**	**0.91**	**3**	*e*Pg	**Pg**	**04 30 53.5**	**-1.2**
IPRN				*e*		04 31 13.5	
ISHM	**Shahmirzad**	**0.96**	**60**	*e*Pg	**Pg**	**04 30 53.8**	**-1.8**
ISHM				*e*		04 31 17.9	
CHTH	**Charan**	**1.10**	**302**	*e*Pg	**Pg**	**04 30 56.7**	**-1.6**
CHTH				IAML		04 31 13.3	
	comp=N,2µm,0.6s						
CHTH	**Charan**	**1.10**	**302**	*e*Pg	**Pg**	**04 30 56.7**	**-1.6**
IANJ	**Anjilo**	**1.35**	**84**	*e*Pg	**Pn**	**04 31 00.5**	**-1.7**
IANJ				*e*		04 31 23.2	
IMHD	**Mahdasht**	**1.36**	**286**	*e*Pg	**Pn**	**04 31 00.7**	**-1.5**
IMHD				*e*		04 31 25.4	
KRSH	**Karshahi**	**1.36**	**185**	*e*Pg	**Pn**	**04 31 00.9**	**-1.4**
IKIA	**Kiasar**	**1.44**	**52**	*e*Pg	**Pn**	**04 31 03.1**	**-0.4**
IKIA				*e*		04 31 33.6	
QAM	**Ghamsar**	**1.71**	**204**	*e*Pg	**Pn**	**04 31 06.7**	**-0.5**
QALM	**Alamut, Qazvin**	**1.72**	**310**	*e*Pg	**Pn**	**04 31 08.0**	**+0.7**
IGLO	**Ghaloghah**	**1.72**	**47**	*e*		04 31 48.5	
IGLO				*e*Pg	**Pb**	**04 31 08.8**	**-0.2**
IRAZ	**Razeghan**	**1.92**	**273**	*e*		04 31 43.5	
IRAZ				*e*Pn	**Pn**	**04 31 09.9**	**-0.1**
IGZV	**Ghazvin**	**1.98**	**303**	*e*Pn	**Pn**	**04 31 11.6**	**+0.8**
IGZV				*e*		04 31 44.2	
ASAO	**Ashtian**	**2.00**	**248**	*e*Pn	**Pn**	**04 31 11.7**	**+0.4**
ASAO				IAML		04 31 48.4	
	comp=E,681nm,0.5s						
ASAO				IAML		04 31 56.8	
	comp=N,629nm,0.7s						
ASAO	**Ashtian**	**2.00**	**248**	*e*Pn	**Pn**	**04 31 11.7**	**+0.4**
IKLH	**Kolahrood**	**2.09**	**196**	*e*Pn	**Pn**	**04 31 12.4**	**0.0**
QABG	**Abgarm-Qazvin**	**2.23**	**281**	*e*Pn	**Pn**	**04 31 13.5**	**-0.8**
IZEF	**Zefreh**	**2.43**	**179**	*e*Pn	**Pn**	**04 31 17.3**	**+0.2**
IZEF				*e*		04 32 00.7	
ANAR	**Anarak**	**2.45**	**150**	*e*Pn	**Pn**	**04 31 17.4**	**+0.1**
KHMZ	**Khomeyn**	**2.48**	**231**	*e*P	**Pn**	**04 31 18.3**	**+0.5**
KHMZ	**Khomeyn**	**2.48**	**231**	*e*Pn	**Pn**	**04 31 18.3**	**+0.5**
NASN	**Na'in**	**2.56**	**170**	*e*Pn	**Pn**	**04 31 19.5**	**+0.5**
NASN				*e*Sg	**Sb**	**04 31 56.3**	**+1.2**
NASN	**Na'in**	**2.56**	**170**	*e*Pn	**Pn**	**04 31 19.5**	**+0.5**
QSDN	**Sirdan**	**2.78**	**296**	*e*Pn	**Pn**	**04 31 22.5**	**+0.7**
IPIR	**Pirpir**	**2.88**	**204**	*e*Pn	**Pn**	**04 31 24.3**	**+1.0**
IGAR	**Gharneh**	**2.92**	**184**	*e*Pn	**Pn**	**04 31 23.7**	**-0.2**
IGAR				*e*		04 32 11.5	
IMND	**Minoodasht**	**3.18**	**52**	*e*Pn	**Pn**	**04 31 27.9**	**+0.7**
ZNJK	**Zanjan**	**3.20**	**296**	*e*Pn	**Pn**	**04 31 28.3**	**+0.6**
ZNJK	**Zanjan**	**3.20**	**296**	*e*Pn	**Pn**	**04 31 28.3**	**+0.6**
HSAM	**Samen**	**3.22**	**251**	*e*Pn	**Pn**	**04 31 29.1**	**+1.1**
HSRG	**Sareghieh**	**3.27**	**270**	*e*Pn	**Pn**	**04 31 28.9**	**+0.2**
HSRG				*e*		04 31 48.3	
IALM	**Almabolaq**	**3.40**	**263**	*e*Pn	**Pn**	**04 31 31.3**	**+0.8**
YZKH	**Yazd**	**3.51**	**146**	*e*Pn	**Pn**	**04 31 32.2**	**+0.4**
YZKH	**Yazd**	**3.51**	**146**	*e*Pn	**Pn**	**04 31 32.2**	**+0.4**
IRAM	**Ramesheh**	**3.51**	**179**	*e*Pn	**Pn**	**04 31 33.2**	**+1.2**
ICHK	**Chekchek**	**3.55**	**149**	*e*Pn	**Pn**	**04 31 32.7**	**+0.2**
ISAD	**Sadrabad**	**3.60**	**161**	*e*Pn	**Pn**	**04 31 33.8**	**+0.5**
IKMR	**Kamar-syah**	**3.69**	**242**	*e*Pn	**Pn**	**04 31 34.9**	**+0.7**
IDOB	**Doab**	**3.71**	**247**	*e*Pn	**Pn**	**04 31 35.7**	**+1.0**
IBZA	**Bozab**	**3.73**	**258**	*e*Pn	**Pn**	**04 31 36.2**	**+1.2**
TNSJ	**Nastanj**	**3.82**	**110**	*e*Pn	**Pn**	**04 31 37.1**	**+1.0**
IKFM	**Kafar-mosalman**	**4.08**	**245**	*e*Pn	**Pn**	**04 31 40.9**	**+1.4**
IKOM	**Komasi**	**4.09**	**255**	*e*Pn	**Pn**	**04 31 41.0**	**+1.2**
TPRV	**Parvadeh(Tabas**	**4.32**	**121**	*e*Pn	**Pn**	**04 31 43.9**	**+1.0**
KER	**Kermanshah**	**4.33**	**259**	*e*Pn	**Pn**	**04 31 44.4**	**+1.2**
TABS	**Tabas**	**4.34**	**111**	*e*Pn	**Pn**	**04 31 43.5**	**+0.3**
TABS	**Tabas**	**4.34**	**111**	*e*Pn	**Pn**	**04 31 43.5**	**+0.3**
TKDS	**Koohdasht(Taba**	**4.36**	**112**	*e*Pn	**Pn**	**04 31 43.8**	**+0.3**
ILIN	**Lien**	**4.37**	**266**	*e*Pn	**Pn**	**04 31 45.1**	**+1.3**
KCHF	**Cheshme Sefid,**	**4.43**	**258**	*e*Pn	**Pn**	**04 31 45.8**	**+1.2**
SBZV	**Sabzevar**	**4.46**	**75**	*e*Pn	**Pn**	**04 31 45.9**	**+0.9**
IVIS	**Veis**	**4.53**	**261**	*e*Pn	**Pn**	**04 31 45.6**	**-0.2**
IBAF	**Bafgh**	**4.63**	**143**	*e*Pn	**Pn**	**04 31 47.6**	**+0.3**
IGHG	**Ghaleghazi**	**4.80**	**260**	*e*Pn	**Pn**	**04 31 50.7**	**+1.1**
IDHR	**Dehrash**	**4.87**	**264**	*e*Pn	**Pn**	**04 31 51.3**	**+0.7**
GRMI	**Germi**	**4.93**	**316**	*e*P	**Pn**	**04 31 52.6**	**+1.3**
GRMI	**Germi**	**4.93**	**316**	*e*Pn	**Pn**	**04 31 52.7**	**+1.3**
ISFR	**Sfrayin**	**4.94**	**68**	*e*Pn	**Pn**	**04 31 53.4**	**+1.8**
IKRD	**Kardeh**	**5.26**	**72**	*e*Pn	**Pb**	**04 32 09.1**	**-0.2**
GEYT	**Alibeck**	**5.37**	**59**	Pn	**Pn**	**04 31 57.9**	**+0.6**
	comp=N,1.0nm,0.3s,baz=225,slow=8.0,SNR=6.8						
GEYT				Sn	**Sn**	**04 33 01.4**	**+2.2**
	baz=239,slow=24,SNR=1.3						
GEYT				Lg	Lg	04 33 29.2	
	comp=N,1.2nm,0.3s,baz=252,slow=32,SNR=1.6						
IAKL	**Akhelmad**	**5.41**	**75**	*e*Pn	**Pn**	**04 31 59.2**	**+1.1**
AFRZ	**Afriz**	**5.89**	**107**	*e*Pn	**Pn**	**04 32 05.0**	**+0.4**
ITEG	**Tejag**	**5.89**	**112**	*e*Pn	**Pn**	**04 32 04.3**	**-0.4**
BSRN	**Basiran**	**6.62**	**118**	*e*Pn	**Pn**	**04 32 14.5**	**-0.2**
BSRN	**Basiran**	**6.62**	**118**	*e*Pn	**Pn**	**04 32 14.5**	**-0.2**
SHRT	**Shahrakht**	**6.83**	**102**	*e*Pn	**Pn**	**04 32 18.2**	**+0.8**
SHRT	**Shahrakht**	**6.83**	**102**	*e*Pn	**Pn**	**04 32 18.2**	**+0.8**
MMAI	**Mount Meron Ar**	**14.16**	**265**	LR	LR	04 40 21.4	
	comp=N,38nm,18.5s,baz=20,slow=42						
EIL	**Elat**	**15.66**	**254**	LR	LR	04 40 32.7	
	comp=N,16nm,20.2s,baz=82,slow=38						
AKTO	**Aktyubinsk**	**15.66**	**14**	Pn	**Pn**	**04 34 17.8**	**0.0**
	comp=N,0.1nm,0.3s,baz=206,slow=13,SNR=4.6						
ARU	**Arti**	**21.53**	**10**	P	**P**	**04 35 26.9**	**+0.7**
	comp=N,1.8nm,0.4s,baz=196,slow=9.5,SNR=12						
MLR	**Muntele Rosu**	**22.38**	**305**	P	**P**	**04 35 37.0**	**+1.4**
	comp=N,3.2nm,1.0s,baz=117,slow=11,SNR=4.8						
AKASG	**Malin Array Be**	**22.67**	**320**	P	**P**	**04 35 38.7**	**+0.3**
	comp=N,0.2nm,0.3s,baz=123,slow=10,SNR=4.3						
KURBB	**Kurchatov Arra**	**24.37**	**43**	P	**P**	**04 35 56.4**	**+1.1**
	comp=N,1.8nm,0.2s,baz=244,slow=9.5,SNR=5.2						
MKAR	**Makanchi Array**	**25.21**	**54**	P	**P**	**04 36 03.0**	**+0.1**
	comp=N,1.0nm,0.8s,baz=249,slow=7.6,SNR=2.1						
ZALV	**Zalesovo Beam**	**29.33**	**40**	P	**P**	**04 36 40.2**	**+0.4**
	comp=N,0.5nm,0.3s,baz=256,slow=8.4,SNR=2.0						
GERES	**GERESS Array B**	**31.30**	**308**	P	**P**	**04 36 57.3**	**0.0**
	comp=N,0.2nm,0.4s,baz=105,slow=8.8,SNR=4.1						
HFS	**Hagfors**	**35.08**	**327**	P	**P**	**04 37 30.7**	**+0.6**
	comp=N,5.5nm,1.1s,baz=124,slow=7.7,SNR=2.6						
HFS				LR	LR	04 52 31.3	
	comp=N,104nm,19.1s,baz=254,slow=37						
ESDC	**Sonseca Array**	**44.21**	**293**	P	**P**	**04 38 45.6**	**-0.8**
	comp=N,0.3nm,0.5s,baz=69,slow=7.4,SNR=1.9						
CMAR	**Chiang Mai Arr**	**44.46**	**100**	P	**P**	**04 38 47.9**	**-0.7**
	comp=N,1.1nm,0.3s,baz=292,slow=9.5,SNR=1.9						
TORD	**Torodi Ar. Bea**	**50.51**	**257**	P	**P**	**04 39 34.0**	**-1.7**
	comp=N,0.6nm,0.8s,baz=46,slow=6.2,SNR=4.0						

ANF ***25*** *04:32:43.3±0.2,41.88N×119.66W,h0km,ML3.2/13,Error ellipse: s-maj=2.5km s-min=1.8km az=159.0*
SEA ***25*** *04:32:44.7±1.1,41.85N±0.04×119.62W±0.02,h3km±8km, Error ellipse: s-maj=6.3km s-min=1.6km az=160.0*
REN ***25*** *04:32:44.6±0.3,41.90N±0.04×119.63W±0.03,h8km±7km, ML3.5/4,ML3.3/27(SEA),Error ellipse: s-maj=6.1km s-min=2.8km az=162.0*

ISC 25 04:32:44.7±0.8,41.88N±0.03×119.64W±0.02,h10km,n50, σ1ᵎ17/63,Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOD	**Modoc Plateau**	**0.49**	**273**		**Pg**	**04 32 54.1**	**-0.2**
MOD	**Modoc Plateau**	**0.49**	**273**	Sg	**Sg**	**04 33 01.0**	**+0.1**
WVOR	**Wild Horse Val**	**0.93**	**53**		**Pg**	**04 33 01.6**	**-1.1**
WVOR					**Sg**	**04 33 14.6**	**-0.1**
K05A	**Summer Lake**	**1.25**	**313**	Pn	**Pn**	**04 33 07.4**	**-1.1**
M04C	**Macdoel**	**1.64**	**267**	P	**Pn**	**04 33 13.2**	**-0.6**
	baz=85,SNR=107						
M04C				Sb	**Sg**	**04 33 37.6**	**0.0**
	baz=85						
J08A	**Circle Bar Ran**	**1.71**	**30**	Pn	**Pn**	**04 33 13.8**	**-0.9**
K04D	**Chiloquin, OR**	**1.73**	**296**	P	**Pn**	**04 33 14.5**	**-0.5**
	baz=114,SNR=16						
K04D				Sb	**Sg**	**04 33 40.3**	**-0.1**
	baz=114						
J05D	**Fort Rock, OR**	**1.83**	**321**	Pb	**Pb**	**04 33 17.7**	**-0.7**
	baz=139,SNR=61						
J05D				Sb	**Sg**	**04 33 42.6**	**-0.9**
	baz=139						
L04D	**Klamath Falls**	**2.01**	**281**	P	**Pn**	**04 33 18.0**	**-0.8**
	baz=98,SNR=62						
L04D				Sb	**Sg**	**04 33 48.2**	**-1.1**
	baz=98						
BEKR	**Beckworth**	**2.08**	**195**		**Pb**	**04 33 21.3**	**-1.4**
PINE	**Pine Mountain**	**2.13**	**334**	Pn	**Pn**	**04 33 20.3**	**-0.3**
PAHR	**Pah Rah Range**	**2.18**	**175**	Pn	**Pn**	**04 33 21.1**	**-0.1**
I07A	**Izee**	**2.20**	**3**	Pn	**Pn**	**04 33 21.1**	**-0.4**
O03E	**Paynes Creek**	**2.27**	**227**	P	**Pn**	**04 33 21.9**	**-0.5**
	baz=45						
O03E				Sb	**Sb**	**04 33 55.7**	**+1.6**
	baz=45						
YBH	**Yreka Blue Hor**	**2.30**	**267**	Pn	**Pn**	**04 33 21.7**	**-1.0**
M02C	**Callahan**	**2.46**	**260**	P	**Pn**	**04 33 23.9**	**-0.9**
	baz=77,SNR=11						
M02C				Sb	**Sb**	**04 34 01.4**	**+2.1**
	baz=77						
N02D	**Trinity Center**	**2.47**	**250**	Pb	**Pb**	**04 33 27.7**	**-1.6**
	baz=67,SNR=17						
N02D				Sb	**Sg**	**04 34 02.5**	**-1.6**
	baz=67						
WDC	**Whiskeytown Da**	**2.54**	**240**	Pn	**Pn**	**04 33 26.3**	**+0.3**
HUMO	**Hull Mountain**	**2.56**	**288**	Pn	**Pn**	**04 33 26.4**	**+0.1**
VCNR	**Virginia City**	**2.58**	**180**		**Pn**	**04 33 26.9**	**+0.1**
ORV	**Oroville**	**2.72**	**212**		**Pn**	**04 33 28.9**	**+0.4**
I05D	**Terrebonne, OR**	**2.75**	**334**	Pb	**Pb**	**04 33 33.1**	**-0.9**
	baz=152,SNR=6.2						
I05D				Sb	**Sb**	**04 34 10.1**	**+2.3**
	baz=152						
PNTR	**Pine Nut**	**2.79**	**179**	Pn	**Pn**	**04 33 29.8**	**+0.2**
I04A	**Tendick Farm,**	**2.79**	**314**	Sb	**Sb**	**04 34 11.6**	**+2.7**
	baz=132						
RUBR	**Rubicon Trail**	**2.85**	**188**	Pn	**Pn**	**04 33 30.5**	**0.0**
O02D	**Mt. Diablo Mer**	**2.93**	**235**	Pb	**Pb**	**04 33 36.2**	**-0.8**
	baz=53,SNR=22						
O02D				Sb	**Sb**	**04 34 15.1**	**+2.3**
	baz=53						
L02E	**Cave Junction**	**2.96**	**277**	P	**Pn**	**04 33 31.6**	**-0.2**
	baz=94,SNR=9.0						
L02E				Sb	**Sb**	**04 34 15.4**	**+1.6**
	baz=94						
KVN	**Kaiserville**	**3.06**	**157**	Pn	**Pn**	**04 33 33.8**	**+0.4**
K02D	**Willamette Mer**	**3.09**	**287**	P	**Pn**	**04 33 33.6**	**0.0**
	baz=104,SNR=47						
K02D				Sb	**Sb**	**04 34 19.8**	**+2.1**
	baz=104						
AFDM	**Forest Hills D**	**3.10**	**200**	Pn	**Pn**	**04 33 33.9**	**+0.2**
MFID	**Camas Ranch**	**3.21**	**60**	Pn	**Pn**	**04 33 34.9**	**-0.3**
KHMM	**Horse Mountain**	**3.24**	**253**	Pn	**Pn**	**04 33 35.8**	**+0.1**
I03D	**Drain, OR**	**3.28**	**305**	Sb	**Sb**	**04 34 25.1**	**+2.3**
	baz=122						
H04A	**Detroit Lake**	**3.36**	**327**	Pn	**Pn**	**04 33 37.0**	**-0.3**
RYN	**Ryan**	**3.36**	**165**	Pn	**Pn**	**04 33 37.4**	**0.0**
WAKR	**Walker**	**3.38**	**177**	Pn	**Pn**	**04 33 37.7**	**+0.1**
BMO	**Blue Mountains**	**3.42**	**29**	Pn	**Pn**	**04 33 37.7**	**-0.5**
G08A	**Pilot Rock**	**3.44**	**8**	Pn	**Pn**	**04 33 38.1**	**-0.4**
H04D	**Lebanon**	**3.48**	**320**	Sb	**Sb**	**04 34 32.1**	**+3.5**
	baz=138						
KMRM	**Mail Ridge**	**3.49**	**243**	Pn	**Pn**	**04 33 39.7**	**+0.5**
ELK	**Elko**	**3.51**	**107**	Pn	**Pn**	**04 33 39.0**	**-0.5**
NV11	**Mina Array Sit**	**3.63**	**161**	Pn	**Pn**	**04 33 41.1**	**0.0**
LHV	**Little Huntoon**	**3.73**	**166**	Pn	**Pn**	**04 33 42.6**	**+0.3**
PLID	**Pearl Lake**	**4.16**	**38**	Pn	**Pn**	**04 33 48.0**	**-0.5**
HLID	**Hailey**	**4.20**	**65**	P	**Pn**	**04 33 49.2**	**+0.2**
	baz=248						
HLID				Sb	**Sb**	**04 34 53.2**	**+3.5**
	baz=248						
HLID	**Hailey**	**4.20**	**65**	Pn	**Pn**	**04 33 48.6**	**-0.4**
R11A	**Troy Canyon, C**	**4.70**	**137**	Pn	**Pn**	**04 33 55.9**	**0.0**
SPR3	**Spring Creek 3**	**4.97**	**124**	Pn	**Pn**	**04 33 59.2**	**-0.5**
BGU	**Big Grassy Mou**	**5.06**	**99**	Pn	**Pn**	**04 34 00.3**	**-0.5**
DUG	**Dugway, Tooele**	**5.43**	**106**	Pn	**Pn**	**04 34 05.6**	**-0.3**

ATH ***25*** *04:43:16.5,38.85N×24.91E,h29km±1km,ML2.7/7, Error ellipse: s-maj=1.5km s-min=0.8km az=305.0*
THE ***25*** *04:43:17.4,38.84N×24.94E,h11km±2km,ML2.4/5,Error ellipse: s-maj=2.3km s-min=0.4km az=183.0*
ISK ***25*** *04:43:17.3,38.96N×24.90E,h10km,ML2.7/15*
DDA ***25*** *04:43:21.1,38.98N×25.42E,h8km±4km,ML2.3*

ISC 25 04:43:17.3±1.0,38.83N±0.03×24.93E±0.02,h23km±10km, n44,σ1ᵎ31/65,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKY	**Skiros Island**	**0.30**	**279**	P	**Pb**	**04 43 23.6**	**-0.6**
SKY				S	**Sb**	**04 43 28.6**	**-0.3**
SKY				AML	AML	04 43 29.9	
	comp=N,4714µm,0.2s						
SKY				AML	AML	04 43 31.0	
	comp=E,4064µm,0.2s						
PSRA	**Psara**	**0.58**	**120**	P	**Pb**	**04 43 28.6**	**-0.2**
PSRA				S	**Sb**	**04 43 37.7**	**+1.2**
PSRA				AML	AML	04 43 39.3	
	comp=N,3799µm,0.3s						
PSRA				AML	AML	04 43 39.5	
	comp=E,4177µm,0.3s						
KYMI	**Kymi, Euboea I**	**0.68**	**253**	P	**Pb**	**04 43 30.0**	**-0.5**
KYMI				S	**Sn**	**04 43 40.5**	**-0.8**
KYMI				AML	AML	04 43 43.

1.7nm,0.8s,baz=333,slow=11,SNR=2.3
MKAR Makanchi Array 57.27 325 P **P** **05 07 20.0 +0.2**
0.3nm,0.4s,baz=114,slow=8.1,SNR=5.5
ZALV Zalesovo Beam 60.18 333 P **P** **05 07 38.1 -1.6**
0.5nm,0.3s,baz=142,slow=7.3,SNR=1.9
KURBB Kurchatov Arra 61.42 327 P **P** **05 07 48.0 -0.2**
1.3nm,0.2s,baz=124,slow=6.7,SNR=1.2
TORD Torodi Ar. Bea 123.24 289 PKP **PKiKP** **05 16 29.8 +0.8**
0.3nm,0.6s,baz=52,slow=2.5,SNR=2.3

IDC 25 05:01:49.3±1.4, 5.50N×61.18E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.5/50, mbtmp3.7/4, Error ellipse: s-maj=78.0km s-min=33.0km az=8.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**39.02**	**67**	P	P	05 09 18.0	0.0
	0.6nm,0.3s,baz=278,slow=9.0,SNR=1.2						
TORD	**Torodi Ar. Bea**	**59.08**	**282**	P	P	05 11 51.9	-0.1
	0.5nm,0.9s,baz=88,slow=6.4,SNR=2.5						
WRA	**Warramunga Arr**	**76.17**	**112**	P	P	05 13 39.9	0.0
	0.7nm,0.9s,baz=293,slow=5.2,SNR=4.3						
ASAR	**Alice Springs**	**76.52**	**116**	P	P	05 13 42.0	0.0
	0.8nm,0.8s,baz=292,slow=5.6,SNR=6.9						

IDC 25 05:10:02.8±1.3, 5.77N×61.28E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/52, mbtmp3.8/6, MS3.6/1, Ms1 3.6/1, ms1mx2.7/50, Error ellipse: s-maj=38.4km s-min=31.1km az=31.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**38.54**	**16**	LR	LR	05 33 18.5	
	comp=Z,84nm,22.0s,baz=150,slow=36						
CMAR	**Chiang Mai Arr**	**38.83**	**68**	P	P	05 17 31.2	+1.3
	0.8nm,0.3s,baz=264,slow=9.0,SNR=4.5						
MKAR	**Makanchi Array**	**44.71**	**21**	P	P	05 18 17.0	-0.6
	0.5nm,0.8s,baz=220,slow=8.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**51.70**	**18**	P	P	05 19 10.8	-0.7
	0.4nm,0.3s,baz=207,slow=9.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**59.12**	**282**	P	P	05 20 06.2	+0.5
	0.3nm,0.7s,baz=92,slow=7.1,SNR=2.2						
WRA	**Warramunga Arr**	**76.18**	**112**	P	P	05 21 53.0	-0.5
	0.9nm,0.9s,baz=288,slow=5.2,SNR=5.5						
ASAR	**Alice Springs**	**76.55**	**116**	P	P	05 21 55.5	-0.1
	1.0nm,0.8s,baz=281,slow=5.5,SNR=9.2						

IDC 25 05:10:35.2±1.7, 1.67N×127.27E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.7/48, mbtmp4.0/5, ML4.0/1, Error ellipse: s-maj=102.8km s-min=22.9km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.71**	**185**	P	Pn	05 15 07.4	-0.3
	0.3nm,0.3s,baz=12,slow=8.9,SNR=11						
WRA	**Warramunga Arr**	**22.57**	**162**	P	P	05 15 37.5	+0.2
	3.0nm,0.4s,baz=339,slow=11,SNR=37						
ASAR	**Alice Springs**	**26.00**	**166**	P	P	05 16 09.6	-0.4
	0.8nm,0.5s,baz=352,slow=6.9,SNR=13						
STKA	**Stephens Creek**	**36.02**	**159**	P	P	05 17 37.7	-0.6
	1.9nm,0.5s,baz=330,slow=7.8,SNR=4.7						
MKAR	**Makanchi Array**	**59.55**	**326**	P	P	05 20 40.7	+0.1
	0.4nm,0.4s,baz=114,slow=7.3,SNR=6.9						

IDC 25 05:10:50.1±1.3, 5.80N×61.31E, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.6/52, mbtmp3.8/6, Error ellipse: s-maj=39.8km s-min=31.8km az=19.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**38.78**	**68**	P	P	05 18 17.1	+0.3
	0.4nm,0.3s,baz=267,slow=8.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**51.66**	**17**	P	P	05 19 58.5	-0.1
	0.4nm,0.3s,baz=202,slow=8.3,SNR=1.5						
SONM	**Songino Array**	**56.80**	**35**	P	P	05 20 36.0	-0.4
	0.3nm,0.5s,baz=228,slow=6.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**59.14**	**282**	P	P	05 20 53.3	0.0
	0.5nm,0.9s,baz=79,slow=5.1,SNR=2.3						
WRA	**Warramunga Arr**	**76.16**	**112**	P	P	05 22 40.4	-0.3
	2.4nm,1.1s,baz=290,slow=5.2,SNR=6.0						
ASAR	**Alice Springs**	**76.54**	**116**	P	P	05 22 43.1	+0.3
	2.0nm,0.9s,baz=287,slow=5.4,SNR=7.9						

IDC 25 05:18:06.5±1.4, 5.43N×61.27E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.5/51, mbtmp3.9/4, Error ellipse: s-maj=76.4km s-min=32.8km az=9.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**38.97**	**67**	P	P	05 25 34.7	-0.1
	1.8nm,0.3s,baz=264,slow=8.1,SNR=1.1						
TORD	**Torodi Ar. Bea**	**59.17**	**282**	P	P	05 28 09.7	0.0
	0.3nm,0.9s,baz=96,slow=5.5,SNR=2.3						
WRA	**Warramunga Arr**	**76.07**	**112**	P	P	05 29 56.2	-0.3
	1.0nm,0.9s,baz=287,slow=4.7,SNR=7.3						
ASAR	**Alice Springs**	**76.42**	**116**	P	P	05 29 58.9	+0.4
	0.9nm,0.8s,baz=288,slow=6.5,SNR=8.0						

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*IDC **25** 05:19:53.2±0.5, 5.87N×61.32E, h0km, mb4.3/26, mb1 4.4/27, mb1mx4.3/57, mbtmp4.3/27, ML3.3/1, MS4.2/20, Ms1 4.2/20, ms1mx4.1/25, Error ellipse: s-maj=14.9km s-min=12.3km az=10.0*

*BJI **25** 05:19:54.0±0.0, 5.80N×61.40E, h10km, mB5.1/36, mb4.7/40, Ms4.7/35, Ms7 4.5/35*

*NEIC **25** 05:19:54.1±2.0, 5.7N±0.1×61.29E±0.09, h10km±1km, mb5.0/43, Error ellipse: s-maj=19.4km s-min=15.1km az=201.0*

*GCMT **25** 05:19:56.1±0.2, 5.76N±0.01×61.15E±0.02, h12km, MW5.0/121, Moment Tensor Solution. s49,c59; s121,c187; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr=3.62±.07; Mθθ2.86±.06; Mϕϕ0.75±.07; Mrθ2.04±.21; Mθϕ=-1.21±.06; Mϕr0.20±.26; Best double couple: Mo4.05800×10^16^ NP1:ϕs126.00000°, δ33.00000°, λ=-69.00000°. NP2:ϕs281.00000°, δ60.00000°, λ=-103.00000°. Principal axes: T 3.8500, Plg14.0000°, Azm21.0000°; N 0.4150, Plg11.0000°, Azm288.0000°; P =-4.2660, Plg72.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 05:19:54.7±0.4, 5.79N±0.05×61.25E±0.05, h10km, n210, σ1s80/217, mb4.8/74, MS4.3/27, 15C-4D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.58**	**312**	P	Pn	05 22 19.4	+6.5
SOCY	**Socotra**	**9.58**	**312**	Pn	**Pn**	**05 22 16.7**	**+3.8**
SHAO	**Shalim**	**13.34**	**336**	P	**Pn**	**05 23 07.7**	**+3.4**
SHAO				P	**Pn**	**05 23 07.7**	**+3.4**
SHAO				P	**Pn**	**05 23 07.7**	**+3.4**
SHAO				S	S	05 25 47.9	-9.2
SHAO				S	S	05 25 47.9	-9.2
SHAO				S	S	05 25 47.9	-9.2
DMTO	**DMTO**	**13.36**	**333**	P	**Pn**	**05 23 09.0**	**+4.5**
DMTO				P	**Pn**	**05 23 09.0**	**+4.5**
DMTO				S	**S**	**05 25 52.0**	**-5.5**
DMTO				S	**S**	**05 25 52.0**	**-5.5**
RBK	**Rabkut**	**13.53**	**330**	P	**Pn**	**05 23 11.2**	**+4.3**
RBK				P	**Pn**	**05 23 11.2**	**+4.3**
RBK				S	**S**	**05 25 57.4**	**-3.6**
RBK				S	**S**	**05 25 57.4**	**-3.6**
ABTO	**Aybut**	**13.88**	**327**	P	**Pn**	**05 23 15.5**	**+3.7**
	SNR=15						
ABTO				P	**Pn**	**05 23 15.5**	**+3.7**
	SNR=15						
ABTO				S	**S**	**05 26 04.1**	**-4.1**
ABTO				S	**S**	**05 26 04.1**	**-4.1**
WHFO	**Wadi Hawf**	**14.10**	**329**	P	**Pn**	**05 23 18.4**	**+3.7**
	SNR=7.8						
WHFO				P	**Pn**	**05 23 18.4**	**+3.7**
	SNR=7.8						
WHFO				S	**Sn**	**05 25 53.8**	**+2.4**
WHFO				S	**Sn**	**05 25 53.8**	**+2.4**
DQM	**DQM**	**14.51**	**346**	P	**Pn**	**05 23 21.9**	**+1.6**
DQM				P	**Pn**	**05 23 21.9**	**+1.6**
DQM				P	**Pn**	**05 23 21.9**	**+1.6**
MHTO	**MHTO**	**15.44**	**348**	P	**Pn**	**05 23 33.6**	**+0.9**
	SNR=33						
MHTO				P	**Pn**	**05 23 33.6**	**+0.9**
	SNR=33						
MHTO				P	**Pn**	**05 23 33.6**	**+0.9**
	SNR=33						
MHTO				S	**S**	**05 26 40.9**	**+0.8**
MHTO				S	**S**	**05 26 40.9**	**+0.8**
MHTO				S	**S**	**05 26 40.9**	**+0.8**
WSAR	**Wadi Sarin**	**17.53**	**352**	P	**Pn**	**05 23 59.9**	**+0.5**
	0.1nm,0.3s,baz=191,slow=8.5,SNR=4.9						
WSAR				LR	LR	05 29 16.5	
	comp=Z,880nm,21.4s,baz=194,slow=32						
POO	**Poona**	**17.65**	**43**	*eP*	**P**	**05 24 02.3**	**+0.4**
POO				IAmb	IAmb	05 24 11.7	
	comp=Z,105nm,1.6s						
SOHO	**SOHO**	**18.80**	**347**	*i* P	**Pn**	**05 24 15.4**	**+0.4**
	SNR=14						
ALNE	**Al Ain**	**18.92**	**344**	*i* P	**Pn**	**05 24 17.7**	**+1.3**
	SNR=15						
ATD	**Arta Tunnel**	**19.06**	**289**	LR	LR	05 30 58.9	
	comp=Z,259nm,18.4s,baz=107,slow=35						
BHUJ	**Bhuj**	**19.17**	**24**	*eP*	**Pn**	**05 24 21.4**	**+2.1**
BHUJ				IAmb	IAmb	05 24 31.0	
	comp=Z,427nm,2.2s						
ASHO	**Ashiyiah**	**19.44**	**346**	*i* P	**Pn**	**05 24 22.6**	**-0.1**
	SNR=7.1						
HATD	**Hatta, Dubai**	**19.56**	**346**	*i* P	**Pn**	**05 24 25.1**	**+1.0**
	SNR=20						
ASUD	**Al Ashush, Dub**	**19.57**	**344**	P	**Pn**	**05 24 24.4**	**+0.1**
FAQ	**Al Faqa, Dubai**	**19.62**	**345**	P	**P**	**05 24 24.3**	**+0.9**
UOSS	**Minazif**	**19.66**	**346**	*i* P	**P**	**05 24 24.8**	**+0.9**
	SNR=9.1						
UOSS	**Minazif**	**19.66**	**346**	P	**P**	**05 24 21.2**	**-2.6**
UOSS				IAmb	IAmb	05 24 34.6	
	comp=Z,164nm,1.8s						
NAZ	**Nazwa, Dubai**	**19.83**	**345**	P	**Pn**	**05 24 27.3**	**-0.1**
MSFE	**Esma-Masafi**	**20.06**	**346**	P	**P**	**05 24 29.5**	**+1.2**
HYB	**Hyderabad**	**20.50**	**54**	*i* P	Pn	05 24 36.0	+0.7
FURI	**Furi**	**22.59**	**279**	P	**P**	**05 24 57.1**	**+1.0**
RAYN	**Ar Rayn**	**23.25**	**321**	*i* P	**P**	**05 25 02.5**	**-0.1**
	SNR=8.1						
RAYN	**Ar Rayn**	**23.25**	**321**	P	**P**	**05 25 00.9**	**-1.7**
RAYN				IAmb	IAmb	05 25 15.4	
	comp=Z,47nm,1.4s						
BHPL	**Bhopal**	**23.33**	**40**	*eP*	**P**	**05 25 06.4**	**+3.1**
BHPL				IAmb	IAmb	05 25 15.1	
	comp=Z,140nm,1.6s						
KIBK	**Kibwezi**	**24.54**	**251**	P	**P**	**05 25 16.8**	**+1.8**
	SNR=9.0						
KMBO	**Kilima Mbogo**	**24.92**	**255**	P	**P**	**05 25 21.3**	**+2.6**
	comp=Z,3.0nm,0.7s,baz=60,slow=10,SNR=14						
KMBO				LR	LR	05 34 03.6	
	comp=Z,574nm,21.2s,baz=80,slow=34						
LODK	**Lodwar**	**25.91**	**266**	P	**P**	**05 25 30.9**	**+3.6**
	SNR=12						
OPO	**Ambohidratompo**	**27.89**	**210**	LR	LR	05 33 52.9	
	comp=Z,671nm,21.7s,baz=192,slow=30						
HRA	**Herat**	**28.48**	**2**	P	**P**	**05 25 51.1**	**+0.7**
HRA				IAmb	IAmb	05 26 30.3	
	comp=Z,35nm,1.6s						
SMLA	**Simla**	**29.31**	**29**	*eP*	**P**	**05 26 01.2**	**+3.6**
KBL	**Kabul**	**29.51**	**13**	P	P	05 26 08.6	+9.0
	SNR=9.2						
KBL	**Kabul**	**29.51**	**13**	P	**P**	**05 26 00.3**	**+0.8**
KBL				IAmb	IAmb	05 26 10.5	
	comp=Z,70nm,1.9s						
DHRM	**DHARAMSHALA**	**29.85**	**26**	*eP*	**P**	**05 26 06.5**	**+3.8**
DHRM				IAmb	IAmb	05 26 27.4	
	comp=Z,71nm,1.5s						
NIL	**Nilore**	**29.88**	**20**	P	P	05 26 11.6	+8.9
NIL				P	P	05 26 11.6	+8.9
NIL	**Nilore**	**29.88**	**20**	P	**P**	**05 26 02.7**	**0.0**
NIL				IAmb	IAmb	05 26 12.2	
	comp=Z,46nm,1.8s						
MBAR	**Mbarara**	**31.11**	**259**	LR	LR	05 39 12.5	
	comp=Z,336nm,18.5s,baz=68,slow=37						
GEYT	**Alibeck**	**32.12**	**355**	LR	LR	05 39 39.3	
	comp=Z,251nm,21.6s,baz=270,slow=37						
GTK	**Tadong**	**33.70**	**47**	*eP*	**P**	**05 26 35.0**	**-1.4**
BELO	**BELONIA**	**33.88**	**56**	*eP*	**P**	**05 26 41.5**	**+3.7**
EIL	**Elat**	**34.34**	**317**	LR	LR	05 40 07.7	
	comp=Z,498nm,18.6s,baz=132,slow=35						
SAIH	**SAIHA**	**34.85**	**58**	*eP*	**P**	**05 26 45.2**	**-1.3**
BTK	**Batken**	**35.19**	**13**	P	**P**	**05 26 51.1**	**+1.9**
SHL	**Shillong**	**35.29**	**53**	*eP*	**P**	**05 26 49.6**	**-0.7**
SHL	**Shillong**	**35.29**	**53**	P	**P**	**05 26 47.2**	**-3.1**
GUWA	**GUWAHATI**	**35.45**	**52**	*eP*	**P**	**05 26 52.2**	**+0.7**
KSH	**Kashi**	**36.12**	**19**	P	**P**	**05 26 54.5**	**-2.7**
KSH				pP	sP	05 27 00.8	+1.0
KSH				PP	**PnPn**	**05 28 16.3**	**-2.1**
KSH				S	S	05 32 27.4	-9.4
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,330nm,5.5s						
KSH				LR	LR		
	comp=Z,510nm,8.6s						
KSH				LR	LR		
	comp=Z,460nm,13.5s						
KSH				LR	LR		
	comp=Z,480nm,9.6s						
MMAI	**Mount Meron Ar**	**36.23**	**322**	LR	LR	05 41 14.4	
	comp=Z,354nm,19.7s,baz=135,slow=35						
KCSI	**Kotacane, Aceh**	**36.47**	**92**	P	**P**	**05 27 01.7**	**+1.3**
	comp=Z,18nm,2.2s						
KOHI	**KOHIMA**	**37.14**	**54**	*eP*	**P**	**05 27 07.7**	**+1.6**
PSI	**Prapat**	**37.68**	**93**	P	**P**	**05 27 11.6**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=183,slow=2.4,SNR=3.7						
PSI				LR	LR	05 40 03.8	
	comp=Z,247nm,21.0s,baz=269,slow=32						
RPSI	**Rantau Prapat**	**37.69**	**93**	P	**P**	**05 27 11.6**	**+0.9**
RPSI	**Rantau Prapat**	**37.69**	**93**	P	**P**	**05 27 09.0**	**-1.8**
RPSI				IAmb	IAmb	05 27 39.7	
	comp=Z,13nm,1.3s						
JORH	**JORHAT**	**37.72**	**53**	*eP*	**P**	**05 27 06.5**	**-4.3**
ZIRO	**ZIRO**	**37.78**	**51**	*eP*	**P**	**05 27 12.3**	**+0.8**
KK31	**Karatay Array**	**38.06**	**11**	P	**P**	**05 27 13.2**	**-0.3**
KK31				IAmb	IAmb	05 27 29.4	
	comp=Z,28nm,1.6s						
KKAR	**Karatay Array**	**38.06**	**11**	P	**P**	**05 27 13.2**	**-0.3**
KKAR	**Karatay Array**	**38.06**	**11**	P	**P**	**05 27 13.7**	**+0.3**
KKAR				IAmb	IAmb	05 27 29.4	
	comp=Z,28nm,1.6s						
AAK	**Ala-Archa**	**38.53**	**16**	P	**P**	**05 27 18.0**	**+0.4**
	comp=Z,4.5nm,1.0s,baz=196,slow=6.2,SNR=7.0						
AAK	**Ala-Archa**	**38.53**	**16**	*i* P	**P**	**05 27 20.0**	**+2.3**
	SNR=5.5						
AAK	**Ala-Archa**	**38.53**	**16**	P	P	05 27 24.0	+6.4
AAK				P	P	05 27 24.0	+6.4
AAK	**Ala-Archa**	**38.53**	**16**	P	**P**	**05 27 17.4**	**-0.2**
AAK				IAmb	IAmb	05 27 27.7	
	comp=Z,57nm,1.9s						
MNSI	**Mandailing Nat**	**38.58**	**96**	P	**P**	**05 27 20.4**	**+2.2**
	comp=Z,11μmcomp=Z,32nm,0.4s						
CM31	**Chiang Mai Arr**	**38.85**	**68**	P	**P**	**05 27 21.4**	**+0.9**
CM31				IAmb	IAmb	05 27 36.1	
	comp=Z,94nm,1.9s						
CMAR	**Chiang Mai Arr**	**38.85**	**68**	P	**P**	**05 27 21.2**	**+0.7**
	comp=Z,5.6nm,0.8s,baz=260,slow=9.3,SNR=27						
CMAR				PcP	**PcP**	**05 29 31.6**	**0.0**
	comp=Z,2.3nm,0.9s,baz=256,slow=4.9,SNR=5.6						
CMAR	**Chiang Mai Arr**	**38.85**	**68**	P	**P**	**05 27 20.9**	**+0.4**
LSZ	**Lusaka**	**38.87**	**237**	P	**P**	**05 27 23.2**	**+2.4**
	comp=Z,2.0nm,0.6s,baz=100,slow=4.2,SNR=2.9						
LSZ				LR	LR	05 41 23.2	
	comp=Z,654nm,20.0s,baz=54,slow=33						
LSZ	**Lusaka**	**38.87**	**237**	P	**P**	**05 27 19.1**	**-1.7**
CHTO	**Chiang Mai**	**38.94**	**67**	P	**P**	**05 27 22.2**	**+1.0**
CHTO				P	**P**	**05 27 22.2**	**+1.0**
CHTO	**Chiang Mai**	**38.94**	**67**	P	**P**	**05 27 21.0**	**-0.2**
CHTO				IAmb	IAmb	05 27 37.4	
	comp=Z,46nm,1.6s						
KULM	**Kulim**	**39.22**	**89**	P	**P**	**05 27 22.8**	**-0.8**
LKP	**Lekhapani**	**39.26**	**53**	*eP*	**P**	**05 27 20.2**	**-3.5**
SDSI	**Sungai Dareh**	**40.67**	**98**	P	**P**	**05 27 37.5**	**+1.8**
	comp=Z,16nm,1.4s						
MATP	**Matopo**	**41.40**	**230**	LR	LR	05 42 57.0	
	comp=Z,981nm,18.4s,baz=58,slow=33						
BRTR	**Keskin Array B**	**41.95**	**328**	P	**P**	**05 27 46.4**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=152,slow=8.0,SNR=9.0						
BRTR	**Keskin Array B**	**41.95**	**328**	P	**P**	**05 27 45.8**	**-0.2**
ABKAR	**Akbulak array**	**43.33**	**359**	P	**P**	**05 27 57.6**	**+0.7**
ABKAR	**Akbulak array**	**43.33**	**359**	P	**P**	**05 27 57.1**	**+0.2**
SLVN	**Son La**	**44.08**	**65**	P	**P**	**05 28 02.8**	**-0.7**
WMQ	**Urumqi**	**44.45**	**27**	*eP*	**P**	**05 28 09.9**	**+3.8**
WMQ				sP	pwP	05 28 18.3	+5.1
WMQ				pmax	pmax		
	comp=Z,24nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.7s						
WMQ				LR	LR		
	comp=Z,2μm,29.7s						
WMQ				LR	LR		
	comp=Z,2μm,29.0s						
WMQ				LR	LR		
	comp=Z,710nm,23.5s						
WMQ	**Urumqi**	**44.45**	**27**	P	**P**	**05 28 06.2**	**+0.1**
KLSI		**44.65**	**103**	P	**P**	**05 28 09.0**	**+0.9**
	comp=Z,204nmcomp=Z,5.4nm,2.1s						
MK31	**Makanchi Array**	**44.70**	**21**	P	**P**	**05 28 07.3**	**-0.7**
MK31				IAmb	IAmb	05 28 26.9	
	comp=Z,25nm,1.9s						
MKAR	**Makanchi Array**	**44.70**	**21**	P	**P**	**05 28 07.5**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=207,slow=7.6,SNR=9.4						
MKAR				PcP	**PcP**	**05 29 49.6**	**-0.8**
	comp=Z,2.1nm,1.0s,baz=226,slow=3.2,SNR=3.5						
MKAR	**Makanchi Array**	**44.70**	**21**	P	**P**	**05 28 05.6**	**-2.4**
LBTB	**Lobatse**	**46.26**	**227**	LR	LR	05 44 56.5	
	comp=Z,646nm,21.4s,baz=55,slow=32						
KURBB	**Kurchatov Arra**	**46.97**	**15**	P	**P**	**05 28 25.4**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=212,slow=8.1,SNR=13						
CD2	**Chengdu**	**47.03**	**53**	*eP*	**P**	**05 28 28.5**	**+1.8**
CD2				S	**S**	**05 35 20.4**	**+1.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,6.9s						
CD2				LR	LR		
	comp=Z,380nm,19.2s						
CD2				LR	LR		
	comp=Z,410nm,17.5s						
CD2				LR	LR		
	comp=Z,440nm,14.3s						
KURK	**Kurchatov**	**47.08**	**15**	P	**P**	**05 28 26.3**	**-0.4**
KURK				IAmb	IAmb	05 28 41.3	
	comp=Z,14nm,1.4s						
GYA	**Guiyang**	**47.90**	**59**	⇑P	**P**	**05 28 33.4**	**-0.2**
GYA				pmax	pmax		
	comp=Z,11nm,0.9s						
GYA				LR	LR		
	comp=Z,230nm,20.3s						
GYA				LR	LR		
	comp=Z,220nm,23.4s						
GYA				LR	LR		
	comp=Z,300nm,20.2s						
LEM	**Lembang**	**47.94**	**105**	LR	LR	05 43 59.5	
	comp=Z,38nm,21.2s,baz=158,slow=30						
LEM	**Lembang**	**47.94**	**105**	P	**P**	**05 28 36.2**	**+2.0**
GTA	**Gaotai**	**48.24**	**40**	⇑P	**P**	**05 28 36.5**	**+0.4**
GTA				pP	pwP	05 28 42.8	-0.4
GTA				sP	sP	05 28 46.0	+7.2
GTA				S	**S**	**05 35 39.3**	**+3.4**
GTA				sS	sS	05 35 46.1	+6.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.8s						
GTA				LR	LR		
	comp=Z,520nm,20.0s						
GTA				LR	LR		
	comp=Z,580nm,20.0s						
GTA				LR	LR		
	comp=Z,580nm,19.3s						
BOSA	**Boshof**	**48.69**	**223**	LR	LR	05 47 25.1	
	comp=Z,581nm,19.0s,baz=46,slow=34						
QIZ	**Qiongzhong**	**49.08**	**70**	P	**P**	**05 28 42.3**	**-0.4**
QIZ				S	**S**	**05 35 49.0**	**+1.0**
QIZ				pmax	pmax		
	comp=Z,150nm,3.8s						
QIZ				LR	LR		
	comp=Z,140nm,14.7s						
QIZ				LR	LR		
	comp=Z,210nm,14.3s						
QIZ				LR	LR		
	comp=Z,110nm,16.9s						
LZH	**Lanzhou**	**49.31**	**46**	*eP*	**P**	**05 28 45.4**	**+1.0**
LZH				pP	pwP	05 28 50.9	-0.6
LZH				sP	sP	05 28 53.9	+6.8
LZH				*eS*	**S**	**05 35 50.4**	**-0.7**
LZH				sS	sS	05 35 59.0	+4.6
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,230nm,4.0s						
LZH				LR	LR		
	comp=Z,240nm,16.5s						
LZH				LR	LR		
	comp=Z,340nm,15.5s						
LZH				LR	LR		
	comp=Z,370nm,19.5s						
TSUM	**Tsumeb**	**49.65**	**239**	P	**P**	**05 28 48.1**	**+1.0**
	comp=Z,4.7nm,1.0s,baz=38,slow=9.4,SNR=3.9						
BISRR	**Bisoca**	**49.67**	**328**	⇑P	P	05 28 53.9	+7.1
NEHR	**Nehoiu**	**49.80**	**328**	⇑P	**P**	**05 28 49.9**	**+2.0**
VRI	**Vrincioaia**	**49.87**	**329**	⇑P	**P**	**05 28 48.8**	**+0.5**
PLOR	**Plostina**	**49.90**	**329**	⇑P	**P**	**05 28 50.3**	**+1.7**
MLR	**Muntele Rosu**	**50.03**	**328**	⇓P	**P**	**05 28 52.2**	**+2.5**
TESR	**Tescani**	**50.35**	**329**	⇑P	**P**	**05 28 52.1**	**+0.1**
VOIR		**50.47**	**327**	⇑P	**P**	**05 28 53.2**	**+0.3**
DOPR	**Dopca**	**50.64**	**328**	⇑P	**P**	**05 28 54.4**	**+0.2**
ARR	**Arges**	**50.65**	**327**	⇑P	**P**	**05 28 55.2**	**+0.9**
SORM	**Soroca**	**50.65**	**332**	⇑P	**P**	**05 28 53.9**	**-0.3**
HERR	**Herculane**	**51.58**	**325**	⇓P	**P**	**05 29 01.3**	**+0.2**
ZALV	**Zalesovo Beam**	**51.70**	**18**	P	**P**	**05 29 01.4**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=223,slow=6.1,SNR=10.0						
BURAR	**Bucovina Array**	**51.82**	**330**	⇑P	**P**	**05 29 04.1**	**+1.1**
BURAR	**Bucovina Array**	**51.82**	**330**	P	**P**	**05 29 03.5**	**+0.5**
BUR08	**Bucovina Ar. S**	**51.85**	**330**	P	**P**	**05 29 02.8**	**-0.5**
AKASG	**Malin Array Be**	**52.14**	**335**	P	**P**	**05 29 04.2**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=137,slow=6.5,SNR=7.8						
XAN	**Xi'an**	**52.26**	**51**	P	**P**	**05 29 06.1**	**-0.4**
XAN				S	**S**	**05 36 30.4**	**-1.4**
XAN				SS	**S

	comp=Z,6.1nm,1.1s								
CONA	**Conrad Observa**	**57.04 325**	*e*P		**P**		**05 29 41.2**	**+0.1**
	comp=Z,18nm,1.3s,SNR=8.5								
OBKA	**Obir**	**57.06 323**	*i* P		**P**		**05 29 40.4**	**-0.8**
	comp=Z,9.2nm,1.2s								
MORC	**Moravsky Berou**	**57.14 328**	*e*P		**P**		**05 29 41.5**	**-0.2**
MORC	**Moravsky Berou**	**57.14 328**	P		**P**		**05 29 40.3**	**-1.4**
MORC			IAmb		IAmb		05 29 42.6	
	comp=Z,11nm,1.0s								
KLMR	**Klimovskoe**	**57.33 348**	*e*P		**P**		**05 29 40.6**	**-2.1**
KLMR			AMP				05 29 42.8	
	comp=Z,21nm,1.5s								
KRUC	**Moravsky**	**57.36 327**	*e*P		**P**		**05 29 43.0**	**-0.2**
VRAC	**Vranov**	**57.38 327**	*e*P		**P**		**05 29 43.3**	**-0.1**
MYKA	**Terra Mystica**	**57.66 323**	*e*P		**P**		**05 29 45.3**	**-0.2**
	comp=Z,16nm,1.2s								
KRLC	**Kraliky**	**57.72 328**	*e*P		**P**		**05 29 45.3**	**-0.4**
MOA	**Molin**	**57.91 324**	*e*P		**P**		**05 29 47.3**	**+0.2**
	comp=Z,22nm,1.4s								
KBA	**Koelnbreinsper**	**58.06 323**	*i* P		**P**		**05 29 47.8**	**-0.5**
	comp=Z,9.5nm,1.3s								
DPC	**Dobruska-Polom**	**58.12 328**	*e*P		**P**		**05 29 48.3**	**-0.2**
CIMO	**Cimolais**	**58.24 322**	P		**P**		**05 29 47.6**	**-1.8**
ABTA	**Abfaltersbach**	**58.40 323**	*e*P		**P**		**05 29 50.6**	**0.0**
	comp=Z,12nm,1.2s,SNR=5.5								
KSP	**Ksiaz**	**58.41 328**	*e*P		**P**		**05 29 50.7**	**+0.2**
GERES	**GERESS Array B**	**58.74 325**	P		**P**		**05 29 51.8**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=116,slow=7.6,SNR=5.8								
GERES	**GERESS Array B**	**58.74 325**	P		**P**		**05 29 51.0**	**-2.0**
KHC	**Kasperske Hory**	**58.96 325**	*e*P		**P**		**05 29 53.4**	**-1.0**
KHC	**Kasperske Hory**	**58.96 325**	P		**P**		**05 29 52.9**	**-1.5**
TORD	**Torodi Ar. Bea**	**59.08 282**	P		**P**		**05 29 55.4**	**-0.5**
	comp=Z,2.5nm,1.0s,baz=89,slow=4.8,SNR=11								
TORD			PcP		**PcP**		**05 30 44.8**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=80,slow=4.0,SNR=4.9								
WTTA	**Wattenberg**	**59.17 323**	*e*P		**P**		**05 29 55.5**	**-0.6**
	comp=Z,12nm,1.1s								
WATA	**Walderalm**	**59.24 323**	*e*P		**P**		**05 29 55.8**	**-0.8**
	comp=Z,13nm,1.2s								
SQTA	**Sankt Quirin**	**59.41 323**	*i* P		**P**		**05 29 57.1**	**-0.6**
	comp=Z,8.6nm,1.1s								
MOTA	**Moosalm**	**59.53 323**	*i* P		**P**		**05 29 57.7**	**-0.9**
	comp=Z,14nm,1.1s								
FETA	**Feichten**	**59.61 322**	*e*P		**P**		**05 29 58.8**	**-0.3**
	comp=Z,4.6nm,1.1s								
NJ2	**Nanjing**	**59.64 56**	*e*P		**P**		**05 29 58.8**	**-0.6**
NJ2			pmax		pmax				
	comp=Z,12nm,0.6s								
BJT	**Baijiatuau**	**59.78 47**	P		**P**		**05 29 59.0**	**-1.3**
RETA	**Reutte**	**59.80 323**	*i* P		**P**		**05 29 59.6**	**-0.7**
	comp=Z,6.4nm,1.2s								
NKC	**Novy Kostel**	**60.15 326**	*e*P		**P**		**05 30 02.5**	**-0.1**
DAVA	**Damuels**	**60.25 322**	*e*P		**P**		**05 30 03.1**	**-0.4**
	comp=Z,15nm,1.6s								
CLL	**Collm**	**60.40 327**	*i* P		**P**		**05 30 04.0**	**-0.3**
	comp=Z,38nm,1.9s								
CLL			*i*				05 30 10.3		
CLL			*e*				05 30 16.0		
CLL			*e*PP		**PP**		**05 32 13.0**	**-4.4**
CLL	**Collm**	**60.40 327**	P		**P**		**05 30 03.4**	**-0.9**
CLL			IAmb		IAmb		05 30 05.3		
	comp=Z,31nm,1.8s								
FINES	**FINESS Array B**	**61.40 342**	LR		LR		05 59 06.6		
	comp=Z,196nm,21.8s,baz=143,slow=38								
SENIN	**Lac Senin/Sane**	**61.46 320**	P		**P**		**05 30 10.8**	**-1.1**
SENIN			IAmb		IAmb		05 30 12.4		
	comp=Z,13nm,1.0s								
BFO	**Black Forest**	**61.64 323**	P		**P**		**05 30 11.7**	**-1.1**
BFO			IAmb		IAmb		05 30 13.7		
	comp=Z,22nm,1.4s								
NWAO	**Narrogin (SRO)**	**65.55 130**	P		**P**		**05 30 38.9**	**0.0**
	comp=Z,10nm,0.9s,baz=289,slow=9.6,SNR=4.2								
DBIC	**Dimbokro**	**65.67 275**	P		**P**		**05 30 40.5**	**+0.5**
	comp=Z,4.7nm,1.0s,baz=51,slow=10,SNR=3.2								
DBIC	**Dimbokro**	**65.67 275**	IAmb		IAmb		05 30 42.9		
	comp=Z,25nm,1.4s								
ESDC	**Sonseca Array**	**67.31 311**	P		**P**		**05 30 49.1**	**-1.1**
	comp=Z,2.6nm,1.1s,baz=90,slow=6.1,SNR=9.4								
ESDC	**Sonseca Array**	**67.31 311**	P		**P**		**05 30 49.0**	**-1.1**
CN2	**Changchun**	**67.51 45**	*e*P		**P**		**05 30 48.8**	**-2.4**
CN2			pmax		pmax				
	comp=Z,10.0nm,0.7s								
FITZ	**Fitzroy Crossi**	**67.79 112**	P		**P**		**05 30 52.7**	**-0.7**
	comp=Z,6.6nm,0.9s,baz=240,slow=3.7,SNR=10								
FITZ	**Fitzroy Crossi**	**67.79 112**	P		**P**		**05 30 51.5**	**-1.9**
FITZ			IAmb		IAmb		05 30 54.8		
	comp=Z,12nm,1.1s								
ARCES	**ARCESS Array B**	**67.80 347**	P		**P**		**05 30 51.9**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=125,slow=8.9,SNR=4.7								
ARCES			LR		LR		06 01 34.8		
	comp=Z,110nm,21.1s,baz=240,slow=37								
KSRS	**Korea Array**	**68.03 52**	P		**P**		**05 30 53.3**	**-1.3**
	comp=Z,5.0nm,0.9s,baz=258,slow=8.1,SNR=5.0								
KSRS			LR		LR		06 01 37.6		
	comp=Z,135nm,20.2s,baz=272,slow=37								
USRK	**Ussuriysk Ar.**	**72.21 45**	LR		LR		06 04 34.6		
	comp=Z,315nm,19.8s,baz=267,slow=37								
KLR	**Kul'dur**	**72.94 40**	P		**P**		**05 31 22.3**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=266,slow=7.1,SNR=4.2								
MJAR	**Matsushiro Arr**	**76.11 54**	P		**P**		**05 31 42.2**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=262,slow=8.5,SNR=4.8								
MJAR	**Matsushiro Arr**	**76.11 54**	IAmb		IAmb		05 31 44.8		
	comp=Z,9.0nm,1.6s								
SYO	**Syowa Base**	**76.12 188**	*i*eP		**P**		**05 31 42.2**	**-0.2**
SYO	**Syowa Base**	**76.12 188**	*i*epP		pP		05 31 45.2	+0.5
SYO	**Syowa Base**	**76.12 188**	*i*esP		sP		05 31 48.4	+2.9
WRA	**Warramunga Arr**	**76.22 112**	P		**P**		**05 31 43.5**	**-0.5**
	comp=Z,13nm,1.0s,baz=288,slow=5.1,SNR=54								
WRA			LR		LR		06 00 24.9		
	comp=Z,32nm,21.8s,baz=185,slow=32								
WRAB	**Tennant Creek**	**76.22 112**	P		**P**		**05 31 43.4**	**-0.7**
WB2	**Warramunga Arr**	**76.23 112**	P		**P**		**05 31 43.1**	**-0.9**
WB0	**Warramunga Arr**	**76.23 112**	IAmb		IAmb		05 31 44.8		
	comp=Z,23nm,1.1s								
WR0	**Warramunga Arr**	**76.41 112**	P		**P**		**05 31 43.4**	**-1.7**
WR0			IAmb		IAmb		05 31 45.8		
	comp=Z,15nm,1.1s								
ASAR	**Alice Springs**	**76.59 116**	P		**P**		**05 31 45.6**	**-0.4**
	comp=Z,9.6nm,0.9s,baz=285,slow=5.6,SNR=68								
ASAR	**Alice Springs**	**76.59 116**	P		**P**		**05 31 45.4**	**-0.7**
STKA	**Stephens Creek**	**84.88 123**	P		**P**		**05 32 30.1**	**-0.1**
	comp=Z,4.3nm,0.8s,baz=307,slow=4.5,SNR=7.6								
PMG	**Port Moresby**	**86.92 100**	P		**P**		**05 32 40.2**	**-0.5**
	comp=Z,7.2nm,0.5s,baz=353,slow=3.0,SNR=3.1								
PMG	**Port Moresby**	**86.92 100**	IAmb		IAmb		05 32 42.1		
	comp=Z,16nm,0.8s								
VNA2	**Neumayer--Watz**	**88.59 198**	P		**P**		**05 32 47.7**	**+0.2**
VNA3	**Neumayer Olymp**	**89.40 198**	P		**P**		**05 32 52.2**	**+0.9**
VNDA	**Vanda**	**97.91 168**	LR		LR		06 12 26.4		
	comp=Z,183nm,19.3s,baz=264,slow=32								
PB16	**IPOC Station P**	**130.41 251**				**PKPdf**	**05 39 06.1**	**-1.2**
656A	**Willston**	**130.68 317**				PKPpre	05 38 58.4		
PDAR	**Pinedale Array**	**130.96 351**	PKP			**PKPdf**	**05 39 07.5**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=83,slow=4.6,SNR=3.9								
NVAR	**Mina Array Bea**	**136.01 359**	PKP			**PKPdf**	**05 39 16.6**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=176,slow=1.1,SNR=4.1								
TXAR	**Lajitas Array**	**142.19 338**	PKhKP			PKPpre	05 39 21.9		
	comp=Z,0.7nm,1.0s,baz=112,slow=1.3,SNR=5.1								
TXAR			PKP			**PKPdf**	**05 39 26.6**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=132,slow=1.9,SNR=3.7								
TXAR	**Lajitas Array**	**142.19 338**				PKPpre	05 39 22.0		
ESQI	**Esquipulas**	**144.51 305**				**PKPab**	**05 39 30.1**	**-0.9**

IDC 25 05:30:53.3±1.2, 5.79N×61.37E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/59, mbtmp3.7/6, Error ellipse: s-maj=43.4km s-min=26.1km az=30.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**38.74 68**		P		P	05 38 20.4	+0.8
	0.5nm,0.4s,baz=252,slow=8.2,SNR=0.7							
BRTR	**Keskin Array B**	**42.01 328**		P		P	05 38 46.8	+0.1
	1.5nm,0.9s,baz=153,slow=9.7,SNR=3.3							
MKAR	**Makanchi Array**	**44.66 20**		P		P	05 39 06.9	-0.9
	0.3nm,0.6s,baz=201,slow=8.9,SNR=1.9							
TORD	**Torodi Ar. Bea**	**59.20 282**		P		P	05 40 56.9	+0.1
	0.2nm,0.6s,baz=100,slow=7.0,SNR=1.8							
WRA	**Warramunga Arr**	**76.10 112**		P		P	05 42 43.9	+0.4
	1.5nm,1.0s,baz=284,slow=5.0,SNR=7.1							
ASAR	**Alice Springs**	**76.48 116**		P		P	05 42 45.2	-0.5
	1.1nm,0.9s,baz=286,slow=5.3,SNR=8.4							

DJA 25 05:31:16.1±0.4, 9°S±4°×117°8E±°, h117km±4km, M3.5/10, MLv3.5/10, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PLAI	**Plampang**	**0.56 256**		P		Pn	05 31 35.5	+1.4
PLAI				S		Sn	05 31 50.3	+2.6
WBSI	**Waikabubak, Su**	**1.41 132**		P		Pn	05 31 42.5	+0.1
WBSI				S		Sn	05 32 03.1	+0.8
TWSI	**Taliwang, Sumb**	**1.43 268**		P		Pn	05 31 43.5	+1.0
TWSI				S		Sn	05 32 02.9	+0.3
BASI	**Baing, Sumba**	**2.69 125**		P		Pn	05 31 57.8	-0.4
BASI				S		Sn	05 32 31.1	+0.5
EDFI	**Ende, Flores**	**3.32 91**		P		Pn	05 32 07.0	+0.3
EDFI				S		Sn	05 32 46.1	+0.4
BKSI	**Bulukumba**	**3.79 28**		P		Pn	05 32 12.6	-0.2
JAGI	**Jajag, Banyuwa**	**4.14 273**		P		Pn	05 32 16.9	-0.6

*IDC **25** 05:32:55.1±1.0, 16°.83N×60°.92W, h0km, mb3.7/7, mb1 4.0/9, mb1mx3.8/37, mbtmp3.8/9, ML3.7/2, MS2.6/1, Ms1 2.6/1, ms1mx2.2/38, Error ellipse: s-maj=29.3km s-min=14.8km az=80.0*

*TRN **25** 05:32:58.6, 16°.76N×61°.10W, h26km, MD3.9*

ISC 25 05:32:57.7±1.7, 16°.77N±0°.05×61°.04W±0°.07, h16km±10km, n47, σ1°23/60, mb3.8/7, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H05N1	**Guadeloupe/Mar**	**0.45 182**		Pn		**Pn**	**05 33 09.7**	**+0.1**
H05N1				Sn		**Sn**	**05 33 16.1**	**-1.3**
ABD	**La Joyeuse, An**	**0.52 236**	*e*P			**Pn**	**05 33 10.5**	**-0.1**
ANBD	**Bethesda, Anti**	**0.75 292**	*e*P			**Pn**	**05 33 14.3**	**+0.6**
MAGL	**Barre de l'ile**	**0.85 196**	*e*P			**Pn**	**05 33 15.7**	**+0.7**
CBE	**Ff, Capester**	**0.89 218**	*e*P			**Pn**	**05 33 16.2**	**+0.8**
TDBA	**Terre de Bas,**	**1.08 212**	*e*P			**Pg**	**05 33 19.4**	**+0.7**
TBG	**Guadaloupe-3**	**1.08 213**	*e*P			**Pg**	**05 33 19.2**	**+0.5**
TBG				*e*S		**Sg**	**05 33 33.1**	**+0.3**
MLYT	**Lee's Yard**	**1.11 268**	*e*P			**Pg**	**05 33 19.3**	**+0.1**
MLYT				*e*S		**Sn**	**05 33 34.6**	**+1.0**
DSLB	**Salisbury**	**1.37 196**	*e*P			**Pg**	**05 33 23.6**	**-0.7**
DSLB				*e*S		**Sg**	**05 33 42.0**	**-0.2**
DLPL	**La Plaine**	**1.44 188**	*e*P			**Pn**	**05 33 23.6**	**+0.4**
DLPL				*e*S		**Sb**	**05 33 43.5**	**+1.0**
MDN	**Morne-Daniel**	**1.48 193**	*e*P			**Pb**	**05 33 24.9**	**-0.1**
MDN				*e*S		**Sg**	**05 33 45.1**	**-0.5**
SKOC	**St. Kitts, UWI**	**1.70 288**	*e*P			**Pb**	**05 33 28.4**	**-0.3**
SKOC				*e*S		**Sn**	**05 33 48.4**	**+0.2**
SKI	**Saint Kitts**	**1.72 289**	*e*P			**Pb**	**05 33 28.4**	**-0.7**
SKI				*e*S		**Sn**	**05 33 49.0**	**+0.3**
SVN	**Savane Anatole**	**1.92 184**	*e*P			**Pb**	**05 33 31.7**	**-0.8**
PCM	**Pelee Case Pet**	**1.95 185**	*e*P			**Pn**	**05 33 31.2**	**+1.0**
CXM	**Morne La Croix**	**1.95 185**	*e*P			**Pb**	**05 33 31.9**	**-1.1**
GBMF	**Grand Be**	**1.96 184**	*e*P			**Pb**	**05 33 32.5**	**-0.8**
PML	**Morne Lenard**	**1.98 184**	*e*P			**Pn**	**05 33 31.2**	**+0.5**
ILAM	**Ilet Lapin Mar**	**1.99 175**	*e*P			**Pn**	**05 33 31.4**	**+0.7**
SEUS	**St. Eustatius**	**1.99 291**	*e*P			**Pn**	**05 33 31.6**	**+0.8**
SEUS				*e*S		**Sn**	**05 33 55.8**	**+0.4**
FDF	**Fort de France**	**2.03 183**	*e*P			**Pn**	**05 33 31.8**	**+0.5**
FDF				*e*S		**Sn**	**05 33 57.8**	**+1.4**
LPMF	**Morne Lapointe**	**2.18 178**	*e*P			**Pn**	**05 33 33.9**	**+0.5**
MVM	**Montagne Vaucl**	**2.21 176**	*e*P			**Pn**	**05 33 34.9**	**+1.1**
TRMF	**Trois Ilets**	**2.22 180**	*e*P			**Pn**	**05 33 34.8**	**+0.9**
BIM	**Bigot**	**2.24 181**	*e*P			**Pn**	**05 33 35.8**	**+1.6**
MPOM	**Morne Pois Mar**	**2.32 176**	*e*P			**Pn**	**05 33 36.4**	**+1.1**
H05S1	**Guadeloupe/Mar**	**2.34 175**		Pn		**Pn**	**05 33 36.8**	**+1.2**
H05S1				Sn		**Sn**	**05 34 03.4**	**-0.6**
SLBI	**Saint Lucia, B**	**2.73 179**	*e*P			**Pn**	**05 33 42.6**	**+1.7**
SLBI				*e*S		**Sn**	**05 34 14.6**	**+0.9**
SLW	**Petit Monier**	**2.73 178**	*e*P			**Pn**	**05 33 43.4**	**+2.3**
MCLT	**Moule a Chique**	**3.04 178**	*e*P			**Pn**	**05 33 47.4**	**+2.1**
MCLT				*e*S		**Sn**	**05 34 22.9**	**+1.5**
SVB	**Belmont**	**3.48 183**	*e*P			**Pn**	**05 33 53.7**	**+2.3**
SVB				*e*S		**Sn**	**05 34 32.9**	**+0.6**
SVOC	**Richmond Hill,**	**3.60 183**	*e*P			**Pn**	**05 33 54.5**	**+1.6**
SVOC				*e*S		**Sn**	**05 34 36.5**	**+1.4**
GCMP	**Grenada, Carri**	**4.28 185**	*e*P			**Pn**	**05 34 03.9**	**+1.7**
GCMP	**Grenada, Carri**	**4.28 185**	*e*S			**Sn**	**05 34 51.5**	**-0.3**
TOSP	**Speyside**	**5.46 175**	*e*P			**Pn**	**05 34 20.8**	**+2.2**
PCRV	**Puerto La Cruz**	**7.43 209**	Pn			**Pn**	**05 34 47.1**	**+1.5**
	1.7nm,0.3s,baz=21,slow=5.8,SNR=8.8							
PCRV				Sn		**Sn**	**05 36 05.4**	**-4.3**
	0.7nm,0.3s,baz=8.5,slow=18,SNR=2.0							
MDP	**Montagnes des**	**14.22 144**	Pn			**Pn**	**05 36 17.1**	**-1.5**
	0.3nm,0.3s,baz=337,slow=17,SNR=1.6							
MDP				Sn		Sn	05 38 43.3	-13
	0.3nm,0.3s,baz=252,slow=19,SNR=2.2							
MDP				LR		LR	05 44 02.7	
	comp=Z,20nm,18.0s,baz=46,slow=47							
SIV	**San Ignacio**	**32.55 180**	P			**P**	**05 39 28.6**	**+0.2**
	3.1nm,0.7s,baz=23,slow=11,SNR=17							
TXAR	**Lajitas Array**	**40.95 296**	P			**P**	**05 40 40.0**	**0.0**
	0.2nm,0.6s,baz=118,slow=9.6,SNR=1.8							
CPUP	**Vila Florida**	**42.99 175**	P			**P**	**05 40 55.9**	**-0.5**
	2.0nm,0.8s,baz=9.2,slow=6.1,SNR=3.0							
PDAR	**Pinedale Array**	**48.60 313**	P			**P**	**05 41 42.0**	**+0.9**
	0.7nm,0.6s,baz=119,slow=9.4,SNR=7.3							
H10N3	**ASCENSION HYDR**	**52.12 114**	T			T	06 38 20.6	
	baz=298,slow=75,SNR=8.4							
H10N2	**ASCENSION HYDR**	**52.12 114**	T			T	06 38 46.7	
	baz=298,slow=75,SNR=29							
H10N1	**ASCENSION HYDR**	**52.12 114**	T			T	06 38 33.8	
	baz=298,slow=75,SNR=33							
NVAR	**Mina Array Bea**	**54.24 305**	P			**P**	**05 42 24.7**	**+1.4**
	0.3nm,0.4s,baz=92,slow=9.1,SNR=1.8							
TORD	**Torodi Ar. Bea**	**60.50 84**	P			**P**	**05 43 07.4**	**-0.2**
	0.7nm,0.9s,baz=287,slow=6.1,SNR=2.8							
ILAR	**Eielson Array**	**73.21 333**	P			**P**	**05 44 26.4**	**-1.3**
	0.2nm,0.5s,baz=88,slow=4.4,SNR=5.8							

IDC 25 05:38:52.8±0.9, 21°.73N×143°.62E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/45, mbtmp3.8/9, Error ellipse: s-maj=42.3km s-min=20.6km az=97.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H11N1	**WAKE ISLAND Hy**	**21.86 91**		T		T	06 06 28.7	
	baz=278							
H11N2	**WAKE ISLAND Hy**	**21.86 91**		T		T	06 06 28.1	
	baz=278							
H11N3	**WAKE ISLAND Hy**	**21.87 91**		T		T	06 06 31.2	
	baz=278							
H11S3	**WAKE ISLAND Hy**	**21.89 94**		T		T	06 06 26.7	
	baz=282,slow=74,SNR=21							
H11S1	**WAKE ISLAND Hy**	**21.91 94**		T		T	06 06 26.7	
	baz=282,slow=74,SNR=28							
H11S2	**WAKE ISLAND Hy**	**21.91 94**		T		T	06 06 27.3	
	baz=282,slow=74,SNR=18							
KLR	**Kul'dur**	**29.02 344**	P			P	05 44 54.6	+0.2
	2.2nm,0.7s,baz=151,slow=6.1,SNR=7.1							
WRA	**Warramunga Arr**	**42.40 193**	P			P	05 46 49.0	-0.2
	0.4nm,0.7s,baz=11,slow=9.3,SNR=5.5							
ASAR	**Alice Springs**	**46.10 192**	P			P	05 47 18.7	-0.2
	0.3nm,0.5s,baz=16,slow=8.9,SNR=6.2							
ZALV	**Zalesovo Beam**	**54.44 322**	P			P	05 48 20.7	-1.0
	0.4nm,0.3s,baz=113,slow=8.4,SNR=1.8							
ILAR	**Eielson Array**	**61.83 27**	P			P	05 49 12.6	-0.7
	0.3nm,0.7s,baz=258,slow=6.2,SNR=2.3							
INK	**Inuvik**	**67.38 24**	P			P	05 49 49.6	+0.1
	1.2nm,0.9s,baz=236,slow=7.3,SNR=3.3							
YKA	**Yellowknife Ar**	**76.24 28**	P			P	05 50 42.9	0.0
	0.8nm,0.9s,baz=292,slow=4.7,SNR=1.6							
NVAR	**Mina Array Bea**	**82.81 52**	P			P	05 51 19.5	+0.1
	0.2nm,0.6s,baz=280,slow=6.0,SNR=1.8							
FINES	**FINESS Array B**	**83.33 335**	P			P	05 51 22.8	+1.4
	5.1nm,1.1s,baz=67,slow=3.6,SNR=2.2							
LPAZ	**La Paz**	**149.53 85**	PKPbc			PKPbc	05 58 45.6	-0.2
	0.5nm,0.8s,baz=256,slow=5.4,SNR=1.8							

IDC 25 06:00:08.0±1.1, 5°.65N×61°.36E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.6/44, mbtmp3.9/5, MS3.4/11, Ms1 3.4/11, ms1mx3.1/49, Error ellipse: s-maj=69.0km s-min=24.5km az=1.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATD	**Arta Tunnel**	**19.21 289**		LR		LR	06 10 55.4	
	comp=Z,52nm,19.9s,baz=38,slow=34							
KMBO	**Kilima Mbogo**	**25.00 255**	P			P	06 05 34.7	+0.6
	0.5nm,0.4s,baz=86,slow=14,SNR=1.5							
KMBO				LR		LR	06 13 57.3	
	comp=Z,116nm,20.7s,baz=86,slow=33							
MBAR	**Mbarara**	**31.20 259**	LR			LR	06 18 06.2	
	comp=Z,55nm,20.4s,baz=69,slow=35							

GEYT	**Alibeck**	**32.26 355**	LR			LR	06 18 20.8	
	comp=Z,38nm,20.8s,baz=230,slow=34							
CMAR	**Chiang Mai Arr**	**38.79 68**	P			P	06 07 35.0	+0.2
	0.8nm,0.3s,baz=251,slow=8.5,SNR=2.3							
CMAR			LR			LR	06 22 06.8	
	comp=Z,36nm,21.9s,baz=255,slow=34							
KBZ	**Khabaz**	**41.26 340**	LR			LR	06 27 15.2	
	comp=Z,82nm,18.5s,baz=143,slow=39							
MATP	**Matopo**	**41.40 230**	LR			LR	06 22 53.4	
	comp=Z,148nm,18.7s,baz=41,slow=33							
LBTB	**Lobatse**	**46.25 227**	LR			LR	06 25 32.4	
	comp=Z,70nm,20.4s,baz=61,slow=33							
TSUM	**Tsumeb**	**49.68 239**	LR			LR	06 28 48.0	
	comp=Z,64nm,18.4s,baz=140,slow=35							
SUR	**Sutherland**	**54.01 223**	LR			LR	06 30 38.1	
	comp=Z,41nm,18.0s,baz=22,slow=34							
TORD	**Torodi Ar. Bea**	**59.22 282**	P			P	06 10 11.0	-0.6
	1.0nm,1.1s,baz=109,slow=8.1,SNR=3.4							
FITZ	**Fitzroy Crossi**	**67.63 112**	LR			LR	06 36 32.4	
	comp=Z,14nm,20.7s,baz=298,slow=32							
WRA	**Warramunga Arr**	**76.06 112**	P			P	06 11 58.2	+0.3
	2.0nm,1.1s,baz=287,slow=5.1,SNR=6.7							
ASAR	**Alice Springs**	**76.43 116**	P			P	06 11 59.7	-0.3
	1.8nm,1.1s,baz=287,slow=5.0,SNR=8.7							
TXAR	**Lajitas Array**	**142.35 338**	PKP			PKPdf	06 19 44.0	+0.4
	0.4nm,0.9s,baz=49,slow=4.1,SNR=3.8							

WEL 25 06:15:28.9, 38°S±8°×18°0W±°, h45km±25km, M3.2/12, ML3.5/12, MLv3.2/12, Error ellipse: s-maj=0.0km s-min=0.0km az=134.8, East of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PUZ	**Puketiti**	**1.50 261**		P		Pn	06 15 53.6	+0.2
PUZ				S		Sn	06 16 12.1	+0.4
CNGZ	**Carnagh Statio**	**1.64 247**		P		Pn	06 15 57.1	+1.8
TWGZ	**Tauwhareparae**	**1.73 259**		P		Pn	06 15 57.3	+0.7
TWGZ				S		Sn	06 16 18.4	+0.9
HAZ	**Te Kaha**	**1.86 272**		P		Pn	06 15 59.3	+1.0
TKGZ	**Te Karaka**	**1.89 251**		P		Pn	06 16 00.2	+1.4
TKGZ				S		Sn	06 16 23.0	+1.6
RUGZ	**Raukumara Rang**	**1.94 266**		P		Pn	06 15 59.5	-0.1
RIGZ	**Rimuhau**	**2.05 245**		P		Pn	06 16 02.6	+1.6
RIGZ				S		Sn	06 16 28.3	+3.0
PRGZ	**Paritu Road**	**2.06 238**		P		Pn	06 16 02.8	+1.6
MWZ	**Matawai**	**2.11 256**		P		Pn	06 16 02.3	+0.5
MHGZ	**Mahia Peninsul**	**2.17 233**		P		Pn	06 16 04.5	+1.9
KNZ	**Kokohu**	**2.25 238**		P		Pn	06 16 04.9	+1.2
URZ	**Urewera**	**2.42 260**		P		P

0.1nm,0.2s,baz=139,slow=6.2,SNR=1.5

SONM	**Songino Array**	**56.87**	**35**	P	**P**	**06 28 29.9**	**-0.2**
	0.3nm,0.6s,baz=231,slow=9.1,SNR=2.0						
TORD	**Torodi Ar. Bea**	**59.15**	**282**	P	**P**	**06 28 46.7**	**+0.2**
	0.7nm,0.8s,baz=97,slow=4.9,SNR=6.5						
ESDC	**Sonseca Array**	**67.39**	**311**	P	**P**	**06 29 40.0**	**-0.9**
	1.5nm,1.0s,baz=84,slow=5.7,SNR=4.3						
ARCES	**ARCESS Array B**	**67.87**	**347**	LR	LR	06 59 51.4	
	comp=Z,30nm,19.0s,baz=250,slow=36						
WRA	**Warramunga Arr**	**76.15**	**112**	P	**P**	**06 30 33.5**	**-0.4**
	3.3nm,1.1s,baz=290,slow=4.7,SNR=8.5						
ASAR	**Alice Springs**	**76.52**	**116**	P	**P**	**06 30 35.9**	**-0.1**
	2.0nm,0.8s,baz=284,slow=5.8,SNR=14						
PDAR	**Pinedale Array**	**131.02**	**351**	PKP	**PKPdf**	**06 37 56.0**	**-1.7**
	0.3nm,0.6s,baz=53,slow=6.2,SNR=2.1						
TXAR	**Lajitas Array**	**142.26**	**338**	PKhKP	PKPpre	06 38 12.4	
	0.2nm,0.6s,baz=28,slow=4.1,SNR=2.6						

*IDC **25** 06:21:20.8±0.9,5°.86N×61°.32E,h0km,mb3.9/9,mb1 4.1/9, mb1mx3.7/55,mbtmp3.9/9,Error ellipse: s-maj=31.3km s-min=21.0km az=179.0*

ISC 25 06:21:22.3±0.8,5°.9N±0°.2×61°.3E±0°.1,h10km,n9,σ1s33/9, mb3.9/9,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**25.01**	**255**	P	**P**	**06 26 48.7**	**+1.7**
	0.9nm,0.4s,baz=62,slow=11,SNR=3.1						
CMAR	**Chiang Mai Arr**	**38.76**	**68**	P	**P**	**06 28 48.8**	**+1.5**
	0.8nm,0.3s,baz=262,slow=8.6,SNR=5.9						
BRTR	**Keskin Array B**	**41.91**	**328**	P	**P**	**06 29 13.9**	**+0.7**
	1.4nm,0.8s,baz=144,slow=5.4,SNR=3.7						
TSUM	**Tsumeb**	**49.75**	**239**	P	**P**	**06 30 16.1**	**+0.6**
	2.8nm,0.8s,baz=79,slow=3.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**51.59**	**18**	P	**P**	**06 30 28.8**	**+0.1**
	0.3nm,0.3s,baz=204,slow=6.1,SNR=1.6						
TORD	**Torodi Ar. Bea**	**59.12**	**282**	P	**P**	**06 31 23.0**	**-0.7**
	0.6nm,1.0s,baz=109,slow=7.9,SNR=2.9						
ESDC	**Sonseca Array**	**67.30**	**311**	P	**P**	**06 32 16.0**	**-1.7**
	0.4nm,0.5s,baz=76,slow=5.4,SNR=2.7						
WRA	**Warramunga Arr**	**76.19**	**112**	P	**P**	**06 33 10.8**	**-0.7**
	2.3nm,0.9s,baz=288,slow=4.8,SNR=7.3						
STKA	**Stephens Creek**	**84.88**	**123**	P	**P**	**06 33 57.0**	**-0.9**
	1.3nm,0.9s,baz=297,slow=6.8,SNR=3.2						

IDC 25 06:27:09.2±2.0,0°.98N×128°.47E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.5/32,mbtmp3.7/3,MS2.8/2,Ms1 2.8/2, ms1mx2.4/36,Error ellipse: s-maj=129.0km s-min=26.8km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.57**	**165**	P	P	06 32 00.9	+0.3
	3.2nm,0.7s,baz=345,slow=11,SNR=17						
WRA				LR	LR	06 40 57.9	
	comp=Z,28nm,20.2s,baz=15,slow=38						
KRVT	**Keravat (AS076**	**24.11**	**103**	LR	LR	06 41 29.4	
	comp=Z,24nm,19.8s,baz=324,slow=36						
ASAR	**Alice Springs**	**25.06**	**168**	P	P	06 32 35.1	-0.4
	0.5nm,0.8s,baz=351,slow=7.7,SNR=2.8						
H11S3	**WAKE ISLAND Hy**	**41.34**	**63**	T	T	07 18 06.4	
	baz=248,slow=74,SNR=32						
H11S2	**WAKE ISLAND Hy**	**41.35**	**63**	T	T	07 18 06.9	
	baz=248,slow=74,SNR=20						
H11S1	**WAKE ISLAND Hy**	**41.35**	**63**	T	T	07 18 05.4	
	baz=248,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**41.95**	**61**	T	T	07 19 03.1	
	baz=247,slow=75,SNR=9.4						
H11N2	**WAKE ISLAND Hy**	**41.96**	**61**	T	T	07 19 03.5	
	baz=247,slow=75,SNR=43						
H11N3	**WAKE ISLAND Hy**	**41.97**	**61**	T	T	07 19 04.1	
	baz=247,slow=75,SNR=57						
MKAR	**Makanchi Array**	**60.79**	**325**	P	P	06 37 23.1	0.0
	0.8nm,0.6s,baz=120,slow=8.5,SNR=5.8						

*IPEC **25** 06:52:20.6±0.2,51°.46N×16°.25E,h1km,ML2.0/3,Error ellipse: s-maj=1.6km s-min=0.8km az=30.0*
*PRU **25** 06:52:21.2±0.0,51°.43N×16°.17E,h0km*
*VIE **25** 06:52:23.6±0.9,51°.28N×16°.31E,h0km,mb2.1/4,ml2.6/4, Error ellipse: s-maj=7.6km s-min=6.1km az=104.0 53 km WNW of Wroclaw Suspected Mining induced.*

ISC 25 06:52:21.3±1.2,51°.43N±0°.05×16°.13E±0°.03,h0km,n26, σ0s75/54,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.59**	**170**	*i* Pg	**Pg**	**06 52 32.8**	**+0.1**
KSP				*e*Sg	**Sg**	**06 52 40.7**	**+0.3**
CHVC	**Chvalec**	**0.84**	**183**	*e*PG	**Pg**	**06 52 37.0**	**-0.4**
CHVC				*e*SG	**Sg**	**06 52 48.2**	**-0.1**
OSTC	**Ostas**	**0.88**	**176**	*e*PG	**Pg**	**06 52 38.1**	**+0.1**
OSTC				*e*SG	**Sg**	**06 52 49.4**	**0.0**
	comp=Z,39nm,0.5s						
UPC	**Upice**	**0.93**	**185**	*e*PG	**Pg**	**06 52 39.0**	**0.0**
UPC				*e*SG	**Sg**	**06 52 51.4**	**+0.4**
	comp=Z,91nm,0.5s						
DPC	**Dobruska-Polom**	**1.09**	**174**	*e*PG	**Pg**	**06 52 41.6**	**-0.5**
DPC				*e*SG	**Sg**	**06 52 56.1**	**-0.1**
	comp=Z,36nm,0.3s						
PVCC	**Panska Ves**	**1.34**	**228**	*e*PG	**Pg**	**06 52 46.6**	**-0.3**
PVCC				*e*SG	**Sn**	**06 53 05.9**	**+0.2**
	comp=Z,96nm,0.4s						
KRLC	**Kraliky**	**1.42**	**163**	*e*PG	**Pn**	**06 52 47.2**	**-1.2**
KRLC				*e*SG	**Sg**	**06 53 05.9**	**-0.9**
	comp=Z,22nm,0.3s						
BRG	**Berggiesshubel**	**1.49**	**249**	PN	**Pn**	**06 52 48.9**	**-0.4**
BRG				PG	**Pb**	**06 52 50.0**	**+0.3**
BRG				SG	**Sn**	**06 53 09.9**	**+0.6**
	46nm,0.5s						
PRU	**Pruhonice**	**1.76**	**216**	*e*PG	**Pn**	**06 52 52.8**	**-0.2**
PRU				*e*SG	**Sg**	**06 53 17.6**	**-0.2**
	comp=Z,29nm,0.7s						
MORC	**Moravsky Berou**	**1.88**	**151**	*e*PN	**Pn**	**06 52 53.4**	**-1.4**
MORC				*e*SG	**Sn**	**06 53 18.8**	**-0.4**
MORC	**Moravsky Berou**	**1.88**	**151**	*e*Pn	**Pn**	**06 52 53.3**	**-1.5**
	baz=334						
MORC				*e*Sg	**Sn**	**06 53 18.8**	**-0.4**
	11nm,0.3s,baz=334						
CLL	**Collm**	**1.96**	**268**	*e*Pg	**Pb**	**06 52 58.0**	**+0.1**
CLL				*e*Sg	**Sg**	**06 53 24.0**	**-0.4**
	comp=Z,27nm,0.8s						
OKC	**Ostrava-Krasne**	**2.05**	**140**	*e*PG	**Pn**	**06 52 57.2**	**+0.2**
OKC				*e*SG	**Sb**	**06 53 24.6**	**-0.7**
	comp=Z,21nm,0.5s						
VRAC	**Vranov**	**2.14**	**172**	*e*PN	**Pn**	**06 52 58.5**	**+0.1**
VRAC				*e*SG	**Sb**	**06 53 27.9**	**-0.2**
VRAC	**Vranov**	**2.14**	**172**	*e*Pn	**Pn**	**06 52 58.4**	**+0.1**
	baz=354						
VRAC				*e*Sg	**Sb**	**06 53 27.8**	**-0.3**
	comp=Z,11nm,0.4s,baz=354						
TREC	**Trest**	**2.18**	**191**	*e*PG	**Pb**	**06 53 01.5**	**0.0**
TREC				*e*SG	**Sg**	**06 53 30.3**	**-0.8**
	comp=Z,12nm,0.3s						
PBCC	**Pribram**	**2.21**	**219**	*e*PG	**Pb**	**06 53 02.2**	**0.0**
PBCC				*e*SG	**Sg**	**06 53 32.0**	**-0.4**
KRUC	**Moravsky**	**2.38**	**176**	*e*PG	**Pb**	**06 53 04.8**	**-0.1**
KRUC				*e*SG	**Sg**	**06 53 36.1**	**-1.5**
KRUC	**Moravsky**	**2.38**	**176**	*e*Pg	**Pb**	**06 53 04.8**	**-0.1**
	baz=358						
KRUC				*e*Sg	**Sg**	**06 53 36.0**	**-1.5**
	comp=Z,6.3nm,0.3s,baz=358						
OJC	**Ojcow**	**2.62**	**116**	*e*Pg	**Pb**	**06 53 10.0**	**+0.9**
OJC				*e*Sg	**Sg**	**06 53 45.3**	**-0.2**
NKC	**Novy Kostel**	**2.62**	**244**	*e*PG	**Pg**	**06 53 10.5**	**-1.1**
NKC				*e*SG	**Sg**	**06 53 46.6**	**+1.1**
	comp=Z,16nm,0.3s						
KHC	**Kasperske Hory**	**2.82**	**216**	*e*PN	**Pn**	**06 53 08.3**	**+0.6**
KHC				*e*PG	**Pb**	**06 53 13.3**	**+0.7**
KHC				*e*SG	**Sg**	**06 53 51.5**	**-0.5**
	comp=Z,5.9nm,0.4s						
LANS	**Liptovska Anna**	**3.13**	**136**	*e*PN	**Pn**	**06 53 12.3**	**+0.4**
LANS				*e*SG	**Sg**	**06 54 01.4**	**-0.3**
MODS	**Modra-Piesok**	**3.15**	**166**	*e*PG	**Pg**	**06 53 23.6**	**+2.0**
MODS				*e*SG	**Sg**	**06 54 01.9**	**-0.4**
CONA	**Conrad Observa**	**3.51**	**183**	*i* Pn	**Pn**	**06 53 18.4**	**+1.2**
	comp=Z,0.5nm,0.2s						
CONA				Sg	**Sg**	**06 54 15.4**	**+1.5**
	comp=Z,5.1nm,0.3s						
MOA	**Molln**	**3.78**	**199**	*i* Pn	**Pn**	**06 53 21.3**	**+0.5**
	comp=Z,0.8nm,0.1s						
MOA				*e*Sg	**Sg**	**06 54 24.1**	**+1.3**
	comp=Z,4.6nm,0.3s						

IDC 25 06:57:12.6±7.0,8°.17S×155°.82E,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.6/25,mbtmp3.7/3,MS2.8/2,Ms1 2.8/2, ms1mx2.4/28,Error ellipse: s-maj=120.8km s-min=88.3km az=10.0,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.27**	**107**	LR	LR	07 00 09.2	
	comp=Z,57nm,21.3s,baz=245,slow=41						
PMG	**Port Moresby**	**8.64**	**261**	LR	LR	07 02 17.4	
	comp=Z,111nm,19.2s,baz=104,slow=35						
WRA	**Warramunga Arr**	**23.86**	**238**	P	P	07 02 27.6	-0.3
	0.6nm,0.7s,baz=65,slow=9.7,SNR=4.8						
ASAR	**Alice Springs**	**26.04**	**231**	P	P	07 02 48.0	+0.1
	1.2nm,0.9s,baz=61,slow=9.3,SNR=9.6						
STKA	**Stephens Creek**	**27.05**	**207**	P	P	07 02 56.8	+0.1
	1.7nm,0.5s,baz=51,slow=7.9,SNR=4.2						

IDC 25 07:00:23.4±2.1,6°.57S×129°.04E,h0km,mb3.8/1, mb1 4.1/3,mb1mx3.6/28,mbtmp3.9/3,ML4.2/2,Error ellipse: s-maj=110.4km s-min=31.6km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.26**	**159**	Pn	Pn	07 03 46.1	-0.6
	1.5nm,0.3s,baz=338,slow=13,SNR=26						
WRA				Sn	Sn	07 06 12.9	-13
	0.8nm,0.3s,baz=336,slow=22,SNR=7.5						
ASAR	**Alice Springs**	**17.63**	**165**	P	Pn	07 04 31.1	+0.4
	0.5nm,0.3s,baz=336,slow=9.0,SNR=19						
ASAR				S	Sn	07 07 35.3	-13
	0.1nm,0.3s,baz=352,slow=27,SNR=2.9						
MKAR	**Makanchi Array**	**67.35**	**327**	P	P	07 11 20.4	0.0
	0.6nm,0.5s,baz=125,slow=7.5,SNR=5.0						

*NEIC **25** 07:16:47.0±2.3,12°.7S±0°.2×76°.4W±0°.2,h73km±19km, mb4.2/3,ML4.3(ARE),Error ellipse: s-maj=32.9km s-min=13.6km az=52.0*

ARE 25 07:16:47±9.1,12°.79S±0°.08×76°.9W±0°.2,h49km±9km, Error ellipse: s-maj=0.0km s-min=0.0km az=167.0,Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**0.80**	**6**		Pn	07 17 03.4	+1.3
NNA				Sn	Sn	07 17 13.6	+0.4
LPAZ	**La Paz**	**9.20**	**113**	Pn	Pn	07 18 52.0	-5.8
PB11	**IPOC Station P**	**9.84**	**136**	Pn	Pn	07 19 01.7	-4.3
SAML	**Samuel**	**14.03**	**76**	Pn	Pn	07 19 56.2	-6.9
ROSC	**El Rosal**	**17.71**	**9**		Pn	07 20 44.2	-6.4
ROSC				IAmb	IAmb	07 20 45.4	
	comp=Z,12nm,1.3s						
CO03	**El Pedregal**	**18.86**	**163**	P	P	07 21 01.2	-2.0
CO03				IAmb	IAmb	07 21 38.0	
	comp=Z,24nm,1.4s						
CO02	**Combarbal**	**19.12**	**164**	P	P	07 21 05.8	-0.4
CO02				IAmb	IAmb	07 21 09.9	
	comp=Z,30nm,1.3s						

*IDC **25** 07:35:13.2±1.4,37°.42N×111°.38E,h0km,mb3.7/6, mb1 3.9/7,mb1mx3.5/35,mbtmp3.7/7,ML3.5/1,Error ellipse: s-maj=50.3km s-min=19.7km az=60.0*

ISC 25 07:35:17.9±1.4,37°.5N±0°.1×111°.4E±0°.3,h35km,n7, σ1s19/7,mb3.6/6,Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**10.97**	**342**	Pn	**Pn**	**07 37 51.5**	**-0.9**
	0.3nm,0.3s,baz=170,slow=12,SNR=3.0						
SONM				Lg	Lg	07 40 52.9	
	0.2nm,0.3s,baz=82,slow=40,SNR=2.5						
CMAR	**Chiang Mai Arr**	**21.86**	**213**	P	**P**	**07 40 07.0**	**-0.5**
	2.0nm,0.6s,baz=15,slow=9.1,SNR=6.6						
MKAR	**Makanchi Array**	**23.37**	**303**	P	**P**	**07 40 23.1**	**-0.1**
	0.7nm,0.6s,baz=100,slow=10,SNR=5.4						
ZALV	**Zalesovo Beam**	**24.58**	**321**	P	**P**	**07 40 35.9**	**+1.6**
	1.2nm,0.7s,baz=105,slow=8.6,SNR=4.3						
KURBB	**Kurchatov Arra**	**26.76**	**310**	P	**P**	**07 40 55.3**	**+1.2**
	2.7nm,0.2s,baz=111,slow=10,SNR=2.2						
WRA	**Warramunga Arr**	**61.08**	**155**	P	**P**	**07 45 27.9**	**-0.5**
	0.2nm,2.4s,baz=347,slow=7.6,SNR=1.6						
ASAR	**Alice Springs**	**64.42**	**157**	P	**P**	**07 45 51.1**	**+0.6**
	0.4nm,0.6s,baz=346,slow=6.9,SNR=7.6						

*IDC **25** 07:58:11.2±8.9,6°.82S×129°.42E,h200km±93km,mb3.8/2, mb1 3.9/6,mb1mx3.3/39,mbtmp4.4/6,Error ellipse: s-maj=99.4km s-min=27.1km az=48.0*

ISC 25 07:58:11.1±1.4,6°.99S±0°.10×129°.4E±0°.1,h200km,n6, σ1s74/10,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.52**	**240**	P	**Pn**	**07 59 47.3**	**+2.0**
	15nm,0.3s,baz=171,slow=3.5,SNR=8.8						
BATI				S	**Sn**	**08 00 58.1**	**-1.7**
	19nm,0.3s,baz=2.1,slow=23,SNR=10						
FITZ	**Fitzroy Crossi**	**11.64**	**198**	P	**Pn**	**08 00 52.3**	**+0.8**
	2.2nm,0.3s,baz=20,slow=11,SNR=85						
FITZ				S	**S**	**08 03 00.5**	**-0.9**
	0.2nm,0.3s,baz=115,slow=7.8,SNR=3.8						
WRA	**Warramunga Arr**	**13.73**	**160**	P	**Pn**	**08 01 18.9**	**+1.0**
	1.1nm,0.3s,baz=341,slow=12,SNR=35						
WRA				S	**S**	**08 03 49.2**	**-1.8**
	0.8nm,0.3s,baz=330,slow=24,SNR=4.9						
ASAR	**Alice Springs**	**17.13**	**166**	P	**Pn**	**08 02 01.2**	**+2.2**
	1.5nm,0.3s,baz=344,slow=11,SNR=109						
ASAR				S	**S**	**08 05 05.0**	**-0.8**
	0.1nm,0.3s,baz=255,slow=12,SNR=6.7						
MKAR	**Makanchi Array**	**67.90**	**327**	P	**P**	**08 08 47.7**	**-0.4**
	1.2nm,0.4s,baz=131,slow=8.4,SNR=25						
ZALV	**Zalesovo Beam**	**71.32**	**334**	P	**P**	**08 09 07.1**	**-1.7**
	1.3nm,0.5s,baz=106,slow=2.1,SNR=5.8						

IDC 25 08:24:06.8±1.3,5°.30N×61°.45E,h0km,mb3.9/5,mb1 4.1/5, mb1mx3.4/51,mbtmp3.9/5,MS3.0/2,Ms1 2.9/2, ms1mx2.5/49,Error ellipse: s-maj=45.5km s-min=29.7km az=167.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**25.00**	**256**	P	P	08 29 33.0	+0.2
	1.1nm,0.3s,baz=20,slow=11,SNR=4.1						
MBAR	**Mbarara**	**31.23**	**260**	LR	LR	08 41 23.7	
	comp=Z,17nm,18.7s,baz=355,slow=33						
CMAR	**Chiang Mai Arr**	**38.85**	**67**	P	P	08 31 34.6	+0.5
	1.3nm,0.5s,baz=259,slow=9.1,SNR=2.2						
BOSA	**Boshof**	**48.48**	**224**	LR	LR	08 51 31.8	
	comp=Z,18nm,18.2s,baz=33,slow=34						
ZALV	**Zalesovo Beam**	**52.09**	**17**	P	P	08 33 18.0	-0.5
	0.4nm,0.3s,baz=210,slow=8.3,SNR=1.9						
WRA	**Warramunga Arr**	**75.85**	**112**	P	P	08 35 56.0	+0.4
	0.7nm,0.9s,baz=289,slow=4.7,SNR=4.1						
ASAR	**Alice Springs**	**76.20**	**116**	P	P	08 35 57.0	-0.6
	0.4nm,0.8s,baz=287,slow=6.1,SNR=4.3						

NNC 25 08:24:37.3±8.0,36°.37N×69°.94E,h41km±193km,mb3.8, mpv3.5,3C-5D,Error ellipse: s-maj=60.4km s-min=47.1km az=163.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.74**	**4**	⇑P	Pn	08 26 15.5	+1.8
	1.2nm,0.4s,baz=182,slow=11,SNR=11						
KK31				⇓S	Sn	08 27 30.8	+1.6
	2.8nm,0.3s,baz=190,slow=24,SNR=11						
TKM2	**Tokmak 2**	**7.86**	**32**	⇓P	Pn	08 26 27.3	-2.0
	2.1nm,0.7s						
TKM2				⇓S	Sn	08 27 55.7	-1.3
	2.2nm,0.8s						
AB31	**Akbulak array**	**14.80**	**334**	⇓P	Pn	08 28 04.1	+0.4
	1.0nm,0.3s,baz=152,slow=12,SNR=44						
AB31				⇑S	Sn	08 30 44.1	-2.3
	1.2nm,0.8s,baz=149,slow=23,SNR=4.0						
AKTO	**Aktyubinsk**	**16.48**	**332**	⇓P	Pn	08 28 26.0	+0.6
	1.6nm,0.8s						
AKTO				⇑S	Sn	08 31 29.4	+2.3
	4.0nm,1.2s						

IDC 25 08:26:12.7±1.8,2°.33N×127°.40E,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.4/44,mbtmp3.6/4,Error ellipse: s-maj=146.5km s-min=21.7km az=67.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.16**	**163**	P	P	08 31 20.9	-0.1
	1.7nm,0.5s,baz=343,slow=12,SNR=20						
ASAR	**Alice Springs**	**26.60**	**167**	P	P	08 31 53.2	+0.3
	0.4nm,0.4s,baz=348,slow=12,SNR=7.5						
MKAR	**Makanchi Array**	**59.08**	**325**	P	P	08 36 15.3	+0.4
	0.4nm,0.5s,baz=118,slow=8.4,SNR=5.2						
KURBB	**Kurchatov Arra**	**63.27**	**328**	P	P	08 36 42.4	-0.8
	0.3nm,0.4s,baz=134,slow=6.6,SNR=4.6						

*IDC **25** 08:27:29.6±2.4,23°.76N×122°.41E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.3/52,mbtmp3.6/4,MS2.3/1,Ms1 2.3/1, ms1mx2.1/50,Error ellipse: s-maj=208.1km s-min=25.7km az=64.0*
*JMA **25** 08:27:37.4±0.1,23°.46N×121°.65E,h47km±3km,M4.1*
*NIED **25** 08:27:37.5,23°.46N×121°.65E,h47km,MW3.8,Moment Tensor Solution. s2 Moment tensor: Scale 10^14^Nm; Mrr5.47; Mθθ-0.54; Mϕϕ-4.93; Mrθ-0.24; Mϕθ-1.59; Mϕr1.00; Fault plane solution: M0 5.55000×10^14^ NP1:ϕs13.00000°, δ50.00000°,λ83.00000°. NP2:ϕs203.00000°,δ41.00000°, λ98.00000°.*
*TAP **25** 08:27:38.5,23°.48N×121°.63E,h47km,ML4.1,C*

ISC 25 08:27:37.7±0.9,23°.48N±0°.02×121°.69E±0°.02,h43km±6km, n144,σ1s51/248,mb3.6/4,2C-12D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HGSD	**Ruisui**	**0.24**	**273**	⇑*i* P	**Pn**	**08 27 46.6**	**+0.9**
	baz=272						
HGSD				S	**Sn**	**08 27 52.9**	**+1.7**
	baz=272						
EGFH	**Guangfu**	**0.31**	**308**	*i* P	**Pn**	**08 27 47.1**	**+0.9**
	baz=305						
EGFH				*e*S	**Sn**	**08 27 53.3**	**+1.1**
	baz=305						
EHY	**Hungye**	**0.34**	**275**	⇓*i* P	**Pn**	**08 27 47.0**	**+0.4**
	baz=274						
EHY				*e*S	**Sn**	**08 27 53.1**	**+0.3**
	baz=274						
EYUL	**Yuli**	**0.36**	**249**	P	**Pn**	**08 27 47.7**	**+0.8**
	baz=255						
EYUL				S	**Sn**	**08 27 56.1**	**+2.7**
	baz=255						
YULB	**Yu-li**	**0.37**	**257**	⇓*i* P	**Pn**	**08 27 47.4**	**+0.5**
	baz=262						
YULB				S	**Sn**	**08 27 53.7**	**+0.2**
	baz=262						
TWF1	**Yuli**	**0.38**	**251**	⇓*i* P	**Pn**	**08 27 47.6**	**+0.5**
	baz=256						
TWF1				S	**Sn**	**08 27 54.1**	**+0.4**
	baz=256						
ESL	**Shilin**	**0.41**	**325**	⇓*i* P	**Pn**	**08 27 47.8**	**+0.3**
	baz=327						
ESL				S	**Sn**	**08 27 54.7**	**+0.5**
	baz=327						
FULB	**Fuli**	**0.46**	**233**	*e*P	**Pn**	**08 27 48.7**	**+0.7**
	baz=238						
FULB				*e*S	**Sn**	**08 27 56.7**	**+1.4**
	baz=238						
CHKT	**Chengkung**	**0.48**	**218**	*e*P	**Pn**	**08 27 48.9**	**+0.6**
	baz=204						
CHKT				*e*S	**Sn**	**08 27 56.3**	**+0.5**
	baz=204						
HWA	**Hwalien**	**0.50**	**351**	*e*P	**Pn**	**08 27 49.4**	**+0.8**
	baz=5.0						
HWA				*e*S	**Sn**	**08 27 59.5**	**+3.3**
	baz=5.0						
TWD	**Chiawan**	**0.60**	**352**	*i* P	**Pn**	**08 27 50.3**	**+0.3**
	baz=6.0						
TWD				*e*S	**Sn**	**08 27 59.4**	**+0.8**
	baz=6.0						
EDH	**Donghe**	**0.62**	**215**	*e*P	**Pn**	**08 27 50.7**	**+0.6**
	baz=220						
EDH				S	**Sn**	**08 27 59.9**	**+1.0**
	baz=220						
OWD	**Renai**	**0.67**	**315**	⇓*i* P	**Pn**	**08 27 51.2**	**+0.3**
	baz=326						
OWD				S	**Sn**	**08 28 00.1**	**-0.3**
	baz=326						
ELDTW	**Lidau**	**0.68**	**245**	P	**Pn**	**08 27 50.9**	**-0.2**
	baz=241						
NACB	**Ninganchiao**	**0.70**	**353**	*i* P	**Pn**	**08 27 51.5**	**+0.3**
	baz=350						
NACB				*e*S	**Sn**	**08 28 00.8**	**-0.1**
	baz=350						
SSLB	**Suanglung**	**0.74**	**295**	⇓*i* P	**Pn**	**08 27 52.2**	**+0.4**
	baz=292						
SSLB				*e*S	**Sn**	**08 28 02.5**	**+0.5**
	baz=292						
CHGB	**Renai**	**0.75**	**321**	*i* P	**Pn**	**08 27 52.6**	**+0.6**
	baz=331						
CHGB				*i* S	**Sn**	**08 28 02.4**	**0.0**
	baz=331						
ETLH	**Xiulin Townshi**	**0.75**	**345**	P	**Pn**	**08 27 52.1**	**+0.1**
	baz=344						
ETLH				*e*S	**Sn**	**08 28 01.5**	**-0.8**
	baz=344						
LONT	**Longtian**	**0.77**	**222**	P	**Pn**	**08 27 52.1**	**0.0**
	baz=224						
LONT				*e*S	**Sn**	**08 28 02.7**	**+0.2**
	baz=224						
WHF	**Hehuan Shan**	**0.77**	**330**	P	**Pn**	**08 27 52.5**	**0.0**
	baz=335						
WHF				*e*S	**Sn**	**08 28 02.5**	**-0.8**
	baz=335						
WHYT	**Xinyi Township**	**0.80**	**286**	*e*P	**Pn**	**08 27 53.5**	**+0.9**
	baz=284						
WHYT				*e*S	**Sn**	**08 28 04.5**	**+1.1**
	baz=284						
ALS	**Alishan**	**0.81**	**272**	⇓*i* P	**Pn**	**08 27 54.0**	**+1.0**
	baz=279						
ALS				S	**Sn**	**08 28 04.7**	**+0.6**
	baz=279						
LDUT	**Ludao**	**0.83**	**194**	*e*P	**Pn**	**08 27 52.8**	**-0.1**
	baz

ENA				*e*S		**Sn**	**08 28 07.9**	**+1.0**
	baz=18							
WJS	**Zhushan**	**0.95**	**291**	P		**Pn**	**08 27 56.0**	**+1.4**
WJS	baz=292			*e*S		**Sn**	**08 28 08.5**	**+1.6**
ENAH	**Nanao**	**0.97**	**6**	*e*P		**Pn**	**08 27 55.4**	**+0.4**
ENAH	baz=12			*e*S		**Sn**	**08 28 08.7**	**+1.1**
NNSB	**Datong**	**0.99**	**344**	P		**Pn**	**08 27 55.9**	**+0.6**
NNSB	baz=348			*e*S		**Sn**	**08 28 07.9**	**-0.1**
NNSH	**Datong**	**0.99**	**344**	*e*P		**Pn**	**08 27 55.3**	**0.0**
NNSH	baz=348			*e*S		**Sn**	**08 28 08.2**	**+0.2**
TPUB	**Ta-pu**	**0.99**	**260**	P		**Pn**	**08 27 56.5**	**+1.3**
TPUB	baz=258			*e*S		**Sn**	**08 28 09.8**	**+1.8**
NNS	**Nan Shan**	**1.00**	**343**	P		**Pn**	**08 27 56.2**	**+0.7**
NNS	baz=349			*e*S		**Sn**	**08 28 08.8**	**+0.4**
WNT	**Mingjian**	**1.00**	**294**	*e*P		**Pn**	**08 27 56.6**	**+1.2**
WNT	baz=283			*e*S		**Sn**	**08 28 10.3**	**+2.0**
WTP	**Ta-pu**	**1.01**	**257**	*i* P		**Pn**	**08 27 56.9**	**+1.4**
WTP	baz=255			*e*S		**Sn**	**08 28 10.8**	**+2.1**
WHP	**Taichung City**	**1.05**	**320**	*e*P		**Pn**	**08 27 57.6**	**+1.6**
WHP	baz=323			*e*S		**Sn**	**08 28 10.4**	**+0.9**
WGK	**Gukeng**	**1.05**	**282**	*e*P		**Pn**	**08 27 57.2**	**+1.2**
WGK	baz=281			*e*S		**Sn**	**08 28 12.3**	**+2.8**
SLGT	**Liugui**	**1.07**	**244**	*e*P		**Pn**	**08 27 57.7**	**+1.4**
SLGT	baz=240			*e*S		**Sn**	**08 28 12.3**	**+2.2**
WDLH	**Douliu**	**1.08**	**281**	*e*P		**Pn**	**08 27 58.0**	**+1.7**
WDLH	baz=281			*e*S		**Sn**	**08 28 13.3**	**+3.2**
SGST	**Jiashian**	**1.09**	**249**	P		**Pn**	**08 27 57.2**	**+0.6**
SGST	baz=246			S		**Sn**	**08 28 12.3**	**+1.8**
CHN1	**Nanshi**	**1.11**	**255**	P		**Pn**	**08 27 58.3**	**+1.5**
CHN1	baz=253			*e*S		**Sn**	**08 28 14.1**	**+3.2**
ECL	**Taimali**	**1.11**	**218**	*e*P		**Pn**	**08 27 56.3**	**-0.4**
ECL	baz=213			*e*S		**Sn**	**08 28 09.9**	**-1.0**
CHN2	**Minshiung**	**1.12**	**273**	P		**Pn**	**08 27 58.6**	**+1.7**
CHN2	baz=272			*e*S		**Sn**	**08 28 14.4**	**+3.4**
TWK	**Hsinying**	**1.12**	**259**	P		**Pn**	**08 27 58.2**	**+1.2**
TWK	baz=257			*e*S		**Sn**	**08 28 13.7**	**+2.4**
SNST	**Tainan City**	**1.13**	**257**	*e*P		**Pn**	**08 27 58.3**	**+1.3**
SNST	baz=255			*e*S		**Sn**	**08 28 13.6**	**+2.2**
NDT	**Datong Townshi**	**1.13**	**352**	*e*P		**Pn**	**08 27 57.9**	**+0.8**
NDT	baz=357			*e*S		**Sn**	**08 28 11.1**	**-0.4**
TWC	**Suao**	**1.14**	**7**	P		**Pn**	**08 27 58.5**	**+1.4**
TWC	baz=13			*e*S		**Sn**	**08 28 13.0**	**+1.5**
TCU	**Taichung**	**1.14**	**306**	P		**Pn**	**08 27 59.2**	**+2.0**
TCU	baz=308			*e*S		**Sn**	**08 28 14.2**	**+2.5**
CHY	**Chiayi**	**1.16**	**271**	P		**Pn**	**08 27 58.7**	**+1.2**
CHY	baz=270			*e*S		**Sn**	**08 28 13.8**	**+1.6**
ENTT	**Nioudou**	**1.16**	**354**	P		**Pn**	**08 27 58.3**	**+0.8**
ENTT				*e*S		**Sn**	**08 28 12.7**	**+0.5**
WCHH	**Zhanghua**	**1.20**	**300**	*e*P		**Pn**	**08 27 59.8**	**+1.8**
WCHH	baz=301			*e*S		**Sn**	**08 28 15.7**	**+2.6**
TWQ1	**Liyutan**	**1.21**	**316**	*e*P		**Pn**	**08 27 59.6**	**+1.5**
TWQ1	baz=319			*e*S		**Sn**	**08 28 15.7**	**+2.4**
WTK	**Tuku**	**1.21**	**280**	P		**Pn**	**08 27 59.2**	**+1.1**
WTK	baz=280			*e*S		**Sn**	**08 28 15.2**	**+1.8**
SSD	**Sandimen**	**1.22**	**233**	P		**Pn**	**08 27 59.8**	**+1.5**
SSD	baz=229			*e*S		**Sn**	**08 28 16.4**	**+2.8**
YHNB	**Yeheng**	**1.22**	**346**	*i* P		**Pn**	**08 27 59.5**	**+1.1**
YHNB				*e*S		**Sn**	**08 28 14.4**	**+0.6**
NSK	**Sanguang**	**1.23**	**346**	P		**Pn**	**08 27 59.4**	**+0.9**
NSK	baz=1.0			S		**Sn**	**08 28 14.7**	**+0.7**
TSMG	**Majia**	**1.23**	**232**	*e*P		**Pn**	**08 28 00.3**	**+1.8**
TSMG	baz=225			*e*S		**Sn**	**08 28 17.6**	**+3.6**
TWE	**Neicheng**	**1.24**	**359**	*e*P		**Pn**	**08 27 59.2**	**+0.6**
TWE	baz=357			*e*S		**Sn**	**08 28 15.4**	**+1.4**
SCST	**Cishan**	**1.25**	**242**	P		**Pn**	**08 28 01.4**	**+2.8**
SCST	baz=238			*e*S		**Sn**	**08 28 18.0**	**+3.7**
NSY	**Sanyi**	**1.26**	**318**	*e*P		**Pn**	**08 28 00.6**	**+1.7**
NSY	baz=320			*e*S		**Sn**	**08 28 18.3**	**+3.6**
WLGB	**Puzi**	**1.28**	**270**	*e*P		**Pn**	**08 27 59.4**	**+0.3**
WLGB	baz=269			*e*S		**Sn**	**08 28 15.9**	**+0.9**
CHN3	**Shinhua**	**1.28**	**252**	*e*P		**Pn**	**08 28 01.4**	**+2.2**
RLNB	**Erlin**	**1.29**	**289**	*e*P		**Pn**	**08 28 00.7**	**+1.5**
WDJ	**Dajia District**	**1.29**	**312**	P		**Pn**	**08 28 00.8**	**+1.5**
WDJ	baz=314			*e*S		**Sn**	**08 28 18.5**	**+3.1**
ICHU	**Yijhu**	**1.30**	**265**	*e*P		**Pn**	**08 28 00.7**	**+1.3**
ICHU	baz=264			*e*S		**Sn**	**08 28 17.5**	**+1.9**
MASBT	**Mashibuluo**	**1.30**	**229**	P		**Pn**	**08 28 00.3**	**+0.9**
MASBT	baz=221			S		**Sn**	**08 28 19.4**	**+3.8**
NWLT	**Wulai**	**1.30**	**352**	P		**Pn**	**08 28 01.0**	**+1.5**
NWLT	baz=358			*e*S		**Sn**	**08 28 16.1**	**+0.4**
NSTT	**Nanjuang**	**1.31**	**331**	P		**Pn**	**08 28 00.9**	**+1.4**
NSTT	baz=323			*e*S		**Sn**	**08 28 16.8**	**+1.0**
LIOB	**Emei**	**1.31**	**332**	*e*P		**Pn**	**08 28 01.4**	**+1.7**
LIOB	baz=324			*e*S		**Sn**	**08 28 17.7**	**+1.7**
SGLT	**Jiouru**	**1.33**	**236**	*e*P		**Pn**	**08 28 03.5**	**+3.6**
TWM1	**Shoushan**	**1.34**	**241**	*e*P		**Pn**	**08 28 02.9**	**+3.0**
TWM1	baz=237			*e*S		**Sn**	**08 28 20.3**	**+3.8**
	baz=237							

NMLH	**Miaoli**	**1.34**	**322**	P		**Pn**	**08 28 01.3**	**+1.4**
NMLH	baz=325			*e*S		**Sn**	**08 28 17.7**	**+1.2**
WTCT	**Ta-ch'eng**	**1.35**	**287**	*e*P		**Pn**	**08 28 01.1**	**+1.1**
WTCT	baz=277			*e*S		**Sn**	**08 28 18.4**	**+1.7**
WSF	**Szhu**	**1.36**	**277**	*e*P		**Pn**	**08 28 00.6**	**+0.4**
CHN8	**Yiju**	**1.36**	**265**	P		**Pn**	**08 28 01.2**	**+0.9**
CHN8	baz=263			*e*S		**Sn**	**08 28 19.1**	**+2.0**
NTC	**Toucheng**	**1.38**	**5**	*e*P		**Pn**	**08 28 01.8**	**+1.3**
NTC	baz=23			*e*S		**Sn**	**08 28 20.1**	**+2.6**
SSPT	**Xinbi**	**1.43**	**226**	*e*P		**Pn**	**08 28 03.6**	**+2.4**
SSPT	baz=211			*e*S		**Sn**	**08 28 23.3**	**+4.5**
LAY	**Lan-yu**	**1.44**	**185**	*e*P		**Pn**	**08 28 01.1**	**-0.3**
LAY	baz=174			*e*S		**Sn**	**08 28 18.9**	**-0.1**
SNJT	**Kaohsiung City**	**1.44**	**240**	*e*P		**Pn**	**08 28 02.6**	**+1.3**
SBCB	**Hsinchu**	**1.46**	**334**	*e*P		**Pn**	**08 28 03.8**	**+2.3**
SBCB	baz=323			*e*S		**Sn**	**08 28 21.7**	**+2.2**
SCZT	**Fangliau**	**1.48**	**222**	P		**Pn**	**08 28 03.4**	**+1.5**
SCZT	baz=207			*e*S		**Sn**	**08 28 21.4**	**+1.5**
NHDH	**Xindian Distri**	**1.49**	**354**	*e*P		**Pn**	**08 28 03.1**	**+1.2**
NHDH	baz=360			*e*S		**Sn**	**08 28 21.6**	**+1.4**
TIPB	**Shuangxi**	**1.49**	**5**	*e*P		**Pn**	**08 28 03.7**	**+1.7**
TWA	**Mucha**	**1.50**	**356**	*e*P		**Pn**	**08 28 03.8**	**+1.6**
SLIU	**Shizi**	**1.50**	**213**	*e*P		**Pn**	**08 28 02.3**	**+0.1**
SLIU	baz=203			*e*S		**Sn**	**08 28 22.1**	**+1.6**
JYNG	**Yonagunijimaku**	**1.50**	**50**	P		**Pn**	**08 28 03.9**	**+1.7**
JYNG				S		**Sn**	**08 28 22.4**	**+1.9**
TATO	**Taipei**	**1.50**	**353**	*e*P		**Pn**	**08 28 03.4**	**+1.3**
TWB1	**Santiao Chiao**	**1.55**	**10**	*e*P		**Pn**	**08 28 04.2**	**+1.4**
TWB1	baz=17			*e*S		**Sn**	**08 28 22.3**	**+0.6**
YOJ	**Yonaguni jima**	**1.56**	**51**	*e*P		**Pn**	**08 28 04.5**	**+1.5**
YOJ	baz=55			*e*S		**Sn**	**08 28 23.4**	**+1.5**
YOJ	**Yonaguni jima**	**1.56**	**51**	P		**Pn**	**08 28 04.4**	**+1.5**
YOJ				S		**Sn**	**08 28 23.6**	**+1.8**
NWF	**Wu-fen Shan**	**1.59**	**3**	*e*P		**Pn**	**08 28 05.5**	**+2.1**
NWF	baz=358			*e*S		**Sn**	**08 28 24.1**	**+1.3**
WFSB	**Wu-fen Shan**	**1.59**	**3**	*e*P		**Pn**	**08 28 04.9**	**+1.6**
WFSB	baz=358			*e*S		**Sn**	**08 28 24.3**	**+1.7**
TWS1	**Kuangyinshan**	**1.63**	**351**	*e*P		**Pn**	**08 28 05.4**	**+1.4**
TWS1	baz=9.0			*e*S		**Sn**	**08 28 25.3**	**+1.5**
WLCH	**Liuqiu**	**1.65**	**227**	*e*P		**Pn**	**08 28 07.3**	**+3.2**
YM04	**YM04**	**1.67**	**355**	*e*P		**Pn**	**08 28 05.8**	**+1.2**
YM10	**YM10**	**1.67**	**356**	*e*P		**Pn**	**08 28 05.4**	**+0.8**
YM05	**YM05**	**1.68**	**356**	*e*P		**Pn**	**08 28 06.0**	**+1.3**
YM11	**YM11**	**1.68**	**356**	*e*P		**Pn**	**08 28 07.0**	**+2.3**
NTST	**Danshui**	**1.69**	**353**	*e*P		**Pn**	**08 28 07.9**	**+3.1**
YM08	**YM08**	**1.70**	**357**	*e*P		**Pn**	**08 28 05.9**	**+0.9**
ANP	**Anpu**	**1.71**	**355**	*e*P		**Pn**	**08 28 07.1**	**+2.0**
HEN	**Hengchun**	**1.71**	**211**	*e*P		**Pn**	**08 28 07.0**	**+2.0**
TWK1	**Hengchun**	**1.73**	**208**	*e*P		**Pn**	**08 28 05.5**	**+0.2**
TWKBT	**Hengchun**	**1.73**	**208**	*e*P		**Pn**	**08 28 05.9**	**+0.5**
TWKBT	baz=203			*e*S		**Sn**	**08 28 27.3**	**+1.1**
TWY	**Chenhua**	**1.79**	**357**	*e*P		**Pn**	**08 28 06.5**	**+0.3**
WDGT	**Dungji**	**1.88**	**264**	*e*P		**Pn**	**08 28 07.6**	**+0.3**
WDGT	baz=263			*e*S		**Sn**	**08 28 29.4**	**-0.4**
PHUB	**P'eng-hu**	**1.94**	**271**	*e*P		**Pn**	**08 28 08.2**	**0.0**
PHUB	baz=260			*e*S		**Sn**	**08 28 31.0**	**-0.4**
PNG	**Penghu**	**1.96**	**273**	*e*P		**Pn**	**08 28 08.8**	**+0.4**
PNG	baz=272			*e*S		**Sn**	**08 28 31.9**	**+0.1**
HATJ	**Hateruma jima**	**2.02**	**73**	P		**Pn**	**08 28 10.5**	**+1.2**
HATJ				S		**Sn**	**08 28 34.8**	**+1.5**
IRIF	**Iriomote-Funau**	**2.05**	**65**	P		**Pn**	**08 28 11.4**	**+1.7**
IRIF				S		**Sn**	**08 28 36.1**	**+2.0**
VCHM	**Qimei**	**2.10**	**263**	*e*P		**Pn**	**08 28 10.3**	**0.0**
VCHM	baz=262			*e*S		**Sn**	**08 28 34.0**	**-1.2**
PCYT	**Pengchaiyu**	**2.17**	**9**	*e*P		**Pn**	**08 28 12.7**	**+1.4**
JKRS	**Kuro-shima**	**2.25**	**70**	P		**Pn**	**08 28 14.1**	**+1.6**
JKRS				*e*S		**Sn**	**08 28 41.4**	**+2.3**
JIJ	**Ishigaki jima**	**2.41**	**68**	P		**Pn**	**08 28 15.6**	**+1.0**
JIJ				S		**Sn**	**08 28 43.9**	**+0.9**
VWUC	**VWUC**	**2.54**	**307**	*e*P		**Pn**	**08 28 16.2**	**-0.2**
JISG	**Ishigakijimahi**	**2.64**	**65**	P		**Pn**	**08 28 18.7**	**+0.9**
JISG				S		**Sn**	**08 28 48.9**	**+0.4**
PTTC	**Pingtan**	**2.67**	**319**	*e*P		**Pn**	**08 28 18.0**	**-0.2**
PTMZ	**Houxiangcun**	**2.81**	**304**	*e*P		**Pn**	**08 28 20.6**	**+0.5**
JTJ	**Tarama**	**2.99**	**67**	P		**Pn**	**08 28 23.5**	**+1.0**
JTJ				S		**Sn**	**08 28 58.5**	**+1.4**
MATB	**Ma-tsu**	**3.10**	**330**	*e*P		**Pn**	**08 28 23.6**	**-0.5**
KNM	**Kinmen**	**3.12**	**288**	*e*P		**Pn**	**08 28 25.4**	**+1.0**
KNMB	**Chin-men Tao**	**3.17**	**289**	*e*P		**Pn**	**08 28 24.1**	**-1.1**
JIRB	**Irabujima**	**3.45**	**66**	P		**Pn**	**08 28 29.8**	**+0.8**
JIRB				S		**Sn**	**08 29 08.7**	**+0.1**
LYJJ	**Jianjiangzhen**	**3.52**	**331**	*e*P		**Pn**	**08 28 29.8**	**-0.2**
JMJ	**Miyako jima 2**	**3.55**	**67**	*e*P		**Pn**	**08 28 31.2**	**+1.0**
JIKM	**Ikemajima**	**3.55**	**65**	P		**Pn**	**08 28 30.9**	**+0.6**
JIKM				S		**Sn**	**08 29 11.3**	**+0.2**
JMJ2	**Miyako jima3**	**3.55**	**69**	P		**Pn**	**08 28 32.0**	**+1.7**
JMJ2				S		**Sn**	**08 29 13.2**	**+2.1**
MHZQ	**Yeshan**	**3.56**	**318**	*e*P		**Pn**	**08 28 29.8**	**-0.6**
ZPLA	**Ao Xicun**	**3.64**	**278**	*e*P		**Pn**	**08 28 30.9**	**-0.6**
AXDP	**Jialang**	**3.68**	**293**	*e*P		**Pn**	**08 28 31.4**	**-0.7**
XPSS	**Dashiqiu**	**3.69**	**339**	*e*P		**Pn**	**08 28 32.0**	**-0.2**
ZZJH	**Jiuhuzhen**	**3.84**	**286**	*e*P		**Pn**	**08 28 34.0**	**-0.3**
KSRS	**Korea Array**	**14.92**	**20**	LR		LR	08 37 13.1	
	comp=Z,10nm,18.8s,baz=50,slow=40							
MKAR	**Makanchi Array**	**39.16**	**316**	P		**P**	**08 35 01.5**	**+0.1**
	0.2nm,0.5s,baz=101,slow=9.1,SNR=1.5							
WRA	**Warramunga Arr**	**44.89**	**163**	P		**P**	**08 35 46.1**	**-2.1**
	0.5nm,0.6s,baz=344,slow=8.7,SNR=6.2							
ASAR	**Alice Springs**	**48.34**	**165**	P		**P**	**08 36 14.3**	**-0.9**
	0.2nm,0.3s,baz=333,slow=6.6,SNR=1.9							
FINES	**FINESS Array B**	**72.28**	**330**	P		**P**	**08 38 56.9**	**-1.6**
	2.1nm,0.8s,baz=79,slow=7.2,SNR=3.3							

NEIC ***25*** *08:34:48.4±1.3, 18°.0N±0°.1×67°.93W±0°.06, h76km±11km, Error ellipse: s-maj=19.5km s-min=7.9km az=188.0*
RSPR ***25*** *08:34:49.5, 18°.11N×67°.93W, h72km±2km, MD3.2/10*

ISC 25 08:34:48.0±1.4, 18°.1N±0°.1×67°.89W±0°.05, h94km, n40, σ1§03/49, 12C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MPR	**Mayaguez**	**0.72**	**84**		Pn	**Pn**	**08 35 04.1**	**-0.8**
MPR					Sn	**Sn**	**08 35 16.4**	**-1.3**
CRPR	**Cabo Rojo, PR**	**0.76**	**100**	↓*e*P		**Pn**	**08 35 04.6**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.76**	**100**	*e*S		**Sn**	**08 35 15.6**	**-2.7**
CRPR	**Cabo Rojo, PR**	**0.76**	**100**		Pn	**Pn**	**08 35 04.6**	**-0.7**
CRPR	**Cabo Rojo, PR**	**0.76**	**100**		Sn	**Sn**	**08 35 16.2**	**-2.1**
LSP	**Las Mesas**	**0.77**	**87**	↑*e*P		**Pn**	**08 35 05.0**	**-0.5**
LSP	**Las Mesas**	**0.77**	**87**	*e*S		**Sn**	**08 35 17.4**	**-1.2**
LSP	**Las Mesas**	**0.77**	**87**			**Pn**	**08 35 05.0**	**-0.5**
AGPR	**Aguadilla, PR**	**0.81**	**66**	↑*e*P		**Pn**	**08 35 05.8**	**0.0**
AGPR	**Aguadilla, PR**	**0.81**	**66**	*e*S		**Sn**	**08 35 18.6**	**-0.7**
AGPR	**Aguadilla, PR**	**0.81**	**66**			**Pn**	**08 35 05.8**	**0.0**
AGPR						**Sn**	**08 35 18.6**	**-0.7**
MLPR	**Magueyes Islan**	**0.82**	**102**	↑*e*P		**Pn**	**08 35 05.9**	**-0.1**
MLPR				*e*S		**Sn**	**08 35 17.7**	**-1.9**
MLPR	**Magueyes Islan**	**0.82**	**102**			**Pn**	**08 35 05.9**	**-0.1**
MLPR						**Sn**	**08 35 17.7**	**-1.9**
GBPR	**Guanica, Bosqu**	**0.98**	**100**	↑*e*P		**Pn**	**08 35 07.5**	**-0.1**
GBPR	**Guanica, Bosqu**	**0.98**	**100**	*e*S		**Sn**	**08 35 22.3**	**-0.2**
GBPR	**Guanica, Bosqu**	**0.98**	**100**			**Pn**	**08 35 07.5**	**-0.1**
GBPR						**Sn**	**08 35 22.3**	**-0.2**
AOPR	**Arecibo Observ**	**1.10**	**79**	↑*e*P		**Pn**	**08 35 09.1**	**0.0**
AOPR	**Arecibo Observ**	**1.10**	**79**	*e*S		**Sn**	**08 35 24.3**	**-0.7**
AOPR	**Arecibo Observ**	**1.10**	**79**			**Pn**	**08 35 09.1**	**0.0**
AOPR						**Sn**	**08 35 24.3**	**-0.7**
OBIP	**Obispado Ponce**	**1.23**	**94**	↑*e*P		**Pn**	**08 35 10.9**	**+0.4**
OBIP	**Obispado Ponce**	**1.23**	**94**			**Pn**	**08 35 10.9**	**+0.4**
CELP	**Cerrillos**	**1.25**	**93**	↑*e*P		**Pn**	**08 35 11.0**	**+0.2**
CELP	**Cerrillos**	**1.25**	**93**	*e*S		**Sn**	**08 35 28.3**	**+0.2**
CELP	**Cerrillos**	**1.25**	**93**			**Pn**	**08 35 11.0**	**+0.2**
CELP						**Sn**	**08 35 28.3**	**+0.2**
DR12	**Loma Pena Alta**	**1.55**	**295**	Pn		**Pn**	**08 35 13.5**	**-1.1**
IGPR	**InterUniversit**	**1.71**	**96**	↑*e*P		**Pn**	**08 35 16.5**	**0.0**
IGPR	**InterUniversit**	**1.71**	**96**	*e*S		**Sn**	**08 35 38.9**	**+0.7**
GCPR	**Guaynabo City**	**1.73**	**84**	Pn		**Pn**	**08 35 17.4**	**+0.7**
PDPR	**Patillas Dam,**	**1.78**	**94**	↑*e*P		**Pn**	**08 35 17.9**	**+0.5**
PDPR	**Patillas Dam,**	**1.78**	**94**			**Pn**	**08 35 17.9**	**+0.5**
CBYP	**Canovanas**	**1.94**	**86**	↑*e*P		**Pn**	**08 35 19.9**	**+0.4**
CBYP	**Canovanas**	**1.94**	**86**	*e*S		**Sn**	**08 35 43.8**	**+0.1**
CBYP	**Canovanas**	**1.94**	**86**			**Pn**	**08 35 19.9**	**+0.4**
CBYP						**Sn**	**08 35 43.8**	**+0.1**
HUMP	**Col San Antoni**	**1.94**	**90**	↑*e*P		**Pn**	**08 35 21.0**	**+1.5**
HUMP	**Col San Antoni**	**1.94**	**90**	*e*S		**Sn**	**08 35 44.2**	**+0.6**
HUMP	**Col San Antoni**	**1.94**	**90**			**Pn**	**08 35 21.0**	**+1.5**
HUMP						**Sn**	**08 35 44.2**	**+0.6**
MTP	**Monte Pirata**	**2.23**	**91**	↑*e*P		**Pn**	**08 35 25.3**	**+2.0**
MTP	**Monte Pirata**	**2.23**	**91**			**Pn**	**08 35 25.3**	**+2.0**
BANI	**BANI**	**2.36**	**276**	Pn		**Pn**	**08 35 27.2**	**+2.0**
SDDR	**Presa de Saban**	**3.33**	**285**	Pn		**Pn**	**08 35 38.9**	**+0.9**

TAP 25 08:44:23.3, 24°.97N×122°.43E, h22km±1km, ML2.1, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.40**	**275**	*e*P		Pb	08 44 32.2	+0.5
TWB1	baz=275			S		Sb	08 44 38.6	+1.2
TIPB	**Shuangxi**	**0.55**	**270**	*i* P		Pb	08 44 34.9	+0.6
TIPB	baz=270			S		Sn	08 44 43.1	-1.3
NWF	**Wu-fen Shan**	**0.59**	**280**	*e*S		Sn	08 44 45.0	-0.6
WFSB	**Wu-fen Shan**	**0.59**	**280**	*e*S		Sn	08 44 45.1	-0.3
TWC	**Suao**	**0.64**	**236**	*e*P		Pn	08 44 36.7	-0.3
TWC	baz=235			*e*S		Sn	08 44 45.7	-0.8
NWLT	**Wulai**	**0.86**	**257**	*e*P		Pb	08 44 39.9	+0.2
NWLT	baz=257			*e*S		Sn	08 44 52.5	+0.3
YHNB	**Yeheng**	**1.00**	**253**	*e*P		Pb	08 44 42.0	0.0
YHNB	baz=252			S		Sn	08 44 56.1	+0.5
	baz=252							

SJA ***25*** *08:54:59.1±0.7, 20°.55S×68°.87W, h122km±3km, ML4.8, MW4.6*
NEIC ***25*** *08:54:59.6, 20°.52S×68°.72W, h113km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=1.73; Mθθ=0.32; Mφφ=2.05; Mrθ=0.30; Mφθ=0.22; Mφr=0.63; Fault plane solution: M₀=2.05000×10¹⁶ NP1:φs=198.27000°, δ=37.62000°, λ=-69.70000°. NP2:φs=353.24000°, δ=55.07000°, λ=-104.97000°. Principal axes: T 2.1667, Plg=9.0000°, Azm=94.0000°; N -0.2674, Plg=12.0000°, Azm=2.0000°; P -1.8993, Plg=75.0000°, Azm=219.0000°;*
NEIC ***25*** *08:54:60.0±2.1, 20°.56S±0°.05×68°.79W±0°.07, h116km±4km, mb5.1/291, Mwr=4.8/49, Mww=4.9, ML5.0(GUC) Error ellipse: s-maj=9.8km s-min=6.8km az=86.0*
MOS ***25*** *08:54:59.6±1.1, 20°.36S×68°.67W, h118km, mb5.1/35, Error ellipse: s-maj=12.0km s-min=6.1km az=111.6*
GUC ***25*** *08:55:00.4±0.8, 20°.54S×68°.78W, h114km±4km, ML5.0, MW4.9*
IDC ***25*** *08:55:00.8±0.3, 20°.49S×68°.60W, h117km±2km, mb4.5/23, mb1 4.6/28, mb1mx4.5/40, mbtmp4.9/28, MS3.8/1, Ms1 3.7/1, ms1mx2.8/29, Error ellipse: s-maj=11.5km s-min=6.5km az=88.0*
NEIC ***25*** *08:55:01, 20°.54S×68°.75W, h120km, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; Mrr=1.84; Mθθ=0.50; Mφφ=2.34; Mrθ=0.66; Mφθ=0.02; Mφr=1.03; Fault plane solution: M₀=2.46000×10¹⁶ NP1:φs=201.00000°, δ=35.00000°, λ=-56.00000°. NP2:φs=342.00000°, δ=61.00000°, λ=-111.00000°. Principal axes: T 2.5818, Plg=13.0000°, Azm=87.0000°; N -0.2712, Plg=19.0000°, Azm=353.0000°; P -2.3106, Plg=67.0000°, Azm=211.0000°;*
VAO ***25*** *08:55:02.0±0.6, 20°.45S×68°.44W, h125km±5km, mb5.3*
BJI ***25*** *08:55:02.0±0.0, 20°.60S×68°.70W, h117km, mB5.4/6*
GCMT ***25*** *08:55:02.0±0.3, 20°.57S±0°.03×68°.97W±0°.02, h125km±3km, MW4.9/89, Moment Tensor Solution. s28,c31; s89,c118; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.16±.09; Mθθ=0.06±.10; Mφφ=2.10±.12; Mrθ=0.33±.07; Mφθ=0.06±.10; Mφr=1.47±.09; Best double couple: M₀=2.60900×10¹⁶ NP1:φs=189.00000°, δ=28.00000°, λ=-77.00000°. NP2: φs=354.00000°, δ=63.00000°, λ=-97.00000°. Principal axes: T 2.5590, Plg=17.0000°, Azm=89.0000°; N 0.1010, Plg=6.0000°, Azm=357.0000°; P -2.6580, Plg=71.0000°, Azm=248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 08:54:59.8±0.3, 20°.51S±0°.03×68°.77W±0°.04, h112km±3km, n807, σ1§14/859, mb5.1/165, 21C-7D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.52**	**316**	↓*i*P		**Pn**	**08 55 18.1**	**+0.6**
PB08				*i* S		**Sn**	**08 55 31.5**	**+0.8**
PB08				IAML			08 55 32.5	
	comp=E,145μm,0.4s							
PB08	**IPOC Station P**	**0.52**	**316**			**Pn**	**08 55 18.2**	**+0.8**
PB08	**IPOC Station P**	**0.52**	**316**	*e*P		**Pn**	**08 55 18.1**	**+0.6**
PB08				*e*S		**Sn**	**08 55 32.0**	**+1.2**
PB08				IAML			08 55 34.3	
	comp=Z,29μm,0.6s							
PB01	**IPOC Station P**	**0.85**	**232**	↑*i*P		**Pn**	**08 55 19.9**	**+0.1**
PB01				*i* S		**Sn**	**08 55 35.2**	**+0.2**

PB01 IAML 08 55 36.1
comp=N,57µm,0.3s
PB01 IPOC Station P 0.85 232 Pn 08 55 20.0 +0.1
PB01 IPOC Station P 0.85 232 *e*P **Pn 08 55 20.0 +0.1**
PB01 *e*S **Sn 08 55 35.5 +0.5**
PB01 IAML 08 55 35.8
comp=Z,21µm,0.2s
PB11 IPOC Station P 1.12 312⇑ *i*P **Pn 08 55 22.9 +0.3**
PB11 *i* S **Sn 08 55 40.3 +0.5**
PB11 IAML 08 55 41.8
comp=N,53µm,0.7s
PB11 IPOC Station P 1.12 312 Pn 08 55 23.0 +0.3
PB11 IPOC Station P 1.12 312 *e*P **Pn 08 55 22.9 +0.3**
PB11 *e*S **Sn 08 55 40.9 +1.1**
PB11 IAML 08 55 43.4
comp=Z,17µm,0.9s
TA02 Huaiquique 1.30 280⇑ *i*P **Pn 08 55 24.5 +0.1**
TA02 *i* S **Sn 08 55 42.9 -0.2**
TA02 IAML 08 55 47.4
comp=N,34µm,0.4s
TA01 Diego Aracena 1.32 267⇑ *i*P **Pn 08 55 24.4 -0.3**
TA01 *i* S **Sn 08 55 43.1 -0.4**
TA01 Diego Aracena 1.32 267 Pn 08 55 24.5 -0.2
PATCX Punta Patache 1.33 256 *i*P **Pn 08 55 24.8 -0.1**
PATCX *i* S **Sn 08 55 43.9 0.0**
PATCX Punta Patache 1.33 256 Pn 08 55 24.9 +0.1
PATCX Punta Patache 1.33 256 *e*P **Pn 08 55 24.8 -0.1**
PB09 IPOC Station P 1.35 199⇑ *i*P **Pn 08 55 25.8 +0.6**
PB09 *i* S **Sn 08 55 45.1 +0.6**
PB09 IAML 08 55 47.6
comp=N,19µm,0.7s
PB09 IPOC Station P 1.35 199 Pn 08 55 26.0 +0.8
PB09 IPOC Station P 1.35 199 *e*P **Pn 08 55 25.7 +0.6**
PB09 *e*S **Sn 08 55 45.6 +1.1**
PB09 IAML 08 55 48.2
comp=Z,14µm,0.7s
PSGC Pisagua 1.56 305⇑ *i*P **Pn 08 55 27.6 0.0**
PSGC *i* S **Sn 08 55 48.4 -0.4**
PSGC IAML 08 55 51.6
comp=N,32µm,0.9s
PSGCX Pisagua 1.56 305 Pn Pn 08 55 27.8 +0.1
PSGCX Pisagua 1.56 305 *e*P **Pn 08 55 27.6 -0.1**
MNMC Minye Minye 1.58 330⇑ *i*P **Pn 08 55 29.1 +1.1**
MNMC *i* S **Sn 08 55 51.3 +1.9**
MNMC IAML 08 55 54.1
comp=N,38µm,0.3s
MNMC Minye Minye 1.58 330 Pn 08 55 29.3 +1.3
MNMCX Minye Minye 1.58 330 *e*P **Pn 08 55 29.0 +1.0**
MNMCX *e*S **Sn 08 55 51.5 +2.1**
PB07 IPOC Station P 1.60 221⇑ *i*P **Pn 08 55 27.9 -0.1**
PB07 *i* S **Sn 08 55 48.9 -0.7**
PB07 IAML 08 55 50.9
comp=N,17µm,0.4s
PB07 IPOC Station P 1.60 221 Pn 08 55 28.0 -0.1
PB07 IPOC Station P 1.60 221 *e*P **Pn 08 55 27.9 -0.1**
PB07 *e*S **Sn 08 55 49.3 -0.3**
PB07 IAML 08 55 50.4
comp=Z,11µm,0.5s
PB03 IPOC Station P 1.78 211⇑ *i*P **Pn 08 55 30.2 -0.1**
PB03 *i* S **Sn 08 55 52.9 -0.7**
PB03 IAML 08 56 00.2
comp=E,8µm,0.4s
PB03 IPOC Station P 1.78 211 *e*P **Pn 08 55 30.2 -0.1**
PB03 *e*S **Sn 08 55 53.2 -0.4**
PB03 IAML 08 55 56.2
comp=Z,10µm,0.7s
LVC Limon Verde 2.09 184 P **Pn 08 55 35.7 +1.3**
comp=Z,99nm,0.3s,baz=357,slow=7.1,SNR=322
LVC S **Sn 08 56 01.5 +0.7**
comp=Z,173nm,0.3s,baz=6.9,slow=10,SNR=6.4
LVC Limon Verde 2.09 184 *e*P **Pn 08 55 34.8 +0.4**
LVC *i* S **Sn 08 56 01.6 +0.7**
LVC Limon Verde 2.09 184 Pn 08 55 35.5 +1.0
LVC Limon Verde 2.09 184 *e*P **Pn 08 55 35.4 +1.0**
LVC *e*S **Sn 08 56 00.0 +4.2**
PB04 IPOC Station P 2.22 215⇑ *i*P **Pn 08 55 35.3 -0.6**
PB04 *i* S **Sn 08 56 01.4 -2.1**
PB04 IPOC Station P 2.22 215 Pn 08 55 35.4 -0.6
PB04 IPOC Station P 2.22 215 *e*P **Pn 08 55 35.6 -0.2**
PB04 *e*S **Sn 08 56 02.4 -1.1**
PB04 IAML 08 56 10.1
comp=Z,4µm,0.8s
PB16 IPOC Station P 2.28 342⇑ *i*P **Pn 08 55 38.7 +1.7**
PB16 *i* S **Sn 08 56 07.2 +1.8**
PB16 IAML 08 56 11.5
comp=N,4µm,0.3s
PB16 IPOC Station P 2.28 342 Pn Pn 08 55 38.6 +1.7
PB16 IPOC Station P 2.28 342 *e*P **Pn 08 55 38.7 +1.7**
PB16 *e*S **Sn 08 56 07.9 +2.5**
PB16 IAML 08 56 13.2
comp=Z,3µm,0.5s
PB06 IPOC Station P 2.31 199⇑ *i*P **Pn 08 55 36.8 -0.1**
PB06 *i* S **Sn 08 56 04.7 -0.7**
PB06 IAML 08 56 11.2
comp=E,5µm,0.6s
PB06 IPOC Station P 2.31 199 Pn 08 55 37.0 0.0
PB06 IPOC Station P 2.31 199 *e*P **Pn 08 55 36.8 -0.1**
PB06 *e*S **Sn 08 56 05.2 -0.3**
PB06 IAML 08 56 14.4
comp=Z,5µm,0.7s
AP01 Chacalluta 2.60 325⇑ *i*P **Pn 08 55 40.5 0.0**
AP01 *i* S **Sn 08 56 12.4 +0.5**
AP01 Chacalluta 2.60 325 Pn 08 55 40.5 0.0
PB05 IPOC Station P 2.68 210⇑ *i*P **Pn 08 55 40.9 -0.9**
PB05 *i* S **Sn 08 56 08.8 -5.3**
PB05 IPOC Station P 2.68 210 *e*P **Pn 08 55 41.4 -0.4**
PB05 *e*S **Sn 08 56 13.2 -1.0**
PB05 IAML 08 56 38.6
comp=Z,2µm,0.8s
PB15 IPOC Station P 2.76 194 *e*P **Pn 08 55 43.1 +0.2**
PB15 IPOC Station P 2.76 194 Pn 08 55 43.7 +0.8
PB15 IPOC Station P 2.76 194 *e*P **Pn 08 55 43.6 +0.7**
PB15 *e*S **Sn 08 56 16.1 0.0**
PB15 IAML 08 56 26.1
comp=Z,5µm,0.2s
PB10 IPOC Station P 3.42 209⇑ *i*P **Pn 08 55 49.7 -1.6**
PB10 IAML 08 56 46.0
comp=N,1µm,0.6s
PB10 IPOC Station P 3.42 209 Pn Pn 08 55 50.1 -1.3
PB10 IPOC Station P 3.42 209 *e*P **Pn 08 55 50.9 -0.5**
PB10 *e*S **Sn 08 56 26.9 -4.3**
PB10 IAML 08 56 56.8
comp=Z,914nm,0.7s
YJA Yavi 3.46 119 *e*P **Pn 08 55 54.7 +2.4**
YJA *e*S **Sn 08 56 38.7 +5.8**
LPAZ La Paz 4.25 8 P **Pn 08 56 05.5 +2.4**
comp=Z,31nm,0.3s,baz=173,slow=7.3,SNR=288
LPAZ La Paz 4.25 8 Pn Pn 08 56 05.2 +2.1
LPAZ La Paz 4.25 8 *e*P **Pn 08 56 05.7 +2.6**
PB14 IPOC Station P 4.36 200 *e*P **Pn 08 56 02.7 -1.7**
PB14 IPOC Station P 4.36 200 Pn 08 56 02.3 -2.1
PB14 IPOC Station P 4.36 200 *e*P **Pn 08 56 03.9 -0.4**
PB14 *e*S **Sn 08 56 52.2 -2.2**
PB14 IAML 08 56 56.0
comp=Z,700nm,0.6s
GO02 Mina Guanaco 4.69 189⇓ *i*P **Pn 08 56 07.5 -1.3**
GO02 Mina Guanaco 4.69 189 Pn Pn 08 56 07.8 -0.9
SLA San Lorenzo 5.16 145 *e*P **Pn 08 56 16.2 +1.2**
AC01 Pan de Azucar 5.86 196 Pn Pn 08 56 22.7 -1.5
FSA Cafayete 6.13 156 *e*P **Pn 08 56 28.8 +0.6**
AC02 Maricunga 6.30 183 Pn Pn 08 56 29.8 -0.9
AHML Horco Molle 6.99 154 *e*P **Pn 08 56 39.6 0.0**
GO03 Copiap 7.17 190 Pn 08 56 41.2 -0.9
AC04 Llanos de Chal 7.94 195 Pn Pn 08 56 50.4 -2.1
AC05 El Transito 8.40 189 Pn Pn 08 56 56.8 -1.9
SIV San Ignacio 8.58 60 P **Pn 08 56 58.7 -2.5**
comp=Z,46nm,0.3s,baz=260,slow=10,SNR=711
SIV S **Sn 08 58 29.9 -6.6**
baz=331,slow=19,SNR=1.1
LCO Las Campanas 8.64 191 P **Pn 08 57 00.5 -1.7**
LCO Las Campanas 8.64 191 Pn 08 57 00.5 -1.7
CO01 Juntas del Tor 9.50 187 Pn 08 57 12.8 -1.0
GO04 Tololo Observa 9.79 190 Pn 08 57 16.1 -1.7
CO03 El Pedregal 10.43 189 Pn 08 57 24.1 -2.1
PTLB Pontes e Lacer 10.46 63 *e*P **Pn 08 57 23.1 -3.5**
CO02 Combarbal 10.83 190 Pn Pn 08 57 30.9 -0.9
ZON Zonda 10.99 180 P **Pn 08 57 31.9 -1.8**
ZON Zonda 10.99 180 Pn Pn 08 57 31.9 -1.8
VILB Vilhena 11.13 49 *e*P **Pn 08 57 33.0 -2.7**
NNA Nana 11.48 316 P **Pn 08 57 38.0 -2.4**
comp=Z,1.5nm,0.3s,baz=183,slow=6.5,SNR=6.5
NNA S **Sn 08 59 38.5 -8.3**
comp=Z,1.6nm,0.3s,baz=178,slow=12,SNR=1.5
NNA Nana 11.48 316 P **Pn 08 57 39.9 -0.6**
NNA Nana 11.48 316 Pn **Pn 08 57 39.9 -0.6**
CPUP Villa Florida 11.99 121 P **Pn 08 57 44.5 -2.5**
comp=Z,2.3nm,0.3s,baz=306,slow=12,SNR=118
CPUP Villa Florida 11.99 121 P **Pn 08 57 46.3 -0.7**
CPUP Villa Florida 11.99 121 Pn **Pn 08 57 46.3 -0.7**
AQDB Aquidauana 12.25 92 *e*P **Pn 08 57 46.9 -3.6**
VA03 San Esteban 12.30 187 Pn 08 57 49.4 -1.8
ROC1 El Roble 12.57 189 Pn 08 57 53.5 -1.4
SAML Samuel 12.70 26 P **Pn 08 57 54.6 -1.8**
SAML Samuel 12.70 26 Pn **Pn 08 57 54.6 -1.8**
MT02 Curacav 12.87 189 Pn **Pn 08 57 58.5 -0.1**
MT05 Renca 12.95 187 Pn 08 57 58.2 -1.4
PP1B Ponte de Pedra 13.45 80 *e*P **Pn 08 58 03.0 -3.1**
ITQB Itaqui 14.28 132 *e*P **Pn 08 58 15.6 -1.2**
BO02 Sierra Bellavi 14.34 187 Pn 08 58 18.6 +1.1
TRCB Terra Rica 15.17 102 *e*P **Pn 08 58 27.1 -1.2**
CLDB Colider 15.73 54 *e*P **Pn 08 58 33.7 -1.5**
PTGB Pitanga 15.98 108 *e*P **Pn 08 58 37.4 -0.9**
BI02 San Fabin de 16.24 187 P **Pn 08 58 40.8 -0.6**
BI02 IAmb IAmb 08 58 44.5
comp=Z,75nm,1.1s
ATAH Atahualpa 16.24 324 P **Pn 08 58 42.0 +0.1**
comp=Z,0.4nm,0.3s,baz=82,slow=18,SNR=2.4
PCMB Pacaembu 16.38 97 *e*P **Pn 08 58 42.2 -1.0**
ITAB Concordia 16.61 117 *e*P **Pn 08 58 45.4 -0.6**
BI03 Tigo 16.69 192 P **Pn 08 58 46.6 -0.3**
CPSB Cacapava Do Su 16.97 129 *e*P **Pn 08 58 48.3 -2.1**
ITRB Iturama 17.31 91 *e*P **P 08 58 51.5 -2.8**
PLTB Pedras Altas 17.61 133 *e*P **P 08 58 54.8 -2.7**
FRTB Fartura 18.04 102 *e*P **P 08 59 01.9 -0.4**
CNLB Canela 18.45 122 *e*P **P 08 59 05.1 -1.6**
LC01 Cunco 18.52 188 P 08 59 05.8 -1.6
NPGB Novo Progresso 18.66 46 *e*P **P 08 59 06.8 -2.3**
SNDB Serra Nova Dou 18.79 66 *e*P **P 08 59 09.2 -1.3**
TIJ01 Guaruva-PR 18.82 108 *e*P **P 08 59 11.1 +0.2**
BB19B Bebedouro 18.93 95 *e*P **P 08 59 10.9 -1.2**
MACA Manacapuru-AM 18.96 26 *e*P **P 08 59 10.8 -1.5**
IPMB Ipameri, GO 19.57 86 *e*P **P 08 59 17.8 -1.2**
SPB Sao Paulo 20.01 103 P **P 08 59 22.6 -1.1**
SPB IAmb IAmb 08 59 27.5
comp=Z,77nm,0.7s
SPB Sao Paulo 20.01 103 *e*P **P 08 59 22.1 -1.6**
PLCA Paso Flores 20.21 184 P **P 08 59 26.2 +0.4**
comp=Z,58nm,0.8s,baz=7.8,slow=13,SNR=104
PLCA PcP **PcP 09 03 36.2 +0.7**
comp=Z,4.9nm,0.7s,baz=14,slow=2.7,SNR=5.9
PLCA Paso Flores 20.21 184 P **P 08 59 25.8 0.0**
PLCA IAmb IAmb 08 59 30.3
comp=Z,88nm,0.9s
PLCA Paso Flores 20.21 184 *e*P **P 08 59 26.4 +0.6**
PET01 Itahaem-SP 20.22 105 *e*P **P 08 59 24.1 -1.9**
BDFB Brasilia 20.31 80 P **P 08 59 25.6 -1.6**
comp=Z,19nm,0.4s,baz=257,slow=12,SNR=44
BDFB LR LR 09 08 31.5
comp=Z,270nm,18.9s,baz=265,slow=40
BDFB Brasilia 20.31 80 P **P 08 59 26.6 -0.5**
BDFB pmax pmax
comp=Z,65nm,1.2s
BDFB Brasilia 20.31 80 P **P 08 59 26.6 -0.5**
BDFB IAmb IAmb 08 59 32.4
comp=Z,65nm,1.2s
VAO Valinhos 20.40 101 *e*P **P 08 59 25.9 -2.1**
ITTB Itaituba 20.45 40 *e*P **P 08 59 26.3 -2.3**
PARB Paraibuna 21.65 102 *e*P **P 08 59 39.2 -2.2**
LL01 San Ignacio de 22.02 187 P **P 08 59 44.1 -0.8**
LL01 IAmb IAmb 08 59 46.5
comp=Z,61nm,0.8s
BSCB Bom Sucesso 22.44 95 *e*P **P 08 59 47.6 -2.0**
OTAV Otavalo 22.70 334 *e*P **P 08 59 55.8 +3.2**
OTAV Otavalo 22.70 334 P **P 08 59 52.6 -0.1**
OTAV Otavalo 22.70 334 *e*P **P 08 59 54.7 +2.1**
ESAR Angra dos Reis 22.73 101 *e*P **P 08 59 50.4 -2.0**
MAN01 Angra dos Reis 23.16 100 *e*P **P 08 59 54.7 -1.9**
PRPB Parauapebas 23.27 55 *e*P **P 08 59 55.5 -2.1**
MALB Monte Alegre 23.33 39 *e*P **P 08 59 55.7 -2.5**
SMTB Santa Maria do 23.50 64 *e*P **P 08 59 58.5 -1.3**
VAS01 Vassuras-RJ 23.64 99 *e*P **P 09 00 00.2 -0.8**
JANB Januaria 23.90 81 *e*P **P 09 00 01.2 -2.2**
SDBA SAO DESIDERIO 24.24 74 *e*P **P 09 00 04.0 -2.5**
DUB01 Friburgo-RJ 24.63 98 *e*P **P 09 00 08.9 -1.1**
ROSC El Rosal 25.78 347 P **P 09 00 21.9 +1.2**
comp=Z,13nm,0.4s,baz=184,slow=7.3,SNR=5.7
ROSC El Rosal 25.78 347 P **P 09 00 21.5 +0.7**
MCPB Macapa, AP 25.85 41 *e*P **P 09 00 19.8 -1.2**
SJMB Sao Joao De Ma 26.04 91 *e*P **P 09 00 20.1 -2.6**
RIB01 Linhares ES 26.69 92 *e*P **P 09 00 27.3 -1.3**
TMAB Tom-Au,PA,Br 27.05 51 *e*P **P 09 00 31.3 -0.5**
NAN01 Guarapari, ES 27.17 89 *e*P **P 09 00 30.1 -2.8**
GDU01 Guandu, BA 28.68 81 *e*P **P 09 00 44.0 -2.3**
SDV Santo Domingo 29.27 356 P **P 09 00 50.5 -1.2**
comp=Z,8.7nm,0.8s,baz=215,slow=8.4,SNR=6.8
SDV Santo Domingo 29.27 356 P **P 09 00 50.3 -1.4**
SDV Santo Domingo 29.27 356 *e*P **P 09 00 50.6 -1.1**
MDP Montagnes des 29.98 34 P **P 09 00 56.1 -1.7**
comp=Z,16nm,0.8s,baz=191,slow=13,SNR=8.5
JTS Las Juntas de 34.50 331 P **P 09 01 38.8 +1.5**
comp=Z,10nm,0.8s,baz=73,slow=2.2,SNR=7.9
JTS Las Juntas de 34.50 331 *d i*P **P 09 01 39.6 +2.2**
JTS pmax pmax
comp=Z,17nm,0.9s
JTS Las Juntas de 34.50 331 P **P 09 01 37.6 +0.2**
JTS IAmb IAmb 09 01 40.8
comp=Z,16nm,0.9s
RCBR Riachuelo 35.07 70 P **P 09 01 41.6 -0.8**
RCBR pmax pmax
comp=Z,56nm,1.2s
RCBR Riachuelo 35.07 70 P **P 09 01 41.6 -0.8**
RCBR IAmb IAmb 09 01 43.7
comp=Z,56nm,1.2s
MATN Matagalpa 37.27 332 P **P 09 02 01.9 +0.9**
MATN IAmb IAmb 09 02 06.1
comp=Z,16nm,0.9s
RPN Rapa Nui 37.57 252 P **P 09 02 05.3 +1.9**
comp=Z,11nm,0.6s,baz=113,slow=7.7,SNR=2.5
RPN Rapa Nui 37.57 252 P **P 09 02 02.9 -0.6**
CRIN San Cristobal 37.58 330 P **P 09 02 03.8 +0.1**
MLPR Magueyes Islan 38.28 3 P **P 09 02 08.3 -1.0**
OBIP Obispado Ponce 38.38 3 P **P 09 02 09.1 -1.1**
PDPR Patillas Dam, 38.39 4 P **P 09 02 09.2 -1.1**
SJG San Juan 38.47 4 P **P 09 02 08.9 -2.0**
comp=Z,51nm,0.8s,baz=76,slow=1.4,SNR=10
SJG San Juan 38.47 4 P **P 09 02 09.7 -1.2**
SJG pmax pmax
comp=Z,46nm,0.8s
SJG San Juan 38.47 4 P **P 09 02 09.7 -1.2**
MPR Mayaguez 38.52 2 P **P 09 02 10.1 -1.2**
TGUH Tegucigalpa,Un 38.87 331 P **P 09 02 15.7 +1.2**
TGUH IAmb IAmb 09 02 16.6
comp=Z,30nm,0.9s
MTO3 Montecristo 40.17 328 P **P 09 02 26.7 +1.3**
MTO3 IAmb IAmb 09 02 27.8
comp=Z,24nm,1.0s
ESQI Esquipulas 40.29 328 P **P 09 02 26.9 +0.6**
ESQI IAmb IAmb 09 02 29.1
comp=Z,42nm,1.2s
PETF Flores 42.57 329 P **P 09 02 45.7 +0.9**
PMSA Palmer Station 44.35 177 P **P 09 02 59.8 +1.4**
comp=Z,22nm,0.8s,baz=359,slow=4.5,SNR=5.0
TEIG Tepich 44.76 334 P **P 09 03 02.0 -0.3**
TEIG IAmb IAmb 09 03 04.5
comp=Z,25nm,0.8s
CMIG Matias Romero 45.31 324 P **P 09 03 07.6 +0.9**
comp=Z,7.1nm,0.8s,baz=114,slow=4.8,SNR=8.3
TLIG Tlapa 47.82 320 P **P 09 03 26.0 -0.3**
TLIG IAmb IAmb 09 03 28.8
comp=Z,13nm,0.7s
DWPF Disney Wildern 49.86 345 P **P 09 03 42.0 +0.4**
baz=164
TIGA Tifton 53.58 344 P **P 09 04 09.0 -0.2**
baz=163
158A Hollywood 54.06 348 P **P 09 04 13.3 +0.6**
baz=167
157A Early Branch 54.17 347 P **P 09 04 13.8 +0.3**
baz=166
ZAIG Zacatecas 54.20 321 P **P 09 04 15.3 +1.0**
ZAIG IAmb IAmb 09 04 17.0
comp=Z,20nm,1.0s
RGRS Roger Stewart 54.23 348 P **P 09 04 14.1 +0.2**
BRAL Brewton 54.30 341 P **P 09 04 14.6 +0.1**
baz=159
NHSC New Hope 54.42 348 P **P 09 04 15.9 +0.6**
baz=167
NHSC New Hope 54.42 348 P **P 09 04 15.5 +0.2**
Z58A St. Stephen 54.57 349 P **P 09 04 16.9 +0.5**
baz=167
Z57A Bowman 54.71 348 P **P 09 04 17.6 +0.2**
baz=166,SNR=5.1
Z56A Williston 54.87 347 P **P 09 04 18.7 +0.1**
baz=166
Z56A Williston 54.87 347 P **P 09 04 18.5 -0.1**
Z56A IAmb IAmb 09 04 19.4
comp=Z,28nm,0.8s
Y58A Scranton 55.10 349 P **P 09 04 20.5 +0.3**
baz=168
Y56A Pelion 55.31 347 P **P 09 04 21.7 0.0**
baz=166
Y57A Sumter 55.34 348 P **P 09 04 22.1 +0.1**
baz=167
Y57A Sumter 55.34 348 P **P 09 04 22.1 +0.1**
Y55A Saluda 55.56 347 P **P 09 04 23.7 +0.1**
baz=165
X58A Rowland 55.68 349 P **P 09 04 24.3 -0.1**
baz=168
JSC Jenkinsville 55.77 347 P **P 09 04 24.9 -0.1**
JSC pmax pmax
comp=Z,10.0nm,0.5s
JSC Jenkinsville 55.77 347 P **P 09 04 24.9 -0.1**
JSC IAmb IAmb 09 04 25.5
comp=Z,9.9nm,0.5s
X56A White Oak 55.93 348 P **P 09 04 26.2 +0.1**
baz=166,SNR=8.7
BIRD Birdtown, Kers 55.97 348 P **P 09 04 26.1 -0.3**
LRAL Lakeview Retre 56.02 342 P **P 09 04 26.2 -0.7**
baz=159
X55A Gracelyn & Ava 56.03 347 P **P 09 04 27.0 +0.2**
baz=166,SNR=5.4
W58A Raeford 56.11 350 P **P 09 04 27.4 0.0**
baz=168,SNR=6.6
X54A Belton 56.26 346 P **P 09 04 28.7 +0.2**
baz=165
W57A Gilead 56.38 349 P **P 09 04 29.4 +0.2**
baz=167
W57A Gilead 56.38 349 P **P 09 04 28.6 -0.6**
W57A IAmb IAmb 09 05 12.7
comp=Z,24nm,0.9s
W56A Indian Trail 56.47 348 P **P 09 04 29.8 -0.1**
baz=167,SNR=5.7
HKT Hockley 56.54 332 *d i*P **P 09 04 31.1 +0.7**
HKT pmax pmax
comp=Z,17nm,1.7s
HKT Hockley 56.54 332 P **P 09 04 30.9 +0.4**
KMSC Kings Mountain 56.62 348 P **P 09 04 31.1 0.0**
baz=166,SNR=6.1
KMSC Kings Mountain 56.62 348 P **P 09 04 31.0 0.0**
KMSC IAmb IAmb 09 04 32.0
comp=Z,21nm,0.8s
Y49A Blount Mountai 56.62 342 P **P 09 04 29.8 -1.3**
Y49A IAmb IAmb 09 05 01.1
comp=Z,20nm,1.1s
V59A Middlesex 56.68 351 P **P 09 04 31.1 -0.4**
baz=169
W54A Cherokee Point 56.74 347 P **P 09 04 32.3 +0.4**
baz=165,SNR=5.4
V58A Windy Hill, Pi 56.85 350 P **P 09 04 32.4 -0.3**
baz=168
833A Chaparral WMA, 56.86 328 P **P 09 04 33.0 +0.2**
baz=145
833A Chaparral WMA, 56.86 328 P **P 09 04 32.8 -0.1**
V57A Coltrane Farms 57.05 349 P **P 09 04 33.9 -0.2**
baz=168
V56A Mocksville 57.11 349 P **P 09 04 34.7 +0.3**
baz=167,SNR=8.3
V55A Taylorsville 57.28 348 P **P 09 04 36.1 +0.4**
baz=166,SNR=7.7
V55A Taylorsville 57.28 348 P **P 09 04 35.1 -0.6**
U58A Oxford 57.35 351 P **P 09 04 36.6 +0.4**
baz=169
V54A Nebo 57.36 347 P **P 09 04 36.3 +0.1**
baz=165,SNR=6.6
X48A Hartselle 57.36 342 P **P 09 04 34.8 -1.5**
X48A IAmb IAmb 09 05 07.2
comp=Z,27nm,1.1s
V53A Saluda 57.44 346 P **P 09 04 36.3 -0.6**
V53A IAmb IAmb 09 04 37.2
comp=Z,10nm,0.8s
U57A Blanch 57.51 350 P **P 09 04 37.0 -0.3**
baz=168
Y45A Yeager Farm, C 57.59 340 P **P 09 04 37.5 -0.4**
W50A Signal Mountai 57.59 344 P **P 09 04 37.4 -0.5**
W50A IAmb IAmb 09 04 38.0
comp=Z,18nm,0.8s
NATX Nacogdoches 57.60 334 P **P 09 04 38.7 +0.7**
U56A King 57.61 349 P **P 09 04 38.5 +0.5**
baz=167
TKL Tuckaleechee C 57.65 346 P **P 09 04 38.0 -0.3**
TKL pmax pmax
comp=Z,13nm,0.8s
TKL Tuckaleechee C 57.65 346 P **P 09 04 38.0 -0.3**
TKL IAmb IAmb 09 04 38.3
comp=Z,13nm,0.8s
SWET Sewanee 57.77 343 P **P 09 04 38.1 -1.1**
T59A Double "B" Far 57.77 352 P **P 09 04 39.0 -0.1**
baz=170
V52A Sevierville 57.78 346 P **P 09 04 38.6 -0.6**
V52A IAmb IAmb 09 04 39.6
comp=Z,23nm,0.8s
T58A Grand View Acr 57.89 351 P **P 09 04 40.2 +0.3**
baz=169
T57A Hurt 58.05 350 P **P 09 04 41.0 0.0**
baz=168
U54A Nelsons Funny 58.05 348 P **P 09 04 41.1 -0.1**
baz=166,SNR=7.7
U54A Nelsons Funny 58.05 348 P **P 09 04 41.0 -0.1**
OXF Oxford 58.14 340 P **P 09 04 40.6 -1.1**
OXF pmax pmax
comp=Z,52nm,1.1s
OXF Oxford 58.14 340 P **P 09 04 40.4 -1.2**
baz=157,SNR=5.7
OXF Oxford 58.14 340 P **P 09 04 40.6 -1.1**
PLAL Pickwick Lake 58.16 341 P **P 09 04 41.0 -0.9**
PLAL IAmb IAmb 09 04 41.6
comp=Z,13nm,0.8s
T56A Rocky Mt 58.21 349 P **P 09 04 42.5 +0.3**
baz=168
237A Washetta, Mont 58.29 333 P **P 09 04 44.1 +1.3**
T55A Pulaski 58.43 349 P **P 09 04 44.3 +0.5**
baz=167,SNR=8.1
TZTN Tazewell 58.44 346 P **P 09 04 43.6 -0.2**
baz=164
BLA Blacksburg 58.45 349 P **P 09 04 44.1 +0.2**
BLA pmax pmax
comp=Z,28nm,1.3s
BLA Blacksburg 58.45 349 P **P 09 04 44.4 +0.5**
baz=167
BLA Blacksburg 58.45 349 P **P 09 04 44.1 +0.2**
BLA IAmb IAmb 09 04 49.2
comp=Z,28nm,1.2s
V48A Smith Brothers 58.50 343 P **P 09 04 43.5 -0.7**
V48A IAmb IAmb 09 04 44.6
comp=Z,19nm,0.7s
T54A Tazewell 58.52 348 P **P 09 04 44.5 +0.1**
baz=166
X43A Marvell 58.63 339 P **P 09 04 45.1 0.0**
baz=156
T53A Wise 58.64 347 P **P 09 04 45.0 -0.3**
baz=165,SNR=6.9
W45A Hickory Valley 58.66 340 P **P 09 04 44.0 -1.3**
WLAR White Oak Lake 58.68 336 P **P 09 04 45.7 +0.2**
CLTN Cedars of Leba 58.70 343 P **P 09 04 44.2 -1.4**
CLTN IAmb IAmb 09 05 16.4
comp=Z,32nm,1.1s
S57A Dark Hollow, R 58.75 351 P **P 09 04 45.9 0.0**
baz=169
JCT Junction City 58.83 329 P **P 09 04 46.4 -0.3**
JCT pmax pmax
comp=Z,9.0nm,1.0s
JCT Junction City 58.83 329 P **P 09 04 46.6 -0.1**
baz=146
JCT Junction City 58.83 329 P **P 09 04 46.4 -0.3**
R59A King George, V 58.92 352 P **P 09 04 47.3 +0.3**
baz=171
U49A Red Boiling Sp 58.95 344 P **P 09 04 46.4 -0.9**
U49A IAmb IAmb 09 05 17.4
comp=Z,14nm,0.8s
WHTX Lake Whitney, 59.00 332 P **P 09 04 47.9 +0.2**
baz=148

WHTX **Lake Whitney,** **59.00 332** P **P** **09 04 47.9 +0.2**
WHTX IAmb IAmb 09 04 48.5
comp=Z,11nm,0.7s

S55A **Lewisburg** **59.02 349** P **P** **09 04 48.4 +0.6**
baz=167,SNR=8.3

Z38A **Mt. Pleasant** **59.04 334** P **P** **09 04 47.9 -0.1**
R58A **Rapidan** **59.14 352** P **P** **09 04 48.4 -0.1**
baz=170

WVT **Waverly** **59.15 342** P **P** **09 04 47.5 -1.2**
WVT pmax pmax
comp=Z,27nm,0.7s

WVT **Waverly** **59.15 342** P **P** **09 04 47.5 -1.2**
baz=159

WVT **Waverly** **59.15 342** P **P** **09 04 47.5 -1.2**
S54A **Dingess, Beckl** **59.19 348** P **P** **09 04 49.1 +0.1**
baz=166,SNR=7.2

S54A **Dingess, Beckl** **59.19 348** P **P** **09 04 48.3 -0.7**
T50A **Nancy** **59.20 345** P **P** **09 04 48.0 -1.0**
T50A IAmb IAmb 09 04 49.2
comp=Z,14nm,0.8s

R57A **Stanardsville** **59.21 351** P **P** **09 04 49.2 +0.1**
baz=169

S53A **Williamson** **59.23 348** P **P** **09 04 48.8 -0.4**
baz=166

X40A **Basin Creek Fa** **59.29 337** P **P** **09 04 49.5 -0.2**
baz=154

R55A **Marlinton** **59.45 350** P **P** **09 04 51.3 +0.6**
baz=168

SLBS **Sierra La Lagu** **59.49 316** P **P** **09 04 52.4 +1.0**
R54A **Victor** **59.50 349** P **P** **09 04 51.3 +0.2**
baz=167,SNR=6.3

MIAR **Mount Ida** **59.62 336** P **P** **09 04 52.2 +0.2**
MIAR pmax pmax
comp=Z,58nm,1.4s

MIAR **Mount Ida** **59.62 336** P **P** **09 04 52.0 +0.1**
baz=153,SNR=9.7

MIAR **Mount Ida** **59.62 336** P **P** **09 04 52.2 +0.2**
W41B **Gary Mavity, V** **59.70 338** P **P** **09 04 52.0 -0.5**
baz=154

W41B **Gary Mavity, V** **59.70 338** P **P** **09 04 51.6 -0.9**
W41B IAmb IAmb 09 05 33.7
comp=Z,44nm,1.6s

BELA **Belgrano 2** **59.70 172** P **P** **09 04 52.8 +0.8**
Q58A **Fox Den Farm,** **59.73 352** P **P** **09 04 52.5 -0.1**
baz=170

T47A **Sharon Grove** **59.75 343** P **P** **09 04 52.2 -0.6**
WHAR **Wooly Hollow** **59.82 338** P **P** **09 04 52.8 -0.4**
WHAR IAmb IAmb 09 04 53.8
comp=Z,15nm,0.9s

R53A **Hurricane** **59.83 348** P **P** **09 04 53.1 -0.2**
baz=166

TX32 **Lajitas Array** **59.90 325** P **P** **09 04 54.3 +0.2**
TX32 IAmb IAmb 09 05 37.8
comp=Z,16nm,1.6s

TXAR **Lajitas Array** **59.90 325** P **P** **09 04 54.3 +0.2**
comp=Z,1.0nm,0.6s,baz=151,slow=8.4,SNR=16
TXAR pP **pP** **09 05 22.8 +0.3**
comp=Z,1.0nm,0.6s,baz=153,slow=7.5,SNR=4.4
TXAR PcP **PcP** **09 05 39.8 +0.4**
comp=Z,0.6nm,0.5s,baz=178,slow=3.3,SNR=4.4

TXAR **Lajitas Array** **59.90 325** P **P** **09 04 53.5 -0.6**
TX31 **Lajitas Ar. Si** **59.90 325** P **P** **09 04 54.7 +0.6**
TX31 IAmb IAmb 09 05 37.8
comp=Z,44nm,1.6s

Q57A **Strasburg** **59.92 351** P **P** **09 04 54.2 +0.3**
baz=170

Q56A **Snyder Ridge,** **60.04 351** P **P** **09 04 55.4 +0.7**
Q56A IAmb IAmb 09 04 56.3
comp=Z,20nm,0.7s

Z35A **Perchaven, San** **60.05 333** P **P** **09 04 55.0 +0.1**
LCAR **Lake Charles** **60.13 339** P **P** **09 04 55.0 -0.4**
LCAR IAmb IAmb 09 04 55.6
comp=Z,9.2nm,0.7s

Q55A **Buckhannon** **60.14 350** P **P** **09 04 56.3 +0.8**
baz=168,SNR=9.5

T45A **Paducah** **60.22 342** P **P** **09 04 55.3 -0.6**
PARMO **Parma** **60.22 341** P **P** **09 04 55.4 -0.6**
Q54A **Coxs Mills** **60.25 349** P **P** **09 04 56.1 -0.1**
baz=167,SNR=6.1

Q54A **Coxs Mills** **60.25 349** P **P** **09 04 55.9 -0.3**
Q53A **Leroy** **60.26 349** P **P** **09 04 56.3 +0.1**
baz=166,SNR=12

W39A **Magazine** **60.28 336** P **P** **09 04 56.8 +0.4**
baz=153,SNR=7.6

W39A **Magazine** **60.28 336** P **P** **09 04 57.6 +1.2**
W39A IAmb IAmb 09 04 57.9
comp=Z,24nm,0.9s

R50A **Paris** **60.28 346** P **P** **09 04 55.8 -0.6**
R50A IAmb IAmb 09 05 26.8
comp=Z,22nm,1.1s

FCAR **Ozark Folk Cen** **60.30 338** P **P** **09 04 55.4 -1.2**
FCAR IAmb IAmb 09 04 56.8
comp=Z,14nm,1.0s

P57A **Homestead Farm** **60.30 352** P **P** **09 04 56.9 +0.4**
baz=170

X37A **Clayton** **60.35 335** P **P** **09 04 56.9 0.0**
P56A **Dayton Farm, R** **60.44 351** P **P** **09 04 57.8 +0.3**
baz=169

Q52A **Bidwell** **60.50 348** P **P** **09 04 57.6 -0.3**
baz=166

ABTX **Abilene, Hawle** **60.53 330** P **P** **09 04 58.3 +0.1**
baz=147,SNR=8.7

ABTX **Abilene, Hawle** **60.53 330** P **P** **09 04 58.2 0.0**
ABTX IAmb IAmb 09 04 59.4
comp=Z,20nm,1.1s

PBMO **Poplar Bluff** **60.54 340** P **P** **09 04 57.3 -0.9**
WCI **Wyandotte Cave** **60.71 344** P **P** **09 04 58.5 -0.8**
WCI pmax pmax
comp=Z,41nm,1.3s

WCI **Wyandotte Cave** **60.71 344** P **P** **09 04 58.6 -0.7**
baz=161

WCI **Wyandotte Cave** **60.71 344** P **P** **09 04 58.5 -0.8**
WCI IAmb IAmb 09 04 59.2
comp=Z,41nm,1.2s

MCWV **Mont Chateau** **60.74 350** P **P** **09 05 00.0 +0.5**
baz=168,SNR=6.5

MCWV **Mont Chateau** **60.74 350** P **P** **09 04 60.0 +0.5**
MCWV IAmb IAmb 09 05 00.9
comp=Z,16nm,0.8s

Q51A **Peebles** **60.78 347** P **P** **09 04 59.2 -0.6**
Q51A IAmb IAmb 09 05 00.3
comp=Z,17nm,1.1s

VNA3 **Neumayer Olymp** **60.97 161** P **P** **09 05 01.3 +0.6**
U40A **Yellville** **60.97 338** P **P** **09 05 00.7 -0.5**
baz=154,SNR=7.9

U40A **Yellville** **60.97 338** P **P** **09 05 00.5 -0.7**
U40A IAmb IAmb 09 05 01.7
comp=Z,20nm,1.0s

T42A **Van Buren** **60.99 340** P **P** **09 05 00.6 -0.6**
T42A IAmb IAmb 09 05 01.1
comp=Z,11nm,0.8s

S44A **Carbondale** **61.02 341** P **P** **09 05 01.1 -0.4**
SIUC **Southern Illin** **61.03 342** P **P** **09 05 00.5 -1.0**
P52A **Corning** **61.12 348** P **P** **09 05 01.9 -0.1**
baz=166

P52A **Corning** **61.12 348** P **P** **09 05 01.6 -0.5**
O56A **Blue Knob Stat** **61.15 351** P **P** **09 05 02.6 +0.3**
baz=170

VNA1 **Neumayer--Stat** **61.17 161** P **P** **09 05 02.9 +0.9**
HHAR **Hobbs** **61.30 337** P **P** **09 05 02.5 -0.9**
HHAR IAmb IAmb 09 05 04.1
comp=Z,30nm,1.2s

SSPA **Standing Stone** **61.42 352** P **P** **09 05 04.0 -0.1**
baz=170

N58A **Sunbury** **61.48 353** P **P** **09 05 04.6 +0.2**
baz=172

MGMO **Mountain Grove** **61.49 339** P **P** **09 05 04.3 -0.4**
N57A **Milroy** **61.50 352** P **P** **09 05 04.7 +0.1**
baz=171

O52A **Adamsville** **61.53 349** P **P** **09 05 04.7 -0.1**
baz=166

O52A **Adamsville** **61.53 349** P **P** **09 05 04.1 -0.8**
VNA2 **Neumayer--Watz** **61.53 161** P **P** **09 05 05.1 +0.6**
baz=280,slow=6.6

O53A **New Philadelph** **61.55 349** P **P** **09 05 04.9 -0.1**
baz=167,SNR=6.5

O53A **New Philadelph** **61.55 349** P **P** **09 05 04.4 -0.5**
P49A **Miami Univ. Ec** **61.57 346** P **P** **09 05 04.1 -1.0**
baz=163

P49A **Miami Univ. Ec** **61.57 346** P **P** **09 05 03.8 -1.3**
U38A **Gravette** **61.60 337** P **P** **09 05 04.5 -1.0**
U38A IAmb IAmb 09 05 05.6
comp=Z,15nm,1.2s

FVM **French Village** **61.65 341** P **P** **09 05 04.6 -1.1**
FVM pmax pmax
comp=Z,60nm,1.1s

FVM **French Village** **61.65 341** P **P** **09 05 04.6 -1.1**
BLO **Bloomington** **61.65 344** P **P** **09 05 04.2 -1.5**
BLO pmax pmax
comp=Z,43nm,0.6s

BLO **Bloomington** **61.65 344** P **P** **09 05 04.2 -1.5**
P48A **Milroy** **61.66 345** P **P** **09 05 04.5 -1.2**
P48A IAmb IAmb 09 05 05.2
comp=Z,17nm,0.6s

TUL1 **Leonard** **61.68 335** P **P** **09 05 05.7 -0.2**
baz=151,SNR=6.5

TUL1 **Leonard** **61.68 335** P **P** **09 05 05.8 -0.1**
TUL1 IAmb IAmb 09 05 07.0
comp=Z,29nm,1.1s

O51A **Pataskala** **61.71 348** P **P** **09 05 05.5 -0.6**
baz=165,SNR=7.2

N56A **West Decatur** **61.75 352** P **P** **09 05 06.2 -0.1**
baz=170

ACSO **Alum Creek Sta** **61.87 348** P **P** **09 05 07.0 0.0**
baz=165

ACSO **Alum Creek Sta** **61.87 348** P **P** **09 05 06.7 -0.3**
WMOK **Wichita Mounta** **61.91 332** P **P** **09 05 07.2 -0.3**
WMOK pmax pmax
comp=Z,5.0nm,0.9s

WMOK **Wichita Mounta** **61.91 332** P **P** **09 05 07.1 -0.5**
baz=148

WMOK **Wichita Mounta** **61.91 332** P **P** **09 05 07.2 -0.3**
CCM **Cathedral Cave** **61.97 340** P **P** **09 05 07.8 0.0**
CCM pmax pmax
comp=Z,25nm,0.9s

CCM **Cathedral Cave** **61.97 340** P **P** **09 05 07.9 0.0**
baz=156

CCM **Cathedral Cave** **61.97 340** P **P** **09 05 07.8 0.0**
CCM IAmb IAmb 09 05 09.0
comp=Z,25nm,0.8s

M58A **Price's Panora** **61.98 353** P **P** **09 05 08.3 +0.5**
baz=172

OK025 **Westminster Rd** **62.01 334** P **P** **09 05 07.8 -0.4**
OK025 IAmb IAmb 09 05 08.7
comp=Z,30nm,1.1s

M57A **Sunshine Farm,** **62.02 353** P **P** **09 05 08.5 +0.4**
baz=171

N54A **Moraine State** **62.04 350** P **P** **09 05 08.8 +0.6**
baz=168

N54A **Moraine State** **62.04 350** P **P** **09 05 08.9 +0.7**
M59A **Waymart** **62.05 354** P **P** **09 05 08.7 +0.5**
baz=173

Q44A **Meyer Farm, Va** **62.08 342** P **P** **09 05 07.5 -0.9**
OK030 **Cody Creek RV** **62.09 334** P **P** **09 05 07.9 -0.7**
OK030 IAmb IAmb 09 05 10.1
comp=Z,36nm,1.1s

O49A **Covington** **62.11 347** P **P** **09 05 07.9 -0.8**
O49A IAmb IAmb 09 05 08.8
comp=Z,34nm,0.9s

L63A **North Scituate** **62.11 358** P **P** **09 05 08.7 +0.1**
baz=177

OK031 **S. Brethren Rd** **62.13 334** P **P** **09 05 08.0 -0.9**
QUOK **Quay** **62.27 335** P **P** **09 05 09.7 -0.2**
M56A **Emporium** **62.30 352** P **P** **09 05 10.0 +0.1**
baz=170

S39A **Bolivar** **62.34 338** P **P** **09 05 09.6 -0.7**
L60A **Shokan** **62.39 355** P **P** **09 05 10.6 0.0**
baz=174

R40A **Maddies Statio** **62.52 339** P **P** **09 05 11.0 -0.5**
R40A IAmb IAmb 09 05 11.8
comp=Z,41nm,1.4s

M54A **Oil Creek Stat** **62.53 351** P **P** **09 05 11.7 +0.2**
baz=168

L58A **Harry Jones Me** **62.58 354** P **P** **09 05 12.2 +0.4**
baz=173

M53A **WI Miller and** **62.62 350** P **P** **09 05 12.2 +0.1**
baz=168

L57A **Andrews Acres** **62.64 353** P **P** **09 05 12.4 +0.1**
baz=172

L59A **Walton** **62.66 355** P **P** **09 05 13.0 +0.7**
baz=173

MNTX **Cornudas Mount** **62.66 325** P **P** **09 05 12.3 -0.3**
baz=141,SNR=11

MNTX **Cornudas Mount** **62.66 325** P **P** **09 05 12.2 -0.3**
L61B **Northampton** **62.75 357** P **P** **09 05 12.8 0.0**
baz=176

BINY **Binghamton** **62.75 354** P **P** **09 05 13.3 +0.4**
baz=172

HRV **Adam Dziewonsk** **62.75 358** P **P** **09 05 13.1 +0.2**
baz=177

M51A **Elyria** **62.78 349** P **P** **09 05 12.8 -0.3**
baz=166

T35A **Sooner Cattle** **62.84 335** P **P** **09 05 14.0 +0.3**
T35A IAmb IAmb 09 05 15.4
comp=Z,19nm,0.9s

L56A **Greenwood** **62.86 353** P **P** **09 05 13.8 +0.1**
baz=171

P43A **Skaggs, Pawnee** **62.90 342** P **P** **09 05 12.5 -1.5**
SFIN **Lafayette** **62.94 344** P **P** **09 05 13.0 -1.2**
baz=161

SFIN **Lafayette** **62.94 344** P **P** **09 05 13.2 -1.0**
L53A **Girard** **63.05 350** P **P** **09 05 15.1 +0.1**
baz=168

N47A **Urbana** **63.07 346** P **P** **09 05 13.6 -1.4**
O44A **Mansfield** **63.09 343** P **P** **09 05 13.8 -1.4**
O44A IAmb IAmb 09 05 44.9
comp=Z,22nm,0.7s

MSTX **Muleshoe** **63.12 329** P **P** **09 05 15.8 0.0**
baz=132,SNR=6.7

MSTX **Muleshoe** **63.12 329** P **P** **09 05 15.7 0.0**
MSTX IAmb IAmb 09 05 16.7
comp=Z,20nm,0.9s

SNAA **Sanae** **63.17 161** P **P** **09 05 15.8 +0.3**
SNAA **Sanae** **63.17 161** *c i* P **P** **09 05 15.7 +0.3**
SNAA pmax pmax
comp=Z,32nm,1.2s

SNAA **Sanae** **63.17 161** P **P** **09 05 15.6 +0.2**
SNAA IAmb IAmb 09 05 16.9
comp=Z,22nm,0.9s

ERPA **Erie** **63.17 351** P **P** **09 05 15.8 +0.1**
baz=168

K59A **Cooperstown** **63.22 355** P **P** **09 05 16.4 +0.4**
baz=174

K58A **Earlville** **63.28 354** P **P** **09 05 16.7 +0.2**
baz=173

K58A **Earlville** **63.28 354** P **P** **09 05 16.5 +0.1**
K58A IAmb IAmb 09 05 17.4
comp=Z,27nm,0.7s

KAN13 **South Haven SW** **63.30 335** P **P** **09 05 16.5 -0.2**
K57A **Scipio Center** **63.33 354** P **P** **09 05 16.8 0.0**
baz=172

AMTX **Amarillo** **63.34 330** P **P** **09 05 17.0 -0.2**
baz=145

KS20 **Mayfield South** **63.52 335** P **P** **09 05 17.9 -0.2**
KS20 IAmb IAmb 09 05 19.2
comp=Z,31nm,1.1s

KAN01 **Argonia South** **63.54 334** P **P** **09 05 18.4 +0.1**
KAN05 **Bluff City Nor** **63.55 334** P **P** **09 05 18.5 +0.2**
P40A **Paris** **63.57 340** P **P** **09 05 18.0 -0.4**
P40A IAmb IAmb 09 05 18.8
comp=Z,37nm,1.1s

KAN08 **Anthony NE Sta** **63.69 334** P **P** **09 05 19.0 -0.2**
HDIL **Hopedale** **63.69 343** P **P** **09 05 18.2 -0.9**
HDIL IAmb IAmb 09 05 49.2
comp=Z,38nm,0.9s

J58A **Remsen** **63.84 355** P **P** **09 05 20.2 +0.1**
baz=173

J59A **Piesco** **63.88 355** P **P** **09 05 20.7 +0.4**
baz=174

J56A **Wolcott** **63.91 353** P **P** **09 05 20.5 0.0**
baz=172

I58A **Old Forge** **64.14 355** P **P** **09 05 22.3 +0.2**
baz=174

P38A **Dawn** **64.14 339** P **P** **09 05 21.5 -0.7**
P38A IAmb IAmb 09 05 22.7
comp=Z,20nm,0.6s

I59A **Olmsteadville** **64.16 356** P **P** **09 05 22.2 +0.1**
baz=175

I60A **Shoreham** **64.17 356** P **P** **09 05 22.5 +0.3**
baz=175

LBNH **Lisbon** **64.50 357** P **P** **09 05 25.1 +0.7**
baz=177

319A **Douglas** **64.59 322** P **P** **09 05 25.2 -0.3**
319A IAmb IAmb 09 05 27.8
comp=Z,21nm,0.8s

121A **Cookes Peak, D** **64.61 324** P **P** **09 05 27.0 +1.4**
baz=139,SNR=7.3

121A **Cookes Peak, D** **64.61 324** P **P** **09 05 26.1 +0.5**
121A IAmb IAmb 09 05 28.3
comp=Z,20nm,1.2s

KSU1 **Kansas State U** **64.78 336** P **P** **09 05 26.4 +0.1**
baz=151

KSU1 **Kansas State U** **64.78 336** P **P** **09 05 25.6 -0.7**
KSU1 IAmb IAmb 09 05 26.9
comp=Z,28nm,1.1s

H58A **Gabriels** **64.80 356** P **P** **09 05 26.6 +0.3**
baz=174

H57A **Richville** **64.94 355** P **P** **09 05 27.5 +0.3**
baz=173

R32A **Long Quarter,** **65.01 334** P **P** **09 05 27.6 -0.3**
R32A IAmb IAmb 09 05 29.2
comp=Z,48nm,1.2s

LONY **Lake Ozonia** **65.03 355** P **P** **09 05 28.0 +0.2**
baz=174

N38A **Joes South For** **65.10 340** P **P** **09 05 27.8 -0.6**
N38A IAmb IAmb 09 05 28.8
comp=Z,23nm,0.9s

BNM **Barren Site** **65.22 326** P **P** **09 05 30.3 +0.7**
LENM **Lemitar** **65.42 326** P **P** **09 05 32.3 +1.5**
G57A **Newington** **65.54 355** P **P** **09 05 31.4 +0.3**
baz=174

ANMO **Albuquerque** **65.75 327** *d i* P **P** **09 05 33.9 +1.0**
ANMO pmax pmax
comp=Z,11nm,1.9s

ANMO **Albuquerque** **65.75 327** P **P** **09 05 33.8 +0.9**
baz=141

ANMO **Albuquerque** **65.75 327** P **P** **09 05 32.8 -0.1**
CBKS **Cedar Bluff** **65.77 334** P **P** **09 05 32.6 -0.2**
CBKS pmax pmax
comp=Z,37nm,1.0s

CBKS **Cedar Bluff** **65.77 334** P **P** **09 05 33.2 +0.5**
baz=148,SNR=9.4

CBKS **Cedar Bluff** **65.77 334** P **P** **09 05 32.6 -0.2**
CBKS IAmb IAmb 09 05 34.3
comp=Z,37nm,1.0s

N35A **Tabor** **65.97 338** P **P** **09 05 33.9 -0.1**
SCIA **State Center** **66.10 340** P **P** **09 05 34.2 -0.5**
baz=155

G54A **Lake Saint Pet** **66.14 353** P **P** **09 05 34.8 -0.2**
baz=170

JFWS **Jewell Farm** **66.14 343** P **P** **09 05 34.0 -1.0**
JFWS pmax pmax
comp=Z,136nm,1.9s

JFWS **Jewell Farm** **66.14 343** P **P** **09 05 34.8 -0.2**
baz=158

JFWS **Jewell Farm** **66.14 343** P **P** **09 05 34.0 -1.0**
TUC **Tucson** **66.14 322** P **P** **09 05 35.6 +0.2**
TUC pmax pmax
comp=Z,12nm,1.3s

TUC **Tucson** **66.14 322** P **P** **09 05 36.9 +1.5**
baz=137

TUC **Tucson** **66.14 322** P **P** **09 05 35.6 +0.2**
T25A **Trinidad** **66.46 329** P **P** **09 05 38.3 +0.8**
baz=144,SNR=5.4

T25A **Trinidad** **66.46 329** P **P** **09 05 37.9 +0.4**
GLMI **Grayling** **66.61 348** P **P** **09 05 38.1 +0.1**
baz=164

ALGO **Algonquin Park** **66.68 353** P **P** **09 05 38.2 -0.2**
baz=171

E58A **La Victoria** **66.69 357** P **P** **09 05 38.4 0.0**
baz=175

E62A **Clayton Lake** **66.82 359** P **P** **09 05 39.2 0.0**
baz=179

E56A **St. Veronique** **66.98 355** P **P** **09 05 40.2 0.0**
baz=174

214A **Organ Pipe Nat** **67.09 320** P **P** **09 05 43.1 +1.8**
baz=135,SNR=5.4

214A **Organ Pipe Nat** **67.09 320** P **P** **09 05 42.4 +1.0**
214A IAmb IAmb 09 05 43.7
comp=Z,15nm,0.7s

I40A **Norwalk** **67.15 343** P **P** **09 05 41.4 0.0**
KSCO **Kaye Shedlock'** **67.17 332** P **P** **09 05 42.9 +1.1**
baz=146

KSCO **Kaye Shedlock'** **67.17 332** P **P** **09 05 42.3 +0.5**
KSCO IAmb IAmb 09 05 43.6
comp=Z,21nm,0.8s

L34A **Svendsen Farm,** **67.21 338** P **P** **09 05 41.2 -0.6**
D63A **Stockholm** **67.23 0** P **P** **09 05 42.1 +0.3**
baz=181

D62A **Allapoint, All** **67.28 360** P **P** **09 05 42.3 +0.2**
baz=180

X18A **Snowflake** **67.30 324** P **P** **09 05 43.5 +0.7**
BGNE **Belgrade** **67.36 336** P **P** **09 05 43.1 +0.2**
baz=150,SNR=15

BGNE **Belgrade** **67.36 336** P **P** **09 05 42.9 +0.1**
D58A **Chemin du LacG** **67.39 357** P **P** **09 05 43.1 +0.3**
baz=176

SDCO **Great Sand Dun** **67.47 329** P **P** **09 05 45.0 +1.1**
baz=143,SNR=22

SDCO **Great Sand Dun** **67.47 329** P **P** **09 05 44.7 +0.8**
SDCO IAmb IAmb 09 05 46.1
comp=Z,26nm,1.2s

D55A **Sainte-Anne-du** **67.49 355** P **P** **09 05 43.2 -0.3**
baz=173

NVL **N'Iazarevskaya** **67.70 159** ⇑ *i* P **P** **09 05 45.2 +0.6**
NVL pmax pmax
comp=Z,36nm,0.9s

LIC **Lamto** **67.99 74** *e* P **P** **09 05 45.9 -1.4**
comp=Z,24nm,0.6s

X16A **Lo Mia Camp, P** **68.05 323** P **P** **09 05 48.3 +0.8**
I37A **Lemond, Waseca** **68.06 341** P **P** **09 05 46.9 -0.3**
I37A IAmb IAmb 09 05 47.3
comp=Z,21nm,0.7s

SPX **San Pedro Mart** **68.09 318** P **P** **09 05 48.8 +0.7**
S22A **4UR Ranch, Cre** **68.12 328** P **P** **09 05 48.9 +0.9**
baz=142,SNR=5.7

S22A **4UR Ranch, Cre** **68.12 328** P **P** **09 05 47.8 -0.2**
TIC **Toumodi** **68.17 74** *e* P **P** **09 05 47.2 -1.3**
Q24A **Divide** **68.27 330** P **P** **09 05 50.0 +1.0**
baz=143,SNR=8.9

Q24A **Divide** **68.27 330** P **P** **09 05 48.7 -0.3**
Q24A IAmb IAmb 09 05 51.0
comp=Z,19nm,0.8s

KIC **Kosan Boka** **68.30 74** *e* P **P** **09 05 47.8 -1.5**
comp=Z,109nm,0.9s

DBIC **Dimbokro** **68.33 74** P **P** **09 05 48.5 -0.9**
comp=Z,48nm,0.7s,baz=222,slow=6.5,SNR=54

DBIC **Dimbokro** **68.33 74** P **P** **09 05 48.2 -1.3**
MVCO **Mesa Verde** **68.55 327** P **P** **09 05 51.7 +1.1**
baz=140,SNR=10

MVCO **Mesa Verde** **68.55 327** P **P** **09 05 51.2 +0.6**
Y14A **Wickenburg** **68.61 321** P **P** **09 05 51.4 +0.6**
K31A **O'Neill** **68.64 337** P **P** **09 05 51.0 +0.2**
WUAZ **Wupatki** **68.82 324** P **P** **09 05 54.0 +1.7**
baz=137,SNR=14

WUAZ **Wupatki** **68.82 324** P **P** **09 05 53.6 +1.4**
WUAZ IAmb IAmb 09 05 55.1
comp=Z,22nm,0.9s

ECSD **EROS Data Cent** **68.85 339** P **P** **09 05 51.7 -0.4**
baz=152,SNR=7.5

ECSD **EROS Data Cent** **68.85 339** P **P** **09 05 51.8 -0.2**
SPMN **Marine on St.** **68.99 342** P **P** **09 05 52.0 -0.8**
SPMN IAmb IAmb 09 05 53.2
comp=Z,44nm,1.4s

ESJX **Sierra Juarez** **69.05 318** P **P** **09 05 54.5 +0.8**
ESJX IAmb IAmb 09 06 58.4
comp=Z,16nm,0.6s

PV01 **Paradox Valley** **69.29 327** P **P** **09 05 56.1 +0.9**
SMCO **Snowmass** **69.31 329** P **P** **09 05 56.0 +0.5**
PV15 **Paradox Valley** **69.40 328** P **P** **09 05 57.3 +1.4**
PV15 IAmb IAmb 09 05 58.6
comp=Z,21nm,1.1s

PV03 **Paradox Valley** **69.52 327** P **P** **09 05 57.8 +1.2**
PDMCI **Parker Dam,Lak** **69.53 321** P **P** **09 05 57.8 +1.4**
baz=135

PV12 **Saucer Basin,** **69.55 327** P **P** **09 05 57.9 +1.2**
PV11 **David Mesa, Pa** **69.57 327** P **P** **09 05 58.3 +1.4**
IKP **In-Ko-Pah, Jac** **69.58 319** P **P** **09 05 58.9 +1.9**
baz=133,SNR=5.2

SWSC **Sam W. Stewart** **69.59 319** P **P** **09 05 59.2 +2.3**
baz=133

PV16 **Nyswonger Mesa** **69.60 327** P **P** **09 05 57.2 +0.1**
LSQD **Lebel-sur-Quev** **69.64 354** P **P** **09 05 56.5 -0.3**
baz=172

QSPA **South Pole Qui** **69.67 180** P **P** **09 05 58.5 +1.4**
comp=Z,14nm,0.4s,baz=238,slow=0.3,SNR=184

QSPA **South Pole Qui** **69.67 180** P **P** **09 05 58.1 +1.0**
QSPA IAmb IAmb 09 05 59.6
comp=Z,66nm,1.4s

PV14 **Lion Creek, Pa** **69.70 327** P **P** **09 05 58.1 +0.4**
CBX **Cerro Bola** **69.70 318** P **P** **09 05 59.1 +1.3**
PV22 **Blue Mesa, Par** **69.70 327** P **P** **09 05 58.4 +0.7**
PV22 IAmb IAmb 09 06 00.1
comp=Z,26nm,1.5s

PV23 **Carpenter Ridg** **69.75 327** P **P** **09 05 58.5 +0.4**
F36A **Milaca** **69.78 342** P **P** **09 05 57.3 -0.4**
BC3 **Big Chuckawall** **69.87 320** P **P** **09 06 00.5 +1.8**
baz=134

W13A Hualapai Mount 69.94 322 P **P** 09 06 00.1 +0.8
MONP2 Monument Peak 69.94 319 P **P** 09 06 01.1 +1.8
baz=133,SNR=5.9
BAR Barrett 69.95 318 P **P** 09 06 00.2 +1.1
BAR IAmb IAmb 09 06 01.9
comp=Z,16nm,0.8s
U15A North Rim 69.99 324 P **P** 09 06 00.3 +0.7
U15A IAmb IAmb 09 06 02.8
comp=Z,18nm,1.0s
IRM Iron Mountain 70.03 320 P **P** 09 06 01.4 +1.8
baz=134,SNR=12
N23A Red Feather La 70.18 331 P **P** 09 06 01.8 +1.1
baz=143,SNR=7.3
N23A Red Feather La 70.18 331 P **P** 09 06 01.3 +0.7
SUSD Miller 70.29 338 P **P** 09 06 00.6 -0.3
SUSD IAmb IAmb 09 06 03.2
comp=Z,30nm,0.9s
BELC Belle Mtn. Jos 70.43 320 P **P** 09 06 04.0 +1.9
baz=133,SNR=7.3
TPFO Pinon Flats 70.44 319 P **P** 09 06 04.1 +1.9
baz=133,SNR=9.5
PFO Pinyon Flats O 70.45 319*d* iP **P** 09 06 04.2 +1.9
PFO pmax pmax
comp=Z,25nm,1.1s
PFO Pinyon Flats O 70.45 319 P **P** 09 06 04.1 +1.8
baz=133,SNR=9.1
PFO Pinyon Flats O 70.45 319 P **P** 09 06 03.4 +1.1
PFO IAmb IAmb 09 06 05.2
comp=Z,34nm,1.5s
F33A 5 Mile Ranch, 70.61 340 P **P** 09 06 02.6 -0.2
O20A White River Ci 70.67 329 P **P** 09 06 04.7 +1.2
baz=141,SNR=8.8
O20A White River Ci 70.67 329 P **P** 09 06 03.6 0.0
O20A IAmb IAmb 09 06 05.8
comp=Z,16nm,0.9s
KNB Kanab 70.71 324 P **P** 09 06 05.2 +1.4
KNB pmax pmax
comp=Z,51nm,1.1s
KNB Kanab 70.71 324 P **P** 09 06 05.2 +1.4
GMRC Granite Mounta 70.77 320 P **P** 09 06 06.0 +1.9
baz=134,SNR=21
MURC Murrieta 70.90 319 P **P** 09 06 06.4 +1.5
baz=132
SRU San Rafael Swe 71.02 327 P **P** 09 06 06.2 +0.5
SRU pmax pmax
comp=Z,20nm,0.7s
SRU San Rafael Swe 71.02 327 P **P** 09 06 06.2 +0.5
MTPU Mount Pierson 71.11 325 P **P** 09 06 07.6 +1.2
BBRC Big Bear Solar 71.17 319 P **P** 09 06 08.8 +2.1
baz=133,SNR=5.7
HEC Hector,Ludlow 71.20 320 P **P** 09 06 08.7 +2.0
baz=133
SZCU Shurtz Canyon 71.27 324 P **P** 09 06 06.1 -1.2
TUQ Turquoise Moun 71.37 321 P **P** 09 06 09.6 +1.8
baz=134,SNR=8.6
CCUT Cedar City 71.39 324 P **P** 09 06 08.5 +0.5
P17A Butcher Ranch, 71.41 327 P **P** 09 06 08.7 +0.7
MSU Marysvale 71.45 325 P **P** 09 06 08.9 +0.6
MSU Marysvale 71.45 325 P **P** 09 06 08.9 +0.6
MVU Marysvale 71.46 325 P **P** 09 06 09.8 +1.4
TMUT Trail Mountain 71.52 326 P **P** 09 06 10.1 +1.3
BFSC Mount Baldy Ra 71.61 319 P **P** 09 06 11.0 +1.7
baz=132,SNR=5.4
RDMU Red Mountain 71.65 328 P **P** 09 06 09.2 -0.2
TCRU Three Creeks R 71.66 325 P **P** 09 06 08.2 -1.4
SHPR Sheep Range 71.67 322 P **P** 09 06 10.0 +0.4
GSC Goldstone, Bar 71.81 320 P **P** 09 06 11.3 +0.9
GSC pmax pmax
comp=Z,41nm,1.7s
GSC Goldstone, Bar 71.81 320 P **P** 09 06 12.3 +1.9
baz=133,SNR=8.2
GSC Goldstone, Bar 71.81 320 P **P** 09 06 11.3 +0.9
GSC IAmb IAmb 09 06 13.6
comp=Z,41nm,1.7s
K22A Casper 71.84 332 P **P** 09 06 11.7 +1.2
baz=143
K22A Casper 71.84 332 P **P** 09 06 11.2 +0.6
MWC Mount Wilson 71.85 319 P **P** 09 06 10.7 -0.1
MWC pmax pmax
comp=Z,39nm,1.5s
MWC Mount Wilson 71.85 319 P **P** 09 06 10.7 -0.1
MWC IAmb IAmb 09 06 13.4
comp=Z,39nm,1.4s
SHOC Shoshone, Teco 71.90 321 P **P** 09 06 12.4 +1.6
baz=134,SNR=5.6
RSSD Black Hills 71.97 334 P **P** 09 06 11.6 +0.3
RSSD pmax pmax
comp=Z,17nm,0.8s
RSSD Black Hills 71.97 334 P **P** 09 06 12.5 +1.2
baz=145
RSSD Black Hills 71.97 334 P **P** 09 06 11.6 +0.3
RSSD IAmb IAmb 09 06 13.2
comp=Z,17nm,0.8s
DECC Green Verdugo 72.04 318 P **P** 09 06 13.6 +1.9
baz=132
SNCC San Nicolas Is 72.13 317 P **P** 09 06 13.3 +1.0
baz=130
PRN Pahroc Range 72.23 323 P **P** 09 06 13.4 +0.5
EDW2 Edwards Air Fo 72.24 319 P **P** 09 06 14.4 +1.5
baz=132,SNR=9.0
MPU Maple Canyon 72.27 327 P **P** 09 06 14.1 +0.9
PSUT Pine Spring 72.37 324 P **P** 09 06 15.2 +1.4
LRMC Laurel Mtn Rad 72.45 320 P **P** 09 06 15.9 +1.6
baz=132,SNR=7.7
KOWA Kowa 72.51 67 P **P** 09 06 13.8 -1.0
KOWA IAmb IAmb 09 06 14.8
comp=Z,21nm,0.8s
TPNV Topopah Spring 72.60 322 P **P** 09 06 15.8 +0.6
TPNV pmax pmax
comp=Z,22nm,1.1s
TPNV Topopah Spring 72.60 322 P **P** 09 06 17.3 +2.2
baz=134,SNR=16
TPNV Topopah Spring 72.60 322 P **P** 09 06 15.8 +0.6
TPNV IAmb IAmb 09 06 18.4
comp=Z,22nm,1.1s
JLU Jordanelle 72.61 327 P **P** 09 06 14.9 -0.4
FURC Furnace Creek, 72.63 321 P **P** 09 06 17.2 +2.1
baz=133,SNR=14
AGMN Agassiz Station 72.67 341 P **P** 09 06 15.0 0.0
baz=154
AGMN Agassiz Nation 72.67 341 P **P** 09 06 14.5 -0.6
SCZ2 Santa Cruz Isl 72.68 318 P **P** 09 06 17.5 +1.9
baz=131
MPMC Manual Prospec 72.72 320 P **P** 09 06 17.3 +1.4
baz=133,SNR=9.2
E28A Huff 72.75 338 P **P** 09 06 16.3 +0.7
E28A IAmb IAmb 09 06 17.2
comp=Z,49nm,0.9s
CTU Camp Tracy 72.83 327 P **P** 09 06 16.9 +0.4
ARVC Arvin 72.92 319 P **P** 09 06 18.4 +1.6
baz=131
SPR3 Spring Creek 3 72.96 324 P **P** 09 06 18.0 +0.5
SPR3 IAmb IAmb 09 06 19.8
comp=Z,46nm,1.7s
TCUT Toone Canyon 72.98 328 P **P** 09 06 18.1 +0.7
DUG Dugway, Tooele 73.01 326 P **P** 09 06 17.7 +0.2
DUG pmax pmax
comp=Z,28nm,1.3s
DUG Dugway, Tooele 73.01 326 P **P** 09 06 19.1 +1.6
baz=137,SNR=14
DUG Dugway, Tooele 73.01 326 P **P** 09 06 17.7 +0.2
DUG IAmb IAmb 09 06 20.2
comp=Z,28nm,1.3s
ISA Isabella, Lake 73.06 320 P **P** 09 06 19.0 +1.2
ISA pmax pmax
comp=Z,15nm,0.9s
ISA Isabella, Lake 73.06 320 P **P** 09 06 19.7 +1.9
baz=132,SNR=14
ISA Isabella, Lake 73.06 320 P **P** 09 06 19.0 +1.2
R11A Troy Canyon, C 73.19 323 P **P** 09 06 20.7 +2.1
baz=135,SNR=14
R11A Troy Canyon, C 73.19 323 P **P** 09 06 19.4 +0.8
GRAC Grapevine Rang 73.29 321 P **P** 09 06 20.8 +1.7
baz=133
BW06 Boulder Array 73.33 330 P **P** 09 06 19.8 +0.4
baz=140,SNR=7.0
BW06 Boulder Array 73.33 330 P **P** 09 06 18.6 -0.8
PD31 Pinedale Array 73.33 330 P **P** 09 06 19.1 -0.3
PDAR Pinedale Array 73.33 330 P **P** 09 06 19.9 +0.5
comp=Z,2.6nm,0.7s,baz=126,slow=7.4,SNR=18
PDAR Pinedale Array 73.33 330 P **P** 09 06 19.3 0.0
CWC Cottonwood Cre 73.33 320 P **P** 09 06 21.1 +1.6
baz=132
PKM Mcpherson Peak 73.37 318 P **P** 09 06 21.7 +1.9
baz=131,SNR=7.8

HWUT Hardware Ranch 73.42 328 P **P** 09 06 20.4 +0.4
HWUT IAmb IAmb 09 06 23.5
comp=Z,19nm,0.7s
MDND Maddock 73.46 339 P **P** 09 06 20.5 +0.7
baz=150,SNR=7.9
MDND Maddock 73.46 339 P **P** 09 06 20.4 +0.7
VES Vestal, Richgr 73.55 319 P **P** 09 06 22.5 +2.0
baz=131
BGU Big Grassy Mou 73.66 327 P **P** 09 06 22.4 +1.1
SMMC Simmler 73.76 318 P **P** 09 06 22.4 +0.6
baz=131,SNR=8.8
TIN Tinemaha, Big 73.84 321 P **P** 09 06 24.8 +2.4
baz=132
TPH Tonopah 73.94 322 P **P** 09 06 23.5 +0.5
TPH pmax pmax
comp=Z,57nm,1.1s
TPH Tonopah 73.94 322 P **P** 09 06 23.5 +0.5
AHID Auburn Hatcher 74.06 329 P **P** 09 06 24.8 +1.2
AHID IAmb IAmb 09 06 25.6
comp=Z,25nm,0.8s
HVU Hansel Valley 74.16 327 P **P** 09 06 24.6 +0.4
HVU pmax pmax
comp=Z,19nm,1.1s
HVU Hansel Valley 74.16 327 P **P** 09 06 24.6 +0.4
PAGB Antelope Grade 74.19 319 P **P** 09 06 25.2 +0.9
PAGB IAmb IAmb 09 06 27.9
comp=Z,61nm,1.6s
REDW Red Top Meadow 74.39 330 P **P** 09 06 26.5 +0.9
ULM Lac du Bonnet 74.42 342 P **P** 09 06 24.9 -0.3
comp=Z,12nm,0.7s,baz=155,slow=6.3,SNR=25
ULM pP **pP** 09 06 55.1 +0.2
comp=Z,6.0nm,0.5s,baz=144,slow=5.7,SNR=4.0
ULM Lac du Bonnet 74.42 342 P **P** 09 06 24.4 -0.8
ULM IAmb IAmb 09 06 25.9
comp=Z,19nm,0.9s
TPAW Teton Pass 74.54 330 P **P** 09 06 26.9 +0.4
TPAW IAmb IAmb 09 06 28.8
comp=Z,17nm,0.8s
OMMB Old Mammoth Mi 74.67 321 P **P** 09 06 28.5 +1.1
OMMB IAmb IAmb 09 06 30.0
comp=Z,19nm,1.0s
MDPB Devils Postpil 74.72 321 P **P** 09 06 28.1 +0.5
LHV Little Huntoon 74.80 321 P **P** 09 06 29.2 +1.5
NVAR Mina Array Bea 74.80 322 P **P** 09 06 29.5 +1.4
comp=Z,5.9nm,0.9s,baz=152,slow=6.1,SNR=26
NVAR PcP **PcP** 09 06 42.6 +1.1
comp=Z,2.5nm,0.6s,baz=132,slow=4.6,SNR=11
NVAR pP **pP** 09 06 59.0 +1.0
comp=Z,6.5nm,0.9s,baz=149,slow=6.1,SNR=7.1
NVAR Mina Array Bea 74.80 322 P **P** 09 06 29.3 +1.2
IMW Indian Meadow 74.84 330 P **P** 09 06 28.9 +0.7
IMW IAmb IAmb 09 06 30.6
comp=Z,41nm,1.3s
FLWY Flagg Ranch 74.87 330 P **P** 09 06 29.5 +1.2
LAO LASA Array 74.95 334 P **P** 09 06 29.4 +0.8
baz=144,SNR=10
LAO LASA Array 74.95 334 P **P** 09 06 29.3 +0.8
LAO IAmb IAmb 09 06 30.6
comp=Z,38nm,1.1s
RLMT Red Lodge 75.01 332 P **P** 09 06 30.9 +1.8
baz=141
H17A Grant Village 75.05 330 P **P** 09 06 31.2 +1.8
baz=140
H17A Grant Village 75.05 330 P **P** 09 06 30.3 +0.9
H17A IAmb IAmb 09 06 32.7
comp=Z,13nm,0.7s
SCHQ Schefferville 75.06 1 P **P** 09 06 28.4 -0.4
comp=Z,6.8nm,0.6s,baz=190,slow=4.4,SNR=9.9
SCHQ pP **pP** 09 06 59.0 +0.3
comp=Z,12nm,0.8s,baz=189,slow=4.1,SNR=4.6
RYN Ryan 75.06 322 P **P** 09 06 30.7 +1.2
KVN Kaiserville 75.10 322 P **P** 09 06 30.3 +0.6
KVN pmax pmax
comp=Z,14nm,1.0s
KVN Kaiserville 75.10 322 P **P** 09 06 30.3 +0.6
YNE Yellowstone No 75.26 331 P **P** 09 06 31.6 +1.0
YNR Norris Junctio 75.34 331 P **P** 09 06 31.7 +0.7
YMR Madison River 75.44 330 P **P** 09 06 33.0 +1.4
YHH Holmes Hill 75.47 330 P **P** 09 06 33.4 +1.5
WAKR Walker 75.51 321 P **P** 09 06 33.4 +1.3
YHB Horse Butte 75.61 330 P **P** 09 06 33.4 +0.8
DGMT Dagmar 75.62 337 P **P** 09 06 33.7 +1.5
baz=146
DGMT Dagmar 75.62 337 P **P** 09 06 32.9 +0.6
YHL Hebgen Lake 75.68 330 P **P** 09 06 34.4 +1.4
GCMT Greycliff 75.71 332 P **P** 09 06 33.6 +0.6
CMB Columbia Colle 75.77 320 P **P** 09 06 33.5 +0.1
CMB Columbia Colle 75.77 320 P **P** 09 06 33.5 +0.1
QLMT Earthquake Lak 75.78 330 P **P** 09 06 34.9 +1.5
PNTR Pine Nut 76.00 322 P **P** 09 06 36.1 +1.2
PNTR IAmb IAmb 09 06 37.9
comp=Z,70nm,1.7s
VCNR Virginia City 76.16 322 P **P** 09 06 37.1 +1.3
VCNR IAmb IAmb 09 06 38.8
comp=Z,26nm,1.5s
PAHR Pah Rah Range 76.28 322 P **P** 09 06 37.8 +1.4
PAHR IAmb IAmb 09 06 39.4
comp=Z,22nm,0.8s
HLID Hailey 76.28 328 P **P** 09 06 38.1 +1.8
baz=136,SNR=39
HLID Hailey 76.28 328 P **P** 09 06 37.3 +1.0
HLID IAmb IAmb 09 06 39.3
comp=Z,22nm,0.9s
BCYI Bear Canyon 76.33 329 P **P** 09 06 38.1 +1.4
MCMT McKenzie Canyo 76.44 329 P **P** 09 06 37.3 0.0
AFDM Forest Hills D 76.71 321 P **P** 09 06 39.2 +0.6
MFID Camas Ranch 76.89 327 P **P** 09 06 40.0 +0.3
MFID IAmb IAmb 09 06 43.3
comp=Z,41nm,1.5s
TOA0 Torodi Ar. Sit 76.90 70 P **P** 09 06 39.2 -1.1
TOA0 IAmb IAmb 09 07 10.1
comp=Z,29nm,0.8s
TORD Torodi Ar. Bea 76.90 70 P **P** 09 06 39.3 -0.9
comp=Z,9.7nm,0.4s,baz=255,slow=5.2,SNR=115
TORD pP **pP** 09 07 09.1 -1.0
comp=Z,28nm,0.8s,baz=252,slow=5.5,SNR=9.8
TORD Torodi Ar. Bea 76.90 70 P **P** 09 06 39.2 -1.1
BEKR Beckworth 76.95 322 P **P** 09 06 41.5 +1.3
BEKR IAmb IAmb 09 06 42.9
comp=Z,32nm,1.7s
SYO Syowa Base 77.38 159 *e*P **P** 09 06 41.3 -0.6
SYO Syowa Base 77.38 159 *i* PcP **PcP** 09 06 49.1 -2.9
SYO Syowa Base 77.38 159 *i* pP pP 09 07 08.2 -3.6
HRY Holter Researc 77.38 331 P **P** 09 06 43.1 +0.8
ORV Oroville 77.42 321 P **P** 09 06 43.9 +1.3
ORV pmax pmax
comp=Z,35nm,1.3s
ORV Oroville 77.42 321 P **P** 09 06 43.9 +1.3
ORV IAmb IAmb 09 06 45.5
comp=Z,35nm,1.2s
EGMT Eagleton 77.48 333 P **P** 09 06 43.6 +0.8
baz=141
EGMT Eagleton 77.48 333 P **P** 09 06 42.6 -0.2
EGMT IAmb IAmb 09 06 44.5
comp=Z,31nm,0.8s
VNDA Vanda 77.84 190 P **P** 09 06 46.5 +2.1
comp=Z,4.8nm,0.7s,baz=125,slow=5.4,SNR=22
VNDA Vanda 77.84 190 P **P** 09 06 44.6 +0.2
O03E Paynes Creek 78.07 321 P **P** 09 06 46.6 +0.4
baz=130,SNR=8.3
PLID Pearl Lake 78.17 328 P **P** 09 06 47.8 +0.9
PLID IAmb IAmb 09 06 49.2
comp=Z,25nm,0.8s
J08A Circle Bar Ran 78.24 325 P **P** 09 06 47.6 +0.5
MOD Modoc Plateau 78.26 323 P **P** 09 06 48.3 +0.9
MOD IAmb IAmb 09 06 50.0
comp=Z,24nm,1.4s
MSO Missoula 78.44 330 P **P** 09 06 49.6 +1.4
baz=137,SNR=6.8
MSO Missoula 78.44 330 P **P** 09 06 49.2 +1.0
O02D Mt. Diablo Mer 78.58 321 P **P** 09 06 49.9 +0.8
baz=129
BMO Blue Mountains 78.66 327 P **P** 09 06 50.3 +0.8
BMO pmax pmax
comp=Z,21nm,0.9s
BMO Blue Mountains 78.66 327 P **P** 09 06 50.3 +0.8
BMO IAmb IAmb 09 06 51.8
comp=Z,21nm,0.9s
WDC Whiskeytown Da 78.68 321 P **P** 09 06 48.9 -0.6
WDC pmax pmax
comp=Z,9.0nm,0.7s
WDC Whiskeytown Da 78.68 321 P **P** 09 06 48.9 -0.6
N02D Trinity Center 79.03 321 P **P** 09 06 51.8 +0.2
baz=130,SNR=8.7
M04C Macdoel 79.05 322 P **P** 09 06 53.0 +1.3
baz=130,SNR=12
K05A Summer Lake 79.13 324 P **P** 09 06 53.3 +1.1
K05A IAmb IAmb 09 06 55.2
comp=Z,37nm,1.0s
KMRM Mail Ridge 79.15 320 P **P** 09 06 53.1 +0.9
KMRM IAmb IAmb 09 06 55.3
comp=Z,27nm,1.1s
M02C Callahan 79.38 322 P **P** 09 06 54.4 +0.9
baz=130
YBH Yreka Blue Hor 79.52 322 P **P** 09 06 54.2 0.0
comp=Z,5.9nm,0.8s,baz=122,slow=2.8,SNR=19
YBH Yreka Blue Hor 79.52 322 P **P** 09 06 54.1 -0.1
L04D Klamath Falls 79.59 323 P **P** 09 06 55.4 +0.8
baz=130,SNR=5.7
J05D Fort Rock, OR 79.69 324 P **P** 09 06 56.5 +1.4
baz=131,SNR=9.2
G08A Pilot Rock 79.81 327 P **P** 09 06 56.5 +0.8
PINE Pine Mountain 79.86 324 P **P** 09 06 57.5 +1.4
PINE IAmb IAmb 09 06 59.1
comp=Z,33nm,1.1s
WALA Waterton Lakes 80.06 332 P **P** 09 06 57.7 +0.7
WALA IAmb IAmb 09 06 59.0
comp=Z,26nm,0.9s
FFC Flin Flon 80.14 341 *e*P **P** 09 06 57.2 +0.1
FFC Flin Flon 80.14 341 P **P** 09 06 56.8 -0.3
J04D Umpqua Nationa 80.14 323 P **P** 09 06 58.7 +1.1
baz=130
TSUM Tsumeb 80.20 107 P **P** 09 06 58.3 -0.2
HUMO Hull Mountain 80.21 323 P **P** 09 06 57.2 -0.6
L02E Cave Junction 80.30 322 P **P** 09 06 59.5 +1.2
baz=129
I05D Terrebonne, OR 80.43 325 P **P** 09 07 00.9 +1.9
baz=131,SNR=13
I04A Tendick Farm, 80.67 324 P **P** 09 07 01.0 +0.7
baz=130
K02D Willamette Mer 80.67 322 P **P** 09 07 01.8 +1.5
baz=129,SNR=5.5
HAWA Hanford 80.86 327 P **P** 09 07 01.9 +0.8
HAWA IAmb IAmb 09 07 03.7
comp=Z,25nm,0.9s
NEW Newport 80.97 330 P **P** 09 07 01.8 +0.1
NEW pmax pmax
comp=Z,13nm,1.4s
NEW Newport 80.97 330 P **P** 09 07 02.5 +0.8
baz=135
NEW Newport 80.97 330 P **P** 09 07 01.8 +0.1
D08A Wollman Farm, 81.00 328 P **P** 09 07 02.9 +1.0
D08A IAmb IAmb 09 07 05.0
comp=Z,21nm,1.2s
G05D Wamic, OR 81.02 325 P **P** 09 07 04.1 +2.0
baz=131
J01E Myrtle Point 81.12 323 P **P** 09 07 04.0 +1.4
baz=129
I03D Drain, OR 81.13 323 P **P** 09 07 04.2 +1.6
baz=130
E07A Sunnyside 81.13 327 P **P** 09 07 01.6 -1.0
C09A Chrisman Ranch 81.19 329 P **P** 09 07 03.9 +1.0
C09A IAmb IAmb 09 07 05.2
comp=Z,39nm,0.8s
F05D White Salmon 81.51 326 P **P** 09 07 06.4 +1.7
baz=131
FCC Fort Churchill 81.70 347 P **P** 09 07 05.1 -0.2
FCC pmax pmax
comp=Z,30nm,0.5s
FCC Fort Churchill 81.70 347 P **P** 09 07 05.1 -0.2
LTY Liberty 82.02 327 P **P** 09 07 07.5 +0.1
LTY IAmb IAmb 09 07 09.4
comp=Z,51nm,1.4s
F04A Amboy 82.05 325 P **P** 09 07 08.2 +0.8
F04A IAmb IAmb 09 07 09.5
comp=Z,31nm,0.9s
B08A Colville Reser 82.09 329 P **P** 09 07 07.7 +0.1
D05A Enumclaw 82.64 327 P **P** 09 07 11.0 +0.5
D05A IAmb IAmb 09 07 12.3
comp=Z,33nm,0.9s
B06A Marblemount 83.26 328 P **P** 09 07 13.5 -0.1
B06A IAmb IAmb 09 07 14.9
comp=Z,39nm,1.0s
B05A Bryant 83.40 327 P **P** 09 07 14.7 +0.3
baz=131,SNR=9.8
D03D Eldon 83.44 326 P **P** 09 07 15.5 +0.9
baz=130
BOSA Boshof 83.79 118 P **P** 09 07 16.9 -0.2
comp=Z,10nm,0.8s,baz=250,slow=3.3,SNR=12
BOSA Boshof 83.79 118 P **P** 09 07 17.0 -0.2
BOSA pmax pmax
comp=Z,14nm,1.1s
BOSA Boshof 83.79 118 P **P** 09 07 16.9 -0.2
A04D Lummi Island 84.01 327 P **P** 09 07 18.8 +1.4
baz=130
PAB San Pablo 84.72 44 P **P** 09 07 20.8 -0.6
PAB pmax pmax
comp=Z,12nm,1.3s
PAB San Pablo 84.72 44 P **P** 09 07 20.8 -0.6
ESDC Sonseca Array 85.04 45 P **P** 09 07 24.1 +1.2
comp=Z,1.6nm,0.8s,baz=251,slow=5.0,SNR=8.2
ESDC pP **pP** 09 07 53.5 +0.3
comp=Z,1.7nm,0.9s,baz=256,slow=5.8,SNR=3.7
ESDC Sonseca Array 85.04 45 P **P** 09 07 22.6 -0.3
MAW Mawson 85.23 163 P **P** 09 07 24.3 +0.9
comp=Z,9.1nm,0.5s,baz=213,slow=5.7,SNR=41
MAW Mawson 85.23 163 P **P** 09 07 22.6 -0.8
LBTB Lobatse 85.31 115 P **P** 09 07 25.2 +0.3
LBTB pmax pmax
comp=Z,9.0nm,0.9s
LBTB Lobatse 85.31 115 P **P** 09 07 25.2 +0.3
YKA Yellowknife Ar 90.30 341 P **P** 09 07 48.0 +0.4
comp=Z,18nm,0.7s,baz=126,slow=5.6,SNR=75
YKA pP **pP** 09 08 18.8 +0.7
comp=Z,4.2nm,0.8s,baz=132,slow=5.5,SNR=2.9
YKA sP **sP** 09 08 32.1 +1.6
comp=Z,9.9nm,0.8s,baz=131,slow=4.4,SNR=5.1
DLBC Dease Lake 93.39 332 P **P** 09 08 02.8 +0.7
DLBC IAmb IAmb 09 08 36.2
comp=Z,14nm,1.3s
INK Inuvik 100.06 340 P **Pdif** 09 08 32.1 +0.2
comp=Z,2.0nm,0.9s,baz=115,slow=5.7,SNR=7.2
OBN Obninsk 115.31 38*c* *i*P **Pdif** 09 09 43.1 +3.1
OBN pmax pmax
comp=Z,11nm,0.4s
ANN Anapa 115.52 49 *i* PKIKP **PKiKP** 09 13 32.2 +3.7
ANN pmax pmax
comp=Z,65nm,1.2s
ANN pmax pmax
comp=Z,351nm,2.7s
KIV Kislovodsk 119.25 50 *e*PKIKP **PKPdf** 09 13 35.5 -0.4
KIV pmax pmax
comp=Z,35nm,1.1s
KBZ Khabaz 119.39 51 PKP **PKiKP** 09 13 36.8 +0.8
comp=Z,7.7nm,0.9s,baz=228,slow=4.0,SNR=6.5
STKA Stephens Creek 120.33 210 PKP **PKPdf** 09 13 38.4 +0.1
comp=Z,1.3nm,0.6s,baz=116,slow=3.3,SNR=5.9
STKA Stephens Creek 120.33 210 **PKPdf** 09 13 37.4 -1.0
CTA Charters Tower 127.05 223 PKP **PKiKP** 09 13 52.0 0.0
comp=Z,3.4nm,0.6s,baz=74,slow=2.8,SNR=5.8
CTA Charters Tower 127.05 223 PKIKP **PKiKP** 09 13 52.0 0.0
ARU Arti 127.26 34 PKP **PKiKP** 09 13 51.6 +0.3
comp=Z,3.3nm,0.4s,baz=161,slow=1.3,SNR=13
ARU Arti 127.26 34 *i* PKIKP **PKiKP** 09 13 52.0 +0.8
ARU 09 15 52.8
ARU 09 20 51.6
ARU SP SP 09 25 44.4 +0.5
ARU SS **SS** 09 32 51.3 -0.3
ARU Arti 127.26 34 **PKiKP** 09 13 51.3 +0.1
TIXI Tiksi 127.83 353 *i* PKIKP **PKPdf** 09 13 51.3 -0.1
SEY Seymchan 129.25 337 PKP **PKiKP** 09 13 55.4 +0.4
comp=Z,13nm,1.0s,baz=104,slow=2.6,SNR=13
SEY pPKP **pPKPdf** 09 14 26.8 +0.5
comp=Z,3.2nm,0.9s,baz=114,slow=6.0,SNR=3.5
ASAR Alice Springs 130.84 208 PKP **PKPdf** 09 13 58.6 -0.1
comp=Z,2.3nm,0.4s,baz=130,slow=1.7,SNR=22
ASAR pPKP **pPKPdf** 09 14 30.6 0.0
comp=Z,2.2nm,1.1s,baz=146,slow=2.2,SNR=2.5
GEYT Alibeck 131.16 57 PKP **PKiKP** 09 13 59.7 -0.1
comp=Z,3.0nm,0.5s,baz=296,slow=4.8,SNR=3.7
PETK Petropavlovsk- 131.85 324 PKP **PKiKP** 09 14 00.4 -0.2
comp=Z,9.8nm,1.0s,baz=90,slow=3.2,SNR=10
PETK Petropavlovsk- 131.85 324 **PKPdf** 09 13 59.6 +0.1
WRA Warramunga Arr 133.87 211 PKP **PKPdf** 09 14 04.8 +0.3
comp=Z,5.4nm,0.6s,baz=158,slow=1.7,SNR=22
WRA Warramunga Arr 133.87 211 **PKPdf** 09 14 04.5 0.0
BVAR Borovoye Array 134.91 34 PKP **PKPdf** 09 14 05.0 -0.3
comp=Z,0.9nm,0.6s,baz=7.4,slow=15,SNR=4.8
BVAR Borovoye Array 134.91 34 PKIKP **PKPdf** 09 14 05.0 -0.3
FITZ Fitzroy Crossi 139.11 201 PKhKP PKPpre 09 14 03.5
comp=Z,1.5nm,0.6s,baz=185,slow=9.0,SNR=6.8

FITZ				PKP	**PKPdf**	09 14 15.2	+1.1		
	comp=Z,4.4nm,0.6s,baz=198,slow=6.7,SNR=12								
DZA	**Taraz**	**139.88**	**47**	*e*PKP	**PKPdf**	**09 14 14.3**	**-0.6**		
	baz=48								
DZA	**Taraz**	**139.88**	**47**	*e*PKIKP	**PKPdf**	**09 14 14.2**	**-0.6**		
KURK	**Kurchatov**	**140.43**	**33**	PKIKP	**PKPdf**	**09 14 16.3**	**+0.8**		
KURK						09 14 48.0			
KURBB	**Kurchatov Arra**	**140.44**	**33**	PKhKP	PKPpre	09 14 08.3			
	comp=Z,0.6nm,0.6s,baz=306,slow=3.0,SNR=2.9								
KURBB				PKP	**PKPdf**	**09 14 16.3**	**+0.8**		
	comp=Z,3.2nm,0.6s,baz=299,slow=2.8,SNR=7.1								
KURBB				pPKP	pPKPdf	09 14 48.0	+0.5		
	comp=Z,2.1nm,0.8s,baz=297,slow=2.7,SNR=4.0								
ZALV	**Zalesovo Beam**	**141.01**	**25**	PKhKP	PKPpre	09 14 11.6			
	comp=Z,1.5nm,0.5s,baz=302,slow=3.2,SNR=6.3								
ZALV				PKP	**PKPdf**	**09 14 17.2**	**+0.7**		
	comp=Z,9.2nm,0.6s,baz=321,slow=2.3,SNR=26								
ZALV				pPKP	pPKPdf	09 14 48.6	+0.1		
	comp=Z,5.4nm,0.8s,baz=299,slow=3.1,SNR=3.7								
SEM	**Semipalatinsk**	**141.44**	**32**	*e*PKP	**PKPdf**	**09 14 17.4**	**-0.3**		
	baz=32								
SEM	**Semipalatinsk**	**141.44**	**32**	*e*PKIKP	**PKPdf**	**09 14 17.3**	**-0.3**		
KUU	**Kurty**	**142.80**	**43**	*e*PKP	**PKPdf**	**09 14 19.0**	**-1.0**		
	baz=44								
KUU	**Kurty**	**142.80**	**43**	*e*PKIKP	**PKPdf**	**09 14 19.0**	**-1.0**		
JAY	**Jayapura**	**143.14**	**235**	PKP	**PKPdf**	**09 14 20.5**	**-1.1**		
	comp=Z,20nm,0.9s,baz=242,slow=9.3,SNR=4.8								
YSS	**Yuzh-Sakhalins**	**143.24**	**323**	*e*P	**Pdif**	**09 11 44.3**	**-0.1**		
KSH	**Kashi**	**144.38**	**50**	*e*PKP	PKPbc	09 14 22.3	+0.5		
KSH				pPKP	pPKPdf	09 14 53.8	-1.3		
KPKS	**Kokpek**	**144.50**	**42**	*e*PKP	**PKPab**	**09 14 21.8**	**0.0**		
	comp=Z,17nm,1.1s,baz=43								
KPKS	**Kokpek**	**144.50**	**42**	*e*PKIKP	**PKPab**	**09 14 21.7**	**0.0**		
KPKS				pmax	pmax				
	comp=Z,17nm,1.1s								
SATY	**Saty**	**144.52**	**43**	*e*PKP	PKPbc	09 14 22.1	0.0		
	comp=Z,12nm,1.4s,baz=44								
SATY	**Saty**	**144.52**	**43**	*e*PKIKP	PKPbc	09 14 22.1	0.0		
SATY				pmax	pmax				
	comp=Z,12nm,1.4s								
ZEA	**Zeya**	**144.63**	**344**	*e*PKIKP	**PKPdf**	**09 14 22.5**	**-0.4**		
ZEA				pmax	pmax				
	comp=Z,20nm,0.7s								
MKAR	**Makanchi Array**	**144.76**	**35**	PKP	PKPbc	09 14 23.0	+0.4		
	comp=Z,11nm,0.7s,baz=342,slow=2.5,SNR=34								
MKAR				pPKP	pPKPdf	09 14 55.8	+0.4		
	comp=Z,4.0nm,0.8s,baz=278,slow=0.9,SNR=2.9								
JKA	**Kamikawa-asahi**	**144.90**	**319**		PKPbc	09 14 22.5	-0.6		
ASAJ	**Asahikawa**	**144.90**	**319**	PKP	**PKPab**	**09 14 23.3**	**+0.2**		
	comp=Z,29nm,0.8s,baz=0,3,slow=1.7,SNR=19								
ZSN	**Zaisan**	**145.67**	**32**	*e*PKP	**PKPdf**	**09 14 24.1**	**-0.8**		
	comp=Z,4.8nm,0.8s,baz=33								
ZSN	**Zaisan**	**145.67**	**32**	*e*PKP2	**PKPdf**	**09 14 24.1**	**-0.8**		
ZSN				pmax	pmax				
	comp=Z,5.0nm,0.8s								
KLR	**Kul'dur**	**146.99**	**335**	PKPbc	**PKPdf**	**09 14 27.6**	**+0.6**		
	comp=Z,6.7nm,0.4s,baz=32,slow=2.9,SNR=38								
KLR				pPKPbc	pPKPbc	09 15 00.5	-0.3		
	comp=Z,5.4nm,1.0s,baz=47,slow=2.7,SNR=2.6								
BATI	**Baumata**	**147.12**	**203**	PKPbc	**PKPbc**	**09 14 31.2**	**+0.6**		
	comp=Z,26nm,0.6s,baz=157,slow=3.5,SNR=7.1								
GUMO	**Guam**	**147.16**	**263**	PKPbc	**PKPbc**	**09 14 30.6**	**0.0**		
	comp=Z,118nm,0.6s,baz=163,slow=19,SNR=6.8								
GUMO	**Guam**	**147.16**	**263**		**PKPbc**	**09 14 30.8**	**+0.1**		
ZAK	**Zakamensk**	**149.53**	**10**	*e*PKP2	**PKPbc**	**09 14 36.0**	**0.0**		
ZAK				pmax	pmax				
	comp=Z,10.0nm,1.5s								
ZAK				pmax	pmax				
	comp=Z,8.0nm,1.3s								
ZAK				pmax	pmax				
	comp=Z,6.0nm,1.1s								
WMQ	**Urumqi**	**149.59**	**35**	*e*PKPbc	**PKPdf**	**09 14 32.0**	**+0.4**		
WMQ				LR	LR				
	comp=Z,2µm,29.0s								
WMQ				LR	LR				
	comp=Z,3µm,28.9s								
WMQ				LR	LR				
	comp=Z,140nm,29.3s								
USA0B	**Ussuriysk Arra**	**150.75**	**329**	*i* PKIKP	**PKiKP**	**09 14 39.4**	**-0.1**		
USA0B	**Ussuriysk Arra**	**150.75**	**329**		**PKiKP**	**09 14 39.5**	**0.0**		
USRK	**Ussuriysk Ar.**	**150.75**	**329**	PKPbc	**PKiKP**	**09 14 39.6**	**+0.1**		
	comp=Z,14nm,0.7s,baz=32,slow=2.1,SNR=35								
USRK				pPKPbc	**pPKPbc**	**09 15 11.6**	**+0.9**		
	comp=Z,6.2nm,0.7s,baz=24,slow=1.5,SNR=4.5								
USRK	**Ussuriysk Ar.**	**150.75**	**329**	PKIKP	**PKPbc**	**09 14 39.1**	**+0.2**		
USRK	**Ussuriysk Ar.**	**150.75**	**329**	P	**PKPbc**	**09 14 39.1**	**+0.2**		
MJAR	**Matsushiro Arr**	**151.55**	**310**	PKPbc	**PKiKP**	**09 14 41.6**	**+0.2**		
	comp=Z,8.4nm,0.9s,baz=72,slow=1.0,SNR=13								
MJAR				PKPab	**PKPab**	**09 14 49.7**	**-0.2**		
	comp=Z,6.5nm,0.8s,baz=77,slow=2.5,SNR=7.2								
MAT	**Matsushiro**	**151.55**	**310**	PKP	**PKiKP**	**09 14 41.4**	**-0.1**		
SONM	**Songino Array**	**152.46**	**7**	PKP	**PKPdf**	**09 14 37.3**	**+1.3**		
	comp=Z,4.6nm,0.9s,baz=244,slow=0.6,SNR=16								
SONM				PKPbc	**PKiKP**	**09 14 43.6**	**+0.4**		
	comp=Z,9.3nm,0.5s,baz=308,slow=1.3,SNR=33								
SONM				PKPab	**PKPab**	**09 14 54.4**	**+0.9**		
	comp=Z,3.1nm,0.7s,baz=320,slow=3.2,SNR=5.4								
SONM				pPKP	**pPKPdf**	**09 15 09.3**	**+1.4**		
	comp=Z,3.3nm,0.7s,baz=314,slow=4.2,SNR=3.5								
SONM				pPKPbc	**pPKPbc**	**09 15 14.9**	**+0.2**		
	comp=Z,3.5nm,0.7s,baz=334,slow=1.8,SNR=3.1								
LEM	**Lembang**	**152.60**	**172**	PKPbc	**PKiKP**	**09 14 45.5**	**+1.0**		
	comp=Z,51nm,0.6s,baz=146,slow=20,SNR=9.9								
KAPI	**Kappang**	**153.29**	**199**	PKPbc	**PKiKP**	**09 14 46.4**	**+0.7**		
	comp=Z,11nm,0.9s,baz=145,slow=6.2,SNR=3.6								
KAPI				PKPab	**PKPab**	**09 14 59.2**	**+1.6**		
	comp=Z,15nm,0.6s,baz=260,slow=0.9,SNR=7.1								
KSRS	**Korea Array**	**157.74**	**323**	PKP	**PKPdf**	**09 14 44.5**	**+1.3**		
	comp=Z,2.8nm,0.8s,baz=60,slow=1.9,SNR=6.3								
KSRS				PKPab	**PKPab**	**09 15 17.1**	**+0.9**		
	comp=Z,4.8nm,0.7s,baz=59,slow=5.0,SNR=9.8								
RPSI	**Rantau Prapat**	**158.61**	**144**		**PKPab**	**09 14 54.4**	**+0.9**		
PSI	**Prapat**	**158.69**	**144**	PKPab	**PKPab**	**09 15 21.4**	**+0.4**		
	comp=Z,6.2nm,0.6s,baz=180,slow=6.0,SNR=5.0								
GTA	**Gaotai**	**158.76**	**25**	⇑PKP	**PKPdf**	**09 14 46.0**	**+1.4**		
GTA				pPKP	pPKPdf	09 15 13.0	-3.8		
GTA				LR	LR				
	comp=Z,78nm,18.2s								
GTA				LR	LR				
	comp=Z,99nm,17.8s								
GTA				LR	LR				
	comp=Z,71nm,18.5s								
HHC	**Hu-ho-hao-te**	**159.72**	**359**	*e*PKP	**PKPdf**	**09 14 46.0**	**+0.3**		
LZH	**Lanzhou**	**163.19**	**21**	*e*PKP	**PKPdf**	**09 14 51.5**	**+2.0**		
LZH				pPKP	pPKPdf	09 15 17.8	-3.9		
XAN	**Xi'an**	**166.37**	**8**	PKP	**PKPdf**	**09 14 53.0**	**+0.8**		
NJ2	**Nanjing**	**166.63**	**331**	*e*PKP	**PKPdf**	**09 14 53.3**	**+1.0**		
CMAR	**Chiang Mai Arr**	**168.23**	**98**	PKP	**PKPdf**	**09 14 53.6**	**-0.2**		
	comp=Z,0.8nm,0.4s,baz=276,slow=1.4,SNR=10								

IDC 25 08:59:07.3±3.9, 53.70N×91.04E, h0km, mb1 2.9/3, mb1mx2.8/70, mbtmp2.9/3, ML2.3/3, Error ellipse: s-maj=40.7km s-min=26.2km az=24.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**3.70**	**276**	*i*		09 23 30.0	
	baz=88,slow=339,SNR=2.5						
ZALV	**Zalesovo Beam**	**3.70**	**276**	Pn	Pn	09 00 07.0	+1.4
	0.1nm,0.3s,baz=99,slow=8.9,SNR=3.7						
ZALV				Lg	Lg	09 01 02.0	
	1.4nm,0.3s,baz=94,slow=24,SNR=7.3						
KURBB	**Kurchatov Arra**	**8.29**	**253**	Pn	Pn	09 01 08.7	0.0
	0.1nm,0.3s,baz=69,slow=15,SNR=7.8						
KURBB				Sn	Sn	09 02 42.5	-0.4
	0.0nm,0.3s,baz=66,slow=26,SNR=4.9						
KURBB				Lg	Lg	09 03 28.4	
	0.0nm,0.3s,baz=66,slow=32,SNR=8.2						
MKAR	**Makanchi Array**	**8.90**	**223**	Pn	Pn	09 01 17.1	0.0
	0.1nm,0.3s,baz=32,slow=11,SNR=4.7						

IDC 25 08:59:12.1±2.7, 48.33N×153.15E, h146km±25km, mb3.1/5, mb1 3.3/7, mb1mx3.0/64, mbtmp3.6/7, Error ellipse: s-maj=42.8km s-min=20.2km az=154.0

ISC 25 08:59:12.5±1.6, 48.4N±0.3×153.1E±0.2, h150km, n7, σ1§37/7, mb3.5/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**5.59**	**30**	P		**09 00 33.7**	**+0.1**
	0.4nm,0.3s,baz=207,slow=11,SNR=4.5						
ASAJ	**Asahikawa**	**8.41**	**244**	P		**09 01 10.3**	**-1.1**
	1.7nm,0.3s,baz=65,slow=15,SNR=14						
KSRS	**Korea Array**	**21.31**	**249**	P		**09 03 49.0**	**+1.7**
	1.2nm,0.7s,baz=45,slow=10,SNR=3.0						
ZALV	**Zalesovo Beam**	**41.67**	**304**	P		**09 06 44.4**	**-1.5**
	0.5nm,0.3s,baz=72,slow=9.3,SNR=2.1						
MKAR	**Makanchi Array**	**46.20**	**296**	P		**09 07 23.1**	**+1.0**
	0.2nm,0.6s,baz=69,slow=7.9,SNR=1.5						
KURBB	**Kurchatov Arra**	**46.57**	**302**	P		**09 07 25.5**	**+0.6**
	0.3nm,0.2s,baz=67,slow=8.2,SNR=5.2						
TXAR	**Lajitas Array**	**76.72**	**61**	P		**09 10 47.0**	**-0.2**
	0.5nm,0.8s,baz=299,slow=5.2,SNR=4.7						

IDC 25 09:01:40.3±3.7, 54.24N×87.47E, h0km, mb1 2.7/2, mb1mx2.6/67, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=32.1km s-min=20.0km az=47.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.59**	**260**	*i*		09 11 40.0	
	baz=80,slow=346,SNR=0.8						
ZALV	**Zalesovo Beam**	**1.59**	**260**	Pg	Pn	09 02 08.7	-0.9
	1.3nm,0.3s,baz=81,slow=18,SNR=20						
ZALV				Lg	Lg	09 02 30.9	
	2.4nm,0.3s,baz=75,slow=28,SNR=5.3						
KURBB	**Kurchatov Arra**	**6.56**	**240**	Pn	Pn	09 03 18.3	+0.4
	0.0nm,0.3s,baz=54,slow=13,SNR=2.3						
MKAR	**Makanchi Array**	**8.15**	**206**	Pn	Pn	09 03 41.1	+1.3
	0.1nm,0.3s,baz=25,slow=13,SNR=1.0						

*NAO **25** 09:01:51.9±1.9, 71.65N×2.77W, ML3.7*
*IDC **25** 09:01:55.2±1.2, 71.50N×2.14W, h0km, mb3.9/8, mb1 4.0/14, mb1mx3.7/61, mbtmp4.0/14, ML3.4/6, Error ellipse: s-maj=24.1km s-min=17.9km az=90.0*
*BER **25** 09:01:55.0±2.8, 71.63N×3.13W, h10km, ML2.5, ML3.7(NAO), Confirmed Earthquake*
*NEIC **25** 09:01:56.5±1.5, 71.57N±0.05×2.1W±0.3, h10km±2km, mb4.4/16, Error ellipse: s-maj=17.4km s-min=3.1km az=300.0*
*DNK **25** 09:01:56.5±0.8, 71.98N×4.13W, h0km±21km, ML3.1*

ISC 25 09:01:56.7±0.8, 71.56N±0.07×1.96W±0.10, h10km, n134, σ1§29/123, mb4.3/26, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBG	**Daneborg**	**6.02**	**306**	Pn	Pn	09 03 16.2	-9.4
DBG	**Daneborg**	**6.02**	**306**	*e*P	Pn	09 03 16.4	-9.3
DBG				IAmb	IAmb	09 03 16.9	
	comp=Z,8.4nm,0.5s						
DBG				IAML		09 03 26.8	
	comp=Z,17nm,0.4s						
DBG				*e*S	Sn	09 04 15.7	-19
DBG	**Daneborg**	**6.02**	**306**	*i* P	Pn	09 03 16.4	-9.3
DBG				IAmb	IAmb	09 03 16.9	
	comp=Z,8.4nm,0.5s						
DBG				IAML		09 03 26.8	
	comp=Z,17nm,0.4s						
DBG				*i* S	Sn	09 04 14.7	-20
LOF	**Lofoten**	**6.36**	**115**	Pn	**Pn**	**09 03 30.0**	**-0.2**
LOF	**Lofoten**	**6.36**	**115**	*e*P	**Pn**	**09 03 30.4**	**+0.1**
LOF				*e*S	**Sn**	**09 04 40.8**	**-1.9**
LOF				IAML		09 04 56.2	
	comp=Z,6.9nm,0.7s						
N2SV	**S¸rv¥gen**	**6.36**	**118**	*e*P	**Pn**	**09 03 30.4**	**0.0**
N2RO	**R¸st**	**6.38**	**123**	*e*P	**Pn**	**09 03 30.4**	**-0.1**
N2VA	**Vr¸y**	**6.43**	**120**	*e*P	**Pn**	**09 03 30.9**	**-0.4**
SCO	**Scoresbysund**	**6.60**	**270**		Pn	09 03 26.0	-7.6
SCO	**Scoresbysund**	**6.60**	**270**	*i* P	Pn	09 03 25.3	-8.3
SCO	**Scoresbysund**	**6.60**	**270**	*i* P	Pn	09 03 25.2	-8.3
SCO	**Scoresbysund**	**6.60**	**270**	*i* P	Pn	09 03 25.3	-8.3
DAG	**Danmarks Havn**	**6.91**	**327**	*e*P	Pn	09 03 30.4	-7.5
DAG				*e*		09 03 30.4	
DAG				*e*		09 04 34.4	
DAG	**Danmarks Havn**	**6.91**	**327**	*i* P	Pn	09 03 29.0	-8.9
DAG				*i* S	Sn	09 04 35.8	-21
DAG	**Danmarks Havn**	**6.91**	**327**	*i* P	Pn	09 03 28.3	-10
DAG				*i* P	Pn	09 03 29.0	-8.9
DAG				*i* S	Sn	09 04 35.9	-21
DAG				IAML		09 04 39.6	
	comp=Z,6.6nm,0.4s						
STEI	**Steigen**	**6.98**	**113**	*e*P	**Pn**	**09 03 39.3**	**+0.5**
N2IH	**Innhavet**	**7.16**	**111**	*e*P	**Pn**	**09 03 41.8**	**+0.5**
NBB08	**Skaug oppvekst**	**7.16**	**118**	*e*P	**Pn**	**09 03 40.4**	**-0.9**
HSPB	**Hornsund (broa**	**7.20**	**33**	Pn	Pn	**09 03 40.2**	**-1.7**
HSPB	**Hornsund (broa**	**7.20**	**33**	*e*P	**Pn**	**09 03 40.5**	**-1.3**
TRO	**Tromso**	**7.21**	**95**	Pn	**Pn**	**09 03 40.5**	**-1.3**
TRO	**Tromso**	**7.21**	**95**	*e*P	**Pn**	**09 03 42.0**	**+0.1**
NBB30	**Finnes**	**7.21**	**122**	*e*P	**Pn**	**09 03 41.7**	**-0.2**
NBB05	**Inndyr**	**7.24**	**121**	*e*P	**Pn**	**09 03 42.3**	**-0.1**
NBB28	**Valnes**	**7.25**	**119**	*e*P	**Pn**	**09 03 42.5**	**0.0**
FAUS	**Fauske**	**7.35**	**116**	*e*P	**Pn**	**09 03 44.0**	**0.0**
NBB40	**Tonnes**	**7.36**	**126**	*e*P	**Pn**	**09 03 44.0**	**0.0**
NBB17	**Glomfjord BVr**	**7.38**	**122**	*e*P	**Pn**	**09 03 43.9**	**-0.5**
KONS	**Konsvik**	**7.40**	**126**	*e*P	**Pn**	**09 03 44.6**	**+0.1**
STOK	**Stokkvaagen**	**7.50**	**127**	*e*P	**Pn**	**09 03 46.5**	**+0.5**
BRBB	**Barentsburg B**	**7.77**	**25**	Pn	**Pn**	**09 03 47.2**	**-2.4**
BRBB	**Barentsburg B**	**7.77**	**25**	Pn	**Pn**	**09 03 47.2**	**-2.4**
MOR8	**Moi Rana**	**8.00**	**124**	*e*P	**Pn**	**09 03 50.5**	**-2.3**
KIF	**Kilpisjarvi**	**8.09**	**97**	Pn	**Pn**	**09 03 52.3**	**-1.6**
KIF	**Kilpisjarvi**	**8.09**	**97**	*e*P	**Pn**	**09 03 54.0**	**+0.1**
SPA0	**Spitsbergen Ar**	**8.14**	**27**	Pn	**Pn**	**09 03 51.5**	**-3.2**
	baz=216,slow=12						
SPA0	**Spitsbergen Ar**	**8.14**	**27**		**Pn**	**09 03 54.3**	**-0.4**
SPA0	**Spitsbergen Ar**	**8.14**	**27**	Pn	**Pn**	**09 03 51.5**	**-3.2**
	baz=216,slow=12						
SPITS	**Spitsbergen Ar**	**8.14**	**27**	Pn	**Pn**	**09 03 54.1**	**-0.6**
	baz=208,slow=14,SNR=44						
KBS	**Kingsbay**	**8.17**	**19**	Pn	**Pn**	**09 03 51.5**	**-3.6**
KBS	**Kingsbay**	**8.17**	**19**	Pn	**Pn**	**09 03 54.3**	**-0.8**
KBS	**Kingsbay**	**8.17**	**19**	*e*P	**Pn**	**09 03 52.8**	**-2.2**
KBS	**Kingsbay**	**8.17**	**19**	*i* P	**Pn**	**09 03 52.9**	**-2.2**
SALU	**Saltoluokta**	**8.29**	**110**	*e*P	**Pn**	**09 03 57.8**	**+0.9**
NSS	**Namsos**	**8.75**	**137**	*e*P	**Pn**	**09 04 01.2**	**-1.8**
NSS				*e*		09 04 04.4	
KTK1	**Kautokeino**	**8.85**	**95**	*e*P	**Pn**	**09 04 05.0**	**+0.5**
ARD8	**ARCESS Array S**	**9.32**	**89**	Pn	**Pn**	**09 04 10.9**	**0.0**
ARD9	**ARCESS Array S**	**9.33**	**89**	Pn	**Pn**	**09 04 11.2**	**+0.3**
ARD7	**ARCESS Array S**	**9.33**	**89**	Pn	**Pn**	**09 04 11.5**	**+0.5**
ARC7	**ARCESS Array S**	**9.33**	**89**	Pn	**Pn**	**09 04 10.8**	**-0.2**
ARC6	**ARCESS Array S**	**9.33**	**89**	Pn	**Pn**	**09 04 10.9**	**-0.1**
ARD1	**ARCESS Array S**	**9.33**	**89**	Pn	**Pn**	**09 04 11.0**	**0.0**
ARB5	**ARCESS Array S**	**9.33**	**89**	Pn	**Pn**	**09 04 11.2**	**+0.2**
ARB4	**ARCESS Array S**	**9.34**	**89**	Pn	**Pn**	**09 04 11.3**	**+0.3**
ARA0	**ARCESS Array S**	**9.34**	**89**	Pn	**Pn**	**09 04 11.2**	**0.0**
	baz=289,slow=12						
ARA0	**ARCESS Array S**	**9.34**	**89**	Pn	**Pn**	**09 04 11.2**	**0.0**
	baz=289,slow=12						
ARCES	**ARCESS Array B**	**9.34**	**89**	Pn	**Pn**	**09 04 11.0**	**-0.1**
	baz=292,slow=11,SNR=30						
ARC2	**ARCESS Array S**	**9.34**	**89**	Pn	**Pn**	**09 04 12.5**	**+1.4**
ARD3	**ARCESS Array S**	**9.35**	**89**	Pn	**Pn**	**09 04 12.3**	**+1.0**
AKN	**Aaknes**	**10.04**	**155**	Pn	**Pn**	**09 04 21.1**	**+0.3**
AKN	**Aaknes**	**10.04**	**155**	Pn	**Pn**	**09 04 21.1**	**+0.3**
SUMG	**Summit**	**11.17**	**292**	*i* P	Pn	09 04 30.1	-6.5
SUMG	**Summit**	**11.17**	**292**	*i* P	Pn	09 04 30.0	-6.6
SUMG	**Summit**	**11.17**	**292**	*i* P	Pn	09 04 30.1	-6.5
NC204	**NORSAR Array S**	**11.47**	**148**		Pn	**09 04 40.8**	**+0.3**
NC303	**NORSAR Array S**	**11.63**	**146**	Pn	**Pn**	**09 04 43.0**	**+0.5**
NB2	**NORSAR Subarra**	**11.77**	**147**	Pn	**Pn**	**09 04 45.5**	**+1.0**
	baz=330,slow=16						
NB2	**NORSAR Subarra**	**11.77**	**147**	Pn	**Pn**	**09 04 45.5**	**+1.0**
	baz=330,slow=16						
NOA	**NORSAR Array B**	**11.77**	**147**	Pn	**Pn**	**09 04 44.1**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=336,slow=13,SNR=4.2						
NB201	**NORSAR Array S**	**11.78**	**147**	Pn	**Pn**	**09 04 45.1**	**+0.5**
NC405	**NORSAR Array S**	**11.79**	**146**	Pn	**Pn**	**09 04 45.8**	**+1.1**
APA0	**Apatity Array**	**12.68**	**91**	Pn	**Pn**	**09 04 56.9**	**+0.1**
	baz=325,slow=18						
APA0	**Apatity Array**	**12.68**	**91**	Pn	**Pn**	**09 04 56.9**	**+0.1**
	baz=325,slow=18						
HFS	**Hagfors**	**13.07**	**143**	Pn	**Pn**	**09 05 00.7**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=338,slow=14,SNR=17						
HFS	**Hagfors**	**13.07**	**143**	Pn	**Pn**	**09 05 01.9**	**-0.2**
	baz=335,slow=14						
HFS	**Hagfors**	**13.07**	**143**	Pn	**Pn**	**09 05 01.9**	**-0.2**
	baz=335,slow=14						
FIA0	**FINESS Array S**	**14.90**	**119**	P	**Pn**	**09 05 26.4**	**-0.7**
	baz=326,slow=14						
FIA0	**FINESS Array S**	**14.90**	**119**	P	**Pn**	**09 05 26.4**	**-0.7**
	baz=326,slow=14						
FINES	**FINESS Array B**	**14.90**	**119**	Pn	**Pn**	**09 05 26.7**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=325,slow=12,SNR=8.1						
FINES	**FINESS Array B**	**14.90**	**119**	Pn	**Pn**	**09 05 26.6**	**-0.5**
EKA	**Eskdalemuir Ar**	**16.30**	**182**	Pn	**Pn**	**09 05 44.8**	**-0.5**
	baz=354,slow=14,SNR=5.7						
EKA	**Eskdalemuir Ar**	**16.30**	**182**	P	**Pn**	**09 05 44.9**	**-0.5**
EKA	**Eskdalemuir Ar**	**16.30**	**182**	P	**Pn**	**09 05 44.9**	**-0.5**
KLMR	**Klimovskoe**	**19.38**	**102**	*e*Pn	**P**	**09 06 20.9**	**-1.3**
KLMR				AMP		09 06 24.6	
	comp=Z,39nm,1.2s						
SUW	**Suwalki**	**20.72**	**135**	*e*P	**P**	**09 06 37.3**	**+0.5**
SUW	**Suwalki**	**20.72**	**135**	P	**P**	**09 06 36.9**	**+0.1**
CLL	**Collm**	**21.41**	**154**	*e*P	**P**	**09 06 44.0**	**-0.3**
	comp=Z,5.0nm,0.8s						
CLL				*e*		09 06 49.0	
CLL				Lm	MLR	09 17 00.0	
	comp=Z,300nm,20.2s						
CLL	**Collm**	**21.41**	**154**	P	**P**	**09 06 43.8**	**-0.6**
CLL				IAmb	IAmb	09 06 49.6	
	comp=Z,7.6nm,0.7s						
BRG	**Berggiesshubel**	**21.97**	**152**	*e*P	**P**	**09 06 52.7**	**+2.3**
	comp=Z,14nm,1.4s						
WLF	**Walferdange**	**22.28**	**166**	P	**P**	**09 06 54.8**	**+1.1**
WLF				IAmb	IAmb	09 07 00.9	
	comp=Z,19nm,1.1s						
KSP	**Ksiaz**	**22.37**	**149**	*e*P	**P**	**09 06 55.3**	**+0.7**
NKC	**Novy Kostel**	**22.39**	**155**	*e*P	**P**	**09 06 55.6**	**+0.8**
OSTC	**Ostas**	**22.64**	**149**	*e*P	**P**	**09 06 57.5**	**0.0**
DPC	**Dobruska-Polom**	**22.85**	**149**	*e*P	**P**	**09 07 00.7**	**+0.9**
PRU	**Pruhonice**	**22.92**	**152**	*e*P	**P**	**09 07 01.8**	**+1.3**
KRLC	**Kraliky**	**23.20**	**148**	*e*P	**P**	**09 07 06.5**	**+3.2**
OJC	**Ojcow**	**23.59**	**143**	*e*P	**P**	**09 07 09.4**	**+2.2**
OJC	**Ojcow**	**23.59**	**143**	P	**P**	**09 07 08.9**	**+1.7**
OJC				IAmb	IAmb	09 07 18.2	
	comp=Z,8.7nm,1.1s						
MORC	**Moravsky Berou**	**23.61**	**147**	*e*P	**P**	**09 07 08.5**	**+1.0**
KHC	**Kasperske Hory**	**23.62**	**154**	*e*P	**P**	**09 07 12.7**	**+5.1**
CLF	**Chamrion-Foret**	**23.69**	**173**	P	**P**	**09 07 08.9**	**+0.8**
BFO	**Black Forest**	**23.80**	**163**	P	**P**	**09 07 08.9**	**-0.3**
BFO				IAmb	IAmb	09 07 12.6	
	comp=Z,16nm,1.1s						
ECH	**Echery**	**23.80**	**165**	P	**P**	**09 07 08.6**	**-0.7**
ECH				IAmb	IAmb	09 07 11.9	
	comp=Z,7.8nm,1.0s						
VRAC	**Vranov**	**23.91**	**149**	*e*P	**P**	**09 07 08.1**	**-2.2**
GEC2	**GERESS Array S**	**23.92**	**154**	P	**P**	**09 07 09.8**	**-0.7**
GEC2				IAmb	IAmb	09 07 17.5	
	comp=Z,8.0nm,1.1s						
GERES	**GERESS Array B**	**23.92**	**154**	P	**P**	**09 07 11.9**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=352,slow=8.1,SNR=12						
**G

NBB30	Finnes	7.51	121	*e*P		Pn	09 06 21.0	-1.3
NBB05	Inndyr	7.54	120	*e*P		Pn	09 06 20.9	-1.9
NBB28	Valnes	7.55	118	*e*P		Pn	09 06 21.9	-1.0
FAUS	Fauske	7.66	115	*e*P		Pn	09 06 23.3	-1.1
NBB40	Tonnes	7.66	125	*e*P		Pn	09 06 23.4	-1.0
NBB17	Glomfjord B¥r	7.69	121	*e*P		Pn	09 06 23.9	-0.8
KONS	Konsvik	7.70	124	*e*P		Pn	09 06 23.4	-1.5
BRBB	Barentsburg B	7.80	27	Pn		Pn	09 06 27.4	+1.1
BRBB	Barentsburg B	7.80	27	Pn		Pn	09 06 27.4	+1.1
STOK	Stokkvaagen	7.80	126	*e*P		Pn	09 06 26.1	-0.2
KBS	Kingsbay	8.16	20	Pn		Pn	09 06 32.2	+1.0
KBS				Sn		Sn	09 07 59.8	-3.7
KBS	Kingsbay	8.16	20	Pn		Pn	09 06 32.8	+1.5
KBS	Kingsbay	8.16	20	*e*P		Pn	09 06 33.2	+2.0
KBS				IAML			09 08 04.8	
	comp=Z,3.5nm,0.4s							
KBS	Kingsbay	8.16	20	*i* P		Pn	09 06 32.3	+1.0
KBS				*e*S		Sn	09 07 57.6	-5.8
KBS				IAML			09 08 04.8	
	comp=Z,3.5nm,0.4s							
SPA0	Spitsbergen Ar	8.18	29	Pn		Pn	09 06 33.0	+1.5
	baz=208,slow=14							
SPA0	Spitsbergen Ar	8.18	29	Pn		Pn	09 06 33.1	+1.7
SPA0	Spitsbergen Ar	8.18	29	Pn		Pn	09 06 33.0	+1.5
	baz=208,slow=14							
SPITS	Spitsbergen A¢	8.18	29	Pn		Pn	09 06 33.3	+1.8
	baz=208,slow=14,SNR=51							
SPITS				Sn		Sn	09 08 03.1	-0.6
	baz=187,slow=11,SNR=1.1							
SPITS				LR		LR	09 09 03.6	
	comp=Z,243nm,18.8s,baz=180,slow=33							
MOR8	Moi Rana	8.30	123	*e*P		Pn	09 06 32.7	-0.4
KIF	Kilpisjarvi	8.38	97	Pn		Pn	09 06 33.1	-1.2
KIF	Kilpisjarvi	8.38	97	*e*P		Pn	09 06 33.0	-1.3
SALU	Saltoluokta	8.60	109	*e*P		Pn	09 06 37.0	-0.4
NSS	Namsos	9.03	135	*e*P		Pn	09 06 40.5	-2.6
KTK1	Kautokeino	9.15	94	*e*P		Pn	09 06 44.0	-0.7
ARD8	ARCESS Array S	9.61	89	Pn		Pn	09 06 50.3	-0.8
ARD9	ARCESS Array S	9.61	89	Pn		Pn	09 06 50.2	-0.9
ARD7	ARCESS Array S	9.61	89	Pn		Pn	09 06 50.3	-0.8
ARC7	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.4	-0.8
ARC6	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.2	-1.0
ARD1	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.5	-0.7
ARB5	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.4	-0.9
ARC1	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.3	-0.9
ARA3	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.6	-0.7
ARB1	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.5	-0.7
ARB4	ARCESS Array S	9.62	89	Pn		Pn	09 06 49.6	-1.7
ARA0	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.1	-1.2
	baz=290,slow=12							
ARA0	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.6	-0.7
ARA0	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.1	-1.2
	baz=290,slow=12							
ARA1	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.6	-0.6
ARC5	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.0	-1.3
ARCES	ARCESS Array B	9.62	89	Pn		Pn	09 06 50.3	-1.0
	baz=289,slow=12,SNR=17							
ARCES				LR		LR	09 09 58.5	
	comp=Z,442nm,21.2s,baz=290,slow=34							
ARD6	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.7	-0.6
ARA2	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.4	-0.9
ARB2	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.7	-0.6
ARB3	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.0	-1.3
ARD2	ARCESS Array S	9.62	89	Pn		Pn	09 06 50.3	-1.0
ARC2	ARCESS Array S	9.63	89	Pn		Pn	09 06 49.4	-2.0
ARD3	ARCESS Array S	9.63	89	Pn		Pn	09 06 50.7	-0.7
MOL	Molde	9.97	151	*e*P		Pn	09 06 55.3	-0.8
KEV	Kevo	10.00	87	Pn		Pn	09 06 55.2	-1.2
AKN	Aaknes	10.27	153	Pn		Pn	09 06 59.9	-0.2
AKN	Aaknes	10.27	153	Pn		Pn	09 06 59.9	-0.2
FOO	Floro	10.57	159	*e*		Pn	09 07 05.0	+0.7
NOD	Norderasen	10.62	132	*e*P		Pn	09 07 05.4	+0.4
SUMG	Summit	10.87	292	Pn		Pn	09 07 09.0	+0.4
SUMG	Summit	10.87	292	*i* P		Pn	09 07 09.4	+0.8
SUMG	Summit	10.87	292	*i* P		Pn	09 07 09.4	+0.8
SUE	Sulen	11.07	160	*e*		Pn	09 07 10.8	-0.3
HYA	Hoyanger	11.13	157	*e*P		Pn	09 07 11.7	-0.2
LRW	Lerwick	11.60	176	*e*P		Pn	09 07 18.0	-0.4
ASK	Askoy	11.68	160	*e*		Pn	09 07 18.0	-1.4
NC204	NORSAR Array S	11.72	146	Pn		Pn	09 07 19.3	-0.8
NC204	NORSAR Array S	11.72	146	*e*P		Pn	09 07 19.2	-0.8
SKAR	Skarsila	11.89	152	*e*P		Pn	09 07 21.5	-0.8
NOA	NORSAR Array B	12.02	145	Pn		Pn	09 07 23.9	-0.2
	comp=Z,0.1nm,0.3s,baz=338,slow=12,SNR=4.7							
NOA				LR		LR	09 11 47.7	
	comp=Z,639nm,19.4s,baz=335,slow=36							
ODD1	Odda	12.40	157	*e*		Pn	09 07 30.2	+0.8
BLS5	Blasjo	12.86	158	*e*		Pn	09 07 29.9	-5.7
APA0	Apatity Array	12.97	91	Pn		Pn	09 07 35.7	-1.3
	baz=297,slow=12							
APA0	Apatity Array	12.97	91	Pn		Pn	09 07 35.7	-1.3
	baz=297,slow=12							
HFS	Hagfors	13.33	142	Pn		Pn	09 07 41.1	-0.9
	comp=Z,1.3nm,0.3s,baz=345,slow=11,SNR=17							
HFS				LR		LR	09 12 28.2	
	comp=Z,602nm,21.2s,baz=326,slow=36							
HFS	Hagfors	13.33	142	Pn		Pn	09 07 41.1	-0.9
	baz=340,slow=9.3							
HFS	Hagfors	13.33	142	Pn		Pn	09 07 41.1	-0.9
	baz=340,slow=9.3							
FIA0	FINESS Array S	15.21	118	P		Pn	09 08 05.4	-2.0
	baz=334,slow=11							
FIA0	FINESS Array S	15.21	118	P		Pn	09 08 05.4	-2.0
	baz=334,slow=11							
FIA1	FINESS Array S	15.21	118	Pn		Pn	09 08 03.8	-3.6
FINES	FINESS Array B	15.21	118	Pn		Pn	09 08 05.8	-1.6
	comp=Z,0.4nm,0.3s,baz=350,slow=8.5,SNR=7.9							
FINES				LR		LR	09 13 21.1	
	comp=Z,586nm,18.9s,baz=302,slow=35							
FINES	FINESS Array B	15.21	118			Pn	09 08 05.3	-2.0
EKA	Eskdalemuir Ar	16.40	181	Pn		Pn	09 08 23.6	+0.7
	baz=1.0,slow=13,SNR=4.6							
EKA	Eskdalemuir Ar	16.40	181	P		Pn	09 08 23.8	+0.9
EKA	Eskdalemuir Ar	16.40	181	P		Pn	09 08 23.8	+0.9
KLMR	Klimovskoe	19.68	101	*e*Pn		P	09 09 01.6	-0.1
KLMR				AMP			09 09 03.9	
	comp=Z,49nm,1.2s							
EUNU	Eureka	19.89	329	P		P	09 09 03.3	-0.7
SUW	Suwalki	21.00	134	*e*P		P	09 09 16.9	+0.8
CLL	Collm	21.64	152	*e*P		P	09 09 24.0	+1.0
	comp=Z,6.0nm,0.8s							
CLL				*e*			09 09 27.0	
CLL	Collm	21.64	152	P		P	09 09 23.8	+0.8
BRG	Berggiesshubel	22.20	151	*e*P		P	09 09 29.6	+0.5
	comp=Z,21nm,1.6s							
KSP	Ksiaz	22.62	147	*e*P		P	09 09 34.3	+0.9
CLF	Chambon-Foret	23.84	171	P		P	09 09 47.1	+1.3
KHC	Kasperske Hory	23.85	153	P		P	09 09 46.5	+0.6
KHC				IAmb		IAmb	09 09 58.5	
	comp=Z,16nm,1.6s							
OJC	Ojcow	23.85	142	*e*P		P	09 09 48.5	+2.5
OJC	Ojcow	23.85	142	P		P	09 09 47.8	+1.7
OJC				IAmb		IAmb	09 09 53.1	
	comp=Z,48nm,1.9s							
MORC	Moravsky Berou	23.86	146	*e*P		P	09 09 47.4	+1.3
MORC	Moravsky Berou	23.86	146	P		P	09 09 47.2	+1.0
BFO	Black Forest	23.99	161	P		P	09 09 48.1	+0.8
BFO				IAmb		IAmb	09 09 51.1	
	comp=Z,16nm,1.2s							
ECH	Echery	23.99	163	P		P	09 09 48.1	+0.8
GEC2	GERESS Array S	24.14	153	P		P	09 09 49.7	+0.8
GEC2				IAmb		IAmb	09 09 56.0	
	comp=Z,22nm,1.7s							
GERES	GERESS Array B	24.14	153	P		P	09 09 50.1	+1.2
	comp=Z,1.7nm,0.8s,baz=343,slow=8.7,SNR=10.0							
GERES	GERESS Array B	24.14	153	P		P	09 09 49.3	+0.4
VRAC	Vranov	24.15	148	LR		LR	09 18 11.2	
	comp=Z,376nm,19.2s,baz=344,slow=34							
VRAC	Vranov	24.15	148	*e*P		P	09 09 50.1	+1.3
RES	Resolute Bay	24.28	320	LR		LR	09 18 58.4	
	comp=Z,284nm,20.9s,baz=54,slow=36							
KRUC	Moravsky	24.35	148	*e*P		P	09 09 51.2	+0.5
KIRV	Kirov	24.57	95	P		P	09 09 53.0	+0.6
	comp=Z,6.8nm,0.5s,baz=323,slow=16,SNR=7.2							
KIRV				LR		LR	09 18 58.7	
	comp=Z,104nm,20.7s,baz=323,slow=35							
RETA	Reutte	25.09	158	*e*P		P	09 10 00.2	+2.9
	comp=Z,8.2nm,1.2s							
MODS	Modra-Piesok	25.17	147	*e*P		P	09 09 59.7	+1.6
DAVA	Damuels	25.18	159	*e*P		P	09 10 01.4	+3.0
	comp=Z,20nm,1.4s							
MOA	Molln	25.20	152	*e*P		P	09 10 00.9	+2.5
	comp=Z,12nm,1.1s							
MOTA	Moosalm	25.27	157	*e*P		P	09 10 01.9	+2.8
	comp=Z,19nm,1.3s							
VYHS	Vyhne	25.33	145	*e*P		P	09 10 02.0	+2.5
WATA	Walderalm	25.34	157	P		P	09 10 01.9	+2.2
	comp=Z,14nm,1.1s							
SQTA	Sankt Quirin	25.40	157	*e*P		P	09 10 03.2	+2.9
	comp=Z,22nm,1.5s							
WTTA	Wattenberg	25.41	157	*e*P		P	09 10 03.5	+3.0
	comp=Z,26nm,1.3s							
AKASG	Malin Array Be	25.50	128	P		P	09 10 01.3	+0.3
	comp=Z,3.4nm,0.5s,baz=338,slow=9.9,SNR=12							
AKASG				LR		LR	09 19 43.8	
	comp=Z,310nm,19.1s,baz=310,slow=36							
AKASG	Malin Array Be	25.50	128	P		P	09 10 00.0	-1.0
AKBB	Malin Array Si	25.50	128	P		P	09 10 00.7	-0.3
AKBB				IAmb		IAmb	09 10 03.8	
	comp=Z,21nm,1.1s							
FETA	Feichten	25.54	158	*e*P		P	09 10 04.6	+3.0
	comp=Z,12nm,1.5s							
KOLS	Kolonicke sedl	25.57	140	*e*P		P	09 10 03.7	+2.0
DAVOX	Davos/Dischmat	25.68	160	LR		LR	09 18 58.3	
	comp=Z,216nm,19.5s,baz=3.5,slow=34							
KBA	Koelnbreinsper	25.82	154	*e*P		P	09 10 07.3	+3.2
	comp=Z,7.5nm,1.1s							
SENIN	Lac Senin/Sane	25.84	164	P		P	09 10 05.3	+1.0
TUE	Stuetta	25.93	160	P		P	09 10 03.9	-1.3
TUE				IAmb		IAmb	09 10 15.2	
	comp=Z,20nm,1.4s							
CTI	Castel Tesino	26.61	157	P		P	09 10 13.2	+2.0
CTI				IAmb		IAmb	09 10 17.1	
	comp=Z,32nm,1.7s							
ARU	Arti	29.21	89	LR		LR	09 21 45.7	
	comp=Z,192nm,20.2s,baz=318,slow=35							
MLR	Muntele Rosu	29.62	137	LR		LR	09 22 38.1	
	comp=Z,316nm,21.8s,baz=321,slow=37							
ESDC	Sonseca Array	32.07	182	P		P	09 11 00.1	+0.4
	comp=Z,1.3nm,1.0s,baz=4.1,slow=8.9,SNR=6.5							
ESDC				LR		LR	09 23 30.6	
	comp=Z,82nm,18.4s,baz=5.0,slow=36							
ESDC	Sonseca Array	32.07	182	P		P	09 10 59.8	+0.1
AKTO	Aktyubinsk	34.13	95	LR		LR	09 24 52.3	
	comp=Z,181nm,19.7s,baz=340,slow=36							
KBZ	Khabaz	35.57	117	LR		LR	09 25 52.2	
	comp=Z,127nm,18.8s,baz=352,slow=36							
BRVK	Borovoye	35.74	82	P		P	09 11 32.4	+1.1
BRVK				IAmb		IAmb	09 11 38.9	
	comp=Z,4.5nm,1.0s							
ABKAR	Akbulak array	35.77	94	P		P	09 11 31.9	+0.2
ABKAR				IAmb		IAmb	09 11 38.4	
	comp=Z,7.4nm,1.2s							
BR131	Keskin Array S	36.87	130	P		P	09 11 43.9	+2.6
BR131				IAmb		IAmb	09 11 44.3	
	comp=Z,12nm,1.2s							
BRTR	Keskin Array B	36.87	130	P		P	09 11 42.8	+1.5
	comp=Z,3.1nm,0.9s,baz=353,slow=8.8,SNR=6.1							
BRTR	Keskin Array B	36.87	130	P		P	09 11 43.6	+2.3
YKA	Yellowknife Ar	38.21	316	LR		LR	09 26 31.0	
	comp=Z,155nm,18.8s,baz=0.0,slow=34							
BMAR	Burnt Mountain	38.81	338	P		P	09 11 59.5	+2.2
MDT	Midelt	38.92	182	LR		LR	09 27 00.6	
	comp=Z,43nm,19.2s,baz=44,slow=35							
ZALV	Zalesovo Beam	39.40	69	P		P	09 12 04.0	+1.7
	comp=Z,0.4nm,0.3s,baz=342,slow=9.1,SNR=1.5							
ZALV				LR		LR	09 31 31.7	
	comp=Z,43nm,20.1s,baz=306,slow=41							
KURBB	Kurchatov Arra	40.41	76	P		P	09 12 11.9	+1.2
	comp=Z,1.3nm,0.8s,baz=331,slow=8.0,SNR=8.3							
KURBB				PP		PP	09 13 44.3	+0.9
	comp=Z,2.0nm,1.1s,baz=336,slow=10,SNR=4.8							
ILAR	Eielson Array	41.64	338	P		P	09 12 23.3	+2.6
	comp=Z,1.7nm,0.9s,baz=11,slow=7.0,SNR=13							
YAK	Yakutsk	42.63	31	LR		LR	09 30 27.5	
	comp=Z,51nm,18.4s,baz=259,slow=36							
KKAR	Karatay Array	44.59	89	P		P	09 12 46.4	+1.7
KKAR				IAmb		IAmb	09 12 47.9	
	comp=Z,7.9nm,1.2s							
MAKZ	Makanchi	44.85	76	⇓Pg		P	09 13 01.1	+14
	comp=Z,0.8nm,0.7s							
MAKZ				⇑Lg		Lg	09 13 34.8	
	comp=Z,0.7nm,0.6s							
MK31	Makanchi Array	44.96	76	⇓Pg		P	09 12 58.6	+11
	comp=Z,0.3nm,0.5s,baz=162,slow=15,SNR=5.9							
MK31				⇑Lg		Lg	09 13 31.7	
	comp=Z,0.1nm,0.2s,baz=155,slow=23,SNR=3.3							
MKAR	Makanchi Array	44.96	76	P		P	09 12 48.9	+1.2
	comp=Z,1.9nm,1.0s,baz=359,slow=7.2,SNR=4.8							
MKAR				LR		LR	09 33 03.6	
	comp=Z,72nm,18.9s,baz=321,slow=38							
GEYT	Alibeck	45.41	104	LR		LR	09 33 22.7	
	comp=Z,116nm,19.0s,baz=325,slow=38							
PDAR	Pinedale Array	54.91	300	P		P	09 14 04.1	+0.5
	comp=Z,0.5nm,0.8s,baz=57,slow=9.8,SNR=4.4							
TORD	Torodi Ar. Bea	58.56	175	P		P	09 14 29.0	-0.4
	comp=Z,1.5nm,0.8s,baz=356,slow=6.1,SNR=5.5							
MVCO	Mesa Verde	59.79	297	P		P	09 14 39.8	+1.7
PSUT	Pine Spring	60.02	302	P		P	09 14 42.5	+2.8
TXAR	Lajitas Array	65.76	290	P		P	09 15 18.7	+0.9
	comp=Z,0.8nm,1.0s,baz=49,slow=9.7,SNR=3.1							
ASAR	Alice Springs	126.16	51	PKP		PKiKP	09 23 35.6	+0.3
	comp=Z,0.2nm,0.8s,baz=353,slow=3.7,SNR=2.5							

IDC ***25*** *09:10:27.8±1.9,2˚.14N×126˚.82E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/54, mbtmp3.6/4, Error ellipse: s-maj=185.0km s-min=21.1km az=67.0*
DJA ***25*** *09:10:32.3±0.4,2˚.N±3˚×12˚.6E± ˚, h10km, M3.5/7, MLv3.5/7*
ISC 25 09:10:34.4±1.3, 1˚.84N±0˚.08×126˚.5E±0˚.2, h47km, n7, σ0:96/8, mb3.6/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
					Op	ISC		
SGSI	Sangihe	2.07	332	P		Pn	09 11 06.9	+0.2
SGSI				S		Sn	09 11 30.8	-0.6
GTOI	Gorontalo	3.69	251	P		Pn	09 11 29.1	+0.3
SANI	Sanana	3.90	188	P		Pn	09 11 30.9	-0.9
WRA	Warramunga Arr	22.97	161	P		P	09 15 36.3	+1.2
	0.7nm,0.5s,baz=341,slow=11,SNR=11							
ASAR	Alice Springs	26.36	165	P		P	09 16 07.5	+1.2
	0.4nm,0.5s,baz=346,slow=8.6,SNR=8.5							
MKAR	Makanchi Array	58.98	326	P		P	09 20 28.7	-0.5
	0.5nm,0.5s,baz=118,slow=7.6,SNR=5.7							
KURBB	Kurchatov Arra	63.20	328	P		P	09 20 57.1	-0.6
	0.6nm,0.6s,baz=132,slow=6.3,SNR=7.5							

IDC ***25*** *09:11:33.5±2.3, 11˚.33S×166˚.52E, h88km±17km, mb4.4/14, mb1 4.5/17, mb1mx4.0/58, mbtmp4.8/17, MS3.4/8, Ms1 3.4/8, ms1mx3.2/29, Error ellipse: s-maj=21.1km s-min=15.9km az=53.0*
BJI ***25*** *09:11:35.5±0.0, 11˚.59S×166˚.10E, h107km, mB5.1/19, mb4.7/25*
NEIC ***25*** *09:11:35.2±1.8, 11˚.33S±0˚.07×166˚.46E±0˚.08, h107km±7km, mb4.9/42, Error ellipse: s-maj=14.8km s-min=3.0km az=133.0*
GCMT ***25*** *09:11:37.2±0.4, 11˚.35S±0˚.03×166˚.31E±0˚.02, h123km±4km, MW5.0/74, Moment Tensor Solution. s20,c22; s74,c91; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr 1.24±.15; Mθθ -3.36±.16; Mϕϕ 2.12±.15; Mrθ 0.51±.13; Mθϕ -1.71±.16; Mϕr 1.34±.11; Best double couple: M₀ 3.64200×10¹⁶ NP1: ϕ₁ 296.00000°, δ61.00000°, λ164.00000°. NP2: ϕ₂ 34.00000°, δ76.00000°, λ29.00000°. Principal axes: T 3.2870, Plg30.0000°, Azm258.0000°; N 0.7100, Plg58.0000°, Azm57.0000°; P -3.9970, Plg10.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 09:11:34.9±0.6, 11˚.46S±0˚.07×166˚.51E±0˚.08, h100km, n106, σ1:92/7 103/8, mb4.8/44, 2C-1D, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
					Op	ISC		
HNR	Honiara	6.76	287	P		Pn	09 13 11.3	-0.2
	25nm,0.3s,baz=266,slow=3.5,SNR=5.5							
HNR				S		Sn	09 14 27.6	+0.5
	50nm,0.3s,baz=208,slow=18,SNR=2.3							
HNR	Honiara	6.76	287			Pn	09 13 11.2	-0.4
DZM	Mont Dzumac	10.55	180	*e*Pn		Pn	09 14 03.9	+0.7
	15nm,0.2s							
DZM				*e*Sn		Sn	09 15 53.9	-5.6
	19nm,0.3s							
DZM				*e*LR		LR	09 16 32.0	
	comp=Z,525nm,27.8s							
DZM	Mont Dzumac	10.55	180	P		Pn	09 14 05.3	+2.1
	6.1nm,0.3s,baz=330,slow=16,SNR=40							
DZM				LR		LR	09 16 46.7	
	comp=Z,147nm,18.9s,baz=20,slow=29							
DZM	Mont Dzumac	10.55	180			Pn	09 14 05.0	+1.8
KRVT	Keravat (AS076	16.00	295	P		P	09 15 15.7	-0.2
	2.1nm,0.3s,baz=51,slow=7.2,SNR=6.8							
KRVT				LR		LR	09 21 29.3	
	comp=Z,244nm,18.8s,baz=125,slow=37							
PMG	Port Moresby	19.14	274	P		P	09 15 50.5	+0.2
	0.7nm,0.3s,baz=77,slow=8.4,SNR=7.6							
PMG				LR		LR	09 22 28.6	
	comp=Z,245nm,20.3s,baz=79,slow=34							
PMG	Port Moresby	19.14	274	P		P	09 15 49.2	-1.2
PMG				IAmb		IAmb	09 15 52.3	
	comp=Z,46nm,1.0s							
EIDS	Eidsvold	20.11	224	P		P	09 16 01.6	+0.8
EIDS				IAmb		IAmb	09 16 04.1	
	comp=Z,46nm,1.0s							
MANU	Manus Island	21.17	295	P		P	09 16 10.5	-1.9
CTA	Charters Tower	21.28	244	P		P	09 16 14.1	+0.6
	comp=Z,26nm,0.9s,baz=69,slow=12,SNR=23							
CTAO	Charters Tower	21.28	244	P		P	09 16 13.9	+0.4
CTAO				IAmb		IAmb	09 16 15.3	
	comp=Z,35nm,0.9s							
COEN	Coen	22.89	261	P		P	09 16 29.6	-0.7
COEN				IAmb		IAmb	09 16 32.2	
	comp=Z,34nm,0.9s							
ARMA	Armidale	23.38	214	P		P	09 16 36.8	+1.8
ARMA				IAmb		IAmb	09 16 39.5	
	comp=Z,29nm,1.1s							
URZ	Urewera	28.32	162	P		P	09 17 20.6	+1.4
	comp=Z,6.6nm,0.9s,baz=273,slow=2.9,SNR=5.8							
URZ				LR		LR	09 26 50.3	
	comp=Z,66nm,20.4s,baz=31,slow=32							
URZ	Urewera	28.32	162	P		P	09 17 22.4	+3.2
URZ				IAmb		IAmb	09 17 24.6	
	comp=Z,29nm,1.3s							
BKZ	Black Stump Fm	28.99	164	P		P	09 17 25.9	+0.8
SMPI	Sarmi	29.13	287	P		P	09 17 26.8	+0.1
	comp=Z,16nm,1.2s							
H11S2	WAKE ISLAND Hy	29.76	0	T		T	09 48 08.8	
	baz=181,slow=76,SNR=11							
H11S3	WAKE ISLAND Hy	29.77	0	T		T	09 48 32.2	
	baz=181,slow=76,SNR=7.5							
H11S1	WAKE ISLAND Hy	29.78	0	T		T	09 48 13.3	
	baz=181,slow=76,SNR=10							
BFZ	Birch Farm	30.35	165	P		P	09 17 38.1	+1.0
TUWZ	Tuamarina	30.56	169	P		P	09 17 39.6	+0.7
STKA	Stephens Creek	30.66	225	P		P	09 17 40.9	+0.8
	comp=Z,5.2nm,0.8s,baz=23,slow=8.6,SNR=11							
STKA				LR		LR	09 30 11.8	
	comp=Z,39nm,18.4s,baz=40,slow=36							
STKA	Stephens Creek	30.66	225	P		P	09 17 40.4	+0.3
THZ	Tophouse	30.70	171	P		P	09 17 41.5	+1.2
THZ				IAmb		IAmb	09 17 45.1	
	comp=Z,17nm,0.9s							
MSWZ	Moikau Station	30.81	167	P		P	09 17 40.9	-0.3
PLWZ	Palliser	30.96	167	P		P	09 17 42.8	+0.2
KHZ	Kahutara	31.44	170	P		P	09 17 47.6	+0.9
KHZ				IAmb		IAmb	09 18 04.6	
	comp=Z,39nm,1.3s							
LTZ	Lake Taylor	31.61	172	P		P	09 17 49.1	+0.9
WR0	Warramunga Arr	31.86	251	P		P	09 17 49.7	-1.1
WR0				IAmb		IAmb	09 17 51.0	
	comp=Z,14nm,0.9s							
WB0	Warramunga Arr	31.97	251	P		P	09 17 50.8	-0.8
WB2	Warramunga Arr	32.04	251	P		P	09 17 51.3	-1.0
WB2				IAmb		IAmb	09 17 52.5	
	comp=Z,22nm,0.9s							
WRAB	Tennant Creek	32.04	251	P		P	09 17 51.4	-0.8
WRAB				IAmb		IAmb	09 17 52.4	
	comp=Z,20nm,0.9s							
WRA	Warramunga Arr	32.05	251	P		P	09 17 51.5	-0.9
	comp=Z,17nm,0.8s,baz=81,slow=9.0,SNR=67							
WRA				ScP		ScP	09 24 17.2	+2.7
	comp=Z,1.3nm,1.0s,baz=81,slow=3.4,SNR=6.8							
WRA				LR		LR	09 31 12.3	
	comp=Z,24nm,18.6s,baz

KMI					pmax	pmax			
	comp=Z,20nm,0.5s								
KMI					pmax	pmax			
	comp=Z,150nm,4.6s								
PAYA	**Payao**	**72.42**	**295**	P	**P**		**09 22 52.5**	**+1.6**	
HHC	**Hu-ho-hao-te**	**72.63**	**319**	*eP*	**P**		**09 22 52.5**	**+0.7**	
HHC					pmax	pmax			
	comp=Z,12nm,0.9s								
HHC					pmax	pmax			
	comp=Z,110nm,7.1s								
CM35	**Chiang Mai Arr**	**72.84**	**294**	P	**P**		**09 22 55.0**	**+1.6**	
CM36	**Chiang Mai Arr**	**72.84**	**294**	P	**P**		**09 22 54.0**	**+0.6**	
CM04	**Chiang Mai Arr**	**72.91**	**293**	P	**P**		**09 22 55.0**	**+1.2**	
CM01	**Chiang Mai Arr**	**72.94**	**293**	P	**P**		**09 22 55.0**	**+1.1**	
CM05	**Chiang Mai Arr**	**72.94**	**293**	P	**P**		**09 22 55.0**	**+1.0**	
CM02	**Chiang Mai Arr**	**72.95**	**293**	P	**P**		**09 22 55.1**	**+1.1**	
CM31	**Chiang Mai Arr**	**72.96**	**293**	P	**P**		**09 22 53.6**	**-0.5**	
CMAR	**Chiang Mai Arr**	**72.96**	**293**	P	**P**		**09 22 54.5**	**+0.4**	
	comp=Z,3.4nm,0.8s,baz=115,slow=4.3,SNR=18								
CMAR	**Chiang Mai Arr**	**72.96**	**293**	P	**P**		**09 22 53.8**	**-0.3**	
CM15	**Chiang Mai Arr**	**72.98**	**293**	P	**P**		**09 22 55.8**	**+1.6**	
CM13	**Chiang Mai Arr**	**72.98**	**293**	P	**P**		**09 22 55.3**	**+1.1**	
CM33	**Chiang Mai Arr**	**73.07**	**294**	P	**P**		**09 22 56.0**	**+1.2**	
CHTO	**Chiang Mai**	**73.08**	**294**	P	**P**		**09 22 52.7**	**-2.1**	
CD2	**Chengdu**	**73.45**	**307**	*eP*	**P**		**09 22 57.5**	**+0.7**	
LZH	**Lanzhou**	**75.59**	**312**	*eP*	**P**		**09 23 10.0**	**+0.8**	
LZH				pP	pP		09 23 38.0	+3.7	
LZH				sP	sP		09 23 50.0	+5.0	
LZH				pmax	pmax				
	comp=Z,19nm,1.2s								
LZH				LR	LR				
	comp=Z,160nm,11.9s								
LZH				LR	LR				
	comp=Z,220nm,12.5s								
LZH				LR	LR				
	comp=Z,160nm,13.6s								
QSPA	**South Pole Qui**	**78.55**	**180**	P	**P**		**09 23 26.6**	**+1.4**	
SONM	**Songino Array**	**79.44**	**324**	P	**P**		**09 23 29.7**	**-0.7**	
	comp=Z,1.5nm,1.0s,baz=134,slow=8.6,SNR=4.6								
SONM				LR	LR		09 59 11.1		
	comp=Z,27nm,18.1s,baz=40,slow=36								
SONM	**Songino Array**	**79.44**	**324**	P	**P**		**09 23 29.8**	**-0.5**	
GTA	**Gaotai**	**79.88**	**314**	⇓*P*	**P**		**09 23 33.8**	**+0.9**	
GTA				pP	pP		09 24 02.8	+4.5	
GTA				sP	sP		09 24 15.3	+6.4	
GTA				pmax	pmax				
	comp=Z,7.0nm,1.2s								
GTA				pmax	pmax				
	comp=Z,150nm,7.1s								
GTA				LR	LR				
	comp=Z,93nm,16.7s								
GTA				LR	LR				
	comp=Z,120nm,16.4s								
GTA				LR	LR				
	comp=Z,89nm,17.1s								
ILAR	**Eielson Array**	**83.67**	**18**	P	**P**		**09 23 51.0**	**-1.0**	
	comp=Z,2.0nm,1.1s,baz=229,slow=5.5,SNR=7.7								
ILAR	**Eielson Array**	**83.67**	**18**	P	**P**		**09 23 50.3**	**-1.8**	
AFDM	**Forest Hills D**	**83.92**	**48**	P	**P**		**09 23 55.2**	**+1.3**	
BMAR	**Burnt Mountain**	**86.18**	**17**	P	**P**		**09 24 03.0**	**-1.6**	
WMQ	**Urumqi**	**89.92**	**315**	*eP*	**P**		**09 24 23.8**	**+0.8**	
WMQ				pmax	pmax				
	comp=Z,15nm,0.7s								
WMQ				pmax	pmax				
	comp=Z,190nm,5.7s								
WMQ				LR	LR				
	comp=Z,420nm,15.3s								
WMQ				LR	LR				
	comp=Z,220nm,23.7s								
WMQ				LR	LR				
	comp=Z,170nm,22.3s								
SYO	**Syowa Base**	**91.61**	**197**	⇑*e*PP	PP		09 28 09.2	-0.1	
MKAR	**Makanchi Array**	**94.33**	**317**	P	**P**		**09 24 42.5**	**-0.8**	
	comp=Z,2.2nm,0.8s,baz=100,slow=5.4,SNR=12								
MKAR	**Makanchi Array**	**94.33**	**317**	P	**P**		**09 24 41.9**	**-1.4**	
RWWY	**Rawlins**	**94.77**	**49**	P	**P**		**09 24 42.7**	**-3.1**	

IDC 25 09:15:16.1±1.4, 1°79.N×125°74.E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/52, mbtmp3.8/5, MS4.7/1, Ms1 4.7/1, ms1mx2.7/42, Error ellipse: s-maj=163.9km s-min=18.2km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.19**	**159**	P	P	09 20 24.5	-0.2
	1.1nm,0.4s,baz=337,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.52**	**163**	P	P	09 20 56.5	+0.7
	0.3nm,0.6s,baz=347,slow=9.2,SNR=5.2						
HNR	**Honiara**	**35.85**	**109**	LR	LR	09 38 45.0	
	comp=Z,1μm,18.7s,baz=310,slow=39						
STKA	**Stephens Creek**	**36.71**	**157**	P	P	09 22 24.7	-0.4
	2.3nm,0.5s,baz=340,slow=6.6,SNR=7.4						
MKAR	**Makanchi Array**	**58.59**	**326**	P	P	09 25 15.0	0.0
	0.6nm,0.4s,baz=118,slow=7.9,SNR=12						
KURBB	**Kurchatov Arra**	**62.84**	**328**	P	P	09 25 43.6	-0.2
	0.6nm,0.4s,baz=130,slow=6.1,SNR=14						

*IDC **25** 09:18:38.8±3.8, 6°.48N×126°.36E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/54, mbtmp3.5/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/26, Error ellipse: s-maj=122.8km s-min=10.2km az=47.0*

*MAN **25** 09:18:43.8, 6°.54N×126°.06E, h35km, mb4.3, ML3.2, MS2.9*

ISC 25 09:18:44.3±1.0, 6°.51N±0°.05×126°.08E±0°.07, h49km±10km, n12, σ1°33/16, mb3.3/4, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.47**	**22**	*eP*	**Pn**	**09 18 54.9**	**-0.3**
MATI				*eS*	**Sn**	**09 19 02.6**	**-0.4**
DDMP	**Don Marcelino,**	**0.54**	**222**	*eP*	**Pn**	**09 18 56.8**	**+0.8**
DDMP				*eS*	**Sn**	**09 19 04.7**	**+0.4**
DAV	**Davao City (W)**	**0.75**	**319**	Pg	**Pn**	**09 18 58.7**	**+0.1**
	65nm,0.3s,baz=242,slow=2.2,SNR=9.7						
DAV				Lg	Lg	09 19 09.9	
	82nm,0.3s,baz=264,slow=20,SNR=21						
KCP	**Kidapawan**	**1.10**	**297**	⇓*iP*	**Pn**	**09 19 03.1**	**-0.4**
KCP				*i*S	**Sn**	**09 19 16.7**	**-0.9**
SKMP	**Bagumbayan, Su**	**1.52**	**271**	*eP*	**Pn**	**09 19 07.8**	**-1.3**
BUKP	**Musuan**	**1.69**	**324**	*eP*	**Pn**	**09 19 10.5**	**-1.1**
BUKP				*eS*	**Sn**	**09 19 31.4**	**-0.7**
CGP	**Cagayan de Oro**	**2.37**	**325**	⇓*eP*	**Pn**	**09 19 23.3**	**+2.6**
CGP				*eS*	**Sn**	**09 19 50.4**	**+1.7**
GUMO	**Guam**	**19.79**	**68**	LR	LR	09 29 50.5	
	comp=Z,47nm,20.5s,baz=179,slow=34						
FITZ	**Fitzroy Crossi**	**24.45**	**181**	P	**P**	**09 24 00.8**	**+2.1**
	0.8nm,0.7s,baz=11,slow=10,SNR=1.7						
WRA	**Warramunga Arr**	**27.51**	**163**	P	**P**	**09 24 26.0**	**-0.4**
	0.2nm,0.5s,baz=343,slow=10,SNR=1.5						
ASAR	**Alice Springs**	**30.95**	**166**	P	**P**	**09 24 56.9**	**-0.1**
	0.4nm,0.7s,baz=337,slow=7.0,SNR=9.9						
STKA	**Stephens Creek**	**40.94**	**160**	P	**P**	**09 26 20.9**	**-1.4**
	1.6nm,0.9s,baz=330,slow=8.1,SNR=2.9						

*GCMT **25** 09:18:59.0±0.4, 25°.86N±0°.05×44°.94W±0°.03, h12km, MW4.8/73, Moment Tensor Solution. s15,c15; s73,c88; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-1.22±.06; Mθθ0.07±.08; Mϕϕ1.15±.05; Mrθ-1.43±.30; Mϕθ0.09±.05; Mϕr-0.49±.24; Best double couple: Mo1.81100×10^16^ NP1:ϕs48.00000°, δ72.00000°, λ-67.00000°. Principal axes: T 1.4390, Plg23.0000°, Azm120.0000°; N 0.7450, Plg22.0000°, Azm220.0000°; P -2.1830, Plg57.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 25 09:18:55.6±2.8, 26°.04N×44°.90W, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.5/55, mbtmp3.7/4, MS3.7/28, Ms1 3.7/28, ms1mx3.6/50 Error ellipse: s-maj=100.8km s-min=30.8km az=19.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**22.09**	**201**	LR	LR	09 30 06.8	
	comp=Z,110nm,20.6s,baz=47,slow=30						
SCHQ	**Schefferville**	**32.97**	**337**	LR	LR	09 37 42.2	
	comp=Z,71nm,21.3s,baz=108,slow=34						
SADO	**Sadowa**	**33.26**	**313**	LR	LR	09 37 06.5	
	comp=Z,243nm,19.9s,baz=134,slow=33						
ESDC	**Sonseca Array**	**36.67**	**58**	LR	LR	09 38 05.7	
	comp=Z,128nm,18.6s,baz=5.0,slow=31						
BDFB	**Brasilia**	**41.54**	**185**	LR	LR	09 42 21.3	
	comp=Z,69nm,19.7s,baz=309,slow=34						
H10N2	**ASCENSION HYDR**	**44.79**	**135**	T	T	10 14 57.2	
	baz=319,slow=75,SNR=180						
H10N3	**ASCENSION HYDR**	**44.79**	**135**	T	T	10 15 07.9	
	baz=319,slow=75,SNR=100						
H10N1	**ASCENSION HYDR**	**44.8**	**135**	T	T	10 14 54.0	
	baz=319,slow=75,SNR=278						
TORD	**Torodi Ar. Bea**	**45.50**	**97**	P	P	09 27 17.1	0.0
	0.7nm,0.8s,baz=294,slow=9.7,SNR=4.0						
TORD				LR	LR	09 44 43.0	
	comp=Z,166nm,19.9s,baz=310,slow=34						
ULM	**Lac du Bonnet**	**45.70**	**316**	LR	LR	09 44 16.3	
	comp=Z,129nm,20.7s,baz=118,slow=33						
KEST	**Kesra**	**47.04**	**64**	LR	LR	09 46 14.4	
	comp=Z,69nm,18.2s,baz=276,slow=35						
DAVOX	**Davos/Dischmat**	**47.65**	**49**	LR	LR	09 44 01.4	
	comp=Z,139nm,18.4s,baz=265,slow=32						
LPAZ	**La Paz**	**47.75**	**211**	LR	LR	09 47 20.7	
	comp=Z,59nm,19.6s,baz=18,slow=36						
JMIC	**Jan Mayen**	**49.48**	**15**	LR	LR	09 42 33.0	
	comp=Z,28nm,20.2s,baz=120,slow=29						
GERES	**GERESS Array B**	**50.41**	**47**	LR	LR	09 45 49.2	
	comp=Z,90nm,18.6s,baz=305,slow=32						
NOA	**NORSAR Array B**	**51.28**	**31**	LR	LR	09 46 29.4	
	comp=Z,85nm,18.1s,baz=260,slow=32						
HFS	**Hagfors**	**52.23**	**33**	LR	LR	09 45 37.2	
	comp=Z,106nm,21.6s,baz=248,slow=31						
VRAC	**Vranov**	**52.33**	**47**	LR	LR	09 47 41.2	
	comp=Z,118nm,18.1s,baz=271,slow=33						
CPUP	**Villa Florida**	**53.42**	**194**	LR	LR	09 48 54.4	
	comp=Z,30nm,21.0s,baz=34,slow=34						
PDAR	**Pinedale Array**	**54.62**	**305**	P	P	09 28 26.2	-0.2
	0.6nm,0.8s,baz=95,slow=8.9,SNR=4.7						
PDAR				LR	LR	09 50 01.0	
	comp=Z,118nm,20.0s,baz=120,slow=34						
YKA	**Yellowknife Ar**	**57.89**	**329**	LR	LR	09 52 19.4	
	comp=Z,106nm,21.7s,baz=0.0,slow=35						
FINES	**FINESS Array B**	**58.42**	**32**	LR	LR	09 52 41.9	
	comp=Z,78nm,18.1s,baz=259,slow=35						
SPITS	**Spitsbergen Ar**	**58.91**	**12**	LR	LR	09 47 40.1	
	comp=Z,39nm,20.1s,baz=245,slow=29						
AKASG	**Malin Array Be**	**60.44**	**45**	P	P	09 29 06.7	-0.3
	0.8nm,0.5s,baz=277,slow=5.8,SNR=1.8						
AKASG				LR	LR	09 52 09.4	
	comp=Z,40nm,18.2s,baz=305,slow=33						
YBH	**Yreka Blue Hor**	**64.42**	**306**	LR	LR	09 55 40.9	
	comp=Z,110nm,19.4s,baz=71,slow=34						
BRTR	**Keskin Array B**	**65.44**	**56**	LR	LR	09 55 10.9	
	comp=Z,22nm,19.3s,baz=299,slow=33						
PLCA	**Paso Flores**	**70.58**	**200**	LR	LR	10 01 45.0	
	comp=Z,31nm,18.1s,baz=325,slow=36						
ILAR	**Eielson Array**	**71.68**	**334**	P	P	09 30 19.2	+0.2
	1.0nm,0.9s,baz=75,slow=4.5,SNR=8.0						
ILAR				LR	LR	10 02 03.7	
	comp=Z,46nm,18.9s,baz=82,slow=36						
BOSA	**Boshof**	**86.53**	**124**	LR	LR	10 03 05.5	
	comp=Z,48nm,19.3s,baz=1.5,slow=31						
ZALV	**Zalesovo Beam**	**89.30**	**27**	LR	LR	10 09 17.9	
	comp=Z,36nm,18.9s,baz=40,slow=34						
PETK	**Petropavlovsk-**	**98.77**	**346**	LR	LR	10 20 45.9	
	comp=Z,52nm,18.1s,baz=40,slow=38						

*IDC **25** 09:19:14.9±0.9, 35°.07N×111°.74W, h0km, mb1 3.2/5, mb1mx3.2/52, mbtmp2.9/5, ML3.3/5, Error ellipse: s-maj=13.6km s-min=10.3km az=15.0*

*NEIC **25** 09:19:18.2±1.5, 34°.96N±0°.02×111°.77W±0°.05, h13km±6km, ML3.5/109, Error ellipse: s-maj=6.5km s-min=2.2km az=82.0*

ISC 25 09:19:17.1±0.9, 34°.98N±0°.04×111°.80W±0°.04, h10km, n73, σ1°26/76, Eastern Arizona

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
X16A	**Lo Mia Camp, P**	**0.64**	**152**		**Pg**	**09 19 28.6**	**-0.9**
X16A				Sg	**Sg**	**09 19 36.9**	**-0.9**
Y14A	**Wickenburg**	**1.44**	**224**		**Pb**	**09 19 44.7**	**+0.6**
Y14A				Sg	**Sg**	**09 20 03.7**	**+0.2**
U15A	**North Rim**	**1.50**	**345**		**Pn**	**09 19 43.0**	**-1.3**
U15A				Sn	**Sn**	**09 20 01.1**	**-2.9**
U15A				IAML		09 20 05.8	
	comp=E,406nm,0.6s						
U15A				IAML		09 20 05.9	
	comp=N,346nm,0.6s						
X18A	**Snowflake**	**1.59**	**106**		**Pn**	**09 19 44.2**	**-1.2**
X18A				IAML		09 20 12.2	
	comp=N,238nm,0.8s						
X18A				IAML		09 20 12.4	
	comp=E,317nm,0.8s						
W18A	**Petrified Fore**	**1.70**	**85**	Pn	**Pn**	**09 19 45.8**	**-1.2**
W18A				IAML		09 20 10.5	
	comp=N,329nm,0.6s						
W18A				IAML		09 20 11.1	
	comp=E,453nm,0.7s						
W13A	**Hualapai Mount**	**1.72**	**274**	Pn	**Pn**	**09 19 47.7**	**+0.4**
KNB	**Kanab**	**2.19**	**338**	Pn	**Pn**	**09 19 54.5**	**+0.8**
LCMT	**Little Creek M**	**2.34**	**330**	Pn	**Pn**	**09 19 56.2**	**+0.5**
PKCU	**Pink Cliffs**	**2.49**	**351**	Pn	**Pn**	**09 19 58.5**	**+0.5**
TUC	**Tucson**	**2.80**	**162**	Pn	**Pn**	**09 20 02.2**	**+0.2**
SZCU	**Shurtz Canyon**	**2.81**	**339**	Pn	**Pn**	**09 20 02.0**	**-0.3**
CCUT	**Cedar City**	**2.86**	**334**	Pn	**Pn**	**09 20 03.5**	**+0.6**
MTPU	**Mount Pierson**	**3.07**	**354**	Pn	**Pn**	**09 20 05.9**	**0.0**
SHPR	**Sheep Range**	**3.13**	**300**	Pn	**Pn**	**09 20 07.4**	**+0.8**
214A	**Organ Pipe Nat**	**3.14**	**196**	Pn	**Pn**	**09 20 06.3**	**-0.3**
214A				IAML		09 21 03.6	
	comp=E,43nm,1.0s						
MVCO	**Mesa Verde**	**3.47**	**49**	Pn	**Pn**	**09 20 11.5**	**+0.1**
MVCO				IAML		09 21 06.2	
MVCO				IAML		09 21 14.3	
	comp=E,130nm,0.6s						
	comp=E,174nm,0.6s						
MVU	**Marysvale**	**3.53**	**355**	Pn	**Pn**	**09 20 12.9**	**+0.8**
MSU	**Marysvale**	**3.54**	**355**	Pn	**Pn**	**09 20 13.6**	**+1.3**
PRN	**Pahroc Range**	**3.57**	**314**	Pn	**Pn**	**09 20 13.5**	**+0.8**
PRN				IAML		09 21 07.2	
	comp=N,96nm,0.9s						
PRN				IAML		09 21 17.6	
	comp=E,106nm,0.9s						
PIX	**Pinacate**	**3.69**	**203**	Pn	**Pn**	**09 20 15.1**	**+1.0**
PV05	**Paradox Valley**	**3.77**	**34**	Pn	**Pn**	**09 20 17.3**	**+1.7**
PSUT	**Pine Spring**	**3.91**	**336**	Pn	**Pn**	**09 20 19.1**	**+1.7**
PV13	**Radium Mtn., P**	**3.97**	**36**	Pn	**Pn**	**09 20 18.9**	**+0.6**
PV18	**Skein Mesa, Pa**	**4.00**	**35**	Pn	**Pn**	**09 20 20.5**	**+1.9**
PV18				IAML		09 21 21.9	
	comp=E,100nm,0.8s						
PV18				IAML		09 21 28.7	
	comp=N,104nm,0.7s						
PV17	**East Wray Mesa**	**4.00**	**34**	Pn	**Pn**	**09 20 20.1**	**+1.5**
PV17				IAML		09 21 24.2	
	comp=N,230nm,0.8s						
PV19	**Morning Glory**	**4.02**	**33**	Pn	**Pn**	**09 20 20.5**	**+1.6**
PV19				IAML		09 21 22.3	
	comp=N,125nm,0.7s						
PV03	**Paradox Valley**	**4.03**	**35**	Pn	**Pn**	**09 20 20.0**	**+0.9**
PV03				IAML		09 21 24.8	
	comp=E,109nm,0.6s						
PV03				IAML		09 21 27.9	
	comp=N,125nm,0.7s						
PV10	**Paradox Valley**	**4.05**	**32**	Pn	**Pn**	**09 20 20.1**	**+0.8**
PV10				IAML		09 21 21.3	
	comp=N,179nm,0.6s						
PV16	**Nyswonger Mesa**	**4.05**	**34**	Pn	**Pn**	**09 20 21.0**	**+1.7**
PV20	**West Nyswonger**	**4.05**	**33**	Pn	**Pn**	**09 20 20.7**	**+1.4**
PV02	**Paradox Valley**	**4.05**	**37**	Pn	**Pn**	**09 20 20.7**	**+1.4**
PV02				IAML		09 21 22.7	
	comp=E,193nm,0.8s						
PV14	**Lion Creek, Pa**	**4.05**	**33**	Pn	**Pn**	**09 20 20.7**	**+1.4**
PV14				IAML		09 21 25.3	
	comp=E,208nm,0.5s						
PV11	**David Mesa, Pa**	**4.06**	**35**		**Pn**	**09 20 20.3**	**+0.9**
LENM	**Lemitar**	**4.06**	**100**	Pn	**Pn**	**09 20 18.9**	**-0.5**
PV01	**Paradox Valley**	**4.08**	**39**	Pn	**Pn**	**09 20 21.1**	**+1.4**
PV01				IAML		09 21 23.4	
	comp=N,92nm,0.9s						
PV01				IAML		09 21 24.6	
	comp=E,150nm,0.6s						
PFO	**Pinyon Flats O**	**4.09**	**252**	Pn	**Pn**	**09 20 21.0**	**+1.2**
	comp=E,0.6nm,0.3s,baz=54,slow=14,SNR=13						
PFO				Lg	Lg	09 21 25.8	
	comp=E,0.3nm,0.3s,baz=142,slow=22,SNR=2.1						
PFO	**Pinyon Flats O**	**4.09**	**252**	Pn	**Pn**	**09 20 21.1**	**+1.2**
PV12	**Saucer Basin,**	**4.11**	**35**		**Pn**	**09 20 21.6**	**+1.5**
TPNV	**Topopah Spring**	**4.11**	**300**		**Pn**	**09 20 21.9**	**+1.8**
TPNV				IAML		09 21 28.6	
	comp=E,24nm,0.7s						
TPNV				IAML		09 21 32.7	
	comp=E,19nm,1.2s						
GSC	**Goldstone, Bar**	**4.12**	**276**	Pn	**Pn**	**09 20 21.0**	**+0.9**
GSC				IAML		09 21 32.7	
	comp=N,19nm,0.9s						
GSC				IAML		09 21 32.7	
	comp=E,32nm,0.7s						
PV04	**Paradox Valley**	**4.12**	**33**		**Pn**	**09 20 21.9**	**+1.7**
PV23	**Carpenter Ridg**	**4.12**	**32**		**Pn**	**09 20 21.8**	**+1.4**
PV23				IAML		09 22 02.8	
	comp=N,22nm,1.0s						
121A	**Cookes Peak, D**	**4.14**	**125**	Pn	**Pn**	**09 20 21.4**	**+0.8**
121A				IAML		09 21 32.4	
	comp=E,91nm,0.9s						
121A				IAML		09 21 39.3	
	comp=N,63nm,0.8s						
319A	**Douglas**	**4.17**	**149**		**Pn**	**09 20 21.9**	**+1.1**
319A				IAML		09 21 35.3	
	comp=N,71nm,0.9s						
319A				IAML		09 21 40.9	
	comp=E,60nm,1.0s						
SRU	**San Rafael Swe**	**4.24**	**14**		**Pn**	**09 20 22.9**	**+1.0**
PV07	**Paradox Valley**	**4.28**	**35**		**Pn**	**09 20 23.4**	**+1.0**
PV07				IAML		09 22 32.1	
	comp=E,91nm,0.7s						
PV07				IAML		09 21 37.2	
	comp=N,68nm,0.7s						
PV15	**Paradox Valley**	**4.28**	**38**	Pn	**Pn**	**09 20 24.5**	**+1.9**
PV15				IAML		09 21 32.4	
	comp=E,189nm,0.6s						
PV22	**Blue Mesa, Par**	**4.29**	**33**		**Pn**	**09 20 23.6**	**+1.0**
PV22				IAML		09 21 30.3	
	comp=N,104nm,0.7s						
PV22				IAML		09 21 32.9	
	comp=E,117nm,0.8s						
TMUT	**Trail Mountain**	**4.33**	**6**		**Pn**	**09 20 24.7**	**+1.5**
BNM	**Barren Site**	**4.34**	**100**		**Pn**	**09 20 24.2**	**+0.8**
ANMO	**Albuquerque**	**4.38**	**89**	Pn	**Pn**	**09 20 24.5**	**+0.6**
	comp=E,0.8nm,0.3s,baz=277,slow=12,SNR=22						
ANMO				Pg	**Pb**	**09 20 35.5**	**+1.2**
	comp=E,2.7nm,0.3s,baz=273,slow=14,SNR=19						
ANMO				Lg	Lg	09 21 29.5	
	comp=E,2.4nm,0.3s,baz=82,slow=13,SNR=9.8						
ANMO	**Albuquerque**	**4.38**	**89**		**Pn**	**09 20 24.7**	**+0.8**
SPR3	**Spring Creek 3**	**4.49**	**334**	Pn	**Pn**	**09 20 25.1**	**-0.4**
SPR3				IAML		09 21 35.5	
	comp=N,18nm,0.8s						
P17A	**Butcher Ranch,**	**4.56**	**10**		**Pn**	**09 20 27.9**	**+1.6**
BAR	**Barrett**	**4.66**	**242**	Pn	**Pn**	**09 20 29.8**	**+2.2**
S22A	**4UR Ranch, Cre**	**4.86**	**54**		**Pn**	**09 20 31.2**	**+0.6**
S22A				IAML		09 21 47.5	
	comp=N,27nm,0.5s						
S22A				IAML		09 21 56.0	
	comp=E,23nm,1.2s						
MPU	**Maple Canyon**	**5.02**	**1**	Pn	**Pn**	**09 20 34.4**	**+1.7**
CCX	**Cicese**	**5.12**	**234**	Pn	**Pn**	**09 20 36.2**	**+2.3**
CCX				IAML		09 21 22.0	
	comp=N,39nm,0.1s						
CCX				IAML		09 21 25.4	
	comp=E,23nm,0.1s						
ISA	**Isabella, Lake**	**5.50**	**279**		**Pn**	**09 20 40.3**	**+1.1**
SMCO	**Snowmass**	**5.69**	**41**	Pn	**Pn**	**09 20 43.0**	**+1.0**
CTU	**Camp Tracy**	**5.70**	**0**	Pn	**Pn**	**09 20 42.9**	**+1.0**
SDCO	**Great Sand Dun**	**5.78**	**60**	Pn	**Pn**	**09 20 44.2**	**+1.0**
RDMU	**Red Mountain**	**5.85**	**17**		**Pn**	**09 20 45.2**	**+1.1**
O20A	**White River Ci**	**5.87**	**28**		**Pn**	**09 20 45.5**	**+1.3**
NV11	**Mina Array Sit**	**6.16**	**306**		**Pn**	**09 20 49.3**	**+1.1**
NVAR	**Mina Array Bea**	**6.26**	**305**	Pn	**Pn**	**09 20 51.0**	**+1.4**
	comp=E,0.5nm,0.3s,baz=120,slow=14,SNR=12						
NVAR				Lg	Lg	09 22 32.8	
	comp=E,0.4nm,0.3s,baz=121,slow=32,SNR=5.7						
NVAR	**Mina Array Bea**	**6.26**	**305**	Pn	**Pn**	**09 20 51.4**	**+1.8**
LHV	**Little Huntoon**	**6.30**	**303**	Pn	**Pn**	**09 20 52.7**	**+2.7**
ELK	**Elko**	**6.36**	**336**	Lg	Lg	09 22 32.1	
	comp=E,0.2nm,0.3s,baz=216,slow=20,SNR=8.1						
RWWY	**Rawlins**	**7.60**	**27**	Pn	**Pn**	**09 21 07.8**	**-0.3**
PDAR	**Pinedale Array**	**7.96**	**12**	Pn	**Pn**	**09 21 12.9**	**-0.2**
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=4.8						
PDAR				Lg	Lg	09 23 23.1	
	comp=E,0.0nm,0.3s,baz=190,slow=25,SNR=2.4						
PDAR	**Pinedale Array**	**7.96**	**12**		**Pn**	**09 21 12.7**	**-0.4**
TXAR	**Lajitas Array**	**8.90**	**127**	Pn	**Pn**	**09 21 26.7**	**+0.9**
	comp=E,0.0nm,0.3s,baz=284,slow=15,SNR=1.1						
TXAR				Pg	Pg	09 21 37.4	-30
	comp=E,0.1nm,0.3s,baz=311,slow=14,SNR=6.4						
TXAR				Lg	Lg	09 23 56.7	
	comp=E,0.1nm,0.3s,baz=318,slow=26,SNR=8.5						

*JMA **25** 09:25:27.3±0.2, 24°.69N×121°.94E, h71km±3km, M1.9*

*TAP **25** 09:25:27.2, 24°.66N×121°.89E, h74km, ML2.9, B*

ISC 25 09:25:27.3±1.4, 24°.67N±0°.03×121°.94E±0°.03, h74km±7km, n57, σ0°67/107, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.11**	**235**	P	**Pn**	**09 25 38.9**	**+0.8**

NNSH				*e*S		**Sn**	**09 25 51.1**	**-0.4**
	baz=236								
NNS	**Nan Shan**	**0.57**	**246**	*i* P		**Pn**	**09 25 41.4**	**+0.1**
	baz=244								
NNS				S		**Sn**	**09 25 51.3**	**-0.3**
	baz=244								
YM01	**YM01**	**0.58**	**324**	*e*P		**Pn**	**09 25 41.2**	**-0.2**
	baz=334								
YM01				S		**Sn**	**09 25 51.6**	**-0.1**
	baz=334								
NACB	**Ninganchiao**	**0.59**	**213**	P		**Pn**	**09 25 41.7**	**+0.4**
	baz=209								
NACB				*e*S		**Sn**	**09 25 51.7**	**0.0**
	baz=209								
YM11	**YM11**	**0.60**	**326**	*e*P		**Pn**	**09 25 41.9**	**+0.3**
	baz=336								
YM11				*e*S		**Sn**	**09 25 52.1**	**+0.1**
	baz=336								
YM05	**YM05**	**0.60**	**325**	*e*P		**Pn**	**09 25 41.3**	**-0.3**
	baz=334								
YM05				*e*S		**Sn**	**09 25 52.5**	**+0.4**
	baz=334								
YM04	**YM04**	**0.61**	**323**	P		**Pn**	**09 25 41.3**	**-0.2**
	baz=333								
YM04				*e*S		**Sn**	**09 25 52.1**	**0.0**
	baz=333								
YM08	**YM08**	**0.61**	**328**	*e*P		**Pn**	**09 25 41.1**	**-0.4**
	baz=338								
YM08				*e*S		**Sn**	**09 25 50.7**	**-1.4**
	baz=338								
ETLH	**Xiulin Townshi**	**0.62**	**222**	*e*P		**Pn**	**09 25 42.3**	**+0.5**
	baz=227								
ETLH				S		**Sn**	**09 25 52.1**	**-0.4**
	baz=227								
TWS1	**Kuangyinshan**	**0.64**	**312**	P		**Pn**	**09 25 41.8**	**-0.1**
	baz=324								
TWS1				S		**Sn**	**09 25 53.6**	**+0.9**
	baz=324								
NTST	**Danshui**	**0.67**	**318**	*e*P		**Pn**	**09 25 42.2**	**+0.1**
	baz=328								
NTST				*e*S		**Sn**	**09 25 53.5**	**+0.4**
	baz=328								
TWD	**Chiawan**	**0.67**	**208**	*e*S		**Sn**	**09 25 52.7**	**-0.4**
	baz=214								
FUSS	**Fushou**	**0.76**	**237**	P		**Pn**	**09 25 43.9**	**+0.4**
	baz=227								
FUSS				*e*S		**Sn**	**09 25 55.1**	**-0.4**
	baz=227								
TDCB	**Techi**	**0.83**	**240**	*e*P		**Pn**	**09 25 44.4**	**+0.3**
	baz=231								
TDCB				*e*S		**Sn**	**09 25 56.3**	**-0.3**
	baz=231								
LIOB	**Emei**	**0.84**	**269**	*i* P		**Pn**	**09 25 43.8**	**-0.4**
	baz=268								
LIOB				*i* S		**Sn**	**09 25 56.5**	**-0.3**
	baz=268								
NSTT	**Nanjuang**	**0.86**	**268**	P		**Pn**	**09 25 44.0**	**-0.3**
	baz=267								
NSTT				S		**Sn**	**09 25 56.0**	**-1.0**
	baz=267								
CHGB	**Renai**	**0.93**	**229**	*e*P		**Pn**	**09 25 45.8**	**+0.4**
	baz=226								
CHGB				*e*S		**Sn**	**09 25 58.8**	**0.0**
	baz=226								
JYNG	**Yonagunijimaku**	**0.94**	**103**	P		**Pn**	**09 25 45.4**	**+0.2**
JYNG				S		**Sn**	**09 25 58.2**	**-0.4**
PCYT	**Pengchaiyu**	**0.96**	**7**	*e*P		**Pn**	**09 25 45.7**	**+0.2**
	baz=6.0								
ESL	**Shilin**	**0.97**	**209**	*e*S		**Sn**	**09 25 57.7**	**-1.6**
	baz=205								
WHP	**Taichung City**	**0.99**	**247**	P		**Pn**	**09 25 46.3**	**+0.3**
	baz=254								
WHP				*e*S		**Sn**	**09 25 59.5**	**-0.4**
	baz=254								
YOJ	**Yonaguni jima**	**0.99**	**102**	*e*P		**Pn**	**09 25 46.1**	**+0.2**
	baz=101								
YOJ				*e*S		**Sn**	**09 25 59.9**	**+0.1**
	baz=101								
YOJ	**Yonaguni jima**	**0.99**	**102**	P		**Pn**	**09 25 46.0**	**+0.1**
YOJ				S		**Sn**	**09 26 00.0**	**+0.2**
OWD	**Renai**	**1.00**	**225**	*e*P		**Pn**	**09 25 46.8**	**+0.6**
	baz=222								
OWD				S		**Sn**	**09 26 00.1**	**-0.1**
	baz=222								
EGFH	**Guangfu**	**1.10**	**205**	*e*S		**Sn**	**09 25 59.1**	**-3.2**
	baz=208								
TYC	**Yuchr**	**1.25**	**233**	*e*P		**Pn**	**09 25 49.6**	**+0.5**
	baz=238								
TYC				*e*S		**Sn**	**09 26 06.5**	**+0.9**
	baz=238								
SSLB	**Suanglung**	**1.26**	**226**	P		**Pn**	**09 25 50.0**	**+0.6**
	baz=223								
SSLB				S		**Sn**	**09 26 06.3**	**+0.4**
	baz=223								
HGSD	**Ruisui**	**1.27**	**202**	*e*P		**Pn**	**09 25 49.0**	**-0.3**
	baz=208								
HGSD				*e*S		**Sn**	**09 26 06.5**	**+0.5**
	baz=208								
EHY	**Hungye**	**1.29**	**206**	*e*P		**Pn**	**09 25 49.2**	**-0.5**
	baz=203								
EHY				S		**Sn**	**09 26 05.7**	**-0.8**
	baz=203								
WHYT	**Xinyi Township**	**1.39**	**226**	*e*S		**Sn**	**09 26 09.3**	**+0.5**
	baz=232								
WNT	**Mingjian**	**1.39**	**236**	*e*S		**Sn**	**09 26 09.7**	**+0.9**
	baz=243								
YULB	**Yu-li**	**1.40**	**205**	*e*P		**Pn**	**09 25 50.4**	**-0.8**
	baz=202								
YULB				*e*S		**Sn**	**09 26 07.0**	**-2.1**
	baz=202								
ALS	**Alishan**	**1.56**	**222**	P		**Pn**	**09 25 54.2**	**+0.9**
	baz=229								
ALS				S		**Sn**	**09 26 13.6**	**+0.5**
	baz=229								
CHN5	**Tsauling**	**1.57**	**228**	*e*P		**Pn**	**09 25 52.7**	**-0.8**
	baz=234								
CHN5				S		**Sn**	**09 26 13.6**	**+0.4**
	baz=234								
FULB	**Fuli**	**1.58**	**202**	*e*P		**Pn**	**09 25 53.9**	**+0.4**
	baz=207								
FULB				*e*S		**Sn**	**09 26 15.2**	**+1.9**
	baz=207								
WGK	**Gukeng**	**1.60**	**232**	*e*S		**Sn**	**09 26 14.2**	**+0.6**
	baz=240								
IRIF	**Iriomote-Funau**	**1.66**	**101**	P		**Pn**	**09 25 54.6**	**+0.1**
IRIF				S		**Sn**	**09 26 14.2**	**-0.9**
JKRS	**Kuro-shima**	**1.93**	**102**	P		**Pn**	**09 25 58.7**	**+0.6**
JKRS				*e*S		**Sn**	**09 26 21.6**	**+0.1**
JIJ	**Ishigaki jima**	**2.03**	**98**	P		**Pn**	**09 25 59.7**	**+0.3**
JIJ				*e*S		**Sn**	**09 26 23.5**	**-0.3**
JISG	**Ishigakijimahi**	**2.16**	**92**	P		**Pn**	**09 26 01.5**	**+0.4**
JISG				S		**Sn**	**09 26 26.5**	**-0.4**

IDC 25 09:29:11.7±3.5, 53°.67N×88°.03E, h0km, mb1 2.7/2, mb1mx2.7/43, mbtmp2.7/2, ML2.4/2, Error ellipse: s-maj=34.7km s-min=19.3km az=50.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.92**	**280**	*i*		09 42 22.8	
	baz=95,slow=338,SNR=3.0						
ZALV	**Zalesovo Beam**	**1.92**	**280**	Pn	Pn	09 29 46.1	+0.5
	1.8nm,0.3s,baz=98,slow=15,SNR=13						
ZALV				Lg	Lg	09 30 12.1	
	3.6nm,0.3s,baz=99,slow=26,SNR=19						
KURBB	**Kurchatov Arra**	**6.59**	**246**	Pn	Pn	09 30 50.5	+0.8
	0.1nm,0.3s,baz=60,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**7.80**	**210**	Pn	Pn	09 31 07.2	+0.8
	0.1nm,0.3s,baz=29,slow=14,SNR=4.1						

*IDC **25** 09:38:09.9±1.6, 51°.88N×179°.12E, h0km, mb3.3/5, mb1 3.7/5, mb1mx3.4/66, mbtmp3.4/5, MS3.4/2, Ms1 3.4/2, ms1mx2.6/31, Error ellipse: s-maj=76.8km s-min=28.4km az=134.0*
*NEIC **25** 09:38:27.7±1.7, 52°.0N±0°.2×179°.42E±0°.07, h148km±11km, Error ellipse: s-maj=28.6km s-min=5.7km az=183.0*
*AEIC **25** 09:38:28±2.2, 51°.9N±0°.1×179°.6E±0°.1, h150km±7km, mb3.8/31(NEIC), Error ellipse: s-maj=19.6km s-min=11.3km az=182.0*
ISC 25 09:38:27.9±0.9, 52°.1N±0°.2×179°.39E±0°.09, h150km, n46, σ0°.99/44, mb3.8/14, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.70**	**184**	Pn	**Pn**	**09 38 50.5**	**+0.1**
ADK	**Adak**	**2.44**	**93**	Pn	**Pn**	**09 39 06.6**	**-1.6**
GSTR	**Great Sitkin T**	**2.81**	**88**	Pn	**Pn**	**09 39 12.6**	**-0.1**
SMY	**Shemya**	**3.30**	**283**	Pn	**Pn**	**09 39 18.9**	**-0.1**
UNV	**Unalaska Valle**	**8.70**	**73**	Pn	**Pn**	**09 40 31.2**	**+0.8**
SDPT	**Sand Point**	**12.36**	**67**	Pn	**Pn**	**09 41 17.6**	**-1.0**
SVW2	**Sparrevohn**	**16.38**	**47**		**Pn**	**09 42 09.3**	**+0.5**
OHAK	**Old Harbor**	**16.56**	**61**		**P**	**09 42 08.4**	**-2.6**
RSO	**Redoubt South**	**17.48**	**50**	P	**P**	**09 42 20.3**	**-1.0**
BRLK	**Bradley Lake**	**18.22**	**53**	P	**P**	**09 42 29.1**	**0.0**
SKT	**Skwentna**	**18.50**	**46**	P	**Pn**	**09 42 34.4**	**+0.2**
SKT				IAmb	IAmb	09 42 39.4	
	comp=Z,4.4nm,0.9s						
SUA	**Susitna One**	**18.70**	**48**	P	**P**	**09 42 34.7**	**+0.2**
SUA				IAmb	IAmb	09 42 47.8	
	comp=Z,7.9nm,1.2s						
O22K	**Cooper Landing**	**18.94**	**52**	P	**P**	**09 42 37.7**	**+0.7**
SEW	**Seward**	**18.99**	**53**	P	**P**	**09 42 38.6**	**+1.1**
KTH	**Kantishna Hill**	**19.33**	**42**	P	**Pn**	**09 42 43.5**	**-0.4**
KTH				IAmb	IAmb	09 43 08.9	
	comp=Z,4.4nm,1.2s						
BPAW	**Bear Paw Mtn.**	**19.52**	**41**	P	**Pn**	**09 42 46.5**	**+0.4**
BPAW				IAmb	IAmb	09 43 09.8	
	comp=Z,6.3nm,1.3s						
TRF	**Thorofare Moun**	**19.55**	**43**	P	**P**	**09 42 45.6**	**+1.8**
TRF				IAmb	IAmb	09 42 48.4	
	comp=Z,4.9nm,1.2s						
SML	**Sawmill**	**19.91**	**48**	P	**P**	**09 42 48.6**	**+1.2**
SML				IAmb	IAmb	09 42 49.8	
	comp=Z,8.8nm,1.3s						
RND	**Reindeer**	**20.14**	**43**	P	**P**	**09 42 51.8**	**+1.8**
RND				IAmb	IAmb	09 43 13.8	
	comp=Z,4.9nm,1.2s						
GLI	**Glacier Island**	**20.29**	**51**	P	**P**	**09 42 51.5**	**+0.1**
SCM	**Sheep Creek Mo**	**20.38**	**48**	P	**P**	**09 42 52.6**	**+0.1**
DHY	**Denali Highway**	**20.68**	**45**	P	**P**	**09 42 56.0**	**+0.2**
WRH	**Wood River Hil**	**20.83**	**41**	P	**P**	**09 42 58.6**	**+1.3**
CCB	**Clear Creek Bu**	**21.01**	**41**	P	**P**	**09 42 57.9**	**-1.2**
HDA	**Harding Lake**	**21.27**	**42**	P	**P**	**09 43 03.6**	**+1.6**
HDA				IAmb	IAmb	09 43 15.4	
	comp=Z,6.6nm,1.4s						
IL31		**21.42**	**41**	P	**P**	**09 43 03.5**	**0.0**
IL31				IAmb	IAmb	09 43 20.2	
	comp=Z,5.2nm,1.5s						
ILAR	**Eielson Array**	**21.42**	**41**	P	**P**	**09 43 02.4**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=240,slow=8.2,SNR=8.1						
ILAR	**Eielson Array**	**21.42**	**41**	P	**P**	**09 43 06.0**	**+2.4**
PAX	**Paxson**	**21.49**	**46**	P	**P**	**09 43 04.0**	**-0.4**
N25K	**Chitina, Valde**	**21.60**	**50**	P	**P**	**09 43 05.7**	**0.0**
N25K				IAmb	IAmb	09 43 28.5	
	comp=Z,7.4nm,1.5s						
GLB	**Gilahina Butte**	**21.95**	**50**	P	**P**	**09 43 09.1**	**-0.2**
GLB				IAmb	IAmb	09 43 11.6	
	comp=Z,3.6nm,0.9s						
VRDI	**Verde Repeater**	**22.09**	**51**	P	**P**	**09 43 10.8**	**0.0**
CTGM	**Chitina Glacie**	**23.09**	**52**	P	**P**	**09 43 20.5**	**+0.3**
CTGM				IAmb	IAmb	09 43 22.1	
	comp=Z,4.6nm,0.7s						
BCAR	**Beaver Creek A**	**23.15**	**47**	P	**P**	**09 43 21.4**	**+0.8**
K27K	**Chicken**	**23.21**	**44**	P	**P**	**09 43 21.5**	**+0.3**
EGAK	**Eagle**	**23.77**	**42**	P	**P**	**09 43 26.2**	**0.0**
EGAK				IAmb	IAmb	09 43 27.0	
	comp=Z,2.6nm,0.7s						
DAWY	**Dawson**	**24.38**	**45**	P	**P**	**09 43 33.0**	**+1.2**
DAWY				IAmb	IAmb	09 43 34.8	
	comp=Z,2.4nm,0.8s						
HYT	**Haines Junctio**	**24.95**	**53**	P	**P**	**09 43 37.5**	**+0.4**
HYT				IAmb	IAmb	09 43 58.5	
	comp=Z,5.3nm,1.4s						
INK	**Inuvik**	**27.54**	**36**	P	**P**	**09 43 59.1**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=255,slow=5.1,SNR=1.8						
INK				LR	LR	09 55 43.9	
	comp=Z,56nm,19.8s,baz=78,slow=38						
YKA	**Yellowknife Ar**	**35.57**	**47**	P	**P**	**09 45 10.3**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=281,slow=8.5,SNR=1.6						
PNTR	**Pine Nut**	**43.37**	**82**	P	**P**	**09 46 15.9**	**+0.5**
PNTR				IAmb	IAmb	09 46 34.0	
	comp=Z,5.0nm,1.3s						
NVAR	**Mina Array Bea**	**44.58**	**82**	P	**P**	**09 46 25.8**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=295,slow=6.9,SNR=4.3						
R11A	**Troy Canyon, C**	**46.29**	**80**	P	**P**	**09 46 38.6**	**+0.2**
MKAR	**Makanchi Array**	**58.71**	**307**	LR	LR	10 14 48.3	
	comp=Z,33nm,18.7s,baz=296,slow=38						
WRA	**Warramunga Arr**	**81.76**	**222**	P	**P**	**09 50 29.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=30,slow=5.9,SNR=4.6						
WRA	**Warramunga Arr**	**81.76**	**222**	IAmb	IAmb	09 50 33.1	
	comp=Z,0.1nm,1.4s						

*IDC **25** 09:39:07.4±3.4, 23°.12S×177°.41W, h0km, mb4.4/5, mb1 4.6/5, mb1mx4.0/36, mbtmp4.4/5, Error ellipse: s-maj=131.2km s-min=44.2km az=147.0*
*NEIC **25** 09:40:14.7±1.6, 23°.5S±0°.1×179°.9E±0°.1, h527km±13km, mb4.3/13, Error ellipse: s-maj=21.4km s-min=12.3km az=219.0*
ISC 25 09:40:15.5±0.7, 23°.5S±0°.1×179°.9E±0°.1, h535km, n30, σ1°.30/30, mb4.2/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.97**	**343**	P	**P**	**09 41 52.1**	**-1.3**
NIUE	**Niue**	**10.50**	**67**	P	**P**	**09 42 40.1**	**+1.7**
FUNA	**Funafuti**	**14.90**	**358**	P	**P**	**09 43 23.6**	**-0.7**
URZ	**Urewera**	**14.90**	**188**	P	**P**	**09 43 22.1**	**-1.9**
BKZ	**Black Stump Fm**	**15.88**	**190**	P	**P**	**09 43 31.9**	**-2.3**
BKZ				IAmb	IAmb	09 43 40.4	
	comp=Z,9.8nm,1.0s						
BFZ	**Birch Farm**	**17.40**	**189**	P	**P**	**09 43 48.0**	**-0.5**
THZ	**Tophouse**	**19.12**	**196**	P	**P**	**09 44 05.0**	**+0.8**
CTA	**Charters Tower**	**31.33**	**270**	P	**P**	**09 45 53.8**	**+1.3**
	comp=Z,5.5nm,0.4s,baz=100,slow=11,SNR=18						
CTA	**Charters Tower**	**31.33**	**270**	P	**P**	**09 45 53.8**	**+1.3**
CTAO	**Charters Tower**	**31.33**	**270**	P	**P**	**09 45 53.5**	**+1.0**
STKA	**Stephens Creek**	**34.74**	**248**	P	**P**	**09 46 20.9**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=84,slow=10,SNR=5.2						
STKA	**Stephens Creek**	**34.74**	**248**	P	**P**	**09 46 22.6**	**+1.5**
AS31	**Alice Springs**	**41.96**	**260**	P	**P**	**09 47 20.4**	**+0.5**
ASAR	**Alice Springs**	**41.96**	**260**	P	**P**	**09 47 20.4**	**+0.5**
	comp=Z,4.2nm,0.8s,baz=94,slow=8.1,SNR=49						
ASAR	**Alice Springs**	**41.96**	**260**	P	**P**	**09 47 20.0**	**+0.1**
WR0	**Warramunga Arr**	**42.10**	**266**	P	**P**	**09 47 20.6**	**-0.5**
WR0				IAmb	IAmb	09 47 21.4	
	comp=Z,4.8nm,0.9s						
WB2	**Warramunga Arr**	**42.28**	**266**	P	**P**	**09 47 22.4**	**0.0**
WB2				IAmb	IAmb	09 47 22.8	
	comp=Z,5.4nm,0.7s						
WB0	**Warramunga Arr**	**42.28**	**266**	P	**P**	**09 47 22.0**	**-0.4**
WB0				IAmb	IAmb	09 47 22.7	
	comp=Z,5.3nm,0.6s						
WRA	**Warramunga Arr**	**42.29**	**266**	P	**P**	**09 47 22.4**	**-0.2**
	comp=Z,3.7nm,0.6s,baz=101,slow=8.3,SNR=60						
WRA	**Warramunga Arr**	**42.29**	**266**	P	**P**	**09 47 21.4**	**-1.1**
FORT	**Forrest**	**46.32**	**249**	P	**P**	**09 47 53.5**	**0.0**
FORT				IAmb	IAmb	09 48 22.3	
	comp=Z,12nm,0.9s						
KNRA	**Kununurra**	**48.55**	**269**	P	**P**	**09 48 10.7**	**+0.4**
KNRA				IAmb	IAmb	09 48 23.2	
	comp=Z,15nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.72**	**265**	P	**P**	**09 48 27.1**	**+0.8**
QSPA	**South Pole Qui**	**66.59**	**180**	P	**P**	**09 50 12.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**89.25**	**290**	P	**P**	**09 52 15.7**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=131,slow=3.3,SNR=5.8						
CMAR	**Chiang Mai Arr**	**89.25**	**290**	P	**P**	**09 52 15.0**	**0.0**
AKASG	**Malin Array Be**	**144.56**	**327**	PKPbc	**PKPdf**	**09 58 47.7**	**-3.1**
	comp=Z,1.4nm,0.6s,baz=43,slow=4.1,SNR=2.9						
MMAI	**Mount Meron Ar**	**147.41**	**295**	PKPbc	**PKPbc**	**09 58 58.5**	**-1.2**
	comp=Z,0.6nm,0.3s,baz=67,slow=4.8,SNR=2.1						
MMAI	**Mount Meron Ar**	**147.41**	**295**		**PKPbc**	**09 58 58.5**	**-1.2**
CLL	**Collm**	**150.43**	**343**	*i* PKPbc	**PKPdf**	**09 59 03.3**	**+2.8**
	comp=Z,5.0nm,1.0s						

IDC 25 09:59:49.1±2.8, 53°.79N×88°.16E, h0km, mb1 3.3/2, mb1mx3.0/37, mbtmp3.3/2, ML2.9/2, Error ellipse: s-maj=23.7km s-min=17.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.98**	**276**	*i*		10 13 39.0	
	baz=90,slow=347,SNR=2.1						
ZALV	**Zalesovo Beam**	**1.99**	**276**	Pn	Pn	10 00 24.5	+0.5
	2.1nm,0.3s,baz=92,slow=13,SNR=62						
ZALV				Lg	Lg	10 00 51.5	
	5.9nm,0.3s,baz=91,slow=25,SNR=15						
KURBB	**Kurchatov Arra**	**6.72**	**246**	Pn	Pn	10 01 29.8	+0.8
	0.2nm,0.3s,baz=62,slow=14,SNR=7.1						
KURBB				Sn	Sn	10 02 45.7	-0.3
	0.1nm,0.3s,baz=84,slow=19,SNR=1.9						
KURBB				Lg	Lg	10 03 22.0	
	0.0nm,0.3s,baz=58,slow=32,SNR=6.2						
MKAR	**Makanchi Array**	**7.95**	**211**	Pn	Pn	10 01 46.8	+0.9
	0.2nm,0.3s,baz=28,slow=14,SNR=8.4						
MKAR				Sn	Sn	10 03 16.0	-0.5
	0.2nm,0.3s,baz=39,slow=23,SNR=1.7						
MKAR				Lg	Lg	10 03 57.3	
	0.1nm,0.3s,baz=35,slow=33,SNR=2.7						

*IDC **25** 10:18:38.5±1.9, 38°.67N×144°.60E, h0km, mb3.6/5, mb1 3.8/9, mb1mx3.5/69, mbtmp3.8/9, ML3.3/4, MS3.7/2, Ms1 3.7/2, ms1mx2.5/51, Error ellipse: s-maj=48.5km s-min=21.0km az=76.0*
*NEIC **25** 10:18:42.2±2.9, 38°.72N±0°.07×144°.4E±0°.2, h24km±8km, mb4.5/3, Error ellipse: s-maj=20.4km s-min=8.8km az=105.0*
*NIED **25** 10:18:43.6, 38°.75N×144°.19E, h46km, MW3.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁴Nm; Mrr=2.09; Mθθ 0.04; Mφφ 2.04; Mrθ 0.02; Mφθ 0.80; Mφr=2.13; Fault plane solution: M0 3.07000×10¹⁴ NP1:ϕ=5.00000°, δ67.00000°, λ=-102.00000°. NP2:ϕ=214.00000°, δ25.00000°, λ=-64.00000°.*
*JMA **25** 10:18:43.6±0.2, 38°.74N×144°.19E, h46km, M3.8*
ISC 25 10:18:45.1±1.3, 38°.74N±0°.05×144°.23E±0°.07, h42km±16km, n50, σ1°.65/33, mb3.8/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.02**	**281**	P	Pn	10 19 16.1	-0.6
OFUJ				S	**Sn**	**10 19 39.8**	**-1.0**
MIYJ	**Miyakonagasawa**	**2.05**	**295**	P	Pn	10 19 16.2	-0.9
MIYJ				S	**Sn**	**10 19 40.6**	**-0.8**
JKMT	**Kesennumamotoy**	**2.15**	**273**	P	Pn	10 19 17.8	-0.7
JKMT				S	**Sn**	**10 19 42.8**	**-1.1**
JTH	**Tanohata**	**2.19**	**304**	P	Pn	10 19 18.1	-0.9
JTH				*e*S	**Sn**	**10 19 43.7**	**-1.2**
JMK	**Ichinoseki**	**2.36**	**276**	P	Pn	10 19 21.0	-0.3
JMK				*e*S	**Sn**	**10 19 48.4**	**-0.6**
JOM	**Ohasama**	**2.40**	**289**	P	Pn	10 19 21.5	-0.4
JOM				*e*S	**Sn**	**10 19 49.2**	**-0.8**
JANG	**Nango**	**2.66**	**309**	P	Pn	10 19 24.2	-1.2
JANG				*e*S	Sn	10 19 54.3	-2.1
JMM	**Marumori**	**2.84**	**253**	Pn	Pn	10 19 27.1	-0.8
JMM				Sn	**Sn**	**10 19 58.8**	**-2.1**
JYK	**Kaneyama**	**3.02**	**275**	P	Pn	10 19 30.8	+0.3
JTM	**Tenmabayashi**	**3.18**	**311**	Pn	Pn	10 19 31.9	-0.6
JTM				Sn	**Sn**	**10 20 07.6**	**-1.6**
JFT	**Otama**	**3.30**	**250**	P	Pn	10 19 34.4	+0.1
JFT				S	**Sn**	**10 20 12.1**	**-0.2**
ERM	**Erimo**	**3.37**	**346**	Pn	Pn	10 19 34.8	-0.5
ERM				Sn	**Sn**	**10 20 13.3**	**-0.7**
JOT	**Ohata**	**3.59**	**318**	P	Pn	10 19 37.9	-0.4
JOT				*e*S	Sn	10 20 16.8	-2.6
JNBK	**Urakawa-nobuka**	**3.71**	**343**	P	Pn	10 19 38.9	-1.0
JNBK				*e*S	**Sn**	**10 20 21.1**	**-1.2**
JCH	**Churui**	**3.93**	**351**	P	Pn	10 19 41.2	-1.6
JCH				*e*S	**Sn**	**10 20 24.5**	**-3.1**
JYT	**Yasato**	**4.07**	**233**		Pn	10 19 43.5	-1.4
JYT				Sn	Sn	10 20 27.7	-3.5
JEW	**Eniwo**	**4.61**	**334**	Pn	Pn	10 19 52.2	0.0
JSD	**Sado**	**4.74**	**263**	Pn	Pn	10 19 54.5	+0.5
NEM2	**Nemuro 2**	**4.76**	**13**	P	Pn	10 19 51.0	-3.3
NEM2				*e*S	Sn	10 20 41.1	-7.1
BSO1	**Boso 1**	**4.84**	**214**	*e*S	**Sn**	**10 20 45.4**	**-4.0**
JOSM	**Okushiri--Mats**	**4.93**	**314**	P	**Pn**	**10 19 58.0**	**+1.4**
JRY	**Ryogami san**	**5.04**	**239**	P	Pn	10 19 57.4	-0.7
JRY				*e*S	**Sn**	**10 20 52.2**	**-2.9**
JTKR	**Abashiri--Toko**	**5.23**	**357**	P	Pn	10 19 59.3	-1.5
MJAR	**Matsushiro Arr**	**5.25**	**247**	Pn	**Pn**	**10 20 01.8**	**+0.6**
	0.6nm,0.3s,baz=62,slow=11,SNR=17						
MJAR	**Matsushiro Arr**	**5.25**	**247**		**Pn**	**10 20 01.4**	**+0.2**
MAJO	**Matsushiro**	**5.25**	**247**		**Pn**	**10 20 02.0**	**+0.9**
MJB9	**Matsu-Tunnel**	**5.26**	**247**	Pn	Pn	10 19 58.1	-3.0
JKA	**Kamikawa-asahi**	**5.51**	**348**		Pn	10 20 02.5	-2.1
ASAJ	**Asahikawa**	**5.51**	**348**	Pn	Pn	10 20 03.6	-0.9
	1.1nm,0.3s,baz=197,slow=15,SNR=13						
ASAJ				Sn	**Sn**	**10 21 05.1**	**-1.5**
	0.7nm,0.3s,baz=96,slow=27,SNR=3.3						
JGF	**Kuroka**	**6.32**	**242**	Pn	**Pn**	**10 20 16.9**	**+1.2**
JHJ	**Hachijo jima 2**	**6.67**	**214**	Pn	Pn	10 20 18.2	-2.2
	11nm,0.3s,baz=249,slow=16,SNR=2.4						
JHJ				Sn	Sn	10 21 27.0	-8.1
	11nm,0.3s,baz=97,slow=24,SNR=1.6						
JWT	**Wachi**	**7.86**	**247**	Pn	**Pn**	**10 20 37.9**	**+1.1**
USRK	**Ussuriysk Ar.**	**10.68**	**305**	Pn	**Pn**	**10 21 16.7**	**+1.3**
	baz=121,slow=12,SNR=8.2						
USRK	**Ussuriysk Ar.**	**10.68**	**305**	Pn	Pn	10 21 15.3	0.0
H11N2	**WAKE ISLAND Hy**	**27.26**	**128**	T	T	10 52 49.2	
	baz=320						
H11N1	**WAKE ISLAND Hy**	**27.27**	**128**

IIEY	**Innrieyrar**	**0.50**	**218**	P		**Pb**	**10 21 31.5**	**-1.5**
	baz=209							
IKSK	**Karasker**	**0.53**	**128**	P		**Pg**	**10 21 31.2**	**-1.2**
	baz=141							
IKSK				S		**Sb**	**10 21 40.2**	**-1.0**
	baz=141							
IKRE	**Kreppuhraun**	**0.54**	**57**	P		Pg	10 21 28.0	-4.4
	baz=74							
THOR	**Thorvaldshraun**	**0.55**	**36**	P		Pg	10 21 27.9	-4.8
	baz=48							
IKAL	**Kalfafell**	**0.56**	**192**	P		**Pb**	**10 21 32.8**	**-1.2**
	baz=190							
IASK	**Askja**	**0.65**	**30**	P		Pg	10 21 29.0	-5.7
	baz=39							
IMKO	**Mokollar**	**0.67**	**43**	P		Pg	10 21 29.8	-5.2
	baz=55							
IFAG	**Fagurholsmyri**	**0.71**	**151**	P		**Pg**	**10 21 34.9**	**-0.8**
	baz=158							
IFAG				S		**Sn**	**10 21 46.8**	**-2.2**
	baz=158							
IVAT	**Vatnsfell**	**0.72**	**245**	P		**Pg**	**10 21 34.5**	**-1.5**
	baz=235							
IVSH	**V-Sauoahnukur**	**0.80**	**66**	P		Pg	10 21 32.6	-4.8
	baz=78							
IVSH				S		**Sg**	**10 21 42.7**	**-5.1**
	baz=78							
ISVA	**Svartarkot**	**0.85**	**5**	P		Pg	10 21 31.8	-6.7
	baz=4.9							
ISVA				S		Sg	10 21 41.5	-8.0
	baz=4.9							
ISNB	**Snabyli**	**0.93**	**215**	P		**Pb**	**10 21 38.6**	**-1.6**
	baz=211							
IADA	**Aoalbol**	**0.95**	**56**	P		Pg	10 21 34.7	-5.7
	baz=65							
IRJU	**Pjupnafell**	**1.04**	**212**	P		**Pn**	**10 21 41.1**	**-1.5**
	baz=209							
IFED	**Fedgar**	**1.09**	**246**	P		**Pg**	**10 21 40.9**	**-2.1**
	baz=238							
IMEL	**Melhnausar**	**1.13**	**16**	P		Pn	10 21 36.6	-7.3
	baz=18							
IHVO	**Lagu-Hvolar**	**1.16**	**213**	P		**Pn**	**10 21 43.2**	**-1.1**
	baz=210							
IREN	**Reynihlio**	**1.18**	**11**	P		Pn	10 21 37.3	-7.3
	baz=12							
IHAU	**Haukadalur**	**1.23**	**246**	P		**Pb**	**10 21 43.0**	**-2.3**
	baz=239							
IKVO	**Krokottuvotn**	**1.25**	**10**	P		Pn	10 21 38.4	-7.1
	baz=11							
IALF	**Alftagrof**	**1.27**	**218**	P		**Pg**	**10 21 44.9**	**-1.5**
	baz=215							
IGRS	**Grimsstaoir**	**1.27**	**25**	P		Pn	10 21 39.3	-6.6
	baz=28							
IESK	**Eystri-Skogar**	**1.32**	**223**	P		**Pb**	**10 21 45.6**	**-1.3**
	baz=219							
IMID	**Miomork**	**1.37**	**233**	P		**Pn**	**10 21 46.0**	**-1.2**
	baz=228							
ISKI	**Skildingahlsh**	**1.39**	**7**	P		Pn	10 21 40.7	-6.9
	baz=7.1							
IGHA	**Grjothals**	**1.39**	**13**	P		Pn	10 21 41.3	-6.3
	baz=14							
ISAU	**Saurbar**	**1.40**	**250**	P		**Pn**	**10 21 45.3**	**-2.3**
	baz=244							
IDIM	**Dimmadalss**	**1.49**	**8**	P		Pn	10 21 42.3	-6.6
	baz=8.2							
IHLA	**Hella**	**1.51**	**345**	P		Pn	10 21 43.4	-5.8
	baz=342							
IHED	**Heoinshofoi**	**1.59**	**2**	P		Pn	10 21 44.0	-6.3
	baz=1.3							
ISOL	**Solvholt**	**1.64**	**251**	P		**Pn**	**10 21 49.3**	**-1.6**
	baz=246							
IBRE	**Brettingsstaoi**	**1.65**	**353**	P		Pn	10 21 45.0	-6.1
	baz=352							
BORG	**Borgarnes**	**1.70**	**280**			**Pn**	**10 21 50.2**	**-1.5**
BORG				Sn		**Sb**	**10 22 14.2**	**-0.6**
SCO	**Scoresbysund**	**6.26**	**346**			**Pn**	**10 22 55.2**	**+0.9**
SCO	**Scoresbysund**	**6.26**	**346**	*e*		Pn	10 22 39.7	-15
	baz=170,slow=6.9							
SCO				*i* P		Pb	10 22 55.0	-16
SCO				*i* S		**Sn**	**10 24 05.2**	**-0.6**
SCO				IAML			10 24 12.1	
	comp=Z,1.6nm,0.5s							
JMIC	**Jan Mayen**	**7.34**	**23**	LR		LR	10 25 27.1	
	comp=Z,126nm,19.3s,baz=289,slow=34							
EKA	**Eskdalemuir Ar.**	**11.61**	**136**	Pn		**Pn**	**10 24 08.2**	**+0.5**
	baz=313,slow=14,SNR=11							
ESK	**Eskdalemuir**	**11.61**	**136**	Pn		**Pn**	**10 24 07.1**	**-0.6**
DAG	**Danmarks Havn**	**12.35**	**359**	*i* P		**Pn**	**10 24 20.6**	**+3.1**
DAG	**Danmarks Havn**	**12.35**	**359**	*i* P		**Pn**	**10 24 20.6**	**+3.1**
NRS	**Narsarsuaq**	**13.16**	**268**	Pn		**Pn**	**10 24 28.0**	**-0.7**
NBO00	**NORSAR Array S**	**13.31**	**92**	Pn		**Pn**	**10 24 28.6**	**-2.2**
NOA	**NORSAR Array B**	**13.50**	**92**	Pn		Pn	10 24 28.7	-4.7
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.3							
CLL	**Collm**	**20.60**	**115**	*e*P		Pn	10 26 02.0	-1.2
BRG	**Berggiesshubel**	**21.31**	**115**	*e*P		**P**	**10 26 09.2**	**+0.6**
	comp=Z,20nm,1.6s							
BRG				*e*			10 26 18.0	
	comp=Z,10nm,1.2s							
GEC2	**GERESS Array S**	**22.84**	**118**	P		**P**	**10 26 27.2**	**+2.0**
GERES	**GERESS Array B**	**22.84**	**118**	P		**P**	**10 26 27.1**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=41,slow=38,SNR=3.1							
GERES				LR		LR	10 35 54.4	
	comp=Z,120nm,20.3s,baz=297,slow=38							
GERES	**GERESS Array B**	**22.84**	**118**	P		**P**	**10 26 26.2**	**+1.1**
DAVOX	**Davos/Dischmat**	**23.19**	**127**	P		**P**	**10 26 31.0**	**+2.2**
	comp=Z,1.2nm,0.4s,baz=337,slow=14,SNR=3.7							
DAVOX				LR		LR	10 35 32.2	
	comp=Z,86nm,20.1s,baz=36,slow=37							
EUNU	**Eureka**	**23.84**	**336**	P		**P**	**10 26 36.0**	**+1.1**
EUNU				IAmb		IAmb	10 26 37.7	
	comp=Z,10nm,1.2s							
ESDC	**Sonseca Array**	**26.08**	**156**	P		**P**	**10 26 57.0**	**+1.4**
	comp=Z,1.3nm,0.8s,baz=350,slow=9.0,SNR=8.7							
ESDC	**Sonseca Array**	**26.08**	**156**	P		**P**	**10 26 53.7**	**-1.9**
AKASG	**Malin Array Be**	**27.79**	**97**	P		**P**	**10 27 09.1**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=324,slow=9.5,SNR=4.9							
TIXI	**Tiksi**	**42.19**	**15**	P		**P**	**10 29 16.5**	**+2.3**
TIXI				IAmb		IAmb	10 29 17.5	
	comp=Z,8.2nm,1.1s							
TOLK	**Toolik Lake Re**	**42.92**	**336**	P		**P**	**10 29 21.5**	**+1.3**
TOLK				IAmb		IAmb	10 29 23.8	
	comp=Z,11nm,1.2s							
IL31		**45.85**	**333**	P		**P**	**10 29 45.2**	**+1.6**
IL31				IAmb		IAmb	10 29 48.6	
	comp=Z,8.1nm,1.4s							
ILAR	**Eielson Array**	**45.85**	**333**	P		**P**	**10 29 44.8**	**+1.1**
	comp=Z,2.3nm,1.1s,baz=23,slow=5.5,SNR=13							
ILAR				LR		LR	10 50 09.4	
	comp=Z,19nm,19.5s,baz=74,slow=38							
ILAR	**Eielson Array**	**45.85**	**333**	P		**P**	**10 29 46.2**	**+2.5**
IMAR	**Indian Mountai**	**46.03**	**337**	P		**P**	**10 29 44.9**	**-0.2**
ZALV	**Zalesovo Beam**	**47.72**	**51**	P		**P**	**10 29 58.8**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=329,slow=11,SNR=2.1							
ZALV	**Zalesovo Beam**	**47.72**	**51**	P		**P**	**10 29 58.5**	**+0.1**
KURK	**Kurchatov**	**48.18**	**58**	P		**P**	**10 30 02.3**	**+0.3**
KURBB	**Kurchatov Arra**	**48.22**	**58**	P		**P**	**10 30 02.2**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=324,slow=7.5,SNR=14							
MKAR	**Makanchi Array**	**52.79**	**58**	P		**P**	**10 30 36.3**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=321,slow=6.7,SNR=6.1							
MKAR	**Makanchi Array**	**52.79**	**58**	P		**P**	**10 30 36.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**52.97**	**156**	P		**P**	**10 30 38.1**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=342,slow=7.7,SNR=4.9							
BW06	**Boulder Array**	**53.27**	**293**	P		**P**	**10 30 42.2**	**+1.4**
BW06				IAmb		IAmb	10 30 43.1	
	comp=Z,4.9nm,1.1s							
PD31	**Pinedale Array**	**53.27**	**293**	P		**P**	**10 30 41.5**	**+0.6**
PD31				IAmb		IAmb	10 30 43.0	
	comp=Z,3.8nm,1.0s							
PDAR	**Pinedale Array**	**53.27**	**293**	P		**P**	**10 30 40.8**	**0.0**
	comp=Z,2.1nm,0.8s,baz=49,slow=6.7,SNR=11							
PDAR	**Pinedale Array**	**53.27**	**293**	P		**P**	**10 30 40.6**	**-0.2**
WMQ	**Urumqi**	**57.30**	**56**	*e*P		**P**	**10 31 13.5**	**+3.9**
SONM	**Songino Array**	**59.75**	**40**	P		**P**	**10 31 26.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=323,slow=9.2,SNR=2.2							
WUAZ	**Wupatki**	**60.20**	**290**	P		**P**	**10 31 29.6**	**-0.4**
TX31	**Lajitas Ar. Si**	**62.35**	**280**	P		**P**	**10 31 45.6**	**+1.1**
TX32	**Lajitas Array**	**62.35**	**280**	P		**P**	**10 31 45.6**	**+1.1**
TXAR	**Lajitas Array**	**62.35**	**280**	LR		LR	10 58 11.7	
	comp=Z,49nm,20.7s,baz=0.0,slow=35							
TXAR	**Lajitas Array**	**62.35**	**280**	P		**P**	**10 31 45.3**	**+0.8**
GTA	**Gaotai**	**65.39**	**49**	*e*P		**P**	**10 32 04.3**	**-0.2**
GTA				pP		pP	10 32 08.8	+0.5
GTA				sP		sP	10 32 11.5	+1.8
GTA				pmax		pmax		
	comp=Z,2.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**67.62**	**40**	*e*P		**P**	**10 32 21.0**	**+2.3**
HHC				pmax		pmax		
	comp=Z,22nm,1.0s							
HHC				pmax		pmax		
	comp=Z,86nm,6.7s							
LZH	**Lanzhou**	**69.72**	**48**	*e*P		**P**	**10 32 32.0**	**0.0**
LZH				pP		pP	10 32 35.5	-0.3
LZH				sP		sP	10 32 38.3	+1.1
LZH				pmax		pmax		
	comp=Z,12nm,1.2s							
CMAR	**Chiang Mai Arr**	**84.19**	**59**	P		**P**	**10 33 52.8**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=328,slow=6.7,SNR=4.8							

IDC 25 10:27:02.2±2.1,6°34S×152°09E,h0km,mb3.2/3, mb1 3.6/4,mb1mx3.4/37,mbtmp3.3/4,ML3.6/1,MS3.1/1, Ms1 3.1/1,ms1mx2.3/15,Error ellipse: s-maj=74.1km s-min=21.7km az=111.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.02**	**358**	Pn	Pn	10 27 38.1	+0.6
	24nm,0.3s,baz=276,slow=8.7,SNR=6.9						
KRVT				Sn	Sb	10 28 04.9	-0.6
	20nm,0.3s,baz=78,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**21.92**	**230**	P	P	10 31 57.0	-0.3
	0.3nm,0.6s,baz=54,slow=9.8,SNR=2.2						
ASAR	**Alice Springs**	**24.55**	**224**	P	P	10 32 24.4	+0.4
	0.7nm,0.9s,baz=50,slow=8.6,SNR=5.6						
USRK	**Ussuriysk Ar.**	**53.47**	**342**	LR	LR	10 57 14.3	
	comp=Z,18nm,20.3s,baz=75,slow=34						
ILAR	**Eielson Array**	**83.84**	**22**	P	P	10 39 32.9	-0.5
	0.7nm,1.0s,baz=249,slow=5.2,SNR=5.0						

*GCG **25** 10:27:11.5±0.6,13°.85N×89°.17W,h239km±32km,MD4.0*
*IDC **25** 10:27:17.8±1.9,13°.98N×88°.88W,h147km±42km,mb3.2/3, mb1 3.4/5,mb1mx3.1/37,mbtmp3.7/5,Error ellipse: s-maj=111.3km s-min=17.8km az=38.0*
*SNET **25** 10:27:18.1±1.2,13°.80N×89°.17W,h151km±5km,ML3.2*
*INET **25** 10:27:19.5,13°.70N×89°.22W,h138km,ML3.0,MW3.0*

ISC 25 10:27:18.5±0.9,13°.82N±0°.10×89°.06W±0°.07,h148km±6km, n28,σ2°15/41,3C-2D,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBRS	**Las Brisas**	**0.08**	**170**	*e*P	**Pn**	**10 27 38.9**	**+0.4**
PAVA	**Las Pavas**	**0.15**	**131**	*e*P	**Pn**	**10 27 39.0**	**+0.3**
PAVA				*e*S	**Sn**	**10 27 55.4**	**+1.5**
LFRS	**El Faro**	**0.19**	**181**	⇑*i*P	**Pn**	**10 27 38.7**	**0.0**
SNET	**Serv Nac Est T**	**0.21**	**233**	*e*P	**Pn**	**10 27 38.5**	**-0.2**
BOQS	**Boqueron**	**0.23**	**250**	*e*P	**Pn**	**10 27 39.2**	**+0.3**
COEG	**Centro de Oper**	**0.26**	**139**	⇑*i*P	**Pn**	**10 27 38.8**	**0.0**
COEG				*e*S	**Sn**	**10 27 54.9**	**+0.6**
COEG				IAML		10 27 56.4	
	comp=Z,378nm,0.4s						
TACO	**Tacachico**	**0.33**	**298**	⇑*i*P	**Pn**	**10 27 38.8**	**-0.1**
TACO				*e*S	**Sn**	**10 27 54.5**	**0.0**
TACO				IAML		10 27 56.6	
	comp=Z,282nm,0.5s						
LALI	**Alcalda de L**	**0.41**	**218**	*e*P	**Pn**	**10 27 38.7**	**-0.6**
LALI				*e*S	**Sn**	**10 27 55.1**	**+0.1**
LALI				IAML		10 27 56.6	
	comp=Z,439nm,0.6s						
SBLS	**San Blas**	**0.55**	**272**	*e*P	**Pn**	**10 27 40.1**	**-0.1**
CEVE	**Cerro Verde**	**0.55**	**271**	*e*P	**Pn**	**10 27 40.0**	**-0.2**
CEVE				IAML		10 27 41.7	
	comp=Z,2μm,0.4s						
RTR	**El Retiro**	**0.58**	**278**	*e*P	**Pn**	**10 27 40.2**	**0.0**
COEB	**Comit de Eme**	**0.60**	**122**	*e*P	**Pn**	**10 27 40.9**	**+0.6**
COEB				*e*S	**Sn**	**10 27 59.7**	**+2.7**
TECA	**Tecapa**	**0.63**	**121**	*e*P	**Pn**	**10 27 41.3**	**+0.7**
MTO3	**Montecristo**	**0.65**	**333**	⇓*i*P	**Pn**	**10 27 41.1**	**+0.3**
MTO3				*e*S	**Sn**	**10 27 58.2**	**+0.4**
MTO3				IAML		10 28 01.5	
	comp=Z,212nm,0.8s						
NUBE	**Las Nubes**	**0.71**	**277**	*e*P	**Pn**	**10 27 40.5**	**-0.6**
NUBE				*e*S	**Sn**	**10 27 58.3**	**+0.2**
ESQI	**Esquipulas**	**0.79**	**340**	⇓*i*P	**Pn**	**10 27 42.4**	**+0.8**
ESQI				*e*S	**Sn**	**10 28 00.6**	**+1.4**
PACA	**Pacayal**	**0.79**	**116**	*e*P	**Pn**	**10 27 43.2**	**+1.6**
PACA				IAML		10 28 15.1	
	comp=Z,148nm,0.2s						
LCND	**La Caada**	**1.24**	**114**	*e*P	**Pn**	**10 27 46.1**	**+0.8**
LCND				*e*S	**Sn**	**10 28 08.8**	**+3.0**
LCND				IAML		10 28 15.0	
	comp=Z,175nm,0.3s						
MRL	**Marmol**	**1.40**	**334**	*e*P	**Pn**	**10 27 48.8**	**+1.7**
NBG	**Las Nubes**	**1.47**	**302**	*e*P	**Pn**	**10 27 48.8**	**+0.9**
PCG	**Pacaya**	**1.61**	**291**	*e*P	**Pn**	**10 27 51.8**	**+2.4**
PCG				*e*S	**Sn**	**10 28 20.5**	**+7.5**
FUG	**Fuego 3**	**1.84**	**290**	*e*P	**Pn**	**10 27 52.1**	**+0.2**
FUG				*e*S	**Sn**	**10 28 23.2**	**+5.8**
JTS	**Las Juntas de**	**5.33**	**131**	P	**Pn**	**10 28 37.3**	**+1.0**
	comp=Z,4.7nm,0.3s,baz=357,slow=23,SNR=26						
JTS				S	**Sn**	**10 29 35.0**	**-2.0**
	comp=Z,1.3nm,0.3s,baz=345,slow=23,SNR=5.8						
CMIG	**Matias Romero**	**6.49**	**301**	P	**Pn**	**10 28 51.5**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=155,slow=10.0,SNR=10						
CMIG				S	**Sn**	**10 29 58.9**	**-5.9**
	comp=Z,0.6nm,0.3s,baz=258,slow=21,SNR=2.2						
TXAR	**Lajitas Array**	**20.53**	**321**	P	**P**	**10 31 44.8**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=142,slow=10,SNR=6.7						
YKA	**Yellowknife Ar**	**51.90**	**345**	P	**P**	**10 36 10.2**	**-1.3**
	comp=Z,0.5nm,0.4s,baz=142,slow=7.4,SNR=5.4						
INK	**Inuvik**	**61.44**	**343**	P	**P**	**10 37 17.3**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=138,slow=5.3,SNR=6.3						
WRA	**Warramunga Arr**	**138.12**	**256**	PKP	**PKPdf**	**10 46 26.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=86,slow=2.1,SNR=2.5						

IDC 25 10:35:31.0±7.0,18°.03S×177°.11W,h0km,mb4.0/3, mb1 4.3/3,mb1mx3.7/35,mbtmp4.0/3,Error ellipse: s-maj=301.8km s-min=40.6km az=142.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.83**	**259**	P	P	10 43 54.6	-0.5
	0.7nm,0.5s,baz=96,slow=7.1,SNR=35						
ASAR	**Alice Springs**	**45.95**	**254**	P	P	10 43 56.3	+0.2
	5.5nm,0.7s,baz=87,slow=8.6,SNR=106						
ILAR	**Eielson Array**	**85.74**	**12**	P	P	10 48 11.5	0.0
	0.3nm,0.9s,baz=224,slow=4.3,SNR=2.1						

*JMA **25** 11:16:36.9±0.2,24°.89N×122°.41E,h1km,M2.2*
*TAP **25** 11:16:37.7,24°.87N×122°.45E,h15km±1km,ML2.5,C*

ISC 25 11:16:37.7±1.1,24°.87N±0°.03×122°.45E±0°.02,h15km±9km, n42,σ0°48/72,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.44**	**288**	*i* P	**Pb**	**11 16 46.8**	**-0.4**
	baz=288						
TWB1				*i* S	**Sb**	**11 16 53.5**	**-0.2**
	baz=288						
NTC	**Toucheng**	**0.57**	**268**	*e*S	**Sb**	**11 16 58.2**	**+1.0**
	baz=268						
TIPB	**Shuangxi**	**0.58**	**280**	*i* P	**Pb**	**11 16 49.8**	**+0.3**
	baz=280						
TIPB				*i* S	**Sb**	**11 16 58.1**	**+0.5**
	baz=280						
TWC	**Suao**	**0.61**	**245**	*i* P	**Pb**	**11 16 49.9**	**-0.2**
	baz=244						
TWC				S	**Sb**	**11 16 59.1**	**+0.7**
	baz=244						
JYNG	**Yonagunijimaku**	**0.61**	**133**	P	**Pb**	**11 16 49.9**	**-0.2**
JYNG				*e*S	**Sb**	**11 16 58.5**	**0.0**
NWF	**Wu-fen Shan**	**0.64**	**288**	*i* P	**Pb**	**11 16 51.1**	**+0.5**
	baz=288						
NWF				*i* S	**Sb**	**11 17 00.2**	**+0.8**
	baz=288						
WFSB	**Wu-fen Shan**	**0.64**	**288**	P	**Pb**	**11 16 50.8**	**+0.2**
	baz=288						
WFSB				S	**Sb**	**11 17 00.5**	**+1.2**
	baz=288						
YOJ	**Yonaguni jima**	**0.65**	**129**	⇑P	**Pb**	**11 16 50.6**	**-0.2**
	baz=128						
YOJ				S	**Sb**	**11 16 59.2**	**-0.4**
	baz=128						
YOJ	**Yonaguni jima**	**0.65**	**129**	P	**Pb**	**11 16 50.7**	**0.0**
YOJ				S	**Sb**	**11 16 59.1**	**-0.5**
ENAH	**Nanao**	**0.72**	**234**	P	**Pb**	**11 16 52.0**	**+0.1**
	baz=234						
ENAH				*e*S	**Sb**	**11 17 02.3**	**+0.6**
	baz=234						
TWE	**Neicheng**	**0.73**	**258**	*i* P	**Pb**	**11 16 52.2**	**+0.1**
	baz=258						
TWE				*i* S	**Sg**	**11 17 01.8**	**+0.1**
	baz=258						
ENA	**Nanau**	**0.79**	**236**	*i* P	**Pb**	**11 16 53.1**	**+0.1**
	baz=235						
ENA				*i* S	**Sb**	**11 17 04.4**	**+0.9**
	baz=235						
TWA	**Mucha**	**0.80**	**278**	*e*P	**Pn**	**11 16 54.0**	**-0.4**
	baz=278						
PCYT	**Pengchaiyu**	**0.83**	**335**	*e*P	**Pn**	**11 16 54.6**	**-0.2**
	baz=336						
ENTT	**Nioudou**	**0.84**	**254**	*i* P	**Pb**	**11 16 54.0**	**+0.1**
	baz=254						
ENTT				S	**Sb**	**11 17 05.3**	**+0.2**
	baz=254						
YM08	**YM08**	**0.84**	**292**	P	**Pb**	**11 16 54.3**	**+0.3**
	baz=292						
YM08				*e*S	**Sb**	**11 17 05.8**	**+0.6**
	baz=292						
YM01	**YM01**	**0.85**	**289**	*e*P	**Pn**	**11 16 54.5**	**-0.6**
	baz=289						
YM01				*e*S	**Sn**	**11 17 06.8**	**-0.4**
	baz=289						
YM05	**YM05**	**0.86**	**290**	*e*P	**Pg**	**11 16 53.8**	**-0.6**
	baz=290						
YM10	**YM10**	**0.86**	**289**	*e*P	**Pb**	**11 16 54.2**	**-0.1**
	baz=289						
NWLT	**Wulai**	**0.87**	**264**	*e*P	**Pb**	**11 16 54.7**	**+0.2**
	baz=264						
NWLT				*e*S	**Sn**	**11 17 07.2**	**-0.6**
	baz=264						
TWY	**Chenhua**	**0.87**	**298**	*e*S	**Sn**	**11 17 07.2**	**-0.6**
	baz=297						
TAP	**Taipei**	**0.88**	**281**	*e*S	**Sn**	**11 17 07.7**	**-0.2**
	baz=281						
YM04	**YM04**	**0.88**	**289**	*e*P	**Pb**	**11 16 54.7**	**0.0**
	baz=289						
NDT	**Datong Townshi**	**0.90**	**253**	*e*P	**Pg**	**11 16 54.5**	**-0.6**
	baz=252						
NDT				*e*S	**Sb**	**11 17 07.7**	**+1.0**
	baz=252						
YHNB	**Yeheng**	**1.00**	**259**	P	**Pg**	**11 16 56.8**	**-0.3**
	baz=258						
YHNB				S	**Sn**	**11 17 10.9**	**-0.2**
	baz=258						
NSK	**Sanguang**	**1.01**	**259**	P	**Pb**	**11 16 56.8**	**-0.2**
	baz=258						
NSK				S	**Sg**	**11 17 10.9**	**+0.2**
	baz=258						
NACB	**Ninganchiao**	**1.05**	**229**	P	**Pn**	**11 16 57.9**	**+0.1**
	baz=228						
NACB				S	**Sn**	**11 17 12.2**	**0.0**
	baz=228						
NNSB	**Datong**	**1.07**	**246**	P	**Pb**	**11 16 57.5**	**-0.5**
	baz=245						
NNSB				*e*S	**Sb**	**11 17 12.3**	**+0.5**
	baz=245						
NNSH	**Datong**	**1.07**	**246**	*e*P	**Pb**	**11 16 57.7**	**-0.3**
	baz=245						
NNSH				*e*S	**Sg**	**11 17 12.5**	**0.0**
	baz=245						
NNS	**Nan Shan**	**1.07**	**247**	P	**Pb**	**11 16 57.9**	**-0.2**
	baz=246						
NNS				S	**Sg**	**11 17 12.7**	**+0.1**
	baz=246						
ETLH	**Xiulin Townshi**	**1.11**	**233**	P	**Pg**	**11 16 58.9**	**-0.2**
	baz=233						
ETLH				*e*S	**Sn**	**11 17 14.4**	**+0.7**
	baz=233						
FUSS	**Fushou**	**1.27**	**241**	*e*P	**Pn**	**11 17 00.7**	**-0.4**
	baz=240						
FUSS				S	**Sn**	**11 17 18.1**	**+0.2**
	baz=240						
IRIF	**Iriomote-Funau**	**1.28**	**115**	P	**Pg**	**11 17 02.6**	**+0.2**
IRIF				*e*S	**Sg**	**11 17 20.1**	**+1.0**
WHF	**Hehuan Shan**	**1.30**	**236**	P	**Pb**	**11 17 01.9**	**-0.2**
	baz=236						
WHF				*e*S	**Sn**	**11 17 19.4**	**+0.3**
	baz=236						
CHGB	**Renai**	**1.42**	**236**	*e*P	**Pb**	**11 17 03.9**	**-0.1**
	baz=235						
HATJ	**Hateruma jima**	**1.48**	**123**	P	**Pg**	**11 17 05.7**	**-0.4**
HATJ				*e*S	**Sg**	**11 17 26.1**	**+0.8**
OWD	**Renai**	**1.48**	**232**	*e*P	**Pb**	**11 17 04.6**	**-0.4**
	baz=231						
WHP	**Taichung City**	**1.50**	**247**	*e*P	**Pn**	**11 17 04.2**	**+0.2**
	baz=246						
JKRS	**Kuro-shima**	**1.55**	**114**	P	**Pg**	**11 17 07.5**	**0.0**
JKRS				*e*S	**Sg**	**11 17 28.2**	**+0.5**
JIJ	**Ishigaki jima**	**1.62**	**108**	P	**Pg**	**11 17 08.6**	**-0.2**
SSLB	**Suanglung**	**1.74**	**232**	*e*P	**Pn**	**11 17 07.6**	**+0.1**
	baz=231						
SSLB				*e*S	**Sn**	**11 17 29.2**	**-0.2**
	baz=231						
ALS	**Alishan**	**2.03**	**228**	*e*P	**Pb**	**11 17 13.0**	**-1.4**
	baz=227						
ALS				*e*S	**Sn**	**11 17 36.6**	**-0.1**
	baz=227						

*IDC **25** 11:18:48.3±1.6,23°.48S×179°.95W,h511km±18km, mb3.6/11,mb1 3.8/12,mb1mx3.5/27,mbtmp4.5/12,Error ellipse: s-maj=21.0km s-min=13.4km az=165.0*
*NEIC **25** 11:18:49.8±1.5,23°.7S±0°.1×180°.0E±0°.1,h534km±9km, mb4.4/70,Error ellipse: s-maj=19.5km s-min=16.7km az=131.0*

**ISC 25 11:18:49.6±0.4,23°.65S±0°.07×179°.96E±0°.08,h535km, n121,σ1

comp=Z,14nm,0.9s
PMG Port Moresby 34.38 289 P **P** **11 24 52.1 -0.2**
comp=Z,20nm,0.7s,baz=108,slow=1.4,SNR=4.8
PMG Port Moresby 34.38 289 P **P** **11 24 52.2 -0.1**
STKA Stephens Creek 34.78 248 P **P** **11 24 57.5 +2.0**
comp=Z,2.4nm,0.6s,baz=73,slow=6.2,SNR=6.7
STKA Stephens Creek 34.78 248 P **P** **11 24 56.9 +1.4**
BBOO Buckleboo 39.51 247 P **P** **11 25 34.8 +0.6**
BBOO IAmb IAmb 11 25 40.8
comp=Z,18nm,1.3s
AS31 Alice Springs 42.04 260 P **P** **11 25 54.6 0.0**
ASAR Alice Springs 42.04 260 P **P** **11 25 55.6 +1.1**
comp=Z,4.5nm,0.7s,baz=93,slow=8.1,SNR=52
ASAR pP **pP** **11 27 29.9 +0.9**
comp=Z,0.8nm,0.7s,baz=102,slow=6.8,SNR=3.8
ASAR ScP **ScP** **11 30 40.2 +3.5**
comp=Z,2.6nm,0.9s,baz=104,slow=3.9,SNR=13
ASAR Alice Springs 42.04 260 P **P** **11 25 54.7 +0.2**
WR0 Warramunga Arr 42.20 266 P **P** **11 25 56.3 +0.4**
WB2 Warramunga Arr 42.38 266 P **P** **11 25 57.6 +0.4**
WB2 IAmb IAmb 11 25 58.5
comp=Z,9.3nm,1.0s
WB0 Warramunga Arr 42.38 266 P **P** **11 25 57.8 +0.5**
WB0 IAmb IAmb 11 25 58.5
comp=Z,7.8nm,0.8s
WRAB Tennant Creek 42.38 266 P **P** **11 25 57.2 -0.1**
WRAB IAmb IAmb 11 25 58.4
comp=Z,6.8nm,0.9s
WRA Warramunga Arr 42.39 266 P **P** **11 25 57.6 +0.3**
comp=Z,3.0nm,0.3s,baz=91,slow=8.3,SNR=237
WRA ScP **ScP** **11 30 42.2 +4.0**
comp=Z,1.9nm,1.0s,baz=100,slow=3.9,SNR=9.6
WRA S **S** **11 31 34.0 -6.3**
comp=Z,0.2nm,0.7s,baz=103,slow=14,SNR=1.6
WRA Warramunga Arr 42.39 266 P **P** **11 25 57.0 -0.3**
FORT Forrest 46.37 249 P **P** **11 26 28.6 +0.8**
FORT IAmb IAmb 11 26 29.1
comp=Z,19nm,0.7s
MTN Manton Dam 47.40 274 P **P** **11 26 36.2 +0.3**
MTN IAmb IAmb 11 27 00.9
comp=Z,22nm,1.5s
KNRA Kununurra 48.66 270 P **P** **11 26 46.4 +1.2**
KNRA IAmb IAmb 11 26 48.7
comp=Z,42nm,1.5s
FITZ Fitzroy Crossi 50.81 265 P **P** **11 27 01.4 +0.4**
VNDA Vanda 54.62 185 P **P** **11 27 29.7 +2.4**
comp=Z,0.7nm,0.6s,baz=306,slow=7.1,SNR=2.1
VNDA Vanda 54.62 185 P **P** **11 27 28.9 +1.7**
QSPA South Pole Qui 66.43 180 P **P** **11 28 47.3 +1.7**
BELA Belgrano 2 76.68 173 P **P** **11 29 45.6 +0.6**
ISA Isabella, Lake 82.88 46 P **P** **11 30 19.2 +0.9**
ISA IAmb IAmb 11 30 20.0
comp=Z,6.4nm,0.8s
CMB Columbia Colle 83.05 43 P **P** **11 30 19.2 +0.2**
CMB IAmb IAmb 11 30 20.5
comp=Z,6.5nm,0.9s
PFO Pinyon Flats O 83.07 49 P **P** **11 30 19.5 +0.2**
baz=227,slow=1.8
AFDM Forest Hills D 83.23 42 P **P** **11 30 20.2 +0.3**
AFDM IAmb IAmb 11 30 21.4
comp=Z,5.8nm,1.0s
ORV Oroville 83.28 42 P **P** **11 30 20.4 +0.3**
WDC Whiskeytown Da 83.29 40 P **P** **11 30 20.9 +0.8**
MDPB Devils Postpil 83.64 44 P **P** **11 30 22.6 +0.4**
GSC Goldstone, Bar 83.78 47 P **P** **11 30 21.8 -1.0**
GSC IAmb IAmb 11 30 24.9
comp=Z,9.5nm,1.3s
WAKR Walker 83.92 43 P **P** **11 30 24.3 +0.7**
BEKR Beckworth 84.17 42 P **P** **11 30 24.4 -0.3**
BEKR IAmb IAmb 11 30 25.7
comp=Z,9.3nm,1.5s
PNTR Pine Nut 84.17 43 P **P** **11 30 25.4 +0.6**
PNTR IAmb IAmb 11 30 26.5
comp=Z,8.3nm,0.9s
LHV Little Huntoon 84.37 44 P **P** **11 30 26.2 +0.7**
NVAR Mina Array Bea 84.60 44 P **P** **11 30 27.6 +0.6**
comp=Z,2.0nm,0.9s,baz=226,slow=7.4,SNR=11
NVAR Mina Array Bea 84.60 44 P **P** **11 30 26.1 -0.8**
PAHR Pah Rah Range 84.67 42 P **P** **11 30 26.9 -0.2**
NV11 Mina Array Sit 84.69 44 P **P** **11 30 27.4 +0.1**
SNAA Sanae 84.91 179 P **P** **11 30 27.5 -0.3**
SNAA Sanae 84.91 179 P **P** **11 30 27.8 +0.1**
TPH Tonopah 85.09 45 P **P** **11 30 29.3 0.0**
MOD Modoc Plateau 85.44 40 P **P** **11 30 31.0 +0.2**
PRN Pahroc Range 86.13 46 P **P** **11 30 34.7 +0.5**
PRN IAmb IAmb 11 30 36.2
comp=Z,5.9nm,1.0s
TUC Tucson 86.39 53 P **P** **11 30 36.4 +0.9**
TUC IAmb IAmb 11 30 38.1
comp=Z,5.2nm,0.8s
WVOR Wild Horse Val 86.75 41 P **P** **11 30 37.1 +0.1**
WVOR IAmb IAmb 11 30 38.7
comp=Z,3.9nm,1.0s
319A Douglas 87.03 54 P **P** **11 30 37.6 -0.9**
319A IAmb IAmb 11 30 41.1
comp=Z,7.0nm,0.9s
LCMT Little Creek M 87.13 47 P **P** **11 30 39.3 +0.4**
CCUT Cedar City 87.34 47 P **P** **11 30 41.4 +1.3**
J08A Circle Bar Ran 87.39 40 P **P** **11 30 38.7 -1.2**
J08A IAmb IAmb 11 30 42.1
comp=Z,9.7nm,1.3s
U15A North Rim 87.47 48 P **P** **11 30 41.1 +0.4**
U15A IAmb IAmb 11 30 42.8
comp=Z,5.9nm,0.8s
G08A Pilot Rock 88.25 38 P **P** **11 30 44.1 +0.2**
G08A IAmb IAmb 11 30 45.7
comp=Z,8.1nm,1.1s
MTPU Mount Pierson 88.39 47 P **P** **11 30 46.8 +1.7**
MFID Camas Ranch 89.00 41 P **P** **11 30 48.0 +0.5**
MFID IAmb IAmb 11 30 49.6
comp=Z,5.1nm,0.9s
TMUT Trail Mountain 89.69 46 P **P** **11 30 51.7 +0.6**
HLID Hailey 89.93 41 P **P** **11 30 52.6 +0.7**
HLID IAmb IAmb 11 30 53.6
comp=Z,2.9nm,0.9s
HVU Hansel Valley 89.98 44 P **P** **11 30 51.9 -0.2**
SRU San Rafael Swe 90.05 47 P **P** **11 30 52.9 +0.4**
MNTX Cornudas Mount 90.10 55 P **P** **11 30 53.5 +0.7**
MNTX IAmb IAmb 11 30 54.0
comp=Z,3.1nm,0.8s
HHC Hu-ho-hao-te 90.22 315 *e*P **P** **11 30 52.5 -0.7**
HHC pmax pmax
comp=Z,10.0nm,0.9s
HHC pmax pmax
comp=Z,120nm,7.3s
TX31 Lajitas Ar. Si 90.33 58 P **P** **11 30 54.2 +0.3**
TX32 Lajitas Array 90.33 58 P **P** **11 30 54.2 +0.3**
TX32 IAmb IAmb 11 30 55.9
comp=Z,4.0nm,0.8s
TXAR Lajitas Array 90.33 58 P **P** **11 30 54.5 +0.6**
comp=Z,2.6nm,0.7s,baz=213,slow=6.7,SNR=36
TXAR Lajitas Array 90.33 58 P **P** **11 30 54.8 +0.8**
TCUT Toone Canyon 90.51 45 P **P** **11 30 55.7 +1.0**
ANMO Albuquerque 90.83 52 P **P** **11 30 56.7 +0.4**
ANMO IAmb IAmb 11 30 57.3
comp=Z,2.8nm,1.1s
ILAR Eielson Array 91.80 14 P **P** **11 31 00.3 +0.6**
comp=Z,0.4nm,0.8s,baz=223,slow=5.8,SNR=4.4
RDOG Red Dog Mine 92.31 6 P **P** **11 30 59.5 -2.5**
SMCO Snowmass 92.48 48 P **P** **11 31 03.7 -0.4**
SMCO IAmb IAmb 11 31 10.4
comp=Z,6.5nm,1.0s
PDAR Pinedale Array 92.54 44 P **P** **11 31 03.3 -0.7**
comp=Z,1.1nm,0.8s,baz=218,slow=2.9,SNR=8.3
PDAR Pinedale Array 92.54 44 P **P** **11 31 04.2 +0.2**
LZH Lanzhou 93.20 308 *e*P **P** **11 31 06.0 -1.1**
LZH pP pP 11 33 06.5 +2.6
LZH sP sP 11 33 58.0 +0.8
LZH pmax pmax
comp=Z,18nm,1.1s
NB2 NORSAR Subarra 141.83 351 PKP **PKPdf** **11 37 15.9 -4.0**
comp=Z,0.6nm,0.7s,baz=21,slow=3.1
NOA NORSAR Array B 141.83 351 PKhKP PKPpre 11 37 14.9
comp=Z,1.2nm,0.8s,baz=17,slow=4.8,SNR=4.0
AKASG Malin Array Be 144.75 327 PKP **PKPdf** **11 37 25.2 0.0**
comp=Z,2.1nm,0.6s,baz=44,slow=4.0,SNR=11
AKASG Malin Array Be 144.75 327 **PKPdf** **11 37 23.5 -1.7**
KWP Kalwaria Pacla 148.54 331 *e*PKP **PKiKP** **11 37 36.6 -0.5**
OJC Ojcow 149.30 335 *e*PKP **PKPbc** **11 37 38.2 +0.3**
KSP Ksiaz 150.05 339 *e*PKP **PKiKP** **11 37 40.2 +0.1**
CLL Collm 150.61 343 ⇑*i*PKPbc **PKPbc** **11 37 40.9 +0.1**
comp=Z,6.0nm,0.9s
CLL *e*PKPab **PKPab** **11 37 48.0 -2.1**
BRG Berggiesshubel 150.74 342 *e*PKP **PKiKP** **11 37 41.6 0.0**
comp=Z,5.0nm,0.7s
TORD Torodi Ar. Bea 169.42 189 PKP **PKPdf** **11 37 55.5 -0.9**
comp=Z,0.9nm,1.0s,baz=135,slow=1.1,SNR=3.8
TORD PKPab **PKPab** **11 39 12.6 -0.2**
comp=Z,0.7nm,0.7s,baz=190,slow=3.1,SNR=3.4

*IDC **25** 11:28:32.4±1.1,20.77S×177.38E,h0km,mb4.4/11, mb1 4.6/12,mb1mx4.3/39,mbtmp4.4/12,ML3.0/1,MS3.6/17, Ms1 3.6/17,ms1mx3.4/33,Error ellipse: s-maj=34.8km s-min=23.3km az=146.0*
*NEIC **25** 11:28:34.4±1.9,20.41S±0.08×177.2E±0.1,h10km±1km, mb4.6/11,Error ellipse: s-maj=21.6km s-min=9.6km az=123.0*
ISC 25 11:28:37.4±0.6,**20.52S**±0.08×**177.43E**±0.09,**h35**km,**n47,** σ1s**68**/34,**mb4.5**/15,**MS3.6**/17,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.83**	**12**	Pn	**Pn**	**11 29 19.0**	**-1.2**
MSVF				Sn	**Sn**	**11 29 52.7**	**-0.5**
DZM	**Mont Dzumac**	**10.36**	**259**	*e*Pn	**Pn**	**11 31 06.4**	**+2.7**
	75nm,1.4s						
DZM				*e*LR	LR	11 33 27.9	
	comp=Z,730nm,25.8s						
DZM	**Mont Dzumac**	**10.36**	**259**	Pn	**Pn**	**11 31 00.3**	**-3.4**
	0.1nm,0.3s,baz=60,slow=20,SNR=2.3						
DZM				LR	LR	11 34 22.5	
	comp=Z,641nm,18.4s,baz=64,slow=34						
DZM	**Mont Dzumac**	**10.36**	**259**		**Pn**	**11 30 59.7**	**-4.0**
URZ	**Urewera**	**17.68**	**181**	LR	LR	11 37 44.2	
	comp=Z,118nm,20.9s,baz=31,slow=32						
URZ	**Urewera**	**17.68**	**181**		**P**	**11 32 43.8**	**+2.3**
TUWZ	**Tuamarina**	**21.06**	**187**	P	**P**	**11 33 18.1**	**-0.3**
RAR	**Rarotonga**	**21.31**	**96**	LR	LR	11 41 00.6	
	comp=Z,39nm,18.6s,baz=256,slow=35						
BSWZ	**Blackbirch Sta**	**21.35**	**187**	P	**P**	**11 33 23.1**	**+1.5**
THZ	**Tophouse**	**21.53**	**189**	P	**P**	**11 33 23.9**	**+0.4**
THZ				IAmb	IAmb	11 33 42.8	
	comp=Z,30nm,1.1s						
OXZ	**Oxford**	**23.19**	**190**	P	**P**	**11 33 41.9**	**+0.9**
RPZ	**Rata Peaks**	**23.74**	**192**	LR	LR	11 41 30.5	
	comp=Z,108nm,20.7s,baz=297,slow=33						
EIDS	**Eidsvold**	**24.72**	**254**	P	**P**	**11 33 55.2**	**-0.4**
EIDS				IAmb	IAmb	11 33 57.9	
	comp=Z,7.3nm,1.0s						
TBI	**Tubuai**	**30.80**	**101**	*e*S	**S**	**11 39 49.0**	**-2.4**
	comp=Z,86nm,29.8s						
TBI				*e*LR	LR	11 42 57.7	
	comp=Z,212nm,32.0s						
PMG	**Port Moresby**	**31.20**	**286**	P	**P**	**11 34 54.4**	**+0.7**
	comp=Z,16nm,0.9s,baz=90,slow=3.0,SNR=3.2						
PMG	**Port Moresby**	**31.20**	**286**	P	**P**	**11 34 53.2**	**-0.4**
PPT2	**Papeete2**	**31.29**	**90**	*e*S	**S**	**11 39 56.6**	**-2.6**
	comp=Z,68nm,25.2s						
PPT2				*e*LR	LR	11 43 10.0	
	comp=Z,308nm,30.0s						
PPT	**Papeete**	**31.29**	**90**	LR	LR	11 46 32.0	
	comp=Z,48nm,18.2s,baz=268,slow=34						
STKA	**Stephens Creek**	**33.94**	**243**	LR	LR	11 47 58.7	
	comp=Z,156nm,18.3s,baz=37,slow=34						
JAY	**Jayapura**	**40.03**	**292**	LR	LR	11 51 47.6	
	comp=Z,55nm,18.4s,baz=161,slow=35						
H11S2	**WAKE ISLAND Hy**	**40.17**	**344**	T	T	12 18 58.3	
	baz=165						
H11S3	**WAKE ISLAND Hy**	**40.17**	**344**	T	T	12 19 00.3	
	baz=165						
H11S1	**WAKE ISLAND Hy**	**40.19**	**344**	T	T	12 18 60.0	
	baz=165						
WB0	**Warramunga Arr**	**40.33**	**263**	P	**P**	**11 36 10.1**	**-1.8**
WB0				IAmb	IAmb	11 36 11.3	
	comp=Z,7.3nm,0.8s						
AS31	**Alice Springs**	**40.34**	**257**	P	P	11 36 06.1	-5.9
ASAR	**Alice Springs**	**40.34**	**257**	P	**P**	**11 36 11.3**	**-0.7**
	comp=Z,9.3nm,0.8s,baz=83,slow=8.4,SNR=34						
ASAR				PcP	**PcP**	**11 38 14.6**	**-0.4**
	comp=Z,0.8nm,1.0s,baz=112,slow=4.2,SNR=3.1						
ASAR				LR	LR	11 52 39.4	
	comp=Z,85nm,18.1s,baz=91,slow=36						
WRA	**Warramunga Arr**	**40.35**	**263**	P	**P**	**11 36 09.7**	**-2.4**
	comp=Z,3.5nm,0.9s,baz=97,slow=8.5,SNR=9.4						
WRA				LR	LR	11 52 27.1	
	comp=Z,114nm,18.2s,baz=120,slow=36						
WRA	**Warramunga Arr**	**40.35**	**263**	P	**P**	**11 36 10.0**	**-2.1**
GUMO	**Guam**	**46.62**	**314**	LR	LR	11 55 38.3	
	comp=Z,15nm,20.8s,baz=130,slow=35						
FITZ	**Fitzroy Crossi**	**48.78**	**264**	P	**P**	**11 37 19.4**	**0.0**
	comp=Z,6.5nm,1.0s,baz=118,slow=11,SNR=5.3						
FITZ				LR	LR	11 57 19.3	
	comp=Z,104nm,18.7s,baz=104,slow=36						
FITZ	**Fitzroy Crossi**	**48.78**	**264**	P	**P**	**11 37 19.0**	**-0.4**
FITZ				IAmb	IAmb	11 37 20.6	
	comp=Z,10nm,1.1s						
BATI	**Baumata**	**52.65**	**273**	P	**P**	**11 37 49.3**	**+0.7**
	comp=Z,39nm,0.9s,baz=90,slow=3.0,SNR=5.6						
BATI				LR	LR	12 01 06.1	
	comp=Z,95nm,18.6s,baz=96,slow=37						
VNDA	**Vanda**	**57.56**	**184**	LR	LR	11 59 04.6	
	comp=Z,28nm,20.0s,baz=353,slow=32						
MJAR	**Matsushiro Arr**	**67.78**	**327**	P	**P**	**11 39 32.8**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=160,slow=5.4,SNR=7.0						
MJAR	**Matsushiro Arr**	**67.78**	**327**	P	**P**	**11 39 31.8**	**+0.1**
QSPA	**South Pole Qui**	**69.55**	**180**	P	**P**	**11 39 43.4**	**+0.8**
QSPA				IAmb	IAmb	11 39 44.1	
	comp=Z,6.0nm,1.0s						
KSRS	**Korea Array**	**74.14**	**321**	LR	LR	12 12 38.7	
	comp=Z,20nm,18.0s,baz=135,slow=36						
USRK	**Ussuriysk Ar.**	**76.65**	**328**	P	**P**	**11 40 26.6**	**+2.1**
	comp=Z,2.4nm,0.8s,baz=134,slow=4.2,SNR=5.4						
USRK	**Ussuriysk Ar.**	**76.65**	**328**	P	**P**	**11 40 25.7**	**+1.2**
MAW	**Mawson**	**80.07**	**201**	P	**P**	**11 40 42.2**	**-1.0**
	comp=Z,3.7nm,1.1s,baz=88,slow=6.0,SNR=3.5						
MAW				LR	LR	12 13 52.6	
	comp=Z,39nm,18.2s,baz=76,slow=34						
NVAR	**Mina Array Bea**	**84.03**	**45**	P	**P**	**11 41 06.4**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=225,slow=8.9,SNR=2.1						
CMAR	**Chiang Mai Arr**	**86.11**	**291**	P	**P**	**11 41 16.2**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=124,slow=3.3,SNR=14						
ILAR	**Eielson Array**	**89.34**	**14**	P	**P**	**11 41 30.6**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=228,slow=6.3,SNR=8.5						
ILAR	**Eielson Array**	**89.34**	**14**	P	**P**	**11 41 30.4**	**+0.6**
TXAR	**Lajitas Array**	**90.70**	**59**	LR	LR	12 14 34.4	
	comp=Z,43nm,20.8s,baz=0.0,slow=30						
YKA	**Yellowknife Ar**	**98.35**	**26**	LR	LR	12 23 36.6	
	comp=Z,45nm,18.2s,baz=0.0,slow=34						
TORD	**Torodi Ar. Bea**	**171.62**	**210**	PKPab	**PKPab**	**11 50 04.3**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=143,slow=5.0,SNR=4.1						

*IDC **25** 11:30:50.5±1.7,3.53S×146.80E,h0km,mb3.8/6, mb1 4.0/7,mb1mx3.8/36,mbtmp3.8/7,ML1.8/1,MS3.2/3, Ms1 3.2/3,ms1mx2.7/30,Error ellipse: s-maj=49.1km s-min=23.6km az=103.0*
ISC 25 11:30:54.3±1.3,**3.6S**±0.1×**146.8E**±0.3,**h25**km,**n16,** σ0s**76**/7,**mb3.7**/5,**Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**5.26**	**98**	LR	LR	11 33 47.8	
	comp=Z,73nm,19.0s,baz=259,slow=34						
PMG	**Port Moresby**	**5.80**	**177**	Pn	**Pn**	**11 32 18.7**	**-0.1**
	1.8nm,0.3s,baz=357,slow=18,SNR=2.3						
PMG				Lg	Lg	11 33 53.2	
	0.2nm,0.3s,baz=286,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**20.30**	**216**	P	**P**	**11 35 28.7**	**+0.1**
	4.5nm,0.8s,baz=41,slow=11,SNR=37						
ASAR	**Alice Springs**	**23.54**	**211**	P	**P**	**11 36 03.6**	**+0.7**
	1.7nm,0.7s,baz=40,slow=8.1,SNR=14						
FITZ	**Fitzroy Crossi**	**25.25**	**234**	P	**P**	**11 36 17.9**	**-0.8**
	2.3nm,0.8s,baz=50,slow=8.6,SNR=6						
DZM	**Mont Dzumac**	**26.48**	**136**	LR	LR	11 45 38.3	
	comp=Z,67nm,19.8s,baz=158,slow=34						
H11S3	**WAKE ISLAND Hy**	**29.41**	**41**	T	T	12 07 35.5	
	baz=222						
H11S2	**WAKE ISLAND Hy**	**29.42**	**41**	T	T	12 07 37.9	
	baz=222						
H11S1	**WAKE ISLAND Hy**	**29.43**	**41**	T	T	12 07 36.4	
	baz=222						
H11N1	**WAKE ISLAND Hy**	**30.43**	**40**	T	T	12 08 50.6	
	baz=221						
H11N3	**WAKE ISLAND Hy**	**30.44**	**40**	T	T	12 08 52.6	
	baz=221						
H11N2	**WAKE ISLAND Hy**	**30.44**	**40**	T	T	12 08 52.8	
	baz=221						
RPZ	**Rata Peaks**	**45.37**	**155**	LR	LR	11 59 49.1	
	comp=Z,52nm,18.1s,baz=24,slow=38						
CMAR	**Chiang Mai Arr**	**51.97**	**297**	P	**P**	**11 40 01.4**	**-0.4**
	0.4nm,0.3s,baz=112,slow=6.9,SNR=1.6						
MKAR	**Makanchi Array**	**75.52**	**320**	P	**P**	**11 42 37.6**	**+0.9**
	0.2nm,0.4s,baz=124,slow=5.9,SNR=2.7						
ILAR	**Eielson Array**	**83.35**	**23**	P	**P**	**11 43 18.6**	**-0.4**
	0.4nm,0.8s,baz=238,slow=5.2,SNR=2.3						

IDC 25 11:51:10.2±2.3,**1.85N**×**126.90E**,**h0**km,**mb3.1**/3, **mb1 3.3**/3,**mb1mx2.3**/34,**mbtmp3.1**/3,**Error ellipse: s-maj=181.8km s-min=28.1km az=66.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.85**	**162**	P	P	11 56 15.0	-0.3
	0.4nm,0.6s,baz=340,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**26.26**	**165**	P	P	11 56 47.7	+0.3
	0.2nm,0.4s,baz=344,slow=12,SNR=8.2						
MKAR	**Makanchi Array**	**59.19**	**326**	P	P	12 01 13.0	-0.1
	0.1nm,0.4s,baz=116,slow=8.3,SNR=1.5						

*IDC **25** 11:57:13.2±1.8,40.73S×174.13E,h108km±23km,mb3.0/2, mb1 3.4/4,mb1mx3.3/22,mbtmp3.6/4,Error ellipse: s-maj=41.4km s-min=16.4km az=135.0*
*WEL **25** 11:57:14.9,41°S±2°×174°E±°,h106km±7km,M4.1/48, MLv4.1/48,Error ellipse: s-maj=0.0km s-min=0.0km az=27.7*
ISC 25 11:57:13.8±0.9,**40.77S**±0.04×**173.96E**±0.04,**h119**km±6km, **n151,** σ0s**93**/156,**1C,Cook Strait**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.05**	**220**	P	**Pn**	**11 57 29.8**	**-0.3**
DUWZ				S	**Sn**	**11 57 40.4**	**-2.1**
TCW	**Tory Channel**	**0.50**	**152**	P	**Pn**	**11 57 32.4**	**+0.8**
TCW				S	**Sn**	**11 57 44.0**	**-1.2**
NNZ	**Nelson**	**0.63**	**224**	P	**Pn**	**11 57 32.6**	**+0.1**
NNZ				S	**Sn**	**11 57 45.1**	**-1.5**
TUWZ	**Tuamarina**	**0.66**	**181**	P	**Pn**	**11 57 33.3**	**+0.6**
KIW	**Kapiti Island**	**0.73**	**98**	P	**Pn**	**11 57 33.9**	**+0.6**
WEL	**Wellington**	**0.80**	**131**	P	**Pn**	**11 57 34.8**	**+1.0**
CAW	**Cannon Point**	**0.90**	**113**	P	**Pn**	**11 57 35.6**	**+0.8**
OGWZ	**Otaki Gorge**	**0.92**	**94**	P	**Pn**	**11 57 35.8**	**+0.9**
BHW	**Baring Head**	**0.94**	**133**	P	**Pn**	**11 57 36.0**	**+0.9**
BSWZ	**Blackbirch Sta**	**0.95**	**184**	P	**Pn**	**11 57 36.4**	**+1.1**
QRZ	**Quartz Range**	**1.09**	**266**	P	**Pn**	**11 57 36.2**	**-0.4**
MSWZ	**Moikau Station**	**1.17**	**124**	P	**Pn**	**11 57 38.5**	**+1.0**
OHWZ	**Ohakea**	**1.17**	**62**	P	**Pn**	**11 57 38.4**	**+0.9**
HOWZ	**Holdsworth Sta**	**1.19**	**97**	P	**Pn**	**11 57 38.4**	**+0.8**
MTW	**Mount Morrison**	**1.23**	**109**	P	**Pn**	**11 57 38.8**	**+0.7**
MRZ	**Mangatainoka R**	**1.23**	**86**	P	**Pn**	**11 57 38.8**	**+0.5**
PLWZ	**Palliser**	**1.26**	**130**	P	**Pn**	**11 57 39.5**	**+1.0**
PAWZ	**Paruwai Farm**	**1.27**	**120**	P	**Pn**	**11 57 39.5**	**+1.0**
THZ	**Tophouse**	**1.27**	**218**	P	**Pn**	**11 57 39.2**	**+0.6**
WAZ	**Wanganui**	**1.28**	**38**	P	**Pn**	**11 57 39.6**	**+1.0**
LREZ	**Lake Rotokare**	**1.35**	**15**	P	**Pn**	**11 57 40.3**	**+0.9**
NMEZ	**Namu Road**	**1.35**	**357**	P	**Pn**	**11 57 39.8**	**+0.4**
POWZ	**Post Office Ro**	**1.43**	**75**	P	**Pn**	**11 57 40.7**	**+0.4**
PREZ	**Palmer Road**	**1.43**	**6**	P	**Pn**	**11 57 41.0**	**+0.6**
TRWZ	**Traveller**	**1.45**	**116**	P	**Pn**	**11 57 41.6**	**+1.1**
TIWZ	**Tintock**	**1.46**	**91**	P	**Pn**	**11 57 41.5**	**+0.8**
KHEZ	**Kahui Hut**	**1.47**	**2**	P	**Pn**	**11 57 41.3**	**+0.4**
NEZ	**North Egmont**	**1.50**	**4**	P	**Pn**	**11 57 41.4**	**+0.2**
NBEZ	**Newall Road No**	**1.50**	**357**	P	**Pn**	**11 57 41.6**	**+0.4**
TMWZ	**Te Maipa**	**1.50**	**104**	P	**Pn**	**11 57 42.1**	**+1.0**
PRWZ	**Pori Road**	**1.54**	**83**	P	**Pn**	**11 57 42.5**	**+0.9**
PKE	**Pukeiti**	**1.57**	**1**	P	**Pn**	**11 57 42.4**	**+0.4**
DREZ	**Durham Road**	**1.59**	**7**	P	**Pn**	**11 57 42.7**	**+0.5**
KHZ	**Kahutara**	**1.68**	**191**	P	**Pn**	**11 57 44.5**	**+1.3**
TSZ	**Takapari Road**	**1.68**	**66**	P	**Pn**	**11 57 43.6**	**+0.2**
CPWZ	**Castlepoint**	**1.71**	**96**	P	**Pn**	**11 57 44.9**	**+1.4**
MHEZ	**Mangahewa**	**1.71**	**9**	P	**Pn**	**11 57 44.4**	**+0.8**
BFZ	**Birch Farm**	**1.74**	**88**	P	**Pn**	**11 57 44.6**	**+0.7**
DVHZ	**Dannevirke**	**1.74**	**75**	P	**Pn**	**11 57 44.2**	**+0.2**
VRZ	**Vera Road**	**1.75**	**21**	P	**Pn**	**11 57 44.8**	**+0.7**
MTVZ	**Mangateitei**	**1.80**	**40**	P	**Pn**	**11 57 45.3**	**+0.5**
PKVZ	**Pokaka**	**1.82**	**36**	P	**Pn**	**11 57 45.3**	**+0.3**
DSZ	**Denniston Nort**	**1.90**	**238**	P	**Pn**	**11 57 46.2**	**+0.2**
WNVZ	**Wahianoa**	**1.91**	**42**	P	**Pn**	**11 57 46.6**	**+0.4**
PNHZ	**Pukenui**	**1.91**	**64**	P	**Pn**	**11 57 46.1**	**0.0**
DRZ	**Dome Shelter**	**1.93**	**40**	P	**Pn**	**11 57 47.1**	**+0.4**
MOVZ	**Moawhango**	**1.93**	**46**	P	**Pn**	**11 57 45.6**	**-0.8**
ANWZ	**Angora Road**	**1.94**	**82**	P	**Pn**	**11 57 47.0**	**+0.6**
WHVZ	**Whangaehu Hut**	**1.94**	**41**	P	**Pn**	**11 57 47.1**	**+0.4**
FWVZ	**Far West T-bar**	**1.94**	**40**	P	**Pn**	**11 57 47.1**	**+0.4**
TUVZ	**Tukino**	**1.98**	**42**	P	**Pn**	**11 57 47.6**	**+0.5**
WPHZ	**Kaipukurau**	**2.02**	**70**	P	**Pn**	**11 57 48.0**	**+0.2**
NGZ	**Ngauruhoe**	**2.03**	**39**	P	**Pn**	**11 57 47.8**	**+0.2**
TWVZ	**Taurewa**	**2.04**	**34**	P	**Pn**	**11 57 47.8**	**0.0**
BHHZ	**Black Hill Sta**	**2.05**	**52**	P	**Pn**	**11 57 47.8**	**-0.1**
OTVZ	**Oturere**	**2.07**	**40**	P	**Pn**	**11 57 48.6**	**+0.4**
WTVZ	**West Tongariro**	**2.07**	**38**	P	**Pn**	**11 57 48.2**	**+0.1**
PRHZ	**Porangahau**	**2.10**	**77**	P	**Pn**	**11 57 49.0**	**+0.6**
KRVZ	**Karewarewa**	**2.11**	**38**	P	**Pn**	**11 57 48.6**	**0.0**
ETVZ	**East Tongariro**	**2.11**	**40**	P	**Pn**	**11 57 49.0**	**+0.3**
TMVZ	**Te Maari**	**2.12**	**40**	P	**Pn**	**11 57 49.1**	**+0.2**
KRHZ	**Kereru**	**2.16**	**59**	P	**Pn**	**11 57 48.9**	**-0.3**
KATZ	**Kakaramea**	**2.23**	**37**	P	**Pn**	**11 57 51.2**	**+1.0**
GVZ	**Greta Valley S**	**2.31**	**197**	P	**Pn**	**11 57 51.6**	**+0.6**
RITZ	**Rihia Road**	**2.31**	**40**	P	**Pn**	**11 57 51.2**	**+0.1**
KWHZ	**Kaweka Forest**	**2.31**	**55**	P	**Pn**	**11 57 51.1**	**-0.1**
PXZ	**Pawanui**	**2.33**	**73**	P	**P

MWZ	**Matawai**	**3.67**	**50**	P		**Pn**	**11 58 07.1**	**-1.9**
AWAZ	**Awhitu Peninsu**	**3.73**	**8**	P		**Pn**	**11 58 10.2**	**+0.4**
ARCZ	**Arundel**	**3.79**	**212**	P		**Pn**	**11 58 09.7**	**-0.7**
TKGZ	**Te Karaka**	**3.80**	**54**	P		**Pn**	**11 58 09.0**	**-1.5**
WTAZ	**Waiatarua**	**3.86**	**7**	P		**Pn**	**11 58 12.1**	**+0.7**
ETAZ	**East Tamaki Re**	**3.88**	**12**	P		**Pn**	**11 58 12.0**	**+0.3**
MYRZ	**Mayor Island**	**3.91**	**28**	P		**Pn**	**11 58 12.8**	**+0.7**
EPAZ	**Eden Park BICE**	**3.93**	**9**	P		**Pn**	**11 58 12.9**	**+0.6**
CNGZ	**Carnagh Statio**	**3.99**	**57**	P		**Pn**	**11 58 11.8**	**-1.3**
RUGZ	**Raukumara Rang**	**4.01**	**47**	P		**Pn**	**11 58 11.2**	**-2.4**
RVAZ	**Riverhead Bore**	**4.02**	**7**	P		**Pn**	**11 58 13.9**	**+0.4**
TWGZ	**Tauwhareparae**	**4.04**	**52**	P		**Pn**	**11 58 12.8**	**-1.1**
MBAZ	**Motutapu North**	**4.06**	**11**	P		**Pn**	**11 58 14.4**	**+0.4**
WIAZ	**Waiheke Island**	**4.07**	**13**	P		**Pn**	**11 58 14.6**	**+0.3**
FOZ	**Fox Glacier**	**4.14**	**227**	P		**Pn**	**11 58 14.3**	**-0.8**
ABAZ	**Army Bay**	**4.21**	**10**	P		**Pn**	**11 58 16.8**	**+0.6**
HAZ	**Te Kaha**	**4.22**	**46**	P		**Pn**	**11 58 13.4**	**-2.8**
KUZ	**Kuaotunu**	**4.24**	**19**	P		**Pn**	**11 58 15.9**	**-0.6**
PUZ	**Puketiti**	**4.28**	**52**	P		**Pn**	**11 58 14.8**	**-2.2**
LBZ	**Lake Benmore**	**4.57**	**216**	P		**Pn**	**11 58 20.5**	**-0.4**
MXZ	**Matakaoa Point**	**4.65**	**48**	P		**Pn**	**11 58 20.0**	**-1.9**
GRZ	**Great Barrier**	**4.66**	**15**	P		**Pn**	**11 58 21.8**	**-0.3**
WCZ	**Waipu Caves**	**4.83**	**4**	P		**Pn**	**11 58 25.3**	**+0.9**
ODZ	**Otahua Downs**	**4.92**	**209**	P		**Pn**	**11 58 25.4**	**-0.2**
JCZ	**Jackson Bay**	**5.06**	**228**	P		**Pn**	**11 58 26.8**	**-0.7**
OUZ	**Omahuta**	**5.54**	**357**	P		**Pn**	**11 58 34.3**	**+0.3**
HHSZ	**Highcliff Hill**	**5.67**	**204**	P		**Pn**	**11 58 35.8**	**+0.1**
SYZ	**Scrubby Hill**	**6.75**	**210**	P		**Pn**	**11 58 50.5**	**+0.4**
CTZ	**Chatham Island**	**7.59**	**116**	P		**Pn**	**11 59 02.3**	**+0.7**
ASAR	**Alice Springs**	**37.56**	**285**	P		**P**	**12 04 17.9**	**+1.2**
	0.1nm,0.3s,baz=126,slow=7.9,SNR=7.6							
WRA	**Warramunga Arr**	**39.56**	**290**	P		**P**	**12 04 34.8**	**+1.5**
	0.4nm,0.5s,baz=127,slow=8.4,SNR=8.6							
SYO	**Syowa Base**	**65.46**	**196**	*eP*		**P**	**12 07 44.2**	**+0.9**
TORD	**Torodi Ar. Bea**	**151.66**	**196**	PKPbc		**PKPbc**	**12 16 55.3**	**+0.8**
	0.6nm,0.9s,baz=194,slow=2.5,SNR=3.2							

*IDC **25** 12:23:15.4±1.3,52.41N×62.90E,h0km,mb3.6/1, mb1 3.2/3,mb1mx3.0/34,mbtmp3.0/3,ML2.1/2,Error ellipse: s-maj=35.9km s-min=11.5km az=163.0*
*NNC **25** 12:23:15.4±5.9,52.50N×62.86E,h0km,mb2.9,mpv2.5, Error ellipse: s-maj=105.1km s-min=27.6km az=152.0, Suspected Mining explosion.*

ISC 25 12:23:16.6±1.2,52.5N±0.1×62.75E±0.07,h0km,n8, σ0s72/8,5C-2D,Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKTO	**Aktyubinsk**	**3.63**	**236**	P		**Pn**	**12 24 14.7**	**+0.7**
	0.1nm,0.3s,baz=86,slow=16,SNR=1.6							
AKTO				Lg		Lg	12 25 09.3	
	0.5nm,0.3s,baz=330,slow=22,SNR=13							
AKTO	**Aktyubinsk**	**3.63**	**236**	⇑Pg		**Pb**	**12 24 20.8**	**-0.8**
	0.7nm,0.6s							
AKTO				⇓Lg		Lg	12 25 09.6	
	3.8nm,0.6s							
I31KZ	**AKTYUBINSK INF**	**3.64**	**236**	*i*			12 44 40.0	
	baz=53,slow=349,SNR=17							
AB31	**Akbulak array**	**3.73**	**210**	⇑Pn		**Pn**	**12 24 14.9**	**-0.5**
	0.6nm,0.8s,baz=55,slow=14,SNR=11							
AB31				⇑Pg		**Pb**	**12 24 23.9**	**+0.5**
	0.7nm,0.7s,baz=28,slow=15,SNR=7.6							
AB31				⇑Lg		Lg	12 25 16.4	
	1.8nm,0.4s,baz=54,slow=31,SNR=8.6							
BRVK	**Borovoye**	**4.60**	**80**	⇑Pg		**Pb**	**12 24 38.7**	**+0.6**
	2.9nm,1.2s							
BRVK				⇓Lg		Lg	12 25 38.0	
	4.1nm,0.7s							
BVAR	**Borovoye Array**	**4.66**	**81**	Pn		**Pn**	**12 24 27.5**	**-0.7**
	0.2nm,0.3s,baz=261,slow=14,SNR=2.9							
BVAR				Pg		Pb	12 24 34.1	-5.0
	0.4nm,0.3s,baz=262,slow=19,SNR=4.2							
BVAR				Sn		**Sn**	**12 25 22.7**	**-0.2**
	0.5nm,0.3s,baz=190,slow=40,SNR=3.1							
BVAR				Lg		Lg	12 25 42.4	
	0.7nm,0.3s,baz=251,slow=31,SNR=6.8							
I46RU	**ZALESOVO INFRA**	**13.28**	**75**	*i*			13 43 20.0	
	baz=270,slow=318,SNR=1.2							
FINES	**FINESS Array B**	**21.60**	**309**	P		**P**	**12 28 07.9**	**+0.2**
	2.9nm,1.0s,baz=113,slow=9.2,SNR=4.2							

*ATH **25** 12:24:06.0,38.11N×20.46E,h19km, ML2.8/11, Error ellipse: s-maj=1.6km s-min=0.8km az=246.0*
*THE **25** 12:24:07.4,38.11N×20.48E,h8km±1km,ML3.5/6, Error ellipse: s-maj=1.3km s-min=0.6km az=355.0*

ISC 25 12:24:05.5±0.9,38.10N±0.03×20.38E±0.04,h19km±2km, n53,σ0s95/76,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.11**	**347**	P		**Pg**	**12 24 10.3**	**+0.8**
KEF3				S		**Sg**	**12 24 13.2**	**+1.1**
KEF3	**Kipouria, Keph**	**0.11**	**347**	P		**Pg**	**12 24 10.2**	**+0.8**
KEF3				S		**Sg**	**12 24 13.2**	**+1.1**
	81µm,0.2s							
ARGA	**Argostoli. Kep**	**0.11**	**44**	P		**Pg**	**12 24 09.5**	**+0.1**
ARGA				S		**Sg**	**12 24 11.6**	**-0.5**
LXRA	**Lixouri, Kepha**	**0.11**	**23**	P		**Pg**	**12 24 10.0**	**+0.5**
LXRA				S		**Sg**	**12 24 12.5**	**+0.4**
KEF4	**Livadi, Kephal**	**0.17**	**12**	P		**Pg**	**12 24 10.7**	**+0.5**
KEF4				S		**Sg**	**12 24 13.9**	**+0.7**
KEF4	**Livadi, Kephal**	**0.17**	**12**	P		**Pg**	**12 24 10.6**	**+0.5**
KEF4				S		**Sg**	**12 24 13.7**	**+0.5**
	156µm,0.1s							
VLS	**Valsamata**	**0.18**	**64**	P		**Pb**	**12 24 10.1**	**+0.6**
VLS				S		**Sb**	**12 24 12.7**	**+0.7**
VLS				AML		AML	12 24 12.9	
	comp=E,73282µm,0.1s							
VLS				AML		AML	12 24 12.9	
VLS	**Valsamata**	**0.18**	**64**	P		**Pb**	**12 24 10.1**	**+0.6**
VLS				S		**Sb**	**12 24 12.6**	**+0.6**
KEF5	**Kardakata, Kep**	**0.20**	**21**	P		**Pg**	**12 24 10.8**	**+0.3**
KEF5				S		**Sg**	**12 24 13.9**	**0.0**
KEF5	**Kardakata, Kep**	**0.20**	**21**	P		**Pg**	**12 24 10.8**	**+0.3**
KEF5				S		**Sg**	**12 24 13.9**	**0.0**
	comp=E,76µm,0.2s							
VLMS	**Volimes, Zakyn**	**0.31**	**134**	P		**Pg**	**12 24 12.3**	**-0.1**
VLMS				S		**Sg**	**12 24 17.0**	**0.0**
VLMS				AML		AML	12 24 26.5	
	comp=N,12373µm,0.3s							
VLMS				AML		AML	12 24 27.8	
	comp=E,8310µm,0.3s							
VLMS	**Volimes, Zakyn**	**0.31**	**134**	P		**Pg**	**12 24 12.3**	**-0.1**
VLMS				S		**Sg**	**12 24 17.0**	**0.0**
FSK	**Fiskardo**	**0.39**	**22**	P		**Pg**	**12 24 13.7**	**0.0**
FSK				S		**Sg**	**12 24 18.8**	**-0.5**
FSK				AML		AML	12 24 20.4	
	comp=N,3504µm,0.2s							
FSK				AML		AML	12 24 20.5	
	comp=E,7076µm,0.1s							
FSK	**Fiskardo**	**0.39**	**22**	P		**Pg**	**12 24 13.7**	**0.0**
FSK				S		**Sg**	**12 24 19.5**	**+0.2**
	comp=E,3µm,0.2s							
MGNA	**Meganis**	**0.65**	**30**	P		**Pb**	**12 24 17.9**	**-0.2**
MGNA				S		**Sb**	**12 24 26.9**	**+0.2**
LKD2	**Lefkada island**	**0.73**	**17**	P		**Pb**	**12 24 19.5**	**-0.1**
LKD2				AML		AML	12 24 37.0	
	comp=N,1822µm,0.5s							
LKD2				AML		AML	12 24 37.1	
	comp=E,1641µm,0.3s							
LKD2	**Lefkada island**	**0.73**	**17**	P		**Pb**	**12 24 20.1**	**+0.5**
LKD2				S		**Sg**	**12 24 31.0**	**+1.4**
	comp=E,892nm,0.3s							
PDO	**Prodromos**	**0.81**	**51**	P		**Pb**	**12 24 20.7**	**-0.4**
PDO	**Prodromos**	**0.81**	**51**	P		**Pb**	**12 24 20.6**	**-0.4**
PDO				S		**Sg**	**12 24 32.2**	**+0.1**
	comp=E,2µm,0.3s							
RLS	**Riolos of Patr**	**0.86**	**92**	P		**Pg**	**12 24 22.3**	**0.0**
RLS				AML		AML	12 24 39.3	
	comp=N,1028µm,0.5s							
RLS				AML		AML	12 24 43.9	
	comp=E,958µm,0.6s							
RLS	**Riolos of Patr**	**0.86**	**92**	P		**Pg**	**12 24 22.3**	**0.0**
DRO	**Drossia**	**1.06**	**97**	P		**Pb**	**12 24 25.2**	**-0.1**
DRO				AML		AML	12 24 46.8	
	comp=N,1515µm,0.4s							
DRO				AML		AML	12 24 53.8	
	comp=E,859µm,0.5s							
DRO	**Drossia**	**1.06**	**97**	P		**Pb**	**12 24 25.2**	**-0.1**
EFP	**Efpalio**	**1.25**	**74**	P		**Pn**	**12 24 28.1**	**+0.2**
ANX	**Ano Chora**	**1.31**	**67**	P		**Pb**	**12 24 30.5**	**+0.9**
ANX				AML		AML	12 24 54.0	
	comp=N,1146µm,0.5s							
ANX				AML		AML	12 24 55.1	
	comp=E,1027µm,0.6s							
SERG	**Sergoula**	**1.36**	**76**	P		**Pn**	**12 24 29.9**	**+0.3**
TRIZ	**Trizonia**	**1.36**	**78**	P		**Pn**	**12 24 29.9**	**+0.4**
EVR	**Evrytania**	**1.39**	**53**	P		**Pb**	**12 24 31.9**	**+0.9**
EVR	**Evrytania**	**1.39**	**53**	P		**Pb**	**12 24 31.9**	**+0.9**
KLV	**Kalavryta, Ach**	**1.40**	**92**	P		**Pb**	**12 24 31.1**	**0.0**
KLV				AML		AML	12 25 03.8	
	comp=N,315µm,0.6s							
KLV				AML		AML	12 25 04.0	
	comp=E,321µm,0.6s							
KALE	**Kalithea**	**1.42**	**77**	P		**Pn**	**12 24 31.0**	**+0.7**
KALE				AML		AML	12 25 01.1	
	comp=N,690µm,0.5s							
KALE				AML		AML	12 25 06.4	
	comp=E,369µm,0.4s							
IGT	**Igoumenitsa**	**1.44**	**359**	P		**Pg**	**12 24 33.1**	**-0.2**
IGT	**Igoumenitsa**	**1.44**	**359**	P		**Pg**	**12 24 33.1**	**-0.2**
ITM	**Ithomi**	**1.53**	**126**	P		**Pb**	**12 24 34.2**	**+0.9**
ITM	**Ithomi**	**1.53**	**126**	P		**Pb**	**12 24 34.2**	**+0.9**
GUR	**Goura**	**1.56**	**95**	P		**Pb**	**12 24 33.7**	**-0.1**
PYL	**PYLOS**	**1.61**	**137**	P		**Pb**	**12 24 35.2**	**+0.5**
PYL	**PYLOS**	**1.61**	**137**	P		**Pb**	**12 24 35.2**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.65**	**56**	P		**Pb**	**12 24 35.4**	**0.0**
KEK	**Kerkira**	**1.68**	**344**	P		**Pb**	**12 24 35.8**	**0.0**
KEK				AML		AML	12 25 08.5	
	comp=N,329µm,0.6s							
KEK				AML		AML	12 25 17.1	
	comp=E,635µm,0.7s							
KEK	**Kerkira**	**1.68**	**344**	P		**Pb**	**12 24 35.8**	**0.0**
DSF	**Desfina**	**1.72**	**79**	P		**Pb**	**12 24 36.0**	**-0.5**
AGG	**Agios Georgios**	**1.79**	**58**	P		**Pb**	**12 24 38.9**	**+1.2**
AGG				AML		AML	12 25 14.5	
	comp=E,362µm,0.6s							
AGG				AML		AML	12 25 15.3	
	comp=N,302µm,0.9s							
THL	**Klokotos Trika**	**1.94**	**41**	P		**Pb**	**12 24 40.4**	**0.0**
STON	**Ston**	**5.19**	**338**	*e*Pn		**Pn**	**12 25 22.5**	**+0.3**
STON				Sn		**Sn**	**12 26 19.0**	**-2.4**
LSTV	**Lastovo**	**5.37**	**331**	*e*Pn		**Pn**	**12 25 25.5**	**+0.8**
LSTV				Sn		**Sn**	**12 26 23.1**	**-2.9**
MAKA	**Makarska**	**5.78**	**335**	*e*Pn		**Pn**	**12 25 31.4**	**+1.1**
MAKA				Sn		**Sn**	**12 26 32.8**	**-3.2**
RICI	**Ricice**	**5.93**	**336**	*e*Pn		**Pn**	**12 25 33.3**	**+0.9**
RICI				Sn		**Sn**	**12 26 38.2**	**-1.5**
ZIRJ	**Zirje**	**6.61**	**329**	*e*Pn		**Pn**	**12 25 42.5**	**+0.8**
KLIV	**Kijevo**	**6.62**	**334**	*e*Pn		**Pn**	**12 25 43.5**	**+1.7**
KLIV				Sn		**Sn**	**12 26 55.3**	**-1.5**
MORI	**Morici**	**6.76**	**330**	*e*Pn		**Pn**	**12 25 45.4**	**+1.7**
DUGI	**Dugi Otok**	**7.13**	**327**	*e*Pn		**Pn**	**12 25 50.4**	**+1.5**
DUGI				Sn		**Sn**	**12 27 08.1**	**-1.2**
NVLJ	**Novalja**	**7.67**	**329**	Sn		**Sn**	**12 27 20.1**	**-2.6**

*ISN **25** 13:04:38.3±0.8,32.67N×47.76E,h14km±5km, ML3.3*
*TEH **25** 13:04:39.3,32.66N×47.75E,h13km, ML3.5*
*THR **25** 13:04:42.2±0.5,32.67N×47.85E,h14km±7km, ML3.5*

ISC 25 13:04:39.8±0.9,32.61N±0.03×47.69E±0.04,h10km,n40, σ1s14/46,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.92**	**8**	*e*Pg		**Pg**	**13 04 55.7**	**-1.8**
IKFM				*e*			13 05 00.9	
IKMR	**Kamar-syah**	**1.07**	**33**	*e*Pg		**Pb**	**13 04 57.7**	**-2.7**
IKMR				*e*			13 05 21.0	
IDOB	**Doab**	**1.24**	**19**	*e*Pg		**Pn**	**13 05 01.3**	**-2.1**
AHWZ	**Ahwaz**	**1.52**	**147**	*e*Sg		**Sg**	**13 05 29.1**	**+0.6**
AHWZ				*e*Pg		**Pg**	**13 05 08.5**	**-0.3**
IBDR	**Badra**	**1.56**	**289**	*e*Pg		**Pn**	**13 05 07.0**	**-0.6**
IBDR				*e*Sg		**Sn**	**13 05 29.0**	**+1.1**
IBDR				AML		AML	13 05 34.9	
	comp=E,329nm,0.5s							
IBDR				AML		AML	13 05 35.9	
	comp=N,308nm,0.4s							
IKOM	**Komasi**	**1.56**	**355**	*e*			13 05 13.6	
IKOM				*e*Pg		**Pn**	**13 05 08.5**	**+0.7**
KCHF	**Cheshme Sefid,**	**1.74**	**342**	*e*Pg		**Pn**	**13 05 11.1**	**+0.8**
KCHF				*e*			13 05 38.4	
HSAM	**Samen**	**1.77**	**25**	*e*Pg		**Pn**	**13 05 11.5**	**+0.8**
HSAM				*e*			13 05 13.2	
KER	**Kermanshah**	**1.83**	**345**	*e*Pg		**Pn**	**13 05 12.0**	**+0.6**
IBZA	**Bozab**	**1.86**	**4**	*e*Pg		**Pn**	**13 05 13.0**	**+1.1**
IBZA				*e*			13 05 20.1	
IGHG	**Ghaleghazi**	**1.95**	**332**	*e*Pn		**Pn**	**13 05 14.2**	**+1.0**
IGHG				*e*			13 05 49.5	
IVIS	**Veis**	**2.03**	**340**	*e*Pn		**Pn**	**13 05 14.6**	**+0.4**
IVIS				*e*			13 05 49.0	
NSR	**Nassriya**	**2.07**	**220**	*e*Pn		**Pn**	**13 05 15.0**	**+0.4**
NSR				*e*Sn		**Sn**	**13 05 41.0**	**+0.6**
NSR				AML		AML	13 05 52.4	
	comp=E,401nm,0.5s							
KHMZ	**Khomeyn**	**2.21**	**59**	*e*Pg		**Pb**	**13 05 19.8**	**-0.2**
KHMZ				*e*Sg		**Sb**	**13 05 47.8**	**+0.3**
KHMZ				IAML			13 05 55.8	
	comp=E,169nm,0.5s							
KHMZ	**Khomeyn**	**2.21**	**59**	*e*Pg		**Pb**	**13 05 19.8**	**-0.2**
IALM	**Almabolaq**	**2.28**	**10**	*e*Pn		**Pn**	**13 05 18.8**	**+1.1**
IDHR	**Dehrash**	**2.35**	**333**	*e*Pn		**Pn**	**13 05 19.4**	**+0.8**
IDHR				*e*			13 05 59.4	
ILIN	**Lien**	**2.38**	**345**	*e*Pn		**Pn**	**13 05 19.9**	**+0.8**
ILIN				*e*			13 06 05.7	
SNGE	**Sanandaj**	**2.49**	**354**	*e*Pn		**Pb**	**13 05 24.0**	**-0.7**
SNGE	**Sanandaj**	**2.49**	**354**	*e*Pn		**Pb**	**13 05 24.0**	**-0.7**
HSRG	**Sareghieh**	**2.67**	**10**	*e*Pn		**Pn**	**13 05 24.1**	**+1.0**
HSRG				*e*			13 05 26.8	
IPIR	**Pirpir**	**2.70**	**88**	*e*Pn		**Pn**	**13 05 24.0**	**+0.4**
IPIR				*e*			13 06 12.4	
ASAO	**Ashtian**	**2.74**	**45**	*e*Pn		**Pn**	**13 05 26.4**	**+2.3**
ASAO				*e*Sg		**Sb**	**13 06 04.2**	**+1.4**
ASAO	**Ashtian**	**2.74**	**45**	*e*Pn		**Pn**	**13 05 26.4**	**+2.3**
BHD	**Baghdad**	**2.86**	**284**	*e*Pn		**Pn**	**13 05 26.0**	**+0.6**
BHD				*e*Sn		**Sn**	**13 06 01.0**	**+1.1**
IKLH	**Kolahrood**	**3.34**	**77**	*e*Pn		**Pn**	**13 05 33.5**	**+1.1**
IKLH				*e*			13 05 42.4	
IRAZ	**Razeghan**	**3.35**	**33**	*e*Pn		**Pn**	**13 05 33.9**	**+1.5**
GHVR	**GHOM**	**3.54**	**57**	*e*Pn		**Pn**	**13 05 36.7**	**+1.8**
GHVR	**GHOM**	**3.54**	**57**	*e*Pn		**Pn**	**13 05 36.7**	**+1.8**
IGAR	**Gharneh**	**3.68**	**92**	*e*Pn		**Pn**	**13 05 36.9**	**-0.1**
IGAR				*e*			13 05 47.8	
KLNJ	**Kolanjah**	**3.69**	**115**	*e*Pn		**Pn**	**13 05 36.9**	**-0.3**
KLNJ				*e*			13 06 43.9	
IZEF	**Zefreh**	**3.92**	**85**	*e*Pn		**Pn**	**13 05 40.7**	**+0.4**
KRSH	**Karshahi**	**3.96**	**69**	*e*Pn		**Pn**	**13 05 40.9**	**+0.1**
IRAM	**Ramesheh**	**4.06**	**100**	*e*Pn		**Pn**	**13 05 41.2**	**-0.9**
QSDN	**Sirdan**	**4.07**	**17**	*e*Pn		**Pn**	**13 05 42.9**	**+0.6**
QALM	**Alamut, Qazvin**	**4.53**	**32**	*e*Pn		**Pn**	**13 05 50.1**	**+1.5**
IDMV	**Damavand**	**4.66**	**49**	*e*Pn		**Pn**	**13 05 51.1**	**+0.6**
ANAR	**Anarak**	**5.11**	**82**	*e*Pn		**Pn**	**13 05 56.6**	**0.0**
ISAD	**Sadrabad**	**5.13**	**96**	*e*Pn		**Pn**	**13 05 56.3**	**-0.6**
ICHK	**Chekchek**	**5.69**	**92**	*e*Pn		**Pn**	**13 06 04.8**	**+0.2**

*REY **25** 13:14:26.9,64.67N×17.44W,h2km*
*IDC **25** 13:14:28.5±1.1,64.60N×17.46W,h0km,mb3.6/6, mb1 3.9/7,mb1mx3.6/42,mbtmp3.7/7,ML3.9/1, Error ellipse: s-maj=34.9km s-min=21.8km az=56.0*
*NEIC **25** 13:14:28.9±1.8,64.58N±0.09×17.9W±0.1,h8km±5km, mb4.2/6, Error ellipse: s-maj=12.5km s-min=7.3km az=172.0*

ISC 25 13:14:28.0±0.5,64.66N±0.02×17.44W±0.02,h10km,n61, σ2s39/64,mb3.9/9,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDYN	**Dyngjuhals**	**0.14**	**12**	P		**Pg**	**13 14 29.8**	**-1.4**
	baz=15							
IVON	**Vonarskard**	**0.14**	**277**	S		**Sg**	**13 14 32.4**	**-1.2**
	baz=272							
IVON				P		**Pg**	**13 14 29.7**	**-1.5**
	baz=272							
IURH	**Urdarhals**	**0.20**	**37**	P		**Pg**	**13 14 31.1**	**-1.2**
	baz=40							
IHAM	**Hamarinn**	**0.24**	**223**	S		**Sb**	**13 14 36.9**	**+0.4**
	baz=221							
IHAM				P		**Pb**	**13 14 31.7**	**-1.4**
	baz=221							
IGRF	**Grimsfjall**	**0.26**	**164**	P		**Pb**	**13 14 32.5**	**-2.4**
	baz=164							
IGRF				S		**Sb**	**13 14 36.7**	**-2.8**
	baz=164							
IKVE	**Kverkfjoll**	**0.33**	**86**	P		**Pb**	**13 14 33.4**	**-2.6**
	baz=88							
IVOT	**Vottur**	**0.40**	**164**	P		**Pb**	**13 14 35.2**	**-2.1**
	baz=164							
IVOT				S		**Sb**	**13 14 41.0**	**-2.5**
	baz=164							
ISKR	**Skrokkalda**	**0.42**	**257**	P		**Pb**	**13 14 35.1**	**-2.5**
	baz=255							
IKRE	**Kreppuhraun**	**0.47**	**74**	P		**Pb**	**13 14 35.5**	**-2.9**
	baz=76							
IJOK	**Jokulheimar**	**0.48**	**225**	P		**Pb**	**13 14 36.3**	**-2.4**
	baz=224							
IJOK				S		**Sb**	**13 14 43.4**	**-2.4**
	baz=224							
IMKO	**Mokollar**	**0.57**	**55**	P		**Pb**	**13 14 37.3**	**-2.8**
	baz=56							
IIEY	**Innrieyrar**	**0.64**	**208**	P		**Pb**	**13 14 38.7**	**-2.6**
	baz=207							
IKSK	**Karasker**	**0.65**	**140**	P		**Pg**	**13 14 38.4**	**-2.2**
	baz=140							
ISVA	**Svartarkot**	**0.69**	**6**	P		**Pg**	**13 14 39.0**	**-2.3**
	baz=6.7							
IKAL	**Kalfafell**	**0.72**	**189**	P		**Pb**	**13 14 40.1**	**-2.5**
	baz=188							
IVSH	**V-Sauoahnukur**	**0.75**	**78**	P		**Pg**	**13 14 40.1**	**-2.4**
	baz=79							
IVAT	**Vatnsfell**	**0.80**	**234**	P		**Pb**	**13 14 41.8**	**-2.2**
	baz=234							
IFAG	**Fagurholsmyri**	**0.86**	**156**	P		**Pg**	**13 14 42.2**	**-2.2**
	baz=156							
IADA	**Aoalbol**	**0.87**	**65**	P		**Pg**	**13 14 42.2**	**-2.7**
	baz=66							
IHVE	**Hveravellir**	**0.94**	**284**	P		**Pg**	**13 14 43.2**	**-2.8**
	baz=283							
IHVE				S		**Sg**	**13 14 55.8**	**-2.5**
	baz=283							
IMEL	**Melhnausar**	**0.97**	**19**	P		**Pg**	**13 14 43.7**	**-3.0**
	baz=20							
IREN	**Reynihlio**	**1.02**	**12**	P		**Pb**	**13 14 45.0**	**-2.7**
	baz=13							
IREN				S		**Sg**	**13 14 57.8**	**-3.0**
	baz=13							
ISNB	**Snabyli**	**1.06**	**210**	P		**Pg**	**13 14 46.0**	**-2.5**
	baz=210							
IKVO	**Krokottuvotn**	**1.09**	**12**	P		**Pg**	**13 14 45.6**	**-3.3**
	baz=12							
IGRS	**Grimsstaoir**	**1.13**	**29**	P		**Pb**	**13 14 46.6**	**-3.0**
	baz=29							
IRJU	**Rjupnafell**	**1.18**	**208**	P		**Pn**	**13 14 48.3**	**-2.2**
	baz=208							
IMJO	**Mjoaskard**	**1.22**	**234**	P		**Pg**	**13 14 49.0**	**-2.4**
	baz=234							
ISKI	**Skildingahlsh**	**1.23**	**8**	P		**Pn**	**13 14 48.0**	**-3.3**
	baz=8.1							
IGHA	**Grjothals**	**1.23**	**15**	P		**Pn**	**13 14 48.4**	**-2.9**
	baz=15							
IGYG	**Gygjarholskot**	**1.26**	**254**	P		**Pn**	**13 14 49.0**	**-2.6**
	baz=253							
IHVO	**Lagu-Hvolar**	**1.29**	**209**	P		**Pb**	**13 14 50.1**	**-2.3**
	baz=209							
IDIM	**Dimmadalss**	**1.33**	**9**	P		**Pn**	**13 14 49.6**	**-3.0**
	baz=9.2							
IHLA	**Hella**	**1.35**	**343**	P		**Pn**	**13 14 50.0**	**-2.9**
	baz=343							
IHED	**Heoinshofoi**	**1.43**	**2**	P		**Pn**	**13 14 51.1**	**-2.9**
	baz=2.2							
IESK	**Eystri-Skogar**	**1.44**	**219**	P		**Pb**	**13 14 52.6**	**-2.3**
	baz=218							
IBRE	**Brettingsstaoi**	**1.49**	**353**	P		**Pn**	**13 14 52.0**	**-2.7**
	baz=353							
BORG	**Borgarnes**	**1.68**	**275**			**Pn**	**13 14 55.4**	**-1.9**
SCO	**Scoresbysund**	**6.10**	**346**			**Pn**	**13 15 58.6**	**+0.6**
SCO	**Scoresbysund**	**6.10**	**346**	*e*		**Pn**	**13 15 57.7**	**-0.3**
	baz=152,slow=10							
SCO				*i*	P	**Pn**	**13 15 59.0**	**+0.9**
SCO				*i*	S	**Sn**	**13 17 12.5**	**+4.7**
SCO				IAML			13 17 35.8	
	comp=Z,1.4nm,0.4s							
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn		**Pn**	**13 17

TUE	**Stuetta**	**1.15**	**316**	P	Pb	13 19 37.4	+0.1
FETA	**Feichten**	**1.38**	**7**	*e*Pg	Pg	13 19 42.1	+0.5
	comp=E,2.1nm,0.5s						
FETA				*e*Sg	Sg	13 19 59.8	+0.2
	comp=E,0.7nm,0.2s						
MSSA	**Maissana**	**1.50**	**208**	S	Sg	13 20 05.0	+1.5
RISI	**Rein**	**1.70**	**40**	P	Pb	13 19 46.8	+0.2
RISI				AML	AML		
	comp=E,52μm,0.3s						
RISI				AML	AML		
	comp=N,59μm,0.3s						
SEI	**Scarperia**	**1.71**	**159**	S	Sn	13 20 07.0	-0.1
CIRO	**Champorcher**	**2.06**	**270**	P	Pn	13 19 50.8	+0.7
PE3	**Peglio**	**2.42**	**143**	S	Sn	13 20 26.0	+1.4
SENI	**Senigallia**	**2.75**	**134**	S	Sb	13 20 37.0	-1.3
ARCI	**Arcidosso**	**2.88**	**166**	S	Sb	13 20 40.0	-2.2
LATE	**Laterza**	**3.18**	**162**	⇑P	Pg	13 20 15.0	-1.0
BIOG	**Biogem**	**5.58**	**141**	⇓P	Pb	13 20 52.9	+0.2

ROM 25 13:20:34.2±0.1, 43°.159N±0°.004×12°.803E±0°.004, h10km, ML0.8/2, Error ellipse: s-maj=0.5km s-min=0.1km az=327.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATCC	**AVT- Casa Cast**	**0.12**	**283**	S	Pg	13 20 38.0	+0.8
ATCC	**AVT- Casa Cast**	**0.12**	**283**	P	Pg	13 20 37.7	+0.5
ATCC				S	Sg	13 20 40.1	+0.8
ATCC				AML	AML		
	comp=N,80μm,0.4s						
ATCC				AML	AML		
	comp=E,85μm,0.1s						
SNTG	**Esanatoglia**	**0.14**	**46**	S	Pg	13 20 38.0	+0.5
SNTG	**Esanatoglia**	**0.14**	**46**	P	Pg	13 20 38.0	+0.5
SNTG				S	Sg	13 20 40.5	+0.8
ASSB	**Assisi San Ben**	**0.16**	**222**	S	Pg	13 20 39.0	+1.3
ASSB	**Assisi San Ben**	**0.16**	**222**	P	Pg	13 20 38.3	+0.5
ASSB				S	Sg	13 20 41.1	+1.0
ASSB				AML	AML		
	comp=E,38μm,1.3s						
ASSB				AML	AML		
	comp=N,38μm,1.1s						
MURB	**Monte Urbino**	**0.23**	**297**	S	Pg	13 20 40.0	+1.0
MURB	**Monte Urbino**	**0.23**	**297**	P	Pg	13 20 39.5	+0.5
FDMO	**Fiordimonte**	**0.24**	**120**	S	Pg	13 20 44.0	+4.8
EL6	**Elcito**	**0.28**	**52**	S	Pg	13 20 41.0	+1.1
EL6	**Elcito**	**0.28**	**52**	P	Pg	13 20 40.4	+0.5
EL6				S	Sb	13 20 45.1	-0.9
LATE	**Laterza**	**0.91**	**234**	AML	AML		
	comp=N,44μm,0.7s						
LATE				AML	AML		
	comp=E,31μm,0.8s						
AQU	**L'Aquila**	**0.92**	**151**	AML	AML		
	comp=E,138μm,0.1s						
AQU				AML	AML		
	comp=N,148μm,0.6s						
FIAM	**Fiamignano**	**0.92**	**165**	S	Pg	13 21 01.0	+9.1

*KRNET **25** 13:30:22.2±0.1, 41°.10N×69°.56E, mb2.7*
*ISU **25** 13:30:24.0, 41°.20N×70°.50E, h5km*
*SOME **25** 13:30:27.0, 41°.03N×69°.87E, h15km*
*NNC **25** 13:30:28.6±1.7, 41°.12N×69°.97E, h0km, mb3.3, mpv3.1, Error ellipse: s-maj=14.0km s-min=8.8km az=59.0*
ISC 25 13:30:26.5±1.2, 41°.06N±0°.04×69°.95E±0°.06, h10km, n16, σ1§40/29, 13C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHMG	**Chimgan**	**0.50**	**5**	*e*P	**Pg**	**13 30 35.8**	**-0.4**
CHMG				*e*S	**Sb**	**13 30 44.2**	**-0.6**
TRKS	**Terek-Say**	**1.02**	**62**	⇓*i*P	**Pg**	**13 30 45.5**	**-0.5**
	baz=73						
TRKS				⇓*i*S	**Sn**	**13 31 02.6**	**+1.2**
	baz=73						
IUG	**Iuzhnay**	**1.09**	**3**	*e*P	**Pn**	**13 30 48.2**	**+0.2**
	28nm,0.5s						
IUG				*e*S	**Sb**	**13 31 02.1**	**+0.2**
	104nm,0.5s						
IUG	**Iuzhnay**	**1.09**	**3**	P	**Pn**	**13 30 48.2**	**+0.2**
	28nm,0.5s						
IUG				S	**Sb**	**13 31 02.1**	**+0.2**
	104nm,0.5s						
BTK	**Batken**	**1.20**	**146**	⇓*e*P	**Pb**	**13 30 48.2**	**-1.1**
	baz=37						
BTK				⇓*e*S	**Sn**	**13 31 06.9**	**+1.2**
	baz=37						
BTK	**Batken**	**1.20**	**146**	*i* P	**Pb**	**13 30 48.7**	**-0.6**
BTK				*i* S	**Sn**	**13 31 08.7**	**+3.0**
KK31	**Karatay Array**	**2.09**	**11**	⇑Pn	**Pb**	**13 31 04.2**	**-0.3**
	3.3nm,0.4s,baz=202,slow=15,SNR=20						
KK31				⇓Lg	Lg	13 31 34.6	
	14nm,0.5s,baz=196,slow=25,SNR=20						
DRK	**Karamyk**	**2.12**	**137**	⇑*i*P	**Pn**	**13 31 01.9**	**-0.3**
	baz=33						
DRK				⇑*i*S	**Sb**	**13 31 31.3**	**-0.3**
	baz=33						
OHH	**Osh**	**2.22**	**103**	⇑*i*P	**Pn**	**13 31 04.1**	**+0.7**
	baz=2.0						
OHH				⇑*i*S	**Sb**	**13 31 34.8**	**+0.5**
	baz=2.0						
ARSB	**Arslanbob**	**2.31**	**82**	⇑*e*P	**Pn**	**13 31 05.4**	**+0.7**
	baz=84						
ARSB				⇑*i*S	**Sb**	**13 31 36.9**	**0.0**
	baz=84						
SFK	**Sufi-Kurgan**	**2.90**	**110**	⇑*i*P	**Pn**	**13 31 13.6**	**+0.6**
	baz=8.0						
SFK				⇑*i*S	**Sn**	**13 31 50.9**	**+2.9**
	baz=8.0						
MRKS	**Merke**	**2.97**	**54**	*e*P	**Pg**	**13 31 22.4**	**-1.1**
	2.5nm,0.3s						
MRKS				*e*S	**Sg**	**13 32 00.6**	**-1.3**
	7.3nm,0.7s						
MRKS	**Merke**	**2.97**	**54**	Pg	**Pg**	**13 31 22.4**	**-1.1**
	2.5nm,0.3s						
MRKS				Lg	Lg	13 32 00.6	
	7.3nm,0.7s						
ARLS	**Aral**	**3.39**	**75**	⇑*i*P	**Pn**	**13 31 20.1**	**+0.6**
	baz=76						
ARLS				⇑*e*S	**Sn**	**13 32 02.6**	**+2.8**
	baz=76						
TKM2	**Tokmak 2**	**4.61**	**64**	⇑Pg	**Pg**	**13 31 51.1**	**-3.5**
	6.8nm,1.1s						
TKM2				⇑Lg	Lg	13 32 53.7	
	0.9nm,0.6s						
BTLS	**Baital**	**4.99**	**36**	*e*P	**Pg**	**13 32 00.8**	**-1.2**
	0.4nm,0.2s						
BTLS				*e*S	**Sg**	**13 33 07.2**	**+0.6**
	2.0nm,0.4s						

*IDC **25** 13:32:47.9±0.7, 39°.67S×15°.60W, h0km, mb4.0/12, mb1 4.1/12, mb1mx4.0/31, mbtmp4.0/12, MS4.3/17, Ms1 4.3/17, ms1mx4.2/23, Error ellipse: s-maj=22.5km s-min=19.0km az=170.0*
*NEIC **25** 13:32:49.4±1.4, 39°.6S±0°.1×15°.49W±0°.08, h14km±4km, mb4.8/26, Error ellipse: s-maj=16.0km s-min=9.0km az=191.0*
*GCMT **25** 13:32:58.4±0.2, 39°.81S±0°.02×15°.81W±0°.01, h12km, MW5.1/131, Moment Tensor Solution. s63,c79; s131,c208; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-5.62±.10; Mθθ 0.55±.11; Mϕϕ 5.06±.09; Mrθ 0.27±.37; Mθϕ-1.53±.09; Mϕr-0.32±.31; Best double couple: Ms 5.59100×10^16 NP1: ϕs 165.00000°, δ 43.00000°, λ -88.00000°. NP2: ϕs 341.00000°, δ 47.00000°, λ -92.00000°. Principal axes: T 5.5430, Plg 2.0000°, Azm 73.0000°; N 0.0860, Plg 2.0000°, Azm 343.0000°; P -5.6380, Plg 87.0000°, Azm 214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 25 13:32:49.0±0.5, 39°.65S±0°.08×15°.56W±0°.10, h10km, n66, σ1§16/44, mb4.3/18, MS4.3/17, 1C-1D, Tristan da Cunha region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H09N1	**TRISTAN DA CUN**	**3.63**	**46**	T	T	13 37 31.1	
	SNR=31						
HOPE	**Hope Point**	**20.33**	**217**	P	**P**	**13 37 25.7**	**+0.6**
SUR	**Sutherland**	**30.15**	**88**	LR	LR	13 48 21.6	
	comp=Z,1μm,21.1s,baz=244,slow=31						
H10S2	**ASCENSION HYDR**	**30.58**	**2**	T	T	14 11 21.9	
	baz=38,slow=74,SNR=71						
H10S3	**ASCENSION HYDR**	**30.58**	**2**	T	T	14 11 15.2	
	baz=182,slow=74,SNR=197						
VNA1	**Neumayer--Stat**	**31.30**	**175**	P	**P**	**13 39 10.8**	**+2.0**
EFI	**East Falkland**	**31.60**	**233**	P	**P**	**13 39 10.8**	**-0.9**
VNA2	**Neumayer--Watz**	**31.62**	**175**	P	**P**	**13 39 12.2**	**+0.4**
	baz=341,slow=8.9						
H10N1	**ASCENSION HYDR**	**31.69**	**2**	T	T	14 12 47.8	
	baz=189,slow=78,SNR=19						
H10N3	**ASCENSION HYDR**	**31.69**	**2**	T	T	14 12 46.6	
	baz=189,slow=78,SNR=185						
H10N2	**ASCENSION HYDR**	**31.70**	**2**	T	T	14 12 47.7	
	baz=189,slow=78,SNR=61						
VNA3	**Neumayer Olymp**	**31.80**	**176**	P	**P**	**13 39 13.2**	**-0.1**
SNAA	**Sanae**	**32.73**	**173**	P	**P**	**13 39 21.4**	**-0.1**
SNAA	**Sanae**	**32.73**	**173**	P	**P**	**13 39 21.0**	**-0.6**
	1.8nm,0.8s,baz=321,slow=7.7,SNR=6.7						
SNAA	**Sanae**	**32.73**	**173**	P	**P**	**13 39 21.0**	**-0.6**
SNAA				IAmb	IAmb	13 39 35.4	
	comp=Z,15nm,1.2s						
BOSA	**Boshof**	**35.26**	**85**	P	**P**	**13 39 43.1**	**-0.9**
	comp=Z,3.9nm,1.0s,baz=200,slow=5.4,SNR=4.4						
BOSA				LR	LR	13 51 38.8	
	comp=Z,789nm,20.1s,baz=243,slow=32						
BOSA	**Boshof**	**35.26**	**85**	IAmb	IAmb	13 39 46.8	
	comp=Z,11nm,1.1s						
BDFB	**Brasilia**	**37.07**	**301**	LR	LR	13 52 12.2	
	comp=Z,348nm,21.7s,baz=125,slow=31						
BDFB	**Brasilia**	**37.07**	**301**	P	**P**	**13 40 00.9**	**+1.3**
CPUP	**Villa Florida**	**37.14**	**278**	P	**P**	**13 39 59.5**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=91,slow=12,SNR=2.0						
CPUP				LR	LR	13 53 14.6	
	comp=Z,958nm,19.3s,baz=132,slow=33						
CPUP	**Villa Florida**	**37.14**	**278**	IAmb	IAmb	13 40 09.3	
	comp=Z,17nm,1.5s						
RCBR	**Riachuelo**	**38.35**	**326**	P	**P**	**13 40 10.2**	**-0.1**
RCBR				IAmb	IAmb	13 40 33.6	
	comp=Z,37nm,1.4s						
BELA	**Belgrano 2**	**39.15**	**186**	P	**P**	**13 40 15.3**	**-1.0**
SYO	**Syowa Base**	**41.25**	**153**	⇑*e*P	**P**	**13 40 31.8**	**-2.0**
SYO	**Syowa Base**	**41.25**	**153**	⇓pP	**P**	**13 40 34.0**	**+0.2**
PLCA	**Paso Flores**	**41.44**	**250**	LR	LR	13 55 00.3	
	comp=Z,915nm,20.9s,baz=124,slow=32						
MATP	**Matopo**	**42.20**	**76**	P	**P**	**13 40 43.5**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=270,slow=3.0,SNR=2.4						
LSZ	**Lusaka**	**45.20**	**70**	P	**P**	**13 41 07.1**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=216,slow=7.5,SNR=3.6						
LSZ	**Lusaka**	**45.20**	**70**	P	**P**	**13 41 05.8**	**-0.7**
CO03	**El Pedregal**	**45.26**	**263**	P	**P**	**13 41 09.0**	**+2.1**
CO03				IAmb	IAmb	13 41 15.9	
	comp=Z,22nm,1.3s						
SIV	**San Ignacio**	**46.03**	**288**	P	**P**	**13 41 14.4**	**+1.4**
	comp=Z,2.3nm,1.0s,baz=121,slow=7.0,SNR=6.7						
DBIC	**Dimbokro**	**47.14**	**15**	LR	LR	13 56 32.2	
	comp=Z,176nm,20.7s,baz=168,slow=30						
GO02	**Mina Guanaco**	**47.18**	**271**	P	**P**	**13 41 22.0**	**-0.3**
PB06	**IPOC Station P**	**48.48**	**274**	P	**P**	**13 41 32.7**	**+0.5**
PB06				IAmb	IAmb	13 41 48.1	
	comp=Z,14nm,1.0s						
PB07	**IPOC Station P**	**49.27**	**275**	P	**P**	**13 41 40.2**	**+1.9**
MAW	**Mawson**	**49.73**	**151**	LR	LR	13 58 31.1	
	comp=Z,146nm,20.4s,baz=243,slow=31						
PATCX	**Punta Patache**	**49.98**	**275**	P	**P**	**13 41 44.1**	**+0.4**
PATCX				IAmb	IAmb	13 42 07.1	
	comp=Z,20nm,1.3s						
MNMC	**Minye Minye**	**50.53**	**278**	P	**P**	**13 41 48.1**	**+0.1**
MNMC				IAmb	IAmb	13 42 03.9	
	comp=Z,6.6nm,0.8s						
QSPA	**South Pole Qui**	**50.60**	**180**	LR	LR	14 00 28.9	
	comp=Z,151nm,19.4s,baz=198,slow=33						
QSPA	**South Pole Qui**	**50.60**	**180**	P	**P**	**13 41 47.6**	**-0.2**
PB16	**IPOC Station P**	**50.93**	**278**	P	**P**	**13 41 51.1**	**-0.3**
LPAZ	**La Paz**	**51.12**	**282**	P	**P**	**13 41 51.3**	**-1.6**
	comp=Z,2.0nm,1.0s,baz=127,slow=13,SNR=5.3						
LPAZ				LR	LR	14 03 38.2	
	comp=Z,254nm,18.0s,baz=134,slow=36						
LPAZ	**La Paz**	**51.12**	**282**	P	**P**	**13 41 49.7**	**-3.2**
SAML	**Samuel**	**52.24**	**293**	P	**P**	**13 41 59.9**	**-0.7**
SAML				IAmb	IAmb	13 42 05.7	
	comp=Z,15nm,1.4s						
MBO	**M'Bour**	**53.78**	**358**	P	**P**	**13 42 09.4**	**-2.2**
SACV	**Santiago Islan**	**54.86**	**350**	P	**P**	**13 42 19.6**	**-1.0**
TOAO	**Torodi Ar. Sit**	**54.93**	**21**	P	**P**	**13 42 19.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**54.93**	**21**	P	**P**	**13 42 20.2**	**+0.1**
	comp=Z,1.6nm,1.0s,baz=226,slow=7.1,SNR=4.1						
TORD				LR	LR	14 01 33.9	
	comp=Z,259nm,19.1s,baz=170,slow=31						
TORD	**Torodi Ar. Bea**	**54.93**	**21**	P	**P**	**13 42 19.2**	**-1.0**
KOWA	**Kowa**	**54.93**	**14**	P	**P**	**13 42 20.5**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=259,slow=8.0,SNR=2.4						
KOWA	**Kowa**	**54.93**	**14**	P	**P**	**13 42 19.4**	**-0.7**
KMBO	**Kilima Mbogo**	**61.38**	**65**	LR	LR	14 07 44.8	
	comp=Z,923nm,19.0s,baz=266,slow=34						
VNDA	**Vanda**	**63.09**	**179**	P	**P**	**13 43 17.5**	**+1.4**
	comp=Z,2.1nm,1.0s,baz=262,slow=3.7,SNR=4.6						
VNDA	**Vanda**	**63.09**	**179**	P	**P**	**13 43 16.1**	**+0.1**
VNDA				IAmb	IAmb	13 43 31.9	
	comp=Z,13nm,1.2s						
KEST	**Kesra**	**78.45**	**20**	LR	LR	14 16 43.5	
	comp=Z,306nm,19.2s,baz=210,slow=34						
ESDC	**Sonseca Array**	**79.66**	**9**	P	**P**	**13 44 57.4**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=176,slow=6.2,SNR=6.4						
ESDC				LR	LR	14 17 24.6	
	comp=Z,85nm,18.3s,baz=240,slow=34						
ESDC	**Sonseca Array**	**79.66**	**9**	P	**P**	**13 44 56.0**	**-0.4**
BRTR	**Keskin Array B**	**90.89**	**36**	P	**P**	**13 45 54.3**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=270,slow=2.9,SNR=2.2						
BRTR				LR	LR	14 24 35.0	
	comp=Z,35nm,21.7s,baz=227,slow=34						
GERES	**GERESS Array B**	**91.85**	**19**	LR	LR	14 23 41.4	
	comp=Z,187nm,21.2s,baz=223,slow=33						
H01W2	**Cape Leeuwin H**	**92.48**	**141**	T	T	15 30 00.9	
	baz=217,slow=75,SNR=9.2						
H01W3	**Cape Leeuwin H**	**92.49**	**141**	T	T	15 30 01.9	
	baz=217,slow=75,SNR=8.8						
H01W1	**Cape Leeuwin H**	**92.49**	**141**	T	T	15 30 07.2	
	baz=217,slow=75,SNR=7.9						
NWAO	**Narrogin (SRO)**	**95.58**	**142**	LR	LR	14 20 03.1	
	comp=Z,106nm,21.9s,baz=133,slow=30						
KBZ	**Khabaz**	**98.34**	**39**	LR	LR	14 29 44.1	
	comp=Z,71nm,20.4s,baz=200,slow=35						
CMAR	**Chiang Mai Arr**	**120.26**	**90**	PKP	**PKiKP**	**13 51 42.0**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=236,slow=3.1,SNR=1.8						
ILAR	**Eielson Array**	**142.44**	**328**	PKP	**PKPdf**	**13 52 21.8**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=44,slow=1.8,SNR=5.3						

MAN 25 13:48:58.8, 17°.09N×120°.08E, h36km, mb4.5, ML3.4, MS3.2, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.72**	**193**	*e*P	Pn	13 49 13.3	+0.8
BOLP				*e*S	Sn	13 49 24.1	+1.9
ABRA	**Dolores**	**0.83**	**47**	*e*P	Pn	13 49 13.8	-0.2
ABRA				*e*S	Sn	13 49 24.5	-0.5
BCP	**Baguio City**	**0.84**	**142**	⇑*i*P	Pn	13 49 15.4	+1.2
BCP				*i* S	Sn	13 49 26.8	+1.3
SIPP	**Brgy, Tapao**	**0.91**	**24**	⇑*e*P	Pn	13 49 15.7	+0.6
SIPP				*e*S	Sn	13 49 28.1	+1.1
SMPP	**San Manuel, Pa**	**1.10**	**148**	*e*P	Pn	13 49 17.1	-0.6
SMPP				*e*S	Sn	13 49 31.4	-0.1
APYP	**Conner**	**1.36**	**55**	*e*P	Pn	13 49 21.0	-0.2
APYP				*e*S	Sn	13 49 36.2	-1.7
CAUP	**Cauayan**	**1.68**	**95**	*e*P	Pn	13 49 28.8	+3.2
BALP	**Baler**	**1.97**	**133**	*e*P	Pn	13 49 31.5	+1.9

*IDC **25** 14:00:57.2±1.0, 17°.76S×179°.85W, h599km±10km, mb3.6/13, mb1 3.9/14, mb1mx3.6/28, mbtmp4.6/14, Error ellipse: s-maj=17.2km s-min=11.5km az=135.0*
*NEIC **25** 14:00:57.1±1.4, 17°.78S±0°.09×179°.85W±0°.10, h607km±6km, mb4.6/121, Error ellipse: s-maj=14.5km s-min=12.5km az=136.0*
ISC 25 14:00:56.6±0.3, 17°.78S±0°.06×179°.82W±0°.06, h600km, n242, σ0§86/249, mb4.6/71, 10C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.03**	**271**		**P**	**14 02 13.9**	**+2.8**
AFI	**Afiamalu**	**8.64**	**65**	P	**P**	**14 03 00.0**	**-2.2**
FUNA	**Funafuti**	**9.25**	**354**	P	**P**	**14 03 08.1**	**0.0**
NIUE	**Niue**	**9.48**	**99**	P	**P**	**14 03 09.9**	**-0.3**
RAO	**Raoul Island**	**11.55**	**172**	P	**P**	**14 03 31.3**	**+0.6**
DZM	**Mont Dzumac**	**13.60**	**249**	P	**P**	**14 03 51.9**	**+0.2**
	3.9nm,0.3s,baz=302,slow=20,SNR=24						
DZM	**Mont Dzumac**	**13.60**	**249**	P	**P**	**14 03 51.6**	**0.0**
KNTN	**Kanton**	**16.90**	**29**	P	**P**	**14 04 21.3**	**-1.0**
OUZ	**Omahuta**	**18.33**	**197**	P	**P**	**14 04 36.9**	**+1.9**
OUZ				IAmb	IAmb	14 04 40.1	
	comp=Z,16nm,1.4s						
MXZ	**Matakaoa Point**	**19.78**	**184**	P	**P**	**14 04 47.6**	**-0.5**
MXZ				IAmb	IAmb	14 05 15.6	
	comp=Z,45nm,1.1s						
URZ	**Urewera**	**20.58**	**187**	P	**P**	**14 04 53.0**	**-2.4**
	comp=Z,9.6nm,1.0s,baz=317,slow=1.7,SNR=6.7						
URZ	**Urewera**	**20.58**	**187**	IAmb	IAmb	14 04 55.5	
	comp=Z,12nm,1.1s						
BKZ	**Black Stump Fm**	**21.55**	**188**	P	**P**	**14 05 04.0**	**-0.1**
BKZ				IAmb	IAmb	14 05 20.6	
	comp=Z,16nm,1.1s						
BFZ	**Birch Farm**	**23.07**	**188**	P	**P**	**14 05 15.8**	**-1.8**
BFZ				IAmb	IAmb	14 05 41.6	
	comp=Z,52nm,1.4s						
QRZ	**Quartz Range**	**23.89**	**194**	P	**P**	**14 05 24.5**	**-0.3**
NNZ	**Nelson**	**24.08**	**193**	P	**P**	**14 05 25.8**	**-0.7**
PLWZ	**Palliser**	**24.08**	**189**	P	**P**	**14 05 25.6**	**-1.0**
BSWZ	**Blackbirch Sta**	**24.46**	**191**	P	**P**	**14 05 30.4**	**+0.6**
THZ	**Tophouse**	**24.70**	**193**	P	**P**	**14 05 31.3**	**-0.7**
THZ				IAmb	IAmb	14 06 00.5	
	comp=Z,44nm,1.2s						
KHZ	**Kahutara**	**25.20**	**192**	P	**P**	**14 05 34.8**	**-1.5**
KHZ				IAmb	IAmb	14 05 44.2	
	comp=Z,22nm,1.0s						
FOZ	**Fox Glacier**	**27.13**	**197**	P	**P**	**14 05 52.4**	**-0.9**
PPTF	**Pamatai, Papee**	**28.81**	**94**	P	**P**	**14 06 08.1**	**-0.3**
ARMA	**Armidale**	**28.85**	**239**	P	**P**	**14 06 08.7**	**+0.1**
ARMA				IAmb	IAmb	14 06 28.0	
	comp=Z,29nm,1.4s						
MLZ	**Mavora Lakes**	**29.29**	**198**	P	**P**	**14 06 12.4**	**+0.3**
WHZ	**Wether Hill Ro**	**29.82**	**197**	P	**P**	**14 06 16.5**	**-0.1**
PYZ	**Puysegur Point**	**30.44**	**199**	P	**P**	**14 06 22.1**	**+0.2**
RABL	**Rabaul**	**30.57**	**293**	P	**P**	**14 06 22.8**	**-0.7**
CTA	**Charters Tower**	**32.14**	**260**	P	**P**	**14 06 37.1**	**+0.4**
	comp=Z,4.4nm,0.5s,baz=96,slow=11,SNR=11						
CTAO	**Charters Tower**	**32.14**	**260**	P	**P**	**14 06 36.8**	**+0.1**
CTAO				IAmb	IAmb	14 06 41.6	
	comp=Z,10nm,0.9s						
COEN	**Coen**	**35.76**	**271**	P	**P**	**14 07 07.7**	**+0.8**
COEN				IAmb	IAmb	14 07 10.8	
	comp=Z,21nm,1.4s						
JOHN	**Johnston Islan**	**35.76**	**17**	P	**P**	**14 07 07.9**	**+1.0**
TOO	**Toolangi**	**36.22**	**230**	P	**P**	**14 07 11.2**	**+0.8**
TOO				IAmb	IAmb	14 07 13.1	
	comp=Z,13nm,0.8s						
TAU	**Tasmania Unive**	**37.45**	**221**	P	**P**	**14 07 21.2**	**+0.8**
STKA	**Stephens Creek**	**37.52**	**241**	P	**P**	**14 07 21.9**	**+0.7**
	comp=Z,8.1nm,0.5s,baz=87,slow=10,SNR=40						
STKA	**Stephens Creek**	**37.52**	**241**	P	**P**	**14 07 21.4**	**+0.2**
TAOE	**Nuku Hiva Isla**	**39.54**	**82**	P	**P**	**14 07 38.6**	**+0.9**
BBOO	**Buckleboo**	**42.29**	**241**	P	**P**	**14 07 59.5**	**+0.3**
BBOO				IAmb	IAmb	14 08 01.1	
	comp=Z,13nm,0.8s						
BBOO				PcP	**PcP**	**14 09 38.6**	**0.0**
WR0	**Warramunga Arr**	**43.14**	**260**	P	**P**	**14 08 05.4**	**-0.6**
WR0				IAmb	IAmb	14 08 06.7	
	comp=Z,12nm,1.4s						
WB0	**Warramunga Arr**	**43.30**	**260**	P	**P**	**14 08 06.4**	**-0.8**
WB2	**Warramunga Arr**	**43.32**	**260**	P	**P**	**14 08 06.6**	**-0.8**
WB2				IAmb	IAmb	14 08 08.1	
	comp=Z,6.0nm,0.7s						
WB2				PcP	**PcP**	**14 09 43.0**	**+0.7**
WRAB	**Tennant Creek**	**43.32**	**260**	P	**P**	**14 08 06.5**	**-0.8**
WRA	**Warramunga Arr**	**43.33**	**260**	P	**P**	**14 08 06.8**	**-0.7**
	comp=Z,2.7nm,0.3s,baz=96,slow=7.8,SNR=123						
WRA				PcP	**PcP**	**14 09 42.9**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=91,slow=3.8,SNR=8.4						
WRA				pP	**pP**	**14 09 52.5**	**+1.2**
	comp=Z,2.1nm,1.0s,baz=97,slow=8.5,SNR=3.7						
WRA				S	**S**	**14 13 49.3**	**-3.7**
	comp=Z,2.0nm,0.9s,baz=93,slow=13,SNR=11						
WRA	**Warramunga Arr**	**43.33**	**260**	P	**P**	**14 08 06.3**	**-1.2**
WRA				PcP	**PcP**	**14 09 43.0**	**+0.5**
AS31	**Alice Springs**	**43.53**	**254**	P	**P**	**14 08 08.7**	**-0.3**
AS31				IAmb	IAmb	14 08 10.1	
	comp=Z,15nm,0.5s						
ASAR	**Alice Springs**	**43.53**	**254**	P	**P**	**14 08 09.1**	**+0.1**
	comp=Z,33nm,0.4s,baz=89,slow=7.9,SNR=1445						
ASAR				PcP	**PcP**	**14 09 43.4**	**+0.3**
	comp=Z,4.1nm,0.6s,baz=98,slow=3.9,SNR=8.8						
ASAR				pP	**pwP**	**14 09 55.0**	**-1.5**
	comp=Z,4.7nm,1.0s,baz=82,slow=8.5,SNR=3.4						
ASAR				ScP	**ScP**	**14 12 40.2**	**+2.0**
	comp=Z,0.7nm,0.7s,baz=103,slow=5.7,SNR=4.0						
ASAR				S	**S**	**14 13 52.8**	**-3.0**
	comp=Z,6.8nm,1.0s,baz=86,slow=16,SNR=28						
ASAR	**Alice Springs**	**43.53**	**254**	P	**P**	**14 08 08.3**	**-0.6**
MLH	**Mauna Loa**	**44.13**	**34**	P	**P**	**14 08 14.5**	**+0.7**
HMH	**Humu'ula Sheep**	**44.17**	**34**	P	**P**	**14 08 14.8**	**+0.6**
HON	**Honolulu**	**44.35**	**30**	P	**P**	**14 08 14.6**	**-0.5**
HPAH	**Hawaii Prepara**	**44.41**	**33**	P	**P**	**14 08 15.8**	**+0.1**
OPA

NACB Ninganchiao 70.73 304 P **P** 14 11 13.6 -0.1
NACB IAmb IAmb 14 11 14.3
comp=Z,16nm,0.9s
CISI Cisompet, Garu 70.98 268 P **P** 14 11 14.6 -0.9
CISI IAmb IAmb 14 11 29.4
comp=Z,36nm,0.9s
SSLB Suanglung 71.04 304 P **P** 14 11 14.9 -0.7
SSLB IAmb IAmb 14 11 15.9
comp=Z,25nm,1.2s
TPUB Ta-pu 71.06 303 P **P** 14 11 15.0 -0.7
TPUB IAmb IAmb 14 11 16.3
comp=Z,15nm,0.8s
NIKH Nikolski High 71.09 7 P **P** 14 11 15.2 0.0
YHNB Yeheng 71.15 305 P **P** 14 11 15.1 -1.2
YHNB IAmb IAmb 14 11 22.2
comp=Z,18nm,1.1s
KSM Kuching 71.33 278 P **P** 14 11 16.6 -0.9
KSM IAmb IAmb 14 11 19.6
comp=Z,18nm,1.0s
UNV Unalaska Valle 72.25 8 P **P** 14 11 20.9 -0.9
QSPA South Pole Qui 72.27 180 P **P** 14 11 22.2 +0.1
QSPA IAmb IAmb 14 11 23.6
comp=Z,24nm,0.8s
PET Petropavlovsk 72.93 347 P **P** 14 11 25.1 -0.6
PEA0B Petropavlovsk- 73.22 346 P **P** 14 11 26.9 -0.6
PEA0B IAmb IAmb 14 11 28.5
comp=Z,33nm,1.1s
PETK Petropavlovsk- 73.22 346 P **P** 14 11 27.9 +0.4
comp=Z,7.7nm,0.9s,baz=130,slow=9.9,SNR=6.2
SDPT Sand Point 74.67 11 P **P** 14 11 34.7 -0.8
SDPT IAmb IAmb 14 12 01.5
comp=Z,31nm,1.1s
CHGN Chignik 75.97 12 P **P** 14 11 42.3 -0.4
CHGN IAmb IAmb 14 12 03.9
comp=Z,27nm,1.3s
CHIR Chirikof Islan 76.12 14 P **P** 14 11 43.0 -0.6
MNAI Manna 76.52 270 P **P** 14 11 46.4 -0.4
SII Sitkinak Islan 77.12 14 P **P** 14 11 49.2 +0.2
SII IAmb IAmb 14 11 58.7
comp=Z,44nm,1.0s
MDJ Mudanjiang 77.31 326 P **P** 14 11 51.5 +1.1
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ pmax pmax
comp=Z,140nm,5.1s
PMPB Monarch Peak 77.40 45 P **P** 14 11 51.1 0.0
PMPB IAmb IAmb 14 11 54.2
comp=Z,29nm,1.3s
HOPS Hopland Field 77.47 42 P **P** 14 11 51.5 +0.1
HOPS IAmb IAmb 14 11 60.0
comp=Z,25nm,1.4s
KMRM Mail Ridge 77.79 41 P **P** 14 11 53.6 +0.5
KMRM IAmb IAmb 14 11 56.1
comp=Z,7.5nm,0.8s
OHAK Old Harbor 77.93 14 P **P** 14 11 53.3 -0.1
OHAK IAmb IAmb 14 12 14.6
comp=Z,14nm,1.3s
MWC Mount Wilson 78.25 48 P **P** 14 11 56.3 +0.4
CBX Cerro Bola 78.30 50 P **P** 14 11 55.1 -1.0
CMB Columbia Colle 78.67 44 P **P** 14 11 58.4 +0.5
ISA Isabella, Lake 78.70 47 P **P** 14 11 58.0 -0.1
AFDM Forest Hills D 78.79 43 P **P** 14 11 58.4 0.0
YBH Yreka Blue Hor 79.28 40 P **P** 14 12 02.2 +1.1
MDPB Devils Postpil 79.33 45 P **P** 14 12 01.7 +0.1
OMMB Old Mammoth Mi 79.37 45 P **P** 14 12 02.8 +0.8
WAKR Walker 79.56 44 P **P** 14 12 03.5 +0.8
HUMO Hull Mountain 79.64 39 P **P** 14 12 03.7 +0.9
SLBS Sierra La Lagu 79.67 61 P **P** 14 12 04.5 +1.0
SLBS IAmb IAmb 14 12 06.3
comp=Z,22nm,1.2s
BEKR Beckworth 79.70 42 P **P** 14 12 03.7 +0.3
PNTR Pine Nut 79.76 43 P **P** 14 12 04.5 +0.6
PNTR IAmb IAmb 14 12 06.1
comp=Z,8.7nm,0.8s
LHV Little Huntoon 80.04 45 P **P** 14 12 05.7 +0.8
PAHR Pah Rah Range 80.24 43 P **P** 14 12 05.7 -0.5
NVAR Mina Array Bea 80.27 44 P **P** 14 12 07.6 +1.2
comp=Z,2.3nm,0.7s,baz=228,slow=8.6,SNR=20
NVAR Mina Array Bea 80.27 44 P **P** 14 12 05.9 -0.5
NV11 Mina Array Sit 80.37 45 P **P** 14 12 07.2 +0.3
KVN Kaiserville 80.73 44 P **P** 14 12 09.4 +0.6
TPH Tonopah 80.81 45 P **P** 14 12 08.0 -1.3
MOD Modoc Plateau 80.86 41 P **P** 14 12 09.6 +0.2
TPNV Topopah Spring 80.90 47 P **P** 14 12 08.8 -0.9
IPM Ipoh 81.07 278 P **P** 14 12 10.4 -0.5
IPM IAmb IAmb 14 12 12.7
comp=Z,14nm,0.7s
PRN Pahroc Range 81.96 47 P **P** 14 12 15.5 +0.4
PRN IAmb IAmb 14 12 17.5
comp=Z,7.7nm,0.9s
WVOR Wild Horse Val 82.19 41 P **P** 14 12 16.6 +0.5
BELA Belgrano 2 82.46 173 P **P** 14 12 15.9 -0.9
J08A Circle Bar Ran 82.78 40 P **P** 14 12 19.4 +0.4
J08A IAmb IAmb 14 12 21.0
comp=Z,13nm,1.3s
ENH Enshi 83.09 305 P **P** 14 12 21.4 +0.6
ENH IAmb IAmb 14 12 22.9
comp=Z,20nm,1.1s
PSUT Pine Spring 83.33 46 P **P** 14 12 21.8 -0.3
U15A North Rim 83.44 49 P **P** 14 12 22.2 -0.4
MAW Mawson 83.52 200 P **P** 14 12 23.1 +1.0
comp=Z,7.2nm,0.5s,baz=129,slow=5.0,SNR=23
MAW Mawson 83.52 200 P **P** 14 12 22.5 +0.4
G08A Pilot Rock 83.54 38 P **P** 14 12 23.0 +0.2
GYA Guiyang 83.81 300 ⇑P **P** 14 12 26.0 +1.5
GYA pmax pmax
comp=Z,4.0nm,0.7s
XAN Xi'an 85.12 308 P **P** 14 12 32.5 +1.9
XAN pP pP 14 14 39.5 +2.2
XAN pmax pmax
comp=Z,15nm,1.4s
XAN LR LR
comp=N,130nm,15.2s
XAN LR LR
comp=E,140nm,18.4s
XAN LR LR
comp=Z,170nm,21.7s
XAN Xi'an 85.12 308 P **P** 14 12 31.4 +0.8
XAN IAmb IAmb 14 12 33.0
comp=Z,18nm,1.2s
HLID Hailey 85.42 42 P **P** 14 12 32.1 +0.1
ILAR Eielson Array 86.07 14 P **P** 14 12 33.5 -0.9
comp=Z,0.8nm,0.8s,baz=225,slow=5.9,SNR=13
ILAR pP **pP** 14 14 43.2 +1.3
comp=Z,1.2nm,1.1s,baz=227,slow=5.0,SNR=5.6
HHC Hu-ho-hao-te 86.23 315 *e*P **P** 14 12 36.5 +0.7
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,120nm,6.4s
TX31 Lajitas Ar. Si 87.06 58 P **P** 14 12 40.1 +0.1
TX31 IAmb IAmb 14 12 44.6
comp=Z,6.2nm,0.9s
TXAR Lajitas Array 87.07 58 P **P** 14 12 41.9 +1.9
comp=Z,1.1nm,0.7s,baz=216,slow=6.1,SNR=12
TXAR Lajitas Array 87.07 58 P **P** 14 12 40.1 +0.1
CMAR Chiang Mai Arr 87.58 290 P **P** 14 12 44.5 +1.9
comp=Z,2.2nm,0.9s,baz=110,slow=2.8,SNR=19
CHTO Chiang Mai 87.69 290 P **P** 14 12 42.5 -0.6
CHTO IAmb IAmb 14 12 45.3
comp=Z,5.0nm,1.1s
PDAR Pinedale Array 88.19 44 P **P** 14 12 45.8 +0.6
comp=Z,0.8nm,0.5s,baz=205,slow=3.4,SNR=8.1
PDAR PP **PP** 14 16 22.0 -2.0
comp=Z,0.1nm,0.3s,baz=251,slow=4.5,SNR=3.8
SYO Syowa Base 88.98 193⇑*e*P **P** 14 12 45.8 -2.2
LZH Lanzhou 89.75 308 *e*P **P** 14 12 55.0 +2.6
LZH pP pwP 14 15 05.5 +0.5
LZH sP sP 14 16 04.8 +3.5
LZH pmax pmax
comp=Z,17nm,1.2s
SNAA Sanae 90.75 179 P **P** 14 12 55.5 -0.8
SNAA Sanae 90.75 179 P **P** 14 12 55.7 -0.6
SNAA IAmb IAmb 14 12 56.5
comp=Z,5.9nm,0.7s
VNA3 Neumayer Olymp 90.95 177 P **P** 14 12 57.0 -0.2
VNA2 Neumayer--Watz 91.37 178 P **P** 14 12 58.9 -0.2
baz=186,slow=4.1
VNA1 Neumayer--Stat 91.61 177 P **P** 14 13 00.3 +0.2
GTA Gaotai 93.92 310 P **P** 14 13 12.3 +0.8
GTA pP pP 14 15 23.8 +3.0
GTA sP sP 14 16 21.8 +1.0
GTA pmax pmax
comp=Z,3.0nm,1.0s

ZALV Zalesovo Beam 107.30 322 PKiKP **PKiKP** 14 18 15.1 -0.3
comp=Z,0.6nm,0.5s,baz=136,slow=1.7,SNR=3.8
MKAR Makanchi Array 108.08 314 PKiKP **PKiKP** 14 18 16.6 -0.6
comp=Z,0.8nm,0.6s,baz=185,slow=0.7,SNR=10
MKAR Makanchi Array 108.08 314 **PKiKP** 14 18 15.7 -1.5
ABKAR Akbulak array 122.93 318 **PKPdf** 14 18 45.0 -0.5
ARCES ARCESS Array B 125.94 349 PKP **PKPdf** 14 18 50.5 -0.3
comp=Z,3.1nm,0.7s,baz=34,slow=1.2,SNR=16
BOSA Boshof 127.89 208 PKP **PKiKP** 14 18 57.3 +0.7
comp=Z,2.7nm,0.8s,baz=224,slow=2.9,SNR=3.8
FINES FINESS Array B 132.69 343 PKP **PKPdf** 14 19 02.6 -1.1
comp=Z,1.1nm,0.4s,baz=128,slow=3.1,SNR=7.9
FINES SKPbc **SKPbc** 14 21 35.8 0.0
comp=Z,4.2nm,1.0s,baz=197,slow=4.0,SNR=3.6
NOA NORSAR Array B 136.08 352 PKP **PKPdf** 14 19 10.8 +0.7
comp=Z,0.5nm,0.7s,baz=13,slow=4.0,SNR=2.2
KWP Kalwaria Pacla 143.40 335 *e*PKP PKPbc 14 19 22.5 +0.1
TLCR 143.71 325 ⇓P **PKPdf** 14 19 24.7 +0.5
BRTR Keskin Array B 143.73 314 PKP PKPab 14 19 24.1 0.0
comp=Z,5.4nm,0.8s,baz=109,slow=3.0,SNR=12
BRTR Keskin Array B 143.73 314 PKPbc 14 19 23.8 -0.1
BUR08 Bucovina Ar. S 143.85 331 **PKPdf** 14 19 24.4 -0.2
BURAR Bucovina Array 143.86 331 ⇑P **PKPdf** 14 19 25.2 +0.6
BURAR Bucovina Array 143.86 331 PKPab 14 19 24.1 -0.1
BIZ Bicaz 143.93 329 ⇓P **PKPdf** 14 19 25.5 +0.9
TESR Tescani 143.96 328 ⇑P **PKPdf** 14 19 25.2 +0.5
OJC Ojcow 144.01 338 *e*PKP PKPbc 14 19 24.3 +0.1
OJC Ojcow 144.01 338 PKPbc 14 19 24.3 +0.1
TPGR Topolog 144.13 325 ⇓P **PKPab** 14 19 25.7 +0.5
ODBI Odobesti 144.26 327 ⇑P **PKPab** 14 19 26.5 +0.8
VRI Vrincioaia 144.36 328 ⇑P **PKPdf** 14 19 24.3 -1.1
CRVS Cervenica-Dubn 144.48 336 *e*PKP **PKPab** 14 19 27.8 +1.4
NIE Niedzica 144.50 337 *e*PKP **PKPab** 14 19 26.7 +0.2
KSP Ksiaz 144.59 342 *e*PKP **PKPab** 14 19 26.6 -0.2
OSTC Ostas 144.87 342 *e*PKP **PKPab** 14 19 26.6 -0.2
DOPR Dopca 144.96 329 ⇓P **PKPab** 14 19 28.3 0.0
UPC Upice 144.97 342 *e*PKP **PKPab** 14 19 28.3 +0.1
MLR Muntele Rosu 145.02 328 ⇓P **PKPab** 14 19 27.5 -0.1
MLR Muntele Rosu 145.02 328 PKPbc **PKPbc** 14 19 27.6 0.0
DPC Dobruska-Polom 145.02 342 *e*PKP **PKPab** 14 19 27.9 -0.6
LANS Liptovska Anna 145.03 338 *e*PKP **PKPab** 14 19 28.6 +0.1
CLL Collm 145.03 346⇓*i*PKPbc **PKPbc** 14 19 27.4 +0.1
comp=Z,26nm,0.7s
CLL Collm 145.03 346 PKPbc **PKPbc** 14 19 27.2 -0.1
KRLC Kraliky 145.13 341 *e*PKP **PKPbc** 14 19 28.1 +0.4
MORC Moravsky Berou 145.15 340 ⇓P **PKPab** 14 19 28.6 -0.3
MORC Moravsky Berou 145.15 340 *e*PKP **PKPbc** 14 19 28.1 +0.3
MORC Moravsky Berou 145.15 340 **PKPbc** 14 19 27.7 0.0
BRG Berggiesshubel 145.20 345 *i* PKP **PKPbc** 14 19 28.2 +0.4
comp=Z,17nm,1.0s
VOIR 145.50 328 ⇑P **PKPbc** 14 19 28.8 -0.2
DRGR 145.61 332 ⇑P **PKPbc** 14 19 29.3 +0.1
ARR Arges 145.76 329 ⇑P **PKPbc** 14 19 29.6 -0.1
VYHS Vyhne 145.80 338 *e*PKP **PKPbc** 14 19 30.3 +0.7
PRU Pruhonice 145.85 343 *e*PKP **PKPbc** 14 19 30.5 +0.8
VRAC Vranov 145.86 341 *e*PKP **PKPbc** 14 19 30.3 +0.5
PSZ Piszkesteto 145.89 336 **PKPbc** 14 19 29.4 -0.6
JAVC Velka Javorina 145.90 339 *e*PKP **PKPab** 14 19 31.7 -0.3
KRUC Moravsky 146.14 341 *e*PKP **PKPbc** 14 19 31.0 +0.5
PBCC Pribram 146.28 344 *e*PKP **PKPbc** 14 19 31.3 +0.4
MODS Modra-Piesok 146.45 339 *e*PKP **PKPbc** 14 19 31.7 +0.3
SIRR Siria 146.48 333 ⇓P **PKPbc** 14 19 30.9 -0.7
ZST Bratislava 146.66 339 *e*PKP **PKiKP** 14 19 33.3 -0.7
KHC Kasperske Hory 146.90 344 *e*PKP **PKPbc** 14 19 32.8 +0.2
KHC Kasperske Hory 146.90 344 **PKPbc** 14 19 32.4 -0.2
BTNL Ternell 146.93 353 PKiKP **PKPbc** 14 19 32.6 0.0
GEC2 GERESS Array S 147.12 343 **PKPbc** 14 19 32.9 -0.4
GERES GERESS Array B 147.12 343 PKPbc **PKPbc** 14 19 33.6 +0.3
comp=Z,5.5nm,0.6s,baz=29,slow=3.0,SNR=21
GERES GERESS Array B 147.12 343 **PKPbc** 14 19 32.9 -0.4
HERR Herculane 147.19 330 ⇑P **PKPbc** 14 19 32.5 -1.0
CONA Conrad Observa 147.31 340 *e*P **PKiKP** 14 19 34.6 -0.8
comp=Z,7.1nm,0.6s,SNR=6.6
BMRD Maredsous 147.35 355 PKiKP **PKPbc** 14 19 34.2 +0.5
WLF Walferdange 147.83 353 PKiKP **PKiKP** 14 19 36.4 0.0
MOA Molln 147.87 342 *e*P **PKPbc** 14 19 35.6 +0.4
comp=Z,5.6nm,0.9s
SOKA Soboth 148.68 340 *e*P **PKPbc** 14 19 37.1 -0.1
comp=Z,5.5nm,0.6s,SNR=5.8
PERS Pernice 148.69 340 *i* PKPbc **PKPbc** 14 19 37.1 -0.1
KBA Koelnbreinsper 148.83 342 *i* P **PKPbc** 14 19 37.1 -0.7
comp=Z,3.5nm,0.4s
DIVS Divibare 148.91 332 **PKPbc** 14 19 37.2 -0.7
WATA Walderalm 149.07 345 *e*P **PKPbc** 14 19 38.5 +0.2
comp=Z,5.8nm,0.5s
WTTA Wattenberg 149.12 345 *e*P **PKPbc** 14 19 38.2 -0.3
comp=Z,12nm,0.5s,SNR=6.3
RETA Reutte 149.12 346 *e*P **PKPbc** 14 19 38.5 +0.1
comp=Z,4.2nm,0.5s
MYKA Terra Mystica 149.15 342 *i* P **PKPbc** 14 19 37.9 -0.5
comp=Z,3.9nm,0.4s
MOTA Moosalm 149.18 345 *i* P **PKPbc** 14 19 38.7 +0.1
comp=Z,13nm,0.9s
SQTA Sankt Quirin 149.27 345 *i* P **PKiKP** 14 19 39.1 -0.4
comp=Z,8.4nm,0.5s
ABTA Abfaltersbach 149.37 343 *e*P **PKPbc** 14 19 38.6 -0.3
comp=Z,19nm,1.0s,SNR=6.8
LJU Ljubljana 149.40 340 *i* PKPbc **PKiKP** 14 19 39.3 -0.4
DAVA Damuels 149.51 347 *i* P **PKiKP** 14 19 39.8 -0.3
comp=Z,10nm,1.0s
FETA Feichten 149.57 346 *i* P **PKiKP** 14 19 40.0 -0.2
comp=Z,5.9nm,0.6s
CEY Cerknica 149.70 340 *i* PKPbc **PKPbc** 14 19 39.9 +0.2
STAL STALIGIAL 149.76 343 **PKPbc** 14 19 38.9 -0.9
CIMO Cimolais 149.79 343 **PKPbc** 14 19 38.7 -1.2
TUE Stuetta 150.40 347 **PKPbc** 14 19 41.1 -0.4
PDG Podgorica 150.54 331 ⇓P **PKPbc** 14 19 38.6 -3.1
DBIC Dimbokro 167.91 155 PKPab **PKPab** 14 21 06.3 -1.0
comp=Z,2.8nm,0.9s,baz=162,slow=3.2,SNR=1.9
TORD Torodi Ar. Bea 175.17 198 PKP **PKPdf** 14 19 58.1 -1.3
comp=Z,0.9nm,0.8s,baz=36,slow=1.1,SNR=4.0
TORD PKPab **PKPab** 14 21 39.1 -0.4
comp=Z,0.9nm,0.7s,baz=177,slow=3.0,SNR=4.2
TORD PP **PP** 14 25 31.4 +0.1
comp=Z,0.7nm,0.8s,baz=189,slow=3.7,SNR=3.7
TORD Torodi Ar. Bea 175.17 198 **PKPdf** 14 19 57.6 -1.8

DJA 25 14:04:30.2±0.4, 9°S±3.7×11°8E±°, h109km±5km, M3.8/12, mb3.9/9/2, MLv3.7/12, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.63**	**251**	P	Pn	14 04 48.9	+1.0
PLAI				S	Sn	14 05 03.6	+2.4
WBSI	**Waikabubak, Su**	**1.42**	**136**	P	Pn	14 04 55.8	-0.3
WBSI				S	Sn	14 05 15.9	+0.2
TWSI	**Taliwang, Sumb**	**1.49**	**265**	P	Pn	14 04 57.0	+0.2
TWSI				S	Sn	14 05 17.6	+0.6
BASI	**Baing, Sumba**	**2.69**	**126**	P	Pn	14 05 12.7	+0.6
BASI				S	Sn	14 05 44.6	+0.3
DNP	**Denpasar**	**3.13**	**269**	P	Pn	14 05 17.5	-0.5
SRBI	**Singaraja**	**3.18**	**279**	P	Pn	14 05 18.8	+0.2
SRBI				S	Sn	14 05 56.2	+0.3
BSSI	**Bau Bau, Buton**	**3.23**	**41**	P	Pn	14 05 18.9	-0.4
BSSI				S	Sn	14 05 57.5	+0.3
EDFI	**Ende, Flores**	**3.27**	**93**	P	Pn	14 05 20.5	+0.6
EDFI				S	Sn	14 05 58.4	0.0
BKSI	**Bulukumba**	**3.71**	**28**	P	Pn	14 05 25.5	-0.1
MMRI	**Maumere**	**3.81**	**91**	P	Pn	14 05 26.8	-0.3
JAGI	**Jajag, Banyuwa**	**4.18**	**272**	P	Pn	14 05 31.9	-0.1
BNSI	**Bone**	**4.53**	**22**	P	Pn	14 05 41.5	+4.8
BATI	**Baumata**	**5.45**	**107**	P	Pn	14 05 48.7	-0.4
0.1nm10nm,0.5s							
TTSI	**Tana Toraja**	**5.72**	**15**	P	Pn	14 05 55.2	+2.4
SOEI	**Soe**	**5.92**	**101**	P	Pn	14 05 56.3	+0.7

*NEIC **25** 14:16:43.2±1.5, 3°.38S±0°.08×100°.80E±0°.09, h41km±7km, mb4.6/30, Error ellipse: s-maj=14.7km s-min=8.8km az=47.0*
*IDC **25** 14:16:47.7±4.7, 3°.06S×101°.15E, h68km±38km, mb3.8/9, mb1 4.0/11, mb1mx3.6/55, mbtmp4.2/11, ML4.0/2, MS3.7/1, Ms1 3.7/1, ms1mx2.6/43, Error ellipse: s-maj=78.6km s-min=13.4km az=54.0*
*DJA **25** 14:16:47.2±0.4, 3°S±2°×10°1E±°, h10km, M4.3/19, mb4.3/7, MLv4.3/19*

ISC 25 14:16:44.4±0.6, 3°.23S±0°.06×100°.94E±0°.07, h46km, n86, σ1°54/79, mb4.5/24, Southern Sumatera

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

KRJI Kerinci 1.25 25 P **Pn** 14 17 04.4 -1.2
KRJI S **Sn** 14 17 18.3 -3.0
MASI Maura Aman, Be 1.30 86 P **Pn** 14 17 06.1 -0.2
KSI Kapahiang 1.70 104 P **Pn** 14 17 13.2 +1.4
MNAI Manna 2.30 119 P **Pn** 14 17 22.7 +2.7
MNAI Manna 2.30 119 **Pn** 14 17 21.3 +1.3
SDSI Sungai Dareh 2.34 12 P **Pn** 14 17 20.4 0.0
SISI Saibi 2.65 316 P **Pn** 14 17 26.7 +2.1
LHSI Lahat 2.65 103 P **Pn** 14 17 26.8 +2.1
BKNI Bangkinang 3.54 2 P **Pn** 14 17 39.0 +2.1
BKNI Bangkinang 3.54 2 Pn **Pn** 14 17 36.9 0.0
LWLI Liwa 3.58 120 P **Pn** 14 17 41.1 +3.5
PMBI Palembang 3.84 86 P **Pn** 14 17 46.8 +5.7
PMBI Palembang 3.84 86 **Pn** 14 17 44.4 +3.3
KLSI 4.05 111 P **Pn** 14 17 47.0 +3.0
KASI Kota Agung 4.21 123 P **Pn** 14 17 49.0 +2.8
MNSI Mandailing Nat 4.23 341 P **Pn** 14 17 50.1 +3.7
PPBI Pangkal Pinang 5.30 79 P **Pn** 14 18 02.1 +1.0
GSI Gunungsitoli 5.62 323 **Pn** 14 18 06.1 +0.5
MYKOM Kota Tinggi 5.78 30 Pn **Pn** 14 18 07.7 +0.1
RPSI Rantau Prapat 6.22 341 Pn **Pn** 14 18 12.8 -1.0
RPSI Rantau Prapat 6.22 341 **Pn** 14 18 16.6 +2.7
PSI Prapat 6.32 341 P **Pn** 14 18 16.6 +1.3
0.9nm,0.3s,baz=180,slow=11,SNR=19
IPM Ipoh 7.66 1 Pn **Pn** 14 18 35.1 +1.5
CISI Cisompet, Garu 8.08 122 Pn **Pn** 14 18 39.0 -0.4
KULM Kulim 8.47 358 Pn **Pn** 14 18 46.2 +1.5
UGM Wanagama 10.61 116 Pn **Pn** 14 19 14.4 +0.4
JAGI Jajag, Banyuwa 14.13 112 Pn **Pn** 14 20 00.9 -1.2
PBA Port Blair 16.89 331 Pn Pn 14 20 37.1 -0.6
KAPI Kappang 18.85 96 P **P** 14 21 01.6 +0.8
1.5nm,0.3s,baz=273,slow=12,SNR=4.7
KAPI Kappang 18.85 96 P **P** 14 21 01.1 +0.3
TTSI Tana Toraja 18.85 90 P Pn 14 21 18.7 +17
BNSI Bone 19.16 94 P **Pn** 14 21 08.1 +2.6
BKSI Bulukumba 19.24 97 P **Pn** 14 21 08.1 +1.6
MPSI Mapaga 19.28 80 P **P** 14 21 07.3 +1.7
WBSI Waikabubak, Su 19.40 110 P **Pn** 14 21 09.9 +1.5
MYLDM Lahad Datu 19.43 65 P **P** 14 21 08.9 +1.7
TOLI2 Tolitoli 20.30 78 P **P** 14 21 16.5 -0.2
APSI Ampana 20.82 84 P Pn 14 21 27.4 +2.2
CMAR Chiang Mai Arr 21.64 355 P **P** 14 21 29.5 -1.6
0.5nm,0.3s,baz=189,slow=9.1,SNR=2.2
MMRI Maumere 21.85 105 P **P** 14 21 34.1 +0.8
MMRI IAmb IAmb 14 22 02.2
comp=Z,45nm,1.3s
LUWI Luwuk 21.93 85 P **P** 14 21 35.0 +0.8
LUWI IAmb IAmb 14 21 36.0
comp=Z,16nm,1.0s
MBWA Marble Bar 25.53 136 P **P** 14 22 08.2 -0.7
PSA00 Pilbara Seismi 25.89 136 P **P** 14 22 09.7 -2.5
PSA00 IAmb IAmb 14 22 18.4
comp=Z,16nm,1.1s
FITZ Fitzroy Crossi 28.35 123 P **P** 14 22 34.5 +0.1
comp=Z,2.2nm,0.4s,baz=330,slow=4.2,SNR=7.5
FITZ Fitzroy Crossi 28.35 123 P **P** 14 22 34.3 -0.1
FITZ IAmb IAmb 14 22 40.2
comp=Z,9.4nm,1.3s
HKPS Hong Kong Po S 28.45 26 P **P** 14 22 36.2 +1.0
H08S2 Diego Garcia H 28.64 260 T T 14 52 05.1
baz=82,slow=75,SNR=16
H08S3 Diego Garcia H 28.65 260 T T 14 52 05.7
baz=82,slow=75,SNR=54
H08S1 Diego Carcia H 28.66 260 T T 14 51 58.5
baz=82,slow=75,SNR=6.1
MORW Morrmwa 29.43 152 P **P** 14 22 41.1 -2.8
KNRA Kununurra 30.05 116 P **P** 14 22 47.7 -1.8
KNRA IAmb IAmb 14 23 03.1
comp=Z,20nm,1.3s
FAKI Fak Fak 31.27 90 P **P** 14 22 58.5 -1.8
FAKI IAmb IAmb 14 23 00.7
comp=Z,11nm,1.3s
YHNB Yeheng 34.12 35 P **P** 14 23 26.6 +1.5
YOJ Yonaguni jima 34.91 37 P **P** 14 23 32.7 +0.9
WB0 Warramunga Arr 36.55 119 P **P** 14 23 45.4 -0.7
WB0 IAmb IAmb 14 23 47.0
comp=Z,4.0nm,0.8s
WRA Warramunga Arr 36.57 120 P **P** 14 23 46.2 0.0
comp=Z,5.0nm,0.4s,baz=303,slow=9.0,SNR=127
WRA Warramunga Arr 36.57 120 P **P** 14 23 45.4 -0.9
WRAB Tennant Creek 36.57 120 P **P** 14 23 45.9 -0.4
WRAB IAmb IAmb 14 23 46.9
comp=Z,5.7nm,0.8s
WB2 Warramunga Arr 36.58 120 P **P** 14 23 45.7 -0.6
WR0 Warramunga Arr 36.75 120 P **P** 14 23 47.3 -0.5
WR0 IAmb IAmb 14 23 48.6
comp=Z,9.0nm,1.0s
AS31 Alice Springs 37.78 125 P **P** 14 23 57.1 +0.6
ASAR Alice Springs 37.78 125 P **P** 14 23 57.0 +0.6
comp=Z,1.8nm,0.5s,baz=297,slow=7.8,SNR=71
ASAR Alice Springs 37.78 125 P **P** 14 23 57.4 +0.9
NJ2 Nanjing 39.00 25 *e*P **P** 14 24 09.3 +2.7
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
LZH Lanzhou 39.21 4 *e*P **P** 14 24 07.3 -1.2
LZH pP pP 14 24 22.8 +2.2
LZH sP sP 14 24 30.0 +4.1
LZH pmax pmax
comp=Z,19nm,1.1s
LZH pmax pmax
comp=Z,89nm,4.6s
LZH LR LR
comp=N,200nm,12.7s
LZH LR LR
comp=E,170nm,15.7s
LZH LR LR
comp=Z,170nm,16.5s
JAY Jayapura 39.72 90 LR LR 14 42 45.5
comp=Z,106nm,19.6s,baz=188,slow=39
HHC Hu-ho-hao-te 44.94 11 *e*P **P** 14 24 56.5 +1.5
HHC pmax pmax
comp=Z,18nm,1.0s
HHC pmax pmax
comp=Z,110nm,6.8s
CTA Charters Tower 47.23 114 P **P** 14 25 13.3 -0.1
comp=Z,3.7nm,0.9s,baz=294,slow=12,SNR=2.6
CTAO Charters Tower 47.23 114 P **P** 14 25 13.3 -0.1
CTAO IAmb IAmb 14 25 37.9
comp=Z,14nm,1.4s
RER Riviere de l'E 47.40 244 P **P** 14 25 12.9 -1.8
STKA Stephens Creek 47.64 131 P **P** 14 25 16.9 +0.6
comp=Z,1.8nm,0.6s,baz=310,slow=4.4,SNR=7.1
STKA Stephens Creek 47.64 131 P **P** 14 25 15.3 -1.0
JMN Monobe 48.14 37 P **P** 14 25 21.5 +1.3
WMQ Urumqi 48.33 347 *e*P **P** 14 25 23.5 +2.0
JHS Saijyo 48.56 36 P **P** 14 25 24.1 +0.7
SONM Songino Array 51.08 5 P **P** 14 25 42.2 -0.2
comp=Z,1.0nm,0.6s,baz=183,slow=12,SNR=3.6
MK31 Makanchi Array 52.46 344 P **P** 14 25 52.6 0.0
MKAR Makanchi Array 52.46 344 P **P** 14 25 53.0 +0.4
comp=Z,1.0nm,0.5s,baz=159,slow=9.2,SNR=17
MKAR Makanchi Array 52.46 344 P **P** 14 25 51.8 -0.8
KURK Kurchatov 57.05 343 P **P** 14 26 25.9 +0.2
KURK IAmb IAmb 14 26 49.1
comp=Z,6.5nm,1.2s
ZAA0 Zalesovo Array 58.55 349 P **P** 14 26 35.7 -0.4
ZAA0 IAmb IAmb 14 26 55.1
comp=Z,7.2nm,1.1s
ZALV Zalesovo Beam 58.55 349 P **P** 14 26 36.1 0.0
comp=Z,2.0nm,0.6s,baz=186,slow=7.3,SNR=11
ZALV Zalesovo Beam 58.55 349 P **P** 14 26 36.2 +0.1
BRVK Borovoye 61.72 340 P **P** 14 26 57.5 -0.4
BRVK IAmb IAmb 14 27 18.7
comp=Z,8.6nm,1.5s
ABKAR Akbulak array 63.16 331 P **P** 14 27 07.8 +0.1
ABKAR IAmb IAmb 14 27 23.4
comp=Z,3.6nm,1.3s
TXAR Lajitas Array 145.08 39 PKP **PKPdf** 14 36 17.8 +0.1
comp=Z,1.3nm,0.6s,baz=265,slow=1.1,SNR=17

IDC 25 14:24:17.6±2.9, 6°.38S×129°.97E, h103km±39km, mb3.2/1, mb1 3.2/5, mb1mx3.0/40, mbtmp3.5/5, Error ellipse: s-maj=72.4km s-min=21.9km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.62**	**13**	P	Pn	14 25 39.0	+0.1
2.6nm,0.3s,baz=31,slow=6.7,SNR=52							
SIJI				S	Sn	14 26 35.6	-6.6
2.7nm,0.3s,baz=160,slow=24,SNR=10							
FITZ	**Fitzroy Crossi**	**12.39**	**200**	P	Pn	14 27 10.8	+0.3
0.1nm,0.3s,baz=15,slow=6.0,SNR=16							
FITZ				S	Sn	14 29 23.6	-3.3

0.2nm,0.3s,baz=242,slow=17,SNR=2.7
WRA Warramunga Arr 14.14 163 P Pn 14 27 31.4 -1.9
0.1nm,0.3s,baz=345,slow=14,SNR=1.4
WRA S Sn 14 30 00.3 -8.9
0.3nm,0.3s,baz=343,slow=24,SNR=9.8
ASAR Alice Springs 17.61 168 P Pn 14 28 17.0 +0.5
0.1nm,0.3s,baz=344,slow=9.8,SNR=14
ASAR S Sn 14 31 28.8 -4.0
0.1nm,0.3s,baz=357,slow=29,SNR=5.0
MKAR Makanchi Array 67.69 327 P P 14 35 03.8 -0.1
0.3nm,0.4s,baz=108,slow=8.7,SNR=6.1

IDC 25 14:28:23.6±3.2, 6°93S×152°45E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.4/40, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=90.3km s-min=18.2km az=96.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.64**	**351**	Pn	Pn	14 29 06.8	-0.7
	5.1nm,0.3s,baz=162,slow=2.7,SNR=20						
KRVT				Lg	Lg	14 29 46.6	
	5.1nm,0.3s,baz=60,slow=18,SNR=3.9						
WRA	**Warramunga Arr**	**21.82**	**232**	P	P	14 33 18.6	+0.9
	0.7nm,0.8s,baz=59,slow=9.9,SNR=4.3						
ASAR	**Alice Springs**	**24.37**	**225**	P	P	14 33 42.1	-1.6
	0.4nm,0.8s,baz=62,slow=9.9,SNR=3.4						
MKAR	**Makanchi Array**	**81.69**	**319**	P	P	14 40 45.5	+1.3
	0.6nm,0.7s,baz=104,slow=6.1,SNR=4.8						
TORD	**Torodi Ar. Bea**	**150.56**	**284**	PKPbc	PKPbc	14 48 17.9	-0.7
	0.4nm,0.6s,baz=92,slow=3.1,SNR=2.3						

*NEIC **25** 14:43:39.9±1.0, 36°.79N±0°.02×97°.72W±0°.04, h5km±6km, Error ellipse: s-maj=4.7km s-min=2.3km az=71.0*
*IDC **25** 14:43:39.8±1.0, 36°.84N×97°.81W, h0km, mb3.4/1, mb1 4.0/6, mb1mx3.7/36, mbtmp3.7/6, ML3.7/5, MS3.0/4, Ms1 3.0/4, ms1mx2.7/32, Error ellipse: s-maj=13.1km s-min=11.0km az=125.0*
*TUL **25** 14:43:40.1±1.6, 36°.82N±0°.02×97°.72W±0°.04, h4km±5km, ML4.0, mb_Lg4.0/165(NEIC), Mwr3.6/25(NEIC), Error ellipse: s-maj=5.1km s-min=2.2km az=71.0*
*ANF **25** 14:43:40.6±0.6, 36°.81N×97°.72W, h10km±4km, ML4.9/17, Error ellipse: s-maj=1.6km s-min=1.5km az=175.0*
*NEIC **25** 14:43:40, 36°.82N×97°.72W, h4km, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.82; $M_{\theta\theta}$=2.76; $M_{\phi\phi}$=-1.94; $M_{r\theta}$=0.81; $M_{r\phi}$=2.30; $M_{\theta\phi}$=-0.42; Fault plane solution: M_o=3.49000×10^{14} NP1:ϕ_s=291.41000°, δ=83.20000°, λ=-17.66000°. NP2:ϕ_s=23.57000°, δ=72.47000°, λ=-172.86000°. Principal axes: T 3.7770, Plg7.0000°, Azm339.0000°; N -0.6795, Plg71.0000°, Azm91.0000°; P -3.0975, Plg17.0000°, Azm246.0000°;*
ISC 25 14:43:40.0±0.9, 36°.82N±0°.03×97°.74W±0°.03, h9km±6km, n234, σ0=88/218, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GC02	**Grant County #**	**0.10**	**290**		**Pg**	**14 43 42.8**	**+0.3**
KAN14	**Manchester OK**	**0.23**	**308**		**Pg**	**14 43 45.1**	**+0.5**
KAN14				Sg	**Sg**	**14 43 48.3**	**+0.6**
KAN13	**South Haven SW**	**0.29**	**47**		**Pg**	**14 43 45.8**	**0.0**
KAN13				Sg	**Sg**	**14 43 49.5**	**-0.2**
KAN05	**Bluff City Nor**	**0.31**	**340**		**Pg**	**14 43 46.6**	**+0.4**
KAN09	**Caldwell North**	**0.33**	**17**		**Pg**	**14 43 46.8**	**+0.1**
KAN09				Sg	**Sg**	**14 43 51.4**	**+0.3**
KAN01	**Argonia South**	**0.34**	**358**		**Pg**	**14 43 46.9**	**+0.2**
KAN01				Sg	**Sg**	**14 43 51.7**	**+0.5**
CROK	**Carrier**	**0.37**	**212**		**Pg**	**14 43 47.6**	**+0.4**
KAN10	**Anthony SW Sta**	**0.42**	**317**	Pg	**Pg**	**14 43 48.6**	**+0.5**
KS20	**Mayfield South**	**0.44**	**20**		**Pg**	**14 43 48.7**	**+0.1**
KAN08	**Anthony NE Sta**	**0.45**	**336**		**Pg**	**14 43 49.1**	**+0.3**
KS21	**Milan North St**	**0.47**	**8**		**Pg**	**14 43 49.4**	**+0.1**
KAN12	**Harper NE Stat**	**0.52**	**337**		**Pg**	**14 43 50.4**	**+0.2**
T35A	**Sooner Cattle**	**0.99**	**84**		**Pb**	**14 43 58.4**	**-1.0**
OK029	**Liberty Lake**	**1.04**	**167**		**Pb**	**14 43 59.7**	**-0.6**
QUOK	**Quay**	**1.05**	**127**		**Pb**	**14 43 59.6**	**-0.8**
U32A	**Winter Ranch,**	**1.10**	**247**		**Pb**	**14 44 01.0**	**-0.3**
OK031	**S. Brethren Rd**	**1.13**	**140**		**Pn**	**14 44 01.1**	**-0.9**
BCOK	**Bluff Creek, N**	**1.16**	**175**		**Pn**	**14 44 01.8**	**-0.6**
OK030	**Cody Creek RV**	**1.18**	**139**		**Pn**	**14 44 01.9**	**-0.7**
OK009	**Oakdale Elemen**	**1.26**	**168**	Pg	**Pn**	**14 44 03.4**	**-0.4**
OK025	**Westminster Rd**	**1.28**	**165**		**Pn**	**14 44 03.9**	**-0.2**
OKCFA	**Oklahoma City**	**1.42**	**170**	Pn	**Pn**	**14 44 06.2**	**+0.2**
OKCFA				IAmb_Lg		14 44 26.9	
	comp=Z,636nm,0.8s						
OKCSW	**OKLAHOMA CITY**	**1.43**	**170**		**Pn**	**14 44 06.6**	**+0.4**
FNO	**Franklin**	**1.58**	**170**		**Pn**	**14 44 08.9**	**+0.7**
R32A	**Long Quarter,**	**1.78**	**335**	Pn	**Pb**	**14 44 12.3**	**-0.5**
W35A	**Tecumseh**	**1.80**	**157**		**Pn**	**14 44 12.2**	**+0.9**
TUL1	**Leonard**	**1.82**	**119**	P	**Pn**	**14 44 12.1**	**+0.6**
	baz=301,SNR=80						
TUL1				Sb	**Sb**	**14 44 37.0**	**+0.7**
	baz=301						
TUL1	**Leonard**	**1.82**	**119**		**Pn**	**14 44 12.1**	**+0.6**
TUL1				IAmb_Lg		14 44 39.7	
	comp=Z,1μm,0.8s						
WMOK	**Wichita Mounta**	**2.24**	**202**	P	**Pn**	**14 44 18.0**	**+0.7**
	baz=22						
WMOK				S	**Sn**	**14 44 46.8**	**+1.7**
	baz=22						
WMOK	**Wichita Mounta**	**2.24**	**202**	Pn	**Pn**	**14 44 18.1**	**+0.7**
WMOK				IAmb_Lg		14 44 51.3	
	comp=Z,471nm,0.8s						
KSU1	**Kansas State U**	**2.45**	**21**	P	**Pn**	**14 44 21.1**	**+0.9**
	baz=201,SNR=19						
KSU1				S	**Sn**	**14 44 52.2**	**+1.9**
	baz=201						
KSU1	**Kansas State U**	**2.45**	**21**	Pn	**Pn**	**14 44 21.1**	**+0.9**
KSU1				IAmb_Lg		14 45 03.0	
	comp=Z,899nm,0.9s						
CBKS	**Cedar Bluff**	**2.54**	**322**	P	**Pn**	**14 44 22.6**	**+1.0**
	baz=141,SNR=60						
CBKS	**Cedar Bluff**	**2.54**	**322**		**Pn**	**14 44 22.5**	**+1.0**
U38A	**Gravette**	**2.73**	**97**		**Pn**	**14 44 24.5**	**+0.5**
X37A	**Clayton**	**2.94**	**138**	Pn	**Pn**	**14 44 27.6**	**+0.7**
X37A				IAmb_Lg		14 45 20.9	
	comp=Z,715nm,0.8s						
HHAR	**Hobbs**	**3.11**	**99**		**Pn**	**14 44 30.6**	**+1.3**
HHAR				IAmb_Lg		14 45 25.2	
	comp=Z,580nm,0.8s						
Z35A	**Perchaven, San**	**3.50**	**173**		**Pn**	**14 44 35.0**	**+0.4**
Z35A				IAmb_Lg		14 45 39.4	
	comp=Z,255nm,1.1s						
W39A	**Magazine**	**3.59**	**116**	P	**Pn**	**14 44 36.2**	**+0.3**
	baz=298						
W39A				Sb	**Sb**	**14 45 30.2**	**+2.7**
	baz=298						
W39A	**Magazine**	**3.59**	**116**		**Pn**	**14 44 36.1**	**+0.2**
S39A	**Bolivar**	**3.63**	**75**		**Pn**	**14 44 36.8**	**+0.3**
S39A				IAmb_Lg		14 45 36.3	
	comp=Z,222nm,0.8s						
AMTX	**Amarillo**	**3.74**	**240**	P	**Pn**	**14 44 39.2**	**+1.2**
	baz=58						
AMTX	**Amarillo**	**3.74**	**240**	Pn	**Pn**	**14 44 39.1**	**+1.2**
AMTX				IAmb_Lg		14 45 40.9	
	comp=Z,630nm,1.2s						
N33A	**J Bar K, Exete**	**3.92**	**3**	Pn	**Pn**	**14 44 41.5**	**+1.0**
N33A				IAmb_Lg		14 45 52.4	
	comp=Z,278nm,0.8s						
U40A	**Yellville**	**3.96**	**95**	P	**Pn**	**14 44 41.5**	**+0.5**
	baz=278,SNR=46						
U40A				S	**Sn**	**14 45 28.9**	**+1.3**
	baz=278						
U40A	**Yellville**	**3.96**	**95**		**Pn**	**14 44 41.7**	**+0.7**
U40A				IAmb_Lg		14 45 48.6	
	comp=Z,468nm,0.8s						
MIAR	**Mount Ida**	**4.08**	**123**	P	**Pn**	**14 44 43.0**	**+0.4**
	baz=305,SNR=9.9						
MIAR				S	**Sn**	**14 45 32.1**	**+1.7**
	baz=305						
MIAR	**Mount Ida**	**4.08**	**123**	Pn	**Pn**	**14 44 42.7**	**+0.1**
MIAR				IAmb_Lg		14 45 52.7	
	comp=Z,535nm,0.7s						
Z38A	**Mt. Pleasant**	**4.21**	**147**		**Pn**	**14 44 45.0**	**+0.7**
Z38A				IAmb_Lg		14 46 03.1	
	comp=Z,501nm,0.7s						
P38A	**Dawn**	**4.34**	**49**		**Pn**	**14 44 47.2**	**+1.0**
P38A				IAmb_Lg		14 46 00.7	
	comp=Z,501nm,0.8s						
N35A	**Tabor**	**4.36**	**21**		**Pn**	**14 44 47.3**	**+0.9**
MGMO	**Mountain Grove**	**4.39**	**84**		**Pn**	**14 44 47.1**	**+0.1**
MGMO				IAmb_Lg		14 45 57.6	
	comp=Z,494nm,0.8s						
KSCO	**Kaye Shedlock'**	**4.44**	**301**	P	**Pn**	**14 44 48.3**	**+0.6**
	baz=118						
KSCO	**Kaye Shedlock'**	**4.44**	**301**		**Pn**	**14 44 48.6**	**+1.0**
ABTX	**Abilene, Hawle**	**4.47**	**201**	P	**Pn**	**14 44 48.7**	**+0.7**
	baz=20						
ABTX				S	**Sn**	**14 45 40.4**	**+0.4**
	baz=20						
ABTX	**Abilene, Hawle**	**4.47**	**201**		**Pn**	**14 44 48.3**	**+0.4**
ABTX				IAmb_Lg		14 46 00.9	
	comp=Z,399nm,1.2s						
R40A	**Maddies Statio**	**4.59**	**70**		**Pn**	**14 44 49.9**	**+0.2**
R40A				IAmb_Lg		14 46 06.6	
	comp=Z,238nm,0.9s						
BGNE	**Belgrade**	**4.60**	**356**	P	**Pn**	**14 44 50.1**	**+0.4**
	baz=176,SNR=10						
BGNE				S	**Sn**	**14 45 44.7**	**+1.5**
	baz=176						
BGNE	**Belgrade**	**4.60**	**356**		**Pn**	**14 44 50.2**	**+0.4**
X40A	**Basin Creek Fa**	**4.62**	**119**	P	**Pn**	**14 44 50.5**	**+0.4**
	baz=302						
X40A	**Basin Creek Fa**	**4.62**	**119**		**Pn**	**14 44 50.0**	**0.0**
X40A				IAmb_Lg		14 46 09.5	
	comp=Z,338nm,0.7s						
FCAR	**Ozark Folk Cen**	**4.63**	**100**		**Pn**	**14 44 50.4**	**+0.3**
FCAR				IAmb_Lg		14 46 06.1	
	comp=Z,430nm,0.7s						
WHAR	**Wooly Hollow**	**4.67**	**107**		**Pn**	**14 44 51.2**	**+0.5**
W41B	**Gary Mavity, V**	**4.75**	**109**	Sb	**Sb**	**14 46 04.3**	**+3.7**
	baz=292						
W41B	**Gary Mavity, V**	**4.75**	**109**		**Pn**	**14 44 52.3**	**+0.5**
W41B				IAmb_Lg		14 46 19.7	
	comp=Z,217nm,0.7s						
WHTX	**Lake Whitney,**	**4.82**	**177**	P	**Pn**	**14 44 53.6**	**+0.8**
	baz=358						
WHTX				S	**Sn**	**14 45 49.4**	**+0.7**
	baz=358						
WHTX	**Lake Whitney,**	**4.82**	**177**		**Pn**	**14 44 53.2**	**+0.4**
UALR	**University of**	**4.84**	**113**	Pn	**Pn**	**14 44 53.4**	**+0.4**
UALR				IAmb_Lg		14 46 19.2	
	comp=Z,389nm,0.9s						
WLAR	**White Oak Lake**	**4.91**	**128**		**Pn**	**14 44 54.6**	**+0.6**
WLAR				IAmb_Lg		14 46 24.4	
	comp=Z,412nm,0.8s						
MSTX	**Muleshoe**	**5.00**	**237**	P	**Pn**	**14 44 55.7**	**+0.4**
	baz=54						
MSTX	**Muleshoe**	**5.00**	**237**		**Pn**	**14 44 55.8**	**+0.5**
237A	**Washetta, Mont**	**5.06**	**161**		**Pn**	**14 44 56.1**	**0.0**
237A				IAmb_Lg		14 46 34.9	
	comp=Z,212nm,1.0s						
P40A	**Paris**	**5.24**	**57**		**Pn**	**14 44 59.1**	**+0.6**
P40A				IAmb_Lg		14 46 34.7	
	comp=Z,222nm,1.0s						
L34A	**Svendsen Farm,**	**5.25**	**11**	Pn	**Pn**	**14 44 59.2**	**+0.5**
N38A	**Joes South For**	**5.31**	**40**		**Pn**	**14 44 59.5**	**+0.1**
CCM	**Cathedral Cave**	**5.32**	**75**	P	**Pn**	**14 44 59.5**	**-0.1**
	baz=258						
CCM				S	**Sn**	**14 46 01.5**	**+0.5**
	baz=258						
CCM	**Cathedral Cave**	**5.32**	**75**		**Pn**	**14 44 59.5**	**-0.1**
CCM				IAmb_Lg		14 46 36.1	
	comp=Z,342nm,1.0s						
T42A	**Van Buren**	**5.33**	**86**		**Pn**	**14 44 60.0**	**+0.2**
T42A				IAmb_Lg		14 46 30.8	
	comp=Z,157nm,0.9s						
T25A	**Trinidad**	**5.35**	**275**	P	**Pn**	**14 45 00.5**	**+0.2**
	baz=91,SNR=8.8						
T25A	**Trinidad**	**5.35**	**275**		**Pn**	**14 45 00.8**	**+0.5**
T25A				IAmb_Lg		14 46 32.4	
	comp=Z,194nm,0.8s						
LCAR	**Lake Charles**	**5.36**	**96**		**Pn**	**14 45 00.5**	**+0.2**
LCAR				IAmb_Lg		14 46 31.0	
	comp=Z,226nm,0.7s						
Z41A	**Richland Creek**	**5.39**	**130**	IAmb_Lg		14 46 40.3	
	comp=Z,279nm,0.8s						
NATX	**Nacogdoches**	**5.65**	**152**	IAmb_Lg		14 46 53.6	
	comp=Z,164nm,0.9s						
K31A	**O'Neill**	**5.85**	**353**		**Pn**	**14 45 07.7**	**+0.7**
PBMO	**Poplar Bluff**	**5.87**	**88**		**Pn**	**14 45 07.0**	**-0.1**
PBMO				IAmb_Lg		14 47 00.7	
	comp=Z,198nm,0.7s						
FVM	**French Village**	**5.94**	**76**		**Pn**	**14 45 08.5**	**+0.4**
FVM				IAmb_Lg		14 46 45.3	
	comp=Z,261nm,0.8s						
435B	**Jarrell**	**6.02**	**179**	P	**Pn**	**14 45 09.4**	**+0.1**
	baz=359						
435B	**Jarrell**	**6.02**	**179**		**Pn**	**14 45 09.4**	**+0.1**
435B				IAmb_Lg		14 47 05.6	
	comp=Z,252nm,0.7s						
SCIA	**State Center**	**6.17**	**33**	P	**Pn**	**14 45 11.9**	**+0.5**
	baz=216,SNR=9.7						
SCIA	**State Center**	**6.17**	**33**		**Pn**	**14 45 11.9**	**+0.5**
SLM	**Saint Louis**	**6.22**	**71**		**Pn**	**14 45 11.9**	**-0.1**
SLM				IAmb_Lg		14 46 58.8	
	comp=Z,232nm,0.8s						
Q24A	**Divide**	**6.24**	**292**	P	**Pn**	**14 45 13.0**	**+0.4**
	baz=108						
Q24A				S	**Sn**	**14 46 23.6**	**-0.5**
	baz=108						
Q24A	**Divide**	**6.24**	**292**		**Pn**	**14 45 12.8**	**+0.3**
SDCO	**Great Sand Dun**	**6.26**	**281**	P	**Pn**	**14 45 13.5**	**+0.7**
	baz=96,SNR=6.4						
SDCO	**Great Sand Dun**	**6.26**	**281**		**Pn**	**14 45 14.0**	**+1.2**
CPRX	**Cap Rock**	**6.29**	**235**		**Pn**	**14 45 13.6**	**+0.5**
JCT	**Junction City**	**6.55**	**196**	P	**Pn**	**14 45 16.4**	**-0.2**
	baz=15						
JCT	**Junction City**	**6.55**	**196**		**Pn**	**14 45 16.4**	**-0.2**
143A	**Socs Landing,**	**6.64**	**126**	IAmb_Lg		14 47 19.5	
	comp=Z,217nm,0.8s						
N41A	**Harden Midland**	**6.64**	**52**		**Pn**	**14 45 17.4**	**-0.3**
S44A	**Carbondale**	**6.83**	**80**		**Pn**	**14 45 20.4**	**+0.1**
GLAT	**Glass**	**6.83**	**92**	Pn	**Pn**	**14 45 20.3**	**0.0**
SIUC	**Southern Illin**	**6.86**	**80**		**Pn**	**14 45 20.3**	**-0.4**
ECSD	**EROS Data Cent**	**6.96**	**7**	P	**Pn**	**14 45 21.4**	**-0.8**
	baz=187,SNR=7.2						
ECSD	**EROS Data Cent**	**6.96**	**7**		**Pn**	**14 45 21.5**	**-0.7**
ECSD				IAmb_Lg		14 47 24.9	
	comp=Z,106nm,0.8s						
K38A	**Parkersburg**	**6.97**	**32**		**Pn**	**14 45 22.5**	**+0.2**
HKT	**Hockley**	**7.03**	**166**	IAmb_Lg		14 47 39.0	
	comp=Z,16nm,1.1s						
P43A	**Skaggs, Pawnee**	**7.06**	**64**		**Pn**	**14 45 23.8**	**+0.3**
P43A				IAmb_Lg		14 47 33.6	
	comp=Z,233nm,1.0s						
W45A	**Hickory Valley**	**7.13**	**101**	IAmb_Lg		14 47 29.0	
	comp=Z,302nm,0.8s						
OXF	**Oxford**	**7.16**	**106**	P	**Pn**	**14 45 25.4**	**+0.5**
	baz=291						
OXF	**Oxford**	**7.16**	**106**		**Pn**	**14 45 25.2**	**+0.3**
OXF				IAmb_Lg		14 47 28.6	
	comp=Z,188nm,0.8s						
Q44A	**Meyer Farm, Va**	**7.21**	**71**		**Pn**	**14 45 25.7**	**+0.1**
Q44A				IAmb_Lg		14 47 38.1	
	comp=Z,245nm,0.9s						
L40A	**Anamosa**	**7.27**	**42**		**Pn**	**14 45 26.5**	**+0.1**
L40A				IAmb_Lg		14 47 33.9	
	comp=Z,286nm,0.9s						
ANMO	**Albuquerque**	**7.32**	**258**	Pn	**Pn**	**14 45 28.5**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=80,slow=17,SNR=2.4						
ANMO				Pg	Pg	14 45 55.6	-4.5
	comp=Z,2.5nm,0.3s,baz=82,slow=16,SNR=16						
ANMO				Lg	Lg	14 47 28.9	
	comp=Z,6.7nm,0.3s,baz=52,slow=7.4,SNR=7.0						
ANMO				LR	LR	14 48 49.2	
	comp=Z,68nm,19.7s,baz=78,slow=43						
ANMO	**Albuquerque**	**7.32**	**258**	Pn	**Pn**	**14 45 27.6**	**+0.4**
Y45A	**Yeager Farm, C**	**7.32**	**111**	IAmb_Lg		14 47 51.4	
	comp=Z,219nm,0.7s						
PHWY	**Pilot Hill**	**7.49**	**309**		**Pn**	**14 45 30.0**	**+0.3**
PHWY				IAmb_Lg		14 47 41.1	
	comp=Z,83nm,0.7s						
VBMS	**Vicksburg**	**7.52**	**125**	IAmb_Lg		14 47 54.1	
	comp=Z,145nm,1.1s						
N23A	**Red Feather La**	**7.58**	**305**	Pn	**Pn**	**14 45 32.1**	**+1.1**
N23A				IAmb_Lg		14 47 57.4	
	comp=Z,204nm,0.7s						
HDIL	**Hopedale**	**7.59**	**58**		**Pn**	**14 45 30.8**	**0.0**
BNM	**Barren Site**	**7.72**	**252**	Pn	**Pn**	**14 45 33.1**	**+0.3**
OLIL	**Olney**	**7.87**	**73**		**Pn**	**14 45 35.0**	**+0.3**
I37A	**Lemond, Waseca**	**7.92**	**23**	Pn	**Pn**	**14 45 35.9**	**+0.7**
I37A				IAmb_Lg		14 48 06.9	
	comp=Z,174nm,0.9s						
735A	**Kenedy**	**7.94**	**180**	IAmb_Lg		14 48 09.1	
	comp=Z,183nm,1.1s						
Y22D	**IRIS PASSCAL I**	**7.97**	**253**	IAmb_Lg		14 48 11.7	
	comp=Z,247nm,1.1s						
LENM	**Lemitar**	**7.98**	**253**	Pn	**Pn**	**14 45 36.8**	**+0.5**
O44A	**Mansfield**	**8.00**	**63**		**Pn**	**14 45 36.8**	**+0.4**
WVT	**Waverly**	**8.02**	**92**		**Pn**	**14 45 37.0**	**+0.3**
WVT				IAmb_Lg		14 47 59.7	
	comp=Z,108nm,0.7s						
PLAL	**Pickwick Lake**	**8.05**	**100**		**Pn**	**14 45 37.5**	**+0.3**
PLAL				IAmb_Lg		14 47 54.6	
	comp=Z,184nm,0.9s						
L42A	**Oliver, Polo**	**8.12**	**48**		**Pn**	**14 45 38.9**	**+0.9**
L42A				IAmb_Lg		14 48 02.2	
	comp=Z,206nm,0.8s						
MNTX	**Cornudas Mount**	**8.13**	**233**	P	**Pn**	**14 45 38.2**	**0.0**
	baz=49						
MNTX	**Cornudas Mount**	**8.13**	**233**		**Pn**	**14 45 38.5**	**+0.3**
146A	**Union**	**8.28**	**118**	IAmb_Lg		14 48 15.6	
	comp=Z,125nm,0.7s						
JFWS	**Jewell Farm**	**8.38**	**41**	P	**Pn**	**14 45 40.9**	**-0.7**
	baz=226,SNR=7.5						
JFWS	**Jewell Farm**	**8.38**	**41**		**Pn**	**14 45 41.5**	**-0.1**
JFWS				IAmb_Lg		14 48 10.5	
	comp=Z,240nm,0.7s						
T47A	**Sharon Grove**	**8.52**	**86**	Pn	**Pn**	**14 45 43.5**	**-0.1**
T47A				IAmb_Lg		14 48 19.5	
	comp=Z,170nm,0.9s						
833A	**Chaparral WMA,**	**8.58**	**190**	Pn	**Pn**	**14 45 45.0**	**+0.5**
833A				IAmb_Lg		14 48 19.4	
	comp=Z,110nm,1.1s						
Z47A	**Carrollton**	**8.72**	**112**	IAmb_Lg		14 48 23.6	
	comp=Z,91nm,1.0s						
RSSD	**Black Hills**	**8.73**	**329**	P	**Pn**	**14 45 47.8**	**+1.2**
	baz=145						
RSSD	**Black Hills**	**8.73**	**329**		**Pn**	**14 45 47.7**	**+1.1**
346A	**Big Creek Wild**	**8.74**	**126**	IAmb_Lg		14 48 34.6	
	comp=Z,102nm,1.2s						
P46A	**Rosedale**	**8.75**	**68**		**Pn**	**14 45 47.1**	**+0.3**
P46A				IAmb_Lg		14 48 24.0	
	comp=Z,219nm,0.8s						
RWWY	**Rawlins**	**8.81**	**306**	IAmb_Lg		14 48 23.7	
	comp=Z,108nm,0.8s						
M44A	**Midewin, Midew**	**8.81**	**56**	Pn	**Pn**	**14 45 47.9**	**+0.3**
V48A	**Smith Brothers**	**8.88**	**94**	IAmb_Lg		14 48 22.7	
	comp=Z,112nm,0.9s						
I40A	**Norwalk**	**8.91**	**35**		**Pn**	**14 45 48.5**	**-0.5**
I40A				IAmb_Lg		14 48 31.5	
	comp=Z,130nm,0.9s						
K22A	**Casper**	**8.93**	**313**	IAmb_Lg		14 48 34.5	
	comp=Z,164nm,1.2s						
PV11	**David Mesa, Pa**	**8.96**	**283**	IAmb_Lg		14 48 38.5	
	comp=Z,76nm,1.2s						
TX31	**Lajitas Ar. Si**	**8.96**	**215**		**Pn**	**14 45 49.4**	**-0.4**
TX32	**Lajitas Array**	**8.96**	**215**		**Pn**	**14 45 49.3**	**-0.5**
TXAR	**Lajitas Array**	**8.96**	**215**	Pn	**Pn**	**14 45 49.0**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=31,slow=11,SNR=45						
TXAR				Lg	Lg	14 48 16.4	
	comp=Z,1.7nm,0.3s,baz=22,slow=22,SNR=2.1						
X48A	**Hartselle**	**9.02**	**102**	IAmb_Lg		14 48 25.1	
	comp=Z,189nm,1.3s						
SFIN	**Lafayette**	**9.06**	**64**	P	**Pn**	**14 45 51.5**	**+0.5**
	baz=250						
SFIN	**Lafayette**	**9.06**	**64**		**Pn**	**14 45 51.1**	**+0.1**
SFIN				IAmb_Lg		14 48 34.0	
	comp=Z,101nm,0.8s						
F33A	**5 Mile Ranch,**	**9.08**	**6**		**Pn**	**14 45 50.0**	**-1.2**
F33A				IAmb_Lg		14 48 24.8	
	comp=Z,104nm,1.0s						
PV23	**Carpenter Ridg**	**9.09**	**284**	IAmb_Lg		14 48 47.1	
	comp=Z,82nm,1.1s						
BLO	**Bloomington**	**9.16**	**72**		**Pn**	**14 45 52.5**	**+0.1**
BLO				IAmb_Lg		14 48 30.8	
	comp=Z,205nm,0.8s						
SPMN	**Marine on St.**	**9.19**	**22**	P	**Pn**	**14 45 53.9**	**+1.2**
	baz=206						
SPMN	**Marine on St.**	**9.19**	**22**	Pn	**Pn**	**14 45 53.1**	**+0.4**
SPMN				IAmb_Lg		14 48 34.5	
	comp=Z,74nm,0.7s						
WCI	**Wyandotte Cave**	**9.21**	**78**	P	**Pn**	**14 45 53.5**	**+0.5**
	baz=265						
WCI	**Wyandotte Cave**	**9.21**	**78**	Pn	**Pn**	**14 45 53.5**	**+0.5**
WCI				IAmb_Lg		14 48 37.6	
	comp=Z,123nm,0.8s						
CLTN	**Cedars of Leba**	**9.22**	**91**	IAmb_Lg		14 48 31.1	
	comp=Z,112nm,1.0s						
L44A	**Lake County Fo**	**9.29**	**52**	Pn	**Pn**	**14 45 54.4**	**+0.2**
K43A	**Burlington**	**9.33**	**48**	Pn	**Pn**	**14 45 54.5**	**-0.1**
F36A	**Milaca**	**9.57**	**18**		**Pn**	**14 45 57.0**	**-1.0**
LRAL	**Lakeview Retre**	**9.59**	**110**	Pn	**Pn**	**14 45 57.4**	**-0.9**
U49A	**Red Boiling Sp**	**9.62**	**88**	IAmb_Lg		14 48 43.6	
	comp=Z,62nm,0.8s						
SWET	**Sewanee**	**9.70**	**96**	IAmb_Lg		14 48 57.8	
	comp=Z,74nm,0.8s						
Y49A	**Blount Mountai**	**9.72**	**104**	IAmb_Lg		14 48 56.4	
	comp=Z,129nm,0.8s						
I42A	**Draeger Farm,**	**9.76**	**41**	Pn	**Pn**	**14 46 00.0**	**-0.5**
I42A				IAmb_Lg		14 48 56.5	
	comp=Z,125nm,0.9s						
E28A	**Huff**	**10.00**	**348**	IAmb_Lg		14 49 10.0

PFO	**Pinyon Flats O**	**15.63**	**264**	LR	LR	14 53 35.8	
	comp=Z,91nm,18.5s,baz=64,slow=38						
SSPA	**Standing Stone**	**15.95**	**70**	Pn	**Pn**	**14 47 21.6**	**-3.0**
NVAR	**Mina Array Bea**	**16.37**	**282**	Pn	**Pn**	**14 47 27.1**	**-3.2**
M57A	**Sunshine Farm,**	**16.62**	**68**	Pn	**Pn**	**14 47 31.2**	**-2.0**
J58A	**Remsen**	**18.36**	**62**	Pn	**P**	**14 47 52.9**	**-1.9**
J59A	**Piesco**	**18.93**	**62**	P	**P**	**14 47 60.0**	**-1.2**
NCB	**Newcomb**	**19.25**	**61**	P	**P**	**14 48 04.7**	**+0.1**
BANI	**BANI**	**30.26**	**120**	P	**P**	**14 49 50.8**	**-0.8**
IL31		**40.17**	**330**	P	**P**	**14 51 16.0**	**-0.2**
ILAR	**Eielson Array**	**40.17**	**330**	P	**P**	**14 51 16.6**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=99,slow=7.4,SNR=6.8						
ESK	**Eskdalemuir**	**63.05**	**40**	P	**P**	**14 54 08.5**	**+1.3**
EKR1	**Eskdalemuir Ar**	**63.05**	**40**	P	**P**	**14 54 08.6**	**+1.3**
EKB5	**Eskdalemuir Ar**	**63.06**	**40**	P	**P**	**14 54 08.5**	**+1.2**

*IDC **25** 14:59:12.1±0.6, 1.°60N×126.°21E, h0km, mb4.2/12, mb1 4.3/14, mb1mx4.1/39, mbtmp4.2/14, ML3.8/2, MS2.1/1, Error ellipse: s-maj=35.9km s-min=11.6km az=72.0*
*NEIC **25** 14:59:17.1±1.7, 1.°83N±0.°07×126.°48E±0.°07, h48km±6km, mb4.6/37, Error ellipse: s-maj=12.5km s-min=5.8km az=224.0*
*DJA **25** 14:59:18.7±0.2, 2.°N±2.°×12.°6E±.°, h52km±9km, M4.3/16, mB4.8/7, mb4.5/15, MLv4.4/16, Mw(mB)4.0/7*
ISC 25 14:59:17.8±0.4, 1.°77N±0.°04×126.°47E±0.°05, h47km, n94, σ1§51/99, mb4.5/28, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.34**	**138**	P	**Pn**	**14 59 40.3**	**+0.2**
TNTI				S	**Sn**	**14 59 58.7**	**+1.9**
TNTI	**Ternate**	**1.34**	**138**	Pn	**Pn**	**14 59 40.1**	**+0.1**
SGSI	**Sangihe**	**2.12**	**334**	P	**Pn**	**14 59 50.8**	**0.0**
SGSI				S	**Sn**	**15 00 16.5**	**+0.6**
KMSI	**Cibinong**	**2.76**	**244**	P	**Pn**	**15 00 00.4**	**+0.9**
KMSI				S	**Sn**	**15 00 32.6**	**+1.0**
GTOI	**Gorontalo**	**3.64**	**252**	P	**Pn**	**15 00 13.9**	**+2.3**
SANI	**Sanana**	**3.83**	**187**	P	**Pn**	**15 00 13.8**	**-0.4**
DDMP	**Don Marcelino,**	**4.37**	**350**	*e*P	**Pn**	**15 00 20.0**	**-1.6**
LUWI	**Luwuk**	**4.63**	**233**	P	**Pn**	**15 00 26.7**	**+1.4**
LUWI	**Luwuk**	**4.63**	**233**	Pn	**Pn**	**15 00 25.9**	**+0.6**
MRSI	**Marisa**	**4.71**	**254**	P	**Pn**	**15 00 28.0**	**+1.7**
KCP	**Kidapawan**	**5.38**	**345**	⇓*i*P	**Pn**	**15 00 39.3**	**+3.7**
KCP				*i* S	**Sn**	**15 01 39.9**	**+3.6**
SIJI	**Sorong**	**5.47**	**119**	Pn	**Pn**	**15 00 38.0**	**+1.3**
	0.9nm,0.3s,baz=316,slow=10,SNR=5.1						
APSI	**Ampana**	**5.51**	**241**	P	**Pn**	**15 00 39.4**	**+2.1**
	0.8nm1µm144nm,0.6s						
TOLI2	**Tolitoli**	**5.72**	**263**	Pn	**Pn**	**15 00 39.0**	**-1.3**
MPSI	**Mapaga**	**6.72**	**258**	P	**Pn**	**15 00 55.4**	**+1.4**
	0.1nm368nm26nm,0.7s						
PAGZ	**Pagadian**	**6.77**	**333**	*e*P	**Pn**	**15 00 53.4**	**-1.2**
FAKI	**Fak Fak**	**7.42**	**129**	P	**Pn**	**15 01 05.3**	**+1.7**
	0.1nm19nm,1.2s						
TTSI	**Tana Toraja**	**8.19**	**234**	P	**Pn**	**15 01 14.7**	**+0.6**
	1µm27nm,0.6s						
MYLDM	**Lahad Datu**	**8.64**	**293**	Pn	**Pn**	**15 01 21.0**	**+0.7**
SPSI	**Sidrap Palu**	**8.79**	**230**	P	**Pn**	**15 01 24.2**	**+1.8**
	22nm,0.7s						
BNSI	**Bone**	**8.83**	**226**	P	**Pn**	**15 01 23.8**	**+0.9**
	23nm,0.6s						
BKSI	**Bulukumba**	**9.48**	**222**	P	**Pn**	**15 01 32.8**	**+1.0**
	532nm22nm,0.6s						
KAPI	**Kappang**	**9.51**	**225**	LR	LR	15 04 42.6	
	comp=Z,13nm,21.4s,baz=62,slow=36						
KAPI	**Kappang**	**9.51**	**225**	Pn	**Pn**	**15 01 30.5**	**-1.8**
BSSI	**Bau Bau, Buton**	**9.87**	**217**	P	**Pn**	**15 01 38.6**	**+1.4**
	27nm,0.5s						
KKM	**Kota Kinabalu**	**11.07**	**293**	Pn	**Pn**	**15 01 54.9**	**+1.1**
MMRI	**Maumere**	**11.17**	**202**	Pn	**Pn**	**15 01 56.1**	**+1.2**
SOEI	**Soe**	**11.66**	**191**	P	**Pn**	**15 02 03.5**	**+1.7**
	26nm,0.8s						
TWSI	**Taliwang, Sumb**	**14.15**	**222**	P	**Pn**	**15 02 38.0**	**+2.3**
	16nm,0.9s						
SBUM	**Sibu**	**14.26**	**273**	Pn	**Pn**	**15 02 35.8**	**-1.2**
JAY	**Jayapura**	**14.86**	**107**	Pn	**P**	**15 02 49.4**	**-0.6**
	0.6nm,0.3s,baz=292,slow=5.5,SNR=2.9						
MTN	**Manton Dam**	**15.24**	**162**	Pn	**Pn**	**15 02 50.0**	**-0.1**
MTN				IAmb	IAmb	15 03 02.3	
	comp=Z,35nm,1.5s						
KSM	**Kuching**	**16.16**	**269**	P	**P**	**15 03 03.2**	**-1.2**
APYP	**Conner**	**16.79**	**343**	*e*P	**P**	**15 03 10.3**	**-1.1**
KNRA	**Kununurra**	**17.49**	**173**		**Pn**	**15 03 17.9**	**-0.5**
UGM	**Wanagama**	**18.59**	**239**	P	**P**	**15 03 30.8**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.76**	**182**	P	**P**	**15 03 42.9**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=12,slow=8.3,SNR=21						
FITZ	**Fitzroy Crossi**	**19.76**	**182**	P	**P**	**15 03 43.0**	**-1.0**
CISI	**Cisompet, Garu**	**20.79**	**243**	P	**P**	**15 03 55.3**	**0.0**
CISI				IAmb	IAmb	15 04 15.4	
	comp=Z,35nm,0.9s						
YULB	**Yu-li**	**22.07**	**347**	P	**P**	**15 04 07.7**	**-1.1**
YULB				IAmb	IAmb	15 04 29.7	
	comp=Z,12nm,1.0s						
TPUB	**Ta-pu**	**22.14**	**346**	P	**P**	**15 04 08.0**	**-1.6**
TPUB				IAmb	IAmb	15 04 12.5	
	comp=Z,22nm,1.1s						
SSLB	**Suanglung**	**22.53**	**347**	P	**P**	**15 04 11.8**	**-2.1**
COEN	**Coen**	**22.77**	**134**	P	**P**	**15 04 15.9**	**-0.6**
WB0	**Warramunga Arr**	**22.78**	**160**	P	**P**	**15 04 15.5**	**-1.0**
WRAB	**Tennant Creek**	**22.92**	**161**	P	**P**	**15 04 16.9**	**-1.0**
WRAB				IAmb	IAmb	15 04 19.1	
	comp=Z,17nm,0.5s						
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**15 04 16.9**	**-1.1**
	comp=Z,16nm,0.4s,baz=339,slow=11,SNR=261						
WRA				PcP	**PcP**	**15 08 07.9**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=313,slow=2.2,SNR=3.3						
WRA				S	**S**	**15 08 19.8**	**-4.9**
	comp=Z,1.5nm,1.1s,baz=337,slow=17,SNR=4.9						
WRA	**Warramunga Arr**	**22.92**	**161**	P	**P**	**15 04 18.2**	**+0.3**
WB2	**Warramunga Arr**	**22.93**	**161**	P	**P**	**15 04 17.1**	**-1.0**
WB2				IAmb	IAmb	15 04 22.1	
	comp=Z,15nm,0.7s						
WC3	**Warramunga Arr**	**22.95**	**161**	P	**P**	**15 04 17.5**	**-0.8**
WC3				IAmb	IAmb	15 04 19.4	
	comp=Z,22nm,0.5s						
WR0	**Warramunga Arr**	**23.00**	**160**	P	**P**	**15 04 17.7**	**-1.1**
WR0				IAmb	IAmb	15 04 20.0	
	comp=Z,17nm,0.5s						
PSA00	**Pilbara Seismi**	**24.09**	**195**	P	**P**	**15 04 28.4**	**-0.7**
PSA00				IAmb	IAmb	15 04 29.6	
	comp=Z,13nm,0.9s						
PSA00	**Pilbara Seismi**	**24.09**	**195**	P	**P**	**15 04 28.4**	**-0.7**
PSA00				IAmb	IAmb	15 04 30.4	
	comp=Z,7.2nm,0.8s						
BKNI	**Bangkinang**	**25.46**	**267**	P	**P**	**15 04 40.9**	**-0.8**
AS31	**Alice Springs**	**26.30**	**164**	P	**P**	**15 04 49.1**	**-0.1**
ASAR	**Alice Springs**	**26.30**	**164**	P	**P**	**15 04 49.5**	**+0.3**
	comp=Z,5.9nm,0.5s,baz=345,slow=7.9,SNR=254						
ASAR				PcP	**PcP**	**15 08 15.6**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=353,slow=2.3,SNR=6.2						
ASAR				S	**S**	**15 09 22.1**	**+3.2**
	comp=Z,0.2nm,0.7s,baz=354,slow=25,SNR=1.8						
ASAR	**Alice Springs**	**26.30**	**164**	P	**P**	**15 04 49.3**	**0.0**
GIRL	**Giralia**	**27.04**	**206**	P	**P**	**15 04 56.3**	**+0.5**
NJ2	**Nanjing**	**30.96**	**347**	*e*P	**P**	**15 05 30.5**	**0.0**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.68**	**303**	P	**P**	**15 05 38.1**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=132,slow=6.6,SNR=2.1						
MORW	**Morawa**	**32.25**	**197**	P	**P**	**15 05 41.7**	**-0.3**
MORW				IAmb	IAmb	15 05 45.8	
	comp=Z,14nm,1.1s						
FORT	**Forrest**	**32.41**	**177**	P	**P**	**15 05 43.5**	**+0.2**
KSRS	**Korea Array**	**35.53**	**2**	P	**P**	**15 06 13.1**	**+2.8**
	comp=Z,1.0nm,0.8s,baz=176,slow=9.4,SNR=4.5						
BBOO	**Buckleboo**	**35.57**	**166**	P	**P**	**15 06 10.7**	**0.0**
BBOO				IAmb	IAmb	15 06 11.6	
	comp=Z,12nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.60**	**193**	P	**P**	**15 06 10.7**	**-0.2**
NWAO	**Narrogin (SRO)**	**35.60**	**193**	P	**P**	**15 06 10.8**	**-0.2**
NWAO				IAmb	IAmb	15 06 28.8	
	comp=Z,21nm,1.2s						
STKA	**Stephens Creek**	**36.41**	**158**	P	**P**	**15 06 18.1**	**+0.2**
	comp=Z,1.7nm,0.3s,baz=341,slow=8.6,SNR=14						
STKA	**Stephens Creek**	**36.41**	**158**	P	**P**	**15 06 18.0**	**0.0**
ARMA	**Armidale**	**40.00**	**145**	P	**P**	**15 06 48.2**	**-0.1**
LZH	**Lanzhou**	**40.06**	**331**	*e*P	**P**	**15 06 47.0**	**-1.8**
LZH				pP	pP	15 06 58.0	-2.9
LZH				sP	pwP	15 07 02.8	-0.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC	**Hu-ho-hao-te**	**41.17**	**343**	*e*P	**P**	**15 06 56.5**	**-1.3**
HHC				pmax	pmax		
	comp=Z,88nm,7.1s						
CN2	**Changchun**	**41.86**	**359**	*e*P	**P**	**15 07 00.8**	**-2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ERM	**Erimo**	**42.78**	**18**	P	**P**	**15 07 08.8**	**-2.0**
JKA	**Kamikawa-asahi**	**44.53**	**17**	P	**P**	**15 07 23.1**	**-1.8**
GTA	**Gaotai**	**44.64**	**330**	*e*P	**P**	**15 07 30.0**	**+4.0**
GTA				pP	sP	15 07 43.3	-0.2
GTA				sP	pwP	15 07 48.3	+7.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	**Songino Array**	**49.06**	**342**	P	**P**	**15 08 02.5**	**+2.1**
	comp=Z,0.7nm,0.6s,baz=166,slow=7.6,SNR=3.7						
SONM	**Songino Array**	**49.06**	**342**	P	**P**	**15 07 59.8**	**-0.6**
WMQ	**Urumqi**	**54.18**	**326**	*e*P	**P**	**15 08 38.8**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,8.5s						
PETK	**Petropavlovsk-**	**57.33**	**22**	P	**P**	**15 09 03.1**	**+2.2**
	comp=Z,3.6nm,0.9s,baz=188,slow=4.9,SNR=5.3						
PETK	**Petropavlovsk-**	**57.33**	**22**	P	**P**	**15 09 00.3**	**-0.7**
MK31	**Makanchi Array**	**59.01**	**326**	P	**P**	**15 09 11.5**	**-1.3**
MK31				IAmb	IAmb	15 09 17.9	
	comp=Z,2.3nm,1.1s						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**15 09 12.4**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=120,slow=7.3,SNR=31						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**15 09 11.7**	**-1.2**
MAKZ	**Makanchi**	**59.20**	**326**	P	**P**	**15 09 12.8**	**-1.3**
MAKZ				IAmb	IAmb	15 09 18.3	
	comp=Z,2.6nm,0.7s						
BFZ	**Birch Farm**	**61.91**	**139**	P	**P**	**15 09 31.9**	**-0.8**
ZALV	**Zalesovo Beam**	**62.21**	**334**	P	**P**	**15 09 35.4**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=134,slow=8.4,SNR=2.4						
KURK	**Kurchatov**	**63.25**	**328**	P	**P**	**15 09 39.7**	**-1.7**
NRIK	**Noril'sk**	**72.25**	**346**	P	**P**	**15 10 39.6**	**+1.8**
	comp=Z,2.6nm,0.7s,baz=113,slow=4.6,SNR=6.9						
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**15 10 43.2**	**-2.4**
NIKH	**Nikolski High**	**73.56**	**35**	P	**P**	**15 10 43.5**	**-2.3**
VNDA	**Vanda**	**81.53**	**173**	P	**P**	**15 11 30.4**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=321,slow=4.9,SNR=5.7						
VNDA	**Vanda**	**81.53**	**173**	IAmb	IAmb	15 11 42.3	
	comp=Z,3.9nm,1.1s						
ARCES	**ARCESS Array B**	**92.18**	**340**	P	**P**	**15 12 23.4**	**+1.3**
	comp=Z,2.2nm,0.9s,baz=94,slow=6.3,SNR=1.3						
H02S1	**DAWSON INLET T**	**95.21**	**36**	T	T	16 59 37.7	
	SNR=68						
TORD	**Torodi Ar. Bea**	**123.25**	**287**	PKP	**PKiKP**	**15 18 10.8**	**0.0**
	comp=Z,0.6nm,0.6s,baz=44,slow=1.7,SNR=3.1						

IDC 25 15:00:14.4±29.0, 22.°77S×172.°38W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.7/30, mbtmp3.9/4, Error ellipse: s-maj=534.5km s-min=168.6km az=76.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.51**	**266**	P	P	15 07 38.6	-0.1
	1.8nm,0.4s,baz=112,slow=11,SNR=7.6						
STKA	**Stephens Creek**	**41.62**	**247**	P	P	15 08 03.9	-0.6
	0.4nm,0.3s,baz=58,slow=9.5,SNR=1.1						
ASAR	**Alice Springs**	**49.12**	**258**	P	P	15 09 04.0	-0.1
	0.2nm,0.4s,baz=86,slow=6.7,SNR=3.3						
WRA	**Warramunga Arr**	**49.48**	**263**	P	P	15 09 07.2	+0.3
	1.1nm,0.5s,baz=103,slow=8.0,SNR=6.4						

*NNC **25** 15:14:53.5±0.6, 43.°21N×78.°68E, h0km, mb3.0, mpv3.0, Error ellipse: s-maj=6.8km s-min=2.9km az=177.0*
*KRNET **25** 15:14:53.8±0.1, 43.°18N×78.°67E, h13km, mb2.8*
*SOME **25** 15:14:54.5, 43.°22N×78.°65E, h10km*
ISC 25 15:14:53.9±0.8, 43.°22N±0.°02×78.°65E±0.°02, h11km±6km, n53, σ1§00/101, 19C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZHN	**Zhinishke**	**0.17**	**253**	*e*P	**Pg**	**15 14 57.5**	**-0.2**
	baz=66						
ZHN				*e*S	**Sg**	**15 15 00.0**	**-0.3**
	baz=66						
ZHN	**Zhinishke**	**0.17**	**253**	*e*P	**Pg**	**15 14 57.5**	**-0.2**
	4.5nm,0.1s						
ZHN				*e*S	**Sg**	**15 14 59.9**	**-0.3**
	64nm,0.1s						
ZHN	**Zhinishke**	**0.17**	**253**	P	**Pg**	**15 14 57.3**	**-0.3**
	41nm,0.3s						
ZHN				S	**Sg**	**15 15 00.0**	**-0.3**
	64nm,0.1s						
SATY	**Saty**	**0.24**	**229**	⇑*e*P	**Pg**	**15 14 58.7**	**-0.2**
	baz=38						
SATY				⇑*e*S	**Sg**	**15 15 02.1**	**-0.2**
	baz=38						
SATY	**Saty**	**0.24**	**229**	⇑*e*P	**Pg**	**15 14 58.7**	**-0.2**
	21nm,0.1s						
SATY				*e*S	**Sg**	**15 15 02.2**	**-0.2**
	278nm,0.1s						
SATY	**Saty**	**0.24**	**229**	P	**Pg**	**15 14 58.8**	**-0.2**
	21nm,0.1s						
SATY				S	**Sg**	**15 15 02.5**	**+0.2**
	278nm,0.1s						
KPKS	**Kokpek**	**0.25**	**5**	⇓*e*P	**Pg**	**15 14 59.5**	**+0.3**
	baz=3.0						
KPKS				⇓*e*S	**Sg**	**15 15 03.4**	**+0.7**
	baz=3.0						
KPKS	**Kokpek**	**0.25**	**5**	⇓*e*P	**Pg**	**15 14 59.5**	**+0.3**
	456nm,0.1s						
KPKS				*e*S	**Sg**	**15 15 03.3**	**+0.7**
	336nm,0.2s						
UZB	**Uzunbulak**	**0.28**	**104**	*e*P	**Pg**	**15 14 59.1**	**-0.6**
	baz=97						
UZB				*e*S	**Sg**	**15 15 02.7**	**-0.8**
	baz=97						
UZB	**Uzunbulak**	**0.28**	**104**	*e*P	**Pg**	**15 14 59.1**	**-0.6**
	4.2nm,0.1s						
UZB				*e*S	**Sg**	**15 15 02.7**	**-0.8**
	103nm,0.1s						
UZB	**Uzunbulak**	**0.28**	**104**	P	**Pg**	**15 14 58.9**	**-0.8**
	4.2nm,0.1s						
UZB				S	**Sg**	**15 15 02.7**	**-0.8**
	103nm,0.1s						
KURS	**Kuram**	**0.44**	**308**	*e*P	**Pg**	**15 15 03.1**	**+0.5**
	baz=11						
KURS				*e*S	**Sb**	**15 15 09.8**	**-0.7**
	baz=11						
KURS	**Kuram**	**0.44**	**308**	*e*P	**Pg**	**15 15 03.1**	**+0.5**
	4.7nm,0.4s						
KURS				*e*S	**Sb**	**15 15 09.8**	**-0.7**
	5.8nm,0.2s						
KURS	**Kuram**	**0.44**	**308**	P	**Pg**	**15 14 58.5**	**-4.1**
	19nm,1.7s						
KURS				S	**Sg**	**15 15 02.0**	**-6.5**
	12nm,1.0s						
PDGK	**Podgornoye**	**0.62**	**79**	P	**Pg**	**15 15 05.4**	**-0.7**
	2.5nm,0.4s						
PDGK				S	**Sg**	**15 15 13.7**	**-0.5**
	6.3nm,0.3s						
PDGK	**Podgornoye**	**0.62**	**79**	⇑P	**Pg**	**15 15 05.5**	**-0.5**
	3.5nm,0.5s						
PDGK				⇓S	**Sg**	**15 15 13.3**	**-1.0**
	5.2nm,0.4s						
PRZ	**Przheval'sk**	**0.76**	**194**	⇑*i*P	**Pg**	**15 15 07.8**	**-0.7**
	baz=95						
PRZ				⇑*i*S	**Sg**	**15 15 17.2**	**-1.2**
	baz=95						
ANVS	**Anan'yevo**	**0.84**	**239**	⇑*i*P	**Pg**	**15 15 10.0**	**-0.2**
	baz=42						
ANVS				⇑*i*S	**Sg**	**15 15 20.1**	**-1.1**
	baz=42						
MNBS	**Baschi**	**0.88**	**348**	⇑*e*P	**Pb**	**15 15 11.4**	**0.0**
	9.5nm,0.1s						
MNBS				*e*S	**Sb**	**15 15 23.6**	**+0.4**
	15nm,0.2s						
MNBS	**Baschi**	**0.88**	**348**	P	**Pb**	**15 15 11.2**	**-0.1**
	9.5nm,0.1s						
MNBS				S	**Sb**	**15 15 23.7**	**+0.4**
	15nm,0.2s						
KOTS	**Kotyrbulak**	**1.12**	**271**	*e*P	**Pn**	**15 15 15.8**	**0.0**
	baz=73						
KOTS				*e*S	**Sn**	**15 15 31.2**	**-0.1**
	baz=73						
KOTS	**Kotyrbulak**	**1.12**	**271**	*e*P	**Pn**	**15 15 15.8**	**0.0**
	6.3nm,0.2s						
KOTS				*e*S	**Sn**	**15 15 31.3**	**-0.1**
	14nm,0.4s						
KOTS	**Kotyrbulak**	**1.12**	**271**	P	**Pn**	**15 15 15.8**	**0.0**
	6.3nm,0.2s						
KOTS				S	**Sn**	**15 15 31.5**	**+0.1**
	14nm,0.4s						
ARXS	**Arharly**	**1.16**	**329**	*e*P	**Pb**	**15 15 16.0**	**-0.1**
	8.0nm,0.3s						
ARXS				*e*S	**Sg**	**15 15 31.6**	**+0.2**
	5.1nm,0.3s						
ARXS	**Arharly**	**1.16**	**329**	P	**Pb**	**15 15 16.1**	**0.0**
	8.0nm,0.3s						
ARXS				S	**Sn**	**15 15 32.1**	**-0.1**
	5.1nm,0.3s						
MDOK	**Medeo**	**1.17**	**268**	*e*P	**Pb**	**15 15 15.9**	**-0.4**
	baz=70						
MDOK				*e*S	**Sb**	**15 15 31.5**	**-0.1**
	baz=70						
MDOK	**Medeo**	**1.17**	**268**	*e*P	**Pb**	**15 15 15.9**	**-0.4**
	2.2nm,0.3s						
MDOK				*e*S	**Sb**	**15 15 31.5**	**-0.1**
	2.9nm,0.2s						
MDOK	**Medeo**	**1.17**	**268**	Pg	**Pn**	**15 15 18.4**	**+1.9**
	26nm,2.6s						
MDOK				Lg	Lg	15 15 35.9	
	34nm,3.1s						
TNSS	**Tian-Shan**	**1.26**	**262**	*e*P	**Pn**	**15 15 18.0**	**+0.1**
	baz=64						
TNSS				*e*S	**Sn**	**15 15 35.1**	**+0.1**
	baz=64						
TNSS	**Tian-Shan**	**1.26**	**262**	*e*P	**Pn**	**15 15 18.0**	**+0.1**
	14nm,1.1s						
TNSS				*e*S	**Sn**	**15 15 35.1**	**+0.1**
	4.0nm,0.2s						
TNSS	**Tian-Shan**	**1.26**	**262**	P	**Pn**	**15 15 17.9**	**0.0**
	14nm,1.1s						
TNSS				S	**Sn**	**15 15 35.2**	**+0.1**
	4.0nm,0.2s						
CHKK	**Chushkaly**	**1.37**	**298**	*e*P	**Pb**	**15 15 19.7**	**+0.1**
	baz=0.0						
CHKK				*e*S	**Sg**	**15 15 37.9**	**0.0**
	baz=0.0						
CHKK	**Chushkaly**	**1.37**	**298**	*e*P	**Pb**	**15 15 19.7**	**+0.1**
	3.1nm,0.1s						
CHKK				*e*S	**Sg**	**15 15 38.0**	**0.0**
	17nm,0.3s						
CHKK	**Chushkaly**	**1.37**	**298**	P	**Pb**	**15 15 19.6**	**+0.1**
	4.5nm,0.3s						
CHKK				S	**Sg**	**15 15 38.1**	**+0.2**
	17nm,0.3s						
DJR	**Jarkent**	**1.39**	**36**	*e*P	**Pg**	**15 15 20.5**	**0.0**
	5.9nm,0.2s						
DJR				*e*S	**Sg**	**15 15 39.5**	**+0.9**
	22nm,0.2s						
DJR	**Jarkent**	**1.39**	**36**	P	**Pb**	**15 15 19.9**	**-0.1**
	5.9nm,0.2s						
DJR				S	**Sg**	**15 15 38.6**	**0.0**
	22nm,0.2s						
KTBS	**Karatobe**	**1.52**	**290**	*e*P	**Pb**	**15 15 22.3**	**+0.2**
	baz=91						
KTBS				*e*S	**Sg**	**15 15 42.6**	**-0.1**
	baz=91						
KTBS	**Karatobe**	**1.52**	**290**	*e*P	**Pb**	**15 15 22.3**	**+0.2**
	6.7nm,0.3s						
KTBS				*e*S	**Sg**	**15 15 42.6**	**-0.1**
	34nm,0.3s						
KTBS	**Karatobe**	**1.52**	**290**	P	**Pb**	**15 15 22.5**	**+0.3**
	6.7nm,0.3s						
KTBS				S	**Sg**	**15 15 42.9**	**+0.2**
	34nm,0.3s						
KDJ	**Kajisay**	**1.54**	**225**	⇑*i*P	**Pb**	**15 15 22.6**	**+0.1**
	baz=26						
KDJ				⇑*i*S	**Sn**	**15 15 41.3**	**-0.2**
	baz=26						
MTBS	**Maitube**	**1.63**	**268**	*e*P	**Pg**	**15 15 25.1**	**-0.1**
	4.3nm,0.2s						
MTBS				*e*S	**Sg**	**15 15 47.1**	**+0.8**
	5.1nm,0.1s						
KUU	**Kurty**	**1.81**	**293**	*e*P	**Pb**	**15 15 27.3**	**+0.1**
	4.2nm,0.7s						
KUU				*e*S	**Sb**	**15 15 51.0**	**+1.1**
	11nm,0.4s						
KUU	**Kurty**	**1.81**	**293**	P	**Pb**	**15 15 27.2**	**+0.1**
	4.2nm,0.7s						
KUU				S	**Sb**	**15 15 51.1**	**+1.3**
	11nm,0.4s						
KST	**Kastek**	**1.98**	**266**	*e*P	**Pg**	**15 15 31.5**	**-0.3**
	3.4nm,0.3s						
KST				*e*S	**Sg**	**15 15 58.2**	**+0.8**
	14nm,1.1s						
KST	**Kastek**	**1.98**	**266**	Pg	**Pg**	**15 15 31.0**	**-0.8**
	42nm,2.4s						
KST				Lg	Lg	15 15 57.6	
	14nm,1.1s						
ULHL	**Ulahol**	**2.02**	**242**	⇑*i*P	**Pb**	**15 15 31.6**	**+0.8**
	baz=43						
ULHL				⇑*i*S	**Sb**	**15 15 57.4**	**+1.3**
	baz=43						
DGS	**Degeres**	**2.10**	**272**	*e*P	**Pb**	**15 15 32.9**	**+0.7**
	3.9nm,0.3s						
DGS				*e*S	**Sg**	**15 16 00.8**	**-0.8**
	17nm,0.5s						
DGS	**Degeres**	**2.10**	**272**	Pg	**Pb**	**15 15 32.6**	**+0.5**
	2.9nm,0.3s						
DGS				Lg	Lg	15 16 00.4	
	17nm,0.5s						
BOOM	**Boomskoye usch**	**2.12**	**251**	⇑*i*P	**Pg**	**15 15

MAT				*e*S	**S**	**15 19 00.3**	**-3.8**	
JSD	**Sado**	**6.32**	**360**	Pn	**Pn**	**15 18 16.4**	**+0.5**	
JMM	**Marumori**	**6.49**	**18**	Pn	**Pn**	**15 18 17.2**	**-0.5**	
ASAJ	**Asahikawa**	**12.85**	**14**	P	**Pn**	**15 19 33.6**	**+1.9**	
	0.3nm,0.3s,baz=214,slow=12,SNR=5.6							
KNRA	**Kununurra**	**47.99**	**192**	P	**P**	**15 24 41.2**	**-1.6**	
KNRA				IAmb	IAmb	15 25 03.9		
	comp=Z,44nm,1.4s							
FITZ	**Fitzroy Crossi**	**50.98**	**196**	P	**P**	**15 25 03.5**	**-1.6**	
FITZ				IAmb	IAmb	15 25 09.8		
	comp=Z,12nm,1.4s							
WB0	**Warramunga Arr**	**51.31**	**185**	P	**P**	**15 25 06.5**	**-1.1**	
WRAB	**Tennant Creek**	**51.48**	**185**	P	**P**	**15 25 07.8**	**-1.0**	
WRAB				IAmb	IAmb	15 25 31.4		
	comp=Z,5.4nm,1.3s							
WB2	**Warramunga Arr**	**51.49**	**185**	P	**P**	**15 25 07.9**	**-1.0**	
WB2				IAmb	IAmb	15 25 34.7		
	comp=Z,7.4nm,1.4s							
WRA	**Warramunga Arr**	**51.49**	**185**	P	**P**	**15 25 08.0**	**-0.9**	
	comp=Z,0.3nm,0.3s,baz=0.0,slow=7.7,SNR=21							
WRA	**Warramunga Arr**	**51.49**	**185**	IAmb	IAmb	15 25 08.4		
	comp=Z,0.2nm,1.4s							
WR0	**Warramunga Arr**	**51.49**	**185**	P	**P**	**15 25 07.9**	**-0.9**	
BVAR	**Borovoye Array**	**52.38**	**315**	P	**P**	**15 25 15.2**	**+0.2**	
	comp=Z,0.5nm,0.4s,baz=114,slow=9.9,SNR=5.6							
ASAR	**Alice Springs**	**55.22**	**185**	P	**P**	**15 25 34.9**	**-0.7**	
	comp=Z,0.2nm,0.4s,baz=25,slow=11,SNR=11							
FORT	**Forrest**	**62.89**	**190**	P	**P**	**15 26 26.8**	**-0.7**	
FORT				IAmb	IAmb	15 26 28.5		
	comp=Z,15nm,0.9s							
ARB2	**ARCESS Array S**	**68.07**	**340**	P	**P**	**15 27 01.5**	**+1.7**	
ARC6	**ARCESS Array S**	**68.08**	**340**	P	**P**	**15 27 01.9**	**+2.0**	
FINES	**FINESS Array B**	**72.31**	**332**	P	**P**	**15 27 26.2**	**+0.8**	
	comp=Z,3.1nm,0.9s,baz=63,slow=4.7,SNR=5.6							
AKASG	**Malin Array Be**	**76.91**	**322**	P	**P**	**15 27 51.8**	**+0.1**	
	comp=Z,0.6nm,0.4s,baz=56,slow=4.2,SNR=3.0							

MOS ***25*** *15:19:06.6±1.0,30.˙15N×101.˙74E,h9km,mb5.7/97, MS5.4/79,Error ellipse: s-maj=4.9km s-min=3.3km az=121.0*

IDC ***25*** *15:19:07.6±0.3,30.˙20N×101.˙79E,h0km,mb5.0/67, mb1 5.1/68,mb1mx5.0/73,mbtmp5.0/68,ML4.9/1,MS5.3/33, Ms1 5.3/33,ms1mx5.1/49,Error ellipse: s-maj=9.1km s-min=7.1km az=40.0*

NEIC ***25*** *15:19:08.1±1.2,30.˙19N±0.˙04×101.˙76E±0.˙07,h9km±1km, mb5.5/293,Ms_20 5.6/685,Mwb5.6/33,Mwc5.8(GCMT), Error ellipse: s-maj=10.3km s-min=6.8km az=71.0*

BJI ***25*** *15:19:09.6±0.0,30.˙20N×101.˙75E,h16km,mB5.8/48, mb5.4/57,ML5.8/25,Ms5.9/79,Ms7 5.8/76*

NEIC ***25*** *15:19:09,30.˙22N×101.˙78E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.01; Mθθ2.72; Mφφ-2.73; Mrθ0.34; Mθφ-1.87; Mφr0.40; Fault plane solution: M₀3.35000×10¹⁷ NP1:φs242.47000°, δ86.78000°,λ-171.69000°. NP2:φs152.00000°, δ81.71000°,λ-3.25000°. Principal axes: T 3.3152, Plg4.0000°, Azm17.0000°; N 0.0621, Plg81.0000°, Azm263.0000°; P -3.3773, Plg8.0000°, Azm107.0000°;*

BGR ***25*** *15:19:11.0±0.0,29.˙48N×101.˙25E,h23km,mb5.8,Ms5.6*

GCMT ***25*** *15:19:12.1±0.1,30.˙16N±0.˙01×101.˙81E±0.˙01,h26km, MW5.7/156,Moment Tensor Solution. s125,c224; s156,c315; Duration: 1ˢ8 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.24±.05; Mθθ4.67±.05; Mφφ-4.44±.05; Mrθ-0.13±.11; Mθφ-2.18±.04; Mφr0.04±.10; Best double couple: M₀5.05200×10¹⁷ NP1:φs238.00000°,δ89.00000°, λ179.00000°. NP2:φs328.00000°,δ89.00000°,λ1.00000°. Principal axes: T 5.1680, Plg1.0000°, Azm193.0000°; N -0.2420, Plg89.0000°, Azm6.0000°; P -4.9350, Plg0.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***25*** *15:19:13,30.˙14N×101.˙83E,h26km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.26; Mθθ4.93; Mφφ-4.66; Mrθ0.07; Mθφ-2.44; Mφr0.66; Fault plane solution: M₀5.43000×10¹⁷ NP1:φs239.00000°, δ84.00000°,λ-175.00000°. NP2:φs148.00000°, δ85.00000°,λ-6.00000°. Principal axes: T 5.5145, Plg1.0000°, Azm194.0000°; N -0.1820, Plg83.0000°, Azm290.0000°; P -5.3325, Plg7.0000°, Azm103.0000°;*

ISC 25 15:19:08.5±0.4,30.˙17N±0.˙02×101.˙78E±0.˙02,h6km±2km, h7km:pP-P,n1384,σ1s84/1241,mb5.5/366,MS5.6/454, 48C-30D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.86**	**66**	↓*i*Pg		**Pb**	**15 19 43.3**	**+0.5**
CD2				Sg		**Sg**	**15 20 09.0**	**+0.8**
CD2				smax	smax			
	comp=N,193μm,0.7s							
CD2				smax	smax			
	comp=E,194μm,1.0s							
KMI	**Kunming**	**5.10**	**170**	↑*i*Pn		**Pn**	**15 20 29.0**	**+3.4**
KMI				Sn		**Sb**	**15 21 34.5**	**-5.3**
KMI				Sg		**Sg**	**15 21 51.5**	**-0.7**
KMI				smax	smax			
	comp=N,4μm,1.3s							
KMI				smax	smax			
	comp=E,4μm,1.0s							
KMI				LR	LR			
	comp=N,105μm,10.2s							
KMI				LR	LR			
	comp=E,65μm,6.5s							
KMI	**Kunming**	**5.10**	**170**	P		**Pn**	**15 20 26.2**	**+0.6**
KMI	**Kunming**	**5.10**	**170**			**Pn**	**15 20 26.2**	**+0.6**
GYA	**Guiyang**	**5.67**	**129**	↓Pn		**Pn**	**15 20 35.0**	**+1.6**
GYA				Sn		**Sn**	**15 21 41.5**	**+2.6**
GYA				Sg		**Sg**	**15 22 15.5**	**+4.8**
GYA				smax	smax			
	comp=N,6μm,1.3s							
GYA				smax	smax			
	comp=E,4μm,1.3s							
GYA				LR	LR			
	comp=E,55μm,6.9s							
GYA				LR	LR			
	comp=Z,37μm,8.3s							
LKP	**Lekhapani**	**5.93**	**243**	↑*e*P		**Pn**	**15 20 39.2**	**+2.5**
LKP				IAmb	IAmb	15 21 02.1		
	comp=Z,2μm,1.1s							
LZH	**Lanzhou**	**6.15**	**16**	*e*Pn		**Pn**	**15 20 42.5**	**+2.5**
LZH				Pg		**Pg**	**15 21 02.0**	**-4.3**
LZH				Sn		**Sn**	**15 21 57.5**	**+6.8**
LZH				Sg		**Sg**	**15 22 21.5**	**-4.5**
LZH				smax	smax			
	comp=Z,4μm,1.4s							
LZH				smax	smax			
	comp=Z,5μm,1.4s							
LZH				LR	LR			
	comp=Z,66μm,5.2s							
LZH				LR	LR			
	comp=Z,73μm,9.5s							
DIBR	**DIBRUGARH**	**6.60**	**248**	*e*P		**Pn**	**15 20 48.8**	**+2.7**
DIBR				IAmb	IAmb	15 21 12.1		
	comp=Z,959nm,0.8s							
ENH	**Enshi**	**6.67**	**87**	Pn		**Pn**	**15 20 47.3**	**+0.3**
XAN	**Xi'an**	**7.18**	**56**	Pn		**Pn**	**15 20 54.5**	**+0.5**
XAN				Sn		**Sn**	**15 22 20.5**	**+4.6**
XAN				Sg		**Sg**	**15 22 53.5**	**-5.5**
XAN				smax	smax			
	comp=Z,10μm,1.0s							
XAN				smax	smax			
	comp=Z,12μm,1.0s							
XAN				LR	LR			
	comp=Z,47μm,8.3s							
XAN				LR	LR			
	comp=Z,34μm,8.3s							
XAN				LR	LR			
	comp=Z,31μm,5.9s							
XAN	**Xi'an**	**7.18**	**56**	P		**Pn**	**15 20 54.1**	**+0.1**
XAN	**Xi'an**	**7.18**	**56**	Pn		**Pn**	**15 20 54.1**	**+0.1**
ZIRO	**ZIRO**	**7.44**	**251**	*e*P		**Pn**	**15 20 59.0**	**+1.3**
ZIRO				IAmb	IAmb	15 21 18.8		
	comp=Z,415nm,1.0s							
MOKO	**MOKOCHONG**	**7.47**	**241**	*e*P		**Pn**	**15 20 60.0**	**+1.9**
MOKO				IAmb	IAmb	15 21 16.5		
	comp=Z,374nm,0.8s							
KOHI	**KOHIMA**	**8.10**	**239**	*e*P		**Pn**	**15 21 06.2**	**-0.6**
KOHI				IAmb	IAmb	15 21 24.7		
	comp=Z,350nm,1.0s							
TEZP	**TEZPUR**	**8.67**	**248**	↑*e*P		**Pn**	**15 21 15.1**	**+0.7**
TEZP				IAmb	IAmb	15 21 30.8		
	comp=Z,173nm,0.9s							
SLVN	**Son La**	**9.00**	**167**	Pn		**Pn**	**15 21 19.2**	**+0.1**
LSA	**Lhasa**	**9.24**	**270**	P		**Pn**	**15 21 24.0**	**+1.4**
LSA				pP			15 21 27.5	
LSA				S		**Sn**	**15 23 10.8**	**+3.6**
LSA				pmax	pmax			
	comp=Z,360nm,1.1s							
LSA				LR	LR			
	comp=Z,108μm,10.0s							
LSA				LR	LR			
	comp=Z,122μm,7.1s							
LSA				LR	LR			
	comp=Z,74μm,7.1s							
LSA	**Lhasa**	**9.24**	**270**	P		**Pn**	**15 21 22.2**	**-0.4**
LSA	**Lhasa**	**9.24**	**270**	Pn		**Pn**	**15 21 22.2**	**-0.4**
GTA	**Gaotai**	**9.36**	**351**	↑P		**Pn**	**15 21 24.3**	**+0.3**
GTA				pP			15 21 28.8	
GTA				sP			15 21 31.3	
GTA				S		**Sn**	**15 23 13.8**	**+4.1**
GTA				sS			15 23 19.5	
GTA				pmax	pmax			
	comp=Z,660nm,7.5s							
GTA				LR	LR			
	comp=Z,28μm,13.1s							
GTA				LR	LR			
	comp=Z,21μm,9.8s							
SILR	**SILCHAR**	**9.61**	**238**	*e*P		**Pn**	**15 21 28.2**	**+0.9**
GUWA	**GUWAHATI**	**9.74**	**248**	*e*P		**Pn**	**15 21 31.7**	**+2.5**
GUWA				*e*S		**Sn**	**15 23 13.6**	**-5.3**
SHL	**Shillong**	**9.88**	**245**	*e*P		**Pn**	**15 21 30.7**	**-0.6**
SHL				IAmb	IAmb	15 21 53.5		
	comp=Z,152nm,0.9s							
SHL				*e*S		**Sn**	**15 23 18.9**	**-3.8**
SHL	**Shillong**	**9.88**	**245**	P		**Pn**	**15 21 31.6**	**+0.3**
	SNR=43							
SHL	**Shillong**	**9.88**	**245**	P		**Pn**	**15 21 30.1**	**-1.2**
SHL	**Shillong**	**9.88**	**245**	Pn		**Pn**	**15 21 30.1**	**-1.2**
WHN	**Wuhan**	**10.86**	**85**	↓P		**Pn**	**15 21 45.0**	**+0.5**
WHN				LR	LR			
	comp=Z,152μm,9.1s							
PAYA	**Payao**	**10.90**	**190**	P		**Pn**	**15 21 49.1**	**+4.1**
	comp=Z,16μmcomp=Z,2μm,0.9s							
SAIH	**SAIHA**	**10.98**	**228**	↑*e*P		**Pn**	**15 21 46.3**	**0.0**
SAIH				IAmb	IAmb	15 21 56.8		
	comp=Z,112nm,0.9s							
CM34	**Chiang Mai Arr**	**11.52**	**193**	P		**Pn**	**15 21 57.0**	**+3.5**
BELO	**BELONIA**	**11.52**	**236**	*e*P		**Pn**	**15 21 57.5**	**+4.0**
CM33	**Chiang Mai Arr**	**11.59**	**193**	P		**Pn**	**15 21 58.0**	**+3.5**
CHTO	**Chiang Mai**	**11.60**	**193**	P		**Pn**	**15 21 58.7**	**+4.1**
CHTO				P		**Pn**	**15 21 58.7**	**+4.1**
CHTO	**Chiang Mai**	**11.60**	**193**	P		**Pn**	**15 21 56.1**	**+1.5**
CHTO	**Chiang Mai**	**11.60**	**193**	Pn		**Pn**	**15 21 56.1**	**+1.5**
CMMT	**Chiang Mai**	**11.60**	**193**	P		**Pn**	**15 21 58.5**	**+3.9**
	comp=Z,2μmcomp=Z,46nm,1.0s							
TIY	**Taiyuan**	**11.61**	**47**	*e*P		**Pn**	**15 21 54.5**	**-0.2**
TIY				PP		**PnPn**	**15 22 06.3**	**+3.8**
TIY				S		**Sn**	**15 24 08.0**	**+3.3**
TIY				SS		**SnSn**	**15 24 22.8**	**+6.1**
TIY				pmax	pmax			
	comp=Z,130nm,0.7s							
TIY				LR	LR			
	comp=Z,59μm,9.3s							
TIY				LR	LR			
	comp=Z,41μm,9.1s							
TIY				LR	LR			
	comp=Z,23μm,11.5s							
CM35	**Chiang Mai Arr**	**11.69**	**192**	P		**Pn**	**15 21 59.0**	**+3.2**
LAMP	**Lampang**	**11.76**	**190**	P		Pn	15 22 02.1	+5.3
	comp=Z,2μmcomp=Z,130nm,0.8s							
CM32	**Chiang Mai Arr**	**11.77**	**194**	P		**Pn**	**15 22 01.0**	**+4.0**
CM36	**Chiang Mai Arr**	**11.85**	**193**	P		**Pn**	**15 22 01.0**	**+2.9**
GTK	**Tadong**	**11.91**	**259**	*e*P		**Pn**	**15 21 58.8**	**-0.2**
GTK				IAmb	IAmb	15 22 10.8		
	comp=Z,146nm,0.8s							
GTK				*ex*	x	15 24 07.8		
CM31	**Chiang Mai Arr**	**11.94**	**193**	P		**Pn**	**15 22 03.5**	**+4.2**
	comp=Z,36μmcomp=Z,2μm,0.8s							
CM31	**Chiang Mai Arr**	**11.94**	**193**			**Pn**	**15 22 01.4**	**+2.1**
CMAR	**Chiang Mai Arr**	**11.94**	**193**	Pn		**Pn**	**15 22 03.1**	**+3.7**
	comp=Z,1.3nm,0.3s,baz=7.5,slow=12,SNR=130							
CMAR				Pg			15 22 49.0	
	comp=Z,0.5nm,0.3s,baz=7.5,slow=11,SNR=5.7							
CMAR				Lg	Lg		15 25 33.8	
	baz=11,slow=24,SNR=1.5							
CMAR	**Chiang Mai Arr**	**11.94**	**193**	*i* P		**Pn**	**15 22 03.0**	**+3.7**
CMAR				pmax	pmax			
	comp=Z,51nm,0.8s							
CMAR	**Chiang Mai Arr**	**11.94**	**193**			**Pn**	**15 22 01.3**	**+2.0**
CM09	**Chiang Mai Arr**	**11.95**	**193**	P		**Pn**	**15 22 03.0**	**+3.6**
	comp=Z,2μmcomp=Z,79nm,0.8s							
CM15	**Chiang Mai Arr**	**11.95**	**193**	P		**Pn**	**15 22 03.6**	**+4.2**
	comp=Z,2μmcomp=Z,75nm,0.8s							
CM02	**Chiang Mai Arr**	**11.96**	**193**	P		**Pn**	**15 22 03.6**	**+4.0**
	comp=Z,2μmcomp=Z,139nm,0.9s							
CM01	**Chiang Mai Arr**	**11.97**	**193**	P		**Pn**	**15 22 03.8**	**+4.0**
	comp=Z,2μmcomp=Z,102nm,0.9s							
CM13	**Chiang Mai Arr**	**11.98**	**193**	P		**Pn**	**15 22 04.0**	**+4.1**
	comp=Z,1μmcomp=Z,91nm,0.9s							
CM04	**Chiang Mai Arr**	**11.99**	**193**	P		**Pn**	**15 22 04.1**	**+4.1**
	comp=Z,102nmcomp=Z,2μmcomp=Z,99nm,0.8s							
CM05	**Chiang Mai Arr**	**12.00**	**193**	P		**Pn**	**15 22 03.0**	**+2.9**
	comp=Z,1μmcomp=Z,67nm,0.8s							
NONG	**Nongkai**	**12.12**	**174**	P		**Pn**	**15 22 04.8**	**+3.2**
	comp=Z,9μmcomp=Z,309nm,1.0s							
BTO	**Baotou**	**12.39**	**31**	*e*P		**Pn**	**15 22 02.5**	**-2.9**
BTO				S		Sn	15 25 01.3	+38
UTTA	**Uttaradit**	**12.42**	**185**	P		Pn	15 22 11.7	+5.9
	comp=Z,1μmcomp=Z,101nm,0.7s							
MHMT	**Maesarieng**	**12.44**	**197**	P		**Pn**	**15 22 10.0**	**+3.9**
	comp=Z,5μmcomp=Z,126nm,0.9s							
GZH	**Guangzhou**	**12.51**	**122**	P		**Pn**	**15 22 04.5**	**-2.6**
GZH				S		**Sn**	**15 24 24.0**	**-2.8**
GZH				LR	LR			
	comp=Z,29μm,8.0s							
GZH				LR	LR			
	comp=Z,25μm,6.8s							
TAPN	**Taplejung**	**12.66**	**261**	*e*P		**Pn**	**15 22 09.3**	**-0.1**
	comp=Z,461nm,0.9s							
SUKH	**Sukhothai**	**12.78**	**189**	P		**Pn**	**15 22 15.0**	**+4.2**
	comp=Z,91nm,0.9s							
PHIT	**Phitsanulok**	**12.98**	**186**	P		Pn	15 22 19.0	+5.5
	comp=Z,4μmcomp=Z,309nm,0.8s							
ODAN	**Odare**	**13.08**	**259**	*e*P		**Pn**	**15 22 13.7**	**-1.3**
	comp=Z,252nm,0.8s							
MCO	**Taipa Grande**	**13.26**	**124**	P		**Pn**	**15 22 17.0**	**-0.3**
QIZ	**Qiongzhong**	**13.29**	**145**	P		**Pn**	**15 22 17.5**	**-0.2**
QIZ				S		**Sn**	**15 24 46.0**	**+0.2**
QIZ				pmax	pmax			
	comp=Z,50nm,0.9s							
QIZ				pmax	pmax			
	comp=Z,390nm,5.1s							
QIZ				LR	LR			
	comp=Z,44μm,9.1s							
QIZ				LR	LR			
	comp=Z,22μm,10.0s							
QIZ	**Qiongzhong**	**13.29**	**145**	Pn		**Pn**	**15 22 16.6**	**-1.1**
HHC	**Hu-ho-hao-te**	**13.29**	**34**	*e*P		**Pn**	**15 22 17.5**	**-0.3**
HHC				PP		**P**	**15 22 28.3**	**+0.6**
HHC				S		**Sn**	**15 24 46.3**	**+0.3**
HHC				pmax	pmax			
	comp=Z,39nm,1.3s							
HHC				pmax	pmax			
	comp=Z,1μm,6.8s							
HHC				LR	LR			
	comp=Z,57μm,12.0s							
HHC				LR	LR			
	comp=Z,35μm,9.2s							
HKPS	**Hong Kong Po S**	**13.59**	**122**	Pn		**Pn**	**15 22 20.4**	**-1.3**
RAMN	**Ramite**	**13.72**	**260**	*e*P		**Pn**	**15 22 22.4**	**-1.4**
	comp=Z,188nm,0.7s							
KHON	**Khonkaen**	**13.80**	**176**	P		**Pn**	**15 22 27.8**	**+3.1**
	comp=Z,4μmcomp=Z,643nm,0.9s							
GUN	**Gumba**	**14.09**	**265**	*e*P		**Pn**	**15 22 27.2**	**-1.8**
	comp=Z,246nm,0.7s							
TIA	**Tai'an**	**14.18**	**61**	P		**Pn**	**15 22 31.0**	**+1.1**
TIA				pmax	pmax			
	comp=Z,640nm,2.4s							
TIA				LR	LR			
	comp=Z,23μm,8.5s							
TIA				LR	LR			
	comp=Z,29μm,9.3s							
CHAI	**Chaiyaphum**	**14.20**	**179**	P		**Pn**	**15 22 33.1**	**+2.9**
	comp=Z,2μmcomp=Z,247nm,0.8s							
PKI	**Pulchoki**	**14.58**	**264**	*e*P		**Pn**	**15 22 33.4**	**-2.2**
	comp=Z,257nm,0.9s							
PKIN	**Phulchoki**	**14.59**	**264**	*e*P		**Pn**	**15 22 33.4**	**-2.3**
	comp=Z,154nm,0.6s							
KKN	**Kakani**	**14.64**	**265**	*e*P		**Pn**	**15 22 33.8**	**-2.5**
	comp=Z,142nm,0.7s							
UTHA	**Uthaitani**	**14.70**	**189**	P		**P**	**15 22 40.4**	**-2.9**
	comp=Z,2μmcomp=Z,216nm,1.0s							
NJ2	**Nanjing**	**14.75**	**78**	↓P		**Pn**	**15 22 36.3**	**-1.3**
NJ2				pP		**P**	**15 22 42.3**	**-1.4**
NJ2				sP			15 22 45.3	
NJ2				S		**Sn**	**15 25 18.0**	**-3.3**
NJ2				SS		**S**	**15 25 38.8**	**-1.4**
NJ2				pmax	pmax			
	comp=Z,66nm,1.5s							
NJ2				pmax	pmax			
	comp=Z,1μm,3.5s							
NJ2				LR	LR			
	comp=Z,26μm,11.4s							
NJ2				LR	LR			
	comp=Z,21μm,11.8s							
DMN	**Daman**	**14.83**	**264**	*e*P		**Pn**	**15 22 36.5**	**-2.5**
	comp=Z,109nm,0.7s							
GKN	**Gorkha**	**15.15**	**266**	*e*P		**Pn**	**15 22 39.5**	**-3.6**
	comp=Z,639nm,0.8s							
BJT	**Baijiatuau**	**15.32**	**46**	P		**Pn**	**15 22 44.5**	**-0.7**
BJT				pmax	pmax			
	comp=Z,103nm,1.1s							
BJT	**Baijiatuau**	**15.32**	**46**	Pn		**Pn**	**15 22 44.5**	**-0.7**
BJI	**Beijing**	**15.34**	**46**	P		**Pn**	**15 22 45.5**	**+0.1**
BJI				S		**Sn**	**15 25 40.8**	**+5.3**
BJI				pmax	pmax			
	comp=Z,21nm,0.8s							
BJI				pmax	pmax			
	comp=Z,980nm,3.5s							
BOK	**Bokaro**	**15.52**	**250**	↑*e*P		**Pn**	**15 22 48.6**	**+0.7**
BOK				IAmb	IAmb	15 23 05.9		
	comp=Z,147nm,0.8s							
BOK				*ex*	x	15 25 30.8		
QZH	**Quanzhou**	**15.79**	**105**	↓*i*P		**Pn**	**15 22 49.5**	**-1.9**
QZH				S		**Sn**	**15 25 47.0**	**+0.3**
QZH				pmax	pmax			
	comp=Z,430nm,0.8s							
QZH				pmax	pmax			
	comp=Z,1μm,4.3s							
QZH				LR	LR			
	comp=Z,19μm,8.5s							
QZH				LR	LR			
	comp=Z,8μm,9.5s							
QZH				LR	LR			
	comp=Z,23μm,9.5s							
KNMB	**Chin-men Tao**	**15.81**	**107**	Pn		**Pn**	**15 22 50.9**	**-0.8**
DANN	**Dangsing**	**15.84**	**268**	*e*P		**Pn**	**15 22 48.1**	**-4.2**
	comp=Z,123nm,0.9s							
SRDT	**SRDT**	**15.93**	**189**	P		**P**	**15 22 59.8**	**+2.8**
	comp=Z,14μmcomp=Z,194nm,0.9s							
SRAK	**Srakaew**	**16.08**	**179**	P		**P**	**15 22 57.6**	**-1.1**
	comp=Z,17μmcomp=Z,2μm,0.8s							
KOLN	**Koldanda**	**16.09**	**266**	*e*P		**Pn**	**15 22 51.5**	**-4.0**
	comp=Z,420nm,0.9s							
PYUN	**Piuthan**	**16.55**	**268**	*e*P		**Pn**	**15 22 57.4**	**-4.0**
	comp=Z,992nm,1.1s							
SSE	**Sheshan**	**16.73**	**82**	P		**Pn**	**15 23 03.5**	**+0.1**
SSE				S		**Sn**	**15 26 12.3**	**+2.8**
SSE				pmax	pmax			
	comp=Z,28nm,0.9s							
SSE				pmax	pmax			
	comp=Z,650nm,4.6s							
SSE				LR	LR			
	comp=Z,2μm,11.3s							
SSE				LR	LR			
	comp=Z,10μm,15.5s							
SSE	**Sheshan**	**16.73**	**82**	P		**P**	**15 23 05.0**	**-0.8**
SSE				IAmb	IAmb	15 23 10.2		
	comp=Z,268nm,0.9s							
PATY	**Pattaya**	**17.18**	**183**	P		**P**	**15 23 12.0**	**+1.2**
	comp=Z,2μmcomp=Z,212nm,0.9s							
PHET	**Kaeng Krachan**	**17.29**	**187**	P		**P**	**15 23 13.3**	**+1.3**
	comp=Z,2μmcomp=Z,259nm,1.0s							
WMQ	**Urumqi**	**17.64**	**324**	*e*P		**P**	**15 23 16.0**	**+0.2**
WMQ				PP		**PnPn**	**15 23 30.3**	**+5.1**
WMQ				S		**Sn**	**15 26 35.0**	**+3.5**
WMQ				sS		S	15 26 38.8	-0.5
WMQ				SS		**SnSn**	**15 26 53.3**	**+8.3**
WMQ				PcP		**PcP**	**15 27 59.0**	**+5.2**
WMQ				pmax	pmax			
	comp=Z,84nm,1.3s							
WMQ				pmax	pmax			
	comp=Z,1μm,3.7s							
WMQ				LR	LR			
	comp=Z,40μm,12.1s							
WMQ				LR	LR			
	comp=Z,21μm,20.1s							
WMQ	**Urumqi**	**17.64**	**324**	P		**Pn**	**15 23 13.5**	**-1.3**
WMQ				pmax	pmax			
	comp=Z,89nm,1.0s							
WMQ	**Urumqi**	**17.64**	**324**			**Pn**	**15 23 13.5**	**-1.3**
SONM	**Songino Array**	**18.00**	**10**	P		**P**	**15 23 19.9**	**+0.1**
	comp=Z,4.2nm,0.3s,baz=192,slow=11,SNR=454							
SONM				LR	LR	15 31 23.7		
	comp=Z,13μm,20.3s,baz=188,slow=41							
SONM	**Songino Array**	**18.00**	**10**	P		**Pn**	**15 23 18.9**	**-0.3**
ULN	**Ulaanbaatar**	**18.13**	**11**	P		**P**	**15 23 21.7**	**+0.3**
ULN				P		**P**	**15 23 21.7**	**+0.3**
ULN				S		**S**	**15 26 53.8**	**+4.4**
ULN				S		**S**	**15 26 53.8**	**+4.4**
ULN	**Ulaanbaatar**	**18.13**	**11**	*ce*P		**P**	**15 23 21.3**	**0.0**
ULN				pmax	pmax			
	comp=Z,678nm,1.7s							
ULN	**Ulaanbaatar**	**18.13**	**11**			**Pn**	**15 23 20.8**	**-0.2**
ULN				IAmb	IAmb	15 23 25.1		
	comp=Z,403nm,1.1s							
TPUB	**Ta-pu**	**18.16**	**108**	P		**Pn**	**15 23 20.7**	**-0.6**
TPUB				IAmb	IAmb	15 23 38.6		
	comp=Z,402nm,0.9s							
TATO	**Taipei**	**18.21**	**102**	P		**P**	**15 23 22.9**	**+0.7**
TATO				P		**P**	**15 23 22.9**	**+0.7**
TATO	**Taipei**	**18.21**	**102**			**Pn**	**15 23 21.1**	**-0.9**
TATO				IAmb	IAmb	15 23 29.1		
	comp=Z,431nm,1.1s							
SSLB	**Suanglung**	**18.22**	**106**			**Pn**	**15 23 21.2**	**-0.9**
YHNB	**Yeheng**	**18.23**	**103**	P		**Pn**	**15 23 21.8**	**-0.5**
YHNB				IAmb	IAmb	15 23 28.3

PBA IAmb IAmb 15 24 00.0
comp=Z,312nm,0.9s
DDI Dehra Dun 20.50 276 *e*P **P 15 23 46.8 -0.4**
DDI IAmb IAmb 15 23 53.7
comp=Z,213nm,0.9s
DDI *ex* x 15 27 28.0
SUJ Sinuiju 21.00 56 P **P 15 23 54.0 +1.4**
SUJ S **S 15 27 49.1 +2.3**
SNY Shenyang 21.06 51 ⇑P **P 15 23 57.8 +4.6**
SNY S **S 15 27 46.0 -1.9**
SNY pmax pmax
comp=Z,26nm,0.8s
SNY LR LR
comp=Z,8μm,9.6s
SNY LR LR
comp=Z,7μm,14.6s
SNY LR LR
comp=Z,12μm,13.2s
SMLA Simla 21.19 279 *e*P **P 15 23 54.1 -0.6**
SMLA IAmb IAmb 15 23 57.1
comp=Z,363nm,1.1s
HJU Haeju 21.29 62 P **P 15 23 57.0 +1.4**
SURT Suratani 21.29 188 P **P 15 24 01.6 +5.8**
comp=Z,116nmcomp=Z,15nm,1.1s
NDI New Delhi 21.44 272 *e*P **P 15 23 56.0 -1.4**
NDI *ex* x 15 27 43.0
MOY Mondy 21.49 359 *e*P **P 15 23 58.4 +0.6**
MOY pmax pmax
comp=Z,547nm,2.1s
TLY Talaya 21.54 3 P **P 15 24 00.7 +2.5**
comp=Z,79nm,1.0s,baz=186,slow=8.5,SNR=27
TLY S **S 15 27 56.5 -0.7**
comp=Z,1.8nm,0.3s,baz=13,slow=8.4,SNR=1.5
TLY LR LR 15 33 35.3
comp=Z,8μm,20.3s,baz=174,slow=40
PYAG Pyongyang 21.58 59 P **P 15 24 01.2 +2.4**
PYAG S **S 15 28 00.2 +1.9**
ZSN Zaisan 21.64 328 *i* P **P 15 23 58.8 -0.5**
comp=Z,202nm,1.8s,baz=327
ZSN *e*S **S 15 27 58.9 -0.3**
baz=327
ZSN LR LR 15 32 17.0
comp=Z,2μm,8.5s,baz=327
ZSN Zaisan 21.64 328 *i* P **P 15 23 58.8 -0.5**
ZSN *e*S **S 15 27 58.9 -0.3**
ZSN pmax pmax
comp=Z,202nm,1.8s
ZSN MLR MLR
comp=Z,2μm,9.0s
PYS Pyongsong 21.71 59 P **P 15 24 03.1 +2.9**
BHK Bhakra 21.82 280 *e*P **P 15 24 03.0 +1.6**
BHK *ex* x 15 24 47.8
INCN Inchon 21.86 64 P **P 15 24 02.1 +0.2**
INCN P **P 15 24 02.1 +0.2**
INCN S **S 15 28 05.8 +2.0**
INCN S **S 15 28 05.8 +2.0**
INCN Inchon 21.86 64 P **P 15 24 00.3 -1.5**
INCN pmax pmax
comp=Z,162nm,1.0s
INCN MLR MLR
comp=Z,16μm,20.0s
INCN Inchon 21.86 64 P **P 15 24 00.3 -1.5**
INCN IAmb IAmb 15 24 14.3
comp=Z,162nm,1.0s
DHRM DHARAMSHALA 21.88 282 *e*P **P 15 24 01.9 -0.5**
DHRM IAmb IAmb 15 24 10.4
comp=Z,328nm,0.9s
DHRM *e*S **S 15 27 59.7 -5.0**
IRK Irkutsk 22.13 4 *e*P **P 15 24 05.8 +1.2**
IRK pmax pmax
comp=Z,1μm,1.9s
TJN Taejon 22.23 67 *ce*P **P 15 24 05.9 +0.1**
TRTT Trang 22.30 185 P **P 15 24 10.2 +3.5**
comp=Z,4μmcomp=Z,125nm,1.1s
PKDT Phuket 22.40 189 P **P 15 24 09.8 +2.1**
MK31 Makanchi Array 22.45 323 *ce*P **P 15 24 07.4 -0.7**
MK31 Makanchi Array 22.45 323 P **P 15 24 06.3 -1.9**
MK31 IAmb IAmb 15 24 16.3
comp=Z,236nm,1.4s
MKAR Makanchi Array 22.45 323 P **P 15 24 07.1 -1.0**
comp=Z,44nm,0.9s,baz=132,slow=12,SNR=130
MKAR LR LR 15 33 11.8
comp=Z,9μm,19.2s,baz=124,slow=38
MKAR P3KPbc 15 57 54.5
comp=Z,0.8nm,0.8s,baz=319,slow=3.5,SNR=4.7
MKAR Makanchi Array 22.45 323 P **P 15 24 06.5 -1.7**
PVM Polavaram 22.45 240 *e*P **P 15 24 07.3 -1.0**
PVM IVmBBB 15 24 25.3
comp=Z,425nm,1.1s
PVM IVMs_BB IVMs_BB 15 33 01.0
comp=Z,2μm,10.5s
MAKZ Makanchi 22.62 323 P **P 15 24 07.9 -2.0**
MAKZ pmax pmax
comp=Z,223nm,1.1s
MAKZ MLR MLR
comp=Z,14μm,20.0s
MAKZ Makanchi 22.62 323 P **P 15 24 07.9 -2.0**
MAKZ IAmb IAmb 15 24 15.9
comp=Z,223nm,1.1s
SATY Saty 22.66 311 *e*P **P 15 24 11.7 +1.2**
comp=Z,51nm,1.1s,baz=311
SATY *e*S **S 15 28 20.4 +1.3**
baz=311
SATY Saty 22.66 311 *e*P **P 15 24 11.7 +1.2**
SATY *e*S **S 15 28 20.4 +1.3**
SATY pmax pmax
comp=Z,51nm,1.1s
KPKS Kokpek 22.67 312 *i* P **P 15 24 10.0 -0.6**
comp=Z,289nm,1.6s,baz=312
KPKS Kokpek 22.67 312 *i* P **P 15 24 09.9 -0.6**
KPKS pmax pmax
comp=Z,289nm,1.6s
BHPL Bhopal 22.80 258 *e*P **P 15 24 12.6 +0.6**
BHPL IAmb IAmb 15 24 19.5
comp=Z,203nm,0.9s
BHPL *e*S **S 15 28 14.2 -7.5**
KGE Kanggye 22.81 55 P **P 15 24 16.4 +4.4**
KS19 Wonju Array Si 22.82 64 P **P 15 24 11.3 -0.8**
KS19 IAmb IAmb 15 24 35.0
comp=Z,177nm,0.9s
KSRS Korea Array 22.86 65 P **P 15 24 12.7 +0.2**
comp=Z,119nm,0.8s,baz=255,slow=9.7,SNR=70
KSRS S **S 15 28 25.7 +3.3**
comp=Z,12nm,1.1s,baz=263,slow=18,SNR=4.2
KSRS LR LR 15 32 58.7
comp=Z,13μm,19.0s,baz=260,slow=36
KSH Kashi 23.08 301 ⇑*i*P **P 15 24 19.3 +4.4**
KSH S **S 15 28 29.8 +3.3**
KSH pmax pmax
comp=Z,190nm,1.1s
KSH pmax pmax
comp=Z,6μm,5.2s
KSH LR LR
comp=Z,9μm,9.2s
KSH LR LR
comp=Z,60μm,12.4s
KDJ Kajisay 23.09 308 P **P 15 24 14.4 -0.7**
KDJ pmax pmax
comp=Z,340nm,1.4s
KDJ Kajisay 23.09 308 P **P 15 24 14.4 -0.7**
KDJ IAmb IAmb 15 24 28.0
comp=Z,340nm,1.4s
CN2 Changchun 23.19 48 *e*P **P 15 24 17.3 +1.4**
CN2 pP sP 15 24 21.0 +0.7
CN2 *e*S **S 15 28 23.0 -5.0**
CN2 pmax pmax
comp=Z,70nm,1.2s
CN2 pmax pmax
comp=Z,2μm,5.1s
CN2 LR LR
comp=Z,19μm,19.0s
CN2 LR LR
comp=Z,11μm,19.0s
CN2 LR LR
comp=Z,12μm,18.0s
RPR Rampur 23.31 246 *e*P **P 15 24 16.4 -0.8**
RPR IVmBBB 15 24 23.4
comp=Z,478nm,2.8s
RPR IVMs_BB IVMs_BB 15 33 22.4
comp=Z,2μm,9.5s
HIA Hailar 23.44 31 P **P 15 24 18.0 -0.4**
HIA pmax pmax
comp=Z,249nm,1.4s
HIA MLR MLR
comp=Z,10μm,18.0s
HIA Hailar 23.44 31 P **P 15 24 18.0 -0.4**
HIA IAmb IAmb 15 24 21.8
comp=Z,249nm,1.4s
MYLAV Mylavaram 23.50 240 *e*P **P 15 24 19.5 +0.3**
MYLAV IVmB_BB 15 24 39.1
comp=Z,760nm,2.5s
MYLAV IVMs_BB IVMs_BB 15 33 29.2
comp=Z,2μm,22.2s
CIT Chita 23.51 18 *e*P **P 15 24 20.3 +1.3**
CIT *e* 15 24 48.7
CIT *e* 15 25 01.5
CIT pmax pmax
comp=Z,429nm,2.2s
MDOK Medeo 23.60 310 *e*P **P 15 24 20.9 +0.7**
baz=310
MDOK *e*S **S 15 28 36.2 +1.2**
baz=310
MDOK Medeo 23.60 310 *e*P **P 15 24 20.9 +0.7**
MDOK *e*S **S 15 28 36.2 +1.2**
TDK Taldyqorghan 23.60 315 *e*P **P 15 24 19.1 -0.9**
comp=Z,1μm,2.5s,baz=315
TDK *e*S **S 15 28 34.3 -0.4**
baz=315
TDK Taldyqorghan 23.60 315 *e*P **P 15 24 19.1 -0.9**
TDK *e*S **S 15 28 34.3 -0.4**
TDK pmax pmax
comp=Z,1μm,2.5s
TNSS Tian-Shan 23.61 310 *e*P **P 15 24 21.4 +0.8**
baz=309
TNSS Tian-Shan 23.61 310 *e*P **P 15 24 21.4 +0.8**
KNDC Almaty 23.68 310 P **P 15 24 22.5 +1.7**
JTU Tsushima 23.70 72 P **P 15 24 20.3 -0.7**
JTU IAmb IAmb 15 24 26.0
comp=Z,109nm,0.9s
AAA Alma-Ata 23.71 310 *e*P **P 15 24 21.8 +0.7**
comp=Z,134nm,1.3s,baz=310
AAA *e*S **S 15 28 37.8 +1.1**
baz=310
AAA LR LR 15 33 24.3
comp=Z,4μm,11.5s,baz=310
AAA Alma-Ata 23.71 310 *e*P **P 15 24 21.8 +0.7**
AAA *e*S **S 15 28 37.7 +1.1**
AAA pmax pmax
comp=Z,134nm,1.3s
AAA MLR MLR
comp=Z,4μm,12.0s
TGY Tagaytay City 23.82 128 P **P 15 24 24.6 +2.2**
comp=Z,114nm,0.4s,baz=173,slow=8.4,SNR=4.8
CHKK Chushkaly 23.94 312 *e*P **P 15 24 22.4 -0.9**
baz=311
CHKK Chushkaly 23.94 312 *e*P **P 15 24 22.4 -0.9**
BOOM Boomskoye usch 24.08 308 P **P 15 24 24.1 -0.7**
BOOM pmax pmax
comp=Z,184nm,1.1s
BOOM MLR MLR
comp=Z,12μm,21.0s
BOOM Boomskoye usch 24.08 308 P **P 15 24 24.1 -0.7**
BOOM IAmb IAmb 15 24 50.5
comp=Z,184nm,1.1s
AJM Ajmer 24.15 268 ⇓*i*P **P 15 24 27.0 +1.6**
AJM *i* x x 15 28 45.0
KUU Kurty 24.38 311 *e*P **P 15 24 26.9 -0.6**
comp=Z,447nm,2.2s,baz=311
KUU *e*S **S 15 28 47.2 -0.1**
baz=311
KUU LR LR 15 33 57.4
comp=Z,4μm,10.0s,baz=311
KUU Kurty 24.38 311 *e*P **P 15 24 26.8 -0.6**
KUU *e*S **S 15 28 47.1 -0.1**
KUU pmax pmax
comp=Z,447nm,2.2s
KUU MLR MLR
comp=Z,4μm,10.0s
NIL Nilore 24.43 286 P **P 15 24 27.8 -0.2**
NIL Nilore 24.43 286 P **P 15 24 27.3 -0.7**
NIL pmax pmax
comp=Z,446nm,1.1s
NIL Nilore 24.43 286 P **P 15 24 27.3 -0.7**
CUPL Choutuppal 24.48 244 *e*P **P 15 24 29.2 +0.7**
CUPL IVmBBB 15 24 35.4
comp=Z,772nm,1.7s
CUPL IVMs_BB IVMs_BB 15 34 13.2
comp=Z,2μm,11.1s
ADKI Addanki 24.56 239 *e*P **P 15 24 30.1 +0.9**
ADKI IVmB_BB 15 24 35.1
comp=Z,1μm,2.8s
ADKI IVMsBB 15 35 35.2
comp=Z,2μm,8.4s
ADKI IVMs_BB IVMs_BB 15 35 35.6
comp=Z,2μm,9.0s
NJS Nagarjunasagar 24.62 242 *e*P **P 15 24 29.8 0.0**
NJS IVmBBB 15 24 36.8
comp=Z,704nm,1.5s
NJS IVMs_BB IVMs_BB 15 35 11.6
comp=Z,2μm,10.9s
JSU Suzuyama 24.63 80 P **P 15 24 28.8 -1.0**
JSU IAmb IAmb 15 24 48.2
comp=Z,174nm,0.9s
HYBB Hyderabad (bro 24.70 244 *e*P **P 15 24 30.7 +0.2**
HYBB IVmBBB 15 24 37.3
comp=Z,825nm,1.7s
HYBB IVMs_BB IVMs_BB 15 34 25.5
comp=Z,2μm,17.0s
HYB Hyderabad 24.70 244 *i* P **P 15 24 30.0 -0.5**
comp=Z,200nm,1.0s
HYB *e*S **S 15 29 02.0 +9.3**
KULM Kulim 24.77 183 P **P 15 24 30.5 -0.5**
KULM IAmb IAmb 15 24 38.8
comp=Z,143nm,1.5s
KULM Kulim 24.77 183 P **P 15 24 31.0 0.0**
KBK Karagaybulak 24.82 308 P **P 15 24 32.9 +1.3**
SNR=39
JNU Nakatsue 24.91 76 P **P 15 24 33.5 +1.2**
comp=Z,108nm,0.9s,baz=282,slow=6.2,SNR=11
JNU S **S 15 29 00.7 +4.6**
comp=Z,5.4nm,0.9s,baz=255,slow=20,SNR=1.1
JNU LR LR 15 34 19.1
comp=Z,10μm,19.2s,baz=274,slow=37
JNU Nakatsue 24.91 76 P **P 15 24 31.7 -0.6**
UCH Uchtor 24.97 306 P **P 15 24 35.0 +1.7**
SNR=16
CHMS Chumysh 25.08 308 P **P 15 24 31.0 -2.7**
SNR=9.9
FRU1 Bishkek 25.09 308 P **P 15 24 33.1 -0.8**
FRU1 pmax pmax
comp=Z,130nm,1.1s
FRU1 MLR MLR
comp=Z,10μm,20.0s
FRU1 Bishkek 25.09 308 P **P 15 24 33.1 -0.8**
FRU1 IAmb IAmb 15 24 42.7
comp=Z,130nm,1.1s
AAK Ala-Archa 25.12 307 P **P 15 24 34.7 +0.4**
comp=Z,69nm,1.2s,baz=113,slow=6.1,SNR=31
AAK S **S 15 29 02.0 +2.5**
comp=Z,6.9nm,0.9s,baz=104,slow=18,SNR=1.3
AAK Ala-Archa 25.12 307 *i* P **P 15 24 34.6 +0.4**
SNR=48
AAK Ala-Archa 25.12 307 P **P 15 24 35.2 +0.8**
AAK S **S 15 29 04.7 +5.2**
AAK Ala-Archa 25.12 307 *ce*P **P 15 24 35.1 +0.8**
AAK pmax pmax
comp=Z,275nm,1.2s
AAK Ala-Archa 25.12 307 IAmb IAmb 15 24 42.4
comp=Z,111nm,1.1s
LHMI Lhok Sumawe 25.22 191 P **P 15 24 33.7 -1.5**
LHMI IAmb IAmb 15 24 47.0
comp=Z,149nm,1.1s
SGDS Sogindy 25.33 309 *e*P **P 15 24 37.1 +1.0**
comp=Z,85nm,1.6s,baz=309
SGDS *e*S **S 15 29 04.1 +1.5**
baz=309
SGDS LR LR 15 34 19.6
comp=Z,905nm,10.0s,baz=309
SGDS Sogindy 25.33 309 *e*P **P 15 24 37.0 +1.0**
SGDS *e*S **S 15 29 04.1 +1.5**
SGDS pmax pmax
comp=Z,85nm,1.6s
SGDS MLR MLR
comp=Z,905nm,10.0s
USP Ospenovka 25.35 309 P **P 15 24 37.3 +1.1**
SNR=56
AML Almayashu 25.51 306 P **P 15 24 39.4 +1.3**
SNR=38
IPM Ipoh 25.56 182 P **P 15 24 36.0 -2.2**
IPM Ipoh 25.56 182 P **P 15 24 37.0 -1.2**
EKS2 Erkin-Say 25.63 307 P **P 15 24 39.8 +0.9**
SNR=28
SEM Semipalatinsk 25.88 327 *e*P **P 15 24 40.0 -1.2**
comp=Z,76nm,1.3s,baz=327
SEM LR LR 15 33 59.0
comp=Z,4μm,12.4s,baz=327
SEM Semipalatinsk 25.88 327 *e*P **P 15 24 39.9 -1.2**
SEM pmax pmax
comp=Z,76nm,1.3s
SEM MLR MLR
comp=Z,4μm,12.0s
KLRI Killari 25.89 248 *e*P **P 15 24 41.4 +0.1**
KLRI IVmBBB 15 24 51.7
comp=Z,610nm,1.1s
KLRI IVMs_BB IVMs_BB 15 35 10.2
comp=Z,3μm,8.1s
DRK Karamyk 26.21 299 P **P 15 24 42.3 -2.0**
MDJ Mudanjiang 26.23 49 P **P 15 24 44.5 +0.4**
MDJ S **S 15 29 18.5 +1.9**
MDJ sS sS 15 29 24.5 +2.6
MDJ pmax pmax
comp=Z,24nm,1.1s
MDJ pmax pmax
comp=Z,590nm,6.1s
MDJ LR LR
comp=Z,12μm,16.3s
MDJ LR LR
comp=Z,13μm,14.0s
MDJ Mudanjiang 26.23 49 P **P 15 24 43.1 -1.0**
MDJ IAmb IAmb 15 25 11.1
comp=Z,173nm,1.3s
MLSI Meulaboh, Aceh 26.26 192 P **P 15 24 48.0 +3.4**
comp=Z,5μmcomp=Z,102nm,0.7s
JMZ Minamidaito 2 26.32 92 P **P 15 24 44.6 -0.4**
JMZ IAmb IAmb 15 24 53.6
comp=Z,133nm,0.9s
BTLS Baital 26.35 312 *e*P **P 15 24 44.4 -0.9**
comp=Z,54nm,2.4s,baz=312
BTLS *e*S **S 15 29 18.2 -0.4**
baz=312
BTLS Baital 26.35 312 *e*P **P 15 24 44.3 -0.9**
BTLS *e*S **S 15 29 18.2 -0.4**
BTLS pmax pmax
comp=Z,54nm,2.4s
TSI Tuntungan 26.70 187 P **P 15 24 52.0 +3.5**
comp=Z,3μmcomp=Z,10μmcomp=Z,274nm,0.9s
ZAA0 Zalesovo Array 26.75 337 P **P 15 24 47.7 -1.0**
ZALV Zalesovo Beam 26.75 337 P **P 15 24 47.9 -0.8**
comp=Z,133nm,0.8s,baz=144,slow=9.2,SNR=322
ZALV LR LR 15 35 16.8
comp=Z,7μm,19.4s,baz=150,slow=36
ZALV Zalesovo Beam 26.75 337 P **P 15 24 47.6 -1.1**
JHS Saijyo 26.78 71 P **P 15 24 49.3 +0.1**
JHS IAMs_20 IAMs_20 15 35 24.6
comp=Z,16μm,20.0s
KURBB Kurchatov Arra 26.84 326 P **P 15 24 49.5 0.0**
comp=Z,27nm,0.8s,baz=131,slow=10.0,SNR=75
KURBB Kurchatov Arra 26.84 326 P **P 15 24 48.0 -1.5**
KURK Kurchatov 26.86 326 P **P 15 24 47.4 -2.2**
KURK Kurchatov 26.86 326 P **P 15 24 49.5 -0.2**
KURK Kurchatov 26.86 326 P **P 15 24 48.7 -0.9**
KURK IAmb IAmb 15 24 57.2
comp=Z,100nm,0.8s
BTK Batken 27.07 300 P **P 15 24 52.0 +0.2**
BTK pmax pmax
comp=Z,71nm,0.9s
BTK Batken 27.07 300 P **P 15 24 52.0 +0.2**
BTK IAmb IAmb 15 25 13.0
comp=Z,71nm,0.8s
URV Uravakonda 27.16 242 *e*P **P 15 24 54.0 +1.2**
URV IVmBBB 15 25 05.3
comp=Z,330nm,3.8s
URV IVMs_BB IVMs_BB 15 36 09.8
comp=Z,1μm,8.7s
VLA Vladivostok 27.23 53 *i* P **P 15 24 53.7 +0.5**
VLA pmax pmax
comp=Z,85nm,0.9s
VLA MLR MLR
comp=Z,5μm,15.0s
PSI Prapat 27.35 186 P **P 15 24 55.2 +0.6**
comp=Z,12nm,0.8s,baz=360,slow=7.3,SNR=13
DZA Taraz 27.41 306 *e*P **P 15 24 54.6 -0.3**
comp=Z,37nm,1.5s,baz=306
DZA *e*S **S 15 29 35.5 0.0**
baz=306
DZA LR LR 15 35 56.3
comp=Z,1μm,11.7s,baz=306
DZA Taraz 27.41 306 *e*P **P 15 24 54.5 -0.3**
DZA *e*S **S 15 29 35.4 0.0**
DZA pmax pmax
comp=Z,37nm,1.5s
DZA MLR MLR
comp=Z,1μm,12.0s
RPSI Rantau Prapat 27.46 186 P **P 15 24 54.9 -0.5**
KKM Kota Kinabalu 27.58 148 P **P 15 24 55.9 -0.6**
USA0B Ussuriysk Arra 27.66 51 *c i*P **P 15 24 57.2 +0.2**
USA0B Ussuriysk Arra 27.66 51 P **P 15 24 56.5 -0.5**
USRK Ussuriysk Ar. 27.66 51 P **P 15 24 57.8 +0.8**
comp=Z,30nm,0.9s,baz=261,slow=7.5,SNR=14
USRK LR LR 15 36 23.6
comp=Z,8μm,19.7s,baz=240,slow=38
USRK Ussuriysk Ar. 27.66 51 P **P 15 24 56.8 -0.2**
KBL Kabul 27.93 288 P **P 15 25 00.7 +0.9**
SNR=159
KBL P **P 15 25 00.7 +0.9**
SNR=159
KBL Kabul 27.93 288 P **P 15 24 58.2 -1.6**
KBL pmax pmax
comp=Z,360nm,1.4s
KBL Kabul 27.93 288 P **P 15 24 58.1 -1.6**
KK31 Karatay Array 28.05 306 *i* P **P 15 25 00.5 0.0**
KK31 Karatay Array 28.05 306 P **P 15 24 59.1 -1.4**
KKAR Karatay Array 28.05 306 P **P 15 24 59.7 -0.8**
KKAR pmax pmax
comp=Z,59nm,1.0s
KKAR Karatay Array 28.05 306 P **P 15 24 59.4 -1.0**
KKAR IAmb IAmb 15 25 18.7
comp=Z,59nm,1.0s
KKAR Karatay Array 28.05 306 P **P 15 24 59.7 -0.8**
IUG Iuzhnay 28.12 304 *e*P **P 15 25 01.0 -0.4**
baz=304
IUG *e*S **S 15 29 46.7 -0.1**
baz=304
IUG LR LR 15 35 57.9
comp=Z,2μm,14.5s,baz=304
IUG Iuzhnay 28.12 304 *e*P **P 15 25 00.9 -0.4**
IUG *e*S **S 15 29 46.7 -0.1**
IUG MLR MLR
comp=Z,2μm,14.0s
MYKOM Kota Tinggi 28.29 176 P **P 15 25 02.8 0.0**
MYKOM IAMs_20 IAMs_20 15 37 57.3
comp=Z,11μm,18.0s
BRLS Borolday 28.50 306 *e*P **P 15 25 04.3 -0.2**
baz=305
BRLS Borolday 28.50 306 *e*P **P 15 25 04.3 -0.2**
JWT Wachi 28.65 71 P **P 15 25 05.8 -0.2**
JWT IAmb IAmb 15 25 20.8
comp=Z,98nm,1.2s
BOD Bodaibo 28.91 14 *e*P **P 15 25 08.1 +0.1**
BOD pmax pmax
comp=Z,37nm,1.7s
GSI Gunungsitoli 28.98 189 P **P 15 25 11.0 +2.0**
comp=Z,83nm,0.9s
GSI Gunungsitoli 28.98 189 P **P 15 25 08.0 -1.0**
GSI IAmb IAmb 15 25 29.6
comp=Z,71nm,0.9s
SBUM Sibu 29.29 158 P **P 15 25 10.5 -1.2**
SBUM IAmb IAmb 15 25 17.3
comp=Z,60nm,0.7s
SBUM Sibu 29.29 158 P **P 15 25 13.0 +1.3**
MYLDM Lahad Datu 29.43 144 P **P 15 25 13.0 0.0**
BRZS Berezniki 29.50 320 *e*P **P 15 25 12.9 -0.4**
baz=320
BRZS Berezniki 29.50 320 *e*P **P 15 25 12.9 -0.4**
KLR Kul'dur 29.61 42 P **P 15 25 14.6 +0.3**
comp=Z,36nm,1.0s,baz=256,slow=9.5,SNR=56
KLR LR LR 15 36 46.0
comp=Z,6μm,18.8s,baz=238,slow=36
KLR Kul'dur 29.61 42 *ce*P **P 15 25 14.7 +0.4**
KLR pmax pmax
comp=Z,54nm,1.0s
KLR MLR MLR
comp=Z,8μm,10.0s
KSM Kuching 29.66 163 P **P 15 25 14.3 -0.7**
KSM Kuching 29.66 163 P **P 15 25 15.0 0.0**
BKNI Bangkinang 29.69 182 P **P 15 25 14.4 -0.8**
ZEA Zeya 29.92 31 *de*P **P 15 25 18.4 +1.4**

ZEA eS S 15 30 08.6 -6.0
ZEA pmax pmax
comp=N,200nm,4.8s
ZEA pmax pmax
comp=Z,200nm,6.9s
ZEA pmax pmax
comp=E,30nm,0.9s
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,50nm,1.0s
ZEA smax smax
comp=N,300nm,12.0s
ZEA MLR MLR
comp=N,7μm,11.0s
ZEA MLR MLR
comp=Z,6μm,11.0s
INU Inuyama 29.98 71 P P 15 25 16.4 -1.2
PALK Pallekele 30.17 225 P P 15 25 18.1 -1.5
PALK pmax pmax
comp=Z,58nm,1.5s
PALK MLR MLR
comp=Z,6μm,21.0s
PALK Pallekele 30.17 225 P P 15 25 18.1 -1.5
JGF Kuroka 30.25 70 P P 15 25 19.2 -1.0
SDSI Sungai Dareh 30.93 181 P P 15 25 28.3 +2.1
comp=Z,660nmcomp=Z,45nm,1.1s
MAJO Matsushiro 30.95 68 *i* P P 15 25 26.9 +0.6
MAT Matsushiro 30.95 68 P P 15 25 25.0 -1.3
MAT S S 15 30 30.4 -0.8
MJAR Matsushiro Arr 30.95 68 P P 15 25 27.3 +0.9
comp=Z,8.2nm,0.7s,baz=277,slow=9.5,SNR=11
MJAR PcP PcP 15 28 24.8 +2.2
comp=Z,7.1nm,0.8s,baz=267,slow=2.1,SNR=7.7
MJAR Matsushiro Arr 30.95 68 P P 15 25 25.6 -0.7
TEY Ternei 31.05 52‖ *e*P P 15 25 27.5 +0.4
TEY *e* 15 25 30.4
TEY eS S 15 30 35.3 +2.8
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=E,20nm,1.0s
TEY pmax pmax
comp=Z,40nm,1.2s
TEY MLR MLR
comp=E,11μm,11.0s
TEY MLR MLR
comp=N,10μm,10.0s
TEY MLR MLR
comp=Z,14μm,11.0s
JSD Sado 31.06 66 P P 15 25 24.7 -2.5
DAV Davao City (W) 32.05 131 LR LR 15 38 57.2
comp=Z,5μm,18.1s,baz=330,slow=37
BVAR Borovoye Array 32.33 324 P P 15 25 38.1 -0.1
comp=Z,1.9nm,0.5s,baz=105,slow=11,SNR=15
JHJ Hachijo jima 2 32.37 75 LR LR 15 38 51.2
comp=Z,8μm,19.4s,baz=284,slow=37
BRVK Borovoye 32.40 324 P P 15 25 40.8 +2.0
BRVK Borovoye 32.40 324*ce*P P 15 25 38.8 0.0
BRVK pmax pmax
comp=Z,86nm,1.7s
BRVK Borovoye 32.40 324 P P 15 25 36.9 -1.9
BRVK Borovoye 32.40 324 IAms_20 IAms_20 15 38 36.0
comp=Z,13μm,19.0s
PPBI Pangkal Pinang 32.42 172 P P 15 25 40.1 +0.8
comp=Z,6μmcomp=Z,50nm,1.1s
GRNR Gornyy 33.00 42‖ *i*P P 15 25 45.3 +1.2
GRNR eS S 15 31 07.0 +4.3
GRNR pmax pmax
comp=E,6.0nm,0.9s
GRNR pmax pmax
comp=Z,10.0nm,0.8s
GRNR smax smax
comp=N,2.0nm,0.9s
GRNR MLR MLR
comp=E,3μm,16.0s
GRNR MLR MLR
comp=N,5μm,10.0s
GRNR MLR MLR
comp=Z,3μm,19.0s
PMBI Palembang 33.03 175 IAMs_20 IAMs_20 15 38 38.2
comp=Z,10μm,19.0s
JMM Marumori 33.05 66 P P 15 25 43.3 -1.4
JMM IAMs_20 IAMs_20 15 39 04.2
comp=Z,9μm,18.0s
TPI Tanjungpandan 33.22 169 P P 15 25 57.1 +11
MTKI Muara Teweh, K 33.37 156 P P 15 25 48.6 +1.0
comp=Z,28nm,0.6s
HRA Herat 33.55 288 P P 15 25 47.9 -1.4
SMKI Samarinda 33.81 151 P P 15 25 53.3 +1.9
comp=Z,284nm,0.7s
LHSI Lahat 33.84 177 P P 15 25 53.8 +2.1
comp=Z,2μmcomp=Z,71nm,1.1s
TOLI2 Tolitoli 34.07 144 P P 15 25 53.0 -0.7
TOLI2 IAmb IAmb 15 26 11.2
comp=Z,52nm,0.9s
MPSI Mapaga 34.31 147 P P 15 25 56.5 +0.7
comp=Z,467nmcomp=Z,24nm,0.8s
BKB Balikpapan 34.42 153 P P 15 25 58.4 +1.7
comp=Z,3μmcomp=Z,269nm,0.8s
BKB Balikpapan 34.42 153 P P 15 25 55.3 -1.5
BKB IAMs_20 IAMs_20 15 42 27.1
comp=Z,8μm,18.0s
KLSI 34.77 175 P P 15 26 02.7 +2.9
comp=Z,658nmcomp=Z,21nm,1.0s
ASAJ Asahikawa 35.02 55 P P 15 26 02.4 +0.6
comp=Z,67nm,0.9s,baz=260,slow=18,SNR=23
JKA Kamikawa-asahi 35.02 55 P P 15 26 01.9 +0.1
JKA IAmb IAmb 15 26 14.8
comp=Z,95nm,1.0s
ERM Erimo 35.14 59 P P 15 26 01.3 -1.5
ERM pmax pmax
comp=Z,65nm,1.2s
ERM MLR MLR
comp=Z,6μm,18.0s
ERM Erimo 35.14 59 P P 15 26 01.3 -1.5
ERM IAmb IAmb 15 26 16.5
comp=Z,65nm,1.2s
MRSI Marisa 35.21 143 P P 15 26 05.5 +1.9
comp=Z,1μmcomp=Z,50nm,0.8s
JCJ Chichijima 35.47 85 P P 15 26 03.5 -2.3
GTOI Gorontalo 35.64 142 P P 15 26 06.6 -0.7
comp=Z,1μmcomp=Z,133nm,0.8s
YSS Yuzh-Sakhalins 35.69 50⇑ *i*P P 15 26 08.2 +0.8
YSS *e* 15 26 11.7
YSS *e* 15 27 25.8
YSS *e* 15 28 38.7
YSS eS S 15 31 43.5 -0.9
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,8μm,14.0s
YSS MLR MLR
comp=N,6μm,13.0s
YSS MLR MLR
comp=E,6μm,13.0s
YSS Yuzh-Sakhalins 35.69 50 P P 15 26 06.0 -1.4
YSS IAmb IAmb 15 26 16.4
comp=Z,118nm,1.3s
YSS IAMs_20 IAMs_20 15 40 55.0
comp=Z,8μm,19.0s
BBKI Banjar Baru 35.70 157 P P 15 26 09.4 +1.6
comp=Z,1μmcomp=Z,51nm,0.8s
KBKI Kotabaru 36.01 155 P P 15 26 11.5 +1.0
comp=Z,284nmcomp=Z,26nm,0.8s
KMSI Cibinong 36.22 140 P P 15 26 13.8 +1.5
comp=Z,3μmcomp=Z,443nm,0.9s
APSI Ampana 36.25 145 P P 15 26 14.7 +2.2
comp=Z,726nmcomp=Z,117nm,0.8s
YAK Yakutsk 36.70 22 P P 15 26 16.2 +0.3
comp=Z,42nm,0.7s,baz=298,slow=0.6,SNR=25
YAK Yakutsk 36.70 22 *e*P P 15 26 15.8 -0.1
YAK *e*PP sP 15 26 24.1 +3.7
YAK *e*PPP PPP 15 28 02.8
YAK *e* 15 28 39.7
YAK eS S 15 31 57.2 -2.2
YAK eSS SnSn 15 34 27.8 -1.6
YAK pmax pmax
comp=Z,90nm,0.9s
YAK pmax pmax
comp=N,20nm,1.5s
YAK pmax pmax
comp=E,15nm,1.2s
YAK smax smax
comp=E,768nm,4.6s
YAK smax smax
comp=N,396nm,3.7s
YAK MLR MLR
comp=Z,7μm,20.0s
YAK MLR MLR
comp=N,4μm,18.0s
YAK MLR MLR
comp=E,6μm,20.0s
YAK Yakutsk 36.70 22 P P 15 26 14.8 -1.1
YAK IAmb IAmb 15 26 20.9
comp=Z,80nm,0.7s
YAK IAMs_20 IAMs_20 15 42 29.6
comp=Z,11μm,20.0s
TYV Tymovskoe 36.70 44 *e*P P 15 26 18.3 +2.3
TYV eS S 15 32 05.6 +5.9
TYV pmax pmax
comp=Z,30nm,1.2s
TYV smax smax
comp=N,11nm,1.2s
TYV MLR MLR
comp=E,7μm,13.0s
TYV MLR MLR
comp=Z,7μm,14.0s
GEYT Alibeck 36.73 294 P P 15 26 19.3 +2.8
comp=Z,23nm,0.9s,baz=101,slow=8.0,SNR=9.4
GEYT LR LR 15 44 58.0
comp=Z,7μm,18.7s,baz=235,slow=42
GEYT Alibeck 36.73 294 P P 15 26 15.8 -0.7
GYA0 ALIBECK ARRAY 36.73 294 P P 15 26 17.5 +0.9
GYA0B ALIBECK ARRAY 36.73 294 P P 15 26 15.7 -0.9
GYA0B IAmb IAmb 15 26 40.9
comp=Z,57nm,0.9s
AB31 Akbulak array 36.82 313 *i* P P 15 26 16.2 -0.9
ABKAR Akbulak array 36.82 313 P P 15 26 16.2 -0.9
ABKAR Akbulak array 36.82 313 P P 15 26 16.4 -0.8
LUWI Luwuk 36.93 143 P P 15 26 18.5 +0.2
comp=Z,2μmcomp=Z,217nm,0.9s
LUWI Luwuk 36.93 143 P P 15 26 17.4 -0.9
LEM Lembang 37.21 170 P P 15 26 22.6 +1.8
comp=Z,32nm,0.6s,baz=346,slow=12,SNR=6.8
TTSI Tana Toraja 37.26 149 P P 15 26 21.5 +0.4
comp=Z,2μmcomp=Z,155nm,0.8s
YUK Yuzh-Kuril'sk 37.34 56*c i*P P 15 26 27.7 +6.1
YUK *i* 15 27 48.3
YUK *i*S S 15 32 10.6 +1.0
YUK eSS SnSn 15 34 38.5 -6.9
YUK eSSS SSS 15 35 17.5
YUK pmax pmax
comp=E,99nm,0.9s
YUK pmax pmax
comp=Z,197nm,0.9s
YUK pmax pmax
comp=Z,435nm,1.7s
KPJI Karang Pucung 37.91 168 P P 15 26 29.1 +2.5
comp=Z,3μmcomp=Z,234nm,0.9s
SMRI Semarang 37.93 166 P P 15 26 29.5 +2.7
comp=Z,109nm,0.9s
SMRI Semarang 37.93 166 P P 15 26 25.4 -1.4
SMRI IAmb IAmb 15 26 41.7
comp=Z,146nm,1.1s
SMRI IAMs_20 IAMs_20 15 41 41.7
comp=Z,9μm,20.0s
CISI Cisompet, Garu 37.95 170 P P 15 26 26.1 -0.9
CISI IAMs_20 IAMs_20 15 43 01.4
comp=Z,7μm,18.0s
TNTI Ternate 38.03 135 P P 15 26 27.4 -0.3
comp=Z,812nmcomp=Z,49nm,0.9s
TNTI Ternate 38.03 135 P P 15 26 26.5 -1.1
SPSI Sidrap Palu 38.06 150 P P 15 26 28.5 +0.6
comp=Z,2μmcomp=Z,149nm,0.9s
AKTO Aktyubinsk 38.34 315 P P 15 26 29.9 0.0
comp=Z,14nm,1.1s,baz=95,slow=11,SNR=21
AKTO Aktyubinsk 38.34 315 P P 15 26 30.0 0.0
BNSI Bone 38.59 150 P P 15 26 32.8 +0.4
comp=Z,972nmcomp=Z,50nm,0.9s
JLN Jalan Bani Buh 38.69 268 P P 15 26 35.5 +2.3
JLN P P 15 26 35.5 +2.3
JLN P P 15 26 35.5 +2.3
UGM Wanagama 38.78 166 P P 15 26 33.2 -0.8
UGM IAMs_20 IAMs_20 15 42 18.2
comp=Z,7μm,19.0s
WOJI Wonogiri, Jawa 38.79 165 P P 15 26 35.7 +1.7
comp=Z,48nm,0.9s
KMMI Kalianget 38.81 160 P P 15 26 36.9 +2.7
comp=Z,2μmcomp=Z,89nm,0.9s
KUR Kuril'sk 38.90 54 P P 15 26 41.7 +7.0
KUR 15 28 11.0
KUR S S 15 32 29.3 -3.9
KUR eSSS SSS 15 35 42.7
KUR pmax pmax
comp=Z,365nm,1.1s
KUR MLR MLR
comp=N,4μm,13.0s
KUR MLR MLR
comp=Z,5μm,13.0s
KUR MLR MLR
comp=E,3μm,14.0s
WBK Wadi Bani Khal 38.91 269 P P 15 26 36.3 +1.2
WBK P P 15 26 36.3 +1.2
WSAR Wadi Sarin 38.98 270 P P 15 26 37.4 +1.6
comp=E,19nm,0.9s,baz=94,slow=7.3,SNR=15
WSAR S S 15 32 32.2 -2.8
comp=E,2.9nm,0.8s,baz=232,slow=19,SNR=1.3
KAPI Kappang 38.99 151 P P 15 26 35.5 -0.2
comp=E,37nm,0.8s,baz=316,slow=7.1,SNR=19
KAPI S S 15 32 27.2 -7.9
comp=E,6.7nm,0.4s,baz=237,slow=7.7,SNR=3.1
KAPI Kappang 38.99 151 P P 15 26 35.4 -0.3
KAPI Kappang 38.99 151 P P 15 26 34.7 -1.0
SVE Sverdlovsk 39.09 325*ce*P P 15 26 36.6 +0.5
SVE eS S 15 32 34.1 -1.7
SVE pmax pmax
comp=Z,150nm,2.0s
SVE MLR MLR
comp=Z,8μm,19.0s
PWJI Pagerwojo 39.17 164 P P 15 26 38.9 +1.7
comp=Z,9μmcomp=Z,64nm,0.7s
BIDO Bidbid 39.33 271 P P 15 26 40.8 +2.2
BIDO P P 15 26 40.8 +2.2
BLJI Banyuglugur 39.37 161 P P 15 26 49.4 +11
BKSI Bulukumba 39.42 150 P P 15 26 39.2 -0.1
comp=Z,1μmcomp=Z,102nm,0.8s
SANI Sanana 39.50 140 P P 15 26 38.2 -1.8
comp=Z,860nmcomp=Z,56nm,0.9s
SMDO Samad 39.55 270 P P 15 26 42.5 +1.9
SMDO P P 15 26 42.5 +1.9
SMDO P P 15 26 42.5 +1.9
JMDO Jabal Madar 39.74 269 P P 15 26 44.2 +2.1
JMDO P P 15 26 44.2 +2.1
ARU Arti 39.97 324 P P 15 26 43.4 -0.1
comp=Z,4.8nm,0.6s,baz=101,slow=5.6,SNR=20
ARU Arti 39.97 324*c i*P P 15 26 42.7 -0.8
ARU 15 28 13.5
ARU 15 28 48.2
ARU S S 15 32 48.0 -1.1
ARU SS SS 15 35 43.7 -1.9
ARU SSS SSS 15 36 19.9
ARU pmax pmax
comp=Z,110nm,1.3s
ARU MLR MLR
comp=Z,6μm,15.0s
ARU Arti 39.97 324 P P 15 26 42.2 -1.3
ARU IAmb IAmb 15 26 59.0
comp=Z,66nm,0.8s
ARU IAMs_20 IAMs_20 15 43 52.4
comp=Z,7μm,20.0s
HOQ Hoqain 40.01 272 P P 15 26 47.2 +2.9
HOQ P P 15 26 47.2 +2.9
NRIK Noril'sk 40.06 352 P P 15 26 44.2 +0.2
comp=Z,72nm,0.9s,baz=150,slow=7.0,SNR=97
NRIK LR LR 15 44 04.2
comp=Z,6μm,18.6s,baz=166,slow=37
NRIK Noril'sk 40.06 352*ce*P P 15 26 43.6 -0.5
NRIK pmax pmax
comp=Z,132nm,1.0s
NRIK MLR MLR
comp=Z,4μm,16.0s
SRBI Singaraja 40.16 159 P P 15 26 47.1 +1.6
comp=Z,2μmcomp=Z,57nm,1.5s
BANOM Banah 40.16 275 P P 15 26 48.2 +2.7
BANOM Banah 40.16 275 P P 15 26 48.5 +3.0
BANOM P P 15 26 48.5 +3.0
JAGI Jajag, Banyuwa 40.21 161 P P 15 26 45.4 -0.6
SHME Shamm 40.27 276 *i* P P 15 26 50.2 +3.8
SNR=9.0
BSSI Bau Bau, Buton 40.32 150 P P 15 26 46.4 -0.4
comp=Z,772nmcomp=Z,35nm,0.7s
MDH Madha 40.35 274 P P 15 26 49.1 +2.0
MHTO MHTO 40.36 267 P P 15 26 48.9 +1.8
MHTO P P 15 26 48.9 +1.8
MHTO P P 15 26 48.9 +1.8
MHTO S S 15 33 00.4 +4.8
MHTO S S 15 33 00.4 +4.8
MHTO S S 15 33 00.4 +4.8
MSFE Esma-Masafi 40.45 275 *i* P P 15 26 50.0 +2.0
SNR=9.3
SOHO SOHO 40.51 273 P P 15 26 50.1 +1.7
UOSS Minazif 40.54 274 *i* P P 15 26 50.5 +1.9
SNR=6.4
HATD Hatta, Dubai 40.64 274 *i* P P 15 26 51.6 +2.1
SNR=17
HATD Hatta, Dubai 40.64 274 P P 15 26 52.0 +2.6
HATD P P 15 26 52.0 +2.6
HATD P sP 15 26 56.0 +2.0
SNR=10
HATD P sP 15 26 56.0 +2.0
SNR=10
HATD S S 15 33 05.2 +5.4
HATD S S 15 33 05.2 +5.4
ASHO Ashiyiah 40.74 274 P P 15 26 53.5 +3.2
UMQ Umm Al-Quwin 40.83 275 P P 15 26 54.4 +3.3
NAZ Nazwa, Dubai 40.99 274 *i* P P 15 26 54.9 +2.5
SNR=12
NAZ Nazwa, Dubai 40.99 274 P P 15 26 59.0 +6.6
SNR=5.0
NAZ P P 15 26 59.0 +6.6
SNR=5.0
NLAI Namlea 41.10 139 P P 15 26 56.6 +3.3
comp=Z,62nm,0.9s
FAQ Al Faqa, Dubai 41.13 274 *i* P P 15 26 55.4 +1.9
SNR=10
FAQ Al Faqa, Dubai 41.13 274 P P 15 26 60.0 +6.5
SNR=7.8
FAQ P P 15 26 60.0 +6.5
SNR=7.8
ALNE Al Ain 41.21 273 *i* P P 15 26 56.8 +2.6
SNR=13
TWSI Taliwang, Sumb 41.32 157 P P 15 26 56.8 +1.8
comp=Z,941nmcomp=Z,45nm,1.3s
ASUD Al Ashush, Dub 41.39 274 *i* P P 15 26 57.5 +1.9
SNR=6.3
AJN Ajban 41.71 274 *i* P P 15 26 59.5 +1.3
SNR=6.0
PLAI Plampang 41.71 156 P P 15 26 58.9 +0.7
comp=Z,1μmcomp=Z,64nm,0.8s
SIJI Sorong 41.73 132 P P 15 26 57.5 -1.0
comp=Z,22nm,0.9s,baz=342,slow=12
MSAI Masohi 42.24 137 P P 15 27 03.2 +0.6
comp=Z,726nmcomp=Z,34nm,0.8s
GUMO Guam 42.97 103 P P 15 27 08.4 -0.2
comp=Z,147nm,1.0s,baz=309,slow=2.0,SNR=4.2
GUMO LR LR 15 46 24.0
comp=Z,932nm,18.8s,baz=292,slow=38
GUMO Guam 42.97 103 P P 15 27 07.2 -1.4
WBSI Waikabubak, Su 43.05 154 P P 15 27 08.2 -1.0
comp=Z,2μmcomp=Z,158nm,0.9s
EDFI Ende, Flores 43.17 151 P P 15 27 11.2 +0.9
comp=Z,457nmcomp=Z,54nm,0.9s
MMRI Maumere 43.30 150 P P 15 27 11.2 0.0
comp=Z,3μmcomp=Z,297nm,1.0s
MMRI Maumere 43.30 150 P P 15 27 09.7 -1.5
FAKI Fak Fak 43.93 133 P P 15 27 16.9 +0.6
comp=Z,817nmcomp=Z,32nm,1.1s
FAKI Fak Fak 43.93 133 P P 15 27 13.7 -2.6
MA2 Magadan 43.97 34 P P 15 27 15.8 -0.4
comp=Z,65nm,0.9s,baz=218,slow=9.6,SNR=6.0
MA2 Magadan 43.97 34*ce*P P 15 27 17.4 +1.2
MA2 pmax pmax
comp=Z,101nm,1.2s
MA2 MLR MLR
comp=Z,3μm,11.0s
MA2 Magadan 43.97 34 P P 15 27 14.2 -1.9
MA2 IAmb IAmb 15 27 21.5
comp=Z,104nm,1.0s
TIXI Tiksi 44.07 12*ce*P P 15 27 15.5 -1.3
TIXI pmax pmax
comp=Z,345nm,1.7s
TIXI Tiksi 44.07 12 P P 15 27 14.7 -2.0
DMTO DMTO 44.28 265 P P 15 27 22.0 +2.8
DMTO P P 15 27 22.0 +2.8
MAK Makhachkala 44.71 302 *e*P P 15 27 19.8 -2.5
MAK *e* 15 28 58.4
MAK *e*PPP PPP 15 29 39.4
MAK eS S 15 33 57.4 -1.8
MAK eSS SS 15 37 14.8 -4.5
MAK eSSS SSS 15 38 00.2
MAK pmax pmax
comp=Z,685nm,1.5s
MAK MLR MLR
comp=Z,4μm,12.0s
SKR Severo-Kuril's 45.01 47 pmax pmax
comp=Z,500nm,4.7s
SKR MLR MLR
comp=Z,3μm,16.0s
SKR MLR MLR
comp=Z,3μm,15.0s
BAKI Biak 45.19 127 P P 15 27 28.8 +2.4
comp=Z,1μmcomp=Z,79nm,1.0s
SOEI Soe 45.20 148 P P 15 27 27.2 +0.6
comp=Z,2μmcomp=Z,140nm,0.7s
SOEI Soe 45.20 148 P P 15 27 24.7 -1.9
BATI Baumata 45.33 149 P P 15 27 26.2 -1.2
comp=Z,177nm,0.8s,baz=323,slow=1.4,SNR=4.1
BATI Baumata 45.33 149 P P 15 27 26.2 -1.2
comp=Z,1μmcomp=Z,171nm,0.8s
KIRV Kirov 45.34 324 LR LR 15 46 43.8
comp=Z,5μm,18.7s,baz=108,slow=36
KIRV Kirov 45.34 324*c i*P P 15 27 27.2 +0.2
SEY Seymchan 45.89 29 P P 15 27 31.4 0.0
comp=Z,3.3nm,0.7s,baz=222,slow=5.7,SNR=7.1
SEY PcP PcP 15 29 11.3 +3.0
comp=Z,18nm,0.8s,baz=286,slow=5.0,SNR=5.7
SEY LR LR 15 45 53.1
comp=Z,5μm,21.4s,baz=248,slow=35
SEY Seymchan 45.89 29 *i* P P 15 27 31.8 +0.5
GROC Groznyy 45.95 303 *e*P P 15 27 32.3 +0.2
GROC *e* 15 29 21.0
GROC eS S 15 34 16.8 -0.4
GROC pmax pmax
comp=Z,65nm,1.1s
PEA0B Petropavlovsk- 46.25 44 *i* P P 15 27 34.7 +0.3
PEA0B Petropavlovsk- 46.25 44 P P 15 27 33.6 -0.8
PETK Petropavlovsk- 46.25 44 P P 15 27 34.6 +0.2
comp=Z,52nm,0.8s,baz=224,slow=0.6,SNR=26
PETK LR LR 15 48 43.6
comp=Z,4μm,18.9s,baz=263,slow=38
PETK Petropavlovsk- 46.25 44 P P 15 27 33.5 -0.9
PET Petropavlovsk 46.81 44 *e*P P 15 27 39.4 +0.7
PET eS S 15 34 25.8 -3.5
PET pmax pmax
comp=Z,110nm,1.2s
PET MLR MLR
comp=Z,7μm,18.0s
PET MLR MLR
comp=Z,7μm,20.0s
GNI Garni 46.98 298 P P 15 27 42.3 +1.8
comp=Z,71nm,1.4s,baz=205,slow=0.6,SNR=5.7
GNI LR LR 15 49 28.1
comp=Z,1μm,19.6s,baz=90,slow=39
GNI Garni 46.98 298 P P 15 27 41.9 +1.5
GNI Garni 46.98 298 P P 15 27 40.0 -0.5
GNI IAmb IAmb 15 28 06.8
comp=Z,55nm,1.0s
ZEI Tsey 47.36 302 *e*P P 15 27 45.5 +2.0
ZEI pmax pmax
comp=Z,17nm,0.7s
SMPI Sarmi 47.58 126 P P 15 27 46.5 +1.3
comp=Z,1μmcomp=Z,50nm,1.0s
SOCY Socotra 47.65 259 P P 15 27 46.3 +0.5
SNR=6.3
SOCY Socotra 47.65 259 P P 15 27 43.4 -2.5
SOCY IAmb IAmb 15 27 52.9
comp=Z,34nm,0.9s
GOF Gofitskoye 47.84 305⇑ *i*P P 15 27 47.4 +0.5
GOF pmax pmax
comp=Z,119nm,1.7s
KBZ Khabaz 48.02 303 P P 15 27 47.5 -0.8
comp=Z,3.5nm,0.8s,baz=79,slow=9.0,SNR=8.6
KBZ Khabaz 48.02 303*c i*P P 15 27 48.2 -0.1
KBZ pmax pmax
comp=Z,49nm,1.9s
KBZ MLR MLR

comp=Z,5μm,16.0s
KVAR Kislovodsk Arr 48.15 304 P **P** **15 27 51.2 +1.7**
comp=Z,2.5nm,0.4s,baz=140,slow=19,SNR=1.4
KIV Kislovodsk 48.16 304 *i* P **P** **15 27 49.4 -0.1**
SNR=18
KIV Kislovodsk 48.16 304 P **P** **15 27 52.1 +2.5**
KIV P **P** **15 27 52.1 +2.5**
KIV Kislovodsk 48.16 304 *e*P **P** **15 27 50.4 +0.9**
KIV *e*S **S** **15 34 49.8 +0.9**
KIV pmax pmax
comp=Z,222nm,3.8s
KIV pmax pmax
comp=Z,170nm,1.0s
KIV MLR MLR
comp=Z,14μm,16.0s
KIV Kislovodsk 48.16 304 P **P** **15 27 48.4 -1.1**
GEVA Gevas 48.52 296 P **P** **15 27 51.5 -1.0**
GEVA IAmb IAmb 15 28 15.5
comp=Z,48nm,1.5s
VRH Novokhopyorsk 48.66 313 *e*P **P** **15 27 53.7 +0.6**
VRH pmax pmax
comp=Z,50nm,1.0s
VRH MLR MLR
comp=Z,2μm,14.0s
GENI Genyem 49.03 125 P **P** **15 27 57.8 +1.4**
comp=Z,3μmcomp=Z,128nm,0.9s
JAY Jayapura 49.36 124 P **P** **15 27 58.6 -0.4**
comp=Z,18nm,0.9s,baz=248,slow=5.4
JAY S **S** **15 35 07.2 +0.9**
comp=Z,1.8nm,0.4s,baz=238,slow=9.8,SNR=1.3
JAY Jayapura 49.36 124 P **P** **15 28 02.2 +3.2**
comp=Z,428nmcomp=Z,24nm,1.0s
VORD Divnogorie 50.19 313 *e*P **P** **15 28 03.6 -1.2**
VORD pmax pmax
comp=Z,70nm,1.2s
KOPT Kop Dagi 50.22 299 P **P** **15 28 05.1 -0.5**
RAYN Ar Rayn 50.23 277 *i* P **P** **15 28 06.1 +0.5**
SNR=26
RAYN Ar Rayn 50.23 277 P **P** **15 28 04.7 -0.9**
RAYN pmax pmax
comp=Z,68nm,1.4s
RAYN Ar Rayn 50.23 277 P **P** **15 28 04.7 -0.9**
RAYN IAmb IAmb 15 28 12.4
comp=Z,68nm,1.4s
VORR Voronezh 50.24 314 *e*P **P** **15 28 04.0 -1.2**
VORR pmax pmax
comp=Z,300nm,1.6s
VSR Storozhevoye 50.26 313 *e*P **P** **15 28 04.9 -0.5**
VSR pmax pmax
comp=Z,50nm,1.1s
VSR MLR MLR
comp=Z,1μm,11.0s
SOC Sochi 50.33 303 *e*P **P** **15 28 03.9 -2.1**
SOC *e* 15 29 57.9
SOC *e*PPP PPP 15 31 03.2
SOC *e*S **S** **15 35 19.4 +0.1**
SOC *e*SS **SS** **15 38 47.8 -4.8**
SOC *e*SSS SSS 15 40 13.9
SOC MLR MLR
comp=Z,6μm,20.0s
LPSR Galich'ya Gora 50.41 315 *e*P **P** **15 28 06.7 +0.2**
LPSR pmax pmax
comp=Z,70nm,1.1s
LPSR MLR MLR
comp=Z,3μm,17.0s
MARD Mardin 50.47 295 P **P** **15 28 06.5 -0.8**
MARD IAmb IAmb 15 28 21.8
comp=Z,35nm,0.8s
KLMR Klimovskoe 50.70 326 *e*P **P** **15 28 06.3 -2.3**
KLMR *e* 15 30 02.4
KLMR *e*SS **SS** **15 38 58.1 +0.2**
KLMR pmax pmax
comp=Z,209nm,1.4s
KLMR MLR MLR
comp=Z,1μm,11.0s
KLMR Klimovskoe 50.70 326 *e*P **P** **15 28 06.4 -2.2**
KLMR AMP 15 28 12.5
comp=Z,209nm,1.4s
KLMR *e*PP **PP** **15 30 02.5 -1.8**
KLMR *e*SS **SS** **15 38 58.1 +0.2**
KLMR *e*SS **SS** **15 38 58.1 +0.2**
KLMR LQ LQ 15 45 45.3
KLMR LQ LQ 15 45 45.3
KLMR LR LR 15 47 40.4
KLMR AMP 15 49 46.8
comp=Z,1μm,10.9s
MOS Moscow 51.25 319 *e*P **P** **15 28 11.0 -1.8**
MOS *e*S **S** **15 35 30.4 -1.3**
MOS pmax pmax
comp=Z,900nm,2.3s
MOS pmax pmax
comp=Z,295nm,1.8s
MOS MLR MLR
comp=Z,5μm,17.0s
MTN Manton Dam 51.26 142 P **P** **15 28 11.7 -1.5**
ANN Anapa 51.83 305 *e*P **P** **15 28 16.2 -1.0**
ANN *e*S **S** **15 35 37.3 -2.6**
ANN pmax pmax
comp=Z,98nm,1.7s
ANN MLR MLR
comp=N,6μm,17.0s
ANN MLR MLR
comp=Z,5μm,16.0s
ANN MLR MLR
comp=E,4μm,14.0s
OBN Obninsk 51.84 318 P **P** **15 28 16.6 -0.5**
comp=E,3.0nm,0.4s,baz=76,slow=8.8
OBN Obninsk 51.84 318*c**e*P **P** **15 28 16.9 -0.2**
OBN *e* 15 29 30.2
OBN *e* 15 30 13.1
OBN *e*S **S** **15 35 40.0 +0.3**
OBN pmax pmax
comp=Z,194nm,2.2s
OBN MLR MLR
comp=Z,4μm,12.0s
OBN Obninsk 51.84 318 P **P** **15 28 15.9 -1.2**
OBN IAmb IAmb 15 28 20.2
comp=Z,128nm,1.4s
OBN IAMs_20 IAMs_20 15 51 31.1
comp=Z,6μm,19.0s
TMCR Tamitsa 51.88 330 *e*P **P** **15 28 16.5 -0.8**
TMCR *e*S **S** **15 35 42.4 +2.4**
TMCR pmax pmax
comp=Z,76nm,1.0s
KNRA Kununurra 52.47 147 P **P** **15 28 21.2 -1.0**
BILL Bilibino 52.87 25*c**e*P **P** **15 28 24.5 -0.2**
BILL *i* 15 28 31.6
BILL *e* 15 29 33.3
BILL *e* 15 30 24.9
BILL *i* S **S** **15 35 54.2 +0.6**
BILL *i* SS **SS** **15 39 31.6 -0.3**
BILL pmax pmax
comp=Z,82nm,1.4s
BILL MLR MLR
comp=Z,8μm,17.0s
BILL Bilibino 52.87 25 P **P** **15 28 23.2 -1.4**
BILL IAmb IAmb 15 28 32.9
comp=Z,86nm,1.3s
FITZ Fitzroy Crossi 53.21 151 P **P** **15 28 26.6 -1.0**
comp=Z,30nm,0.8s,baz=354,slow=4.9,SNR=4.9
FITZ Fitzroy Crossi 53.21 151 P **P** **15 28 27.1 -0.6**
TOKA Tokat 53.21 300 P **P** **15 28 27.3 -0.3**
GAZ Gaziantep 53.28 296 P **P** **15 28 26.7 -1.5**
GAZ IAmb IAmb 15 28 41.0
comp=Z,71nm,1.1s
MANU Manus Island 53.98 118 P **P** **15 28 33.0 -0.5**
APA Apatity 54.25 334↓ *i*P **P** **15 28 32.9 -1.9**
APA *i* S **S** **15 36 09.0 -3.3**
APA *i* PS **PKiKP** **15 36 15.0 +1.7**
APA pmax pmax
comp=Z,25nm,0.9s
PSA00 Pilbara Seismi 54.30 159 P **P** **15 28 35.0 -0.6**
PSA00 IAmb IAmb 15 28 42.5
comp=Z,37nm,0.8s
PSA00 Pilbara Seismi 54.30 159 P **P** **15 28 34.7 -0.9**
PSA00 IAmb IAmb 15 28 43.1
comp=Z,29nm,0.8s
ILGA Ilgaz 55.12 301 P **P** **15 28 40.0 -1.8**
ILGA IAmb IAmb 15 28 58.0
comp=Z,95nm,1.2s
BR131 Keskin Array S 55.46 300*c* *i*P **P** **15 28 43.9 -0.3**
BR131 Keskin Array S 55.46 300 P **P** **15 28 42.6 -1.6**
BRTR Keskin Array B 55.46 300 P **P** **15 28 44.2 0.0**
comp=Z,3.3nm,0.7s,baz=119,slow=10,SNR=16
BRTR Keskin Array B 55.46 300 P **P** **15 28 42.8 -1.4**

MMAI Mount Meron Ar 55.76 291 P **P** **15 28 47.4 +1.1**
comp=Z,11nm,0.9s,baz=69,slow=9.4,SNR=6.1
MMAI LR LR 15 58 32.5
comp=Z,2μm,18.1s,baz=70,slow=42
ANTO Ankara 56.07 300 P **P** **15 28 46.1 -2.3**
ANTO MLR MLR
comp=Z,2μm,22.0s
ANTO Ankara 56.07 300 P **P** **15 28 46.1 -2.3**
BR231 Keskin MP Arra 56.09 300 P **P** **15 28 47.6 -1.0**
BR231 IAmb IAmb 15 29 00.2
comp=Z,58nm,0.9s
AKASG Malin Array Be 56.57 313 P **P** **15 28 50.2 -1.5**
comp=Z,13nm,0.8s,baz=70,slow=6.8,SNR=26
AKASG Malin Array Be 56.57 313 *i* P **P** **15 28 50.7 -1.0**
AKASG pmax pmax
comp=Z,21nm,0.8s
AKASG Malin Array Be 56.57 313 P **P** **15 28 49.9 -1.8**
AKBB Malin Array Si 56.57 313*ce*P **P** **15 28 51.0 -0.7**
AKBB Malin Array Si 56.57 313 P **P** **15 28 49.4 -2.3**
AKBB IAmb IAmb 15 28 54.4
comp=Z,54nm,1.2s
KEV Kevo 56.78 336 P **P** **15 28 51.1 -1.8**
KEV pmax pmax
comp=Z,53nm,0.9s
KEV MLR MLR
comp=Z,4μm,20.0s
KEV Kevo 56.78 336 P **P** **15 28 51.1 -1.8**
KEV IAmb IAmb 15 29 07.1
comp=Z,53nm,0.9s
KEV IAMs_20 IAMs_20 15 53 16.7
comp=Z,4μm,20.0s
MICGM Minsk 56.89 318 *e*P P 15 29 02.0 +8.1
MICGM *e*LR LR 15 49 30.0
MICGM LRM MLR 15 54 26.0
comp=Z,5.2nm,20.0s
MICGM LRM MLR 15 54 36.0
comp=E,4.7nm,20.0s
MNK Minsk 56.89 318 *e*P P 15 29 02.0 +8.1
MNK MLR MLR
comp=Z,5μm,20.0s
MNK MLR MLR
comp=E,5μm,20.0s
MDUB Mudurnu 57.12 301 P **P** **15 28 54.5 -1.5**
VSU Vasula 57.12 323 *e*P **P** **15 28 55.1 -0.4**
VSU Vasula 57.12 323 *i* P **P** **15 28 55.3 -0.2**
VSU pmax pmax
comp=Z,363nm,1.9s
EIL Elat 57.13 288 P **P** **15 28 56.7 +0.7**
comp=Z,16nm,0.7s,baz=82,slow=1.6,SNR=14
FIA1 FINESS Array S 57.23 326 P **P** **15 28 55.2 -1.0**
FIA1 IAmb IAmb 15 29 13.7
comp=Z,40nm,1.1s
FINES FINESS Array B 57.23 326 P **P** **15 28 54.9 -1.4**
comp=Z,10nm,0.8s,baz=93,slow=5.5,SNR=11
ARD3 ARCESS Array S 57.28 336 P **P** **15 28 55.7 -0.8**
ARD3 IAmb IAmb 15 28 57.0
comp=Z,86nm,1.4s
ARD4 ARCESS Array S 57.28 336 P **P** **15 28 55.7 -0.8**
ARD4 IAmb IAmb 15 29 10.2
comp=Z,52nm,1.1s
ARD2 ARCESS Array S 57.28 336 P **P** **15 28 55.3 -1.2**
ARD2 IAmb IAmb 15 28 57.1
comp=Z,83nm,1.4s
ARC2 ARCESS Array S 57.29 336 P **P** **15 28 55.7 -0.8**
ARC2 IAmb IAmb 15 28 57.1
comp=Z,89nm,1.4s
ARC3 ARCESS Array S 57.29 336 P **P** **15 28 55.7 -0.9**
ARC3 IAmb IAmb 15 28 57.2
comp=Z,70nm,1.3s
ARB2 ARCESS Array S 57.29 336 P **P** **15 28 55.2 -1.3**
ARB2 IAmb IAmb 15 28 57.2
comp=Z,84nm,1.3s
ARB3 ARCESS Array S 57.29 336 P **P** **15 28 55.7 -0.8**
ARB3 IAmb IAmb 15 29 00.1
comp=Z,64nm,1.1s
ARC4 ARCESS Array S 57.29 336 P **P** **15 28 55.0 -1.6**
ARC4 IAmb IAmb 15 29 00.1
comp=Z,67nm,1.1s
ARD5 ARCESS Array S 57.29 336 P **P** **15 28 55.4 -1.2**
ARD5 IAmb IAmb 15 29 00.1
comp=Z,68nm,1.1s
ARA2 ARCESS Array S 57.29 336 P **P** **15 28 55.6 -1.0**
ARA2 IAmb IAmb 15 29 00.1
comp=Z,60nm,1.1s
ARB1 ARCESS Array S 57.29 336 P **P** **15 28 55.7 -0.9**
ARB1 IAmb IAmb 15 28 57.2
comp=Z,72nm,1.3s
ARD1 ARCESS Array S 57.29 336 P **P** **15 28 55.6 -1.0**
ARD1 IAmb IAmb 15 29 00.1
comp=Z,59nm,1.1s
ARA0 ARCESS Array S 57.29 336 *e*P **P** **15 28 55.9 -0.7**
ARCES ARCESS Array B 57.29 336 P **P** **15 28 56.1 -0.5**
comp=Z,14nm,0.6s,baz=92,slow=7.9,SNR=37
KIS Kishinev 57.44 309 *e*P **P** **15 29 00.0 +2.0**
KIS *e*LQ LQ 15 49 19.0
comp=Z,2μm,21.5s
KIS LRM MLR 15 56 30.0
comp=Z,1μm,16.0s
KIS Kishinev 57.44 309 *e*P **P** **15 29 00.0 +2.0**
KIS MLR MLR
comp=Z,1μm,16.0s
IDID Didziasalis 57.45 319 *e*P **P** **15 28 58.0 +0.1**
NACGM Naroch 57.48 319 *e*P **P** **15 28 55.0 -3.1**
NACGM *e*PPP PPP 15 31 46.0
NACGM *e*S S 15 36 46.0 -10
NACGM *e*PS **PnS** **15 37 00.0 -5.5**
NACGM *e*SS **SS** **15 40 42.0 -2.8**
NACGM *e*SSS SSS 15 42 40.0
NACGM *e*LQ LQ 15 47 28.0
NACGM *e*LR LR 15 51 50.0
NACGM LRM MLR 15 55 00.0
comp=Z,11nm,14.0s
ATD Arta Tunnel 57.50 264 P **P** **15 28 59.3 +0.4**
comp=Z,6.0nm,0.6s,baz=80,slow=11,SNR=1.5
ATD LR LR 15 52 04.6
comp=Z,1μm,21.7s,baz=56,slow=34
SORM Soroca 57.54 310↓ P **P** **15 28 58.7 0.0**
IIGN Ignalina 57.74 319 *e*P **P** **15 28 58.9 -1.0**
ISAL Salakas 57.77 319 *e*P **P** **15 29 00.2 +0.1**
TLCR 57.80 307↓ P **P** **15 29 01.8 +1.3**
HAMF Hammerfest 57.93 337 *e*P **P** **15 29 00.5 -0.5**
KTK1 Kautokeino 58.10 335 *e*P **P** **15 29 01.9 -0.4**
TPGR Topolog 58.14 307↑ P **P** **15 29 04.1 +1.2**
TIRR Tirgusor 58.23 306↑ P **P** **15 29 04.4 +0.8**
TIRR Tirgusor 58.23 306↑ P **P** **15 29 04.4 +0.8**
CFR Carcaliu 58.27 307↓ P **P** **15 29 04.3 +0.6**
ISP Isparta 58.29 298 P **P** **15 29 02.5 -1.7**
ISP pmax pmax
comp=Z,68nm,0.8s
ISP Isparta 58.29 298 P **P** **15 29 02.5 -1.7**
HARR Harsova 58.52 307↓ P **P** **15 29 05.5 0.0**
PMG Port Moresby 58.73 125 P **P** **15 29 06.1 -1.2**
PMG pmax pmax
comp=Z,66nm,0.9s
PMG Port Moresby 58.73 125 P **P** **15 29 06.1 -1.2**
ICOR Ion Corvin 58.73 306↑ P **P** **15 29 08.4 +1.3**
WB0 Warramunga Arr 58.74 144 P **P** **15 29 06.6 -0.8**
WRAB Tennant Creek 58.86 144*ce*P **P** **15 29 07.9 -0.2**
WRAB pmax pmax
comp=Z,112nm,0.8s
WRAB Tennant Creek 58.86 144 P **P** **15 29 07.7 -0.5**
WRA Warramunga Arr 58.86 144 P **P** **15 29 08.0 -0.2**
comp=Z,153nm,0.8s,baz=335,slow=7.3,SNR=484
WRA PKP2bc 15 58 56.8
comp=Z,2.3nm,1.0s,baz=167,slow=1.9,SNR=5.3
WRA Warramunga Arr 58.86 144 P **P** **15 29 08.0 -0.2**
WRA Warramunga Arr 58.86 144 P **P** **15 29 07.2 -1.0**
WB2 Warramunga Arr 58.87 144 P **P** **15 29 07.3 -0.9**
ODBI Odobesti 58.88 308↓ P **P** **15 29 09.5 +1.4**
WR0 Warramunga Arr 58.98 144 P **P** **15 29 08.1 -0.9**
PABE Paberze 58.99 320 *e*P **P** **15 29 08.2 -0.4**
TESR Tescani 59.00 309↑ P **P** **15 29 10.2 +1.3**
RABL Rabaul 59.04 116 P **P** **15 29 09.6 0.0**
ELL Elmali 59.05 297 P **P** **15 29 08.8 -0.8**
ELL pmax pmax
comp=Z,246nm,1.1s
ELL MLR MLR
comp=Z,10μm,20.0s
ELL Elmali 59.05 297 P **P** **15 29 08.8 -0.8**
VRI Vrincioaia 59.09 308↓ P **P** **15 29 10.0 +0.5**
PLOR Plostina 59.14 308↓ P **P** **15 29 10.4 +0.4**
BISRR Bisoca 59.17 308↓ P **P** **15 29 11.2 +1.0**
BIZ Bicaz 59.27 309↓ P **P** **15 29 11.5 +0.7**
COEN Coen 59.28 132 P **P** **15 29 10.7 -0.5**

COEN IAmb IAmb 15 29 16.6
comp=Z,58nm,0.8s
ISR Istrita 59.38 307↑ P **P** **15 29 12.6 +0.9**
NEHR Nehoiu 59.48 308↓ P **P** **15 29 13.1 +0.8**
AMKA Amchitka 59.54 45 P **P** **15 29 12.3 -0.2**
SLIT Slitere, Latvi 59.57 322 *e*P **P** **15 29 12.5 -0.1**
TRO Tromso 59.60 336 *e*P **P** **15 29 12.1 -0.5**
MANT Manisa 59.60 299 P **P** **15 29 12.4 -1.1**
MANT IAMs_20 IAMs_20 15 57 39.5
comp=Z,5μm,18.0s
OZUR 59.67 309↓ P **P** **15 29 14.4 +0.8**
SUW Suwalki 59.69 318 *e*P **P** **15 29 12.8 -0.7**
SUW *e*L L 15 56 10.2
comp=Z,5μm,19.3s
SUW Suwalki 59.69 318 P **P** **15 29 11.9 -1.6**
SUW pmax pmax
comp=Z,192nm,1.1s
SUW MLR MLR
comp=Z,5μm,20.0s
SUW Suwalki 59.69 318 P **P** **15 29 11.9 -1.6**
SUW IAMs_20 IAMs_20 15 56 16.8
comp=Z,5μm,20.0s
MLR Muntele Rosu 59.70 308 P **P** **15 29 14.9 +1.0**
comp=Z,13nm,0.9s,baz=43,slow=6.9,SNR=11
MLR Muntele Rosu 59.70 308↓ P **P** **15 29 14.0 0.0**
MLR Muntele Rosu 59.70 308 P **P** **15 29 12.7 -1.3**
MLR IAmb IAmb 15 29 36.2
comp=Z,46nm,1.0s
BURAR Bucovina Array 59.71 310↓ P **P** **15 29 14.9 +1.0**
BURAR Bucovina Array 59.71 310 P **P** **15 29 12.6 -1.3**
BUR08 Bucovina Ar. S 59.72 310 P **P** **15 29 12.7 -1.3**
SPA0 Spitsbergen Ar 59.77 346 P **P** **15 29 12.7 -1.0**
SPA0 Spitsbergen Ar 59.77 346 *e*P **P** **15 29 13.8 +0.1**
DOPR Dopca 59.97 308↑ P **P** **15 29 16.9 +1.2**
JMB Yambol 60.00 304 *e*P **P** **15 29 17.5 +1.7**
LVV L'vov 60.00 313 *e*P **P** **15 29 16.7 +0.9**
LVV *e*S **S** **15 37 25.9 -2.7**
LVV *e*PS **PnS** **15 37 47.9 +7.5**
LVV MLR MLR
comp=N,3μm,15.0s
LVV MLR MLR
comp=E,2μm,15.0s
LVV MLR MLR
comp=Z,2μm,16.0s
HSPB Hornsund (broa 60.01 345 *e*P **P** **15 29 14.2 -1.1**
HSPB *e*L L 15 55 32.2
comp=Z,6μm,21.9s
HSPB Hornsund (broa 60.01 345 *e*P **P** **15 29 17.8 +2.4**
PBUR Paburge 60.04 320 *e*P **P** **15 29 13.5 -2.3**
VOIR 60.33 308↑ P **P** **15 29 19.5 +1.3**
ARCR ARCALIA 60.41 310↓ P **P** **15 29 19.3 +0.7**
MORW Morawa 60.46 166 P **P** **15 29 19.1 +0.1**
MORW IAmb IAmb 15 29 24.5
comp=Z,42nm,0.8s
KBS Kingsbay 60.59 347 P **P** **15 29 18.4 -0.9**
KBS pmax pmax
comp=Z,35nm,1.1s
KBS MLR MLR
comp=Z,8μm,19.0s
KBS Kingsbay 60.59 347 P **P** **15 29 18.4 -0.9**
KBS IAmb IAmb 15 29 26.0
comp=Z,35nm,1.1s
KBS Kingsbay 60.59 347 *e*P **P** **15 29 18.4 -0.9**
ARR Arges 60.63 308↑ P **P** **15 29 20.0 -0.2**
ALN Alexandroupoli 60.80 303 P **P** **15 29 20.5 -0.9**
ALN pmax pmax
comp=Z,85nm,1.4s
ALN MLR MLR
comp=Z,2μm,19.0s
ALN Alexandroupoli 60.80 303 P **P** **15 29 20.5 -0.9**
ALN IAmb IAmb 15 29 24.6
comp=Z,85nm,1.4s
KWP Kalwaria Pacla 60.88 313 *e*P **P** **15 29 21.8 0.0**
KWP *e*L L 15 57 57.5
comp=Z,3μm,21.8s
KWP Kalwaria Pacla 60.88 313 P **P** **15 29 21.2 -0.6**
KWP pmax pmax
comp=Z,150nm,1.2s
KWP MLR MLR
comp=Z,3μm,20.0s
KWP Kalwaria Pacla 60.88 313 P **P** **15 29 21.2 -0.6**
STEI Steigen 61.14 334 *e*P **P** **15 29 25.3 +2.1**
LOT Lotru 61.20 308↓ P **P** **15 29 24.1 -0.1**
FAUS Fauske 61.21 334 *e*P **P** **15 29 22.2 -1.4**
KOLS Kolonicke sedl 61.32 312 *e*P **P** **15 29 24.1 -0.7**
KOLS MLR MLR
comp=Z,2μm,20.1s
KOLS Kolonicke sedl 61.32 312 *e*P **P** **15 29 24.1 -0.7**
KOLS *e*L L 15 58 26.4
UZH Uzhgorod 61.38 312 *e*P **P** **15 29 25.1 -0.1**
UZH *e* 15 30 09.1
UZH *e* 15 33 13.9
UZH *e*S **S** **15 37 45.1 -1.2**
UZH *e* 15 38 01.9
UZH *e* 15 44 18.3
UZH MLR MLR
comp=N,1μm,18.0s
UZH MLR MLR
comp=E,750nm,18.0s
UZH MLR MLR
comp=Z,400nm,18.0s
PLD Plovdiv 61.44 304 *e*P **P** **15 29 27.6 +1.9**
RZN Rozhen 61.54 304 *e*P **P** **15 29 26.3 -0.3**
BEL Belsk 61.56 316 *e*P **P** **15 29 26.8 +0.5**
BEL *e*L L 15 56 26.0
comp=Z,7μm,19.2s
DRGR 61.57 310↑ P **P** **15 29 27.8 +1.2**
PGB Panagyurishte 61.70 305 *e*P **P** **15 29 29.9 +2.4**
LOF Lofoten 61.73 335 *e*P **P** **15 29 26.7 -0.5**
MOR8 Moi Rana 61.76 333 *e*P **P** **15 29 25.2 -2.2**
AS31 Alice Springs 61.78 146 P **P** **15 29 27.5 -0.6**
ASAR Alice Springs 61.78 146 P **P** **15 29 28.0 -0.1**
comp=Z,23nm,1.0s,baz=330,slow=6.5,SNR=227
ASAR PKP2bc 15 58 44.6
comp=Z,0.5nm,0.7s,baz=153,slow=3.0,SNR=5.1
CRVS Cervenica-Dubn 61.85 312 *e*P **P** **15 29 30.1 +1.7**
CRVS MLR MLR
comp=Z,3μm,17.9s
CRVS Cervenica-Dubn 61.85 312 *e*P **P** **15 29 30.1 +1.7**
CRVS *e*L L 16 00 29.6
GZR Gura Zlata 61.89 308↑ P **P** **15 29 28.9 +0.2**
KONS Konsvik 62.22 333 *e*P **P** **15 29 31.0 +0.5**
HERR Herculane 62.27 308↓ P **P** **15 29 31.8 +0.5**
VTS Vitosha 62.34 305 *e*P **P** **15 29 34.3 +2.4**
SIRR Siria 62.41 310↑ P **P** **15 29 33.1 +1.0**
NIE Niedzica 62.46 313 *e*P **P** **15 29 33.0 +0.6**
NIE *e*L L 15 57 08.6
comp=Z,3μm,21.7s
OJC Ojcow 62.56 314 *e*P **P** **15 29 33.4 +0.2**
OJC *e*L L 15 57 03.7
OJC Ojcow 62.56 314 P **P** **15 29 32.7 -0.4**
OJC pmax pmax
comp=Z,52nm,1.2s
OJC Ojcow 62.56 314 P **P** **15 29 32.6 -0.4**
OJC IAmb IAmb 15 29 37.5
comp=Z,52nm,1.2s
KECS Kecovo 62.58 312 *e*P **P** **15 29 35.3 +2.0**
KECS Kecovo 62.58 312 *e*P **P** **15 29 35.3 +2.0**
BZS Buzias 62.61 309↑ P **P** **15 29 34.4 +0.9**
KKB Krupnik 62.66 304 *e*P **P** **15 29 35.6 +1.7**
MDVR Moldovita 62.78 308↓ P **P** **15 29 35.8 +1.0**
LANS Liptovska Anna 63.05 313 *e*P **P** **15 29 39.5 +3.1**
LANS Liptovska Anna 63.05 313 *e*P **P** **15 29 39.5 +3.1**
TNA Tin City 63.07 28 IAMs_20 IAMs_20 15 53 53.3
comp=Z,3μm,21.0s
PSZ Piszkesteto 63.12 312↑ P **P** **15 29 38.2 +1.3**
PSZ Piszkesteto 63.12 312 P P **P** **15 29 36.0 -0.9**
PSZ pmax pmax
comp=Z,25nm,1.2s
PSZ MLR MLR
comp=Z,3μm,18.0s
PSZ Piszkesteto 63.12 312 P **P** **15 29 36.0 -0.9**
NSS Namsos 63.12 331 *e*P **P** **15 29 37.5 +1.0**
GKP Gorka Klasztor 63.31 318 *e*P **P** **15 29 38.3 +0.3**
GKP *e*L L 15 58 20.3
comp=Z,8μm,19.2s
IDI Anoyia 63.37 297 P **P** **15 29 39.0 +0.1**
comp=Z,15nm,0.7s,baz=45,slow=10,SNR=7.8
IDI Anoyia 63.37 297 P **P** **15 29 37.9 -1.0**
HFS Hagfors 63.43 326 P **P** **15 29 37.6 -1.1**
comp=Z,2.9nm,0.4s,baz=98,slow=6.1,SNR=5.7
VYHS Vyhne 63.63 313 *e*P **P** **15 29 40.5 +0.2**
VYHS pmax pmax
comp=Z,87nm,1.7s

VYHS Vyhne 63.63 313 *e*P P **15 29 40.5 +0.2**
VYHS *e*L L 15 57 58.5
OKC Ostrava-Krasne 63.69 314 *e*P P **15 29 41.2 +0.6**
OKC MLR MLR
comp=Z,4µm,14.9s
OKC Ostrava-Krasne 63.69 314 *e*P P **15 29 41.2 +0.6**
OKC AMS AMS 15 57 40.0
comp=Z,4µm,14.9s
FRGS Fruska Gora 63.97 309 *e*P P **15 29 44.0 +1.5**
MORC Moravsky Berou 64.08 314 ⇑P P **15 29 43.5 +0.3**
MORC Moravsky Berou 64.08 314 *e*P P **15 29 42.8 -0.5**
MORC Moravsky Berou 64.08 314 P P **15 29 42.5 -0.8**
MORC pmax pmax
comp=Z,28nm,1.1s
MORC MLR MLR
comp=Z,4µm,19.0s
MORC Moravsky Berou 64.08 314 P P **15 29 42.5 -0.8**
MORC IAmb IAmb 15 29 47.0
comp=Z,28nm,1.1s
MORC IAMs_20 IAMs_20 15 58 18.2
comp=Z,4µm,19.0s
AGG Agios Georgios 64.08 302 P P **15 29 42.1 -1.3**
AGG MLR MLR
comp=Z,2µm,19.0s
AGG Agios Georgios 64.08 302 P P **15 29 42.1 -1.3**
NC405 NORSAR Array S 64.11 327 P P **15 29 41.4 -1.8**
NC405 IAmb IAmb 15 29 51.6
comp=Z,55nm,1.0s
BSD Bornholm Skovb 64.12 320 *i* P P **15 29 45.2 +1.9**
BSD IAMs_20 IAMs_20 15 58 40.9
comp=Z,5µm,14.6s
DIVS Divibare 64.16 308 *e*P P **15 29 42.9 -1.0**
DIVS Divibare 64.16 308 P P **15 29 42.5 -1.4**
DIVS IAmb IAmb 15 30 01.4
comp=Z,37nm,1.2s
NC303 NORSAR Array S 64.24 328 P P **15 29 42.8 -1.2**
JAVC Velka Javorina 64.27 313 *e*P P **15 29 45.4 +0.9**
NC602 NORSAR Array S 64.30 327 P P **15 29 42.5 -1.9**
NC602 IAmb IAmb 15 29 55.6
comp=Z,45nm,0.9s
NC602 NORSAR Array S 64.30 327 *e*P P **15 29 43.0 -1.4**
NB201 NORSAR Array S 64.33 327 P P **15 29 42.6 -2.0**
RDOG Red Dog Mine 64.33 25 P P **15 29 42.9 -1.6**
NB2 NORSAR Subarra 64.37 327 P P **15 29 43.1 -1.8**
comp=Z,98nm,1.7s,baz=74,slow=6.9
NB2 NORSAR Subarra 64.37 327 P P **15 29 43.1 -1.8**
baz=74,slow=6.9
NOA NORSAR Array B 64.37 327 P P **15 29 43.3 -1.6**
comp=Z,4.9nm,0.7s,baz=74,slow=6.5,SNR=17
NOA PP PP **15 32 10.2 +4.2**
comp=Z,3.6nm,0.8s,baz=65,slow=8.1,SNR=4.4
NOA LR LR 15 58 03.5
comp=Z,4µm,19.6s,baz=90,slow=36
ANM Nome 64.38 29 IAMs_20 IAMs_20 15 59 32.6
comp=Z,4µm,20.0s
MORH Mrgy, Hungar 64.43 310 *e*P P **15 29 44.2 -1.3**
NWAO Narrogin (SRO) 64.44 166 P P **15 29 44.3 -1.2**
NWAO pmax pmax
comp=Z,41nm,0.7s
NWAO MLR MLR
comp=Z,2µm,21.0s
NWAO Narrogin (SRO) 64.44 166 P P **15 29 44.3 -1.2**
NWAO IAmb IAmb 15 29 50.5
comp=Z,41nm,0.7s
NWAO Narrogin (SRO) 64.44 166 P P **15 29 44.4 -1.1**
NWAO IAmb IAmb 15 29 50.5
comp=Z,51nm,0.7s
KRLC Kraliky 64.47 315 *e*P P **15 29 45.1 -0.7**
KRLC *e*S S **15 38 17.9 -7.1**
KRLC MLR MLR
comp=Z,5µm,18.2s
KRLC Kraliky 64.47 315 *e*P P **15 29 45.1 -0.7**
KRLC *e*S S **15 38 17.9 -7.1**
KRLC AMS AMS 15 58 00.0
comp=Z,5µm,18.2s
NC204 NORSAR Array S 64.51 328 P P **15 29 44.3 -1.6**
SMOL Smolenice 64.53 313 *e*P P **15 29 47.3 +1.2**
SMOL pmax pmax
comp=Z,44nm,1.9s
SMOL Smolenice 64.53 313 *e*P P **15 29 47.3 +1.2**
KSP Ksiaz 64.54 316 *e*P P **15 29 46.4 +0.2**
KSP *e*SSS SSS 15 45 29.1
KSP *e*L L 15 58 19.7
comp=Z,5µm,20.6s
NBO00 NORSAR Array S 64.57 327 P P **15 29 44.6 -1.6**
NBO00 IAmb IAmb 15 29 48.3
comp=Z,44nm,1.2s
NAO01 NORSAR Array S 64.58 327 P P **15 29 44.3 -1.9**
NAO01 IAmb IAmb 15 30 10.1
comp=Z,44nm,1.1s
BBLS Lazići 64.64 307 *e*P P **15 29 48.5 +1.5**
MODS Modra-Piesok 64.66 313 *e*P P **15 29 46.3 -0.7**
MODS pmax pmax
comp=Z,91nm,1.8s
MODS Modra-Piesok 64.66 313 *e*P P **15 29 46.3 -0.7**
MODS *e*L L 15 58 59.2
DPC Dobruska-Polom 64.67 315 *e*P P **15 29 47.4 +0.3**
DPC *e*S S **15 38 22.9 -4.6**
DPC MLR MLR
comp=Z,6µm,18.7s
DPC Dobruska-Polom 64.67 315 *e*P P **15 29 47.4 +0.3**
DPC *e*S S **15 38 22.9 -4.6**
DPC AMS AMS 15 58 10.0
comp=Z,6µm,18.7s
OSTC Ostas 64.67 315 *e*P P **15 29 46.9 -0.2**
OSTC *e*S S **15 38 24.6 -2.9**
OSTC AMS AMS 15 58 00.0
comp=Z,4µm,19.0s
KWAJ Kwajalein Atol 64.76 94 P P **15 29 45.9 -2.2**
KWAJ pmax pmax
comp=Z,486nm,1.4s
KWAJ Kwajalein Atol 64.76 94 P P **15 29 45.9 -2.2**
CHVC Chvalec 64.76 315 *e*P P 15 29 53.8 +6.1
UPC Upice 64.81 315 *e*P P **15 29 48.5 +0.5**
UPC *e*S S **15 38 29.6 +0.4**
UPC MLR MLR
comp=Z,5µm,18.4s
UPC Upice 64.81 315 *e*P P **15 29 48.5 +0.5**
UPC *e*S S **15 38 29.6 +0.4**
UPC AMS AMS 15 58 10.0
comp=Z,5µm,18.4s
VRAC Vranov 64.81 314 P P **15 29 48.9 +0.9**
comp=Z,8.2nm,0.8s,baz=74,slow=6.2,SNR=13
VRAC Vranov 64.81 314 ⇓P P **15 29 48.8 +0.9**
VRAC Vranov 64.81 314 *e*P P **15 29 47.5 -0.5**
ITM Ithomi 64.99 300 P P **15 29 47.4 -2.0**
ITM IAmb IAmb 15 29 50.8
comp=Z,56nm,1.2s
KRUC Moravsky 65.01 314 *e*P P **15 29 49.7 +0.4**
DOMB Dombas 65.06 329 *e*P P **15 29 49.7 +0.3**
TIR Tirane 65.12 305 ⇓P P **15 29 50.4 +0.3**
TIR Tirane 65.12 305 P P **15 29 48.1 -2.0**
TIR pmax pmax
comp=Z,38nm,0.7s
TIR MLR MLR
comp=Z,2µm,19.0s
TIR Tirane 65.12 305 P P **15 29 48.1 -2.0**
TIR IAmb IAmb 15 29 55.7
comp=Z,38nm,0.7s
RGN Rugen 65.17 320 P P **15 29 48.2 -1.9**
RGN IAMs_20 IAMs_20 15 59 21.5
comp=Z,4µm,18.0s
UPM Unac-Piva 65.19 307 *e*P P **15 29 50.7 -0.1**
PDG Podgorica 65.20 306 ⇓P P **15 29 51.3 +0.7**
PDG Podgorica 65.20 306 *e*P P **15 29 51.9 +1.3**
PDG Podgorica 65.20 306 P P **15 29 49.1 -1.5**
PDG IAmb IAmb 15 29 53.7
comp=Z,39nm,0.9s
DRME Dracevica, Mon 65.33 306 *e*P P **15 29 50.1 -1.3**
A21K Barrow 65.34 20 P P **15 29 50.6 -0.4**
baz=291,SNR=22
A21K Barrow 65.34 20 P P **15 29 50.2 -0.7**
TREC Trest 65.51 314 AMS AMS 15 58 50.0
comp=Z,5µm,22.5s
RUE Ruedersdorf 65.54 318 *e*P P **15 29 52.8 +0.2**
BRY Bratogost 65.54 307 *e*P P **15 29 52.1 -0.9**
KONO Kongsberg 65.55 326 IAMs_20 IAMs_20 15 59 26.0
comp=Z,4µm,19.0s
KONO Kongsberg 65.55 326 *e*P P **15 29 52.8 +0.3**
FORT Forrest 65.56 155 P P **15 29 52.9 0.0**
MOL Molde 65.57 330 *e*P P **15 29 53.5 +0.8**
PVCC Panska Ves 65.68 316 AMS AMS 16 00 00.0
comp=Z,4µm,16.7s
CONA Conrad Observa 65.70 313 *e*P P **15 29 53.6 -0.3**
comp=Z,54nm,2.0s,SNR=20
TREB Trebinje 65.73 307 *e*P P **15 29 52.0 -2.1**
CTA Charters Tower 65.79 134 P P **15 29 54.5 -0.1**
comp=Z,64nm,0.8s,baz=322,slow=9.1,SNR=4.8
CTAO Charters Tower 65.79 134 P P **15 29 53.9 -0.7**
CTAO pmax pmax
comp=Z,77nm,0.9s
CTAO Charters Tower 65.79 134 P P **15 29 53.9 -0.7**
SKAR Skarsla 65.83 327 *e*P P **15 29 54.6 +0.2**
BLY Banja Luka 65.86 309 *e*P P **15 29 53.7 -1.2**
PRU Pruhonice 65.87 315 *e*P P **15 29 55.1 +0.3**
PRU *e*S S 15 38 33.0 -9.1
PRU MLR MLR
comp=Z,5µm,17.9s
PRU Pruhonice 65.87 315 *e*P P **15 29 55.1 +0.3**
PRU *e*S S 15 38 33.0 -9.1
PRU AMS AMS 15 58 50.0
comp=Z,5µm,17.9s
PRA Prague 65.91 315 *e*S S **15 38 41.4 -1.2**
PRA AMS AMS 15 58 50.0
comp=Z,2µm,16.4s
AKN Aaknes 65.94 329 *e*P P **15 29 55.8 +0.7**
BRG Berggiesshubel 65.95 316 *e*P P **15 29 55.1 -0.2**
comp=Z,92nm,1.7s
BRG S S **15 38 45.0 +1.9**
BRG SS SS **15 43 02.0 +4.5**
comp=N,4µm,28.1s
comp=E,3µm,18.8s
comp=Z,5µm,19.2s
BRG Berggiesshubel 65.95 316 *e*P P **15 29 55.1 -0.2**
BRG S S **15 38 45.0 +1.9**
BRG SS SS **15 43 02.0 +4.5**
BRG pmax pmax
comp=Z,92nm,1.7s
BRG MLR MLR
comp=E,3µm,18.8s
BRG Berggiesshubel 65.95 316 *e*P P **15 29 55.2 -0.2**
comp=E,93nm,1.7s,baz=70,slow=6.3
STON Ston 66.13 307 *e*P P **15 29 55.3 -1.3**
ARSA Arzberg 66.14 312 *e*P P **15 29 57.0 +0.3**
comp=E,20nm,1.4s
FBE Freiberg 66.29 316 *e*P P **15 29 57.6 +0.2**
comp=E,142nm,1.8s,baz=70,slow=6.3
PBCC Pribram 66.30 315 *e*P P **15 30 00.5 +2.9**
CLL Collm 66.37 317 *i* P P **15 29 57.5 -0.5**
comp=Z,81nm,1.6s
CLL *i* 15 30 06.1
CLL *i* 15 30 14.8
CLL *e*S S **15 38 52.0 +3.8**
CLL *e*SS SS **15 43 02.0 -2.0**
CLL *e*SSS SSS 15 46 06.0
CLL *e*SSSS 15 47 12.0
CLL Collm 66.37 317 *i* P P **15 29 57.5 -0.5**
CLL *i* 15 30 06.1
CLL *e*S S **15 38 52.0 +3.8**
CLL pmax pmax
comp=Z,81nm,1.6s
CLL Collm 66.37 317 *e*P P **15 29 57.5 -0.5**
comp=Z,81nm,1.6s,baz=70,slow=6.3
CLL Collm 66.37 317 P P **15 29 57.2 -0.7**
CLL IAMs_20 IAMs_20 16 03 54.5
comp=Z,3µm,22.0s
SCTE Santa Cesarea 66.55 304 P P **15 29 57.8 -1.5**
GOET G??ttrup 66.58 323 *e*P P **15 30 03.3 +4.1**
PERS Pernice 66.61 311 *i* P P **15 30 01.4 +1.7**
SOKA Soboth 66.64 312 *e*P P **15 29 59.2 -0.7**
comp=Z,16nm,1.1s,SNR=19
HYA Hoyanger 66.65 328 *e*P P **15 30 00.5 +0.9**
CRES Cresnjev 66.66 311 *e*P P **15 29 59.1 -0.8**
KHC Kasperske Hory 66.74 314 *e*P P **15 30 00.1 -0.4**
KHC *e*S S **15 38 51.4 -1.5**
KHC MLR MLR
comp=Z,5µm,18.5s
KHC Kasperske Hory 66.74 314 *e*P P **15 30 00.1 -0.4**
KHC *ex* x 15 30 17.0
KHC *e*S S **15 38 51.4 -1.5**
KHC AMS AMS 15 59 40.0
comp=Z,5µm,18.5s
KHC Kasperske Hory 66.74 314 P P **15 29 59.5 -0.9**
MOA Molin 66.74 313 *e*P P **15 30 01.0 +0.5**
comp=Z,26nm,1.1s,SNR=8.0
GEC2 GERESS Array S 66.76 314 *e*P P **15 30 00.6 0.0**
comp=Z,106nm,1.9s,baz=70,slow=6.3
GEC2 GERESS Array S 66.76 314 P P **15 29 59.9 -0.8**
GEC2 IAmb IAmb 15 30 04.4
comp=Z,29nm,1.2s
GEC2 IAMs_20 IAMs_20 15 59 49.1
comp=Z,5µm,20.0s
GERES GERESS Array B 66.76 314 P P **15 29 59.8 -0.8**
comp=Z,5.7nm,0.9s,baz=71,slow=5.8,SNR=14
GERES LR LR 16 00 10.0
comp=Z,5µm,20.1s,baz=72,slow=37
BOJS Bojanci 66.90 310 *i* P P **15 30 03.5 +2.1**
BOJS *e*S S **15 38 55.4 +0.6**
BOJS *e* 15 46 37.1
TANN Tannenbergstha 66.99 316 *e*P P **15 30 01.9 -0.1**
comp=Z,220nm,1.8s,baz=70,slow=6.3
OBKA Obir 67.02 311 *e*P P **15 30 02.7 +0.3**
comp=Z,24nm,1.5s
BSEG Bad Segeberg 67.04 320 *e*P P **15 30 02.5 +0.4**
comp=Z,298nm,2.2s,baz=70,slow=6.3
NKC Novy Kostel 67.06 316 *e*P P **15 30 05.1 +2.6**
NKC MLR MLR
comp=Z,5µm,15.2s
NKC Novy Kostel 67.06 316 *e*P P **15 30 05.1 +2.6**
NKC AMS AMS 15 59 50.0
comp=Z,5µm,15.2s
WERD Werda 67.07 316 *e*P P **15 30 02.2 -0.3**
comp=Z,136nm,2.5s,baz=70,slow=6.3
WERN Wernitzgruen 67.09 316 *e*P P **15 30 02.6 -0.1**
comp=Z,66nm,1.7s,baz=70,slow=6.3
GUNZ Gunzen 67.09 316 *e*P P **15 30 02.5 -0.1**
comp=Z,84nm,1.6s,baz=70,slow=6.3
BLS5 Blasjo 67.13 326 *e*P P **15 30 03.4 +0.7**
NEUB Neuenburg 67.13 317 *e*P P **15 30 02.8 0.0**
comp=Z,195nm,1.8s,baz=70,slow=6.3
PLN Plauen 67.15 316 *e*P P **15 30 02.9 -0.1**
comp=Z,80nm,1.7s,baz=70,slow=6.3
WET Wettzell 67.17 315 *e*P P **15 30 03.3 +0.1**
comp=Z,124nm,1.9s,baz=70,slow=6.3
LJU Ljubljana 67.19 311 *i* P P **15 30 04.9 +1.5**
LJU Ljubljana 67.19 311 *e*P P **15 30 04.8 +1.5**
UNV Unalaska Valle 67.20 40 P P **15 30 02.6 -0.6**
DAG Danmarks Havn 67.32 348 *i* P P **15 30 01.8 -1.8**
DAG pmax pmax
comp=Z,16nm,0.8s
DAG MLR MLR
comp=Z,3µm,19.0s
DAG Danmarks Havn 67.32 348 *i* P P **15 30 01.8 -1.8**
comp=Z,16nm,0.8s
comp=Z,3µm,19.0s
DAG Danmarks Havn 67.32 348 *i* P P **15 30 01.8 -1.8**
DAG IAmb IAmb 15 30 07.0
comp=Z,16nm,0.8s
DAG IAMs_20 IAMs_20 16 02 58.2
comp=Z,3µm,19.3s
MANZ Manzenberg 67.35 316 *e*P P **15 30 04.2 -0.1**
comp=Z,114nm,1.9s,baz=70,slow=6.3
CEY Cerknica 67.36 311 *e*P P **15 30 04.6 +0.1**
ROTZ Rotzenmuhle 67.37 315 *e*P P **15 30 04.6 +0.2**
comp=Z,143nm,1.7s,baz=70,slow=6.3
MOX Moxa 67.42 316 *e*P P **15 30 04.6 -0.1**
comp=Z,113nm,1.9s,baz=70,slow=6.3
MOX *e*L L 16 00 13.9
comp=Z,3µm,18.6s
RIY Rijeka 67.47 310 *e*P P **15 30 07.5 +2.4**
AKUT Akutan 67.51 40 P P **15 30 03.9 -1.3**
MYKA Terra Mystica 67.56 312 *e*P P **15 30 05.2 -0.6**
comp=Z,3.0nm,0.6s
KBA Koelnbreinsper 67.59 312 *e*P P **15 30 06.2 +0.1**
comp=Z,7.8nm,0.6s,SNR=7.2
NRDL Niedersach Rie 67.65 319 *e*P P **15 30 06.5 +0.5**
comp=Z,150nm,1.6s,baz=70,slow=6.3
PRED Cave del Predi 67.68 312 P P **15 30 05.2 -1.3**
PRED IAMs_20 IAMs_20 16 00 50.4
comp=Z,4µm,20.0s
RJOB Jochberg 67.71 313 *e*P P **15 30 05.8 -0.8**
comp=Z,93nm,1.5s,baz=70,slow=6.3
CLZ Clausthal 67.73 318 *e*P P **15 30 06.8 +0.1**
comp=Z,90nm,1.5s,baz=70,slow=6.3
LODK Lodwar 67.95 261 P P **15 30 11.5 +2.8**
SNR=12
GRA1 Grafenberg Arr 67.99 316 P P **15 30 07.6 -0.8**
GRA1 IAmb IAmb 15 30 26.1
comp=Z,27nm,1.0s
GRA1 IAMs_20 IAMs_20 16 00 22.5
comp=Z,5µm,21.0s
GRF Grafenberg Arr 67.99 316 P P **15 30 07.6 -0.8**
GRF pmax pmax
comp=Z,27nm,1.0s
GRF MLR MLR
comp=Z,5µm,21.0s
GRF Grafenberg Arr 67.99 316 *e*P P **15 30 08.6 +0.3**
comp=Z,207nm,1.8s,baz=70,slow=6.3
GRF *e*L L 16 00 32.5
comp=Z,4µm,21.6s
ZOU Zoufplan 68.02 312 P P **15 30 07.7 -1.1**
TIP Timpagrande 68.10 303 ⇑P P **15 30 09.6 +0.3**
TIP Timpagrande 68.10 303 P P **15 30 08.3 -1.0**
TIP IAmb IAmb 15 30 12.4
comp=Z,45nm,1.2s
ABTA Abfaltersbach 68.25 312 *e*P P **15 30 09.6 -0.5**
comp=Z,15nm,1.0s,SNR=7.3
UBBA Unterbreizbach 68.32 317 *e*P P **15 30 10.1 -0.1**
comp=Z,85nm,1.7s,baz=70,slow=6.3
CIMO Cimolais 68.45 312 P P **15 30 09.7 -1.6**
CIMO IAmb IAmb 15 30 13.8
comp=Z,46nm,1.4s
WTTA Wattenberg 68.62 313 *e*P P **15 30 12.1 -0.4**
comp=Z,59nm,1.7s,SNR=13
WATA Walderalm 68.63 313 *e*P P **15 30 12.6 0.0**
comp=Z,55nm,1.7s,SNR=11
TOLK Toolik Lake Re 68.67 22 P P **15 30 11.8 -0.5**
baz=298,SNR=28
TOLK Toolik Lake Re 68.67 22 P P **15 30 12.0 -0.3**
TOLK IAmb IAmb 15 30 19.6
comp=Z,47nm,0.8s
KIBK Kibwezi 68.74 254 P P **15 30 15.5 +1.9**
SNR=14
KMBO Kilima Mbogo 68.74 256 P P **15 30 15.9 +2.1**
comp=Z,12nm,0.7s,baz=51,slow=9.9,SNR=21
KMBO LR LR 15 59 00.9
comp=Z,753nm,21.6s,baz=76,slow=35
KMBO Kilima Mbogo 68.74 256 *i* P P **15 30 14.6 +0.7**
SNR=29
KMBO Kilima Mbogo 68.74 256 P P **15 30 13.3 -0.5**
KMBO pmax pmax
comp=Z,30nm,0.9s
KMBO MLR MLR
comp=Z,2µm,19.0s
KMBO Kilima Mbogo 68.74 256 P P **15 30 13.3 -0.5**
KMBO IAmb IAmb 15 30 24.4
comp=Z,30nm,0.8s
TTA Tatalina 68.85 29 P P **15 30 13.3 -0.3**
TTA pmax pmax
comp=Z,23nm,1.0s
TTA MLR MLR
comp=Z,4µm,18.0s
TTA Tatalina 68.85 29 P P **15 30 13.3 -0.3**
SQTA Sankt Quirin 68.90 313 *e*P P **15 30 13.4 -0.8**
comp=Z,46nm,1.5s,SNR=9.5
MOTA Moosalm 68.92 313 *e*P P **15 30 13.8 -0.6**
comp=Z,47nm,1.4s,SNR=15
PAOL Paolisi 68.97 306 P P **15 30 12.8 -1.9**
CTI Castel Tesino 69.06 312 P P **15 30 13.2 -2.0**
CTI pmax pmax
comp=Z,13nm,0.7s
CTI MLR MLR
comp=Z,5µm,21.0s
CTI Castel Tesino 69.06 312 P P **15 30 13.2 -2.0**
CTI IAMs_20 IAMs_20 16 01 43.6
comp=Z,5µm,21.0s
IBBN Ibbenburen 69.06 319 *e*P P **15 30 15.0 0.0**
comp=Z,412nm,2.5s,baz=70,slow=6.3
INTR Introdacqua 69.06 307 P P **15 30 13.4 -1.9**
INTR IAmb IAmb 15 30 26.4
comp=Z,31nm,0.9s
CEL Celeste 69.07 303 P P **15 30 12.8 -2.6**
RETA Reutte 69.08 313 *i* P P **15 30 14.9 -0.4**
comp=Z,35nm,1.6s,SNR=6.8
COLD Coldfoot 69.13 23 P P **15 30 14.1 -1.0**
baz=298,SNR=21
COLD Coldfoot 69.13 23 P P **15 30 14.3 -0.8**
COLD IAmb IAmb 15 30 23.1
comp=Z,41nm,0.9s
DBG Daneborg 69.13 346 *i* P P **15 30 14.2 -0.8**
DBG IAmb IAmb 15 30 15.0
comp=Z,48nm,1.2s
DBG IAMs_20 IAMs_20 15 59 50.3
comp=Z,4µm,30.8s
FETA Feichten 69.28 313 *e*P P **15 30 15.8 -0.9**
comp=Z,19nm,1.3s,SNR=11
AQU L'Aquila 69.28 308 P P **15 30 14.9 -1.7**
AQU pmax pmax
comp=Z,88nm,1.3s
AQU MLR MLR
comp=Z,3µm,20.0s
AQU L'Aquila 69.28 308 P P **15 30 14.9 -1.7**
AQU IAMs_20 IAMs_20 16 02 57.2
comp=Z,3µm,20.0s
NRCA Norcia 69.30 308 P P **15 30 14.7 -2.0**
NRCA IAmb IAmb 15 30 29.9
comp=Z,22nm,0.8s
TEOL Teolo 69.30 311 P P **15 30 15.1 -1.6**
TEOL IAmb IAmb 15 30 19.9
comp=Z,80nm,1.3s
UBR Ueberruh 69.42 314 *e*P P **15 30 16.9 -0.5**
comp=Z,152nm,2.0s,baz=70,slow=6.3
TNS Taunus Mts 69.46 317 *e*P P **15 30 17.4 -0.1**
comp=Z,49nm,1.5s,baz=70,slow=6.3
MURB Monte Urbino 69.53 309 P P **15 30 17.8 -0.3**
STU Stuttgart 69.57 315 P P **15 30 17.0 -1.2**
STU pmax pmax
comp=Z,27nm,0.9s
STU MLR MLR
comp=Z,4µm,20.0s
STU Stuttgart 69.57 315 P P **15 30 17.0 -1.2**
STU IAmb IAmb 15 30 41.0
comp=Z,27nm,0.9s
STU IAMs_20 IAMs_20 16 01 20.2
comp=Z,4µm,20.0s
BUG Bochum--Univer 69.68 318 *e*P P **15 30 18.7 0.0**
comp=Z,178nm,1.9s,baz=70,slow=6.3
DAVA Damuels 69.72 313 *e*P P **15 30 18.5 -0.8**
comp=Z,7.1nm,1.0s
SVW2 Sparrevohn 69.82 30 P P **15 30 19.8 +0.3**
SVW2 IAmb IAmb 15 30 25.2
comp=Z,49nm,1.2s
SVW2 IAMs_20 IAMs_20 15 59 06.1
comp=Z,4µm,19.0s
DAVOX Davos/Dischmat 69.91 313 P P **15 30 19.1 -1.5**
comp=Z,10nm,0.7s,baz=82,slow=4.3,SNR=22
EUNU Eureka 69.92 2 P P **15 30 19.4 -0.4**
EUNU IAmb IAmb 15 30 33.1
comp=Z,34nm,1.2s
EUNU IAMs_20 IAMs_20 16 05 18.1
comp=Z,4µm,19.0s
SALO Salr 69.95 312 P P **15 30 19.9 -0.7**
MLY Manley 69.98 26 P P **15 30 19.5 -1.0**
baz=298,SNR=36
ZCCA Zocca 70.15 310 P P **15 30 20.1 -1.8**
ZCCA IAmb IAmb 15 30 47.1
comp=Z,47nm,1.0s
ZCCA IAMs_20 IAMs_20 16 02 42.9
comp=Z,4µm,21.0s
BFO Black Forest 70.27 315 P P **15 30 21.4 -1.2**
BFO pmax pmax
comp=Z,28nm,1.2s
BFO MLR MLR
comp=Z,5µm,18.0s
BFO Black Forest 70.27 315 *e*P P **15 30 22.1 -0.4**
comp=Z,111nm,1.7s,baz=70,slow=6.3
BFO Black Forest 70.27 315 P P **15 30 21.4 -1.2**
LATE Laterza 70.27 308 P P **15 30 21.4 -1.3**
OSSC Osservatorio P 70.29 309 P P **15 30 21.8 -1.0**
OSSC IAmb IAmb 15 30 25.9
comp=Z,51nm,1.3s
BPAW Bear Paw Mtn. 70.33 26 P P **15 30 22.2 -0.5**
BPAW IAMs_20 IAMs_20 15 59 14.1
comp=Z,3µm,20.0s
TUE Stuetta 70.37 313 P P **15 30 22.1 -1.3**
TUE IAmb IAmb 15 30 45.9
comp=Z,30nm,0.9s
LRW Lerwick 70.39 329 *e*P P **15 30 25.0 +2.1**
LRW IAmb IAmb 15 30 29.8
comp=Z,38nm,0.8s
PRMA PARMA 70.42 311 IAMs_20 IAMs_20 16 02 45.1
comp=Z,4µm,22.0s
PPLA Purkeypile 70.43 28 P P **15 30 22.9 -0.5**
PPLA IAMs_20 IAMs_20 16 02 32.8
comp=Z,4µm,18.0s

I23K Minto, Yukon-K 70.44 25 P **P** **15 30 23.1 -0.1**
baz=300,SNR=14
I23K Minto, Yukon-K 70.44 25 P **P** **15 30 22.6 -0.5**
I23K IAmb IAmb 15 30 49.9
comp=Z,51nm,1.2s
VAE Valguarnera 70.45 303 P **P** **15 30 26.6 +2.7**
comp=Z,14nm,0.3s,baz=199,slow=20,SNR=3.2
BBOO Buckleboo 70.55 150 P **P** **15 30 23.2 -1.0**
BBOO IAmb IAmb 15 30 34.0
comp=Z,70nm,1.2s
CHGN Chignik 70.55 36 P **P** **15 30 23.1 -0.9**
CHGN IAmb IAmb 15 30 29.5
comp=Z,42nm,0.8s
CNBA Chernabura Isl 70.58 37 P **P** **15 30 23.4 -0.8**
VLC Villacollemand 70.61 310 IAMs_20 IAMs_20 16 03 10.2
comp=Z,4µm,22.0s
KTH Kantishna Hill 70.62 27 P **P** **15 30 23.9 -0.5**
KTH IAmb IAmb 15 30 30.5
comp=Z,45nm,1.2s
BTNL Ternell 70.68 318 pP **P** **15 30 24.7 -0.3**
NEA2 Nenana 70.82 26 P **P** **15 30 24.8 -0.7**
baz=300,SNR=47
BHOU Houvegnez 70.85 318 P **P** **15 30 23.7 -2.3**
BHOU sP **pP** **15 30 27.6 -1.8**
BWN Browne 70.88 26 P **P** **15 30 26.3 +0.4**
BWN IAMs_20 IAMs_20 16 03 21.0
comp=Z,3µm,21.0s
TRF Thorofare Moun 70.92 27 P **P** **15 30 25.5 -0.9**
MDM Murphy Dome 70.94 25 P **P** **15 30 25.6 -0.7**
BSTI Sart Tilman 71.01 318 sP sP 15 30 30.2 -1.4
ECH Echery 71.03 315 P **P** **15 30 25.5 -1.7**
ECH pmax pmax
comp=Z,44nm,1.5s
ECH MLR MLR
comp=Z,4µm,19.0s
ECH Echery 71.03 315 P **P** **15 30 25.5 -1.7**
ECH IAmb IAmb 15 30 30.5
comp=Z,44nm,1.5s
ECH IAMs_20 IAMs_20 16 02 12.9
comp=Z,4µm,19.0s
WLF Walferdange 71.04 317 pP **P** **15 30 27.5 +0.3**
WLF Walferdange 71.04 317 P **P** **15 30 26.3 -0.9**
WLF pmax pmax
comp=Z,53nm,1.0s
WLF Walferdange 71.04 317 *e*P **P** **15 30 27.6 +0.5**
comp=Z,231nm,1.6s,baz=70,slow=6.3
WLF Walferdange 71.04 317 P **P** **15 30 26.3 -0.9**
WLF IAmb IAmb 15 30 44.9
comp=Z,53nm,1.0s
WLF IAMs_20 IAMs_20 16 07 12.1
comp=Z,3µm,18.0s
CORL Corleone 71.09 303 P **P** **15 30 26.2 -1.6**
CORL IAmb IAmb 15 30 52.4
comp=Z,34nm,1.2s
MSSA Maissana 71.12 311 P **P** **15 30 26.8 -1.1**
MSSA IAmb IAmb 15 30 30.1
comp=Z,44nm,1.3s
TCOL CIGO, UAF Yank 71.12 25 P **P** **15 30 26.2 -1.2**
baz=301
TCOL CIGO, UAF Yank 71.12 25 P **P** **15 30 26.5 -0.8**
COLA College 71.13 25 P **P** **15 30 26.6 -0.8**
COLA pmax pmax
comp=Z,94nm,1.2s
COLA MLR MLR
comp=Z,2µm,19.0s
COLA College 71.13 25 P **P** **15 30 26.6 -0.8**
SKT Skwentna 71.14 29 P **P** **15 30 26.4 -1.1**
SKT IAmb IAmb 15 30 32.7
comp=Z,38nm,0.9s
SKT IAMs_20 IAMs_20 16 00 56.5
comp=Z,4µm,20.0s
POKR Poker Plat Res 71.15 25 P **P** **15 30 27.2 -0.4**
baz=301,SNR=29
POKR Poker Plat Res 71.15 25 P **P** **15 30 26.7 -0.9**
BCLA Clavier 71.23 318 P **P** **15 30 28.1 -0.1**
BCLA pP **pP** **15 30 30.3 -1.4**
WRH Wood River Hil 71.25 25 P **P** **15 30 27.6 -0.6**
CCB Clear Creek Bu 71.26 25 P **P** **15 30 27.2 -1.0**
CLTB Caltabellotta 71.28 303 P **P** **15 30 27.9 -1.1**
MCK McKinley 71.31 26 P **P** **15 30 27.4 -1.1**
baz=300,SNR=19
RSO Redoubt South 71.34 30 P **P** **15 30 26.7 -2.3**
BGES Gesves 71.37 318 x x 15 30 30.7
CUT Chulitna 71.44 28 P **P** **15 30 28.3 -1.0**
baz=300,SNR=6.9
OPO Ambohidratompo 71.48 235 P **P** **15 30 29.8 -0.6**
comp=Z,17nm,0.9s,baz=49,slow=11,SNR=12
OPO LR LR 16 00 27.3
comp=Z,900nm,20.1s,baz=182,slow=35
RND Reindeer 71.50 27 P **P** **15 30 28.4 -1.4**
RND pmax pmax
comp=Z,48nm,1.1s
RND MLR MLR
comp=Z,4µm,22.0s
RND Reindeer 71.50 27 P **P** **15 30 28.4 -1.4**
RND IAmb IAmb 15 30 34.7
comp=Z,48nm,1.1s
RND IAMs_20 IAMs_20 16 03 38.0
comp=Z,4µm,22.0s
IL31 71.53 25 P **P** **15 30 28.6 -1.3**
ILAR Eielson Array 71.53 25 P **P** **15 30 29.0 -0.9**
comp=Z,8.0nm,0.9s,baz=287,slow=5.9,SNR=36
ILAR LR LR 16 04 10.1
comp=Z,3µm,19.3s,baz=300,slow=38
ILAR Eielson Array 71.53 25 P **P** **15 30 28.0 -1.8**
BMRD Maredsous 71.59 318 pP **P** **15 30 30.8 +0.3**
HDA Harding Lake 71.70 25 P **P** **15 30 29.7 -1.2**
baz=302,SNR=5.4
HDA Harding Lake 71.70 25 P **P** **15 30 29.5 -1.4**
HDA IAMs_20 IAMs_20 16 05 21.0
comp=Z,2µm,19.0s
SENIN Lac Senin/Sane 71.71 313 P **P** **15 30 30.9 -0.6**
SENIN IAMs_20 IAMs_20 16 00 50.0
comp=Z,3µm,18.0s
SUA Susitna One 71.72 29 P **P** **15 30 30.1 -1.1**
SUA IAMs_20 IAMs_20 16 01 24.8
comp=Z,3µm,18.0s
DOU Dourbes 71.78 318 P **P** **15 30 28.2 -3.3**
DOU pP **pP** **15 30 31.9 -3.1**
DOU sP **sP** **15 30 33.6 -2.6**
CAPN Captain Cook N 71.89 30 P **P** **15 30 30.7 -1.3**
baz=300
SCO Scoresbysund 71.98 343 *i* P **P** **15 30 32.7 +0.3**
SCO Scoresbysund 71.98 343 P **P** **15 30 32.3 -0.2**
SCO Scoresbysund 71.98 343 *i* P **P** **15 30 32.7 +0.3**
SCO Scoresbysund 71.98 343 *i* P **P** **15 30 32.7 +0.3**
CHIR Chirikof Islan 72.17 35 P **P** **15 30 33.9 0.0**
CHIR IAMs_20 IAMs_20 16 01 34.1
comp=Z,4µm,19.0s
DHY Denali Highway 72.25 27 P **P** **15 30 33.1 -1.3**
GHO Glory Hole Cre 72.31 28 P **P** **15 30 33.7 -1.0**
GHO IAmb IAmb 15 30 54.6
comp=Z,73nm,1.1s
GHO IAMs_20 IAMs_20 16 04 35.3
comp=Z,3µm,21.0s
PMR Palmer 72.32 28 P **P** **15 30 33.7 -0.9**
PMR pmax pmax
comp=Z,76nm,0.9s
PMR Palmer 72.32 28 P **P** **15 30 33.7 -0.9**
PMR IAMs_20 IAMs_20 16 00 16.7
comp=Z,3µm,18.0s
RC01 Rabbit Creek A 72.33 29 P **P** **15 30 33.7 -0.9**
baz=300,SNR=27
STKA Stephens Creek 72.35 145 P **P** **15 30 35.5 +0.4**
comp=Z,27nm,1.0s,baz=326,slow=6.5,SNR=58
STKA Stephens Creek 72.35 145 P **P** **15 30 34.1 -1.0**
CNPM China Poot 72.47 31 IAMs_20 IAMs_20 16 04 27.7
comp=Z,3µm,20.0s
BRLK Bradley Lake 72.50 30 P **P** **15 30 34.7 -1.1**
BRLK IAmb IAmb 15 30 41.1
comp=Z,62nm,0.9s
BRLK IAMs_20 IAMs_20 16 00 59.4
comp=Z,3µm,18.0s
SML Sawmill 72.53 28 P **P** **15 30 35.2 -0.8**
SML IAMs_20 IAMs_20 15 59 14.4
comp=Z,3µm,20.0s
SII Sitkinak Islan 72.53 34 P **P** **15 30 35.0 -1.0**
SII IAMs_20 IAMs_20 16 02 58.7
comp=Z,4µm,20.0s
O22K Cooper Landing 72.64 29 P **P** **15 30 34.4 -2.2**
OHAK Old Harbor 72.65 33 P **P** **15 30 35.9 -0.8**
OHAK IAmb IAmb 15 30 45.5
comp=Z,44nm,0.8s
OHAK IAMs_20 IAMs_20 16 01 00.7
comp=Z,4µm,18.0s

BNI Bardonecchia 72.66 312 P **P** **15 30 35.7 -1.5**
BNI pmax pmax
comp=Z,21nm,0.7s
BNI MLR MLR
comp=Z,4µm,20.0s
BNI Bardonecchia 72.66 312 P **P** **15 30 35.7 -1.5**
BNI IAmb IAmb 15 30 50.4
comp=Z,21nm,0.7s
BNI IAMs_20 IAMs_20 16 03 40.2
comp=Z,4µm,20.0s
EIDS Eidsvold 72.67 134 P **P** **15 30 37.0 -0.2**
EIDS IAmb IAmb 15 30 39.4
comp=Z,47nm,0.8s
KNK Knik Glacier 72.69 28 P **P** **15 30 36.7 -0.2**
KNK IAMs_20 IAMs_20 16 00 28.5
comp=Z,3µm,19.0s
KDAK Kodiak Island 72.71 33 P **P** **15 30 36.6 -0.4**
KDAK pmax pmax
comp=Z,62nm,0.9s
KDAK MLR MLR
comp=Z,3µm,20.0s
KDAK Kodiak Island 72.71 33 P **P** **15 30 36.6 -0.4**
KDAK IAmb IAmb 15 30 42.2
comp=Z,62nm,0.9s
KDAK IAMs_20 IAMs_20 16 02 55.1
comp=Z,3µm,20.0s
RIDG Independent Ri 72.84 25 P **P** **15 30 36.2 -1.7**
RIDG IAmb IAmb 15 30 41.8
comp=Z,68nm,1.1s
RIDG IAMs_20 IAMs_20 16 04 51.4
comp=Z,3µm,18.0s
SCM Sheep Creek Mo 72.92 28 P **P** **15 30 38.0 -0.3**
SCM pmax pmax
comp=Z,75nm,1.0s
SCM MLR MLR
comp=Z,3µm,21.0s
SCM Sheep Creek Mo 72.92 28 P **P** **15 30 38.0 -0.3**
SCM IAmb IAmb 15 30 59.0
comp=Z,75nm,1.0s
SCM IAMs_20 IAMs_20 16 04 24.7
comp=Z,3µm,21.0s
SEW Seward 72.95 30 IAMs_20 IAMs_20 16 00 50.5
comp=Z,3µm,19.0s
ESY Stoneypath 73.02 325 *e*P **P** **15 30 40.0 +1.1**
SCRK Sand Creek 73.03 25 P **P** **15 30 38.3 -0.7**
baz=304,SNR=48
PAX Paxson 73.03 26 IAMs_20 IAMs_20 16 00 38.6
comp=Z,3µm,21.0s
DOT Dot Lake 73.18 25 P **P** **15 30 39.7 -0.1**
DOT IAMs_20 IAMs_20 16 04 59.1
comp=Z,3µm,19.0s
VSL Villasalto 73.22 306 P **P** **15 30 39.0 -1.5**
M24K Tolsona, Glenn 73.24 27 P **P** **15 30 39.9 -0.3**
baz=303,SNR=19
M24K Tolsona, Glenn 73.24 27 P **P** **15 30 40.3 +0.2**
M24K IAMs_20 IAMs_20 16 04 34.9
comp=Z,3µm,21.0s
TULEG Thule 73.39 358 P **P** **15 30 39.9 -0.8**
TULEG IAmb IAmb 15 30 48.9
TULEG comp=Z,36nm,0.8s IAMs_20 IAMs_20 16 06 12.8
comp=Z,2µm,19.0s
TULEG Thule 73.39 358 *i* P **P** **15 30 40.6 -0.1**
TULEG IAmb IAmb 15 30 41.2
comp=Z,54nm,1.1s
TULEG IAMs_20 IAMs_20 16 06 07.5
comp=Z,2µm,17.1s
GLI Glacier Island 73.53 28 IAMs_20 IAMs_20 16 02 33.8
comp=Z,3µm,18.0s
EGAK Eagle 73.56 23 P **P** **15 30 41.3 -0.6**
EGAK IAMs_20 IAMs_20 16 05 39.1
comp=Z,4µm,20.0s
EKA Eskdalemuir Ar 73.57 325 P **P** **15 30 40.9 -1.3**
comp=Z,0.6nm,0.2s,baz=58,slow=6.8,SNR=13
KLU Klutina 73.67 28 P **P** **15 30 42.2 -0.6**
KLU IAMs_20 IAMs_20 16 01 32.3
comp=Z,4µm,20.0s
K27K Chicken 73.68 24 P **P** **15 30 42.5 -0.2**
K27K IAmb IAmb 15 30 48.1
comp=Z,50nm,1.1s
K27K IAMs_20 IAMs_20 16 05 09.1
comp=Z,3µm,18.0s
INK Inuvik 73.69 19 P **P** **15 30 41.0 -1.5**
comp=Z,27nm,0.7s,baz=325,slow=7.2,SNR=68
INK LR LR 16 05 11.2
comp=Z,516nm,21.1s,baz=332,slow=38
INK Inuvik 73.69 19 P **P** **15 30 41.9 -0.7**
INK pmax pmax
comp=Z,66nm,0.9s
INK MLR MLR
comp=Z,3µm,18.0s
INK Inuvik 73.69 19 P **P** **15 30 41.9 -0.7**
INK IAmb IAmb 15 30 49.7
comp=Z,66nm,0.9s
INK IAMs_20 IAMs_20 16 07 54.2
comp=Z,3µm,18.0s
MENT Mentasta 73.72 26 P **P** **15 30 42.3 -0.7**
MENT IAMs_20 IAMs_20 16 03 07.5
comp=Z,3µm,18.0s
LBWR Ladybower, Pea 73.78 323 *e*P **P** **15 30 43.4 0.0**
LBWR IAmb IAmb 15 30 46.6
comp=Z,41nm,1.0s
L26K Log Cabin Wild 73.81 26 P **P** **15 30 42.8 -0.7**
baz=305
FID Port Fidalgo 73.86 28 IAMs_20 IAMs_20 16 02 43.4
comp=Z,4µm,19.0s
KESW Keswick, Cumbr 73.91 324 *e*P **P** **15 30 45.9 +1.7**
KESW IAmb IAmb 15 30 47.4
comp=Z,64nm,1.3s
SSB Saint Sauveur 73.92 313 P **P** **15 30 43.3 -1.2**
SSB pmax pmax
comp=Z,10.0nm,0.9s
SSB MLR MLR
comp=Z,3µm,22.0s
SSB Saint Sauveur 73.92 313 P **P** **15 30 43.3 -1.2**
SSB Saint Sauveur 73.92 313 IAMs_20 IAMs_20 16 04 22.4
comp=Z,3µm,22.0s
SUMG Summit 73.97 348 *i* P **P** **15 30 44.4 -0.3**
SUMG pmax pmax
comp=Z,240nm,1.3s
SUMG Summit 73.97 348 P **P** **15 30 43.4 -1.3**
SUMG IAmb IAmb 15 30 50.5
comp=Z,68nm,1.2s
SUMG Summit 73.97 348 *i* P **P** **15 30 44.4 -0.3**
comp=Z,240nm,1.3s
SUMG Summit 73.97 348 *i* P **P** **15 30 44.4 -0.3**
SUMG IAmb IAmb 15 30 50.0
comp=Z,241nm,1.3s
MBAR Mbarara 73.97 260 P **P** **15 30 46.5 +1.1**
comp=Z,6.0nm,0.7s,baz=35,slow=8.2
MBAR Mbarara 73.97 260 P **P** **15 30 44.0 -1.5**
HIN Hinchinbrook I 74.04 29 P **P** **15 30 44.6 -0.2**
HIN IAmb IAmb 15 31 01.4
comp=Z,81nm,1.1s
HIN IAMs_20 IAMs_20 16 05 07.3
comp=Z,4µm,20.0s
CLF Chambon-Foret 74.07 316 P **P** **15 30 43.4 -1.8**
CLF IAMs_20 IAMs_20 16 03 09.2
comp=Z,3µm,20.0s
N25K Chitina, Valde 74.14 27 P **P** **15 30 44.7 -0.8**
baz=304
N25K Chitina, Valde 74.14 27 P **P** **15 30 44.7 -0.8**
N25K IAmb IAmb 15 30 50.9
comp=Z,45nm,1.1s
N25K IAMs_20 IAMs_20 16 00 04.7
comp=Z,3µm,19.0s
EYAK Cordova Ski Ar 74.27 28 P **P** **15 30 45.8 -0.3**
EYAK IAmb IAmb 15 30 53.7
comp=Z,67nm,0.8s
BCAR Beaver Creek A 74.36 25 P **P** **15 30 46.9 +0.1**
GLB Gilahina Butte 74.54 27 P **P** **15 30 46.6 -1.2**
GLB IAMs_20 IAMs_20 16 05 26.2
comp=Z,4µm,20.0s
DAWY Dawson 74.61 24 P **P** **15 30 47.3 -0.8**
DAWY IAMs_20 IAMs_20 16 06 44.9
comp=Z,4µm,21.0s
RAGM Ragged Mountai 74.80 28 P **P** **15 30 49.8 +0.4**
RAGM IAmb IAmb 15 30 57.0
comp=Z,57nm,1.2s
FOEL Foel Wylfa 74.81 323 *e*P **P** **15 30 51.0 +1.5**
FOEL IAmb IAmb 15 30 53.2
comp=Z,55nm,1.1s
VRDI Verde Repeater 74.81 27 P **P** **15 30 49.1 -0.4**
VRDI IAMs_20 IAMs_20 16 00 26.2
comp=Z,4µm,21.0s
RES Resolute Bay 74.84 5 P **P** **15 30 49.2 0.0**

RES pmax pmax
comp=Z,37nm,1.0s
RES Resolute Bay 74.84 5 P **P** **15 30 49.2 0.0**
RES IAmb IAmb 15 30 57.3
comp=Z,37nm,0.9s
MCARA McCarthy VSAT 74.88 27 P **P** **15 30 49.1 -0.6**
MCARA IAmb IAmb 15 31 02.5
comp=Z,38nm,1.0s
KEST Kesra 74.89 303 P **P** **15 30 49.5 -0.8**
comp=Z,3.5nm,0.6s,baz=4.7,slow=3.2,SNR=13
KEST LR LR 16 08 18.8
comp=Z,538nm,20.8s,baz=352,slow=39
KEST Kesra 74.89 303 P **P** **15 30 49.1 -1.2**
HMT Hamilton 75.00 28 P **P** **15 30 49.9 -0.5**
HMT IAmb IAmb 15 31 07.6
comp=Z,102nm,1.5s
HMT IAMs_20 IAMs_20 16 06 36.3
comp=Z,3µm,20.0s
KAIM Kayak Island 75.17 28 IAMs_20 IAMs_20 16 04 19.0
comp=Z,4µm,21.0s
YLL Llanberis 75.19 323 *e*P **P** **15 30 53.5 +1.9**
C36M Paulatuk 75.32 15 P **P** **15 30 50.9 -1.2**
baz=320
C36M Paulatuk 75.32 15 P **P** **15 30 50.6 -1.4**
TGL Tana Glacier 75.33 27 P **P** **15 30 51.5 -0.9**
TGL IAmb IAmb 15 30 57.3
comp=Z,50nm,1.0s
SUCK Suckling Hills 75.35 28 IAMs_20 IAMs_20 16 01 27.8
comp=Z,4µm,18.0s
BALM Baldy 75.35 27 P **P** **15 30 52.3 -0.3**
BALM IAMs_20 IAMs_20 16 05 53.7
comp=Z,3µm,21.0s
BORG Borgarnes 75.60 338 P **P** **15 30 52.8 -0.9**
BORG pmax pmax
comp=Z,197nm,1.3s
BORG Borgarnes 75.60 338 P **P** **15 30 52.8 -0.9**
BARN Barnard Glacie 75.61 27 P **P** **15 30 53.3 -0.9**
BARN IAMs_20 IAMs_20 16 02 49.5
comp=Z,4µm,21.0s
ISLE Juniper Island 75.61 27 IAMs_20 IAMs_20 16 00 48.6
comp=Z,4µm,22.0s
CTGM Chitina Glacie 75.79 27 P **P** **15 30 54.8 -0.4**
CTGM IAmb IAmb 15 31 00.6
comp=Z,62nm,1.3s
CTGM IAMs_20 IAMs_20 16 06 16.4
comp=Z,3µm,18.0s
FOMA Nahampoana Res 75.93 230 P **P** **15 30 55.7 -0.5**
FOMA IAmb IAmb 15 31 00.8
comp=Z,44nm,0.9s
YAH Yahtse 75.99 27 P **P** **15 30 56.1 -0.3**
YAH IAmb IAmb 15 31 01.4
comp=Z,42nm,0.8s
MESA MESA 76.02 28 P **P** **15 30 56.2 -0.4**
MESA IAmb IAmb 15 31 04.1
comp=Z,48nm,0.9s
TABL Table Mountain 76.19 27 P **P** **15 30 57.3 -0.2**
TABL IAmb IAmb 15 31 06.7
comp=Z,29nm,1.0s
TABL IAMs_20 IAMs_20 16 03 22.9
comp=Z,3µm,19.0s
DSB Dublin 76.26 324 P **P** **15 30 56.9 -0.9**
DSB IAmb IAmb 15 31 01.2
comp=Z,84nm,1.5s
ARMA Armidale 76.67 137 P **P** **15 30 59.7 -0.7**
ARMA IAmb IAmb 15 31 07.5
comp=Z,34nm,0.8s
PCA Pinnacle 76.75 27 P **P** **15 30 59.5 -1.0**
PCA IAmb IAmb 15 31 05.4
comp=Z,35nm,0.8s
ICESG Greenland Ices 77.08 347 *i* P **P** **15 31 02.2 -0.4**
ICESG IAmb IAmb 15 31 07.7
comp=Z,64nm,1.0s
BCPM Bancas Point 77.08 27 P **P** **15 31 01.2 -1.1**
BCPM IAmb IAmb 15 31 16.7
comp=Z,86nm,1.5s
BCPM IAMs_20 IAMs_20 16 06 57.3
comp=Z,4µm,21.0s
HYT Haines Junctio 77.34 26 P **P** **15 31 03.2 -0.7**
HYT IAMs_20 IAMs_20 16 03 38.3
comp=Z,3µm,19.0s
WHY Whitehorse 78.42 25 P **P** **15 31 08.7 -1.2**
WHY IAMs_20 IAMs_20 16 03 54.6
comp=Z,3µm,22.0s
TOO Toolangi 78.83 146 P **P** **15 31 11.6 -0.6**
TOO pmax pmax
comp=Z,48nm,1.0s
TOO Toolangi 78.83 146 P **P** **15 31 11.6 -0.6**
TOO IAmb IAmb 15 31 18.6
comp=Z,48nm,1.0s
SKAG Skagway 79.06 26 P **P** **15 31 12.2 -1.0**
SKAG IAmb IAmb 15 31 18.8
comp=Z,50nm,0.9s
BESE Bessie Mountai 79.84 26 IAMs_20 IAMs_20 16 04 48.4
comp=Z,3µm,22.0s
SFJD Kangerlussuaq 80.90 349 P **P** **15 31 22.8 -0.3**
SFJD pmax pmax
comp=Z,41nm,1.0s
SFJD Kangerlussuaq 80.90 349 P **P** **15 31 22.8 -0.3**
SFJD IAmb IAmb 15 31 27.0
comp=Z,41nm,0.9s
SFJD Kangerlussuaq 80.90 349 *i* P **P** **15 31 23.0 -0.1**
SFJD Kangerlussuaq 80.90 349 *i* P **P** **15 31 23.0 -0.1**
DZM Mont Dzumac 80.97 122 *e*P **P** **15 31 26.3 +2.1**
comp=Z,98nm,1.4s
DZM Mont Dzumac 80.97 122 *e*S **S** **15 41 33.5 -0.4**
comp=Z,243nm,27.1s
DZM Mont Dzumac 80.97 122 *e*LR LR 15 56 34.5
comp=Z,1µm,23.9s
DLBC Dease Lake 81.74 25 P **P** **15 31 26.3 -1.5**
ES19 SONSECA Array 82.09 311 IAMs_20 IAMs_20 16 09 44.3
comp=Z,2µm,20.0s
ES09 SONSECA Array 82.11 311 IAMs_20 IAMs_20 16 09 44.6
comp=Z,2µm,20.0s
ES08 SONSECA Array 82.12 311 IAMs_20 IAMs_20 16 09 47.9
comp=Z,3µm,21.0s
ES10 SONSECA Array 82.12 311 IAMs_20 IAMs_20 16 09 46.0
comp=Z,2µm,21.0s
ES02 SONSECA Array 82.13 311 IAMs_20 IAMs_20 16 07 59.3
comp=Z,2µm,20.0s
ES03 SONSECA Array 82.14 311 IAMs_20 IAMs_20 16 09 47.4
comp=Z,3µm,21.0s
ES11 SONSECA Array 82.14 311 IAMs_20 IAMs_20 16 09 46.4
comp=Z,2µm,21.0s
ES01 SONSECA Array 82.14 311 IAMs_20 IAMs_20 16 07 59.6
comp=Z,2µm,21.0s
ES06 SONSECA Array 82.14 311 IAMs_20 IAMs_20 16 09 30.6
comp=Z,2µm,20.0s
ES04 SONSECA Array 82.15 311 IAMs_20 IAMs_20 16 09 48.7
comp=Z,3µm,21.0s
ESBB Sonseca Array 82.15 311 P **P** **15 31 30.0 -0.3**
ESBB IAmb IAmb 15 31 36.5
comp=Z,45nm,1.4s
ESBB IAMs_20 IAMs_20 16 09 47.7
comp=Z,2µm,19.0s
ESDC Sonseca Array 82.15 311 P **P** **15 31 30.3 0.0**
comp=Z,4.2nm,0.9s,baz=45,slow=4.8,SNR=28
ESDC PP **PP** **15 34 43.3 +5.4**
comp=Z,3.1nm,1.1s,baz=60,slow=8.8,SNR=4.0
ESDC LR LR 16 10 21.3
comp=Z,2µm,21.2s,baz=65,slow=37
ESDC Sonseca Array 82.15 311 P **P** **15 31 29.0 -1.4**
ES05 SONSECA Array 82.15 311 IAMs_20 IAMs_20 16 09 49.4
comp=Z,3µm,20.0s
ES12 SONSECA Array 82.16 311 IAMs_20 IAMs_20 16 09 47.2
comp=Z,2µm,21.0s
ES13 SONSECA Array 82.17 311 IAMs_20 IAMs_20 16 09 49.4
comp=Z,3µm,21.0s
WRAK Wrangell Islan 82.31 27 IAMs_20 IAMs_20 16 05 18.9
comp=Z,3µm,20.0s
PAB San Pablo 82.47 311 P **P** **15 31 30.8 -1.2**
PAB pmax pmax
comp=Z,32nm,1.5s
PAB San Pablo 82.47 311 P **P** **15 31 30.8 -1.2**
PAB San Pablo 82.47 311 IAMs_20 IAMs_20 16 09 56.3
comp=Z,2µm,20.0s
CRAG Craig 82.67 28 IAMs_20 IAMs_20 16 09 29.4
comp=Z,3µm,19.0s
PBRG Braganca 82.74 314 *e*P **P** **15 31 35.3 +1.9**
comp=Z,55nm,2.0s
YKA Yellowknife Ar 83.16 16 P **P** **15 31 35.0 0.0**
comp=Z,15nm,0.7s,baz=333,slow=4.9,SNR=29
YKA LR LR 16 14 29.5
comp=Z,2µm,18.7s,baz=0.0,slow=40
MVO Moncorvo 83.28 314 *e*P **P** **15 31 37.2 +1.0**
comp=Z,77nm,2.2s
MVO Moncorvo 83.28 314 *e*LR LR 16 03 45.5

comp=Z,2µm,18.0s
PCAB Cabril 83.59 315 eP P 15 31 39.0 +1.3
comp=Z,120nm,1.9s
PGAV Gavieira, Arco 83.59 315 eP P 15 31 39.7 +1.9
comp=Z,120nm,1.8s
PGAV Gavieira, Arco 83.59 315 eLR LR 16 04 27.0
comp=Z,µm,20.0s
POLO Lamas de Olo 83.64 314 eP P 15 31 39.7 +1.6
comp=Z,26nm,2.1s
TAM Tamanrasset 83.95 293 P P 15 31 38.0 -2.0
TAM pmax pmax
comp=Z,15nm,1.2s
TAM MLR MLR
comp=Z,1µm,22.0s
TAM Tamanrasset 83.95 293 P P 15 31 38.0 -2.0
LSZ Lusaka 83.97 249 P P 15 31 39.3 -0.8
comp=Z,17nm,0.8s,baz=27,slow=5.9,SNR=16
LSZ Lusaka 83.97 249 P P 15 31 38.4 -1.6
LSZ IAmb IAmb 15 31 45.4
comp=Z,22nm,0.8s
LSZ Lusaka 83.97 249 IAMs_20 IAMs_20 16 08 33.0
comp=Z,2µm,18.0s
MTE Manteigas 84.03 314 eP P 15 31 42.0 +1.9
comp=Z,130nm,2.0s
MTE Manteigas 84.03 314 eLR LR 16 02 04.5
comp=Z,2µm,20.0s
MTE eLQ LQ 16 04 39.1
MTE Manteigas 84.03 314 P P 15 31 38.7 -1.4
MTE IAmb IAmb 15 31 46.7
comp=Z,50nm,1.1s
MTE IAMs_20 IAMs_20 16 10 28.4
comp=Z,2µm,20.0s
PVIS Viseu 84.07 314 eP P 15 31 42.7 +2.5
comp=Z,100nm,1.8s
JBK JBK 84.08 306 P P 15 31 43.5 +2.9
SNR=12
PCBR Castelo Branco 84.31 313 eP P 15 31 42.8 +1.4
comp=Z,58nm,1.8s
FIGM Figuig 84.33 304 P P 15 31 42.3 +0.5
SNR=9.5
PMRV Marv??o 84.49 313 eP P 15 31 42.9 +0.6
comp=Z,103nm,1.8s
PMRV Marv??o 84.49 313 eLR LR 16 04 36.1
comp=Z,1µm,16.0s
DIB Dawson Inlet, 84.54 29 IAMs_20 IAMs_20 16 12 13.9
comp=Z,3µm,18.0s
COI Coimbra 84.69 314 IAMs_20 IAMs_20 16 09 52.7
comp=Z,2µm,20.0s
PMTG Montargil 85.23 313 eP P 15 31 47.9 +1.9
comp=Z,76nm,2.0s
SFS San Fernando 85.39 310 IAMs_20 IAMs_20 16 13 37.8
comp=Z,2µm,18.0s
CHEFC Chefchaouen 85.57 308 P P 15 31 50.5 +2.6
SNR=7.8
PBEJ Beja 85.60 312 eP P 15 31 50.3 +2.4
comp=Z,72nm,2.0s
PVAQ Vaqueiros 85.86 311 eP P 15 31 51.5 +2.3
comp=Z,69nm,1.9s
PVAQ Vaqueiros 85.86 311 eLR LR 16 05 12.6
comp=Z,2µm,20.0s
PVAQ Vaqueiros 85.86 311 P P 15 31 48.0 -1.2
PVAQ IAmb IAmb 15 31 55.4
comp=Z,28nm,1.1s
PVAQ IAMs_20 IAMs_20 16 11 58.9
comp=Z,3µm,21.0s
PCVE Castro Verde 85.94 312 eP P 15 31 51.7 +2.1
comp=Z,88nm,1.8s
PNCL Nicolau / Gran 85.97 312 eP P 15 31 49.7 -0.1
comp=Z,79nm,2.1s
PBDV Barranco-do-Ve 86.09 311 eP P 15 31 50.2 -0.2
comp=Z,99nm,1.8s
MDT Midelt 86.34 306 P P 15 31 51.5 -0.3
comp=Z,4.6nm,1.0s,baz=41,slow=4.3,SNR=6.1
MDT Midelt 86.34 306 P P 15 31 54.2 +2.4
SNR=8.8
MORF Marmelete 86.52 312 eP P 15 31 52.8 +0.2
MORF AMS AMS 16 09 41.4
comp=N,2µm,21.1s
MORF Marmelete 86.52 312 eP P 15 31 52.8 +0.2
MATP Matopo 86.55 244 P P 15 31 52.4 -0.5
comp=N,21nm,0.7s,baz=63,slow=3.7,SNR=30
PFVI Vila Bisbo 86.74 311 IAMs_20 IAMs_20 16 10 15.2
comp=Z,2µm,19.0s
RTC Rabat Centre 87.23 308 IAMs_20 IAMs_20 16 12 42.7
comp=Z,3µm,20.0s
MSVF Nonsavu 87.45 112 P P 15 31 56.0 -1.3
MSVF pmax pmax
comp=Z,36nm,0.9s
MSVF Nonsavu 87.45 112 P P 15 31 56.0 -1.3
MSVF IAmb IAmb 15 32 14.5
comp=Z,36nm,0.9s
ZGR Zagora 88.55 304 P P 15 32 05.0 +2.4
SNR=9.1
ZGR P P 15 32 05.0 +2.4
SNR=9.1
FCC Fort Churchill 90.42 8 IAMs_20 IAMs_20 16 18 46.4
comp=Z,2µm,18.0s
LBTB Lobatse 91.30 242 P P 15 32 16.1 +0.8
comp=Z,4.0nm,0.7s,baz=104,slow=4.2,SNR=6.2
TORD Torodi Ar. Bea 91.99 286 P P 15 32 20.1 +1.4
comp=Z,8.8nm,1.1s,baz=34,slow=2.3,SNR=20
TORD PP PP 15 35 58.2 +0.2
comp=Z,2.5nm,0.8s,baz=58,slow=6.0,SNR=6.9
TORD LR LR 16 19 35.9
comp=Z,1µm,19.5s,baz=55,slow=39
NLWA Neilton Lookou 92.55 29 IAMs_20 IAMs_20 16 10 36.7
comp=Z,2µm,20.0s
B06A Marblemount 92.62 27 IAMs_20 IAMs_20 16 11 19.6
comp=Z,2µm,22.0s
D03D Eldon 92.76 29 P P 15 32 19.2 -2.5
baz=322
FFC Flin Flon 93.01 14 IAMs_20 IAMs_20 16 16 57.9
comp=Z,2µm,19.0s
BOSA Boshof 93.49 239 P P 15 32 25.9 +0.5
comp=Z,4.8nm,0.8s,baz=11,slow=3.0,SNR=8.3
BOSA LR LR 16 15 41.3
comp=Z,823nm,18.1s,baz=61,slow=36
B08A Colville Reser 93.59 26 IAMs_20 IAMs_20 16 15 17.0
comp=Z,2µm,21.0s
LTY Liberty 93.97 27 IAMs_20 IAMs_20 16 13 36.2
comp=Z,2µm,21.0s
F04A Amboy 94.31 29 IAMs_20 IAMs_20 16 21 44.4
comp=Z,1µm,19.0s
NEW Newport 94.49 25 IAMs_20 IAMs_20 16 12 46.8
comp=Z,3µm,21.0s
SCHQ Schefferville 94.78 353 P P 15 32 32.5 +1.6
comp=Z,9.2nm,0.8s,baz=39,slow=13,SNR=2.3
SCHQ LR LR 16 19 32.8
comp=Z,1µm,19.1s,baz=18,slow=38
SCHQ Schefferville 94.78 353 IAmb IAmb 15 32 38.0
comp=Z,14nm,0.9s
PMOZ Porto Moniz, M 94.79 312 eLR LR 16 10 23.3
comp=Z,2µm,20.0s
E07A Sunnyside 94.86 27 IAMs_20 IAMs_20 16 14 13.7
comp=Z,2µm,20.0s
WALA Waterton Lakes 94.94 23 IAMs_20 IAMs_20 16 18 23.2
comp=Z,3µm,20.0s
HAWA Hanford 95.12 27 IAMs_20 IAMs_20 16 14 44.7
comp=Z,2µm,22.0s
H04D Lebanon 95.30 30 P P 15 32 31.5 -1.9
baz=323
F07A Phinny Hill Vi 95.37 28 IAMs_20 IAMs_20 16 18 52.2
comp=Z,2µm,19.0s
E09A Wood Farm, Sta 95.57 26 IAMs_20 IAMs_20 16 19 04.3
comp=Z,2µm,20.0s
KOWA Kowa 95.97 290 P P 15 32 38.5 +1.6
comp=Z,2.9nm,0.6s,baz=57,slow=8.3,SNR=5.6
KOWA PP PP 15 36 32.3 +3.3
comp=Z,1.3nm,0.4s,baz=66,slow=9.4,SNR=3.8
G08A Pilot Rock 96.26 28 IAMs_20 IAMs_20 16 17 46.6
comp=Z,2µm,21.0s
HUMO Hull Mountain 96.71 32 IAMs_20 IAMs_20 16 15 49.1
comp=Z,2µm,21.0s
RPZ Rata Peaks 97.01 137 LR LR 16 18 44.5
comp=Z,861nm,20.4s,baz=254,slow=37
EGMT Eagleton 97.17 21 IAMs_20 IAMs_20 16 21 01.3
comp=Z,2µm,18.0s
BMO Blue Mountains 97.28 27 IAMs_20 IAMs_20 16 15 58.5
comp=Z,2µm,19.0s
DGMT Dagmar 98.33 17 IAMs_20 IAMs_20 16 21 18.7
comp=Z,2µm,20.0s
ULM Lac du Bonnet 98.42 11 P P 15 32 47.0 -0.3
comp=Z,1.4nm,0.6s,baz=8.1,slow=14,SNR=1.6
ULM LR LR 16 21 07.0
comp=Z,947nm,18.8s,baz=334,slow=38
ULM Lac du Bonnet 98.42 11 IAMs_20 IAMs_20 16 19 04.8
comp=Z,2µm,22.0s
MOD Modoc Plateau 98.46 30 IAMs_20 IAMs_20 16 21 54.2
comp=Z,2µm,21.0s
MFID Camas Ranch 99.06 27 IAMs_20 IAMs_20 16 21 03.9
comp=Z,2µm,21.0s
LAO LASA Array 99.42 19 IAMs_20 IAMs_20 16 16 57.9
comp=Z,2µm,22.0s
HLID Hailey 99.48 26 IAMs_20 IAMs_20 16 23 29.9
comp=Z,2µm,20.0s
RLMT Red Lodge 99.91 22 IAMs_20 IAMs_20 16 16 10.1
comp=Z,2µm,20.0s
MDND Maddock 100.00 14 IAMs_20 IAMs_20 16 18 12.0
comp=Z,2µm,20.0s
AGMN Agassiz Nation 100.30 12 IAMs_20 IAMs_20 16 20 11.7
comp=Z,2µm,20.0s
FLWY Flagg Ranch 100.36 23 IAMs_20 IAMs_20 16 22 10.8
comp=Z,2µm,19.0s
PAHR Pah Rah Range 100.65 31 IAMs_20 IAMs_20 16 18 38.1
comp=Z,2µm,22.0s
TPAW Teton Pass 100.79 24 IAMs_20 IAMs_20 16 18 06.6
comp=Z,2µm,21.0s
DBIC Dimbokro 100.87 284 PP PP 15 37 06.5 -0.2
comp=Z,6.0nm,0.9s,baz=9.0,slow=10,SNR=4.2
KIC Kosan Boka 100.94 284 ePKP1 PP 15 37 09.4 +2.1
comp=Z,45nm,1.4s
REDW Red Top Meadow 100.94 24 IAMs_20 IAMs_20 16 22 09.4
comp=Z,2µm,20.0s
TIC Toumodi 101.02 284 ePKP1 PP 15 37 08.4 +0.5
PNTR Pine Nut 101.05 32 IAMs_20 IAMs_20 16 25 08.0
comp=Z,2µm,20.0s
LIC Lamto 101.25 284 ePKP1 PP 15 37 08.9 -0.7
comp=Z,4.3nm,0.2s
EYMN Ely 101.33 9 IAMs_20 IAMs_20 16 24 40.8
comp=Z,2µm,20.0s
AHID Auburn Hatcher 101.38 24 IAMs_20 IAMs_20 16 18 27.8
comp=Z,1µm,18.0s
ELK Elko 101.55 28 IAMs_20 IAMs_20 16 22 50.7
comp=Z,2µm,22.0s
BW06 Boulder Array 101.91 23 IAMs_20 IAMs_20 16 23 10.8
comp=Z,2µm,20.0s
PDAR Pinedale Array 101.91 23 PP PP 15 37 14.2 +0.8
comp=Z,1.1nm,1.0s,baz=180,slow=0.9,SNR=4.2
NVAR Mina Array Bea 102.17 31 P Pdif 15 33 10.3 +5.6
comp=Z,0.5nm,0.7s,baz=310,slow=3.4,SNR=3.4
HWUT Hardware Ranch 102.22 25 IAMs_20 IAMs_20 16 17 30.4
comp=Z,2µm,22.0s
LHV Little Huntoon 102.23 31 IAMs_20 IAMs_20 16 22 05.1
comp=Z,2µm,22.0s
E38A The Farm, Brul 102.64 9 IAMs_20 IAMs_20 16 24 35.3
comp=Z,2µm,20.0s
PQI Presque Isle 102.97 353 IAMs_20 IAMs_20 16 19 46.1
comp=Z,2µm,20.0s
DUG Dugway, Tooele 102.98 27 IAMs_20 IAMs_20 16 24 12.4
comp=Z,2µm,20.0s
K22A Casper 103.00 21 IAMs_20 IAMs_20 16 22 46.8
comp=Z,2µm,20.0s
F36A Milaca 103.06 11 IAMs_20 IAMs_20 16 24 41.6
comp=Z,2µm,20.0s
LMN Caledonia Moun 103.36 350 IAMs_20 IAMs_20 16 23 10.0
comp=Z,2µm,21.0s
E43A Lone Tree Farm 103.40 6 IAMs_20 IAMs_20 16 25 19.4
comp=Z,2µm,19.0s
SPR3 Spring Creek 3 103.40 28 IAMs_20 IAMs_20 16 20 37.9
comp=Z,1µm,19.0s
R11A Troy Canyon, C 103.43 29 IAMs_20 IAMs_20 16 20 35.7
comp=Z,2µm,20.0s
COWI Conover 103.45 8 IAMs_20 IAMs_20 16 24 42.7
comp=Z,2µm,20.0s
E46A Sault Ste Mari 103.62 4 IAMs_20 IAMs_20 16 25 36.3
comp=Z,2µm,20.0s
F64A Sherman 103.80 353 IAMs_20 IAMs_20 16 29 33.7
comp=Z,2µm,19.0s
SPMN Marine on St. 103.80 11 IAMs_20 IAMs_20 16 20 16.0
comp=Z,2µm,20.0s
F63A Nahmanta, Br 104.03 353 IAMs_20 IAMs_20 16 19 59.1
comp=Z,2µm,20.0s
G40A Rib Lake 104.13 9 IAMs_20 IAMs_20 16 23 16.2
comp=Z,2µm,22.0s
HAL Halifax 104.36 349 IAMs_20 IAMs_20 16 23 05.5
comp=Z,2µm,21.0s
PRN Pahroc Range 104.45 30 IAMs_20 IAMs_20 16 21 17.7
comp=Z,2µm,20.0s
O20A White River Ci 104.70 23 IAMs_20 IAMs_20 16 30 10.0
comp=Z,1µm,19.0s
N23A Red Feather La 104.78 21 IAMs_20 IAMs_20 16 19 15.8
comp=Z,2µm,20.0s
FRNY Flat Rock 105.24 357 IAMs_20 IAMs_20 16 27 47.9
comp=Z,1µm,20.0s
SADO Sadowa 105.42 1 IAMs_20 IAMs_20 16 25 40.1
comp=Z,2µm,19.0s
LONY Lake Ozonia 105.50 357 IAMs_20 IAMs_20 16 25 39.8
comp=Z,2µm,20.0s
I42A Beger Farm, 105.65 8 IAMs_20 IAMs_20 16 27 39.4
comp=Z,2µm,20.0s
VT1 Waterbury 105.69 356 IAMs_20 IAMs_20 16 25 20.4
comp=Z,2µm,20.0s
PV22 Blue Mesa, Par 105.94 25 IAMs_20 IAMs_20 16 26 11.7
comp=Z,2µm,21.0s
SMCO Snowmass 105.99 23 IAMs_20 IAMs_20 16 19 58.6
comp=Z,1µm,21.0s
PV14 Lion Creek, Pa 105.99 25 IAMs_20 IAMs_20 16 26 13.3
comp=Z,2µm,19.0s
PV19 Morning Glory 106.06 25 IAMs_20 IAMs_20 16 26 26.1
comp=Z,2µm,21.0s
PV16 Nyswonger Mesa 106.09 25 IAMs_20 IAMs_20 16 22 31.7
comp=Z,2µm,22.0s
PV12 Saucer Basin, 106.12 25 IAMs_20 IAMs_20 16 19 25.7
comp=Z,2µm,20.0s
NCB Newcomb 106.13 357 IAMs_20 IAMs_20 16 21 45.9
comp=Z,1µm,21.0s
PV03 Paradox Valley 106.16 25 IAMs_20 IAMs_20 16 21 52.2
comp=Z,2µm,21.0s
L34A Svendsen Farm, 106.29 14 IAMs_20 IAMs_20 16 24 39.6
comp=Z,2µm,21.0s
U15A North Rim 106.43 28 IAMs_20 IAMs_20 16 27 32.2
comp=Z,2µm,20.0s
J59A Piesco 106.65 357 IAMs_20 IAMs_20 16 26 11.2
comp=Z,2µm,20.0s
ACCN Adirondack Com 106.69 357 IAMs_20 IAMs_20 16 28 52.3
comp=Z,2µm,19.0s
J57A Williamstown 106.75 358 IAMs_20 IAMs_20 16 30 48.4
comp=Z,2µm,20.0s
J58A Remsen 106.78 358 IAMs_20 IAMs_20 16 23 24.8
comp=Z,2µm,21.0s
Q24A Divide 106.78 22 IAMs_20 IAMs_20 16 25 46.0
comp=Z,2µm,20.0s
W13A Hualapai Mount 106.90 30 IAMs_20 IAMs_20 16 24 21.6
comp=Z,1µm,19.0s
J56A Wolcott 106.90 359 IAMs_20 IAMs_20 16 25 47.0
comp=Z,2µm,20.0s
J54A Appleton 106.92 0 IAMs_20 IAMs_20 16 26 33.8
comp=Z,2µm,20.0s
J55A Hilton 106.92 360 IAMs_20 IAMs_20 16 23 20.5
comp=Z,2µm,21.0s
SCIA State Center 106.96 12 IAMs_20 IAMs_20 16 24 06.8
comp=Z,2µm,18.0s
PFO Pinyon Flats O 106.98 33 IAMs_20 IAMs_20 16 21 31.2
comp=Z,1µm,20.0s
XPFO Pion Flat 106.99 33 IAMs_20 IAMs_20 16 21 31.2
comp=Z,1µm,20.0s
L40A Anamosa 107.13 10 IAMs_20 IAMs_20 16 30 05.3
comp=Z,2µm,20.0s
MVCO Mesa Verde 107.22 25 IAMs_20 IAMs_20 16 27 04.4
comp=Z,2µm,18.0s
N33A J Bar K, Exete 107.23 15 IAMs_20 IAMs_20 16 25 32.5
comp=Z,2µm,20.0s
K50A Casco 107.30 3 IAMs_20 IAMs_20 16 30 20.0
comp=Z,2µm,19.0s
S22A 4UR Ranch, Cre 107.33 23 IAMs_20 IAMs_20 16 27 00.5
comp=Z,2µm,20.0s
TRY Troy 107.34 356 IAMs_20 IAMs_20 16 26 18.7
comp=Z,1µm,20.0s
K58A Earlville 107.39 358 IAMs_20 IAMs_20 16 23 30.8
comp=Z,2µm,20.0s
MMNY Mt. Morris Dam 107.46 360 IAMs_20 IAMs_20 16 23 59.7
comp=Z,2µm,20.0s
N35A Tabor 107.51 14 IAMs_20 IAMs_20 16 26 30.4
comp=Z,2µm,19.0s
KSCO Kaye Shedlock' 107.51 20 IAMs_20 IAMs_20 16 28 43.9
comp=Z,2µm,20.0s
WES Weston 107.53 355 IAMs_20 IAMs_20 16 24 34.8
comp=Z,2µm,21.0s
AAM Ann Arbor 107.72 4 IAMs_20 IAMs_20 16 25 05.5
comp=Z,2µm,22.0s
SDCO Great Sand Dun 107.78 22 IAMs_20 IAMs_20 16 26 26.3
comp=Z,2µm,21.0s
L59A Walton 107.94 358 IAMs_20 IAMs_20 16 25 28.4
comp=Z,2µm,21.0s
BRYW Bryant College 108.01 355 IAMs_20 IAMs_20 16 25 00.3
comp=Z,2µm,19.0s
L48A N Adams 108.02 5 IAMs_20 IAMs_20 16 25 16.9
comp=Z,2µm,20.0s
N38A Joes South For 108.04 12 IAMs_20 IAMs_20 16 24 38.6
comp=Z,2µm,19.0s
ERPA Erie 108.05 1 IAMs_20 IAMs_20 16 25 36.5
comp=Z,2µm,19.0s
Y14A Wickenburg 108.27 30 IAMs_20 IAMs_20 16 24 29.8
comp=Z,1µm,21.0s
CBKS Cedar Bluff 108.50 18 IAMs_20 IAMs_20 16 25 47.8
comp=Z,2µm,20.0s
X16A Lo Mia Camp, P 108.52 29 IAMs_20 IAMs_20 16 27 16.3
comp=Z,1µm,21.0s
W18A Petrified Fore 108.59 27 IAMs_20 IAMs_20 16 25 55.2
comp=Z,1µm,19.0s
M50A Fremont 108.65 4 IAMs_20 IAMs_20 16 25 36.6
comp=Z,2µm,20.0s
M54A Oil Creek Stat 108.67 1 IAMs_20 IAMs_20 16 24 31.7
comp=Z,2µm,21.0s
T25A Trinidad 108.69 22 IAMs_20 IAMs_20 16 21 54.3
comp=Z,2µm,20.0s
SYO Syowa Base 108.71 200↑ ePP PP 15 38 09.0 +4.9
M55A Ridgway 108.72 0 IAMs_20 IAMs_20 16 29 45.1
comp=Z,2µm,19.0s
N47A Urbana 108.97 6 IAMs_20 IAMs_20 16 31 06.2
comp=Z,2µm,19.0s
KSU1 Kansas State U 108.99 15 IAMs_20 IAMs_20 16 26 11.9
comp=Z,2µm,21.0s
PAL Palisades 109.07 357 IAMs_20 IAMs_20 16 31 54.2
comp=Z,2µm,19.0s
R32A Long Quarter, 109.13 17 IAMs_20 IAMs_20 16 23 42.8
comp=Z,2µm,22.0s
N51A Ashland 109.17 3 IAMs_20 IAMs_20 16 27 29.3
comp=Z,2µm,20.0s
N54A Moraine State 109.21 1 IAMs_20 IAMs_20 16 24 57.8
comp=Z,2µm,21.0s
N59A State Game Lan 109.24 358 IAMs_20 IAMs_20 16 28 27.2
comp=Z,2µm,20.0s
N58A Sunbury 109.34 359 IAMs_20 IAMs_20 16 28 18.8
comp=Z,2µm,21.0s
N53A Lisbon 109.34 2 IAMs_20 IAMs_20 16 27 25.6
comp=Z,2µm,20.0s
O44A Mansfield 109.39 8 IAMs_20 IAMs_20 16 28 02.4
comp=Z,2µm,20.0s
LUPA Lehigh Univers 109.54 358 IAMs_20 IAMs_20 16 27 36.8
comp=Z,2µm,20.0s
SSPA Standing Stone 109.55 360 IAMs_20 IAMs_20 16 25 02.5
comp=Z,2µm,21.0s
P43A Skaggs, Pawnee 109.75 9 IAMs_20 IAMs_20 16 31 35.0
comp=Z,2µm,19.0s
O49A Covington 109.77 5 IAMs_20 IAMs_20 16 26 07.3
comp=Z,2µm,21.0s
ACSO Alum Creek Sta 109.82 4 IAMs_20 IAMs_20 16 28 42.2
comp=Z,1µm,19.0s
ANMO Albuquerque 109.98 24 IAMs_20 IAMs_20 16 28 46.4
comp=Z,1µm,19.0s
O52A Adamsville 109.99 3 IAMs_20 IAMs_20 16 30 37.2
comp=Z,2µm,18.0s
214A Organ Pipe Nat 110.04 31 IAMs_20 IAMs_20 16 26 50.6
comp=Z,1µm,18.0s
P46A Rosedale 110.07 7 IAMs_20 IAMs_20 16 26 38.3
comp=Z,2µm,20.0s
MVL Millersville 110.17 358 IAMs_20 IAMs_20 16 24 42.4
comp=Z,2µm,20.0s
WUPA West Chester U 110.21 358 IAMs_20 IAMs_20 16 27 55.8
comp=Z,1µm,20.0s
P48A Milroy 110.40 6 IAMs_20 IAMs_20 16 28 13.1
comp=Z,2µm,21.0s
P61A Hammonton 110.44 357 IAMs_20 IAMs_20 16 28 18.1
comp=Z,2µm,20.0s
P52A Corning 110.46 3 IAMs_20 IAMs_20 16 26 20.9
comp=Z,2µm,19.0s
Q44A Meyer Farm, Va 110.55 9 IAMs_20 IAMs_20 16 31 36.0
comp=Z,2µm,19.0s
P51A Williamsport 110.56 4 P PKiKP 15 37 39.9 -2.2
baz=356
P51A Williamsport 110.56 4 IAMs_20 IAMs_20 16 29 41.9
comp=Z,2µm,20.0s
BLO Bloomington 110.58 7 IAMs_20 IAMs_20 16 26 51.3
comp=Z,2µm,21.0s
Y22D IRIS PASSCAL I 110.59 25 IAMs_20 IAMs_20 16 28 20.9
comp=Z,1µm,20.0s
TUC Tucson 110.61 29 IAMs_20 IAMs_20 16 28 44.7
comp=Z,1µm,20.0s
U32A Winter Ranch, 110.98 18 IAMs_20 IAMs_20 16 28 39.9
comp=Z,1µm,20.0s
Q51A Peebles 111.00 4 IAMs_20 IAMs_20 16 27 08.7
comp=Z,2µm,20.0s
Q56A Snyder Ridge, 111.14 1 IAMs_20 IAMs_20 16 29 16.1
comp=Z,2µm,19.0s
Q60A Greensboro 111.15 358 IAMs_20 IAMs_20 16 31 56.2
comp=Z,2µm,20.0s
FVM French Village 111.25 10 IAMs_20 IAMs_20 16 25 54.3
comp=Z,2µm,20.0s
WCI Wyandotte Cave 111.54 7 IAMs_20 IAMs_20 16 29 20.8
comp=Z,2µm,21.0s
R49A Shelbyville 111.58 6 IAMs_20 IAMs_20 16 25 58.4
comp=Z,2µm,20.0s
AMTX Amarillo 111.62 21 IAMs_20 IAMs_20 16 29 09.6
comp=Z,2µm,19.0s
121A Cookes Peak, D 111.63 27 IAMs_20 IAMs_20 16 25 57.5
comp=Z,1µm,20.0s
R50A Paris 111.67 5 IAMs_20 IAMs_20 16 29 25.5
comp=Z,2µm,20.0s
SIUC Southern Illin 111.69 9 IAMs_20 IAMs_20 16 27 01.3
comp=Z,2µm,19.0s
S44A Carbondale 111.70 9 IAMs_20 IAMs_20 16 30 32.2
comp=Z,2µm,18.0s
R53A Hurricane 111.77 3 IAMs_20 IAMs_20 16 31 42.5
comp=Z,2µm,20.0s
OK029 Liberty Lake 111.94 17 IAMs_20 IAMs_20 16 28 39.0
comp=Z,2µm,21.0s
OK031 S. Brethren Rd 111.94 16 IAMs_20 IAMs_20 16 28 36.1
comp=Z,2µm,20.0s
319A Douglas 112.05 28 IAMs_20 IAMs_20 16 31 01.7
comp=Z,2µm,20.0s
T42A Van Buren 112.07 11 IAMs_20 IAMs_20 16 26 13.0
comp=Z,2µm,22.0s
MSTX Muleshoe 112.12 22 IAMs_20 IAMs_20 16 29 22.0
comp=Z,2µm,20.0s
R58B Mineral 112.22 360 IAMs_20 IAMs_20 16 30 50.2
comp=Z,2µm,20.0s
HHAR Hobbs 112.27 14 IAMs_20 IAMs_20 16 25 29.4
comp=Z,2µm,21.0s
OKCFA Oklahoma City 112.30 17 IAMs_20 IAMs_20 16 23 48.6
comp=Z,2µm,22.0s
S55A Lewisburg 112.38 2 P PKiKP 15 37 44.8 -0.8
baz=358
T45A Paducah 112.45 9 IAMs_20 IAMs_20 16 26 08.1
comp=Z,2µm,21.0s
WMOK Wichita Mounta 112.59 18 IAMs_20 IAMs_20 16 31 16.3
comp=Z,2µm,18.0s
HENM Henderson Moun 112.63 10 IAMs_20 IAMs_20 16 28 20.9
comp=Z,2µm,21.0s
EPT El Paso 112.80 26 IAMs_20 IAMs_20 16 34 00.5
comp=Z,1µm,19.0s
HICK Hickman 112.84 10 IAMs_20 IAMs_20 16 29 44.4
comp=Z,2µm,20.0s
T50A Nancy 112.88 6 IAMs_20 IAMs_20 16 33 29.2
comp=Z,2µm,18.0s
LCAR Lake Charles 113.00 11 IAMs_20 IAMs_20 16 32 13.6
comp=Z,1µm,19.0s
T60A Surry 113.03 359 IAMs_20 IAMs_20 16 29 30.3
comp=Z,2µm,21.0s
PEBM Pemiscott Bayo 113.17 10 IAMs_20 IAMs_20 16 27 00.4
comp=Z,2µm,22.0s
T59A Double "B" Far 113.21 359 IAMs_20 IAMs_20 16 31 28.0
comp=Z,2µm,20.0s
MNTX Cornudas Mount 113.28 25 IAMs_20 IAMs_20 16 30 49.1
comp=Z,1µm,19.0s
W39A Magazine 113.35 14 IAMs_20 IAMs_20 16 28 23.1
comp=Z,2µm,21.0s
WVT Waverly 113.44 8 IAMs_20 IAMs_20 16 27 09.0
comp=Z,2µm,20.0s
HALT Halls 113.44 10 IAMs_20 IAMs_20 16 28 31.3
comp=Z,2µm,22.0s
TZTN Tazewell 113.45 5 IAMs_20 IAMs_20 16 30 25.4
comp=Z,2µm,20.0s
U54A Nelsons Funny 113.58 3 IAMs_20 IAMs_20 16 28 09.7
comp=Z,2µm,20.0s
HBAR Harrisburg 113.58 11 IAMs_20 IAMs_20 16 32 22.1
comp=Z,1µm,19.0s
U59A Littleton 113.83 360 IAMs_20 IAMs_20 16 31 45.4
comp=Z,2µm,20.0s
U61A Possum Corner 113.83 358 IAMs_20 IAMs_20 16 27 46.5
comp=Z,2µm,21.0s
MIAR Mount Ida 114.02 14 IAMs_20 IAMs_20 16 28 29.8
comp=Z,2µm,21.0s
HDBT Hernando Brdge 114.08 11 IAMs_20 IAMs_20 16 14 28.9

	comp=Z,2µm,18.0s							
MET	**Memphis--Engin**	**114.13**	**11**	IAMs_20	IAMs_20	16 26 19.4		
	comp=Z,2µm,20.0s							
V54A	**Nebo**	**114.31**	**3**	P	**PKiKP**	**15 37 47.1**	**-2.2**	
	baz=356							
TKL	**Tuckaleechee C**	**114.31**	**5**	IAMs_20	IAMs_20	16 31 40.3		
	comp=Z,2µm,18.0s							
ABTX	**Abilene, Hawle**	**114.33**	**20**	IAMs_20	IAMs_20	16 27 05.4		
	comp=Z,2µm,21.0s							
V61A	**Roper**	**114.37**	**359**	IAMs_20	IAMs_20	16 27 21.8		
	comp=Z,2µm,19.0s							
V58A	**Windy Hill, Pi**	**114.38**	**1**	IAMs_20	IAMs_20	16 29 23.1		
	comp=Z,2µm,20.0s							
V60A	**Jim Taylor Roa**	**114.41**	**359**	IAMs_20	IAMs_20	16 26 30.8		
	comp=Z,2µm,22.0s							
CPCT	**Cooper Cave**	**114.46**	**6**	IAMs_20	IAMs_20	16 33 12.1		
	comp=Z,2µm,20.0s							
PPT2	**Papeete2**	**114.47**	**97**	*e*PP	PP	15 38 26.0	-21	
	comp=Z,69nm,28.2s							
PPT2				*e*SP	SP	15 48 23.9	-0.4	
	comp=Z,363nm,25.0s							
PPT2				*e*SS	**SS**	**15 54 44.4**	**+3.9**	
	comp=Z,1µm,28.8s							
PPT2	**Papeete2**	**114.47**	**97**	*e*LR	LR	16 12 19.3		
	comp=Z,1µm,23.5s							
PLAL	**Pickwick Lake**	**114.53**	**9**	IAMs_20	IAMs_20	16 29 01.5		
	comp=Z,2µm,21.0s							
SWET	**Sewanee**	**114.56**	**7**	IAMs_20	IAMs_20	16 33 59.1		
	comp=Z,2µm,20.0s							
OXF	**Oxford**	**114.81**	**10**	IAMs_20	IAMs_20	16 33 08.7		
	comp=Z,2µm,20.0s							
W52A	**Murphy**	**114.86**	**5**	IAMs_20	IAMs_20	16 29 32.8		
	comp=Z,2µm,19.0s							
KMSC	**Kings Mountain**	**114.97**	**3**	IAMs_20	IAMs_20	16 29 01.6		
	comp=Z,2µm,21.0s							
W57A	**Gilead**	**115.00**	**2**	IAMs_20	IAMs_20	16 32 40.6		
	comp=Z,2µm,19.0s							
BG3	**Lake Jocassee**	**115.03**	**4**	IAMs_20	IAMs_20	16 31 23.3		
	comp=Z,1µm,20.0s							
X48A	**Hartselle**	**115.19**	**8**	IAMs_20	IAMs_20	16 29 43.8		
	comp=Z,2µm,20.0s							
FPAL	**Fort Paine**	**115.26**	**7**	IAMs_20	IAMs_20	16 28 12.4		
	comp=Z,2µm,20.0s							
PAULI	**Pauline**	**115.27**	**3**	IAMs_20	IAMs_20	16 29 31.9		
	comp=Z,2µm,19.0s							
JSC	**Jenkinsville**	**115.83**	**3**	IAMs_20	IAMs_20	16 33 02.4		
	comp=Z,1µm,20.0s							
HODGE	**Hodges**	**115.83**	**4**	IAMs_20	IAMs_20	16 30 28.4		
	comp=Z,1µm,20.0s							
TXAR	**Lajitas Array**	**116.05**	**25**	PKP	**PKiKP**	**15 37 51.8**	**-1.1**	
	comp=Z,0.7nm,0.7s,baz=215,slow=1.3,SNR=7.0							
TXAR				PKKPbc	**PKKPbc**	**15 48 25.2**	**+2.1**	
	comp=Z,1.4nm,0.8s,baz=167,slow=6.3,SNR=10							
Y57A	**Sumter**	**116.13**	**2**	IAMs_20	IAMs_20	16 30 38.3		
	comp=Z,2µm,19.0s							
Y60A	**Bolivia**	**116.17**	**360**	IAMs_20	IAMs_20	16 33 36.5		
	comp=Z,2µm,19.0s							
Y58A	**Scranton**	**116.26**	**1**	IAMs_20	IAMs_20	16 30 05.7		
	comp=Z,2µm,20.0s							
JCT	**Junction City**	**116.28**	**21**	IAMs_20	IAMs_20	16 26 37.2		
	comp=Z,2µm,22.0s							
NATX	**Nacogdoches**	**116.46**	**16**	IAMs_20	IAMs_20	16 35 20.9		
	comp=Z,2µm,20.0s							
BBSR	**BB Station**	**116.49**	**347**	IAMs_20	IAMs_20	16 34 24.0		
	comp=Z,1µm,19.0s							
LRAL	**Lakeview Retre**	**116.59**	**8**	IAMs_20	IAMs_20	16 32 16.6		
	comp=Z,2µm,18.0s							
TBI	**Tubuai**	**116.94**	**103**	*e*SP	SP	15 48 49.3	+2.8	
	comp=Z,261nm,26.3s							
TBI				*e*SS	**SS**	**15 55 12.0**	**-0.6**	
	comp=Z,486nm,39.2s							
TBI	**Tubuai**	**116.94**	**103**	*e*LR	LR	16 13 23.4		
	comp=Z,955nm,23.0s							
NHSC	**New Hope**	**117.04**	**2**	IAMs_20	IAMs_20	16 34 08.2		
	comp=Z,2µm,19.0s							
154A	**Montrose**	**117.39**	**5**	IAMs_20	IAMs_20	16 34 01.6		
	comp=Z,2µm,21.0s							
HPIG		**117.44**	**28**	IAMs_20	IAMs_20	16 32 06.5		
	comp=Z,2µm,21.0s							
257A	**Skidaway Islan**	**118.14**	**3**	IAMs_20	IAMs_20	16 34 17.5		
	comp=Z,2µm,19.0s							
735A	**Kenedy**	**118.40**	**20**	IAMs_20	IAMs_20	16 28 14.1		
	comp=Z,2µm,22.0s							
TAOE	**Nuku Hiva Isla**	**118.63**	**83**	*e*LR	LR	16 14 08.6		
	comp=Z,2µm,23.9s							
QSPA	**South Pole Qui**	**119.95**	**180**	PKKPbc	PKKPbc	15 48 10.8	+0.6	
	comp=Z,2.6nm,0.8s,baz=98,slow=1.7,SNR=12							
QSPA	**South Pole Qui**	**119.95**	**180**		**PKPdf**	**15 37 57.0**	**-2.1**	
ZAIG	**Zacatecas**	**122.40**	**27**	IAMs_20	IAMs_20	16 36 58.9		
	comp=Z,1µm,19.0s							
SNAA	**Sanae**	**122.92**	**201**	PKPdf	**PKiKP**	**15 38 05.5**	**+0.6**	
SNAA	**Sanae**	**122.92**	**201**	PKKPbc	PKKPbc	15 47 58.4	0.0	
	comp=Z,0.8nm,0.7s,baz=258,slow=2.9,SNR=6.2							
VNA2	**Neumayer--Watz**	**124.45**	**202**	PKPdf	**PKiKP**	**15 38 08.8**	**+1.0**	
	baz=97,slow=2.5							
VNA3	**Neumayer Olymp**	**125.14**	**202**	PKPdf	**PKiKP**	**15 38 09.7**	**+0.4**	
UNM	**Universidad Na**	**126.81**	**25**	IAMs_20	IAMs_20	16 37 56.6		
	comp=Z,1µm,19.0s							
GRTK	**Grand Turk**	**128.17**	**352**	IAMs_20	IAMs_20	16 37 38.1		
	comp=Z,2µm,22.0s							
TEIG	**Tepich**	**128.97**	**12**	IAMs_20	IAMs_20	16 38 49.7		
	comp=Z,1µm,20.0s							
GTBY	**Guantanamo Bay**	**130.10**	**356**	IAMs_20	IAMs_20	16 40 36.4		
	comp=Z,2µm,22.0s							
SDDR	**Presa de Saban**	**130.68**	**351**	IAMs_20	IAMs_20	16 39 29.6		
	comp=Z,1µm,20.0s							
PETF	**Flores**	**131.86**	**15**	IAMs_20	IAMs_20	16 38 42.2		
	comp=Z,2µm,22.0s							
MTDJ	**Mount Denham**	**131.88**	**359**	IAMs_20	IAMs_20	16 35 22.4		
	comp=Z,976nm,20.0s							
CCIG	**Comitan**	**131.91**	**18**	IAMs_20	IAMs_20	16 42 29.0		
	comp=Z,1µm,21.0s							
FDF	**Fort de France**	**132.43**	**337**	IAMs_20	IAMs_20	16 35 01.3		
	comp=Z,1µm,21.0s							
HUEH	**Huehuetenango**	**133.00**	**18**	IAMs_20	IAMs_20	16 42 39.9		
	comp=Z,907nm,19.0s							
RCBR	**Riachuelo**	**133.44**	**293**	IAMs_20	IAMs_20	16 34 50.3		
	comp=Z,1µm,22.0s							
RTAL	**Retalhuleu**	**133.71**	**18**	IAMs_20	IAMs_20	16 43 17.3		
	comp=Z,2µm,22.0s							
MTO3	**Montecristo**	**134.41**	**15**	IAMs_20	IAMs_20	16 44 13.0		
	comp=Z,1µm,20.0s							
SNET	**Serv Nac Est T**	**135.13**	**15**	IAMs_20	IAMs_20	16 44 21.8		
	comp=Z,1µm,21.0s							
TGUH	**Tegucigalpa,Un**	**135.17**	**13**	IAMs_20	IAMs_20	16 42 16.1		
	comp=Z,1µm,21.0s							
HDC	**Heredia**	**139.66**	**9**	IAMs_20	IAMs_20	16 45 28.8		
	comp=Z,924nm,22.0s							
SDV	**Santo Domingo**	**140.49**	**348**	*e*P	**PKPdf**	**15 38 40.9**	**+1.2**	
MOTC	**Monteria, Cord**	**141.20**	**356**	*e*P	**PKPdf**	**15 38 40.3**	**-0.4**	
DBBC	**Dabeiba**	**142.98**	**357**	*e*P	**PKPdf**	**15 38 43.2**	**-0.8**	
BARC	**Barichara**	**143.13**	**352**	*e*P	**PKiKP**	**15 38 48.1**	**+0.4**	
PTBC	**PUERTO BERRIO**	**143.32**	**354**	*e*P	PKPbc	15 38 41.7	+0.2	
HELC	**Santa Helena**	**143.76**	**355**	*e*P	PKPab	15 38 42.6	+0.1	
RUSC	**La Rusia**	**143.81**	**351**	*e*P	PKPab	15 38 42.3	-0.5	
MALB	**Monte Alegre**	**143.81**	**317**	*e*P	**PKiKP**	**15 38 48.4**	**-0.4**	
CBOC	**Ciudad Bolivar**	**144.11**	**356**	*e*P	**PKPab**	**15 38 43.2**	**-0.4**	
RIB01	**Linhares ES**	**144.14**	**279**	*e*P	**PKPdf**	**15 38 46.0**	**+0.3**	
NORC	**Norcasia**	**144.33**	**354**	*e*P	**PKPab**	**15 38 43.7**	**-0.6**	
SMTB	**Santa Maria do**	**144.38**	**300**	*e*P	**PKPdf**	**15 38 47.6**	**+1.3**	
GUY2C	**Guyana, Caldas**	**144.70**	**355**	*e*P	**PKPab**	**15 38 45.1**	**-1.0**	
ROSC	**El Rosal**	**144.99**	**353**	PKP	**PKPab**	**15 38 46.1**	**-1.0**	
	comp=Z,113nm,0.8s,baz=94,slow=12,SNR=12							
ROSC	**El Rosal**	**144.99**	**353**	*e*P	**PKPab**	**15 38 47.0**	**0.0**	
RREF	**El Recreo**	**145.02**	**355**	*e*P	**PKPdf**	**15 38 48.2**	**-0.1**	
PLMC	**San Jos del P**	**145.08**	**357**	*e*P	**PKPab**	**15 38 47.0**	**0.0**	
CHIC	**Chingaza**	**145.13**	**352**	*e*P	**PKPbc**	**15 38 47.5**	**-0.1**	
PTGC	**Puerto Gaitan,**	**145.34**	**349**	*e*P	**PKPbc**	**15 38 47.6**	**-0.1**	
ANIL	**Santa Ana**	**145.43**	**355**	*e*P	**PKPab**	**15 38 49.5**	**+0.9**	
ORTC	**Ortega, Tolima**	**146.00**	**355**	*e*P	**PKPab**	**15 38 50.2**	**-0.1**	
GUVC	**San Jose del G**	**147.03**	**350**	*e*P	**PKPdf**	**15 38 50.9**	**0.0**	
MARP	**Paez Belalcaza**	**147.10**	**356**	*e*P	**PKPab**	**15 38 55.1**	**+0.2**	
POPC	**Popayan, Colom**	**147.44**	**357**	*e*P	**PKPbc**	**15 38 55.0**	**+0.7**	
MACC	**Macarena, Meta**	**147.60**	**352**	*e*P	**PKPbc**	**15 38 54.4**	**-0.1**	
PCON	**Cinco Dias**	**147.64**	**357**	*e*P	**PKPbc**	**15 38 54.7**	**-0.5**	
GARC	**Garzon, Huila**	**147.72**	**355**	*e*P	**PKPbc**	**15 38 54.2**	**-0.9**	
BBAC	**Balboa, Cauca**	**147.98**	**358**	*e*P	**PKiKP**	**15 38 56.9**	**-0.8**	
FLOC	**Florencia**	**148.33**	**355**	*e*P	**PKPbc**	**15 38 55.2**	**-1.3**	
BDFB	**Brasilia**	**148.77**	**291**	PKPbc	**PKiKP**	**15 38 58.4**	**-0.7**	
	comp=Z,7.8nm,0.6s,baz=129,slow=4.0,SNR=6.9							
GCUF	**Volcan Galeras**	**148.77**	**358**	*e*P	**PKPbc**	**15 38 56.6**	**-1.6**	
PUAC	**Puerto Asis, P**	**149.41**	**357**	*e*P	**PKiKP**	**15 39 01.8**	**+1.5**	
PTLC	**Puerto Leguiza**	**149.65**	**353**	*e*P	**PKPbc**	**15 38 59.5**	**-0.3**	
OTAV	**Otavalo**	**149.76**	**0**	*e*P	**PKPbc**	**15 38 59.1**	**-1.5**	
OTAV	**Otavalo**	**149.76**	**0**	PKHKP	PKPpre	15 38 57.7		
OTAV				MLR	MLR			
	comp=Z,500nm,22.0s							
OTAV	**Otavalo**	**149.76**	**0**		**PKPdf**	**15 38 57.7**	**+1.8**	
OTAV	**Otavalo**	**149.76**	**0**	*e*P	**PKPdf**	**15 38 57.0**	**+1.1**	
IPMB	**Ipameri, GO**	**150.13**	**287**	*e*P	**PKPdf**	**15 38 57.8**	**+2.0**	
PARB	**Paraibuna**	**150.18**	**275**	*e*P	**PKPdf**	**15 38 56.6**	**+0.9**	
SPB	**Sao Paulo**	**151.83**	**276**	IAMs_20	IAMs_20	16 49 40.3		
	comp=Z,961nm,22.0s							
TIJ01	**Guaruva-PR**	**153.74**	**273**	*e*P	**PKPdf**	**15 39 03.2**	**+2.0**	
SAML	**Samuel**	**154.63**	**323**	*e*P	**PKiKP**	**15 39 13.7**	**+2.6**	
SAML	**Samuel**	**154.63**	**323**	PKIKP	**PKPdf**	**15 38 59.8**	**-2.7**	
SAML				MLR	MLR			
	comp=Z,800nm,21.0s							
SAML	**Samuel**	**154.63**	**323**	PKPdf	**PKPdf**	**15 38 59.8**	**-2.7**	
SAML	**Samuel**	**154.63**	**323**	IAMs_20	IAMs_20	16 45 22.5		
	comp=Z,800nm,21.0s							
CNLB	**Canela**	**156.24**	**265**	*e*P	**PKPdf**	**15 39 05.8**	**+1.4**	
SIV	**San Ignacio**	**158.88**	**308**	PKP	**PKPdf**	**15 39 09.9**	**+1.9**	
	comp=Z,1.3nm,0.7s,baz=243,slow=0.8,SNR=6.2							
SIV				PKPab	**PKPab**	**15 39 43.1**	**-0.7**	
	comp=Z,6.9nm,0.9s,baz=84,slow=4.7,SNR=12							
CPUP	**Villa Florida**	**161.21**	**277**	PKP	**PKPdf**	**15 39 14.4**	**+4.2**	
	comp=Z,2.2nm,0.9s,baz=51,slow=6.5,SNR=3.4							
LPAZ	**La Paz**	**163.38**	**324**	PKP	**PKPdf**	**15 39 14.8**	**+1.3**	
	comp=Z,2.7nm,0.8s,baz=58,slow=3.4,SNR=11							
LPAZ				PKPab	**PKPab**	**15 40 04.8**	**+0.7**	
	comp=Z,7.3nm,0.9s,baz=26,slow=7.4,SNR=6.6							
LPAZ	**La Paz**	**163.38**	**324**	*e*P	**PKPdf**	**15 39 15.2**	**+1.7**	
LPAZ	**La Paz**	**163.38**	**324**	PKIKP	**PKPdf**	**15 39 11.3**	**-2.2**	
LPAZ	**La Paz**	**163.38**	**324**		**PKPdf**	**15 39 11.3**	**-2.2**	
PLCA	**Paso Flores**	**167.75**	**209**	PKPab	**PKPab**	**15 40 21.7**	**-0.5**	
	comp=Z,8.1nm,0.8s,baz=140,slow=3.7,SNR=13							
LVC	**Limon Verde**	**168.77**	**310**	PKPab	**PKPab**	**15 40 28.2**	**+0.6**	
	comp=Z,26nm,0.9s,baz=16,slow=3.2,SNR=7.2							
LVC	**Limon Verde**	**168.77**	**310**	PKP2	**PKPab**	**15 40 25.0**	**-2.6**	
LVC	**Limon Verde**	**168.77**	**310**	PKPab	**PKPab**	**15 40 25.0**	**-2.6**	
LVC	**Limon Verde**	**168.77**	**310**	*e*P	**PKPdf**	**15 39 18.7**	**+1.4**	

IDC ***25*** *15:27:45.6±0.8, 5.°72N×61.°16E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.0/74, mbtmp4.1/17, Error ellipse: s-maj=23.2km s-min=17.4km az=32.0*

NEIC ***25*** *15:27:46.4±1.5, 5.°7N±0.°1×61.°17E±0.°09, h10km±1km, mb4.6/23, Error ellipse: s-maj=23.1km s-min=14.3km az=183.0*

ISC 25 15:27:46.6±0.8, 5.°7N±0.°1×61.°2E±0.°1, h10km, n53, σ0.°75/51, mb4.5/32, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UOSS	**Minazif**	**19.73**	**347**	P	**P**	**15 32 16.9**	**+0.4**
RAYN	**Ar Rayn**	**23.29**	**321**	P	**P**	**15 32 54.8**	**0.0**
RAYN				IAmb	IAmb	15 32 57.6	
	comp=Z,28nm,1.4s						
AAK	**Ala-Archa**	**38.64**	**16**	P	**P**	**15 35 11.3**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=209,slow=10,SNR=3.4						
CMAR	**Chiang Mai Arr**	**38.94**	**68**	P	**P**	**15 35 14.5**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=259,slow=9.1,SNR=14						
CMAR				PcP	**PcP**	**15 37 24.1**	**+0.2**
	comp=Z,0.4nm,0.2s,baz=264,slow=4.1,SNR=4.2						
CMAR	**Chiang Mai Arr**	**38.94**	**68**	P	**P**	**15 35 13.8**	**+0.6**
BR131	**Keskin Array S**	**41.99**	**328**	P	**P**	**15 35 38.1**	**-0.2**
BR131				IAmb	IAmb	15 35 43.9	
	comp=Z,16nm,1.2s						
BRTR	**Keskin Array B**	**41.99**	**328**	P	**P**	**15 35 39.5**	**+1.2**
	comp=Z,2.2nm,0.8s,baz=132,slow=6.8,SNR=3.9						
BRTR	**Keskin Array B**	**41.99**	**328**	P	**P**	**15 35 38.4**	**+0.1**
ANTO	**Ankara**	**42.55**	**327**	P	**P**	**15 35 41.1**	**-1.6**
ABKAR	**Akbulak array**	**43.42**	**359**	P	**P**	**15 35 49.9**	**+0.4**
AKTO	**Aktyubinsk**	**44.67**	**357**	P	**P**	**15 35 59.1**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=189,slow=9.0,SNR=3.9						
MKAR	**Makanchi Array**	**44.81**	**21**	P	**P**	**15 36 00.3**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=226,slow=7.8,SNR=3.5						
MKAR	**Makanchi Array**	**44.81**	**21**	P	**P**	**15 36 00.5**	**-0.3**
TSUM	**Tsumeb**	**49.54**	**239**	P	**P**	**15 36 38.3**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=112,slow=15,SNR=2.0						
TSUM	**Tsumeb**	**49.54**	**239**	IAmb	IAmb	15 36 49.9	
	comp=Z,8.8nm,0.9s						
MLR	**Muntele Rosu**	**50.08**	**328**	P	**P**	**15 36 42.4**	**+0.5**
	comp=Z,5.6nm,1.0s,baz=120,slow=8.1,SNR=2.4						
ARU	**Arti**	**50.64**	**358**	P	**P**	**15 36 45.8**	**0.0**
	comp=Z,1.1nm,0.7s,baz=183,slow=5.5,SNR=3.3						
ARU	**Arti**	**50.64**	**358**	IAmb	IAmb	15 36 48.7	
	comp=Z,5.5nm,0.9s						
SBUM	**Sibu**	**51.00**	**91**	P	**P**	**15 36 48.6**	**-0.6**
SBUM				IAmb	IAmb	15 36 58.2	
	comp=Z,12nm,1.5s						
ZALV	**Zalesovo Beam**	**51.80**	**18**	P	**P**	**15 36 53.9**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=225,slow=10,SNR=4.4						
ZALV	**Zalesovo Beam**	**51.80**	**18**	P	**P**	**15 36 53.2**	**-1.4**
BURAR	**Bucovina Array**	**51.87**	**330**	P	**P**	**15 36 54.5**	**-0.8**
AKASG	**Malin Array Be**	**52.20**	**335**	P	**P**	**15 36 57.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=136,slow=6.5,SNR=5.1						
XAN	**Xi'an**	**52.37**	**51**	P	**P**	**15 36 58.6**	**-0.6**
XAN				IAmb	IAmb	15 36 59.8	
	comp=Z,12nm,1.3s						
PSZ	**Piszkesteto**	**54.84**	**327**	P	**P**	**15 37 16.6**	**-0.5**
PSZ				IAmb	IAmb	15 37 20.1	
	comp=Z,5.3nm,0.9s						
SOKA	**Soboth**	**56.90**	**324**	*e*P	**P**	**15 37 32.4**	**+0.4**
	comp=Z,4.9nm,1.2s						
SONM	**Songino Array**	**56.97**	**35**	P	**P**	**15 37 33.3**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=242,slow=3.1,SNR=3.0						
SONM	**Songino Array**	**56.97**	**35**	IAmb	IAmb	15 37 40.5	
	comp=Z,1.8nm,1.1s						
CONA	**Conrad Observa**	**57.08**	**325**	*e*P	**P**	**15 37 33.7**	**+0.4**
	comp=Z,5.7nm,1.1s						
OBKA	**Obir**	**57.10**	**323**	*e*P	**P**	**15 37 35.1**	**+1.7**
	comp=Z,7.9nm,1.0s						
MORC	**Moravsky Berou**	**57.19**	**328**	P	**P**	**15 37 33.3**	**-0.6**
MORC				IAmb	IAmb	15 37 35.3	
	comp=Z,4.7nm,0.9s						
VRAC	**Vranov**	**57.43**	**327**	P	**P**	**15 37 35.9**	**+0.3**
	comp=Z,1.9nm,0.3s,baz=144,slow=5.7,SNR=3.1						
MYKA	**Terra Mystica**	**57.70**	**323**	*e*P	**P**	**15 37 37.7**	**0.0**
	comp=Z,2.5nm,0.5s						
MOA	**Molln**	**57.95**	**325**	*i* P	**P**	**15 37 40.0**	**+0.8**
	comp=Z,5.7nm,0.9s						
KBA	**Koelnbreinsper**	**58.10**	**323**	*e*P	**P**	**15 37 40.9**	**+0.4**
	comp=Z,4.6nm,1.2s						
GERES	**GERESS Array B**	**58.78**	**325**	P	**P**	**15 37 44.0**	**-1.2**
KHC	**Kasperske Hory**	**59.00**	**326**	P	**P**	**15 37 45.7**	**-0.9**
KHC				IAmb	IAmb	15 37 48.7	
	comp=Z,7.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**59.04**	**282**	P	**P**	**15 37 48.1**	**+0.7**
	comp=Z,1.8nm,1.0s,baz=69,slow=3.9,SNR=2.5						
MOTA	**Moosalm**	**59.57**	**323**	*e*P	**P**	**15 37 49.8**	**-0.9**
	comp=Z,5.4nm,1.1s						
SENIN	**Lac Senin/Sane**	**61.49**	**320**	P	**P**	**15 38 02.9**	**-1.1**
HFS	**Hagfors**	**65.05**	**336**	P	**P**	**15 38 27.3**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=114,slow=5.4,SNR=2.2						
ESDC	**Sonseca Array**	**67.33**	**311**	P	**P**	**15 38 42.9**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=80,slow=5.4,SNR=5.1						
ESDC	**Sonseca Array**	**67.33**	**311**	P	**P**	**15 38 42.1**	**0.0**
WRA	**Warramunga Arr**	**76.24**	**112**	P	**P**	**15 39 36.9**	**+0.9**
	comp=Z,4.9nm,1.0s,baz=286,slow=5.3,SNR=13						
WRA	**Warramunga Arr**	**76.24**	**112**	P	**P**	**15 39 36.1**	**+0.1**
WRAB	**Tennant Creek**	**76.25**	**112**	P	**P**	**15 39 35.9**	**-0.2**
WB2	**Warramunga Arr**	**76.25**	**112**	P	**P**	**15 39 36.0**	**-0.2**
WB0	**Warramunga Arr**	**76.26**	**112**	P	**P**	**15 39 36.2**	**0.0**
WB0				IAmb	IAmb	15 39 37.6	
	comp=Z,8.6nm,1.1s						
WR0	**Warramunga Arr**	**76.43**	**112**	P	**P**	**15 39 36.6**	**-0.5**
WR0				IAmb	IAmb	15 39 45.9	
	comp=Z,7.0nm,1.1s						
ASAR	**Alice Springs**	**76.61**	**116**	P	**P**	**15 39 38.8**	**+0.7**
	comp=Z,4.0nm,1.0s,baz=289,slow=5.2,SNR=16						
ASAR	**Alice Springs**	**76.61**	**116**	P	**P**	**15 39 37.8**	**-0.3**
TXAR	**Lajitas Array**	**142.25**	**338**	PKP	**PKPdf**	**15 47 19.6**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=106,slow=4.2,SNR=3.5						
TXAR	**Lajitas Array**	**142.25**	**338**		**PKPdf**	**15 47 19.0**	**-1.3**

IDC ***25*** *15:28:42.2±1.6, 2.°06N×126.°70E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/56, mbtmp3.8/6, Error ellipse: s-maj=114.8km s-min=21.2km az=68.0*

NEIC ***25*** *15:28:46.5±1.9, 1.°9N±0.°1×126.°73E±0.°09, h32km±7km, mb4.2/9, Error ellipse: s-maj=18.7km s-min=6.0km az=219.0*

ISC 25 15:28:47.9±0.8, 1.°94N±0.°09×126.°71E±0.°09, h47km, n23, σ1.°28/22, mb4.0/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**150**		**Pn**	**15 29 09.2**	**-0.9**
LUWI	**Luwuk**	**4.93**	**233**	Pn	**Pn**	**15 29 58.7**	**-0.8**
TOLI2	**Tolitoli**	**5.98**	**262**	Pn	**Pn**	**15 30 14.1**	**+0.1**
MYLDM	**Lahad Datu**	**8.80**	**292**	Pn	**Pn**	**15 30 51.7**	**-1.0**
JAGI	**Jajag, Banyuwa**	**16.24**	**230**	Pn	**Pn**	**15 32 31.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P	**Pn**	**15 33 17.4**	**-0.6**
	3.7nm,0.9s,baz=41,slow=9.3,SNR=2.8						
FITZ	**Fitzroy Crossi**	**19.94**	**183**	P	**P**	**15 33 16.0**	**-0.1**
WB0	**Warramunga Arr**	**22.85**	**161**	P	**P**	**15 33 48.6**	**+1.2**
WB0				IAmb	IAmb	15 34 10.4	
	comp=Z,5.5nm,1.0s						
WRAB	**Tennant Creek**	**22.99**	**161**	P	**P**	**15 33 46.6**	**-2.2**
WRAB				IAmb	IAmb	15 34 14.3	
	comp=Z,5.3nm,0.8s						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**15 33 48.2**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=340,slow=11,SNR=7.1						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**15 33 47.2**	**-1.6**
WB2	**Warramunga Arr**	**23.00**	**161**	P	**P**	**15 33 48.6**	**-0.3**
WB2				IAmb	IAmb	15 33 55.0	
	comp=Z,20nm,1.4s						
MBWA	**Marble Bar**	**23.95**	**196**	P	**P**	**15 33 58.8**	**+0.9**
AS31	**Alice Springs**	**26.39**	**165**	P	**P**	**15 34 21.5**	**+1.3**
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**15 34 23.4**	**+3.2**
	comp=Z,1.1nm,0.6s,baz=346,slow=12,SNR=2.1						
MORW	**Morawa**	**32.48**	**198**	P	**P**	**15 35 14.5**	**+0.4**
KSAR	**Wonju Array Be**	**35.35**	**2**	P	**P**	**15 35 39.4**	**+0.5**
STKA	**Stephens Creek**	**36.48**	**158**	P	**P**	**15 35 50.5**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=342,slow=9.5,SNR=1.7						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**15 38 42.6**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=121,slow=8.1,SNR=1.5						
KURBB	**Kurchatov Arra**	**63.23**	**328**	P	**P**	**15 39 11.9**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=126,slow=6.5,SNR=1.5						
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**15 39 11.9**	**+0.4**
KURK	**Kurchatov**	**63.24**	**328**	IAmb	IAmb	15 39 28.8	
	comp=Z,3.8nm,1.1s						
ABKAR	**Akbulak array**	**73.52**	**321**	P	**P**	**15 40 15.2**

comp=Z,1µm,20.5s
CHTO Chiang Mai 15.91 123 Pn 15 52 50.6 +1.1
CM33 Chiang Mai Arr 15.91 123 P P 15 52 53.0 -0.1
CMMT Chiang Mai 15.91 123 P P 15 52 53.6 +0.4
comp=Z,6.1nm,1.0s
CM32 Chiang Mai Arr 15.93 123 P P 15 52 54.0 +0.6
CM34 Chiang Mai Arr 16.04 122 P P 15 52 54.0 -0.6
BOOM Boomskoye usch 16.05 336 P P 15 52 54.1 -0.8
BOOM IAmb IAmb 15 53 12.8
comp=Z,27nm,1.3s
CM15 Chiang Mai Arr 16.12 124 P P 15 52 56.5 +1.1
comp=Z,53nmcomp=Z,7.3nm,0.9s
CM13 Chiang Mai Arr 16.12 124 P P 15 52 56.4 +0.9
comp=Z,46nmcomp=Z,5.9nm,0.8s
CM31 Chiang Mai Arr 16.13 124 P P 15 52 59.5 +3.9
comp=Z,166nm,0.8s
CM31 Chiang Mai Arr 16.13 124 Pn P 15 52 54.6 -0.9
CMAR Chiang Mai Arr 16.13 124 Pn Pn 15 52 53.7 +1.4
comp=Z,0.4nm,0.3s,baz=306,slow=12,SNR=14
CMAR Chiang Mai Arr 16.13 124 P P 15 52 54.8 -0.8
CM02 Chiang Mai Arr 16.14 124 P P 15 52 57.4 +1.6
comp=Z,8.6nm,0.8s
CM35 Chiang Mai Arr 16.15 123 P P 15 52 56.0 +0.2
CM01 Chiang Mai Arr 16.16 124 P P 15 52 58.0 +2.0
CM05 Chiang Mai Arr 16.16 124 P P 15 52 58.5 +2.6
comp=Z,4.9nm,0.9s
CM09 Chiang Mai Arr 16.17 124 P P 15 52 59.0 +2.9
comp=Z,6.3nm,0.9s
CM04 Chiang Mai Arr 16.19 124 P P 15 52 59.0 +2.7
comp=Z,4.8nm,0.8s
CM36 Chiang Mai Arr 16.20 123 P P 15 52 57.0 +0.6
ARSB Arslanbob 16.36 327 Pn Pn 15 52 52.6 -2.7
AAK Ala-Archa 16.74 333 Pn Pn 15 53 00.7 +0.6
comp=Z,0.1nm,0.3s,baz=197,slow=14,SNR=3.1
GTA Gaotai 16.77 44 *e*P **Pn 15 53 00.5 0.0**
GTA pP pP 15 53 05.3 -1.3
GTA sP sP 15 53 07.5 -0.6
GTA pmax pmax
comp=Z,2.0nm,1.0s
LZH Lanzhou 17.94 59 *e*P **P 15 53 17.0 +1.3**
LZH pP sP 15 53 20.0 -1.1
LZH sP pP 15 53 21.3 +2.0
MK31 Makanchi Array 18.75 355 P P 15 53 24.1 -0.3
MKAR Makanchi Array 18.75 355 P Pn 15 53 25.1 +0.3
comp=Z,1.1nm,0.3s,baz=178,slow=11,SNR=60
MKAR S Sn 15 56 46.8 -7.7
comp=Z,0.2nm,0.3s,baz=171,slow=28,SNR=4.0
MKAR Makanchi Array 18.75 355 P P 15 53 24.1 -0.3
MAKZ Makanchi 18.79 354 P P 15 53 24.9 0.0
KK31 Karatay Array 18.91 326 P P 15 53 24.3 -1.9
KKAR Karatay Array 18.91 326 P P 15 53 23.9 -2.3
KKAR Karatay Array 18.91 326 P P 15 53 24.2 -2.0
KKAR IAmb IAmb 15 53 46.6
comp=Z,5.9nm,1.2s
GYA Guiyang 19.48 90 ⇑P **Pn 15 53 37.8 +4.0**
GYA pmax pmax
comp=Z,6.0nm,0.8s
NONG Nongkai 19.57 117 P Pn 15 53 41.6 +6.7
comp=Z,7.7nm,0.9s
CHAI Chaiyaphum 19.99 124 P Pn 15 53 44.2 +4.3
comp=Z,20nm,0.7s
SRAK Srakaew 21.29 128 P P 15 54 01.3 +9.1
comp=Z,134nm,0.9s
XAN Xi'an 21.44 68 P P 15 53 53.5 -0.3
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN Xi'an 21.44 68 P P 15 53 52.8 -1.0
XAN IAmb IAmb 15 53 54.0
comp=Z,5.2nm,0.6s
ENH Enshi 21.62 78 P P 15 53 55.9 +0.2
ENH IAmb IAmb 15 54 00.2
comp=Z,8.7nm,1.0s
KURBB Kurchatov Arra 22.98 350 P P 15 54 09.9 -0.1
comp=Z,2.8nm,0.5s,baz=173,slow=9.9,SNR=30
KURK Kurchatov 23.05 350 P P 15 54 10.5 -0.3
KURK IAmb IAmb 15 54 13.2
comp=Z,15nm,1.4s
HHC Hu-ho-hao-te 25.32 53 *e*P **P 15 54 34.5 +2.1**
HHC pmax pmax
comp=Z,11nm,0.9s
HHC pmax pmax
comp=Z,780nm,7.2s
ZAA0 Zalesovo Array 25.80 360 P P 15 54 36.3 -0.1
ZAA0 IAmb IAmb 15 54 38.0
comp=Z,3.6nm,0.8s
ZALV Zalesovo Beam 25.80 360 P P 15 54 37.1 +0.7
comp=Z,3.0nm,0.6s,baz=184,slow=10,SNR=18
ZALV Zalesovo Beam 25.80 360 P P 15 54 36.4 0.0
SONM Songino Array 25.85 35 P P 15 54 39.0 +1.8
comp=Z,4.0nm,0.6s,baz=222,slow=9.5,SNR=26
SONM Songino Array 25.85 35 P P 15 54 38.1 +0.9
ULN Ulaanbaatar 26.21 35 P P 15 54 41.4 +1.0
ULN IAmb IAmb 15 54 44.6
comp=Z,4.1nm,0.7s
BVAR Borovoye Array 27.09 341 P P 15 54 48.9 +0.8
comp=Z,0.3nm,0.4s,baz=115,slow=16,SNR=2.8
BVAR pP **sP 15 54 53.6 0.0**
comp=Z,0.7nm,0.4s,baz=157,slow=16,SNR=4.4
KULM Kulim 27.23 144 P P 15 54 52.4 +2.8
KULM IAmb IAmb 15 54 58.1
comp=Z,7.7nm,1.0s
ABKAR Akbulak array 28.46 325 P P 15 55 00.8 +0.4
ABKAR Akbulak array 28.46 325 P P 15 55 00.8 +0.4
ABKAR IAmb IAmb 15 55 01.6
comp=Z,1.6nm,0.6s
ARU Arti 33.91 334 P P 15 55 48.6 +0.3
ARU IAmb IAmb 15 55 49.3
comp=Z,3.5nm,0.7s
KSRS Korea Array 37.13 64 P P 15 56 15.7 -0.6
comp=Z,1.1nm,0.7s,baz=261,slow=9.4,SNR=4.9
YAK Yakutsk 44.87 28 P P 15 57 19.6 0.0
YAK IAmb IAmb 15 57 21.3
comp=Z,6.2nm,0.7s
LUWI Luwuk 46.53 122 P P 15 57 34.9 +1.6
ELL Elmali 46.61 295 P P 15 57 34.0 0.0
AKASG Malin Array Be 47.23 314 P P 15 57 37.3 -1.1
comp=Z,0.3nm,0.3s,baz=80,slow=7.3,SNR=4.4
MLR Muntele Rosu 49.13 307 P P 15 57 55.0 +1.7
BURAR Bucovina Array 49.65 310 P P 15 57 57.1 -0.1
TIXI Tiksi 49.77 17 P P 15 57 57.8 +0.1
TIXI IAmb IAmb 15 57 59.2
comp=Z,4.0nm,0.8s
FIA1 FINESS Array S 50.85 328 P P 15 58 05.9 -0.1
FINES FINESS Array B 50.85 328 P P 15 58 06.2 +0.2
comp=Z,2.7nm,0.5s,baz=112,slow=7.9,SNR=25
ARD3 ARCESS Array S 53.30 338 P P 15 58 24.4 +0.3
ARD4 ARCESS Array S 53.30 338 P P 15 58 24.4 +0.3
ARC3 ARCESS Array S 53.31 338 P P 15 58 24.4 +0.2
ARC3 IAmb IAmb 15 58 50.5
comp=Z,11nm,1.4s
ARD5 ARCESS Array S 53.31 338 P P 15 58 24.6 +0.4
ARCES ARCESS Array B 53.32 338 P P 15 58 24.6 +0.4
comp=Z,2.6nm,0.6s,baz=86,slow=6.6,SNR=16
ARB4 ARCESS Array S 53.32 338 P P 15 58 24.6 +0.4
ARC5 ARCESS Array S 53.32 338 P P 15 58 24.7 +0.4
ARC5 IAmb IAmb 15 58 49.9
comp=Z,11nm,1.1s
NOA NORSAR Array B 57.94 327 P P 15 58 56.7 -0.9
comp=Z,0.6nm,0.6s,baz=89,slow=7.4,SNR=3.9
KBS Kingsbay 59.32 348 P P 15 59 07.1 +0.2
BILL Bilibino 61.06 25 P P 15 59 20.3 +1.3
BILL IAmb IAmb 15 59 20.8
comp=Z,3.3nm,0.6s
WB0 Warramunga Arr 67.55 129 P P 16 00 02.0 -0.2
WRA Warramunga Arr 67.63 129 P P 16 00 03.0 +0.3
comp=Z,2.3nm,0.5s,baz=323,slow=6.5,SNR=29
WRA pP **pP 16 00 07.1 0.0**
comp=Z,2.3nm,0.5s,baz=322,slow=6.4,SNR=13
WRA Warramunga Arr 67.63 129 P P 16 00 02.2 -0.4
WRAB Tennant Creek 67.63 129 P P 16 00 01.7 -1.0
WRAB IAmb IAmb 16 00 07.8
comp=Z,4.2nm,0.7s
WB2 Warramunga Arr 67.64 129 P P 16 00 02.7 -0.1
WR0 Warramunga Arr 67.78 129 P P 16 00 03.7 +0.1
AS31 Alice Springs 69.92 132 P P 16 00 17.1 +0.1
ASAR Alice Springs 69.92 132 P P 16 00 17.1 +0.2
comp=Z,1.2nm,0.6s,baz=315,slow=6.3,SNR=15
ASAR pP **pP 16 00 21.2 -0.1**
comp=Z,1.2nm,0.6s,baz=314,slow=6.2,SNR=9.7
ASAR Alice Springs 69.92 132 P P 16 00 17.3 +0.3
EUNU Eureka 71.94 358 P P 16 00 28.9 +0.4
EUNU IAmb IAmb 16 00 30.0
comp=Z,3.4nm,0.8s
A21K Barrow 72.07 17 P P 16 00 29.9 +0.7
A21K IAmb IAmb 16 00 51.0
comp=Z,4.9nm,1.0s
TOLK Toolik Lake Re 75.65 18 P P 16 00 51.0 +0.6
TOLK IAmb IAmb 16 00 52.7
comp=Z,5.5nm,0.8s
TORD Torodi Ar. Bea 77.95 279 P P 16 01 03.5 -0.7
comp=Z,0.5nm,0.7s,baz=77,slow=4.8,SNR=4.5
POKR Poker Plat Res 78.69 20 P P 16 01 07.5 +0.1
POKR IAmb IAmb 16 01 09.2
comp=Z,6.9nm,1.2s
FALS False Pass 78.86 33 P P 16 01 08.9 +0.4
IL31 79.10 20 P P 16 01 10.0 +0.3
IL31 IAmb IAmb 16 01 17.5
comp=Z,1.8nm,1.0s
ILAR Eielson Array 79.10 20 P P 16 01 09.9 +0.2
comp=Z,1.2nm,0.8s,baz=320,slow=4.0,SNR=5.2
ILAR Eielson Array 79.10 20 P P 16 01 09.7 -0.1
SKT Skwentna 79.50 24 P P 16 01 12.2 +0.2
INK Inuvik 79.76 14 P P 16 01 13.9 +0.7
comp=Z,3.6nm,1.1s,baz=323,slow=12,SNR=4.8
INK Inuvik 79.76 14 IAmb IAmb 16 01 14.8
comp=Z,7.1nm,1.2s
STKA Stephens Creek 80.47 134 P P 16 01 17.1 -0.5
comp=Z,0.9nm,0.5s,baz=330,slow=6.6,SNR=6.2
STKA Stephens Creek 80.47 134 IAmb IAmb 16 01 21.4
comp=Z,0.5nm,1.1s

NEIC ***25*** *15:51:16.0±0.8, 5.7N±0.2×61.5E±0.2, h10km±2km, mb4.2/4, Error ellipse: s-maj=33.3km s-min=25.6km az=171.0*
IDC ***25*** *15:51:16.0±1.1, 5.35N×61.76E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.5/34, mbtmp3.8/5, Error ellipse: s-maj=64.5km s-min=23.3km az=178.0*
ISC 25 15:51:17.4±1.0, 5.8N±0.2×61.7E±0.1, h14km, n11, σ1§83/9, mb3.9/5, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**19.46**	**288**	P	P	**15 55 43.0**	**-1.0**
ATD				IAmb	IAmb	15 55 43.8	
	comp=Z,22nm,1.2s						
KMBO	**Kilima Mbogo**	**25.32**	**255**	P	P	**15 56 43.8**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=66,slow=12,SNR=4.5						
KMBO	**Kilima Mbogo**	**25.32**	**255**	P	P	**15 56 41.4**	**-2.8**
KMBO				IAmb	IAmb	15 56 43.4	
	comp=Z,4.6nm,1.2s						
CMAR	**Chiang Mai Arr**	**38.48**	**68**	P	P	**15 58 40.0**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=265,slow=8.6,SNR=7.2						
ABKAR	**Akbulak array**	**43.38**	**358**	P	P	**15 59 19.1**	**-0.2**
MKAR	**Makanchi Array**	**44.59**	**20**	P	P	**15 59 28.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**59.49**	**282**	P	P	**16 01 23.8**	**+3.1**
	comp=Z,0.8nm,0.8s,baz=62,slow=5.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**59.49**	**282**	IAmb	IAmb	16 01 25.8	
	comp=Z,1.3nm,1.0s						
WRA	**Warramunga Arr**	**75.82**	**112**	P	P	**16 03 03.7**	**0.0**
	comp=Z,1.7nm,1.2s,baz=282,slow=5.1,SNR=5.8						
WRA	**Warramunga Arr**	**75.82**	**112**	IAmb	IAmb	16 03 11.3	
	comp=Z,0.2nm,1.1s						
ASAR	**Alice Springs**	**76.20**	**116**	P	P	**16 03 05.4**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=277,slow=7.2,SNR=6.1						

IDC 25 16:04:28.1±1.6, 30.17N×101.91E, h0km, mb3.1/3, mb1 3.4/4, mb1mx3.2/36, mbtmp3.2/4, ML3.6/1, Error ellipse: s-maj=86.2km s-min=26.6km az=64.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**17.97**	**10**	P	Pn	16 08 39.7	+0.2
	0.2nm,0.3s,baz=186,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**22.51**	**323**	P	P	16 09 29.2	-0.1
	0.4nm,0.8s,baz=135,slow=10,SNR=3.2						
WRA	**Warramunga Arr**	**58.80**	**144**	P	P	16 14 28.9	+0.5
	0.7nm,1.1s,baz=336,slow=7.5,SNR=6.5						
ASAR	**Alice Springs**	**61.72**	**147**	P	P	16 14 47.6	-0.8
	0.2nm,0.8s,baz=334,slow=6.8,SNR=1.3						

TAP 25 16:12:27.0, 24.89N×122.01E, h15km, ML1.5, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.12**	**350**	P	Pb	16 12 31.0	-0.1
	baz=353						
TWB1				S	Sg	16 12 33.2	+0.3
	baz=353						
NTC	**Toucheng**	**0.17**	**259**	*e*P	Pb	16 12 31.9	+0.1
	baz=258						
NTC				*e*S	Sb	16 12 34.6	-0.4
	baz=258						
TIPB	**Shuangxi**	**0.19**	**297**	*e*P	Pb	16 12 32.5	+0.3
	baz=296						
TIPB				S	Sb	16 12 35.7	+0.1
	baz=296						
TWC	**Suao**	**0.31**	**208**	*e*S	Sb	16 12 39.5	+0.2
	baz=206						
TWE	**Neicheng**	**0.35**	**242**	*e*P	Pb	16 12 35.1	+0.2
	baz=240						
TWE				*e*S	Sg	16 12 39.5	+0.4
	baz=240						
ENTT	**Nioudou**	**0.47**	**239**	*e*P	Pb	16 12 37.5	+0.5
	baz=238						
ENTT				S	Sb	16 12 44.2	+0.3
	baz=238						
NWLT	**Wulai**	**0.47**	**257**	*e*P	Pb	16 12 38.1	+1.0
	baz=256						
NWLT				*e*S	Sb	16 12 44.0	+0.1
	baz=256						

JMA 25 16:13:05.0±0.2, 24.51N×123.45E, h54km±3km, M0.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.31**	**124**	P	Pn	16 13 14.4	-0.2
IRIF				eS	Sn	16 13 21.8	+0.4
YOJ	**Yonaguni jima**	**0.40**	**263**	P	Pn	16 13 15.3	-0.2
YOJ				S	Sn	16 13 22.9	-0.1
JYNG	**Yonagunijimaku**	**0.46**	**263**	P	Pn	16 13 16.5	+0.4
JYNG				S	Sn	16 13 23.8	-0.3
HATJ	**Hateruma jima**	**0.56**	**144**	eS	Sn	16 13 25.8	-0.1
JKRS	**Kuro-shima**	**0.58**	**118**	P	Pn	16 13 17.4	0.0
JKRS				S	Sn	16 13 27.1	+0.7
JIJ	**Ishigaki jima**	**0.65**	**103**	P	Pn	16 13 18.2	-0.1
JIJ				S	Sn	16 13 28.1	+0.2
JISG	**Ishigakijimahi**	**0.79**	**84**	P	Pn	16 13 20.3	+0.3
JISG				S	Sn	16 13 31.6	+0.6
JTJ	**Tarama**	**1.15**	**83**	P	Pn	16 13 25.4	+0.6
JTJ				S	Sn	16 13 40.3	+0.8

ISN ***25*** *16:14:34.8±0.8, 32.51N×47.93E, h14km±5km, ML2.9*
TEH ***25*** *16:14:35.2, 32.55N×47.95E, h8km, ML2.9*
ISC 25 16:14:35.8±1.0, 32.53N±0.05×47.93E±0.04, h15km, n28, σ1§72/32, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.99**	**356**	*e*Pg	**Pg**	**16 14 54.1**	**-0.9**
IKMR	**Kamar-syah**	**1.06**	**21**	*e*Pg	**Pn**	**16 14 55.9**	**-0.2**
IKMR				*e*		16 15 16.2	
IDOB	**Doab**	**1.27**	**9**	*e*Pg	**Pg**	**16 14 59.8**	**-0.6**
IKOM	**Komasi**	**1.68**	**348**	*e*		16 15 11.6	
IKOM				*e*Pg	**Pg**	**16 15 06.9**	**-1.2**
IKOM				*e*Sg	**Sg**	**16 15 30.8**	**+0.9**
HSAM	**Samen**	**1.77**	**18**	*e*		16 15 12.6	
HSAM				*e*Pg	**Pg**	**16 15 08.7**	**-1.2**
IBDR	**Badra**	**1.78**	**290**	*e*Pg	**Pn**	**16 15 07.0**	**+1.0**
IBDR				*e*Sg	**Sb**	**16 15 31.0**	**+0.8**
IBDR				AML	AML	16 15 38.2	
	comp=E,51nm,0.6s						
IBDR				AML	AML	16 15 44.5	
	comp=N,38nm,0.6s						
KCHF	**Cheshme Sefid,**	**1.89**	**337**	*e*Pg	**Pg**	**16 15 11.4**	**-0.8**
KCHF				*e*		16 15 17.2	
IBZA	**Bozab**	**1.94**	**358**	*e*Pn	**Pg**	**16 15 11.7**	**-1.3**
IBZA				*e*		16 15 46.0	
KER	**Kermanshah**	**1.97**	**340**	*e*Pn	**Pb**	**16 15 10.3**	**-1.1**
IGHG	**Ghaleghazi**	**2.12**	**328**	*e*Pn	**Pb**	**16 15 13.7**	**-0.4**
IGHG				*e*		16 16 01.6	
NSR	**Nassriya**	**2.15**	**226**	*e*Pn	**Pn**	**16 15 11.0**	**0.0**
NSR				*e*Sn	**Sn**	**16 15 37.0**	**-0.4**
NSR				AML	AML	16 15 42.2	
	comp=E,184nm,0.4s						
IVIS	**Veis**	**2.19**	**336**	*e*Pn	**Pb**	**16 15 15.5**	**+0.4**
IVIS				*e*		16 15 59.1	
IALM	**Almabolaq**	**2.33**	**5**	*e*Pn	**Pb**	**16 15 16.6**	**-1.1**
IPIR	**Pirpir**	**2.51**	**86**	*e*Pn	**Pn**	**16 15 18.8**	**+2.5**
IPIR				*e*		16 16 03.8	
ILIN	**Lien**	**2.52**	**342**	*e*Pn	**Pb**	**16 15 19.4**	**-1.4**
ILIN				*e*		16 15 27.5	
IDHR	**Dehrash**	**2.52**	**330**	*e*Pn	**Pb**	**16 15 18.5**	**-2.3**
IDHR				*e*		16 16 10.9	
HSRG	**Sareghieh**	**2.72**	**6**	*e*Pn	**Pn**	**16 15 20.3**	**+1.0**
HSRG				*e*		16 16 13.1	
BHD	**Baghdad**	**3.07**	**285**	*e*Pn	**Pn**	**16 15 25.0**	**+1.2**
BHD				*e*Sn	**Sn**	**16 16 02.0**	**+1.7**
BHD				AML	AML	16 16 06.8	
	comp=E,350nm,0.4s						
IKLH	**Kolahrood**	**3.17**	**75**	*e*Pn	**Pn**	**16 15 27.9**	**+2.5**
IKLH				*e*		16 16 26.5	
IRAZ	**Razeghan**	**3.32**	**30**	*e*Pn	**Pb**	**16 15 30.4**	**-4.0**
KLNJ	**Kolanjah**	**3.47**	**115**	*e*Pn	**Pn**	**16 15 31.1**	**+1.5**
KLNJ				*e*		16 16 40.9	
IGAR	**Gharneh**	**3.48**	**91**	*e*Pn	**Pn**	**16 15 31.2**	**+1.6**
IGAR				*e*		16 16 16.5	
IZEF	**Zefreh**	**3.73**	**83**	*e*Pn	**Pn**	**16 15 35.3**	**+2.2**
KRSH	**Karshahi**	**3.81**	**67**	*e*Pn	**Pn**	**16 15 36.2**	**+2.1**
IRAM	**Ramesheh**	**3.84**	**100**	*e*Pn	**Pn**	**16 15 36.1**	**+1.5**
QSDN	**Sirdan**	**4.10**	**14**	*e*Pn	**Pn**	**16 15 41.4**	**+3.3**
IDMV	**Damavand**	**4.57**	**47**	*e*Pn	**Pn**	**16 15 45.8**	**+1.2**
ANAR	**Anarak**	**4.93**	**81**	*e*Pn	**Pn**	**16 15 51.2**	**+1.8**

IDC 25 16:29:02.9±1.7, 19.93S×134.03E, h0km, mb1 4.0/3, mb1mx3.6/38, mbtmp3.9/3, ML3.9/3, Error ellipse: s-maj=9.9km s-min=2.3km az=94.0, Northern Territory

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**0.29**	**93**	Pg	Pg	16 29 08.6	+0.1
	40nm,0.3s,baz=272,slow=30,SNR=2049						
WRA				Lg	Lg	16 29 12.6	
	169nm,0.3s,baz=274,slow=31,SNR=40						
ASAR	**Alice Springs**	**3.72**	**182**	Pn	Pn	16 30 03.2	+1.5
	5.7nm,0.3s,baz=4.1,slow=9.7,SNR=262						
ASAR				Sn	Sn	16 30 47.2	+0.9
	5.1nm,0.3s,baz=5.4,slow=26,SNR=9.2						
ASAR				Lg	Lg	16 30 59.2	
	8.3nm,0.3s,baz=5.4,slow=31,SNR=10.0						
FITZ	**Fitzroy Crossi**	**8.14**	**282**	Pn	Pn	16 31 01.1	-1.3
	1.4nm,0.3s,baz=102,slow=8.3,SNR=70						
FITZ				Sn	Sn	16 32 27.6	-7.7
	1.8nm,0.3s,baz=342,slow=16,SNR=9.6						
FITZ				Lg	Lg	16 33 15.6	
	0.8nm,0.3s,baz=357,slow=23,SNR=1.8						
STKA	**Stephens Creek**	**13.70**	**152**	Pn	Pn	16 32 16.4	-2.1
	0.4nm,0.3s,baz=337,slow=13,SNR=3.7						

IDC ***25*** *16:29:46.5±0.4, 2.32N×126.93E, h0km, mb4.7/31, mb1 4.8/34, mb1mx4.6/49, mbtmp4.7/34, ML4.6/3, MS4.3/17, Ms1 4.3/17, ms1mx4.0/41, Error ellipse: s-maj=17.3km s-min=9.3km az=82.0*
MOS ***25*** *16:29:46.8±0.9, 2.36N×126.85E, h14km, mb5.2/28, Error ellipse: s-maj=9.1km s-min=4.9km az=107.4*
BJI ***25*** *16:29:49.0±0.0, 1.97N×127.01E, h45km, mB5.2/46, mb4.8/65, Ms4.6/36, Ms7 4.4/38*
NEIC ***25*** *16:29:51.5±1.8, 2.36N±0.06×127.00E±0.07, h37km±5km, mb5.1/115, Error ellipse: s-maj=10.3km s-min=7.9km az=58.0*
GCMT ***25*** *16:29:54.5±0.2, 2.52N±0.01×127.04E±0.01, h14km, MW5.2/92, Moment Tensor Solution. s52,c64; s92,c132; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr2.08±.20; Mθθ4.71±.15; Mϕϕ-6.79±.17; Mrθ2.42±.36; Mθϕ1.13±.16; Mϕr3.33±.40; Best double couple: Mo7.31200×10^16 NP1,ϕ132.00000°, δ52.00000°, λ13.00000°. NP2,ϕ34.00000°, δ80.00000°, λ141.00000°. Principal axes: T 6.7140, Plg34.0000°, Azm246.0000°; N 1.1940, Plg50.0000°, Azm201.0000°; P -7.9090, Plg18.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***25*** *16:29:54.4±0.4, 2.N±2.×12.7E±., h35km±4km, M4.8/58, mb5.0/58, mB5.3/32, MLv5.0/19, Mw(mB)4.7/32, Mwp5.1/7*
MAN ***25*** *16:30:40.6, 5.92N×125.34E, h7km, mb5.2, ML4.1, MS4.2*
ISC 25 16:29:51.8±0.3, 2.39N±0.03×127.00E±0.05, h35km, n427, σ1§51/423, mb5.0/141, MS4.4/26, 15C-6D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.65**	**167**	P	**Pn**	**16 30 18.1**	**-0.3**
TNTI	**Ternate**	**1.65**	**167**	Pn	Pn	**16 30 17.7**	**-0.7**
SGSI	**Sangihe**	**1.95**	**311**	P	Pn	**16 30 24.3**	**+1.8**
KMSI	**Cibinong**	**3.52**	**239**	P	Pn	**16 30 47.8**	**+3.8**
DDMP	**Don Marcelino,**	**3.91**	**341**	*e*P	Pn	**16 30 49.1**	**-0.3**
GTOI	**Gorontalo**	**4.35**	**246**	P	Pn	**16 30 59.5**	**+4.0**
SANI	**Sanana**	**4.53**	**193**	P	Pn	**16 30 59.7**	**+1.8**
DAV	**Davao City (W)**	**4.86**	**343**	Pn	Pn	**16 31 02.3**	**-0.2**
	65nm,0.3s,baz=87,slow=6.6,SNR=2.9						
DAV				Sn	**Sn**	**16 31 52.3**	**-5.3**
	97nm,0.3s,baz=217,slow=23,SNR=2.2						
KCP	**Kidapawan**	**4.97**	**338**	⇑*i*P	Pn	**16 31 06.5**	**+2.4**
SIJI	**Sorong**	**5.36**	**127**	Pn	Pn	**16 31 09.8**	**+0.4**
	15nm,0.3s,baz=321,slow=8.2,SNR=65						
SIJI				Sn	**Sn**	**16 32 11.5**	**+1.6**
	baz=142,slow=23,SNR=0.6						
SIJI				LR	LR	16 33 39.1	
	comp=Z,8µm,20.5s,baz=289,slow=43						
MRSI	**Marisa**	**5.40**	**249**	P	**Pn**	**16 31 13.9**	**+3.9**
	2.4nm3µm8µm503nm,0.9s						
LUWI	**Luwuk**	**5.43**	**231**	P	Pn	16 31 16.4	+6.0
	2.5nm7µm348nm,0.8s						
LUWI	**Luwuk**	**5.43**	**231**	Pn	**Pn**	**16 31 09.7**	**-0.7**
NLAI	**Namlea**	**5.59**	**179**	P	**Pn**	**16 31 13.3**	**+0.7**
	0.5nm2µm142nm,0.7s						
MSAI	**Masohi**	**6.02**	**161**	P	**Pn**	**16 31 22.7**	**+4.3**
	0.3nm783nm80nm,1.1s						
APSI	**Ampana**	**6.27**	**239**	P	**Pn**	**16 31 25.9**	**+3.9**
	1.7nm5µm502nm,1.6s						
TOLI2	**Tolitoli**	**6.34**	**259**	Pn	**Pn**	**16 31 24.0**	**+1.1**
CGP	**Cagayan de Oro**	**6.45**	**339**	‖*e*P	**Pn**	**16 31 28.3**	**+4.0**
PAGZ	**Pagadian**	**6.51**	**327**	*e*P	**Pn**	**16 31 25.2**	**0.0**
MPSI	**Mapaga**	**7.38**	**254**	P	Pn	16 31 42.2	+5.0
	0.5nm3µm1µm174nm,1.1s						
FAKI	**Fak Fak**	**7.44**	**135**	P	**Pn**	**16 31 41.0**	**+3.0**
	0.3nm4µm990nm92nm,1.1s						
FAKI	**Fak Fak**	**7.44**	**135**	Pn	**Pn**	**16 31 37.9**	**-0.1**
KDI	**Kendari**	**7.68**	**215**	P	Pn	16 31 54.8	+14
CNOP	**Candoni, Negro**	**8.56**	**330**	*e*P	Pn	**16 31 54.1**	**+0.7**
MYLDM	**Lahad Datu**	**8.92**	**288**	Pn	Pn	**16 31 59.1**	**+0.8**
OCLP	**Ormoc**	**8.92**	**345**	*e*P	Pn	**16 31 59.8**	**+1.5**
TTSI	**Tana Toraja**	**8.98**	**233**	P	Pn	**16 32 01.9**	**+2.8**
	1µm125nm,1.0s						
SPSI	**Sidrap Palu**	**9.59**	**229**	P	Pn	**16 32 11.4**	**+3.8**
	747nm63nm,0.9s						
BNSI	**Bone**	**9.64**	**226**	P	Pn	**16 32 11.4**	**+3.2**
	826nm72nm,1.3s						
BAKI	**Biak**	**9.78**	**111**	P	Pn	**16 32 14.1**	**+4.0**
	4µm305nm,1.4s						
BKSI	**Bulukumba**	**10.29**	**222**	P	Pn	**16 32 19.8**	**+2.7**
	747nm42nm,0.7s						
KAPI	**Kappang**	**10.32**	**225**	Pn	Pn	**16 32 15.3**	**-2.2**
	2.5nm,0.3s,baz=53,slow=20,SNR=2.0						
KAPI				Sn	**Sn**	**16 34 13.8**	**+1.8**
	1.9nm,0.3s,baz=150,slow=14,SNR=1.2						
BSSI	**Bau Bau, Buton**

BBKI **Banjar Baru** 13.47 244 P P 16 33 06.5 -2.9
1µm34nm, 1.9s
GENI **Genyem** 14.07 111 P Pn 16 33 11.5 +2.7
3µm3µm175nm, 1.2s
WBSI **Waikabubak, Su** 14.15 212 P Pn 16 33 13.3 +3.3
1µm114nm, 0.6s
PLAI **Plampang** 14.45 219 P P 16 33 17.4 -2.9
3µm205nm, 1.4s
JAY **Jayapura** 14.54 109 Pn P 16 33 20.1 -1.3
0.9nm,0.3s,baz=323,slow=2.3,SNR=8.8
JAY LR LR 16 38 26.8
comp=Z,2µm,20.8s,baz=303,slow=36
JAY **Jayapura** 14.54 109 P Pn 16 33 18.0 +2.7
508nm28nm,0.9s
SBUM **Sibu** 14.77 271 Pn Pn 16 33 17.8 -0.4
TWSI **Taliwang, Sumb** 14.96 222 P P 16 33 25.5 -0.5
1µm113nm,1.1s
SMPP **San Manuel, Pa** 15.02 336 eP Pn 16 33 21.5 -0.2
SRBI **Singaraja** 15.70 228 P P 16 33 35.2 +1.0
2µm192nm,1.2s
KMMI **Kalianget** 16.04 234 P P 16 33 40.5 +2.6
2µm218nm,1.5s
KSM **Kuching** 16.70 267 Pn 16 33 43.5 +0.1
BLJI **Banyuglugur** 16.74 233 P P 16 33 47.8 +2.1
2µm152nm,1.0s
JAGI **Jajag, Banyuwa** 16.75 230 P P 16 33 48.8 +2.9
2µm195nm,1.4s
JAGI **Jajag, Banyuwa** 16.75 230 P 16 33 45.1 -0.7
JAGI IAmb IAmb 16 34 05.5
comp=Z,246nm,1.2s
KNRA **Kununurra** 18.04 175 P Pn 16 33 59.3 -0.6
baz=18,SNR=5.4
KNRA **Kununurra** 18.04 175 P Pn 16 33 56.8 -3.0
PWJI **Pagerwojo** 18.35 236 P Pn 16 34 05.8 +2.1
comp=Z,99nm,1.1s
UGM **Wanagama** 19.36 238 P P 16 34 13.6 -1.1
UGM IAmb IAmb 16 34 41.5
comp=Z,168nm,1.2s
TPI **Tanjungpandan** 20.00 255 P Pn 16 34 23.8 +0.2
comp=Z,628nmcomp=Z,42nm,1.2s
FITZ **Fitzroy Crossi** 20.40 184 P P 16 34 25.0 -1.0
comp=Z,7.5nm,0.5s,baz=15,slow=14,SNR=7.1
FITZ **Fitzroy Crossi** 20.40 184 P Pn 16 34 28.4 +0.2
baz=21,SNR=3.8
FITZ **Fitzroy Crossi** 20.40 184 P P 16 34 24.3 -1.6
KPJI **Karang Pucung** 20.45 242 P P 16 34 27.3 +0.7
DLV **T Lat** 20.66 292 P P 16 34 28.3 -0.6
GUMO **Guam** 20.88 57 LR LR 16 43 01.5
comp=Z,374nm,18.1s,baz=242,slow=38
TWG **Pinlang** 21.11 345 P P 16 34 30.9 -2.6
TWG IAmb IAmb 16 34 51.6
comp=Z,47nm,0.7s
PPBI **Pangkal Pinang** 21.34 258 P P 16 34 38.6 +2.4
comp=Z,47nm,1.2s
LEM **Lembang** 21.40 245 P P 16 34 35.2 -1.8
comp=Z,8.1nm,0.4s,baz=24,slow=12,SNR=1.5
CISI **Cisompet, Garu** 21.54 243 P P 16 34 35.7 -2.7
YULB **Yu-li** 21.60 346 P 16 34 36.1 -2.7
TPUB **Ta-pu** 21.68 344 P P 16 34 37.1 -2.7
TPUB IAmb IAmb 16 34 59.9
comp=Z,74nm,0.7s
CBJI **Citeko** 21.94 246 P P 16 34 46.7 +4.1
comp=Z,66nm,1.2s
SSLB **Suanglung** 22.06 345 P 16 34 41.4 -2.4
NACB **Ninganchiao** 22.28 347 P P 16 34 43.6 -2.5
YHNB **Yeheng** 22.80 347 P P 16 34 50.2 -1.6
YHNB IAmb IAmb 16 35 07.1
comp=Z,51nm,1.0s
COEN **Coen** 22.83 136 P P 16 34 49.2 -2.9
MYKOM **Kota Tinggi** 23.14 269 P P 16 34 55.2 -0.1
MYKOM IAmb IAmb 16 35 12.5
comp=Z,99nm,1.3s
WB0 **Warramunga Arr** 23.19 162 P P 16 34 53.6 -2.1
WB0 IAmb IAmb 16 34 58.8
comp=Z,88nm,1.1s
PMG **Port Moresby** 23.26 121 LR LR 16 45 56.8
comp=Z,876nm,20.4s,baz=308,slow=42
WRAB **Tennant Creek** 23.33 162 P P 16 34 55.4 -1.7
WRAB pmax pmax
comp=Z,38nm,0.8s
WRAB **Tennant Creek** 23.33 162 P P 16 34 55.4 -1.7
WRAB IAmb IAmb 16 35 01.0
comp=Z,38nm,0.8s
KLSI 23.34 252 P P 16 35 00.2 +3.0
comp=Z,21nm,1.0s
WRA **Warramunga Arr** 23.34 162 P P 16 34 55.8 -1.4
comp=Z,24nm,0.5s,baz=342,slow=11,SNR=24
WRA PcP PcP 16 38 44.0 +0.2
comp=Z,1.1nm,0.7s,baz=331,slow=2.0,SNR=2.0
WRA S S 16 39 09.3 +1.7
comp=Z,1.4nm,0.7s,baz=325,slow=17,SNR=3.0
WRA ScP ScP 16 42 20.4 +1.0
comp=Z,2.0nm,1.1s,baz=331,slow=2.9,SNR=4.7
WRA **Warramunga Arr** 23.34 162 P P 16 34 55.2 -1.9
WRA 16 38 44.0
WRA S S 16 39 09.3 +1.7
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA **Warramunga Arr** 23.34 162 P P 16 34 55.2 -1.9
WB2 **Warramunga Arr** 23.34 162 P P 16 34 55.4 -1.7
WB2 IAmb IAmb 16 35 11.0
comp=Z,79nm,1.1s
WR0 **Warramunga Arr** 23.41 162 P P 16 34 56.0 -1.9
WR0 IAmb IAmb 16 35 15.1
comp=Z,46nm,0.8s
QIZ **Qiongzhong** 23.57 316 P P 16 34 59.5 +0.1
QIZ S S 16 39 09.5 -1.9
QIZ LR LR
comp=Z,340nm,15.9s
QIZ LR LR
comp=Z,480nm,16.5s
QIZ LR LR
comp=Z,530nm,20.6s
QIZ **Qiongzhong** 23.57 316 P P 16 34 59.2 -0.2
KASI **Kota Agung** 23.81 251 P P 16 35 04.2 +2.4
comp=Z,84nm,1.0s
LWLI **Liwa** 24.07 252 P P 16 35 15.3 +11
PSA00 **Pilbara Seismi** 24.82 196 P P 16 35 09.8 -1.2
PSA00 **Pilbara Seismi** 24.82 196 P P 16 35 09.6 -1.4
PSA00 IAmb IAmb 16 35 27.4
comp=Z,103nm,1.1s
SDSI **Sungai Dareh** 25.78 263 P P 16 35 24.3 +4.6
comp=Z,13nm,1.1s
KRVT **Keravat (AS076** 25.88 105 LR LR 16 44 09.4
comp=Z,1µm,20.4s,baz=282,slow=33
QIS **Mount Isa** 25.94 152 P P 16 35 20.5 -0.7
baz=26,SNR=15
RABL **Rabaul** 25.98 105 P P 16 35 19.8 -1.9
RABL IAmb IAmb 16 35 47.9
comp=Z,78nm,1.2s
IPM **Ipoh** 26.01 275 P P 16 35 20.5 -1.3
KULM **Kulim** 26.44 277 P P 16 35 25.2 -0.6
AS31 **Alice Springs** 26.76 166 P P 16 35 27.4 -1.1
ASAR **Alice Springs** 26.76 166 P P 16 35 27.8 -0.8
comp=Z,3.9nm,0.5s,baz=336,slow=5.1,SNR=20
ASAR PcP PcP 16 38 50.5 -0.8
comp=Z,2.5nm,0.6s,baz=343,slow=2.0,SNR=6.7
ASAR S S 16 40 03.8 +1.6
comp=Z,0.4nm,0.7s,baz=347,slow=20,SNR=1.3
ASAR ScP ScP 16 42 30.6 +1.6
comp=Z,1.6nm,1.0s,baz=333,slow=1.5,SNR=4.9
ASAR **Alice Springs** 26.76 166 P P 16 35 27.2 -1.3
SRAK **Srakaew** 27.23 296 P P 16 35 28.5 -4.2
comp=Z,2µmcomp=Z,161nm,0.8s
WRKA **Warakurna** 27.29 177 P P 16 35 35.0 +1.7
baz=28,SNR=12
KHON **Khomkaen** 27.53 302 P P 16 35 39.1 +3.6
GIRL **Giralia** 27.83 206 P P 16 35 40.3 +2.2
baz=28,SNR=3.4
GIRL **Giralia** 27.83 206 P P 16 35 37.5 -0.6
PSI **Prapat** 28.05 271 P P 16 35 39.4 -1.0
comp=Z,4.2nm,0.6s,baz=180,slow=1.9,SNR=5.5
RPSI **Rantau Prapat** 28.05 271 P P 16 35 38.9 -1.3
RPSI **Rantau Prapat** 28.05 271 P P 16 35 39.4 -0.8
CHAI **Chaiyaphum** 28.05 300 P P 16 35 40.0 -0.2
comp=Z,29nm,0.8s
NONG **Nongkai** 28.10 305 P P 16 35 41.4 +0.8
comp=Z,19nm,0.9s
JSU **Suzuyama** 29.14 6 P P 16 35 50.0 +0.3
JSU IAmb IAmb 16 35 52.2
comp=Z,35nm,1.2s
CTA **Charters Tower** 29.26 141 LR LR 16 49 06.5
comp=Z,895nm,20.4s,baz=318,slow=40
GSI **Gunungsitoli** 29.43 268 P P 16 35 51.3 -1.2
GSI IAmb IAmb 16 36 09.7
comp=Z,27nm,1.0s
PHIT **Phitsanulok** 29.97 301 P P 16 35 58.3 +1.1
comp=Z,111nm,0.8s
MEEK **Meekatharra** 29.97 195 P P 16 35 56.8 -0.4
baz=30,SNR=6.2
UTTA **Uttaradit** 30.10 302 P P 16 35 59.3 +0.9
comp=Z,166nmcomp=Z,21nm,0.8s
LHMI **Lhok Sumawe** 30.11 276 P P 16 35 56.6 -1.9
UTHA **Uthaitani** 30.14 297 P P 16 35 59.3 +0.5
comp=Z,166nmcomp=Z,21nm,0.8s
WHN **Wuhan** 30.45 338 ⇑P P 16 36 04.3 +3.0
WHN S S 16 41 02.5 +2.3
WHN LR LR
comp=Z,950nm,15.0s
WHN LR LR
comp=Z,3µm,20.2s
WHN LR LR
comp=Z,4µm,28.6s
NJ2 **Nanjing** 30.48 346 eP P 16 36 02.8 +1.2
NJ2 sP sP 16 36 18.8 +4.0
NJ2 pmax pmax
comp=Z,17nm,1.2s
NJ2 pmax pmax
comp=Z,250nm,6.2s
SUKH **Sukhothai** 30.77 301 P P 16 36 05.1 +0.8
comp=Z,37nm,0.7s
JNU **Nakatsue** 30.79 6 LR LR 16 47 54.7
comp=Z,458nm,21.4s,baz=180,slow=35
JNU **Nakatsue** 30.79 6 P P 16 36 02.8 -1.5
JNU IAmb IAmb 16 36 07.8
comp=Z,45nm,0.9s
GYA **Guiyang** 30.88 323⇓eP P 16 36 05.8 +0.5
GYA pmax pmax
comp=Z,7.0nm,0.9s
GYA LR LR
comp=Z,240nm,19.3s
GYA LR LR
comp=Z,220nm,20.7s
GYA LR LR
comp=Z,520nm,26.7s
PAYA **Payao** 31.44 304 P P 16 36 13.5 +3.3
comp=Z,113nm,0.9s
CM35 **Chiang Mai Arr** 31.71 303 P P 16 36 12.0 -0.6
CM04 **Chiang Mai Arr** 31.73 302 P P 16 36 14.1 +1.2
comp=Z,68nmcomp=Z,7.2nm,0.8s
CM09 **Chiang Mai Arr** 31.74 302 P P 16 36 13.9 +1.0
comp=Z,82nmcomp=Z,12nm,0.8s
CM01 **Chiang Mai Arr** 31.76 302 P P 16 36 14.2 +1.2
comp=Z,65nmcomp=Z,7.6nm,0.9s
CM05 **Chiang Mai Arr** 31.76 302 P P 16 36 14.2 +1.2
comp=Z,49nmcomp=Z,7.8nm,1.0s
CM02 **Chiang Mai Arr** 31.78 302 P P 16 36 14.1 +0.9
comp=Z,71nmcomp=Z,10nm,0.8s
CM31 **Chiang Mai Arr** 31.79 302 P P 16 36 14.2 +0.9
comp=Z,254nm,0.8s
CM31 **Chiang Mai Arr** 31.79 302 P P 16 36 12.5 -0.8
CMAR **Chiang Mai Arr** 31.79 302 P P 16 36 12.9 -0.3
comp=Z,5.3nm,0.8s,baz=121,slow=7.2,SNR=44
CMAR PcP PcP 16 39 03.4 -0.8
comp=Z,0.4nm,0.7s,baz=137,slow=1.4,SNR=1.6
CMAR **Chiang Mai Arr** 31.79 302 P P 16 36 12.3 -1.0
CMAR 16 39 03.4
CMAR **Chiang Mai Arr** 31.79 302 P P 16 36 12.3 -1.0
CM34 **Chiang Mai Arr** 31.80 303 P P 16 36 13.0 -0.3
CM15 **Chiang Mai Arr** 31.80 302 P P 16 36 14.2 +0.7
comp=Z,88nmcomp=Z,11nm,0.8s
CM13 **Chiang Mai Arr** 31.80 302 P P 16 36 14.0 +0.6
comp=Z,65nmcomp=Z,8.0nm,0.8s
CMMT **Chiang Mai** 31.95 303 P P 16 36 14.6 -0.1
comp=Z,193nmcomp=Z,11nm,0.7s
CHTO **Chiang Mai** 31.95 303 P P 16 36 13.0 -1.7
CHTO pmax pmax
comp=Z,14nm,0.8s
CHTO **Chiang Mai** 31.95 303 P P 16 36 13.0 -1.7
CHTO IAmb IAmb 16 36 28.3
comp=Z,14nm,0.8s
CM33 **Chiang Mai Arr** 31.95 303 P P 16 36 14.0 -0.7
CM32 **Chiang Mai Arr** 31.96 302 P P 16 36 15.0 +0.2
ENH **Enshi** 32.32 331 P P 16 36 16.4 -1.4
KMI **Kunming** 32.52 316⇓eP P 16 36 24.5 +4.7
KMI pmax pmax
KMI comp=Z,12nm,0.8s pmax pmax
KMI comp=Z,77nm,5.0s LR LR
KMI comp=Z,550nm,18.9s LR LR
KMI comp=Z,470nm,17.7s LR LR
comp=Z,370nm,21.8s
MHMT **Maesarieng** 32.53 301 P P 16 36 20.2 +0.5
JHS **Saijyo** 32.94 9 P P 16 36 24.6 +1.5
MORW **Morawa** 33.00 198 P P 16 36 24.3 +0.6
baz=33,SNR=9.5
MORW **Morawa** 33.00 198 P P 16 36 23.3 -0.4
FORT **Forrest** 33.00 178 P P 16 36 23.4 -0.3
baz=33,SNR=10.0
FORT **Forrest** 33.00 178 P P 16 36 23.1 -0.5
JWT **Wachi** 33.65 12 P P 16 36 28.9 -0.3
TJN **Taejon** 33.82 1ceP P 16 36 33.2 +2.4
KMBL **Kambalda** 33.92 188 P P 16 36 32.6 +0.8
baz=34,SNR=6.3
INU **Inuyama** 34.09 15 P P 16 36 32.7 -0.4
BLDU **Balidu** 34.26 196 P P 16 36 35.2 +0.6
baz=35,SNR=5.7
JGF **Kuroka** 34.41 15 P P 16 36 35.4 -0.6
JGF IAmb IAmb 16 36 39.4
comp=Z,46nm,1.3s
KSAR **Wonju Array Be** 34.89 1 P P 16 36 40.4 +0.4
KSAR **Wonju Array Be** 34.89 1 P P 16 36 40.4 +0.4
KSRS **Korea Array** 34.90 1 P P 16 36 41.1 +1.0
comp=Z,22nm,0.9s,baz=180,slow=10,SNR=42
KSRS LR LR 16 50 57.8
comp=Z,302nm,21.7s,baz=188,slow=36
KLBR **Kellerberrin** 34.92 194 P P 16 36 40.3 0.0
baz=35,SNR=28
KS19 **Wonju Array Si** 34.95 1 P P 16 36 41.0 +0.4
MAJO **Matsushiro** 35.53 16 P P 16 36 44.5 -1.1
MAJO pmax pmax
comp=Z,33nm,1.2s
MAJO **Matsushiro** 35.53 16 P P 16 36 44.5 -1.1
MAJO IAmb IAmb 16 36 46.0
comp=Z,34nm,1.2s
MAT **Matsushiro** 35.53 16 P P 16 36 44.5 -1.1
MJAR **Matsushiro Arr** 35.53 16 P P 16 36 44.5 -1.1
comp=Z,11nm,1.0s,baz=180,slow=9.4,SNR=12
MJAR LR LR 16 49 42.0
comp=Z,828nm,21.4s,baz=205,slow=34
MJAR **Matsushiro Arr** 35.53 16 P P 16 36 43.9 -1.7
MJAR pmax pmax
comp=Z,6.0nm,0.9s
MJAR **Matsushiro Arr** 35.53 16 P P 16 36 43.9 -1.7
MUN **Mundaring** 35.68 196 P P 16 36 47.1 +0.1
baz=36,SNR=12
XAN **Xi'an** 35.73 334 P P 16 36 46.8 -0.6
XAN pmax pmax
XAN comp=Z,31nm,1.4s LR LR
XAN comp=Z,350nm,17.4s LR LR
XAN comp=Z,370nm,21.7s LR LR
XAN comp=Z,920nm,27.1s LR LR
XAN **Xi'an** 35.73 334 P P 16 36 46.2 -1.1
XAN pmax pmax
comp=Z,42nm,1.3s
XAN **Xi'an** 35.73 334 P P 16 36 46.2 -1.1
XAN IAmb IAmb 16 37 13.7
comp=Z,42nm,1.3s
CD2 **Chengdu** 35.88 325 P P 16 36 48.5 -0.2
CD2 pmax pmax
CD2 comp=Z,20nm,0.8s LR LR
CD2 comp=Z,480nm,24.7s LR LR
CD2 comp=Z,820nm,15.5s LR LR
CD2 comp=Z,490nm,11.8s LR LR
BBOO **Buckleboo** 36.05 167 P P 16 36 50.1 0.0
baz=36,SNR=12
BBOO **Buckleboo** 36.05 167 P P 16 36 49.2 -0.8
BBOO IAmb IAmb 16 36 56.5
comp=Z,46nm,1.4s
EIDS **Eidsvold** 36.14 141 P P 16 36 49.2 -1.8
baz=36,SNR=4.9
EIDS **Eidsvold** 36.14 141 P P 16 36 50.2 -0.8
EIDS IAmb IAmb 16 37 06.0
comp=Z,34nm,1.3s
NWAO **Narrogin (SRO)** 36.32 194 P P 16 36 51.5 -0.9
comp=Z,14nm,0.5s,baz=22,slow=7.9,SNR=17
NWAO **Narrogin (SRO)** 36.32 194 P P 16 36 52.8 +0.4
baz=37,SNR=18
NWAO **Narrogin (SRO)** 36.32 194 P P 16 36 51.9 -0.5
NWAO **Narrogin (SRO)** 36.32 194 P P 16 36 52.2 -0.1
NWAO IAmb IAmb 16 37 09.0
comp=Z,75nm,1.4s
DL2 **Dalian** 36.67 353 P P 16 36 58.5 +3.2
DL2 pmax pmax
comp=Z,45nm,0.7s
STKA **Stephens Creek** 36.79 159 P P 16 36 55.6 -0.8
comp=Z,16nm,0.5s,baz=332,slow=7.9,SNR=21
STKA **Stephens Creek** 36.79 159 P P 16 36 56.0 -0.4
baz=37,SNR=31
STKA **Stephens Creek** 36.79 159 P P 16 36 55.2 -1.2
STKA pmax pmax
comp=Z,8.0nm,0.9s
STKA **Stephens Creek** 36.79 159 P P 16 36 55.2 -1.2
JSD **Sado** 36.95 15 P P 16 36 57.1 -0.6
HTT **Hallett** 37.37 163 P P 16 37 03.7 +2.3
baz=38,SNR=5.1
JMM **Marumori** 37.51 18 P P 16 37 02.3 -0.1
RKGY **Rocky Gully** 37.99 193 P P 16 37 07.9 +1.4
baz=38,SNR=15
CMSA **Cobar Meteorol** 38.14 154 P P 16 37 07.5 -0.3
baz=38,SNR=12
BJT **Baijiatuan** 38.72 347 P P 16 37 12.9 +0.3
BJT pmax pmax
comp=Z,50nm,1.0s
BJT **Baijiatuan** 38.72 347 P P 16 37 12.9 +0.3
BJT IAmb IAmb 16 37 32.7
comp=Z,50nm,1.0s
BJI **Beijing** 38.74 347 P P 16 37 14.0 +1.2
BJI S S 16 43 09.0 +1.3
BJI pmax pmax
comp=Z,17nm,1.0s
BJI pmax pmax
comp=Z,270nm,11.2s
BJI LR LR
comp=Z,240nm,13.5s
BJI LR LR
comp=Z,270nm,18.0s
BJI LR LR
comp=Z,310nm,26.5s
LZH **Lanzhou** 39.79 330 eP P 16 37 23.8 +2.0
LZH SS SS 16 46 20.5 -0.3
LZH pmax pmax
comp=Z,22nm,1.1s
LZH pmax pmax
comp=Z,180nm,4.9s
LZH LR LR
comp=Z,520nm,15.2s
LZH LR LR
comp=Z,540nm,15.4s
LZH LR LR
comp=Z,750nm,15.7s
ARMA **Armidale** 40.21 146 P P 16 37 24.4 -0.9
baz=40,SNR=14
ARMA **Armidale** 40.21 146 P P 16 37 24.4 -0.9
ARMA IAmb IAmb 16 37 46.2
comp=Z,43nm,1.2s
HHC **Hu-ho-hao-te** 40.75 342 eP P 16 37 30.5 +0.9
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,150nm,7.2s
HHC LR LR
comp=Z,320nm,19.2s
HHC LR LR
comp=Z,320nm,15.5s
HHC LR LR
comp=Z,670nm,20.4s
VLA **Vladivostok** 40.79 5 iP P 16 37 30.8 +1.1
VLA pmax pmax
comp=Z,21nm,1.0s
SHL **Shillong** 40.89 307 P P 16 37 30.4 -0.7
SHL pmax pmax
comp=Z,27nm,1.0s
SHL **Shillong** 40.89 307 P P 16 37 30.4 -0.7
SHL IAmb IAmb 16 37 52.4
comp=Z,26nm,1.0s
CN2 **Changchun** 41.26 358 eP P 16 37 38.5 +4.9
CN2 pmax pmax
comp=Z,10.0nm,1.0s
ARPS **Mount Arapiles** 41.34 162 P P 16 37 34.9 +0.5
baz=42,SNR=6.5
USA0B **Ussuriysk Arra** 41.87 5 P P 16 37 39.5 +0.9
USA0B pmax pmax
comp=Z,37nm,1.0s
USA0B **Ussuriysk Arra** 41.87 5 P P 16 37 39.5 +0.9
USA0B IAmb IAmb 16 37 41.5
comp=Z,37nm,0.9s
USRK **Ussuriysk Ar.** 41.87 5 P P 16 37 40.0 +1.4
comp=Z,28nm,0.8s,baz=191,slow=8.1,SNR=58
USRK LR LR 16 54 47.4
comp=Z,252nm,21.9s,baz=186,slow=36
USRK **Ussuriysk Ar.** 41.87 5 P P 16 37 38.8 +0.2
USRK **Ussuriysk Ar.** 41.87 5 P P 16 37 38.8 +0.2
H11S3 **WAKE ISLAND Hy** 42.04 65 T T 17 22 36.3
baz=252,slow=75,SNR=14
H11S1 **WAKE ISLAND Hy** 42.05 65 T T 17 22 45.3
baz=252,slow=75,SNR=6.9
H11S2 **WAKE ISLAND Hy** 42.05 65 T T 17 22 37.6
baz=252,slow=75,SNR=7.2
MDJ **Mudanjiang** 42.11 3 P P 16 37 41.5 +0.9
MDJ pP pwP 16 37 53.5 +0.1
MDJ sP sP 16 38 00.5 +6.5
MDJ pmax pmax
comp=Z,60nm,1.0s
MDJ pmax pmax
comp=Z,190nm,4.6s
MDJ **Mudanjiang** 42.11 3 P P 16 37 41.2 +0.6
MDJ IAmb IAmb 16 37 43.3
comp=Z,51nm,1.0s
H11N1 **WAKE ISLAND Hy** 42.60 63 T T 17 23 22.6
baz=247
H11N2 **WAKE ISLAND Hy** 42.61 63 T T 17 23 21.4
baz=247
H11N3 **WAKE ISLAND Hy** 42.62 63 T T 17 23 14.3
baz=247
TOO **Toolangi** 43.30 158 P P 16 37 50.4 0.0
baz=43,SNR=4.3
TEY **Ternei** 43.30 10⇑eP P 16 37 51.4 +1.2
TEY pmax pmax
comp=Z,40nm,1.1s
TEY pmax pmax
comp=E,10.0nm,1.4s
LSA **Lhasa** 43.53 312 P P 16 37 53.5 +0.6
LSA pmax pmax
comp=E,33nm,0.7s
LSA **Lhasa** 43.53 312 P P 16 37 52.5 -0.4
LSA pmax pmax
comp=Z,15nm,0.9s
LSA **Lhasa** 43.53 312 P P 16 37 52.5 -0.4
ASAJ **Asahikawa** 43.79 16 LR LR 16 55 15.6
comp=Z,601nm,21.2s,baz=186,slow=35
ASAJ **Asahikawa** 43.79 16 P P 16 37 54.3 +0.1
ASAJ pmax pmax
comp=Z,22nm,0.9s
JKA **Kamikawa-asahi** 43.79 16 P P 16 37 54.3 +0.1
JKA IAmb IAmb 16 38 20.6
comp=Z,22nm,0.9s
GTA **Gaotai** 44.38 330 ⇑P P 16 37 59.0 -0.2
GTA pP pwP 16 38 10.8 -1.3
GTA sP sP 16 38 15.0 +2.4
GTA PcP PP 16 39 44.0 +0.9
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,120nm,6.2s
GTA LR LR
comp=Z,290nm,16.4s
GTA LR LR
comp=Z,590nm,19.3s
GTA LR LR
comp=Z,760nm,20.0s
TAPN **Taplejung** 45.03 307 eP P 16 38 04.7 -0.1
comp=Z,90nm,1.4s
ODAN **Odare** 45.07 306 eP P 16 38 05.5 +0.5
comp=Z,31nm,0.6s
RAMN **Ramite** 45.74 306 eP P 16 38 10.2 -0.2
comp=Z,28nm,0.7s
PALK **Pallekele** 46.36 278 P P 16 38 14.9 -0.3

PALK pmax pmax
comp=Z,44nm,1.4s
PALK Pallekele 46.36 278 P **P** **16 38 14.8 -0.3**
PALK IAmb IAmb 16 38 28.7
comp=Z,44nm,1.4s
YSS Yuzh-Sakhalins 46.46 15 *eP* **P** **16 38 16.5 +1.2**
YSS pmax pmax
comp=Z,20nm,0.9s
YSS Yuzh-Sakhalins 46.46 15 P **P** **16 38 15.1 -0.2**
YSS IAmb IAmb 16 38 22.6
comp=Z,44nm,1.3s
GUN Gumba 46.73 307 *eP* **P** **16 38 17.9 -0.4**
comp=Z,47nm,0.7s
KLR Kul'dur 46.84 4 P **P** **16 38 18.8 +0.4**
comp=Z,16nm,0.8s,baz=208,slow=4.6,SNR=32
KLR Kul'dur 46.84 4*ceP* **P** **16 38 19.1 +0.8**
KLR pmax pmax
comp=Z,25nm,0.9s
PKI Pulchoki 46.97 306 *eP* **P** **16 38 19.2 -0.9**
PKIN Phulchoki 46.98 306 *eP* **P** **16 38 19.4 -0.7**
comp=Z,28nm,1.0s
KKN Kakani 47.16 306 *eP* **P** **16 38 20.7 -0.8**
DMN Daman 47.23 306 *eP* **P** **16 38 22.1 +0.1**
comp=Z,41nm,1.0s
GKN Gorkha 47.77 306 *eP* **P** **16 38 25.3 -0.8**
ULN Ulaanbaatar 48.47 342*ceP* **P** **16 38 31.4 +0.2**
ULN pmax pmax
comp=Z,11nm,0.8s
ULN Ulaanbaatar 48.47 342 P **P** **16 38 30.3 -0.9**
ULN IAmb IAmb 16 38 56.4
comp=Z,17nm,1.0s
KOLN Koldanda 48.51 306 *eP* **P** **16 38 31.6 -0.3**
comp=Z,42nm,0.7s
DANN Dangsing 48.61 306 *eP* **P** **16 38 32.0 -0.8**
comp=Z,24nm,0.5s
SONM Songino Array 48.64 342 P **P** **16 38 32.8 +0.3**
comp=Z,5.2nm,0.7s,baz=160,slow=7.3,SNR=18
SONM LR LR 17 00 58.0
comp=Z,443nm,21.9s,baz=153,slow=38
SONM Songino Array 48.64 342 P **P** **16 38 32.4 -0.1**
GRNR Gornyy 48.86 8*iP* **P** **16 38 35.7 +1.8**
GRNR pmax pmax
comp=N,8.0nm,1.0s
GRNR pmax pmax
comp=Z,10.0nm,1.0s
PYUN Piuthan 49.13 306 *eP* **P** **16 38 36.6 -0.1**
comp=Z,22nm,0.5s
HYB Hyderabad 49.83 291 *i* P **P** **16 38 42.0 +0.1**
ZEA Zeya 51.18 0 *eP* **P** **16 38 51.7 +0.2**
ZEA pmax pmax
comp=N,10.0nm,0.6s
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZAK Zakamensk 51.87 341 *eP* **P** **16 38 56.3 -0.5**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
TLY Talaya 52.88 342 P **P** **16 39 03.7 -0.4**
comp=Z,5.8nm,0.6s,baz=69,slow=4.7,SNR=3.5
MOY Mondy 53.72 340 *eP* **P** **16 39 09.4 -1.1**
MOY pmax pmax
comp=Z,61nm,2.3s
WMQ Urumqi 53.97 325 *eP* **P** **16 39 13.5 +1.1**
WMQ pP pP 16 39 22.5 +0.3
WMQ sP sP 16 39 35.3 +9.3
WMQ pmax pmax
comp=Z,14nm,1.1s
WMQ pmax pmax
comp=Z,200nm,4.9s
WMQ LR LR
comp=Z,480nm,20.7s
WMQ LR LR
comp=Z,370nm,19.1s
WMQ LR LR
comp=Z,600nm,28.9s
MSVF Nonsavu 54.12 114 P **P** **16 39 12.0 -2.0**
MSVF pmax pmax
comp=Z,38nm,1.3s
MSVF Nonsavu 54.12 114 P **P** **16 39 11.9 -2.0**
MSVF IAmb IAmb 16 39 28.7
comp=Z,38nm,1.3s
BOD Bodaibo 56.22 352 *eP* **P** **16 39 27.4 -0.9**
BOD pmax pmax
comp=Z,24nm,1.5s
PEA0B Petropavlovsk- 56.56 22 P **P** **16 39 30.3 -0.6**
PEA0B pmax pmax
comp=Z,83nm,1.4s
PEA0B Petropavlovsk- 56.56 22 P **P** **16 39 30.3 -0.6**
PETK Petropavlovsk- 56.56 22 P **P** **16 39 31.8 +0.9**
comp=Z,4.5nm,0.5s,baz=189,slow=4.5,SNR=20
PETK LR LR 17 02 46.5
comp=Z,137nm,21.6s,baz=221,slow=35
PETK Petropavlovsk- 56.56 22 P **P** **16 39 31.1 +0.2**
PETK Petropavlovsk- 56.56 22 P **P** **16 39 31.1 +0.2**
ZSN Zaisan 57.77 327 *eP* **P** **16 39 39.2 -0.4**
baz=327
ZSN Zaisan 57.77 327 *eP* **P** **16 39 39.1 -0.4**
MK31 Makanchi Array 58.80 326*ceP* **P** **16 39 47.0 +0.2**
MK31 Makanchi Array 58.80 326 P **P** **16 39 46.1 -0.7**
MK31 IAmb IAmb 16 40 10.0
comp=Z,21nm,1.1s
MKAR Makanchi Array 58.80 326 P **P** **16 39 46.6 -0.2**
comp=Z,4.8nm,0.5s,baz=118,slow=7.3,SNR=44
MKAR Makanchi Array 58.80 326 P **P** **16 39 46.0 -0.8**
NIL Nilore 58.95 308 P **P** **16 39 47.2 -0.9**
NIL pmax pmax
comp=Z,9.0nm,0.9s
NIL Nilore 58.95 308 P **P** **16 39 47.2 -0.9**
NIL IAmb IAmb 16 40 04.3
comp=Z,9.2nm,0.9s
MAKZ Makanchi 58.99 325 P **P** **16 39 47.2 -0.9**
MAKZ pmax pmax
comp=Z,24nm,1.0s
MAKZ Makanchi 58.99 325 P **P** **16 39 47.2 -0.9**
SATY Saty 59.17 320 *eP* **P** **16 39 49.7 +0.2**
comp=Z,30nm,1.9s,baz=320
SATY Saty 59.17 320 *eP* **P** **16 39 49.7 +0.2**
SATY pmax pmax
comp=Z,30nm,1.9s
KSH Kashi 59.18 316 *eP* P 16 39 58.5 +8.9
KSH Kashi 59.18 316 P P 16 40 04.8 +15
KSH pmax pmax
comp=Z,27nm,0.9s
KSH pmax pmax
comp=Z,250nm,4.4s
KSH pmax pmax
comp=Z,27nm,0.9s
KSH pmax pmax
comp=Z,210nm,3.8s
KPKS Kokpek 59.19 321 *eP* **P** **16 39 49.8 +0.1**
comp=Z,29nm,2.2s,baz=321
KPKS Kokpek 59.19 321 *eP* **P** **16 39 49.7 +0.1**
KPKS pmax pmax
comp=Z,29nm,2.2s
KDJ Kajisay 59.52 319 P **P** **16 39 50.3 -1.7**
KDJ pmax pmax
comp=Z,91nm,1.2s
KDJ Kajisay 59.52 319 P **P** **16 39 50.3 -1.7**
YAK Yakutsk 59.53 1 P **P** **16 39 52.3 +0.9**
comp=Z,35nm,0.8s,baz=140,slow=0.2,SNR=5.5
YAK Yakutsk 59.53 1 *eP* **P** **16 39 51.9 +0.5**
YAK *e* 16 40 40.2
YAK *eS* **S** **16 47 59.2 +0.7**
YAK *e**SS* **sS** **16 48 15.4 +0.5**
YAK *e* 16 49 31.1
YAK *e*SSS SSS 16 54 29.7
YAK pmax pmax
comp=Z,43nm,0.9s
YAK pmax pmax
comp=N,14nm,1.0s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=Z,297nm,6.1s
YAK pmax pmax
comp=N,303nm,4.4s
YAK pmax pmax
comp=E,256nm,5.5s
YAK smax smax
comp=E,188nm,4.8s
YAK smax smax
comp=N,84nm,2.9s
YAK Yakutsk 59.53 1 P **P** **16 39 51.7 +0.3**
TDK Taldyqorghan 60.13 322 *eP* **P** **16 39 55.9 0.0**
comp=N,6.7nm,1.0s,baz=322
TDK Taldyqorghan 60.13 322 *eP* **P** **16 39 55.9 0.0**
TDK pmax pmax
comp=Z,7.0nm,1.0s
LBZ Lake Benmore 60.43 146 P **P** **16 39 57.7 -0.3**
CHKK Chushkaly 60.45 320 *eP* **P** **16 39 58.0 -0.2**
baz=320
CHKK Chushkaly 60.45 320 *eP* **P** **16 39 58.0 -0.2**
THZ Tophouse 60.49 142 P **P** **16 39 58.0 -0.5**
KUU Kurty 60.89 320 *eP* **P** **16 40 00.6 -0.5**
comp=Z,9.0nm,1.0s,baz=320
KUU Kurty 60.89 320 *eP* **P** **16 40 00.6 -0.5**
KUU pmax pmax
comp=Z,9.0nm,1.0s
SGDS Sogindy 61.79 319 *iP* **P** **16 40 06.7 -0.6**
baz=319
SGDS Sogindy 61.79 319 *iP* **P** **16 40 06.7 -0.6**
ZAA0 Zalesovo Array 61.90 333 P **P** **16 40 07.1 -0.6**
ZALV Zalesovo Beam 61.90 333 P **P** **16 40 07.6 -0.1**
comp=Z,2.9nm,0.6s,baz=128,slow=6.1,SNR=11
ZALV LR LR 17 08 45.7
comp=Z,116nm,20.0s,baz=104,slow=38
ZALV Zalesovo Beam 61.90 333 *iP* **P** **16 40 07.5 -0.2**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 61.90 333 P **P** **16 40 07.0 -0.7**
SEM Semipalatinsk 61.97 328 *eP* **P** **16 40 07.5 -1.2**
baz=328
SEM Semipalatinsk 61.97 328 *eP* **P** **16 40 07.4 -1.2**
KNZ Kokohu 62.15 137 P **P** **16 40 09.9 +0.3**
BTLS Baital 62.87 321 *eP* **P** **16 40 13.4 -1.0**
baz=320
BTLS Baital 62.87 321 *eP* **P** **16 40 13.4 -1.0**
KURBB Kurchatov Arra 63.00 328 P **P** **16 40 15.3 +0.1**
comp=Z,8.5nm,0.6s,baz=129,slow=6.4,SNR=41
KURBB Kurchatov Arra 63.00 328 P **P** **16 40 14.6 -0.6**
KURK Kurchatov 63.01 328*ceP* **P** **16 40 14.8 -0.4**
KURK pmax pmax
comp=Z,30nm,1.3s
KURK Kurchatov 63.01 328 P **P** **16 40 14.4 -0.7**
BTK Batken 63.04 314 P **P** **16 40 14.1 -1.7**
BTK pmax pmax
comp=Z,15nm,1.0s
BTK Batken 63.04 314 P **P** **16 40 14.1 -1.7**
BTK IAmb IAmb 16 40 40.6
comp=Z,16nm,1.0s
SEY Seymchan 63.27 13 P **P** **16 40 17.6 +0.9**
comp=Z,11nm,1.1s,baz=233,slow=10.0,SNR=6.2
SEY Seymchan 63.27 13 *iP* **P** **16 40 17.8 +1.1**
DZA Taraz 63.75 317 *eP* **P** **16 40 20.3 -0.1**
baz=317
DZA Taraz 63.75 317 *eP* **P** **16 40 20.3 -0.1**
IUG Iuzhnay 64.36 316 *eP* **P** **16 40 24.0 -0.5**
baz=316
IUG Iuzhnay 64.36 316 *eP* **P** **16 40 24.0 -0.5**
KK31 Karatay Array 64.39 317 P **P** **16 40 23.4 -1.1**
KK31 pmax pmax
comp=Z,13nm,0.9s
KK31 Karatay Array 64.39 317 P **P** **16 40 23.4 -1.1**
KK31 IAmb IAmb 16 40 47.5
comp=Z,13nm,0.9s
KKAR Karatay Array 64.39 317 P **P** **16 40 23.3 -1.2**
KKAR Karatay Array 64.39 317 P **P** **16 40 23.3 -1.2**
BRZS Berezniki 65.93 325 *eP* **P** **16 40 34.0 -0.4**
baz=325
BRZS Berezniki 65.93 325 *eP* **P** **16 40 34.0 -0.4**
BRVK Borovoye 68.65 327*ceP* **P** **16 40 51.3 -0.2**
BRVK pmax pmax
comp=Z,32nm,2.5s
BRVK Borovoye 68.65 327 P **P** **16 40 51.1 -0.4**
BRVK IAmb IAmb 16 41 09.0
comp=Z,24nm,0.9s
TIXI Tiksi 69.17 1*ceP* **P** **16 40 55.0 +0.6**
TIXI pmax pmax
comp=Z,64nm,1.3s
TIXI Tiksi 69.17 1 P **P** **16 40 53.3 -1.1**
TIXI IAmb IAmb 16 40 55.7
comp=Z,25nm,1.4s
BILL Bilibino 70.77 15⇑*iP* **P** **16 41 04.8 +0.5**
BILL *i* 16 41 21.6
BILL *i* 16 43 43.9
BILL pmax pmax
comp=Z,5.0nm,1.2s
NRIK Noril'sk 71.78 346 P **P** **16 41 10.9 +0.5**
comp=Z,8.8nm,0.6s,baz=127,slow=5.7,SNR=22
NRIK LR LR 17 14 58.2
comp=Z,366nm,21.0s,baz=188,slow=38
NRIK Noril'sk 71.78 346*ceP* **P** **16 41 10.5 +0.1**
SOCY Socotra 72.89 282 P **P** **16 41 16.6 -1.6**
SOCY IAmb IAmb 16 41 22.9
comp=Z,16nm,0.7s
AB31 Akbulak array 73.35 321 *iP* **P** **16 41 20.0 -0.1**
ABKAR Akbulak array 73.35 321 P **P** **16 41 19.3 -0.8**
ABKAR IAmb IAmb 16 41 38.1
comp=Z,14nm,0.8s
AKTO Aktyubinsk 74.87 322 P **P** **16 41 28.9 -0.1**
SVE Sverdlovsk 75.23 329 *eP* P 16 41 47.1 +16
SVE pmax pmax
comp=Z,54nm,1.0s
ARU Arti 76.20 328*dP* **P** **16 41 36.6 +0.1**
ARU 16 44 22.3
ARU PPP PPP 16 46 12.8
ARU S **S** **16 51 20.8 +2.6**
ARU SS **SS** **16 56 14.9 +2.7**
ARU pmax pmax
comp=Z,13nm,0.8s
ARU Arti 76.20 328 P **P** **16 41 35.9 -0.5**
ARU IAmb IAmb 16 41 53.1
comp=Z,33nm,1.0s
SDPT Sand Point 78.15 34 P **P** **16 41 46.1 -1.3**
RAYN Ar Rayn 81.25 293 P **P** **16 42 04.3 -0.7**
RAYN pmax pmax
comp=Z,17nm,1.0s
RAYN Ar Rayn 81.25 293 P **P** **16 42 04.3 -0.7**
RAYN IAmb IAmb 16 42 27.9
comp=Z,17nm,1.0s
GROC Groznyy 81.95 313 *eP* **P** **16 42 09.2 +1.0**
GROC *e* 16 42 14.7
GROC *eS* **S** **16 52 23.6 +3.7**
GROC pmax pmax
comp=Z,19nm,0.6s
TTA Tatalina 81.97 27 P **P** **16 42 08.0 0.0**
TTA pmax pmax
comp=Z,13nm,1.1s
TTA Tatalina 81.97 27 P **P** **16 42 08.0 0.0**
VNDA Vanda 82.07 173 P **P** **16 42 07.9 -0.3**
comp=Z,4.2nm,0.6s,baz=315,slow=6.9,SNR=15
VNDA Vanda 82.07 173 P **P** **16 42 07.9 -0.3**
VNDA IAmb IAmb 16 42 24.8
comp=Z,18nm,1.0s
MAW Mawson 82.60 200 P **P** **16 42 11.4 +0.4**
comp=Z,4.5nm,0.8s,baz=82,slow=5.1,SNR=7.5
MAW Mawson 82.60 200 P **P** **16 42 11.7 +0.7**
KDAK Kodiak Island 82.87 32 P **P** **16 42 13.4 +0.7**
KDAK pmax pmax
comp=Z,23nm,0.9s
KDAK Kodiak Island 82.87 32 P **P** **16 42 13.4 +0.7**
KDAK IAmb IAmb 16 42 30.5
comp=Z,23nm,0.9s
ZEI Tsey 83.31 313 *eP* **P** **16 42 15.8 +0.2**
ZEI pmax pmax
comp=Z,30nm,1.5s
A21K Barrow 83.40 18 P **P** **16 42 17.3 +2.2**
baz=258
PPLA Purkeypile 83.69 27 P **P** **16 42 18.1 +1.1**
GEVA Gevas 83.77 308 P **P** **16 42 18.6 +0.6**
SKT Skwentna 83.89 28 P **P** **16 42 18.3 +0.4**
BRLK Bradley Lake 83.97 30 P **P** **16 42 18.6 +0.3**
KBZ Khabaz 84.09 314 P **P** **16 42 20.4 +1.1**
comp=Z,5.9nm,0.9s,baz=156,slow=3.5,SNR=5.6
KBZ Khabaz 84.09 314 *iP* **P** **16 42 17.9 -1.3**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
SUA Susitna One 84.20 29 P **P** **16 42 19.9 +0.2**
KIV Kislovodsk 84.25 314 *eP* **P** **16 42 20.9 +0.7**
KIV pmax pmax
comp=Z,26nm,1.1s
KTH Kantishna Hill 84.34 26 P **P** **16 42 20.9 +0.7**
KTH IAmb IAmb 16 42 39.3
comp=Z,31nm,1.3s
BPAW Bear Paw Mtn. 84.36 26 P **P** **16 42 20.7 +0.4**
PPT Papeete 84.45 108 LR LR 17 16 37.4
comp=Z,212nm,19.6s,baz=304,slow=33
MLY Manley 84.57 25 P **P** **16 42 23.0 +1.6**
baz=264
TRF Thorofare Moun 84.61 27 P **P** **16 42 21.9 +0.2**
O22K Cooper Landing 84.61 30 P **P** **16 42 22.8 +1.3**
baz=265
O22K Cooper Landing 84.61 30 P **P** **16 42 21.7 +0.2**
RC01 Rabbit Creek A 84.66 29 P **P** **16 42 22.9 +1.1**
baz=265
SEW Seward 84.72 30 P **P** **16 42 22.0 0.0**
PMR Palmer 84.99 29 P **P** **16 42 23.5 +0.1**
PMR pmax pmax
comp=Z,27nm,1.0s
PMR Palmer 84.99 29 P **P** **16 42 23.5 +0.1**
COLD Coldfoot 85.01 23 P **P** **16 42 25.5 +2.0**
baz=264
COLD Coldfoot 85.01 23 P **P** **16 42 23.6 +0.2**
COLD IAmb IAmb 16 42 44.0
comp=Z,22nm,1.2s
I23K Minto, Yukon-K 85.16 25 P **P** **16 42 25.8 +1.6**
baz=265
I23K Minto, Yukon-K 85.16 25 P **P** **16 42 25.0 +0.8**
I23K IAmb IAmb 16 42 44.8
comp=Z,20nm,1.3s
VRH Novokhopyorsk 85.18 321 *eP* **P** **16 42 23.1 -1.5**
VRH pmax pmax
comp=Z,10.0nm,0.6s
MCK McKinley 85.23 26 P **P** **16 42 25.8 +1.1**
baz=266
NEA2 Nenana 85.24 25 P **P** **16 42 25.6 +0.9**
baz=266
RND Reindeer 85.25 27 P **P** **16 42 24.6 -0.2**
RND pmax pmax
comp=Z,24nm,1.4s
RND Reindeer 85.25 27 P **P** **16 42 24.6 -0.2**
RND IAmb IAmb 16 42 43.4
comp=Z,24nm,1.4s
KNK Knik Glacier 85.30 29 P **P** **16 42 25.0 0.0**
SML Sawmill 85.38 28 P **P** **16 42 25.5 0.0**
TOLK Toolik Lake Re 85.39 21 P **P** **16 42 27.5 +2.2**
baz=265
TOLK Toolik Lake Re 85.39 21 P **P** **16 42 25.4 +0.1**
TOLK IAmb IAmb 16 42 45.8
comp=Z,12nm,1.0s
WRH Wood River Hil 85.66 26 P **P** **16 42 26.9 +0.2**
SCM Sheep Creek Mo 85.86 28 P **P** **16 42 28.6 +0.7**
SCM pmax pmax
comp=Z,29nm,1.1s
SCM Sheep Creek Mo 85.86 28 P **P** **16 42 28.6 +0.7**
DHY Denali Highway 85.89 27 P **P** **16 42 28.3 +0.2**
IL31 86.19 25 P **P** **16 42 29.1 -0.2**
ILAR Eielson Array 86.19 25 P **P** **16 42 28.8 -0.6**
comp=Z,1.2nm,0.5s,baz=251,slow=4.6,SNR=18
KLMR Klimovskoe 86.69 331 *eP* **P** **16 42 33.5 +1.6**
KLMR pmax pmax
comp=Z,27nm,1.0s
KLMR Klimovskoe 86.69 331 *eP* **P** **16 42 33.5 +1.6**
KLMR AMP 16 42 50.1
comp=Z,27nm,1.0s
VSR Storozhevoye 86.79 321 *eP* **P** **16 42 33.0 +0.4**
VSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR Galich'ya Gora 86.94 322 *eP* **P** **16 42 33.2 -0.1**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
RIDG Independent Ri 87.05 26 P **P** **16 42 33.4 -0.3**
MENT Mentasta 87.56 27 P **P** **16 42 35.9 -0.2**
L26K Log Cabin Wild 87.73 27 P **P** **16 42 38.0 +1.0**
baz=271
K27K Chicken 88.28 26 P **P** **16 42 41.5 +2.1**
baz=272
K27K Chicken 88.28 26 P **P** **16 42 39.3 -0.1**
K27K IAmb IAmb 16 43 00.6
comp=Z,12nm,1.0s
OBN Obninsk 88.30 325 *eP* **P** **16 42 38.4 -1.3**
OBN *e* 16 46 08.2
OBN pmax pmax
comp=Z,4.0nm,0.9s
BCAR Beaver Creek A 88.44 27 P **P** **16 42 41.0 +0.7**
BARN Barnard Glacie 88.58 29 P **P** **16 42 41.6 +0.4**
BARN IAmb IAmb 16 43 02.6
comp=Z,8.8nm,1.0s
DAWY Dawson 89.45 26 P **P** **16 42 44.9 -0.2**
DAWY IAmb IAmb 16 43 06.1
comp=Z,14nm,1.2s
KMBO Kilima Mbogo 89.79 269 P **P** **16 42 47.6 -0.3**
comp=Z,0.7nm,0.3s,baz=50,slow=7.0,SNR=2.2
KMBO Kilima Mbogo 89.79 269 IAmb IAmb 16 43 05.1
comp=Z,12nm,1.4s
BRTR Keskin Array B 91.08 310 P **P** **16 42 53.4 +0.1**
comp=Z,1.4nm,0.7s,baz=78,slow=6.2,SNR=3.2
SYO Syowa Base 91.28 201⇑*eX* P 16 43 01.6 +8.3
SYO Syowa Base 91.28 201⇑*esP* sP 16 43 11.4 +3.9
ARCES ARCESS Array B 91.79 340 P **P** **16 42 55.4 -0.4**
comp=Z,1.9nm,0.6s,baz=64,slow=5.5,SNR=10
ARCES LR LR 17 30 03.1
comp=Z,137nm,18.2s,baz=275,slow=39
QSPA South Pole Qui 92.31 180 P **P** **16 42 58.4 +0.1**
comp=Z,4.6nm,1.0s,baz=321,slow=1.2
AKASG Malin Array Be 93.09 321 P **P** **16 43 02.5 +0.3**
comp=Z,0.3nm,0.4s,baz=66,slow=5.1,SNR=2.9
FINES FINESS Array B 93.13 332 P **P** **16 43 02.5 +0.4**
comp=Z,3.0nm,0.9s,baz=87,slow=5.7,SNR=1.9
BURAR Bucovina Array 96.17 318 P **P** **16 43 15.7 -0.8**
DAG Danmarks Havn 98.61 352 *eP* **P** **16 43 26.4 -0.3**
DAG Danmarks Havn 98.61 352 *iP* **P** **16 43 26.4 -0.3**
DAG *eS* **pP** **16 43 39.1 +2.0**
DAG Danmarks Havn 98.61 352 *eP* **P** **16 43 26.4 -0.3**
DAG *eS* **pP** **16 43 39.1 +2.0**
DAG IAML 16 43 43.4
comp=Z,0.6nm,0.5s
SCHQ Schefferville 121.84 9 PKP **PKPdf** **16 48 42.3 0.0**
comp=Z,2.5nm,0.8s,baz=49,slow=9.3,SNR=1.2
TXAR Lajitas Array 122.19 53 PKP **PKiKP** **16 48 45.1 +1.0**
comp=Z,0.7nm,0.8s,baz=219,slow=0.8,SNR=5.0
TORD Torodi Ar. Bea 123.58 287 PKP **PKPdf** **16 48 46.8 +0.1**
comp=Z,1.6nm,0.7s,baz=26,slow=1.6,SNR=11
TORD Torodi Ar. Bea 123.58 287 **PKPdf** **16 48 44.7 -2.1**
CO01 Juntas del Tor 148.13 151 **PKPbc** **16 49 35.7 +0.7**
LCO Las Campanas 148.62 149 PKP2 **PKiKP** **16 49 37.3 -0.6**
LCO Las Campanas 148.62 149 **PKiKP** **16 49 37.3 -0.6**
GO02 Mina Guanaco 152.28 146 **PKPbc** **16 49 43.6 -1.6**

NEIC ***25*** *16:38:17.2±0.8, 31°.66S±0°.07×178°.4W±0°.2, h10km±1km, mb4.5/15, Error ellipse: s-maj=27.6km s-min=8.1km az=109.0*

IDC ***25*** *16:38:24.3±2.4, 31°.83S×178°.64W, h51km±23km, mb4.2/6, mb1 4.4/8, mb1mx3.8/40, mbtmp4.5/8, ML4.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.6/31, Error ellipse: s-maj=26.6km s-min=16.1km az=112.0*

ISC 25 16:38:23.5±0.8, 31°.94S±0°.07×178°.7W±0°.1, h45km, n54, σ1§36/55, mb4.5/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.74**	**13**	P	**Pn**	**16 39 03.7**	**-1.2**
GLKZ				S	**Sn**	**16 39 33.5**	**-3.3**
RAO	**Raoul Island**	**2.75**	**13**	P	**Pn**	**16 39 05.4**	**+0.3**
	61nm,0.3s,baz=283,slow=21,SNR=3.2						
RAO				S	**Sn**	**16 39 35.8**	**-1.3**
	74nm,0.3s,baz=110,slow=23,SNR=2.4						
RAO				LR	LR	16 39 38.0	
	comp=Z,173nm,20.1s,baz=161,slow=28						
RAO	**Raoul Island**	**2.75**	**13**	Pn	Pn	16 38 56.4	-8.8
RIZ	**Raoul Island**	**2.76**	**13**	P	**Pn**	**16 39 07.1**	**+1.9**
MXZ	**Matakaoa Point**	**6.14**	**203**	P	**Pn**	**16 39 51.6**	**0.0**
MXZ				S	**Sn**	**16 41 00.9**	**+0.4**
MXZ	**Matakaoa Point**	**6.14**	**203**	Pn	**Pn**	**16 39 51.4**	**-0.3**
WMGZ	**Waiomatatini S**	**6.34**	**202**	P	**Pn**	**16 39 52.9**	**-1.5**
WMGZ				S	**Sn**	**16 41 03.3**	**-2.2**
HAZ	**Te Kaha**	**6.50**	**206**	P	**Pn**	**16 39 57.1**	**+0.6**
HAZ				S	**Sn**	**16 41 12.0**	**+2.7**
PKGZ	**Pakihiroa**	**6.51**	**203**	P	**Pn**	**16 39 56.4**	**-0.4**
PKGZ				S	**Sn**	**16 41 07.1**	**-2.8**
RUGZ	**Raukumara Rang**	**6.72**	**206**	P	**Pn**	**16 39 59.8**	**+0.1**
RUGZ				S	**Sn**	**16 41 15.6**	**+0.5**
TWGZ	**Tauwhareparae**	**6.81**	**203**	P	**Pn**	**16 40 03.1**	**+2.3**
TWGZ				S	**Sn**	**16 41 16.5**	**-0.5**
CNGZ	**Carnagh Statio**	**7.02**	**201**	P	**Pn**	**16 40 02.7**	**-1.0**
MWZ	**Matawai**	**7.11**	**205**	S	**Sn**	**16 41 22.7**	**-1.6**
MWZ	**Matawai**	**7.11**	**205**	P	**Pn**	**16 40 03.6**	**-1.3**
URZ	**Urewera**	**7.20**	**208**	P	**Pn**	**16 40 07.0**	**+0.9**
	3.7nm,0.3s,baz=277,slow=6.3,SNR=22						
URZ				S	**Sn**	**16 41 24.4**	**-2.1**
	4.1nm,0.3s,baz=101,slow=21,SNR=8.6						
URZ	**Urewera**	**7.20**	**208**	P	**Pn**	**16 40 06.8**	**+0.7**
URZ				S	**Sn**	**16 41 23.7**	**-2.9**
URZ	**Urewera**	**7.20**	**208**		**Pn**	**16 40 04.9**	**-1.2**
PRGZ	**Paritu Road**	**7.52**	**201**	P	**Pn**	**16 40 12.1**	**+1.5**

MTHZ	Maungataniwha	7.82 207	P	Pn	16 40 16.0	+1.3
ARHZ	Aropaoanui	8.12 205	S	Sn	16 41 47.7	-1.5
BKZ	Black Stump Fm	8.22 207	P	Pn	16 40 22.5	+2.3
BKZ	Black Stump Fm	8.22 207	Pn	Pn	16 40 20.0	-0.2
BFZ	Birch Farm	9.65 204	Pn	Pn	16 40 37.2	-2.4
CTA	Charters Tower	33.53 282	P	P	16 45 00.3	+1.2
	3.5nm,0.5s,baz=104,slow=10,SNR=13					
CTAO	Charters Tower	33.53 282	P	P	16 44 58.6	-0.5
BBOO	Buckleboo	38.04 256	P	P	16 45 38.2	+0.6
KRVT	Keravat (AS076	38.88 309	P	P	16 45 44.4	-0.3
	22nm,0.4s,baz=82,slow=3.6,SNR=3.9					
COEN	Coen	39.19 288	P	P	16 45 48.7	+1.4
COEN			IAmb	IAmb	16 45 50.6	
	comp=Z,12nm,1.1s					
AS31	Alice Springs	42.49 269	P	P	16 46 14.8	+0.2
ASAR	Alice Springs	42.49 269	P	P	16 46 14.6	-0.1
	comp=Z,2.0nm,0.4s,baz=106,slow=7.3,SNR=87					
WR0	Warramunga Arr	43.45 274	P	P	16 46 22.0	-0.2
WB2	Warramunga Arr	43.61 274	P	P	16 46 23.4	-0.2
WB2			IAmb	IAmb	16 46 24.6	
	comp=Z,6.3nm,0.7s					
WRAB	Tennant Creek	43.62 274	P	P	16 46 23.7	+0.1
WRAB			IAmb	IAmb	16 46 51.0	
	comp=Z,6.0nm,0.7s					
WRA	Warramunga Arr	43.62 274	P	P	16 46 23.7	0.0
	comp=Z,3.4nm,0.3s,baz=113,slow=7.9,SNR=76					
WRA	Warramunga Arr	43.62 274	P	P	16 46 22.9	-0.8
WB0	Warramunga Arr	43.65 274	P	P	16 46 23.1	-0.8
WB0			IAmb	IAmb	16 46 24.9	
	comp=Z,6.6nm,0.7s					
FORT	Forrest	45.13 257	P	P	16 46 35.5	-0.1
MTN	Manton Dam	49.69 281	P	P	16 47 10.9	-0.4
KNRA	Kununurra	50.29 276	P	P	16 47 15.9	+0.1
FITZ	Fitzroy Crossi	51.82 271	P	P	16 47 27.0	-0.2
	comp=Z,2.2nm,0.8s,baz=99,slow=6.2,SNR=6.4					
FITZ	Fitzroy Crossi	51.82 271	IAmb	IAmb	16 47 31.2	
	comp=Z,4.2nm,1.0s					
QSPA	South Pole Qui	58.18 180	P	P	16 48 14.4	+1.8
	comp=Z,2.3nm,0.7s,baz=54,slow=0.2,SNR=2.7					
QSPA	South Pole Qui	58.18 180	IAmb	IAmb	16 48 31.3	
	comp=Z,5.6nm,1.2s					
SNAA	Sanae	76.64 179	P	P	16 50 09.6	+0.5
H03S2	Juan Fernandez	80.08 124	T	T	18 19 12.0	
	baz=236,slow=74,SNR=45					
H03S1	Juan Fernandez	80.09 124	T	T	18 19 13.2	
	baz=236,slow=74,SNR=46					
H03S3	Juan Fernandez	80.10 124	T	T	18 19 12.1	
	baz=236,slow=74,SNR=57					
H03N3	Juan Fernandez	80.28 123	T	T	18 19 16.3	
	baz=241,slow=72,SNR=36					
H03N2	Juan Fernandez	80.28 123	T	T	18 19 15.0	
	baz=241,slow=72,SNR=44					
H03N1	Juan Fernandez	80.30 123	T	T	18 19 15.4	
	baz=241,slow=72,SNR=74					
FINES	FINESS Array B	146.38 339	PKPbc	PKPdf	16 57 57.4	0.0
	comp=Z,3.5nm,0.6s,baz=37,slow=3.9,SNR=23					
NB2	NORSAR Subarra	150.18 350	PKP	PKPbc	16 58 07.7	-1.1
	comp=Z,0.6nm,0.5s,baz=13,slow=2.6					
NOA	NORSAR Array B	150.18 350	PKPbc	PKPbc	16 58 08.0	-0.8
	comp=Z,0.5nm,0.4s,baz=17,slow=4.1,SNR=4.5					
TORD	Torodi Ar. Bea	161.29 181	PKPab	PKPab	16 59 03.5	0.0
	comp=Z,1.1nm,0.9s,baz=190,slow=2.7,SNR=4.0					

MAN 25 16:41:18.1, 12.78N×119.44E, h27km, mb4.2, ML3.0, MS2.6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	1.23	40	eP	Pn	16 41 39.0	-0.6
LUBP				eS	Sn	16 41 54.5	-0.9
ENPP	El Nido	1.56	180	eP	Pn	16 41 42.6	-1.6
ENPP				eS	Sb	16 42 05.3	-0.6

*IDC **25** 16:46:18.2±1.4, 22.28S×174.42W, h0km, mb3.9/6, mb1 4.2/8, mb1mx3.9/40, mbtmp4.0/8, ML3.5/2, MS3.4/1, Ms1 3.4/1, ms1mx2.9/32, Error ellipse: s-maj=48.3km s-min=26.6km az=145.0*
*NEIC **25** 16:46:19.4±1.8, 22.6S±0.2×174.1W±0.1, h21km±5km, mb4.4/8, Error ellipse: s-maj=25.4km s-min=12.8km az=162.0*

ISC 25 16:46:20.0±0.6, 22.55S±0.09×173.96W±0.07, h31km, n25, σ1§22/23, mb4.0/8, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.11	48	Pn	Pn	16 47 35.0	+0.5
AFI	Afiamalu	8.84	14		Pn	16 48 17.0	-8.7
MSVF	Nonsavu	8.90	301		Pn	16 48 23.4	-3.2
RAR	Rarotonga	13.24	87	Pn	P	16 49 33.5	-1.8
	1.9nm,0.3s,baz=170,slow=16,SNR=1.5						
RAR				Sn	Sn	16 51 50.9	-1.1
	1.0nm,0.3s,baz=147,slow=13,SNR=1.4						
RAR				LR	LR	16 54 24.7	
	comp=Z,159nm,18.5s,baz=319,slow=36						
FUNA	Funafuti	15.42 334		Pn	Pn	16 49 56.8	+1.4
URZ	Urewera	17.43 204		P	P	16 50 23.4	+1.6
	0.2nm,0.3s,baz=9.0,slow=19,SNR=1.9						
URZ				Sn	Sn	16 53 33.9	-0.1
	0.7nm,0.3s,baz=191,slow=16,SNR=4.5						
RPZ	Rata Peaks	24.48 207		P	P	16 51 37.4	+1.1
LBZ	Lake Benmore	25.39 207		P	P	16 51 43.8	-0.7
CTA	Charters Tower	37.07 266		P	P	16 53 26.7	-0.9
	3.1nm,1.0s,baz=110,slow=12,SNR=1.9						
COEN	Coen	41.48 274		P	P	16 54 04.5	0.0
AS31	Alice Springs	47.74 258		P	P	16 54 53.9	-0.6
ASAR	Alice Springs	47.75 258		P	P	16 54 54.2	-0.3
	0.3nm,0.3s,baz=102,slow=7.4,SNR=2.8						
WB2	Warramunga Arr	48.06 263		P	P	16 54 57.0	+0.1
WB2				IAmb	IAmb	16 55 24.9	
	comp=Z,9.9nm,1.4s						
WB0	Warramunga Arr	48.06 263		P	P	16 54 57.0	+0.1
WB0				IAmb	IAmb	16 55 18.3	
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	48.07 263		P	P	16 54 57.0	+0.1
	comp=Z,0.3nm,0.5s,baz=95,slow=8.3,SNR=6.9						
WRA	Warramunga Arr	48.07 263		P	P	16 54 57.1	+0.1
PEA0B	Petropavlovsk-	79.26 343		P	P	16 58 22.2	+0.2
PETK	Petropavlovsk-	79.26 343		P	P	16 58 22.9	+0.9
	comp=Z,2.6nm,0.6s,baz=103,slow=8.4,SNR=11						
H03S2	Juan Fernandez	81.73 123		T	T	18 30 36.8	
	baz=249						
H03S1	Juan Fernandez	81.74 123		T	T	18 30 36.1	
	baz=249						
H03S3	Juan Fernandez	81.75 123		T	T	18 30 37.2	
	baz=249						
MCMT	McKenzie Canyo	87.14	39	P	P	16 59 02.9	-0.2
ILAR	Eielson Array	89.52	11	P	P	16 59 15.8	+2.1
	comp=Z,0.5nm,0.8s,baz=236,slow=5.1,SNR=5.5						
CMAR	Chiang Mai Arr	94.33 288		P	P	16 59 38.3	+1.2
	comp=Z,0.2nm,0.4s,baz=73,slow=3.0,SNR=4.4						
AKASG	Malin Array Be	146.58 333		PKPbc	PKPab	17 05 59.7	+0.5
	comp=Z,0.9nm,0.4s,baz=37,slow=4.0,SNR=9.0						

*NEIC **25** 16:47:51.5±1.9, 11.56S±0.07×117.51E±0.06, h10km±1km, mb4.3/16, Error ellipse: s-maj=12.1km s-min=9.0km az=177.0*
*IDC **25** 16:47:51.6±1.0, 11.29S×117.61E, h0km, mb4.1/7, mb1 4.1/12, mb1mx3.9/36, mbtmp4.0/12, ML3.8/5, Error ellipse: s-maj=31.1km s-min=17.3km az=56.0*
*DJA **25** 16:47:59.1±1.5, 11°S±9°×117°8E±°, h27km±21km, M4.3/13, mB4.8/2, mb4.5/5, MLv4.3/13, Mw(mB)4.0/2*

ISC 25 16:47:54.2±0.5, 11.59S±0.05×117.65E±0.05, h34km, n72, σ2§33/78, mb4.1/12, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	Waikabubak, Su	2.59	42	P	Pn	16 48 33.7	0.0
WBSI				S	Sn	16 49 01.4	-2.7
PLAI	Plampang	2.75	3	P	Pn	16 48 35.1	-0.8
PLAI				S	Sn	16 49 04.3	-3.7
TWSI	Taliwang, Sumb	2.93	345	P	Pn	16 48 37.0	-1.4
BASI	Baing, Sumba	3.19	65	P	Pn	16 48 45.2	+3.3
WSI	Waingapu	3.23	54	P	Pn	16 48 44.6	+2.1
DNP	Denpasar	3.76	320	P	Pn	16 48 51.2	+1.4
SRBI	Singaraja	4.23	325	P	Pn	16 48 57.2	+1.0
JAGI	Jajag, Banyuwa	4.63	312	P	Pn	16 49 03.0	+1.2
JAGI	Jajag, Banyuwa	4.63	312		Pn	16 48 58.6	-3.2
EDFI	Ende, Flores	4.88	55	P	Pn	16 49 07.4	+2.1
MMRI	Maumere	5.39	57	P	Pn	16 49 14.0	+1.7
	0.5nm47nm,1.3s						
MMRI	Maumere	5.39	57	Pn	Pn	16 49 13.9	+1.7
BATI	Baumata	6.07	77	Pn	Pn	16 49 23.5	+1.9
	5.3nm,0.3s,baz=258,slow=4.2,SNR=7.7						
BATI				Sn	Sn	16 50 29.5	-0.5
	3.4nm,0.3s,baz=23,slow=22,SNR=5.6						
BSSI	Bau Bau, Buton	6.10	28	P	Pn	16 49 22.7	+0.7
	0.2nm592nm31nm,0.9s						
BKSI	Bulukumba	6.69	22	P	Pn	16 49 31.5	+1.4
	876nm70nm,0.6s						
SOEI	Soe	6.76	75	Pn	Pn	16 49 32.8	+1.6
PWJI	Pagerwojo	6.76	301	P	Pn	16 49 35.4	+4.3
KAPI	Kappang	6.86	18	Pn	Pn	16 49 33.1	+0.7
	2.9nm,0.3s,baz=173,slow=6.8,SNR=9.4						
KAPI				Sn	Sn	16 50 42.7	-6.6
	14nm,0.3s,baz=94,slow=22,SNR=25						
KAPI	Kappang	6.86	18		Pn	16 49 33.0	+0.6
BNSI	Bone	7.55	19	P	Pn	16 49 50.9	+9.0
UGM	Wanagama	7.91	297	Pn	Pn	16 49 46.1	-0.9
TTSI	Tana Toraja	8.76	14	P	Pn	16 50 03.2	+4.7
FITZ	Fitzroy Crossi	10.08	131	Pn	Pn	16 50 19.1	+2.6
	1.2nm,0.3s,baz=324,slow=8.7,SNR=4.5						
FITZ				Sn	Sn	16 52 03.6	-4.8
	1.0nm,0.3s,baz=167,slow=15,SNR=4.1						
FITZ	Fitzroy Crossi	10.08	131		Pn	16 50 17.9	+1.3
PSA00	Pilbara Seismi	10.15	168		Pn	16 50 17.8	+0.2
PSA00	Pilbara Seismi	10.15	168	Pn	Pn	16 50 18.0	+0.5
CISI	Cisompet, Garu	10.49	292	Pn	Pn	16 50 19.1	-3.2
MTKI	Muara Teweh, K	10.93	345	P	Pn	16 50 30.6	+2.4
GIRL	Giralia	11.46	196	Pn	Pn	16 50 36.6	+1.1
KNRA	Kununurra	11.54	112	Pn	Pn	16 50 38.7	+2.1
XMIS	Christmas Isla	11.82	274	Pn	Pn	16 50 39.7	-0.8
MTN	Manton Dam	13.24	97	Pn	Pn	16 51 01.1	+1.1
SIJI	Sorong	17.21	53	P	Pn	16 51 52.7	+0.5
	0.4nm,0.3s,baz=220,slow=19,SNR=2.4						
MORW	Morawa	17.45	185	P	P	16 51 55.7	-0.3
MORW				IAmb	IAmb	16 52 09.7	
	comp=Z,41nm,1.4s						
KKM	Kota Kinabalu	17.58	355		Pn	16 51 56.2	-0.5
KKM				IAmb	IAmb	16 52 07.3	
	comp=Z,86nm,1.5s						
WB0	Warramunga Arr	18.05	119		P	16 52 04.7	+2.0
WB0				IAmb	IAmb	16 52 28.9	
	comp=Z,9.1nm,1.5s						
WRA	Warramunga Arr	18.07	119	P	P	16 52 05.2	+2.2
	comp=Z,0.2nm,0.3s,baz=287,slow=15,SNR=7.7						
WRA				S	Sn	16 55 18.5	-5.1
	comp=Z,0.2nm,0.3s,baz=288,slow=22,SNR=4.6						
WB2	Warramunga Arr	18.08	119		P	16 52 04.9	+1.8
WR0	Warramunga Arr	18.25	119		Pn	16 52 06.7	+1.8
AS31	Alice Springs	19.58	130		Pn	16 52 21.4	+0.4
ASAR	Alice Springs	19.58	130	P	Pn	16 52 23.4	+2.4
	comp=Z,0.3nm,0.3s,baz=316,slow=14,SNR=19						
ASAR				S	S	16 55 53.2	-5.6
	comp=Z,0.2nm,0.3s,baz=302,slow=23,SNR=6.1						
ASAR	Alice Springs	19.58	130	P	P	16 52 20.2	+0.7
BKNI	Bangkinang	20.30	305	P	P	16 52 27.0	-0.4
COCO	West Island	20.37	266	P	P	16 52 27.3	-0.8
NWAO	Narrogin (SRO)	21.24	181	P	P	16 52 43.8	+6.5
	comp=Z,10nm,0.4s,baz=7.8,slow=12,SNR=23						
NWAO				S	S	16 56 22.9	-8.7
	comp=Z,7.6nm,0.9s,baz=214,slow=15,SNR=1.8						
KULM	Kulim	23.82	314	P	P	16 53 04.2	-0.1
KULM				IAmb	IAmb	16 53 16.1	
	comp=Z,4.8nm,1.0s						
BBOO	Buckleboo	27.05	144	P	P	16 53 34.0	+0.5
BBOO				IAmb	IAmb	16 53 39.7	
	comp=Z,19nm,1.4s						
STKA	Stephens Creek	29.91	136	P	P	16 53 59.3	+0.3
STKA				IAmb	IAmb	16 54 17.0	
	comp=Z,1.6nm,1.4s						
CMAR	Chiang Mai Arr	35.10	328	P	P	16 54 44.6	+0.1
	comp=Z,0.5nm,0.7s,baz=160,slow=7.5,SNR=7.1						
ODAN	Odare	48.21	323	eP	P	16 56 32.5	+0.5
TAPN	Taplejung	48.39	324	eP	P	16 56 34.1	+0.7
	comp=Z,5.1nm,0.4s						
RAMN	Ramite	48.75	322	eP	P	16 56 36.9	+0.8
	comp=Z,9.1nm,0.5s						
GUN	Gumba	49.89	322	eP	P	16 56 45.2	+0.2
	comp=Z,15nm,0.7s						
PKI	Pulchoki	49.92	322	eP	P	16 56 45.1	-0.1
	comp=Z,7.8nm,0.7s						
PKIN	Phulchoki	49.93	322	eP	P	16 56 45.1	-0.1
	comp=Z,4.9nm,0.4s						
DMN	Daman	50.13	322	eP	P	16 56 47.0	+0.3
	comp=Z,17nm,0.7s						
KKN	Kakani	50.16	322	eP	P	16 56 47.5	+0.6
GKN	Gorkha	50.70	322	eP	P	16 56 50.9	0.0
	comp=Z,8.2nm,0.4s						
KOLN	Koldanda	51.18	320	eP	P	16 56 54.6	+0.1
	comp=Z,16nm,0.7s						
DANN	Dangsing	51.49	321	eP	P	16 56 57.1	+0.1
	comp=Z,28nm,0.6s						
PYUN	Piuthan	51.79	320	eP	P	16 56 59.4	+0.3
	comp=Z,16nm,0.7s						
USRK	Ussuriysk Ar.	57.04	12	P	P	16 57 36.9	+0.2
	comp=Z,1.6nm,0.6s,baz=191,slow=5.5,SNR=3.1						
SONM	Songino Array	60.00	351	P	P	16 57 58.5	+1.0
	comp=Z,0.4nm,0.4s,baz=167,slow=8.8,SNR=2.8						
SONM	Songino Array	60.00	351	P	P	16 57 57.3	-0.2
MK31	Makanchi Array	66.17	334	P	P	16 58 38.6	+0.3
MK31				IAmb	IAmb	16 58 39.9	
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	66.17	334	P	P	16 58 38.9	+0.6
	comp=Z,0.7nm,0.5s,baz=142,slow=6.9,SNR=9.5						
MKAR	Makanchi Array	66.17	334	P	P	16 58 38.6	+0.3
ARSB	Arslanbob	66.82	325	P	P	16 58 44.5	+1.7
AAK	Ala-Archa	66.87	327	P	P	16 58 44.6	+1.5
AAK				IAmb	IAmb	16 59 13.6	
	comp=Z,9.5nm,1.5s						
ZALV	Zalesovo Beam	70.99	340	P	P	16 59 08.0	-0.2
	comp=Z,1.1nm,0.5s,baz=116,slow=3.4,SNR=5.1						
PETK	Petropavlovsk-	72.97	24	P	P	16 59 22.0	+1.9
	comp=Z,4.6nm,0.8s,baz=244,slow=5.3,SNR=4.8						
ABKAR	Akbulak array	78.92	326	P	P	16 59 53.7	-0.4

*IDC **25** 17:06:18.2±5.3, 14.67S×167.26E, h172km±47km, mb3.1/5, mb1 3.3/6, mb1mx3.1/32, mbtmp3.6/6, Error ellipse: s-maj=39.9km s-min=30.0km az=167.0*

ISC 25 17:06:17.9±1.3, 14.7S±0.1×167.3E±0.2, h170km, n7, σ0§61/8, mb3.3/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.43	186	P	Pn	17 08 04.5	+0.7
	1.2nm,0.3s,baz=144,slow=21,SNR=13						
DZM				S	Sn	17 09 26.4	-0.9
	0.4nm,0.3s,baz=75,slow=16,SNR=1.7						
STKA	Stephens Creek	29.04	229	P	P	17 12 02.6	+0.4
	0.5nm,0.3s,baz=38,slow=7.3,SNR=6.1						
WRA	Warramunga Arr	31.84	256	P	P	17 12 26.7	-0.4
	0.1nm,0.3s,baz=83,slow=7.3,SNR=1.6						
ASAR	Alice Springs	32.70	249	P	P	17 12 34.3	-0.2
	0.2nm,0.3s,baz=80,slow=9.7,SNR=15						
VNDA	Vanda	62.94	181	P	P	17 16 25.6	-0.2
	0.4nm,0.5s,baz=354,slow=1.5,SNR=2.5						
ILAR	Eielson Array	86.45	18	P	P	17 18 40.6	-0.3
	0.2nm,0.8s,baz=226,slow=3.6,SNR=2.2						
ARCES	ARCESS Array B	120.17	345	PKP	PKiKP	17 24 48.4	+0.2
	3.9nm,1.1s,baz=64,slow=1.9,SNR=11						

*IDC **25** 17:17:57.0±3.3, 3.08S×127.67E, h64km±32km, mb3.2/3, mb1 3.5/6, mb1mx3.4/34, mbtmp3.6/6, ML3.7/3, Error ellipse: s-maj=28.2km s-min=11.2km az=82.0*

ISC 25 17:17:54.5±1.0, 3.08S±0.08×127.5E±0.1, h42km, n6, σ1§66/9, mb3.7/3, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	4.34	60	P	Pn	17 18 57.2	-0.8
	7.5nm,0.3s,baz=236,slow=11,SNR=41						
SIJI				S	Sn	17 19 48.1	+0.6
	2.1nm,0.3s,baz=309,slow=23,SNR=6.4						
FITZ	Fitzroy Crossi	15.03	187	P	P	17 21 27.1	-1.8
	0.1nm,0.3s,baz=7.7,slow=14,SNR=1.3						
WRA	Warramunga Arr	18.03	159	P	Pn	17 22 02.1	0.0
	0.3nm,0.3s,baz=340,slow=12,SNR=15						
WRA				S	Sn	17 25 24.2	+1.8
	0.0nm,0.3s,baz=340,slow=20,SNR=2.1						
ASAR	Alice Springs	21.37	164	P	P	17 22 39.2	+0.7
	2.1nm,0.6s,baz=346,slow=12,SNR=40						
ASAR				S	S	17 26 32.8	-1.0
	1.6nm,1.0s,baz=346,slow=24,SNR=12						
SONM	Songino Array	53.98	343	P	P	17 27 12.9	-1.5
	0.4nm,0.5s,baz=159,slow=8.9,SNR=2.3						
MKAR	Makanchi Array	63.62	327	P	P	17 28 23.5	+2.3
	0.2nm,0.5s,baz=124,slow=8.1,SNR=2.4						

*IDC **25** 17:22:15.3±1.4, 2.49N×126.83E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/38, mbtmp3.6/6, ML2.7/1, Error ellipse: s-maj=56.4km s-min=21.0km az=60.0*

ISC 25 17:22:22.1±1.4, 2.4N±0.2×126.8E±0.2, h53km, n9, σ1§42/7, mb3.7/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.54	126	Pn	Pn	17 23 40.3	-1.7
	0.2nm,0.3s,baz=185,slow=21,SNR=1.8						
SIJI				Sn	Sn	17 24 46.6	+2.1
	baz=121,slow=22,SNR=1.1						
FITZ	Fitzroy Crossi	20.43	183	P	P	17 26 55.4	+0.2
	1.0nm,0.9s,baz=354,slow=9.2,SNR=0.9						
WRA	Warramunga Arr	23.43	162	P	P	17 27 26.4	-0.5
	1.1nm,0.5s,baz=343,slow=10,SNR=16						
ASAR	Alice Springs	26.85	165	P	P	17 27 58.0	+0.1
	0.4nm,0.5s,baz=346,slow=7.8,SNR=13						
STKA	Stephens Creek	36.90	159	P	P	17 29 25.9	+0.1
	1.6nm,0.8s,baz=332,slow=10,SNR=7.1						
H11S3	WAKE ISLAND Hy	42.20	65	T	T	18 15 09.9	
	baz=252						
H11S2	WAKE ISLAND Hy	42.21	65	T	T	18 15 04.5	
	baz=252						
H11S1	WAKE ISLAND Hy	42.21	65	T	T	18 15 07.5	
	baz=252						
MKAR	Makanchi Array	58.66	326	P	P	17 32 14.6	+0.5
	0.3nm,0.4s,baz=121,slow=7.5,SNR=7.8						

*IDC **25** 18:01:25.9±2.0, 1.95N×126.50E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/41, mbtmp3.4/4, ML3.0/1, MS3.7/1, Ms1 3.7/1, ms1mx2.6/31, Error ellipse: s-maj=119.2km s-min=25.0km az=68.0*
*DJA **25** 18:01:29.8±0.3, 2°N±3°×12°7E±°, h10km, M3.6/8, mb4.1/1, MLv3.4/8*

ISC 25 18:01:31.5±1.1, 2.04N±0.07×126.80E±0.10, h35km, n12, σ1§61/13, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.38	156	P	Pn	18 01 54.6	+0.3
TNTI				S	Sn	18 02 15.1	+3.8
SGSI	Sangihe	2.07	322	P	Pn	18 02 04.5	+0.7
SGSI				S	Sn	18 02 30.0	+1.5
KMSI	Cibinong	3.17	243	P	Pn	18 02 19.6	+0.6
GTOI	Gorontalo	4.04	250	P	Pn	18 02 32.2	+1.3
SANI	Sanana	4.14	191	P	Pn	18 02 31.7	-0.6
LUWI	Luwuk	5.06	233	P	Pn	18 02 44.1	-0.8
MRSI	Marisa	5.10	252	P	Pn	18 02 46.1	+0.6
FITZ	Fitzroy Crossi	20.04	183	P	P	18 06 00.1	-1.6
	0.0nm,0.3s,baz=9.8,slow=13,SNR=1.6						
WRA	Warramunga Arr	23.06	162	P	P	18 06 33.2	-0.9
	0.7nm,0.4s,baz=339,slow=11,SNR=13						
ASAR	Alice Springs	26.47	165	P	P	18 07 04.9	-0.7
	0.2nm,0.5s,baz=343,slow=8.8,SNR=2.8						
JHJ	Hachijo jima 2	33.23	20	LR	LR	18 21 25.9	
	comp=Z,114nm,19.5s,baz=72,slow=36						
MKAR	Makanchi Array	58.98	326	P	P	18 11 26.6	-1.1
	0.2nm,0.4s,baz=119,slow=6.9,SNR=5.4						

*SKHL **25** 18:10:54.0±0.7, 44.53N×152.63E, h482km±15km, mb4.6/3, msh4.8/3*
*IDC **25** 18:10:58.9±1.5, 48.35N×147.89E, h468km±23km, mb2.9/9, mb1 3.0/14, mb1mx2.9/52, mbtmp3.7/14, Error ellipse: s-maj=30.8km s-min=14.9km az=155.0*

ISC 25 18:10:57.7±0.7, 48.29N±0.09×148.0E±0.1, h450km, n21, σ1§61/24, mb3.3/9, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	3.06	182	*i* P	P	18 12 05.6	+0.4
KUR				AMB	AMB	18 12 07.0	
	100nm,0.7s						
KUR				*e*S	S	18 13 02.0	+2.0
KUR				A	A	18 13 06.6	
	30nm,0.8s						
KUR				A	A	18 13 06.6	
	40nm,0.8s						
YSS	Yuzh-Sakhalins	3.80	251	*e*P	P	18 12 43.1	+32
YUK	Yuzh-Kuril'sk	4.51	200	*i* P	P	18 12 18.0	+0.5
YUK				AMB	AMB	18 12 19.8	
	60nm,0.3s						
YUK				*e*S	S	18 13 25.6	+3.2
YUK				A	A	18 13 27.0	
	22nm,0.5s						
YUK				A	A	18 13 27.0	
	63nm,0.5s						
GRPR	Tuman	4.57	201	*e*P	P	18 12 18.0	-0.1
GRPR				AMB	AMB	18 12 21.0	
	53nm,0.4s						
GRPR				*e*S	S	18 13 23.0	-0.4
GRPR				A	A	18 13 30.0	
	54nm,0.4s						
GRPR				A	A	18 13 30.0	
	62nm,0.4s						
GLVR	Golovnino	4.87	202	*e*P	P	18 12 21.0	+0.1
GLVR				*e*S	S	18 13 29.0	+0.4
NMR	Nemuro--Hokkai	5.17	199	*i* P	P	18 12 21.0	-2.8
NMR				*i* S	S	18 13 30.2	-3.7
ASAJ	Asahikawa	5.61	224	P	P	18 12 29.2	+1.1
	0.3nm,0.3s,baz=42,slow=16,SNR=1.6						
PETK	Petropavlovsk-	7.82	48	P	P	18 12 53.2	+2.3
	0.3nm,0.3s,baz=220,slow=7.4,SNR=12						
TEY

H11S2	**WAKE ISLAND Hy**	**22.07**	**96**	T	T	18 42 00.5		
	baz=282,slow=75,SNR=39							
BATI	**Baumata**	**37.66**	**213**	LR	LR	18 36 22.8		
	comp=Z,55nm,21.9s,baz=50,slow=35							
SONM	**Songino Array**	**39.10**	**320**	P	**P**	**18 22 07.6**	**+0.2**	
	0.3nm,0.6s,baz=133,slow=10.0,SNR=2.4							
SDPT	**Sand Point**	**52.80**	**36**	P	**P**	**18 23 55.4**	**+0.4**	
ZALV	**Zalesovo Beam**	**53.96**	**321**	P	**P**	**18 24 03.2**	**-0.4**	
	0.5nm,0.3s,baz=115,slow=6.3,SNR=4.2							
MKAR	**Makanchi Array**	**54.54**	**312**	P	**P**	**18 24 07.7**	**-0.3**	
	0.5nm,0.6s,baz=85,slow=8.5,SNR=5.2							
MAKZ	**Makanchi**	**54.76**	**312**	P	**P**	**18 24 09.7**	**+0.1**	
SII	**Sitkinak Islan**	**56.52**	**36**	P	**P**	**18 24 23.0**	**+1.0**	
SVW2	**Sparrevohn**	**56.79**	**30**	P	**P**	**18 24 25.6**	**+1.7**	
SVW2				IAmb	IAmb	18 24 45.2		
	comp=Z,5.4nm,1.3s							
KDAK	**Kodiak Island**	**57.59**	**35**	P	**P**	**18 24 29.5**	**0.0**	
BRLK	**Bradley Lake**	**58.79**	**33**	P	**P**	**18 24 37.9**	**-0.1**	
ILAR	**Eielson Array**	**61.42**	**27**	P	**P**	**18 24 55.2**	**-0.7**	
	comp=Z,0.7nm,0.6s,baz=269,slow=5.3,SNR=7.4							
ILAR	**Eielson Array**	**61.42**	**27**	P	**P**	**18 24 55.3**	**-0.6**	
BRVK	**Borovoye**	**62.51**	**319**	P	**P**	**18 25 04.4**	**+1.1**	
BRVK				IAmb	IAmb	18 25 12.3		
	comp=Z,4.4nm,1.3s							
BCAR	**Beaver Creek A**	**63.49**	**29**	P	**P**	**18 25 10.7**	**+0.9**	
CTGM	**Chitina Glacie**	**63.62**	**32**	P	**P**	**18 25 10.9**	**0.0**	
CTGM				IAmb	IAmb	18 25 12.7		
	comp=Z,5.4nm,0.9s							
INK	**Inuvik**	**66.95**	**24**	P	**P**	**18 25 32.3**	**+0.2**	
	comp=Z,2.1nm,0.8s,baz=274,slow=4.2,SNR=4.6							
INK	**Inuvik**	**66.95**	**24**	IAmb	IAmb	18 25 33.8		
	comp=Z,3.4nm,1.1s							
ABKAR	**Akbulak array**	**69.36**	**316**	P	**P**	**18 25 47.2**	**-0.3**	
EUNU	**Eureka**	**74.52**	**8**	P	**P**	**18 26 17.7**	**-0.4**	
SPA0	**Spitsbergen Ar**	**75.34**	**350**	P	**P**	**18 26 21.8**	**-0.9**	
YKA	**Yellowknife Ar**	**75.84**	**28**	P	**P**	**18 26 25.9**	**+0.1**	
	comp=Z,0.9nm,0.6s,baz=297,slow=4.9,SNR=5.1							
ARB3	**ARCESS Array S**	**78.49**	**342**	P	**P**	**18 26 40.2**	**-0.4**	
ARCES	**ARCESS Array B**	**78.49**	**342**	P	**P**	**18 26 40.7**	**+0.1**	
	comp=Z,3.8nm,1.0s,baz=61,slow=7.5,SNR=6.5							
NVAR	**Mina Array Bea**	**82.58**	**52**	P	**P**	**18 27 02.8**	**-0.6**	
	comp=Z,0.6nm,0.6s,baz=284,slow=6.0,SNR=6.5							
FIA1	**FINESS Array S**	**82.81**	**335**	P	**P**	**18 27 03.2**	**-0.6**	
FINES	**FINESS Array B**	**82.81**	**335**	P	**P**	**18 27 02.7**	**-1.1**	
	comp=Z,5.0nm,1.1s,baz=60,slow=6.7,SNR=5.0							
LPAZ	**La Paz**	**149.60**	**84**	PKPbc	**PKPdf**	**18 34 27.9**	**+1.7**	
	comp=Z,1.2nm,0.5s,baz=276,slow=3.6,SNR=4.9							

*IDC **25** 18:16:11.5±1.6, 7°.33S×129°.33E, h90km±14km, mb3.9/12, mb1 4.0/16, mb1mx3.9/37, mbtmp4.3/16, MS3.0/4, Ms1 3.0/4, ms1mx2.7/38, Error ellipse: s-maj=16.8km s-min=11.0km az=106.0*
*NEIC **25** 18:16:12.0±2.5, 7°.34S±0°.05×129°.30E±0°.05, h97km±6km, mb4.6/34, Error ellipse: s-maj=8.7km s-min=5.3km az=127.0*
*DJA **25** 18:16:11.7±1.4, 8°S±2°×12°9E±°, h19km±12km, M4.6/24, mb4.6/24, mB5.0/10, MLv4.8/13, Mw(mB)4.4/10,*
ISC 25 18:16:11.7±0.3, 7°.51S±0°.04×129°.42E±0°.04, h100km, n127, σ2.32/136, mb4.5/29, 2C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.92**	**104**	P	**Pn**	**18 16 44.6**	**+1.4**
SAUI				S	**Sn**	**18 17 08.2**	**+0.9**
SAUI	**Saumlaki**	**1.92**	**104**	Pn	**Pn**	**18 16 46.1**	**+2.9**
SAUI				Sn	**Sn**	**18 17 11.6**	**+4.4**
BNDI	**Bandanaira**	**3.01**	**9**	P	**Pn**	**18 17 00.7**	**+3.2**
BNDI				S	**Sn**	**18 17 36.5**	**+3.6**
MSAI	**Masohi**	**4.17**	**353**	P	**Pn**	**18 17 14.6**	**+1.5**
FAKI	**Fak Fak**	**5.36**	**32**	P	**Pn**	**18 17 30.6**	**+1.3**
	2μm0.7nm91nm,0.5s						
FAKI	**Fak Fak**	**5.36**	**32**	Pn	**Pn**	**18 17 28.9**	**-0.4**
FAKI				Sn	**Sn**	**18 18 26.5**	**-3.2**
MTN	**Manton Dam**	**5.56**	**163**	Pn	**Pn**	**18 17 34.1**	**+2.1**
SOEI	**Soe**	**5.56**	**246**	P	**Pn**	**18 17 33.2**	**+1.0**
	1.8nm2μm219nm,0.9s						
SOEI	**Soe**	**5.56**	**246**	Pn	**Pn**	**18 17 32.5**	**+0.3**
BATI	**Baumata**	**6.29**	**244**	P	**Pn**	**18 17 42.1**	**+0.1**
	32nm,0.3s,baz=130,slow=3.0,SNR=32						
BATI				S	**Sn**	**18 18 51.7**	**-0.8**
	43nm,0.3s,baz=205,slow=22,SNR=7.4						
BATI	**Baumata**	**6.29**	**244**	P	**Pn**	**18 17 42.8**	**+0.8**
	0.8nm2μm89nm,0.4s						
SANI	**Sanana**	**6.41**	**328**	P	**Pn**	**18 17 45.4**	**+1.8**
	0.1nm38nm,1.2s						
SIJI	**Sorong**	**6.85**	**16**	P	**Pn**	**18 17 48.8**	**-0.8**
	6.5nm,0.3s,baz=216,slow=11,SNR=30						
SIJI				S	**Sn**	**18 19 02.3**	**-3.8**
	3.5nm,0.3s,baz=48,slow=18,SNR=15						
MMRI	**Maumere**	**7.20**	**261**	Pn	**Pn**	**18 17 56.0**	**+1.7**
EDFI	**Ende, Flores**	**7.75**	**260**	P	**Pn**	**18 18 03.7**	**+1.7**
	10nm,0.8s						
KNRA	**Kununurra**	**8.14**	**184**	Pn	**Pn**	**18 18 07.2**	**+0.1**
TNTI	**Ternate**	**8.48**	**346**	P	**Pn**	**18 18 15.7**	**+4.0**
	0.1nm389nm10nm,0.6s						
TNTI	**Ternate**	**8.48**	**346**	Pn	**Pn**	**18 18 11.8**	**+0.1**
BSSI	**Bau Bau, Buton**	**8.97**	**278**	P	**Pn**	**18 18 20.3**	**+1.8**
	382nm25nm,0.9s						
BAKI	**Biak**	**9.15**	**47**	P	**Pn**	**18 18 23.4**	**+2.5**
	63nm,0.9s						
LUWI	**Luwuk**	**9.23**	**314**	P	**Pn**	**18 18 26.1**	**+4.1**
	34nm,1.0s						
LUWI	**Luwuk**	**9.23**	**314**	Pn	**Pn**	**18 18 19.2**	**-2.8**
BKSI	**Bulukumba**	**9.49**	**283**	P	**Pn**	**18 18 28.0**	**+2.4**
	368nm40nm,1.1s						
BNSI	**Bone**	**9.77**	**288**	P	**Pn**	**18 18 31.2**	**+1.9**
	24nm,0.8s						
WAMI	**Wamena**	**9.92**	**69**	P	Pn	18 18 36.5	+5.2
	47nm,0.5s						
KAPI	**Kappang**	**9.93**	**284**	P	**Pn**	**18 18 30.5**	**-0.9**
	1.5nm,0.3s,baz=101,slow=14,SNR=1.9						
KAPI				LR	LR	18 22 34.6	
	comp=Z,61nm,21.6s,baz=121,slow=39						
KAPI	**Kappang**	**9.93**	**284**	Pn	**Pn**	**18 18 32.8**	**+1.3**
WBSI	**Waikabubak, Su**	**10.14**	**257**	P	**Pn**	**18 18 34.6**	**+0.2**
	69nm,0.8s						
APSI	**Ampana**	**10.15**	**310**	P	Pn	18 18 47.8	+13
GTOI	**Gorontalo**	**10.31**	**321**	P	**Pn**	**18 18 41.4**	**+4.7**
	11nm,1.1s						
TTSI	**Tana Toraja**	**10.54**	**294**	P	**Pn**	**18 18 41.9**	**+2.1**
	13nm,1.3s						
SMPI	**Sarmi**	**10.76**	**60**	P	**Pn**	**18 18 44.6**	**+1.9**
MRSI	**Marisa**	**10.89**	**316**	P	**Pn**	**18 18 47.9**	**+3.3**
	22nm,1.2s						
FITZ	**Fitzroy Crossi**	**11.15**	**199**	P	**Pn**	**18 18 45.8**	**-2.2**
	7.7nm,0.3s,baz=30,slow=10,SNR=233						
FITZ				S	Sn	18 20 41.6	-9.1
	12nm,0.3s,baz=88,slow=11,SNR=11						
PLAI	**Plampang**	**11.60**	**263**	P	**Pn**	**18 18 55.6**	**+1.4**
	36nm,0.6s						
GENI	**Genyem**	**11.76**	**66**	P	**Pn**	**18 19 00.4**	**+4.1**
	29nm,0.6s						
TOLI2	**Tolitoli**	**12.15**	**314**	Pn	**Pn**	**18 19 02.9**	**+1.5**
JAY	**Jayapura**	**12.28**	**67**	P	**Pn**	**18 19 03.5**	**+0.2**
	0.5nm,0.3s,baz=263,slow=16,SNR=2.8						
JAY				S	**Sn**	**18 21 09.5**	**-8.9**
	0.2nm,0.3s,baz=19,slow=14,SNR=1.9						
JAY	**Jayapura**	**12.28**	**67**	P	**P**	**18 19 07.4**	**-4.0**
	4.7nm,0.8s						
MPSI	**Mapaga**	**12.29**	**309**	P	**Pn**	**18 19 06.7**	**+3.4**
	6.6nm,1.2s						
TWSI	**Taliwang, Sumb**	**12.48**	**264**	P	**Pn**	**18 19 08.2**	**+2.5**
	8.4nm,1.0s						
WB0	**Warramunga Arr**	**13.10**	**159**	Pn	**Pn**	**18 19 12.1**	**-1.9**
WRAB	**Tennant Creek**	**13.24**	**159**		**Pn**	**18 19 13.0**	**-2.8**
WRA	**Warramunga Ar**	**13.25**	**159**	P	**Pn**	**18 19 14.0**	**-1.9**
	0.3nm,0.3s,baz=345,slow=11,SNR=50						
WRA				S	**Sn**	**18 21 33.7**	**-8.0**
	8.0nm,0.3s,baz=330,slow=24,SNR=10.0						
WRA	**Warramunga Arr**	**13.25**	**159**		**Pn**	**18 19 12.5**	**-3.4**
WB2	**Warramunga Ar**	**13.25**	**159**	Pn	**Pn**	**18 19 13.9**	**-2.0**
WR0	**Warramunga Arr**	**13.33**	**159**		**Pn**	**18 19 14.3**	**-2.8**
COEN	**Coen**	**14.95**	**117**		**Pn**	**18 19 37.5**	**-0.4**
BBKI	**Banjar Baru**	**15.06**	**285**	P	**P**	**18 19 46.2**	**+4.0**
JAGI	**Jajag, Banyuwa**	**15.15**	**265**	Pn	**Pn**	**18 19 38.5**	**-2.0**
JAGI				IAmb	IAmb	18 20 15.1	
	comp=Z,33nm,1.0s						
MTKI	**Muara Teweh, K**	**15.88**	**294**	P	**P**	**18 19 55.1**	**+3.8**
AS31	**Alice Springs**	**16.63**	**166**		**Pn**	**18 19 57.5**	**-1.3**
ASAR	**Alice Springs**	**16.63**	**166**	P	**Pn**	**18 19 58.9**	**0.0**
	comp=Z,1.6nm,0.3s,baz=334,slow=8.8,SNR=92						
ASAR				S	**Sn**	**18 22 56.5**	**-7.0**
	comp=Z,2.2nm,0.3s,baz=316,slow=16,SNR=6.3						
ASAR				ScP	**ScP**	**18 28 10.5**	**+1.5**
	baz=343,slow=1.3,SNR=6.2						
ASAR	**Alice Springs**	**16.63**	**166**	P	**Pn**	**18 19 57.7**	**-1.1**
MYLDM	**Lahad Datu**	**16.66**	**319**	P	**P**	**18 19 59.7**	**-0.2**
MYLDM				IAmb	IAmb	18 20 13.8	
	comp=Z,46nm,1.1s						
PSAB2	**Pilbara Seismi**	**16.74**	**212**	P	**Pn**	**18 19 59.6**	**-0.6**
PSAB2				IAmb	IAmb	18 20 25.8	
	comp=Z,27nm,1.1s						
PSA00	**Pilbara Seismi**	**16.76**	**212**	Pn	**Pn**	**18 19 59.2**	**-1.2**
PMG	**Port Moresby**	**17.64**	**97**	P	**Pn**	**18 20 15.7**	**+4.5**
	comp=Z,1.5nm,0.3s,baz=31,slow=4.5,SNR=6.4						
PMG				LR	LR	18 28 24.5	
	comp=Z,84nm,20.8s,baz=253,slow=41						
PMG	**Port Moresby**	**17.64**	**97**	Pn	**Pn**	**18 20 15.6**	**+4.3**
PMG				IAmb	IAmb	18 20 17.6	
	comp=Z,23nm,1.1s						
KKM	**Kota Kinabalu**	**18.84**	**315**	P	**P**	**18 20 20.9**	**-3.1**
KKM				IAmb	IAmb	18 20 37.6	
	comp=Z,41nm,1.2s						
SBUM	**Sibu**	**19.81**	**299**	P	**P**	**18 20 34.8**	**+0.3**
KSM	**Kuching**	**21.05**	**294**	P	**P**	**18 20 46.0**	**-1.9**
CISI	**Cisompet, Garu**	**21.42**	**268**	P	**P**	**18 20 48.0**	**-3.9**
MORW	**Morawa**	**24.88**	**209**	P	**P**	**18 21 27.0**	**+1.9**
MORW				IAmb	IAmb	18 21 29.6	
	comp=Z,21nm,1.1s						
BBOO	**Buckleboo**	**25.92**	**167**	P	**P**	**18 21 36.2**	**+1.6**
BBOO				IAmb	IAmb	18 21 49.1	
	comp=Z,36nm,1.6s						
STKA	**Stephens Creek**	**26.77**	**157**	P	**P**	**18 21 44.8**	**+2.6**
	comp=Z,1.1nm,0.4s,baz=338,slow=7.4,SNR=6.3						
STKA	**Stephens Creek**	**26.77**	**157**	P	**P**	**18 21 42.5**	**+0.3**
NWAO	**Narrogin (SRO)**	**27.71**	**202**	P	**P**	**18 21 52.5**	**+1.9**
	comp=Z,9.2nm,0.8s,baz=47,slow=7.4,SNR=9.7						
NWAO				LR	LR	18 33 23.3	
	comp=Z,56nm,18.8s,baz=245,slow=37						
NWAO	**Narrogin (SRO)**	**27.71**	**202**	P	**P**	**18 21 53.2**	**+2.6**
YULB	**Yu-li**	**31.72**	**346**	P	**P**	**18 22 27.0**	**+0.8**
YULB				IAmb	IAmb	18 22 55.8	
	comp=Z,11nm,1.0s						
TPUB	**Ta-pu**	**31.81**	**345**	P	**P**	**18 22 24.9**	**-2.0**
SSLB	**Suanglung**	**32.19**	**345**	P	**P**	**18 22 28.2**	**-2.1**
YOJ	**Yonaguni jima**	**32.39**	**349**	P	**P**	**18 22 29.7**	**-2.2**
NACB	**Ninganchiao**	**32.40**	**347**	P	**P**	**18 22 30.1**	**-2.0**
NACB				IAmb	IAmb	18 22 49.9	
	comp=Z,14nm,0.9s						
YHNB	**Yeheng**	**32.93**	**346**	P	**P**	**18 22 35.5**	**-1.4**
CMAR	**Chiang Mai Arr**	**39.62**	**311**	P	**P**	**18 23 32.9**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=144,slow=7.3,SNR=12						
CMAR				PcP	**PcP**	**18 25 41.1**	**+1.9**
	comp=Z,0.9nm,0.6s,baz=154,slow=3.4,SNR=7.2						
CMAR				ScP	**ScP**	**18 29 20.6**	**+1.5**
	comp=Z,0.9nm,0.9s,baz=165,slow=3.7,SNR=5.9						
CMAR	**Chiang Mai Arr**	**39.62**	**311**	P	**P**	**18 23 32.7**	**-1.1**
CMAR				S	**ScP**	**18 29 21.0**	**+2.0**
CHTO	**Chiang Mai**	**39.84**	**311**	P	**P**	**18 23 35.5**	**-0.1**
NJ2	**Nanjing**	**40.61**	**346**	⇑P	**P**	**18 23 42.5**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,12nm,0.9s						
JWT	**Wachi**	**42.93**	**7**	P	**P**	**18 23 59.8**	**-0.8**
KSRS	**Korea Array**	**44.75**	**358**	P	**P**	**18 24 15.1**	**0.0**
KSRS				LR	LR	18 42 21.3	
	comp=Z,12nm,21.8s,baz=355,slow=35						
XAN	**Xi'an**	**45.66**	**336**	P	**P**	**18 24 21.5**	**-1.0**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				LR	LR		
	comp=N,150nm,16.3s						
XAN				LR	LR		
	comp=E,73nm,14.1s						
XAN				LR	LR		
	comp=Z,170nm,14.0s						
BJI	**Beijing**	**48.87**	**346**	P	**P**	**18 24 47.0**	**-0.2**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LZH	**Lanzhou**	**49.59**	**333**	*e*P	P	18 24 58.0	+5.0
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC	**Hu-ho-hao-te**	**50.85**	**343**	*e*P	**P**	**18 25 03.8**	**+1.4**
HHC				pmax	pmax		
	comp=Z,14nm,0.7s						
HHC				pmax	pmax		
	comp=Z,150nm,6.1s						
LSA	**Lhasa**	**52.17**	**317**	P	**P**	**18 25 12.2**	**-0.7**
LSA				IAmb	IAmb	18 25 18.6	
	comp=Z,8.8nm,1.1s						
TAPN	**Taplejung**	**53.20**	**312**	*e*P	**P**	**18 25 19.7**	**-0.6**
RAMN	**Ramite**	**53.80**	**311**	*e*P	**P**	**18 25 23.9**	**-0.7**
	comp=Z,12nm,0.5s						
GTA	**Gaotai**	**54.15**	**332**	⇑P	**P**	**18 25 27.5**	**+0.8**
GTA				pP	pwP	18 25 54.3	+1.2
GTA	**Gaotai**	**54.15**	**332**	SS	**SKiKP**	**18 36 32.8**	**+4.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,45nm,6.2s						
GTA				LR	LR		
	comp=N,87nm,16.7s						
GTA				LR	LR		
	comp=E,100nm,17.4s						
GTA				LR	LR		
	comp=Z,160nm,16.0s						
GUN	**Gumba**	**54.86**	**312**	*e*P	**P**	**18 25 31.8**	**-0.6**
	comp=Z,13nm,0.4s						
PKI	**Pulchoki**	**55.02**	**311**	*e*P	**P**	**18 25 32.5**	**-1.1**
	comp=Z,3.3nm,0.4s						
PKIN	**Phulchoki**	**55.04**	**311**	*e*P	**P**	**18 25 32.5**	**-1.1**
	comp=Z,3.7nm,0.4s						
KKN	**Kakani**	**55.24**	**311**	*e*P	**P**	**18 25 34.5**	**-0.5**
DMN	**Daman**	**55.27**	**311**	*e*P	**P**	**18 25 34.4**	**-0.9**
GKN	**Gorkha**	**55.83**	**311**	*e*P	**P**	**18 25 38.3**	**-0.9**
	comp=Z,12nm,0.4s						
KOLN	**Koldanda**	**56.49**	**310**	*e*P	**P**	**18 25 43.4**	**-0.5**
	comp=Z,3.8nm,0.3s						
DANN	**Dangsing**	**56.67**	**311**	*e*P	**P**	**18 25 45.5**	**+0.2**
PYUN	**Piuthan**	**57.12**	**310**	*e*P	**P**	**18 25 47.8**	**-0.6**
ULN	**Ulaanbaatar**	**58.57**	**343**	P	**P**	**18 25 57.7**	**-0.4**
ULN				IAmb	IAmb	18 25 59.7	
	comp=Z,6.4nm,1.1s						
SONM	**Songino Array**	**58.74**	**342**	P	**P**	**18 25 59.2**	**0.0**
	comp=Z,2.7nm,0.9s,baz=141,slow=7.1,SNR=11						
SONM	**Songino Array**	**58.74**	**342**	P	**P**	**18 25 59.9**	**+0.7**
WMQ	**Urumqi**	**63.51**	**327**	*e*P	**P**	**18 26 32.3**	**+0.9**
WMQ	**Urumqi**	**63.51**	**327**	P	**P**	**18 26 31.1**	**-0.3**
WMQ				IAmb	IAmb	18 26 33.7	
	comp=Z,7.4nm,0.8s						
PETK	**Petropavlovsk-**	**64.98**	**18**	P	**P**	**18 26 40.7**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=219,slow=1.9,SNR=5.8						
MK31	**Makanchi Array**	**68.34**	**327**	P	**P**	**18 27 02.1**	**-0.2**
MK31				IAmb	IAmb	18 27 04.2	
	comp=Z,6.3nm,0.9s						
MKAR	**Makanchi Array**	**68.34**	**327**	P	**P**	**18 27 02.3**	**0.0**
	comp=Z,4.0nm,0.6s,baz=115,slow=8.3,SNR=49						
MKAR	**Makanchi Array**	**68.34**	**327**	P	**P**	**18 27 01.9**	**-0.4**
MAKZ	**Makanchi**	**68.52**	**327**	P	**P**	**18 27 03.1**	**-0.3**
MAKZ				IAmb	IAmb	18 27 05.1	
	comp=Z,6.3nm,0.9s						
ZAA0	**Zalesovo Array**	**71.79**	**334**	P	**P**	**18 27 21.9**	**-1.3**
ZAA0				IAmb	IAmb	18 27 24.3	
	comp=Z,6.2nm,0.9s						
ZALV	**Zalesovo Beam**	**71.79**	**334**	P	**P**	**18 27 21.6**	**-1.5**
	comp=Z,3.8nm,0.7s,baz=124,slow=4.6,SNR=16						
ZALV	**Zalesovo Beam**	**71.79**	**334**	P	**P**	**18 27 22.1**	**-1.1**
VNDA	**Vanda**	**72.01**	**173**	P	**P**	**18 27 26.9**	**+2.7**
	comp=Z,0.7nm,0.7s,baz=304,slow=9.2,SNR=2.6						
VNDA	**Vanda**	**72.01**	**173**	P	**P**	**18 27 27.2**	**+3.0**
KURK	**Kurchatov**	**72.65**	**329**	P	**P**	**18 27 28.8**	**+0.4**
KKAR	**Karatay Array**	**73.35**	**319**	P	**P**	**18 27 32.1**	**-0.6**
TIXI	**Tiksi**	**79.00**	**360**	P	**P**	**18 28 03.2**	**-0.8**
TIXI				IAmb	IAmb	18 28 04.4	
	comp=Z,3.4nm,0.4s						
NRIK	**Noril'sk**	**81.91**	**346**	P	**P**	**18 28 19.7**	**0.0**
	comp=Z,2.6nm,0.5s,baz=168,slow=5.1,SNR=4.6						
QSPA	**South Pole Qui**	**82.47**	**180**	P	**P**	**18 28 25.0**	**+2.1**
	comp=Z,2.5nm,0.9s,baz=340,slow=0.2						
QSPA	**South Pole Qui**	**82.47**	**180**	IAmb	IAmb	18 28 26.2	
	comp=Z,2.9nm,0.9s						
ABKAR	**Akbulak array**	**82.55**	**322**	P	**P**	**18 28 22.9**	**-0.6**
ILAR	**Eielson Array**	**94.05**	**25**	P	**P**	**18 29 17.5**	**-0.9**
	comp=Z,1.1nm,1.1s,baz=267,slow=4.9,SNR=6.2						
ARCES	**ARCESS Array B**	**101.85**	**340**	P	**Pdif**	**18 29 52.1**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=99,slow=5.6,SNR=4.1						
TXAR	**Lajitas Array**	**125.68**	**59**	PKhKP	PKPpre	18 34 58.2	
	comp=Z,0.3nm,0.7s,baz=274,slow=2.4,SNR=2.7						
TXAR				PKP	**PKiKP**	**18 35 02.8**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=280,slow=5.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	**128.34**	**281**	PKP	**PKPdf**	**18 35 07.9**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=78,slow=2.1,SNR=4.9						
CPUP	**Villa Florida**	**145.73**	**169**	PKPbc	**PKPab**	**18 35 40.4**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=185,slow=5.4,SNR=4.6						
LPAZ	**La Paz**	**150.66**	**144**	PKPbc	**PKiKP**	**18 35 54.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=132,slow=3.2,SNR=4.3						

KRSC 25 18:19:06.5±1.5, 50°.48N×157°.56E, h41km±20km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.94**	**283**	*e*P	Pn	18 19 24.2	+1.0
SKR				*e*S	Sn	18 19 35.9	+0.4
PAU	**Pauzhetka**	**1.10**	**335**	*e*P	Pn	18 19 27.2	+1.8
PAU				*e*S	Sn	18 19 41.3	+2.0
KDTR	**Khodutka, Kamc**	**1.37**	**14**	*e*P	Pn	18 19 30.7	+1.5
KDTR				*e*S	Sn	18 19 47.0	+0.9
ASAK	**Asacha**	**1.92**	**6**	*e*P	Pn	18 19 39.8	+3.0
MTVR	**Mutnovka**	**2.05**	**11**	*e*P	Pn	18 19 40.6	+2.0
MTVR				*e*S	Sn	18 20 05.8	+2.9
RUS	**Russkaya**	**2.05**	**17**	*e*P	Pn	18 19 39.7	+1.3
RUS				*e*S	Sn	18 20 03.8	+1.1
GRL	**Gorelyy**	**2.10**	**9**	*e*P	Pn	18 19 41.7	+2.4
GRL				*e*S	Sn	18 20 06.8	+2.5
KRMR	**Karymshinskiy**	**2.38**	**8**	P	Pn	18 19 46.1	+3.1
KRMR				S	Sn	18 20 15.1	+4.1
APC	**Apacha**	**2.46**	**354**	*e*P	Pn	18 19 47.0	+2.9
PET	**Petropavlovsk**	**2.64**	**15**	*e*P	Pn	18 19 49.2	+2.7
PET				*e*S	Sn	18 20 19.9	+2.6
DALK	**Dalny**	**2.66**	**16**	*e*P	Pn	18 19 49.3	+2.4
DALK				*e*S	Sn	18 20 21.1	+3.2
UGLR	**Uglovaya**	**2.85**	**16**	*e*P	Pn	18 19 53.6	+4.1
UGLR				*e*S	Sn	18 20 27.5	+4.9
AVH	**Avacha**	**2.89**	**14**	*e*P	Pn	18 19 54.2	+4.2
SMAR	**Somma**	**2.90**	**15**	*e*P	Pn	18 19 54.3	+4.0
KOK	**Koryaka**	**2.90**	**13**	*e*P	Pn	18 19 54.0	+3.8
KOK				*e*S	Sn	18 20 28.7	+4.9
SDLR	**Sedlovina**	**2.92**	**16**	P	Pn	18 19 54.0	+3.4
KRX	**Arik**	**2.96**	**13**	*e*P	Pn	18 19 54.7	+3.5
KRX				S	Sn	18 20 30.9	+5.4
SPN	**Mys Shipunski**	**3.04**	**29**	*e*P	Pn	18 19 54.6	+2.6
SPN				*e*S	Sn	18 20 30.5	+3.4
GNL	**Ganaly**	**3.23**	**4**	*e*P	Pn	18 19 59.5	+4.7
KZV	**Kizimen**	**4.93**	**19**	P	Pn	18 20 23.7	+5.5
TUMR	**Tumrok**	**5.06**	**17**	P	Pn	18 20 24.9	+5.0
KBTR	**Krutoberegovo**	**6.55**	**27**	P	Pn	18 20 43.0	+2.9

*RHSSO **25** 18:38:34.1±0.2, 43°.31N×19°.24E, h4km±2km, ML2.4/10*
*PDG **25** 18:38:34.6±0.1, 43°.20N×19°.25E, h9km, MD2.5/1, ML2.2/13, Error ellipse: s-maj=0.2km s-min=0.1km az=90.0*
*BEO **25** 18:38:34.3±0.2, 43°.27N×19°.27E, h0km, ML2.4/10*
ISC 25 18:38:33.7±1.0, 43°.28N±0°.01×19°.27E±0°.02, h5km±9km, n56, σ0°.92/97, 8C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.28**	**254**	⇓*i*Pg	**Pg**	**18 38 39.6**	**+0.4**
UPM				*i* Sg	**Sg**	**18 38 43.6**	**+0.8**
UPM	**Unac-Piva**	**0.28**	**254**	⇓*i*Pg	**Pg**	**18 38 39.5**	**+0.4**
UPM				*e*Sg	**Sg**	**18 38 43.3**	**+0.5**
RUDO	**Rudo**

*TIF **25** 18:47:20.3,39.61N×45.36E,h12km±1km*
*DDA **25** 18:47:22.6,39.68N×45.07E,h7km±2km,ML2.4*
*TEH **25** 18:47:22.4,39.37N×45.16E,h5km,ML2.8*
*ISK **25** 18:47:22.6,39.60N×45.02E,h5km,ML2.6/4*

ISC 25 18:47:21.3±1.2,39.56N±0.03×45.28E±0.04,h28km±15km, n21,σ1§42/33,Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GNI	**Garni**	**0.72**	**325**	Pg	**Pn**	**18 47 35.1**	**-0.7**
GNI				SG	**Sn**	**18 47 44.4**	**-1.6**
IMRD	**Marand**	**0.91**	**158**	*e*Pg	**Pn**	**18 47 37.8**	**-0.5**
IMRD				*e*		18 47 53.1	
TASB	**TASBURUN-IGDIR**	**0.91**	**298**	PG	**Pn**	**18 47 37.4**	**-0.9**
TASB				SG	**Sb**	**18 47 48.3**	**-1.9**
IGDI	**IGDIR**	**0.98**	**289**	*i* P	**Pn**	**18 47 38.0**	**-1.3**
IGDI				*i* S	**Sb**	**18 47 49.6**	**-2.6**
IGDI				IAML		18 47 52.0	
	comp=N,165nm,0.4s						
CLDR	**Caldiran**	**1.13**	**249**	PG	**Pb**	**18 47 42.3**	**-0.1**
CLDR				SG	**Sn**	**18 47 56.8**	**+0.5**
CLDR	**Caldiran**	**1.13**	**249**	*i* P	**Pb**	**18 47 42.5**	**+0.1**
CLDR				*i* S	**Sn**	**18 47 57.5**	**+1.2**
CLDR				IAML		18 47 59.0	
	comp=N,69nm,0.3s						
CLDR				IAML		18 48 03.0	
	comp=E,108nm,0.4s						
DYDN	**Diyadin**	**1.23**	**270**	*i* P	**Pb**	**18 47 43.8**	**-0.3**
VMUR	**Van-Muradiye**	**1.44**	**247**	*i* P	**Pb**	**18 47 46.1**	**-1.5**
VMUR				*i* S	**Sb**	**18 48 07.8**	**+2.3**
ITBZ	**Tabriz**	**1.49**	**153**	*e*Pg	**Pb**	**18 47 47.0**	**-1.4**
ITBZ				*e*Sg	**Sb**	**18 48 07.6**	**+0.7**
ITBZ				*e*		18 48 10.6	
DIGO	**Kars**	**1.69**	**301**	*i* P	**Pb**	**18 47 50.1**	**-1.8**
DIGO				*i* S	**Sb**	**18 48 14.6**	**+1.7**
DIGO				IAML		18 48 19.0	
	comp=N,49nm,0.4s						
DIGO				IAML		18 48 21.0	
	comp=E,42nm,0.3s						
EAK	**Akyaka**	**1.71**	**312**	*i* P	**Pb**	**18 47 52.1**	**0.0**
EAK				*i* S	**Sb**	**18 48 15.2**	**+2.0**
EAK				IAML		18 48 20.0	
	comp=E,48nm,0.4s						
EAK				IAML		18 48 20.0	
	comp=N,64nm,0.9s						
AGRB	**Hanur-Agry**	**1.77**	**271**	PN	**Pb**	**18 47 52.8**	**-0.3**
TUTA	**Tutak**	**1.91**	**266**	*i* P	**Pb**	**18 47 55.9**	**+0.2**
DMNI	**Dmanisi**	**1.96**	**335**	P	**Pb**	**18 47 55.8**	**-0.5**
DMNI				S	**Sb**	**18 48 21.2**	**+0.9**
IAZR	**Azarshahr**	**1.96**	**163**	*e*Pn	**Pb**	**18 47 56.1**	**-0.3**
IAZR				*e*		18 48 26.6	
YOVA	**Hakkari_Yksek**	**2.11**	**202**	*i* P	**Pb**	**18 48 01.0**	**+2.0**
BGD	**Bogdanovka**	**2.13**	**324**	P	**Pb**	**18 48 00.8**	**+1.4**
BGD				S	**Sb**	**18 48 28.6**	**+3.0**
BTNK	**Botanikuri**	**2.15**	**350**	P	**Pb**	**18 48 00.3**	**+0.6**
BTNK				S	**Sb**	**18 48 27.8**	**+1.8**
EATA	**Eleskirt**	**2.17**	**279**	*i* P	**Pb**	**18 48 00.8**	**+0.8**
ISRB	**Sarab**	**2.55**	**132**	*e*		18 48 13.2	
ISRB				*e*Pn	**Pb**	**18 48 06.1**	**-0.3**
ABS	**Abastumani**	**2.89**	**320**	P	**Pb**	**18 48 12.1**	**-0.1**

*DJA **25** 18:48:18.3±0.2,3°S±2°×12°9E±°,h10km,M4.2/13,mB4.8/2, mb4.6/5,MLv4.0/13,Mw(mB)4.1/2*
*NEIC **25** 18:48:19.2±2.3,2.80S±0.07×129.41E±0.04,h31km±7km, mb4.0/14,Error ellipse: s-maj=10.3km s-min=4.8km az=164.0*
*IDC **25** 18:48:22.2±2.1,2.82S×129.61E,h60km±23km,mb3.6/4, mb1 3.8/8,mb1mx3.4/51,mbtmp3.9/8,ML3.7/4,MS2.9/2, Ms1 2.9/2,ms1mx2.4/33,Error ellipse: s-maj=22.6km s-min=11.0km az=92.0*

ISC 25 18:48:19.0±0.7,2.70S±0.05×129.35E±0.05,h35km,n41, σ2§33/43,mb4.1/6,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.77**	**213**	P	**Pn**	**18 48 32.2**	**-1.2**
MSAI				S	**Sn**	**18 48 45.8**	**+2.0**
BNDI	**Bandanaira**	**1.90**	**163**	P	**Pn**	**18 48 52.3**	**+3.3**
BNDI				S	**Sn**	**18 49 18.4**	**+6.7**
NLAI	**Namlea**	**2.31**	**256**	P	**Pn**	**18 48 56.2**	**+1.6**
NLAI				S	**Sn**	**18 49 25.0**	**+3.3**
SIJI	**Sorong**	**2.64**	**47**	P	**Pn**	**18 49 01.1**	**+1.9**
	24nm,0.3s,baz=212,slow=9.2,SNR=264						
SIJI				S	**Sn**	**18 49 31.9**	**+1.9**
	35nm,0.3s,baz=103,slow=20,SNR=12						
FAKI	**Fak Fak**	**2.91**	**94**	P	**Pn**	**18 49 04.6**	**+1.7**
FAKI	**Fak Fak**	**2.91**	**94**		**Pn**	**18 49 03.8**	**+1.0**
SANI	**Sanana**	**3.42**	**281**	P	**Pn**	**18 49 08.8**	**-1.0**
TNTI	**Ternate**	**3.97**	**330**	P	**Pn**	**18 49 17.6**	**+0.1**
TNTI	**Ternate**	**3.97**	**330**		**Pn**	**18 49 19.1**	**+1.6**
KMSI	**Cibinong**	**6.27**	**301**	P	**Pn**	**18 49 50.0**	**+0.9**
	0.2nm806nm40nm,0.5s						
LUWI	**Luwuk**	**6.77**	**284**		**Pn**	**18 49 56.0**	**0.0**
APSI	**Ampana**	**7.89**	**283**	P	**Pn**	**18 50 12.0**	**+0.6**
	0.1nm491nm34nm,0.5s						
MRSI	**Marisa**	**8.04**	**293**	P	**Pn**	**18 50 14.8**	**+1.3**
BATI	**Baumata**	**9.36**	**217**	P	Pn	18 50 35.7	+4.2
	0.4nm,0.3s,baz=80,slow=6.1,SNR=2.3						
TOLI2	**Tolitoli**	**9.36**	**294**	Pn	**Pn**	**18 50 32.6**	**+1.1**
KAPI	**Kappang**	**9.85**	**256**	LR	LR	18 55 01.7	
	comp=Z,59nm,20.3s,baz=78,slow=40						
MTN	**Manton Dam**	**10.24**	**170**	Pn	**Pn**	**18 50 43.7**	**+0.2**
GENI	**Genyem**	**10.81**	**90**	P	Pn	18 50 59.6	+8.2
KNRA	**Kununurra**	**12.91**	**183**	Pn	**Pn**	**18 51 19.3**	**-0.8**
MYLDM	**Lahad Datu**	**13.36**	**306**	Pn	**P**	**18 51 31.0**	**-4.4**
FITZ	**Fitzroy Crossi**	**15.73**	**193**	P	**P**	**18 51 59.6**	**-2.1**
	0.2nm,0.3s,baz=19,slow=12,SNR=9.4						
FITZ				S	**Sn**	**18 54 54.3**	**+2.9**
	0.0nm,0.3s,baz=188,slow=22,SNR=1.5						
FITZ	**Fitzroy Crossi**	**15.73**	**193**		**Pn**	**18 51 58.3**	**+0.2**
FITZ				IAmb	IAmb	18 52 00.9	
	comp=Z,13nm,1.6s						
COEN	**Coen**	**17.66**	**130**		**Pn**	**18 52 21.7**	**-0.7**
COEN				IAmb	IAmb	18 52 45.2	
	comp=Z,29nm,1.4s						
WB0	**Warramunga Arr**	**17.67**	**164**	P	**P**	**18 52 22.1**	**-1.2**
WRAB	**Tennant Creek**	**17.82**	**164**	P	**Pn**	**18 52 23.1**	**-1.3**
WRA	**Warramunga Arr**	**17.82**	**164**	P	**Pn**	**18 52 23.4**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=346,slow=13,SNR=26						
WRA				S	**Sn**	**18 55 35.2**	**-7.0**
	comp=Z,0.1nm,0.3s,baz=341,slow=26,SNR=1.4						
WRA	**Warramunga Arr**	**17.82**	**164**	P	**Pn**	**18 52 23.6**	**-0.8**
WB2	**Warramunga Arr**	**17.83**	**164**		**Pn**	**18 52 22.9**	**-1.5**
WB2				IAmb	IAmb	18 52 36.3	
	comp=Z,9.9nm,1.4s						
SBUM	**Sibu**	**17.87**	**286**	Pn	**P**	**18 52 25.3**	**-0.1**
WR0	**Warramunga Arr**	**17.89**	**164**		**P**	**18 52 25.0**	**-0.7**
WR0				IAmb	IAmb	18 52 31.4	
	comp=Z,16nm,1.6s						
PSA00	**Pilbara Seismi**	**20.92**	**205**	P	Pn	18 53 00.4	-1.0
AS31	**Alice Springs**	**21.31**	**168**	P	**P**	**18 53 02.9**	**0.0**
AS31				IAmb	IAmb	18 53 12.1	
	comp=Z,4.6nm,0.5s						
ASAR	**Alice Springs**	**21.31**	**168**	P	**P**	**18 53 02.2**	**-0.7**
	comp=Z,3.9nm,0.5s,baz=349,slow=11,SNR=32						
ASAR				S	**S**	**18 56 55.3**	**-2.7**
	comp=Z,1.5nm,1.0s,baz=348,slow=19,SNR=7.7						
ASAR				LR	LR	19 01 52.1	
	comp=Z,36nm,18.3s,baz=332,slow=38						
MK31	**Makanchi Array**	**64.30**	**326**	P	**P**	**18 58 52.9**	**+1.9**
MK31				IAmb	IAmb	18 59 28.8	
	comp=Z,2.3nm,1.1s						
MKAR	**Makanchi Array**	**64.30**	**326**	P	**P**	**18 58 52.8**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=111,slow=7.9,SNR=4.4						
MKAR	**Makanchi Array**	**64.30**	**326**	P	**P**	**18 58 52.4**	**+1.4**
MAKZ	**Makanchi**	**64.48**	**326**	P	**P**	**18 58 54.3**	**+2.0**
ZALV	**Zalesovo Beam**	**67.46**	**333**	P	**P**	**18 59 13.5**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=112,slow=6.4,SNR=2.0						
KURBB	**Kurchatov Arra**	**68.53**	**328**	P	**P**	**18 59 19.8**	**+1.8**
	comp=Z,0.8nm,0.6s,baz=127,slow=5.8,SNR=12						
KURK	**Kurchatov**	**68.53**	**328**	P	**P**	**18 59 19.8**	**+1.8**
ABKAR	**Akbulak array**	**78.76**	**321**	P	P	19 00 22.9	+4.9

*IDC **25** 18:49:08.0±2.8,9.96S×153.84E,h0km,mb3.7/5, mb1 3.8/6,mb1mx3.6/50,mbtmp3.7/6,ML1.1/1,MS3.0/3, Ms1 3.0/3,ms1mx2.6/30,Error ellipse: s-maj=59.3km s-min=33.4km az=97.0*

ISC 25 18:49:09.9±2.2,10.05S±0.2×153.8E±0.3,h10km,n10, σ0§66/7,mb3.7/5,D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.53**	**274**	Pn	**Pn**	**18 50 45.6**	**-0.4**
	0.3nm,0.3s,baz=90,slow=8.1,SNR=1.5						
DZM	**Mont Dzumac**	**17.12**	**136**	LR	LR	18 58 38.5	
	comp=Z,124nm,20.4s,baz=254,slow=33						
WRA	**Warramunga Arr**	**21.19**	**240**	P	**P**	**18 53 56.4**	**+0.6**
	2.0nm,0.8s,baz=64,slow=10,SNR=6.8						
ASAR	**Alice Springs**	**23.34**	**232**	P	**P**	**18 54 19.3**	**+0.8**
	2.1nm,0.9s,baz=59,slow=9.0,SNR=6.7						
STKA	**Stephens Creek**	**24.54**	**206**	P	**P**	**18 54 29.2**	**-0.6**
	3.6nm,0.7s,baz=16,slow=12,SNR=7.9						
STKA				LR	LR	19 03 49.2	
	comp=Z,38nm,18.6s,baz=21,slow=36						
STKA	**Stephens Creek**	**24.54**	**206**	IAmb	IAmb	18 54 31.5	
	comp=Z,1.2nm,0.8s						
STKA	**Stephens Creek**	**24.54**	**206**	P	**P**	**18 54 29.4**	**-0.4**
GUMO	**Guam**	**25.01**	**339**	LR	LR	19 02 52.7	
	comp=Z,16nm,21.9s,baz=180,slow=33						
CMAR	**Chiang Mai Arr**	**61.01**	**298**	P	**P**	**18 59 24.3**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=139,slow=6.0,SNR=2.3						
MKAR	**Makanchi Array**	**84.83**	**319**	P	**P**	**19 01 44.7**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=116,slow=6.6,SNR=3.3						

*TAP **25** 18:51:05.0,24.98N×122.49E,h27km±1km,ML2.5,D*
*JMA **25** 18:51:05.7±0.2,24.83N×122.43E,h7km±3km,M2.6*

ISC 25 18:51:05.1±1.1,24.90N±0.04×122.46E±0.02,h17km±9km, n51,σ0§48/73,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.44**	**284**	P	**Pb**	**18 51 14.4**	**-0.1**
	baz=273						
TWB1				*i* S	**Sb**	**18 51 21.1**	**+0.2**
	baz=273						
TIPB	**Shuangxi**	**0.58**	**277**	P	**Pb**	**18 51 17.5**	**+0.5**
	baz=269						
TIPB				*e*S	**Sb**	**18 51 25.2**	**+0.2**
	baz=269						
JYNG	**Yonagunijimaku**	**0.63**	**136**	P	**Pg**	**18 51 17.5**	**0.0**
JYNG				S	**Sg**	**18 51 25.8**	**-0.1**
TWC	**Suao**	**0.63**	**242**	P	**Pg**	**18 51 17.7**	**+0.2**
	baz=237						
TWC				*e*S	**Sb**	**18 51 26.2**	**0.0**
	baz=237						
NWF	**Wu-fen Shan**	**0.64**	**285**	*e*P	**Pn**	**18 51 18.9**	**-0.7**
	baz=278						
NWF				*e*S	**Sb**	**18 51 26.7**	**0.0**
	baz=278						
WFSB	**Wu-fen Shan**	**0.64**	**285**	*e*P	**Pb**	**18 51 18.4**	**+0.5**
	baz=278						
WFSB				*e*S	**Sb**	**18 51 26.9**	**+0.3**
	baz=278						
YOJ	**Yonaguni jima**	**0.66**	**131**	*e*P	**Pg**	**18 51 18.3**	**+0.1**
	baz=137						
YOJ				*e*S	**Sg**	**18 51 27.0**	**0.0**
	baz=137						
YOJ	**Yonaguni jima**	**0.66**	**131**	P	**Pg**	**18 51 18.3**	**+0.1**
YOJ				S	**Sg**	**18 51 26.8**	**-0.2**
ENAH	**Nanao**	**0.75**	**233**	*e*P	**Pb**	**18 51 19.2**	**-0.5**
	baz=230						
ENAH				*e*S	**Sg**	**18 51 29.8**	**+0.2**
	baz=230						
TWE	**Neicheng**	**0.75**	**256**	*e*P	**Pb**	**18 51 19.5**	**-0.2**
	baz=250						
TWE				*e*S	**Sg**	**18 51 30.0**	**+0.4**
	baz=250						
ENA	**Nanau**	**0.81**	**234**	P	**Pb**	**18 51 20.7**	**-0.1**
	baz=231						
ENA				*e*S	**Sg**	**18 51 31.9**	**+0.3**
	baz=231						
YM08	**YM08**	**0.84**	**290**	*e*P	**Pb**	**18 51 20.9**	**-0.4**
	baz=284						
YM01	**YM01**	**0.85**	**287**	*e*P	**Pn**	**18 51 22.3**	**0.0**
	baz=281						
YM11	**YM11**	**0.85**	**288**	*e*P	**Pb**	**18 51 21.1**	**-0.4**
	baz=282						
YM05	**YM05**	**0.85**	**288**	*e*P	**Pb**	**18 51 21.5**	**-0.1**
	baz=282						
ENTT	**Nioudou**	**0.86**	**252**	P	**Pb**	**18 51 21.6**	**0.0**
	baz=233						
ENTT				*e*S	**Sn**	**18 51 34.0**	**-0.6**
	baz=233						
YM10	**YM10**	**0.86**	**287**	*e*P	**Pb**	**18 51 21.4**	**-0.2**
	baz=282						
YM04	**YM04**	**0.88**	**287**	*e*P	**Pb**	**18 51 21.9**	**-0.1**
	baz=281						
NWLT	**Wulai**	**0.88**	**262**	*e*P	**Pb**	**18 51 21.6**	**-0.4**
	baz=257						
ANP	**Anpu**	**0.90**	**288**	*e*P	**Pn**	**18 51 23.6**	**+0.5**
	baz=283						
NDT	**Datong Townshi**	**0.92**	**251**	*e*P	**Pg**	**18 51 23.0**	**0.0**
	baz=233						
YHNB	**Yeheng**	**1.02**	**257**	*e*P	**Pb**	**18 51 23.9**	**-0.4**
	baz=265						
YHNB				*e*S	**Sn**	**18 51 38.8**	**+0.1**
	baz=265						
NSK	**Sanguang**	**1.03**	**258**	*e*P	**Pb**	**18 51 24.6**	**+0.1**
	baz=264						
NSK				*e*S	**Sb**	**18 51 37.8**	**-0.1**
	baz=264						
NACB	**Ninganchiao**	**1.07**	**228**	*e*P	**Pb**	**18 51 24.4**	**-0.9**
	baz=232						
NACB				S	**Sb**	**18 51 39.3**	**+0.2**
	baz=232						
NNSB	**Datong**	**1.09**	**245**	*e*P	**Pb**	**18 51 25.6**	**-0.1**
	baz=230						
NNSH	**Datong**	**1.09**	**245**	*e*P	**Pb**	**18 51 25.4**	**-0.3**
	baz=242						
NNSH				*e*S	**Sb**	**18 51 39.5**	**-0.1**
	baz=242						
NNS	**Nan Shan**	**1.09**	**245**	*e*P	**Pb**	**18 51 25.2**	**-0.5**
	baz=242						
NNS				*e*S	**Sb**	**18 51 39.8**	**0.0**
	baz=242						
ETLH	**Xiulin Townshi**	**1.13**	**232**	*e*P	**Pn**	**18 51 26.1**	**-0.3**
	baz=241						
IRIF	**Iriomote-Funau**	**1.28**	**116**	P	**Pg**	**18 51 29.9**	**0.0**
FUSS	**Fushou**	**1.29**	**240**	*e*P	**Pb**	**18 51 29.0**	**-0.1**
	baz=237						
WHF	**Hehuan Shan**	**1.33**	**236**	P	**Pb**	**18 51 30.5**	**+0.6**
	baz=243						
WHF				*e*S	**Sn**	**18 51 47.3**	**+0.4**
	baz=243						
TWT	**Tachien**	**1.34**	**241**	*e*P	**Pb**	**18 51 30.2**	**+0.3**
	baz=239						
LIOB	**Emei**	**1.34**	**259**	*e*P	**Pn**	**18 51 29.2**	**+0.1**
	baz=256						
TDCB	**Techi**	**1.35**	**242**	*e*P	**Pb**	**18 51 30.0**	**-0.1**
	baz=239						
TDCB				*e*S	**Sb**	**18 51 48.1**	**+0.9**
	baz=239						
NSTT	**Nanjuang**	**1.36**	**259**	*e*P	**Pn**	**18 51 28.9**	**-0.5**
	baz=255						
ESL	**Shilin**	**1.44**	**221**	*e*P	**Pn**	**18 51 29.0**	**-1.4**
	baz=206						
CHGB	**Renai**	**1.44**	**235**	*e*P	**Pb**	**18 51 31.8**	**0.0**
	baz=233						
HATJ	**Hateruma jima**	**1.48**	**124**	P	**Pb**	**18 51 33.2**	**+0.9**
OWD	**Renai**	**1.51**	**231**	*e*P	**Pb**	**18 51 32.6**	**-0.1**
	baz=218						
WHP	**Taichung City**	**1.52**	**246**	*e*P	**Pb**	**18 51 33.7**	**+0.8**
	baz=235						
JKRS	**Kuro-shima**	**1.56**	**115**	P	**Pb**	**18 51 33.2**	**-0.3**
JKRS				S	**Sb**	**18 51 54.0**	**+1.1**
JIJ	**Ishigaki jima**	**1.62**	**109**	P	**Pg**	**18 51 36.0**	**-0.3**
JIJ				*e*S	**Sg**	**18 51 56.6**	**-0.8**
HGSD	**Ruisui**	**1.69**	**214**	*e*P	**Pn**	**18 51 34.4**	**+0.4**
	baz=202						
JISG	**Ishigakijimahi**	**1.71**	**100**	P	**Pb**	**18 51 36.3**	**+0.2**
JISG				*e*S	**Sg**	**18 51 59.5**	**-0.7**
SMLT	**Sun Moon Lake**	**1.75**	**235**	*e*P	**Pb**	**18 51 36.8**	**-0.1**
	baz=220						
SSLB	**Suanglung**	**1.77**	**231**	*e*P	**Pb**	**18 51 37.8**	**+0.6**
	baz=215						
TYC	**Yuchr**	**1.77**	**236**	*e*P	**Pb**	**18 51 37.3**	**+0.1**
	baz=221						
ALS	**Alishan**	**2.05**	**228**	*e*P	**Pn**	**18 51 40.4**	**+1.2**
	baz=213						
CHN5	**Tsauling**	**2.08**	**232**	*e*P	**Pb**	**18 51 41.6**	**-1.0**
	baz=230						
ELDTW	**Lidau**	**2.16**	**218**	*e*P	**Pn**	**18 51 40.2**	**-0.2**
	baz=206						
CHN4	**Tsaushan**	**2.30**	**228**	*e*P	**Pb**	**18 51 45.5**	**-0.7**
	baz=214						

KRNET 25 18:52:26.6±0.1,42.04N×79.93E,mb2.3,8C,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.22**	**292**	⇑*i*P	Pg	18 52 48.7	-1.2
	baz=92						
PRZ				⇑*i*S	Sg	18 53 05.3	-0.4
	baz=92						
ANVS	**Anan'yevo**	**1.83**	**295**	⇑*i*P	Pn	18 52 59.6	+0.1
	baz=95						
ANVS				⇑*i*S	Sn	18 53 23.2	-0.3
	baz=95						
KDJ	**Kajisay**	**2.05**	**273**	⇑*i*P	Pn	18 53 02.3	-0.2
	baz=73						
KDJ				⇑*i*S	Sn	18 53 28.2	-0.6
	baz=73						
BOOM	**Boomskoye usch**	**3.00**	**280**	⇑*i*P	Pn	18 53 15.5	0.0
	baz=80						
BOOM				⇑*i*S	Sn	18 53 51.1	-1.1
	baz=80						

*NNC **25** 18:53:04.3±0.3,43.16N×78.72E,h0km,mb2.7,mpv2.3, Error ellipse: s-maj=2.8km s-min=1.4km az=168.0*
*SOME **25** 18:53:04.8,43.22N×78.63E,h5km*

ISC 25 18:53:04.5±1.0,43.20N±0.03×78.67E±0.02,h4km±11km, n18,σ0§50/34,5C,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZHN	**Zhinishke**	**0.18**	**259**	*e*P	**Pg**	**18 53 07.9**	**-0.1**
	2.8nm,0.1s						
ZHN				*e*S	**Sg**	**18 53 10.2**	**-0.2**
	20nm,0.1s						
SATY	**Saty**	**0.24**	**234**	*e*P	**Pg**	**18 53 09.4**	**+0.2**
	8.0nm,0.1s						
SATY				*e*S	**Sg**	**18 53 12.8**	**+0.4**
	97nm,0.1s						
SATY	**Saty**	**0.24**	**234**	P	**Pg**	**18 53 09.4**	**+0.2**
	1.5nm,0.1s						
SATY				P		18 53 10.0	
	7.4nm,0.1s						
SATY				S	**Sg**	**18 53 12.8**	**+0.4**
	124nm,0.1s						
SATY				S		18 53 12.8	
	124nm,0.1s						
UZB	**Uzynbulak**	**0.26**	**102**	*e*P	**Pg**	**18 53 09.5**	**-0.1**
	3.5nm,0.1s						
UZB				*e*S	**Sg**	**18 53 12.9**	**-0.1**
	32nm,0.1s						
UZB	**Uzynbulak**	**0.26**	**102**	P	**Pg**	**18 53 09.5**	**-0.1**
	2.4nm,0.1s						
UZB				S	**Sg**	**18 53 12.9**	**-0.1**
	28nm,0.2s						
KPKS	**Kokpek**	**0.26**	**2**	*e*P	**Pg**	**18 53 09.8**	**+0.2**
	104nm,0.1s						
KPKS				*e*S	**Sg**	**18 53 13.7**	**+0.6**
	134nm,0.2s						
PDGK	**Podgornoye**	**0.61**	**78**	P	**Pg**	**18 53 15.8**	**-0.5**
	0.4nm,0.5s						
PDGK				S	**Sg**	**18 53 24.0**	**-0.1**
	1.4nm,0.4s						
PDGK	**Podgornoye**	**0.61**	**78**	⇑P	**Pg**	**18 53 15.6**	**-0.6**
	1.4nm,0.5s						
PDGK				⇑S	**Sg**	**18 53 23.7**	**-0.5**
	1.3nm,0.4s						
MNBS	**Baschi**	**0.90**	**347**	⇑*e*P	**Pg**	**18 53 21.8**	**0.0**
	2.5nm,0.1s						
MNBS				*e*S	**Sg**	**18 53 33.6**	**+0.2**
	5.8nm,0.2s						
MNBS	**Baschi**	**0.90**	**347**	P	**Pg**	**18 53 21.3**	**-0.4**
	2.1nm,0.2s						
MNBS				S	**Sg**	**18 53 33.2**	**-0.2**
	5.3nm,0.2s						
KOTS	**Kotyrbulak**	**1.14**	**272**	*e*P	**Pg**	**18 53 26.2**	**-0.2**
	2.0nm,0.2s						
KOTS				*e*S	**Sb**	**18 53 41.8**	**-0.3**
	5.5nm,0.5s						
ARXS	**Arharly**	**1.18**	**329**	*e*P	**Pb**	**18 53 26.3**	**-1.3**
	1.8nm,0.1s						
ARXS				*e*S	**Sg**	**18 53 41.6**	**-0.9**
	2.2nm,0.3s						
DJR	**Jarkent**	**1.39**	**35**	*e*P	**Pn**	**18 53 30.9**	**+0.2**
	3.0nm,0.2s						
DJR				*e*S	**Sb**	**18 53 49.2**	**0.0**
	6.1nm,0.2s						
DJR	**Jarkent**	**1.39**	**35**	P	**Pn**	**18 53 30.9**	**+0.2**
	2.3nm,0.2s						
DJR				S	**Sn**	**18 53 49.6**	**0.0**
	6.3nm,0.3s						
KTBS	**Karatobe**	**1.54**	**290**	*e*P	**Pb**	**18 53 33.4**	**-0.2**
	2.5nm,0.2s						
KTBS				*e*S	**Sb**	**18 53 53.5**	**0.0**
	6.1nm,0.3s						
KAPS	**Kapalarasan**	**2.14**	**13**	*e*P	**Pb**	**18 53 43.9**	**0.0**
	1.3nm,0.3s						
KAPS				*e*S	**Sb**	**18 54 12.2**	**+1.4**
	2.5nm,0.4s						
KAPS	**Kapalarasan**	**2.14**	**13**	Pg	**Pb**	**18 53 44.9**	**+1.1**
	1.0nm,0.3s						
KAPS				Lg	Lg	18 54 13.6	
	2.8nm,0.3s						
TKM2	**Tokmak 2**	**2.27**	**264**	⇑Pg	**Pb**	**18 53 46.2**	**0.0**
	0.4nm,0.5s						
TKM2				⇑Lg	Lg	18 54 16.5	
	1.0nm,0.5s						

*IDC **25** 18:55:36.2±0.9,43.79N×105.40W,h0km,mb3.8/4, mb1 3.9/10,mb1mx3.7/45,mbtmp3.6/10,ML3.4/5,MS3.2/1, Ms1 3.2/1,ms1mx2.4/49,Error ellipse: s-maj=20.9km s-min=7.6km az=146.0*
*NEIC **25** 18:55:37.5±0.6,43.80N±0.05×105.24W±0.03,h0km±2km, ML3.7/69,Error ellipse: s-maj=9.3km s-min=3.0km az=157.0*

ISC 25 18:55:36.6±0.8,43.84N±0.06×105.22W±0.07,h0km,n71, σ0§82/69,mb4.1/4,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.90**	**71**	Pg	**Pb**	**18 55 55.2**	**0.0**
K22A	**Casper**	**1.52**	**219**		**Pn**	**18 56 03.9**	**-1.3**
K22A				IAML		18 56 27.3	
	comp=E,1μm,0.8s						
K22A				IAML		18 56 27.4	
	comp=N,1

IMW				IAML		18 57 52.6		
	comp=N,66nm,0.9s							
IMW				IAML		18 57 53.4		
	comp=N,66nm,0.7s							
YHH	**Holmes Hill**	**4.15**	**285**		**Pn**	**18 56 42.0**	**+0.5**	
TPAW	**Teton Pass**	**4.17**	**267**		**Pn**	**18 56 42.5**	**+0.8**	
TPAW				IAML		18 58 00.3		
	comp=N,79nm,1.1s							
E28A	**Huff**	**4.21**	**48**		**Pn**	**18 56 43.6**	**+1.6**	
E28A				IAML		18 58 10.1		
	comp=E,130nm,0.9s							
YMR	**Madison River**	**4.21**	**283**		**Pn**	**18 56 43.3**	**+1.1**	
O20A	**White River Ci**	**4.33**	**212**		**Pn**	**18 56 44.3**	**+0.4**	
O20A				IAML		18 57 55.5		
	comp=E,110nm,0.7s							
O20A				IAML		18 57 55.7		
	comp=N,103nm,0.8s							
YHB	**Horse Butte**	**4.39**	**284**		**Pn**	**18 56 45.4**	**+0.7**	
YHL	**Hebgen Lake**	**4.40**	**285**		**Pn**	**18 56 45.2**	**+0.4**	
AHID	**Auburn Hatcher**	**4.42**	**258**		**Pn**	**18 56 46.6**	**+1.5**	
AHID				IAML		18 58 06.1		
	comp=E,62nm,1.3s							
AHID				IAML		18 58 19.3		
	comp=N,79nm,1.0s							
SUSD	**Miller**	**4.55**	**80**		**Pn**	**18 56 48.0**	**+1.3**	
QLMT	**Earthquake Lak**	**4.56**	**285**		**Pn**	**18 56 48.5**	**+1.4**	
RDMU	**Red Mountain**	**4.59**	**226**	Pn	**Pn**	**18 56 48.0**	**+0.5**	
DGMT	**Dagmar**	**4.69**	**8**	Pn	**Pn**	**18 56 51.1**	**+2.5**	
SMCO	**Snowmass**	**4.84**	**196**		**Pn**	**18 56 51.3**	**+0.3**	
SMCO				IAML		18 58 16.6		
	comp=N,57nm,0.8s							
SMCO				IAML		18 58 20.5		
	comp=N,38nm,1.1s							
Q24A	**Divide**	**4.87**	**179**		**Pn**	**18 56 51.5**	**+0.1**	
Q24A				IAML		18 58 12.2		
	comp=E,46nm,0.7s							
K31A	**O'Neill**	**4.88**	**102**		**Pn**	**18 56 52.0**	**+0.8**	
BOZ	**Bozeman (W)**	**4.90**	**293**		**Pn**	**18 56 51.7**	**+0.1**	
BOZ				IAML		18 58 12.3		
	comp=E,40nm,0.9s							
HWUT	**Hardware Ranch**	**5.18**	**247**		**Pn**	**18 56 55.8**	**+0.3**	
HWUT				IAML		18 58 32.4		
	comp=E,56nm,0.8s							
HWUT				IAML		18 58 42.1		
	comp=E,56nm,0.9s							
KSCO	**Kaye Shedlock'**	**5.20**	**157**	Pn	**Pn**	**18 56 55.9**	**+0.1**	
EGMT	**Eagleton**	**5.25**	**325**	Pn	**Pn**	**18 56 57.1**	**+0.7**	
TCUT	**Toone Canyon**	**5.32**	**241**		**Pn**	**18 56 58.3**	**+0.7**	
HRY	**Holter Researc**	**5.48**	**304**		**Pn**	**18 57 00.2**	**+0.7**	
DLMT	**Dillon**	**5.48**	**289**		**Pn**	**18 57 00.7**	**+1.0**	
LRM	**Limekiln Ridge**	**5.51**	**294**	Pn	**Pn**	**18 57 00.8**	**+0.7**	
BGNE	**Belgrade**	**5.75**	**113**		**Pn**	**18 57 03.6**	**+0.4**	
HVU	**Hansel Valley**	**5.93**	**252**	Pn	**Pn**	**18 57 06.0**	**+0.3**	
PV07	**Paradox Valley**	**5.98**	**207**		**Pn**	**18 57 07.0**	**+0.5**	
SDCO	**Great Sand Dun**	**6.09**	**182**		**Pn**	**18 57 08.2**	**+0.1**	
PV23	**Carpenter Ridg**	**6.09**	**209**		**Pn**	**18 57 08.7**	**+0.5**	
MPU	**Maple Canyon**	**6.12**	**234**		**Pn**	**18 57 09.0**	**+0.5**	
PV14	**Lion Creek, Pa**	**6.17**	**209**		**Pn**	**18 57 09.8**	**+0.7**	
SRU	**San Rafael Swe**	**6.18**	**222**	Pn	**Pn**	**18 57 08.4**	**-0.8**	
S22A	**4UR Ranch, Cre**	**6.21**	**192**		**Pn**	**18 57 10.7**	**+1.0**	
PV03	**Paradox Valley**	**6.21**	**207**		**Pn**	**18 57 10.0**	**+0.2**	
ECSD	**EROS Data Cent**	**6.23**	**88**	Pn	**Pn**	**18 57 11.0**	**+1.2**	
PV18	**Skein Mesa, Pa**	**6.24**	**208**	Pn	**Pn**	**18 57 10.1**	**0.0**	
BGU	**Big Grassy Mou**	**6.47**	**246**	Pn	**Pn**	**18 57 14.0**	**+0.8**	
CBKS	**Cedar Bluff**	**6.50**	**139**		**Pn**	**18 57 13.9**	**+0.4**	
F33A	**5 Mile Ranch,**	**6.66**	**69**		**Pn**	**18 57 16.4**	**+0.9**	
HLID	**Hailey**	**6.67**	**271**	Pn	**Pn**	**18 57 16.4**	**+0.5**	
JTMT	**Jette**	**7.44**	**305**		**Pn**	**18 57 27.7**	**+1.2**	
ELK	**Elko**	**8.04**	**251**	Pn	**Pn**	**18 57 35.8**	**+0.9**	
	comp=E,0.8nm,0.3s,baz=63,slow=8.2,SNR=9.3							
ELK				Lg	Lg	18 59 47.0		
	comp=E,0.1nm,0.3s,baz=143,slow=14,SNR=1.8							
I10CA	**LAC DU BONNET**	**8.94**	**41**	*i*		19 53 50.0		
	baz=217,slow=330,SNR=0.7							
ULM	**Lac du Bonnet**	**9.04**	**42**	Pn	**Pn**	**18 57 47.7**	**-0.6**	
	comp=E,2.6nm,0.3s,baz=229,slow=12,SNR=20							
ULM				Pg		18 58 17.1		
	comp=E,1.0nm,0.3s,baz=249,slow=10,SNR=1.9							
ULM				Lg	Lg	19 00 18.4		
	comp=E,0.9nm,0.3s,baz=160,slow=16,SNR=3.8							
NVAR	**Mina Array Bea**	**11.24**	**246**	Pn	**Pn**	**18 58 19.4**	**+0.6**	
	comp=E,0.3nm,0.3s,baz=211,slow=21,SNR=7.2							
NVAR	**Mina Array Bea**	**11.24**	**246**		**Pn**	**18 58 19.5**	**+0.8**	
TXAR	**Lajitas Array**	**14.53**	**175**	Pn	**Pn**	**18 59 03.4**	**-0.2**	
	comp=E,0.1nm,0.3s,baz=1.5,slow=14,SNR=2.3							
TXAR				Lg	Lg	19 03 05.9		
	comp=E,0.0nm,0.3s,baz=7.1,slow=30,SNR=2.6							
BBB	**Bella Bella**	**17.39**	**307**	LR	LR	19 05 53.6		
	comp=E,74nm,18.3s,baz=332,slow=36							
YKA	**Yellowknife Ar**	**19.48**	**347**	P	**P**	**19 00 04.3**	**-0.5**	
	comp=E,0.2nm,0.3s,baz=153,slow=12,SNR=6.0							
ILAR	**Eielson Array**	**31.21**	**327**	P	**P**	**19 01 56.7**	**-0.6**	
	comp=E,0.2nm,0.5s,baz=126,slow=8.8,SNR=2.3							
ARCES	**ARCESS Array B**	**61.31**	**18**	P	**P**	**19 05 52.7**	**-0.6**	
	comp=E,0.9nm,0.5s,baz=0.0,slow=1.8,SNR=8.8							
ZALV	**Zalesovo Beam**	**82.21**	**354**	P	**P**	**19 07 58.9**	**-0.2**	
	comp=E,0.6nm,0.3s,baz=348,slow=7.4,SNR=3.6							
MKAR	**Makanchi Array**	**89.51**	**355**	P	**P**	**19 08 35.7**	**+0.2**	
	comp=E,0.6nm,0.7s,baz=2.7,slow=4.4,SNR=5.0							

KRNET 25 18:58:33.4±0.1, 41°81′N×78°92′E, h25km, mb2.2, 8C, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
PRZ	**Przheval'sk**	**0.78**	**330**	⇑	*i*P		Pb	18 58 48.3	-0.1
	baz=31								
PRZ				⇑	*i*S		Sb	18 58 59.0	+0.4
	baz=31								
KDJ	**Kajisay**	**1.34**	**284**	⇑	*i*P		Pb	18 58 57.6	-0.3
	baz=84								
KDJ				⇑	*i*S		Sb	18 59 15.1	+0.5
	baz=84								
ANVS	**Anan'yevo**	**1.35**	**317**	⇑	*i*P		Pb	18 58 57.7	-0.3
	baz=17								
ANVS				⇑	*i*S		Sb	18 59 15.9	+1.0
	baz=17								
BOOM	**Boomskoye usch**	**2.32**	**288**	⇑	*i*P		Pn	18 59 11.6	+1.5
	baz=88								
BOOM				⇑	*i*S		Sn	18 59 39.8	+1.9
	baz=88								

*NNC **25** 18:58:46.2±1.1, 43°.14N×78°.71E, h2km±7km, mb2.7, mpv2.3, Error ellipse: s-maj=8.1km s-min=3.9km az=175.0*
*SOME **25** 18:58:47.2, 43°.18N×78°.68E, h10km*

ISC 25 18:58:46.4±1.0, 43°.17N±0°.04×78°.70E±0°.03, h15km±8km, n16, σ0°80/30, 4C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
UZB	**Uzynbulak**	**0.24**	**94**	*e*	P		**Pb**	**18 58 52.1**	**-0.4**
	15nm,0.1s								
UZB					*e*S		**Sg**	**18 58 55.7**	**+0.4**
	45nm,0.1s								
UZB	**Uzynbulak**	**0.24**	**94**		P		**Pb**	**18 58 52.0**	**-0.4**
	9.3nm,0.2s								
UZB					S		**Sg**	**18 58 55.7**	**+0.4**
	37nm,0.2s								
SATY	**Saty**	**0.24**	**244**	*e*	P		**Pg**	**18 58 51.9**	**+0.1**
	5.0nm,0.1s								
SATY					*e*S		**Sg**	**18 58 55.5**	**+0.1**
	46nm,0.1s								
SATY	**Saty**	**0.24**	**244**		P		**Pg**	**18 58 52.0**	**+0.3**
	2.9nm,0.1s								
SATY					S		**Sg**	**18 58 55.6**	**+0.3**
	157nm,0.1s								
KPKS	**Kokpek**	**0.30**	**358**	⇓	*e*P		**Pg**	**18 58 52.3**	**-0.4**
	55nm,0.1s								
KPKS					*e*S		**Sg**	**18 58 56.1**	**-1.0**
	46nm,0.1s								
PDGK	**Podgornoye**	**0.60**	**74**		P		**Pg**	**18 58 58.3**	**+0.1**
	0.3nm,0.2s								
PDGK					S		**Sg**	**18 59 06.4**	**+0.2**
	1.8nm,0.2s								
PDGK	**Podgornoye**	**0.60**	**74**	⇑	P		**Pg**	**18 58 57.2**	**-1.0**
	1.9nm,0.7s								
PDGK				⇑	S		**Sg**	**18 59 06.5**	**+0.3**
	4.8nm,0.5s								
MNBS	**Baschi**	**0.94**	**347**	⇑	*e*P		**Pb**	**18 59 04.3**	**-0.2**
	1.4nm,0.1s								
MNBS					*e*S		**Sb**	**18 59 16.4**	**-0.3**
	6.3nm,0.2s								
MNBS	**Baschi**	**0.94**	**347**		P		**Pb**	**18 59 04.2**	**-0.2**
	1.4nm,0.3s								
MNBS					S		**Sb**	**18 59 16.3**	**-0.5**
	7.3nm,0.3s								
ARXS	**Arharly**	**1.22**	**329**	*e*	P		**Pb**	**18 59 09.7**	**+0.4**
	2.2nm,0.1s								
ARXS					*e*S		**Sn**	**18 59 25.6**	**+0.3**
	1.8nm,0.2s								
ARXS	**Arharly**	**1.22**	**329**		P		**Pb**	**18 59 09.7**	**+0.4**
	1.6nm,0.2s								
ARXS					S		**Sn**	**18 59 25.6**	**+0.3**
	1.6nm,0.3s								
DJR	**Jarkent**	**1.41**	**34**	*e*	P		**Pg**	**18 59 13.7**	**+0.2**
	1.1nm,0.1s								
DJR					*e*S		**Sg**	**18 59 33.0**	**+1.3**
	3.7nm,0.2s								
DJR	**Jarkent**	**1.41**	**34**		P		**Pg**	**18 59 14.8**	**+1.3**
	1.0nm,0.1s								
DJR					S		**Sg**	**18 59 34.5**	**+2.7**
	4.4nm,0.3s								
KAPS	**Kapalarasan**	**2.17**	**12**	*e*	P		**Pg**	**18 59 27.0**	**-1.0**
	0.7nm,0.3s								
KAPS					*e*S		**Sg**	**18 59 55.2**	**-0.9**
	1.4nm,0.2s								
KAPS	**Kapalarasan**	**2.17**	**12**		Pg		**Pg**	**18 59 27.5**	**-0.5**
	0.6nm,0.4s								
KAPS					Lg		Lg	18 59 55.7	
	2.5nm,0.5s								
TKM2	**Tokmak 2**	**2.29**	**265**	⇑	Pg		**Pb**	**18 59 27.1**	**-0.4**
	2.7nm,1.1s								
TKM2				⇓	Lg		Lg	18 59 59.9	
	1.3nm,0.3s								

*IDC **25** 19:11:52.5±0.8, 5°.71N×61°.35E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.7/40, mbtmp3.9/9, MS3.3/8, Ms1 3.3/8, ms1mx3.0/49, Error ellipse: s-maj=33.0km s-min=17.4km az=163.0*
*NEIC **25** 19:11:53.6±2.0, 5°.66N±0°.08×61°.32E±0°.08, h10km±1km, mb4.4/14, Error ellipse: s-maj=17.3km s-min=8.7km az=132.0*

ISC 25 19:11:54.3±0.6, 5°.7N±0°.1×61°.37E±0°.09, h14km, n33, σ1§30/25, mb4.1/13, MS3.3/8, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SOCY	**Socotra**	**9.76**	**312**	Pn		Pn	**Pn**	**19 14 18.1**	**+3.7**
WSAR	**Wadi Sarin**	**17.69**	**352**	LR		LR	LR	19 21 25.8	
	comp=Z,115nm,20.6s,baz=154,slow=32								
RAYN	**Ar Rayn**	**23.44**	**321**	P		P	**P**	**19 17 01.8**	**-1.6**
RAYN						IAmb	IAmb	19 17 28.9	
	comp=Z,26nm,1.8s								
KMBO	**Kilima Mbogo**	**25.00**	**255**	P		P	**P**	**19 17 19.2**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=51,slow=12,SNR=8.3								
KMBO						LR	LR	19 26 00.9	
	comp=Z,46nm,19.8s,baz=93,slow=34								
KMBO	**Kilima Mbogo**	**25.00**	**255**	P		P	**P**	**19 17 17.5**	**-0.9**
KMBO						IAmb	IAmb	19 17 37.3	
	comp=Z,15nm,1.8s								
RER	**Riviere de l'E**	**27.21**	**192**	P		P	**P**	**19 17 37.5**	**-0.5**
GEYT	**Alibeck**	**32.27**	**355**	LR		LR	LR	19 29 35.1	
	comp=Z,41nm,20.4s,baz=290,slow=33								
CM31	**Chiang Mai Arr**	**38.79**	**68**	P		P	**P**	**19 19 19.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**38.79**	**68**	P		P	**P**	**19 19 19.9**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=255,slow=9.0,SNR=7.3								
CMAR						PcP	**PcP**	**19 21 31.0**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=228,slow=3.5,SNR=1.5								
CMAR						LR	LR	19 33 51.2	
	comp=Z,21nm,20.8s,baz=338,slow=34								
CHTO	**Chiang Mai**	**38.88**	**67**	P		P	**P**	**19 19 21.1**	**+1.4**
LSZ	**Lusaka**	**38.89**	**237**	P		P	**P**	**19 19 20.8**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=85,slow=6.2,SNR=3.9								
LSZ	**Lusaka**	**38.89**	**237**			IAmb	IAmb	19 19 40.2	
	comp=Z,7.4nm,1.4s								
KULM	**Kulim**	**39.10**	**89**	P		P	**P**	**19 19 22.5**	**+0.9**
KULM						IAmb	IAmb	19 19 34.7	
	comp=Z,11nm,1.3s								
BRTR	**Keskin Array B**	**42.13**	**328**	LR		LR	LR	19 37 12.2	
	comp=Z,30nm,18.8s,baz=118,slow=36								
ABKAR	**Akbulak array**	**43.47**	**359**	P		P	**P**	**19 19 57.0**	**0.0**
ABKAR	**Akbulak array**	**43.47**	**359**	P		P	**P**	**19 19 55.3**	**-1.7**
ABKAR						IAmb	IAmb	19 20 10.3	
	comp=Z,5.6nm,1.4s								
MDUB	**Mudurnu**	**43.98**	**326**	P		P	**P**	**19 19 59.4**	**-1.9**
MKAR	**Makanchi Array**	**44.79**	**20**	P		P	**P**	**19 20 05.8**	**-1.9**
BOSA	**Boshof**	**48.67**	**224**	LR		LR	LR	19 39 23.3	
	comp=Z,46nm,19.1s,baz=34,slow=34								
TSUM	**Tsumeb**	**49.68**	**239**	P		P	**P**	**19 20 46.4**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=27,slow=6.2,SNR=5.6								
TSUM	**Tsumeb**	**49.68**	**239**			IAmb	IAmb	19 20 48.7	
	comp=Z,2.9nm,0.8s								
ZAA0	**Zalesovo Array**	**51.79**	**17**	P		P	**P**	**19 21 02.5**	**+1.0**
ZAA0						IAmb	IAmb	19 21 18.7	
	comp=Z,4.1nm,1.2s								
ZALV	**Zalesovo Beam**	**51.79**	**17**	P		P	**P**	**19 21 01.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=217,slow=9.1,SNR=1.9								
SONM	**Songino Array**	**56.90**	**35**	P		P	**P**	**19 21 38.9**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=210,slow=5.0,SNR=2.1								
TLY	**Talaya**	**57.66**	**30**	LR		LR	LR	19 47 58.1	
	comp=Z,35nm,18.2s,baz=248,slow=38								
TORD	**Torodi Ar. Bea**	**59.23**	**282**	P		P	**P**	**19 21 55.5**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=81,slow=7.0,SNR=4.9								
NOA	**NORSAR Array B**	**66.69**	**336**	LR		LR	LR	19 53 29.3	
	comp=Z,37nm,18.6s,baz=350,slow=38								
JNU	**Nakatsue**	**69.79**	**57**	LR		LR	LR	19 54 27.8	
	comp=Z,318nm,21.8s,baz=268,slow=37								
WRA	**Warramunga Arr**	**76.06**	**112**	P		P	**P**	**19 23 42.4**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=289,slow=5.0,SNR=12								
WRA	**Warramunga Arr**	**76.06**	**112**	P		P	**P**	**19 23 42.0**	**0.0**
WB2	**Warramunga Arr**	**76.07**	**112**	P		P	**P**	**19 23 41.6**	**-0.4**
WB2						IAmb	IAmb	19 24 07.9	
	comp=Z,17nm,1.6s								
ASAR	**Alice Springs**	**76.42**	**116**	P		P	**P**	**19 23 44.6**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=288,slow=5.3,SNR=18								
ASCN	**Ascension**	**76.72**	**261**	P		P	**P**	**19 23 44.2**	**-1.7**

IDC 25 19:33:59.5±2.4, 6°.97S×129°.84E, h0km, mb3.2/1, mb1 3.5/4, mb1mx3.3/43, mbtmp3.3/4, ML3.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.3/17, Error ellipse: s-maj=86.4km s-min=30.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
FITZ	**Fitzroy Crossi**	**11.79**	**200**	Pn		Pn	Pn	19 36 49.0	-0.2
	0.1nm,0.3s,baz=24,slow=10,SNR=12								
FITZ						Sn	Sn	19 38 46.3	-15
	0.2nm,0.3s,baz=359,slow=8.6,SNR=1.9								
WRA	**Warramunga Arr**	**13.62**	**162**	Pn		Pn	Pn	19 37 13.7	-0.4
	0.1nm,0.3s,baz=344,slow=14,SNR=13								
WRA						Sn	Sn	19 39 33.9	-12
	0.3nm,0.3s,baz=334,slow=22,SNR=8.5								
WRA						LR	LR	19 43 23.8	
	comp=Z,121nm,19.6s,baz=75,slow=41								
ASAR	**Alice Springs**	**17.06**	**167**	P		P	Pn	19 38 00.1	+0.5
	0.2nm,0.3s,baz=348,slow=9.6,SNR=14								
ASAR						S	Sn	19 40 57.5	-13
	0.1nm,0.3s,baz=358,slow=27,SNR=4.1								
MKAR	**Makanchi Array**	**68.11**	**327**	P		P	P	19 45 01.3	0.0
	0.1nm,0.5s,baz=123,slow=7.0,SNR=1.5								

*IDC **25** 19:36:00.3±2.8, 4°.54S×153°.18E, h45km±22km, mb3.9/14, mb1 4.0/15, mb1mx3.8/43, mbtmp4.2/15, ML1.9/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/36, Error ellipse: s-maj=23.6km s-min=16.0km az=74.0*

ISC 25 19:35:58.9±0.7, 4°.65S±0°.08×153°.18E±0°.09, h35km, n22, σ1§73/27, mb4.1/15, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
KRVT	**Keravat (AS076**	**1.20**	**287**	P		P	**Pn**	**19 36 20.7**	**+1.5**
	186nm,0.3s,baz=124,slow=1.6,SNR=417								
KRVT						S	**Sn**	**19 36 35.0**	**+0.6**
	baz=54,slow=19								
PMG	**Port Moresby**	**7.62**	**231**	P		P	**Pn**	**19 37 50.8**	**+3.4**
	1.0nm,0.3s,baz=330,slow=16,SNR=2.2								
PMG						S	**Sn**	**19 39 10.7**	**-1.9**
	2.8nm,0.3s,baz=80,slow=9.3,SNR=5.7								
PMG						LR	LR	19 40 44.5	
	comp=Z,37nm,21.5s,baz=76,slow=37								
DZM	**Mont Dzumac**	**21.56**	**145**	P		P	**P**	**19 40 46.7**	**+1.1**
	7.3nm,1.0s,baz=43,slow=19,SNR=2.0								
DZM						LR	LR	19 48 21.7	
	comp=Z,56nm,20.0s,baz=204,slow=34								
SIJI	**Sorong**	**22.21**	**279**	P		P	**P**	**19 40 51.8**	**-0.8**
	6.0nm,0.6s,baz=81,slow=7.7,SNR=8.6								
WRA	**Warramunga Arr**	**23.83**	**229**	P		P	**P**	**19 41 08.8**	**-0.2**
	3.8nm,0.3s,baz=50,slow=9.9,SNR=25								
WRA					PcP		**PcP**	**19 44 52.1**	**+0.2**
	0.3nm,0.6s,baz=49,slow=2.1,SNR=1.9								
WRA					S		**S**	**19 45 16.9**	**-5.8**
	0.7nm,1.0s,baz=59,slow=27,SNR=2.7								
ASAR	**Alice Springs**	**26.52**	**223**	P		P	**P**	**19 41 36.1**	**+2.7**
	1.0nm,0.3s,baz=51,slow=8.9,SNR=30								
ASAR					PcP		**PcP**	**19 44 58.0**	**+0.2**
	0.2nm,0.6s,baz=60,slow=2.6,SNR=1.6								
BATI	**Baumata**	**29.77**	**258**	P		P	**P**	**19 42 04.3**	**+1.7**
	4.4nm,0.4s,baz=39,slow=4.1,SNR=3.5								
FITZ	**Fitzroy Crossi**	**30.06**	**241**	P		P	**P**	**19 42 03.3**	**-1.8**
	3.3nm,0.4s,baz=46,slow=6.8,SNR=17								
JNU	**Nakatsue**	**43.11**	**332**	P		P	**P**	**19 43 54.9**	**-1.1**
	8.5nm,0.8s,baz=202,slow=2.4,SNR=1.9								
KSRS	**Korea Array**	**48.04**	**333**	P		P	**P**	**19 44 35.2**	**+0.4**
	1.0nm,0.8s,baz=159,slow=7.2,SNR=3.4								
KLR	**Kul'dur**	**56.81**	**343**	P		P	**P**	**19 45 39.5**	**-0.2**
	2.1nm,0.7s,baz=169,slow=4.5,SNR=6.9								
CMAR	**Chiang Mai Arr**	**58.16**	**295**	P		P	**P**	**19 45 49.9**	**+0.1**
	0.7nm,0.5s,baz=121,slow=5.1,SNR=9.6								
SONM	**Songino Array**	**66.41**	**328**	P		P	**P**	**19 46 45.3**	**+0.7**
	0.6nm,0.5s,baz=134,slow=8.3,SNR=4.0								
MK31	**Makanchi Array**	**80.47**	**319**	PcP		P	**P**	**19 48 06.7**	**-0.6**
MKAR	**Makanchi Array**	**80.47**	**319**	P		P	**P**	**19 48 07.0**	**-0.3**
	0.7nm,0.5s,baz=96,slow=7.5,SNR=12								
MKAR	**Makanchi Array**	**80.47**	**319**	PcP		P	**P**	**19 48 07.0**	**-0.3**
MAKZ	**Makanchi**	**80.68**	**319**	PcP		P	**P**	**19 48 07.5**	**-0.9**
ZALV	**Zalesovo Beam**	**81.24**	**326**	P		P	**P**	**19 48 10.9**	**-0.3**
	1.0nm,0.5s,baz=114,slow=6.5,SNR=3.0								
ILAR	**Eielson Array**	**81.88**	**22**	P		P	**P**	**19 48 13.5**	**-0.9**
	0.5nm,0.7s,baz=256,slow=5.7,SNR=4.6								
MAW	**Mawson**	**85.85**	**203**	P		P	**P**	**19 48 33.9**	**-0.7**
	0.9nm,0.5s,baz=100,slow=6.1,SNR=1.6								
GERES	**GERESS Array B**	**124.13**	**329**	PKP			**PKPdf**	**19 54 54.0**	**-0.1**
	0.4nm,0.6s,baz=41,slow=5.2,SNR=3.2								
TORD	**Torodi Ar. Bea**	**150.62**	**289**	PKPbc			**PKPbc**	**19 55 47.6**	**-0.7**
	2.7nm,0.6s,baz=88,slow=2.2,SNR=20								

*IDC **25** 19:38:17.6±2.5, 36°.66N×142°.02E, h41km±22km, mb3.7/11, mb1 3.8/17, mb1mx3.6/53, mbtmp3.9/17, ML3.3/6, MS3.1/4, Ms1 3.1/4, ms1mx2.7/52, Error ellipse: s-maj=18.5km s-min=14.9km az=91.0*
*NEIC **25** 19:38:18±3.0, 36°.62N±0°.06×141°.85E±0°.09, h44km±8km, mb4.4/17, Error ellipse: s-maj=11.1km s-min=7.8km az=113.0*
*JMA **25** 19:38:19.0±0.3, 36°.80N×141°.52E, h53km±4km, M3.7*
*NIED **25** 19:38:19.0, 36°.80N×141°.52E, h53km, MW4.0, Moment Tensor Solution. s3 Moment tensor: Scale 10^{15}Nm; M_{rr}0.61; $M_{\theta\theta}$-0.03; $M_{\phi\phi}$-0.58; $M_{r\theta}$0.39; $M_{\theta\phi}$-0.30; $M_{r\phi}$0.84; Fault plane solution: $M_0$1.14000×10^{15} NP1:ϕ_s25.00000°, δ72.00000°, λ91.00000°. NP2:ϕ_s203.00000°, δ18.00000°, λ88.00000°.*

ISC 25 19:38:16.8±0.6, 36°.69N±0°.05×141°.99E±0°.06, h35km, n91, σ1§69/85, mb4.2/22, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.04**	**294**		P	P	**Pn**	**19 38 32.2**	**-2.7**
JFK	**Kawauchi**	**1.12**	**307**		P	P	**Pn**	**19 38 33.4**	**-2.6**
JHO	**Hitachi**	**1.14**	**266**		P	P	**Pn**	**19 38 33.8**	**-2.5**
JHYU	**Hitachinakayam**	**1.18**	**253**		P	P	**Pn**	**19 38 35.1**	**-1.7**
JFFD	**Fukushimafurud**	**1.21**	**290**		P	P	**Pn**	**19 38 34.5**	**-2.8**
JMM	**Marumori**	**1.51**	**321**		P	P	**Pn**	**19 38 39.7**	**-1.7**
JMM	**Marumori**	**1.51**	**321**				**Pn**	**19 38 39.7**	**-1.7**
JYT	**Yasato**	**1.52**	**253**	Pn		P	**Pn**	**19 38 39.8**	**-1.7**
JFT	**Otama**	**1.56**	**303**	Pn	

GTA				pP	pP	19 44 59.3	+0.3
GTA				sP	sP	19 45 03.0	0.0
GTA				SS	SS	19 52 06.0	-24
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,90nm,5.3s						
GTA				LR	LR		
	comp=N,110nm,14.5s						
GTA				LR	LR		
	comp=E,99nm,15.3s						
GTA				LR	LR		
	comp=Z,140nm,16.7s						
GAMB	**Gambell**	**38.77**	**31**	P	**P**	**19 45 38.9**	**+1.4**
AKUT	**Akutan**	**39.59**	**47**	P	**P**	**19 45 46.4**	**+1.9**
WMQ	**Urumqi**	**41.41**	**297**	*eP*	**P**	**19 46 00.5**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,100nm,4.1s						
WMQ				LR	LR		
	comp=N,2μm,29.2s						
WMQ				LR	LR		
	comp=E,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,260nm,29.2s						
ZAA0	**Zalesovo Array**	**42.48**	**313**	P	**P**	**19 46 08.7**	**+0.4**
ZALV	**Zalesovo Beam**	**42.48**	**313**	P	**P**	**19 46 08.8**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=97,slow=7.1,SNR=6.3						
ZALV				PcP	**PcP**	**19 48 01.7**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=58,slow=3.6,SNR=2.1						
ZALV	**Zalesovo Beam**	**42.48**	**313**	P	**P**	**19 46 08.3**	**0.0**
MK31	**Makanchi Array**	**44.69**	**302**	P	**P**	**19 46 26.5**	**+0.3**
MK31				IAmb	IAmb	19 46 30.6	
	comp=Z,5.9nm,1.4s						
MKAR	**Makanchi Array**	**44.69**	**302**	P	**P**	**19 46 25.9**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=88,slow=9.0,SNR=10.0						
MKAR	**Makanchi Array**	**44.69**	**302**	P	**P**	**19 46 26.1**	**-0.1**
MAKZ	**Makanchi**	**44.90**	**303**	P	**P**	**19 46 27.5**	**-0.4**
KAPI	**Kappang**	**46.41**	**211**	LR	LR	20 06 44.8	
	comp=Z,30nm,18.2s,baz=79,slow=37						
KURK	**Kurchatov**	**46.51**	**308**	P	**P**	**19 46 40.0**	**-0.4**
KURK				IAmb	IAmb	19 46 53.5	
	comp=Z,4.0nm,0.8s						
RSO	**Redoubt South**	**46.89**	**38**	P	**P**	**19 46 45.9**	**+2.3**
ILAR	**Eielson Array**	**49.54**	**32**	P	**P**	**19 47 03.4**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=260,slow=6.9,SNR=1.8						
KK31	**Karatay Array**	**53.70**	**300**	P	**P**	**19 47 33.5**	**-1.6**
KK31				IAmb	IAmb	19 47 37.5	
	comp=Z,6.6nm,1.4s						
KKAR	**Karatay Array**	**53.70**	**300**	P	**P**	**19 47 33.7**	**-1.4**
KKAR	**Karatay Array**	**53.70**	**300**	P	**P**	**19 47 33.5**	**-1.6**
KKAR				IAmb	IAmb	19 47 37.5	
	comp=Z,6.6nm,1.4s						
WB0	**Warramunga Arr**	**56.61**	**189**	P	**P**	**19 47 56.8**	**+0.6**
WB0				IAmb	IAmb	19 48 28.5	
	comp=Z,8.3nm,1.4s						
CTA	**Charters Tower**	**56.62**	**175**	P	**P**	**19 47 56.0**	**-0.2**
	comp=Z,2.8nm,0.5s,baz=90,slow=2.0,SNR=8.2						
WRA	**Warramunga Arr**	**56.79**	**189**	P	**P**	**19 47 57.0**	**-0.5**
	comp=Z,0.6nm,1.0s,baz=14,slow=7.2,SNR=3.1						
ABKAR	**Akbulak array**	**58.51**	**310**	P	**P**	**19 48 09.8**	**+0.4**
ABKAR				IAmb	IAmb	19 48 10.2	
	comp=Z,1.7nm,0.7s						
ASAR	**Alice Springs**	**60.52**	**189**	P	**P**	**19 48 23.5**	**0.0**
	comp=Z,0.3nm,0.8s,baz=17,slow=6.8,SNR=2.1						
ASAR	**Alice Springs**	**60.52**	**189**	P	**P**	**19 48 23.8**	**+0.3**
NB2	**NORSAR Subarra**	**74.68**	**338**	P	**P**	**19 49 53.1**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**74.68**	**338**	P	**P**	**19 49 53.1**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=40,slow=5.7,SNR=4.2						
AKASG	**Malin Array Be**	**74.85**	**323**	P	**P**	**19 49 54.2**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=48,slow=5.9,SNR=7.0						
AKASG	**Malin Array B**	**74.85**	**323**	IAmb	IAmb	19 50 02.2	
	comp=Z,0.6nm,0.8s						
GERES	**GERESS Array B**	**83.25**	**329**	P	**P**	**19 50 40.4**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=37,slow=5.5,SNR=2.1						
H03N2	**Juan Fernandez**	**146.53**	**97**	T	T	22 42 15.7	
	baz=291,slow=76,SNR=3.0						
H03N3	**Juan Fernandez**	**146.54**	**97**	T	T	22 42 06.6	
	baz=291,slow=76,SNR=4.7						
H03N1	**Juan Fernandez**	**146.54**	**97**	T	T	22 42 14.0	
	baz=291,slow=76,SNR=5.5						

*IDC **25** 19:47:52.2±0.6,39˚68S×15˚64W,h0km,mb4.3/14, mb1 4.4/14,mb1mx4.3/30,mbtmp4.3/14,MS4.6/20, Ms1 4.6/20,ms1mx4.6/21,Error ellipse: s-maj=19.6km s-min=17.0km az=112.0*

*NEIC **25** 19:47:53.7±2.9,39˚7S±0˚1×15˚9W±0˚1,h14km±3km, mb5.1/53,Error ellipse: s-maj=15.3km s-min=14.7km az=191.0*

*GCMT **25** 19:47:57.7±0.1,39˚78S±0˚01×15˚81W±0˚01,h12km, MW5.2/141,Moment Tensor Solution. s84,c116; s141,c250; Duration: 1ᵗ¡0 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.89±.01; Mθθ 0.01±.01; Mϕϕ 0.87±.01; Mrθ 0.20±.04; Mθϕ-0.07±.01; Mϕr 0.04±.03; Best double couple: M₀0.90800×10¹⁷ NP1:ϕs344.00000°,δ46.00000°, λ-107.00000°. NP2:ϕs188.00000°,δ47.00000°, λ-73.00000°. Principal axes: T 0.8840, Plg1.0000°, Azm266.0000°; N 0.0470, Plg12.0000°, Azm356.0000°; P -0.9310, Plg78.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 19:47:53.7±0.4,39.74S±0.08×15.86W±0.07,h11km,n168, σ1ᵗ25/134,mb5.0/38,MS4.8/24,1C-1D,Tristan da Cunha region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10S2	**ASCENSION HYDR**	**30.66**	**2**	T	T	20 26 25.2	
	baz=182,slow=74,SNR=102						
H10S3	**ASCENSION HYDR**	**30.67**	**2**	T	T	20 26 25.6	
	baz=38,slow=74,SNR=113						
VNA1	**Neumayer--Stat**	**31.23**	**175**	P	**P**	**19 54 14.9**	**+2.1**
VNA2	**Neumayer--Watz**	**31.56**	**175**	P	**P**	**19 54 16.1**	**+0.3**
	baz=347,slow=9.8						
ASCN	**Ascension**	**31.69**	**3**	P	**P**	**19 54 17.5**	**+0.1**
VNA3	**Neumayer Olymp**	**31.74**	**176**	P	**P**	**19 54 17.4**	**+0.1**
H10N1	**ASCENSION HYDR**	**31.78**	**3**	T	T	20 27 51.3	
	baz=189,slow=78,SNR=20						
H10N3	**ASCENSION HYDR**	**31.78**	**3**	T	T	20 27 50.9	
	baz=189,slow=78,SNR=231						
H10N2	**ASCENSION HYDR**	**31.79**	**3**	T	T	20 27 52.1	
	baz=189,slow=78,SNR=86						
SNAA	**Sanae**	**32.68**	**172**	P	**P**	**19 54 26.8**	**+1.2**
SNAA	**Sanae**	**32.68**	**172**	P	**P**	**19 54 25.5**	**-0.2**
	4.5nm,0.9s,baz=328,slow=7.5,SNR=13						
SNAA	**Sanae**	**32.68**	**172**	P	**P**	**19 54 25.7**	**+0.1**
SNAA				IAmb	IAmb	19 54 33.6	
	comp=Z,16nm,1.2s						
FRTB	**Fartura**	**32.81**	**290**	*eP*	**P**	**19 54 27.8**	**+0.5**
BB19B	**Bebedouro**	**33.51**	**294**	*eP*	**P**	**19 54 34.9**	**+1.6**
JANB	**Januaria**	**34.98**	**307**	*eP*	**P**	**19 54 46.4**	**+0.3**
PCMB	**Pacaembu**	**35.12**	**290**	*eP*	**P**	**19 54 47.8**	**+0.6**
TSUM	**Tsumeb**	**35.29**	**64**	P	**P**	**19 54 48.7**	**-0.2**
IPMB	**Ipameri, GO**	**35.38**	**298**	*eP*	**P**	**19 54 49.3**	**-0.3**
BOSA	**Boshof**	**35.50**	**85**	P	**P**	**19 54 48.8**	**-1.8**
	comp=Z,2.4nm,0.7s,baz=248,slow=10,SNR=6.6						
BOSA				LR	LR	20 06 36.8	
	comp=Z,2μm,20.0s,baz=240,slow=32						
BOSA	**Boshof**	**35.50**	**85**	P	**P**	**19 54 50.0**	**-0.7**
ITRB	**Iturama**	**35.70**	**294**	*eP*	**P**	**19 54 53.8**	**+1.5**
BDFB	**Brasilia**	**36.91**	**301**	LR	LR	20 07 12.0	
	comp=Z,828nm,20.8s,baz=122,slow=31						
BDFB	**Brasilia**	**36.91**	**301**	P	**P**	**19 55 02.6**	**-0.2**
CPUP	**Villa Florida**	**36.93**	**278**	P	**P**	**19 55 03.9**	**+1.2**
	comp=Z,2.9nm,0.9s,baz=154,slow=3.9,SNR=2.7						
CPUP				LR	LR	20 08 04.1	
	comp=Z,2μm,19.8s,baz=133,slow=33						
CPUP	**Villa Florida**	**36.93**	**278**	P	**P**	**19 55 01.9**	**-0.8**
CPUP	**Villa Florida**	**36.93**	**278**	*eP*	**P**	**19 55 03.4**	**+0.7**
SDBA	**SAO DESIDERIO**	**37.39**	**309**	*eP*	**P**	**19 55 07.1**	**+0.3**
BELA	**Belgrano 2**	**39.05**	**186**	P	**P**	**19 55 18.8**	**-1.2**
ARAG	**Araguaiana, MT**	**39.42**	**297**	*eP*	**P**	**19 55 25.7**	**+1.9**
PEXB	**Peixe**	**39.72**	**305**	*eP*	**P**	**19 55 24.7**	**-1.7**
PP1B	**Ponte de Pedra**	**40.29**	**292**	*eP*	**P**	**19 55 32.9**	**+1.8**
PLCA	**Paso Flores**	**41.19**	**250**	P	**P**	**19 55 39.4**	**+1.1**
PLCA	comp=Z,1.8nm,1.1s,baz=120,slow=16,SNR=2.2			LR	LR	20 09 59.0	
	comp=Z,2μm,20.9s,baz=116,slow=32						
PLCA	**Paso Flores**	**41.19**	**250**	P	**P**	**19 55 38.3**	**0.0**
SYO	**Syowa Base**	**41.28**	**153**	*eP*	**P**	**19 55 36.8**	**-1.8**
SYO	**Syowa Base**	**41.28**	**153**	*sP*	sP	19 55 45.0	+2.8
SNDB	**Serra Nova Dou**	**41.75**	**302**	*eP*	**P**	**19 55 43.9**	**+0.8**
SMTB	**Santa Maria do**	**41.79**	**309**	*eP*	**P**	**19 55 43.9**	**+0.5**
MATP	**Matopo**	**42.44**	**76**	P	**P**	**19 55 46.9**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=211,slow=6.3,SNR=6.8						
ZON	**Zonda**	**43.17**	**264**	P	**P**	**19 55 53.5**	**-1.1**
ZON				IAmb	IAmb	19 57 13.7	
	comp=Z,10nm,0.4s						
BO02	**Sierra Bellavi**	**43.42**	**259**	P	**P**	**19 55 56.9**	**+0.3**
PEL	**Peldehue**	**44.02**	**261**	P	**P**	**19 56 00.5**	**-0.9**
PEL				IAmb	IAmb	19 56 09.5	
	comp=Z,36nm,1.0s						
VA03	**San Esteban**	**44.07**	**261**	P	**P**	**19 56 02.5**	**+0.6**
VA03				IAmb	IAmb	19 56 08.5	
	comp=Z,33nm,1.1s						
MT02	**Curacav**	**44.31**	**260**	P	**P**	**19 56 03.0**	**-0.7**
PTLB	**Pontes e Lacer**	**44.77**	**290**	*eP*	**P**	**19 56 08.1**	**+0.6**
LSZ	**Lusaka**	**45.44**	**70**	P	**P**	**19 56 11.4**	**-1.6**
CLDB	**Colider**	**45.56**	**298**	*eP*	**P**	**19 56 14.6**	**+0.8**
LIC	**Lamto**	**46.81**	**15**	*eP*	**P**	**19 56 23.5**	**0.0**
	comp=Z,26nm,0.9s						
GO02	**Mina Guanaco**	**46.95**	**271**	P	**P**	**19 56 25.6**	**+0.6**
KIC	**Kosan Boka**	**47.00**	**15**	*eP*	**P**	**19 56 24.9**	**-0.1**
	comp=Z,26nm,1.0s						
VILB	**Vilhena**	**47.20**	**292**	*eP*	**P**	**19 56 27.9**	**+1.2**
AC01	**Pan de Azucar**	**47.22**	**269**	P	**P**	**19 56 26.6**	**-0.2**
AC01				IAmb	IAmb	19 56 41.0	
	comp=Z,25nm,1.1s						
TIC	**Toumodi**	**47.22**	**15**	*eP*	**P**	**19 56 26.6**	**-0.1**
DBIC	**Dimbokro**	**47.28**	**15**	P	**P**	**19 56 25.8**	**-1.3**
	comp=Z,5.2nm,0.9s,baz=210,slow=5.7,SNR=4.8						
DBIC				LR	LR	20 11 30.7	
	comp=Z,249nm,20.7s,baz=166,slow=30						
DBIC	**Dimbokro**	**47.28**	**15**	P	**P**	**19 56 24.8**	**-2.3**
DBIC				IAmb	IAmb	19 56 35.0	
	comp=Z,22nm,1.1s						
LVC	**Limon Verde**	**47.80**	**275**	P	**P**	**19 56 31.2**	**-0.5**
LVC	**Limon Verde**	**47.80**	**275**	*eP*	**P**	**19 56 32.4**	**+0.7**
PB15	**IPOC Station P**	**47.91**	**274**	P	**P**	**19 56 31.2**	**-1.1**
PB15				IAmb	IAmb	19 56 40.2	
	comp=Z,20nm,1.2s						
NPGB	**Novo Progresso**	**48.08**	**302**	*eP*	**P**	**19 56 33.4**	**-0.1**
PB06	**IPOC Station P**	**48.26**	**274**	P	**P**	19 56 31.7	-3.3
PB06				IAmb	IAmb	19 57 27.8	
	comp=Z,12nm,0.8s						
PB04	**IPOC Station P**	**48.91**	**274**	P	**P**	**19 56 38.9**	**-1.1**
PB07	**IPOC Station P**	**49.04**	**275**	P	**P**	**19 56 40.1**	**-0.9**
PB07				IAmb	IAmb	19 56 49.0	
	comp=Z,42nm,1.2s						
PB01	**IPOC Station P**	**49.12**	**276**	P	**P**	**19 56 39.7**	**-1.9**
PB01				IAmb	IAmb	19 56 49.2	
	comp=Z,19nm,1.2s						
PB08	**IPOC Station P**	**49.38**	**277**	P	**P**	**19 56 42.3**	**-1.6**
PB08				IAmb	IAmb	19 56 53.8	
	comp=Z,30nm,1.0s						
MAW	**Mawson**	**49.77**	**151**	P	**P**	**19 56 45.7**	**-0.1**
	comp=Z,4.0nm,0.9s,baz=269,slow=13,SNR=5.5						
MAW				LR	LR	20 13 18.1	
	comp=Z,666nm,21.8s,baz=252,slow=31						
PB11	**IPOC Station P**	**49.99**	**277**	P	**P**	**19 56 46.3**	**-2.0**
PB11				IAmb	IAmb	19 56 57.6	
	comp=Z,16nm,1.1s						
MNMC	**Minye Minye**	**50.31**	**278**	P	**P**	**19 56 49.9**	**-1.0**
MNMC				IAmb	IAmb	19 57 04.6	
	comp=Z,28nm,1.5s						
PSGCX	**Pisagua**	**50.44**	**277**	P	**P**	**19 56 50.5**	**-1.2**
PSGCX				IAmb	IAmb	19 57 11.8	
	comp=Z,30nm,1.5s						
QSPA	**South Pole Qui**	**50.52**	**180**	P	**P**	**19 56 51.9**	**+0.2**
QSPA				IAmb	IAmb	19 57 02.9	
	comp=Z,52nm,1.2s						
PB16	**IPOC Station P**	**50.71**	**279**	P	**P**	**19 56 52.3**	**-2.0**
LPAZ	**La Paz**	**50.90**	**282**	P	**P**	**19 56 57.3**	**+1.6**
	comp=Z,4.7nm,1.1s,baz=178,slow=7.0,SNR=7.1						
LPAZ				LR	LR	20 16 59.6	
	comp=Z,838nm,21.9s,baz=136,slow=34						
LPAZ	**La Paz**	**50.90**	**282**	P	**P**	**19 56 53.4**	**-2.3**
LPAZ	**La Paz**	**50.90**	**282**	*eP*	**P**	**19 56 54.3**	**-1.4**
SAML	**Samuel**	**52.06**	**293**	P	**P**	**19 57 01.8**	**-1.9**
SAML				IAmb	IAmb	19 57 11.4	
	comp=Z,40nm,1.6s						
SAML	**Samuel**	**52.06**	**293**	*eP*	**P**	**19 57 03.3**	**-0.4**
ETMB	**Extrema**	**53.65**	**290**	*eP*	**P**	**19 57 15.3**	**-0.1**
MBO	**M'Bour**	**53.85**	**359**	P	**P**	**19 57 17.4**	**+0.6**
FOMA	**Nahampoana Res**	**54.07**	**94**		**P**	**19 57 20.1**	**+1.7**
KOWA	**Kowa**	**55.07**	**14**	P	**P**	**19 57 24.8**	**-0.8**
KOWA				IAmb	IAmb	19 57 34.2	
	comp=Z,50nm,1.5s						
TOA0	**Torodi Ar. Sit**	**55.09**	**21**	P	**P**	**19 57 24.8**	**-1.1**
TOA0				IAmb	IAmb	19 57 33.6	
	comp=Z,49nm,1.9s						
TORD	**Torodi Ar. Bea**	**55.09**	**21**	P	**P**	**19 57 24.7**	**-1.1**
	comp=Z,2.5nm,1.0s,baz=205,slow=6.5,SNR=7.0						
TORD				PcP	**PcP**	**19 58 27.3**	**+0.2**
	comp=Z,1.9nm,1.2s,baz=210,slow=3.7,SNR=1.8						
TORD				LR	LR	20 16 32.6	
	comp=Z,415nm,19.1s,baz=190,slow=31						
TORD	**Torodi Ar. Bea**	**55.09**	**21**	P	**P**	**19 57 23.5**	**-2.3**
MBAR	**Mbarara**	**57.56**	**59**	P	**P**	**19 57 42.4**	**-1.4**
MBAR				IAmb	IAmb	19 57 54.9	
	comp=Z,15nm,1.3s						
NNA	**Nana**	**60.17**	**279**	LR	LR	20 23 25.7	
	comp=Z,815nm,21.0s,baz=97,slow=35						
KMBO	**Kilima Mbogo**	**61.63**	**65**	LR	LR	20 22 43.0	
	comp=Z,2μm,18.9s,baz=255,slow=34						
VNDA	**Vanda**	**63.01**	**179**	P	**P**	**19 58 20.8**	**+0.7**
	comp=Z,4.7nm,0.9s,baz=205,slow=6.9,SNR=11						
VNDA				LR	LR	20 23 08.0	
	comp=Z,239nm,20.2s,baz=170,slow=34						
VNDA	**Vanda**	**63.01**	**179**	P	**P**	**19 58 19.8**	**-0.3**
VNDA				IAmb	IAmb	19 58 24.2	
	comp=Z,35nm,1.5s						
ATAH	**Atahualpa**	**64.44**	**283**	LR	LR	20 27 19.2	
	comp=Z,733nm,18.2s,baz=151,slow=37						
TAM	**Tamanrasset**	**65.33**	**22**	P	**P**	**19 58 35.5**	**-0.6**
TAM				IAmb	IAmb	19 58 44.8	
	comp=Z,8.0nm,1.1s						
GUVC	**San Jose del G**	**66.79**	**295**	*eP*	**P**	**19 58 42.7**	**-2.9**
PCRV	**Puerto La Cruz**	**67.14**	**307**	LR	LR	20 26 45.3	
	comp=Z,618nm,18.4s,slow=35						
MACC	**Macarena, Meta**	**67.37**	**293**	*eP*	**P**	**19 58 48.0**	**-1.3**
PUAC	**Puerto Asis, P**	**68.21**	**290**	*eP*	P	19 59 01.0	+6.4
VILC	**Villavicencio,**	**68.65**	**295**	*eP*	P	19 58 53.3	-4.1
TAMC	**Tame, Arauca**	**69.00**	**298**	*eP*	**P**	**19 58 57.6**	**-1.8**
PCON	**Cinco Dias**	**69.31**	**292**	*eP*	**P**	**19 59 02.5**	**+0.4**
SOTA	**Rioblanco**	**69.33**	**291**	*eP*	P	19 58 53.3	-8.8
RUSC	**La Rusia**	**69.49**	**297**	*eP*	**P**	**19 59 01.0**	**-2.0**
ROSC	**El Rosal**	**69.60**	**295**	LR	LR	20 28 17.6	
	comp=Z,3μm,19.3s,baz=188,slow=35						
SDV	**Santo Domingo**	**70.01**	**301**	P	**P**	**19 59 05.2**	**-0.7**
SDV				IAmb	IAmb	19 59 12.8	
	comp=Z,16nm,1.3s						
TOLC	**Tolima**	**70.12**	**294**	*eP*	**P**	**19 59 04.9**	**-1.9**
PAMC	**Pamplona, Colo**	**70.27**	**298**	*eP*	P	**19 59 06.3**	**-1.5**
PTBC	**PUERTO BERRIO,**	**70.90**	**296**	*eP*	P	19 59 05.3	-5.8
OCAC	**Ocana**	**71.34**	**298**	*eP*	P	19 59 06.3	-7.6
ZARC	**Zaragoza, Cauc**	**71.86**	**297**	*eP*	**P**	**19 59 16.9**	**0.0**
PMOZ	**Porto Moniz, M**	**72.20**	**359**	P	**P**	**19 59 20.2**	**+1.6**
DBBC	**Dabeiba**	**72.46**	**295**	*eP*	**P**	**19 59 18.9**	**-1.7**
PESTR	**Estremoz**	**78.59**	**7**	P	**P**	**19 59 56.0**	**+0.9**
KEST	**Kesra**	**78.61**	**21**	P	**P**	**19 59 55.5**	**+0.2**
	comp=Z,5.3nm,0.9s,baz=153,slow=2.6,SNR=7.2						
KEST				LR	LR	20 31 42.3	
	comp=Z,515nm,19.2s,baz=181,slow=34						
KEST	**Kesra**	**78.61**	**21**	P	**P**	**19 59 55.6**	**+0.3**
KEST				IAmb	IAmb	20 00 11.4	
	comp=Z,25nm,1.3s						
PAB	**San Pablo**	**79.60**	**9**	P	**P**	**19 59 58.8**	**-1.9**
ESDC	**Sonseca Array**	**79.78**	**9**	P	**P**	**20 00 01.3**	**-0.3**
	comp=Z,2.7nm,1.0s,baz=187,slow=4.8,SNR=15						
ESDC				LR	LR	20 33 16.2	
	comp=Z,132nm,18.3s,baz=315,slow=34						
ESDC	**Sonseca Array**	**79.78**	**9**	P	**P**	**20 00 00.6**	**-1.0**
ESBB	**Sonseca Array**	**79.78**	**9**	P	**P**	**20 00 01.4**	**-0.1**
ESBB				IAmb	IAmb	20 00 10.9	
	comp=Z,31nm,1.7s						
TIP	**Timpagrande**	**84.02**	**25**	P	**P**	**20 00 23.8**	**-0.2**
TIP				IAmb	IAmb	20 00 32.5	
	comp=Z,13nm,1.2s						
RAYN	**Ar Rayn**	**85.03**	**54**	P	**P**	**20 00 31.8**	**+2.4**
RAYN				IAmb	IAmb	20 00 33.5	
	comp=Z,28nm,1.7s						
INTR	**Introdacqua**	**85.74**	**22**	P	**P**	**20 00 32.9**	**+0.3**
CLF	**Chambon-Foret**	**88.85**	**12**	P	**P**	**20 00 48.7**	**+1.4**
BRTR	**Keskin Array B**	**91.09**	**36**	P	**P**	**20 00 58.2**	**0.0**
	comp=Z,0.8nm,0.5s,baz=205,slow=6.4,SNR=1.6						
BRTR				LR	LR	20 42 27.4	
	comp=Z,44nm,18.8s,baz=213,slow=36						
WLF	**Walferdange**	**91.11**	**14**	pP	**P**	**20 00 59.8**	**+1.9**
BMRD	**Maredsous**	**91.48**	**13**	pP	P	**20 01 01.8**	**+2.3**
BCLA	**Clavier**	**91.68**	**13**	PcP	P	**20 01 01.9**	**+1.4**
GERES	**GERESS Array B**	**92.00**	**19**	LR	LR	20 38 51.3	
	comp=Z,234nm,22.0s,baz=210,slow=33						
MODS	**Modra-Piesok**	**92.52**	**21**	*eP*	P	**20 01 06.2**	**+1.8**
H01W2	**Cape Leeuwin H**	**92.56**	**141**	T	T	21 44 39.8	
	baz=217,slow=75,SNR=6.9						
H01W3	**Cape Leeuwin H**	**92.58**	**141**	T	T	21 44 39.8	
	baz=217,slow=75,SNR=10						
H01W1	**Cape Leeuwin H**	**92.58**	**141**	T	T	21 44 40.4	
	baz=217,slow=75,SNR=8.0						
MLR	**Muntele Rosu**	**92.76**	**28**	P	P	**20 01 05.1**	**-0.7**
	comp=Z,5.6nm,1.0s,baz=284,slow=17,SNR=4.5						
MLR	**Muntele Rosu**	**92.76**	**28**	P	P	**20 01 07.1**	**+1.3**
VYHS	**Vyhne**	**93.08**	**22**	*eP*	P	**20 01 08.7**	**+1.7**
CRVS	**Cervenica-Dubn**	**94.23**	**24**	*eP*	P	**20 01 15.4**	**+3.1**
BURAR	**Bucovina Array**	**94.33**	**26**	P	P	**20 01 13.6**	**+0.7**
BIRD	**Birdtown, Kers**	**95.03**	**312**	P	P	20 01 11.9	-4.4
X51A	**Calhoun**	**97.56**	**309**	P	P	20 01 24.1	-3.7
TKL	**Tuckaleechee C**	**97.67**	**310**	P	P	**20 01 28.3**	**-0.1**
V52A	**Sevierville**	**97.69**	**311**	P	P	**20 01 29.4**	**+1.0**
AKASG	**Malin Array Be**	**98.35**	**27**	LR	LR	20 44 11.7	
	comp=Z,124nm,21.2s,baz=320,slow=34						
KBZ	**Khabaz**	**98.55**	**39**	LR	LR	20 44 10.9	
	comp=Z,158nm,21.5s,baz=205,slow=34						
TBI	**Tubuai**	**103.76**	**223**	*eLR*	LR	20 36 03.2	
	comp=Z,510nm,31.2s						
PPT2	**Papeete2**	**108.49**	**227**	*eLR*	LR	20 38 11.7	
	comp=Z,648nm,28.8s						
TAOE	**Nuku Hiva Isla**	**109.39**	**240**	*eLR*	LR	20 38 43.8	
	comp=Z,307nm,23.8s						
DZM	**Mont Dzumac**	**118.48**	**182**	*eLR*	LR	20 42 37.8	
	comp=Z,196nm,21.8s						
CMAR	**Chiang Mai Arr**	**120.49**	**91**	PKP	**PKPdf**	**20 06 46.2**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=259,slow=3.4,SNR=4.3						
CMAR	**Chiang Mai Arr**	**120.49**	**91**		**PKPdf**	**20 06 45.3**	**-0.3**
EUNU	**Eureka**	**125.62**	**348**		**PKPdf**	**20 06 54.8**	**+1.0**
BMAR	**Burnt Mountain**	**140.67**	**332**		**PKPdf**	**20 07 23.0**	**+0.7**
BALM	**Baldy**	**141.20**	**321**		**PKPdf**	**20 07 23.1**	**-0.4**
TOLK	**Toolik Lake Re**	**141.97**	**335**		**PKPdf**	**20 07 25.0**	**+0.4**
ILAR	**Eielson Array**	**142.39**	**328**	PKhKP	PKPpre	20 07 21.1	
	comp=Z,1.0nm,0.7s,baz=84,slow=1.8,SNR=5.5						
ILAR	**Eielson Array**	**142.39**	**328**		PKPpre	20 07 20.5	
HDA	**Harding Lake**	**142.53**	**327**		**PKPdf**	**20 07 23.2**	**-2.5**
DHY	**Denali Highway**	**143.09**	**325**		PKPab	20 07 23.9	+1.6
I23K	**Minto, Yukon-K**	**143.26**	**329**		PKPab	20 07 23.6	+0.9
RND	**Reindeer**	**143.63**	**326**		PKPbc	20 07 26.4	+1.1
TRF	**Thorofare Moun**	**144.23**	**327**		**PKPab**	**20 07 25.8**	**-1.0**
BPAW	**Bear Paw Mtn.**	**144.29**	**328**		**PKPab**	**20 07 25.8**	**-1.0**
KTH	**Kantishna Hill**	**144.46**	**327**		**PKPab**	**20 07 26.2**	**-1.2**
IMAR	**Indian Mountai**	**144.59**	**332**		**PKPab**	**20 07 26.2**	**-1.6**
SEW	**Seward**	**144.83**	**321**		**PKPab**	**20 07 28.4**	**-0.4**
SUA	**Susitna One**	**145.06**	**324**		**PKPbc**	**20 07 29.4**	**-0.4**
PPLA	**Purkeypile**	**145.23**	**326**		**PKPbc**	**20 07 29.3**	**-1.0**
SKT	**Skwentna**	**145.26**	**325**		**PKPbc**	**20 07 29.5**	**-0.8**
BRLK	**Bradley Lake**	**145.61**	**321**		**PKPdf**	**20 07 31.7**	**+0.5**
CNPM	**China Poot**	**145.84**	**320**		**PKPdf**	**20 07 33.3**	**+1.7**
RDOG	**Red Dog Mine**	**146.43**	**338**		**PKPdf**	**20 07 34.2**	**+1.8**
TTA	**Tatalina**	**146.83**	**328**	PKPdf	**PKPdf**	**20 07 34.6**	**+1.3**
KSAR	**W

ISC 25 19:57:04.0±0.5,1°83N±0'.05×126°39E±0'.07,h47km,n75,
σ1°77/78,mb4.3/26,1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**137**	**P**	**Pn**	**19 57 26.9**	**-0.6**
TNTI				S	**Sn**	**19 57 47.5**	**+2.4**
TNTI	**Ternate**	**1.43**	**137**	Pn	**Pn**	**19 57 27.2**	**-0.2**
SGSI	**Sangihe**	**2.04**	**335**	P	**Pn**	**19 57 34.5**	**-1.4**
SGSI				S	**Sn**	**19 58 03.0**	**+2.9**
KMSI	**Cibinong**	**2.71**	**243**	P	**Pn**	**19 57 45.4**	**+0.3**
GTOI	**Gorontalo**	**3.58**	**251**	P	**Pn**	**19 57 58.9**	**+1.9**
SANI	**Sanana**	**3.87**	**186**	P	**Pn**	**19 58 00.6**	**-0.4**
LUWI	**Luwuk**	**4.61**	**232**	P	**Pn**	**19 58 12.5**	**+1.4**
LUWI	**Luwuk**	**4.61**	**232**		**Pn**	**19 58 12.2**	**+1.1**
MRSI	**Marisa**	**4.65**	**253**	P	**Pn**	**19 58 12.8**	**+1.1**
KCP	**Kidapawan**	**5.31**	**346**	*eP*	**Pn**	**19 58 24.1**	**+3.2**
KCP				*i* S	**Sn**	**19 59 26.9**	**+6.1**
APSI	**Ampana**	**5.47**	**240**	P	**Pn**	**19 58 24.6**	**+1.7**
	0.4nm1µm136nm,1.1s						
SIJI	**Sorong**	**5.56**	**119**	Pn	**Pn**	**19 58 25.6**	**+1.4**
	0.3nm,0.3s,baz=228,slow=23,SNR=2.1						
TOLI2	**Tolitoli**	**5.66**	**263**		**Pn**	**19 58 23.8**	**-1.7**
MPSI	**Mapaga**	**6.66**	**257**	P	**Pn**	**19 58 40.2**	**+0.9**
	0.1nm342nm30nm,0.8s						
FAKI	**Fak Fak**	**7.51**	**129**	Pn	**Pn**	**19 58 51.3**	**+0.3**
TTSI	**Tana Toraja**	**8.16**	**234**	P	**Pn**	**19 59 00.4**	**+0.5**
	24nm,0.7s						
MYLDM	**Lahad Datu**	**8.55**	**293**		**Pn**	**19 59 05.3**	**0.0**
SPSI	**Sidrap Palu**	**8.77**	**229**	P	**Pn**	**19 59 09.6**	**+1.4**
	20nm,0.9s						
BNSI	**Bone**	**8.82**	**225**	P	**Pn**	**19 59 08.8**	**-0.1**
	22nm,0.7s						
KAPI	**Kappang**	**9.50**	**224**	Pn	Pn	19 59 13.6	-4.6
	0.5nm,0.3s,baz=103,slow=23,SNR=1.4						
KAPI	**Kappang**	**9.50**	**224**	Pn	**Pn**	**19 59 16.2**	**-2.0**
KKM	**Kota Kinabalu**	**10.98**	**293**	Pn	**Pn**	**19 59 37.5**	**-1.2**
SOEI	**Soe**	**11.70**	**190**	Pn	**Pn**	**19 59 47.7**	**-0.8**
TWSI	**Taliwang, Sumb**	**14.14**	**222**	P	**P**	**20 00 31.1**	**+3.0**
SBUM	**Sibu**	**14.18**	**273**	P	**Pn**	**20 00 24.1**	**+2.0**
GENI	**Genyem**	**14.45**	**108**	P	P	20 00 39.3	+7.7
MTN	**Manton Dam**	**15.31**	**162**	Pn	**Pn**	**20 00 35.4**	**-1.7**
KSM	**Kuching**	**16.08**	**269**	Pn	**Pn**	**20 00 44.4**	**-2.6**
KNRA	**Kununurra**	**17.55**	**172**	Pn	**Pn**	**20 01 02.4**	**-2.9**
KNRA				IAmb	IAmb	20 01 12.1	
	comp=Z,18nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P	**P**	**20 01 30.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=27,slow=7.2,SNR=7.7						
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P	**P**	**20 01 30.0**	**-0.7**
YULB	**Yu-li**	**22.00**	**347**	P	**P**	**20 01 51.5**	**-2.8**
YULB				IAmb	IAmb	20 02 01.1	
	comp=Z,37nm,1.5s						
TPUB	**Ta-pu**	**22.07**	**346**	P	**P**	**20 01 52.5**	**-2.6**
TPUB				IAmb	IAmb	20 01 58.6	
	comp=Z,33nm,1.1s						
SSLB	**Suanglung**	**22.46**	**347**	P	**P**	**20 01 54.6**	**-4.7**
SSLB				IAmb	IAmb	20 02 28.7	
	comp=Z,16nm,1.2s						
YOJ	**Yonaguni jima**	**22.74**	**352**	P	**P**	**20 02 00.0**	**-2.2**
WB0	**Warramunga Arr**	**22.85**	**160**	P	**P**	**20 02 02.4**	**-1.0**
WB0				IAmb	IAmb	20 02 18.2	
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	**22.99**	**161**	P	**P**	**20 02 03.7**	**-1.1**
WRAB				IAmb	IAmb	20 02 10.4	
	comp=Z,7.7nm,0.5s						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**20 02 03.9**	**-1.0**
	comp=Z,2.6nm,0.5s,baz=336,slow=11,SNR=39						
WRA				PcP	**PcP**	**20 05 55.2**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=334,slow=2.1,SNR=2.0						
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**20 02 03.5**	**-1.4**
WB2	**Warramunga Arr**	**23.00**	**161**	P	**P**	**20 02 03.9**	**-1.1**
WB2				IAmb	IAmb	20 02 10.4	
	comp=Z,7.5nm,0.6s						
WR0	**Warramunga Arr**	**23.08**	**160**	P	**P**	**20 02 04.8**	**-0.9**
PSA00	**Pilbara Seismi**	**24.12**	**195**	P	**P**	**20 02 13.9**	**-1.6**
PSA00				IAmb	IAmb	20 02 27.5	
	comp=Z,30nm,1.2s						
KULM	**Kulim**	**25.92**	**278**	P	**P**	**20 02 30.6**	**-1.5**
KULM				IAmb	IAmb	20 03 02.3	
	comp=Z,7.5nm,1.2s						
AS31	**Alice Springs**	**26.37**	**164**	P	**P**	**20 02 34.7**	**-1.3**
ASAR	**Alice Springs**	**26.37**	**164**	P	**P**	**20 02 36.5**	**+0.5**
	comp=Z,1.5nm,0.5s,baz=347,slow=7.4,SNR=43						
ASAR				PcP	**PcP**	**20 06 02.2**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=343,slow=2.0,SNR=4.9						
ASAR	**Alice Springs**	**26.37**	**164**	P	**P**	**20 02 35.3**	**-0.7**
ASAR					**PcP**	**20 06 01.6**	**+0.6**
NJ2	**Nanjing**	**30.89**	**347**	*eP*	**P**	**20 03 15.8**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MORW	**Morawa**	**32.28**	**197**	P	**P**	**20 03 28.5**	**+0.2**
JWT	**Wachi**	**34.33**	**13**	P	**P**	**20 03 45.7**	**-0.4**
NWAO	**Narrogin (SRO)**	**35.63**	**193**	P	**P**	**20 03 58.3**	**+0.9**
NWAO	**Narrogin (SRO)**	**35.63**	**193**	P	**P**	**20 03 58.5**	**+1.0**
NWAO				IAmb	IAmb	20 04 36.1	
	comp=Z,28nm,1.2s						
BBOO	**Buckleboo**	**35.64**	**166**	P	**P**	**20 03 58.1**	**+0.6**
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**20 04 05.3**	**+0.5**
	comp=Z,1.4nm,0.3s,baz=312,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**20 04 05.0**	**+0.2**
LZH	**Lanzhou**	**39.98**	**331**	*eP*	**P**	**20 04 36.5**	**+2.2**
LZH				pP	pP	20 04 47.8	+1.3
LZH				sP	sP	20 04 52.5	+0.7
LZH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**41.10**	**343**	*eP*	**P**	**20 04 42.5**	**-0.9**
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,95nm,7.0s						
LSA	**Lhasa**	**43.46**	**313**	P	**P**	**20 04 59.4**	**-3.8**
GTA	**Gaotai**	**44.56**	**330**	*eP*	**P**	**20 05 15.5**	**+4.0**
GTA				pP	pP	20 05 25.0	+1.1
GTA				sP	sP	20 05 29.3	+0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,52nm,5.8s						
GTA				LR	LR		
	comp=N,65nm,15.6s						
GTA				LR	LR		
	comp=E,88nm,16.7s						
GTA				LR	LR		
	comp=Z,120nm,15.6s						
SONM	**Songino Array**	**48.99**	**342**	P	**P**	**20 05 44.0**	**-2.0**
	comp=Z,0.4nm,0.5s,baz=163,slow=10,SNR=3.0						
SONM	**Songino Array**	**48.99**	**342**	IAmb	IAmb	20 05 51.7	
	comp=Z,1.5nm,1.0s						
WMQ	**Urumqi**	**54.09**	**326**	*eP*	**P**	**20 06 24.8**	**+0.6**
MK31	**Makanchi Array**	**58.93**	**326**	P	**P**	**20 06 56.9**	**-1.6**
MK31				IAmb	IAmb	20 07 02.0	
	comp=Z,6.8nm,1.6s						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**20 06 57.8**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=119,slow=7.5,SNR=20						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**20 06 56.7**	**-1.8**
MAKZ	**Makanchi**	**59.11**	**326**	P	**P**	**20 06 58.2**	**-1.5**
MAKZ				IAmb	IAmb	20 07 04.2	
	comp=Z,3.8nm,0.9s						
KURK	**Kurchatov**	**63.16**	**328**	P	**P**	**20 07 25.9**	**-1.1**
BVAR	**Borovoye Array**	**68.73**	**327**	P	**P**	**20 08 02.5**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=116,slow=9.8,SNR=2.6						
NRIK	**Noril'sk**	**72.19**	**346**	P	**P**	**20 08 23.6**	**0.0**
	comp=Z,2.4nm,0.7s,baz=177,slow=18,SNR=2.5						
ABKAR	**Akbulak array**	**73.41**	**321**	P	**P**	**20 08 31.0**	**-0.2**
ABKAR				IAmb	IAmb	20 08 39.5	
	comp=Z,5.8nm,1.6s						
AKTO	**Aktyubinsk**	**74.94**	**322**	P	**P**	**20 08 40.5**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=100,slow=8.0,SNR=2.4						
VNDA	**Vanda**	**81.59**	**173**	P	**P**	**20 09 17.2**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=314,slow=5.6,SNR=5.6						
VNDA	**Vanda**	**81.59**	**173**	P	**P**	**20 09 17.6**	**+1.3**
VNDA				IAmb	IAmb	20 09 31.5	
	comp=Z,14nm,1.6s						
ARCES	**ARCESS Array B**	**92.11**	**340**	P	**P**	**20 10 08.5**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=64,slow=6.2,SNR=1.8						
FINES	**FINESS Array B**	**93.34**	**332**	P	**P**	**20 10 13.9**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=64,slow=4.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**123.17**	**287**	PKP	**PKiKP**	**20 15 57.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=90,slow=2.9,SNR=3.2						

IDC 25 19:58:56.3±3.1,2°15N×127°11E,h0km,mb3.1/3,
mb1 3.4/3,mb1mx3.1/47,mbtmp3.2/3,MS3.1/1,Ms1 3.1/1,
ms1mx2.4/21,Error ellipse: s-maj=278.3km
s-min=29.7km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**23.04**	**120**	LR	LR	20 15 28.7	
	comp=Z,51nm,20.5s,baz=256,slow=43						
WRA	**Warramunga Arr**	**23.07**	**162**	P	P	20 04 03.3	-0.4
	0.2nm,0.4s,baz=341,slow=11,SNR=0.8						
ASAR	**Alice Springs**	**26.50**	**166**	P	P	20 04 36.0	+0.4
	0.2nm,0.5s,baz=348,slow=8.5,SNR=0.9						
MKAR	**Makanchi Array**	**59.06**	**326**	P	P	20 08 58.2	-0.1
	0.2nm,0.5s,baz=116,slow=8.0,SNR=1.4						

IDC 25 20:01:31.4±4.9,20°08N×145°99E,h0km,mb3.8/7,
mb1 3.9/7,mb1mx3.5/58,mbtmp3.8/7,Error ellipse:
s-maj=115.0km s-min=98.0km az=52.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**23.39**	**322**	P	P	20 06 40.7	-1.1
	0.9nm,0.6s,baz=153,slow=9.3,SNR=1.4						
KLR	**Kul'dur**	**31.24**	**342**	P	P	20 07 53.5	+0.9
	0.6nm,0.3s,baz=153,slow=9.0,SNR=3.5						
SONM	**Songino Array**	**42.25**	**320**	P	P	20 09 25.3	-1.2
	0.4nm,0.6s,baz=131,slow=7.4,SNR=1.9						
ZALV	**Zalesovo Beam**	**57.10**	**322**	P	P	20 11 20.2	+0.8
	0.8nm,0.3s,baz=98,slow=10,SNR=2.2						
MKAR	**Makanchi Array**	**57.72**	**313**	P	P	20 11 24.8	+0.8
	0.4nm,0.5s,baz=88,slow=8.6,SNR=10						
BVAR	**Borovoye Array**	**65.60**	**320**	P	P	20 12 17.1	+0.1
	0.4nm,0.4s,baz=91,slow=9.9,SNR=5.1						
FINES	**FINESS Array B**	**85.75**	**335**	P	P	20 14 11.2	-1.1
	4.5nm,1.0s,baz=46,slow=4.0,SNR=4.6						

*IDC **25** 20:06:07.9±4.2,24°.78N×123°.49E,h0km,mb3.5/4,*
mb1 3.7/4,mb1mx3.3/51,mbtmp3.5/4,Error ellipse:
s-maj=230.5km s-min=29.3km az=61.0
*JMA **25** 20:06:15.8±0.1,23°.91N×121°.99E,h29km±2km,M3.5*
*TAP **25** 20:06:16.8,23°.96N×121°.96E,h37km,ML3.8,B*
ISC 25 20:06:15.0±1.0,23°93N±0'.02×122°00E±0'.02,h18km±5km,
n151,σ0°77/253,mb3.6/4,8C-18D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.36**	**278**	⇑*iP*	**Pn**	**20 06 25.2**	**-0.2**
HWA				*i* S	**Sn**	**20 06 31.4**	**-0.7**
	baz=266						
TWD	**Chiawan**	**0.40**	**292**	⇑*iP*	**Pn**	**20 06 25.1**	**-0.8**
TWD	baz=291			*i* S	**Sn**	**20 06 31.3**	**-1.7**
	baz=291						
NACB	**Ninganchiao**	**0.44**	**304**	⇑*iP*	**Pb**	**20 06 25.5**	**+1.2**
NACB	baz=303			*i* S	**Sb**	**20 06 32.0**	**+1.4**
	baz=303						
ESL	**Shilin**	**0.53**	**258**	*eP*	**Pb**	**20 06 26.8**	**+1.1**
ESL	baz=247			*eS*	**Sb**	**20 06 34.9**	**+1.8**
	baz=247						
ENAH	**Nanao**	**0.55**	**342**	*eP*	**Pn**	**20 06 27.7**	**-0.3**
ENAH	baz=333			*eS*	**Sn**	**20 06 36.0**	**-0.6**
	baz=333						
ETLH	**Xiulin Townshi**	**0.55**	**301**	⇓P	**Pb**	**20 06 27.2**	**+1.0**
ETLH	baz=299			*eS*	**Sb**	**20 06 34.9**	**+1.2**
	baz=299						
ENA	**Nanau**	**0.55**	**335**	⇓*iP*	**Pn**	**20 06 27.4**	**-0.5**
ENA	baz=327			*eS*	**Sn**	**20 06 35.7**	**-1.0**
	baz=327						
EGFH	**Guangfu**	**0.58**	**244**	P	**Pb**	**20 06 27.9**	**+1.3**
EGFH	baz=239			*eS*	**Sn**	**20 06 36.9**	**-0.6**
	baz=239						
HGSD	**Ruisui**	**0.68**	**231**	P	**Pb**	**20 06 29.2**	**+0.8**
HGSD	baz=222			*eS*	**Sb**	**20 06 38.0**	**+0.5**
	baz=222						
TWC	**Suao**	**0.69**	**349**	P	**Pn**	**20 06 29.9**	**-0.1**
TWC	baz=352			S	**Sn**	**20 06 39.6**	**-0.6**
	baz=352						
WHF	**Hehuan Shan**	**0.70**	**288**	⇓*iP*	**Pb**	**20 06 29.6**	**+0.6**
WHF	baz=278			*eS*	**Sg**	**20 06 38.2**	**-0.2**
	baz=278						
EHY	**Hungye**	**0.75**	**236**	⇓*iP*	**Pb**	**20 06 30.0**	**+0.5**
EHY	baz=232			*eS*	**Sg**	**20 06 40.8**	**+1.1**
	baz=232						
NNSB	**Datong**	**0.75**	**312**	⇓*iP*	**Pb**	**20 06 30.3**	**+0.6**
NNSB	baz=312			*eS*	**Sb**	**20 06 40.5**	**+0.8**
	baz=312						
NNSH	**Datong**	**0.75**	**312**	*i* P	**Pb**	**20 06 30.3**	**+0.7**
NNSH	baz=311			S	**Sb**	**20 06 40.3**	**+0.7**
	baz=311						
OWD	**Renai**	**0.75**	**272**	⇓*iP*	**Pb**	**20 06 30.3**	**+0.6**
OWD	baz=270			*i* S	**Sb**	**20 06 40.4**	**+0.7**
	baz=270						
FUSS	**Fushou**	**0.76**	**295**	⇓*iP*	**Pn**	**20 06 30.8**	**-0.3**
FUSS	baz=294			S	**Sb**	**20 06 41.0**	**+1.1**
	baz=294						
CHGB	**Renai**	**0.76**	**280**	⇓*iP*	**Pb**	**20 06 30.7**	**+0.8**
CHGB	baz=270			S	**Sb**	**20 06 40.8**	**+0.7**
	baz=270						
NNS	**Nan Shan**	**0.76**	**312**	⇓*iP*	**Pg**	**20 06 30.4**	**+0.4**
NNS	baz=312			*eS*	**Sb**	**20 06 40.8**	**+0.8**
	baz=312						
NDT	**Datong Townshi**	**0.80**	**327**	P	**Pn**	**20 06 31.5**	**0.0**
NDT	baz=328			*eS*	**Sg**	**20 06 41.5**	**0.0**
	baz=328						
ENTT	**Nioudou**	**0.81**	**331**	⇓*iP*	**Pn**	**20 06 31.4**	**-0.2**
ENTT	baz=332			*eS*	**Sn**	**20 06 42.3**	**-0.8**
	baz=332						
TWT	**Tachien**	**0.82**	**293**	⇓*iP*	**Pn**	**20 06 31.8**	**0.0**
TWT	baz=283			*eS*	**Sg**	**20 06 42.3**	**+0.4**
	baz=283						
TDCB	**Techi**	**0.83**	**293**	⇓*iP*	**Pn**	**20 06 31.9**	**-0.1**
TDCB	baz=285			S	**Sg**	**20 06 42.5**	**+0.1**
	baz=285						
YULB	**Yu-li**	**0.83**	**230**	⇓*iP*	**Pb**	**20 06 31.3**	**+0.3**
YULB	baz=239			*eS*	**Sb**	**20 06 41.9**	**0.0**
	baz=239						
TWE	**Neicheng**	**0.84**	**339**	P	**Pn**	**20 06 32.1**	**+0.1**
TWE	baz=342			*eS*	**Sg**	**20 06 43.0**	**+0.3**
	baz=342						
EYUL	**Yuli**	**0.85**	**227**	*eP*	**Pg**	**20 06 32.0**	**+0.3**
EYUL	baz=219			*eS*	**Sn**	**20 06 44.3**	**+0.1**
	baz=219						
TWF1	**Yuli**	**0.86**	**228**	⇓*iP*	**Pb**	**20 06 31.8**	**+0.3**
TWF1	baz=237			*eS*	**Sb**	**20 06 43.0**	**+0.3**
	baz=237						
YHNB	**Yeheng**	**0.93**	**323**	P	**Pg**	**20 06 33.2**	**0.0**
YHNB	baz=312			S	**Sb**	**20 06 44.7**	**-0.1**
	baz=312						
NTC	**Toucheng**	**0.93**	**351**	*eP*	**Pn**	**20 06 33.7**	**+0.4**
NTC	baz=6.0			*eS*	**Sn**	**20 06 46.0**	**-0.2**
	baz=6.0						
NSK	**Sanguang**	**0.94**	**322**	⇓*iP*	**Pg**	**20 06 33.2**	**-0.2**
NSK	baz=312			*eS*	**Sg**	**20 06 45.4**	**-0.6**
	baz=312						
NWLT	**Wulai**	**0.96**	**332**	*eP*	**Pg**	**20 06 33.5**	**-0.2**
NWLT	baz=321			S	**Sg**	**20 06 46.3**	**0.0**
	baz=321						
SSLB	**Suanglung**	**0.97**	**262**	P	**Pb**	**20 06 33.7**	**+0.4**
SSLB	baz=260			S	**Sb**	**20 06 45.0**	**-0.7**
	baz=260						
FULB	**Fuli**	**0.97**	**222**	*eP*	**Pb**	**20 06 33.2**	**-0.2**
FULB	baz=209			*eS*	**Sb**	**20 06 46.5**	**+0.6**
	baz=209						
DPDB	**Guoxing**	**0.98**	**276**	⇑*iP*	**Pn**	**20 06 34.5**	**+0.4**
DPDB	baz=270			*eS*	**Sg**	**20 06 47.1**	**-0.1**
	baz=270						
SMLT	**Sun Moon Lake**	**1.01**	**268**	⇓*iP*	**Pn**	**20 06 34.5**	**+0.2**
SMLT	baz=265			S	**Sb**	**20 06 47.2**	**+0.3**
	baz=265						
CHKT	**Chengkung**	**1.01**	**215**	*eP*	**Pb**	**20 06 33.0**	**-0.9**
CHKT	baz=202			*eS*	**Sb**	**20 06 45.8**	**-1.1**
	baz=202						
JYNG	**Yonagunijimaku**	**1.01**	**59**	P	**Pb**	**20 06 34.5**	**+0.5**
JYNG				S	**Sg**	**20 06 48.1**	**+0.2**
WHP	**Taichung City**	**1.02**	**290**	P	**Pg**	**20 06 35.1**	**+0.2**
WHP	baz=289			*eS*	**Sg**	**20 06 47.7**	**-0.6**
	baz=289						
TYC	**Yuchr**	**1.04**	**269**	P	**Pn**	**20 06 35.0**	**+0.2**
	baz=267						
TIPB	**Shuangxi**	**1.05**	**351**	⇑*iP*	**Pg**	**20 06 35.7**	**+0.3**
TIPB	baz=5.0			*eS*	**Sg**	**20 06 49.1**	**-0.2**
	baz=5.0						
YOJ	**Yonaguni jima**	**1.07**	**60**	P	**Pb**	**20 06 35.4**	**+0.4**
YOJ	baz=62			S	**Sb**	**20 06 49.1**	**+0.5**
	baz=62						
YOJ	**Yonaguni jima**	**1.07**	**60**	P	**Pb**	**20 06 35.4**	**+0.4**
YOJ				S	**Sb**	**20 06 49.1**	**+0.5**
WHYT	**Xinyi Township**	**1.07**	**258**	⇑*iP*	**Pg**	**20 06 36.0**	**+0.1**
WHYT	baz=247			*eS*	**Sg**	**20 06 49.6**	**-0.3**
	baz=247						
TWB1	**Santiao Chiao**	**1.07**	**360**	*eP*	**Pb**	**20 06 33.7**	**-1.4**
	baz=2.0						
TWA	**Mucha**	**1.11**	**340**	P	**Pg**	**20 06 36.6**	**-0.1**
TWA	baz=330			*eS*	**Sn**	**20 06 50.7**	**+0.1**
	baz=330						
NHDH	**Xindian Distri**	**1.12**	**337**	*eP*	**Pg**	**20 06 36.5**	**-0.2**
NHDH	baz=327			*eS*	**Sn**	**20 06 50.5**	**-0.2**
	baz=327						
TATO	**Taipei**	**1.14**	**336**	*eP*	**Pg**	**20 06 36.9**	**-0.3**
TATO	baz=337			*eS*	**Sb**	**20 06 50.9**	**+0.1**
	baz=337						
EDH	**Donghe**	**1.15**	**214**	*eP*	**Pn**	**20 06 35.9**	**-0.2**
EDH	baz=202			*eS*	**Sb**	**20 06 49.9**	**-1.0**
	baz=202						
LIOB	**Emei**	**1.15**	**309**	*i* P	**Pg**	**20 06 37.4**	**+0.2**
LIOB	baz=309			*eS*	**Sg**	**20 06 51.8**	**-0.5**
	baz=309						
NSTT	**Nanjuang**	**1.15**	**308**	⇑P	**Pg**	**20 06 37.3**	**0.0**
NSTT	baz=308			*eS*	**Sb**	**20 06 50.2**	**-0.7**
	baz=308						
NWF	**Wu-fen Shan**	**1.15**	**350**	P	**Pg**	**20 06 37.3**	**-0.1**
NWF	baz=352			*eS*	**Sn**	**20 06 52.0**	**+0.2**
	baz=352						
WFSB	**Wu-fen Shan**	**1.15**	**350**	P	**Pg**	**20 06 37.4**	**0.0**
WFSB	baz=352			S	**Sg**	**20 06 53.1**	**+0.6**
	baz=352						
ELDTW	**Lidau**	**1.16**	**231**	*eP*	**Pn**	**20 06 35.9**	**-0.6**
ELDTW	baz=228			*eS*	**Sb**	**20 06 49.7**	**-1.8**
	baz=228						
WJS	**Zhushan**	**1.17**	**265**	*eP*	**Pg**	**20 06 37.9**	**+0.3**
WJS	baz=263			S	**Sg**	**20 06 52.9**	**-0.1**
	baz=263						
ALS	**Alishan**	**1.17**	**249**	P	**Pb**	**20 06 37.4**	**+0.5**
ALS	baz=247			*eS*	**Sb**	**20 06 51.2**	**-0.7**
	baz=247						
TAP1	**Taipei**	**1.19**	**339**	*eP*	**Pn**	**20 06 36.5**	**-0.3**
TAP1	baz=328			*eS*	**Sg**	**20 06 54.0**	**+0.4**
	baz=328						
TAP	**Taipei**	**1.19**	**338**	*eP*	**Pn**	**20 06 36.7**	**-0.2**
	baz=339						
TWQ1	**Liyutan**	**1.19**	**291**	*eP*	**Pg**	**20 06 38.2**	**0.0**
TWQ1	baz=290			*eS*	**Sg**	**20 06 53.7**	**-0.1**
	baz=290						
WNT	**Mingjian**	**1.20**	**268**	P	**Pg**	**20 06 38.5**	**+0.2**
WNT	baz=266			*eS*	**Sg**	**20 06 53.6**	**-0.4**
	baz=266						
TCU	**Taichung**	**1.23**	**280**	⇓P	**Pg**	**20 06 39.1**	**+0.3**
TCU	baz=279			*eS*	**Sn**	**20 06 53.9**	**+0.5**
	baz=279						
NSY	**Sanyi**	**1.23**	**293**	⇑*iP*	**Pg**	**20 06 38.8**	**0.0**
NSY	baz=293			*eS*	**Sn**	**20 06 53.7**	**+0.2**
	baz=293						
CHN5	**Tsauling**	**1.25**	**255**	P	**Pb**	**20 06 38.9**	**+0.7**
CHN5	baz=253			*eS*	**Sg**	**20 06 55.8**	**+0.1**
	baz=253						
NMLH	**Miaoli**	**1.26**	**299**	*eP*	**Pg**	**20 06 39.1**	**-0.2**
NMLH	baz=298			*eS*	**Sg**	**20 06 55.8**	**0.0**
	baz=298						
SBCB	**Hsinchu**	**1.26**	**313**	*eP*	**Pb**	**20 06 38.7**	**+0.4**
SBCB	baz=313			*eS*	**Sg**	**20 06 55.6**	**-0.3**
	baz=313						
NCUH	**Zhongli**	**1.27**	**325**	P	**Pb**	**20 06 38.9**	**+0.4**
NCUH	baz=325			*eS*	**Sn**	**20 06 55.2**	**+0.6**
	baz=325						
NCU	**National Centr**	**1.27**	**325**	P	**Pb**	**20 06 38.9**	**+0.4**
NCU	baz=325			*eS*	**Sg**	**20 06 55.7**	**-0.6**
	baz=325						
YM01	**YM01**	**1.27**	**342**	*eP*	**Pg**	**20 06 39.4**	**-0.3**
	baz=327						
HSN	**Hsinchu**	**1.28**	**313**	*eP*	**Pb**	**20 06 39.1**	**+0.5**
HSN	baz=315			*eS*	**Sg**	**20 06 56.5**	**0.0**
	baz=315						
TWS1	**Kuangyinshan**	**1.28**	**336**	*eP*	**Pb**	**20 06 38.5**	**-0.1**
TWS1	baz=337			*eS*	**Sn**	**20 06 55.2**	**+0.5**
	baz=337						
YM10	**YM10**	**1.28**	**342**	P	**Pn**	**20 06 38.5**	**+0.4**
	baz=328						
YM04	**YM04**	**1.29**	**341**	*eP*	**Pn**	**20 06 38.2**	**0.0**
	baz=342						
YM11	**YM11**	**1.29**	**343**	*eP*	**Pb**	**20 06 38.8**	**-0.1**
	baz=328						
YM05	**YM05**	**1.29**	**342**	*eP*	**Pn**	**20 06 38.5**	**+0.2**
	baz=328						
LONT	**Longtian**	**1.29**	**218**	*eP*	**Pn**	**20 06 37.5**	**-0.7**
LONT	baz=216			*eS*	**Sn**	**20 06 53.3**	**-1.8**
	baz=

LDUT	**Ludao**	**1.34**	**201**	*eP*	**Pn**	**20 06 38.3**	**-0.6**
	baz=199							
LDUT				*eS*	**Sn**	**20 06 53.8**	**-2.5**
	baz=199							
WDLH	**Douliu**	**1.36**	**260**	*eP*	**Pb**	**20 06 40.4**	**+0.5**
	baz=258							
STYT	**Tauyuan**	**1.37**	**236**	*eP*	**Pn**	**20 06 40.0**	**+0.7**
	baz=234							
STYT				*eS*	**Sn**	**20 06 56.3**	**-0.8**
	baz=234							
TWY	**Chenhua**	**1.39**	**345**	*eP*	**Pb**	**20 06 40.3**	**-0.2**
	baz=346							
TWGBT	**Beinan**	**1.39**	**218**	*eP*	**Pn**	**20 06 38.8**	**-0.8**
TWGBT	baz=215							
				eS	**Sn**	**20 06 54.6**	**-2.9**
	baz=215							
TWG	**Pinlang**	**1.39**	**218**	*eP*	**Pn**	**20 06 38.9**	**-0.7**
	baz=215							
TWG				*eS*	**Sn**	**20 06 55.4**	**-2.2**
	baz=215							
TPUB	**Ta-pu**	**1.40**	**244**	*eP*	**Pb**	**20 06 41.0**	**+0.3**
	baz=241							
CHN4	**Tsaushan**	**1.41**	**246**	*eP*	**Pb**	**20 06 41.4**	**+0.6**
	baz=244							
CHN4				*eS*	**Sg**	**20 07 00.2**	**-0.5**
	baz=244							
WTP	**Ta-pu**	**1.44**	**242**	P	**Pb**	**20 06 41.5**	**+0.2**
	baz=240							
WTP				*eS*	**Sn**	**20 06 59.4**	**+0.7**
	baz=240							
CHN2	**Minshiung**	**1.45**	**254**	*eP*	**Pb**	**20 06 41.9**	**+0.4**
	baz=253							
CHN2				*eS*	**Sg**	**20 07 01.6**	**-0.3**
	baz=253							
WTK	**Tuku**	**1.49**	**261**	*eP*	**Pb**	**20 06 42.6**	**+0.4**
	baz=259							
WTK				*eS*	**Sb**	**20 07 01.2**	**+0.4**
	baz=259							
RLNB	**Erlin**	**1.50**	**269**	*eP*	**Pb**	**20 06 42.9**	**+0.6**
	baz=268							
RLNB				*eS*	**Sg**	**20 07 02.7**	**-0.8**
	baz=268							
CHY	**Chiayi**	**1.50**	**254**	*eP*	**Pb**	**20 06 42.6**	**+0.2**
	baz=252							
CHY				*eS*	**Sb**	**20 07 01.7**	**+0.5**
	baz=252							
TWK	**Hsinying**	**1.53**	**245**	*eP*	**Pb**	**20 06 43.0**	**0.0**
	baz=242							
TWK				*eS*	**Sb**	**20 07 03.2**	**+1.1**
	baz=242							
CHN1	**Nanshi**	**1.54**	**242**	*eP*	**Pb**	**20 06 43.2**	**+0.2**
	baz=239							
CHN1				*eS*	**Sb**	**20 07 03.4**	**+1.2**
	baz=239							
SNST	**Tainan City**	**1.55**	**243**	*eP*	**Pb**	**20 06 43.5**	**+0.3**
	baz=241							
SNST				*eS*	**Sn**	**20 07 01.5**	**+0.2**
	baz=241							
SGST	**Jiashian**	**1.55**	**237**	*eP*	**Pn**	**20 06 42.3**	**+0.5**
	baz=228							
SGST				*eS*	**Sb**	**20 07 03.3**	**+0.9**
	baz=228							
SLGT	**Liugui**	**1.55**	**233**	*eP*	**Pb**	**20 06 43.3**	**+0.1**
	baz=221							
SLGT				*eS*	**Sb**	**20 07 02.5**	**0.0**
	baz=221							
WTCT	**Ta-ch'eng**	**1.57**	**268**	*eP*	**Pb**	**20 06 43.4**	**-0.2**
	baz=267							
WTCT				*eS*	**Sb**	**20 07 04.5**	**+1.3**
	baz=267							
WLGB	**Puzi**	**1.62**	**254**	*eP*	**Pn**	**20 06 43.2**	**+0.5**
	baz=252							
IRIF	**Iriomote-Funau**	**1.63**	**75**	P	**Pn**	**20 06 43.4**	**+0.5**
IRIF				S	**Sn**	**20 07 03.7**	**+0.2**
ECL	**Taimali**	**1.64**	**216**	*eP*	**Pn**	**20 06 42.1**	**-0.8**
	baz=214							
WSF	**Szhu**	**1.65**	**260**	*eP*	**Pb**	**20 06 44.7**	**-0.3**
	baz=259							
WSF				*eS*	**Sb**	**20 07 05.7**	**+0.2**
	baz=259							
HATJ	**Hateruma jima**	**1.66**	**85**	P	**Pn**	**20 06 43.7**	**+0.5**
HATJ				S	**Sn**	**20 07 03.9**	**-0.2**
ICHU	**Yijhu**	**1.67**	**251**	*eP*	**Pb**	**20 06 45.1**	**-0.2**
	baz=249							
ICHU				*eS*	**Sn**	**20 07 04.7**	**+0.2**
	baz=249							
PCYT	**Pengchaiyu**	**1.69**	**2**	*eP*	**Pb**	**20 06 45.1**	**-0.6**
	baz=4.0							
SSD	**Sandimen**	**1.72**	**227**	*eP*	**Pn**	**20 06 45.4**	**+1.3**
	baz=218							
SSD				*eS*	**Sb**	**20 07 07.1**	**-0.3**
	baz=218							
CHN3	**Shinhua**	**1.72**	**241**	*eP*	**Pb**	**20 06 47.0**	**+0.9**
	baz=238							
SCST	**Cishan**	**1.73**	**233**	*eP*	**Pb**	**20 06 46.3**	**0.0**
	baz=244							
SCST				*eS*	**Sb**	**20 07 08.4**	**+0.8**
	baz=244							
CHN8	**Yiju**	**1.74**	**251**	P	**Pn**	**20 06 45.5**	**+1.2**
	baz=249							
CHN8				*eS*	**Sb**	**20 07 07.6**	**-0.3**
	baz=249							
TSMG	**Majia**	**1.74**	**226**	*eP*	**Pn**	**20 06 45.9**	**+1.6**
	baz=218							
TSMG				*eS*	**Sb**	**20 07 07.7**	**-0.3**
	baz=218							
MASBT	**Mashibuluo**	**1.81**	**224**	*eP*	**Pn**	**20 06 46.0**	**+0.7**
	baz=214							
SCLT	**Jiali**	**1.82**	**246**	*eP*	**Pb**	**20 06 47.1**	**-0.7**
	baz=243							
TWM1	**Shoushan**	**1.82**	**233**	*eP*	**Pb**	**20 06 48.6**	**+0.8**
	baz=230							
SGLT	**Jiouru**	**1.83**	**229**	*eP*	**Pb**	**20 06 48.6**	**+0.6**
	baz=216							
JKRS	**Kuro-shima**	**1.86**	**80**	P	**Pn**	**20 06 46.9**	**+0.9**
JKRS				S	**Sn**	**20 07 10.0**	**+0.9**
EAST	**Anshuo**	**1.87**	**215**	*eP*	**Pn**	**20 06 45.6**	**-0.5**
	baz=204							
LAY	**Lan-yu**	**1.93**	**192**	*eP*	**Pn**	**20 06 46.1**	**-0.8**
	baz=181							
SSPT	**Xinbi**	**1.95**	**223**	*eP*	**Pb**	**20 06 49.8**	**-0.2**
	baz=209							
SCZT	**Fangliau**	**2.00**	**220**	*eP*	**Pn**	**20 06 49.7**	**+1.8**
	baz=213							
SCZT				*eS*	**Sn**	**20 07 14.3**	**+1.7**
	baz=213							
JIJ	**Ishigaki jima**	**2.01**	**77**	P	**Pn**	**20 06 48.3**	**+0.3**
JIJ				S	**Sn**	**20 07 11.5**	**-1.2**
SLIU	**Shizi**	**2.03**	**213**	*eP*	**Pn**	**20 06 49.7**	**+1.4**
	baz=204							
WLCH	**Liuqiu**	**2.17**	**224**	*eP*	**Pb**	**20 06 54.5**	**+0.8**
	baz=221							
JISG	**Ishigakijimahi**	**2.21**	**72**	P	**Pn**	**20 06 51.0**	**+0.2**
JISG				S	**Sn**	**20 07 16.3**	**-1.4**
HEN	**Hengchun**	**2.24**	**211**	*eP*	**Pn**	**20 06 52.2**	**+1.0**
	baz=200							
WDGT	**Dungji**	**2.25**	**253**	*eP*	**Pn**	**20 06 51.9**	**+0.6**
	baz=251							
TWKBT	**Hengchun**	**2.26**	**209**	*eP*	**Pn**	**20 06 51.5**	**0.0**
	baz=200							
PHUB	**P'eng-hu**	**2.26**	**260**	*eP*	**Pn**	**20 06 51.9**	**+0.4**
	baz=258							
PNG	**Penghu**	**2.27**	**261**	*eP*	**Pn**	**20 06 51.5**	**-0.1**
	baz=259							
VCHM	**Qimei**	**2.46**	**254**	*eP*	**Pn**	**20 06 54.9**	**+0.6**
	baz=251							
VWUC	**VWUC**	**2.55**	**295**	*eP*	**Pn**	**20 06 55.1**	**-0.4**
	baz=294							
PTTC	**Pingtan**	**2.56**	**308**	*eP*	**Pn**	**20 06 54.9**	**-0.7**
	baz=308							
JTJ	**Tarama**	**2.57**	**73**	P	**Pn**	**20 06 56.3**	**+0.6**
JTJ				S	**Sn**	**20 07 26.5**	**0.0**
PTMZ	**Houxiangcun**	**2.84**	**293**	*eP*	**Pn**	**20 06 59.1**	**-0.4**
	baz=293							
MATB	**Ma-tsu**	**2.89**	**320**	*eP*	**Pn**	**20 06 59.2**	**-1.0**
	baz=320							
JIRB	**Irabujima**	**3.03**	**72**	P	**Pn**	**20 07 02.5**	**+0.4**
JIRB				S	**Sn**	**20 07 36.6**	**-1.3**
JIKM	**Ikemajima**	**3.12**	**71**	P	**Pn**	**20 07 01.9**	**-1.5**
JIKM				S	**Sn**	**20 07 39.8**	**-0.4**
JMJ	**Miyako jima 2**	**3.13**	**73**	*eP*	**Pn**	**20 07 04.6**	**+1.1**
	baz=75							
JMJ2	**Miyako jima3**	**3.14**	**74**	P	**Pn**	**20 07 04.6**	**+0.9**
JMJ2				S	**Sn**	**20 07 40.8**	**+0.1**
JOGS	**Gusukube**	**3.22**	**74**	P	**Pn**	**20 07 04.7**	**0.0**
JOGS				S	**Sn**	**20 07 42.2**	**-0.4**
QZH	**Quanzhou**	**3.26**	**289**	*i*Pn	**Pn**	**20 07 04.8**	**-0.5**
QZH				Sn	**Sn**	**20 07 40.8**	**-2.9**
QZH				smax	smax		
	comp=N,33nm,0.6s						
QZH				smax	smax		
	comp=E,28nm,0.7s						
KNM	**Kinmen**	**3.29**	**279**	*eP*	**Pn**	**20 07 06.9**	**+1.2**
	baz=277							
KNMB	**Chin-men Tao**	**3.34**	**280**	*eP*	**Pn**	**20 07 06.0**	**-0.4**
	baz=278							
XPSS	**Dashiqiu**	**3.41**	**332**	*eP*	**Pn**	**20 07 06.5**	**-0.7**
	baz=332							
MHZQ	**Yeshan**	**3.45**	**309**	*eP*	**Pn**	**20 07 06.7**	**-1.2**
	baz=309							
AXDP	**Jialang**	**3.80**	**286**	*eP*	**Pn**	**20 07 12.4**	**-0.2**
	baz=284							
ZPLA	**Ao Xicun**	**3.89**	**271**	*eP*	**Pn**	**20 07 14.0**	**+0.1**
	baz=269							
ZZJH	**Jiuhuzhen**	**4.02**	**279**	*eP*	**Pn**	**20 07 16.1**	**+0.3**
	baz=277							
MKAR	**Makanchi Array**	**39.04**	**316**	P	**P**	**20 13 39.2**	**-1.5**
	comp=E,0.3nm,0.7s,baz=97,slow=6.7,SNR=2.4							
FITZ	**Fitzroy Crossi**	**41.92**	**175**	P	**P**	**20 14 08.0**	**+3.3**
	comp=E,1.2nm,0.9s,baz=2.0,slow=12,SNR=1.1							
WRA	**Warramunga Arr**	**45.23**	**164**	P	**P**	**20 14 29.7**	**-1.7**
	comp=E,0.5nm,0.6s,baz=345,slow=8.7,SNR=9.7							
ASAR	**Alice Springs**	**48.70**	**165**	P	**P**	**20 14 57.7**	**-0.8**
	comp=E,0.2nm,0.4s,baz=345,slow=7.0,SNR=4.2							

BJI ***25*** *20:20:14.0±0.0, 6.90N×73.00W, h148km, mB5.3/12*
IDC ***25*** *20:20:15.5±0.4, 6.78N×72.98W, h157km±3km, mb4.7/25, mb1 4.8/31,mb1mx4.7/38,mbtmp5.1/31,MS3.8/6, Ms1 3.8/6,ms1mx3.4/33,Error ellipse: s-maj=7.6km s-min=6.0km az=114.0*
RSNC ***25*** *20:20:16.0±2.3, 6.81N×73.14W, h152km±8km, ML5.1, Mw5.3,Fault plane solution: NP1:φ=23.00000°, δ62.00000°, λ126.00000°.*
NEIC ***25*** *20:20:16.3±2.2, 6.76N±0.06×72.95W±0.07, h166km±4km, mb5.3/614,Mwr5.1(RSNC),Mwr4.8(CAR),Error ellipse: s-maj=11.0km s-min=7.7km az=132.0*
VAO ***25*** *20:20:17.1±0.4, 6.70N×73.15W, h177km±3km, mb4.9*
CAR ***25*** *20:20:18±3.2, 6.89N±0.05×72.97W±0.02, h141km±4km, Error ellipse: s-maj=0.0km s-min=0.0km az=109.0*
GCMT ***25*** *20:20:19.3±0.3, 6.89N±0.02×73.02W±0.02, h168km±2km, MW5.0/96,Moment Tensor Solution. s26,c31; s96,c128; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.84±.14; Mθθ0.68±.18; Mφφ-3.52±.17; Mrθ2.68±.12; Mφθ0.46±.17; Mφr0.87±.14; Best double couple: Mo4.20100×10¹⁶ NP1:φs146.00000°, δ48.00000°, λ42.00000°. NP2: φs25.00000°, δ60.00000°, λ130.00000°. Principal axes: T 4.7640, Plg56.0000°, Azm348.0000°; N -1.1260, Plg34.0000°, Azm183.0000°; P -3.6390, Plg7.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 25 20:20:15.4±0.3, 6.83N±0.02×73.10W±0.03, h159km±2km, h159km;pP-P,n1079,σ1§85/1011,mb5.3/317,46C-44D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.25**	**200**	⇑*i*	*i*P	**Pn**	**20 20 36.7**	**-0.4**
BARC					*e*S	**Sn**	**20 20 51.3**	**-2.4**
BARC					IAML		20 20 52.7	
	comp=Z,32μm,0.3s							
BARC	**Barichara**	**0.25**	**200**		*i* P	**Pn**	**20 20 36.7**	**-0.4**
BARC					*e*S	**Sn**	**20 20 51.5**	**-2.3**
BARC					*i*		20 20 52.5	
	comp=Z,32μm,0.3s							
PAMC	**Pamplona, Colo**	**0.65**	**38**	⇑*i*	*i*P	**Pn**	**20 20 39.5**	**+0.4**
PAMC					*e*S	**Sn**	**20 20 55.6**	**-1.5**
PAMC					IAML		20 20 58.7	
	comp=Z,22μm,0.4s							
PAMC	**Pamplona, Colo**	**0.65**	**38**	⇑	*i*P	**Pn**	**20 20 39.5**	**+0.4**
PAMC					*e*S	**Sn**	**20 20 56.0**	**-1.2**
PAMC					*i*		20 20 58.6	
	comp=Z,22μm,0.4s							
BRRC	**Barranca, Sant**	**0.67**	**295**	⇑	*i*P	**Pn**	**20 20 38.5**	**-0.1**
BRRC					*e*S	**Sn**	**20 20 55.5**	**-1.0**
BRRC					IAML		20 20 58.5	
	comp=Z,36μm,0.3s							
BRRC	**Barranca, Sant**	**0.67**	**295**	⇑	*i*P	**Pn**	**20 20 38.5**	**-0.1**
BRRC					*e*S	**Sn**	**20 20 55.5**	**-1.0**
BRRC					*i*		20 20 58.1	
	comp=Z,36μm,0.3s							
RUSC	**La Rusia**	**0.93**	**179**	⇑	*i*P	**Pn**	**20 20 40.7**	**-0.4**
RUSC					*e*S	**Sn**	**20 20 58.6**	**-2.0**
RUSC					IAML		20 21 01.2	
	comp=Z,12μm,0.3s							
RUSC	**La Rusia**	**0.93**	**179**	⇑	*i*P	**Pn**	**20 20 40.6**	**-0.4**
RUSC					*e*S	**Sn**	**20 20 59.4**	**-1.2**
RUSC					*i*		20 21 01.1	
	comp=Z,12μm,0.3s							
TAMC	**Tame, Arauca**	**1.35**	**107**	⇑	*i*P	**Pn**	**20 20 45.1**	**+0.9**
TAMC	**Tame, Arauca**	**1.35**	**107**	⇑	*i*P	**Pn**	**20 20 45.1**	**+0.9**
TAMC					*e*S	**Sn**	**20 21 06.5**	**+0.2**
TAMC					IAML		20 21 07.7	
	comp=Z,16μm,0.6s							
TAMC	**Tame, Arauca**	**1.35**	**107**	⇑	*i*P	**Pn**	**20 20 45.1**	**+0.9**
TAMC					*e*S	**Sn**	**20 21 05.8**	**-0.5**
TAMC					*i*		20 21 07.4	
	comp=Z,16μm,0.6s							
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	⇑	*i*P	**Pn**	**20 20 43.2**	**-1.3**
PTBC	**PUERTO BERRIO,**	**1.38**	**258**	⇑	*i*P	**Pn**	**20 20 43.2**	**-1.3**
PTBC					*e*S	**Sn**	**20 21 03.9**	**-2.8**
PTBC					*i*		20 21 06.2	
	comp=Z,35μm,0.3s							
OCAC	**Ocana**	**1.42**	**351**	⇓	*e*P	**Pn**	**20 20 44.8**	**-0.2**
OCAC					*e*S	**Sn**	**20 21 06.3**	**-1.5**
OCAC					IAML		20 21 11.3	
	comp=Z,16μm,0.3s							
OCAC	**Ocana**	**1.42**	**351**	⇓	*i*P	**Pn**	**20 20 44.8**	**-0.2**
OCAC					*e*S	**Sn**	**20 21 06.4**	**-1.5**
OCAC					*i*		20 21 11.1	
	comp=Z,16μm,0.3s							
SPBC	**San Pablo de B**	**1.52**	**220**	⇑	*i*P	**Pn**	**20 20 45.7**	**-0.3**
SPBC					*e*S	**Sn**	**20 21 07.6**	**-1.7**
SPBC	**San Pablo de B**	**1.52**	**220**	⇑	*i*P	**Pn**	**20 20 45.6**	**-0.3**
SPBC					*e*S	**Sn**	**20 21 07.7**	**-1.7**
SPBC					*i*		20 21 15.2	
	comp=Z,32μm,0.2s							
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	⇓	*i*P	**Pn**	**20 20 49.0**	**-0.6**
ZARC					*e*S	**Sn**	**20 21 14.4**	**-1.5**
ZARC	**Zaragoza, Cauc**	**1.87**	**291**	⇓	*i*P	**Pn**	**20 20 48.9**	**-0.6**
ZARC					*e*S	**Sn**	**20 21 15.0**	**-0.9**
ZARC					*i*		20 21 20.6	
	comp=Z,47μm,0.5s							
NORC	**Norcasia**	**2.16**	**235**	⇑	*i*P	**Pn**	**20 20 52.5**	**-0.6**
NORC					*e*S	**Sn**	**20 21 20.9**	**-1.1**
NORC	**Norcasia**	**2.16**	**235**	⇑	*i*P	**Pn**	**20 20 52.4**	**-0.6**
NORC					*e*S	**Sn**	**20 21 20.1**	**-1.9**
NORC					*i*		20 21 24.4	
	comp=Z,23μm,0.3s							
CHIC	**Chingaza**	**2.27**	**196**	⇑	*i*P	**Pn**	**20 20 54.7**	**0.0**
CHIC	**Chingaza**	**2.27**	**196**	⇑	*i*P	**Pn**	**20 20 54.6**	**0.0**
CHIC					*e*S	**Sn**	**20 21 23.8**	**-1.1**
CHIC					*i*		20 21 31.6	
	comp=Z,16μm,0.5s							
ROSC	**El Rosal**	**2.32**	**212**	P		**Pn**	**20 20 56.6**	**+1.4**
	comp=Z,4μm,0.3s,baz=40,slow=4.9,SNR=1877							
ROSC					S	**Sn**	**20 21 26.3**	**+0.4**
	comp=Z,10μm,0.3s,baz=39,slow=22,SNR=14							
ROSC	**El Rosal**	**2.32**	**212**	⇑	*i*P	**Pn**	**20 20 56.6**	**+1.4**
ROSC					*e*S	**Sn**	**20 21 26.2**	**+0.3**
ROSC	**El Rosal**	**2.32**	**212**	⇑	*i*P	**Pn**	**20 20 56.6**	**+1.4**
ROSC					*e*S	**Sn**	**20 21 24.9**	**-0.9**
ROSC					*i*		20 21 33.5	
	comp=Z,29μm,0.4s							
ROSC	**El Rosal**	**2.32**	**212**	Pn		**Pn**	**20 20 56.4**	**+1.2**
ROSC				Sn		**Sn**	**20 21 27.3**	**+1.4**
HELC	**Santa Helena**	**2.50**	**256**	⇓	*i*P	**Pn**	**20 20 56.3**	**-0.9**
HELC	**Santa Helena**	**2.50**	**256**	⇓	*i*P	**Pn**	**20 20 56.3**	**-0.9**
HELC					*e*S	**Sn**	**20 21 28.9**	**-0.7**
HELC					*i*		20 21 34.9	
	comp=Z,19μm,0.3s							
UREC	**San Jos de Ur**	**2.59**	**291**	*e*P		**Pn**	**20 20 56.4**	**-1.5**
UREC					*e*S	**Sn**	**20 21 27.6**	**-3.4**
UREC	**San Jos de Ur**	**2.59**	**291**	⇓*e*P		**Pn**	**20 20 56.5**	**-1.5**
UREC					*e*S	**Sn**	**20 21 27.5**	**-3.5**
UREC					*i*		20 21 39.3	
	comp=Z,14μm,0.4s							
GUY2C	**Guyana, Caldas**	**2.76**	**235**	⇓*i*P		**Pn**	**20 21 00.7**	**+0.1**
GUY2C	**Guyana, Caldas**	**2.76**	**235**	⇓*i*P		**Pn**	**20 21 00.7**	**+0.1**
GUY2C					*e*S	**Sn**	**20 21 36.5**	**+1.0**
GUY2C					*i*		20 21 47.4	
	comp=Z,22μm,0.6s							
VILC	**Villavicencio,**	**2.76**	**192**	⇑*i*P		**Pn**	**20 21 00.1**	**-0.1**
VILC	**Villavicencio,**	**2.76**	**192**	⇑*i*P		**Pn**	**20 21 00.2**	**-0.1**
VILC					*e*S	**Sn**	**20 21 34.2**	**-0.9**
VILC					*i*		20 21 38.9	
	comp=Z,19μm,0.6s							
PTGC	**Puerto Gaitan,**	**2.78**	**160**	⇑*i*P		**Pn**	**20 20 60.0**	**-0.4**
PTGC	**Puerto Gaitan,**	**2.78**	**160**	⇑*i*P		**Pn**	**20 20 60.0**	**-0.4**
PTGC					*e*S	**Sn**	**20 21 32.6**	**-2.7**
RREF	**El Recreo**	**2.94**	**230**	*e*P		**Pn**	**20 21 02.9**	**-0.2**
RREF	**El Recreo**	**2.94**	**230**	⇓*i*P		**Pn**	**20 21 02.8**	**-0.2**
RREF					*e*S	**Sn**	**20 21 38.0**	**-1.9**
RREF					*i*		20 21 44.6	
	comp=Z,14μm,0.4s							
CBOC	**Ciudad Bolivar**	**3.05**	**252**	⇓*i*P		**Pn**	**20 21 04.2**	**+0.3**
CBOC	**Ciudad Bolivar**	**3.05**	**252**	⇓*i*P		**Pn**	**20 21 04.2**	**+0.3**
CBOC					*e*S	**Sn**	**20 21 39.9**	**-1.6**
CBOC					*i*		20 21 57.5	
	comp=Z,7μm,0.6s							
DBBC	**Dabeiba**	**3.10**	**274**	⇓*i*P		**Pn**	**20 21 04.4**	**0.0**
DBBC	**Dabeiba**	**3.10**	**274**	⇓*i*P		**Pn**	**20 21 04.2**	**-0.2**
TOLC	**Tolima**	**3.14**	**225**	*e*P		**Pn**	**20 21 05.2**	**+0.1**
TOLC					*e*S	**Sn**	**20 21 44.8**	**+1.0**
TOLC	**Tolima**	**3.14**	**225**	⇓*e*P		**Pn**	**20 21 05.1**	**0.0**
TOLC					*e*S	**Sn**	**20 21 43.2**	**-0.6**
SDV	**Santo Domingo**	**3.19**	**50**	P		**Pn**	**20 21 06.2**	**+0.5**
	comp=Z,1μm,0.3s,baz=235,slow=10,SNR=2183							
SDV					S	**Sn**	**20 21 42.8**	**-1.8**
	comp=Z,664nm,0.3s,baz=266,slow=19,SNR=13							
SDV	**Santo Domingo**	**3.19**	**50**	⇓*i*P		**Pn**	**20 21 06.2**	**+0.5**
SDV					*e*S	**Sn**	**20 21 41.8**	**-2.8**
SDV					IAML		20 21 48.9	
	comp=Z,3μm,0.6s							
SDV	**Santo Domingo**	**3.19**	**50**	⇓*i*P		**Pn**	**20 21 06.1**	**+0.5**
SDV					*i*		20 21 07.1	
	comp=Z,3μm,0.2s							
SDV					*e*S	**Sn**	**20 21 41.2**	**-3.4**
SDV	**Santo Domingo**	**3.19**	**50**			**Pn**	**20 21 06.0**	**+0.4**
SDV					Sn	**Sn**	**20 21 43.7**	**-0.9**
SDV	**Santo Domingo**	**3.19**	**50**	*eP*		**Pn**	**20 21 06.9**	**+1.3**
MOTC	**Monteria, Cord**	**3.20**	**307**	⇓*i*P		**Pn**	**20 21 03.9**	**-1.8**
MOTC	**Monteria, Cord**	**3.20**	**307**	⇓*i*P		**Pn**	**20 21 03.8**	**-1.8**
MOTC					*e*S	**Sn**	**20 21 39.1**	**-5.6**
MOTC					*i*		20 22 02.5	
	comp=Z,5μm,0.6s							
ARGC	**Ariguani, Magd**	**3.22**	**339**	*eP*		**Pn**	**20 21 06.8**	**+0.9**
ARGC					*e*S	**Sn**	**20 21 45.3**	**+0.2**
ARGC					IAML		20 21 57.9	
	comp=Z,2μm,0.4s							
ARGC	**Ariguani, Magd**	**3.22**	**339**	⇑*e*P		**Pn**	**20 21 06.9**	**+0.9**
ARGC					*e*S	**Sn**	**20 21 42.4**	**-2.8**
ARGC					*i*		20 21 57.7	
	comp=Z,2μm,0.4s							
ANIL	**Santa Ana**	**3.26**	**225**	*eP*		**Pn**	**20 21 06.6**	**-0.1**
ANIL					*e*S	**Sn**	**20 21 48.1**	**+1.6**
ANIL					IAML		20 21 55.6	
	comp=Z,4μm,0.4s							
ANIL	**Santa Ana**	**3.26**	**225**	⇓*i*P		**Pn**	**20 21 06.8**	**+0.1**
ANIL					*e*S	**Sn**	**20 21 45.3**	**-1.3**
ANIL					*i*		20 21 55.3	
	comp=Z,4μm,0.4s							
ORTC	**Ortega, Tolima**	**3.60**	**217**	*eP*		**Pn**	**20 21 10.6**	**-0.2**
ORTC	**Ortega, Tolima**	**3.60**	**217**	⇑*e*P		**Pn**	**20 21 10.6**	**-0.2**
ORTC					*e*S	**Sn**	**20 21 53.1**	**-0.8**
ORTC					*i*		20 22 00.8	
	comp=Z,10μm,0.5s							
CVALL	**Valledupar, Ce**	**3.66**	**358**	*eP*		**Pn**	**20 21 10.6**	**-1.0**
CVALL					*e*S	**Sn**	**20 21 51.2**	**-4.1**
CVALL					*i*		20 21 58.8	
	comp=Z,3μm,0.6s							
SJCC	**San Jacinto, C**	**3.68**	**326**	⇑*i*P		**Pn**	**20 21 10.5**	**-1.3**
SJCC					*e*S	**Sn**	**20 21 51.9**	**-3.9**
SJCC					*i*		20 22 06.6	
	comp=Z,4μm,0.6s							
PLMC	**San Jos del P**	**3.70**	**239**	*eP*		**Pn**	**20 21 11.7**	**-0.4**
PLMC					*e*S	**Sn**	**20 21 52.3**	**-3.9**
PLMC					IAML		20 22 11.3	
	comp=Z,7μm,0.7s							
PLMC	**San Jos del P**	**3.70**	**239**	⇓*i*P		**Pn**	**20 21 11.7**	**-0.4**
PLMC					*i*		20 21 14.2	
	comp=Z,7μm,0.3s							
PLMC					*e*S	**Sn**	**20 21 53.3**	**-2.9**
LCBC	**Los crdobas,**	**3.82**	**302**	*eP*		**Pn**	**20 21 11.6**	**-1.9**
LCBC					*e*S	**Sn**	**20 21 59.0**	**+0.2**
LCBC					*i*		20 22 01.2	
	comp=Z,5μm,0.4s							
GUVC	**San Jose del G**	**4.28**	**174**	*eP*		**Pn**	**20 21 18.5**	**-1.0**
GUVC	**San Jose del G**	**4.28**	**174**	⇑*i*P		**Pn**	**20 21 18.6**	**-0.9**
GUVC					*e*S	**Sn**	**20 22 07.5**	**-2.1**
GUVC					*i*		20 22 12.9	
	comp=Z,6μm,0.3s							
YOTC	**Yotoco, Valle**	**4.29**	**229**	⇓*i*P		**Pn**	**20 21 19.1**	**-0.7**
YOTC					*

comp=Z,2µm,0.3s
PCON **Cinco Dias** 5.55 217 ⇓ *i* P Pn 20 21 37.5 +0.7
PCON *eS* Sn 20 22 30.7 -10
PCON *i* 20 23 10.7
comp=Z,1µm,0.7s
POPC **Popayan, Colom** 5.55 220 ⇓ *i* P Pn 20 21 36.4 -0.1
POPC *eS* Sn 20 22 38.4 -1.6
POPC IAML 20 22 45.9
comp=Z,428nm,0.5s
POPC **Popayan, Colom** 5.55 220 ⇓ *i* P Pn 20 21 36.3 -0.2
POPC *eS* Sn 20 22 36.3 -3.7
FLOC **Florencia** 5.80 206 ⇑ *eP* Pn 20 21 38.9 -0.7
FLOC *eS* Sn 20 22 40.1 -5.5
FLOC IAML 20 22 50.9
comp=Z,1µm,0.5s
FLOC **Florencia** 5.80 206 ⇑ *i* P Pn 20 21 38.6 -0.9
FLOC *eS* Sn 20 22 40.1 -5.5
SOTA **Rioblanco** 5.83 217 ⇑ *i* P Pn 20 21 41.5 +1.1
SOTA *eS* Sn 20 22 39.1 -7.8
BBAC **Balboa, Cauca** 6.32 221 ⇓ *eP* Pn 20 21 45.8 -0.8
BBAC *eS* Sn 20 22 54.0 -4.1
BBAC IAML 20 23 01.7
comp=Z,958nm,0.6s
BBAC **Balboa, Cauca** 6.32 221 ⇓ *i* P Pn 20 21 45.7 -0.9
BBAC *i* 20 21 49.7
comp=Z,955nm,0.4s
BBAC *eS* Sn 20 22 52.0 -6.1
CRUC **La Cruz** 6.49 217 ⇓ *eP* Pn 20 21 49.6 +0.7
CRUC *i* 20 21 54.4
comp=Z,2µm,0.4s
UPA **Univ. de Panam** 6.73 289 ⇓ *eP* Pn 20 21 48.4 -3.4
UPA *eS* Sn 20 22 59.5 -8.1
PTLC **Puerto Leguiza** 6.83 194 ⇑ *eP* Pn 20 21 55.6 +2.4
PTLC *eS* Sn 20 23 18.4 +8.3
PTLC *i* 20 24 13.8
comp=Z,744nm,0.6s
GCUF **Volcan Galeras** 6.99 217 ⇓ *eP* Pn 20 21 55.9 +0.1
GCUF *i* 20 21 59.5
comp=Z,674nm,0.4s
GCUF *eS* Sn 20 23 12.1 -2.6
AZU **Azuero** 7.18 278 ⇓ *i* P Pn 20 21 57.0 -1.0
AZU *i* 20 21 58.2
comp=Z,754nm,0.3s
AZU *eS* Sn 20 23 11.7 -6.9
PNME **Penonome** 7.35 283 *eP* Pn 20 22 00.2 0.0
PNME *i* 20 22 01.8
comp=Z,364nm,0.6s
PNME *eS* Sn 20 23 15.0 -7.6
TUMC **Tumaco** 7.50 229 ⇑ *eP* Pn 20 22 00.6 -1.5
TUMC *eS* Sn 20 23 19.2 -6.9
TUMC *i* 20 23 39.4
comp=Z,329nm,0.6s
CMBC **Cumbal** 7.51 219 *eP* Pn 20 22 03.4 +0.7
OTAV **Otavalo** 8.45 219 ⇓ *i* P Pn 20 22 14.2 -1.0
OTAV *eS* Sn 20 23 41.6 -8.0
OTAV **Otavalo** 8.45 219 Pn Pn 20 22 14.0 -1.2
OTAV **Otavalo** 8.45 219 *eP* Pn 20 22 13.9 -1.3
MAPC **Malpelo** 8.92 252 ⇓ *i* P Pn 20 22 21.3 +0.2
MAPC *i* 20 22 30.2
comp=Z,263nm,0.4s
PCRV **Puerto La Cruz** 9.01 68 P Pn 20 22 20.4 -1.8
comp=Z,26nm,0.3s,baz=225,slow=5.7,SNR=30
PLCV **Puerto La Cruz** 9.04 68 Pn 20 22 20.4 -2.3
PRVC **Isla de Provid** 10.42 309 *eP* Pn 20 22 39.5 -1.3
PRVC *eS* Sn 20 24 28.4 -7.9
PRVC *i* 20 24 35.4
comp=Z,304nm,0.4s
HDC **Heredia** 11.35 287 Pn 20 22 54.0 +0.8
PCJ **Portland Cotta** 11.55 340 ⇓ *i* P Pn 20 22 58.0 +2.3
LGNH **Logne** 11.62 2 Pn Pn 20 22 57.7 +1.1
HOJ **Hope** 11.67 343 *i* P Pn 20 22 59.3 +2.1
CMJ **Castle Mountai** 11.69 344 *i* P Pn 20 22 59.9 +2.5
STH **Stony Hill** 11.75 342 ⇓ *i* P Pn 20 23 00.8 +2.5
MCJ **Malvern** 11.91 338 *i* P Pn 20 23 02.8 +2.5
MCJ *i* S Sn 20 25 02.5 -10
BNJ **Bonny Gate** 12.03 342 ⇑ *i* P Pn 20 23 04.4 +2.6
MTDJ **Mount Denham** 12.13 340 Pn Pn 20 23 05.1 +1.9
BBJ **Bamboo Saint A** 12.19 341 ⇑ *eP* Pn 20 23 06.5 +2.6
SDDR **Presa de Saban** 12.21 8 Pn Pn 20 23 04.7 +0.5
JTS **Las Juntas de** 12.22 287 P Pn 20 23 04.5 +0.2
comp=Z,4.2nm,0.3s,baz=138,slow=6.2,SNR=34
JTS **Las Juntas de** 12.22 287 Pn Pn 20 23 04.7 +0.4
ESPN **Las Esperanzas** 12.27 297 Pn 20 23 04.3 -0.6
GRGR **Grenville** 12.46 64 Pn Pn 20 23 05.1 -2.3
MLPR **Magueyes Islan** 12.55 28 Pn Pn 20 23 04.8 -3.8
CRPR **Cabo Rojo, PR** 12.55 27 Pn Pn 20 23 04.9 -3.6
MPR **Mayaguez** 12.72 27 Pn Pn 20 23 08.2 -2.5
ICMP **Isla Caja de M** 12.72 30 Pn Pn 20 23 09.1 -1.7
OBIP **Obispado Ponce** 12.82 29 Pn Pn 20 23 09.9 -2.1
AGPR **Aguadilla, PR** 12.96 26 Pn Pn 20 23 12.5 -1.3
ACON **Arcoyapa** 12.96 294 Pn Pn 20 23 13.9 +0.1
IGPR **InterUniversit** 13.00 31 Pn Pn 20 23 13.3 -1.0
AOPR **Arecibo Observ** 13.01 28 Pn Pn 20 23 12.5 -2.0
PDPR **Patillas Dam,** 13.09 31 Pn Pn 20 23 12.0 -3.4
SJG **San Juan** 13.10 30 P Pn 20 23 13.1 -2.5
comp=Z,15nm,0.3s,baz=200,slow=12,SNR=19
SJG S Sn 20 25 34.8 -6.0
baz=210,slow=20,SNR=6.4
SJG **San Juan** 13.10 30 Pn Pn 20 23 12.7 -2.9
GTBY **Guantanamo Bay** 13.17 352 Pn Pn 20 23 16.8 +0.3
TOSP **Speyside** 13.18 69 Pn Pn 20 23 13.8 -2.8
EMPR **Esperanza - Ma** 13.23 28 Pn Pn 20 23 16.4 -0.9
HUMP **Col San Antoni** 13.28 31 Pn Pn 20 23 14.0 -3.9
SVB **Belmont** 13.30 60 P Pn 20 23 16.8 -1.4
GCPR **Guaynabo City** 13.30 30 Pn Pn 20 23 15.6 -2.6
CBYP **Canovanas** 13.39 31 Pn 20 23 18.3 -1.0
MTP **Monte Pirata** 13.40 33 Pn Pn 20 23 17.1 -2.4
CDVI **St. Croix** 13.56 36 Pn Pn 20 23 19.0 -2.5
CUPR **Culebra, Puert** 13.72 33 Pn Pn 20 23 21.7 -1.8
MCLT **Moule a Chique** 13.77 59 P 20 23 26.4 -1.1
FDF **Fort de France** 14.12 55 Pn 20 23 25.4 -3.1
CBCY **The Bluff, Cay** 14.37 334 Pn 20 23 33.1 +1.4
LCCY **Blossom Villag** 14.46 333 P Pn 20 23 33.9 +1.2
CZSB **Cruzeiro do Su** 14.46 178 *eP* Pn 20 23 32.9 +0.1
SKI **Saint Kitts** 14.54 43 Pn Pn 20 23 33.0 -0.8
FSCY **Frank Sound, G** 14.69 328 P Pn 20 23 35.8 +0.2
GRTK **Grand Turk** 14.72 7 P Pn 20 23 35.1 -0.9
BBGH **Gun Hill** 14.73 64 P Pn 20 23 35.6 -0.6
ATAH **Atahualpa** 14.84 201 P Pn 20 23 37.6 -0.3
comp=Z,2.7nm,0.3s,baz=35,slow=5.0,SNR=13
CRIN **San Cristobal** 14.94 294 P P 20 23 40.8 +0.4
CRIN IAmb IAmb 20 24 00.6
comp=Z,102nm,1.0s
TGUH **Tegucigalpa,Un** 15.68 298 P Pn 20 23 48.4 +0.4
MACA **Manacapuru-AM** 15.87 128 *eP* P 20 23 50.6 -0.1
MTO3 **Montecristo** 17.66 297 P P 20 24 11.1 +0.4
ESQI **Esquipulas** 17.71 297 P Pn 20 24 12.3 -0.1
ETMB **Extrema** 17.90 157 *eP* P 20 24 13.1 +0.1
SAML **Samuel** 18.52 148 P P 20 24 19.4 -0.5
SAML IAmb IAmb 20 24 48.6
comp=Z,84nm,0.7s
SAML **Samuel** 18.52 148 *eP* P 20 24 19.5 -0.4
PAYG **Puerto Ayora** 18.70 247 Pn 20 24 24.1 +0.1
PAYG IAmb IAmb 20 24 28.5
comp=Z,109nm,0.8s
NNA **Nana** 19.06 191 P P 20 24 25.1 -0.6
comp=Z,1.9nm,0.3s,baz=347,slow=9.9,SNR=8.0
NNA **Nana** 19.06 191 P P 20 24 25.9 +0.2
PETF **Flores** 19.21 303 P P 20 24 28.5 +1.1
PETF IAmb IAmb 20 24 35.2
comp=Z,219nm,1.3s
TEIG **Tepich** 19.86 314 ⇑ *i* P P 20 24 36.0 +1.8
TEIG **Tepich** 19.86 314 P P 20 24 35.6 +1.4
061Z **Ochoppi** 20.35 339 P P 20 24 40.0 +0.5
MDP **Montagnes des** 20.42 94 P P 20 24 40.2 -0.1
comp=Z,101nm,0.7s,baz=268,slow=9.7,SNR=29
ITTB **Itaituba** 20.59 122 *eP* P 20 24 43.2 +1.0
MALB **Monte Alegre** 20.68 114 *eP* P 20 24 44.2 +1.1
CCIG **Comitan** 20.87 298 P P 20 24 46.7 +1.4
CCIG IAmb IAmb 20 24 49.8
comp=Z,72nm,0.7s
MCPB **Macapa, AP** 22.17 108 *eP* P 20 24 59.7 +0.9
NPGB **Novo Progresso** 22.43 128 *eP* P 20 25 01.3 +0.1
DWPF **Disney Wildern** 22.59 341 P P 20 25 04.9 +2.3
baz=158
DWPF **Disney Wildern** 22.59 341 P P 20 25 04.2 +1.6
DWPF IAmb IAmb 20 25 06.8
comp=Z,95nm,0.7s
LPAZ **La Paz** 23.48 168 P P 20 25 11.4 -0.2
comp=Z,6.2nm,0.7s,baz=354,slow=6.6,SNR=24
LPAZ pP pP 20 25 43.8 +1.6
comp=Z,71nm,0.8s,baz=344,slow=13,SNR=20
LPAZ ScP ScP 20 32 17.9 +1.3
comp=Z,18nm,0.9s,baz=290,slow=7.4,SNR=5.3
LPAZ **La Paz** 23.48 168 P P 20 25 10.8 -0.8
LPAZ **La Paz** 23.48 168 *eP* P 20 25 10.1 -1.5
CMIG **Matias Romero** 23.60 298 P P 20 25 09.7 -2.3
comp=Z,4.1nm,0.3s,baz=96,slow=5.4,SNR=12
CMIG PcP PcP 20 28 53.0 +0.4
comp=Z,3.8nm,0.7s,baz=202,slow=5.4,SNR=2.5
656A **Willston** 24.13 340 P P 20 25 17.8 +1.1
CLDB **Colider** 24.61 135 *eP* P 20 25 20.3 -0.9
CLDB *epP* pP 20 25 57.0 +3.3
CLDB *eS* S 20 29 28.3 -2.6
PB16 **IPOC Station P** 25.25 172 P P 20 25 25.4 -2.2
SIV **San Ignacio** 25.61 152 P P 20 25 29.3 -0.9
comp=Z,5.4nm,0.7s,baz=339,slow=9.2,SNR=21
SIV pP pP 20 26 02.2 -1.5
comp=Z,42nm,0.8s,baz=338,slow=9.0,SNR=20
MNMC **Minye Minye** 26.02 172 P P 20 25 31.5 -2.6
257A **Skidaway Islan** 26.09 345 P P 20 25 35.0 +0.6
PTLB **Pontes e Lacer** 26.10 148 *eP* P 20 25 34.3 -0.2
TIGA **Tifton** 26.38 339 P P 20 25 39.5 +2.5
baz=156
TIGA **Tifton** 26.38 339 P P 20 25 39.1 +2.1
TIGA IAmb IAmb 20 25 40.4
comp=Z,80nm,0.8s
255A **Hazlehurst** 26.46 342 P P 20 25 39.2 +1.5
255A IAmb IAmb 20 25 42.1
comp=Z,133nm,1.3s
451A **Vernon** 26.48 335 P P 20 25 40.7 +2.9
157A **Early Branch** 26.75 345 P P 20 25 42.6 +2.3
baz=162
CSU **Charleston Sou** 26.82 347 P P 20 25 43.1 +2.2
Z59A **Georgetown, SC** 26.90 348 P P 20 25 43.7 +2.0
baz=166
352A **Blakely** 26.91 337 P P 20 25 44.2 +2.6
NHSC **New Hope** 26.96 347 P P 20 25 44.6 +2.4
baz=164
NHSC **New Hope** 26.96 347 P P 20 25 44.2 +2.1
NHSC IAmb IAmb 20 25 46.3
comp=Z,55nm,0.8s
TLIG **Tlapa** 27.05 296 P P 20 25 45.8 +2.6
TLIG IAmb IAmb 20 25 52.3
comp=Z,45nm,1.1s
PB08 **IPOC Station P** 27.08 172 P P 20 25 42.6 -1.1
Z58A **St. Stephen** 27.10 348 P P 20 25 45.6 +2.2
baz=165
Z57A **Bowman** 27.27 346 P P 20 25 47.1 +2.2
baz=163,SNR=13
154A **Montrose** 27.30 341 P P 20 25 45.4 +0.3
Y60A **Bolivia** 27.46 351 P P 20 25 48.5 +1.9
baz=169,SNR=8.7
Y60A **Bolivia** 27.46 351 P P 20 25 48.4 +1.9
Z56A **Williston** 27.46 345 P P 20 25 48.6 +2.0
baz=162
Y59A **Loris** 27.55 350 P P 20 25 49.2 +1.8
baz=167,SNR=8.4
Y59A **Loris** 27.55 350 P P 20 25 48.8 +1.3
Y58A **Scranton** 27.62 348 P P 20 25 50.0 +2.0
baz=166
Y58A **Scranton** 27.62 348 P P 20 25 49.5 +1.5
Y58A IAmb IAmb 20 25 50.9
comp=Z,49nm,0.8s
PATCX **Punta Patache** 27.63 174 P P 20 25 47.8 -0.5
250A **Grady** 27.88 336 P P 20 25 52.7 +2.3
Y57A **Sumter** 27.89 347 P P 20 25 52.8 +2.5
baz=164
Y57A **Sumter** 27.89 347 P P 20 25 52.3 +1.9
Y57A IAmb IAmb 20 25 53.5
comp=Z,59nm,0.6s
Y56A **Pelion** 27.89 345 P P 20 25 52.3 +1.8
baz=162
152A **Waverly Hall** 27.89 339 P P 20 25 52.9 +2.4
PB01 **IPOC Station P** 27.92 173 P P 20 25 49.3 -1.6
X60A **Albert Glenn T** 27.98 351 P P 20 25 53.0 +1.8
baz=169
X59A **McDuffie Farm,** 28.08 350 P P 20 25 53.8 +1.7
baz=168
GOGA **Godfrey** 28.15 341 P P 20 25 55.1 +2.4
baz=158,SNR=20
GOGA **Godfrey** 28.15 341 P P 20 25 55.2 +2.5
GOGA IAmb IAmb 20 25 56.0
comp=Z,56nm,0.8s
Y55A **Saluda** 28.17 344 P P 20 25 55.2 +2.2
baz=161,SNR=25
X58A **Rowland** 28.19 349 P P 20 25 54.8 +1.8
baz=167
X58A **Rowland** 28.19 349 P P 20 25 54.7 +1.6
X58A IAmb IAmb 20 25 55.8
comp=Z,38nm,0.7s
X57A **Johnson Farm,** 28.25 348 P P 20 25 55.4 +1.8
baz=165
JSC **Jenkinsville** 28.34 346 P P 20 25 56.4 +2.0
JSC IAmb IAmb 20 25 57.5
comp=Z,38nm,0.8s
W60A **Pink Hill** 28.41 352 P P 20 25 56.9 +1.9
baz=170
W61A **Ground Anchor** 28.44 353 P P 20 25 57.1 +1.8
baz=172
X56A **White Oak** 28.49 346 P P 20 25 57.7 +2.0
baz=163,SNR=9.6
BIRD **Birdtown, Kers** 28.51 347 P P 20 25 57.4 +1.5
BIRD IAmb IAmb 20 25 58.8
comp=Z,82nm,1.4s
PB07 **IPOC Station P** 28.55 174 P P 20 25 56.8 +0.2
HODGE **Hodges** 28.56 344 P P 20 25 58.5 +2.1
HODGE IAmb IAmb 20 25 59.4
comp=Z,66nm,0.6s
X55A **Gracelyn & Ava** 28.62 345 P P 20 25 59.1 +2.2
baz=162,SNR=14
W58A **Raeford** 28.62 349 P P 20 25 58.5 +1.7
baz=167,SNR=7.4
W59A **Clinton** 28.63 351 P P 20 25 58.8 +1.9
baz=169
Z51A **Franklin** 28.64 339 P P 20 25 59.2 +2.1
Y52A **Lilburn** 28.76 341 P P 20 26 00.4 +2.2
Y52A IAmb IAmb 20 26 01.0
comp=Z,60nm,0.6s
346A **Big Creek Wild** 28.84 330 P P 20 26 01.5 +2.7
X54A **Belton** 28.89 344 P P 20 26 01.6 +2.3
baz=160,SNR=6.4
W57A **Gilead** 28.90 348 P P 20 26 00.8 +1.5
baz=166
W57A **Gilead** 28.90 348 P P 20 26 01.0 +1.7
PAULI **Pauline** 29.00 345 P P 20 26 02.5 +2.3
PAULI IAmb IAmb 20 26 03.3
comp=Z,57nm,0.8s
W56A **Indian Trail** 29.00 347 P P 20 26 02.1 +1.8
baz=164,SNR=6.3
V61A **Roper** 29.00 354 P P 20 26 02.0 +1.8
baz=173
V61A **Roper** 29.00 354 P P 20 26 02.1 +1.8
V61A IAmb IAmb 20 26 02.8
comp=Z,71nm,0.9s
V60A **Jim Taylor Roa** 29.05 353 P P 20 26 02.6 +1.9
baz=171,SNR=6.8
V60A **Jim Taylor Roa** 29.05 353 P P 20 26 02.8 +2.1
V60A IAmb IAmb 20 26 03.4
comp=Z,65nm,0.7s
LRAL **Lakeview Retre** 29.10 335 P P 20 26 03.5 +2.4
baz=150,SNR=25
LRAL **Lakeview Retre** 29.10 335 P P 20 26 03.6 +2.4
LRAL IAmb IAmb 20 26 04.5
comp=Z,65nm,0.8s
KMSC **Kings Mountain** 29.18 346 P P 20 26 03.9 +2.1
baz=163,SNR=9.9
KMSC **Kings Mountain** 29.18 346 P P 20 26 04.0 +2.1
KMSC IAmb IAmb 20 26 04.4
comp=Z,35nm,0.7s
V59A **Middlesex** 29.19 351 P P 20 26 03.5 +1.7
baz=169,SNR=9.6
W54A **Cherokee Point** 29.34 345 P P 20 26 05.7 +2.4
baz=161,SNR=9.6
V58A **Windy Hill, Pi** 29.36 350 P P 20 26 04.5 +1.2
V58A IAmb IAmb 20 26 05.4
comp=Z,24nm,0.6s
BG3 **Lake Jocassee** 29.46 343 P P 20 26 06.7 +2.4
U61A **Possum Corner** 29.53 355 P P 20 26 06.6 +1.7
baz=173
U61A **Possum Corner** 29.53 355 IAmb IAmb 20 26 07.5
comp=Z,77nm,0.7s
344A **Westbrook Farm** 29.53 328 P P 20 26 07.5 +2.5
LVC **Limon Verde** 29.54 172 P P 20 26 04.5 -1.1
comp=Z,2.6nm,0.4s,baz=7.0,slow=3.6,SNR=5.6
LVC pP pP 20 26 39.3 -0.5
comp=Z,17nm,0.9s,baz=7.1,slow=7.3,SNR=6.2
LVC **Limon Verde** 29.54 172 P P 20 26 05.9 +0.3
LVC pP 20 26 39.1 -0.7
PB06 **IPOC Station P** 29.55 173 pP 20 26 39.0 -0.8
V57A **Coltrane Farms** 29.57 349 P P 20 26 06.6 +1.4
baz=166,SNR=8.6
Y49A **Blount Mountai** 29.59 337 P P 20 26 07.6 +2.1
V56A **Mocksville** 29.64 348 P P 20 26 07.8 +1.9
baz=165,SNR=10
X51A **Calhoun** 29.66 340 P P 20 26 08.1 +2.0
X51A IAmb IAmb 20 26 09.1
comp=Z,50nm,0.8s
146A **Union** 29.67 332 P P 20 26 08.7 +2.5
Z47A **Carrollton** 29.70 334 P P 20 26 08.8 +2.4
U59A **Littleton** 29.70 352 P P 20 26 08.2 +1.8
U60A **Pendleton** 29.74 353 P P 20 26 08.2 +1.4
baz=172
SMTB **Santa Maria do** 29.82 121 *eP* P 20 26 08.0 +0.2
V55A **Taylorsville** 29.83 347 P P 20 26 09.9 +2.3
baz=163,SNR=15
V55A **Taylorsville** 29.83 347 P P 20 26 10.1 +2.4
V55A IAmb IAmb 20 26 11.0
comp=Z,59nm,0.8s
W52A **Murphy** 29.85 342 P P 20 26 10.2 +2.5
U58A **Oxford** 29.85 351 P P 20 26 09.6 +1.8
baz=169,SNR=17
FPAL **Fort Paine** 29.90 339 P P 20 26 10.4 +2.1
FPAL IAmb IAmb 20 26 11.3
comp=Z,60nm,0.9s
V54A **Nebo** 29.94 345 P P 20 26 10.8 +2.2
baz=162,SNR=16
U57A **Blanch** 30.02 350 P P 20 26 10.7 +1.5
baz=167,SNR=15
VBMS **Vicksburg** 30.03 330 P P 20 26 11.6 +2.2
baz=144,SNR=5.5
VBMS **Vicksburg** 30.03 330 P P 20 26 11.8 +2.4
PB15 **IPOC Station P** 30.06 173 pP 20 26 45.0 +0.8
V53A **Saluda** 30.06 344 P P 20 26 12.3 +2.6
V53A IAmb IAmb 20 26 13.1
comp=Z,45nm,0.8s
U56A **King** 30.13 348 P P 20 26 12.3 +2.1
baz=165
U56A **King** 30.13 348 P P 20 26 12.2 +2.0
PP1B **Ponte de Pedra** 30.21 144 *eP* P 20 26 12.0 +0.8
PB10 **IPOC Station P** 30.26 175 P P 20 26 12.2 +0.8
T59A **Double "B" Far** 30.28 353 P P 20 26 13.3 +1.7
baz=171,SNR=20
T59A **Double "B" Far** 30.28 353 P P 20 26 13.3 +1.7
T59A IAmb IAmb 20 26 14.1
comp=Z,71nm,0.8s
TKL **Tuckaleechee C** 30.32 343 P P 20 26 14.2 +2.2
TKL IAmb IAmb 20 26 15.7
comp=Z,32nm,0.8s
T60A **Surry** 30.36 354 P P 20 26 13.9 +1.7
baz=173
T60A **Surry** 30.36 354 P P 20 26 14.2 +2.0
X48A **Hartselle** 30.36 337 P P 20 26 14.2 +1.9
CPCT **Cooper Cave** 30.36 341 P P 20 26 14.8 +2.5
CPCT IAmb IAmb 20 26 15.7
comp=Z,75nm,0.8s
T58A **Grand View Acr** 30.39 351 P P 20 26 14.2 +1.7
baz=169,SNR=28
W50A **Signal Mountai** 30.39 340 P P 20 26 15.1 +2.5
V52A **Sevierville** 30.44 343 P P 20 26 14.6 +1.6
V52A IAmb IAmb 20 26 16.2
comp=Z,56nm,1.1s
ROSB **Rosrio** 30.49 108 *eP* P 20 26 14.7 +1.0
T57A **Hurt** 30.55 350 P P 20 26 15.5 +1.5
baz=168,SNR=16
T57A **Hurt** 30.55 350 P P 20 26 15.7 +1.7
T57A IAmb IAmb 20 26 16.6
comp=Z,77nm,0.8s
U54A **Nelsons Funny** 30.61 346 P P 20 26 17.1 +2.6
baz=163,SNR=38
U54A **Nelsons Funny** 30.61 346 P P 20 26 16.9 +2.3
SWET **Sewanee** 30.62 339 P P 20 26 16.7 +2.1
SWET IAmb IAmb 20 26 17.7
comp=Z,41nm,0.8s
V51A **Loudon** 30.63 342 P P 20 26 17.1 +2.4
T56A **Rocky Mt** 30.72 349 P P 20 26 17.4 +2.0
baz=166,SNR=7.0
ARAG **Araguaiana, MT** 30.75 137 *eP* P 20 26 15.3 -0.7
143A **Socs Landing,** 30.87 329 P P 20 26 17.8 +1.0
143A IAmb IAmb 20 26 22.5
comp=Z,66nm,0.8s
S60A **Water View** 30.91 355 P P 20 26 19.3 +2.3
baz=173,SNR=6.8
Y45A **Yeager Farm, C** 30.91 333 P P 20 26 19.3 +2.2
T55A **Pulaski** 30.96 348 P P 20 26 19.9 +2.3
baz=165,SNR=8.5
BLA **Blacksburg** 30.97 349 P P 20 26 20.0 +2.2
baz=166,SNR=5.7
BLA **Blacksburg** 30.97 349 P P 20 26 19.9 +2.2
BLA IAmb IAmb 20 26 21.1
comp=Z,69nm,1.1s
S58A **Poland Farm, P** 30.98 352 P P 20 26 19.2 +1.6
baz=170,SNR=5.7
S58A **Poland Farm, P** 30.98 352 P P 20 26 18.8 +1.2
S58A IAmb IAmb 20 26 19.7
comp=Z,25nm,0.6s
RCRC **Randolf Colleg** 30.98 350 P P 20 26 19.2 +1.5
PEXB **Peixe** 31.01 127 *eP* P 20 26 18.4 +0.2
S59A **Mechanicsville** 31.03 354 P P 20 26 20.0 +1.9
baz=172
T54A **Tazewell** 31.07 347 P P 20 26 20.9 +2.3
baz=163,SNR=34
TZTN **Tazewell** 31.09 344 P P 20 26 20.8 +2.2
baz=159,SNR=9.0
TZTN **Tazewell** 31.09 344 P P 20 26 20.3 +1.6
TZTN IAmb IAmb 20 26 21.9
comp=Z,92nm,1.2s
T53A **Wise** 31.23 345 P P 20 26 22.3 +2.4
baz=162,SNR=20
PLAL **Pickwick Lake** 31.23 336 P P 20 26 21.8 +1.9
S57A **Dark Hollow, R** 31.25 351 P P 20 26 22.0 +1.9
baz=168,SNR=14
S57A **Dark Hollow, R** 31.25 351 P P 20 26 21.7 +1.6
S57A IAmb IAmb 20 26 22.9
comp=Z,66nm,0.8s
S56A **Natural Bridge** 31.27 350 P P 20 26 21.8 +1.6
baz=167
R58B **Mineral** 31.30 353 P P 20 26 22.0 +1.6
baz=171
OXF **Oxford** 31.40 334 P P 20 26 22.7 +1.2
baz=148,SNR=5.5
OXF **Oxford** 31.40 334 P P 20 26 22.6 +1.2
OXF IAmb IAmb 20 26 23.7
comp=Z,96nm,1.0s
HKT **Hockley** 31.41 320 P P 20 26 22.8 +1.3
R59A **King George, V** 31.45 354 P P 20 26 24.0 +2.3
baz=172,SNR=12
R60A **Leonardtown, M** 31.46 355 P P 20 26 24.1 +2.2
baz=173
CBN **Corbin Frederi** 31.48 354 P P 20 26 24.0 +2.0
baz=172
S55A **Lewisburg** 31.53 349 P P 20 26 24.9 +2.3
baz=166,SNR=15
R58A **Rapidan** 31.64 353 P P 20 26 25.6 +2.1
baz=170,SNR=11
R57A **Stanardsville** 31.71 352 P P 20 26 26.3 +2.2
baz=170
S54A **Dingess, Beckl** 31.72 348 P P 20 26 26.6 +2.3
baz=164,SNR=13
S54A **Dingess, Beckl** 31.72 348 IAmb IAmb 20 26 27.6
comp=Z,66nm,0.8s
U49A **Red Boiling Sp** 31.74 340 IAmb IAmb 20 26 26.9
comp=Z,37nm,0.7s
S53A **Williamson** 31.79 346 P P 20 26 26.8 +2.0
baz=163,SNR=6.9
T50A **Nancy** 31.91 342 P P 20 26 28.1 +2.2
T50A IAmb IAmb 20 26 29.2
comp=Z,76nm,1.0s
NATX **Nacogdoches** 31.95 324 P P 20 26 28.0 +1.7
baz=136,SNR=7.2
NATX **Nacogdoches** 31.95 324 P P 20 26 28.0 +1.7
R56A **Bull Pasture M** 31.95 351 P P 20 26 28.8 +2.5
baz=168,SNR=15
R55A **Marlinton** 31.95 350 P P 20 26 28.8 +2.4
baz=167,SNR=11
R55A **Marlinton** 31.95 350 IAmb IAmb 20 26 29.9
comp=Z,57nm,0.8s
Q61A **Milford** 31.98 357 P P 20 26 28.5 +2.1
baz=176
GO02 **Mina Guanaco** 31.98 174 P P 20 26 26.7 -0.2
GO02 pP pP 20 27 03.4 +2.1
735A **Kenedy** 32.01 316 P P 20 26 28.3 +1.5
R54A **Victor** 32.02 348 P P 20 26 29.1 +2.3
baz=165,SNR=13

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baz=123,SNR=126
MNTX Cornudas Mount 38.98 314 IAmb IAmb 20 27 29.4
comp=Z,83nm,0.8s
JFWS Jewell Farm 39.00 340 P **P** **20 27 27.1 +0.8**
baz=152,SNR=41
F60A Warwick 39.01 1 P **P** **20 27 28.0 +1.7**
baz=182,SNR=8.5
GDU01 Guandu, BA 39.04 122 eP **P** **20 27 26.6 -0.4**
F61A St Evariste 39.04 2 P **P** **20 27 28.1 +1.5**
baz=183
R32A Long Quarter, 39.07 327 IAmb IAmb 20 27 28.4
comp=Z,95nm,1.3s
F64A Sherman 39.11 5 P **P** **20 27 28.8 +1.6**
baz=187,SNR=6.2
F64A Sherman 39.11 5 IAmb IAmb 20 27 29.8
comp=Z,59nm,0.9s
SLBS Sierra La Lagu 39.14 299 P **P** **20 27 29.6 +1.8**
SLBS IAmb IAmb 20 27 31.8
comp=Z,58nm,1.1s
VAO Valinhos 39.14 140 eP **P** **20 27 27.7 -0.1**
RCBR Riachuelo 39.19 108 P **P** **20 27 27.7 -0.6**
RCBR Riachuelo 39.19 108 eP **P** **20 27 28.7 +0.4**
ALGO Algonquin Park 39.22 355 P **P** **20 27 29.8 +1.8**
baz=172,SNR=14
BSCB Bom Sucesso 39.22 135 eP **P** **20 27 28.1 -0.4**
SCIA State Center 39.23 336 P **P** **20 27 29.2 +1.0**
baz=147,SNR=30
SPB Sao Paulo 39.27 141 P **P** **20 27 27.7 -1.1**
SPB Sao Paulo 39.27 141 eP **P** **20 27 27.3 -1.5**
E58A La Victoria 39.40 360 P **P** **20 27 31.4 +1.8**
baz=180,SNR=6.6
E59A St. Maurice 39.51 1 P **P** **20 27 32.3 +1.8**
baz=181
E61A Lac Etchemin 39.52 3 P **P** **20 27 32.5 +1.9**
baz=184,SNR=11
LMN Caledonia Moun 39.54 9 P **P** **20 27 32.2 +1.5**
E55A Montcerf-Lytto 39.56 357 P **P** **20 27 32.8 +1.9**
baz=175,SNR=12
LPIG La Paz 39.59 300 LR LR 20 44 47.6
comp=Z,99nm,20.6s,baz=116,slow=37
ITQB Itaqui 39.59 157 eP **P** **20 27 27.9 -3.5**
ROC1 El Roble 39.63 177 P **P** **20 27 31.3 -0.6**
E63A Oxbow 39.66 5 P **P** **20 27 33.4 +1.7**
baz=187,SNR=10
E63A Oxbow 39.66 5 IAmb IAmb 20 27 34.5
comp=Z,65nm,0.8s
K38A Parkersburg 39.69 337 IAmb IAmb 20 27 34.1
comp=Z,62nm,0.7s
E64A Bridgewater 39.71 6 P **P** **20 27 33.9 +1.8**
baz=188,SNR=9.7
E62A Clayton Lake 39.77 4 P **P** **20 27 34.5 +1.9**
baz=185
E62A Clayton Lake 39.77 4 IAmb IAmb 20 27 35.7
comp=Z,53nm,0.8s
PET01 Itanhaem-SP 39.88 142 eP **P** **20 27 32.8 -1.0**
CBKS Cedar Bluff 39.91 327 P **P** **20 27 34.5 +0.5**
baz=136,SNR=8.1
CBKS Cedar Bluff 39.91 327 IAmb IAmb 20 27 35.3
comp=Z,193nm,1.4s
MT02 Curacav 39.91 177 P **P** **20 27 32.3 -1.6**
PQI Presque Isle 39.94 5 IAmb IAmb 20 27 36.7
comp=Z,66nm,0.8s
D60A Saint Jean D'O 39.98 2 P **P** **20 27 36.1 +1.8**
baz=183,SNR=5.2
I40A Norwalk 39.99 340 IAmb IAmb 20 27 36.0
comp=Z,113nm,0.8s
D58A Chemin du LacG 40.12 0 P **P** **20 27 37.3 +1.8**
baz=180,SNR=6.7
D63A Stockholm 40.29 5 P **P** **20 27 39.0 +2.1**
baz=187,SNR=12
D61A St Aubert, Com 40.31 3 P **P** **20 27 39.3 +2.3**
baz=184,SNR=7.7
LATQ La Tuque 40.41 0 P **P** **20 27 39.8 +2.0**
baz=180,SNR=12
LATQ La Tuque 40.41 0 P **P** **20 27 39.9 +2.0**
SJMB Sao Joao De Ma 40.42 129 eP **P** **20 27 38.1 -0.3**
BATG Bathurst New B 40.75 7 IAmb IAmb 20 27 43.2
comp=Z,104nm,0.9s
F42A Maple Grove Fa 40.91 344 IAmb IAmb 20 27 43.9
comp=Z,93nm,0.6s
BGNE Belgrade 41.02 331 P **P** **20 27 43.1 0.0**
baz=140
G40A Rib Lake 41.08 342 IAmb IAmb 20 27 45.5
comp=Z,88nm,1.1s
121A Cookes Peak, D 41.16 313 P **P** **20 27 46.7 +2.2**
baz=121,SNR=25
121A Cookes Peak, D 41.16 313 IAmb IAmb 20 27 47.9
comp=Z,69nm,1.1s
E43A Lone Tree Farm 41.19 345 IAmb IAmb 20 27 46.1
comp=Z,45nm,0.7s
VLDQ Val d'Or 41.31 356 P **P** **20 27 47.4 +2.2**
Y22D IRIS PASSCAL I 41.36 316 P **P** **20 27 47.7 +1.6**
baz=123
RIB01 Linhares ES 41.38 129 eP **P** **20 27 45.9 -0.3**
BO02 Sierra Bellavi 41.45 177 P **P** **20 27 46.9 +0.3**
T25A Trinidad 41.50 321 P **P** **20 27 49.5 +2.2**
baz=129,SNR=25
T25A Trinidad 41.50 321 IAmb IAmb 20 27 50.6
comp=Z,68nm,1.1s
COWI Conover 41.51 343 IAmb IAmb 20 27 49.7
comp=Z,107nm,0.9s
ANMO Albuquerque 41.53 317 P **P** **20 27 49.3 +1.8**
baz=125
ANMO Albuquerque 41.53 317 P **P** **20 27 49.1 +1.7**
DUB01 Friburgo-RJ 41.61 134 eP **P** **20 27 47.3 -0.9**
KSCO Kaye Shedlock' 41.66 325 P **P** **20 27 49.4 +1.1**
baz=133,SNR=7.8
KSCO Kaye Shedlock' 41.66 325 IAmb IAmb 20 27 50.5
comp=Z,68nm,0.7s
319A Douglas 41.70 311 IAmb IAmb 20 27 52.0
comp=Z,55nm,0.8s
SPMN Marine on St. 41.91 339 P **P** **20 27 50.6 +0.4**
baz=150
SPMN Marine on St. 41.91 339 IAmb IAmb 20 27 51.5
comp=Z,47nm,0.9s
HSIG 41.95 306 PcP **PcP** **20 29 44.8 +1.5**
ECSD EROS Data Cent 42.15 334 P **P** **20 27 52.3 +0.1**
baz=144,SNR=30
ECSD EROS Data Cent 42.15 334 IAmb IAmb 20 27 53.3
comp=Z,106nm,1.1s
LSQQ Lebel-sur-Quev 42.22 356 P **P** **20 27 54.2 +1.6**
baz=174
D41A Chassel 42.23 344 IAmb IAmb 20 27 54.8
comp=Z,184nm,1.2s
SDCO Great Sand Dun 42.56 321 P **P** **20 27 57.9 +1.9**
baz=128,SNR=62
SDCO Great Sand Dun 42.56 321 IAmb IAmb 20 27 59.0
comp=Z,51nm,0.8s
E38A The Farm, Brul 42.70 341 IAmb IAmb 20 27 58.1
comp=Z,47nm,0.7s
F36A Milaca 42.72 339 IAmb IAmb 20 27 59.2
comp=Z,65nm,1.2s
CHGQ Chibougamau 42.95 359 P **P** **20 27 59.9 +1.4**
baz=178,SNR=7.6
MATQ Matagami 42.96 356 P **P** **20 28 00.2 +1.6**
baz=173,SNR=30
Q24A Divide 43.11 323 P **P** **20 28 01.7 +1.4**
baz=130,SNR=13
TUC Tucson 43.26 311 P **P** **20 28 03.0 +1.6**
baz=118
BI02 San Fabin de 43.29 178 P **P** **20 28 01.9 +0.4**
S22A 4UR Ranch, Cre 43.40 320 P **P** **20 28 04.8 +2.1**
baz=127,SNR=42
S22A 4UR Ranch, Cre 43.40 320 IAmb IAmb 20 28 05.9
comp=Z,90nm,1.2s
X18A Snowflake 43.73 314 IAmb IAmb 20 28 08.4
comp=Z,43nm,0.8s
F33A 5 Mile Ranch, 43.74 337 IAmb IAmb 20 28 06.0
comp=Z,101nm,1.1s
SUSD Miller 43.74 333 P **P** **20 28 05.4 +0.4**
baz=141,SNR=42
EYMN Ely 43.87 342 P **P** **20 28 06.7 +0.7**
baz=153,SNR=65
W18A Petrified Fore 43.88 315 P **P** **20 28 08.4 +2.0**
baz=121,SNR=54
W18A Petrified Fore 43.88 315 IAmb IAmb 20 28 09.6
comp=Z,111nm,0.9s
MVCO Mesa Verde 44.17 318 P **P** **20 28 10.4 +1.6**
baz=124,SNR=27
MVCO Mesa Verde 44.17 318 IAmb IAmb 20 28 11.4
comp=Z,134nm,1.4s
214A Organ Pipe Nat 44.64 309 P **P** **20 28 14.2 +1.9**
baz=116,SNR=9.1
PV01 Paradox Valley 44.74 319 IAmb IAmb 20 28 16.5
comp=Z,62nm,0.9s
N23A Red Feather La 44.81 324 P **P** **20 28 15.7 +1.8**
baz=130,SNR=35
N23A Red Feather La 44.81 324 IAmb IAmb 20 28 17.4
comp=Z,80nm,0.9s
PV02 Paradox Valley 44.89 319 IAmb IAmb 20 28 17.4
comp=Z,71nm,0.7s
PV13 Radium Mtn., P 44.91 319 IAmb IAmb 20 28 17.5
comp=Z,101nm,0.8s
B35A Bob, Littlefor 44.95 341 IAmb IAmb 20 28 15.8
comp=Z,107nm,0.7s
PV03 Paradox Valley 44.99 319 IAmb IAmb 20 28 17.9
comp=Z,44nm,0.7s
PV12 Saucer Basin, 44.99 320 IAmb IAmb 20 28 18.3
comp=Z,74nm,0.7s
PV18 Skein Mesa, Pa 45.02 319 IAmb IAmb 20 28 20.2
comp=Z,66nm,0.8s
PV11 David Mesa, Pa 45.03 319 P **P** **20 28 17.2 +1.7**
PV11 IAmb IAmb 20 28 18.3
comp=Z,48nm,0.6s
PV17 East Wray Mesa 45.07 319 IAmb IAmb 20 28 20.0
comp=Z,53nm,0.7s
D32A Dogwood Acres, 45.09 337 IAmb IAmb 20 28 16.8
comp=Z,148nm,1.1s
PV22 Blue Mesa, Par 45.11 320 IAmb IAmb 20 28 18.9
comp=Z,51nm,0.7s
WUAZ Wupatki 45.23 315 P **P** **20 28 19.1 +2.0**
baz=120,SNR=60
WUAZ Wupatki 45.23 315 IAmb IAmb 20 28 20.7
comp=Z,136nm,0.9s
LC01 Cunco 45.50 179 P **P** **20 28 17.7 -1.3**
LC01 **pP** **20 28 53.7 -1.6**
AGMN Agassiz Nation 45.63 339 P **P** **20 28 20.5 +0.7**
baz=147,SNR=49
AGMN Agassiz Nation 45.63 339 IAmb IAmb 20 28 21.4
comp=Z,94nm,0.6s
Y14A Wickenburg 45.66 312 IAmb IAmb 20 28 23.0
comp=Z,68nm,0.8s
O20A White River Ci 45.71 322 P **P** **20 28 22.6 +1.8**
baz=127,SNR=13
RSSD Black Hills 45.95 329 P **P** **20 28 23.6 +0.9**
baz=135
RSSD Black Hills 45.95 329 P **P** **20 28 24.1 +1.5**
K22A Casper 46.28 326 P **P** **20 28 26.5 +1.3**
baz=131,SNR=15
U15A North Rim 46.33 315 IAmb IAmb 20 28 29.1
comp=Z,82nm,1.0s
GLA Glamis 46.65 310 P **P** **20 28 29.8 +1.8**
baz=115,SNR=19
GLA Glamis 46.65 310 IAmb IAmb 20 28 30.8
comp=Z,62nm,0.8s
PDMCI Parker Dam,Lak 46.67 312 P **P** **20 28 29.5 +1.4**
baz=116,SNR=7.4
MDND Maddock 46.70 336 P **P** **20 28 29.2 +1.0**
baz=142,SNR=32
NEE2 Needles Airpor 47.23 312 P **P** **20 28 33.7 +1.2**
baz=116
ULM Lac du Bonnet 47.29 340 P **P** **20 28 33.0 +0.3**
comp=Z,127nm,0.6s,baz=147,slow=7.5,SNR=154
ULM PcP **PcP** **20 30 01.7 +0.5**
comp=Z,19nm,0.8s,baz=135,slow=4.3,SNR=3.5
ULM ScP **ScP** **20 33 40.8 +0.5**
comp=Z,2.6nm,0.7s,baz=225,slow=1.4,SNR=2.0
ULM Lac du Bonnet 47.29 340 P **P** **20 28 33.1 +0.4**
SWSC Sam W. Stewart 47.35 309 P **P** **20 28 35.2 +1.7**
baz=114
IRM Iron Mountain 47.35 311 P **P** **20 28 35.2 +1.6**
baz=115,SNR=28
BC3 Big Chuckawall 47.38 310 P **P** **20 28 35.2 +1.4**
baz=115,SNR=19
PLCA Paso Flores 47.38 177 P **P** **20 28 32.1 -1.4**
comp=Z,4.5nm,0.9s,baz=360,slow=11,SNR=11
PLCA pP **pP** **20 29 09.4 -0.8**
comp=Z,22nm,1.1s,baz=352,slow=8.9,SNR=9.0
PLCA ScP **ScP** **20 33 39.6 -1.4**
comp=Z,3.7nm,0.9s,baz=354,slow=3.3,SNR=4.9
PLCA Paso Flores 47.38 177 P **P** **20 28 32.2 -1.4**
PLCA **pP** **20 29 07.6 -2.6**
PLCA Paso Flores 47.38 177 eP **P** **20 28 32.0 -1.6**
IKP In-Ko-Pah, Jac 47.47 309 P **P** **20 28 36.3 +1.8**
baz=113,SNR=5.3
CCUT Cedar City 47.63 316 **PcP** **20 30 05.4 +2.3**
MONP2 Monument Peak 47.81 309 P **P** **20 28 38.9 +1.6**
baz=113,SNR=13
BAR Barrett 47.92 308 PcP **PcP** **20 30 05.1 +1.2**
BELC Belle Mtn. Jos 47.93 310 P **P** **20 28 39.7 +1.6**
baz=114,SNR=23
JLU Jordanelle 47.98 321 P **P** **20 28 39.6 +1.1**
GMRC Granite Mounta 48.01 311 P **P** **20 28 40.2 +1.5**
baz=115
NLU North Lily Min 48.02 319 P **P** **20 28 39.7 +0.9**
BW06 Boulder Array 48.09 324 P **P** **20 28 40.1 +0.8**
baz=128,SNR=28
BW06 Boulder Array 48.09 324 P **P** **20 28 40.0 +0.7**
BW06 IAmb IAmb 20 28 41.3
comp=Z,76nm,1.2s
PD31 Pinedale Array 48.09 324 P **P** **20 28 40.0 +0.7**
PD31 IAmb IAmb 20 28 41.3
comp=Z,69nm,1.2s
PDAR Pinedale Array 48.09 324 P **P** **20 28 40.2 +0.9**
comp=Z,25nm,0.7s,baz=127,slow=9.5,SNR=133
PDAR PcP **PcP** **20 30 05.2 +0.6**
comp=Z,4.8nm,0.6s,baz=129,slow=6.1,SNR=3.8
PDAR ScP **ScP** **20 33 44.8 +0.6**
comp=Z,1.7nm,0.9s,baz=124,slow=4.9,SNR=4.0
PDAR P4KPbc 21 06 17.4
comp=Z,0.5nm,0.6s,baz=132,slow=3.5,SNR=3.9
PDAR Pinedale Array 48.09 324 P **P** **20 28 40.3 +0.9**
PDAR PcP **PcP** **20 30 04.7 +0.2**
TPFO Pinon Flats 48.12 310 P **P** **20 28 41.0 +1.5**
baz=114,SNR=7.6
PFO Pinyon Flats O 48.12 310 P **P** **20 28 41.1 +1.5**
baz=114,SNR=6.7
PFO Pinyon Flats O 48.12 310 P **P** **20 28 40.2 +0.6**
SCHQ Schefferville 48.13 5 P **P** **20 28 40.5 +1.4**
comp=Z,89nm,0.6s,baz=191,slow=6.3,SNR=51
SCHQ ScP **ScP** **20 33 44.0 +0.1**
comp=Z,7.7nm,0.8s,baz=207,slow=4.0,SNR=3.3
SCHQ Schefferville 48.13 5 P **P** **20 28 40.4 +1.3**
SCHQ IAmb IAmb 20 28 41.8
comp=Z,88nm,0.7s
109C Camp Elliot, M 48.34 309 P **P** **20 28 42.6 +1.6**
baz=113
TUQ Turquoise Moun 48.48 312 P **P** **20 28 43.7 +1.4**
baz=116,SNR=58
HEC Hector,Ludlow 48.53 311 P **P** **20 28 44.4 +1.8**
baz=115,SNR=8.9
HWUT Hardware Ranch 48.61 322 IAmb IAmb 20 28 45.6
comp=Z,42nm,0.7s
DUG Dugway, Tooele 48.62 319 P **P** **20 28 44.8 +1.5**
baz=122,SNR=36
DUG Dugway, Tooele 48.62 319 IAmb IAmb 20 28 46.1
comp=Z,41nm,0.8s
RPN Rapa Nui 48.68 225 LR LR 20 47 04.8
comp=Z,46nm,19.0s,baz=320,slow=33
MURC Murrieta 48.68 309 P **P** **20 28 45.3 +1.6**
baz=113,SNR=5.8
BBRC Big Bear Solar 48.74 310 P **P** **20 28 46.2 +1.8**
baz=114
LAO LASA Array 48.84 330 P **P** **20 28 45.5 +0.7**
baz=134
LAO LASA Array 48.84 330 IAmb IAmb 20 28 46.5
comp=Z,85nm,1.2s
SHOC Shoshone, Teco 48.94 313 P **P** **20 28 47.4 +1.7**
baz=116,SNR=16
AHID Auburn Hatcher 49.00 323 IAmb IAmb 20 28 48.1
comp=Z,59nm,0.8s
SPR3 Spring Creek 3 49.01 317 IAmb IAmb 20 28 49.1
comp=Z,64nm,1.2s
RRX Edison Barstow 49.04 311 P **P** **20 28 47.7 +1.2**
baz=114
GSC Goldstone, Bar 49.08 312 P **P** **20 28 48.5 +1.7**
baz=115,SNR=26
GSC Goldstone, Bar 49.08 312 IAmb IAmb 20 28 49.4
comp=Z,48nm,0.8s
DGMT Dagmar 49.16 333 P **P** **20 28 48.7 +1.6**
baz=137,SNR=76
SACV Santiago Islan 49.17 76 P **P** **20 28 45.1 -2.6**
BFSC Mount Baldy Ra 49.29 310 P **P** **20 28 49.7 +1.2**
baz=113,SNR=6.3
TPAW Teton Pass 49.34 324 IAmb IAmb 20 28 51.5
comp=Z,49nm,0.7s
TPNV Topopah Spring 49.38 314 P **P** **20 28 51.1 +1.9**
baz=116,SNR=52
TPNV Topopah Spring 49.38 314 P **P** **20 28 50.7 +1.5**
TPNV IAmb IAmb 20 28 52.8
comp=Z,49nm,0.9s
TPNV PcP **PcP** **20 30 10.2 +1.0**
RLMT Red Lodge 49.39 327 P **P** **20 28 50.2 +1.0**
baz=129,SNR=31
SCI2 San Clemente I 49.50 308 P **P** **20 28 51.4 +1.5**
baz=112
CIS Catalina Islan 49.55 309 P **P** **20 28 52.1 +1.7**
baz=112,SNR=6.4
R11A Troy Canyon, C 49.56 316 P **P** **20 28 52.2 +1.7**
baz=118,SNR=66
IMW Indian Meadow 49.57 324 IAmb IAmb 20 28 52.8
comp=Z,52nm,0.7s
FURC Furnace Creek, 49.61 313 P **P** **20 28 52.6 +1.9**
baz=116,SNR=18
H17A Grant Village 49.67 325 P **P** **20 28 52.9 +1.6**
baz=128
EDW2 Edwards Air Fo 49.80 311 P **P** **20 28 53.6 +1.4**
baz=113,SNR=26
LRMC Laurel Mtn Rad 49.80 311 P **P** **20 28 53.9 +1.5**
baz=114,SNR=20
MPMC Manual Prospec 49.90 312 P **P** **20 28 54.3 +1.2**
baz=115,SNR=16
GRAC Grapevine Rang 50.21 313 P **P** **20 28 57.3 +2.0**
baz=116,SNR=17
ISA Isabella, Lake 50.47 311 P **P** **20 28 58.8 +1.5**
baz=114,SNR=8.5
ISA Isabella, Lake 50.47 311 P **P** **20 28 59.1 +1.8**
ISA PcP **PcP** **20 30 15.2 +2.0**
CWC Cottonwood Cre 50.49 312 P **P** **20 28 59.2 +1.7**
baz=114
ARVC Arvin 50.52 310 P **P** **20 28 59.1 +1.5**
baz=113
SCZ2 Santa Cruz Isl 50.71 309 P **P** **20 29 00.5 +1.5**
baz=111,SNR=9.1
TIN Tinemaha, Big 50.86 313 P **P** **20 29 02.1 +1.9**
baz=115,SNR=12
SBC Santa Barbara 50.94 309 P **P** **20 29 02.2 +1.5**
baz=112
BOZ Bozeman (W) 50.99 326 P **P** **20 29 02.5 +1.4**
baz=127,SNR=58
BOZ Bozeman (W) 50.99 326 IAmb IAmb 20 29 03.5
comp=Z,42nm,0.8s
VES Vestal, Richgr 50.99 311 P **P** **20 29 02.9 +1.8**
baz=113,SNR=16
PKM Mcpherson Peak 51.18 310 P **P** **20 29 04.3 +1.6**
baz=112,SNR=9.9
NV11 Mina Array Sit 51.39 315 P **P** **20 29 05.7 +1.4**
NV11 PcP **PcP** **20 30 17.8 +1.1**
DLMT Dillon 51.40 325 IAmb IAmb 20 29 07.4
comp=Z,62nm,1.2s
HLID Hailey 51.45 322 P **P** **20 29 05.9 +1.3**
baz=123,SNR=60
HLID Hailey 51.45 322 IAmb IAmb 20 29 07.5
comp=Z,38nm,0.8s
SMMC Simmler 51.48 310 P **P** **20 29 06.5 +1.8**
baz=112,SNR=8.1
NVAR Mina Array Bea 51.50 315 P **P** **20 29 06.8 +1.7**
comp=Z,18nm,0.7s,baz=122,slow=7.1,SNR=147
NVAR PcP **PcP** **20 30 18.8 +1.6**
comp=Z,5.3nm,0.5s,baz=133,slow=5.1,SNR=11
NVAR ScP **ScP** **20 34 00.7 +1.8**
comp=Z,1.5nm,0.9s,baz=98,slow=2.7,SNR=1.7
NVAR Mina Array Bea 51.50 315 P **P** **20 29 06.2 +1.1**
NVAR PcP **PcP** **20 30 18.0 +0.9**
EGMT Eagleton 51.52 329 P **P** **20 29 05.9 +1.0**
baz=131,SNR=13
EGMT Eagleton 51.52 329 IAmb IAmb 20 29 07.3
comp=Z,128nm,1.4s
LHV Little Huntoon 51.56 314 IAmb IAmb 20 29 08.4
comp=Z,71nm,1.4s
MDPB Devils Postpil 51.71 313 IAmb IAmb 20 29 09.5
comp=Z,36nm,0.9s
PAGB Antelope Grade 51.83 311 IAmb IAmb 20 29 09.8
comp=Z,49nm,0.8s
MFID Camas Ranch 52.24 321 IAmb IAmb 20 29 13.5
comp=Z,62nm,0.7s
PMPB Monarch Peak 52.42 311 IAmb IAmb 20 29 13.9
comp=Z,36nm,1.0s
PNTR Pine Nut 52.69 315 IAmb IAmb 20 29 16.7
comp=Z,46nm,0.8s
VCNR Virginia City 52.82 315 IAmb IAmb 20 29 17.6
comp=Z,51nm,1.0s
RUBR Rubicon Trail 53.07 315 IAmb IAmb 20 29 22.6
comp=Z,71nm,0.9s
FFC Flin Flon 53.09 339 P **P** **20 29 16.8 +0.6**
FFC IAmb IAmb 20 29 17.3
comp=Z,37nm,0.6s
PLID Pearl Lake 53.23 323 P **P** **20 29 17.8 0.0**
PLID IAmb IAmb 20 29 19.4
comp=Z,48nm,0.8s
PLID PcP **PcP** **20 30 23.8 +0.3**
WVOR Wild Horse Val 53.54 319 IAmb IAmb 20 29 23.7
comp=Z,82nm,1.0s
BEKR Beckworth 53.56 315 IAmb IAmb 20 29 22.4
comp=Z,46nm,1.2s
JTMT Jette 53.74 327 IAmb IAmb 20 29 23.8
comp=Z,72nm,0.9s
J08A Circle Bar Ran 53.88 320 IAmb IAmb 20 29 24.8
comp=Z,56nm,1.2s
ORV Oroville 54.23 315 IAmb IAmb 20 29 27.4
comp=Z,29nm,0.8s
FCC Fort Churchill 54.27 347 P **P** **20 29 25.0 +0.3**
FCC IAmb IAmb 20 29 26.1
comp=Z,101nm,1.1s
O03E Paynes Creek 54.74 315 P **P** **20 29 29.1 +0.5**
baz=114,SNR=18
HOPS Hopland Field 55.13 313 IAmb IAmb 20 29 35.2
comp=Z,39nm,1.2s
E09A Wood Farm, Sta 55.26 324 IAmb IAmb 20 29 34.0
comp=Z,50nm,0.9s
WDC Whiskeytown Da 55.37 315 P **P** **20 29 32.2 -0.8**
M04C Macdoel 55.38 317 P **P** **20 29 34.3 +1.0**
baz=115,SNR=21
O02D Mt. Diablo Mer 55.39 315 P **P** **20 29 32.8 -0.4**
baz=113,SNR=21
NEW Newport 55.60 326 P **P** **20 29 35.2 +0.6**
comp=Z,18nm,0.6s,baz=122,slow=6.0,SNR=32
NEW Newport 55.60 326 P **P** **20 29 35.2 +0.6**
baz=123,SNR=20
NEW Newport 55.60 326 IAmb IAmb 20 29 36.2
comp=Z,55nm,1.3s
J05D Fort Rock, OR 55.63 319 P **P** **20 29 36.3 +1.3**
baz=116,SNR=35
N02D Trinity Center 55.64 316 P **P** **20 29 34.4 -0.7**
baz=114,SNR=12
K04D Chiloquin, OR 55.68 318 P **P** **20 29 36.6 +1.3**
baz=116,SNR=11
KCPM Cahto Peak 55.76 314 IAmb IAmb 20 29 39.0
comp=Z,69nm,0.9s
L04D Klamath Falls 55.88 317 P **P** **20 29 37.5 +0.7**
baz=115,SNR=22
M02C Callahan 55.91 316 P **P** **20 29 36.9 -0.1**
baz=114,SNR=9.8
YBH Yreka Blue Hor 55.95 317 P **P** **20 29 37.0 -0.3**
comp=Z,21nm,0.6s,baz=115,slow=2.5,SNR=99
YBH Yreka Blue Hor 55.95 317 P **P** **20 29 36.7 -0.6**
YBH IAmb IAmb 20 29 37.8
comp=Z,24nm,0.6s
D08A Wollman Farm, 55.99 324 IAmb IAmb 20 29 39.4
comp=Z,25nm,0.8s
F07A Phinny Hill Vi 56.02 322 IAmb IAmb 20 29 39.6
comp=Z,46nm,0.6s
KMRM Mail Ridge 56.05 314 P **P** **20 29 39.6 +1.6**
I05D Terrebonne, OR 56.17 320 P **P** **20 29 40.4 +1.7**
baz=117,SNR=12
J04D Umpqua Nationa 56.18 318 P **P** **20 29 40.4 +1.4**
baz=116,SNR=19
E07A Sunnyside 56.30 323 IAmb IAmb 20 29 41.6
comp=Z,31nm,1.1s
G05D Wamic, OR 56.57 321 P **P** **20 29 43.6 +2.2**
baz=118,SNR=8.9
I04A Tendick Farm, 56.62 319 P **P** **20 29 42.6 +0.7**
baz=116,SNR=12
KRMB Red Mountain 56.69 316 IAmb IAmb 20 29 44.8
comp=Z,98nm,1.4s
L02E Cave Junction 56.73 317 P **P** **20 29 43.1 +0.4**
baz=114
B08A Colville Reser 56.90 325 P **P** **20 29 44.6 +0.8**
B08A IAmb IAmb 20 29 45.6
comp=Z,54nm,0.8s
F05D White Salmon 56.95 321 P **P** **20 29 45.5 +1.3**
baz=118
K02D Willamette Mer 56.99 317 P **P** **20 29 45.5 +0.9**
baz=114,SNR=11
LTY Liberty 57.13 323 IAmb IAmb 20 29 47.7
comp=Z,55nm,0.7s
H04D Lebanon 57.15 320 P **P** **20 29 46.1 +0.6**
baz=116
I03D Drain, OR 57.19 318 P **P** **20 29 46.6 +0.8**
baz=115,SNR=7.3
J01E Myrtle Point 57.36 318 P **P** **20 29 48.6 +1.6**
baz=114,SNR=6.5

F04A **Amboy** 57.57 321 IAmb IAmb 20 29 50.1
comp=Z,21nm,0.8s
LON **Longmire** 57.57 322 IAmb IAmb 20 29 50.6
comp=Z,25nm,0.8s
I02D **Swisshome** 57.69 319 P **P** **20 29 51.1 +1.8**
baz=114,SNR=5.3
G03D **McMinnville, O** 57.78 320 P **P** **20 29 51.5 +1.5**
baz=116
D05A **Enumclaw** 57.88 323 IAmb IAmb 20 29 52.6
comp=Z,57nm,0.9s
E04D **Cinebar** 57.94 322 P **P** **20 29 51.9 +0.8**
baz=117
NRS **Narsarsuaq** 58.02 15 P **P** **20 29 52.1 +0.9**
NRS IAmb IAmb 20 29 54.2
comp=Z,55nm,0.8s
NRS **Narsarsuaq** 58.02 15 *i* P **P** **20 29 52.2 +0.9**
comp=Z,52nm,0.7s
NRS **Narsarsuaq** 58.02 15 *i* P **P** **20 29 52.2 +0.9**
NRS IAmb IAmb 20 29 54.1
comp=Z,52nm,0.7s
B06A **Marblemount** 58.22 324 IAmb IAmb 20 29 55.9
comp=Z,22nm,0.7s
D04E **Lakebay** 58.35 322 P **P** **20 29 55.1 +1.3**
baz=117,SNR=6.5
B05A **Bryant** 58.46 324 P **P** **20 29 54.4 -0.2**
baz=118,SNR=6.2
D03D **Eldon** 58.71 323 P **P** **20 29 57.1 +0.7**
baz=117,SNR=6.2
A04D **Lummi Island** 59.03 324 P **P** **20 29 58.9 +0.4**
baz=118,SNR=5.7
NLWA **Neilton Lookou** 59.12 322 IAmb IAmb 20 30 02.0
comp=Z,80nm,1.2s
NUUK **Nuuk** 59.26 11 *i* P **P** **20 30 01.6 +1.8**
NUUK IAmb IAmb 20 30 02.1
comp=Z,72nm,0.9s
PGC **Sidney** 59.43 324 IAmb IAmb 20 30 03.5
comp=Z,74nm,1.4s
SFJD **Kangerlussuaq** 62.02 10 P **P** **20 30 17.7 -0.7**
SFJD IAmb IAmb 20 30 19.3
comp=Z,27nm,1.0s
YKA **Yellowknife Ar** 63.27 340 P **P** **20 30 27.6 +0.8**
comp=Z,78nm,0.6s,baz=130,slow=7.3,SNR=556
BBB **Bella Bella** 63.67 326 P **P** **20 30 30.8 +1.2**
comp=Z,41nm,0.8s,baz=102,slow=5.1,SNR=16
BBB LR LR 20 59 03.9
comp=Z,107nm,21.9s,baz=92,slow=36
BBB **Bella Bella** 63.67 326 IAmb IAmb 20 30 32.4
comp=Z,54nm,0.9s
ILULI **Ilulissat** 63.96 9 P **P** **20 30 31.5 +0.3**
ILULI IAmb IAmb 20 30 32.4
comp=Z,70nm,1.0s
ILULI **Ilulissat** 63.96 9 *i* P **P** **20 30 31.4 +0.2**
comp=Z,66nm,0.9s
ILULI **Ilulissat** 63.96 9 *i* P **P** **20 30 31.4 +0.2**
ILULI IAmb IAmb 20 30 32.2
comp=Z,66nm,0.9s
ICESG **Greenland Ices** 65.94 13⇑ *i* P **P** **20 30 44.7 +0.2**
ICESG IAmb IAmb 20 30 46.0
comp=Z,119nm,0.9s
DLBC **Dease Lake** 67.33 331 P **P** **20 30 54.9 +1.8**
comp=Z,25nm,0.5s,baz=105,slow=3.0,SNR=58
DLBC LR LR 21 02 51.0
comp=Z,194nm,21.2s,baz=112,slow=38
DLBC **Dease Lake** 67.33 331 IAmb IAmb 20 30 55.9
comp=Z,58nm,1.1s
TIC **Toumodi** 67.55 86 *e*P **P** **20 30 54.0 -1.3**
LIC **Lamto** 67.58 86 *e*P **P** **20 30 54.4 -1.0**
comp=Z,110nm,0.7s
WRAK **Wrangell Islan** 67.65 329 P **P** **20 30 56.0 +1.0**
DBIC **Dimbokro** 67.71 86 P **P** **20 30 55.3 -0.9**
comp=Z,25nm,0.6s,baz=268,slow=6.5,SNR=49
DBIC **Dimbokro** 67.71 86 P **P** **20 30 55.3 -0.9**
DBIC IAmb IAmb 20 30 56.2
comp=Z,31nm,0.8s
DBIC pP **pP** **20 31 35.1 +0.1**
KIC **Kosan Boka** 67.85 86 *e*P **P** **20 30 56.1 -1.0**
comp=Z,112nm,0.8s
KOWA **Kowa** 68.11 77 P **P** **20 30 58.2 -0.5**
KOWA pP **20 31 39.3 +1.9**
BORG **Borgarnes** 68.27 21 P **P** **20 31 00.4 +1.6**
RES **Resolute Bay** 68.97 354 P **P** **20 31 03.5 +0.6**
comp=Z,10nm,0.8s,baz=182,slow=9.6,SNR=20
SUMG **Summit** 68.98 11 P **P** **20 31 04.5 +1.0**
SUMG **Summit** 68.98 11⇑ *i* P **P** **20 31 04.3 +0.8**
comp=Z,391nm,0.8s
SUMG **Summit** 68.98 11⇑ *i* P **P** **20 31 04.4 +0.8**
SUMG IAmb IAmb 20 31 05.2
comp=Z,392nm,0.8s
PAB **San Pablo** 69.32 50 P **P** **20 31 05.0 -0.9**
JIS **Juneau Island** 69.37 330 IAmb IAmb 20 31 08.3
comp=Z,36nm,1.0s
ESDC **Sonseca Array** 69.63 50 P **P** **20 31 06.6 -1.2**
comp=Z,0.8nm,0.6s,baz=267,slow=6.0,SNR=13
ESDC PKP2bc 20 59 11.9
comp=Z,1.5nm,1.0s,baz=60,slow=2.2,SNR=8.4
ESDC **Sonseca Array** 69.63 50 P **P** **20 31 06.7 -1.1**
TULEG **Thule** 69.71 1 P **P** **20 31 08.3 +0.9**
TULEG IAmb IAmb 20 31 09.3
comp=Z,35nm,0.8s
TULEG **Thule** 69.71 1⇑ *i* P **P** **20 31 08.1 +0.6**
TULEG IAmb IAmb 20 31 09.4
comp=Z,32nm,0.8s
BESE **Bessie Mountai** 69.71 331 IAmb IAmb 20 31 10.6
comp=Z,46nm,1.1s
SKAG **Skagway** 70.26 331 IAmb IAmb 20 31 13.8
comp=Z,31nm,0.8s
C36M **Paulatuk** 70.60 343 P **P** **20 31 12.2 -0.7**
baz=125,SNR=6.0
DSB **Dublin** 70.72 36 P **P** **20 31 11.9 -2.1**
SCO **Scoresbysund** 71.30 16 P **P** **20 31 18.3 +1.1**
BCPM **Bancas Point** 72.48 331 IAmb IAmb 20 31 27.6
comp=Z,66nm,1.0s
PCA **Pinnacle** 72.82 331 IAmb IAmb 20 31 29.6
comp=Z,42nm,0.9s
ESK **Eskdalemuir** 73.02 34 P **P** **20 31 27.6 -0.1**
INK **Inuvik** 73.03 340 P **P** **20 31 28.4 +0.9**
comp=Z,32nm,0.6s,baz=99,slow=6.0,SNR=138
INK **Inuvik** 73.03 340 IAmb IAmb 20 31 29.4
comp=Z,37nm,0.7s
TABL **Table Mountain** 73.34 331 IAmb IAmb 20 31 32.7
comp=Z,48nm,0.9s
CTGM **Chitina Glacie** 73.58 332 IAmb IAmb 20 31 34.3
comp=Z,46nm,0.8s
YAH **Yahtse** 73.61 331 IAmb IAmb 20 31 34.8
comp=Z,50nm,1.0s
MESA **MESA** 73.66 331 IAmb IAmb 20 31 34.8
comp=Z,35nm,0.8s
TOA0 **Torodi Ar. Sit** 73.71 78 P **P** **20 31 31.3 -1.3**
TORD **Torodi Ar. Bea** 73.71 78 P **P** **20 31 31.2 -1.3**
comp=Z,2.0nm,0.6s,baz=285,slow=6.7,SNR=16
TORD pP **pP** **20 32 12.3 +0.2**
comp=Z,2.7nm,0.7s,baz=279,slow=5.4,SNR=4.9
BARN **Barnard Glacie** 73.76 332 IAmb IAmb 20 31 35.3
comp=Z,36nm,0.9s
DBG **Daneborg** 73.94 13 *i* P **P** **20 31 33.3 +0.6**
DBG IAmb IAmb 20 31 34.5
comp=Z,27nm,1.1s
ISLE **Juniper Island** 73.96 331 IAmb IAmb 20 31 36.1
comp=Z,38nm,1.0s
BALM **Baldy** 74.07 332 IAmb IAmb 20 31 36.9
comp=Z,36nm,0.9s
TGL **Tana Glacier** 74.23 331 IAmb IAmb 20 31 37.7
comp=Z,49nm,0.9s
BCAR **Beaver Creek A** 74.37 334 P **P** **20 31 37.3 +1.8**
CRQM **Cirque** 74.38 331 IAmb IAmb 20 31 38.4
comp=Z,33nm,0.9s
MCARA **McCarthy VSAT** 74.48 332 IAmb IAmb 20 31 39.5
comp=Z,64nm,1.1s
EGAK **Eagle** 74.59 336 IAmb IAmb 20 31 39.2
comp=Z,88nm,1.4s
VRDI **Verde Repeater** 74.64 332 IAmb IAmb 20 31 40.1
comp=Z,31nm,0.8s
HMT **Hamilton** 74.82 331 IAmb IAmb 20 31 41.1
comp=Z,50nm,0.8s
GLB **Gilahina Butte** 74.86 332 IAmb IAmb 20 31 41.4
comp=Z,59nm,1.2s
RAGM **Ragged Mountai** 75.03 331 IAmb IAmb 20 31 42.4
comp=Z,123nm,1.2s
L26K **Log Cabin Wild** 75.04 334 P **P** **20 31 41.2 +1.9**
baz=105,SNR=52
CLF **Chambon-Foret** 75.17 42 P **P** **20 31 39.7 -0.6**
N25K **Chitina, Valde** 75.27 332 P **P** **20 31 42.4 +1.6**
baz=103,SNR=20
DOT **Dot Lake** 75.51 334 IAmb IAmb 20 31 44.7
comp=Z,76nm,0.7s
SCRK **Sand Creek** 75.56 335 P **P** **20 31 43.9 +1.5**
baz=104,SNR=48

DAG **Danmarks Havn** 75.65 11⇑ *i* P **P** **20 31 42.5 0.0**
comp=Z,35nm,0.8s
DAG **Danmarks Havn** 75.65 11⇑ *i* P **P** **20 31 42.5 0.0**
DAG IAmb IAmb 20 31 43.4
comp=Z,35nm,0.8s
Q23K **Middleton Isla** 75.66 330 P **P** **20 31 44.5 +1.7**
baz=101
RIDG **Independent Ri** 75.87 334 IAmb IAmb 20 31 46.8
comp=Z,89nm,1.0s
PAX **Pason** 75.97 333 IAmb IAmb 20 31 47.0
comp=Z,49nm,1.0s
FID **Port Fidalgo** 75.98 331 IAmb IAmb 20 31 47.0
comp=Z,41nm,1.1s
M24K **Tolsona, Glenn** 76.11 332 P **P** **20 31 47.0 +1.6**
baz=102,SNR=27
M24K **Tolsona, Glenn** 76.11 332 IAmb IAmb 20 31 48.3
comp=Z,122nm,1.1s
BMAR **Burnt Mountain** 76.67 338 P **P** **20 31 50.0 +1.5**
DOU **Dourbes** 76.90 40 P **P** **20 31 50.4 +0.3**
HDA **Harding Lake** 76.92 335 P **P** **20 31 50.8 +0.9**
baz=102,SNR=40
HDA **Harding Lake** 76.92 335 IAmb IAmb 20 31 51.8
comp=Z,49nm,0.8s
TAM **Tamanrasset** 76.92 68 P **P** **20 31 50.5 -0.5**
TAM **pP** **20 32 30.9 +0.1**
ILAR **Eielson Array** 76.97 335 P **P** **20 31 51.0 +0.9**
comp=Z,14nm,0.8s,baz=110,slow=4.4,SNR=141
ILAR pP **pP** **20 32 31.2 +2.0**
comp=Z,3.6nm,0.7s,baz=101,slow=4.5,SNR=2.2
ILAR PP **PP** **20 34 43.5 -1.9**
comp=Z,2.1nm,0.7s,baz=108,slow=6.9,SNR=5.2
ILAR **Eielson Array** 76.97 335 P **P** **20 31 50.9 +0.7**
KNK **Knik Glacier** 77.04 331 IAmb IAmb 20 31 53.0
comp=Z,61nm,0.8s
SML **Sawmill** 77.05 332 IAmb IAmb 20 31 53.1
comp=Z,71nm,1.0s
POKR **Poker Plat Res** 77.27 335 P **P** **20 31 52.9 +1.1**
baz=101,SNR=14
SEW **Seward** 77.32 330 IAmb IAmb 20 31 53.8
comp=Z,44nm,1.1s
PMR **Palmer** 77.39 332 IAmb IAmb 20 31 54.5
comp=Z,38nm,0.8s
COLA **College** 77.39 335 P **P** **20 31 53.2 +0.7**
TCOL **CIGO, UAF Yank** 77.40 335 P **P** **20 31 53.3 +0.8**
baz=101
O22K **Cooper Landing** 77.51 330 P **P** **20 31 54.0 +0.7**
baz=98
MDM **Murphy Dome** 77.57 335 IAmb IAmb 20 31 55.7
comp=Z,63nm,1.2s
RC01 **Rabbit Creek A** 77.60 331 P **P** **20 31 54.9 +1.2**
baz=98,SNR=14
MCK **McKinley** 77.65 334 P **P** **20 31 55.2 +1.2**
baz=100,SNR=18
NEA2 **Nenana** 77.86 335 P **P** **20 31 56.0 +0.9**
baz=100,SNR=40
WLF **Walferdange** 77.87 41 P **P** **20 31 55.4 -0.1**
WLF **Walferdange** 77.87 41 P **P** **20 31 55.4 -0.1**
BWN **Browne** 77.96 334 IAmb IAmb 20 31 57.6
comp=Z,80nm,1.0s
BRLK **Bradley Lake** 77.99 330 IAmb IAmb 20 31 57.8
comp=Z,48nm,0.9s
CUT **Chulitna** 78.05 332 P **P** **20 31 57.2 +1.1**
baz=98,SNR=15
I23K **Minto, Yukon-K** 78.07 335 P **P** **20 31 57.5 +1.2**
baz=100,SNR=23
CNPM **China Poot** 78.14 329 IAmb IAmb 20 31 58.6
comp=Z,37nm,0.9s
TRF **Throfare Moun** 78.21 333 IAmb IAmb 20 31 59.5
comp=Z,35nm,0.8s
SENIN **Lac Senin/Sane** 78.47 44 P **P** **20 31 58.7 -0.5**
KTH **Kantishna Hill** 78.50 333 IAmb IAmb 20 32 00.8
comp=Z,48nm,1.0s
SKT **Skwentna** 78.58 332 IAmb IAmb 20 32 01.2
comp=Z,48nm,0.8s
BPAW **Bear Paw Mtn.** 78.61 334 IAmb IAmb 20 32 01.3
comp=Z,42nm,0.9s
MLY **Manley** 78.63 335 P **P** **20 32 00.4 +1.0**
baz=98,SNR=37
KDAK **Kodiak Island** 78.65 328 P **P** **20 32 00.1 +0.5**
COLD **Coldfoot** 78.75 337 P **P** **20 32 01.7 +1.7**
baz=99,SNR=18
TOLK **Toolik Lake Re** 78.76 339 P **P** **20 32 01.2 +1.1**
baz=100,SNR=10
OHAK **Old Harbor** 78.98 327 IAmb IAmb 20 32 02.9
comp=Z,41nm,0.8s
BFO **Black Forest** 79.24 42 P **P** **20 32 02.5 -0.6**
PPTF **Pamatai, Papee** 79.27 251 P **P** **20 32 03.6 -0.2**
PPTF IAmb IAmb 20 32 06.3
comp=Z,111nm,1.3s
TUE **Stuetta** 79.89 44 P **P** **20 32 05.9 -1.0**
VSL **Villasalto** 79.90 51 P **P** **20 32 06.1 -0.6**
KEST **Kesra** 79.93 55 P **P** **20 32 06.5 -0.6**
IMAR **Indian Mountai** 80.00 336 P **P** **20 32 07.5 +0.8**
MUD **Monsted U'grnd** 80.08 34 *i* P **P** **20 32 07.6 +0.3**
comp=Z,8.4nm,0.5s
MUD **Monsted U'grnd** 80.08 34 *i* P **P** **20 32 07.7 +0.3**
MUD IAmb IAmb 20 32 08.9
comp=Z,8.4nm,0.5s
DAVA **Damuels** 80.26 43 *e*P **P** **20 32 08.3 -0.4**
comp=Z,12nm,0.9s
SVW2 **Sparrevohn** 80.43 331 IAmb IAmb 20 32 10.3
comp=Z,46nm,0.8s
FETA **Feichten** 80.84 44 *e*P **P** **20 32 12.1 +0.2**
comp=Z,5.8nm,0.8s
MOTA **Moosalm** 81.09 43 *e*P **P** **20 32 12.5 -0.6**
comp=Z,4.4nm,0.7s
NBO00 **NORSAR Array S** 81.10 29 P **P** **20 32 13.1 +0.4**
NC204 **NORSAR Array S** 81.10 29 P **P** **20 32 13.6 +0.8**
SQTA **Sankt Quirin** 81.17 43 *e*P **P** **20 32 13.7 +0.2**
comp=Z,3.3nm,0.8s
NB2 **NORSAR Subarra** 81.31 29 P **P** **20 32 14.4 +0.5**
comp=Z,3.2nm,0.6s,baz=268,slow=5.3
NOA **NORSAR Array B** 81.31 29 P **P** **20 32 14.6 +0.7**
comp=Z,7.0nm,0.8s,baz=268,slow=5.4,SNR=24
A21K **Barrow** 81.50 341 P **P** **20 32 16.0 +1.4**
baz=94,SNR=14
A21K **Barrow** 81.50 341 IAmb IAmb 20 32 17.1
comp=Z,66nm,0.8s
CHGN **Chignik** 81.77 326 IAmb IAmb 20 32 17.5
comp=Z,71nm,0.9s
NKC **Novy Kostel** 81.95 40 *e*P **P** **20 32 17.6 +0.2**
ABTA **Abfaltersbach** 82.07 44 *e*P **P** **20 32 17.7 -0.5**
comp=Z,3.4nm,0.7s
CLL **Collm** 82.28 39 *i* P **P** **20 32 19.5 +0.4**
CLL *e*pP **pP** **20 33 00.0 +0.5**
KBS **Kingsbay** 82.39 11 P **P** **20 32 21.1 +1.9**
KBS IAmb IAmb 20 32 22.2
comp=Z,32nm,0.9s
CNBA **Chernabura Isl** 82.45 324 IAmb IAmb 20 32 21.6
comp=Z,20nm,0.6s
KBA **Koelnbreinsper** 82.63 43 *e*P **P** **20 32 21.6 +0.4**
comp=Z,6.6nm,0.9s
KHC **Kasperske Hory** 82.71 41 *e*P **P** **20 32 21.9 +0.5**
GERES **GERESS Array B** 82.80 42 P **P** **20 32 21.9 -0.1**
comp=Z,3.6nm,0.6s,baz=256,slow=2.8,SNR=16
MYKA **Terra Mystica** 82.85 44 *e*P **P** **20 32 22.0 -0.2**
comp=Z,8.0nm,0.8s
MOA **Molln** 83.22 43 *e*P **P** **20 32 24.6 +0.5**
comp=Z,4.3nm,0.7s
PRU **Pruhonice** 83.30 40 *e*P **P** **20 32 24.8 +0.4**
OBKA **Obir** 83.48 44 *e*P **P** **20 32 25.4 -0.1**
comp=Z,4.5nm,1.1s
RDOG **Red Dog Mine** 83.65 338 IAmb IAmb 20 32 27.6
comp=Z,25nm,0.7s
SOKA **Soboth** 83.80 44 *e*P **P** **20 32 26.1 -1.0**
comp=Z,1.1nm,0.6s
ARSA **Arzberg** 84.10 43 *e*P **P** **20 32 28.5 -0.1**
comp=Z,2.3nm,0.8s
UPC **Upice** 84.22 40 *e*P **P** **20 32 29.9 +0.8**
CONA **Cold Observa** 84.29 43 *e*P **P** **20 32 30.0 +0.4**
comp=Z,5.8nm,0.8s
DPC **Dobruska-Polom** 84.43 40 *e*P **P** **20 32 30.0 -0.2**
KRLC **Kraliky** 84.74 40 *e*P **P** **20 32 31.8 0.0**
MODS **Modra-Piesok** 85.20 42 *e*P **P** **20 32 34.0 0.0**
ARCES **ARCESS Array B** 86.66 20 P **P** **20 32 41.1 +0.3**
comp=Z,9.0nm,0.7s,baz=264,slow=3.2,SNR=21
VNA3 **Neumayer Olymp** 88.17 163 P **P** **20 32 46.8 -1.0**
VNA1 **Neumayer--Stat** 88.31 162 P **P** **20 32 48.2 -0.3**
FINES **FINESS Array B** 88.42 28 P **P** **20 32 49.4 +0.1**
comp=Z,7.5nm,0.9s,baz=163,slow=2.0,SNR=8.0
VNA2 **Neumayer--Watz** 88.69 163 P **P** **20 32 49.6 -0.7**
baz=300,slow=4.8
SNAA **Sanae** 90.34 163 P **P** **20 32 57.3 -0.8**
SNAA **Sanae** 90.34 163 P **P** **20 32 57.4 -0.7**
BURAR **Bucovina Array** 90.58 42 P **P** **20 33 00.3 +0.5**
BILL **Bilibino** 94.64 341 P **P** **20 33 19.2 +1.3**

BILL IAmb IAmb 20 33 20.2
comp=Z,25nm,1.2s
QSPA **South Pole Qui** 96.84 180 P **P** **20 33 28.0 0.0**
SEY **Seymchan** 102.33 340 P **Pdif** **20 33 51.7 -0.9**
comp=Z,5.7nm,1.1s,baz=36,slow=21,SNR=5.3
SYO **Syowa Base** 104.37 160‖ *e*PKiKP **PKiKP** **20 38 15.2 -1.7**
YAK **Yakutsk** 109.12 349 PP **PP** **20 38 51.3 -4.7**
comp=Z,3.0nm,0.4s,baz=242,slow=1.7,SNR=4.3
ZALV **Zalesovo Beam** 116.66 14 PKP **PKPdf** **20 38 40.6 0.0**
comp=Z,4.3nm,0.5s,baz=318,slow=2.0,SNR=17
ZALV SKP 20 42 02.6
comp=Z,1.6nm,0.6s,baz=354,slow=1.5,SNR=5.4
ZALV **Zalesovo Beam** 116.66 14 **PKiKP** **20 38 41.1 +0.5**
KURK **Kurchatov** 117.69 20 **PKiKP** **20 38 43.4 +0.6**
KLR **Kul'dur** 120.10 341 PKP **PKiKP** **20 38 48.2 +0.7**
comp=Z,1.8nm,0.6s,baz=58,slow=1.7,SNR=6.3
MAKZ **Makanchi** 122.19 20 PKPdf **PKPdf** **20 38 51.4 -0.2**
MKAR **Makanchi Array** 122.31 20 PKP **PKPdf** **20 38 51.6 -0.2**
comp=Z,2.4nm,0.5s,baz=314,slow=2.5,SNR=34
MKAR SKP 20 42 13.1
comp=Z,1.3nm,0.8s,baz=328,slow=1.9,SNR=4.1
USRK **Ussuriysk Ar.** 124.39 338 PKP **PKiKP** **20 38 56.7 +0.6**
comp=Z,3.6nm,0.7s,baz=307,slow=3.4,SNR=7.1
ULN **Ulaanbaatar** 125.55 360 PKPdf **PKiKP** **20 38 58.6 0.0**
SONM **Songino Array** 125.57 0 PKP **PKiKP** **20 38 58.9 +0.3**
comp=Z,3.6nm,0.5s,baz=322,slow=0.8,SNR=20
KSH **Kashi** 125.74 29 *e*PKP **PKPdf** **20 38 55.5 -3.2**
WMQ **Urumqi** 126.67 17 *e*PKP **PKPdf** **20 38 59.3 -1.0**
WMQ LR LR
comp=Z,2μm,29.1s
WMQ LR LR
comp=Z,2μm,29.2s
WMQ LR LR
comp=Z,220nm,29.3s
MJAR **Matsushiro Arr** 127.83 328 PKP **PKPdf** **20 39 02.8 +0.2**
comp=Z,2.3nm,0.7s,baz=296,slow=1.2,SNR=4.4
KSRS **Korea Array** 131.77 337 PKP **PKPdf** **20 39 10.5 +0.5**
comp=Z,2.0nm,0.6s,baz=5.9,slow=2.3,SNR=6.0
KSRS PP **PP** **20 41 31.1 +0.3**
comp=Z,2.9nm,0.9s,baz=6.0,slow=5.4,SNR=5.7
KSRS SKPbc **SKPab** **20 42 21.8 -0.2**
comp=Z,1.9nm,0.7s,baz=25,slow=4.6,SNR=4.5
HHC **Hu-ho-hao-te** 132.37 355 *e*PKP **PKPdf** **20 39 09.5 -1.8**
GTA **Gaotai** 133.53 8⇑ PKP **PKiKP** **20 39 14.5 -0.3**
GTA SKS **SKSdf** **20 46 08.3 -1.9**
GTA LR LR
comp=Z,97nm,18.9s
GTA LR LR
comp=Z,110nm,17.5s
GTA LR LR
comp=Z,140nm,17.4s
LZH **Lanzhou** 137.22 4 *e*PKP **PKiKP** **20 39 22.0 -0.4**
LZH sPKP 20 40 19.3
STKA **Stephens Creek** 139.17 228 PKhKP PKPpre 20 39 18.5
comp=Z,1.4nm,0.5s,baz=107,slow=4.9,SNR=2.6
STKA PKP **PKPdf** **20 39 24.4 +0.3**
comp=Z,4.9nm,0.6s,baz=48,slow=1.2,SNR=11
STKA pPKP pPKPdf 20 40 04.2 -2.1
comp=Z,4.2nm,0.8s,baz=109,slow=3.9,SNR=4.0
STKA SKPbc **SKPbc** **20 42 44.2 -0.3**
comp=Z,2.9nm,0.8s,baz=48,slow=2.4,SNR=4.7
STKA **Stephens Creek** 139.17 228 PKPdf **PKPdf** **20 39 24.7 +0.7**
XAN **Xi'an** 139.31 357 PKP **PKPdf** **20 39 25.3 +1.0**
XAN LR LR
comp=Z,140nm,18.3s
XAN LR LR
comp=Z,140nm,16.1s
XAN LR LR
comp=Z,150nm,17.2s
NJ2 **Nanjing** 139.69 344 *e*PKP **PKPdf** **20 39 24.0 -0.9**
CD2 **Chengdu** 142.36 4 *e*PKP **PKPdf** **20 39 31.0 +1.1**
COEN **Coen** 143.66 256 PKPdf PKPbc 20 39 30.9 +0.6
JAY **Jayapura** 146.05 276 PKPbc **PKPdf** **20 39 36.3 -0.4**
comp=Z,4.5nm,0.4s,baz=135,slow=5.7,SNR=4.4
SSLB **Suanglung** 146.62 336 **PKPbc** **20 39 39.9 +0.8**
GYA **Guiyang** 146.91 0 PKPbc **PKPbc** **20 39 40.5 +0.5**
KMI **Kunming** 147.99 7‖ *e*PKPbc **PKPbc** **20 39 43.5 +0.4**
KMI AMB AMB
comp=Z,78nm,3.5s
KMI LR LR
comp=Z,160nm,21.2s
KMI LR LR
comp=Z,260nm,21.7s
KMI LR LR
comp=Z,300nm,23.5s
FORT **Forrest** 149.00 217 PKPdf **PKPdf** **20 39 40.7 -0.4**
FORT **PKPbc** **20 39 45.2 -0.1**
AS31 **Alice Springs** 149.13 234 PKPdf **PKPdf** **20 39 41.6 +0.1**
AS31 PKPbc **PKPbc** **20 39 45.7 -0.2**
ASAR **Alice Springs** 149.13 234 PKP **PKPdf** **20 39 42.2 +0.7**
comp=Z,25nm,0.5s,baz=113,slow=3.8,SNR=107
ASAR PKPbc **PKPbc** **20 39 45.5 -0.3**
comp=Z,28nm,0.7s,baz=118,slow=2.2,SNR=158
ASAR pPKPbc **pPKPdf** **20 40 25.6 +1.6**
comp=Z,9.3nm,0.6s,baz=120,slow=3.5,SNR=3.1
ASAR PP PP 20 43 08.7 -10
comp=Z,2.4nm,0.9s,baz=120,slow=3.3,SNR=3.0
ASAR **Alice Springs** 149.13 234 PKPdf **PKPdf** **20 39 41.4 -0.2**
ASAR PKPbc **PKPbc** **20 39 45.7 -0.2**
ASAR **pPKPbc** **20 40 27.0 -1.0**
WRAB **Tennant Creek** 150.35 241 **PKPdf** **20 39 42.0 -1.6**
WRAB PKPbc **PKPbc** **20 39 49.1 +0.2**
WRAB PKPab **PKPab** **20 39 55.3 -0.5**
WRA **Warramunga Arr** 150.36 241 PKP **PKPdf** **20 39 44.1 +0.6**
comp=Z,29nm,0.5s,baz=107,slow=2.7,SNR=21
WRA PKPbc **PKPbc** **20 39 48.9 -0.1**
comp=Z,29nm,0.5s,baz=109,slow=2.7,SNR=205
WRA pPKPbc **pPKPbc** **20 40 30.1 -0.9**
comp=Z,17nm,0.6s,baz=112,slow=2.3,SNR=3.8
PAYA **Payao** 153.07 15 P **PKPdf** **20 39 49.1 +1.5**
comp=Z,6μmcomp=Z,763nm,0.8s
CM33 **Chiang Mai Arr** 153.34 17 P **PKPdf** **20 39 48.0 0.0**
CHTO **Chiang Mai** 153.34 17 PKPdf **PKPdf** **20 39 47.1 -1.0**
CHTO **PKiKP** **20 39 56.1 +0.3**
CMMT **Chiang Mai** 153.34 17 P **PKPdf** **20 39 49.1 +1.0**
comp=Z,250nmcomp=Z,7.7nm,1.1s
CM34 **Chiang Mai Arr** 153.37 17 P **PKPdf** **20 39 49.0 +0.9**
CM32 **Chiang Mai Arr** 153.47 17 P **PKPdf** **20 39 49.0 +0.8**
CM35 **Chiang Mai Arr** 153.53 17 P **PKPdf** **20 39 49.0 +0.7**
MHMT **Maesarieng** 153.62 19 P **PKPdf** **20 39 50.5 +2.1**
comp=Z,46nm,0.8s
CM36 **Chiang Mai Arr** 153.66 17 P **PKPdf** **20 39 49.0 +0.5**
CM15 **Chiang Mai Arr** 153.68 17 P **PKPdf** **20 39 50.0 +1.5**
comp=Z,120nmcomp=Z,15nm,0.8s
CM31 **Chiang Mai Arr** 153.68 17 P **PKPdf** **20 39 50.3 +1.8**
comp=Z,4μmcomp=Z,486nm,1.1s
CMAR **Chiang Mai Arr** 153.68 17 PKP **PKPdf** **20 39 49.6 +1.1**
comp=Z,3.9nm,0.9s,baz=312,slow=2.0,SNR=35
CMAR PKPbc **PKiKP** **20 39 57.1 +0.7**
comp=Z,11nm,0.8s,baz=319,slow=2.9,SNR=39
CMAR PKPab **PKPab** **20 40 10.2 +0.7**
comp=Z,4.3nm,0.7s,baz=330,slow=5.0,SNR=11
CMAR **Chiang Mai Arr** 153.68 17 **PKPdf** **20 39 48.7 +0.2**
CM02 **Chiang Mai Arr** 153.70 17 P **PKPdf** **20 39 50.0 +1.4**
comp=Z,154nmcomp=Z,19nm,1.0s
CM13 **Chiang Mai Arr** 153.70 17 P **PKPdf** **20 39 50.0 +1.4**
comp=Z,137nmcomp=Z,17nm,1.1s
CM09 **Chiang Mai Arr** 153.71 17 P **PKPdf** **20 39 50.0 +1.4**
comp=Z,170nmcomp=Z,19nm,1.1s
CM01 **Chiang Mai Arr** 153.72 17 P **PKPdf** **20 39 50.0 +1.4**
comp=Z,168nmcomp=Z,20nm,0.9s
CM05 **Chiang Mai Arr** 153.73 17 P **PKPdf** **20 39 50.0 +1.4**
comp=Z,146nmcomp=Z,18nm,0.9s
CM04 **Chiang Mai Arr** 153.74 17 P **PKPdf** **20 39 50.5 +1.8**
comp=Z,196nmcomp=Z,23nm,0.9s
LAMP **Lampang** 153.81 16 P **PKPdf** **20 39 50.8 +2.1**
comp=Z,31nm,1.1s
PHRA **Phrae** 153.99 15 P **PKPdf** **20 39 50.0 +1.1**
comp=Z,68μmcomp=Z,130nm,0.9s
QIZ **Qiongzhong** 154.15 354 PKPbc **PKPdf** **20 39 45.3 -3.9**
QIZ PP **PP** **20 43 44.3 -0.8**
QIZ SS SS 21 03 10.0 +0.1
QIZ AMB AMB
comp=Z,86nm,12.6s
SIJI **Sorong** 154.99 283 PKPbc PKPdf 20 39 59.9 +9.4
comp=Z,2.0nm,0.6s,baz=17,slow=7.3,SNR=3.8
SIJI PKPab **PKPab** **20 40 16.4 +0.9**
comp=Z,3.8nm,0.6s,baz=131,slow=3.2,SNR=4.1
UTHA **Uthaitani** 156.56 18 P **PKPab** **20 40 22.9 +1.1**
comp=Z,26nm,0.9s
CHAI **Chaiyaphum** 156.90 12 P **PKPab** **20 40 24.1 +0.8**
TOLI2 **Tolitoli** 164.06 299 PKPdf **PKPdf** **20 39 59.8 -1.1**
TOLI2 PKPab **PKPab** **20 40 55.2 +0.3**
SBUM **Sibu** 169.37 330 PKPab **PKPab** **20 41 19.0 +0.9**

*IDC **25** 20:33:31.3±0.7,21°.81N×143°.57E, h0km,mb4.1/18, mb1 4.2/19,mb1mx4.1/51,mbtmp4.1/19,ML2.8/1,MS3.1/3, Ms1 3.1/3,ms1mx2.6/58,Error ellipse: s-maj=25.7km s-min=16.7km az=82.0*
*NEIC **25** 20:33:38.3±2.0,21°.81N±0°.08×143°.5E±0°.1, h47km±6km, mb5.0/37,Error ellipse: s-maj=18.4km s-min=11.5km az=80.0*

ISC 25 20:33:37.0±0.5,21°.81N±0°.07×143°.5E±0°.1, h35km, n71, σ0s92/61, mb4.4/31, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.39**	**348**	Pn	**Pn**	**20 34 55.1**	**+0.1**
JCJ				Sn	**Sn**	**20 35 57.9**	**+2.0**
MJAR	**Matsushiro Arr**	**15.38**	**344**	Pn	**Pn**	**20 37 10.8**	**-0.6**
	0.0nm,0.3s,baz=160,slow=12,SNR=1.8						
MJAR				LR	LR	20 42 52.3	
	comp=Z,75nm,18.5s,baz=125,slow=36						
JMM	**Marumori**	**16.17**	**352**	Pn	**Pn**	**20 37 20.5**	**-1.0**
JMM				IAmb	IAmb	20 37 24.4	
	comp=Z,171nm,1.8s						
KSRS	**Korea Array**	**20.59**	**323**	P	Pn	20 38 14.5	-0.8
	comp=Z,1.6nm,0.7s,baz=150,slow=10.0,SNR=5.6						
KSRS				LR	LR	20 45 56.7	
	comp=Z,28nm,19.9s,baz=90,slow=36						
H11N1	**WAKE ISLAND Hy**	**22.00**	**91**	T	T	21 01 03.3	
	baz=279,slow=75,SNR=20						
H11N2	**WAKE ISLAND Hy**	**22.01**	**91**	T	T	21 01 05.0	
	baz=279,slow=75,SNR=25						
H11N3	**WAKE ISLAND Hy**	**22.02**	**91**	T	T	21 01 04.4	
	baz=279,slow=75,SNR=16						
H11S3	**WAKE ISLAND Hy**	**22.05**	**94**	T	T	21 01 04.7	
	baz=283,slow=74,SNR=53						
H11S1	**WAKE ISLAND Hy**	**22.05**	**94**	T	T	21 01 02.1	
	baz=283,slow=74,SNR=69						
H11S2	**WAKE ISLAND Hy**	**22.06**	**94**	T	T	21 01 03.0	
	baz=283,slow=74,SNR=29						
JAY	**Jayapura**	**24.32**	**187**	P	**P**	**20 38 51.6**	**0.0**
	comp=Z,2.7nm,0.5s,baz=12,slow=14,SNR=3.7						
KLR	**Kul'dur**	**28.91**	**344**	P	**P**	**20 39 33.1**	**+0.6**
	comp=Z,6.7nm,0.8s,baz=142,slow=10.0,SNR=12						
QIZ	**Qiongzhong**	**31.59**	**271**	P	**P**	**20 39 58.1**	**+1.5**
QIZ				IAmb	IAmb	20 40 13.5	
	comp=Z,26nm,1.2s						
SAUI	**Saumlaki**	**31.92**	**203**	P	**P**	**20 40 01.7**	**+2.3**
PEA0B	**Petropavlovsk-**	**33.10**	**16**	P	**P**	**20 40 10.3**	**+0.8**
PETK	**Petropavlovsk-**	**33.10**	**16**	LR	LR	20 50 09.8	
	comp=Z,65nm,21.5s,baz=117,slow=30						
SONM	**Songino Array**	**39.42**	**320**	P	**P**	**20 41 04.3**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=133,slow=11,SNR=2.5						
SONM	**Songino Array**	**39.42**	**320**	IAmb	IAmb	20 41 06.5	
	comp=Z,1.7nm,1.0s						
YAK	**Yakutsk**	**41.30**	**350**	P	**P**	**20 41 17.5**	**-1.4**
	comp=Z,2.5nm,0.6s,baz=173,slow=3.2,SNR=4.6						
YAK	**Yakutsk**	**41.30**	**350**	IAmb	IAmb	20 41 19.5	
	comp=Z,7.1nm,0.7s						
ASAR	**Alice Springs**	**46.15**	**192**	P	**P**	**20 41 57.8**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=12,slow=9.6,SNR=1.9						
SDPT	**Sand Point**	**53.17**	**36**	P	**P**	**20 42 51.6**	**+0.3**
STKA	**Stephens Creek**	**53.41**	**182**	P	**P**	**20 42 52.3**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=8.8,slow=8.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**54.29**	**322**	P	**P**	**20 42 58.6**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=93,slow=7.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**54.29**	**322**	P	**P**	**20 42 59.0**	**-0.6**
CHGN	**Chignik**	**54.54**	**36**	P	**P**	**20 43 00.7**	**-0.6**
CHGN				IAmb	IAmb	20 43 11.1	
	comp=Z,23nm,1.1s						
MKAR	**Makanchi Array**	**54.82**	**313**	P	**P**	**20 43 04.2**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=102,slow=11,SNR=4.2						
SVW2	**Sparrevohn**	**57.18**	**30**	P	**P**	**20 43 21.5**	**+1.3**
SVW2				IAmb	IAmb	20 43 47.2	
	comp=Z,28nm,2.0s						
OHAK	**Old Harbor**	**57.49**	**35**	P	**P**	**20 43 22.7**	**+0.2**
OHAK				IAmb	IAmb	20 43 51.4	
	comp=Z,15nm,1.4s						
NRIK	**Noril'sk**	**57.98**	**340**	P	**P**	**20 43 25.2**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=192,slow=19,SNR=1.9						
CNPM	**China Poot**	**58.96**	**33**	P	**P**	**20 43 32.6**	**-0.1**
CNPM				IAmb	IAmb	20 43 36.5	
	comp=Z,21nm,1.2s						
PPLA	**Purkeypile**	**59.16**	**29**	P	**P**	**20 43 35.2**	**+1.0**
BRLK	**Bradley Lake**	**59.17**	**32**	P	**P**	**20 43 33.6**	**-0.6**
SKT	**Skwentna**	**59.27**	**30**	P	**P**	**20 43 34.4**	**-0.5**
IMAR	**Indian Mountai**	**59.28**	**25**	P	**P**	**20 43 35.6**	**+0.9**
KNK	**Knik Glacier**	**60.62**	**31**	P	**P**	**20 43 43.8**	**-0.3**
KNK				IAmb	IAmb	20 43 59.5	
	comp=Z,15nm,1.5s						
SML	**Sawmill**	**60.73**	**30**	P	**P**	**20 43 44.7**	**-0.2**
SML				IAmb	IAmb	20 43 46.4	
	comp=Z,8.2nm,0.9s						
NIUE	**Niue**	**61.07**	**128**	P	**P**	**20 43 49.4**	**+1.7**
GLI	**Glacier Island**	**61.20**	**32**	P	**P**	**20 43 47.9**	**-0.1**
GLI				IAmb	IAmb	20 44 06.3	
	comp=Z,24nm,1.4s						
SCM	**Sheep Creek Mo**	**61.21**	**30**	P	**P**	**20 43 48.8**	**+0.6**
SCM				IAmb	IAmb	20 43 49.0	
	comp=Z,13nm,1.0s						
FID	**Port Fidalgo**	**61.49**	**32**	P	**P**	**20 43 50.0**	**0.0**
TOLK	**Toolik Lake Re**	**61.52**	**23**	P	**P**	**20 43 51.7**	**+1.5**
TOLK				IAmb	IAmb	20 43 51.7	
	comp=Z,19nm,1.9s						
IL31		**61.83**	**27**	P	**P**	**20 43 51.2**	**-0.9**
ILAR	**Eielson Array**	**61.83**	**27**	P	**P**	**20 43 51.4**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=264,slow=5.6,SNR=15						
ILAR	**Eielson Array**	**61.83**	**27**	P	**P**	**20 43 51.2**	**-0.9**
KLU	**Klutina**	**61.84**	**31**	P	**P**	**20 43 53.1**	**+0.7**
PALK	**Pallekele**	**62.07**	**267**	P	**P**	**20 43 52.7**	**-2.0**
N25K	**Chitina, Valde**	**62.48**	**31**	P	**P**	**20 43 57.9**	**+1.1**
N25K				IAmb	IAmb	20 43 58.1	
	comp=Z,22nm,2.0s						
BRVK	**Borovoye**	**62.82**	**319**	P	**P**	**20 43 58.9**	**-0.1**
VRDI	**Verde Repeater**	**63.00**	**31**	P	**P**	**20 44 00.3**	**0.0**
VRDI				IAmb	IAmb	20 44 01.8	
	comp=Z,29nm,2.0s						
CRQM	**Cirque**	**63.12**	**32**	P	**P**	**20 44 01.5**	**+0.3**
CRQM				IAmb	IAmb	20 44 03.0	
	comp=Z,17nm,1.2s						
BMAR	**Burnt Mountain**	**63.14**	**24**	P	**P**	**20 44 02.0**	**+1.0**
BCAR	**Beaver Creek A**	**63.89**	**29**	P	**P**	**20 44 06.0**	**-0.1**
DAWY	**Dawson**	**65.00**	**28**	P	**P**	**20 44 14.0**	**+0.7**
DAWY				IAmb	IAmb	20 44 50.3	
	comp=Z,19nm,1.9s						
INK	**Inuvik**	**67.36**	**24**	P	**P**	**20 44 27.9**	**-0.3**
	comp=Z,3.8nm,1.1s,baz=270,slow=9.2,SNR=6.5						
INK	**Inuvik**	**67.36**	**24**	P	**P**	**20 44 28.1**	**-0.1**
ABKAR	**Akbulak array**	**69.65**	**316**	P	**P**	**20 44 42.7**	**-0.2**
ABKAR	**Akbulak array**	**69.65**	**316**	P	**P**	**20 44 42.7**	**-0.2**
YKA	**Yellowknife Ar**	**76.24**	**28**	P	**P**	**20 45 21.5**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=294,slow=4.9,SNR=7.8						
RES	**Resolute Bay**	**76.91**	**13**	P	**P**	**20 45 25.4**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=336,slow=3.0,SNR=4.8						
RES	**Resolute Bay**	**76.91**	**13**	IAmb	IAmb	20 45 25.9	
	comp=Z,19nm,1.8s						
ARCES	**ARCESS Array B**	**78.90**	**342**	P	**P**	**20 45 36.0**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=61,slow=7.3,SNR=1.7						
NVAR	**Mina Array Bea**	**82.87**	**52**	P	**P**	**20 45 59.1**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=283,slow=5.6,SNR=13						
NVAR	**Mina Array Bea**	**82.87**	**52**	P	**P**	**20 45 59.0**	**+0.4**
FINES	**FINESS Array B**	**83.19**	**335**	P	**P**	**20 45 58.0**	**-1.4**
	comp=Z,4.1nm,1.1s,baz=70,slow=6.3,SNR=3.6						
EGMT	**Eagleton**	**84.63**	**40**	P	**P**	**20 46 06.1**	**-1.0**
FFC	**Flin Flon**	**85.60**	**32**	P	**P**	**20 46 11.2**	**-0.5**
PDAR	**Pinedale Array**	**87.13**	**45**	P	**P**	**20 46 19.1**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=349,slow=1.8,SNR=2.2						
KNB	**Kanab**	**87.42**	**51**	P	**P**	**20 46 21.9**	**+0.6**
LPAZ	**La Paz**	**149.67**	**85**	PKPbc	**PKPbc**	**20 53 22.9**	**-1.7**
	comp=Z,2.8nm,0.9s,baz=315,slow=2.9,SNR=7.9						
LPAZ	**La Paz**	**149.67**	**85**		**PKPbc**	**20 53 23.6**	**-1.0**

IDC 25 20:50:10.3±1.1,21°.33N×143°.97E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/49, mbtmp3.5/7, Error ellipse: s-maj=42.6km s-min=23.6km az=87.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**21.24**	**323**	P	P	20 54 58.6	+0.7
	1.0nm,0.5s,baz=140,slow=9.1,SNR=2.6						
H11N1	**WAKE ISLAND Hy**	**21.53**	**90**	T	T	21 17 46.4	
	baz=278,slow=74,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**21.53**	**90**	T	T	21 17 43.8	
	baz=278						
H11S3	**WAKE ISLAND Hy**	**21.55**	**94**	T	T	21 17 42.8	
	baz=282,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**21.55**	**90**	T	T	21 17 44.9	
	baz=278,slow=74,SNR=5.8						
H11S1	**WAKE ISLAND Hy**	**21.56**	**93**	T	T	21 17 45.7	
	baz=282,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hy**	**21.57**	**94**	T	T	21 17 44.5	
	baz=282,slow=74,SNR=7.4						
KLR	**Kul'dur**	**29.49**	**344**	P	P	20 56 14.2	-1.8
	1.4nm,0.7s,baz=125,slow=10,SNR=5.0						
WRA	**Warramunga Arr**	**42.09**	**194**	P	P	20 58 03.5	-0.7
	0.2nm,0.8s,baz=17,slow=9.6,SNR=1.9						
ASAR	**Alice Springs**	**45.79**	**193**	P	P	20 58 34.0	+0.1
	0.2nm,0.8s,baz=12,slow=8.7,SNR=1.6						
MKAR	**Makanchi Array**	**55.48**	**313**	P	P	20 59 47.7	+0.7
	0.5nm,0.8s,baz=94,slow=8.5,SNR=4.1						
YKA	**Yellowknife Ar**	**76.44**	**28**	P	P	21 02 03.2	+1.7
	0.3nm,0.6s,baz=287,slow=4.6,SNR=1.3						
NVAR	**Mina Array Bea**	**82.80**	**52**	P	P	21 02 36.2	-0.8
	0.1nm,0.3s,baz=269,slow=4.1,SNR=2.0						

*IDC **25** 20:51:51.0±0.6,21°.78N×143°.59E, h0km, mb4.0/21, mb1 4.1/22,mb1mx4.0/49, mbtmp4.0/22,ML2.9/1,MS3.7/6, Ms1 3.7/6,ms1mx3.1/63,Error ellipse: s-maj=22.7km s-min=14.6km az=89.0*
*NEIC **25** 20:51:54.2±1.6,21°.7N±0°.1×143°.5E±0°.2, h22km±6km, mb4.5/35,Error ellipse: s-maj=21.0km s-min=14.8km az=90.0*

ISC 25 20:51:56.3±0.6,21°.76N±0°.08×143°.6E±0°.1, h35km, n87, σ1s22/74, mb4.1/37, MS3.6/6, 1C, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.46**	**347**		**Pn**	**20 53 14.4**	**-0.7**
JHJ	**Hachijo jima 2**	**11.80**	**344**	LR	LR	20 58 59.8	
	comp=Z,422nm,19.3s,baz=96,slow=36						
JGF	**Kuroka**	**14.82**	**340**	Pn	**Pn**	**20 55 21.6**	**-1.8**
MJAR	**Matsushiro Arr**	**15.45**	**344**	Pn	**Pn**	**20 55 28.0**	**-3.7**
	0.0nm,0.3s,baz=162,slow=11,SNR=1.8						
MJAR	**Matsushiro Arr**	**15.45**	**344**		**Pn**	**20 55 30.9**	**-0.7**
MAJO	**Matsushiro**	**15.45**	**344**	Pn	**Pn**	**20 55 31.5**	**-0.1**
JMM	**Marumori**	**16.23**	**352**	Pn	**Pn**	**20 55 40.7**	**-0.9**
JMM				IAmb	IAmb	20 55 58.3	
	comp=Z,69nm,1.0s						
JSD	**Sado**	**16.86**	**345**	Pn	**Pn**	**20 55 49.2**	**-0.3**
JSD				IAmb	IAmb	20 55 60.0	
	comp=Z,95nm,1.3s						
KSRS	**Korea Array**	**20.68**	**323**	P	**P**	**20 56 34.1**	**+0.9**
	comp=Z,2.0nm,0.9s,baz=146,slow=9.4,SNR=3.0						
KSRS				LR	LR	21 04 15.5	
	comp=Z,186nm,18.7s,baz=235,slow=36						
KSAR	**Wonju Array Be**	**20.70**	**322**	P	**P**	**20 56 33.2**	**-0.2**
SSLB	**Suanglung**	**20.95**	**280**	P	Pn	20 56 40.3	+1.2
SSLB				IAmb	IAmb	20 56 49.9	
	comp=Z,22nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**21.90**	**91**	T	T	21 19 23.2	
	baz=279,slow=74,SNR=17						
H11N2	**WAKE ISLAND Hy**	**21.90**	**91**	T	T	21 19 26.8	
	baz=279,slow=74,SNR=15						
H11N3	**WAKE ISLAND Hy**	**21.91**	**91**	T	T	21 19 24.4	
	baz=279,slow=74,SNR=16						
H11S3	**WAKE ISLAND Hy**	**21.94**	**94**	T	T	21 19 22.8	
	baz=282,slow=74,SNR=35						
H11S1	**WAKE ISLAND Hy**	**21.95**	**94**	T	T	21 19 23.4	
	baz=282,slow=74,SNR=40						
H11S2	**WAKE ISLAND Hy**	**21.95**	**94**	T	T	21 19 24.0	
	baz=282,slow=74,SNR=28						
DAV	**Davao City (W)**	**22.70**	**233**	LR	LR	21 04 41.3	
	comp=Z,199nm,21.9s,baz=72,slow=34						
USA0B	**Ussuriysk Arra**	**24.35**	**339**	P	**P**	**20 57 12.6**	**+1.7**
USA0B				IAmb	IAmb	20 57 19.1	
	comp=Z,15nm,1.3s						
USRK	**Ussuriysk Ar.**	**24.35**	**339**	P	**P**	**20 57 14.1**	**+3.3**
	comp=Z,2.7nm,0.7s,baz=116,slow=8.3,SNR=2.1						
USRK	**Ussuriysk Ar.**	**24.35**	**339**	P	**P**	**20 57 12.1**	**+1.3**
MDJ	**Mudanjiang**	**25.55**	**336**	P	**P**	**20 57 23.1**	**+1.3**
MDJ				IAmb	IAmb	20 57 33.7	
	comp=Z,7.8nm,0.8s						
TIA	**Tai'an**	**27.14**	**308**	P	P	20 57 44.8	+8.6
TIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WHN	**Wuhan**	**27.59**	**295**	⇑P	**P**	**20 57 42.0**	**+1.7**
KLR	**Kul'dur**	**28.98**	**344**	P	**P**	**20 57 51.8**	**-0.7**
	comp=Z,3.1nm,0.7s,baz=135,slow=8.0,SNR=10						
XAN	**Xi'an**	**32.82**	**299**	P	**P**	**20 58 29.0**	**+2.4**
XAN				pP	sP	20 58 54.0	+14
XAN				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BATI	**Baumata**	**37.30**	**214**	LR	LR	21 13 20.0	
	comp=Z,94nm,21.4s,baz=110,slow=34						
SONM	**Songino Array**	**39.52**	**320**	P	**P**	**20 59 24.4**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=130,slow=9.2,SNR=2.5						
SONM	**Songino Array**	**39.52**	**320**	P	**P**	**20 59 24.1**	**+0.2**
GTA	**Gaotai**	**41.13**	**305**	*e*P	**P**	**20 59 39.0**	**+1.7**
GTA				pP	pP	20 59 43.5	-3.5
GTA				sP	pwP	20 59 46.0	-3.5
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,120nm,5.8s						
GTA				LR	LR		
	comp=N,110nm,15.3s						
GTA				LR	LR		
	comp=E,160nm,18.2s						
GTA				LR	LR		
	comp=Z,150nm,16.4s						
YAK	**Yakutsk**	**41.37**	**350**	P	**P**	**20 59 37.3**	**-1.3**
	comp=Z,1.3nm,0.3s,baz=117,slow=11,SNR=1.2						
SEY	**Seymchan**	**41.58**	**6**	P	**P**	**20 59 39.2**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=210,slow=20,SNR=1.3						
CMAR	**Chiang Mai Arr**	**41.94**	**274**	P	**P**	**20 59 43.8**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=54,slow=6.8,SNR=4.1						
WB0	**Warramunga Arr**	**42.24**	**193**	P	**P**	**20 59 45.0**	**-1.2**
WR0	**Warramunga Arr**	**42.39**	**193**	P	**P**	**20 59 45.4**	**-2.1**
WR0				IAmb	IAmb	21 00 37.5	
	comp=Z,10nm,1.4s						
WRAB	**Tennant Creek**	**42.41**	**193**	P	**P**	**20 59 45.6**	**-2.0**
WRAB				IAmb	IAmb	20 59 51.7	
	comp=Z,9.6nm,1.4s						
WB2	**Warramunga Arr**	**42.42**	**193**	P	**P**	**20 59 46.9**	**-0.8**
WRA	**Warramunga Arr**	**42.42**	**193**	P	**P**	**20 59 47.1**	**-0.6**
	comp=Z,4.3nm,1.1s,baz=15,slow=8.9,SNR=14						
WRA	**Warramunga Arr**	**42.42**	**193**	P	**P**	**20 59 46.9**	**-0.8**
AS31	**Alice Springs**	**46.12**	**192**	P	**P**	**21 00 18.1**	**+0.7**
ASAR	**Alice Springs**	**46.12**	**192**	P	**P**	**21 00 17.1**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=17,slow=9.1,SNR=17						
ASAR	**Alice Springs**	**46.12**	**192**	P	**P**	**21 00 17.0**	**-0.4**
RPSI	**Rantau Prapat**	**47.33**	**253**	P	**P**	**21 00 26.0**	**-1.0**
RPSI				IAmb	IAmb	21 00 36.8	
	comp=Z,9.7nm,1.2s						
DZM	**Mont Dzumac**	**48.94**	**151**	LR	LR	21 18 15.7	
	comp=Z,56nm,18.3s,baz=32,slow=32						
TIXI	**Tiksi**	**50.62**	**354**	P	**P**	**21 00 53.8**	**+2.4**
WMQ	**Urumqi**	**50.82**	**309**	P	**P**	**21 00 54.6**	**+1.1**
WMQ				IAmb	IAmb	21 01 06.3	
	comp=Z,14nm,1.4s						
SDPT	**Sand Point**	**53.14**	**36**	P	**P**	**21 01 10.4**	**0.0**
STKA	**Stephens Creek**	**53.37**	**182**	P	**P**	**21 01 12.3**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=331,slow=6.8,SNR=3.1						
STKA	**Stephens Creek**	**53.37**	**182**	P	**P**	**21 01 12.1**	**-0.2**
ZAA0	**Zalesovo Array**	**54.39**	**322**	P	**P**	**21 01 20.1**	**+0.5**
ZAA0				IAmb	IAmb	21 01 31.4	
	comp=Z,3.4nm,0.8s						
ZALV	**Zalesovo Beam**	**54.39**	**322**	P	**P**	**21 01 18.7**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=105,slow=7.4,SNR=2.1						
ZALV	**Zalesovo Beam**	**54.39**	**322**	P	**P**	**21 01 18.1**	**-1.5**
MK31	**Makanchi Array**	**54.92**	**313**	P	**P**	**21 01 24.9**	**+1.3**
MK31				IAmb	IAmb	21 01 27.6	
	comp=Z,4.0nm,1.4s						
MKAR	**Makanchi Array**	**54.92**	**313**	P	**P**	**21 01 23.7**	**0.0**
	comp=Z,0.3nm,0.6s,baz=99,slow=7.4,SNR=1.9						
MKAR	**Makanchi Array**	**54.92**	**313**	P	**P**	**21 01 22.6**	**-1.0**
MAKZ	**Makanchi**	**55.14**	**313**	P	**P**	**21 01 24.8**	**-0.4**
MAKZ				IAmb	IAmb	21 01 55.0	
	comp=Z,5.1nm,1.3s						
SVW2	**Sparrevohn**	**57.17**	**30**	P	**P**	**21 01 40.4**	**+1.0**
KURK	**Kurchatov**	**57.68**	**317**	P	**P**	**21 01 43.3**	**+0.1**
KURK				IAmb	IAmb	21 01 50.0	
	comp=Z,6.9nm,1.2s						
KDAK	**Kodiak Island**	**57.94**	**35**	P	**P**	**21 01 44.2**	**-0.7**
NRIK	**Noril'sk**	**58.06**	**340**	P	**P**	**21 01 44.9**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=157,slow=9.4,SNR=1.6						
IMAR	**Indian Mountai**	**59.27**	**25**	P	**P**	**21 01 54.7**	**+0.7**
BOOM	**Boomskoye usch**	**59.36**	**307**	P	**P**	**21 01 52.9**	**-2.4**
ILAR	**Eielson Array**	**61.82**	**27**	P	**P**	**21 02 10.8**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=261,slow=5.2,SNR=5.1						
ILAR	**Eielson Array**	**61.82**	**27**	P	**P**	**21 02 10.2**	**-1.3**
BRVK	**Borovoye**	**62.92**	**320**	P	**P**	**21 02 18.9**	**-0.1**
CRQM	**Cirque**	**63.10**	**32**	P	**P**	**21 02 20.8**	**+0.5**
BMAR	**Burnt Mountain**	**63.14**	**24**	P	**P**	**21 02 21.6**	**+1.3**
BALM	**Baldy**	**63.51**	**32**	P	**P**	**21 02 23.0**	**+0.1**
BALM				IAmb	IAmb	21 02 30.9	
	comp=Z,6.0nm,1.1s						
BCAR	**Beaver Creek A**	**63.88**	**29**	P	**P**	**21 02 25.1**	**-0.1**
WHY	**Whitehorse**	**67.16**	**32**		**P**	**21 02 47.1**	**+0.6**
WHY				IAmb	IAmb	21 03 34.7	
	comp=Z,6.8nm,1.4s						
INK	**Inuvik**	**67.36**	**24**	P	**P**	**21 02 47.4**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=236,slow=8.8,SNR=3.4						
INK	**Inuvik**	**67.36**	**24**	P	**P**	**21 02 46.7**	**-0.8**
ABKAR	**Akbulak array**	**69.76**	**316**	P	**P**	**21 03 02.2**	**-0.6**
ABKAR	**Akbulak array**	**69.76**	**316**	P	**P**	**21 03 00.1**	**-2.7**
ABKAR				IAmb	IAmb	21 03 12.0	
	comp=Z,2.0nm,0.8s						
EUNU	**Eureka**	**74.99**	**8**	P	**P**	**21 03 33.8**	**+0.2**
EUNU				IAmb	IAmb	21 03 41.5	
	comp=Z,7.0nm,1.1s						
PPT	**Papeete**	**76.23**	**115**	LR	LR	21 31 04.7	
	comp=Z,50nm,21.7s,baz=354,slow=31						
YKA	**Yellowknife Ar**	**76.23**	**28**	P	**P**	**21 03 40.6**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=295,slow=4.8,SNR=5.2						
RES	**Resolute Bay**	**76.93**	**13**	P	**P**	**21 03 45.1**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=254,slow=8.9,SNR=2.9						
RES	**Resolute Bay**	**76.93**	**13**	P	**P**	**21 03 44.7**	**0.0**
RES				IAmb	IAmb	21 03 53.1	
	comp=Z,4.7nm,0.9s						
ARCES	**ARCESS Array B**	**78.98**	**342**	P	**P**	**21 03 57.3**	**+1.1**
	comp=Z,4.3nm,1.1s,baz=44,slow=7.8,SNR=1.9						
KBZ	**Khabaz**	**82.59**	**314**	P	**P**	**21 04 17.1**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=90,slow=5.1,SNR=1.8						
NVAR	**Mina Array Bea**	**82.82**	**52**	P	**P**	**21 04 18.6**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=289,slow=5.4,SNR=11						
FINES	**FINESS Array B**	**83.28**	**335**	P	**P**	**21 04 18.7**	**-0.4**
	comp=Z,2.5nm,1.0s,baz=46,slow=5.5,SNR=4.4						
PDAR	**Pinedale Array**	**87.09**	**45**	P	**P**	**21 04 39.0**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=176,slow=1.4,SNR=2.3						
KNB	**Kanab**	**87.37**	**51**		**P**	**21 04 41.2**	**+0.9**
PLCA	**Paso Flores**	**145.52**	**131**	PKPbc	**PKPab**	**21 11 31.1**	**-0.3**
	comp=Z,1.1nm,0.9s,baz=303,slow=6.0,SNR=1.9						
LPAZ	**La Paz**	**149.57**	**85**	PKPbc	**PKPbc**	**21 11 43.8**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=342,slow=6.4,SNR=4.2						

*IDC **25** 20:53:19.2±1.4,21°.71N×143°.70E, h0km, mb3.7/5, mb1 3.9/6,mb1mx3.6/50,mbtmp3.7/6,MS3.8/1,Ms1 3.8/1, ms1mx2.8/60,Error ellipse: s-maj=65.7km s-min=23.7km az=91.0*

ISC 25 20:53:24.4±1.3,21°.7N±0°.1×143°.7E±0°.4, h35km, n13, σ1s34/6, mb3.5/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.52**	**343**	Pn	**Pn**	**20 57 01.0**	**+0.4**
	baz=164,slow=12,SNR=1.9						
H11N1	**WAKE ISLAND Hy**	**21.83**	**91**	T	T	21 20 49.3	
	baz=278						
H11N2	**WAKE ISLAND Hy**	**21.83**	**91**	T	T	21 20 49.6	
	baz=278						
H11N3	**WAKE ISLAND Hy**	**21.85**	**91**	T	T	21 20 48.4	
	baz=278						
H11S3	**WAKE ISLAND Hy**	**21.87**	**94**	T	T	21 20 49.8	
	baz=282,slow=74						
H11S1	**WAKE ISLAND Hy**	**21.88**	**94**	T	T	21 20 48.8	
	baz=282,slow=74						
H11S2	**WAKE ISLAND Hy**	**21.88**	**94**	T	T	21 20 49.0	
	baz=282				

mpv2.8,Error ellipse: s-maj=11.4km s-min=5.0km az=159.0

ISC 25 21:02:45.6±1.2,41°.82N±0°.02×72°.59E±0°.02,h1km±11km, n24,σ0°96/44,24C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.58**	**149**	⇑*iP*		**Pg**	**21 02 57.0**	**+0.3**
	baz=51							
ARSB				⇑*iS*		**Sg**	**21 03 05.8**	**+1.6**
	baz=51							
MNAS	**Manas**	**0.67**	**355**	⇑*iP*		**Pg**	**21 02 58.4**	**0.0**
	baz=54							
MNAS				⇑*iS*		**Sg**	**21 03 07.4**	**+0.3**
	baz=54							
AML	**Almayashu**	**0.88**	**69**	⇑*iP*		**Pg**	**21 03 02.4**	**-0.1**
	baz=70							
AML				⇑*iS*		**Sg**	**21 03 14.3**	**+0.3**
	baz=70							
MRKS	**Merke**	**1.04**	**27**	*e*P		**Pg**	**21 03 05.4**	**-0.1**
	3.6nm,0.1s							
MRKS				*e*S		**Sn**	**21 03 21.0**	**-1.6**
	6.1nm,0.3s							
MRKS	**Merke**	**1.04**	**27**	P		**Pg**	**21 03 05.7**	**+0.2**
	1.1nm,0.1s							
MRKS				S		**Sn**	**21 03 21.1**	**-1.5**
	4.5nm,0.2s							
TRKS	**Terek-Say**	**1.12**	**255**	⇓*iP*		**Pg**	**21 03 07.2**	**0.0**
	baz=51							
TRKS				⇓*iS*		**Sb**	**21 03 22.7**	**-0.4**
	baz=51							
EKS2	**Erkin-Say**	**1.22**	**46**	⇑*iP*		**Pg**	**21 03 08.7**	**-0.3**
	baz=47							
EKS2				⇑*iS*		**Sg**	**21 03 24.8**	**0.0**
	baz=47							
ARLS	**Aral**	**1.30**	**88**	⇑*iP*		**Pg**	**21 03 10.3**	**-0.2**
	baz=88							
ARLS				⇑*iS*		**Sg**	**21 03 27.9**	**+0.6**
	baz=88							
OHH	**Osh**	**1.31**	**173**	⇑*iP*		**Pn**	**21 03 10.7**	**-0.4**
	baz=74							
OHH				⇑*iS*		**Sb**	**21 03 29.0**	**+0.7**
	baz=74							
DZA	**Taraz**	**1.42**	**319**	P		**Pg**	**21 03 14.2**	**+1.4**
	12nm,0.2s							
DZA				S		**Sn**	**21 03 36.0**	**+4.0**
	54nm,0.3s							
UCH	**Uchtor**	**1.49**	**74**	⇓*iP*		**Pn**	**21 03 13.9**	**-0.1**
	baz=74							
UCH				⇓*iS*		**Sb**	**21 03 33.9**	**-0.1**
	baz=74							
IUG	**Iuzhnay**	**1.93**	**281**	*e*P		**Pb**	**21 03 21.0**	**-0.8**
	7.1nm,0.2s							
IUG				*e*S		**Sg**	**21 03 47.1**	**-0.6**
	26nm,0.3s							
IUG	**Iuzhnay**	**1.93**	**281**	Pg		**Pb**	**21 03 21.1**	**-0.6**
	3.7nm,0.4s							
IUG				Lg		Lg	21 03 47.8	
	39nm,0.3s							
SFK	**Sufi-Kurgan**	**1.94**	**159**	⇓*e*P		**Pb**	**21 03 21.8**	**-0.1**
	baz=59							
SFK				⇓*iS*		**Sg**	**21 03 48.0**	**+0.2**
	baz=59							
KBK	**Karagaybulak**	**1.94**	**64**	⇑*iP*		**Pb**	**21 03 21.4**	**-0.5**
	baz=64							
KBK				⇑*iS*		**Sb**	**21 03 47.4**	**+0.7**
	baz=64							
CHMS	**Chumysh**	**1.99**	**53**	⇑*iP*		**Pb**	**21 03 22.0**	**-0.6**
	baz=53							
CHMS				⇑*iS*		**Sb**	**21 03 48.5**	**+0.6**
	baz=53							
KK31	**Karatay Array**	**2.00**	**310**	⇑Pn		**Pb**	**21 03 21.6**	**-1.2**
	1.3nm,0.3s,baz=130,slow=16,SNR=38							
KK31				⇓Lg		Lg	21 03 49.3	
	1.7nm,0.3s,baz=130,slow=30,SNR=12							
USP	**Ospenovka**	**2.02**	**44**	⇑*iP*		**Pb**	**21 03 22.4**	**-0.8**
	baz=44							
USP				⇑*iS*		**Sb**	**21 03 49.1**	**+0.3**
	baz=44							
BTK	**Batken**	**2.21**	**218**	⇑*iP*		**Pb**	**21 03 25.8**	**-0.7**
	baz=18							
BTK				⇑*iS*		**Sb**	**21 03 54.8**	**+0.3**
	baz=18							
SGDS	**Sogindy**	**2.22**	**42**	Pg		**Pb**	**21 03 26.6**	**0.0**
	2.4nm,0.8s							
SGDS				Lg		Lg	21 03 56.9	
	12nm,1.1s							
DRK	**Karamyk**	**2.42**	**195**	⇑*iP*		**Pb**	**21 03 28.7**	**-1.4**
	baz=95							
DRK				⇑*iS*		**Sb**	**21 04 00.1**	**-0.4**
	baz=95							
TKM2	**Tokmak 2**	**2.48**	**63**	⇓Pg		**Pb**	**21 03 31.5**	**+0.2**
	5.1nm,0.9s							
TKM2				⇑Lg		Lg	21 04 05.5	
	7.2nm,0.5s							
DGS	**Degeres**	**2.75**	**58**	*e*P		**Pb**	**21 03 35.8**	**+0.1**
	1.1nm,0.4s							
DGS				*e*S		**Sg**	**21 04 12.7**	**-1.2**
	2.2nm,0.4s							
KST	**Kastek**	**2.78**	**63**	*e*P		**Pb**	**21 03 37.1**	**+0.9**
	0.9nm,0.1s							
KST				*e*S		**Sg**	**21 04 14.9**	**0.0**
	7.5nm,0.5s							

IDC 25 21:12:20.1±3.3,30°.34S×177°.55W,h0km,mb3.7/2, mb1 4.0/2,mb1mx3.7/31,mbtmp3.7/2,Error ellipse: s-maj=71.7km s-min=34.5km az=112.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.13**	**343**		Pn	Pn	21 12 43.2	+0.1
	145nm,0.3s,baz=72,slow=20,SNR=4.9							
RAO					Sn	Sg	21 12 56.0	-0.3
	487nm,0.3s,baz=31,slow=19,SNR=16							
URZ	**Urewera**	**9.05**	**208**		Sn	Sn	21 16 08.6	-6.0
	0.5nm,0.3s,baz=200,slow=24,SNR=2.1							
ASAR	**Alice Springs**	**43.50**	**267**	P		P	21 20 25.5	0.0
	0.3nm,0.4s,baz=103,slow=7.8,SNR=4.1							
WRA	**Warramunga Arr**	**44.48**	**272**	P		P	21 20 33.2	-0.3
	0.6nm,0.3s,baz=110,slow=8.1,SNR=28							
H03S2	**Juan Fernandez**	**80.17**	**123**	T		T	22 53 55.9	
	baz=238,slow=74,SNR=5.7							
H03S1	**Juan Fernandez**	**80.19**	**123**	T		T	22 53 51.2	
	baz=238,slow=74,SNR=4.4							
H03S3	**Juan Fernandez**	**80.19**	**123**	T		T	22 53 58.1	
	baz=238,slow=74,SNR=5.5							
FINES	**FINESS Array B**	**145.22**	**340**	PKPbc		PKPbc	21 31 57.7	-0.9
	2.6nm,0.9s,baz=75,slow=3.1,SNR=9.1							

WEL 25 21:18:39.3,38°.5±9°×18°.0W±°,h33km,M3.7/24,ML4.0/24, MLv3.7/24,Error ellipse: s-maj=0.0km s-min=0.0km az=175.5

IDC 25 21:18:39.1±2.9,37°.05S×179°.56E,h0km,mb3.9/4, mb1 4.1/5,mb1mx3.8/37,mbtmp3.9/5,ML3.3/1,MS3.9/2, Ms1 3.9/2,ms1mx2.9/36,Error ellipse: s-maj=83.3km s-min=39.5km az=148.0

NEIC 25 21:18:40.2±1.5,37.85S±0°.09×180°.0W±0°.1,h35km±2km, mb4.1/7,Error ellipse: s-maj=17.4km s-min=11.7km az=42.0

ISC 25 21:18:35.4±2.1,37°.83S±0°.06×179°.91W±0°.08,h5km±11km, n66,σ1°32/71,mb4.0/7,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.33**	**270**		P	**Pg**	**21 19 01.6**	**+0.7**
WMGZ					S	**Sg**	**21 19 17.9**	**-0.1**
MXZ	**Matakaoa Point**	**1.44**	**280**		P	**Pg**	**21 19 02.8**	**-0.2**
MXZ					S	**Sb**	**21 19 20.2**	**-1.1**
MXZ	**Matakaoa Point**	**1.44**	**280**			**Pg**	**21 19 02.8**	**-0.2**
MXZ					Sn	**Sb**	**21 19 19.2**	**-2.1**
CNGZ	**Carnagh Station**	**1.62**	**246**		P	**Pg**	**21 19 07.3**	**+0.9**
TWGZ	**Tauwhareparae**	**1.70**	**258**		P	**Pg**	**21 19 08.1**	**+0.1**
TWGZ					S	**Sn**	**21 19 28.3**	**+0.3**
HAZ	**Te Kaha**	**1.83**	**272**		P	**Pb**	**21 19 09.0**	**-0.3**
TKGZ	**Te Karaka**	**1.87**	**250**		P	**Pb**	**21 19 09.9**	**-0.1**
TKGZ					S	**Sb**	**21 19 33.2**	**-0.5**
RUGZ	**Raukumara Rang**	**1.92**	**265**		P	**Pb**	**21 19 10.0**	**-0.8**
RIGZ	**Rimuhau**	**2.03**	**244**		P	**Pb**	**21 19 13.0**	**+0.2**
RIGZ					S	**Sn**	**21 19 37.6**	**+1.6**
PRGZ	**Paritu Road**	**2.05**	**237**		P	**Pb**	**21 19 13.2**	**+0.2**
MWZ	**Matawai**	**2.08**	**255**		P	**Pb**	**21 19 13.0**	**-0.7**
MHGZ	**Mahia Peninsul**	**2.16**	**232**		P	**Pb**	**21 19 14.9**	**-0.1**
KNZ	**Kokohu**	**2.24**	**237**		P	**Pb**	**21 19 15.3**	**-1.1**
SNGZ	**Shannon Statio**	**2.36**	**246**		P	**Pb**	**21 19 17.2**	**-1.3**
URZ	**Urewera**	**2.39**	**259**		Pn	**Pb**	**21 19 17.4**	**-1.5**
	8.8nm,0.3s,baz=271,slow=5.6,SNR=34							
URZ					Sn	**Sn**	**21 19 44.3**	**-0.6**
	12nm,0.3s,baz=71,slow=8.6,SNR=14							
URZ	**Urewera**	**2.39**	**259**	P		**Pb**	**21 19 17.2**	**-1.6**
URZ	**Urewera**	**2.39**	**259**			**Pn**	**21 19 16.6**	**+1.4**
URZ					Sn	**Sn**	**21 19 44.7**	**-0.2**
WHHZ	**Waihua**	**2.57**	**240**	P		**Pb**	**21 19 20.2**	**-1.7**
RTZ	**Ruatahuna**	**2.57**	**251**	P		**Pb**	**21 19 20.2**	**-1.8**
RAHZ	**Arahi**	**2.60**	**244**	P		**Pb**	**21 19 20.8**	**-1.7**
MUGZ	**Murupara**	**2.70**	**255**	P		**Pb**	**21 19 23.1**	**-1.0**
MTHZ	**Maungataniwha**	**2.75**	**247**	P		**Pn**	**21 19 22.3**	**+2.1**
OPRZ	**Ohinepanea**	**2.80**	**269**	P		**Pn**	**21 19 22.0**	**+1.2**
TARZ	**Mount Tarawera**	**2.86**	**261**	P		**Pn**	**21 19 24.1**	**+2.4**
BKZ	**Black Stump Fm**	**3.12**	**244**	P		**Pn**	**21 19 27.5**	**+2.2**
BKZ	**Black Stump Fm**	**3.12**	**244**			**Pn**	**21 19 27.2**	**+1.9**
BKZ					Sn	**Sn**	**21 20 03.0**	**0.0**
KAHZ	**Kahuranaki**	**3.19**	**231**	P		**Pn**	**21 19 28.5**	**+2.3**
KWHZ	**Kaweka Forest**	**3.29**	**240**	P		**Pn**	**21 19 29.5**	**+2.0**
KRHZ	**Kereru**	**3.43**	**237**	P		**Pn**	**21 19 31.0**	**+1.5**
KUZ	**Kuaotunu**	**3.65**	**286**	P		**Pn**	**21 19 33.0**	**+0.5**
TMVZ	**Te Maari**	**3.67**	**248**	P		**Pn**	**21 19 34.8**	**+1.8**
ETVZ	**East Tongariro**	**3.68**	**248**	P		**Pn**	**21 19 35.4**	**+2.4**
PNHZ	**Pukenui**	**3.68**	**234**	P		**Pn**	**21 19 34.5**	**+1.6**
MOVZ	**Moawhango**	**3.75**	**244**	P		**Pn**	**21 19 37.1**	**+3.2**
WNVZ	**Wahianoa**	**3.83**	**246**	P		**Pn**	**21 19 38.0**	**+2.9**
TSZ	**Takapari Road**	**3.91**	**234**	P		**Pn**	**21 19 37.6**	**+1.4**
BFZ	**Birch Farm**	**4.12**	**225**	P		**Pn**	**21 19 39.5**	**+0.5**
BFZ	**Birch Farm**	**4.12**	**225**	Pn		**Pn**	**21 19 39.3**	**+0.3**
BFZ					Sn	**Sn**	**21 20 26.9**	**-0.7**
HIZ	**Hauiti**	**4.18**	**259**	Pn		**Pn**	**21 19 40.9**	**+1.0**
MRZ	**Mangatainoka R**	**4.50**	**230**	P		**Pn**	**21 19 45.2**	**+1.0**
TMWZ	**Te Maipa**	**4.61**	**224**	P		**Pn**	**21 19 46.3**	**+0.5**
HOWZ	**Holdsworth Sta**	**4.69**	**228**	P		**Pn**	**21 19 47.2**	**+0.5**
OGWZ	**Otaki Gorge**	**4.84**	**230**	P		**Pn**	**21 19 49.7**	**+0.8**
WCZ	**Waipu Caves**	**4.98**	**291**	P		**Pn**	**21 19 53.3**	**+2.5**
QRZ	**Quartz Range**	**6.58**	**241**	Pn		**Pn**	**21 20 14.3**	**+1.5**
THZ	**Tophouse**	**6.78**	**232**	Pn		**Pn**	**21 20 15.7**	**+0.1**
ODZ	**Otahua Downs**	**10.11**	**222**	Pn		**Pn**	**21 21 01.9**	**+0.8**
DZM	**Mont Dzumac**	**19.62**	**319**	LR		LR	21 29 14.4	
	comp=Z,69nm,20.6s,baz=28,slow=34							
DZM	**Mont Dzumac**	**19.62**	**319**	P		**P**	**21 23 04.2**	**-0.6**
DZM					IAmb	IAmb	21 23 09.9	
	comp=Z,41nm,1.5s							
STKA	**Stephens Creek**	**31.98**	**269**	P		**P**	**21 25 02.1**	**-0.4**
	comp=Z,2.3nm,1.1s,baz=124,slow=11,SNR=2.1							
STKA	**Stephens Creek**	**31.98**	**269**	P		**P**	**21 25 02.4**	**0.0**
COEN	**Coen**	**40.45**	**296**	P		**P**	**21 26 16.0**	**+1.0**
AS31	**Alice Springs**	**41.72**	**276**	P		**P**	**21 26 25.6**	**+0.2**
AS31					IAmb	IAmb	21 26 33.5	
	comp=Z,0.7nm,0.7s							
ASAR	**Alice Springs**	**41.72**	**276**	P		**P**	**21 26 25.9**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=123,slow=8.2,SNR=14							
ASAR	**Alice Springs**	**41.72**	**276**	P		**P**	**21 26 25.5**	**+0.1**
WR0	**Warramunga Arr**	**43.21**	**281**	P		**P**	**21 26 37.9**	**+0.3**
WR0					IAmb	IAmb	21 26 55.0	
	comp=Z,5.2nm,1.2s							
WRA	**Warramunga Arr**	**43.38**	**281**	P		**P**	**21 26 39.4**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=121,slow=7.8,SNR=17							
WRA	**Warramunga Arr**	**43.38**	**281**	P		**P**	**21 26 39.3**	**+0.4**
FITZ	**Fitzroy Crossi**	**51.21**	**277**	P		**P**	**21 27 41.0**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=140,slow=7.9,SNR=1.8							
QSPA	**South Pole Qui**	**52.30**	**180**	P		**P**	**21 27 46.1**	**-1.5**
QSPA					IAmb	IAmb	21 27 56.2	
	comp=Z,3.0nm,1.0s							
TGY	**Tagaytay City**	**75.76**	**301**	LR		LR	22 01 41.5	
	comp=Z,356nm,21.9s,baz=275,slow=34							
H03N3	**Juan Fernandez**	**77.94**	**123**	T		T	22 56 41.9	
	baz=234,slow=72,SNR=23							
H03N2	**Juan Fernandez**	**77.94**	**123**	T		T	22 56 40.6	
	baz=234,slow=72,SNR=22							
H03N1	**Juan Fernandez**	**77.95**	**123**	T		T	22 56 36.5	
	baz=234,slow=72,SNR=28							
ARCES	**ARCESS Array B**	**145.41**	**345**	PKP		**PKiKP**	**21 38 16.7**	**-0.6**
	comp=Z,2.1nm,0.7s,baz=31,slow=2.8,SNR=5.1							
FINES	**FINESS Array B**	**151.36**	**334**	PKPbc		**PKiKP**	**21 38 30.4**	**+0.7**
	comp=Z,3.5nm,1.0s,baz=42,slow=4.3,SNR=2.1							

NDI 25 21:32:20.8±1.2,27°.39N×89°.22E,h10km,ML3.6

IDC 25 21:32:21.8±2.1,26°.99N×88°.58E,h0km,mb3.4/6, mb1 3.6/7,mb1mx3.4/61,mbtmp3.5/7,ML4.0/1,MS3.4/1, Ms1 3.4/1,ms1mx2.5/47,Error ellipse: s-maj=83.5km s-min=19.6km az=65.0

BJI 25 21:32:27.8±0.0,27°.10N×89°.16E,h6km,mb3.7/6

DMN 25 21:32:27.5±0.8,27°.19N×89°.22E,h30km,Ml5.0/5,Error ellipse: s-maj=22.2km s-min=15.1km az=11.0

ISC 25 21:32:27.0±0.7,26°.99N±0°.06×88°.88E±0°.04,h17km,n26, σ1°84/35,mb3.6/5,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**1.10**	**289**	*e*Pg		**Pn**	**21 32 48.8**	**+0.8**
TAPN				*e*Sg		**Sn**	**21 33 05.1**	**+2.1**
	5μm,0.5s							
ODAN	**Odare**	**1.34**	**265**	*e*Pg		**Pg**	**21 32 53.8**	**+0.9**
ODAN				*e*Sg		**Sg**	**21 33 12.5**	**+2.1**
	18μm,0.4s							
RAMN	**Ramite**	**2.04**	**269**	*e*Pn		**Pb**	**21 33 03.6**	**-0.1**
GUN	**Gumba**	**2.82**	**290**	*e*Pn		**Pn**	**21 33 13.6**	**+2.0**
GUN				*e*Sn		**Sn**	**21 33 47.2**	**+1.8**
	1μm,0.5s							
PKI	**Pulchoki**	**3.14**	**281**	*e*Pn		**Pn**	**21 33 17.5**	**+1.4**
PKIN	**Phulchoki**	**3.16**	**281**	*e*Pn		**Pn**	**21 33 17.6**	**+1.4**
KKN	**Kakani**	**3.30**	**285**	*e*Pn		**Pn**	**21 33 19.5**	**+1.4**
LSA	**Lhasa**	**3.36**	**36**	Pn		**Pn**	**21 33 20.5**	**+1.4**
LSA				Pg		**Pb**	**21 33 25.5**	**-0.8**
LSA				Sn		**Sn**	**21 34 02.0**	**+3.2**
LSA				Sg		**Sb**	**21 34 06.5**	**-0.6**
DMN	**Daman**	**3.42**	**281**	*e*Pn		**Pn**	**21 33 20.9**	**+1.1**
GKN	**Gorkha**	**3.90**	**286**	*e*Pn		**Pn**	**21 33 28.1**	**+1.7**
DANN	**Dangsing**	**4.74**	**288**	*e*Pn		**Pn**	**21 33 38.2**	**+0.2**
DANN				*e*Sn		**Sn**	**21 34 31.6**	**-1.1**
	212nm,0.3s							
KOLN	**Koldanda**	**4.76**	**281**	*e*Pn		**Pn**	**21 33 38.8**	**+0.6**
KOLN				*e*Sn		**Sn**	**21 34 32.2**	**-0.9**
	216nm,0.4s							
PYUN	**Piuthan**	**5.35**	**283**	*e*Pn		**Pn**	**21 33 46.4**	**+0.2**
BWNR	**Bhubaneshwar**	**7.24**	**204**	*e*P		**Pn**	**21 34 13.1**	**+1.0**
BWNR				*e*S		**Sn**	**21 35 10.9**	**0.0**
BWNR				IAML			21 35 35.4	
	comp=N,28nm,0.3s							
BWNR				IAML			21 35 36.0	
	comp=E,23nm,0.2s							
NGP	**Nagpur**	**10.70**	**239**	*e*P		**Pn**	**21 35 00.2**	**+0.6**
NGP				*e*S		**Sn**	**21 36 55.2**	**-3.8**
NGP				IAML			21 36 57.0	
	comp=N,16nm,0.3s							
NGP				IAML			21 36 57.1	
	comp=E,17nm,0.5s							
CMAR	**Chiang Mai Arr**	**12.58**	**130**	Pn		**Pn**	**21 35 26.9**	**+1.6**
	comp=E,0.3nm,0.3s,baz=303,slow=14,SNR=1.8							
HYB	**Hyderabad**	**13.50**	**227**	*i* P		**Pn**	**21 35 37.0**	**-0.8**
WMQ	**Urumqi**	**16.82**	**357**	*e*P		**P**	**21 36 24.0**	**+0.2**
XAN	**Xi'an**	**18.62**	**63**	P		**Pn**	**21 36 47.3**	**+3.2**
XAN				pP		sP	21 36 54.0	+2.6
XAN				pmax		pmax		
	comp=E,5.0nm,1.7s							
MKAR	**Makanchi Array**	**20.44**	**347**	P		**P**	**21 37 01.7**	**-1.8**
	comp=E,0.6nm,0.5s,baz=164,slow=9.4,SNR=9.9							
KURBB	**Kurchatov Arra**	**24.89**	**344**	P		**P**	**21 37 45.7**	**-3.1**
	comp=E,0.2nm,0.5s,baz=162,slow=9.7,SNR=6.8							
SONM	**Songino Array**	**24.91**	**29**	P		**P**	**21 37 47.6**	**-1.6**
	comp=E,1.0nm,0.7s,baz=216,slow=9.0,SNR=2.9							
ZALV	**Zalesovo Beam**	**27.09**	**355**	P		**P**	**21 38 04.7**	**-4.0**
	comp=E,0.5nm,0.3s,baz=173,slow=13,SNR=1.5							
GNI	**Garni**	**38.67**	**301**	LR		LR	21 59 29.6	
	comp=E,48nm,19.1s,baz=24,slow=42							
WRA	**Warramunga Arr**	**64.17**	**132**	P		**P**	**21 42 59.9**	**-1.0**
	comp=E,0.3nm,0.7s,baz=325,slow=6.8,SNR=13							
ASAR	**Alice Springs**	**66.54**	**135**	P		**P**	**21 43 14.5**	**-1.8**
	comp=E,0.2nm,0.3s,baz=310,slow=6.0,SNR=1.7							

IDC 25 21:40:34.9±1.2,21°.80N×143°.54E,h0km,mb3.7/9, mb1 3.8/9,mb1mx3.6/64,mbtmp3.7/9,MS3.4/4,Ms1 3.4/4, ms1mx2.8/47,Error ellipse: s-maj=50.3km s-min=18.3km az=82.0

NEIC 25 21:40:41.0±2.1,21°.76N±0°.09×143°.3E±0°.2,h35km±2km, mb4.3/7,Error ellipse: s-maj=30.6km s-min=14.5km az=93.0

ISC 25 21:40:40.7±0.9,21°.80N±0°.09×143°.5E±0°.2,h35km,n33, σ1°05/24,mb3.8/12,MS3.3/3,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.40**	**348**		Pn	**Pn**	**21 41 58.7**	**0.0**
JGF	**Kuroka**	**14.75**	**340**		Pn	**Pn**	**21 44 05.0**	**-1.8**
MJAR	**Matsushiro Arr**	**15.38**	**344**		LR	LR	21 50 14.8	
	comp=Z,68nm,20.2s,baz=120,slow=38							
JHS	**Saijyo**	**15.97**	**328**		Pn	**Pn**	**21 44 22.1**	**-0.7**
JHS					IAmb	IAmb	21 44 37.1	
	comp=Z,20nm,1.0s							
JSD	**Sado**	**16.79**	**346**			**P**	**21 44 34.4**	**-0.6**
KSRS	**Korea Array**	**20.59**	**323**		LR	LR	21 51 58.9	
	comp=Z,62nm,19.6s,baz=100,slow=33							
H11N1	**WAKE ISLAND Hy**	**22.00**	**91**		T	T	22 08 06.3	
	baz=279,slow=75,SNR=8.2							
H11N2	**WAKE ISLAND Hy**	**22.01**	**91**		T	T	22 08 11.7	
	baz=279,slow=75,SNR=5.0							
H11N3	**WAKE ISLAND Hy**	**22.02**	**91**		T	T	22 08 07.5	
	baz=279,slow=75,SNR=6.8							
H11S3	**WAKE ISLAND Hy**	**22.05**	**94**		T	T	22 08 08.4	
	baz=282,slow=74,SNR=24							
H11S1	**WAKE ISLAND Hy**	**22.06**	**94**		T	T	22 08 10.8	
	baz=282,slow=74,SNR=21							
H11S2	**WAKE ISLAND Hy**	**22.07**	**94**		T	T	22 08 09.8	
	baz=282,slow=74,SNR=15							
KLR	**Kul'dur**	**28.91**	**344**		P	**P**	**21 46 37.2**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=133,slow=6.9,SNR=7.1							
SONM	**Songino Array**	**39.42**	**320**		P	**P**	**21 48 08.6**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=105,slow=11,SNR=1.3							
SONM					LR	LR	22 03 31.0	
	comp=Z,44nm,20.4s,baz=62,slow=35							
WB2	**Warramunga Arr**	**42.43**	**193**		P	**P**	**21 48 31.4**	**-0.8**
WB2					IAmb	IAmb	21 48 43.0	
	comp=Z,6.3nm,1.2s							
WRA	**Warramunga Arr**	**42.44**	**193**		P	**P**	**21 48 31.7**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=14,slow=8.8,SNR=5.8							
WRA	**Warramunga Arr**	**42.44**	**193**		P	**P**	**21 48 31.6**	**-0.6**
KULM	**Kulim**	**44.54**	**255**		P	**P**	**21 48 49.1**	**-0.4**
KULM					IAmb	IAmb	21 48 53.8	
	comp=Z,5.2nm,1.1s							
ASAR	**Alice Springs**	**46.14**	**192**		P	**P**	**21 49 01.1**	**-0.8**
	comp=Z,5.5nm,0.6s,baz=19,slow=9.3,SNR=8.4							
ASAR	**Alice Springs**	**46.14**	**192**		P	**P**	**21 49 01.0**	**-1.0**
STKA	**Stephens Creek**	**53.40**	**182**		P	**P**	**21 49 57.1**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=165,slow=5.5,SNR=1.7							
STKA	**Stephens Creek**	**53.40**	**182**		P	**P**	**21 49 57.7**	**+0.8**
ZALV	**Zalesovo Beam**	**54.29**	**322**		P	**P**	**21 50 02.1**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=121,slow=6.7,SNR=1.7							
ZALV	**Zalesovo Beam**	**54.29**	**322**		P	**P**	**21 50 03.0**	**-0.3**
MKAR	**Makanchi Array**	**54.82**	**313**		P	**P**	**21 50 05.4**	**-1.9**
	comp=Z,0.5nm,0.9s,baz=103,slow=7.9,SNR=2.8							
MKAR	**Makanchi Array**	**54.82**	**313**		P	**P**	**21 50 08.0**	**+0.7**
KURBB	**Kurchatov Arra**	**57.52**	**317**		P	**P**	**21 50 26.8**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=93,slow=7.9,SNR=5.0							
ILAR	**Eielson Array**	**61.83**	**27**		P	**P**	**21 50 54.5**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=246,slow=5.7,SNR=2.3							
BMAR	**Burnt Mountain**	**63.15**	**24**		P	**P**	**21 51 06.5**	**+1.7**
KK31	**Karatay Array**	**63.19**	**308**		P	**P**	**21 51 05.8**	**+0.3**
KK31					IAmb	IAmb	21 51 14.8	
	comp=Z,2.7nm,0.9s							
KKAR	**Karatay Array**	**63.19**	**308**		P	**P**	**21 51 06.6**	**+1.1**
ABKAR	**Akbulak array**	**69.65**	**316**		P	**P**	**21 51 47.5**	**+0.9**
NEW	**Newport**	**80.03**	**42**		LR	LR	22 25 18.4	
	comp=Z,54nm,18.6s,baz=357,slow=34							

NEIC 25 21:43:40.4±1.2,18°.2S±0°.1×178°.3W±0°.1,h578km±8km, mb4.3/20,Error ellipse: s-maj=21.2km s-min=10.0km az=223.0

IDC 25 21:43:42.0±2.9,18°.21S×178°.34W,h591km±36km,mb3.4/8, mb1 3.5/8,mb1mx3.1/42,mbtmp4.3/8,Error ellipse: s-maj=29.1km s-min=18.7km az=148.0

ISC 25 21:43:40.6±0.7,18°.1S±0°.1×178°.3W±0°.1,h579km,n41, σ0°79/45,mb4.2/18,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.53**	**276**		P	**P**	**21 45

s-min=26.6km az=101.0
*DDA **25** 21:52:55.0,34°.92N×31°.33E,h42km±160km,ML3.4*
*ISK **25** 21:52:55.8,35°.28N×31°.56E,h15km,ML3.6/29*
*GII **25** 21:52:56.7±0.0,34°.96N×31°.61E,h1km,MD2.2/3*
*NIC **25** 21:52:59.2±0.0,35°.13N×31°.61E,h23km±1km,Ml3.8/5*

ISC 25 21:52:57.4±1.0,**35°.18N**±0°.03×**31°.47E**±0°.03,**h46**km±15km,
n91,σ1°**65**/116,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.72**	**103**	P	**Pn**	**21 53 10.8**	**-0.5**
AKMS				S	**Sn**	**21 53 21.1**	**-0.3**
AKMS				AML	AML	21 53 24.4	
	23nm,0.4s						
AKMS				AML	AML	21 53 24.4	
	23nm,0.4s						
AKMS				AML	AML	21 53 29.9	
	14nm,0.5s						
AKMS				AML	AML	21 53 29.9	
	14nm,0.5s						
ALFC	**Alefka**	**0.92**	**91**	P	**Pn**	**21 53 14.7**	**+0.7**
ALFC				S	**Sn**	**21 53 27.6**	**+1.4**
ALFC				AML	AML	21 53 29.9	
	13nm,0.4s						
ALFC				AML	AML	21 53 29.9	
	13nm,0.4s						
ALFC				AML	AML	21 53 30.1	
	13nm,0.3s						
ALFC				AML	AML	21 53 30.1	
	13nm,0.3s						
NATA	**Nata**	**0.99**	**114**	P	**Pn**	**21 53 15.6**	**+0.8**
NATA				S	**Sn**	**21 53 29.2**	**+1.5**
NATA				AML	AML	21 53 44.0	
	29nm,0.7s						
NATA				AML	AML	21 53 44.0	
	29nm,0.7s						
NATA				AML	AML	21 53 44.7	
	23nm,0.8s						
NATA				AML	AML	21 53 44.7	
	23nm,0.8s						
LEF	**Lefka**	**1.16**	**93**	PG	**Pn**	**21 53 16.9**	**-0.3**
LEF				SG	**Sn**	**21 53 32.2**	**+0.3**
LEF	**Lefka**	**1.16**	**93**	*i* P	**Pn**	**21 53 16.2**	**-1.0**
LEF				*i* S	**Sn**	**21 53 32.6**	**+0.7**
LEF				IAML		21 53 34.0	
	comp=N,834nm,0.4s						
LEF				IAML		21 53 35.0	
	comp=E,891nm,0.6s						
AKDN	**Akdeniz- Kıbrı**	**1.23**	**84**	PN	**Pn**	**21 53 18.3**	**+0.2**
AKDN				SN	**Sn**	**21 53 34.1**	**+0.6**
SZAC	**Souni**	**1.23**	**110**	P	**Pn**	**21 53 18.8**	**+0.6**
SZAC				AML	AML	21 53 44.9	
	comp=E,7.1nm,0.5s						
SZAC				AML	AML	21 53 46.1	
	comp=E,7.3nm,0.9s						
GAZI	**Gazipasa**	**1.25**	**33**	PN	**Pn**	**21 53 17.8**	**-0.7**
GAZI				SN	**Sn**	**21 53 33.8**	**-0.4**
GAZI	**Gazipasa**	**1.25**	**33**	*i* P	**Pn**	**21 53 16.8**	**-1.6**
GAZI				*i* S	**Sn**	**21 53 32.9**	**-1.3**
ALAN	**Alanya-ANTALYA**	**1.45**	**18**	PN	**Pn**	**21 53 20.4**	**-0.7**
ASGA	**Asgata**	**1.51**	**105**	P	**Pn**	**21 53 22.7**	**+0.8**
ASGA				AML	AML	21 53 53.0	
	comp=E,4.0nm,0.6s						
ASGA				AML	AML	21 53 53.7	
	comp=E,3.5nm,0.5s						
BOZY	**Bozyazi-Mersin**	**1.53**	**53**	PN	**Pn**	**21 53 21.8**	**-0.4**
CSS	**Mathiatis**	**1.54**	**98**	PN	**Pn**	**21 53 22.7**	**+0.3**
CSS	**Mathiatis**	**1.54**	**98**	P	**Pn**	**21 53 23.2**	**+0.8**
ATHAL	**Athalassa**	**1.58**	**91**	P	**Pn**	**21 53 24.6**	**+1.7**
KEMT	**Kemer-ANTALYA**	**1.60**	**333**	PN	**Pn**	**21 53 23.6**	**+0.4**
AKIN	**Akıncılar- Kıb**	**1.64**	**95**	PN	**Pn**	**21 53 23.8**	**0.0**
TEKE	**Tekeli-Mersin**	**1.64**	**54**	PN	**Pn**	**21 53 23.1**	**-0.7**
OSC1	**CSNet OBS 1**	**1.69**	**186**	P	Pn	21 53 27.4	+3.1
OSC1				S	**Sn**	**21 53 48.0**	**+3.2**
KEPZ	**Antalya-Kepez**	**1.72**	**3**	*i* P	**Pn**	**21 53 23.1**	**-1.8**
KEPZ				*i* S	**Sn**	**21 53 42.8**	**-2.9**
MVOU	**Mavrovouni**	**1.78**	**95**	P	**Pn**	**21 53 25.6**	**0.0**
KSL	**Kastellorizon**	**1.82**	**303**	P	Pn	21 53 31.4	+5.3
KSL				S	**Sn**	**21 53 55.1**	**+7.1**
BERE	**Bereket-Mersin**	**1.84**	**50**	PN	**Pn**	**21 53 26.2**	**-0.4**
AKAS	**Kas**	**1.85**	**305**	PN	**Pn**	**21 53 28.1**	**+1.4**
AKAS	**Kas**	**1.85**	**305**	*i* P	Pn	21 53 34.9	+8.2
ERMK	**Ermenek**	**1.87**	**38**	*i* P	**Pn**	**21 53 29.1**	**+2.1**
ERMK				*i* S	**Sn**	**21 53 53.3**	**+3.7**
ERMK				IAML		21 53 55.0	
	comp=E,216nm,0.7s						
ERMK				IAML		21 53 58.0	
	comp=N,327nm,0.4s						
OREN	**Orenkoy-Mersin**	**1.91**	**57**	PN	**Pn**	**21 53 27.3**	**-0.1**
AKK1	**Akkuyu-Mersin**	**1.94**	**60**	PN	**Pn**	**21 53 27.7**	**-0.1**
AKK2	**Akkuyu-Mersin**	**1.94**	**60**	PN	**Pn**	**21 53 27.8**	**0.0**
AKKU	**Akkuyu-Mersin**	**1.95**	**59**	PN	**Pn**	**21 53 28.4**	**+0.4**
GULN	**MERSIN_Gulnar**	**1.96**	**59**	*i* P	**Pn**	**21 53 27.5**	**-0.6**
GULN				*i* S	**Sn**	**21 53 52.6**	**+1.1**
GULN				IAML		21 54 01.0	
	comp=N,124nm,0.7s						
TEPK	**Tepekoy-MERSIN**	**1.98**	**58**	PN	**Pn**	**21 53 28.4**	**0.0**
KORT	**Korkueli**	**2.03**	**334**	PN	**Pn**	**21 53 29.1**	**-0.1**
KORT	**Korkueli**	**2.03**	**334**	*i* P	**Pn**	**21 53 31.8**	**+2.6**
KORT				*i* S	Sn	21 54 02.9	+10
KORT				IAML		21 54 09.0	
	comp=E,249nm,0.9s						
KORT				IAML		21 54 09.0	
	comp=N,168nm,0.6s						
YESI	**Yesilovacik-Me**	**2.03**	**60**	PN	**Pn**	**21 53 28.6**	**-0.5**
TISA	**Tisan-Mersin**	**2.04**	**61**	PN	**Pn**	**21 53 29.1**	**-0.2**
IKL	**Isikli**	**2.09**	**59**	PN	**Pn**	**21 53 29.4**	**-0.4**
OSC2	**CSNet OBS 4**	**2.20**	**162**	P	**Pn**	**21 53 33.6**	**+2.1**
OSC2				S	**Sn**	**21 53 58.4**	**+0.9**
KEBE	**Keben-Mersin**	**2.21**	**55**	PN	**Pn**	**21 53 31.3**	**-0.4**
SEYD	**Seydisehir-KON**	**2.24**	**7**	PN	**Pn**	**21 53 31.8**	**-0.3**
SILI	**Silifke-Mersin**	**2.32**	**59**	PN	**Pn**	**21 53 32.9**	**-0.1**
BCK	**Bucak**	**2.38**	**343**	PN	**Pn**	**21 53 34.6**	**+0.6**
FETY	**Fethiye**	**2.42**	**307**	*i* P	**Pn**	**21 53 32.3**	**-2.2**
FETY				*i* S	**Sn**	**21 53 59.0**	**-3.9**
KRMN	**Karaman**	**2.46**	**36**	PN	**Pn**	**21 53 34.8**	**-0.3**
KIZK	**Mersin**	**2.53**	**58**	PN	**Pn**	**21 53 36.1**	**+0.2**
KIZK	**Mersin**	**2.53**	**58**	*i* P	**Pn**	**21 53 38.0**	**+2.2**
GOLH	**Golhisar**	**2.57**	**324**	*i* P	**Pn**	**21 53 37.0**	**+0.5**
KMER	**Konya-Meram**	**2.68**	**15**	*i* P	**Pn**	**21 53 39.9**	**+1.8**
KMER				*i* S	**Sn**	**21 54 15.6**	**+6.2**
KMER				IAML		21 54 22.0	
	comp=E,238nm,0.4s						
ISP	**Isparta**	**2.74**	**344**	PN	**Pn**	**21 53 39.8**	**+0.8**
BRDR	**BURDUR-Merkez**	**2.75**	**336**	*i* P	**Pn**	**21 53 39.5**	**+0.3**
DALY	**Dalyan (Mula)**	**2.81**	**306**	*i* P	**Pn**	**21 53 38.5**	**-1.2**
DALY				*i* S	Sn	21 54 06.7	-5.2
BAGO	**Egridir - ISPA**	**2.86**	**349**	*i* P	**Pn**	**21 53 43.2**	**+2.7**
BAGO				*i* S	**Sn**	**21 54 18.7**	**+5.0**
DOGA	**KONYA_Doganhis**	**2.92**	**3**	*i* P	**Pn**	**21 53 43.3**	**+1.8**
DOGA				*i* S	**Sn**	**21 54 19.6**	**+4.2**
DOGA				IAML		21 54 22.0	
	comp=E,87nm,0.8s						
DOGA				IAML		21 54 24.0	
	comp=N,104nm,0.6s						
BASM	**Basmaki-Afyon**	**2.96**	**338**	PN	**Pn**	**21 53 43.2**	**+1.2**
TAVA	**DENIZLI_Tavas**	**3.08**	**319**	*i* P	**Pn**	**21 53 42.7**	**-0.9**
YESY	**Yesilyurt**	**3.17**	**35**	PN	**Pn**	**21 53 45.3**	**+0.4**
DED	**Mersin**	**3.23**	**56**	*i* P	**Pn**	**21 53 46.5**	**+0.9**
KZIL	**AFYON_Kizioren**	**3.25**	**341**	*i* P	**Pn**	**21 53 45.9**	**-0.1**
GULE	**Gulek**	**3.40**	**51**	*i* P	**Pn**	**21 53 50.5**	**+2.5**
GULE				*i* S	Sn	21 54 36.0	+8.9
GULE				IAML		21 54 40.0	
	comp=N,100nm,0.3s						
GULE				IAML		21 54 47.0	
	comp=E,132nm,0.6s						
SULT	**Sultanhani-AKS**	**3.43**	**28**	PN	**Pn**	**21 53 48.7**	**+0.3**
KRTS	**Karatas**	**3.46**	**65**	PN	**Pn**	**21 53 49.1**	**+0.4**
KARA	**Karaisali**	**3.56**	**53**	PN	**Pn**	**21 53 50.8**	**+0.7**
KIZT	**Kizilcal**	**3.71**	**5**	PN	**Pn**	**21 53 52.6**	**+0.4**
HNTI	**Hanita**	**3.71**	**123**	Pn	Pn	**21 53 53.2**	**+1.0**
CMRD	**Camardi-Nigde**	**3.76**	**48**	PN	**Pn**	**21 53 53.9**	**+0.9**
CEYT	**Ceyhan**	**3.91**	**61**	PN	**Pn**	**21 53 55.8**	**+0.9**
AKO	**Adana**	**3.93**	**54**	*i* P	**Pn**	**21 53 56.0**	**+0.8**
BLGI	**Bet Lehem HaGe**	**3.94**	**127**	Pn	**Pn**	**21 53 55.9**	**+0.6**
BLGI				Sn	**Sn**	**21 54 41.1**	**+0.9**
GEM	**Giv'at Ha'Em**	**3.99**	**118**	Pn	**Pn**	**21 53 57.1**	**+1.1**
GEM				Sn	**Sn**	**21 54 41.8**	**+0.3**
TAHT	**Tahtakopru-Hat**	**4.01**	**71**	PN	**Pn**	**21 53 57.4**	**+1.1**
NATI	**Neve Ativ**	**4.02**	**117**	Pn	**Pn**	**21 53 57.6**	**+1.3**
NATI				Sn	Sn	**21 54 42.5**	**+0.4**
YAYX	**Yaylak**	**4.19**	**26**	PN	**Pn**	**21 53 59.0**	**+0.2**
KOZT	**Kozan**	**4.20**	**56**	PN	**Pn**	**21 53 59.6**	**+0.8**
MMLI	**Mount Malkishu**	**4.28**	**129**	Pn	**Pn**	**21 54 00.3**	**+0.3**
HMDT	**Nahal Hemdat**	**4.46**	**130**	Pn	**Pn**	**21 54 03.1**	**+0.6**
HMDT				Sn	**Sn**	**21 54 54.8**	**+1.6**
AMAZ	**Amatzia**	**4.64**	**141**	Pn	**Pn**	**21 54 04.6**	**-0.4**
BRTR	**Keskin Array B**	**4.85**	**20**	Pn	**Pn**	**21 54 08.2**	**+0.3**
	comp=E,0.5nm,0.3s,baz=196,slow=13,SNR=8.6						
BRTR				Sn	**Sn**	**21 55 04.2**	**+1.3**
	comp=E,0.4nm,0.3s,baz=24,slow=20,SNR=2.2						
BRTR				LR	LR	21 56 24.8	
	comp=E,32nm,19.8s,baz=19,slow=44						
DSI	**Dead Sea**	**4.86**	**137**	Pn	**Pn**	**21 54 08.6**	**+0.6**
DSI				Sn	**Sn**	**21 55 03.6**	**+0.6**
YTIR	**Yattir**	**4.88**	**140**	Pn	**Pn**	**21 54 08.1**	**-0.2**
KZIT	**Kziot**	**4.92**	**149**	Pn	**Pn**	**21 54 09.1**	**+0.3**
KZIT				Sn	**Sn**	**21 55 04.6**	**+0.2**
GHAJ	**Ghor Haditha**	**5.17**	**137**	Pn	**Pn**	**21 54 12.7**	**+0.5**
IDI	**Anoyia**	**5.39**	**273**	Pn	**Pn**	**21 54 12.9**	**-2.4**
	comp=E,1.2nm,0.3s,baz=154,slow=9.6,SNR=15						
IDI				Sn	**Sn**	**21 55 11.8**	**-4.2**
	comp=E,7.8nm,0.3s,baz=297,slow=19,SNR=12						
PRNI	**Paran**	**5.66**	**147**	Pn	**Pn**	**21 54 19.1**	**+0.1**
KRMI	**Paran Flat**	**5.75**	**151**	Pn	**Pn**	**21 54 20.1**	**0.0**
HRFI	**Mount Harif**	**5.95**	**149**	Pn	**Pn**	**21 54 23.2**	**+0.3**
MBRI	**Mt Berech**	**6.11**	**151**	Pn	**Pn**	**21 54 25.4**	**+0.2**
EIL	**Elat**	**6.23**	**151**	Pn	**Pn**	**21 54 26.4**	**-0.4**
	comp=E,1.1nm,0.3s,baz=337,slow=7.2,SNR=15						
EIL				Sn	**Sn**	**21 55 36.5**	**-0.3**
	comp=E,0.8nm,0.3s,baz=351,slow=22,SNR=3.1						
EIL	**Elat**	**6.23**	**151**	Pn	**Pn**	**21 54 26.1**	**-0.7**
EIL				Sn	**Sn**	**21 55 36.7**	**0.0**
AKASG	**Malin Array Be**	**15.60**	**355**	Pn	**P**	**21 56 36.3**	**-1.1**
	comp=E,0.4nm,0.3s,baz=180,slow=9.7,SNR=1.8						
FINES	**FINESS Array B**	**26.50**	**354**	P	**P**	**21 58 27.6**	**-2.5**
	comp=E,1.2nm,0.7s,baz=148,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**39.43**	**57**	P	**P**	**22 00 22.6**	**-0.3**
	comp=E,0.5nm,0.8s,baz=269,slow=6.6,SNR=3.2						

*IDC **25** 21:59:00.8±2.1,19°.01N×145°.66E,h216km±20km,*
mb3.5/13,mb1 3.7/15,mb1mx3.4/57,mbtmp4.1/15,Error ellipse: s-maj=26.7km s-min=9.9km az=81.0
*NEIC **25** 21:59:02.7±1.8,18°.97N±0°.09×145°.4E±0°.2,h235km±10km,*
mb4.3/22,Error ellipse: s-maj=30.7km s-min=11.4km az=78.0

ISC 25 21:59:00.6±0.7,**19°.01N**±0°.06×**145°.6E**±0°.2,**h214**km,**n47,**
σ0°**98**/45,**mb4.0**/20,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.43**	**187**	P	**Pn**	**22 00 22.9**	**+2.0**
	27nm,0.3s,baz=21,slow=5.9,SNR=7.1						
GUMO				S	**S**	**22 01 22.3**	**-2.0**
	7.8nm,0.3s,baz=156,slow=20,SNR=1.6						
GUMO	**Guam**	**5.43**	**187**		**Pn**	**22 00 22.7**	**+1.8**
JCJ	**Chichijima**	**8.62**	**340**	Pn	**Pn**	**22 01 02.1**	**+0.2**
INU	**Inuyama**	**17.94**	**337**	P	**Pn**	**22 02 56.9**	**-0.3**
INU				IAmb	IAmb	22 03 01.4	
	comp=Z,12nm,0.7s						
JMN	**Monobe**	**17.98**	**327**	P	**Pn**	**22 02 57.8**	**+0.1**
JGF	**Kuroka**	**18.04**	**338**		**Pn**	**22 02 58.3**	**-0.1**
JWT	**Wachi**	**18.53**	**333**	P	**P**	**22 03 02.4**	**+1.1**
JWT				IAmb	IAmb	22 03 04.3	
	comp=Z,35nm,1.3s						
MJAR	**Matsushiro Arr**	**18.62**	**341**	P	**P**	**22 03 03.1**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=164,slow=10.0,SNR=11						
MJAR	**Matsushiro Arr**	**18.62**	**341**	P	**P**	**22 03 03.0**	**+0.8**
MAJO	**Matsushiro**	**18.62**	**341**	P	**Pn**	**22 03 03.7**	**-1.5**
MAJO				IAmb	IAmb	22 03 09.4	
	comp=Z,18nm,1.1s						
MAT	**Matsushiro**	**18.62**	**341**	P	**P**	**22 03 03.2**	**+1.0**
JMM	**Marumori**	**19.24**	**348**	P	**Pn**	**22 03 11.6**	**-0.8**
H11S3	**WAKE ISLAND Hy**	**20.02**	**88**	T	T	22 24 51.1	
	baz=289,slow=74,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**20.04**	**88**	T	T	22 24 55.7	
	baz=280,slow=74,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**20.15**	**84**	T	T	22 24 32.2	
	SNR=0.9						
JAY	**Jayapura**	**21.92**	**193**	P	**P**	**22 03 38.1**	**+1.1**
	comp=Z,9.0nm,0.9s,baz=360,slow=5.3,SNR=5.7						
SSLB	**Suanglung**	**23.38**	**286**	P	**P**	**22 03 49.1**	**-1.2**
SSLB				IAmb	IAmb	22 03 52.6	
	comp=Z,12nm,0.8s						
KSRS	**Korea Array**	**23.99**	**324**	P	**P**	**22 03 56.1**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=145,slow=8.4,SNR=5.7						
KLR	**Kul'dur**	**32.13**	**343**	P	**P**	**22 05 08.0**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=162,slow=8.1,SNR=10						
COEN	**Coen**	**32.85**	**184**	P	**P**	**22 05 13.7**	**-0.7**
COEN				IAmb	IAmb	22 05 21.5	
	comp=Z,14nm,1.4s						
WB0	**Warramunga Arr**	**40.06**	**196**	P	**P**	**22 06 15.4**	**+0.1**
WB0				IAmb	IAmb	22 06 16.1	
	comp=Z,5.0nm,0.6s						
WB2	**Warramunga Arr**	**40.24**	**196**	P	**P**	**22 06 16.9**	**+0.1**
WB2				IAmb	IAmb	22 06 17.8	
	comp=Z,8.7nm,0.8s						
WRA	**Warramunga Arr**	**40.25**	**196**	P	**P**	**22 06 17.2**	**+0.4**
	comp=Z,5.5nm,0.7s,baz=6.2,slow=8.8,SNR=125						
WRA	**Warramunga Arr**	**40.25**	**196**	P	**P**	**22 06 16.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**41.75**	**209**	P	**P**	**22 06 29.1**	**+0.1**
FITZ				IAmb	IAmb	22 06 33.2	
	comp=Z,8.1nm,1.3s						
SONM	**Songino Array**	**42.81**	**321**	P	**P**	**22 06 39.0**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=134,slow=7.8,SNR=5.0						
SONM	**Songino Array**	**42.81**	**321**	P	**P**	**22 06 38.2**	**+0.7**
AS31	**Alice Springs**	**43.91**	**195**	P	**P**	**22 06 45.7**	**-0.7**
ASAR	**Alice Springs**	**43.92**	**195**	P	**P**	**22 06 46.4**	**0.0**
	comp=Z,1.8nm,0.6s,baz=17,slow=7.9,SNR=22						
ASAR	**Alice Springs**	**43.92**	**195**	P	**P**	**22 06 45.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**44.05**	**277**	P	**P**	**22 06 48.8**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=68,slow=7.0,SNR=11						
CMAR	**Chiang Mai Arr**	**44.05**	**277**	P	**P**	**22 06 48.1**	**+0.5**
DZM	**Mont Dzumac**	**45.66**	**152**	P	**P**	**22 07 00.9**	**+0.7**
	comp=Z,8.8nm,0.9s,baz=1.7,slow=7.9,SNR=2.7						
DZM	**Mont Dzumac**	**45.66**	**152**	P	**P**	**22 07 01.3**	**+1.1**
DZM				IAmb	IAmb	22 07 01.4	
	comp=Z,16nm,1.0s						
STKA	**Stephens Creek**	**50.74**	**184**	P	**P**	**22 07 37.9**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=17,slow=6.3,SNR=4.4						
STKA	**Stephens Creek**	**50.74**	**184**	P	**P**	**22 07 37.4**	**-1.4**
MK31	**Makanchi Array**	**58.15**	**314**	P	**P**	**22 08 31.3**	**-0.7**
MKAR	**Makanchi Array**	**58.15**	**314**	P	**P**	**22 08 31.8**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=86,slow=9.3,SNR=6.7						
MKAR	**Makanchi Array**	**58.15**	**314**	P	**P**	**22 08 32.0**	**0.0**
MAKZ	**Makanchi**	**58.37**	**314**	P	**P**	**22 08 33.1**	**-0.4**
MAKZ				IAmb	IAmb	22 08 35.0	
	comp=Z,2.6nm,1.0s						
KURK	**Kurchatov**	**60.95**	**318**	P	**P**	**22 08 50.1**	**-0.9**
ILAR	**Eielson Array**	**63.42**	**26**	P	**P**	**22 09 07.1**	**0.0**
	comp=Z,0.2nm,0.6s,baz=254,slow=6.0,SNR=1.7						
ABKAR	**Akbulak array**	**73.02**	**317**		**P**	**22 10 06.0**	**-1.0**
ABKAR				IAmb	IAmb	22 10 07.5	
	comp=Z,1.3nm,0.7s						
ABKAR	**Akbulak array**	**73.02**	**317**	P	**P**	**22 10 06.2**	**-0.8**
ARCES	**ARCESS Array B**	**82.15**	**342**	P	**P**	**22 10 57.0**	**-0.2**
	comp=Z,5.0nm,1.0s,baz=51,slow=6.4,SNR=3.9						
FIA1	**FINESS Array S**	**86.54**	**335**	P	**P**	**22 11 18.0**	**-1.2**
FINES	**FINESS Array B**	**86.55**	**335**	P	**P**	**22 11 17.4**	**-1.8**
	comp=Z,1.5nm,0.4s,baz=63,slow=4.4,SNR=21						

IDC 25 22:00:59.8±21.0,**42°.04N×148°.23E**,**h0**km,**mb3.5/3,**
mb1 3.7/3,mb1mx3.3/49,mbtmp3.5/3,Error ellipse:
s-maj=706.5km s-min=41.0km az=63.0,Off southeast
coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**46.10**	**299**	P	P	22 09 25.2	-0.3
	0.5nm,0.6s,baz=82,slow=11,SNR=1.6						
WRA	**Warramunga Arr**	**63.00**	**195**	P	P	22 11 29.7	+1.3
	0.6nm,1.1s,baz=17,slow=8.9,SNR=1.8						
ASAR	**Alice Springs**	**66.71**	**194**	P	P	22 11 51.6	-0.9
	0.3nm,0.6s,baz=10,slow=7.6,SNR=4.8						

*NEIC **25** 22:04:21.9±1.1,35°.85N±0°.01×97°.44W±0°.02,h2km±9km,*
Error ellipse: s-maj=2.7km s-min=2.0km az=93.0
*TUL **25** 22:04:21.8±1.5,35°.82N±0°.02×97°.43W±0°.02,h5km±7km,*
ML3.6,Mwr3.4/20(NEIC),Error ellipse: s-maj=2.7km
s-min=2.3km az=93.0
*NEIC **25** 22:04:21.8,35°.82N×97°.43W,h4km,Moment Tensor*
Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=1.31;
Mθθ=1.29; Mϕϕ=0.03; Mrθ=0.28; Mrϕ=0.48; Mθϕ=-0.34; Fault
plane solution: M₀1.45000×10¹⁴ NP1:ϕ₁268.10000°,
δ50.80000°,λ-67.52000°. NP2:ϕ₂54.88000°,δ44.27000°,
λ-115.12000°. Principal axes: T 1.4562, Plg3.0000°,
Azm342.0000°; N -0.0047, Plg17.0000°, Azm73.0000°; P
-1.4516, Plg72.0000°, Azm242.0000°;
*ANF **25** 22:04:24.2±0.9,35°.80N×97°.43W,h22km±9km,ML4.5/9*
Error ellipse: s-maj=5.9km s-min=3.9km az=158.0

ISC 25 22:04:22.2±0.9,**35°.84N**±0°.02×**97°.44W**±0°.02,**h4**km±7km,
n50,σ0°**73**/60,**Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK029	**Liberty Lake**	**0.04**	**194**		**Pg**	**22 04 22.9**	**-0.3**
OK029				Sg	**Sg**	**22 04 23.9**	**-0.2**
BCOK	**Bluff Creek, N**	**0.23**	**217**		**Pg**	**22 04 26.3**	**-0.3**
BCOK				Sg	**Sg**	**22 04 29.7**	**+0.1**
OK009	**Oakdale Elemen**	**0.26**	**177**		**Pg**	**22 04 26.9**	**-0.2**
OK025	**Westminster Rd**	**0.27**	**162**		**Pg**	**22 04 27.1**	**-0.4**
OK025				Sg	**Sg**	**22 04 31.2**	**+0.2**
OKCFA	**Oklahoma City**	**0.42**	**181**	Pg	**Pg**	**22 04 29.8**	**-0.5**
OKCSW	**OKLAHOMA CITY**	**0.43**	**180**		**Pg**	**22 04 30.0**	**-0.5**
OKCSW				Sg	**Sg**	**22 04 36.4**	**+0.3**
OK031	**S. Brethren Rd**	**0.50**	**77**		**Pg**	**22 04 31.7**	**-0.1**
OK030	**Cody Creek RV**	**0.54**	**80**		**Pg**	**22 04 32.5**	**-0.1**
OK030				Sg	**Sg**	**22 04 39.9**	**+0.2**
FNO	**Franklin**	**0.58**	**177**		**Pg**	**22 04 32.7**	**-0.6**
QUOK	**Quay**	**0.68**	**61**		**Pg**	**22 04 35.1**	**-0.2**
CROK	**Carrier**	**0.80**	**327**		**Pg**	**22 04 37.4**	**-0.1**
W35A	**Tecumseh**	**0.83**	**146**		**Pg**	**22 04 36.8**	**-1.2**
GC02	**Grant County #**	**1.07**	**342**		**Pg**	**22 04 42.2**	**-0.4**
KAN13	**South Haven SW**	**1.17**	**359**		**Pg**	**22 04 44.2**	**-0.5**
KAN14	**Manchester OK**	**1.19**	**339**		**Pg**	**22 04 44.4**	**-0.6**
KAN09	**Caldwell North**	**1.30**	**354**		**Pn**	**22 04 46.5**	**-0.7**
T35A	**Sooner Cattle**	**1.31**	**35**		**Pn**	**22 04 46.2**	**-1.1**
KAN05	**Bluff City Nor**	**1.31**	**345**		**Pn**	**22 04 46.5**	**-0.9**
KAN01	**Argonia South**	**1.34**	**349**		**Pn**	**22 04 47.0**	**-0.7**
TUL1	**Leonard**	**1.34**	**86**	P	**Pn**	**22 04 46.0**	**-1.7**
	baz=268						
TUL1				S	**Sg**	**22 05 04.4**	**-0.9**
	baz=268						
TUL1	**Leonard**	**1.34**	**86**		**Pn**	**22 04 46.0**	**-1.7**
U32A	**Winter Ranch,**	**1.37**	**294**		**Pn**	**22 04 47.2**	**-1.0**
KAN10	**Anthony SW Sta**	**1.39**	**338**		**Pn**	**22 04 47.6**	**-0.8**
KS20	**Mayfield South**	**1.39**	**356**		**Pn**	**22 04 47.9**	**-0.5**
KAN08	**Anthony NE Sta**	**1.45**	**343**		**Pn**	**22 04 48.8**	**-0.4**
KAN12	**Harper NE Stat**	**1.52**	**343**		**Pn**	**22 04 50.0**	**-0.3**
WMOK	**Wichita Mounta**	**1.55**	**225**	P	**Pn**	**22 04 49.7**	**-0.9**
	baz=45						
WMOK				S	**Sn**	**22 05 10.1**	**-1.1**
	baz=45						
WMOK	**Wichita Mounta**	**1.55**	**225**		**Pn**	**22 04 49.7**	**-0.9**
X37A	**Clayton**	**2.10**	**126**		**Pn**	**22 04 58.2**	**0.0**
Z35A	**Perchaven, San**	**2.51**	**176**		**Pn**	**22 05 03.6**	**-0.1**
U38A	**Gravette**	**2.54**	**75**	Pn	**Pn**	**22 05 04.6**	**+0.3**
R32A	**Long Quarter,**	**2.77**	**339**		**Pn**	**22 05 07.8**	**+0.4**
HHAR	**Hobbs**	**2.87**	**80**		**Pn**	**22 05 08.7**	**-0.1**
W39A	**Magazine**	**3.05**	**101**	P	**Pn**	**22 05 10.9**	**-0.3**
	baz=283						
W39A	**Magazine**	**3.05**	**101**		**Pn**	**22 05 10.8**	**-0.3**
Z38A	**Mt. Pleasant**	**3.27**	**141**		**Pn**	**22 05 14.9**	**+0.7**
KSU1	**Kansas State U**	**3.32**	**11**	P	**Pn**	**22 05 15.2**	**+0.2**
	baz=192						
KSU1				Pb	**Pb**	**

BOZ	**Bozeman (W)**	**5.00**	**296**		**Pn**	**22 08 47.7**	**-0.7**
BOZ				IAML		22 10 17.2	
	comp=E,37nm,0.8s						
BOZ				IAML		22 10 21.6	
	comp=E,29nm,0.9s						
HWUT	**Hardware Ranch**	**5.08**	**249**		**Pn**	**22 08 50.0**	**+0.4**
TCUT	**Toone Canyon**	**5.20**	**244**		**Pn**	**22 08 50.9**	**-0.5**
EGMT	**Eagleton**	**5.45**	**326**		**Pn**	**22 08 54.8**	**+0.2**
DLMT	**Dillon**	**5.56**	**291**		**Pn**	**22 08 57.5**	**+1.2**
LRM	**Limekiln Ridge**	**5.61**	**296**	Pn	**Pn**	**22 08 56.8**	**-0.3**
HRY	**Holter Researc**	**5.62**	**306**		**Pn**	**22 08 56.4**	**-0.6**
PV22	**Blue Mesa, Par**	**5.72**	**209**		**Pn**	**22 08 57.8**	**-0.6**
MDND	**Maddock**	**5.80**	**41**		**Pn**	**22 08 59.8**	**+0.4**
SPUT	**South Promonto**	**5.81**	**249**		**Pn**	**22 09 01.5**	**+1.8**
HVU	**Hansel Valley**	**5.85**	**255**		**Pn**	**22 09 01.1**	**+0.9**
SRU	**San Rafael Swe**	**5.99**	**223**		**Pn**	**22 09 02.8**	**+0.6**
BGU	**Big Grassy Mou**	**6.37**	**248**		**Pn**	**22 09 07.3**	**-0.1**
DUG	**Dugway, Tooele**	**6.60**	**242**		**Pn**	**22 09 11.4**	**+1.0**
HLID	**Hailey**	**6.67**	**273**		**Pn**	**22 09 12.5**	**+0.9**
MSO	**Missoula**	**6.96**	**301**	Pn	**Pn**	**22 09 15.0**	**-0.4**
MSU	**Marysvale**	**7.30**	**228**	Pn	**Pn**	**22 09 20.2**	**0.0**
JTMT	**Jette**	**7.58**	**306**	Pn	**Pn**	**22 09 23.7**	**-0.3**
ELK	**Elko**	**7.96**	**253**	Pn	**Pn**	**22 09 29.7**	**+0.5**
	comp=E,0.1nm,0.3s,baz=254,slow=9.4,SNR=2.0						
ELK				Lg	Lg	22 11 40.7	
	comp=E,0.1nm,0.3s,baz=186,slow=22,SNR=1.8						
ULM	**Lac du Bonnet**	**9.23**	**41**	Pn	**Pn**	**22 09 44.8**	**-1.7**
	comp=E,3.3nm,0.3s,baz=227,slow=11,SNR=15						
ULM				Lg	Lg	22 12 17.9	
	comp=E,0.5nm,0.3s,baz=140,slow=20,SNR=4.3						
YBH	**Yreka Blue Hor**	**13.01**	**268**	Pn	**Pn**	**22 10 40.5**	**+2.3**
	comp=E,0.1nm,0.3s,baz=50,slow=8.1,SNR=3.6						
TXAR	**Lajitas Array**	**14.28**	**174**	Lg	Lg	22 14 54.0	
	comp=E,0.0nm,0.3s,baz=349,slow=28,SNR=2.4						
YKA	**Yellowknife Ar**	**19.72**	**347**	P	**Pn**	**22 12 04.9**	**+0.6**
	comp=E,0.2nm,0.3s,baz=151,slow=9.7,SNR=4.3						
INK	**Inuvik**	**28.88**	**339**	P	**P**	**22 13 32.9**	**+0.9**
	comp=E,1.2nm,0.6s,baz=113,slow=16,SNR=5.9						
ILAR	**Eielson Array**	**31.42**	**327**	P	**P**	**22 13 54.9**	**+0.3**
	comp=E,0.2nm,0.5s,baz=111,slow=8.7,SNR=1.7						
ARCES	**ARCESS Array B**	**61.55**	**18**	P	**P**	**22 17 49.0**	**-1.5**
	comp=E,2.0nm,0.8s,baz=338,slow=6.8,SNR=4.6						

*IDC **25** 22:07:32.0±0.8,21˚.96N×143˚.10E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.8/46, mbtmp3.8/12, Error ellipse: s-maj=30.5km s-min=19.4km az=84.0*

ISC 25 22:07:37.2±0.9, 22˚.0N±0˚.1×143˚.1E±0˚.2, h35km, n19, σ1º09/13, mb3.7/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.24**	**323**	P	**P**	**22 12 10.5**	**+1.1**
	0.3nm,0.3s,baz=64,slow=41,SNR=1.4						
H11N1	**WAKE ISLAND Hy**	**22.38**	**91**	T	T	22 35 04.9	
	baz=279,slow=75,SNR=5.0						
H11N2	**WAKE ISLAND Hy**	**22.38**	**91**	T	T	22 35 09.9	
	baz=279,slow=75,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	**22.40**	**91**	T	T	22 35 06.7	
	baz=279,slow=75,SNR=6.6						
H11S3	**WAKE ISLAND Hy**	**22.43**	**95**	T	T	22 35 03.8	
H11S1	**WAKE ISLAND Hy**	**22.44**	**95**	T	T	22 35 03.8	
H11S2	**WAKE ISLAND Hy**	**22.45**	**95**	T	T	22 35 09.0	
	SNR=12						
KLR	**Kul'dur**	**28.66**	**344**	P	**P**	**22 13 30.6**	**0.0**
	0.4nm,0.3s,baz=92,slow=18,SNR=1.8						
SONM	**Songino Array**	**39.07**	**320**	P	**P**	**22 14 59.0**	**-2.0**
	0.6nm,0.7s,baz=142,slow=7.4,SNR=2.1						
WRA	**Warramunga Arr**	**42.51**	**192**	P	**P**	**22 15 29.0**	**-0.4**
	0.3nm,0.5s,baz=14,slow=9.0,SNR=6.4						
ASAR	**Alice Springs**	**46.21**	**192**	P	**P**	**22 15 59.5**	**+0.4**
	0.5nm,0.5s,baz=20,slow=9.0,SNR=6.8						
ZALV	**Zalesovo Beam**	**53.94**	**322**	P	**P**	**22 16 56.1**	**-1.2**
	0.5nm,0.4s,baz=101,slow=7.5,SNR=1.5						
MKAR	**Makanchi Array**	**54.44**	**313**	P	**P**	**22 17 02.3**	**+1.2**
	0.2nm,0.6s,baz=82,slow=8.9,SNR=2.4						
ILAR	**Eielson Array**	**61.86**	**27**	P	**P**	**22 17 52.9**	**+0.1**
	0.8nm,0.9s,baz=255,slow=4.6,SNR=5.6						
YKA	**Yellowknife Ar**	**76.28**	**28**	P	**P**	**22 19 22.9**	**+0.8**
	0.6nm,0.5s,baz=297,slow=4.6,SNR=5.9						
ARCES	**ARCESS Array B**	**78.64**	**341**	P	**P**	**22 19 35.4**	**+0.2**
	2.8nm,0.9s,baz=83,slow=32,SNR=2.1						
FINES	**FINESS Array B**	**82.90**	**334**	P	**P**	**22 19 59.7**	**+1.6**
	2.3nm,1.0s,baz=61,slow=13,SNR=3.5						
NVAR	**Mina Array Bea**	**83.07**	**51**	P	**P**	**22 19 59.1**	**-0.7**
	0.3nm,0.5s,baz=35,slow=40,SNR=5.4						
LPAZ	**La Paz**	**150.03**	**85**	PKPbc	**PKPbc**	**22 27 25.5**	**-0.2**
	1.5nm,0.7s,baz=304,slow=3.7,SNR=5.7						

*IDC **25** 22:09:24.8±0.8,21˚.65N×143˚.88E, h0km, mb3.8/13, mb1 4.1/13, mb1mx3.9/48, mbtmp3.9/13, MS3.4/8, Ms1 3.4/8, ms1mx3.0/37, Error ellipse: s-maj=29.2km s-min=19.2km az=88.0*

*NEIC **25** 22:09:30.1±1.9,21˚.6N±0˚.1×143˚.7E±0˚.2, h35km, 2km, mb4.4/6, Error ellipse: s-maj=33.5km s-min=17.0km az=258.0*

ISC 25 22:09:29.8±0.7, 21˚.6N±0˚.1×143˚.8E±0˚.2, h35km, n43, σ0º95/29, mb4.0/15, MS3.3/5, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.63**	**345**	Pn	**Pn**	**22 10 50.0**	**-1.1**
GUMO	**Guam**	**8.06**	**172**	LR	LR	22 14 07.5	
	comp=Z,170nm,18.7s,baz=356,slow=35						
JHJ	**Hachijo jima 2**	**11.98**	**344**	LR	LR	22 16 43.9	
	comp=Z,204nm,18.0s,baz=158,slow=37						
MJAR	**Matsushiro Arr**	**15.63**	**343**	LR	LR	22 18 35.4	
	comp=Z,207nm,19.7s,baz=155,slow=35						
KSRS	**Korea Array**	**20.90**	**322**	P	**P**	**22 14 11.0**	**+1.9**
	1.6nm,0.6s,baz=149,slow=8.3,SNR=2.8						
H11N1	**WAKE ISLAND Hy**	**21.71**	**91**	T	T	22 37 00.2	
	baz=279,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**21.71**	**91**	T	T	22 37 01.7	
	baz=279,slow=75,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**21.72**	**91**	T	T	22 36 60.0	
	baz=279,slow=75,SNR=10						
H11S3	**WAKE ISLAND Hy**	**21.74**	**94**	T	T	22 37 01.1	
	baz=283,slow=74,SNR=38						
H11S1	**WAKE ISLAND Hy**	**21.75**	**94**	T	T	22 36 59.3	
	baz=283,slow=74,SNR=16						
H11S2	**WAKE ISLAND Hy**	**21.76**	**94**	T	T	22 36 56.8	
	baz=283,slow=74,SNR=14						
USRK	**Ussuriysk Ar.**	**24.54**	**339**	P	**P**	**22 14 47.0**	**+0.9**
	0.6nm,0.6s,baz=221,slow=39,SNR=1.6						
USRK	**Ussuriysk Ar.**	**24.54**	**339**	P	**P**	**22 14 46.9**	**+0.8**
KRVT	**Keravat (AS076**	**27.01**	**162**	LR	LR	22 24 05.1	
	comp=Z,24nm,21.9s,baz=6.6,slow=33						
KLR	**Kul'dur**	**29.16**	**344**	P	**P**	**22 15 27.2**	**-0.4**
	2.4nm,0.7s,baz=145,slow=9.6,SNR=7.3						
PETK	**Petropavlovsk-**	**33.19**	**15**	LR	LR	22 27 07.3	
	comp=Z,63nm,21.3s,baz=216,slow=32						
WB2	**Warramunga Arr**	**42.33**	**193**	P	**P**	**22 17 20.2**	**-0.4**
WB2				IAmb	IAmb	22 17 39.0	
	comp=Z,5.6nm,1.2s						
WRA	**Warramunga Arr**	**42.34**	**193**	P	**P**	**22 17 19.9**	**-0.7**
	comp=Z,1.3nm,1.0s,baz=17,slow=8.5,SNR=6.2						
WRA	**Warramunga Arr**	**42.34**	**193**	P	**P**	**22 17 19.6**	**-1.0**
ASAR	**Alice Springs**	**46.04**	**193**	P	**P**	**22 17 51.0**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=10,slow=9.5,SNR=5.6						
ASAR	**Alice Springs**	**46.04**	**193**	P	**P**	**22 17 50.3**	**+0.1**
WMQ	**Urumqi**	**51.05**	**309**	P	**P**	**22 18 29.4**	**+0.6**
WMQ				IAmb	IAmb	22 18 36.0	
	comp=Z,6.4nm,1.0s						
STKA	**Stephens Creek**	**53.24**	**182**	P	**P**	**22 18 44.9**	**-0.1**
ZALV	**Zalesovo Beam**	**54.61**	**322**	P	**P**	**22 18 54.5**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=66,slow=15,SNR=1.4						
ZALV	**Zalesovo Beam**	**54.61**	**322**	P	**P**	**22 18 56.0**	**+1.3**
MKAR	**Makanchi Array**	**55.15**	**313**	P	**P**	**22 18 59.0**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=90,slow=13,SNR=1.8						
MKAR	**Makanchi Array**	**55.15**	**313**	P	**P**	**22 18 58.9**	**+0.1**
KDAK	**Kodiak Island**	**57.94**	**34**	P	**P**	**22 19 19.6**	**+1.2**
NRIK	**Noril'sk**	**58.25**	**340**	LR	LR	22 43 53.8	
	comp=Z,37nm,19.2s,baz=173,slow=36						
ILAR	**Eielson Array**	**61.85**	**27**	P	**P**	**22 19 44.5**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=258,slow=4.8,SNR=3.5						
KKAR	**Karatay Array**	**63.53**	**308**	P	**P**	**22 19 55.5**	**-1.4**
KKAR	**Karatay Array**	**63.53**	**308**	P	**P**	**22 19 56.1**	**-0.7**
KKAR				IAmb	IAmb	22 20 04.9	
	comp=Z,5.8nm,1.2s						
BCAR	**Beaver Creek A**	**63.90**	**29**	P	**P**	**22 20 00.1**	**+1.1**
INK	**Inuvik**	**67.41**	**24**	P	**P**	**22 20 21.1**	**-0.2**
	comp=Z,1.9nm,0.8s,baz=274,slow=7.1,SNR=4.0						
PPT	**Papeete**	**76.00**	**116**	LR	LR	22 48 56.8	
	comp=Z,16nm,21.5s,baz=356,slow=31						
YKA	**Yellowknife Ar**	**76.25**	**28**	P	**P**	**22 21 13.9**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=297,slow=5.5,SNR=2.5						
ARCES	**ARCESS Array B**	**79.16**	**342**	LR	LR	23 00 28.3	
	comp=Z,36nm,18.5s,baz=225,slow=39						
NVAR	**Mina Array Bea**	**82.75**	**52**	P	**P**	**22 21 52.0**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=279,slow=6.4,SNR=6.1						
FINES	**FINESS Array B**	**83.48**	**335**	P	**P**	**22 21 54.9**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=10,slow=3.1,SNR=2.1						
PDAR	**Pinedale Array**	**87.05**	**45**	P	**P**	**22 22 11.1**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=291,slow=0.6,SNR=7.0						
PDAR	**Pinedale Array**	**87.05**	**45**	P	**P**	**22 22 10.9**	**-1.4**
LPAZ	**La Paz**	**149.39**	**86**	PKPbc	**PKiKP**	**22 29 18.3**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=296,slow=3.6,SNR=4.8						
LPAZ	**La Paz**	**149.39**	**86**		**PKiKP**	**22 29 17.8**	**-0.1**

*JMA **25** 22:10:28.3±0.1, 38˚.67N×142˚.46E, h39km±2km, M3.9*
JMA Felt I J1.
*NEIC **25** 22:10:28.4±1.3, 38˚.70N±0˚.02×142˚.6E±0˚.1, h43km±8km, mb4.3/8, Error ellipse: s-maj=14.9km s-min=1.6km az=97.0*
*NIED **25** 22:10:28.3, 38˚.67N×142˚.46E, h39km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14^Nm; Mrr6.37; Mθθ-2.44; Mφφ-3.92; Mrθ-2.76; Mθφ-2.40; Mφr-4.47; Fault plane solution: Mo8.00000×10^14^ NP1: φs213.00000°, δ66.00000°, λ88.00000°. NP2:φs39.00000°, δ25.00000°, λ95.00000°.*
*IDC **25** 22:10:30.6±2.7, 38˚.69N×142˚.39E, h62km±24km, mb3.7/9, mb1 3.8/13, mb1mx3.6/51, mbtmp3.9/13, ML3.3/4, MS3.0/2, Ms1 3.0/2, ms1mx2.5/46 Error ellipse: s-maj=24.1km s-min=14.1km az=107.0*

ISC 25 22:10:25.8±0.7, 38˚.69N±0˚.05×142˚.57E±0˚.05, h24km, n62, σ1º45/68, mb4.2/14, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.81**	**300**	P	**Pn**	**22 10 42.5**	**+0.8**
OFUJ				S	**Sn**	**22 10 52.3**	**-0.7**
JKMT	**Kesennumamotoy**	**0.87**	**279**	P	**Pn**	**22 10 42.9**	**+0.4**
JKMT				S	**Sn**	**22 10 53.3**	**-1.1**
JIKH	**Ishinomakikobu**	**0.94**	**247**	P	**Pn**	**22 10 43.9**	**+0.3**
JIKH				S	**Sn**	**22 10 55.0**	**-1.3**
JIO	**Ouri**	**0.99**	**257**	P	**Pn**	**22 10 44.5**	**+0.4**
JIO				S	**Sn**	**22 10 55.9**	**-1.4**
JMK	**Ichinoseki**	**1.09**	**285**	P	**Pb**	**22 10 46.4**	**+0.4**
JMK				S	**Sn**	**22 10 58.9**	**-1.0**
JOM	**Ohasama**	**1.27**	**309**	P	**Pb**	**22 10 49.4**	**+0.3**
JOM				S	**Sb**	**22 11 04.9**	**-0.1**
JTH	**Tanohata**	**1.37**	**337**	P	**Pn**	**22 10 50.7**	**+1.3**
JTH				eS	**Sb**	**22 11 07.9**	**+0.1**
JOU	**Okura**	**1.53**	**259**	P	**Pb**	**22 10 52.6**	**-0.9**
JOU				S	**Sb**	**22 11 11.1**	**-1.4**
JMM	**Marumori**	**1.62**	**240**	P	**Pn**	**22 10 53.3**	**+0.4**
JMM				eS	**Sn**	**22 11 12.2**	**-0.8**
JMM	**Marumori**	**1.62**	**240**	Pn	**Pn**	**22 10 53.6**	**+0.7**
JRG	**Rokugo**	**1.67**	**296**	P	**Pb**	**22 10 54.9**	**-0.9**
JRG				eS	**Sb**	**22 11 15.2**	**-1.2**
JYK	**Kaneyama**	**1.75**	**278**	P	**Pb**	**22 10 55.7**	**-1.4**
JFK	**Kawauchi**	**1.88**	**226**	P	**Pn**	**22 10 56.9**	**+0.4**
JTM	**Tenmabayashi**	**2.40**	**332**		**Pn**	**22 11 05.5**	**+1.9**
JYT	**Yasato**	**3.10**	**218**	Pn	**Pn**	**22 11 11.9**	**-1.3**
ERM	**Erimo**	**3.36**	**7**	Pn	**Pn**	**22 11 17.3**	**+0.6**
JSD	**Sado**	**3.45**	**261**	Pn	**Pn**	**22 11 18.9**	**+0.9**
MJAR	**Matsushiro Arr**	**4.07**	**240**	P	**Pn**	**22 11 29.1**	**+2.5**
	0.7nm,0.3s,baz=57,slow=9.5,SNR=10						
MJAR				S	**Sn**	**22 12 13.8**	**+0.3**
	0.2nm,0.3s,baz=54,slow=42,SNR=1.2						
MJAR	**Matsushiro Arr**	**4.07**	**240**		**Pn**	**22 11 28.1**	**+1.5**
MAJO	**Matsushiro**	**4.07**	**240**	Pn	**Pn**	**22 11 28.5**	**+1.9**
MAT	**Matsushiro**	**4.07**	**240**	P	**Pn**	**22 11 29.3**	**+2.7**
MAT				eS	**Sn**	**22 12 17.3**	**+3.8**
MJB9	**Matsu-Tunnel**	**4.07**	**240**		**Pn**	**22 11 29.1**	**+2.5**
JGF	**Kuroka**	**5.18**	**235**	Pn	**Pn**	**22 11 44.4**	**+2.5**
JKA	**Kamikawa-asahi**	**5.43**	**0**		**Pn**	**22 11 46.8**	**+1.6**
ASAJ	**Asahikawa**	**5.43**	**0**	P	**Pn**	**22 11 47.8**	**+2.6**
	2.2nm,0.3s,baz=206,slow=20,SNR=11						
ASAJ				S	**Sn**	**22 12 43.3**	**-3.6**
	baz=211,slow=29,SNR=1.4						
ASAJ				LR	LR	22 14 26.4	
	comp=Z,101nm,19.1s,baz=154,slow=44						
INU	**Inuyama**	**5.55**	**235**		**Pn**	**22 11 48.7**	**+1.8**
JWT	**Wachi**	**6.67**	**242**		**Pn**	**22 12 03.7**	**+1.4**
USA0B	**Ussuriysk Arra**	**9.67**	**308**		**Pn**	**22 12 44.9**	**+1.6**
USRK	**Ussuriysk Ar.**	**9.67**	**308**	P	**Pn**	**22 12 46.3**	**+3.0**
	baz=125,slow=12,SNR=13						
USRK	**Ussuriysk Ar.**	**9.67**	**308**		**Pn**	**22 12 44.5**	**+1.1**
KSRS	**Korea Array**	**11.62**	**268**	P	**Pn**	**22 13 12.6**	**+2.6**
	0.3nm,0.3s,baz=88,slow=14,SNR=6.2						
SONM	**Songino Array**	**27.67**	**301**	P	**P**	**22 16 09.8**	**-2.1**
	0.4nm,0.6s,baz=90,slow=24,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**28.27**	**125**	T	T	22 46 41.6	
	baz=317,slow=75,SNR=385						
H11N1	**WAKE ISLAND Hy**	**28.28**	**125**	T	T	22 46 50.6	
	baz=317,slow=75,SNR=516						
H11N3	**WAKE ISLAND Hy**	**28.29**	**125**	T	T	22 46 48.8	
	baz=317,slow=75,SNR=231						
H11S1	**WAKE ISLAND Hy**	**29.05**	**127**	T	T	22 47 42.9	
	baz=318,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**29.05**	**127**	T	T	22 47 50.2	
	baz=318,slow=76,SNR=32						
H11S2	**WAKE ISLAND Hy**	**29.07**	**127**	T	T	22 47 44.6	
	baz=318,slow=76,SNR=29						
ZALV	**Zalesovo Beam**	**41.50**	**311**	P	**P**	**22 18 10.2**	**-0.6**
	1.0nm,0.3s,baz=80,slow=8.6,SNR=3.9						
MK31	**Makanchi Array**	**44.04**	**301**	P	**P**	**22 18 31.5**	**-0.1**
MKAR	**Makanchi Array**	**44.04**	**301**	P	**P**	**22 18 31.4**	**-0.1**
	0.7nm,0.7s,baz=76,slow=10,SNR=9.2						
MKAR	**Makanchi Array**	**44.04**	**301**	P	**P**	**22 18 31.6**	**+0.1**
MAKZ	**Makanchi**	**44.25**	**301**	P	**P**	**22 18 33.3**	**+0.1**
MAKZ				IAmb	IAmb	22 18 51.8	
	comp=Z,3.8nm,1.2s						
IMAR	**Indian Mountai**	**44.77**	**31**	P	**P**	**22 18 38.7**	**+1.6**
KURK	**Kurchatov**	**45.65**	**307**	P	**P**	**22 18 44.0**	**-0.3**
KURK				IAmb	IAmb	22 18 56.2	
	comp=Z,3.0nm,0.6s						
ILAR	**Eielson Array**	**47.61**	**33**	P	**P**	**22 19 00.4**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=270,slow=7.2,SNR=7.4						
ILAR	**Eielson Array**	**47.61**	**33**	P	**P**	**22 19 00.7**	**+1.3**
ARSB	**Arslanbob**	**52.05**	**296**	P	**P**	**22 19 34.3**	**+0.7**
ARSB				IAmb	IAmb	22 19 54.0	
	comp=Z,8.3nm,1.3s						
ABKAR	**Akbulak array**	**57.59**	**310**	P	**P**	**22 20 13.4**	**-0.1**
ABKAR				IAmb	IAmb	22 20 33.2	
	comp=Z,3.8nm,1.5s						
ABKAR	**Akbulak array**	**57.59**	**310**	P	**P**	**22 20 13.2**	**-0.3**
WR0	**Warramunga Arr**	**58.82**	**189**	P	**P**	**22 20 21.7**	**-0.6**
WRA	**Warramunga Arr**	**58.83**	**189**	P	**P**	**22 20 22.1**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=7.8,slow=7.1,SNR=21						
WRA	**Warramunga Arr**	**58.83**	**189**	P	**P**	**22 20 21.7**	**-0.6**
ASAR	**Alice Springs**	**62.55**	**189**	P	**P**	**22 20 48.1**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=12,slow=7.0,SNR=9.5						
ARCES	**ARCESS Array B**	**62.78**	**339**	P	**P**	**22 20 48.0**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=36,slow=4.5,SNR=2.0						
FINES	**FINESS Array B**	**67.78**	**332**	P	**P**	**22 21 22.0**	**+0.8**
	comp=Z,2.3nm,1.0s,baz=123,slow=14,SNR=1.5						
NVAR	**Mina Array Bea**	**73.27**	**54**	P	**P**	**22 21 53.0**	**-2.4**
PDAR	**Pinedale Array**	**75.86**	**46**	LR	LR	22 55 30.8	
	comp=Z,15nm,20.6s,baz=321,slow=36						
BUR08	**Bucovina Ar. S**	**77.57**	**322**	P	**P**	**22 22 20.6**	**+0.8**
BUR08				IAmb	IAmb	22 22 21.9	
	comp=Z,4.8nm,1.3s						
BURAR	**Bucovina Array**	**77.58**	**322**	P	**P**	**22 22 20.1**	**+0.2**
TXAR	**Lajitas Array**	**88.39**	**53**	P	**P**	**22 23 16.6**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=286,slow=3.4,SNR=5.7						
TXAR	**Lajitas Array**	**88.39**	**53**	P	**P**	**22 23 16.3**	**+0.2**

*IDC **25** 22:30:33.3±0.8, 21˚.79N×143˚.64E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.8/41, mbtmp3.9/10, Error ellipse: s-maj=30.1km s-min=19.7km az=86.0*
*NEIC **25** 22:30:40.5±1.1, 21˚.75N±0˚.10×143˚.5E±0˚.1, h55km±8km, mb4.3/9, Error ellipse: s-maj=18.0km s-min=13.8km az=92.0*

ISC 25 22:30:38.3±0.7, 21˚.7N±0˚.1×143˚.6E±0˚.2, h35km, n31, σ0º58/25, mb4.2/13, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.49**	**347**	Pn	**Pn**	**22 31 57.6**	**+0.1**
KSRS	**Korea Array**	**20.71**	**323**	P	**P**	**22 35 16.9**	**+1.4**
	1.5nm,0.5s,baz=146,slow=9.6,SNR=6.1						
H11N1	**WAKE ISLAND Hy**	**21.89**	**91**	T	T	22 58 01.3	
	baz=279,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hy**	**21.89**	**91**	T	T	22 58 08.0	
	baz=279,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**21.90**	**91**	T	T	22 58 08.5	
	baz=279,slow=75,SNR=7.8						
H11S3	**WAKE ISLAND Hy**	**21.93**	**94**	T	T	22 58 03.4	
	baz=283,slow=74,SNR=42						
H11S1	**WAKE ISLAND Hy**	**21.93**	**94**	T	T	22 58 05.8	
	baz=283,slow=74,SNR=30						
H11S2	**WAKE ISLAND Hy**	**21.94**	**94**	T	T	22 58 09.5	
	baz=283,slow=74,SNR=25						
KLR	**Kul'dur**	**29.00**	**344**	P	**P**	**22 36 35.3**	**+0.6**
	4.3nm,0.7s,baz=144,slow=8.1,SNR=16						
WB0	**Warramunga Arr**	**42.22**	**193**	P	**P**	**22 38 27.6**	**-0.5**
WB2	**Warramunga Arr**	**42.40**	**193**	P	**P**	**22 38 29.6**	**+0.1**
WB2				IAmb	IAmb	22 38 42.6	
	comp=Z,11nm,1.5s						
WRA	**Warramunga Arr**	**42.40**	**193**	P	**P**	**22 38 30.0**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=15,slow=8.7,SNR=6.5						
WRA	**Warramunga Arr**	**42.40**	**193**	P	**P**	**22 38 29.9**	**+0.3**
ASAR	**Alice Springs**	**46.10**	**192**	P	**P**	**22 39 00.1**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=19,slow=8.7,SNR=4.5						
ARMA	**Armidale**	**52.43**	**171**	P	**P**	**22 39 47.7**	**+0.2**
ZALV	**Zalesovo Beam**	**54.41**	**322**	P	**P**	**22 40 01.2**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=57,slow=5.5,SNR=4.9						
MK31	**Makanchi Array**	**54.95**	**313**	P	**P**	**22 40 05.3**	**-0.6**
MK31				IAmb	IAmb	22 40 13.1	
	comp=Z,3.4nm,1.4s						
MKAR	**Makanchi Array**	**54.95**	**313**	P	**P**	**22 40 05.8**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=96,slow=10.0,SNR=6.9						
ILAR	**Eielson Array**	**61.83**	**27**	P	**P**	**22 40 52.8**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=253,slow=4.6,SNR=7.8						
KK31	**Karatay Array**	**63.32**	**308**	P	**P**	**22 41 04.0**	**0.0**
KK31				IAmb	IAmb	22 41 04.5	
	comp=Z,2.6nm,1.0s						
KKAR	**Karatay Array**	**63.32**	**308**	P	**P**	**22 41 04.1**	**+0.1**
KKAR	**Karatay Array**	**63.32**	**308**	P	**P**	**22 41 04.1**	**+0.1**
KKAR				IAmb	IAmb	22 41 04.5	
	comp=Z,2.6nm,1.0s						
BALM	**Baldy**	**63.52**	**32**	P	**P**	**22 41 05.2**	**+0.2**
ABKAR	**Akbulak array**	**69.78**	**316**	P	**P**	**22 41 44.5**	**-0.6**
ABKAR	**Akbulak array**	**69.78**	**316**	P	**P**	**22 41 44.3**	**-0.7**
YKA	**Yellowknife Ar**	**76.24**	**28**	P	**P**	**22 42 23.4**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=295,slow=4.8,SNR=10						
NVAR	**Mina Array Bea**	**82.83**	**52**	P	**P**	**22 43 00.0**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=288,slow=5.1,SNR=4.4						
NVAR	**Mina Array Bea**	**82.83**	**52**	P	**P**	**22 42 59.7**	**+0.1**
FINES	**FINESS Array B**	**83.31**	**335**	P	**P**	**22 43 00.5**	**-0.8**
	comp=Z,3.1nm,1.0s,baz=90,slow=3.8,SNR=4.2						
FINES	**FINESS Array B**	**83.31**	**335**	P	**P**	**22 43 00.6**	**-0.6**
LPAZ	**La Paz**	**149.56**	**85**	PKPbc	**PKiKP**	**22 50 26.1**

s-min=19.3km az=90.0

ISC 25 22:51:40.5±0.9, 21°38'N±0°1'×143°6'E±0°2, h35km, n26, σ1s08/13, mb3.8/11, MS3.0/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**8.22**	**171**	LR	LR	LR	22 55 57.8	
	comp=Z,53nm,19.3s,baz=114,slow=32							
JHJ	**Hachijo jima 2**	**11.81**	**344**	LR	LR	LR	22 58 43.7	
	comp=Z,206nm,18.4s,baz=118,slow=36							
MJAR	**Matsushiro Arr**	**15.45**	**343**	Pn		**Pn**	**22 55 15.8**	**-0.1**
	0.1nm,0.3s,baz=164,slow=11,SNR=2.3							
MJAR				LR	LR	LR	23 00 45.0	
	comp=Z,112nm,19.6s,baz=140,slow=36							
KSRS	**Korea Array**	**20.70**	**322**	P		Pn	22 56 26.8	+6.6
	2.1nm,0.5s,baz=148,slow=9.1,SNR=7.8							
KSRS				LR	LR	LR	23 02 50.0	
	comp=Z,40nm,20.4s,baz=122,slow=33							
H11N1	**WAKE ISLAND Hy 21.86**	**91**		T	T	T	23 19 06.6	
	baz=279,slow=75,SNR=7.1							
H11N2	**WAKE ISLAND Hy 21.86**	**91**		T	T	T	23 19 09.4	
	baz=279,slow=75,SNR=5.8							
H11N3	**WAKE ISLAND Hy 21.88**	**91**		T	T	T	23 19 07.6	
	baz=279,slow=75,SNR=6.3							
H11S3	**WAKE ISLAND Hy 21.90**	**94**		T	T	T	23 19 09.3	
	baz=283,slow=74,SNR=35							
H11S1	**WAKE ISLAND Hy 21.91**	**94**		T	T	T	23 19 10.3	
	baz=283,slow=74,SNR=13							
H11S2	**WAKE ISLAND Hy 21.92**	**94**		T	T	T	23 19 12.3	
	baz=283,slow=74,SNR=11							
USRK	**Ussuriysk Ar.**	**24.35**	**339**	LR	LR	LR	23 05 40.7	
	comp=Z,47nm,21.6s,baz=205,slow=35							
KLR	**Kul'dur**	**28.98**	**344**	P		**P**	**22 57 37.3**	**+0.6**
	1.6nm,0.7s,baz=135,slow=6.0,SNR=6.5							
PETK	**Petropavlovsk-**	**33.10**	**16**	LR	LR	LR	23 13 28.2	
	comp=Z,14nm,18.1s,baz=207,slow=40							
BATI	**Baumata**	**37.33**	**214**	LR	LR	LR	23 13 45.5	
	comp=Z,35nm,19.1s,baz=49,slow=36							
SONM	**Songino Array**	**39.54**	**320**	P		**P**	**22 59 08.3**	**+0.1**
	0.5nm,0.8s,baz=120,slow=7.2,SNR=2.1							
SONM				LR	LR	LR	23 14 43.1	
	comp=Z,48nm,19.6s,baz=244,slow=35							
WRA	**Warramunga Arr**	**42.44**	**193**	P		**P**	**22 59 31.7**	**-0.4**
	1.5nm,1.0s,baz=13,slow=8.9,SNR=6.3							
LEM	**Lembang**	**45.31**	**235**	LR	LR	LR	23 21 14.7	
	comp=Z,15nm,18.6s,baz=313,slow=39							
ASAR	**Alice Springs**	**46.14**	**192**	P		**P**	**23 00 01.6**	**-0.1**
	0.7nm,0.8s,baz=9.5,slow=8.2,SNR=6.8							
ASAR				LR	LR	LR	23 19 18.0	
	comp=Z,20nm,18.2s,baz=12,slow=36							
ZALV	**Zalesovo Beam**	**54.40**	**322**	P		**P**	**23 01 02.3**	**-1.6**
	0.5nm,0.3s,baz=112,slow=11,SNR=1.6							
MKAR	**Makanchi Array**	**54.95**	**313**	P		**P**	**23 01 07.5**	**-0.6**
	0.2nm,0.6s,baz=90,slow=10.0,SNR=1.5							
ILAR	**Eielson Array**	**61.79**	**27**	P		**P**	**23 01 53.5**	**-2.0**
	0.4nm,0.8s,baz=226,slow=4.8,SNR=3.1							
INK	**Inuvik**	**67.34**	**24**	P		**P**	**23 02 30.9**	**-0.7**
	1.0nm,0.7s,baz=301,slow=2.7,SNR=3.6							
YKA	**Yellowknife Ar**	**76.20**	**28**	P		**P**	**23 03 25.1**	**+0.1**
	0.8nm,0.7s,baz=292,slow=4.7,SNR=3.1							
ARCES	**ARCESS Array B**	**78.98**	**342**	P		**P**	**23 03 42.2**	**+1.8**
	1.9nm,0.8s,baz=348,slow=11,SNR=3.8							
NVAR	**Mina Array Bea**	**82.78**	**52**	P		**P**	**23 04 02.2**	**+0.6**
	0.8nm,0.5s,baz=288,slow=4.6,SNR=3.6							
LPAZ	**La Paz**	**149.53**	**85**	PKPbc		**PKPbc**	**23 11 28.2**	**+0.5**
	1.1nm,0.7s,baz=318,slow=4.2,SNR=4.7							

*INET **25** 22:58:15.3, 12°.41N×88°.26W, h15km, ML3.2, MW3.0*
*IDC **25** 22:58:16.9±2.3, 12°.77N×88°.17W, h59km±9km, mb3.4/4, mb1 3.7/5, mb1mx3.3/40, mbtmp3.6/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/33, Error ellipse: s-maj=66.5km s-min=29.1km az=41.0*
*UCR **25** 22:58:17.7±0.8, 12°.61N×88°.26W, h33km±3km, ML3.7*
*SNET **25** 22:58:17.5±1.0, 12°.61N×88°.26W, h33km±4km, ML3.7*

ISC 25 22:58:16.4±1.0, 12°62N±0°08×88°19W±0°06, h62km±8km, n35, σ0s94/51, mb3.6/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JUCU	**Jucuarįn**	**0.63**	**355**	*eP*		**Pn**	**22 58 30.4**	**+0.3**
JUCU				*eS*		**Sn**	**22 58 40.3**	**+0.3**
JUCU	**Jucuarįn**	**0.63**	**355**	*eP*		**Pn**	**22 58 30.4**	**+0.3**
JUCU				*eS*		**Sn**	**22 58 40.3**	**+0.3**
LCND	**La Caada**	**0.75**	**23**	*eP*		**Pn**	**22 58 32.0**	**+0.7**
LCND				*eS*		**Sn**	**22 58 43.8**	**+1.5**
LCND				IAML			22 58 47.7	
	comp=Z,3µm,0.3s							
LCND	**La Caada**	**0.75**	**23**	*eP*		**Pn**	**22 58 32.0**	**+0.7**
LCND				*eS*		**Sn**	**22 58 43.8**	**+1.5**
LCND				IAML			22 58 47.7	
	comp=Z,3µm,0.3s							
ALJI	**Alcalda de J**	**0.79**	**332**	*eP*		**Pn**	**22 58 32.3**	**+0.4**
ALJI				*eS*		**Sn**	**22 58 44.1**	**+0.8**
ALJI				IAML			22 58 45.8	
	comp=Z,3µm,0.4s							
ALJI	**Alcalda de J**	**0.79**	**332**	*eP*		**Pn**	**22 58 32.3**	**+0.4**
ALJI				*eS*		**Sn**	**22 58 44.1**	**+0.8**
ALJI				IAML			22 58 45.8	
	comp=Z,3µm,0.4s							
LCY	**Lacayo**	**0.80**	**353**	*eP*		**Pn**	**22 58 32.9**	**+0.7**
LCY	**Lacayo**	**0.80**	**353**	*eP*		**Pn**	**22 58 32.9**	**+0.7**
PACA	**Pacayal**	**0.85**	**351**	*eP*		**Pn**	**22 58 33.8**	**+1.0**
PACA				*eS*		**Sn**	**22 58 45.8**	**+1.0**
PACA	**Pacayal**	**0.85**	**351**	*eP*		**Pn**	**22 58 33.8**	**+1.0**
PACA				*eS*		**Sn**	**22 58 45.8**	**+1.0**
TECA	**Tecapa**	**0.92**	**341**	*eP*		**Pn**	**22 58 34.2**	**+0.5**
TECA	**Tecapa**	**0.92**	**341**	*eP*		**Pn**	**22 58 34.2**	**+0.5**
COEB	**Comit de Eme**	**0.93**	**339**	*eP*		**Pn**	**22 58 34.1**	**+0.3**
COEB				*eS*		**Sn**	**22 58 47.3**	**+0.7**
COEB				IAML			22 58 47.9	
	comp=Z,2µm,0.3s							
COEB	**Comit de Eme**	**0.93**	**339**	*eP*		**Pn**	**22 58 34.1**	**+0.3**
COEB				*eS*		**Sn**	**22 58 47.3**	**+0.7**
COEB				IAML			22 58 47.9	
	comp=Z,2µm,0.3s							
COEG	**Centro de Oper**	**1.20**	**326**	*eP*		**Pn**	**22 58 37.8**	**+0.6**
COEG				*eS*		**Sn**	**22 58 53.4**	**+0.7**
COEG				IAML			22 58 56.7	
	comp=Z,2µm,0.4s							
COEG	**Centro de Oper**	**1.20**	**326**	*eP*		**Pn**	**22 58 37.8**	**+0.6**
COEG				*eS*		**Sn**	**22 58 53.4**	**+0.7**
COEG				IAML			22 58 56.7	
	comp=Z,2µm,0.4s							
PAVA	**Las Pavas**	**1.30**	**326**	*eS*		**Sn**	**22 58 56.7**	**+1.4**
PAVA	**Las Pavas**	**1.30**	**326**	*eS*		**Sn**	**22 58 56.7**	**+1.4**
LFRS	**El Faro**	**1.31**	**320**	*eP*		**Pn**	**22 58 39.1**	**+0.4**
LFRS	**El Faro**	**1.31**	**320**	*eP*		**Pn**	**22 58 39.1**	**+0.4**
LBRS	**Las Brisas**	**1.39**	**323**	*eP*		**Pn**	**22 58 41.0**	**+1.3**
LBRS	**Las Brisas**	**1.39**	**323**	*eP*		**Pn**	**22 58 41.0**	**+1.3**
BOQS	**Boqueron**	**1.53**	**316**	*eP*		**Pn**	**22 58 42.5**	**+0.7**
BOQS				*eS*		**Sn**	**22 59 01.8**	**+0.9**
BOQS	**Boqueron**	**1.53**	**316**	*eP*		**Pn**	**22 58 42.5**	**+0.7**
BOQS				*eS*		**Sn**	**22 59 01.8**	**+0.9**
CEVE	**Cerro Verde**	**1.84**	**311**	*eP*		**Pn**	**22 58 47.1**	**+1.2**
CEVE	**Cerro Verde**	**1.84**	**311**	*eP*		**Pn**	**22 58 47.1**	**+1.2**
NUBE	**Las Nubes**	**2.00**	**310**	*eS*		**Sn**	**22 59 12.9**	**+0.7**
NUBE	**Las Nubes**	**2.00**	**310**	*eS*		**Sn**	**22 59 12.9**	**+0.7**
JTS	**Las Juntas de**	**3.93**	**126**	P		**Pn**	**22 59 16.4**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=259,slow=19,SNR=1.4							
JTS				S		**Sn**	**22 59 58.7**	**-0.5**
	comp=Z,3.1nm,0.3s,baz=342,slow=21,SNR=1.6							
SDV	**Santo Domingo**	**17.64**	**100**	LR		LR	23 09 32.4	
	comp=Z,30nm,18.4s,baz=254,slow=38							
ATAH	**Atahualpa**	**21.91**	**153**	LR		LR	23 10 58.2	
	comp=Z,20nm,20.6s,baz=18,slow=35							
TXAR	**Lajitas Array**	**21.99**	**322**	P		**P**	**23 03 06.8**	**+1.4**
	comp=Z,1.5nm,0.7s,baz=140,slow=9.2,SNR=7.5							
SCHQ	**Schefferville**	**45.33**	**17**	P		**P**	**23 06 27.4**	**-0.7**
	comp=Z,6.1nm,1.0s,baz=210,slow=8.3,SNR=2.6							
SCHQ				pP		**pP**	**23 06 44.0**	**0.0**
	comp=Z,5.6nm,0.9s,baz=98,slow=3.7,SNR=2.6							
YKA	**Yellowknife Ar**	**53.26**	**345**	P		**P**	**23 07 27.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=141,slow=8.0,SNR=1.8							
YKA				pP		**pP**	**23 07 43.1**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=126,slow=9.4,SNR=1.2							
ILAR	**Eielson Array**	**65.57**	**336**	P		**P**	**23 08 52.9**	**-0.5**
	comp=Z,0.1nm,0.5s,baz=176,slow=4.6,SNR=4.6							
ILAR				pP		**pP**	**23 09 09.0**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=86,slow=5.3,SNR=6.0							

*IDC **25** 23:03:28.6±1.3, 37°.00S×179°.78E, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.9/43, mbtmp4.0/4, ML4.0/1, MS3.0/1,*

Ms1 2.9/1, ms1mx2.4/22, Error ellipse: s-maj=43.6km s-min=25.9km az=25.0
*WEL **25** 23:03:33.2±1.1, 38°.5S×18°.0E±°, h33km, M4.0/21, ML4.4/21, MLv4.0/21, Error ellipse: s-maj=0.0km s-min=0.0km az=29.4*
*NEIC **25** 23:03:34.1±2.0, 37°.72S±0°.09×179°.8E±0°.1, h43km±10km, mb4.4/6, Error ellipse: s-maj=15.0km s-min=12.9km az=56.0*

ISC 25 23:03:29.3±1.9, 37°71S±0°06×179°97E±0°06, h12km±10km, n96, σ1s61/102, mb4.3/7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.24**	**265**	P		**Pg**	**23 03 53.6**	**+0.5**
WMGZ				S		**Sn**	**23 04 09.6**	**+0.6**
MXZ	**Matakaoa Point**	**1.33**	**276**	P		**Pb**	**23 03 53.9**	**-0.2**
MXZ				S		**Sb**	**23 04 09.9**	**-1.2**
MXZ	**Matakaoa Point**	**1.33**	**276**	Pn		**Pg**	**23 03 54.2**	**-0.6**
MXZ				Sn		**Sb**	**23 04 09.9**	**-1.2**
PUZ	**Puketiti**	**1.40**	**255**	P		**Pg**	**23 03 56.7**	**+0.5**
PUZ				S		**Sg**	**23 04 14.6**	**+0.2**
PKGZ	**Pakihiroa**	**1.51**	**263**	P		**Pb**	**23 03 57.2**	**-0.1**
PKGZ				P		**Pb**	**23 03 57.2**	**-0.1**
CNGZ	**Carnagh Statio**	**1.59**	**241**	P		**Pg**	**23 04 00.0**	**+0.2**
TWGZ	**Tauwhareparae**	**1.64**	**253**	P		**Pb**	**23 04 00.2**	**+0.7**
HAZ	**Te Kaha**	**1.74**	**268**	P		**Pb**	**23 04 00.4**	**-0.6**
TKGZ	**Te Karaka**	**1.83**	**246**	P		**Pb**	**23 04 02.7**	**+0.1**
RUGZ	**Raukumara Rang**	**1.83**	**261**	P		**Pb**	**23 04 01.9**	**-0.9**
RIGZ	**Rimuhau**	**2.00**	**240**	P		**Pb**	**23 04 05.4**	**-0.2**
RIGZ				S		**Sn**	**23 04 30.3**	**+2.4**
MWZ	**Matawai**	**2.03**	**251**	P		**Pn**	**23 04 04.7**	**+1.5**
MWZ				S		**Sn**	**23 04 28.6**	**+0.1**
PRGZ	**Paritu Road**	**2.04**	**233**	P		**Pb**	**23 04 06.0**	**-0.2**
RAGZ	**Rawiri**	**2.16**	**248**	P		**Pb**	**23 04 07.7**	**-1.1**
MHGZ	**Mahia Peninsul**	**2.17**	**228**	P		**Pb**	**23 04 07.7**	**-0.7**
KNZ	**Kokohu**	**2.23**	**233**	P		**Pn**	**23 04 08.1**	**+2.2**
URZ	**Urewera**	**2.33**	**256**	Pn		**Pb**	**23 04 09.5**	**-1.6**
URZ	33nm,0.3s,baz=72,slow=3.6,SNR=131							
				Sn		**Sn**	**23 04 36.7**	**+0.9**
	71nm,0.3s,baz=316,slow=23,SNR=26							
URZ	**Urewera**	**2.33**	**256**	P		**Pb**	**23 04 09.5**	**-1.6**
URZ	**Urewera**	**2.33**	**256**	Pn		**Pn**	**23 04 09.4**	**+2.1**
URZ				Sn		**Sn**	**23 04 36.4**	**+0.7**
SNGZ	**Shannon Statio**	**2.33**	**242**	P		**Pn**	**23 04 09.8**	**+2.4**
WHRZ	**Whale Island**	**2.38**	**266**	P		**Pb**	**23 04 10.7**	**-1.3**
RTZ	**Ruatahuna**	**2.52**	**248**	P		**Pn**	**23 04 12.4**	**+2.3**
WHHZ	**Waihua**	**2.55**	**237**	P		**Pn**	**23 04 13.0**	**+2.7**
RAHZ	**Arahi**	**2.57**	**241**	P		**Pn**	**23 04 13.1**	**+2.4**
MUGZ	**Murupara**	**2.64**	**252**	P		**Pn**	**23 04 13.6**	**+2.0**
OPRZ	**Ohinepanea**	**2.71**	**266**	P		**Pn**	**23 04 13.7**	**+1.2**
MTHZ	**Maungataniwha**	**2.71**	**244**	P		**Pn**	**23 04 14.8**	**+2.1**
TARZ	**Mount Tarawera**	**2.79**	**258**	P		**Pn**	**23 04 16.0**	**+2.2**
ARHZ	**Aropaoanui**	**2.80**	**236**	P		**Pn**	**23 04 16.8**	**+2.9**
NMHZ	**Naumai**	**2.84**	**240**	P		**Pn**	**23 04 16.9**	**+2.4**
KARZ	**Kaharoa**	**2.97**	**263**	P		**Pb**	**23 04 20.4**	**-1.6**
CKHZ	**Cape Kidnapper**	**2.98**	**229**	P		**Pn**	**23 04 18.3**	**+2.0**
MYRZ	**Mayor Island**	**3.00**	**277**	P		**Pb**	**23 04 22.7**	**+0.1**
BKZ	**Black Stump Fm**	**3.09**	**241**	P		**Pn**	**23 04 19.9**	**+2.0**
BKZ	**Black Stump Fm**	**3.09**	**241**	Pn		**Pn**	**23 04 19.7**	**+1.8**
BKZ				Sn		**Sn**	**23 04 55.8**	**+1.0**
MCHZ	**McNeill Hill**	**3.09**	**235**	P		**Pn**	**23 04 20.3**	**+2.4**
KAHZ	**Kahuranaki**	**3.19**	**228**	P		**Pn**	**23 04 21.3**	**+2.1**
KWHZ	**Kaweka Forest**	**3.26**	**237**	P		**Pn**	**23 04 22.4**	**+2.1**
KRHZ	**Kereru**	**3.41**	**235**	P		**Pn**	**23 04 24.0**	**+1.7**
KUZ	**Kuautonu**	**3.53**	**285**	P		**Pn**	**23 04 23.5**	**-0.3**
BHHZ	**Black Hill Sta**	**3.54**	**239**	P		**Pn**	**23 04 25.8**	**+1.8**
TOZ	**Tahuroa Road**	**3.54**	**268**	P		**Pn**	**23 04 24.9**	**+0.8**
WPHZ	**Waipukurau**	**3.62**	**228**	P		**Pn**	**23 04 26.5**	**+1.4**
KRVZ	**Karewarewa**	**3.67**	**247**	P		**Pn**	**23 04 28.9**	**+3.0**
PNHZ	**Pukenui**	**3.67**	**232**	P		**Pn**	**23 04 27.3**	**+1.4**
OTVZ	**Oturere**	**3.68**	**246**	P		**Pb**	**23 04 31.6**	**-2.7**
MOVZ	**Moawhango**	**3.71**	**242**	P		**Pn**	**23 04 28.1**	**+1.7**
NGZ	**Ngauruhoe**	**3.73**	**246**	P		**Pn**	**23 04 28.2**	**+1.4**
WNVZ	**Wahianoa**	**3.79**	**244**	P		**Pn**	**23 04 29.1**	**+1.5**
GRZ	**Great Barrier**	**3.90**	**291**	P		**Pn**	**23 04 28.6**	**-0.3**
TSZ	**Takapari Road**	**3.91**	**232**	P		**Pn**	**23 04 30.1**	**+1.0**
HIZ	**Hauiti**	**4.11**	**257**	P		**Pn**	**23 04 34.3**	**+2.4**
HIZ	**Hauiti**	**4.11**	**257**	Pn		**Pn**	**23 04 33.3**	**+1.4**
BFZ	**Birch Farm**	**4.14**	**223**	Pn		**Pn**	**23 04 32.7**	**+0.4**
BFZ				Sn		**Sn**	**23 05 20.5**	**-0.1**
PRWZ	**Pori Road**	**4.21**	**226**	P		**Pn**	**23 04 35.4**	**+2.2**
VRZ	**Vera Road**	**4.33**	**249**	P		**Pn**	**23 04 37.2**	**+2.3**
MRZ	**Mangatainoka R**	**4.51**	**228**	P		**Pn**	**23 04 37.9**	**+0.6**
HOWZ	**Holdsworth Sta**	**4.70**	**226**	P		**Pn**	**23 04 40.0**	**+0.1**
OGWZ	**Otaki Gorge**	**4.85**	**229**	P		**Pn**	**23 04 42.4**	**+0.5**
WCZ	**Waipu Caves**	**4.85**	**290**	P		**Pn**	**23 04 42.6**	**+0.6**
KHEZ	**Kahui Hut**	**4.93**	**250**	P		**Pn**	**23 04 46.4**	**+3.2**
KIW	**Kapiti Island**	**5.03**	**230**	P		**Pn**	**23 04 45.2**	**+0.7**
CAW	**Cannon Point**	**5.09**	**227**	P		**Pn**	**23 04 45.4**	**+0.1**
MSWZ	**Moikau Station**	**5.19**	**223**	Pn		**Pn**	**23 04 45.3**	**-1.4**
MSWZ				Sn		**Sn**	**23 05 44.1**	**-2.5**
BHW	**Baring Head**	**5.40**	**225**	Pn		**Pn**	**23 04 46.9**	**-2.6**
BHW				Sn		**Sn**	**23 05 48.7**	**-2.9**
OUZ	**Omahuta**	**5.71**	**294**	P		**Pn**	**23 04 54.5**	**+0.7**
OUZ	**Omahuta**	**5.71**	**294**	Pn		**Pn**	**23 04 54.2**	**+0.4**
CTZ	**Chatham Island**	**6.55**	**158**	P		**Pn**	**23 05 09.8**	**+4.5**
CTZ				S		**Sn**	**23 06 18.8**	**-1.1**
QRZ	**Quartz Range**	**6.56**	**239**	P		**Pn**	**23 05 05.6**	**+0.1**
THZ	**Tophouse**	**6.78**	**231**	Pn		**Pn**	**23 05 08.9**	**+0.4**
KHZ	**Kahutara**	**6.81**	**224**	P		**Pn**	**23 05 10.7**	**+1.8**
ARCZ	**Arundel**	**9.12**	**224**	P		**Pn**	**23 05 41.0**	**+0.4**
FOZ	**Fox Glacier**	**9.66**	**230**	Pn		**Pn**	**23 05 49.7**	**+1.7**
ODZ	**Otahua Downs**	**10.13**	**221**	Pn		**Pn**	**23 05 56.0**	**+1.6**
STKA	**Stephens Creek**	**31.89**	**269**	LR		LR	23 22 20.9	
	comp=Z,26nm,18.4s,baz=23,slow=36							
COEN	**Coen**	**40.31**	**296**	P		**P**	**23 11 05.7**	**-0.9**
COEN				IAmb		IAmb	23 11 22.3	
	comp=Z,17nm,1.4s							
AS31	**Alice Springs**	**41.61**	**276**	P		**P**	**23 11 17.3**	**0.0**
ASAR	**Alice Springs**	**41.61**	**276**	P		**P**	**23 11 16.8**	**-0.6**
	comp=Z,1.8nm,0.6s,baz=122,slow=7.9,SNR=19							
FORT	**Forrest**	**43.01**	**263**	P		**P**	**23 11 28.7**	**+0.1**
WB2	**Warramunga Arr**	**43.25**	**281**	P		**P**	**23 11 28.5**	**-1.8**
WB2				IAmb		IAmb	23 11 45.7	
	comp=Z,8.4nm,1.3s							
WRA	**Warramunga Arr**	**43.26**	**281**	P		**P**	**23 11 29.7**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=120,slow=7.8,SNR=6.1							
WRA	**Warramunga Arr**	**43.26**	**281**	P		**P**	**23 11 29.9**	**-0.8**
WB0	**Warramunga Arr**	**43.32**	**281**	P		**P**	**23 11 30.2**	**-1.0**
WB0				IAmb		IAmb	23 11 48.1	
	comp=Z,7.2nm,1.3s							
FITZ	**Fitzroy Crossi**	**51.10**	**277**	P		**P**	**23 12 31.7**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=153,slow=2.3,SNR=1.7							
FITZ	**Fitzroy Crossi**	**51.10**	**277**	P		**P**	**23 12 31.4**	**-0.5**
PMSA	**Palmer Station**	**66.33**	**155**	P		P	23 14 23.3	+6.2
	comp=Z,51nm,0.9s,baz=345,slow=3.9,SNR=8.4							
H03S2	**Juan Fernandez**	**77.85**	**123**	T		T	00 41 31.3	
	baz=230,slow=74,SNR=4.9							
H03S1	**Juan Fernandez**	**77.86**	**123**	T		T	00 41 33.1	
	baz=230,slow=74,SNR=3.9							
H03S3	**Juan Fernandez**	**77.86**	**123**	T		T	00 41 31.3	
	baz=230,slow=74,SNR=5.7							
H03N3	**Juan Fernandez**	**78.08**	**123**	T		T	00 41 45.1	
	baz=234,slow=72,SNR=34							
H03N2	**Juan Fernandez**	**78.08**	**123**	T		T	00 41 43.6	
	baz=234,slow=72,SNR=28							
H03N1	**Juan Fernandez**	**78.10**	**123**	T		T	00 41 49.7	
	baz=234,slow=72,SNR=43							
ARCES	**ARCESS Array B**	**145.28**	**345**	PKP		**PKPdf**	**23 23 06.2**	**+0.5**
	comp=Z,3.5nm,1.1s,baz=39,slow=3.6,SNR=6.9							
FINES	**FINESS Array B**	**151.21**	**334**	PKPbc		**PKPbc**	**23 23 20.6**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=29,slow=4.4,SNR=4.9							
FINES	**FINESS Array B**	**151.21**	**334**			**PKPbc**	**23 23 21.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**155.49**	**184**	PKPab		**PKPab**	**23 23 51.7**	**+3.1**
	comp=Z,0.6nm,0.8s,baz=221,slow=1.4,SNR=3.7							

*JMA **25** 23:14:01.6±0.1, 24°.21N×121°.76E, h18km±2km, M2.6*
*TAP **25** 23:14:02.1, 24°.27N×121°.79E, h12km, ML3.3, C*

ISC 25 23:14:01.8±0.9, 24°25N±0°02×121°80E±0°02, h13km±6km, n99, σ0s76/140, 14D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.19**	**344**	↓*iP*		**Pg**	**23 14 05.9**	**-0.2**
	baz=347							
ENA				*i* S		**Sg**	**23 14 08.6**	**-0.4**
	baz=347							
NACB	**Ninganchiao**	**0.20**	**249**	↓*iP*		**Pg**	**23 14 06.2**	**0.0**
	baz=235							
NACB				*i* S		**Sb**	**23 14 09.7**	**-1.3**
	baz=235							
ENAH	**Nanao**	**0.20**	**3**	↓*iP*		**Pg**	**23 14 06.2**	**0.0**
	baz=4.0							
ENAH				*i* S		**Sg**	**23 14 09.4**	**+0.1**
	baz=4.0							
TWD	**Chiawan**	**0.25**	**228**	*i* P		**Pg**	**23 14 07.1**	**+0.1**
	baz=221							
TWD				S		**Sb**	**23 14 11.0**	**-1.3**
	baz=221							
ETLH	**Xiulin Townshi**	**0.29**	**262**	*i* P		**Pb**	**23 14 08.1**	**-0.8**
	baz=257							
ETLH				S		**Sb**	**23 14 12.6**	**-1.1**
	baz=257							
HWA	**Hwalien**	**0.32**	**214**	*eP*		**Pb**	**23 14 09.8**	**+0.4**
	baz=216							
TWC	**Suao**	**0.36**	**7**	↓*iP*		**Pg**	**23 14 09.0**	**-0.1**
	baz=11							
TWC				*i* S		**Sg**	**23 14 14.1**	**+0.1**
	baz=11							
NNSB	**Datong**	**0.42**	**296**	↓*iP*		**Pb**	**23 14 10.4**	**-0.7**
	baz=293							
NNSB				*eS*		**Sg**	**23 14 15.8**	**-0.1**
	baz=293							
NNSH	**Datong**	**0.42**	**296**	↓*iP*		**Pg**	**23 14 10.4**	**+0.2**
	baz=293							
NNSH				S		**Sg**	**23 14 15.8**	**-0.1**
	baz=293							
NNS	**Nan Shan**	**0.43**	**297**	↓*iP*		**Pg**	**23 14 10.6**	**+0.2**
	baz=294							
NNS				*eS*		**Sg**	**23 14 16.3**	**0.0**
	baz=294							
NDT	**Datong Townshi**	**0.44**	**324**	↓*iP*		**Pg**	**23 14 10.8**	**+0.3**
	baz=323							
NDT				S		**Sb**	**23 14 17.1**	**-0.9**
	baz=323							
ENTT	**Nioudou**	**0.45**	**332**	↓*iP*		**Pg**	**23 14 10.9**	**+0.2**
	baz=332							
ENTT				S		**Sg**	**23 14 16.7**	**+0.1**
	baz=332							
TWE	**Neicheng**	**0.49**	**346**	↓*iP*		**Pg**	**23 14 11.6**	**+0.2**
	baz=348							
TWE				*eS*		**Sg**	**23 14 17.5**	**-0.4**
	baz=348							
WHF	**Hehuan Shan**	**0.50**	**258**	*i* P		**Pb**	**23 14 11.9**	**-0.8**
	baz=255							
WHF				*eS*		**Sb**	**23 14 19.2**	**-0.7**
	baz=255							
FUSS	**Fushou**	**0.51**	**270**	↓*iP*		**Pb**	**23 14 12.3**	**-0.4**
	baz=268							
FUSS				*eS*		**Sb**	**23 14 19.2**	**-0.9**
	baz=268							
ILA	**Ilan**	**0.52**	**355**	*eP*		**Pg**	**23 14 12.3**	**+0.3**
	baz=351							
ILA				*eS*		**Sb**	**23 14 20.0**	**-0.2**
	baz=351							
ESL	**Shilin**	**0.55**	**218**	*eP*		**Pb**	**23 14 13.0**	**-0.2**
	baz=223							
ESL				*eS*		**Sb**	**23 14 21.7**

NMLH	Miaoli	0.96	288	eP		Pn	23 14 23.0	+2.0	
	baz=286								
YULB	Yu-li	0.97	208	eP		Pb	23 14 19.1	-1.3	
	baz=220								
NTST	Danshui	0.97	341	eP		Pn	23 14 21.8	+0.7	
	baz=341								
ANP	Anpu	0.97	345	eP		Pn	23 14 20.9	-0.3	
	baz=345								
EYUL	Yuli	1.00	206	eP		Pn	23 14 21.4	0.0	
	baz=219								
TWF1	Yuli	1.00	207	eP		Pb	23 14 19.8	-1.2	
	baz=219								
TWY	Chenhua	1.04	350	eP		Pg	23 14 22.8	+0.9	
	baz=334								
WDJ	Dajia District	1.06	276	eP		Pg	23 14 24.0	+1.7	
	baz=274								
JYNG	Yonagunijimaku	1.06	79	P		Pb	23 14 21.9	-0.2	
WJS	Zhushan	1.07	247	eP		Pg	23 14 24.2	+1.9	
	baz=238								
WNT	Mingjian	1.08	250	eP		Pg	23 14 23.9	+1.2	
	baz=240								
YOJ	Yonaguni jima	1.13	79	eP		Pn	23 14 23.1	-0.1	
	baz=68								
YOJ	Yonaguni jima	1.13	79	P		Pb	23 14 23.6	+0.5	
FULB	Fuli	1.14	204	eP		Pg	23 14 23.6	-0.2	
	baz=218								
ALS	Alishan	1.17	231	P		Pg	23 14 24.6	+0.3	
	baz=231								
ALS				eS		Sn	23 14 41.1	+1.1	
	baz=231								
CHKT	Chengkung	1.21	199	eP		Pn	23 14 24.0	-0.4	
	baz=182								
CHN5	Tsauling	1.21	238	eP		Pg	23 14 25.0	-0.1	
	baz=238								
CHN5				eS		Sg	23 14 42.5	+1.6	
	baz=238								
ELDTW	Lidau	1.27	214	eP		Pn	23 14 24.5	-0.9	
	baz=199								
WDLH	Douliu	1.28	245	eP		Pb	23 14 25.6	-0.1	
	baz=228								
EDH	Donghe	1.35	200	eP		Pn	23 14 25.3	-1.0	
	baz=187								
PCYT	Pengchaiyu	1.40	10	eP		Pn	23 14 27.2	+0.1	
	baz=10.0								
CHN4	Tsaushan	1.42	231	eP		Pg	23 14 29.2	+0.2	
	baz=232								
CHN4				eS		Sg	23 14 51.0	+3.5	
	baz=232								
TPUB	Ta-pu	1.43	229	eP		Pg	23 14 28.8	-0.4	
	baz=229								
STYT	Tauyuan	1.44	222	eP		Pb	23 14 28.5	0.0	
	baz=222								
STYT				eS		Sg	23 14 48.4	+0.2	
	baz=222								
CHY	Chiayi	1.46	240	eP		Pg	23 14 29.7	-0.1	
	baz=225								
WTP	Ta-pu	1.47	228	eP		Pg	23 14 29.9	-0.1	
	baz=228								
TWK	Hsinying	1.55	231	eP		Pg	23 14 30.9	-0.6	
	baz=232								
TWGBT	Beinan	1.57	205	eP		Pn	23 14 28.6	-0.8	
	baz=190								
TWG	Pinlang	1.57	205	eP		Pn	23 14 29.1	-0.2	
	baz=191								
CHN1	Nanshi	1.57	228	eP		Pb	23 14 30.9	+0.2	
	baz=229								
LDUT	Ludao	1.59	191	eP		Pn	23 14 27.6	-2.0	
	baz=193								
SGST	Jiashian	1.61	224	eP		Pb	23 14 31.5	+0.2	
	baz=225								
SLGT	Liugui	1.64	221	eP		Pb	23 14 31.8	0.0	
	baz=222								
ICHU	Yijhu	1.65	238	eP		Pb	23 14 32.0	0.0	
	baz=239								
IRIF	Iriomote-Funau	1.76	87	P		Pb	23 14 33.3	-0.7	
SSD	Sandimen	1.84	216	eP		Pb	23 14 35.0	-0.2	
	baz=228								
TSMG	Majia	1.86	215	eP		Pb	23 14 35.2	-0.5	
	baz=201								
MASBT	Mashibuluo	1.95	214	eP		Pb	23 14 36.3	-0.8	
	baz=216								
JKRS	Kuro-shima	2.02	90	P		Pn	23 14 36.2	+0.7	
EAST	Anshuo	2.05	205	eP		Pb	23 14 37.7	-1.2	
	baz=195								
JIJ	Ishigaki jima	2.14	86	eS		Sn	23 15 04.1	+0.4	
SCZT	Fangliau	2.16	210	eP		Pb	23 14 39.0	-1.7	
	baz=196								
PHUB	P'eng-hu	2.17	251	eP		Pn	23 14 38.4	+0.9	
	baz=252								
SLIU	Shizi	2.22	205	eP		Pn	23 14 38.8	+0.5	
	baz=195								
VWUC	VWUC	2.26	290	eP		Pn	23 14 39.2	+0.3	
	baz=289								
JISG	Ishigakijimahi	2.31	81	P		Pn	23 14 40.3	+0.7	
JISG				eS		Sn	23 15 08.9	+1.0	
JTJ	Tarama	2.67	81	eS		Sn	23 15 18.6	+1.8	

*REY **25** 23:26:20.6,64°.67N×17°.39W,h3km*
*IDC **25** 23:26:20.5±0.9,64°.81N×17°.35W,h0km,mb3.8/9,*
mb1 4.0/12,mb1mx3.7/61,mbtmp3.8/12,ML2.5/2,MS3.3/9,
Ms1 3.3/9,ms1mx2.9/63,Error ellipse: s-maj=27.3km
s-min=17.7km az=35.0
*NEIC **25** 23:26:23.4±2.2,64°.53N±0°.07×17°.5W±0°.2,h7km±5km,*
mb4.5/25,Error ellipse: s-maj=11.0km s-min=9.9km
az=214.0

ISC 25 23:26:23.4±0.4,64°.61N±0°.03×17°.45W±0°.02,h10km,n110,
σ2s40/104,mb4.5/26,MS3.2/5,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
IVON	Vonarskard	0.15	294	P		Pg	23 26 23.9		-2.9
IVON				S		Sg	23 26 26.5		-2.6
	baz=271								
IDYN	Dyngjuhals	0.18	11	P		Pg	23 26 23.4		-4.0
	baz=4.3								
IDYN				S		Sg	23 26 26.9		-3.2
	baz=4.3								
IHAM	Hamarinn	0.21	231	P		Pg	23 26 25.9		-2.0
	baz=225								
IURH	Urdarhals	0.24	31	P		Pg	23 26 24.6		-3.9
	baz=34								
IHUS	Husbondi	0.33	196	P		Pg	23 26 27.9		-2.2
	baz=197								
IHUS				S		Sg	23 26 34.1		-0.4
	baz=197								
IKVE	Kverkfjoll	0.34	78	P		Pg	23 26 26.8		-3.4
	baz=88								
IVOT	Vottur	0.36	162	P		Pg	23 26 28.2		-2.4
	baz=167								
IVOT				S		Sb	23 26 34.8		-3.0
	baz=167								
ISKR	Skrokkalda	0.41	263	P		Pg	23 26 28.9		-2.6
	baz=256								
ISKR				S		Sg	23 26 35.1		-1.8
	baz=256								
IJOK	Jokulheimar	0.45	229	P		Pg	23 26 30.0		-2.2
	baz=226								
IJOK				S		Sb	23 26 37.8		-2.5
	baz=226								
IKRE	Kreppuhraun	0.49	69	P		Pg	23 26 28.7		-4.3
	baz=75								
IKRE				S		Sg	23 26 35.8		-3.6
	baz=75								
IASK	Askja	0.56	37	P		Pg	23 26 29.7		-4.5
	baz=39								
IIEY	Innrieyrar	0.60	210	P		Pg	23 26 32.5		-2.5
	baz=209								
IIEY				S		Sb	23 26 42.0		-2.5
	baz=209								
IMKO	Mokollar	0.60	52	P		Pg	23 26 30.5		-4.5
	baz=55								
IMKO				S		Sg	23 26 38.2		-4.8
	baz=55								
IKSK	Karasker	0.62	137	P		Pg	23 26 32.2		-3.2
	baz=142								
IKSK				S		Sg	23 26 41.9		-1.7
	baz=142								
IKAL	Kalfafell	0.68	189	P		Pg	23 26 34.2		-2.2
	baz=190								
IKAL				S		Sb	23 26 44.4		-2.2
	baz=190								
ISVA	Svartarkot	0.73	6	P		Pg	23 26 32.6		-4.9
	baz=4.8								
ISVA				S		Sg	23 26 42.0		-5.1
	baz=4.8								
IVSH	V-Sauoahnukur	0.76	74	P		Pg	23 26 33.4		-4.8
	baz=78								
IVSH				S		Sg	23 26 43.6		-4.5
	baz=78								
IVAT	Vatnsfell	0.77	237	P		Pg	23 26 35.8		-2.5
	baz=234								
IVAT				S		Sb	23 26 45.9		-3.5
	baz=234								
IFAG	Fagurholsmyri	0.82	155	P		Pg	23 26 36.4		-2.7
	baz=158								
IADA	Aoalbol	0.90	62	P		Pg	23 26 35.3		-5.4
	baz=65								
IHVE	Hveravellir	0.95	287	P		Pg	23 26 37.8		-3.8
	baz=283								
IHVE				S		Sg	23 26 50.0		-3.9
	baz=283								
IMEL	Melhnausar	1.02	19	P		Pb	23 26 37.9		-5.2
	baz=18								
IMEL				S		Sb	23 26 50.3		-6.2
	baz=18								
ISNB	Snabyli	1.02	211	P		Pg	23 26 40.1		-2.9
	baz=211								
IREN	Reynihlio	1.06	12	P		Pb	23 26 38.1		-5.8
	baz=12								
IKVO	Krokottuvotn	1.13	12	P		Pn	23 26 39.4		-5.9
	baz=11								
IRJU	Rjupnafell	1.14	209	P		Pg	23 26 42.0		-3.2
	baz=209								
IFED	Fedgar	1.14	240	P		Pg	23 26 42.0		-3.3
	baz=238								
IGRS	Grimsstaoir	1.17	28	P		Pn	23 26 40.0		-5.9
	baz=28								
IMJO	Mjoaskard	1.19	236	P		Pg	23 26 43.5		-2.8
	baz=234								
IGYG	Gygjarholskot	1.25	256	P		Pb	23 26 43.5		-3.5
	baz=254								
ISKI	Skildingahlsh	1.27	8	P		Pn	23 26 41.9		-5.4
	baz=7.0								
IGHA	Grjothals	1.28	15	P		Pn	23 26 42.6		-4.7
	baz=14								
IDIM	Dimmadalss	1.37	9	P		Pn	23 26 43.8		-4.8
	baz=8.2								
BORG	Borgarnes	1.68	276	Pn		Pn	23 26 50.6		-2.1
SCO	Scoresbysund	6.14	346	Pn		Pn	23 27 55.1		+1.1
SCO	Scoresbysund	6.14	346	e		Pn	23 27 46.9		-7.2
	baz=164,slow=10								
SCO					i	P	Pn	23 27 54.0	-0.1
JMIC	Jan Mayen	7.23	24	LR		LR	23 30 26.0		
	comp=Z,114nm,18.1s,baz=74,slow=35								
EKB10	Eskdalemuir Ar	11.68	136	Pn		Pn	23 29 09.3		-0.6
EKB8	Eskdalemuir Ar	11.69	136			Pn	23 29 09.7		-0.4
EKA	Eskdalemuir Ar	11.70	136	Pn		Pn	23 29 09.3		-1.0
	baz=323,slow=13,SNR=9.9								
ESK	Eskdalemuir	11.70	136			Pn	23 29 09.8		-0.4
NC204	NORSAR Array S	13.21	92	Pn		Pn	23 29 28.0		-2.7
NOA	NORSAR Array B	13.51	92	Pn		Pn	23 29 31.6		-3.3
	0.0nm,0.3s,baz=301,slow=13,SNR=3.2								
NOA				LR		LR	23 35 25.2		
	comp=Z,80nm,18.4s,baz=290,slow=40								
SFJD	Kangerlussuaq	13.71	295	LR		LR	23 34 36.1		
	comp=Z,179nm,18.6s,baz=98,slow=36								
HFS	Hagfors	15.02	93	Pn		P	23 30 01.6		+0.7
	0.1nm,0.3s,baz=330,slow=8.7,SNR=6.8								
HFS				LR		LR	23 35 30.8		
	comp=Z,193nm,19.0s,baz=270,slow=37								
FINES	FINESS Array B	19.69	79	P		P	23 30 48.6		-3.8
	0.1nm,0.3s,baz=311,slow=6.4,SNR=2.6								
CLL	Collm	20.66	116		i P	P	23 31 03.7		+0.7
	comp=Z,27nm,1.7s								
CLL	Collm	20.66	116	P		P	23 31 03.0		+0.1
NKC	Novy Kostel	21.30	118	eP		P	23 31 14.1		+4.1
BRG	Berggiesshubel	21.37	115	eP		P	23 31 10.7		+0.1
	comp=Z,14nm,1.3s								
BFO	Black Forest	21.40	127	P		P	23 31 13.2		+2.2
BFO				IAmb		IAmb	23 31 20.5		
	comp=Z,18nm,1.5s								
PRU	Pruhonice	22.30	116	eP		P	23 31 22.5		+1.8
KSP	Ksiaz	22.32	112	eP		P	23 31 20.7		-0.2
OSTC	Ostas	22.51	113	eP		P	23 31 24.3		+1.4
KHC	Kasperske Hory	22.63	118	eP		P	23 31 24.2		0.0
KHC	Kasperske Hory	22.63	118	P		P	23 31 24.4		+0.2
DPC	Dobruska-Polom	22.72	113	eP		P	23 31 25.7		+0.6
GERES	GERESS Array B	22.91	119	P		P	23 31 27.2		0.0
	comp=Z,1.0nm,0.8s,baz=326,slow=8.5,SNR=4.1								
GERES	GERESS Array B	22.91	119	P		P	23 31 27.8		+0.6
KRLC	Kraliky	23.12	113	eP		P	23 31 31.8		+2.5
VRAC	Vranov	23.65	114	eP		P	23 31 34.9		+0.3
MORC	Moravsky Berou	23.66	112	eP		P	23 31 34.8		+0.1
MORC	Moravsky Berou	23.66	112	P		P	23 31 35.1		+0.4
EUNU	Eureka	23.73	336	P		P	23 31 37.7		+2.5
EUNU				IAmb		IAmb	23 31 39.4		
	comp=Z,23nm,1.5s								
KRUC	Moravsky	23.77	115	eP		P	23 31 35.6		-0.1
LANS	Liptovska Anna	24.92	111	eP		P	23 31 48.7		+2.3
KWP	Kalwaria Pacla	25.87	106	eP		P	23 31 55.8		+0.8
KWP	Kalwaria Pacla	25.87	106	P		P	23 31 56.1		+1.1
KWP				IAmb		IAmb	23 32 00.5		
	comp=Z,21nm,1.1s								
PSZ	Piszkesteto	26.08	112	P		P	23 31 58.1		+1.3
PSZ				IAmb		IAmb	23 32 03.1		
	comp=Z,15nm,1.4s								
ESDC	Sonseca Array	26.19	156	P		P	23 31 58.3		+0.3
	comp=Z,1.1nm,0.8s,baz=350,slow=9.0,SNR=11								
ESDC	Sonseca Array	26.19	156	P		P	23 31 59.0		+1.0
KOLS	Kolonicke sedl	26.24	108	eP		P	23 32 01.2		+3.0
AKASG	Malin Array Be	27.81	98	P		P	23 32 10.3		-2.1
	comp=Z,0.3nm,0.4s,baz=324,slow=9.7,SNR=4.0								
OBN	Obninsk	27.86	84	LR		LR	23 44 10.5		
	comp=Z,22nm,18.8s,baz=335,slow=38								
ARU	Arti	36.08	66	LR		LR	23 47 22.0		
	comp=Z,97nm,19.0s,baz=319,slow=35								
SADO	Sadowa	38.84	270	LR		LR	23 48 20.1		
	comp=Z,39nm,21.4s,baz=124,slow=34								
KBZ	Khabaz	39.09	92	P		P	23 33 47.1		-3.2
	comp=Z,2.0nm,0.9s,baz=97,slow=13,SNR=1.8								
TIXI	Tiksi	42.08	15	P		P	23 34 16.9		+2.2
TIXI				IAmb		IAmb	23 34 19.1		
	comp=Z,8.4nm,1.2s								
TOLK	Toolik Lake Re	42.81	336	P		P	23 34 23.8		+3.0
TOLK				IAmb		IAmb	23 34 25.4		
	comp=Z,18nm,1.5s								
IL31		45.74	332	P		P	23 34 47.6		+3.5
ILAR	Eielson Array	45.74	332	P		P	23 34 39.6		-4.6
	comp=Z,0.1nm,0.4s,baz=16,slow=39,SNR=1.9								
ILAR				PcP		PcP	23 36 21.0		-0.6
	comp=Z,1.5nm,1.1s,baz=333,slow=2.4,SNR=6.3								
ILAR				LR		LR	23 55 00.1		
	comp=Z,22nm,21.2s,baz=29,slow=38								
ILAR	Eielson Array	45.74	332	P		P	23 34 47.1		+2.9
MDM	Murphy Dome	45.84	333	P		P	23 34 48.4		+3.4
MDM				IAmb		IAmb	23 34 50.8		
	comp=Z,13nm,1.4s								
COLA	College	45.84	333	P		P	23 34 48.3		+3.4
TCOL	CIGO, UAF Yank	45.84	333	P		P	23 34 46.6		+1.6
IMAR	Indian Mountai	45.92	337	P		P	23 34 47.4		+1.8
PAX	Paxson	47.05	331	P		P	23 34 57.4		+2.7
KURK	Kurchatov	48.12	58	P		P	23 35 03.6		+0.6
KURK				IAmb		IAmb	23 35 05.6		
	comp=Z,4.5nm,0.9s								
V51A	Loudon	48.47	267	P		P	23 35 08.5		+2.7
BOZ	Bozeman (W)	51.65	297	P		P	23 35 33.1		+3.1
BOZ				IAmb		IAmb	23 35 34.6		
	comp=Z,5.6nm,1.2s								
MK31	Makanchi Array	52.73	58	P		P	23 35 38.9		+1.0
MKAR	Makanchi Array	52.73	58	P		P	23 35 36.6		-1.3
	comp=Z,1.4nm,0.9s,baz=335,slow=5.4,SNR=7.4								
MKAR	Makanchi Array	52.73	58	P		P	23 35 38.5		+0.6
TORD	Torodi Ar. Bea	53.08	156	P		P	23 35 40.4		-0.4
	comp=Z,1.0nm,0.9s,baz=334,slow=8.4,SNR=5.4								
TORD	Torodi Ar. Bea	53.08	156	P		P	23 35 41.3		+0.6
PD31	Pinedale Array	53.22	293	P		P	23 35 41.7		-0.1
PD31				IAmb		IAmb	23 35 46.0		
	comp=Z,10nm,1.4s								
PDAR	Pinedale Array	53.22	293	P		P	23 35 39.8		-2.1
	comp=Z,1.7nm,0.8s,baz=54,slow=7.5,SNR=9.9								
PDAR				LR		LR	23 58 35.5		
	comp=Z,48nm,19.0s,baz=352,slow=36								
PDAR	Pinedale Array	53.22	293	P		P	23 35 41.5		-0.3
BTK	Batken	53.95	72	P		P	23 35 47.7		+0.7
BTK				IAmb		IAmb	23 35 49.0		
	comp=Z,6.1nm,1.1s								
KSH	Kashi	56.50	68	eP		P	23 36 06.5		+1.1
KSH				pmax		pmax			
	comp=Z,6.0nm,0.5s								
KSH				pmax		pmax			
	comp=Z,200nm,5.6s								
PV13	Radium Mtn., P	56.84	290	P		P	23 36 10.8		+2.8
PV13				IAmb		IAmb	23 36 12.2		
	comp=Z,11nm,1.2s								
WMQ	Urumqi	57.24	56	eP		P	23 36 15.0		+4.4
WUAZ	Wupatki	60.15	290	P		P	23 36 34.0		+3.0
GTA	Gaotai	65.32	49	eP		P	23 37 08.0		+2.6
GTA				pP		sP	23 37 12.5		+1.9
GTA				sP		pP	23 37 15.0		+5.8
GTA				pmax		pmax			
	comp=Z,3.0nm,1.1s								
HHC	Hu-ho-hao-te	67.54	40	eP		P	23 37 22.5		+2.9
HHC				pmax		pmax			
	comp=Z,14nm,0.9s								
HHC				pmax		pmax			
	comp=Z,170nm,7.6s								
LZH	Lanzhou	69.65	48	eP		P	23 37 34.5		+1.6
LZH				pP		pP	23 37 38.0		+1.3
LZH				sP		sP	23 37 40.8		+2.7
LZH				pmax		pmax			
	comp=Z,13nm,1.3s								
NJ2	Nanjing	77.77	37	eP		P	23 38 22.3		+2.0
NJ2				pmax		pmax			
	comp=Z,11nm,0.7s								
CMAR	Chiang Mai Arr	84.14	59	P		P	23 38 53.5		-1.0
	comp=Z,1.3nm,0.3s,baz=330,slow=7.1,SNR=4.9								
CMAR	Chiang Mai Arr	84.14	59	P		P	23 38 54.1		-0.4
LUWI	Luwuk	110.34	43	Pdif		Pdif	23 40 58.4		+3.8

IDC 25 23:29:10.3±1.1,21°.75N×143°.77E,h0km,mb3.7/6,
mb1 3.9/6,mb1mx3.6/54,mbtmp3.7/6,MS2.9/2,Ms1 2.9/2,
ms1mx2.5/39,Error ellipse: s-maj=41.1km
s-min=24.5km az=95.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
KSRS	Korea Array	20.80	322	LR		LR	23 41 18.3		
	comp=Z,36nm,18.1s,baz=130,slow=35								
H11N1	WAKE ISLAND Hy	21.72	91	T		T	23 56 34.7		
	baz=279,slow=75,SNR=6.3								
H11N2	WAKE ISLAND Hy	21.72	91	T		T	23 56 42.0		
	baz=279,slow=75,SNR=3.8								
H11N3	WAKE ISLAND Hy	21.74	91	T		T	23 56 40.0		
	baz=279,slow=75,SNR=6.6								
H11S3	WAKE ISLAND Hy	21.76	94	T		T	23 56 39.4		
	baz=283,slow=74,SNR=21								
H11S1	WAKE ISLAND Hy	21.77	94	T		T	23 56 39.2		
	baz=283,slow=74,SNR=14								
H11S2	WAKE ISLAND Hy	21.78	94	T		T	23 56 38.9		
	baz=283,slow=74,SNR=11								
KRVT	Keravat (AS076	27.13	162	LR		LR	23 43 13.6		
	comp=Z,25nm,21.9s,baz=358,slow=31								
WRA	Warramunga Arr	42.45	193	P		P	23 37 07.2		0.0
	0.2nm,0.6s,baz=15,slow=9.7,SNR=2.7								
ASAR	Alice Springs	46.16	193	P		P	23 37 36.5		-0.3
	0.3nm,0.5s,baz=9.2,slow=8.6,SNR=5.6								
ZALV	Zalesovo Beam	54.50	322	P		P	23 38 39.2		-0.5
	0.8nm,0.4s,baz=90,slow=7.4,SNR=3.8								
MKAR	Makanchi Array	55.06	313	P		P	23 38 44.3		+0.3
	0.6nm,0.6s,baz=91,slow=9.6,SNR=5.9								
ILAR	Eielson Array	61.74	27	P		P	23 39 30.1		-0.3
	0.9nm,1.0s,baz=252,slow=6.1,SNR=5.8								
NVAR	Mina Array Bea	82.68	52	P		P	23 41 36.8		+0.4
	0.2nm,0.4s,baz=235,slow=35,SNR=2.9								

*PRE **25** 23:32:48.2±1.2,26°.96S×26°.82E,h2km,ML2.9*
*BUL **25** 23:32:50.9±0.8,26°.99S×26°.90E,h10km,MD4.2*
*EAF **25** 23:32:51.9±1.6,27°.01S×26°.87E,h10km,MD4.2*
ISC 25 23:32:48.8±1.5,26°.97S±0°.04×26°.82E±0°.05,h4km±12km,
n23,σ1s73/44,South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
PRYS	Parys	0.48	85	eP		Pg	23 32 57.8		-0.3
PRYS				eS		Sg	23 33 04.9		+0.5
PRYS				AML		AML	23 33 10.9		
	comp=Z,968nm,0.7s								
WDLM	Western Deep L	0.76	45	eP		Pg	23 33 03.0		-0.4
WDLM				eS		Sg	23 33 12.5		-0.8
WDLM				AML		AML	23 33 21.5		
	comp=Z,473nm,0.2s								
KLOF	Kloof	0.94	49	eP		Pg	23 33 06.2		-0.5
KLOF				eS		Sg	23 33 18.6		-0.3
KLOF				AML		AML	23 33 24.4		
	comp=Z,1μm,0.2s								
ERPM	east rand prop	1.42	64	eP		Pn	23 33 15.4		0.0
ERPM				eS		Sn	23 33 35.9		+1.3
ERPM				AML		AML	23 33 38.6		
	comp=Z,74nm,0.2s								
BOSA	Boshof	2.15	220	i P		Pn	23 33 27.0		+1.5
BOSA				i S		Sn	23 33 54.2		+1.6
BOSA	Boshof	2.15	220	eP		Pn	23 33 26.4		+1.0
BOSA				eS		Sn	23 33 52.7		+0.1
BOSA				AML		AML	23 33 58.1		
	comp=Z,107nm,0.2s								
BOSA	Boshof	2.15	220	i P		Pn	23 33 27.0		+1.5
BOSA				i S		Sn	23 33 54.2		+1.6
LBTB	Lobatse	2.23	330	i P		Pn	23 33 28.4		+1.8
LBTB				i S		Sn	23 33 57.4		+2.7
LBTB	Lobatse	2.23	330	eP		Pn	23 33 27.4		+0.8
LBTB				eS		Sn	23 33 54.6		0.0
LBTB				AML		AML	23 33 59.7		
	comp=Z,266nm,0.2s								
LBTB	Lobatse	2.23	330	i P		Pn	23 33 28.4		+1.8
LBTB				i S		Sn	23 33 57.4		+2.7
POGA	Pongola	4.37	96	i P		Pn	23 33 56.8		+0.8
POGA				i S		Sn	23 34 45.3		-2.0
POGA	Pongola	4.37	96	eP		Pn	23 33 56.0		+0.1
POGA				eS		Sn	23 34 46.4		-0.9
POGA				AML		AML	23 35 08.2		
	comp=Z,76nm,0.4s								
POGA	Pongola	4.37	96	i P		Pn	23 33 56.8		+0.8
POGA				i S		Sn	23 34 45.3		-2.0
UPI	Upington	5.13	253	eP		Pn	23 34 07.0		+0.5
UPI				eS		Sn	23 35 04.9		-1.2
UPI				AML		AML	23 35 35.0		
	comp=Z,13nm,0.3s								
MOPA	Mopani	5.38	51	eP		Pn	23 34 10.1		+0.2

KAN14				Sg	**Sg**	23 33 01.5	-0.1	
KAN05	**Bluff City Nor**	**0.31**	**357**		**Pg**	23 33 01.5	-0.1	
KAN05				Sg	**Sg**	23 33 05.9	+0.2	
CROK	**Carrier**	**0.31**	**200**		**Pg**	23 33 01.6	0.0	
CROK				Sg	**Sg**	23 33 06.3	+0.5	
KAN01	**Argonia South**	**0.36**	**12**		**Pg**	23 33 02.5	0.0	
KAN01				Sg	**Sg**	23 33 07.6	+0.3	
KAN13	**South Haven SW**	**0.37**	**55**		**Pg**	23 33 02.8	+0.1	
KAN13				Sg	**Sg**	23 33 08.1	+0.6	
KAN10	**Anthony SW Sta**	**0.38**	**329**		Pg	23 33 02.7	-0.2	
KAN10				Sg	**Sg**	23 33 08.0	+0.1	
KAN09	**Caldwell North**	**0.38**	**29**		**Pg**	23 33 03.0	0.0	
KAN09				Sg	**Sg**	23 33 08.5	+0.4	
KAN08	**Anthony NE Sta**	**0.44**	**347**		**Pg**	23 33 03.9	-0.1	
KAN08				Sg	**Sg**	23 33 10.0	+0.3	
KS20	**Mayfield South**	**0.49**	**29**		**Pg**	23 33 05.0	0.0	
KS20				Sg	**Sg**	23 33 11.8	+0.3	
KAN12	**Harper NE Stat**	**0.51**	**347**		**Pg**	23 33 05.2	-0.2	
KAN12				Sg	**Sb**	23 33 13.8	-1.0	
U32A	**Winter Ranch,**	**1.02**	**246**		**Pg**	23 33 14.2	-0.9	
U32A				Sg	**Sg**	23 33 28.2	0.0	
OK029	**Liberty Lake**	**1.05**	**162**		**Pg**	23 33 15.1	-0.6	
T35A	**Sooner Cattle**	**1.08**	**83**		**Pg**	23 33 15.8	-0.5	
T35A				Sg	**Sg**	23 33 30.1	-0.2	
QUOK	**Quay**	**1.11**	**124**	Pg	**Pg**	23 33 16.4	-0.5	
BCOK	**Bluff Creek, N**	**1.16**	**170**		**Pg**	23 33 16.9	-0.8	
OK031	**S. Brethren Rd**	**1.18**	**136**		**Pg**	23 33 17.5	-0.6	
OK030	**Cody Creek RV**	**1.23**	**135**		**Pg**	23 33 18.3	-0.7	
OK025	**Westminster Rd**	**1.28**	**161**		**Pg**	23 33 19.4	-0.8	
OKCFA	**Oklahoma City**	**1.42**	**167**	Pn	**Pn**	23 33 21.5	-0.5	
OKCSW	**OKLAHOMA CITY**	**1.43**	**166**	Pn	**Pn**	23 33 21.9	-0.3	
FNO	**Franklin**	**1.58**	**167**	Pn	**Pn**	23 33 24.1	-0.2	
R32A	**Long Quarter,**	**1.76**	**337**	Pn	**Pn**	23 33 26.9	-0.2	
W35A	**Tecumseh**	**1.82**	**154**	Pn	**Pn**	23 33 27.8	+0.2	
TUL1	**Leonard** baz=299	**1.89**	**117**	P	**Pn**	23 33 29.3	+0.8	
TUL1				S	**Sb**	23 33 54.6	+0.3	
TUL1	**Leonard** baz=299	**1.89**	**117**	Pn	**Pn**	23 33 28.6	+0.2	
WMOK	**Wichita Mounta** baz=19	**2.19**	**200**	P	**Pn**	23 33 32.7	+0.1	
WMOK				S	**Sn**	23 34 01.3	+1.1	
WMOK	**Wichita Mounta** baz=19	**2.19**	**200**	Pn	**Pn**	23 33 32.8	+0.1	
KSU1	**Kansas State U** baz=204	**2.50**	**23**	S	**Sb**	23 34 12.4	+0.4	
KSU1	**Kansas State U** baz=204	**2.50**	**23**	Pn	**Pn**	23 33 36.9	+0.1	
CBKS	**Cedar Bluff** baz=143	**2.50**	**324**	P	**Pb**	23 33 39.3	-1.7	
CBKS				S	**Sb**	23 34 11.9	-0.3	
CBKS	**Cedar Bluff** baz=143	**2.50**	**324**	Pn	**Pn**	23 33 37.4	+0.4	
U38A	**Gravette**	**2.81**	**96**	Pn	**Pn**	23 33 41.7	+0.5	
X37A	**Clayton**	**2.99**	**137**	Pn	**Pn**	23 33 44.5	+0.8	
HHAR	**Hobbs**	**3.19**	**98**	Pn	**Pn**	23 33 46.9	+0.5	
Z35A	**Perchaven, San**	**3.50**	**172**	Pn	**Pn**	23 33 50.7	+0.1	
AMTX	**Amarillo** baz=57	**3.65**	**240**	Pb	**Pb**	23 34 00.6	-0.1	
AMTX	**Amarillo** baz=278	**3.65**	**240**	Pn	**Pn**	23 33 54.3	+1.5	
S39A	**Bolivar**	**3.72**	**75**	Pn	**Pn**	23 33 53.4	-0.3	
N33A	**J Bar K, Exete**	**3.94**	**4**	Pn	**Pn**	23 33 55.6	-1.1	
U40A	**Yellville** baz=278	**4.05**	**95**	S	**Sn**	23 34 46.6	+0.6	
U40A	**Yellville**	**4.05**	**95**	Pn	**Pn**	23 33 57.5	-0.7	
MIAR	**Mount Ida**	**4.14**	**122**	Pn	**Pn**	23 34 01.0	+1.5	
Z38A	**Mt. Pleasant**	**4.24**	**146**	Pn	**Pn**	23 34 01.1	+0.3	
N35A	**Tabor**	**4.41**	**22**	Pn	**Pn**	23 34 04.0	+0.9	
ABTX	**Abilene, Hawle** baz=19	**4.42**	**200**	S	**Sn**	23 34 54.4	-0.8	
ABTX	**Abilene, Hawle**	**4.42**	**200**	Pn	**Pn**	23 34 03.6	+0.3	
P38A	**Dawn**	**4.42**	**49**	Pn	**Pn**	23 34 04.6	+1.4	
MGMO	**Mountain Grove**	**4.48**	**84**	Pn	**Pn**	23 34 04.8	+0.6	
BGNE	**Belgrade** baz=177	**4.61**	**357**	P	**Pn**	23 34 05.7	-0.2	
BGNE	**Belgrade**	**4.61**	**357**	Pn	**Pn**	23 34 05.5	-0.4	
R40A	**Maddies Statio**	**4.68**	**70**	Pn	**Pn**	23 34 07.3	+0.4	
X40A	**Basin Creek Fa**	**4.69**	**118**	Pn	**Pn**	23 34 08.7	+1.7	
FCAR	**Ozark Folk Cen**	**4.71**	**99**	Pn	**Pn**	23 34 08.9	+1.6	
WHAR	**Wooly Hollow**	**4.75**	**107**	Pn	**Pn**	23 34 08.3	+0.4	
WHTX	**Lake Whitney,** baz=356	**4.81**	**176**	P	**Pn**	23 34 08.4	-0.2	
WHTX	**Lake Whitney,**	**4.81**	**176**	Pn	**Pn**	23 34 08.3	-0.3	
MSTX	**Muleshoe**	**4.91**	**236**	Pn	**Pn**	23 34 09.7	-0.4	
WLAR	**White Oak Lake**	**4.97**	**127**	Pn	**Pn**	23 34 12.7	+1.9	
237A	**Washetta, Mont**	**5.08**	**160**	Pn	**Pn**	23 34 12.4	+0.1	
P40A	**Paris**	**5.32**	**57**	Pn	**Pn**	23 34 16.0	+0.3	
N38A	**Joes South For**	**5.38**	**41**	Pn	**Pn**	23 34 16.5	+0.1	
CCM	**Cathedral Cave**	**5.41**	**75**	Pn	**Pn**	23 34 16.8	0.0	
T42A	**Van Buren**	**5.42**	**86**	Pn	**Pn**	23 34 18.2	+1.2	
LCAR	**Lake Charles**	**5.45**	**96**	Pn	**Pn**	23 34 18.7	+1.3	
NATX	**Nacogdoches**	**5.68**	**151**	Pn	**Pn**	23 34 21.3	+0.7	
435B	**Jarrell**	**6.01**	**178**	Pn	**Pn**	23 34 25.6	+0.6	
Q24A	**Divide**	**6.16**	**293**	Pn	**Pn**	23 34 27.9	+0.4	
SDCO	**Great Sand Dun** baz=96	**6.17**	**281**	P	**Pn**	23 34 28.4	+0.8	
SDCO	**Great Sand Dun**	**6.17**	**281**	Pn	**Pn**	23 34 27.8	+0.1	
CPRX	**Cap Rock**	**6.21**	**234**	Pn	**Pn**	23 34 28.0	0.0	
N41A	**Harden Midland**	**6.72**	**52**	Pn	**Pn**	23 34 34.4	-0.4	
S44A	**Carbondale**	**6.92**	**80**	Pn	**Pn**	23 34 37.7	+0.2	
ECSD	**EROS Data Cent** baz=188	**6.99**	**7**	P	**Pn**	23 34 37.2	-1.4	
ECSD	**EROS Data Cent**	**6.99**	**7**	Pn	**Pn**	23 34 37.0	-1.6	
P43A	**Skaggs, Pawnee**	**7.14**	**64**	Pn	**Pn**	23 34 40.9	+0.2	
ANMO	**Albuquerque** 0.1nm,0.3s,baz=70,slow=12,SNR=1.8	**7.23**	**258**	Pn	**Pn**	23 34 43.3	+1.3	
ANMO	0.3nm,0.3s,baz=86,slow=15,SNR=4.8			Pg	**Pb**	23 35 04.1	+2.5	
ANMO	1.8nm,0.3s,baz=171,slow=21,SNR=8.9			Lg	Lg	23 36 43.1		
OXF	**Oxford**	**7.24**	**106**	Pn	**Pn**	23 34 42.0	0.0	
L40A	**Anamosa**	**7.34**	**42**	Pn	**Pn**	23 34 43.3	-0.1	
BNM	**Barren Site**	**7.63**	**252**	Pn	**Pn**	23 34 49.8	+2.2	
HDIL	**Hopedale**	**7.67**	**58**	Pn	**Pn**	23 34 47.7	-0.2	
MNTX	**Cornudas Mount**	**8.04**	**233**	Pn	**Pn**	23 34 52.1	-1.0	
WVT	**Waverly**	**8.10**	**92**	Pn	**Pn**	23 34 53.9	0.0	
L42A	**Oliver, Polo**	**8.19**	**48**	Pn	**Pn**	23 34 53.4	-1.7	
JFWS	**Jewell Farm**	**8.45**	**41**	Pn	**Pn**	23 34 57.8	-0.8	
TX31	**Lajitas Ar. Si**	**8.90**	**215**	Pn	**Pn**	23 35 04.2	-0.7	
TXAR	**Lajitas Array** 0.2nm,0.3s,baz=42,slow=10,SNR=19	**8.90**	**215**	Pn	**Pn**	23 35 04.2	-0.7	
TXAR	1.2nm,0.3s,baz=34,slow=27,SNR=6.8			Lg	Lg	23 37 31.6		
TXAR	**Lajitas Array**	**8.90**	**215**		**Pn**	23 35 03.8	-1.1	
TX32	**Lajitas Array**	**8.90**	**215**	Pn	**Pn**	23 35 04.2	-0.7	
I40A	**Norwalk**	**8.98**	**36**		**Pn**	23 35 05.1	-0.7	
U49A	**Red Boiling Sp**	**9.71**	**88**		**Pn**	23 35 16.7	+0.9	
I42A	**Draeger Farm,**	**9.83**	**41**	Pn	**Pn**	23 35 16.8	-0.7	
P48A	**Milroy**	**10.14**	**71**		**Pn**	23 35 21.7	-0.1	
PDAR	**Pinedale Array** 0.3nm,0.3s,baz=106,slow=16,SNR=2.7	**10.80**	**307**	Pg	Pn	23 36 13.2	+42	
PDAR	0.3nm,0.3s,baz=113,slow=32,SNR=1.3			Lg	Lg	23 38 28.8		
CPCT	**Cooper Cave**	**10.87**	**93**	Pn	**Pn**	23 35 33.5	+1.7	
S51A	**Beattyville**	**11.40**	**82**	Pn	**Pn**	23 35 39.1	+0.1	
TKL	**Tuckaleechee C** 0.3nm,0.3s,baz=242,slow=8.5,SNR=4.3	**11.43**	**92**	Pn	**Pn**	23 35 39.7	+0.2	
TKL	0.6nm,0.3s,baz=178,slow=22,SNR=8.0			Lg	Lg	23 38 49.4		
TKL	**Tuckaleechee C**	**11.43**	**92**		**Pn**	23 35 39.2	-0.2	
ULM	**Lac du Bonnet** 0.3nm,0.3s,baz=177,slow=12,SNR=1.5	**13.52**	**5**	Pn	Pn	23 36 02.3	-5.6	
ULM	0.2nm,0.3s,baz=333,slow=7.5,SNR=1.1			Sn	Sn	23 38 21.6	-17	
ULM	0.2nm,0.3s,baz=268,slow=20,SNR=2.4			Lg	Lg	23 39 49.0		

NEIC ***25*** *23:37:11.8±2.0, 19°.8S±0°.1×177°.4W±0°.1, h546km±8km, mb4.4/41, Error ellipse: s-maj=22.1km s-min=15.6km az=145.0*

IDC ***25*** *23:37:14.3±2.4, 19°.97S×177°.44W, h575km±27km, mb3.5/9, mb1 3.8/10, mb1mx3.5/33, mbtmp4.4/10, Error ellipse: s-maj=22.0km s-min=10.5km az=147.0*

ISC 25 23:37:12.1±0.5,**19°.76S**±0°.09×**177°.42W**±0°.08,**h550**km, **n97**,σ1°**02**/103, **mb4.4**/28,**6C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MSVF	**Nonsavu**	**4.74**	**294**	P	**P**	**P**	**23 38 40.5**	**+0.5**
NIUE	**Niue**	**7.10**	**86**	P	**P**	**P**	**23 39 00.3**	**-0.8**
AFI	**Afiamalu**	**7.94**	**44**	P	**P**	**P**	**23 39 06.0**	**-3.4**
DZM	**Mont Dzumac**	**15.25**	**259**	P	**P**	**P**	**23 40 25.2**	**+0.9**
DZM					IAmb	IAmb	23 40 29.9	
	comp=Z,14nm,1.0s							
OUZ	**Omahuta**	**17.33**	**205**	P	**P**	**P**	**23 40 46.8**	**+3.2**
OUZ					IAmb	IAmb	23 40 48.3	
	comp=Z,13nm,0.8s							
URZ	**Urewera**	**19.04**	**193**	P	**P**	**P**	**23 40 58.3**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=292,slow=2.4,SNR=7.3							
URZ					S	**S**	**23 43 59.6**	**-4.3**
	comp=Z,0.4nm,0.3s,baz=15,slow=22,SNR=2.3							
URZ	**Urewera**	**19.04**	**193**	P	**P**	**P**	**23 40 58.7**	**-0.6**
URZ					IAmb	IAmb	23 41 02.0	
	comp=Z,11nm,0.8s							
THZ	**Tophouse**	**23.43**	**198**	P	**P**	**P**	**23 41 38.5**	**-0.3**
WHZ	**Wether Hill Ro**	**28.72**	**202**	P	**P**	**P**	**23 42 26.7**	**+1.4**
EIDS	**Eidsvold**	**29.58**	**253**	P	**P**	**P**	**23 42 33.2**	**+0.2**
EIDS					IAmb	IAmb	23 42 33.4	
	comp=Z,5.8nm,0.8s							
ARMA	**Armidale**	**29.88**	**243**	P	**P**	**P**	**23 42 36.1**	**+0.3**
ARMA					IAmb	IAmb	23 42 36.9	
	comp=Z,8.9nm,0.7s							
KWAJ	**Kwajalein Atol**	**31.98**	**331**	P	**P**	**P**	**23 42 54.5**	**+0.8**
CTAO	**Charters Tower**	**34.11**	**263**	P	**P**	**P**	**23 43 11.9**	**+0.2**
TOO	**Toolangi**	**36.77**	**233**	P	**P**	**P**	**23 43 34.0**	**+0.4**
COEN	**Coen**	**38.09**	**272**	P	**P**	**P**	**23 43 44.7**	**+0.2**
COEN					IAmb	IAmb	23 43 45.3	
	comp=Z,11nm,0.8s							
STKA	**Stephens Creek**	**38.60**	**243**	P	**P**	**P**	**23 43 49.0**	**+0.5**
	comp=Z,13nm,0.8s,baz=90,slow=9.4,SNR=21							
STKA	**Stephens Creek**	**38.60**	**243**	P	**P**	**P**	**23 43 49.1**	**+0.5**
BBOO	**Buckleboo**	**43.37**	**243**	P	**P**	**P**	**23 44 26.4**	**+0.1**
WR0	**Warramunga Arr**	**45.06**	**261**	P	**P**	**P**	**23 44 38.7**	**-0.9**
WR0					IAmb	IAmb	23 44 40.3	
	comp=Z,19nm,1.4s							
AS31	**Alice Springs**	**45.22**	**256**	P	**P**	**P**	**23 44 40.9**	**0.0**
AS31					IAmb	IAmb	23 44 42.3	
	comp=Z,5.8nm,0.8s							
ASAR	**Alice Springs**	**45.22**	**256**	P	**P**	**P**	**23 44 40.5**	**-0.4**
	comp=Z,10nm,0.5s,baz=91,slow=7.3,SNR=138							
ASAR					PcP	**PcP**	**23 46 09.2**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=100,slow=4.8,SNR=6.7							
ASAR					S	**S**	**23 50 39.4**	**-1.8**
	comp=Z,2.4nm,0.8s,baz=91,slow=15,SNR=20							
WB0	**Warramunga Arr**	**45.22**	**261**	P	**P**	**P**	**23 44 40.0**	**-0.9**
WB0					IAmb	IAmb	23 44 40.8	
	comp=Z,22nm,1.2s							
WB2	**Warramunga Arr**	**45.24**	**261**	P	**P**	**P**	**23 44 40.1**	**-0.8**
WB2					IAmb	IAmb	23 44 41.0	
	comp=Z,12nm,0.7s							
WRA	**Warramunga Arr**	**45.25**	**261**	P	**P**	**P**	**23 44 39.9**	**-1.1**
	comp=Z,6.8nm,0.5s,baz=98,slow=7.9,SNR=136							
WRA					PcP	**PcP**	**23 46 08.8**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=96,slow=3.5,SNR=3.7							
WRA					S	**S**	**23 50 40.0**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=98,slow=12,SNR=2.4							
WRA	**Warramunga Arr**	**45.25**	**261**	P	**P**	**P**	**23 44 40.0**	**-1.1**
MTN	**Manton Dam**	**49.71**	**270**	P	**P**	**P**	**23 45 13.8**	**-0.7**
MTN					IAmb	IAmb	23 45 14.8	
	comp=Z,18nm,1.3s							
FORT	**Forrest**	**50.09**	**246**	P	**P**	**P**	**23 45 16.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**53.67**	**262**	P	**P**	**P**	**23 45 42.9**	**-0.1**
SOEI	**Soe**	**57.03**	**271**	P	**P**	**P**	**23 46 07.6**	**+1.0**
SOEI					IAmb	IAmb	23 46 08.3	
	comp=Z,23nm,0.8s							
PSA00	**Pilbara Seismi**	**58.37**	**256**	P	**P**	**P**	**23 46 14.8**	**-0.6**
PSA00					IAmb	IAmb	23 46 15.5	
	comp=Z,29nm,0.8s							
GIRL	**Giralia**	**63.28**	**254**	P	**P**	**P**	**23 46 48.4**	**+0.8**
UGM	**Wanagama**	**70.53**	**268**	P	**P**	**P**	**23 47 31.9**	**-0.5**
SII	**Sitkinak Islan**	**78.50**	**13**	P	**P**	**P**	**23 48 16.3**	**0.0**
SII					IAmb	IAmb	23 48 35.6	
	comp=Z,37nm,1.3s							
YBH	**Yreka Blue Hor**	**79.37**	**38**	P	**P**	**P**	**23 48 22.8**	**+1.4**
	comp=Z,1.3nm,0.5s,baz=232,slow=2.5,SNR=6.2							
YBH	**Yreka Blue Hor**	**79.37**	**38**	P	**P**	**P**	**23 48 22.4**	**+1.0**
BEKR	**Beckworth**	**79.65**	**41**	P	**P**	**P**	**23 48 23.8**	**+0.8**
PNTR	**Pine Nut**	**79.67**	**42**	P	**P**	**P**	**23 48 24.6**	**+1.5**
NVAR	**Mina Array Bea**	**80.11**	**43**	P	**P**	**P**	**23 48 25.8**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=226,slow=7.9,SNR=5.9							
NVAR	**Mina Array Bea**	**80.11**	**43**	P	**P**	**P**	**23 48 26.6**	**+1.1**
MOD	**Modoc Plateau**	**80.90**	**39**	P	**P**	**P**	**23 48 30.4**	**+1.0**
K05A	**Summer Lake**	**81.05**	**38**	P	**P**	**P**	**23 48 31.6**	**+1.3**
PINE	**Pine Mountain**	**81.67**	**38**	P	**P**	**P**	**23 48 35.0**	**+1.6**
BRLK	**Bradley Lake**	**82.15**	**13**	P	**P**	**P**	**23 48 35.0**	**-0.2**
BRLK					IAmb	IAmb	23 48 39.5	
	comp=Z,22nm,1.5s							
U15A	**North Rim**	**83.06**	**47**	P	**P**	**P**	**23 48 42.1**	**+1.4**
U15A					IAmb	IAmb	23 48 43.0	
	comp=Z,4.7nm,0.8s							
SUA	**Susitna One**	**83.72**	**13**	P	**P**	**P**	**23 48 42.7**	**-0.5**
SUA					IAmb	IAmb	23 48 43.4	
	comp=Z,8.4nm,1.0s							
TTA	**Tatalina**	**84.12**	**10**	P	**P**	**P**	**23 48 45.5**	**+0.4**
SCM	**Sheep Creek Mo**	**84.79**	**14**	P	**P**	**P**	**23 48 48.3**	**0.0**
SCM					IAmb	IAmb	23 48 53.9	
	comp=Z,6.9nm,1.3s							
F10A	**Beach Ranch, E**	**85.08**	**37**	P	**P**	**P**	**23 48 50.4**	**+0.2**
F10A					IAmb	IAmb	23 48 51.3	
	comp=Z,5.6nm,0.9s							
TXAR	**Lajitas Array**	**86.20**	**57**	P	**P**	**P**	**23 48 57.4**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=223,slow=6.3,SNR=14							
TXAR	**Lajitas Array**	**86.20**	**57**	P	**P**	**P**	**23 48 57.3**	**+1.3**
HDA	**Harding Lake**	**87.14**	**13**	P	**P**	**P**	**23 48 59.0**	**-0.4**
HDA					IAmb	IAmb	23 48 59.4	
	comp=Z,2.9nm,0.6s							
CCB	**Clear Creek Bu**	**87.18**	**12**	P	**P**	**P**	**23 48 58.3**	**-1.3**
CCB					IAmb	IAmb	23 48 59.2	
	comp=Z,3.4nm,0.6s							
ILAR	**Eielson Array**	**87.47**	**13**	P	**P**	**P**	**23 48 59.9**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=225,slow=5.5,SNR=14							
ILAR	**Eielson Array**	**87.47**	**13**	P	**P**	**P**	**23 48 59.8**	**-1.2**
PDAR	**Pinedale Array**	**88.05**	**43**	P	**P**	**P**	**23 49 04.6**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=177,slow=2.0,SNR=7.1							
YHL	**Hebgen Lake**	**88.06**	**41**	P	**P**	**P**	**23 49 06.6**	**+2.0**
VNA3	**Neumayer Olymp**	**88.84**	**176**	P	**P**	**P**	**23 49 07.7**	**+0.2**
HHC	**Hu-ho-hao-te**	**89.23**	**314**	*eP*	**P**	**P**	**23 49 10.0**	**+0.1**
HHC					pmax	pmax		
	comp=Z,18nm,1.1s							
HHC					pmax	pmax		
	comp=Z,180nm,8.4s							
VNA2	**Neumayer--Watz** baz=176,slow=3.8	**89.29**	**177**	P	**P**	**P**	**23 49 10.1**	**+0.5**
CMAR	**Chiang Mai Arr**	**90.38**	**289**	P	**P**	**P**	**23 49 15.8**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=108,slow=2.6,SNR=8.2							
MKAR	**Makanchi Array**	**111.09**	**314**	PKiKP		**PKiKP**	**23 54 42.0**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=236,slow=1.3,SNR=6.5							
MKAR	**Makanchi Array**	**111.09**	**314**			**PKiKP**	**23 54 41.0**	**-2.4**
ARCES	**ARCESS Array B**	**128.29**	**350**	PKP		**PKPdf**	**23 55 15.1**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=25,slow=1.7,SNR=16							
FINES	**FINESS Array B**	**135.21**	**344**	PKP		**PKPdf**	**23 55 29.6**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=116,slow=4.4,SNR=5.0							
NOA	**NORSAR Array B**	**139.31**	**354**	PKP		**PKPdf**	**23 55 35.7**	**+1.0**
	comp=Z,1.0nm,1.0s,baz=328,slow=1.7,SNR=2.6							
AKASG	**Malin Array Be**	**142.62**	**332**	PKhKP		PKPpre	23 55 38.6	
	comp=Z,1.1nm,0.4s,baz=43,slow=4.6,SNR=7.5							
GKP	**Gorka Klasztor**	**144.68**	**345**	*e*PKP		**PKPdf**	**23 55 45.8**	**-0.4**
SORM	**Soroca**	**144.85**	**330**	⇓P		**PKPdf**	**23 55 46.1**	**-0.6**
OJC	**Ojcow**	**146.66**	**340**	*e*PKP		**PKPbc**	**23 55 52.2**	**-0.1**
BUR08	**Bucovina Ar. S**	**146.66**	**332**			**PKPbc**	**23 55 52.9**	**+0.4**
BURAR	**Bucovina Array**	**146.68**	**332**	⇑P		**PKPbc**	**23 55 52.9**	**+0.3**
BURAR	**Bucovina Array**	**146.68**	**332**			**PKPbc**	**23 55 52.6**	**+0.1**
BRTR	**Keskin Array B**	**146.74**	**313**	PKPbc		**PKPbc**	**23 55 52.4**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=130,slow=4.5,SNR=5.1							
BIZ	**Bicaz**	**146.77**	**330**	⇓P		**PKPbc**	**23 55 53.2**	**+0.5**
KSP	**Ksiaz**	**147.14**	**344**	*e*PKP		**PKPbc**	**23 55 53.6**	**+0.1**
OSTC	**Ostas**	**147.42**	**344**	⇑*e*PKP		**PKPbc**	**23 55 54.5**	**+0.2**
CLL	**Collm**	**147.46**	**348**	*e*PKPdf		**PKPdf**	**23 55 52.0**	**+1.1**
CLL				*i*	PKPbc	**PKPbc**	**23 55 54.1**	**-0.3**
	comp=Z,7.0nm,0.9s							
CLL				*i*	PKPab	**PKPab**	**23 55 57.6**	**-0.6**
CLL	**Collm**	**147.46**	**348**			**PKPbc**	**23 55 53.7**	**-0.6**
DPC	**Dobruska-Polom**	**147.58**	**344**	⇑*e*PKP		**PKPbc**	**23 55 55.0**	**+0.2**
KRLC	**Kraliky**	**147.70**	**343**	⇑*e*PKP		**PKPbc**	**23 55 54.9**	**-0.2**
MORC	**Moravsky Berou**	**147.75**	**342**	*e*PKP		**PKPbc**	**23 55 55.0**	**-0.2**
MMAI	**Mount Meron Ar**	**147.91**	**301**	PKPbc		**PKPbc**	**23 55 56.8**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=79,slow=6.0,SNR=12							
PRU	**Pruhonice**	**148.37**	**345**	⇑*e*PKP		**PKPbc**	**23 55 56.4**	**-0.3**
VRAC	**Vranov**	**148.45**	**342**	*e*PKP		**PKiKP**	**23 55 57.6**	**-0.5**
JAVC	**Velka Javorina**	**148.53**	**341**	*e*PKP		**PKiKP**	**23 55 58.5**	**+0.2**
KRUC	**Moravsky**	**148.73**	**342**	*e*PKP		**PKPbc**	**23 55 57.6**	**0.0**
KRUC				*e*			23 56 03.4	
KHC	**Kasperske Hory**	**149.39**	**346**	⇑*e*PKP		**PKPbc**	**23 55 59.3**	**0.0**
KHC	**Kasperske Hory**	**149.39**	**346**			**PKPbc**	**23 55 59.2**	**0.0**
GEC2	**GERESS Array S**	**149.63**	**345**	PKPbc		**PKPbc**	**23 55 59.6**	**-0.4**
GERES	**GERESS Array B**	**149.63**	**345**	PKPbc		**PKPbc**	**23 55 59.6**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=4.8,slow=1.6,SNR=13							
GERES	**GERESS Array B**	**149.63**	**345**	PKPbc		**PKPbc**	**23 55 59.9**	**-0.1**
CONA	**Conrad Observa**	**149.90**	**342**	*i* P		**PKPbc**	**23 56 00.8**	**+0.2**
	comp=Z,4.1nm,0.6s							
KBA	**Koelnbreinsper**	**151.37**	**345**	*i* P		**PKPbc**	**23 56 03.7**	**-0.4**
	comp=Z,2.2nm,0.5s							
OBKA	**Obir**	**151.57**	**342**	*i* P		**PKPbc**	**23 56 04.2**	**-0.2**
	comp=Z,3.2nm,0.7s							
MYKA	**Terra Mystica**	**151.70**	**344**	*i* P		**PKPbc**	**23 56 03.9**	**-0.8**
	comp=Z,1.4nm,0.4s							
ABTA	**Abfaltersbach**	**151.88**	**345**	*i* P		**PKPbc**	**23 56 04.2**	**-1.0**
	comp=Z,3.0nm,0.5s							
FETA	**Feichten**	**152.00**	**348**	*i* P		**PKPbc**	**23 56 05.4**	**-0.1**
	comp=Z,0.9nm,0.4s							

IDC 25 23:40:49.9±1.3,**5°.71N×61°.17E, h0**km, **mb3.7**/5,**mb1 3.9**/5, **mb1mx3.4**/44,**mbtmp3.7**/5,**MS3.5/9,Ms1 3.5/9, ms1mx3.0**/58,**Error ellipse: s-maj=49.4km s-min=29.4km az=38.0,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
PALK	**Pallekele**	**19.47**	**84**	LR		LR	23 51 18.7	
	comp=Z,47nm,18.9s,baz=14,slow=32							
GNI	**Garni**	**37.34**	**339**	LR		LR	00 05 04.5	
	comp=Z,22nm,18.8s,baz=210,slow=39							
CMAR	**Chiang Mai Arr**	**38.95**	**68**	LR		LR	00 02 36.5	
	comp=Z,20nm,19.8s,baz=8.0,slow=34							
AKTO	**Aktyubinsk**	**44.66**	**357**	LR		LR	00 08 19.8	
	comp=Z,43nm,18.1s,baz=289,slow=37							
MKAR	**Makanchi Array**	**44.80**	**21**	P		P	23 49 04.3	-1.2
	0.3nm,0.7s,baz=211,slow=8.2,SNR=2.3							
BOSA	**Boshof**	**48.58**

SGAZ				IAML			00 05 37.0	
SRCK	**Saricakaya, Es**	**1.42**	**60**	PN		**Pg**	**00 05 14.9**	**-0.1**
SHUT	**Suhut-Afyon**	**1.43**	**123**	PN		**Pg**	**00 05 14.9**	**-0.2**
GEYV	**SAKARYA_Geyve**	**1.51**	**40**	⇑*i*P		**Pn**	**00 05 15.3**	**-0.2**
GEYV				*i*S		**Sg**	**00 05 37.7**	**+1.5**
ZEDA	**zmir-Bergama**	**1.56**	**257**	*i*P		**Pn**	**00 05 15.4**	**-0.7**
ZEDA				*i*S		**Sg**	**00 05 38.2**	**+0.4**
CIFT	**Cifteler, Eski**	**1.58**	**89**	PN		**Pb**	**00 05 17.1**	**-0.5**
GULT	**Gulveren**	**1.59**	**46**	PN		**Pb**	**00 05 17.2**	**-0.4**
BASM	**Basmaki-Afyon**	**1.63**	**150**	PN		**Pb**	**00 05 17.6**	**-0.8**
AYDB	**Zeytinkoy-Aydi**	**1.65**	**213**	PN		**Pb**	**00 05 18.1**	**-0.6**
DKL	**Dikili**	**1.67**	**261**	PN		**Pb**	**00 05 19.0**	**+0.1**
AVCI	**Avcilar-stanb**	**1.67**	**352**	PN		**Pb**	**00 05 18.8**	**-0.2**
SPNC	**Sapanca-Adapaz**	**1.67**	**36**	PN		**Pb**	**00 05 18.7**	**-0.3**
MRMT	**Marmara Adasi**	**1.67**	**320**	PN		**Pb**	**00 05 19.2**	**+0.1**
SAUV	**Serdivan-Sakar**	**1.72**	**35**	PN		**Pb**	**00 05 19.6**	**-0.3**
KAVV	**Kandilli-Istan**	**1.72**	**1**	PN		**Pb**	**00 05 19.6**	**-0.3**
ISK	**Istanbul-Kandi**	**1.73**	**1**	PN		**Pb**	**00 05 19.4**	**-0.5**
ISK	**Istanbul-Kandi**	**1.73**	**1**	P		**Pn**	**00 05 17.7**	**-0.7**
ISK				S		**Sg**	**00 05 43.1**	**-0.1**
	comp=N,3μm,0.7s							
AYVA	**Ayvalik**	**1.81**	**270**	*i*P		**Pn**	**00 05 19.3**	**-0.2**
AYVA				*i*S		**Sg**	**00 05 46.5**	**+0.7**
BRDR	**BURDUR-Merkez**	**1.83**	**153**	*i*P		**Pn**	**00 05 19.7**	**-0.3**
BRDR				*i*S		**Sg**	**00 05 51.6**	**+5.0**
BGKT	**Bogazkoy**	**1.85**	**354**	PN		**Pb**	**00 05 21.5**	**-0.5**
ELBA	**Catalca**	**1.86**	**346**	*i*P		**Pb**	**00 05 22.2**	**-0.1**
ELBA				*i*S		**Sb**	**00 05 46.4**	**+0.5**
TAVA	**DENIZLI_Tavas**	**1.87**	**183**	*i*P		**Pn**	**00 05 19.8**	**-0.8**
TAVA				*i*S		**Sg**	**00 05 54.1**	**+6.2**
SILT	**Sile**	**1.87**	**15**	PN		**Pb**	**00 05 21.5**	**-1.0**
KLYT	**Kilyos**	**1.91**	**0**	PN		**Pb**	**00 05 22.3**	**-0.8**
ISP	**Isparta**	**1.92**	**142**	PN		**Pb**	**00 05 22.1**	**-1.2**
ISP	**Isparta**	**1.92**	**142**			**Pn**	**00 05 21.1**	**-0.1**
MAR3	**Marsite Statio**	**1.93**	**317**	PN		**Pb**	**00 05 22.6**	**-0.8**
CTKS	**Kestanelik-??a**	**1.94**	**348**	PN		**Pb**	**00 05 22.8**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.94**	**86**	PN		**Pb**	**00 05 22.4**	**-1.3**
SART	**Tekirdag**	**1.95**	**314**	*i*P		**Pb**	**00 05 23.4**	**-0.5**
SART				*i*S		**Sn**	**00 05 45.4**	**-1.2**
SART				IAML			00 05 52.0	
	comp=N,2μm,0.8s							
RKY	**Sarkoy-Tekirda**	**1.95**	**314**	PN		**Pb**	**00 05 22.9**	**-1.0**
AUSIV	**SIVRIHISAR**	**1.96**	**86**	*i*P		**Pn**	**00 05 21.6**	**-0.1**
AUSIV				*i*S		**Sg**	**00 05 51.8**	**+1.2**
KAND	**Kocaeli-Kandir**	**1.97**	**27**	*i*P		**Pn**	**00 05 21.8**	**0.0**
KAND				*i*S		**Sg**	**00 05 51.0**	**0.0**
SLVT	**Silivri**	**1.99**	**342**	PN		**Pb**	**00 05 23.6**	**-0.8**
MDUB	**Mudurnu**	**2.02**	**55**	PN		**Pb**	**00 05 23.4**	**-1.6**
MDUB	**Mudurnu**	**2.02**	**55**	Pn		**Pn**	**00 05 22.2**	**-0.4**
LPK	**Lapseki**	**2.02**	**301**	PN		**Pb**	**00 05 24.1**	**-0.9**
SAHE	**Sakarya_HENDEK**	**2.06**	**42**	*i*P		**Pn**	**00 05 22.7**	**-0.4**
SAHE				*i*S		**Sg**	**00 05 55.1**	**+1.0**
DGB	**zmir**	**2.11**	**233**	*i*P		**Pg**	**00 05 27.3**	**-0.8**
DGB				*i*S		**Sg**	**00 05 54.6**	**-0.9**
DGB				IAML			00 05 58.0	
	comp=N,1μm,0.6s							
URLA	**Izmir**	**2.13**	**243**	PN		**Pb**	**00 05 25.8**	**-1.1**
PRK	**Paraskevi**	**2.13**	**268**	P		**Pn**	**00 05 25.1**	**+1.0**
PRK				S		**Sn**	**00 05 52.0**	**+1.1**
EZN	**Ezine**	**2.14**	**284**	PN		**Pb**	**00 05 25.6**	**-1.4**
EZN	**Ezine**	**2.14**	**284**	P		**Pn**	**00 05 24.3**	**+0.2**
EZN				S		**Sn**	**00 05 51.2**	**+0.2**
	comp=N,2μm,0.5s							
GCAM	**G?zelcaml?**	**2.15**	**221**	PN		**Pb**	**00 05 25.6**	**-1.6**
BCK	**Bucak**	**2.24**	**146**	PN		**Pn**	**00 05 26.6**	**+1.0**
MLSB	**Milas**	**2.26**	**206**	PN		**Pb**	**00 05 27.5**	**-1.6**
YER	**Yerkesik**	**2.28**	**195**	PN		**Pb**	**00 05 27.7**	**-1.7**
YER	**Yerkesik**	**2.28**	**195**	P		**Pn**	**00 05 25.6**	**-0.5**
SMG	**Samos**	**2.36**	**227**	P		**Pn**	**00 05 26.7**	**-0.5**
SMG				S		**Sn**	**00 05 55.7**	**-0.9**
	comp=N,3μm,0.6s							
CAME	**Cameli-Denizli**	**2.40**	**175**	PN		**Pn**	**00 05 28.8**	**+0.9**
KIBS	**BOLU**	**2.43**	**63**	*i*P		**Pg**	**00 05 33.6**	**-0.8**
SIGR	**SIGRI**	**2.46**	**268**	P		**Pn**	**00 05 28.4**	**-0.1**
SIGR				S		**Sn**	**00 05 59.5**	**+0.5**
	comp=N,3μm,0.6s							
GADA	**Gvkgeada**	**2.55**	**290**	P		**Pn**	**00 05 30.2**	**+0.4**
ENEZ	**Enez**	**2.61**	**303**	P		**Pn**	**00 05 30.9**	**+0.4**
ENEZ				S		**Sn**	**00 06 03.7**	**+1.1**
	comp=N,2μm,0.5s							
ELL	**Elmali**	**2.68**	**165**	Pn		**Pn**	**00 05 33.0**	**+1.3**
ALN	**Alexandroupoli**	**2.76**	**305**	Pn		**Pn**	**00 05 32.5**	**-0.1**
ALN	**Alexandroupoli**	**2.76**	**305**	P		**Pn**	**00 05 32.6**	**-0.1**
ALN				S		**Sn**	**00 06 08.5**	**+2.1**
	comp=N,1μm,0.5s							
SMTH	**Samothraki Isl**	**2.91**	**294**	P		**Pn**	**00 05 34.9**	**+0.1**
BR231	**Keskin MP Arra**	**2.94**	**79**			**Pn**	**00 05 36.8**	**+1.5**
LIA	**Limnos Island**	**3.02**	**282**	P		**Pn**	**00 05 36.4**	**+0.2**
EDRB	**Edirne**	**3.05**	**326**	P		**Pn**	**00 05 36.5**	**-0.1**
AKAS	**Kas**	**3.14**	**171**			**Pb**	**00 05 41.4**	**-2.6**
RDO	**Rodhopi**	**3.22**	**305**	P		**Pn**	**00 05 39.2**	**+0.2**
APE	**Apeiranthos**	**3.56**	**232**	⇓P		**Pg**	**00 05 54.7**	**-1.3**
APE				⇓S		**Sg**	**00 06 38.6**	**-3.6**
KDZ	**Kurdzhali**	**3.59**	**311**	P		**Pn**	**00 05 44.3**	**+0.2**
BR131	**Keskin Array S**	**3.59**	**82**	Pn		**Pn**	**00 05 44.5**	**+0.3**
BRTR	**Keskin Array B**	**3.59**	**82**	Pn		**Pn**	**00 05 44.5**	**+0.3**
	comp=N,1.5nm,0.3s,baz=254,slow=13,SNR=44							
BRTR				Pg		**Pg**	**00 05 55.4**	**-1.2**
	comp=N,2.6nm,0.3s,baz=256,slow=14,SNR=20							
BRTR				Sn		**Sn**	**00 06 25.4**	**-1.7**
	comp=N,2.1nm,0.3s,baz=117,slow=9.5,SNR=5.9							
BRTR				Lg		Lg	00 06 44.7	
	comp=N,2.1nm,0.3s,baz=254,slow=27,SNR=9.5							
BRTR				LR		LR	00 07 33.0	
	comp=N,151nm,18.9s,baz=245,slow=47							
BRTR	**Keskin Array B**	**3.59**	**82**	Pn		**Pn**	**00 05 44.6**	**+0.3**
JMB	**Yambol**	**3.63**	**330**	P		**Pn**	**00 05 45.3**	**+0.7**
DIM	**Dimitrovgrad**	**3.79**	**317**	P		**Pn**	**00 05 46.9**	**+0.1**
KAVA	**Kavala**	**3.83**	**297**	P		**Pn**	**00 05 47.5**	**+0.1**
AVR	**AVREN**	**3.91**	**345**	P		**Pn**	**00 05 49.7**	**+1.2**
RZN	**Rozhen**	**4.03**	**307**	P		**Pn**	**00 05 50.6**	**+0.3**
PRD	**Provadia**	**4.05**	**343**	P		**Pn**	**00 05 50.1**	**-0.2**
KARP	**Karpathos**	**4.06**	**202**	Pn		**Pn**	**00 05 50.2**	**-0.4**
PAIG	**Paliouri**	**4.17**	**280**	P		**Pn**	**00 05 52.0**	**0.0**
PLD	**Plovdiv**	**4.29**	**311**	P		**Pn**	**00 05 54.1**	**+0.4**
NVR	**Nevrokopi**	**4.42**	**299**	P		**Pn**	**00 05 55.7**	**+0.1**
SRS	**Serrai**	**4.52**	**295**	P		**Pn**	**00 05 56.9**	**0.0**
SZH	**Strazhica**	**4.56**	**330**	P		**Pn**	**00 05 57.3**	**-0.1**
BZK	**Bozkurt**	**4.61**	**54**	⇓P		**Pb**	**00 06 10.2**	**+1.2**
BZK				⇑S		**Sb**	**00 07 05.3**	**+0.5**
MMB	**Musomiste**	**4.62**	**301**	P		**Pn**	**00 05 58.2**	**-0.1**
RAZG	**Razgrad**	**4.63**	**337**	⇓P		**Pn**	**00 05 58.5**	**+0.2**
ICOR	**Ion Corvin**	**4.86**	**350**	⇑P		**Pn**	**00 06 01.9**	**+0.4**
PGB	**Panagyurishte**	**4.88**	**313**	P		**Pn**	**00 06 01.9**	**+0.1**
TIRR	**Tirgusor**	**5.13**	**355**	⇓P		**Pn**	**00 06 05.4**	**+0.1**
TIRR				⇑S		**Sn**	**00 07 00.2**	**-4.7**
TIRR	**Tirgusor**	**5.13**	**355**	Pn		**Pn**	**00 06 05.0**	**-0.2**
AGG	**Agios Georgios**	**5.21**	**269**	Pn		**Pn**	**00 06 07.0**	**+0.7**
IDI	**Anoyia**	**5.21**	**220**	Pn		**Pn**	**00 06 03.3**	**-3.2**
	comp=N,0.5nm,0.3s,baz=4.8,slow=12,SNR=1.9							
IDI				Lg		Lg	00 07 36.2	
	comp=N,0.6nm,0.3s,baz=240,slow=20,SNR=1.0							
IDI	**Anoyia**	**5.21**	**220**	Pn		**Pn**	**00 06 06.7**	**+0.2**
TLBR	**Topalu**	**5.25**	**352**	⇓P		**Pn**	**00 06 07.4**	**+0.5**
TLBR				⇓S		**Sn**	**00 07 02.8**	**-5.0**
DIKM	**Dikmen**	**5.29**	**62**	⇓P		**Pb**	**00 06 19.4**	**-1.2**
SGRR	**Singureni**	**5.38**	**336**	⇑P		**Pn**	**00 06 08.9**	**+0.2**
VTS	**Vitosha**	**5.47**	**309**	P		**Pn**	**00 06 10.8**	**+0.8**
CSS	**Mathiatis**	**5.56**	**140**	Pn		**Pn**	**00 06 13.7**	**+2.5**
COPA	**Copaceanca**	**5.57**	**331**	⇑P		**Pn**	**00 06 11.3**	**0.0**
VLAD	**Vladila**	**5.80**	**325**	⇓P		**Pn**	**00 06 14.2**	**-0.2**
CFR	**Carcaliu**	**5.87**	**354**	⇑P		**Pn**	**00 06 17.9**	**+2.5**
ITM	**Ithomi**	**5.98**	**251**	Pn		**Pn**	**00 06 18.1**	**+1.1**
NEHR	**Nehoiu**	**6.41**	**343**	⇑P		**Pn**	**00 06 23.3**	**+0.5**
BISRR	**Bisoca**	**6.44**	**345**	⇑P		**Pn**	**00 06 24.3**	**+1.0**
MLR	**Muntele Rosu**	**6.55**	**341**	Pn		**Pn**	**00 06 25.8**	**+0.9**
	comp=N,0.8nm,0.3s,baz=7.7,slow=2.7,SNR=16							
MLR				Sn		**Sn**	**00 07 38.2**	**-1.9**
	comp=N,0.7nm,0.3s,baz=228,slow=16,SNR=1.6							
MLR				Lg		Lg	00 08 13.6	
	comp=N,0.5nm,0.3s,baz=199,slow=14,SNR=3.2							
MLR	**Muntele Rosu**	**6.55**	**341**	⇑P		**Pn**	**00 06 25.0**	**+0.1**
MLR	**Muntele Rosu**	**6.55**	**341**	Pn		**Pn**	**00 06 25.6**	**+0.7**
ODBI	**Odobesti**	**6.58**	**348**	⇑P		**Pn**	**00 06 26.7**	**+1.5**
VARL	**Varlezi**	**6.61**	**353**	⇓P		**Pn**	**00 06 26.9**	**+1.3**
PUNG	**Punghina**	**6.71**	**319**	⇑P		**Pn**	**00 06 25.5**	**-1.4**
PLOR	**Plostina**	**6.74**	**346**	⇑P		**Pn**	**00 06 28.0**	**+0.6**
VRI	**Vrincioaia**	**6.74**	**346**	⇓P		**Pn**	**00 06 28.0**	**+0.6**
VOIR		**6.76**	**336**	⇓P		**Pn**	**00 06 28.2**	**+0.5**
GHRR		**6.82**	**351**	⇑P		**Pn**	**00 06 29.3**	**+0.8**
ARR	**Arges**	**6.84**	**333**	⇓P		**Pn**	**00 06 29.5**	**+0.7**
DOPR	**Dopca**		**7.14**	**339**	⇑P	**Pn**	**00 06 33.5**	**+0.6**
OZUR			**7.16**	**342**	⇑P	**Pn**	**00 06 33.3**	**+0.2**
LOT	**Lotru**		**7.24**	**329**	⇑P	**Pn**	**00 06 34.1**	**-0.2**
TESR	**Tescani**		**7.38**	**347**	⇓P	**Pn**	**00 06 36.0**	**-0.1**
HERR	**Herculane**		**7.40**	**321**	⇓P	**Pn**	**00 06 35.5**	**-0.8**
GZR	**Gura Zlata**		**7.61**	**325**	⇓P	**Pn**	**00 06 39.3**	**-0.1**
KIS	**Kishinev**		**7.66**	**359**	*e*P	**Pn**	**00 06 42.0**	**+2.1**
KIS					*e*S	**Sn**	**00 08 13.0**	**+6.0**
KIS					*e*LR	LR	00 15 38.0	
	comp=N,200nm,7.0s							
MDVR	**Moldovita**		**7.69**	**317**	⇑P	**Pn**	**00 06 40.0**	**-0.4**
BIZ	**Bicaz**		**7.89**	**345**	⇑P	**Pn**	**00 06 44.2**	**+1.1**
PDG	**Podgorica**		**8.02**	**296**	⇑P	**Pn**	**00 06 45.0**	**+0.2**
MMAI	**Mount Meron Ar**		**8.15**	**139**	Pn	**Pn**	**00 06 47.3**	**+0.5**
	comp=N,1.0nm,0.3s,baz=305,slow=11,SNR=8.4							
MMAI					Sn	**Sn**	**00 08 22.9**	**+3.6**
	comp=N,0.6nm,0.3s,baz=289,slow=31,SNR=2.2							
DIVS	**Divibare**		**8.26**	**308**	Pn	**Pn**	**00 06 47.9**	**-0.3**
BZS	**Buzias**		**8.32**	**321**	⇑P	**Pn**	**00 06 47.9**	**-1.2**
ARCR	**ARCALIA**		**8.46**	**338**	⇑P	**Pn**	**00 06 51.3**	**+0.3**
BURAR	**Bucovina Array**		**8.72**	**343**	⇑P	**Pn**	**00 06 55.6**	**+1.0**
BURAR	**Bucovina Array**		**8.72**	**343**	Pn	**Pn**	**00 06 54.7**	**+0.1**
BUR08	**Bucovina Ar. S**		**8.75**	**343**	Pn	**Pn**	**00 06 55.1**	**+0.1**
DRGR			**8.76**	**330**	⇓P	**Pn**	**00 06 54.7**	**-0.4**
SORM	**Soroca**		**8.81**	**357**	⇑P	**Pn**	**00 06 58.4**	**+2.7**
TIP	**Timpagrande**		**9.51**	**273**	Pn	**Pn**	**00 07 07.7**	**+2.2**
EIL	**Eilat**		**10.81**	**151**	LR	LR	00 12 41.9	
	comp=N,18nm,22.0s,baz=325,slow=44							
KWP	**Kalwaria Pacla**		**11.23**	**338**	Pn	**Pn**	**00 07 30.0**	**+1.1**
KBZ	**Khabaz**		**11.29**	**63**	LR	LR	00 11 36.3	
	comp=N,67nm,21.1s,baz=268,slow=37							
AKASG	**Malin Array Be**		**11.36**	**1**	Pn	**Pn**	**00 07 27.8**	**-2.8**
	comp=N,0.5nm,0.3s,baz=181,slow=11,SNR=1.6							
AKASG					Sn	**Sn**	**00 09 42.0**	**+4.0**
	comp=N,1.1nm,0.3s,baz=188,slow=25,SNR=5.3							
AKASG	**Malin Array Be**		**11.36**	**1**		**Pn**	**00 07 28.7**	**-1.9**
GERES	**GERESS Array B**		**14.52**	**316**	Pn	**Pn**	**00 08 14.9**	**+1.0**
	comp=N,0.1nm,0.3s,baz=119,slow=11,SNR=2.1							
GERES					LR	LR	00 13 23.4	
	comp=N,47nm,20.9s,baz=108,slow=36							
KEST	**Kesra**		**16.02**	**263**	LR	LR	00 15 48.5	
	comp=N,70nm,18.4s,baz=303,slow=41							
OBN	**Obninsk**		**16.58**	**15**	LR	LR	00 14 44.3	
	comp=N,16nm,20.1s,baz=214,slow=36							
FINES	**FINESS Array B**		**22.21**	**356**	P	**P**	**00 09 43.2**	**-1.5**
	comp=N,2.5nm,0.8s,baz=173,slow=15,SNR=8.0							
FINES	**FINESS Array B**		**22.21**	**356**		**P**	**00 09 45.3**	**+0.6**
GEYT	**Alibeck**		**22.73**	**84**	P	**P**	**00 09 51.1**	**+0.4**
	comp=N,2.7nm,0.6s,baz=303,slow=17,SNR=2.6							
GYA0B	**ALIBECK ARRAY**		**22.73**	**84**	P	**P**	**00 09 51.3**	**+0.6**
GYA0B					IAmb	IAmb	00 10 09.4	
	comp=Z,5.7nm,0.8s							
HFS	**Hagfors**		**22.94**	**340**	P	**P**	**00 09 53.3**	**+0.8**
	comp=Z,2.3nm,1.0s,baz=222,slow=28,SNR=4.5							
HFS					LR	LR	00 20 08.7	
	comp=Z,103nm,20.9s,baz=358,slow=40							
AKTO	**Aktyubinsk**		**23.20**	**52**	P	**P**	**00 09 54.5**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=257,slow=8.3,SNR=9.4							
KIRV	**Kirov**		**23.29**	**28**	P	**P**	**00 09 53.0**	**-3.1**
	comp=Z,7.3nm,0.6s,baz=353,slow=5.2,SNR=4.3							
ABKAR	**Akbulak array**		**24.10**	**56**	P	**P**	**00 10 04.6**	**+0.4**
ABKAR					IAmb	IAmb	00 10 06.1	
	comp=Z,2.7nm,1.1s							
NB2	**NORSAR Subarra**		**24.37**	**339**	P	**P**	**00 10 05.3**	**-1.3**
	comp=Z,12nm,1.4s,baz=142,slow=9.3							
NOA	**NORSAR Array B**		**24.37**	**339**	P	**P**	**00 10 05.7**	**-0.9**
	comp=Z,1.7nm,0.9s,baz=144,slow=9.2,SNR=5.3							
NOA					LR	LR	00 21 32.3	
	comp=Z,60nm,18.8s,baz=325,slow=41							
ESDC	**Sonseca Array**		**25.38**	**281**	P	**P**	**00 10 18.1**	**+2.2**
	comp=Z,0.5nm,1.0s,baz=67,slow=9.2,SNR=3.7							
ARU	**Arti**		**25.87**	**39**	P	**P**	**00 10 20.0**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=246,slow=4.7,SNR=11							
ARU	**Arti**		**25.87**	**39**	P	**P**	**00 10 21.5**	**+1.4**
ARU					IAmb	IAmb	00 10 21.7	
	comp=Z,6.0nm,0.8s							
EKA	**Eskdalemuir Ar**		**26.72**	**317**	P	**P**	**00 10 27.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=118,slow=12,SNR=8.3							
KK31	**Karatay Array**		**31.20**	**69**	P	**P**	**00 11 07.9**	**0.0**
KK31					IAmb	IAmb	00 11 08.8	
	comp=Z,3.1nm,0.9s							
KKAR	**Karatay Array**		**31.20**	**69**	P	**P**	**00 11 07.3**	**-0.6**
TORD	**Torodi Ar. Bea**		**35.53**	**230**	P	**P**	**00 11 45.5**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=32,slow=8.5,SNR=4.3							
TORD	**Torodi Ar. Bea**		**35.53**	**230**	P	**P**	**00 11 44.9**	**-0.9**
MK31	**Makanchi Array**		**38.98**	**61**	P	**P**	**00 12 15.5**	**+0.7**
MKAR	**Makanchi Array**		**38.98**	**61**	P	**P**	**00 12 14.5**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=283,slow=5.0,SNR=5.3							
MKAR	**Makanchi Array**		**38.98**	**61**	P	**P**	**00 12 15.0**	**+0.2**
ZALV	**Zalesovo Beam**		**39.92**	**50**	P	**P**	**00 12 21.9**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=286,slow=11,SNR=3.7							
ZALV	**Zalesovo Beam**		**39.92**	**50**	T	**P**	**00 12 22.8**	**+0.2**
SONM	**Songino Array**		**54.50**	**54**	P	**P**	**00 14 15.6**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=298,slow=9.3,SNR=3.6							
BOSA	**Boshof**		**67.69**	**184**	P	**P**	**00 15 46.8**	**+0.7**
	comp=Z,3.9nm,1.0s,baz=2.5,slow=5.0,SNR=3.6							
BOSA	**Boshof**		**67.69**	**184**	P	**P**	**00 15 46.0**	**0.0**
WHN	**Wuhan**		**68.05**	**68**	P	P	00 15 56.5	+8.1
ILAR	**Eielson Array**		**76.18**	**358**	P	**P**	**00 16 35.5**	**-1.0**
	comp=Z,0.2nm,0.7s,baz=339,slow=2.2,SNR=3.0							
DAV	**Davao City (W)**		**90.61**	**80**	LR	LR	01 04 18.6	
	comp=Z,263nm,18.3s,baz=113,slow=40							
TXAR	**Lajitas Array**		**98.71**	**320**	LR	LR	01 01 33.3	
	comp=Z,19nm,21.8s,baz=0.0,slow=34							
GUMO	**Guam**		**100.45**	**63**	P	**Pdif**	**00 18 36.8**	**+0.4**
	comp=Z,32nm,0.3s,baz=14,slow=12,SNR=3.7							

*IDC **26** 00:09:36.1±0.8,21.˚66N×143.˚84E, h0km, mb3.9/20, mb1 4.1/21, mb1mx4.0/55, mbtmp3.9/21, ML2.8/1, MS3.5/23, Ms1 3.5/23, ms1mx3.4/41, Error ellipse: s-maj=25.9km s-min=19.3km az=85.0*

*NEIC **26** 00:09:45.9±2.1,21.˚9N±0.˚1×143.˚5E±0.˚2, h13km±5km, mb4.7/42, Error ellipse: s-maj=20.1km s-min=15.7km az=92.0*

ISC 26 00:09:49.2±0.7, 22.˚1N±0.˚1×143.˚5E±0.˚1, h35km, n104,
σ1s96/67, mb4.3/38, MS3.5/21, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
JCJ	**Chichijima**	**5.15**	**347**	Pn	**Pn**	**00 11 01.5**	**-2.4**
JHJ	**Hachijo jima 2**	**11.50**	**344**	LR	LR	00 16 35.3	
	comp=Z,311nm,21.1s,baz=126,slow=35						
JGF	**Kuroka**	**14.52**	**340**	Pn	**Pn**	**00 13 12.0**	**-0.1**
MJAR	**Matsushiro Arr**	**15.14**	**344**	Pn	**Pn**	**00 13 19.4**	**-1.1**
	0.0nm,0.3s,baz=159,slow=10,SNR=4.4						
MJAR				LR	LR	00 18 45.9	
	comp=Z,270nm,19.9s,baz=155,slow=35						
MJAR	**Matsushiro Arr**	**15.14**	**344**		**Pn**	**00 13 21.2**	**+0.7**
JNU	**Nakatsue**	**15.68**	**317**	LR	LR	00 18 27.4	
	comp=Z,128nm,20.2s,baz=90,slow=33						
JHS	**Saijyo**	**15.77**	**327**	P	**P**	**00 13 32.6**	**+0.4**
JHS				IAmb	IAmb	00 13 46.6	
	comp=Z,37nm,1.2s						
JMM	**Marumori**	**15.93**	**352**	Pn	**Pn**	**00 13 31.0**	**+0.4**
JMM				IAmb	IAmb	00 13 45.0	
	comp=Z,102nm,1.3s						
JSD	**Sado**	**16.55**	**345**	P	**P**	**00 13 43.3**	**+2.6**
JSD				IAmb	IAmb	00 13 55.6	
	comp=Z,64nm,1.5s						
KSRS	**Korea Array**	**20.40**	**322**	P	**P**	**00 14 22.8**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=144,slow=8.8,SNR=2.9						
KSAR	**Wonju Array Be**	**20.41**	**322**	P	Pn	00 14 30.8	+5.3
SSLB	**Suanglung**	**20.82**	**279**	P	Pn	00 14 30.5	+0.2
SSLB				IAmb	IAmb	00 14 47.4	
	comp=Z,43nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**21.99**	**92**	T	T	00 37 15.1	
	baz=279,slow=74,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**22.00**	**92**	T	T	00 37 22.4	
	baz=279,slow=74,SNR=14						
H11N3	**WAKE ISLAND Hy**	**22.01**	**92**	T	T	00 37 15.9	
	baz=279,slow=74,SNR=15						
ASAJ	**Asahikawa**	**22.02**	**358**	LR	LR	00 26 42.1	
	comp=Z,26nm,18.3s,baz=182,slow=46						
H11S3	**WAKE ISLAND Hy**	**22.05**	**95**	T	T	00 37 13.5	
	baz=283,slow=74,SNR=42						
H11S1	**WAKE ISLAND Hy**	**22.06**	**95**	T	T	00 37 15.4	
	baz=283,slow=74,SNR=41						
H11S2	**WAKE ISLAND Hy**	**22.07**	**95**	T	T	00 37 14.3	
	baz=283,slow=74,SNR=35						
DAV	**Davao City (W)**	**22.81**	**232**	LR	LR	00 21 35.3	
	comp=Z,161nm,20.7s,baz=54,slow=32						
NJ2	**Nanjing**	**24.04**	**300**	*e*P	**P**	**00 15 01.3**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						

USA0B	**Ussuriysk Arra**	**24.04**	**339**	P		**P**	**00 15 01.6**	**+0.8**
USRK	**Ussuriysk Ar.**	**24.04**	**339**	P		**P**	**00 15 02.6**	**+1.7**
KLR	**Kul'dur**	**28.67**	**344**	P		**P**	**00 15 38.5**	**-4.1**
	comp=Z,1.1nm,0.5s,baz=149,slow=12,SNR=5.6							
HHC	**Hu-ho-hao-te**	**32.80**	**312**	*e*P		**P**	**00 16 22.3**	**+3.1**
HHC				pmax	pmax			
	comp=Z,11nm,0.9s							
HHC				pmax	pmax			
	comp=Z,120nm,5.1s							
PETK	**Petropavlovsk-**	**32.86**	**16**	LR		LR	00 27 31.3	
	comp=Z,87nm,21.5s,baz=197,slow=32							
KAPI	**Kappang**	**35.55**	**224**	LR		LR	00 29 30.8	
	comp=Z,21nm,21.1s,baz=74,slow=34							
LZH	**Lanzhou**	**37.10**	**301**	*e*P		**P**	**00 16 58.5**	**+2.0**
LZH				pP		pP	00 17 04.8	-0.8
LZH				sP		pwP	00 17 07.0	-3.0
LZH				pmax	pmax			
	comp=Z,17nm,1.3s							
BATI	**Baumata**	**37.49**	**213**	LR		LR	00 29 40.4	
	comp=Z,113nm,21.0s,baz=63,slow=32							
SONM	**Songino Array**	**39.24**	**320**	P		P	00 17 09.6	-4.7
	comp=Z,0.2nm,0.4s,baz=133,slow=7.1,SNR=1.3							
SONM				LR		LR	00 34

YPP	Pitchstone Pla	85.46	44	P		P	00 22 21.7	-2.1
PSUT	Pine Spring	85.86	50	P		P	00 22 26.4	+0.6
PDAR	Pinedale Array	86.95	45	LR		LR	00 53 05.9	
	comp=Z,51nm,20.6s,baz=316,slow=30							
KNB	Kanab	87.25	51	P		P	00 22 33.6	+1.0
AKASG	Malin Array Be	87.38	325	P		P	00 22 29.2	-3.5
	comp=Z,0.2nm,0.3s,baz=57,slow=3.1,SNR=1.8							
NOA	NORSAR Array B	88.71	339	P		P	00 22 33.6	-5.3
	comp=Z,0.3nm,0.6s,baz=44,slow=4.9,SNR=1.9							
NOA				LR		LR	01 05 07.1	
	comp=Z,46nm,18.8s,baz=270,slow=37							
TXAR	Lajitas Array	97.62	54	P		P	00 23 12.1	-8.6
	comp=Z,0.1nm,0.4s,baz=322,slow=6.8,SNR=1.5							
VNDA	Vanda	99.95	176	LR		LR	01 07 40.1	
	comp=Z,13nm,18.3s,baz=338,slow=35							
LPAZ	La Paz	149.63	85	PKPbc		PKPdf	00 29 27.9	-4.1
	comp=Z,0.9nm,0.8s,baz=246,slow=3.2,SNR=3.6							
LPAZ	La Paz	149.63	85			PKPdf	00 29 29.6	-2.4

*ISK **26** 00:11:16.5, 39°.35N×29°.01E, h5km, ML3.5/43*
*DDA **26** 00:11:17.2, 39°.36N×29°.02E, h6km±2km, ML3.5*
*THE **26** 00:11:19.4, 39°.23N×29°.12E, h19km±3km, ML3.3/2, Error ellipse: s-maj=3.8km s-min=0.6km az=119.0*

ISC 26 00:11:17.1±1.1, 39°.36N±0°.02×29°.02E±0°.02, h5km±10km, n78, σ0s69/93, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TVSB	Tavsanli	0.36	75	PG		Pg	00 11 24.7	+0.7
SHAP	Saphane-Kutahy	0.37	154	PG		Pg	00 11 24.6	+0.4
DST	Dursunbey	0.39	309	PG		Pg	00 11 24.9	+0.2
GDZ	Gediz	0.45	126	*i* P		Pg	00 11 26.5	+0.7
GDZ				*i* S		Sb	00 11 33.1	-1.5
USAK	Uak-Merkez	0.64	180	*i* P		Pg	00 11 29.8	+0.4
USAK				*i* S		Sg	00 11 37.4	-0.3
USAK				IAML			00 11 43.0	
	comp=E,2μm,0.3s							
ORLT	Orhaneli	0.69	352	PG		Pg	00 11 30.3	-0.1
ANDZ	Kutahya, Merke	0.70	77	*i* P		Pg	00 11 30.8	+0.3
ANDZ				*i* S		Sg	00 11 39.9	+0.3
ANDZ				IAML			00 11 41.0	
	comp=E,2μm,0.3s							
ANDZ				IAML			00 11 41.0	
	comp=N,2μm,0.3s							
ULDT	Uludag	0.79	7	*i* P		Pg	00 11 32.3	0.0
ULDT				*i* S		Sg	00 11 42.2	-0.3
ULDT				IAML			00 11 47.0	
	comp=N,2μm,0.3s							
KULA	Kula-Manisa	0.89	198	PG		Pg	00 11 34.2	+0.2
KULA	Kula-Manisa	0.89	198	P		Pg	00 11 34.1	+0.1
KULA				S		Sg	00 11 45.2	-0.3
IGD	Bursa	0.92	9	*i* P		Pg	00 11 34.9	+0.2
IGD				*i* S		Sg	00 11 45.7	-0.9
IGD				IAML			00 11 50.0	
	comp=N,947nm,0.3s							
IGD				IAML			00 11 50.0	
	comp=E,1μm,0.2s							
BALB	Balikesir	0.92	288	PG		Pb	00 11 35.9	+0.3
MANT	Manisa	0.94	203	*i* P		Pg	00 11 35.1	+0.1
MANT				*i* S		Sg	00 11 46.4	-0.7
AUBOZ	BOZOYUK	0.96	54	*i* P		Pg	00 11 35.8	+0.3
AUBOZ				*i* S		Sg	00 11 47.7	-0.3
AUBOZ				IAML			00 11 53.0	
	comp=E,2μm,0.4s							
AUBOZ				IAML			00 11 54.0	
	comp=N,1μm,0.4s							
STEP	BALIKESIR_Sava	1.01	272	*i* P		Pg	00 11 36.6	+0.3
MDNY	Mudanya-Bursa	1.02	354	PG		Pg	00 11 36.5	-0.1
BILE	Bilecik/Merkez	1.04	39	*i* P		Pb	00 11 38.1	+0.4
BILE				*i* S		Sn	00 11 52.9	-0.6
AKHS	Akhisar	1.05	243	*i* P		Pg	00 11 37.6	+0.4
AKS	Akhisar	1.05	243	PG		Pg	00 11 37.4	+0.2
CAVI	Cavuskoy	1.06	37	PG		Pg	00 11 38.1	+0.2
GOMA	Golmarmara-Man	1.07	233	PG		Pg	00 11 37.9	+0.3
GEMT	Gemlik	1.09	7	PN		Pb	00 11 38.8	+0.4
KHL	Karahalli	1.10	159	PN		Pb	00 11 38.9	+0.2
BALY	Balya	1.15	290	*i* P		Pn	00 11 40.4	+0.5
AFYO	Afyonkarahisar	1.15	119	*i* P		Pn	00 11 40.5	+0.6
AFYO				*i* S		Sn	00 11 56.0	-0.1
ADVT	Abdulvahap	1.21	27	PN		Pn	00 11 41.1	+0.4
BORA	Eskisehir	1.23	64	*i* P		Pg	00 11 40.5	-0.2
GONE	Gonen-Balikesi	1.24	304	PN		Pn	00 11 41.3	+0.3
TRML	Termal-Yalova	1.26	5	PN		Pg	00 11 40.9	-0.3
CFTB	Yalova	1.32	9	PN		Pg	00 11 43.1	+0.6
EDC	Edincik	1.33	318	PN		Pg	00 11 43.3	+0.8
GPA	Golpazari	1.36	47	PN		Pg	00 11 43.9	+0.7
KZIL	AFYON_Kizioren	1.41	141	*i* P		Pg	00 11 44.0	-0.1
KZIL				*i* S		Sn	00 12 04.6	+2.1
SRCK	Saricakaya, Es	1.42	61	PN		Pb	00 11 44.1	+0.1
SGAZ	Eskisehir, Sey	1.42	82	*i* P		Pn	00 11 43.7	+0.0
SGAZ				*i* S		Sb	00 12 00.9	-1.7
SHUT	Suhut-Afyon	1.44	123	PN		Pb	00 11 44.3	-0.2
GEYV	SAKARYA_Geyve	1.50	41	*i* P		Pg	00 11 46.3	+0.6
ZEDA	zmir-Bergama	1.56	256	*i* P		Pb	00 11 46.6	+0.2
GULT	Gulveren	1.58	47	PN		Pb	00 11 46.9	+0.1
CIFT	Cifteler, Eski	1.59	89	PN		Pb	00 11 46.9	0.0
BASM	Basmaki-Afyon	1.65	150	PN		Pb	00 11 47.7	-0.3
AVCI	Avcilar-stanb	1.65	352	PN		Pb	00 11 48.3	+0.3
MRMT	Marmara Adasi	1.66	319	PN		Pb	00 11 48.1	0.0
SPNC	Sapanca-Adapaz	1.66	36	PN		Pb	00 11 48.3	+0.2
AYDB	Zeytinkoy-Aydi	1.66	212	PN		Pn	00 11 47.6	+0.6
DKL	Dikili	1.66	261	PN		Pb	00 11 47.9	-0.3
KAVV	Kandilli-Istan	1.71	1	PN		Pb	00 11 48.9	0.0
ISK	Istanbul-Kandi	1.71	1	PN		Pb	00 11 48.7	-0.3
ISK	Istanbul-Kandi	1.71	1	P		Pn	00 11 48.2	+0.7
ISK				S		Sb	00 12 11.4	+0.7
	comp=N,570nm,0.6s							
SAUV	Serdivan-Sakar	1.71	36	PN		Pb	00 11 49.1	+0.1
BGKT	Bogazkoy	1.83	354	PN		Pb	00 11 50.7	-0.4
ELBA	Catalca	1.84	346	*i* P		Pb	00 11 51.6	+0.3
BRDR	BURDUR-Merkez	1.85	153	*i* P		Pg	00 11 52.4	-0.1
BRDR				*i* S		Sg	00 12 17.6	+1.1
SILT	Sile	1.86	15	PN		Pb	00 11 50.8	-0.7
KLYT	Kilyos	1.90	1	PN		Pb	00 11 51.3	-0.8
MAR3	Marsite Statio	1.91	317	PN		Pb	00 11 51.7	-0.8
CTKS	Kestanelik-??a	1.92	348	PN		Pn	00 11 51.6	+1.2
ISP	Isparta	1.93	142	PN		Pb	00 11 51.8	-1.1
RKY	Sarkoy-Tekirda	1.94	314	PN		Pn	00 11 51.9	+1.1
SVRH	Sivrihisar-ESK	1.94	87	PN		Pb	00 11 52.5	-0.6
AUSIV	SIVRIHISAR	1.96	87	*i* P		Pg	00 11 54.5	-0.1
SLVT	Silivri	1.97	342	PN		Pb	00 11 52.5	-0.9
AUMIH	MIHALICIK	1.97	74	*i* P		Pg	00 11 55.1	+0.2
LPK	Lapseki	2.01	301	PN		Pn	00 11 52.9	+1.2
MDUB	Mudurnu	2.01	56	PN		Pb	00 11 53.5	-0.7
EZN	Ezine	2.13	284	PN		Pb	00 11 54.9	-1.3
EZN	Ezine	2.13	284	P		Pn	00 11 53.7	+0.4
PRK	Paraskevi	2.13	268	P		Pn	00 11 54.1	+0.8
PRK				S		Sb	00 12 21.7	-1.2
	comp=N,512nm,0.5s							
URLA	Izmir	2.13	243	PN		Pn	00 11 54.9	+1.5
GCAM	G?zelcaml?	2.17	221	PN		Pn	00 11 54.9	+1.1
MLSB	Milas	2.28	206	PN		Pn	00 11 56.7	+1.3
YER	Yerkesik	2.29	195	PN		Pn	00 11 57.1	+1.5
YER	Yerkesik	2.29	195	P		Pn	00 11 54.5	-1.1
SMG	Samos	2.37	227	P		Pn	00 11 55.9	-0.8
SIGR	SIGRI	2.46	268	P		Pn	00 11 58.0	+0.2
ENEZ	Enez	2.59	303	P		Pn	00 12 00.1	+0.4
ALN	Alexandroupoli	2.75	305	P		Pn	00 12 01.9	+0.1
SMTH	Samothraki Isl	2.90	294	P		Pn	00 12 04.3	+0.3

*IDC **26** 00:20:14.7±1.5, 5°.71N×61°.20E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/47, mbtmp3.6/5, MS3.3/4, Ms1 3.2/4, ms1mx2.8/40, Error ellipse: s-maj=52.7km s-min=30.4km az=49.0*
*NEIC **26** 00:20:17.0±0.8, 5°.7N±0°.1×61°.3E±0°.1, h10km±1km, mb4.2/6, Error ellipse: s-maj=25.5km s-min=17.5km az=159.0*

ISC 26 00:20:16.8±1.4, 5°.7N±0°.2×61°.2E±0°.2, h10km, n19, σ0s58/15, mb4.0/8, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WSAR	Wadi Sarin	17.62	352	LR		LR	00 29 46.7	
	comp=Z,40nm,19.6s,baz=169,slow=32							
PALK	Pallekele	19.40	84	LR		LR	00 30 43.0	
	comp=Z,33nm,18.6s,baz=7.7,slow=32							
RAYN	Ar Rayn	23.32	321	P		P	00 25 25.0	-0.2
RAYN				IAmb		IAmb	00 25 32.6	
	comp=Z,9.0nm,1.3s							

ABKAR	Akbulak array	43.42	359	P		P	00 28 19.5	-0.2
MKAR	Makanchi Array	44.78	21	P		P	00 28 29.9	-0.8
	comp=Z,0.4nm,0.8s,baz=210,slow=8.3,SNR=3.7							
MKAR	Makanchi Array	44.78	21	P		P	00 28 31.2	+0.5
BOSA	Boshof	48.62	224	LR		LR	00 47 57.0	
	comp=Z,48nm,18.5s,baz=11,slow=34							
ARU	Arti	50.63	358	P		P	00 29 16.3	+0.4
ARU				IAmb		IAmb	00 29 34.3	
	comp=Z,2.7nm,1.1s							
BURAR	Bucovina Array	51.89	330	P		P	00 29 25.6	0.0
SONM	Songino Array	56.93	35	P		P	00 30 02.2	-0.1
	comp=Z,0.2nm,0.4s,baz=213,slow=5.0,SNR=2.5							
GEC2	GERESS Array S	58.81	325	P		P	00 30 17.0	+1.5
FINES	FINESS Array B	61.48	342	LR		LR	00 56 28.6	
	comp=Z,57nm,19.3s,baz=356,slow=35							
SENIN	Lac Senin/Sane	61.52	320	P		P	00 30 33.9	-0.4
SENIN				IAmb		IAmb	00 30 36.8	
	comp=Z,3.0nm,0.9s							
ESDC	Sonseca Array	67.36	311	P		P	00 31 11.8	-0.6
	comp=Z,0.7nm,1.0s,baz=77,slow=8.0,SNR=4.5							
WRA	Warramunga Arr	76.19	112	P		P	00 32 05.7	-0.2
	comp=Z,2.4nm,1.3s,baz=290,slow=4.8,SNR=7.6							
WRA	Warramunga Arr	76.19	112	P		P	00 32 06.0	+0.1
WB2	Warramunga Arr	76.20	112	P		P	00 32 06.2	+0.2
ASAR	Alice Springs	76.56	116	P		P	00 32 07.8	-0.1
	comp=Z,1.0nm,0.8s,baz=285,slow=5.5,SNR=9.1							
ASAR	Alice Springs	76.56	116	P		P	00 32 08.3	+0.3

MAN 26 00:45:57.7, 13°.56N×121°.28E, h8km, mb4.3, ML3.2, MS2.9, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PGP	Puerto Galera	0.33	260	*e*P		Pg	00 46 04.6	+0.4
PGP				*e*S		Sg	00 46 06.3	-2.2
BOAC	Boac	0.56	100	*e*P		Pg	00 46 08.8	+0.3
BOAC				*e*S		Sb	00 46 18.1	+0.3
LUBP	Lubang	1.02	280	*e*P		Pg	00 46 17.4	0.0
LUBP				*e*S		Sn	00 46 32.4	-0.5
SJMP	San Jose	1.10	188	*e*P		Pn	00 46 19.3	-0.2
SJMP				*e*S		Sn	00 46 34.9	0.0
OTRP	Odiongan	1.39	149	*e*P		Pn	00 46 22.7	-0.8
OTRP				*e*S		Sb	00 46 41.8	-0.1
SMPP	San Manuel, Pa	2.64	347	*e*P		Pn	00 46 41.6	+1.0
SMPP				*e*S		Sn	00 47 13.8	+0.9

*IDC **26** 00:47:49.0±0.8, 21°.40N×144°.47E, h0km, mb3.8/14, mb1 4.0/14, mb1mx3.9/42, mbtmp3.8/14, MS3.0/2, Ms1 3.0/2, ms1mx2.5/55, Error ellipse: s-maj=27.9km s-min=19.6km az=81.0*

ISC 26 00:48:02.7±0.9, 21°.4N±0°.1×144°.3E±0°.2, h114km, n23, σ1s24/15, mb3.6/14, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
H11N1	WAKE ISLAND Hy	21.25	90	T		T	01 15 21.3	
	baz=274,slow=74							
H11N2	WAKE ISLAND Hy	21.25	90	T		T	01 15 22.7	
	baz=274							
H11N3	WAKE ISLAND Hy	21.27	90	T		T	01 15 22.5	
	baz=274,slow=74							
H11S3	WAKE ISLAND Hy	21.27	94	T		T	01 15 25.4	
	baz=283,slow=74,SNR=11							
H11S1	WAKE ISLAND Hy	21.28	94	T		T	01 15 22.9	
	baz=283,slow=74,SNR=9.7							
H11S2	WAKE ISLAND Hy	21.29	94	T		T	01 15 20.4	
	baz=283,slow=74,SNR=9.5							
KSRS	Korea Array	21.37	322	P		P	00 52 40.9	0.0
	1.2nm,0.5s,baz=148,slow=9.4,SNR=4.3							
USRK	Ussuriysk Ar.	24.92	339	P		P	00 53 15.4	+0.4
	1.3nm,0.7s,baz=138,slow=12,SNR=3.0							
KLR	Kul'dur	29.52	343	P		P	00 53 56.8	+0.6
	2.7nm,0.6s,baz=150,slow=7.2,SNR=10							
PETK	Petropavlovsk-	33.31	15	LR		LR	01 05 05.0	
	comp=Z,22nm,21.3s,baz=265,slow=31							
HNR	Honiara	34.28	152	LR		LR	01 08 02.2	
	comp=Z,25nm,19.4s,baz=112,slow=36							
SONM	Songino Array	40.22	320	P		P	00 55 27.1	-1.1
	0.3nm,0.4s,baz=101,slow=7.5,SNR=1.0							
WRA	Warramunga Arr	42.21	194	P		P	00 55 43.8	-0.7
	0.7nm,0.8s,baz=14,slow=9.0,SNR=5.7							
ASAR	Alice Springs	45.91	193	P		P	00 56 13.9	-0.1
	0.3nm,0.6s,baz=14,slow=8.6,SNR=2.5							
ZALV	Zalesovo Beam	55.08	322	P		P	00 57 23.2	+0.6
	0.6nm,0.4s,baz=108,slow=14,SNR=1.7							
MKAR	Makanchi Array	55.65	313	P		P	00 57 26.6	-0.3
	0.5nm,0.7s,baz=88,slow=10,SNR=4.6							
ILAR	Eielson Array	61.86	27	P		P	00 58 07.5	-2.0
	0.4nm,0.7s,baz=253,slow=5.2,SNR=4.7							
INK	Inuvik	67.45	24	P		P	00 58 43.6	-2.1
	1.0nm,0.8s,baz=214,slow=3.6,SNR=2.0							
YKA	Yellowknife Ar	76.26	28	P		P	00 59 38.1	-0.4
	0.6nm,0.6s,baz=291,slow=4.7,SNR=5.0							
ARCES	ARCESS Array B	79.53	342	P		P	00 59 57.3	+0.8
	4.4nm,0.9s,baz=37,slow=10,SNR=2.3							
NVAR	Mina Array Bea	82.55	52	P		P	01 00 15.1	+1.7
	0.8nm,0.6s,baz=288,slow=5.9,SNR=9.5							
FINES	FINESS Array B	83.89	335	P		P	01 00 21.3	+1.8
	2.0nm,0.9s,baz=35,slow=5.1,SNR=3.4							
LPAZ	La Paz	148.96	86	PKPbc		PKiKP	01 07 40.8	+0.7
	1.1nm,0.7s,baz=256,slow=5.0,SNR=4.8							

IDC 26 01:04:12.0±6.7, 5°.43S×154°.37E, h181km±51km, mb3.0/2, mb1 3.4/3, mb1mx3.0/34, mbtmp3.5/3, Error ellipse: s-maj=87.2km s-min=29.1km az=122.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRVT	Keravat (AS076	2.58	295	P		Pn	01 04 55.6	-0.2
	3.5nm,0.3s,baz=43,slow=19,SNR=2.0							
KRVT				S		Sn	01 05 30.2	+0.4
	6.9nm,0.3s,baz=165,slow=21,SNR=1.9							
WRA	Warramunga Arr	24.24	232	P		P	01 09 12.5	0.0
	0.3nm,0.5s,baz=58,slow=10,SNR=8.1							
ILAR	Eielson Array	82.16	22	P		P	01 16 12.2	0.0
	0.4nm,0.7s,baz=237,slow=5.2,SNR=5.3							
TORD	Torodi Ar. Bea	151.98	288	PKPbc		PKPbc	01 23 46.7	0.0
	0.1nm,0.3s,baz=88,slow=2.7,SNR=2.1							

WEL 26 01:06:07.4±0.5, 44°S±3°×176°9E±°, h5km, M2.8/7, ML2.9/7, MLv2.8/7, Error ellipse: s-maj=0.0km s-min=0.0km az=119.2, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JCZ	Jackson Bay	0.16	23	P		Pg	01 06 11.2	+0.6
JCZ				S		Sg	01 06 13.3	+0.7
WKZ	Wanaka	0.65	160	P		Pg	01 06 20.5	+0.6
WKZ				S		Sg	01 06 28.7	+0.3
MSZ	Milford Sound	0.72	230	P		Pg	01 06 21.6	+0.4
MSZ				S		Sg	01 06 30.7	+0.2
FOZ	Fox Glacier	1.06	50	P		Pg	01 06 27.1	-0.6
FOZ				S		Sg	01 06 41.6	+0.3
LBZ	Lake Benmore	1.08	100	P		Pb	01 06 28.5	-0.1
LBZ				S		Sg	01 06 42.2	+0.1
EAZ	Earnscleugh	1.10	157	P		Pg	01 06 28.7	+0.2
EAZ				S		Sg	01 06 43.0	+0.1
MLZ	Mavora Lakes	1.22	200	P		Pg	01 06 30.4	-0.5
MLZ				S		Sb	01 06 47.2	+0.1
GCSZ	Gaunt Creek Bo	1.48	53	P		Pn	01 06 34.9	+0.2
ODZ	Otahua Downs	1.62	121	P		Pn	01 06 37.1	+0.5
ARCZ	Arundel	1.81	82	P		Pg	01 06 41.8	-0.2
TUZ	Tuapeka	1.86	160	P		Pb	01 06 42.2	+0.4
SYZ	Scrubby Hill	2.34	173	P		Pb	01 06 49.1	-0.9

*HEL **26** 01:13:38.2, 67°.79N×19°.95E, h0km, ML1.6, Explosion*
UPP 26 01:13:38.6±0.3, 67°.83N×20°.20E, h1km±4km, ML2.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUA	Kurravaara	0.14	23	P		Pg	01 13 41.3	+0.1
KUA				S		Sg	01 13 43.3	+0.3
KUA	Kurravaara	0.14	23	*i* P		Pg	01 13 41.3	+0.1
KUA				*i* S		Sg	01 13 43.3	+0.3
RATU	Laukkuluspa	0.23	269	P		Pg	01 13 43.1	+0.1
RATU				S		Sg	01 13 46.4	+0.4
RATU	Laukkuluspa	0.23	269	*i* P		Pg	01 13 43.1	+0.1
RATU				*i* S		Sg	01 13 46.4	+0.4

KOVU	Salmi	0.40	358	P		Pg	01 13 46.1	-0.1
KOVU	Salmi	0.40	358	*i* P		Pg	01 13 46.1	-0.1
NIKU	Nikkaluokta	0.44	276	P		Pg	01 13 47.0	-0.1
NIKU				S		Sg	01 13 53.1	+0.4
NIKU	Nikkaluokta	0.44	276	*i* P		Pg	01 13 47.0	-0.1
NIKU				*i* S		Sg	01 13 53.1	+0.4
LANU	Lannavaara	0.71	71	P		Pg	01 13 51.9	-0.4
LANU				S		Sg	01 14 01.5	0.0
LANU	Lannavaara	0.71	71	*e*P		Pg	01 13 51.8	-0.5
LANU				*e*			01 14 05.4	
DUNU	Dundret	0.72	168	P		Pg	01 13 52.0	-0.4
DUNU	Dundret	0.72	168	*i* P		Pg	01 13 52.0	-0.4
MASU	Masugnsbyn	0.78	118	P		Pg	01 13 53.3	-0.2
MASU	Masugnsbyn	0.78	118	*i* P		Pg	01 13 53.3	-0.2
SALU	Saltoluokta	0.79	236	P		Pg	01 13 53.4	-0.3
SALU	Saltoluokta	0.79	236	*i* P		Pg	01 13 53.4	-0.3
KIF	Kilpisjarvi	1.20	10	*e*PB		Pg	01 14 01.7	+0.1
KIF				MSG			01 14 17.4	
	comp=Z,5.2nm,0.2s							
KIF				*e*SN		Sn	01 14 21.0	+1.6
KIF	Kilpisjarvi	1.20	10	*e*P		Pg	01 14 01.8	+0.2
PAJU	Pajala	1.39	124	P		Pn	01 14 03.8	-1.3
PAJU	Pajala	1.39	124	*e*P		Pn	01 14 03.6	-1.4
ERTU	Ertsjaerv	1.50	148	P		Pn	01 14 06.4	-0.1
ERTU	Ertsjaerv	1.50	148	*e*P		Pn	01 14 05.7	-0.8
	baz=322							
ERTU				*e*SN		Sn	01 14 30.3	+3.6
KTK1	Kautokeino	1.64	42	*e*P		Pn	01 14 08.3	-0.1
TOF	Tornio	2.39	135	*e*PG		Pg	01 14 24.3	-0.1
TOF				MSG			01 14 50.2	
	comp=Z,2.0nm,0.2s							
TOF				*e*SG		Sb	01 14 53.1	+0.8
SGF	Sodankyl	2.45	96	*e*PG		Pb	01 14 22.4	-1.0
RNF	Rovaniemi	2.57	116	*e*PB		Pn	01 14 23.3	+2.0
RNF				*e*SG		Sb	01 14 57.9	+0.3
ARA0	ARCESS Array S	2.59	46	*e*P		Pn	01 14 22.6	+1.0
	baz=229							

UPP 26 01:13:42.5±0.2, 67°.82N×20°.21E, h0km, ML1.6, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUA	Kurravaara	0.14	20	P		Pg	01 13 45.3	+0.1
	baz=177							
KUA				S		Sg	01 13 47.3	+0.3
RATU	Laukkuluspa	0.23	270	P		Pg	01 13 47.1	+0.1
RATU				S		Sg	01 13 50.4	+0.4
KOVU	Salmi	0.40	357	P		Pg	01 13 50.1	0.0

IDC 26 01:20:46.0±1.1, 21°.41N×144°.03E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/76, mbtmp3.6/7, MS3.0/4, Ms1 3.0/4, ms1mx2.5/37, Error ellipse: s-maj=39.3km s-min=23.6km az=92.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	Guam	7.82	174	LR		LR	01 25 26.2	
	comp=Z,41nm,19.7s,baz=114,slow=36							
MJAR	Matsushiro Arr	15.91	343	LR		LR	01 29 42.4	
	comp=Z,55nm,19.9s,baz=270,slow=34							
H11N1	WAKE ISLAND Hy	21.47	90	T		T	01 48 16.9	
	baz=279,slow=75,SNR=8.0							
H11N2	WAKE ISLAND Hy	21.47	90	T		T	01 48 17.4	
	baz=279,slow=75,SNR=6.0							
H11N3	WAKE ISLAND Hy	21.49	90	T		T	01 48 19.9	
	baz=279,slow=75,SNR=7.4							
H11S3	WAKE ISLAND Hy	21.49	94	T		T	01 48 17.4	
	baz=283,slow=74,SNR=37							
H11S1	WAKE ISLAND Hy	21.50	94	T		T	01 48 17.6	
	baz=283,slow=74,SNR=27							
H11S2	WAKE ISLAND Hy	21.51	94	T		T	01 48 19.0	
	baz=283,slow=74,SNR=19							
KLR	Kul'dur	29.43	344	P		P	01 26 52.0	+0.8
	2.3nm,0.7s,baz=154,slow=10,SNR=5.8							
WRA	Warramunga Arr	42.18	194	P		P	01 28 41.1	+0.5
	0.4nm,0.8s,baz=16,slow=8.7,SNR=2.9							
WRA				LR		LR	01 45 16.1	
	comp=Z,32nm,21.0s,baz=165,slow=35							
ASAR	Alice Springs	45.88	193	P		P	01 29 09.9	-0.3
	0.1nm,0.3s,baz=11,slow=8.8,SNR=1.4							
ZALV	Zalesovo Beam	54.92	322	P		P	01 30 16.9	-1.5
	0.5nm,0.3s,baz=56,slow=7.8,SNR=1.8							
MKAR	Makanchi Array	55.47	313	P		P	01 30 22.8	+0.2
	0.5nm,0.8s,baz=96,

comp=Z,1.2nm,0.8s,baz=285,slow=4.8,SNR=11
ASAR Alice Springs 76.56 116 P **P** **01 34 05.4 -0.3**

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*BGR **26** 01:25:23.1±0.0,6°.28S×72°.55W,h587km±3km, mb5.4*
*IDC **26** 01:26:24.3±0.3,6°.12S×71°.91W,h583km±2km, mb4.1/43, mb1 4.2/49,mb1mx4.2/56, mbtmp5.0/49,Error ellipse: s-maj=8.5km s-min=5.9km az=56.0*
*NEIC **26** 01:26:24.3±2.2,6°.25S±0°.08×71°.94W±0°.10,h587km±5km, mb4.6/403,Error ellipse: s-maj=13.8km s-min=11.4km az=75.0*
*BJI **26** 01:26:25.0±0.0,6°.20S×71°.90W, h588km, mB5.2/10*
*VAO **26** 01:26:25.7±0.2,6°.29S×71°.87W, h594km±1km, mb5.0*
ISC 26 01:26:24.1±0.2,**6°.20S**±0°.03×**71°.90W**±0°.04,**h585**km±2km, **h586**km**:pP-P,n916,**∘**0**≤**97**/942,**mb4.6**/272,**4C-4D**,**
Western Brazil

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CZSB	**Cruzeiro do Su**	**1.71**	**208**	*eP*	**P**	**P**	**01 27 36.1**	**+0.1**
ATAH	**Atahualpa**	**6.52**	**261**	P	**P**	**P**	**01 28 10.9**	**+1.3**
	22nm,0.3s,baz=92,slow=6.2,SNR=253							
ATAH				S		**S**	**01 29 36.8**	**+1.0**
	18nm,0.3s,baz=83,slow=17,SNR=17							
ETMB	**Extrema**	**6.68**	**123**	*eP*		**P**	**01 28 11.7**	**+1.1**
ETMB				*eS*		**S**	**01 29 38.2**	**+0.6**
PTLC	**Puerto Leguiza**	**6.96**	**335**	*eP*		P	01 28 07.8	-5.5
NNA	**Nana**	**7.54**	**220**	P		**P**	**01 28 18.4**	**-0.2**
PUAC	**Puerto Asis, P**	**8.17**	**325**	*eP*		**P**	**01 28 24.2**	**-0.5**
FLOC	**Florencia**	**8.60**	**334**	*eP*		**P**	**01 28 28.6**	**-0.2**
CFLOR	**Florencia**	**8.60**	**334**	*eP*		**P**	**01 28 30.1**	**+1.2**
SAML	**Samuel**	**9.06**	**108**	*eP*		**P**	**01 28 34.8**	**+1.5**
SAML	**Samuel**	**9.06**	**108**	P		**P**	**01 28 34.5**	**+1.1**
GARC	**Garzon, Huila**	**9.07**	**337**	*eP*		**P**	**01 28 33.0**	**-0.8**
OTAV	**Otavalo**	**9.15**	**314**	*eP*		**P**	**01 28 35.9**	**+1.1**
OTAV	**Otavalo**	**9.15**	**314**	P		**P**	**01 28 35.7**	**+1.0**
OTAV	**Otavalo**	**9.15**	**314**	*eP*		**P**	**01 28 35.5**	**+0.7**
CUSE	**Cuicocha Este**	**9.16**	**315**	*eP*		**P**	**01 28 35.9**	**+1.1**
GCUF	**Volcan Galeras**	**9.17**	**323**	*eP*		**P**	**01 28 36.0**	**+1.1**
CRUC	**La Cruz**	**9.22**	**327**	*eP*		**P**	**01 28 35.9**	**+0.5**
BETC	**Betania**	**9.51**	**338**	*eP*		**P**	**01 28 36.5**	**-1.3**
BBAC	**Balboa, Cauca**	**9.76**	**327**	*eP*		**P**	**01 28 40.3**	**-0.3**
MARP	**Paez Belalcaza**	**9.86**	**336**	*eP*		**P**	**01 28 40.5**	**-1.0**
PTGC	**Puerto Gaitan,**	**10.34**	**359**	*eP*		**P**	**01 28 42.3**	**-3.8**
VILC	**Villavicencio,**	**10.40**	**350**	*eP*		**P**	**01 28 44.6**	**-2.3**
ORTC	**Ortega, Tolima**	**10.59**	**342**	*eP*		**P**	**01 28 48.3**	**-0.4**
LPAZ	**La Paz**	**10.68**	**160**	P		**P**	**01 28 50.1**	**0.0**
	7.7nm,0.3s,baz=340,slow=9.8,SNR=185							
LPAZ				S		**S**	**01 30 43.4**	**-6.5**
	3.2nm,0.3s,baz=349,slow=13,SNR=2.2							
LPAZ	**La Paz**	**10.68**	**160**	*eP*		**P**	**01 28 49.7**	**-0.3**
LPAZ	**La Paz**	**10.68**	**160**	P		**P**	**01 28 49.8**	**-0.3**
LPAZ	**La Paz**	**10.68**	**160**	*eP*		**P**	**01 28 50.3**	**+0.2**
LPAZ				*eS*		**S**	**01 30 49.1**	**-0.8**
CHIC	**Chingaza**	**10.92**	**350**	*eP*		**P**	**01 28 51.2**	**-1.2**
YOTC	**Yotoco, Valle**	**11.05**	**336**	*eP*		**P**	**01 28 49.6**	**-3.8**
ANIL	**Santa Ana**	**11.19**	**342**	*eP*		**P**	**01 28 54.8**	**-0.1**
ROSC	**El Rosal**	**11.23**	**348**	P		**P**	**01 28 56.9**	**+1.3**
	22nm,0.3s,baz=43,slow=5.2,SNR=21							
ROSC				S		**S**	**01 31 01.6**	**+1.7**
	2.5nm,0.3s,baz=183,slow=17,SNR=4.5							
ROSC	**El Rosal**	**11.23**	**348**	*eP*		**P**	**01 28 54.1**	**-1.5**
ROSC	**El Rosal**	**11.25**	**348**	P		**P**	**01 28 56.6**	**+1.0**
TOLC	**Tolima**	**11.25**	**342**	*eP*		P	01 28 49.6	-6.1
RREF	**El Recreo**	**11.56**	**343**	*eP*		**P**	**01 28 59.2**	**+0.1**
MACA	**Manacapuru-AM**	**11.58**	**75**	*eP*		**P**	**01 28 59.4**	**+0.8**
MACA				*eS*		**S**	**01 31 07.3**	**+1.7**
GUY2C	**Guyana, Caldas**	**11.87**	**343**	*eP*		**P**	**01 29 00.7**	**-1.4**
PLMC	**San Jos del P**	**11.87**	**338**	*eP*		**P**	**01 29 00.7**	**-1.0**
SPBC	**San Pablo de B**	**11.97**	**350**	*i P*		**P**	**01 29 02.0**	**-0.8**
NORC	**Norcasia**	**12.06**	**346**	*eP*		**P**	**01 29 02.1**	**-1.5**
RUSC	**La Rusia**	**12.07**	**354**	*eP*		**P**	**01 29 03.7**	**-0.5**
AP01	**Chacalluta**	**12.19**	**173**	P		**P**	**01 29 02.7**	**-2.0**
PB16	**IPOC Station P**	**12.28**	**169**	P		**P**	**01 29 03.9**	**-2.5**
PIZC	**Pizarro, Choco**	**12.36**	**334**	*eP*		**P**	**01 29 05.7**	**-0.9**
TAMC	**Tame, Arauca**	**12.56**	**0**	*eP*		P	01 28 57.0	-12
CBOC	**Ciudad Bolivar**	**12.67**	**341**	*eP*		**P**	**01 29 08.7**	**-1.3**
BARC	**Barichara**	**12.78**	**354**	*eP*		**P**	**01 29 10.1**	**-1.0**
HELC	**Santa Helena**	**12.83**	**344**	*eP*		**P**	**01 29 09.8**	**-2.0**
MNMC	**Minye Minye**	**13.04**	**170**	P		**P**	**01 29 11.2**	**-2.6**
VILB	**Vilhena**	**13.34**	**121**	*eP*		**P**	**01 29 17.4**	**+0.8**
PSGCX	**Pisagua**	**13.43**	**173**	P		**P**	**01 29 14.9**	**-2.6**
PSGCX	**Pisagua**	**13.43**	**173**	*i P*		**P**	**01 29 15.6**	**-2.0**
PAMC	**Pamplona, Colo**	**13.48**	**357**	*eP*		**P**	**01 29 16.7**	**-1.9**
SOLC	**Bahia Solano**	**13.52**	**336**	*eP*		P	01 29 11.8	-6.6
GO01	**Chusmiza**	**13.64**	**169**	P		**P**	**01 29 17.9**	**-2.2**
PB11	**IPOC Station P**	**13.65**	**171**	P		**P**	**01 29 17.2**	**-2.7**
PB11	**IPOC Station P**	**13.65**	**171**	*i P*		**P**	**01 29 17.4**	**-2.5**
ZARC	**Zaragoza, Cauc**	**13.92**	**348**	*eP*		P	01 29 14.3	-8.3
PB08	**IPOC Station P**	**14.11**	**169**	P		**P**	**01 29 22.5**	**-2.2**
PB08	**IPOC Station P**	**14.11**	**169**	*i P*		**P**	**01 29 22.9**	**-1.8**
TA01	**Diego Aracena**	**14.37**	**174**	P		**P**	**01 29 25.1**	**-1.8**
SIV	**San Ignacio**	**14.40**	**133**	P		**P**	**01 29 27.2**	**+0.1**
	11nm,0.3s,baz=313,slow=9.4,SNR=132							
SIV				S		**S**	**01 31 59.6**	**+2.5**
	2.1nm,0.3s,baz=290,slow=18,SNR=10.0							
OCAC	**Ocana**	**14.42**	**354**	*eP*		**P**	**01 29 24.3**	**-3.2**
PATCX	**Punta Patache**	**14.63**	**174**	P		**P**	**01 29 28.5**	**-0.9**
PB01	**IPOC Station P**	**14.94**	**171**	P		**P**	**01 29 31.5**	**-0.8**
PB01	**IPOC Station P**	**14.94**	**171**	*i P*		**P**	**01 29 31.5**	**-0.8**
PB01				*i S*		**S**	**01 32 04.3**	**-1.9**
SDV	**Santo Domingo**	**15.04**	**5**	*eP*		**P**	**01 29 35.9**	**+2.4**
SDV	**Santo Domingo**	**15.04**	**5**	P		**P**	**01 29 33.6**	**+0.1**
SDV				IAmb		IAmb	01 29 34.9	
	comp=Z,36nm,0.8s							
SDV	**Santo Domingo**	**15.04**	**5**	*eP*		**P**	**01 29 34.0**	**+0.5**
MOTC	**Monteria, Cord**	**15.35**	**346**	*eP*		**P**	**01 29 34.6**	**-1.6**
PTLB	**Pontes e Lacer**	**15.53**	**127**	*eP*		**P**	**01 29 39.0**	**+1.1**
PB07	**IPOC Station P**	**15.55**	**173**	P		**P**	**01 29 37.2**	**-1.0**
PB07	**IPOC Station P**	**15.55**	**173**	*i P*		**P**	**01 29 37.8**	**-0.4**
PB09	**IPOC Station P**	**15.71**	**171**	P		**P**	**01 29 39.8**	**+0.1**
PB09	**IPOC Station P**	**15.71**	**171**	*i P*		**P**	**01 29 39.6**	**-0.1**
PB03	**IPOC Station P**	**15.89**	**173**	*eP*		**P**	**01 29 40.7**	**-0.6**
PB03				*i S*		**S**	**01 32 21.9**	**-0.3**
PB04	**IPOC Station P**	**16.12**	**174**	P		**P**	**01 29 43.5**	**0.0**
PB04	**IPOC Station P**	**16.12**	**174**	*i P*		**P**	**01 29 44.0**	**+0.4**
ITTB	**Itaituba**	**16.20**	**84**	*eP*		**P**	**01 29 45.3**	**+1.1**
ITTB				*eS*		**S**	**01 32 28.8**	**+1.7**
SJCC	**San Jacinto, C**	**16.32**	**348**	*eP*		**P**	**01 29 47.6**	**+2.3**
NPGB	**Novo Progresso**	**16.45**	**94**	*eP*		**P**	**01 29 47.2**	**+0.7**
NPGB				*eS*		**S**	**01 32 32.1**	**+0.8**
PB06	**IPOC Station P**	**16.56**	**172**	P		**P**	**01 29 47.9**	**+0.4**
PB06	**IPOC Station P**	**16.56**	**172**	*i P*		**P**	**01 29 47.4**	**-0.1**
LVC	**Limon Verde**	**16.56**	**170**	P		**P**	**01 29 49.2**	**+1.5**
	comp=Z,20nm,0.3s,baz=356,slow=3.8,SNR=117							
LVC				S		**S**	**01 32 35.2**	**+1.7**
	comp=Z,2.8nm,0.3s,baz=324,slow=4.1,SNR=14							
LVC	**Limon Verde**	**16.56**	**170**	P		**P**	**01 29 48.8**	**+1.0**
LVC	**Limon Verde**	**16.56**	**170**	*i P*		**P**	**01 29 49.2**	**+1.5**
LVC				*i S*		**S**	**01 32 34.6**	**+1.1**
CLDB	**Colider**	**16.58**	**107**	*eP*		**P**	**01 29 48.1**	**+0.4**
CLDB				*eS*		**S**	**01 32 34.1**	**+0.7**
PB05	**IPOC Station P**	**16.63**	**175**	*i P*		**P**	**01 29 48.1**	**0.0**
YJA	**Yavi**	**17.04**	**159**	*eP*		**P**	**01 29 52.7**	**+0.6**
YJA				*eS*		**S**	**01 32 37.0**	**-4.4**
PB15	**IPOC Station P**	**17.07**	**172**	P		**P**	**01 29 52.7**	**+0.6**
PB15	**IPOC Station P**	**17.07**	**172**	*i P*		**P**	**01 29 52.6**	**+0.5**
PB10	**IPOC Station P**	**17.26**	**176**	P		**P**	**01 29 54.2**	**+0.6**
PB10				IAmb		IAmb	01 29 55.1	
	comp=Z,27nm,0.8s							
SMRC	**Santa Marta, M**	**17.41**	**352**	*eP*		**P**	**01 29 55.1**	**0.0**
PCRV	**Puerto La Cruz**	**17.81**	**24**	P		**P**	**01 30 00.3**	**+1.4**
	comp=Z,1.5nm,0.3s,baz=37,slow=2.9,SNR=7.8							
HJA	**Humahuaca**	**18.02**	**160**	*i P*		**P**	**01 30 02.1**	**+1.0**
MALB	**Monte Alegre**	**18.11**	**77**	*eP*		**P**	**01 30 03.1**	**+1.5**
MALB				*eS*		**S**	**01 32 59.2**	**+1.0**
PB14	**IPOC Station P**	**18.37**	**176**	P		**P**	**01 30 05.0**	**+0.9**
PB14	**IPOC Station P**	**18.37**	**176**	*i P*		**P**	**01 30 05.1**	**+0.9**
GO02	**Mina Guanaco**	**18.98**	**174**	P		**P**	**01 30 10.6**	**+0.9**
PAYG	**Puerto Ayora**	**19.15**	**286**	P		**P**	**01 30 12.6**	**+1.5**
SLA	**San Lorenzo**	**19.41**	**162**	*i P*		**P**	**01 30 14.0**	**+0.6**
PP1B	**Ponte de Pedra**	**20.12**	**126**	*eP*		**P**	**01 30 20.7**	**+1.0**
PP1B				*eS*		**S**	**01 33 30.4**	**+0.1**
MCPB	**Macapa, AP**	**20.64**	**74**	*eP*		**P**	**01 30 25.5**	**+1.1**
MCPB				*eS*		**S**	**01 33 39.3**	**+0.7**
GRGR	**Grenville**	**20.87**	**29**	P		**P**	**01 30 27.2**	**+0.7**
JTS	**Las Juntas de**	**20.92**	**321**	P		**P**	**01 30 28.9**	**+1.9**
	comp=Z,86nm,1.1s,baz=231,slow=18,SNR=18							
JTS	**Las Juntas de**	**20.92**	**321**	P		**P**	**01 30 28.9**	**+1.9**
SNDB	**Serra Nova Dou**	**21.13**	**107**	*eP*		**P**	**01 30 30.0**	**+1.1**
SNDB				*eS*		**S**	**01 33 47.5**	**+1.1**
AHML	**Horco Molle**	**21.40**	**164**	*i P*		**P**	**01 30 31.3**	**0.0**
ARAG	**Araguaiana, MT**	**21.84**	**117**	*eP*		**P**	**01 30 35.6**	**+0.4**
ARAG				*eS*		**S**	**01 33 57.9**	**+0.4**
AC04	**Llanos de Chal**	**21.90**	**178**	P		**P**	**01 30 35.5**	**-0.1**
AC04				IAmb		IAmb	01 30 37.7	
	comp=Z,22nm,0.8s							
PRPB	**Parauapebas**	**21.96**	**91**	*eP*		**P**	**01 30 37.0**	**+0.7**
PRPB				*eS*		**S**	**01 33 59.4**	**-0.1**
MDP	**Montagnes des**	**22.27**	**60**	P		**P**	**01 30 39.7**	**+0.7**
	comp=Z,17nm,0.9s,baz=252,slow=7.6,SNR=18							
VCA	**Vinchina**	**22.68**	**172**	*i P*		**P**	**01 30 44.5**	**+1.8**
LCO	**Las Campanas**	**22.71**	**177**	P		**P**	**01 30 43.6**	**+0.5**
CYA	**Choya**	**22.86**	**166**	*i P*		**P**	**01 30 44.5**	**+0.3**
AANI	**Anillaco**	**22.97**	**169**	*i P*		**P**	**01 30 46.2**	**+0.9**
ACLC	**CERRO LA CRUZ**	**23.57**	**169**	*i P*		**P**	**01 30 51.5**	**+0.9**
CO01	**Juntas del Tor**	**23.71**	**176**	IAmb		IAmb	01 30 54.4	
	comp=Z,29nm,0.9s							
AROD	**Rodeo**	**23.95**	**175**	*i P*		**P**	**01 30 56.4**	**+2.2**
TMAB	**Tom-Au,PA,Br**	**24.04**	**82**	*eP*		**P**	**01 30 56.2**	**+1.4**
SMTB	**Santa Maria do**	**24.24**	**98**	*eP*		**P**	**01 30 58.0**	**+1.3**
SMTB				*eS*		**S**	**01 34 36.7**	**+1.3**
CPUP	**Villa Florida**	**24.37**	**147**	P		**P**	**01 30 57.0**	**-0.6**
	comp=Z,18nm,0.8s,baz=325,slow=8.2,SNR=40							
CPUP				*sP*		**sP**	**01 33 32.9**	**-2.0**
	comp=Z,22nm,0.8s,baz=324,slow=9.4,SNR=5.1							
CPUP				ScP		**ScP**	**01 37 00.3**	**0.0**
	comp=Z,16nm,1.1s,baz=300,slow=5.3,SNR=4.9							
CPUP	**Villa Florida**	**24.37**	**147**	P		**P**	**01 30 56.0**	**-1.5**
CPUP				IAmb		IAmb	01 30 57.3	
	comp=Z,19nm,0.8s							
CPUP	**Villa Florida**	**24.37**	**147**	*eP*		**P**	**01 30 57.4**	**-0.2**
ACCO	**Cerro Coronel**	**24.40**	**174**	*i P*		**P**	**01 30 59.5**	**+1.3**
MLPR	**Magueyes Islan**	**24.49**	**11**	P		**P**	**01 30 60.0**	**+1.3**
MLPR				IAmb		IAmb	01 31 07.7	
	comp=Z,31nm,1.0s							
CO03	**El Pedregal**	**24.53**	**177**	P		**P**	**01 31 00.1**	**+1.0**
CO03				PcP		**PcP**	**01 34 17.2**	**+0.5**
APLL	**PUNTA DE LOS L**	**24.59**	**169**	*i P*		**P**	**01 30 59.9**	**+0.4**
OBIP	**Obispado Ponce**	**24.65**	**12**	P		**P**	**01 30 59.7**	**-0.4**
AVFE	**Valle Fertil**	**24.68**	**171**	*i P*		**P**	**01 31 01.1**	**+0.8**
SJG	**San Juan**	**24.82**	**13**	P		**P**	**01 31 00.4**	**-1.1**
	comp=Z,14nm,0.3s,baz=173,slow=7.8,SNR=11							
SJG				S		**S**	**01 34 45.6**	**+1.4**
	comp=Z,9.3nm,0.4s,baz=307,slow=17,SNR=7.1							
TRCB	**Terra Rica**	**24.84**	**134**	*eP*		**P**	**01 31 02.0**	**+0.1**
TRCB				*eS*		**S**	**01 34 42.7**	**-2.0**
ITRB	**Iturama**	**24.87**	**125**	*eP*		**P**	**01 31 03.2**	**+1.1**
ITRB				*eS*		**S**	**01 34 45.1**	**0.0**
AOPR	**Arecibo Observ**	**24.92**	**12**	P		**P**	**01 31 02.6**	**+0.1**
GCPR	**Guaynabo City**	**25.02**	**13**	P		**P**	**01 31 03.5**	**+0.1**
GCPR				IAmb		IAmb	01 31 04.8	
	comp=Z,11nm,0.6s							
PCMB	**Pacaembu**	**25.16**	**130**	*eP*		**P**	**01 31 04.9**	**+0.2**
RTLL	**Cerro Villicun**	**25.20**	**173**	*i P*		**P**	**01 31 05.8**	**+1.0**
CUPR	**Culebra, Puert**	**25.22**	**15**	P		**P**	**01 31 04.2**	**-0.9**
BDFB	**Brasilia**	**25.23**	**114**	P		**P**	**01 31 06.8**	**+1.3**
	comp=Z,39nm,0.8s,baz=274,slow=9.6,SNR=50							
BDFB				*sP*		**sP**	**01 33 44.6**	**+0.2**
	comp=Z,18nm,1.0s,baz=290,slow=16,SNR=3.4							
BDFB	**Brasilia**	**25.23**	**114**	P		**P**	**01 31 06.4**	**+0.9**
TGUH	**Tegucigalpa,Un**	**25.26**	**323**	P		**P**	**01 31 07.1**	**+1.4**
ACHE	**Chepes**	**25.31**	**169**	*i P*		**P**	**01 31 07.0**	**+1.0**
RTLS	**Leoncito**	**25.58**	**175**	*i P*		**P**	**01 31 09.8**	**+1.3**
RTCV	**Cerro Valdivia**	**25.72**	**173**	*i P*		**P**	**01 31 10.5**	**+1.0**
RTCV				*i S*		S	01 33 44.1	-74
IPMB	**Ipameri, GO**	**25.91**	**119**	*eP*		**P**	**01 31 12.2**	**+0.9**
IPMB				*eS*		**S**	**01 35 01.4**	**-0.2**
TCA	**Tanti**	**25.92**	**166**	*i P*		**P**	**01 31 10.9**	**-0.4**
AUSP	**Uspallata**	**25.99**	**175**	*i P*		**P**	**01 31 13.9**	**+1.8**
ASAL	**Salagasta**	**26.41**	**174**	*i P*		**P**	**01 31 17.2**	**+1.6**
PTGB	**Pitanga**	**26.47**	**136**	*eP*		**P**	**01 31 16.2**	**0.0**
VA01	**Torpederas**	**26.69**	**180**	P		**P**	**01 31 18.8**	**+1.0**
MRA	**San Martin**	**26.71**	**168**	*i P*		**P**	**01 31 18.5**	**+0.2**
MTO3	**Montecristo**	**26.82**	**320**	P		**P**	**01 31 20.2**	**+0.7**
AAGR	**Agrelo**	**26.90**	**174**	*eP*		**P**	**01 31 21.1**	**+1.3**
MT02	**Curacav**	**26.93**	**179**	IAmb		IAmb	01 31 23.1	
	comp=Z,27nm,0.8s							
BB19B	**Bebedouro**	**27.03**	**125**	*eP*		**P**	**01 31 21.7**	**+0.5**
SDBA	**SAO DESIDERIO**	**27.33**	**105**	*eP*		**P**	**01 31 25.0**	**+1.1**
SDBA				*eS*		**S**	**01 35 22.4**	**-1.3**
ITQB	**Itaqui**	**27.43**	**150**	*eP*		**P**	**01 31 24.1**	**-0.3**
FRTB	**Fartura**	**27.43**	**131**	*eP*		**P**	**01 31 24.4**	**-0.2**
ROSB	**Rosrio**	**27.88**	**84**	*eP*		**P**	**01 31 29.7**	**+1.1**
ROSB				*eS*		**S**	**01 35 33.5**	**+1.3**
ITAB	**Concordia**	**28.12**	**140**	*eP*		**P**	**01 31 30.1**	**-0.4**
H03S3	**Juan Fernandez**	**28.24**	**192**	P		**P**	**01 31 32.7**	**+1.6**
H03S2	**Juan Fernandez**	**28.26**	**192**	P		**P**	**01 31 32.8**	**+1.6**
H03S1	**Juan Fernandez**	**28.26**	**192**	P		**P**	**01 31 32.7**	**+1.4**
RTAL	**Retalhuleu**	**28.45**	**316**	P		**P**	**01 31 35.3**	**+1.8**
BO02	**Sierra Bellavi**	**28.47**	**178**	P		**P**	**01 31 34.9**	**+1.4**
BO02				PcP		**PcP**	**01 34 26.8**	**+0.7**
JANB	**Januaria**	**28.48**	**110**	*eP*		**P**	**01 31 34.2**	**+0.4**
TU01	**Guaruva-PR**	**29.01**	**133**	*eP*		**P**	**01 31 39.6**	**+1.3**
SPB	**Sao Paulo**	**29.20**	**129**	P		**P**	**01 31 39.4**	**-0.5**
SPB				IAmb		IAmb	01 31 40.3	
	comp=Z,26nm,0.8s							
SPB	**Sao Paulo**	**29.20**	**129**	*eP*		**P**	**01 31 40.0**	**+0.2**
SPB				*epP*		**pP**	**01 33 15.3**	**+1.7**
VAO	**Valinhos**	**29.26**	**127**	*eP*		**P**	**01 31 40.9**	**+0.4**
CPSB	**Cacapava Do Su**	**29.68**	**146**	*eP*		**P**	**01 31 43.1**	**-0.8**
PET01	**Itanhaem-SP**	**29.70**	**130**	*eP*		**P**	**01 31 43.8**	**-0.4**
CCIG	**Comitan**	**30.00**	**318**	P		**P**	**01 31 47.2**	**+0.2**
BSCB	**Bom Sucesso**	**30.11**	**122**	*eP*		**P**	**01 31 48.7**	**+0.8**
BSCB				*epP*		**PP**	**01 33 25.1**	**-2.7**
CNLB	**Canela**	**30.38**	**142**	*eP*		**P**	**01 31 48.9**	**-1.1**
CNLB				*epP*		**pP**	**01 33 23.6**	**-0.9**
PARB	**Paraibuna**	**30.49**	**127**	*eP*		**P**	**01 31 51.1**	**0.0**
PLTB	**Pedras Altas**	**30.65**	**148**	*eP*		**P**	**01 31 51.3**	**-0.9**
PLTB				*epP*		**pP**	**01 33 27.2**	**+0.4**
TEIG	**Tepich**	**30.81**	**329**	P		**P**	**01 31 53.0**	**-0.7**
ESAR	**Angra dos Reis**	**31.29**	**125**	*eP*		**P**	**01 31 58.3**	**+0.5**
ESAR				*epP*		**pP**	**01 33 33.2**	**+0.4**
MAN01	**Angra dos Reis**	**31.61**	**124**	*eP*		**P**	**01 32 01.9**	**+1.3**
MAN01				*epP*		**pP**	**01 33 35.3**	**-0.5**
VAS01	**Vassouras-RJ**	**31.78**	**123**	*eP*		**P**	**01 32 02.3**	**+0.2**
VAS01				*epP*		**PP**	**01 33 40.9**	**-2.3**
NBMO	**Morrinhos-CE**	**31.87**	**86**	*eP*		**P**	**01 32 04.5**	**+1.6**
NBMO				*eS*		**S**	**01 36 33.6**	**-0.1**
SJMB	**Sao Joao De Ma**	**32.39**	**115**	*eP*		**P**	**01 32 07.4**	**+0.1**
SJMB				*epP*		**pP**	**01 33 44.9**	**+1.9**
SJMB				*eS*		**S**	**01 36 40.8**	**-0.7**
CMIG	**Matias Romero**	**32.43**	**316**	P		**P**	**01 32 08.5**	**+1.0**
	comp=Z,20nm,0.3s,baz=124,slow=5.8,SNR=87							
CMIG				ScP		**ScP**	**01 37 26.1**	**+0.1**
	comp=Z,16nm,1.1s,baz=3.1,slow=8.1,SNR=4.5							
LC01	**Cunco**	**32.55**	**180**	P		**P**	**01 32 08.5**	**+0.2**
LC01				PcP		**PcP**	**01 34 37.6**	**+0.7**
DUB01	**Friburgo-RJ**	**32.59**	**122**	*eP*		**P**	**01 32 09.2**	**+0.3**
DUB01				*epP*		**pP**	**01 33 46.0**	**+1.3**
GDU01	**Guandu, BA**	**32.67**	**106**	*eP*		**P**	**01 32 10.2**	**+0.6**
GDU01				*epP*		**pP**	**01 33 47.5**	**+2.0**
GDU01				*eS*		**S**	**01 36 45.7**	**-0.1**
TRQA	**Tornquist**	**32.96**	**166**	*eP*		**P**	**01 32 11.3**	**-0.5**
NAN01	**Guarapari, ES**	**33.09**	**113**	*eP*		**P**	**01 32 14.2**	**+1.0**
NAN01				*epP*		**pP**	**01 33 51.5**	**+2.2**
NAN01				*eS*		**S**	**01 36 52.0**	**-0.1**
RIB01	**Linhares ES**	**33.30**	**116**	*eP*		**P**	**01 32 15.3**	**+0.4**
RIB01				*epP*		**pP**	**01 33 52.9**	**+1.8**
RIB01				*eS*		**S**	**01 36 54.0**	**-1.1**
PLCA	**Paso Flores**	**34.40**	**178**	P		**P**	**01 32 24.6**	**+0.7**
	comp=Z,60nm,0.5s,baz=352,slow=9.2,SNR=302							
PLCA				PcP		**PcP**	**01 34 43.1**	**+0.8**
	comp=Z,19nm,0.9s,baz=341,slow=6.2,SNR=5.2							
PLCA				ScP		**ScP**	**01 37 32.9**	**+0.2**
	comp=Z,17nm,0.9s,baz=333,slow=5.6,SNR=8.5							
PLCA	**Paso Flores**	**34.40**	**178**	P		**P**	**01 32 24.6**	**+0.7**
PLCA				PcP		**PcP**	**01 34 43.0**	**+0.6**
PLCA	**Paso Flores**	**34.40**	**178**	*eP*		**P**	**01 32 24.8**	**+0.9**
PLCA				*epP*		**pP**	**01 34 01.2**	**+0.1**
PLCA				*eS*		**S**	**01 37 11.8**	**+0.5**
NBLI	**Livramento-PB**	**34.72**	**94**	*eP*		**P**	**01 32 28.3**	**+1.4**
NBLI				*epP*		**pP**	**01 34 05.6**	**+1.6**
TLIG	**Tlapa**	**35.38**	**312**	P		**P**	**01 32 34.0**	**+1.7**
RCBR	**Riachuelo**	**35.80**	**91**	P		**P**	**01 32 35.7**	**-0.1**
	comp=Z,15nm,0.8s,baz=270,slow=16,SNR=3.6							
RCBR	**Riachuelo**	**35.80**	**91**	P		**P**	**01 32 35.0**	**-0.9**
RCBR				IAmb		IAmb	01 32 38.2	
	comp=Z,36nm,1.1s							
MOIG	**Morelia**	**38.63**	**312**	P		**P**	**01 33 00.9**	**+1.9**
TIGA	**Tifton**	**39.06**	**344**	P		**P**	**01 33 02.9**	**+0.9**
	baz=162							
158A	**Hollywood**	**39.52**	**349**	P		**P**	**01 33 06.2**	**+0.5**
	baz=167							
NHSC	**New Hope**	**39.88**	**349**	P		**P**	**01 33 08.8**	**+0.3**
	baz=167							
Z58A	**St. Stephen**	**40.03**	**350**	P		**P**	**01 33 09.6**	**-0.1**
	baz=168							
Z57A	**Bowman**	**40.16**	**349**	P		**P**	**01 33 10.5**	**-0.3**
	baz=166							
Z56A	**Williston**	**40.33**	**348**	P		**P**	**01 33 12.4**	**+0.3**
	baz=166							
Y60A	**Bolivia**	**40.43**	**352**	P		**P**	**01 33 12.6**	**-0.3**
	baz=170							
152A	**Waverly Hall**	**40.54**	**343**	IAmb		IAmb	01 33 13.6	
	comp=Z,14nm,0.6s							
Y58A	**Scranton**	**40.56**	**350**	P		**P**	**01 33 14.1**	**+0.1**
	baz=168							
Y57A	**Sumter**	**40.80**	**349**	P		**P**	**01 33 15.7**	**-0.1**
	baz=167							
GOGA	**Godfrey**	**40.90**	**345**	P		**P**	**01 33 16.1**	**-0.5**
	baz=162							
X60A	**Albert Glenn T**	**40.97**	**352**	P		**P**	**01 33 16.8**	**-0.3**
	baz=171							
Y55A	**Saluda**	**41.02**	**347**	P		**P**

T50A PcP **PcP** **01 35 16.2 +0.5**
WVT **Waverly** **44.69 342** P **P** **01 33 43.9 -2.1**
baz=157
WVT **Waverly** **44.69 342** P **P** **01 33 44.0 -2.1**
WVT IAmb IAmb 01 33 44.7
comp=Z,6.8nm,0.6s
S53A **Williamson** **44.69 348** P **P** **01 33 46.2 0.0**
baz=166
R57A **Stanardsville** **44.70 353** P **P** **01 33 46.6 +0.5**
baz=171
GO09 **Cerro Castillo** **44.92 180** P **P** **01 33 49.4 +1.7**
S51A **Beattyville** **44.96 347** IAmb IAmb 01 33 48.4
comp=Z,12nm,0.7s
R54A **Victor** **44.96 350** P **P** **01 33 48.2 0.0**
baz=167
X40A **Basin Creek Fa** **45.05 335** P **P** **01 33 47.3 -1.6**
baz=150
WHTX **Lake Whitney,** **45.13 329** P **P** **01 33 49.6 +0.1**
baz=143,SNR=13
WHTX **Lake Whitney,** **45.13 329** IAmb IAmb 01 33 50.2
comp=Z,27nm,0.7s
JCT **Junction City** **45.22 325** P **P** **01 33 50.0 -0.3**
baz=139,SNR=8.8
JCT **Junction City** **45.22 325** IAmb IAmb 01 33 52.6
comp=Z,14nm,0.7s
Q58A **Fox Den Farm,** **45.23 354** P **P** **01 33 50.5 +0.2**
baz=172
T47A **Sharon Grove** **45.26 343** IAmb IAmb 01 33 49.7
comp=Z,11nm,0.6s
R53A **Hurricane** **45.28 349** P **P** **01 33 50.2 -0.4**
baz=166
W41B **Gary Mavity, V** **45.40 336** P **P** **01 33 49.7 -1.9**
baz=151
MIAR **Mount Ida** **45.41 335** P **P** **01 33 50.0 -1.6**
baz=149
MIAR **Mount Ida** **45.41 335** P **P** **01 33 50.2 -1.4**
MIAR PcP **PcP** **01 35 18.9 +0.6**
Q57A **Strasburg** **45.41 353** P **P** **01 33 51.9 +0.3**
baz=171
Q56A **Snyder Ridge,** **45.52 352** P **P** **01 33 53.1 +0.7**
baz=170
WHAR **Wooly Hollow** **45.52 336** IAmb IAmb 01 33 52.6
comp=Z,13nm,1.0s
Q55A **Buckhannon** **45.61 351** P **P** **01 33 53.6 +0.5**
baz=169
Q53A **Leroy** **45.72 349** P **P** **01 33 53.9 0.0**
baz=167,SNR=7.6
Q54A **Coxs Mills** **45.72 350** P **P** **01 33 53.8 -0.1**
baz=168
Q54A **Coxs Mills** **45.72 350** P **P** **01 33 54.2 +0.3**
Q54A IAmb IAmb 01 33 54.7
comp=Z,12nm,0.5s
R50A **Paris** **45.74 346** P **P** **01 33 53.2 -0.9**
LCAR **Lake Charles** **45.77 338** P **P** **01 33 52.4 -1.9**
P59A **Jarrettsville** **45.78 355** P **P** **01 33 54.6 +0.3**
baz=174
P57A **Homestead Farm** **45.81 353** P **P** **01 33 55.5 +0.9**
baz=172
P56A **Dayton Farm, R** **45.93 353** P **P** **01 33 56.1 +0.6**
baz=170
Q52A **Bidwell** **45.95 349** P **P** **01 33 55.6 -0.1**
baz=166
FCAR **Ozark Folk Cen** **45.98 337** IAmb IAmb 01 33 54.3
comp=Z,6.9nm,0.6s
W39A **Magazine** **46.05 335** P **P** **01 33 55.4 -1.1**
baz=149,SNR=6.8
W39A **Magazine** **46.05 335** IAmb IAmb 01 33 57.5
comp=Z,15nm,1.0s
PBMO **Poplar Bluff** **46.14 339** IAmb IAmb 01 33 55.7
comp=Z,12nm,0.5s
WCI **Wyandotte Cave** **46.19 344** P **P** **01 33 56.2 -1.3**
baz=160
WCI **Wyandotte Cave** **46.19 344** P **P** **01 33 56.7 -0.8**
WCI IAmb IAmb 01 33 57.0
comp=Z,14nm,0.5s
X37A **Clayton** **46.23 333** IAmb IAmb 01 33 57.9
comp=Z,11nm,0.7s
USIN **University of** **46.33 343** P **P** **01 33 57.0 -1.5**
USIN IAmb IAmb 01 33 57.7
comp=Z,25nm,0.6s
HPIG **46.41 317** IAmb IAmb 01 34 02.5
comp=Z,14nm,0.9s
O57A **Amberson** **46.48 354** P **P** **01 34 00.1 +0.4**
baz=172
S44A **Carbondale** **46.57 341** IAmb IAmb 01 33 59.5
comp=Z,14nm,0.6s
P52A **Corning** **46.58 349** P **P** **01 33 60.0 -0.4**
baz=166
SIUC **Southern Illin** **46.58 341** IAmb IAmb 01 34 00.1
comp=Z,16nm,0.6s
T42A **Van Buren** **46.60 339** IAmb IAmb 01 34 00.3
comp=Z,9.7nm,0.8s
U40A **Yellville** **46.67 337** P **P** **01 33 59.8 -1.4**
baz=151,SNR=17
U40A **Yellville** **46.67 337** IAmb IAmb 01 34 00.8
comp=Z,23nm,0.8s
TXAR **Lajitas Array** **46.70 321** P **P** **01 34 01.8 +0.2**
comp=Z,6.0nm,0.5s,baz=140,slow=8.1,SNR=120
TXAR PcP **PcP** **01 35 24.0 +0.8**
comp=Z,1.3nm,0.3s,baz=144,slow=4.9,SNR=6.4
TXAR ScP **ScP** **01 38 21.8 +0.2**
comp=Z,4.7nm,1.0s,baz=152,slow=5.9,SNR=5.8
TXAR **Lajitas Array** **46.70 321** P **P** **01 34 02.0 +0.3**
TXAR PcP **PcP** **01 35 24.2 +1.0**
TX31 **Lajitas Ar. Si** **46.71 321** IAmb IAmb 01 34 03.9
comp=Z,19nm,0.7s
EFI **East Falkland** **46.76 168** P **P** **01 34 02.1 +0.6**
ABTX **Abilene, Hawle** **46.77 327** P **P** **01 34 01.9 -0.1**
baz=141,SNR=17
ABTX **Abilene, Hawle** **46.77 327** IAmb IAmb 01 34 02.7
comp=Z,33nm,0.8s
O52A **Adamsville** **46.99 350** P **P** **01 34 03.4 -0.1**
baz=167
O53A **New Philadelph** **47.01 350** P **P** **01 34 03.2 -0.4**
baz=167
O53A **New Philadelph** **47.01 350** P **P** **01 34 03.4 -0.2**
O53A IAmb IAmb 01 34 04.2
comp=Z,16nm,0.8s
PAL **Palisades** **47.01 358** P **P** **01 34 03.3 -0.3**
baz=177
N57A **Milroy** **47.02 354** P **P** **01 34 03.6 -0.1**
baz=172
N58A **Sunbury** **47.02 355** P **P** **01 34 04.0 +0.3**
baz=174
HHAR **Hobbs** **47.05 336** P **P** **01 34 02.4 -1.6**
HHAR PcP **PcP** **01 35 23.9 -0.3**
ODNJ **Ogdensburg** **47.12 357** P **P** **01 34 03.8 -0.6**
BLO **Bloomington** **47.14 344** IAmb IAmb 01 34 04.2
comp=Z,21nm,0.6s
MGMO **Mountain Grove** **47.15 338** IAmb IAmb 01 34 05.0
comp=Z,15nm,1.1s
FVM **French Village** **47.23 340** IAmb IAmb 01 34 05.2
comp=Z,24nm,0.7s
N56A **West Decatur** **47.26 353** P **P** **01 34 05.6 +0.1**
baz=171
M60A **Port Jervis** **47.36 357** P **P** **01 34 06.0 -0.3**
baz=176
N53A **Lisbon** **47.49 351** P **P** **01 34 07.5 +0.2**
N54A **Moraine State** **47.52 352** P **P** **01 34 07.6 +0.2**
baz=169
TUL1 **Leonard** **47.53 334** P **P** **01 34 06.4 -1.1**
baz=147,SNR=9.0
TUL1 **Leonard** **47.53 334** IAmb IAmb 01 34 07.1
comp=Z,17nm,0.7s
M58A **Price's Panora** **47.53 355** P **P** **01 34 07.7 +0.1**
baz=174
M57A **Sunshine Farm,** **47.55 355** P **P** **01 34 07.7 +0.1**
baz=173
SLBS **Sierra La Lagu** **47.55 310** P **P** **01 34 09.2 +1.1**
CCM **Cathedral Cave** **47.57 339** P **P** **01 34 06.3 -1.6**
baz=154
CCM **Cathedral Cave** **47.57 339** P **P** **01 34 06.4 -1.4**
CCM IAmb IAmb 01 34 07.5
comp=Z,13nm,0.8s
CCM PcP **PcP** **01 35 26.1 +0.1**
M59A **Waymart** **47.62 356** P **P** **01 34 08.4 +0.2**
baz=175
M56A **Emporium** **47.80 354** P **P** **01 34 09.7 +0.1**
baz=172
M56A **Emporium** **47.80 354** P **P** **01 34 09.7 +0.1**
M56A IAmb IAmb 01 34 10.5
comp=Z,17nm,0.6s
OK025 **Westminster Rd** **47.96 332** IAmb IAmb 01 34 13.2
comp=Z,10nm,0.6s
WMOK **Wichita Mounta** **47.98 330** P **P** **01 34 10.1 -0.9**
baz=143,SNR=13
WMOK **Wichita Mounta** **47.98 330** IAmb IAmb 01 34 10.8
comp=Z,9.4nm,0.8s
OK030 **Cody Creek RV** **47.99 333** IAmb IAmb 01 34 12.0
comp=Z,28nm,0.8s
L60A **Shokan** **48.01 358** P **P** **01 34 10.5 -0.5**
baz=177
M54A **Oil Creek Stat** **48.01 352** P **P** **01 34 11.4 +0.3**
baz=170
M54A **Oil Creek Stat** **48.01 352** P **P** **01 34 11.3 +0.3**
M54A IAmb IAmb 01 34 13.2
comp=Z,22nm,1.1s
S39A **Bolivar** **48.02 337** P **P** **01 34 09.3 -1.9**
S39A IAmb IAmb 01 34 10.4
comp=Z,12nm,0.7s
S39A PcP **PcP** **01 35 27.7 +0.1**
OK031 **S. Brethren Rd** **48.03 333** IAmb IAmb 01 34 12.4
comp=Z,29nm,0.8s
M53A **WI Miller and** **48.09 351** P **P** **01 34 11.8 +0.2**
baz=168
BCOK **Bluff Creek, N** **48.15 332** P **P** **01 34 11.4 -0.8**
R40A **Maddies Statio** **48.15 338** IAmb IAmb 01 34 11.1
comp=Z,8.5nm,0.7s
L58A **Harry Jones Me** **48.15 356** P **P** **01 34 12.2 +0.1**
baz=175
L57A **Andrews Acres** **48.19 355** P **P** **01 34 12.5 +0.2**
baz=174
L61A **Hillsdale 1, H** **48.19 358** P **P** **01 34 13.1 +0.8**
baz=178
M51A **Elyria** **48.23 350** P **P** **01 34 12.0 -0.7**
baz=166
L59A **Walton** **48.25 357** P **P** **01 34 12.5 -0.3**
baz=176
BINY **Binghamton** **48.31 356** P **P** **01 34 13.8 +0.5**
baz=175
L56A **Greenwood** **48.38 354** P **P** **01 34 14.3 +0.4**
baz=173
L56A **Greenwood** **48.38 354** P **P** **01 34 13.9 +0.1**
L56A IAmb IAmb 01 34 14.7
comp=Z,10nm,0.5s
L56A PcP **PcP** **01 35 28.9 0.0**
L61B **Northampton** **48.43 359** P **P** **01 34 13.5 -0.6**
baz=179
HRV **Adam Dziewonsk** **48.48 0** P **P** **01 34 14.0 -0.5**
baz=180
HRV **Adam Dziewonsk** **48.48 0** P **P** **01 34 15.4 +0.9**
HRV IAmb IAmb 01 34 23.0
comp=Z,16nm,1.1s
L53A **Girard** **48.53 352** P **P** **01 34 14.9 0.0**
baz=169
USHA **Ushuaia** **48.57 177** P **P** **01 34 16.5 +1.6**
comp=Z,70nm,0.8s,baz=16,slow=3.5,SNR=8.3
ERPA **Erie** **48.65 352** P **P** **01 34 15.3 -0.5**
baz=169
K61A **Williamstown** **48.66 359** P **P** **01 34 15.9 +0.1**
baz=178
K63A **Dunstable** **48.66 0** P **P** **01 34 16.0 +0.2**
baz=180
T35A **Soner Cattle** **48.68 334** IAmb IAmb 01 34 16.5
comp=Z,13nm,0.7s
K59A **Cooperstown** **48.82 357** P **P** **01 34 16.8 -0.3**
baz=176
K58A **Earlville** **48.85 356** P **P** **01 34 17.3 -0.1**
baz=175
K58A **Earlville** **48.85 356** IAmb IAmb 01 34 17.6
comp=Z,33nm,1.1s
K57A **Scipio Center** **48.88 355** P **P** **01 34 17.1 -0.4**
baz=174
GDL2 **Guadalupe Moun** **49.14 323** P **P** **01 34 20.9 +1.1**
P40A **Paris** **49.17 339** IAmb IAmb 01 34 18.4
comp=Z,12nm,0.8s
HDIL **Hopedale** **49.20 342** P **P** **01 34 18.6 -1.3**
HDIL IAmb IAmb 01 34 18.7
comp=Z,15nm,0.5s
J60A **Lant Hill Farm** **49.23 359** P **P** **01 34 20.2 +0.1**
baz=178
MNTX **Cornudas Mount** **49.41 322** P **P** **01 34 20.8 -0.8**
baz=134,SNR=30
MNTX **Cornudas Mount** **49.41 322** P **P** **01 34 21.7 +0.1**
MNTX IAmb IAmb 01 34 21.8
comp=Z,24nm,1.1s
MNTX PcP **PcP** **01 35 33.2 +0.3**
J59A **Piesco** **49.49 358** P **P** **01 34 21.9 0.0**
baz=177
MSTX **Muleshoe** **49.50 326** P **P** **01 34 21.9 -0.4**
baz=138,SNR=7.5
MSTX **Muleshoe** **49.50 326** IAmb IAmb 01 34 23.8
comp=Z,26nm,0.9s
J57A **Williamstown** **49.52 356** P **P** **01 34 21.8 -0.3**
baz=175
AMTX **Amarillo** **49.59 328** P **P** **01 34 22.2 -0.8**
baz=140
AMTX **Amarillo** **49.59 328** IAmb IAmb 01 34 23.1
comp=Z,24nm,0.7s
I58A **Old Forge** **49.74 357** P **P** **01 34 23.6 -0.2**
baz=176
P38A **Dawn** **49.79 338** IAmb IAmb 01 34 23.9
comp=Z,13nm,0.6s
I59A **Olmsteadville** **49.80 358** P **P** **01 34 23.7 -0.5**
baz=178
LBNH **Lisbon** **50.21 360** P **P** **01 34 27.6 +0.4**
baz=180
LBNH **Lisbon** **50.21 360** P **P** **01 34 27.4 +0.2**
H58A **Gabriels** **50.43 358** P **P** **01 34 28.6 -0.3**
baz=177,SNR=7.3
I51A **Listowel** **50.45 351** P **P** **01 34 28.8 -0.2**
baz=168
H61A **Lyndonville** **50.50 360** P **P** **01 34 29.4 +0.1**
baz=180
H57A **Richville** **50.53 357** P **P** **01 34 29.4 -0.1**
baz=176
H62A **Milan** **50.55 1** P **P** **01 34 29.9 +0.2**
baz=181
KSU1 **Kansas State U** **50.55 335** P **P** **01 34 28.8 -1.0**
baz=148,SNR=5.2
KSU1 **Kansas State U** **50.55 335** IAmb IAmb 01 34 29.2
comp=Z,20nm,0.6s
H59A **Cadyville** **50.64 358** P **P** **01 34 30.3 0.0**
baz=178
L42A **Oliver, Polo** **50.65 343** P **P** **01 34 29.0 -1.4**
H63A **New Sharon** **50.66 2** P **P** **01 34 30.7 +0.2**
baz=182
N38A **Joes South For** **50.71 339** IAmb IAmb 01 34 29.7
comp=Z,13nm,0.6s
H53A **Bocaygeon** **50.90 354** P **P** **01 34 31.5 -0.7**
baz=172
R32A **Long Quarter,** **50.91 333** IAmb IAmb 01 34 32.4
comp=Z,13nm,0.7s
G60A **Masonville** **51.07 360** P **P** **01 34 33.6 +0.2**
baz=180
SADO **Sadowa** **51.16 353** P **P** **01 34 33.4 -0.6**
comp=Z,5.6nm,0.4s,baz=184,slow=8.4,SNR=8.9
SADO pP **pP** **01 36 20.9 -1.6**
comp=Z,11nm,0.9s,baz=185,slow=7.3,SNR=2.9
SADO **Sadowa** **51.16 353** IAmb IAmb 01 34 34.4
comp=Z,18nm,0.9s
G62A **West of Eustis** **51.20 1** P **P** **01 34 34.9 +0.6**
baz=182
G62A **West of Eustis** **51.20 1** P **P** **01 34 34.3 -0.1**
G62A IAmb IAmb 01 34 36.5
comp=Z,20nm,1.0s
G61A **St-Isidore-de-** **51.25 0** P **P** **01 34 35.3 +0.6**
baz=180
PKME **Peaks-Kenny Pk** **51.29 2** P **P** **01 34 35.2 +0.2**
baz=183
G65A **Princeton** **51.32 4** P **P** **01 34 35.6 +0.5**
baz=186
G65A **Princeton** **51.32 4** P **P** **01 34 35.6 +0.5**
G65A IAmb IAmb 01 34 36.5
comp=Z,22nm,0.8s
121A **Cookes Peak, D** **51.47 321** P **P** **01 34 37.2 +0.5**
baz=132,SNR=17
121A **Cookes Peak, D** **51.47 321** IAmb IAmb 01 34 38.1
comp=Z,21nm,0.8s
SCIA **State Center** **51.69 340** P **P** **01 34 36.2 -1.7**
baz=153
SCIA **State Center** **51.69 340** IAmb IAmb 01 34 36.8
comp=Z,24nm,0.8s
CBKS **Cedar Bluff** **51.70 332** P **P** **01 34 37.9 -0.2**
baz=144,SNR=6.8
CBKS **Cedar Bluff** **51.70 332** P **P** **01 34 37.6 -0.5**
CBKS IAmb IAmb 01 34 39.2
comp=Z,22nm,0.7s
F64A **Sherman** **51.93 3** P **P** **01 34 39.6 0.0**
baz=184
F60A **Warwick** **51.94 360** P **P** **01 34 39.3 -0.3**
baz=180
I42A **Draeger Farm,** **52.18 344** P **P** **01 34 39.8 -1.6**
LMN **Caledonia Moun** **52.21 6** P **P** **01 34 41.7 +0.1**
LMN IAmb IAmb 01 34 42.0
comp=Z,44nm,1.1s
LMN PcP **PcP** **01 35 42.4 -0.7**
ALGO **Algonquin Park** **52.22 355** P **P** **01 34 41.2 -0.4**
baz=172
N33A **J Bar K, Exete** **52.28 336** P **P** **01 34 41.4 -0.9**
ANMO **Albuquerque** **52.31 324** P **P** **01 34 42.6 -0.1**
comp=Z,5.8nm,0.5s,baz=132,slow=8.8,SNR=23
ANMO pP **pP** **01 36 30.8 -1.2**
comp=Z,8.9nm,1.0s,baz=145,slow=9.2,SNR=6.9
ANMO ScP **ScP** **01 38 45.2 -0.5**
comp=Z,6.7nm,1.1s,baz=150,slow=4.2,SNR=5.3
ANMO **Albuquerque** **52.31 324** P **P** **01 34 42.7 -0.1**
baz=135
ANMO **Albuquerque** **52.31 324** P **P** **01 34 43.2 +0.4**
E58A **La Victoria** **52.36 359** P **P** **01 34 42.7 +0.1**
baz=178
E61A **Lac Etchemin** **52.42 1** P **P** **01 34 43.2 +0.1**
baz=182
E56A **St. Veronique** **52.59 357** P **P** **01 34 43.9 -0.4**
baz=176
T25A **Trinidad** **52.74 327** P **P** **01 34 46.0 +0.2**
baz=138,SNR=20
T25A **Trinidad** **52.74 327** IAmb IAmb 01 34 48.2
comp=Z,26nm,0.9s
D60A **Saint Jean D'O** **52.89 1** P **P** **01 34 47.6 +1.2**
baz=181
L34A **Svendsen Farm,** **52.89 337** IAmb IAmb 01 34 46.9
comp=Z,28nm,0.6s
D58A **Chemin du LacG** **53.07 359** P **P** **01 34 47.4 -0.3**
baz=179
D55A **Sainte-Anne-du** **53.09 357** P **P** **01 34 47.2 -0.6**
baz=176
D63A **Stockholm** **53.12 3** P **P** **01 34 47.8 -0.2**
baz=185
BGNE **Belgrade** **53.13 335** P **P** **01 34 47.5 -0.8**
baz=147
BGNE **Belgrade** **53.13 335** IAmb IAmb 01 34 48.1
comp=Z,45nm,0.9s
KSCO **Kaye Shedlock'** **53.23 330** P **P** **01 34 49.8 +0.6**
baz=141,SNR=6.8
KSCO **Kaye Shedlock'** **53.23 330** IAmb IAmb 01 34 51.3
comp=Z,31nm,0.8s
TUC **Tucson** **53.26 318** P **P** **01 34 49.3 -0.1**
baz=129
TUC **Tucson** **53.26 318** P **P** **01 34 49.6 +0.2**
TUC IAmb IAmb 01 34 50.9
comp=Z,30nm,1.1s
LATQ **La Tuque** **53.36 359** P **P** **01 34 49.6 -0.1**
baz=179
BATG **Bathurst New B** **53.50 5** P **P** **01 34 51.1 +0.3**
BATG IAmb IAmb 01 34 57.4
comp=Z,19nm,1.1s
I37A **Lemond, Waseca** **53.62 341** IAmb IAmb 01 34 51.0
comp=Z,14nm,0.8s
SDCO **Great Sand Dun** **53.77 327** P **P** **01 34 53.5 +0.2**
baz=137,SNR=13
VLDQ **Val d'Or** **54.30 355** P **P** **01 34 56.0 -0.3**
W18A **Petrified Fore** **54.39 322** P **P** **01 34 57.9 +0.4**
baz=132
214A **Organ Pipe Nat** **54.40 317** P **P** **01 34 57.4 0.0**
baz=127,SNR=10
214A **Organ Pipe Nat** **54.40 317** IAmb IAmb 01 34 58.5
comp=Z,17nm,0.8s
Q24A **Divide** **54.48 328** P **P** **01 34 58.6 +0.4**
baz=138,SNR=6.9
ECSD **EROS Data Cent** **54.50 338** P **P** **01 34 56.2 -1.6**
ECSD PcP **PcP** **01 35 52.1 +0.1**
S22A **4UR Ranch, Cre** **54.50 326** P **P** **01 34 58.7 +0.3**
baz=136,SNR=21
S22A **4UR Ranch, Cre** **54.50 326** IAmb IAmb 01 34 59.5
comp=Z,17nm,1.1s
X16A **Lo Mia Camp, P** **55.01 320** IAmb IAmb 01 35 04.5
comp=Z,19nm,0.9s
MVCO **Mesa Verde** **55.07 325** P **P** **01 35 02.5 +0.2**
baz=134,SNR=29
MVCO **Mesa Verde** **55.07 325** P **P** **01 35 02.8 +0.5**
MVCO IAmb IAmb 01 35 03.2
comp=Z,28nm,0.8s
LSQQ **Lebel-sur-Quev** **55.21 356** P **P** **01 35 02.3 -0.4**
baz=174
WUAZ **Wupatki** **55.67 321** P **P** **01 35 06.9 +0.6**
baz=130,SNR=35
WUAZ **Wupatki** **55.67 321** IAmb IAmb 01 35 08.9
comp=Z,51nm,1.1s
SPX **San Pedro Mart** **55.72 314** P **P** **01 35 07.3 +0.3**
Y14A **Wickenburg** **55.73 319** IAmb IAmb 01 35 09.1
comp=Z,19nm,0.8s
PV01 **Paradox Valley** **55.75 325** IAmb IAmb 01 35 08.2
comp=Z,19nm,0.8s
HOPE **Hope Point** **55.80 156** P **P** **01 35 07.5 +0.8**
PV15 **Paradox Valley** **55.84 326** IAmb IAmb 01 35 08.9
comp=Z,26nm,0.8s
PV02 **Paradox Valley** **55.89 325** IAmb IAmb 01 35 10.3
comp=Z,24nm,0.9s
PV13 **Hadium Mtn., P** **55.91 325** IAmb IAmb 01 35 10.3
comp=Z,36nm,0.8s
CHGQ **Chibougamau** **55.92 358** P **P** **01 35 07.2 -0.4**
baz=177
MATQ **Matagami** **55.95 356** P **P** **01 35 07.0 -0.8**
baz=173
PV03 **Paradox Valley** **55.99 325** P **P** **01 35 08.9 +0.4**
PV03 IAmb IAmb 01 35 10.1
comp=Z,19nm,0.9s
PV07 **Paradox Valley** **56.00 325** IAmb IAmb 01 35 09.7
comp=Z,11nm,0.6s
PV12 **Saucer Basin,** **56.01 325** IAmb IAmb 01 35 10.5
comp=Z,25nm,0.9s
PV18 **Skein Mesa, Pa** **56.02 325** P **P** **01 35 09.1 +0.4**
PV18 IAmb IAmb 01 35 10.3
comp=Z,18nm,0.7s
PV11 **David Mesa, Pa** **56.03 325** IAmb IAmb 01 35 10.5
comp=Z,19nm,0.7s
PV17 **East Wray Mesa** **56.07 325** IAmb IAmb 01 35 10.7
comp=Z,17nm,0.8s
PV19 **Morning Glory** **56.10 325** IAmb IAmb 01 35 10.8
comp=Z,21nm,1.2s
PV22 **Blue Mesa, Par** **56.15 325** IAmb IAmb 01 35 10.6
comp=Z,18nm,0.7s
N23A **Red Feather La** **56.32 329** P **P** **01 35 10.9 0.0**
baz=138
CPBX **Cerro Prieto** **56.38 316** IAmb IAmb 01 35 13.9
comp=Z,56nm,1.2s
GLA **Glamis** **56.42 317** P **P** **01 35 11.3 -0.1**
baz=126,SNR=6.3
ESJX **Sierra Juarez** **56.60 315** P **P** **01 35 12.5 -0.3**
EYMN **Ely** **56.62 344** P **P** **01 35 11.3 -1.1**
baz=157
DRLN **Deer Lake** **56.64 11** P **P** **01 35 12.4 -0.1**
DRLN IAmb IAmb 01 35 12.6
comp=Z,71nm,1.1s
PDMCI **Parker Dam,Lak** **56.70 318** P **P** **01 35 13.7 +0.5**
baz=127
O20A **White River Ci** **56.97 327** P **P** **01 35 15.6 +0.4**
baz=136,SNR=10
RMX **La Rumorosa** **57.02 315** IAmb IAmb 01 35 17.9
comp=Z,34nm,1.2s
SWSC **Sam W. Stewart** **57.03 316** P **P** **01 35 15.8 +0.3**
baz=125,SNR=6.9
IKP **In-Ko-Pah, Jac** **57.07 316** P **P** **01 35 16.5 +0.6**
baz=124,SNR=11
BC3 **Big Chuckawall** **57.20 317** P **P** **01 35 17.2 +0.4**
baz=126,SNR=13
IRM **Iron Mountain** **57.28 318** P **P** **01 35 17.7 +0.5**
baz=126,SNR=14
MONP2 **Monument Peak** **57.43 316** P **P** **01 35 18.7 +0.2**
baz=124,SNR=10
SRU **San Rafael Swe** **57.53 325** P **P** **01 35 19.6 +0.5**
BELC **Belle Mtn. Jos** **57.76 317** P **P** **01 35 21.0 +0.4**
baz=125,SNR=13
TPFO **Pinon Flats** **57.85 316** P **P** **01 35 21.6 +0.4**
baz=125,SNR=7.8
PFO **Pinyon Flats O** **57.86 316** P **P** **01 35 21.9 +0.6**
comp=Z,4.5nm,0.9s,baz=125,slow=6.4,SNR=8.8
PFO sP **sP** **01 38 15.8 -0.5**
comp=Z,6.0nm,1.0s,baz=113,slow=4.6,SNR=4.7
PFO **Pinyon Flats O** **57.86 316** P **P** **01 35 21.8 +0.5**
baz=125,SNR=8.1
PFO **Pinyon Flats O** **57.86 316** P **P** **01 35 21.3 0.0**
RSSD **Black Hills** **57.87 333** P **P** **01 35 22.0 +0.8**
baz=142
RSSD **Black Hills** **57.87 333** P **P** **01 35 22.2 +0.9**
RSSD IAmb IAmb 01 35 23.0
comp=Z,12nm,0.6s
109C **Camp Elliot, M** **57.90 315** P **P** **01 35 21.9 +0.5**
baz=124

K22A Casper 57.92 330 P P 01 35 21.8 +0.2
baz=138,SNR=6.5
GMRC Granite Mounta 57.99 318 P P 01 35 22.6 +0.4
baz=126,SNR=19
MSU Marysvale 58.10 323 P P 01 35 24.1 +1.1
AGMN Agassiz Nation 58.21 341 P P 01 35 22.3 -0.9
baz=152
MURC Murrieta 58.36 316 P P 01 35 24.8 +0.2
baz=124
E28A Huff 58.44 337 IAmb IAmb 01 35 25.7
comp=Z,43nm,0.6s
HEC Hector,Ludlow 58.47 317 P P 01 35 25.9 +0.6
baz=125,SNR=10.0
BBRC Big Bear Solar 58.54 317 P P 01 35 26.7 +0.7
baz=125
TUQ Turquoise Moun 58.55 318 P P 01 35 26.3 +0.4
baz=126,SNR=18
SHPR Sheep Range 58.68 320 P P 01 35 27.8 +1.0
SHPR PcP PcP 01 36 10.3 +1.4
PMSA Palmer Station 58.73 176 P P 01 35 27.5 +1.2
comp=Z,64nm,0.8s,baz=359,slow=4.6,SNR=21
PMSA Palmer Station 58.73 176 P P 01 35 27.8 +1.4
PMSA Palmer Station 58.73 176 eP P 01 35 27.3 +0.9
SCI2 San Clemente I 58.97 314 P P 01 35 28.8 +0.2
baz=123
BFSC Mount Baldy Ra 59.03 316 P P 01 35 29.5 +0.4
baz=124,SNR=8.5
SHOC Shoshone, Teco 59.05 319 P P 01 35 30.3 +1.2
baz=126
GSC Goldstone, Bar 59.05 318 P P 01 35 29.8 +0.6
baz=125,SNR=20
GSC Goldstone, Bar 59.05 318 P P 01 35 30.3 +1.0
MDND Maddock 59.10 339 P P 01 35 29.4 +0.3
baz=148
MDND Maddock 59.10 339 IAmb IAmb 01 35 29.8
comp=Z,25nm,0.8s
CIS Catalina Islan 59.10 315 P P 01 35 30.1 +0.6
baz=123
MWC Mount Wilson 59.30 316 IAmb IAmb 01 35 32.8
comp=Z,32nm,1.1s
PASC Pasadena Art C 59.36 316 IAmb IAmb 01 35 33.1
comp=Z,22nm,0.9s
DECC Green Verdugo 59.51 316 P P 01 35 33.3 +1.1
baz=124
BW06 Boulder Array 59.54 329 P P 01 35 32.2 -0.3
baz=135,SNR=13
PDAR Pinedale Array 59.54 329 P P 01 35 32.1 -0.3
comp=Z,7.0nm,0.5s,baz=123,slow=9.3,SNR=105
PDAR PcP PcP 01 36 12.2 -0.1
comp=Z,6.3nm,1.1s,baz=145,slow=5.4,SNR=7.2
PDAR pP pP 01 37 26.2 +0.2
comp=Z,0.8nm,0.6s,baz=122,slow=8.6,SNR=1.9
PDAR ScP ScP 01 39 16.6 -0.8
comp=Z,2.6nm,1.0s,baz=123,slow=5.5,SNR=3.9
PDAR S S 01 42 58.4 0.0
comp=Z,0.8nm,1.1s,baz=120,slow=16,SNR=1.8
PDAR PKP2bc 02 05 02.5
comp=Z,0.4nm,0.7s,baz=344,slow=2.3,SNR=4.2
PDAR Pinedale Array 59.54 329 P P 01 35 32.6 +0.1
DUG Dugway, Tooele 59.57 324 P P 01 35 33.3 +0.6
baz=131,SNR=23
DUG Dugway, Tooele 59.57 324 IAmb IAmb 01 35 35.4
comp=Z,28nm,1.0s
EDW2 Edwards Air Fo 59.62 317 P P 01 35 33.5 +0.5
baz=124,SNR=16
TPNV Topopah Spring 59.65 320 P P 01 35 34.4 +1.1
baz=126,SNR=29
TPNV Topopah Spring 59.65 320 IAmb IAmb 01 35 36.2
comp=Z,25nm,1.1s
LRMC Laurel Mtn Rad 59.74 317 P P 01 35 34.5 +0.6
baz=125,SNR=21
FURC Furnace Creek, 59.77 319 P P 01 35 34.6 +0.8
baz=126,SNR=9.2
HWUT Hardware Ranch 59.81 326 P P 01 35 34.5 +0.3
HWUT IAmb IAmb 01 35 34.8
comp=Z,16nm,0.7s
ULM Lac du Bonnet 59.94 342 P P 01 35 33.4 -1.3
comp=Z,12nm,0.4s,baz=156,slow=6.0,SNR=35
ULM PcP PcP 01 36 13.0 -0.4
comp=Z,9.7nm,0.8s,baz=166,slow=1.6,SNR=5.5
ULM pP pP 01 37 25.5 -3.0
comp=Z,15nm,1.2s,baz=167,slow=8.2,SNR=4.1
ULM PKP2bc 02 04 58.7
comp=Z,3.4nm,1.0s,baz=333,slow=14,SNR=2.5
ULM Lac du Bonnet 59.94 342 IAmb IAmb 01 35 34.3
comp=Z,19nm,0.6s
MPMC Manual Prospec 59.94 318 P P 01 35 35.6 +0.4
baz=125,SNR=15
R11A Troy Canyon, C 60.07 321 P P 01 35 37.0 +0.9
baz=128,SNR=22
SPUT South Promonto 60.10 326 P P 01 35 36.6 +0.4
SCZ2 Santa Cruz Isl 60.28 315 P P 01 35 37.9 +0.6
baz=122
ARVC Arvin 60.33 316 P P 01 35 38.6 +1.0
baz=124
ISA Isabella, Lake 60.38 317 P P 01 35 39.0 +1.0
baz=124,SNR=16
ISA Isabella, Lake 60.38 317 P P 01 35 39.0 +1.0
GRAC Grapevine Rang 60.40 319 P P 01 35 39.1 +1.0
baz=126,SNR=8.7
CWC Cottonwood Cre 60.55 318 P P 01 35 40.2 +1.0
baz=125
PKM Mcpherson Peak 60.88 316 P P 01 35 42.5 +1.1
baz=122,SNR=17
VES Vestal, Richgr 60.89 317 P P 01 35 42.5 +1.3
baz=124,SNR=14
SCHQ Schefferville 60.96 3 P P 01 35 40.5 -0.9
comp=Z,17nm,1.1s,baz=193,slow=5.4,SNR=8.8
SCHQ Schefferville 60.96 3 P P 01 35 40.7 -0.7
SCHQ PcP PcP 01 36 17.2 -0.3
TIN Tinemaha, Big 61.00 319 P P 01 35 43.2 +1.1
baz=125
FLWY Flagg Ranch 61.05 329 IAmb IAmb 01 35 43.7
comp=Z,11nm,0.7s
RLMT Red Lodge 61.08 331 P P 01 35 43.1 +0.5
baz=137,SNR=8.2
RLMT Red Lodge 61.08 331 P P 01 35 43.1 +0.5
H17A Grant Village 61.21 329 P P 01 35 45.1 +1.6
baz=135
SMMC Simmler 61.23 316 P P 01 35 44.5 +0.9
baz=123,SNR=6.2
ELK Elko 61.34 324 P P 01 35 44.1 -0.3
comp=Z,1.8nm,0.5s,baz=212,slow=1.8,SNR=11
ELK PcP PcP 01 36 19.8 0.0
comp=Z,2.3nm,0.8s,baz=98,slow=5.6,SNR=4.5
ELK pP pP 01 37 40.9 +1.9
comp=Z,3.0nm,1.0s,baz=176,slow=1.4,SNR=2.9
ELK ScP ScP 01 39 25.4 -0.1
comp=Z,5.8nm,1.1s,baz=94,slow=2.2,SNR=4.4
ELK Elko 61.34 324 P P 01 35 44.7 +0.2
DGMT Dagmar 61.37 336 P P 01 35 44.9 +0.8
baz=143
DGMT Dagmar 61.37 336 IAmb IAmb 01 35 45.8
comp=Z,31nm,0.5s
PAGB Antelope Grade 61.63 316 P P 01 35 47.3 +1.2
PAGB IAmb IAmb 01 35 47.4
comp=Z,18nm,0.9s
OMMB Old Mammoth Mi 61.82 319 IAmb IAmb 01 35 49.0
comp=Z,16nm,0.8s
NVAR Mina Array Bea 61.84 320 P P 01 35 48.3 +0.6
comp=Z,4.2nm,0.6s,baz=135,slow=7.2,SNR=35
NVAR PcP PcP 01 36 22.0 +0.2
comp=Z,3.5nm,0.8s,baz=142,slow=4.9,SNR=6.4
NVAR pP pP 01 37 42.6 +0.2
comp=Z,2.8nm,0.7s,baz=132,slow=6.9,SNR=6.9
NVAR SKKP 01 59 17.9
comp=Z,0.4nm,0.6s,baz=288,slow=4.6,SNR=5.3
NVAR PKPPKP P'P'df 02 04 46.5 -1.7
comp=Z,0.2nm,0.4s,baz=135,slow=23,SNR=1.7
NVAR Mina Array Bea 61.84 320 P P 01 35 48.0 +0.3
LHV Little Huntoon 61.86 320 P P 01 35 48.9 +1.4
LHV PcP PcP 01 36 22.9 +1.3
MDPB Devils Postpil 61.88 319 P P 01 35 49.1 +1.1
MDPB IAmb IAmb 01 35 49.3
comp=Z,14nm,0.7s
PMPB Monarch Peak 62.27 316 P P 01 35 50.8 +0.5
PMPB IAmb IAmb 01 35 52.8
comp=Z,17nm,0.9s
BOZ Bozeman (W) 62.59 330 P P 01 35 52.7 +0.5
baz=134,SNR=14
HLID Hailey 62.68 326 P P 01 35 53.7 +0.8
baz=131,SNR=17
HLID Hailey 62.68 326 P P 01 35 53.8 +0.9
PNTR Pine Nut 63.04 320 P P 01 35 56.6 +1.2
PNTR IAmb IAmb 01 35 57.0
comp=Z,13nm,0.8s
VCNR Virginia City 63.19 320 IAmb IAmb 01 35 59.2
comp=Z,12nm,0.9s
MFID Camas Ranch 63.37 326 IAmb IAmb 01 35 58.8
comp=Z,19nm,0.7s
RUBR Rubicon Trail 63.38 319 IAmb IAmb 01 36 03.5
comp=Z,13nm,1.0s
EGMT Eagleton 63.42 333 P P 01 35 57.7 +0.2
baz=137,SNR=19
EGMT Eagleton 63.42 333 IAmb IAmb 01 35 58.6
comp=Z,26nm,0.6s
PLID Pearl Lake 64.53 327 P P 01 36 04.7 0.0
MSO Missoula 64.60 329 P P 01 36 05.7 +0.7
baz=133,SNR=8.7
O03E Paynes Creek 65.12 320 P P 01 36 08.1 -0.3
baz=123,SNR=6.9
JTMT Jette 65.39 330 P P 01 36 10.9 +0.9
FFC Flin Flon 65.69 341 P P 01 36 11.8 +0.2
O02D Mt. Diablo Mer 65.70 319 P P 01 36 11.6 -0.3
baz=122
K05A Summer Lake 65.91 322 IAmb IAmb 01 36 16.4
comp=Z,31nm,1.1s
KCPM Cahto Peak 65.96 318 P P 01 36 15.2 +1.6
KCPM IAmb IAmb 01 36 21.3
comp=Z,22nm,1.2s
KCPM PcP PcP 01 36 35.3 -3.4
M04C Macdoel 65.97 321 P P 01 36 14.1 +0.4
baz=124,SNR=12
N02D Trinity Center 66.07 320 P P 01 36 14.3 0.0
baz=123
WALA Waterton Lakes 66.11 331 IAmb IAmb 01 36 15.3
comp=Z,9.1nm,0.7s
KMRM Mail Ridge 66.32 319 IAmb IAmb 01 36 18.6
comp=Z,18nm,1.2s
M02C Callahan 66.39 320 P P 01 36 15.8 -0.4
baz=123
J05D Fort Rock, OR 66.44 323 P P 01 36 17.2 +0.6
baz=125,SNR=9.0
YBH Yreka Blue Hor 66.48 321 P P 01 36 15.9 -0.9
comp=Z,3.5nm,0.6s,baz=134,slow=3.3,SNR=20
YBH pP pP 01 38 13.2 -0.8
comp=Z,3.7nm,0.9s,baz=84,slow=5.2,SNR=4.7
L04D Klamath Falls 66.49 321 P P 01 36 16.9 0.0
baz=124,SNR=8.8
PINE Pine Mountain 66.55 323 IAmb IAmb 01 36 19.1
comp=Z,10nm,0.7s
KHMM Horse Mountain 66.68 320 IAmb IAmb 01 36 19.6
comp=Z,14nm,0.8s
JCC Jacoby Creek, 66.84 319 P P 01 36 19.9 +1.0
JCC IAmb IAmb 01 36 21.6
comp=Z,25nm,1.0s
J04D Umpqua Nationa 66.94 322 P P 01 36 20.0 +0.3
baz=124
I05D Terrebonne, OR 67.10 324 P P 01 36 21.7 +1.2
baz=125,SNR=6.7
KRMB Red Mountain 67.13 320 IAmb IAmb 01 36 22.4
comp=Z,13nm,0.9s
NEW Newport 67.17 329 P P 01 36 20.8 0.0
comp=Z,2.7nm,0.7s,baz=106,slow=7.6,SNR=8.8
NEW pP pP 01 38 20.5 +2.1
comp=Z,2.7nm,0.8s,baz=137,slow=5.9,SNR=3.8
NEW S S 01 44 29.8 -0.2
comp=Z,0.5nm,0.4s,baz=337,slow=18,SNR=6.2
NEW Newport 67.17 329 P P 01 36 20.8 0.0
baz=130
L02E Cave Junction 67.27 321 P P 01 36 22.0 +0.5
baz=122
C09A Chrisman Ranch 67.47 328 IAmb IAmb 01 36 25.2
comp=Z,7.1nm,0.6s
K02D Willamette Mer 67.60 321 P P 01 36 24.5 +0.9
baz=122,SNR=7.1
G05D Wamic, OR 67.61 325 P P 01 36 24.7 +1.1
baz=125
KBO Bosley Butte 67.69 321 P P 01 36 25.0 +0.8
KBO IAmb IAmb 01 36 25.9
comp=Z,19nm,1.1s
LIC Lamto 67.87 81 eP P 01 36 25.5 -0.3
comp=Z,94nm,0.6s
I03D Drain, OR 67.94 322 P P 01 36 26.3 +0.7
baz=123
TIC Toumodi 67.95 80 eP P 01 36 25.9 -0.3
DBIC Dimbokro 68.11 80 P P 01 36 27.8 +0.6
comp=Z,30nm,0.4s,baz=245,slow=3.2,SNR=179
DBIC pP pP 01 38 25.5 +0.3
comp=Z,12nm,0.8s,baz=227,slow=3.7,SNR=5.6
DBIC sP sP 01 39 25.6 -0.6
comp=Z,8.2nm,1.0s,baz=253,slow=6.6,SNR=2.5
DBIC Dimbokro 68.11 80 P P 01 36 27.9 +0.7
KIC Kosan Boka 68.17 81 eP P 01 36 27.9 +0.3
comp=Z,58nm,0.5s
E03A Lebam 69.64 325 P P 01 36 37.2 +1.6
E03A IAmb IAmb 01 36 50.1
comp=Z,29nm,1.1s
B05A Bryant 69.79 327 P P 01 36 36.5 -0.1
baz=126
FRB Frobisher Bay 69.80 2 P P 01 36 34.8 -1.5
comp=Z,19nm,0.9s,baz=163,slow=8.8,SNR=4.5
FRB pP pP 01 38 32.8 -2.3
comp=Z,20nm,1.0s,baz=247,slow=2.1,SNR=3.6
D03D Eldon 69.92 326 P P 01 36 37.6 +0.2
baz=125
KOWA Kowa 70.38 72 P P 01 36 40.5 -0.2
PFVI Vila Bisbo 72.82 48 eP P 01 36 55.6 +1.1
comp=Z,93nm,1.9s
MORF Marmelete 73.02 48 eP P 01 36 57.0 +1.3
MORF AMb AMB 01 37 00.4
comp=Z,141nm,1.9s
MORF Marmelete 73.02 48 eP P 01 36 57.3 +1.6
comp=Z,143nm,1.6s
PTEO Sao Teotonio 73.05 48 eP P 01 36 56.9 +1.1
comp=Z,130nm,1.7s
PNCL Nicolau / Gran 73.41 47 eP P 01 36 58.9 +1.1
comp=Z,73nm,1.7s
PBDV Barranco-do-Ve 73.53 48 eP P 01 36 59.3 +0.7
comp=Z,79nm,1.6s
PCVE Castro Verde 73.59 48 eP P 01 37 00.3 +1.4
comp=Z,71nm,1.4s
PVAQ Vaqueiros 73.75 48 P P 01 37 01.6 +1.8
PBEJ Beja 73.86 48 eP P 01 37 01.5 +1.1
comp=Z,19nm,1.7s
EVO Evora 73.94 47 eP P 01 37 01.7 +0.9
comp=Z,37nm,1.6s
PMTG Montargil 73.99 47 eP P 01 37 01.7 +0.6
comp=Z,63nm,1.7s
PCAS Casmilo, Conde 74.16 46 eP P 01 37 02.9 +0.8
comp=Z,76nm,1.9s
COI Coimbra 74.28 45 eP P 01 37 03.5 +0.8
comp=Z,114nm,1.6s
SFJD Kangerlussuaq 74.61 9 P P 01 37 02.6 -1.3
comp=Z,6.3nm,0.4s,baz=176,slow=3.5,SNR=5.0
SFJD pP pP 01 39 04.9 -0.1
comp=Z,14nm,1.0s,baz=214,slow=5.9,SNR=3.6
SFJD Kangerlussuaq 74.61 9 P P 01 37 03.0 -1.0
MDT Midelt 74.62 54 P P 01 37 06.4 +1.5
comp=Z,20nm,1.1s,baz=259,slow=3.5,SNR=20
PMRV Mar??o 74.72 46 eP P 01 37 06.1 +0.9
comp=Z,28nm,1.8s
PCBR Castelo Branco 74.81 46 eP P 01 37 06.1 +0.4
comp=Z,36nm,1.6s
PVIS Viseu 74.84 45 eP P 01 37 06.5 +0.6
comp=Z,56nm,1.4s
MTE Manteigas 74.97 45 eP P 01 37 07.2 +0.5
comp=Z,35nm,1.5s
MTE Manteigas 74.97 45 IAmb IAmb 01 37 07.5
comp=Z,21nm,1.0s
POLO Lamas de Olo 75.16 44 eP P 01 37 08.2 +0.5
comp=Z,21nm,1.5s
BBB Bella Bella 75.18 328 P P 01 37 08.3 +0.9
comp=Z,5.3nm,0.5s,baz=142,slow=12,SNR=14
PVRL Vila Real 75.18 45 eP P 01 37 08.6 +0.8
comp=Z,27nm,1.7s
VNA3 Neumayer Olymp 75.44 163 P P 01 37 09.1 +0.5
TORD Torodi Ar. Bea 75.56 75 P P 01 37 10.4 0.0
comp=Z,53nm,1.0s,baz=268,slow=4.9,SNR=156
TORD pP pP 01 39 12.1 +0.3
comp=Z,13nm,1.1s,baz=271,slow=4.7,SNR=8.9
TORD sP PP 01 40 10.0 -0.9
comp=Z,5.1nm,0.8s,baz=270,slow=4.7,SNR=2.8
TORD S S 01 46 03.5 -1.6
comp=Z,5.8nm,1.3s,baz=294,slow=10.0,SNR=7.8
MVO Moncorvo 75.62 45 eP P 01 37 10.6 +0.4
comp=Z,44nm,1.7s
VNA1 Neumayer--Stat 75.62 162 P P 01 37 10.4 +0.9
YKA Yellowknife Ar 75.87 341 P P 01 37 10.7 -0.3
comp=Z,6.5nm,0.5s,baz=132,slow=6.5,SNR=90
YKA pP pP 01 39 11.8 -0.8
comp=Z,2.0nm,0.8s,baz=133,slow=6.8,SNR=4.3
VNA2 Neumayer--Watz 75.99 162 P P 01 37 12.2 +0.5
baz=295,slow=4.9
PBRG Braganca 76.06 44 eP P 01 37 13.0 +0.4
comp=Z,32nm,1.7s
PAB San Pablo 76.97 47 P P 01 37 18.5 +0.8
PAB IAmb IAmb 01 37 19.2
comp=Z,19nm,0.9s
ESDC Sonseca Array 77.29 47 P P 01 37 20.2 +0.8
comp=Z,20nm,1.1s,baz=253,slow=6.0,SNR=69
ESDC pP pP 01 39 22.8 +1.1
comp=Z,1.8nm,0.9s,baz=254,slow=6.7,SNR=5.7
ESDC Sonseca Array 77.29 47 P P 01 37 20.4 +1.0
SNAA Sanae 77.63 162 P P 01 37 21.0 +0.4
SNAA Sanae 77.63 162 P P 01 37 21.2 +0.6
ICESG Greenland Ices 78.37 11 iP P 01 37 23.2 -1.7
ICESG IAmb IAmb 01 37 24.9
comp=Z,65nm,1.2s
DLBC Dease Lake 79.35 333 P P 01 37 31.2 +1.2
comp=Z,7.8nm,0.8s,baz=146,slow=5.9,SNR=14
DLBC pP pP 01 39 31.6 -1.4
comp=Z,7.7nm,0.9s,baz=105,slow=6.0,SNR=6.2
TAM Tamanrasset 80.88 66 IAmb IAmb 01 37 40.8
comp=Z,36nm,1.1s
SUMG Summit 81.51 10 P P 01 37 41.2 -0.1
SUMG Summit 81.51 10 ⇓iP P 01 37 41.2 -0.1
SUMG Summit 81.51 10 iP P 01 37 40.0 -1.3
SUMG ⇓iP P 01 37 41.2 -0.1
RES Resolute Bay 81.97 354 P P 01 37 42.3 -0.8
comp=Z,9.3nm,1.0s,baz=180,slow=6.3,SNR=11
RES Resolute Bay 81.97 354 IAmb IAmb 01 37 43.5
comp=Z,16nm,1.1s
SKAG Skagway 82.25 333 P P 01 37 46.0 +1.3
TULEG Thule 82.63 1 P P 01 37 45.9 -0.5
TULEG Thule 82.63 1 iP P 01 37 46.1 -0.3
TULEG IAmb IAmb 01 37 47.0
comp=Z,49nm,1.1s
EKA Eskdalemuir Ar 83.23 32 P P 01 37 49.1 -0.7
comp=Z,4.2nm,0.7s,baz=239,slow=4.7,SNR=13
EKA pP pP 01 39 54.2 -0.2
comp=Z,2.9nm,0.9s,baz=235,slow=6.0,SNR=3.3
SCO Scoresbysund 83.46 15 P P 01 37 50.7 +0.1
SCO IAmb IAmb 01 37 52.7
comp=Z,12nm,1.1s
SCO Scoresbysund 83.46 15 iP P 01 37 50.2 -0.4
SCO Scoresbysund 83.46 15 iP P 01 37 50.2 -0.4
QSPA South Pole Qui 83.89 180 P P 01 37 54.2 +1.1
CTGM Chitina Glacie 85.60 333 IAmb IAmb 01 38 03.5
comp=Z,31nm,1.2s
INK Inuvik 85.64 341 P P 01 38 01.1 -0.1
comp=Z,13nm,0.9s,baz=96,slow=4.8,SNR=31
INK pP pP 01 40 06.5 -0.4
comp=Z,12nm,1.1s,baz=94,slow=4.7,SNR=8.7
INK Inuvik 85.64 341 IAmb IAmb 01 38 01.9
comp=Z,19nm,1.0s
BARN Barnard Glacie 85.79 333 IAmb IAmb 01 38 05.0
comp=Z,24nm,1.2s
DAWY Dawson 85.93 336 IAmb IAmb 01 38 03.5
comp=Z,11nm,1.0s
ISLE Juniper Island 85.94 332 IAmb IAmb 01 38 09.3
comp=Z,13nm,1.0s
BALM Baldy 86.09 333 P P 01 38 04.2 +0.5
BALM IAmb IAmb 01 38 04.9
comp=Z,8.1nm,0.8s
DOU Dourbes 86.13 39 P P 01 38 03.5 -0.5
DOU PcP PcP 01 38 05.4 -0.3
TGL Tana Glacier 86.22 332 IAmb IAmb 01 38 06.6
comp=Z,23nm,1.0s
BMRD Maredsous 86.29 39 P P 01 38 04.0 -0.8
DBG Daneborg 86.30 12 iP P 01 38 04.2 -0.1
BNI Bardonecchia 86.34 44 P P 01 38 05.2 -0.1
BGES Gesves 86.51 39 P P 01 38 05.4 -0.4
KEST Kesra 86.52 54 P P 01 38 06.3 0.0
comp=Z,21nm,1.1s,baz=174,slow=2.6,SNR=28
KEST pP pP 01 40 13.3 +1.0
comp=Z,12nm,1.0s,baz=296,slow=1.8,SNR=9.5
KEST Kesra 86.52 54 IAmb IAmb 01 38 10.3
comp=Z,15nm,1.1s
BCAR Beaver Creek A 86.55 335 P P 01 38 06.8 +1.1
BCLA Clavier 86.65 39 P P 01 38 05.3 -1.2
HMT Hamilton 86.75 332 IAmb IAmb 01 38 08.4
comp=Z,24nm,1.0s
BSTI Sart Tilman 86.86 39 P P 01 38 07.1 -0.3
GLB Gilahina Butte 86.89 333 IAmb IAmb 01 38 09.6
comp=Z,7.1nm,0.8s
BEBN Eben Emael 86.97 38 P P 01 38 07.3 -0.6
BEBN PcP PcP 01 38 08.6 -0.8
WLF Walferdange 87.01 40 P P 01 38 07.0 -1.1
WLF Walferdange 87.01 40 eP P 01 38 08.5 +0.4
comp=Z,60nm,1.3s,baz=261,slow=4.6
WLF epP pP 01 40 15.3 +0.9
WLF Walferdange 87.01 40 P P 01 38 08.6 +0.4
WLF IAmb IAmb 01 38 08.8
comp=Z,19nm,1.0s
K27K Chicken 87.02 335 P P 01 38 09.0 +1.1
baz=111
BHOU Houvegnez 87.08 39 P P 01 38 08.4 -0.1
MEM Membach 87.14 39 P P 01 38 08.0 -0.7
BTNL Ternell 87.21 39 P P 01 38 08.7 -0.4
L26K Log Cabin Wild 87.21 334 P P 01 38 09.4 +0.6
baz=109,SNR=6.3
VSL Villasalto 87.21 50 IAmb IAmb 01 38 10.1
comp=Z,13nm,1.1s
N25K Chitina, Valde 87.30 333 P P 01 38 09.6 +0.2
baz=108
N25K Chitina, Valde 87.30 333 P P 01 38 09.8 +0.4
ECH Echery 87.34 41 IAmb IAmb 01 38 20.0
comp=Z,7.2nm,1.1s
MENT Mentasta 87.34 334 IAmb IAmb 01 38 10.2
comp=Z,8.4nm,1.0s
TSUM Tsumeb 87.50 109 P P 01 38 11.9 +0.5
AHRW Bad Neuenahr-A 87.78 39 eP P 01 38 11.9 +0.1
comp=Z,52nm,1.4s,baz=261,slow=4.6
SCRK Sand Creek 87.79 335 P P 01 38 12.1 +0.5
baz=109,SNR=20
KLU Klutina 87.87 333 IAmb IAmb 01 38 14.0
comp=Z,16nm,0.9s
BUG Bochum--Univer 88.10 38 eP P 01 38 13.1 -0.1
comp=Z,53nm,1.2s,baz=261,slow=4.6
PAX Paxson 88.11 334 IAmb IAmb 01 38 14.8
comp=Z,16nm,1.0s
DAG Danmarks Havn 88.14 11 iP P 01 38 12.0 -0.8
comp=Z,53nm,1.5s
DAG Danmarks Havn 88.14 11 iP P 01 38 12.0 -0.8
DAG ⇓iP PcP 01 38 12.2 -1.8
DAG IAmb IAmb 01 38 13.1
comp=Z,53nm,1.5s
M24K Tolsona, Glenn 88.17 333 P P 01 38 14.0 +0.6
baz=107,SNR=11
TUE Stuetta 88.45 43 IAmb IAmb 01 38 15.6
comp=Z,16nm,1.1s
IBBN Ibbenburen 88.57 37 eP P 01 38 15.3 0.0
comp=Z,50nm,1.4s,baz=261,slow=4.6
TNS Taunus Mts 88.58 39 eP P 01 38 15.3 -0.2
comp=Z,23nm,1.3s,baz=261,slow=4.6
TNS epP pP 01 40 22.6 +0.3
SCM Sheep Creek Mo 88.61 333 IAmb IAmb 01 38 17.7
comp=Z,12nm,1.0s
DAVA Damuels 88.96 42 eP P 01 38 17.8 +0.2
comp=Z,18nm,1.1s,SNR=9.7
DAVA eP pP 01 40 24.6 +0.3
comp=Z,13nm,1.1s
DHY Denali Highway 88.97 334 IAmb IAmb 01 38 23.0
comp=Z,5.6nm,1.1s
KNK Knik Glacier 89.02 332 IAmb IAmb 01 38 20.2
comp=Z,6.4nm,0.6s
BMAR Burnt Mountain 89.13 338 P P 01 38 18.6 +0.8
HDA Harding Lake 89.16 335 P P 01 38 17.7 -0.1
baz=106,SNR=16
HDA Harding Lake 89.16 335 IAmb IAmb 01 38 19.5
comp=Z,16nm,1.1s
UBR Ueberruh 89.18 42 eP P 01 38 18.4 0.0
comp=Z,46nm,1.3s,baz=261,slow=4.6
IL31 89.23 336 IAmb IAmb 01 38 19.4
comp=Z,9.6nm,1.1s
ILAR Eielson Array 89.23 336 P P 01 38 18.2 0.0
comp=Z,6.5nm,1.1s,baz=151,slow=5.0,SNR=44
ILAR pP pP 01 40 22.9 -2.2
comp=Z,5.0nm,1.0s,baz=107,slow=3.4,SNR=18
ILAR Eielson Array 89.23 336 P P 01 38 17.5 -0.7
OSSC Osservatorio P 89.28 46 IAmb IAmb 01 38 20.4
comp=Z,9.4nm,1.1s
GHO Glory Hole Cre 89.33 332 IAmb IAmb 01 38 19.3
comp=Z,7.4nm,0.9s
FETA Feichten 89.48 43 eP P 01 38 19.6 -0.4
comp=Z,26nm,1.3s
FETA eP pP 01 40 26.9 0.0
comp=Z,7.3nm,1.1s
RC01 Rabbit Creek A 89.54 332 P P 01 38 20.1 +0.4
baz=104

POKR	**Poker Plat Res**	**89.55**	**336**	P		**P**	**01 38 20.1**	**+0.4**
	baz=106,SNR=11								
POKR	**Poker Plat Res**	**89.55**	**336**	IAmb		IAmb	01 38 20.6		
	comp=Z,15nm,0.9s								
CCB	**Clear Creek Bu**	**89.58**	**335**	IAmb		IAmb	01 38 21.5		
	comp=Z,9.4nm,1.0s								
RETA	**Reutte**	**89.58**	**42**	*i* P		**P**	**01 38 20.5**	**+0.2**
	comp=Z,12nm,1.3s								
RETA				*e*P		**pP**	**01 40 26.8**	**-0.5**
	comp=Z,5.3nm,1.1s								
WRH	**Wood River Hil**	**89.65**	**335**	P		**P**	**01 38 20.5**	**+0.3**
WRH				IAmb		IAmb	01 38 21.3		
	comp=Z,14nm,1.0s								
TCOL	**CIGO, UAF Yank**	**89.66**	**336**	P		**P**	**01 38 20.4**	**+0.3**
	baz=105								
RND	**Reindeer**	**89.70**	**334**	IAmb		IAmb	01 38 21.5		
	comp=Z,18nm,1.2s								
MOTA	**Moosalm**	**89.79**	**42**	*i* P		**P**	**01 38 20.9**	**-0.4**
	comp=Z,24nm,1.3s								
MOTA				*e*P		**pP**	**01 40 27.7**	**-0.7**
	comp=Z,9.3nm,1.1s								
MCK	**McKinley**	**89.82**	**334**	P		**P**	**01 38 21.1**	**+0.2**
	baz=104,SNR=6.5								
SQTA	**Sankt Quirin**	**89.84**	**43**	*e*P		**P**	**01 38 21.2**	**-0.3**
	comp=Z,30nm,1.2s								
SQTA				*e*P		**pP**	**01 40 28.1**	**-0.5**
	comp=Z,16nm,1.2s,SNR=6.2								
NRDL	**Niedersach Rie**	**90.02**	**37**	*e*P		**P**	**01 38 22.4**	**+0.4**
	comp=Z,42nm,1.7s,baz=261,slow=4.6								
CLZ	**Clausthal**	**90.07**	**38**	*e*P		**P**	**01 38 22.7**	**+0.2**
	comp=Z,26nm,1.3s,baz=261,slow=4.6								
CLZ				*e*pP		**pP**	**01 40 29.7**	**+0.2**
NEA2	**Nenana**	**90.09**	**335**	P		**P**	**01 38 22.6**	**+0.4**
	baz=104,SNR=16								
WATA	**Walderalm**	**90.11**	**43**	*i* P		**P**	**01 38 22.9**	**0.0**
	comp=Z,8.9nm,0.6s								
WATA				*e*P		**pP**	**01 40 29.5**	**-0.4**
	comp=Z,5.3nm,1.2s								
WTTA	**Wattenberg**	**90.14**	**43**	*i* P		**P**	**01 38 22.9**	**-0.1**
	comp=Z,22nm,1.0s								
WTTA				*e*P		**pP**	**01 40 29.7**	**-0.4**
	comp=Z,21nm,1.2s,SNR=7.4								
TRF	**Thorofare Moun**	**90.34**	**334**	IAmb		IAmb	01 38 24.6		
	comp=Z,6.4nm,0.8s								
I23K	**Minto, Yukon-K**	**90.35**	**336**	P		**P**	**01 38 23.4**	**+0.1**
	baz=104,SNR=6.2								
I23K	**Minto, Yukon-K**	**90.35**	**336**	IAmb		IAmb	01 38 24.0		
	comp=Z,9.3nm,0.9s								
GRC3	**Grafenberg Arr**	**90.36**	**41**	*e*P		**P**	**01 38 23.3**	**-0.4**
	comp=Z,24nm,1.6s,baz=261,slow=4.6								
BSEG	**Bad Segeberg**	**90.40**	**36**	*e*P		**P**	**01 38 23.8**	**0.0**
	comp=Z,18nm,1.3s,baz=261,slow=4.6								
BSEG				*e*pP		**pP**	**01 40 30.9**	**0.0**
GRB4	**Grafenberg Arr**	**90.43**	**40**	*e*P		**P**	**01 38 24.2**	**+0.1**
	comp=Z,42nm,1.6s,baz=261,slow=4.6								
GRB1	**Grafenberg Arr**	**90.48**	**40**	*e*P		**P**	**01 38 24.4**	**+0.1**
	comp=Z,18nm,1.0s,baz=261,slow=4.6								
GRB3	**Grafenberg Arr**	**90.57**	**41**	*e*P		**P**	**01 38 24.6**	**-0.1**
	comp=Z,28nm,1.2s,baz=261,slow=4.6								
ABTA	**Abfaltersbach**	**90.65**	**43**	*e*P		**P**	**01 38 25.1**	**-0.2**
	comp=Z,29nm,1.2s,SNR=16								
ABTA				*e*P		**pP**	**01 40 32.0**	**-0.4**
	comp=Z,9.5nm,1.0s,SNR=6.7								
MANZ	**Manzenberg**	**90.86**	**40**	*e*P		**P**	**01 38 26.3**	**+0.2**
	comp=Z,26nm,1.3s,baz=261,slow=4.6								
MANZ				*e*pP		**pP**	**01 40 33.7**	**+0.4**
MLY	**Manley**	**90.89**	**335**	P		**P**	**01 38 25.8**	**-0.1**
	baz=103,SNR=7.8								
ROTZ	**Rotzenmuhle**	**90.89**	**40**	*e*P		**P**	**01 38 26.6**	**+0.4**
	comp=Z,31nm,1.5s,baz=261,slow=4.6								
PLN	**Plauen**	**90.96**	**39**	*e*pP		pP	01 40 34.1	+0.4
TANN	**Tannenbergstha**	**91.15**	**40**	*e*P		**P**	**01 38 27.4**	**-0.1**
	comp=Z,69nm,1.5s,baz=261,slow=4.6								
COLD	**Coldfoot**	**91.17**	**338**	P		**P**	**01 38 28.1**	**+1.0**
	baz=103,SNR=5.7								
WET	**Wettzell**	**91.23**	**41**	*e*P		**P**	**01 38 27.7**	**-0.2**
	comp=Z,24nm,1.6s,baz=261,slow=4.6								
WET				*e*pP		**pP**	**01 40 35.3**	**+0.3**
KBA	**Koelnbreinsper**	**91.26**	**43**	*e*P		**P**	**01 38 27.7**	**-0.5**
	comp=Z,23nm,1.4s,SNR=7.3								
KBA				*e*P		**pP**	**01 40 35.1**	**-0.4**
	comp=Z,6.0nm,0.9s,SNR=5.6								
TOLK	**Toolik Lake Re**	**91.27**	**339**	P		**P**	**01 38 28.1**	**+0.5**
	baz=104								
TOLK	**Toolik Lake Re**	**91.27**	**339**	IAmb		IAmb	01 38 28.3		
	comp=Z,4.5nm,0.9s								
VNDA	**Vanda**	**91.32**	**190**	P		**P**	**01 38 29.1**	**+1.4**
	comp=Z,11nm,0.9s,baz=131,slow=4.4,SNR=50								
VNDA				pP		**pP**	**01 40 34.9**	**0.0**
	comp=Z,2.6nm,0.9s,baz=94,slow=4.5,SNR=4.2								
VNDA	**Vanda**	**91.32**	**190**	P		**P**	**01 38 28.9**	**+1.2**
PRED	**Cave del Predi**	**91.33**	**44**	IAmb		IAmb	01 38 32.6		
	comp=Z,7.6nm,1.1s								
MYKA	**Terra Mystica**	**91.41**	**43**	*e*P		**P**	**01 38 28.4**	**-0.4**
	comp=Z,14nm,1.1s,SNR=6.7								
MYKA				*e*P		**pP**	**01 40 36.1**	**+0.1**
	comp=Z,16nm,1.2s								
CLL	**Collm**	**91.61**	**39**	*i* P		**P**	**01 38 29.2**	**-0.3**
	comp=Z,36nm,2.1s								
CLL				*e*pP		**pP**	**01 40 36.0**	**-0.7**
CLL				*e*			01 41 28.0		
CLL				*e*PP		**PP**	**01 42 17.0**	**-1.5**
KHC	**Kasperske Hory**	**91.69**	**41**	*e*P		**P**	**01 38 28.6**	**-1.3**
GERES	**GERESS Array B**	**91.73**	**41**	P		**P**	**01 38 29.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=243,slow=0.6,SNR=5.1								
GERES				pP		**pP**	**01 40 36.8**	**-0.7**
	comp=Z,3.6nm,1.1s,baz=268,slow=3.7,SNR=6.5								
FBE	**Freiberg**	**91.78**	**39**	*e*P		**P**	**01 38 30.5**	**+0.2**
	comp=Z,22nm,1.5s,baz=261,slow=4.6								
FBE				*e*pP		**pP**	**01 40 38.3**	**+0.8**
SYO	**Syowa Base**	**91.78**	**160**	⇑*i* P		**P**	**01 38 28.7**	**-1.2**
SYO	**Syowa Base**	**91.78**	**160**	⇑*e*P		**P**	**01 38 33.1**	**+3.2**
MOA	**Molln**	**91.98**	**42**	*e*P		**P**	**01 38 31.0**	**-0.3**
	comp=Z,25nm,1.4s,SNR=12								
MOA				*e*P		**pP**	**01 40 38.4**	**-0.2**
	comp=Z,12nm,1.1s,SNR=6.3								
NB2	**NORSAR Subarra**	**92.05**	**29**	P		**P**	**01 38 31.4**	**+0.1**
	comp=Z,43nm,1.7s,baz=262,slow=4.8								
NB2	**NORSAR Subarra**	**92.05**	**29**	P		**P**	**01 38 31.4**	**+0.1**
	baz=262,slow=4.8								
NOA	**NORSAR Array B**	**92.05**	**29**	P		**P**	**01 38 31.6**	**+0.2**
	comp=Z,6.6nm,1.1s,baz=258,slow=4.6,SNR=11								
NOA				pP		**pP**	**01 40 39.2**	**+0.6**
	comp=Z,4.3nm,1.2s,baz=259,slow=4.8,SNR=5.4								
BRG	**Berggiesshubel**	**92.14**	**39**	*e*P		**P**	**01 38 32.0**	**+0.1**
	comp=Z,17nm,1.4s								
BRG				*e*pP		**pP**	**01 40 39.3**	**+0.1**
	comp=Z,12nm,1.3s								
IMAR	**Indian Mountai**	**92.31**	**336**	P		**P**	**01 38 32.3**	**-0.1**
PRU	**Pruhonice**	**92.42**	**40**	*e*P		**P**	**01 38 33.7**	**+0.5**
ARSA	**Arzberg**	**92.76**	**43**	*e*P		**P**	**01 38 34.4**	**-0.5**
	comp=Z,14nm,1.2s,SNR=6.8								
ARSA				*e*P		**pP**	**01 40 40.5**	**-1.7**
	comp=Z,10nm,1.4s								
CONA	**Conrad Observa**	**93.06**	**42**	*e*P		**P**	**01 38 35.8**	**-0.5**
	comp=Z,18nm,1.4s,SNR=8.8								
CONA				*e*P		**pP**	**01 40 42.9**	**-0.8**
	comp=Z,7.0nm,1.2s,SNR=7.6								
HFS	**Hagfors**	**93.14**	**30**	P		**P**	**01 38 35.5**	**-0.8**
	comp=Z,3.5nm,0.9s,baz=290,slow=9.3,SNR=4.5								
HFS				pP		**pP**	**01 40 44.0**	**+0.4**
	comp=Z,4.0nm,0.9s,baz=250,slow=4.2,SNR=3.8								
BOSA	**Boshof**	**93.31**	**119**	P		**P**	**01 38 37.7**	**-0.3**
	comp=Z,15nm,1.0s,baz=274,slow=5.9,SNR=9.5								
BOSA	**Boshof**	**93.31**	**119**	P		**P**	**01 38 37.5**	**-0.5**
UPC	**Upice**	**93.41**	**40**	*e*P		**P**	**01 38 38.2**	**+0.4**
CHVC	**Chvalec**	**93.44**	**40**	*e*P		**P**	**01 38 38.1**	**+0.2**
KRUC	**Moravsky**	**93.52**	**41**	*e*P		**P**	**01 38 38.3**	**0.0**
KRUC				*e*pP		**pP**	**01 40 45.5**	**-0.2**
OSTC	**Ostas**	**93.54**	**40**	*e*P		**P**	**01 38 38.5**	**+0.1**
DPC	**Dobruska-Polom**	**93.59**	**40**	*e*P		**P**	**01 38 39.1**	**+0.5**
VRAC	**Vranov**	**93.67**	**41**	P		**P**	**01 38 39.2**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=254,slow=4.7,SNR=10								
VRAC	**Vranov**	**93.67**	**41**	*e*P		**P**	**01 38 38.8**	**-0.2**
VRAC				*e*pP		**pP**	**01 40 46.5**	**+0.1**
KRLC	**Kraliky**	**93.86**	**40**	*e*P		**P**	**01 38 40.4**	**+0.5**
ZST	**Bratislava**	**93.91**	**42**	*e*P		**P**	**01 38 39.5**	**-0.6**
MODS	**Modra-Piesok**	**94.04**	**42**	*e*P		**P**	**01 38 39.3**	**-1.4**
A21K	**Barrow**	**94.14**	**341**	P		**P**	**01 38 40.9**	**+0.4**
	baz=97								
A21K	**Barrow**	**94.14**	**341**	IAmb		IAmb	01 38 57.8		
	comp=Z,5.0nm,0.9s								
SMOL	**Smolenice**	**94.15**	**42**	*e*P		**P**	**01 38 41.5**	**+0.3**
LBTB	**Lobatse**	**94.16**	**116**	P		**P**	**01 38 40.3**	**-1.7**
MORC	**Moravsky Berou**	**94.33**	**41**	*e*P		**P**	**01 38 42.4**	**+0.4**
MORC				*e*pP		**pP**	**01 40 49.9**	**+0.4**
MORC	**Moravsky Berou**	**94.33**	**41**	IAmb		IAmb	01 38 47.6		
	comp=Z,3.2nm,1.0s								
JAVC	**Velka Javorina**	**94.34**	**41**	*e*P		**P**	**01 38 43.0**	**+0.9**
JAVC				*e*pP		**pP**	**01 40 50.5**	**+0.9**
VYHS	**Vyhne**	**95.09**	**42**	*e*P		**P**	**01 38 45.4**	**0.0**
DIVS	**Divibare**	**95.63**	**46**	IAmb		IAmb	01 38 51.0		
	comp=Z,3.8nm,1.1s								
OJC	**Ojcow**	**95.81**	**40**	IAmb		IAmb	01 38 51.2		
	comp=Z,5.1nm,1.0s								
KECS	**Kecovo**	**96.18**	**42**	*e*PDIFF		**P**	**01 38 50.3**	**0.0**
CRVS	**Cervenica-Dubn**	**96.84**	**42**	*e*PDIFF		**P**	**01 38 54.1**	**+0.8**
ARCES	**ARCESS Array B**	**98.37**	**21**	P		Pdif	01 38 58.8	-0.9
	comp=Z,2.2nm,0.7s,baz=275,slow=4.4,SNR=9.8								
ARCES				PKKPbc		**PKKPbc**	**01 55 27.6**	**-3.0**
	comp=Z,2.4nm,0.8s,baz=98,slow=4.2,SNR=3.7								
BURAR	**Bucovina Array**	**99.34**	**43**	Pdif		**Pdif**	**01 39 05.6**	**+1.0**
KBZ	**Khabaz**	**112.10**	**45**	PKiKP		**PKiKP**	**01 43 53.5**	**-0.6**
	comp=Z,3.0nm,1.0s,baz=286,slow=7.4,SNR=5.0								
NRIK	**Noril'sk**	**115.52**	**8**	PKKPbc		PKKPbc	01 54 34.1	-3.8
	comp=Z,0.9nm,0.3s,baz=156,slow=3.5,SNR=4.4								
NRIK				SKKPbc		SKKPbc	01 57 21.1	-7.7
	comp=Z,2.3nm,0.5s,baz=19,slow=24,SNR=4.1								
RAYN	**Ar Rayn**	**117.56**	**67**	PKPdf		**PKiKP**	**01 44 05.4**	**+0.1**
ABKAR	**Akbulak array**	**121.04**	**35**			**PKiKP**	**01 44 11.2**	**0.0**
BRVK	**Borovoye**	**124.03**	**27**	PKPdf		**PKPdf**	**01 44 16.8**	**0.0**
GEYT	**Alibeck**	**124.84**	**48**	PKP		**PKPdf**	**01 44 18.4**	**-0.4**
	comp=Z,6.2nm,0.4s,baz=219,slow=0.9,SNR=3.9								
GEYT	**Alibeck**	**124.84**	**48**	PKPdf		**PKiKP**	**01 44 19.0**	**-0.2**
UOSS	**Minazif**	**127.01**	**63**	PKPdf		**PKPdf**	**01 44 23.0**	**-0.3**
ZALV	**Zalesovo Beam**	**128.79**	**17**	PKP		**PKPdf**	**01 44 25.9**	**+0.1**
	comp=Z,12nm,0.4s,baz=300,slow=2.9,SNR=80								
ZALV				pPKP		**PP**	**01 46 40.5**	**-0.3**
	comp=Z,11nm,0.8s,baz=318,slow=2.0,SNR=12								
ZALV	**Zalesovo Beam**	**128.79**	**17**	PKPdf		**PKPdf**	**01 44 26.1**	**+0.3**
KURK	**Kurchatov**	**129.28**	**24**	PKPdf		**PKiKP**	**01 44 27.5**	**-0.1**
STKA	**Stephens Creek**	**130.46**	**218**	PKP		**PKPdf**	**01 44 29.8**	**+0.1**
	comp=Z,16nm,1.0s,baz=99,slow=2.0,SNR=22								
STKA				pPKP		**pPKPdf**	**01 46 45.6**	**+0.2**
	comp=Z,7.6nm,1.1s,baz=135,slow=1.6,SNR=7.1								
STKA				SKPbc		**SKPbc**	**01 46 57.9**	**-1.5**
	comp=Z,13nm,0.9s,baz=114,slow=6.4,SNR=13								
STKA				SKP			01 47 09.8		
	comp=Z,9.1nm,0.8s,baz=31,slow=5.8,SNR=7.5								
STKA	**Stephens Creek**	**130.46**	**218**	PKPdf		**PKPdf**	**01 44 29.5**	**-0.2**
ASAJ	**Asahikawa**	**131.66**	**327**	PKP		**PKPdf**	**01 44 31.9**	**+0.4**
	comp=Z,12nm,0.9s,baz=307,slow=5.0,SNR=4.0								
ASAJ				SKPbc		**SKPbc**	**01 47 01.7**	**-1.5**
	comp=Z,18nm,0.8s,baz=305,slow=6.3,SNR=9.6								
KLR	**Kul'dur**	**132.69**	**339**	PKP		**PKPdf**	**01 44 33.0**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=14,slow=2.4,SNR=5.7								
KLR				SKPbc		**SKPbc**	**01 47 06.3**	**-0.3**
	comp=Z,5.9nm,0.6s,baz=61,slow=3.0,SNR=15								
MAKZ	**Makanchi**	**133.72**	**25**	PKPdf		**PKPdf**	**01 44 35.4**	**0.0**
MKAR	**Makanchi Array**	**133.86**	**25**	PKhKP		PKPpre	01 44 24.3		
	comp=Z,0.2nm,0.4s,baz=1.1,slow=2.4,SNR=4.3								
MKAR				PKP		**PKPdf**	**01 44 35.3**	**-0.3**
	comp=Z,1.8nm,0.4s,baz=306,slow=3.7,SNR=18								
MKAR				pPKP		pPKPdf	01 46 50.5	-0.9
	comp=Z,1.8nm,0.8s,baz=346,slow=2.5,SNR=5.1								
MKAR				SKPbc		**SKPbc**	**01 47 10.0**	**-0.6**
	comp=Z,5.1nm,0.9s,baz=336,slow=2.7,SNR=10								
MKAR				SKKPbc		**SKKPbc**	**01 56 22.2**	**-4.4**
	comp=Z,0.9nm,0.8s,baz=133,slow=5.3,SNR=5.1								
MKAR				SKKP			01 57 08.3		
	comp=Z,0.8nm,0.9s,baz=213,slow=23,SNR=2.3								
MKAR	**Makanchi Array**	**133.86**	**25**	PKPdf		**PKPdf**	**01 44 35.5**	**-0.2**
CTAO	**Charters Tower**	**134.28**	**234**	PKPdf		**PKPdf**	**01 44 37.4**	**+0.2**
TLY	**Talaya**	**134.52**	**4**	SKPbc		**SKPbc**	**01 47 12.0**	**-0.5**
	comp=Z,3.2nm,0.8s,baz=246,slow=10.0,SNR=2.0								
KSH	**Kashi**	**136.00**	**36**	PKP		**PKPdf**	**01 44 40.8**	**+0.8**
KSH				PP		**PP**	**01 47 26.0**	**-1.1**
KSH				AMB		AMB			
	comp=Z,290nm,4.8s								
USRK	**Ussuriysk Ar.**	**136.75**	**335**	PKP		**PKPdf**	**01 44 41.5**	**+0.5**
	comp=Z,7.9nm,1.0s,baz=329,slow=0.4,SNR=9.0								
USRK				pPKP		**pPKPdf**	**01 46 57.2**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=289,slow=1.4,SNR=4.4								
USRK				SKPbc		**SKPbc**	**01 47 19.7**	**+0.2**
	comp=Z,33nm,0.9s,baz=37,slow=1.7,SNR=41								
WMQ	**Urumqi**	**138.47**	**22**	*e*PKP		**PKPdf**	**01 44 44.8**	**+0.5**
SONM	**Songino Array**	**138.49**	**2**	PKhKP		PKPpre	01 44 35.4		
	comp=Z,0.5nm,0.3s,baz=357,slow=4.1,SNR=4.1								
SONM				PKP		**PKPdf**	**01 44 45.0**	**+0.7**
	comp=Z,6.2nm,1.0s,baz=342,slow=0.5,SNR=20								
SONM				SKPbc		**SKPbc**	**01 47 24.3**	**-0.2**
	comp=Z,11nm,0.9s,baz=342,slow=1.8,SNR=22								
SONM				SKPab		**SKPab**	**01 47 34.2**	**-0.4**
	comp=Z,3.8nm,1.0s,baz=333,slow=0.7,SNR=3.7								
SONM				SKKPbc		**SKKPbc**	**01 56 09.0**	**-0.5**
	comp=Z,1.5nm,1.0s,baz=163,slow=7.2,SNR=5.5								
MJAR	**Matsushiro Arr**	**139.14**	**322**	PKhKP		PKPpre	01 44 28.2		
	comp=Z,0.8nm,0.3s,baz=64,slow=5.5,SNR=1.3								
MJAR				PKP		**PKPdf**	**01 44 46.1**	**+0.5**
	comp=Z,1.8nm,0.3s,baz=340,slow=0.8,SNR=6.6								
MJAR				pPKP		pPKPdf	01 47 01.7	+0.1
	comp=Z,1.2nm,0.3s,baz=360,slow=1.0,SNR=2.8								
MJAR				SKPbc		**SKPbc**	**01 47 26.3**	**-0.2**
	comp=Z,14nm,1.1s,baz=320,slow=0.8,SNR=14								
MAT	**Matsushiro**	**139.14**	**322**	PKP		**PKPdf**	**01 44 45.7**	**0.0**
COEN	**Coen**	**139.84**	**240**	PKPdf		**PKPdf**	**01 44 42.6**	**-4.9**
ASAR	**Alice Springs**	**141.06**	**219**	PKhKP		PKPpre	01 44 43.7		
	comp=Z,4.4nm,0.5s,baz=135,slow=3.8,SNR=38								
ASAR				pPKP		pPKPdf	01 47 03.5	-2.0
	comp=Z,2.9nm,0.8s,baz=151,slow=3.8,SNR=5.8								
ASAR				SKPbc		**SKPbc**	**01 47 29.2**	**-2.7**
	comp=Z,18nm,0.8s,baz=132,slow=3.0,SNR=22								
ASAR				SKKPbc		**SKKPbc**	**01 55 57.0**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=4.3,slow=5.0,SNR=4.2								
ASAR	**Alice Springs**	**141.06**	**219**			PKPpre	01 44 43.4		
WRAB	**Tennant Creek**	**143.37**	**224**			PKPab	01 44 51.9	-0.1
WRA	**Warramunga Arr**	**143.38**	**224**	PKP		PKPab	01 44 51.9	-0.2
	comp=Z,119nm,0.9s,baz=131,slow=3.4,SNR=572								
WRA				pPKP		pPKPdf	01 47 06.1	-3.6
	comp=Z,9.9nm,0.9s,baz=128,slow=2.4,SNR=12								
WRA				SKPbc		**SKPbc**	**01 47 36.4**	**-1.3**
	comp=Z,34nm,1.1s,baz=126,slow=1.9,SNR=17								
KSRS	**Korea Array**	**144.03**	**333**	PKP		PKPbc	01 44 53.9	+0.1
	comp=Z,36nm,1.0s,baz=32,slow=3.5,SNR=66								
KSRS				SKPbc		**SKPbc**	**01 47 39.0**	**+0.3**
	comp=Z,25nm,1.1s,baz=25,slow=1.7,SNR=14								
MORW	**Morawa**	**144.11**	**192**			PKPbc	01 44 53.9	-0.5
HHC	**Hu-ho-hao-te**	**145.37**	**355**	*e*PKPbc		**PKPbc**	**01 44 57.8**	**-0.1**
BJI	**Beijing**	**145.54**	**349**	PKPbc		**PKPbc**	**01 44 58.3**	**+0.1**
BTO	**Baotou**	**145.70**	**357**	*e*PKPbc		**PKPdf**	**01 44 56.0**	**-1.2**
JNU	**Nakatsue**	**145.86**	**325**	PKPbc		**PKPdf**	**01 44 58.2**	**+0.6**
	comp=Z,36nm,1.1s,baz=44,slow=5.3,SNR=6.0								
JNU	**Nakatsue**	**145.86**	**325**	PKPdf		**PKPdf**	**01 44 55.7**	**-1.9**
GTA	**Gaotai**	**146.11**	**12**	⇓PKPbc		**PKPdf**	**01 44 58.5**	**+0.5**
GTA				pPKP		pPKPab	01 47 11.3	-1.6
GTA				sPKP			01 48 03.8		
LZH	**Lanzhou**	**150.00**	**7**	*e*PKPbc		**PKPdf**	**01 45 06.0**	**+1.6**
LZH				pPKP		pPKPdf	01 47 20.0	-0.7
LZH				sPKP			01 48 16.3		
PSA00	**Pilbara Seismi**	**150.09**	**202**			**PKPbc**	**01 45 10.1**	**-0.4**
PSA00						**PKPab**	**01 45 18.1**	**-0.7**
KNRA	**Kununurra**	**150.14**	**223**			**PKPbc**	**01 45 10.5**	**-0.2**
FITZ	**Fitzroy Crossi**	**150.29**	**215**	PKPdf		**PKPdf**	**01 45 04.9**	**-0.2**
FITZ						**PKPbc**	**01 45 11.0**	**0.0**
FITZ				PKPab		**PKPab**	**01 45 19.1**	**-0.6**
JMZ	**Minamidaito 2**	**150.53**	**314**			**PKPbc**	**01 45 11.5**	**+0.2**
GIRL	**Giralia**	**150.71**	**192**			**PKiKP**	**01 45 12.4**	**+0.2**
GIRL				PKPab		**PKPab**	**01 45 22.2**	**+0.8**
XAN	**Xi'an**	**152.29**	**359**	PKPbc		**PKPdf**	**01 45 08.5**	**+0.7**
NJ2	**Nanjing**	**152.39**	**340**	*e*PKPbc		**PKPdf**	**01 45 07.5**	**-0.4**
CD2	**Chengdu**	**155.09**	**9**	*e*PKP		**PKPdf**	**01 45 12.0**	**+0.2**
SOEI	**Soe**	**157.40**	**226**	PKP		**PKPdf**	**01 45 18.0**	**+2.7**
GYA	**Guiyang**	**159.81**	**4**	⇑PKP		**PKPdf**	**01 45 18.0**	**+0.2**
GYA				PKPab		**PKPab**	**01 46 00.0**	**-0.6**
GYA				AMB		AMB			
	comp=Z,80nm,4.4s								
EDFI	**Ende, Flores**	**159.90**	**223**	PKP		**PKPdf**	**01 45 17.7**	**-0.5**
SANI	**Sanana**	**160.35**	**246**	PKP		**PKPdf**	**01 45 20.2**	**+1.6**
WBSI	**Waikabubak, Su**	**160.65**	**216**	PKP		**PKPdf**	**01 45 20.5**	**+1.6**
TWSI	**Taliwang, Sumb**	**162.77**	**211**	PKP		**PKPdf**	**01 45 20.9**	**-0.1**
BNSI	**Bone**	**164.04**	**229**	PKP		**PKPdf**	**01 45 24.1**	**+1.9**
SLVN	**Son La**	**164.42**	**15**			**PKPdf**	**01 45 23.3**	**+0.9**
MHMT	**Maesarieng**	**164.51**	**39**	P		**PKPdf**	**01 45 23.8**	**+1.4**
CM33	**Chiang Mai Arr**	**164.61**	**35**	P		**PKPdf**	**01 45 23.0**	**+0.4**
CHTO	**Chiang Mai**	**164.62**	**35**	PKPdf		**PKPdf**	**01 45 22.0**	**-0.5**
CMMT	**Chiang Mai**	**164.62**	**35**	P		**PKPdf**	**01 45 23.0**	**+0.4**
	comp=Z,280nmcomp=Z,4.5nm,1.6s								
CM35	**Chiang Mai Arr**	**164.84**	**34**	P		**PKPdf**	**01 45 23.0**	**+0.3**
CM15	**Chiang Mai Arr**	**164.89**	**36**	P		**PKPdf**	**01 45 25.0**	**+2.2**
	comp=Z,505nmcomp=Z,5.8nm,0.4s								
CMAR	**Chiang Mai Arr**	**164.90**	**35**	PKP		**PKPdf**	**01 45 22.8**	**0.0**
	comp=Z,5.6nm,1.1s,baz=306,slow=2.1,SNR=23								
CMAR				PKPab		**PKPab**	**01 46 22.8**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=309,slow=9.0,SNR=6.4								
CMAR				pPKP		**pPKPdf**	**01 47 39.8**	**0.0**
	comp=Z,1.3nm,0.7s,baz=293,slow=2.1,SNR=2.1								
CMAR				pPKPab		**pPKPab**	**01 48 31.1**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=327,slow=5.3,SNR=2.7								
CMAR	**Chiang Mai Arr**	**164.90**	**35**	PKPdf		**PKPdf**	**01 45 22.0**	**-0.8**
CM13	**Chiang Mai Arr**	**164.91**	**36**	P		**PKPdf**	**01 45 23.9**	**+1.0**
	comp=Z,6.4nm,1.3s								
CM02	**Chiang Mai Arr**	**164.92**	**35**	P		**PKPdf**	**01 45 23.9**	**+1.1**
	comp=Z,76nmcomp=Z,7.5nm,1.0s								
CM01	**Chiang Mai Arr**	**164.94**	**35**	P		**PKPdf**	**01 45 24.0**	**+1.2**
	comp=Z,7.3nm,1.4s								
CM09	**Chiang Mai Arr**	**164.94**	**35**	P		**PKPdf**	**01 45 24.0**	**+1.2**
	comp=Z,80nmcomp=Z,7.2nm,1.3s								
CM05	**Chiang Mai Arr**	**164.94**	**36**	P		**PKPdf**	**01 45 23.0**	**+0.2**
	comp=Z,61nmcomp=Z,5.1nm,1.4s								
CM04	**Chiang Mai Arr**	**164.96**	**35**	P		**PKPdf**	**01 45 23.0**	**+0.1**
	comp=Z,8.4nm,1.2s								
PHRA	**Phrae**	**165.57**	**31**	P		**PKPdf**	**01 45 24.0**	**+0.7**
SUKH	**Sukhothai**	**166.07**	**36**	P		**PKPdf**	**01 45 25.2**	**+1.5**
	comp=Z,19nm,1.1s								
UTTA	**Uttaradit**	**166.37**	**32**	P		**PK

JSD	**Sado**	**17.43**	**344**	P	**P**	**01 52 59.4**	**0.0**
JSD				IAmb	IAmb	01 53 00.8	
	comp=Z,36nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**21.17**	**90**	T	T	02 16 23.6	
	baz=279,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**21.17**	**90**	T	T	02 16 25.2	
	baz=279,slow=75,SNR=8.8						
H11N3	**WAKE ISLAND Hy**	**21.18**	**90**	T	T	02 16 24.7	
	baz=279,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**21.19**	**94**	T	T	02 16 25.0	
	baz=282,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy**	**21.20**	**94**	T	T	02 16 25.8	
	baz=282,slow=75,SNR=34						
H11S2	**WAKE ISLAND Hy**	**21.20**	**94**	T	T	02 16 27.5	
	baz=282,slow=75,SNR=22						
KSRS	**Korea Array**	**21.44**	**322**	P	**P**	**01 53 43.9**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=149,slow=8.8,SNR=4.6						
KSRS				LR	LR	02 00 38.4	
	comp=Z,28nm,20.0s,baz=145,slow=33						
USRK	**Ussuriysk Ar.**	**24.97**	**339**	P	**P**	**01 54 18.3**	**0.0**
	comp=Z,2.0nm,0.7s,baz=153,slow=9.7,SNR=4.6						
USRK	**Ussuriysk Ar.**	**24.97**	**339**	P	**P**	**01 54 19.0**	**+0.7**
SIJI	**Sorong**	**25.54**	**212**	LR	LR	02 01 58.8	
	comp=Z,48nm,19.5s,baz=36,slow=31						
KLR	**Kul'dur**	**29.56**	**343**	P	**P**	**01 55 00.8**	**+1.3**
	comp=Z,4.1nm,0.8s,baz=148,slow=7.7,SNR=14						
PETK	**Petropavlovsk-**	**33.30**	**15**	LR	LR	02 11 47.0	
	comp=Z,8.0nm,18.2s,baz=111,slow=41						
BATI	**Baumata**	**37.38**	**215**	P	**P**	**01 56 05.7**	**-2.2**
	comp=Z,28nm,0.3s,baz=76,slow=18,SNR=8.1						
SONM	**Songino Array**	**40.29**	**320**	P	**P**	**01 56 32.8**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=132,slow=6.4,SNR=2.0						
SONM	**Songino Array**	**40.29**	**320**	P	**P**	**01 56 32.3**	**+0.3**
WRA	**Warramunga Arr**	**42.21**	**194**	P	**P**	**01 56 48.3**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=13,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**45.90**	**193**	P	**P**	**01 57 18.2**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=19,slow=10,SNR=5.7						
EIDS	**Eidsvold**	**46.91**	**172**	P	**P**	**01 57 23.9**	**-1.4**
MKAR	**Makanchi Array**	**55.72**	**313**	P	**P**	**01 58 32.0**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=97,slow=8.7,SNR=5.0						
MKAR	**Makanchi Array**	**55.72**	**313**	P	**P**	**01 58 32.1**	**+0.9**
KURBB	**Kurchatov Arra**	**58.51**	**317**	P	**P**	**01 58 50.6**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=95,slow=7.7,SNR=11						
ILAR	**Eielson Array**	**61.84**	**27**	P	**P**	**01 59 11.8**	**-1.6**
	comp=Z,0.4nm,1.0s,baz=262,slow=6.3,SNR=2.2						
ILAR	**Eielson Array**	**61.84**	**27**	P	**P**	**01 59 13.1**	**-0.3**
CTGM	**Chitina Glacie**	**63.95**	**32**	P	**P**	**01 59 27.8**	**+0.1**
CTGM				IAmb	IAmb	01 59 45.9	
	comp=Z,7.8nm,1.4s						
KKAR	**Karatay Array**	**64.11**	**309**	P	**P**	**01 59 29.8**	**+0.9**
ABKAR	**Akbulak array**	**70.54**	**316**	P	**P**	**02 00 10.2**	**+0.8**
ARCES	**ARCESS Array B**	**79.58**	**342**	P	**P**	**02 01 02.4**	**+1.1**
	comp=Z,1.9nm,0.8s,baz=74,slow=9.6,SNR=4.2						
NVAR	**Mina Array Bea**	**82.49**	**52**	P	**P**	**02 01 18.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=271,slow=6.6,SNR=4.2						
NVAR	**Mina Array Bea**	**82.49**	**52**	P	**P**	**02 01 18.4**	**+0.8**
FINES	**FINESS Array B**	**83.94**	**335**	P	**P**	**02 01 26.5**	**+2.1**
	comp=Z,2.1nm,1.0s,baz=80,slow=7.6,SNR=3.3						
FINES	**FINESS Array B**	**83.94**	**335**	P	**P**	**02 01 26.6**	**+2.3**

*DDA **26** 01:50:59.9, 41.25N×43.85E, h6km±2km, ML2.2*
*TIF **26** 01:50:59.6, 41.29N×43.90E, h16km*
*NORS **26** 01:51:01.0±0.0, 41.50N×43.95E, h1km, MPVA3.4*
ISC 26 01:51:00.1±0.9, 41.26N±0.02×43.91E±0.02, h13km±7km, n30, σ0.80/58, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DMNI	**Dmanisi**	**0.22**	**73**	P		**Pg**	**Pg**	**01 51 04.9**	**-0.1**
DMNI				S		Sg	Sg	01 51 08.1	-0.3
BGD	**Bogdanovka**	**0.23**	**270**	P		**Pg**	**Pg**	**01 51 05.6**	**+0.3**
BGD				S		Sg	Sg	01 51 09.3	+0.6
AKH	**Akhalkalaki**	**0.34**	**295**	P		**Pg**	**Pg**	**01 51 07.2**	**0.0**
AKH				S		Sg	Sg	01 51 12.0	+0.1
BKRG	**Bakuriani**	**0.57**	**330**	P		**Pg**	**Pg**	**01 51 11.3**	**-0.1**
BKRG				S		Sb	Sb	01 51 19.5	-0.8
EAK	**Akyaka**	**0.62**	**202**	*i* P		**Pg**	**Pg**	**01 51 11.2**	**-1.1**
EAK				*i* S		Sg	Sg	01 51 20.9	+0.4
BTNK	**Botanikuri**	**0.79**	**58**	P		**Pb**	**Pb**	**01 51 15.8**	**+0.1**
SEAG	**Tbilisi Sea**	**0.84**	**53**	P		**Pg**	**Pg**	**01 51 15.7**	**-0.6**
SEAG				S		Sb	Sb	01 51 27.4	-0.3
EPOS	**Posof**	**0.92**	**285**	*i* P		**Pg**	**Pg**	**01 51 16.9**	**-1.1**
DIGO	**Kars**	**0.94**	**206**	*i* P		**Pg**	**Pg**	**01 51 17.5**	**-0.8**
DIGO				*i* S		Sg	Sg	**01 51 31.0**	**+0.4**
DIGO				IAML				01 51 33.0	
	comp=E,65nm,0.3s								
DIGO				IAML				01 51 36.0	
	comp=N,62nm,0.3s								
ABS	**Abastumani**	**0.96**	**301**	P		**Pg**	**Pg**	**01 51 18.1**	**-0.5**
ABS				S		Sb	Sb	01 51 31.3	-0.1
GUDG	**Gudauri**	**1.27**	**19**	P		**Pg**	**Pg**	**01 51 23.5**	**-1.2**
GUDG				S		Sb	Sb	01 51 40.8	+0.3
GUDG	**Gudauri**	**1.27**	**19**	*i* Pg		**Pg**	**Pg**	**01 51 23.4**	**-1.2**
GUDG				*e*Sg		Sb	Sb	01 51 40.8	+0.3
TKB	**Tkibuli**	**1.28**	**328**	P		**Pg**	**Pg**	**01 51 24.0**	**-0.8**
TKB				S		Sb	Sb	01 51 41.1	+0.5
ONI	**Oni**	**1.37**	**346**	P		**Pn**	**Pn**	**01 51 25.1**	**0.0**
ONI				S		Sn	Sn	01 51 43.4	+0.3
ONI	**Oni**	**1.37**	**346**	*e*Pg		**Pn**	**Pn**	**01 51 25.3**	**+0.2**
ONI				*e*Sg		Sn	Sn	01 51 43.4	+0.3
IGDI	**IGDIR**	**1.40**	**175**	*i* P		**Pn**	**Pn**	**01 51 25.6**	**+0.1**
IGDI				*i* S		Sb	Sb	01 51 43.9	-0.1
DAGI	**Agillar**	**1.52**	**264**	*i* P		**Pn**	**Pn**	**01 51 26.5**	**-0.6**
DAGI				*i* S		Sg	Sg	01 51 48.9	-0.1
ZEI	**Tsey**	**1.52**	**360**	*e*Pg		**Pb**	**Pb**	**01 51 28.2**	**-0.1**
ZEI				*e*Sg		Sg	Sg	01 51 48.8	-0.4
LACR	**Lac**	**1.59**	**10**	*e*Pg		**Pb**	**Pb**	**01 51 29.0**	**-0.4**
LACR				*e*Sg		Sg	Sg	01 51 50.1	-1.2
DIGR	**Digorskoe uzhe**	**1.65**	**352**	*i* Pg		**Pg**	**Pg**	**01 51 31.2**	**-0.6**
DIGR				*e*Sg		Sg	Sg	01 51 53.1	-0.2
DDEM	**Demirkent**	**1.67**	**258**	*i* P		**Pb**	**Pb**	**01 51 30.6**	**-0.2**
DDEM				*i* S		Sn	Sn	**01 51 31.3**	**+0.7**
DDEM				IAML				01 51 58.0	
	comp=E,34nm,0.4s								
DBAD	**Bademkaya**	**1.69**	**262**	*i* P		**Pn**	**Pn**	**01 51 30.5**	**+1.0**
DBAD				*i* S		Sg	Sg	01 51 53.6	-0.9
DBOC	**Borcka**	**1.69**	**273**	*i* P		**Pn**	**Pn**	**01 51 29.7**	**+0.3**
DBOC				*i* S		Sn	Sn	**01 51 52.2**	**+1.2**
KORR	**Kora**	**1.82**	**4**	*e*Pg		**Pg**	**Pg**	**01 51 34.8**	**-0.3**
KORR				*e*Sg		Sg	Sg	01 51 59.7	+0.9
KMGR	**Komgaron**	**1.93**	**21**	*e*Pg		**Pg**	**Pg**	**01 51 36.1**	**-1.0**
KMGR				*e*Sg		Sg	Sg	01 52 03.5	+1.3
LSNR	**Lesken**	**2.01**	**358**	*e*Pg		**Pg**	**Pg**	**01 51 37.7**	**-1.0**
LSNR				*e*Sg		Sg	Sg	01 52 03.9	-1.0
BTKR	**Batakoyurt**	**2.16**	**12**	*e*Pg		**Pg**	**Pg**	**01 51 40.9**	**-0.7**
BTKR				*e*Sg		Sg	Sg	01 52 11.6	+2.0
BTLR	**Botlikh**	**2.22**	**50**	*e*Pg		**Pb**	**Pb**	**01 51 40.5**	**+0.4**
BTLR				*e*Sg		Sb	Sb	01 52 09.4	+1.8
DVE	**Vedeno**	**2.36**	**44**	*e*Pg		**Pb**	**Pb**	**01 51 41.7**	**-0.9**
DVE				*e*Sg		Sg	Sg	01 52 14.0	-2.0
GROC	**Groznyy**	**2.39**	**35**	*e*Pg		**Pg**	**Pg**	**01 51 46.2**	**+0.3**
GROC				*e*Sg		Sg	Sg	**01 52 17.5**	**+0.5**

IDC 26 01:52:16.9±23.0, 2.41S×101.28E, h136km±205km, mb3.2/4, mb1 3.3/4, mb1mx2.9/48, mbtmp3.6/4, Error ellipse: s-maj=164.5km s-min=26.1km az=56.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**36.68**	**121**	P		P	P	01 59 10.8	-0.2
	0.3nm,0.4s,baz=302,slow=9.0,SNR=8.8								
SONM	**Songino Array**	**50.24**	**4**	P		P	P	02 00 59.9	+0.6
	0.4nm,0.5s,baz=184,slow=8.8,SNR=3.6								
MKAR	**Makanchi Array**	**51.77**	**343**	P		P	P	02 01 09.4	-1.2
	0.2nm,0.3s,baz=157,slow=9.2,SNR=4.5								
ZALV	**Zalesovo Beam**	**57.81**	**349**	P		P	P	02 01 54.7	+0.8
	0.5nm,0.3s,baz=182,slow=6.6,SNR=1.9								
TXAR	**Lajitas Array**	**144.23**	**39**	PKP		PKPbc		02 11 36.7	+0.5
	0.3nm,0.8s,baz=246,slow=1.8,SNR=2.3								

ATH 26 01:53:17.6, 38.09N×20.43E, h14km±3km, ML1.2/1, Error ellipse: s-maj=4.0km s-min=1.7km az=28.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARGA	**Argostoli. Kep**	**0.10**	**24**	P		Pg		01 53 20.8	0.0
ARGA				S		Sg		01 53 22.9	0.0
LXRA	**Lixouri, Kepha**	**0.11**	**3**	P		Pg		01 53 21.2	+0.2
KEF3	**Kipouria, Keph**	**0.13**	**331**	P		Pg		01 53 21.3	+0.1
KEF3				S		Sg		01 53 24.0	+0.4
VLS	**Valsamata**	**0.15**	**55**	P		Pg		01 53 21.5	-0.1
VLS				S		Sg		01 53 24.3	+0.1
VLS				AML		AML		01 53 24.6	
	comp=N,139μm,0.1s								
VLS				AML		AML		01 53 24.7	
	comp=E,326μm,0.1s								
KEF4	**Livadi, Kephal**	**0.17**	**359**	P		Pg		01 53 21.8	0.0
KEF5	**Kardakata, Kep**	**0.19**	**9**	P		Pg		01 53 22.1	0.0
KEF5				S		Sg		01 53 25.3	+0.2
VLMS	**Volimes, Zakyn**	**0.28**	**139**	P		Pg		01 53 23.4	-0.2
FSK	**Fiskardo**	**0.38**	**16**	P		Pg		01 53 25.1	-0.3

ATH 26 01:53:49.4, 38.26N×22.12E, h9km±4km, ML0.9/2, Error ellipse: s-maj=4.3km s-min=0.9km az=8.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.11**	**341**	P		P	Pg	01 53 51.9	-0.2
TRIZ				S		S	Sg	01 53 53.9	0.0
KALE	**Kalithea**	**0.13**	**7**	P		P	Pg	01 53 52.4	0.0
KALE				S		S	Sg	01 53 54.8	+0.3
KALE				AML		AML	AML	01 53 55.5	
	comp=N,161μm,0.3s								
KALE				AML		AML	AML	01 53 55.6	
	comp=E,128μm,0.2s								
SERG	**Sergoula**	**0.16**	**342**	P		P	Pg	01 53 52.9	0.0
SERG				S		S	Sg	01 53 55.4	+0.1
SERG				AML		AML	AML	01 53 55.8	
	comp=E,146μm,0.2s								
SERG				AML		AML	AML	01 53 55.9	
	comp=N,156μm,0.1s								
KLV	**Kalavryta, Ach**	**0.22**	**173**	P		P	Pg	01 53 54.1	+0.2
KLV				S		S	Sg	01 53 57.2	+0.3
EFP	**Efpalio**	**0.24**	**315**	P		P	Pg	01 53 54.2	0.0
EFP				S		S	Sg	01 53 58.3	+0.8
DSF	**Desfina**	**0.35**	**65**	P		P	Pg	01 53 56.5	0.0
ANX	**Ano Chora**	**0.37**	**335**	P		P	Pg	01 53 56.5	-0.2
GUR	**Goura**	**0.37**	**151**	P		P	Pg	01 53 56.6	-0.1
DRO	**Drossia**	**0.45**	**226**	P		P	Pg	01 53 58.0	-0.2

*ROM **26** 02:01:22.9±0.2, 41.70N±0.01×16.11E±0.01, h4km±1km, ML2.5/26, Error ellipse: s-maj=1.4km s-min=0.5km az=38.0*
ISC 26 02:01:23.4±1.0, 41.68N±0.02×16.11E±0.02, h7km±8km, n47, σ0.62/59, 2C-1D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSAG	**Monte S. Angel**	**0.15**	**284**	⇓P		**Pg**		**02 01 26.8**	**+0.3**
MSAG				S		**Sg**		**02 01 29.1**	**+0.3**
MSAG				AML		AML			
	comp=E,3005μm,0.6s								
MSAG				AML		AML			
	comp=N,6295μm,0.4s								
MSAG				AML		AML			
	comp=E,3295μm,0.6s								
MSAG				AML		AML			
	comp=E,3010μm,0.6s								
MSAG				AML		AML			
	comp=N,6535μm,0.5s								
SGRT	**San Giovanni R**	**0.28**	**286**	P		**Pg**		**02 01 28.9**	**0.0**
SGRT				S		**Sg**		**02 01 33.0**	**+0.3**
SGRT				AML		AML			
	comp=E,2280μm,0.2s								
SGRT				AML		AML			
	comp=N,1705μm,1.4s								
MRVN	**Minervino Murg**	**0.62**	**174**	P		**Pg**		**02 01 35.4**	**+0.1**
MRVN				S		**Sb**		**02 01 45.1**	**-0.3**
MRVN				AML		AML			
	comp=E,918μm,0.3s								
MRVN				AML		AML			
	comp=N,636μm,0.3s								
MRVN				AML		AML			
	comp=E,917μm,0.3s								
TREM	**Isole Tremiti**	**0.63**	**315**	P		**Pg**		**02 01 35.4**	**-0.1**
TREM				S		**Sb**		**02 01 45.1**	**-0.6**
TREM				AML		AML			
	comp=N,744μm,0.9s								
TREM				AML		AML			
	comp=E,392μm,0.2s								
MELA	**Melanico ??? S**	**0.73**	**273**	P		**Pg**		**02 01 36.9**	**-0.6**
MELA				AML		AML			
	comp=N,1006μm,0.3s								
MELA				AML		AML			
	comp=E,805μm,0.4s								
MELA				AML		AML			
	comp=N,1004μm,0.3s								
MELA				AML		AML			
	comp=N,1008μm,0.3s								
MELA				AML		AML			
	comp=E,862μm,0.4s								
MELA				AML		AML			
	comp=E,804μm,0.4s								
MELA				AML		AML			
	comp=N,1050μm,0.3s								
PALZ	**Palazzo San Ge**	**0.74**	**189**	P		**Pg**		**02 01 37.7**	**+0.2**
PALZ				S		**Sb**		**02 01 48.7**	**-0.2**
PALZ				AML		AML			
	comp=E,279μm,1.1s								
PALZ				AML		AML			
	comp=N,323μm,1.0s								
PALZ				AML		AML			
	comp=E,278μm,1.1s								
PALZ				AML		AML			
	comp=N,322μm,1.0s								
MOCO	**Biccari - m.te**	**0.78**	**247**	P		**Pb**		**02 01 38.7**	**-0.5**
SGTA	**Sant Agata di**	**0.78**	**226**	P		**Pg**		**02 01 38.4**	**+0.1**
SGTA				AML		AML			
	comp=N,230μm,0.4s								
SGTA				AML		AML			
	comp=E,200μm,0.3s								
SGTA				AML		AML			
	comp=E,200μm,0.3s								
VULT	**Monte Vulture**	**0.81**	**207**	P		**Pb**		**02 01 39.5**	**-0.3**
VULT				AML		AML			
	comp=N,538μm,0.5s								
VULT				AML		AML			
	comp=E,450μm,0.7s								
VULT				AML		AML			
	comp=N,492μm,0.6s								
VULT				AML		AML			
	comp=E,410μm,0.7s								
BAI	**Bari**	**0.81**	**134**	⇑*i* Pg		**Pb**		**02 01 40.1**	**+0.3**
BAI				Sg		**Sn**		**02 01 53.4**	**0.0**
AMUR	**Altamura**	**0.85**	**154**	P		**Pg**		**02 01 39.9**	**+0.1**
AMUR				S		**Sb**		**02 01 53.4**	**+1.2**
AMUR				AML		AML			
	comp=E,426μm,0.4s								
AMUR				AML		AML			
	comp=N,370μm,0.4s								
AMUR				AML		AML			
	comp=N,370μm,0.4s								
ACER	**Acerenza**	**0.90**	**188**	P		**Pb**		**02 01 41.2**	**-0.1**
ACER				S		**Sb**		**02 01 54.4**	**+1.0**
ACER				AML		AML			
	comp=N,426μm,0.7s								
ACER				AML		AML			
	comp=E,896μm,0.4s								
ACER				AML		AML			
	comp=N,412μm,0.7s								
ACER				AML		AML			
	comp=N,426μm,0.7s								
ACER				AML		AML			
	comp=N,412μm,0.7s								
ACER				AML		AML			
	comp=E,896μm,0.4s								
ACER				AML		AML			
	comp=E,828μm,0.4s								
CIGN	**Sant'Elia a Pi**	**0.90**	**269**	P		**Pb**		**02 01 41.3**	**0.0**
CIGN				S		**Sb**		**02 01 54.1**	**+0.7**
CIGN				AML		AML			
	comp=E,104μm,0.4s								
CIGN				AML		AML			
	comp=N,152μm,1.5s								
GATE	**Gambatesa**	**0.91**	**260**	P		**Pb**		**02 01 41.9**	**+0.4**
CAFE	**Carife**	**0.92**	**226**	P		**Pb**		**02 01 41.7**	**0.0**
CAFE				AML		AML			
	comp=E,170μm,0.7s								
CAFE				AML		AML			
	comp=N,106μm,1.4s								
CAFE				AML		AML			
	comp=E,170μm,0.7s								
CAFE				AML		AML			
	comp=N,106μm,1.4s								
SNAL	**S. Angelo Dei**	**1.01**	**222**	P		**Pg**		**02 01 42.5**	**-0.2**
SNAL				AML		AML			
	comp=E,117μm,1.2s								
SNAL				AML		AML			
	comp=N,156μm,0.8s								
MRB1	**Monte Rocchett**	**1.01**	**238**	P		**Pb**		**02 01 43.5**	**+0.2**
MRLC	**Muro Lucano**	**1.03**	**207**	P		**Pg**		**02 01 43.1**	**0.0**
MRLC				S		**Sb**		**02 01 58.4**	**+1.1**
MRLC				AML		AML			
	comp=E,170μm,0.9s								
MRLC				AML		AML			
	comp=N,120μm,0.7s								
MRLC				AML		AML			
	comp=E,165μm,0.8s								
MRLC				AML		AML			
	comp=N,140μm,0.7s								
SACR	**S. Croce Del S**	**1.09**	**256**	P		**Pb**		**02 01 44.3**	**-0.2**
MIGL	**Miglionico**	**1.10**	**167**	P		**Pb**		**02 01 44.6**	**-0.1**
MIGL				AML		AML			
	comp=E,668μm,0.5s								
MIGL				AML		AML			
	comp=N,624μm,0.3s								
MATE	**Matera**	**1.12**	**156**	P		**Pb**		**02 01 44.9**	**-0.1**
MATE				S		**Sb**		**02 01 59.9**	**+0.1**
MATE				AML		AML			
	comp=N,276μm,0.3s								
MATE				AML		AML			
	comp=E,270μm,0.8s								
MCRV	**Calabrutti - M**	**1.14**	**219**	P		**Pg**		**02 01 44.1**	**-1.1**
BSSO	**Busso**	**1.14**	**264**	P		**Pb**		**02 01 45.1**	**-0.3**
BSSO				AML		AML			
	comp=E,134μm,1.2s								
BSSO				AML		AML			
	comp=N,108μm,0.8s								
BSSO				AML		AML			
	comp=E,46μm,1.3s								
BSSO				AML		AML			
	comp=N,53μm,0.8s								
NOCI	**Noci**	**1.14**	**140**	P		**Pg**		**02 01 45.1**	**-0.2**
NOCI				S		**Sb**		**02 02 00.6**	**+0.1**
NOCI				AML		AML			
	comp=E,212μm,1.0s								
NOCI				AML		AML			
	comp=N,330μm,1.5s								
NOCI				AML		AML			
	comp=E,212μm,1.0s								
TRIV	**Trivento**	**1.17**	**275**	P		**Pn**		**02 01 46.1**	**-0.1**
LTRZ	**Laterza**	**1.20**	**153**	P		**Pg**		**02 01 46.2**	**-0.2**
LTRZ				S		**Sn**		**02 02 03.7**	**+0.7**
VITU	**Vitulano (BN)**	**1.21**	**247**	P		**Pg**		**02 01 46.0**	**-0.6**
VITU				AML		AML			
	comp=N,134μm,0.7s								
VITU				AML		AML			
	comp=N,134μm,0.7s								
VITU				AML		AML			
	comp=E,114μm,0.4s								
PTRJ	**Pietraroja**	**1.22**	**256**	P		**Pg**		**02 01 46.1**	**-0.8**
LSTV	**Lastovo**	**1.24**	**28**	*e*Pn		**Pn**		**02 01 47.4**	**+0.4**
LSTV				Sg		**Sn**		**02 02 06.1**	**+2.1**
SGG	**Gregorio Mates**	**1.33**	**258**	P		**Pn**		**02 01 48.0**	**-0.3**
CDRU	**Civita di Ruta**	**1.33**	**207**	P		**Pn**		**02 01 46.9**	**-1.5**
CDRU				AML		AML			
	comp=E,62μm,0.4s								
CDRU				AML		AML			
	comp=N,32μm,0.4s								
CDRU				AML		AML			
	comp=E,62μm,0.4s								
CRAC	**Craco**	**1.33**	**169**	P		**Pg**		**02 01 49.0**	**+0.1**
CRAC				AML		AML			
	comp=E,359μm,1.4s								
CRAC				AML		AML			
	comp=N,210μm,0.3s								
CRAC				AML		AML			
	comp=E,360μm,1.4s								
SLCN	**Sala Consilina**	**1.33**	**196**	P		**Pn**		**02 01 48.2**	**-0.2**
MCEL	**Monticello**	**1.37**	**190**	P		**Pn**		**02 01 48.7**	**-0.2**
MCEL				AML		AML			
	comp=E,93μm,0.8s								
MCEL				AML		AML			
	comp=N,110μm,0.6s								
MIDA	**Miranda**	**1.39**	**269**	P		**Pn**		**02 01 49.2**	**0.0**
MIDA				AML		AML			
	comp=E,125μm,1.0s								
MIDA				AML		AML			
	comp=N,78μm,1.5s								
MIDA				AML		AML			
	comp=E,124μm,1.0s								
MTSN	**Montesano sull**	**1.43**	**191**	P		**Pn**		**02 01 49.4**	**-0.4**
TAR1	**Taranto**	**1.45**	**142**	⇑*i* Pg		**Pb**		**02 01 50.7**	**0.0**
RNI2	**Rionero Sannit**	**1.46**	**272**	P		**Pn**		**02 01 50.2**	**0.0**
MGR	**Morigerati**	**1.59**	**195**	P		**Pn**		**02 01 51.0**	**-0.9**
INTR	**Introdacqua**	**1.68**	**282**	P		**Pn**		**02 01 53.1**	**-0.1**
STON	**Ston**	**1.68**	**44**	AML		AML			
	comp=E,31μm,1.3s								
STON				AML		AML			
	comp=N,25μm,0.9s								
STON	**Ston**	**1.68**	**44**	*e*Pn		**Pg**		**02 01 54.5**	**-1.1**
STON				Sn		**Sg**		**02 02 16.1**	**-1.2**
RICI	**Ricice**	**1.97**	**22**	Sn		**Sn**		**02 02 22.1**	**0.0**
MORI	**Morici**	**2.21**	**352**	*e*Pn		**Pn**		**02 02 01.2**	**+0.9**
RM33	**Pellescritta (**	**2.31**	**292**	AML		AML			
	comp=E,128μm,1.4s								
RM33				AML		AML			
	comp=N,186μm,0.5s								
KIJV	**Kijevo**	**2.34**	**5**	Sn		**Sn**		**02 02 30.7**	**-0.5**
NRCA	**Norcia**	**2.50**	**299**	AML		AML			
	comp=E,30μm,0.7s								
NRCA				AML		AML			
	comp=N,32μm,0.5s								

*VAO **26** 02:20:54.6±1.0, 16.24S×74.71W, h10km, mb4.2*
*IDC **26** 02:20:55.7±4.2, 17.30S×74.45W, h0km, mb4.0/3, mb1 4.1/5, mb1mx3.8/31, mbtmp4.1/5, ML4.1/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/25, Error ellipse: s-maj=114.2km s-min=42.6km az=35.0*
*ARE **26** 02:21:05±1.4, 16.66S±0.10×73.6W±0.1, h37km±10km, Error ellipse: s-maj=17.1km s-min=10.9km az=52.0*
*NEIC **26** 02:21:07.3±1.9, 16.55S±0.10×73.69W±0.09, h35km±2km, ML4.3(ARE), Error ellipse: s-maj=19.7km s-min=10.6km az=38.0*
ISC 26 02:21:07.3±0.8, 16.59S±0.07×73.63W±0.08, h39km, n61, σ2.915/60, mb4.1/3, MS3.3/4, 1C, Near coast of Peru

| Code | Station Name | Δ° | AZ° | Phase | ID | Op

LVC				Sn	**Sn**	02 24 16.5	**-1.0**		
	4.2nm,0.3s,baz=82,slow=23,SNR=12								
LVC				LR	LR	02 24 31.2			
	comp=Z,14nm,18.1s,baz=307,slow=29								
LVC	**Limon Verde**	**7.46**	**144**	Pn	**Pn**	02 22 56.0	**+2.1**		
LVC	**Limon Verde**	**7.46**	**144**	*e*P	**Pn**	02 22 56.6	**+2.7**		
PB10	**IPOC Station P**	**7.47**	**158**	Pn	**Pn**	02 22 54.5	**+0.7**		
PB14	**IPOC Station P**	**8.54**	**160**	Pn	**Pn**	02 23 07.9	**-0.9**		
CZSB	**Cruzeiro do Su**	**8.85**	**6**	*e*P	Pn	02 23 00.4	-12		
GO02	**Mina Guanaco**	**9.32**	**157**	Pn	**Pn**	02 23 21.1	**+1.6**		
ETMB	**Extrema**	**9.87**	**48**	*e*P	**Pn**	02 23 25.7	**-1.0**		
ACO1	**Pan de Azucar**	**9.92**	**164**	Pn	**Pn**	02 23 28.1	**+0.7**		
ATAH	**Atahualpa**	**10.49**	**333**	Pn	**Pn**	02 23 31.7	**-3.9**		
	0.3nm,0.3s,baz=274,slow=21,SNR=1.8								
ATAH				Sn	**Sn**	02 25 31.3	**-0.8**		
	0.2nm,0.3s,baz=270,slow=20,SNR=1.3								
ATAH				LR	LR	02 28 09.7			
	comp=Z,36nm,21.6s,baz=140,slow=40								
AC04	**Llanos de Chal**	**11.80**	**169**	Pn	**Pn**	02 23 57.1	**+4.1**		
SIV	**San Ignacio**	**12.07**	**89**	Pn	**Pn**	02 23 56.2	**-0.7**		
	2.6nm,0.3s,baz=276,slow=11,SNR=43								
SIV				Sn	**Sn**	02 26 11.7	**+1.4**		
	baz=16,slow=22,SNR=1.0								
SIV				LR	LR	02 29 08.3			
	comp=Z,186nm,20.1s,baz=286,slow=38								
SAML	**Samuel**	**12.70**	**55**	Pn	**Pn**	02 24 03.5	**-2.0**		
SAML	**Samuel**	**12.70**	**55**	*e*P	**Pn**	02 24 04.5	**-1.0**		
VILB	**Vilhena**	**13.48**	**76**	*e*P	**Pn**	02 24 18.4	**+2.2**		
H03N1	**Juan Fernandez**	**17.44**	**195**	T	T	02 43 35.2			
	baz=18,slow=73,SNR=3612								
H03N2	**Juan Fernandez**	**17.45**	**195**	T	T	02 43 34.0			
	baz=18,slow=73,SNR=2826								
H03N3	**Juan Fernandez**	**17.46**	**195**	T	T	02 43 33.2			
	baz=18,slow=73,SNR=2285								
CLDB	**Colider**	**18.23**	**74**	*e*P	**Pn**	02 25 19.6	**+2.2**		
NPGB	**Novo Progresso**	**20.23**	**64**	*e*P	**P**	02 25 39.0	**-0.2**		
ITQB	**Itaqui**	**20.31**	**133**	*e*P	**P**	02 25 42.4	**+2.3**		
ROSC	**El Rosal**	**21.30**	**358**	LR	LR	02 34 53.6			
	comp=Z,56nm,18.2s,baz=92,slow=38								
ITTB	**Itaituba**	**21.35**	**57**	*e*P	**P**	02 25 49.1	**-2.3**		
PTGB	**Pitanga**	**21.72**	**115**	*e*P	**P**	02 25 58.3	**+3.0**		
ITAB	**Concordia**	**22.55**	**122**	*e*P	**P**	02 26 06.8	**+2.7**		
FRTB	**Fartura**	**23.58**	**110**	*e*P	**P**	02 26 16.0	**+1.4**		
BB19B	**Bebedouro**	**24.16**	**105**	*e*P	**P**	02 26 19.9	**-0.2**		
IPMB	**Ipameri, GO**	**24.30**	**97**	*e*P	**P**	02 26 20.4	**-1.1**		
CNLB	**Canela**	**24.44**	**125**	*e*P	**P**	02 26 22.8	**+0.2**		
MCPB	**Macapa, AP**	**26.69**	**55**	*e*P	**P**	02 26 40.6	**-2.4**		
JANB	**Januaria**	**28.24**	**91**	*e*P	**P**	02 26 56.6	**-0.3**		
JTS	**Las Juntas de**	**28.96**	**336**	LR	LR	02 38 31.8			
	comp=Z,25nm,18.2s,baz=187,slow=36								
MDP	**Montagnes des**	**29.92**	**46**	LR	LR	02 39 56.6			
	comp=Z,112nm,18.2s,baz=248,slow=37								
DBIC	**Dimbokro**	**71.81**	**77**	P	**P**	**02 32 25.6**	**-0.9**		
	2.5nm,0.8s,baz=271,slow=9.6,SNR=3.8								
DBIC				LR	LR	03 03 39.6			
	comp=Z,32nm,18.0s,baz=276,slow=35								
TORD	**Torodi Ar. Bea**	**80.07**	**73**	P	**P**	**02 33 13.1**	**-0.5**		
	1.0nm,0.4s,baz=267,slow=5.1,SNR=14								
ESDC	**Sonseca Array**	**85.60**	**47**	P	**P**	**02 33 42.6**	**+0.7**		
	0.3nm,0.8s,baz=275,slow=6.3,SNR=2.6								

IDC 26 02:24:31.2±7.4,**21.62N**×**145.79E,h0**km,**mb3.5**/4,
mb1 3.6/4,**mb1mx3.3**/42,**mbtmp3.6**/4,**Error ellipse:**
s-maj=271.6km s-min=31.8km az=76.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11N1	**WAKE ISLAND Hy**	**19.84**	**92**	T	T	02 48 06.7	
	baz=279,slow=75,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**19.84**	**92**	T	T	02 48 09.2	
	baz=279,slow=75,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**19.86**	**92**	T	T	02 48 10.1	
	baz=279,slow=75,SNR=4.4						
H11S3	**WAKE ISLAND Hy**	**19.88**	**95**	T	T	02 48 04.9	
	baz=283,slow=74,SNR=23						
H11S1	**WAKE ISLAND Hy**	**19.89**	**95**	T	T	02 48 07.7	
	baz=283,slow=74,SNR=19						
H11S2	**WAKE ISLAND Hy**	**19.89**	**95**	T	T	02 48 08.6	
	baz=283,slow=74,SNR=9.7						
KSRS	**Korea Array**	**22.09**	**320**	P	P	02 29 28.9	+1.0
	0.7nm,0.4s,baz=143,slow=9.1,SNR=6.1						
WRA	**Warramunga Arr**	**42.79**	**196**	P	P	02 32 30.8	0.0
	0.4nm,1.0s,baz=17,slow=8.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**55.78**	**321**	P	P	02 34 09.5	-0.3
	0.7nm,0.4s,baz=99,slow=7.7,SNR=3.6						
MKAR	**Makanchi Array**	**56.53**	**313**	P	P	02 34 14.9	-0.5
	0.4nm,0.7s,baz=82,slow=8.7,SNR=3.6						

*IDC **26** 02:38:25.6±0.7,12.˚03N×143.˚61E,h0km,mb4.2/14,*
mb1 4.4/14,mb1mx4.2/38,mbtmp4.1/14,MS3.1/5,
Ms1 3.1/5,ms1mx2.9/28,Error ellipse: s-maj=23.4km
s-min=15.4km az=109.0
*NEIC **26** 02:38:28.2±1.6,12.˚00N±0.˚09×143.˚6E±0.˚1,h16km±5km,*
mb4.6/31,Error ellipse: s-maj=15.5km s-min=11.8km
az=116.0

ISC 26 02:38:29.2±0.5,**11.99N**±0.˚07×**143.˚60E**±0.˚08,**h25**km,**n66,**
σ0.98/60,**mb4.5**/28,**MS3.0**/3,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.02**	**38**	Pn	**Pn**	**02 39 01.5**	**-0.2**
	37nm,0.3s,baz=25,slow=7.5,SNR=18						
GUMO				LR	LR	02 39 18.6	
	comp=Z,96nm,18.7s,baz=204,slow=27						
GUMO				Sn	**Sn**	**02 39 26.4**	**+0.2**
	122nm,0.3s,baz=178,slow=23,SNR=5.3						
GUMO	**Guam**	**2.02**	**38**	Pn	**Pn**	**02 39 01.3**	**-0.4**
GUMO				Sn	**Sn**	**02 39 25.8**	**-0.4**
JAY	**Jayapura**	**14.69**	**191**	LR	LR	02 47 00.3	
	comp=Z,92nm,18.0s,baz=174,slow=35						
PATS	**Pohnpei**	**15.39**	**108**	Pn	**Pn**	**02 42 03.3**	**-1.7**
KRVT	**Keravat (AS076**	**18.23**	**152**	LR	LR	02 48 35.2	
	comp=Z,40nm,18.7s,baz=315,slow=33						
H11N1	**WAKE ISLAND Hy**	**23.67**	**68**	T	T	03 08 27.9	
	baz=255,slow=75,SNR=24						
H11N2	**WAKE ISLAND Hy**	**23.68**	**68**	T	T	03 08 27.1	
	baz=255,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**23.69**	**68**	T	T	03 08 27.6	
	baz=255,slow=75,SNR=19						
YHNB	**Yeheng**	**24.53**	**304**	P	**P**	**02 43 44.5**	**-2.6**
YHNB				IAmb	IAmb	02 43 51.2	
	comp=Z,23nm,1.0s						
MJAR	**Matsushiro Arr**	**24.93**	**350**	LR	LR	02 51 10.4	
	comp=Z,78nm,20.3s,baz=135,slow=31						
WB0	**Warramunga Arr**	**32.83**	**196**	P	**P**	**02 45 00.9**	**-0.1**
WB0				IAmb	IAmb	02 45 10.7	
	comp=Z,10nm,1.3s						
WR0	**Warramunga Arr**	**32.97**	**196**	P	**P**	**02 45 02.5**	**+0.2**
WB2	**Warramunga Arr**	**33.01**	**196**	P	**P**	**02 45 02.7**	**+0.1**
WB2				IAmb	IAmb	02 45 03.7	
	comp=Z,6.4nm,1.1s						
WRA	**Warramunga Arr**	**33.01**	**196**	P	**P**	**02 45 02.8**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=19,slow=9.6,SNR=17						
WRA	**Warramunga Arr**	**33.01**	**196**	P	**P**	**02 45 02.4**	**-0.2**
ASAR	**Alice Springs**	**36.68**	**195**	P	**P**	**02 45 35.0**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=22,slow=11,SNR=9.1						
EIDS	**Eidsvold**	**37.84**	**169**	P	**P**	**02 45 43.5**	**-0.5**
DZM	**Mont Dzumac**	**40.60**	**146**	P	**P**	**02 46 08.7**	**+1.4**
DZM				IAmb	IAmb	02 46 21.5	
	comp=Z,21nm,1.3s						
CMAR	**Chiang Mai Arr**	**43.48**	**284**	P	**P**	**02 46 32.2**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=82,slow=5.9,SNR=6.4						
CMAR				LR	LR	03 03 10.8	
	comp=Z,22nm,21.1s,baz=162,slow=34						
CMAR	**Chiang Mai Arr**	**43.48**	**284**	P	**P**	**02 46 30.9**	**0.0**
STKA	**Stephens Creek**	**43.66**	**182**	P	**P**	**02 46 32.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=330,slow=7.4,SNR=3.8						
STKA				LR	LR	03 05 39.9	
	comp=Z,18nm,19.9s,baz=27,slow=37						
STKA	**Stephens Creek**	**43.66**	**182**	P	**P**	**02 46 31.9**	**-0.1**
FORT	**Forrest**	**45.07**	**199**	P	**P**	**02 46 43.1**	**-0.2**
BBOO	**Buckleboo**	**45.12**	**189**	P	**P**	**02 46 44.0**	**+0.3**
BBOO				IAmb	IAmb	02 47 00.5	
	comp=Z,15nm,1.3s						
KNTN	**Kanton**	**46.77**	**105**	P	**P**	**02 46 55.9**	**-1.1**
SONM	**Songino Array**	**47.34**	**326**	P	**P**	**02 47 00.6**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=144,slow=8.6,SNR=3.8						
SONM	**Songino Array**	**47.34**	**326**	P	**P**	**02 47 00.5**	**-0.7**
MK31	**Makanchi Array**	**61.79**	**317**	P	**P**	**02 48 46.4**	**+0.4**
MKAR	**Makanchi Array**	**61.79**	**317**	P	**P**	**02 48 46.5**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=97,slow=8.8,SNR=9.8						
MKAR	**Makanchi Array**	**61.79**	**317**	P	**P**	**02 48 46.1**	**+0.1**

ZALV	**Zalesovo Beam**	**62.21**	**325**	P	**P**	**02 48 48.4**	**-0.3**		
	comp=Z,1.3nm,0.3s,baz=119,slow=6.8,SNR=5.4								
ZALV	**Zalesovo Beam**	**62.21**	**325**	P	**P**	**02 48 48.1**	**-0.6**		
SII	**Sitkinak Islan**	**64.89**	**33**	P	**P**	**02 49 07.1**	**+0.7**		
KURK	**Kurchatov**	**65.01**	**321**	P	**P**	**02 49 07.5**	**+0.2**		
OHAK	**Old Harbor**	**65.55**	**32**	P	**P**	**02 49 11.1**	**+0.5**		
SVW2	**Sparrevohn**	**65.66**	**28**	P	**P**	**02 49 13.1**	**+1.9**		
SVW2				IAmb	IAmb	02 49 27.9			
	comp=Z,4.9nm,1.2s								
PPLA	**Purkeypile**	**67.77**	**26**	P	**P**	**02 49 24.7**	**-0.1**		
IMAR	**Indian Mountai**	**68.15**	**23**	P	**P**	**02 49 27.8**	**+0.8**		
TRF	**Thorofare Moun**	**68.75**	**26**	P	**P**	**02 49 30.4**	**-0.6**		
RND	**Reindeer**	**69.36**	**26**	P	**P**	**02 49 35.7**	**+1.0**		
RND				IAmb	IAmb	02 49 43.9			
	comp=Z,5.2nm,1.2s								
KKAR	**Karatay Array**	**69.57**	**312**	P	**P**	**02 49 37.1**	**+0.7**		
I23K	**Minto, Yukon-K**	**69.62**	**25**	P	**P**	**02 49 37.2**	**+1.1**		
I23K				IAmb	IAmb	02 49 41.6			
	comp=Z,6.4nm,1.3s								
DHY	**Denali Highway**	**69.93**	**27**	P	**P**	**02 49 39.6**	**+1.3**		
DHY				IAmb	IAmb	02 49 45.5			
	comp=Z,5.7nm,1.2s								
BRVK	**Borovoye**	**70.48**	**322**	P	**P**	**02 49 42.3**	**+0.6**		
BRVK				IAmb	IAmb	02 49 49.6			
	comp=Z,3.2nm,0.7s								
ILAR	**Eielson Array**	**70.54**	**25**	P	**P**	**02 49 40.7**	**-1.1**		
	comp=Z,2.1nm,0.5s,baz=250,slow=5.8,SNR=27								
ILAR	**Eielson Array**	**70.54**	**25**	P	**P**	**02 49 40.9**	**-1.0**		
RIDG	**Independent Ri**	**71.18**	**26**	P	**P**	**02 49 46.2**	**+0.4**		
RIDG				IAmb	IAmb	02 50 02.3			
	comp=Z,5.1nm,1.0s								
DOT	**Dot Lake**	**71.51**	**27**	P	**P**	**02 49 48.0**	**+0.3**		
DOT				IAmb	IAmb	02 49 51.5			
	comp=Z,5.7nm,0.7s								
BMAR	**Burnt Mountain**	**72.05**	**23**	P	**P**	**02 49 52.5**	**+1.5**		
BCAR	**Beaver Creek A**	**72.43**	**27**	P	**P**	**02 49 53.9**	**+0.6**		
DAWY	**Dawson**	**73.62**	**27**	P	**P**	**02 50 01.5**	**+1.1**		
INK	**Inuvik**	**76.31**	**22**	P	**P**	**02 50 16.2**	**+0.5**		
INK				IAmb	IAmb	02 50 19.7			
	comp=Z,5.3nm,0.8s								
ABKAR	**Akbulak array**	**76.89**	**318**	P	**P**	**02 50 19.5**	**+0.1**		
C36M	**Paulatuk**	**79.70**	**21**	P	**P**	**02 50 34.8**	**+0.3**		
C36M				IAmb	IAmb	02 50 37.9			
	comp=Z,6.1nm,0.9s								
HUMO	**Hull Mountain**	**84.50**	**48**	P	**P**	**02 51 02.1**	**+1.8**		
HUMO				IAmb	IAmb	02 51 03.3			
	comp=Z,5.1nm,0.9s								
YKA	**Yellowknife Ar**	**84.84**	**27**	P	**P**	**02 51 02.2**	**+0.7**		
	comp=Z,1.3nm,0.6s,baz=286,slow=4.2,SNR=9.4								
ARCES	**ARCESS Array B**	**88.22**	**342**	P	**P**	**02 51 17.4**	**-0.5**		
	comp=Z,1.1nm,0.4s,baz=79,slow=6.7,SNR=17								
NVAR	**Mina Array Bea**	**88.89**	**51**	P	**P**	**02 51 24.1**	**+2.0**		
	comp=Z,3.7nm,0.7s,baz=267,slow=5.3,SNR=39								
NVAR	**Mina Array Bea**	**88.89**	**51**	P	**P**	**02 51 24.2**	**+2.1**		
FINES	**FINESS Array B**	**92.08**	**335**	P	**P**	**02 51 34.8**	**-1.3**		
	comp=Z,1.2nm,0.4s,baz=76,slow=4.2,SNR=12								
FINES	**FINESS Array B**	**92.08**	**335**	P	**P**	**02 51 35.1**	**-1.0**		
PDAR	**Pinedale Array**	**93.97**	**45**	P	**P**	**02 51 46.6**	**+1.0**		
	comp=Z,0.3nm,0.7s,baz=225,slow=2.4,SNR=2.2								
NOA	**NORSAR Array B**	**98.09**	**339**	P	Pdif	02 52 05.1	+1.4		
	comp=Z,0.4nm,0.6s,baz=48,slow=4.7,SNR=2.6								
TORD	**Torodi Ar. Bea**	**134.70**	**302**	PKP	**PKPdf**	**02 57 46.0**	**-0.8**		
	comp=Z,0.3nm,0.8s,baz=103,slow=4.6,SNR=1.9								
DBIC	**Dimbokro**	**143.56**	**299**	PKhKP	PKPpre	02 57 58.8			
	comp=Z,4.4nm,1.1s,baz=129,slow=9.2,SNR=2.2								
LPAZ	**La Paz**	**148.96**	**102**	PKPbc	**PKPbc**	**02 58 15.1**	**-1.7**		
	comp=Z,4.3nm,0.8s,baz=276,slow=2.4,SNR=4.0								

*IDC **26** 03:08:33.4±0.5,21.˚80N×143.˚54E,h0km,mb4.4/22,*
mb1 4.5/23,mb1mx4.5/37,mbtmp4.3/23,ML3.2/1,MS4.0/39,
Ms1 4.0/39,ms1mx4.0/44,Error ellipse: s-maj=20.5km
s-min=13.2km az=85.0
*NEIC **26** 03:08:34.9±0.9,21.˚77N±0.˚09×143.˚5E±0.˚1,h10km±1km,*
mb4.9/166,Error ellipse: s-maj=22.8km s-min=14.2km
az=259.0
*GCMT **26** 03:08:36.9±0.2,21.˚62N±0.˚01×143.˚61E±0.˚02,h14km±1km,*
MW4.9/111,Moment Tensor Solution. s17,c20;
s111,c159; Duration: 0 Moment tensor: Scale 10¹⁶Nm;
M_{rr}-1.41±.12; $M_{\theta\theta}$1.35±.10; $M_{\phi\phi}$0.05±.08; $M_{r\theta}$-1.00±.19;
$M_{\theta\phi}$-2.53±.07; $M_{\phi r}$1.16±.20; Best double couple:
M_o2.96100×10¹⁶ NP1:ϕ_s265.00000°,δ49.00000°,
λ-160.00000°. NP2:ϕ_s162.00000°,δ75.00000°,
λ-43.00000°. Principal axes: T 3.7540, Plg16.0000°,
Azm219.0000°; N -1.5850, Plg45.0000°, Azm326.0000°;
P -2.1690, Plg40.0000°, Azm114.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
*BJI **26** 03:08:40.0±0.0,21.˚90N×143.˚50E,h25km,mB5.0/42,*
mb4.7/55,Ms4.4/37,Ms7 4.2/38

ISC 26 03:08:39.1±0.4,**21.76N**±0.˚06×**143.˚50E**±0.˚07,**h35**km,**n293,**
σ1.28/197,**mb4.9**/119,**MS4.1**/48,**1C-1D,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.44**	**348**	Pn	**Pn**	**03 09 58.0**	**+0.2**
JCJ				Sn	**Sn**	**03 10 59.1**	**0.0**
GUMO	**Guam**	**8.23**	**171**	LR	LR	03 13 09.2	
	comp=Z,820nm,19.2s,baz=26,slow=33						
JHJ	**Hachijo jima 2**	**11.78**	**345**	LR	LR	03 15 42.2	
	comp=Z,1μm,19.3s,baz=146,slow=36						
INU	**Inuyama**	**14.68**	**339**	Pn	**Pn**	**03 12 04.4**	**+0.2**
JGF	**Kuroka**	**14.80**	**340**	Pn	**Pn**	**03 12 03.5**	**-2.4**
MJAR	**Matsushiro Arr**	**15.43**	**344**	Pn	**Pn**	**03 12 12.2**	**-1.9**
	0.1nm,0.3s,baz=162,slow=10,SNR=3.8						
MJAR				LR	LR	03 17 42.8	
	comp=Z,1μm,19.8s,baz=165,slow=36						
MJAR	**Matsushiro Arr**	**15.43**	**344**		**Pn**	**03 12 12.5**	**-1.6**
MAJO	**Matsushiro**	**15.43**	**344**	Pn	**Pn**	**03 12 14.8**	**+0.6**
MAT	**Matsushiro**	**15.43**	**344**	P	**Pn**	**03 12 13.5**	**-0.7**
JNU	**Nakatsue**	**15.90**	**318**	LR	LR	03 17 23.9	
	comp=Z,264nm,21.7s,baz=104,slow=33						
JMM	**Marumori**	**16.22**	**352**	Pn	**Pn**	**03 12 22.2**	**-2.1**
JMM				IAmb	IAmb	03 12 37.8	
	comp=Z,102nm,1.1s						
JSD	**Sado**	**16.84**	**346**	Pn	**Pn**	**03 12 30.5**	**-1.6**
KSRS	**Korea Array**	**20.64**	**323**	P	Pn	03 13 18.9	+0.9
	comp=Z,5.4nm,0.5s,baz=148,slow=9.0,SNR=25						
KSRS				LR	LR	03 20 39.8	
	comp=Z,572nm,18.4s,baz=128,slow=35						
KSAR	**Wonju Array Be**	**20.65**	**323**	P	**P**	**03 13 15.0**	**-0.8**
SSLB	**Suanglung**	**20.88**	**280**	P	**P**	**03 13 18.2**	**-0.2**
H11N1	**WAKE ISLAND Hy**	**21.97**	**91**	T	T	03 36 11.0	
	baz=279,slow=75,SNR=59						
H11N2	**WAKE ISLAND Hy**	**21.97**	**91**	T	T	03 36 07.9	
	baz=279,slow=75,SNR=66						
H11N3	**WAKE ISLAND Hy**	**21.99**	**91**	T	T	03 36 06.8	
	baz=279,slow=75,SNR=50						
SSE	**Sheshan**	**22.00**	**300**	P	**P**	**03 13 30.3**	**0.0**
SSE				S	**S**	**03 17 28.5**	**-2.7**
SSE				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SSE				pmax	pmax		
	comp=Z,60nm,4.3s						
SSE				LR	LR		
	comp=Z,230nm,14.8s						
SSE				LR	LR		
	comp=Z,280nm,15.9s						
H11S3	**WAKE ISLAND Hy**	**22.01**	**94**	T	T	03 36 09.8	
	baz=282,slow=75,SNR=235						
H11S1	**WAKE ISLAND Hy**	**22.02**	**94**	T	T	03 36 10.6	
	baz=282,slow=75,SNR=238						
H11S2	**WAKE ISLAND Hy**	**22.03**	**94**	T	T	03 36 07.8	
	baz=282,slow=75,SNR=163						
ASAJ	**Asahikawa**	**22.30**	**358**	P	**P**	**03 13 38.2**	**+4.7**
	comp=Z,8.9nm,1.0s,baz=11,slow=23,SNR=2.7						
ASAJ				LR	LR	03 23 54.4	
	comp=Z,74nm,18.7s,baz=170,slow=41						
DAV	**Davao City (W)**	**22.64**	**232**	LR	LR	03 20 21.5	
	comp=Z,765nm,22.0s,baz=38,slow=31						
TGY	**Tagaytay City**	**22.76**	**254**	LR	LR	03 20 52.6	
	comp=Z,430nm,20.8s,baz=308,slow=32						
QZH	**Quanzhou**	**23.07**	**283**	*e*P	**P**	**03 13 43.3**	**+1.6**
QZH				pP	**sP**	**03 13 51.3**	**-3.0**
QZH				S	Sn	03 17 57.3	-11
QZH				pmax	pmax		
	comp=Z,52nm,1.3s						
QZH				LR	LR		
	comp=Z,280nm,10.4s						
NJ2	**Nanjing**	**24.20**	**300**	*e*P	**P**	**03 13 52.5**	**+0.1**
NJ2				pP	**pP**	**03 14 00.0**	**-1.5**
NJ2				sP	**pwP**	**03 14 04.5**	**-1.0**
NJ2				S	**S**	**03 18 14.0**	**+5.5**
NJ2				sS	**sS**	**03 18 22.5**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,320nm,4.3s						
NJ2				LR	LR		
	comp=Z,560nm,11.4s						
NJ2				LR	LR		
	comp=Z,600nm,13.9s						
NJ2				LR	LR		
	comp=Z,810nm,16.7s						
JAY	**Jayapura**	**24.28**	**187**	P	**P**	**03 13 54.1**	**+0.8**
	comp=Z,8.3nm,0.9s,baz=39,slow=4.5,SNR=4.6						
JAY				LR	LR	03 21 18.0	
	comp=Z,258nm,21.5s,baz=330,slow=31						
JAY	**Jayapura**	**24.28**	**187**	P	**P**	**03 13 55.1**	**+1.7**
	comp=Z,16nm,1.0s						
USA0B	**Ussuriysk Arra**	**24.32**	**340**	IAmb	IAmb	03 14 04.0	
	comp=Z,28nm,0.9s						
USRK	**Ussuriysk Ar.**	**24.32**	**340**	P	**P**	**03 13 54.8**	**+1.4**
	comp=Z,12nm,0.9s,baz=166,slow=10,SNR=7.9						
USRK				LR	LR	03 22 40.2	
	comp=Z,244nm,21.6s,baz=138,slow=35						
USRK	**Ussuriysk Ar.**	**24.32**	**340**	P	**P**	**03 13 52.5**	**-0.9**
DL2	**Dalian**	**25.36**	**317**	P	P	03 14 12.0	+9.1
DL2				S	S	03 18 47.5	+21
DL2				pmax	pmax		
	comp=Z,56nm,0.7s						
DL2				LR	LR		
	comp=N,520nm,15.9s						
DL2				LR	LR		
	comp=E,430nm,14.5s						
DL2				LR	LR		
	comp=Z,380nm,16.6s						
MDJ	**Mudanjiang**	**25.52**	**337**	P	P	03 14 11.8	+7.5
MDJ				pmax	pmax		
	comp=Z,22nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.4s						
MDJ				LR	LR		
	comp=Z,470nm,17.5s						
MDJ				LR	LR		
	comp=Z,570nm,16.8s						
MDJ				LR	LR		
	comp=Z,620nm,22.9s						
MDJ	**Mudanjiang**	**25.52**	**337**	IAmb	IAmb	03 14 16.8	
	comp=Z,25nm,0.9s						
CN2	**Changchun**	**26.59**	**330**	*e*P	**P**	**03 14 16.8**	**+2.8**
CN2				*e*S	**S**	**03 18 48.5**	**+2.1**
CN2				LR	LR		
	comp=Z,600nm,18.0s						
CN2				LR	LR		
	comp=Z,360nm,18.0s						
CN2				LR	LR		
	comp=Z,660nm,20.0s						
KRVT	**Keravat (AS076**	**27.22**	**161**	LR	LR	03 23 45.1	
	comp=Z,86nm,21.6s,baz=316,slow=34						
WHN	**Wuhan**	**27.52**	**295**	P	P	03 14 30.5	+8.0
WHN				LR	LR		
	comp=Z,940nm,10.8s						
WHN				LR	LR		
	comp=Z,390nm,9.6s						
WHN				LR	LR		
	comp=Z,720nm,12.2s						
KLR	**Kul'dur**	**28.96**	**344**	P	**P**	**03 14 35.5**	**+0.4**
	comp=Z,8.0nm,0.7s,baz=141,slow=8.9,SNR=30						
KLR				LR	LR	03 25 59.3	
	comp=Z,379nm,20.0s,baz=153,slow=36						
QIZ	**Qiongzhong**	**31.63**	**271**	P	**P**	**03 14 59.3**	**+0.2**
QIZ				S	**S**	**03 20 07.5**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,6.0nm,1.2s						
QIZ				LR	LR		
	comp=Z,360nm,14.0s						
QIZ				LR	LR		
	comp=Z,120nm,9.3s						
QIZ				LR	LR		
	comp=Z,210nm,11.4s						
XAN	**Xi'an**	**32.76**	**299**	P	P	03 15 16.3	+7.4
XAN				pmax	pmax		
	comp=Z,17nm,0.8s						
HHC	**Hu-ho-hao-te**	**33.00**	**313**	*e*P	**P**	**03 15 12.3**	**+1.3**
HHC				sP	pwP	03 15 25.5	+1.9
HHC				S	**S**	**03 20 30.3**	**+3.0**
HHC				pmax	pmax

GTA LR LR
comp=Z,210nm,15.6s
GTA LR LR
comp=Z,280nm,16.4s
GTA LR LR
comp=Z,260nm,15.3s
SUKH Sukhothai 41.44 272 P P 03 16 32.0 +9.3
comp=Z,16nm,0.9s
CM35 Chiang Mai Arr 41.62 274 P P 03 16 33.0 +8.8
CMMT Chiang Mai 41.78 274 P P 03 16 34.0 +8.4
comp=Z,252nmcomp=Z,4.4nm,1.0s
CM04 Chiang Mai Arr 41.84 274 P P 03 16 36.0 +10
comp=Z,5.3nm,1.1s
CMAR Chiang Mai Arr 41.86 274 P **P** **03 16 26.1 -0.1**
comp=Z,1.2nm,0.3s,baz=60,slow=8.7,SNR=2.1
CMAR LR LR 03 34 30.2
comp=Z,48nm,19.2s,baz=154,slow=37
CMAR Chiang Mai Arr 41.86 274 P **P** **03 16 25.6 -0.6**
UTHA Uthaitani 42.08 269 P P 03 16 37.9 +10
comp=Z,208nmcomp=Z,19nm,0.9s
WB0 Warramunga Arr 42.23 193 P **P** **03 16 29.3 +0.3**
WR0 Warramunga Arr 42.38 193 P **P** **03 16 30.8 +0.6**
WB2 Warramunga Arr 42.40 193 P **P** **03 16 31.0 +0.6**
WRA Warramunga Arr 42.41 193 P **P** **03 16 30.1 -0.3**
comp=Z,6.8nm,1.0s,baz=13,slow=8.8,SNR=27
WRA LR LR 03 33 57.6
comp=Z,160nm,19.1s,baz=25,slow=36
WRA Warramunga Arr 42.41 193 P **P** **03 16 30.0 -0.5**
PHET Kaeng Krachan 42.67 266 P P 03 16 42.4 +10
LEM Lembang 45.22 235 LR LR 03 34 58.2
comp=Z,58nm,20.6s,baz=18,slow=35
ASAR Alice Springs 46.11 192 P **P** **03 16 59.9 -0.2**
comp=Z,2.0nm,0.7s,baz=10,slow=8.9,SNR=22
ASAR LR LR 03 35 10.3
comp=Z,157nm,21.8s,baz=14,slow=35
ASAR Alice Springs 46.11 192 P **P** **03 17 00.1 0.0**
TIXI Tiksi 50.61 354 P **P** **03 17 33.9 -0.2**
WMQ Urumqi 50.76 309 *e*P **P** **03 17 38.5 +2.6**
WMQ pmax pmax
comp=Z,41nm,0.9s
WMQ pmax pmax
comp=Z,260nm,4.3s
STKA Stephens Creek 53.37 182 P **P** **03 17 54.5 -0.7**
comp=Z,4.6nm,0.7s,baz=353,slow=6.4,SNR=12
STKA LR LR 03 40 01.4
comp=Z,76nm,20.9s,baz=15,slow=35
STKA Stephens Creek 53.37 182 P **P** **03 17 55.8 +0.6**
ZAA0 Zalesovo Array 54.34 322 P **P** **03 18 01.6 -0.4**
ZAA0 IAmb IAmb 03 18 10.1
comp=Z,8.8nm,0.6s
ZALV Zalesovo Beam 54.34 322 P **P** **03 18 01.6 -0.5**
comp=Z,2.6nm,0.5s,baz=107,slow=7.6,SNR=12
ZALV LR LR 03 41 10.1
comp=Z,226nm,20.4s,baz=96,slow=36
ZALV Zalesovo Beam 54.34 322 P **P** **03 18 01.5 -0.6**
MK31 Makanchi Array 54.87 313 P **P** **03 18 05.6 -0.5**
MKAR Makanchi Array 54.87 313 P **P** **03 18 05.9 -0.2**
comp=Z,1.2nm,0.7s,baz=88,slow=9.3,SNR=12
MKAR LR LR 03 43 26.2
comp=Z,190nm,18.1s,baz=82,slow=38
MKAR Makanchi Array 54.87 313 P **P** **03 18 05.4 -0.7**
MAKZ Makanchi 55.08 313 P **P** **03 18 07.1 -0.5**
MAKZ IAmb IAmb 03 18 16.4
comp=Z,14nm,0.9s
SVW2 Sparrevohn 57.20 30 P **P** **03 18 22.4 -0.1**
OHAK Old Harbor 57.51 35 P **P** **03 18 24.5 -0.1**
OHAK IAmb IAmb 03 18 32.6
comp=Z,11nm,0.7s
KURK Kurchatov 57.62 317 P **P** **03 18 25.1 -0.6**
KDAK Kodiak Island 57.98 35 P **P** **03 18 27.9 -0.1**
KDAK IAmb IAmb 03 18 35.9
comp=Z,9.6nm,0.8s
NRIK Noril'sk 58.03 340 P **P** **03 18 27.8 -0.4**
comp=Z,5.1nm,0.7s,baz=119,slow=9.2,SNR=7.3
NRIK LR LR 03 45 18.3
comp=Z,232nm,18.5s,baz=66,slow=38
SKT Skwentna 59.29 30 IAmb IAmb 03 18 45.2
comp=Z,15nm,1.0s
IMAR Indian Mountai 59.30 25 P **P** **03 18 37.0 -0.1**
KSH Kashi 59.43 304 *e*P **P** **03 18 42.3 +3.7**
KSH pP sP 03 18 49.5 -2.9
KSH pmax pmax
comp=Z,8.0nm,0.6s
KSH pmax pmax
comp=Z,220nm,7.3s
TKM2 Tokmak 2 59.53 308 P P 03 18 47.7 +8.4
SNR=7.0
KTH Kantishna Hill 59.89 28 IAmb IAmb 03 18 50.0
comp=Z,14nm,1.1s
SEW Seward 59.96 32 P **P** **03 18 41.8 +0.1**
BPAW Bear Paw Mtn. 59.98 27 IAmb IAmb 03 18 50.1
comp=Z,10nm,0.8s
RC01 Rabbit Creek A 59.98 31 P **P** **03 18 41.7 -0.1**
baz=261
KBK Karagaybulak 60.02 308 P P 03 18 50.9 +8.2
SNR=7.0
TRF Thorofare Moun 60.15 28 IAmb IAmb 03 18 50.9
comp=Z,14nm,0.9s
MLY Manley 60.28 26 P **P** **03 18 43.7 -0.2**
baz=258
USP Ospenovka 60.32 308 P P 03 18 52.4 +7.8
SNR=6.1
PMR Palmer 60.34 31 IAmb IAmb 03 18 55.6
comp=Z,8.9nm,0.8s
GHO Glory Hole Cre 60.47 30 IAmb IAmb 03 18 52.8
comp=Z,12nm,0.8s
MCK McKinley 60.79 28 P **P** **03 18 47.1 -0.3**
baz=260
I23K Minto, Yukon-K 60.88 26 P **P** **03 18 48.3 +0.4**
baz=259
EKS2 Erkin-Say 60.88 308 P P 03 18 56.5 +8.0
SNR=5.2
NEA2 Nenana 60.89 27 P **P** **03 18 48.5 +0.5**
baz=259
AML Almayashu 60.98 307 P P 03 18 58.1 +8.6
SNR=8.5
COLD Coldfoot 60.99 24 P **P** **03 18 49.5 +0.8**
baz=257
COLD Coldfoot 60.99 24 IAmb IAmb 03 18 57.6
comp=Z,7.7nm,0.8s
TOLK Toolik Lake Re 61.55 23 P **P** **03 18 53.3 +0.9**
baz=257
POKR Poker Plat Res 61.67 27 P **P** **03 18 54.2 +0.9**
baz=261
HDA Harding Lake 61.77 28 P **P** **03 18 53.5 -0.5**
baz=261
M24K Tolsona, Glenn 61.80 30 P **P** **03 18 55.8 +1.5**
baz=263
IL31 61.85 27 IAmb IAmb 03 19 05.9
comp=Z,12nm,1.1s
ILAR Eielson Array 61.85 27 P **P** **03 18 53.5 -1.0**
comp=Z,4.1nm,0.9s,baz=258,slow=5.8,SNR=27
ILAR LR LR 03 42 40.3
comp=Z,154nm,21.7s,baz=260,slow=33
ILAR Eielson Array 61.85 27 P **P** **03 18 53.8 -0.7**
KLU Klutina 61.85 31 IAmb IAmb 03 19 04.9
comp=Z,14nm,1.2s
N25K Chitina, Valde 62.50 31 P **P** **03 18 59.4 +0.4**
baz=265
GLB Gilahina Butte 62.86 31 IAmb IAmb 03 19 09.6
comp=Z,12nm,1.0s
BRVK Borovoye 62.87 320 P **P** **03 19 01.0 -0.5**
DOT Dot Lake 62.93 29 IAmb IAmb 03 19 14.0
comp=Z,9.6nm,0.9s
SCRK Sand Creek 63.00 28 P **P** **03 19 02.6 +0.3**
baz=264
VRDI Verde Repeater 63.02 31 P **P** **03 19 02.2 -0.3**
VRDI IAmb IAmb 03 19 10.6
comp=Z,8.5nm,1.0s
BMAR Burnt Mountain 63.17 24 P **P** **03 19 03.1 -0.2**
KKAR Karatay Array 63.24 308 P **P** **03 19 03.4 -0.8**
KKAR Karatay Array 63.24 308 IAmb IAmb 03 19 12.8
comp=Z,18nm,0.8s
TGL Tana Glacier 63.29 32 IAmb IAmb 03 19 15.1
comp=Z,14nm,1.1s
BALM Baldy 63.54 32 IAmb IAmb 03 19 13.9
comp=Z,7.4nm,0.8s
K27K Chicken 63.84 28 P **P** **03 19 08.2 +0.4**
baz=266
BCAR Beaver Creek A 63.91 29 P **P** **03 19 08.3 0.0**
DAWY Dawson 65.02 28 P **P** **03 19 15.0 -0.5**
DAWY IAmb IAmb 03 19 27.8
comp=Z,9.6nm,1.0s
SKAG Skagway 67.06 33 IAmb IAmb 03 19 37.4
comp=Z,12nm,1.0s
WHY Whitehorse 67.20 32 IAmb IAmb 03 19 38.4
comp=Z,10nm,0.9s

INK Inuvik 67.39 24 P **P** **03 19 30.0 -0.6**
INK IAmb IAmb 03 19 38.9
comp=Z,12nm,0.9s
ARU Arti 69.38 324 P **P** **03 19 42.8 -0.4**
ARU IAmb IAmb 03 19 54.6
comp=Z,12nm,0.9s
ABKAR Akbulak array 69.70 316 P **P** **03 19 44.8 -0.5**
ABKAR Akbulak array 69.70 316 P **P** **03 19 44.9 -0.5**
ABKAR IAmb IAmb 03 19 53.2
comp=Z,8.8nm,0.7s
C36M Paulatuk 70.69 22 P **P** **03 19 50.8 -0.2**
baz=280
C36M Paulatuk 70.69 22 IAmb IAmb 03 19 58.7
comp=Z,11nm,0.9s
GEYT Alibeck 73.45 305 LR LR 03 55 22.0
comp=Z,78nm,18.0s,baz=270,slow=38
EUNU Eureka 74.99 8 IAmb IAmb 03 20 24.4
comp=Z,14nm,0.8s
YKA Yellowknife Ar 76.26 28 P **P** **03 20 23.8 -0.1**
comp=Z,3.1nm,0.5s,baz=295,slow=4.8,SNR=34
YKA LR LR 03 51 51.6
comp=Z,180nm,21.5s,baz=0.0,slow=34
PPT Papeete 76.30 115 LR LR 03 46 18.8
comp=Z,106nm,20.2s,baz=342,slow=30
D03D Eldon 76.49 44 P **P** **03 20 26.7 +1.2**
baz=288
B05A Bryant 76.91 43 P **P** **03 20 28.1 +0.3**
baz=288
RES Resolute Bay 76.94 13 IAmb IAmb 03 20 36.1
comp=Z,13nm,0.9s
E04D Cinebar 77.13 45 P **P** **03 20 29.4 +0.3**
baz=288
I03D Drain, OR 77.49 48 P **P** **03 20 32.0 +0.8**
baz=288
K02D Willamette Mer 77.58 49 P **P** **03 20 31.9 0.0**
baz=288
H04D Lebanon 77.65 47 P **P** **03 20 31.8 -0.3**
baz=288
KLMR Klimovskoe 77.79 331 *e*P **P** **03 20 34.8 +2.3**
KLMR AMP 03 20 43.9
comp=Z,24nm,1.2s
KHMM Horse Mountain 78.10 51 IAmb IAmb 03 20 44.3
comp=Z,13nm,0.9s
I04A Tendick Farm, 78.10 48 P **P** **03 20 35.4 +0.7**
baz=289
J04D Umpqua Nationa 78.49 48 P **P** **03 20 38.1 +1.1**
baz=289
YBH Yreka Blue Hor 78.55 50 P **P** **03 20 37.0 -0.3**
M02C Callahan 78.56 50 P **P** **03 20 38.6 +1.3**
baz=289
B08A Colville Reser 78.62 42 P **P** **03 20 36.8 -0.7**
B08A IAmb IAmb 03 20 45.8
comp=Z,8.4nm,0.8s
I05D Terrebonne, OR 78.66 47 P **P** **03 20 38.5 +0.7**
baz=289
L04D Klamath Falls 78.68 49 P **P** **03 20 38.7 +0.6**
baz=289
N02D Trinity Center 78.80 50 P **P** **03 20 39.6 +0.9**
baz=289
K04D Chiloquin, OR 78.94 49 P **P** **03 20 40.4 +1.0**
baz=289
ARD4 ARCESS Array S 78.95 342 P **P** **03 20 38.6 -0.2**
ARD4 IAmb IAmb 03 20 50.7
comp=Z,18nm,0.9s
ARCES ARCESS Array B 78.95 342 P **P** **03 20 38.2 -0.6**
comp=Z,4.7nm,0.8s,baz=31,slow=2.8,SNR=7.9
ARCES LR LR 04 00 21.1
comp=Z,107nm,18.1s,baz=60,slow=39
O02D Mt. Diablo Mer 79.00 51 P **P** **03 20 41.1 +1.3**
baz=289
WDC Whiskeytown Da 79.05 51 IAmb IAmb 03 20 48.7
comp=Z,9.9nm,1.1s
J05D Fort Rock, OR 79.08 48 P **P** **03 20 40.9 +0.7**
baz=290
M04C Macdoel 79.15 49 P **P** **03 20 41.4 +0.7**
baz=290
C09A Chrisman Ranch 79.48 43 IAmb IAmb 03 20 50.5
comp=Z,11nm,1.1s
K05A Summer Lake 79.50 48 P **P** **03 20 41.8 -0.8**
O03E Paynes Creek 79.68 51 P **P** **03 20 44.0 +0.6**
baz=290
TULEG Thule 79.96 7 *i* P **P** **03 20 44.1 0.0**
TULEG IAmb IAmb 03 20 52.2
comp=Z,26nm,0.8s
NEW Newport 80.04 42 P **P** **03 20 45.6 +0.4**
baz=292,SNR=6.5
ORV Oroville 80.15 51 IAmb IAmb 03 20 54.0
comp=Z,11nm,1.1s
BEKR Beckworth 80.86 51 IAmb IAmb 03 20 58.7
comp=Z,13nm,0.9s
J08A Circle Bar Ran 80.94 47 IAmb IAmb 03 20 58.9
comp=Z,11nm,0.9s
DAG Danmarks Havn 81.09 356 *i* P **P** **03 20 49.1 -1.1**
comp=Z,7.2nm,1.0s
DAG Danmarks Havn 81.09 356 *i* P **P** **03 20 49.2 -1.1**
DAG IAmb IAmb 03 20 57.0
comp=Z,7.2nm,1.0s
BMO Blue Mountains 81.17 45 IAmb IAmb 03 20 59.8
comp=Z,9.2nm,0.9s
CMB Columbia Colle 81.49 53 IAmb IAmb 03 20 54.6
comp=Z,8.7nm,0.7s
PNTR Pine Nut 81.69 51 IAmb IAmb 03 21 03.1
comp=Z,12nm,0.8s
WALA Waterton Lakes 81.70 40 IAmb IAmb 03 21 03.1
comp=Z,8.9nm,0.8s
KBZ Khabaz 82.53 314 P **P** **03 20 58.3 -0.1**
comp=Z,4.6nm,0.8s,baz=113,slow=3.0,SNR=7.8
KBZ LR LR 03 59 34.8
comp=Z,113nm,21.6s,baz=60,slow=37
RYN Ryan 82.64 51 IAmb IAmb 03 21 07.9
comp=Z,6.9nm,0.9s
MFID Camas Ranch 82.70 46 IAmb IAmb 03 21 08.0
comp=Z,10.0nm,0.9s
KVN Kaiserville 82.79 51 IAmb IAmb 03 21 08.5
comp=Z,7.0nm,1.0s
LHV Little Huntoon 82.79 52 IAmb IAmb 03 21 08.9
comp=Z,7.8nm,1.0s
NVAR Mina Array Bea 82.87 52 P **P** **03 21 01.4 +0.8**
comp=Z,5.5nm,0.7s,baz=281,slow=5.5,SNR=61
NVAR LR LR 03 51 31.4
comp=Z,167nm,21.0s,baz=286,slow=31
NVAR Mina Array Bea 82.87 52 P **P** **03 20 60.0 -0.7**
NV11 Mina Array Sit 82.98 52 IAmb IAmb 03 21 09.6
comp=Z,5.8nm,0.8s
PKM Mcpherson Peak 83.06 55 P **P** **03 21 02.4 +0.8**
baz=292
FINES FINESS Array B 83.25 335 P **P** **03 21 01.1 -0.6**
comp=Z,2.4nm,0.5s,baz=60,slow=3.8,SNR=22
FINES LR LR 03 59 51.7
comp=Z,101nm,18.9s,baz=52,slow=37
FINES FINESS Array B 83.25 335 P **P** **03 21 01.3 -0.5**
TIN Tinemaha, Big 83.44 53 P **P** **03 21 04.9 +1.4**
baz=292
SCZ2 Santa Cruz Isl 83.52 56 P **P** **03 21 04.7 +0.9**
baz=292
HLID Hailey 83.59 46 P **P** **03 21 04.8 +0.6**
baz=294
ARVC Arvin 83.72 55 P **P** **03 21 05.2 +0.4**
baz=292
ISA Isabella, Lake 83.79 54 P **P** **03 21 05.0 -0.2**
baz=292
CWC Cottonwood Cre 83.79 53 P **P** **03 21 05.6 +0.3**
baz=292
GRAC Grapevine Rang 84.11 53 P **P** **03 21 06.8 0.0**
baz=293
ELK Elko 84.16 49 IAmb IAmb 03 21 15.7
comp=Z,5.9nm,0.9s
MPMC Manual Prospec 84.38 54 P **P** **03 21 08.7 +0.3**
baz=293,SNR=8.0
EDW2 Edwards Air Fo 84.45 55 P **P** **03 21 09.0 +0.5**
baz=293
LRMC Laurel Mtn Rad 84.45 54 P **P** **03 21 09.1 +0.4**
baz=293,SNR=12
BOZ Bozeman (W) 84.55 43 P **P** **03 21 09.2 +0.2**
baz=296
EGMT Eagleton 84.64 40 P **P** **03 21 09.8 +0.5**
baz=297
FURC Furnace Creek, 84.68 53 P **P** **03 21 10.1 +0.5**
baz=293
CIS Catalina Islan 84.69 56 P **P** **03 21 09.8 +0.1**
baz=293
R11A Troy Canyon, C 84.87 51 P **P** **03 21 11.2 +0.4**
baz=294,SNR=6.1
R11A Troy Canyon, C 84.87 51 IAmb IAmb 03 21 19.4
comp=Z,6.6nm,1.1s
TPNV Topopah Spring 84.95 52 P **P** **03 21 11.5 +0.3**
baz=294,SNR=8.3
TPNV Topopah Spring 84.95 52 IAmb IAmb 03 21 20.1
comp=Z,8.0nm,0.9s
BFSC Mount Baldy Ra 84.95 55 P **P** **03 21 11.8 +0.6**
baz=293
GSC Goldstone, Bar 85.18 54 P **P** **03 21 12.7 +0.4**
baz=293,SNR=5.1
GSC Goldstone, Bar 85.18 54 IAmb IAmb 03 21 20.6
comp=Z,6.9nm,0.8s
SHOC Shoshone, Teco 85.34 53 P **P** **03 21 13.4 +0.4**
baz=294
SPR3 Spring Creek 3 85.51 50 IAmb IAmb 03 21 27.6
comp=Z,8.7nm,1.1s
MURC Murrieta 85.55 56 P **P** **03 21 14.6 +0.5**
baz=293
FFC Flin Flon 85.62 32 P **P** **03 21 13.5 -0.4**
PRN Pahroc Range 85.64 52 IAmb IAmb 03 21 23.7
comp=Z,8.5nm,1.0s
HEC Hector,Ludlow 85.72 54 P **P** **03 21 15.3 +0.3**
baz=294
IMW Indian Meadow 85.73 44 IAmb IAmb 03 21 24.5
comp=Z,6.9nm,0.9s
TUQ Turquoise Moun 85.79 54 P **P** **03 21 15.7 +0.3**
baz=294
FLWY Flagg Ranch 85.81 44 IAmb IAmb 03 21 24.6
comp=Z,12nm,0.9s
SUMG Summit 85.89 1 *i* P P 03 21 22.9 +7.4
SUMG Summit 85.89 1 *i* P P 03 21 22.9 +7.4
SHPR Sheep Range 85.93 52 IAmb IAmb 03 21 24.8
comp=Z,6.8nm,0.9s
DUG Dugway, Tooele 86.07 48 P **P** **03 21 17.2 +0.4**
baz=295,SNR=6.7
DUG Dugway, Tooele 86.07 48 IAmb IAmb 03 21 25.0
comp=Z,7.3nm,0.9s
PFO Pinyon Flats O 86.11 55 P **P** **03 21 17.3 +0.3**
baz=294,SNR=6.1
PFO Pinyon Flats O 86.11 55 P **P** **03 21 16.5 -0.5**
PFO IAmb IAmb 03 21 28.4
comp=Z,10.0nm,1.1s
TPFO Pinon Flats 86.12 55 P **P** **03 21 17.3 +0.3**
baz=294,SNR=5.5
GMRC Granite Mounta 86.25 54 P **P** **03 21 18.2 +0.5**
baz=294,SNR=5.0
RLMT Red Lodge 86.25 43 P **P** **03 21 18.6 +1.0**
baz=297
BELC Belle Mtn. Jos 86.31 55 P **P** **03 21 18.2 +0.2**
baz=294
HWUT Hardware Ranch 86.32 47 IAmb IAmb 03 21 26.3
comp=Z,12nm,0.9s
MONP2 Monument Peak 86.43 56 P **P** **03 21 18.7 0.0**
baz=294
IKP In-Ko-Pah, Jac 86.76 56 P **P** **03 21 20.8 +0.6**
baz=294
BC3 Big Chuckawall 86.86 55 P **P** **03 21 21.0 +0.4**
baz=294
SWSC Sam W. Stewart 86.88 56 P **P** **03 21 20.8 +0.2**
baz=294
IRM Iron Mountain 86.89 55 P **P** **03 21 21.1 +0.3**
baz=294
BW06 Boulder Array 87.14 45 P **P** **03 21 21.9 -0.1**
baz=297
PDAR Pinedale Array 87.14 45 P **P** **03 21 21.1 -0.9**
comp=Z,0.6nm,0.5s,baz=267,slow=0.6,SNR=6.9
PDAR LR LR 03 52 51.1
comp=Z,161nm,21.8s,baz=322,slow=30
LAO LASA Array 87.39 40 P **P** **03 21 23.4 +0.5**
baz=299
GLA Glamis 87.59 55 P **P** **03 21 24.8 +0.7**
baz=294
PDMCI Parker Dam,Lak 87.59 54 P **P** **03 21 24.8 +0.8**
baz=295
AKASG Malin Array Be 87.62 325 P **P** **03 21 22.4 -1.4**
comp=Z,0.2nm,0.3s,baz=55,slow=4.3,SNR=1.5
AKASG LR LR 04 03 57.6
comp=Z,284nm,18.8s,baz=50,slow=38
AKASG Malin Array Be 87.62 325 P **P** **03 21 22.7 -1.1**
DGMT Dagmar 87.69 38 P **P** **03 21 24.0 -0.3**
baz=301
U15A North Rim 88.06 51 IAmb IAmb 03 21 35.7
comp=Z,8.7nm,0.9s
NB2 NORSAR Subarra 88.99 339 P **P** **03 21 27.4 -2.7**
comp=Z,21nm,1.7s,baz=42,slow=5.1
NB2 NORSAR Subarra 88.99 339 P **P** **03 21 27.4 -2.7**
baz=42,slow=5.1
NOA NORSAR Array B 88.99 339 P **P** **03 21 28.1 -2.1**
comp=Z,0.6nm,0.8s,baz=53,slow=4.4,SNR=2.4
NOA LR LR 04 04 16.7
comp=Z,133nm,20.9s,baz=35,slow=38
WUAZ Wupatki 89.12 52 P **P** **03 21 32.5 +1.0**
baz=296
WUAZ Wupatki 89.12 52 IAmb IAmb 03 21 40.2
comp=Z,9.1nm,0.9s
K22A Casper 89.17 44 P **P** **03 21 32.2 +0.6**
baz=299
PV20 West Nyswonger 89.57 49 IAmb IAmb 03 21 44.5
comp=Z,8.9nm,1.0s
214A Organ Pipe Nat 89.59 56 P **P** **03 21 34.2 +0.7**
baz=296
PV16 Nyswonger Mesa 89.62 49 IAmb IAmb 03 21 41.9
comp=Z,8.9nm,1.0s
PV18 Skein Mesa, Pa 89.66 49 IAmb IAmb 03 21 42.0
comp=Z,8.6nm,0.9s
PV03 Paradox Valley 89.69 49 IAmb IAmb 03 21 42.3
comp=Z,8.1nm,1.1s
PV12 Saucer Basin, 89.70 49 IAmb IAmb 03 21 45.7
comp=Z,10nm,1.0s
PV13 Radium Mtn., P 89.76 49 IAmb IAmb 03 21 42.4
comp=Z,6.3nm,0.8s
PV01 Paradox Valley 89.94 49 IAmb IAmb 03 21 43.3
comp=Z,5.7nm,0.8s
N23A Red Feather La 90.41 45 P **P** **03 21 37.9 +0.4**
baz=300
N23A Red Feather La 90.41 45 IAmb IAmb 03 21 46.4
comp=Z,8.3nm,0.9s
MVCO Mesa Verde 90.42 49 P **P** **03 21 38.4 +0.8**
baz=298
W18A Petrified Fore 90.50 52 P **P** **03 21 38.5 +0.5**
baz=297
BRTR Keskin Array B 90.51 313 P **P** **03 21 36.9 -0.9**
comp=Z,0.6nm,0.7s,baz=64,slow=6.9,SNR=1.8
BRTR LR LR 04 07 33.3
comp=Z,38nm,18.2s,baz=38,slow=39
TUC Tucson 90.98 55 P **P** **03 21 40.9 +0.8**
baz=297
ULM Lac du Bonnet 91.23 34 P **P** **03 21 39.3 -1.5**
comp=Z,2.8nm,0.9s,baz=294,slow=6.3,SNR=3.6
ULM LR LR 04 02 02.4
comp=Z,114nm,20.2s,baz=321,slow=35
ULM Lac du Bonnet 91.23 34 IAmb IAmb 03 21 48.4
comp=Z,8.3nm,1.0s
Q24A Divide 91.89 47 P **P** **03 21 45.0 +0.5**
baz=300
SDCO Great Sand Dun 92.26 48 P **P** **03 21 46.4 +0.2**
baz=300
AGMN Agassiz Nation 92.40 35 P **P** **03 21 46.1 -0.1**
baz=307
121A Cookes Peak, D 93.14 53 P **P** **03 21 51.1 +1.0**
baz=298
ECSD EROS Data Cent 94.69 39 P **P** **03 21 56.8 -0.1**
baz=306
GERES GERESS Array B 96.68 329 LR LR 04 09 44.7
comp=Z,111nm,18.9s,baz=64,slow=38
TXAR Lajitas Array 97.78 54 P **P** **03 22 11.4 0.0**
comp=Z,0.6nm,0.8s,baz=350,slow=4.6,SNR=4.9
TXAR LR LR 04 02 44.7
comp=Z,42nm,19.6s,baz=0.0,slow=33
TXAR Lajitas Array 97.78 54 P **P** **03 22 10.4 -0.9**
SCHQ Schefferville 99.41 17 LR LR 04 08 37.4
comp=Z,58nm,21.4s,baz=302,slow=36
VNDA Vanda 99.67 176 LR LR 04 06 05.0
comp=Z,44nm,19.5s,baz=359,slow=35
TORD Torodi Ar. Bea 128.93 309 PKP **PKPdf** **03 27 42.8 -1.2**
comp=Z,0.4nm,0.7s,baz=29,slow=1.9,SNR=4.1
TORD Torodi Ar. Bea 128.93 309 **PKPdf** **03 27 42.5 -1.5**
H03S2 Juan Fernandez 140.85 117 T T 06 04 48.1
baz=266
H03S3 Juan Fernandez 140.86 117 T T 06 04 45.8
baz=266
H03S1 Juan Fernandez 140.86 117 T T 06 04 52.7
baz=266
PLCA Paso Flores 145.58 131 PKPbc **PKPdf** **03 28 13.2 -0.8**
comp=Z,3.2nm,0.9s,baz=247,slow=4.6,SNR=8.7
PLCA Paso Flores 145.58 131 **PKPdf** **03 28 13.5 -0.5**
LPAZ La Paz 149.64 85 PKPbc **PKPbc** **03 28 26.0 -0.7**
comp=Z,9.5nm,0.7s,baz=283,slow=2.4,SNR=35
LPAZ La Paz 149.64 85 **PKPbc** **03 28 24.7 -2.0**

MAN 26 03:11:37.7,13°46N×121°21E,h19km,mb4.0,ML2.7,

MS2.3,1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.25**	**279**	⇑*eP*	Pg	03 11 45.0	+1.4
PGP				*eS*	Sg	03 11 47.5	-0.1
BOAC	**Boac**	**0.62**	**90**	*eP*	Pg	03 11 50.0	+0.1
BOAC				*eS*	Sb	03 11 51.9	-6.1
LUBP	**Lubang**	**0.98**	**286**	*eP*	Pb	03 11 54.9	-1.1
LUBP				*eS*	Sn	03 12 10.0	+0.3

*IDC **26** 03:15:34.2±0.8, 21°.73N×143°.64E, h0km, mb3.9/12, mb1 4.1/13, mb1mx3.9/45, mbtmp3.9/13, ML3.2/1, Error ellipse: s-maj=28.6km s-min=19.4km az=90.0*

ISC 26 03:15:39.5±0.9, 21°.7N±0°.1×143°.7E±0°.2, h35km, n21, σ1§04/15, mb4.0/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.53**	**343**	Pn	**Pn**	**03 19 14.3**	**-1.4**
	0.1nm,0.3s,baz=158,slow=11,SNR=5.1						
KSRS	**Korea Array**	**20.79**	**322**	P	**P**	**03 20 19.2**	**+1.7**
	1.1nm,0.7s,baz=145,slow=8.8,SNR=3.1						
H11N1	**WAKE ISLAND Hy**	**21.79**	**91**	T	T	03 43 07.0	
	baz=278,slow=75						
H11N2	**WAKE ISLAND Hy**	**21.79**	**91**	T	T	03 43 06.4	
	baz=278,slow=75						
H11N3	**WAKE ISLAND Hy**	**21.81**	**91**	T	T	03 43 10.9	
	baz=278,slow=75						
H11S3	**WAKE ISLAND Hy**	**21.83**	**94**	T	T	03 43 06.9	
	baz=282,slow=75						
H11S1	**WAKE ISLAND Hy**	**21.84**	**94**	T	T	03 43 06.0	
	baz=282,slow=75						
H11S2	**WAKE ISLAND Hy**	**21.84**	**94**	T	T	03 43 09.0	
	baz=282,slow=75						
KLR	**Kul'dur**	**29.05**	**344**	P	**P**	**03 21 36.3**	**0.0**
	1.9nm,0.7s,baz=138,slow=8.7,SNR=6.2						
SONM	**Songino Array**	**39.63**	**320**	P	**P**	**03 23 09.1**	**+1.2**
	0.3nm,0.5s,baz=120,slow=8.5,SNR=3.6						
WRA	**Warramunga Arr**	**42.40**	**193**	P	**P**	**03 23 30.8**	**0.0**
	0.4nm,0.3s,baz=16,slow=8.7,SNR=5.6						
ASAR	**Alice Springs**	**46.10**	**192**	P	**P**	**03 23 60.0**	**-0.4**
	0.5nm,0.7s,baz=8.7,slow=8.9,SNR=6.0						
ZALV	**Zalesovo Beam**	**54.49**	**322**	P	**P**	**03 25 02.2**	**-1.3**
	1.0nm,0.5s,baz=75,slow=6.1,SNR=1.9						
MKAR	**Makanchi Array**	**55.03**	**313**	P	**P**	**03 25 06.6**	**-1.0**
	0.3nm,0.7s,baz=98,slow=7.2,SNR=2.2						
ILAR	**Eielson Array**	**61.81**	**27**	P	**P**	**03 25 53.9**	**-0.6**
	1.2nm,0.9s,baz=265,slow=6.3,SNR=6.4						
INK	**Inuvik**	**67.36**	**24**	P	**P**	**03 26 30.7**	**0.0**
	0.8nm,0.6s,baz=292,slow=6.7,SNR=4.3						
YKA	**Yellowknife Ar**	**76.22**	**28**	P	**P**	**03 27 24.2**	**+0.2**
	1.0nm,0.7s,baz=295,slow=4.7,SNR=5.3						
KBZ	**Khabaz**	**82.70**	**314**	P	**P**	**03 28 00.4**	**+0.8**
	2.3nm,0.9s,baz=135,slow=2.9,SNR=2.7						
NVAR	**Mina Array Bea**	**82.76**	**52**	P	**P**	**03 28 01.6**	**+1.2**
	1.2nm,0.6s,baz=289,slow=5.6,SNR=14						
FINES	**FINESS Array B**	**83.37**	**335**	P	**P**	**03 28 01.8**	**-0.9**
	2.0nm,0.8s,baz=29,slow=3.2,SNR=2.1						
LPAZ	**La Paz**	**149.47**	**85**	PKPbc	**PKiKP**	**03 35 27.1**	**-0.6**
	2.1nm,0.8s,baz=307,slow=3.7,SNR=7.0						

ANF 26 03:22:48.8±1.2, 43°.77N×128°.73W, h0km, ML3.5/4, Error ellipse: s-maj=16.2km s-min=10.3km az=166.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I02D	**Swisshome**	**3.54**	**83**	S	Sn	03 24 28.0	+0.4
	baz=266						
J01E	**Myrtle Point**	**3.55**	**98**	P	Pn	03 23 44.7	-0.4
	baz=282						
K02D	**Willamette Mer**	**3.85**	**104**	S	Sn	03 24 36.0	+0.5
	baz=288						
I03D	**Drain, OR**	**3.90**	**89**	P	Pn	03 23 50.0	0.0
	baz=273,SNR=57						
I03D				S	Sn	03 24 37.6	+1.1
	baz=273						
G03D	**McMinnville, O**	**4.17**	**68**	P	Pn	03 23 53.4	-0.3
	baz=252,SNR=11						
G03D				S	Sn	03 24 43.5	+0.5
	baz=252						
H04D	**Lebanon**	**4.38**	**78**	S	Sn	03 24 49.3	+1.1
	baz=262						
I04A	**Tendick Farm,**	**4.58**	**88**	P	Pn	03 24 00.1	+0.8
	baz=272,SNR=5.4						
E04D	**Cinebar**	**5.17**	**55**	P	Pn	03 24 07.0	-0.4
	baz=240,SNR=8.0						
D03D	**Eldon**	**5.46**	**44**	P	Pn	03 24 11.2	-0.2
	baz=228						
G05D	**Wamic, OR**	**5.50**	**72**	P	Pn	03 24 12.2	+0.2
	baz=257,SNR=8.8						

*SOME **26** 03:32:05.8, 40°.58N×73°.05E, h10km*
*ISU **26** 03:32:07.7, 40°.67N×73°.13E, h15km*
*KRNET **26** 03:32:07.6±0.1, 40°.66N×73°.10E, h20km, mb3.0*
*NNC **26** 03:32:09.9±1.2, 40°.80N×73°.13E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=9.8km s-min=4.3km az=179.0*

ISC 26 03:32:05.9±0.8, 40°.59N±0°.03×73°.28E±0°.02, h10km, n63, σ1§29/102, 28C-11D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHH	**Osh**	**0.39**	**260**	⇑*iP*	**Pg**	**03 32 13.8**	**+0.2**
	baz=41						
OHH				⇑*iS*	**Sg**	**03 32 17.8**	**-0.9**
	baz=41						
SFK	**Sufi-Kurgan**	**0.60**	**164**	⇓*iP*	**Pn**	**03 32 21.4**	**+0.6**
	baz=54						
SFK				⇓*iS*	**Sn**	**03 32 31.4**	**+0.7**
	baz=54						
SFK	**Sufi-Kurgan**	**0.60**	**164**	*eP*	**Pn**	**03 32 21.1**	**+0.3**
SFK				*eS*	**Sn**	**03 32 31.0**	**+0.3**
ANR	**Andizhan**	**0.72**	**283**	*eP*	**Pg**	**03 32 17.0**	**-2.9**
ANR				*eS*	**Sg**	**03 32 28.6**	**-0.7**
ARSB	**Arslanbob**	**0.77**	**343**	⇓*iP*	**Pg**	**03 32 20.9**	**+0.2**
	baz=52						
ARSB				⇓*iS*	**Sg**	**03 32 30.6**	**-0.2**
	baz=52						
ARSB	**Arslanbob**	**0.77**	**343**	*eP*	**Pg**	**03 32 20.0**	**-0.7**
ARSB				*eS*	**Sg**	**03 32 29.4**	**-1.4**
FRG	**Fergana**	**1.15**	**278**	*eP*	**Pb**	**03 32 27.9**	**0.0**
FRG				*eS*	**Sb**	**03 32 41.1**	**-1.8**
ARLS	**Aral**	**1.49**	**31**	⇑*iP*	**Pg**	**03 32 35.4**	**+0.8**
	baz=37						
ARLS				⇑*iS*	**Sg**	**03 32 56.2**	**+2.3**
	baz=37						
AML	**Almayashu**	**1.57**	**11**	⇑*iP*	**Pg**	**03 32 35.8**	**-0.3**
	baz=17						
AML				⇑*iS*	**Sg**	**03 32 56.6**	**+0.2**
	baz=17						
AML	**Almayashu**	**1.57**	**11**	P	**Pg**	**03 32 36.7**	**+0.7**
	SNR=50						
DRK	**Karamyk**	**1.59**	**226**	⇑*iP*	**Pn**	**03 32 36.2**	**+1.8**
	baz=21						
DRK				⇑*iS*	**Sn**	**03 32 56.6**	**+1.4**
	baz=21						
TRKS	**Terek-Say**	**1.87**	**301**	⇑*iP*	**Pn**	**03 32 38.5**	**+0.3**
	baz=99						
TRKS				⇑*iS*	**Sn**	**03 33 00.0**	**-1.9**
	baz=99						
UCH	**Uchtor**	**1.88**	**29**	⇓*iP*	**Pg**	**03 32 41.6**	**-0.4**
	baz=34						
UCH				⇓*iS*	**Sg**	**03 33 07.1**	**+0.7**
	baz=34						
UCH	**Uchtor**	**1.88**	**29**	P	**Pg**	**03 32 43.0**	**+1.0**
	SNR=25						
BTK	**Batken**	**1.96**	**255**	⇓*iP*	**Pn**	**03 32 41.6**	**+2.3**
	baz=52						
BTK				⇓*iS*	**Sn**	**03 33 06.2**	**+2.2**
	baz=52						
BTK	**Batken**	**1.96**	**255**	*iP*	**Pn**	**03 32 41.3**	**+2.0**
BTK				*iS*	**Sn**	**03 33 03.9**	**-0.1**
MNAS	**Manas**	**1.98**	**343**	⇑*iP*	**Pb**	**03 32 41.6**	**-0.6**
	baz=46						
MNAS				⇑*iS*	**Sb**	**03 33 07.1**	**+0.1**
	baz=46						
EKS2	**Erkin-Say**	**2.10**	**10**	⇑*iP*	**Pb**	**03 32 44.1**	**-0.1**
	baz=14						
EKS2				⇑*iS*	**Sb**	**03 33 11.2**	**+0.8**
	baz=14						
EKS2	**Erkin-Say**	**2.10**	**10**	P	**Pg**	**03 32 46.2**	**0.0**
	SNR=9.8						
MRKS	**Merke**	**2.15**	**359**	*eP*	**Pb**	**03 32 45.9**	**+0.9**
	40nm,0.4s						
MRKS				*eS*	**Sg**	**03 33 13.7**	**-1.4**
	90nm,0.3s						
MRKS	**Merke**	**2.15**	**359**	Pg	**Pb**	**03 32 45.9**	**+0.9**
	40nm,0.4s						
MRKS				Lg	Lg	03 33 13.7	
	88nm,0.3s						
KBK	**Karagaybulak**	**2.41**	**31**	⇑*iP*	**Pb**	**03 32 49.1**	**-0.4**
	baz=34						
KBK				⇑*iS*	**Sb**	**03 33 20.0**	**+0.6**
	baz=34						
KBK	**Karagaybulak**	**2.41**	**31**	P	**Pg**	**03 32 53.3**	**+1.1**
	SNR=14						
CHMS	**Chumysh**	**2.64**	**24**	⇑*iP*	**Pb**	**03 32 51.7**	**-1.7**
	baz=27						
CHMS				⇑*iS*	**Sb**	**03 33 25.0**	**-0.9**
	baz=27						
CHMS	**Chumysh**	**2.64**	**24**	P	**Sb**	**03 33 30.7**	**+4.8**
	SNR=6.0						
DZA	**Taraz**	**2.72**	**328**	*eP*	**Pb**	**03 32 54.7**	**0.0**
	70nm,0.1s						
DZA				*eS*	**Sb**	**03 33 28.6**	**+0.4**
	153nm,0.2s						
DZA	**Taraz**	**2.72**	**328**	Pg	**Pb**	**03 32 55.9**	**+1.2**
	62nm,0.3s						
DZA				Lg	Lg	03 33 30.2	
	153nm,0.2s						
BOOM	**Boomskoye usch**	**2.75**	**46**	⇑*iP*	**Pb**	**03 32 54.0**	**-1.3**
	baz=48						
BOOM				⇑*iS*	**Sb**	**03 33 28.8**	**-0.4**
	baz=48						
ULHL	**Ulahol**	**2.77**	**52**	⇑*iP*	**Pb**	**03 32 54.5**	**-1.2**
	baz=55						
ULHL				⇑*iS*	**Sb**	**03 33 29.5**	**-0.3**
	baz=55						
USP	**Ospenovka**	**2.82**	**18**	⇑*iP*	**Pb**	**03 32 54.1**	**-2.4**
	baz=21						
USP				⇑*iS*	**Sb**	**03 33 29.0**	**-2.1**
	baz=21						
USP	**Ospenovka**	**2.82**	**18**	P	**Pg**	**03 32 59.7**	**-0.3**
	SNR=7.8						
IUG	**Iuzhnay**	**2.90**	**303**	*eP*	**Pb**	**03 32 58.1**	**+0.3**
	13nm,0.2s						
IUG				*eS*	**Sb**	**03 33 33.9**	**+0.6**
	120nm,0.5s						
TKM2	**Tokmak 2**	**2.90**	**36**	⇓*iP*	**Pb**	**03 32 55.9**	**-2.0**
	baz=39						
TKM2				⇓*iS*	**Sb**	**03 33 32.1**	**-1.4**
	baz=39						
TKM2	**Tokmak 2**	**2.90**	**36**	P	**Pg**	**03 33 01.7**	**+0.2**
	SNR=6.7						
TKM2	**Tokmak 2**	**2.90**	**36**	⇑Pg	**Pg**	**03 33 00.1**	**-1.4**
	2.2nm,0.3s						
TKM2				⇓Lg	Lg	03 33 37.1	
	5.7nm,0.6s						
KST	**Kastek**	**3.16**	**38**	*eP*	**Pg**	**03 33 06.3**	**-0.2**
	4.4nm,0.3s						
KST				*eS*	**Sg**	**03 33 48.7**	**+1.2**
	13nm,0.4s						
KST	**Kastek**	**3.16**	**38**	Pg	**Pg**	**03 33 06.4**	**-0.2**
	4.4nm,0.3s						
KST				Lg	Lg	03 33 48.7	
	13nm,0.4s						
DGS	**Degeres**	**3.23**	**34**	*eP*	**Pg**	**03 33 07.5**	**-0.4**
	6.8nm,0.7s						
DGS				*eS*	**Sg**	**03 33 50.3**	**+0.5**
	10.0nm,0.5s						
DGS	**Degeres**	**3.23**	**34**	Pg	**Pg**	**03 33 07.5**	**-0.4**
	6.8nm,0.7s						
DGS				Lg	Lg	03 33 50.3	
	10.0nm,0.5s						
KK31	**Karatay Array**	**3.25**	**321**	Pg	**Pb**	**03 33 04.3**	**+0.6**
	0.8nm,0.3s,baz=134,slow=17,SNR=30						
KK31				⇑Lg	Lg	03 33 43.9	
	7.0nm,0.4s,baz=136,slow=28,SNR=12						
KDJ	**Kajisay**	**3.31**	**61**	⇑*eP*	**Pb**	**03 33 02.4**	**-2.5**
	baz=63						
KDJ				⇑*iS*	**Sb**	**03 33 42.5**	**-2.8**
	baz=63						
MTBS	**Maitube**	**3.46**	**42**	*eP*	**Pg**	**03 33 12.0**	**-0.1**
	7.2nm,0.4s						
MTBS				*eS*	**Sg**	**03 33 57.6**	**+0.7**
	7.6nm,0.2s						
MTBS	**Maitube**	**3.46**	**42**	Pg	**Pg**	**03 33 12.0**	**-0.1**
	7.2nm,0.4s						
MTBS				Lg	Lg	03 33 57.7	
	7.6nm,0.2s						
TNSS	**Tian-Shan**	**3.67**	**47**	*eP*	**Pg**	**03 33 17.0**	**+0.8**
	2.9nm,0.4s						
TNSS				*eS*	**Sg**	**03 34 06.2**	**+2.4**
	4.7nm,0.4s						
TNSS	**Tian-Shan**	**3.67**	**47**	Pg	**Pg**	**03 33 17.0**	**+0.8**
	2.9nm,0.4s						
TNSS				Lg	Lg	03 34 06.2	
	4.7nm,0.4s						
MDOK	**Medeo**	**3.81**	**46**	*eP*	**Pg**	**03 33 19.3**	**+0.4**
	4.4nm,0.6s						
MDOK				*eS*	**Sg**	**03 34 10.1**	**+1.9**
	11nm,0.5s						
MDOK	**Medeo**	**3.81**	**46**	Pg	**Pg**	**03 33 19.3**	**+0.4**
	4.4nm,0.6s						
MDOK				Lg	Lg	03 34 10.1	
	11nm,0.5s						
KOTS	**Kotyrbulak**	**3.89**	**46**	*eP*	**Pg**	**03 33 20.9**	**+0.5**
	12nm,0.4s						
KOTS				*eS*	**Sg**	**03 34 13.0**	**+2.2**
	39nm,0.7s						
KOTS	**Kotyrbulak**	**3.89**	**46**	Pg	**Pg**	**03 33 20.9**	**+0.5**
	12nm,0.4s						
KOTS				Lg	Lg	03 34 13.0	
	39nm,0.7s						
KUU	**Kurty**	**4.00**	**34**	*eP*	**Pg**	**03 33 21.3**	**-1.3**
	2.9nm,0.3s						
KUU				*eS*	**Sg**	**03 34 13.5**	**-0.9**
	10nm,0.5s						
KUU	**Kurty**	**4.00**	**34**	Pg	**Pg**	**03 33 21.3**	**-1.3**
	2.9nm,0.3s						
KUU				Lg	Lg	03 34 13.5	
	10nm,0.5s						
KTBS	**Karatobe**	**4.01**	**38**	*eP*	**Pg**	**03 33 21.9**	**-0.9**
	2.5nm,0.5s						
KTBS				*eS*	**Sg**	**03 34 14.6**	**-0.2**
	18nm,0.5s						
KTBS	**Karatobe**	**4.01**	**38**	Pg	**Pg**	**03 33 21.9**	**-0.9**
	2.5nm,0.5s						
KTBS				Lg	Lg	03 34 14.6	
	18nm,0.5s						
CHKK	**Chushkaly**	**4.26**	**39**	*eP*	**Pg**	**03 33 26.4**	**-1.3**
	2.3nm,0.4s						
CHKK				*eS*	**Sg**	**03 34 22.6**	**-0.3**
	11nm,0.3s						
CHKK	**Chushkaly**	**4.26**	**39**	Pg	**Pg**	**03 33 26.4**	**-1.3**
	2.3nm,0.4s						
CHKK				Lg	Lg	03 34 22.6	
	11nm,0.3s						
BTLS	**Baital**	**4.48**	**7**	*eP*	**Pg**	**03 33 29.9**	**-1.9**
	2.4nm,0.4s						
BTLS				*eS*	**Sg**	**03 34 28.2**	**-1.6**
	4.2nm,0.3s						
SATY	**Saty**	**4.55**	**56**	*eP*	**Pg**	**03 33 32.7**	**-0.5**
	0.9nm,0.1s						
SATY				*eS*	**Sg**	**03 34 33.2**	**+1.1**
	7.7nm,0.3s						
SATY	**Saty**	**4.55**	**56**	Pg	**Pg**	**03 33 32.7**	**-0.5**
	2.1nm,0.9s						
SATY				Lg	Lg	03 34 33.1	
	5.5nm,0.5s						
UZB	**Uzunbulak**	**4.99**	**57**	*eP*	**Pg**	**03 33 40.2**	**-1.2**
	1.4nm,0.6s						
UZB				*eS*	**Sg**	**03 34 46.2**	**+0.1**
	6.2nm,1.3s						
UZB	**Uzunbulak**	**4.99**	**57**	Pg	**Pg**	**03 33 39.2**	**-2.3**
	4.3nm,1.8s						
UZB				Lg	Lg	03 34 44.2	
	6.2nm,1.3s						
MNBS	**Baschi**	**5.15**	**46**	*eP*	**Pg**	**03 33 43.6**	**-1.0**
	2.1nm,0.6s						
MNBS				*eS*	**Sg**	**03 34 51.7**	**+0.5**
	5.6nm,0.1s						
MNBS	**Baschi**	**5.15**	**46**	Pg	**Pg**	**03 33 43.6**	**-1.0**
	2.1nm,0.6s						
MNBS				Lg	Lg	03 34 51.7	
	5.6nm,0.1s						
PDGK	**Podgornoye**	**5.38**	**57**	Pg	**Pg**	**03 33 47.1**	**-1.7**
	2.1nm,1.8s						
PDGK				Lg	Lg	03 34 57.8	
	2.2nm,0.9s						

*IDC **26** 03:47:41.9±1.0, 53°.89N×161°.19W, h0km, mb3.9/17, mb1 4.0/20, mb1mx3.9/54, mbtmp3.8/20, ML3.4/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/35, Error ellipse: s-maj=26.7km s-min=14.7km az=5.0*

*AEIC **26** 03:47:43.2±1.1, 53°.71N±0°.05×161°.01W±0°.05, h35km±5km, mb4.0/11(NEIC), Error ellipse: s-maj=7.8km s-min=4.3km az=188.0*

*NEIC **26** 03:47:45.0±2.0, 53°.71N±0°.08×160°.95W±0°.09, h44km±6km, Error ellipse: s-maj=13.0km s-min=5.9km az=155.0*

ISC 26 03:47:43.3±3.5, 53°.79N±0°.07×161°.01W±0°.04, h18km±21km, n99, σ1§62/101, mb3.9/18, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**1.32**	**38**		**Pb**	**03 48 07.7**	**+0.2**
CNBA					**Sn**	**03 48 24.6**	**+0.6**
DT1	**Dutton Round H**	**1.51**	**331**		**Pn**	**03 48 09.7**	**+0.3**
SDPT	**Sand Point**	**1.59**	**11**		**Pn**	**03 48 11.8**	**+1.4**
SDPT					**Sn**	**03 48 32.4**	**+1.8**
HAG	**Hague Volcano**	**1.61**	**342**		**Pn**	**03 48 12.4**	**+1.5**
PS4A	**Pavlof South-4**	**1.63**	**343**		**Pn**	**03 48 12.7**	**+1.6**
PN7A	**Pavlof North-7**	**1.74**	**341**		**Pn**	**03 48 13.8**	**+1.2**
FALS	**False Pass**	**1.77**	**308**		**Pn**	**03 48 13.8**	**+0.9**
FALS					**Sb**	**03 48 37.9**	**+1.0**
SSLS	**Shishaldin Sou**	**1.98**	**299**		**Pn**	**03 48 16.8**	**+0.9**
SSLS					**Sn**	**03 48 42.2**	**+1.9**
SSLN	**Shishaldin Nor**	**2.03**	**301**		**Pn**	**03 48 18.0**	**+1.4**
SSLN					**Sb**	**03 48 44.5**	**+0.1**
WESE	**West Dahl East**	**2.21**	**289**		**Pn**	**03 48 19.6**	**+0.5**
WTUG	**Tugumak**	**2.24**	**299**		**Pn**	**03 48 20.8**	**+1.3**
WESP	**Westdahl Peak**	**2.29**	**289**		**Pn**	**03 48 20.6**	**+0.3**
VNSS	**Veniaminof 8**	**2.60**	**20**		**Pn**	**03 48 25.7**	**+1.1**
AKSA	**Akutan Strait**	**2.79**	**279**		**Pn**	**03 48 27.1**	**+0.1**
CHGN	**Chignik**	**2.92**	**30**		**Pn**	**03 48 29.8**	**+1.0**
AKBBA	**Akutan Broad B**	**2.93**	**278**		**Pn**	**03 48 29.1**	**+0.3**
ZRO	**Akutan Zero**	**2.95**	**278**		**Pn**	**03 48 29.3**	**+0.1**
AKGG	**Akutan Green G**	**2.97**	**280**		**Pn**	**03 48 29.9**	**+0.5**
AKMO	**Akutan Morgan**	**2.97**	**278**		**Pn**	**03 48 29.7**	**+0.2**
AKMO					**Sn**	**03 49 05.7**	**+1.0**
UNV	**Unalaska Valle**	**3.26**	**273**		**Pn**	**03 48 33.5**	**+0.1**
UNV					**Sn**	**03 49 12.3**	**+0.7**
MREP	**Makushin Rep't**	**3.40**	**273**		**Pn**	**03 48 35.3**	**-0.1**
MAPS	**Pakushin South**	**3.52**	**273**		**Pn**	**03 48 37.0**	**0.0**
MAPS					**Sn**	**03 49 20.3**	**+2.2**
CHIR	**Chirikof Islan**	**3.72**	**55**		**Pn**	**03 48 40.5**	**+0.7**
SII	**Sitkinak Islan**	**4.79**	**52**		**Pn**	**03 48 55.1**	**+0.6**
KABU	**Katmai Buttres**	**5.52**	**33**		**Pn**	**03 49 07.2**	**+2.7**
OHAK	**Old Harbor**	**5.57**	**49**		**Pn**	**03 49 05.7**	**+0.6**
KDAK	**Kodiak Island**	**6.21**	**47**		**Pn**	**03 49 14.7**	**+0.8**
AUCH	**Augustine Cone**	**6.97**	**34**		**Pn**	**03 49 26.8**	**+2.4**
AUL	**Augustine Lava**	**6.99**	**34**		**Pn**	**03 49 26.1**	**+1.5**
IVE	**Iliamna Volcan**	**7.62**	**32**		**Pn**	**03 49 35.8**	**+2.5**
CNPM	**China Poot**	**7.87**	**39**		**Pn**	**03 49 39.0**	**+2.4**
BRLK	**Bradley Lake**	**8.16**	**39**		**Pn**	**03 49 41.2**	**+0.5**
BRSE	**Bradley Lake S**	**8.20**	**39**		**Pn**	**03 49 42.0**	**+0.8**
SLKM	**Skilak Lake**	**8.92**	**37**		**Pn**	**03 49 54.2**	**+3.2**
TT01	**Tatalina**	**9.51**	**14**		**Pn**	**03 50 02.5**	**+3.4**
SKT	**Skwentna**	**9.62**	**28**		**Pn**	**03 50 02.5**	**+1.7**
PWL	**Port Wells**	**9.84**	**39**		**Pn**	**03 50 05.1**	**+1.4**
KNK	**Knik Glacier**	**10.17**	**36**		**Pn**	**03 50 09.9**	**+1.7**
HIN	**Hinchinbrook I**	**10.28**	**44**	Pn	**Pn**	**03 50 08.3**	**-1.5**
SCM	**Sheep Creek Mo**	**10.85**	**37**		**Pn**	**03 50 18.4**	**+0.9**
KAIM	**Kayak Island**	**10.95**	**49**	Pn	**Pn**	**03 50 20.0**	**+1.2**
KLU	**Klutina**	**11.15**	**40**		**Pn**	**03 50 22.3**	**+0.7**
M24K	**Tolsona, Glenn**	**11.44**	**37**	Pn	**Pn**	**03 50 26.4**	**+0.7**
DHY	**Denali Highway**	**11.70**	**32**		**Pn**	**03 50 28.8**	**-0.5**
ISLE	**Juniper Island**	**12.18**	**48**		**Pn**	**03 50 35.6**	**-0.2**
PAX	**Paxson**	**12.25**	**35**		**Pn**	**03 50 37.5**	**+0.8**
YAH	**Yahtse**	**12.34**	**50**		**Pn**	**03 50 39.0**	**+0.9**
BALM	**Baldy**	**12.37**	**47**		**Pn**	**03 50 38.8**	**+0.5**
IMAR	**Indian Mountai**	**12.75**	**14**		**Pn**	**03 50 44.9**	**+1.5**
I23K	**Minto, Yukon-K**	**12.80**	**23**		**Pn**	**03 50 41.3**	**-2.9**
MENT	**Mentasta**	**12.85**	**38**		**Pn**	**03 50 45.7**	**+0.8**
PCA	**Pinnacle**	**12.93**	**52**		**Pn**	**03 50 48.0**	**+2.0**
RIDG	**Independent Ri**	**12.98**	**33**	Pn	**Pn**	**03 50 47.1**	**+0.5**
ILAR	**Eielson Array**	**13.12**	**27**	Pn	**Pn**	**03 50 46.0**	**-2.5**
	0.1nm,0.3s,baz=219,slow=14,SNR=4.8						
ILAR				Sn	**Sn**	**03 53 09.4**	**-4.3**
	0.0nm,0.3s,baz=213,slow=22,SNR=3.1						
ILAR				LR	LR	03 55 44.9	
	comp=Z,55nm,18.6s,baz=252,slow=37						
DOT	**Dot Lake**	**13.18**	**35**	Pn	**Pn**	**03 50 51.2**	**+1.8**
BCAR	**Beaver Creek A**	**13.64**	**39**		**Pn**	**03 50 55.6**	**0.0**
K27K	**Chicken**	**14.11**	**36**	P	**Pn**	**03 51 02.0**	**+0.1**
EGAK	**Eagle**	**14.88**	**35**	P	**Pn**	**03 51 12.9**	**+0.4**
DAWY	**Dawson**	**15.09**	**38**	Pn	**Pn**	**03 51 14.1**	**-1.2**
DAWY				IAmb	IAmb	03 51 26.4	
	comp=Z,8.0nm,1.1s						
SKAG	**Skagway**	**15.17**	**58**	P	**P**	**03 51 19.0**	**-2.3**
SKAG				IAmb	IAmb	03 51 31.2	
	comp=Z,7.0nm,0.8s						
A21K	**Barrow**	**17.70**	**5**		**Pn**	**03 51 47.6**	**-0.8**
A21K				IAmb	IAmb	03 51 52.9	
	comp=Z,10nm,0.9s						
DLBC	**Dease Lake**	**17.79**	**62**	P	**Pn**	**03 51 50.1**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=311,slow=19,SNR=2.1						
DLBC	**Dease Lake**	**17.79**	**62**	P	**Pn**	**03 51 48.7**	**-1.0**
INK	**Inuvik**	**19.44**	**31**	P	**P**	**03 52 08.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=229,slow=12,SNR=11						
INK	**Inuvik**	**19.44**	**31**	P	**P**	**03 52 06.8**	**-1.6**
BILL	**Bilibino**	**20.99**	**325**	P	**P**	**03 52 22.8**	**-2.5**
C36M	**Paulatuk**	**22.95**	**33**	P	**P**	**03 52 44.5**	**-1.5**
PETK	**Petropavlovsk-**	**24.36**	**285**	P	**P**	**03 52 59.3**	**-0.6**
	comp=Z,8.4nm,0.9s,baz=84,slow=12

IDC 26 04:14:26.2±7.8, 7°96'N×94°52'E, h0km, mb3.8/4, mb1 3.8/4, mb1mx3.4/43, mbtmp3.8/4, MS2.6/1, Ms1 2.8/1, ms1mx2.4/34, Error ellipse: s-maj=428.6km s-min=25.1km az=58.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.29**	**22**	LR		LR	04 21 50.4	
	comp=Z,30nm,19.0s,baz=169,slow=39							
MKAR	**Makanchi Array**	**40.09**	**347**	P		P	04 22 03.1	-0.4
	0.9nm,0.8s,baz=159,slow=8.7,SNR=5.9							
KURBB	**Kurchatov Arra**	**44.55**	**346**	P		P	04 22 39.9	+0.1
	0.8nm,0.2s,baz=166,slow=6.5,SNR=6.6							
WRA	**Warramunga Arr**	**48.01**	**126**	P		P	04 23 06.3	-1.1
	0.1nm,0.4s,baz=304,slow=8.7,SNR=2.4							
ASAR	**Alice Springs**	**49.69**	**130**	P		P	04 23 21.3	+0.9
	0.2nm,0.2s,baz=300,slow=7.4,SNR=1.7							

*IDC **26** 04:26:44.5±1.9, 73°49'N×131°17'E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/38, mbtmp3.6/5, MS2.9/2, Ms1 2.9/2, ms1mx2.4/42, Error ellipse: s-maj=56.7km s-min=30.0km az=159.0*

*YARS **26** 04:26:48.4±0.0, 73°30'N×130°63'E, h10km*

ISC 26 04:26:46.4±0.9, 73°48'N±0°09'×130°71'E±0°08, h10km, n10, σ0°98/11, mb3.8/5, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIXI	**Tiksi**	**1.93**	**198**	*e*P		**Pn**	**04 27 19.1**	**0.0**
	53nm,0.2s							
TIXI				*e*S		**Sn**	**04 27 42.2**	**-1.1**
	488nm,0.3s							
DEPR	**Deputatskiy**	**5.05**	**140**	*e*P		**Pn**	**04 28 02.3**	**+0.3**
	11nm,0.2s							
DEPR				*e*S		**Sn**	**04 29 00.8**	**+0.5**
	38nm,1.1s							
MOMR	**Moma**	**8.23**	**143**	*e*P		**Pn**	**04 28 46.6**	**+1.0**
	4.4nm,0.4s							
MOMR				*e*S		**Sn**	**04 30 17.8**	**-0.7**
	5.4nm,0.7s							
MA2	**Magadan**	**15.93**	**141**	LR		LR	04 37 27.9	
	comp=Z,34nm,19.5s,baz=138,slow=41							
ILAR	**Eielson Array**	**28.12**	**64**	P		**P**	**04 32 36.6**	**-1.3**
	0.2nm,0.6s,baz=319,slow=8.7,SNR=2.1							
MKAR	**Makanchi Array**	**34.24**	**246**	P		**P**	**04 33 32.9**	**+1.0**
	0.4nm,0.4s,baz=35,slow=6.3,SNR=10.0							
YKA	**Yellowknife Ar**	**37.52**	**44**	LR		LR	04 50 33.3	
	comp=Z,25nm,18.9s,baz=0,slow=38							
AKASG	**Malin Array Be**	**45.31**	**299**	P		**P**	**04 35 04.2**	**+0.4**
	0.7nm,0.4s,baz=26,slow=9.0,SNR=3.7							
ESDC	**Sonseca Array**	**62.99**	**322**	P		**P**	**04 37 13.7**	**+0.8**
	0.9nm,0.9s,baz=21,slow=5.8,SNR=6.7							
TORD	**Torodi Ar. Bea**	**87.64**	**311**	P		**P**	**04 39 33.6**	**-1.1**
	0.3nm,0.6s,baz=2.9,slow=5.9,SNR=7.4							

*DDA **26** 05:05:32.7, 36°91'N×27°71'E, h21km±1km, MW4.2*

*ATH **26** 05:05:33.7, 36°93'N×27°72'E, h33km±1km, ML4.3/8, Error ellipse: s-maj=1.9km s-min=0.7km az=241.0*

*MED_RC **26** 05:05:33.0±2.0, 36°76'N×27°84'E, h11km±3km, MW4.2/9, Moment Tensor Solution. Mantle waves: s9,c11; Duration: 1s0 Moment tensor: Scale 10^15 Nm; Mrr=1.99±.52; Mθθ=2.62±.38; Mϕϕ=0.63±.21; Mrθ=0.32±.70; Mrϕ=0.51±.18; Mθϕ=0.42±.87; Best double couple: M=2.42000×10^15 NP1:ϕs=264.00000°, δ42.00000°, λ=-112.00000°. NP2: ϕs=112.00000°, δ51.00000°, λ=-71.00000°. Principal axes: T 2.7300, Plg5.0000°, Azm189.0000°; N -0.6200, Plg14.0000°, Azm280.0000°; P -2.1200, Plg75.0000°, Azm82.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*THE **26** 05:05:33.8, 36°95'N×27°74'E, h5km±1km, ML4.3/7 Error ellipse: s-maj=1.2km s-min=0.4km az=329.0*

*ISK **26** 05:05:33.6, 36°93'N×27°74'E, h11km, ML4.1/11*

*HLW **26** 05:05:36.6, 36°59'N×27°90'E, h8km±16km, Md4.7, Ml4.3*

*IDC **26** 05:05:36.3±2.3, 36°93'N×27°75'E, h34km±21km, mb3.8/15, mb1 3.9/21, mb1mx3.7/53, mbtmp4.0/21, ML3.8/6, MS3.4/4, Ms1 3.4/4, ms1mx2.8/41, Error ellipse: s-maj=15.4km s-min=11.0km az=146.0*

*NEIC **26** 05:05:37.3±1.9, 36°96'N±0°05'×27°70'E±0°06, h47km±9km, Error ellipse: s-maj=8.0km s-min=7.3km az=152.0*

ISC 26 05:05:34.2±0.7, 36°91'N±0°02'×27°74'E±0°01, h19km±2km, n229, σ1s69/279, mb4.0/16, 10C-14D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DATC	**Datca-Mugla**	**0.16**	**203**	PG		**Pb**	**05 05 37.9**	**+0.3**
BDRM	**Kayabasi**	**0.28**	**303**	⇑*i*P		**Pg**	**05 05 39.4**	**-1.1**
BDRM				*i* S		**Sg**	**05 05 43.6**	**-1.2**
BDRM				IAML			05 05 44.0	
	comp=E,27μm,0.6s							
BODT	**Bodrum**	**0.38**	**294**	PG		**Pg**	**05 05 41.3**	**-0.8**
BODT				SG		**Sg**	**05 05 46.9**	**-0.6**
BODT	**Bodrum**	**0.38**	**294**	P		**Pg**	**05 05 41.3**	**-0.8**
BODT				S		**Sg**	**05 05 46.7**	**-0.8**
MLSB	**Milas**	**0.39**	**4**	PG		**Pg**	**05 05 42.3**	**0.0**
MRSB	**Marmaris-Mugla**	**0.41**	**118**	PG		**Pg**	**05 05 42.3**	**-0.5**
YKAV	**Yalikavak-Bodr**	**0.42**	**300**	PG		**Pg**	**05 05 42.1**	**-0.9**
YKAV				SG		**Sg**	**05 05 48.4**	**-0.5**
TURN	**Turunc**	**0.43**	**108**	PG		**Pg**	**05 05 42.3**	**-0.7**
TURN				SG		**Sb**	**05 05 49.5**	**+0.1**
TURN	**Turunc**	**0.43**	**108**	⇓*i*P		**Pg**	**05 05 41.3**	**-1.7**
TURN				*i* S		**Sb**	**05 05 49.0**	**-0.3**
TURN				IAML			05 05 52.0	
	comp=N,9μm,0.3s							
YER	**Yerkesik**	**0.49**	**63**	PG		**Pg**	**05 05 43.2**	**-1.0**
YER	**Yerkesik**	**0.49**	**63**	P		**Pg**	**05 05 43.1**	**-1.1**
YER				S		**Sg**	**05 05 49.9**	**-1.0**
NIS1	**Nisyros Isl.**	**0.55**	**236**	P		**Pb**	**05 05 45.3**	**+0.1**
NIS1				S		**Sb**	**05 05 54.3**	**+1.7**
NIS1				AML		AML	05 05 59.9	
NIS1				AML		AML	05 06 00.2	
NIS1	**Nisyros Isl.**	**0.55**	**236**	PG		**Pb**	**05 05 44.9**	**-0.3**
NIS1	**Nisyros Isl.**	**0.55**	**236**	P		**Pb**	**05 05 45.1**	**-0.1**
NIS1				S		**Sb**	**05 05 54.3**	**+1.7**
	comp=N,147μm,0.4s							
NISR	**Nisiros**	**0.57**	**239**	P		**Pb**	**05 05 45.7**	**+0.1**
NISR				S		**Sb**	**05 05 54.8**	**+1.4**
NISR				AML		AML	05 05 56.6	
NISR				AML		AML	05 05 57.1	
NISR	**Nisiros**	**0.57**	**239**	P		**Pb**	**05 05 45.5**	**-0.1**
NISR				S		**Sb**	**05 05 54.6**	**+1.3**
	comp=N,73μm,0.3s							
KOSK	**Kos Island**	**0.63**	**256**	PG		**Pb**	**05 05 46.4**	**-0.2**
KOSK	**Kos Island**	**0.63**	**256**	P		**Pb**	**05 05 46.3**	**-0.3**
KOSK				S		**Sb**	**05 05 55.6**	**+0.6**
	comp=N,30μm,0.4s							
DALY	**Dalyan (Mula)**	**0.74**	**97**	PG		**Pb**	**05 05 48.2**	**-0.3**
DALY	**Dalyan (Mula)**	**0.74**	**97**	*i* P		**Pb**	**05 05 47.5**	**-1.0**
DALY				*i* S		**Sn**	**05 06 01.1**	**+0.7**
DALY				IAML			05 06 03.0	
	comp=N,3μm,0.5s							
AYDN	**Tasoluk**	**0.76**	**8**	⇑*i*P		**Pb**	**05 05 47.6**	**-1.2**
AYDN				*i* S		**Sb**	**05 05 58.2**	**-0.7**
AYDN				IAML			05 06 02.0	
	comp=N,23μm,0.6s							
ARG	**Arkhangelos**	**0.76**	**156**	P		**Pb**	**05 05 48.9**	**0.0**
ARG				S		**Sn**	**05 06 01.4**	**+0.5**
ARG				AML		AML	05 06 03.7	
	comp=N,40262μm,0.6s							
ARG				AML		AML	05 06 05.8	
	comp=E,30926μm,0.5s							
ARG	**Arkhangelos**	**0.76**	**156**	PG		**Pb**	**05 05 48.8**	**0.0**
ARG	**Arkhangelos**	**0.76**	**156**	P		**Pb**	**05 05 48.6**	**-0.3**
ARG				S		**Sn**	**05 06 01.2**	**+0.3**
	comp=E,18μm,0.6s							
GCAM	**G?zelcaml?**	**0.89**	**333**	PG		**Pb**	**05 05 50.5**	**-0.5**
GCAM	**G?zelcaml?**	**0.89**	**333**	⇑*i*P		**Pb**	**05 05 49.8**	**-1.2**
GCAM				*i* S		**Sb**	**05 06 02.1**	**-0.4**
GCAM				IAML			05 06 05.0	
	comp=E,8μm,0.6s							
GCAM				IAML			05 06 10.0	
	comp=N,10μm,0.7s							
AYDB	**Zeytinkoy-Aydi**	**1.04**	**7**	PG		**Pb**	**05 05 52.9**	**-0.9**
SMG	**Samos**	**1.07**	**318**	P		**Pn**	**05 05 53.8**	**-0.6**
SMG				S		**Sb**	**05 06 08.1**	**+0.2**
SMG				AML		AML	05 06 12.3	
	comp=N,26165μm,0.3s							
SMG				AML		AML	05 06 13.3	
	comp=E,41735μm,0.3s							
SMG	**Samos**	**1.07**	**318**	P		**Pn**	**05 05 53.5**	**-0.8**
SMG				S		**Sb**	**05 06 07.7**	**-0.2**
	comp=E,17μm,0.3s							
TAVA	**DENIZLI_Tavas**	**1.09**	**59**	⇑*i*P		**Pb**	**05 05 53.8**	**-0.8**
TAVA				*i* S		**Sg**	**05 06 09.7**	**0.0**
TAVA				IAML			05 06 11.0	
	comp=E,2μm,0.7s							
TAVA				IAML			05 06 18.0	
	comp=N,2μm,1.1s							
FETY	**Fethiye**	**1.11**	**104**	PN		**Pn**	**05 05 55.3**	**+0.4**
FETY	**Fethiye**	**1.11**	**104**	⇓*i*P		**Pb**	**05 05 54.9**	**-0.1**
FETY				*i* S		**Sg**	**05 06 12.6**	**+2.1**
FETY				IAML			05 06 14.0	
	comp=N,671nm,0.8s							
FETY				IAML			05 06 17.0	
	comp=E,730nm,0.8s							
FETY	**Fethiye**	**1.11**	**104**	P		**Pb**	**05 05 55.0**	**+0.1**
FETY				S		**Sg**	**05 06 10.8**	**+0.3**
CAME	**Cameli-Denizli**	**1.25**	**88**	PN		**Pb**	**05 05 57.8**	**+0.4**
DGB	**zmir**	**1.33**	**329**	⇓*i*P		**Pb**	**05 05 57.0**	**-0.8**
DGB				*i* S		**Sn**	**05 06 15.3**	**+0.3**
DGB				IAML			05 06 23.0	
	comp=N,2μm,0.5s							
KARP	**Karpathos**	**1.44**	**199**	P		**Pn**	**05 05 59.6**	**+0.2**
KARP				S		**Sn**	**05 06 18.8**	**+1.0**
KARP				AML		AML	05 06 24.9	
	comp=N,13577μm,0.6s							
KARP				AML		AML	05 06 27.3	
	comp=E,13800μm,0.8s							
KARP	**Karpathos**	**1.44**	**199**	PN		**Pn**	**05 05 59.8**	**+0.4**
KARP	**Karpathos**	**1.44**	**199**			**Pn**	**05 05 59.4**	**0.0**
KARP	**Karpathos**	**1.44**	**199**	P		**Pn**	**05 05 59.6**	**+0.2**
KARP				S		**Sn**	**05 06 18.8**	**+1.0**
	comp=E,7μm,0.7s							
AMGA	**Amorgos Island**	**1.48**	**268**	P		**Pn**	**05 05 59.5**	**-0.5**
AMGA				S		**Sn**	**05 06 19.1**	**+0.3**
	comp=N,8818μm,0.3s							
AMGA				AML		AML	05 06 31.1	
	comp=E,7573μm,0.8s							
AMGA	**Amorgos Island**	**1.48**	**268**	P		**Pn**	**05 05 59.4**	**-0.5**
AMGA				S		**Sn**	**05 06 19.1**	**+0.3**
	comp=E,4μm,0.5s							
GOLH	**Golhisar**	**1.49**	**77**	⇓*i*P		**Pb**	**05 06 02.3**	**+0.8**
GOLH				*i* S		**Sg**	**05 06 23.8**	**+1.2**
GOLH				IAML			05 06 31.0	
	comp=E,149nm,0.8s							
GOLH				IAML			05 06 37.0	
	comp=N,2μm,0.9s							
AKAS	**Kas**	**1.65**	**114**	PN		**Pb**	**05 06 03.8**	**-0.3**
AKAS	**Kas**	**1.65**	**114**	*i* P		**Pg**	**05 06 05.9**	**-0.1**
AKAS				*i* S		**Sg**	**05 06 30.8**	**+3.3**
AKAS				IAML			05 06 45.0	
	comp=N,1μm,1.0s							
AKAS	**Kas**	**1.65**	**114**			**Pb**	**05 06 04.5**	**+0.4**
KSL	**Kastellorizon**	**1.67**	**116**	P		**Pb**	**05 06 03.9**	**-0.5**
ANAF	**Anafi Island**	**1.68**	**251**	P		**Pn**	**05 06 03.1**	**+0.5**
ANAF				AML		AML	05 06 31.8	
	comp=N,14322μm,0.4s							
ANAF				AML		AML	05 06 35.4	
	comp=E,21686μm,0.6s							
ANAF	**Anafi Island**	**1.68**	**251**	P		**Pn**	**05 06 02.4**	**-0.2**
MANT	**Manisa**	**1.71**	**22**	*i* P		**Pn**	**05 06 02.8**	**-0.5**
MANT				*i* S		**Sg**	**05 06 30.0**	**+0.7**
MANT				IAML			05 06 36.0	
	comp=E,702nm,0.7s							
MANT	**Manisa**	**1.71**	**22**	Pn		**Pn**	**05 06 03.1**	**-0.1**
URLA	**Izmir**	**1.71**	**328**	PN		**Pn**	**05 06 04.7**	**+1.6**
URLA	**Izmir**	**1.71**	**328**	*i* P		**Pn**	**05 06 02.2**	**-0.8**
URLA				*i* S		**Sg**	**05 06 29.8**	**+0.4**
URLA				IAML			05 06 36.0	
	comp=N,2μm,0.7s							
ELL	**Elmali**	**1.75**	**95**	PN		**Pb**	**05 06 05.4**	**-0.4**
ELL	**Elmali**	**1.75**	**95**			**Pb**	**05 06 06.6**	**+0.8**
KULA	**Kula-Manisa**	**1.76**	**24**	PN		**Pn**	**05 06 05.1**	**+1.2**
KULA	**Kula-Manisa**	**1.76**	**24**	P		**Pn**	**05 06 03.6**	**-0.2**
APE	**Apeiranthos**	**1.77**	**276**	P		**Pn**	**05 06 03.9**	**-0.2**
APE				S		**Sn**	**05 06 25.3**	**-0.8**
APE				AML		AML	05 06 37.0	
	comp=N,3566μm,0.4s							
APE				AML		AML	05 06 42.4	
	comp=E,1743μm,0.6s							
APE	**Apeiranthos**	**1.77**	**276**	⇓P		**Pn**	**05 06 03.7**	**-0.3**
APE	**Apeiranthos**	**1.77**	**276**	P		**Pn**	**05 06 03.8**	**-0.2**
APE				S		**Sn**	**05 06 25.6**	**-0.5**
GOMA	**Golmarmara-Man**	**1.80**	**4**	PN		**Pn**	**05 06 05.7**	**+1.4**
THT2	**Imerovigli**	**1.92**	**256**	PN		**Pn**	**05 06 07.6**	**+1.6**
THR6	**Thira Island,**	**1.96**	**254**	P		**Pn**	**05 06 06.8**	**+0.3**
AKHS	**Akhisar**	**1.97**	**2**	*i* P		**Pn**	**05 06 05.6**	**-1.0**
AKHS				*i* S		**Sg**	**05 06 37.5**	**0.0**
AKHS				IAML			05 06 45.0	
	comp=E,709nm,0.6s							
BRDR	**BURDUR-Merkez**	**2.01**	**66**	*i* P		**Pn**	**05 06 08.9**	**+1.6**
BRDR				*i* S		**Sg**	**05 06 38.3**	**-0.7**
BRDR				IAML			05 06 49.0	
	comp=N,814nm,1.6s							
USAK	**Uak-Merkez**	**2.07**	**29**	*i* P		**Pn**	**05 06 08.0**	**0.0**
USAK				*i* S		**Sg**	**05 06 44.5**	**+3.7**
KORT	**Korkueli**	**2.09**	**87**	*i* P		**Pb**	**05 06 11.5**	**-0.2**
KORT				*i* S		**Sg**	**05 06 39.2**	**-2.4**
ZEDA	**zmir-Bergama**	**2.12**	**346**	*i* P		**Pn**	**05 06 07.5**	**-1.2**
ZEDA				*i* S		**Sg**	**05 06 43.0**	**+0.6**
ZEDA				IAML			05 06 46.0	
	comp=E,833nm,1.0s							
ZEDA				IAML			05 06 54.0	
	comp=N,1μm,0.8s							
ZKR	**Zakros**	**2.17**	**215**	P		**Pn**	**05 06 10.0**	**+0.5**
ZKR	**Zakros**	**2.17**	**215**	PN		**Pn**	**05 06 11.8**	**+2.3**
ZKR	**Zakros**	**2.17**	**215**	P		**Pn**	**05 06 11.0**	**+1.5**
DKL	**Dikili**	**2.26**	**343**	PN		**Pn**	**05 06 12.2**	**+1.6**
KZIL	**AFYON_Kizioren**	**2.33**	**54**	*i* P		**Pn**	**05 06 13.3**	**+1.5**
KZIL				*i* S		**Sg**	**05 06 52.9**	**+3.5**
NPS	**Neapolis**	**2.38**	**227**	P		**Pn**	**05 06 13.0**	**+0.7**
ISP	**Isparta**	**2.40**	**67**			**Pn**	**05 06 14.4**	**+1.8**
STEP	**BALIKESIR_Sava**	**2.46**	**360**	*i* P		**Pn**	**05 06 12.6**	**-0.8**
STEP				*i* S		**Sg**	**05 06 54.6**	**+1.2**
STEP				IAML			05 07 04.0	
	comp=E,2μm,0.8s							
LAST	**Lasithi**	**2.53**	**227**	P		**Pn**	**05 06 14.9**	**+0.5**
LAST	**Lasithi**	**2.53**	**227**	P		**Pn**	**05 06 15.6**	**+1.2**
AYVA	**Ayvalik**	**2.53**	**341**	*e*P		**Pn**	**05 06 12.9**	**-1.5**
AYVA				*i* S		**Sg**	**05 06 55.1**	**-0.6**
GDZ	**Gediz**	**2.57**	**32**	*i* P		**Pn**	**05 06 15.0**	**-0.1**
GDZ				*i* S		**Sg**	**05 07 00.6**	**+3.6**
PRK	**Paraskevi**	**2.60**	**334**	P		**Pn**	**05 06 16.1**	**+0.7**
BAGO	**Egridir - ISPA**	**2.66**	**65**	*i* P		**Pn**	**05 06 18.0**	**+1.9**
BAGO				*i* S		**Sg**	**05 07 01.6**	**+1.9**
SIGR	**SIGRI**	**2.74**	**328**	P		**Pn**	**05 06 17.0**	**-0.2**
SIGR	**SIGRI**	**2.74**	**328**	P		**Pn**	**05 06 16.9**	**-0.2**
AFYO	**Afyonkarahisar**	**2.76**	**46**	*i* P		**Pn**	**05 06 19.0**	**+1.4**
AFYO				*i* S		**Sg**	**05 07 10.9**	**+7.9**
IDI	**Anoyia**	**2.82**	**236**	Pn		**Pn**	**05 06 19.5**	**+1.1**
	comp=E,5.3nm,0.3s,baz=354,slow=6.5,SNR=25							
IDI				Sn		**Sn**	**05 06 50.2**	**-1.7**
	comp=E,15nm,0.3s,baz=233,slow=10,SNR=3.9							
IDI				Lg		Lg	05 07 07.6	
	comp=E,25nm,0.3s,baz=276,slow=16,SNR=4.4							
IDI	**Anoyia**	**2.82**	**236**	P		**Pn**	**05 06 18.5**	**+0.2**
IDI	**Anoyia**	**2.82**	**236**	⇓P		**Pn**	**05 06 19.5**	**+1.1**
IDI	**Anoyia**	**2.82**	**236**	P		**Pn**	**05 06 19.3**	**+0.9**
BALY	**Balya**	**2.83**	**358**	*i* P		**Pn**	**05 06 17.8**	**-0.7**
BALY				*i* S		**Sg**	**05 07 04.1**	**-1.0**
BALY				IAML			05 07 09.0	
	comp=N,730nm,0.6s							
BALY				IAML			05 07 10.0	
	comp=E,429nm,0.8s							
KARY	**Karystos**	**2.86**	**294**	P		**Pn**	**05 06 19.2**	**+0.4**
SIVA	**Sivas**	**3.04**	**232**	P		**Pn**	**05 06 22.7**	**+1.4**
KEPZ	**Antalya-Kepez**	**3.10**	**89**	*i* P		**Pn**	**05 06 25.4**	**+3.2**
KEPZ				*i* S		**Sb**	**05 07 05.0**	**-1.3**
KEPZ				IAML			05 07 07.0	
	comp=N,229nm,1.4s							
EZN	**Ezine**	**3.12**	**340**	P		**Pn**	**05 06 22.1**	**-0.3**
DION	**Dionisos Attik**	**3.24**	**292**	P		**Pn**	**05 06 24.9**	**+0.7**
DION	**Dionisos Attik**	**3.24**	**292**	P		**Pn**	**05 06 24.8**	**+0.7**
VLY	**Voula,Athens**	**3.28**	**288**	P		**Pn**	**05 06 25.4**	**+0.8**
VLY	**Voula,Athens**	**3.28**	**288**	P		**Pn**	**05 06 25.4**	**+0.8**
PTL	**Penteli**	**3.29**	**291**	P		**Pn**	**05 06 25.5**	**+0.7**
ATHU	**Athens Univers**	**3.32**	**290**	P		**Pn**	**05 06 25.9**	**+0.7**
DOGA	**KONYA_Doganhis**	**3.34**	**68**	*i* P		**Pn**	**05 06 28.1**	**+2.4**
DOGA				*i* S		**Sg**	**05 07 20.2**	**-1.5**
KYMI	**Kymi, Euboea I**	**3.36**	**302**	P		**Pn**	**05 06 25.8**	**0.0**
IMMV	**Iera Moni Meta**	**3.37**	**246**	P		**Pn**	**05 06 26.8**	**+1.0**
ATH	**Athens Observa**	**3.37**	**290**	P		**Pn**	**05 06 26.9**	**+1.0**
ATH	**Athens Observa**	**3.37**	**290**	P		**Pn**	**05 06 26.9**	**+1.0**
EREA	**Eretria**	**3.38**	**298**	P		**Pn**	**05 06 26.8**	**+0.8**
GADA	**Gvkgeada**	**3.58**	**337**	P		**Pn**	**05 06 28.7**	**-0.1**
LIA	**Limnos Island**	**3.60**	**327**	P		**Pn**	**05 06 29.3**	**+0.3**
LIA	**Limnos Island**	**3.60**	**327**	P		**Pn**	**05 06 29.3**	**+0.3**
GVD	**Gavdhos**	**3.61**	**236**	P		**Pn**	**05 06 31.3**	**+2.1**
KRND	**KRANIDI**	**3.70**	**279**	P		**Pn**	**05 06 30.9**	**+0.5**
ANKY	**Antikythira Is**	**3.73**	**255**	P		**Pn**	**05 06 30.8**	**0.0**
VILL	**Villia**	**3.73**	**291**	P		**Pn**	**05 06 31.9**	**+1.0**
GAZI	**Gazipasa**	**3.75**	**99**	*i* P		**Pn**	**05 06 32.6**	**+1.5**
GAZI				*i* S		**Sn**	**05 07 18.2**	**+3.5**
GAZI				IAML			05 07 19.0	
	comp=N,286nm,0.8s							
GAZI				IAML			05 07 19.0	
	comp=E,237nm,0.6s							
AOS	**Alonnisos**	**3.79**	**308**	P		**Pn**	**05 06 31.4**	**-0.3**
KTHA	**Kythira Island**	**3.82**	**262**	P		**Pn**	**05 06 33.3**	**+1.3**
VLI	**Veliai**	**3.86**	**269**	P		**Pn**	**05 06 32.7**	**+0.1**
SMTH	**Samothraki Isl**	**3.95**	**335**	P		**Pn**	**05 06 33.9**	**-0.1**
SMTH	**Samothraki Isl**	**3.95**	**335**	P		**Pn**	**05 06 33.8**	**-0.1**
LTK	**Loutraki**	**3.96**	**288**	P		**Pn**	**05 06 34.9**	**+0.9**
LTK	**Loutraki**	**3.96**	**288**	P		**Pn**	**05 06 34.9**	**+0.9**
ENEZ	**Enez**	**4.02**	**343**	P		**Pn**	**05 06 35.0**	**+0.2**
ERMK	**Ermenek**	**4.16**	**92**	*i* P		**Pn**	**05 06 40.7**	**+3.7**
ERMK				*i* S		**Sb**	**05 07 31.6**	**-5.4**
ERMK				IAML			05 07 34.0	
	comp=N,329nm,1.4s							
ERMK				IAML			05 08 05.0	
	comp=E,178nm,0.8s							
ALN	**Alexandroupoli**	**4.20**	**342**	P		**Pn**	**05 06 37.0**	**-0.2**
ALN	**Alexandroupoli**	**4.20**	**342**	Pn		**Pn**	**05 06 37.3**	**+0.1**
ALN	**Alexandroupoli**	**4.20**	**342**	P		**Pn**	**05 06 36.8**	**-0.4**
NEO	**Neokhori**	**4.29**	**305**	P		**Pn**	**05 06 39.4**	**+0.8**
DSF	**Desfina**	**4.40**	**291**	P		**Pn**	**05 06 41.4**	**+1.3**
GUR	**Goura**	**4.42**	**285**	P		**Pn**	**05 06 41.6**	**+1.3**
GUR	**Goura**	**4.42**	**285**	P		**Pn**	**05 06 41.6**	**+1.3**
AXAR	**Agios Charalam**	**4.43**	**296**	P		**Pn**	**05 06 41.7**	**+1.3**
MDUB	**Mudurnu**	**4.47**	**36**	Pn		**Pn**	**05 06 43.0**	**+1.9**
RDO	**Rodhopi**	**4.56**	**339**	P		**Pn**	**05 06 42.5**	**+0.2**
KLV	**Kalavryta, Ach**	**4.59**	**286**	P		**Pn**	**05 06 44.0**	**+1.3**
KLV	**Kalavryta, Ach**	**4.59**	**286**	P		**Pn**	**05 06 44.0**	**+1.3**
ITM	**Ithoni**	**4.66**	**275**	Pn		**Pn**	**05 06 46.5**	**+2.9**
KALE	**Kalithea**	**4.68**	**290**	P		**Pn**	**05 06 45.2**	**+1.2**
TRIZ	**Trizonia**	**4.73**	**290**	P		**Pn**	**05 06 46.1**	**+1.6**
AGG	**Agios Georgios**	**4.76**	**298**	Pn		**Pn**	**05 06 46.8**	**+1.7**
AGG	**Agios Georgios**	**4.76**	**298**	P		**Pn**	**05 06 46.2**	**+1.1**
KAVA	**Kavala**	**4.79**	**329**	P		**Pn**	**05 06 45.6**	**+0.2**
EFP	**Efpalio**	**4.87**	**290**	P		**Pn**	**05 06 48.2**	**+1.7**
BR231	**Keskin MP Arra**	**4.92**	**52**			**Pn**	**05 06 46.9**	**-0.5**
CSS	**Mathiatis**	**4.94**	**112**			**Pn**	**05 06 48.4**	**+1.0**
EVR	**Evrytania**	**5.10**	**295**	P		**Pn**	**05 06 51.4**	**+1.7**
RZN	**Rozhen**	**5.32**	**335**	P		**Pb**	**05 07 06.1**	**-0.5**
NVR	**Nevrokopi**	**5.36**	**327**	P		**Pn**	**05 06 53.9**	**+0.6**
DIM	**Dimitrovgrad**	**5.41**	**342**	P		**Pn**	**05 06 54.1**	**+0.2**
BR131	**Keskin Array S**	**5.42**	**57**	Pn		**Pn**	**05 06 56.1**	**+1.8**
BRTR	**Keskin Array B**	**5.42**	**57**	Pn		**Pn**	**05 06 56.2**	**+2.0**
	comp=E,2.3nm,0.3s,baz=239,slow=16,SNR=30							
BRTR				Sn		**Sn**	**05 07 56.1**	**-0.2**
	baz=233,slow=24,SNR=1.2							
BRTR	**Keskin Array B**	**5.42**	**57**	Pn		**Pn**	**05 06 54.5**	**+0.2**
SLUM	**Salum**	**5.80**	**202**	P		**Pn**	**05 06 59.1**	**-0.2**
	baz=205							
SLUM				S		**Sn**	**05 07 57.6**	**-7.6**
	baz=205							
SLUM				AMP			05 08 00.0	
	baz=205							
KKB	**Krupnik**	**6.12**	**325**	P		**Pn**	**05 07 04.6**	**+0.9**
PGB

comp=Z,2.7nm,0.8s,baz=165,slow=12,SNR=3.1
ESDC Sonseca Array 24.97 286 P **P** 05 10 57.0 +0.3
comp=Z,3.1nm,0.8s,baz=81,slow=9.1,SNR=32
KLMR Klimovskoe 25.11 14 *e* **P** 05 10 57.4 -0.1
KLMR AMP 05 11 02.3
comp=Z,13nm,1.0s
AKTO Aktyubinsk 25.53 48 P **P** 05 11 00.8 -0.8
comp=Z,1.0nm,0.8s,baz=264,slow=11,SNR=4.1
NOA NORSAR Array B 26.32 342 P **P** 05 11 09.8 +1.2
comp=Z,0.6nm,0.8s,baz=146,slow=11,SNR=3.3
NOA LR LR 05 23 06.7
comp=Z,55nm,18.4s,baz=335,slow=40
ARCES ARCESS Array B 32.71 359 LR LR 05 27 34.4
comp=Z,151nm,18.4s,baz=240,slow=40
KKAR Karatay Array 33.06 66 P **P** 05 12 07.9 -0.7
TOA0 Torodi Ar. Sit 33.21 231 P **P** 05 12 09.9 -0.2
TORD Torodi Ar. Bea 33.21 231 P **P** 05 12 10.0 -0.1
comp=Z,2.8nm,0.6s,baz=34,slow=8.7,SNR=30
TORD Torodi Ar. Bea 33.21 231 P **P** 05 12 09.6 -0.5
AAK Ala-Archa 36.02 66 P **P** 05 12 34.7 +0.3
comp=Z,1.2nm,0.5s,baz=260,slow=11,SNR=5.1
AAK Ala-Archa 36.02 66 IAmb IAmb 05 12 38.5
comp=Z,5.1nm,1.3s
MK31 Makanchi Array 41.07 58 P **P** 05 13 16.9 +0.2
MK31 IAmb IAmb 05 13 17.9
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 41.07 58 P **P** 05 13 17.0 +0.3
comp=Z,2.0nm,0.7s,baz=280,slow=7.5,SNR=15
MKAR Makanchi Array 41.07 58 P **P** 05 13 16.9 +0.3
ZALV Zalesovo Beam 42.28 48 P **P** 05 13 26.2 -0.2
comp=Z,0.9nm,0.5s,baz=303,slow=8.4,SNR=2.0
DBIC Dimbokro 42.29 233 P **P** 05 13 25.8 -1.0
comp=Z,1.7nm,0.5s,baz=36,slow=6.9,SNR=4.6
DBIC Dimbokro 42.29 233 IAmb IAmb 05 13 31.7
comp=Z,9.7nm,1.2s
SONM Songino Array 56.76 52 P **P** 05 15 17.7 +0.7
comp=Z,1.1nm,0.6s,baz=291,slow=9.1,SNR=6.5
CMAR Chiang Mai Arr 64.32 86 P **P** 05 16 08.4 -0.5
comp=Z,0.9nm,0.3s,baz=300,slow=8.1,SNR=6.1
BOSA Boshof 65.22 182 P **P** 05 16 14.8 +0.3
comp=Z,4.3nm,0.9s,baz=356,slow=8.2,SNR=4.2
YKA Yellowknife Ar 76.41 343 P **P** 05 17 20.3 -1.8
comp=Z,0.7nm,0.9s,baz=25,slow=5.9,SNR=2.5
ILAR Eielson Array 78.56 358 P **P** 05 17 33.1 -1.0
comp=Z,0.7nm,0.9s,baz=8.5,slow=2.7,SNR=5.8

*PGC **26** 05:06:36.1±0.0, 65°.62N×136°.54W, h1km, ML3.4/7, 220km Ene of Dawson, Yt Northern Yukon Territory, Canada*
ISC 26 05:06:35.7±0.9, 65°.66N±0°.04×136°.44W±0°.06, h10km, n41, σ2s17/60, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAWY	**Dawson**	**2.03**	**220**	Pn	**Pn**	**05 07 09.7**	**-0.3**
DAWY				Sg	**Sb**	**05 07 37.0**	**-1.0**
INK	**Inuvik**	**2.90**	**22**	Pn	**Pn**	**05 07 23.4**	**+1.6**
INK				Sn	**Sn**	**05 07 57.8**	**+1.2**
K27K	**Chicken** baz=53	**2.91**	**238**	P	**Pn**	**05 07 21.7**	**-0.3**
SCRK	**Sand Creek** baz=59	**3.64**	**246**	P	**Pn**	**05 07 31.3**	**-0.8**
BVCY	**Beaver Creek**	**3.79**	**213**	Pn	**Pn**	**05 07 34.0**	**-0.1**
BVCY				Sg	**Sb**	**05 08 32.3**	**+3.8**
DOT	**Dot Lake**	**3.85**	**242**	Pn	**Pn**	**05 07 34.1**	**-0.7**
YUK1	**Sand Pete Hill**	**3.95**	**209**	Pn	**Pn**	**05 07 36.3**	**-0.1**
YUK1				Sn	**Sn**	**05 08 23.8**	**+0.9**
YUK3	**Moose Creek**	**4.29**	**207**	Pn	**Pn**	**05 07 41.1**	**0.0**
YUK3				Sn	**Sn**	**05 08 31.8**	**+0.7**
YUK3				Sg	**Sb**	**05 08 46.8**	**+3.9**
YUK2	**White River**	**4.35**	**209**	Pn	**Pn**	**05 07 41.7**	**-0.2**
YUK2				Sn	**Sn**	**05 08 31.3**	**-1.2**
YUK4	**Talbot Arm**	**4.44**	**194**	Pn	**Pn**	**05 07 42.2**	**-0.9**
YUK4				Sg	**Sb**	**05 08 48.8**	**+1.5**
YUK5	**Granite Creek**	**4.59**	**189**	Pn	**Pn**	**05 07 45.5**	**+0.4**
YUK5				Sg	**Sb**	**05 08 56.0**	**+4.5**
HDA	**Harding Lake** baz=70	**4.63**	**259**	P	**Pn**	**05 07 44.9**	**-0.6**
PAX	**Paxson**	**4.76**	**240**	Pn	**Pn**	**05 07 47.5**	**0.0**
PAX				Sn	**Sn**	**05 08 40.7**	**-2.0**
YUK6	**Outpost Mounta**	**4.81**	**191**	Pn	**Pn**	**05 07 48.7**	**+0.4**
YUK6				Sg	**Sb**	**05 09 04.0**	**+6.0**
HYT	**Haines Junctio**	**4.87**	**186**	Pn	**Pn**	**05 07 49.8**	**+0.8**
WHY	**Whitehorse**	**5.06**	**171**	Pn	**Pn**	**05 07 52.0**	**+0.4**
CTGM	**Chitina Glacie**	**5.20**	**207**	Pn	**Pn**	**05 07 52.8**	**-0.7**
CTGM				Sn	**Sn**	**05 08 52.9**	**-0.6**
YUK7	**Dusty Glacier**	**5.20**	**189**	Pn	**Pn**	**05 07 54.7**	**+1.1**
YUK7				Sg	**Sb**	**05 09 15.3**	**+6.0**
PTPK	**Patty Peak**	**5.24**	**214**	Pn	**Pn**	**05 07 54.5**	**+0.4**
LOGN	**Logan Glacier**	**5.27**	**205**	Pn	**Pn**	**05 07 55.4**	**+0.9**
LOGN				Sn	**Sn**	**05 08 55.1**	**-0.2**
BALM	**Baldy**	**5.34**	**213**	Pn	**Pn**	**05 07 56.0**	**+0.5**
BALM				Sn	**Sn**	**05 08 58.4**	**+1.3**
NEA2	**Nenana** baz=73	**5.44**	**264**	P	**Pn**	**05 07 55.6**	**-1.0**
KIAG	**Kiagna River**	**5.45**	**212**	Pn	**Pn**	**05 07 58.4**	**+1.4**
GRNC	**Granite Creek**	**5.50**	**208**	Pn	**Pn**	**05 07 59.1**	**+1.5**
GRNC				Sn	**Sn**	**05 09 00.2**	**-0.8**
TABL	**Table Mountain**	**5.65**	**204**	Pn	**Pn**	**05 08 01.4**	**+1.5**
MCK	**McKinley** baz=65	**5.70**	**256**	P	**Pn**	**05 08 00.9**	**+0.6**
COLD	**Coldfoot** baz=100	**5.74**	**292**	P	**Pn**	**05 08 03.1**	**+2.3**
PCA	**Pinnacle**	**5.84**	**199**	Pn	**Pn**	**05 08 03.6**	**+1.3**
SAMH	**Samovar Hills**	**5.89**	**202**	Pn	**Pn**	**05 08 04.2**	**+1.2**
TOLK	**Toolik Lake Re** baz=115	**5.93**	**306**	P	**Pn**	**05 08 06.0**	**+2.7**
C36M	**Paulatuk**	**6.02**	**46**	Pn	**Pn**	**05 08 05.0**	**+0.4**
C36M				Sn	**Sn**	**05 09 10.6**	**-2.7**
C36M	**Paulatuk** baz=238	**6.02**	**46**	P	**Pn**	**05 08 06.1**	**+1.6**
MLY	**Manley** baz=78	**6.02**	**271**	P	**Pn**	**05 08 03.8**	**-0.9**
MESA	**MESA**	**6.04**	**207**	Pn	**Pn**	**05 08 08.7**	**+3.5**
PNL	**Peninsula**	**6.16**	**194**	Pn	**Pn**	**05 08 08.7**	**+2.1**
PLBC	**Pleasant Camp**	**6.22**	**180**	Pn	**Pn**	**05 08 08.1**	**+0.7**
PLBC				Sg	**Sg**	**05 09 47.6**	**-7.6**
BESE	**Bessie Mountai**	**7.14**	**173**	Pn	**Pn**	**05 08 20.8**	**+0.7**
DLBC	**Dease Lake**	**7.84**	**154**	Pn	**Pn**	**05 08 29.8**	**+0.1**
DLBC				Sg	Sg	05 10 38.8	-8.1
KUKN	**Kugluktuk,NWT**	**8.71**	**66**	Pn	**Pn**	**05 08 41.3**	**-0.1**
KUKN				Sn	**Sn**	**05 10 16.4**	**-3.1**
FNBB	**Fort Nelson**	**9.21**	**131**	Pn	**Pn**	**05 08 50.5**	**+2.1**
YKW3	**Yellowknife Ar**	**10.01**	**98**	Pn	**Pn**	**05 08 59.0**	**-0.3**
YKW3				Sn	Sn	05 10 43.9	-7.6

*IDC **26** 05:07:21.7±1.2, 7°.21N×94°.20E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.7/40, mbtmp3.9/10, ML3.9/2, MS3.1/5, Ms1 3.2/5, ms1mx2.8/44, Error ellipse: s-maj=55.7km s-min=17.5km az=59.0*
*NEIC **26** 05:07:34.1±1.4, 7°.9N±0°.1×95°.3E±0°.2, h83km±8km, mb4.4/6, Error ellipse: s-maj=26.4km s-min=15.2km az=61.0*
ISC 26 05:07:29.5±0.8, 7°.7N±0°.1×94°.9E±0°.1, h35km, n29, σ1s62/25, mb4.2/11, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.20**	**112**		**Pn**	**05 08 59.5**	**+0.9**
PSI	**Prapat** 0.5nm,0.3s,baz=180,slow=13,SNR=1.9	**6.31**	**140**	Pn	**Pn**	**05 09 00.2**	**+0.1**
PSI				LR	LR	05 11 39.6	
	comp=Z,196nm,18.9s,baz=270,slow=40						
RPSI	**Rantau Prapat**	**6.39**	**141**		**Pn**	**05 09 04.6**	**+3.4**
IPM	**Ipoh**	**6.89**	**117**		**Pn**	**05 09 08.1**	**+0.1**
CM31	**Chiang Mai Arr**	**11.40**	**20**	Pn	**Pn**	**05 10 10.1**	**+0.2**
CMAR	**Chiang Mai Arr** 0.7nm,0.3s,baz=219,slow=13,SNR=4.4	**11.40**	**20**	Pn	Pn	05 10 15.2	+5.4
CMAR				LR	LR	05 14 42.3	
	comp=Z,75nm,19.9s,baz=216,slow=36						
CMAR	**Chiang Mai Arr**	**11.40**	**20**		**Pn**	**05 10 10.6**	**+0.8**
PALK	**Pallekele** comp=Z,104nm,21.8s,baz=196,slow=35	**14.08**	**269**	LR	LR	05 15 14.2	
H08S3	**Diego Garcia H** baz=55,slow=74	**27.04**	**236**	T	T	05 39 45.9	
H08S2	**Diego Garcia H** baz=55,slow=74	**27.04**	**236**	T	T	05 39 46.2	
H08S1	**Diego Carcia H** baz=55	**27.05**	**236**	T	T	05 39 45.2	
AAK	**Ala-Archa** 0.9nm,0.7s,baz=283,slow=2.4,SNR=3.7	**39.17**	**336**	P	**P**	**05 14 53.9**	**-0.2**
MK31	**Makanchi Array**	**40.42**	**347**	P	**P**	**05 15 04.0**	**-0.4**
MKAR	**Makanchi Array** 2.6nm,0.7s,baz=166,slow=8.1,SNR=18	**40.42**	**347**	P	**P**	**05 15 04.1**	**-0.3**
MKAR	**Makanchi Array**	**40.42**	**347**	P	**P**	**05 15 03.3**	**-1.0**
MAKZ	**Makanchi**	**40.51**	**346**	P	**P**	**05 15 04.6**	**-0.5**
MAKZ				IAmb	IAmb	05 15 14.4	
	comp=Z,10nm,1.4s						
SONM	**Songino Array** comp=Z,0.6nm,0.7s,baz=210,slow=38,SNR=2.5	**41.17**	**12**	P	**P**	**05 15 14.0**	**+3.3**
TLY	**Talaya** comp=Z,39nm,20.2s,baz=279,slow=37	**44.44**	**8**	LR	LR	05 35 17.0	
KURK	**Kurchatov**	**44.96**	**345**	P	**P**	**05 15 40.7**	**-0.4**
KURK				IAmb	IAmb	05 15 50.3	
	comp=Z,5.3nm,1.0s						
ZALV	**Zalesovo Beam** comp=Z,1.4nm,0.5s,baz=181,slow=7.9,SNR=5.1	**46.83**	**352**	P	**P**	**05 15 55.0**	**-0.8**
ZALV	**Zalesovo Beam**	**46.83**	**352**	P	**P**	**05 15 56.5**	**+0.7**
WRA	**Warramunga Arr** comp=Z,0.7nm,1.0s,baz=306,slow=8.9,SNR=6.1	**47.56**	**126**	P	**P**	**05 16 01.1**	**-0.8**
WRA				PcP	**PcP**	**05 17 30.7**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=318,slow=3.0,SNR=1.6						
WRA				LR	LR	05 37 12.0	
	comp=Z,14nm,18.9s,baz=240,slow=37						
WB2	**Warramunga Arr**	**47.56**	**126**	P	**P**	**05 16 00.5**	**-1.5**
WB2				IAmb	IAmb	05 16 15.9	
	comp=Z,5.6nm,1.3s						
ASAR	**Alice Springs** comp=Z,0.4nm,0.7s,baz=309,slow=7.8,SNR=2.5	**49.23**	**130**	P	**P**	**05 16 13.0**	**-1.9**
ASAR				PcP	**PcP**	**05 17 36.9**	**-0.8**
	comp=Z,0.4nm,0.6s,baz=310,slow=3.5,SNR=2.1						
RAYN	**Ar Rayn**	**49.84**	**294**	P	**P**	**05 16 22.3**	**+2.7**
ABKAR	**Akbulak array**	**50.74**	**331**	P	**P**	**05 16 24.0**	**-1.9**
FINES	**FINESS Array B** comp=Z,2.3nm,0.7s,baz=96,slow=10,SNR=5.3	**73.21**	**332**	P	**P**	**05 18 54.6**	**-2.0**
NB2	**NORSAR Subarra** comp=Z,6.9nm,1.2s,baz=95,slow=5.6	**80.25**	**331**	P	**P**	**05 19 34.3**	**-2.2**
NOA	**NORSAR Array B** comp=Z,1.0nm,0.8s,baz=91,slow=6.1,SNR=4.4	**80.25**	**331**	P	**P**	**05 19 34.8**	**-1.7**

*GCG **26** 05:14:11.8±0.7, 13°.77N×91°.70W, h35km±999km, MD3.5*
*MEX **26** 05:14:14.3±0.5, 14°.06N×91°.81W, h15km, MD3.7*
ISC 26 05:14:12.3±3.1, 14°.0N±0°.2×91°.84W±0°.09, h54km, n5, σ0s75/9, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUG	**Fuego 3**	**1.07**	**65**	*e*P	**Pn**	**05 14 30.8**	**-0.5**
PCG	**Pacaya**	**1.26**	**72**	*e*P	**Pn**	**05 14 33.2**	**-0.7**
PCG				*e*S	**Sn**	**05 14 50.0**	**0.0**
NBG	**Las Nubes**	**1.56**	**68**	*e*P	**Pn**	**05 14 38.3**	**+0.3**
NBG				*e*S	**Sn**	**05 14 58.4**	**+1.1**
PCIG		**2.15**	**322**	*i*P	**Pn**	**05 14 46.5**	**+0.7**
PCIG				*i*S	**Sn**	**05 15 10.4**	**-1.0**
CCIG	**Comitan**	**2.29**	**353**	*e*P	**Pn**	**05 14 47.9**	**+0.1**
CCIG				*i*S	**Sn**	**05 15 14.7**	**-0.2**

*IDC **26** 05:27:47.8±0.8, 21°.73N×143°.50E, h0km, mb3.9/18, mb1 4.1/18, mb1mx3.9/57, mbtmp3.9/18, MS3.3/15, Ms1 3.3/15, ms1mx3.1/47, Error ellipse: s-maj=28.3km s-min=17.9km az=85.0*
ISC 26 05:27:53.3±0.9, 21°.7N±0°.1×143°.5E±0°.2, h35km, n36, σ0s73/18, mb4.0/17, MS3.3/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam** comp=Z,173nm,19.5s,baz=38,slow=34	**8.20**	**170**	LR	LR	05 32 25.1	
MJAR	**Matsushiro Arr** comp=Z,143nm,19.3s,baz=155,slow=36	**15.45**	**344**	LR	LR	05 36 55.4	
JNU	**Nakatsue** comp=Z,48nm,19.8s,baz=56,slow=34	**15.91**	**318**	LR	LR	05 36 52.6	
KSRS	**Korea Array** 0.6nm,0.3s,baz=268,slow=24,SNR=1.5	**20.65**	**323**	P	**P**	**05 32 29.8**	**-0.1**
KSRS				LR	LR	05 39 54.3	
	comp=Z,113nm,18.1s,baz=126,slow=35						
H11N1	**WAKE ISLAND Hy** baz=278,slow=76,SNR=21	**22.01**	**91**	T	T	05 55 20.8	
H11N2	**WAKE ISLAND Hy** baz=278,slow=76,SNR=16	**22.01**	**91**	T	T	05 55 22.2	
H11N3	**WAKE ISLAND Hy** baz=278,slow=76,SNR=25	**22.02**	**91**	T	T	05 55 25.4	
H11S3	**WAKE ISLAND Hy** baz=283,slow=74,SNR=76	**22.04**	**94**	T	T	05 55 17.6	
H11S1	**WAKE ISLAND Hy** baz=283,slow=74,SNR=68	**22.05**	**94**	T	T	05 55 18.2	
H11S2	**WAKE ISLAND Hy** baz=283,slow=74,SNR=54	**22.06**	**94**	T	T	05 55 18.9	
DAV	**Davao City (W)** comp=Z,84nm,21.8s,baz=68,slow=31	**22.59**	**232**	LR	LR	05 39 35.1	
JAY	**Jayapura** comp=Z,47nm,19.0s,baz=352,slow=35	**24.24**	**187**	LR	LR	05 41 55.6	
USRK	**Ussuriysk Ar.** 1.4nm,0.6s,baz=108,slow=9.5,SNR=4.2	**24.34**	**340**	P	**P**	**05 33 08.7**	**+0.9**
KRVT	**Keravat (AS076** comp=Z,32nm,21.8s,baz=9.6,slow=33	**27.20**	**161**	LR	LR	05 42 47.2	
KLR	**Kul'dur** 3.5nm,0.7s,baz=145,slow=7.3,SNR=12	**28.98**	**344**	P	**P**	**05 33 49.8**	**+0.3**
SONM	**Songino Array** 0.5nm,0.5s,baz=128,slow=6.1,SNR=2.4	**39.48**	**320**	P	**P**	**05 35 20.0**	**-0.5**
CMAR	**Chiang Mai Arr** comp=Z,11nm,18.6s,baz=182,slow=37	**41.83**	**274**	LR	LR	05 53 34.8	
WRA	**Warramunga Arr** 3.0nm,1.1s,baz=12,slow=9.1,SNR=7.5	**42.36**	**193**	P	**P**	**05 35 44.0**	**-0.3**
WRA				LR	LR	05 53 42.3	
	comp=Z,26nm,19.8s,baz=45,slow=37						
ASAR	**Alice Springs** 1.1nm,0.7s,baz=15,slow=9.7,SNR=11	**46.07**	**192**	P	**P**	**05 36 13.6**	**-0.4**
ZALV	**Zalesovo Beam** 1.8nm,0.6s,baz=95,slow=9.5,SNR=4.5	**54.35**	**322**	P	**P**	**05 37 15.6**	**-0.7**
ZALV				LR	LR	06 02 00.9	
	comp=Z,48nm,18.0s,baz=40,slow=38						
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=89,slow=8.1,SNR=2.3	**54.87**	**313**	P	**P**	**05 37 19.6**	**-0.6**
KURBB	**Kurchatov Arra** 1.1nm,0.6s,baz=94,slow=7.2,SNR=8.0	**57.68**	**317**	P	**P**	**05 37 39.7**	**-0.5**
ILAR	**Eielson Array** 0.6nm,0.9s,baz=243,slow=4.4,SNR=5.5	**61.90**	**27**	P	**P**	**05 38 08.0**	**-1.0**
BVAR	**Borovoye Array** 0.5nm,0.5s,baz=94,slow=7.5,SNR=4.5	**62.82**	**319**	P	**P**	**05 38 14.9**	**-0.4**
INK	**Inuvik** 0.3nm,0.3s,baz=182,slow=3.4,SNR=2.2	**67.44**	**24**	P	**P**	**05 38 44.1**	**-0.9**
ARU	**Arti** comp=Z,33nm,18.4s,baz=202,slow=36	**69.39**	**324**	LR	LR	06 09 28.3	
YKA	**Yellowknife Ar** 0.6nm,0.8s,baz=294,slow=4.6,SNR=2.6	**76.31**	**28**	P	**P**	**05 39 38.0**	**-0.4**
PPT	**Papeete** comp=Z,21nm,20.7s,baz=330,slow=31	**76.31**	**115**	LR	LR	06 06 44.3	
YBH	**Yreka Blue Hor** comp=Z,24nm,20.4s,baz=314,slow=31	**78.61**	**50**	LR	LR	06 08 08.7	
ARCES	**ARCESS Array B** 2.0nm,0.9s,baz=35,slow=6.6,SNR=1.2	**78.98**	**342**	P	**P**	**05 39 53.0**	**-0.2**
KBZ	**Khabaz** 6.2nm,0.8s,baz=24,slow=5.3,SNR=3.7	**82.53**	**314**	P	**P**	**05 40 13.7**	**+1.1**
NVAR	**Mina Array Bea** 1.1nm,0.6s,baz=267,slow=5.4,SNR=3.5	**82.92**	**52**	P	**P**	**05 40 16.1**	**+1.0**
FINES	**FINESS Array B** 3.9nm,1.1s,baz=49,slow=4.2,SNR=1.9	**83.27**	**335**	P	**P**	**05 40 16.2**	**+0.1**
ELK	**Elko** comp=Z,32nm,19.1s,baz=288,slow=32	**84.21**	**48**	LR	LR	06 12 15.4	
PFO	**Pinyon Flats O** comp=Z,12nm,20.8s,baz=282,slow=32	**86.16**	**55**	LR	LR	06 13 24.2	
AKASG	**Malin Array Be** 0.4nm,0.4s,baz=47,slow=4.7,SNR=2.5	**87.63**	**325**	P	**P**	**05 40 39.1**	**+1.1**

IDC 26 05:29:50.3±1.9, 1°.97N×126°.64E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/46, mbtmp3.6/4, ML3.0/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/38, Error ellipse: s-maj=117.7km s-min=23.9km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi** 0.0nm,0.3s,baz=17,slow=14,SNR=1.4	**19.97**	**183**	P	Pn	05 34 25.4	-0.5
WRA	**Warramunga Arr** 2.1nm,0.6s,baz=339,slow=11,SNR=21	**23.05**	**161**	P	P	05 34 57.1	-0.4
PMG	**Port Moresby** comp=Z,32nm,18.9s,baz=47,slow=38	**23.36**	**119**	LR	LR	05 44 45.5	
ASAR	**Alice Springs** 0.5nm,0.6s,baz=346,slow=12,SNR=5.5	**26.45**	**165**	P	P	05 35 29.0	-0.1
MKAR	**Makanchi Array** 0.4nm,0.5s,baz=118,slow=7.6,SNR=6.9	**58.95**	**326**	P	P	05 39 51.5	-0.1

*NEIC **26** 05:52:50.8±0.7, 62°.15N±0°.04×152°.08W±0°.06, h111km±7km, Error ellipse: s-maj=5.1km s-min=4.2km az=192.0*
*ANF **26** 05:52:51.3±0.4, 62°.18N×152°.00W, h111km±7km, ML3.5/15, Error ellipse: s-maj=3.6km s-min=2.3km az=100.0*
*AEIC **26** 05:52:52±1.0, 62°.16N±0°.04×152°.07W±0°.10, h107km±6km, ML3.1, Error ellipse: s-maj=6.7km s-min=5.2km az=110.0*
ISC 26 05:52:50.4±1.3, 62°.15N±0°.03×152°.07W±0°.04, h116km±7km, n148, σ0s55/171, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKT	**Skwentna**	**0.31**	**124**	Pn	**Pn**	**05 53 06.7**	**-0.2**
SKT	**Skwentna**	**0.31**	**124**		**Sn**	**05 53 18.5**	**-0.9**
STLK	**Strandline Lak**	**0.67**	**170**		**Pn**	**05 53 08.9**	**-0.3**
PPLA	**Purkeypile**	**0.75**	**356**		**Pn**	**05 53 10.1**	**+0.2**
PPLA					**Sn**	**05 53 24.1**	**-0.5**
SPNN	**North Nagishla**	**0.84**	**201**		**Pn**	**05 53 10.9**	**+0.1**
SPNN					**Sn**	**05 53 25.7**	**-0.4**
SPCG	**Spurr Capps Gl**	**0.86**	**178**		**Pn**	**05 53 10.8**	**-0.2**
SPCG					**Sn**	**05 53 25.9**	**-0.5**
CUT	**Chulitna** baz=254,SNR=7.5	**0.88**	**73**	P	**Pn**	**05 53 11.3**	**+0.4**
CUT				S	**Sn**	**05 53 26.2**	**-0.2**
	baz=254						
CUT	**Chulitna**	**0.88**	**73**		**Pn**	**05 53 11.3**	**+0.4**
CUT					**Sn**	**05 53 26.1**	**-0.2**
SPCP	**Crater Peak Br**	**0.89**	**183**		**Pn**	**05 53 11.2**	**0.0**
SPBG	**Spurr Blockage**	**0.91**	**189**		**Pn**	**05 53 11.5**	**+0.1**
SPBG					**Sn**	**05 53 27.1**	**0.0**
SUA	**Susitna One**	**0.94**	**137**		**Pn**	**05 53 11.8**	**+0.2**
SUA					**Sn**	**05 53 27.3**	**-0.2**
SPCR	**Spurr Chakacha**	**0.96**	**184**		**Pn**	**05 53 11.7**	**-0.1**
CAST	**Castle Rocks**	**1.27**	**360**		**Pn**	**05 53 15.0**	**0.0**
FIS	**Fire Island**	**1.34**	**138**		**Pn**	**05 53 17.2**	**+1.5**
HUR	**Hurricane**	**1.40**	**53**		**Pn**	**05 53 17.2**	**+0.8**
CAPN	**Captain Cook N** baz=343	**1.46**	**162**	P	**Pn**	**05 53 18.6**	**+1.6**
CAPN	**Captain Cook N**	**1.46**	**162**		**Pn**	**05 53 18.7**	**+1.6**
KTH	**Kantishna Hill**	**1.50**	**20**		**Pn**	**05 53 17.8**	**+0.2**
KTH					**Sn**	**05 53 37.4**	**-0.9**
PMR	**Palmer**	**1.50**	**111**		**Pn**	**05 53 17.2**	**-0.3**
PMR					**Sn**	**05 53 37.6**	**-0.6**
GHO	**Glory Hole Cre**	**1.53**	**103**		**Pn**	**05 53 18.1**	**+0.1**
TRF	**Thorofare Moun**	**1.54**	**31**		**Pn**	**05 53 18.5**	**+0.4**
RC01	**Rabbit Creek A** baz=315,SNR=17	**1.54**	**133**	P	**Pn**	**05 53 18.3**	**+0.2**
RC01				S	**Sn**	**05 53 38.9**	**-0.2**
	baz=315						
RC01	**Rabbit Creek A**	**1.54**	**133**		**Pn**	**05 53 18.2**	**+0.2**
DFR	**Drift River**	**1.60**	**191**		**Pn**	**05 53 19.2**	**+0.4**
WAT7	**Susitna Watana**	**1.64**	**64**		**Pn**	**05 53 19.8**	**+0.4**
WAT7					**Sn**	**05 53 42.0**	**+0.7**
NCT	**North Crescent**	**1.65**	**195**		**Pn**	**05 53 19.8**	**+0.3**
RDWB	**Redoubt West**	**1.71**	**193**		**Pn**	**05 53 20.8**	**+0.5**
RSO	**Redoubt South**	**1.73**	**191**		**Pn**	**05 53 20.9**	**+0.4**
CHUM	**Lake Minchumin**	**1.74**	**356**		**Pn**	**05 53 20.6**	**+0.2**
WAT1	**Susitna Watana**	**1.77**	**66**		**Pn**	**05 53 21.1**	**+0.3**
RED	**Redoubt Volcan**	**1.77**	**191**		**Pn**	**05 53 21.3**	**+0.4**
SML	**Sawmill**	**1.80**	**100**		**Pn**	**05 53 21.2**	**0.0**
WAT2	**Susitna Watana**	**1.81**	**62**		**Pn**	**05 53 21.5**	**+0.2**
KNK	**Knik Glacier**	**1.87**	**112**		**Pn**	**05 53 21.9**	**-0.2**
SLKM	**Skilak Lake**	**1.88**	**151**		**Pn**	**05 53 22.8**	**+0.7**
RND	**Reindeer**	**1.94**	**48**		**Pn**	**05 53 23.5**	**+0.5**
TT01	**Tatalina**	**1.98**	**294**		**Pn**	**05 53 23.2**	**-0.1**
SVW2	**Sparrevohn**	**1.98**	**239**		**Pn**	**05 53 23.3**	**-0.1**
TTA	**Tatalina**	**1.99**	**295**		**Pn**	**05 53 23.3**	**-0.3**
BPAW	**Bear Paw Mtn.**	**2.01**	**14**		**Pn**	**05 53 23.9**	**0.0**
O22K	**Cooper Landing** baz=327,SNR=10	**2.02**	**145**	P	**Pn**	**05 53 24.2**	**+0.2**
O22K				S	**Sn**	**05 53 48.5**	**-1.0**
	baz=327						
O22K	**Cooper Landing**	**2.02**	**145**		**Pn**	**05 53 24.5**	**+0.6**
WAT6	**Susitna Watana**	**2.06**	**76**		**Pn**	**05 53 24.6**	**0.0**
MCK	**McKinley** baz=224,SNR=22	**2.14**	**41**	P	**Pn**	**05 53 25.9**	**+0.6**
MCK				S	**Sn**	**05 53 52.2**	**0.0**
	baz=224						
MCK	**McKinley**	**2.14**	**41**		**Pn**	**05 53 26.0**	**+0.6**
PWL	**Port Wells**	**2.21**	**124**		**Pn**	**05 53 25.8**	**-0.5**
SCM	**Sheep Creek Mo**	**2.26**	**96**		**Pn**	**05 53 26.8**	**-0.2**
BWN	**Browne**	**2.34**	**29**		**Pn**	**05 53 28.9**	**+0.9**
DHY	**Denali Highway**	**2.36**	**65**		**Pn**	**05 53 28.5**	**+0.2**
SEW	**Seward**	**2.42**	**147**		**Pn**	**05 53 28.9**	**0.0**
BRLK	**Bradley Lake**	**2.47**	**165**		**Pn**	**05 53 29.2**	**-0.1**
BRSE	**Bradley Lake S**	**2.51**	**164**		**Pn**	**05 53 29.7**	**-0.4**
HOM	**Homer** baz=356	**2.51**	**175**	P	**Pn**	**05 53 30.8**	**+0.6**
HOM				S	**Sn**	**05 54 02.0**	**+1.3**
	baz=356						
HOM	**Homer**	**2.51**	**175**		**Pn**	**05 53 30.5**	**+0.4**
CNPM	**China Poot**	**2.67**	**171**		**Pn**	**05 53 31.7**	**-0.5**
GLI	**Glacier Island**	**2.70**	**116**		**Pn**	**05 53 31.5**	**-1.1**
M24K	**Tolsona, Glenn** baz=274,S

NICHA	**Nichawak Mount**	**4.37**	**113**			**Pn**	**05 53 54.5**	**-0.2**
KDAK	**Kodiak Island**	**4.39**	**184**			**Pn**	**05 53 54.5**	**-0.6**
BERG	**Berg Lake**	**4.41**	**110**			**Pn**	**05 53 54.6**	**-0.7**
CRQM	**Cirque**	**4.51**	**104**			**Pn**	**05 53 57.1**	**+0.3**
SUCK	**Suckling Hills**	**4.53**	**114**			**Pn**	**05 53 57.0**	**0.0**
KHIT	**Khitrov Hills**	**4.59**	**108**			**Pn**	**05 53 58.0**	**+0.3**
TGL	**Tana Glacier**	**4.65**	**103**			**Pn**	**05 53 58.6**	**0.0**
PTPK	**Patty Peak**	**4.68**	**98**			**Pn**	**05 53 59.1**	**0.0**
BALM	**Baldy**	**4.78**	**99**			**Pn**	**05 54 00.1**	**-0.3**
KIAG	**Kiagna River**	**4.81**	**101**			**Pn**	**05 54 00.5**	**-0.3**
BC03		**4.84**	**75**			**Pn**	**05 54 01.1**	**+0.1**
BCAR	**Beaver Creek A**	**4.84**	**75**			**Pn**	**05 54 00.6**	**-0.5**
SNH	**Sunshine Point**	**4.89**	**110**			**Pn**	**05 54 01.6**	**-0.1**
K27K	**Chicken**	**4.91**	**63**	P		**Pn**	**05 54 02.0**	**0.0**
	baz=252							
K27K				S		**Sn**	**05 54 57.0**	**-0.7**
	baz=252							
K27K	**Chicken**	**4.91**	**63**			**Pn**	**05 54 02.1**	**0.0**
ISLE	**Juniper Island**	**4.93**	**104**			**Pn**	**05 54 02.3**	**-0.1**
OHAK	**Old Harbor**	**4.99**	**188**			**Pn**	**05 54 01.9**	**-1.2**
BARN	**Barnard Glacie**	**5.09**	**98**			**Pn**	**05 54 04.6**	**0.0**
GRNC	**Granite Creek**	**5.15**	**101**			**Pn**	**05 54 05.9**	**+0.4**
COLD	**Coldfoot**	**5.16**	**8**	P		**Pn**	**05 54 05.7**	**+0.4**
	baz=190							
COLD				S		**Sn**	**05 55 04.5**	**+1.0**
	baz=190							
COLD	**Coldfoot**	**5.16**	**8**			**Pn**	**05 54 06.1**	**+0.8**
BVCY	**Beaver Creek**	**5.24**	**82**			**Pn**	**05 54 07.0**	**+0.5**
CTGM	**Chitina Glacie**	**5.27**	**98**			**Pn**	**05 54 07.2**	**+0.2**
MESA	**MESA**	**5.28**	**108**			**Pn**	**05 54 07.3**	**+0.1**
YAH	**Yahtse**	**5.30**	**105**			**Pn**	**05 54 07.6**	**+0.2**
YUK2	**White River**	**5.31**	**89**			**Pn**	**05 54 07.8**	**+0.3**
YUK1	**Sand Pete Hill**	**5.41**	**85**			**Pn**	**05 54 09.3**	**+0.4**
LOGN	**Logan Glacier**	**5.47**	**99**			**Pn**	**05 54 09.7**	**0.0**
YUK3	**Moose Creek**	**5.49**	**89**			**Pn**	**05 54 10.3**	**+0.3**
RKAV	**Rock Avalanche**	**5.50**	**105**			**Pn**	**05 54 10.6**	**+0.5**
TABL	**Table Mountain**	**5.54**	**103**			**Pn**	**05 54 10.9**	**+0.2**
EGAK	**Eagle**	**5.55**	**57**			**Pn**	**05 54 10.6**	**0.0**
SII	**Sitkinak Islan**	**5.71**	**192**			**Pn**	**05 54 11.8**	**-1.1**
DAWY	**Dawson**	**6.06**	**66**			**Pn**	**05 54 17.7**	**+0.1**
BM03	**Burnt Mountain**	**6.17**	**28**			**Pn**	**05 54 19.3**	**+0.3**
BMAR	**Burnt Mountain**	**6.18**	**28**			**Pn**	**05 54 19.7**	**+0.5**
YUK4	**Talbot Arm**	**6.43**	**91**			**Pn**	**05 54 23.3**	**+0.6**
BCPM	**Bancas Point**	**6.43**	**105**	Pn		**Pn**	**05 54 22.4**	**0.0**
TOLK	**Toolik Lake Re**	**6.60**	**8**	P		**Pn**	**05 54 24.2**	**-0.6**
	baz=190							
TOLK				S		**Sn**	**05 55 38.4**	**0.0**
	baz=190							
TOLK	**Toolik Lake Re**	**6.60**	**8**			**Pn**	**05 54 24.3**	**-0.5**
YUK5	**Granite Creek**	**6.85**	**92**			**Pn**	**05 54 28.1**	**-0.1**
HYT	**Haines Junctio**	**7.10**	**94**	Pn		**Pn**	**05 54 32.1**	**+0.5**
INK	**Inuvik**	**9.89**	**43**	Pn		**Pn**	**05 55 10.6**	**+1.4**

*IDC **26** 05:53:49.8±0.9, 5°.72N×61°.53E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.7/51, mbtmp3.9/10, ML3.6/1, MS4.0/31, Ms1 4.0/31, ms1mx3.9/44, Error ellipse: s-maj=25.1km s-min=20.8km az=4.0*

*NEIC **26** 05:53:50.8±1.4, 5°.7N±0°.2×61°.37E±0°.08, h10km±1km, mb4.4/13, Error ellipse: s-maj=27.8km s-min=9.6km az=158.0*

*GCMT **26** 05:54:01.8±0.3, 5°.68N±0°.03×61°.31E±0°.03, h18km±1km, MW4.8/104, Moment Tensor Solution. s14,c14; s104,c132; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.34±.14; Mθθ 1.51±.09; Mϕϕ 0.82±.08; Mrθ-0.14±.22; Mθϕ-0.68±.05; Mϕr 0.06±.25; Best double couple: M=2.13900×10¹⁶ NP1:ϕs302.00000°, δ43.00000°, λ-89.00000°. NP2:ϕs121.00000°, δ47.00000°, λ-91.00000°. Principal axes: T 1.9320, Plg2.0000°, Azm212.0000°; N 0.4100, Plg0.0000°, Azm122.0000°; P -2.3460, Plg88.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 05:53:51.2±0.9, 5°.8N±0°.1×61°.5E±0°.1, h10km, n52, σ0s89/24, mb4.1/15, MS4.0/28, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.60**	**351**	P		**Pn**	**05 57 56.1**	**-0.6**
	0.2nm,0.3s,baz=196,slow=6.4,SNR=5.5							
WSAR				LR		LR	06 03 31.6	
	comp=Z,534nm,20.5s,baz=192,slow=33							
PALK	**Pallekele**	**19.17**	**84**	LR		LR	06 04 22.3	
	comp=Z,669nm,18.7s,baz=8.7,slow=33							
ATD	**Arta Tunnel**	**19.28**	**289**	LR		LR	06 04 50.5	
	comp=Z,209nm,19.4s,baz=84,slow=34							
UOSS	**Minazif**	**19.75**	**346**	P		**P**	**05 58 21.7**	**+0.4**
UOSS				IAmb		IAmb	05 58 36.1	
	comp=Z,27nm,1.4s							
RAYN	**Ar Rayn**	**23.43**	**321**	P		**P**	**05 58 59.5**	**-1.2**
RAYN				IAmb		IAmb	05 59 21.0	
	comp=Z,14nm,1.1s							
KMBO	**Kilima Mbogo**	**25.13**	**255**	P		**P**	**05 59 18.5**	**+1.6**
	comp=Z,1.2nm,0.6s,baz=63,slow=11,SNR=9.5							
KMBO	**Kilima Mbogo**	**25.13**	**255**	P		**P**	**05 59 15.8**	**-1.1**
OPO	**Ambohidratompo**	**27.97**	**210**	LR		LR	06 08 10.2	
	comp=Z,393nm,21.2s,baz=192,slow=31							
KBL	**Kabul**	**29.50**	**13**	P		**P**	**05 59 56.4**	**+0.4**
KBL				IAmb		IAmb	06 00 25.4	
	comp=Z,8.7nm,1.1s							
SHL	**Shillong**	**35.14**	**53**	P		**P**	**06 00 44.7**	**-0.8**
BTK	**Batken**	**35.18**	**12**	P		**P**	**06 00 45.0**	**-0.5**
BTK				IAmb		IAmb	06 01 08.0	
	comp=Z,8.2nm,1.2s							
KKAR	**Karatay Array**	**38.05**	**11**	P		**P**	**06 01 11.0**	**+1.1**
AAK	**Ala-Archa**	**38.51**	**15**	P		**P**	**06 01 15.1**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=215,slow=12,SNR=4.1							
AAK	**Ala-Archa**	**38.51**	**15**	P		**P**	**06 01 14.2**	**+0.3**
CMAR	**Chiang Mai Arr**	**38.66**	**68**	P		**P**	**06 01 15.8**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=262,slow=9.5,SNR=4.5							
CMAR				LR		LR	06 16 16.9	
	comp=Z,131nm,20.9s,baz=322,slow=35							
FRU1	**Bishkek**	**38.70**	**16**	P		**P**	**06 01 15.6**	**+0.1**
CHTO	**Chiang Mai**	**38.75**	**67**	P		**P**	**06 01 15.9**	**-0.2**
LSZ	**Lusaka**	**39.04**	**237**	LR		LR	06 16 10.0	
	comp=Z,477nm,18.8s,baz=116,slow=34							
MATP	**Matopo**	**41.55**	**230**	LR		LR	06 16 36.4	
	comp=Z,817nm,19.7s,baz=133,slow=33							
BRTR	**Keskin Array B**	**42.10**	**328**	LR		LR	06 19 41.7	
	comp=Z,106nm,19.9s,baz=122,slow=37							
ABKAR	**Akbulak array**	**43.37**	**359**	P		**P**	**06 01 53.6**	**-0.1**
ABKAR				IAmb		IAmb	06 02 15.0	
	comp=Z,7.8nm,1.1s							
ABKAR	**Akbulak array**	**43.37**	**359**	P		**P**	**06 01 53.3**	**-0.4**
AKTO	**Aktyubinsk**	**44.63**	**357**	P		**P**	**06 02 03.5**	**-0.3**
	comp=Z,3.0nm,1.2s,baz=164,slow=8.5,SNR=5.6							
MK31	**Makanchi Array**	**44.66**	**20**	P		**P**	**06 02 06.4**	**+2.2**
MK31				IAmb		IAmb	06 02 11.2	
	comp=Z,5.0nm,1.4s							
MKAR	**Makanchi Array**	**44.66**	**20**	LR		LR	06 21 36.8	
	comp=Z,187nm,21.4s,baz=222,slow=37							
LBTB	**Lobatse**	**46.39**	**227**	LR		LR	06 18 53.5	
	comp=Z,480nm,21.9s,baz=70,slow=32							
KURBB	**Kurchatov Arra**	**46.95**	**15**	P		**P**	**06 02 22.2**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=209,slow=7.8,SNR=4.9							
KURK	**Kurchatov**	**47.06**	**15**	P		**P**	**06 02 22.2**	**-0.7**
KURK	**Kurchatov**	**47.06**	**15**	IAmb		IAmb	06 02 24.9	
	comp=Z,5.1nm,1.3s							
LEM	**Lembang**	**47.72**	**105**	LR		LR	06 19 02.4	
	comp=Z,99nm,20.7s,baz=314,slow=32							
BOSA	**Boshof**	**48.82**	**224**	LR		LR	06 21 42.3	
	comp=Z,406nm,18.9s,baz=28,slow=34							
ZALV	**Zalesovo Beam**	**51.66**	**17**	LR		LR	06 25 28.8	
	comp=Z,152nm,20.2s,baz=53,slow=37							
AKASG	**Malin Array Be**	**52.27**	**335**	LR		LR	06 27 23.7	
	comp=Z,82nm,19.1s,baz=310,slow=38							
KEST	**Kesra**	**56.30**	**309**	LR		LR	06 26 12.0	
	comp=Z,80nm,20.8s,baz=75,slow=34							
TLY	**Talaya**	**57.52**	**30**	LR		LR	06 28 21.1	
	comp=Z,201nm,21.8s,baz=216,slow=36							
TORD	**Torodi Ar. Bea**	**59.31**	**282**	P		**P**	**06 03 53.6**	**-0.3**
	comp=Z,1.2nm,1.1s,baz=69,slow=7.9,SNR=5.4							
TORD				LR		LR	06 30 36.7	
	comp=Z,134nm,18.3s,baz=85,slow=37							
DAV	**Davao City (W)**	**63.68**	**85**	LR		LR	06 30 48.3	
	comp=Z,32nm,19.9s,baz=248,slow=35							
NRIK	**Noril'sk**	**65.78**	**10**	LR		LR	06 36 19.8	
	comp=Z,224nm,19.0s,baz=201,slow=39							
DBIC	**Dimbokro**	**65.90**	**275**	LR		LR	06 32 22.6	
	comp=Z,123nm,21.5s,baz=74,slow=35							
ESDC	**Sonseca Array**	**67.51**	**311**	P		**P**	**06 04 48.8**	**+1.0**
	comp=Z,1.4nm,1.1s,baz=91,slow=4.4,SNR=2.5							
KSRS	**Korea Array**	**67.88**	**52**	LR		LR	06 36 20.8	
	comp=Z,100nm,18.8s,baz=278,slow=38							
ARCES	**ARCESS Array B**	**67.89**	**347**	LR		LR	06 36 46.5	
	comp=Z,75nm,19.7s,baz=255,slow=38							
USRK	**Ussuriysk Ar.**	**72.07**	**45**	LR		LR	06 38 47.5	
	comp=Z,244nm,19.5s,baz=259,slow=37							
KLR	**Kul'dur**	**72.83**	**40**	LR		LR	06 39 08.7	
	comp=Z,168nm,18.3s,baz=269,slow=37							
MAW	**Mawson**	**73.19**	**179**	LR		LR	06 29 39.4	
	comp=Z,133nm,21.8s,baz=48,slow=29							
MJAR	**Matsushiro Arr**	**75.95**	**54**	LR		LR	06 41 48.5	
	comp=Z,41nm,18.5s,baz=255,slow=38							
WRA	**Warramunga Arr**	**76.00**	**112**	P		**P**	**06 05 39.1**	**-0.1**
	comp=Z,2.0nm,1.2s,baz=291,slow=5.7,SNR=6.2							
WRA				LR		LR	06 35 27.7	
	comp=Z,34nm,20.2s,baz=295,slow=33							
WRA	**Warramunga Arr**	**76.00**	**112**	IAmb		IAmb	06 05 41.3	
	comp=Z,0.6nm,1.5s							
ASAR	**Alice Springs**	**76.37**	**116**	P		**P**	**06 05 40.8**	**-0.6**
	comp=Z,1.6nm,1.1s,baz=274,slow=6.1,SNR=7.3							
ASAR				LR		LR	06 34 37.2	
	comp=Z,54nm,21.3s,baz=296,slow=32							
JHJ	**Hachijo jima 2**	**77.10**	**57**	LR		LR	06 40 58.4	
	comp=Z,43nm,20.8s,baz=83,slow=37							
PETK	**Petropavlovsk-**	**89.18**	**37**	LR		LR	06 49 42.5	
	comp=Z,144nm,18.9s,baz=268,slow=38							
VNDA	**Vanda**	**97.82**	**168**	LR		LR	06 46 42.9	
	comp=Z,98nm,19.2s,baz=223,slow=32							

IDC 26 06:04:10.6±1.1, 5°.62N×61°.22E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/37, mbtmp3.7/7, MS3.4/4, Ms1 3.5/4, ms1mx3.0/36, Error ellipse: s-maj=40.3km s-min=24.7km az=23.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PALK	**Pallekele**	**19.43**	**84**	LR		LR	06 14 34.5	
	comp=Z,146nm,18.6s,baz=19,slow=32							
MBAR	**Mbarara**	**31.06**	**259**	LR		LR	06 23 52.8	
	comp=Z,34nm,18.1s,baz=78,slow=38							
CMAR	**Chiang Mai Arr**	**38.94**	**68**	P		P	06 11 39.6	+0.9
	0.4nm,0.3s,baz=252,slow=9.9,SNR=4.5							
CMAR				LR		LR	06 26 18.4	
	comp=Z,50nm,20.1s,baz=255,slow=34							
AKTO	**Aktyubinsk**	**44.74**	**357**	P		P	06 12 25.0	-0.7
	0.5nm,0.5s,baz=156,slow=7.0,SNR=3.5							
AKTO				LR		LR	06 31 07.7	
	comp=Z,64nm,18.9s,baz=171,slow=36							
SONM	**Songino Array**	**57.00**	**35**	P		P	06 13 58.0	-0.4
	0.6nm,0.9s,baz=231,slow=9.1,SNR=2.5							
TORD	**Torodi Ar. Bea**	**59.09**	**282**	P		P	06 14 13.6	+0.2
	0.7nm,1.0s,baz=98,slow=8.9,SNR=3.3							
ESDC	**Sonseca Array**	**67.40**	**311**	P		P	06 15 08.5	+0.2
	0.5nm,0.8s,baz=100,slow=6.2,SNR=4.4							
WRA	**Warramunga Arr**	**76.18**	**112**	P		P	06 16 01.1	-0.2
	1.1nm,0.9s,baz=288,slow=5.1,SNR=5.8							
ASAR	**Alice Springs**	**76.54**	**116**	P		P	06 16 03.2	-0.1
	0.4nm,0.8s,baz=298,slow=5.3,SNR=6.1							

IDC 26 06:08:21.1±4.3, 5°.33N×61°.21E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.4/41, mbtmp3.9/3, Error ellipse: s-maj=924.0km s-min=33.8km az=17.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**59.14**	**282**	P		P	06 18 24.1	-0.1
	0.8nm,1.0s,baz=85,slow=5.5,SNR=3.4							
WRA	**Warramunga Arr**	**76.08**	**112**	P		P	06 20 11.2	-0.1
	1.7nm,1.0s,baz=289,slow=5.2,SNR=6.9							
ASAR	**Alice Springs**	**76.42**	**116**	P		P	06 20 13.3	+0.2
	1.1nm,0.9s,baz=281,slow=5.3,SNR=8.1							

IDC 26 06:10:39.0±1.2, 5°.63N×61°.44E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/44, mbtmp3.8/5, MS3.5/2, Ms1 3.5/2, ms1mx2.9/30, Error ellipse: s-maj=68.3km s-min=26.0km az=17.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.71**	**351**	LR		LR	06 20 22.1	
	comp=Z,105nm,19.4s,baz=192,slow=33							
CMAR	**Chiang Mai Arr**	**38.73**	**67**	P		P	06 18 05.3	0.0
	0.4nm,0.3s,baz=259,slow=7.3,SNR=1.5							
MKAR	**Makanchi Array**	**44.78**	**20**	LR		LR	06 38 18.3	
	comp=Z,69nm,19.9s,baz=238,slow=37							
TORD	**Torodi Ar. Bea**	**59.30**	**282**	P		P	06 20 43.4	+0.2
	0.7nm,0.9s,baz=93,slow=5.8,SNR=3.6							
ESDC	**Sonseca Array**	**67.56**	**311**	P		P	06 21 37.4	-0.2
	0.8nm,0.9s,baz=93,slow=6.4,SNR=4.1							
WRA	**Warramunga Arr**	**75.98**	**112**	P		P	06 22 28.4	-0.2
	1.1nm,1.0s,baz=285,slow=4.3,SNR=4.8							
ASAR	**Alice Springs**	**76.35**	**116**	P		P	06 22 30.8	+0.2
	1.4nm,1.1s,baz=281,slow=5.8,SNR=5.8							

*IDC **26** 06:19:36.3±0.7, 5°.50N×77°.69W, h0km, mb3.9/12, mb1 4.2/16, mb1mx4.1/30, mbtmp4.0/16, ML3.8/4, MS3.4/8, Ms1 3.4/8, ms1mx3.1/27, Error ellipse: s-maj=21.0km s-min=14.3km az=51.0*

*NEIC **26** 06:19:37.6±3.0, 5°.55N±0°.05×77°.86W±0°.07, h14km±5km, mb4.5/15, ML3.7(RSNC), Error ellipse: s-maj=11.5km s-min=3.1km az=55.0*

*RSNC **26** 06:19:38.4±2.8, 5°.60N×77°.77W, h32km±45km, ML3.7, Mw4.0, Fault plane solution: NP1:ϕs149.00000°, δ33.00000°, λ118.00000°.*

*VAO **26** 06:19:39.7±0.9, 5°.32N×77°.56W, h10km, mb4.3*

ISC 26 06:19:37.1±1.3, 5°.58N±0°.02×77°.85W±0°.04, h10km±8km, n105, σ2s17/151, mb4.0/14, MS3.3/5, 13C-7D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SOLC	**Bahia Solano**	**0.77**	**34**	↓iP		**Pb**	**06 19 51.9**	**-0.7**
SOLC				eS		**Sg**	**06 20 00.4**	**-1.7**
SOLC				i			06 20 04.5	
	comp=Z,6μm,0.5s							
PIZC	**Pizarro, Choco**	**0.78**	**142**	↑iP		**Pg**	**06 19 52.1**	**-0.1**
PIZC				i			06 19 52.8	
	comp=Z,6μm,0.5s							
PIZC				eS		**Sg**	**06 20 01.6**	**-0.9**
PTAC	**Punta Ardita,**	**1.55**	**1**	eP		**Pn**	**06 20 03.2**	**-1.5**
PTAC				eS		**Sn**	**06 20 20.5**	**-4.5**
MALC	**Bahia Malaga**	**1.64**	**162**	↑iP		**Pn**	**06 20 05.4**	**-0.5**
MALC				i			06 20 05.7	
	comp=Z,819nm,0.2s							
MALC				eS		**Sn**	**06 20 23.4**	**-3.8**
PLMC	**San Jos del P**	**1.70**	**113**	↑iP		**Pn**	**06 20 04.5**	**-2.3**
PLMC				eS		**Sn**	**06 20 23.9**	**-4.7**
PLMC				i			06 20 26.8	
	comp=Z,2μm,0.7s							
CBOC	**Ciudad Bolivar**	**1.85**	**81**	↓iP		**Pn**	**06 20 06.9**	**-2.0**
CBOC				eS		**Sn**	**06 20 27.3**	**-5.1**
CBOC				i			06 20 29.8	
	comp=Z,638nm,0.4s							
DBBC	**Dabeiba**	**2.16**	**49**	↓eP		**Pn**	**06 20 12.7**	**-0.5**
DBBC				eS		**Sn**	**06 20 38.5**	**-1.6**
YOTC	**Yotoco, Valle**	**2.18**	**137**	↑iP		**Pn**	**06 20 11.9**	**-1.6**
YOTC				i			06 20 12.7	
	comp=Z,473nm,0.5s							
YOTC				eS		**Sn**	**06 20 36.1**	**-4.6**
CMAN1	**Manizales, Cal**	**2.37**	**102**	eP		**Pn**	**06 20 15.0**	**-1.3**
CMAN1				eS		**Sn**	**06 20 44.4**	**-1.1**
HELC	**Santa Helena**	**2.38**	**75**	↓iP		**Pn**	**06 20 15.7**	**-0.8**
HELC				eS		**Sn**	**06 20 42.3**	**-3.6**
GUY2C	**Guyana, Caldas**	**2.50**	**98**	eP		**Pn**	**06 20 17.2**	**-0.9**
GUY2C				eS		**Sn**	**06 20 46.1**	**-2.8**
RREF	**El Recreo**	**2.58**	**105**	↓iP		**Pn**	**06 20 19.5**	**+0.1**
RREF				eS		**Sn**	**06 20 49.2**	**-2.0**
ANIL	**Santa Ana**	**2.67**	**114**	eP		**Pn**	**06 20 20.2**	**-0.1**
ANIL				eS		**Sn**	**06 20 51.2**	**-1.6**
ANIL				i			06 20 54.8	
	comp=Z,143nm,0.4s							
TOLC	**Tolima**	**2.70**	**111**	eP		**Pn**	**06 20 20.6**	**-0.3**
TOLC				eS		**Sn**	**06 20 47.0**	**-6.9**
TOLC				i			06 20 59.6	
	comp=Z,875nm,0.5s							
NORC	**Norcasia**	**2.96**	**90**	eP		**Pn**	**06 20 24.4**	**+0.2**
NORC				eS		**Sn**	**06 20 58.4**	**-1.4**
NORC				i			06 21 00.1	
	comp=Z,258nm,0.3s							
CAPC	**Capurgana**	**3.07**	**9**	eP		**Pn**	**06 20 26.5**	**+0.8**
CAPC				eS		**Sn**	**06 21 00.2**	**-2.3**
CAPC				i			06 21 10.4	
	comp=Z,163nm,0.6s							
ORTC	**Ortega, Tolima**	**3.08**	**123**	↑eP		**Pn**	**06 20 26.3**	**+0.5**
ORTC				eS		**Sn**	**06 21 00.7**	**-2.0**
ORTC				i			06 21 07.5	
	comp=Z,406nm,0.7s							
UREC	**San Jos de Ur**	**3.15**	**47**	eP		**Pn**	**06 20 27.5**	**+0.7**
UREC				eS		**Sn**	**06 21 02.9**	**-1.5**
UREC				i			06 21 07.8	
	comp=Z,271nm,0.8s							
POPC	**Popayan, Colom**	**3.24**	**159**	↑eP		**Pn**	**06 20 27.6**	**-0.6**
POPC				eS		**Sn**	**06 21 08.3**	**+1.4**
AZU	**Azuero**	**3.26**	**312**	↑eP		**Pn**	**06 20 27.1**	**-1.1**
MARP	**Paez Belalcaza**	**3.31**	**145**	↑eP		**Pn**	**06 20 29.3**	**+0.1**
MARP				eS		**Sn**	**06 21 05.9**	**-2.8**
PTBC	**PUERTO BERRIO,**	**3.50**	**74**	↓eP		**Pn**	**06 20 32.5**	**+0.9**
PTBC				eS		**Sn**	**06 21 11.6**	**-1.5**
PTBC				i			06 21 30.0	
	comp=Z,104nm,0.6s							
ZARC	**Zaragoza, Cauc**	**3.52**	**57**	↓iP		**Pn**	**06 20 32.9**	**+1.0**
ZARC				eS		**Sn**	**06 21 13.5**	**-0.1**
ZARC				i			06 21 16.6	
	comp=Z,153nm,0.4s							
PCON	**Cinco Dias**	**3.54**	**156**	↑iP		**Pn**	**06 20 33.4**	**+0.8**
PCON				eS		**Sn**	**06 21 13.6**	**-1.3**
PCON				i			06 21 34.1	
	comp=Z,348nm,0.9s							
BBAC	**Balboa, Cauca**	**3.59**	**170**	eP		**Pn**	**06 20 31.5**	**-1.5**
BBAC				eS		**Sn**	**06 21 18.0**	**+2.5**
ROSC	**El Rosal**	**3.59**	**102**	Pn		**Pn**	**06 20 36.7**	**+3.6**
	comp=Z,16nm,0.3s,baz=294,slow=7.8,SNR=26							
ROSC				Sn		**Sn**	**06 21 16.4**	**+0.6**
	comp=Z,17nm,0.3s,baz=319,slow=12,SNR=6.7							
ROSC				LR		LR	06 22 10.9	
	comp=Z,372nm,18.6s,baz=92,slow=45							
ROSC	**El Rosal**	**3.59**	**102**	eP		**Pn**	**06 20 36.3**	**+3.2**
ROSC				eS		**Sn**	**06 21 17.0**	**+1.2**
ROSC				i			06 21 37.0	
	comp=Z,55nm,0.5s							
ROSC	**El Rosal**	**3.59**	**102**	Pn		**Pn**	**06 20 35.3**	**+2.1**
SOTA	**Rioblanco**	**3.64**	**160**	eS		**Sn**	**06 21 14.5**	**-2.8**
BETC	**Betania**	**3.75**	**140**	eP		**Pn**	**06 20 36.0**	**+1.0**
BETC				eS		**Sn**	**06 21 19.7**	**+0.4**
SPBC	**San Pablo de B**	**3.76**	**89**	eP		**Pn**	**06 20 35.9**	**+0.8**
SPBC				eS		**Sn**	**06 21 17.9**	**-1.6**
MAPC	**Malpelo**	**4.06**	**247**	eP		**Pn**	**06 20 39.1**	**-0.2**
MAPC				eS		**Sn**	**06 21 23.9**	**-3.0**
CRUC	**La Cruz**	**4.09**	**167**	eP		**Pn**	**06 20 40.7**	**+0.7**
GARC	**Garzon, Huila**	**4.11**	**145**	↑iP		**Pn**	**06 20 41.4**	**+1.2**
GARC				eS		**Sn**	**06 21 27.4**	**-1.1**
CHIC	**Chingaza**	**4.21**	**103**	↑eP		**Pn**	**06 20 44.1**	**+2.4**
CHIC				eS		**Sn**	**06 21 29.4**	**-1.7**
CHIC				i			06 21 40.1	
	comp=Z,38nm,0.2s							
GCUF	**Volcan Galeras**	**4.36**	**173**	eP		**Pn**	**06 20 44.4**	**+0.6**
GCUF				eS		Sn	06 21 27.9	-6.9
BRRC	**Barranca, Sant**	**4.38**	**70**	eP		**Pn**	**06 20 44.8**	**+1.1**
BRRC				eS		**Sn**	**06 21 33.3**	**-1.4**
VILC	**Villavicencio,**	**4.39**	**109**	eP		**Pn**	**06 20 46.4**	**+2.5**
VILC				eS		**Sn**	**06 21 36.9**	**+1.7**
VILC				i			06 21 60.0	
	comp=Z,120nm,0.8s							
FLOC	**Florencia**	**4.54**	**151**	↑eP		**Pn**	**06 20 47.0**	**+1.1**
FLOC				eS		**Sn**	**06 21 32.8**	**-5.9**
BARC	**Barichara**	**4.75**	**78**	eP		**Pn**	**06 20 50.0**	**+1.1**
BARC				eS		**Sn**	**06 21 41.1**	**-3.0**
BARC				i			06 21 47.9	
RUSC	**La Rusia**	**4.75**	**86**	eP		**Pn**	**06 20 50.7**	**+1.5**
RUSC				eS		**Sn**	**06 21 45.2**	**+0.7**
RUSC				i			06 22 02.2	
	comp=Z,34nm,0.7s							
OCAC	**Ocana**	**5.21**	**59**	eP		**Pn**	**06 20 56.6**	**+1.4**
OCAC				eS		**Sn**	**06 21 59.1**	**+3.

ANMO	**Albuquerque**	**39.38**	**322**	P	**P**	**06 27 05.5**	**-1.7**
TUC	**Tucson**	**40.65**	**315**	P	**P**	**06 27 16.3**	**-1.4**
TUC				IAmb	IAmb	06 27 21.6	
	comp=Z,7.1nm,0.9s						
PD31	**Pinedale Array**	**46.46**	**328**	P	**P**	**06 28 04.8**	**+0.3**
PD31				IAmb	IAmb	06 28 18.8	
	comp=Z,5.2nm,1.2s						
PDAR	**Pinedale Array**	**46.46**	**328**	P	**P**	**06 28 06.5**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=121,slow=1.1,SNR=8.4						
PDAR				LR	LR	06 49 58.9	
	comp=Z,29nm,19.8s,baz=145,slow=39						
PDAR	**Pinedale Array**	**46.46**	**328**	P	**P**	**06 28 04.9**	**+0.3**
PLCA	**Paso Flores**	**46.57**	**172**	P	**P**	**06 28 05.7**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=350,slow=9.0,SNR=6.8						
PLCA	**Paso Flores**	**46.57**	**172**	P	**P**	**06 28 04.1**	**-1.1**
PLCA				IAmb	IAmb	06 28 18.3	
	comp=Z,7.3nm,1.3s						
ULM	**Lac du Bonnet**	**47.02**	**344**	LR	LR	06 49 07.6	
	comp=Z,52nm,19.2s,baz=322,slow=38						
REDW	**Red Top Meadow**	**47.55**	**327**	P	**P**	**06 28 12.4**	**-0.7**
GCMT	**Greycliff**	**48.64**	**331**	P	**P**	**06 28 22.0**	**+0.6**
NVAR	**Mina Array Bea**	**49.11**	**318**	P	**P**	**06 28 27.9**	**+2.7**
	comp=Z,1.2nm,0.8s,baz=129,slow=7.2,SNR=9.2						
NVAR	**Mina Array Bea**	**49.11**	**318**	P	**P**	**06 28 22.1**	**-3.0**
BOZ	**Bozeman (W)**	**49.49**	**329**	P	**P**	**06 28 27.5**	**-0.3**
BOZ				IAmb	IAmb	06 28 41.7	
	comp=Z,4.2nm,1.0s						
YKA	**Yellowknife Ar**	**62.88**	**342**	P	**P**	**06 30 03.8**	**+0.7**
	comp=Z,0.8nm,0.8s,baz=133,slow=7.0,SNR=2.8						
ESDC	**Sonseca Array**	**74.06**	**50**	P	**P**	**06 31 14.4**	**+0.9**
	comp=Z,1.6nm,1.0s,baz=262,slow=5.6,SNR=12						
ESDC	**Sonseca Array**	**74.06**	**50**	P	**P**	**06 31 12.4**	**-1.2**
ILAR	**Eielson Array**	**76.12**	**336**	P	**P**	**06 31 26.3**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=109,slow=4.6,SNR=2.7						
TORD	**Torodi Ar. Bea**	**78.59**	**78**	P	**P**	**06 31 39.4**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=276,slow=7.1,SNR=8.2						
TORD	**Torodi Ar. Bea**	**78.59**	**78**	P	**P**	**06 31 39.3**	**-0.3**
GERES	**GERESS Array B**	**86.86**	**41**	P	**P**	**06 32 22.5**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=274,slow=5.5,SNR=2.2						
ASAR	**Alice Springs**	**144.55**	**236**	PKP	**PKPdf**	**06 39 15.6**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=124,slow=3.8,SNR=5.7						
WRA	**Warramunga Arr**	**145.61**	**243**	PKPbc	**PKPdf**	**06 39 17.3**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=101,slow=3.1,SNR=3.4						

IDC 26 06:22:04.5±1.3, 25°.56N×105°.75E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/42, mbtmp3.6/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/33, Error ellipse: s-maj=36.3km s-min=21.6km az=82.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.47**	**223**	Pg	Pn	06 24 58.0	+36
	0.3nm,0.3s,baz=42,slow=19,SNR=2.7						
CMAR				Lg	Lg	06 27 04.3	
	0.4nm,0.3s,baz=40,slow=28,SNR=6.5						
SONM	**Songino Array**	**22.24**	**1**	P	P	06 27 03.5	+0.6
	1.0nm,0.7s,baz=175,slow=11,SNR=3.8						
TLY	**Talaya**	**26.13**	**357**	LR	LR	06 37 25.0	
	comp=Z,68nm,18.8s,baz=198,slow=35						
ZALV	**Zalesovo Beam**	**32.35**	**337**	P	P	06 28 34.6	-0.7
	2.7nm,0.6s,baz=140,slow=8.1,SNR=8.8						
WRA	**Warramunga Ar**	**53.08**	**146**	P	P	06 31 23.9	0.0
	0.7nm,0.9s,baz=333,slow=8.8,SNR=6.6						
ASAR	**Alice Springs**	**56.02**	**149**	P	P	06 31 45.4	+0.3
	0.3nm,1.0s,baz=327,slow=6.7,SNR=2.1						

*NNC **26** 06:25:14.4±0.4, 45°.41N×80°.95E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=7.0km s-min=2.1km az=127.0*
*SOME **26** 06:25:16.6, 45°.28N×80°.92E, h15km*
ISC 26 06:25:16.2±1.2, 45°.34N±0°.04×81°.13E±0°.04, h24km±15km, n41, σ1°.40/67, 9C-3D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPS	**Kapalarasan**	**1.25**	**268**	⇓*iP*	**Pn**	**06 25 37.3**	**-1.0**
KAPS	7.2nm,0.3s			*e*S	**Sn**	**06 25 52.7**	**-1.7**
	39nm,0.3s						
KAPS	**Kapalarasan**	**1.25**	**268**	P	**Pn**	**06 25 37.2**	**-1.0**
KAPS	7.2nm,0.3s			S	**Sn**	**06 25 52.8**	**-1.7**
	43nm,0.3s						
DJR	**Jarkent**	**1.38**	**224**	*e*P	**Pb**	**06 25 40.5**	**-1.0**
DJR	18nm,0.2s			⇑*i*S	**Sn**	**06 25 57.8**	**+0.1**
	42nm,0.1s						
DJR	**Jarkent**	**1.38**	**224**	P	**Pb**	**06 25 40.4**	**-1.0**
DJR	18nm,0.3s			S	**Sn**	**06 25 57.7**	**+0.1**
	42nm,0.2s						
MAKZ	**Makanchi**	**1.59**	**22**	⇑P	**Pb**	**06 25 43.6**	**-1.3**
MAKZ	2.9nm,0.4s			⇑S	**Sb**	**06 26 04.4**	**-0.1**
	24nm,0.3s						
MK31	**Makanchi Array**	**1.67**	**29**	⇑P	**Pb**	**06 25 44.9**	**-1.4**
	2.1nm,0.3s,baz=213,slow=16,SNR=125						
MK31				⇑S	**Sb**	**06 26 06.5**	**-0.3**
	6.3nm,0.2s,baz=207,slow=24,SNR=31						
TDK	**Taldyqorghan**	**1.96**	**261**	*e*P	**Pb**	**06 25 50.4**	**-0.7**
TDK	27nm,0.2s			*e*S	**Sb**	**06 26 14.9**	**-0.2**
	96nm,0.2s						
KTMS	**Ketmen**	**1.97**	**197**	*e*P	**Pb**	**06 25 51.0**	**-0.5**
KTMS	18nm,0.3s			*e*S	**Sb**	**06 26 15.4**	**-0.2**
	66nm,0.1s						
MNBS	**Baschi**	**2.32**	**238**	*e*P	**Pb**	**06 25 55.6**	**-1.7**
MNBS	6.3nm,0.1s			*e*S	**Sn**	**06 26 23.4**	**+2.7**
	85nm,0.2s						
MNBS	**Baschi**	**2.32**	**238**	Pg	**Pb**	**06 25 55.6**	**-1.7**
MNBS	6.3nm,0.1s			Lg	Lg	06 26 23.4	
	84nm,0.2s						
PDGK	**Podgornoye**	**2.33**	**211**	Pg	**Pb**	**06 25 56.9**	**-0.6**
PDGK	1.6nm,0.2s			Lg	Lg	06 26 25.6	
	24nm,0.3s						
PDGK	**Podgornoye**	**2.33**	**211**	⇑Pn	**Pb**	**06 25 55.2**	**-2.3**
PDGK	4.3nm,0.6s			⇑Sn	**Sb**	**06 26 25.5**	**-0.3**
	22nm,0.5s						
KPKS	**Kokpek**	**2.56**	**224**	*e*P	**Pb**	**06 26 01.1**	**-0.4**
KPKS	8.7nm,0.1s			*e*S	**Sb**	**06 26 33.0**	**+0.3**
	107nm,0.2s						
ARXS	**Arharly**	**2.61**	**246**	*e*P	**Pb**	**06 26 01.4**	**-0.9**
ARXS	7.2nm,0.2s			*e*S	**Sb**	**06 26 33.5**	**-0.4**
	28nm,0.3s						
ARXS	**Arharly**	**2.61**	**246**	Pg	**Pb**	**06 26 01.4**	**-0.9**
ARXS	6.1nm,0.2s			Lg	Lg	06 26 33.5	
	27nm,0.2s						
UZB	**Uzynbulak**	**2.66**	**215**	*e*P	**Pb**	**06 26 02.6**	**-0.6**
UZB	3.1nm,0.2s			*e*S	**Sb**	**06 26 35.5**	**0.0**
	25nm,0.2s						
UZB	**Uzynbulak**	**2.66**	**215**	Pg	**Pb**	**06 26 02.6**	**-0.6**
UZB	3.1nm,0.2s			Lg	Lg	06 26 35.3	
	25nm,0.2s						
KURS	**Kuram**	**2.81**	**230**	*e*P	**Pb**	**06 26 05.1**	**-0.6**
KURS	3.6nm,0.5s			*e*S	**Sb**	**06 26 39.8**	**0.0**
	12nm,0.3s						
KURS	**Kuram**	**2.81**	**230**	Pg	**Pb**	**06 26 05.1**	**-0.6**
KURS	3.6nm,0.5s			Lg	Lg	06 26 39.8	
	12nm,0.3s						
ZHN	**Zhinishke**	**2.91**	**223**	*e*P	**Pb**	**06 26 06.4**	**-1.0**
ZHN	11nm,0.1s			*e*S	**Sb**	**06 26 41.9**	**-0.6**
	21nm,0.2s						
SATY	**Saty**	**3.00**	**222**	*e*P	**Pb**	**06 26 08.7**	**-0.4**
SATY	4.3nm,0.2s			*e*S	**Sb**	**06 26 45.7**	**+0.4**
	85nm,0.2s						
SATY	**Saty**	**3.00**	**222**	Pg	**Pb**	**06 26 08.7**	**-0.4**
SATY	4.3nm,0.2s			Lg	Lg	06 26 45.7	
	85nm,0.2s						
CHKK	**Chushkaly**	**3.31**	**245**	*e*P	**Pb**	**06 26 14.2**	**0.0**
	1.6nm,0.1s						
CHKK				*e*S	**Sb**	**06 26 55.4**	**+1.4**
	16nm,0.2s						
CHKK	**Chushkaly**	**3.31**	**245**	Pg	**Pb**	**06 26 14.2**	**0.0**
	1.3nm,0.1s						
CHKK				Lg	Lg	06 26 55.4	
	17nm,0.2s						
ZSN	**Zaisan**	**3.34**	**49**	*e*P	**Pb**	**06 26 15.7**	**+1.0**
	3.3nm,0.3s						
ZSN				*e*S	**Sb**	**06 26 58.5**	**+3.6**
	9.0nm,0.4s						
KOTS	**Kotyrbulak**	**3.57**	**235**	*e*P	**Pb**	**06 26 18.6**	**-0.1**
	5.8nm,0.3s						
KOTS				*e*S	**Sb**	**06 27 03.3**	**+1.7**
	50nm,0.5s						
KOTS	**Kotyrbulak**	**3.57**	**235**	Pg	**Pb**	**06 26 18.7**	**-0.1**
	5.8nm,0.3s						
KOTS				Lg	Lg	06 27 02.7	
	50nm,0.5s						
KTBS	**Karatobe**	**3.57**	**245**	*e*P	**Pb**	**06 26 18.2**	**-0.5**
	1.5nm,0.4s						
KTBS				*e*S	**Sb**	**06 27 02.4**	**+0.8**
	22nm,0.5s						
KTBS	**Karatobe**	**3.57**	**245**	Pg	**Pb**	**06 26 18.2**	**-0.5**
	0.8nm,0.3s						
KTBS				Lg	Lg	06 27 02.4	
	21nm,0.5s						
MDOK	**Medeo**	**3.65**	**235**	*e*P	**Pb**	**06 26 20.1**	**0.0**
	2.4nm,0.4s						
MDOK				*e*S	**Sb**	**06 27 05.3**	**+1.3**
	7.4nm,0.4s						
MDOK	**Medeo**	**3.65**	**235**	Pg	**Pb**	**06 26 19.2**	**-0.8**
	2.4nm,0.4s						
MDOK				Lg	Lg	06 27 03.9	
	7.4nm,0.4s						
KUU	**Kurty**	**3.71**	**249**	*e*P	**Pb**	**06 26 21.0**	**-0.1**
	0.5nm,0.1s						
KUU				*e*S	**Sb**	**06 27 07.5**	**+1.9**
	19nm,0.3s						
KUU	**Kurty**	**3.71**	**249**	Pg	**Pb**	**06 26 21.4**	**+0.4**
	2.5nm,0.5s						
KUU				Lg	Lg	06 27 07.7	
	19nm,0.3s						
TNSS	**Tian-Shan**	**3.79**	**234**	*e*P	**Pb**	**06 26 23.1**	**+0.6**
	1.8nm,0.3s						
TNSS				*e*S	**Sb**	**06 27 10.5**	**+2.4**
	4.2nm,0.3s						
TNSS	**Tian-Shan**	**3.79**	**234**	Pg	**Pb**	**06 26 23.1**	**+0.6**
	1.7nm,0.4s						
TNSS				Lg	Lg	06 27 10.5	
	4.2nm,0.3s						
MTBS	**Maitube**	**4.03**	**239**	*e*P	**Pb**	**06 26 25.9**	**-0.7**
	3.1nm,0.2s						
MTBS				*e*S	**Sb**	**06 27 15.3**	**+0.4**
	12nm,0.3s						
KST	**Kastek**	**4.37**	**240**	*e*P	**Pb**	**06 26 33.6**	**+1.3**
	4.1nm,0.8s						
KST				*e*S	**Sb**	**06 27 29.6**	**+5.1**
	5.7nm,0.3s						
DGS	**Degeres**	**4.38**	**243**	*e*P	**Pb**	**06 26 33.5**	**+1.0**
	2.2nm,0.4s						
DGS				*e*S	**Sb**	**06 27 29.4**	**+4.5**
	8.1nm,0.5s						
DGS	**Degeres**	**4.38**	**243**	Pg	**Pb**	**06 26 33.5**	**+1.0**
	2.2nm,0.4s						
DGS				Lg	Lg	06 27 29.4	
	8.1nm,0.5s						
KURBB	**Kurchatov Arra**	**5.57**	**343**	⇓Sn	**Sn**	**06 27 41.8**	**+1.1**
	5.4nm,0.8s						
KURBB				⇓Lg	Lg	06 28 07.9	
	14nm,0.7s						
KURK	**Kurchatov**	**5.64**	**344**	⇑Sn	**Sn**	**06 27 41.6**	**-0.8**
	2.5nm,0.5s						
KURK				⇑Lg	Lg	06 28 08.7	
	12nm,1.1s						

*GCMT **26** 07:04:20.0±0.4, 5°.68N±0°.03×61°.15E±0°.04, h19km±1km, MW4.7/73, Moment Tensor Solution. s14,c15; s73,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.61±.14; $M_{\theta\theta}$1.24±.09; $M_{\phi\phi}$0.37±.08; $M_{r\theta}$-0.06±.17; $M_{r\phi}$-0.33±.05; $M_{\theta\phi}$0.49±.21; Best double couple: M_o1.54700×10^{16} NP1:ϕ_s277.00000°,δ42.00000°,λ-109.00000°. NP2: ϕ_s122.00000°,δ51.00000°,λ-74.00000°. Principal axes: T 1.3700, Plg4.0000°, Azm201.0000°; N 0.3570, Plg12.0000°, Azm292.0000°; P -1.7240, Plg77.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*
IDC 26 07:04:16.2±1.8, 5°.81N×61°.17E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.4/46, mbtmp3.8/4, MS3.6/30, Ms1 3.6/30, ms1mx3.5/44 Error ellipse: s-maj=136.1km s-min=27.3km az=9.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**18.98**	**289**	LR	LR	07 14 55.0	
	comp=Z,58nm,18.9s,baz=107,slow=34						
KMBO	**Kilima Mbogo**	**24.86**	**255**	P	P	07 09 41.0	-0.1
	0.7nm,0.4s,baz=74,slow=8.9,SNR=1.1						
OPO	**Ambohidratompo**	**27.88**	**209**	LR	LR	07 18 37.2	
	comp=Z,126nm,20.8s,baz=205,slow=31						
GEYT	**Alibeck**	**32.09**	**355**	LR	LR	07 24 24.4	
	comp=Z,83nm,19.1s,baz=25,slow=38						
GNI	**Garni**	**37.25**	**339**	LR	LR	07 27 11.7	
	comp=Z,64nm,19.1s,baz=138,slow=37						
AAK	**Ala-Archa**	**38.53**	**16**	LR	LR	07 29 11.3	
	comp=Z,90nm,18.8s,baz=225,slow=39						
CMAR	**Chiang Mai Arr**	**38.91**	**68**	LR	LR	07 26 28.1	
	comp=Z,37nm,20.8s,baz=308,slow=34						
KBZ	**Khabaz**	**41.05**	**340**	LR	LR	07 29 35.2	
	comp=Z,61nm,18.9s,baz=154,slow=37						
KVAR	**Kislovodsk Arr**	**41.32**	**340**	LR	LR	07 29 04.4	
	comp=Z,90nm,18.4s,baz=66,slow=36						
BRTR	**Keskin Array B**	**41.89**	**328**	LR	LR	07 29 59.8	
	comp=Z,47nm,19.7s,baz=136,slow=37						
AKTO	**Aktyubinsk**	**44.55**	**357**	LR	LR	07 30 49.7	
	comp=Z,86nm,21.8s,baz=169,slow=36						
MKAR	**Makanchi Array**	**44.71**	**21**	LR	LR	07 33 02.6	
	comp=Z,47nm,18.5s,baz=222,slow=39						
BOSA	**Boshof**	**48.66**	**223**	LR	LR	07 31 48.7	
	comp=Z,134nm,18.8s,baz=22,slow=34						
TSUM	**Tsumeb**	**49.60**	**239**	LR	LR	07 32 26.9	
	comp=Z,93nm,19.6s,baz=120,slow=34						
ARU	**Arti**	**50.52**	**358**	LR	LR	07 34 42.3	
	comp=Z,63nm,19.6s,baz=209,slow=36						
ZALV	**Zalesovo Beam**	**51.70**	**18**	LR	LR	07 35 47.5	
	comp=Z,74nm,19.6s,baz=23,slow=37						
AKASG	**Malin Array Be**	**52.09**	**335**	LR	LR	07 38 58.2	
	comp=Z,28nm,18.1s,baz=330,slow=40						
SONM	**Songino Array**	**56.88**	**35**	LR	LR	07 38 43.4	
	comp=Z,84nm,18.8s,baz=343,slow=36						
TLY	**Talaya**	**57.62**	**30**	LR	LR	07 38 51.2	
	comp=Z,76nm,21.4s,baz=222,slow=36						
GERES	**GERESS Array B**	**58.68**	**325**	LR	LR	07 39 45.4	
	comp=Z,37nm,18.5s,baz=92,slow=36						
TORD	**Torodi Ar. Bea**	**59.01**	**282**	P	P	07 14 18.4	0.0
	0.6nm,0.9s,baz=93,slow=6.2,SNR=3.6						
FINES	**FINESS Array B**	**61.36**	**342**	LR	LR	07 40 48.7	
	comp=Z,70nm,18.2s,baz=146,slow=36						
DBIC	**Dimbokro**	**65.60**	**275**	LR	LR	07 43 08.0	
	comp=Z,42nm,19.7s,baz=70,slow=36						
NRIK	**Noril'sk**	**65.78**	**10**	LR	LR	07 46 06.7	
	comp=Z,99nm,19.6s,baz=202,slow=38						
NOA	**NORSAR Array B**	**66.46**	**336**	LR	LR	07 46 07.1	
	comp=Z,34nm,18.9s,baz=355,slow=38						
ARCES	**ARCESS Array B**	**67.77**	**347**	LR	LR	07 45 09.5	
	comp=Z,27nm,18.3s,baz=240,slow=36						
USRK	**Ussuriysk Ar.**	**72.24**	**46**	LR	LR	07 48 57.3	
	comp=Z,93nm,19.2s,baz=176,slow=37						
MAW	**Mawson**	**73.25**	**179**	LR	LR	07 39 45.5	
	comp=Z,57nm,20.1s,baz=36,slow=29						
WRA	**Warramunga Arr**	**76.29**	**112**	P	P	07 16 07.5	0.0
	1.2nm,1.1s,baz=292,slow=4.7,SNR=4.5						
ASAR	**Alice Springs**	**76.66**	**116**	P	P	07 16 09.8	+0.1
	0.9nm,0.9s,baz=290,slow=6.2,SNR=7.3						
ASAJ	**Asahikawa**	**79.83**	**46**	LR	LR	07 53 46.7	
	comp=Z,48nm,18.0s,baz=254,slow=37						
STKA	**Stephens Creek**	**84.95**	**123**	LR	LR	07 50 22.4	
	comp=Z,39nm,20.8s,baz=201,slow=33						
PETK	**Petropavlovsk-**	**89.31**	**37**	LR	LR	08 00 14.7	
	comp=Z,64nm,18.2s,baz=293,slow=38						
VNDA	**Vanda**	**97.95**	**168**	LR	LR	07 56 40.4	
	comp=Z,36nm,19.1s,baz=244,slow=32						

*IDC **26** 07:13:41.5±1.0, 55°.31S×27°.36W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.8/22, mbtmp4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.5/19, Error ellipse: s-maj=46.0km s-min=31.0km az=89.0*
*NEIC **26** 07:13:45.4±1.0, 55°.4S±0°.2×27°.7W±0°.1, h23km±7km, mb4.2/6, Error ellipse: s-maj=26.8km s-min=8.2km az=195.0*
ISC 26 07:13:42.9±0.9, 55°.3S±0°.1×27°.6W±0°.1, h10km, n17, σ0°.52/15, mb4.1/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.26**	**278**	Pn	**Pn**	**07 15 01.3**	**0.0**
SNAA	**Sanae**	**19.50**	**157**	P	P	**07 18 10.2**	**+0.4**
PMSA	**Palmer Station**	**20.22**	**227**	P	P	**07 18 16.8**	**-0.7**
PMSA				IAmb	IAmb	07 18 32.7	
	comp=Z,43nm,1.4s						
GO09	**Cerro Castillo**	**26.70**	**260**	P	**P**	**07 19 21.9**	**+0.1**
PLCA	**Paso Flores**	**31.66**	**279**	LR	LR	07 31 50.8	
	comp=Z,16nm,19.4s,baz=135,slow=34						
QSPA	**South Pole Qui**	**34.93**	**180**	P	P	**07 20 34.4**	**-0.1**
QSPA				IAmb	IAmb	07 20 57.3	
	comp=Z,1.7nm,0.8s						
VNDA	**Vanda**	**47.29**	**183**	P	**P**	**07 22 15.9**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=187,slow=6.5,SNR=10						
VNDA	**Vanda**	**47.29**	**183**	P	P	**07 22 16.1**	**+0.4**
VNDA				IAmb	IAmb	07 22 17.1	
	comp=Z,2.3nm,0.8s						
LPAZ	**La Paz**	**49.77**	**305**	P	**P**	**07 22 37.0**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=157,slow=7.7,SNR=2.2						
LPAZ	**La Paz**	**49.77**	**305**	IAmb	IAmb	07 23 01.0	
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.53**	**30**	P	**P**	**07 25 09.6**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=199,slow=6.8,SNR=9.0						
INK	**Inuvik**	**145.10**	**321**	PKPbc	**PKPbc**	**07 33 18.2**	**-0.1**
	comp=Z,4.2nm,0.9s,baz=99,slow=3.7,SNR=14						
KLU	**Klutina**	**148.23**	**307**	PKPdf	**PKPdf**	**07 33 23.8**	**-0.6**
RIDG	**Independent Ri**	**148.36**	**311**		**PKPbc**	**07 33 28.7**	**+0.7**
ILAR	**Eielson Array**	**149.46**	**313**	PKPbc	**PKPbc**	**07 33 30.6**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=120,slow=1.4,SNR=23						
ILAR	**Eielson Array**	**149.46**	**313**		**PKPbc**	**07 33 29.8**	**-0.9**
SONM	**Songino Array**	**150.90**	**85**	PKPbc	**PKPbc**	**07 33 34.6**	**-0.3**
	comp=Z,1.5nm,0.8s,baz=219,slow=1.9,SNR=6.1						

*IDC **26** 07:23:56.2±4.8, 36°.37N×70°.88E, h186km±42km, mb3.2/5, mb1 3.4/9, mb1mx3.1/50, mbtmp3.8/9, Error ellipse: s-maj=36.4km s-min=26.8km az=28.0*
*NNC **26** 07:24:03.5±4.8, 37°.22N×69°.52E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=40.7km s-min=31.3km az=146.0*
ISC 26 07:23:52.4±1.1, 36°.1N±0°.1×70°.9E±0°.1, h150km, n20, σ2°.05/21, mb3.4/4, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.38**	**19**	P	**Pn**	**07 25 26.6**	**+2.1**
	SNR=80						
UCH	**Uchtor**	**6.72**	**24**	P	**Pn**	**07 25 31.6**	**+2.6**
	SNR=18						
EKS2	**Erkin-Say**	**6.90**	**18**	P	**Pn**	**07 25 33.9**	**+2.7**
	SNR=5.5						
KK31	**Karatay Array**	**6.97**	**358**	P	**Pn**	**07 25 33.4**	**+1.5**
	2.7nm,0.4s,baz=181,slow=12,SNR=40						
KK31				⇓S	Sn	07 26 42.2	-7.9
	27nm,0.7s,baz=187,slow=24,SNR=21						
AAK	**Ala-Archa**	**7.08**	**22**	P	**Pn**	**07 25 36.0**	**+2.4**
	6.9nm,0.3s,baz=197,slow=7.0,SNR=80						
AAK				S	**Sn**	**07 26 50.4**	**-2.6**
	1.8nm,0.3s,baz=340,slow=20,SNR=13						
KBK	**Karagaybulak**	**7.24**	**25**	P	**Pn**	**07 25 38.5**	**+2.8**
	SNR=8.7						
ULHL	**Ulahol**	**7.40**	**33**	P	**Pn**	**07 25 40.5**	**+2.7**
	SNR=9.7						
CHMS	**Chumysh**	**7.49**	**22**	P	**Pn**	**07 25 40.7**	**+1.8**
	SNR=5.2						
USP	**Ospenovka**	**7.66**	**20**	P	**Pn**	**07 25 43.3**	**+2.1**
	SNR=6.8						
TKM2	**Tokmak 2**	**7.71**	**27**	P	**Pn**	**07 25 44.1**	**+2.1**
	SNR=33						
MKAR	**Makanchi Array**	**13.66**	**35**	P	**Pn**	**07 27 00.0**	**+0.2**
	0.3nm,0.3s,baz=218,slow=10,SNR=13						
AB31	**Akbulak array**	**15.36**	**332**	⇓P	**Pn**	**07 27 19.5**	**-1.5**
	0.5nm,0.5s,baz=144,slow=11,SNR=12						
AB31				⇑S	Sn	07 29 58.5	-13
	0.8nm,0.8s						
KURBB	**Kurchatov Arra**	**15.51**	**19**	P	**Pn**	**07 27 21.3**	**-1.5**
	0.2nm,0.3s,baz=209,slow=10,SNR=12						
AKTO	**Aktyubinsk**	**17.05**	**331**	P	P	**07 27 40.5**	**-0.5**
	0.2nm,0.3s,baz=130,slow=11,SNR=6.2						
AKTO	**Aktyubinsk**	**17.05**	**331**	⇑P	**Pn**	**07 27 44.4**	**+2.8**
	2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**20.30**	**24**	P	**P**	**07 28 15.2**	**-1.0**
	2.6nm,0.5s,baz=217,slow=11,SNR=8.6						
TORD	**Torodi Ar. Bea**	**65.60**	**269**	P	**P**	**07 34 20.0**	**-0.5**
	0.2nm,0.4s,baz=49,slow=5.6,SNR=2.0						
YKA	**Yellowknife Ar**	**81.62**	**3**	P	**P**	**07 35 51.9**	**-1.2**
	0.5nm,0.7s,baz=360,slow=5.0,SNR=5.1						
WRA	**Warramunga Arr**	**81.89**	**122**	P	**P**	**07 35 55.4**	**+0.1**
	0.3nm,0.4s,baz=324,slow=5.1,SNR=7.4						
ASAR	**Alice Springs**	**84.14**	**125**	P	**P**	**07 36 07.0**	**+0.2**
	0.3nm,0.5s,baz=303,slow=5.2,SNR=6.2						

IDC 26 07:40:24.1±2.0, 6°.74S×129°.28E, h0km, mb3.8/1, mb1 3.7/3, mb1mx3.5/26, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=112.1km s-min=31.0km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.01**	**160**	Pn	Pn	07 43 43.6	-0.4
	0.5nm,0.3s,baz=339,slow=12,SNR=22						
WRA				Sn	Sn	07 46 06.5	-14
	0.4nm,0.3s,baz=343,

ARCES	**ARCES Array B**	**79.32**	**342**	P		**P**	**08 00 58.7**	**+0.4**
	2.6nm,0.8s,baz=44,slow=5.4,SNR=4.8							
NVAR	**Mina Array Bea**	**83.23**	**51**	P		**P**	**08 01 20.5**	**+0.5**
	1.0nm,0.7s,baz=273,slow=5.7,SNR=8.2							
FINES	**FINESS Array B**	**83.58**	**335**	P		**P**	**08 01 21.4**	**+0.5**
	1.4nm,0.8s,baz=83,slow=3.4,SNR=1.5							
LPAZ	**La Paz**	**149.79**	**86**	PKPbc		**PKiKP**	**08 08 45.4**	**-0.1**
	3.0nm,1.0s,baz=349,slow=2.3,SNR=7.0							

IDC 26 07:55:33.3±4.4, 24°.17S×179°.93W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/36, mbtmp3.9/4, Error ellipse: s-maj=173.2km s-min=39.4km az=145.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.68**	**248**	P	P	08 02 24.4	-0.5
	0.5nm,0.4s,baz=102,slow=14,SNR=4.2						
ASAR	**Alice Springs**	**42.06**	**261**	P	P	08 03 27.0	-0.1
	1.6nm,0.4s,baz=91,slow=7.3,SNR=43						
WRA	**Warramunga Arr**	**42.45**	**266**	P	P	08 03 30.4	0.0
	0.6nm,0.5s,baz=104,slow=7.8,SNR=11						
ILAR	**Eielson Array**	**92.28**	**14**	P	P	08 08 44.8	0.0
	0.9nm,1.1s,baz=215,slow=4.4,SNR=4.1						

*IDC **26** 08:03:35.8±1.2, 11°.92N×87°.34W, h0km, mb3.8/6, mb1 4.1/7, mb1mx3.8/33, mbtmp3.8/7, ML3.3/2, MS3.2/5, Ms1 3.2/5, ms1mx2.9/25, Error ellipse: s-maj=44.0km s-min=16.1km az=42.0*

*UCR **26** 08:03:39.0±1.6, 11°.61N×87°.68W, h37km±999km, ML3.5, mb4.4(NEIC)*

*SNET **26** 08:03:39.9±0.7, 11°.74N×87°.74W, h22km±59km, ML3.5*

*NEIC **26** 08:03:41.8±2.3, 11°.80N±0°.01×87°.35W±0°.07, h56km±8km, mb4.4/59, Error ellipse: s-maj=9.6km s-min=1.4km az=94.0*

*INET **26** 08:03:42.4, 11°.78N×87°.27W, h15km, ML3.7*

ISC 26 08:03:39.8±0.7, 11°.71N±0°.07×87°.52W±0°.06, h35km, n100, σ1§37/91, mb4.5/34, MS3.3/4, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.09**	**25**	Pn	**Pn**	**08 03 59.0**	**+0.4**
CSGN	**Cosiguina Volc**	**1.26**	**358**	Pn	**Pn**	**08 04 02.5**	**+1.5**
LCND	**La Caada**	**1.63**	**347**	*e*P	**Pn**	**08 04 06.3**	**+0.3**
LCND				IAML		08 04 38.3	
	comp=Z,1μm,0.4s						
LCND	**La Caada**	**1.63**	**347**	*e*P	**Pn**	**08 04 06.3**	**+0.3**
LCND				*e*S	**Sn**	**08 04 27.6**	**+1.8**
LCND				IAML		08 04 38.3	
	comp=Z,1μm,0.4s						
JUCU	**Jucuarįn**	**1.69**	**335**	*e*P	**Pn**	**08 04 06.7**	**-0.3**
JUCU				*e*S	**Sn**	**08 04 27.8**	**+0.4**
JUCU	**Jucuarįn**	**1.69**	**335**	*e*P	**Pn**	**08 04 06.7**	**-0.3**
JUCU				*e*S	**Sn**	**08 04 27.8**	**+0.4**
ALJI	**Alcalda de J**	**1.91**	**328**	*e*P	**Pn**	**08 04 09.5**	**-0.3**
ALJI				*e*S	**Sn**	**08 04 31.6**	**-0.9**
ALJI				IAML		08 04 48.1	
	comp=Z,415nm,0.3s						
ALJI	**Alcalda de J**	**1.91**	**328**	*e*P	**Pn**	**08 04 09.5**	**-0.3**
ALJI				*e*S	**Sn**	**08 04 31.6**	**-0.9**
ALJI				IAML		08 04 48.1	
	comp=Z,415nm,0.3s						
PACA	**Pacayal**	**1.92**	**336**	*e*P	**Pn**	**08 04 10.6**	**+0.5**
PACA	**Pacayal**	**1.92**	**336**	*e*P	**Pn**	**08 04 10.6**	**+0.5**
MATN	**Matagalpa**	**1.98**	**52**		**Pn**	**08 04 09.4**	**-1.5**
TECA	**Tecapa**	**2.02**	**332**	*e*P	**Pn**	**08 04 11.5**	**0.0**
TECA	**Tecapa**	**2.02**	**332**	*e*P	**Pn**	**08 04 11.5**	**0.0**
COEB	**Comit de Eme**	**2.03**	**331**	*e*P	**Pn**	**08 04 11.8**	**+0.1**
COEB				IAML		08 04 46.7	
	comp=Z,352nm,0.4s						
COEB	**Comit de Eme**	**2.03**	**331**	*e*P	**Pn**	**08 04 11.8**	**+0.1**
COEB				IAML		08 04 46.7	
	comp=Z,352nm,0.4s						
ACON	**Acoyapa**	**2.31**	**83**		**Pn**	**08 04 13.9**	**-1.5**
COEG	**Centro de Oper**	**2.31**	**325**	*e*P	**Pn**	**08 04 15.3**	**-0.2**
COEG				IAML		08 04 53.7	
	comp=Z,281nm,0.3s						
COEG	**Centro de Oper**	**2.31**	**325**	*e*P	**Pn**	**08 04 15.3**	**-0.2**
COEG				IAML		08 04 53.7	
	comp=Z,281nm,0.3s						
TGUH	**Tegucigalpa,Un**	**2.35**	**6**	*e*P	**Pn**	**08 04 16.9**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.35**	**6**	*e*P	**Pn**	**08 04 16.9**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.35**	**6**	Pn	**Pn**	**08 04 17.0**	**+1.0**
LFRS	**El Faro**	**2.42**	**322**	*e*P	**Pn**	**08 04 16.6**	**-0.4**
LFRS	**El Faro**	**2.42**	**322**	*e*P	**Pn**	**08 04 16.6**	**-0.4**
PAVA	**Las Pavas**	**2.42**	**325**	*e*P	**Pn**	**08 04 16.9**	**-0.2**
PAVA	**Las Pavas**	**2.42**	**325**	*e*P	**Pn**	**08 04 16.9**	**-0.2**
SNET	**Serv Nac Est T**	**2.58**	**320**	Pn	**Pn**	**08 04 22.1**	**+3.0**
JTS	**Las Juntas de**	**2.89**	**119**	Pn	**Pn**	**08 04 23.0**	**-0.4**
	comp=Z,2.1nm,0.3s,baz=332,slow=16,SNR=13						
JTS				Pg		08 04 28.4	
	comp=Z,5.2nm,0.3s,baz=8.4,slow=14,SNR=13						
JTS				Sn	**Sn**	**08 04 58.0**	**+1.1**
	comp=Z,9.7nm,0.3s,baz=82,slow=22,SNR=5.8						
JTS				LR	LR	08 05 03.8	
	comp=Z,63nm,19.2s,baz=358,slow=31						
JTS	**Las Juntas de**	**2.89**	**119**		**Pn**	**08 04 22.0**	**-1.4**
CEVE	**Cerro Verde**	**2.94**	**316**	*e*S	**Sn**	**08 04 58.6**	**+0.2**
CEVE	**Cerro Verde**	**2.94**	**316**	*e*S	**Sn**	**08 04 58.6**	**+0.2**
ESPN	**Las Esperanzas**	**3.19**	**81**		**Pn**	**08 04 29.2**	**+1.8**
MTO3	**Montecristo**	**3.22**	**326**	Pn	**Pn**	**08 04 30.0**	**+1.9**
ESQI	**Esquipulas**	**3.34**	**328**	Pn	**Pn**	**08 04 31.0**	**+1.3**
HDC	**Heredia**	**3.75**	**117**		**Pn**	**08 04 37.6**	**+2.3**
EDPN	**Palmar Norte**	**4.84**	**124**	*e*P	**Pn**	**08 04 50.2**	**0.0**
EDSV	**San Vito**	**5.32**	**122**	*e*P	**Pn**	**08 04 57.7**	**+0.8**
CCIG	**Comitan**	**6.38**	**316**	Pn	**Pn**	**08 05 15.0**	**+3.4**
CMIG	**Matias Romero**	**8.91**	**308**	Pn	**Pn**	**08 05 47.8**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=150,slow=13,SNR=7.5						
TLIG	**Tlapa**	**12.16**	**300**	Pn	**Pn**	**08 06 33.6**	**+2.8**
HKT	**Hockley**	**19.73**	**338**		**Pn**	**08 08 10.7**	**+2.7**
344A	**Westbrook Farm**	**19.87**	**352**		**Pn**	**08 08 10.5**	**+0.7**
344A				IAmb	IAmb	08 08 15.1	
	comp=Z,23nm,0.8s						
833A	**Chaparral WMA,**	**19.91**	**328**	P	**P**	**08 08 08.6**	**0.0**
342A	**Flagon Creek P**	**20.07**	**348**		Pn	08 08 12.3	+0.2
152A	**Waverly Hall**	**21.02**	**7**	P	**P**	**08 08 24.3**	**+3.9**
152A				IAmb	IAmb	08 08 24.8	
	comp=Z,19nm,0.9s						
LRAL	**Lakeview Retre**	**21.23**	**1**	P	**P**	**08 08 23.8**	**+1.1**
Z41A	**Richland Creek**	**21.99**	**348**	IAmb	IAmb	08 08 33.9	
	comp=Z,15nm,0.7s						
Y52A	**Lilburn**	**22.28**	**8**	IAmb	IAmb	08 08 37.8	
	comp=Z,11nm,0.8s						
WLAR	**White Oak Lake**	**22.47**	**348**	P	**P**	**08 08 37.2**	**+1.2**
WLAR				IAmb	IAmb	08 08 38.3	
	comp=Z,19nm,1.1s						
OXF	**Oxford**	**22.76**	**356**	P	**P**	**08 08 38.7**	**-0.4**
TXAR	**Lajitas Array**	**23.10**	**322**	P	**P**	**08 08 43.8**	**+0.9**
	comp=Z,2.3nm,0.6s,baz=138,slow=9.6,SNR=33						
TXAR	**Lajitas Array**	**23.10**	**322**	P	**P**	**08 08 42.8**	**0.0**
TX31	**Lajitas Ar. Si**	**23.10**	**322**	P	**P**	**08 08 43.5**	**+0.7**
MIAR	**Mount Ida**	**23.39**	**347**	P	**P**	**08 08 44.4**	**-1.1**
W50A	**Signal Mountai**	**23.47**	**5**	P	**P**	**08 08 46.7**	**+0.4**
W50A				IAmb	IAmb	08 08 47.8	
	comp=Z,15nm,0.8s						
BG3	**Lake Jocassee**	**23.55**	**9**	P	**P**	**08 08 47.6**	**+0.5**
BG3				IAmb	IAmb	08 08 48.9	
	comp=Z,15nm,1.1s						
WHAR	**Wooly Hollow**	**23.87**	**350**	P	**P**	**08 08 48.8**	**-1.2**
WHAR				IAmb	IAmb	08 08 54.8	
	comp=Z,16nm,1.3s						
X37A	**Clayton**	**23.87**	**344**	IAmb	IAmb	08 08 52.2	
	comp=Z,21nm,1.0s						
V48A	**Smith Brothers**	**23.93**	**1**	P	**P**	**08 08 49.7**	**-0.9**
TKL	**Tuckaleechee C**	**24.08**	**7**	P	**P**	**08 08 52.3**	**+0.2**
	comp=Z,6.5nm,0.7s,baz=179,slow=11,SNR=7.5						
TKL				LR	LR	08 18 12.0	
	comp=Z,44nm,19.8s,baz=106,slow=37						
TKL	**Tuckaleechee C**	**24.08**	**7**	IAmb	IAmb	08 08 54.9	
	comp=Z,11nm,0.9s						
CLTN	**Cedars of Leba**	**24.30**	**2**	P	**P**	**08 08 52.5**	**-1.4**
CLTN				IAmb	IAmb	08 08 55.6	
	comp=Z,12nm,0.7s						
WVT	**Waverly**	**24.32**	**359**	P	**P**	**08 08 53.0**	**-1.1**
FCAR	**Ozark Folk Cen**	**24.43**	**351**	IAmb	IAmb	08 08 55.5	
	comp=Z,8.7nm,0.7s						
U40A	**Yellville**	**25.01**	**350**	P	**P**	**08 08 59.1**	**-1.3**
U40A				IAmb	IAmb	08 09 01.0	
	comp=Z,11nm,0.8s						
PBMO	**Poplar Bluff**	**25.10**	**354**	P	**P**	**08 08 59.7**	**-1.5**
PBMO				IAmb	IAmb	08 09 01.9	
	comp=Z,10nm,0.8s						
HHAR	**Hobbs**	**25.14**	**348**	P	**P**	**08 09 01.3**	**-0.4**
V58A	**Windy Hill, Pi**	**25.16**	**16**	P	**P**	**08 09 01.4**	**-0.4**
V58A				IAmb	IAmb	08 09 02.7	
	comp=Z,15nm,0.8s						
T47A	**Sharon Grove**	**25.17**	**1**	P	**P**	**08 09 01.4**	**-0.5**
T47A				IAmb	IAmb	08 09 02.5	
	comp=Z,14nm,0.8s						
TUL1	**Leonard**	**25.23**	**344**	P	**P**	**08 09 03.2**	**+0.8**
OK025	**Westminster Rd**	**25.38**	**341**	IAmb	IAmb	08 09 06.6	
	comp=Z,11nm,0.7s						
T42A	**Van Buren**	**25.42**	**353**	P	**P**	**08 09 03.1**	**-1.0**
T42A				IAmb	IAmb	08 09 03.5	
	comp=Z,7.9nm,0.7s						
MSTX	**Muleshoe**	**26.17**	**330**	IAmb	IAmb	08 09 20.1	
	comp=Z,11nm,0.9s						
S39A	**Bolivar**	**26.39**	**350**	IAmb	IAmb	08 09 13.1	
	comp=Z,14nm,0.8s						
AMTX	**Amarillo**	**26.42**	**333**	IAmb	IAmb	08 09 16.5	
	comp=Z,13nm,1.2s						
CCM	**Cathedral Cave**	**26.45**	**353**	P	**P**	**08 09 12.9**	**-0.5**
Q51A	**Peebles**	**27.46**	**7**	P	**P**	**08 09 22.2**	**-0.4**
P48A	**Milroy**	**27.70**	**3**	P	**P**	**08 09 20.9**	**-3.9**
P48A				IAmb	IAmb	08 09 27.1	
	comp=Z,19nm,1.4s						
P52A	**Corning**	**28.22**	**9**	P	**P**	**08 09 28.1**	**-1.3**
P38A	**Dawn**	**28.31**	**350**	P	**P**	**08 09 28.9**	**-1.2**
P38A				IAmb	IAmb	08 09 30.5	
	comp=Z,9.6nm,0.8s						
O53A	**New Philadelph**	**28.97**	**10**	P	**P**	**08 09 35.6**	**-0.4**
O53A				IAmb	IAmb	08 09 39.9	
	comp=Z,12nm,1.0s						
PV12	**Saucer Basin,**	**32.60**	**328**	IAmb	IAmb	08 10 19.3	
	comp=Z,6.8nm,0.8s						
PV17	**East Wray Mesa**	**32.66**	**328**	P	**P**	**08 10 09.9**	**+1.1**
PV17				IAmb	IAmb	08 10 15.8	
	comp=Z,4.4nm,0.8s						
PV04	**Paradox Valley**	**32.71**	**328**	IAmb	IAmb	08 10 19.6	
	comp=Z,5.8nm,0.9s						
ECSD	**EROS Data Cent**	**32.86**	**348**	IAmb	IAmb	08 10 09.9	
	comp=Z,7.2nm,0.9s						
LPAZ	**La Paz**	**33.79**	**145**	LR	LR	08 24 01.1	
	comp=Z,40nm,19.4s,baz=38,slow=36						
PDAR	**Pinedale Array**	**36.39**	**332**	P	**P**	**08 10 41.2**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=132,slow=9.1,SNR=5.9						
PDAR	**Pinedale Array**	**36.39**	**332**	P	**P**	**08 10 39.3**	**-1.8**
HWUT	**Hardware Ranch**	**36.47**	**329**	IAmb	IAmb	08 10 51.1	
	comp=Z,7.1nm,1.2s						
AGMN	**Agassiz Nation**	**37.13**	**351**	P	**P**	**08 10 44.6**	**-2.5**
NVAR	**Mina Array Bea**	**38.21**	**319**	P	**P**	**08 10 57.4**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=130,slow=8.4,SNR=1.6						
NVAR				PcP	**PcP**	**08 13 11.8**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=126,slow=4.6,SNR=4.8						
F10A	**Beach Ranch, E**	**42.45**	**329**	P	**P**	**08 11 30.7**	**-0.8**
F10A				IAmb	IAmb	08 11 32.1	
	comp=Z,10.0nm,1.2s						
SCHQ	**Schefferville**	**46.00**	**17**	P	**P**	**08 11 58.0**	**-1.6**
	comp=Z,3.7nm,0.7s,baz=221,slow=9.6,SNR=7.5						
SCHQ				LR	LR	08 30 53.1	
	comp=Z,47nm,19.2s,baz=324,slow=36						
MESA	**MESA**	**62.65**	**333**	P	**P**	**08 14 01.1**	**+0.3**
ILAR	**Eielson Array**	**66.67**	**336**	P	**P**	**08 14 26.5**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=147,slow=4.8,SNR=4.3						
NOA	**NORSAR Array B**	**84.05**	**29**	LR	LR	08 52 56.0	
	comp=Z,29nm,18.1s,baz=345,slow=35						
LZH	**Lanzhou**	**131.27**	**348**	*e*PKP	**PKPdf**	**08 22 44.3**	**-4.7**
LZH				sPKP		08 22 54.0	
ASAR	**Alice Springs**	**138.93**	**247**	PKP	**PKiKP**	**08 23 05.0**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=108,slow=2.4,SNR=1.6						
WRA	**Warramunga Arr**	**138.99**	**253**	PKP	**PKiKP**	**08 23 06.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=32,slow=2.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**149.35**	**348**	PKPbc	**PKPbc**	**08 23 26.4**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=343,slow=3.8,SNR=14						
CMAR	**Chiang Mai Arr**	**149.35**	**348**		**PKPbc**	**08 23 25.0**	**-0.9**

IDC 26 08:03:45.4±2.2, 22°.07N×142°.81E, h0km, mb3.5/5, mb1 3.9/5, mb1mx3.5/49, mbtmp3.5/5, Error ellipse: s-maj=192.9km s-min=23.9km az=111.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11N1	**WAKE ISLAND Hy**	**22.62**	**92**	T	T	08 31 20.3	
	baz=279,slow=75,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**22.62**	**91**	T	T	08 31 22.9	
	baz=279,slow=75,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**22.63**	**92**	T	T	08 31 25.2	
	baz=279,slow=75,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**22.67**	**95**	T	T	08 31 16.4	
	baz=283,slow=74,SNR=51						
H11S1	**WAKE ISLAND Hy**	**22.68**	**95**	T	T	08 31 17.1	
	baz=283,slow=74,SNR=30						
H11S2	**WAKE ISLAND Hy**	**22.69**	**95**	T	T	08 31 17.6	
	baz=283,slow=74,SNR=26						
WRA	**Warramunga Arr**	**42.56**	**192**	P	P	08 11 43.0	-0.1
	0.2nm,0.6s,baz=16,slow=8.4,SNR=4.8						
ASAR	**Alice Springs**	**46.27**	**191**	P	P	08 12 12.8	-0.1
	0.2nm,0.6s,baz=17,slow=9.7,SNR=4.9						
ILAR	**Eielson Array**	**61.87**	**27**	P	P	08 14 05.4	-0.9
	0.4nm,0.8s,baz=264,slow=5.6,SNR=4.1						
YKA	**Yellowknife Ar**	**76.29**	**28**	P	P	08 15 36.7	+0.9
	0.6nm,0.5s,baz=295,slow=4.8,SNR=4.1						
NVAR	**Mina Array Bea**	**83.19**	**51**	P	P	08 16 14.3	+0.2
	0.5nm,0.7s,baz=284,slow=5.0,SNR=6.7						
LPAZ	**La Paz**	**150.25**	**84**	PKPbc	PKPbc	08 23 39.5	-0.6
	0.7nm,0.7s,baz=270,slow=1.0,SNR=2.4						

*IDC **26** 08:04:45.2±1.1, 7°.13N×94°.03E, h0km, mb4.0/8, mb1 4.1/9, mb1mx3.8/49, mbtmp3.9/9, ML3.4/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/30, Error ellipse: s-maj=61.2km s-min=17.3km az=55.0*

*NEIC **26** 08:04:49.5±0.9, 7°.4N±0°.2×94°.5E±0°.2, h24km±7km, mb4.3/10, Error ellipse: s-maj=29.5km s-min=14.2km az=46.0*

ISC 26 08:04:47.9±0.8, 7°.5N±0°.1×94°.5E±0°.2, h10km, n37, σ1§10/31, mb4.1/13, MS3.1/5, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**6.36**	**136**	Pn	**Pn**	**08 06 24.5**	**+2.7**
	0.7nm,0.3s,baz=0.2,slow=2.5,SNR=4.7						
RPSI	**Rantau Prapat**	**6.43**	**137**		**Pn**	**08 06 24.5**	**+1.7**
RPSI	**Rantau Prapat**	**6.43**	**137**	Pn	**Pn**	**08 06 21.2**	**-1.6**
KULM	**Kulim**	**6.44**	**109**		**Pn**	**08 06 22.7**	**-0.3**
IPM	**Ipoh**	**7.09**	**114**		**Pn**	**08 06 31.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**11.75**	**21**	Pn	Pn	08 07 45.6	+10
	0.6nm,0.3s,baz=217,slow=13,SNR=2.1						
RAMN	**Ramnie**	**20.81**	**340**	*e*P	**P**	**08 09 31.3**	**+1.4**
TAPN	**Taplejung**	**20.83**	**343**	*e*P	Pn	08 09 33.6	+1.0
	25nm,0.8s						
PKI	**Pulchoki**	**21.80**	**338**	*e*P	**P**	**08 09 41.0**	**+0.3**
GUN	**Gumba**	**21.94**	**339**	*e*P	**P**	**08 09 44.1**	**+1.9**
	20nm,0.6s						
DMN	**Daman**	**21.95**	**337**	*e*P	**P**	**08 09 43.6**	**+1.4**
	26nm,0.9s						
DANN	**Dangsing**	**23.15**	**335**	*e*P	**P**	**08 09 54.8**	**-0.1**
H08S3	**Diego Garcia H**	**26.61**	**236**	T	T	08 37 08.9	
	baz=55,slow=75,SNR=94						
RPSI	**Rantau Prapat**	**6.43**	**137**		**Pn**	**08 06 24.5**	**+1.7**
RPSI	**Rantau Prapat**	**6.43**	**137**	Pn	**Pn**	**08 06 21.2**	**-1.6**
KULM	**Kulim**	**6.44**	**109**		**Pn**	**08 06 22.7**	**-0.3**
IPM	**Ipoh**	**7.09**	**114**		**Pn**	**08 06 31.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**11.75**	**21**	Pn	Pn	08 07 45.6	+10
	0.6nm,0.3s,baz=217,slow=13,SNR=2.1						
RAMN	**Ramnie**	**20.81**	**340**	*e*P	**P**	**08 09 31.3**	**+1.4**
TAPN	**Taplejung**	**20.83**	**343**	*e*P	Pn	08 09 33.6	+1.0
	25nm,0.8s						
PKI	**Pulchoki**	**21.80**	**338**	*e*P	**P**	**08 09 41.0**	**+0.3**
GUN	**Gumba**	**21.94**	**339**	*e*P	**P**	**08 09 44.1**	**+1.9**
	20nm,0.6s						
DMN	**Daman**	**21.95**	**337**	*e*P	**P**	**08 09 43.6**	**+1.4**
	26nm,0.9s						
DANN	**Dangsing**	**23.15**	**335**	*e*P	**P**	**08 09 54.8**	**-0.1**
H08S3	**Diego Garcia H**	**26.61**	**236**	T	T	08 37 08.9	
	baz=55,slow=75,SNR=94						
H08S2	**Diego Garcia H**	**26.61**	**236**	T	T	08 37 07.8	
	baz=55,slow=75,SNR=16						
H08S1	**Diego Carcia H**	**26.62**	**236**	T	T	08 37 08.8	
	baz=55,slow=75,SNR=6.6						
DAV	**Davao City (W)**	**30.79**	**89**	LR	LR	08 26 05.1	
	comp=Z,18nm,20.6s,baz=150,slow=41						
ARSB	**Arslanbob**	**38.80**	**334**	P	**P**	**08 12 13.0**	**-0.1**
ARSB				IAmb	IAmb	08 12 14.2	
	comp=Z,7.0nm,0.9s						
AAK	**Ala-Archa**	**39.25**	**336**	LR	LR	08 29 44.7	
	comp=Z,33nm,18.8s,baz=162,slow=38						
MK31	**Makanchi Array**	**40.59**	**347**	P	**P**	**08 12 28.0**	**+0.2**
MKAR	**Makanchi Array**	**40.59**	**347**	P	**P**	**08 12 28.0**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=169,slow=8.0,SNR=29						
MKAR				LR	LR	08 32 01.7	
	comp=Z,21nm,18.0s,baz=152,slow=40						
MAKZ	**Makanchi**	**40.67**	**347**	P	**P**	**08 12 28.6**	**+0.1**
SONM	**Songino Array**	**41.49**	**12**	P	**P**	**08 12 37.5**	**+2.2**
	comp=Z,0.8nm,0.8s,baz=195,slow=8.4,SNR=4.3						
SONM	**Songino Array**	**41.49**	**12**	P	**P**	**08 12 35.9**	**+0.6**
KURK	**Kurchatov**	**45.12**	**346**	P	**P**	**08 13 04.6**	**+0.2**
KURK				IAmb	IAmb	08 13 05.8	
	comp=Z,3.2nm,0.8s						
ZALV	**Zalesovo Beam**	**47.03**	**352**	P	**P**	**08 13 20.2**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=190,slow=7.5,SNR=4.9						
ZALV	**Zalesovo Beam**	**47.03**	**352**	P	**P**	**08 13 19.3**	**-0.1**
WRA	**Warramunga Arr**	**47.70**	**125**	P	**P**	**08 13 25.2**	**0.0**
	comp=Z,0.4nm,0.4s,baz=306,slow=8.7,SNR=9.6						
WRA				PcP	**PcP**	**08 14 54.1**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=312,slow=2.8,SNR=5.2						
WRA				LR	LR	08 35 15.8	
	comp=Z,40nm,18.0s,baz=355,slow=38						
WB2	**Warramunga Arr**	**47.70**	**125**	P	**P**	**08 13 24.4**	**-0.8**
WB2				IAmb	IAmb	08 13 32.4	
	comp=Z,3.5nm,1.1s						
ASAR	**Alice Springs**	**49.34**	**130**	P	**P**	**08 13 37.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=305,slow=8.0,SNR=5.9						
ASAR				PcP	**PcP**	**08 15 00.2**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=302,slow=3.5,SNR=2.0						
BRVK	**Borovoye**	**49.58**	**341**	P	**P**	**08 13 39.0**	**-0.1**
BRVK				IAmb	IAmb	08 13 39.7	
	comp=Z,2.4nm,0.7s						
FORT	**Forrest**	**49.76**	**141**	P	**P**	**08 13 41.0**	**+0.2**
ABKAR	**Akbulak array**	**50.79**	**331**	P	**P**	**08 13 48.1**	**-0.2**
ABKAR				IAmb	IAmb	08 13 49.6	
	comp=Z,2.1nm,0.9s						
STKA	**Stephens Creek**	**59.53**	**134**	LR	LR	08 42 07.7	
	comp=Z,16nm,20.7s,baz=27,slow=38						
FINES	**FINESS Array B**	**73.27**	**332**	P	**P**	**08 16 18.4**	**-0.9**
	comp=Z,4.3nm,0.8s,baz=104,slow=8.0,SNR=6.1						
GERES	**GERESS Array B**	**78.40**	**318**	P	**P**	**08 16 47.8**	**-1.2**
	comp=Z,1.1nm,0.7s,baz=76,slow=5.6,SNR=4.7						
NB2	**NORSAR Subarra**	**80.29**	**331**	P	**P**	**08 16 58.0**	**-1.0**
	comp=Z,3.5nm,1.0s,baz=90,slow=5.3						
NOA	**NORSAR Array B**	**80.29**	**331**	P	**P**	**08 16 57.8**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=91,slow=5.6,SNR=4.9						

*IDC **26** 08:10:54.7±2.6, 30°.25N×139°.64E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.5/41, mbtmp3.8/4, Error ellipse: s-maj=113.0km s-min=28.1km az=73.0*

*JMA **26** 08:11:37.4±0.1, 30°.19N×139°.71E, h383km, M3.4*

ISC 26 08:11:35.6±0.9, 30°.10N±0°.08×139°.5E±0°.2, h388km, n11, σ1§74/14, mb3.2/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.80**	**141**	P	**Pn**	**08 12 46.4**	**+1.4**
CBIJ				*e*S	**S**	**08 13 40.6**	**-0.6**
BSO3	**Boso 3**	**4.76**	**10**	P	**Pn**	**08 12 56.1**	**+2.0**
BSO3				*e*S	**S**	**08 13 57.3**	**-0.7**
JIE	**Ise**	**4.90**	**332**	P	**Pn**	**08 12 58.0**	**+2.1**
BSO4	**Boso 4**	**4.93**	**8**	P	**Pn**	**08 12 57.0**	**+1.0**
BSO4				*e*S	**S**	**08 13 59.5**	**-1.9**
JKN2	**Miekihoku**	**4.96**	**327**	P	**Pn**	**08 12 58.2**	**+1.7**
JAO	**Obara**	**5.50**	**340**	P	**Pn**	**08 13 04.4**	**+2.2**
JRY	**Ryogami san**	**5.93**	**355**	P	**Pn**	**08 13 08.1**	**+1.3**
MKAR	**Makanchi Array**	**46.78**	**308**	P	**P**	**08 19 25.8**	**-2.

OCAC				*i*			08 32 30.6	
	comp=Z,107nm,0.2s							
SPBC	**San Pablo de B**	**1.48 219**		*e*P		Pn	08 32 01.1	-0.6
SPBC				*e*S		Sn	08 32 23.9	-0.2
SPBC				*i*			08 32 30.1	
	comp=Z,216nm,0.4s							
ZARC	**Zaragoza, Cauc**	**1.84 292**		*e*P		Pn	08 32 04.7	-0.8
ZARC				*e*S		Sn	08 32 30.5	-0.4
ZARC				*i*			08 32 36.4	
	comp=Z,138nm,0.2s							
NORC	**Norcasia**	**2.12 234**		*e*P		Pn	08 32 08.2	-0.6
NORC				*e*S		Sn	08 32 36.6	-0.3
NORC				*i*			08 32 39.9	
	comp=Z,97nm,0.6s							
CHIC	**Chingaza**	**2.25 195**		*e*P		Pn	08 32 10.2	-0.6
CHIC				*e*S		Sn	08 32 39.5	-0.7
CHIC				*i*			08 32 48.3	
	comp=Z,42nm,0.7s							
ROSC	**El Rosal**	**2.29 211**		*e*P		Pn	08 32 11.7	+0.6
ROSC				*e*S		Sn	08 32 43.0	+2.0
ROSC				*i*			08 32 49.7	
	comp=Z,127nm,0.5s							
HELC	**Santa Helena**	**2.46 256**		*e*P		Pn	08 32 12.9	-0.3
HELC				*e*S		Sn	08 32 41.6	-3.0
HELC				*i*			08 32 51.1	
	comp=Z,64nm,0.2s							
GUY2C	**Guyana, Caldas**	**2.72 235**		*e*P		Pn	08 32 16.2	-0.4
GUY2C				*e*S		Sn	08 32 54.8	+4.1
GUY2C				*i*			08 32 59.0	
	comp=Z,113nm,0.8s							
VILC	**Villavicencio,**	**2.74 192**		*e*P		Pn	08 32 15.0	-1.5
VILC				*e*S		Sn	08 32 48.7	-1.9
VILC				*i*			08 33 01.0	
	comp=Z,53nm,0.1s							
PTGC	**Puerto Gaitan,**	**2.78 159**⇓		*e*P		Pn	08 32 15.1	-1.8
PTGC				*e*S		Sn	08 32 48.3	-3.1
RREF	**El Recreo**	**2.91 229**		*e*P		Pn	08 32 19.2	+0.1
RREF				*e*S		Sn	08 32 57.8	+2.7
RREF				*i*			08 33 03.8	
	comp=Z,64nm,0.5s							
DBBC	**Dabeiba**	**3.06 274**		*e*P		Pn	08 32 19.6	-0.9
DBBC				*i*			08 32 59.0	
	comp=Z,164nm,0.2s							
TOLC	**Tolima**	**3.10 225**		*e*P		Pn	08 32 21.6	+0.4
TOLC				*e*S		Sn	08 32 59.6	+0.6
TOLC				*i*			08 33 05.9	
	comp=Z,157nm,0.4s							
MOTC	**Monteria, Cord**	**3.18 308**		*e*P		Pn	08 32 19.6	-2.2
MOTC				*e*S		Sn	08 32 58.2	-2.1
MOTC				*i*			08 33 12.5	
	comp=Z,24nm,0.6s							
SDV	**Santo Domingo**	**3.22 50**		*e*P		Pn	08 32 21.6	-1.1
ANIL	**Santa Ana**	**3.23 224**		*e*P		Pn	08 32 23.4	+0.6
ANIL				*e*S		Sn	08 33 03.4	+1.6
ANIL				*i*			08 33 15.0	
	comp=Z,15nm,0.8s							
ORTC	**Ortega, Tolima**	**3.57 216**		*e*P		Pn	08 32 26.3	-0.7
ORTC				*e*S		Sn	08 33 09.7	+0.3
ORTC				*i*			08 33 16.9	
	comp=Z,40nm,0.6s							
PLMC	**San Jos del P**	**3.66 239**		*e*P		Pn	08 32 27.7	-0.4
PLMC				*e*S		Sn	08 33 11.1	-0.4
GUVC	**San Jose del G**	**4.27 173**		*e*P		Pn	08 32 33.6	-2.5
GUVC				*e*S		Sn	08 33 23.7	-2.1
GUVC				*i*			08 33 31.9	
	comp=Z,27nm,0.2s							
MACC	**Macarena, Meta**	**4.69 189**		*e*P		Pn	08 32 38.9	-2.8
MACC				*e*S		Sn	08 33 30.4	-5.3
MACC				*i*			08 33 53.9	
	comp=Z,7.5nm,0.5s							
GARC	**Garzon, Huila**	**5.16 207**		*e*P		Pn	08 32 45.8	-2.3
GARC				*e*S		Sn	08 33 42.8	-4.4

*VAO **26** 08:41:35.6±0.7, 16°.59S×69°.50W, h176km±7km, mb4.5*
*SJA **26** 08:41:36.1±0.4, 16°.68S×69°.97W, h208km±9km, ML4.6, MW4.2*
*NEIC **26** 08:41:37.3±2.0, 16°.71S±0°.05×69°.3W±0°.1, h204km±6km, mb4.4/2, Error ellipse: s-maj=19.5km s-min=7.8km az=97.0*
*GUC **26** 08:41:38.9±0.8, 16°.67S×69°.26W, h187km±6km, ML4.2*
*IDC **26** 08:41:39.3±0.8, 16°.69S×69°.15W, h201km±6km, mb3.5/7, mb1 3.7/10, mb1mx3.6/28, mbtmp4.1/10, Error ellipse: s-maj=17.4km s-min=15.7km az=81.0*

ISC 26 08:41:37.1±0.7, 16°.70S±0°.04×69°.40W±0°.06, h193km±6km, n117, σ1°.78/135, mb4.2/9, 7C-1D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.29**	**71**	P		**Pn**		**08 42 10.8**	**+1.7**
	813nm,0.3s,baz=293,slow=6.4								
LPAZ				LR		LR		08 42 11.1	
	comp=Z,26nm,18.2s,baz=230,slow=30								
LPAZ				S		**S**		**08 42 34.4**	**+0.8**
	40nm,0.3s,baz=118,slow=23,SNR=6.4								
LPAZ	**La Paz**	**1.29**	**71**	⇓*i*P		**Pn**		**08 42 10.7**	**+1.7**
LPAZ				*i* S		**S**		**08 42 33.9**	**+0.4**
LPAZ	**La Paz**	**1.29**	**71**	Pn		**Pn**		**08 42 10.5**	**+1.5**
PB16	**IPOC Station P**	**1.63 183**		⇑*i*P		**Pn**		**08 42 14.1**	**+2.2**
PB16				*i* S		**S**		**08 42 41.0**	**+1.9**
PB16	**IPOC Station P**	**1.63 183**		Pn		**Pn**		**08 42 14.3**	**+2.4**
AP01	**Chacalluta**	**1.89 208**		IAML				08 42 44.8	
	comp=E,946nm,0.4s								
MNMC	**Minye Minye**	**2.42 184**		⇑*i*P		**Pn**		**08 42 21.3**	**+1.4**
MNMC				*i* S		**S**		**08 42 54.0**	**+0.6**
MNMC				IAML				08 43 02.6	
	comp=N,478nm,0.7s								
MNMC	**Minye Minye**	**2.42 184**				**Pn**		**08 42 21.4**	**+1.4**
GO01	**Chusmiza**	**2.96 176**		⇑*i*P		**Pn**		**08 42 27.8**	**+1.5**
GO01				*i* S		**S**		**08 43 05.8**	**+1.0**
GO01				IAML				08 43 13.7	
	comp=N,410nm,0.1s								
GO01	**Chusmiza**	**2.96 176**				**Pn**		**08 42 28.0**	**+1.7**
PSGC	**Pisagua**	**2.96 193**		⇑*i*P		**Pn**		**08 42 26.1**	**+0.2**
PSGC				*i* S		**S**		**08 43 01.1**	**-3.1**
PSGC				IAML				08 43 04.3	
	comp=N,262nm,0.4s								
PSGCX	**Pisagua**	**2.96 193**		Pn		**Pn**		**08 42 25.6**	**-0.3**
PB11	**IPOC Station P**	**3.05 184**		⇑*i*P		**Pn**		**08 42 27.6**	**+0.5**
PB11				*i* S		**S**		**08 43 05.1**	**-1.2**
PB11				IAML				08 43 08.0	
	comp=E,416nm,0.4s								
PB11	**IPOC Station P**	**3.05 184**				**Pn**		**08 42 27.8**	**+0.8**
PB08	**IPOC Station P**	**3.43 176**		⇑*i*P		**Pn**		**08 42 33.3**	**+1.5**
PB08				*i* S		**S**		**08 43 14.8**	**0.0**
PB08	**IPOC Station P**	**3.43 176**				**Pn**		**08 42 33.6**	**+1.7**
PB08	**IPOC Station P**	**3.43 176**		*e*P		**Pn**		**08 42 33.6**	**+1.7**
PB08				*e*S		**S**		**08 43 16.1**	**+1.3**
TA01	**Diego Aracena**	**3.91 191**		⇑*i*P		**Pn**		**08 42 37.1**	**-0.4**
TA01				*e*S		**S**		**08 43 20.6**	**-4.3**
TA01	**Diego Aracena**	**3.91 191**		Pn		**Pn**		**08 42 37.4**	**0.0**
PATCX	**Punta Patache**	**4.16 190**		*e*P		**Pn**		**08 42 41.0**	**+0.4**
PATCX	**Punta Patache**	**4.16 190**				**Pn**		**08 42 41.5**	**+0.9**
PB01	**IPOC Station P**	**4.32 181**				**Pn**		**08 42 43.3**	**+0.6**
PB01	**IPOC Station P**	**4.32 181**		*e*P		**Pn**		**08 42 43.3**	**+0.6**
PB01				*e*S		**S**		**08 43 30.8**	**-3.5**
PB01				IAML				08 43 35.5	
	comp=Z,232nm,0.2s								
PB07	**IPOC Station P**	**5.02 185**				**Pn**		**08 42 52.2**	**+0.5**
PB07	**IPOC Station P**	**5.02 185**		*e*P		**Pn**		**08 42 52.0**	**+0.3**
PB07				*e*S				08 43 38.5	
PB07				IAML				08 43 50.4	
	comp=Z,284nm,0.6s								
PB09	**IPOC Station P**	**5.07 178**				**Pn**		**08 42 53.4**	**+1.0**
PB09	**IPOC Station P**	**5.07 178**		*e*P		**Pn**		**08 42 53.3**	**+1.0**
PB09				*e*S				08 43 39.2	
PB09				IAML				08 43 53.0	
	comp=Z,315nm,0.9s								
PB03	**IPOC Station P**	**5.33 183**		*e*P		**Pn**		**08 42 55.9**	**+0.2**
PB03				*e*S		**S**		**08 43 54.9**	**-2.7**
PB03				IAML				08 43 58.2	
	comp=Z,395nm,0.8s								
PB04	**IPOC Station P**	**5.64 187**				**S**		**08 44 00.6**	**-4.5**
PB04	**IPOC Station P**	**5.64 187**		*e*P		**Pn**		**08 42 59.7**	**-0.1**
PB04				*e*S		**S**		**08 43 59.4**	**-5.7**
PB04				IAML				08 44 09.8	
	comp=Z,236nm,0.6s								
LVC	**Limon Verde**	**5.89 176**		P		**Pn**		**08 43 04.6**	**+1.4**
	comp=Z,6.7nm,0.3s,baz=29,slow=8.7,SNR=80								
LVC				S		**S**		**08 44 07.8**	**-3.4**
	comp=Z,11nm,0.3s,baz=115,slow=22,SNR=15								
LVC	**Limon Verde**	**5.89 176**		Pn		**Pn**		**08 43 02.5**	**-0.7**
LVC	**Limon Verde**	**5.89 176**		*e*P		**Pn**		**08 43 04.5**	**+1.3**
LVC				*e*S		**S**		**08 44 08.9**	**-2.2**
LVC				IAML				08 44 12.8	
	comp=Z,122nm,0.8s								
PB06	**IPOC Station P**	**5.97 181**				**Pn**		**08 43 03.9**	**-0.1**
PB06	**IPOC Station P**	**5.97 181**		*e*P		**Pn**		**08 43 03.8**	**-0.2**
PB06				*e*S		**S**		**08 44 10.7**	**-2.1**
PB06				IAML				08 44 14.6	
	comp=Z,171nm,1.9s								
PB05	**IPOC Station P**	**6.16 187**		*e*P		**Pn**		**08 43 05.9**	**-0.6**
PB05				*e*S		**S**		**08 44 09.8**	**-7.4**
PB05				IAML				08 44 15.8	
	comp=Z,90nm,1.2s								
PB15	**IPOC Station P**	**6.47 181**				**Pn**		**08 43 10.4**	**-0.1**
PB15	**IPOC Station P**	**6.47 181**		*e*P		**Pn**		**08 43 11.5**	**+1.0**
PB15				*e*S		**S**		**08 44 21.5**	**-3.0**
YJA	**Yavi**	**6.56 147**		*e*P		**Pn**		**08 43 13.0**	**+1.0**
PB10	**IPOC Station P**	**6.86 189**		*e*P		**Pn**		**08 43 15.1**	**-0.3**
PB10				*e*S		**S**		**08 44 29.6**	**-3.8**
HJA	**Humahuaca**	**7.48 151**		*e*P		**Pn**		**08 43 24.8**	**+0.9**
HJA				*e*S		**S**		**08 44 47.0**	**-1.6**
ETMB	**Extrema**	**7.52**	**25**	*e*P		**Pn**		**08 43 23.1**	**-0.9**
SIV	**San Ignacio**	**8.03**	**86**	P		**Pn**		**08 43 29.4**	**-1.4**
	comp=Z,4.3nm,0.3s,baz=268,slow=9.0,SNR=82								
SIV				S		**S**		**08 44 58.3**	**-2.9**
	comp=Z,1.4nm,0.3s,baz=180,slow=20,SNR=10								
GO02	**Mina Guanaco**	**8.42 181**		Pn		**Pn**		**08 43 36.5**	**+0.4**
NNA	**Nana**	**8.60 302**				**Pn**		**08 43 38.7**	**+0.4**
SLA	**San Lorenzo**	**8.77 156**		*e*P		**Pn**		**08 43 40.5**	**0.0**
SLA				*e*S		**S**		**08 45 18.0**	**-1.0**
CZSB	**Cruzeiro do Su**	**9.48 340**		*e*P		**Pn**		**08 43 46.8**	**-3.0**
VILB	**Vilhena**	**9.65 68**		*e*P		**Pn**		**08 43 51.5**	**-0.5**
SAML	**Samuel**	**9.81 39**				**Pn**		**08 43 52.4**	**-1.5**
SAML	**Samuel**	**9.81 39**		*e*P		**Pn**		**08 43 52.5**	**-1.5**
PTLB	**Pontes e Lacer**	**9.95 84**		*e*P		**Pn**		**08 43 54.4**	**-1.4**
AC02	**Maricunga**	**10.09 179**		Pn		**Pn**		**08 43 58.3**	**+0.3**
AHML	**Horco Molle**	**10.72 160**		*e*P		**Pn**		**08 44 07.2**	**+1.5**
GO03	**Copiap**	**10.87 184**		*e*P		**Pn**		**08 44 09.6**	**+1.9**
VCA	**Vinchina**	**12.03 175**		*e*P		**P**		**08 44 32.2**	**+4.6**
CYA	**Chova**	**12.15 165**		*e*P		**P**		**08 44 31.8**	**+3.0**
LCO	**Las Campanas**	**12.31 185**		Pn		**Pn**		**08 44 25.4**	**-1.0**
CO01	**Juntas del Tor**	**13.23 183**				**Pn**		**08 44 39.4**	**+1.5**
GO04	**Tololo Observa**	**13.47 185**		Pn		**Pn**		**08 44 40.7**	**-0.2**
AQDB	**Aquidauana**	**13.52 108**		*e*P		**P**		**08 44 42.3**	**-1.8**
PP1B	**Ponte de Pedra**	**13.91 96**		*e*P		**P**		**08 44 46.9**	**-1.5**
CO03	**El Pedregal**	**14.12 185**				**Pn**		**08 44 49.4**	**+0.6**
CLDB	**Colider**	**14.43 68**		*e*P		**P**		**08 44 52.6**	**-1.6**
CPUP	**Villa Florida**	**14.75 133**		P		**Pn**		**08 44 56.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=313,slow=13,SNR=3.6								
CPUP	**Villa Florida**	**14.75 133**				**P**		**08 44 56.9**	**-0.8**
CPUP	**Villa Florida**	**14.75 133**		*e*P		**Pn**		**08 44 55.1**	**-1.5**
TCA	**Tanti**	**15.21 164**		*e*P		**Pn**		**08 45 01.6**	**-0.7**
MACA	**Manacapuru-AM**	**15.95 33**		*e*P		**P**		**08 45 09.8**	**-1.3**
NPGB	**Novo Progresso**	**16.75 57**		*e*P		**Pn**		**08 45 20.1**	**-0.8**
TRCB	**Terra Rica**	**16.90 114**		*e*P		**Pn**		**08 45 23.1**	**+0.5**
ARAG	**Araguaiana, MT**	**16.93 89**		*e*P		**Pn**		**08 45 22.9**	**0.0**
ITQB	**Itaqui**	**17.43 140**		*e*P		**Pn**		**08 45 29.0**	**+0.2**
PCMB	**Pacaembu**	**17.82 109**		*e*P		**Pn**		**08 45 33.0**	**-0.4**
PTGB	**Pitanga**	**18.06 119**		*e*P		**Pn**		**08 45 35.4**	**-0.9**
SNDB	**Serra Nova Dou**	**18.16 77**		*e*P		**Pn**		**08 45 36.2**	**-1.3**
ITTB	**Itaituba**	**18.17 49**		*e*P		**P**		**08 45 34.6**	**-0.7**
ITRB	**Iturama**	**18.34 102**		*e*P		**Pn**		**08 45 38.6**	**-1.0**
H03N1	**Juan Fernandez**	**18.74 205**		T		T		09 03 57.3	
	baz=28,slow=73,SNR=4.4								
H03N2	**Juan Fernandez**	**18.75 206**		T		T		09 03 57.2	
	baz=28,slow=73,SNR=5.9								
H03N3	**Juan Fernandez**	**18.76 205**		T		T		09 03 56.2	
	baz=28,slow=73,SNR=5.7								
ITAB	**Concordia**	**19.12 126**		*e*P		**Pn**		**08 45 47.7**	**-1.0**
FRTB	**Fartura**	**19.77 113**		*e*P		**Pn**		**08 45 54.1**	**-2.4**
CPSB	**Cacapava Do Su**	**19.97 136**		*e*P		**P**		**08 45 55.2**	**+0.5**
BB19B	**Bebedouro**	**20.22 106**		*e*P		**P**		**08 45 58.2**	**+0.7**
IPMB	**Ipameri, GO**	**20.27 97**		*e*P		**P**		**08 45 58.4**	**+0.4**
PLTB	**Pedras Altas**	**20.75 139**		*e*P		**P**		**08 46 05.2**	**+2.2**
MALB	**Monte Alegre**	**20.97 47**		*e*P		**P**		**08 46 04.2**	**-1.2**
CNLB	**Canela**	**21.16 130**		*e*P		**P**		**08 46 08.5**	**+1.2**
RCLB	**Rio Claro- Sao**	**21.37 109**		*e*P		**P**		**08 46 10.1**	**+0.4**
PRPB	**Parauapebas**	**21.84 64**		*e*P		**P**		**08 46 14.3**	**-0.2**
VAO	**Valinhos**	**22.00 110**		*e*P		**P**		**08 46 17.5**	**+1.4**
PET01	**Itanhaem-SP**	**22.04 114**		*e*P		**P**		**08 46 17.1**	**+0.8**
SMTB	**Santa Maria do**	**22.64 73**		*e*P		**P**		**08 46 22.1**	**+0.1**
PARB	**Paraibuna**	**23.28 110**		*e*P		**P**		**08 46 29.6**	**+1.8**
MCPB	**Macapa, AP**	**23.58 48**		*e*P		**P**		**08 46 29.9**	**-0.6**
BSCB	**Bom Sucesso**	**23.69 104**		*e*P		**P**		**08 46 33.1**	**+1.6**
PLCA	**Paso Flores**	**23.97 182**		P		**P**		**08 46 35.8**	**+2.0**
	comp=Z,4.6nm,0.8s,baz=4.2,slow=12,SNR=11								
PLCA	**Paso Flores**	**23.97 182**		P		**P**		**08 46 34.1**	**+0.3**
PLCA				IAmb		IAmb		08 46 38.6	
	comp=Z,7.2nm,0.9s								
PLCA	**Paso Flores**	**23.97 182**		*e*P		**P**		**08 46 34.2**	**+0.4**
SDBA	**SAO DESIDERIO**	**24.09 83**		*e*P		**P**		**08 46 34.5**	**-0.7**
JANB	**Januaria**	**24.19 90**		*e*P		**P**		**08 46 35.8**	**-0.3**
VAS01	**Vassouras-RJ**	**25.08 107**		*e*P		**P**		**08 46 45.9**	**+1.8**
DUB01	**Friburgo-RJ**	**26.03 106**		*e*P		**P**		**08 46 54.5**	**+1.8**
SJMB	**Sao Joao De Ma**	**26.95 98**		*e*P		**P**		**08 47 02.0**	**+1.2**
TXAR	**Lajitas Array**	**56.47 324**		P		**P**		**08 51 00.5**	**+1.3**
	comp=Z,0.3nm,0.8s,baz=138,slow=8.4,SNR=2.8								
LIC	**Lamo**	**67.59**	**76**	*e*PKP1		**P**		**08 52 13.1**	**-0.3**
	comp=Z,2.7nm,0.3s								
TIC	**Toumodi**	**67.74**	**75**	*e*PKP1		**P**		**08 52 12.9**	**-1.5**
KIC	**Kosan Boka**	**67.90**	**76**	*e*PKP1		**P**		**08 52 12.6**	**-2.8**
	comp=Z,5.2nm,0.5s								
DBIC	**Dimbokro**	**67.90**	**75**	P		**P**		**08 52 14.7**	**-0.7**
	comp=Z,4.1nm,0.7s,baz=223,slow=6.3,SNR=5.8								
DBIC	**Dimbokro**	**67.90**	**75**	P		**P**		**08 52 14.5**	**-0.9**
DBIC				IAmb		IAmb		08 52 16.2	
	comp=Z,9.8nm,1.1s								
PDAR	**Pinedale Array**	**69.75 330**		P		**P**		**08 52 27.8**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=124,slow=12,SNR=3.8								
NVAR	**Mina Array Bea**	**71.46 321**		P		**P**		**08 52 39.6**	**+2.7**
	comp=Z,0.6nm,0.8s,baz=153,slow=7.2,SNR=4.1								
TORD	**Torodi Ar. Bea**	**76.24**	**72**	P		**P**		**08 53 04.8**	**0.0**
	comp=Z,4.8nm,0.7s,baz=259,slow=5.5,SNR=23								
YKA	**Yellowknife Ar**	**86.53 341**		P		**P**		**08 53 59.0**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=128,slow=5.5,SNR=5.1								
ASAR	**Alice Springs**	**133.87 210**		PKP		**PKiKP**		**09 00 32.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=125,slow=1.5,SNR=6.2								
WRA	**Warramunga Arr**	**136.75 214**		PKP		**PKiKP**		**09 00 38.3**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=148,slow=1.9,SNR=7.8								
SONM	**Songino Array**	**148.76**	**5**	PKPbc		**PKPab**		**09 01 03.8**	**-2.3**
	comp=Z,2.5nm,0.9s,baz=311,slow=1.7,SNR=13								

*IDC **26** 09:12:03.3±3.3, 5°.70S×151°.63E, h62km±24km, mb3.5/4, mb1 3.8/5, mb1mx3.4/33, mbtmp3.8/5, ML1.6/1, Error ellipse: s-maj=81.2km s-min=10.5km az=123.0*

ISC 26 09:12:01.0±1.6, 5°.9S±0°.2×151°.9E±0°.3, h50km, n7, σ1°.06/9, mb3.7/4, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.54**	**4**	P		**Pn**		**09 12 26.6**	**+0.5**
	197nm,0.3s,baz=279,slow=0.6,SNR=30								
KRVT				S		**Sn**		**09 12 45.3**	**+0.3**
	176nm,0.3s,baz=330,slow=23,SNR=14								
KRVT				LR		LR		09 13 16.8	
	comp=Z,164nm,18.6s,baz=216,slow=51								
PMG	**Port Moresby**	**5.89 233**		P		**Pn**		**09 13 27.1**	**+1.4**
	1.2nm,0.3s,baz=23,slow=2.8,SNR=3.8								
PMG				S		**Sn**		**09 14 30.5**	**-1.4**
	3.2nm,0.3s,baz=154,slow=9.1,SNR=3.4								
WRA	**Warramunga Arr**	**22.09 229**		P		**P**		**09 16 52.4**	**+0.3**
	2.8nm,0.7s,baz=52,slow=9.8,SNR=34								
ASAR	**Alice Springs**	**24.78 223**		P		**P**		**09 17 19.3**	**+0.9**
	1.6nm,0.8s,baz=58,slow=9.7,SNR=18								
FITZ	**Fitzroy Crossi**	**28.39 242**		P		**P**		**09 17 50.0**	**-0.9**
	1.6nm,0.7s,baz=61,slow=10,SNR=1.6								
ILAR	**Eielson Array**	**83.46**	**22**	P		**P**		**09 24 22.1**	**-0.9**
	0.5nm,1.1s,baz=232,slow=6.7,SNR=1.7								
TORD	**Torodi Ar. Bea**	**149.77 286**		PKPbc		**PKiKP**		**09 31 47.4**	**-0.1**
	0.5nm,0.7s,baz=50,slow=3.2,SNR=2.2								

*NEIC **26** 09:19:43.2±1.6, 29°.89S±0°.09×177°.1W±0°.1, h12km±4km, mb4.7/22, Error ellipse: s-maj=18.0km s-min=7.5km az=47.0*
*BJI **26** 09:19:43.3±0.0, 30°.26S×177°.32W, h28km, mb5.2/8*
*IDC **26** 09:19:50.0±1.6, 29°.67S×177°.32W, h51km±11km, mb4.1/12, mb1 4.3/13, mb1mx4.1/27, mbtmp4.4/13, ML4.8/1, MS3.8/10, Ms1 3.8/10, ms1mx3.4/35, Error ellipse: s-maj=20.7km s-min=17.4km az=95.0*

ISC 26 09:19:47.5±0.5, 29°.89S±0°.06×177°.25W±0°.09, h35km, n88, σ1°.33/71, mb4.7/22, MS3.7/12, 2C, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.86 318**		P		**Pn**		**09 20 02.3**	**-0.8**
	5μm,0.3s,baz=94,slow=5.1,SNR=230								
RAO				S		**Sn**		**09 20 14.9**	**+0.4**
	9μm,0.3s,baz=128,slow=22,SNR=13								
RAO	**Raoul Island**	**0.86 318**				**Pn**		**09 20 02.2**	**-1.0**
RAO				Sn		**Sn**		**09 20 15.3**	**+0.8**
URZ	**Urewera**	**9.56 208**		P		**Pn**		**09 21 59.3**	**-3.4**
	0.5nm,0.3s,baz=147,slow=12,SNR=1.7								
URZ				S		**Sn**		**09 23 47.7**	**-1.2**
	1.9nm,0.3s,baz=95,slow=14,SNR=1.9								
URZ	**Urewera**	**9.56 208**				**Pn**		**09 22 01.0**	**-1.7**
BKZ	**Black Stump Fm**	**10.59 207**		Pn		**Pn**		**09 22 15.6**	**-1.2**
DZM	**Mont Dzumac**	**16.59 294**		P		**P**		**09 23 42.4**	**+2.7**
	0.8nm,0.3s,baz=165,slow=11,SNR=7.8								
DZM	**Mont Dzumac**	**16.59 294**		*e*Pn		**P**		**09 23 43.3**	**+3.5**
	50nm,0.9s								
DZM				*e*LR		LR		09 27 50.6	
	comp=Z,684nm,23.6s								
RPZ	**Rata Peaks**	**16.65 211**		P		**P**		**09 23 39.8**	**-0.4**
	3.5nm,0.3s,baz=313,slow=2.4,SNR=9.6								
RPZ	**Rata Peaks**	**16.65 211**				**P**		**09 23 40.0**	**-0.2**
RAR	**Rarotonga**	**17.97 65**		LR		LR		09 29 07.6	
	comp=Z,113nm,21.8s,baz=260,slow=31								
TBI	**Tubuai**	**25.65 82**		*e*LR		LR		09 31 15.7	
	comp=Z,283nm,28.8s								
TBI	**Tubuai**	**25.65 82**		*e*T		T		09 51 04.0	
	20nm,0.4s								
ARMA	**Armidale**	**26.87 261**		P		**P**		**09 25 26.0**	**+0.8**
PAE	**Paea**	**28.02 70**		*e*T		T		09 54 08.2	
	6.5nm,0.4s								
PPT2	**Papeete2**	**28.06 70**		*e*LR		LR		09 32 33.5	
	comp=Z,276nm,26.2s,baz=232								
PPT2	**Papeete2**	**28.06 70**		*e*T		T		09 54 12.1	
	4.1nm,0.4s								
PPT	**Papeete**	**28.07 70**		LR		LR		09 34 01.8	
	comp=Z,50nm,21.8s,baz=238,slow=30								
EIDS	**Eidsvold**	**28.36 271**		P		**P**		**09 25 38.3**	**-0.2**
EIDS				IAmb		IAmb		09 25 43.1	
	comp=Z,7.0nm,0.7s								
VAH	**Vaihoa**	**30.89 68**		*e*T		T		09 57 45.3	
	comp=Z,6.8nm,0.2s								
TAU	**Tasmania Unive**	**31.10 236**		P		**P**		**09 26 00.9**	**-1.6**
TOO	**Toolangi**	**31.76 246**		P		**P**		**09 26 06.8**	**-1.7**
TOO				IAmb		IAmb		09 26 16.6	
	comp=Z,9.8nm,1.2s								
CTA	**Charters Tower**	**34.36 278**		P		**P**		**09 26 32.5**	**+1.2**
	comp=Z,10nm,0.7s,baz=101,slow=9.9,SNR=12								
CTAO	**Charters Tower**	**34.36 278**		P		**P**		**09 26 32.3**	**+0.9**
CTAO				IAmb		IAmb		09 26 34.2	
	comp=Z,11nm,0.8s								
STKA	**Stephens Creek**	**35.23

KBZ	**Khabaz**	**145.36**	**305**	PKPbc	**PKPab**	**09 39 21.6**	**0.0**
	comp=Z,3.2nm,0.8s,baz=102,slow=3.5,SNR=4.1						
NC303	**NORSAR Array S**	**148.14**	**352**	PKPbc	**PKPbc**	**09 39 28.9**	**-0.1**
NB2	**NORSAR Subarra**	**148.34**	**352**	PKP	**PKPbc**	**09 39 28.8**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=9.8,slow=2.8						
NOA	**NORSAR Array B**	**148.34**	**352**	PKPbc	**PKPbc**	**09 39 29.1**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=14,slow=4.4,SNR=11						
AKASG	**Malin Array Be**	**151.28**	**324**	PKPbc	**PKPbc**	**09 39 36.5**	**-0.4**
	comp=Z,6.0nm,0.6s,baz=46,slow=2.8,SNR=13						
TORD	**Torodi Ar. Bea**	**163.31**	**176**	PKPab	**PKPab**	**09 40 38.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=172,slow=2.5,SNR=2.9						

*ISN **26** 09:31:27.5±0.8,33°.71N×45°.65E, h0km±3km, ML2.4*
*TEH **26** 09:31:28.5,33°.73N×45°.71E, h10km, ML2.8*
ISC 26 09:31:28.9±1.0, 33°.72N±0°.05×45°.70E±0°.06, h13km, n9, σ0s90/12, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IBDR	**Badra**	**0.64**	**162**	*e*Pg		**Pg**	**09 31 41.0**	**-0.4**
IBDR				*e*Sg		**Sg**	**09 31 50.0**	**+0.2**
IBDR				AML		AML	09 31 58.8	
	comp=N,96nm,0.6s							
IBDR				AML		AML	09 32 09.8	
	comp=E,86nm,0.6s							
IGHG	**Ghaleghazi**	**0.94**	**50**	*e*Pg		**Pg**	**09 31 47.1**	**-0.1**
IGHG				*e*			09 32 04.0	
IDHR	**Dehrash**	**1.13**	**30**	*e*Pg		**Pb**	**09 31 50.4**	**-0.1**
IDHR				*e*			09 32 10.9	
BHD	**Baghdad**	**1.19**	**248**	*e*Pg		**Pb**	**09 31 51.0**	**-0.3**
BHD				*e*Sg		**Sn**	**09 32 08.0**	**+0.7**
BHD				AML		AML	09 32 12.8	
	comp=E,729nm,0.6s							
IVIS	**Veis**	**1.25**	**50**	*e*Pg		**Pn**	**09 31 52.0**	**-0.2**
IVIS				*e*			09 32 16.8	
KER	**Kermanshah**	**1.36**	**61**	*e*Pg		**Pg**	**09 31 55.0**	**-0.1**
KER				*e*			09 32 16.6	
IKOM	**Komasi**	**1.57**	**73**	*e*Pg		**Pb**	**09 31 58.3**	**+0.3**
IKOM				*e*			09 32 24.7	
ILIN	**Lien**	**1.59**	**41**	*e*Pg		**Pb**	**09 31 58.3**	**0.0**
ILIN				*e*			09 32 22.3	
NSR	**Nassriya**	**2.73**	**172**	*e*Pn		**Pn**	**09 32 14.0**	**+1.6**
NSR				*e*Sn		**Sb**	**09 32 49.0**	**-2.0**
NSR				AML		AML	09 33 02.8	
	comp=E,10nm,1.0s							

*IDC **26** 09:32:14.9±2.9,53°.52N×87°.74E, h0km, mb1 3.5/2,*
mb1mx3.2/42, mbtmp3.5/2, ML3.0/2, Error ellipse:
s-maj=25.5km s-min=14.3km az=62.0
*NNC **26** 09:32:15.2±2.2,53°.46N×87°.67E, h0km, mb3.3, mpv3.0,*
Error ellipse: s-maj=17.1km s-min=8.2km az=62.0,
Suspected Mining explosion.
ISC 26 09:32:16.0±3.5, 53°.6N±0°.1×87°.6E±0°.2, h0km, n9, σ0s82/12,
8C-3D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.69**	**285**	*i*			09 42 50.0	
	baz=99,slow=324,SNR=0.7							
ZAA0	**Zalesovo Array**	**1.69**	**285**	⇑P		**Pn**	**09 32 46.4**	**-0.3**
ZAA0	1.0nm,0.5s			⇑S		**Sg**	**09 33 10.9**	**+0.7**
	4.8nm,0.5s							
ZALV	**Zalesovo Beam**	**1.69**	**285**	Pg		**Pn**	**09 32 46.5**	**-0.2**
	2.6nm,0.3s,baz=102,slow=13,SNR=12							
ZALV				Lg		Lg	09 33 11.8	
	8.6nm,0.3s,baz=106,slow=27,SNR=16							
KURK	**Kurchatov**	**6.21**	**246**	⇑Sn		**Sn**	**09 34 59.2**	**-1.1**
KURK	2.1nm,0.6s			⇑Lg		Lg	09 35 33.8	
	5.1nm,0.6s							
KURBB	**Kurchatov Arra**	**6.30**	**246**	Pn		**Pn**	**09 33 50.9**	**+0.9**
	0.3nm,0.3s,baz=62,slow=14,SNR=7.0							
KURBB				Lg		Lg	09 35 36.3	
	0.1nm,0.3s,baz=61,slow=34,SNR=1.4							
KURBB	**Kurchatov Arra**	**6.30**	**246**	⇑Pn		**Pn**	**09 33 50.3**	**+0.2**
	2.6nm,0.4s							
KURBB				⇑Sn		**Sn**	**09 35 02.7**	**0.0**
	11nm,0.7s							
KURBB				⇓Lg		Lg	09 35 36.0	
	11nm,0.7s							
MK31	**Makanchi Array**	**7.57**	**209**	Pn		**Pn**	**09 34 08.1**	**+0.6**
	1.3nm,0.8s,baz=30,slow=14,SNR=11							
MK31				⇓Sn		**Sn**	**09 35 34.2**	**+0.3**
	1.6nm,0.8s							
MK31				⇑Lg		Lg	09 36 16.7	
	4.6nm,0.9s,baz=28,slow=31,SNR=3.7							
MKAR	**Makanchi Array**	**7.57**	**209**	Pn		**Pn**	**09 34 07.8**	**+0.4**
	0.3nm,0.3s,baz=30,slow=14,SNR=12							
MKAR				Sn		**Sn**	**09 35 32.7**	**-1.2**
	0.2nm,0.3s,baz=31,slow=25,SNR=2.2							
MKAR				Lg		Lg	09 36 14.8	
	0.2nm,0.3s,baz=23,slow=29,SNR=2.7							
MAKZ	**Makanchi**	**7.64**	**210**	⇑Sn		**Sn**	**09 35 34.6**	**-1.2**
	2.6nm,1.0s							
MAKZ				⇓Lg		Lg	09 36 15.1	
	3.1nm,0.8s							

*ISK **26** 09:40:16.4,41°.34N×42°.56E, h9km, ML2.6/3*
*TIF **26** 09:40:16.5,41°.29N×42°.56E, h16km±1km*
*DDA **26** 09:40:16.9,41°.27N×42°.55E, h7km±2km, ML1.9*
ISC 26 09:40:16.8±1.0, 41°.28N±0°.03×42°.56E±0°.02, h14km±9km,
n20, σ0s46/38, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EPOS	**Posof**	**0.26**	**30**	*i* P		**Pg**	**09 40 22.5**	**+0.1**
EPOS				*i* S		**Sb**	**09 40 26.6**	**-1.1**
EPOS				IAML			09 40 27.0	
	comp=E,162nm,0.2s							
EPOS				IAML			09 40 27.0	
	comp=N,171nm,0.6s							
ABS	**Abastumani**	**0.51**	**22**	P		**Pg**	**09 40 26.9**	**0.0**
ABS				S		**Sb**	**09 40 34.4**	**-0.7**
DAGI	**Agillar**	**0.52**	**247**	*i* P		**Pb**	**09 40 27.8**	**0.0**
DAGI				IAML			09 40 35.0	
	comp=N,68nm,0.7s							
DAGI				*i* S		**Sb**	**09 40 35.0**	**-0.3**
DAGI				IAML			09 40 38.0	
	comp=E,80nm,0.3s							
DBOC	**Borcka**	**0.67**	**276**	*i* P		**Pg**	**09 40 29.8**	**-0.1**
DBOC				*i* S		**Sg**	**09 40 38.6**	**-0.2**
DBOC				IAML			09 40 39.0	
	comp=E,74nm,0.3s							
DBAD	**Bademkaya**	**0.70**	**248**	*i* P		**Pb**	**09 40 30.8**	**0.0**
DBAD				*i* S		**Sg**	**09 40 39.9**	**+0.2**
DBAD				IAML			09 40 40.0	
	comp=N,178nm,0.3s							
DBAD				IAML			09 40 41.0	
	comp=E,123nm,0.4s							
AKH	**Akhalkalaki**	**0.72**	**79**	P		**Pb**	**09 40 31.0**	**-0.1**
AKH				S		**Sb**	**09 40 41.2**	**+0.3**
AKH	**Akhalkalaki**	**0.72**	**79**	PG		**Pg**	**09 40 30.6**	**-0.2**
AKH				SG		**Sb**	**09 40 40.6**	**-0.3**
DDEM	**Demirkent**	**0.72**	**238**	*i* P		**Pb**	**09 40 31.4**	**+0.2**
DDEM				*i* S		**Sb**	**09 40 41.8**	**+0.9**
DDEM				IAML			09 40 43.0	
	comp=N,215nm,0.5s							
DDEM				IAML			09 40 47.0	
	comp=E,177nm,0.3s							
BATM	**Batumi**	**0.72**	**297**	P		**Pb**	**09 40 30.9**	**-0.3**
BATM				S		**Sb**	**09 40 40.8**	**-0.2**
BATM	**Batumi**	**0.72**	**297**	PG		**Pg**	**09 40 30.5**	**-0.4**
BATM				SG		**Sb**	**09 40 40.7**	**-0.2**
BATM	**Batumi**	**0.72**	**297**	*i* P		**Pg**	**09 40 30.7**	**-0.2**
BATM				*i* S		**Sg**	**09 40 40.3**	**-0.1**
KARS	**Kars**	**0.76**	**148**	PG		**Pn**	**09 40 32.9**	**-0.3**
KARS				SG		**Sn**	**09 40 44.8**	**+0.2**
BKRG	**Bakuriani**	**0.87**	**56**	P		**Pb**	**09 40 34.0**	**+0.3**
BKRG				S		**Sb**	**09 40 46.3**	**+1.0**
EAK	**Akyaka**	**0.99**	**126**	*i* P		**Pg**	**09 40 35.2**	**-0.8**
EAK				*i* S		**Sb**	**09 40 49.1**	**+0.3**
EAK				IAML			09 41 03.0	
	comp=E,22nm,0.5s							
EAK				IAML			09 41 10.0	
	comp=N,19nm,0.8s							
DIGO	**Kars**	**1.06**	**144**	*i* P		**Pb**	**09 40 37.3**	**+0.2**
DIGO				IAML			09 40 55.0	
	comp=N,18nm,0.4s							
DIGO				IAML			09 41 03.0	
	comp=E,22nm,0.6s							

TKB	**Tkibuli**	**1.12**	**17**	P		**Pn**	**09 40 38.2**	**+0.1**
TKB				S		**Sb**	**09 40 53.1**	**+0.7**
DMNI	**Dmanisi**	**1.23**	**87**	P		**Pn**	**09 40 39.9**	**+0.2**
DMNI				S		**Sn**	**09 40 56.5**	**+0.4**
CHOM	**Cayeli-Rize**	**1.37**	**263**	PN		**Pg**	**09 40 42.6**	**-0.4**
CHOM				SN		**Sg**	**09 41 01.5**	**+0.7**
KZRT	**Kazreti**	**1.39**	**85**	P		**Pg**	**09 40 43.0**	**-0.5**
ONI	**Oni**	**1.47**	**27**	P		**Pg**	**09 40 44.4**	**-0.7**
ONI				S		**Sg**	**09 41 04.5**	**+0.3**

TAP 26 09:49:23.2, 24°.92N×122°.09E, h14km, ML2.2, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TWB1	**Santiao Chiao**	**0.13**	**314**	*i* P		Pb	09 49 27.1	-0.4
	baz=317							
TWB1				*i* S		Sg	09 49 29.2	+0.2
	baz=317							
EGS		**0.16**	**243**	*i* P		Pb	09 49 27.6	-0.4
	baz=248							
EGS				*i* S		Sb	09 49 30.9	-0.3
	baz=248							
NTC	**Toucheng**	**0.25**	**255**	*i* P		Pb	09 49 29.1	-0.3
	baz=262							
NTC				S		Sg	09 49 32.7	+0.6
	baz=262							
TIPB	**Shuangxi**	**0.25**	**282**	*i* P		Pb	09 49 29.3	-0.2
	baz=284							
TIPB				*i* S		Sg	09 49 32.5	+0.4
	baz=284							
NWF	**Wu-fen Shan**	**0.32**	**298**	*i* P		Pb	09 49 31.0	+0.2
	baz=299							
WFSB	**Wu-fen Shan**	**0.32**	**298**	P		Pb	09 49 31.1	+0.4
	baz=299							
TWC	**Suao**	**0.38**	**216**	P		Pg	09 49 31.2	+0.4
	baz=219							
TWC				S		Sb	09 49 37.3	-0.2
	baz=219							
TWE	**Neicheng**	**0.43**	**243**	*i* P		Pb	09 49 32.3	-0.4
	baz=241							
TWA	**Mucha**	**0.47**	**278**	*e*P		Pb	09 49 33.6	+0.4
	baz=279							
TWA				*e*S		Sb	09 49 40.5	+0.6
	baz=279							
ENAH	**Nanao**	**0.53**	**209**	*e*P		Pb	09 49 34.0	-0.3
	baz=212							
ENAH				*e*S		Sb	09 49 42.2	+0.3
	baz=212							
TATO	**Taipei**	**0.55**	**276**	*e*P		Pb	09 49 35.4	+0.7
	baz=278							
TATO				*e*S		Sb	09 49 43.0	+0.6
	baz=278							
NWLT	**Wulai**	**0.55**	**255**	P		Pb	09 49 34.5	-0.2
	baz=258							
NWLT				S		Sb	09 49 42.5	0.0
	baz=258							
TWY	**Chenhua**	**0.57**	**309**	P		Pb	09 49 35.8	+0.8
	baz=309							
ANP	**Anpu**	**0.58**	**297**	*e*P		Pb	09 49 35.9	+0.6
	baz=298							
ENA	**Nanau**	**0.58**	**213**	*e*P		Pb	09 49 35.6	+0.4
	baz=215							
ENA				S		Sb	09 49 43.6	+0.3
	baz=215							
NDT	**Datong Townshi**	**0.61**	**239**	P		Pg	09 49 34.9	-0.3
	baz=233							
NTST	**Danshui**	**0.63**	**293**	*e*P		Pn	09 49 37.1	-0.7
	baz=293							
YHNB	**Yeheng**	**0.70**	**249**	P		Pb	09 49 37.1	0.0
	baz=250							
YHNB				*e*S		Sg	09 49 46.3	+0.3
	baz=250							
NSK	**Sanguang**	**0.71**	**250**	*e*P		Pg	09 49 37.1	+0.1
	baz=251							
NSK				*e*S		Sb	09 49 46.8	-0.2
	baz=251							
NNSH	**Datong**	**0.81**	**233**	P		Pb	09 49 39.7	+0.6
	baz=244							
NNS	**Nan Shan**	**0.81**	**234**	*e*P		Pn	09 49 39.9	-0.4
	baz=237							
NNSB	**Datong**	**0.81**	**233**	P		Pb	09 49 39.5	+0.3
	baz=236							
NACB	**Ninganchiao**	**0.87**	**211**	P		Pg	09 49 40.0	0.0
	baz=203							
ETLH	**Xiulin Townshi**	**0.90**	**218**	P		Pn	09 49 41.5	-0.1
	baz=225							
ETLH				S		Sn	09 49 54.0	-0.5
	baz=225							
LIOB	**Emei**	**1.01**	**255**	*i* P		Pn	09 49 44.2	+1.1
	baz=257							
LIOB				S		Sn	09 49 58.0	+0.9
	baz=257							
FUSS	**Fushou**	**1.02**	**229**	P		Pb	09 49 42.9	0.0
	baz=214							
NSTT	**Nanjuang**	**1.03**	**254**	*e*P		Pn	09 49 43.9	+0.6
	baz=248							
WHF	**Hehuan Shan**	**1.08**	**224**	P		Pn	09 49 45.0	+0.7
	baz=223							
CHGB	**Renai**	**1.20**	**225**	P		Pg	09 49 47.4	+1.1
	baz=223							
WHP	**Taichung City**	**1.22**	**239**	*e*P		Pg	09 49 46.7	-0.1
	baz=229							
OWD	**Renai**	**1.27**	**221**	P		Pg	09 49 48.1	+0.4
	baz=220							

*IDC **26** 09:53:20.2±0.6,5°.91N×61°.40E, h0km, mb4.0/16,*
mb1 4.1/16, mb1mx3.9/52, mbtmp4.0/16, MS3.5/18,
Ms1 3.5/18, ms1mx3.3/42, Error ellipse: s-maj=19.8km
s-min=15.8km az=155.0
*NEIC **26** 09:53:21.6±1.2,5°.9N±0°.1×61°.5E±0°.1, h10km±1km,*
mb4.5/23, Error ellipse: s-maj=19.9km s-min=18.4km
az=145.0
ISC 26 09:53:21.5±0.5, 5°.89N±0°.1×61°.42E±0°.09, h10km, n60,
σ1s06/46, mb4.3/26, MS3.5/15, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WSAR	**Wadi Sarin**	**17.46**	**351**	LR		LR	10 02 42.2	
	comp=Z,195nm,21.5s,baz=187,slow=32							
ATD	**Arta Tunnel**	**19.19**	**288**	LR		LR	10 03 57.5	
	comp=Z,61nm,19.2s,baz=31,slow=33							
PALK	**Pallekele**	**19.20**	**85**	LR		LR	10 03 37.7	
	comp=Z,148nm,19.9s,baz=14,slow=32							
RAYN	**Ar Rayn**	**23.29**	**320**	P		**P**	**09 58 28.7**	**-1.0**
KMBO	**Kilima Mbogo**	**25.12**	**255**	P		**P**	**09 58 48.5**	**+1.4**
	1.6nm,0.3s,baz=59,slow=12,SNR=8.4							
KMBO				LR		LR	10 07 19.1	
	comp=Z,121nm,21.8s,baz=64,slow=33							
KMBO	**Kilima Mbogo**	**25.12**	**255**	P		**P**	**09 58 47.5**	**+0.3**
KMBO				IAmb		IAmb	09 59 00.8	
	comp=Z,12nm,1.2s							
RER	**Riviere de l'E**	**27.45**	**192**	P		**P**	**09 59 08.3**	**+0.4**
OPO	**Ambohidratompo**	**28.07**	**210**	LR		LR	10 07 30.4	
	comp=Z,117nm,19.4s,baz=182,slow=30							
HRA	**Herat**	**28.37**	**1**	P		**P**	**09 59 15.4**	**-0.8**
MBAR	**Mbarara**	**31.31**	**259**	P		**P**	**09 59 42.4**	**0.0**
GEYT	**Alibeck**	**32.04**	**355**	LR		LR	10 12 40.1	
	comp=Z,60nm,18.3s,baz=230,slow=36							
RPSI	**Rantau Prapat**	**37.52**	**93**	P		**P**	**10 00 32.4**	**-3.7**
RPSI				IAmb		IAmb	10 00 54.1	
	comp=Z,26nm,1.6s							
KKAR	**Karatay Array**	**37.92**	**11**	P		**P**	**10 00 42.1**	**+2.9**
AAK	**Ala-Archa**	**38.39**	**16**	P		**P**	**10 00 44.6**	**+1.4**
	comp=Z,1.1nm,0.5s,baz=209,slow=10,SNR=4.6							
AAK	**Ala-Archa**	**38.39**	**16**	P		**P**	**10 00 43.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**38.65**	**68**	P		**P**	**10 00 46.4**	**+0.9**
	comp=Z,1.9nm,0.6s,baz=258,slow=9.4,SNR=14							
CMAR				LR		LR	10 16 43.3	
	comp=Z,35nm,19.3s,baz=306,slow=36							
CMAR	**Chiang Mai Arr**	**38.65**	**68**	P		**P**	**10 00 48.1**	**+2.5**
CHTO	**Chiang Mai**	**38.74**	**67**	P		**P**	**10 00 46.7**	**+0.4**
AKH	**Akhalkalaki**	**38.82**	**338**	P		**P**	**10 00 47.1**	**+0.2**
KBZ	**Khabaz**	**41.06**	**339**	LR		LR	10 18 30.0	
	comp=Z,49nm,18.6s,baz=166,slow=37							
MATP	**Matopo**	**41.60**	**230**	P		**P**	**10 01 10.5**	**+0.4**
	comp=Z,2.3nm,0.9s,baz=48,slow=10,SNR=3.6							
BRTR	**Keskin Array B**	**41.96**	**327**	LR		LR	10 19 00.6	
	comp=Z,42nm,19.4s,baz=144,slow=37							
MYKOM	**Kota Tinggi**	**42.52**	**94**	P		**P**	**10 01 17.4**	**-0.2**
MYKOM				IAmb		IAmb	10 01 19.7	
	comp=Z,21nm,1.3s							
ABKAR	**Akbulak array**	**43.24**	**359**	P		**P**	**10 01 24.1**	**+1.2**
ABKAR				IAmb		IAmb	10 01 25.8	
	comp=Z,7.3nm,1.1s							
ABKAR	**Akbulak array**	**43.24**	**359**	P		**P**	**10 01 23.0**	**+0.1**
SLVN	**Son La**	**43.88**	**65**	P		**P**	**10 01 29.7**	**+1.1**
SLVN				IAmb		IAmb	10 01 39.1	
	comp=Z,7.0nm,1.0s							
AKTO	**Aktyubinsk**	**44.49**	**357**	P		**P**	**10 01 33.4**	**+0.4**
	comp=Z,2.4nm,1.0s,baz=217,slow=11,SNR=5.0							
MKAR	**Makanchi Array**	**44.55**	**20**	P		**P**	**10 01 33.2**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=215,slow=10,SNR=4.5							
MKAR				LR		LR	10 20 36.5	
	comp=Z,115nm,21.7s,baz=218,slow=37							
MKAR	**Makanchi Array**	**44.55**	**20**	P		**P**	**10 01 33.7**	**+0.2**
BRVK	**Borovoye**	**47.58**	**7**	P		**P**	**10 01 57.7**	**+0.4**
BRVK				IAmb		IAmb	10 02 11.3	
	comp=Z,3.2nm,0.9s							
BOSA	**Boshof**	**48.89**	**224**	LR		LR	10 20 42.4	
	comp=Z,106nm,19.1s,baz=32,slow=34							
TSUM	**Tsumeb**	**49.85**	**239**	P		**P**	**10 02 15.9**	**+0.5**
	comp=Z,5.7nm,1.0s,baz=58,slow=6.4,SNR=5.3							
ZALV	**Zalesovo Beam**	**51.55**	**17**	P		**P**	**10 02 27.5**	**0.0**
	comp=Z,0.5nm,0.4s,baz=224,slow=8.3,SNR=4.1							
ZALV				LR		LR	10 24 49.9	
	comp=Z,80nm,19.6s,baz=58,slow=37							
ZALV	**Zalesovo Beam**	**51.55**	**17**	P		**P**	**10 02 28.3**	**+0.8**
AKASG	**Malin Array Be**	**52.12**	**335**	P		**P**	**10 02 30.8**	**-1.1**
	comp=Z,0.3nm,0.2s,baz=132,slow=6.5,SNR=4.5							
AKASG				LR		LR	10 26 42.5	
	comp=Z,38nm,18.7s,baz=330,slow=38							
AKASG	**Malin Array Be**	**52.12**	**335**	P		**P**	**10 02 31.0**	**-0.9**
TAM	**Tamanrasset**	**56.36**	**293**	P		**P**	**10 03 04.0**	**+0.5**
TAM				IAmb		IAmb	10 03 11.9	
	comp=Z,6.0nm,1.2s							
SONM	**Songino Array**	**56.67**	**35**	P		**P**	**10 03 06.3**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=237,slow=7.7,SNR=4.5							
SONM	**Songino Array**	**56.67**	**35**	P		**P**	**10 03 04.0**	**-1.3**
MORC	**Moravsky Berou**	**57.15**	**328**	P		**P**	**10 03 08.0**	**-0.5**
MORC				IAmb		IAmb	10 03 09.3	
	comp=Z,5.2nm,1.0s							
TORD	**Torodi Ar. Bea**	**59.23**	**282**	P		**P**	**10 03 22.7**	**-1.0**
	comp=Z,1.3nm,1.0s,baz=93,slow=7.3,SNR=3.5							
CLL	**Collm**	**60.41**	**327**	*e*P		**P**	**10 03 31.0**	**-0.1**
FINES	**FINESS Array B**	**61.36**	**342**	LR		LR	10 31 57.2	
	comp=Z,79nm,19.4s,baz=124,slow=38							
SENIN	**Lac Senin/Sane**	**61.50**	**320**	P		**P**	**10 03 37.8**	**-1.0**
BFO	**Black Forest**	**61.67**	**323**	P		**P**	**10 03 39.6**	**-0.2**
BFO				IAmb		IAmb	10 03 50.0	
	comp=Z,3.2nm,0.9s							
DBIC	**Dimbokro**	**65.84**	**275**	LR		LR	10 32 33.3	
	comp=Z,39nm,18.3s,baz=78,slow=36							
NOA	**NORSAR Array B**	**66.49**	**336**	LR		LR	10 34 45.2	
	comp=Z,25nm,20.0s,baz=0.0,slow=37							
ESDC	**Sonseca Array**	**67.38**	**311**	P		**P**	**10 04 16.4**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=73,slow=5.1,SNR=4.1							
ESDC	**Sonseca Array**	**67.38**	**311**	IAmb		IAmb	10 04 17.6	
	comp=Z,5.6nm,1.2s							
KSRS	**Korea Array**	**67.83**	**52**	P		**P**	**10 04 19.6**	**-0.5**
	comp=Z,1.7nm,0.9s,baz=264,slow=9.4,SNR=5.7							
MAW	**Mawson**	**73.32**	**179**	LR		LR	10 28 38.9	
	comp=Z,51nm,21.7s,baz=60,slow=29							
WRA	**Warramunga Arr**	**76.09**	**112**	P		**P**	**10 05 10.5**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=289,slow=5.2,SNR=20							
WRA	**Warramunga Arr**	**76.09**	**112**	P		**P**	**10 05 10.2**	**+0.2**
WRAB	**Tennant Creek**	**76.10**	**112**	P		**P**	**10 05 10.2**	**+0.1**
WB2	**Warramunga Arr**	**76.10**	**112**	P		**P**	**10 05 10.6**	**+0.5**
WB2				IAmb		IAmb	10 05 12.0	
	comp=Z,7.6nm,1.1s							
ASAR	**Alice Springs**	**76.47**	**116**	P		**P**	**10 05 12.6**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=284,slow=5.4,SNR=24							
ASAR	**Alice Springs**	**76.47**	**116**	P		**P**	**10 05 12.3**	**+0.1**
TIXI	**Tiksi**	**77.44**	**17**	P		**P**	**10 05 16.2**	**-0.4**
TIXI				IAmb		IAmb	10 05 17.6	
	comp=Z,4.8nm,1.2s							
STKA	**Stephens Creek**	**84.78**	**123**	P		**P**	**10 05 56.6**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=335,slow=7.5,SNR=3.2							
PETK	**Petropavlovsk-**	**89.10**	**37**	LR		LR	10 49 26.7	
	comp=Z,36nm,18.7s,baz=177,slow=38							

*IDC **26** 10:05:14.8±0.8,56°.80N×156°.43W, h0km, mb4.2/21,*
mb1 4.4/23, mb1mx4.2/57, mbtmp4.2/23, ML3.7/2, MS3.4/14,
Ms1 3.3/14, ms1mx3.1/45, Error ellipse: s-maj=23.7km
s-min=12.1km az=11.0
*NEIC **26** 10:05:17.2±1.9,56°.55N±0°.03×156°.20W±0°.03, h15km±3km,*
Error ellipse: s-maj=4.5km s-min=2.8km az=187.0
*MOS **26** 10:05:17.4±0.8,57°.29N×156°.71W, h10km, mb4.6/17,*
Error ellipse: s-maj=29.7km s-min=11.5km az=102.5
*AEIC **26** 10:05:18.1±1.8,56°.54N±0°.03×156°.21W±0°.04, h9km±4km,*
ML4.3, mb4.5/37(NEIC), Error ellipse: s-maj=3.8km
s-min=3.4km az=219.0
*ANF **26** 10:05:20.5±1.6,56°.65N×156°.14W, h48km±14km, ML5.3/2,*
Error ellipse: s-maj=15.9km s-min=11.9km az=14.0
ISC 26 10:05:19.5±0.6, 56°.59N±0°.05×156°.26W±0°.04, h37km±1km,
n282, σ1s23/296, mb4.4/53, MS3.4/14, 6C-3D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHIR	**Chirikof Islan**	**0.84**	**155**			**Pn**	**10 05 32.3**	**-2.5**
CHIR						**Sn**	**10 05 43.2**	**-2.8**
PLK3	**Peulik 3**	**1.11**	**360**			**Pn**	**10 05 37.5**	**-1.0**
PLK3						**Sn**	**10 05 53.1**	**+0.6**
SII	**Sitkinak Islan**	**1.15**	**90**			**Pn**	**10 05 37.5**	**-1.5**
SII						**Sn**	**10 05 52.0**	**-1.5**
PLBL

baz=219
RC01 Rabbit Creek A 5.64 34 Pn Pn 10 06 40.8 +0.1
SUA Susitna One 5.66 28 Pn Pn 10 06 41.6 +0.6
SKT Skwentna 5.93 22 Pn 10 06 46.1 +1.5
PWL Port Wells 5.95 41 Pn 10 06 44.1 -0.8
MID Middleton Isla 5.99 57 Pn Pn 10 06 45.7 +0.2
PMR Palmer 6.22 33 Pn Pn 10 06 48.3 -0.2
KNK Knik Glacier 6.30 37 Pn 10 06 48.9 -0.8
TT01 Tatalina 6.34 1 Pn 10 06 50.2 -0.1
TTA Tatalina 6.37 1 Pn 10 06 50.6 -0.1
HIN Hinchinbrook I 6.38 49 Pn 10 06 49.4 -1.5
GHO Glory Hole Cre 6.42 33 Pn 10 06 50.9 -0.5
GLI Glacier Island 6.42 44 Pn 10 06 49.8 -1.6
UNV Unalaska Valle 6.47 249 Pn Pn 10 06 52.3 +0.2
MSW Makushin Switc 6.59 250 Pn 10 06 53.8 +0.1
FID Port Fidalgo 6.59 47 Pn 10 06 51.5 -2.1
SML Sawmill 6.63 35 Pn Pn 10 06 53.8 -0.5
PPLA Purkeypile 6.66 16 Pn Pn 10 06 57.2 +2.5
EYAK Cordova Ski Ar 6.78 50 Pn 10 06 55.1 -1.2
SCM Sheep Creek Mo 6.97 37 Pn 10 06 58.9 -0.2
KAIM Kayak Island 7.08 57 Pn 10 07 01.3 +0.8
DIV Divide 7.09 46 Pn 10 06 59.6 -1.0
DIV Sn 10 08 21.4 +1.5
RAGM Ragged Mountai 7.17 53 Pn 10 07 00.6 -1.0
GOAT Goat Mountain 7.23 52 Pn 10 07 01.1 -1.5
KLU Klutina 7.25 43 Pn 10 07 02.2 -0.6
WAT7 Susitna Watana 7.30 28 Pn 10 07 03.4 -0.1
HMT Hamilton 7.33 54 Pn 10 07 02.5 -1.3
WAT6 Susitna Watana 7.40 32 Pn 10 07 04.2 -0.7
NICHA Nichawak Mount 7.42 55 Pn 10 07 04.0 -1.1
NICHA Sn 10 08 27.6 -0.2
SUCK Suckling Hills 7.44 57 Pn 10 07 04.1 -1.3
WAT2 Susitna Watana 7.47 28 Pn 10 07 05.8 -0.1
BMRM Bremner River 7.48 49 Pn 10 07 04.0 -2.0
KTH Kantishna Hill 7.48 19 Pn 10 07 07.9 +2.0
TRF Thorofare Moun 7.50 21 Pn 10 07 07.4 +1.1
PS12 TAPS Pump St12 7.54 45 Pn 10 07 06.0 -0.7
M24K Tolsona, Glenn 7.56 39 P Pn 10 07 06.6 -0.4
baz=227,SNR=14
M24K Tolsona, Glenn 7.56 39 Pn 10 07 07.8 +0.8
BERG Berg Lake 7.60 55 Pn 10 07 06.2 -1.4
GRIN Grindle Hills 7.73 56 Pn 10 07 08.6 -0.8
RND Reindeer 7.78 25 Pn 10 07 10.3 +0.3
PS11 TAPS Pump St11 7.79 41 Pn 10 07 11.0 +0.9
N25K Chitina, Valde 7.83 45 P Pn 10 07 09.6 -1.2
baz=235,SNR=11
N25K S Sn 10 08 35.2 -2.8
baz=235
N25K Chitina, Valde 7.83 45 Pn 10 07 09.8 -0.9
KHIT Khitrov Hills 7.83 55 Pn 10 07 09.7 -1.1
DHY Denali Highway 7.89 31 Pn 10 07 11.6 -0.1
SNH Sunshine Point 7.92 57 Pn 10 07 11.5 -0.4
BPAW Bear Paw Mtn. 7.98 17 Pn 10 07 13.1 +0.4
KULT Kultieth River 8.00 57 Pn 10 07 12.5 -0.5
CRQM Cirque 8.01 53 Pn 10 07 12.3 -1.0
MCK McKinley 8.04 24 P Pn 10 07 13.5 -0.1
baz=210
MCK S Sn 10 08 41.7 -1.4
baz=210
GLB Gilahina Butte 8.05 48 Pn 10 07 12.7 -1.1
VRDI Verde Repeater 8.09 50 Pn 10 07 13.9 -0.5
TGL Tana Glacier 8.15 54 Pn 10 07 13.9 -1.2
ISLE Juniper Island 8.30 55 Pn 10 07 16.9 -0.4
MESA MESA 8.33 58 Pn 10 07 17.0 -0.8
MCARA McCarthy VSAT 8.35 49 Pn 10 07 18.0 +0.2
PAX Paxson 8.39 36 Pn 10 07 18.0 -0.5
KIAG Kiagna River 8.43 53 Pn 10 07 17.9 -1.2
BALM Baldy 8.48 53 Pn 10 07 19.1 -0.6
YAH Yahtse 8.49 58 Pn 10 07 19.1 -0.8
PTPK Patty Peak 8.49 51 Pn 10 07 19.5 -0.5
GRNC Granite Creek 8.62 55 Pn 10 07 20.7 -1.1
RKAV Rock Avalanche 8.66 58 Pn 10 07 20.3 -1.9
CHX Chaix Hills 8.69 60 Pn 10 07 21.4 -1.2
NEA2 Nenana 8.77 21 P Pn 10 07 22.4 -1.1
baz=207,SNR=9.3
NEA2 Nenana 8.77 21 Pn 10 07 22.7 -0.9
BARN Barnard Glacie 8.79 53 Pn 10 07 23.4 -0.7
TABL Table Mountain 8.80 58 Pn 10 07 23.2 -0.9
WRH Wood River Hil 8.87 24 Pn 10 07 23.8 -1.1
SAMH Samovar Hills 8.87 60 Pn 10 07 23.4 -1.6
MLY Manley 8.89 15 P Pn 10 07 24.7 -0.5
baz=200
MLY Manley 8.89 15 Pn 10 07 24.9 -0.3
CTGM Chitina Glacie 8.90 54 Pn 10 07 24.5 -1.0
MENT Mentasta 8.96 40 Pn 10 07 26.4 +0.2
CCB Clear Creek Bu 9.08 24 Pn 10 07 26.2 -1.6
HDA Harding Lake 9.08 26 P Pn 10 07 27.2 -0.6
baz=214,SNR=15
HDA S Sn 10 09 09.2 +0.6
baz=214
HDA S Sn 10 09 09.2 +0.6
baz=214
HDA Harding Lake 9.08 26 Pn 10 07 27.4 -0.5
PCA Pinnacle 9.12 61 Pn 10 07 26.6 -1.7
RIDG Independent Ri 9.14 34 Pn 10 07 29.6 +0.9
L26K Log Cabin Wild 9.15 40 P Pn 10 07 28.4 -0.4
baz=231,SNR=10
L26K Log Cabin Wild 9.15 40 Pn 10 07 29.2 +0.4
ANM Nome 9.16 335 Pn Pn 10 07 29.5 +0.6
I23K Minto, Yukon-K 9.22 18 P Pn 10 07 29.0 -0.7
baz=204,SNR=22
I23K Minto, Yukon-K 9.22 18 Pn 10 07 29.5 -0.2
MDM Murphy Dome 9.26 22 Pn 10 07 29.5 -0.8
TCOL CIGO, UAF Yank 9.27 23 P Pn 10 07 29.8 -0.5
baz=210
TCOL CIGO, UAF Yank 9.27 23 Pn 10 07 30.2 -0.1
COLA College 9.27 23 *i* P Pn 10 07 29.6 -0.7
COLA College 9.27 23 Pn 10 07 30.6 +0.3
DOT Dot Lake 9.32 36 Pn Pn 10 07 31.0 -0.2
BCPM Bancas Point 9.38 62 Pn 10 07 31.2 -0.8
IL31 9.40 25 Pn 10 07 30.9 -1.2
ILAR Eielson Array 9.40 25 Pn Pn 10 07 30.0 -2.2
0.9nm,0.3s,baz=215,slow=14,SNR=42
ILAR Sn Sn 10 09 11.3 -5.1
0.5nm,0.3s,baz=207,slow=17,SNR=1.0
ILAR Eielson Array 9.40 25 Pn Pn 10 07 31.5 -0.7
PNL Peninsula 9.43 64 Pn 10 07 30.8 -1.9
YUK2 White River 9.46 50 Pn 10 07 33.0 -0.1
IM03 9.51 6 Pn 10 07 32.9 -0.7
IMAR Indian Mountai 9.51 6 Pn 10 07 34.1 +0.4
POKR Poker Plat Res 9.57 23 P Pn 10 07 34.2 -0.3
baz=210
POKR Poker Plat Res 9.57 23 Pn 10 07 34.7 +0.2
SCRK Sand Creek 9.58 34 P Pn 10 07 34.0 -0.8
baz=225
YUK3 Moose Creek 9.62 51 Pn 10 07 34.9 -0.5
BC03 9.74 42 Pn 10 07 36.3 -0.6
BCAR Beaver Creek A 9.74 42 Pn 10 07 36.8 -0.1
YUK1 Sand Pete Hill 9.76 49 Pn 10 07 37.2 -0.1
K27K Chicken 10.23 37 Pn 10 07 44.1 +0.6
TNA Tin City 10.61 333 Pn Pn 10 07 49.4 +0.8
HYT Haines Junctio 10.62 59 Pn Pn 10 07 49.4 +0.3
EGAK Eagle 11.03 36 Pn Pn 10 07 54.6 +0.2
COLD Coldfoot 11.05 12 P Pn 10 07 54.1 -0.6
baz=198
COLD Coldfoot 11.05 12 Pn 10 07 54.7 0.0
DAWY Dawson 11.20 41 Pn 10 07 56.3 -0.5
SKAG Skagway 11.45 67 Pn 10 07 58.9 -1.3
WHY Whitehorse 11.84 61 Pn 10 08 04.4 -1.3
JIS Juneau Island 11.90 73 Pn 10 08 06.9 +0.6
BMAR Burnt Mountain 12.15 22 Pn 10 08 08.2 -1.6
DLBC Dease Lake 14.19 72 Pn Pn 10 08 37.9 +0.2
0.1nm,0.3s,baz=259,slow=8.0,SNR=6.3
DLBC LR LR 10 13 26.2
comp=Z,105nm,21.1s,baz=187,slow=35
DLBC Dease Lake 14.19 72 Pn 10 08 35.1 -2.5
A21K Barrow 14.80 360 P Pn 10 08 45.1 -0.6
baz=179,SNR=22
A21K Barrow 14.80 360 Pn Pn 10 08 45.3 -0.4
INK Inuvik 15.63 32 Pn Pn 10 08 55.9 -0.8
0.4nm,0.3s,baz=249,slow=13,SNR=14
INK LR LR 10 14 58.6
comp=Z,213nm,18.3s,baz=178,slow=38
INK Inuvik 15.63 32 Pn 10 08 55.6 -1.0
BBB Bella Bella 16.91 93 LR LR 10 13 47.5
comp=Z,80nm,20.0s,baz=200,slow=30
C36M Paulatuk 19.10 35 P P 10 09 37.3 -1.3
baz=244,SNR=5.7
C36M Paulatuk 19.10 35 P P 10 09 38.0 -0.6
C36M IAmb IAmb 10 09 58.0
comp=Z,14nm,0.8s
BILL Bilibino 20.45 319 ∥ *e*P P 10 09 53.1 -0.2
BILL S S 10 13 28.0 -12
BILL pmax pmax
comp=Z,6.0nm,1.0s
BILL MLR MLR
comp=Z,126nm,16.0s
BILL Bilibino 20.45 319 P **P** **10 09 52.4 -0.9**
YKA Yellowknife Ar 21.61 57 P **P** **10 10 05.8 -0.1**
comp=Z,5.7nm,0.7s,baz=272,slow=8.2,SNR=50
YKA LR LR 10 18 54.2
comp=Z,86nm,20.2s,baz=0.0,slow=38
NEW Newport 24.97 93 P **P** **10 10 41.1 +1.8**
comp=Z,1.8nm,0.7s,baz=327,slow=7.7,SNR=3.7
NEW LR LR 10 19 14.6
comp=Z,67nm,18.9s,baz=297,slow=34
NEW Newport 24.97 93 P **P** **10 10 41.0 +1.8**
PET Petropavlovsk 25.87 281 *e*P **P** **10 10 49.2 +1.9**
PET pmax pmax
comp=Z,32nm,0.9s
PET MLR MLR
comp=Z,100nm,17.0s
YBH Yreka Blue Hor 26.16 110 LR LR 10 18 34.8
comp=Z,54nm,20.1s,baz=322,slow=30
PETK Petropavlovsk- 26.35 282 P **P** **10 10 51.4 -0.3**
comp=Z,2.7nm,0.6s,baz=66,slow=14,SNR=7.0
PETK LR LR 10 21 26.3
comp=Z,92nm,19.6s,baz=81,slow=37
PETK Petropavlovsk- 26.35 282 P **P** **10 10 52.8 +1.2**
JTMT Jette 26.84 91 P **P** **10 10 58.4 +2.1**
JTMT IAmb IAmb 10 11 12.2
comp=Z,9.7nm,1.3s
HRY Holter Researc 28.80 91 P **P** **10 11 15.6 +1.9**
EGMT Eagleton 29.18 87 P **P** **10 11 18.0 +0.9**
EGMT IAmb IAmb 10 11 29.8
comp=Z,5.8nm,0.9s
BOZ Bozeman (W) 29.59 93 P **P** **10 11 22.3 +1.5**
PNTR Pine Nut 29.71 110 P **P** **10 11 24.2 +2.1**
PNTR IAmb IAmb 10 11 45.2
comp=Z,8.5nm,0.9s
YHH Holmes Hill 30.52 93 P **P** **10 11 31.8 +2.6**
GCMT Greycliff 30.55 91 P **P** **10 11 25.4 -3.9**
ELK Elko 30.82 103 LR LR 10 21 05.9
comp=Z,38nm,20.1s,baz=309,slow=31
NVAR Mina Array Bea 30.88 110 P **P** **10 11 34.4 +2.1**
comp=Z,1.1nm,0.8s,baz=303,slow=9.1,SNR=8.4
NVAR PcP **PcP** **10 14 28.8 +0.5**
comp=Z,0.2nm,0.4s,baz=340,slow=41,SNR=1.8
NVAR Mina Array Bea 30.88 110 P **P** **10 11 35.0 +2.7**
IMW Indian Meadow 31.04 95 P **P** **10 11 31.0 -2.8**
OMMB Old Mammoth Mi 31.13 112 P **P** **10 11 37.8 +3.1**
OMMB IAmb IAmb 10 11 52.7
comp=Z,3.3nm,0.9s
PMPB Monarch Peak 31.30 115 P **P** **10 11 36.5 +0.6**
R11A Troy Canyon, C 32.37 107 P **P** **10 11 47.9 +2.5**
PD31 Pinedale Array 32.54 95 P **P** **10 11 49.1 +2.1**
PDAR Pinedale Array 32.54 95 P **P** **10 11 48.0 +1.0**
comp=Z,1.7nm,0.6s,baz=315,slow=5.1,SNR=15
PDAR Pinedale Array 32.54 95 P **P** **10 11 48.8 +1.8**
TIXI Tiksi 33.30 326 *ce*P **P** **10 11 51.4 -1.5**
O20A White River Ci 35.06 97 P **P** **10 12 10.9 +2.1**
O20A IAmb IAmb 10 12 25.6
comp=Z,14nm,1.2s
ULM Lac du Bonnet 35.49 74 P **P** **10 12 12.8 +0.6**
comp=Z,3.9nm,1.1s,baz=313,slow=12,SNR=3.1
ULM LR LR 10 27 20.4
comp=Z,54nm,19.9s,baz=1.0,slow=37
ULM Lac du Bonnet 35.49 74 P **P** **10 12 13.3 +1.2**
YAK Yakutsk 36.27 310 *i* P **P** **10 12 17.3 -1.3**
YAK pmax pmax
comp=Z,10.0nm,0.8s
PV01 Paradox Valley 36.30 100 P **P** **10 12 22.1 +2.6**
PV01 IAmb IAmb 10 12 23.0
comp=Z,2.9nm,0.7s
AGMN Agassiz Nation 36.62 77 P **P** **10 12 22.3 +0.5**
AGMN IAmb IAmb 10 12 35.7
comp=Z,7.7nm,0.8s
B35A Bob, Littlefor 37.73 75 P **P** **10 12 32.3 +1.0**
B35A IAmb IAmb 10 12 50.5
comp=Z,4.8nm,1.0s
EYMN Ely 39.17 74 P **P** **10 12 44.7 +1.3**
EYMN IAmb IAmb 10 12 51.1
comp=Z,13nm,1.1s
ASAJ Asahikawa 39.63 278 P **P** **10 12 47.0 -0.2**
comp=Z,6.2nm,0.7s,baz=76,slow=14,SNR=6.3
E38A The Farm, Brul 39.97 76 P **P** **10 12 51.1 +1.0**
E38A IAmb IAmb 10 13 03.2
comp=Z,9.9nm,0.8s
ERM Erimo 40.72 276 *i* P **P** **10 12 57.4 +1.2**
ERM pmax pmax
comp=Z,40nm,1.2s
KLR Kul'dur 42.17 292 *ce*P **P** **10 13 06.6 -1.4**
KLR pmax pmax
comp=Z,3.0nm,1.3s
E43A Lone Tree Farm 42.55 73 P **P** **10 13 12.6 +1.4**
JFWS Jewell Farm 43.08 79 P **P** **10 13 15.4 -0.1**
JFWS IAmb IAmb 10 13 23.0
comp=Z,10nm,0.8s
P38A Dawn 43.53 85 P **P** **10 13 20.3 +1.1**
P38A IAmb IAmb 10 13 20.6
comp=Z,7.4nm,0.7s
E46A Sault Ste Mari 43.97 71 P **P** **10 13 23.2 +0.6**
E46A IAmb IAmb 10 13 35.1
comp=Z,10nm,0.8s
SUMG Summit 44.23 22 *i* P **P** **10 13 25.3 +0.4**
SUMG pmax pmax
comp=Z,12nm,1.0s
SUMG Summit 44.23 22 *i* P **P** **10 13 25.3 +0.4**
comp=Z,12nm,1.0s
SUMG Summit 44.23 22 *i* P **P** **10 13 25.3 +0.4**
SUMG IAmb IAmb 10 13 26.8
comp=Z,12nm,1.0s
DAG Danmarks Havn 44.23 13 *i* P **P** **10 13 23.0 -1.3**
DAG pmax pmax
comp=Z,7.0nm,0.7s
DAG Danmarks Havn 44.23 13 *i* P **P** **10 13 23.0 -1.3**
comp=Z,7.1nm,0.7s
DAG Danmarks Havn 44.23 13 *i* P **P** **10 13 23.0 -1.3**
DAG *i* P **P** **10 13 23.0 -1.3**
DAG IAmb IAmb 10 13 24.5
comp=Z,7.1nm,0.7s
TXAR Lajitas Array 45.61 104 P **P** **10 13 38.1 +2.1**
comp=Z,1.0nm,0.8s,baz=316,slow=7.0,SNR=7.8
TXAR LR LR 10 31 48.6
comp=Z,34nm,18.4s,baz=0.0,slow=35
TXAR Lajitas Array 45.61 104 P **P** **10 13 38.6 +2.6**
DBG Daneborg 46.12 15 *i* P **P** **10 13 38.5 -0.8**
DBG IAmb IAmb 10 13 39.8
comp=Z,4.7nm,0.7s
NRIK Noril'sk 46.20 334 P **P** **10 13 39.4 -0.7**
comp=Z,2.3nm,0.5s,baz=69,slow=5.8,SNR=4.7
NRIK Noril'sk 46.20 334 *ce*P **P** **10 13 38.2 -1.8**
NRIK pmax pmax
comp=Z,2.0nm,0.9s
ICESG Greenland Ices 46.49 26 *i* P **P** **10 13 42.6 -0.1**
SFIN Lafayette 46.53 80 P **P** **10 13 44.0 +0.9**
SCHQ Schefferville 46.95 52 P **P** **10 13 46.0 -0.1**
comp=Z,4.3nm,0.8s,baz=258,slow=4.6,SNR=4.0
SCHQ LR LR 10 34 56.3
comp=Z,87nm,20.3s,baz=25,slow=38
MAJO Matsushiro 47.28 274 *i* P **P** **10 13 50.3 +1.3**
MAJO pmax pmax
comp=Z,11nm,1.0s
P48A Milroy 48.09 79 P **P** **10 13 54.9 -0.3**
PLAL Pickwick Lake 49.89 85 P **P** **10 14 09.9 +1.0**
PLAL IAmb IAmb 10 14 22.3
comp=Z,7.2nm,0.9s
CLTN Cedars of Leba 50.03 83 P **P** **10 14 11.5 +1.4**
CLTN IAmb IAmb 10 14 11.7
comp=Z,5.0nm,0.6s
L56A Greenwood 50.40 71 P **P** **10 14 13.7 +0.8**
Z47A Carrollton 51.22 87 P **P** **10 14 20.1 +1.1**
V52A Sevierville 51.71 81 P **P** **10 14 23.5 +0.8**
KSRS Korea Array 52.24 283 P **P** **10 14 26.4 -0.2**
comp=Z,1.9nm,0.8s,baz=47,slow=6.7,SNR=7.5
ARCES ARCESS Array B 54.18 359 P **P** **10 14 38.8 -1.6**
comp=Z,2.5nm,0.7s,baz=7.8,slow=9.8,SNR=4.6
ARCES LR LR 10 39 06.7
comp=Z,38nm,18.2s,baz=195,slow=38
ULN Ulaanbaatar 55.08 305 *i* P **P** **10 14 47.3 -0.1**
ULN pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 55.40 306 P **P** **10 14 49.3 -0.4**
comp=Z,2.0nm,0.6s,baz=42,slow=6.5,SNR=15
SONM Songino Array 55.40 306 P **P** **10 14 50.3 +0.6**
HHC Hu-ho-hao-te 58.21 297 *e*P **P** **10 15 09.5 -0.2**
HHC pmax pmax
comp=Z,8.0nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.2s
TMCR Tamitsa 59.08 353 *e*P **P** **10 15 13.7 -1.5**
TMCR pmax pmax
comp=Z,20nm,1.2s
ZALV Zalesovo Beam 59.09 323 P **P** **10 15 13.9 -1.5**
comp=Z,0.9nm,0.5s,baz=55,slow=5.6,SNR=5.6
ZALV Zalesovo Beam 59.09 323 *i* P **P** **10 15 13.8 -1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 62.30 359 P **P** **10 15 36.0 -1.1**
comp=Z,4.9nm,0.8s,baz=357,slow=9.5,SNR=11
FINES FINESS Array B 62.30 359 P **P** **10 15 36.6 -0.5**
NB2 NORSAR Subarra 62.30 7 P **P** **10 15 36.9 -0.4**
comp=Z,1.4nm,0.6s,baz=354,slow=6.9
NOA NORSAR Array B 62.30 7 P **P** **10 15 36.8 -0.5**
comp=Z,3.1nm,0.9s,baz=352,slow=6.8,SNR=11
KIRV Kirov 63.36 345 *i* P **P** **10 15 43.5 -0.7**
KURK Kurchatov 63.85 325 *i* P **P** **10 15 46.1 -1.6**
KURK pmax pmax
comp=Z,2.0nm,1.1s
ARU Arti 63.88 339 *d i*P **P** **10 15 46.6 -1.1**
ARU 10 18 03.8
ARU S **S** **10 24 18.4 -1.6**
ARU SS **SS** **10 28 27.0 -0.6**
ARU pmax pmax
comp=Z,18nm,2.6s
BRVK Borovoye 64.25 331 *ce*P **P** **10 15 48.8 -1.4**
BRVK pmax pmax
comp=Z,1.0nm,0.6s
VSU Vasula 65.28 358 *i* P **P** **10 15 56.3 -0.5**
MKAR Makanchi Array 65.99 320 P **P** **10 16 00.7 -1.0**
comp=Z,1.0nm,0.6s,baz=39,slow=6.0,SNR=6.9
WMQ Urumqi 66.49 315 *e*P **P** **10 16 07.3 +2.3**
OBN Obninsk 68.17 352 ∥ *e*P **P** **10 16 14.9 -0.4**
OBN *e* 10 16 41.3
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,64nm,11.0s
ABKAR Akbulak array 70.32 336 P **P** **10 16 28.5 -0.2**
ABKAR IAmb IAmb 10 16 46.4
comp=Z,1.8nm,0.8s
ABKAR Akbulak array 70.32 336 P **P** **10 16 28.1 -0.6**
CLL Collm 72.11 7 *i* P **P** **10 16 39.6 +0.1**
AKASG Malin Array Be 72.98 356 P **P** **10 16 44.0 -0.7**
comp=Z,5.3nm,0.5s,baz=8.8,slow=6.0,SNR=18
AKASG Malin Array Be 72.98 356 *i* P **P** **10 16 44.0 -0.7**
AKASG pmax pmax
comp=Z,6.0nm,0.5s
AKASG Malin Array Be 72.98 356 P **P** **10 16 44.0 -0.7**
AKBB Malin Array Si 72.98 356 *ce*P **P** **10 16 43.1 -1.6**
AKBB Malin Array Si 72.98 356 P **P** **10 16 44.0 -0.7**
KKAR Karatay Array 73.17 326 P **P** **10 16 46.4 +0.5**
KHC Kasperske Hory 74.31 7 *ce*P **P** **10 16 52.5 0.0**
KHC pmax pmax
comp=Z,19nm,2.5s
KHC Kasperske Hory 74.31 7 *e*P **P** **10 16 52.6 0.0**
KHC Kasperske Hory 74.31 7 P **P** **10 16 54.3 +1.8**
KHC IAmb IAmb 10 16 54.4
comp=Z,4.2nm,0.8s
GERES GERESS Array B 74.61 7 P **P** **10 16 55.0 +0.6**
comp=Z,2.1nm,0.6s,baz=350,slow=4.1,SNR=12
GERES GERESS Array B 74.61 7 P **P** **10 16 55.2 +0.9**
KBZ Kabaz 78.76 346 LR LR 10 54 20.2
comp=Z,29nm,22.0s,baz=46,slow=38
ESDC Sonseca Array 81.28 21 P **P** **10 17 32.6 +1.1**
comp=Z,2.1nm,0.8s,baz=336,slow=5.0,SNR=8.9
CMAR Chiang Mai Arr 82.65 292 P **P** **10 17 39.0 +0.1**
comp=Z,2.9nm,0.8s,baz=11,slow=5.3,SNR=12
FITZ Fitzroy Crossi 98.55 250 LR LR 11 04 35.3
comp=Z,13nm,18.4s,baz=21,slow=36
BOSA Boshof 152.02 357 PKPbc **PKPbc** **10 25 10.2 -0.2**
comp=Z,4.8nm,1.1s,baz=21,slow=1.9,SNR=4.5

*IDC **26** 10:11:01.3±0.8,3˚07S×135˚51E,h0km,mb4.2/7, mb1 4.4/11,mb1mx4.1/33,mbtmp4.2/11,ML4.2/3,MS3.4/8, Ms1 3.4/8,ms1mx3.0/33,Error ellipse: s-maj=30.1km s-min=18.2km az=80.0*
*DJA **26** 10:11:04.1±0.8,3˚S±3˚×13˚6E±˚,h12km±6km,M4.5/9, mb4.5/9,mB4.9/3,MLv4.5/6,Mw(mB)4.2/3*
*NEIC **26** 10:11:07.5±2.9,3˚33S±0˚10×135˚7E±0˚1,h54km±8km, mb4.3/12,Error ellipse: s-maj=17.1km s-min=11.0km az=48.0*
ISC 26 10:11:03.1±0.5,3˚12S±0˚06×135˚76E±0˚04,h10km,n45, σ1§97/45,mb4.2/6,MS3.5/4,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAKI	**Biak**	**1.94**	**10**	P	**Pg**	**10 11 40.1**	**-0.3**
SMPI	**Sarmi**	**3.15**	**69**	P	**Pb**	**10 11 56.7**	**-2.5**
SMPI				S	**Sn**	**10 12 31.9**	**+1.4**
FAKI	**Fak Fak**	**3.51**	**273**	P	**Pn**	**10 11 59.6**	**+1.8**
FAKI				S	**Sn**	**10 12 39.5**	**+0.1**
FAKI	**Fak Fak**	**3.51**	**273**		**Pn**	**10 12 00.5**	**+2.7**
FAKI				Sn	**Sn**	**10 12 39.6**	**+0.1**
GENI	**Genyem**	**4.43**	**83**	P	**Pn**	**10 12 13.1**	**+2.7**
JAY	**Jayapura**	**4.97**	**83**	Pn	**Pn**	**10 12 21.9**	**+4.0**
JAY	4.6nm,0.3s,baz=234,slow=8.8,SNR=24			Sn	**Sn**	**10 13 13.6**	**-1.9**
JAY	1.8nm,0.3s,baz=261,slow=22,SNR=1.0 **Jayapura**	**4.97**	**83**	P	**Pn**	**10 12 20.0**	**+2.1**
SANI	**Sanana**	**9.82**	**276**	P	**Pn**	**10 13 26.2**	**+1.7**
	25nm,0.8s						
MTN	**Manton Dam**	**10.69**	**205**	Pn	**Pn**	**10 13 36.8**	**+0.4**
PMG	**Port Moresby**	**12.93**	**119**	Pn	**Pn**	**10 14 09.8**	**+2.7**
PMG	1.2nm,0.3s,baz=208,slow=7.2,SNR=2.2			LR	LR	10 19 42.1	
	comp=Z,95nm,20.1s,baz=316,slow=40						
PMG	**Port Moresby**	**12.93**	**119**	Pn	**Pn**	**10 14 09.9**	**+2.9**
COEN	**Coen**	**13.02**	**146**	Pn	**Pn**	**10 14 07.8**	**-0.5**
SOEI	**Soe**	**13.18**	**239**	P	**Pn**	**10 14 11.8**	**+1.2**
	40nm,0.9s						
SOEI	**Soe**	**13.18**	**239**	Pn	Pn	10 14 03.6	-7.0
KNRA	**Kununurra**	**14.26**	**208**	Pn	**Pn**	**10 14 23.4**	**-1.8**
KRVT	**Keravat (AS076**	**16.27**	**95**	LR	LR	10 21 32.4	
	comp=Z,63nm,20.0s,baz=257,slow=38						
WB0	**Warramunga Arr**	**16.60**	**185**	Pn	**Pn**	**10 14 52.4**	**-3.7**
WB0				IAmb	IAmb	10 15 00.4	
	comp=Z,16nm,0.8s						
WRAB	**Tennant Creek**	**16.77**	**185**		**Pn**	**10 14 55.3**	**-2.9**
WRAB				IAmb	IAmb	10 15 02.4	
	comp=Z,22nm,0.7s						
WB2	**Warramunga Arr**	**16.78**	**185**	Pn	**Pn**	**10 14 54.6**	**-3.7**
WB2				IAmb	IAmb	10 15 03.0	
	comp=Z,35nm,1.1s						
WRA	**Warramunga Arr**	**16.78**	**185**	Pn	**Pn**	**10 14 54.2**	**-4.1**
	comp=Z,1.2nm,0.3s,baz=0.2,slow=13,SNR=60						
WRA				Sn	Sn	10 17 49.4	-16
	comp=Z,1.4nm,0.3s,baz=9.7,slow=22,SNR=7.9						
WRA				LR	LR	10 21 49.1	
	comp=Z,197nm,20.5s,baz=25,slow=38						
WRA	**Warramunga Arr**	**16.78**	**185**		**Pn**	**10 14 54.5**	**-3.8**
WR0	**Warramunga Arr**	**16.78**	**184**		**Pn**	**10 14 56.1**	**-2.2**
WR0				IAmb	IAmb	10 15 02.9	
	comp=Z,20nm,0.8s						
FITZ	**Fitzroy Crossi**	**17.89**	**213**	P	**Pn**	**10 15 11.7**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=34,slow=11,SNR=17						
FITZ				S	Sn	10 18 17.9	-14
	comp=Z,0.8nm,0.3s,baz=216,slow=14,SNR=5.3						
FITZ				LR	LR	10 22 49.3	
	comp=Z,90nm,18.3s,baz=36,slow=40						
FITZ	**Fitzroy Crossi**	**17.89**	**213**	P	**Pn**	**10 15 11.4**	**-0.8**
CTA	**Charters Tower**	**19.73**	**150**	P	**Pn**	**10 15 34.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=325,slow=13,SNR=6.3						
CTAO	**Charters Tower**	**19.73**	**150**		**Pn**	**10 15 35.0**	**+0.5**
CTAO				IAmb	IAmb	10 15 39.1	
	comp=Z,34nm,1.3s						
AS31	**Alice Springs**	**20.51**	**185**		**P**	**10 15 42.6**	**+1.1**
AS31				IAmb	IAmb	10 15 54.2	
	comp=Z,14nm,0.6s						
ASAR	**Alice Springs**	**20.51**	**185**	P	**P**	**10 15 42.0**	**+0.5**
	comp=Z,23nm,0.6s,baz=10,slow=11,SNR=206						
ASAR				S	S	10 19 20.2	-11
	comp=Z,9.3nm,1.0s,baz=7.1,slow=26,SNR=8.2						
ASAR				LR	LR	10 24 05.6	
	comp=Z,232nm,19.6s,baz=0.5,slow=38						
ASAR	**Alice Springs**	**20.51**	**185**	P	**P**	**10 15 42.6**	**+1.1**
PSA00	**Pilbara Seismi**	**24.00**	**219**	P	**P**	**10 16 19.3**	**+1.2**
HNR	**Honiara**	**24.83**	**106**	LR	LR	10 25 59.6	
	comp=Z,29nm,21.9s,baz=244,slow=36						
STKA	**Stephens Creek**	**29.13**	**170**	P	**P**	**10 17 03.2**	**-1.1**

comp=Z,1.8nm,0.7s,baz=324,slow=7.0,SNR=4.6
STKA LR LR 10 30 01.8
comp=Z,88nm,19.1s,baz=16,slow=39
STKA Stephens Creek 29.13 170 P P 10 17 02.2 -2.1
SONM Songino Array 56.88 337 P P 10 20 46.9 -1.4
comp=Z,0.6nm,0.5s,baz=152,slow=9.6,SNR=2.5
ZALV Zalesovo Beam 70.83 331 P P 10 22 18.9 -1.0
comp=Z,1.3nm,0.5s,baz=121,slow=7.5,SNR=6.4
VNDA Vanda 75.65 174 P P 10 22 48.1 +0.1
comp=Z,0.6nm,0.5s,baz=320,slow=6.0,SNR=6.0
VNDA Vanda 75.65 174 P P 10 22 48.0 +0.1
VNDA IAmb IAmb 10 23 06.2
comp=Z,2.5nm,1.2s
QSPA South Pole Qui 86.83 180 LR LR 11 01 29.4
comp=Z,72nm,19.3s,baz=7.0,slow=35
ILAR Eielson Array 87.43 25 P P 10 23 50.5 +0.1
comp=Z,1.1nm,0.5s,baz=257,slow=4.4,SNR=16
ILAR Eielson Array 87.43 25 P P 10 23 50.9 +0.4
INK Inuvik 93.14 22 P P 10 24 15.7 -1.3
comp=Z,1.0nm,0.7s,baz=240,slow=8.7,SNR=3.7
INK Inuvik 93.14 22 P P 10 24 16.2 -0.9
TORD Torodi Ar. Bea 133.53 285 PKP PKPdf 10 30 20.7 -0.2
comp=Z,0.4nm,0.7s,baz=339,slow=1.4,SNR=4.2
CPUP Villa Florida 148.10 157 PKPbc PKPbc 10 30 50.1 +0.2
comp=Z,1.5nm,0.6s,baz=309,slow=3.6,SNR=4.6
LPAZ La Paz 149.51 130 PKPbc PKPbc 10 30 55.2 +0.7
comp=Z,1.0nm,0.6s,baz=325,slow=2.6,SNR=5.4

IDC 26 10:12:56.0±6.9, 21°48N×143°34E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/48, mbtmp3.7/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/37, Error ellipse: s-maj=173.5km s-min=52.7km az=13.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**12.02**	**346**	LR	LR	10 19 58.2	
	comp=Z,61nm,18.2s,baz=154,slow=35						
KSRS	**Korea Array**	**20.78**	**323**	P	P	10 17 38.5	-0.1
	0.7nm,0.5s,baz=150,slow=9.5,SNR=4.5						
DAV	**Davao City (W)**	**22.35**	**233**	LR	LR	10 25 29.7	
	comp=Z,83nm,21.2s,baz=80,slow=34						
ILAR	**Eielson Array**	**62.17**	**27**	P	P	10 23 18.5	-0.3
	0.7nm,1.0s,baz=274,slow=5.8,SNR=4.1						
YKA	**Yellowknife Ar**	**76.58**	**28**	P	P	10 24 48.0	0.0
	0.5nm,0.7s,baz=297,slow=4.7,SNR=4.2						
FINES	**FINESS Array B**	**83.44**	**335**	P	P	10 25 25.7	+0.5
	0.9nm,0.7s,baz=90,slow=2.8,SNR=1.3						

*IDC **26** 10:13:20.4±1.0, 22°.08N×143°.46E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.8/48, mbtmp3.9/9, ML3.0/1, Error ellipse: s-maj=39.1km s-min=25.0km az=75.0*
ISC 26 10:13:25.3±0.9, 22°.1N±0°.1×143°.4E±0°.2, h35km, n11, σ1§10/11, mb3.9/7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**15.07**	**344**	Pn	**Pn**	**10 16 53.9**	**-1.8**
	0.1nm,0.3s,baz=62,slow=22,SNR=2.1						
KSRS	**Korea Array**	**20.30**	**322**	P	**P**	**10 17 59.1**	**+1.0**
	1.9nm,0.6s,baz=145,slow=9.6,SNR=6.0						
USRK	**Ussuriysk Ar.**	**23.96**	**340**	P	**P**	**10 18 37.9**	**+1.5**
	0.5nm,0.5s,baz=169,slow=28,SNR=3.1						
WRA	**Warramunga Arr**	**42.70**	**193**	P	**P**	**10 21 18.6**	**-0.5**
	0.8nm,0.7s,baz=7.0,slow=8.3,SNR=1.4						
ILAR	**Eielson Array**	**61.61**	**27**	P	**P**	**10 23 38.3**	**-0.8**
	0.3nm,0.7s,baz=270,slow=5.2,SNR=4.1						
YKA	**Yellowknife Ar**	**76.03**	**28**	P	**P**	**10 25 08.8**	**0.0**
	0.9nm,0.6s,baz=297,slow=4.7,SNR=4.3						
ARCES	**ARCESS Array B**	**78.60**	**342**	P	**P**	**10 25 24.2**	**+1.2**
	3.6nm,0.9s,baz=46,slow=5.2,SNR=4.3						
NVAR	**Mina Array Bea**	**82.76**	**52**	P	**P**	**10 25 47.0**	**+0.7**
	0.9nm,0.7s,baz=278,slow=5.7,SNR=7.8						
FINES	**FINESS Array B**	**82.89**	**335**	P	**P**	**10 25 45.7**	**-0.4**
	0.5nm,0.4s,baz=98,slow=4.2,SNR=1.1						
PLCA	**Paso Flores**	**145.89**	**131**	PKPbc	**PKPbc**	**10 33 01.3**	**-0.1**
	1.0nm,0.9s,baz=294,slow=6.2,SNR=3.1						
LPAZ	**La Paz**	**149.74**	**85**	PKPbc	**PKiKP**	**10 33 14.3**	**+0.2**
	1.6nm,0.8s,baz=353,slow=4.2,SNR=4.0						

*SOME **26** 10:20:55.7, 44°.57N×82°.37E, h25km*
*NNC **26** 10:20:58.9±1.9, 44°.71N×82°.06E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=22.2km s-min=5.6km az=121.0*
ISC 26 10:20:54.0±1.4, 44°.64N±0°.06×82°.43E±0°.06, h10km, n18, σ0§76/30, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.92**	**262**	*e*P	**Pg**	**10 21 29.8**	**-0.9**
	13nm,0.2s						
DJR				*e*S	**Sg**	**10 21 54.6**	**-1.0**
	8.8nm,0.5s						
MK31	**Makanchi Array**	**2.15**	**357**	⇓Pn	**Pg**	**10 21 34.9**	**-0.4**
	7.7nm,0.2s,baz=183,slow=14,SNR=414						
MK31				⇑Sn	**Sg**	**10 22 03.1**	**-0.2**
	6.6nm,0.3s,baz=181,slow=26,SNR=19						
MAKZ	**Makanchi**	**2.19**	**352**	⇑Pn	**Pg**	**10 21 35.0**	**-1.0**
	2.1nm,0.2s						
MAKZ				⇑Sn	**Sg**	**10 22 03.5**	**-0.8**
	8.1nm,0.3s						
KAPS	**Kapalarasan**	**2.28**	**288**	*e*P	**Pb**	**10 21 35.4**	**+0.2**
	8.3nm,0.3s						
KAPS				*e*S	**Sb**	**10 22 04.0**	**+0.5**
	17nm,0.3s						
KAPS	**Kapalarasan**	**2.28**	**288**	Pg	**Pb**	**10 21 35.4**	**+0.2**
	8.3nm,0.3s						
KAPS				Lg	Lg	10 22 04.0	
	17nm,0.4s						
PDGK	**Podgornoye**	**2.50**	**239**	Pg	**Pb**	**10 21 38.6**	**-0.4**
	4.6nm,0.2s						
PDGK				Lg	Lg	10 22 09.6	
	18nm,0.7s						
PDGK	**Podgornoye**	**2.50**	**239**	⇓Pn	**Pb**	**10 21 38.6**	**-0.4**
	2.6nm,0.3s						
PDGK				⇓Sn	**Sb**	**10 22 11.1**	**+1.3**
	28nm,0.6s						
UZB	**Uzynbulak**	**2.88**	**240**	*e*P	**Pb**	**10 21 45.9**	**+0.3**
	8.4nm,0.2s						
UZB				*e*S	**Sb**	**10 22 22.0**	**+1.0**
	8.6nm,0.2s						
UZB	**Uzynbulak**	**2.88**	**240**	Pg	**Pb**	**10 21 45.9**	**+0.3**
	8.4nm,0.2s						
UZB				Lg	Lg	10 22 22.0	
	8.6nm,0.2s						
TDK	**Taldyqorghan**	**2.89**	**279**	*e*P	**Pb**	**10 21 46.3**	**+0.7**
	70nm,0.5s						
TDK				*e*S	**Sb**	**10 22 22.5**	**+1.5**
	76nm,0.3s						
MNBS	**Baschi**	**2.95**	**260**	*e*P	**Pb**	**10 21 46.5**	**-0.2**
	16nm,0.3s						
MNBS				*e*S	**Sb**	**10 22 23.1**	**+0.4**
	21nm,0.3s						
MNBS	**Baschi**	**2.95**	**260**	Pg	**Pb**	**10 21 46.5**	**-0.2**
	16nm,0.3s						
MNBS				Lg	Lg	10 22 23.1	
	21nm,0.3s						
KPKS	**Kokpek**	**2.95**	**248**	*e*P	**Pb**	**10 21 47.0**	**+0.3**
	16nm,0.1s						
KPKS				*e*S	**Sb**	**10 22 23.8**	**+1.0**
	48nm,0.5s						
ZSN	**Zaisan**	**3.28**	**30**	*e*P	**Pb**	**10 21 52.5**	**+0.2**
	4.9nm,0.3s						
ZSN				*e*S	**Sb**	**10 22 33.4**	**+1.1**
	5.5nm,0.4s						
SATY	**Saty**	**3.31**	**243**	*e*P	**Pb**	**10 21 53.1**	**+0.2**
	5.3nm,0.2s						
SATY				*e*S	**Sb**	**10 22 34.5**	**+1.1**
	26nm,0.3s						
SATY	**Saty**	**3.31**	**243**	Pg	**Pb**	**10 21 53.1**	**+0.2**
	5.2nm,0.3s						
SATY				Lg	Lg	10 22 34.5	
	26nm,0.3s						
ARXS	**Arharly**	**3.33**	**264**	*e*P	**Pb**	**10 21 53.5**	**+0.4**
	14nm,0.4s						
ARXS				*e*S	**Sb**	**10 22 34.9**	**+1.2**
	20nm,0.3s						
ARXS	**Arharly**	**3.33**	**264**	Pg	**Pb**	**10 21 53.5**	**+0.4**
	14nm,0.4s						
ARXS				Lg	Lg	10 22 34.9	
	20nm,0.3s						

*IDC **26** 10:32:07.7±0.7, 2°.34N×127°.16E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/33, mbtmp3.9/12, MS3.2/1, Ms1 3.2/1, ms1mx2.3/36, Error ellipse: s-maj=42.9km s-min=13.8km az=75.0*
*NEIC **26** 10:32:12.8±1.2, 2°.36N±0°.10×127°.2E±0°.1, h35km±2km, mb4.2/13, Error ellipse: s-maj=23.6km s-min=10.8km az=54.0*
*DJA **26** 10:32:12.2±0.4, 2°.N±3°×12°.7E±°, h10km, M3.9/12, mB4.8/1, mb4.1/4, MLv3.8/12, Mw(mB)4.1/1*
ISC 26 10:32:14.9±0.5, 2°.36N±0°.06×127°.16E±0°.10, h53km, n40, σ1§20/42, mb4.0/15, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.59**	**172**	P	**Pn**	**10 32 39.5**	**-1.3**
TNTI				S	**Sn**	**10 33 01.5**	**+1.3**
TNTI	**Ternate**	**1.59**	**172**	Pn	**Pn**	**10 32 39.4**	**-1.3**
SGSI	**Sangihe**	**2.09**	**309**	P	**Pn**	**10 32 46.5**	**-1.1**
GTOI	**Gorontalo**	**4.49**	**248**	P	**Pn**	**10 33 19.5**	**-0.9**
SANI	**Sanana**	**4.53**	**195**	P	**Pn**	**10 33 19.1**	**-2.0**
MRSI	**Marisa**	**5.54**	**250**	P	**Pn**	**10 33 36.3**	**+1.4**
	0.2nm52nm,0.6s						
NLAI	**Namlea**	**5.56**	**181**	P	**Pn**	**10 33 34.4**	**-0.8**
	0.1nm12nm,0.9s						
TOLI2	**Tolitoli**	**6.49**	**259**	Pn	**Pn**	**10 33 47.9**	**-0.1**
FAKI	**Fak Fak**	**7.31**	**136**	Pn	**Pn**	**10 34 02.1**	**+3.0**
MPSI	**Mapaga**	**7.53**	**255**	P	**Pn**	**10 34 04.0**	**+1.8**
MTKI	**Muara Teweh, K**	**12.69**	**255**	P	**Pn**	**10 35 14.2**	**+1.4**
MTN	**Manton Dam**	**15.61**	**165**	Pn	**Pn**	**10 35 48.2**	**-3.5**
MTN				IAmb	IAmb	10 36 03.2	
	comp=Z,16nm,1.2s						
KNRA	**Kununurra**	**17.99**	**175**	P	**P**	**10 36 20.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**20.38**	**184**	P	**P**	**10 36 46.9**	**-0.5**
	comp=Z,2.2nm,0.7s,baz=352,slow=6.2,SNR=6.8						
FITZ	**Fitzroy Crossi**	**20.38**	**184**	P	**P**	**10 36 47.1**	**-0.3**
PMG	**Port Moresby**	**23.10**	**121**	LR	LR	10 47 40.5	
	comp=Z,52nn,19.0s,baz=292,slow=40						
WB0	**Warramunga Arr**	**23.11**	**162**	P	**P**	**10 37 15.3**	**-1.2**
WRA	**Warramunga Arr**	**23.26**	**163**	P	**P**	**10 37 16.7**	**-1.3**
	comp=Z,5.0nm,0.5s,baz=342,slow=11,SNR=62						
WRA	**Warramunga Arr**	**23.26**	**163**	P	**P**	**10 37 15.7**	**-2.3**
WB2	**Warramunga Arr**	**23.26**	**163**	P	**P**	**10 37 17.0**	**-1.0**
WB2				IAmb	IAmb	10 37 17.2	
	comp=Z,5.2nm,0.6s						
WR0	**Warramunga Arr**	**23.33**	**162**	P	**P**	**10 37 17.9**	**-0.7**
WR0				IAmb	IAmb	10 37 24.3	
	comp=Z,4.7nm,0.8s						
AS31	**Alice Springs**	**26.69**	**166**	P	**P**	**10 37 49.2**	**-0.1**
ASAR	**Alice Springs**	**26.69**	**166**	P	**P**	**10 37 48.6**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=350,slow=7.0,SNR=19						
ASAR				PcP	**PcP**	**10 41 12.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=355,slow=2.1,SNR=6.8						
CMAR	**Chiang Mai Arr**	**31.94**	**302**	P	**P**	**10 38 35.8**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=227,slow=17,SNR=1.7						
KSRS	**Korea Array**	**34.93**	**1**	P	**P**	**10 39 01.8**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=182,slow=9.6,SNR=2.5						
NWAO	**Narrogin (SRO)**	**36.33**	**194**	P	**P**	**10 39 13.7**	**-0.1**
STKA	**Stephens Creek**	**36.70**	**159**	P	**P**	**10 39 16.4**	**-0.5**
	comp=Z,2.8nm,0.3s,baz=339,slow=7.8,SNR=14						
STKA	**Stephens Creek**	**36.70**	**159**	P	**P**	**10 39 17.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**41.88**	**5**	P	**P**	**10 39 59.9**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=194,slow=9.9,SNR=5.8						
SONM	**Songino Array**	**48.72**	**341**	P	**P**	**10 40 54.6**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=132,slow=54,SNR=3.1						
SONM				PcP	**PcP**	**10 42 19.4**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=151,slow=3.3,SNR=2.4						
MK31	**Makanchi Array**	**58.92**	**326**	P	**P**	**10 42 08.1**	**-0.6**
MK31				IAmb	IAmb	10 42 13.0	
	comp=Z,3.4nm,1.4s						
MKAR	**Makanchi Array**	**58.92**	**326**	P	**P**	**10 42 07.9**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=121,slow=8.6,SNR=12						
ZALV	**Zalesovo Beam**	**61.99**	**333**	P	**P**	**10 42 30.3**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=76,slow=37,SNR=2.5						
TIXI	**Tiksi**	**69.20**	**1**	P	**P**	**10 43 15.4**	**-0.2**
TIXI				IAmb	IAmb	10 43 16.1	
	comp=Z,2.2nm,0.8s						
ABKAR	**Akbulak array**	**73.48**	**321**	P	**P**	**10 43 41.9**	**0.0**
VNDA	**Vanda**	**82.02**	**173**	P	**P**	**10 44 28.6**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=16,slow=2.3,SNR=1.2						
VNDA	**Vanda**	**82.02**	**173**	P	**P**	**10 44 28.5**	**-0.3**
VNDA				IAmb	IAmb	10 44 35.3	
	comp=Z,2.5nm,1.3s						
IMAR	**Indian Mountai**	**83.41**	**24**	P	**P**	**10 44 37.8**	**+1.5**
ILAR	**Eielson Array**	**86.15**	**25**	P	**P**	**10 44 50.0**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=235,slow=5.7,SNR=4.6						
TXAR	**Lajitas Array**	**122.08**	**53**	PKP	**PKiKP**	**10 51 05.5**	**+0.9**
	comp=Z,0.6nm,1.1s,baz=124,slow=37,SNR=1.8						

*DDA **26** 10:47:55.6, 39°.35N×29°.00E, h7km±2km, ML2.3*
*ISK **26** 10:47:55.4, 39°.34N×29°.06E, h4km, ML2.5/13*
ISC 26 10:47:55.8±1.0, 39°.36N±0°.02×29°.02E±0°.02, h7km±11km, n33, σ0§44/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIMA	**Simav-Kutahya**	**0.28**	**187**	PG	**Pg**	**10 48 01.5**	**+0.2**
SIMA				SG	**Sg**	**10 48 05.6**	**+0.6**
TVSB	**Tavsanli**	**0.35**	**75**	PG	**Pg**	**10 48 02.7**	**0.0**
TVSB				SG	**Sg**	**10 48 07.6**	**+0.2**
USAK	**Uak-Merkez**	**0.64**	**180**	*i* P	**Pg**	**10 48 08.2**	**0.0**
USAK				IAML		10 48 13.0	
	comp=N,142nm,0.7s						
USAK				IAML		10 48 14.0	
	comp=E,152nm,1.2s						
ANDZ	**Kutahya, Merke**	**0.69**	**77**	*i* P	**Pg**	**10 48 08.9**	**-0.3**
ANDZ				IAML		10 48 19.0	
	comp=E,87nm,0.5s						
ANDZ				IAML		10 48 23.0	
	comp=N,169nm,0.2s						
ORLT	**Orhaneli**	**0.69**	**352**	PG	**Pb**	**10 48 09.8**	**-0.5**
ULDT	**Uludag**	**0.79**	**6**	*i* P	**Pg**	**10 48 11.1**	**+0.1**
ULDT				*i* S	**Sg**	**10 48 20.8**	**-0.5**
ULDT				IAML		10 48 25.0	
	comp=N,130nm,0.5s						
KULA	**Kula-Manisa**	**0.89**	**199**	PG	**Pg**	**10 48 12.5**	**-0.4**
IGD	**Bursa**	**0.92**	**9**	*i* P	**Pg**	**10 48 13.4**	**0.0**
IGD				*i* S	**Sg**	**10 48 25.7**	**+0.4**
IGD				IAML		10 48 29.0	
	comp=E,78nm,0.2s						
IGD				IAML		10 48 29.0	
	comp=N,68nm,0.2s						
BALB	**Balikesir**	**0.93**	**288**	PG	**Pn**	**10 48 14.9**	**-0.3**
MANT	**Manisa**	**0.94**	**203**	*i* P	**Pg**	**10 48 13.6**	**-0.2**
MANT				*i* S	**Sg**	**10 48 25.2**	**-0.8**
MANT				IAML		10 48 29.0	
	comp=N,58nm,0.2s						
MANT				IAML		10 48 29.0	
	comp=E,85nm,0.8s						
STEP	**BALIKESIR_Sava**	**1.01**	**272**	*i* P	**Pg**	**10 48 15.1**	**-0.2**
STEP				*i* S	**Sb**	**10 48 28.9**	**-0.3**
STEP				IAML		10 48 30.0	
	comp=N,161nm,0.4s						
STEP				IAML		10 48 32.0	
	comp=E,168nm,0.5s						
MDNY	**Mudanya-Bursa**	**1.02**	**354**	PG	**Pb**	**10 48 15.9**	**+0.2**
BILE	**Bilecik/Merkez**	**1.04**	**39**	*i* P	**Pg**	**10 48 15.6**	**-0.1**
BILE				IAML		10 48 33.0	
	comp=N,55nm,0.4s						
BILE				IAML		10 48 35.0	
	comp=E,38nm,0.2s						
CAVI	**Cavuskoy**	**1.05**	**37**	PG	**Pb**	**10 48 16.4**	**0.0**
AKHS	**Akhisar**	**1.05**	**243**	*i* P	**Pb**	**10 48 16.2**	**-0.2**
AKHS				*i* S	**Sb**	**10 48 30.3**	**-0.1**
AKHS				IAML		10 48 33.0	
	comp=E,52nm,0.3s						
GEMT	**Gemlik**	**1.08**	**7**	PN	**Pb**	**10 48 17.1**	**+0.2**
BALY	**Balya**	**1.15**	**290**	*i* P	**Pb**	**10 48 18.0**	**0.0**
BALY				*i* S	**Sb**	**10 48 33.2**	**0.0**
BALY				IAML		10 48 36.0	
	comp=N,32nm,0.5s						
BALY				IAML		10 48 36.0	
	comp=E,40nm,0.4s						
ADVT	**Abdulvahap**	**1.21**	**27**	PN	**Pn**	**10 48 19.3**	**+0.2**
GONE	**Gonen-Balikesi**	**1.24**	**304**	PN	**Pn**	**10 48 20.3**	**+0.8**
TRML	**Termal-Yalova**	**1.26**	**5**	PN	**Pg**	**10 48 19.6**	**-0.3**
SRCK	**Saricakaya, Es**	**1.41**	**61**	PN	**Pg**	**10 48 22.6**	**-0.3**
SGAZ	**Eskisehir, Sey**	**1.42**	**82**	*i* P	**Pb**	**10 48 22.3**	**-0.3**
SGAZ				*i* S	**Sb**	**10 48 40.6**	**-0.3**
GEYV	**SAKARYA_Geyve**	**1.49**	**41**	*i* P	**Pb**	**10 48 23.9**	**+0.1**
GEYV				*i* S	**Sg**	**10 48 44.0**	**+0.2**
GEYV				IAML		10 48 46.0	
	comp=E,20nm,0.3s						
GEYV				IAML		10 48 47.0	
	comp=N,38nm,0.3s						
ZEDA	**zmir-Bergama**	**1.56**	**256**	*i* P	**Pg**	**10 48 25.4**	**-0.3**
ZEDA				*i* S	**Sn**	**10 48 44.5**	**+0.1**
ZEDA				IAML		10 48 48.0	
	comp=N,27nm,0.6s						
ZEDA				IAML		10 48 49.0	
	comp=E,12nm,0.5s						
GULT	**Gulveren**	**1.57**	**46**	PN	**Pb**	**10 48 24.7**	**-0.5**
MAR9	**Marsite Statio**	**1.62**	**322**	PN	**Pb**	**10 48 25.9**	**-0.1**
MRMT	**Marmara Adasi**	**1.66**	**319**	PN	**Pb**	**10 48 26.5**	**-0.2**
ISK	**Istanbul-Kandi**	**1.71**	**1**	PN	**Pb**	**10 48 27.0**	**-0.5**
SAUV	**Serdivan-Sakar**	**1.71**	**36**	PN	**Pn**	**10 48 26.7**	**+0.8**
SILT	**Site**	**1.85**	**15**	PN	**Pb**	**10 48 29.1**	**-0.9**
SVRH	**Sivrihisar-ESK**	**1.94**	**87**	PN	**Pn**	**10 48 29.8**	**+0.6**
MAR4	**Marsite Statio**	**1.95**	**318**	PN	**Pn**	**10 48 30.5**	**+1.2**
SAHE	**Sakarya_HENDEK**	**2.05**	**43**	*i* P	**Pg**	**10 48 34.4**	**-0.7**

*IDC **26** 11:10:40.9±1.0, 12°.72N×124°.57E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/35, mbtmp3.7/8, MS3.0/4, Ms1 3.0/4, ms1mx2.5/43, Error ellipse: s-maj=49.7km s-min=17.0km az=69.0*
*MAN **26** 11:10:42.3, 12°.97N×124°.57E, h3km, mb4.8, ML3.7, MS3.6*
ISC 26 11:10:43.0±1.3, 12°.80N±0°.03×124°.38E±0°.06, h8km±9km, n28, σ2§29/29, mb3.7/8, MS2.8/4, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	**0.82**	**344**	*e*P	**Pg**	**11 10 57.1**	**-1.7**
PVCP				*e*S	**Sg**	**11 11 09.9**	**+0.3**
OCLP	**Ormoc**	**1.75**	**173**	*e*P	**Pb**	**11 11 15.7**	**+0.4**
OCLP				*e*S	**Sg**	**11 11 45.5**	**+6.2**
JCNP	**Jose Panganiba**	**2.21**	**312**	*e*P	**Pn**	**11 11 20.9**	**+1.0**
JCNP				*e*S	**Sb**	**11 11 49.8**	**-0.9**
OTRP	**Odiongan**	**2.35**	**260**	*e*P	**Pb**	**11 11 25.3**	**-0.2**
OTRP				*e*S	**Sn**	**11 11 48.6**	**-2.2**
LLP	**Lapu-Lapu**	**2.50**	**189**	*e*P	**Pb**	**11 11 27.9**	**-0.3**
LLP				*e*S	**Sg**	**11 12 01.1**	**-2.2**
MSLP	**Maasin**	**2.69**	**170**	*e*P	**Pb**	**11 11 30.1**	**-1.3**
MSLP				*e*S	**Sg**	**11 12 09.4**	**-0.1**
GUIM	**Jordan**	**2.78**	**219**	*e*P	**Pb**	**11 11 31.7**	**-1.3**
GUIM				*e*S	**Sb**	**11 12 05.5**	**-1.7**
POLP	**Polilio Island**	**3.05**	**309**	*e*P	**Pn**	**11 11 33.3**	**+1.8**
POLP				*e*S	**Sn**	**11 12 10.8**	**+2.5**
JAP	**San Jose, Anti**	**3.14**	**230**	⇓*e*P	**Pb**	**11 11 39.8**	**+0.7**
TGY	**Tagaytay City**	**3.59**	**292**	Pn	**Pb**	**11 11 47.0**	**+0.1**
	23nm,0.3s,baz=141,slow=7.7,SNR=1.7						
SMPP	**San Manuel, Pa**	**4.89**	**313**	*e*P	**Pn**	**11 12 01.2**	**+4.3**
SMPP				*e*S	**Sn**	**11 12 55.6**	**+1.9**
PAGZ	**Pagadian**	**5.02**	**191**	*e*P	**Pn**	**11 12 03.0**	**+4.5**
KSRS	**Korea Array**	**24.76**	**7**	P	**P**	**11 16 04.8**	**-0.2**
	0.9nm,0.7s,baz=189,slow=9.3,SNR=4.1						
KSRS				LR	LR	11 25 15.3	
	comp=Z,33nm,19.7s,baz=166,slow=35						
CMAR	**Chiang Mai Arr**	**25.12**	**286**	P	**P**	**11 16 10.2**	**+1.5**
	0.3nm,0.5s,baz=102,slow=8.4,SNR=0.9						
CMAR				LR	LR	11 27 46.4	
	comp=Z,23nm,18.1s,baz=112,slow=40						
PMG	**Port Moresby**	**31.60**	**133**	LR	LR	11 30 55.9	
	comp=Z,12nm,20.8s,baz=225,slow=39						
WRA	**Warramunga Arr**	**33.98**	**163**	P	**P**	**11 17 24.5**	**-2.7**
	0.8nm,0.8s,baz=341,slow=9.5,SNR=7.3						
ASAR	**Alice Springs**	**37.42**	**166**	P	**P**	**11 17 55.6**	**-1.2**
	1.2nm,0.6s,baz=346,slow=6.6,SNR=32						
SONM	**Songino Array**	**38.02**	**340**	P	**P**	**11 18 03.1**	**+1.3**
	0.3nm,0.3s,baz=145,slow=5.3,SNR=1.6						
H11S3	**WAKE ISLAND Hy**	**41.06**	**77**	T	T	12 02 07.0	
	baz=289,slow=73,SNR=12						
H11S1	**WAKE ISLAND Hy**	**41.07**	**77**	T	T	12 02 02.9	
	baz=289,slow=73,SNR=8.9						
H11S2	**WAKE ISLAND Hy**	**41.08**	**77**	T	T	12 02 02.9	
	baz=289,slow=73,SNR=13						
H11N1	**WAKE ISLAND Hy**	**41.30**	**75**	T	T	12 02 16.8	
	baz=267,slow=75,SNR=130						
H11N2	**WAKE ISLAND Hy**	**41.31**	**75**	T	T	12 02 16.9	
	baz=267,slow=75,SNR=71						
H11N3	**WAKE ISLAND Hy**	**41.32**	**75**	T	T	12 02 18.3	
	baz=267,slow=75,SNR=81						
STKA	**Stephens Creek**	**47.39**	**160**	P	**P**	**11 19 15.4**	**-2.4**
	2.3nm,0.7s,baz=330,slow=8.9,SNR=4.4						
MKAR	**Makanchi Array**	**48.91**	**322**	P	**P**	**11 19 29.0**	**-0.5**
	0.5nm,0.8s,baz=117,slow=9.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**51.53**	**331**	P	**P**	**11 19 48.5**	**-0.6**
	0.4nm,0.3s,baz=120,slow=5.7,SNR=1.8						
AAK	**Ala-Archa**	**52.24**	**314**	LR	LR	11 42 42.7	
	comp=Z,31nm,20.6s,baz=96,slow=37						

*IDC **26** 11:18:28.0±0.6, 2°.77S×79°.86W, h0km, mb4.4/14, mb1 4.6/17, mb1mx4.5/27, mbtmp4.4/17, ML4.2/3, MS3.7/16, Ms1 3.7/16, ms1mx3.6/30, Error ellipse: s-maj=28.4km s-min=12.4km az=53.0*
*IGQ **26** 11:18:29.9±0.2, 3°.S±3°×8°.0W±°, h5km, M4.8*
*BJI **26** 11:18:32.0±0.0, 2°.90S×79°.80W, h10km, mB5.4/1, Ms4.9/1*
*VAO

HELC Santa Helena 9.98 25 *e*P Pn 11 21 14.3 +20
DBBC Dabeiba 10.48 20 *e*P **Pn 11 21 03.5 +2.8**
PAYG Puerto Ayora 10.73 282 Pn **Pn 11 21 06.7 +2.6**
RUSC La Rusia 11.00 37 *e*P Pn 11 21 13.2 +4.9
ZARC Zaragoza, Cauc 11.43 25 *e*P **Pn 11 21 15.4 +1.6**
PAMC Pamplona, Colo 12.38 35 *e*P Pn 11 21 34.3 +7.1
JTS Las Juntas de 14.08 339 Pn **Pn 11 21 48.7 -1.2**
0.2nm,0.3s,baz=198,slow=19,SNR=2.7
JTS LR LR 11 26 18.5
comp=Z,457nm,20.8s,baz=219,slow=34
JTS Las Juntas de 14.08 339 Pn 11 21 54.1 +4.2
SDV Santo Domingo 14.84 38 P 11 22 04.6 -1.8
SDV Santo Domingo 14.84 38 *e*P **P 11 22 06.1 -0.3**
ETMB Extrema 15.13 118 *e*P **Pn 11 22 00.2 -4.0**
ESPN Las Esperanzas 15.65 343 Pn 11 22 13.2 +2.1
ESPN IAmb IAmb 11 22 16.8
comp=Z,56nm,0.6s
MATN Matagalpa 16.87 339 P 11 22 30.8 +1.9
CRIN San Cristobal 17.10 335 P **P 11 22 33.4 +2.1**
CRIN IAmb IAmb 11 22 48.7
comp=Z,36nm,0.6s
LPAZ La Paz 17.56 140 P **P 11 22 38.8 +1.7**
comp=Z,0.8nm,0.3s,baz=327,slow=12,SNR=22
LPAZ La Paz 17.56 140 P **P 11 22 37.0 -0.1**
LPAZ La Paz 17.56 140 *e*P **P 11 22 37.0 -0.1**
SAML Samuel 17.56 111 P **Pn 11 22 35.6 +0.2**
SAML Samuel 17.56 111 *e*P **Pn 11 22 35.0 -0.4**
PB16 IPOC Station P 18.35 147 P 11 22 45.6 -0.1
TGUH Tegucigalpa,Un 18.41 336 P **Pn 11 22 49.8 +3.8**
TGUH IAmb IAmb 11 22 58.7
comp=Z,65nm,1.2s
MNMC Minye Minye 18.96 149 P **Pn 11 22 52.8 0.0**
MACA Manacapuru-AM 19.07 91 *e*P **P 11 22 51.8 -1.3**
PSGCX Pisagua 19.09 151 P **Pn 11 22 54.0 -0.2**
PB11 IPOC Station P 19.46 150 P **P 11 22 55.9 -1.5**
GO01 Chusmiza 19.62 149 P **Pn 11 23 00.3 -0.5**
MTO3 Montecristo 19.64 331 P **P 11 23 00.4 +0.9**
PCRV Puerto La Cruz 19.91 49 LR LR 11 31 13.6
comp=Z,455nm,19.4s,slow=38
PB08 IPOC Station P 20.03 150 P **P 11 23 03.7 -0.2**
PB01 IPOC Station P 20.63 152 P **P 11 23 10.9 +0.8**
PB07 IPOC Station P 21.04 154 P **P 11 23 15.7 +1.0**
PB07 IAmb IAmb 11 23 17.4
comp=Z,57nm,1.3s
PB09 IPOC Station P 21.40 152 P **P 11 23 18.4 -0.1**
PB04 IPOC Station P 21.46 155 P **P 11 23 19.5 +0.3**
VILB Vilhena 21.79 118 *e*P **P 11 23 23.8 +1.1**
PETF Flores 22.07 333 P **P 11 23 26.7 +1.2**
LVC Limon Verde 22.25 153 P **P 11 23 29.5 +1.6**
comp=Z,5.9nm,0.7s,baz=318,slow=6.3,SNR=4.8
LVC LR LR 11 31 02.9
comp=Z,94nm,20.1s,baz=318,slow=34
LVC Limon Verde 22.25 153 P **P 11 23 28.2 +0.3**
LVC Limon Verde 22.25 153 *e*P **P 11 23 30.2 +2.3**
SIV San Ignacio 22.55 126 P **P 11 23 31.0 +0.3**
comp=Z,24nm,1.0s,baz=316,slow=10,SNR=26
PTLB Pontes e Lacer 23.86 123 *e*P **P 11 23 45.2 +1.2**
ITTB Itaituba 24.04 94 *e*P **P 11 23 45.5 -0.3**
PDPR Patillas Dam, 24.82 33 P **P 11 23 53.2 +0.4**
PDPR IAmb IAmb 11 24 03.9
comp=Z,79nm,1.4s
CMIG Matias Romero 24.84 324 P **P 11 23 52.7 -0.3**
comp=Z,6.7nm,0.8s,baz=139,slow=2.0,SNR=4.4
CMIG LR LR 11 32 07.3
comp=Z,151nm,20.1s,baz=168,slow=33
GCPR Guaynabo City 25.02 32 P **P 11 23 56.1 +1.4**
GCPR IAmb IAmb 11 23 58.3
comp=Z,55nm,1.2s
CBYP Canovanas 25.11 33 P **P 11 23 53.2 -2.4**
CBYP IAmb IAmb 11 23 59.3
comp=Z,48nm,0.9s
MALB Monte Alegre 25.52 88 *e*P **P 11 24 01.0 +1.7**
MCPB Macapa, AP 27.83 85 *e*P **P 11 24 23.4 +3.3**
MDP Montagnes des 28.25 74 P **P 11 24 23.7 -0.2**
comp=Z,58nm,1.3s,baz=252,slow=6.8,SNR=5.1
MDP LR LR 11 36 06.8
comp=Z,661nm,18.6s,baz=260,slow=37
PP1B Ponte de Pedra 28.46 123 *e*P **P 11 24 27.9 +2.1**
SNDB Serra Nova Dou 29.62 109 *e*P **P 11 24 36.5 +0.4**
ARAG Araguaiana, MT 30.34 117 *e*P **P 11 24 44.9 +2.5**
ROC1 El Roble 31.03 166 P **P 11 24 49.6 +1.0**
MT02 Curacav 31.27 166 P **P 11 24 51.8 +1.4**
MT02 IAmb IAmb 11 25 12.7
comp=Z,28nm,1.5s
CPUP Villa Florida 31.73 139 LR LR 11 39 50.3
comp=Z,232nm,18.4s,baz=323,slow=40
PEXB Peixe 32.49 108 *e*P **P 11 25 02.8 +1.4**
SMTB Santa Maria do 32.55 102 *e*P **P 11 25 03.6 +1.7**
PCMB Pacaembu 33.38 126 *e*P **P 11 25 11.2 +2.0**
BDFB Brasilia 33.74 114 P **P 11 25 12.6 +0.1**
comp=Z,4.0nm,0.8s,baz=286,slow=11,SNR=7.0
BDFB Brasilia 33.74 114 P **P 11 25 13.0 +0.5**
IPMB Ipameri, GO 34.38 118 *e*P **P 11 25 19.9 +2.0**
ITQB Itaqui 34.52 143 *e*P **P 11 25 20.3 +1.4**
BB19B Bebedouro 35.38 123 *e*P **P 11 25 28.7 +2.2**
157A Early Branch 35.40 358 P **P 11 25 26.6 +0.1**
baz=178
Z56A Williston 36.06 358 P **P 11 25 32.4 +0.4**
baz=177
GOGA Godfrey 36.28 355 P **P 11 25 34.4 +0.4**
baz=174
GOGA Godfrey 36.28 355 P **P 11 25 34.7 +0.7**
833A Chaparral WMA, 36.32 330 P **P 11 25 34.5 +0.1**
833A IAmb IAmb 11 25 39.8
comp=Z,22nm,1.1s
VBMS Vicksburg 36.38 345 P **P 11 25 36.4 +1.6**
VBMS IAmb IAmb 11 25 56.8
comp=Z,12nm,0.7s
LRAL Lakeview Retre 36.39 350 P **P 11 25 35.8 +0.9**
baz=168,SNR=5.2
LRAL Lakeview Retre 36.39 350 P **P 11 25 36.3 +1.4**
LRAL IAmb IAmb 11 25 38.1
comp=Z,29nm,1.4s
LC01 Cunco 36.55 170 P **P 11 25 37.2 +0.9**
LC01 IAmb IAmb 11 25 39.1
comp=Z,12nm,1.1s
Y55A Saluda 36.69 357 P **P 11 25 37.6 +0.1**
baz=176
JANB Januaria 36.99 111 *e*P **P 11 25 41.9 +1.5**
X56A White Oak 37.21 358 P **P 11 25 42.4 +0.5**
baz=178
X55A Gracelyn & Ava 37.21 357 P **P 11 25 42.9 +1.0**
baz=177
NATX Nacogdoches 37.26 339 P **P 11 25 43.1 +0.8**
NATX IAmb IAmb 11 25 46.2
comp=Z,10nm,0.8s
435B Jarrell 37.55 334 P **P 11 25 45.8 +0.9**
baz=150
435B Jarrell 37.55 334 P **P 11 25 45.6 +0.7**
435B IAmb IAmb 11 25 49.9
comp=Z,16nm,0.8s
Y45A Yeager Farm, C 37.71 347 P **P 11 25 47.0 +0.9**
W58A Raeford 37.72 1 P **P 11 25 47.1 +0.9**
baz=181
X48A Hartselle 37.78 350 P **P 11 25 47.9 +1.2**
BG3 Lake Jocassee 37.81 356 P **P 11 25 49.3 +2.3**
BG3 IAmb IAmb 11 25 50.3
comp=Z,30nm,1.2s
W56A Indian Trail 37.84 359 P **P 11 25 48.4 +1.2**
baz=178
W54A Cherokee Point 37.85 357 P **P 11 25 48.1 +0.8**
baz=176
W57A Gilead 37.85 360 P **P 11 25 49.3 +2.0**
baz=179
KMSC Kings Mountain 37.87 358 P **P 11 25 48.8 +1.3**
baz=177
KMSC Kings Mountain 37.87 358 P **P 11 25 49.0 +1.5**
KMSC IAmb IAmb 11 25 50.1
comp=Z,19nm,0.9s
237A Washetta, Mont 37.90 338 P **P 11 25 50.9 +3.1**
W61A Ground Anchor 37.97 4 P **P 11 25 50.9 +2.6**
baz=184
W52A Murphy 37.99 354 pP 11 26 09.6 +18
OXF Oxford 38.30 347 P **P 11 25 53.4 +2.3**
baz=164
JCT Junction City 38.30 332 P **P 11 25 52.9 +1.7**
baz=146,SNR=6.1
JCT Junction City 38.30 332 P **P 11 25 51.5 +0.3**
JCT IAmb IAmb 11 25 56.1
comp=Z,24nm,1.2s
CCAR Cane Creek 38.33 344 P **P 11 25 52.9 +1.6**
CCAR IAmb IAmb 11 25 54.5
comp=Z,20nm,1.1s
SWET Sewanee 38.35 352 P **P 11 25 52.9 +1.3**
SWET IAmb IAmb 11 25 53.7
comp=Z,12nm,0.9s
CPCT Cooper Cave 38.41 354 P **P 11 25 53.4 +1.4**
CPCT IAmb IAmb 11 25 54.6
comp=Z,18nm,0.9s
V59A Middlesex 38.49 2 P **P 11 25 53.6 +0.9**
baz=182
V58A Windy Hill, Pi 38.50 1 P **P 11 25 54.1 +1.3**
baz=181
V56A Mocksville 38.51 359 P **P 11 25 54.0 +1.1**
baz=179
V54A Nebo 38.53 357 P **P 11 25 54.0 +0.9**
baz=176
V60A Jim Taylor Roa 38.53 3 P **P 11 25 53.7 +0.7**
baz=184
WHTX Lake Whitney, 38.55 336 P **P 11 25 55.3 +2.1**
baz=151
WHTX Lake Whitney, 38.55 336 P **P 11 25 53.0 -0.2**
WHTX IAmb IAmb 11 25 57.5
comp=Z,20nm,0.8s
V55A Taylorsville 38.57 358 P **P 11 25 55.0 +1.6**
baz=178
PLCA Paso Flores 38.58 169 P **P 11 25 53.1 -0.3**
comp=Z,1.6nm,0.5s,baz=0.3,slow=9.8,SNR=5.4
PLCA LR LR 11 40 27.3
comp=Z,74nm,18.3s,baz=354,slow=34
PLCA Paso Flores 38.58 169 IAmb IAmb 11 26 00.4
comp=Z,4.8nm,1.1s
V57A Coltrane Farms 38.59 0 P **P 11 25 54.6 +1.1**
baz=180
V52A Sevierville 38.70 355 P **P 11 25 56.1 +1.6**
V52A IAmb IAmb 11 25 57.5
comp=Z,29nm,1.1s
Z38A Mt. Pleasant 38.73 339 P **P 11 25 57.0 +2.3**
Z38A IAmb IAmb 11 25 58.7
comp=Z,23nm,1.1s
V51A Loudon 38.74 354 P **P 11 25 55.6 +0.8**
V51A IAmb IAmb 11 25 57.2
comp=Z,23nm,0.9s
W45A Hickory Valley 38.87 348 P **P 11 25 57.1 +1.2**
V48A Smith Brothers 39.00 351 P **P 11 25 58.2 +1.2**
V48A IAmb IAmb 11 25 59.2
comp=Z,12nm,0.8s
U56A King 39.05 359 P **P 11 25 58.5 +1.1**
baz=179
U59A Littleton 39.09 3 P **P 11 25 59.0 +1.2**
baz=183
U58A Oxford 39.11 2 P **P 11 25 58.5 +0.7**
baz=182
U57A Blanch 39.13 1 P **P 11 25 59.2 +1.1**
baz=180
X40A Basin Creek Fa 39.16 343 P **P 11 25 59.5 +1.1**
baz=159
U54A Nelsons Funny 39.26 357 P **P 11 25 59.9 +0.7**
baz=177
TX32 Lajitas Array 39.38 326 P **P 11 26 00.8 +0.4**
TXAR Lajitas Array 39.38 326 P **P 11 25 57.8 -2.7**
comp=Z,1.1nm,0.9s,baz=134,slow=5.4,SNR=5.6
TXAR PcP **PcP 11 28 07.9 -0.9**
comp=Z,2.2nm,0.8s,baz=151,slow=6.6,SNR=7.2
TXAR LR LR 11 40 42.8
comp=Z,76nm,20.0s,baz=0.0,slow=34
TXAR Lajitas Array 39.38 326 P **P 11 26 00.3 -0.1**
TX31 Lajitas Ar. Si 39.39 326 P **P 11 26 00.8 +0.4**
TX31 IAmb IAmb 11 26 05.1
comp=Z,17nm,1.3s
TZTN Tazewell 39.40 355 P **P 11 26 01.3 +1.0**
baz=174
TZTN Tazewell 39.40 355 P **P 11 26 01.8 +1.5**
MIAR Mount Ida 39.44 342 P **P 11 26 01.6 +0.9**
baz=158
WVT Waverly 39.55 350 P **P 11 26 02.4 +0.9**
baz=167
WVT Waverly 39.55 350 P **P 11 26 01.9 +0.4**
W41B Gary Mavity, V 39.64 344 P **P 11 26 03.8 +1.5**
baz=160
Z35A Perchaven, San 39.64 337 P **P 11 26 03.0 +0.7**
T58A Grand View Acr 39.66 2 P **P 11 26 03.8 +1.4**
baz=182
T57A Hurt 39.70 1 P **P 11 26 04.1 +1.3**
baz=181
T59A Double "B" Far 39.72 3 P **P 11 26 04.0 +1.1**
baz=183
T56A Rocky Mt 39.73 360 P **P 11 26 04.1 +1.1**
baz=179
T53A Wise 39.76 357 P **P 11 26 04.7 +1.3**
baz=176
T54A Tazewell 39.79 358 P **P 11 26 04.3 +0.7**
baz=177
T55A Pulaski 39.82 359 P **P 11 26 05.7 +1.8**
baz=178
T60A Surry 39.94 4 P **P 11 26 06.2 +1.5**
baz=184
GLAT Glass 39.97 348 P **P 11 26 04.3 -0.7**
ABTX Abilene, Hawle 40.03 334 P **P 11 26 06.9 +1.3**
baz=148,SNR=6.4
ABTX Abilene, Hawle 40.03 334 P **P 11 26 06.0 +0.3**
W39A Magazine 40.11 342 P **P 11 26 07.6 +1.4**
baz=158,SNR=5.1
W39A Magazine 40.11 342 P **P 11 26 05.5 -0.7**
W39A IAmb IAmb 11 26 09.9
comp=Z,16nm,0.9s
LCAR Lake Charles 40.20 346 P **P 11 26 07.9 +1.0**
LCAR IAmb IAmb 11 26 09.2
comp=Z,16nm,1.0s
HICK Hickman 40.22 348 P **P 11 26 08.0 +0.9**
FCAR Ozark Folk Cen 40.28 344 P **P 11 26 08.4 +0.8**
S56A Natural Bridge 40.37 0 P **P 11 26 10.1 +1.7**
baz=180
S53A Williamson 40.43 357 P **P 11 26 09.6 +0.7**
baz=176
PARMO Parma 40.44 348 P **P 11 26 10.0 +1.1**
S57A Dark Hollow, R 40.46 1 P **P 11 26 10.4 +1.3**
baz=181
S55A Lewisburg 40.47 359 P **P 11 26 10.5 +1.3**
baz=179
S51A Beattyville 40.49 355 P **P 11 26 09.8 +0.4**
S51A IAmb IAmb 11 26 11.4
comp=Z,24nm,0.8s
S54A Dingess, Beckl 40.52 358 P **P 11 26 11.0 +1.3**
baz=177
R58B Mineral 40.70 2 P **P 11 26 12.2 +1.1**
baz=183
PBMO Poplar Bluff 40.70 347 P **P 11 26 12.3 +1.2**
PBMO IAmb IAmb 11 26 13.2
comp=Z,16nm,1.2s
R54A Victor 40.89 359 P **P 11 26 14.3 +1.6**
baz=178
U40A Yellville 40.92 344 P **P 11 26 13.8 +0.9**
baz=160,SNR=8.6
U40A Yellville 40.92 344 P **P 11 26 14.8 +1.9**
U40A IAmb IAmb 11 26 15.9
comp=Z,14nm,0.8s
R55A Marlinton 40.98 360 P **P 11 26 13.9 +0.4**
baz=179
R58A Rapidan 41.02 2 P **P 11 26 14.6 +0.9**
baz=182
R60A Leonardstown, M 41.07 4 P **P 11 26 15.1 +1.1**
baz=185
R53A Hurricane 41.07 357 P **P 11 26 14.7 +0.5**
baz=176
T42A Van Buren 41.10 346 P **P 11 26 15.7 +1.3**
W35A Tecumseh 41.11 339 P **P 11 26 17.8 +3.2**
HHAR Hobbs 41.16 343 P **P 11 26 16.7 +1.7**
R50A Paris 41.19 355 P **P 11 26 16.4 +1.3**
R50A IAmb IAmb 11 26 17.1
comp=Z,17nm,0.8s
R49A Shelbyville 41.29 354 P **P 11 26 16.9 +1.0**
R49A IAmb IAmb 11 26 17.6
comp=Z,21nm,0.9s
USIN University of 41.31 351 P **P 11 26 17.3 +1.2**
S44A Carbondale 41.33 349 P **P 11 26 17.5 +1.2**
S44A IAmb IAmb 11 26 19.3
comp=Z,14nm,0.8s
SIUC Southern Illin 41.35 349 P **P 11 26 16.2 -0.2**
SIUC IAmb IAmb 11 26 18.3
comp=Z,16nm,0.9s
WCI Wyandotte Cave 41.36 352 P **P 11 26 17.0 +0.4**
baz=170
WCI Wyandotte Cave 41.36 352 P **P 11 26 16.9 +0.4**
WCI IAmb IAmb 11 26 18.6
comp=Z,22nm,0.9s
FNO Franklin 41.40 338 P **P 11 26 17.9 +1.0**
TUL1 Leonard 41.41 340 P **P 11 26 18.3 +1.3**
baz=155,SNR=9.6
TUL1 Leonard 41.41 340 P **P 11 26 19.2 +2.3**
U38A Gravette 41.44 342 P **P 11 26 18.1 +0.9**
WMOK Wichita Mounta 41.48 336 P **P 11 26 18.6 +1.0**
baz=150
WMOK Wichita Mounta 41.48 336 P **P 11 26 17.4 -0.2**
WMOK IAmb IAmb 11 26 22.0
comp=Z,16nm,1.1s
MGMO Mountain Grove 41.51 345 P **P 11 26 18.7 +0.9**
MGMO IAmb IAmb 11 26 20.4
comp=Z,13nm,0.9s
Q53A Leroy 41.58 358 P **P 11 26 19.1 +0.7**
baz=177,SNR=6.4
Q58A Fox Den Farm, 41.68 2 P **P 11 26 19.3 +0.2**
baz=183
Q54A Coxs Mills 41.69 359 P **P 11 26 19.9 +0.7**
baz=178
Q54A Coxs Mills 41.69 359 P **P 11 26 20.6 +1.5**
Q55A Buckhannon 41.69 360 P **P 11 26 20.1 +0.9**
baz=179,SNR=5.4
Q52A Bidwell 41.72 357 P **P 11 26 20.4 +1.0**
baz=176
Q57A Strasburg 41.75 2 P **P 11 26 20.1 +0.4**
baz=182
OK030 Cody Creek RV 41.77 339 P **P 11 26 21.5 +1.5**
RIB01 Linhares ES 41.80 116 *e*P **P 11 26 22.0 +1.5**
OK031 S. Brethren Rd 41.81 339 P **P 11 26 22.8 +2.5**
BCOK Bluff Creek, N 41.83 338 P **P 11 26 23.4 +3.0**
Q51A Peebles 41.85 356 P **P 11 26 20.9 +0.4**
Q51A IAmb IAmb 11 26 22.5
comp=Z,29nm,1.1s
FVM French Village 41.86 347 P **P 11 26 21.4 +0.8**
FVM IAmb IAmb 11 26 23.2
comp=Z,21nm,1.2s
OK029 Liberty Lake 41.90 338 P **P 11 26 20.4 -0.5**
QUOK Quay 41.96 339 P **P 11 26 18.9 -2.6**
CCM Cathedral Cave 42.11 346 P **P 11 26 23.8 +1.1**
baz=163
CCM Cathedral Cave 42.11 346 P **P 11 26 23.6 +1.0**
MNTX Cornudas Mount 42.14 327 P **P 11 26 23.0 -0.1**
baz=140
MNTX Cornudas Mount 42.14 327 P **P 11 26 22.5 -0.6**
P56A Dayton Farm, R 42.20 1 P **P 11 26 24.1 +0.7**
baz=181
P57A Homestead Farm 42.21 2 P **P 11 26 23.9 +0.5**
baz=182
P58A Pank, Wackersv 42.24 3 P **P 11 26 23.7 0.0**
baz=183
P51A Williamsport 42.28 356 P **P 11 26 24.8 +0.8**
baz=175
P51A Williamsport 42.28 356 P **P 11 26 25.1 +1.1**
P51A IAmb IAmb 11 26 26.9
comp=Z,27nm,1.3s
S39A Bolivar 42.30 344 P **P 11 26 25.4 +1.2**
BLO Bloomington 42.32 352 P **P 11 26 24.9 +0.5**
BLO IAmb IAmb 11 26 26.1
comp=Z,18nm,0.9s
P52A Corning 42.38 357 P **P 11 26 25.4 +0.5**
baz=176
P52A Corning 42.38 357 P **P 11 26 26.1 +1.3**
P59A Jarrettsville 42.41 4 P **P 11 26 26.3 +1.3**
baz=185
Q44A Meyer Farm, Va 42.46 349 P **P 11 26 25.8 +0.4**
P49A Miami Univ. Ec 42.47 354 P **P 11 26 26.3 +0.7**
baz=172
P49A Miami Univ. Ec 42.47 354 P **P 11 26 25.3 -0.3**
P49A IAmb IAmb 11 26 26.6
comp=Z,20nm,1.0s
P48A Milroy 42.47 354 P **P 11 26 26.0 +0.4**
P48A IAmb IAmb 11 26 26.6
comp=Z,22nm,0.9s
T35A Sooner Cattle 42.57 340 P **P 11 26 27.4 +1.0**
R40A Maddies Statio 42.58 345 P **P 11 26 27.5 +1.0**
MSTX Muleshoe 42.60 331 P **P 11 26 27.1 +0.3**
baz=145,SNR=8.5
MSTX Muleshoe 42.60 331 P **P 11 26 26.5 -0.3**
CROK Carrier 42.72 338 P **P 11 26 27.9 +0.2**
MVL Millersville 42.81 4 P **P 11 26 28.8 +0.5**
MVL IAmb IAmb 11 26 31.6
comp=Z,30nm,1.1s
AMTX Amarillo 42.84 333 P **P 11 26 30.6 +1.8**
baz=147
AMTX Amarillo 42.84 333 P **P 11 26 29.7 +0.9**
AMTX IAmb IAmb 11 26 33.0
comp=Z,20nm,1.1s
O52A Adamsville 42.85 358 P **P 11 26 29.9 +1.2**
baz=177
O58A Lewisberry 42.89 3 P **P 11 26 29.8 +0.8**
baz=184
O57A Amberson 42.95 2 P **P 11 26 30.6 +1.1**
baz=183,SNR=5.8
O53A New Philadelph 42.96 358 P **P 11 26 30.3 +0.8**
baz=178
O53A New Philadelph 42.96 358 P **P 11 26 30.4 +0.8**
O53A IAmb IAmb 11 26 31.7
comp=Z,19nm,0.9s
O56A Blue Knob Stat 42.97 1 P **P 11 26 30.6 +0.9**
baz=182
KAN13 South Haven SW 42.99 339 P **P 11 26 30.0 +0.1**
U32A Winter Ranch, 43.00 337 P **P 11 26 30.3 +0.3**
PAGS Pennsylvania G 43.01 3 P **P 11 26 30.6 +0.6**
PAGS IAmb IAmb 11 26 33.6
comp=Z,36nm,1.2s
ACSO Alum Creek Sta 43.02 356 P **P 11 26 31.2 +1.1**
baz=175
ACSO Alum Creek Sta 43.02 356 P **P 11 26 31.1 +1.1**
O59A Robesonia 43.13 4 P **P 11 26 31.9 +1.0**
baz=185
O60A Telford 43.20 5 P **P 11 26 32.2 +0.8**
baz=186
KS20 Mayfield South 43.21 339 P **P 11 26 31.4 -0.3**
KAN01 Argonia South 43.22 339 P **P 11 26 32.3 +0.7**
P43A Skaggs, Pawnee 43.27 349 P **P 11 26 32.6 +0.5**
SSPA Standing Stone 43.36 2 P **P 11 26 33.8 +1.1**
baz=182
SSPA Standing Stone 43.36 2 P **P 11 26 34.0 +1.3**
SSPA IAmb IAmb 11 26 36.1
comp=Z,18nm,0.9s
LUPA Lehigh Univers 43.48 5 P **P 11 26 36.8 +3.1**
LUPA IAmb IAmb 11 26 37.7
comp=Z,22nm,1.0s
N57A Milroy 43.49 2 P **P 11 26 34.3 +0.4**
baz=183
O44A Mansfield 43.58 350 P **P 11 26 34.5 0.0**
O44A IAmb IAmb 11 26 35.9
comp=Z,40nm,1.4s
N58A Sunbury 43.62 3 P **P 11 26 35.7 +0.8**
baz=184
N54A Moraine State 43.65 360 P **P 11 26 35.8 +0.7**
baz=180
N54A Moraine State 43.65 360 P **P 11 26 35.9 +0.8**
N54A IAmb IAmb 11 26 37.5
comp=Z,16nm,0.8s
N51A Ashland 43.67 357 P **P 11 26 35.4 +0.1**
N59A State Game Lan 43.76 4 P **P 11 26 37.0 +1.0**
baz=186
N59A State Game Lan 43.76 4 P **P 11 26 38.8 +2.7**
N59A IAmb IAmb 11 26 40.1
comp=Z,30nm,1.2s
N60A Cedar Hill Far 43.77 5 P **P 11 26 37.3 +1.2**
baz=186
N47A Urbana 43.90 354 P **P 11 26 37.6 +0.4**
N47A IAmb IAmb 11 26 38.1
comp=Z,25nm,1.0s
M51A Elyria 44.08 357 P **P 11 26 39.1 +0.5**
baz=176
M57A Sunshine Farm, 44.09 3 P **P 11 26 39.5 +0.8**
baz=184
M57A Sunshine Farm, 44.09 3 P **P 11 26 41.2 +2.6**
HDIL Hopedale 44.11 350 P **P 11 26 39.5 +0.7**
baz=166
HDIL Hopedale 44.11 350 P **P 11 26 39.5 +0.7**
HDIL IAmb IAmb 11 26 40.0
comp=Z,23nm,0.8s
M53A WI Miller and 44.14 359 P **P 11 26 39.4 +0.4**
baz=178
M58A Price's Panora 44.16 4 P **P 11 26 39.6 +0.4**
baz=184
M55A Ridgway 44.17 1 P **P 11 26 40.9 +1.5**
M55A IAmb IAmb 11 26 41.6
comp=Z,16nm,0.9s
M50A Fremont 44.19 356 P **P 11 26 40.6 +1.2**
M54A Oil Creek Stat 44.20 0 P **P 11 26 40.2 +0.7**
baz=180
M56A Emporium 44.20 2 P **P 11 26 40.4 +0.8**
baz=182
M56A Emporium 44.20 2 P **P 11 26 40.5 +0.9**
M56A IAmb IAmb 11 26 42.0

comp=Z,26nm,0.8s
M61A Granite Spring 44.34 6 P P 11 26 41.4 +0.8
baz=188
KSPA Keystone Colle 44.40 4 P P 11 26 42.7 +1.6
KSPA IAmb IAmb 11 26 44.9
comp=Z,30nm,1.2s
M59A Waymart 44.41 5 P P 11 26 42.0 +0.8
baz=186
N41A Harden Midland 44.56 348 P P 11 26 43.3 +0.9
N41A IAmb IAmb 11 26 43.9
comp=Z,13nm,0.9s
KSU1 Kansas State U 44.58 341 P P 11 26 43.7 +1.1
baz=156,SNR=10.0
KSU1 Kansas State U 44.58 341 P P 11 26 44.4 +1.8
L53A Girard 44.65 359 P P 11 26 43.2 +0.1
baz=179
M63A Gales Ferry 44.65 8 P P 11 26 43.2 +0.1
baz=191
R32A Long Quarter, 44.69 339 P P 11 26 43.0 -0.5
BNM Barren Site 44.69 328 P P 11 26 43.4 -0.5
L57A Andrews Acres 44.77 3 P P 11 26 44.9 +0.8
baz=184,SNR=7.6
L48A N Adams 44.83 355 P P 11 26 45.0 +0.4
L56A Greenwood 44.87 2 P P 11 26 45.7 +0.8
baz=183
L56A Greenwood 44.87 2 P P 11 26 46.4 +1.5
L56A IAmb IAmb 11 26 47.3
comp=Z,17nm,0.8s
L58A Harry Jones Me 44.88 4 P P 11 26 45.4 +0.5
baz=185
L60A Shokan 44.96 6 P P 11 26 47.0 +1.4
baz=188
BINY Binghamton 45.02 4 P P 11 26 47.3 +1.2
baz=185,SNR=5.5
BINY Binghamton 45.02 4 P P 11 26 47.9 +1.8
L59A Walton 45.08 5 P P 11 26 47.8 +1.1
baz=186
L59A Walton 45.08 5 P P 11 26 48.1 +1.5
WVNY West Valley, N 45.11 1 P P 11 26 47.7 +0.9
WVNY IAmb IAmb 11 26 49.2
comp=Z,27nm,1.0s
L63A North Scituate 45.17 9 P P 11 26 47.9 +0.7
baz=191
ANMO Albuquerque 45.21 329 P P 11 26 48.2 +0.3
baz=141
ANMO Albuquerque 45.21 329 P P 11 26 48.3 +0.3
ANMO IAmb IAmb 11 26 53.5
comp=Z,16nm,0.9s
L61A Hillsdale 1, H 45.24 7 P P 11 26 49.4 +1.6
baz=188
CBKS Cedar Bluff 45.41 338 P P 11 26 50.9 +1.6
baz=151
K56A Middlesex 45.44 3 P P 11 26 50.7 +1.2
baz=183
K57A Scipio Center 45.52 3 P P 11 26 51.6 +1.6
baz=184,SNR=6.5
K50A Casco 45.54 357 P P 11 26 50.5 +0.4
L42A Oliver, Polo 45.59 350 P P 11 26 50.8 +0.2
L61B Northampton 45.59 7 P P 11 26 51.7 +1.1
baz=190
K58A Earlville 45.60 4 P P 11 26 51.9 +1.1
baz=186
K59A Cooperstown 45.68 5 P P 11 26 53.1 +1.8
baz=187
K62A Royalston 45.87 8 P P 11 26 54.6 +1.9
baz=190
L40A Anamosa 45.94 348 P P 11 26 53.5 +0.2
T25A Trinidad 45.95 332 P P 11 26 54.5 +0.7
baz=144
T25A Trinidad 45.95 332 P P 11 26 54.1 +0.3
T25A IAmb IAmb 11 26 58.9
comp=Z,26nm,1.3s
K63A Dunstable 45.99 8 P P 11 26 55.7 +2.0
baz=191
J56A Wolcott 46.04 3 P P 11 26 55.4 +1.4
baz=184
K43A Burlington 46.05 351 P P 11 26 55.0 +0.8
K43A IAmb IAmb 11 26 55.8
comp=Z,25nm,0.9s
J47A Sumner 46.15 355 P P 11 26 56.0 +1.0
J57A Williamstown 46.22 4 P P 11 26 56.4 +0.8
baz=185
J58A Remsen 46.23 5 P P 11 26 56.2 +0.6
baz=186
SCIA State Center 46.24 346 P P 11 26 57.2 +1.4
baz=161
SCIA State Center 46.24 346 P P 11 26 56.2 +0.5
J60A Lant Hill Farm 46.29 6 P P 11 26 57.0 +0.9
baz=189
N33A J Bar K, Exete 46.34 341 P P 11 26 57.1 +0.5
J59A Piesco 46.40 5 P P 11 26 58.3 +1.4
baz=187
J59A Piesco 46.40 5 P P 11 26 58.2 +1.2
ACCN Adirondack Com 46.40 6 P P 11 26 58.8 +1.8
I51A Listowel 46.51 359 P P 11 26 59.1 +1.3
baz=178
JFWS Jewell Farm 46.57 349 P P 11 26 58.5 +0.2
baz=165,SNR=7.2
JFWS Jewell Farm 46.57 349 P P 11 26 58.8 +0.5
I58A Old Forge 46.58 5 P P 11 26 59.1 +0.7
baz=186
I49A Point Hope 46.71 357 P P 11 26 59.4 +0.1
KSCO Kaye Shedlock' 46.72 335 P P 11 27 00.9 +1.1
baz=148
KSCO Kaye Shedlock' 46.72 335 IAmb IAmb 11 27 04.8
comp=Z,19nm,0.8s
214A Organ Pipe Nat 46.74 320 P P 11 27 01.1 +1.2
baz=132
I57A Carthage 46.77 4 P P 11 27 01.7 +1.8
baz=185
I59A Olmsteadville 46.79 6 P P 11 27 01.6 +1.6
baz=188
X18A Snowflake 46.80 325 P P 11 27 00.2 -0.3
K38A Parkersburg 46.84 347 P P 11 27 00.2 -0.1
I60A Shoreham 46.90 6 P P 11 27 02.0 +1.2
baz=189
SDCO Great Sand Dun 46.95 332 P P 11 27 01.9 +0.2
baz=144
SDCO Great Sand Dun 46.95 332 P P 11 27 02.3 +0.5
SDCO IAmb IAmb 11 27 07.1
comp=Z,11nm,0.9s
W18A Petrified Fore 47.11 326 P P 11 27 02.9 0.0
baz=137
W18A Petrified Fore 47.11 326 P P 11 27 03.5 +0.6
W18A IAmb IAmb 11 27 08.9
comp=Z,34nm,1.4s
I61A Oroboro, Fairl 47.11 7 P P 11 27 03.6 +1.1
baz=190
BGNE Belgrade 47.17 341 P P 11 27 03.4 +0.4
H53A Bobcaygeon 47.27 1 P P 11 27 04.6 +0.8
baz=181
I42A Draeger Farm, 47.30 351 P P 11 27 04.2 +0.2
I42A IAmb IAmb 11 27 05.6
comp=Z,16nm,0.9s
H57A Richville 47.31 4 P P 11 27 05.0 +1.0
baz=186
LBNH Lisbon 47.45 8 P P 11 27 06.0 +0.8
baz=190
SADO Sadowa 47.46 1 P P 11 27 05.2 0.0
SADO IAmb IAmb 11 27 07.0
comp=Z,24nm,1.1s
LONY Lake Ozonia 47.54 5 P P 11 27 06.4 +0.5
baz=187
LONY Lake Ozonia 47.54 5 P P 11 27 05.5 -0.3
LONY IAmb IAmb 11 27 09.5
comp=Z,28nm,1.3s
X16A Lo Mia Camp, P 47.58 324 P P 11 27 06.7 +0.1
S22A 4UR Ranch, Cre 47.59 331 P P 11 27 07.1 +0.3
baz=142
I40A Norwalk 47.59 349 P P 11 27 06.0 -0.2
I40A IAmb IAmb 11 27 08.3
comp=Z,24nm,1.1s
H59A Cadyville 47.65 6 P P 11 27 07.4 +0.7
baz=188
H60A Morristown 47.67 7 P P 11 27 07.6 +0.7
baz=189
H43A Windswept, Lux 47.70 352 P P 11 27 06.6 -0.4
GLMI Grayling 47.71 355 S 11 33 59.5 -3.8
H61A Lyndonville 47.74 8 P P 11 27 08.3 +0.8
baz=190
Q24A Divide 47.77 333 P P 11 27 09.2 +1.0
baz=145
FRNY Flat Rock 47.84 6 P P 11 27 09.7 +1.5
FRNY IAmb IAmb 11 27 11.6
comp=Z,23nm,1.1s
G57A Newington 47.98 5 P P 11 27 10.7 +1.4
baz=186,SNR=5.9
MVCO Mesa Verde 48.01 329 P P 11 27 09.9 0.0
baz=140
MVCO Mesa Verde 48.01 329 P P 11 27 09.1 -0.8
MVCO IAmb IAmb 11 27 14.3
comp=Z,15nm,1.4s
G54A Lake Saint Pet 48.11 2 P P 11 27 11.4 +1.1
baz=182
G58A Ormstown 48.11 5 P P 11 27 11.0 +0.8
baz=188
H63A New Sharon 48.15 9 P P 11 27 11.6 +1.0
baz=193
G60A Masonville 48.24 7 P P 11 27 13.0 +1.6
baz=190
I37A Lemond, Waseca 48.28 347 P P 11 27 12.4 +0.8
I37A IAmb IAmb 11 27 13.2
comp=Z,19nm,0.9s
WUAZ Wupatki 48.32 325 P P 11 27 13.2 +0.8
baz=136,SNR=10
WUAZ Wupatki 48.32 325 P P 11 27 12.8 +0.5
WUAZ IAmb IAmb 11 27 19.1
comp=Z,20nm,1.2s
G61A St-Isidore-de- 48.53 8 P P 11 27 15.0 +1.5
baz=191
G62A West of Eustis 48.61 9 P P 11 27 16.1 +1.9
baz=192
ALGO Algonquin Park 48.67 2 P P 11 27 15.1 +0.6
baz=182
PV01 Paradox Valley 48.75 330 P P 11 27 15.1 -0.6
PV01 IAmb IAmb 11 27 21.1
comp=Z,12nm,1.1s
ECSD EROS Data Cent 48.83 344 P P 11 27 17.3 +1.5
baz=157,SNR=10
ECSD EROS Data Cent 48.83 344 P P 11 27 16.9 +1.0
ECSD IAmb IAmb 11 27 18.3
comp=Z,17nm,0.9s
PKME Peaks-Kenny Pk 48.85 10 P P 11 27 16.6 +0.6
baz=194
PV15 Paradox Valley 48.87 330 P P 11 27 16.2 -0.3
PV02 Paradox Valley 48.89 330 P P 11 27 16.1 -0.6
F59A Saint Guilaume 48.94 6 P P 11 27 17.5 +0.9
baz=189
PV03 Paradox Valley 48.98 330 P P 11 27 17.3 -0.1
PV03 IAmb IAmb 11 27 22.5
comp=Z,18nm,0.9s
PV12 Saucer Basin, 49.01 330 P P 11 27 17.7 +0.1
PV18 Skein Mesa, Pa 49.01 329 P P 11 27 17.9 +0.3
PV18 IAmb IAmb 11 27 22.6
comp=Z,15nm,0.9s
F42A Maple Grove Fa 49.01 352 P P 11 27 18.5 +1.3
PV07 Paradox Valley 49.02 330 P P 11 27 17.2 -0.5
PV07 IAmb IAmb 11 27 23.0
comp=Z,14nm,1.0s
PV11 David Mesa, Pa 49.03 330 P P 11 27 17.7 -0.1
PV17 East Wray Mesa 49.06 329 P P 11 27 18.1 +0.1
PV17 IAmb IAmb 11 27 23.0
comp=Z,14nm,0.8s
PV16 Nyswonger Mesa 49.06 330 P P 11 27 18.2 +0.2
PV16 IAmb IAmb 11 27 23.1
comp=Z,19nm,1.1s
PV19 Morning Glory 49.09 329 IAmb IAmb 11 27 23.2
comp=Z,13nm,1.1s
PV20 West Nyswonger 49.11 330 P P 11 27 18.0 -0.4
PV20 IAmb IAmb 11 27 23.3
comp=Z,12nm,1.0s
PV04 Paradox Valley 49.12 330 P P 11 27 16.8 -1.6
F60A Warwick 49.15 7 P P 11 27 19.6 +1.3
baz=190
PV14 Lion Creek, Pa 49.16 330 P P 11 27 18.0 -0.9
PV14 IAmb IAmb 11 27 23.8
comp=Z,11nm,0.9s
PV22 Blue Mesa, Par 49.17 330 P P 11 27 18.6 -0.2
PV22 IAmb IAmb 11 27 23.9
comp=Z,8.3nm,0.9s
PV23 Carpenter Ridg 49.22 330 P P 11 27 19.6 +0.3
PV23 IAmb IAmb 11 27 26.1
comp=Z,20nm,1.4s
SPMN Marine on St. 49.30 348 P P 11 27 19.8 +0.4
baz=163,SNR=5.4
SPMN Marine on St. 49.30 348 P P 11 27 19.3 -0.1
SPMN IAmb IAmb 11 27 20.9
comp=Z,18nm,1.1s
E57A Chemin Saint G 49.35 5 P P 11 27 20.1 +0.2
baz=187
E58A La Victoria 49.40 6 P P 11 27 21.5 +1.4
baz=188
E56A St. Veronique 49.41 4 P P 11 27 21.6 +1.4
baz=186
E43A Lone Tree Farm 49.48 353 P P 11 27 21.0 +0.3
U15A North Rim 49.49 325 P P 11 27 21.6 +0.2
W13A Hualapai Mount 49.51 323 P P 11 27 21.7 +0.2
F64A Sherman 49.60 10 P P 11 27 23.1 +1.4
baz=194
E60A Ste Agathe de 49.61 8 P P 11 27 23.3 +1.5
baz=191
IRM Iron Mountain 49.66 321 P P 11 27 22.5 +0.1
baz=131
E61A Lac Etchemin 49.80 8 P P 11 27 24.8 +1.6
baz=192
D55A Sainte-Anne-du 49.85 4 P P 11 27 24.1 +0.5
baz=185
F36A Milaca 50.06 347 P P 11 27 25.5 +0.3
F36A IAmb IAmb 11 27 27.3
comp=Z,15nm,1.1s
BELC Belle Mtn. Jos 50.10 320 P P 11 27 25.8 -0.1
baz=130
E63A Oxbow 50.13 10 P P 11 27 27.3 +1.6
baz=195
O20A White River Ci 50.14 332 P P 11 27 26.5 +0.3
baz=142
O20A White River Ci 50.14 332 P P 11 27 25.4 -0.8
O20A IAmb IAmb 11 27 33.7
comp=Z,19nm,1.4s
TPFO Pinon Flats 50.15 320 P P 11 27 27.0 +0.7
baz=129
PFO Pinyon Flats O 50.15 320 P P 11 27 26.7 +0.4
baz=129
D58A Chemin du LacG 50.15 6 P P 11 27 27.0 +1.1
baz=189
SUSD Miller 50.16 342 P P 11 27 27.2 +1.2
baz=155
SUSD Miller 50.16 342 P P 11 27 25.5 -0.5
KNB Kanab 50.21 325 P P 11 27 26.3 -0.5
D60A Saint Jean D'O 50.21 8 P P 11 27 27.9 +1.6
baz=191
E64A Bridgewater 50.23 11 P P 11 27 27.9 +1.4
baz=195
LCMT Little Creek M 50.45 325 P P 11 27 28.9 +0.4
LATQ La Tuque 50.45 6 P P 11 27 29.5 +1.4
baz=189,SNR=6.1
LATQ La Tuque 50.45 6 P P 11 27 29.5 +1.4
LATQ IAmb IAmb 11 27 31.1
comp=Z,15nm,1.0s
SRU San Rafael Swe 50.49 329 P P 11 27 29.0 +0.2
D61A St Aubert, Com 50.60 8 P P 11 27 29.7 +0.5
baz=192
F33A 5 Mile Ranch, 50.69 345 P P 11 27 31.1 +1.0
F33A IAmb IAmb 11 27 32.1
comp=Z,14nm,0.9s
SZCU Shurtz Canyon 50.77 326 P P 11 27 30.9 -0.1
BBRC Big Bear Solar 50.86 320 P P 11 27 32.0 +0.3
baz=129
P17A Butcher Ranch, 50.87 329 P P 11 27 31.6 -0.1
CCUT Cedar City 50.89 325 P P 11 27 33.0 +1.0
MSU Marysvale 50.92 327 P P 11 27 31.9 -0.2
MVU Marysvale 50.93 327 P P 11 27 31.9 -0.4
TUQ Turquoise Moun 50.98 322 P P 11 27 32.9 +0.4
baz=131
RDMU Red Mountain 51.12 331 P P 11 27 33.2 -0.4
SHPR Sheep Range 51.22 323 P P 11 27 34.6 +0.3
CIS Catalina Islan 51.31 318 P P 11 27 33.9 -1.1
baz=127
BFSC Mount Baldy Ra 51.32 319 P P 11 27 34.6 -0.5
baz=128
GSC Goldstone, Bar 51.44 321 P P 11 27 36.3 +0.3
baz=130
GSC Goldstone, Bar 51.44 321 P P 11 27 36.3 +0.3
GSC IAmb IAmb 11 27 44.3
comp=Z,11nm,1.2s
SHOC Shoshone, Teco 51.50 322 P P 11 27 35.3 -1.0
baz=131
RSSD Black Hills 51.62 338 P P 11 27 37.3 0.0
baz=148
RSSD Black Hills 51.62 338 IAmb IAmb 11 27 42.1
comp=Z,9.9nm,1.2s
EYMN Ely 51.66 350 P P 11 27 37.8 +0.6
baz=165
EYMN Ely 51.66 350 P P 11 27 38.1 +0.8
EYMN IAmb IAmb 11 27 39.0
comp=Z,12nm,0.8s
LSQQ Lebel-sur-Quev 51.80 2 P P 11 27 38.0 -0.2
baz=183
PSUT Pine Spring 51.86 326 P P 11 27 39.5 +0.3
EDW2 Edwards Air Fo 51.94 320 P P 11 27 40.0 +0.3
baz=128
LRMC Laurel Mtn Rad 52.11 321 P P 11 27 41.8 +0.8
baz=129
TPNV Topopah Spring 52.17 323 P P 11 27 42.3 +0.8
baz=131
FURC Furnace Creek, 52.23 322 P P 11 27 41.7 +0.1
baz=130
MPMC Manual Prospec 52.35 321 P P 11 27 42.3 -0.6
baz=130
SPR3 Spring Creek 3 52.45 326 P P 11 27 43.8 +0.2
SPR3 IAmb IAmb 11 27 48.9
comp=Z,17nm,1.4s
DUG Dugway, Tooele 52.48 328 P P 11 27 43.9 +0.3
baz=137
DUG Dugway, Tooele 52.48 328 P P 11 27 44.1 +0.4
B35A Bob, Littlefor 52.48 348 P P 11 27 44.4 +1.1
B35A IAmb IAmb 11 27 45.3
comp=Z,15nm,0.8s
MATQ Matagami 52.48 2 P P 11 27 43.3 0.0
baz=182
E28A Huff 52.61 342 P P 11 27 45.3 +0.9
R11A Troy Canyon, C 52.71 325 P P 11 27 45.2 -0.3
baz=133
R11A Troy Canyon, C 52.71 325 P P 11 27 46.0 +0.6
ISA Isabella, Lake 52.73 320 P P 11 27 44.4 -1.1
baz=128
PD31 Pinedale Array 52.82 333 P P 11 27 45.6 -0.7
PDAR Pinedale Array 52.82 333 P P 11 27 45.0 -1.2
comp=Z,2.3nm,0.9s,baz=126,slow=6.9,SNR=8.0
PDAR PcP PcP 11 28 53.8 -1.8
comp=Z,0.8nm,0.6s,baz=140,slow=7.0,SNR=2.7
PDAR LR LR 11 50 54.2
comp=Z,70nm,19.1s,baz=140,slow=37
GRAC Grapevine Rang 52.88 322 P P 11 27 46.8 +0.2
baz=130
HWUT Hardware Ranch 52.88 330 P P 11 27 46.5 -0.2
HWUT IAmb IAmb 11 27 51.4
comp=Z,14nm,1.1s
AGMN Agassiz Nation 52.88 347 P P 11 27 46.3 0.0
baz=160,SNR=10
AGMN Agassiz Nation 52.88 347 P P 11 27 47.4 +1.1
CWC Cottonwood Cre 52.96 321 P P 11 27 46.8 -0.5
baz=129
BGU Big Grassy Mou 53.12 329 P P 11 27 48.8 +0.4
VES Vestal, Richgr 53.23 320 P P 11 27 48.6 -0.5
baz=128
MDND Maddock 53.44 343 P P 11 27 50.5 +0.1
baz=155,SNR=12
MDND Maddock 53.44 343 P P 11 27 50.2 -0.3
HVU Hansel Valley 53.62 330 P P 11 27 51.1 -0.9
ELK Elko 54.17 327 P P 11 27 56.6 +0.4
OMMB Old Mammoth Mi 54.27 322 P P 11 27 57.4 +0.3
OMMB IAmb IAmb 11 28 05.1
comp=Z,8.3nm,0.9s
NV11 Mina Array Sit 54.28 323 P P 11 27 57.0 0.0
MDPB Devils Postpil 54.33 322 P P 11 27 57.0 -0.5
NVAR Mina Array Bea 54.37 323 P P 11 27 55.5 -2.2
comp=Z,1.9nm,0.7s,baz=142,slow=7.4,SNR=17
NVAR Mina Array Bea 54.37 323 P P 11 27 56.6 -1.0
LHV Little Huntoon 54.37 323 P P 11 27 57.9 +0.5
LHV IAmb IAmb 11 28 05.4
comp=Z,6.8nm,0.8s
RLMT Red Lodge 54.55 335 P P 11 27 58.6 -0.2
baz=143
KVN Kaiserville 54.65 324 P P 11 27 59.2 -0.5
ULM Lac du Bonnet 54.72 347 P P 11 27 57.7 -2.1
comp=Z,17nm,0.7s,baz=153,slow=7.4,SNR=24
ULM PcP PcP 11 29 03.4 +1.0
comp=Z,3.8nm,0.6s,baz=204,slow=1.5,SNR=2.6
ULM Lac du Bonnet 54.72 347 P P 11 28 00.1 +0.4
WAKR Walker 55.10 322 P P 11 28 03.3 +0.3
YHL Hebgen Lake 55.18 333 P P 11 28 03.9 +0.4
GCMT Greycliff 55.25 335 P P 11 28 03.4 -0.5
VCNR Virginia City 55.73 323 P P 11 28 07.7 +0.2
HLID Hailey 55.74 330 P P 11 28 06.6 -0.9
baz=137
BCYI Bear Canyon 55.80 331 P P 11 28 08.3 +0.4
MCMT McKenzie Canyo 55.92 332 P P 11 28 06.3 -2.5
BOZ Bozeman (W) 55.95 333 P P 11 28 08.4 -0.6
baz=140,SNR=7.0
BOZ Bozeman (W) 55.95 333 P P 11 28 08.2 -0.7
BOZ IAmb IAmb 11 28 12.9
comp=Z,9.7nm,1.2s
AFDM Forest Hills D 56.32 322 P P 11 28 10.9 -0.6
MFID Camas Ranch 56.36 329 P P 11 28 11.8 0.0
MFID IAmb IAmb 11 28 17.0
comp=Z,18nm,1.4s
BEKR Beckworth 56.51 323 P P 11 28 13.2 +0.2
ORV Oroville 57.01 322 P P 11 28 16.9 +0.5
ORV IAmb IAmb 11 28 24.6
comp=Z,8.7nm,0.9s
EGMT Eagleton 57.08 336 P P 11 28 16.6 -0.2
baz=143
WVOR Wild Horse Val 57.18 326 P P 11 28 17.5 -0.2
WVOR IAmb IAmb 11 28 24.9
comp=Z,12nm,1.0s
O03E Paynes Creek 57.65 323 P P 11 28 20.1 -0.9
baz=128
MOD Modoc Plateau 57.77 325 IAmb IAmb 11 28 39.0
comp=Z,11nm,1.4s
MSO Missoula 57.93 333 P P 11 28 22.1 -0.8
baz=138
MSO Missoula 57.93 333 IAmb IAmb 11 28 26.9
comp=Z,11nm,1.3s
O02D Mt. Diablo Mer 58.18 322 P P 11 28 24.3 -0.4
baz=127
SCHQ Schefferville 58.52 9 LR LR 11 54 15.8
comp=Z,34nm,19.1s,baz=47,slow=37
M04C Macdoel 58.59 324 P P 11 28 27.2 -0.4
baz=128
K05A Summer Lake 58.63 325 P P 11 28 27.7 -0.3
M02C Callahan 58.95 323 P P 11 28 29.0 -1.0
baz=127
YBH Yreka Blue Hor 59.07 324 P P 11 28 33.0 +2.1
J05D Fort Rock, OR 59.18 326 P P 11 28 31.4 -0.3
baz=130
G08A Pilot Rock 59.27 329 P P 11 28 31.8 -0.5
G08A IAmb IAmb 11 28 36.5
comp=Z,11nm,1.1s
PINE Pine Mountain 59.34 326 P P 11 28 32.1 -0.8
PINE IAmb IAmb 11 28 40.9
comp=Z,13nm,1.0s
WALA Waterton Lakes 59.60 335 P P 11 28 34.7 +0.2
I05D Terrebonne, OR 59.92 327 P P 11 28 36.5 -0.1
baz=130
I04A Tendick Farm, 60.17 326 P P 11 28 38.6 +0.2
baz=129
K02D Willamette Mer 60.22 324 P P 11 28 38.3 -0.5
baz=127
FFC Flin Flon 60.30 345 P P 11 28 39.2 +0.2
FFC IAmb IAmb 11 28 42.7
comp=Z,18nm,1.4s
NEW Newport 60.45 332 P P 11 28 40.1 -0.1
baz=136
NEW Newport 60.45 332 P P 11 28 41.0 +0.8
YKA Yellowknife Ar 70.36 344 P P 11 29 42.3 -1.7
comp=Z,4.4nm,0.9s,baz=129,slow=6.5,SNR=13
YKA LR LR 12 03 55.0
comp=Z,48nm,18.4s,baz=0.0,slow=39
DLBC Dease Lake 72.95 335 P P 11 29 59.6 -0.3
DLBC IAmb IAmb 11 30 07.2
comp=Z,11nm,1.1s
LIC Lamto 75.19 83 *e*PKIKP P 11 30 11.9 -1.8
comp=Z,34nm,1.1s
TIC Toumodi 75.23 82 *e*PKIKP P 11 30 12.3 -1.7
DBIC Dimbokro 75.39 82 P P 11 30 13.6 -1.3
comp=Z,11nm,1.1s,baz=284,slow=8.3,SNR=5.3
DBIC LR LR 12 03 52.3
comp=Z,51nm,18.1s,baz=251,slow=36
DBIC Dimbokro 75.39 82 P P 11 30 14.2 -0.7
DBIC IAmb IAmb 11 30 18.3
comp=Z,26nm,1.5s
KIC Kosan Boka 75.48 83 *e*PKIKP P 11 30 13.6 -1.8
comp=Z,13nm,0.7s
ICESG Greenland Ices 76.87 14 *i* P P 11 30 24.0 +1.4
ICESG IAmb IAmb 11 30 24.7
comp=Z,26nm,0.9s
SUMG Summit 79.74 12 P P 11 30 39.0 +0.4

SUMG					IAmb	IAmb	11 30 41.6	
	comp=Z,18nm,0.9s							
SUMG	**Summit**	**79.74**	**12**	*i* P	**P**	**P**	**11 30 40.7**	**+2.2**
	comp=Z,46nm,0.9s							
SUMG	**Summit**	**79.74**	**12**	*i* P	**P**	**P**	**11 30 40.7**	**+2.2**
SUMG					IAmb	IAmb	11 30 41.9	
	comp=Z,46nm,0.9s							
DAWY	**Dawson**	**79.80**	**337**	P	**P**	**P**	**11 30 41.3**	**+2.7**
INK	**Inuvik**	**80.04**	**342**	P	**P**	**P**	**11 30 38.8**	**-0.9**
INK					IAmb	IAmb	11 30 43.5	
	comp=Z,17nm,1.1s							
BCAR	**Beaver Creek A**	**80.28**	**336**	P	**P**	**P**	**11 30 40.9**	**-0.4**
GLB	**Gilahina Butte**	**80.44**	**334**	IAmb	IAmb		11 30 45.9	
	comp=Z,16nm,1.2s							
EGAK	**Eagle**	**80.82**	**338**	P	**P**	**P**	**11 30 43.3**	**-0.6**
EGAK					IAmb	IAmb	11 30 47.6	
	comp=Z,16nm,1.1s							
K27K	**Chicken**	**80.83**	**337**	P	**P**	**P**	**11 30 43.6**	**-0.5**
	baz=116							
K27K	**Chicken**	**80.83**	**337**	P	**P**	**P**	**11 30 46.9**	**+2.8**
K27K					IAmb	IAmb	11 30 49.2	
	comp=Z,16nm,1.4s							
N25K	**Chitina, Valde**	**80.85**	**334**	P	**P**	**P**	**11 30 43.0**	**-1.4**
	baz=114							
L26K	**Log Cabin Wild**	**80.91**	**336**	P	**P**	**P**	**11 30 43.3**	**-1.3**
	baz=115							
ESDC	**Sonseca Array**	**80.97**	**49**	P	**P**	**P**	**11 30 46.1**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=325,slow=38,SNR=3.8							
ESDC					LR	LR	12 05 14.2	
	comp=Z,24nm,18.8s,baz=0.0,slow=35							
ESDC	**Sonseca Array**	**80.97**	**49**	P	**P**	**P**	**11 30 47.8**	**+2.3**
KLU	**Klutina**	**81.39**	**334**	P	**P**	**P**	**11 30 47.7**	**+0.4**
KLU					IAmb	IAmb	11 30 50.7	
	comp=Z,11nm,1.0s							
DOT	**Dot Lake**	**81.46**	**336**	P	**P**	**P**	**11 30 48.7**	**+1.2**
SCRK	**Sand Creek**	**81.57**	**336**	P	**P**	**P**	**11 30 47.2**	**-1.0**
	baz=114							
M24K	**Tolsona, Glenn**	**81.73**	**334**	P	**P**	**P**	**11 30 47.4**	**-1.6**
	baz=112							
M24K	**Tolsona, Glenn**	**81.73**	**334**	P	**P**	**P**	**11 30 48.2**	**-0.8**
M24K					IAmb	IAmb	11 30 52.9	
	comp=Z,24nm,1.1s							
PAX	**Paxson**	**81.77**	**335**	P	**P**	**P**	**11 30 48.2**	**-1.0**
RIDG	**Independent Ri**	**81.82**	**336**	P	**P**	**P**	**11 30 49.0**	**-0.4**
SCM	**Sheep Creek Mo**	**82.14**	**334**	P	**P**	**P**	**11 30 50.3**	**-0.9**
SCM					IAmb	IAmb	11 30 55.0	
	comp=Z,14nm,1.1s							
SCO	**Scoresbysund**	**82.45**	**17**	*i* P	**P**	**P**	**11 30 54.2**	**+1.7**
	comp=Z,11nm,1.0s							
SCO	**Scoresbysund**	**82.45**	**17**	*i* P	**P**	**P**	**11 30 54.2**	**+1.7**
SCO					IAmb	IAmb	11 30 56.0	
	comp=Z,11nm,1.0s							
O22K	**Cooper Landing**	**82.76**	**332**	P	**P**	**P**	**11 30 53.8**	**-0.5**
	baz=109							
GHO	**Glory Hole Cre**	**82.83**	**333**	P	**P**	**P**	**11 30 54.6**	**-0.1**
GHO					IAmb	IAmb	11 30 58.4	
	comp=Z,12nm,1.0s							
HDA	**Harding Lake**	**82.93**	**336**	P	**P**	**P**	**11 30 53.8**	**-1.3**
	baz=112							
HDA	**Harding Lake**	**82.93**	**336**	P	**P**	**P**	**11 30 56.4**	**+1.3**
EUNU	**Eureka**	**82.94**	**359**	P	**P**	**P**	**11 30 55.4**	**+0.4**
RC01	**Rabbit Creek A**	**82.97**	**333**	P	**P**	**P**	**11 30 54.6**	**-0.7**
	baz=109							
IL18	**Eielson Array**	**82.99**	**337**	P	**P**	**P**	**11 30 54.2**	**-1.3**
IL31		**83.04**	**337**	P	**P**	**P**	**11 30 54.3**	**-1.3**
ILAR	**Eielson Array**	**83.04**	**337**	P	**P**	**P**	**11 30 53.7**	**-2.0**
	comp=Z,3.6nm,1.0s,baz=129,slow=2.4,SNR=10.0							
MCK	**McKinley**	**83.50**	**335**	P	**P**	**P**	**11 30 57.4**	**-0.8**
	baz=110							
MDM	**Murphy Dome**	**83.65**	**337**	P	**P**	**P**	**11 30 58.5**	**-0.3**
MDM					IAmb	IAmb	11 31 02.1	
	comp=Z,12nm,1.1s							
NEA2	**Nenana**	**83.85**	**336**	P	**P**	**P**	**11 30 59.0**	**-0.9**
	baz=110,SNR=5.6							
BWN	**Browne**	**83.87**	**336**	P	**P**	**P**	**11 30 57.8**	**-2.1**
SKT	**Skwentna**	**84.06**	**333**	P	**P**	**P**	**11 30 59.6**	**-1.4**
SKT					IAmb	IAmb	11 31 04.3	
	comp=Z,9.9nm,1.0s							
I23K	**Minto, Yukon-K**	**84.16**	**337**	P	**P**	**P**	**11 31 00.5**	**-0.9**
	baz=110,SNR=6.1							
I23K	**Minto, Yukon-K**	**84.16**	**337**	P	**P**	**P**	**11 31 00.3**	**-1.1**
I23K					IAmb	IAmb	11 31 05.3	
	comp=Z,18nm,1.2s							
KTH	**Kantishna Hill**	**84.28**	**335**	P	**P**	**P**	**11 31 00.4**	**-1.8**
KTH					IAmb	IAmb	11 31 01.3	
	comp=Z,19nm,1.4s							
BPAW	**Bear Paw Mtn.**	**84.48**	**335**	P	**P**	**P**	**11 31 04.7**	**+1.6**
BPAW					IAmb	IAmb	11 31 06.2	
	comp=Z,13nm,1.0s							
PPLA	**Purkeypile**	**84.63**	**334**	P	**P**	**P**	**11 31 02.6**	**-1.4**
PPLA					IAmb	IAmb	11 31 07.1	
	comp=Z,13nm,1.0s							
MLY	**Manley**	**84.67**	**336**	P	**P**	**P**	**11 31 03.3**	**-0.9**
	baz=108,SNR=6.5							
DBG	**Daneborg**	**84.87**	**14**	*i* P	**P**	**P**	**11 31 07.0**	**+2.1**
COLD	**Coldfoot**	**85.18**	**338**	P	**P**	**P**	**11 31 06.0**	**-0.6**
	baz=109,SNR=5.6							
COLD	**Coldfoot**	**85.18**	**338**	P	**P**	**P**	**11 31 06.2**	**-0.4**
COLD					IAmb	IAmb	11 31 10.9	
	comp=Z,8.3nm,1.0s							
IMAR	**Indian Mountai**	**86.16**	**337**	P	**P**	**P**	**11 31 09.9**	**-1.5**
DAG	**Danmarks Havn**	**86.44**	**12**	*i* P	**P**	**P**	**11 31 13.6**	**+1.1**
	comp=Z,7.7nm,1.1s							
DAG	**Danmarks Havn**	**86.44**	**12**	*i* P	**P**	**P**	**11 31 13.7**	**+1.1**
DAG					IAmb	IAmb	11 31 16.7	
	comp=Z,7.7nm,1.1s							
QSPA	**South Pole Qui**	**87.17**	**180**	P	**P**	**P**	**11 31 14.6**	**-2.0**
A21K	**Barrow**	**88.53**	**342**	P	**P**	**P**	**11 31 22.3**	**-0.4**
	baz=103,SNR=7.0							
A21K	**Barrow**	**88.53**	**342**	P	**P**	**P**	**11 31 23.1**	**+0.4**
DOU	**Dourbes**	**88.59**	**40**	PcP	**PcP**	**PcP**	**11 31 25.7**	**+0.6**
VNDA	**Vanda**	**93.11**	**191**	LR	LR	LR	12 05 27.1	
	comp=Z,25nm,20.3s,baz=117,slow=30							
GERES	**GERESS Array B**	**94.46**	**41**	LR	LR	LR	12 13 44.1	
	comp=Z,14nm,18.6s,baz=68,slow=35							
ARCES	**ARCESS Array B**	**98.03**	**20**	LR	LR	LR	12 12 09.9	
	comp=Z,26nm,21.4s,baz=210,slow=33							
ZALV	**Zalesovo Beam**	**127.57**	**11**	PKP	**PKPdf**	**PKPdf**	**11 37 34.2**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=259,slow=3.0,SNR=5.2							
MKAR	**Makanchi Array**	**133.58**	**17**	PKP	**PKPdf**	**PKPdf**	**11 37 44.5**	**-2.9**
	comp=Z,0.4nm,0.6s,baz=356,slow=3.6,SNR=3.7							
MKAR	**Makanchi Array**	**133.58**	**17**	PKPdf	**PKPdf**	**PKPdf**	**11 37 45.7**	**-1.7**
SONM	**Songino Array**	**134.92**	**354**	PKhKP	PKPpre		11 37 45.0	
	comp=Z,0.3nm,0.6s,baz=217,slow=1.4,SNR=2.0							
WMQ	**Urumqi**	**137.76**	**14**	*e*PKP	**PKPdf**	**PKPdf**	**11 37 55.8**	**+0.5**
ASAR	**Alice Springs**	**137.90**	**229**	PKhKP	PKPpre		11 37 47.5	
	comp=Z,0.2nm,0.5s,baz=113,slow=3.6,SNR=1.8							
ASAR					PKP	**PKPdf**	**11 37 54.1**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=92,slow=1.2,SNR=4.1							
WRA	**Warramunga Arr**	**139.53**	**234**		PKP	**PKPdf**	**11 37 57.6**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=129,slow=1.7,SNR=5.3							
HHC	**Hu-ho-hao-te**	**140.86**	**346**	*e*PKP	**PKiKP**	**PKiKP**	**11 38 03.0**	**-0.8**
GTA	**Gaotai**	**143.66**	**1**	*e*PKP	**PKiKP**	**PKiKP**	**11 38 09.3**	**-0.3**
GTA					LR	LR		
	comp=Z,64nm,17.1s							
GTA					LR	LR		
	comp=Z,72nm,17.1s							
NJ2	**Nanjing**	**146.12**	**331**	*e*PKPbc	**PKPbc**	**PKPbc**	**11 38 11.0**	**-0.3**
LZH	**Lanzhou**	**146.81**	**355**	*e*PKPbc	**PKiKP**	**PKiKP**	**11 38 15.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**147.40**	**229**	PKPbc	**PKPdf**	**PKPdf**	**11 38 14.0**	**+1.0**
	comp=Z,3.8nm,0.8s,baz=146,slow=6.1,SNR=4.3							
FITZ	**Fitzroy Crossi**	**147.40**	**229**	PKPbc	**PKPbc**	**PKPbc**	**11 38 15.2**	**-0.2**
XAN	**Xi'an**	**147.97**	**346**	PKPbc	**PKPdf**	**PKPdf**	**11 38 15.0**	**+1.4**
XAN					pPKP	PKiKP	11 38 18.5	0.0
WHN	**Wuhan**	**149.43**	**336**	PKPbc	**PKPab**	**PKPab**	**11 38 25.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**164.49**	**5**	PKP	**PKPdf**	**PKPdf**	**11 38 34.5**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=310,slow=6.7,SNR=6.2							
CMAR	**Chiang Mai Arr**	**164.49**	**5**			**PKPdf**	**11 38 33.6**	**-1.8**

*ISK **26** 11:25:47.6,40°.53N×31°.73E,h1km,ML2.5/10*
*DDA **26** 11:25:48.4,40°.53N×31°.70E,h7km±2km,ML1.8*
ISC 26 11:25:48.5±1.2,40°.54N±0°.03×31°.72E±0°.03,h2km±12km, n21,σ0°97/28,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YUVA	**Yuva-Kibriscik**	**0.15**	**190**	PG	**Pg**		**11 25 51.2**	**-0.2**
KIBS	**BOLU**	**0.16**	**140**	*i* P	**Pg**		**11 25 51.8**	**+0.2**
KIBS				*i* S	**Sg**		**11 25 55.0**	**+1.4**
KIBS				IAML			11 25 56.0	
	comp=N,900nm,0.2s							
KIBS				IAML			11 26 00.0	
	comp=E,674nm,0.3s							
BCAM	**Yenicaga**	**0.38**	**43**	*i* P	**Pb**		**11 25 56.6**	**-1.5**
BCAM				*i* S	**Sb**		**11 26 03.7**	**-0.8**
BCAM				IAML			11 26 04.0	
	comp=E,210nm,0.3s							
BCAM				IAML			11 26 05.0	
	comp=N,284nm,0.3s							
MDUB	**Mudurnu**	**0.40**	**261**	PG	**Pg**		**11 25 56.6**	**+0.3**
MDUB				SG	**Sb**		**11 26 04.1**	**-1.0**
GRDE	**Gerede-Bolu**	**0.46**	**55**	PG	**Pg**		**11 25 57.5**	**+0.2**
GRDE				SG	**Sg**		**11 26 04.5**	**+1.3**
YIGI	**Dzce**	**0.47**	**334**	*i* P	**Pg**		**11 25 57.5**	**0.0**
YIGI				IAML			11 26 02.0	
	comp=N,44nm,1.5s							
YIGI				IAML			11 26 14.0	
	comp=E,42nm,0.5s							
AUMIH	**MIHALICIK**	**0.69**	**195**	*i* P	**Pg**		**11 26 01.7**	**-0.1**
AUMIH				*i* S	**Sb**		**11 26 11.8**	**-1.6**
AUMIH				IAML			11 26 13.0	
	comp=N,41nm,0.4s							
AUMIH				IAML			11 26 14.0	
	comp=E,91nm,0.2s							
SAHE	**Sakarya_HENDEK**	**0.73**	**296**	*i* P	**Pg**		**11 26 02.4**	**-0.1**
SAHE				IAML			11 26 13.0	
	comp=E,72nm,1.4s							
SAHE				IAML			11 26 13.0	
	comp=N,74nm,1.8s							
SAHE				*i* S	**Sb**		**11 26 13.9**	**-0.4**
KDZE	**Karadeniz Ereo**	**0.80**	**345**	PG	**Pb**		**11 26 04.2**	**-1.0**
GULT	**Gulveren**	**0.93**	**264**	PG	**Pb**		**11 26 06.5**	**-0.8**
SRCK	**Saricakaya, Es**	**0.97**	**240**	PG	**Pg**		**11 26 06.6**	**-0.6**
KBUK	**KARABUK-Merkez**	**0.98**	**44**	*i* P	**Pg**		**11 26 07.0**	**-0.2**
KBUK				IAML			11 26 25.0	
	comp=E,27nm,0.3s							
KBUK				IAML			11 26 27.0	
	comp=N,18nm,0.9s							
SAUV	**Serdivan-Sakar**	**1.08**	**281**	PN	**Pb**		**11 26 09.3**	**-0.6**
GEYV	**SAKARYA_Geyve**	**1.09**	**268**	*i* P	**Pb**		**11 26 09.2**	**-0.8**
GEYV				*i* S	**Sn**		**11 26 29.1**	**+2.8**
SVRH	**Sivrihisar-ESK**	**1.10**	**188**	PN	**Pb**		**11 26 09.6**	**-0.7**
SGAZ	**Eskisehir, Sey**	**1.21**	**214**	*i* P	**Pn**		**11 26 13.2**	**+0.6**
CIFT	**Cifteler, Eski**	**1.28**	**203**	PN	**Pn**		**11 26 13.1**	**-0.3**
PELI	**Kastamonı-Ara**	**1.43**	**57**	*i* P	**Pg**		**11 26 15.7**	**-0.1**
PELI				IAML			11 26 41.0	
	comp=E,24nm,2.0s							
PELI				IAML			11 26 52.0	
	comp=N,14nm,1.1s							
CAVI	**Cavuskoy**	**1.47**	**257**	PN	**Pg**		**11 26 16.4**	**-0.3**
ADVT	**Abdulvahap**	**1.52**	**267**	PN	**Pg**		**11 26 16.8**	**-0.7**
TVSB	**Tavsanli**	**2.05**	**239**	PN	**Pn**		**11 26 24.3**	**+0.3**

*IDC **26** 11:38:59.9±0.8,5°.76N×61°.41E,h0km,mb3.9/10, mb1 4.0/10,mb1mx3.8/50,mbtmp3.9/10,MS3.2/8, Ms1 3.2/8,ms1mx2.9/45,Error ellipse: s-maj=24.4km s-min=19.3km az=165.0*
*NEIC **26** 11:39:01.1±1.0,5°.7N±0°.1×61°.4E±0°.1,h10km±1km, mb4.3/17,Error ellipse: s-maj=20.2km s-min=19.6km az=150.0*
ISC 26 11:39:01.2±0.6,5°.8N±0°.1×61°.36E±0°.10,h10km,n38, σ0°78/31,mb4.1/16,MS3.1/6,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.57**	**352**	LR	LR		11 48 40.1	
	comp=Z,56nm,20.4s,baz=182,slow=33							
PALK	**Pallekele**	**19.27**	**84**	LR	LR		11 49 26.0	
	comp=Z,79nm,18.4s,baz=1.2,slow=33							
RAYN	**Ar Rayn**	**23.35**	**321**	P	**P**		**11 44 08.7**	**-1.3**
KMBO	**Kilima Mbogo**	**25.03**	**255**	P	**P**		**11 44 28.1**	**+2.0**
	1.4nm,0.3s,baz=56,slow=9.8,SNR=6.0							
KMBO	**Kilima Mbogo**	**25.03**	**255**	P	**P**		**11 44 26.6**	**+0.5**
RER	**Riviere de l'E**	**27.32**	**191**	P	**P**		**11 44 46.2**	**-0.2**
OPO	**Ambohidratompo**	**27.93**	**210**	LR	LR		11 53 20.4	
	comp=Z,40nm,19.1s,baz=192,slow=31							
PSI	**Prapat**	**37.56**	**93**	LR	LR		11 59 29.1	
	comp=Z,36nm,18.9s,baz=92,slow=33							
KKAR	**Karatay Array**	**38.06**	**11**	P	**P**		**11 46 21.0**	**+1.1**
AAK	**Ala-Archa**	**38.52**	**16**	P	**P**		**11 46 25.6**	**+1.6**
	0.7nm,0.5s,baz=134,slow=5.7,SNR=5.4							
AAK	**Ala-Archa**	**38.52**	**16**	P	**P**		**11 46 23.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**38.75**	**68**	P	**P**		**11 46 25.5**	**-0.6**
	0.7nm,0.3s,baz=258,slow=9.8,SNR=7.8							
CMAR				LR	LR		12 00 49.4	
	comp=Z,16nm,21.4s,baz=270,slow=34							
CMAR	**Chiang Mai Arr**	**38.75**	**68**	P	**P**		**11 46 26.9**	**+0.8**
BRTR	**Keskin Array B**	**42.03**	**328**	P	**P**		**11 46 52.8**	**-0.4**
	1.1nm,0.7s,baz=154,slow=14,SNR=4.4							
ANTO	**Ankara**	**42.59**	**327**	P	**P**		**11 46 58.8**	**+1.2**
ABKAR	**Akbulak array**	**43.36**	**359**	P	**P**		**11 47 03.8**	**+0.2**
ABKAR				IAmb	IAmb		11 47 05.3	
	comp=Z,4.2nm,0.9s							
ABKAR	**Akbulak array**	**43.36**	**359**	P	**P**		**11 47 04.0**	**+0.5**
MAKZ	**Makanchi**	**44.59**	**20**	P	**P**		**11 47 13.8**	**+0.3**
MAKZ				IAmb	IAmb		11 47 14.9	
	comp=Z,6.6nm,1.4s							
MKAR	**Makanchi Array**	**44.68**	**20**	P	**P**		**11 47 14.0**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=196,slow=8.3,SNR=4.8							
LEM	**Lembang**	**47.82**	**105**	LR	LR		12 03 56.8	
	comp=Z,18nm,20.2s,baz=85,slow=31							
CISI	**Cisompet, Garu**	**48.19**	**105**	P	**P**		**11 47 42.0**	**-0.4**
TSUM	**Tsumeb**	**49.74**	**239**	P	**P**		**11 47 55.1**	**+0.8**
	comp=Z,2.7nm,0.8s,baz=123,slow=21,SNR=4.6							
TSUM	**Tsumeb**	**49.74**	**239**	P	**P**		**11 47 53.8**	**-0.5**
TSUM				IAmb	IAmb		11 47 55.9	
	comp=Z,3.4nm,0.9s							
ARU	**Arti**	**50.58**	**358**	P	**P**		**11 47 59.7**	**-0.2**
ARU				IAmb	IAmb		11 48 09.1	
	comp=Z,5.9nm,1.3s							
SBUM	**Sibu**	**50.82**	**92**	P	**P**		**11 48 02.4**	**0.0**
ZAA0	**Zalesovo Array**	**51.68**	**17**	P	**P**		**11 48 07.6**	**-0.6**
ZAA0				IAmb	IAmb		11 48 28.2	
	comp=Z,5.3nm,1.6s							
ZALV	**Zalesovo Beam**	**51.68**	**17**	P	**P**		**11 48 08.8**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=217,slow=7.0,SNR=1.8							
ZALV	**Zalesovo Beam**	**51.68**	**17**	P	**P**		**11 48 08.0**	**-0.2**
BURAR	**Bucovina Array**	**51.90**	**330**	P	**P**		**11 48 10.5**	**+0.4**
XAN	**Xi'an**	**52.18**	**51**	P	**P**		**11 48 12.2**	**-0.2**
XAN				IAmb	IAmb		11 48 19.7	
	comp=Z,3.9nm,1.0s							
MORC	**Moravsky Berou**	**57.22**	**328**	P	**P**		**11 48 48.3**	**-0.4**
MORC				IAmb	IAmb		11 48 48.9	
	comp=Z,4.8nm,1.1s							
TORD	**Torodi Ar. Bea**	**59.20**	**282**	P	**P**		**11 49 01.8**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=85,slow=7.8,SNR=2.4							
TUE	**Stuetta**	**60.31**	**321**	P	**P**		**11 49 10.2**	**-0.2**
KSRS	**Korea Array**	**67.95**	**52**	LR	LR		12 19 58.4	
	comp=Z,20nm,19.4s,baz=355,slow=36							
MAW	**Mawson**	**73.20**	**179**	LR	LR		12 16 17.3	
	comp=Z,30nm,19.9s,baz=238,slow=31							
WRA	**Warramunga Arr**	**76.10**	**112**	P	**P**		**11 50 49.6**	**-0.2**
	comp=Z,1.8nm,0.9s,baz=289,slow=5.6,SNR=10							
WRA	**Warramunga Arr**	**76.10**	**112**	P	**P**		**11 50 49.8**	**0.0**
ASAR	**Alice Springs**	**76.47**	**116**	P	**P**		**11 50 52.2**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=296,slow=5.3,SNR=11							

IDC 26 11:40:09.1±1.5,7°.24S×120°.30E,h426km±15km,mb2.5/2, mb1 2.9/6,mb1mx2.6/47,mbtmp3.5/6,Error ellipse: s-maj=100.1km s-min=13.1km az=56.0,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KAPI	**Kappang**	**2.28**	**346**	P	P		11 41 09.3	+0.1
	11nm,0.3s,baz=176,slow=5.1,SNR=22							
KAPI				S	S		11 41 58.5	+0.7
	1.4nm,0.3s,baz=97,slow=16,SNR=1.4							
BATI	**Baumata**	**4.44**	**132**	P	P		11 41 27.3	+0.5
	4.2nm,0.3s,baz=346,slow=1.0,SNR=2.4							
BATI				S	S		11 42 29.3	-0.9
	11nm,0.3s,baz=135,slow=6.0,SNR=5.0							
FITZ	**Fitzroy Crossi**	**11.98**	**155**	P	P		11 42 47.8	-0.2
	0.4nm,0.3s,baz=352,slow=7.6,SNR=17							
WRA	**Warramunga Arr**	**18.57**	**134**	P	P		11 43 58.5	0.0
	0.2nm,0.3s,baz=312,slow=11,SNR=13							
ASAR	**Alice Springs**	**20.91**	**143**	P	P		11 44 21.0	+0.7
	0.4nm,0.7s,baz=317,slow=8.7,SNR=10							
MKAR	**Makanchi Array**	**63.51**	**332**	P	P		11 49 55.2	-0.8
	0.2nm,0.7s,baz=136,slow=8.2,SNR=2.3							

*IDC **26** 11:46:39.2±0.8,21°.3N×143°.3E±0°.2,h35km,n21,*
σ0°95/14,**mb3.9**/12,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GUMO	**Guam**	**7.84**	**169**	LR	LR		11 50 40.0	
	comp=Z,33nm,20.0s,baz=94,slow=31							
KSRS	**Korea Array**	**20.89**	**324**	P	**P**		**11 51 21.8**	**-1.9**
	1.9nm,0.6s,baz=149,slow=9.2,SNR=9.8							
KSRS				LR	LR		11 58 42.2	
	comp=Z,27nm,19.2s,baz=120,slow=35							
H11N1	**WAKE ISLAND Hy**	**22.13**	**90**	T	T		12 14 07.3	
	baz=278,slow=75,SNR=5.7							
H11N2	**WAKE ISLAND Hy**	**22.14**	**90**	T	T		12 14 09.4	
	baz=278,slow=75,SNR=4.9							
H11S3	**WAKE ISLAND Hy**	**22.15**	**93**	T	T		12 14 10.1	
	baz=283,slow=74,SNR=24							
H11N3	**WAKE ISLAND Hy**	**22.15**	**90**	T	T		12 14 07.7	
	baz=278,slow=75,SNR=5.6							
H11S1	**WAKE ISLAND Hy**	**22.16**	**93**	T	T		12 14 10.9	
	baz=283,slow=74,SNR=23							
H11S2	**WAKE ISLAND Hy**	**22.17**	**93**	T	T		12 14 11.4	
	baz=283,slow=74,SNR=15							
SONM	**Songino Array**	**39.70**	**321**	P	**P**		**11 54 13.9**	**+0.4**
	0.3nm,0.5s,baz=125,slow=7.2,SNR=2.4							
WRA	**Warramunga Arr**	**41.95**	**193**	P	**P**		**11 54 31.1**	**-0.9**
	0.4nm,0.8s,baz=16,slow=9.1,SNR=5.0							
ASAR	**Alice Springs**	**45.65**	**192**	P	**P**		**11 55 01.8**	**0.0**
	0.4nm,0.6s,baz=16,slow=9.3,SNR=11							
ZALV	**Zalesovo Beam**	**54.58**	**322**	P	**P**		**11 56 09.3**	**+0.1**
	0.6nm,0.3s,baz=96,slow=6.7,SNR=5.5							
MKAR	**Makanchi Array**	**55.04**	**313**	P	**P**		**11 56 13.4**	**+0.7**
	0.9nm,0.6s,baz=88,slow=8.9,SNR=7.5							
NRIK	**Noril'sk**	**58.38**	**340**	P	**P**		**11 56 35.9**	**-0.1**
	2.2nm,0.7s,baz=122,slow=3.8,SNR=3.7							
ILAR	**Eielson Array**	**62.31**	**27**	P	**P**		**11 57 01.6**	**-1.4**
	0.6nm,0.8s,baz=271,slow=5.7,SNR=5.9							
INK	**Inuvik**	**67.85**	**23**	P	**P**		**11 57 38.5**	**-0.3**
	0.9nm,0.8s,baz=173,slow=1.9,SNR=3.9							
YKA	**Yellowknife Ar**	**76.72**	**28**	P	**P**		**11 58 32.5**	**+0.6**
	0.5nm,0.6s,baz=295,slow=4.8,SNR=4.7							
ARCES	**ARCESS Array B**	**79.31**	**342**	P	**P**		**11 58 47.0**	**+0.9**
	2.6nm,0.7s,baz=79,slow=6.4,SNR=4.5							
NVAR	**Mina Array Bea**	**83.27**	**51**	P	**P**		**11 59 07.8**	**-0.3**
	0.4nm,0.6s,baz=287,slow=5.3,SNR=8.0							
FINES	**FINESS Array B**	**83.57**	**335**	P	**P**		**11 59 09.5**	**+0.8**
	2.5nm,0.9s,baz=116,slow=8.7,SNR=2.3							
LPAZ	**La Paz**	**149.84**	**86**	PKPbc	**PKiKP**		**12 06 34.4**	**+1.0**
	1.3nm,0.7s,baz=239,slow=10,SNR=4.1							

*DJA **26** 11:59:54.2±0.7,10°.5S×12°.3E±°,h55km±21km,M4.1/9, mB5.0/2,mb4.6/2,MLv3.9/9,Mw(mB)4.3/2*
*IDC **26** 11:59:54.1±2.0,10°.29S×123°.28E,h86km±22km,mb3.2/2, mb1 3.8/5,mb1mx3.5/33,mbtmp3.9/5,Error ellipse: s-maj=71.5km s-min=23.4km az=75.0*
ISC 26 11:59:51.0±0.9,10°.43S±0°.06×122°.98E±0°.07,h50km,n15, σ3°34/19,Savu Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BATI	**Baumata**	**0.71**	**71**	P	**Pn**		**12 00 08.9**	**+4.0**
	485nm,0.3s,baz=65,slow=0.9,SNR=525							
BATI				S	**Sn**		**12 00 19.8**	**+4.8**
	468nm,0.3s,baz=346,slow=0.4,SNR=12							
BATI	**Baumata**	**0.71**	**71**	P	**Pn**		**12 00 08.4**	**+3.5**
SOEI	**Soe**	**1.43**	**62**	P	**Pn**		**12 00 18.5**	**+3.7**
SOEI				S	**Sn**		**12 00 30.6**	**-1.9**
**MM

SNAA	**Sanae**	**84.65**	**179**	P	**P**	**12 15 35.5**	**-0.8**
SNAA				IAmb	IAmb	12 16 04.0	
	comp=Z,4.6nm,1.4s						
VNA3	**Neumayer Olymp**	**84.87**	**177**	P	**P**	**12 15 36.2**	**-1.1**
VNA2	**Neumayer--Watz**	**85.28**	**178**	P	**P**	**12 15 38.7**	**-0.6**
TXAR	**Lajitas Array**	**90.52**	**58**	P	**P**	**12 16 04.0**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=224,slow=6.3,SNR=7.3						
TXAR	**Lajitas Array**	**90.52**	**58**	P	**P**	**12 16 04.6**	**-0.1**
BCYI	**Bear Canyon**	**91.19**	**41**	P	**P**	**12 16 06.7**	**-0.9**
TORD	**Torodi Ar. Bea**	**169.16**	**189**	PKPab	**PKPab**	**12 24 20.5**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=149,slow=4.8,SNR=3.6						

*IDC **26** 12:23:23.3±1.0,55°.81S×27°.04W,h0km,mb4.1/4, mb1 4.3/4,mb1mx3.9/27,mbtmp4.1/4,MS3.0/1,Ms1 3.0/1, ms1mx2.6/19,Error ellipse: s-maj=38.7km s-min=27.3km az=67.0*

*NEIC **26** 12:23:28.7±1.7,55°.9S±0°.1×27°.3W±0°.1,h32km±5km, mb4.5/21,Error ellipse: s-maj=15.6km s-min=11.2km az=154.0*

ISC 26 12:23:28.6±0.8,**55°.9S**±0°.1×**27°.1W**±0°.1,**h35**km,**n29, σ0s76/29, mb4.4**/12,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.60**	**282**	Pn	**Pn**	**12 24 49.4**	**+0.2**
HOPE				Sn	Sn	12 25 44.9	-7.3
SNAA	**Sanae**	**18.91**	**156**	P	**Pn**	**12 27 46.9**	**+0.2**
PMSA	**Palmer Station**	**20.06**	**229**	P	**P**	**12 27 57.8**	**-0.6**
PMSA				IAmb	IAmb	12 28 16.2	
	comp=Z,66nm,1.5s						
BELA	**Belgrano 2**	**22.28**	**184**	P	**P**	**12 28 21.9**	**-0.3**
QSPA	**South Pole Qui**	**34.40**	**180**	P	**P**	**12 30 12.6**	**+0.4**
CPUP	**Villa Florida**	**36.70**	**311**	P	**P**	**12 30 31.9**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=160,slow=8.8,SNR=4.4						
CPUP				LR	LR	12 43 22.4	
	comp=Z,22nm,21.0s,baz=144,slow=33						
CPUP	**Villa Florida**	**36.70**	**311**	P	**P**	**12 30 31.0**	**-1.0**
MT02	**Curacav**	**37.75**	**288**	P	**P**	**12 30 40.0**	**-0.9**
CO02	**Combarbal**	**39.27**	**290**	P	**P**	**12 30 53.5**	**-0.3**
CO02				IAmb	IAmb	12 30 54.6	
	comp=Z,14nm,1.1s						
CO01	**Juntas del Tor**	**39.77**	**292**	P	**P**	**12 30 59.0**	**+0.9**
CO01				IAmb	IAmb	12 31 20.7	
	comp=Z,6.6nm,1.1s						
MAW	**Mawson**	**40.29**	**144**	P	**P**	**12 31 01.1**	**-0.6**
AC04	**Llanos de Chal**	**41.70**	**293**	P	**P**	**12 31 13.9**	**+0.2**
AC02	**Maricunga**	**41.81**	**296**	P	**P**	**12 31 16.2**	**+0.9**
AC02				IAmb	IAmb	12 31 17.4	
	comp=Z,8.2nm,1.1s						
GO02	**Mina Guanaco**	**43.43**	**297**	P	**P**	**12 31 28.6**	**+0.4**
LVC	**Limon Verde**	**45.23**	**300**	P	**P**	**12 31 44.1**	**+1.5**
LVC				IAmb	IAmb	12 31 45.1	
	comp=Z,3.8nm,0.8s						
PB09	**IPOC Station P**	**46.08**	**300**	P	**P**	**12 31 50.5**	**+1.4**
VNDA	**Vanda**	**46.78**	**183**	P	**P**	**12 31 54.3**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=186,slow=6.9,SNR=14						
VNDA	**Vanda**	**46.78**	**183**	P	**P**	**12 31 54.8**	**+1.0**
PB01	**IPOC Station P**	**46.83**	**300**	P	**P**	**12 31 56.4**	**+1.4**
PB01				IAmb	IAmb	12 31 56.5	
	comp=Z,8.2nm,0.9s						
PATCX	**Punta Patache**	**47.35**	**300**	P	**P**	**12 31 58.7**	**-0.3**
PSGCX	**Pisagua**	**48.37**	**301**	P	**P**	**12 32 06.9**	**0.0**
PSGCX				IAmb	IAmb	12 32 13.4	
	comp=Z,11nm,1.2s						
MNMC	**Minye Minye**	**48.52**	**302**	P	**P**	**12 32 08.7**	**+0.5**
MNMC				IAmb	IAmb	12 32 14.7	
	comp=Z,4.5nm,0.9s						
LPAZ	**La Paz**	**50.28**	**305**	P	**P**	**12 32 22.3**	**+0.1**
	comp=Z,2.5nm,0.4s,baz=108,slow=4.9,SNR=15						
LPAZ	**La Paz**	**50.28**	**305**	P	**P**	**12 32 22.8**	**+0.6**
LPAZ				IAmb	IAmb	12 32 23.6	
	comp=Z,4.5nm,1.1s						
TOA0	**Torodi Ar. Sit**	**72.86**	**29**	P	**P**	**12 34 54.3**	**+0.7**
TOA0				IAmb	IAmb	12 35 04.5	
	comp=Z,5.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.86**	**29**	P	**P**	**12 34 54.1**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=196,slow=5.5,SNR=3.9						
ILAR	**Eielson Array**	**150.00**	**312**	PKPbc	**PKPbc**	**12 43 13.3**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=124,slow=2.0,SNR=10						
ILAR	**Eielson Array**	**150.00**	**312**		**PKPbc**	**12 43 13.2**	**-0.5**
SONM	**Songino Array**	**150.68**	**86**	PKPbc	**PKPbc**	**12 43 15.0**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=225,slow=0.4,SNR=4.4						

*ATH **26** 12:26:36.8,36°.44N×28°.25E,h24km±1km,ML3.0/6,Error ellipse: s-maj=2.0km s-min=1.1km az=181.0*

*THE **26** 12:26:36.4,36°.50N×28°.26E,h1km±1km,ML3.0/4,Error ellipse: s-maj=1.5km s-min=0.7km az=76.0*

*DDA **26** 12:26:36.9,36°.53N×28°.29E,h22km, MW3.5*

*ISK **26** 12:26:36.5,36°.48N×28°.28E,h15km,ML3.1/20*

ISC 26 12:26:34.0±1.1,**36°.43N**±0°.03×**28°.51E**±0°.03,**h10**km±9km, **n59,σ1s65/70, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.37**	**236**	P	**Pb**	**12 26 42.8**	**+0.1**
ARG				S	**Sg**	**12 26 47.3**	**+1.0**
ARG				AML	AML	12 26 48.2	
	comp=E,5722μm,0.2s						
ARG				AML	AML	12 26 48.7	
	comp=N,5293μm,0.3s						
ARG	**Arkhangelos**	**0.37**	**236**	PG	**Pb**	**12 26 42.8**	**+0.1**
ARG				SG	**Sg**	**12 26 47.6**	**+1.3**
ARG	**Arkhangelos**	**0.37**	**236**	P	**Pb**	**12 26 42.8**	**+0.1**
ARG				S	**Sg**	**12 26 47.5**	**+1.3**
	comp=N,2μm,0.3s						
MRSB	**Marmaris-Mugla**	**0.38**	**319**	PG	**Pg**	**12 26 42.1**	**+0.6**
TURN	**Turunc**	**0.41**	**329**	PG	**Pg**	**12 26 43.0**	**+1.0**
TURN				SG	**Sg**	**12 26 47.9**	**+0.5**
TURN	**Turunc**	**0.41**	**329**	*i* P	**Pg**	**12 26 42.7**	**+0.7**
TURN				*i* S	**Sg**	**12 26 47.8**	**+0.5**
TURN				IAML		12 26 48.0	
	comp=E,1μm,0.1s						
DALY	**Dalyan (Mula)**	**0.41**	**17**	PG	**Pn**	**12 26 45.7**	**-0.2**
FETY	**Fethiye**	**0.51**	**66**	PG	**Pn**	**12 26 49.6**	**+2.2**
FETY				SG	Sb	12 27 00.3	+7.7
FETY	**Fethiye**	**0.51**	**66**	P	**Pn**	**12 26 49.1**	**+1.7**
FETY				S	Sb	12 27 00.2	+7.7
YER	**Yerkesik**	**0.73**	**346**	PG	**Pb**	**12 26 49.5**	**+0.7**
YER				SG	**Sg**	**12 26 59.2**	**+1.6**
YER	**Yerkesik**	**0.73**	**346**	P	**Pb**	**12 26 49.1**	**+0.3**
YER				S	**Sg**	**12 26 59.0**	**+1.4**
DATC	**Datca-Mugla**	**0.76**	**296**	PG	**Pg**	**12 26 48.2**	**-0.4**
DATC				SG	**Sg**	**12 26 57.6**	**-0.9**
CAME	**Cameli-Denizli**	**0.82**	**51**	PG	**Pn**	**12 26 54.3**	**+2.5**
AKAS	**Kas**	**0.91**	**102**	PN	Pn	12 26 58.1	+5.1
AKAS	**Kas**	**0.91**	**102**	*i* P	Pn	12 26 58.0	+5.1
AKAS				*i* S	Sn	12 27 16.4	+10
KSL	**Kastellorizon**	**0.91**	**107**	P	Pn	12 26 58.0	+5.1
KSL				S	Sn	12 27 14.2	+8.1
KSL				AML	AML	12 27 18.4	
	comp=N,277μm,0.9s						
KSL				AML	AML	12 27 18.7	
	comp=E,266μm,0.4s						
KSL	**Kastellorizon**	**0.91**	**107**	P	Pn	12 26 57.9	+5.1
KSL				S	Sn	12 27 14.8	+8.7
	comp=E,205nm,0.9s						
MLSB	**Milas**	**1.04**	**326**	PG	**Pg**	**12 26 54.7**	**+0.6**
BDRM	**Kayabasi**	**1.06**	**307**	*i* P	**Pg**	**12 26 53.8**	**-0.7**
BDRM				*i* S	**Sg**	**12 27 06.2**	**-2.1**
BDRM				IAML		12 27 08.0	
	comp=E,663nm,0.4s						
NIS1	**Nisyros Isl.**	**1.08**	**280**	P	**Pg**	**12 26 53.8**	**-1.1**
NIS1				S	**Sg**	**12 27 06.9**	**-2.0**
NIS1				AML	AML	12 27 11.0	
	comp=N,9344μm,0.4s						
NIS1				AML	AML	12 27 12.0	
	comp=E,7652μm,0.4s						
NIS1	**Nisyros Isl.**	**1.08**	**280**	PG	**Pg**	**12 26 54.3**	**-0.5**
NIS1	**Nisyros Isl.**	**1.08**	**280**	P	**Pg**	**12 26 53.7**	**-1.1**
NIS1				S	**Sg**	**12 27 06.9**	**-2.0**
	comp=E,4μm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.09**	**17**	*i* P	**Pn**	**12 26 57.4**	**+2.0**
TAVA				*i* S	**Sn**	**12 27 15.3**	**+4.7**
BODT	**Bodrum**	**1.15**	**304**	PG	Pn	**12 26 54.8**	**-1.4**
BODT	**Bodrum**	**1.15**	**304**	P	**Pn**	**12 26 54.9**	**-1.3**
BODT				S	**Sg**	**12 27 08.3**	**-2.8**
GOLH	**Golhisar**	**1.17**	**46**	*i* P	Pn	12 27 00.2	+3.7
GOLH				*i* S	Sn	12 27 21.8	+9.2
ELL	**Elmali**	**1.17**	**74**	PN	Pn	12 27 01.7	+5.1
YKAV	**Yalikavak-Bodr**	**1.21**	**306**	PG	**Pn**	**12 26 56.7**	**-0.2**
KOSK	**Kos Island**	**1.27**	**285**	PN	**Pn**	**12 26 57.8**	**0.0**
AYDN	**Tasoluk**	**1.33**	**338**	*i* P	**Pb**	**12 26 59.4**	**+0.4**
AYDN				*i* S	**Sb**	**12 27 15.5**	**-0.7**
AYDN				IAML		12 27 22.0	
	comp=E,238nm,0.4s						
KARP	**Karpathos**	**1.40**	**232**	P	**Pb**	**12 27 00.5**	**+0.2**
KARP				S	**Sn**	**12 27 18.6**	**+0.4**
KARP				AML	AML	12 27 21.9	
	comp=E,2259μm,0.5s						
KARP				AML	AML	12 27 22.6	
	comp=N,2025μm,0.3s						
KARP	**Karpathos**	**1.40**	**232**	PN	**Pg**	**12 27 00.8**	**-0.1**
KARP	**Karpathos**	**1.40**	**232**	P	**Pb**	**12 27 00.5**	**+0.2**
KARP				S	**Sn**	**12 27 18.6**	**+0.4**
	comp=N,1μm,0.4s						
KORT	**Korkueli**	**1.59**	**68**	PN	Pg	12 27 07.6	+3.1
KORT	**Korkueli**	**1.59**	**68**	*i* P	Pg	12 27 09.1	+4.6
KORT				*i* S	Sg	12 27 38.1	+13
KORT				IAML		12 27 40.0	
	comp=E,157nm,0.6s						
AYDB	**Zeytinkoy-Aydi**	**1.59**	**342**	PN	**Pb**	**12 27 03.8**	**+0.2**
GCAM	**G?zelcami?**	**1.63**	**322**	PN	Pn	**12 27 03.6**	**+0.9**
GCAM	**G?zelcami?**	**1.63**	**322**	*i* P	Pn	**12 27 02.1**	**-0.6**
GCAM				*i* S	**Sn**	**12 27 23.3**	**-0.4**
GCAM				IAML		12 27 28.0	
	comp=E,167nm,0.6s						
BRDR	**BURDUR-Merkez**	**1.77**	**44**	*i* P	Pg	12 27 10.0	+2.0
BRDR				*i* S	Sg	12 27 39.1	+8.0
SMG	**Samos**	**1.85**	**314**	P	**Pn**	**12 27 06.7**	**+0.9**
SMG				AML	AML	12 27 36.5	
	comp=E,593μm,0.5s						
SMG				AML	AML	12 27 36.6	
	comp=N,494μm,0.3s						
SMG	**Samos**	**1.85**	**314**	P	**Pn**	**12 27 05.0**	**-0.8**
MANT	**Manisa**	**2.06**	**1**	*i* P	**Pb**	**12 27 11.1**	**-0.5**
MANT				*i* S	**Sb**	**12 27 36.7**	**-0.6**
KULA	**Kula-Manisa**	**2.09**	**3**	PN	**Pb**	**12 27 11.9**	**-0.1**
KZIL	**AFYON_Kizioren**	**2.24**	**35**	*i* P	**Pg**	**12 27 14.9**	**-2.1**
KZIL				*i* S	**Sg**	**12 27 51.7**	**+5.6**
ZKR	**Zakros**	**2.28**	**236**	P	**Pn**	**12 27 12.8**	**+1.1**
ZKR				AML	AML	12 27 48.1	
	comp=N,259μm,0.7s						
ZKR				AML	AML	12 27 49.1	
	comp=E,383μm,0.5s						
ZKR	**Zakros**	**2.28**	**236**	PN	**Pn**	**12 27 13.3**	**+1.7**
ZKR	**Zakros**	**2.28**	**236**	P	**Pn**	**12 27 12.8**	**+1.1**
URLA	**Izmir**	**2.46**	**322**	PN	**Pn**	**12 27 15.6**	**+1.4**
APE	**Apeiranthos**	**2.47**	**286**	PN	**Pn**	**12 27 15.1**	**+0.7**
NPS	**Neapolis**	**2.62**	**245**	P	**Pn**	**12 27 17.5**	**+1.1**
NPS	**Neapolis**	**2.62**	**245**	P	**Pn**	**12 27 17.5**	**+1.1**
LAST	**Lasithi**	**2.77**	**244**	P	**Pn**	**12 27 18.9**	**+0.4**
LAST	**Lasithi**	**2.77**	**244**	P	**Pn**	**12 27 18.9**	**+0.4**
SEYD	**Seydisehir-KON**	**2.84**	**69**	PN	**Pg**	**12 27 25.3**	**-3.2**
DOGA	**KONYA_Doganhis**	**3.03**	**55**	*i* P	**Pg**	**12 27 28.1**	**-3.9**
DOGA				*i* S	**Sg**	**12 28 07.6**	**-3.7**
TVSB	**Tavsanli**	**3.11**	**14**	PN	**Pb**	**12 27 26.9**	**-2.6**
IDI	**Anoyia**	**3.15**	**250**	P	**Pn**	**12 27 24.0**	**+0.3**
IDI	**Anoyia**	**3.15**	**250**	PN	**Pn**	**12 27 25.2**	**+1.5**
IDI	**Anoyia**	**3.15**	**250**	P	**Pn**	**12 27 23.6**	**-0.1**

*IDC **26** 12:27:22.7±0.7,2°.35N×126°.98E,h0km,mb4.1/11, mb1 4.2/11,mb1mx4.0/36,mbtmp4.1/11,MS2.7/3, Ms1 2.7/3,ms1mx2.5/40,Error ellipse: s-maj=45.6km s-min=13.6km az=74.0*

*NEIC **26** 12:27:28.0±1.9,2°.40N±0°.09×127°.0E±0°.1,h35km±2km, mb4.2/18,Error ellipse: s-maj=21.9km s-min=9.9km az=234.0*

*DJA **26** 12:27:27.2±2.9,3°.N±4°.×12°.7E±°.,h29km±34km,M4.2/11, mB4.6/1,mb4.6/2,MLv4.0/11,Mw(mB)3.8/1*

ISC 26 12:27:29.7±0.5,**2°.44N**±0°.06×**127°.06E**±0°.09,**h53**km,**n50, σ1s28/44, mb4.2**/17,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.69**	**170**	P	**Pn**	**12 27 55.5**	**-1.3**
TNTI	**Ternate**	**1.69**	**170**		**Pn**	**12 27 55.6**	**-1.3**
SGSI	**Sangihe**	**1.97**	**309**	P	**Pn**	**12 27 57.4**	**-3.3**
KMSI	**Cibinong**	**3.59**	**239**	P	**Pn**	**12 28 23.4**	**+0.4**
GTOI	**Gorontalo**	**4.43**	**246**	P	**Pn**	**12 28 35.9**	**+1.5**
SANI	**Sanana**	**4.59**	**194**	P	**Pn**	**12 28 36.3**	**-0.3**
MRSI	**Marisa**	**5.48**	**249**	P	**Pn**	**12 28 49.6**	**+0.8**
LUWI	**Luwuk**	**5.51**	**231**	Pn	**Pn**	**12 28 46.7**	**-2.6**
TOLI2	**Tolitoli**	**6.41**	**258**		**Pn**	**12 29 00.1**	**-1.6**
FAKI	**Fak Fak**	**7.43**	**136**	Pn	**Pn**	**12 29 17.9**	**+2.3**
MPSI	**Mapaga**	**7.46**	**254**	P	Pn	12 29 19.7	+3.7
MYLDM	**Lahad Datu**	**8.96**	**288**	Pn	**Pn**	**12 29 35.8**	**-0.8**
KAPI	**Kappang**	**10.40**	**225**	LR	LR	12 33 56.9	
	comp=Z,14nm,19.2s,baz=55,slow=38						
SOEI	**Soe**	**12.43**	**193**	Pn	Pn	12 30 18.9	-5.3
JAY	**Jayapura**	**14.50**	**110**	LR	LR	12 36 07.3	
	comp=Z,54nm,21.5s,baz=286,slow=36						
SBUM	**Sibu**	**14.83**	**270**	Pn	**Pn**	**12 30 56.8**	**+0.4**
MTN	**Manton Dam**	**15.71**	**165**	Pn	**Pn**	**12 31 05.9**	**-1.9**
KNRA	**Kununurra**	**18.08**	**175**	P	**P**	**12 31 36.3**	**-0.8**
KNRA				IAmb	IAmb	12 31 53.3	
	comp=Z,39nm,1.5s						
FITZ	**Fitzroy Crossi**	**20.46**	**184**	P	**P**	**12 32 02.2**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=291,slow=13,SNR=1.8						
FITZ	**Fitzroy Crossi**	**20.46**	**184**	P	**P**	**12 32 02.1**	**-0.9**
FITZ				IAmb	IAmb	12 32 20.5	
	comp=Z,12nm,1.4s						
TWG	**Pinlang**	**21.07**	**344**	P	**P**	**12 32 08.6**	**-1.1**
WB0	**Warramunga Arr**	**23.21**	**162**	P	**P**	**12 32 30.9**	**-1.5**
WB0				IAmb	IAmb	12 32 37.3	
	comp=Z,5.7nm,0.7s						
WRAB	**Tennant Creek**	**23.36**	**162**	P	**P**	**12 32 32.3**	**-1.5**
WRAB				IAmb	IAmb	12 32 35.7	
	comp=Z,5.5nm,0.5s						
WRA	**Warramunga Arr**	**23.36**	**163**	P	**P**	**12 32 32.2**	**-1.5**
	comp=Z,3.5nm,0.4s,baz=343,slow=11,SNR=81						
WRA	**Warramunga Arr**	**23.36**	**163**	P	**P**	**12 32 31.3**	**-2.5**
WB2	**Warramunga Arr**	**23.37**	**162**	P	**P**	**12 32 32.1**	**-1.8**
WB2				IAmb	IAmb	12 32 36.8	
	comp=Z,5.8nm,0.9s						
WR0	**Warramunga Arr**	**23.44**	**162**	P	**P**	**12 32 33.1**	**-1.4**
WR0				IAmb	IAmb	12 32 33.5	
	comp=Z,9.1nm,1.2s						
RGRI	**Rengat**	**24.88**	**264**	P	P	12 32 54.5	+6.7
KRVT	**Keravat (AS076**	**25.83**	**105**	LR	LR	12 42 42.4	
	comp=Z,34nm,18.9s,baz=264,slow=36						
AS31	**Alice Springs**	**26.79**	**166**		**P**	**12 33 04.5**	**-0.5**
ASAR	**Alice Springs**	**26.79**	**166**	P	**P**	**12 33 03.8**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=344,slow=7.7,SNR=26						
ASAR	**Alice Springs**	**26.79**	**166**	P	**P**	**12 33 04.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**31.82**	**302**	P	**P**	**12 33 49.4**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=114,slow=6.2,SNR=7.0						
INU	**Inuyama**	**34.02**	**15**	P	**P**	**12 34 09.7**	**+1.0**
KSRS	**Korea Array**	**34.85**	**1**	P	**P**	**12 34 16.6**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=180,slow=10,SNR=8.2						
STKA	**Stephens Creek**	**36.82**	**159**	P	**P**	**12 34 32.1**	**-0.7**
	comp=Z,4.9nm,0.4s,baz=358,slow=7.5,SNR=18						
STKA	**Stephens Creek**	**36.82**	**159**	P	**P**	**12 34 32.3**	**-0.4**
JMM	**Marumori**	**37.44**	**18**	P	**P**	**12 34 38.6**	**+0.6**
ARMA	**Armidale**	**40.22**	**146**	P	**P**	**12 35 02.6**	**+1.1**
ARMA				IAmb	IAmb	12 35 17.5	
	comp=Z,10nm,1.4s						
USRK	**Ussuriysk Ar.**	**41.81**	**5**	P	**P**	**12 35 14.7**	**+0.5**
	comp=Z,4.5nm,1.0s,baz=197,slow=5.3,SNR=4.6						
SONM	**Songino Array**	**48.62**	**342**	P	**P**	**12 36 09.3**	**+1.0**
	comp=Z,2.7nm,1.2s,baz=165,slow=8.1,SNR=5.3						
MK31	**Makanchi Array**	**58.80**	**326**	P	**P**	**12 37 22.0**	**-0.6**
MK31				IAmb	IAmb	12 37 51.1	
	comp=Z,1.7nm,1.1s						
MKAR	**Makanchi Array**	**58.80**	**326**	P	**P**	**12 37 22.3**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=120,slow=7.8,SNR=16						
MAKZ	**Makanchi**	**58.98**	**325**	P	**P**	**12 37 24.3**	**+0.3**
MAKZ				IAmb	IAmb	12 37 48.1	
	comp=Z,4.8nm,1.2s						
LBZ	**Lake Benmore**	**60.44**	**146**	P	**P**	**12 37 34.2**	**+0.2**
KKAR	**Karatay Array**	**64.39**	**317**	P	**P**	**12 38 01.2**	**+0.8**
NRIK	**Noril'sk**	**71.75**	**346**	P	**P**	**12 38 46.8**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=133,slow=10,SNR=4.9						
ABKAR	**Akbulak array**	**73.35**	**321**	P	**P**	**12 38 56.2**	**+0.3**
VNDA	**Vanda**	**82.11**	**173**	P	**P**	**12 39 44.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=314,slow=5.8,SNR=4.5						
VNDA	**Vanda**	**82.11**	**173**	P	**P**	**12 39 44.7**	**+0.5**

*NEIC **26** 12:27:35.7±1.8,22°.2S±0°.1×179°.4W±0°.1,h586km±8km, mb4.3/32,Error ellipse: s-maj=18.4km s-min=14.4km az=105.0*

*IDC **26** 12:27:37.4±1.8,22°.03S×179°.69W,h588km±20km, mb3.4/15,mb1 3.5/15,mb1mx3.4/34,mbtmp4.3/15,Error ellipse: s-maj=17.8km s-min=12.8km az=153.0*

ISC 26 12:27:36.4±0.5,**22°.24S**±0°.06×**179°.45W**±0°.08,**h592**km, **n85,σ1s51/97, mb4.2**/28,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.06**	**332**	P	**P**	**12 29 08.2**	**-1.3**
RIZ	**Raoul Island**	**7.11**	**169**	P	**P**	**12 29 25.3**	**-1.7**
RAO	**Raoul Island**	**7.12**	**169**	P	**P**	**12 29 26.5**	**-0.5**
GLKZ	**Green Lake**	**7.13**	**169**	P	**P**	**12 29 24.9**	**-2.2**
GLKZ				S	**S**	**12 30 55.4**	**-2.5**
DZM	**Mont Dzumac**	**13.07**	**268**	P	**P**	**12 30 28.0**	**+1.8**
	0.7nm,0.3s,baz=124,slow=15,SNR=6.9						
OUZ	**Omahuta**	**14.29**	**204**	P	**P**	**12 30 40.9**	**+2.9**
SANVU	**Saraoutou**	**14.32**	**296**	P	**P**	**12 30 39.4**	**+0.8**
WCZ	**Waipu Caves**	**14.68**	**200**	P	**P**	**12 30 42.5**	**+0.8**
KUZ	**Kuaotunu**	**15.05**	**195**	P	**P**	**12 30 46.0**	**+0.9**
WIAZ	**Waiheke Island**	**15.24**	**197**	P	**P**	**12 30 49.2**	**+2.2**
MXZ	**Matakaoa Point**	**15.39**	**187**	P	**P**	**12 30 48.5**	**+0.2**
ETAZ	**East Tamaki Re**	**15.45**	**197**	P	**P**	**12 30 51.3**	**+2.4**
MKAZ	**Moumakai**	**15.53**	**196**	P	**P**	**12 30 51.5**	**+1.9**
WTAZ	**Waiatarua**	**15.53**	**198**	P	**P**	**12 30 51.9**	**+2.3**
AWAZ	**Awhitu Peninsu**	**15.63**	**198**	P	**P**	**12 30 52.8**	**+2.3**
WMGZ	**Waiomatatini S**	**15.63**	**186**	P	**P**	**12 30 50.4**	**-0.1**
WMGZ				S	**S**	**12 33 31.9**	**+3.0**
HAZ	**Te Kaha**	**15.65**	**188**	P	**P**	**12 30 50.7**	**+0.1**
PKGZ	**Pakihiroa**	**15.74**	**187**	P	**P**	**12 30 51.5**	**-0.1**
RUGZ	**Raukumara Rang**	**15.87**	**188**	P	**P**	**12 30 51.9**	**-0.9**
PUZ	**Puketiti**	**15.90**	**187**	P	**P**	**12 30 53.2**	**+0.2**
PUZ				S	**S**	**12 33 31.7**	**-1.7**
TWGZ	**Tauwhareparae**	**16.04**	**187**	P	**P**	**12 30 55.2**	**+0.9**
URZ	**Urewera**	**16.24**	**190**	P	**P**	**12 30 53.4**	**-2.7**
	2.8nm,0.3s,baz=288,slow=2.7,SNR=34						
URZ				S	**S**	**12 33 37.7**	**-1.0**
	0.4nm,0.3s,baz=241,slow=23,SNR=8.2						
URZ	**Urewera**	**16.24**	**190**	P	**P**	**12 30 53.5**	**-2.7**
URZ				S	**S**	**12 33 37.1**	**-1.7**
MWZ	**Matawai**	**16.25**	**189**	P	**P**	**12 30 54.9**	**-1.4**
MWZ				S	**S**	**12 33 36.3**	**-2.8**
PRGZ	**Paritu Road**	**16.78**	**187**	P	**P**	**12 31 01.7**	**+0.6**
MTHZ	**Maungataniwha**	**16.86**	**190**	P	**P**	**12 31 01.8**	**-0.1**
MTHZ				S	**S**	**12 33 48.9**	**-0.2**
BKZ	**Black Stump Fm**	**17.22**	**191**	P	**P**	**12 31 03.5**	**-1.7**
VRZ	**Vera Road**	**17.54**	**195**	P	**P**	**12 31 09.8**	**+1.8**
WNVZ	**Wahianoa**	**17.55**	**193**	P	**P**	**12 31 07.4**	**-0.9**
BHHZ	**Black Hill Sta**	**17.61**	**192**	P	**P**	**12 31 03.4**	**-5.4**
KAHZ	**Kahuranaki**	**17.78**	**189**	P	**P**	**12 31 10.2**	**0.0**
PNHZ	**Pukenui**	**18.00**	**191**	P	**P**	**12 31 11.5**	**-0.7**
PNHZ				S	**S**	**12 34 06.9**	**-0.7**
WKZ	**Wanaka**	**24.44**	**200**	P	**P**	**12 32 09.7**	**-0.2**
ARMA	**Armidale**	**27.11**	**246**	P	**P**	**12 32 35.4**	**+1.6**
EIDS	**Eidsvold**	**27.12**	**258**	P	**P**	**12 32 34.2**	**+0.5**
EIDS				IAmb	IAmb	12 32 49.6	
	comp=Z,5.3nm,0.9s						
CTA	**Charters Tower**	**32.02**	**267**	P	**P**	**12 33 15.8**	**-0.1**
	comp=Z,5.6nm,0.4s,baz=92,slow=11,SNR=14						
CTAO	**Charters Tower**	**32.02**	**267**	P	**P**	**12 33 15.9**	**-0.1**
CTAO				IAmb	IAmb	12 33 20.5	
	comp=Z,16nm,1.3s						
PMG	**Port Moresby**	**34.47**	**286**	P	**P**	**12 33 36.0**	**-0.5**
	comp=Z,19nm,0.8s,baz=75,slow=5.7,SNR=4.2						
PMG	**Port Moresby**	**34.47**	**286**	P	**P**	**12 33 36.1**	**-0.5**
STKA	**Stephens Creek**	**35.83**	**246**	P	**P**	**12 33 48.2**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=

*IDC **26** 12:32:59.2±1.1, 21.56N×143.93E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/40, mbtmp3.5/7, MS3.3/3, Ms1 3.3/3, ms1mx2.6/40, Error ellipse: s-maj=39.8km s-min=23.5km az=83.0*

ISC 26 12:33:04.2±1.1, 21.6N±0.2×143.8E±0.2, h33km, n15, σ0.92/7, mb3.4/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**12.07**	**343**	LR			LR	12 39 38.1	
	comp=Z,63nm,18.6s,baz=80,slow=33								
KSRS	**Korea Array**	**21.00**	**322**	P			**P**	**12 37 43.6**	**-1.1**
	1.0nm,0.5s,baz=149,slow=8.8,SNR=6.3								
H11N1	**WAKE ISLAND Hy 21.65**	**91**		T			T	13 00 27.7	
	baz=279,slow=75,SNR=11								
H11N2	**WAKE ISLAND Hy 21.65**	**91**		T			T	13 00 34.7	
	baz=279,slow=75,SNR=9.7								
H11N3	**WAKE ISLAND Hy 21.66**	**91**		T			T	13 00 31.3	
	baz=279,slow=75,SNR=8.5								
H11S3	**WAKE ISLAND Hy 21.68**	**94**		T			T	13 00 32.9	
	baz=283,slow=74,SNR=38								
H11S1	**WAKE ISLAND Hy 21.68**	**94**		T			T	13 00 32.7	
	baz=283,slow=74,SNR=30								
H11S2	**WAKE ISLAND Hy 21.69**	**94**		T			T	13 00 34.2	
	baz=283,slow=74,SNR=19								
WRA	**Warramunga Arr**	**42.28**	**193**	P			**P**	**12 40 54.1**	**-0.6**
	0.5nm,0.9s,baz=16,slow=8.8,SNR=2.8								
WRA				LR			LR	12 58 32.4	
	comp=Z,28nm,19.7s,baz=140,slow=36								
ASAR	**Alice Springs**	**45.98**	**193**	P			**P**	**12 41 24.6**	**+0.2**
	0.3nm,0.7s,baz=16,slow=11,SNR=6.0								
ZALV	**Zalesovo Beam**	**54.70**	**322**	P			**P**	**12 42 30.3**	**+0.2**
	0.5nm,0.3s,baz=87,slow=7.4,SNR=2.0								
MKAR	**Makanchi Array**	**55.24**	**313**	P			**P**	**12 42 35.4**	**+1.3**
	0.7nm,0.6s,baz=89,slow=8.7,SNR=6.5								
NRIK	**Noril'sk**	**58.34**	**340**	LR			LR	13 08 13.2	
	comp=Z,68nm,18.1s,baz=23,slow=36								
YKA	**Yellowknife Ar**	**76.29**	**28**	P			**P**	**12 44 49.4**	**0.0**
	0.2nm,0.6s,baz=290,slow=5.5,SNR=1.0								
NVAR	**Mina Array Bea**	**82.75**	**52**	P			**P**	**12 45 25.4**	**0.0**
	0.1nm,0.3s,baz=118,slow=21,SNR=2.2								

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*BJI **26** 12:42:31.1±0.0, 48.66N×154.76E, h95km, mB5.0/40, mb5.2/71*

*KRSC **26** 12:42:34.4±2.9, 48.55N×155.03E, h141km±38km, ML5.3*

*IDC **26** 12:42:35.9±0.5, 48.76N×154.16E, h90km±4km, mb4.6/30, mb1 4.7/33, mb1mx4.6/45, mbtmp4.9/33, MS3.5/9, Ms1 3.5/9, ms1mx3.1/44, Error ellipse: s-maj=11.4km s-min=8.2km az=139.0*

*SKHL **26** 12:42:36.1±0.5, 48.56N×154.69E, h124km±2km, mb5.3/4, Ms3.9/3, msh5.1/1*

*MOS **26** 12:42:37.0±1.0, 48.90N×154.13E, h115km, mb5.0/86, Error ellipse: s-maj=5.3km s-min=2.8km az=73.0*

*NEIC **26** 12:42:37.8±1.3, 48.84N±0.08×154.1E±0.1, h102km±5km, mb5.0/395, Error ellipse: s-maj=14.3km s-min=8.8km az=134.0*

*GCMT **26** 12:42:38.8±0.3, 48.73N±0.02×154.56E±0.03, h95km±3km, MW4.9/98, Moment Tensor Solution. s35,c42; s98,c144; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.40±.10; $M_{\theta\theta}$0.08±.12; $M_{\phi\phi}$1.31±.11; $M_{r\theta}$-1.25±.06; $M_{r\phi}$1.15±.11; $M_{\theta\phi}$-1.50±.06; Best double couple: M○2.59600×10^{16} NP1:ϕ_s197.00000°, δ22.00000°, λ-111.00000°. NP2: ϕ_s39.00000°, δ70.00000°, λ-82.00000°. Principal axes: T 2.8760, Plg24.0000°, Azm123.0000°; N -0.5680, Plg7.0000°, Azm217.0000°; P -2.3150, Plg64.0000°, Azm322.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 12:42:37.7±0.4, 48.80N±0.04×154.25E±0.03, h106km±3km, h106km:pP-P, n1338, σ1.14/1373, mb5.0/359, 79C-18D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.24**	**32**	*e*P			**Pn**	**12 43 13.1**	**-0.5**
SKR				*e*S			**Sn**	**12 43 39.5**	**-1.4**
SKR	**Severo-Kuril's**	**2.24**	**32**	*e*P			**Pn**	**12 43 13.0**	**-0.5**
SKR				AMB			AMB	12 43 18.0	
	980nm,0.7s								
SKR				*e*S			**Sn**	**12 43 41.1**	**+0.2**
SKR				A			A	12 43 44.0	
	3μm,0.3s								
SKR				A			A	12 43 44.0	
	2μm,0.3s								
SKR				AMS			AMS	12 44 24.0	
	700nm,11.0s								
SKR	**Severo-Kuril's**	**2.24**	**32**	*e*PN			**Pn**	**12 43 14.4**	**+0.9**
SKR				*e*S			**Sn**	**12 43 41.4**	**+0.5**
SKR				pmax			pmax		
	comp=Z,2μm,0.6s								
SKR				smax			smax		
	comp=E,2μm,0.4s								
SKR				smax			smax		
	comp=N,2μm,0.3s								
SKR				MLR			MLR		
	comp=Z,700nm,11.0s								
PAU	**Pauzhetka**	**3.13**	**31**	*e*P			**Pn**	**12 43 25.2**	**-0.1**
PAU				*e*S			**Sn**	**12 44 02.0**	**0.0**
PAU	**Pauzhetka**	**3.13**	**31**	*e*P			**Pn**	**12 43 25.2**	**-0.1**
PAU				AMB			AMB	12 43 29.8	
	comp=Z,581nm,0.4s								
PAU				*e*S			**Sn**	**12 44 02.1**	**0.0**
PAU				A			A	12 44 44.4	
	comp=Z,2μm,0.5s								
PAU				A			A	12 44 44.4	
	comp=Z,3μm,0.5s								
PAU	**Pauzhetka**	**3.13**	**31**	PN			**Pn**	**12 43 25.2**	**-0.1**
PAU				S			**Sn**	**12 44 02.0**	**0.0**
KDTR	**Khodutka, Kamc**	**3.88**	**38**	*e*P			**Pn**	**12 43 33.1**	**-2.2**
KDTR				*e*S			**Sn**	**12 44 15.8**	**-4.1**
KDTR	**Khodutka, Kamc**	**3.88**	**38**	PN			**Pn**	**12 43 33.1**	**-2.2**
KDTR				S			**Sn**	**12 44 15.8**	**-4.1**
ASAK	**Asacha**	**4.27**	**32**	*i* P			**Pn**	**12 43 41.1**	**+0.5**
ASAK				*e*S			**Sn**	**12 44 29.9**	**+0.4**
ASAK	**Asacha**	**4.27**	**32**	PN			**Pn**	**12 43 41.1**	**+0.5**
ASAK				S			**Sn**	**12 44 29.9**	**+0.4**
MTVR	**Mutnovka**	**4.45**	**33**	*e*P			**Pn**	**12 43 42.8**	**-0.3**
MTVR				*e*S			**Sn**	**12 44 31.5**	**-2.4**
MTVR	**Mutnovka**	**4.45**	**33**	PN			**Pn**	**12 43 42.8**	**-0.3**
MTVR				S			**Sn**	**12 44 31.5**	**-2.4**
GRL	**Gorelyy**	**4.47**	**31**	*i* P			**Pn**	**12 43 43.6**	**+0.2**
GRL				*e*S			**Sn**	**12 44 33.1**	**-1.2**
GRL	**Gorelyy**	**4.47**	**31**	PN			**Pn**	**12 43 43.6**	**+0.2**
GRL				S			**Sn**	**12 44 33.1**	**-1.2**
RUS	**Russkaya**	**4.53**	**35**	*i* P			**Pn**	**12 43 42.1**	**-2.0**
RUS				*e*S			**Sn**	**12 44 31.6**	**-4.0**
RUS	**Russkaya**	**4.53**	**35**	*e*P			**Pn**	**12 43 42.1**	**-2.0**
RUS	**Russkaya**	**4.53**	**35**	PN			**Pn**	**12 43 42.1**	**-2.0**
RUS				S			**Sn**	**12 44 31.6**	**-4.0**
KRMR	**Karymshinskiy**	**4.72**	**30**	*e*P			**Pn**	**12 43 46.7**	**+0.1**
KRMR	**Karymshinskiy**	**4.72**	**30**	PN			**Pn**	**12 43 46.7**	**+0.1**
PEA0B	**Petropavlovsk-**	**4.83**	**26**	*d* iPN			**Pn**	**12 43 49.0**	**+0.9**
PEA0B	**Petropavlovsk-**	**4.83**	**26**	Pn			**Pn**	**12 43 48.4**	**+0.3**
PETK	**Petropavlovsk-**	**4.83**	**26**	P			**Pn**	**12 43 48.9**	**+0.8**
	comp=Z,22nm,0.3s,baz=180,slow=11,SNR=386								
PETK				LR			LR	12 45 46.5	
	comp=Z,489nm,21.9s,baz=199,slow=39								
PETK	**Petropavlovsk-**	**4.83**	**26**	PN			**Pn**	**12 43 48.3**	**+0.2**
PETK	**Petropavlovsk-**	**4.83**	**26**				**Pn**	**12 43 48.3**	**+0.2**
PET	**Petropavlovsk**	**5.06**	**32**	*i* P			**Pn**	**12 43 51.4**	**+0.2**
PET				*e*S			**Sn**	**12 44 46.9**	**-1.4**
PET	**Petropavlovsk**	**5.06**	**32**	*e*P			**Pn**	**12 43 52.8**	**+1.6**
PET				AMB			AMB	12 43 58.7	
	comp=Z,791nm,0.6s								
PET				*e*S			**Sn**	**12 44 47.6**	**-0.7**
PET	**Petropavlovsk**	**5.06**	**32**	*e*PN			**Pn**	**12 43 50.6**	**-0.6**
PET				*e*S			**Sn**	**12 44 47.8**	**-0.5**
PET				pmax			pmax		
	comp=Z,311nm,0.6s								
PET				smax			smax		
	comp=E,759nm,0.6s								
PET				smax			smax		
	comp=N,624nm,0.4s								
PET				MLR			MLR		
	comp=Z,300nm,14.0s								
PET	**Petropavlovsk**	**5.06**	**32**				**Pn**	**12 43 51.1**	**-0.1**
PET				Sn			**Sn**	**12 44 48.0**	**-0.4**
DALK	**Dalny**	**5.10**	**32**	*e*P			**Pn**	**12 43 51.2**	**-0.5**
DALK				*e*S			**Sn**	**12 44 48.2**	**-1.1**
DALK	**Dalny**	**5.10**	**32**	PN			**Pn**	**12 43 51.2**	**-0.5**
DALK				S			**Sn**	**12 44 48.2**	**-1.1**
UGLR	**Uglovaya**	**5.27**	**31**	*e*P			**Pn**	**12 43 54.4**	**+0.3**
UGLR				*e*S			**Sn**	**12 44 53.1**	**-0.5**
UGLR	**Uglovaya**	**5.27**	**31**	PN			**Pn**	**12 43 54.4**	**+0.3**
UGLR				S			**Sn**	**12 44 53.1**	**-0.5**
KOK	**Koryaka**	**5.28**	**30**	*i* P			**Pn**	**12 43 55.3**	**+1.1**
KOK	**Koryaka**	**5.28**	**30**	*e*P			**Pn**	**12 43 55.3**	**+1.1**
KOK	**Koryaka**	**5.28**	**30**	PN			**Pn**	**12 43 55.3**	**+1.1**
AVH	**Avacha**	**5.29**	**31**	*i* P			**Pn**	**12 43 55.2**	**+0.9**
AVH	**Avacha**	**5.29**	**31**	PN			**Pn**	**12 43 55.2**	**+0.9**
SMAR	**Somma**	**5.31**	**31**	*i* P			**Pn**	**12 43 54.8**	**+0.1**
SMAR	**Somma**	**5.31**	**31**	PN			**Pn**	**12 43 54.8**	**+0.1**
KRER	**Koryakskii**	**5.32**	**30**	*e*P			**Pn**	**12 43 55.1**	**+0.2**
KRER				*e*S			**Sn**	**12 44 54.4**	**-0.7**
KRER	**Koryakskii**	**5.32**	**30**	PN			**Pn**	**12 43 55.1**	**+0.2**
KRER				S			**Sn**	**12 44 54.4**	**-0.7**
KRX	**Arik**	**5.34**	**30**	*i* P			**Pn**	**12 43 55.6**	**+0.5**
KRX	**Arik**	**5.34**	**30**	PN			**Pn**	**12 43 55.6**	**+0.5**
SDLR	**Sedlovina**	**5.35**	**31**	*i* P			**Pn**	**12 43 54.7**	**-0.5**
SDLR				*e*S			**Sn**	**12 44 53.3**	**-2.2**
SDLR	**Sedlovina**	**5.35**	**31**	PN			**Pn**	**12 43 54.7**	**-0.5**
SDLR				S			**Sn**	**12 44 53.3**	**-2.2**
GNL	**Ganaly**	**5.42**	**24**	*e*P			**Pn**	**12 43 57.1**	**+1.0**
GNL	**Ganaly**	**5.42**	**24**	PN			**Pn**	**12 43 57.1**	**+1.0**
SPN	**Mys Shipunski**	**5.64**	**38**	*e*P			**Pn**	**12 43 57.1**	**-1.9**
SPN				*e*S			**Sn**	**12 44 55.3**	**-7.0**
SPN	**Mys Shipunski**	**5.64**	**38**	*e*P			**Pn**	**12 43 57.1**	**-1.9**
SPN	**Mys Shipunski**	**5.64**	**38**	PN			**Pn**	**12 43 57.1**	**-1.9**
KUR	**Kuril'sk**	**5.64**	**233**	*i* P			**Pn**	**12 43 59.7**	**+0.6**
KUR				AMB			AMB	12 44 13.8	
	comp=Z,230nm,0.5s								
KUR				*e*S			**Sn**	**12 45 02.0**	**-0.5**
KUR				A			A	12 45 19.0	
	comp=Z,300nm,0.5s								
KUR				A			A	12 45 19.0	
	comp=Z,173nm,0.5s								
KUR	**Kuril'sk**	**5.64**	**233**	*d* iPN			**Pn**	**12 43 59.1**	**0.0**
KUR				S			**Sn**	**12 45 05.8**	**+3.3**
KUR				pmax			pmax		
	comp=Z,230nm,0.5s								
KUR				pmax			pmax		
	comp=N,66nm,0.6s								
KUR				pmax			pmax		
	comp=E,46nm,0.6s								
KUR				smax			smax		
	comp=E,173nm,0.6s								
KUR				smax			smax		
	comp=N,30nm,0.5s								
KII	**Karymskiy**	**6.17**	**30**	P			**Pn**	**12 44 06.6**	**+0.4**
KII	**Karymskiy**	**6.17**	**30**	PN			**Pn**	**12 44 06.6**	**+0.4**
KZV	**Kizimen**	**7.34**	**28**	*e*P			**Pn**	**12 44 22.2**	**0.0**
KZV				*e*S			**Sn**	**12 45 42.4**	**-1.4**
KZV	**Kizimen**	**7.34**	**28**	PN			**Pn**	**12 44 22.2**	**0.0**
KZV				S			**Sn**	**12 45 42.4**	**-1.4**
MKZ	**Mys Kozlova**	**7.40**	**36**	*i* P			**Pn**	**12 44 20.0**	**-2.8**
MKZ				*e*S			Sn	12 45 35.9	-9.2
MKZ	**Mys Kozlova**	**7.40**	**36**	PN			**Pn**	**12 44 20.0**	**-2.8**
TUMR	**Tumrok**	**7.43**	**27**	*i* P			**Pn**	**12 44 24.2**	**+0.7**
TUMR	**Tumrok**	**7.43**	**27**	PN			**Pn**	**12 44 23.2**	**-0.3**
TUMR				S			**Sn**	**12 45 44.9**	**-1.3**
TUMD	**Tumrok D**	**7.45**	**28**	*e*P			**Pn**	**12 44 23.2**	**-0.3**
TUMD				*e*S			**Sn**	**12 45 44.9**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**7.50**	**234**	*e*P			Pn	12 44 23.3	-1.1
YUK				AMB			AMB	12 44 33.0	
	comp=N,267nm,0.6s								
YUK				AMB			AMB	12 44 36.0	
	comp=N,567nm,1.2s								
YUK				*e*S			**Sn**	**12 45 45.3**	**-2.5**
YUK				A			A	12 45 48.5	
	comp=N,300nm,0.8s								
YUK				A			A	12 45 48.5	
	comp=N,320nm,0.8s								
YUK				AMS			AMS	12 47 59.0	
	comp=N,272nm,13.0s								
YUK				AMS			AMS	12 47 59.0	
	comp=N,410nm,13.0s								
YUK	**Yuzh-Kuril'sk**	**7.50**	**234**	*e*PN			Pn	12 44 23.1	-1.3
YUK				pmax			pmax		
	comp=Z,267nm,0.6s								
YUK				pmax			pmax		
	comp=E,114nm,0.4s								
YUK				pmax			pmax		
	comp=N,129nm,0.3s								
YUK				pmax			pmax		
	comp=Z,567nm,1.2s								
YUK				MLR			MLR		
	comp=Z,410nm,13.0s								
YUK				MLR			MLR		
	comp=E,272nm,12.0s								
GRPR	**Tuman**	**7.58**	**234**	*e*P			Pn	12 44 23.0	-2.4
GRPR				AMB			AMB	12 44 29.0	
	comp=E,131nm,0.3s								
GRPR				*e*S			Sn	12 45 44.0	-5.7
GRPR	**Tuman**	**7.58**	**234**	*e*PN			Pn	12 44 23.9	-1.5
GRPR				pmax			pmax		
	comp=Z,131nm,0.3s								
GRPR				pmax			pmax		
	comp=N,86nm,0.1s								
GRPR				pmax			pmax		
	comp=E,147nm,0.6s								
ESO	**Esso**	**7.63**	**19**	*e*P			**Pn**	**12 44 27.8**	**+1.7**
ESO	**Esso**	**7.63**	**19**	*e*P			**Pn**	**12 44 27.8**	**+1.7**
ESO	**Esso**	**7.63**	**19**	PN			**Pn**	**12 44 27.8**	**+1.7**
TYV	**Tymovskoe**	**7.78**	**290**	*e*P			**Pn**	**12 44 30.1**	**+2.1**
TYV				AMB			AMB	12 44 33.4	
	comp=E,76nm,1.0s								
TYV				*e*S			**Sn**	**12 45 57.4**	**+3.1**
TYV				A			A	12 46 04.7	
	comp=E,30nm,1.0s								
TYV	**Tymovskoe**	**7.78**	**290**	*e*PN			**Pn**	**12 44 32.6**	**+4.6**
TYV				pmax			pmax		
	comp=Z,76nm,1.1s								
RUSJ	**Misakicho**	**7.79**	**236**	*e*PN			**Pn**	**12 44 29.3**	**+1.0**
RUSJ				*e*S			**Sn**	**12 46 00.0**	**+5.2**
GLVR	**Golovnino**	**7.89**	**233**	*i* P			Pn	12 44 27.0	-2.6
GLVR				AMB			AMB	12 44 43.0	
	comp=Z,765nm,1.1s								
GLVR				*e*S			Sn	12 45 51.0	-6.1
GLVR	**Golovnino**	**7.89**	**233**	*d* iPN			Pn	12 44 27.7	-1.9
GLVR				pmax			pmax		
	comp=Z,765nm,1.1s								
YSS	**Yuzh-Sakhalins**	**7.95**	**261**	*e*P			**Pn**	**12 44 33.3**	**+2.9**
YSS				AMB			AMB	12 44 34.3	
	comp=Z,110nm,0.8s								
YSS				AMB			AMB	12 44 36.4	
	comp=Z,200nm,3.0s								
YSS				*e*S			**Sn**	**12 45 59.8**	**+1.2**
YSS				A			A	12 46 08.8	
	comp=Z,50nm,0.6s								
YSS				A			A	12 46 08.8	
	comp=Z,40nm,0.6s								
YSS				A			A	12 46 08.9	
	comp=Z,100nm,2.0s								
YSS				A			A	12 46 08.9	
	comp=Z,200nm,2.0s								
YSS				AMS			AMS	12 48 17.0	
	comp=Z,400nm,16.0s								
YSS	**Yuzh-Sakhalins**	**7.95**	**261**	*ae*PN			**Pn**	**12 44 33.6**	**+3.2**
YSS				pmax			pmax		
	comp=Z,110nm,0.8s								
YSS				pmax			pmax		
	comp=Z,200nm,2.9s								
YSS				MLR			MLR		
	comp=Z,400nm,16.0s								
YSS	**Yuzh-Sakhalins**	**7.95**	**261**	Pn			**Pn**	**12 44 33.5**	**+3.2**
UGL	**Uglegorsk**	**8.03**	**277**	*e*P			**Pn**	**12 44 35.0**	**+3.6**
UGL				AMB			AMB	12 44 36.0	
	comp=Z,900nm,2.0s								
UGL				AMB			AMB	12 44 37.0	
	comp=Z,501nm,0.9s								
UGL	**Uglegorsk**	**8.03**	**277**	*e*PN			**Pn**	**12 44 35.8**	**+4.4**
UGL				S			**Sn**	**12 46 05.1**	**+4.6**
UGL				pmax			pmax		
	comp=Z,900nm,1.1s								
UGL				pmax			pmax		
	comp=Z,502nm,0.9s								
UGL				smax			smax		
	comp=N,101nm,0.7s								
UGL				smax			smax		
	comp=E,112nm,0.6s								
KOZ	**Kozyrevsk**	**8.03**	**23**	*e*P			**Pn**	**12 44 32.1**	**+0.6**
KOZ	**Kozyrevsk**	**8.03**	**23**	*e*P			**Pn**	**12 44 32.1**	**+0.6**
KOZ	**Kozyrevsk**	**8.03**	**23**	PN			**Pn**	**12 44 32.1**	**+0.6**
NMR	**Nemuro--Hokkai**	**8.04**	**231**	*e*P			Pn	12 44 27.0	-4.6
NMR	**Nemuro--Hokkai**	**8.04**	**231**	*e*PN			Pn	12 44 27.4	-4.2
KIRR	**Kirishev**	**8.07**	**25**	*e*P			Pn	12 44 27.8	-4.3
KIRR	**Kirishev**	**8.07**	**25**	PN			Pn	12 44 27.8	-4.3
BZMR	**Bezymyannaya**	**8.10**	**26**	*e*P			**Pn**	**12 44 32.8**	**+0.4**
BZMR	**Bezymyannaya**	**8.10**	**26**	PN			**Pn**	**12 44 32.8**	**+0.4**
BZWR	**Bezymyannyi-We**	**8.12**	**26**	*e*P			**Pn**	**12 44 33.0**	**+0.2**
BZWR	**Bezymyannyi-We**	**8.12**	**26**	PN			**Pn**	**12 44 33.0**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**8.16**	**26**	*e*P			**Pn**	**12 44 32.8**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**8.16**	**26**	PN			**Pn**	**12 44 32.8**	**-0.5**
SRDR	**Sredinnyy**	**8.23**	**22**	*e*P			**Pn**	**12 44 34.4**	**+0.3**
SRDR	**Sredinnyy**	**8.23**	**22**	PN			**Pn**	**12 44 34.4**	**+0.3**
ZLN	**Zelenaya**	**8.26**	**27**	*e*P			**Pn**	**12 44 34.7**	**+0.1**
ZLN	**Zelenaya**	**8.26**	**27**	PN			**Pn**	**12 44 34.7**	**+0.1**
LGNR	**Loginova**	**8.28**	**26**	*e*P			**Pn**	**12 44 35.4**	**+0.3**
LGNR	**Loginova**	**8.28**	**26**	PN			**Pn**	**12 44 35.4**	**+0.3**
CIRR	**Tsirk**	**8.32**	**26**	*e*P			**Pn**	**12 44 36.3**	**+0.7**
CIRR	**Tsirk**	**8.32**	**26**	PN			**Pn**	**12 44 36.3**	**+0.7**
KRSR	**Krestovskiy**	**8.36**	**25**	*e*P			**Pn**	**12 44 36.5**	**+0.5**
KRSR	**Krestovskiy**	**8.36**	**25**	PN			**Pn**	**12 44 36.5**	**+0.5**
KLY	**Klyuchi**	**8.47**	**25**	*e*P			**Pn**	**12 44 37.8**	**+0.5**
KLY	**Klyuchi**	**8.47**	**25**	PN			**Pn**	**12 44 37.8**	**+0.5**
OKH	**Okha**	**8.55**	**308**	*i* P			**Pn**	**12 44 42.1**	**+3.7**
OKH				AMB			AMB	12 44 49.8	
	comp=E,100nm,13.0s								
OKH				*i* S			**Sn**	**12 46 17.1**	**+4.1**
OKH				AMS			AMS	12 49 21.2	
	comp=E,300nm,12.0s								
OKH				AMS			AMS	12 49 21.2	
	comp=E,500nm,12.0s								
OKH				AMS			AMS	12 49 21.2	
	comp=E,400nm,12.0s								
OKH	**Okha**	**8.55**	**308**	*c* iPN			Pn	12 44 34.6	-3.8
OKH				pmax			pmax		
	comp=Z,100nm,13.7s								
OKH				MLR			MLR		
	comp=E,500nm,12.0s								
OKH				MLR			MLR		
	comp=N,300nm,15.0s								
OKH				MLR			MLR		
	comp=Z,400nm,14.0s								
BDR	**Baidarnaya**	**8.85**	**26**	*e*P			**Pn**	**12 44 40.1**	**-2.5**
BDR	**Baidarnaya**	**8.85**	**26**	PN			**Pn**	**12 44 40.1**	**-2.5**
SRKR	**Sorokina**	**8.91**	**25**	*e*P			**Pn**	**12 44 43.0**	**-0.4**
SRKR	**Sorokina**	**8.91**	**25**	PN			**Pn**	**12 44 43.0**	**-0.4**
JMP	**Maruseppu**	**8.92**	**242**	P			**Pn**	**12 44 43.6**	**0.0**
SMKR	**Semkarok**	**8.93**	**27**	*e*P			**Pn**	**12 44 42.6**	**-1.1**
SMKR				*e*S			**Sn**	**12 46 18.6**	**-3.9**
SMKR	**Semkarok**	**8.93**	**27**	PN			**Pn**	**12 44 42.6**	**-1.1**
SMKR				S			**Sn**	**12 46 18.6**	**-3.9**
KBG	**Krutoberegovo**	**9.06**	**31**	*e*P			**Pn**	**12 44 42.6**	**-2.8**
KBG				*e*S			Sn	12 46 16.4	-9.1
KBG	**Krutoberegovo**	**9.06**	**31**	PN			**Pn**	**12 44 42.6**	**-2.8**
KBTR	**Krutoberegovo**	**9.06**	**32**	*i* P			**Pn**	**12 44 43.2**	**-2.2**
KBTR				*e*S			Sn	12 46 15.9	-10
KBTR	**Krutoberegovo**	**9.06**	**32**	PN			**Pn**	**12 44 43.2**	**-2.2**
JWK2	**Keihoku**	**9.12**	**252**	P			Pn	12 44 52.1	+5.8
JKA	**Kamikawa-asahi**	**9.30**	**244**	*e*P			**Pn**	**12 44 50.0**	**+1.2**
JKA	**Kamikawa-asahi**	**9.30**	**244**	Pn			**Pn**	**12 44 50.0**	**+1.2**
ASAJ	**Asahikawa**	**9.31**	**244**	P			**Pn**	**12 44 49.7**	**+0.9**
	comp=Z,8.7nm,0.3s,baz=74,slow=12,SNR=124								
ASAJ	**Asahikawa**	**9.31**	**244**	P			**Pn**	**12 44 50.0**	**+1.2**
ASAJ	**Asahikawa**	**9.31**	**244**	PN			**Pn**	**12 44 50.0**	**+1.2**
BKI	**Bering**	**9.65**	**44**	*e*S			Sn	12 46 25.9	-14
ERM	**Erimo**	**10.33**	**233**	*ce*PN			Pn	12 45 00.3	-2.5
ERM				pmax			pmax		
	comp=Z,162nm,1.7s								
ERM	**Erimo**	**10.33**	**233**	Pn			Pn	12 44 59.9	-2.9
JEM	**Erimo**	**10.33**	**233**	P			Pn	12 44 59.2	-3.5
JEW	**Eniwo**	**10.73**	**241**	Pn			Pn	12 45 06.9	-1.3
MA2	**Magadan**	**10.98**	**351**	*e*P			**Pn**	**12 45 13.5**	**+2.1**
MA2	**Magadan**	**10.98**	**351**	*ce*PN			**Pn**	**12 45 13.5**	**+2.1**
MA2				pmax			pmax		
	comp=Z,90nm,2.5s								
MA2	**Magadan**	**10.98**	**351**	Pn			**Pn**	**12 45 12.1**	**+0.7**
JSH	**Shimam**	**11.68**	**243**	P			Pn	12 45 19.2	-1.6
GRNR	**Gornyy**	**11.69**	**286**	*e*P			**Pn**	**12 45 24.5**	**+3.5**
GRNR				AMB			AMB	12 45 27.3	
	comp=Z,20nm,0.9s								
GRNR				AMB			AMB	12 45 27.3	
	comp=Z,20nm,0.9s								
GRNR	**Gornyy**	**11.69**	**286** ⇑	*i* PN			**Pn**	**12 45 24.5**	**+3.5**
GRNR				pmax			pmax		
	comp=E,20nm,0.9s

ZEA AMS AMS 12 54 58.0
comp=Z,200nm,12.0s
ZEA Zeya 17.55 297 *e*P **P** **12 46 35.3 +0.4**
ZEA *e*S Sn 12 49 38.5 -12
ZEA pmax pmax
comp=E,10.0nm,1.3s
ZEA pmax pmax
comp=N,30nm,0.8s
ZEA pmax pmax
comp=Z,30nm,0.9s
ZEA pmax pmax
comp=Z,100nm,4.2s
ZEA smax smax
comp=E,100nm,4.4s
ZEA smax smax
comp=N,100nm,4.7s
ZEA MLR MLR
comp=E,200nm,9.0s
ZEA MLR MLR
comp=Z,200nm,17.0s
JGN Niukaw 17.67 231 P P 12 46 31.2 -5.2
KROS Kirovskiy 17.79 299 *e*P **Pn** **12 46 39.0 +0.8**
KROS AMB AMB 12 46 43.1
comp=Z,11nm,0.3s
KROS AMB AMB 12 46 43.1
comp=Z,18nm,0.3s
KROS AMB AMB 12 46 43.1
comp=Z,33nm,0.3s
JGF Kuroka 18.13 230 P **P** **12 46 40.2 -1.3**
INU Inuyama 18.50 230 **P** **12 46 45.2 -0.2**
YAK Yakutsk 19.07 323 *e*P **P** **12 46 51.3 -0.1**
YAK Yakutsk 19.07 323 *e*P **P** **12 46 51.4 0.0**
YAK *e*S **Sn** **12 50 22.4 -4.6**
YAK pmax pmax
comp=Z,95nm,0.8s
YAK pmax pmax
comp=N,13nm,1.1s
YAK pmax pmax
comp=E,14nm,0.9s
YAK smax smax
comp=N,88nm,1.3s
YAK smax smax
comp=E,109nm,1.9s
YAK Yakutsk 19.07 323 P **P** **12 46 51.8 +0.4**
JWT Wachi 19.38 233 P **P** **12 46 54.4 -0.7**
BILL Bilibino 20.22 13 *e*P **P** **12 47 02.3 -1.5**
BILL Bilibino 20.22 13 *d i*P **P** **12 47 02.3 -1.5**
BILL *e**PP **pP** **12 47 24.8 +1.3**
BILL *SP **sP** **12 47 42.0 +5.3**
BILL pmax pmax
comp=Z,26nm,1.0s
BILL Bilibino 20.22 13 P **P** **12 47 02.9 -0.8**
CN2 Changchun 20.45 267 ⇑P **P** **12 47 03.5 -3.0**
CN2 *e*pP pP 12 47 22.5 -3.2
CN2 *e*S S 12 50 39.8 -10
CN2 pmax pmax
comp=Z,20nm,0.9s
JHS Saijyo 20.83 236 P **P** **12 47 10.7 0.0**
JHS Saijyo 20.83 236 P **P** **12 47 10.9 +0.2**
JHS IAmb IAmb 12 47 11.8
comp=Z,70nm,1.0s
KSRS Korea Array 22.20 249 P **P** **12 47 25.1 0.0**
comp=Z,30nm,0.6s,baz=48,slow=9.9,SNR=75
KSRS PcP **PcP** **12 51 17.6 0.0**
comp=Z,3.3nm,0.8s,baz=332,slow=0.5,SNR=8.5
KSRS LR LR 12 55 17.2
comp=Z,61nm,18.7s,baz=57,slow=34
KS19 Wonju Array Si 22.20 249 P **P** **12 47 24.9 -0.3**
KS19 IAmb IAmb 12 47 27.6
comp=Z,40nm,0.8s
KSAR Wonju Array Be 22.23 249 P **P** **12 47 25.4 -0.1**
KSAR Wonju Array Be 22.23 249 P **P** **12 47 25.4 -0.1**
HIA Hailar 22.52 284 P **P** **12 47 27.6 -0.8**
HIA pmax pmax
comp=Z,21nm,0.9s
HIA Hailar 22.52 284 P **P** **12 47 27.6 -0.8**
INCN Inchon 22.98 251 P **P** **12 47 33.4 +0.3**
INCN Inchon 22.98 251 P **P** **12 47 32.8 -0.3**
INCN pmax pmax
comp=Z,72nm,1.2s
INCN Inchon 22.98 251 P **P** **12 47 32.8 -0.3**
INCN IAmb IAmb 12 47 34.4
comp=Z,72nm,1.1s
TJN Taejon 23.23 248 *ce*P **P** **12 47 34.1 -1.3**
JTU Tsushima 23.28 241 P **P** **12 47 35.5 -0.4**
JTU IAmb IAmb 12 47 39.1
comp=Z,59nm,1.1s
JNU Nakatsue 23.46 237 P **P** **12 47 37.4 -0.3**
comp=Z,56nm,0.9s,baz=54,slow=5.9,SNR=14
JNU Nakatsue 23.46 237 P **P** **12 47 37.6 0.0**
JNU Nakatsue 23.46 237 P **P** **12 47 37.8 +0.2**
JNU IAmb IAmb 12 47 43.0
comp=Z,61nm,0.9s
GAMB Gambell 23.72 38 P **P** **12 47 40.4 +0.9**
GAMB IAmb IAmb 12 47 41.3
comp=Z,167nm,1.3s
JSU Suzuyama 24.92 235 P **P** **12 47 52.0 +1.2**
JSU Suzuyama 24.92 235 P **P** **12 47 51.1 +0.3**
JSU IAmb IAmb 12 47 53.1
comp=Z,99nm,1.2s
BOD Bodaibo 25.33 306 *e*P **P** **12 47 52.8 -1.4**
BOD Bodaibo 25.33 306 *e*P **P** **12 47 52.8 -1.4**
BOD pmax pmax
comp=Z,30nm,1.6s
DL2 Dalian 25.35 259 P **P** **12 47 54.3 -0.2**
DL2 S **S** **12 52 12.5 -0.4**
DL2 *es*S sS 12 52 47.5 -5.6
DL2 pmax pmax
comp=Z,38nm,1.4s
TIXI Tiksi 25.73 342 *e*P **P** **12 47 55.9 -1.8**
TIXI Tiksi 25.73 342 *ce*P **P** **12 47 55.9 -1.8**
TIXI pmax pmax
comp=Z,66nm,1.0s
TIXI Tiksi 25.73 342 P **P** **12 47 56.3 -1.4**
TIXI IAmb IAmb 12 48 25.3
comp=Z,35nm,0.9s
TNA Tin City 25.91 36 P **P** **12 48 02.1 +2.8**
baz=248,SNR=7.7
TNA Tin City 25.91 36 P **P** **12 47 59.8 +0.4**
BJT Baijiatuau 28.34 266 P **P** **12 48 20.4 -0.9**
BJT pmax pmax
comp=Z,9.0nm,0.9s
BJT Baijiatuau 28.34 266 P **P** **12 48 20.4 -0.9**
RDOG Red Dog Mine 28.66 32 P **P** **12 48 24.3 +0.4**
RDOG IAmb IAmb 12 48 25.6
comp=Z,48nm,0.7s
TIA Tai'an 29.82 259 P **P** **12 48 34.5 0.0**
TIA pmax pmax
comp=Z,14nm,1.2s
TTA Tatalina 30.39 44 P **P** **12 48 39.9 +0.6**
TTA pmax pmax
comp=Z,13nm,0.8s
TTA Tatalina 30.39 44 P **P** **12 48 39.9 +0.6**
SVW2 Sparrevohn 30.51 47 P **P** **12 48 41.4 +1.0**
H11N2 WAKE ISLAND Hy 30.74 156 T T 13 20 57.9
baz=342,slow=76,SNR=142
H11N1 WAKE ISLAND Hy 30.76 156 T T 13 21 23.1
baz=342,slow=76,SNR=261
H11N3 WAKE ISLAND Hy 30.76 156 T T 13 20 59.6
baz=342,slow=76,SNR=84
HHC Hu-ho-hao-te 30.96 271 *e*P **P** **12 48 45.0 +0.3**
HHC S **S** **12 53 40.5 -0.9**
HHC pmax pmax
comp=Z,54nm,1.2s
HHC pmax pmax
comp=Z,67nm,4.7s
ULN Ulaanbaatar 31.00 286 *e*P **P** **12 48 44.7 -0.3**
ULN Ulaanbaatar 31.00 286 P **P** **12 48 45.2 +0.2**
ULN Ulaanbaatar 31.00 286 *ce*P **P** **12 48 44.7 -0.3**
ULN pmax pmax
comp=Z,15nm,1.0s
ULN Ulaanbaatar 31.00 286 P **P** **12 48 44.8 -0.3**
NJ2 Nanjing 31.36 251 ⇑P **P** **12 48 48.5 +0.4**
NJ2 pmax pmax
comp=Z,15nm,0.6s
SONM Songino Array 31.43 287 P **P** **12 48 48.6 -0.1**
comp=Z,7.1nm,0.9s,baz=79,slow=8.2,SNR=28
SONM PcP **PcP** **12 51 38.9 -0.6**
comp=Z,4.9nm,0.8s,baz=100,slow=2.0,SNR=8.6
SONM ScP **ScP** **12 55 12.9 +0.3**
comp=Z,0.2nm,0.4s,baz=331,slow=46,SNR=3.2
SONM LR LR 13 02 19.2
comp=Z,148nm,19.9s,baz=39,slow=38
SONM Songino Array 31.43 287 P **P** **12 48 49.2 +0.5**
IMAR Indian Mountai 31.66 38 P **P** **12 48 50.2 -0.2**

A21K Barrow 31.83 28 P **P** **12 48 52.3 +0.5**
baz=252,SNR=28
A21K Barrow 31.83 28 P **P** **12 48 52.3 +0.5**
H11S1 WAKE ISLAND Hy 31.86 157 T T 13 22 52.5
SNR=549
H11S3 WAKE ISLAND Hy 31.87 157 T T 13 21 52.2
baz=343,slow=74,SNR=5063
H11S2 WAKE ISLAND Hy 31.88 157 T T 13 22 00.7
baz=225,slow=74,SNR=4007
RSO Redoubt South 31.91 48 P **P** **12 48 53.7 +0.8**
OHAK Old Harbor 31.93 55 P **P** **12 48 52.7 -0.2**
OHAK IAmb IAmb 12 48 53.3
comp=Z,31nm,1.0s
TIY Taiyuan 32.03 266 *e*P **P** **12 48 55.0 +1.0**
TIY pmax pmax
comp=Z,35nm,0.7s
BTO Baotou 32.10 272 *e*P **P** **12 48 53.3 -1.4**
PPLA Purkeypile 32.13 44 P **P** **12 48 56.2 +1.5**
KDAK Kodiak Island 32.24 53 P **P** **12 48 55.3 -0.2**
KDAK pmax pmax
comp=Z,28nm,0.9s
KDAK Kodiak Island 32.24 53 P **P** **12 48 55.3 -0.2**
KDAK IAmb IAmb 12 48 55.9
comp=Z,28nm,0.9s
HOM Homer 32.52 50 P **P** **12 48 58.2 +0.2**
baz=275
ZAK Zakamensk 32.55 292 *e*P **P** **12 48 57.4 -1.1**
ZAK Zakamensk 32.55 292 *e*P **P** **12 48 57.4 -1.1**
ZAK pmax pmax
comp=Z,16nm,1.1s
BPAW Bear Paw Mtn. 32.69 42 P **P** **12 49 00.6 +1.1**
BPAW IAmb IAmb 12 49 01.0
comp=Z,14nm,0.8s
KTH Kantishna Hill 32.71 43 P **P** **12 49 01.1 +1.3**
KTH IAmb IAmb 12 49 02.0
comp=Z,46nm,1.2s
CNPM China Poot 32.74 50 P **P** **12 49 00.3 +0.3**
CNPM IAmb IAmb 12 49 01.8
comp=Z,29nm,0.8s
MLY Manley 32.83 40 P **P** **12 49 01.7 +1.0**
baz=268,SNR=16
SUA Susitna One 32.84 46 P **P** **12 49 00.7 -0.2**
SUA IAmb IAmb 12 49 01.9
comp=Z,13nm,0.8s
BRLK Bradley Lake 32.90 50 P **P** **12 49 01.4 +0.1**
BRLK IAmb IAmb 12 49 03.6
comp=Z,18nm,0.8s
TRF Thorofare Moun 33.00 43 P **P** **12 49 03.1 +0.8**
TRF IAmb IAmb 12 49 05.2
comp=Z,17nm,1.1s
CUT Chulitna 33.03 45 P **P** **12 49 02.7 +0.3**
baz=272
COLD Coldfoot 33.21 36 P **P** **12 49 04.8 +1.0**
baz=265,SNR=54
COLD Coldfoot 33.21 36 P **P** **12 49 04.9 +1.0**
COLD IAmb IAmb 12 49 05.9
comp=Z,39nm,0.8s
RC01 Rabbit Creek A 33.35 47 P **P** **12 49 05.9 +0.7**
baz=275
BWN Browne 33.36 41 P **P** **12 49 06.6 +1.3**
O22K Cooper Landing 33.41 48 P **P** **12 49 05.9 +0.2**
baz=276
O22K Cooper Landing 33.41 48 P **P** **12 49 05.9 +0.2**
I23K Minto, Yukon-K 33.42 40 P **P** **12 49 06.9 +1.1**
baz=269,SNR=13
I23K Minto, Yukon-K 33.42 40 P **P** **12 49 06.7 +1.0**
I23K IAmb IAmb 12 49 08.7
comp=Z,18nm,1.0s
NEA2 Nenana 33.54 41 P **P** **12 49 07.5 +0.7**
baz=270,SNR=23
SEW Seward 33.58 49 P **P** **12 49 07.2 0.0**
SEW IAmb IAmb 12 49 07.8
comp=Z,27nm,1.0s
MCK McKinley 33.60 42 P **P** **12 49 07.9 +0.5**
baz=271,SNR=14
TOLK Toolik Lake Re 33.60 33 P **P** **12 49 08.3 +1.0**
baz=263,SNR=88
TOLK Toolik Lake Re 33.60 33 P **P** **12 49 08.4 +1.1**
PMR Palmer 33.60 46 P **P** **12 49 08.0 +0.6**
PMR pmax pmax
comp=Z,7.0nm,0.7s
PMR Palmer 33.60 46 P **P** **12 49 08.0 +0.6**
RND Reindeer 33.64 43 P **P** **12 49 08.1 +0.3**
RND pmax pmax
comp=Z,23nm,0.8s
RND Reindeer 33.64 43 P **P** **12 49 08.1 +0.3**
RND IAmb IAmb 12 49 08.9
comp=Z,23nm,0.8s
GHO Glory Hole Cre 33.69 46 P **P** **12 49 08.6 +0.4**
MDM Murphy Dome 33.90 40 P **P** **12 49 10.9 +1.0**
MDM IAmb IAmb 12 49 12.0
comp=Z,28nm,1.0s
KNK Knik Glacier 33.94 46 P **P** **12 49 11.1 +0.7**
KNK IAmb IAmb 12 49 11.7
comp=Z,38nm,0.8s
WRH Wood River Hil 33.96 41 P **P** **12 49 11.2 +0.8**
WRH IAmb IAmb 12 49 14.0
comp=Z,18nm,0.8s
SML Sawmill 33.97 46 P **P** **12 49 11.0 +0.4**
TCOL CIGO, UAF Yank 34.05 40 P **P** **12 49 12.3 +1.0**
baz=270,SNR=18
TCOL CIGO, UAF Yank 34.05 40 P **P** **12 49 12.4 +1.2**
COLA College 34.06 40 *d i*P **P** **12 49 10.2 -1.1**
COLA pmax pmax
comp=Z,35nm,0.9s
COLA College 34.06 40 P **P** **12 49 12.4 +1.2**
CCB Clear Creek Bu 34.08 41 P **P** **12 49 12.0 +0.6**
CCB IAmb IAmb 12 49 14.2
comp=Z,15nm,0.7s
POKR Poker Plat Res 34.24 40 P **P** **12 49 14.0 +1.2**
baz=270,SNR=19
POKR Poker Plat Res 34.24 40 P **P** **12 49 14.3 +1.4**
DHY Denali Highway 34.33 43 P **P** **12 49 14.4 +0.5**
DHY IAmb IAmb 12 49 15.1
comp=Z,39nm,1.4s
SCM Sheep Creek Mo 34.44 46 P **P** **12 49 15.6 +0.9**
SCM pmax pmax
comp=Z,24nm,0.7s
SCM Sheep Creek Mo 34.44 46 P **P** **12 49 15.6 +0.9**
SCM IAmb IAmb 12 49 17.9
comp=Z,24nm,0.7s
HDA Harding Lake 34.46 41 P **P** **12 49 14.5 -0.2**
baz=272,SNR=20
HDA Harding Lake 34.46 41 P **P** **12 49 14.6 -0.2**
HDA IAmb IAmb 12 49 16.5
comp=Z,17nm,0.8s
IL31 34.47 40 P **P** **12 49 15.4 +0.6**
IL31 IAmb IAmb 12 49 17.2
comp=Z,12nm,0.8s
ILAR Eielson Array 34.47 40 P **P** **12 49 15.1 +0.2**
comp=Z,6.7nm,0.7s,baz=255,slow=7.2,SNR=78
ILAR PcP **PcP** **12 51 46.2 -1.3**
comp=Z,1.1nm,0.6s,baz=276,slow=3.2,SNR=4.2
ILAR LR LR 13 06 09.8
comp=Z,39nm,18.9s,baz=249,slow=41
ILAR Eielson Array 34.47 40 P **P** **12 49 14.6 -0.3**
ILAR Eielson Array 34.47 40 P **P** **12 49 14.6 -0.3**
M24K Tolsona, Glenn 34.96 45 P **P** **12 49 20.2 +1.1**
baz=276,SNR=8.7
M24K Tolsona, Glenn 34.96 45 P **P** **12 49 20.2 +1.1**
M24K IAmb IAmb 12 49 22.5
comp=Z,21nm,0.7s
FID Port Fidalgo 34.97 47 P **P** **12 49 18.6 -0.5**
FID IAmb IAmb 12 49 20.1
comp=Z,32nm,1.3s
KLU Klutina 35.14 46 P **P** **12 49 21.5 +0.8**
KLU IAmb IAmb 12 49 23.2
comp=Z,35nm,1.3s
PAX Paxson 35.20 43 P **P** **12 49 22.5 +1.2**
PAX pmax pmax
comp=Z,11nm,1.2s
PAX Paxson 35.20 43 P **P** **12 49 22.5 +1.2**
WHN Wuhan 35.22 254 P **P** **12 49 21.0 -0.6**
WHN pmax pmax
comp=Z,140nm,0.6s
BMAR Burnt Mountain 35.39 36 P **P** **12 49 24.2 +1.4**
RIDG Independent Ri 35.42 42 P **P** **12 49 23.2 +0.1**
RIDG IAmb IAmb 12 49 24.0
comp=Z,27nm,1.0s
N25K Chitina, Valde 35.76 46 P **P** **12 49 27.1 +1.0**
baz=278,SNR=9.6
N25K Chitina, Valde 35.76 46 P **P** **12 49 27.0 +1.0**
N25K IAmb IAmb 12 49 27.9
comp=Z,8.6nm,0.7s
DOT Dot Lake 35.77 42 P **P** **12 49 25.8 -0.2**

DOT IAmb IAmb 12 49 27.5
comp=Z,10nm,0.7s
SCRK Sand Creek 35.78 42 P **P** **12 49 26.1 -0.1**
baz=275,SNR=15
MENT Mentasta 36.00 43 P **P** **12 49 29.1 +1.1**
MENT IAmb IAmb 12 49 33.4
comp=Z,8.1nm,0.6s
KAIM Kayak Island 36.11 49 P **P** **12 49 30.8 +1.9**
HMT Hamilton 36.11 48 P **P** **12 49 30.2 +1.2**
HMT IAmb IAmb 12 49 31.2
comp=Z,28nm,1.1s
GLB Gilahina Butte 36.16 46 P **P** **12 49 30.3 +0.9**
L26K Log Cabin Wild 36.16 43 P **P** **12 49 30.3 +1.0**
baz=277,SNR=7.4
VRDI Verde Repeater 36.36 46 P **P** **12 49 32.3 +1.0**
VRDI IAmb IAmb 12 49 33.2
comp=Z,20nm,1.3s
XAN Xi'an 36.49 263 P **P** **12 49 31.7 -0.8**
XAN pmax pmax
comp=Z,15nm,1.1s
XAN Xi'an 36.49 263 P **P** **12 49 31.7 -0.8**
XAN IAmb IAmb 12 49 32.9
comp=Z,16nm,1.1s
MCARA McCarthy VSAT 36.54 46 P **P** **12 49 34.2 +1.6**
MCARA IAmb IAmb 12 49 35.1
comp=Z,15nm,1.1s
CRQM Cirque 36.59 47 P **P** **12 49 34.6 +1.4**
K27K Chicken 36.61 41 P **P** **12 49 34.1 +1.0**
baz=277,SNR=29
K27K Chicken 36.61 41 P **P** **12 49 33.8 +0.7**
K27K IAmb IAmb 12 49 35.3
comp=Z,30nm,0.9s
TGL Tana Glacier 36.74 47 P **P** **12 49 35.6 +1.2**
TGL IAmb IAmb 12 49 36.6
comp=Z,25nm,1.0s
TPUB Ta-pu 36.75 238 P **P** **12 49 34.5 -0.3**
BCAR Beaver Creek A 36.86 43 P **P** **12 49 36.6 +1.3**
BALM Baldy 36.92 46 P **P** **12 49 37.0 +1.0**
BALM IAmb IAmb 12 49 38.1
comp=Z,18nm,1.0s
EGAK Eagle 36.92 40 P **P** **12 49 36.0 +0.3**
EGAK IAmb IAmb 12 49 37.1
comp=Z,30nm,0.9s
ISLE Juniper Island 37.00 47 P **P** **12 49 37.8 +1.1**
ISLE IAmb IAmb 12 49 41.6
comp=Z,27nm,1.0s
BARN Barnard Glacie 37.24 46 P **P** **12 49 40.3 +1.5**
BARN IAmb IAmb 12 49 41.8
comp=Z,26nm,0.8s
MESA MESA 37.28 48 P **P** **12 49 40.7 +1.6**
YAH Yahtse 37.34 47 P **P** **12 49 41.1 +1.5**
NRIK Noril'sk 37.42 328 P **P** **12 49 39.0 -0.9**
comp=Z,5.6nm,0.6s,baz=258,slow=20,SNR=12
NRIK PcP **PcP** **12 51 56.0 -0.2**
comp=Z,8.9nm,0.6s,baz=93,slow=2.8,SNR=6.3
NRIK Noril'sk 37.42 328 *ce*P **P** **12 49 38.7 -1.2**
NRIK pmax pmax
comp=Z,6.0nm,0.7s
CTGM Chitina Glacie 37.42 46 P **P** **12 49 41.5 +1.3**
TABL Table Mountain 37.62 47 P **P** **12 49 43.1 +1.2**
DAWY Dawson 37.77 41 P **P** **12 49 43.6 +0.6**
PCA Pinnacle 38.12 48 P **P** **12 49 47.3 +1.2**
BCPM Bancas Point 38.46 48 P **P** **12 49 49.9 +1.2**
ENH Enshi 38.52 258 P **P** **12 49 48.9 -0.8**
ENH IAmb IAmb 12 49 50.0
comp=Z,39nm,1.0s
LZH Lanzhou 38.62 270 *e*P **P** **12 49 50.8 +0.2**
LZH pP pP 12 50 11.0 -3.0
LZH sP pwP 12 50 20.0 +2.6
LZH pmax pmax
comp=Z,27nm,1.0s
HYT Haines Junctio 39.28 46 P **P** **12 49 57.3 +1.5**
HYT IAmb IAmb 12 49 58.6
comp=Z,20nm,0.8s
GTA Gaotai 39.44 277 ⇓P **P** **12 49 57.0 -0.4**
GTA pP pP 12 50 19.8 -1.0
GTA sP pwP 12 50 31.0 +6.9
GTA PcP **PcP** **12 52 03.8 +0.6**
GTA pmax pmax
comp=Z,18nm,1.1s
GTA pmax pmax
comp=Z,92nm,4.7s
GTA LR LR
comp=Z,69nm,18.9s
GTA LR LR
comp=Z,94nm,18.5s
GTA LR LR
comp=Z,110nm,17.1s
INK Inuvik 39.51 34 P **P** **12 49 58.7 +1.3**
INK pmax pmax
comp=Z,48nm,0.9s
INK Inuvik 39.51 34 P **P** **12 49 58.7 +1.3**
WHY Whitehorse 40.56 46 P **P** **12 50 08.3 +2.0**
WHY IAmb IAmb 12 50 09.4
comp=Z,23nm,0.8s
SKAG Skagway 40.69 48 P **P** **12 50 09.6 +2.3**
SKAG IAmb IAmb 12 50 11.4
comp=Z,16nm,1.1s
JIS Juneau Island 41.53 49 P **P** **12 50 16.3 +2.2**
JIS IAmb IAmb 12 50 17.3
comp=Z,32nm,1.0s
CD2 Chengdu 41.84 264 P **P** **12 50 17.3 +0.2**
CD2 pmax pmax
comp=Z,60nm,0.9s
ZAA0 Zalesovo Array 42.06 304 P **P** **12 50 17.8 -0.7**
ZALV Zalesovo Beam 42.06 304 P **P** **12 50 17.4 -1.1**
comp=Z,4.1nm,0.5s,baz=62,slow=6.6,SNR=15
ZALV PcP **PcP** **12 52 11.7 +0.4**
comp=Z,22nm,0.8s,baz=64,slow=3.4,SNR=31
ZALV LR LR 13 08 20.7
comp=Z,78nm,18.4s,baz=151,slow=37
ZALV Zalesovo Beam 42.06 304 P **P** **12 50 16.8 -1.7**
C36M Paulatuk 42.66 31 P **P** **12 50 24.2 +1.1**
baz=285,SNR=92
C36M Paulatuk 42.66 31 P **P** **12 50 24.3 +1.1**
GYA Guiyang 42.93 256 ⇓P **P** **12 50 25.8 -0.2**
GYA pmax pmax
comp=Z,84nm,0.9s
GYA pmax pmax
comp=Z,130nm,3.5s
DLBC Dease Lake 43.63 48 P **P** **12 50 33.0 +1.8**
DLBC IAmb IAmb 12 50 34.7
comp=Z,26nm,1.0s
TGY Tagaytay City 44.13 230 P **P** **12 50 36.0 +0.4**
comp=Z,134nm,0.3s,baz=156,slow=21,SNR=3.1
DIB Dawson Inlet, 44.45 55 P **P** **12 50 39.6 +1.9**
DIB IAmb IAmb 12 50 44.1
comp=Z,23nm,1.1s
ZSN Zaisan 44.85 296 *e*P **P** **12 50 40.0 -1.0**
comp=Z,4.8nm,1.0s,baz=296
ZSN Zaisan 44.85 296 *e*P **P** **12 50 40.0 -1.0**
ZSN pmax pmax
comp=Z,5.0nm,1.0s
WMQ Urumqi 44.92 290 P **P** **12 50 42.5 +0.8**
WMQ pP pP 12 51 05.5 -0.5
WMQ pmax pmax
comp=Z,46nm,0.9s
WMQ pmax pmax
comp=Z,110nm,3.9s
WMQ Urumqi 44.92 290 P **P** **12 50 41.4 -0.3**
WMQ pmax pmax
comp=Z,25nm,0.9s
WMQ Urumqi 44.92 290 P **P** **12 50 41.4 -0.3**
WMQ IAmb IAmb 12 50 43.0
comp=Z,25nm,0.9s
SEM Semipalatinsk 46.12 301 *e*P **P** **12 50 48.9 -2.4**
comp=Z,6.9nm,0.7s,baz=302
SEM Semipalatinsk 46.12 301 *e*P **P** **12 50 48.8 -2.4**
SEM pmax pmax
comp=Z,7.0nm,0.7s
KMI Kunming 46.39 259 ⇓*i*P **P** **12 50 53.8 +0.2**
KMI pP pP 12 51 18.5 +0.7
KMI sP pwP 12 51 29.5 +8.8
KMI pmax pmax
comp=Z,89nm,1.0s
KMI Kunming 46.39 259 P **P** **12 50 54.2 +0.6**
KMI pmax pmax
comp=Z,66nm,0.8s
KMI Kunming 46.39 259 P **P** **12 50 54.1 +0.6**
MK31 Makanchi Array 46.70 296 P **P** **12 50 55.1 -0.5**
MK31 pmax pmax
comp=Z,20nm,0.7s
MK31 Makanchi Array 46.70 296 P **P** **12 50 55.1 -0.5**
MK31 IAmb IAmb 12 50 56.5
comp=Z,20nm,0.7s

MKAR **Makanchi Array** 46.70 296 P **P** 12 50 55.1 -0.5
comp=Z,19nm,0.7s,baz=76,slow=5.3,SNR=112
MKAR PcP **PcP** 12 52 27.7 +0.3
comp=Z,6.9nm,0.7s,baz=67,slow=4.2,SNR=5.8
MKAR LR LR 13 12 09.3
comp=Z,86nm,18.3s,baz=101,slow=38
MKAR Makanchi Array 46.70 296 P **P** 12 50 54.6 -1.0
MAKZ Makanchi 46.88 296 P **P** 12 50 56.0 -1.0
MAKZ pmax pmax
comp=Z,41nm,1.3s
MAKZ Makanchi 46.88 296 P **P** 12 50 56.0 -1.0
MAKZ IAmb IAmb 12 50 58.1
comp=Z,41nm,1.3s
KURK Kurchatov 46.89 302 *eP* **P** 12 50 55.8 -1.1
KURK Kurchatov 46.89 302 P **P** 12 50 56.0 -0.9
KURK Kurchatov 46.89 302 *ceP* **P** 12 50 55.8 -1.1
KURK pmax pmax
comp=Z,35nm,0.7s
KURK Kurchatov 46.89 302 P **P** 12 50 56.2 -0.7
EUNU Eureka 46.96 12 P **P** 12 50 57.8 +0.6
KURBB Kurchatov Arra 46.98 302 P **P** 12 50 57.1 -0.5
comp=Z,30nm,0.6s,baz=67,slow=8.3,SNR=195
KURBB pP **pP** 12 51 22.4 +0.4
comp=Z,29nm,0.9s,baz=66,slow=7.7,SNR=6.7
KURBB PcP **PcP** 12 52 28.5 +0.3
comp=Z,9.2nm,0.7s,baz=65,slow=3.3,SNR=8.8
KURBB Kurchatov Arra 46.98 302 P **P** 12 50 55.5 -2.1
SLVN Son La 48.34 254 P **P** 12 51 09.3 +0.7
SLVN IAmb IAmb 12 51 10.3
comp=Z,37nm,1.1s
RES Resolute Bay 48.64 19 P **P** 12 51 11.0 +0.9
RES pmax pmax
comp=Z,38nm,0.7s
RES Resolute Bay 48.64 19 P **P** 12 51 11.0 +0.9
YKA Yellowknife Ar 48.83 38 P **P** 12 51 12.7 +1.0
comp=Z,19nm,0.8s,baz=301,slow=7.5,SNR=51
YKA pP **pP** 12 51 35.0 -1.8
comp=Z,7.0nm,0.9s,baz=299,slow=7.5,SNR=4.1
YKA PcP **PcP** 12 52 35.1 +0.5
comp=Z,3.8nm,0.8s,baz=309,slow=3.3,SNR=7.5
TDK Taldyqorghan 49.95 296 *eP* **P** 12 51 19.7 -0.8
comp=Z,50nm,0.7s,baz=296
TDK Taldyqorghan 49.95 296 *eP* **P** 12 51 19.7 -0.8
TDK pmax pmax
comp=Z,50nm,0.7s
BRVK Borovoye 50.20 309 *eP* **P** 12 51 21.6 -0.7
BRVK Borovoye 50.20 309 P **P** 12 51 22.0 -0.3
BRVK Borovoye 50.20 309 P **P** 12 51 21.6 -0.7
BRVK pmax pmax
comp=Z,39nm,0.6s
BRVK Borovoye 50.20 309 P **P** 12 51 21.6 -0.7
PDGK Podgornoye 50.22 294 P **P** 12 51 21.2 -1.6
SHLS Shalkode 50.34 293 *eP* **P** 12 51 20.1 -3.5
comp=Z,8.1nm,1.0s,baz=293
SHLS Shalkode 50.34 293 *eP* **P** 12 51 20.1 -3.5
SHLS pmax pmax
comp=Z,8.0nm,1.0s
BRZS Berezniki 50.54 304 *eP* **P** 12 51 23.0 -1.9
comp=Z,7.0nm,0.8s,baz=304
BRZS Berezniki 50.54 304 *eP* **P** 12 51 23.0 -1.9
BRZS pmax pmax
comp=Z,7.0nm,0.8s
KPKS Kokpek 50.63 294 *eP* **P** 12 51 24.7 -1.1
comp=Z,12nm,0.9s,baz=294
KPKS Kokpek 50.63 294 *eP* **P** 12 51 24.7 -1.1
KPKS pmax pmax
comp=Z,12nm,0.9s
LSA Lhasa 50.94 272 P **P** 12 51 30.2 +1.5
LSA Lhasa 50.94 272 P **P** 12 51 30.3 +1.5
LSA Lhasa 50.94 272 P **P** 12 51 29.4 +0.7
LSA pmax pmax
comp=Z,21nm,0.6s
LSA Lhasa 50.94 272 P **P** 12 51 29.4 +0.7
SATY Saty 51.03 294 *eP* **P** 12 51 27.7 -1.1
comp=Z,9.5nm,1.2s,baz=294
SATY Saty 51.03 294 *eP* **P** 12 51 27.7 -1.1
SATY pmax pmax
comp=Z,10.0nm,1.2s
NONG Nongkai 51.23 252 P **P** 12 51 31.0 +0.6
comp=Z,7μmcomp=Z,92nm,0.8s
CHKK Chushkaly 51.43 296 *eP* **P** 12 51 30.2 -1.5
baz=296
CHKK Chushkaly 51.43 296 *eP* **P** 12 51 30.2 -1.5
MDOK Medeo 51.79 295 *eP* **P** 12 51 33.2 -1.3
baz=295
MDOK Medeo 51.79 295 *eP* **P** 12 51 33.2 -1.3
KUU Kurty 51.80 296 *eP* **P** 12 51 32.5 -1.9
comp=Z,16nm,1.1s,baz=296
KUU Kurty 51.80 296 *eP* **P** 12 51 32.5 -1.9
KUU pmax pmax
comp=Z,16nm,1.1s
AAA Alma-Ata 51.84 295 *eP* **P** 12 51 34.1 -0.7
comp=Z,9.9nm,0.4s,baz=295
AAA Alma-Ata 51.84 295 *eP* **P** 12 51 34.1 -0.7
AAA Alma-Ata 51.84 295 *eP* **P** 12 51 34.1 -0.7
AAA pmax pmax
comp=Z,10.0nm,0.4s
TNSS Tian-Shan 51.92 295 *eP* **P** 12 51 35.0 -0.9
baz=295
TNSS Tian-Shan 51.92 295 *eP* **P** 12 51 34.9 -0.9
TULEG Thule 51.96 12 P **P** 12 51 34.6 -0.5
TULEG Thule 51.96 12 *||P* **P** 12 51 34.8 -0.2
TULEG IAmb IAmb 12 51 35.5
comp=Z,36nm,0.8s
KDJ Kajisay 52.30 294 P **P** 12 51 36.9 -1.5
KDJ pmax pmax
comp=Z,22nm,0.9s
KDJ Kajisay 52.30 294 P **P** 12 51 36.9 -1.5
KDJ IAmb IAmb 12 51 39.2
comp=Z,22nm,0.9s
PAYA Payao 52.35 256 P **P** 12 51 39.8 +1.0
comp=Z,14μmcomp=Z,2μm,0.8s
D03D Eldon 52.48 58 P **P** 12 51 40.6 +1.3
baz=304
BTLS Baital 52.49 298 *eP* **P** 12 51 37.9 -1.6
comp=Z,2.6nm,0.7s,baz=298
BTLS Baital 52.49 298 *eP* **P** 12 51 37.9 -1.6
BTLS pmax pmax
comp=Z,3.0nm,0.7s
B05A Bryant 52.62 57 P **P** 12 51 41.4 +1.0
baz=304
KHON Khomkaen 52.73 251 P **P** 12 51 42.5 +0.9
comp=Z,150nm,0.8s
PHRA Phrae 52.76 255 P **P** 12 51 42.8 +1.1
comp=Z,86μmcomp=Z,1μm,1.1s
TKM2 Tokmak 2 52.80 295 P **P** 12 51 42.3 +0.2
SNR=11
ULHL Ulahol 52.80 294 P **P** 12 51 42.0 -0.1
SNR=13
BOOM Boomskoye usch 52.84 295 P **P** 12 51 41.6 -0.7
BOOM pmax pmax
comp=Z,26nm,1.0s
BOOM Boomskoye usch 52.84 295 P **P** 12 51 41.6 -0.7
BOOM IAmb IAmb 12 51 43.5
comp=Z,26nm,0.9s
SGDS Sogindy 53.06 296 *eP* **P** 12 51 42.7 -1.1
comp=Z,8.4nm,1.0s,baz=296
SGDS Sogindy 53.06 296 *eP* **P** 12 51 42.7 -1.1
SGDS pmax pmax
comp=Z,8.0nm,1.0s
UTTA Uttaradit 53.11 254 P **P** 12 51 45.0 +0.7
comp=Z,333nmcomp=Z,40nm,1.1s
LAMP Lampang 53.12 255 P **P** 12 51 45.4 +1.0
comp=Z,1μmcomp=Z,144nm,0.9s
CM34 Chiang Mai Arr 53.19 256 P **P** 12 51 45.0 +0.1
SHL Shillong 53.20 268 P **P** 12 51 45.9 +0.7
SHL Shillong 53.20 268 P **P** 12 51 45.2 0.0
SHL pmax pmax
comp=Z,64nm,0.8s
SHL Shillong 53.20 268 P **P** 12 51 45.2 0.0
USP Ospenovka 53.25 296 P **P** 12 51 44.9 -0.2
SNR=38
CHMS Chumysh 53.26 296 P **P** 12 51 45.3 +0.2
SNR=9.5
CM35 Chiang Mai Arr 53.31 256 P **P** 12 51 46.0 +0.2
E04D Cinebar 53.33 59 P **P** 12 51 46.6 +0.9
baz=305
KBK Karagaybulak 53.34 295 P **P** 12 51 46.3 +0.3
SNR=11
CM33 Chiang Mai Arr 53.34 256 P **P** 12 51 46.0 -0.1
CHTO Chiang Mai 53.35 256 P **P** 12 51 46.8 +0.7
CHTO Chiang Mai 53.35 256 P **P** 12 51 46.9 +0.8
CHTO pmax pmax
comp=Z,107nm,0.9s
CHTO Chiang Mai 53.35 256 P **P** 12 51 46.9 +0.8
FRU1 Bishkek 53.44 296 P **P** 12 51 47.0 +0.4
FRU1 pmax pmax
comp=Z,37nm,1.1s
FRU1 Bishkek 53.44 296 P **P** 12 51 47.0 +0.4
CM36 Chiang Mai Arr 53.47 256 P **P** 12 51 47.0 0.0
CM32 Chiang Mai Arr 53.53 256 P **P** 12 51 48.0 +0.6
CHAI Chaiyaphum 53.59 251 P **P** 12 51 48.2 +0.4
comp=Z,1μmcomp=Z,141nm,0.7s
CM09 Chiang Mai Arr 53.59 256 P **P** 12 51 48.9 +1.0
comp=Z,739nmcomp=Z,95nm,0.8s
PHIT Phitsanulok 53.61 253 P **P** 12 51 49.0 +1.0
comp=Z,102nm,0.9s
CM31 Chiang Mai Arr 53.61 256 P **P** 12 51 49.0 +1.0
comp=Z,23μmcomp=Z,3μm,0.8s
CM31 Chiang Mai Arr 53.61 256 P **P** 12 51 48.8 +0.8
CMAR Chiang Mai Arr 53.61 256 P **P** 12 51 48.8 +0.8
comp=Z,68nm,0.9s,baz=34,slow=7.2,SNR=320
AAK Ala-Archa 53.62 296 P **P** 12 51 48.1 +0.1
comp=Z,15nm,0.9s,baz=99,slow=4.5,SNR=34
AAK Ala-Archa 53.62 296 *i* P **P** 12 51 47.9 -0.2
SNR=23
AAK Ala-Archa 53.62 296 *eP* **P** 12 51 47.4 -0.6
AAK Ala-Archa 53.62 296 P **P** 12 51 47.6 -0.4
AAK Ala-Archa 53.62 296 *d iP* **P** 12 51 47.4 -0.6
AAK pmax pmax
comp=Z,54nm,1.0s
AAK Ala-Archa 53.62 296 P **P** 12 51 47.5 -0.6
AAK IAmb IAmb 12 51 48.8
comp=Z,21nm,1.0s
CM02 Chiang Mai Arr 53.62 256 P **P** 12 51 49.0 +0.9
comp=Z,685nmcomp=Z,95nm,0.8s
CM15 Chiang Mai Arr 53.62 256 P **P** 12 51 49.0 +0.9
comp=Z,618nmcomp=Z,82nm,1.0s
CM01 Chiang Mai Arr 53.63 256 P **P** 12 51 49.1 +1.0
comp=Z,678nmcomp=Z,92nm,0.8s
CM04 Chiang Mai Arr 53.63 256 P **P** 12 51 49.1 +1.0
comp=Z,772nmcomp=Z,95nm,0.8s
CM05 Chiang Mai Arr 53.65 256 P **P** 12 51 49.0 +0.7
comp=Z,620nmcomp=Z,78nm,0.8s
CM13 Chiang Mai Arr 53.66 256 P **P** 12 51 49.2 +0.9
comp=Z,689nmcomp=Z,92nm,0.8s
G03D McMinnville, O 53.71 60 P **P** 12 51 49.5 +1.1
baz=306
SUKH Sukhothai 53.89 254 P **P** 12 51 51.1 +1.1
comp=Z,68nm,0.7s
LTY Liberty 53.99 57 P **P** 12 51 51.5 +0.9
ARU Arti 54.03 317 *eP* **P** 12 51 49.4 -1.1
ARU Arti 54.03 317 *d iP* **P** 12 51 49.5 -1.1
ARU *PP **pP** 12 52 18.4 +3.2
ARU 12 52 52.7
ARU 12 53 48.2
ARU PPP PPP 12 54 59.6
ARU S **S** 12 59 19.5 +1.5
ARU SS **SS** 13 03 04.7 +4.6
ARU pmax pmax
comp=Z,35nm,0.5s
ARU Arti 54.03 317 P **P** 12 51 49.7 -0.8
EKS2 Erkin-Say 54.03 296 P **P** 12 51 50.8 -0.2
SNR=23
B08A Colville Reser 54.09 55 P **P** 12 51 52.1 +0.9
B08A IAmb IAmb 12 51 52.9
comp=Z,10nm,0.9s
AML Almayashu 54.40 296 P **P** 12 51 54.5 +0.5
SNR=6.9
MHMT Maesarieng 54.47 256 P **P** 12 51 55.0 +0.8
comp=Z,111nm,1.0s
KSH Kashi 54.59 292 *eP* **P** 12 51 59.0 +3.9
KSH pmax pmax
comp=Z,23nm,0.6s
KSH pmax pmax
comp=Z,210nm,3.9s
DAG Danmarks Havn 54.62 358 *i* P **P** 12 51 53.0 -1.5
DAG *i* 12 52 56.2
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 54.62 358 *i* P **P** 12 51 53.0 -1.5
comp=Z,4.6nm,0.7s
DAG *i* 12 52 56.2
DAG Danmarks Havn 54.62 358 *i* P **P** 12 51 53.0 -1.5
DAG IAmb IAmb 12 51 54.9
comp=Z,4.6nm,0.7s
DAG *i* 12 52 56.2
TAPN Taplejung 54.76 273 *eP* **P** 12 51 56.6 0.0
comp=Z,12nm,0.3s
G05D Wamic, OR 54.81 59 P **P** 12 51 57.9 +1.5
baz=307
E07A Sunnyside 54.85 57 P **P** 12 51 57.8 +1.1
K02D Willamette Mer 54.97 63 P **P** 12 51 58.0 +0.3
baz=307
C09A Chrisman Ranch 54.99 55 P **P** 12 51 57.9 +0.3
C09A IAmb IAmb 12 51 59.3
comp=Z,9.0nm,0.9s
SRAK Srakaew 54.99 249 P **P** 12 51 56.5 -1.4
comp=Z,3μmcomp=Z,384nm,1.1s
I04A Tendick Farm, 55.04 61 P **P** 12 51 58.4 +0.2
baz=307
HAWA Hanford 55.13 57 P **P** 12 51 59.4 +0.7
ODAN Odare 55.30 272 *eP* **P** 12 52 01.3 +0.9
ARSB Arslanbob 55.31 295 P **P** 12 52 00.8 +0.6
ARSB pmax pmax
comp=Z,23nm,1.1s
ARSB Arslanbob 55.31 295 P **P** 12 52 00.8 +0.6
ARSB IAmb IAmb 12 52 01.4
comp=Z,23nm,1.1s
L02E Cave Junction 55.33 64 P **P** 12 52 01.7 +1.5
baz=307
NEW Newport 55.34 54 P **P** 12 52 01.2 +1.0
NEW pmax pmax
comp=Z,21nm,1.4s
NEW Newport 55.34 54 P **P** 12 52 00.8 +0.6
baz=307,SNR=5.7
NEW Newport 55.34 54 P **P** 12 52 01.2 +1.0
NEW IAmb IAmb 12 52 02.0
comp=Z,21nm,1.4s
I05D Terrebonne, OR 55.34 60 P **P** 12 52 01.9 +1.6
baz=307
DZA Taraz 55.34 298 *eP* **P** 12 51 59.3 -1.0
baz=298
DZA Taraz 55.34 298 *eP* **P** 12 51 59.2 -1.0
UTHA Uthaitani 55.44 253 P **P** 12 52 02.5 +1.3
comp=Z,437nmcomp=Z,48nm,0.9s
J04D Umpqua Nationa 55.55 62 P **P** 12 52 03.4 +1.4
baz=307
GUN Gumba 55.60 274 *eP* **P** 12 52 02.7 0.0
comp=Z,50nm,0.5s
KK31 Karatay Array 55.69 298 *i* P **P** 12 52 02.0 -0.8
KK31 Karatay Array 55.69 298 P **P** 12 52 02.3 -0.5
KK31 IAmb IAmb 12 52 03.8
comp=Z,8.2nm,0.8s
KKAR Karatay Array 55.69 298 P **P** 12 52 01.8 -1.0
KKAR Karatay Array 55.69 298 P **P** 12 52 02.3 -0.5
KKAR IAmb IAmb 12 52 03.8
comp=Z,8.2nm,0.8s
KKAR Karatay Array 55.69 298 P **P** 12 52 01.8 -1.0
RAMN Ramite 55.76 273 *eP* **P** 12 52 04.0 +0.2
comp=Z,75nm,0.6s
E09A Wood Farm, Sta 55.83 57 P **P** 12 52 04.2 +0.6
E09A IAmb IAmb 12 52 05.5
comp=Z,12nm,0.8s
PINE Pine Mountain 55.89 61 P **P** 12 52 06.0 +1.6
PINE IAmb IAmb 12 52 08.0
comp=Z,43nm,1.5s
J05D Fort Rock, OR 56.03 61 P **P** 12 52 07.2 +1.8
baz=308,SNR=17
L04D Klamath Falls 56.06 63 P **P** 12 52 06.1 +0.6
baz=308
KKN Kakani 56.07 275 *eP* **P** 12 52 06.6 +0.7
YBH Yreka Blue Hor 56.12 64 P **P** 12 52 06.9 +1.0
YBH pmax pmax
comp=Z,17nm,1.4s
YBH Yreka Blue Hor 56.12 64 P **P** 12 52 06.8 +1.0
YBH IAmb IAmb 12 52 08.9
comp=Z,17nm,1.4s
PKI Pulchoki 56.13 274 *eP* **P** 12 52 06.4 -0.1
comp=Z,53nm,0.8s
PKIN Phulchoki 56.14 274 *eP* **P** 12 52 06.6 +0.1
comp=Z,33nm,0.5s
ARCES ARCESS Array B 56.16 341 P **P** 12 52 03.9 -1.8
comp=Z,1.9nm,0.5s,baz=40,slow=9.6,SNR=16
ARCES PcP **PcP** 12 53 01.2 -1.0
comp=Z,9.5nm,0.9s,baz=38,slow=3.4,SNR=5.5
M02C Callahan 56.24 64 P **P** 12 52 09.2 +2.4
baz=308
DMN Daman 56.31 275 *eP* **P** 12 52 08.5 +0.9
comp=Z,70nm,0.7s
GKN Gorkha 56.35 275 *eP* **P** 12 52 08.2 +0.3
comp=Z,104nm,0.5s
WALA Waterton Lakes 56.55 52 P **P** 12 52 09.8 +0.9
WALA IAmb IAmb 12 52 10.5
comp=Z,13nm,0.7s
IUG Iuzhnay 56.56 298 *eP* **P** 12 52 08.3 -0.8
comp=Z,8.4nm,0.7s,baz=298
IUG Iuzhnay 56.56 298 *eP* **P** 12 52 08.2 -0.8
IUG pmax pmax
comp=Z,8.0nm,0.7s
K05A Summer Lake 56.57 62 P **P** 12 52 10.2 +0.9
K05A IAmb IAmb 12 52 12.3
comp=Z,38nm,1.5s
N02D Trinity Center 56.59 64 P **P** 12 52 10.9 +1.7
baz=308
M04C Macdoel 56.60 63 P **P** 12 52 11.0 +1.6
baz=308
KIRV Kirov 56.60 323 *i* P **P** 12 52 07.4 -1.5
DANN Dangsing 56.70 276 *eP* **P** 12 52 10.7 +0.2
comp=Z,137nm,0.6s
TMCR Tamitsa 56.88 332 *eP* **P** 12 52 08.7 -2.1
TMCR pmax pmax
comp=Z,55nm,0.4s
WDC Whiskeytown Da 56.93 64 P **P** 12 52 13.5 +2.0
WDC pmax pmax
comp=Z,2.0nm,0.8s
WDC Whiskeytown Da 56.93 64 P **P** 12 52 13.5 +2.0
O02D Mt. Diablo Mer 57.03 65 P **P** 12 52 13.7 +1.4
baz=309
DBG Daneborg 57.12 358 *i* P **P** 12 52 11.0 -1.4
JTMT Jette 57.16 53 P **P** 12 52 14.1 +0.8
JTMT IAmb IAmb 12 52 15.1
comp=Z,8.2nm,0.7s
KOLN Koldanda 57.19 276 *eP* **P** 12 52 14.3 +0.5
BMO Blue Mountains 57.31 58 P **P** 12 52 15.2 +0.9
BMO pmax pmax
comp=Z,6.0nm,0.8s
BMO Blue Mountains 57.31 58 P **P** 12 52 15.2 +0.9
PHET Kaeng Krachan 57.33 251 P **P** 12 52 16.2 +1.6
PYUN Piuthan 57.37 277 *eP* **P** 12 52 15.6 +0.5
comp=Z,77nm,0.5s
BTK Batken 57.39 295 P **P** 12 52 14.8 -0.1
BTK pmax pmax
comp=Z,31nm,1.0s
BTK Batken 57.39 295 P **P** 12 52 14.8 -0.1
MOD Modoc Plateau 57.43 62 P **P** 12 52 16.7 +1.5
O03E Paynes Creek 57.55 64 P **P** 12 52 16.8 +0.8
baz=309,SNR=6.3
J08A Circle Bar Ran 57.58 60 P **P** 12 52 17.9 +1.7
AB31 Akbulak array 57.71 309 P **P** 12 52 15.7 -1.2
ABKAR Akbulak array 57.71 309 P **P** 12 52 16.2 -0.7
PLID Pearl Lake 57.89 57 P **P** 12 52 19.8 +1.3
PLID IAmb IAmb 12 52 20.6
comp=Z,22nm,0.8s
MSO Missoula 57.92 54 P **P** 12 52 19.4 +0.9
baz=309,SNR=11
MSO Missoula 57.92 54 P **P** 12 52 19.7 +1.1
MSO IAmb IAmb 12 52 21.3
comp=Z,22nm,1.3s
WVOR Wild Horse Val 58.06 61 P **P** 12 52 21.1 +1.5
WVOR pmax pmax
comp=Z,6.0nm,0.8s
WVOR Wild Horse Val 58.06 61 P **P** 12 52 21.1 +1.5
ORV Oroville 58.19 65 P **P** 12 52 21.2 +0.8
ORV pmax pmax
comp=Z,3.0nm,0.9s
ORV Oroville 58.19 65 P **P** 12 52 21.2 +0.8
SUMG Summit 58.59 4 *i* P **P** 12 52 23.0 -0.1
SUMG pmax pmax
comp=Z,30nm,0.4s
SUMG Summit 58.59 4 P **P** 12 52 23.1 -0.1
SUMG Summit 58.59 4 *i* P **P** 12 52 23.0 -0.1
comp=Z,30nm,0.4s
SUMG Summit 58.59 4 *i* P **P** 12 52 23.1 -0.1
SUMG IAmb IAmb 12 52 24.6
comp=Z,30nm,0.4s
BEKR Beckworth 58.67 64 P **P** 12 52 25.2 +1.2
FFC Flin Flon 58.68 41 P **P** 12 52 24.9 +1.3
FFC pmax pmax
comp=Z,36nm,0.7s
FFC Flin Flon 58.68 41 P **P** 12 52 24.9 +1.3
KLMR Klimovskoe 58.75 329 *eP* **P** 12 52 22.4 -1.5
KLMR pmax pmax
comp=Z,22nm,0.8s
KLMR Klimovskoe 58.75 329 *eP* **P** 12 52 22.4 -1.5
KLMR AMP 12 52 23.8
comp=Z,22nm,0.8s
MFID Camas Ranch 59.04 58 P **P** 12 52 27.7 +1.3
HRY Holter Researc 59.12 53 P **P** 12 52 28.3 +1.4
FCC Fort Churchill 59.13 34 P **P** 12 52 27.3 +0.8
FCC pmax pmax
comp=Z,33nm,0.8s
FCC Fort Churchill 59.13 34 P **P** 12 52 27.3 +0.8
EGMT Eagleton 59.35 51 P **P** 12 52 28.8 +0.4
baz=310,SNR=12
EGMT Eagleton 59.35 51 P **P** 12 52 29.4 +1.0
PAHR Pah Rah Range 59.35 63 P **P** 12 52 29.7 +1.1
PAHR IAmb IAmb 12 52 30.6
comp=Z,17nm,1.4s
LRM Limekiln Ridge 59.35 54 P **P** 12 52 30.3 +1.6
VCNR Virginia City 59.46 64 P **P** 12 52 30.4 +0.9
DLMT Dillon 59.57 55 P **P** 12 52 31.7 +1.6
PNTR Pine Nut 59.62 64 P **P** 12 52 32.3 +1.7
PNTR IAmb IAmb 12 52 57.3
comp=Z,8.6nm,0.7s
HLID Hailey 59.73 57 P **P** 12 52 32.6 +1.4
baz=310,SNR=7.3
HLID Hailey 59.73 57 P **P** 12 52 32.6 +1.4
BCYI Bear Canyon 59.81 56 P **P** 12 52 32.8 +1.0
CMB Columbia Colle 59.83 66 P **P** 12 52 32.5 +0.7
CMB pmax pmax
comp=Z,7.0nm,1.5s
CMB Columbia Colle 59.83 66 P **P** 12 52 32.5 +0.7
BOZ Bozeman (W) 59.94 54 P **P** 12 52 34.2 +1.6
BOZ pmax pmax
comp=Z,19nm,0.9s
BOZ Bozeman (W) 59.94 54 P **P** 12 52 34.0 +1.4
baz=311,SNR=27
BOZ Bozeman (W) 59.94 54 P **P** 12 52 34.1 +1.6
BOZ IAmb IAmb 12 52 35.1
comp=Z,19nm,0.8s
NIL Nilore 59.99 288 P **P** 12 52 33.6 +0.6
NIL Nilore 59.99 288 P **P** 12 52 33.1 +0.1
NIL pmax pmax
comp=Z,35nm,0.8s
NIL Nilore 59.99 288 P **P** 12 52 33.0 +0.1
WAKR Walker 60.10 65 P **P** 12 52 35.0 +1.2
KVN Kaiserville 60.54 63 P **P** 12 52 37.9 +1.1
KVN pmax pmax
comp=Z,12nm,1.2s
KVN Kaiserville 60.54 63 P **P** 12 52 37.9 +1.1
KVN IAmb IAmb 12 52 39.0
comp=Z,12nm,1.2s
QLMT Earthquake Lak 60.55 55 P **P** 12 52 38.5 +1.7
RYN Ryan 60.56 64 P **P** 12 52 37.9 +0.9
YHL Hebgen Lake 60.67 54 P **P** 12 52 39.0 +1.3
YHB Horse Butte 60.72 55 P **P** 12 52 39.4 +1.4
LHV Little Huntoon 60.82 64 P **P** 12 52 39.8 +1.3
NVAR Mina Array Bea 60.82 64 P **P** 12 52 40.0 +1.2
comp=Z,4.4nm,0.8s,baz=298,slow=7.3,SNR=36
NVAR pP **pP** 12 53 01.1 -3.5
comp=Z,2.5nm,0.7s,baz=299,slow=7.2,SNR=7.0
NVAR Mina Array Bea 60.82 64 P **P** 12 52 39.8 +1.0
ILULI Ilulissat 60.82 10 P **P** 12 52 37.8 -0.1
ILULI pmax pmax
comp=Z,71nm,0.8s
ILULI Ilulissat 60.82 10 P **P** 12 52 37.8 -0.1
ILULI Ilulissat 60.82 10 *i* P **P** 12 52 37.8 -0.1
comp=Z,70nm,0.8s
ILULI Ilulissat 60.82 10 *i* P **P** 12 52 37.9 -0.1
ILULI IAmb IAmb 12 52 38.5
comp=Z,70nm,0.8s
GCMT Greycliff 60.85 53 P **P** 12 52 40.7 +1.9
MDPB Devils Postpil 60.88 65 P **P** 12 52 40.8 +1.5
YHH Holmes Hill 60.88 54 P **P** 12 52 41.1 +1.9
YMR Madison River 60.90 54 P **P** 12 52 39.4 +0.1
NV11 Mina Array Sit 60.91 64 P **P** 12 52 40.2 +0.9
YNR Norris Junctio 61.02 54 P **P** 12 52 42.8 +2.6
ELK Elko 61.10 60 P **P** 12 52 42.3 +1.7
ELK pmax pmax
comp=Z,2.0nm,0.8s
ELK Elko 61.10 60 P **P** 12 52 42.3 +1.7
YNE Yellowstone No 61.19 54 P **P** 12 52 42.3 +1.1
H17A Grant Village 61.29 54 P **P** 12 52 42.5 +0.6
baz=312
H17A Grant Village 61.29 54 P **P** 12 52 45.3 +3.4

H17A IAmb IAmb 12 52 46.1
comp=Z,19nm,1.1s
IMW Indian Meadow 61.42 55 P **P 12 52 44.8 +2.0**
IMW IAmb IAmb 12 52 46.0
comp=Z,10nm,1.1s
RLMT Red Lodge 61.51 53 P **P 12 52 44.5 +1.2**
baz=312,SNR=14
RLMT Red Lodge 61.51 53 P **P 12 52 45.1 +1.8**
RLMT IAmb IAmb 12 52 46.9
comp=Z,20nm,1.0s
TPAW Teton Pass 61.69 55 P **P 12 52 46.4 +1.7**
TPAW IAmb IAmb 12 52 47.8
comp=Z,17nm,0.9s
TPH Tonopah 61.70 64 P **P 12 52 46.0 +1.4**
TPH pmax pmax
comp=Z,44nm,1.2s
TPH Tonopah 61.70 64 P **P 12 52 46.0 +1.4**
LOHW Long Hollow 61.80 55 P **P 12 52 47.1 +1.9**
LOHW IAmb IAmb 12 52 48.4
comp=Z,20nm,1.3s
HVU Hansel Valley 61.81 58 P **P 12 52 47.2 +1.9**
HVU pmax pmax
comp=Z,5.0nm,1.0s
HVU Hansel Valley 61.81 58 P **P 12 52 47.2 +1.9**
DGMT Dagmar 61.84 48 P **P 12 52 46.4 +1.1**
baz=313,SNR=10.0
DGMT Dagmar 61.84 48 P **P 12 52 46.5 +1.3**
ICESG Greenland Ices 61.98 6⇓ *i*P **P 12 52 46.7 +0.5**
ICESG IAmb IAmb 12 52 47.5
comp=Z,94nm,1.0s
KBL Kabul 62.03 291 P **P 12 52 45.5 -1.5**
KBL Kabul 62.03 291 P **P 12 52 45.8 -1.1**
KBL pmax pmax
comp=Z,17nm,0.9s
KBL Kabul 62.03 291 P **P 12 52 45.8 -1.1**
KBL IAmb IAmb 12 52 46.4
comp=Z,17nm,0.8s
LAO LASA Array 62.04 50 P **P 12 52 48.3 +1.7**
baz=313,SNR=14
LAO LASA Array 62.04 50 P **P 12 52 48.4 +1.7**
AHID Auburn Hatcher 62.09 56 P **P 12 52 48.6 +1.4**
CWC Cottonwood Cre 62.27 66 P **P 12 52 49.1 +0.7**
baz=312
GRAC Grapevine Rang 62.32 65 P **P 12 52 49.3 +0.7**
baz=312
R11A Troy Canyon, C 62.48 62 P **P 12 52 49.9 +0.1**
baz=312,SNR=8.6
R11A Troy Canyon, C 62.48 62 P **P 12 52 49.9 +0.1**
FIA1 FINESS Array S 62.51 335 P **P 12 52 49.2 -0.2**
FIA1 IAmb IAmb 12 52 50.6
comp=Z,29nm,0.8s
FINES FINESS Array B 62.51 335 P **P 12 52 48.7 -0.7**
comp=Z,20nm,0.6s,baz=35,slow=7.7,SNR=55
FINES PcP **PcP 12 53 27.6 0.0**
comp=Z,3.0nm,0.4s,baz=43,slow=4.3,SNR=4.9
FINES FINESS Array B 62.51 335 P **P 12 52 48.4 -1.0**
ISA Isabella, Lake 62.54 66 P **P 12 52 50.8 +0.6**
baz=312
HWUT Hardware Ranch 62.60 57 P **P 12 52 52.2 +1.6**
HWUT IAmb IAmb 12 52 53.3
comp=Z,23nm,1.5s
SPR3 Spring Creek 3 62.77 61 P **P 12 52 54.1 +2.1**
DUG Dugway, Tooele 62.85 59 P **P 12 52 53.7 +1.5**
DUG pmax pmax
comp=Z,7.0nm,0.9s
DUG Dugway, Tooele 62.85 59 P **P 12 52 53.1 +0.9**
baz=312,SNR=7.6
DUG Dugway, Tooele 62.85 59 P **P 12 52 53.7 +1.5**
MPMC Manual Prospec 62.88 66 P **P 12 52 53.3 +0.8**
baz=312,SNR=5.2
BW06 Boulder Array 62.93 55 P **P 12 52 53.9 +1.0**
baz=313,SNR=6.7
BW06 Boulder Array 62.93 55 P **P 12 52 53.8 +1.0**
BW06 IAmb IAmb 12 52 55.0
comp=Z,13nm,0.8s
PD31 Pinedale Array 62.93 55 P **P 12 52 54.0 +1.2**
PD31 IAmb IAmb 12 52 55.0
comp=Z,15nm,1.0s
PDAR Pinedale Array 62.93 55 P **P 12 52 53.9 +1.1**
comp=Z,10nm,0.8s,baz=321,slow=2.1,SNR=55
PDAR pP **pP 12 53 15.8 -3.0**
comp=Z,5.0nm,0.9s,baz=321,slow=1.9,SNR=3.4
PDAR Pinedale Array 62.93 55 P **P 12 52 53.8 +0.9**
FURC Furnace Creek, 62.98 65 P **P 12 52 53.5 +0.6**
baz=312,SNR=11
SFJD Kangerlussuaq 62.99 11 *i*P **P 12 52 52.0 -0.5**
SFJD Kangerlussuaq 62.99 11 P **P 12 52 52.6 +0.1**
SFJD Kangerlussuaq 62.99 11 *i*P **P 12 52 52.0 -0.5**
SFJD Kangerlussuaq 62.99 11 *i*P **P 12 52 52.1 -0.5**
TPNV Topopah Spring 63.02 64 P **P 12 52 54.8 +1.3**
TPNV pmax pmax
comp=Z,6.0nm,0.9s
TPNV Topopah Spring 63.02 64 P **P 12 52 53.8 +0.4**
baz=312,SNR=5.8
TPNV Topopah Spring 63.02 64 P **P 12 52 54.8 +1.3**
CTU Camp Tracy 63.11 58 P **P 12 52 53.5 -0.5**
EDW2 Edwards Air Fo 63.36 67 P **P 12 52 56.2 +0.6**
baz=313
PRN Pahroc Range 63.42 63 P **P 12 52 57.7 +1.6**
MPU Maple Canyon 63.64 59 P **P 12 52 59.0 +1.5**
SHOC Shoshone, Teco 63.71 65 P **P 12 52 58.3 +0.5**
baz=313
GSC Goldstone, Bar 63.79 66 P **P 12 52 58.9 +0.4**
GSC pmax pmax
comp=Z,5.0nm,1.1s
GSC Goldstone, Bar 63.79 66 P **P 12 52 59.1 +0.7**
baz=313
GSC Goldstone, Bar 63.79 66 P **P 12 52 58.9 +0.4**
FMP Fort Macarthur 63.96 68 P **P 12 53 00.1 +0.6**
baz=313
SHPR Sheep Range 63.97 64 P **P 12 53 01.1 +1.5**
BFSC Mount Baldy Ra 63.99 67 P **P 12 53 00.2 +0.3**
baz=313
OBN Obninsk 64.05 326 *e*P **P 12 52 57.8 -1.8**
OBN Obninsk 64.05 326⇑ *i*P **P 12 52 57.5 -2.1**
OBN *e* 12 53 34.1
OBN pmax pmax
comp=Z,13nm,1.1s
TUQ Turquoise Moun 64.23 65 P **P 12 53 02.1 +0.7**
baz=313,SNR=5.9
SCI2 San Clemente I 64.30 69 P **P 12 53 03.1 +1.4**
baz=313
CCUT Cedar City 64.31 62 P **P 12 53 03.3 +1.3**
MVU Marysvale 64.33 60 P **P 12 53 03.2 +1.1**
MSU Marysvale 64.35 60 P **P 12 53 03.7 +1.5**
MSU Marysvale 64.35 60 P **P 12 53 03.7 +1.5**
BBRC Big Bear Solar 64.43 67 P **P 12 53 03.9 +1.1**
baz=313
ULM Lac du Bonnet 64.47 42 P **P 12 53 02.9 +0.4**
comp=Z,13nm,0.7s,baz=308,slow=5.9,SNR=16
ULM Lac du Bonnet 64.47 42 P **P 12 53 03.1 +0.5**
ULM IAmb IAmb 12 53 03.9
comp=Z,17nm,0.9s
MDND Maddock 64.49 46 P **P 12 53 04.0 +1.2**
baz=316,SNR=10
MDND Maddock 64.49 46 P **P 12 53 04.1 +1.4**
P17A Butcher Ranch, 64.51 59 P **P 12 53 04.2 +1.0**
K22A Casper 64.64 54 P **P 12 53 04.9 +0.9**
baz=314
K22A Casper 64.64 54 P **P 12 53 05.2 +1.2**
MTPU Mount Pierson 64.66 61 P **P 12 53 06.4 +1.9**
MTN Manton Dam 64.70 205 P **P 12 53 03.7 -0.6**
MTN IAmb IAmb 12 53 04.4
comp=Z,17nm,0.9s
MURC Murrieta 64.71 67 P **P 12 53 05.3 +0.9**
baz=313
VSU Vasula 64.75 333 *e*P **P 12 53 03.6 -0.5**
VSU Vasula 64.75 333 *i*P **P 12 53 02.5 -1.6**
LCMT Little Creek M 64.75 62 P **P 12 53 06.0 +1.2**
GMRC Granite Mounta 64.83 65 P **P 12 53 06.2 +0.9**
baz=313
E28A Huff 64.87 47 P **P 12 53 05.5 +0.3**
E28A IAmb IAmb 12 53 07.1
comp=Z,21nm,0.8s
SRU San Rafael Swe 64.88 59 P **P 12 53 06.3 +0.7**
SRU pmax pmax
comp=Z,13nm,0.8s
SRU San Rafael Swe 64.88 59 P **P 12 53 06.3 +0.7**
RSSD Black Hills 64.92 51 P **P 12 53 06.8 +0.9**
RSSD pmax pmax
comp=Z,28nm,0.9s
RSSD Black Hills 64.92 51 P **P 12 53 06.7 +0.9**
baz=315
RSSD Black Hills 64.92 51 P **P 12 53 06.8 +0.9**
RSSD IAmb IAmb 12 53 07.7
comp=Z,28nm,0.8s
VRH Novokhopyorsk 64.92 320 *e*P **P 12 53 03.8 -1.6**
VRH *e* 12 53 36.5
VRH pmax pmax
comp=Z,30nm,0.6s
KNB Kanab 64.99 62 P **P 12 53 08.2 +1.8**
KNB pmax pmax
comp=Z,8.0nm,1.0s
KNB Kanab 64.99 62 P **P 12 53 08.2 +1.8**
LPSR Galich'ya Gora 65.03 323 *e*P **P 12 53 04.6 -1.5**
LPSR *e* 12 53 37.8
LPSR pmax pmax
comp=Z,20nm,0.7s
O20A White River Ci 65.45 57 P **P 12 53 09.5 +0.2**
baz=314
O20A White River Ci 65.45 57 P **P 12 53 10.4 +1.1**
ISOG Isortoq, Green 65.53 6⇓ *i*P **P 12 53 09.2 +0.1**
ISOG IAmb IAmb 12 53 09.7
comp=Z,38nm,0.6s
ANGG Ammassalik, Gr 65.55 5 *i*P **P 12 53 09.1 -0.1**
ANGG IAmb IAmb 12 53 09.7
comp=Z,36nm,0.7s
IRM Iron Mountain 65.57 66 P **P 12 53 10.7 +0.7**
baz=314,SNR=5.2
PSI Prapat 65.66 244 P **P 12 53 10.5 -0.3**
comp=Z,6.1nm,0.7s,baz=360,slow=2.8,SNR=4.9
MONP2 Monument Peak 65.67 67 P **P 12 53 11.2 +0.3**
baz=314
U15A North Rim 65.71 62 P **P 12 53 11.8 +0.7**
BC3 Big Chuckawall 65.73 66 P **P 12 53 11.7 +0.6**
baz=314
RPSI Rantau Prapat 65.75 244 P **P 12 53 10.5 -0.7**
AGMN Agassiz Nation 65.90 43 P **P 12 53 12.3 +0.5**
baz=317
AGMN Agassiz Nation 65.90 43 P **P 12 53 12.6 +0.7**
AGMN IAmb IAmb 12 53 13.2
comp=Z,28nm,1.0s
VSR Storozhevoye 65.98 321 *e*P **P 12 53 10.9 -1.4**
VSR *e* 12 53 41.2
VSR pmax pmax
comp=Z,10.0nm,0.6s
SWSC Sam W. Stewart 66.01 67 P **P 12 53 13.8 +1.1**
baz=314
PDMCI Parker Dam,Lak 66.08 65 P **P 12 53 13.9 +0.8**
baz=314
VORD Divnogorie 66.12 321 *e*P **P 12 53 11.9 -1.2**
VORD *e* 12 53 41.9
VORD pmax pmax
comp=Z,10.0nm,0.7s
N23A Red Feather La 66.18 55 P **P 12 53 14.9 +0.9**
baz=315
N23A Red Feather La 66.18 55 P **P 12 53 15.7 +1.7**
PV23 Carpenter Ridg 66.19 58 P **P 12 53 15.4 +1.3**
PV23 IAmb IAmb 12 53 16.3
comp=Z,27nm,1.4s
GYA0B ALIBECK ARRAY 66.21 301 P **P 12 53 14.3 +0.3**
GYA0B IAmb IAmb 12 53 15.1
comp=Z,14nm,0.6s
D32A Dogwood Acres, 66.22 45 P **P 12 53 14.8 +0.9**
PV10 Paradox Valley 66.22 59 P **P 12 53 16.2 +1.8**
PV10 IAmb IAmb 12 53 16.7
comp=Z,22nm,0.9s
PV14 Lion Creek, Pa 66.24 59 P **P 12 53 15.0 +0.6**
HRA Herat 66.26 295 P **P 12 53 14.9 +0.4**
HRA IAmb IAmb 12 53 15.4
comp=Z,9.6nm,0.7s
PV22 Blue Mesa, Par 66.26 58 P **P 12 53 15.8 +1.3**
PV04 Paradox Valley 66.29 58 P **P 12 53 16.1 +1.4**
PV19 Morning Glory 66.30 59 P **P 12 53 16.2 +1.3**
PV19 IAmb IAmb 12 53 16.3
comp=Z,10.0nm,0.8s
NC303 NORSAR Array S 66.33 341 P **P 12 53 14.1 -0.2**
NC303 IAmb IAmb 12 53 16.9
comp=Z,43nm,1.3s
PV17 East Wray Mesa 66.34 59 P **P 12 53 16.4 +1.4**
PV17 IAmb IAmb 12 53 17.0
comp=Z,19nm,0.7s
PV16 Nyswonger Mesa 66.34 59 P **P 12 53 16.4 +1.4**
PV16 IAmb IAmb 12 53 17.0
comp=Z,20nm,1.3s
NC405 NORSAR Array S 66.36 341 P **P 12 53 14.1 -0.4**
PV11 David Mesa, Pa 66.37 58 P **P 12 53 16.7 +1.4**
PV11 IAmb IAmb 12 53 17.9
comp=Z,14nm,0.8s
PV18 Skein Mesa, Pa 66.39 59 P **P 12 53 16.7 +1.4**
PV18 IAmb IAmb 12 53 17.3
comp=Z,16nm,1.1s
PV05 Paradox Valley 66.40 59 P **P 12 53 17.0 +1.5**
PV05 IAmb IAmb 12 53 17.5
comp=Z,15nm,0.8s
PV12 Saucer Basin, 66.40 58 P **P 12 53 16.8 +1.4**
PV12 IAmb IAmb 12 53 17.7
comp=Z,27nm,1.5s
PV07 Paradox Valley 66.40 58 P **P 12 53 17.2 +1.7**
NC204 NORSAR Array S 66.41 342 P **P 12 53 14.3 -0.6**
PV03 Paradox Valley 66.42 59 P **P 12 53 16.8 +1.3**
PV13 Radium Mtn., P 66.50 59 P **P 12 53 17.5 +1.4**
PV13 IAmb IAmb 12 53 18.1
comp=Z,12nm,0.8s
NB201 NORSAR Array S 66.50 341 P **P 12 53 14.9 -0.5**
NB2 NORSAR Subarra 66.53 341 P **P 12 53 14.8 -0.9**
comp=Z,11nm,0.7s,baz=30,slow=6.5
NOA NORSAR Array B 66.53 341 P **P 12 53 14.8 -0.9**
comp=Z,6.3nm,0.5s,baz=26,slow=6.4,SNR=39
PV15 Paradox Valley 66.56 58 P **P 12 53 17.4 +0.9**
NBO00 NORSAR Array S 66.63 342 P **P 12 53 16.9 +0.7**
NBO00 IAmb IAmb 12 53 17.4
comp=Z,42nm,1.2s
PV01 Paradox Valley 66.66 58 P **P 12 53 18.4 +1.2**
NC602 NORSAR Array S 66.73 341 P **P 12 53 16.8 -0.1**
NC602 IAmb IAmb 12 53 18.1
comp=Z,34nm,1.0s
SLIT Slitere, Latvi 66.76 334 *e*P **P 12 53 16.6 -0.5**
NAO01 NORSAR Array S 66.77 341 P **P 12 53 16.3 -0.8**
NAO01 IAmb IAmb 12 53 19.1
comp=Z,33nm,1.0s
B35A Bob, Littlefor 66.82 42 P **P 12 53 17.9 +0.3**
B35A IAmb IAmb 12 53 18.9
comp=Z,19nm,0.8s
WUAZ Wupatki 66.87 62 P **P 12 53 19.9 +1.5**
baz=314
WUAZ Wupatki 66.87 62 P **P 12 53 20.1 +1.6**
SUSD Miller 67.25 48 P **P 12 53 21.2 +0.7**
baz=317
ISAL Salakas 67.31 331 *e*P **P 12 53 21.1 +0.5**
IDID Didziasalis 67.33 331 *e*P **P 12 53 20.8 +0.1**
MVCO Mesa Verde 67.35 59 P **P 12 53 22.4 +0.9**
baz=315,SNR=5.8
MVCO Mesa Verde 67.35 59 P **P 12 53 22.8 +1.3**
MVCO IAmb IAmb 12 53 24.1
comp=Z,23nm,1.5s
IIGN Ignalina 67.47 331 *e*P **P 12 53 21.0 -0.6**
F33A 5 Mile Ranch, 67.51 46 P **P 12 53 22.7 +0.6**
F33A IAmb IAmb 12 53 23.6
comp=Z,32nm,0.9s
X16A Lo Mia Camp, P 67.60 63 P **P 12 53 24.7 +1.7**
HYB Hyderabad 67.72 271 *i*P **P 12 53 23.0 -0.8**
S22A 4UR Ranch, Cre 67.91 58 P **P 12 53 26.6 +1.5**
baz=315,SNR=8.4
S22A 4UR Ranch, Cre 67.91 58 P **P 12 53 26.7 +1.6**
PABE Paberze 68.05 332 *e*P **P 12 53 24.6 -0.6**
W18A Petrified Fore 68.11 61 P **P 12 53 26.9 +0.7**
baz=315
EYMN Ely 68.11 41 P **P 12 53 26.0 +0.2**
baz=320,SNR=6.1
EYMN Ely 68.11 41 P **P 12 53 26.4 +0.6**
EYMN IAmb IAmb 12 53 27.1
comp=Z,27nm,0.9s
MAK Makhachkala 68.31 311 *e*P **P 12 53 25.4 -1.7**
MAK *e**PP **PcP 12 53 50.6 -1.4**
MAK *e* 12 55 56.5
MAK *e*S **S 13 02 17.5 -1.8**
MAK *e**SS **sS 13 03 03.9 -0.1**
MAK pmax pmax
comp=Z,375nm,1.4s
MAK MLR MLR
comp=Z,208nm,17.0s
X18A Snowflake 68.40 62 P **P 12 53 29.8 +1.7**
214A Organ Pipe Nat 68.51 66 P **P 12 53 29.7 +1.1**
baz=315
SDCO Great Sand Dun 68.65 57 P **P 12 53 30.5 +0.8**
baz=316
SDCO Great Sand Dun 68.65 57 P **P 12 53 31.1 +1.4**
F36A Milaca 68.78 44 P **P 12 53 30.0 0.0**
ECSD EROS Data Cent 68.92 47 P **P 12 53 31.2 +0.4**
baz=318,SNR=21
ECSD EROS Data Cent 68.92 47 P **P 12 53 31.3 +0.4**
ECSD IAmb IAmb 12 53 32.2
comp=Z,33nm,0.8s
GOF Gofitskoye 68.92 315⇑ *e*P **P 12 53 29.2 -1.6**
E38A The Farm, Brul 69.11 42 P **P 12 53 32.4 +0.4**
E38A IAmb IAmb 12 53 32.5
comp=Z,22nm,0.8s
TUC Tucson 69.47 64 P **P 12 53 35.5 +0.9**
baz=316
SUW Suwalki 69.56 332 P **P 12 53 33.3 -1.3**
SUW pmax pmax
comp=Z,106nm,0.3s
SUW Suwalki 69.56 332 P **P 12 53 33.3 -1.3**
SPMN Marine on St. 69.59 44 P **P 12 53 35.2 +0.2**
baz=320,SNR=5.4
SPMN Marine on St. 69.59 44 P **P 12 53 35.5 +0.5**
SPMN IAmb IAmb 12 53 36.4
comp=Z,24nm,0.8s
T25A Trinidad 69.69 57 P **P 12 53 36.7 +0.7**
baz=316
T25A Trinidad 69.69 57 P **P 12 53 36.2 +0.2**
KIV Kislovodsk 69.91 314 P **P 12 53 39.3 +2.2**
KIV Kislovodsk 69.91 314 *e*P **P 12 53 35.4 -1.7**
KIV Kislovodsk 69.91 314 *e*P **P 12 53 35.4 -1.7**
KIV pmax pmax
comp=Z,30nm,0.9s
KBZ Khabaz 69.98 314 P **P 12 53 38.0 +0.7**
comp=Z,9.0nm,0.6s,baz=96,slow=3.7,SNR=30
KBZ Khabaz 69.98 314 *e*P **P 12 53 37.3 -0.1**
KBZ Khabaz 69.98 314 *d i*P **P 12 53 37.3 -0.1**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 70.12 60 *i*P **P 12 53 37.0 -1.6**
ANMO pmax pmax
comp=Z,15nm,3.0s
ANMO Albuquerque 70.12 60 P **P 12 53 39.5 +0.9**
baz=316
ANMO Albuquerque 70.12 60 P **P 12 53 39.4 +0.8**
I37A Lemond, Waseca 70.24 45 P **P 12 53 40.0 +1.0**
AKASG Malin Array Be 70.26 326 P **P 12 53 37.9 -1.1**
comp=Z,6.6nm,0.5s,baz=34,slow=6.1,SNR=8.3
AKASG Malin Array Be 70.26 326 P **P 12 53 38.1 -0.9**
L34A Svendsen Farm, 70.35 48 P **P 12 53 40.1 +0.4**
WB0 Warramunga Arr 70.53 200 P **P 12 53 39.8 -1.1**
GOET G??ttrup 70.61 341 *i*P **P 12 53 42.1 +1.2**
comp=Z,89nm,0.8s
GOET G??ttrup 70.61 341 *i*P **P 12 53 42.2 +1.2**
GOET IAmb IAmb 12 53 42.9
comp=Z,89nm,0.8s
WR0 Warramunga Arr 70.68 200 P **P 12 53 41.0 -0.8**
WRAB Tennant Creek 70.69 200 *i*P **P 12 53 40.2 -1.7**
WRAB pmax pmax
comp=Z,17nm,1.2s
WRAB Tennant Creek 70.69 200 P **P 12 53 41.2 -0.7**
WRAB IAmb IAmb 12 53 41.8
comp=Z,19nm,1.2s
WB2 Warramunga Arr 70.70 200 P **P 12 53 40.9 -1.0**
WRA Warramunga Arr 70.71 200 P **P 12 53 40.5 -1.4**
comp=Z,8.8nm,0.9s,baz=15,slow=6.1,SNR=55
WRA pP **PcP 12 54 03.5 +1.3**
comp=Z,5.5nm,0.7s,baz=16,slow=6.2,SNR=5.7
WRA Warramunga Arr 70.71 200 P **P 12 53 40.9 -1.1**
WC3 Warramunga Arr 70.72 200 P **P 12 53 40.1 -1.9**
WC3 IAmb IAmb 12 53 42.0
comp=Z,19nm,1.2s
G40A Rib Lake 70.74 42 P **P 12 53 42.2 +0.2**
G40A IAmb IAmb 12 53 43.2
comp=Z,17nm,0.9s
BSD Bornholm Skovb 70.98 337 *i*P **P 12 53 42.9 -0.3**
BSD pmax pmax
comp=Z,50nm,0.9s
BSD Bornholm Skovb 70.98 337 *i*P **P 12 53 42.9 -0.3**
comp=Z,50nm,0.9s
BSD Bornholm Skovb 70.98 337 *i*P **P 12 53 43.0 -0.3**
BSD IAmb IAmb 12 53 44.5
comp=Z,50nm,0.9s
CBKS Cedar Bluff 70.98 53 P **P 12 53 43.1 -0.5**
baz=318
319A Douglas 71.03 64 P **P 12 53 45.4 +1.2**
319A IAmb IAmb 12 53 46.2
comp=Z,14nm,0.8s
SCHQ Schefferville 71.12 24 P **P 12 53 44.8 +0.7**
comp=Z,38nm,0.7s,baz=347,slow=5.6,SNR=48
SCHQ Schefferville 71.12 24 P **P 12 53 44.9 +0.7**
SCHQ IAmb IAmb 12 53 45.9
comp=Z,46nm,0.9s
MUD Monsted U'grnd 71.15 340 *i*P **P 12 53 44.6 +0.4**
MUD Monsted U'grnd 71.15 340 *i*P **P 12 53 44.6 +0.4**
MUD Monsted U'grnd 71.15 340 *i*P **P 12 53 44.6 +0.4**
F42A Maple Grove Fa 71.27 41 P **P 12 53 46.0 +0.8**
F42A IAmb IAmb 12 53 46.5
comp=Z,23nm,0.9s
FITZ Fitzroy Crossi 71.31 209 P **P 12 53 45.5 -0.1**
comp=Z,10nm,0.8s,baz=17,slow=5.6,SNR=24
FITZ pP **PcP 12 54 09.2 +4.4**
comp=Z,4.4nm,0.8s,baz=336,slow=4.9,SNR=3.5
FITZ Fitzroy Crossi 71.31 209 P **P 12 53 45.8 +0.2**
DZM Mont Dzumac 71.39 168 *e*LR LR 13 15 18.4
comp=Z,133nm,32.7s
N35A Tabor 71.54 49 P **P 12 53 47.7 +0.7**
N35A IAmb IAmb 12 53 48.2
comp=Z,33nm,0.8s
I40A Norwalk 71.62 44 P **P 12 53 47.6 +0.3**
I40A IAmb IAmb 12 53 48.4
comp=Z,32nm,1.2s
ANN Anapa 71.67 318 *e*P **P 12 53 51.6 +4.0**
ANN pmax pmax
comp=Z,100nm,2.0s
GNI Garni 71.78 310 *i*P **P 12 53 48.7 +0.1**
GNI pmax pmax
comp=Z,10.0nm,0.7s
SCIA State Center 71.93 46 P **P 12 53 49.9 +0.6**
baz=320,SNR=7.2
SCIA State Center 71.93 46 P **P 12 53 50.0 +0.8**
MATQ Matagami 72.15 32 P **P 12 53 50.5 +0.1**
baz=327
KSU1 Kansas State U 72.39 50 P **P 12 53 51.7 -0.3**
baz=319
KSU1 Kansas State U 72.39 50 P **P 12 53 51.7 -0.3**
KSU1 IAmb IAmb 12 53 52.3
comp=Z,17nm,0.8s
I42A Draeger Farm, 72.39 43 P **P 12 53 52.2 +0.3**
I42A IAmb IAmb 12 53 53.1
comp=Z,46nm,1.4s
H43A Windswept, Lux 72.44 42 P **P 12 53 52.9 +0.7**
H43A IAmb IAmb 12 53 53.5
comp=Z,35nm,1.1s
JFWS Jewell Farm 72.55 44 P **P 12 53 52.1 -0.8**
baz=322
SORM Soroca 72.70 325⇑ P **P 12 53 52.9 -0.8**
SORM Soroca 72.70 325⇑ P **P 12 53 52.9 -0.8**
L40A Anamosa 72.76 45 P **P 12 53 54.0 -0.1**
L40A IAmb IAmb 12 53 54.9
comp=Z,32nm,1.1s
N38A Joes South For 72.78 47 P **P 12 53 54.8 +0.5**
N38A IAmb IAmb 12 53 55.4
comp=Z,27nm,0.9s
AMTX Amarillo 72.84 57 P **P 12 53 54.5 -0.3**
baz=318
AMTX Amarillo 72.84 57 P **P 12 53 55.6 +0.8**
AMTX IAmb IAmb 12 53 57.4
comp=Z,16nm,1.1s
MSTX Muleshoe 72.91 58 P **P 12 53 56.2 +0.8**
baz=318
MSTX Muleshoe 72.91 58 P **P 12 53 56.3 +1.0**
LSQQ Lebel-sur-Quev 72.98 32 P **P 12 53 55.2 -0.1**
baz=328
MNTX Cornudas Mount 73.09 61 P **P 12 53 56.8 +0.5**
baz=317
MNTX Cornudas Mount 73.09 61 P **P 12 53 57.5 +1.2**
CHGQ Chibougamau 73.15 30 P **P 12 53 56.4 +0.1**
baz=329,SNR=5.2
KWP Kalwaria Pacla 73.45 329 *e*P **P 12 53 58.2 +0.1**
KWP Kalwaria Pacla 73.45 329 P **P 12 53 58.2 +0.1**
KWP pmax pmax
comp=Z,42nm,0.8s
KWP Kalwaria Pacla 73.45 329 P **P 12 53 58.2 +0.1**
L42A Oliver, Polo 73.53 44 P **P 12 53 58.6 0.0**
L42A IAmb IAmb 12 53 59.2
comp=Z,23nm,1.0s
K43A Burlington 73.58 43 P **P 12 53 58.8 -0.2**
K43A IAmb IAmb 12 53 59.8
comp=Z,31nm,1.0s
INVG Invergeldie, C 73.59 348 *e*P **P 12 53 59.0 +0.3**

INVG IAmb IAmb 12 53 59.3
comp=Z,75nm,1.4s
VLDQ Val d'Or 73.60 33 P P 12 53 58.1 -0.9
ESY Stoneypath 73.87 347 eP P 12 54 00.9 +0.4
OJC Ojcow 73.89 331 eP P 12 54 00.6 -0.1
OJC Ojcow 73.89 331 P P 12 54 00.6 -0.1
OJC pmax pmax
comp=Z,10.0nm,0.8s
OJC Ojcow 73.89 331 P P 12 54 00.6 -0.1
LAWE Loch Awe, Argy 73.94 348 eP P 12 54 01.3 +0.5
LAWE IAmb IAmb 12 54 01.9
comp=Z,31nm,0.8s
N41A Harden Midland 73.99 46 P P 12 54 02.0 +0.6
EBL Broad Law 74.08 347 eP P 12 54 02.2 +0.5
KOLS Kolonicke sedl 74.19 329 eP P 12 54 02.4 0.0
KOLS pmax pmax
comp=Z,9.0nm,1.1s
KOLS Kolonicke sedl 74.19 329 eP P 12 54 02.4 0.0
L44A Lake County Fo 74.19 43 P P 12 54 03.1 +0.5
baz=323
PGBU Glenifferbraes 74.25 348 eP P 12 54 03.4 +0.8
PGBU IAmb IAmb 12 54 04.0
comp=Z,77nm,0.9s
BUR08 Bucovina Ar. S 74.27 327 P P 12 54 03.0 0.0
BURAR Bucovina Array 74.29 327 ⇑P P 12 54 03.1 -0.1
BURAR Bucovina Array 74.29 327 ⇑P P 12 54 03.1 -0.1
BURAR Bucovina Array 74.29 327 P P 12 54 02.6 -0.6
P40A Paris 74.33 47 P P 12 54 03.7 +0.3
P40A IAmb IAmb 12 54 04.8
comp=Z,22nm,0.9s
AS31 Alice Springs 74.40 199 P P 12 54 03.0 -0.8
KSP Ksiaz 74.40 334 eP P 12 54 03.4 -0.2
ASAR Alice Springs 74.40 199 P P 12 54 03.6 -0.2
comp=Z,7.1nm,0.6s,baz=15,slow=5.3,SNR=88
ASAR pP PcP 12 54 25.8 +7.8
comp=Z,4.8nm,0.9s,baz=20,slow=6.4,SNR=2.7
ASAR Alice Springs 74.40 199 P P 12 54 03.5 -0.3
ASAR Alice Springs 74.40 199 P P 12 54 03.5 -0.3
NIE Niedzica 74.42 331 eP P 12 54 02.5 -1.3
OK029 Liberty Lake 74.44 53 P P 12 54 04.5 +0.4
OK029 IAmb IAmb 12 54 05.6
comp=Z,23nm,0.9s
CRVS Cervenica-Dubn 74.49 330 eP P 12 54 04.7 +0.5
CRVS pmax pmax
comp=Z,67nm,2.2s
CRVS Cervenica-Dubn 74.49 330 eP P 12 54 04.7 +0.5
WMOK Wichita Mounta 74.53 55 P P 12 54 04.5 -0.2
WMOK pmax pmax
comp=Z,11nm,0.9s
WMOK Wichita Mounta 74.53 55 P P 12 54 05.1 +0.4
baz=319,SNR=5.7
WMOK Wichita Mounta 74.53 55 P P 12 54 04.5 -0.2
BIZ Bicaz 74.54 326 ⇑P P 12 54 04.1 -0.3
ESK Eskdalemuir 74.54 347 eP P 12 54 04.8 +0.5
ESK IAmb IAmb 12 54 05.4
comp=Z,20nm,0.7s
ESK Eskdalemuir 74.54 347 P P 12 54 04.2 -0.1
ESK pmax pmax
comp=Z,21nm,0.7s
ESK Eskdalemuir 74.54 347 P P 12 54 04.2 -0.1
ESK IAmb IAmb 12 54 05.6
comp=Z,21nm,0.7s
QUOK Quay 74.55 53 P P 12 54 05.0 +0.2
QUOK IAmb IAmb 12 54 06.1
comp=Z,21nm,1.0s
OK031 S. Brethren Rd 74.65 53 P P 12 54 06.2 +0.8
OK031 IAmb IAmb 12 54 06.7
comp=Z,37nm,0.9s
OK025 Westminster Rd 74.67 53 P P 12 54 06.3 +0.9
OK025 IAmb IAmb 12 54 07.0
comp=Z,29nm,0.8s
TESR Tescani 74.69 325 ⇑P P 12 54 05.8 +0.4
OK030 Cody Creek RV 74.70 53 P P 12 54 06.1 +0.5
OK030 IAmb IAmb 12 54 07.0
comp=Z,26nm,0.9s
J47A Sunmer 74.70 41 P P 12 54 06.0 +0.5
M44A Midewin, Midew 74.76 44 P P 12 54 06.2 +0.3
M44A IAmb IAmb 12 54 06.8
comp=Z,25nm,0.9s
UPC Upice 74.78 334 eP P 12 54 06.3 +0.5
UPC Upice 74.78 334 eP P 12 54 06.3 +0.5
DPC Dobruska-Polom 74.83 334 eP P 12 54 06.3 +0.1
DPC Dobruska-Polom 74.83 334 eP P 12 54 06.3 +0.1
DPC ex x 12 54 10.7
HDIL Hopedale 74.84 45 P P 12 54 06.5 +0.2
baz=322
HDIL Hopedale 74.84 45 P P 12 54 07.0 +0.7
HDIL IAmb IAmb 12 54 07.6
comp=Z,38nm,0.9s
FNO Franklin 74.88 54 P P 12 54 07.9 +1.3
NEWG New Galloway 74.89 347 eP P 12 54 06.6 +0.3
CLL Collm 74.91 336 iP P 12 54 06.3 -0.2
comp=Z,25nm,0.7s
CLL ePP PP 12 56 54.0 -0.6
CLL Collm 74.91 336 iP P 12 54 06.3 -0.2
CLL eS S 13 03 31.0 -3.8
CLL pmax pmax
comp=Z,25nm,0.7s
CLL Collm 74.91 336 eP P 12 54 06.3 -0.2
comp=Z,25nm,0.7s,baz=24,slow=5.8
CLL Collm 74.91 336 P P 12 54 06.5 0.0
CLL IAmb IAmb 12 54 07.6
comp=Z,22nm,0.7s
LANS Liptovska Anna 74.92 331 eP P 12 54 07.8 +1.1
LANS pmax pmax
comp=Z,7.0nm,0.7s
LANS Liptovska Anna 74.92 331 eP P 12 54 07.8 +1.1
KRLC Kraliky 74.94 333 eP P 12 54 06.4 -0.4
KRLC Kraliky 74.94 333 eP P 12 54 06.4 -0.4
KRLC ex x 12 54 12.0
TLCR 74.97 323 ⇑P P 12 54 07.5 +0.5
TLCR 74.97 323 ⇑P P 12 54 07.5 +0.5
MORC Moravsky Berou 74.97 333 ⇑P P 12 54 07.7 +0.7
MORC Moravsky Berou 74.97 333 eP P 12 54 06.3 -0.7
MORC Moravsky Berou 74.97 333 ⇑P P 12 54 07.7 +0.7
MORC Moravsky Berou 74.97 333 P P 12 54 07.5 +0.6
BRG Berggiesshubel 75.04 335 eP P 12 54 07.2 -0.1
comp=Z,7.8nm,0.9s
BRG Berggiesshubel 75.04 335 eP P 12 54 07.2 -0.1
BRG pmax pmax
comp=Z,8.0nm,0.9s
CLZ Clausthal 75.10 338 eP P 12 54 07.9 +0.2
comp=Z,43nm,1.4s,baz=24,slow=5.8
S39A Bolivar 75.13 49 P P 12 54 07.6 -0.4
FBE Freiberg 75.16 336 eP P 12 54 08.1 +0.1
comp=Z,22nm,0.8s,baz=24,slow=5.8
CLGH Cloghs, Cushen 75.18 348 eP P 12 54 08.6 +0.6
CLGH IAmb IAmb 12 54 09.2
comp=Z,54nm,0.8s
R40A Maddies Statio 75.19 48 P P 12 54 08.4 0.0
ALGO Algonquin Park 75.20 35 P P 12 54 07.6 -0.6
baz=328,SNR=5.3
VRI Vrincioaia 75.21 325 ⇑P P 12 54 09.2 +0.8
VRI Vrincioaia 75.21 325 ⇑P P 12 54 09.2 +0.8
TUL1 Leonard 75.23 52 P P 12 54 08.8 +0.1
baz=320
TUL1 Leonard 75.23 52 P P 12 54 09.5 +0.9
TUL1 IAmb IAmb 12 54 10.0
comp=Z,29nm,1.2s
CFR Carcaliu 75.24 324 ⇑P P 12 54 08.3 -0.2
CFR Carcaliu 75.24 324 ⇑P P 12 54 08.3 -0.2
IDGL Inch Island, C 75.37 349 eP P 12 54 09.8 +0.7
IDGL IAmb IAmb 12 54 10.6
comp=Z,103nm,1.0s
TPGR Topolog 75.40 323 ⇑P P 12 54 09.8 +0.3
E55A Montcerf-Lytto 75.51 33 P P 12 54 09.8 -0.3
baz=328
U38A Gravette 75.55 51 P P 12 54 10.8 +0.3
HPK Haverah Park 75.60 346 eP P 12 54 11.3 +0.9
HPK IAmb IAmb 12 54 11.8
comp=Z,111nm,1.0s
DOPR Dopca 75.62 326 ⇑P P 12 54 14.3 +3.5
G54A Lake Saint Pet 75.65 35 P P 12 54 11.1 +0.2
baz=328
ABTX Abilene, Hawle 75.65 57 P P 12 54 12.0 +0.8
baz=319
PRU Pruhonice 75.67 334 eP P 12 54 11.2 +0.3
PRU Pruhonice 75.67 334 eP P 12 54 11.2 +0.3
PRU ex x 12 54 15.3
VRAC Vranov 75.68 333 ⇑P P 12 54 11.9 +0.9
VRAC Vranov 75.68 333 eP P 12 54 11.1 +0.1
VRAC Vranov 75.68 333 ⇑P P 12 54 11.9 +0.9
VYHS Vyhne 75.70 331 eP P 12 54 10.7 -0.4
VYHS pmax pmax
comp=Z,27nm,1.7s
VYHS Vyhne 75.70 331 eP P 12 54 10.7 -0.4
HARR Harsova 75.73 324 ⇑P P 12 54 11.6 +0.3
HARR Harsova 75.73 324 ⇑P P 12 54 11.6 +0.3
TIRR Tirgusor 75.73 323 ⇑P P 12 54 10.6 -0.7
TIRR Tirgusor 75.73 323 ⇑P P 12 54 10.6 -0.7
TIRR Tirgusor 75.73 323 ⇑P P 12 54 10.6 -0.7
JAVC Velka Javorina 75.75 332 eP P 12 54 11.9 +0.5
SADO Sadowa 75.77 36 LR LR 13 31 36.7
comp=Z,24nm,18.2s,baz=282,slow=39
TLBR Topalu 75.80 323 ⇑P P 12 54 12.0 +0.3
E56A St. Veronique 75.81 33 P P 12 54 12.0 +0.3
baz=329
MLR Muntele Rosu 75.82 325 ⇑P P 12 54 12.9 +0.9
MLR Muntele Rosu 75.82 325 ⇑P P 12 54 12.9 +0.9
MLR Muntele Rosu 75.82 325 P P 12 54 13.1 +1.1
TX31 Lajitas Ar. Si 75.83 62 P P 12 54 13.0 +0.7
TX31 IAmb IAmb 12 54 14.0
comp=Z,36nm,1.1s
TX32 Lajitas Array 75.83 62 P P 12 54 13.0 +0.7
TXAR Lajitas Array 75.83 62 P P 12 54 13.0 +0.7
comp=Z,5.5nm,0.6s,baz=298,slow=4.6,SNR=80
TXAR pP pP 12 54 36.4 -2.7
comp=Z,5.9nm,0.8s,baz=298,slow=4.2,SNR=8.1
TXAR Lajitas Array 75.83 62 P P 12 54 12.9 +0.7
I51A Listowel 75.83 38 P P 12 54 12.3 +0.4
baz=326
TANN Tannenbergstha 75.86 336 eP P 12 54 12.2 +0.1
comp=Z,47nm,1.5s,baz=24,slow=5.8
PSZ Piszkesteto 75.86 330 ⇑P P 12 54 13.4 +1.3
PSZ Piszkesteto 75.86 330 ⇑P P 12 54 13.4 +1.3
PSZ Piszkesteto 75.86 330 P P 12 54 12.8 +0.6
LATQ La Tuque 75.86 31 P P 12 54 12.2 +0.2
baz=330
CCM Cathedral Cave 75.87 48 P P 12 54 12.6 +0.3
CCM pmax pmax
comp=Z,10.0nm,1.0s
CCM Cathedral Cave 75.87 48 P P 12 54 12.1 -0.2
baz=322
CCM Cathedral Cave 75.87 48 P P 12 54 12.6 +0.3
MOX Moxa 75.88 337 eP P 12 54 12.2 +0.1
comp=Z,25nm,1.4s,baz=24,slow=5.8
PLN Plauen 75.88 336 eP P 12 54 12.3 +0.2
comp=Z,17nm,1.1s,baz=24,slow=5.8
BANOM Banah 75.89 293 P P 12 54 12.8 +0.2
BANOM Banah 75.89 293 P P 12 54 12.7 +0.1
SHME Shamm 75.89 293 P P 12 54 12.5 -0.1
HHAR Hobbs 75.90 51 P P 12 54 12.7 +0.2
ISR Istrita 75.91 325 ⇑P P 12 54 12.9 +0.5
ISR Istrita 75.91 325 ⇑P P 12 54 12.9 +0.5
GUNZ Gunzen 75.94 336 eP P 12 54 12.7 +0.2
comp=Z,15nm,0.7s,baz=24,slow=5.8
MARD Mardin 75.94 311 P P 12 54 14.5 +1.6
MARD IAmb IAmb 12 54 14.9
comp=Z,18nm,0.6s
KRUC Moravsky 75.95 333 eP P 12 54 12.6 +0.1
SFIN Lafayette 76.00 44 P P 12 54 12.8 -0.2
baz=324
NKC Novy Kostel 76.03 336 eP P 12 54 13.0 0.0
NKC Novy Kostel 76.03 336 eP P 12 54 13.0 0.0
D58A Chemin du LacG 76.08 31 P P 12 54 13.6 +0.3
baz=330
PBCC Pribram 76.10 335 eP P 12 54 13.4 0.0
PBCC ex x 12 54 16.4
UBBA Unterbreizbach 76.13 338 eP P 12 54 13.4 0.0
comp=Z,12nm,0.8s,baz=24,slow=5.8
LBWR Ladybower, Pea 76.15 345 eP P 12 54 14.3 +0.7
LBWR IAmb IAmb 12 54 14.9
comp=Z,110nm,1.1s
H53A Bobcaygeon 76.16 36 P P 12 54 13.7 -0.1
baz=327,SNR=5.9
VOIR 76.20 326 ⇑P P 12 54 14.6 +0.5
VOIR 76.20 326 ⇑P P 12 54 14.6 +0.5
ICOR Ion Corvin 76.26 323 ⇑P P 12 54 15.2 +0.9
MODS Modra-Piesok 76.30 332 eP P 12 54 14.4 -0.1
MODS pmax pmax
comp=Z,21nm,1.1s
MODS Modra-Piesok 76.30 332 eP P 12 54 14.4 -0.1
FVM French Village 76.33 47 P P 12 54 15.5 +0.6
FVM pmax pmax
comp=Z,12nm,0.8s
FVM French Village 76.33 47 P P 12 54 15.4 +0.6
MANZ Manzenberg 76.34 336 eP P 12 54 15.0 +0.2
comp=Z,12nm,0.9s,baz=24,slow=5.8
MDH Madha 76.35 293 P P 12 54 14.5 -0.6
U40A Yellville 76.40 50 P P 12 54 15.1 -0.2
baz=321,SNR=11
U40A Yellville 76.40 50 P P 12 54 15.3 0.0
U40A IAmb IAmb 12 54 16.2
comp=Z,23nm,0.9s
ARR Arges 76.41 326 ⇓P P 12 54 17.5 +2.2
BIDO Bidbid 76.53 290 P P 12 54 16.5 +0.3
P46A Rosedale 76.56 44 P P 12 54 16.8 +0.7
P46A IAmb IAmb 12 54 17.4
comp=Z,34nm,1.0s
E58A La Victoria 76.57 32 P P 12 54 16.5 +0.5
baz=330,SNR=12
UOSS Minazif 76.66 293 P P 12 54 16.5 -0.4
UOSS Minazif 76.66 293 P P 12 54 16.9 0.0
UOSS IAmb IAmb 12 54 18.2
comp=Z,24nm,0.8s
WBK Wadi Bani Khal 76.67 289 P P 12 54 18.2 +1.1
SIRR Siria 76.70 328 ⇑P P 12 54 17.8 +0.9
KHC Kasperske Hory 76.72 335 eP P 12 54 16.9 0.0
KHC e 12 54 22.6
KHC Kasperske Hory 76.72 335 eP P 12 54 16.9 0.0
KHC ex x 12 54 22.6
KHC Kasperske Hory 76.72 335 P P 12 54 17.3 +0.4
KHC IAmb IAmb 12 54 18.8
comp=Z,12nm,0.7s
JLN Jalan Bani Buh 76.73 288 P P 12 54 18.3 +1.0
HATD Hatta, Dubai 76.80 292 iP P 12 54 18.5 +0.8
SNR=6.2
HATD Hatta, Dubai 76.80 292 P P 12 54 17.9 +0.2
W39A Magazine 76.82 51 P P 12 54 18.2 +0.5
baz=321
SGRR Singureni 76.88 325 ⇑P P 12 54 18.4 +0.6
FOEL Foel Wylfa 76.89 346 eP P 12 54 18.2 +0.4
FOEL IAmb IAmb 12 54 20.1
comp=Z,35nm,0.8s
D60A Saint Jean D'O 76.90 30 P P 12 54 18.3 +0.4
baz=331
WET Wettzell 76.90 335 eP P 12 54 18.6 +0.6
comp=Z,31nm,0.8s,baz=24,slow=5.8
SMDO Samad 76.91 290 P P 12 54 18.7 +0.2
GEC2 GERESS Array S 76.94 334 eP P 12 54 18.9 +0.7
comp=Z,16nm,0.7s,baz=24,slow=5.8
GEC2 GERESS Array S 76.94 334 P P 12 54 18.6 +0.4
GEC2 IAmb IAmb 12 54 19.5
comp=Z,15nm,0.8s
GERES GERESS Array B 76.94 334 P P 12 54 18.7 +0.5
comp=Z,11nm,0.6s,baz=30,slow=5.0,SNR=72
GERES GERESS Array B 76.94 334 P P 12 54 18.2 0.0
GERES GERESS Array B 76.94 334 P P 12 54 18.1 0.0
ASHO Ashiyiah 76.94 292 iP P 12 54 18.5 0.0
SNR=7.6
ASHO Ashiyiah 76.94 292 P P 12 54 18.9 +0.3
NAZ Nazwa, Dubai 76.96 293 P P 12 54 18.9 +0.3
HOQ Hoqain 76.99 291 P P 12 54 19.1 +0.3
SNR=5.3
LLW Llanuwchllyn 77.00 346 eP P 12 54 18.8 +0.4
DSB Dublin 77.01 348 P P 12 54 19.1 +0.8
G57A Newington 77.06 33 P P 12 54 18.6 -0.2
baz=329,SNR=5.9
SOHO SOHO 77.06 292 iP P 12 54 19.4 +0.2
SNR=8.6
SOHO SOHO 77.06 292 P P 12 54 19.4 +0.2
GZR Gura Zlata 77.06 327 ⇑P P 12 54 19.1 +0.2
GZR Gura Zlata 77.06 327 ⇑P P 12 54 19.1 +0.2
TNS Taunus Mts 77.07 338 eP P 12 54 19.4 +0.5
comp=Z,27nm,0.8s,baz=24,slow=5.8
AHRW Bad Neuenahr-A 77.10 339 eP P 12 54 19.3 +0.3
comp=Z,42nm,1.2s,baz=24,slow=5.8
S44A Carbondale 77.12 47 P P 12 54 20.0 +0.7
S44A IAmb IAmb 12 54 20.7
comp=Z,14nm,0.8s
SIUC Southern Illin 77.12 47 P P 12 54 20.0 +0.7
SIUC IAmb IAmb 12 54 20.7
comp=Z,18nm,0.9s
CONA Conrad Observa 77.13 333 iP P 12 54 20.4 +1.1
comp=Z,17nm,0.7s,SNR=12
FCAR Ozark Folk Cen 77.13 50 P P 12 54 19.5 +0.1
JCT Junction City 77.18 58 P P 12 54 20.2 +0.3
JCT pmax pmax
comp=Z,26nm,1.4s
JCT Junction City 77.18 58 P P 12 54 20.1 +0.3
baz=320
JCT IAmb IAmb 12 54 21.3
comp=Z,26nm,1.4s
FAQ Al Faqa, Dubai 77.18 293 iP P 12 54 19.8 -0.1
SNR=6.4
F59A Saint Guilaume 77.19 32 P P 12 54 20.2 +0.7
baz=330,SNR=6.1
E60A Ste Agathe de 77.20 31 P P 12 54 19.9 +0.3
baz=331
COPA Copaceanca 77.24 325 ⇑P P 12 54 20.4 +0.5
PBMO Poplar Bluff 77.28 48 P P 12 54 20.8 +0.6
PBMO IAmb IAmb 12 54 22.6
comp=Z,24nm,1.4s
BTNL Ternell 77.28 340 P P 12 54 20.2 +0.2
BZS Buzias 77.28 328 ⇑P P 12 54 20.2 +0.1
BZS Buzias 77.28 328 ⇑P P 12 54 20.2 +0.1
MEM Membach 77.29 340 P P 12 54 20.3 +0.3
WHTX Lake Whitney, 77.34 56 P P 12 54 21.2 +0.6
baz=320
G58A Ormstown 77.35 33 P P 12 54 20.4 0.0
baz=330,SNR=5.1
F60A Warwick 77.38 31 P P 12 54 20.8 +0.2
baz=331
JMDO Jabal Madar 77.39 289 P P 12 54 21.8 +0.7
SNR=7.5
BSTI Sart Tilman 77.41 340 P P 12 54 21.9 +1.2
BR131 Keskin Array S 77.41 317 dP P 12 54 20.8 -0.3
BR131 Keskin Array S 77.41 317 P P 12 54 21.6 +0.5
BRTR Keskin Array B 77.41 317 P P 12 54 21.6 +0.5
comp=Z,16nm,1.0s,baz=91,slow=1.8,SNR=20
BRTR Keskin Array B 77.41 317 P P 12 54 21.1 0.0
BRTR Keskin Array B 77.41 317 P P 12 54 21.1 0.0
ASUD Al Ashush, Dub 77.43 293 iP P 12 54 21.5 +0.2
SNR=7.8
MIAR Mount Ida 77.44 52 P P 12 54 21.7 +0.6
MIAR pmax pmax
comp=Z,18nm,1.0s
MIAR Mount Ida 77.44 52 P P 12 54 21.5 +0.4
baz=321,SNR=8.4
MIAR Mount Ida 77.44 52 P P 12 54 21.7 +0.6
MIAR IAmb IAmb 12 54 22.6
comp=Z,18nm,0.9s
H57A Richville 77.46 34 P P 12 54 21.1 0.0
baz=329
WHAR Wooly Hollow 77.52 50 P P 12 54 21.9 +0.4
WHAR IAmb IAmb 12 54 22.8
comp=Z,25nm,1.2s
BHOU Houvegnez 77.53 340 P P 12 54 21.2 -0.2
LONY Lake Ozonia 77.62 33 P P 12 54 21.5 -0.5
baz=330
BCLA Clavier 77.62 340 P P 12 54 22.6 +0.7
W41B Gary Mavity, V 77.63 50 P P 12 54 22.6 +0.4
baz=322,SNR=6.8
W41B Gary Mavity, V 77.63 50 P P 12 54 22.5 +0.4
W41B IAmb IAmb 12 54 23.9
comp=Z,30nm,1.2s
HERR Herculane 77.64 327 ⇑P P 12 54 22.4 +0.3
ARQ Araqi 77.66 291 P P 12 54 23.0 +0.5
BSY Bisya 77.67 290 P P 12 54 23.1 +0.5
SNR=7.9
MOA Molln 77.67 334 eP P 12 54 23.3 +1.1
comp=Z,15nm,0.7s
L53A Girard 77.68 38 P P 12 54 23.1 +0.8
baz=327
D63A Stockholm 77.69 28 P P 12 54 22.4 +0.1
baz=333
F61A St Evariste 77.70 30 P P 12 54 23.3 +0.9
baz=332
PARMO Parma 77.70 48 P P 12 54 23.7 +1.2
BGES Gesves 77.70 340 P P 12 54 22.9 +0.6
MCH1 Michaelchurch 77.72 346 eP P 12 54 22.8 +0.5
MCH1 IAmb IAmb 12 54 23.6
comp=Z,38nm,1.0s
P49A Miami Univ. Ec 77.76 43 P P 12 54 22.9 0.0
baz=325
SNF Seneffe 77.76 341 P P 12 54 22.9 +0.3
MORH Mrgy, Hungar 77.77 330 ⇑iP P 12 54 22.7 0.0
STRD Stroud 77.79 345 eP P 12 54 23.3 +0.5
STRD IAmb IAmb 12 54 24.7
comp=Z,118nm,0.9s
GAZ Gaziantep 77.80 313 P P 12 54 25.0 +1.8
GAZ IAmb IAmb 12 54 25.4
comp=Z,51nm,1.3s
I57A Carthage 77.81 34 P P 12 54 23.2 +0.2
baz=329
ARSA Arzberg 77.84 333 iP P 12 54 24.3 +1.1
comp=Z,21nm,1.1s,SNR=6.8
MONM Monmouth 77.84 346 eP P 12 54 23.5 +0.5
MONM IAmb IAmb 12 54 24.4
comp=Z,86nm,0.9s
MOQ Mont Orford 77.85 32 P P 12 54 24.0 +0.7
BMRD Maredsous 77.85 341 P P 12 54 23.4 +0.2
X40A Basin Creek Fa 77.86 51 P P 12 54 24.5 +1.0
baz=322
X40A Basin Creek Fa 77.86 51 P P 12 54 23.8 +0.3
RCHB Rochefort 77.89 340 P P 12 54 23.4 +0.1
J56A Wolcott 77.92 36 P P 12 54 23.2 -0.4
baz=328
H59A Cadyville 77.92 33 P P 12 54 23.5 -0.2
baz=330
M53A WI Miller and 77.94 39 P P 12 54 24.3 +0.5
baz=327
H58A Gabriels 77.94 33 P P 12 54 24.0 +0.2
baz=330
ACSO Alum Creek Sta 77.95 41 P P 12 54 24.3 +0.4
baz=326
WVNY West Valley, N 77.97 37 P P 12 54 24.4 +0.4
WVNY IAmb IAmb 12 54 25.3
comp=Z,31nm,1.0s
MMNY Mt. Morris Dam 77.97 37 P P 12 54 24.3 +0.4
MMNY IAmb IAmb 12 54 24.9
comp=Z,37nm,0.9s
MDVR Moldovita 77.97 328 ⇑P P 12 54 24.4 +0.4
SWN1 Swindon 77.98 345 eP P 12 54 24.8 +1.0
SWN1 IAmb IAmb 12 54 25.5
comp=Z,207nm,0.8s
WOL Wolverton 78.08 345 eP P 12 54 24.9 +0.5
WOL IAmb IAmb 12 54 25.4
comp=Z,83nm,0.8s
DOU Dourbes 78.08 341 P P 12 54 24.5 +0.1
WCI Wyandotte Cave 78.09 44 P P 12 54 25.6 +0.9
WCI pmax pmax
comp=Z,26nm,0.9s
WCI Wyandotte Cave 78.09 44 P P 12 54 25.2 +0.5
baz=324
WCI Wyandotte Cave 78.09 44 P P 12 54 25.6 +0.9
WCI IAmb IAmb 12 54 26.2
comp=Z,26nm,0.8s
BATG Bathurst New B 78.10 27 P P 12 54 25.7 +1.1
BATG IAmb IAmb 12 54 26.6
comp=Z,25nm,1.0s
G61A St-Isidore-de- 78.12 31 P P 12 54 25.6 +0.8
baz=331,SNR=5.4
J57A Williamstown 78.13 35 P P 12 54 25.1 +0.3
baz=329
E63A Oxbow 78.14 29 P P 12 54 24.9 +0.1
baz=333
RJOB Jochberg 78.20 335 eP P 12 54 25.8 +0.6
comp=Z,8.8nm,0.8s,baz=24,slow=5.8
K56A Middlesex 78.23 36 P P 12 54 25.5 +0.1
baz=328
I58A Old Forge 78.28 34 P P 12 54 25.6 -0.1
baz=330
M54A Oil Creek Stat 78.30 38 P P 12 54 26.1 +0.3
baz=327
NCB Newcomb 78.31 34 P P 12 54 26.2 +0.3
E64A Bridgewater 78.33 28 P P 12 54 25.9 0.0
baz=333
H60A Morristown 78.35 32 P P 12 54 26.2 +0.2
baz=331
J58A Remsen 78.44 34 P P 12 54 26.7 +0.1
baz=329
J58A Remsen 78.44 34 P P 12 54 26.7 +0.1
J58A IAmb IAmb 12 54 27.4
comp=Z,29nm,1.0s
MHTO MHTO 78.49 289 P P 12 54 27.6 +0.5
SNR=23
SOKA Soboth 78.50 333 iP P 12 54 27.8 +0.9
comp=Z,38nm,0.8s,SNR=20
PERS Pernice 78.51 333 iP P 12 54 27.2 +0.3
K57A Scipio Center 78.51 36 P P 12 54 26.4 -0.6
baz=329
G62A West of Eustis 78.52 31 P P 12 54 27.4 +0.5

baz=332
G62A West of Eustis 78.52 31 P P 12 54 28.6 +1.7
G62A IAmb IAmb 12 54 28.9
comp=Z,49nm,1.1s
O52A Adamsville 78.54 40 P P 12 54 27.0 -0.1
baz=326
GROS Grobnik 78.55 332 *i* P P 12 54 27.1 -0.1
F63A Nahmakanta, Br 78.56 29 P P 12 54 27.8 +0.6
baz=333
I59A Olmsteadville 78.59 33 P P 12 54 27.2 -0.2
baz=330
L56A Greenwood 78.61 37 P P 12 54 27.5 0.0
baz=328
N54A Moraine State 78.62 39 P P 12 54 27.9 +0.3
baz=327
N54A Moraine State 78.62 39 P P 12 54 28.4 +0.8
KBA Koelnbreinsper 78.64 334 *i* P P 12 54 29.2 +1.4
comp=Z,106nm,0.7s,SNR=46
H61A Lyndonville 78.64 32 P P 12 54 28.0 +0.4
baz=331
J59A Piesco 78.64 34 P P 12 54 27.5 -0.2
baz=330
F64A Sherman 78.66 29 P P 12 54 27.8 +0.1
baz=333
M55A Ridgway 78.69 38 P P 12 54 28.8 +0.8
M55A IAmb IAmb 12 54 29.3
comp=Z,23nm,0.9s
O53A New Philadelph 78.70 40 P P 12 54 28.4 +0.3
baz=326
I60A Shoreham 78.76 33 P P 12 54 28.5 +0.2
baz=330
Q51A Peebles 78.78 42 P P 12 54 29.4 +0.9
Q51A IAmb IAmb 12 54 29.9
comp=Z,17nm,0.8s
OBKA Obir 78.80 333 *i* P P 12 54 29.3 +0.8
comp=Z,20nm,0.6s,SNR=6.0
P52A Corning 78.81 41 P P 12 54 28.2 -0.5
baz=326
K58A Earlville 78.82 35 P P 12 54 28.0 -0.6
baz=329
BFO Black Forest 78.85 338 P P 12 54 28.8 0.0
BFO pmax pmax
comp=Z,24nm,0.9s
BFO Black Forest 78.85 338 *e*P P 12 54 28.7 0.0
comp=Z,35nm,1.1s,baz=24,slow=5.8
BFO Black Forest 78.85 338 P P 12 54 28.8 0.0
BFO IAmb IAmb 12 54 30.2
comp=Z,24nm,0.9s
H62A Milan 78.87 31 P P 12 54 29.5 +0.6
baz=332
H62A Milan 78.87 31 P P 12 54 30.1 +1.2
H62A IAmb IAmb 12 54 30.7
comp=Z,42nm,1.0s
WATA Walderalm 78.91 335 *i* P P 12 54 30.4 +1.2
comp=Z,46nm,0.6s,SNR=19
G63A Kingsbury 78.91 30 P P 12 54 29.7 +0.6
baz=332
M56A Emporium 78.92 37 P P 12 54 29.6 +0.4
baz=328
HTL Hartland 78.92 346 *e*P P 12 54 29.9 +0.9
HTL IAmb IAmb 12 54 30.4
comp=Z,55nm,0.9s
TEKS Tekeris 78.94 329⇑*i*P P 12 54 29.3 0.0
WTTA Wattenberg 78.96 335 *i* P P 12 54 30.7 +1.2
comp=Z,79nm,0.6s,SNR=30
MYKA Terra Mystica 78.96 334 *i* P P 12 54 29.9 +0.5
comp=Z,16nm,0.6s,SNR=7.1
RETA Reutte 78.99 336 *i* P P 12 54 30.4 +0.8
comp=Z,30nm,0.8s,SNR=13
L57A Andrews Acres 79.01 36 P P 12 54 29.9 +0.2
baz=329
NATX Nacogdoches 79.03 54 P P 12 54 31.5 +1.5
baz=321
MOTA Moosalm 79.03 335 *i* P P 12 54 31.0 +1.1
comp=Z,104nm,1.1s,SNR=29
WVT Waverly 79.06 47 P P 12 54 30.6 +0.5
baz=324
I61A Oroboro, Fairl 79.07 32 P P 12 54 30.7 +0.8
baz=331
G64A Maxfield 79.07 29 P P 12 54 30.7 +0.8
baz=333
K59A Cooperstown 79.11 35 P P 12 54 30.4 +0.1
baz=330,SNR=6.5
SQTA Sankt Quirin 79.11 335 *i* P P 12 54 31.7 +1.4
comp=Z,81nm,1.1s,SNR=21
CRES Cresnjev 79.13 332⇑*i*P P 12 54 30.5 +0.2
PRED Cave del Predi 79.15 334 P P 12 54 30.7 +0.3
BINY Binghamton 79.17 36 P P 12 54 30.6 0.0
baz=329
DIVS Divibare 79.17 328⇑*i*P P 12 54 30.5 -0.1
DIVS Divibare 79.17 328 P P 12 54 30.6 0.0
DIVS IAmb IAmb 12 54 31.4
comp=Z,22nm,0.7s
ABTA Abfaltersbach 79.18 334 *i* P P 12 54 30.9 +0.3
comp=Z,25nm,0.7s,SNR=13
ZOU Zoufplan 79.22 334 P P 12 54 31.0 0.0
ZOU IAmb IAmb 12 54 38.4
comp=Z,12nm,0.7s
LJU Ljubljana 79.22 333 *e*P P 12 54 30.5 -0.3
LJU Ljubljana 79.22 333⇑*i*P P 12 54 30.9 +0.1
J60A Lant Hill Farm 79.23 33 P P 12 54 30.6 -0.3
baz=330
ECH Echery 79.25 338 P P 12 54 31.1 +0.2
ECH pmax pmax
comp=Z,36nm,1.0s
ECH Echery 79.25 338 P P 12 54 31.1 +0.2
ECH IAmb IAmb 12 54 32.3
comp=Z,36nm,1.0s
Q52A Bidwell 79.31 41 P P 12 54 31.7 +0.4
baz=326
N56A West Decatur 79.35 38 P P 12 54 31.6 0.0
baz=328
L58A Harry Jones Me 79.36 36 P P 12 54 31.7 +0.1
baz=329
DAVA Damuels 79.41 336 *i* P P 12 54 32.9 +1.0
comp=Z,52nm,0.9s,SNR=13
FETA Feichten 79.43 336 *i* P P 12 54 32.8 +0.7
comp=Z,39nm,1.0s,SNR=15
M57A Sunshine Farm, 79.46 37 P P 12 54 32.2 0.0
baz=328
M57A Sunshine Farm, 79.46 37 P P 12 54 32.8 +0.7
M57A IAmb IAmb 12 54 33.3
comp=Z,17nm,0.7s
CEY Cerknica 79.53 333⇑*i*P P 12 54 32.4 -0.1
I63A Otisfield 79.53 31 P P 12 54 33.2 +0.8
baz=332
L59A Walton 79.54 35 P P 12 54 32.9 +0.3
baz=330
L59A Walton 79.54 35 P P 12 54 33.0 +0.4
HAPS Han Pijesak,BI 79.54 329 *e*P P 12 54 31.5 -1.2
DQM DQM 79.54 288 P P 12 54 32.3 -0.6
BLY Banja Luka 79.54 330⇑*i*P P 12 54 32.6 +0.1
STAL STALIGIAL 79.56 334 P P 12 54 32.4 -0.2
BBLS Lazići 79.58 329⇑*i*P P 12 54 33.1 +0.3
CIMO Cimolais 79.60 334 P P 12 54 32.5 -0.3
CIMO IAmb IAmb 12 54 34.2
comp=Z,12nm,0.6s
ALN Alexandroupoli 79.67 323 P P 12 54 33.8 +0.6
ALN pmax pmax
comp=Z,43nm,1.1s
ALN Alexandroupoli 79.67 323 P P 12 54 33.8 +0.6
ALN IAmb IAmb 12 54 34.5
comp=Z,43nm,1.1s
M58A Price's Panora 79.69 36 P P 12 54 33.6 +0.1
baz=329
Q53A Leroy 79.72 41 P P 12 54 34.1 +0.5
baz=326
T50A Nancy 79.75 44 P P 12 54 34.5 +0.8
SSPA Standing Stone 79.75 38 P P 12 54 33.9 +0.2
baz=328
MCWV Mont Chateau 79.77 39 P P 12 54 34.7 +0.8
baz=327
K61A Williamstown 79.78 34 P P 12 54 34.3 +0.4
baz=330
N57A Milroy 79.79 37 P P 12 54 34.3 +0.4
baz=328,SNR=6.9
O56A Blue Knob Stat 79.79 38 P P 12 54 34.5 +0.5
baz=328
O56A Blue Knob Stat 79.79 38 P P 12 54 33.9 -0.1
O56A IAmb IAmb 12 54 35.2
comp=Z,25nm,1.1s
J62A Henniker 79.82 32 P P 12 54 34.9 +0.8
baz=331
PLAL Pickwick Lake 79.86 48 P P 12 54 34.8 +0.4
Q54A Coxs Mills 79.91 40 P P 12 54 34.9 +0.2
baz=327
M59A Waymart 79.95 36 P P 12 54 34.8 0.0
baz=329
L60A Shokan 80.02 35 P P 12 54 35.4 +0.2
baz=330
N58A Sunbury 80.05 37 P P 12 54 35.2 -0.1
baz=329
CTI Castel Tesino 80.06 335 P P 12 54 35.5 0.0
CTI pmax pmax
comp=Z,28nm,0.7s
CTI Castel Tesino 80.06 335 P P 12 54 35.5 0.0
CTI IAmb IAmb 12 54 36.0
comp=Z,28nm,0.7s
L61A Hillsdale 1, H 80.09 34 P P 12 54 36.0 +0.5
baz=330
K62A Royalston 80.16 33 P P 12 54 36.6 +0.7
baz=331
O57A Amberson 80.21 38 P P 12 54 36.8 +0.5
baz=328
Q55A Buckhannon 80.22 40 P P 12 54 36.7 +0.3
baz=327
JSA Saint Aubin 80.29 345 *e*P P 12 54 37.2 +0.8
JSA IAmb IAmb 12 54 37.9
comp=Z,88nm,0.9s
TUE Stuetta 80.31 336 P P 12 54 37.8 +0.9
P56A Dayton Farm, R 80.32 39 P P 12 54 37.6 +0.8
baz=328,SNR=6.8
UPM Unac-Piva 80.33 329⇑*i*P P 12 54 36.6 -0.5
N59A State Game Lan 80.35 36 P P 12 54 36.6 -0.4
baz=329
K63A Dunstable 80.39 32 P P 12 54 37.1 0.0
baz=332
M60A Port Jervis 80.44 35 P P 12 54 37.3 -0.1
baz=330
STIP Stip 80.48 326 *i* P P 12 54 37.0 -0.6
SKO Skopje 80.51 326 *i* P P 12 54 38.9 +1.1
R54A Victor 80.51 41 P P 12 54 37.7 -0.2
baz=327
CLF Chambon-Foret 80.55 341 P P 12 54 38.8 +1.0
O58A Lewisberry 80.58 37 P P 12 54 38.2 0.0
baz=329
MANT Manisa 80.66 320 P P 12 54 39.4 +0.5
P57A Homestead Farm 80.68 38 P P 12 54 38.8 +0.1
baz=328
TEOL Teolo 80.69 334 P P 12 54 39.3 +0.6
S54A Dingess, Beckl 80.69 41 P P 12 54 38.4 -0.5
baz=327
SWET Sewanee 80.70 46 P P 12 54 39.4 +0.4
SWET IAmb IAmb 12 54 39.8
comp=Z,12nm,0.7s
BRY Bratogost 80.73 329⇑*i*P P 12 54 38.5 -0.6
SALO Salr 80.77 335 P P 12 54 39.6 +0.5
M61A Granite Spring 80.78 35 P P 12 54 39.5 +0.3
baz=330
T53A Wise 80.83 43 P P 12 54 40.0 +0.3
baz=326
Q57A Strasburg 80.89 39 P P 12 54 40.1 +0.2
baz=328
PDG Podgorica 80.89 328⇑*i*P P 12 54 39.6 -0.1
PDG Podgorica 80.89 328⇑*i*P P 12 54 39.7 -0.1
PDG Podgorica 80.89 328 P P 12 54 39.7 -0.1
SENIN Lac Senin/Sane 80.94 338 P P 12 54 41.3 +1.0
SENIN IAmb IAmb 12 54 42.0
comp=Z,22nm,0.9s
P58A Pank, Wackersv 80.96 38 P P 12 54 40.8 +0.6
baz=329
PAL Palisades 80.99 35 P P 12 54 40.2 -0.1
baz=330
STON Ston 81.04 329⇑*i*P P 12 54 39.6 -0.9
TAOE Nuku Hiva Isla 81.07 114 *e*LR LR 13 19 33.4
comp=Z,156nm,32.9s
L63A North Scituate 81.09 33 P P 12 54 40.9 +0.1
baz=332
STKA Stephens Creek 81.11 191 P P 12 54 39.1 -1.7
comp=Z,0.9nm,0.5s,baz=17,slow=7.0,SNR=5.1
DRME Dracevica, Mon 81.13 328⇑*i*P P 12 54 41.2 +0.1
HCY Herceg Novi 81.14 328⇑*i*P P 12 54 40.4 -0.7
T54A Tazewell 81.19 42 P P 12 54 41.8 +0.2
baz=327
P59A Jarrettsville 81.21 37 P P 12 54 42.1 +0.6
baz=329
Q58A Fox Den Farm, 81.27 38 P P 12 54 42.3 +0.5
baz=328
L64A Middleborough 81.30 32 P P 12 54 42.2 +0.2
baz=332
M63A Gales Ferry 81.33 33 P P 12 54 42.6 +0.5
baz=331
P60A Greenville 81.35 37 P P 12 54 42.3 +0.1
baz=330
CSS Mathiatis 81.43 315 P P 12 54 43.1 +0.3
R57A Stanardsville 81.47 39 P P 12 54 44.0 +1.1
baz=328
OHR Ohrid 81.50 326 *i* P P 12 54 43.0 -0.1
ELL Elmali 81.53 318 P P 12 54 43.7 +0.3
ELL pmax pmax
comp=Z,98nm,0.8s
ELL Elmali 81.53 318 P P 12 54 43.7 +0.3
U54A Nelsons Funny 81.53 43 P P 12 54 43.6 +0.2
baz=327
PMOR Pomariorio Ree 81.55 124 *e*T T 14 22 46.6
comp=Z,9.0nm,0.2s
TIR Tirane 81.63 327⇑*i*P P 12 54 44.2 +0.5
TIR Tirane 81.63 327⇑*i*P P 12 54 44.2 +0.5
TIR Tirane 81.63 327 P P 12 54 44.1 +0.3
S57A Dark Hollow, R 81.74 40 P P 12 54 45.1 +0.7
baz=328
ZCCA Zocca 81.81 334 P P 12 54 46.0 +1.3
LRAL Lakeview Retre 81.96 48 P P 12 54 45.5 0.0
baz=324
V54A Nebo 82.09 43 P P 12 54 46.2 -0.1
baz=327
SHAO Shalim 82.16 288 *i* P P 12 54 47.4 +0.5
SNR=6.7
SHAO Shalim 82.16 288 P P 12 54 47.2 +0.3
MSSA Maissana 82.25 335 P P 12 54 47.2 +0.1
T57A Hurt 82.25 41 P P 12 54 47.1 0.0
baz=328
V55A Taylorsville 82.36 42 P P 12 54 47.6 -0.1
baz=327
S59A Mechanicsville 82.44 39 P P 12 54 48.2 +0.2
baz=329
OSSC Osservatorio P 82.49 334 P P 12 54 48.6 +0.4
NRCA Norcia 82.56 332 P P 12 54 48.6 0.0
W54A Cherokee Point 82.56 44 P P 12 54 50.1 +1.4
baz=326
SSB Saint Sauveur 82.63 339 P P 12 54 49.9 +1.0
SSB pmax pmax
comp=Z,69nm,0.9s
SSB Saint Sauveur 82.63 339 P P 12 54 49.9 +1.0
SGRT San Giovanni R 82.69 330 P P 12 54 48.7 -0.7
PPT Papeete 82.76 127 LR LR 13 26 37.4
comp=Z,26nm,18.4s,baz=322,slow=32
PPT2 Papeete2 82.78 127 *e*LR LR 13 20 12.7
comp=Z,131nm,33.2s
PPT2 Papeete2 82.78 127 *e*T T 14 24 21.0
comp=Z,3.3nm,0.3s
DMTO DMTO 82.82 289 P P 12 54 50.0 -0.3
AQU L'Aquila 82.90 332 P P 12 54 51.3 +0.9
AQU pmax pmax
comp=Z,47nm,0.8s
AQU L'Aquila 82.90 332⇑*i*P P 12 54 52.4 +2.0
AQU L'Aquila 82.90 332 P P 12 54 51.3 +0.9
INTR Introdacqua 83.05 331 P P 12 54 51.0 -0.3
U58A Oxford 83.07 40 P P 12 54 51.5 +0.3
baz=328
LATE Laterza 83.15 333 P P 12 54 52.0 +0.3
LATE IAmb IAmb 12 54 54.5
comp=Z,32nm,1.2s
SCTE Santa Cesarea 83.25 327 P P 12 54 52.2 0.0
X55A Gracelyn & Ava 83.32 44 P P 12 54 52.9 +0.3
baz=327
MATE Matera 83.36 329⇓*i*P P 12 54 52.5 -0.2
WHFO Wadi Hawf 83.40 290 P P 12 54 53.1 -0.2
SNR=14
BRAL Brewton 83.44 49 P P 12 54 53.8 +0.6
RBK Rabkut 83.44 289 P P 12 54 53.1 -0.4
SNR=5.2
PAOL Paolisi 83.73 330 P P 12 54 54.6 -0.1
PAOL IAmb IAmb 12 54 55.2
comp=Z,24nm,1.0s
V59A Middlesex 83.73 40 P P 12 54 55.0 +0.3
baz=328
KARP Karpathos 83.74 319 P P 12 54 53.8 -0.9
W58A Raeford 83.93 42 P P 12 54 56.0 +0.3
baz=328
RAYN Ar Rayn 84.11 299 *i* P P 12 54 57.3 +0.4
SNR=31
RAYN Ar Rayn 84.11 299 P P 12 54 57.3 +0.4
RAYN pmax pmax
comp=Z,64nm,1.2s
RAYN Ar Rayn 84.11 299 P P 12 54 57.3 +0.4
ABTO Aybut 84.12 290 P P 12 54 56.9 -0.1
SNR=6.3
ITM Ithomi 84.50 324 P P 12 54 57.9 -0.6
IDI Anoyia 84.92 321⇑*i*P P 12 54 59.5 -1.3
IDI Anoyia 84.92 321 P P 12 54 59.9 -0.9
VSL Villasalto 86.74 334 P P 12 55 10.5 +0.9
CORL Corleone 86.98 330 P P 12 55 13.2 +2.4
CLTB Caltabellotta 87.30 330 P P 12 55 13.3 +0.8
CLTB IAmb IAmb 12 55 39.4
comp=Z,23nm,1.1s
SOCY Socotra 87.58 286 P P 12 55 12.6 -1.5
SOCY Socotra 87.58 286 P P 12 55 12.5 -1.6
TBI Tubuai 87.62 130 *e*LR LR 13 22 34.6
comp=Z,160nm,32.5s
PBRG Braganca 88.23 346 *e*P P 12 55 16.6 -0.2
PVRL Vila Real 88.90 347 *e*P P 12 55 19.7 -0.2
MVO Moncorvo 88.90 346 *e*P P 12 55 19.9 -0.1
PVIS Viseu 89.47 347 *e*P P 12 55 22.9 +0.3
MTE Manteigas 89.73 346 *e*P P 12 55 24.1 +0.2
ESBB Sonseca Array 89.81 343 P P 12 55 24.0 -0.3
ESBB IAmb IAmb 12 55 25.7
comp=Z,8.1nm,0.8s
ESDC Sonseca Array 89.81 343 P P 12 55 23.4 -0.9
comp=Z,6.6nm,0.7s,baz=5.3,slow=4.0,SNR=36
ESDC Sonseca Array 89.81 343 P P 12 55 23.6 -0.7
PAB San Pablo 90.01 344 P P 12 55 24.9 -0.3
PAB pmax pmax
comp=Z,9.0nm,0.8s
PAB San Pablo 90.01 344 P P 12 55 24.9 -0.3
PAB IAmb IAmb 12 55 26.5
comp=Z,8.9nm,0.8s
KEST Kesra 90.22 332 P P 12 55 26.6 +0.4
comp=Z,36nm,0.6s,baz=228,slow=0.4,SNR=44
KEST Kesra 90.22 332 P P 12 55 26.8 +0.5
PCBR Castelo Branco 90.27 346 *e*P P 12 55 24.6 -1.7
MTO3 Montecristo 95.70 61 P P 12 55 54.7 +2.8
DBIC Dimbokro 121.80 335 PKP PKPdf 13 01 19.4 -0.1
comp=Z,7.5nm,0.8s,baz=31,slow=2.9,SNR=6.7
VNDA Vanda 126.14 178 PKP PKPdf 13 01 25.7 -0.1
comp=Z,0.9nm,0.7s,baz=316,slow=4.0,SNR=6.6
H03N2 Juan Fernandez 137.97 89 T T 15 35 10.6
baz=310,slow=77,SNR=35
H03N1 Juan Fernandez 137.98 89 T T 15 35 12.5
baz=310,slow=77,SNR=42
H03N3 Juan Fernandez 137.99 89 T T 15 35 15.5
baz=310,slow=77,SNR=570
ARAG Araguaiana, MT 140.70 42 *e*P **PKPdf 13 01 53.3 -1.6**
PP1B Ponte de Pedra 140.92 47 *e*P **PKPdf 13 01 55.2 0.0**
SYO Syowa Base 143.06 213⇓*i*X PKPab 13 01 52.0 -1.1
SYO Syowa Base 143.06 213⇓*e*pPKPdf pPKPdf 13 02 30.0 +3.6
CPUP Villa Florida 146.77 59 PKPbc **PKPdf 13 02 06.8 +1.6**
comp=Z,9.7nm,0.9s,baz=316,slow=2.6,SNR=21
CPUP Villa Florida 146.77 59 PKPdf **PKPbc 13 02 07.3 +0.2**
PLCA Paso Flores 147.58 93 PKPbc **PKPdf 13 02 07.5 +1.2**
comp=Z,4.9nm,0.8s,baz=278,slow=4.2,SNR=13
PLCA Paso Flores 147.58 93 PKPbc 13 02 09.1 0.0
RIB01 Linhares ES 148.29 27 *e*P **PKPdf 13 02 06.0 -2.0**
SNAA Sanae 154.74 197 P PKPbc 13 02 23.4 -1.5

IDC 26 12:47:39.6±2.2, 2°30N×127°21E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/33, mbtmp3.3/4, Error ellipse: s-maj=120.7km s-min=27.0km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	20.33	184	P	P	12 52 18.2	+0.7
	1.0nm,0.7s,baz=328,slow=9.5,SNR=3.1						
WRA	Warramunga Arr	23.19	163	P	P	12 52 47.3	-0.9
	0.2nm,0.4s,baz=341,slow=11,SNR=11						
ASAR	Alice Springs	26.62	166	P	P	12 53 20.8	+0.7
	0.2nm,0.5s,baz=348,slow=13,SNR=5.1						
MKAR	Makanchi Array	59.00	326	P	P	12 57 40.9	-0.3
	0.3nm,0.5s,baz=120,slow=6.6,SNR=2.3						

*NEIC **26** 12:57:29.0±1.9, 16°12S±0°04×172°7W±0°1, h10km±1km, mb4.6/18, Error ellipse: s-maj=21.6km s-min=7.4km az=85.0*

*IDC **26** 12:57:29.6±0.9, 16°27S×172°98W, h0km, mb4.0/9, mb1 4.3/9, mb1mx4.0/39, mbtmp4.0/9, MS3.2/4, Ms1 3.2/4, ms1mx2.9/36, Error ellipse: s-maj=46.1km s-min=17.7km az=141.0*

ISC 26 12:57:30.8±0.6, 16°4S±0°1×172°78W±0°08, h10km, n56, σ1§29/36, mb4.3/18, MS3.2/6, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.67	21		Pn	12 58 08.3	-5.6
AFI				Sn	Sn	12 58 34.0	-12
NIUE	Niue	3.79	135		Pn	12 58 30.3	+1.0
NIUE				Sn	Sn	12 59 11.1	-2.9
RAR	Rarotonga	13.20	113	LR	LR	13 04 54.1	
	comp=Z,69nm,18.9s,baz=272,slow=33						
RAR	Rarotonga	13.20	113	Pn	Pn	13 00 37.9	-0.5
DZM	Mont Dzumac	20.40	251	LR	LR	13 08 24.1	
	comp=Z,84nm,19.1s,baz=94,slow=32						
DZM	Mont Dzumac	20.40	251	*e*P	Pn	13 02 14.6	+4.3
	62nm,1.2s						
DZM				*e*LQ	LQ	13 06 32.6	
	760nm,27.9s						
DZM				*e*LR	LR	13 07 15.9	
	comp=Z,98nm,23.2s						
PAE	Paea	22.21	97	*e*T	T	13 24 43.4	
	2.5nm,0.3s						
PPT2	Papeete2	22.21	96	*e*LR	LR	13 07 45.3	
	comp=Z,118nm,27.5s						
PPT2	Papeete2	22.21	96	*e*T	T	13 24 45.2	
	3.0nm,0.3s						
PPT	Papeete	22.21	96	LR	LR	13 09 40.3	
	comp=Z,24nm,19.4s,baz=288,slow=33						
TVO	Taravao	22.52	97	*e*T	T	13 25 06.9	
	1.4nm,0.3s						
TBI	Tubuai	22.97	111	*e*LR	LR	13 08 15.5	
	comp=Z,190nm,28.5s						
TBI	Tubuai	22.97	111	*e*T	T	13 25 52.6	
	6.9nm,0.3s						
URZ	Urewera	23.51	200	P	P	13 02 42.5	+1.6
	7.7nm,0.9s,baz=261,slow=2.7,SNR=9.0						
PMOR	Pomariorio Ree	23.99	90	*e*T	T	13 26 54.9	
	2.9nm,0.3s						
HNR	Honiara	27.46	281	LR	LR	13 12 18.7	
	comp=Z,161nm,21.2s,baz=162,slow=33						
TAOE	Nuku Hiva Isla	32.67	81	*e*LR	LR	13 12 28.0	
	comp=Z,74nm,28.9s						
TAOE	Nuku Hiva Isla	32.67	81	*e*T	T	13 37 38.3	
	25nm,0.2s						
CTA	Charters Tower	39.01	258	P	P	13 04 58.1	+0.2
	5.2nm,1.1s,baz=262,slow=13,SNR=1.6						
H11S2	WAKE ISLAND Hy	40.14	329	T	T	13 47 08.6	
	baz=149,slow=75,SNR=3.2						
H11S3	WAKE ISLAND Hy	40.15	329	T	T	13 47 16.8	
	baz=149,slow=75,SNR=1.4						
H11S1	WAKE ISLAND Hy	40.16	329	T	T	13 47 09.1	
	baz=149,slow=75,SNR=3.3						
H11N3	WAKE ISLAND Hy	41.09	330	T	T	13 47 59.1	
	baz=150,slow=76,SNR=4.8						
H11N1	WAKE ISLAND Hy	41.09	330	T	T	13 47 59.4	
	baz=150,slow=76,SNR=5.7						
H11N2	WAKE ISLAND Hy	41.10	330	T	T	13 48 00.5	
	baz=150,slow=76,SNR=5.2						
STKA	Stephens Creek	44.06	241	P	P	13 05 37.4	-1.8
	3.1nm,0.8s,baz=48,slow=6.2,SNR=4.2						
STKA	Stephens Creek	44.06	241	P	P	13 05 38.2	-1.0
WR0	Warramunga Arr	50.02	258	P	P	13 06 23.6	-2.3
WR0				IAmb	IAmb	13 06 38.4	
	comp=Z,4.8nm,1.2s						
WB0	Warramunga Arr	50.17	258	P	P	13 06 25.5	-1.6
WC3	Warramunga Arr	50.17	258	P	P	13 06 25.9	-1.2
WC3				IAmb	IAmb	13 06 44.3	
	comp=Z,5.3nm,1.2s						
WB2	Warramunga Arr	50.19	258	P	P	13 06 26.1	-1.2
WB2				IAmb	IAmb	13 06 26.9	
	comp=Z,8.4nm,1.4s						
WRAB	Tennant Creek	50.20	258	P	P	13 06 27.0	-0.2
WRA	Warramunga Arr	50.21	258	P	P	13 06 25.6	-1.8
	comp=Z,0.4nm,0.3s,baz=93,slow=6.7,SNR=21						
WRA	Warramunga Arr	50.21	258	P	P	13 06 25.7	-1.6
ASAR	Alice Springs	50.38	253	P	P	13 06 27.8	-0.9
	comp=Z,3.3nm,0.5s,baz=89,slow=8.0,SNR=65						
ASAR	Alice Springs	50.38	253	P	P	13 06 28.7	0.0

FORT	**Forrest**	**55.50**	**244**	P		**P**	**13 07 05.0**	**-1.3**
KNRA	**Kununurra**	**56.02**	**262**	P		**P**	**13 07 10.4**	**+0.2**
KNRA				IAmb		IAmb	13 07 22.1	
	comp=Z,9.5nm,1.1s							
FITZ	**Fitzroy Crossi**	**58.59**	**259**	P		**P**	**13 07 29.5**	**+1.1**
FITZ				IAmb		IAmb	13 07 54.0	
	comp=Z,11nm,1.5s							
PSAA1	**Pilbara Seismi**	**63.50**	**254**	P		**P**	**13 08 01.2**	**-0.5**
QSPA	**South Pole Qui**	**73.64**	**180**	P		**P**	**13 09 07.7**	**+3.3**
QSPA				IAmb		IAmb	13 09 21.6	
	comp=Z,4.5nm,0.9s							
NVAR	**Mina Array Bea**	**74.68**	**42**	P		**P**	**13 09 11.7**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=231,slow=10.0,SNR=5.8							
NVAR	**Mina Array Bea**	**74.68**	**42**	P		**P**	**13 09 12.1**	**+1.1**
MSU	**Marysvale**	**78.73**	**44**	P		**P**	**13 09 33.1**	**-0.8**
TTA	**Tatalina**	**80.17**	**8**	P		**P**	**13 09 41.7**	**+0.7**
SCM	**Sheep Creek Mo**	**80.56**	**12**	P		**P**	**13 09 43.0**	**-0.1**
SCM				IAmb		IAmb	13 10 06.1	
	comp=Z,7.6nm,1.1s							
TXAR	**Lajitas Array**	**80.68**	**56**	P		**P**	**13 09 44.7**	**+0.2**
	comp=Z,0.9nm,1.1s,baz=160,slow=4.0,SNR=3.8							
PDAR	**Pinedale Array**	**82.62**	**42**	P		**P**	**13 09 55.3**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=222,slow=2.0,SNR=7.2							
CCB	**Clear Creek Bu**	**83.04**	**11**	P		**P**	**13 09 55.9**	**-0.1**
CCB				IAmb		IAmb	13 10 00.4	
	comp=Z,3.5nm,0.9s							
TCOL	**CIGO, UAF Yank**	**83.24**	**10**	P		**P**	**13 09 56.9**	**-0.2**
COLA	**College**	**83.24**	**10**	P		**P**	**13 09 56.7**	**-0.3**
ILAR	**Eielson Array**	**83.32**	**11**	P		**P**	**13 09 56.9**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=226,slow=5.5,SNR=19							
IMAR	**Indian Mountai**	**83.39**	**8**	P		**P**	**13 09 56.9**	**-0.9**
POKR	**Poker Plat Res**	**83.54**	**11**	P		**P**	**13 09 57.3**	**-1.3**
POKR				IAmb		IAmb	13 09 59.4	
	comp=Z,6.4nm,1.0s							
GERES	**GERESS Array B**	**147.22**	**352**	PKPbc		**PKPbc**	**13 17 14.9**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=48,slow=1.5,SNR=3.5							
BRTR	**Keskin Array B**	**147.32**	**321**	PKPbc		**PKPab**	**13 17 15.9**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=70,slow=1.7,SNR=1.7							

IDC ***26*** *13:05:25.2±1.8,2.97N×96.08E,h0km,mb3.8/6,mb1 3.8/7, mb1mx3.5/55,mbtmp3.7/7,ML2.7/1, Error ellipse: s-maj=55.4km s-min=18.9km az=48.0*

NEIC ***26*** *13:05:28.8±0.7,2.96N±0.07×96.02E±0.10,h27km±5km, mb4.2/12, Error ellipse: s-maj=15.1km s-min=8.8km az=65.0*

DJA ***26*** *13:05:31.7±0.4,3.1N±2.9×9.6E±1,h10km, M3.4/7, MLv3.4/7*

ISC 26 13:05:31.8±0.8,3.11N±0.04×96.27E±0.07,h35km,n37,
σ1§86/34,mb4.1/12,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.70**	**175**	P	**Pn**	**13 05 46.0**	**+0.8**
SNSI				S	**Sn**	**13 05 56.2**	**+1.4**
TPTI		**0.92**	**81**	P	**Pn**	**13 05 46.6**	**-1.6**
TPTI				S	**Sn**	**13 05 55.6**	**-4.7**
MLSI	**Meulaboh, Aceh**	**1.16**	**7**	P	**Pn**	**13 05 52.2**	**+0.7**
MLSI				S	**Sn**	**13 06 08.3**	**+2.1**
KCSI	**Kotacane, Aceh**	**1.55**	**75**	P	**Pn**	**13 05 57.5**	**+0.5**
LHMI	**Lhok Sumawe**	**2.21**	**18**	Pn	**Pn**	**13 06 08.1**	**+2.0**
GSI	**Gunungsitoli**	**2.22**	**144**	P	**Pn**	**13 06 07.4**	**+1.3**
GSI	**Gunungsitoli**	**2.22**	**144**	Pn	**Pn**	**13 06 05.1**	**-1.0**
PSI	**Prapat**	**2.67**	**97**	Pn	**Pn**	**13 06 12.9**	**+0.5**
	1.2nm,0.3s,baz=180,slow=15,SNR=3.4						
PSI				Sn	**Sn**	**13 06 48.4**	**+4.8**
	2.2nm,0.3s,baz=181,slow=4.1,SNR=3.8						
RPSI	**Rantau Prapat**	**2.68**	**99**		**Sn**	**13 06 48.4**	**+4.6**
RPSI	**Rantau Prapat**	**2.68**	**99**	Pn	**Pn**	**13 06 13.6**	**+1.1**
KULM	**Kulim**	**4.88**	**63**	Pn	**Pn**	**13 06 43.8**	**+1.1**
IPM	**Ipoh**	**4.94**	**74**	Pn	**Pn**	**13 06 43.4**	**-0.1**
MYLDM	**Lahad Datu**	**22.27**	**84**	P	**P**	**13 10 27.3**	**+1.2**
MYLDM				IAmb	IAmb	13 10 35.5	
	comp=Z,8.1nm,1.0s						
H08S2	**Diego Garcia H**	**26.02**	**246**	T	T	13 37 18.8	
	baz=68,slow=74						
H08S3	**Diego Garcia H**	**26.02**	**246**	T	T	13 37 20.7	
	baz=68,slow=74						
H08S1	**Diego Garcia H**	**26.04**	**246**	T	T	13 37 40.0	
	baz=68						
FITZ	**Fitzroy Crossi**	**35.80**	**127**	P	**P**	**13 12 26.4**	**-1.6**
H01W3	**Cape Leeuwin H**	**41.35**	**158**	T	T	13 56 34.9	
	baz=333,slow=76,SNR=3.4						
H01W2	**Cape Leeuwin H**	**41.36**	**158**	T	T	13 56 35.8	
	baz=333,slow=76,SNR=4.4						
H01W1	**Cape Leeuwin H**	**41.37**	**158**	T	T	13 56 35.9	
	baz=333,slow=76,SNR=4.5						
ARSB	**Arslanbob**	**43.43**	**334**	P	**P**	**13 13 29.6**	**-1.9**
ARSB				IAmb	IAmb	13 13 49.2	
	comp=Z,5.6nm,1.2s						
WB0	**Warramunga Arr**	**43.80**	**123**	P	**P**	**13 13 33.6**	**-1.0**
WB0				IAmb	IAmb	13 13 35.5	
	comp=Z,4.7nm,1.2s						
WRA	**Warramunga Arr**	**43.84**	**123**	P	**P**	**13 13 33.8**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=301,slow=9.2,SNR=16						
WRAB	**Tennant Creek**	**43.84**	**123**	P	**P**	**13 13 34.3**	**-0.7**
WB2	**Warramunga Arr**	**43.85**	**123**	P	**P**	**13 13 34.1**	**-0.9**
WR0	**Warramunga Arr**	**44.01**	**123**	P	**P**	**13 13 35.5**	**-0.9**
WR0				IAmb	IAmb	13 13 36.3	
	comp=Z,3.1nm,0.9s						
MK31	**Makanchi Array**	**45.18**	**346**	P	**P**	**13 13 44.2**	**-1.1**
MKAR	**Makanchi Array**	**45.18**	**346**	P	**P**	**13 13 44.5**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=159,slow=8.8,SNR=27						
MKAR	**Makanchi Array**	**45.18**	**346**	P	**P**	**13 13 44.0**	**-1.3**
MAKZ	**Makanchi**	**45.27**	**346**	P	**P**	**13 13 44.7**	**-1.3**
MAKZ				IAmb	IAmb	13 14 09.4	
	comp=Z,4.4nm,1.4s						
ASAR	**Alice Springs**	**45.29**	**128**	P	**P**	**13 13 45.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=304,slow=8.6,SNR=1.8						
SONM	**Songino Array**	**45.40**	**10**	P	**P**	**13 13 46.6**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=199,slow=9.2,SNR=4.0						
KURBB	**Kurchatov Arra**	**49.66**	**345**	P	**P**	**13 14 19.4**	**-0.6**
	comp=Z,1.7nm,1.2s,baz=164,slow=7.0,SNR=6.3						
KURK	**Kurchatov**	**49.72**	**345**	P	**P**	**13 14 19.4**	**-1.0**
KURK	**Kurchatov**	**49.72**	**345**	IAmb	IAmb	13 14 31.0	
	comp=Z,3.1nm,1.3s						
ZALV	**Zalesovo Beam**	**51.54**	**351**	P	**P**	**13 14 33.3**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=159,slow=6.9,SNR=2.8						
CTAO	**Charters Tower**	**54.19**	**117**	P	**P**	**13 14 54.8**	**+0.5**

IDC ***26*** *13:07:38.6±2.0,37.99N×144.30E,h0km,mb3.4/4, mb1 3.5/6,mb1mx3.3/56,mbtmp3.4/6,ML3.3/2, Error ellipse: s-maj=57.3km s-min=24.8km az=74.0*

JMA ***26*** *13:07:43.8±0.2,38.07N×143.92E,h41km,M3.4*

ISC 26 13:07:43.5±1.2,38.07N±0.07×144.11E±0.08,h35km,n19,
σ1§46/26,mb3.6/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.09**	**277**	P	**Pn**	**13 08 15.5**	**-0.5**
JIKH				*eS*	**Sn**	**13 08 38.2**	**-2.6**
OFUJ	**Ofunato**	**2.16**	**298**	P	**Pn**	**13 08 16.7**	**-0.2**
JKMT	**Kesennumamotoy**	**2.19**	**290**	P	**Pn**	**13 08 17.0**	**-0.4**
JKMT				S	**Sn**	**13 08 41.9**	**-1.4**
JIO	**Ouri**	**2.20**	**281**	S	**Sn**	**13 08 41.4**	**-2.1**
JMK	**Ichinoseki**	**2.43**	**292**	P	**Pn**	**13 08 20.6**	**0.0**
JOM	**Ohasama**	**2.61**	**303**	P	**Pn**	**13 08 24.0**	**+0.9**
JOM				S	**Sn**	**13 08 53.0**	**-0.5**
JFT	**Otama**	**3.04**	**261**	P	**Pn**	**13 08 29.1**	**+0.1**
JFT				S	**Sn**	**13 09 02.8**	**-1.4**
JANG	**Nango**	**3.05**	**320**	*eS*	**Sn**	**13 09 03.3**	**-1.2**
JYK	**Kaneyama**	**3.06**	**287**	P	**Pn**	**13 08 30.0**	**+0.7**
JYK				*eS*	**Sn**	**13 09 04.0**	**-0.7**
JKB	**Kayabe**	**4.48**	**329**	P	**Pn**	**13 08 51.2**	**+2.4**
JCH	**Churui**	**4.57**	**353**	P	**Pn**	**13 08 50.3**	**+0.2**
JCH				*eS*	**Sn**	**13 09 40.8**	**-1.1**
JRY	**Ryogami san**	**4.64**	**245**	P	**Pn**	**13 08 50.4**	**-0.7**
MJAR	**Matsushiro Arr**	**4.94**	**254**	Pn	**Pn**	**13 08 55.6**	**+0.3**
	0.1nm,0.3s,baz=66,slow=15,SNR=2.1						
NEM2	**Nemuro 2**	**5.43**	**13**	P	**Pn**	**13 09 00.3**	**-1.5**
NEM2				*eS*	**Sn**	**13 09 59.6**	**-3.4**
ASAJ	**Asahikawa**	**6.14**	**350**	Pn	**Pn**	**13 09 11.8**	**+0.2**
	1.6nm,0.3s,baz=187,slow=8.7,SNR=17						
MKAR	**Makanchi Array**	**45.39**	**302**	P	**P**	**13 16 00.3**	**+1.9**
	0.2nm,0.6s,baz=73,slow=6.5,SNR=1.6						
KURBB	**Kurchatov Arra**	**47.06**	**308**	P	**P**	**13 16 13.1**	**+1.6**
	0.4nm,0.5s,baz=83,slow=8.2,SNR=3.3						
WRA	**Warramunga Arr**	**58.43**	**191**	P	**P**	**13 17 36.3**	**+0.6**
	0.7nm,0.7s,baz=11,slow=7.1,SNR=8.6						
ASAR	**Alice Springs**	**62.16**	**191**	P	**P**	**13 18 00.3**	**-0.9**
	0.2nm,0.5s,baz=15,slow=7.7,SNR=1.5						

BJI ***26*** *13:08:29.5±0.0,5.01N×60.89E,h8km,mB5.3/37, mb4.8/44,Ms5.0/44,Ms7 4.8/43*

MOS ***26*** *13:08:35.3±1.1,5.80N±61.28E,h9km,mb5.3/61, MS4.3/10,Error ellipse: s-maj=6.8km s-min=4.2km az=85.8*

IDC ***26*** *13:08:36.1±0.4,5.86N×61.33E,h0km,mb4.4/40, mb1 4.5/43,mb1mx4.4/57,mbtmp4.4/43,ML4.0/3,MS4.4/28, Ms1 4.4/28,ms1mx4.3/38,Error ellipse: s-maj=11.1km s-min=9.9km az=158.0*

NEIC ***26*** *13:08:36.9±1.6,5.80N±0.08×61.37E±0.08,h10km±1km, mb5.2/120,Error ellipse: s-maj=15.5km s-min=10.4km az=228.0*

GCMT ***26*** *13:08:38.8±0.2,5.78N±0.01×61.17E±0.01,h12km, MW5.2/127,Moment Tensor Solution. s69,c92; s127,c221; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=6.46±.09; Mθθ5.10±.09; Mϕϕ1.36±.10; Mrθ3.66±.28; Mθϕ-2.25±.08; Mrϕ0.13±.30; Best double couple: M=7.27900×1016 NP1:ϕs126.00000°,δ32.00000°, λ-70.00000°. NP2:ϕs283.00000°,δ60.00000°, λ-102.00000°. Principal axes: T 6.9720, Plg14.0000°, Azm22.0000°; N 0.6150, Plg10.0000°, Azm289.0000°; P -7.5870, Plg72.0000°, Azm163.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 13:08:40.5±0.8,5.80N±0.04×61.22E±0.04,h29km±5km,
n525,σ2§07/585,mb5.1/198,MS4.5/53,21C-8D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**9.55**	**312**	P	Pn	13 11 02.6	+6.2
SOCY	**Socotra**	**9.55**	**312**	Pn	Pn	13 11 00.9	+4.5
SHAO	**Shalim**	**13.32**	**336**	P	**Pn**	**13 11 50.2**	**+2.3**
SHAO	**Shalim**	**13.32**	**336**	P	**Pn**	**13 11 50.5**	**+2.7**
SHAO				P	**Pn**	**13 11 50.5**	**+2.7**
SHAO				S	**S**	**13 14 30.6**	**-8.1**
SHAO				S	**S**	**13 14 30.6**	**-8.1**
DMTO	**DMTO**	**13.34**	**333**	P	**Pn**	**13 11 51.6**	**+3.6**
DMTO				P	**Pn**	**13 11 51.6**	**+3.6**
DMTO				P	**Pn**	**13 11 51.6**	**+3.6**
DMTO				S	**S**	**13 14 33.5**	**-5.5**
DMTO				S	**S**	**13 14 33.5**	**-5.5**
DMTO				S	**S**	**13 14 33.5**	**-5.5**
RBK	**Rabkut**	**13.51**	**330**	P	**Pn**	**13 11 54.1**	**+3.7**
	SNR=10.0						
RBK				P	**Pn**	**13 11 54.1**	**+3.7**
	SNR=10.0						
RBK				P	**Pn**	**13 11 54.1**	**+3.7**
	SNR=10.0						
RBK				S	**S**	**13 14 39.0**	**-3.5**
RBK				S	**S**	**13 14 39.0**	**-3.5**
RBK				S	**S**	**13 14 39.0**	**-3.5**
ABTO	**Aybut**	**13.86**	**327**	P	**Pn**	**13 11 58.1**	**+2.9**
	SNR=18						
ABTO				P	**Pn**	**13 11 58.1**	**+2.9**
	SNR=18						
ABTO				S	**S**	**13 14 46.2**	**-3.5**
ABTO				S	**S**	**13 14 46.2**	**-3.5**
WHFO	**Wadi Hawf**	**14.07**	**330**	P	**Pn**	**13 12 01.5**	**+3.3**
WHFO				P	**Pn**	**13 12 01.5**	**+3.3**
WHFO				S	**S**	**13 14 51.4**	**-2.8**
WHFO				S	**S**	**13 14 51.4**	**-2.8**
DQM	**DQM**	**14.50**	**346**	P	**Pn**	**13 12 05.0**	**+1.1**
	SNR=9.9						
DQM				P	**Pn**	**13 12 05.0**	**+1.1**
	SNR=9.9						
DQM				P	**Pn**	**13 12 05.0**	**+1.1**
	SNR=9.9						
MHTO	**MHTO**	**15.43**	**349**	P	**Pn**	**13 12 17.1**	**+0.8**
	SNR=106						
MHTO				P	**Pn**	**13 12 17.1**	**+0.8**
	SNR=106						
MHTO				P	**Pn**	**13 12 17.1**	**+0.8**
	SNR=106						
TRD	**Trivandrum**	**15.85**	**79**	*eP*	**Pn**	**13 12 23.2**	**+1.5**
JLN	**Jalan Bani Buh**	**16.35**	**354**	P	**Pn**	**13 12 28.7**	**+0.5**
	SNR=41						
JLN				P	**Pn**	**13 12 28.7**	**+0.5**
	SNR=41						
JMDO	**Jabal Madar**	**16.75**	**350**	P	**P**	**13 12 34.5**	**-0.7**
	SNR=53						
JMDO				P	**P**	**13 12 34.5**	**-0.7**
	SNR=53						
JMDO				P	**P**	**13 12 34.5**	**-0.7**
	SNR=53						
WBK	**Wadi Bani Khal**	**16.86**	**353**	P	**P**	**13 12 35.7**	**-0.8**
	SNR=21						
WBK				P	**P**	**13 12 35.7**	**-0.8**
	SNR=21						
BSY	**Bisya**	**17.29**	**347**	P	**P**	**13 12 41.3**	**+0.1**
	SNR=156						
BSY				P	**P**	**13 12 41.3**	**+0.1**
	SNR=156						
SMDO	**Samad**	**17.43**	**350**	P	**Pn**	**13 12 42.5**	**+0.6**
	SNR=48						
SMDO				P	**Pn**	**13 12 42.5**	**+0.6**
	SNR=48						
SMDO				P	**Pn**	**13 12 42.5**	**+0.6**
	SNR=48						
WSAR	**Wadi Sarin**	**17.52**	**352**	P	**Pn**	**13 12 42.1**	**-0.8**
	0.3nm,0.3s,baz=197,slow=14,SNR=11						
WSAR				LR	LR	13 18 00.5	
	comp=Z,2μm,21.5s,baz=194,slow=32						
POO	**Poona**	**17.66**	**43**	*eP*	**P**	**13 12 46.6**	**+1.2**
POO				IAmb	IAmb	13 12 55.2	
	comp=Z,147nm,1.6s						
BIDO	**Bidbid**	**17.87**	**351**	P	**P**	**13 12 47.8**	**+0.2**
	SNR=77						
BIDO				P	**P**	**13 12 47.8**	**+0.2**
	SNR=77						
ARQ	**Araqi**	**18.02**	**346**	P	**P**	**13 12 50.5**	**+1.2**
	SNR=23						
ARQ				P	**P**	**13 12 50.5**	**+1.2**
	SNR=23						
ARQ				P	**P**	**13 12 50.5**	**+1.2**
	SNR=23						
ARQ				S	**S**	**13 16 19.7**	**+5.1**
ARQ				S	**S**	**13 16 19.7**	**+5.1**
ARQ				S	**S**	**13 16 19.7**	**+5.1**
HOQ	**Hoqain**	**18.08**	**348**	P	**P**	**13 12 50.8**	**+0.9**
	SNR=46						
HOQ				P	**P**	**13 12 50.8**	**+0.9**
	SNR=46						
HOQ				P	**P**	**13 12 50.8**	**+0.9**
	SNR=46						
SOHO	**SOHO**	**18.78**	**347**	*i* P	**Pn**	**13 12 58.3**	**0.0**
	SNR=9.4						
SOHO	**SOHO**	**18.78**	**347**	P	**Pn**	**13 12 59.0**	**+0.8**
SOHO				P	**Pn**	**13 12 59.0**	**+0.8**
SOHO				P	**Pn**	**13 12 59.0**	**+0.8**
ALNE	**Al Ain**	**18.90**	**344**	*i* P	**P**	**13 12 59.0**	**0.0**
	SNR=37						
ATD	**Arta Tunnel**	**19.03**	**289**	P	**Pn**	**13 13 01.6**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=100,slow=10,SNR=4.7						
ATD				LR	LR	13 19 51.2	
	comp=Z,656nm,18.1s,baz=108,slow=35						
ATD	**Arta Tunnel**	**19.03**	**289**	P	**Pn**	**13 13 01.4**	**0.0**
BHUJ	**Bhuj**	**19.17**	**24**	*eP*	**Pn**	**13 13 05.6**	**+2.7**
PALK	**Pallekele**	**19.41**	**85**	P	**P**	**13 13 02.0**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=249,slow=14,SNR=3.7						
PALK				LR	LR	13 18 45.2	
	comp=Z,2μm,21.6s,baz=23,slow=32						
PALK	**Pallekele**	**19.41**	**85**	P	**P**	**13 13 01.7**	**-3.0**
PALK	**Pallekele**	**19.41**	**85**	P	**P**	**13 13 02.6**	**-2.1**
PALK				pmax	pmax		
	comp=Z,197nm,1.5s						
PALK	**Pallekele**	**19.41**	**85**		**P**	**13 13 02.6**	**-2.1**
PALK				IAmb	IAmb	13 13 16.9	
	comp=Z,197nm,1.4s						
ASHO	**Ashiyiah**	**19.42**	**346**	*i* P	**P**	**13 13 04.6**	**-0.1**
	SNR=8.2						
ASHO	**Ashiyiah**	**19.42**	**346**	P	**Pn**	**13 13 06.3**	**+0.3**
	SNR=18						
ASHO				P	**Pn**	**13 13 06.3**	**+0.3**
	SNR=18						
HATD	**Hatta, Dubai**	**19.54**	**346**	*i* P	**Pn**	**13 13 07.9**	**+0.5**
	SNR=34						
HATD	**Hatta, Dubai**	**19.54**	**346**	P	**Pn**	**13 13 08.1**	**+0.7**
	SNR=18						
HATD				P	**Pn**	**13 13 08.1**	**+0.7**
	SNR=18						
ASUD	**Al Ashush, Dub**	**19.56**	**344**	P	**Pn**	**13 13 07.8**	**+0.3**
ASUD	**Al Ashush, Dub**	**19.56**	**344**	P	**Pn**	**13 13 08.1**	**+0.5**
ASUD				P	**Pn**	**13 13 08.1**	**+0.5**
ASUD				P	**Pn**	**13 13 08.1**	**+0.5**
ASUD				S	**Sn**	**13 16 51.0**	**+4.6**
ASUD				S	**Sn**	**13 16 51.0**	**+4.6**
ASUD				S	**Sn**	**13 16 51.0**	**+4.6**
AJN	**Ajban**	**19.60**	**343**	*i* P	**Pn**	**13 13 07.9**	**-0.1**
	SNR=9.9						
AJN	**Ajban**	**19.60**	**343**	P	**Pn**	**13 13 07.9**	**-0.1**
AJN				P	**Pn**	**13 13 07.9**	**-0.1**
AJN				P	**Pn**	**13 13 07.9**	**-0.1**
AJN				S	**Sn**	**13 16 52.7**	**+5.4**
AJN				S	**Sn**	**13 16 52.7**	**+5.4**
AJN				S	**Sn**	**13 16 52.7**	**+5.4**
FAQ	**Al Faqa, Dubai**	**19.60**	**345**	*i* P	**Pn**	**13 13 07.6**	**-0.5**
	SNR=17						
FAQ	**Al Faqa, Dubai**	**19.60**	**345**	P	**Pn**	**13 13 08.7**	**+0.6**
	SNR=8.0						
FAQ				P	**Pn**	**13 13 08.7**	**+0.6**
	SNR=8.0						
FAQ				P	**Pn**	**13 13 08.7**	**+0.6**
	SNR=8.0						
FAQ				S	**Sn**	**13 16 53.8**	**+6.4**
FAQ				S	**Sn**	**13 16 53.8**	**+6.4**
FAQ				S	**Sn**	**13 16 53.8**	**+6.4**
UOSS	**Minazif**	**19.64**	**346**	*i* P	**P**	**13 13 07.9**	**+0.8**
	SNR=21						
UOSS	**Minazif**	**19.64**	**346**	P	**Pn**	**13 13 08.3**	**-0.3**
UOSS				P	**Pn**	**13 13 08.3**	**-0.3**
UOSS				P	**Pn**	**13 13 08.3**	**-0.3**
UOSS	**Minazif**	**19.64**	**346**	P	**P**	**13 13 06.8**	**-0.2**
UOSS				IAmb	IAmb	13 13 29.6	
	comp=Z,197nm,1.6s						
NAZ	**Nazwa, Dubai**	**19.81**	**345**	*i* P	**Pn**	**13 13 10.8**	**+0.2**
	SNR=15						
NAZ	**Nazwa, Dubai**	**19.81**	**345**	P	**Pn**	**13 13 11.0**	**+0.4**
	SNR=11						
NAZ				P	**Pn**	**13 13 11.0**	**+0.4**
	SNR=11						
NAZ				P	**Pn**	**13 13 11.0**	**+0.4**
	SNR=11						
NAZ				S	**Sn**	**13 16 59.7**	**+7.1**
NAZ				S	**Sn**	**13 16 59.7**	**+7.1**
NAZ				S	**Sn**	**13 16 59.7**	**+7.1**
MDH	**Madha**	**19.96**	**347**	P	**P**	**13 13 11.2**	**+0.7**
MDH	**Madha**	**19.96**	**347**	P	**P**	**13 13 10.7**	**+0.2**
MDH				P	**P**	**13 13 11.9**	**+0.2**
MDH				S	**Sn**	**13 17 01.4**	**+5.4**
MDH				S	**Sn**	**13 17 01.4**	**+5.4**
MSFE	**Esma-Masafi**	**20.05**	**347**	*i* P	**P**	**13 13 12.5**	**+1.0**
	SNR=15						
MDRS	**Chennai**	**20.10**	**68**	*eP*	Pn	13 13 15.3	+1.2
MDRS				IAmb	IAmb	13 13 23.5	
	comp=Z,148nm,1.5s						
UMQ	**Umm Al-Quwin**	**20.33**	**345**	P	Pn	13 13 16.8	+0.2
UMQ	**Umm Al-Quwin**	**20.33**	**345**	P	Pn	13 13 17.2	+0.6
UMQ				P	Pn	13 13 17.2	+0.6
HYB	**Hyderabad**	**20.51**	**54**	*i* P	**P**	**13 13 18.0**	**+1.4**
BANOM	**Banah**	**20.56**	**347**	P	**P**	**13 13 18.1**	**+1.1**
SHME	**Shamm**	**20.72**	**347**	P	**P**	**13 13 19.5**	**+0.7**
ETEID	**Ethiopian Broa**	**20.84**	**288**	*eP*	Pn	13 13 23.6	+0.9
FURI	**Furi**	**22.56**	**279**	P	**P**	**13 13 40.3**	**+1.2**
FURI				IAmb	IAmb	13 13 46.0	
	comp=Z,111nm,1.1s						
RAYN	**Ar Rayn**	**23.23**	**321**	*i* P	**P**	**13 13 43.7**	**-1.9**
	SNR=9.1						
RAYN	**Ar Rayn**	**23.23**	**321**	P	**P**	**13 13 44.6**	**-1.0**
RAYN				pmax	pmax		
	comp=Z,93nm,1.4s						
RAYN	**Ar Rayn**	**23.23**	**321**	P	**P**	**13 13 44.6**	**-1.0**
RAYN				IAmb	IAmb	13 13 54.2	
	comp=Z,93nm,1.4s						
BHPL	**Bhopal**	**23.34**	**40**	*eP*	**P**	**13 13 49.4**	**+2.7**
BHPL				IAmb	IAmb	13 13 51.7	
	comp=Z,114nm,1.4s						
KIBK	**Kibwezi**	**24.51**	**251**	P	**P**	**13 13 59.2**	**+1.4**
	SNR=17						
KMBO	**Kilima Mbogo**	**24.90**	**255**	P	**P**	**13 14 04.3**	**+2.7**
	comp=Z,9.3nm,0.8s,baz=59,slow=11,SNR=44						
KMBO				LR	LR	13 23 54.9	
	comp=Z,1μm,18.7s,baz=86,slow=37						
KMBO	**Kilima Mbogo**	**24.90**	**255**	*i* P	**P**	**13 14 01.9**	**+0.3**
	SNR=16						
KMBO	**Kilima Mbogo**	**24.90**	**255**	P	**P**	**13 14 04.4**	**+2.9**
KMBO				P	**P**	**13 14 04.4**	**+2.9**
KMBO				S	S	13 18 35.6	+12
KMBO				S	S	13 18 35.6	+12
KMBO	**Kilima Mbogo**	**24.90**	**255**	P	**P**	**13 14 02.5**	**+1.0**
KMBO				pmax	pmax		
	comp=Z,95nm,1.6s						
KMBO	**Kilima Mbogo**	**24.90**	**255**	P	**P**	**13 14 02.5**	**+1.0**
KMBO				IAmb	IAmb	13 14 29.1	
	comp=Z,95nm,1.6s						
LODK	**Lodwar**	**25.88**	**266**	P	**P**	**13 14 14.1**	**+3.8**
	SNR=32						
OPO	**Ambohidratompo**	**27.89**	**209**	P	**P**	**13 14 30.3**	**+2.0**
	comp=Z,2.4nm,0.3s,baz=11,slow=8.7,SNR=5.8						
OPO				LR	LR	13 22 37.2	
	comp=Z,2μm,21.5s,baz=188,slow=30						
ABPO	**Ambohimpanom**	**28.25**	**209**	P	**P**	**13 14 32.6**	**+1.1**
ABPO				pmax	pmax		
	comp=Z,30nm,1.5s						
ABPO	**Ambohimpanom**	**28.25**	**209**	P	**P**	**13 14 32.6**	**+1.1**
HRA	**Herat**	**28.47**	**2**	P	**P**	**13 14 33.4**	**0.0**
DDI	**Dehra Dun**	**29.09**	**31**

KSH S **S** **13 21 11.0 -7.1**
KSH pmax pmax
comp=Z,16nm,0.9s
KSH pmax pmax
comp=Z,580nm,5.3s
KSH LR LR
comp=Z,1μm,14.1s
KSH LR LR
comp=Z,950nm,10.7s
KSH LR LR
comp=Z,3μm,20.4s
KCSI Kotacane, Aceh 36.50 92 P **P** **13 15 46.1 +2.4**
comp=Z,800nmcomp=Z,20nm,1.1s
MARD Mardin 36.50 332 P **P** **13 15 44.9 +1.4**
TEZP TEZPUR 36.53 52 *e*P **P** **13 15 46.8 +3.0**
LSA Lhasa 36.90 46 P **P** **13 15 47.3 -0.2**
LSA Lhasa 36.90 46 P **P** **13 15 48.7 +1.2**
LSA Lhasa 36.90 46 P **P** **13 15 45.9 -1.6**
LSA pmax pmax
comp=Z,7.0nm,0.9s
LSA Lhasa 36.90 46 P **P** **13 15 45.9 -1.6**
ARSB Arslanbob 36.91 15 P **P** **13 15 45.9 -1.1**
ARSB pmax pmax
comp=Z,32nm,1.5s
ARSB Arslanbob 36.91 15 P **P** **13 15 45.9 -1.1**
IUG luzhnay 37.04 11 *e*P **P** **13 15 47.7 -0.3**
comp=Z,4.6nm,1.5s,baz=11
IUG luzhnay 37.04 11 *e*P **P** **13 15 47.6 -0.4**
IUG pmax pmax
comp=Z,5.0nm,1.5s
KOHI KOHIMA 37.16 54 *e*P **P** **13 15 53.0 +3.6**
GNI Garni 37.27 339 P **P** **13 15 50.3 +0.2**
GNI Garni 37.27 339 P **P** **13 15 49.7 -0.5**
GNI P **P** **13 15 49.7 -0.5**
GNI Garni 37.27 339 *i* P **P** **13 15 48.9 -1.2**
GNI pmax pmax
comp=Z,36nm,1.3s
GNI Garni 37.27 339 P **P** **13 15 49.6 -0.5**
GNI IAmb IAmb 13 16 00.6
comp=Z,116nm,1.5s
PSI Prapat 37.71 93 P **P** **13 15 53.2 -0.9**
comp=Z,2.0nm,0.6s,baz=359,slow=4.1,SNR=1.5
PSI Prapat 37.71 93 P **P** **13 15 52.3 -1.8**
PSI pmax pmax
comp=Z,28nm,1.3s
RPSI Rantau Prapat 37.72 93 P **P** **13 15 52.3 -1.8**
JORH JORHAT 37.74 53 *e*P **P** **13 15 56.6 +2.5**
MOKO MOKOCHONG 37.76 54 *e*P **P** **13 15 58.2 +3.8**
MHMT Maesarieng 37.87 68 P **P** **13 15 58.9 +3.6**
comp=Z,980nmcomp=Z,50nm,1.9s
DZA Taraz 38.01 12 *e*P **P** **13 15 56.8 +0.6**
comp=Z,4.1nm,0.6s,baz=12
DZA *i* LR LR 13 31 32.4
comp=Z,201nm,17.8s,baz=12
DZA Taraz 38.01 12 *e*P **P** **13 15 56.7 +0.6**
DZA pmax pmax
comp=Z,4.0nm,0.6s
DZA MLR MLR
comp=Z,201nm,18.0s
KK31 Karatay Array 38.05 11 P **P** **13 15 55.6 -0.9**
KK31 pmax pmax
comp=Z,47nm,1.7s
KK31 Karatay Array 38.05 11 **P** **13 15 55.6 -0.9**
KKAR Karatay Array 38.05 11 P **P** **13 15 55.6 -0.9**
KKAR pmax pmax
comp=Z,47nm,1.7s
KKAR Karatay Array 38.05 11 **P** **13 15 55.6 -0.9**
AAK Ala-Archa 38.53 16 P **P** **13 16 01.5 +0.8**
comp=Z,5.5nm,0.7s,baz=180,slow=5.3,SNR=18
AAK PcP **PcP** **13 18 14.1 +0.9**
comp=Z,2.7nm,0.9s,baz=222,slow=13,SNR=2.9
AAK LR LR 13 33 59.5
comp=Z,994nm,18.1s,baz=213,slow=40
AAK Ala-Archa 38.53 16 *i* P **P** **13 16 01.9 +1.2**
SNR=12
AAK Ala-Archa 38.53 16*c**e*P **P** **13 15 58.2 -2.5**
AAK pmax pmax
comp=Z,82nm,2.5s
MNSI Mandailing Nat 38.60 96 P **P** **13 16 03.8 +2.3**
FRU1 Bishkek 38.73 16 P **P** **13 16 02.6 +0.3**
FRU1 pmax pmax
comp=Z,24nm,0.8s
FRU1 Bishkek 38.73 16 P **P** **13 16 02.6 +0.3**
UTHA Uthaitani 38.73 72 P **P** **13 16 04.6 +2.1**
comp=Z,416nmcomp=Z,32nm,1.1s
BOOM Boomskoye usch 38.81 17 P **P** **13 16 01.8 -1.2**
BOOM pmax pmax
comp=Z,55nm,1.6s
BOOM Boomskoye usch 38.81 17 P **P** **13 16 01.8 -1.2**
CM13 Chiang Mai Arr 38.83 68 P **P** **13 16 06.5 +3.1**
comp=Z,188nmcomp=Z,13nm,1.5s
CM32 Chiang Mai Arr 38.83 67 P **P** **13 16 06.0 +2.6**
KOPT Kop Dagi 38.84 334 P **P** **13 16 03.3 -0.2**
LSZ Lusaka 38.85 237 P **P** **13 16 04.0 +0.4**
comp=Z,5.3nm,0.7s,baz=63,slow=7.9,SNR=6.8
LSZ Lusaka 38.85 237 P **P** **13 16 03.5 -0.2**
LSZ pmax pmax
comp=Z,33nm,1.4s
LSZ Lusaka 38.85 237 P **P** **13 16 03.5 -0.2**
CM15 Chiang Mai Arr 38.85 68 P **P** **13 16 07.0 +3.4**
comp=Z,202nmcomp=Z,11nm,1.6s
CM05 Chiang Mai Arr 38.86 68 P **P** **13 16 06.9 +3.3**
comp=Z,198nmcomp=Z,14nm,1.4s
KDJ Kajisay 38.87 19 P **P** **13 16 02.1 -1.5**
KDJ pmax pmax
comp=Z,42nm,1.6s
KDJ Kajisay 38.87 19 P **P** **13 16 02.1 -1.5**
CM02 Chiang Mai Arr 38.87 68 P **P** **13 16 06.0 +2.3**
comp=Z,241nmcomp=Z,20nm,1.3s
CM31 Chiang Mai Arr 38.87 68 P P 13 16 08.9 +5.2
comp=Z,8μmcomp=Z,451nm,1.4s
CM31 Chiang Mai Arr 38.87 68 P **P** **13 16 02.6 -1.1**
CM31 IAmb IAmb 13 16 13.5
comp=Z,88nm,1.5s
CMAR Chiang Mai Arr 38.87 68 P **P** **13 16 02.9 -0.8**
comp=Z,8.4nm,1.1s,baz=261,slow=9.1,SNR=25
CMAR PcP **PcP** **13 18 14.9 +0.4**
comp=Z,3.0nm,1.0s,baz=256,slow=5.4,SNR=4.4
CMAR LR LR 13 30 48.2
comp=Z,336nm,21.0s,baz=301,slow=34
CMAR Chiang Mai Arr 38.87 68 P **P** **13 16 02.1 -1.6**
CMAR Chiang Mai Arr 38.87 68 P **P** **13 16 02.1 -1.6**
CM01 Chiang Mai Arr 38.88 68 P **P** **13 16 06.0 +2.2**
comp=Z,241nmcomp=Z,19nm,1.1s
CM04 Chiang Mai Arr 38.89 68 P **P** **13 16 06.0 +2.1**
comp=Z,251nmcomp=Z,20nm,1.3s
CM09 Chiang Mai Arr 38.91 68 P **P** **13 16 07.2 +3.2**
comp=Z,247nmcomp=Z,19nm,1.3s
MAK Makhachkala 38.95 344 *e*P P 13 15 58.3 -5.7
MAK *e*S **S** **13 21 55.3 -5.4**
MAK *e*SS **SnSn** **13 24 47.8 -5.2**
MAK pmax pmax
comp=Z,522nm,1.6s
MAK MLR MLR
comp=Z,193nm,12.0s
CHTO Chiang Mai 38.96 67 P **P** **13 16 07.0 +2.5**
CHTO S **S** **13 22 09.0 +7.4**
CHTO Chiang Mai 38.96 67 P **P** **13 16 03.9 -0.5**
CHTO pmax pmax
comp=Z,100nm,1.6s
CHTO Chiang Mai 38.96 67 P **P** **13 16 03.9 -0.5**
CHTO IAmb IAmb 13 16 14.0
comp=Z,100nm,1.6s
CM36 Chiang Mai Arr 39.03 68 P **P** **13 16 06.0 +1.0**
CM35 Chiang Mai Arr 39.12 67 P **P** **13 16 07.0 +1.2**
CM34 Chiang Mai Arr 39.16 67 P **P** **13 16 08.0 +1.9**
KULM Kulim 39.25 89 P **P** **13 16 04.6 -2.3**
KULM Kulim 39.25 89 P **P** **13 16 07.0 +0.1**
SUKH Sukhothai 39.29 69 P P 13 16 16.9 +10
comp=Z,17nm,0.9s
SGDS Sogindy 39.33 15 *e*P **P** **13 16 07.3 0.0**
comp=Z,8.5nm,1.4s,baz=16
SGDS Sogindy 39.33 15 *e*P **P** **13 16 07.2 0.0**
SGDS pmax pmax
comp=Z,9.0nm,1.4s
LAMP Lampang 39.52 68 P P 13 16 19.2 +10
comp=Z,16nm,1.0s
TNSS Tian-Shan 39.61 18 *e*P **P** **13 16 10.6 +0.6**
baz=18
TNSS Tian-Shan 39.61 18 *e*P **P** **13 16 10.6 +0.6**
GROC Groznyy 39.67 342 *e*P **P** **13 16 11.7 +1.7**
GROC *e* 13 17 40.7
GROC pmax pmax
comp=Z,14nm,0.3s
AAA Alma-Ata 39.76 18 *e*P **P** **13 16 11.3 +0.4**
baz=18
AAA *i* S **S** **13 22 15.1 +2.0**
baz=18
AAA LR LR 13 33 06.7
comp=Z,266nm,12.9s,baz=18
AAA Alma-Ata 39.76 18 *e*P **P** **13 16 11.2 +0.4**
AAA MLR MLR
comp=Z,266nm,13.0s
MDOK Medeo 39.76 18 *e*P **P** **13 16 11.2 +0.3**
baz=18
MDOK *i* PP **PP** **13 17 42.3 -0.3**
MDOK *e*S **S** **13 22 15.1 +1.8**
baz=18
MDOK LR LR 13 33 05.2
comp=Z,365nm,16.8s,baz=18
MDOK Medeo 39.76 18 *e*P **P** **13 16 11.2 +0.3**
MDOK *e*S **S** **13 22 15.0 +1.8**
MDOK MLR MLR
comp=Z,365nm,17.0s
SATY Saty 40.10 20 *e*P **P** **13 16 14.1 +0.3**
comp=Z,4.8nm,1.2s,baz=20
SATY Saty 40.10 20 *e*P **P** **13 16 14.1 +0.3**
SATY pmax pmax
comp=Z,5.0nm,1.2s
UTTA Uttaradit 40.20 69 P P 13 16 24.5 +10
comp=Z,208nmcomp=Z,8.1nm,1.3s
KUU Kurty 40.21 17 *e*P **P** **13 16 14.7 +0.1**
comp=Z,7.0nm,1.3s,baz=17
KUU Kurty 40.21 17 *e*P **P** **13 16 14.6 +0.1**
KUU pmax pmax
comp=Z,7.0nm,1.3s
CHKK Chushkaly 40.36 18 *e*P **P** **13 16 15.3 -0.5**
baz=18
CHKK Chushkaly 40.36 18 *e*P **P** **13 16 15.3 -0.5**
SHLS Shalkode 40.55 21 *e*P **P** **13 16 19.1 +1.6**
comp=Z,5.9nm,1.2s,baz=21
SHLS Shalkode 40.55 21 *e*P **P** **13 16 19.0 +1.6**
SHLS pmax pmax
comp=Z,6.0nm,1.2s
KPKS Kokpek 40.55 20 *e*P **P** **13 16 17.9 +0.4**
comp=Z,9.9nm,1.3s,baz=20
KPKS Kokpek 40.55 20 *e*P **P** **13 16 17.8 +0.4**
KPKS pmax pmax
comp=Z,10.0nm,1.3s
BTLS Baital 40.66 14 *e*P **P** **13 16 18.6 +0.3**
comp=Z,5.6nm,1.5s,baz=14
BTLS Baital 40.66 14 *e*P **P** **13 16 18.5 +0.3**
BTLS pmax pmax
comp=Z,6.0nm,1.5s
SDSI Sungai Dareh 40.70 98 P **P** **13 16 20.8 +1.8**
comp=Z,38nm,1.4s
TOKA Tokat 40.93 331 P **P** **13 16 20.2 -0.4**
SRAK Srakaew 40.98 75 P P 13 16 30.0 +8.7
KBZ Khabaz 41.08 340 P **P** **13 16 22.4 +0.8**
comp=Z,4.5nm,0.7s,baz=158,slow=8.8,SNR=9.3
KBZ LR LR 13 34 38.9
comp=Z,426nm,20.4s,baz=148,slow=38
KBZ Khabaz 41.08 340*c**e*P **P** **13 16 22.9 +1.3**
KBZ pmax pmax
comp=Z,7.0nm,1.0s
KIV Kislovodsk 41.35 340 P **P** **13 16 24.5 +0.5**
KIV Kislovodsk 41.35 340 *e*P **P** **13 16 24.8 +0.8**
KIV *e* 13 18 00.7
KIV *e*S **S** **13 22 39.7 +2.8**
KIV pmax pmax
comp=Z,76nm,1.1s
KIV pmax pmax
comp=Z,45nm,4.4s
KIV MLR MLR
comp=Z,782nm,16.0s
KIV Kislovodsk 41.35 340 P **P** **13 16 24.0 0.0**
MATP Matopo 41.38 230 P **P** **13 16 24.9 +0.3**
comp=Z,17nm,1.2s,baz=60,slow=11,SNR=9.7
MATP PcP **PcP** **13 18 23.0 +0.3**
comp=Z,1.3nm,0.6s,baz=57,slow=5.6,SNR=1.5
TDK Taldyqorghan 41.84 18 *e*P **P** **13 16 28.5 +0.5**
comp=Z,24nm,1.2s,baz=18
TDK LR LR 13 34 17.6
comp=Z,449nm,16.0s,baz=18
TDK Taldyqorghan 41.84 18 *e*P **P** **13 16 28.4 +0.5**
TDK pmax pmax
comp=Z,24nm,1.2s
TDK MLR MLR
comp=Z,449nm,16.0s
BR131 Keskin Array S 41.93 328 P **P** **13 16 28.3 -0.6**
BR131 pmax pmax
comp=Z,46nm,1.5s
BR131 Keskin Array S 41.93 328 P **P** **13 16 28.3 -0.6**
BRTR Keskin Array B 41.93 328 P **P** **13 16 29.6 +0.7**
comp=Z,4.5nm,0.8s,baz=148,slow=9.1,SNR=8.7
BRTR PcP **PcP** **13 18 26.3 +2.2**
comp=Z,0.8nm,0.4s,baz=160,slow=5.5,SNR=2.3
BRTR LR LR 13 34 19.1
comp=Z,423nm,19.8s,baz=130,slow=37
BRTR Keskin Array B 41.93 328 P **P** **13 16 29.2 +0.3**
BRTR Keskin Array B 41.93 328 P **P** **13 16 29.2 +0.3**
ELL Elmali 42.05 321 P **P** **13 16 29.5 -0.4**
ELL pmax pmax
comp=Z,96nm,1.4s
ELL Elmali 42.05 321 P **P** **13 16 29.5 -0.4**
ELL IAmb IAmb 13 16 44.6
comp=Z,96nm,1.4s
SOC Sochi 42.13 337 *e*P **P** **13 16 28.6 -1.7**
SOC *e* 13 18 07.9
SOC *e*PPP PPP 13 18 35.7
SOC *e*S **S** **13 22 50.1 +1.9**
SOC *e*SS **SS** **13 25 54.1 -2.5**
SOC *e*SSS SSS 13 26 34.7
SOC pmax pmax
comp=Z,11nm,0.6s
SOC MLR MLR
comp=Z,560nm,19.0s
GOF Gofitskoye 42.20 341⇑ *e*P P 13 16 38.9 +8.0
GOF pmax pmax
comp=Z,130nm,1.8s
ILGA Ilgaz 42.85 329 P **P** **13 16 36.7 +0.2**
LHSI Lahat 43.32 102 P **P** **13 16 43.8 +3.4**
comp=Z,59nm,1.7s
ABKAR Akbulak array 43.32 359 P **P** **13 16 40.4 +0.6**
ABKAR IAmb IAmb 13 16 49.5
comp=Z,65nm,1.4s
ABKAR Akbulak array 43.32 359 P **P** **13 16 40.2 +0.3**
KMI Kunming 44.14 60⇑ *e*P **P** **13 16 45.8 -1.3**
KMI pP pP 13 16 48.8 -5.9
KMI sP sP 13 16 49.8 -8.0
KMI pmax pmax
comp=Z,12nm,0.6s
KMI LR LR
comp=Z,210nm,10.3s
KMI LR LR
comp=Z,510nm,13.9s
KMI LR LR
comp=Z,280nm,16.6s
WMQ Urumqi 44.45 27 *e*P **P** **13 16 50.5 +1.4**
WMQ sP sP 13 16 56.5 -3.1
WMQ S **S** **13 23 23.8 +1.4**
WMQ pmax pmax
comp=Z,43nm,1.3s
WMQ pmax pmax
comp=Z,410nm,4.1s
WMQ LR LR
comp=Z,710nm,18.5s
WMQ LR LR
comp=Z,1μm,19.5s
WMQ LR LR
comp=Z,2μm,25.9s
WMQ Urumqi 44.45 27 P **P** **13 16 48.7 -0.4**
WMQ pmax pmax
comp=Z,66nm,1.5s
WMQ Urumqi 44.45 27 P **P** **13 16 48.7 -0.4**
WMQ IAmb IAmb 13 17 12.1
comp=Z,66nm,1.5s
AKTO Aktyubinsk 44.57 357 LR LR 13 36 18.1
comp=Z,559nm,19.2s,baz=162,slow=37
MAKZ Makanchi 44.61 20 P **P** **13 16 48.4 -1.9**
MAKZ pmax pmax
comp=Z,45nm,1.6s
MAKZ Makanchi 44.61 20 P **P** **13 16 48.4 -1.9**
MAKZ IAmb IAmb 13 16 59.2
comp=Z,45nm,1.6s
KLSI 44.68 103 P **P** **13 16 53.6 +2.3**
comp=Z,486nmcomp=Z,17nm,2.0s
MK31 Makanchi Array 44.70 21*c**e*P **P** **13 16 50.6 -0.4**
MK31 Makanchi Array 44.70 21 P **P** **13 16 49.8 -1.2**
MKAR Makanchi Array 44.70 21 P **P** **13 16 50.6 -0.4**
comp=Z,2.1nm,0.8s,baz=211,slow=8.9,SNR=12
MKAR PcP **PcP** **13 18 33.4 +0.3**
comp=Z,1.0nm,0.8s,baz=172,slow=3.6,SNR=1.8
MKAR Makanchi Array 44.70 21 P **P** **13 16 49.6 -1.4**
MKAR Makanchi Array 44.70 21 P **P** **13 16 49.6 -1.4**
BRZS Berezniki 45.08 10 *e*P **P** **13 16 54.9 +0.9**
comp=Z,4.6nm,2.1s,baz=10
BRZS Berezniki 45.08 10 *e*P **P** **13 16 54.8 +0.9**
BRZS pmax pmax
comp=Z,5.0nm,2.1s
ZSN Zaisan 46.19 22 *e*P **P** **13 17 02.2 -0.6**
comp=Z,3.0nm,1.3s,baz=22
ZSN Zaisan 46.19 22 *e*P **P** **13 17 02.2 -0.6**
ZSN pmax pmax
comp=Z,3.0nm,1.3s
LBTB Lobatse 46.24 227 P **P** **13 17 05.1 +1.4**
comp=Z,14nm,1.1s,baz=38,slow=7.3,SNR=5.9
LBTB Lobatse 46.24 227 P **P** **13 17 04.4 +0.7**
LBTB pmax pmax
comp=Z,38nm,1.4s
LBTB Lobatse 46.24 227 P **P** **13 17 04.4 +0.7**
LBTB IAmb IAmb 13 17 07.6
comp=Z,38nm,1.4s
KURBB Kurchatov Arra 46.97 15 P **P** **13 17 08.4 -0.4**
comp=Z,2.5nm,0.9s,baz=216,slow=7.9,SNR=14
KURBB PcP **PcP** **13 18 39.4 -1.5**
comp=Z,0.3nm,0.3s,baz=264,slow=9.3,SNR=4.9
SKJI Sukabumi 46.99 105 P P 13 16 57.7 -12
KURK Kurchatov 47.08 15*c**e*P **P** **13 17 09.2 -0.4**
KURK pmax pmax
comp=Z,20nm,2.5s
KURK Kurchatov 47.08 15 P **P** **13 17 07.8 -1.8**
KURK IAmb IAmb 13 17 17.8
comp=Z,21nm,1.3s
XMIS Christmas Isla 47.11 110 P **P** **13 17 08.3 -2.2**
SEM Semipalatinsk 47.24 17 *e*P **P** **13 17 10.8 -0.4**
comp=Z,3.5nm,1.3s,baz=17
SEM Semipalatinsk 47.24 17 *e*P **P** **13 17 10.8 -0.4**
SEM pmax pmax
comp=Z,3.0nm,1.3s
ITM Ithomi 47.52 317 P **P** **13 17 12.8 -0.6**
BVAR Borovoye Array 47.68 7 P **P** **13 17 13.5 -0.8**
comp=Z,0.6nm,0.6s,baz=90,slow=8.6,SNR=5.3
BVAR PcP **PcP** **13 18 43.0 -0.5**
comp=Z,0.2nm,0.3s,baz=144,slow=5.2,SNR=1.8
BRVK Borovoye 47.70 7*c**e*P **P** **13 17 13.9 -0.6**
BRVK pmax pmax
comp=Z,20nm,2.5s
BRVK Borovoye 47.70 7 P **P** **13 17 13.3 -1.1**
BRVK IAmb IAmb 13 17 23.8
comp=Z,33nm,1.5s
GYA Guiyang 47.92 59 ⇓P P 13 17 23.5 +6.7
GYA PP **PP** **13 19 12.0 +3.1**
GYA S **S** **13 24 09.5 -3.3**
GYA sS pS 13 24 17.3 -4.6
GYA pmax pmax
comp=Z,32nm,1.6s
GYA LR LR
comp=N,330nm,21.0s
GYA LR LR
comp=E,340nm,25.7s
GYA LR LR
comp=Z,570nm,25.0s
LEM Lembang 47.97 105 P **P** **13 17 17.0 -0.4**
comp=Z,8.0nm,0.4s,baz=315,slow=2.9,SNR=1.3
TIRR Tirgusor 48.02 329 P **P** **13 17 16.5 -0.5**
TIRR pmax pmax
comp=Z,102nm,1.3s
TIRR Tirgusor 48.02 329 P **P** **13 17 16.5 -0.5**
GTA Gaotai 48.25 40 P **P** **13 17 20.5 +1.3**
GTA pP pP 13 17 25.8 -1.0
GTA sP pwP 13 17 29.5 -2.3
GTA S S 13 24 26.5 +9.3
GTA pmax pmax
comp=Z,4.0nm,2.5s
GTA pmax pmax
comp=Z,140nm,4.9s
GTA LR LR
comp=Z,990nm,20.4s
GTA LR LR
comp=Z,990nm,19.3s
GTA LR LR
comp=Z,1μm,18.5s
BOSA Boshof 48.68 223 P **P** **13 17 23.2 +0.6**
comp=Z,7.5nm,1.0s,baz=59,slow=8.0,SNR=4.6
BOSA LR LR 13 36 35.9
comp=Z,2μm,18.6s,baz=32,slow=34
BOSA Boshof 48.68 223 P **P** **13 17 23.7 +1.1**
BOSA pmax pmax
comp=Z,24nm,1.3s
BOSA Boshof 48.68 223 P **P** **13 17 23.7 +1.1**
BOSA IAmb IAmb 13 17 25.4
comp=Z,24nm,1.2s
QIZ Qiongzhong 49.11 70 P **P** **13 17 22.3 -3.6**
QIZ S **S** **13 24 27.5 -2.0**
QIZ LR LR
comp=Z,270nm,16.7s
QIZ LR LR
comp=Z,260nm,14.3s
QIZ LR LR
comp=Z,360nm,33.3s
KSM Kuching 49.16 93 P **P** **13 17 30.0 +3.6**
LZH Lanzhou 49.32 46 *e*P P 13 17 19.8 -7.7
LZH sP pP 13 17 25.5 -10
LZH *e*S **S** **13 24 32.8 +0.4**
LZH sS pS 13 24 41.0 -0.6
LZH pmax pmax
comp=Z,22nm,1.1s
LZH pmax pmax
comp=Z,140nm,4.6s
LZH LR LR
comp=N,420nm,14.4s
LZH LR LR
comp=E,650nm,14.6s
LZH LR LR
comp=Z,790nm,17.9s
KPJI Karang Pucung 49.36 105 P P 13 17 33.7 +5.9
comp=Z,28nm,1.2s
TSUM Tsumeb 49.63 239 P **P** **13 17 28.2 -1.8**
TSUM IAmb IAmb 13 17 39.7
comp=Z,42nm,1.2s
VRI Vrincioaia 49.85 329 ⇓P **P** **13 17 33.9 +2.7**
PLOR Plostina 49.88 329 ⇓P **P** **13 17 33.8 +2.3**
MLR Muntele Rosu 50.01 328 ⇑P **P** **13 17 34.4 +1.9**
MLR Muntele Rosu 50.01 328 P **P** **13 17 30.7 -1.8**
MLR pmax pmax
comp=Z,74nm,1.4s
MLR Muntele Rosu 50.01 328 P **P** **13 17 30.7 -1.8**
TESR Tescani 50.33 329 ⇑P **P** **13 17 35.7 +1.0**
VOIR 50.45 327 ⇑P **P** **13 17 36.6 +0.8**
ARU Arti 50.54 358*d* *i*P **P** **13 17 36.2 +0.1**
ARU 13 18 54.7
ARU 13 19 35.0
ARU PPP PPP 13 20 27.3
ARU S **S** **13 24 52.0 +3.6**
ARU SS **SS** **13 28 20.3 -2.4**
ARU SSS SSS 13 29 57.9
ARU pmax pmax
comp=Z,34nm,1.9s
ARU MLR MLR
comp=Z,607nm,18.0s
ARU Arti 50.54 358 P **P** **13 17 34.8 -1.4**
ARU IAmb IAmb 13 17 44.8
comp=Z,82nm,1.6s
ARR Arges 50.63 327 ⇑P **P** **13 17 37.8 +0.6**
SORM Soroca 50.63 332 ⇑P **P** **13 17 36.9 -0.1**
SVE Sverdlovsk 50.90 360 *e*P **P** **13 17 39.9 +1.1**
SVE pmax pmax
comp=Z,41nm,1.5s
SBUM Sibu 50.96 92 P **P** **13 17 38.5 -1.5**
SBUM IAmb IAmb 13 17 49.4
comp=Z,44nm,1.2s
LOT Lotru 51.15 327 ⇑P **P** **13 17 41.2 +0.1**
WOJI Wonogiri, Jawa 51.40 105 P **P** **13 17 47.8 +4.5**
comp=Z,54nm,2.1s
ENH Enshi 51.45 56 P **P** **13 17 42.2 -1.3**
ENH IAmb IAmb 13 18 10.3
comp=Z,47nm,1.4s
HERR Herculane 51.55 325 ⇓P **P** **13 17 44.6 +0.6**
ZAA0 Zalesovo Array 51.70 18 P **P** **13 17 43.9 -1.0**
ZALV Zalesovo Beam 51.70 18 P **P** **13 17 44.4 -0.5**
comp=Z,3.5nm,0.8s,baz=210,slow=7.9,SNR=14
ZALV PcP **PcP** **13 18 57.6 -0.5**
comp=Z,0.7nm,0.2s,baz=305,slow=5.2,SNR=1.5
BURAR Bucovina Array 51.80 330 P **P** **13 17 45.9 0.0**
BUR08 Bucovina Ar. S 51.82 330 P **P** **13 17 45.8 -0.3**

MDVR Moldovita 51.89 325 ⇑P **P** **13 17 46.5 -0.1**
AKASG Malin Array Be 52.12 335 P **P** **13 17 47.8 -0.2**
comp=Z,2.5nm,0.7s,baz=128,slow=6.6,SNR=14
AKASG PcP **PcP** **13 18 59.7 0.0**
comp=Z,0.3nm,0.3s,baz=100,slow=2.4,SNR=1.3
AKASG LR LR 13 41 51.4
comp=Z,269nm,19.1s,baz=130,slow=38
AKASG Malin Array Be 52.12 335 *i* P **P** **13 17 50.7 +2.6**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 52.12 335 P **P** **13 17 47.5 -0.6**
AKBB Malin Array Si 52.12 335 *i* P **P** **13 17 48.7 +0.6**
AKBB Malin Array Si 52.12 335 P **P** **13 17 47.2 -0.9**
AKBB IAmb IAmb 13 17 56.5
comp=Z,36nm,1.3s
DIVS Divibare 52.50 323 P **P** **13 17 50.8 -0.4**
DIVS IAmb IAmb 13 17 59.8
comp=Z,38nm,1.4s
DRGR 52.57 327 ⇓P **P** **13 17 54.5 +2.9**
OBN Obninsk 53.01 343⇑ *eP* **P** **13 17 55.0 +0.4**
OBN *PP **pP** **13 17 58.0 -4.3**
OBN *e* 13 18 02.0
OBN SS **SKiKP** **13 29 08.0 -3.6**
OBN *e*SSS SSS 13 30 45.2
OBN pmax pmax
comp=Z,16nm,1.5s
OBN MLR MLR
comp=Z,322nm,19.0s
MOS Moscow 53.24 344 *eP* **P** **13 17 54.9 -1.4**
MOS *e* 13 20 05.7
MOS *e* 13 25 17.1
MOS *e* 13 25 39.8
MOS pmax pmax
comp=Z,97nm,1.4s
KIRV Kirov 53.45 352 *ceP* **P** **13 17 57.1 -0.6**
LVV L'vov 53.85 331 *eP* **P** **13 18 01.2 +0.3**
CORL Corleone 53.92 313 P **P** **13 18 02.0 +0.3**
SGRT San Giovanni R 53.94 319 P **P** **13 18 01.7 -0.1**
SGRT IAmb IAmb 13 18 11.0
comp=Z,54nm,1.4s
UZH Uzhgorod 53.95 329 *eP* P 13 18 07.5 +5.9
UZH *e* 13 18 13.3
KOLS Kolonicke sedl 54.15 329 *eP* **P** **13 18 04.5 +1.4**
KOLS *e* 13 18 12.0
KOLS pmax pmax
comp=Z,67nm,1.5s
KOLS Kolonicke sedl 54.15 329 *eP* **P** **13 18 04.5 +1.4**
KOLS *e* 13 18 12.0
PAOL Paolisi 54.39 317 P **P** **13 18 05.4 +0.3**
PAOL IAmb IAmb 13 18 23.1
comp=Z,30nm,1.6s
CRVS Cervenica-Dubn 54.54 329 *eP* **P** **13 18 06.8 +0.8**
CRVS pmax pmax
comp=Z,73nm,1.4s
CRVS Cervenica-Dubn 54.54 329 *eP* **P** **13 18 06.8 +0.8**
PSZ Piszkesteto 54.77 327 P **P** **13 18 07.2 -0.6**
PSZ pmax pmax
comp=Z,37nm,1.5s
PSZ Piszkesteto 54.77 327 P **P** **13 18 07.2 -0.6**
PSZ IAmb IAmb 13 18 16.0
comp=Z,37nm,1.5s
INTR Introdacqua 55.28 318 P **P** **13 18 10.8 -0.7**
INTR IAmb IAmb 13 18 19.9
comp=Z,24nm,1.2s
WHN Wuhan 55.55 57 P P 13 18 20.3 +6.8
WHN S **S** **13 26 02.5 +5.1**
WHN ScS ScS 13 28 11.8 +11
SRBI Singaraja 55.59 104 P P 13 18 19.6 +5.5
comp=Z,874nmcomp=Z,56nm,1.6s
BTO Baotou 55.67 44 *eP* **P** **13 18 13.3 -1.1**
BTO S **S** **13 25 56.3 -2.7**
VYHS Vyhne 55.68 327 *eP* **P** **13 18 14.2 0.0**
VYHS *e* 13 18 21.4
VYHS pmax pmax
comp=Z,38nm,1.3s
VYHS Vyhne 55.68 327 *eP* **P** **13 18 14.2 0.0**
VYHS *e* 13 18 21.4
LANS Liptovska Anna 55.73 328 *eP* **P** **13 18 15.7 +1.1**
LANS *e* 13 18 22.9
LANS pmax pmax
comp=Z,17nm,1.3s
LANS Liptovska Anna 55.73 328 *eP* **P** **13 18 15.7 +1.1**
LANS *e* 13 18 22.9
KEST Kesra 56.07 310 P **P** **13 18 19.1 +1.7**
comp=Z,14nm,1.2s,baz=116,slow=5.6,SNR=3.8
KEST LR LR 13 43 17.4
comp=Z,147nm,18.1s,baz=343,slow=37
KEST Kesra 56.07 310 P **P** **13 18 16.4 -0.9**
KEST IAmb IAmb 13 18 29.7
comp=Z,24nm,1.3s
NRCA Norcia 56.17 319 P **P** **13 18 16.7 -1.2**
NRCA IAmb IAmb 13 18 22.6
comp=Z,27nm,1.4s
OJC Ojcow 56.21 329 *eP* **P** **13 18 17.6 -0.4**
OJC Ojcow 56.21 329 P **P** **13 18 16.8 -1.2**
OJC pmax pmax
comp=Z,33nm,1.4s
OJC Ojcow 56.21 329 P **P** **13 18 16.8 -1.2**
OJC IAmb IAmb 13 18 26.1
comp=Z,33nm,1.4s
TAM Tamanrasset 56.21 293 P **P** **13 18 18.5 -0.1**
TAM pmax pmax
comp=Z,35nm,1.3s
TAM Tamanrasset 56.21 293 P **P** **13 18 18.5 -0.1**
TAM IAmb IAmb 13 18 28.7
comp=Z,35nm,1.3s
MODS Modra-Piesok 56.47 326 *eP* **P** **13 18 18.7 -1.1**
MODS pmax pmax
comp=Z,39nm,1.4s
MODS Modra-Piesok 56.47 326 *eP* **P** **13 18 18.7 -1.1**
JAVC Velka Javorina 56.52 327 *eP* **P** **13 18 21.3 +1.0**
ZAK Zakamensk 56.64 31 *eP* **P** **13 18 23.1 +2.0**
ZAK pmax pmax
comp=Z,7.0nm,1.4s
SOKA Soboth 56.84 324 *eP* P 13 18 30.3 +7.7
comp=Z,23nm,1.6s
HHC Hu-ho-hao-te 56.84 44 *eP* **P** **13 18 21.5 -1.2**
HHC pP pP 13 18 26.0 -4.5
HHC S **S** **13 26 09.3 -5.2**
HHC pmax pmax
comp=Z,13nm,0.9s
HHC pmax pmax
comp=Z,220nm,5.4s
HHC LR LR
comp=Z,890nm,18.0s
HHC LR LR
comp=Z,460nm,16.5s
HHC LR LR
comp=Z,610nm,15.9s
ARSA Arzberg 56.85 324 *eP* P 13 18 30.5 +7.9
comp=Z,31nm,1.6s
SONM Songino Array 56.86 35 P **P** **13 18 22.6 -0.2**
comp=Z,1.9nm,0.8s,baz=234,slow=7.6,SNR=9.7
SONM LR LR 13 43 38.9
comp=Z,1μm,18.6s,baz=239,slow=37
SONM Songino Array 56.86 35 P **P** **13 18 21.3 -1.5**
SONM pmax pmax
comp=Z,13nm,1.2s
SONM Songino Array 56.86 35 P **P** **13 18 21.3 -1.5**
LATE Laterza 56.94 318 P **P** **13 18 23.2 -0.1**
MYLDM Lahad Datu 57.00 88 P **P** **13 18 22.2 -2.0**
MYLDM IAmb IAmb 13 18 32.5
comp=Z,39nm,1.5s
CONA Conrad Observa 57.01 325 *eP* **P** **13 18 24.2 +0.3**
comp=Z,44nm,1.4s
OBKA Obir 57.04 323 *eP* **P** **13 18 27.6 +3.6**
comp=Z,18nm,1.2s
SUW Suwalki 57.08 334 *eP* **P** **13 18 26.1 +2.1**
SUW Suwalki 57.08 334 P **P** **13 18 23.6 -0.4**
SUW pmax pmax
comp=Z,53nm,1.1s
SUW Suwalki 57.08 334 P **P** **13 18 23.6 -0.4**
MORC Moravsky Berou 57.12 328 *eP* **P** **13 18 24.6 +0.1**
MORC Moravsky Berou 57.12 328 P **P** **13 18 24.2 -0.3**
MORC pmax pmax
comp=Z,60nm,1.5s
MORC Moravsky Berou 57.12 328 P **P** **13 18 24.2 -0.3**
MORC IAmb IAmb 13 18 33.0
comp=Z,60nm,1.5s
ULN Ulaanbaatar 57.25 35 *i* P **P** **13 18 24.6 -1.0**
ULN pmax pmax
comp=Z,3.0nm,1.2s
ULN Ulaanbaatar 57.25 35 P **P** **13 18 24.3 -1.3**
KLMR Klimovskoe 57.31 348 *eP* **P** **13 18 23.5 -2.0**
KLMR pmax pmax
comp=Z,50nm,1.4s
KLMR Klimovskoe 57.31 348 *eP* **P** **13 18 23.5 -2.0**
KLMR AMP 13 18 34.2
comp=Z,50nm,1.4s
KRUC Moravsky 57.33 327 *eP* **P** **13 18 26.1 +0.2**
VRAC Vranov 57.36 327 P **P** **13 18 26.1 0.0**
comp=Z,8.1nm,0.8s,baz=132,slow=5.9,SNR=9.1
VRAC Vranov 57.36 327 *eP* **P** **13 18 26.4 +0.2**
VSL Villasalto 57.37 314 P **P** **13 18 25.1 -1.3**
PRED Cave del Predi 57.59 323 P **P** **13 18 26.8 -1.1**
MYKA Terra Mystica 57.64 323 *eP* **P** **13 18 28.6 +0.4**
comp=Z,39nm,1.6s
KRLC Kraliky 57.69 328 *eP* **P** **13 18 28.4 -0.1**
KRLC *e* 13 18 35.8
KRLC Kraliky 57.69 328 *eP* **P** **13 18 28.4 -0.1**
KRLC *ex* x 13 18 35.8
MOA Molln 57.89 324 *eP* **P** **13 18 30.2 +0.3**
comp=Z,28nm,1.0s
ZOU Zoufplan 58.01 323 P **P** **13 18 30.6 -0.4**
ZOU IAmb IAmb 13 18 40.4
comp=Z,40nm,1.7s
STAL STALIGIAL 58.02 322 P **P** **13 18 30.9 0.0**
KBA Koelnbreinsper 58.04 323 *eP* **P** **13 18 32.0 +0.8**
comp=Z,19nm,1.5s
DPC Dobruska-Polom 58.09 328 *eP* P 13 18 38.4 +7.1
DPC *e* 13 18 43.8
DPC Dobruska-Polom 58.09 328 *ep*P **pP** **13 18 38.4 -0.9**
DPC *ex* x 13 18 43.8
CIMO Cimolais 58.21 322 P **P** **13 18 31.3 -0.9**
CIMO IAmb IAmb 13 18 41.5
comp=Z,34nm,1.5s
ZCCA Zocca 58.24 320 P P **13 18 31.7 -0.7**
TEOL Teolo 58.25 321 P **P** **13 18 31.3 -1.1**
TEOL IAmb IAmb 13 18 41.2
comp=Z,48nm,1.3s
IRK Irkutsk 58.25 30 *eP* **P** **13 18 34.6 +2.2**
IRK pmax pmax
comp=Z,64nm,2.8s
OSTC Ostas 58.27 328 *eP* P 13 18 40.2 +7.7
UPC Upice 58.34 328 *eP* P 13 18 40.6 +7.6
UPC Upice 58.34 328 *ep*P pP 13 18 40.6 -0.4
CHVC Chvalec 58.37 328 *ep*P pP 13 18 39.4 -1.8
ABTA Abfaltersbach 58.38 323 *eP* P 13 18 40.9 +7.5
comp=Z,32nm,1.6s
KSP Ksiaz 58.38 328 *eP* **P** **13 18 33.8 +0.6**
CTI Castel Tesino 58.57 322 P **P** **13 18 33.4 -1.5**
CTI Castel Tesino 58.57 322 P **P** **13 18 33.4 -1.5**
CTI IAmb IAmb 13 18 43.3
comp=Z,53nm,1.7s
GEC2 GERESS Array S 58.72 325 P **P** **13 18 34.8 -1.0**
GERES GERESS Array B 58.72 325 P **P** **13 18 35.0 -0.8**
comp=Z,0.3nm,0.4s,baz=134,slow=7.6,SNR=4.7
GERES LR LR 13 44 07.6
comp=Z,170nm,21.2s,baz=112,slow=36
KHC Kasperske Hory 58.94 325 *eP* **P** **13 18 36.6 -0.6**
KHC *e* 13 18 43.3
KHC Kasperske Hory 58.94 325 *eP* **P** **13 18 36.6 -0.6**
KHC *ex* x 13 18 43.3
KHC Kasperske Hory 58.94 325 P **P** **13 18 36.4 -0.8**
KHC IAmb IAmb 13 18 44.7
comp=Z,21nm,1.2s
TOA0 Torodi Ar. Sit 59.05 282 P **P** **13 18 37.6 -1.0**
TOA0 IAmb IAmb 13 18 48.0
comp=Z,32nm,1.4s
TORD Torodi Ar. Bea 59.05 282 P **P** **13 18 39.5 +1.0**
comp=Z,2.7nm,0.9s,baz=86,slow=5.3,SNR=12
TORD PcP **PcP** **13 19 27.4 +0.1**
comp=Z,1.3nm,0.8s,baz=84,slow=2.9,SNR=1.6
SALO Salr 59.08 321 P **P** **13 18 37.1 -1.1**
WTTA Wattenberg 59.15 323 *eP* **P** **13 18 38.6 -0.3**
comp=Z,25nm,1.4s
WATA Walderalm 59.22 323 *eP* **P** **13 18 39.9 +0.6**
comp=Z,33nm,1.4s
TIA Tai'an 59.33 51 P **P** **13 18 39.0 -1.2**
TIA S S 13 26 58.8 +12
TIA pmax pmax
comp=Z,8.0nm,2.6s
TIA LR LR
comp=Z,450nm,18.6s
TIA LR LR
comp=Z,430nm,18.4s
TIA LR LR
comp=Z,670nm,16.7s
SQTA Sankt Quirin 59.39 323 *eP* P 13 18 47.1 +6.6
comp=Z,17nm,1.0s
KAPI Kappang 59.42 99 P **P** **13 18 39.9 -1.2**
comp=Z,7.4nm,0.3s,baz=280,slow=7.3,SNR=4.8
KAPI Kappang 59.42 99 P **P** **13 18 38.6 -2.5**
KAPI pmax pmax
comp=Z,37nm,1.3s
KAPI Kappang 59.42 99 P **P** **13 18 38.6 -2.5**
KAPI IAmb IAmb 13 18 48.8
comp=Z,37nm,1.2s
MOTA Moosalm 59.51 323 *eP* **P** **13 18 40.5 -0.8**
comp=Z,30nm,1.4s
FETA Feichten 59.59 322 *eP* **P** **13 18 42.8 +0.9**
comp=Z,11nm,1.2s
TOLI2 Tolitoli 59.61 92 P **P** **13 18 40.1 -2.3**
TOLI2 IAmb IAmb 13 18 50.0
comp=Z,22nm,1.2s
BRG Berggiesshubel 59.65 327 *eP* **P** **13 18 41.4 -0.7**
comp=Z,44nm,2.1s
BRG *e* 13 18 49.4
comp=Z,32nm,1.6s
BRG Berggiesshubel 59.65 327 *eP* **P** **13 18 41.4 -0.7**
BRG *e* 13 18 49.3
BRG pmax pmax
comp=Z,44nm,2.1s
BRG pmax pmax
comp=Z,32nm,1.6s
NJ2 Nanjing 59.65 56 *eP* **P** **13 18 41.5 -0.9**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
NJ2 pmax pmax
comp=Z,330nm,4.7s
NJ2 LR LR
comp=Z,420nm,15.2s
NJ2 LR LR
comp=Z,570nm,15.2s
NJ2 LR LR
comp=Z,740nm,20.8s
BNSI Bone 59.67 98 P **P** **13 18 43.6 +0.8**
comp=Z,1μmcomp=Z,72nm,1.7s
RETA Reutte 59.78 323 *eP* **P** **13 18 42.2 -0.9**
comp=Z,17nm,1.4s
BJT Baijiatuau 59.80 47 P **P** **13 18 41.3 -2.0**
BJT pmax pmax
comp=Z,26nm,1.3s
BJT Baijiatuau 59.80 47 P **P** **13 18 41.3 -2.0**
BJT IAmb IAmb 13 18 51.0
comp=Z,26nm,1.3s
BJI Beijing 59.81 47 P **P** **13 18 45.5 +2.2**
BJI S S 13 27 04.0 +11
BJI pmax pmax
comp=Z,8.0nm,0.7s
BJI LR LR
comp=Z,430nm,17.2s
BJI LR LR
comp=Z,320nm,20.1s
BJI LR LR
comp=Z,650nm,23.0s
BKSI Bulukumba 59.84 100 P P 13 18 51.2 +7.2
DAVOX Davos/Dischmat 60.00 322 P **P** **13 18 44.5 -0.3**
comp=Z,4.3nm,0.7s,baz=105,slow=5.8,SNR=5.4
TUE Stuetta 60.19 321 P **P** **13 18 44.6 -1.5**
TUE IAmb IAmb 13 18 57.4
comp=Z,21nm,1.3s
DAVA Damuels 60.22 322 *eP* **P** **13 18 47.1 +0.8**
comp=Z,19nm,1.5s
YULB Yu-li 60.29 66 P **P** **13 18 43.9 -3.1**
CLL Collm 60.38 327 *eP* **P** **13 18 47.0 0.0**
CLL *e* 13 18 54.0
comp=Z,46nm,1.5s
CLL *e* 13 19 09.0
CLL *e*PP **PP** **13 21 00.0 -0.3**
CLL *e*SSS SSS 13 33 53.0
CLL Collm 60.38 327 *eP* **P** **13 18 47.0 0.0**
CLL *e* 13 18 54.0
CLL *e*S **S** **13 26 54.0 -6.0**
CLL Collm 60.38 327 P **P** **13 18 46.7 -0.3**
CLL IAmb IAmb 13 19 13.0
comp=Z,35nm,1.4s
GRA1 Grafenberg Arr 60.55 325 P **P** **13 18 46.9 -1.4**
GRF Grafenberg Arr 60.55 325 P **P** **13 18 46.9 -1.4**
GRF pmax pmax
comp=Z,27nm,0.6s
GRF Grafenberg Arr 60.55 325 *eP* **P** **13 18 47.5 -0.8**
comp=Z,53nm,1.4s,baz=119,slow=7.8
GRF *eL* L 13 47 12.6
comp=Z,209nm,21.7s
TMCR Tamitsa 60.60 349 *eP* **P** **13 18 46.9 -1.4**
TMCR pmax pmax
comp=Z,26nm,1.2s
MOX Moxa 60.80 326 *eL* L 13 48 51.6
comp=Z,147nm,20.9s
FINES FINESS Array B 61.38 342 P **P** **13 18 52.6 -1.1**
comp=Z,3.5nm,0.9s,baz=159,slow=5.7,SNR=5.0
FINES LR LR 13 47 38.9
comp=Z,464nm,20.9s,baz=143,slow=38
FINES FINESS Array B 61.38 342 *i* P **P** **13 18 53.4 -0.3**
FINES pmax pmax
comp=Z,4.0nm,0.9s
SSE Sheshan 61.40 58 P **P** **13 18 55.0 +0.7**
SSE S **S** **13 27 08.5 -5.2**
SSE pmax pmax
comp=Z,12nm,0.7s
SSE pmax pmax
comp=Z,120nm,4.2s
SSE LR LR
comp=Z,190nm,16.0s
SSE LR LR
comp=Z,200nm,20.5s
SSE Sheshan 61.40 58 P **P** **13 18 52.7 -1.6**
SENIN Lac Senin/Sane 61.44 320 P **P** **13 18 53.8 -0.9**
BFO Black Forest 61.62 323 P **P** **13 18 54.8 -0.8**
BFO pmax pmax
comp=Z,46nm,1.3s
BFO Black Forest 61.62 323 P **P** **13 18 54.8 -0.8**
ECH Echery 62.28 322 P **P** **13 18 59.2 -0.8**
ECH pmax pmax
comp=Z,28nm,1.3s
ECH Echery 62.28 322 P **P** **13 18 59.2 -0.8**
ECH IAmb IAmb 13 19 08.6
comp=Z,28nm,1.3s
SSB Saint Sauveur 62.81 318 P **P** **13 19 03.2 -0.4**
SSB pmax pmax
comp=Z,24nm,1.4s
SSB Saint Sauveur 62.81 318 P **P** **13 19 03.2 -0.4**
SSB IAmb IAmb 13 19 12.0
comp=Z,24nm,1.4s
MORW Morawa 63.04 127 P **P** **13 19 07.6 +2.2**
baz=63,SNR=5.3
MORW Morawa 63.04 127 P **P** **13 19 04.7 -0.7**
WLF Walferdange 63.48 323 P **P** **13 19 07.1 -0.9**
WLF pmax pmax
comp=Z,33nm,1.5s
WLF Walferdange 63.48 323 P **P** **13 19 07.1 -0.9**
WLF IAmb IAmb 13 19 34.8
comp=Z,33nm,1.5s
DL2 Dalian 63.51 49 P **P** **13 19 09.0 +0.7**
DL2 S **S** **13 27 45.0 +5.0**
DL2 pmax pmax
comp=Z,150nm,4.1s
DL2 LR LR
comp=Z,730nm,18.3s
DL2 LR LR
comp=Z,510nm,16.3s
DL2 LR LR
comp=Z,810nm,19.6s
H01W3 Cape Leeuwin H 64.14 133 T T 14 28 50.5
baz=298
H01W2 Cape Leeuwin H 64.15 133 T T 14 28 47.9
baz=298
H01W1 Cape Leeuwin H 64.16 133 T T 14 28 48.8
baz=298
BATI Baumata 64.19 104 LR LR 13 45 48.6
comp=Z,133nm,20.9s,baz=276,slow=35
SOEI Soe 64.68 104 P P 13 19 28.4 +12
SOEI Soe 64.68 104 P **P** **13 19 14.0 -2.6**
HFS Hagfors 64.97 336 P **P** **13 19 16.9 -0.6**
comp=Z,4.5nm,0.6s,baz=154,slow=4.1,SNR=13
SANI Sanana 65.15 95 P **P** **13 19 19.4 -0.1**
comp=Z,563nmcomp=Z,31nm,1.5s
CLF Chambon-Foret 65.24 321 P **P** **13 19 19.9 +0.4**
KIC Kosan Boka 65.55 274 *e*PKP2 **P** **13 19 24.7 +2.6**
comp=Z,31nm,1.1s
NWAO Narrogin (SRO) 65.58 130 LR LR 13 42 42.7
comp=Z,230nm,20.4s,baz=332,slow=31
DBIC Dimbokro 65.64 275 P **P** **13 19 22.0 -0.7**
comp=Z,5.2nm,0.9s,baz=87,slow=6.6,SNR=5.4
DBIC pmax pmax
comp=Z,24nm,1.1s
DBIC Dimbokro 65.64 275 P **P** **13 19 21.4 -1.3**
DBIC IAmb IAmb 13 19 32.0
comp=Z,24nm,1.1s
NRIK Noril'sk 65.78 10 P **P** **13 19 21.1 -1.5**
comp=Z,1.3nm,0.6s,baz=222,slow=8.4,SNR=4.4
NRIK LR LR 13 50 27.9
comp=Z,795nm,20.0s,baz=200,slow=38
NRIK Noril'sk 65.78 10 *i* P **P** **13 19 21.6 -1.0**
NRIK pmax pmax
comp=Z,6.0nm,1.3s
TIC Toumodi 65.81 275 *e*PKP2 **P** **13 19 25.9 +2.1**
LIC Lamto 65.84 274 *e*PKP2 **P** **13 19 25.9 +1.9**
comp=Z,19nm,0.7s
BOD Bodaibo 66.00 28 *eP* **P** **13 19 26.6 +2.4**
BOD pmax pmax
comp=Z,14nm,1.7s
NC602 NORSAR Array S 66.19 336 P **P** **13 19 24.8 -0.5**
TNTI Ternate 66.19 92 P **P** **13 19 28.7 +2.4**
comp=Z,968nmcomp=Z,42nm,1.7s
TNTI Ternate 66.19 92 P **P** **13 19 23.9 -2.4**
NLAI Namlea 66.40 96 P **P** **13 19 27.1 -0.5**
comp=Z,1μmcomp=Z,31nm,1.2s
KONO Kongsberg 66.41 334 *i* P **P** **13 19 27.2 +0.4**
KONO pmax pmax
comp=Z,14nm,1.3s
KONO Kongsberg 66.41 334 P **P** **13 19 26.2 -0.6**
NB2 NORSAR Subarra 66.49 336 P **P** **13 19 26.6 -0.8**
comp=Z,78nm,1.7s,baz=120,slow=6.2
NB2 NORSAR Subarra 66.49 336 P **P** **13 19 26.6 -0.8**
baz=120,slow=6.2
NOA NORSAR Array B 66.49 336 P **P** **13 19 26.6 -0.8**
comp=Z,4.3nm,1.2s,baz=120,slow=6.9,SNR=5.1
NOA LR LR 13 50 26.4
comp=Z,210nm,21.0s,baz=110,slow=38
NAO01 NORSAR Array S 66.52 336 P **P** **13 19 26.6 -0.9**
NBO00 NORSAR Array S 66.67 336 P **P** **13 19 27.1 -1.3**
ESBB Sonseca Array 67.29 311 P **P** **13 19 32.5 -0.4**
ESBB IAmb IAmb 13 19 41.7
comp=Z,32nm,1.4s
ESDC Sonseca Array 67.29 311 P **P** **13 19 31.9 -1.0**
comp=Z,2.1nm,0.9s,baz=81,slow=5.5,SNR=10
ESDC LR LR 13 50 38.4
comp=Z,53nm,18.5s,baz=60,slow=38
ESDC Sonseca Array 67.29 311 P **P** **13 19 31.7 -1.2**
TJN Taejon 67.42 53 *i* P **P** **13 19 32.1 -1.6**
CN2 Changchun 67.52 45 *eP* **P** **13 19 35.8 +1.6**
CN2 *eS* **S** **13 28 31.0 +2.1**
CN2 LR LR
comp=Z,250nm,16.0s
CN2 LR LR
comp=Z,520nm,16.0s
CN2 LR LR
comp=Z,670nm,18.0s
ARD4 ARCESS Array S 67.78 347 P **P** **13 19 34.5 -0.9**
ARD4 IAmb IAmb 13 19 57.7
comp=Z,36nm,1.4s
ARD3 ARCESS Array S 67.78 347 P **P** **13 19 34.7 -0.7**
ARCES ARCESS Array B 67.79 347 P **P** **13 19 35.1 -0.3**
comp=Z,3.6nm,0.7s,baz=189,slow=5.4,SNR=6.2
FITZ Fitzroy Crossi 67.81 112 P **P** **13 19 37.1 +0.7**
baz=68,SNR=4.7
FITZ Fitzroy Crossi 67.81 112 P **P** **13 19 35.3 -1.2**
KS19 Wonju Array Si 68.01 52 P **P** **13 19 36.2 -1.2**
KSAR Wonju Array Be 68.01 52 P **P** **13 19 35.5 -1.9**
KSAR Wonju Array Be 68.01 52 P **P** **13 19 35.5 -1.9**
KSRS Korea Array 68.05 52 P **P** **13 19 36.3 -1.3**
comp=Z,4.1nm,1.0s,baz=257,slow=6.2,SNR=9.9
KSRS LR LR 13 51 51.1
comp=Z,245nm,18.9s,baz=270,slow=38
JNU Nakatsue 69.83 57 P **P** **13 19 48.8 -0.1**
comp=Z,18nm,1.1s,baz=199,slow=7.2,SNR=3.7
JNU LR LR 13 52 33.4
comp=Z,256nm,18.9s,baz=280,slow=38
MDJ Mudanjiang 70.60 45 P **P** **13 19 55.8 +2.5**
MDJ pmax pmax
comp=Z,13nm,1.0s
MDJ pmax pmax

comp=Z,98nm,3.5s
EKA Eskdalemuir Ar 70.84 327 P **P** **13 19 54.1 -0.4**
comp=Z,1.0nm,0.5s,baz=113,slow=6.4,SNR=8.4
SAUI Saumlaki 71.22 100 P **P** **13 19 55.3 -2.3**
ZEA Zeya 71.29 35 *eP* P 13 20 04.8 +7.5
ZEA pmax pmax
comp=Z,10.0nm,1.7s
ZEA MLR MLR
comp=N,200nm,16.0s
ZEA MLR MLR
comp=E,200nm,16.0s
ZEA MLR MLR
comp=Z,300nm,16.0s
WRKA Warakurna 71.98 119 P **P** **13 20 03.6 +1.5**
baz=72,SNR=9.5
USRK Ussuriysk Ar. 72.22 45 LR LR 13 53 27.2
comp=Z,688nm,18.5s,baz=275,slow=37
KLR Kul'dur 72.95 40 *ceP* **P** **13 20 06.3 -1.1**
KLR pmax pmax
comp=Z,13nm,1.3s
KDU Kakadu 73.13 105 P **P** **13 20 09.0 0.0**
baz=73,SNR=3.4
MAW Mawson 73.23 179 P **P** **13 20 08.2 -0.3**
comp=Z,4.7nm,1.0s,baz=28,slow=4.6,SNR=3.4
YAK Yakutsk 74.89 27 *eP* P 13 20 23.3 +4.9
YAK pmax pmax
comp=Z,28nm,1.3s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,21nm,1.4s
YAK Yakutsk 74.89 27 P **P** **13 20 17.1 -1.2**
YAK IAmb IAmb 13 20 26.0
comp=Z,36nm,1.1s
MJAR Matsushiro Arr 76.12 54 P **P** **13 20 25.7 -0.3**
comp=Z,2.2nm,0.9s,baz=283,slow=10,SNR=2.8
SYO Syowa Base 76.13 188‖ *eP* **P** **13 20 25.4 +0.1**
SYO Syowa Base 76.13 188‖ *ep*P pP 13 20 29.6 -3.8
WRA Warramunga Arr 76.25 112 P **P** **13 20 26.7 -0.3**
comp=Z,17nm,1.1s,baz=288,slow=5.1,SNR=40
WRA LR LR 13 49 08.4
comp=Z,73nm,21.4s,baz=260,slow=32
WRA Warramunga Arr 76.25 112 P **P** **13 20 25.8 -1.2**
WRA pmax pmax
comp=Z,5.0nm,1.1s
WRA Warramunga Arr 76.25 112 P **P** **13 20 25.8 -1.2**
WRAB Tennant Creek 76.25 112 *ceP* **P** **13 20 25.8 -1.3**
WRAB pmax pmax
comp=Z,39nm,1.3s
WRAB Tennant Creek 76.25 112 P **P** **13 20 26.4 -0.7**
WB2 Warramunga Arr 76.26 112 P **P** **13 20 25.8 -1.3**
WB0 Warramunga Arr 76.26 112 P **P** **13 20 25.9 -1.2**
WR0 Warramunga Arr 76.44 112 P **P** **13 20 27.1 -0.9**
ASAR Alice Springs 76.62 116 P **P** **13 20 28.9 -0.2**
comp=Z,12nm,1.0s,baz=284,slow=5.3,SNR=48
ASAR Alice Springs 76.62 116 P **P** **13 20 28.6 -0.5**
ASAR Alice Springs 76.62 116 P **P** **13 20 28.6 -0.5**
AS31 Alice Springs 76.62 116 P **P** **13 20 28.0 -1.1**
TIXI Tiksi 77.58 17 *ceP* **P** **13 20 32.2 -1.3**
TIXI pmax pmax
comp=Z,95nm,2.5s
TIXI Tiksi 77.58 17 P **P** **13 20 32.6 -1.0**
TIXI IAmb IAmb 13 20 46.6
comp=Z,30nm,1.4s
ASAJ Asahikawa 79.80 46 P **P** **13 20 45.6 -0.7**
ASAJ pmax pmax
comp=Z,48nm,1.5s
JAY Jayapura 79.81 94 LR LR 13 56 24.4
comp=Z,32nm,21.1s,baz=242,slow=36
JKA Kamikawa-asahi 79.81 46 P **P** **13 20 45.6 -0.7**
JKA IAmb IAmb 13 21 07.3
comp=Z,48nm,1.5s
YSS Yuzh-Sakhalins 80.02 43 *eP* **P** **13 20 50.1 +2.7**
YSS pmax pmax
comp=Z,20nm,0.9s
QIS Mount Isa 81.22 112 P **P** **13 20 55.0 +0.7**
baz=81,SNR=4.2
NVL N'lazarevskaya 83.11 195 *eP* P 13 21 11.0 +7.8
NVL *eS* **S** **13 31 26.7 +6.0**
NVL pmax pmax
comp=Z,16nm,1.1s
MA2 Magadan 84.82 31 *i* P **P** **13 21 12.4 +0.2**
MA2 pmax pmax
comp=Z,37nm,1.2s
STKA Stephens Creek 84.91 123 P **P** **13 21 12.8 -0.5**
comp=Z,4.5nm,0.9s,baz=303,slow=8.3,SNR=3.8
STKA Stephens Creek 84.91 123 P **P** **13 21 13.2 0.0**
baz=85,SNR=3.9
STKA Stephens Creek 84.91 123 P **P** **13 21 12.4 -0.8**
STKA pmax pmax
comp=Z,5.0nm,1.2s
STKA Stephens Creek 84.91 123 P **P** **13 21 12.4 -0.8**
SEY Seymchan 85.41 27 *i* P **P** **13 21 13.8 -1.3**
PMG Port Moresby 86.95 100 *i* P **P** **13 21 22.4 -1.3**
PMG pmax pmax
comp=Z,39nm,1.2s
SNAA Sanae 87.56 197 *i* P **P** **13 21 26.7 +1.2**
SNAA pmax pmax
comp=Z,4.0nm,1.8s
SNAA Sanae 87.56 197 P **P** **13 21 26.5 +1.0**
SNAA IAmb IAmb 13 21 35.3
comp=Z,25nm,1.6s
VNA2 Neumayer--Watz 88.59 198 P **P** **13 21 29.3 -1.0**
PETK Petropavlovsk- 89.29 37 LR LR 14 04 42.0
comp=Z,497nm,18.2s,baz=258,slow=38
VNA3 Neumayer Olymp 89.40 198 P **P** **13 21 36.0 +1.8**
BILL Bilibino 90.24 21‖ *eP* **P** **13 21 38.2 0.0**
BILL *i* 13 21 46.9
BILL S **S** **13 32 23.0 -7.1**
BILL *e* 13 34 03.0
BILL pmax pmax
comp=Z,8.0nm,1.2s
RMQ Roma 90.36 116 P **P** **13 21 41.8 +2.2**
baz=90,SNR=8.6
VNDA Vanda 97.92 168 LR LR 14 01 00.0
comp=Z,384nm,19.6s,baz=250,slow=32
DZM Mont Dzumac 106.25 111 *e*SS SS 13 42 18.7 +1.6
comp=Z,71nm,26.7s
DZM Mont Dzumac 106.25 111 *e*LR LR 13 57 41.6
comp=Z,189nm,29.3s
COLA College 106.30 12 pmax pmax
comp=Z,19nm,1.5s
ILAR Eielson Array 106.59 12 PKiKP **PKiKP** **13 27 01.4 -1.1**
comp=Z,0.1nm,0.4s,baz=324,slow=33,SNR=1.7
ILAR PKKPbc **PKKPbc** **13 38 24.0 -0.6**
comp=Z,0.5nm,1.1s,baz=114,slow=1.1,SNR=2.4
CHI Chicago-Loyola 124.68 332 P **Pdif** **13 24 06.2 -6.8**
CHI pmax pmax
comp=Z,44nm,1.3s
LPAZ La Paz 129.33 254 PKP **PKPdf** **13 27 48.3 +0.2**
comp=Z,0.4nm,0.3s,baz=325,slow=6.1,SNR=1.7
PDAR Pinedale Array 130.94 351 PKP **PKPdf** **13 27 49.3 -0.7**
comp=Z,0.5nm,0.6s,baz=54,slow=2.8,SNR=5.3
NVAR Mina Array Bea 136.00 359 PKP **PKPdf** **13 27 59.8 +0.2**
comp=Z,0.5nm,0.6s,baz=341,slow=1.8,SNR=4.7
TXAR Lajitas Array 142.17 338 PKhKP PKPpre 13 28 05.8
comp=Z,0.6nm,0.8s,baz=46,slow=3.6,SNR=3.8
TXAR PKP **PKPdf** **13 28 11.7 +0.7**
comp=Z,1.1nm,0.9s,baz=56,slow=2.3,SNR=4.8
TBI Tubuai 145.69 124 *e*LR LR 14 16 12.0
comp=Z,168nm,29.5s
PPT2 Papeete2 147.71 114 *e*LR LR 14 17 03.0
comp=Z,238nm,28.0s
TAOE Nuku Hiva Isla 158.59 99 *e*LR LR 14 22 04.3
comp=Z,154nm,26.5s

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*BJI **26** 13:12:04.5±0.0,27.92N×101.43E,h17km,ML3.7/15*
*IDC **26** 13:12:05.4±1.2,28.01N×101.70E,h0km,mb3.6/5,*
mb1 3.7/6,mb1mx3.5/54,mbtmp3.5/6,ML3.5/1,MS3.3/1,
Ms1 3.3/1,ms1mx2.6/37,Error ellipse: s-maj=35.4km
s-min=19.8km az=89.0
ISC 26 13:12:07.5±0.9,28.16N±0.06×101.54E±0.07,h10km,n12,
σ1s98/16,mb3.8/4,1C-1D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.21**	**160**‖	*eP*	g	**Pn**	**13 13 00.3**	**+2.1**
KMI				Sg		**Sn**	**13 13 39.0**	**+2.4**
KMI				smax		smax		
	comp=N,310nm,0.9s							
KMI				smax		smax		
	comp=E,310nm,0.8s							
CD2	**Chengdu**	**3.35**	**35**	Pg		**Pg**	**13 13 12.0**	**+0.3**
CD2				Sg		**Sg**	**13 13 57.0**	**+1.8**
CD2				smax		smax		
	comp=N,1μm,0.8s							
CD2				smax		smax		
	comp=E,1μm,0.9s							
GYA	**Guiyang**	**4.86**	**109**	⇓Pn		**Pn**	**13 13 21.0**	**+0.2**
GYA				Sn		**Sn**	**13 14 17.8**	**+0.5**
GYA				Sg		**Sg**	**13 14 44.0**	**+0.3**
GYA				smax		smax		
	comp=N,43nm,0.8s							
GYA				smax		smax		
	comp=E,51nm,1.0s							
CMAR	**Chiang Mai Arr**	**9.95**	**194**	Pn		**Pn**	**13 14 30.1**	**-0.5**
	0.1nm,0.3s,baz=4.3,slow=14,SNR=4.6							
CMAR				Pg			13 15 05.8	
	0.2nm,0.3s,baz=6.5,slow=18,SNR=24							
CMAR				Lg		Lg	13 17 19.0	
	0.2nm,0.3s,baz=68,slow=30,SNR=2.1							
WHN	**Wuhan**	**11.43**	**75**	P		**Pn**	**13 14 53.0**	**+2.3**
WHN				S		**Sn**	**13 16 54.5**	**-4.0**
WMQ	**Urumqi**	**19.19**	**328**	*eP*		**Pn**	**13 16 31.3**	**-1.0**
SONM	**Songino Array**	**20.00**	**10**	P		**P**	**13 16 40.3**	**0.0**
	0.4nm,0.6s,baz=205,slow=13,SNR=2.5							
MKAR	**Makanchi Array**	**23.96**	**326**	P		**P**	**13 17 23.2**	**+1.3**
	2.6nm,0.8s,baz=130,slow=11,SNR=7.8							
KSRS	**Korea Array**	**23.97**	**61**	P		**P**	**13 17 22.4**	**+0.4**
	0.3nm,0.4s,baz=242,slow=13,SNR=1.3							
ASAJ	**Asahikawa**	**36.37**	**53**	LR		LR	13 33 48.5	
	comp=Z,44nm,19.7s,baz=227,slow=36							
WRA	**Warramunga Arr**	**57.38**	**143**	P		**P**	**13 21 53.1**	**-3.1**
	1.3nm,0.8s,baz=331,slow=7.9,SNR=7.5							
ASAR	**Alice Springs**	**60.24**	**146**	P		**P**	**13 22 14.2**	**-1.9**
	0.4nm,0.6s,baz=322,slow=6.5,SNR=1.0							

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*REY **26** 13:14:26.2,64.66N×17.48W,h4km*
*IDC **26** 13:14:27.2±0.6,64.63N×17.59W,h0km,mb3.9/18,*
mb1 4.1/20,mb1mx4.0/52,mbtmp3.9/20,ML3.4/2,MS3.3/4,
Ms1 3.4/4,ms1mx3.0/43,Error ellipse: s-maj=19.8km
s-min=12.6km az=18.0
*NEIC **26** 13:14:28.6±1.5,64.54N±0.08×17.7W±0.2,h8km±4km,*
mb4.6/85,Error ellipse: s-maj=13.1km s-min=8.4km
az=207.0
ISC 26 13:14:28.7±0.3,64.57N±0.03×17.55W±0.02,h10km,n189,
σ1s53/172,mb4.5/54,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.14**	**319**	P		Pg	13 14 28.8	-3.1
	baz=275							
IHAM	**Hamarinn**	**0.15**	**233**	P		**Pg**	**13 14 31.1**	**-1.0**
	baz=219							
IGRF	**Grimsfjall**	**0.20**	**143**	P		**Pg**	**13 14 31.6**	**-1.5**
	baz=160							
IDYN	**Dyngjuhals**	**0.23**	**19**	P		Pg	13 14 29.3	-4.2
	baz=21							
IHUS	**Husbondi**	**0.28**	**190**	P		**Pg**	**13 14 33.3**	**-1.0**
	baz=192							
IHUS				S		**Sg**	**13 14 39.2**	**+1.0**
	baz=192							
IURH	**Urdarhals**	**0.30**	**34**	P		Pg	13 14 30.6	-4.2
	baz=42							
IVOT	**Vottur**	**0.34**	**152**	P		**Pg**	**13 14 34.1**	**-1.4**
	baz=162							
IVOT				S		**Sg**	**13 14 40.5**	**+0.5**
	baz=162							
ISKR	**Skrokkalda**	**0.36**	**269**	P		**Pg**	**13 14 33.7**	**-2.2**
	baz=256							
ISKR				S		**Sg**	**13 14 39.8**	**-0.8**
	baz=256							
IJOK	**Jokulheimar**	**0.39**	**229**	P		**Pg**	**13 14 34.9**	**-1.5**
	baz=223							
IJOK				S		**Sb**	**13 14 42.1**	**-1.6**
	baz=223							
IKVE	**Kverkfjoll**	**0.39**	**74**	P		**Pg**	**13 14 32.9**	**-3.5**
	baz=87							
IKVE				S		**Sg**	**13 14 37.9**	**-3.7**
	baz=87							
IIEY	**Innrieyrar**	**0.54**	**208**	P		**Pb**	**13 14 37.4**	**-2.9**
	baz=206							
IIEY				S		**Sb**	**13 14 46.6**	**-1.4**
	baz=206							
IKRE	**Kreppuhraun**	**0.55**	**66**	P		Pg	13 14 35.0	-4.2
	baz=75							
IKRE				S		**Sg**	**13 14 42.3**	**-4.2**
	baz=75							
IASK	**Askja**	**0.62**	**38**	P		Pg	13 14 35.7	-4.9
	baz=42							
IASK				S		Sg	13 14 43.3	-5.5
	baz=42							
IKSK	**Karasker**	**0.62**	**131**	P		**Pg**	**13 14 38.0**	**-2.7**
	baz=138							
IKAL	**Kalfafell**	**0.63**	**186**	P		**Pb**	**13 14 39.1**	**-2.6**
	baz=187							
IKAL				S		**Sb**	**13 14 49.2**	**-1.3**
	baz=187							
IMKO	**Mokollar**	**0.66**	**51**	P		Pg	13 14 36.8	-4.6
	baz=56							
IVAT	**Vatnsfell**	**0.71**	**238**	P		**Pg**	**13 14 40.3**	**-2.0**
	baz=233							
ISVA	**Svartarkot**	**0.78**	**9**	P		Pg	13 14 38.4	-5.3
	baz=8.0							
ISVA				S		Sg	13 14 48.0	-5.8
	baz=8.0							
IFAG	**Fagurholsmyri**	**0.80**	**150**	P		**Pg**	**13 14 41.5**	**-2.5**
	baz=155							
IFAG				S		**Sn**	**13 14 53.1**	**-4.7**
	baz=155							
IVSH	**V-Sauoahnukur**	**0.82**	**72**	P		Pg	13 14 39.6	-4.8
	baz=78							
IVSH				S		**Sg**	**13 14 50.1**	**-5.0**
	baz=78							
IHVE	**Hveravellir**	**0.92**	**290**	P		Pg	13 14 41.9	-4.4
	baz=284							
IHVE				S		**Sg**	**13 14 55.1**	**-3.2**
	baz=284							
IADA	**Aoalbol**	**0.96**	**61**	P		Pg	13 14 41.6	-5.5
	baz=65							
ISNB	**Snabyli**	**0.96**	**210**	P		**Pb**	**13 14 45.0**	**-2.4**
	baz=209							
IMEL	**Melhnausar**	**1.07**	**20**	P		Pn	13 14 43.2	-6.6
	baz=21							
IMEL				S		Sb	13 14 55.9	-7.5
	baz=21							
IRJU	**Rjupnafell**	**1.08**	**208**	P		**Pg**	**13 14 46.6**	**-2.7**
	baz=207							
IFED	**Fedgar**	**1.08**	**241**	P		**Pg**	**13 14 46.8**	**-2.6**
	baz=237							
IREN	**Reynihlio**	**1.11**	**14**	P		Pn	13 14 43.9	-6.4
	baz=14							
IREN				S		Sb	13 14 57.4	-7.2
	baz=14							
IMJO	**Mjoaskard**	**1.13**	**236**	P		**Pg**	**13 14 47.9**	**-2.4**
	baz=234							
IKVO	**Krokottuvotn**	**1.18**	**14**	P		Pn	13 14 45.1	-6.1
	baz=13							
IKVO				S		Sb	13 14 59.6	-7.0
	baz=13							
IGYG	**Gygjarholskot**	**1.19**	**257**	P		**Pb**	**13 14 47.9**	**-3.4**
	baz=253							
IGYG				S		**Sb**	**13 15 03.9**	**-2.9**
	baz=253							
IHVO	**Lagu-Hvolar**	**1.19**	**209**	P		**Pb**	**13 14 49.1**	**-2.2**
	baz=208							
IHAU	**Haukadalur**	**1.22**	**241**	P		**Pb**	**13 14 48.8**	**-2.9**
	baz=238							
IHAU				S		**Sb**	**13 15 05.4**	**-2.0**
	baz=238							
IGRS	**Grimsstaoir**	**1.23**	**29**	P		Pn	13 14 45.9	-6.0
	baz=30							
IGRS				S		Sb	13 15 00.8	-7.1
	baz=30							
IALF	**Alftagrof**	**1.30**	**214**	P		**Pb**	**13 14 50.6**	**-2.6**
	baz=213							
ISKI	**Skildingahlsh**	**1.32**	**9**	P		Pn	13 14 47.3	-5.9
	baz=8.8							
IGHA	**Grjothals**	**1.33**	**16**	P		Pn	13 14 47.4	-5.9
	baz=16							
IGHA				S		Sn	13 15 03.5	-7.6
	baz=16							
IESK	**Eystri-Skogar**	**1.34**	**219**	P		**Pn**	**13 14 51.4**	**-2.0**
	baz=218							
IGRA	**Granastaoir**	**1.35**	**359**	P		Pn	13 14 47.8	-5.8
	baz=358							
IMID	**Miomork**	**1.38**	**229**	P		**Pn**	**13 14 51.9**	**-2.0**
	baz=227							
ISAU	**Saurbar**	**1.38**	**246**	P		**Pn**	**13 14 50.7**	**-3.2**
	baz=244							
IDIM	**Dimmadalss**	**1.42**	**10**	P		Pn	13 14 48.9	-5.7
	baz=9.8							
IHLA	**Hella**	**1.42**	**346**	P		Pn	13 14 49.2	-5.3
	baz=344							
IHLA				S		Sn	13 15 06.4	-6.8
	baz=344							
IHED	**Heoinshofoi**	**1.52**	**4**	P		Pn	13 14 50.4	-5.5
	baz=2.8							
IASM	**Asmuli**	**1.53**	**243**	P		**Pn**	**13 14 54.1**	**-1.9**
	baz=240							
IBRE	**Brettingsstaoi**	**1.57**	**355**	P		Pn	13 14 51.2	-5.3
	baz=353							
IGIL	**Gilhagi**	**1.59**	**18**	P		Pn	13 14 51.4	-5.5
	baz=18							
ISOL	**Solvholt**	**1.62**	**248**	P		**Pn**	**13 14 55.0**	**-2.1**
	baz=246							
IKRO	**Krokur**	**1.63**	**255**	P		**Pn**	**13 14 54.8**	**-2.5**
	baz=252							
BORG	**Borgarnes**	**1.64**	**278**	Pn		**Pn**	**13 14 54.0**	**-3.5**
IHEI	**Heioarbar**	**1.65**	**259**	P		**Pn**	**13 14 54.7**	**-2.9**
	baz=256							
ISIG	**Siglufjorour**	**1.67**	**341**	P		Pn	13 14 53.0	-4.9
	baz=338							
ILEI	**Leirhofn**	**1.90**	**13**	P		Pn	13 14 56.3	-4.7
	baz=13							
SCO	**Scoresbysund**	**6.17**	**346**	Pn		Pn	13 15 56.0	-3.7
SCO	**Scoresbysund**	**6.17**	**346**	*e*		Pn	13 15 48.0	-12
	baz=172,slow=8.6							
SCO				*i*	P	Pn	13 15 56.0	-3.7
SCO				*i*	S	**Sn**	**13 17 10.9**	**+0.7**
SCO				IAML			13 17 19.6	
	comp=Z,2.3nm,0.4s							
DBG	**Daneborg**	**9.83**	**356**	*e*	P	Pn	13 17 00.3	+11
EKA	**Eskdalemuir Ar**	**11.71**	**136**	Pn		**Pn**	**13 17 15.6**	**0.0**
	baz=320,slow=14,SNR=14							
ESK	**Eskdalemuir**	**11.71**	**136**	Pn		**Pn**	**13 17 16.0**	**+0.5**
NC204	**NORSAR Array S**	**13.25**	**91**	Pn		**Pn**	**13 17 37.3**	**+0.7**
NBO00	**NORSAR Array S**	**13.37**	**92**	Pn		**Pn**	**13 17 40.1**	**+1.9**
NOA	**NORSAR Array B**	**13.55**	**92**	Pn		**Pn**	**13 17 40.9**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=2.4							
NOA				LR		LR	13 23 02.8	
	comp=Z,84nm,18.1s,baz=290,slow=38							
SFJD	**Kangerlussuaq**	**13.69**	**295**	LR		LR	13 21 31.8	
	comp=Z,52nm,19.4s,baz=84,slow=31							
HFS	**Hagfors**	**15.06**	**93**	Pn		**P**	**13 18 06.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=315,slow=14,SNR=3.6							
ARC5	**ARCESS Array S**	**17.19**	**54**	P		**P**	**13 18 32.6**	**+2.5**
ARC1	**ARCESS Array S**	**17.19**	**54**	P		**P**	**13 18 32.0**	**+1.9**
KEV	**Kevo**	**17.70**	**53**	P		**P**	**13 18 38.1**	**+2.4**
KEV				IAmb		IAmb	13 18 50.8	
	comp=Z,53nm,1.5s							
BMRD	**Maredsous**	**18.51**	**130**	P		Pn	13 18 50.9	+6.0
MEM	**Membach**	**18.67**	**127**	Pn		**Pn**	**13 18 47.5**	**+0.7**
BTNL	**Ternell**	**18.73**	**127**	x		x	13 18 50.7	
FIA1	**FINESS Array S**	**19.75**	**79**	P		**Pn**	**13 19 00.0**	**+0.3**
FIA1				IAmb		IAmb	13 19 02.9	
	comp=Z,36nm,1.4s							
TULEG	**Thule**	**19.92**	**328**	P		**P**	**13 19 01.4**	**+1.4**
CLL	**Collm**	**20.68**	**115**	*eP*		Pn	13 19 10.0	-0.8
	comp=Z,31nm,1.3s							
CLL				*e*	PPP	PPP	13 19 35.0	
CLL	**Collm**	**20.68**	**115**	P		Pn	13 19 10.2	-0.6
GRA1	**Grafenberg Arr**	**21.30**	**121**	P		**P**	**13 19 13.6**	**-1.6**
KSP	**Ksiaz**	**22.35**	**112**	*eP*		**P**	**13 19 29.1**	**+2.8**
KHC	**Kasperske Hory**	**22.65**	**118**	P		**P**	**13 19 30.0**	**+0.4**
GEC2	**GERESS Array S**	**22.93**	**118**	P		**P**	**13 19 34.0**	**+1.4**
GEC2				IAmb		IAmb	13 19 44.6	
	comp=Z,27nm,1.5s							
GERES	**GERESS Array B**	**22.93**	**118**	P		**P**	**13 19 33.6**	**+1.0**
	comp=Z,2.5nm,0.9s,baz=318,slow=7.4,SNR=8.2							
EUNU	**Eureka**	**23.75**	**336**	P		**P**	**13 19 40.8**	**+0.2**
EUNU				IAmb		IAmb	13 19 44.8	
	comp=Z,26nm,1.2s							
NIE	**Niedzica**	**25.08**	**109**	*eP*		**P**	**13 19 53.9**	**+0.9**
SCHQ	**Schefferville**	**26.02**	**272**	P		**P**	**13 20 02.3**	**+0.8**
	comp=Z,6.1nm,0.7s,baz=46,slow=3.1,SNR=4.6							
SCHQ				LR		LR	13 28 44.0	
	comp=Z,94nm,20.6s,baz=47,slow=33							
SCHQ	**Schefferville**	**26.02**	**272**	P		**P**	**13 20 02.6**	**+1.2**
SCHQ				IAmb		IAmb	13 20 21.0	
	comp=Z,20nm,1.2s							
ESBB	**Sonseca Array**	**26.17**	**156**	P		**P**	**13 20 04.5**	**+1.4**
ESDC	**Sonseca Array**	**26.17**	**156**	P		**P**	**13 20 03.9**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=355,slow=7.6,SNR=6.4							
ESDC	**Sonseca Array**	**26.17**	**156**	P		**P**	**13 20 04.7**	**+1.7**
AKASG	**Malin Array Be**	**27.85**	**97**	P		**P**	**13 20 18.6**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=52,slow=5.8,SNR=4.2							
BURAR	**Bucovina Array**	**28.52**	**106**	P		**P**	**13 20 25.6**	**+1.5**
ARU	**Arti**	**36.14**	**66**	P		**P**	**13 21 30.7**	**+0.2**
MDUB	**Mudurnu**	**36.84**	**107**	P		**P**	**13 21 36.3**	**-0.5**
ILGA	**Ilgaz**	**37.40**	**104**	P		**P**	**13 21 41.8**	**+0.2**
BRYW	**Bryant College**	**37.83**	**260**	P		**P**	**13 21 44.8**	**-0.3**
ANTO	**Ankara**	**38.00**	**106**	P		**P**	**13 21 45.9**	**-0.6**
BRTR	**Keskin Array B**	**38.48**	**105**	P		**P**	**13 21 51.0**	**+0.3**
	comp=Z,2.5nm,0.8s,baz=323,slow=11,SNR=2.4							
KSCT	**Kent School, K**	**38.82**	**262**	P		**P**	**13 21 53.2**	**-0.1**
KSCT				IAmb		IAmb	13 21 57.4	
	comp=Z,31nm,1.5s							
YKA	**Yellowknife Ar**	**39.26**	**313**	P		**P**	**13 21 56.2**	**-0.6**
	comp=Z,1.7nm,1.0s,baz=45,slow=9.0,SNR=3.9							
ABKAR	**Akbulak array**	**42.04**	**73**	P		**P**	**13 22 19.8**	**-0.1**
TIXI	**Tiksi**	**42.13**	**15**	P		**P**	**13 22 21.3**	**+1.0**
H43A	**Windswept, Lux**	**42.75**	**277**	P		**P**	**13 22 26.8**	**+1.1**
H43A				IAmb		IAmb	13 22 35.6	
	comp=Z,17nm,0.9s							
TOLK	**Toolik Lake Re**	**42.83**	**336**	P		**P**	**13 22 27.0**	**+0.9**
TOLK				IAmb		IAmb	13 22 33.6	
	comp=Z,16nm,1.2s							
BRVK	**Borovoye**	**43.20**	**62**	P		**P**	**13 22 30.4**	**+1.2**
BVAR	**Borovoye Array**	**43.26**	**62**	P		**P**	**13 22 29.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=344,slow=12,SNR=4.0							
K27K	**Chicken**	**45.40**	**329**	P		**P**	**13 22 47.1**	**+0.4**
K27K				IAmb		IAmb	13 22 50.8	
	comp=Z,8.2nm,1.4s							
IL31		**45.76**	**332**	P		**P**	**13 22 49.5**	**-0.1**
IL31				IAmb		IAmb	13 22 53.9	
	comp=Z,8.8nm,1.3s							
ILAR	**Eielson Array**	**45.76**	**332**	P		**P**	**13 22 47.8**	**-1.8**
	comp=Z,2.7nm,1.1s,baz=32,slow=7.7,SNR=10							
ILAR				PcP		**PcP**	**13 24 28.0**	**+1.1**
	comp=Z,1.2nm,0.9s,baz=9.3,slow=3.2,SNR=7.5							
ILAR	**Eielson Array**	**45.76**	**332**	P		**P**	**13 22 49.5**	**-0.1**
ILAR				PcP		**PcP**	**13 24 27.8**	**+0.9**
MDM	**Murphy Dome**	**45.86**	**333**	P		**P**	**13 22 51.0**	**+0.7**
COLA	**College**	**45.86**	**333**	P		**P**	**13 22 50.5**	**+0.1**
TCOL	**CIGO, UAF Yank**	**45.86**	**333**	P		**P**	**13 22 50.5**	**+0.2**
HDA	**Harding Lake**	**46.09**	**332**	P		**P**	**13 22 53.7**	**+1.5**
RIDG	**Independent Ri**	**46.26**	**331**	P		**P**	**13 22 54.2**	**+0.7**
RIDG				IAmb		IAmb	13 22 58.2	
	comp=Z,14nm,1.5s							
ZAA0	**Zalesovo Array**	**47.71**	**51**	P		**P**	**13 23 05.7**	**+0.8**
ZALV	**Zalesovo Beam**	**47.71**	**51**	P		**P**	**13 23 05.0**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=322,slow=8.3,SNR=4.5							
ZALV	**Zalesovo Beam**	**47.71**	**51**	P		**P**	**13 23 04.6**	**-0.3**
KURK	**Kurchatov**	**48.18**	**58**	P		**P**	**13 23 07.4**	**-1.3**
KURK				IAmb		IAmb	13 23 10.9	
	comp=Z,6.1nm,0.9s							
KURBB	**Kurchatov Arra**	**48.23**	**58**	P		**P**	**13 23 07.9**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=323,slow=7.3,SNR=21							
EGMT	**Eagleton**	**48.90**	**297**	P		**P**	**13 23 14.9**	**+0.6**
GCMT	**Greycliff**	**50.71**	**295**	P		**P**	**13 23 28.6**	**+0.4**
HRY	**Holter Researc**	**50.78**	**298**	P		**P**	**13 23 29.4**	**+0.8**
RLMT	**Red Lodge**	**51.11**	**295**	P		**P**	**13 23 30.8**	**-0.5**
RLMT

	comp=Z,2.6nm,0.8s,baz=315,slow=1.4,SNR=6.8							
AAK	**Ala-Archa**	**53.32**	**67**	IAmb	IAmb	13 23 52.2		
	comp=Z,5.5nm,1.1s							
ARSB	**Arslanbob**	**53.82**	**69**	P	**P**	**13 23 51.4**	**0.0**	
ARSB				IAmb	IAmb	13 24 11.7		
	comp=Z,5.9nm,1.2s							
BTK	**Batken**	**54.01**	**71**	P	**P**	**13 23 52.9**	**+0.2**	
KDJ	**Kajisay**	**54.81**	**65**	P	**P**	**13 23 58.2**	**-0.4**	
KDJ				IAmb	IAmb	13 24 02.8		
	comp=Z,5.5nm,0.9s							
O20A	**White River Ci**	**54.89**	**290**	P	**P**	**13 23 58.1**	**-1.1**	
HWUT	**Hardware Ranch**	**54.97**	**294**	P	**P**	**13 23 59.4**	**-0.3**	
TCUT	**Toone Canyon**	**55.32**	**294**	P	**P**	**13 24 02.5**	**+0.1**	
SPUT	**South Promonto**	**55.57**	**294**	P	**P**	**13 24 04.7**	**+0.6**	
CHIR	**Chirikof Islan**	**55.71**	**333**	P	**P**	**13 24 06.2**	**+1.5**	
BGU	**Big Grassy Mou**	**56.13**	**295**	P	**P**	**13 24 08.5**	**+0.5**	
MPU	**Maple Canyon**	**56.35**	**293**	P	**P**	**13 24 10.2**	**+0.5**	
PV22	**Blue Mesa, Par**	**56.48**	**290**	P	**P**	**13 24 10.2**	**-0.4**	
PV22				IAmb	IAmb	13 24 23.1		
	comp=Z,5.4nm,1.2s							
PV07	**Paradox Valley**	**56.50**	**290**	P	**P**	**13 24 10.0**	**-0.8**	
KSH	**Kashi**	**56.56**	**68**	*e*P	**P**	**13 24 12.0**	**+0.9**	
KSH				pmax	pmax			
	comp=Z,14nm,0.5s							
KSH				pmax	pmax			
	comp=Z,340nm,5.1s							
PV23	**Carpenter Ridg**	**56.64**	**290**	P	**P**	**13 24 11.2**	**-0.7**	
PV23				IAmb	IAmb	13 24 17.8		
	comp=Z,6.6nm,1.0s							
SRU	**San Rafael Swe**	**56.68**	**292**	P	**P**	**13 24 11.2**	**-0.9**	
PV14	**Lion Creek, Pa**	**56.71**	**290**	P	**P**	**13 24 11.6**	**-0.7**	
PV14				IAmb	IAmb	13 24 15.1		
	comp=Z,5.8nm,1.0s							
PV01	**Paradox Valley**	**56.73**	**289**	P	**P**	**13 24 12.6**	**+0.1**	
PV01				IAmb	IAmb	13 24 15.6		
	comp=Z,5.1nm,1.0s							
PV02	**Paradox Valley**	**56.73**	**290**	P	**P**	**13 24 12.2**	**-0.3**	
PV02				IAmb	IAmb	13 24 15.6		
	comp=Z,6.5nm,1.1s							
PV03	**Paradox Valley**	**56.74**	**290**	P	**P**	**13 24 12.7**	**+0.2**	
PV03				IAmb	IAmb	13 24 19.7		
	comp=Z,7.8nm,1.3s							
PV17	**East Wray Mesa**	**56.76**	**290**	P	**P**	**13 24 12.9**	**+0.2**	
PV17				IAmb	IAmb	13 24 15.7		
	comp=Z,13nm,1.4s							
PV18	**Skein Mesa, Pa**	**56.77**	**290**	P	**P**	**13 24 13.1**	**+0.3**	
PV18				IAmb	IAmb	13 24 15.8		
	comp=Z,8.9nm,1.1s							
WMQ	**Urumqi**	**57.30**	**56**	*e*P	**P**	**13 24 20.3**	**+4.0**	
MSU	**Marysvale**	**57.86**	**293**	P	**P**	**13 24 20.1**	**-0.4**	
SPR3	**Spring Creek 3**	**58.29**	**295**	P	**P**	**13 24 24.0**	**+0.5**	
SPR3				IAmb	IAmb	13 24 31.5		
	comp=Z,8.0nm,1.3s							
DBIC	**Dimbokro**	**58.50**	**165**	P	**P**	**13 24 25.1**	**+0.3**	
CCUT	**Cedar City**	**59.16**	**293**	P	**P**	**13 24 29.6**	**+0.1**	
R11A	**Troy Canyon, C**	**59.34**	**295**	P	**P**	**13 24 31.3**	**+0.6**	
R11A				IAmb	IAmb	13 24 40.2		
	comp=Z,5.9nm,1.4s							
U15A	**North Rim**	**59.70**	**291**	P	**P**	**13 24 33.1**	**-0.2**	
U15A				IAmb	IAmb	13 24 37.4		
	comp=Z,6.5nm,1.2s							
KVN	**Kaiserville**	**59.71**	**298**	P	**P**	**13 24 32.5**	**-0.8**	
KVN				IAmb	IAmb	13 24 36.1		
	comp=Z,5.0nm,1.3s							
SONM	**Songino Array**	**59.73**	**40**	P	**P**	**13 24 33.6**	**+0.4**	
	comp=Z,0.4nm,0.6s,baz=331,slow=8.6,SNR=2.4							
SONM	**Songino Array**	**59.73**	**40**	P	**P**	**13 24 33.3**	**+0.1**	
WUAZ	**Wupatki**	**60.12**	**290**	P	**P**	**13 24 36.1**	**+0.1**	
WUAZ				IAmb	IAmb	13 24 40.9		
	comp=Z,8.3nm,1.1s							
NVAR	**Mina Array Bea**	**60.33**	**297**	P	**P**	**13 24 37.7**	**+0.2**	
	comp=Z,0.3nm,0.6s,baz=23,slow=7.2,SNR=2.8							
NVAR	**Mina Array Bea**	**60.33**	**297**	P	**P**	**13 24 37.3**	**-0.2**	
NIL	**Nilore**	**60.50**	**73**	P	**P**	**13 24 38.7**	**+0.1**	
CBCY	**The Bluff, Cay**	**60.50**	**253**	P	**P**	**13 24 38.5**	**-0.1**	
SHPR	**Sheep Range**	**60.78**	**294**	P	**P**	**13 24 40.6**	**0.0**	
SHPR				IAmb	IAmb	13 24 52.0		
	comp=Z,5.6nm,1.4s							
TPNV	**Topopah Spring**	**60.82**	**295**	P	**P**	**13 24 40.9**	**+0.1**	
MTDJ	**Mount Denham**	**60.94**	**250**	P	**P**	**13 24 42.0**	**+0.2**	
X16A	**Lo Mia Camp, P**	**61.10**	**290**	P	**P**	**13 24 43.0**	**+0.2**	
X16A				IAmb	IAmb	13 24 46.6		
	comp=Z,4.4nm,1.1s							
121A	**Cookes Peak, D**	**61.23**	**285**	P	**P**	**13 24 43.1**	**-0.6**	
121A				IAmb	IAmb	13 24 43.7		
	comp=Z,2.7nm,0.8s							
OMMB	**Old Mammoth Mi**	**61.31**	**297**	P	**P**	**13 24 43.7**	**-0.6**	
TXAR	**Lajitas Array**	**62.28**	**280**	P	**P**	**13 24 51.1**	**+0.4**	
	comp=Z,1.6nm,1.1s,baz=58,slow=3.6,SNR=6.9							
TXAR				LR	LR	13 50 45.2		
	comp=Z,68nm,18.2s,baz=0.0,slow=35							
TXAR	**Lajitas Array**	**62.28**	**280**	P	**P**	**13 24 50.6**	**-0.1**	
PETK	**Petropavlovsk-**	**62.60**	**3**	P	**P**	**13 24 54.1**	**+1.8**	
TUC	**Tucson**	**62.67**	**288**	P	**P**	**13 24 53.0**	**-0.3**	
TUC				IAmb	IAmb	13 25 15.9		
	comp=Z,7.1nm,1.5s							
AMKA	**Amchitka**	**63.65**	**348**	P	**P**	**13 24 59.5**	**+0.2**	
GLA	**Glamis**	**63.66**	**292**	P	**P**	**13 24 59.0**	**-0.8**	
GLA				IAmb	IAmb	13 25 08.0		
	comp=Z,6.2nm,1.0s							
214A	**Organ Pipe Nat**	**63.80**	**289**	P	**P**	**13 25 00.4**	**-0.3**	
214A				IAmb	IAmb	13 25 09.9		
	comp=Z,3.6nm,0.9s							
GTA	**Gaotai**	**65.38**	**49**	P	**P**	**13 25 11.3**	**+0.3**	
GTA				pP	sP	13 25 18.0	+1.7	
GTA				sP	pP	13 25 21.5	+6.7	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.7s							
GTA				pmax	pmax			
	comp=Z,110nm,5.5s							
GTA				LR	LR			
	comp=N,77nm,18.2s							
GTA				LR	LR			
	comp=E,100nm,19.6s							
GTA				LR	LR			
	comp=Z,90nm,17.1s							
ZAIG	**Zacatecas**	**67.56**	**276**	P	**P**	**13 25 24.8**	**-0.6**	
ZAIG				IAmb	IAmb	13 25 29.5		
	comp=Z,4.8nm,1.0s							
HHC	**Hu-ho-hao-te**	**67.60**	**40**	*e*P	**P**	**13 25 27.0**	**+1.8**	
HHC				pmax	pmax			
	comp=Z,19nm,1.1s							
HHC				pmax	pmax			
	comp=Z,200nm,5.2s							
LZH	**Lanzhou**	**69.71**	**47**	*e*P	**P**	**13 25 38.8**	**+0.3**	
LZH				pP	pP	13 25 41.5	-0.7	
LZH				sP	sP	13 25 44.0	+0.4	
LZH				sS	sS	13 34 55.8	+2.4	
LZH				pmax	pmax			
	comp=Z,14nm,1.1s							
LZH				pmax	pmax			
	comp=Z,200nm,4.6s							
LZH				LR	LR			
	comp=N,1μm,14.9s							
LZH				LR	LR			
	comp=E,1μm,13.6s							
LZH				LR	LR			
	comp=Z,1μm,13.6s							
NJ2	**Nanjing**	**77.83**	**37**	*e*P	**P**	**13 26 26.8**	**+0.9**	
CMAR	**Chiang Mai Arr**	**84.20**	**59**	P	**P**	**13 27 00.3**	**+0.3**	
	comp=Z,1.0nm,0.9s,baz=314,slow=6.5,SNR=9.0							
WRA	**Warramunga Arr**	**131.61**	**36**	PKP	**PKiKP**	**13 33 42.6**	**+0.4**	
	comp=Z,0.2nm,0.8s,baz=357,slow=2.8,SNR=3.5							
ASAR	**Alice Springs**	**135.05**	**38**	PKP	**PKPdf**	**13 33 46.6**	**-1.1**	
	comp=Z,0.7nm,1.0s,baz=25,slow=2.4,SNR=3.8							

*NEIC **26** 13:23:05.0±1.4, 0.°05S±0.°07×124.°00E±0.°07, h91km±6km, mb4.4/29, Error ellipse: s-maj=10.8km s-min=9.6km az=160.0*

*IDC **26** 13:23:05.1±3.1, 0.°02S×123.°96E, h92km±31km, mb3.8/12, mb1 3.9/14, mb1mx3.6/43, mbtmp4.1/14, MS2.7/2, Ms1 2.7/2, ms1mx2.4/51, Error ellipse: s-maj=24.6km s-min=12.7km az=75.0*

*DJA **26** 13:23:07.1±0.2, 0.°5S±3.°×12.°4E±.°, h66km±5km, M4.4/19, mB4.9/5, mb4.5/12, MLv4.4/19, Mw(mB)4.2/5*

ISC 26 13:23:06.5±0.4, 0.°02S±0.°05×124.°02E±0.°06, h110km, n72, σ1s27/74, mb4.3/25, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.60**	**356**	P	**Pn**	**13 23 21.9**	**-2.2**
KMSI				S	**Sn**	**13 23 33.1**	**-4.1**
LUWI	**Luwuk**	**1.60**	**231**	P	**Pn**	**13 23 32.8**	**-1.8**
LUWI	**Luwuk**	**1.60**	**231**		**Pn**	**13 23 32.0**	**-2.6**
MRSI	**Marisa**	**2.14**	**283**	P	**Pn**	**13 23 38.9**	**-2.3**
APSI	**Ampana**	**2.53**	**250**	P	**Pn**	**13 23 45.6**	**-0.7**
SANI	**Sanana**	**2.82**	**136**	P	**Pn**	**13 23 47.3**	**-2.8**
TOLI2	**Tolitoli**	**3.43**	**289**	Pn	**Pn**	**13 23 56.1**	**-2.1**
TNTI	**Ternate**	**3.44**	**77**	P	**Pn**	**13 23 59.0**	**+0.6**
TNTI	**Ternate**	**3.44**	**77**	Pn	**Pn**	**13 23 56.8**	**-1.6**
MPSI	**Mapaga**	**4.13**	**275**	P	**Pn**	**13 24 08.2**	**+0.5**
NLAI	**Namlea**	**4.44**	**136**	P	Pn	13 24 18.8	+7.0
TTSI	**Tana Toraja**	**5.16**	**234**	P	**Pn**	**13 24 20.8**	**-0.7**
	0.7nm3μm166nm,0.5s						
SPSI	**Sidrap Palu**	**5.77**	**227**	P	**Pn**	**13 24 29.8**	**-0.1**
	0.6nm2μm132nm,0.5s						
BNSI	**Bone**	**5.84**	**222**	P	**Pn**	**13 24 30.6**	**-0.2**
	0.3nm725nm38nm,0.7s						
MSAI	**Masohi**	**5.91**	**124**	P	**Pn**	**13 24 32.5**	**+0.7**
	0.3nm520nm24nm,0.8s						
KAPI	**Kappang**	**6.54**	**221**	P	**Pn**	**13 24 39.4**	**-0.8**
	3.5nm,0.3s,baz=77,slow=5.8,SNR=4.9						
KAPI				S	**Sn**	**13 25 51.5**	**-1.8**
	8.2nm,0.3s,baz=53,slow=20,SNR=9.8						
KAPI				LR	LR	13 27 27.5	
	comp=Z,40nm,21.0s,baz=248,slow=40						
KAPI	**Kappang**	**6.54**	**221**		**Pn**	**13 24 38.2**	**-2.0**
BKSI	**Bulukumba**	**6.54**	**216**	P	**Pn**	**13 24 40.3**	**0.0**
	0.1nm19nm,1.2s						
BSSI	**Bau Bau, Buton**	**7.02**	**210**	P	**Pn**	**13 24 47.5**	**+0.7**
	0.1nm21nm,0.6s						
MYLDM	**Lahad Datu**	**7.56**	**313**		**Pn**	**13 24 52.1**	**-1.9**
FAKI	**Fak Fak**	**8.72**	**109**	Pn	**Pn**	**13 25 07.4**	**-2.4**
KKM	**Kota Kinabalu**	**9.85**	**308**	Pn	**Pn**	**13 25 26.2**	**+0.9**
BATI	**Baumata**	**10.12**	**182**	LR	LR	13 30 45.5	
	comp=Z,76nm,18.3s,baz=68,slow=46						
KSM	**Kuching**	**13.79**	**276**	Pn	**Pn**	**13 26 16.2**	**-1.3**
MTN	**Manton Dam**	**14.56**	**151**	Pn	**Pn**	**13 26 26.0**	**-1.4**
KNRA	**Kununurra**	**16.24**	**163**	P	**P**	**13 26 49.4**	**-0.1**
KNRA				IAmb	IAmb	13 26 51.2	
	comp=Z,20nm,1.2s						
FITZ	**Fitzroy Crossi**	**18.03**	**175**	P	**P**	**13 27 08.3**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=1.4,slow=8.6,SNR=9.4						
FITZ	**Fitzroy Crossi**	**18.03**	**175**	P	**P**	**13 27 08.0**	**-1.1**
PSA00	**Pilbara Seismi**	**21.80**	**191**	P	**P**	**13 27 48.6**	**-1.2**
PSA00				IAmb	IAmb	13 28 04.3	
	comp=Z,35nm,1.3s						
WB0	**Warramunga Arr**	**22.10**	**153**	P	**P**	**13 27 52.1**	**-1.0**
WRAB	**Tennant Creek**	**22.23**	**154**	P	**P**	**13 27 53.5**	**-0.9**
WRAB				IAmb	IAmb	13 27 56.0	
	comp=Z,6.4nm,0.7s						
WRA	**Warramunga Arr**	**22.23**	**154**	P	**P**	**13 27 53.6**	**-0.8**
	comp=Z,5.0nm,0.5s,baz=334,slow=10,SNR=86						
WRA	**Warramunga Arr**	**22.23**	**154**	P	**P**	**13 27 52.8**	**-1.6**
WB2	**Warramunga Arr**	**22.23**	**154**	P	**P**	**13 27 53.6**	**-0.8**
WB2				IAmb	IAmb	13 27 56.0	
	comp=Z,7.2nm,0.7s						
WR0	**Warramunga Arr**	**22.33**	**153**	P	**P**	**13 27 54.5**	**-0.9**
COEN	**Coen**	**23.48**	**127**	P	**P**	**13 28 06.2**	**-0.4**
COEN				IAmb	IAmb	13 28 10.4	
	comp=Z,11nm,1.2s						
PMG	**Port Moresby**	**24.85**	**113**	P	**P**	**13 28 20.5**	**+1.5**
PMG				IAmb	IAmb	13 28 34.9	
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**25.39**	**158**	P	**P**	**13 28 24.1**	**+0.2**
ASAR	**Alice Springs**	**25.39**	**158**	P	**P**	**13 28 24.0**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=324,slow=7.2,SNR=26						
ASAR				PcP	**PcP**	**13 31 55.0**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=351,slow=2.5,SNR=9.7						
ASAR	**Alice Springs**	**25.39**	**158**	P	**P**	**13 28 24.1**	**+0.2**
ASAR					**PcP**	**13 31 54.4**	**+0.8**
FORT	**Forrest**	**30.83**	**173**	P	**P**	**13 29 12.4**	**+0.3**
FORT				IAmb	IAmb	13 29 16.9	
	comp=Z,17nm,0.9s						
NWAO	**Narrogin (SRO)**	**33.35**	**190**	P	**P**	**13 29 34.4**	**+0.2**
STKA	**Stephens Creek**	**35.78**	**154**	P	**P**	**13 29 56.1**	**+0.9**
	comp=Z,2.4nm,0.5s,baz=337,slow=8.9,SNR=16						
STKA				PcP	**PcP**	**13 32 21.8**	**+1.1**
	comp=Z,1.9nm,1.0s,baz=326,slow=3.6,SNR=2.9						
STKA	**Stephens Creek**	**35.78**	**154**	IAmb	IAmb	13 29 57.8	
	comp=Z,1.8nm,1.2s						
JWT	**Wachi**	**36.70**	**16**	P	**P**	**13 30 03.9**	**+1.0**
KSRS	**Korea Array**	**37.47**	**5**	P	**P**	**13 30 10.5**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=183,slow=9.9,SNR=1.9						
JGF	**Kuroka**	**37.56**	**18**	P	**P**	**13 30 10.4**	**+0.1**
JGF				IAmb	IAmb	13 30 20.8	
	comp=Z,12nm,1.1s						
MAJO	**Matsushiro**	**38.69**	**18**	P	**P**	**13 30 20.2**	**+0.4**
MJAR	**Matsushiro Arr**	**38.69**	**18**	P	**P**	**13 30 19.4**	**-0.3**
	comp=Z,3.8nm,0.8s,baz=188,slow=8.9,SNR=5.6						
ARMA	**Armidale**	**40.03**	**142**	P	**P**	**13 30 32.3**	**+1.2**
ARMA				IAmb	IAmb	13 30 58.4	
	comp=Z,17nm,1.4s						
JMM	**Marumori**	**40.76**	**20**	P	**P**	**13 30 38.3**	**+1.6**
JTM	**Tenmabayashi**	**43.48**	**19**	P	**P**	**13 31 00.1**	**+1.3**
USA0B	**Ussuriysk Arra**	**44.60**	**8**	P	**P**	**13 31 08.8**	**+1.0**
USA0B				IAmb	IAmb	13 31 31.6	
	comp=Z,3.6nm,0.8s						
USRK	**Ussuriysk Ar.**	**44.60**	**8**	P	**P**	**13 31 08.4**	**+0.7**
	comp=Z,2.0nm,0.4s,baz=194,slow=6.3,SNR=9.7						
ASAJ	**Asahikawa**	**46.97**	**18**	P	**P**	**13 31 27.2**	**+0.8**
	comp=Z,3.8nm,0.7s,baz=211,slow=5.9,SNR=2.0						
JKA	**Kamikawa-asahi**	**46.97**	**18**	P	**P**	**13 31 27.2**	**+0.8**
JKA	**Kamikawa-asahi**	**46.97**	**18**	IAmb	IAmb	13 31 55.9	
	comp=Z,14nm,1.2s						
SONM	**Songino Array**	**50.07**	**345**	P	**P**	**13 31 50.3**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=152,slow=6.5,SNR=2.4						
MK31	**Makanchi Array**	**59.17**	**328**	P	**P**	**13 32 56.0**	**0.0**
MKAR	**Makanchi Array**	**59.17**	**328**	P	**P**	**13 32 55.5**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=116,slow=8.1,SNR=20						
MKAR				PcP	**PcP**	**13 33 43.4**	**0.0**
	comp=Z,0.3nm,0.5s,baz=132,slow=2.1,SNR=5.0						
PETK	**Petropavlovsk-**	**59.91**	**23**	P	**P**	**13 33 02.2**	**+1.4**
TUWZ	**Tuamarina**	**61.03**	**139**	P	**P**	**13 33 09.5**	**+0.9**
BKZ	**Black Stump Fm**	**61.72**	**136**	P	**P**	**13 33 14.3**	**+0.9**
MA2	**Magadan**	**62.99**	**15**	P	**P**	**13 33 22.8**	**+1.4**
KURBB	**Kurchatov Arra**	**63.50**	**329**	P	**P**	**13 33 25.5**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=138,slow=6.4,SNR=6.8						
KURK	**Kurchatov**	**63.51**	**330**	P	**P**	**13 33 25.6**	**+0.6**
KURK				IAmb	IAmb	13 33 27.0	
	comp=Z,5.8nm,1.4s						
SOCY	**Socotra**	**70.50**	**283**	P	**P**	**13 34 10.7**	**+0.7**
SOCY				IAmb	IAmb	13 34 25.6	
	comp=Z,9.5nm,1.1s						
TIXI	**Tiksi**	**71.63**	**2**	P	**P**	**13 34 15.3**	**-0.3**
TIXI				IAmb	IAmb	13 34 16.0	
	comp=Z,4.0nm,1.1s						
UNV	**Unalaska Valle**	**78.03**	**35**	P	**P**	**13 34 51.3**	**-1.6**
ARCES	**ARCESS Array B**	**93.01**	**340**	P	**P**	**13 36 08.1**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=36,slow=7.8,SNR=2.2						
FINES	**FINESS Array B**	**93.83**	**332**	P	**P**	**13 36 10.6**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=80,slow=4.7,SNR=1.7						
TORD	**Torodi Ar. Bea**	**121.40**	**285**	PKP	**PKPdf**	**13 41 48.3**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=29,slow=2.8,SNR=2.3						

*ASRS **26** 13:32:54.9±0.3, 50.°N±2.°×88.°3E±1.°0, h5km, MLh3.4/17, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

*NNC **26** 13:33:01.8±1.7, 49.°92N×87.°87E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=12.4km s-min=7.8km az=78.0*

ISC 26 13:32:59.0±0.8, 49.°97N±0.°04×88.°16E±0.°02, h10km, n30, σ2s25/54, 4C-10D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**0.18**	**44**	Pg	**Pg**	**13 33 02.7**	**-0.3**
CUR				Sg	**Sg**	**13 33 06.6**	**+0.8**
AKAR	**Aktash**	**0.49**	**316**	Pg	**Pg**	**13 33 07.9**	**-0.8**
AKAR				Sg	**Sg**	**13 33 15.3**	**+0.1**
DGZ	**Jazzator, Alta**	**0.54**	**240**	Pg	Pg	13 33 06.4	-3.2
DGZ				Sg	**Sg**	**13 33 12.6**	**-4.1**
CHBI	**Chibit, Altay**	**0.54**	**310**	Pg	**Pg**	**13 33 08.6**	**-1.0**
CHBI				Sg	**Sg**	**13 33 16.1**	**-0.7**
ULGR	**Ulagan, Altay**	**0.67**	**349**	Pg	**Pg**	**13 33 11.3**	**-0.6**
ULGR				Sg	**Sb**	**13 33 21.1**	**-1.0**
TUNR	**Tungur**	**1.19**	**280**	Pg	**Pb**	**13 33 19.0**	**-2.7**
TUNR				Sg	**Sb**	**13 33 35.3**	**-1.9**
TEL	**Teeli**	**1.68**	**50**	Pg	**Pb**	**13 33 30.2**	**+0.2**
TEL				Sg	**Sg**	**13 33 52.7**	**-0.2**
ARTR	**Artybash**	**1.91**	**344**	Pg	**Pb**	**13 33 33.8**	**-0.2**
ARTR				Sg	**Sg**	**13 34 00.2**	**-0.3**
TASR	**Tashtagol**	**2.80**	**357**	Pg	**Pb**	**13 33 48.6**	**-0.5**
TASR				Sg	**Sg**	**13 34 27.0**	**-1.9**
TBTR	**Tabat**	**3.37**	**27**	Pg	**Pb**	**13 34 00.1**	**+1.3**
TBTR				Sg	**Sg**	**13 34 44.8**	**-2.4**
DJO	**Djoy, Khakassi**	**3.41**	**33**	Pg	**Pb**	**13 34 00.7**	**+1.2**
DJO				Sg	**Sg**	**13 34 47.7**	**-0.7**
DJOS	**Djoyskaya Sosn**	**3.48**	**34**	Pg	**Pb**	**13 34 02.0**	**+1.3**
DJOS				Sg	**Sg**	**13 34 49.3**	**-1.5**
ELT	**Eltsovka**	**3.51**	**341**	Pg	**Pb**	**13 33 59.7**	**-1.4**
ELT				Sg	**Sg**	**13 34 47.8**	**-3.7**
CERR	**Cheremushki**	**3.54**	**34**	Pg	**Pb**	**13 34 02.6**	**+1.0**
CERR				Sg	**Sg**	**13 34 50.6**	**-1.9**
VEH	**Verkhnyaya Baz**	**3.55**	**21**	Pg	**Pb**	**13 34 03.7**	**+1.7**
VEH				Sg	**Sg**	**13 34 50.6**	**-2.5**
BLRR	**Bol'shaya Rech**	**4.07**	**39**	Pg	**Pb**	**13 34 12.7**	**+1.9**
BLRR				Sg	**Sg**	**13 35 08.1**	**-1.6**
ARDR	**Aradan**	**4.22**	**50**	Pg	**Pb**	**13 34 11.4**	**-1.9**
ARDR				Sg	**Sg**	**13 35 10.4**	**-4.0**
ABNR	**Abakan**	**4.28**	**27**	Sg	**Sg**	**13 35 14.6**	**-1.6**
KZLR	**Kyzyl**	**4.35**	**64**	Sg	**Sg**	**13 35 15.5**	**-3.2**
ERNS	**Erzin**	**4.51**	**84**	Pg	**Pb**	**13 34 19.7**	**+1.3**
ERNS				Sg	**Sb**	**13 35 18.0**	**+5.2**
SALR	**Pechorkino, Sa**	**4.70**	**342**	Sg	**Sg**	**13 35 28.3**	**-1.6**
MK31	**Makanchi Array**	**5.04**	**233**	⇓Pn	**Pn**	**13 34 16.7**	**+2.1**
	0.2nm,0.2s,baz=47,slow=12,SNR=40						
MK31				⇓Pg	**Pb**	**13 34 29.8**	**+2.6**
	2.1nm,0.5s,baz=53,slow=16,SNR=5.9						
MK31				⇓Sn	**Sn**	**13 35 14.6**	**+1.8**
	3.2nm,0.5s,baz=53,slow=23,SNR=5.4						
MK31				⇑Lg	Lg	13 35 34.4	
	7.8nm,0.6s,baz=58,slow=32,SNR=7.3						
MAKZ	**Makanchi**	**5.19**	**235**	⇓Pn	**Pn**	**13 34 18.5**	**+1.8**
	1.4nm,0.5s						
MAKZ				⇓Pg	**Pb**	**13 34 32.6**	**+2.8**
	2.7nm,0.8s						
MAKZ				⇑Sn	**Sn**	**13 35 18.4**	**+1.8**
	5.9nm,1.0s						
MAKZ				⇓Lg	Lg	13 35 38.3	
	7.8nm,0.7s						
TDJR	**Todzha**	**5.56**	**61**	Pg	**Pg**	**13 34 41.2**	**-4.2**
TDJR				Sg	**Sg**	**13 35 50.5**	**-6.8**
BSTK	**Bystrovka, Nov**	**5.71**	**326**	Sg	**Sg**	**13 36 02.6**	**+0.4**
NVS	**Novosibirsk**	**5.73**	**330**	Sg	**Sg**	**13 36 03.1**	**+0.2**
NVSII	**Novosibirsk**	**5.73**	**330**	Sg	**Sg**	**13 36 02.9**	**0.0**
KNGR	**Kungurtug, Tuv**	**6.04**	**80**	Sg	**Sg**	**13 36 09.7**	**-3.0**
KURK	**Kurchatov**	**6.15**	**281**	⇑Pn	**Pn**	**13 34 31.1**	**+1.3**
	4.3nm,1.0s						
KURK				⇓Sn	**Sn**	**13 35 41.2**	**+1.1**
	4.7nm,0.6s						
KURK				⇓Lg	Lg	13 36 10.1	
	5.6nm,0.5s						
KURBB	**Kurchatov Arra**	**6.20**	**280**	⇑Pn	**Pn**	**13 34 31.6**	**+1.1**
	2.9nm,0.6s						
KURBB				⇓Sn	**Sn**	**13 35 43.9**	**+2.5**
	14nm,0.7s						
KURBB				⇓Lg	Lg	13 36 16.3	
	23nm,0.7s						

*IDC **26** 13:43:01.9±1.3, 28.°06N×101.°83E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.4/50, mbtmp3.3/5, ML4.0/1, Error ellipse: s-maj=41.0km s-min=20.7km az=82.0*

*NEIC **26** 13:43:04.2±0.4, 28.°1N±0.°1×101.°9E±0.°2, h16km±4km, mb4.5/3, Error ellipse: s-maj=30.1km s-min=15.6km az=74.0*

ISC 26 13:43:03.4±1.0, 28.°1N±0.°1×101.°9E±0.°2, h10km, n9, σ0s38/9, mb4.0/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	**Kunming**	**3.04**	**166**	Pn	**Pn**	**13 43 51.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**9.96**	**196**	Pn	**Pn**	**13 45 26.8**	**+0.1**
	0.4nm,0.3s,baz=8.9,slow=13,SNR=3.4						
CMAR				Pg		13 46 03.8	
	0.5nm,0.3s,baz=6.2,slow=17,SNR=13						
CMAR				Lg	Lg	13 48 15.4	
	0.1nm,0

ASHO Ashiyiah 19.47 345 P Pn 13 56 48.5 -0.5
SNR=8.8
HATD Hatta, Dubai 19.59 346 *i* P Pn 13 56 50.2 -0.3
SNR=6.8
HATD Hatta, Dubai 19.59 346 P Pn 13 56 51.5 +1.1
SNR=5.6
ASUD Al Ashush, Dub 19.61 344 P Pn 13 56 50.5 -0.2
ASUD Al Ashush, Dub 19.61 344 P Pn 13 56 50.4 -0.2
FAQ Al Faqa, Dubai 19.65 344 P P 13 56 50.4 +0.6
UOSS Minazif 19.68 346 *i* P P 13 56 50.5 +0.4
SNR=7.7
UOSS Minazif 19.68 346 P P 13 56 50.5 +0.4
UOSS Minazif 19.68 346 P P 13 56 50.4 +0.2
UOSS IAmb IAmb 13 56 56.7
comp=Z,32nm,1.0s
NAZ Nazwa, Dubai 19.86 345 P Pn 13 56 53.7 0.0
SNR=6.6
MSFE Esma-Masafi 20.09 346 P P 13 56 55.3 +0.7
HYB Hyderabad 20.44 54 *i* P Pn 13 57 02.0 +1.4
BANOM Banah 20.60 347 P P 13 57 00.5 +0.3
RAYN Ar Rayn 23.31 321 *i* P P 13 57 28.4 -0.8
SNR=35
RAYN Ar Rayn 23.31 321 P P 13 57 27.8 -1.4
RAYN IAmb IAmb 13 57 30.7
comp=Z,36nm,0.9s
KIBK Kibwezi 24.61 252 P P 13 57 42.0 +0.4
SNR=5.4
KMBO Kilima Mbogo 25.00 255 P P 13 57 47.1 +1.8
comp=Z,2.8nm,0.4s,baz=55,slow=11,SNR=21
KMBO Kilima Mbogo 25.00 255 *i* P P 13 57 46.8 +1.5
SNR=6.8
KMBO Kilima Mbogo 25.00 255 P P 13 57 45.7 +0.4
KMBO Kilima Mbogo 25.00 255 P P 13 57 46.1 +0.8
KMBO IAmb IAmb 13 57 47.6
comp=Z,15nm,1.0s
OPO Ambohidratompo 27.92 210 LR LR 14 06 30.7
comp=Z,228nm,19.2s,baz=184,slow=30
HRA Herat 28.48 2 P P 13 58 17.1 +0.7
KBL Kabul 29.50 13 P P 13 58 28.2 +2.7
SNR=5.4
KBL Kabul 29.50 13 P P 13 58 26.7 +1.2
KBL IAmb IAmb 13 58 30.4
comp=Z,16nm,1.4s
NIL Nilore 29.87 20 P P 13 58 31.5 +3.0
NIL Nilore 29.87 20 P P 13 58 30.2 +1.7
NIL IAmb IAmb 13 58 39.7
comp=Z,14nm,1.1s
GEYT Alibeck 32.14 355 LR LR 14 12 02.4
comp=Z,119nm,20.7s,baz=225,slow=37
DRK Karamyk 34.86 14 P P 13 59 13.8 +1.2
BTK Batken 35.18 13 P P 13 59 16.3 +1.2
BTK IAmb IAmb 13 59 20.7
comp=Z,20nm,1.2s
SHL Shillong 35.24 53 P P 13 59 16.7 +0.8
SHL IAmb IAmb 13 59 20.7
comp=Z,11nm,1.1s
GEVA Gevas 36.39 335 P P 13 59 26.2 +0.7
GEVA IAmb IAmb 13 59 28.2
comp=Z,9.1nm,0.9s
MARD Mardin 36.56 332 P P 13 59 27.8 +0.8
LSA Lhasa 36.84 46 P P 13 59 29.9 0.0
ARSB Arslanbob 36.90 15 P P 13 59 30.7 +0.9
GNI Garni 37.33 339 P P 13 59 34.4 +0.8
GNI Garni 37.33 339 P P 13 59 33.8 +0.3
GNI IAmb IAmb 13 59 37.3
comp=Z,28nm,1.2s
RPSI Rantau Prapat 37.62 93 P P 13 59 35.9 -0.2
KKAR Karatay Array 38.05 11 P P 13 59 40.0 +0.6
AAK Ala-Archa 38.52 16 P P 13 59 45.8 +2.2
comp=Z,4.9nm,0.7s,baz=196,slow=5.3,SNR=22
AAK Ala-Archa 38.52 16 *i* P P 13 59 45.2 +1.7
SNR=11
CMAR Chiang Mai Arr 38.78 68 P P 13 59 48.2 +2.3
comp=Z,2.7nm,0.8s,baz=258,slow=8.9,SNR=20
CMAR PcP PcP 14 01 58.5 +1.0
comp=Z,0.7nm,0.4s,baz=253,slow=4.4,SNR=7.0
CMAR LR LR 14 15 42.9
comp=Z,65nm,18.8s,baz=309,slow=36
CMAR Chiang Mai Arr 38.78 68 P P 13 59 46.6 +0.7
BOOM Boomskoye usch 38.79 17 P P 13 59 45.9 +0.1
KDJ Kajisay 38.85 19 P P 13 59 46.3 0.0
KDJ IAmb IAmb 13 59 57.8
comp=Z,19nm,1.4s
CHTO Chiang Mai 38.87 67 P P 13 59 48.0 +1.4
LSZ Lusaka 38.93 237 P P 13 59 47.8 +0.5
comp=Z,4.5nm,0.8s,baz=57,slow=6.7,SNR=6.3
LSZ PP PnPn 14 01 17.8 -1.1
comp=Z,4.1nm,0.3s,baz=339,slow=0.7,SNR=9.2
LSZ Lusaka 38.93 237 P P 13 59 47.7 +0.4
COCO West Island 39.56 117 P P 13 59 51.4 -1.0
KBZ Khabaz 41.13 340 P P 14 00 05.9 +0.9
comp=Z,6.3nm,0.8s,baz=152,slow=8.1,SNR=12
KBZ PP PP 14 01 42.1 +2.1
comp=Z,5.1nm,1.0s,baz=142,slow=8.5,SNR=3.6
KBZ LR LR 14 18 17.1
comp=Z,90nm,18.4s,baz=151,slow=38
KIV Kislovodsk 41.41 340 P P 14 00 07.5 0.0
KIV IAmb IAmb 14 00 09.5
comp=Z,19nm,1.2s
MATP Matopo 41.45 230 P P 14 00 07.2 -1.0
comp=Z,5.1nm,0.8s,baz=32,slow=8.6,SNR=7.8
BR131 Keskin Array S 42.00 328 P P 14 00 12.3 -0.1
BR131 IAmb IAmb 14 00 13.8
comp=Z,17nm,0.9s
BRTR Keskin Array B 42.00 328 P P 14 00 13.1 +0.6
comp=Z,7.0nm,0.8s,baz=150,slow=10.0,SNR=17
BRTR LR LR 14 18 06.7
comp=Z,80nm,18.2s,baz=126,slow=37
BRTR Keskin Array B 42.00 328 P P 14 00 12.2 -0.2
ABKAR Akbulak array 43.34 359 P P 14 00 23.6 +0.6
ABKAR IAmb IAmb 14 00 25.2
comp=Z,18nm,0.9s
ABKAR Akbulak array 43.34 359 P P 14 00 23.4 +0.4
SLVN Son La 44.01 65 P P 14 00 28.4 -0.5
WMQ Urumqi 44.42 27 *eP* P 14 00 33.5 +1.7
WMQ pP pwP 14 00 37.5 -1.9
WMQ pmax pmax
comp=Z,22nm,0.7s
WMQ pmax pmax
comp=Z,230nm,4.9s
WMQ LR LR
comp=Z,270nm,13.7s
WMQ LR LR
comp=Z,400nm,15.3s
WMQ LR LR
comp=Z,410nm,23.1s
WMQ Urumqi 44.42 27 P P 14 00 32.9 +1.0
WMQ IAmb IAmb 14 00 35.0
comp=Z,9.0nm,0.5s
MAKZ Makanchi 44.59 20 P P 14 00 33.3 +0.2
MAKZ IAmb IAmb 14 00 34.8
comp=Z,11nm,1.3s
AKTO Aktyubinsk 44.59 357 LR LR 14 19 48.8
comp=Z,142nm,20.0s,baz=175,slow=37
MK31 Makanchi Array 44.68 20 P P 14 00 34.1 +0.2
MKAR Makanchi Array 44.68 20 P P 14 00 34.5 +0.6
comp=Z,2.8nm,0.8s,baz=208,slow=8.6,SNR=18
MKAR PcP PcP 14 02 16.3 -0.1
comp=Z,0.9nm,0.7s,baz=212,slow=3.8,SNR=3.7
MKAR LR LR 14 20 08.3
comp=Z,92nm,20.2s,baz=225,slow=37
MKAR Makanchi Array 44.68 20 P P 14 00 33.9 +0.1
LBTB Lobatse 46.31 227 P P 14 00 47.6 +0.5
comp=Z,11nm,1.1s,baz=99,slow=6.0,SNR=4.6
LBTB Lobatse 46.31 227 P P 14 00 45.3 -1.8
KURBB Kurchatov Arra 46.96 15 P P 14 00 52.5 +0.7
comp=Z,2.8nm,0.6s,baz=215,slow=8.1,SNR=27
KURBB PcP PcP 14 02 23.7 -0.5
comp=Z,0.1nm,0.4s,baz=142,slow=16,SNR=2.8
KURK Kurchatov 47.07 15 P P 14 00 53.0 +0.5
BRVK Borovoye 47.70 7 P P 14 00 58.0 +0.5
TIRR Tirgusor 48.09 328 ⇑P P 14 01 01.4 +0.8
GTA Gaotai 48.20 40 *eP* P 14 01 02.5 +0.8
GTA pP pwP 14 01 10.8 +1.5
GTA sP sP 14 01 15.0 +11
GTA pmax pmax
comp=Z,2.0nm,1.2s
AGG Agios Georgios 48.31 319 P P 14 01 01.4 -1.1
TLBR Topalu 48.34 328 ⇑P P 14 01 03.0 +0.4
BOSA Boshof 48.74 224 P P 14 01 06.5 +0.4
comp=Z,2.8nm,0.8s,baz=22,slow=11,SNR=2.1
BOSA LR LR 14 20 01.9
comp=Z,287nm,18.6s,baz=40,slow=34
BOSA Boshof 48.74 224 IAmb IAmb 14 01 19.4
comp=Z,11nm,1.2s

ISR Istrita 49.52 328 ⇓P P 14 01 13.7 +2.1
TSUM Tsumeb 49.71 239 P P 14 01 13.6 0.0
TSUM IAmb IAmb 14 01 23.8
comp=Z,11nm,0.8s
NEHR Nehoiu 49.85 328 ⇓P P 14 01 15.3 +1.1
VRI Vrincioaia 49.92 329 ⇓P P 14 01 16.4 +1.7
PLOR Plostina 49.95 329 ⇑P P 14 01 16.9 +2.0
MLR Muntele Rosu 50.08 328 ⇑P P 14 01 17.9 +1.8
MLR Muntele Rosu 50.08 328 P P 14 01 16.7 +0.7
TESR Tescani 50.40 329 ⇑P P 14 01 19.2 +0.9
VOIR 50.52 327 ⇑P P 14 01 20.0 +0.7
ARU Arti 50.56 358 P P 14 01 19.2 -0.1
ARU IAmb IAmb 14 01 20.5
comp=Z,13nm,0.8s
OZUR 50.56 328 ⇓P P 14 01 20.4 +0.8
SORM Soroca 50.70 332 ⇓P P 14 01 20.4 -0.1
ARR Arges 50.70 327 ⇑P P 14 01 21.2 +0.5
BIZ Bicaz 50.97 329 ⇓P P 14 01 23.6 +1.1
PRAR RASCA 51.19 330 ⇑P P 14 01 24.8 +0.5
SCTE Santa Cesarea 51.41 318 P P 14 01 24.4 -1.6
ZAA0 Zalesovo Array 51.68 17 P P 14 01 26.6 -1.2
ZALV Zalesovo Beam 51.68 17 P P 14 01 27.8 0.0
comp=Z,4.1nm,0.8s,baz=209,slow=8.0,SNR=15
ZALV PcP PcP 14 02 41.0 -0.2
comp=Z,0.4nm,0.3s,baz=235,slow=5.1,SNR=1.7
ZALV LR LR 14 24 00.4
comp=Z,128nm,21.4s,baz=46,slow=37
ZALV Zalesovo Beam 51.68 17 P P 14 01 27.1 -0.7
GZR Gura Zlata 51.74 326 ⇑P P 14 01 29.2 +0.7
BURAR Bucovina Array 51.87 330 ⇑P P 14 01 30.7 +1.3
BUR08 Bucovina Ar. S 51.89 330 P P 14 01 29.7 0.0
ARCR ARCALIA 51.96 329 ⇓P P 14 01 31.0 +1.0
MDVR Moldovita 51.97 325 ⇓P P 14 01 30.3 +0.1
AKASG Malin Array Be 52.18 335 P P 14 01 31.4 -0.2
comp=Z,2.0nm,0.8s,baz=128,slow=6.4,SNR=10
AKASG LR LR 14 25 51.9
comp=Z,53nm,21.9s,baz=120,slow=39
AKASG Malin Array Be 52.18 335 IAmb IAmb 14 01 32.1
comp=Z,1.1nm,0.9s
AKBB Malin Array Si 52.18 335 P P 14 01 31.2 -0.4
AKBB IAmb IAmb 14 01 32.3
comp=Z,9.1nm,1.0s
XAN Xi'an 52.20 51 P P 14 01 31.9 -0.2
XAN IAmb IAmb 14 01 39.6
comp=Z,12nm,1.1s
DIVS Divibare 52.58 323 P P 14 01 34.3 -0.5
DIVS IAmb IAmb 14 01 35.6
comp=Z,12nm,1.1s
SIRR Siria 52.89 326 ⇓P P 14 01 38.2 +1.2
SGRT San Giovanni R 54.03 319 P P 14 01 45.5 0.0
SUR Sutherland 54.07 223 LR LR 14 22 59.4
comp=Z,198nm,18.1s,baz=18,slow=34
KOLS Kolonicke sedl 54.22 329 *eP* P 14 01 47.2 +0.6
KWP Kalwaria Pacla 54.45 330 P P 14 01 48.4 +0.1
CRVS Cervenica-Dubn 54.62 329 *eP* P 14 01 49.5 0.0
PSZ Piszkesteto 54.84 327 P P 14 01 49.9 -1.4
PSZ IAmb IAmb 14 01 53.3
comp=Z,7.8nm,0.8s
INTR Introdacqua 55.36 318 P P 14 01 53.9 -1.3
INTR IAmb IAmb 14 01 55.7
comp=Z,18nm,1.2s
VYHS Vyhne 55.76 327 *eP* P 14 01 57.3 -0.5
LANS Liptovska Anna 55.81 328 *eP* P 14 01 58.9 +0.7
KEST Kesra 56.17 310 P P 14 02 00.3 -0.8
comp=Z,5.7nm,0.8s,baz=14,slow=4.2,SNR=2.9
KEST LR LR 14 26 01.4
comp=Z,45nm,18.2s,baz=327,slow=36
KEST Kesra 56.17 310 P P 14 02 00.1 -1.0
KEST IAmb IAmb 14 02 05.4
comp=Z,8.3nm,0.9s
OJC Ojcow 56.28 329 P P 14 02 00.9 -0.6
OJC IAmb IAmb 14 02 01.7
comp=Z,11nm,1.1s
ZST Bratislava 56.54 326 *eP* P 14 02 03.4 +0.1
MODS Modra-Piesok 56.54 326 *eP* P 14 02 02.2 -1.2
JAVC Velka Javorina 56.60 327 *eP* P 14 02 04.1 +0.3
HHC Hu-ho-hao-te 56.78 44 *eP* P 14 02 05.5 +0.2
HHC pP pwP 14 02 10.8 -2.1
HHC S S 14 09 59.3 +0.7
HHC pmax pmax
comp=Z,14nm,0.9s
HHC pmax pmax
comp=Z,150nm,5.5s
HHC LR LR
comp=Z,300nm,15.5s
HHC LR LR
comp=Z,270nm,17.8s
HHC LR LR
comp=Z,160nm,14.5s
SONM Songino Array 56.82 35 P P 14 02 06.0 +0.5
comp=Z,2.0nm,0.8s,baz=234,slow=7.9,SNR=13
SONM Songino Array 56.82 35 P P 14 02 05.6 +0.1
SOKA Soboth 56.91 324 *eP* P 14 02 06.1 -0.1
comp=Z,14nm,1.3s
ARSA Arzberg 56.92 324 *i* P P 14 02 06.1 0.0
comp=Z,11nm,1.0s,SNR=5.3
LATE Laterza 57.03 318 P P 14 02 05.7 -1.3
CONA Conrad Observa 57.09 325 *i* P P 14 02 07.4 0.0
comp=Z,25nm,1.3s,SNR=9.8
OBKA Obir 57.12 323 *eP* P 14 02 07.7 +0.1
comp=Z,8.2nm,0.9s
SUW Suwalki 57.14 334 P P 14 02 07.0 -0.5
MORC Moravsky Berou 57.19 328 *eP* P 14 02 07.4 -0.6
MORC Moravsky Berou 57.19 328 P P 14 02 07.4 -0.6
MORC IAmb IAmb 14 02 08.8
comp=Z,13nm,0.9s
KRUC Moravsky 57.41 327 *eP* P 14 02 08.6 -0.9
VRAC Vranov 57.44 327 *eP* P 14 02 09.1 -0.6
MYKA Terra Mystica 57.72 323 *eP* P 14 02 11.9 +0.1
comp=Z,11nm,1.0s
KRLC Kraliky 57.77 328 *eP* P 14 02 11.3 -0.8
MOA Molln 57.96 324 *i* P P 14 02 13.4 -0.1
comp=Z,23nm,1.0s,SNR=7.8
ZOU Zoufplan 58.09 323 P P 14 02 14.0 -0.6
ZOU IAmb IAmb 14 02 16.7
comp=Z,11nm,1.2s
STAL STALIGIAL 58.10 322 P P 14 02 13.6 -0.9
STAL IAmb IAmb 14 02 15.3
comp=Z,11nm,1.0s
KBA Koelnbreinsper 58.12 323 *eP* P 14 02 14.0 -0.8
comp=Z,10.0nm,1.1s
DPC Dobruska-Polom 58.16 328 *eP* P 14 02 14.6 -0.3
CIMO Cimolais 58.29 322 P P 14 02 14.8 -1.0
ZCCA Zocca 58.32 320 P P 14 02 16.2 +0.2
TEOL Teolo 58.33 321 P P 14 02 15.6 -0.5
OSTC Ostas 58.34 328 *eP* P 14 02 15.8 -0.2
ABTA Abfaltersbach 58.46 323 *eP* P 14 02 17.2 +0.2
comp=Z,19nm,1.2s
CTI Castel Tesino 58.66 322 P P 14 02 18.0 -0.5
CTI IAmb IAmb 14 02 19.1
comp=Z,8.7nm,0.9s
GERES GERESS Array B 58.80 325 P P 14 02 17.6 -1.8
comp=Z,1.1nm,0.7s,baz=130,slow=6.1,SNR=7.6
GERES GERESS Array B 58.80 325 P P 14 02 17.8 -1.6
KHC Kasperske Hory 59.01 325 *eP* P 14 02 19.2 -1.6
KHC Kasperske Hory 59.01 325 P P 14 02 19.1 -1.6
TOA0 Torodi Ar. Sit 59.16 282 P P 14 02 19.8 -2.5
TORD Torodi Ar. Bea 59.16 282 P P 14 02 22.9 +0.5
comp=Z,1.8nm,0.9s,baz=97,slow=5.1,SNR=8.0
WTTA Wattenberg 59.23 323 *eP* P 14 02 22.3 -0.2
comp=Z,17nm,1.0s
WATA Walderalm 59.30 323 *eP* P 14 02 22.0 -0.9
comp=Z,19nm,1.2s
SQTA Sankt Quirin 59.47 323 *eP* P 14 02 23.1 -1.0
comp=Z,17nm,1.2s
NJ2 Nanjing 59.58 56 *eP* P 14 02 23.5 -1.4
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
MOTA Moosalm 59.59 323 *i* P P 14 02 23.9 -1.1
comp=Z,14nm,0.9s,SNR=5.1
FETA Feichten 59.66 322 *eP* P 14 02 24.8 -0.7
comp=Z,6.2nm,0.9s
RETA Reutte 59.86 323 *eP* P 14 02 25.6 -1.1
comp=Z,10.0nm,1.5s
NKC Novy Kostel 60.21 326 *eP* P 14 02 29.3 +0.3
DAVA Damuels 60.30 322 *eP* P 14 02 29.4 -0.5
comp=Z,9.9nm,1.1s
CLL Collm 60.45 327 *eP* P 14 02 31.0 +0.4
comp=Z,8.0nm,1.1s
CLL Collm 60.45 327 P P 14 02 30.1 -0.5
CLL IAmb IAmb 14 02 32.3
comp=Z,6.9nm,1.1s
NACB Ninganchiao 60.57 66 P P 14 02 30.6 -1.3
FINES FINESS Array B 61.44 342 P P 14 02 36.6 -0.5
comp=Z,2.0nm,0.6s,baz=132,slow=8.0,SNR=7.1

SENIN Lac Senin/Sane 61.52 320 P P 14 02 37.3 -1.0
BFO Black Forest 61.70 323 P P 14 02 38.2 -1.0
BFO IAmb IAmb 14 02 40.0
comp=Z,13nm,1.1s
ECH Echery 62.36 322 P P 14 02 43.1 -0.5
ECH IAmb IAmb 14 02 44.3
comp=Z,9.1nm,1.1s
SSB Saint Sauveur 62.89 318 P P 14 02 46.3 -1.0
SSB IAmb IAmb 14 02 47.9
comp=Z,8.6nm,1.1s
PSA00 Pilbara Seismi 63.45 117 P P 14 02 51.1 -0.1
HFS Hagfors 65.03 336 P P 14 03 00.8 -0.2
comp=Z,6.5nm,0.6s,baz=132,slow=6.2,SNR=11
CLF Chambon-Foret 65.33 321 P P 14 03 02.6 -0.5
DBIC Dimbokro 65.75 275 P P 14 03 07.5 +1.0
comp=Z,4.0nm,0.9s,baz=73,slow=4.7,SNR=3.2
DBIC Dimbokro 65.75 275 IAmb IAmb 14 03 15.4
comp=Z,17nm,1.4s
NB2 NORSAR Subarra 66.55 336 P P 14 03 09.6 -1.2
comp=Z,15nm,1.4s,baz=120,slow=6.2
NOA NORSAR Array B 66.55 336 P P 14 03 10.3 -0.5
comp=Z,1.9nm,0.8s,baz=115,slow=7.1,SNR=4.1
NAO01 NORSAR Array S 66.58 336 P P 14 03 10.3 -0.7
ESBB Sonseca Array 67.38 311 P P 14 03 16.0 -0.5
ESBB IAmb IAmb 14 03 17.5
comp=Z,14nm,1.4s
ESDC Sonseca Array 67.38 311 P P 14 03 15.5 -1.1
comp=Z,3.3nm,1.0s,baz=82,slow=5.1,SNR=13
ESDC Sonseca Array 67.38 311 P P 14 03 15.8 -0.8
KEV Kevo 67.68 348 P P 14 03 17.4 -0.4
ARD4 ARCESS Array S 67.82 347 P P 14 03 18.2 -0.4
ARCES ARCESS Array B 67.83 347 P P 14 03 18.4 -0.3
comp=Z,3.8nm,0.7s,baz=137,slow=6.0,SNR=9.3
ARD9 ARCESS Array S 67.84 347 P P 14 03 18.2 -0.6
KS19 Wonju Array Si 67.94 52 P P 14 03 18.4 -1.7
KSAR Wonju Array Be 67.94 52 P P 14 03 18.6 -1.4
KSRS Korea Array 67.97 52 P P 14 03 19.8 -0.4
comp=Z,3.1nm,0.6s,baz=260,slow=6.6,SNR=14
JTU Tsushima 68.70 55 P P 14 03 23.6 -1.2
SAUI Saumlaki 71.12 100 P P 14 03 38.9 -1.2
MJAR Matsushiro Arr 76.05 54 P P 14 04 10.1 +1.3
comp=Z,0.9nm,0.5s,baz=286,slow=4.0,SNR=2.2
SYO Syowa Base 76.13 188‖ *eP* P 14 04 08.2 -0.2
SYO Syowa Base 76.13 188‖ *es*P sP 14 04 16.2 +5.0
WRA Warramunga Arr 76.14 112 P P 14 04 09.5 -0.1
comp=Z,4.3nm,0.9s,baz=294,slow=4.5,SNR=24
WRA Warramunga Arr 76.14 112 P P 14 04 08.2 -1.3
WRAB Tennant Creek 76.15 112 P P 14 04 08.7 -0.9
WRAB IAmb IAmb 14 04 11.6
comp=Z,7.0nm,1.0s
WB2 Warramunga Arr 76.15 112 P P 14 04 08.7 -0.9
WB2 IAmb IAmb 14 04 18.2
comp=Z,9.8nm,1.1s
WB0 Warramunga Arr 76.16 112 P P 14 04 08.9 -0.8
WB0 IAmb IAmb 14 04 11.4
comp=Z,8.1nm,1.1s
ASAR Alice Springs 76.51 116 P P 14 04 11.8 +0.1
comp=Z,4.9nm,0.9s,baz=285,slow=4.9,SNR=31
ASAR Alice Springs 76.51 116 P P 14 04 08.9 -2.8
AS31 Alice Springs 76.51 116 P P 14 04 08.5 -3.2
TIXI Tiksi 77.57 17 P P 14 04 15.3 -1.3
TIXI IAmb IAmb 14 04 30.5
comp=Z,15nm,1.4s
JMIC Jan Mayen 78.06 342 P P 14 04 20.7 +1.3
baz=170,slow=11
STKA Stephens Creek 84.81 123 P P 14 04 56.6 +0.7
comp=Z,9.9nm,0.8s,baz=282,slow=4.0,SNR=4.6
VNA2 Neumayer--Watz 88.61 198 P P 14 05 14.4 +0.8
VNA3 Neumayer Olymp 89.41 198 P P 14 05 18.9 +1.5
EUNU Eureka 92.74 355 P P 14 05 33.5 +0.7
EUNU IAmb IAmb 14 05 34.4
comp=Z,5.9nm,1.2s
PDAR Pinedale Array 130.98 351 PKP PKPdf 14 11 33.2 -0.2
comp=Z,0.4nm,0.7s,baz=57,slow=5.5,SNR=2.5
NVAR Mina Array Bea 136.02 360 PKP PKiKP 14 11 44.1 -0.5
comp=Z,0.7nm,0.7s,baz=324,slow=2.1,SNR=6.9
TXAR Lajitas Array 142.23 338 PKhKP PKPpre 14 11 49.1
comp=Z,0.7nm,0.7s,baz=48,slow=2.6,SNR=8.2
TXAR PKP PKPdf 14 11 55.3 +0.9
comp=Z,0.5nm,0.8s,baz=104,slow=2.6,SNR=5.3

IDC ***26*** *14:03:28.4±0.6,21.72N×143.56E,h0km,mb4.0/19, mb1 4.2/20,mb1mx4.0/53,mbtmp4.0/20,ML3.6/1,MS3.7/7, Ms1 3.7/7,ms1mx3.4/60,Error ellipse: s-maj=20.0km s-min=15.2km az=91.0*
NEIC ***26*** *14:03:29.5±1.9,21.74N±0.09×143.58E±0.09,h10km±1km, mb4.4/24,Error ellipse: s-maj=17.1km s-min=12.0km az=317.0*

ISC 26 14:03:33.2±0.6,21.76N±0.08×143.6E±0.1,h35km,n68, σ1$06/56,mb4.1/26,MS3.6/3,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.46**	**347**		**Pn**	**14 04 52.1**	**0.0**
GUMO	**Guam**	**8.22**	**171**	LR	LR	14 08 04.3	
	comp=Z,286nm,18.5s,baz=312,slow=34						
JHJ	**Hachijo jima 2**	**11.81**	**344**	LR	LR	14 10 27.9	
	comp=Z,486nm,20.0s,baz=120,slow=36						
INU	**Inuyama**	**14.71**	**338**		**P**	**14 07 02.1**	**-2.3**
JGF	**Kuroka**	**14.83**	**340**		**P**	**14 07 04.5**	**-1.2**
JWT	**Wachi**	**15.27**	**334**		**P**	**14 07 10.8**	**+0.2**
JWT				IAmb	IAmb	14 07 38.9	
	comp=Z,33nm,1.4s						
MJAR	**Matsushiro Arr**	**15.46**	**343**	Pn	**Pn**	**14 07 09.8**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=160,slow=9.8,SNR=14						
MJAR				LR	LR	14 12 46.5	
	comp=Z,307nm,18.4s,baz=170,slow=36						
MJAR	**Matsushiro Arr**	**15.46**	**343**		**Pn**	**14 07 08.5**	**0.0**
MAJO	**Matsushiro**	**15.46**	**343**	P	**P**	**14 07 12.7**	**0.0**
MJB9	**Matsu-Tunnel**	**15.46**	**343**	Pn	**Pn**	**14 07 09.0**	**+0.4**
JNU	**Nakatsue**	**15.97**	**318**	LR	LR	14 11 51.8	
	comp=Z,209nm,20.4s,baz=90,slow=32						
JMM	**Marumori**	**16.23**	**352**	Pn	**Pn**	**14 07 17.3**	**-1.1**
JMM				IAmb	IAmb	14 07 24.4	
	comp=Z,69nm,1.2s						
JSD	**Sado**	**16.86**	**345**	Pn	**Pn**	**14 07 24.9**	**-1.5**
JSD				IAmb	IAmb	14 07 32.9	
	comp=Z,69nm,1.4s						
JTM	**Tenmabayashi**	**19.09**	**354**	P	**P**	**14 07 52.4**	**-0.3**
KSRS	**Korea Array**	**20.70**	**323**	P	Pn	14 08 13.0	+0.2
	comp=Z,3.7nm,0.9s,baz=145,slow=9.8,SNR=14						
KSRS				LR	LR	14 15 33.8	
	comp=Z,246nm,18.4s,baz=125,slow=35						
KS19	**Wonju Array Si**	**20.76**	**323**	P	**P**	**14 08 09.7**	**-1.3**
KS19				IAmb	IAmb	14 08 24.5	
	comp=Z,23nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**21.87**	**91**	T	T	14 31 01.7	
	baz=279,slow=75						
H11N2	**WAKE ISLAND Hy**	**21.88**	**91**	T	T	14 31 02.2	
	baz=279,slow=75						
H11N3	**WAKE ISLAND Hy**	**21.89**	**91**	T	T	14 31 01.9	
	baz=279,slow=75						
H11S3	**WAKE ISLAND Hy**	**21.91**	**94**	T	T	14 31 01.5	
	baz=281,slow=75						
H11S1	**WAKE ISLAND Hy**	**21.92**	**94**	T	T	14 31 05.0	
	baz=281,slow=75						
H11S2	**WAKE ISLAND Hy**	**21.93**	**94**	T	T	14 31 02.2	
	baz=281,slow=75						
JKA	**Kamikawa-asahi**	**22.31**	**358**	P	**P**	**14 08 27.1**	**-0.5**
JKA				IAmb	IAmb	14 08 43.6	
	comp=Z,10nm,0.8s						
USRK	**Ussuriysk Ar.**	**24.35**	**339**	P	**P**	**14 08 49.9**	**+2.1**
	comp=Z,1.3nm,0.7s,baz=135,slow=9.3,SNR=2.4						
USRK	**Ussuriysk Ar.**	**24.35**	**339**	P	**P**	**14 08 47.6**	**-0.1**
PETK	**Petropavlovsk-**	**33.11**	**16**	LR	LR	14 21 34.3	
	comp=Z,89nm,20.2s,baz=210,slow=33						
SMY	**Shemya**	**38.76**	**30**	P	**P**	**14 10 51.4**	**-2.7**
SONM	**Songino Array**	**39.54**	**320**	P	**P**	**14 11 00.7**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=124,slow=7.4,SNR=3.8						
SONM				LR	LR	14 27 28.9	
	comp=Z,290nm,18.4s,baz=201,slow=36						
CMAR	**Chiang Mai Arr**	**41.96**	**274**	P	**P**	**14 11 22.1**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=71,slow=6.9,SNR=1.8						
WB0	**Warramunga Arr**	**42.25**	**193**	P	**P**	**14 11 22.9**	**-0.3**
WR0	**Warramunga Arr**	**42.40**	**193**	P	**P**	**14 11 24.1**	**-0.3**
WR0				IAmb	IAmb	14 11 33.9	
	comp=Z,9.9nm,1.4s						
WRAB	**Tennant Creek**	**42.42**	**193**	P	**P**	**14 11 24.0**	**-0.6**
WRAB				IAmb	IAmb	14 11 31.6	
	comp=Z,6.7nm,1.1s						
WB2	**Warramunga Arr**	**42.42**	**193**	P	**P**	**14 11 24.5**	**-0.2**
WB2				IAmb	IAmb	14 11 34.7	
	comp=Z,9.4nm,1.3s						
WRA	**Warramunga Arr**	**42.43**	**193**	P	**P**	**14 11 24.5**	**-0.2**

comp=Z,3.7nm,1.1s,baz=12,slow=9.6,SNR=16
WRA Warramunga Arr 42.43 193 P P 14 11 24.8 +0.1
WC3 Warramunga Arr 42.44 193 P P 14 11 24.7 -0.1
FITZ Fitzroy Crossi 43.34 205 P P 14 11 32.8 +0.7
FITZ IAmb IAmb 14 11 33.0
comp=Z,9.6nm,1.3s
ASAR Alice Springs 46.13 192 P P 14 11 54.3 0.0
comp=Z,0.9nm,0.6s,baz=18,slow=11,SNR=21
ASAR Alice Springs 46.13 192 P P 14 11 54.4 +0.1
EIDS Eidsvold 47.41 171 P P 14 12 02.7 -1.5
EIDS IAmb IAmb 14 12 11.0
comp=Z,6.0nm,1.1s
STKA Stephens Creek 53.37 182 P P 14 12 48.5 -0.7
comp=Z,2.2nm,1.0s,baz=351,slow=13,SNR=3.9
STKA Stephens Creek 53.37 182 IAmb IAmb 14 12 51.1
comp=Z,1.7nm,1.4s
ZAA0 Zalesovo Array 54.40 322 P P 14 12 56.3 -0.2
ZAA0 IAmb IAmb 14 13 05.0
comp=Z,4.4nm,0.9s
ZALV Zalesovo Beam 54.40 322 P P 14 12 56.0 -0.6
comp=Z,2.3nm,0.9s,baz=90,slow=5.9,SNR=5.2
ZALV Zalesovo Beam 54.40 322 P P 14 12 55.7 -0.9
MKAR Makanchi Array 54.94 313 P P 14 13 00.5 -0.2
comp=Z,0.9nm,0.8s,baz=105,slow=7.6,SNR=6.5
MKAR Makanchi Array 54.94 313 P P 14 12 60.0 -0.7
KURBB Kurchatov Arra 57.74 317 P P 14 13 20.2 -0.3
comp=Z,1.7nm,0.8s,baz=94,slow=7.5,SNR=11
TRF Thorofare Moun 60.10 28 P P 14 13 37.2 +0.4
ILAR Eielson Array 61.80 27 P P 14 13 48.0 -0.3
comp=Z,1.0nm,0.8s,baz=260,slow=5.9,SNR=10
BVAR Borovoye Array 62.88 319 P P 14 13 56.4 +0.8
comp=Z,0.8nm,0.5s,baz=89,slow=8.9,SNR=4.5
BMAR Burnt Mountain 63.13 24 P P 14 13 58.3 +1.2
KK05 Karatay Array 63.31 308 P P 14 13 59.2 +0.5
KK06 Karatay Array 63.31 308 P P 14 13 58.5 -0.2
KKAR Karatay Array 63.32 308 P P 14 13 58.3 -0.5
KK04 Karatay Array 63.32 308 P P 14 13 58.3 -0.5
INK Inuvik 67.35 24 P P 14 14 25.3 +1.0
comp=Z,1.4nm,0.8s,baz=289,slow=5.6,SNR=6.4
ABKAR Akbulak array 69.77 316 P P 14 14 39.1 -0.7
DLBC Dease Lake 69.85 34 P P 14 14 41.5 +1.3
comp=Z,1.4nm,0.8s,baz=286,slow=10.0,SNR=4.2
YKA Yellowknife Ar 76.22 28 P P 14 15 18.4 +0.7
comp=Z,0.6nm,0.4s,baz=294,slow=4.9,SNR=9.5
YBH Yreka Blue Hor 78.48 50 P P 14 15 32.8 +1.9
comp=Z,0.8nm,0.5s,baz=120,slow=5.9,SNR=4.2
ARCES ARCESS Array B 78.98 342 P P 14 15 35.0 +2.0
comp=Z,3.3nm,0.7s,baz=38,slow=8.0,SNR=3.5
NEW Newport 79.97 42 P P 14 15 40.2 +1.4
comp=Z,1.0nm,0.4s,baz=310,slow=7.9,SNR=1.6
NVAR Mina Array Bea 82.80 52 P P 14 15 55.8 +1.5
comp=Z,0.7nm,0.6s,baz=273,slow=5.9,SNR=8.8
NVAR Mina Array Bea 82.80 52 P P 14 15 52.1 -2.2
FINES FINESS Array B 83.29 335 P P 14 15 57.7 +1.7
comp=Z,1.3nm,0.8s,baz=46,slow=5.5,SNR=5.0
PLCA Paso Flores 145.51 131 PKPbc PKPab 14 23 08.9 +0.7
comp=Z,0.7nm,0.4s,baz=310,slow=9.5,SNR=3.1
LPAZ La Paz 149.54 85 PKPbc PKPbc 14 23 20.9 +0.4
comp=Z,1.9nm,0.8s,baz=284,slow=3.7,SNR=5.9

*SOME **26** 14:14:04.5,39.97N×77.88E,h5km*
*NNC **26** 14:14:06.2±1.8, 40.04N×77.98E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=11.8km s-min=10.7km az=19.0*
*KRNET **26** 14:14:08.2±0.1, 39.97N×77.14E, mb2.5*
ISC 26 14:13:59.2±2.1, 39.77N±0.09×77.80E±0.06, h10km, n26, σ1§34/41, 7C-5D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**2.41**	**349**	⇑*iP*	**Pg**	**14 14 47.7**	**+2.3**
	baz=1.0						
KDJ				⇑*iS*	**Sg**	**14 15 16.7**	**+0.1**
	baz=1.0						
ANVS	**Anan'yevo**	**3.02**	**358**	⇓*iP*	**Pg**	**14 14 57.2**	**+0.2**
	baz=8.0						
ANVS				⇓*iS*	**Sg**	**14 15 33.5**	**-2.6**
	baz=8.0						
BOOM	**Boomskoye usch**	**3.06**	**333**	⇓*iP*	**Pb**	**14 14 55.3**	**+1.4**
	baz=41						
BOOM				⇓*iS*	**Sb**	**14 15 28.9**	**-2.5**
	baz=41						
SFK	**Sufi-Kurgan**	**3.31**	**276**	⇑*iP*	**Pb**	**14 14 56.8**	**-1.4**
	baz=72						
SFK				⇑*iS*	**Sn**	**14 15 32.0**	**+1.1**
	baz=72						
SATY	**Saty**	**3.32**	**8**	*eP*	**Pg**	**14 15 02.3**	**-0.5**
	2.6nm,0.6s						
SATY				*eS*	**Sg**	**14 15 44.4**	**-1.5**
	9.9nm,0.7s						
SATY	**Saty**	**3.32**	**8**	Pg	**Pg**	**14 15 02.3**	**-0.5**
	2.6nm,0.6s						
SATY				Lg	Lg	14 15 44.1	
	12nm,0.6s						
TNSS	**Tian-Shan**	**3.33**	**349**	*eP*	**Pg**	**14 15 02.6**	**-0.4**
	8.3nm,0.6s						
TNSS				*eS*	**Sg**	**14 15 44.9**	**-1.3**
	9.1nm,0.5s						
TNSS	**Tian-Shan**	**3.33**	**349**	Pg	**Pg**	**14 15 03.4**	**+0.4**
	8.3nm,0.4s						
TNSS				Lg	Lg	14 15 44.9	
	9.1nm,0.5s						
IZV	**Izvestkoviy**	**3.39**	**345**	*eP*	**Pg**	**14 15 03.9**	**-0.1**
	4.3nm,0.3s						
IZV				*eS*	**Sg**	**14 15 46.7**	**-1.2**
	15nm,0.5s						
IZV	**Izvestkoviy**	**3.39**	**345**	Pg	**Pg**	**14 15 04.5**	**+0.4**
	4.3nm,0.3s						
IZV				Lg	Lg	14 15 47.1	
	15nm,0.6s						
MDOK	**Medeo**	**3.44**	**351**	*eP*	**Pg**	**14 15 05.3**	**+0.2**
	4.6nm,0.4s						
MDOK				*eS*	**Sg**	**14 15 48.9**	**-0.8**
	12nm,0.5s						
MDOK	**Medeo**	**3.44**	**351**	Pg	**Pg**	**14 15 05.3**	**+0.2**
	4.6nm,0.4s						
MDOK				Lg	Lg	14 15 48.3	
	12nm,0.6s						
UZB	**Uzynbulak**	**3.50**	**15**	*eP*	**Pg**	**14 15 05.2**	**-1.1**
	2.4nm,0.7s						
UZB				*eS*	**Sg**	**14 15 48.8**	**-2.8**
	5.4nm,0.9s						
UZB	**Uzynbulak**	**3.50**	**15**	Pg	**Pg**	**14 15 05.5**	**-0.8**
	2.5nm,0.6s						
UZB				Lg	Lg	14 15 48.8	
	5.4nm,0.9s						
KOTS	**Kotyrbulak**	**3.50**	**352**	*eP*	**Pg**	**14 15 06.5**	**+0.2**
	6.3nm,0.4s						
KOTS				*eS*	**Sg**	**14 15 51.1**	**-0.6**
	37nm,0.5s						
KOTS	**Kotyrbulak**	**3.50**	**352**	Pg	**Pg**	**14 15 06.5**	**+0.2**
	6.3nm,0.4s						
KOTS				Lg	Lg	14 15 51.1	
	12nm,0.6s						
KNDC	**Almaty**	**3.50**	**350**	⇓Pg	**Pb**	**14 15 03.8**	**+2.5**
	7.3nm,0.4s						
KNDC				⇑Lg	Lg	14 15 48.8	
	18nm,0.5s						
KST	**Kastek**	**3.55**	**338**	*eP*	**Pg**	**14 15 07.5**	**+0.3**
	1.8nm,0.1s						
KST				*eS*	**Sg**	**14 15 52.9**	**-0.4**
	9.1nm,0.8s						
KST	**Kastek**	**3.55**	**338**	Pg	**Pg**	**14 15 08.3**	**+1.1**
	2.4nm,0.3s						
KST				Lg	Lg	14 15 52.9	
	9.1nm,0.8s						
SHLS	**Shalkode**	**3.61**	**20**	*eP*	**Pg**	**14 15 09.8**	**+1.4**
	4.4nm,0.2s						
SHLS				*eS*	**Sg**	**14 15 56.4**	**+1.2**
	9.4nm,0.7s						
PDGK	**Podgornoye**	**3.78**	**19**	Pg	**Pg**	**14 15 09.9**	**-1.7**
	0.7nm,0.6s						
PDGK				Lg	Lg	14 15 56.7	
	2.3nm,0.8s						
PDGK	**Podgornoye**	**3.78**	**19**	⇑Pg	**Pb**	**14 15 08.3**	**+2.2**
	1.4nm,0.7s						
PDGK				⇑Lg	Lg	14 15 55.4	
	4.1nm,0.6s						
DGS	**Degeres**	**3.79**	**337**	*eP*	**Pg**	**14 15 11.7**	**-0.1**
	3.1nm,0.5s						
DGS				*eS*	**Sg**	**14 16 00.1**	**-0.8**
	7.1nm,0.6s						
KRBS	**Karabastau**	**4.24**	**339**	*eP*	**Pg**	**14 15 19.4**	**-0.9**
	2.1nm,0.4s						
KRBS				*eS*	**Sg**	**14 16 13.4**	**-1.7**
	3.9nm,0.4s						
KRBS	**Karabastau**	**4.24**	**339**	Pg	**Pg**	**14 15 19.4**	**-0.9**
	2.1nm,0.4s						
KRBS				Lg	Lg	14 16 13.4	
	3.9nm,0.4s						
MRKS	**Merke**	**4.55**	**312**	*eP*	**Pg**	**14 15 27.4**	**+1.0**
	0.8nm,0.2s						
MRKS				*eS*	**Sg**	**14 16 26.9**	**+1.6**
	2.4nm,0.7s						

*NEIC **26** 14:15:40.5±1.9, 50.54N±0.09×139.7W±0.1, h10km±1km, mb4.3/109, Mwr4.7(OTT), Error ellipse: s-maj=15.7km s-min=12.3km az=213.0*
*IDC **26** 14:15:42.0±1.1, 51.07N×139.05W, h0km, mb4.0/12, mb1 4.2/17, mb1mx3.9/56, mbtmp4.0/17, ML3.5/5, MS3.6/6, Ms1 3.7/6, ms1mx3.5/65, Error ellipse: s-maj=33.2km s-min=14.2km az=32.0*
*PGC **26** 14:15:43.9±1.2, 50.83N×139.04W, h10km, MLSn4.1/2, Mw4.7/2, 562km Wsw of Sandspit, Bc West Of Vancouver Island*
ISC 26 14:15:40.7±0.6, 50.64N±0.06×139.50W±0.06, h10km, n371, σ1§60/371, mb4.3/44, West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIB	**Dawson Inlet,**	**5.05**	**57**	Pn	**Pn**	**14 16 53.5**	**-2.9**
DIB				Sn	Sn	14 17 45.2	-9.5
DIB	**Dawson Inlet,**	**5.05**	**57**	Pn	**Pn**	**14 16 53.5**	**-2.9**
HG1B	**Mitchell Dam**	**5.12**	**61**	Pn	**Pn**	**14 16 55.1**	**-2.2**
HG1B				Sn	Sn	14 17 46.7	-10
NDB	**Naden**	**5.21**	**48**	Pn	**Pn**	**14 16 57.2**	**-1.5**
MOBC	**Moresby Island**	**5.29**	**59**	Pn	**Pn**	**14 16 57.3**	**-2.6**
MOBC				Sn	Sn	14 17 52.7	-8.2
HG4B	**Hotspring**	**5.45**	**69**	Pn	**Pn**	**14 16 58.5**	**-3.4**
HG4B				Sn	Sn	14 17 55.4	-9.2
BNAB	**Bonilla**	**6.17**	**59**	Pn	**Pn**	**14 17 11.1**	**-0.7**
CRAG	**Craig**	**6.17**	**36**		**Pn**	**14 17 12.3**	**+0.4**
GRNB	**Grenville Isla**	**6.68**	**58**	Pn	**Pn**	**14 17 18.0**	**-0.9**
GRNB				Sn	Sn	14 18 27.9	-7.0
RUBB	**Prince Rupert**	**6.75**	**53**	Pn	**Pn**	**14 17 19.5**	**-0.1**
RUBB				Sn	**Sn**	**14 18 29.9**	**-6.5**
SIT	**Sitka**	**6.88**	**19**	Pn	**Pn**	**14 17 22.2**	**+0.7**
HWKB	**Hawksbury Isla**	**7.02**	**61**	Pn	**Pn**	**14 17 23.3**	**-0.3**
HWKB				Sn	**Sn**	**14 18 37.4**	**-6.1**
WRAK	**Wrangell Islan**	**7.18**	**34**		**Pn**	**14 17 27.5**	**+1.8**
HOLB	**Holberg**	**7.23**	**86**	Pn	**Pn**	**14 17 26.4**	**-0.1**
BUTB	**Butedale**	**7.25**	**66**	Pn	**Pn**	**14 17 26.2**	**-0.6**
BBB	**Bella Bella**	**7.29**	**73**	Pn	**Pn**	**14 17 26.0**	**-1.2**
	1.4nm,0.3s,baz=266,slow=5.9,SNR=17						
BBB				Sn	Sn	14 18 42.5	-7.3
	1.8nm,0.3s,baz=57,slow=18,SNR=1.3						
BBB	**Bella Bella**	**7.29**	**73**	Pn	**Pn**	**14 17 25.9**	**-1.2**
BBB				Sn	Sn	14 18 42.5	-7.3
BBB	**Bella Bella**	**7.29**	**73**	Pn	**Pn**	**14 17 25.9**	**-1.3**
KEMF	**NEPTUNE Canada**	**7.32**	**108**	Pn	**Pn**	**14 17 27.7**	**+0.4**
KITB	**Kitimat**	**7.49**	**58**	Pn	**Pn**	**14 17 29.3**	**-0.5**
KITB				Sn	Sn	14 18 47.7	-7.0
PHC	**Port Hardy**	**7.67**	**85**	Pn	**Pn**	**14 17 30.6**	**-1.8**
MAYB	**Maynard**	**7.86**	**87**	Pn	**Pn**	**14 17 34.3**	**-0.9**
TLCB	**Telegraph Cove**	**8.06**	**86**	Pn	**Pn**	**14 17 37.9**	**+0.1**
JIS	**Juneau Island**	**8.21**	**19**		**Pn**	**14 17 41.8**	**+2.1**
WOSB	**Woss**	**8.28**	**88**	Pn	**Pn**	**14 17 41.0**	**+0.2**
BESE	**Bessie Mountai**	**8.40**	**17**	Pn	**Pn**	**14 17 44.2**	**+1.8**
BESE	**Bessie Mountai**	**8.40**	**17**	Pn	**Pn**	**14 17 44.3**	**+1.9**
NCRB	**Newcastle Ridg**	**8.57**	**86**	Pn	**Pn**	**14 17 43.6**	**-1.3**
YKUJ	**Yakutat**	**8.89**	**359**	Pn	**Pn**	**14 17 52.6**	**+3.6**
PLBC	**Pleasant Camp**	**9.01**	**10**	Pn	**Pn**	**14 17 53.5**	**+2.7**
PLBC				Sn	**Sn**	**14 19 29.6**	**-2.7**
PNL	**Peninsula**	**9.05**	**0**	Pn	**Pn**	**14 17 53.4**	**+2.1**
CBB	**Campbell River**	**9.06**	**88**	Pn	**Pn**	**14 17 52.1**	**+0.6**
SKAG	**Skagway**	**9.15**	**14**		**Pn**	**14 17 55.6**	**+2.9**
BCPM	**Bancas Point**	**9.33**	**360**	Pn	**Pn**	**14 17 57.4**	**+2.2**
PCA	**Pinnacle**	**9.49**	**358**	Pn	**Pn**	**14 17 59.2**	**+1.9**
PCA	**Pinnacle**	**9.49**	**358**		**Pn**	**14 17 59.2**	**+1.9**
SAMH	**Samovar Hills**	**9.54**	**356**	Pn	**Pn**	**14 18 00.5**	**+2.4**
DLBC	**Dease Lake**	**9.55**	**31**	Pn	**Pn**	**14 18 01.1**	**+3.0**
	1.3nm,0.3s,baz=206,slow=13,SNR=28						
DLBC				LR	LR	14 21 06.2	
	comp=Z,422nm,19.9s,baz=291,slow=36						
DLBC	**Dease Lake**	**9.55**	**31**	Pn	**Pn**	**14 18 00.9**	**+2.7**
DLBC	**Dease Lake**	**9.55**	**31**	Pn	**Pn**	**14 18 00.9**	**+2.7**
MID	**Middleton Isla**	**9.63**	**339**		**Pn**	**14 17 58.7**	**-0.5**
Q23K	**Middleton Isla**	**9.64**	**339**	P	**Pn**	**14 17 58.5**	**-0.8**
	baz=154						
Q23K	**Middleton Isla**	**9.64**	**339**	Pn	**Pn**	**14 17 58.7**	**-0.6**
MESA	**MESA**	**9.66**	**353**	Pn	**Pn**	**14 18 01.7**	**+1.9**
MESA	**MESA**	**9.66**	**353**	Pn	**Pn**	**14 18 01.4**	**+1.6**
KAIM	**Kayak Island**	**9.71**	**345**	Pn	**Pn**	**14 18 01.7**	**+1.3**
RKAV	**Rock Avalanche**	**9.74**	**355**	Pn	**Pn**	**14 18 02.9**	**+2.1**
SUCK	**Suckling Hills**	**9.76**	**347**		**Pn**	**14 18 02.5**	**+1.5**
YAH	**Yahtse**	**9.82**	**353**		**Pn**	**14 18 03.5**	**+1.4**
TABL	**Table Mountain**	**9.86**	**355**	Pn	**Pn**	**14 18 04.7**	**+2.0**
TABL	**Table Mountain**	**9.86**	**355**	Pn	**Pn**	**14 18 04.4**	**+1.8**
YUK7	**Dusty Glacier**	**9.94**	**4**	Pn	**Pn**	**14 18 07.6**	**+3.9**
HMT	**Hamilton**	**10.08**	**346**		**Pn**	**14 18 06.5**	**+1.1**
SHB	**Sechelt**	**10.09**	**90**	Pn	**Pn**	**14 18 06.3**	**+1.0**
ISLE	**Juniper Island**	**10.11**	**352**		**Pn**	**14 18 07.4**	**+1.4**
GRNC	**Granite Creek**	**10.19**	**354**	Pn	**Pn**	**14 18 09.1**	**+1.9**
GRNC				Sn	**Sn**	**14 19 59.1**	**-2.4**
RAGM	**Ragged Mountai**	**10.19**	**345**	Pn	**Pn**	**14 18 07.7**	**+0.7**
LOGN	**Logan Glacier**	**10.24**	**356**	Pn	**Pn**	**14 18 09.8**	**+2.1**
HYT	**Haines Junctio**	**10.27**	**5**	Pn	**Pn**	**14 18 11.6**	**+3.5**
HYT				Sn	**Sn**	**14 20 00.3**	**-2.9**
HYT	**Haines Junctio**	**10.27**	**5**	Pn	**Pn**	**14 18 11.4**	**+3.3**
TGL	**Tana Glacier**	**10.31**	**351**		**Pn**	**14 18 10.2**	**+1.5**
CRQM	**Cirque**	**10.34**	**350**	Pn	**Pn**	**14 18 09.9**	**+0.8**
YUK6	**Outpost Mounta**	**10.35**	**3**	Pn	**Pn**	**14 18 12.8**	**+3.6**
WHY	**Whitehorse**	**10.37**	**13**	Pn	**Pn**	**14 18 13.0**	**+3.6**
WHY				Sn	**Sn**	**14 20 03.4**	**-2.3**
WHY	**Whitehorse**	**10.37**	**13**		**Pn**	**14 18 12.8**	**+3.3**
CTGM	**Chitina Glacie**	**10.40**	**355**	Pn	**Pn**	**14 18 12.0**	**+2.1**
CTGM	**Chitina Glacie**	**10.40**	**355**		**Pn**	**14 18 11.5**	**+1.7**
KIAG	**Kiagna River**	**10.43**	**352**	Pn	**Pn**	**14 18 12.2**	**+1.8**
OHAK	**Old Harbor**	**10.45**	**314**	Pn	**Pn**	**14 18 08.3**	**-2.1**
KDAK	**Kodiak Island**	**10.47**	**318**	Pn	**Pn**	**14 18 09.5**	**-1.2**
WPB	**Watts Point**	**10.51**	**89**	Pn	**Pn**	**14 18 14.0**	**+2.8**
BARN	**Barnard Glacie**	**10.51**	**354**		**Pn**	**14 18 12.9**	**+1.4**
EYAK	**Cordova Ski Ar**	**10.53**	**343**		**Pn**	**14 18 11.8**	**+0.3**
SII	**Sitkinak Islan**	**10.54**	**310**	Pn	**Pn**	**14 18 08.5**	**-3.1**
BALM	**Baldy**	**10.54**	**352**	Pn	**Pn**	**14 18 13.6**	**+1.8**
BALM	**Baldy**	**10.54**	**352**		**Pn**	**14 18 13.2**	**+1.4**
HIN	**Hinchinbrook I**	**10.54**	**341**	Pn	**Pn**	**14 18 12.3**	**+0.5**
YUK5	**Granite Creek**	**10.55**	**4**	Pn	**Pn**	**14 18 15.2**	**+3.2**
PGC	**Sidney**	**10.60**	**95**	Pn	**Pn**	**14 18 15.3**	**+2.7**
WSLR	**Whistler**	**10.60**	**86**	Pn	**Pn**	**14 18 14.8**	**+2.2**
PTPK	**Patty Peak**	**10.70**	**352**	Pn	**Pn**	**14 18 16.1**	**+2.0**
YUK4	**Talbot Arm**	**10.74**	**2**	Pn	Pn	14 18 20.1	+5.5
YUK4				Sn	**Sn**	**14 20 15.9**	**+1.1**
VRDI	**Verde Repeater**	**10.84**	**350**	Pn	**Pn**	**14 18 17.2**	**+1.2**
FID	**Port Fidalgo**	**10.86**	**342**		**Pn**	**14 18 16.8**	**+0.8**
MCARA	**McCarthy VSAT**	**10.94**	**351**	Pn	**Pn**	**14 18 18.0**	**+0.8**
CHIR	**Chirikof Islan**	**10.96**	**304**	Pn	**Pn**	**14 18 14.9**	**-2.5**
SEW	**Seward**	**11.03**	**333**	Pn	**Pn**	**14 18 17.5**	**-0.8**
DIV	**Divide**	**11.08**	**344**	Pn	**Pn**	**14 18 20.5**	**+1.4**
GLB	**Gilahina Butte**	**11.09**	**349**	Pn	**Pn**	**14 18 20.0**	**+0.8**
GLI	**Glacier Island**	**11.11**	**340**		**Pn**	**14 18 19.5**	**+0.1**
CNPM	**China Poot**	**11.14**	**328**	Pn	**Pn**	**14 18 18.6**	**-1.3**
YUK3	**Moose Creek**	**11.17**	**358**	Pn	**Pn**	**14 18 24.4**	**+3.9**
YUK3				Sn	**Sn**	**14 20 24.3**	**-1.2**
LLLB	**Lillooet**	**11.20**	**83**	Pn	**Pn**	**14 18 22.2**	**+1.4**
YUK2	**White River**	**11.20**	**357**	Pn	**Pn**	**14 18 24.8**	**+4.0**
BRLK	**Bradley Lake**	**11.20**	**329**	Pn	**Pn**	**14 18 19.6**	**-1.2**
D03D	**Eldon**	**11.20**	**100**	P	**Pn**	**14 18 21.7**	**+0.9**
	baz=292						
N25K	**Chitina, Valde**	**11.35**	**348**	P	**Pn**	**14 18 24.4**	**+1.6**
	baz=164,SNR=37						
N25K				S	**Sn**	**14 20 28.3**	**-1.2**
	baz=164						
N25K	**Chitina, Valde**	**11.35**	**348**		**Pn**	**14 18 24.1**	**+1.3**
HOM	**Homer**	**11.38**	**327**	P	**Pn**	**14 18 22.9**	**-0.2**
	baz=138						
O22K	**Cooper Landing**	**11.42**	**334**	P	**Pn**	**14 18 23.9**	**+0.3**
	baz=146,SNR=21						
O22K				S	**Sn**	**14 20 28.7**	**-2.3**
	baz=146						
O22K	**Cooper Landing**	**11.42**	**334**		**Pn**	**14 18 23.8**	**+0.1**
KLU	**Klutina**	**11.44**	**344**		**Pn**	**14 18 24.8**	**+0.6**
YUK1	**Sand Pete Hill**	**11.55**	**358**	Pn	**Pn**	**14 18 29.6**	**+4.0**
BVCY	**Beaver Creek**	**11.82**	**357**	Pn	**Pn**	**14 18 33.3**	**+4.0**
KNK	**Knik Glacier**	**11.88**	**339**		**Pn**	**14 18 30.2**	**+0.1**
RC01	**Rabbit Creek A**	**11.93**	**335**	P	**Pn**	**14 18 30.7**	**+0.1**
	baz=148,SNR=16						
E04D	**Cinebar**	**11.93**	**103**	P	**Pn**	**14 18 31.7**	**+1.0**
	baz=296						
SCM	**Sheep Creek Mo**	**12.02**	**342**		**Pn**	**14 18 32.7**	**+0.8**
NBC5	**NorthernBC 5**	**12.02**	**49**	Pn	**Pn**	**14 18 34.2**	**+2.1**
M24K	**Tolsona, Glenn**	**12.06**	**345**	P	**Pn**	**14 18 34.1**	**+1.5**
	baz=160,SNR=151						
M24K	**Tolsona, Glenn**	**12.06**	**345**	Pn	**Pn**	**14 18 34.0**	**+1.5**
G03D	**McMinnville, O**	**12.16**	**110**	P	**Pn**	**14 18 35.4**	**+1.5**
	baz=302						
PMR	**Palmer**	**12.20**	**338**	Pn	**Pn**	**14 18 34.6**	**+0.3**
SML	**Sawmill**	**12.21**	**340**	Pn	**Pn**	**14 18 35.2**	**+0.7**
GHO	**Glory Hole Cre**	**12.31**	**339**	Pn	**Pn**	**14 18 36.6**	**+0.7**
LON	**Longmire**	**12.32**	**102**		**Pn**	**14 18 38.2**	**+2.1**
FMW	**Mount Fremont**	**12.33**	**101**	Pn	**Pn**	**14 18 39.1**	**+2.7**
RSO	**Redoubt South**	**12.35**	**328**		**Pn**	**14 18 36.1**	**-0.4**
SUA	**Susitna One**	**12.51**	**334**	Pn	**Pn**	**14 18 39.0**	**+0.3**
MENT	**Mentasta**	**12.54**	**351**		**Pn**	**14 18 41.4**	**+2.4**
FNBB	**Fort Nelson**	**12.57**	**43**	Pn	**Pn**	**14 18 42.6**	**+3.1**
L26K	**Log Cabin Wild**	**12.59**	**352**	P	**Pn**	**14 18 42.6**	**+2.9**
	baz=169,SNR=25						
CHGN	**Chignik**	**12.59**	**304**		**Pn**	**14 18 38.2**	**-1.5**
PAX	**Paxson**	**12.78**	**348**	Pn	**Pn**	**14 18 45.0**	**+2.7**
PAX	**Paxson**	**12.78**	**348**		**Pn**	**14 18 43.8**	**+1.5**
LTY	**Liberty**	**12.83**	**98**		**Pn**	**14 18 44.7**	**+1.6**
CNBA	**Chernabura Isl**	**12.86**	**297**	Pn	**Pn**	**14 18 40.7**	**-2.7**
F05D	**White Salmon**	**12.92**	**105**	P	**Pn**	**14 18 46.6**	**+2.3**
	baz=298						
I03D	**Drain, OR**	**12.99**	**116**	P	**Pn**	**14 18 46.5**	**+1.3**
	baz=307						
J01E	**Myrtle Point**	**13.00**	**119**	P	**Pn**	**14 18 46.9**	**+1.6**
	baz=310						
SKT	**Skwentna**	**13.15**	**334**		**Pn**	**14 18 47.7**	**+0.3**
NBC6	**NorthernBC 6**	**13.16**	**46**	Pn	**Pn**	**14 18 51.2**	**+3.7**
DHY	**Denali Highway**	**13.17**	**344**		**Pn**	**14 18 49.2**	**+1.4**
CUT	**Cutbluhtno**	**13.18**	**338**	P	**Pn**	**14 18 48.7**	**+1.1**
	baz=149,SNR=35						
DOT	**Dot Lake**	**13.27**	**351**	Pn	**Pn**	**14 18 51.8**	**+2.8**
DOT	**Dot Lake**	**13.27**	**351**	Pn	**Pn**	**14 18 51.0**	**+2.1**
B08A	**Colville Reser**	**13.30**	**92**	Pn	**Pn**	**14 18 51.2**	**+1.7**
B08A	**Colville Reser**	**13.30**	**92**	Pn	**Pn**	**14 18 51.2**	**+1.7**
RIDG	**Independent Ri**	**13.44**	**350**	Pn	**Pn**	**14 18 54.0**	**+2.6**
K02D	**Willamette Mer**	**13.45**	**120**	P	**Pn**	**14 18 53.8**	**+2.2**
	baz=311						
DAWY	**Dawson**	**13.46**	**0**	Pn	**Pn**	**14 18 55.5**	**+4.0**
DAWY	**Dawson**	**13.46**	**0**	Pn	**Pn**	**14 18 55.2**	**+3.7**
SDPT	**Sand Point**	**13.46**	**299**	Pn	**Pn**	**14 18 50.4**	**-1.2**
I04A	**Tendick Farm,**	**13.47**	**114**	P	**Pn**	**14 18 53.2**	**+1.4**
	baz=306						
K27K	**Chicken**	**13.49**	**355**	P	**Pn**	**14 18 55.2**	**+3.2**
	baz=174						
K27K	**Chicken**	**13.49**	**355**		**Pn**	**14 18 54.8**	**+2.8**
SCRK	**Sand Creek**	**13.58**	**352**	P	**Pn**	**14 18 55.7**	**+2.3**
	baz=168,SNR=27						
E07A	**Sunnyside**	**13.62**	**100**	Pn	**Pn**	**14 18 55.0**	**+1.1**
RND	**Reindeer**	**13.75**	**342**	Pn	**Pn**	**14 18 57.3**	**+1.7**
SVW2	**Sparrevohn**	**13.78**	**326**	Pn	**Pn**	**14 18 54.7**	**-1.2**
HUMO	**Hull Mountain**	**13.90**	**119**	Pn	**Pn**	**14 18 59.0**	**+1.3**
MCK	**McKinley**	**14.06**	**343**	P	**Pn**	**14 19 01.8**	**+2.1**
	baz=155,SNR=52						
PPLA	**Purkeypile**	**14.07**	**336**	Pn	**Pn**	**14 19 00.8**	**+0.8**
TRF	**Thorofare Moun**	**14.09**	**340**	Pn	**Pn**	**14 19 02.4**	**+2.1**
C09A	**Chrisman Ranch**	**14.15**	**93**	Pn	**Pn**	**14 19 02.8**	**+1.7**
EGAK	**Eagle**	**14.20**	**357**	Pn	**Pn**	**14 19 04.5**	**+2.8**
KTH	**Kantishna Hill**	**14.32**	**339**		**Pn**	**14 19 05.0**	**+1.7**
PINE	**Pine Mountain**	**14.33**	**111**	Pn	**Pn**	**14 19 06.0**	**+2.2**
HDA	**Harding Lake**	**14.35**	**347**	P	**Pn**	**14 19 05.3**	**+1.5**
	baz=161,SNR=28						
HDA	**Harding Lake**	**14.35**	**347**		**Pn**	**14 19 04.9**	**+1.1**
J05D	**

HLID	**Hailey**	**18.43**	**103**	P		**Pn**		14 19 57.3	**+0.9**
CMB	**Columbia Colle**	**18.53**	**126**	P		**Pn**		14 19 58.7	**+1.3**
LRM	**Limekiln Ridge**	**18.60**	**95**	P		**Pn**		14 19 59.7	**+1.2**
HRY	**Holter Researc**	**18.64**	**91**	P		**P**		14 19 59.1	**+0.6**
BCYI	**Bear Canyon**	**18.68**	**100**	P		**Pn**		14 20 00.1	**+0.6**
DLMT	**Dillon**	**18.71**	**96**	P		**Pn**		14 20 00.4	**+0.7**
TOLK	**Toolik Lake Re**	**18.71**	**348**	P		**Pn**		14 20 00.6	**+1.2**
	baz=160,SNR=8.6								
TOLK	**Toolik Lake Re**	**18.71**	**348**			**Pn**		14 20 01.1	**+1.7**
TOLK					IAmb	IAmb		14 20 18.0	
	comp=Z,30nm,1.1s								
MCMT	**McKenzie Canyo**	**18.79**	**98**	P		**Pn**		14 20 01.2	**+0.5**
SAO	**San Andreas Ge**	**18.98**	**130**	P		**Pn**		14 20 02.7	**-0.1**
BOZ	**Bozeman (W)**	**19.22**	**94**	P		**P**		14 20 05.5	**+0.6**
	baz=295								
BOZ	**Bozeman (W)**	**19.22**	**94**	P		**P**		14 20 05.8	**+0.9**
NVAR	**Mina Array Bea**	**19.34**	**121**	P		**Pn**		14 20 09.6	**+2.1**
	comp=Z,0.3nm,0.3s,baz=303,slow=10,SNR=15								
NVAR	**Mina Array Bea**	**19.34**	**121**	P		**Pn**		14 20 08.1	**+0.6**
LHV	**Little Huntoon**	**19.36**	**122**	P		**Pn**		14 20 08.3	**+0.9**
EGMT	**Eagleton**	**19.50**	**86**	P		**P**		14 20 08.5	**+0.7**
	baz=289								
EGMT	**Eagleton**	**19.50**	**86**	P		**P**		14 20 08.6	**+0.7**
EGMT					IAmb	IAmb		14 20 11.5	
	comp=Z,35nm,1.1s								
ELK	**Elko**	**19.54**	**111**	P		**Pn**		14 20 10.0	**+0.1**
	comp=Z,0.1nm,0.3s,baz=296,slow=10,SNR=12								
ELK	**Elko**	**19.54**	**111**	P		**Pn**		14 20 09.7	**-0.2**
YHL	**Hebgen Lake**	**19.83**	**96**	P		**Pn**		14 20 13.2	**-0.2**
YHB	**Horse Butte**	**19.87**	**96**	P		**P**		14 20 13.4	**+1.2**
YMR	**Madison River**	**20.05**	**96**	P		**P**		14 20 14.9	**+0.8**
YHH	**Holmes Hill**	**20.07**	**96**	P		**P**		14 20 15.3	**+0.9**
C36M	**Paulatuk**	**20.17**	**16**	P		Pn		14 20 16.7	**-0.1**
	baz=210								
YNR	**Norris Junctio**	**20.21**	**96**	P		**P**		14 20 17.2	**+1.4**
GCMT	**Greycliff**	**20.39**	**92**	P		**P**		14 20 18.7	**+1.1**
HVU	**Hansel Valley**	**20.42**	**105**	P		**P**		14 20 19.2	**+1.2**
IMW	**Indian Meadow**	**20.44**	**98**	P		Pn		14 20 20.0	**-0.5**
IMW					IAmb	IAmb		14 20 24.3	
	comp=Z,11nm,0.9s								
TPAW	**Teton Pass**	**20.63**	**99**	P		Pn		14 20 22.2	**-0.6**
REDW	**Red Top Meadow**	**20.76**	**99**	P		**P**		14 20 22.5	**+0.7**
REDW					IAmb	IAmb		14 20 28.3	
	comp=Z,26nm,1.1s								
BGU	**Big Grassy Mou**	**20.76**	**108**	P		**P**		14 20 22.4	**+0.7**
LOHW	**Long Hollow**	**20.79**	**99**	P		**P**		14 20 23.5	**+1.4**
LOHW					IAmb	IAmb		14 20 28.4	
	comp=Z,12nm,1.4s								
SPUT	**South Promonto**	**20.89**	**106**	P		**P**		14 20 24.1	**+1.0**
GRAC	**Grapevine Rang**	**20.90**	**122**	P		**P**		14 20 22.5	**-0.6**
	baz=317								
AHID	**Auburn Hatcher**	**20.91**	**101**	P		**P**		14 20 25.1	**+1.7**
AHID					IAmb	IAmb		14 20 26.1	
	comp=Z,12nm,0.8s								
R11A	**Troy Canyon, C**	**20.92**	**117**	P		**P**		14 20 23.0	**-0.5**
	baz=313								
RLMT	**Red Lodge**	**20.93**	**94**	P		**P**		14 20 24.3	**+0.8**
	baz=296								
RLMT	**Red Lodge**	**20.93**	**94**	P		**P**		14 20 24.9	**+1.3**
CWC	**Cottonwood Cre**	**20.93**	**124**	P		**P**		14 20 23.6	**0.0**
	baz=319								
SPR3	**Spring Creek 3**	**21.20**	**114**	P		**P**		14 20 27.9	**+1.2**
PKM	**Mcpherson Peak**	**21.27**	**130**	P		**P**		14 20 25.1	**-2.2**
	baz=323								
ISA	**Isabella, Lake**	**21.33**	**127**	P		**P**		14 20 27.4	**-0.3**
	baz=321								
ISA	**Isabella, Lake**	**21.33**	**127**	P		**P**		14 20 28.2	**+0.5**
DUG	**Dugway, Tooele**	**21.34**	**109**	P		**P**		14 20 27.9	**-0.1**
	baz=308								
DUG	**Dugway, Tooele**	**21.34**	**109**	P		**P**		14 20 28.4	**+0.5**
DUG					IAmb	IAmb		14 20 33.0	
	comp=Z,10nm,1.1s								
MPMC	**Manual Prospec**	**21.54**	**124**	P		**P**		14 20 30.2	**+0.1**
	baz=319								
TPNV	**Topopah Spring**	**21.54**	**121**	P		**P**		14 20 30.1	**0.0**
	baz=316								
TPNV	**Topopah Spring**	**21.54**	**121**	P		**P**		14 20 31.8	**+1.6**
TPNV					IAmb	IAmb		14 20 40.7	
	comp=Z,11nm,0.8s								
ATKA	**Atka Island**	**21.57**	**288**	P		**P**		14 20 29.7	**-0.5**
TCUT	**Toone Canyon**	**21.64**	**105**	P		**P**		14 20 32.3	**+1.0**
PSUT	**Pine Spring**	**21.79**	**114**	P		**P**		14 20 33.8	**+0.9**
BW06	**Boulder Array**	**21.88**	**99**	P		**P**		14 20 33.4	**-0.4**
	baz=301								
BW06	**Boulder Array**	**21.88**	**99**	P		**P**		14 20 34.6	**+0.8**
BW06					IAmb	IAmb		14 20 36.0	
	comp=Z,13nm,0.9s								
PD31	**Pinedale Array**	**21.88**	**99**	P		**P**		14 20 34.8	**+1.0**
PD31					IAmb	IAmb		14 20 36.0	
	comp=Z,11nm,0.9s								
PDAR	**Pinedale Array**	**21.88**	**99**	P		**P**		14 20 35.0	**+1.2**
	comp=Z,8.0nm,0.9s,baz=308,slow=7.3,SNR=42								
PDAR	**Pinedale Array**	**21.88**	**99**	P		**P**		14 20 34.5	**+0.7**
PRN	**Pahroc Range**	**21.88**	**118**	P		**P**		14 20 35.4	**+1.7**
PRN					IAmb	IAmb		14 20 38.0	
	comp=Z,6.3nm,0.9s								
JLU	**Jordanelle**	**21.92**	**106**	P		**P**		14 20 34.9	**+0.6**
NLU	**North Lily Min**	**21.93**	**109**	P		**P**		14 20 35.0	**+0.6**
A21K	**Barrow**	**22.17**	**345**	P		**P**		14 20 36.8	**+0.4**
	baz=151,SNR=15								
A21K	**Barrow**	**22.17**	**345**	P		**P**		14 20 37.1	**+0.7**
LAO	**LASA Array**	**22.22**	**87**	P		**P**		14 20 37.8	**+0.6**
	baz=292,SNR=9.9								
LAO	**LASA Array**	**22.22**	**87**	P		**P**		14 20 38.2	**+0.9**
CCUT	**Cedar City**	**22.74**	**115**	P		**P**		14 20 43.7	**+0.6**
MVU	**Marysvale**	**22.77**	**112**	P		**P**		14 20 44.1	**+0.6**
MSU	**Marysvale**	**22.79**	**112**	P		**P**		14 20 44.9	**+1.3**
DGMT	**Dagmar**	**22.88**	**82**	P		**P**		14 20 43.9	**-0.3**
	baz=289								
DGMT	**Dagmar**	**22.88**	**82**	P		**P**		14 20 44.0	**-0.2**
DGMT					IAmb	IAmb		14 20 52.6	
	comp=Z,20nm,1.0s								
FFC	**Flin Flon**	**22.92**	**65**	P		**P**		14 20 44.8	**+0.2**
HEC	**Hector,Ludlow**	**23.08**	**124**	P		**P**		14 20 43.8	**-2.6**
	baz=320								
MTPU	**Mount Pierson**	**23.09**	**113**	P		**P**		14 20 48.2	**+1.3**
LCMT	**Little Creek M**	**23.18**	**116**	P		**P**		14 20 48.5	**+0.9**
SRU	**San Rafael Swe**	**23.39**	**108**	P		**P**		14 20 50.8	**+1.0**
U15A	**North Rim**	**24.14**	**116**	P		**P**		14 20 58.0	**+1.0**
U15A					IAmb	IAmb		14 21 06.4	
	comp=Z,5.2nm,1.1s								
O20A	**White River Ci**	**24.17**	**104**	P		**P**		14 20 56.6	**-0.6**
	baz=306								
O20A	**White River Ci**	**24.17**	**104**	P		**P**		14 20 57.4	**+0.1**
O20A					IAmb	IAmb		14 20 59.2	
	comp=Z,7.7nm,0.8s								
W13A	**Hualapai Mount**	**24.20**	**120**	P		**P**		14 20 57.9	**+0.4**
IRM	**Iron Mountain**	**24.22**	**124**	P		**P**		14 20 56.2	**-1.4**
	baz=320								
RSSD	**Black Hills**	**24.71**	**91**	P		**P**		14 21 02.3	**+0.2**
	baz=298								
RSSD	**Black Hills**	**24.71**	**91**	P		**P**		14 21 02.5	**+0.3**
RSSD					IAmb	IAmb		14 21 04.0	
	comp=Z,7.8nm,0.8s								
PV23	**Carpenter Ridg**	**24.73**	**108**	P		**P**		14 21 01.3	**-1.1**
PV23					IAmb	IAmb		14 21 05.3	
	comp=Z,5.9nm,0.9s								
PV22	**Blue Mesa, Par**	**24.81**	**107**	P		**P**		14 21 02.4	**-0.6**
PV04	**Paradox Valley**	**24.83**	**108**	P		**P**		14 21 03.4	**+0.2**
PV04					IAmb	IAmb		14 21 05.7	
	comp=Z,10nm,1.3s								
PV19	**Morning Glory**	**24.83**	**108**	P		**P**		14 21 02.9	**-0.4**
PV19					IAmb	IAmb		14 21 04.8	
	comp=Z,7.5nm,1.2s								
PV17	**East Wray Mesa**	**24.86**	**108**	P		**P**		14 21 03.3	**-0.3**
PV17					IAmb	IAmb		14 21 05.0	
	comp=Z,8.2nm,1.0s								
PV05	**Paradox Valley**	**24.91**	**109**	P		**P**		14 21 03.7	**-0.3**
PV18	**Skein Mesa, Pa**	**24.92**	**108**	P		**P**		14 21 03.8	**-0.3**
PV18					IAmb	IAmb		14 21 06.6	
	comp=Z,7.0nm,0.9s								
PV12	**Saucer Basin,**	**24.94**	**108**	P		**P**		14 21 04.2	**-0.1**
PV12					IAmb	IAmb		14 21 06.9	
	comp=Z,9.6nm,1.2s								
PV03	**Paradox Valley**	**24.95**	**108**	P		**P**		14 21 04.0	**-0.3**
PV03					IAmb	IAmb		14 21 06.7	
	comp=Z,5.4nm,1.0s								
PV07	**Paradox Valley**	**24.95**	**107**	P		**P**		14 21 04.3	**-0.1**
PV07					IAmb	IAmb		14 21 05.2	
	comp=Z,4.6nm,0.9s								
PV13	**Radium Mtn., P**	**25.03**	**108**	P		**P**		14 21 04.9	**-0.1**
PV13					IAmb	IAmb		14 21 06.5	
	comp=Z,18nm,1.3s								
PV02	**Paradox Valley**	**25.05**	**108**	P		**P**		14 21 05.0	**-0.2**
PV02					IAmb	IAmb		14 21 06.3	
	comp=Z,8.6nm,1.2s								
PV15	**Paradox Valley**	**25.12**	**107**	P		**P**		14 21 05.9	**0.0**
PV15					IAmb	IAmb		14 21 11.6	
	comp=Z,6.7nm,0.8s								
N23A	**Red Feather La**	**25.16**	**100**	P		**P**		14 21 06.7	**+0.4**
	baz=304								
PV01	**Paradox Valley**	**25.19**	**108**	P		**P**		14 21 06.5	**-0.1**
PV01					IAmb	IAmb		14 21 07.5	
	comp=Z,6.4nm,0.8s								
PHWY	**Pilot Hill**	**25.24**	**98**	P		**P**		14 21 06.8	**-0.3**
PHWY					IAmb	IAmb		14 21 09.4	
	comp=Z,7.8nm,0.9s								
WUAZ	**Wupatki**	**25.30**	**116**	P		**P**		14 21 06.7	**-0.8**
	baz=315								
MVCO	**Mesa Verde**	**25.84**	**109**	P		**P**		14 21 11.6	**-0.8**
	baz=311								
Q24A	**Divide**	**26.78**	**103**	P		**P**		14 21 18.7	**-2.3**
	baz=307								
Q24A	**Divide**	**26.78**	**103**	P		**P**		14 21 21.1	**0.0**
Q24A					IAmb	IAmb		14 21 22.5	
	comp=Z,3.5nm,0.8s								
AGMN	**Agassiz Nation**	**28.15**	**78**	P		**P**		14 21 32.2	**-0.7**
	baz=291								
T25A	**Trinidad**	**28.37**	**105**	P		**P**		14 21 34.4	**-0.8**
	baz=309								
T25A	**Trinidad**	**28.37**	**105**	P		**P**		14 21 35.2	**0.0**
T25A					IAmb	IAmb		14 21 38.5	
	comp=Z,3.5nm,0.9s								
RES	**Resolute Bay**	**30.25**	**22**	LR		LR		14 34 04.8	
	comp=Z,206nm,18.4s,baz=207,slow=37								
EYMN	**Ely**	**30.99**	**76**	P		**P**		14 21 58.1	**0.0**
	baz=293								
EYMN	**Ely**	**30.99**	**76**	P		**P**		14 21 58.0	**0.0**
MSTX	**Muleshoe**	**31.46**	**108**	P		**P**		14 22 01.7	**-0.7**
	baz=313								
MSTX	**Muleshoe**	**31.46**	**108**	P		**P**		14 22 02.5	**+0.1**
MNTX	**Cornudas Mount**	**31.51**	**114**	P		**P**		14 22 01.9	**-0.9**
	baz=317								
T35A	**Sooner Cattle**	**33.44**	**97**	P		**P**		14 22 20.1	**+0.4**
L40A	**Anamosa**	**33.88**	**86**	P		**P**		14 22 23.0	**-0.3**
TXAR	**Lajitas Array**	**34.25**	**115**	P		**P**		14 22 27.6	**+0.7**
	comp=Z,1.3nm,0.9s,baz=303,slow=8.2,SNR=10								
TXAR	**Lajitas Array**	**34.25**	**115**	P		**P**		14 22 27.3	**+0.5**
EUNU	**Eureka**	**34.32**	**14**	P		**P**		14 22 29.2	**+2.3**
EUNU					IAmb	IAmb		14 22 30.5	
	comp=Z,2.8nm,0.8s								
TUL1	**Leonard**	**34.52**	**98**	P		**P**		14 22 29.5	**+0.5**
	baz=309								
P40A	**Paris**	**34.73**	**90**	P		**P**		14 22 30.7	**-0.1**
P40A					IAmb	IAmb		14 22 32.3	
	comp=Z,5.0nm,0.8s								
H43A	**Windswept, Lux**	**34.85**	**80**	P		**P**		14 22 31.6	**-0.1**
L42A	**Oliver, Polo**	**34.90**	**85**	P		**P**		14 22 32.0	**-0.2**
S39A	**Bolivar**	**34.99**	**94**	P		**P**		14 22 33.5	**+0.4**
S39A					IAmb	IAmb		14 22 43.4	
	comp=Z,2.9nm,0.9s								
JCT	**Junction City**	**35.70**	**109**	P		**P**		14 22 38.7	**-0.5**
	baz=316								
JCT	**Junction City**	**35.70**	**109**	P		**P**		14 22 39.7	**+0.4**
U40A	**Yellville**	**36.10**	**95**	P		**P**		14 22 42.4	**-0.2**
	baz=338,SNR=6.2								
U40A	**Yellville**	**36.10**	**95**	P		**P**		14 22 42.5	**-0.1**
W39A	**Magazine**	**36.24**	**97**	P		**P**		14 22 43.9	**+0.1**
	baz=309								
W39A	**Magazine**	**36.24**	**97**	P		**P**		14 22 44.0	**+0.3**
W39A					IAmb	IAmb		14 22 45.1	
	comp=Z,5.6nm,0.8s								
M44A	**Midewin, Midew**	**36.25**	**84**	P		**P**		14 22 43.2	**-0.6**
P43A	**Skaggs, Pawnee**	**36.28**	**88**	P		**P**		14 22 43.8	**-0.3**
MIAR	**Mount Ida**	**36.79**	**98**	P		**P**		14 22 46.9	**-1.5**
	baz=310								
FCAR	**Ozark Folk Cen**	**36.85**	**95**	P		**P**		14 22 48.6	**-0.5**
WHAR	**Wooly Hollow**	**37.13**	**96**	P		**P**		14 22 51.1	**-0.2**
WHAR					IAmb	IAmb		14 23 13.1	
	comp=Z,12nm,1.5s								
W41B	**Gary Mavity, V**	**37.23**	**96**	P		**P**		14 22 51.8	**-0.4**
	baz=309								
W41B	**Gary Mavity, V**	**37.23**	**96**	P		**P**		14 22 52.4	**+0.2**
W41B					IAmb	IAmb		14 22 53.1	
	comp=Z,4.4nm,0.8s								
SFIN	**Lafayette**	**37.41**	**85**	P		**P**		14 22 52.9	**-0.7**
	baz=304								
PETK	**Petropavlovsk-**	**37.75**	**299**	P		P		14 23 01.1	**+4.6**
	comp=Z,2.4nm,0.7s,baz=84,slow=9.8,SNR=5.6								
OXF	**Oxford**	**39.45**	**94**	P		**P**		14 23 10.6	**-0.3**
	baz=310,SNR=5.7								
OXF	**Oxford**	**39.45**	**94**	P		**P**		14 23 10.8	**-0.1**
PLAL	**Pickwick Lake**	**39.99**	**93**	P		**P**		14 23 14.9	**-0.6**
PLAL					IAmb	IAmb		14 23 15.8	
	comp=Z,13nm,1.1s								
P51A	**Williamsport**	**40.47**	**84**	P		**P**		14 23 18.8	**-0.5**
	baz=305								
S51A	**Beattyville**	**41.22**	**86**	P		**P**		14 23 24.8	**-0.7**
S51A					IAmb	IAmb		14 23 26.9	
	comp=Z,13nm,1.1s								
FPAL	**Fort Paine**	**41.84**	**91**	P		**P**		14 23 30.3	**-0.5**
V53A	**Saluda**	**42.91**	**88**	P		**P**		14 23 39.5	**0.0**
SUMG	**Summit**	**45.69**	**24**	P		**P**		14 24 02.9	**+1.3**
H11N2	**WAKE ISLAND Hy**	**52.07**	**254**	T		T		15 21 14.3	
	baz=39,slow=75,SNR=10								
H11N3	**WAKE ISLAND Hy**	**52.07**	**254**	T		T		15 21 16.1	
	baz=39,slow=75,SNR=39								
H11N1	**WAKE ISLAND Hy**	**52.09**	**254**	T		T		15 21 13.7	
	baz=39,slow=75,SNR=4.7								
NOA	**NORSAR Array B**	**66.21**	**15**	P		**P**		14 26 28.6	**+0.4**
	comp=Z,0.9nm,0.8s,baz=340,slow=6.5,SNR=3.5								
SONM	**Songino Array**	**66.76**	**318**	P		**P**		14 26 35.9	**+3.9**
	comp=Z,0.2nm,0.4s,baz=19,slow=4.9,SNR=2.8								
FINES	**FINESS Array B**	**67.67**	**7**	P		**P**		14 26 37.4	**0.0**
	comp=Z,1.3nm,0.6s,baz=29,slow=4.4,SNR=4.7								
EKA	**Eskdalemuir Ar**	**68.31**	**25**	P		**P**		14 26 41.4	**-0.1**
	comp=Z,1.1nm,0.6s,baz=347,slow=6.1,SNR=2.1								
HHC	**Hu-ho-hao-te**	**69.78**	**310**	*eP*		**P**		14 26 51.3	**+0.2**
HHC					pmax	pmax			
	comp=Z,11nm,1.1s								
HHC					pmax	pmax			
	comp=Z,99nm,6.4s								
KURBB	**Kurchatov Arra**	**74.04**	**336**	P		**P**		14 27 16.7	**+0.4**
	comp=Z,0.4nm,0.6s,baz=22,slow=6.0,SNR=3.5								
WMQ	**Urumqi**	**77.36**	**327**	*eP*		**P**		14 27 37.0	**+1.5**
AKTO	**Aktyubinsk**	**78.20**	**349**	P		**P**		14 27 39.9	**-0.1**
	comp=Z,0.9nm,0.6s,baz=18,slow=8.1,SNR=2.1								
GERES	**GERESS Array B**	**78.26**	**18**	P		**P**		14 27 39.9	**-0.6**
	comp=Z,1.3nm,0.8s,baz=8.1,slow=4.7,SNR=6.9								
AKASG	**Malin Array Be**	**78.58**	**7**	P		**P**		14 27 40.4	**-1.6**
	comp=Z,0.5nm,0.4s,baz=356,slow=5.4,SNR=4.6								
ABKAR	**Akbulak array**	**79.10**	**347**	P		**P**		14 27 45.1	**+0.1**
ESDC	**Sonseca Array**	**81.97**	**33**	P		**P**		14 28 00.6	**-0.1**
	comp=Z,2.7nm,1.0s,baz=330,slow=4.1,SNR=6.9								
ESDC	**Sonseca Array**	**81.97**	**33**	P		**P**		14 28 00.0	**-0.7**

*IDC **26** 14:16:38.2±3.2, 27.06S×66.87E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/58, mbtmp3.8/5, Error ellipse: s-maj=95.6km s-min=37.8km az=54.0*
*NEIC **26** 14:16:39.5±0.9, 27.0S±0.1×66.8E±0.1, h10km±1km, mb4.5/8, Error ellipse: s-maj=28.2km s-min=11.2km az=144.0*
ISC 26 14:16:39.8±0.9, 27.0S±0.2×66.8E±0.1, h10km, n24, σ0s67/18, mb4.1/8, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**20.02**	**17**	T	T	14 41 34.0	
	baz=193						
H08S2	**Diego Garcia H**	**20.03**	**17**	T	T	14 41 42.9	
	baz=193						
H08S3	**Diego Garcia H**	**20.04**	**17**	T	T	14 41 41.1	
	baz=193						
LBTB	**Lobatse**	**36.96**	**264**	P	**P**	14 23 49.4	**-0.1**
LBTB					IAmb	IAmb	14 23 57.2	
	comp=Z,11nm,1.2s						
LSZ	**Lusaka**	**37.71**	**280**	P	**P**	14 23 55.9	**-0.1**
H01W2	**Cape Leeuwin H**	**41.04**	**113**	T	T	15 07 50.9	
	baz=272						
H01W3	**Cape Leeuwin H**	**41.04**	**113**	T	T	15 07 58.9	
	baz=272						
H01W1	**Cape Leeuwin H**	**41.05**	**113**	T	T	15 07 54.2	
	baz=272						
NWAO	**Narrogin (SRO)**	**43.75**	**110**	P	**P**	14 24 46.2	**+0.6**
CMAR	**Chiang Mai Arr**	**54.93**	**38**	P	**P**	14 26 10.6	**-0.5**
	comp=Z,1.0nm,0.6s,baz=231,slow=6.8,SNR=9.4						
ASAR	**Alice Springs**	**60.10**	**103**	P	**P**	14 26 47.9	**+0.2**
	comp=Z,0.3nm,0.5s,baz=249,slow=6.0,SNR=6.1						
ASAR	**Alice Springs**	**60.10**	**103**	P	**P**	14 26 47.1	**-0.5**
WRA	**Warramunga Arr**	**61.72**	**99**	P	**P**	14 26 57.6	**-1.1**
	comp=Z,0.4nm,0.8s,baz=248,slow=6.6,SNR=4.8						
WRA	**Warramunga Arr**	**61.72**	**99**	P	**P**	14 26 58.9	**+0.2**
WB2	**Warramunga Arr**	**61.73**	**99**	P	**P**	14 26 57.4	**-1.4**
WR0	**Warramunga Arr**	**61.89**	**99**	P	**P**	14 26 59.2	**-0.6**
GTA	**Gaotai**	**72.93**	**26**	*eP*	**P**	14 28 09.8	**+0.4**
GTA				pP	pwP	14 28 15.8	-0.5
GTA				sP	sP	14 28 18.0	+5.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MKAR	**Makanchi Array**	**74.81**	**11**	P	**P**	14 28 19.5	**-0.6**
ABKAR	**Akbulak array**	**76.19**	**355**	P	**P**	14 28 28.4	**+0.5**
ABKAR					IAmb	IAmb	14 28 29.5	
	comp=Z,3.4nm,0.9s						
KURK	**Kurchatov**	**78.11**	**8**	P	**P**	14 28 37.6	**-1.0**
ZALV	**Zalesovo Beam**	**82.14**	**11**	P	**P**	14 29 00.7	**+0.4**
	comp=Z,1.8nm,0.8s,baz=184,slow=4.2,SNR=7.5						
ZALV	**Zalesovo Beam**	**82.14**	**11**	P	**P**	14 29 00.2	**-0.1**
SONM	**Songino Array**	**82.59**	**26**	P	**P**	14 29 03.5	**+0.4**
	comp=Z,1.5nm,0.9s,baz=198,slow=4.2,SNR=6.4						
YKA	**Yellowknife Ar**	**144.53**	**1**	PKP	**PKPab**	14 36 14.7	**+0.4**
	comp=Z,0.6nm,0.7s,baz=355,slow=3.6,SNR=5.4						

*IDC **26** 14:21:25.7±1.1, 9.31S×159.42E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/31, mbtmp3.6/4, MS3.1/2, Ms1 3.1/2, ms1mx3.0/36, Error ellipse: s-maj=35.8km s-min=8.8km az=10.0*
*NEIC **26** 14:21:26.6±1.7, 9.88S±0.06×159.7E±0.1, h10km±2km, mb4.2/3, Error ellipse: s-maj=25.1km s-min=3.2km az=294.0*
ISC 26 14:21:25.7±0.9, 9.78S±0.09×159.8E±0.1, h10km, n12, σ1s17/11, mb3.8/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.39**	**26**	Pg	**Pn**	**14 21 36.4**	**-0.9**
	2μm,0.3s,baz=194,slow=6.8,SNR=635						
HNR				Lg	Lg	14 21 43.0	
	11μm,0.3s,baz=164,slow=18,SNR=77						
HNR	**Honiara**	**0.39**	**26**		**Pn**	**14 21 36.4**	**-0.9**
HNR				Sg	**Sb**	**14 21 42.4**	**+1.8**
SANVU	**Saraoutou**	**9.18**	**129**	Pn	**Pn**	**14 23 38.2**	**0.0**
KRVT	**Keravat (AS076**	**9.42**	**305**	LR	LR	14 27 19.9	
	comp=Z,77nm,18.1s,baz=140,slow=40						
DZM	**Mont Dzumac**	**13.80**	**153**	LR	LR	14 29 45.7	
	comp=Z,129nm,21.6s,baz=22,slow=35						
ARMA	**Armidale**	**21.89**	**199**	P	**P**	**14 26 20.4**	**+1.2**
ARMA					IAmb	IAmb	14 26 43.0	
	comp=Z,15nm,1.4s						
WB0	**Warramunga Arr**	**26.44**	**245**	P	**P**	**14 27 02.6**	**-0.4**
WB0					IAmb	IAmb	14 27 08.6	
	comp=Z,8.2nm,1.5s						
WRAB	**Tennant Creek**	**26.53**	**245**	P	**P**	**14 27 04.5**	**+0.7**
WRAB					IAmb	IAmb	14 27 20.8	
	comp=Z,5.2nm,1.1s						
WRA	**Warramunga Arr**	**26.54**	**245**	P	**P**	**14 27 05.7**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=72,slow=9.5,SNR=7.7						
ASAR	**Alice Springs**	**28.29**	**238**	P	**P**	**14 27 18.9**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=67,slow=10,SNR=2.1						
ILAR	**Eielson Array**	**84.28**	**20**	P	**P**	**14 33 56.7**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=246,slow=5.4,SNR=7.7						
MKAR	**Makanchi Array**	**88.62**	**318**	P	**P**	**14 34 19.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=

TNSS	**Tian-Shan**	**1.17**	**37**	⇑	*i*	P	**Pn**	**14 24 29.8**	**-1.3**
	baz=36								
TNSS				⇑	*i*	S	**Sg**	**14 24 45.0**	**-0.2**
	baz=36								
TNSS	**Tian-Shan**	**1.17**	**37**	⇑	*i*	P	**Pn**	**14 24 29.8**	**-1.3**
	17nm,0.1s								
TNSS				⇑	*i*	S	**Sg**	**14 24 45.0**	**-0.2**
	114nm,0.4s								
TNSS	**Tian-Shan**	**1.17**	**37**			P	**Pn**	**14 24 29.8**	**-1.3**
	17nm,0.1s								
TNSS						S	**Sg**	**14 24 45.0**	**-0.2**
	77nm,0.3s								
AAK	**Ala-Archa**	**1.23**	**296**	⇑	*i*	P	**Pb**	**14 24 31.2**	**-0.2**
	baz=95								
AAK				⇑	*i*	S	**Sg**	**14 24 48.0**	**+0.9**
	baz=95								
AAK	**Ala-Archa**	**1.23**	**296**	⇓		P	**Pb**	**14 24 31.5**	**0.0**
	13nm,0.2s,SNR=42								
AAK				⇓		S	**Sn**	**14 24 47.7**	**-1.1**
	92nm,0.3s								
FRU1	**Bishkek**	**1.23**	**306**	⇑		P	**Pb**	**14 24 31.3**	**-0.1**
	baz=5.0								
FRU1				⇑	*i*	S	**Sg**	**14 24 48.5**	**+1.4**
	baz=5.0								
ARLS	**Aral**	**1.27**	**260**	⇓	*i*	P	**Pn**	**14 24 31.7**	**-0.4**
	baz=60								
ARLS				⇓	*i*	S	**Sg**	**14 24 49.3**	**+1.1**
	baz=60								
CHMS	**Chumysh**	**1.28**	**315**	⇑	*i*	P	**Pb**	**14 24 31.9**	**-0.3**
	baz=14								
CHMS				⇑	*i*	S	**Sg**	**14 24 49.5**	**+0.8**
	baz=14								
CHMS	**Chumysh**	**1.28**	**315**	⇓		P	**Pb**	**14 24 32.2**	**-0.1**
	11nm,0.2s,SNR=9.6								
CHMS				⇑		S	**Sg**	**14 24 49.2**	**+0.5**
	47nm,0.2s								
MDOK	**Medeo**	**1.32**	**36**	⇓	*i*	P	**Pb**	**14 24 32.3**	**-0.6**
	baz=36								
MDOK				⇓	*i*	S	**Sg**	**14 24 49.3**	**-0.6**
	baz=36								
MDOK	**Medeo**	**1.32**	**36**	⇓	*i*	P	**Pb**	**14 24 32.3**	**-0.6**
	11nm,0.2s								
MDOK				⇓	*i*	S	**Sg**	**14 24 49.2**	**-0.6**
	83nm,0.4s								
MDOK	**Medeo**	**1.32**	**36**			Pg	**Pb**	**14 24 32.2**	**-0.6**
	9.6nm,0.2s								
MDOK						Lg	Lg	14 24 49.0	
	83nm,0.4s								
KNDC	**Almaty**	**1.33**	**32**	⇑		P	**Pg**	**14 24 33.1**	**+0.2**
	15nm,0.2s								
KNDC				⇑		S	**Sg**	**14 24 50.8**	**+0.6**
	220nm,0.4s								
KOTS	**Kotyrbulak**	**1.40**	**36**	⇑	*i*	P	**Pg**	**14 24 34.1**	**-0.3**
	baz=35								
KOTS				⇓	*e*	S	**Sg**	**14 24 52.2**	**-0.4**
	baz=35								
KOTS	**Kotyrbulak**	**1.40**	**36**	⇑	*i*	P	**Pg**	**14 24 34.1**	**-0.3**
	24nm,0.1s								
KOTS				⇓	*e*	S	**Sg**	**14 24 52.1**	**-0.4**
	631nm,0.5s								
KOTS	**Kotyrbulak**	**1.40**	**36**			P	**Pg**	**14 24 34.1**	**-0.3**
	24nm,0.1s								
KOTS						S	**Sg**	**14 24 52.1**	**-0.4**
	631nm,0.5s								
ANVS	**Anan'yevo**	**1.42**	**61**	⇑	*i*	P	**Pb**	**14 24 33.9**	**-0.7**
	baz=61								
ANVS				⇑	*i*	S	**Sg**	**14 24 53.2**	**+0.2**
	baz=61								
USP	**Ospenovka**	**1.60**	**317**	⇑	*i*	P	**Pb**	**14 24 37.6**	**-0.1**
	baz=16								
USP				⇑	*i*	S	**Sg**	**14 24 59.3**	**+0.3**
	baz=16								
USP	**Ospenovka**	**1.60**	**317**	⇑		P	**Pb**	**14 24 37.9**	**+0.3**
	35nm,0.3s,SNR=67								
USP				⇑		S	**Sg**	**14 24 59.4**	**+0.4**
	27nm,0.1s								
KRBS	**Karabastau**	**1.61**	**352**	⇓	*i*	P	**Pb**	**14 24 37.9**	**0.0**
	baz=51								
KRBS				⇓	*e*	S	**Sg**	**14 24 59.0**	**-0.3**
	baz=51								
KRBS	**Karabastau**	**1.61**	**352**	⇓	*i*	P	**Pb**	**14 24 37.9**	**0.0**
	61nm,0.2s								
KRBS					*e*	S	**Sg**	**14 24 59.0**	**-0.3**
	108nm,0.6s								
KRBS	**Karabastau**	**1.61**	**352**			P	**Pb**	**14 24 37.9**	**0.0**
	61nm,0.2s								
KRBS						S	**Sg**	**14 24 59.0**	**-0.3**
	108nm,0.6s								
SGDS	**Sogindy**	**1.68**	**324**			P	**Pb**	**14 24 39.2**	**+0.1**
	34nm,0.6s								
SGDS						S	**Sg**	**14 25 01.0**	**-0.5**
	36nm,0.1s								
KTBS	**Karatobe**	**1.69**	**17**	⇓	*i*	P	**Pg**	**14 24 39.2**	**-0.7**
	baz=17								
KTBS				⇑	*i*	S	**Sg**	**14 25 01.4**	**-0.4**
	baz=17								
KTBS	**Karatobe**	**1.69**	**17**	⇓	*i*	P	**Pg**	**14 24 39.2**	**-0.7**
	30nm,0.2s								
KTBS				⇑	*i*	S	**Sg**	**14 25 01.4**	**-0.4**
	122nm,0.3s								
KTBS	**Karatobe**	**1.69**	**17**			P	**Pg**	**14 24 39.3**	**-0.7**
	30nm,0.2s								
KTBS						S	**Sg**	**14 25 01.5**	**-0.3**
	113nm,0.4s								
AML	**Almayashu**	**1.71**	**272**	⇑	*i*	P	**Pb**	**14 24 40.0**	**+0.3**
	baz=71								
AML				⇑	*i*	S	**Sg**	**14 25 03.1**	**+0.7**
	baz=71								
AML	**Almayashu**	**1.71**	**272**	⇓		P	**Pg**	**14 24 40.6**	**+0.3**
	14nm,0.2s,SNR=48								
AML				⇑		S	**Sg**	**14 25 03.6**	**+1.2**
	82nm,0.3s								
EKS2	**Erkin-Say**	**1.73**	**290**	⇑	*i*	P	**Pb**	**14 24 40.2**	**+0.2**
	baz=89								
EKS2				⇑	*i*	S	**Sg**	**14 25 03.6**	**+0.4**
	baz=89								
EKS2	**Erkin-Say**	**1.73**	**290**	⇑		P	**Pg**	**14 24 41.2**	**+0.5**
	9.8nm,0.2s,SNR=29								
KUU	**Kurty**	**1.81**	**8**	⇓	*i*	P	**Pb**	**14 24 41.3**	**+0.1**
	baz=7.0								
KUU				⇓	*e*	S	**Sg**	**14 25 04.8**	**-0.9**
	baz=7.0								
KUU	**Kurty**	**1.81**	**8**	⇓	*i*	P	**Pb**	**14 24 41.3**	**+0.1**
	19nm,0.3s								
KUU					*e*	S	**Sg**	**14 25 04.8**	**-0.9**
	131nm,0.4s								
KUU	**Kurty**	**1.81**	**8**			P	**Pb**	**14 24 41.3**	**+0.1**
	19nm,0.3s								
KUU						S	**Sg**	**14 25 04.8**	**-0.9**
	131nm,0.4s								
PRZ	**Przheval'sk**	**1.83**	**77**	⇑	*i*	P	**Pb**	**14 24 41.3**	**-0.3**
	baz=78								
PRZ				⇑	*i*	S	**Sg**	**14 25 05.9**	**-0.3**
	baz=78								
CHKK	**Chushkaly**	**1.90**	**22**	⇓	*e*	P	**Pb**	**14 24 42.9**	**+0.2**
	baz=22								
CHKK				⇓	*e*	S	**Sg**	**14 25 07.3**	**-1.2**
	baz=22								
CHKK	**Chushkaly**	**1.90**	**22**	⇓	*e*	P	**Pb**	**14 24 42.9**	**+0.2**
	16nm,0.1s								
CHKK					*e*	S	**Sg**	**14 25 07.3**	**-1.2**
	191nm,0.2s								
CHKK	**Chushkaly**	**1.90**	**22**			P	**Pb**	**14 24 43.0**	**+0.2**
	16nm,0.1s								
CHKK						S	**Sg**	**14 25 07.3**	**-1.2**
	191nm,0.2s								
SATY	**Saty**	**2.02**	**61**	*e*	P		**Pb**	**14 24 44.5**	**-0.4**
	baz=61								
SATY					*e*	S	**Sb**	**14 25 10.1**	**-0.4**
	baz=61								
SATY	**Saty**	**2.02**	**61**	*e*	P		**Pb**	**14 24 44.5**	**-0.4**
	28nm,0.3s								
SATY					*e*	S	**Sb**	**14 25 10.0**	**-0.4**
	201nm,0.2s								
SATY	**Saty**	**2.02**	**61**			Pg	**Pb**	**14 24 44.5**	**-0.4**
	28nm,0.3s								
SATY						Lg	Lg	14 25 10.0	
	201nm,0.2s								
ZHN	**Zhinishke**	**2.10**	**59**	*e*	P		**Pb**	**14 24 46.3**	**+0.2**
	baz=59								
ZHN					*e*	S	**Sg**	**14 25 13.3**	**-1.5**
	baz=59								
ZHN	**Zhinishke**	**2.10**	**59**	*e*	P		**Pb**	**14 24 46.3**	**+0.2**
	44nm,0.3s								
ZHN					*e*	S	**Sg**	**14 25 13.3**	**-1.5**
	36nm,0.2s								
ZHN	**Zhinishke**	**2.10**	**59**			Pg	**Pb**	**14 24 46.3**	**+0.2**
	44nm,0.3s								
ZHN						Lg	Lg	14 25 13.3	
	36nm,0.2s								
KURS	**Kuram**	**2.12**	**48**	*e*	P		**Pg**	**14 24 47.1**	**-1.0**
	baz=48								
KURS					*e*	S	**Sg**	**14 25 14.5**	**-1.1**
	baz=48								
KURS	**Kuram**	**2.12**	**48**	*e*	P		**Pg**	**14 24 47.1**	**-1.0**
	27nm,0.4s								
KURS					*e*	S	**Sg**	**14 25 14.5**	**-1.1**
	51nm,0.6s								
KURS	**Kuram**	**2.12**	**48**			Pg	**Pg**	**14 24 47.1**	**-1.0**
	27nm,0.4s								
KURS						Lg	Lg	14 25 14.5	
	51nm,0.6s								
MRKS	**Merke**	**2.15**	**288**	*e*	P		**Pg**	**14 24 48.7**	**+0.1**
	19nm,0.3s								
MRKS					*e*	S	**Sg**	**14 25 17.3**	**+0.8**
	63nm,0.3s								
MRKS	**Merke**	**2.15**	**288**			Pg	**Pg**	**14 24 48.7**	**+0.1**
	19nm,0.3s								
MRKS						Lg	Lg	14 25 17.3	
	63nm,0.3s								
ARSB	**Arslanbob**	**2.38**	**252**	⇓	*i*	P	**Pb**	**14 24 49.8**	**-1.2**
	baz=52								
ARSB				⇓	*i*	S	**Sb**	**14 25 20.4**	**-0.4**
	baz=52								
KPKS	**Kokpek**	**2.41**	**55**	*e*	P		**Pb**	**14 24 51.1**	**-0.3**
	baz=55								
KPKS					*e*	S	**Sb**	**14 25 21.6**	**+0.1**
	baz=55								
KPKS	**Kokpek**	**2.41**	**55**	*e*	P		**Pb**	**14 24 51.0**	**-0.3**
	95nm,0.3s								
KPKS					*e*	S	**Sb**	**14 25 21.5**	**+0.1**
	260nm,0.3s								
UZB	**Uzynbulak**	**2.47**	**64**	*e*	P		**Pb**	**14 24 51.5**	**-1.0**
	baz=64								
UZB					*e*	S	**Sb**	**14 25 22.8**	**-0.6**
	baz=64								
UZB	**Uzynbulak**	**2.47**	**64**	*e*	P		**Pb**	**14 24 51.5**	**-1.0**
	29nm,0.3s								
UZB					*e*	S	**Sb**	**14 25 22.7**	**-0.6**
	68nm,0.5s								
UZB	**Uzynbulak**	**2.47**	**64**			Pg	**Pb**	**14 24 51.5**	**-1.0**
	29nm,0.3s								
UZB						Lg	Lg	14 25 22.0	
	68nm,0.5s								
ARXS	**Arharly**	**2.50**	**32**	*e*	P		**Pb**	**14 24 53.2**	**+0.1**
	64nm,0.4s								
ARXS					*e*	S	**Sb**	**14 25 24.9**	**+0.6**
	257nm,0.5s								
ARXS	**Arharly**	**2.50**	**32**			Pg	**Pb**	**14 24 53.2**	**+0.1**
	64nm,0.4s								
ARXS						Lg	Lg	14 25 24.9	
	257nm,0.5s								
MNAS	**Manas**	**2.62**	**280**	⇑	*i*	P	**Pb**	**14 24 52.8**	**-2.2**
	baz=79								
MNAS				⇑	*i*	S	**Sb**	**14 25 25.8**	**-1.8**
	baz=79								
MNBS	**Baschi**	**2.65**	**41**	*e*	P		**Pb**	**14 24 55.9**	**+0.3**
	17nm,0.5s								
MNBS					*e*	S	**Sg**	**14 25 29.8**	**-2.8**
	162nm,0.6s								
MNBS	**Baschi**	**2.65**	**41**			Pg	**Pb**	**14 24 55.9**	**+0.3**
	17nm,0.5s								
MNBS						Lg	Lg	14 25 29.8	
	162nm,0.6s								
SHLS	**Shalkode**	**2.77**	**66**	*e*	P		**Pg**	**14 25 02.8**	**+2.2**
	26nm,0.3s								
SHLS					*e*	S	**Sg**	**14 25 41.8**	**+5.4**
	58nm,0.7s								
SHLS	**Shalkode**	**2.77**	**66**			Pg	**Pg**	**14 25 02.8**	**+2.2**
	26nm,0.3s								
SHLS						Lg	Lg	14 25 41.8	
	58nm,0.7s								
SFK	**Sufi-Kurgan**	**2.81**	**223**	⇓	*i*	P	**Pn**	**14 24 55.3**	**+1.9**
	baz=23								
SFK				⇓	*i*	S	**Sb**	**14 25 30.7**	**-2.4**
	baz=23								
PDGK	**Podgornoye**	**2.86**	**63**			Pg	**Pb**	**14 24 58.0**	**-1.1**
	4.2nm,0.3s								
PDGK						Lg	Lg	14 25 33.5	
	14nm,0.4s								
PDGK	**Podgornoye**	**2.86**	**63**	⇑	Pn		**Pb**	**14 24 56.5**	**-2.6**
	5.5nm,0.5s								
PDGK				⇓	Lg		Lg	14 25 37.3	
	22nm,0.5s								
BTLS	**Baital**	**3.26**	**335**	*e*	P		**Pb**	**14 25 07.5**	**+1.5**
	6.6nm,0.5s								
BTLS					*e*	S	**Sg**	**14 25 49.5**	**-2.8**
	13nm,0.6s								
BTLS	**Baital**	**3.26**	**335**			Pg	**Pb**	**14 25 07.5**	**+1.5**
	6.6nm,0.5s								
BTLS						Lg	Lg	14 25 49.4	
	13nm,0.6s								
TDK	**Taldyqorghan**	**3.39**	**30**	*e*	P		**Pb**	**14 25 08.8**	**+0.6**
	20nm,0.5s								
TDK					*e*	S	**Sb**	**14 25 51.6**	**+1.9**
	117nm,0.5s								
TDK	**Taldyqorghan**	**3.39**	**30**			Pg	**Pb**	**14 25 08.8**	**+0.6**
	20nm,0.5s								
TDK						Lg	Lg	14 25 51.6	
	117nm,0.5s								
KTMS	**Ketmen**	**3.48**	**66**	*e*	P		**Pb**	**14 25 09.9**	**+0.2**
	36nm,0.2s								
KTMS					*e*	S	**Sb**	**14 25 54.2**	**+1.8**
	22nm,0.6s								
KTMS	**Ketmen**	**3.48**	**66**			Pg	**Pb**	**14 25 09.9**	**+0.2**
	36nm,0.2s								
KTMS						Lg	Lg	14 25 54.2	
	22nm,0.6s								
DJR	**Jarkent**	**3.56**	**50**	*e*	P		**Pb**	**14 25 12.0**	**+0.9**
	4.3nm,0.4s								
DJR					*e*	S	**Sb**	**14 25 57.1**	**+2.5**
	25nm,0.3s								
DJR	**Jarkent**	**3.56**	**50**			Pg	**Pb**	**14 25 12.0**	**+0.9**
	4.3nm,0.4s								
DJR						Lg	Lg	14 25 57.2	
	25nm,0.3s								
KAPS	**Kapalarasan**	**4.01**	**36**	*e*	P		**Pb**	**14 25 19.7**	**+0.9**
	3.2nm,0.3s								
KAPS					*e*	S	**Sb**	**14 26 10.2**	**+2.6**
	51nm,0.4s								
KK31	**Karatay Array**	**4.17**	**286**	⇓	Pg		**Pg**	**14 25 27.4**	**0.0**
	0.6nm,0.3s,baz=99,slow=16,SNR=11								
KK31				⇑	Lg		Lg	14 26 23.2	
	3.5nm,0.4s,baz=106,slow=29,SNR=14								
IUG	**Iuzhnay**	**4.43**	**273**	*e*	P		**Pg**	**14 25 30.4**	**-2.0**
	5.7nm,0.3s								
IUG					*e*	S	**Sg**	**14 26 29.2**	**-0.6**
	17nm,0.9s								
MAKZ	**Makanchi**	**6.36**	**40**	⇑	Lg		Lg	14 27 31.1	
	3.5nm,0.9s								
MK31	**Makanchi Array**	**6.51**	**42**	⇑	Pn		**Pn**	**14 25 45.0**	**+1.1**
	0.5nm,0.5s,baz=221,slow=15,SNR=9.4								
MK31				⇓	Sn		**Sn**	**14 27 02.5**	**+3.9**
	1.4nm,0.7s,baz=220,slow=22,SNR=5.4								
MK31				⇑	Lg		Lg	14 27 33.9	
	0.6nm,0.4s,baz=221,slow=28,SNR=4.5								
KURBB	**Kurchatov Arra**	**8.70**	**11**	⇓	Lg		Lg	14 28 43.9	
	6.2nm,0.7s								
KURK	**Kurchatov**	**8.81**	**11**	⇑	Lg		Lg	14 28 48.1	
	5.0nm,0.8s								

BUL ***26*** *14:27:59.9±1.1, 25°.92S×29°.55E, h10km, MD3.7*
EAF ***26*** *14:28:00.9±1.1, 25°.93S×29°.57E, h10km, MD3.7*

ISC 26 14:27:59.3±1.2, 25°.89S±0°.05×29°.54E±0°.05, h10km, n8, σ1s36/16, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
POGA	**Pongola**	**2.42**	**127**	*i*	P	**Pn**	**14 28 40.0**	**+1.1**
POGA				*i*	S	**Sn**	**14 29 07.4**	**-1.2**
POGA	**Pongola**	**2.42**	**127**	*i*	P	**Pn**	**14 28 40.0**	**+1.1**
POGA				*i*	S	**Sn**	**14 29 07.4**	**-1.2**
LBTB	**Lobatse**	**3.67**	**283**	*i*	P	**Pn**	**14 28 57.6**	**+1.3**
LBTB				*i*	S	**Sn**	**14 29 38.8**	**-0.9**
LBTB	**Lobatse**	**3.67**	**283**	*i*	P	**Pn**	**14 28 57.6**	**+1.3**
LBTB				*i*	S	**Sn**	**14 29 38.8**	**-0.9**
BOSA	**Boshof**	**4.68**	**234**	*i*	P	**Pn**	**14 29 10.8**	**+0.6**
BOSA				*i*	S	**Sn**	**14 30 03.4**	**-1.2**
BOSA	**Boshof**	**4.68**	**234**	*i*	P	**Pn**	**14 29 10.8**	**+0.6**
BOSA				*i*	S	**Sn**	**14 30 03.4**	**-1.2**
BLWY	**Bulawayo**	**5.79**	**351**	*i*	P	**Pn**	**14 29 26.7**	**+1.2**
BLWY				*i*	S	**Sn**	**14 30 30.2**	**-1.8**
BLWY	**Bulawayo**	**5.79**	**351**	*i*	P	**Pn**	**14 29 26.7**	**+1.2**
BLWY				*i*	S	**Sn**	**14 30 30.2**	**-1.8**

IDC ***26*** *14:33:39.5±0.3, 1°.91N×126°.45E, h0km, mb6.2/42, mb1 6.2/43, mb1mx6.1/45, mbtmp6.2/43, ML5.1/1, MS6.3/37, Ms1 6.3/37, ms1mx6.2/43, Error ellipse: s-maj=12.4km s-min=7.8km az=67.0*

MOS ***26*** *14:33:42.5±1.0, 1°.87N×126°.41E, h39km, mb6.7/110, MS6.5/70, Error ellipse: s-maj=6.9km s-min=3.6km az=114.6*

NEIC ***26*** *14:33:43.6±2.4, 1°.96N±0°.04×126°.58E±0°.05, h39km±1km, mb6.4/299, Ms_20 6.6/891, Mwb6.8/38, Mww6.8, Mwc6.8(GCMT), Error ellipse: s-maj=8.7km s-min=5.4km az=115.0*

NEIC ***26*** *14:33:43.5, 1°.97N×126°.58E, h39km, Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr1.39; Mθθ-0.73; Mφφ-0.66; Mrθ0.31; Mθφ-1.20; Mφr-0.27; Fault plane solution: M₀1.75000×10¹⁹ NP1:φs65.65000°, δ49.37000°, λ118.51000°. NP2:φs205.82000°, δ48.17000°, λ60.91000°. Principal axes: T 1.5507, Plg69.0000°, Azm44.0000°; N 0.3447, Plg21.0000°, Azm226.0000°; P -1.8954, Plg1.0000°, Azm136.0000°;*

BJI ***26*** *14:33:44.0±0.0, 2°.00N×126°.45E, h50km, mB6.5/86, mb6.3/82, Ms6.7/96, Ms7 6.6/88*

DJA ***26*** *14:33:46.8±0.2, 2°.N±2°×12°.7E±°, h59km±3km, M6.6/73, mB6.8/73, mb6.3/73, MLv6.5/18, Mw6.7/43, Mw(mB)6.6/73, Mwp6.6/72*

KLM ***26*** *14:33:47.0, 1°.93N×126°.56E, h62km, mb6.5*

GCMT ***26*** *14:33:49.6±0.0, 2°.11N×126°.44E, h35km, MW6.8/168, Moment Tensor Solution. s168,c448; s165,c782; Duration: 5s9 Moment tensor: Scale 10¹⁹Nm; Mrr1.58±.01; Mθθ-0.39±.01; Mφφ-1.18±.01; Mrθ-0.20±.01; Mθφ-0.83±.00; Mφr-0.74±.01; Best double couple: M₀1.81200×10¹⁹ NP1:φs40.00000°, δ33.00000°, λ103.00000°. NP2:φs205.00000°, δ57.00000°, λ82.00000°. Principal axes: T 1.7650, Plg76.0000°, Azm89.0000°; N 0.1010, Plg7.0000°, Azm209.0000°; P -1.8590, Plg12.0000°, Azm301.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *14:33:50, 1°.98N×126°.44E, h36km, Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr1.47; Mθθ-0.34; Mφφ-1.13; Mrθ-0.42; Mθφ-0.75; Mφr-0.90; Fault plane solution: M₀1.82000×10¹⁹ NP1:φs35.00000°, δ29.00000°, λ96.00000°. NP2:φs208.00000°, δ61.00000°, λ86.00000°. Principal axes: T 1.7678, Plg73.0000°, Azm109.0000°; N 0.1065, Plg3.0000°, Azm209.0000°; P -1.8743, Plg16.0000°, Azm300.0000°;*

NEIC ***26*** *14:33:51, 2°.12N×126°.49E, h33km, Moment Tensor Solution. Moment tensor: Scale 10¹⁹Nm; Mrr1.46; Mθθ-0.31; Mφφ-1.15; Mrθ-0.09; Mθφ-0.79; Mφr-0.85; Fault plane solution: M₀1.77000×10¹⁹ NP1:φs44.00000°, δ33.00000°, λ112.00000°. NP2:φs199.00000°, δ60.00000°, λ76.00000°. Principal axes: T 1.7199, Plg72.0000°, Azm76.0000°; N 0.0884, Plg12.0000°, Azm206.0000°; P -1.8082, Plg14.0000°, Azm298.0000°;*

ISC 26 14:33:45.2±0.2, 1°.97N±0°.02×126°.47E±0°.03, h48km±1km, h48km:pP-P, n2596, σ1s80/2656, mb6.4/336, MS6.6/600, 120C-47D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.49**	**143**	P		**Pn**	**14 34 07.3**	**-2.2**
TNTI	**Ternate**	**1.49**	**143**	P	n	**Pn**	**14 34 08.2**	**-1.3**
KMSI	**Cibinong**	**2.84**	**241**	P		**Pn**	**14 34 30.8**	**+2.7**
GTOI	**Gorontalo**	**3.70**	**249**	P		**Pn**	**14 34 42.1**	**+2.3**
SANI	**Sanana**	**4.02**	**187**	P		**Pn**	**14 34 43.9**	**-0.3**
LUWI	**Luwuk**	**4.75**	**231**	P		**Pn**	**14 34 56.6**	**+2.3**
LUWI	**Luwuk**	**4.75**	**231**	P	n	**Pn**	**14 34 55.9**	**+1.6**
MRSI	**Marisa**	**4.76**	**252**	P		**Pn**	**14 34 57.0**	**+2.6**
DAV	**Davao City (W)**	**5.15**	**350**	P	n	**Pn**	**14 35 02.5**	**+2.8**
	148nm,0.3s,baz=82,slow=1.2,SNR=19							
DAV					Sn	**Sn**	**14 36 02.5**	**+4.5**
	327nm,0.3s,baz=77,slow=16,SNR=5.2							
DAV	**Davao City (W)**	**5.15**	**350**	P	n	**Pn**	**14 34 59.4**	**-0.4**
DAV	**Davao City (W)**	**5.15**	**350**	⇓	*e*P	**Pn**	**14 35 01.3**	**+1.5**
NLAI	**Namlea**	**5.21**	**173**	P		**Pn**	**14 35 01.5**	**+0.9**
	19nm820μm46μm2μm,0.9s							
APSI	**Ampana**	**5.60**	**239**	P		Pn	14 35 09.8	+3.8
	99nm594μm215μm27μm,1.0s							
TOLI2	**Tolitoli**	**5.74**	**262**	P	n	**Pn**	**14 35 08.0**	**0.0**
MSAI	**Masohi**	**5.82**	**155**	P		**Pn**	**14 35 11.4**	**+2.4**
	5.3nm412μm34μm1μm,1.6s							
ZCP	**Zamboanga City**	**6.59**	**319**	⇓	*i*P	Pn	14 35 32.9	+13
ZCP					*i* S	**Sn**	**14 36 35.1**	**+1.6**
CGP	**Cagayan de Oro**	**6.68**	**345**	⇓	*e*P	Pn	14 35 25.5	+4.6
MPSI	**Mapaga**	**6.76**	**256**	P		**Pn**	**14 35 25.1**	**+3.2**
	20nm93μm7μm,1.1s							
KDI	**Kendari**	**7.03**	**213**	P		**Pn**	**14 35 27.3**	**+1.7**
	15nm51μm3μm,0.8s							
BNDI	**Bandanaira**	**7.30**	**152**	P		**Pn**	**14 35 31.6**	**+2.2**
	21nm118μm3μm,1.0s							
FAKI	**Fak Fak**	**7.55**	**130**	P		**Pn**	**14 35 34.2**	**+1.5**
	12nm71μm2μm,1.2s							
FAKI	**Fak Fak**	**7.55**	**130**	P	n	**Pn**	**14 35 33.0**	**+0.2**
TTSI	**Tana Toraja**	**8.30**	**233**	P		**Pn**	**14 35 45.3**	**+2.3**
	660μm57μm7μm,1.0s							
MYLDM	**Lahad Datu**	**8.57**	**292**			**Pn**	**14 35 49.3**	**+2.6**
LLP	**Lapu-Lapu**	**8.66**	**343**	*e*P		**Pn**	**14 35 50.0**	**+2.0**
LLP				*e*S		Sn	14 37 42.6	+18
SPSI	**Sidrap Palu**	**8.91**	**229**	P		**Pn**	**14 35 53.3**	**+1.9**
	569μm43μm3μm,0.9s							
BNSI	**Bone**	**8.96**	**225**	P		**Pn**	**14 35 53.9**	**+1.8**
	464μm38μm2μm,0.7s							
SMKI	**Samarinda**	**9.56**	**256**	P		**Pn**	**14 36 03.9**	**+3.6**
	88μm4μm,1.0s							
BKSI	**Bulukumba**	**9.62**	**221**	P		**Pn**	**14 36 02.9**	**+1.8**
	366μm31μm2μm,1.

SMPI **Sarmi** 12.86 108 P P 14 36 49.0 -6.0
444µm53µm1µm,1.4s
LQP **Lukban** 13.02 338 ⇓*e*P **Pn** **14 36 50.1 +2.4**
WSI **Waingapu** 13.09 208 P **Pn** **14 36 51.9 +3.4**
61µm3µm,1.9s
TGY **Tagaytay City** 13.24 336 Pn **Pn** **14 36 54.2 +3.5**
baz=129,slow=11,SNR=9.3
BASI **Baing, Sumba** 13.45 206 P **Pn** **14 36 55.9 +2.4**
149µm24µm1µm,1.3s
WBSI **Waikabubak, Su** 13.51 211 P **Pn** **14 36 56.3 +1.9**
170µm35µm2µm,0.9s
PLAI **Plampang** 13.78 219 P **Pn** **14 37 00.8 +2.8**
179µm33µm3µm,1.3s
SBUM **Sibu** 14.24 272 Pn **Pn** **14 37 03.9 -0.3**
SBUM **Sibu** 14.24 272 P **P** **14 37 08.0 -2.4**
TWSI **Taliwang, Sumb** 14.29 222 P **Pn** **14 37 07.2 +2.3**
117µm21µm2µm,0.9s
GENI **Genyem** 14.43 108 P **P** **14 37 08.9 -3.6**
698µm113µm7µm,1.1s
JAY **Jayapura** 14.91 107 Pn **P** **14 37 15.4 -2.6**
7.4nm,0.3s,baz=274,slow=6.4,SNR=48
JAY **Jayapura** 14.91 107 P **P** **14 37 14.2 -3.7**
260µm23µm1µm,0.9s
SRBI **Singaraja** 15.02 228 P **P** **14 37 16.8 -2.2**
184µm47µm3µm,1.0s
STKI **Sintang** 15.10 263 P **P** **14 37 20.5 +0.5**
1µm12µm546nm,1.3s
KMMI **Kalianget** 15.36 234 P **P** **14 37 21.4 -1.4**
223µm54µm4µm,1.0s
DNP **Denpasar** 15.41 227 P **P** **14 37 23.9 +0.5**
233µm134µm10µm,1.5s
MTN **Manton Dam** 15.43 163 Pn **Pn** **14 37 16.6 -3.1**
PBKI **Pangkalan Bun** 15.50 253 P **P** **14 37 22.8 -1.6**
251µm33µm1µm,1.0s
ABJI **Asem Bagus** 15.58 231 P **P** **14 37 25.4 +0.1**
43µm2µm,1.1s
KDU **Kakadu** 15.73 158 P **Pn** **14 37 22.2 -1.5**
baz=16,SNR=381
JAGI **Jajag, Banyuwa** 16.07 230 P **P** **14 37 31.4 +0.7**
232µm58µm4µm,1.2s
JAGI **Jajag, Banyuwa** 16.07 230 **P** **14 37 29.4 -1.3**
JAGI IAmb IAmb 14 37 46.1
comp=Z,7µm,1.4s
KSM **Kuching** 16.16 269 P **Pn** **14 37 30.4 +1.3**
KSM **Kuching** 16.16 269 P **P** **14 37 32.0 +0.3**
CVP **Callao Caves** 16.29 344 ⇑*i*P **Pn** **14 37 30.3 -0.5**
GMJI **Gumukmas** 16.49 232 P **P** **14 37 36.1 +0.7**
comp=Z,218µmcomp=Z,68µmcomp=Z,2µm,1.0s
GRJI **Gresik** 16.51 238 P **P** **14 37 36.6 +1.0**
comp=Z,3µmcomp=Z,6µmcomp=Z,546nm,0.6s
SIPP **Brgy, Tapao** 16.92 340 ⇑*e*P **P** **14 37 40.5 +0.4**
TBJI **Tambak Boyo** 17.00 239 P **P** **14 37 41.8 +0.8**
comp=Z,118µmcomp=Z,31µmcomp=Z,801nm,1.2s
MMPI **Merauke** 17.32 127 P **P** **14 37 47.6 +3.0**
comp=Z,350µmcomp=Z,69µmcomp=Z,4µm,0.9s
PWJI **Pagerwojo** 17.67 236 P **P** **14 37 49.2 +0.8**
comp=Z,186µmcomp=Z,37µmcomp=Z,1µm,1.4s
KNRA **Kununurra** 17.68 173 P **Pn** **14 37 46.8 -1.2**
baz=18,SNR=1000
KNRA **Kununurra** 17.68 173 **Pn** **14 37 46.2 -1.8**
KNRA IAmb IAmb 14 37 56.6
comp=Z,4µm,1.1s
WOJI **Wonogiri, Jawa** 18.31 238 P **Pn** **14 37 56.3 +0.5**
comp=Z,105µmcomp=Z,20µmcomp=Z,911nm,1.2s
SMRI **Semarang** 18.33 241 P **Pn** **14 37 57.0 +0.9**
comp=Z,228µmcomp=Z,54µmcomp=Z,1µm,0.9s
SMRI **Semarang** 18.33 241 **P** **14 37 55.2 -0.5**
UGM **Wanagama** 18.68 238 P **Pn** **14 38 02.2 +1.8**
comp=Z,73µmcomp=Z,4µmcomp=Z,2µm,1.3s
UGM **Wanagama** 18.68 238 P **P** **14 37 59.4 -0.3**
YOGI **Yogyakarta** 18.83 239 P **Pn** **14 38 03.8 +1.6**
comp=Z,111µmcomp=Z,23µmcomp=Z,2µm,0.8s
TPI **Tanjungpandan** 19.38 256 P **Pn** **14 38 09.3 +0.6**
comp=Z,219µmcomp=Z,41µmcomp=Z,663nm,1.1s
KPJI **Karang Pucung** 19.78 242 P **P** **14 38 11.8 +0.1**
comp=Z,212µmcomp=Z,33µmcomp=Z,3µm,0.8s
FITZ **Fitzroy Crossi** 19.95 182 P **Pn** **14 38 13.6 -1.8**
comp=Z,4.5nm,0.3s,baz=15,slow=10,SNR=138
FITZ **Fitzroy Crossi** 19.95 182 P **P** **14 38 12.3 -1.1**
JCJI **Jatiwangi** 20.01 245 P Pn 14 38 15.8 -0.4
comp=Z,179µmcomp=Z,34µmcomp=Z,853nm,0.9s
DLV **T Lat** 20.39 300 **P** **14 38 19.8 +1.3**
PPBI **Pangkal Pinang** 20.73 259 P **P** **14 38 22.8 +0.8**
comp=Z,240µmcomp=Z,47µmcomp=Z,896nm,1.1s
LEM **Lembang** 20.74 245 P **P** **14 38 22.1 -0.1**
comp=Z,333nm,0.9s,baz=62,slow=7.6,SNR=47
LEM LR LR 14 48 27.3
comp=Z,80µm,20.3s,baz=56,slow=43
CISI **Cisompet, Garu** 20.87 243 P **P** **14 38 22.4 -1.1**
comp=Z,164µmcomp=Z,28µmcomp=Z,1µm,0.6s
CISI **Cisompet, Garu** 20.87 243 P **P** **14 38 21.2 -2.4**
MANU **Manus Island** 21.27 101 P **P** **14 38 26.2 -1.6**
CBJI **Citeko** 21.28 247 P **P** **14 38 27.8 0.0**
comp=Z,226µmcomp=Z,48µmcomp=Z,1µm,1.1s
TWG **Pinlang** 21.38 346 P **P** **14 38 25.4 -3.4**
TWG IAmb IAmb 14 38 52.7
comp=Z,946nm,0.7s
DBJI **Dramaga** 21.42 247 P **P** **14 38 29.0 -0.4**
comp=Z,18µmcomp=Z,462nm,1.4s
GUMO **Guam** 21.56 57 P **P** **14 38 31.2 +0.4**
comp=Z,231nm,0.5s,baz=182,slow=9.6,SNR=20
GUMO LR LR 14 46 36.2
comp=Z,41µm,18.6s,baz=234,slow=36
GUMO **Guam** 21.56 57 P **P** **14 38 28.4 -2.4**
GUMO pmax pmax
comp=Z,1µm,0.8s
GUMO MLR MLR
comp=Z,62µm,22.0s
GUMO **Guam** 21.56 57 P **P** **14 38 28.4 -2.4**
GUMO IAmb IAmb 14 38 44.1
comp=Z,1µm,0.8s
SKJI **Sukabumi** 21.78 246 P **P** **14 38 33.5 +0.3**
comp=Z,131µmcomp=Z,24µmcomp=Z,1µm,0.7s
YULB **Yu-li** 21.88 347 P **P** **14 38 30.3 -3.9**
YULB IAmb IAmb 14 38 37.9
comp=Z,819nm,0.6s
TPUB **Ta-pu** 21.95 346 P **P** **14 38 32.2 -2.8**
PMBI **Palembang** 22.22 257 P **P** **14 38 40.5 +2.5**
comp=Z,211µmcomp=Z,46µmcomp=Z,4µm,1.1s
PMBI **Palembang** 22.22 257 **P** **14 38 38.2 +0.2**
PMBI IAMs_20 IAMs_20 14 48 48.6
comp=Z,210µm,22.0s
SSLB **Suanglung** 22.34 347 P **P** **14 38 36.1 -3.1**
SSLB IAmb IAmb 14 38 47.6
comp=Z,936nm,0.8s
SSLB IAMs_20 IAMs_20 14 47 57.4
comp=Z,246µm,22.0s
BLSI **Bandar Lampung** 22.41 251 P **P** **14 38 40.8 +0.8**
comp=Z,157µmcomp=Z,22µmcomp=Z,1µm,0.8s
NACB **Ninganchiao** 22.58 348 P **P** **14 38 39.6 -2.0**
MYKOM **Kota Tinggi** 22.60 270 P **P** **14 38 43.2 +1.1**
MYKOM IAmb IAmb 14 38 48.9
comp=Z,2µm,1.2s
MYKOM **Kota Tinggi** 22.60 270 P **P** **14 38 44.0 +1.9**
YOJ **Yonaguni jima** 22.61 352 P **P** **14 38 42.2 +0.2**
YOJ pmax pmax
comp=Z,1µm,0.8s
YOJ MLR MLR
comp=Z,59µm,19.0s
YOJ **Yonaguni jima** 22.61 352 P **P** **14 38 42.2 +0.2**
YOJ IAmb IAmb 14 38 54.2
comp=Z,1µm,0.8s
KLSI 22.70 253 P **P** **14 38 42.2 -0.9**
comp=Z,62µmcomp=Z,11µmcomp=Z,288nm,0.9s
COEN **Coen** 22.91 134 P **P** **14 38 43.0 -2.2**
baz=23,SNR=83
COEN **Coen** 22.91 134 P **P** **14 38 42.7 -2.5**
WB0 **Warramunga Arr** 22.96 161 P **P** **14 38 43.7 -2.0**
WB0 IAmb IAmb 14 38 52.6
comp=Z,3µm,1.2s
I07AU **WARRAMUNGA INT** 23.09 161 P **P** **14 38 46.4 -0.7**
baz=324,slow=13,SNR=3.7
WRAB **Tennant Creek** 23.10 161 *ce*P **P** **14 38 45.3 -1.8**
WRAB pmax pmax
comp=Z,2µm,1.3s
WRAB MLR MLR
comp=Z,114µm,24.0s
WRAB **Tennant Creek** 23.10 161 P **P** **14 38 45.2 -1.8**
WRA **Warramunga Arr** 23.10 161 P **P** **14 38 46.6 -0.5**
comp=Z,1µm,0.8s,baz=339,slow=11,SNR=360
WRA PcP **PcP** **14 42 36.8 +1.7**
comp=Z,55nm,0.6s,baz=319,slow=2.2,SNR=4.4
WRA S **S** **14 42 56.8 +1.9**
comp=Z,158nm,0.9s,baz=338,slow=16,SNR=7.3
WRA PKP2ab 15 16 15.2
comp=Z,2.8nm,0.9s,baz=157,slow=4.3,SNR=5.4
WRA **Warramunga Arr** 23.10 161 P **P** **14 38 44.0 -3.1**
comp=Z,64nm,0.7s
WRA **Warramunga Arr** 23.10 161 P **P** **14 38 44.0 -3.1**
YHNB **Yeheng** 23.10 348 P **P** **14 38 45.7 -1.5**
YHNB IAmb IAmb 14 38 53.1
comp=Z,1µm,0.6s
YHNB IAMs_20 IAMs_20 14 48 38.5
comp=Z,188µm,21.0s
WB2 **Warramunga Arr** 23.11 161 P **P** **14 38 45.2 -2.0**
WB2 IAmb IAmb 14 38 52.8
comp=Z,2µm,0.7s
KASI **Kota Agung** 23.17 251 P **P** **14 38 47.1 -0.8**
comp=Z,153µmcomp=Z,23µmcomp=Z,1µm,0.8s
WR0 **Warramunga Arr** 23.18 160 P **P** **14 38 46.0 -1.9**
WR0 IAmb IAmb 14 39 02.9
comp=Z,1µm,0.8s
TATO **Taipei** 23.38 349 P **P** **14 38 48.0 -1.7**
TATO P **P** **14 38 48.0 -1.7**
TATO S **S** **14 42 54.9 -4.4**
TATO S **S** **14 42 54.9 -4.4**
TATO **Taipei** 23.38 349 P **P** **14 38 47.7 -2.0**
TATO **Taipei** 23.38 349 IAMs_20 IAMs_20 14 48 48.6
comp=Z,162µm,21.0s
LWLI **Liwa** 23.43 253 P **P** **14 38 50.5 -0.1**
comp=Z,20µmcomp=Z,2µm,0.8s
HKPS **Hong Kong Po S** 23.48 330 P **P** **14 38 48.9 -1.8**
HKPS IAmb IAmb 14 38 55.9
comp=Z,1µm,1.0s
HKC **Hong Kong Obse** 23.48 330 ⇑P **P** **14 38 50.0 -0.8**
PMG **Port Moresby** 23.51 119 P **P** **14 38 51.1 0.0**
comp=Z,182nm,0.8s,baz=324,slow=5.5,SNR=46
PMG LR LR 14 49 04.0
comp=Z,208µm,21.7s,baz=320,slow=39
PMG **Port Moresby** 23.51 119 *ce*P **P** **14 38 48.9 -2.2**
PMG pmax pmax
comp=Z,698nm,1.7s
PMG MLR MLR
comp=Z,211µm,21.0s
PMG **Port Moresby** 23.51 119 P **P** **14 38 48.6 -2.5**
PMG **Port Moresby** 23.51 119 IAMs_20 IAMs_20 14 48 41.9
comp=Z,219µm,22.0s
QIZ **Qiongzhong** 23.51 317 P **P** **14 38 50.3 -0.8**
QIZ sP **sP** **14 39 07.8 -0.4**
QIZ S **S** **14 42 59.8 -1.8**
QIZ sS **sS** **14 43 21.5 +0.1**
QIZ pmax pmax
comp=Z,270nm,1.5s
QIZ pmax pmax
comp=Z,12µm,3.1s
QIZ LR LR
comp=Z,86µm,16.7s
QIZ LR LR
comp=Z,140µm,20.8s
QIZ LR LR
comp=Z,195µm,25.1s
QIZ **Qiongzhong** 23.51 317 P **P** **14 38 49.9 -1.1**
QIZ IAmb IAmb 14 38 55.3
comp=Z,2µm,1.5s
LHSI **Lahat** 23.64 256 P **P** **14 38 52.6 +0.2**
comp=Z,171µmcomp=Z,37µmcomp=Z,1µm,1.9s
MCO **Taipa Grande** 23.64 329 P **P** **14 38 53.0 +0.7**
KNMB **Chin-men Tao** 23.69 341 P **P** **14 38 50.4 -2.3**
KNMB IAmb IAmb 14 38 58.0
comp=Z,1µm,1.1s
MBWA **Marble Bar** 23.91 196 P **P** **14 38 54.3 -0.4**
MBWA P **P** **14 38 54.3 -0.4**
QZH **Quanzhou** 24.07 342 ⇓*i*P **P** **14 38 55.5 -0.7**
QZH S **S** **14 43 08.5 -2.1**
QZH pmax pmax
comp=Z,790nm,1.2s
QZH pmax pmax
comp=Z,14µm,3.8s
QZH LR LR
comp=Z,111µm,23.7s
QZH LR LR
comp=Z,60µm,20.8s
QZH LR LR
comp=Z,166µm,27.5s
XMIS **Christmas Isla** 24.12 239 P **P** **14 38 54.0 -2.8**
XMIS IAmb IAmb 14 39 01.6
comp=Z,932nm,0.8s
JMZ **Minamidaito 2** 24.16 11 P **P** **14 38 57.2 +0.3**
PSA00 **Pilbara Seismi** 24.27 195 P **P** **14 38 55.9 -2.2**
PSA00 **Pilbara Seismi** 24.27 195 P **P** **14 38 56.6 -1.5**
PSA00 IAmb IAmb 14 39 22.0
comp=Z,173nm,0.8s
MNAI **Manna** 24.32 255 P **P** **14 39 00.7 +2.1**
comp=Z,159µmcomp=Z,50µmcomp=Z,2µm,0.8s
MNAI **Manna** 24.32 255 P **P** **14 38 57.0 -1.6**
MNAI IAMs_20 IAMs_20 14 49 32.3
comp=Z,225µm,22.0s
KSI **Kapahiang** 24.50 257 P **P** **14 39 01.7 +1.3**
comp=Z,36µmcomp=Z,2µm,1.0s
GZH **Guangzhou** 24.55 330 P **P** **14 39 03.0 +2.4**
GZH S **S** **14 43 21.8 +3.5**
GZH pmax pmax
comp=Z,11µm,4.3s
GZH LR LR
comp=Z,64µm,20.4s
GZH LR LR
comp=Z,49µm,22.7s
MASI **Maura Aman, Be** 24.74 258 P **P** **14 39 04.7 +2.2**
comp=Z,165µmcomp=Z,59µmcomp=Z,4µm,1.0s
JOW **Kunigami** 24.79 4 P **P** **14 39 00.5 -2.3**
SDSI **Sungai Dareh** 25.20 264 P **P** **14 39 07.2 +0.6**
comp=Z,149µmcomp=Z,31µmcomp=Z,556nm,1.2s
KRJI **Kerinci** 25.32 261 P **P** **14 39 09.9 +2.0**
comp=Z,153µmcomp=Z,112µmcomp=Z,6µm,2.4s
BKNI **Bangkinang** 25.47 267 P **P** **14 39 10.2 +1.1**
comp=Z,157µmcomp=Z,35µmcomp=Z,1µm,1.0s
BKNI **Bangkinang** 25.47 267 P **P** **14 39 07.5 -1.6**
BKNI IAmb IAmb 14 39 14.3
comp=Z,1µm,1.1s
IPM **Ipoh** 25.52 276 P **P** **14 39 09.5 -0.1**
IPM IAmb IAmb 14 39 24.3
comp=Z,1µm,1.1s
IPM **Ipoh** 25.52 276 P **P** **14 39 10.0 +0.4**
QIS **Mount Isa** 25.82 151 P **P** **14 39 11.8 -0.4**
baz=26,SNR=587
KULM **Kulim** 25.97 278 P **P** **14 39 12.7 -1.0**
KULM **Kulim** 25.97 278 P **P** **14 39 14.0 +0.4**
KRVT **Keravat (AS076** 26.29 104 P **P** **14 39 17.4 +0.8**
comp=Z,222nm,0.8s,baz=279,slow=9.8,SNR=28
KRVT LR LR 14 48 53.9
comp=Z,88µm,18.5s,baz=268,slow=35
RABL **Rabaul** 26.40 103 P **P** **14 39 15.3 -2.2**
RABL IAmb IAmb 14 39 30.0
comp=Z,526nm,0.7s
RABL IAMs_20 IAMs_20 14 48 46.4
comp=Z,143µm,21.0s
AS31 **Alice Springs** 26.48 165 P **P** **14 39 16.8 -1.4**
ASAR **Alice Springs** 26.49 165 P **P** **14 39 17.9 -0.4**
comp=Z,147nm,0.7s,baz=338,slow=6.0,SNR=257
ASAR PcP **PcP** **14 42 43.9 +1.5**
comp=Z,93nm,0.7s,baz=339,slow=2.0,SNR=6.4
ASAR S **S** **14 43 51.5 +2.4**
comp=Z,74nm,1.0s,baz=354,slow=16,SNR=3.3
ASAR LR LR 14 49 50.6
comp=Z,38µm,21.1s,baz=336,slow=37
ASAR P3KPbc 15 12 02.9
comp=Z,4.6nm,0.8s,baz=155,slow=5.2,SNR=11
ASAR PKP2ab 15 16 04.6
comp=Z,2.1nm,1.1s,baz=162,slow=3.5,SNR=4.4
ASAR **Alice Springs** 26.49 165 P **P** **14 39 16.5 -1.7**
ASAR **Alice Springs** 26.49 165 P **P** **14 39 16.5 -1.7**
MTSU **Mount Surprise** 26.61 139 P **P** **14 39 19.6 +0.2**
baz=27,SNR=164
WRKA **Warakurna** 26.90 176 P **P** **14 39 21.6 -0.3**
baz=27,SNR=1000
SRAK **Srakaew** 26.94 298 P **P** **14 39 18.0 -4.4**
comp=Z,17µmcomp=Z,35µmcomp=Z,6µm,0.9s
GIRL **Giralia** 27.21 205 P **P** **14 39 26.2 +1.5**
baz=27,SNR=50
GIRL **Giralia** 27.21 205 P **P** **14 39 24.3 -0.4**
TRTT **Trang** 27.29 283 P **P** **14 39 26.8 +1.2**
comp=Z,107µmcomp=Z,24µmcomp=Z,308nm,1.1s
KHON **Khomkaen** 27.31 303 P **P** **14 39 26.5 +0.9**
comp=Z,8µmcomp=Z,1µm,0.9s
RPSI **Rantau Prapat** 27.53 272 P **P** **14 39 26.6 -1.0**
PSI **Prapat** 27.53 272 P **P** **14 39 27.9 0.0**
comp=Z,224nm,0.7s,baz=179,slow=1.3,SNR=112
PSI PcP **PcP** **14 42 47.5 +2.2**
comp=Z,123nm,0.9s,baz=180,slow=1.4,SNR=4.9
PSI **Prapat** 27.53 272 P **P** **14 39 26.6 -1.2**
PSI pmax pmax
comp=Z,678nm,1.1s
PSI MLR MLR
comp=Z,103µm,22.0s
PATY **Pattaya** 27.58 295 P **P** **14 39 31.2 +3.1**
comp=Z,154nm,0.9s
CHAI **Chaiyaphum** 27.81 301 P **P** **14 39 29.9 -0.2**
comp=Z,6µmcomp=Z,981nm,0.8s
NONG **Nongkai** 27.92 306 P **P** **14 39 31.0 -0.1**
comp=Z,25µmcomp=Z,2µm,0.9s
SURT **Suratani** 28.39 285 P **P** **14 39 37.4 +2.0**
comp=Z,129nmcomp=Z,13nm,1.1s
PKDT **Phuket** 28.62 283 P **P** **14 39 38.0 +0.6**
comp=Z,121µmcomp=Z,14µmcomp=Z,431nm,0.8s
PHET **Kaeng Krachan** 28.70 294 P **P** **14 39 38.7 +0.5**
comp=Z,3µmcomp=Z,496nm,1.0s
GSI **Gunungsitoli** 28.89 269 P **P** **14 39 38.2 -1.5**
GSI IAmb IAmb 14 39 44.9
comp=Z,912nm,0.7s
JCJ **Chichijima** 29.18 30 P **P** **14 39 40.5 -1.7**
SLVN **Son La** 29.22 313 P **P** **14 39 42.6 -0.1**
SLVN IAMs_20 IAMs_20 14 50 41.5
comp=Z,145µm,21.0s
CTA **Charters Tower** 29.28 139 P **P** **14 39 43.5 +0.4**
comp=Z,135nm,1.1s,baz=321,slow=11,SNR=44
CTA LR LR 14 53 56.3
comp=Z,136µm,19.4s,baz=328,slow=42
CTAO **Charters Tower** 29.28 139 P **P** **14 39 42.8 -0.4**
CTAO pmax pmax
comp=Z,531nm,1.1s
CTAO MLR MLR
comp=Z,140µm,22.0s
CTAO **Charters Tower** 29.28 139 P **P** **14 39 42.8 -0.4**
CTAO **Charters Tower** 29.28 139 IAMs_20 IAMs_20 14 52 55.2
comp=Z,140µm,22.0s
SSE **Sheshan** 29.40 351 P **P** **14 39 46.5 +2.4**
SSE S **S** **14 44 35.3 +0.6**
SSE pmax pmax
comp=Z,69nm,0.8s
SSE pmax pmax
comp=Z,4µm,3.8s
MEEK **Meekatharra** 29.43 194 P **P** **14 39 44.4 -0.1**
baz=30,SNR=256
JSU **Suzuyama** 29.62 7 P **P** **14 39 45.1 -1.0**
LHMI **Lhok Sumawe** 29.63 277 P **P** **14 39 46.3 -0.1**
LHMI IAmb IAmb 14 39 55.2
comp=Z,430nm,0.8s
SRDT **SRDT** 29.68 296 P **P** **14 39 49.9 +3.1**
comp=Z,125nm,1.0s
PHIT **Phitsanulok** 29.74 302 P **P** **14 39 48.3 +1.0**
comp=Z,16µmcomp=Z,2µm,0.9s
UTHA **Uthaitani** 29.86 298 P **P** **14 39 48.6 +0.2**
comp=Z,3µmcomp=Z,350nm,0.8s
UTTA **Uttaradit** 29.88 303 P **P** **14 39 49.3 +0.7**
comp=Z,4µmcomp=Z,526nm,0.9s
PHRA **Phrae** 30.52 304 P **P** **14 39 55.2 +1.0**
comp=Z,146µmcomp=Z,7µm,1.0s
SUKH **Sukhothai** 30.54 302 P **P** **14 39 55.0 +0.7**
comp=Z,4µmcomp=Z,493nm,0.8s
WHN **Wuhan** 30.66 339 ⇓*i*P **P** **14 39 55.8 +0.6**
WHN sP **sP** **14 40 13.8 +1.1**
WHN S **S** **14 44 52.0 -2.5**
WHN pmax pmax
comp=Z,1µm,0.9s
WHN pmax pmax
comp=Z,7µm,4.3s
WHN LR LR
comp=Z,19µm,16.6s
WHN LR LR
comp=Z,161µm,18.9s
WHN LR LR
comp=Z,266µm,22.0s
NJ2 **Nanjing** 30.77 347 ⇑P **P** **14 39 58.5 +2.3**
NJ2 pP **pwP** **14 40 08.8 -1.6**
NJ2 S **S** **14 44 50.3 -6.0**
NJ2 pmax pmax
comp=Z,290nm,0.8s
NJ2 pmax pmax
comp=Z,6µm,4.0s
NJ2 LR LR
comp=Z,72µm,24.5s
NJ2 LR LR
comp=Z,54µm,20.8s
NJ2 LR LR
comp=Z,134µm,23.7s
GYA **Guiyang** 30.90 324 ⇓P **P** **14 39 58.3 +0.7**
GYA pP pP 14 40 07.8 -1.9
GYA PP **PnPn** **14 41 03.3 +3.6**
GYA PcP **PcP** **14 42 56.5 +3.0**
GYA S **S** **14 44 56.3 -2.4**
GYA pmax pmax
comp=Z,250nm,1.1s
GYA pmax pmax
comp=Z,3µm,3.9s
GYA LR LR
comp=Z,51µm,15.6s
GYA LR LR
comp=Z,48µm,16.3s
GYA LR LR
comp=Z,102µm,24.0s
LAMP **Lampang** 31.03 304 P **P** **14 40 00.0 +1.3**
comp=Z,4µmcomp=Z,499nm,0.9s
PAYA **Payao** 31.24 305 P **P** **14 40 01.8 +1.2**
comp=Z,36µmcomp=Z,5µm,0.9s
JNU **Nakatsue** 31.27 7 P **P** **14 40 01.4 +0.7**
comp=Z,639nm,0.8s,baz=191,slow=10,SNR=121
JNU LR LR 14 53 17.8
comp=Z,29µm,21.5s,baz=182,slow=38
JNU **Nakatsue** 31.27 7 P **P** **14 39 59.1 -1.6**
JNU IAmb IAmb 14 40 04.9
comp=Z,621nm,0.8s
CM36 **Chiang Mai Arr** 31.47 303 P **P** **14 40 03.0 +0.4**
CM35 **Chiang Mai Arr** 31.50 304 P **P** **14 40 03.0 +0.2**
CM04 **Chiang Mai Arr** 31.51 303 P **P** **14 40 04.3 +1.4**
comp=Z,2µmcomp=Z,310nm,1.0s
CM09 **Chiang Mai Arr** 31.52 303 P **P** **14 40 04.5 +1.4**
comp=Z,2µmcomp=Z,298nm,1.0s
CM01 **Chiang Mai Arr** 31.54 303 P **P** **14 40 04.8 +1.7**
comp=Z,496nmcomp=Z,2µmcomp=Z,303nm,1.0s
CM05 **Chiang Mai Arr** 31.54 303 P **P** **14 40 04.5 +1.3**
comp=Z,2µmcomp=Z,200nm,1.0s
CM02 **Chiang Mai Arr** 31.56 303 P **P** **14 40 04.8 +1.5**
comp=Z,463nmcomp=Z,2µmcomp=Z,260nm,1.0s
CM31 **Chiang Mai Arr** 31.57 303 P **P** **14 40 05.0 +1.5**
comp=Z,70µmcomp=Z,7µm,1.0s
CM31 **Chiang Mai Arr** 31.57 303 P **P** **14 40 03.3 -0.1**
CMAR **Chiang Mai Arr** 31.57 303 P **P** **14 40 04.8 +1.4**
comp=Z,207nm,1.0s,baz=124,slow=7.6,SNR=182
CMAR PcP **PcP** **14 42 58.5 +3.2**
comp=Z,85nm,0.9s,baz=170,slow=1.9,SNR=13
CMAR PKiKP **PKiKP** **14 50 25.8 +1.0**
comp=Z,6.7nm,0.8s,baz=274,slow=1.3,SNR=9.3
CMAR LR LR 14 55 36.1
comp=Z,38µm,18.4s,baz=176,slow=42
CMAR P3KPbc 15 11 45.5
comp=Z,0.8nm,0.4s,baz=294,slow=4.8,SNR=5.4
CMAR **Chiang Mai Arr** 31.57 303 P **P** **14 40 02.6 -0.9**
CMAR **Chiang Mai Arr** 31.57 303 P **P** **14 40 02.6 -0.9**
CM13 **Chiang Mai Arr** 31.58 303 P **P** **14 40 04.8 +1.2**
comp=Z,2µmcomp=Z,271nm,1.0s
CM15 **Chiang Mai Arr** 31.58 303 P **P** **14 40 04.9 +1.3**
comp=Z,2µmcomp=Z,275nm,1.0s
CM34 **Chiang Mai Arr** 31.58 304 P **P** **14 40 04.0 +0.4**
CMMT **Chiang Mai** 31.73 304 P **P** **14 40 05.1 +0.2**
comp=Z,5µmcomp=Z,246nm,1.0s
CHTO **Chiang Mai** 31.74 304 P **P** **14 40 04.9 0.0**
CHTO P **P** **14 40 04.9 0.0**
CHTO P **P** **14 40 04.9 0.0**
CHTO S **S** **14 45 09.7 -2.0**
CHTO S **S** **14 45 09.7 -2.0**
CHTO S **S** **14 45 09.7 -2.0**
CHTO **Chiang Mai** 31.74 304 P **P** **14 40 03.9 -1.1**
CHTO pmax pmax
comp=Z,407nm,1.0s
CHTO MLR MLR
comp=Z,130µm,22.0s
CHTO **Chiang Mai** 31.74 304 P **P** **14 40 03.9 -1.1**
CHTO IAmb IAmb 14 40 10.1
comp=Z,407nm,0.9s
CHTO **Chiang Mai** 31.74 304 IAMs_20 IAMs_20 14 52 38.6
comp=Z,130µm,22.0s
CM33 **Chiang Mai Arr** 31.74 304 P **P** **14 40 04.0 -0.9**
CM32 **Chiang Mai Arr** 31.74 303 P **P** **14 40 06.0 +1.0**
PATS **Pohnpei** 32.11 80 P **P** **14 40 08.8 +0.5**
baz=32,SNR=4.5
PATS **Pohnpei** 32.11 80 P **P** **14 40 06.6 -1.7**
MHMT **Maesarieng** 32.30 302 P **P** **14 40 10.0 +0.2**
comp=Z,67µmcomp=Z,10µmcomp=Z,388nm,0.8s

JMN	**Monobe**	**32.35**	**12**	P	**P**	**14 40 11.0**	**+0.8**		
JMN				IAmb	IAmb	14 40 15.3			
	comp=Z,534nm,0.8s								
ENH	**Enshi**	**32.43**	**332**	P	**P**	**14 40 09.9**	**-1.0**		
MORW	**Morawa**	**32.43**	**197**	P	**P**	**14 40 10.9**	**0.0**		
	baz=32,SNR=173								
MORW	**Morawa**	**32.43**	**197**	P	**P**	**14 40 10.9**	**0.0**		
MORW				IAmb	IAmb	14 40 14.9			
	comp=Z,496nm,1.3s								
KMI	**Kunming**	**32.46**	**317**⇓	*eP*	**P**	**14 40 12.5**	**+1.1**		
KMI				pP	pP	14 40 21.8	-1.7		
KMI				sP	sP	14 40 28.0	-1.0		
KMI				PcP	**PcP**	**14 43 00.8**	**+2.9**		
KMI				S	**S**	**14 45 23.3**	**0.0**		
KMI				pmax	pmax				
	comp=Z,460nm,1.8s								
KMI				pmax	pmax				
	comp=Z,4μm,4.3s								
KMI				LR	LR				
	comp=Z,73μm,19.9s								
KMI				LR	LR				
	comp=Z,35μm,21.1s								
KMI				LR	LR				
	comp=Z,92μm,22.3s								
KMI	**Kunming**	**32.46**	**317**	P	**P**	**14 40 11.3**	**-0.1**		
KMI				pmax	pmax				
	comp=Z,972nm,1.5s								
KMI				MLR	MLR				
	comp=Z,179μm,22.0s								
KMI	**Kunming**	**32.46**	**317**	P	**P**	**14 40 11.3**	**-0.1**		
KMI				IAmb	IAmb	14 40 17.1			
	comp=Z,972nm,1.5s								
JTU	**Tsushima**	**32.51**	**5**	P	**P**	**14 40 10.5**	**-1.0**		
FORT	**Forrest**	**32.60**	**177**	P	**P**	**14 40 12.0**	**-0.3**		
	baz=33,SNR=157								
FORT	**Forrest**	**32.60**	**177**	P	**P**	**14 40 11.5**	**-0.8**		
COCO	**West Island**	**32.62**	**244**	P	**P**	**14 40 11.3**	**-1.4**		
COCO				pmax	pmax				
	comp=Z,406nm,0.9s								
COCO	**West Island**	**32.62**	**244**	P	**P**	**14 40 11.3**	**-1.4**		
COCO				IAmb	IAmb	14 40 19.1			
	comp=Z,406nm,0.9s								
QLP	**Quilpie**	**33.16**	**150**	P	**P**	**14 40 16.6**	**-0.7**		
	baz=33,SNR=62								
JHJ	**Hachijo jima 2**	**33.42**	**21**	P	**P**	**14 40 20.7**	**+1.2**		
	comp=Z,344nm,0.7s,baz=67,slow=22,SNR=4.7								
JHJ2	**Mitsune**	**33.42**	**21**	P	**P**	**14 40 18.8**	**-0.7**		
JHJ2				IAmb	IAmb	14 40 25.8			
	comp=Z,665nm,1.0s								
KMBL	**Kambalda**	**33.43**	**187**	P	**P**	**14 40 19.9**	**+0.3**		
	baz=34,SNR=106								
JHS	**Saijyo**	**33.45**	**10**	P	**P**	**14 40 20.2**	**+0.5**		
JHS				IAmb	IAmb	14 40 30.2			
	comp=Z,758nm,1.0s								
BLDU	**Ballidu**	**33.71**	**195**	P	**P**	**14 40 21.8**	**-0.2**		
	baz=34,SNR=157								
JWT	**Wachi**	**34.18**	**13**	P	**P**	**14 40 26.8**	**+0.8**		
TJN	**Taejon**	**34.25**	**1***ce*	P	**P**	**14 40 27.7**	**+1.1**		
JSG	**Sagara**	**34.33**	**17**	P	**P**	**14 40 27.6**	**+0.3**		
KLBR	**Kellerberrin**	**34.38**	**193**	P	**P**	**14 40 27.7**	**-0.1**		
	baz=34,SNR=158								
INU	**Inuyama**	**34.63**	**15**	P	**P**	**14 40 29.9**	**0.0**		
PBA	**Port Blair**	**34.80**	**288**	*eP*	P	14 40 32.6	+0.9		
PBA				IAmb	IAmb	14 42 05.1			
	comp=Z,3μm,2.4s								
PBA	**Port Blair**	**34.80**	**288**	P	P	14 40 30.9	-0.8		
PBA				IAmb	IAmb	14 40 36.7			
	comp=Z,583nm,1.5s								
PBA				IAMs_20	IAMs_20	14 55 36.5			
	comp=Z,138μm,22.0s								
JGF	**Kuroka**	**34.96**	**16**	P	**P**	**14 40 31.6**	**-1.3**		
JGF				IAmb	IAmb	14 40 37.5			
	comp=Z,518nm,0.8s								
DGPR	**DIGLIPUR**	**35.00**	**290**	*eP*	**P**	**14 40 33.1**	**-0.3**		
MUN	**Mundaring**	**35.13**	**195**	P	**P**	**14 40 34.5**	**+0.2**		
	baz=35,SNR=46								
TIA	**Tai'an**	**35.16**	**347**	P	**P**	**14 40 35.3**	**+0.8**		
TIA				S	**S**	**14 46 03.5**	**-0.8**		
TIA				pmax	pmax				
	comp=Z,310nm,0.9s								
TIA				pmax	pmax				
	comp=Z,7μm,11.8s								
TIA				LR	LR				
	comp=Z,40μm,20.0s								
TIA				LR	LR				
	comp=Z,34μm,21.4s								
TIA				LR	LR				
	comp=Z,91μm,27.5s								
HNR	**Honiara**	**35.22**	**109**	LR	LR	14 53 51.7			
	comp=Z,41μm,19.9s,baz=276,slow=34								
HNR	**Honiara**	**35.22**	**109**	P	**P**	**14 40 32.7**	**-2.6**		
HNR				pmax	pmax				
	comp=Z,784nm,1.0s								
HNR				MLR	MLR				
	comp=Z,70μm,21.0s								
HNR	**Honiara**	**35.22**	**109**	P	**P**	**14 40 32.7**	**-2.6**		
HNR				IAmb	IAmb	14 40 49.5			
	comp=Z,784nm,1.0s								
KSAR	**Wonju Array Be**	**35.33**	**2**	P	**P**	**14 40 36.9**	**+1.0**		
KSAR	**Wonju Array Be**	**35.33**	**2**	P	**P**	**14 40 36.9**	**+1.0**		
KSRS	**Korea Array**	**35.34**	**2**	P	**P**	**14 40 37.5**	**+1.6**		
	comp=Z,156nm,0.7s,baz=177,slow=9.7,SNR=166								
KSRS				PcP	**PcP**	**14 43 08.2**	**+2.7**		
	comp=Z,54nm,0.9s,baz=186,slow=2.8,SNR=7.0								
KSRS				S	S	14 46 15.8	+8.8		
	comp=Z,10nm,1.0s,baz=178,slow=18,SNR=4.3								
KSRS				PKiKP	**PKiKP**	**14 50 27.5**	**+0.6**		
	comp=Z,2.8nm,0.8s,baz=188,slow=2.3,SNR=4.6								
INCN	**Inchon**	**35.35**	**0**	P	**P**	**14 40 37.5**	**+1.4**		
INCN				P	**P**	**14 40 37.5**	**+1.4**		
INCN				P	**P**	**14 40 37.5**	**+1.4**		
INCN				S	**S**	**14 46 10.8**	**+3.6**		
INCN				S	**S**	**14 46 10.8**	**+3.6**		
INCN				S	**S**	**14 46 10.8**	**+3.6**		
INCN	**Inchon**	**35.35**	**0**	P	**P**	**14 40 36.9**	**+0.8**		
INCN				pmax	pmax				
	comp=Z,447nm,1.1s								
INCN				MLR	MLR				
	comp=Z,51μm,22.0s								
INCN	**Inchon**	**35.35**	**0**	P	**P**	**14 40 36.9**	**+0.8**		
INCN				IAmb	IAmb	14 41 02.6			
	comp=Z,446nm,1.1s								
KS19	**Wonju Array Si**	**35.39**	**2**	P	**P**	**14 40 37.1**	**+0.6**		
KS19				IAmb	IAmb	14 40 59.2			
	comp=Z,453nm,1.0s								
RMQ	**Roma**	**35.55**	**144**	P	**P**	**14 40 37.6**	**-0.4**		
	baz=36,SNR=58								
NWAO	**Narrogin (SRO)**	**35.78**	**193**	LR	LR	14 56 58.1			
	comp=Z,17μm,20.4s,baz=18,slow=39								
NWAO	**Narrogin (SRO)**	**35.78**	**193**	P	**P**	**14 40 40.4**	**+0.5**		
	baz=36,SNR=48								
NWAO	**Narrogin (SRO)**	**35.78**	**193**	P	**P**	**14 40 39.4**	**-0.5**		
NWAO				P	**P**	**14 40 39.4**	**-0.5**		
NWAO				P	**P**	**14 40 39.4**	**-0.5**		
NWAO	**Narrogin (SRO)**	**35.78**	**193**	P	**P**	**14 40 39.3**	**-0.6**		
NWAO				pmax	pmax				
	comp=Z,425nm,1.0s								
NWAO				MLR	MLR				
	comp=Z,20μm,22.0s								
NWAO	**Narrogin (SRO)**	**35.78**	**193**	P	**P**	**14 40 39.3**	**-0.6**		
NWAO				IAmb	IAmb	14 40 51.1			
	comp=Z,425nm,0.9s								
NWAO	**Narrogin (SRO)**	**35.78**	**193**	P	**P**	**14 40 39.4**	**-0.5**		
NWAO				IAmb	IAmb	14 40 51.1			
	comp=Z,338nm,0.9s								
NWAO				IAMs_20	IAMs_20	14 54 27.3			
	comp=Z,20μm,22.0s								
XAN	**Xi'an**	**35.88**	**335**	P	**P**	**14 40 41.0**	**+0.3**		
XAN				S	**S**	**14 46 11.5**	**-4.0**		
XAN				pmax	pmax				
	comp=Z,680nm,0.9s								
XAN				pmax	pmax				
	comp=Z,9μm,11.7s								
XAN				LR	LR				
	comp=Z,72μm,21.0s								
XAN				LR	LR				
	comp=Z,68μm,23.5s								
XAN				LR	LR				
	comp=Z,83μm,19.4s								
XAN	**Xi'an**	**35.88**	**335**	P	**P**	**14 40 39.5**	**-1.2**		
XAN				pmax	pmax				
	comp=Z,1μm,1.4s								
XAN				MLR	MLR				
	comp=Z,43μm,20.0s								
XAN	**Xi'an**	**35.88**	**335**	P	**P**	**14 40 39.5**	**-1.2**		
CD2	**Chengdu**	**35.92**	**326**	P	**P**	**14 40 41.3**	**+0.1**		
CD2				pP	pwP	14 40 54.5	+1.1		
CD2				sP	sP	14 40 58.5	-0.4		
CD2				PP	**PP**	**14 42 04.0**	**+0.4**		
CD2				S	**S**	**14 46 16.3**	**0.0**		
CD2				SS	**SnSn**	**14 48 41.8**	**-1.7**		
CD2				ScS	**ScS**	**14 50 53.5**	**-2.0**		
CD2				pmax	pmax				
	comp=Z,1μm,1.1s								
CD2				pmax	pmax				
	comp=Z,5μm,5.9s								
CD2				LR	LR				
	comp=Z,96μm,26.5s								
CD2				LR	LR				
	comp=Z,120μm,24.5s								
CD2				LR	LR				
	comp=Z,128μm,23.3s								
MAJO	**Matsushiro**	**36.08**	**16***c*	*iP*	**P**	**14 40 42.3**	**-0.1**		
MAJO				pmax	pmax				
	comp=Z,767nm,0.9s								
MAJO				MLR	MLR				
	comp=Z,69μm,22.0s								
MAJO	**Matsushiro**	**36.08**	**16**	P	**P**	**14 40 41.4**	**-1.0**		
MAT	**Matsushiro**	**36.08**	**16**	P	**P**	**14 40 42.4**	**0.0**		
MAT				S	**S**	**14 46 17.7**	**-0.8**		
MJAR	**Matsushiro Arr**	**36.08**	**16**	P	**P**	**14 40 42.4**	**0.0**		
	comp=Z,551nm,0.9s,baz=174,slow=6.5,SNR=14								
MJAR				PcP	**PcP**	**14 43 09.9**	**+2.1**		
	comp=Z,110nm,0.9s,baz=179,slow=2.7,SNR=7.7								
MJAR				LR	LR	14 54 19.9			
	comp=Z,28μm,20.8s,baz=200,slow=34								
MJAR				P3KPbc		15 11 21.9			
	comp=Z,3.6nm,0.8s,baz=16,slow=4.2,SNR=4.3								
MJAR	**Matsushiro Arr**	**36.08**	**16**	P	**P**	**14 40 40.4**	**-2.0**		
MJB9	**Matsu-Tunnel**	**36.08**	**16**	P	**P**	**14 40 41.8**	**-0.6**		
EIDS	**Eidsvold**	**36.15**	**140**	P	**P**	**14 40 42.5**	**-0.7**		
	baz=36,SNR=82								
EIDS	**Eidsvold**	**36.15**	**140**	P	**P**	**14 40 40.2**	**-3.0**		
EIDS				IAmb	IAmb	14 40 51.4			
	comp=Z,544nm,0.9s								
JYT	**Yasato**	**36.39**	**19**	P	**P**	**14 40 43.4**	**-1.6**		
JYT				IAmb	IAmb	14 40 49.1			
	comp=Z,572nm,1.0s								
STKA	**Stephens Creek**	**36.59**	**158**	P	**P**	**14 40 46.6**	**-0.2**		
	comp=Z,252nm,0.6s,baz=330,slow=8.6,SNR=193								
STKA				LR	LR	14 58 38.4			
	comp=Z,36μm,19.8s,baz=340,slow=41								
STKA	**Stephens Creek**	**36.59**	**158**	P	**P**	**14 40 46.4**	**-0.5**		
	baz=37,SNR=280								
STKA	**Stephens Creek**	**36.59**	**158**	P	**P**	**14 40 43.9**	**-2.9**		
STKA				pmax	pmax				
	comp=Z,101nm,1.0s								
STKA				MLR	MLR				
	comp=Z,6μm,22.0s								
STKA	**Stephens Creek**	**36.59**	**158**	P	**P**	**14 40 43.9**	**-2.9**		
PYAG	**Pyongyang**	**36.92**	**359**	P	**P**	**14 40 52.1**	**+2.7**		
PYAG				pP	**sP**	**14 41 11.0**	**+4.0**		
PYAG				S	**S**	**14 46 36.1**	**+5.0**		
DL2	**Dalian**	**37.03**	**354**⇑	*iP*	**P**	**14 40 52.0**	**+1.6**		
DL2				S	**S**	**14 46 32.3**	**-0.5**		
DL2				pmax	pmax				
	comp=Z,490nm,0.8s								
DL2				pmax	pmax				
	comp=Z,7μm,5.4s								
DL2				LR	LR				
	comp=Z,54μm,23.3s								
DL2				LR	LR				
	comp=Z,28μm,24.1s								
DL2				LR	LR				
	comp=Z,95μm,25.3s								
PYS	**Pyongsong**	**37.12**	**359**	P	**P**	**14 40 54.0**	**+2.9**		
HTT	**Hallett**	**37.12**	**163**	P	**P**	**14 40 51.3**	**0.0**		
	baz=37,SNR=163								
JSD	**Sado**	**37.50**	**15**	P	**P**	**14 40 54.1**	**-0.3**		
JSD				IAmb	IAmb	14 40 58.2			
	comp=Z,708nm,0.8s								
HHU	**Hamhung**	**37.80**	**1**	P	**P**	**14 40 59.5**	**+2.6**		
HHU				sP	**sP**	**14 41 17.8**	**+3.3**		
HHU				S	**S**	**14 46 48.8**	**+4.3**		
TIY	**Taiyuan**	**37.84**	**342**	*eP*	**P**	**14 40 58.5**	**+1.1**		
TIY				pP	**pwP**	**14 41 09.3**	**-2.5**		
TIY				sP	**sP**	**14 41 14.5**	**-0.6**		
TIY				S	**S**	**14 46 47.0**	**+1.6**		
TIY				pmax	pmax				
	comp=Z,470nm,1.0s								
TIY				pmax	pmax				
	comp=Z,4μm,4.4s								
TIY				LR	LR				
	comp=Z,62μm,21.5s								
TIY				LR	LR				
	comp=Z,17μm,14.8s								
TIY				LR	LR				
	comp=Z,157μm,27.0s								
CMSA	**Cobar Meteorol**	**38.00**	**153**	P	**P**	**14 40 58.7**	**0.0**		
	baz=38,SNR=186								
SUJ	**Sinuiju**	**38.00**	**358**	P	**P**	**14 41 01.4**	**+2.8**		
SUJ				pP	**sP**	**14 41 18.0**	**+1.8**		
SUJ				S	**S**	**14 46 51.0**	**+3.4**		
JMM	**Marumori**	**38.08**	**19**	P	**P**	**14 41 00.1**	**+0.8**		
SAIH	**SAIHA**	**38.38**	**305**	*eP*	**P**	**14 41 02.6**	**+0.4**		
H01W3	**Cape Leeuwin H**	**38.44**	**196**	P	**P**	**14 41 05.2**	**+3.1**		
	baz=28,slow=6.6,SNR=12								
H01W1	**Cape Leeuwin H**	**38.44**	**196**	P	**P**	**14 41 03.9**	**+1.8**		
	baz=28,slow=6.6,SNR=16								
H01W2	**Cape Leeuwin H**	**38.45**	**196**	P	**P**	**14 41 05.4**	**+3.2**		
	baz=28,slow=6.6,SNR=10								
LKP	**Lekhapani**	**38.68**	**314**⇑	*eP*	**P**	**14 41 05.7**	**+1.2**		
LKP				IAmb	IAmb	14 43 19.1			
	comp=Z,280nm,0.7s								
BJT	**Baijiatuau**	**39.02**	**347**	P	**P**	**14 41 07.4**	**+0.3**		
BJT				pmax	pmax				
	comp=Z,834nm,1.1s								
BJT				MLR	MLR				
	comp=Z,36μm,22.0s								
BJT	**Baijiatuau**	**39.02**	**347**	P	**P**	**14 41 07.4**	**+0.3**		
BJT				IAmb	IAmb	14 41 14.3			
	comp=Z,834nm,1.1s								
BJI	**Beijing**	**39.04**	**347**	P	**P**	**14 41 07.8**	**+0.5**		
BJI				S	**S**	**14 47 01.5**	**-1.6**		
BJI				pmax	pmax				
	comp=Z,650nm,0.8s								
BJI				pmax	pmax				
	comp=Z,8μm,4.7s								
BJI				LR	LR				
	comp=Z,29μm,20.4s								
BJI				LR	LR				
	comp=Z,36μm,22.8s								
BJI				LR	LR				
	comp=Z,60μm,29.4s								
KOHI	**KOHIMA**	**39.08**	**310**⇑	*eP*	**P**	**14 41 07.9**	**-0.2**		
KOHI				IAmb	IAmb	14 41 11.5			
	comp=Z,1μm,1.0s								
MOKO	**MOKOCHONG**	**39.09**	**311**	*eP*	**P**	**14 41 08.4**	**+0.2**		
MOKO				IAmb	IAmb	14 43 20.7			
	comp=Z,383nm,0.9s								
DIBR	**DIBRUGARH**	**39.44**	**313**	*eP*	**P**	**14 41 11.2**	**+0.3**		
JORH	**JORHAT**	**39.52**	**311**	*eP*	**P**	**14 41 12.8**	**+1.3**		
JORH				IAmb	IAmb	14 41 15.0			
	comp=Z,1μm,0.8s								
SILR	**SILCHAR**	**39.62**	**308**⇑	*eP*	**P**	**14 41 13.4**	**+1.0**		
SNY	**Shenyang**	**39.77**	**357**	⇓*P*	**P**	**14 41 14.5**	**+1.1**		
SNY				S	**S**	**14 47 14.5**	**+0.4**		
SNY				pmax	pmax				
	comp=Z,370nm,0.7s								
SNY				LR	LR				
	comp=Z,47μm,23.0s								
SNY				LR	LR				
	comp=Z,34μm,21.6s								
SNY				LR	LR				
	comp=Z,77μm,21.4s								
LZH	**Lanzhou**	**39.89**	**331**⇑	*iP*	**P**	**14 41 16.0**	**+1.2**		
LZH				pP	pP	14 41 25.5	-1.5		
LZH				sP	sP	14 41 31.0	-1.5		
LZH				PcP	**PcP**	**14 43 23.0**	**+3.2**		
LZH				*e*S	**S**	**14 47 16.5**	**-0.1**		
LZH				sS	sS	14 47 34.3	-2.7		
LZH				SS	**SS**	**14 50 02.8**	**-12**		
LZH				pmax	pmax				
	comp=Z,1μm,1.3s								
LZH				pmax	pmax				
	comp=Z,6μm,4.1s								
LZH				LR	LR				
	comp=Z,39μm,13.8s								
LZH				LR	LR				
	comp=Z,56μm,14.1s								
LZH				LR	LR				
	comp=Z,105μm,15.7s								
BELO	**BELONIA**	**39.99**	**305**⇑	*eP*	**P**	**14 41 17.8**	**+2.3**		
ARMA	**Armidale**	**40.16**	**145**	P	**P**	**14 41 17.4**	**+0.4**		
	baz=40,SNR=108								
ARMA	**Armidale**	**40.16**	**145**	P	**P**	**14 41 17.1**	**+0.2**		
ARMA				IAmb	IAmb	14 41 23.9			
	comp=Z,501nm,0.8s								
ZIRO	**ZIRO**	**40.25**	**312**⇑	*eP*	**P**	**14 41 18.1**	**+0.2**		
AGT	**Agartala**	**40.44**	**306**	*eP*	**P**	**14 41 21.3**	**+2.1**		
AGT				IAmb	IAmb	14 41 24.5			
	comp=Z,2μm,1.2s								
TEZP	**TEZPUR**	**40.55**	**310**	*eP*	**P**	**14 41 20.0**	**-0.1**		
SHL	**Shillong**	**40.73**	**308**	*eP*	**P**	**14 41 22.4**	**+0.6**		
SHL				IAmb	IAmb	14 43 25.7			
	comp=Z,483nm,1.2s								
SHL	**Shillong**	**40.73**	**308**	P	**P**	**14 41 21.3**	**-0.5**		
	SNR=435								
SHL	**Shillong**	**40.73**	**308**	P	**P**	**14 41 22.0**	**+0.2**		
SHL				pmax	pmax				
	comp=Z,2μm,0.9s								
SHL	**Shillong**	**40.73**	**308**	P	**P**	**14 41 22.0**	**+0.2**		
JTM	**Tenmabayashi**	**40.84**	**17**	P	**P**	**14 41 22.0**	**-0.3**		
JTM				IAmb	IAmb	14 41 28.0			
	comp=Z,1μm,1.0s								
HHC	**Hu-ho-hao-te**	**40.99**	**343**	*eP*	**P**	**14 41 24.8**	**+1.1**		
HHC				S	**S**	**14 47 28.8**	**-3.8**		
HHC				SS	**SS**	**14 50 35.3**	**-0.8**		
HHC				pmax	pmax				
	comp=Z,110nm,1.0s								
HHC				pmax	pmax				
	comp=Z,8μm,6.3s								
HHC				LR	LR				
	comp=Z,104μm,22.4s								
HHC				LR	LR				
	comp=Z,44μm,22.6s								
HHC				LR	LR				
	comp=Z,170μm,22.0s								
ARPS	**Mount Arapiles**	**41.11**	**161**	P	**P**	**14 41 24.9**	**+0.3**		
	baz=41,SNR=197								
GUWA	**GUWAHATI**	**41.19**	**309**⇑	*eP*	**P**	**14 41 25.2**	**-0.2**		
GUWA				IAmb	IAmb	14 41 28.6			
	comp=Z,593nm,0.4s								
BTO	**Baotou**	**41.25**	**341**	*eP*	**P**	**14 41 27.0**	**+1.2**		
VLA	**Vladivostok**	**41.26**	**6***c*	*iP*	**P**	**14 41 27.5**	**+1.8**		
VLA				pmax	pmax				
	comp=Z,689nm,1.0s								
VLA				MLR	MLR				
	comp=Z,24μm,21.0s								
KWAJ	**Kwajalein Atol**	**41.50**	**79**	IAMs_20	IAMs_20	14 55 46.3			
	comp=Z,80μm,20.0s								
YNG	**Young**	**41.55**	**152**	P	**P**	**14 41 29.0**	**+0.7**		
	baz=42,SNR=44								
CN2	**Changchun**	**41.67**	**359**	⇑P	**P**	**14 41 29.5**	**+0.5**		
CN2				*ep*	pwP	14 41 41.8	-1.8		
CN2				*es*	sP	14 41 47.0	+0.3		
CN2				*eS*	**S**	**14 47 40.8**	**-1.5**		
CN2				ScS	**ScS**	**14 51 25.5**	**-2.7**		
CN2				pmax	pmax				
	comp=Z,50nm,0.8s								
CN2				pmax	pmax				
	comp=Z,8μm,7.0s								
CN2				LR	LR				
	comp=Z,25μm,23.0s								
CN2				LR	LR				
	comp=Z,36μm,23.0s								
CN2				LR	LR				
	comp=Z,49μm,23.0s								
MGCD	**Mangrove Creek**	**42.01**	**149**	P	**P**	**14 41 33.6**	**+1.6**		
	baz=42,SNR=53								
USA0B	**Ussuriysk Arra**	**42.34**	**6***c*	*iP*	**P**	**14 41 36.1**	**+1.6**		
USA0B	**Ussuriysk Arra**	**42.34**	**6**	P	**P**	**14 41 35.3**	**+0.8**		
USA0B				IAmb	IAmb	14 41 40.1			
	comp=Z,601nm,0.9s								
USRK	**Ussuriysk Ar.**	**42.34**	**6**	P	**P**	**14 41 36.0**	**+1.4**		
	comp=Z,612nm,0.8s,baz=189,slow=6.2,SNR=285								
USRK				LR	LR	15 00 41.7			
	comp=Z,14μm,20.0s,baz=185,slow=38								
USRK	**Ussuriysk Ar.**	**42.34**	**6**	P	**P**	**14 41 35.2**	**+0.7**		
USRK	**Ussuriysk Ar.**	**42.34**	**6**	P	**P**	**14 41 35.2**	**+0.7**		
RIV	**Riverview**	**42.52**	**149**	P	**P**	**14 41 37.8**	**+1.7**		
	baz=43,SNR=8.8								
MDJ	**Mudanjiang**	**42.56**	**3**	P	**P**	**14 41 38.3**	**+2.0**		
MDJ				pP	sP	14 41 50.0	-4.1		
MDJ				sP	pwP	14 41 54.8	+3.9		
MDJ				S	**S**	**14 47 53.5**	**-2.0**		
MDJ				sS	sS	14 48 13.5	-2.6		
MDJ				SS	**SS**	**14 51 02.0**	**-4.9**		
MDJ				pmax	pmax				
	comp=Z,95nm,0.5s								
MDJ				pmax	pmax				
	comp=Z,12μm,10.4s								
MDJ				LR	LR				
	comp=Z,64μm,22.5s								
MDJ				LR	LR				
	comp=Z,23μm,25.9s								
MDJ				LR	LR				
	comp=Z,105μm,27.0s								
MDJ	**Mudanjiang**	**42.56**	**3**	P	**P**	**14 41 37.3**	**+1.0**		
MDJ				IAmb	IAmb	14 41 48.2			
	comp=Z,555nm,1.0s								
ERM	**Erimo**	**42.60**	**18***ce*	P	**P**	**14 41 38.2**	**+1.6**		
ERM				pmax	pmax				
	comp=Z,339nm,0.8s								
ERM	**Erimo**	**42.60**	**18**	P	**P**	**14 41 37.0**	**+0.4**		
H11S3	**WAKE ISLAND Hy**	**42.70**	**65**	P	**P**	**14 41 39.1**	**+1.4**		
	baz=9.4,slow=73,SNR=4.2								
H11S3				T	T	15 27 25.1			
	baz=252,slow=74,SNR=126								
H11S2	**WAKE ISLAND Hy**	**42.72**	**65**	P	**P**	**14 41 39.2**	**+1.4**		
	baz=9.4,slow=73,SNR=5.2								
H11S2				T	T	15 27 23.1			
	baz=252,slow=74,SNR=700								
H11S1	**WAKE ISLAND Hy**	**42.72**	**65**	P	**P**	**14 41 39.2**	**+1.4**		
	baz=9.4,slow=73,SNR=3.5								
H11S1				T	T	15 27 22.1			
	baz=252,slow=74,SNR=73								
CNB	**Canberra Magne**	**42.83**	**152**	P	**P**	**14 41 39.9**	**+1.2**		
	baz=43,SNR=36								
JEW	**Eniwo**	**42.85**	**16**	P	**P**	**14 41 39.0**	**+0.3**		
JEW				IAMs_20	IAMs_20	14 59 07.9			
	comp=Z,66μm,22.0s								
WAKE	**Wake Island**	**42.92**	**64**	P	**P**	**14 41 39.1**	**-0.5**		
WAKE				IAmb	IAmb	14 41 59.7			
	comp=Z,844nm,1.3s								
TOO	**Toolangi**	**43.11**	**158**	P	**P**	**14 41 41.8**	**+0.9**		
	baz=43,SNR=63								
TOO	**Toolangi**	**43.11**	**158**	P	**P**	**14 41 40.4**	**-0.5**		
TOO				pmax	pmax				
	comp=Z

TEY pmax pmax
comp=N,180nm,0.8s
TEY pmax pmax
comp=Z,310nm,0.8s
TEY pmax pmax
comp=N,1μm,6.1s
TEY pmax pmax
comp=Z,2μm,5.8s
TEY pmax pmax
comp=E,300nm,4.4s
TEY smax smax
comp=N,29μm,17.7s
SANVU Saraoutou 43.84 115 P **P** **14 41 46.5 -0.5**
SANVU IAmb IAmb 14 42 04.9
comp=Z,1μm,1.2s
GTK Tadong 44.15 308⇑ *e*P **P** **14 41 50.0 +0.4**
GTK IAmb IAmb 14 41 54.0
comp=Z,921nm,1.1s
ASAJ Asahikawa 44.35 17 LR LR 15 00 08.2
comp=Z,65μm,21.8s,baz=220,slow=36
ASAJ Asahikawa 44.35 17 P **P** **14 41 51.5 +0.8**
ASAJ pmax pmax
comp=Z,578nm,0.9s
ASAJ MLR MLR
comp=Z,67μm,22.0s
JKA Kamikawa-asahi 44.35 17 P **P** **14 41 51.5 +0.8**
JKA IAmb IAmb 14 42 04.3
comp=Z,578nm,0.9s
JKA IAMs_20 IAMs_20 15 00 18.6
comp=Z,67μm,22.0s
GTA Gaotai 44.48 330 ⇓P **P** **14 41 51.8 -0.2**
GTA pP pP 14 42 01.8 -2.6
GTA sP sP 14 42 06.0 -3.8
GTA PcP **PcP** **14 43 37.5 +1.0**
GTA S **S** **14 48 25.0 +1.0**
GTA sS sS 14 48 40.8 -3.9
GTA pmax pmax
comp=Z,190nm,1.4s
GTA pmax pmax
comp=Z,4μm,4.6s
GTA LR LR
comp=Z,59μm,23.3s
GTA LR LR
comp=Z,40μm,22.9s
GTA LR LR
comp=Z,93μm,23.3s
CHLP Challavanipeta 44.68 294 *e*P **P** **14 41 53.9 +0.1**
CHLP IVmB_BB 14 42 21.6
comp=Z,4μm,7.6s
CHLP IVMs_BB IVMs_BB 14 59 39.4
comp=Z,14μm,24.6s
BOK Bokaro 44.85 302 *e*P **P** **14 41 53.4 -1.7**
BOK IAmb IAmb 14 41 59.4
comp=Z,281nm,0.9s
TAPN Taplejung 44.86 308 *e*P **P** **14 41 55.3 -0.2**
ODAN Odare 44.89 307 *e*P **P** **14 41 55.9 +0.2**
YUK Yuzh-Kuril'sk 45.29 20*c i*P **P** **14 41 59.3 +1.1**
YUK *e* 14 43 31.7
YUK *i* S **S** **14 48 37.4 +2.1**
YUK *e*SS **ScS** **14 51 53.5 +2.7**
YUK *e*SSS SSS 14 52 56.3
YUK pmax pmax
comp=Z,2μm,1.2s
YUK pmax pmax
comp=Z,2μm,1.0s
YUK pmax pmax
comp=N,620nm,0.7s
LHI Lord Howe Isla 45.47 140 P **P** **14 41 59.8 0.0**
baz=46,SNR=3.2
LHI Lord Howe Isla 45.47 140 P **P** **14 41 59.3 -0.5**
LHI IAMs_20 IAMs_20 15 02 26.9
comp=Z,54μm,19.0s
RAMN Ramite 45.56 307 *e*P **P** **14 42 01.0 0.0**
DZM Mont Dzumac 45.76 124 LR LR 15 02 26.2
comp=Z,83μm,21.0s,baz=314,slow=38
DZM Mont Dzumac 45.76 124 *e*P **P** **14 42 02.4 0.0**
comp=Z,624nm,1.1s
DZM *e*S **S** **14 48 46.4 +3.5**
comp=Z,74μm,37.6s
DZM *e*LR LR 14 55 00.7
comp=Z,252μm,24.8s
DZM Mont Dzumac 45.76 124 P **P** **14 42 01.7 -0.7**
DZM IAMs_20 IAMs_20 15 02 04.6
comp=Z,92μm,21.0s
PALK Pallekele 45.90 278 LR LR 15 02 55.6
comp=Z,81μm,21.9s,baz=213,slow=38
PALK Pallekele 45.90 278 P **P** **14 42 02.3 -1.2**
PALK P **P** **14 42 02.3 -1.2**
PALK P **P** **14 42 02.3 -1.2**
PALK S **S** **14 48 37.9 -7.1**
PALK S **S** **14 48 37.9 -7.1**
PALK S **S** **14 48 37.9 -7.1**
PALK Pallekele 45.90 278 P **P** **14 42 03.8 +0.3**
PALK pmax pmax
comp=Z,261nm,0.9s
PALK MLR MLR
comp=Z,93μm,22.0s
PALK Pallekele 45.90 278 P **P** **14 42 03.8 +0.3**
PALK Pallekele 45.90 278 IAMs_20 IAMs_20 15 02 22.8
comp=Z,93μm,22.0s
TARA Tarawa 46.44 90 P **P** **14 42 06.6 -1.2**
TARA Tarawa 46.44 90 IAMs_20 IAMs_20 15 02 29.4
comp=Z,61μm,22.0s
GUN Gumba 46.56 308 *e*P **P** **14 42 08.5 -0.5**
PVM Polavaram 46.59 292 *e*P **P** **14 42 09.0 +0.1**
PVM IVmB_BB 14 42 33.7
comp=Z,3μm,6.3s
PVM IVMs_BB IVMs_BB 15 01 01.6
comp=Z,16μm,24.5s
PKI Pulchoki 46.79 307 *e*P **P** **14 42 10.9 +0.2**
PKIN Phulchoki 46.80 307 *e*P **P** **14 42 11.0 +0.3**
KKN Kakani 46.99 307 *e*P **P** **14 42 12.3 +0.2**
YSS Yuzh-Sakhalins 47.00 15α *i*P **P** **14 42 13.1 +1.5**
YSS *e* 14 42 29.2
YSS *e* 14 43 57.2
YSS *e*S **S** **14 48 59.1 -0.7**
YSS pmax pmax
comp=Z,420nm,0.8s
YSS pmax pmax
comp=Z,6μm,10.2s
YSS pmax pmax
comp=N,4μm,10.4s
YSS pmax pmax
comp=E,2μm,7.2s
YSS pmax pmax
comp=Z,12μm,6.5s
YSS pmax pmax
comp=N,4μm,5.0s
YSS pmax pmax
comp=E,3μm,6.3s
YSS Yuzh-Sakhalins 47.00 15 P **P** **14 42 11.3 -0.3**
YSS IAmb IAmb 14 42 18.9
comp=Z,470nm,0.9s
KUR Kuril'sk 47.03 21*c i*P **P** **14 42 12.6 +0.7**
KUR *e* 14 43 44.4
KUR *i* 14 44 03.7
KUR *i* S **S** **14 49 01.5 +1.3**
KUR pmax pmax
comp=Z,13μm,6.4s
KUR pmax pmax
comp=E,6μm,5.2s
KUR pmax pmax
comp=N,5μm,5.9s
KUR pmax pmax
comp=N,276nm,1.2s
KUR pmax pmax
comp=E,395nm,1.2s
KUR pmax pmax
comp=Z,1μm,1.2s
MDRS Chennai 47.04 286 *e*P **P** **14 42 14.2 +1.7**
MDRS IAmb IAmb 14 42 21.0
comp=Z,238nm,1.1s
DMN Daman 47.05 307 *e*P **P** **14 42 13.1 +0.4**
KLR Kul'dur 47.30 5*ce*P **P** **14 42 14.3 +0.3**
KLR pmax pmax
comp=Z,547nm,1.0s
KLR MLR MLR
comp=Z,47μm,23.0s
MYLAV Mylavaram 47.39 291 *e*P **P** **14 42 15.2 +0.1**
MYLAV IVmB_BB 14 42 20.1
comp=Z,3μm,3.7s
MYLAV IVMs_BB IVMs_BB 15 01 38.9
comp=Z,14μm,24.8s
HIA Hailar 47.48 354 P **P** **14 42 16.1 +0.8**
HIA pmax pmax
comp=Z,514nm,1.1s
HIA MLR MLR
comp=Z,18μm,19.0s
HIA Hailar 47.48 354 P **P** **14 42 16.1 +0.8**
HIA IAmb IAmb 14 42 24.8
comp=Z,514nm,1.1s
GKN Gorkha 47.59 307 *e*P **P** **14 42 17.3 +0.5**
ADKI Addanki 47.82 290 *e*P **P** **14 42 18.1 -0.4**
ADKI IVmB_BB 14 42 23.2
comp=Z,3μm,3.8s
ADKI IVMs_BB IVMs_BB 15 01 23.5
comp=Z,8μm,22.7s
MOO Moorlands 48.01 159 P **P** **14 42 20.8 +1.3**
baz=48,SNR=17
GGR Gangavaram 48.05 292 *e*P **P** **14 42 20.8 +0.5**
KOLN Koldanda 48.33 306 *e*P **P** **14 42 23.2 +0.7**
DANN Dangsing 48.44 307 *e*P **P** **14 42 24.0 +0.5**
TAU Tasmania Unive 48.47 160 P **P** **14 42 22.4 -0.6**
TAU pmax pmax
comp=Z,143nm,1.0s
TAU Tasmania Unive 48.47 160 P **P** **14 42 22.4 -0.6**
NJS Nagarjunasagar 48.59 290 *e*P **P** **14 42 23.9 -0.6**
NJS IVmB_BB 14 42 28.6
comp=Z,3μm,3.7s
NJS IVMs_BB IVMs_BB 15 02 11.9
comp=Z,9μm,25.6s
ULN Ulaanbaatar 48.71 343 P **P** **14 42 26.7 +1.7**
ULN S **S** **14 49 27.9 +3.6**
ULN Ulaanbaatar 48.71 343*ce*P **P** **14 42 25.6 +0.6**
ULN pmax pmax
comp=Z,810nm,1.3s
ULN Ulaanbaatar 48.71 343 P **P** **14 42 25.6 +0.6**
ULN IAmb IAmb 14 42 30.4
comp=Z,621nm,1.1s
SONM Songino Array 48.88 342 P **P** **14 42 27.1 +0.8**
comp=Z,452nm,0.9s,baz=158,slow=8.9,SNR=146
SONM PcP **PcP** **14 43 52.4 +2.1**
comp=Z,158nm,1.0s,baz=158,slow=3.2,SNR=5.8
SONM LR LR 15 06 20.5
comp=Z,30μm,21.9s,baz=155,slow=40
SONM P4KPbc 15 20 10.6
comp=Z,0.5nm,0.3s,baz=127,slow=3.8,SNR=4.0
SONM Songino Array 48.88 342 P **P** **14 42 26.7 +0.4**
PYUN Piuthan 48.95 306 *e*P **P** **14 42 28.4 +1.1**
CUPL Choutuppal 49.11 291 *e*P **P** **14 42 27.9 -0.6**
CUPL IVmB_BB 14 42 32.6
comp=Z,3μm,3.5s
CUPL IVMs_BB IVMs_BB 15 02 28.6
comp=Z,15μm,24.2s
RPR Rampur 49.13 293 *e*P **P** **14 42 29.0 +0.5**
RPR IVmBBB 14 42 34.3
comp=Z,3μm,2.7s
RPR IVMs_BB IVMs_BB 15 02 03.4
comp=Z,12μm,25.4s
GRNR Gornyy 49.35 8⇑ *i*P **P** **14 42 31.8 +2.1**
GRNR *e*S **S** **14 49 38.9 +5.9**
GRNR pmax pmax
comp=N,90nm,0.9s
GRNR pmax pmax
comp=E,10.0nm,0.9s
GRNR pmax pmax
comp=Z,190nm,0.9s
GRNR smax smax
comp=E,20nm,1.1s
GRNR MLR MLR
comp=N,14μm,19.0s
GRNR MLR MLR
comp=E,6μm,19.0s
GRNR MLR MLR
comp=Z,18μm,20.0s
HYB Hyderabad 49.48 291 *i*P **P** **14 42 30.0 -1.3**
comp=Z,700nm,1.0s
HYB *e*PP **PP** **14 44 28.0 +2.1**
HYB *e*PPP PPP 14 45 20.0
HYB *e*ScP **ScP** **14 47 40.0 -4.6**
HYB *e*S **S** **14 49 36.0 +0.2**
HYB *e*ScS **ScS** **14 52 12.0 -7.7**
HYB *e*LR LR
comp=Z,39nm,20.0s
HYBB Hyderabad (bro 49.48 291 *e*P **P** **14 42 30.6 -0.8**
HYBB IVmB_BB 14 42 35.0
comp=Z,3μm,3.7s
HYBB IVMs_BB IVMs_BB 15 02 39.0
comp=Z,17μm,23.5s
TRD Trivandrum 49.69 279⇑ *e*P **P** **14 42 33.5 +0.6**
URV Uravakonda 50.22 288 *e*P **P** **14 42 36.5 -0.4**
URV IVmBBB 14 42 40.6
comp=Z,2μm,1.9s
URV IVMs_BB IVMs_BB 15 04 26.4
comp=Z,11μm,21.3s
NFK Norfolk Island 50.26 131 P **P** **14 42 37.8 +0.8**
baz=50,SNR=52
TYV Tymovskoe 50.61 13 *e*P **P** **14 42 41.5 +2.3**
TYV *e*S **S** **14 49 56.0 +5.6**
TYV pmax pmax
comp=Z,3μm,2.3s
TYV pmax pmax
comp=Z,210nm,1.0s
TYV smax smax
comp=E,21μm,5.9s
TYV smax smax
comp=E,19nm,1.0s
CIT Chita 51.04 350 *e*P **P** **14 42 43.6 +1.0**
CIT *e* 14 43 02.3
CIT *e* 14 44 04.8
CIT *e*S **S** **14 49 55.4 -1.1**
CIT pmax pmax
comp=Z,3μm,3.3s
KLRI Killari 51.44 292 *e*P **P** **14 42 45.5 -0.7**
KLRI IVmBBB 14 42 51.3
comp=Z,4μm,2.7s
KLRI IVMs_BB IVMs_BB 15 03 45.2
comp=Z,21μm,24.5s
ZEA Zeya 51.61 1*ce*P **P** **14 42 47.1 +0.4**
ZEA *e**SP **sP** **14 43 05.9 +1.3**
ZEA *e* 14 43 57.3
ZEA *e* 14 44 43.4
ZEA *e*S **S** **14 50 03.5 -0.6**
ZEA *e* 14 52 36.0
ZEA pmax pmax
comp=E,300nm,5.2s
ZEA pmax pmax
comp=N,1μm,4.7s
ZEA pmax pmax
comp=Z,2μm,6.8s
ZEA pmax pmax
comp=N,190nm,0.8s
ZEA pmax pmax
comp=E,50nm,0.8s
ZEA pmax pmax
comp=Z,280nm,0.9s
ZEA pmax pmax
comp=E,400nm,4.6s
ZEA pmax pmax
comp=N,2μm,5.6s
ZEA pmax pmax
comp=Z,4μm,5.1s
ZEA smax smax
comp=E,7μm,14.7s
ZEA MLR MLR
comp=N,30μm,20.0s
ZEA MLR MLR
comp=Z,30μm,22.0s
BHPL Bhopal 51.98 298⇑ *e*P **P** **14 42 49.2 -0.9**
BHPL IAmb IAmb 14 42 53.4
comp=Z,480nm,0.7s
ZAK Zakamensk 52.10 341 *e*P **P** **14 42 51.7 +1.2**
ZAK pmax pmax
comp=Z,138nm,1.2s
IRK Irkutsk 53.43 343 *e*P **P** **14 43 02.3 +2.1**
IRK *e* 14 50 32.0
IRK pmax pmax
comp=Z,1μm,3.4s
FUNA Funafuti 53.59 102 P **P** **14 43 01.4 -0.6**
FUNA IAMs_20 IAMs_20 15 01 41.9
comp=Z,62μm,22.0s
DDI Dehra Dun 53.79 307 *e*P **P** **14 43 03.9 +0.6**
DDI IAmb IAmb 14 43 07.0
comp=Z,399nm,0.7s
MOY Mondy 53.94 341 *e*P **P** **14 43 06.4 +2.3**
MOY *e* 14 50 40.1
MOY pmax pmax
comp=Z,2μm,4.0s
WMQ Urumqi 54.02 326 P **P** **14 43 06.3 +1.5**
WMQ pP pwP 14 43 18.0 -1.8
WMQ sP sP 14 43 25.3 +2.5
WMQ PcP **PcP** **14 44 10.3 +0.9**
WMQ ScP **ScP** **14 48 05.8 +2.0**
WMQ S **S** **14 50 38.0 +0.5**
WMQ ScS **ScS** **14 52 48.3 -2.0**
WMQ SS **SS** **14 54 19.3 -0.3**
WMQ pmax pmax
comp=Z,860nm,1.1s
WMQ pmax pmax
comp=Z,6μm,4.3s
WMQ LR LR
comp=Z,96μm,21.7s
WMQ LR LR
comp=Z,79μm,22.1s
WMQ LR LR
comp=Z,115μm,23.3s
WMQ Urumqi 54.02 326 P **P** **14 43 05.1 +0.3**
WMQ pmax pmax
comp=Z,634nm,1.0s
WMQ MLR MLR
comp=Z,80μm,22.0s
WMQ Urumqi 54.02 326 P **P** **14 43 05.1 +0.3**
WMQ IAmb IAmb 14 43 10.2
comp=Z,634nm,1.0s
POO Poona 54.09 291⇑ *e*P **P** **14 43 04.6 -1.1**
POO IAmb IAmb 14 43 50.2
comp=Z,180nm,1.1s
MSVF Nonsavu 54.44 113 P **P** **14 43 07.9 -0.4**
MSVF pmax pmax
comp=Z,663nm,1.3s
MSVF Nonsavu 54.44 113 P **P** **14 43 07.9 -0.4**
MSVF IAmb IAmb 14 43 19.7
comp=Z,663nm,1.3s
MSVF Nonsavu 54.44 113 IAMs_20 IAMs_20 15 04 54.7
comp=Z,72μm,22.0s
SKR Severo-Kuril's 54.63 23 *e*P **P** **14 43 08.8 -0.2**
SKR *e* 14 45 07.0
SKR *e*PPP PPP 14 46 29.8
SKR *i* S **S** **14 50 48.4 +3.1**
SKR *e*SS **SS** **14 54 30.8 +2.0**
SKR pmax pmax
comp=Z,6μm,6.1s
SKR pmax pmax
comp=Z,368nm,0.9s
SKR pmax pmax
comp=Z,4μm,16.2s
SKR smax smax
comp=E,13μm,10.3s
SKR MLR MLR
comp=Z,8μm,20.0s
SKR MLR MLR
comp=Z,8μm,19.0s
H08S2 Diego Garcia H 54.68 259 P **P** **14 43 12.3 +2.7**
baz=59,slow=9.2,SNR=12
H08S3 Diego Garcia H 54.68 259 P **P** **14 43 11.4 +1.6**
baz=59,slow=9.2,SNR=35
DGAR Diego Garcia 54.69 260*ce*P **P** **14 43 09.8 -0.2**
DGAR pmax pmax
comp=Z,598nm,0.8s
DGAR Diego Garcia 54.69 260 P **P** **14 43 10.2 +0.1**
DGAR IAmb IAmb 14 43 14.3
comp=Z,558nm,0.8s
DGAR Diego Garcia 54.69 260 IAMs_20 IAMs_20 15 04 22.9
comp=Z,60μm,22.0s
H08S1 Diego Carcia H 54.70 259 P **P** **14 43 11.6 +1.8**
baz=59,slow=9.2,SNR=13
SMLA Simla 54.80 307 *e*P **P** **14 43 11.2 +0.6**
DHRM DHARAMSHALA 55.91 308 *e*P **P** **14 43 20.3 +1.4**
DHRM IAmb IAmb 14 43 22.7
comp=Z,2μm,1.1s
BOD Bodaibo 56.56 352 *e*P **P** **14 43 20.4 -2.3**
BOD pmax pmax
comp=Z,682nm,1.3s
PEA0B Petropavlovsk- 57.16 22*ce*P **P** **14 43 28.3 +1.3**
PEA0B Petropavlovsk- 57.16 22 P **P** **14 43 27.7 +0.7**
PEA0B IAmb IAmb 14 43 32.1
comp=Z,326nm,0.9s
PETK Petropavlovsk- 57.16 22 P **P** **14 43 28.8 +1.7**
comp=Z,244nm,0.8s,baz=196,slow=4.4,SNR=97
PETK LR LR 15 08 01.0
comp=Z,17μm,20.8s,baz=218,slow=36
PETK Petropavlovsk- 57.16 22 P **P** **14 43 27.5 +0.5**
PETK Petropavlovsk- 57.16 22 P **P** **14 43 27.5 +0.5**
PET Petropavlovsk 57.45 22α *i*P **P** **14 43 30.6 +1.6**
PET *e**SP **sP** **14 43 47.7 +0.7**
PET *e*PPP PPP 14 46 54.9
PET *i* S **S** **14 51 25.7 +3.0**
PET *e*SS **SS** **14 55 21.8 +8.8**
PET pmax pmax
comp=Z,13μm,6.9s
PET pmax pmax
comp=Z,578nm,1.3s
PET pmax pmax
comp=Z,15μm,14.4s
PET smax smax
comp=E,15μm,10.5s
PET smax smax
comp=E,22μm,20.0s
PET MLR MLR
comp=Z,25μm,20.0s
PET MLR MLR
comp=Z,17μm,19.0s
PET Petropavlovsk 57.45 22 P **P** **14 43 29.2 +0.2**
OUZ Omahuta 57.51 135 P **P** **14 43 29.0 -0.8**
ZSN Zaisan 57.84 328 *e*P **P** **14 43 32.5 +0.4**
comp=Z,101nm,0.9s,baz=328
ZSN *i* S **S** **14 51 29.4 +1.3**
comp=Z,984nm,4.2s,baz=328
ZSN Zaisan 57.84 328 *e*P **P** **14 43 32.4 +0.4**
ZSN *i* S **S** **14 51 29.4 +1.3**
ZSN pmax pmax
comp=Z,101nm,0.9s
SHLS Shalkode 58.54 321 *i*P **P** **14 43 36.0 -1.1**
comp=Z,282nm,0.8s,baz=321
SHLS *i* S **S** **14 51 36.4 -1.3**
comp=Z,1μm,3.9s,baz=321
SHLS Shalkode 58.54 321 *i*P **P** **14 43 35.9 -1.1**
SHLS *i* S **S** **14 51 36.3 -1.3**
SHLS pmax pmax
comp=Z,282nm,0.8s
PDGK Podgornoye 58.61 321 P **P** **14 43 38.3 +0.7**
NIL Nilore 58.80 309 P **P** **14 43 38.9 -0.1**
NIL P **P** **14 43 38.9 -0.1**
NIL S **S** **14 51 37.3 -3.9**
NIL S **S** **14 51 37.3 -3.9**
NIL Nilore 58.80 309 P **P** **14 43 38.1 -0.9**
NIL pmax pmax
comp=Z,530nm,1.0s
NIL MLR MLR
comp=Z,28μm,22.0s
NIL Nilore 58.80 309 P **P** **14 43 38.1 -0.9**
NIL IAmb IAmb 14 43 48.4
comp=Z,530nm,0.9s
MK31 Makanchi Array 58.85 326 P **P** **14 43 38.7 -0.4**
MK31 pmax pmax
comp=Z,368nm,0.9s
MK31 Makanchi Array 58.85 326 P **P** **14 43 38.7 -0.4**
MK31 IAmb IAmb 14 43 44.5
comp=Z,368nm,0.8s
MKAR Makanchi Array 58.85 326 P **P** **14 43 40.2 +1.1**
comp=Z,346nm,0.6s,baz=121,slow=8.3,SNR=567
MKAR LR LR 15 10 59.2
comp=Z,53μm,20.6s,baz=116,slow=38
MKAR PKP2bc 15 13 23.9
comp=Z,6.7nm,0.9s,baz=294,slow=4.6,SNR=3.9
MKAR P4KPbc 15 20 47.2
comp=Z,3.8nm,0.8s,baz=128,slow=5.4,SNR=25
MKAR Makanchi Array 58.85 326 *i*P **P** **14 43 39.2 +0.1**
MKAR pmax pmax
comp=Z,346nm,0.6s
MKAR Makanchi Array 58.85 326 P **P** **14 43 38.9 -0.2**
PRZ Przheval'sk 58.87 320 P **P** **14 43 40.3 +0.8**
PRZ pmax pmax
comp=Z,822nm,0.9s
PRZ Przheval'sk 58.87 320 P **P** **14 43 40.3 +0.8**
BHUJ Bhuj 58.90 296 *e*P **P** **14 43 40.4 +0.7**
BHUJ IAmb IAmb 14 44 32.3
comp=Z,3μm,10.6s
MAKZ Makanchi 59.04 326 P **P** **14 43 40.3 0.0**
MAKZ pmax pmax
comp=Z,653nm,0.8s
MAKZ MLR MLR
comp=Z,58μm,21.0s
MAKZ Makanchi 59.04 326 P **P** **14 43 40.3 0.0**
MAKZ IAMs_20 IAMs_20 15 09 50.6
comp=Z,58μm,21.0s

KSH	**Kashi**	**59.11 316**	⇓	*i*	P	**P**	**14 43 42.3 +1.2**
KSH					sP	sP	14 44 02.8 +3.4
KSH					S	**S**	**14 51 45.5 +0.4**
KSH					ScS	**ScS**	**14 53 27.5 0.0**
KSH					pmax	pmax	
	comp=Z,430nm,0.9s						
KSH					pmax	pmax	
	comp=Z,5μm,4.4s						
KSH					LR	LR	
	comp=Z,18μm,14.8s						
KSH					LR	LR	
	comp=Z,47μm,18.8s						
KSH					LR	LR	
	comp=Z,96μm,22.8s						
SATY	**Saty**	**59.15 321**		*i*	P	**P**	**14 43 41.9 +0.6**
	comp=Z,598nm,0.9s,baz=320						
SATY				*i*	S	**S**	**14 51 46.9 +1.3**
	comp=Z,663nm,5.0s,baz=320						
SATY	**Saty**	**59.15 321**		*i*	P	**P**	**14 43 41.9 +0.6**
SATY				*i*	S	**S**	**14 51 46.9 +1.3**
SATY					pmax	pmax	
	comp=Z,598nm,0.9s						
KPKS	**Kokpek**	**59.18 321**		*eP*		**P**	**14 43 41.8 +0.2**
	comp=Z,377nm,0.8s,baz=321						
KPKS	**Kokpek**	**59.18 321**		*eP*		**P**	**14 43 41.7 +0.2**
KPKS					pmax	pmax	
	comp=Z,377nm,0.8s						
ZHN	**Zhinishke**	**59.19 321**		*eP*		**P**	**14 43 42.9 +1.3**
	comp=Z,23nm,0.9s,baz=320						
ZHN					*eS*	**S**	**14 51 47.9 +1.9**
	baz=320						
ZHN	**Zhinishke**	**59.19 321**		*eP*		**P**	**14 43 42.9 +1.3**
ZHN					*eS*	**S**	**14 51 47.9 +1.9**
DCZ	**Deep Cove**	**59.40 148**		P		**P**	**14 43 42.5 -0.3**
DCZ					IAMs_20	IAMs_20	15 12 23.7
	comp=Z,44μm,19.0s						
KDJ	**Kajisay**	**59.49 319**		P		**P**	**14 43 44.0 +0.2**
KDJ					pmax	pmax	
	comp=Z,592nm,0.9s						
KDJ					MLR	MLR	
	comp=Z,70μm,22.0s						
KDJ	**Kajisay**	**59.49 319**		P		**P**	**14 43 44.0 +0.2**
PYZ	**Puysegur Point**	**59.61 149**		IAMs_20		IAMs_20	15 12 44.2
	comp=Z,36μm,20.0s						
FOZ	**Fox Glacier**	**59.66 145**		P		**P**	**14 43 43.8 -0.8**
FOZ				IAMs_20		IAMs_20	15 11 50.5
	comp=Z,32μm,19.0s						
QRZ	**Quartz Range**	**59.73 141**		P		**P**	**14 43 45.1 0.0**
QRZ				IAmb		IAmb	14 43 50.9
	comp=Z,244nm,0.8s						
KHEZ	**Kahui Hut**	**59.87 139**		P		P	14 43 50.6 +4.3
YAK	**Yakutsk**	**59.97 2**	*c*	*iP*		**P**	**14 43 47.6 +1.2**
YAK				*e*			14 44 30.3
YAK				*i*	S	**S**	**14 51 54.0 -1.1**
YAK				*e*	*SS	sS	14 52 25.8 +9.1
YAK				*e*			14 53 34.6
YAK				*e*	SS	**SS**	**14 56 01.2 +8.9**
YAK					pmax	pmax	
	comp=Z,2μm,0.9s						
YAK					pmax	pmax	
	comp=E,155nm,1.2s						
YAK					pmax	pmax	
	comp=N,557nm,1.3s						
YAK					smax	smax	
	comp=E,15μm,6.3s						
YAK					smax	smax	
	comp=N,6μm,4.3s						
YAK					MLR	MLR	
	comp=Z,35μm,22.0s						
YAK					MLR	MLR	
	comp=E,14μm,22.0s						
YAK					MLR	MLR	
	comp=N,18μm,20.0s						
YAK	**Yakutsk**	**59.97 2**		P		**P**	**14 43 46.1 -0.3**
YAK				IAMs_20		IAMs_20	15 10 49.9
	comp=Z,47μm,22.0s						
WKZ	**Wanaka**	**60.00 146**		IAMs_20		IAMs_20	15 13 08.7
	comp=Z,55μm,20.0s						
HIZ	**Hauiti**	**60.03 137**		P		**P**	**14 43 48.9 +1.6**
HIZ	**Hauiti**	**60.03 137**		IAMs_20		IAMs_20	15 09 28.5
	comp=Z,37μm,22.0s						
MDOK	**Medeo**	**60.07 320**		*i*	P	**P**	**14 43 48.5 +0.7**
	baz=320						
MDOK					*eS	**S**	**14 51 58.9 +1.4**
	baz=320						
MDOK	**Medeo**	**60.07 320**		*i*	P	**P**	**14 43 48.4 +0.7**
MDOK					*eS	**S**	**14 51 58.8 +1.4**
TNSS	**Tian-Shan**	**60.07 320**		*i*	P	**P**	**14 43 49.0 +0.9**
	baz=320						
TNSS	**Tian-Shan**	**60.07 320**		*i*	P	**P**	**14 43 48.9 +0.9**
TOZ	**Tahuroa Road**	**60.08 136**		P		**P**	**14 43 49.1 +1.5**
WHZ	**Wether Hill Ro**	**60.10 148**		P		**P**	**14 43 46.5 -1.1**
WHZ				IAMs_20		IAMs_20	15 12 55.1
	comp=Z,36μm,20.0s						
TDK	**Taldyqorghan**	**60.14 323**		*i*	P	**P**	**14 43 47.8 -0.2**
	comp=Z,555nm,0.8s,baz=322						
TDK					*iS	**S**	**14 51 58.8 +0.7**
	baz=322						
TDK	**Taldyqorghan**	**60.14 323**		*i*	P	**P**	**14 43 47.8 -0.2**
TDK					*iS	**S**	**14 51 58.7 +0.7**
TDK					pmax	pmax	
	comp=Z,555nm,0.8s						
KNDC	**Almaty**	**60.15 320**		P		**P**	**14 43 50.1 +2.0**
ULHL	**Ulahol**	**60.16 319**		P		**P**	**14 43 51.0 +2.5**
	SNR=15						
AAA	**Alma-Ata**	**60.18 320**		*eP*		**P**	**14 43 49.1 +0.7**
	comp=Z,350nm,0.9s,baz=320						
AAA					*eS	**S**	**14 51 59.1 +0.4**
	baz=320						
AAA	**Alma-Ata**	**60.18 320**		*eP*		**P**	**14 43 49.0 +0.7**
AAA					*eS	**S**	**14 51 59.1 +0.4**
AAA					pmax	pmax	
	comp=Z,350nm,0.9s						
LREZ	**Lake Rotokare**	**60.21 139**		P		**P**	**14 43 51.2 +2.6**
VRZ	**Vera Road**	**60.28 138**		P		**P**	**14 43 50.5 +1.5**
LBZ	**Lake Benmore**	**60.39 145**		P		**P**	**14 43 48.8 -0.9**
LBZ				IAmb		IAmb	14 43 51.4
	comp=Z,309nm,0.7s						
CHKK	**Chushkaly**	**60.44 321**		*eP*		**P**	**14 43 50.2 +0.1**
	baz=320						
CHKK	**Chushkaly**	**60.44 321**		*eP*		**P**	**14 43 50.1 +0.1**
BOOM	**Boomskoye usch**	**60.47 319**		P		**P**	**14 43 50.5 0.0**
BOOM					pmax	pmax	
	comp=Z,402nm,1.1s						
BOOM	**Boomskoye usch**	**60.47 319**		P		**P**	**14 43 50.5 0.0**
BOOM				IAmb		IAmb	14 43 56.1
	comp=Z,402nm,1.1s						
MA2	**Magadan**	**60.47 14**		P		**P**	**14 43 50.7 +0.8**
MA2					pmax	pmax	
	comp=Z,969nm,0.9s						
MA2	**Magadan**	**60.47 14**		P		**P**	**14 43 50.7 +0.8**
NNZ	**Nelson**	**60.48 141**		P		**P**	**14 43 48.9 -1.4**
THZ	**Tophouse**	**60.48 141**		P		**P**	**14 43 48.7 -1.7**
THZ				IAmb		IAmb	14 43 55.4
	comp=Z,200nm,0.7s						
RPZ	**Rata Peaks**	**60.49 144**		P		**P**	**14 43 50.5 +0.2**
	comp=Z,155nm,0.8s,baz=7.2,slow=0.4,SNR=11						
RPZ					LR	LR	15 11 48.2
	comp=Z,38μm,18.5s,baz=308,slow=38						
RPZ	**Rata Peaks**	**60.49 144**		P		**P**	**14 43 48.7 -1.6**
RPZ				IAmb		IAmb	14 44 17.1
	comp=Z,270nm,1.0s						
RPZ				IAMs_20		IAMs_20	15 12 46.5
	comp=Z,53μm,20.0s						
LTZ	**Lake Taylor**	**60.67 143**		P		**P**	**14 43 50.5 -1.2**
LTZ				IAmb		IAmb	14 44 16.5
	comp=Z,322nm,1.2s						
WATZ	**Wairara**	**60.72 137**		P		**P**	**14 43 53.6 +1.5**
RATZ	**Rangitukua**	**60.83 137**		P		**P**	**14 43 56.4 +3.6**
OXZ	**Oxford**	**60.84 143**		P		**P**	**14 43 52.0 -0.8**
OXZ				IAMs_20		IAMs_20	15 11 56.9
	comp=Z,45μm,19.0s						
OMRZ	**Omania**	**60.87 136**		P		P	14 43 57.1 +4.0
NGZ	**Ngauruhoe**	**60.87 138**		P		**P**	**14 43 54.7 +1.5**
OPRZ	**Ohinepanea**	**60.87 136**		P		**P**	**14 43 53.8 +0.8**
KUU	**Kurty**	**60.87 321**		*i*	P	**P**	**14 43 53.5 +0.4**
	comp=Z,1μm,1.0s,baz=320						
KUU					*eS	**S**	**14 52 08.7 +1.2**
	comp=Z,2μm,3.6s,baz=320						
KUU	**Kurty**	**60.87 321**		*i*	P	**P**	**14 43 53.4 +0.4**
KUU					*eS	**S**	**14 52 08.6 +1.2**
KUU					pmax	pmax	
	comp=Z,1μm,1.0s						
HSRZ	**Hossack Road**	**60.88 137**		P		P	14 43 58.5 +5.4
TKM2	**Tokmak 2**	**60.89 319**		P		**P**	**14 43 53.7 +0.3**
	SNR=543						
TMVZ	**Te Maari**	**60.91 138**		P		**P**	**14 43 55.0 +1.6**
ETVZ	**East Tongariro**	**60.92 138**		P		**P**	**14 43 55.3 +1.8**
WNVZ	**Wahianoa**	**60.94 138**		P		**P**	**14 43 54.9 +1.2**
HRRZ	**Handcock Road**	**60.94 137**		P		P	14 43 57.5 +3.9
TUWZ	**Tuamarina**	**60.95 141**		P		**P**	**14 43 52.0 -1.5**
ODZ	**Otahua Downs**	**61.05 146**		P		**P**	**14 43 52.7 -1.4**
BSWZ	**Blackbirch Sta**	**61.07 141**		P		**P**	**14 43 51.9 -2.4**
MOVZ	**Moawhango**	**61.09 138**		P		**P**	**14 43 54.9 +0.3**
KBK	**Karagaybulak**	**61.20 319**		P		**P**	**14 43 56.4 +0.9**
	SNR=339						
KHZ	**Kahutara**	**61.24 142**		P		**P**	**14 43 54.0 -1.4**
KHZ				IAmb		IAmb	14 44 00.1
	comp=Z,248nm,0.9s						
MRHZ	**Matea Rd**	**61.25 137**		P		**P**	**14 43 56.9 +1.2**
UCH	**Uchtor**	**61.30 318**		P		**P**	**14 43 58.0 +1.6**
	SNR=59						
CMWZ	**Cape Campbell**	**61.30 141**		P		**P**	**14 43 54.0 -1.9**
BHHZ	**Black Hill Sta**	**61.33 138**		P		**P**	**14 43 56.4 +0.2**
SNZO	**South Karori**	**61.38 140**		P		**P**	**14 43 54.0 -2.4**
SNZO				IAmb		IAmb	14 44 01.9
	comp=Z,302nm,1.0s						
OGWZ	**Otaki Gorge**	**61.42 140**		P		**P**	**14 43 56.8 +0.1**
MQZ	**McQueen's Vall**	**61.42 143**		P		**P**	**14 43 54.8 -1.9**
URZ	**Urewera**	**61.45 136**		P		**P**	**14 43 56.8 -0.1**
	comp=Z,300nm,0.9s,baz=296,slow=3.1,SNR=43						
URZ					LR	LR	15 11 59.3
	comp=Z,48μm,19.0s,baz=318,slow=37						
URZ	**Urewera**	**61.45 136**		P		**P**	**14 43 56.6 -0.4**
URZ	**Urewera**	**61.45 136**		P		**P**	**14 43 55.3 -1.6**
URZ				IAmb		IAmb	14 44 01.6
	comp=Z,407nm,1.0s						
BKZ	**Black Stump Fm**	**61.47 137**		P		**P**	**14 43 55.7 -1.4**
BKZ	**Black Stump Fm**	**61.47 137**		P		**P**	**14 43 55.5 -1.6**
BKZ				IAmb		IAmb	14 44 01.7
	comp=Z,320nm,0.9s						
FRU1	**Bishkek**	**61.48 319**		P		**P**	**14 43 58.1 +0.9**
FRU1				pmax		pmax	
	comp=Z,266nm,0.9s						
FRU1	**Bishkek**	**61.48 319**		P		**P**	**14 43 58.1 +0.9**
FRU1				IAmb		IAmb	14 44 02.7
	comp=Z,266nm,0.8s						
CHMS	**Chumysh**	**61.48 319**		P		**P**	**14 43 57.2 0.0**
	SNR=212						
AAK	**Ala-Archa**	**61.49 319**		P		**P**	**14 43 58.4 +1.1**
	comp=Z,317nm,0.9s,baz=127,slow=5.6,SNR=146						
AAK					LR	LR	15 11 13.8
	comp=Z,20μm,18.9s,baz=105,slow=37						
AAK	**Ala-Archa**	**61.49 319**		*i*	P	**P**	**14 43 59.0 +1.6**
	SNR=358						
AAK	**Ala-Archa**	**61.49 319**		*i*	P	**P**	**14 43 58.7 +1.3**
	SNR=108						
AAK	**Ala-Archa**	**61.49 319**			P	**P**	**14 43 58.5 +1.1**
AAK					P	**P**	**14 43 58.5 +1.1**
AAK					P	**P**	**14 43 58.5 +1.1**
AAK					S	**S**	**14 52 13.3 -2.3**
AAK					S	**S**	**14 52 13.3 -2.3**
AAK					S	**S**	**14 52 13.3 -2.3**
AAK	**Ala-Archa**	**61.49 319**		IAmb		IAmb	14 44 03.3
	comp=Z,420nm,1.1s						
CAW	**Cannon Point**	**61.50 140**		P		**P**	**14 43 57.0 -0.3**
RTZ	**Ruatahuna**	**61.53 137**		P		**P**	**14 43 57.8 +0.2**
RAO	**Raoul Island**	**61.53 125**		P		**P**	**14 43 57.7 0.0**
	comp=Z,243nm,0.5s,baz=311,slow=11,SNR=5.9						
BHW	**Baring Head**	**61.53 140**		P		**P**	**14 43 55.7 -1.8**
MTHZ	**Maungataniwha**	**61.55 137**		P		**P**	**14 43 57.9 +0.2**
TSZ	**Takapari Road**	**61.55 138**		P		**P**	**14 43 57.5 -0.1**
POWZ	**Post Office Ro**	**61.59 139**		P		**P**	**14 43 56.0 -1.9**
KRHZ	**Kereru**	**61.62 138**		P		**P**	**14 43 58.1 0.0**
PNHZ	**Pukenui**	**61.64 138**		P		**P**	**14 43 58.2 -0.1**
NMHZ	**Naumai**	**61.64 137**		P		**P**	**14 43 59.5 +1.1**
HAZ	**Te Kaha**	**61.68 135**		P		**P**	**14 43 59.0 +0.5**
HOWZ	**Holdsworth Sta**	**61.68 139**		P		**P**	**14 43 57.8 -0.8**
MCHZ	**McNeill Hill**	**61.74 137**		P		**P**	**14 43 59.8 +0.9**
RAHZ	**Arahi**	**61.75 137**		P		**P**	**14 43 59.8 +0.8**
SGDS	**Sogindy**	**61.77 319**		*eP*		**P**	**14 43 59.1 0.0**
	comp=Z,61nm,0.8s,baz=319						
SGDS					*eS	**S**	**14 52 19.6 +0.6**
	comp=Z,452nm,5.0s,baz=319						
SGDS	**Sogindy**	**61.77 319**		*eP*		**P**	**14 43 59.1 0.0**
SGDS				*eS		**S**	**14 52 19.5 +0.6**
SGDS					pmax	pmax	
	comp=Z,61nm,0.8s						
USP	**Ospenovka**	**61.77 319**		P		**P**	**14 43 59.1 0.0**
	SNR=743						
MWZ	**Matawai**	**61.78 136**		P		**P**	**14 43 58.8 -0.4**
MSWZ	**Moikau Station**	**61.78 140**		P		**P**	**14 43 57.9 -1.3**
AML	**Almayashu**	**61.80 318**		P		**P**	**14 44 02.0 +2.2**
	SNR=97						
MTW	**Mount Morrison**	**61.81 140**		P		**P**	**14 44 00.8 +1.5**
ARHZ	**Aropaoanui**	**61.85 137**		P		**P**	**14 44 00.3 +0.6**
PLWZ	**Palliser**	**61.87 140**		P		**P**	**14 43 58.4 -1.4**
WPHZ	**Waipukurau**	**61.87 138**		P		**P**	**14 43 60.0 +0.2**
ARSB	**Arslanbob**	**61.94 317**		P		**P**	**14 44 00.8 +0.4**
ARSB					pmax	pmax	
	comp=Z,502nm,0.9s						
ARSB	**Arslanbob**	**61.94 317**		P		**P**	**14 44 00.8 +0.4**
MXZ	**Matakaoa Point**	**61.97 135**		P		**P**	**14 43 59.0 -1.4**
MXZ				IAMs_20		IAMs_20	15 12 37.8
	comp=Z,38μm,21.0s						
EKS2	**Erkin-Say**	**61.98 318**		P		**P**	**14 44 01.5 +0.9**
	SNR=584						
KNTN	**Kanton**	**61.98 94**		P		**P**	**14 43 58.4 -2.6**
KNTN				IAmb		IAmb	14 44 17.7
	comp=Z,224nm,1.0s						
KNTN				IAMs_20		IAMs_20	15 04 37.5
	comp=Z,40μm,22.0s						
KAHZ	**Kahuranaki**	**62.03 138**		P		**P**	**14 44 01.3 +0.4**
TMWZ	**Te Maipa**	**62.03 139**		P		**P**	**14 44 00.8 -0.1**
DRK	**Karamyk**	**62.04 314**		P		**P**	**14 44 00.1 -1.2**
ZAA0	**Zalesovo Array**	**62.04 334**		P		**P**	**14 43 59.8 -0.8**
ZALV	**Zalesovo Beam**	**62.04 334**		P		**P**	**14 44 01.2 +0.6**
	comp=Z,97nm,0.6s,baz=130,slow=6.7,SNR=95						
ZALV					LR	LR	15 11 47.7
	comp=Z,20μm,21.0s,baz=131,slow=37						
ZALV					P4KPbc		15 21 00.8
	comp=Z,0.7nm,0.4s,baz=108,slow=4.7,SNR=5.2						
ZALV	**Zalesovo Beam**	**62.04 334**		P		**P**	**14 44 00.2 -0.4**
ZALV	**Zalesovo Beam**	**62.04 334**		P		**P**	**14 44 00.2 -0.4**
TKGZ	**Te Karaka**	**62.05 136**		P		**P**	**14 44 02.7 +1.7**
BFZ	**Birch Farm**	**62.05 139**		P		**P**	**14 43 58.4 -2.6**
BFZ	**Birch Farm**	**62.05 139**		P		**P**	**14 43 57.7 -3.3**
BFZ				IAMs_20		IAMs_20	15 10 28.0
	comp=Z,58μm,22.0s						
SEM	**Semipalatinsk**	**62.05 328**		*eP*		**P**	**14 44 01.0 -0.1**
	comp=Z,36nm,0.9s,baz=328						
SEM	**Semipalatinsk**	**62.05 328**		*eP*		**P**	**14 44 00.9 -0.1**
TRWZ	**Traveller**	**62.05 140**		P		**P**	**14 44 01.2 +0.3**
RIGZ	**Rimuhau**	**62.11 136**		P		**P**	**14 44 02.2 +0.7**
MCQ	**Macquarie Isla**	**62.35 159**		P		**P**	**14 44 04.4 +1.7**
	baz=62,SNR=7.4						
MCQ	**Macquarie Isla**	**62.35 159**		IAMs_20		IAMs_20	15 13 41.8
	comp=Z,37μm,19.0s						
KBL	**Kabul**	**62.39 308**		P		**P**	**14 44 03.8 +0.2**
	SNR=350						
KBL					P	**P**	**14 44 03.8 +0.2**
	SNR=350						
KBL					S	**S**	**14 52 23.6 -3.8**
KBL					S	**S**	**14 52 23.6 -3.8**
KBL	**Kabul**	**62.39 308**		P		**P**	**14 44 02.9 -0.7**
KBL					pmax	pmax	
	comp=Z,618nm,0.9s						
KBL					MLR	MLR	
	comp=Z,16μm,21.0s						
KBL	**Kabul**	**62.39 308**		P		**P**	**14 44 02.9 -0.7**
BTLS	**Baital**	**62.86 321**		*eP*		**P**	**14 44 06.4 +0.1**
	comp=Z,156nm,0.9s,baz=321						
BTLS					*iS	**S**	**14 52 33.4 +0.9**
	comp=Z,109nm,4.5s,baz=321						
BTLS	**Baital**	**62.86 321**		*eP*		**P**	**14 44 06.4 +0.1**
BTLS					*iS	**S**	**14 52 33.4 +0.9**
BTLS					pmax	pmax	
	comp=Z,156nm,0.9s						
BTK	**Batken**	**62.96 315**		P		**P**	**14 44 07.0 -0.2**
BTK	**Batken**	**62.96 315**		P		**P**	**14 44 07.0 -0.2**
KURBB	**Kurchatov Arra**	**63.08 328**		P		**P**	**14 44 08.6 +1.0**
KURK	**Kurchatov**	**63.08 328**		P		**P**	**14 44 08.7 +1.0**
KURK				P		**P**	**14 44 08.7 +1.0**
KURK				S		**S**	**14 52 31.0 -4.0**
KURK				S		**S**	**14 52 31.0 -4.0**
KURK	**Kurchatov**	**63.08 328**	*ce*	*eP*		**P**	**14 44 07.9 +0.3**
KURK					pmax	pmax	
	comp=Z,1μm,1.0s						
KURK					MLR	MLR	
	comp=Z,22μm,21.0s						
KURK	**Kurchatov**	**63.08 328**		P		**P**	**14 44 07.6 -0.1**
DZA	**Taraz**	**63.71 318**		*eP*		**P**	**14 44 12.6 +0.5**
	comp=Z,106nm,0.7s,baz=318						
DZA					*eS	**S**	**14 52 44.6 +1.4**
	baz=318						
DZA	**Taraz**	**63.71 318**		*eP*		**P**	**14 44 12.5 +0.5**
DZA					*eS	**S**	**14 52 44.6 +1.4**
DZA					pmax	pmax	
	comp=Z,105nm,0.7s						
SEY	**Seymchan**	**63.80 13**	*c*	*iP*		**P**	**14 44 15.3 +3.2**
SMY	**Shemya**	**64.11 30**		P		**P**	**14 44 13.9 -0.5**
SMY					pmax	pmax	
	comp=Z,672nm,0.9s						
SMY	**Shemya**	**64.11 30**		P		**P**	**14 44 13.9 -0.5**
SMY				IAMs_20		IAMs_20	15 08 03.2
	comp=Z,37μm,22.0s						
IUG	**Iuzhnay**	**64.30 317**		*i*	P	**P**	**14 44 16.8 +0.7**
	comp=Z,205nm,0.9s,baz=316						
IUG				*i*	S	**S**	**14 52 51.9 +1.2**
	comp=Z,465nm,5.0s,baz=316						
IUG	**Iuzhnay**	**64.30 317**		*i*	P	**P**	**14 44 16.7 +0.7**
IUG				*i*	S	**S**	**14 52 51.9 +1.2**
IUG					pmax	pmax	
	comp=Z,205nm,0.9s						
KK31	**Karatay Array**	**64.34 318**		P		**P**	**14 44 15.7 -0.5**
KK31					pmax	pmax	
	comp=Z,357nm,1.0s						
KK31	**Karatay Array**	**64.34 318**		P		**P**	**14 44 15.7 -0.5**
KK31				IAmb		IAmb	14 44 21.4
	comp=Z,357nm,0.9s						
KKAR	**Karatay Array**	**64.34 318**		P		**P**	**14 44 15.8 -0.4**
KKAR					pmax	pmax	
	comp=Z,357nm,1.0s						
KKAR	**Karatay Array**	**64.34 318**		P		**P**	**14 44 16.2 +0.1**
KKAR				IAmb		IAmb	14 44 21.4
	comp=Z,357nm,0.9s						
KKAR	**Karatay Array**	**64.34 318**		P		**P**	**14 44 15.8 -0.4**
JOHN	**Johnston Islan**	**64.57 72**		P		**P**	**14 44 15.4 -2.6**
CHM	**Chimkent**	**64.66 317**		*eP*		**P**	**14 44 19.8 +1.6**
	baz=316						
CHM	**Chimkent**	**64.66 317**		*eP*		**P**	**14 44 19.8 +1.6**
BRLS	**Borolday**	**64.77 317**		*eP*		**P**	**14 44 20.1 +1.1**
	comp=Z,128nm,0.8s,baz=317						
BRLS	**Borolday**	**64.77 317**		*eP*		**P**	**14 44 20.0 +1.1**
BRLS					pmax	pmax	
	comp=Z,128nm,0.8s						
NIUE	**Niue**	**65.85 112**		P		**P**	**14 44 26.2 -0.2**
	baz=66,SNR=5.0						
BRZS	**Berezniki**	**65.97 325**		*eP*		**P**	**14 44 26.9 +0.3**
	comp=Z,155nm,0.9s,baz=325						
BRZS					*eS	**S**	**14 53 12.0 +1.3**
	comp=Z,738nm,4.8s,baz=325						
BRZS	**Berezniki**	**65.97 325**		*eP*		**P**	**14 44 26.8 +0.3**
BRZS					*eS	**S**	**14 53 12.0 +1.3**
BRZS					pmax	pmax	
	comp=Z,155nm,0.9s						
AMKA	**Amchitka**	**66.11 33**		P		**P**	**14 44 24.8 -2.6**
HRA	**Herat**	**67.75 306**		P		**P**	**14 44 38.0 -0.5**
JLN	**Jalan Bani Buh**	**68.04 293**		P		**P**	**14 44 41.0 +0.8**
	SNR=27						
JLN					P	**P**	**14 44 41.0 +0.8**
	SNR=27						
WBK	**Wadi Bani Khal**	**68.50 293**		P		**P**	**14 44 44.0 +0.8**
	SNR=32						
WBK					P	**P**	**14 44 44.0 +0.8**
	SNR=32						
WBK					P	**P**	**14 44 44.0 +0.8**
	SNR=32						
ADK	**Adak**	**68.56 34**		P		**P**	**14 44 42.7 -0.2**
ADK					pmax	pmax	
	comp=Z,347nm,0.9s						
ADK					MLR	MLR	
	comp=Z,21μm,22.0s						
ADK	**Adak**	**68.56 34**		P		**P**	**14 44 42.7 -0.2**
ADK				IAmb		IAmb	14 44 47.5
	comp=Z,346nm,0.9s						
BRVK	**Borovoye**	**68.72 327**		P		**P**	**14 44 45.6 +1.8**
BRVK					P	**P**	**14 44 45.6 +1.8**
BRVK					P	**P**	**14 44 45.6 +1.8**
BRVK					S	**S**	**14 53 38.4 -5.2**
BRVK					S	**S**	**14 53 38.4 -5.2**
BRVK					S	**S**	**14 53 38.4 -5.2**
BRVK	**Borovoye**	**68.72 327**		P		**P**	**14 44 44.5 +0.6**
BRVK					pmax	pmax	
	comp=Z,938nm,1.2s						
BRVK					MLR	MLR	
	comp=Z,35μm,22.0s						
BRVK	**Borovoye**	**68.72 327**		P		**P**	**14 44 44.5 +0.6**
BRVK	**Borovoye**	**68.72 327**		IAMs_20		IAMs_20	15 15 16.0
	comp=Z,35μm,22.0s						
GSTR	**Great Sitkin T**	**69.00 34**		P		**P**	**14 44 45.3 -0.4**
CASY	**Casey**	**69.04 187**		P		**P**	**14 44 45.0 -0.5**
CASY				IAmb		IAmb	14 44 56.0
	comp=Z,324nm,1.1s						
MHTO	**MHTO**	**69.24 292**		P		**P**	**14 44 46.3 -1.5**
	SNR=88						
MHTO					P	**P**	**14 44 46.3 -1.5**
	SNR=88						
MHTO					P	**P**	**14 44 46.3 -1.5**
	SNR=88						
MHTO					S	**S**	**14 53 49.1 -1.7**
MHTO					S	**S**	**14 53 49.1 -1.7**
MHTO					S	**S**	**14 53 49.1 -1.7**
JMDO	**Jabal Madar**	**69.27 293**		P		**P**	**14 44 49.0 +1.1**
	SNR=56						
JMDO					P	**P**	**14 44 49.0 +1.1**
	SNR=56						
BIDO	**Bidbid**	**69.38 294**		P		**P**	**14 44 49.0 +0.4**
	SNR=57						
BIDO					P	**P**	**14 44 49.0 +0.4**
	SNR=57						
SMDO	**Samad**	**69.40 294**		P		**P**	**14 44 50.0 +1.2**
	SNR=22						
SMDO					P	**P**	**14 44 50.0 +1.2**
	SNR=22						
SMDO					P	**P**	**14 44 50.0 +1.2**
	SNR=22						
DQM	**DQM**	**69.53 290**		P		**P**	**14 44 51.0 +1.4**
	SNR=55						
DQM					P	**P**	**14 44 51.0 +1.4**
	SNR=55						
DQM					P	**P**	**14 44 51.0 +1.4**
	SNR=55						
DQM					S	**S**	**14 53 48

BILL eSS SS 14 58 49.3 +0.9
BILL pmax pmax
comp=Z,5µm,5.0s
BILL pmax pmax
comp=Z,198nm,1.3s
BILL MLR MLR
comp=Z,23µm,23.0s
BILL Bilibino 71.32 15 P P **14 44 59.3 -0.2**
BILL IAMs_20 IAMs_20 15 16 15.4
comp=Z,35µm,22.0s
BANOM Banah 71.33 297 P P **14 45 01.2 +0.8**
BANOM Banah 71.33 297 P P **14 45 04.0 +3.5**
SNR=12
BANOM P P **14 45 04.0 +3.5**
SNR=12
HATD Hatta, Dubai 71.35 295 *i* P P **14 45 01.2 +0.7**
SNR=36
HATD Hatta, Dubai 71.35 295 P P **14 45 01.3 +0.7**
SNR=20
HATD P P **14 45 01.3 +0.7**
SNR=20
MSFE Esma-Masafi 71.38 296 *i* P P **14 45 03.9 +3.0**
SNR=24
ASHO Ashiyiah 71.40 295 P P **14 45 02.2 +1.3**
ASHO Ashiyiah 71.40 295 P P **14 45 03.0 +2.0**
SNR=27
SHME Shamm 71.48 297 *i* P P **14 45 02.2 +0.8**
SNR=14
ALNE Al Ain 71.61 295 *i* P P **14 45 03.1 +1.0**
SNR=58
NAZ Nazwa, Dubai 71.79 296 *i* P P **14 45 03.7 +0.5**
SNR=13
NAZ Nazwa, Dubai 71.79 296 P P **14 45 04.2 +1.0**
SNR=7.4
GEYT Alibeck 71.79 309 P P **14 45 03.0 0.0**
comp=Z,198nm,0.8s,baz=134,slow=4.2,SNR=7.8
GYA0B ALIBECK ARRAY 71.79 309 P P **14 45 03.6 +0.5**
DMTO DMTO 71.80 288 P P **14 45 05.0 +1.6**
SNR=16
DMTO P P **14 45 05.0 +1.6**
SNR=16
FAQ Al Faqa, Dubai 71.82 295 *i* P P **14 45 03.9 +0.5**
SNR=37
FAQ Al Faqa, Dubai 71.82 295 P P **14 45 04.3 +0.9**
SNR=12
UMQ Umm Al-Quwin 71.85 296 *i* P P **14 45 04.8 +1.2**
SNR=6.8
UMQ Umm Al-Quwin 71.85 296 P P **14 45 05.0 +1.4**
UMQ P P **14 45 05.0 +1.4**
ASUD Al Ashush, Dub 72.05 295 *i* P P **14 45 06.0 +1.2**
SNR=31
ASUD Al Ashush, Dub 72.05 295 P P **14 45 06.6 +1.8**
SNR=15
NRIK Noril'sk 72.07 346 P P **14 45 05.5 +1.5**
comp=Z,392nm,0.7s,baz=124,slow=6.1,SNR=270
NRIK PKPPKP **P'P'df 15 12 49.0 -2.7**
comp=Z,3.1nm,0.9s,baz=40,slow=5.5,SNR=3.9
NRIK LR LR 15 20 45.5
comp=Z,19µm,20.7s,baz=146,slow=39
NRIK Noril'sk 72.07 346*c* *i* P P **14 45 04.6 +0.6**
NRIK pmax pmax
comp=Z,618nm,1.0s
AJN Ajban 72.35 295 *i* P P **14 45 06.2 -0.4**
SNR=26
AJN Ajban 72.35 295 P P **14 45 07.8 +1.2**
SNR=24
AJN P P **14 45 07.8 +1.2**
SNR=24
SOCY Socotra 72.46 282 P P **14 45 06.2 -1.3**
SNR=82
SOCY Socotra 72.46 282 P P **14 45 05.6 -1.9**
SOCY IAmb IAmb 14 45 11.3
comp=Z,662nm,0.9s
RBK Rabkut 72.50 288 P P **14 45 09.0 +1.3**
SNR=34
RBK P P **14 45 09.0 +1.3**
SNR=34
RER Riviere de l'E 72.79 247 P P **14 45 11.4 +2.0**
SNR=16
RER Riviere de l'E 72.79 247 P P **14 45 10.2 +0.8**
RER IAmb IAmb 14 45 18.7
comp=Z,636nm,0.9s
RER IAMs_20 IAMs_20 15 14 22.5
comp=Z,35µm,22.0s
WHFO Wadi Hawf 72.93 288 P P **14 45 11.0 +0.7**
SNR=95
WHFO P P **14 45 11.0 +0.7**
SNR=95
AB31 Akbulak array 73.34 321 P P **14 45 13.0 +1.0**
ABKAR Akbulak array 73.34 321 P P **14 45 11.9 -0.1**
ABKAR Akbulak array 73.34 321 P P **14 45 11.8 -0.1**
ABKAR IAmb IAmb 14 45 16.7
comp=Z,194nm,0.7s
ABTO Aybut 73.35 287 P P **14 45 14.0 +1.2**
SNR=40
ABTO P P **14 45 14.0 +1.2**
SNR=40
SPIA Saint Paul Isl 74.14 30 P P **14 45 16.9 +0.5**
AKTO Aktyubinsk 74.87 322 P P **14 45 22.8 +1.9**
comp=Z,201nm,0.7s,baz=104,slow=7.2,SNR=227
AKTO PKPPKP **P'P'df 15 12 44.4 -3.6**
comp=Z,1.5nm,0.7s,baz=72,slow=1.5,SNR=4.0
AKTO LR LR 15 22 23.8
comp=Z,22µm,20.7s,baz=105,slow=39
UNV Unalaska Valle 75.02 34 P P **14 45 22.4 +0.8**
UNV IAmb IAmb 14 45 31.1
comp=Z,615nm,0.8s
UNV IAMs_20 IAMs_20 15 14 01.6
comp=Z,28µm,22.0s
SVE Sverdlovsk 75.32 329*d* *i* P P **14 45 24.4 +1.1**
SVE *e*S S **14 54 55.3 -3.9**
SVE *e*SSS SSS 15 03 09.0
SVE pmax pmax
comp=Z,1µm,1.1s
SVE MLR MLR
comp=Z,33µm,24.0s
AKUT Akutan 75.52 34 P P **14 45 25.3 +0.8**
AKUT IAMs_20 IAMs_20 15 15 01.8
comp=Z,34µm,22.0s
RAR Rarotonga 75.61 112 P P **14 45 26.9 +1.2**
comp=Z,42nm,0.9s,baz=286,slow=5.5,SNR=4.0
RAR LR LR 15 16 39.8
comp=Z,13µm,21.4s,baz=280,slow=34
RAR Rarotonga 75.61 112 IAmb IAmb 14 45 28.4
comp=Z,108nm,1.1s
KIP Kipapa 75.81 69 P P **14 45 24.6 -2.2**
KIP pmax pmax
comp=Z,362nm,1.1s
KIP Kipapa 75.81 69 P P **14 45 24.6 -2.2**
KIP IAmb IAmb 14 45 32.3
comp=Z,362nm,1.1s
KIP Kipapa 75.81 69 IAMs_20 IAMs_20 15 11 30.9
comp=Z,28µm,21.0s
HON Honolulu 75.81 69 IAMs_20 IAMs_20 15 14 14.1
comp=Z,30µm,20.0s
OPA Opana 75.83 68 IAMs_20 IAMs_20 15 18 26.4
comp=Z,33µm,20.0s
ARU Arti 76.28 328*d* *i* P P **14 45 28.8 0.0**
ARU *PP **sP** **14 45 44.9 -2.4**
ARU 14 48 20.1
ARU PPP PPP 14 50 07.0
ARU *e*S S **14 55 09.6 -0.2**
ARU *SS **sS** **14 55 31.4 -0.8**
ARU SS SS **15 00 03.9 -0.5**
ARU SSS SSS 15 03 28.8
ARU pmax pmax
comp=Z,567nm,0.8s
ARU pmax pmax
comp=Z,2µm,4.5s
ARU MLR MLR
comp=Z,29µm,21.0s
ARU Arti 76.28 328 P P **14 45 28.6 -0.1**
ARU IAmb IAmb 14 45 35.0
comp=Z,625nm,0.9s
ARU IAMs_20 IAMs_20 15 22 31.5
comp=Z,29µm,21.0s
FALS False Pass 77.04 34 P P **14 45 33.3 +0.2**
SBV Sambava 77.39 256 P P **14 45 37.6 +1.8**
SNR=32
SBV S S **14 55 24.3 +1.0**
KHLU Kahalu`u 77.70 70 P P **14 45 36.6 -1.1**
KHLU IAmb IAmb 14 45 43.6
comp=Z,686nm,1.2s
HPAH Hawaii Prepara 77.90 70 IAMs_20 IAMs_20 15 15 22.4
comp=Z,38µm,21.0s
HLP Hilina Pali 78.24 71 P P **14 45 38.2 -2.4**
HLP IAmb IAmb 14 45 53.4
comp=Z,678nm,1.2s
WRMHI West Rim 78.25 71 P P **14 45 38.5 -2.3**
UWE Uwekahuna 78.26 71 P P **14 45 39.5 -1.3**
UWE IAmb IAmb 14 45 46.1
comp=Z,665nm,1.0s
OBL Observatory Le 78.27 71 P P **14 45 39.1 -1.7**
SBLHI Steaming Bluff 78.28 71 P P **14 45 39.7 -1.3**
SBLHI IAmb IAmb 14 45 51.8
comp=Z,399nm,0.9s
KKO Keanakako`i 78.28 71 P P **14 45 40.2 -0.8**
HATHI Halema'uma'u T 78.29 71 P P **14 45 39.7 -1.3**
HATHI IAmb IAmb 14 45 51.9
comp=Z,653nm,1.0s
TNA Tin City 78.31 23 P P **14 45 41.8 +1.8**
baz=248
TNA S S **14 55 35.5 +4.1**
baz=248
TNA Tin City 78.31 23 P P **14 45 40.5 +0.6**
SDPT Sand Point 78.80 34 P P **14 45 42.8 0.0**
SDPT IAMs_20 IAMs_20 15 15 43.2
comp=Z,31µm,22.0s
ANM Nome 78.97 24 P P **14 45 44.6 +0.9**
ANM pmax pmax
comp=Z,359nm,1.2s
ANM Nome 78.97 24 P P **14 45 44.6 +0.9**
CNBA Chernabura Isl 79.18 34 P P **14 45 45.5 +0.5**
CNBA IAmb IAmb 14 45 49.7
comp=Z,426nm,0.9s
CHGN Chignik 80.14 33 P P **14 45 50.5 +0.4**
CHGN IAmb IAmb 14 45 54.5
comp=Z,476nm,1.0s
ABPO Ambohimpanom 80.47 250 P P **14 45 52.8 -0.1**
ABPO Ambohimpanom 80.47 250 P P **14 45 52.8 -0.1**
ABPO IAmb IAmb 14 45 58.8
comp=Z,350nm,0.9s
ABPO Ambohimpanom 80.47 250 IAMs_20 IAMs_20 15 16 57.8
comp=Z,29µm,22.0s
MAK Makhachkala 80.58 313 *e*P P **14 45 51.3 -1.5**
MAK *e* 14 48 56.7
MAK *e*S S **14 55 53.6 -2.8**
MAK *e*SS SS **15 01 14.7 +5.0**
MAK pmax pmax
comp=Z,453nm,1.1s
MAK MLR MLR
comp=Z,16µm,21.0s
RAYN Ar Rayn 80.93 293 *i* P P **14 45 55.5 +0.3**
SNR=51
RAYN Ar Rayn 80.93 293 P P **14 45 55.1 -0.1**
RAYN pmax pmax
comp=Z,348nm,0.9s
RAYN MLR MLR
comp=Z,47µm,21.0s
RAYN Ar Rayn 80.93 293 P P **14 45 55.1 -0.1**
RAYN IAmb IAmb 14 46 00.6
comp=Z,348nm,0.8s
RDOG Red Dog Mine 81.02 21 P P **14 45 55.1 +0.4**
VOI Vohitsoka 81.16 248 P P **14 45 57.5 +1.0**
SNR=24
FOMA Nahampoana Res 81.30 245 P P **14 45 58.9 +1.9**
SNR=7.3
FOMA Nahampoana Res 81.30 245 P P **14 45 56.1 -0.9**
KIRV Kirov 81.59 329*d* *i* P P **14 45 58.4 +0.6**
CHIR Chirikof Islan 81.59 34 P P **14 45 58.1 +0.2**
CHIR IAMs_20 IAMs_20 15 19 54.1
comp=Z,25µm,22.0s
VNDA Vanda 81.72 173 P P **14 45 59.1 +0.9**
comp=Z,151nm,0.8s,baz=316,slow=6.5,SNR=267
VNDA PKPPKP **P'P'df 15 12 31.6 -2.1**
comp=Z,2.2nm,0.9s,baz=209,slow=2.1,SNR=5.2
VNDA LR LR 15 24 21.8
comp=Z,15µm,18.6s,baz=341,slow=37
VNDA Vanda 81.72 173 P P **14 45 58.4 +0.2**
VNDA pmax pmax
comp=Z,185nm,1.0s
VNDA Vanda 81.72 173 P P **14 45 58.4 +0.2**
GROC Groznyy 81.85 313 *e*P P **14 46 00.9 +1.3**
GROC *e**PP **sP** **14 46 17.8 -0.3**
GROC *e*S S **14 56 08.0 -1.6**
GROC pmax pmax
comp=Z,378nm,1.0s
MAW Mawson 82.02 200 P P **14 46 01.2 +1.4**
comp=Z,161nm,0.7s,baz=64,slow=5.0,SNR=146
MAW PKPPKP **P'P'df 15 12 31.7 -1.8**
comp=Z,9.0nm,1.0s,baz=280,slow=8.6,SNR=4.9
MAW LR LR 15 16 54.5
comp=Z,7µm,21.5s,baz=58,slow=32
MAW Mawson 82.02 200 P P **14 46 01.0 +1.1**
baz=82,SNR=132
MAW Mawson 82.02 200 P P **14 46 00.6 +0.8**
MAW pmax pmax
comp=Z,49nm,1.0s
MAW Mawson 82.02 200 P P **14 46 00.6 +0.8**
GNI Garni 82.41 310 P P **14 46 05.2 +2.4**
comp=Z,60nm,0.9s,baz=82,slow=3.4,SNR=25
GNI PKPPKP **P'P'df 15 12 30.8 -4.5**
comp=Z,2.6nm,0.6s,baz=353,slow=18,SNR=3.8
GNI Garni 82.41 310 P P **14 46 05.1 +2.4**
GNI Garni 82.41 310 *i* P P **14 46 05.5 +2.8**
GNI Garni 82.41 310 P P **14 46 05.6 +2.8**
GNI S S **14 56 15.9 +0.1**
GNI Garni 82.41 310*c* *i* P P **14 46 03.9 +1.1**
GNI pmax pmax
comp=Z,193nm,0.9s
GNI Garni 82.41 310 P P **14 46 04.8 +2.0**
GNI IAmb IAmb 14 46 33.0
comp=Z,343nm,0.9s
SII Sitkinak Islan 82.50 33 P P **14 46 03.9 +1.2**
SII IAMs_20 IAMs_20 15 19 35.9
comp=Z,31µm,21.0s
TTA Tatalina 82.58 27 P P **14 46 04.6 +1.5**
TTA pmax pmax
comp=Z,942nm,1.2s
TTA MLR MLR
comp=Z,12µm,22.0s
TTA Tatalina 82.58 27 P P **14 46 04.6 +1.5**
TASB TASBURUN-IGDIR 82.78 310 *i* P P **14 46 07.4 +2.8**
CLDR Caldiran 82.98 309 *i* P P **14 46 08.5 +2.6**
OHAK Old Harbor 83.07 33 P P **14 46 06.5 +0.9**
OHAK IAmb IAmb 14 46 10.8
comp=Z,541nm,0.9s
CUKT Cukurca 83.13 307 *i* P P **14 46 08.2 +1.7**
ZEI Tsey 83.21 313 *e*P P **14 46 05.5 -1.4**
ZEI pmax pmax
comp=Z,532nm,1.0s
ATD Arta Tunnel 83.36 281 P P **14 46 09.8 +1.7**
ATD IAmb IAmb 14 46 16.2
comp=Z,371nm,1.0s
ATD Arta Tunnel 83.36 281 *i* P P **14 46 08.3 +0.2**
ATD *i* S S **14 56 25.8 -0.3**
ATD Arta Tunnel 83.36 281 *i* P P **14 46 08.3 +0.2**
ATD Arta Tunnel 83.36 281 *i* S S **14 56 25.8 -0.3**
KDAK Kodiak Island 83.51 32 P P **14 46 08.7 +0.9**
KDAK pmax pmax
comp=Z,1µm,1.4s
KDAK MLR MLR
comp=Z,22µm,22.0s
KDAK Kodiak Island 83.51 32 P P **14 46 08.7 +0.9**
KDAK IAMs_20 IAMs_20 15 23 24.9
comp=Z,22µm,22.0s
GEVA Gevas 83.61 308 P P **14 46 10.3 +1.3**
GEVA IAMs_20 IAMs_20 15 27 48.9
comp=Z,23µm,22.0s
AKDM Akdamar-Van 83.67 308 *i* P P **14 46 11.4 +2.0**
KARS Kars 83.70 310 *i* P P **14 46 13.0 +3.6**
AGRB Hanur-Agry 83.72 309 *i* P P **14 46 11.9 +2.3**
RSO Redoubt South 83.75 29 P P **14 46 09.6 +0.3**
GOF Gofitskoye 83.96 315⇑ *i* P P **14 46 11.3 +0.8**
GOF *e*S S **14 56 31.6 +0.6**
GOF pmax pmax
comp=Z,424nm,1.0s
GOF smax smax
comp=N,690nm,2.9s
GOF smax smax
comp=E,495nm,3.2s
A21K Barrow 83.97 18 P P **14 46 12.5 +2.6**
baz=256,SNR=616
A21K S S **14 56 32.1 +2.1**
baz=258
A21K Barrow 83.97 18 P P **14 46 11.9 +2.0**
KBZ Khabaz 83.99 314 P P **14 46 12.0 +1.4**
comp=E,174nm,0.9s,baz=102,slow=3.6,SNR=103
KBZ Khabaz 83.99 314*d* *i* P P **14 46 11.0 +0.4**
KBZ pmax pmax
comp=Z,212nm,1.0s
KBZ MLR MLR
comp=Z,19µm,24.0s
MLAZ Malazgirt-MUS 84.04 309 *i* P P **14 46 14.4 +3.2**
IMAR Indian Mountai 84.05 24 P P **14 46 12.2 +1.7**
SIRT Sirnak 84.07 307 *i* P P **14 46 12.9 +1.6**
KIV Kislovodsk 84.16 314 *i* P P **14 46 13.2 +1.6**
SNR=98
KIV Kislovodsk 84.16 314 *i* P P **14 46 13.4 +1.8**
KIV Kislovodsk 84.16 314 P P **14 46 13.5 +1.8**
KIV P P **14 46 13.5 +1.8**
KIV S S **14 56 29.3 -3.9**
KIV S S **14 56 29.3 -3.9**
KIV Kislovodsk 84.16 314 *e*P P **14 46 11.7 +0.1**
KIV *e* 14 49 26.8
KIV *e*SS SS 15 01 58.5 -4.5
KIV pmax pmax
comp=Z,8µm,4.9s
KIV pmax pmax
comp=Z,633nm,1.0s
KIV MLR MLR
comp=Z,44µm,20.0s
KIV Kislovodsk 84.16 314 P P **14 46 12.5 +0.9**
KIV IAmb IAmb 14 46 29.6
comp=Z,278nm,1.0s
HOM Homer 84.21 30 P P **14 46 12.6 +1.2**
baz=264,SNR=15
HOM S S **14 56 32.0 -0.8**
baz=264
SENK Senkaya-Erzuru 84.25 310 *i* P P **14 46 15.1 +2.8**
PPLA Purkeypile 84.31 27 P P **14 46 13.2 +1.2**
PPLA IAmb IAmb 14 46 17.8
comp=Z,659nm,1.4s
PPLA IAMs_20 IAMs_20 15 21 09.8
comp=Z,21µm,22.0s
CNPM China Poot 84.40 30 P P **14 46 13.4 +1.0**
CNPM IAMs_20 IAMs_20 15 19 23.3
comp=Z,25µm,22.0s
GURO Guroymak-BITLI 84.42 308 *i* P P **14 46 15.8 +2.6**
SKT Skwentna 84.51 28 P P **14 46 13.4 +0.5**
CAPN Captain Cook N 84.56 29 P P **14 46 14.5 +1.4**
baz=264
CAPN S S **14 56 36.8 +0.5**
baz=264
BRLK Bradley Lake 84.60 30 P P **14 46 13.7 +0.3**
KOPR Koprukoy-ERZUR 84.61 310 *i* P P **14 46 17.0 +2.9**
BATM Batumi 84.79 311 *i* P P **14 46 16.7 +2.0**
PPT Papeete 84.83 108 LR LR 15 21 03.7
comp=Z,14µm,21.9s,baz=269,slow=34
SUA Susitna One 84.83 29 P P **14 46 15.3 +0.7**
PPT2 Papeete2 84.83 108 *e*P P **14 46 18.1 +2.6**
comp=Z,164nm,1.3s
PPT2 Papeete2 84.83 108 *e*S S **14 56 43.4 +2.6**
comp=Z,60µm,31.8s
PPT2 Papeete2 84.83 108 *e*LQ LQ 15 09 28.0
comp=Z,28µm,30.0s
PPT2 *e*LR LR 15 13 04.5
comp=Z,70µm,26.2s
PAE Paea 84.83 108 *e*P P **14 46 17.7 +2.3**
comp=Z,23nm,1.2s
PPTF Pamatai, Papee 84.84 108 IAMs_20 IAMs_20 15 20 29.1
comp=Z,21µm,22.0s
VRTB Varto-Mus 84.89 309 *i* P P **14 46 18.3 +2.8**
KTH Kantishna Hill 84.95 26 P P **14 46 16.1 +0.9**
KTH IAmb IAmb 14 46 21.9
comp=Z,262nm,1.2s
TIAR Tiarei 85.05 108 *e*P P **14 46 19.0 +2.5**
comp=Z,22nm,0.9s
SVAN Silvan-Diyarba 85.07 308 *i* P P **14 46 18.2 +1.9**
CUT Chulitna 85.14 28 P P **14 46 16.5 +0.5**
baz=265,SNR=78
CUT S S **14 56 41.1 -0.9**
baz=265
TVO Taravao 85.15 108 *e*P P **14 46 19.8 +2.7**
comp=Z,67nm,1.3s
VRH Novokhopyorsk 85.18 321 *e*P P **14 46 16.2 -0.2**
VRH *e*S S **14 56 36.1 -6.7**
VRH pmax pmax
comp=Z,2µm,0.8s
VRH pmax pmax
comp=Z,2µm,0.8s
VRH smax smax
comp=N,14µm,11.4s
VRH MLR MLR
comp=Z,35µm,22.0s
MLY Manley 85.18 25 P P **14 46 17.4 +1.2**
baz=264,SNR=128
MLY S S **14 56 43.2 +0.7**
baz=264
TRF Thorofare Moun 85.22 27 P P **14 46 17.4 +0.7**
TRF IAmb IAmb 14 46 41.1
comp=Z,224nm,1.2s
O22K Cooper Landing 85.24 30 P P **14 46 17.5 +0.9**
baz=266,SNR=56
O22K S S **14 56 43.1 0.0**
baz=266
O22K Cooper Landing 85.24 30 P P **14 46 17.6 +1.0**
RC01 Rabbit Creek A 85.28 29 P P **14 46 17.4 +0.7**
baz=265,SNR=145
RC01 S S **14 56 44.4 +0.8**
baz=265
TBI Tubuai 85.33 113 *e*P P **14 46 20.2 +2.4**
comp=Z,427nm,1.2s
TBI Tubuai 85.33 113 *e*S S **14 56 48.0 +2.6**
comp=Z,24µm,36.5s
TBI Tubuai 85.33 113 *e*LQ LQ 15 09 36.9
comp=Z,19µm,27.5s
TBI *e*LR LR 15 13 18.7
comp=Z,62µm,33.2s
SEW Seward 85.35 30 P P **14 46 18.2 +1.1**
SEW IAMs_20 IAMs_20 15 20 48.3
comp=Z,20µm,22.0s
MARD Mardin 85.38 307 P P **14 46 18.8 +0.8**
MARD IAmb IAmb 14 46 23.2
comp=Z,332nm,0.8s
CHOM Cayeli-Rize 85.48 311 *i* P P **14 46 20.6 +2.4**
BNGB Bingl 85.49 309 *i* P P **14 46 20.7 +2.2**
COLD Coldfoot 85.61 23 P P **14 46 20.4 +2.1**
baz=264,SNR=397
COLD S S **14 56 49.0 +2.5**
baz=264
COLD Coldfoot 85.61 23 P P **14 46 19.4 +1.1**
COLD IAmb IAmb 14 46 23.7
comp=Z,314nm,0.9s
PMR Palmer 85.61 29 P P **14 46 19.0 +0.7**
PMR pmax pmax
comp=Z,576nm,1.0s
PMR Palmer 85.61 29 P P **14 46 19.0 +0.7**
BWN Browne 85.65 26 P P **14 46 19.4 +0.8**
BWN IAmb IAmb 14 46 26.7
comp=Z,302nm,1.1s
MAZI Mazidag 85.65 307 *i* P P **14 46 21.5 +2.2**
GHO Glory Hole Cre 85.72 28 P P **14 46 19.5 +0.5**
GHO IAmb IAmb 14 46 27.2
comp=Z,283nm,0.9s
I23K Minto, Yukon-K 85.77 25 P P **14 46 20.7 +1.6**
baz=266,SNR=113
I23K S S **14 56 49.8 +1.6**
baz=266
I23K Minto, Yukon-K 85.77 25 P P **14 46 19.8 +0.7**
I23K IAmb IAmb 14 46 27.1
comp=Z,224nm,0.9s
MCK McKinley 85.85 26 P P **14 46 19.9 +0.3**
baz=266,SNR=134
MCK S S **14 56 49.4 +0.3**
baz=266
NEA2 Nenana 85.85 26 P P **14 46 20.1 +0.5**
baz=266,SNR=64
NEA2 S S **14 56 49.4 +0.4**
baz=266
DYBB Diyarbakir 85.90 308 *i* P P **14 46 22.4 +1.9**
KNK Knik Glacier 85.92 29 P P **14 46 20.7 +0.7**
KNK IAMs_20 IAMs_20 15 25 53.4
comp=Z,20µm,21.0s
BAYT Aydıntepe-Bayb 85.93 310 *i* P P **14 46 23.7 +3.0**
TOLK Toolik Lake Re 85.97 21 P P **14 46 22.0 +1.8**
baz=265,SNR=266
TOLK S S **14 56 53.4 +3.2**
baz=265
TOLK Toolik Lake Re 85.97 21 P P **14 46 21.4 +1.3**
TOLK IAmb IAmb 14 46 24.9
comp=Z,271nm,0.9s
SML Sawmill 86.01 28 P P **14 46 20.9 +0.5**
KTUT Trabzon 86.23 311 *i* P P **14 46 24.1 +2.2**
MDM Murphy Dome 86.24 25 P P **14 46 21.3 -0.2**
ERZN Erzincan 86.25 309 *i* P P **14 46 24.5 +2.3**
WRH Wood River Hil 86.27 26 P P **14 46 20.8 -0.8**

PMOR	**Pomariorio Ree**	**86.29**	**105**	*e*P		**P**		**14 46 25.3**	**+2.6**
	comp=Z,338nm,1.3s									
SOC	**Sochi**	**86.30**	**313**	*e*P		**P**		**14 46 22.4**	**+0.2**
SOC				*e**PP		**pwP**		**14 46 35.2**	**-2.8**
SOC				*e**SP		**sP**		**14 46 40.6**	**-0.2**
SOC				*e*				14 49 41.5	
SOC				*e*PPP		PPP		14 51 38.1	
SOC				pmax		pmax			
	comp=Z,549nm,0.7s									
SOC				pmax		pmax				
	comp=Z,2µm,2.3s									
SOC				MLR		MLR				
	comp=Z,21µm,20.0s									
TCOL	**CIGO, UAF Yank**	**86.39**	**25**	P		**P**		**14 46 22.2**	**+0.1**
	baz=267,SNR=14									
TCOL				S		**S**		**14 56 54.2**	**+0.1**
	baz=267									
TCOL	**CIGO, UAF Yank**	**86.39**	**25**	P		**P**		**14 46 21.8**	**-0.4**
COLA	**College**	**86.39**	**25***c*	*i*P		**P**		**14 46 22.3**	**+0.1**
COLA				pmax		pmax				
	comp=Z,52nm,0.9s									
COLA	**College**	**86.39**	**25**	P		**P**		**14 46 21.7**	**-0.4**
CCB	**Clear Creek Bu**	**86.40**	**25**	P		**P**		**14 46 21.9**	**-0.3**
ANKE	**Ethiopia-Afar**	**86.45**	**279**	*i*P		**P**		**14 46 27.1**	**+3.0**
ANKE				*i*S		**S**		**14 56 54.1**	**-3.5**
SCM	**Sheep Creek Mo**	**86.48**	**28**	P		**P**		**14 46 22.1**	**-0.7**
SCM				pmax		pmax				
	comp=Z,365nm,0.9s									
SCM				MLR		MLR				
	comp=Z,12µm,21.0s									
SCM	**Sheep Creek Mo**	**86.48**	**28**	P		**P**		**14 46 22.1**	**-0.7**
SCM				IAmb		IAmb		14 46 29.8		
	comp=Z,365nm,0.9s									
PTK	**Pertek**	**86.50**	**309**	*i*P		**P**		**14 46 25.8**	**+2.3**
DHY	**Denali Highway**	**86.51**	**27**	P		**P**		**14 46 23.1**	**0.0**
GLI	**Glacier Island**	**86.56**	**29**	P		**P**		**14 46 23.4**	**+0.3**
GLI				IAmb		IAmb		14 46 29.3		
	comp=Z,313nm,0.8s									
SVRC	**Sivrice-ELAZID**	**86.56**	**308**	*i*P		**P**		**14 46 25.7**	**+1.9**
VAH	**Vaihoa**	**86.56**	**105**	*e*P		**P**		**14 46 26.4**	**+2.4**
	comp=Z,181nm,1.1s									
POKR	**Poker Plat Res**	**86.58**	**25**	P		**P**		**14 46 23.0**	**-0.2**
	baz=267,SNR=27									
POKR				S		**S**		**14 56 55.9**	**-0.2**
	baz=267									
POKR	**Poker Plat Res**	**86.58**	**25**	P		**P**		**14 46 22.5**	**-0.6**
VORD	**Divnogorie**	**86.70**	**321**	*e*P		**P**		**14 46 23.4**	**-0.6**
VORD				*e*S		**SKSac**		**14 56 43.7**	**-3.2**
VORD				pmax		pmax				
	comp=Z,780nm,0.8s									
VORD				pmax		pmax				
	comp=Z,880nm,1.0s									
VORD				smax		smax				
	comp=E,3µm,6.6s									
HDA	**Harding Lake**	**86.76**	**26**	P		**P**		**14 46 23.2**	**-0.8**
	baz=268,SNR=164									
HDA				S		**S**		**14 56 57.1**	**-0.7**
	baz=268									
HDA				S		**S**		**14 56 57.1**	**-0.7**
	baz=268									
HDA	**Harding Lake**	**86.76**	**26**	P		**P**		**14 46 23.2**	**-0.8**
HDA				IAmb		IAmb		14 46 27.4		
	comp=Z,175nm,0.8s									
VORR	**Voronezh**	**86.77**	**321**	⇓*i*P		**P**		**14 46 23.0**	**-1.3**
VORR				pmax		pmax				
	comp=Z,2µm,1.6s									
VSR	**Storozhevoye**	**86.78**	**321**	*e*P		**P**		**14 46 23.4**	**-1.0**
VSR				*e*S		**SKSac**		**14 56 50.4**	**+3.0**
VSR				pmax		pmax				
	comp=Z,1µm,0.9s									
VSR				pmax		pmax				
	comp=Z,2µm,1.9s									
VSR				smax		smax				
	comp=N,12µm,8.8s									
VSR				MLR		MLR				
	comp=Z,10µm,21.0s									
IL31		**86.80**	**25**	P		**P**		**14 46 22.8**	**-1.4**
ILAR	**Eielson Array**	**86.80**	**25**	P		**P**		**14 46 23.9**	**-0.3**
	comp=Z,59nm,1.0s,baz=282,slow=3.7,SNR=128									
ILAR				PP		**PP**		**14 49 44.8**	**-2.3**
	comp=Z,14nm,1.1s,baz=260,slow=5.8,SNR=3.4									
ILAR				PKKPbc		**PKKPbc**		**15 04 20.2**	**-0.8**
	comp=Z,5.7nm,1.0s,baz=342,slow=0.9,SNR=5.1									
ILAR				PKPPKP		**P'P'df**		**15 12 22.8**	**-2.9**
	comp=Z,1.9nm,1.0s,baz=71,slow=1.7,SNR=5.2									
ILAR	**Eielson Array**	**86.80**	**25**	P		**P**		**14 46 22.8**	**-1.4**
ILAR	**Eielson Array**	**86.80**	**25**	P		**P**		**14 46 22.8**	**-1.4**
KLMR	**Klimovskoe**	**86.80**	**331***c*	*i*P		**P**		**14 46 24.0**	**-0.2**
KLMR				*e*				14 49 45.9	
KLMR				*e*S		**SKSac**		**14 56 46.3**	**-0.8**
KLMR				pmax		pmax				
	comp=Z,686nm,1.1s									
KLMR				MLR		MLR				
	comp=Z,9µm,21.0s									
KLMR	**Klimovskoe**	**86.80**	**331**	⇑*i*P		**P**		**14 46 24.1**	**-0.2**
KLMR				⇓*i*P		**P**		**14 46 24.1**	**-0.2**
KLMR				⇳*i*P		**P**		**14 46 24.1**	**-0.2**
KLMR				AMP				14 46 29.1	
	comp=Z,686nm,1.1s									
KLMR				*e*PP		**PP**		**14 49 45.9**	**-1.3**
KLMR				*e*S		**SKSac**		**14 56 46.4**	**-0.7**
KLMR				*e*S		**SKSac**		**14 56 46.4**	**-0.7**
KLMR				LQ		LQ		15 18 39.4	
KLMR				LQ		LQ		15 18 39.4	
KLMR				LR		LR		15 24 13.2	
KLMR				AMP				15 25 40.9	
	comp=Z,9µm,21.0s									
HIN	**Hinchinbrook I**	**86.83**	**30**	P		**P**		**14 46 25.0**	**+0.6**
HIN				IAmb		IAmb		14 46 31.1		
	comp=Z,252nm,1.0s									
FID	**Port Fidalgo**	**86.85**	**29**	P		**P**		**14 46 24.7**	**+0.1**
FID				IAmb		IAmb		14 46 30.9		
	comp=Z,273nm,1.0s									
Q23K	**Middleton Isla**	**86.88**	**31**	P		**P**		**14 46 25.7**	**+1.0**
	baz=268									
Q23K				S		**S**		**14 57 02.0**	**+2.9**
	baz=268									
URFA	**Urfa**	**86.94**	**307**	*i*P		**P**		**14 46 27.5**	**+1.9**
LPSR	**Galich'ya Gora**	**86.95**	**322**	*e*P		**P**		**14 46 23.6**	**-1.6**
LPSR				*e*S		**SKSac**		**14 56 50.4**	**+2.0**
LPSR				pmax		pmax				
	comp=Z,980nm,1.0s									
LPSR				pmax		pmax				
	comp=Z,2µm,1.5s									
LPSR				smax		smax				
	comp=N,9µm,8.6s									
LPSR				MLR		MLR				
	comp=Z,19µm,24.0s									
ESPY	**Espiye-Giresun**	**87.01**	**311**	*i*P		**P**		**14 46 27.3**	**+1.5**
M24K	**Tolsona, Glenn**	**87.04**	**28**	P		**P**		**14 46 26.4**	**+0.9**
	baz=268									
M24K				S		**S**		**14 57 04.3**	**+3.5**
	baz=268									
M24K	**Tolsona, Glenn**	**87.04**	**28**	P		**P**		**14 46 26.0**	**+0.5**
M24K				IAmb		IAmb		14 46 30.9		
	comp=Z,280nm,0.9s									
ILIC	**ilic-Erzincan**	**87.14**	**309**	*i*P		**P**		**14 46 28.6**	**+2.0**
KLU	**Klutina**	**87.14**	**29**	P		**P**		**14 46 26.4**	**+0.4**
KLU				IAmb		IAmb		14 46 36.9		
	comp=Z,197nm,1.1s									
EYAK	**Cordova Ski Ar**	**87.21**	**30**	P		**P**		**14 46 26.7**	**+0.5**
MALT	**Malatya**	**87.25**	**308**	*i*P		**P**		**14 46 29.1**	**+2.0**
PAX	**Paxson**	**87.38**	**27**	P		**P**		**14 46 27.3**	**+0.1**
PAX				pmax		pmax				
	comp=Z,211nm,1.1s									
PAX	**Paxson**	**87.38**	**27**	P		**P**		**14 46 27.3**	**+0.1**
PAX				IAmb		IAmb		14 46 36.3		
	comp=Z,211nm,1.1s									
PAX				IAMs_20		IAMs_20		15 22 34.0		
	comp=Z,25µm,22.0s									
AAE	**Adis Abeba**	**87.42**	**279**	*i*P		**P**		**14 46 30.5**	**+1.9**
AAE				*i*S		**S**		**14 56 59.7**	**-7.1**
AAE	**Adis Abeba**	**87.42**	**279**	*i*P		**P**		**14 46 30.5**	**+1.9**
AAE				*i*S		**S**		**14 56 59.7**	**-7.1**
FURI	**Furi**	**87.51**	**279**	*i*P		**P**		**14 46 30.5**	**+1.4**
FURI				*i*S		**S**		**14 57 01.7**	**-6.0**
FURI	**Furi**	**87.51**	**279**	*i*P		**P**		**14 46 30.5**	**+1.4**
FURI	**Furi**	**87.51**	**279**	*i*S		**S**		**14 57 01.7**	**-6.0**
TMCR	**Tamitsa**	**87.56**	**334**	*e*P		**P**		**14 46 26.6**	**-1.2**
TMCR				*e*S		**SKSac**		**14 56 49.2**	**-2.4**
TMCR				pmax		pmax				
	comp=Z,257nm,0.7s									
RIDG	**Independent Ri**	**87.67**	**26**	P		**P**		**14 46 28.6**	**+0.1**
RIDG				IAmb		IAmb		14 46 33.0		
	comp=Z,258nm,1.0s									
MOS	**Moscow**	**87.73**	**326**	*e*P		**P**		**14 46 27.0**	**-1.9**
MOS				*e**PP		**sP**		**14 46 45.5**	**-2.0**
MOS				*e*				14 49 51.9	
MOS				*e*S		**SKSac**		**14 56 48.7**	**-4.3**
MOS				pmax		pmax				
	comp=Z,728nm,0.9s									
MOS				pmax		pmax				
	comp=Z,8µm,4.0s									
MOS				MLR		MLR				
	comp=Z,30µm,21.0s									
RAGM	**Ragged Mountai**	**87.74**	**30**	IAMs_20		IAMs_20		15 21 30.5		
	comp=Z,20µm,21.0s									
N25K	**Chitina, Valde**	**87.78**	**29**	P		**P**		**14 46 29.3**	**+0.2**
	baz=270									
N25K				S		**S**		**14 57 08.9**	**+1.0**
	baz=270									
N25K	**Chitina, Valde**	**87.78**	**29**	P		**P**		**14 46 29.3**	**+0.2**
BMAR	**Burnt Mountain**	**87.80**	**23**	P		**P**		**14 46 30.4**	**+1.3**
KAIM	**Kayak Island**	**87.87**	**30**	IAMs_20		IAMs_20		15 22 17.0		
	comp=Z,28µm,22.0s									
ANN	**Anapa**	**87.94**	**315**	*e*P		**P**		**14 46 29.6**	**-0.5**
ANN				*e**PP		**pwP**		**14 46 43.8**	**-2.1**
ANN				*e*				14 50 05.8	
ANN				*e*SP				14 58 17.3	
ANN				pmax		pmax				
	comp=Z,2µm,0.8s									
ANN				pmax		pmax				
	comp=N,307nm,0.7s									
ANN				pmax		pmax				
	comp=E,322nm,0.9s									
ANN				MLR		MLR				
	comp=N,36µm,21.0s									
HMT	**Hamilton**	**87.95**	**30**	P		**P**		**14 46 29.7**	**-0.2**
HMT				IAMs_20		IAMs_20		15 21 37.0		
	comp=Z,21µm,21.0s									
DILA	**Dilla**	**87.97**	**276**	*e*P		**P**		**14 46 33.9**	**+2.8**
DILA				*e*S		**SKSac**		**14 56 54.5**	**-2.0**
DOT	**Dot Lake**	**88.02**	**27**	P		**P**		**14 46 30.1**	**-0.1**
DOT				IAmb		IAmb		14 46 34.7		
	comp=Z,166nm,1.1s									
SCRK	**Sand Creek**	**88.05**	**26**	P		**P**		**14 46 30.6**	**+0.2**
	baz=270,SNR=87									
SCRK				S		**S**		**14 57 11.3**	**+0.8**
	baz=270									
RSDY	**Resadiye-TOKAT**	**88.08**	**310**	*i*P		**P**		**14 46 32.6**	**+1.6**
GLB	**Gilahina Butte**	**88.16**	**29**	P		**P**		**14 46 31.0**	**+0.1**
GLB				IAmb		IAmb		14 46 40.7		
	comp=Z,291nm,1.3s									
MENT	**Mentasta**	**88.18**	**27**	P		**P**		**14 46 31.4**	**+0.5**
SUCK	**Suckling Hills**	**88.19**	**30**	IAMs_20		IAMs_20		15 22 28.4		
	comp=Z,23µm,22.0s									
GAZ	**Gaziantep**	**88.23**	**307**	*i*P		**P**		**14 46 34.1**	**+2.3**
GAZ	**Gaziantep**	**88.23**	**307**	P		**P**		**14 46 32.2**	**+0.4**
VRDI	**Verde Repeater**	**88.33**	**29**	P		**P**		**14 46 32.3**	**+0.4**
OBN	**Obninsk**	**88.34**	**325***c*	*i*P		**P**		**14 46 31.8**	**+0.1**
OBN				*e**PP		**pwP**		**14 46 45.2**	**-2.3**
OBN				*i*S		**SKSac**		**14 56 55.2**	**-1.5**
OBN				*i*				14 57 09.3	
OBN				SS		**SS**		**15 03 13.0**	**+10**
OBN				SSS		SSS		15 06 36.0		
OBN				pmax		pmax				
	comp=Z,485nm,1.0s									
OBN				pmax		pmax				
	comp=Z,6µm,3.4s									
OBN				MLR		MLR				
	comp=Z,51µm,25.0s									
OBN	**Obninsk**	**88.34**	**325**	P		**P**		**14 46 31.6**	**-0.1**
OBN				IAMs_20		IAMs_20		15 28 39.8		
	comp=Z,26µm,22.0s									
SVSK	**Karacayir**	**88.34**	**310**	*i*P		**P**		**14 46 34.8**	**+2.7**
L26K	**Log Cabin Wild**	**88.35**	**27**	P		**P**		**14 46 32.6**	**+0.9**
	baz=271,SNR=127									
L26K				S		**S**		**14 57 14.5**	**+1.3**
	baz=271									
KIBK	**Kibwezi**	**88.50**	**268**	P		**P**		**14 46 35.3**	**+1.8**
	SNR=216									
MCARA	**McCarthy VSAT**	**88.53**	**29**	P		**P**		**14 46 33.6**	**+1.0**
MCARA				IAmb		IAmb		14 46 42.1		
	comp=Z,249nm,1.1s									
TGL	**Tana Glacier**	**88.65**	**29**	P		**P**		**14 46 33.9**	**+0.6**
TGL				IAmb		IAmb		14 46 42.7		
	comp=Z,196nm,1.0s									
TOKT	**Tokat**	**88.68**	**310**	*i*P		**P**		**14 46 35.2**	**+1.4**
TOKA	**Tokat**	**88.73**	**310**	P		**P**		**14 46 34.2**	**+0.1**
TOKA				IAmb		IAmb		14 46 41.6		
	comp=Z,141nm,0.7s									
SARI	**SarD1z-Kayseri**	**88.83**	**308**	*i*P		**P**		**14 46 36.9**	**+2.2**
BALM	**Baldy**	**88.87**	**29**	P		**P**		**14 46 34.6**	**+0.3**
LVZ	**Lovozero**	**88.88**	**338***c*	*i*P		**P**		**14 46 33.1**	**-1.0**
LVZ				pmax		pmax				
	comp=Z,242nm,0.9s									
LVZ	**Lovozero**	**88.88**	**338**	P		**P**		**14 46 33.3**	**-0.8**
LVZ				IAmb		IAmb		14 46 40.6		
	comp=Z,218nm,0.9s									
K27K	**Chicken**	**88.89**	**26**	P		**P**		**14 46 34.7**	**+0.5**
ISLE	**Juniper Island**	**88.89**	**30**	P		**P**		**14 46 34.7**	**+0.3**
ISLE				IAmb		IAmb		14 46 45.2		
	comp=Z,145nm,0.9s									
ISLE				IAMs_20		IAMs_20		15 23 07.0		
	comp=Z,24µm,22.0s									
KVT	**Kavak**	**89.04**	**311**	*i*P		**P**		**14 46 35.4**	**-0.1**
BCAR	**Beaver Creek A**	**89.06**	**27**	P		**P**		**14 46 35.8**	**+0.7**
TAHT	**Tahtakopru-Hat**	**89.07**	**306**	*i*P		**P**		**14 46 37.6**	**+1.9**
MESA	**MESA**	**89.10**	**30**	P		**P**		**14 46 34.6**	**-1.0**
MESA				IAmb		IAmb		14 46 45.1		
	comp=Z,252nm,1.2s									
MESA				IAMs_20		IAMs_20		15 22 12.5		
	comp=Z,19µm,22.0s									
YAH	**Yahtse**	**89.20**	**30**	P		**P**		**14 46 34.6**	**-1.4**
YAH				IAmb		IAmb		14 46 45.8		
	comp=Z,344nm,1.4s									
YAH				IAMs_20		IAMs_20		15 22 29.0		
	comp=Z,23µm,22.0s									
BARN	**Barnard Glacie**	**89.21**	**29**	P		**P**		**14 46 36.7**	**+0.7**
BARN				IAmb		IAmb		14 46 41.7		
	comp=Z,356nm,1.2s									
KMBO	**Kilima Mbogo**	**89.25**	**269**	P		**P**		**14 46 40.8**	**+3.5**
	comp=Z,98nm,1.0s,baz=70,slow=5.2,SNR=178									
KMBO				LR		LR		15 27 49.4		
	comp=Z,8µm,18.5s,baz=82,slow=36									
KMBO	**Kilima Mbogo**	**89.25**	**269**	*i*P		**P**		**14 46 39.3**	**+2.0**
	SNR=69									
KMBO	**Kilima Mbogo**	**89.25**	**269**	IAMs_20		IAMs_20		15 22 45.1		
	comp=Z,21µm,22.0s									
KMBO	**Kilima Mbogo**	**89.25**	**269**	*i*P		**P**		**14 46 38.3**	**+1.0**
KMBO				*e*S		**SKSac**		**14 57 04.6**	**+0.2**
KMBO	**Kilima Mbogo**	**89.25**	**269**	*i*P		**P**		**14 46 38.3**	**+1.0**
EGAK	**Eagle**	**89.25**	**25**	P		**P**		**14 46 36.1**	**+0.3**
EGAK				IAmb		IAmb		14 46 40.7		
	comp=Z,183nm,1.3s									
BNN	**Bunyan**	**89.26**	**309**	*i*P		**P**		**14 46 38.1**	**+1.4**
KOZT	**Kozan**	**89.33**	**307**	*i*P		**P**		**14 46 38.8**	**+2.0**
HWQ	**Hawqa**	**89.33**	**304**	*e*P		**P**		**14 46 38.7**	**+1.6**
CTGM	**Chitina Glacie**	**89.37**	**29**	P		**P**		**14 46 38.0**	**+1.3**
CTGM				IAmb		IAmb		14 46 42.5		
	comp=Z,373nm,1.1s									
APA	**Apatity**	**89.37**	**337**	⇓*i*P		**P**		**14 46 35.7**	**-0.7**
APA				*i*				14 57 05.0		
APA				*i*S		SS		15 03 26.0	+8.2	
APA				pmax		pmax				
	comp=Z,116nm,0.8s									
CEYT	**Ceyhan**	**89.40**	**307**	*i*P		**P**		**14 46 39.5**	**+2.3**
RCY	**Rachaya**	**89.45**	**303**	*e*P		**P**		**14 46 39.3**	**+1.6**
TABL	**Table Mountain**	**89.49**	**30**	P		**P**		**14 46 38.1**	**+0.7**
TABL				IAmb		IAmb		14 46 51.3		
	comp=Z,291nm,1.0s									
TABL				IAMs_20		IAMs_20		15 23 12.8		
	comp=Z,24µm,22.0s									
QRWL	**Qaraoun**	**89.58**	**303**	*e*P		**P**		**14 46 39.6**	**+1.4**
BHL	**Bhannes**	**89.59**	**304**	*e*P		**P**		**14 46 40.0**	**+1.7**
DIKM	**Dikmen**	**89.61**	**311**	⇓P		**P**		**14 46 40.0**	**+1.9**
SNOP	**Sinop**	**89.64**	**312**	*i*P		P		14 46 42.4	+4.2	
DQRL	**Deir Qamar**	**89.67**	**304**	*e*P		**P**		**14 46 40.1**	**+1.5**
KRTS	**Karatas**	**89.72**	**306**	*i*P		P		14 46 42.9	+4.2	
MMAI	**Mount Meron Ar**	**89.83**	**303**	P		**P**		**14 46 41.8**	**+2.3**
	comp=Z,433nm,1.0s,baz=83,slow=7.6,SNR=62									
KARA	**Karaisali**	**89.95**	**307**	*i*P		**P**		**14 46 41.4**	**+1.6**
PCA	**Pinnacle**	**89.95**	**30**	P		**P**		**14 46 40.0**	**+0.6**
PCA				IAmb		IAmb		14 46 46.9		
	comp=Z,193nm,1.0s									
CMRD	**Camardi-Nigde**	**89.98**	**308**	*i*P		**P**		**14 46 41.0**	**+0.9**
DAWY	**Dawson**	**90.07**	**26**	P		**P**		**14 46 40.5**	**+0.7**
DAWY				IAmb		IAmb		14 46 45.0		
	comp=Z,242nm,1.2s									
DAWY				IAMs_20		IAMs_20		15 29 57.0		
	comp=Z,18µm,21.0s									
CORM	**Corum**	**90.15**	**310**	*i*P		**P**		**14 46 42.9**	**+2.1**
SIM	**Simferopol'**	**90.29**	**315***c*	*i*P		**P**		**14 46 41.1**	**-0.1**
SIM				*i*S		**SKSac**		**14 57 08.3**	**-0.4**
SIM				pmax		pmax				
	comp=Z,435nm,0.6s									
SIM				smax		smax				
	comp=N,72µm,8.2s									
SIM				MLR		MLR				
	comp=Z,23µm,27.0s									
EIL	**Elat**	**90.36**	**300**	P		**P**		**14 46 43.4**	**+1.6**
	comp=Z,142nm,0.8s,baz=92,slow=4.1,SNR=34									
BZK	**Bozkurt**	**90.53**	**312**	⇓P		**P**		**14 46 44.3**	**+2.0**
BZK	**Bozkurt**	**90.53**	**312**	*i*P		**P**		**14 46 43.5**	**+1.2**
SYO	**Syowa Base**	**90.69**	**201**	⇓*i*P		**P**		**14 46 42.2**	**-0.2**
SYO	**Syowa Base**	**90.69**	**201**	⇑*i*pP		pP		14 46 53.6	-2.4	
KIZK	**Mersin**	**90.71**	**306**	*i*P		**P**		**14 46 44.5**	**+1.2**
EREN	**Erenkoy**	**90.74**	**305**	*i*P		**P**		**14 46 44.8**	**+1.3**
HOPEN	**Hopen**	**90.77**	**347**	*e*P		**P**		**14 46 44.7**	**+1.9**
HOPEN				IVmB_BB				14 46 49.7		
	comp=Z,3µm,3.1s									
HOPEN				*e*PP		**PP**		**14 50 20.7**	**+2.3**
HOPEN				*e*SKSac		**SKSac**		**14 57 12.2**	**+2.0**
HOPEN				*e*SS		**SS**		**15 03 36.8**	**-0.9**
HOPEN				IVMs_BB		IVMs_BB		15 29 44.0		
	comp=Z,14µm,22.1s									
ILGA	**Ilgaz**	**90.80**	**311**	P		**P**		**14 46 43.7**	**-0.3**
ILGA				IAmb		IAmb		14 46 49.8		
	comp=Z,247nm,0.9s									
SILI	**Silifke-Mersin**	**90.90**	**306**	*i*P		**P**		**14 46 45.8**	**+1.6**
CANT	**Cankiri**	**90.90**	**310**	*i*P		**P**		**14 46 45.8**	**+1.6**
BR131	**Keskin Array S**	**90.94**	**310**	P		**P**		**14 46 44.0**	**-0.5**
BR131				pmax		pmax				
	comp=Z,201nm,1.0s									
BR131	**Keskin Array S**	**90.94**	**310**	P		**P**		**14 46 44.0**	**-0.5**
BR131				IAmb		IAmb		14 46 49.6		
	comp=Z,201nm,1.0s									
BRTR	**Keskin Array B**	**90.94**	**310**	P		**P**		**14 46 44.7**	**+0.2**
	comp=Z,101nm,0.9s,baz=121,slow=4.8,SNR=74									
BRTR				PP		**PP**		**14 50 22.9**	**+1.9**
	comp=Z,18nm,1.0s,baz=90,slow=7.2,SNR=4.9									
BRTR				PKKPbc		**PKKPbc**		**15 04 11.8**	**+1.7**
	comp=Z,4.5nm,0.8s,baz=190,slow=3.8,SNR=3.9									
BRTR				LR		LR		15 34 30.9		
	comp=Z,4µm,21.7s,baz=91,slow=40									
BRTR	**Keskin Array B**	**90.94**	**310**	*i*P		**P**		**14 46 45.7**	**+1.2**
BRTR	**Keskin Array B**	**90.94**	**310**	P		**P**		**14 46 43.5**	**-1.0**
BRTR	**Keskin Array B**	**90.94**	**310**	P		**P**		**14 46 43.5**	**-1.0**
YESY	**Yesilyurt**	**90.96**	**308**	*i*P		**P**		**14 46 46.3**	**+1.7**
LODK	**Lodwar**	**90.98**	**273**	P		**P**		**14 46 47.2**	**+2.0**
	SNR=24									
SERE	**Sereflikochisa**	**91.04**	**309**	*i*P		**P**		**14 46 46.3**	**+1.4**
KEBE	**Keben-Mersin**	**91.06**	**306**	*i*P		**P**		**14 46 46.9**	**+1.9**
IKL	**Isikli**	**91.10**	**306**	*i*P		**P**		**14 46 46.8**	**+1.7**
SULT	**Sultanhani-AKS**	**91.12**	**308**	*i*P		**P**		**14 46 46.4**	**+1.1**
AKKU	**Akkuyu-Mersin**	**91.21**	**306**	*i*P		**P**		**14 46 46.9**	**+1.3**
HYT	**Haines Junctio**	**91.25**	**29**	P		**P**		**14 46 45.6**	**+0.2**
HYT				IAmb		IAmb		14 46 50.4		
	comp=Z,118nm,0.9s									
HYT				IAMs_20		IAMs_20		15 24 33.2		
	comp=Z,29µm,22.0s									
TEVE	**Tevekalti-Mers**	**91.28**	**306**	*i*P		**P**		**14 46 47.6**	**+1.5**
AFSR	**Afar-Bala (An**	**91.39**	**309**	*i*P		**P**		**14 46 48.2**	**+1.7**
PUL	**Pulkovo**	**91.42**	**330**	*e*P		**P**		**14 46 46.8**	**+0.7**
PUL	**Pulkovo**	**91.42**	**330**	*i*P		**P**		**14 46 46.1**	**+0.1**
PUL				pmax		pmax				
	comp=Z,206nm,0.6s									
KEV	**Kevo**	**91.45**	**340**	P		**P**		**14 46 45.3**	**-0.7**
KEV				pmax		pmax				
	comp=Z,105nm,0.9s									
KEV	**Kevo**	**91.45**	**340**	P		**P**		**14 46 45.3**	**-0.7**
KEV				IAmb		IAmb		14 47 03.6		
	comp=Z,105nm,0.9s									
KEV				IAMs_20		IAMs_20		15 33 59.6		
	comp=Z,30µm,22.0s									
CSS	**Mathiatis**	**91.46**	**305**	*i*P		**P**		**14 46 48.5**	**+1.6**
CSS	**Mathiatis**	**91.46**	**305**	P		**P**		**14 46 46.7**	**-0.2**
BERE	**Bereket-Mersin**	**91.46**	**306**	*i*P		**P**		**14 46 48.5**	**+1.5**
KURC	**Kurucasile-Bar**	**91.48**	**312**	*i*P		**P**

HSPB ePP **PP** **14 50 34.6 +0.7**
HSPB eSKS **SKSac** **14 57 21.9 +0.6**
HSPB eS **ScS** **14 57 56.6 +1.9**
HSPB eSP SPn 14 59 06.1 +1.0
HSPB eL L 15 30 02.6
comp=Z,57µm,25.2s
HSPB Hornsund (broa 92.73 348 eP **P** **14 46 52.7 +0.9**
HSPB IVmB_BB 14 46 58.2
comp=Z,3µm,5.4s
HSPB ePP **PP** **14 50 34.4 +0.5**
HSPB eSKSac **SKSac** **14 57 22.6 +1.4**
HSPB IVMs_BB IVMs_BB 15 30 09.1
comp=Z,14µm,24.2s
BJO1 Bjornoya 92.74 345 eP **P** **14 46 49.9 -2.0**
BJO1 IVmB_BB 14 46 58.4
comp=Z,3µm,1.2s
BJO1 eSKSac **SKSac** **14 57 21.7 +0.3**
BJO1 eSS **SS** **15 04 08.7 +2.6**
BJO1 IVMs_BB IVMs_BB 15 26 52.4
comp=Z,8µm,23.6s
MDUB Mudurnu 92.75 310 *i* P **P** **14 46 53.5 +0.7**
MDUB Mudurnu 92.75 310 P **P** **14 46 52.9 +0.1**
BESE Bessie Mountai 92.87 31 IAMs_20 IAMs_20 15 23 19.1
comp=Z,22µm,22.0s
KTK1 Kautokeino 92.90 339 eP **P** **14 46 52.8 0.0**
KTK1 ePP **PP** **14 50 38.0 +2.5**
KTK1 eSKSac **SKSac** **14 57 21.7 -0.8**
KTK1 eSP SPn 14 59 08.1 +0.6
CIFT Cifteler, Eski 92.95 309 *i* P **P** **14 46 55.1 +1.4**
AKASG Malin Array Be 93.08 321 P **P** **14 46 53.6 -0.3**
comp=Z,56nm,0.9s,baz=72,slow=4.3,SNR=92
AKASG PKKP **PKKPbc** **15 04 03.4 -1.4**
comp=Z,5.3nm,0.7s,baz=269,slow=3.3,SNR=8.1
AKASG LR LR 15 32 55.3
comp=Z,22µm,21.3s,baz=75,slow=38
AKASG Malin Array Be 93.08 321 P **P** **14 46 53.1 -0.9**
AKASG pmax pmax
comp=Z,64nm,1.1s
AKASG Malin Array Be 93.08 321 P **P** **14 46 53.1 -0.9**
AKBB Malin Array Si 93.08 321 P **P** **14 46 53.1 -0.9**
AKBB pmax pmax
comp=Z,99nm,1.1s
AKBB MLR MLR
comp=Z,30µm,22.0s
AKBB Malin Array Si 93.08 321 P **P** **14 46 53.1 -0.9**
AKBB IAMs_20 IAMs_20 15 32 33.6
comp=Z,30µm,22.0s
JIS Juneau Island 93.16 31 P **P** **14 46 54.7 +0.6**
JIS IAmb IAmb 14 47 00.6
comp=Z,242nm,1.0s
SRCK Saricakaya, Es 93.22 310 *i* P **P** **14 46 54.8 -0.1**
FIA1 FINESS Array S 93.25 332 P **P** **14 46 53.5 -1.0**
FINES FINESS Array B 93.25 332 P **P** **14 46 54.4 0.0**
comp=Z,45nm,0.7s,baz=90,slow=5.7,SNR=82
FINES LR LR 15 32 31.4
comp=Z,28µm,20.1s,baz=74,slow=38
FINES FINESS Array B 93.25 332 P **P** **14 46 53.0 -1.5**
FINES FINESS Array B 93.25 332 P **P** **14 46 53.0 -1.5**
GULT Gulveren 93.27 310 *i* P **P** **14 46 56.3 +1.1**
SAUV Serdivan-Sakar 93.39 311 *i* P **P** **14 46 56.9 +1.3**
MICGM Minsk 93.40 325⇑ *i* P **P** **14 46 55.0 -0.3**
MICGM ⇑ *i* P **P** **14 46 55.0 -0.3**
MICGM PM 14 46 56.0
comp=Z,0.9nm,1.0s
MICGM PM 14 46 58.0
comp=Z,7.2nm,2.0s
MICGM eP **sP** **14 47 12.0 -2.0**
MICGM eS pwP 14 47 36.0 +25
MICGM eP PP 14 51 00.0 +20
MICGM ePP PPP 14 52 42.0
MICGM eSKS **SKSac** **14 57 24.0 -1.7**
MICGM eS **SKKSac** **14 57 52.0 +6.8**
MICGM SM 14 57 54.0
comp=E,14nm,10.0s
MICGM SM 14 57 58.0
comp=N,9.7nm,4.0s
MICGM eS **S** **14 58 00.0 +0.5**
MICGM eP **PS** **14 59 11.0 -7.6**
MICGM eSS **SS** **15 04 16.0 -0.4**
MICGM eSSS SSS 15 07 42.0
MICGM eLR LR 15 23 30.0
MICGM LRM MLR 15 29 52.0
comp=Z,27nm,22.0s
MICGM LRM MLR 15 29 56.0
comp=E,37nm,22.0s
MICGM LRM MLR 15 30 00.0
comp=E,22nm,22.0s
MICGM LRM MLR 15 30 00.0
comp=Z,42nm,22.0s
MNK Minsk 93.40 325⇑ *i* P **P** **14 46 55.0 -0.3**
MNK *e* 14 47 12.0
MNK *e* 14 52 42.0
MNK *e* 14 57 24.0
MNK eS SKSac 14 57 52.0 +26
MNK *e* 14 59 11.0
MNK *e* 15 04 16.0
MNK pmax pmax
comp=Z,900nm,1.0s
MNK pmax pmax
comp=Z,7µm,2.0s
MNK smax smax
comp=E,14µm,10.0s
MNK smax smax
comp=N,10µm,4.0s
MNK MLR MLR
comp=E,37µm,22.0s
MNK MLR MLR
comp=Z,42nm,22.0s
SPNC Sapanca-Adapaz 93.41 311 *i* P **P** **14 46 56.3 +0.6**
SHUT Suhut-Afyon 93.42 309 *i* P **P** **14 46 56.6 +0.6**
VSU Vasula 93.43 329 *eP* **P** **14 46 55.2 -0.1**
VSU Vasula 93.43 329 *c i* P **P** **14 46 54.2 -1.1**
VSU pmax pmax
comp=Z,219nm,0.8s
BCK Bucak 93.48 308 *i* P **P** **14 46 56.6 +0.4**
ISP Isparta 93.51 308 *i* P **P** **14 46 56.6 +0.2**
ISP Isparta 93.51 308 P **P** **14 46 54.0 -2.3**
ISP pmax pmax
comp=Z,102nm,0.9s
ISP Isparta 93.51 308 P **P** **14 46 54.0 -2.3**
ISP IAmb IAmb 14 47 09.1
comp=Z,102nm,0.9s
ISP Isparta 93.51 308 IAMs_20 IAMs_20 15 33 28.1
comp=Z,18µm,22.0s
TAOE Nuku Hiva Isla 93.64 99 eSKSac **SKSac** **14 57 30.7 +1.8**
comp=Z,7µm,24.9s
TAOE Nuku Hiva Isla 93.64 99 ePS PS 14 59 25.4 +2.4
comp=Z,17µm,29.6s
TAOE Nuku Hiva Isla 93.64 99 eLR LR 15 17 13.0
comp=Z,63µm,24.9s
TAOE Nuku Hiva Isla 93.64 99 IAMs_20 IAMs_20 15 20 25.6
comp=Z,18µm,22.0s
KORT Korkueli 93.72 307 *i* P **P** **14 46 57.6 +0.2**
KIS Kishinev 93.80 317⇑ *i* P **P** **14 46 55.0 -2.3**
comp=Z,1µm,4.5s
KIS Kishinev 93.80 317 *i* PP PP 14 50 34.5 -8.5
KIS Kishinev 93.80 317 *c i* P **P** **14 46 55.0 -2.3**
KIS *i* 14 57 27.0
KIS eS **S** **14 58 00.0 -3.3**
KIS pmax pmax
comp=Z,1µm,4.5s
CAVI Cavuskoy 93.81 310 *i* P **P** **14 46 58.7 +1.1**
MILM Milestii Mici 93.81 317 ⇓ P **P** **14 46 57.7 +0.3**
SILT Sile 93.86 311 *i* P **P** **14 46 57.9 +0.2**
ADVT Abdulvahap 93.86 311 *i* P **P** **14 46 58.2 +0.4**
IDID Didziasalis 93.93 326 *eP* **P** **14 46 58.1 +0.3**
SORM Soroca 93.97 318⇑ P **P** **14 46 58.7 +0.6**
NACGM Naroch 93.97 325 *eP* **P** **14 46 58.0 +0.1**
NACGM PM 14 47 05.0
comp=Z,0.4nm,1.0s
NACGM ePP PP 14 51 05.0 +21
NACGM ePPP PPP 14 52 41.0
NACGM eSKS **SKSac** **14 57 30.0 +1.2**
NACGM eS **ScS** **14 58 08.0 +2.1**
NACGM eSS SS 15 03 54.0 -31
NACGM eSSS SSS 15 07 18.0
NACGM eLQ LQ 15 19 12.0
NACGM eLR LR 15 24 30.0
NACGM LRM MLR 15 30 09.0
comp=Z,45nm,25.0s
TLCR 94.01 315⇑ P **P** **14 46 59.3 +1.0**
JURR Jurilovca 94.02 315 ⇓ P **P** **14 46 59.9 +1.5**
ELL Elmali 94.09 307 *i* P **P** **14 47 00.1 +1.0**
ELL Elmali 94.09 307 P **P** **14 46 58.7 -0.4**

ELL pmax pmax
comp=Z,327nm,0.9s
ELL Elmali 94.09 307 P **P** **14 46 58.7 -0.4**
TVSB Tavsanli 94.17 310 *i* P **P** **14 47 00.4 +1.0**
TRO Tromso 94.22 340 *eP* **P** **14 46 58.0 -0.7**
TRO IVmBBB 14 46 59.5
comp=Z,1µm,0.3s
TRO eSKSac **SKSac** **14 57 28.3 -1.3**
TRO eSP **SP** **14 59 22.0 +1.6**
TRO eSS **SS** **15 04 31.4 +4.2**
TRO IVMs_BB IVMs_BB 15 28 46.8
comp=Z,10µm,25.3s
IIGN Ignalina 94.22 326 *eP* **P** **14 46 59.4 +0.3**
ISAL Salakas 94.23 326 *eP* **P** **14 46 59.2 +0.1**
GEMT Gemlik 94.28 311 *i* P **P** **14 47 00.4 +0.7**
CRAG Craig 94.29 34 P **P** **14 47 00.2 +0.8**
CRAG IAmb IAmb 14 47 05.8
comp=Z,215nm,1.3s
ISK Istanbul-Kandi 94.31 311 *i* P **P** **14 46 59.7 -0.1**
ISK Istanbul-Kandi 94.31 311 P **P** **14 47 00.5 +0.7**
KAVV Kandilli-Istan 94.31 311 *i* P **P** **14 46 59.7 -0.1**
TPGR Topolog 94.33 315⇑ P **P** **14 47 01.0 +1.1**
AKAS Kas 94.39 306 P **P** **14 46 59.7 -0.8**
TIRR Tirgusor 94.39 315⇑ P **P** **14 47 01.2 +1.1**
TIRR Tirgusor 94.39 315 P **P** **14 47 00.1 0.0**
TIRR pmax pmax
comp=Z,455nm,1.5s
TIRR MLR MLR
comp=Z,47µm,22.0s
TIRR Tirgusor 94.39 315 P **P** **14 47 00.1 0.0**
CFR Carcaliu 94.49 315⇑ P **P** **14 47 01.7 +1.2**
MDNY Mudanya-Bursa 94.52 311 *i* P **P** **14 47 02.2 +1.4**
VASR Vaslui 94.54 317 ⇓ P **P** **14 47 02.4 +1.6**
CAME Cameli-Denizli 94.56 307 *i* P **P** **14 47 01.3 0.0**
WRAK Wrangell Islan 94.56 33 P **P** **14 46 59.7 -0.8**
SIMA Simav-Kutahya 94.58 309 *i* P **P** **14 47 01.9 +0.6**
VARL Varlezi 94.60 316 ⇓ P **P** **14 47 02.8 +1.8**
IAS Iasi 94.62 317 ⇓ P **P** **14 47 02.4 +1.3**
HARR Harsova 94.70 315 ⇓ P **P** **14 47 03.0 +1.8**
FETY Fethiye 94.76 307 *i* P **P** **14 47 02.9 +0.8**
FETY Fethiye 94.76 307 P **P** **14 47 02.2 +0.1**
CTYL Yalikoy Yolu 94.84 312 *i* P **P** **14 47 03.5 +1.3**
KULA Kula-Manisa 94.90 309 *i* P **P** **14 47 03.8 +1.1**
KULA Kula-Manisa 94.90 309 P **P** **14 47 03.4 +0.7**
SLVT Silivri 94.93 311 *i* P **P** **14 47 02.6 0.0**
C36M Paulatuk 94.95 20 P **P** **14 47 02.5 +0.4**
baz=289,SNR=246
C36M S **S** **14 58 08.0 -4.5**
baz=289
C36M Paulatuk 94.95 20 P **P** **14 47 01.7 -0.4**
MANT Manisa 94.98 309 P **P** **14 47 02.0 -1.3**
DIB Dawson Inlet, 95.06 36 P **P** **14 47 02.0 -0.9**
DIB IAmb IAmb 14 47 25.8
comp=Z,156nm,1.4s
DALY Dalyan (Mula) 95.09 307 *i* P **P** **14 47 00.9 -2.6**
ODBI Odobesti 95.17 316⇑ P **P** **14 47 06.1 +2.4**
GRER 95.28 316⇑ P **P** **14 47 07.0 +2.8**
TESR Tescani 95.34 317⇑ P **P** **14 47 05.6 +1.1**
YER Yerkesik 95.35 307 *i* P **P** **14 47 04.0 -0.8**
YER Yerkesik 95.35 307 P **P** **14 47 05.6 +0.8**
BALB Balikesir 95.37 310 *i* P **P** **14 47 05.4 +0.7**
VRI Vrincioaia 95.38 316 ⇓ P **P** **14 47 06.2 +1.6**
VRI Vrincioaia 95.38 316 *i* P **P** **14 47 06.6 +1.9**
DLBC Dease Lake 95.38 31 P **P** **14 47 05.7 +1.2**
DLBC IAmb IAmb 14 47 10.2
comp=Z,183nm,1.3s
PHSR Pinarhisar 95.39 312 *i* P **P** **14 47 05.7 +0.9**
TURN Turunc 95.42 307 *i* P **P** **14 47 06.6 +1.6**
PLOR Plostina 95.44 316⇑ P **P** **14 47 06.5 +1.6**
PABE Paberze 95.45 326 *eP* **P** **14 47 05.0 +0.3**
MRMT Marmara Adasi 95.47 311 *i* P **P** **14 47 05.9 +0.7**
PRAR RASCA 95.50 318 ⇓ P **P** **14 47 06.4 +1.3**
ALE Alert 95.51 1 IAMs_20 IAMs_20 15 31 40.5
comp=Z,18µm,22.0s
AYDB Zeytinkoy-Aydi 95.56 308 *i* P **P** **14 47 07.3 +1.5**
ARG Arkhangelos 95.58 306 P **P** **14 47 09.2 +3.5**
ISR Istrita 95.62 316 ⇓ P **P** **14 47 07.9 +2.1**
BIZ Bicaz 95.64 317⇑ P **P** **14 47 07.4 +1.5**
MLSB Milas 95.73 308 *i* P P 14 47 10.4 +3.9
MBAR Mbarara 95.74 270 P **P** **14 47 08.2 +1.0**
MBAR P **P** **14 47 08.2 +1.0**
MBAR S **SKSac** **14 47 43.5 +3.1**
MBAR S **SKSac** **14 57 43.5 +3.1**
MBAR Mbarara 95.74 270 IAMs_20 IAMs_20 15 30 38.2
comp=Z,16µm,22.0s
NEHR Nehoiu 95.74 316 ⇓ P **P** **14 47 07.7 +1.4**
RKY Sarkoy-Tekirda 95.77 311 *i* P **P** **14 47 07.5 +0.9**
N2IH Innhavet 95.78 339 *eP* **P** **14 47 05.4 -0.5**
RAZG Razgrad 95.87 314⇑ P **P** **14 47 08.2 +1.3**
SULR 95.88 315 ⇓ P **P** **14 47 09.0 +2.0**
SLIT Slitere, Latvi 95.91 328 *eP* **P** **14 47 06.5 -0.2**
SECR 95.96 315⇑ P **P** **14 47 09.5 +2.2**
MLR Muntele Rosu 95.98 316 P **P** **14 47 08.4 +0.9**
comp=Z,95nm,0.8s,baz=83,slow=3.6,SNR=82
MLR Muntele Rosu 95.98 316 P **P** **14 47 07.7 +0.2**
MLR pmax pmax
comp=Z,129nm,0.9s
MLR Muntele Rosu 95.98 316 P **P** **14 47 07.7 +0.2**
MLR IAmb IAmb 14 47 10.1
comp=Z,129nm,0.9s
OZUR 95.99 317⇑ P **P** **14 47 08.7 +1.2**
STEI Steigen 96.04 339 *eP* **P** **14 47 06.9 -0.2**
STEI ePP **PP** **14 50 59.2 -0.5**
STEI eSKSac **SKSac** **14 57 40.6 +1.3**
STEI eSP **SP** **14 59 38.3 -2.0**
STEI eSS **SS** **15 04 51.1 -2.0**
STEI IVMs_BB IVMs_BB 15 29 24.5
comp=Z,10µm,26.6s
GCAM G?zelcaml? 96.11 308 *i* P **P** **14 47 09.6 +1.5**
N2ST Straumen 96.11 339 *eP* **P** **14 47 03.4 -4.0**
UKOP Uzunkopru-Edir 96.12 312 *i* P **P** **14 47 09.9 +1.8**
BODT Bodrum 96.13 307 *i* P **P** **14 47 09.4 +1.1**
BODT Bodrum 96.13 307 P **P** **14 47 11.4 +3.1**
BURAR Bucovina Array 96.13 318 P **P** **14 47 08.5 +0.3**
BUR08 Bucovina Ar. S 96.14 318 P **P** **14 47 08.4 +0.2**
BUR08 IAmb IAmb 14 47 32.1
comp=Z,225nm,1.1s
SGRR Singureni 96.15 315 ⇓ P **P** **14 47 09.8 +1.7**
DKL Dikili 96.19 309 *i* P **P** **14 47 09.3 +0.9**
SUW Suwalki 96.20 325 *eP* **P** **14 47 08.0 -0.1**
SUW eSKS **SKSac** **14 57 41.1 +0.4**
SUW eS **S** **14 58 22.0 -1.9**
SUW eSP **SP** **14 59 40.8 -2.1**
SUW eL L 15 31 39.6
comp=Z,43µm,25.5s
SUW Suwalki 96.20 325 P **P** **14 47 07.7 -0.4**
SUW pmax pmax
comp=Z,499nm,1.0s
SUW Suwalki 96.20 325 P **P** **14 47 07.7 -0.4**
N2TV TVrnvik 96.21 339 *eP* **P** **14 47 07.2 -0.7**
FAUS Fauske 96.21 339 *eP* **P** **14 47 07.2 -0.7**
FAUS IVmB_BB 14 47 08.8
comp=Z,2µm,0.5s
FAUS ePP **PP** **14 51 02.8 +1.6**
FAUS eSKSac **SKSac** **14 57 40.1 -0.2**
FAUS eSP **SP** **14 59 44.0 +1.7**
FAUS eSS **SS** **15 04 56.6 +0.9**
FAUS IVMs_BB IVMs_BB 15 34 39.6
comp=Z,9µm,18.2s
N2VI Vinje 96.26 340 *eP* **P** **14 47 06.7 -1.4**
ERIK Erikli-Kesan 96.27 311 *i* P **P** **14 47 08.8 0.0**
SMG Samos 96.42 308 P **P** **14 47 10.2 +0.6**
KARP Karpathos 96.43 306 *i* P **P** **14 47 10.7 +1.0**
KARP Karpathos 96.43 306 P **P** **14 47 08.6 -1.1**
NBB08 Skaug oppvekst 96.45 339 *eP* **P** **14 47 08.7 -0.3**
EUNU Eureka 96.45 5 P **P** **14 47 09.0 +0.1**
PBUR Paburge 96.47 327 *eP* **P** **14 47 09.2 -0.1**
LVV L'vov 96.51 320 *eP* **P** **14 47 10.8 +1.1**
LVV *e* 14 57 47.8
LVV eS **S** **14 58 25.9 -0.9**
URLA Izmir 96.52 309 *i* P **P** **14 47 10.9 +0.8**
EZN Ezine 96.53 310 *i* P **P** **14 47 10.9 +0.9**
EZN Ezine 96.53 310 P **P** **14 47 10.6 +0.6**
ENEZ Enez 96.53 311 *i* P **P** **14 47 10.9 +0.9**
ENEZ Enez 96.53 311 P **P** **14 47 10.7 +0.7**
LOF Lofoten 96.56 340 *eP* **P** **14 47 09.0 -0.5**
LOF eSKSac **SKSac** **14 57 40.8 -1.3**
LOF eSS **SS** **15 05 05.2 +4.7**
LOF IVMs_BB IVMs_BB 15 30 33.2
comp=Z,8µm,22.7s
NBB28 Valnes 96.58 339 *eP* **P** **14 47 09.1 -0.5**
ALN Alexandroupoli 96.59 311 *i* P **P** **14 47 10.8 +0.6**

ALN Alexandroupoli 96.59 311 P **P** **14 47 09.2 -1.0**
ALN pmax pmax
comp=Z,74nm,1.1s
ALN Alexandroupoli 96.59 311 P **P** **14 47 09.2 -1.0**
ALN Alexandroupoli 96.59 311 P **P** **14 47 10.3 +0.1**
VOIR 96.61 316 ⇓ P **P** **14 47 11.6 +1.3**
MTUR Matau 96.63 316⇑ P **P** **14 47 11.7 +1.2**
PRK Paraskevi 96.65 310 P **P** **14 47 12.3 +1.7**
COPA Copaceanca 96.70 315 ⇓ P **P** **14 47 12.4 +1.7**
BOZC Bozcaada 96.74 310 *i* P **P** **14 47 11.9 +1.0**
STFAR Stefanesti-Arg 96.77 315 ⇓ P **P** **14 47 12.6 +1.6**
NBB05 Inndyr 96.80 339 *eP* **P** **14 47 10.4 -0.1**
GADA Gvkgeada 96.81 311 *i* P **P** **14 47 11.9 +0.7**
GADA Gvkgeada 96.81 311 P **P** **14 47 11.3 +0.1**
HUMR Humele 96.81 315⇑ P **P** **14 47 12.1 +0.9**
N2SV S rvYgen 96.84 340 *eP* **P** **14 47 10.5 -0.2**
NBB17 Glomfjord BYr 96.90 338 *eP* **P** **14 47 10.6 -0.5**
ARR Arges 96.91 316⇑ P **P** **14 47 12.9 +1.2**
NBB30 Finnes 96.93 339 *eP* **P** **14 47 10.6 -0.5**
RDO Rodhopi 96.94 312 *i* P 14 47 12.4
RDO Rodhopi 96.94 312 P 14 47 12.0
KDZ Kurdzhali 96.95 312 *i* P **P** **14 47 13.8 +1.9**
MOR8 Moi Rana 96.96 338 *eP* **P** **14 47 09.7 -1.7**
MOR8 eSKSac **SKSac** **14 57 43.5 -0.8**
MOR8 eSP **SP** **14 59 50.4 -0.1**
MOR8 eSS **SS** **15 05 06.5 +0.2**
MOR8 IVMs_BB IVMs_BB 15 30 41.5
comp=Z,14µm,22.7s
SIGR SIGRI 96.98 310 *i* P **P** **14 47 12.7 +0.7**
SIGR SIGRI 96.98 310 P **P** **14 47 12.1 +0.1**
N2VA Vr_y 97.04 339 *eP* **P** **14 47 11.2 -0.5**
SMTH Samothraki Isl 97.04 311 P **P** **14 47 11.5 -0.8**
ZKR Zakros 97.25 306 *i* P Pdif 14 47 15.0 +1.5
BMR Baia Mare 97.27 318 ⇓ P Pdif 14 47 14.6 +1.4
AMGA Amorgos Island 97.28 307 P **P** **14 47 12.0 -1.5**
N2RO R_st 97.30 339 *eP* **P** **14 47 12.1 -0.7**
KONS Konsvik 97.33 338 *eP* **P** **14 47 12.3 -0.6**
NBB40 Tonnes 97.37 338 *eP* **P** **14 47 12.3 -0.8**
CJR Cluj-Napoca 97.38 317⇑ P Pdif 14 47 16.0 +2.1
LIA Limnos Island 97.39 310 P Pdif 14 47 13.9 0.0
KWP Kalwaria Pacla 97.39 320 *e* Pdif Pdif 14 47 14.5 +0.8
KWP eSKS **SKSac** **14 57 46.4 -0.8**
KWP eSdif **S** **14 58 34.1 -0.3**
KWP eSP **SP** **14 59 55.8 -0.3**
KWP eL L 15 35 21.3
comp=Z,37µm,24.4s
KWP Kalwaria Pacla 97.39 320 P **P** **14 47 12.8 -0.9**
KWP pmax pmax
comp=Z,171nm,1.0s
KWP Kalwaria Pacla 97.39 320 P **P** **14 47 12.8 -0.9**
KWP IAmb IAmb 14 47 21.0
comp=Z,171nm,1.0s
PLD Plovdiv 97.40 313 *i* P Pdif 14 47 14.4 +0.4
STOK Stokkvaagen 97.43 338 *eP* Pdif 14 47 14.1 +0.6
STOK eSKSac **SKSac** **14 57 47.0 +0.4**
LOT Lotru 97.49 316 ⇓ P Pdif 14 47 15.3 +0.8
LOT Lotru 97.49 316 *i* P Pdif 14 47 15.9 +1.4
APE Apeiranthos 97.54 308 *i* P **P** **14 47 14.4 -0.3**
THAS Thassos island 97.63 311 P Pdif 14 47 15.3 +0.3
KAVA Kavala 97.72 312 P **P** **14 47 15.0 -0.4**
NOD Norderasen 97.76 335 *eP* **P** **14 47 14.0 -1.0**
LAST Lasithi 97.85 306 P Pdif 14 47 17.3 +1.1
UZH Uzhgorod 97.86 320⇑ *i* P Pdif 14 47 17.7 +1.9
UZH *e* 14 47 28.0
UZH *e* 14 47 38.3
UZH *e* 14 57 48.8
UZH eS **S** **14 58 36.0 -2.4**
UZH pmax pmax
comp=Z,40nm,1.0s
DRGR 97.96 318 ⇓ P Pdif 14 47 17.5 +1.0
SRE Strehaia 98.03 315⇑ P Pdif 14 47 19.0 +2.3
BEL Belsk 98.10 323 *e* Pdif Pdif 14 47 18.4 +1.6
BEL eSKS **SKSac** **14 57 52.2 +1.6**
BEL eS **S** **14 58 40.0 -0.2**
BEL eSP **SP** **15 00 00.8 -2.8**
BEL eL L 15 34 44.9
comp=Z,34µm,22.7s
NVR Nevrokopi 98.15 312 P **P** **14 47 17.2 -0.1**
GZR Gura Zlata 98.19 316⇑ P Pdif 14 47 18.2 +0.7
OUR Ouranopolis 98.23 311 *i* P Pdif 14 47 18.1 +0.4
IDI Anoyia 98.31 306 P Pdif 14 47 18.7 +0.5
comp=Z,62nm,0.7s,baz=75,slow=6.3,SNR=22
IDI Anoyia 98.31 306⇑ P Pdif 14 47 19.4 +1.2
IDI Anoyia 98.31 306 *i* P Pdif 14 47 22.0 +3.8
IDI Anoyia 98.31 306 P **P** **14 47 17.2 -1.0**
IDI IAmb IAmb 14 47 31.9
comp=Z,81nm,0.8s
IDI Anoyia 98.31 306 P Pdif 14 47 18.7 +0.5
CRVS Cervenica-Dubn 98.34 320 *e* P Pdif 14 47 19.3 +1.3
CRVS *e* 14 57 52.4
CRVS eS **S** **14 58 39.6 -3.0**
CRVS eSS **SS** **15 05 31.4 +4.6**
CRVS Cervenica-Dubn 98.34 320 *e* PDIFF Pdif 14 47 19.3 +1.3
CRVS *e* 14 57 52.4
CRVS eS **S** **14 58 39.6 -3.0**
CRVS eSS **SS** **15 05 31.4 +4.6**
SRS Serrai 98.39 312 P **P** **14 47 17.2 -1.2**
LSZ Lusaka 98.50 255 P Pdif 14 47 20.4 +0.9
LSZ S **SKSac** **14 57 56.5 +2.1**
LSZ Lusaka 98.50 255 P **P** **14 47 19.0 -0.5**
LSZ pmax pmax
comp=Z,87nm,1.0s
LSZ Lusaka 98.50 255 P **P** **14 47 19.0 -0.5**
LSZ IAmb IAmb 14 47 21.9
comp=Z,87nm,0.9s
AOS Alonnisos 98.50 310 *i* P Pdif 14 47 19.4 +0.5
AOS Alonnisos 98.50 310 P **P** **14 47 17.9 -1.0**
PAIG Paliouri 98.53 311 P Pdif 14 47 19.1 +0.1
NSS Namsos 98.54 337 *eP* Pdif 14 47 18.2 -0.3
NSS IVmB_BB 14 47 21.2
comp=Z,1µm,3.4s
NSS ePP **PP** **14 51 21.2 +2.2**
NSS eSKSac **SKSac** **14 57 51.5 -0.8**
NSS eSS **SS** **15 05 31.4 +2.9**
NSS IVMs_BB IVMs_BB 15 34 16.2
comp=Z,12µm,24.3s
HERR Herculane 98.54 316⇑ P Pdif 14 47 20.3 +1.3
SOH Sokhos 98.62 312 P **P** **14 47 19.3 -0.2**
PLG Polygyros 98.63 311 P Pdif 14 47 19.4 -0.1
DION Dionisos Attik 98.64 309 P Pdif 14 47 21.8 +2.2
ATHU Athens Univers 98.77 309 P **P** **14 47 19.4 -0.8**
SIRR Siria 98.78 317 ⇓ P Pdif 14 47 21.1 +1.0
VLY Voula,Athens 98.78 309 P **P** **14 47 19.4 -0.8**
VAM Vamos 98.85 306 P Pdif 14 47 22.2 +1.7
HORT Hortiatis 98.85 311 *i* P Pdif 14 47 20.9 +0.3
HORT Hortiatis 98.85 311 P **P** **14 47 20.2 -0.3**
KNT Kendrikon 98.90 312 *i* P Pdif 14 47 20.9 +0.2
KNT Kendrikon 98.90 312 P Pdif 14 47 20.8 +0.1
BZS Buzias 98.94 317 ⇓ P **Pdif** **14 47 21.3 +0.6**
DAG Danmarks Havn 98.96 352 *i* P Pdif 14 47 20.0 -0.1
DAG pmax pmax
comp=Z,91nm,0.8s
DAG MLR MLR
comp=Z,36µm,26.0s
DAG Danmarks Havn 98.96 352 *i* P Pdif 14 47 20.0 -0.1
comp=Z,91nm,0.8s
comp=Z,36µm,26.0s
DAG Danmarks Havn 98.96 352 *i* P Pdif 14 47 20.0 -0.1
DAG IAmb IAmb 14 47 23.0
comp=Z,91nm,0.8s
DAG IAMs_20 IAMs_20 15 31 42.4
comp=Z,36µm,26.0s
NIE Niedzica 98.97 321 *e* Pdif **Pdif** **14 47 21.9 +1.1**
NIE *e* PP **PP** **14 51 23.6 +0.7**
NIE eSKS **SKSac** **14 57 57.0 +1.8**
NIE eSP **SP** **15 00 11.1 -2.1**
NIE eL L 15 32 41.0
comp=Z,17µm,26.2s
NEO Neokhori 98.98 310 P **Pdif** **14 47 20.4 -0.7**
IMMV Iera Moni Meta 99.02 306 *i* P **Pdif** **14 47 22.8 +1.5**
IMMV Iera Moni Meta 99.02 306 P **Pdif** **14 47 22.3 +1.0**
GVDS Gavdos 99.02 306 *i* P **Pdif** **14 47 22.7 +1.4**
GVD Gavdhos 99.02 306 *i* P **Pdif** **14 47 22.7 +1.4**
MDVR Moldovita 99.05 316⇑ P **Pdif** **14 47 22.8 +1.4**
KECS Kecovo 99.07 320 *eP* **Pdif** **14 47 22.1 +0.9**
KECS Kecovo 99.07 320 *e* PDIFF **Pdif** **14 47 22.1 +0.9**
OJC Ojcow 99.09 321 *e* Pdif **Pdif** **14 47 22.0 +0.7**
OJC *e* PP **PP** **14 51 25.0 +1.2**
OJC eSKS **SKSac** **14 57 55.0 -0.8**
OJC eSdif **ScS** **14 58 48.3 -0.5**
OJC eSP **SP** **15 00 10.8 -3.6**

OJC eL L 15 33 40.1
comp=Z,24µm,23.9s
OJC Ojcow 99.09 321 P **Pdif** **14 47 20.4 -0.9**
OJC pmax pmax
comp=Z,66nm,1.0s
OJC Ojcow 99.09 321 P **Pdif** **14 47 20.4 -0.9**
VILL Villia 99.11 309 P **Pdif** **14 47 19.2 -2.5**
ATAL Atalanti 99.24 310 P **Pdif** **14 47 21.1 -1.1**
LKR Lokris 99.27 310 P **Pdif** **14 47 21.3 -1.0**
GRG Griva 99.31 312 *i* P **Pdif** **14 47 22.2 -0.3**
GRG Griva 99.31 312 P **Pdif** **14 47 22.1 -0.4**
STIP Stip 99.33 313 *i* P **Pdif** **14 47 21.9 -0.6**
KRND KRANIDI 99.37 308 P **Pdif** **14 47 21.8 -1.0**
LOUT Loutraki 99.40 309 P **Pdif** **14 47 21.5 -1.5**
HFS Hagfors 99.45 332 P **Pdif** **14 47 22.3 -0.4**
comp=Z,28nm,0.8s,baz=66,slow=3.7,SNR=43
ANKY Antikythira Is 99.50 307 P **Pdif** **14 47 23.5 +0.1**
LANS Liptovska Anna 99.56 320 *e*P **Pdif** **14 47 24.9 +1.4**
LANS Liptovska Anna 99.56 320 *e*PDIFF **Pdif** **14 47 24.9 +1.4**
PSZ Piszkesteto 99.59 319 ⇓P **Pdif** **14 47 25.5 +1.8**
PSZ Piszkesteto 99.59 319 IAMs_20 IAMs_20 15 38 09.7
comp=Z,18µm,22.0s
KTHA Kythira Island 99.62 307 *i* P **Pdif** **14 47 23.8 -0.2**
VLI Veliai 99.65 308 P **Pdif** **14 47 22.4 -1.7**
DSF Desfina 99.67 309 P **Pdif** **14 47 22.9 -1.3**
AGG Agios Georgios 99.72 310 *i* P **Pdif** **14 47 23.9 -0.5**
AGG Agios Georgios 99.72 310 P **Pdif** **14 47 23.5 -0.9**
TBLU Trondheim 99.75 336 *e*P **Pdif** **14 47 23.6 -0.3**
TBLU *e*PP **PP** **14 51 26.9 -1.5**
TBLU *e*SKSac **SKSac** **14 57 57.8 -0.6**
TBLU *e*SP **SP** **15 00 16.8 -3.9**
TBLU *e*SS **SS** **15 05 47.3 +1.8**
TBLU IVMs_BB IVMs_BB 15 34 32.9
comp=Z,12µm,25.8s
NVL N'lazarevskaya 99.80 198 *e*P **Pdif** **14 47 23.9 0.0**
NVL *e*S **SKSac** **14 57 59.0 +0.7**
NVL *e*SS **SS** **15 05 51.8 +5.9**
NVL *e*SSS SSS 15 09 42.1
NVL pmax pmax
comp=Z,30nm,1.1s
NVL MLR MLR
comp=Z,7µm,19.0s
GKP Gorka Klasztor 99.81 325 *e*Pdif **Pdif** **14 47 25.6 +1.2**
GKP *e*SKS **SKSac** **14 58 00.5 +1.3**
GKP *e*SP **SP** **15 00 18.8 -3.2**
GKP *e*L L 15 35 24.9
comp=Z,57µm,24.0s
MAKR Makrakomi, Fth 99.87 310 P **Pdif** **14 47 24.5 -0.6**
GUR Goura 99.90 309 P **Pdif** **14 47 24.9 -0.4**
VLX Vlachokerasia 99.97 308 P **Pdif** **14 47 26.0 +0.4**
KALE Kalithea 99.98 309 P **Pdif** **14 47 25.6 0.0**
TRIP Tripoli 100.03 308 P **Pdif** **14 47 25.5 -0.4**
KLV Kalavryta, Ach 100.03 309 P **Pdif** **14 47 24.8 -0.4**
TRIZ Trizonia 100.03 309 P **Pdif** **14 47 25.5 -0.2**
SERG Sergoula 100.04 309 P **Pdif** **14 47 25.6 -0.2**
ANX Ano Chora 100.11 310 P **Pdif** **14 47 26.2 0.0**
VYHS Vyhne 100.13 320 *e*P **Pdif** **14 47 27.6 +1.6**
VYHS *e* 14 51 34.3
VYHS Vyhne 100.13 320 *e*PDIFF **Pdif** **14 47 27.6 +1.6**
VYHS *e*PP **PP** **14 51 34.2 +2.4**
EVR Evrytania 100.14 310 P **Pdif** **14 47 26.1 -0.2**
EFP Efpalio 100.15 309 P **Pdif** **14 47 26.2 -0.1**
NC602 NORSAR Array S 100.21 333 *e*P **Pdif** **14 47 25.5 -0.5**
NC602 IVmB_BB 14 47 57.7
comp=Z,1µm,8.3s
NC602 *e*SKSac **SKSac** **14 58 01.2 +0.4**
NC602 *e*SS **SS** **15 05 54.9 +2.9**
NC602 IVMs_BB IVMs_BB 15 35 19.3
comp=Z,13µm,27.4s
OKC Ostrava-Krasne 100.22 321 *e*P **Pdif** **14 47 27.4 +1.1**
OKC *e* 14 57 59.5
OKC MLR MLR
comp=Z,16µm,22.1s
OKC Ostrava-Krasne 100.22 321 *e*PDIFF **Pdif** **14 47 27.4 +1.1**
OKC *ex* x 14 47 31.7
OKC *e*SKS 14 57 59.5
OKC AMS AMS 15 36 30.0
comp=Z,16µm,22.1s
NB2 NORSAR Subarra100.24 333 P **Pdif** **14 47 25.1 -1.1**
comp=Z,122nm,1.2s,baz=67,slow=4.6
NB2 NORSAR Subarra100.24 333 P **Pdif** **14 47 25.1 -1.1**
baz=67,slow=4.6
NOA NORSAR Array B 100.24 333 P **Pdif** **14 47 25.8 -0.5**
comp=Z,42nm,0.8s,baz=68,slow=4.6,SNR=98
ITM Ithomi 100.36 308 *i* P **Pdif** **14 47 26.9 -0.4**
ITM Ithomi 100.36 308 P **Pdif** **14 47 27.3 0.0**
DRO Drossia 100.39 309 P **Pdif** **14 47 28.4 +1.0**
DIVS Divibare 100.40 315⇑*i* P **Pdif** **14 47 27.7 +0.3**
OHR Ohrid 100.46 312 *i* P **Pdif** **14 47 27.5 -0.2**
AMT Artemida-Makis 100.47 309 P **Pdif** **14 47 27.7 -0.1**
BSD Bornholm Skovb 100.55 327 *i* P **Pdif** **14 47 28.0 +0.4**
BSD pmax pmax
comp=Z,66nm,0.9s
BSD MLR MLR
comp=Z,23µm,22.0s
BSD Bornholm Skovb 100.55 327 *i* P **Pdif** **14 47 28.0 +0.4**
comp=Z,66nm,0.9s
comp=Z,23µm,22.0s
BSD Bornholm Skovb 100.55 327 *i* P **Pdif** **14 47 28.0 +0.4**
BSD IAmb IAmb 14 47 30.1
comp=Z,66nm,0.9s
BSD IAMs_20 IAMs_20 15 37 17.8
comp=Z,23µm,22.5s
PYL PYLOS 100.56 308 P **Pdif** **14 47 27.8 -0.3**
PHP Peshkopia 100.61 313 P **Pdif** **14 47 28.2 -0.1**
MORC Moravsky Berou 100.61 321⇑P **Pdif** **14 47 29.7 +1.6**
MORC Moravsky Berou 100.61 321 *e*PDIFF **Pdif** **14 47 29.3 +1.2**
MORC *e* 14 50 55.9
MORC *e*SKS 14 58 04.8
MORC *e*SDIFF **Sdif** **14 59 01.4 -0.2**
MORC *e*PKKP PKKPbc 15 03 36.3 -8.0
TEKS Tekeris 100.62 316⇑*i*P **Pdif** **14 47 29.5 +1.2**
PDO Prodromos 100.67 310 P **Pdif** **14 47 28.9 +0.3**
DOMB Dombas 100.76 335 *e*P **Pdif** **14 47 29.3 +0.8**
DOMB IVmB_BB 14 47 29.6
comp=Z,2µm,4.7s
DOMB *e*SKSac **SKSac** **14 58 03.7 +0.1**
DOMB ⇑*e*SP **SP** **15 00 33.3 +1.6**
DOMB *e*SS **SS** **15 06 03.0 +3.3**
DOMB IVMs_BB IVMs_BB 15 35 11.5
comp=Z,15µm,23.4s
BOSA Boshof 100.78 241 P **Pdif** **14 47 30.0 +0.6**
comp=Z,16nm,0.8s,baz=92,slow=3.7,SNR=14
JAVC Velka Javorina 100.78 320 *e*PDIFF **Pdif** **14 47 30.9 +2.0**
JAVC *e*PP **PP** **14 51 38.1 +1.4**
JAVC *e*SKS 14 58 06.2
JAVC *e*SDIFF **Sdif** **14 59 06.5 +3.4**
JAVC *e*PKKP **PKKPbc** **15 03 38.1 -5.7**
LSK Leskovik 100.81 311 P **Pdif** **14 47 29.7 +0.4**
MORH Mrgy, Hungar 100.83 318⇑*i*P **Pdif** **14 47 29.4 +0.3**
BBLS Lazići 100.87 315⇑*i*P **Pdif** **14 47 30.4 +1.0**
OSL Oslo 100.90 332 *e*P **Pdif** **14 47 29.8 +0.7**
OSL *e*SKSac **SKSac** **14 58 04.9 +0.7**
OSL *e*SS **SS** **15 06 05.9 +4.3**
OSL IVMs_BB IVMs_BB 15 35 39.9
comp=Z,11µm,27.7s
KRLC Kraliky 101.00 322 *e*SKS 14 57 59.8
KRLC AMS AMS 15 37 10.0
comp=Z,28µm,21.9s
NYDR Nydri-Lefkada 101.03 310 P **Pdif** **14 47 29.8 -0.3**
LKD2 Lefkada island 101.04 310 P **Pdif** **14 47 30.5 +0.2**
EVGI Lefkada island 101.08 310 P **Pdif** **14 47 30.4 0.0**
KSP Ksiaz 101.08 323 *e*Pdif **Pdif** **14 47 31.2 +1.1**
KSP *e*PP **PP** **14 51 39.8 +1.0**
KSP *e*SKS 14 58 05.8
KSP *e*Sdif **Sdif** **14 59 04.2 -1.1**
KSP *e*SP **SP** **15 00 31.9 -3.8**
KSP *e*L L 15 36 36.2
comp=Z,32µm,23.2s
TULEG Thule 101.11 4 *i* P **Pdif** **14 47 30.2 +0.4**
TULEG IAmb IAmb 14 47 35.7
comp=Z,18nm,1.0s
TULEG IAMs_20 IAMs_20 15 27 49.1
comp=Z,57µm,30.3s
IGT Igoumenitsa 101.14 311 P **Pdif** **14 47 30.6 -0.1**
MOL Molde 101.16 336 *e*P **Pdif** **14 47 30.7 +0.5**
MOL IVmB_BB 14 48 01.5
comp=Z,2µm,7.0s
MOL *e*PP **PP** **14 51 39.9 +0.9**
MOL *e*SKSac **SKSac** **14 58 06.5 +1.1**
MOL *e*SP **SP** **15 00 36.0 +0.1**
MOL IVMs_BB IVMs_BB 15 38 14.9
comp=Z,14µm,23.2s

MODS Modra-Piesok 101.17 320 *e*P **Pdif** **14 47 32.1 +1.5**
MODS *e* 14 51 42.3
MODS *e* 14 58 07.2
MODS *e*SS SS 15 06 11.6 +5.5
MODS Modra-Piesok 101.17 320 *e*PDIFF **Pdif** **14 47 32.0 +1.5**
MODS *e*PP **PP** **14 51 42.3 +2.7**
MODS *e* 14 58 07.2
MODS *e*SS SS 15 06 11.6 +5.5
FSK Fiskardo 101.18 310 P **Pdif** **14 47 30.4 -0.4**
YKA Yellowknife Ar 101.20 24 P **Pdif** **14 47 31.8 +1.4**
comp=Z,45nm,0.9s,baz=302,slow=4.5,SNR=45
YKA PKiKP **PKiKP** **14 51 57.6 +2.8**
comp=Z,12nm,0.8s,baz=315,slow=1.0,SNR=19
DPC Dobruska-Polom 101.21 322 *e*P **Pdif** **14 47 31.9 +1.1**
DPC *e* 14 58 00.1
DPC MLR MLR
comp=Z,24µm,21.1s
DPC Dobruska-Polom 101.21 322 *e*PDIFF **Pdif** **14 47 31.9 +1.1**
DPC *e*SKS 14 58 00.1
DPC AMS AMS 15 34 50.0
comp=Z,24µm,21.1s
OSTC Ostas 101.21 322 *e*PDIFF **Pdif** **14 47 32.2 +1.5**
OSTC *ex* x 14 47 36.7
OSTC *e*SKS 14 58 06.1
OSTC AMS AMS 15 36 30.0
comp=Z,29µm,22.3s
VLS Valsamata 101.22 309 P **Pdif** **14 47 31.1 +0.1**
DBG Daneborg 101.22 351 *i* P **Pdif** **14 47 31.0 +0.8**
DBG IAmb IAmb 14 47 33.7
comp=Z,65nm,0.8s
DBG IAMs_20 IAMs_20 15 34 43.8
comp=Z,31µm,25.5s
CHVC Chvalec 101.30 322 *e*SKS 14 58 05.4
CHVC AMS AMS 15 36 30.0
comp=Z,30µm,22.3s
PDG Podgorica 101.31 314⇑P **Pdif** **14 47 32.3 +1.0**
PDG Podgorica 101.31 314⇑*i*P **Pdif** **14 47 31.8 +0.5**
PDG Podgorica 101.31 314 IAMs_20 IAMs_20 15 42 10.5
comp=Z,15µm,22.0s
VRAC Vranov 101.34 321 P **Pdif** **14 47 32.9 +1.6**
comp=Z,20nm,1.0s,baz=69,slow=4.8,SNR=19
VRAC Vranov 101.34 321⇑P **Pdif** **14 47 33.3 +2.0**
VRAC Vranov 101.34 321 *e*PDIFF **Pdif** **14 47 32.9 +1.6**
VRAC *e*PP **PP** **14 51 42.6 +1.8**
VRAC *e*SKS 14 58 08.3
VRAC *e*SDIFF **Sdif** **14 59 10.3 +2.7**
VRAC *e*PKKP **PKKPbc** **15 03 39.8 -2.3**
UPC Upice 101.35 322 *e*P **Pdif** **14 47 32.1 +0.8**
UPC *e* 14 58 03.9
UPC MLR MLR
comp=Z,31µm,22.3s
UPC Upice 101.35 322 *e*PDIFF **Pdif** **14 47 32.1 +0.8**
UPC *e*SKS 14 58 03.9
UPC AMS AMS 15 36 30.0
comp=Z,31µm,22.3s
DRME Dracevica, Mon 101.41 314⇑*i*P **Pdif** **14 47 31.1 -0.7**
JMIC Jan Mayen 101.50 346 *e*Pdif **Pdif** **14 47 31.9 +0.4**
JMIC *e*SKSac **SKSac** **14 58 07.5 +0.8**
JMIC *e*SP **SP** **15 00 40.8 +1.7**
JMIC IVMs_BB IVMs_BB 15 27 01.1
comp=Z,6µm,31.2s
KRUC Moravsky 101.53 321 *e*PDIFF **Pdif** **14 47 33.7 +1.5**
KRUC *e*pP **PP** **14 51 41.3 -1.0**
KRUC *e*SKS 14 58 09.0
KRUC *e*SDIFF **Sdif** **14 59 11.6 +2.4**
KRUC *e*PKKP **PKKPbc** **15 03 40.5 -1.1**
KONO Kongsberg 101.54 332 *i* P **Pdif** **14 47 31.9 -0.1**
KONO pmax pmax
comp=Z,33nm,0.9s
KONO Kongsberg 101.54 332 IAMs_20 IAMs_20 15 43 12.8
comp=Z,24µm,22.0s
KONO Kongsberg 101.54 332 *e*P **Pdif** **14 47 31.8 -0.1**
KONO *e*PP **PP** **14 51 44.0 +2.1**
KONO *e*SKSac **SKSac** **14 58 08.0 +0.7**
KONO *e*SP **SP** **15 00 37.2 -2.7**
KONO IVMs_BB IVMs_BB 15 32 30.5
comp=Z,9µm,27.4s
AKN Aaknes 101.57 335 *e*P **Pdif** **14 47 33.0 +0.9**
AKN IVmB_BB 14 47 39.5
comp=Z,3µm,3.6s
AKN *e*SKSac **SKSac** **14 58 07.3 -0.1**
AKN IVMs_BB IVMs_BB 15 35 31.1
comp=Z,12µm,30.6s
RGN Rugen 101.61 327 IAMs_20 IAMs_20 15 37 46.2
comp=Z,23µm,21.0s
COP Copenhagen 101.68 328 *e*P **Pdif** **14 47 35.0 +2.4**
COP MLR MLR
comp=Z,17µm,22.0s
COP Copenhagen 101.68 328 *i* P **Pdif** **14 47 35.0 +2.4**
comp=Z,17µm,22.0s
COP Copenhagen 101.68 328 *e*P **Pdif** **14 47 35.0 +2.4**
COP IAMs_20 IAMs_20 15 38 27.7
comp=Z,17µm,21.5s
SKAR Skarslia 101.68 334 *e*P **Pdif** **14 47 33.2 +0.5**
SKAR IVmB_BB 14 47 39.7
comp=Z,1µm,4.0s
SKAR *e*PP **PP** **14 51 42.3 -0.8**
SKAR *e*SKSac **SKSac** **14 58 10.2 +2.1**
SKAR *e*SP **SP** **15 00 40.8 -0.8**
SKAR *e*SS **SS** **15 06 14.3 +1.7**
SKAR IVMs_BB IVMs_BB 15 35 06.3
comp=Z,13µm,24.8s
BRY Bratogost 101.71 314⇑*i*P **Pdif** **14 47 33.8 +0.5**
NLWA Neilton Lookou 101.74 41 IAMs_20 IAMs_20 15 25 41.3
comp=Z,21µm,21.0s
HCY Herceg Novi 101.85 314⇑*i*P **Pdif** **14 47 33.4 -0.3**
TREC Trest 102.03 321 *e*P **Pdif** **14 47 35.6 +1.2**
TREC *e* 14 58 11.1
TREC MLR MLR
comp=Z,30µm,24.0s
TREC Trest 102.03 321 *e*PDIFF **Pdif** **14 47 35.6 +1.2**
TREC *e*SKS 14 58 11.1
TREC AMS AMS 15 37 40.0
comp=Z,30µm,24.0s
RUE Ruedersdorf 102.05 325 *e*Pdiff **Pdif** **14 47 36.2 +1.9**
A04D Lummi Island 102.11 39 P **Pdif** **14 47 36.3 +1.6**
baz=287
E03A Lebam 102.18 42 IAMs_20 IAMs_20 15 26 25.8
comp=Z,15µm,21.0s
BLY Banja Luka 102.20 317⇑*i*P **Pdif** **14 47 36.4 +1.2**
CONA Conrad Observa 102.20 320 *i* P **Pdif** **14 47 37.1 +1.8**
comp=Z,14nm,1.3s,SNR=7.2
CONA *e*PP **PP** **14 51 44.2 -3.2**
comp=Z,40nm,1.2s
CONA *e*S **SKSac** **14 58 06.9 -4.3**
comp=Z,7.9nm,1.3s
CONA *e*P **PKKPbc** **15 03 37.0 -2.7**
comp=Z,7.8nm,0.8s
D03D Eldon 102.21 41 P **Pdif** **14 47 35.7 +0.5**
baz=287,SNR=9.8
PVCC Panska Ves 102.22 323 *e*SKS 14 58 03.6
PVCC AMS AMS 15 37 10.0
comp=Z,36µm,23.0s
STON Ston 102.31 315⇑*i*P **Pdif** **14 47 35.7 -0.1**
HYA Hoyanger 102.39 335 *e*P **Pdif** **14 47 36.9 +1.2**
HYA *e*SKSac **SKSac** **14 58 13.6 +2.4**
PRU Pruhonice 102.41 322 *e*P **Pdif** **14 47 37.6 +1.6**
PRU *e* 14 58 09.6
PRU MLR MLR
comp=Z,25µm,21.3s
PRU Pruhonice 102.41 322 *e*PDIFF **Pdif** **14 47 37.6 +1.6**
PRU *ex* x 14 47 41.9
PRU *e*SKS 14 58 09.9
PRU AMS AMS 15 36 10.0
comp=Z,25µm,21.3s
PRA Prague 102.45 322 *e*SKS 14 58 11.1
PRA AMS AMS 15 36 10.0
comp=Z,13µm,21.0s
BRG Berggiesshubel 102.49 323 *i* PDIFF **Pdif** **14 47 37.2 +0.8**
comp=Z,49nm,1.0s
BRG *i* 14 47 41.5
comp=Z,82nm,1.0s
BRG *e*pPDIFF 14 47 50.7
comp=Z,35nm,0.9s
BRG Berggiesshubel 102.49 323 *i* PKP **PKiKP** **14 51 55.5 -2.1**
comp=Z,47nm,1.2s
BRG SKS **SKSac** **14 58 10.0 -2.2**
BRG SDIFF **SKSac** **14 58 10.0 -2.2**
comp=N,39µm,22.9s
comp=E,29µm,22.6s
comp=Z,39µm,22.2s
BRG Berggiesshubel 102.49 323 *i* P **Pdif** **14 47 37.2 +0.8**
BRG pmax pmax
comp=Z,49nm,1.0s

BRG Berggiesshubel 102.49 323 *e*Pdiff **Pdif** **14 47 37.7 +1.3**
D04E Lakebay 102.52 41 P **Pdif** **14 47 38.1 +1.5**
baz=287
ARSA Arzberg 102.62 319 *e*P **Pdif** **14 47 38.8 +1.7**
comp=Z,9.7nm,0.8s
ARSA *e*P **PP** **14 51 47.4 -3.2**
comp=Z,24nm,1.1s
ARSA *e*P **PKKPbc** **15 03 39.0 +0.6**
comp=Z,5.9nm,0.9s
HOMB Homborsund 102.63 331 *e*Pdif **Pdif** **14 47 38.0 +1.2**
HOMB IVmB_BB 14 47 41.0
comp=Z,2µm,5.4s
HOMB *e*PP **PKiKP** **14 51 53.7 -3.9**
HOMB *e*SKSac **SKSac** **14 58 13.4 +0.9**
HOMB *e*SP **SP** **15 00 48.4 -3.2**
HOMB IVMs_BB IVMs_BB 15 36 34.8
comp=Z,13µm,27.2s
B05A Bryant 102.64 40 P **Pdif** **14 47 37.7 +0.6**
baz=288,SNR=7.2
I02D Swisshome 102.65 44 P **Pdif** **14 47 38.2 +1.0**
baz=285
FOO Floro 102.66 335 *e*Pdif **Pdif** **14 47 38.5 +1.6**
FOO *e*PP **PP** **14 51 52.0 +1.8**
FOO *e*SKSac **SKSac** **14 58 14.3 +1.8**
FOO *e*SP **SP** **15 00 52.6 +0.9**
FOO IVMs_BB IVMs_BB 15 36 32.0
comp=Z,11µm,22.2s
F04D Rainier, OR 102.68 42 P **Pdif** **14 47 37.9 +0.6**
baz=286
G03D McMinnville, O 102.75 43 P **Pdif** **14 47 37.2 -0.5**
baz=286
ODD1 Odda 102.78 333 *e*P **Pdif** **14 47 38.5 +1.0**
ODD1 *e*SKSac **SKSac** **14 58 12.9 -0.4**
ODD1 *e*SP **SP** **15 00 54.2 +1.1**
ODD1 IVMs_BB IVMs_BB 15 40 30.0
comp=Z,14µm,21.1s
GOET G??ttrup 102.80 330 *i* P **Pdif** **14 47 38.3 +0.7**
comp=Z,200nm,1.0s
GOET G??ttrup 102.80 330 *e*P **Pdif** **14 47 38.3 +0.7**
GOET IAmb IAmb 14 47 39.2
comp=Z,200nm,1.0s
FBE Freiberg 102.82 323 *e*Pdiff **Pdif** **14 47 39.4 +1.5**
FBE *e*PP **PKiKP** **14 51 55.5 -2.6**
baz=64,slow=7.8
E04D Cinebar 102.83 41 P **Pdif** **14 47 38.8 +0.8**
baz=287
J01E Myrtle Point 102.83 45 P **Pdif** **14 47 37.1 -1.0**
baz=285
PBCC Pribram 102.84 322 *e*PDIFF **Pdif** **14 47 40.0 +2.0**
PBCC *ex* x 14 47 43.4
PBCC *e*SKS 14 58 13.1
CLL Collm 102.90 324 *e*Pdif **Pdif** **14 47 39.0 +0.8**
comp=Z,27nm,1.1s
CLL *e* 14 47 44.0
CLL *e* 14 50 36.0
CLL *e*PP **PP** **14 51 51.0 -1.4**
CLL *e* 14 54 54.0
CLL *e*SKSac **SKSac** **14 58 16.0 +1.9**
CLL *e*SKKSac **SKKSac** **14 58 53.0 -1.3**
CLL *e*Sdif **Sdif** **14 59 18.0 -2.5**
CLL *e*(sSdiff) 14 59 51.0
CLL *e*SP **SP** **15 00 48.0 -6.9**
CLL *e*PPS PPS 15 01 42.0
CLL *e* 15 04 54.0
CLL *e*SS **SS** **15 06 30.0 +0.2**
CLL *e*SSS SSS 15 10 42.0
CLL *e*PKPPKPdf **P'P'df** **15 11 51.0 -5.0**
CLL *e*SSSS 15 13 48.0
CLL *e* 15 15 00.0
CLL Lmax 15 42 00.0
CLL Collm 102.90 324 *e*P **Pdif** **14 47 39.0 +0.8**
CLL *e* 14 58 16.0
CLL *e*S **Sdif** **14 59 18.0 -2.5**
CLL pmax pmax
comp=Z,27nm,1.1s
CLL Collm 102.90 324 *e*Pdiff **Pdif** **14 47 39.2 +1.0**
CLL *e*PP **PKiKP** **14 51 55.7 -2.6**
baz=64,slow=7.8
B06A Marblemount 102.95 39 IAMs_20 IAMs_20 15 26 21.0
comp=Z,18µm,22.0s
GCIS Gornji Cirnik 102.95 318 *i* Pdiff **Pdif** **14 47 40.4 +1.8**
GCIS *e* 14 47 42.6
D05A Enumclaw 103.03 41 IAMs_20 IAMs_20 15 26 34.2
comp=Z,20µm,21.0s
SUE Sulen 103.05 335 *e*Pdif **Pdif** **14 47 41.5 +2.9**
SUE IVmB_BB 14 47 45.8
comp=Z,1µm,3.7s
SUE *e*PP **PP** **14 51 54.1 +1.0**
SUE *e*SKSac **SKSac** **14 58 16.9 +2.5**
SUE *e*SP **SP** **15 00 55.5 -0.3**
SUE *e*SS **SS** **15 06 34.1 +3.0**
SUE IVMsBB 15 36 41.8
comp=Z,12µm,26.7s
MUD Monsted U'grnd 103.07 330 *i* P **Pdif** **14 47 39.8 +1.1**
MUD pmax pmax
comp=Z,63nm,1.2s
MUD Monsted U'grnd 103.07 330 *i* P **Pdif** **14 47 39.8 +1.1**
comp=Z,63nm,1.2s
comp=Z,31µm,29.0s
MUD Monsted U'grnd 103.07 330 *i* P **Pdif** **14 47 39.9 +1.1**
MUD IAmb IAmb 14 47 43.6
comp=Z,63nm,1.2s
MUD IAMs_20 IAMs_20 15 35 05.9
comp=Z,31µm,28.6s
CRES Cresnjev 103.07 318 *i* Pdiff **Pdif** **14 47 40.8 +1.7**
CRES *e* 14 51 59.9
CRES *e*SKSac **SKSac** **14 58 16.0 +0.8**
CRES *e*Sdiff **Sdif** **14 59 27.2 +5.0**
CRES *e*SP **SP** **15 00 57.1 +0.1**
CRES Cresnjev 103.07 318⇑*i*P **Pdif** **14 47 40.6 +1.5**
BLS5 Blasjo 103.08 333 *e*P **Pdif** **14 47 40.3 +1.5**
BLS5 IVmB_BB 14 47 46.1
comp=Z,1µm,5.3s
BLS5 *e*SKSac **SKSac** **14 58 17.9 +3.2**
BLS5 *e*SS **SS** **15 06 37.6 +5.8**
BLS5 IVMs_BB IVMs_BB 15 36 56.1
comp=Z,12µm,25.1s
I03D Drain, OR 103.10 44 P **Pdif** **14 47 39.3 0.0**
baz=286,SNR=6.0
SOKA Soboth 103.11 319 *e*P **Pdif** **14 47 40.7 +1.4**
comp=Z,18nm,1.2s
SOKA *e*P **PKiKP** **14 51 57.2 -1.8**
comp=Z,43nm,1.1s
SOKA *e*P **PKKPbc** **15 03 36.6 -0.4**
comp=Z,7.1nm,0.9s
F04A Amboy 103.11 42 IAMs_20 IAMs_20 15 33 18.6
comp=Z,17µm,22.0s
BER Bergen 103.13 334 IVmB_BB 14 47 37.2
comp=Z,772nm,1.7s
BER *e*P **Pdif** **14 47 37.3 -1.6**
BER *e*SKSac **SKSac** **14 58 16.3 +1.6**
BER *e*SP **SP** **15 00 57.9 +1.2**
BER IVMs_BB IVMs_BB 15 36 11.8
comp=Z,11µm,22.1s
LEGS Legarje 103.13 318 *i* Pdiff **Pdif** **14 47 40.9 +1.5**
ASK Askoy 103.14 334 *e*P **Pdif** **14 47 39.3 +0.3**
ASK *e*SKSac **SKSac** **14 58 17.4 +2.6**
ASK IVMs_BB IVMs_BB 15 32 46.7
comp=Z,12µm,25.9s
K02D Willamette Mer 103.14 45 P **Pdif** **14 47 40.2 +0.6**
baz=285
SNART Snartemo 103.22 332 *e*Pdif **Pdif** **14 47 40.2 +0.8**
SNART *e*SKSac **SKSac** **14 58 18.4 +3.1**
SNART *e*SP **SP** **15 00 56.0 -1.8**
MOA Molln 103.25 320 *i* P **Pdif** **14 47 40.8 +0.9**
comp=Z,42nm,1.2s,SNR=18
MOA *e*P **PP** **14 51 54.1 -1.1**
comp=Z,35nm,1.2s
MOA *e*P **PKKPbc** **15 03 36.3 -0.2**
comp=Z,14nm,0.9s
KRMB Red Mountain 103.27 47 IAMs_20 IAMs_20 15 24 56.1
comp=Z,16µm,22.0s
KHC Kasperske Hory 103.28 322 *e*P **Pdif** **14 47 41.1 +1.1**
KHC *e* 14 51 58.0
KHC *e* 14 58 17.9
KHC MLR MLR
comp=Z,34µm,25.4s
KHC Kasperske Hory 103.28 322 *e*PDIFF **Pdif** **14 47 41.1 +1.1**
KHC *ex* x 14 47 44.1
KHC *ex* x 14 50 23.0
KHC *e*PP **PKiKP** **14 51 58.0 -1.1**
KHC *e*SKS 14 58 17.9
KHC AMS AMS 15 37 30.0
comp=Z,34µm,25.4s

LON Longmire 103.28 41 IAMs_20 IAMs_20 15 26 39.8
comp=Z,18µm,22.0s

GERES GERESS Array B 103.29 321 Pdiff **Pdif 14 47 41.5 +1.4**
comp=Z,26nm,1.0s,bas=64,slow=6.1,SNR=22
GERES PKiKP **PKiKP 14 52 00.2 +1.0**
comp=Z,26nm,0.9s,bas=75,slow=5.7,SNR=9.4
GERES PKKPbc **PKKPbc 15 03 36.6 +0.1**
comp=Z,3.0nm,0.8s,bas=222,slow=1.8,SNR=9.3
GERES PKPPKP **P'P'df 15 11 54.1 -1.4**
comp=Z,0.3nm,0.3s,baz=270,slow=1.0,SNR=1.8

H04D Lebanon 103.30 43 P **Pdif 14 47 41.7 +1.6**
baz=286

L02E Cave Junction 103.33 46 P **Pdif 14 47 42.0 +1.7**
baz=285

JCC Jacoby Creek, 103.36 47 IAMs_20 IAMs_20 15 26 18.5
comp=Z,18µm,21.0s

SNAA Sanae 103.45 195 P **Pdif 14 47 41.9 +1.6**
SNAA x x 15 03 34.5
SNAA Sanae 103.45 195 Pdiff **Pdif 14 47 41.7 +1.4**
comp=Z,12nm,0.9s,bas=151,slow=4.5,SNR=35
SNAA PKiKP **PKiKP 14 51 59.4 +0.6**
comp=Z,15nm,1.0s,bas=174,slow=5.8,SNR=4.2
SNAA PKKPbc **PKKPbc 15 03 34.5 -2.2**
comp=Z,21nm,0.9s,bas=306,slow=2.7,SNR=25
SNAA Sanae 103.45 195 IAMs_20 IAMs_20 15 42 05.0
comp=Z,16µm,20.0s

BSEG Bad Segeberg 103.47 327 *e*Pdiff **Pdif 14 47 42.2 +1.5**
OBKA Obir 103.47 319 *e*P **Pdif 14 47 42.7 +1.7**
comp=Z,16nm,1.1s
OBKA *e*P PKiKP 14 52 11.2 +12
comp=Z,25nm,1.1s
OBKA *e*P **PKKPbc 15 03 31.5 -4.3**
comp=Z,7.8nm,0.8s

C06D Leavenworth 103.51 40 P **Pdif 14 47 42.0 +1.0**
baz=288

TANN Tannenbergstha 103.53 323 *e*Pdiff **Pdif 14 47 42.3 +1.2**
TANN *e*PP **PKiKP 14 52 01.3 +1.7**
baz=64,slow=7.8

KHMM Horse Mountain 103.57 47 IAMs_20 IAMs_20 15 26 25.9
comp=Z,20µm,21.0s

NKC Novy Kostel 103.60 323 *e*P **Pdif 14 47 42.2 +0.8**
NKC *e* 14 58 13.6
NKC MLR MLR
comp=Z,46µm,22.9s
NKC Novy Kostel 103.60 323 *e*PDIFF **Pdif 14 47 42.2 +0.8**
NKC *e*pP **pPdif 14 47 49.5 -5.5**
NKC *e*SKS 14 58 13.6
NKC AMS AMS 15 38 10.0
comp=Z,46µm,22.9s

WERD Werda 103.61 323 *e*Pdiff **Pdif 14 47 42.8 +1.3**
WERD *e*PP **PKiKP 14 52 01.9 +2.2**
baz=64,slow=7.8

GUNZ Gunzen 103.62 323 *e*Pdiff **Pdif 14 47 43.0 +1.5**
GUNZ *e*PP **PKiKP 14 52 01.7 +1.9**
baz=64,slow=7.8

WERN Wernitzgruen 103.62 323 *e*Pdiff **Pdif 14 47 42.9 +1.4**
WERN *e*PP **PKiKP 14 52 02.5 +2.7**
baz=64,slow=7.8

LJU Ljubljana 103.63 318 *i* Pdiff **Pdif 14 47 43.0 +1.4**
LJU *e* 14 47 45.6
LJU *e*SKSac **SKSac 14 58 18.6 +0.8**
LJU *e*Sdiff **Sdif 14 59 29.7 +2.8**
LJU *e*SP **SP 15 00 58.7 -4.1**
LJU *e*SS **SKKPbc 15 07 14.3 +0.9**
LJU Ljubljana 103.63 318⇑ *i*P **Pdif 14 47 42.9 +1.3**
NEUB Neuenburg 103.66 324 *e*Pdiff **Pdif 14 47 43.1 +1.6**
HUMO Hull Mountain 103.67 45 IAMs_20 IAMs_20 15 34 15.6
comp=Z,15µm,22.0s

PLN Plauen 103.69 323 *e*Pdiff **Pdif 14 47 43.1 +1.4**
PLN *e*PP **PKiKP 14 52 02.7 +2.9**
baz=64,slow=7.8

WET Wettzell 103.70 322 *e*Pdiff **Pdif 14 47 44.1 +2.2**
WET *e*PP **PKiKP 14 52 03.1 +3.2**
baz=64,slow=7.8

KMY Karmoy 103.72 333 *e*P **Pdif 14 47 43.0 +1.3**
KMY *e*SP SP 15 01 00.6 -2.4
I04A Tendick Farm, 103.73 44 P **Pdif 14 47 43.2 +1.1**
baz=286,SNR=10

F05D White Salmon 103.77 42 P **Pdif 14 47 43.8 +1.6**
baz=288

CEY Cerknica 103.79 318⇑ *i*P **Pdif 14 47 43.6 +1.3**
MANZ Manzenberg 103.89 323 *e*PP **PKiKP 14 52 04.5 +4.2**
baz=64,slow=7.8

ROTZ Rotzenmuhle 103.91 322 *e*Pdiff **Pdif 14 47 44.4 +1.7**
ROTZ *e*PP **PP 14 52 04.4 +4.4**
baz=64,slow=7.8

MOX Moxa 103.95 323 *e*L L 15 39 49.3
comp=Z,21µm,21.1s

ASSE Asse, Remlinge 103.96 325 *e*Pdiff **Pdif 14 47 44.4 +1.6**
ASSE *e*PP **PP 14 52 03.2 +3.0**
baz=64,slow=7.8

KCPM Cahto Peak 103.98 48 IAMs_20 IAMs_20 15 35 05.8
comp=Z,22µm,22.0s

MYKA Terra Mystica 104.03 319 *e*P **Pdif 14 47 43.3 -0.2**
comp=Z,12nm,1.0s
MYKA *e*S **SKSac 14 58 18.9 -0.8**
comp=Z,14nm,1.3s
MYKA *e*P **PKKPbc 15 03 31.2 -3.0**
comp=Z,11nm,0.9s

G05D Wamic, OR 104.06 42 P **Pdif 14 47 43.2 -0.4**
baz=288

M02C Callahan 104.07 47 P **Pdif 14 47 44.1 +0.3**
baz=285

KBA Koelnbreinsper 104.08 320 *e*P **Pdif 14 47 44.6 +0.8**
comp=Z,27nm,1.3s
KBA *e*P **PP 14 52 03.5 +1.8**
comp=Z,47nm,1.2s
KBA *e*P **PKKPbc 15 03 30.0 -4.2**
comp=Z,9.7nm,1.2s

YBH Yreka Blue Hor 104.08 46 PKKPbc PKKPbc 15 03 33.4 -0.5
comp=Z,1.3nm,0.4s,baz=92,slow=7.5,SNR=4.2

J04D Umpqua Nationa 104.10 45 P **Pdif 14 47 44.8 +0.8**
baz=286

SKDS Skadanscina 104.12 318 *e*Pdiff **Pdif 14 47 44.1 +0.3**
SKDS *e*SKSac **SKSac 14 58 19.9 -0.2**
SKDS *e*Sdiff **Sdif 14 59 30.7 -0.3**
PRED Cave del Predi 104.14 319 IAMs_20 IAMs_20 15 40 40.1
comp=Z,21µm,22.0s

NRDL Niedersach Rie 104.14 326 *e*Pdiff **Pdif 14 47 45.6 +2.0**
CLZ Clausthal 104.24 325 *e*Pdiff **Pdif 14 47 46.0 +1.7**
L04D Klamath Falls 104.24 46 P **Pdif 14 47 45.5 +0.9**
baz=286,SNR=6.7

SUR Sutherland 104.26 237 PKKPbc PKKPbc 15 03 34.4 +1.2
comp=Z,14nm,0.9s,baz=220,slow=11,SNR=2.6
SUR Sutherland 104.26 237 IAMs_20 IAMs_20 15 28 54.8
comp=Z,25µm,22.0s

N02D Trinity Center 104.29 47 P **Pdif 14 47 44.8 +0.1**
baz=285

I05D Terrebonne, OR 104.31 43 P **Pdif 14 47 45.2 +0.5**
baz=287,SNR=7.4

B08A Colville Reser 104.35 39 IAMs_20 IAMs_20 15 29 03.2
comp=Z,14µm,22.0s

O02D Mt. Diablo Mer 104.44 48 P **Pdif 14 47 46.0 +0.6**
baz=285,SNR=9.2

K04D Chiloquin, OR 104.52 45 P **Pdif 14 47 45.4 -0.4**
baz=286

GRF Grafenberg Arr 104.53 323 *e*PP PKiKP 14 52 09.3 +7.9
baz=64,slow=7.8
GRF *e*L L 15 48 08.2
comp=Z,15µm,21.5s

HOPS Hopland Field 104.53 49 IAMs_20 IAMs_20 15 35 28.6
comp=Z,22µm,22.0s

J05D Fort Rock, OR 104.69 44 P **Pdif 14 47 47.5 +0.9**
baz=287,SNR=9.1

M04C Macdoel 104.70 46 P **Pdif 14 47 47.2 +0.6**
baz=286,SNR=8.0

SCO Scoresbysund 104.72 350 *i* P **Pdif 14 47 47.9 +2.1**
SCO pmax pmax
comp=Z,15nm,0.9s
SCO MLR MLR
comp=Z,42µm,27.0s
SCO Scoresbysund 104.72 350 *i* P **Pdif 14 47 47.9 +2.1**
comp=Z,15nm,0.9s
comp=Z,42µm,27.0s
SCO Scoresbysund 104.72 350 *i* P **Pdif 14 47 47.9 +2.1**
SCO IAmb IAmb 14 47 51.8
comp=Z,15nm,0.9s
SCO IAMs_20 IAMs_20 15 32 35.4
comp=Z,42µm,27.1s

ABTA Abfaltersbach 104.73 319 *e*P **Pdif 14 47 46.1 -0.4**
comp=Z,22nm,1.2s
ABTA *e*P **PP 14 52 05.7 -0.7**
comp=Z,30nm,1.1s
ABTA *e*S **SKSac 14 58 22.9 -0.1**
comp=Z,12nm,1.0s
ABTA *e*P **PKKPbc 15 03 28.1 -4.1**
comp=Z,13nm,0.9s

PINE Pine Mountain 104.75 44 IAMs_20 IAMs_20 15 31 27.0
comp=Z,16µm,22.0s

F07A Phinny Hill Vi 104.78 41 IAMs_20 IAMs_20 15 29 08.7
comp=Z,17µm,22.0s

GDXM Geysers 104.79 49 IAMs_20 IAMs_20 15 28 21.5
comp=Z,18µm,21.0s

HAWA Hanford 104.88 41 IAMs_20 IAMs_20 15 29 16.7
comp=Z,19µm,22.0s

SUMG Summit 104.97 355 *i* P **Pdif 14 47 49.0 +1.6**
SUMG pmax pmax
comp=Z,62nm,1.0s
SUMG MLR MLR
comp=Z,73µm,23.0s
SUMG Summit 104.97 355 *i* P **Pdif 14 47 49.0 +1.6**
comp=Z,62nm,1.0s
comp=Z,73µm,23.0s

SUMG Summit 104.97 355 *i* P **Pdif 14 47 49.0 +1.6**
SUMG IAmb IAmb 14 48 01.1
comp=Z,62nm,1.0s
SUMG IAMs_20 IAMs_20 15 36 21.2
comp=Z,73µm,22.9s

VNA2 Neumayer--Watz 105.06 194 P **Pdif 14 47 49.3 +1.9**
VNA2 x x 15 03 29.8
K05A Summer Lake 105.10 45 IAMs_20 IAMs_20 15 30 36.3
comp=Z,20µm,22.0s

WTTA Wattenberg 105.12 320 *i* P **Pdif 14 47 47.1 -1.3**
comp=Z,36nm,1.1s,SNR=7.0
WTTA *e*P **PKiKP 14 52 01.5 -1.2**
comp=Z,71nm,1.1s
WTTA *e*S **SKSac 14 58 23.6 -1.3**
comp=Z,11nm,1.1s
WTTA *e*P **PKKPbc 15 03 28.4 -2.6**
comp=Z,12nm,1.0s

O03E Paynes Creek 105.14 47 P **PKiKP 14 52 03.5 +0.6**
baz=286,SNR=7.1

WATA Walderalm 105.14 320 *i* P **Pdif 14 47 47.2 -1.3**
comp=Z,22nm,1.2s,SNR=5.1
WATA *e*P **PKiKP 14 52 02.4 -0.3**
comp=Z,87nm,1.4s
WATA *e*P **PKKPbc 15 03 27.0 -4.0**
comp=Z,11nm,0.6s

C09A Chrisman Ranch 105.21 39 IAMs_20 IAMs_20 15 29 28.9
comp=Z,16µm,22.0s

UPNV Upernavik 105.36 1 *e*P **Pdif 14 47 49.6 +0.9**
UPNV IAMs_20 IAMs_20 15 36 38.1
comp=Z,25µm,23.3s

VNA3 Neumayer Olymp 105.39 193 P **Pdif 14 47 50.5 +1.7**
VNA3 x x 15 03 29.0

SQTA Sankt Quirin 105.41 320 *i* P **Pdif 14 47 48.5 -1.1**
comp=Z,23nm,0.9s,SNR=5.3
SQTA *e*P **PKiKP 14 52 03.7 +0.5**
comp=Z,73nm,1.3s
SQTA *e*S **SKSac 14 58 27.9 +1.8**
comp=Z,30nm,1.5s
SQTA *e*P **PKKPbc 15 03 27.4 -2.7**
comp=Z,13nm,1.1s

MOTA Moosalm 105.44 320 *i* P **Pdif 14 47 49.1 -0.7**
comp=Z,30nm,1.1s,SNR=5.9
MOTA *e*P **PKiKP 14 52 02.9 -0.4**
comp=Z,58nm,0.9s
MOTA *e*S **SKSac 14 58 25.9 -0.4**
comp=Z,13nm,1.0s
MOTA *e*P **PKKPbc 15 03 26.4 -3.7**
comp=Z,12nm,0.9s

AQU L'Aquila 105.51 315⇑ *i*P **Pdif 14 47 50.3 +0.2**
ORV Oroville 105.56 48 IAMs_20 IAMs_20 15 36 31.8
comp=Z,14µm,22.0s

RETA Reutte 105.60 321 *e*P **Pdif 14 47 48.7 -1.7**
comp=Z,9.7nm,1.3s
RETA *e*P **PKiKP 14 52 02.8 -0.7**
comp=Z,53nm,1.0s
RETA *e*S **SKSac 14 58 28.6 +1.8**
comp=Z,21nm,1.4s
RETA *e*P **PKKPbc 15 03 26.7 -2.8**
comp=Z,7.6nm,1.1s

G08A Pilot Rock 105.62 42 IAMs_20 IAMs_20 15 28 32.9
comp=Z,23µm,22.0s

I07A Izee 105.65 43 IAMs_20 IAMs_20 15 31 35.8
comp=Z,20µm,22.0s

E09A Wood Farm, Sta 105.74 40 IAMs_20 IAMs_20 15 29 44.0
comp=Z,14µm,22.0s

NEW Newport 105.77 38 P **PKiKP 14 52 04.1 +0.4**
baz=292

FETA Feichten 105.79 320 *i* P **Pdif 14 47 50.8 -0.5**
comp=Z,20nm,1.3s,SNR=6.2
FETA *e*P **PKiKP 14 52 02.7 -1.3**
comp=Z,52nm,1.1s
FETA *e*S **SKSac 14 58 30.8 +2.9**
comp=Z,18nm,1.5s
FETA *e*P **PKKPbc 15 03 26.2 -2.8**
comp=Z,11nm,1.1s

MURB Monte Urbino 105.84 316 IAMs_20 IAMs_20 15 44 40.5
comp=Z,18µm,21.0s

TNS Taunus Mts 105.99 324 *e*Pdiff **Pdif 14 47 53.5 +1.5**
LRW Lerwick 106.02 336 *e*P **Pdif 14 47 46.8 -5.1**
LRW IAMs_20 IAMs_20 15 39 38.0
comp=Z,26µm,21.9s

STU Stuttgart 106.11 322 IAMs_20 IAMs_20 15 38 51.7
comp=Z,22µm,22.0s

DAVA Damuels 106.23 321 *e*P **Pdif 14 47 51.4 -2.0**
comp=Z,5.6nm,1.1s
DAVA *e*P **PKiKP 14 52 04.4 -0.3**
comp=Z,32nm,1.1s
DAVA *e*P **PKKPbc 15 03 26.5 -1.2**
comp=Z,7.7nm,0.8s

SAO San Andreas Ge 106.35 51 IAMs_20 IAMs_20 15 34 37.8
comp=Z,21µm,21.0s

DAVOX Davos/Dischmat 106.42 320 Pdiff **Pdif 14 47 56.0 +1.7**
comp=Z,9.5nm,0.7s,baz=145,slow=2.2,SNR=11
DAVOX PKiKP **PKiKP 14 52 07.7 +2.5**
comp=Z,5.4nm,0.8s,baz=249,slow=1.1,SNR=3.2

F10A Beach Ranch, E 106.53 41 IAMs_20 IAMs_20 15 31 25.0
comp=Z,15µm,22.0s

WVOR Wild Horse Val 106.77 45 IAMs_20 IAMs_20 15 31 41.6
comp=Z,14µm,22.0s

BFO Black Forest 106.81 322 IAMs_20 IAMs_20 15 44 51.3
comp=Z,17µm,21.0s

BMO Blue Mountains 106.87 42 IAMs_20 IAMs_20 15 30 21.0
comp=Z,19µm,22.0s

VCNR Virginia City 107.01 48 IAMs_20 IAMs_20 15 37 14.1
comp=Z,15µm,21.0s

VLC Villacollemanzl 107.01 317 IAMs_20 IAMs_20 15 43 15.9
comp=Z,21µm,22.0s

PAHR Pah Rah Range 107.08 47 IAMs_20 IAMs_20 15 28 24.0
comp=Z,23µm,22.0s

WAKR Walker 107.40 49 IAMs_20 IAMs_20 15 29 43.5
comp=Z,17µm,22.0s

WALA Waterton Lakes 107.42 37 IAMs_20 IAMs_20 15 33 35.1
comp=Z,20µm,22.0s

ECH Echery 107.57 322 IAMs_20 IAMs_20 15 40 59.4
comp=Z,19µm,22.0s

WLF Walferdange 107.57 324 IAMs_20 IAMs_20 15 43 09.3
comp=Z,21µm,22.0s

PLID Pearl Lake 107.65 41 IAMs_20 IAMs_20 15 30 47.7
comp=Z,19µm,22.0s

SMMC Simmler 107.87 52 P **PKiKP 14 52 08.6 +0.6**
baz=286

OMMB Old Mammoth Mi 107.99 49 IAMs_20 IAMs_20 15 35 31.2
comp=Z,14µm,20.0s

RYN Ryan 108.05 48 IAMs_20 IAMs_20 15 36 27.6
comp=Z,13µm,21.0s

LHV Little Huntoon 108.18 49 IAMs_20 IAMs_20 15 41 41.0
comp=Z,17µm,22.0s

NVAR Mina Array Bea 108.27 48 Pdiff **Pdif 14 48 05.4 +2.7**
comp=Z,9.5nm,1.0s,baz=271,slow=5.6,SNR=23
NVAR PKiKP **PKiKP 14 52 10.9 +2.0**
comp=Z,8.5nm,0.8s,baz=255,slow=3.0,SNR=9.6
NVAR PKKPbc **PKKPbc 15 03 21.5 +0.4**
comp=Z,2.7nm,0.7s,baz=152,slow=3.5,SNR=6.9
NVAR PKKP **PKKPdf 15 03 35.6 +0.5**
comp=Z,20nm,0.9s,baz=133,slow=4.8,SNR=23

MSO Missoula 108.31 39 IAMs_20 IAMs_20 15 34 10.8
comp=Z,19µm,22.0s

SBC Santa Barbara 108.33 53 P **PKiKP 14 52 11.2 +2.3**
baz=286

NV11 Mina Array Sit 108.38 48 IAMs_20 IAMs_20 15 30 38.4
comp=Z,13µm,21.0s

DRUM Mains of Drumt 108.43 333 *e*P **Pdif 14 47 53.7 -8.9**
DRUM IAMs_20 IAMs_20 15 38 00.1
comp=Z,32µm,25.0s

LINV Loch Inver, As 108.87 335 *e*P **Pdif 14 47 59.6 -4.9**
LINV IAMs_20 IAMs_20 15 42 38.7
comp=Z,27µm,22.7s

WACR West Acre 109.20 329 *e*P **Pdif 14 48 00.2 -5.9**
WACR IAMs_20 IAMs_20 15 43 23.1
comp=Z,31µm,21.4s

HLID Hailey 109.28 42 IAMs_20 IAMs_20 15 34 04.8
comp=Z,19µm,22.0s

LMK Market Rasen 109.31 330 *e*P **Pdif 14 47 59.6 -7.0**
LMK IAMs_20 IAMs_20 15 37 55.2
comp=Z,48µm,27.9s

EDI Edinburgh 109.32 333 *e*P **Pdif 14 48 01.1 -5.6**
EDI IAMs_20 IAMs_20 15 40 40.3
comp=Z,50µm,26.8s

EDMD Edmundbyers 109.37 331 *e*P **Pdif 14 48 01.4 -5.5**
EDMD IAMs_20 IAMs_20 15 40 11.2
comp=Z,50µm,25.6s

BORG Borgarnes 109.39 346 IAMs_20 IAMs_20 15 44 50.1
comp=Z,17µm,21.0s

INVG Invergeldie, C 109.41 333 *e*P **Pdif 14 48 02.6 -4.4**
INVG IAMs_20 IAMs_20 15 35 02.4
comp=Z,45µm,32.0s

DECC Green Verdugo 109.48 53 P **PKiKP 14 52 12.9 +1.8**
baz=286

KPL Plockton 109.56 335 *e*P **Pdif 14 48 03.5 -4.2**
KPL IAMs_20 IAMs_20 15 39 58.7
comp=Z,33µm,24.4s

LEWI Lewis, Hebride 109.56 336 *e*P **Pdif 14 48 02.6 -5.1**
LEWI IAMs_20 IAMs_20 15 41 40.4
comp=Z,32µm,25.2s

EDW2 Edwards Air Fo 109.56 52 P **PKiKP 14 52 11.9 +0.7**
baz=287,SNR=5.6

MPMC Manual Prospec 109.61 51 P **PKiKP 14 52 13.6 +2.1**
baz=288

LRMC Laurel Mtn Rad 109.63 51 P **PKiKP 14 52 13.2 +1.7**
baz=287

SCI2 San Clemente I 109.66 54 P **PKiKP 14 52 14.1 +2.7**
baz=286

FMP Fort Macarthur 109.66 53 P **PKiKP 14 52 13.2 +1.9**
baz=286

ESK Eskdalemuir 109.68 332 *e*P **Pdif 14 48 02.0 -6.2**
ESK IAMs_20 IAMs_20 15 40 27.7
comp=Z,53µm,26.0s

HPK Haverah Park 109.69 330 *e*P **Pdif 14 48 01.5 -6.8**
HPK IAMs_20 IAMs_20 15 40 24.1
comp=Z,40µm,25.2s

ELSH Elham, Standar 109.73 327 *e*P **Pdif 14 48 03.0 -5.6**
ELSH IAMs_20 IAMs_20 15 43 45.8
comp=Z,33µm,23.2s

ELK Elko 109.74 45 PKKPbc PKKPbc 15 03 17.9 +1.4
comp=Z,5.9nm,0.8s,baz=144,slow=1.3,SNR=12
ELK Elko 109.74 45 IAMs_20 IAMs_20 15 40 37.3
comp=Z,15µm,22.0s

DLMT Dillon 109.76 40 IAMs_20 IAMs_20 15 30 12.3
comp=Z,21µm,22.0s

FURC Furnace Creek, 109.97 50 P **PKiKP 14 52 09.7 -2.2**
baz=288

BFSC Mount Baldy Ra 110.02 52 P **PKiKP 14 52 10.6 -1.6**
baz=287

LBWR Ladybower, Pea 110.04 330 *e*P **Pdif 14 48 04.6 -5.3**
LBWR IAMs_20 IAMs_20 15 39 58.1
comp=Z,51µm,26.1s

KESW Keswick, Cumbr 110.05 331 *e*P **Pdif 14 48 04.8 -5.1**
KESW IAMs_20 IAMs_20 15 40 56.7
comp=Z,51µm,26.6s

LAWE Loch Awe, Argy 110.12 334 *e*P **Pdif 14 48 04.3 -5.8**
LAWE IAMs_20 IAMs_20 15 45 18.3
comp=Z,27µm,20.4s

CWF Charnwood Fore 110.19 329 *e*P **Pdif 14 48 03.9 -6.7**
CWF IAMs_20 IAMs_20 15 38 33.3
comp=Z,42µm,27.7s

BOZ Bozeman (W) 110.28 39 P **PKiKP 14 52 13.1 +0.7**
baz=295,SNR=8.8

TPNV Topopah Spring 110.28 49 P **PKiKP 14 52 12.8 +0.1**
baz=289

TPNV Topopah Spring 110.28 49 IAMs_20 IAMs_20 15 37 11.8
comp=Z,18µm,20.0s

HMNX Herstmonceux 110.31 327 *e*P **Pdif 14 48 07.0 -4.1**
HMNX IAMs_20 IAMs_20 15 38 47.2
comp=Z,26µm,23.0s

R11A Troy Canyon, C 110.32 48 P **PKiKP 14 52 09.5 -3.3**
baz=290

RRX Edison Barstow 110.35 52 P **PKiKP 14 52 11.6 -1.1**
baz=288

EGMT Eagleton 110.35 37 P **PKiKP 14 52 10.4 -2.0**
baz=298

EGMT Eagleton 110.35 37 IAMs_20 IAMs_20 15 35 14.7
comp=Z,17µm,22.0s

GSC Goldstone, Bar 110.37 51 P **PKiKP 14 52 13.9 +1.1**
baz=288,SNR=5.7

KEST Kesra 110.54 309 Pdiff **Pdif 14 48 13.1 +0.4**
comp=Z,4.5nm,0.7s,baz=287,slow=11,SNR=4.3
KEST PKKPbc **PKKPbc 15 03 15.1 +1.5**
comp=Z,6.1nm,0.8s,baz=338,slow=3.8,SNR=5.7

MURC Murrieta 110.57 53 P **PKiKP 14 52 14.5 +1.4**
baz=287

BBRC Big Bear Solar 110.59 52 P **PKiKP 14 52 12.9 -0.5**
baz=287

SHOC Shoshone, Teco 110.60 50 P **PKiKP 14 52 14.0 +0.9**
baz=288,SNR=6.3

CLF Chambon-Foret 110.60 324 IAMs_20 IAMs_20 15 42 39.5
comp=Z,23µm,22.0s

GAL1 Galloway 110.64 332 *e*P **Pdif 14 48 07.5 -5.0**
GAL1 IAMs_20 IAMs_20 15 40 54.2
comp=Z,50µm,25.1s

109C Camp Elliot, M 110.85 54 P **PKiKP 14 52 13.4 -0.2**
baz=287

HEC Hector,Ludlow 110.88 52 P **PKiKP 14 52 16.1 +2.3**
baz=288,SNR=6.9

FFC Flin Flon 110.91 28 IAMs_20 IAMs_20 15 35 40.9
comp=Z,14µm,21.0s

WOL Wolverton 110.91 328 *e*P **Pdif 14 48 09.5 -4.4**
WOL IAMs_20 IAMs_20 15 42 32.4
comp=Z,27µm,22.9s

IOMK Kirk Michael 110.94 332 *e*P **Pdif 14 48 10.6 -3.3**
IOMK IAMs_20 IAMs_20 15 41 34.1
comp=Z,109µm,25.9s

TUQ Turquoise Moun 111.01 51 P **PKiKP 14 52 16.4 +2.3**
baz=288,SNR=5.7

SPR3 Spring Creek 3 111.02 47 IAMs_20 IAMs_20 15 30 53.1
comp=Z,17µm,22.0s

PRN Pahroc Range 111.04 49 IAMs_20 IAMs_20 15 32 11.7
comp=Z,15µm,22.0s

FOEL Foel Wylfa 111.07 330 *e*P **Pdif 14 48 08.7 -5.8**
FOEL IAMs_20 IAMs_20 15 40 54.0
comp=Z,48µm,26.0s

SWN1 Swindon 111.11 328 *e*P **Pdif 14 48 07.5 -7.2**
SWN1 IAMs_20 IAMs_20 15 39 08.1
comp=Z,34µm,26.7s

PFO Pinyon Flats O 111.15 53 P **PKiKP 14 52 15.2 +0.9**
baz=287

STRD Stroud 111.16 329 *e*P **Pdif 14 48 08.9 -6.0**
STRD IAMs_20 IAMs_20 15 38 51.5
comp=Z,39µm,27.8s

TPFO Pinon Flats 111.16 53 P **PKiKP 14 52 15.2 +0.8**
baz=287

SFJD Kangerlussuaq 111.16 359 *e*P **Pdif 14 48 13.9 -0.6**
SFJD MLR MLR
comp=Z,3µm,26.0s
SFJD Kangerlussuaq 111.16 359 *i* P **Pdif 14 48 13.9 -0.6**
comp=Z,3µm,26.0s
SFJD Kangerlussuaq 111.16 359 *e*P **Pdif 14 48 14.0 -0.6**
SFJD IAMs_20 IAMs_20 15 36 41.1
comp=Z,3µm,25.9s

SHPR Sheep Range 111.25 50 IAMs_20 IAMs_20 15 37 48.7
comp=Z,16µm,20.0s

MONP2 Monument Peak 111.40 54 P **PKiKP 14 52 16.4 +1.4**
baz=287,SNR=16

BELC Belle Mtn. Jos 111.40 52 P **PKiKP 14 52 16.3 +1.4**
baz=288,SNR=7.7

WPS Cemaes, Angles 111.41 331 *e*P **Pdif 14 48 09.3 -6.7**
WPS IAMs_20 IAMs_20 15 41 37.2
comp=Z,50µm,26.6s

OLDB Oldbury-Upon-S 111.42 329 *e*P **Pdif 14 48 09.8 -6.3**
OLDB IAMs_20 IAMs_20 15 40 19.7
comp=Z,39µm,25.5s

GMRC Granite Mounta 111.42 51 P **PKiKP 14 52 16.0 +1.1**
baz=288,SNR=16

WLF1 Llynfaes 111.43 331 *e*P **Pdif 14 48 08.2 -7.9**
WLF1 IAMs_20 IAMs_20 15 41 25.6
comp=Z,90µm,24.8s

IMW Indian Meadow 111.45 41 IAMs_20 IAMs_20 15 34 26.1
comp=Z,15µm,20.0s

MONM Monmouth 111.46 329 *e*P **Pdif 14 48 09.1 -7.1**
MONM IAMs_20 IAMs_20 15 40 19.9
comp=Z,44µm,25.1s

MCH1 Michaelchurch 111.47 329 *e*P **Pdif 14 48 12.2 -4.1**
MCH1 IAMs_20 IAMs_20 15 46 26.5
comp=Z,35µm,21.8s

H17A Grant Village 111.47 40 P **PKiKP 14 52 17.1 +2.2**
baz=296

H17A Grant Village 111.47 40 IAMs_20 IAMs_20 15 30 00.6
comp=Z,19µm,22.0s

CCX Cicese 111.50 55 IAMs_20 IAMs_20 15 35 06.4
comp=Z,15µm,21.0s

FCC	**Fort Churchill**	**111.51**	**21**	IAMs_20	IAMs_20	15 37 25.6			
	comp=Z,16µm,22.0s								
FLWY	**Flagg Ranch**	**111.53**	**41**	IAMs_20	IAMs_20	15 34 06.1			
	comp=Z,20µm,22.0s								
TPAW	**Teton Pass**	**111.61**	**41**	IAMs_20	IAMs_20	15 35 37.5			
	comp=Z,16µm,22.0s								
DUG	**Dugway, Tooele**	**111.67**	**45**	P	**PKiKP**	**14 52 14.9**	**-0.2**		
	baz=292								
IKP	**In-Ko-Pah, Jac**	**111.72**	**54**	P	**PKiKP**	**14 52 16.3**	**+0.9**		
	baz=287,SNR=14								
LOHW	**Long Hollow**	**111.79**	**41**	IAMs_20	IAMs_20	15 35 33.1			
	comp=Z,20µm,22.0s								
AHID	**Auburn Hatcher**	**111.82**	**42**	IAMs_20	IAMs_20	15 42 50.0			
	comp=Z,13µm,21.0s								
SWSC	**Sam W. Stewart**	**111.88**	**53**	P	**PKiKP**	**14 52 16.2**	**+0.6**		
	baz=288,SNR=9.3								
BC3	**Big Chuckawall**	**111.94**	**53**	P	**PKiKP**	**14 52 17.6**	**+1.7**		
	baz=288								
HWUT	**Hardware Ranch**	**111.98**	**43**	IAMs_20	IAMs_20	15 41 09.3			
	comp=Z,16µm,22.0s								
RLMT	**Red Lodge**	**111.98**	**39**	P	**PKiKP**	**14 52 18.5**	**+2.7**		
	baz=297								
IRM	**Iron Mountain**	**112.03**	**52**	P	**PKiKP**	**14 52 16.9**	**+1.0**		
	baz=288,SNR=7.5								
NEE2	**Needles Airpor**	**112.24**	**51**	P	**PKiKP**	**14 52 18.1**	**+1.9**		
	baz=289								
CPBX	**Cerro Prieto**	**112.44**	**54**	IAMs_20	IAMs_20	15 31 48.9			
	comp=Z,17µm,22.0s								
JSA	**Saint Aubin**	**112.56**	**326**	*e*P	**Pdif**	**14 48 16.9**	**-4.3**		
JSA				IAMs_20	IAMs_20	15 42 02.9			
	comp=Z,37µm,25.2s								
GLA	**Glamis**	**112.62**	**53**	P	**PKiKP**	**14 52 18.4**	**+1.4**		
	baz=288								
W13A	**Hualapai Mount**	**112.70**	**51**	IAMs_20	IAMs_20	15 39 06.9			
	comp=Z,19µm,21.0s								
SPX	**San Pedro Mart**	**112.72**	**55**	IAMs_20	IAMs_20	15 33 02.7			
	comp=Z,19µm,20.0s								
PDMCI	**Parker Dam,Lak**	**112.77**	**51**	P	**PKiKP**	**14 52 18.3**	**+1.1**		
	baz=289								
MAHO	**Mahon**	**112.83**	**315**	PP	**PP**	**14 53 06.9**	**+1.6**		
MAHO				SKS	**SKSac**	**14 58 57.5**	**+0.1**		
BW06	**Boulder Array**	**112.85**	**42**	P	**PKiKP**	**14 52 17.6**	**+0.1**		
	baz=296								
BW06	**Boulder Array**	**112.85**	**42**	IAMs_20	IAMs_20	15 32 59.1			
	comp=Z,19µm,22.0s								
PDAR	**Pinedale Array**	**112.85**	**42**	Pdiff	**Pdif**	**14 48 24.2**	**+1.2**		
	comp=Z,0.1nm,0.4s,baz=58,slow=34,SNR=3.3								
PDAR				PKiKP	**PKiKP**	**14 52 19.6**	**+2.1**		
	comp=Z,9.6nm,0.9s,baz=162,slow=0.9,SNR=14								
PDAR				PKKPbc	**PKKPbc**	**15 03 05.4**	**-1.0**		
	comp=Z,5.1nm,0.7s,baz=122,slow=6.4,SNR=13								
LAO	**LASA Array**	**113.10**	**37**	P	**PKiKP**	**14 52 18.9**	**+1.3**		
	baz=300								
SFX	**San Felipe**	**113.22**	**55**	IAMs_20	IAMs_20	15 33 17.1			
	comp=Z,17µm,21.0s								
DGMT	**Dagmar**	**113.34**	**34**	P	**PKiKP**	**14 52 20.2**	**+2.2**		
	baz=303								
DGMT	**Dagmar**	**113.34**	**34**	IAMs_20	IAMs_20	15 37 13.7			
	comp=Z,12µm,21.0s								
U15A	**North Rim**	**113.45**	**49**	IAMs_20	IAMs_20	15 39 11.6			
	comp=Z,18µm,20.0s								
CCA1	**Carnmenellis**	**113.66**	**328**	*e*P	**Pdif**	**14 48 23.1**	**-3.0**		
CCA1				IAMs_20	IAMs_20	15 47 56.0			
	comp=Z,21µm,21.7s								
PIX	**Pinacate**	**114.19**	**54**	IAMs_20	IAMs_20	15 36 40.9			
	comp=Z,14µm,21.0s								
WUAZ	**Wupatki**	**114.47**	**49**	P	**PKiKP**	**14 52 22.0**	**+1.3**		
	baz=292,SNR=23								
WUAZ	**Wupatki**	**114.47**	**49**	IAMs_20	IAMs_20	15 39 34.8			
	comp=Z,18µm,20.0s								
214A	**Organ Pipe Nat**	**114.59**	**53**	P	**PKiKP**	**14 52 21.8**	**+0.9**		
	baz=289,SNR=9.6								
214A	**Organ Pipe Nat**	**114.59**	**53**	IAMs_20	IAMs_20	15 36 55.2			
	comp=Z,18µm,21.0s								
O20A	**White River Ci**	**114.89**	**44**	P	PKPdf	14 52 22.6	+1.2		
	baz=296,SNR=41								
O20A	**White River Ci**	**114.89**	**44**	IAMs_20	IAMs_20	15 31 22.3			
	comp=Z,17µm,22.0s								
K22A	**Casper**	**114.89**	**40**	IAMs_20	IAMs_20	15 35 40.1			
	comp=Z,17µm,20.0s								
PV10	**Paradox Valley**	**115.08**	**46**	IAMs_20	IAMs_20	15 40 42.4			
	comp=Z,15µm,20.0s								
PV14	**Lion Creek, Pa**	**115.09**	**46**	IAMs_20	IAMs_20	15 40 43.8			
	comp=Z,19µm,21.0s								
PV19	**Morning Glory**	**115.14**	**46**	IAMs_20	IAMs_20	15 40 45.2			
	comp=Z,14µm,21.0s								
PV04	**Paradox Valley**	**115.17**	**46**	IAMs_20	IAMs_20	15 40 46.8			
	comp=Z,20µm,21.0s								
PV16	**Nyswonger Mesa**	**115.19**	**46**	IAMs_20	IAMs_20	15 40 46.5			
	comp=Z,15µm,20.0s								
PV18	**Skein Mesa, Pa**	**115.22**	**46**	IAMs_20	IAMs_20	15 40 45.3			
	comp=Z,13µm,20.0s								
PV11	**David Mesa, Pa**	**115.23**	**46**	IAMs_20	IAMs_20	15 40 47.4			
	comp=Z,17µm,20.0s								
PV03	**Paradox Valley**	**115.26**	**46**	IAMs_20	IAMs_20	15 40 19.4			
	comp=Z,14µm,20.0s								
PV12	**Saucer Basin,**	**115.27**	**46**	IAMs_20	IAMs_20	15 40 48.6			
	comp=Z,18µm,20.0s								
PV02	**Paradox Valley**	**115.36**	**46**	IAMs_20	IAMs_20	15 40 12.1			
	comp=Z,17µm,22.0s								
PV01	**Paradox Valley**	**115.51**	**46**	IAMs_20	IAMs_20	15 40 27.0			
	comp=Z,14µm,21.0s								
RSSD	**Black Hills**	**115.73**	**38**	PKIKP	**PKiKP**	**14 52 22.2**	**-0.8**		
RSSD				MLR	MLR				
	comp=Z,14µm,22.0s								
RSSD	**Black Hills**	**115.73**	**38**	P	**PKPdf**	**14 52 23.5**	**+0.6**		
	baz=301								
RSSD	**Black Hills**	**115.73**	**38**		**PKiKP**	**14 52 22.2**	**-0.8**		
RSSD	**Black Hills**	**115.73**	**38**	IAMs_20	IAMs_20	15 42 43.7			
	comp=Z,14µm,22.0s								
W18A	**Petrified Fore**	**115.87**	**49**	P	**PKPdf**	**14 52 24.6**	**+1.1**		
	baz=293,SNR=22								
W18A	**Petrified Fore**	**115.87**	**49**	IAMs_20	IAMs_20	15 41 26.6			
	comp=Z,19µm,21.0s								
MVCO	**Mesa Verde**	**115.95**	**47**	P	**PKPdf**	**14 52 25.0**	**+1.4**		
	baz=294,SNR=18								
TUC	**Tucson**	**116.09**	**52**	P	**PKiKP**	**14 52 25.1**	**+1.3**		
	baz=291								
TUC	**Tucson**	**116.09**	**52**	IAMs_20	IAMs_20	15 33 52.7			
	comp=Z,20µm,22.0s								
N23A	**Red Feather La**	**116.10**	**42**	P	**PKiKP**	**14 52 24.7**	**+0.8**		
	baz=298								
N23A	**Red Feather La**	**116.10**	**42**	IAMs_20	IAMs_20	15 36 24.3			
	comp=Z,15µm,22.0s								
SMCO	**Snowmass**	**116.19**	**44**	IAMs_20	IAMs_20	15 42 21.8			
	comp=Z,15µm,22.0s								
MDND	**Maddock**	**116.22**	**33**	P	**PKPdf**	**14 52 24.5**	**+1.0**		
	baz=307								
MDND	**Maddock**	**116.22**	**33**		**PKPdf**	**14 52 23.0**	**-0.5**		
E28A	**Huff**	**116.37**	**34**	IAMs_20	IAMs_20	15 39 16.8			
	comp=Z,16µm,22.0s								
ULM	**Lac du Bonnet**	**116.62**	**29**	PKP	**PKiKP**	**14 52 24.7**	**+0.5**		
	comp=Z,58nm,0.8s,baz=308,slow=3.0,SNR=40								
ULM				PKKPbc	**PKKPbc**	**15 02 51.7**	**-1.7**		
	comp=Z,12nm,0.8s,baz=197,slow=2.2,SNR=5.2								
ULM	**Lac du Bonnet**	**116.62**	**29**	PKIKP	**PKPdf**	**14 52 22.9**	**-1.3**		
ULM	**Lac du Bonnet**	**116.62**	**29**		**PKPdf**	**14 52 22.9**	**-1.3**		
ULM					**PKKPbc**	**15 02 51.2**	**-2.2**		
NRS	**Narsarsuaq**	**116.74**	**356**	PKIKP	**PKiKP**	**14 52 23.8**	**-0.2**		
NRS	**Narsarsuaq**	**116.74**	**356**		**PKiKP**	**14 52 23.8**	**-0.2**		
NRS				IAMs_20	IAMs_20	15 47 21.9			
	comp=Z,14µm,22.0s								
PMSA	**Palmer Station**	**116.86**	**175**	IAMs_20	IAMs_20	15 47 37.5			
	comp=Z,12µm,20.0s								
S22A	**4UR Ranch, Cre**	**116.92**	**45**	P	**PKiKP**	**14 52 26.9**	**+1.4**		
	baz=296,SNR=27								
S22A	**4UR Ranch, Cre**	**116.92**	**45**	IAMs_20	IAMs_20	15 44 10.3			
	comp=Z,17µm,20.0s								
TAM	**Tamanrasset**	**117.46**	**297**	IAMs_20	IAMs_20	15 41 01.1			
	comp=Z,16µm,22.0s								
CART	**Cartagena**	**117.53**	**315**	PP	PP	14 53 43.4	+5.0		
CART				SKS	**SKSac**	**14 59 16.2**	**+0.8**		
Q24A	**Divide**	**117.55**	**44**	P	**PKiKP**	**14 52 28.1**	**+1.4**		
	baz=298,SNR=14								
Q24A	**Divide**	**117.55**	**44**	IAMs_20	IAMs_20	15 39 24.7			
	comp=Z,13µm,21.0s								
SDCO	**Great Sand Dun**	**117.86**	**45**	P	**PKiKP**	**14 52 28.7**	**+1.4**		
	baz=297,SNR=20								
SDCO	**Great Sand Dun**	**117.86**	**45**	IAMs_20	IAMs_20	15 44 54.2			
	comp=Z,17µm,22.0s								
AGMN	**Agassiz Nation**	**117.91**	**31**	P	**PKPdf**	**14 52 25.2**	**-1.5**		
	baz=310								
AGMN	**Agassiz Nation**	**117.91**	**31**		**PKiKP**	**14 52 26.5**	**-0.3**		
AGMN				IAMs_20	IAMs_20	15 44 20.2			
	comp=Z,15µm,22.0s								
D32A	**Dogwood Acres,**	**118.05**	**32**		**PKiKP**	**14 52 26.8**	**-0.3**		
D32A				IAMs_20	IAMs_20	15 36 55.0			
	comp=Z,14µm,22.0s								
121A	**Cookes Peak, D**	**118.36**	**51**	P	**PKiKP**	**14 52 29.3**	**+1.0**		
	baz=293,SNR=22								
ANMO	**Albuquerque**	**118.40**	**48**	P	**PKiKP**	**14 52 28.2**	**-0.1**		
	baz=295								
ANMO	**Albuquerque**	**118.40**	**48**	IAMs_20	IAMs_20	15 41 51.6			
	comp=Z,14µm,22.0s								
Y22D	**IRIS PASSCAL I**	**118.41**	**49**	P	**PKiKP**	**14 52 28.7**	**+0.3**		
	baz=294								
ES18	**SONSECA Array**	**118.56**	**318**	IAMs_20	IAMs_20	15 45 29.4			
	comp=Z,13µm,22.0s								
ES11	**SONSECA Array**	**118.58**	**318**	IAMs_20	IAMs_20	15 45 32.2			
	comp=Z,13µm,21.0s								
ES07	**SONSECA Array**	**118.58**	**318**	IAMs_20	IAMs_20	15 45 30.2			
	comp=Z,13µm,21.0s								
ES01	**SONSECA Array**	**118.58**	**318**	IAMs_20	IAMs_20	15 45 31.4			
	comp=Z,13µm,21.0s								
ES06	**SONSECA Array**	**118.58**	**318**	IAMs_20	IAMs_20	15 45 30.4			
	comp=Z,13µm,21.0s								
ESDC	**Sonseca Array**	**118.59**	**318**	PKP	**PKiKP**	**14 52 30.4**	**+2.0**		
	comp=Z,3.6nm,1.1s,baz=51,slow=1.6,SNR=7.6								
ESDC				PKKPbc	**PKKPbc**	**15 02 46.2**	**+0.1**		
	comp=Z,2.3nm,0.7s,baz=263,slow=3.3,SNR=7.8								
ES05	**SONSECA Array**	**118.59**	**318**	IAMs_20	IAMs_20	15 45 31.7			
	comp=Z,14µm,20.0s								
ES12	**SONSECA Array**	**118.59**	**318**	IAMs_20	IAMs_20	15 45 31.7			
	comp=Z,11µm,21.0s								
SUSD	**Miller**	**118.60**	**36**	P	**PKPdf**	**14 52 27.3**	**-0.9**		
	baz=306								
SUSD	**Miller**	**118.60**	**36**		**PKPdf**	**14 52 27.6**	**-0.6**		
SUSD				IAMs_20	IAMs_20	15 36 12.9			
	comp=Z,13µm,22.0s								
ES13	**SONSECA Array**	**118.61**	**318**	IAMs_20	IAMs_20	15 45 31.0			
	comp=Z,13µm,21.0s								
ES16	**SONSECA Array**	**118.61**	**318**	IAMs_20	IAMs_20	15 45 31.0			
	comp=Z,13µm,21.0s								
ES14	**SONSECA Array**	**118.62**	**318**	IAMs_20	IAMs_20	15 45 30.4			
	comp=Z,12µm,21.0s								
ES15	**SONSECA Array**	**118.62**	**318**	IAMs_20	IAMs_20	15 45 29.4			
	comp=Z,13µm,21.0s								
PAB	**San Pablo**	**118.91**	**318**	IAMs_20	IAMs_20	15 52 51.8			
	comp=Z,12µm,21.0s								
T25A	**Trinidad**	**118.91**	**45**	P	**PKiKP**	**14 52 30.3**	**+0.9**		
	baz=298,SNR=35								
T25A	**Trinidad**	**118.91**	**45**	IAMs_20	IAMs_20	15 35 35.0			
	comp=Z,20µm,22.0s								
B35A	**Bob, Littlefor**	**118.93**	**29**		**PKPdf**	**14 52 27.6**	**-1.1**		
B35A				IAMs_20	IAMs_20	15 50 45.3			
	comp=Z,12µm,22.0s								
KSCO	**Kaye Shedlock'**	**119.24**	**42**	P	**PKiKP**	**14 52 30.7**	**+0.9**		
	baz=300,SNR=7.1								
KSCO	**Kaye Shedlock'**	**119.24**	**42**	IAMs_20	IAMs_20	15 38 10.5			
	comp=Z,18µm,22.0s								
F33A	**5 Mile Ranch,**	**119.25**	**33**		**PKPdf**	**14 52 28.3**	**-1.0**		
F33A				IAMs_20	IAMs_20	15 41 18.9			
	comp=Z,11µm,20.0s								
PBRG	**Braganca**	**119.27**	**321**	*e*SS	SS	15 10 19.9	+11		
PBRG	**Braganca**	**119.27**	**321**	*e*Pdif	**SP**	**15 03 26.4**	**-6.6**		
K31A	**O'Neill**	**119.78**	**37**	IAMs_20	IAMs_20	15 44 47.2			
	comp=Z,16µm,21.0s								
MVO	**Moncorvo**	**119.80**	**321**	*e*PP	PP	14 53 55.5	+1.5		
MVO	**Moncorvo**	**119.80**	**321**	*e*SS	SS	15 10 23.4	+7.9		
MVO	**Moncorvo**	**119.80**	**321**	*e*LR	LR	15 38 15.6			
	comp=Z,13µm,22.0s								
MVO	**Moncorvo**	**119.80**	**321**	*e*Pdif	**SP**	**15 03 35.7**	**-2.2**		
MVO	**Moncorvo**	**119.80**	**321**	*e*LR	LR	15 42 29.4			
	comp=Z,13µm,22.0s								
MVO	**Moncorvo**	**119.80**	**321**	*e*LQ	LQ	15 34 54.5			
MELI	**Melilla**	**119.96**	**313**	PP	PP	14 53 54.6	-0.5		
MELI				SKS	**SKSac**	**14 59 24.4**	**+0.2**		
PCAB	**Cabril**	**120.12**	**322**	*e*Pdif	**SP**	**15 03 40.5**	**-0.1**		
PGAV	**Gavieira, Arco**	**120.13**	**322**	*e*PKPdf	**PKiKP**	**14 52 33.2**	**+1.8**		
PGAV	**Gavieira, Arco**	**120.13**	**322**	*e*LR	LR	15 40 11.3			
	comp=Z,11µm,20.0s								
PGAV	**Gavieira, Arco**	**120.13**	**322**	*e*Pdif	**SP**	**15 03 38.8**	**-1.9**		
PGAV	**Gavieira, Arco**	**120.13**	**322**	*e*LR	LR	15 39 58.1			
	comp=Z,11µm,20.0s								
PGAV	**Gavieira, Arco**	**120.13**	**322**	*e*LQ	LQ	15 35 31.7			
POLO	**Lamas de Olo**	**120.17**	**321**	*e*PKPdf	**PKiKP**	**14 52 34.5**	**+3.0**		
POLO	**Lamas de Olo**	**120.17**	**321**	*e*Pdif	**SP**	**15 03 38.5**	**-2.6**		
EYMN	**Ely**	**120.30**	**29**	P	**PKiKP**	**14 52 31.9**	**+0.5**		
	baz=315,SNR=15								
EYMN	**Ely**	**120.30**	**29**		**PKiKP**	**14 52 31.2**	**-0.3**		
EYMN	**Ely**	**120.30**	**29**	IAMs_20	IAMs_20	15 49 15.4			
	comp=Z,13µm,22.0s								
EMAL	**Malaga-Limoner**	**120.34**	**315**	PP	PP	14 53 50.3	-7.4		
EMAL				SKS	**SKSac**	**14 59 23.8**	**-1.6**		
ECSD	**EROS Data Cent**	**120.38**	**35**	P	**PKiKP**	**14 52 31.9**	**+0.2**		
	baz=308,SNR=68								
ECSD	**EROS Data Cent**	**120.38**	**35**		**PKPdf**	**14 52 30.8**	**-0.8**		
ECSD	**EROS Data Cent**	**120.38**	**35**	IAMs_20	IAMs_20	15 42 52.9			
	comp=Z,13µm,22.0s								
MTE	**Manteigas**	**120.55**	**320**	*e*PKPdf	**PKiKP**	**14 52 35.2**	**+3.0**		
MTE	**Manteigas**	**120.55**	**320**	*e*LR	LR	15 39 05.3			
	comp=Z,14µm,22.0s								
MTE	**Manteigas**	**120.55**	**320**	*e*Pdif	**SP**	**15 03 42.5**	**-2.1**		
MTE	**Manteigas**	**120.55**	**320**	*e*LR	LR	15 39 23.7			
	comp=Z,14µm,22.0s								
MTE	**Manteigas**	**120.55**	**320**	IAMs_20	IAMs_20	15 51 22.1			
	comp=Z,15µm,22.0s								
MTE	**Manteigas**	**120.55**	**320**	*e*LQ	LQ	15 35 58.0			
MNTX	**Cornudas Mount**	**120.56**	**51**	P	**PKiKP**	**14 52 33.2**	**+0.8**		
	baz=294,SNR=124								
PVIS	**Viseu**	**120.60**	**321**	*e*PKPdf	**PKiKP**	**14 52 33.6**	**+1.3**		
F36A	**Milaca**	**120.71**	**31**		**PKPdf**	**14 52 31.6**	**-0.6**		
F36A				IAMs_20	IAMs_20	15 46 34.5			
	comp=Z,14µm,22.0s								
PCBR	**Castelo Branco**	**120.81**	**320**	*e*PKPdf	**PKiKP**	**14 52 35.7**	**+3.0**		
PCBR	**Castelo Branco**	**120.81**	**320**	*e*Pdif	**SP**	**15 03 45.7**	**-1.2**		
BGNE	**Belgrade**	**120.84**	**38**	P	**PKiKP**	**14 52 32.9**	**+0.2**		
	baz=305,SNR=17								
BGNE	**Belgrade**	**120.84**	**38**		**PKiKP**	**14 52 32.1**	**-0.6**		
BGNE				IAMs_20	IAMs_20	15 47 12.5			
	comp=Z,14µm,22.0s								
PMRV	**Marv??o**	**120.98**	**319**	*e*PKPdf	**PKiKP**	**14 52 36.0**	**+3.0**		
PMRV	**Marv??o**	**120.98**	**319**	*e*SS	SS	15 10 47.2	+17		
PMRV	**Marv??o**	**120.98**	**319**	*e*LR	LR	15 45 47.4			
	comp=Z,15µm,22.0s								
PMRV	**Marv??o**	**120.98**	**319**	*e*Pdif	**SP**	**15 03 45.9**	**-2.5**		
PMRV	**Marv??o**	**120.98**	**319**	*e*LR	LR	15 42 46.2			
	comp=Z,15µm,22.0s								
PMRV	**Marv??o**	**120.98**	**319**	*e*LQ	LQ	15 38 45.5			
PVLZ	**Peæn de**	**121.00**	**314**	PP	PP	14 54 06.5	+4.2		
PVLZ				SKS	**SKSac**	**14 59 23.4**	**-4.3**		
RPN	**Rapa Nui**	**121.07**	**121**	PKP	**PKiKP**	**14 52 35.7**	**+2.2**		
	comp=Z,78nm,0.8s,baz=299,slow=1.2,SNR=7.6								
RPN	**Rapa Nui**	**121.07**	**121**	IAMs_20	IAMs_20	15 39 17.2			
	comp=Z,11µm,22.0s								
COI	**Coimbra**	**121.21**	**321**	*e*Pdif	**SP**	**15 03 48.5**	**-1.8**		
E38A	**The Farm, Brul**	**121.21**	**30**		**PKPdf**	**14 52 32.2**	**-0.9**		
E38A				IAMs_20	IAMs_20	15 41 13.5			
	comp=Z,18µm,22.0s								
CBKS	**Cedar Bluff**	**121.27**	**41**	P	**PKiKP**	**14 52 34.2**	**+0.5**		
	baz=302,SNR=14								
PCAS	**Casmilo, Conde**	**121.35**	**321**	*e*PKPdf	**PKiKP**	**14 52 36.4**	**+2.7**		
PCAS	**Casmilo, Conde**	**121.35**	**321**	*e*SS	SS	15 10 46.5	+11		
PCAS	**Casmilo, Conde**	**121.35**	**321**	*e*Pdif	**SP**	**15 03 49.2**	**-2.4**		
PESTR	**Estremoz**	**121.42**	**319**	*e*SS	SS	15 10 48.9	+13		
PESTR	**Estremoz**	**121.42**	**319**	IAMs_20	IAMs_20	15 51 17.2			
	comp=Z,12µm,22.0s								
CEU	**Ceuta**	**121.42**	**315**	PP	PP	14 54 12.0	+6.9		
SPMN	**Marine on St.**	**121.51**	**32**	P	**PKiKP**	**14 52 33.9**	**0.0**		
	baz=312,SNR=15								
SPMN	**Marine on St.**	**121.51**	**32**	IAMs_20	IAMs_20	15 42 25.7			
	comp=Z,12µm,22.0s								
MSTX	**Muleshoe**	**121.56**	**48**	P	**PKiKP**	**14 52 34.9**	**+0.4**		
	baz=297,SNR=52								
L34A	**Svendsen Farm,**	**121.59**	**37**		**PKPdf**	**14 52 32.6**	**-1.4**		
L34A				IAMs_20	IAMs_20	15 42 01.1			
	comp=Z,13µm,20.0s								
N33A	**J Bar K, Exete**	**121.66**	**38**		**PKPdf**	**14 52 32.6**	**-1.6**		
PMTG	**Montargil**	**121.72**	**319**	*e*Pdif	**SP**	**15 03 49.9**	**-5.1**		
SFS	**San Fernando**	**121.73**	**316**	PP	PP	14 54 18.7	+11		
SFS				SKS	**SKSac**	**14 59 31.6**	**+1.4**		
PSBE	**So Bento**	**121.84**	**320**	*e*SS	SS	15 11 03.3	+22		
PSBE	**So Bento**	**121.84**	**320**	*e*Pdif	**SP**	**15 03 53.3**	**-2.7**		
EVO	**Evora**	**121.87**	**319**	PP	PP	14 54 19.2	+11		
EVO				SKS	**SKSac**	**14 59 32.6**	**+2.0**		
EVO	**Evora**	**121.87**	**319**	*e*PKPdf	**PKPdf**	**14 52 32.5**	**-2.1**		
EVO	**Evora**	**121.87**	**319**	*e*Pdif	**SP**	**15 03 53.9**	**-2.5**		
AMTX	**Amarillo**	**121.93**	**46**	P	**PKiKP**	**14 52 35.8**	**+0.6**		
	baz=299								
AMTX	**Amarillo**	**121.93**	**46**	IAMs_20	IAMs_20	15 39 16.8			
	comp=Z,18µm,22.0s								
I37A	**Lemond, Waseca**	**122.00**	**33**	IAMs_20	IAMs_20	15 42 51.6			
	comp=Z,14µm,22.0s								
PBEJ	**Beja**	**122.05**	**318**	*e*PKPdf	**PKiKP**	**14 52 35.2**	**0.0**		
HPIG		**122.17**	**56**	IAMs_20	IAMs_20	15 42 22.1			
	comp=Z,14µm,21.0s								
PVAQ	**Vaqueiros**	**122.28**	**318**	*e*SS	SS	15 11 02.6	+15		
PVAQ	**Vaqueiros**	**122.28**	**318**	*e*LR	LR	15 42 25.9			
	comp=Z,12µm,22.0s								
PVAQ	**Vaqueiros**	**122.28**	**318**	*e*Pdif	**SP**	**15 03 55.6**	**-4.5**		
PVAQ	**Vaqueiros**	**122.28**	**318**	*e*LR	LR	15 42 33.1			
	comp=Z,12µm,22.0s								
PVAQ	**Vaqueiros**	**122.28**	**318**	IAMs_20	IAMs_20	15 55 29.4			
	comp=Z,16µm,22.0s								
D41A	**Chassel**	**122.32**	**28**	IAMs_20	IAMs_20	15 50 32.8			
	comp=Z,17µm,22.0s								
SCHQ	**Schefferville**	**122.34**	**9**	PKP	**PKiKP**	**14 52 36.3**	**+1.1**		
	comp=Z,82nm,0.8s,baz=2.4,slow=1.8,SNR=47								
SCHQ				PKKPbc	**PKKPab**	**15 02 30.9**	**-0.8**		
	comp=Z,14nm,0.8s,baz=161,slow=4.2,SNR=6.8								
SCHQ	**Schefferville**	**122.34**	**9**		**PKPdf**	**14 52 34.4**	**-0.7**		
PCVE	**Castro Verde**	**122.38**	**318**	*e*PKPdf	**PKiKP**	**14 52 38.8**	**+3.0**		
PCVE	**Castro Verde**	**122.38**	**318**	*e*SS	SS	15 11 02.6	+14		
PCVE	**Castro Verde**	**122.38**	**318**	*e*Pdif	**SP**	**15 03 53.4**	**-7.5**		
PNCL	**Nicolau / Gran**	**122.44**	**319**	*e*PKPdf	**PKiKP**	**14 52 38.1**	**+2.2**		
PNCL	**Nicolau / Gran**	**122.44**	**319**	*e*SS	SS	15 11 04.0	+15		
PNCL	**Nicolau / Gran**	**122.44**	**319**	*e*Pdif	**SP**	**15 03 57.4**	**-4.0**		
PMAFR	**Mafra**	**122.47**	**320**	*e*SS	SS	15 11 07.2	+18		
PMAFR	**Mafra**	**122.47**	**320**	*e*Pdif	**SP**	**15 03 58.1**	**-3.5**		
PBDV	**Barranco-do-Ve**	**122.51**	**317**	*e*Pdif	**SP**	**15 03 54.5**	**-7.6**		
LIS	**Lisbon**	**122.52**	**320**	*e*PKPdf	**PKPdf**	**14 52 34.7**	**-1.1**		
LIS				*e*PP	**PP**	**14 54 11.8**	**-0.5**		
LIS				*e*		14 54 24.4			
	baz=62,slow=18								
LIS				*e*SKSac	**SKSac**	**14 59 31.2**	**-1.5**		
LIS				AMS	AMS	15 51 52.0			
	comp=N,13µm,25.8s								
LIS	**Lisbon**	**122.52**	**320**	*e*PKIKP	**PKPdf**	**14 52 34.7**	**-1.1**		
LIS				*e*		14 54 11.8			
LIS				*e*		14 59 31.3			
LIS	**Lisbon**	**122.52**	**320**	*e*Pdif	**SP**	**15 03 58.3**	**-3.7**		
N35A	**Tabor**	**122.70**	**37**	IAMs_20	IAMs_20	15 45 31.5			
	comp=Z,17µm,22.0s								
G40A	**Rib Lake**	**122.82**	**30**		**PKPdf**	**14 52 35.1**	**-1.1**		
G40A				IAMs_20	IAMs_

comp=Z,17µm,22.0s
I45A Fountain 125.66 29 IAMs_20 IAMs_20 15 54 11.3
comp=Z,12µm,22.0s
P40A Paris 125.68 36 PKiKP 14 52 41.5 -0.8
P40A IAMs_20 IAMs_20 15 44 46.3
comp=Z,17µm,22.0s
GLMI Grayling 125.82 27 P PKPdf 14 52 41.1 -0.9
baz=320
GLMI Grayling 125.82 27 IAMs_20 IAMs_20 15 51 41.3
comp=Z,14µm,22.0s
VLDQ Val d'Or 125.94 20 PKPdf 14 52 40.7 -1.4
VLDQ IAMs_20 IAMs_20 15 53 18.7
comp=Z,13µm,22.0s
MG01 Puerto William 125.96 170 IAMs_20 IAMs_20 15 48 21.1
comp=Z,11µm,22.0s
HOPE Hope Point 126.00 192 IAMs_20 IAMs_20 15 44 27.0
comp=Z,10µm,21.0s
S39A Bolivar 126.05 39 IAMs_20 IAMs_20 15 50 31.5
comp=Z,12µm,21.0s
U38A Gravette 126.12 41 PKPdf 14 52 41.1 -1.8
L44A Lake County Fo 126.18 31 P PKiKP 14 52 43.7 +0.4
baz=316,SNR=14
L44A Lake County Fo 126.18 31 IAMs_20 IAMs_20 15 49 38.3
comp=Z,10µm,22.0s
ZAIG Zacatecas 126.28 60 IAMs_20 IAMs_20 15 40 51.4
comp=Z,12µm,21.0s
R40A Maddies Statio 126.33 38 PKiKP 14 52 42.8 -0.8
R40A IAMs_20 IAMs_20 15 51 16.8
comp=Z,12µm,22.0s
WHTX Lake Whitney, 126.42 47 P PKiKP 14 52 44.6 +0.6
baz=300,SNR=27
WHTX Lake Whitney, 126.42 47 IAMs_20 IAMs_20 15 42 13.1
comp=Z,15µm,21.0s
HQIL Hanson Quary C 126.48 32 IAMs_20 IAMs_20 15 53 32.2
comp=Z,11µm,21.0s
HHAR Hobbs 126.50 41 IAMs_20 IAMs_20 15 43 21.6
comp=Z,17µm,22.0s
X37A Clayton 126.52 43 IAMs_20 IAMs_20 15 45 50.2
comp=Z,14µm,22.0s
HDIL Hopedale 126.58 34 P PKiKP 14 52 43.8 -0.2
baz=313,SNR=25
HDIL Hopedale 126.58 34 PKPdf 14 52 43.0 -0.6
HDIL IAMs_20 IAMs_20 15 45 52.9
comp=Z,16µm,22.0s
M44A Midewin, Midew 126.67 32 PKPdf 14 52 42.3 -1.4
M44A IAMs_20 IAMs_20 15 55 39.4
comp=Z,15µm,22.0s
833A Chaparral WMA, 126.69 52 P PKiKP 14 52 45.3 +0.6
baz=297
435B Jarrell 126.93 48 P PKiKP 14 52 45.1 0.0
baz=300,SNR=6.9
J47A Sunmer 126.94 28 IAMs_20 IAMs_20 15 57 08.0
comp=Z,15µm,21.0s
MGMO Mountain Grove 127.04 39 PKiKP 14 52 44.3 -0.8
P43A Skaggs, Pawnee 127.07 35 PKiKP 14 52 44.6 -0.4
P43A IAMs_20 IAMs_20 15 51 47.1
comp=Z,16µm,20.0s
CCM Cathedral Cave 127.10 37 P PKiKP 14 52 44.8 -0.4
baz=310
L46A Eue Claire 127.13 30 IAMs_20 IAMs_20 15 55 30.3
comp=Z,11µm,21.0s
U40A Yellville 127.16 40 P PKiKP 14 52 45.5 +0.1
baz=307,SNR=50
W39A Magazine 127.24 42 P PKiKP 14 52 45.6 0.0
baz=306,SNR=34
W39A Magazine 127.24 42 IAMs_20 IAMs_20 15 46 24.3
comp=Z,18µm,22.0s
I49A Point Hope 127.31 26 IAMs_20 IAMs_20 15 52 57.8
comp=Z,14µm,22.0s
O44A Mansfield 127.31 33 IAMs_20 IAMs_20 15 46 25.3
comp=Z,16µm,22.0s
SLM Saint Louis 127.33 36 IAMs_20 IAMs_20 15 43 57.0
comp=Z,12µm,22.0s
ALGO Algonquin Park 127.59 21 P PKiKP 14 52 45.7 -0.2
baz=328,SNR=17
237A Washetta, Mont 127.61 46 IAMs_20 IAMs_20 15 49 23.5
comp=Z,14µm,20.0s
FVM French Village 127.64 37 IAMs_20 IAMs_20 15 54 33.4
comp=Z,12µm,21.0s
MIAR Mount Ida 127.76 42 P PKiKP 14 52 47.0 +0.4
baz=306,SNR=45
E55A Montcerf-Lytto 127.86 20 P PKiKP 14 52 46.3 -0.2
baz=331,SNR=13
SFIN Lafayette 127.89 32 P PKiKP 14 52 46.9 +0.2
baz=316,SNR=18
SFIN Lafayette 127.89 32 PKPdf 14 52 43.5 -2.6
SFIN IAMs_20 IAMs_20 15 42 01.7
comp=Z,13µm,22.0s
FCAR Ozark Folk Cen 127.91 40 IAMs_20 IAMs_20 15 54 31.8
comp=Z,14µm,20.0s
LATQ La Tuque 128.04 17 P PKiKP 14 52 46.5 -0.3
baz=335,SNR=28
LATQ La Tuque 128.04 17 PKPdf 14 52 44.4 -1.7
G54A Lake Saint Pet 128.05 22 P PKiKP 14 52 46.6 -0.3
baz=328,SNR=18
L48A N Adams 128.10 29 PKPdf 14 52 44.5 -2.0
L48A IAMs_20 IAMs_20 15 55 30.0
comp=Z,17µm,22.0s
E56A St. Veronique 128.11 19 P PKiKP 14 52 47.0 0.0
baz=332,SNR=13
SADO Sadowa 128.18 23 PKPdf 14 52 46.2 -0.3
SADO IAMs_20 IAMs_20 15 46 11.5
comp=Z,11µm,21.0s
I51A Listowel 128.20 25 P PKiKP 14 52 47.4 +0.1
baz=324,SNR=18
AAM Ann Arbor 128.21 28 P PKiKP 14 52 47.3 0.0
baz=320
AAM Ann Arbor 128.21 28 IAMs_20 IAMs_20 15 48 53.6
comp=Z,11µm,20.0s
W41B Gary Mavity, V 128.27 41 P PKPdf 14 52 46.2 -0.8
baz=307
N47A Urbana 128.27 31 PKiKP 14 52 47.3 -0.1
N47A IAMs_20 IAMs_20 15 53 58.5
comp=Z,11µm,22.0s
D58A Chemin du LacG 128.27 17 P PKiKP 14 52 47.0 -0.2
baz=335,SNR=20
X40A Basin Creek Fa 128.29 42 P PKiKP 14 52 47.7 0.0
baz=306,SNR=7.5
KOWA Kowa 128.31 290 PKPdf 14 52 47.4 -0.2
K50A Casco 128.32 27 IAMs_20 IAMs_20 15 52 45.5
comp=Z,16µm,22.0s
GO09 Cerro Castillo 128.38 165 IAMs_20 IAMs_20 15 49 50.0
comp=Z,13µm,20.0s
LCAR Lake Charles 128.42 39 IAMs_20 IAMs_20 15 54 27.1
comp=Z,13µm,21.0s
PBMO Poplar Bluff 128.42 38 IAMs_20 IAMs_20 15 51 54.1
comp=Z,16µm,21.0s
UALR University of 128.44 41 PKPdf 14 52 43.7 -3.6
S44A Carbondale 128.53 36 PKPdf 14 52 45.9 -1.5
H53A Bobcaygeon 128.56 23 P PKiKP 14 52 48.0 +0.1
baz=327,SNR=14
NATX Nacogdoches 128.57 46 P PKiKP 14 52 48.0 -0.3
baz=303
E58A La Victoria 128.81 17 P PKiKP 14 52 48.3 0.0
baz=334,SNR=11
DRLN Deer Lake 128.87 3 IAMs_20 IAMs_20 15 54 22.3
comp=Z,16µm,22.0s
F57A Harrington 128.87 19 P PKiKP 14 52 48.5 +0.1
baz=332
D61A St Aubert, Com 128.90 15 P PKiKP 14 52 48.6 +0.1
baz=338
E59A St. Maurice 128.94 17 P PKiKP 14 52 47.8 -0.7
baz=335
D60A Saint Jean D'O 128.98 15 P PKiKP 14 52 48.3 -0.4
baz=337,SNR=5.4
Z41A Richland Creek 129.03 43 P PKiKP 14 52 48.8 -0.3
baz=306,SNR=10.0
HBAR Harrisburg 129.06 39 IAMs_20 IAMs_20 15 39 58.0
comp=Z,17µm,22.0s
BLO Bloomington 129.07 33 IAMs_20 IAMs_20 15 54 03.7
comp=Z,12µm,20.0s
PVMO Portageville 129.10 38 IAMs_20 IAMs_20 15 52 23.2
comp=Z,11µm,20.0s
PENMO Penman 129.12 38 IAMs_20 IAMs_20 15 52 24.7
comp=Z,13µm,21.0s
M50A Fremont 129.19 29 IAMs_20 IAMs_20 15 57 12.6
comp=Z,11µm,22.0s
GNAR Gosnell 129.20 38 IAMs_20 IAMs_20 15 50 04.7
comp=Z,14µm,20.0s
PEBM Pemiscott Bayo 129.20 38 IAMs_20 IAMs_20 15 51 11.7
comp=Z,15µm,22.0s
LPAR Lepanto 129.25 39 IAMs_20 IAMs_20 15 54 58.2
comp=Z,12µm,21.0s
USIN University of 129.27 35 IAMs_20 IAMs_20 15 46 51.4
comp=Z,16µm,22.0s
CCAR Cane Creek 129.34 42 IAMs_20 IAMs_20 15 55 28.7
comp=Z,11µm,20.0s
E60A Ste Agathe de 129.34 16 P PKiKP 14 52 49.1 -0.3
baz=337,SNR=6.7
G57A Newington 129.40 20 P PKiKP 14 52 48.8 -0.7
baz=332,SNR=13
F59A Saint Guilaume 129.43 17 P PKiKP 14 52 49.2 -0.4
baz=335
LNXT Lenox 129.43 38 IAMs_20 IAMs_20 15 50 17.9
comp=Z,13µm,20.0s
P48A Milroy 129.45 32 IAMs_20 IAMs_20 15 55 26.7
comp=Z,14µm,21.0s
GLAT Glass 129.45 38 IAMs_20 IAMs_20 15 56 17.3
comp=Z,16µm,21.0s
O49A Covington 129.47 31 IAMs_20 IAMs_20 15 50 46.4
comp=Z,14µm,22.0s
E61A Lac Etchemin 129.54 15 P PKiKP 14 52 49.3 -0.5
baz=338,SNR=18
D63A Stockholm 129.55 13 P PKiKP 14 52 49.4 -0.4
baz=341
X43A Marvell 129.56 41 P PKiKP 14 52 50.3 +0.1
baz=308
F60A Warwick 129.56 17 P PKiKP 14 52 49.4 -0.5
baz=336,SNR=19
J54A Appleton 129.62 24 IAMs_20 IAMs_20 15 52 46.8
comp=Z,12µm,21.0s
HALT Halls 129.65 38 IAMs_20 IAMs_20 15 49 07.7
comp=Z,12µm,21.0s
M51A Elyria 129.65 28 P PKiKP 14 52 49.8 -0.4
baz=322,SNR=8.7
G58A Ormstown 129.66 19 P PKiKP 14 52 49.9 -0.2
baz=333,SNR=6.4
HDBT Hernando Brdge 129.69 39 IAMs_20 IAMs_20 15 47 33.8
comp=Z,10µm,20.0s
BATG Bathurst New B 129.75 11 IAMs_20 IAMs_20 15 57 54.6
comp=Z,10µm,21.0s
P49A Miami Univ. Ec 129.76 31 P PKiKP 14 52 50.0 -0.5
baz=318,SNR=22
P49A Miami Univ. Ec 129.76 31 IAMs_20 IAMs_20 15 57 25.1
comp=Z,12µm,20.0s
MET Memphis--Engin 129.79 39 IAMs_20 IAMs_20 15 48 35.4
comp=Z,15µm,22.0s
MEDO Medina 129.79 24 IAMs_20 IAMs_20 15 52 53.2
comp=Z,16µm,22.0s
H57A Richville 129.82 20 P PKiKP 14 52 50.2 -0.2
baz=331,SNR=14
F61A St Evariste 129.83 16 P PKiKP 14 52 50.9 +0.5
baz=337,SNR=9.2
WCI Wyandotte Cave 129.86 34 PKIKP PKPdf 14 52 47.5 -2.4
WCI Wyandotte Cave 129.86 34 P PKiKP 14 52 50.8 +0.1
baz=315
WCI Wyandotte Cave 129.86 34 PKPdf 14 52 47.5 -2.4
M52A Chesterland 129.87 27 IAMs_20 IAMs_20 15 58 38.5
comp=Z,14µm,22.0s
N51A Ashland 129.88 28 PKPdf 14 52 47.3 -2.6
N51A IAMs_20 IAMs_20 15 55 14.0
comp=Z,10µm,21.0s
PQI Presque Isle 129.92 13 IAMs_20 IAMs_20 15 50 24.1
comp=Z,10µm,21.0s
J55A Hilton 129.96 23 IAMs_20 IAMs_20 15 53 59.6
comp=Z,13µm,22.0s
LONY Lake Ozonia 129.96 20 P PKiKP 14 52 50.9 +0.2
baz=332,SNR=12
LONY Lake Ozonia 129.96 20 PKPdf 14 52 49.0 -0.9
ERPA Erie 130.01 26 P PKPdf 14 52 49.6 -0.5
baz=324
ERPA Erie 130.01 26 PKPdf 14 52 47.0 -3.1
ERPA IAMs_20 IAMs_20 15 49 30.3
comp=Z,15µm,22.0s
L53A Girard 130.03 26 P PKiKP 14 52 50.0 -0.9
baz=324
E63A Oxbow 130.06 13 P PKPdf 14 52 49.3 -0.7
baz=340
E63A Oxbow 130.06 13 PKPdf 14 52 49.4 -0.7
E63A IAMs_20 IAMs_20 15 49 25.9
comp=Z,12µm,21.0s
FRNY Flat Rock 130.09 19 IAMs_20 IAMs_20 15 48 59.0
comp=Z,16µm,22.0s
ACSO Alum Creek Sta 130.12 29 P PKiKP 14 52 50.9 -0.3
baz=320,SNR=27
ACSO Alum Creek Sta 130.12 29 IAMs_20 IAMs_20 15 53 50.3
comp=Z,10µm,21.0s
I57A Carthage 130.19 21 P PKiKP 14 52 51.1 -0.1
baz=330,SNR=10
E64A Bridgewater 130.20 13 P PKPdf 14 52 50.0 -0.3
baz=341
H59A Monticville 130.23 19 P PKiKP 14 52 50.7 -0.5
baz=333,SNR=9.9
W45A Hickory Valley 130.23 39 PKPdf PKPdf 14 52 47.7 -3.0
W45A IAMs_20 IAMs_20 15 59 51.2
comp=Z,12µm,19.0s
G60A Masonville 130.25 17 P PKiKP 14 52 50.8 -0.5
baz=335
M53A WI Miller and 130.26 27 P PKiKP 14 52 51.0 -0.4
baz=323,SNR=16
M53A WI Miller and 130.26 27 IAMs_20 IAMs_20 15 50 06.8
comp=Z,15µm,22.0s
T47A Sharon Grove 130.27 35 PKPdf 14 52 49.8 -1.0
H58A Gabriels 130.27 19 P PKiKP 14 52 51.4 0.0
baz=332,SNR=11
G61A St-Isidore-de- 130.31 17 P PKPdf 14 52 49.1 -1.5
baz=336
EFI East Falkland 130.32 176 IAMs_20 IAMs_20 15 52 47.3
comp=Z,10µm,21.0s
J56A Wolcott 130.32 22 P PKiKP 14 52 50.9 -0.5
baz=329
J56A Wolcott 130.32 22 PKPdf 14 52 48.9 -1.7
WVNY West Valley, N 130.36 24 PKPdf 14 52 48.1 -2.7
WVNY IAMs_20 IAMs_20 15 54 35.4
comp=Z,13µm,21.0s
MMNY Mt. Morris Dam 130.37 24 IAMs_20 IAMs_20 15 56 01.6
comp=Z,14µm,22.0s
WVT Waverly 130.42 37 PKIKP PKPdf 14 52 49.7 -1.3
WVT MLR MLR
comp=Z,13µm,22.0s
WVT Waverly 130.42 37 P PKiKP 14 52 51.1 -0.8
baz=312
WVT Waverly 130.42 37 PKPdf PKPdf 14 52 49.7 -1.3
WVT Waverly 130.42 37 IAMs_20 IAMs_20 15 50 59.0
comp=Z,13µm,22.0s
R49A Shelbyville 130.43 33 IAMs_20 IAMs_20 15 53 49.9
comp=Z,11µm,21.0s
OXF Oxford 130.51 40 PKIKP PKPdf 14 52 48.4 -2.8
OXF MLR MLR
comp=Z,18µm,21.0s
OXF Oxford 130.51 40 P PKiKP 14 52 51.6 -0.5
baz=310,SNR=6.7
OXF Oxford 130.51 40 PKPdf 14 52 48.4 -2.8
J57A Williamstown 130.52 21 P PKiKP 14 52 52.0 +0.1
baz=330,SNR=8.7
J57A Williamstown 130.52 21 IAMs_20 IAMs_20 15 57 49.5
comp=Z,12µm,22.0s
F63A Nahmakanta, Br 130.57 14 P PKiKP 14 52 52.3 +0.4
baz=339,SNR=7.1
F63A Nahmakanta, Br 130.57 14 IAMs_20 IAMs_20 16 00 45.5
comp=Z,17µm,22.0s
KIC Kean Boka 130.59 280 ePKP1 PKiKP 14 52 54.0 +1.2
comp=Z,289nm,1.3s
F64A Sherman 130.60 14 P PKiKP 14 52 51.8 -0.2
baz=340,SNR=7.7
F64A Sherman 130.60 14 IAMs_20 IAMs_20 15 57 51.3
comp=Z,12µm,22.0s
H60A Morristown 130.62 18 P PKPdf 14 52 50.4 -0.8
baz=334
K56A Middlesex 130.63 23 P PKPdf 14 52 49.7 -1.6
baz=328
I58A Old Forge 130.65 20 P PKiKP 14 52 52.3 +0.1
baz=331
G62A West of Eustis 130.65 16 P PKiKP 14 52 51.9 -0.2
baz=337
G62A West of Eustis 130.65 16 PKPdf 14 52 49.8 -1.4
G62A IAMs_20 IAMs_20 15 57 34.6
comp=Z,16µm,22.0s
M54A Oil Creek Stat 130.65 26 P PKiKP 14 52 51.9 -0.4
baz=324,SNR=18
M54A Oil Creek Stat 130.65 26 IAMs_20 IAMs_20 15 54 33.1
comp=Z,12µm,21.0s
P51A Williamsport 130.65 30 P PKiKP 14 52 51.9 -0.4
baz=320,SNR=17
P51A Williamsport 130.65 30 PKPdf PKPdf 14 52 50.1 -1.3
P51A IAMs_20 IAMs_20 15 58 32.5
comp=Z,11µm,22.0s
NCB Newcomb 130.66 20 PKPdf 14 52 49.9 -1.4
NCB IAMs_20 IAMs_20 15 47 40.8
comp=Z,16µm,22.0s
DBIC Dimbokro 130.66 280 PKP PKiKP 14 52 54.3 +1.3
comp=Z,72nm,1.1s,baz=38,slow=1.3,SNR=5.2
O52A Adamsville 130.76 29 P PKiKP 14 52 51.9 -0.6
baz=321,SNR=11
O52A Adamsville 130.76 29 PKPdf 14 52 49.8 -1.8
O52A IAMs_20 IAMs_20 15 46 46.4
comp=Z,15µm,22.0s
VT1 Waterbury 130.81 18 IAMs_20 IAMs_20 15 49 43.2
comp=Z,16µm,22.0s
J58A Remsen 130.82 21 P PKiKP 14 52 52.3 -0.2
baz=331,SNR=16
J58A Remsen 130.82 21 IAMs_20 IAMs_20 15 50 56.4
comp=Z,13µm,21.0s
TIC Toumodi 130.82 280 ePKP1 PKiKP 14 52 54.4 +1.1
H61A Lyndonville 130.88 17 P PKiKP 14 52 52.5 -0.1
baz=335,SNR=9.2
LIC Lamto 130.89 280 ePKP1 PKiKP 14 52 54.6 +1.2
comp=Z,331nm,1.2s
R50A Paris 130.89 32 PKPdf PKPdf 14 52 49.3 -2.6
R50A IAMs_20 IAMs_20 16 01 12.0
comp=Z,14µm,21.0s
K57A Scipio Center 130.91 22 P PKiKP 14 52 52.5 -0.2
baz=329,SNR=11
I59A Olmsteadville 130.93 19 P PKiKP 14 52 52.4 -0.3
baz=333,SNR=8.7
PKME Peaks-Kenny Pk 130.93 15 P PKiKP 14 52 52.8 +0.2
baz=339
PKME Peaks-Kenny Pk 130.93 15 IAMs_20 IAMs_20 15 54 43.1
comp=Z,12µm,22.0s
N54A Moraine State 130.95 27 P PKiKP 14 52 52.0 -0.9
baz=324,SNR=14
N54A Moraine State 130.95 27 IAMs_20 IAMs_20 15 54 09.1
comp=Z,15µm,21.0s
O53A New Philadelph 130.96 28 P PKiKP 14 52 52.2 -0.6
baz=322,SNR=6.5
O53A New Philadelph 130.96 28 IAMs_20 IAMs_20 15 49 00.7
comp=Z,14µm,21.0s
G63A Kingsbury 130.99 15 P PKPdf 14 52 51.1 -0.8
baz=338
P52A Corning 131.00 29 P PKiKP 14 52 52.4 -0.6
baz=321,SNR=17
P52A Corning 131.00 29 PKPdf PKPdf 14 52 51.2 -0.9
P52A IAMs_20 IAMs_20 16 02 10.5
comp=Z,12µm,20.0s
J59A Piesco 131.01 20 P PKiKP 14 52 52.0 -0.9
baz=332,SNR=12
J59A Piesco 131.01 20 IAMs_20 IAMs_20 15 49 55.2
comp=Z,17µm,22.0s
L56A Greenwood 131.01 24 P PKPdf 14 52 51.5 -0.6
baz=327
L56A Greenwood 131.01 24 PKPdf 14 52 50.2 -1.9
L56A IAMs_20 IAMs_20 15 53 27.5
comp=Z,11µm,21.0s
PLAL Pickwick Lake 131.04 38 PKPdf 14 52 50.0 -2.3
PLAL IAMs_20 IAMs_20 15 49 31.4
comp=Z,16µm,21.0s
H62A Milan 131.07 17 P PKPdf 14 52 51.6 -0.4
baz=336
H62A Milan 131.07 17 IAMs_20 IAMs_20 16 01 02.7
comp=Z,15µm,21.0s
M55A Ridgway 131.07 25 IAMs_20 IAMs_20 15 52 47.2
comp=Z,15µm,22.0s
I60A Shoreham 131.08 19 P PKiKP 14 52 52.1 -0.8
baz=333,SNR=9.7
G64A Maxfield 131.08 14 P PKiKP 14 52 52.2 -0.7
baz=340,SNR=6.7
LBNH Lisbon 131.15 18 P PKiKP 14 52 52.7 -0.4
baz=335,SNR=7.5
LBNH Lisbon 131.15 18 IAMs_20 IAMs_20 15 50 50.8
comp=Z,15µm,22.0s
VBMS Vicksburg 131.20 43 P PKPdf 14 52 52.2 -0.4
baz=307
K58A Earlville 131.21 22 P PKiKP 14 52 52.5 -0.9
baz=330,SNR=5.9
K58A Earlville 131.21 22 IAMs_20 IAMs_20 15 54 00.7
comp=Z,11µm,22.0s
PMOZ Porto Moniz, M 131.26 318 eLR LR 15 45 24.8
comp=Z,11µm,22.0s
PMOZ Porto Moniz, M 131.26 318 eLR LR 15 46 03.1
comp=Z,11µm,22.0s
V48A Smith Brothers 131.29 36 PKPdf PKPdf 14 52 50.9 -1.8
V48A IAMs_20 IAMs_20 15 59 37.9
comp=Z,11µm,20.0s
H63A New Sharon 131.30 16 P PKPdf 14 52 50.6 -1.9
baz=338
M56A Emporium 131.30 25 P PKiKP 14 52 52.9 -0.7
baz=326,SNR=11
M56A Emporium 131.30 25 IAMs_20 IAMs_20 15 52 55.3
comp=Z,17µm,22.0s
CLTN Cedars of Leba 131.34 36 PKPdf PKPdf 14 52 52.3 -0.4
I61A Oroboro, Fairl 131.34 18 P PKiKP 14 52 53.2 -0.3
baz=335
LMN Caledonia Moun 131.35 10 IAMs_20 IAMs_20 15 55 36.1
comp=Z,17µm,22.0s
U49A Red Boiling Sp 131.36 35 PKPdf PKiKP 14 52 52.8 -1.0
L57A Andrews Acres 131.41 23 P PKiKP 14 52 53.3 -0.4
baz=328
G65A Princeton 131.41 13 P PKiKP 14 52 53.1 -0.5
baz=341,SNR=9.0
G65A Princeton 131.41 13 IAMs_20 IAMs_20 15 50 04.6
comp=Z,16µm,22.0s
Q52A Bidwell 131.45 30 P PKiKP 14 52 53.1 -0.7
baz=320,SNR=12
K59A Cooperstown 131.49 21 P PKiKP 14 52 53.5 -0.4
baz=331
WVL Waterville 131.49 15 IAMs_20 IAMs_20 15 56 52.8
comp=Z,13µm,22.0s
HNH Hanover 131.52 18 IAMs_20 IAMs_20 15 50 03.5
comp=Z,17µm,22.0s
H64A Troy 131.53 15 P PKiKP 14 52 53.2 -0.7
baz=339
J60A Lant Hill Farm 131.57 19 P PKiKP 14 52 53.3 -0.7
baz=333
BINY Binghamton 131.57 22 P PKiKP 14 52 53.6 -0.4
baz=329
BINY Binghamton 131.57 22 PKPdf PKPdf 14 52 50.4 -2.7
BINY IAMs_20 IAMs_20 15 54 05.6
comp=Z,12µm,22.0s
TLIG Tlapa 131.57 64 PKPdf 14 52 51.8 -2.1
TLIG IAMs_20 IAMs_20 15 40 17.1
comp=Z,12µm,22.0s
GGN Saint George 131.65 13 IAMs_20 IAMs_20 16 01 42.1
comp=Z,12µm,22.0s
I62A Tamworth 131.66 17 P PKiKP 14 52 54.5 +0.4
baz=336
I62A Tamworth 131.66 17 IAMs_20 IAMs_20 15 48 53.2
comp=Z,12µm,22.0s
I63A Otisfield 131.71 16 P PKiKP 14 52 55.0 +0.8
baz=337
I63A Otisfield 131.71 16 IAMs_20 IAMs_20 15 53 45.7
comp=Z,12µm,21.0s
N56A West Decatur 131.72 25 P PKiKP 14 52 53.8 -0.7
baz=326,SNR=11
H65A Eastbrook 131.72 14 P PKiKP 14 52 54.7 +0.4
baz=340
L58A Harry Jones Me 131.75 22 P PKPdf 14 52 52.9 -0.6
baz=329
S51A Beattyville 131.76 32 IAMs_20 IAMs_20 16 02 48.9
comp=Z,11µm,20.0s
J61A Chester 131.76 19 P PKiKP 14 52 55.4 +1.1
baz=334
M57A Sunshine Farm, 131.86 24 P PKiKP 14 52 54.2 -0.4
baz=328,SNR=9.9
M57A Sunshine Farm, 131.86 24 IAMs_20 IAMs_20 15 54 39.9
comp=Z,16µm,21.0s
H66A Whiting 131.86 13 P PKiKP 14 52 53.8 -0.7
baz=341,SNR=8.8
Q53A Leroy 131.89 29 P PKiKP 14 52 54.8 0.0
baz=321,SNR=14
EMMW East Machias 131.90 13 IAMs_20 IAMs_20 16 02 31.6
comp=Z,10µm,21.0s
146A Union 131.92 41 IAMs_20 IAMs_20 15 50 03.9
comp=Z,17µm,22.0s
L59A Walton 131.93 21 P PKiKP 14 52 55.0 +0.2
baz=330
L59A Walton 131.93 21 PKPdf 14 52 51.3 -2.5
L59A IAMs_20 IAMs_20 15 54 11.7
comp=Z,11µm,22.0s
K60A Five Rivers En 131.97 20 P PKiKP 14 52 55.1 +0.3
baz=332
X48A Hartselle 132.02 38 PKPdf 14 52 51.7 -2.4
MCWV Mont Chateau 132.06 27 P PKiKP 14 52 55.3 +0.2
baz=323
R53A Hurricane 132.09 30 P PKiKP 14 52 55.0 -0.2
baz=320,SNR=15
R53A Hurricane 132.09 30 IAMs_20 IAMs_20 15 57 23.5
comp=Z,10µm,20.0s
I64A Boothbay 132.09 16 P PKiKP 14 52 55.0 0.0
baz=338
M58A Price's Panora 132.09 23 P PKiKP 14 52 55.0 -0.2
baz=328
J62A Henniker 132.10 18 P PKiKP 14 52 55.0 -0.1
baz=335

SSPA	Standing Stone	132.13	25	PKPdf	PKPdf	14 52 53.6	-0.5	
K61A	Williamstown	132.13	20	P	PKiKP	14 52 55.8	+0.6	
	baz=333							
Q54A	Coxs Mills	132.13	29	P	PKiKP	14 52 54.8	-0.5	
	baz=322,SNR=9.5							
Q54A	Coxs Mills	132.13	29	PKPdf	PKPdf	14 52 54.1	-0.1	
Q54A				IAMs_20	IAMs_20	15 59 11.6		
	comp=Z,12μm,21.0s							
O56A	Blue Knob Stat	132.14	26	P	PKiKP	14 52 55.3	0.0	
	baz=325,SNR=11							
O56A	Blue Knob Stat	132.14	26	IAMs_20	IAMs_20	16 02 21.6		
	comp=Z,11μm,22.0s							
N57A	Milroy	132.17	25	P	PKiKP	14 52 55.4	+0.1	
	baz=327,SNR=7.9							
SWET	Sewanee	132.18	36	IAMs_20	IAMs_20	15 57 09.4		
	comp=Z,15μm,22.0s							
KSPA	Keystone Colle	132.21	23	IAMs_20	IAMs_20	15 54 05.1		
	comp=Z,14μm,22.0s							
J63A	Strafford	132.27	17	P	PKPdf	14 52 54.2	-0.1	
	baz=336							
M59A	Waymart	132.35	22	P	PKiKP	14 52 55.8	+0.2	
	baz=330							
L60A	Shokan	132.40	21	P	PKiKP	14 52 55.9	+0.2	
	baz=331							
N58A	Sunbury	132.44	24	P	PKiKP	14 52 55.5	-0.4	
	baz=328,SNR=7.6							
L61A	Hillsdale 1, H	132.46	20	P	PKiKP	14 52 55.3	-0.5	
	baz=332							
K62A	Royalston	132.47	19	P	PKiKP	14 52 55.7	-0.2	
	baz=334							
Q55A	Buckhannon	132.48	28	P	PKiKP	14 52 56.0	-0.1	
	baz=323,SNR=14							
S53A	Williamson	132.49	31	P	PKiKP	14 52 55.8	-0.3	
	baz=320,SNR=9.3							
L61B	Northampton	132.52	19	P	PKiKP	14 52 55.8	-0.1	
	baz=334,SNR=5.4							
W50A	Signal Mountai	132.55	36	PKPdf	PKPdf	14 52 54.4	-0.8	
W50A				IAMs_20	IAMs_20	16 01 02.3		
	comp=Z,15μm,20.0s							
TZTN	Tazewell	132.59	33	P	PKiKP	14 52 56.0	-0.3	
	baz=317,SNR=14							
O57A	Amberson	132.59	25	P	PKiKP	14 52 55.5	-0.6	
	baz=326							
P56A	Dayton Farm, R	132.65	27	P	PKiKP	14 52 55.6	-0.7	
	baz=324,SNR=9.3							
K63A	Dunstable	132.68	18	P	PKPdf	14 52 53.9	-1.2	
	baz=335							
R54A	Victor	132.68	30	P	PKiKP	14 52 55.3	-1.1	
	baz=321,SNR=14							
N59A	State Game Lan	132.75	23	P	PKiKP	14 52 56.6	+0.1	
	baz=329							
T53A	Wise	132.81	32	P	PKPdf	14 52 55.6	-0.1	
	baz=319,SNR=9.1							
S54A	Dingess, Beckl	132.82	30	P	PKiKP	14 52 56.0	-0.7	
	baz=321,SNR=11							
S54A	Dingess, Beckl	132.82	30	IAMs_20	IAMs_20	15 56 46.8		
	comp=Z,16μm,22.0s							
HRV	Adam Dziewonsk	132.83	18	P	PKiKP	14 52 55.6	-0.9	
	baz=335							
CPCT	Cooper Cave	132.83	35	IAMs_20	IAMs_20	15 59 29.6		
	comp=Z,15μm,22.0s							
M60A	Port Jervis	132.84	22	P	PKiKP	14 52 55.6	-1.0	
	baz=331							
L62A	Suffield	132.90	19	P	PKiKP	14 52 56.9	+0.2	
	baz=333							
O58A	Lewisberry	132.96	25	P	PKiKP	14 52 56.2	-0.7	
	baz=327,SNR=12							
LRAL	Lakeview Retre	132.99	39	P	PKiKP	14 52 56.5	-0.7	
	baz=311,SNR=7.7							
LRAL	Lakeview Retre	132.99	39	PKPdf	PKPdf	14 52 55.6	-0.4	
LRAL				IAMs_20	IAMs_20	15 53 22.2		
	comp=Z,17μm,22.0s							
WES	Weston	133.01	18	IAMs_20	IAMs_20	15 50 48.3		
	comp=Z,10μm,22.0s							
P57A	Homestead Farm	133.03	26	P	PKiKP	14 52 56.7	-0.3	
	baz=326							
N60A	Cedar Hill Far	133.05	22	P	PKiKP	14 52 56.0	-1.0	
	baz=330,SNR=7.4							
ODNJ	Ogdensburg	133.06	22	PKPdf	PKiKP	14 52 56.4	-0.7	
ODNJ				IAMs_20	IAMs_20	15 54 31.5		
	comp=Z,11μm,21.0s							
V52A	Sevierville	133.07	34	PKPdf	PKiKP	14 52 56.4	-0.9	
O59A	Robesonia	133.10	24	P	PKiKP	14 52 57.0	-0.2	
	baz=328,SNR=8.6							
BCX	Boston College	133.11	18	IAMs_20	IAMs_20	15 49 53.7		
	comp=Z,11μm,21.0s							
TKL	Tuckaleechee C	133.11	34	PKIKP	PKiKP	14 52 56.2	-1.2	
TKL	Tuckaleechee C	133.11	34	PKPdf	PKiKP	14 52 56.2	-1.2	
TRNY	Table Rock, Ra	133.14	21		PKPdf	14 52 53.0	-3.1	
M61A	Granite Spring	133.16	21	P	PKiKP	14 52 56.8	-0.5	
	baz=332,SNR=8.0							
LUPA	Lehigh Univers	133.18	23	IAMs_20	IAMs_20	15 51 29.9		
	comp=Z,12μm,21.0s							
Q57A	Strasburg	133.22	27	P	PKiKP	14 52 57.1	-0.4	
	baz=325							
S55A	Lewisburg	133.24	30	P	PKPdf	14 52 56.4	0.0	
	baz=322,SNR=7.2							
T54A	Tazewell	133.25	31	P	PKiKP	14 52 56.7	-0.9	
	baz=320,SNR=7.5							
X51A	Calhoun	133.26	36	IAMs_20	IAMs_20	15 58 20.1		
	comp=Z,10μm,21.0s							
ROSA	Rosais	133.29	333	IAMs_20	IAMs_20	15 56 19.6		
	comp=Z,15μm,21.0s							
MVL	Millersville	133.30	24	PKPdf	PKPdf	14 52 55.5	-0.9	
P58A	Pank, Wackersv	133.33	25	P	PKiKP	14 52 56.9	-0.8	
	baz=326,SNR=5.8							
M62A	Hamden	133.35	20	P	PKiKP	14 52 56.6	-1.0	
	baz=333							
PAL	Palisades	133.38	21	P	PKiKP	14 52 57.0	-0.7	
	baz=331							
PAL	Palisades	133.38	21	IAMs_20	IAMs_20	15 54 26.0		
	comp=Z,16μm,22.0s							
L63A	North Scituate	133.40	19	P	PKiKP	14 52 57.4	-0.3	
	baz=335							
O60A	Telford	133.41	23	P	PKPdf	14 52 56.3	-0.2	
	baz=329							
BRNJ	Basking Ridge	133.42	22	IAMs_20	IAMs_20	15 49 49.1		
	comp=Z,14μm,22.0s							
W52A	Murphy	133.43	35	IAMs_20	IAMs_20	15 51 35.4		
	comp=Z,12μm,22.0s							
WSPT	Westport, CT	133.44	21	IAMs_20	IAMs_20	15 49 48.6		
	comp=Z,13μm,21.0s							
YLE	Yale	133.45	20	IAMs_20	IAMs_20	15 55 34.8		
	comp=Z,14μm,21.0s							
N61A	South Mountain	133.46	22	P	PKiKP	14 52 57.2	-0.7	
	baz=331							
U54A	Nelsons Funny	133.53	32	P	PKiKP	14 52 58.0	-0.2	
	baz=319							
U54A	Nelsons Funny	133.53	32	PKPdf	PKPdf	14 52 54.7	-2.3	
CPNY	Central Park	133.55	21	IAMs_20	IAMs_20	15 50 31.5		
	comp=Z,11μm,21.0s							
L64A	Middleborough	133.57	18	P	PKiKP	14 52 57.4	-0.7	
	baz=336							
P59A	Jarrettsville	133.60	25	P	PKiKP	14 52 57.4	-0.8	
	baz=328							
N62A	Caumsett State	133.60	21	P	PKiKP	14 52 57.8	-0.3	
	baz=332							
T55A	Pulaski	133.61	30	P	PKiKP	14 52 58.1	-0.3	
	baz=321,SNR=12							
Q58A	Fox Den Farm,	133.62	26	P	PKiKP	14 52 57.9	-0.4	
	baz=326,SNR=9.4							
V53A	Saluda	133.63	33	IAMs_20	IAMs_20	15 59 53.4		
	comp=Z,16μm,22.0s							
WUPA	West Chester U	133.66	24	IAMs_20	IAMs_20	15 56 20.7		
	comp=Z,10μm,22.0s							
M63A	Gales Ferry	133.67	19	P	PKiKP	14 52 57.9	-0.3	
	baz=334							
BLA	Blacksburg	133.72	30	P	PKiKP	14 52 58.4	-0.2	
	baz=321							
PSUB	Penn St. - Bra	133.73	23	IAMs_20	IAMs_20	15 56 32.4		
	comp=Z,16μm,22.0s							
P60A	Greenville	133.75	24	P	PKPdf	14 52 57.0	-0.2	
	baz=329							
P60A	Greenville	133.75	24	IAMs_20	IAMs_20	15 58 38.1		
	comp=Z,16μm,21.0s							
R57A	Stanardsville	133.77	27	P	PKiKP	14 52 58.2	-0.4	
	baz=324,SNR=8.6							
S56A	Natural Bridge	133.77	29	P	PKiKP	14 52 57.9	-0.7	
	baz=323,SNR=8.2							
M64A	Tiverton	133.81	18	P	PKiKP	14 52 58.2	-0.4	
	baz=335							
O61A	Allentown	133.93	22	P	PKiKP	14 52 57.7	-1.2	
	baz=330							
Z51A	Franklin	133.94	38	PKPdf	PKPdf	14 52 57.2	-0.6	
Z51A				IAMs_20	IAMs_20	15 54 14.1		
	comp=Z,15μm,21.0s							
M65A	Busby, Falmout	133.97	18	P	PKPdf	14 52 57.4	-0.2	
	baz=336							
M65A	Busby, Falmout	133.97	18	IAMs_20	IAMs_20	15 50 29.6		
	comp=Z,14μm,22.0s							
S57A	Dark Hollow, R	134.00	28	P	PKiKP	14 52 58.9	-0.2	
	baz=323							
S57A	Dark Hollow, R	134.00	28	PKPdf	PKPdf	14 52 56.1	-1.6	
S57A				IAMs_20	IAMs_20	15 57 26.0		
	comp=Z,14μm,21.0s							
R58A	Rapidan	134.00	27	P	PKiKP	14 52 58.3	-0.8	
	baz=325,SNR=12							
V54A	Nebo	134.03	33	P	PKiKP	14 52 58.2	-1.0	
	baz=319,SNR=15							
T56A	Rocky Mt	134.06	30	P	PKiKP	14 52 58.5	-0.8	
	baz=322,SNR=12							
BG3	Lake Jocassee	134.06	34	IAMs_20	IAMs_20	15 54 44.1		
	comp=Z,12μm,22.0s							
Q59A	Harwood	134.13	25	P	PKiKP	14 52 59.1	-0.1	
	baz=327							
BRAL	Brewton	134.16	41	P	PKiKP	14 52 59.2	-0.4	
	baz=310							
P61A	Hammonton	134.20	23	P	PKPdf	14 52 57.8	-0.2	
	baz=330							
P61A	Hammonton	134.20	23	IAMs_20	IAMs_20	15 57 54.0		
	comp=Z,15μm,21.0s							
R58B	Mineral	134.33	27	P	PKiKP	14 52 59.0	-0.7	
	baz=325,SNR=7.0							
R58B	Mineral	134.33	27	PKPdf	PKPdf	14 52 57.9	-0.5	
R58B				IAMs_20	IAMs_20	15 57 51.7		
	comp=Z,12μm,20.0s							
Q60A	Greensboro	134.36	24	P	PKiKP	14 52 59.6	-0.2	
	baz=328							
V55A	Taylorsville	134.36	32	P	PKiKP	14 52 59.4	-0.5	
	baz=320,SNR=13							
CBN	Corbin Frederi	134.36	26	P	PKiKP	14 52 59.8	+0.1	
	baz=326,SNR=6.7							
W54A	Cherokee Point	134.41	33	P	PKiKP	14 52 59.7	-0.3	
	baz=318,SNR=9.0							
U56A	King	134.41	31	P	PKiKP	14 52 59.7	-0.3	
	baz=321,SNR=7.4							
U56A	King	134.41	31		PKPdf	14 52 58.1	-0.5	
T57A	Hurt	134.46	29	P	PKiKP	14 53 00.0	0.0	
	baz=323,SNR=9.1							
R59A	King George, V	134.48	26	P	PKiKP	14 52 59.5	-0.5	
	baz=326,SNR=5.8							
S58A	Poland Farm, P	134.54	28	P	PKiKP	14 52 59.9	-0.2	
	baz=324,SNR=6.7							
S58A	Poland Farm, P	134.54	28	IAMs_20	IAMs_20	15 53 12.2		
	comp=Z,12μm,22.0s							
152A	Waverly Hall	134.66	38		PKPdf	14 52 59.0	-0.1	
R60A	Leonardtown, M	134.66	26	P	PKPdf	14 52 59.0	+0.1	
	baz=327							
X54A	Belton	134.70	34	P	PKiKP	14 53 00.8	+0.2	
	baz=317,SNR=6.6							
S59A	Mechanicsville	134.76	27	P	PKiKP	14 53 00.7	+0.1	
	baz=325							
V56A	Mocksville	134.77	31	P	PKiKP	14 53 00.4	-0.3	
	baz=320,SNR=10							
PAULI	Pauline,	134.81	33	IAMs_20	IAMs_20	15 54 50.8		
	comp=Z,12μm,22.0s							
KMSC	Kings Mountain	134.83	33	P	PKiKP	14 53 00.6	-0.3	
	baz=319,SNR=10							
T58A	Grand View Acr	134.85	29	P	PKiKP	14 53 00.1	-0.8	
	baz=323,SNR=15							
U57A	Blanch	134.87	30	P	PKiKP	14 53 00.7	-0.2	
	baz=322,SNR=18							
GOGA	Godfrey	134.89	36	P	PKiKP	14 53 01.3	+0.3	
	baz=315							
V57A	Coltrane Farms	135.08	31	P	PKiKP	14 53 01.4	+0.1	
	baz=321,SNR=11							
S60A	Water View	135.10	26	P	PKiKP	14 53 00.6	-0.7	
	baz=326							
R61A	Willards	135.13	24	P	PKiKP	14 53 02.1	+0.8	
	baz=328							
X55A	Gracelyn & Ava	135.17	34	P	PKiKP	14 53 01.0	-0.5	
	baz=318,SNR=8.8							
W56A	Indian Trail	135.24	32	P	PKiKP	14 53 01.2	-0.5	
	baz=320							
U58A	Oxford	135.29	29	P	PKiKP	14 53 01.4	-0.3	
	baz=323,SNR=6.7							
T59A	Double "B" Far	135.29	28	P	PKiKP	14 53 01.6	-0.1	
	baz=325,SNR=7.0							
Y55A	Saluda	135.44	34	P	PKiKP	14 53 02.3	+0.2	
	baz=318							
V58A	Windy Hill, Pi	135.48	30	P	PKiKP	14 53 00.9	-1.2	
	baz=324							
X56A	White Oak	135.48	33	P	PKiKP	14 53 01.3	-0.8	
	baz=319,SNR=7.5							
T60A	Surry	135.53	27	P	PKiKP	14 53 01.0	-1.2	
	baz=326							
W57A	Gilead	135.53	31	P	PKiKP	14 53 02.1	-0.1	
	baz=321							
S61A	Accomac	135.54	25	P	PKiKP	14 53 02.1	-0.1	
	baz=328							
154A	Montrose	135.67	37	IAMs_20	IAMs_20	16 03 40.9		
	comp=Z,15μm,21.0s							
U59A	Littleton	135.68	28	P	PKiKP	14 53 01.3	-1.2	
	baz=324							
U59A	Littleton	135.68	28	IAMs_20	IAMs_20	15 55 59.5		
	comp=Z,15μm,21.0s							
Y56A	Pelion	135.86	34	P	PKiKP	14 53 03.8	+0.9	
	baz=318							
U60A	Pendleton	135.88	28	P	PKiKP	14 53 02.0	-0.9	
	baz=315							
V59A	Middlesex	135.94	29	P	PKiKP	14 53 02.8	-0.3	
	baz=323,SNR=6.7							
X57A	Johnson Farm,	136.01	32	P	PKiKP	14 53 01.9	-1.3	
	baz=320							
W58A	Raeford	136.03	31	P	PKiKP	14 53 03.0	-0.2	
	baz=321							
Z56A	Williston	136.16	34	P	PKiKP	14 53 02.9	-0.7	
	baz=318							
Y57A	Sumter	136.19	33	P	PKiKP	14 53 03.3	-0.3	
	baz=319							
TIGA	Tifton	136.20	38	P	PKiKP	14 53 03.7	0.0	
	baz=314							
W59A	Clinton	136.31	30	P	PKiKP	14 53 03.2	-0.6	
	baz=322							
U61A	Possum Corner	136.32	27	P	PKiKP	14 53 02.5	-1.3	
	baz=326							
X58A	Rowland	136.34	31	P	PKiKP	14 53 02.7	-1.2	
	baz=321,SNR=5.8							
LL01	San Ignacio de	136.35	160	IAMs_20	IAMs_20	15 53 38.2		
	comp=Z,10μm,21.0s							
V60A	Jim Taylor Roa	136.41	28	P	PKiKP	14 53 03.4	-0.6	
	baz=324							
CNNC	Cliffs of the	136.53	29	P	PKiKP	14 53 03.6	-0.7	
	baz=323							
CNNC	Cliffs of the	136.53	29	IAMs_20	IAMs_20	15 58 12.0		
	comp=Z,13μm,20.0s							
255A	Hazlehurst	136.53	37	IAMs_20	IAMs_20	16 03 52.8		
	comp=Z,12μm,22.0s							
Z57A	Bowman	136.56	34	P	PKPdf	14 53 02.8	+0.1	
	baz=318,SNR=6.4							
Y58A	Scranton	136.66	32	P	PKPdf	14 53 02.4	-0.4	
	baz=320							
X59A	McDuffie Farm,	136.70	31	P	PKPdf	14 53 03.2	+0.3	
	baz=322							
V61A	Roper	136.71	28	P	PKiKP	14 53 03.5	-1.1	
	baz=325							
W60A	Pink Hill	136.76	29	P	PKiKP	14 53 04.0	-0.7	
	baz=323							
X60A	Albert Glenn T	137.01	30	P	PKiKP	14 53 04.1	-1.2	
	baz=323							
W61A	Ground Anchor	137.01	29	P	PKPdf	14 53 03.4	0.0	
	baz=324							
Y59A	Loris	137.02	31	P	PKiKP	14 53 04.8	-0.4	
	baz=321							
Z58A	St. Stephen	137.02	33	P	PKiKP	14 53 04.2	-1.1	
	baz=320,SNR=6.4							
V62A	Hyde County Ai	137.18	27	P	PKiKP	14 53 04.4	-1.2	
	baz=326							
Y60A	Bolivia	137.34	31	P	PKPdf	14 53 02.9	-1.2	
	baz=322							
PLCA	Paso Flores	138.45	160	PKhKP	PKPpre	14 52 56.9		
	comp=Z,7.1nm,0.6s,baz=230,slow=3.7,SNR=18							
PLCA				PKP	PKiKP	14 53 09.1	+0.9	
	comp=Z,57nm,0.7s,baz=208,slow=4.5,SNR=27							
PLCA	Paso Flores	138.45	160	PKHKP	PKPpre	14 52 55.4		
PLCA	Paso Flores	138.45	160	PKPpre	PKPpre	14 52 55.4		
PLCA	Paso Flores	138.45	160	eP	PKiKP	14 53 06.7	-1.5	
RTAL	Retalhuleu	138.81	65	IAMs_20	IAMs_20	15 50 10.0		
	comp=Z,13μm,20.0s							
TEIG	Tepich	139.42	55		PKPdf	14 53 06.6	-1.7	
TEIG	Tepich	139.42	55	IAMs_20	IAMs_20	15 50 09.2		
	comp=Z,10μm,22.0s							
LC01	Cunco	139.60	158	PKPdf	PKPdf	14 53 06.1	-2.0	
LC01				IAMs_20	IAMs_20	15 53 03.1		
	comp=Z,10μm,21.0s							
DWPF	Disney Wildern	139.84	40	P	PKPdf	14 53 06.7	-2.1	
	baz=314							
BI03	Tigo	140.91	155	IAMs_20	IAMs_20	15 55 10.2		
	comp=Z,8μm,21.0s							
ESQI	Esquipulas	140.93	64	IAMs_20	IAMs_20	15 51 04.9		
	comp=Z,10μm,20.0s							
MTO3	Montecristo	140.97	64	IAMs_20	IAMs_20	15 43 47.0		
	comp=Z,12μm,22.0s							
SNET	Serv Nac Est T	141.34	65	IAMs_20	IAMs_20	15 49 52.0		
	comp=Z,13μm,21.0s							
061Z	Ochoppi	141.71	42		PKPdf	14 53 10.8	-1.4	
061Z				IAMs_20	IAMs_20	15 52 30.3		
	comp=Z,9μm,22.0s							
TGUH	Tegucigalpa,Un	142.97	64		PKPdf	14 53 12.6	-2.3	
TGUH				IAMs_20	IAMs_20	15 51 04.0		
	comp=Z,11μm,22.0s							
BO02	Sierra Bellavi	143.60	156		PKPbc	14 53 13.5	+0.6	
CRIN	San Cristobal	143.68	65	eP	PKPbc	14 53 13.8	+0.1	
CRIN	San Cristobal	143.68	65		PKPbc	14 53 14.0	+0.4	
CNGN	Cerro Negro	144.07	66	eP	PKPab	14 53 12.9	-1.4	
VA05	Santo Domingo	144.22	154	⇑iP	PKPdf	14 53 15.6	-0.9	
BBSR	BB Station	144.25	16		PKPdf	14 53 16.2	-0.3	
BBSR	BB Station	144.25	16	IAMs_20	IAMs_20	16 00 30.6		
	comp=Z,11μm,22.0s							
MT09	Talagante	144.39	155	⇑iP	PKPdf	14 53 15.9	-1.1	
MATN	Matagalpa	144.61	64		PKPdf	14 53 16.6	-1.1	
VA01	Torpederas	144.74	153	⇑iP	PKPdf	14 53 17.1	-0.3	
VA01	Torpederas	144.74	153		PKPdf	14 53 16.8	-0.6	
VA01				IAMs_20	IAMs_20	15 55 24.8		
	comp=Z,13μm,22.0s							
MT02	Curacav	144.76	154		PKPdf	14 53 16.8	-0.6	
MT05	Renca	144.82	155	⇑iP	PKPdf	14 53 16.6	-1.0	
MT05	Renca	144.82	155		PKPdf	14 53 17.0	-0.7	
ROC1	El Roble	145.06	154	eP	PKPdf	14 53 19.1	+0.6	
PEL	Peldehue	145.06	154	⇑iP	PKPdf	14 53 17.3	-0.7	
ROCH	El Roble	145.06	154	⇑iP	PKPdf	14 53 18.4	+0.1	
VA03	San Esteban	145.44	154	⇑iP	PKPab	14 53 20.1	+1.1	
VA03	San Esteban	145.44	154		PKPab	14 53 19.0	0.0	
VA03				IAMs_20	IAMs_20	15 56 29.3		
	comp=Z,11μm,21.0s							
GBS3	Finca Las Img	145.81	68	eP	PKiKP	14 53 22.4	-1.4	
LAPC	Finca la Perla	145.84	68	eP	PKiKP	14 53 22.1	-1.8	
BUEV	Buena Vista	145.85	68	eP	PKiKP	14 53 22.9	-1.2	
GB1A	Borinquen Arri	145.85	68	eP	PKiKP	14 53 22.5	-1.6	
AAGR	Agrelo	145.88	157	eP	PKPab	14 53 20.7	+0.2	
BUAI	Buenos Aires	145.89	67	eP	PKiKP	14 53 22.1	-1.9	
GPS1	Guardaparques	145.91	68	eP	PKPab	14 53 21.8	+0.6	
GUAI	GUAI	145.93	68	eP	PKiKP	14 53 22.0	-2.0	
ORTG	Ortega, Santa	145.95	68	eP	PKPab	14 53 20.6	-0.8	
DUNO	Dulce Nombre,	146.01	69	eP	PKiKP	14 53 22.5	-1.8	
LIM1	Limonal	146.03	68	eP	PKiKP	14 53 22.5	-1.8	
ARCO	CERRO ARCO	146.05	156	eP	PKPab	14 53 21.1	-0.2	
PLVR	Palo Verde	146.05	68	eP	PKiKP	14 53 23.1	-1.5	
COLC	Colonia	146.08	68	eP	PKPab	14 53 21.4	-0.3	
HORNC	Hornillas	146.09	68	eP	PKPab	14 53 21.1	-0.8	
CUI	Cuipilapa	146.12	68	eP	PKPab	14 53 21.6	-0.4	
ACAL	Aguas Claras	146.25	68	eP	PKPbc	14 53 21.1	-0.6	
PTEN	Parque Tenorio	146.27	67	eP	PKPab	14 53 21.9	-0.7	
ASAL	Salagasta	146.31	156	eP	PKPab	14 53 22.0	-0.2	
AUSP	Uspallata	146.40	155	eP	PKPab	14 53 22.0	-0.8	
CBCY	The Bluff, Cay	146.42	49		PKPbc	14 53 20.8	-1.2	
JTS	Las Juntas de	146.44	68	PKP2	PKPdf	14 53 20.7	-0.1	
JTS	Las Juntas de	146.44	68	eP	PKPdf	14 53 20.8	-0.1	
JTS	Las Juntas de	146.44	68		PKPdf	14 53 20.7	-0.1	
CO02	Combarbal	146.56	152	⇑iP	PKPab	14 53 22.2	-1.1	
CO02	Combarbal	146.56	152		PKPbc	14 53 21.6	-0.6	
CO02				IAMs_20	IAMs_20	16 03 50.0		
	comp=Z,11μm,22.0s							
CASO	Castillo	146.59	68	eP	PKiKP	14 53 24.3	-1.2	
ARE1	Arenal 1	146.60	68⇑	eP	PKPbc	14 53 21.8	-0.9	
CEDE	Laguna Cedeo	146.60	68	eP	PKPab	14 53 23.3	-0.5	
COVE	Coope Vega, Sa	146.80	67	eP	PKPbc	14 53 21.6	-1.6	
RTLS	Leoncito	146.81	155	eP	PKPbc	14 53 22.7	-0.5	
JACO	JACO, Garabito	146.92	69	eP	PKPbc	14 53 21.9	-1.6	
SRA1	San Ramn	146.95	68⇑	eP	PKPbc	14 53 22.5	-1.3	
CO03	El Pedregal	147.01	152		PKPdf	14 53 21.3	-0.2	
CO03				IAMs_20	IAMs_20	16 04 11.0		
	comp=Z,8μm,20.0s							
RTCV	Cerro Valdivia	147.07	156	eP	PKPbc	14 53 22.4	-1.2	
ZON	Zonda	147.29	156	PKP2	PKPdf	14 53 22.1	+0.2	
ZON				MLR	MLR			
	comp=Z,8μm,21.0s							
ZON	Zonda	147.29	156		PKPdf	14 53 22.1	+0.2	
ZON				IAMs_20	IAMs_20	15 58 52.0		
	comp=Z,8μm,21.0s							
HDC	Heredia	147.31	68	eP	PKPbc	14 53 23.1	-1.8	
LCR2	La Lucha 2	147.50	68	eP	PKPbc	14 53 23.8	-1.7	
GO04	Tololo Observa	147.51	151		PKPdf	14 53 22.3	-0.2	
MRA	San Martin	147.61	161	eP	PKPbc	14 53 24.0	-1.2	
MRA				eP	PKPab	14 53 25.6	-1.7	
RIMA	Rio Macho	147.62

SLA	San Lorenzo	154.59	154	*eP*		PKPdf	14 53 34.8	+1.3
LVC	Limon Verde	154.62	145	PKP		PKPdf	14 53 35.7	+1.9
	comp=Z,35nm,0.8s,baz=303,slow=0.8,SNR=20							
LVC					PKPbc	pPKPdf	14 53 44.5	-3.2
	comp=Z,39nm,0.7s,baz=255,slow=3.9,SNR=12							
LVC	Limon Verde	154.62	145	IAMs_20	IAMs_20		15 54 23.2	
	comp=Z,13µm,22.0s							
LVC	Limon Verde	154.62	145	*eP*		PKPdf	14 53 35.0	+1.2
PAC1	Pacto, Paraso	154.65	85	*eP*		PKPdf	14 53 33.9	+0.1
ATAH	Atahualpa	154.70	103	PKP		PKPdf	14 53 36.0	+1.9
	comp=Z,52nm,0.9s,baz=314,slow=1.6,SNR=30							
PB07	IPOC Station P	154.72	142	⇑*iP*		PKPdf	14 53 34.1	+0.4
SOLC	Bahia Solano	154.81	71	*eP*		PKPdf	14 53 35.0	+1.2
LCBC	Los crdobas,	154.83	64	*eP*		PKPdf	14 53 34.4	+0.6
ITAB	Concordia	154.84	183	*eP*		PKPdf	14 53 35.0	+1.5
OTAV	Otavalo	154.99	85	*eP*		PKPdf	14 53 34.5	-0.1
OTAV	Otavalo	154.99	85	*eP*		PKPdf	14 53 35.0	+0.3
PB02	IPOC Station P	155.02	142	⇑*iP*		PKPdf	14 53 35.5	+1.6
CUSE	Cuicocha Este	155.04	85	*eP*		PKPdf	14 53 35.0	+0.3
PB09	IPOC Station P	155.06	143	⇑*iP*		PKPdf	14 53 31.9	-2.3
PATCX	Punta Patache	155.22	140	IAMs_20	IAMs_20		15 52 43.8	
	comp=Z,9µm,22.0s							
PIZC	Pizarro, Choco	155.22	74	*eP*		PKPdf	14 53 35.5	+1.2
TA01	Diego Aracena	155.39	140	⇑*iP*		PKPdf	14 53 35.9	+1.5
TA01	Diego Aracena	155.39	140	IAMs_20	IAMs_20		16 01 51.2	
	comp=Z,8µm,22.0s							
SJCC	San Jacinto, C	155.44	61	*eP*		PKPdf	14 53 34.0	-0.7
PB01	IPOC Station P	155.47	142	*eP*		PKPdf	14 53 35.8	+1.2
PB01	IPOC Station P	155.47	142	IAMs_20	IAMs_20		15 55 20.3	
	comp=Z,10µm,22.0s							
MOTC	Monteria, Cord	155.50	64	*eP*		PKPdf	14 53 34.3	-0.4
CPUP	Villa Florida	155.50	172	PKP		PKPdf	14 53 36.2	+1.8
	comp=Z,17nm,0.8s,baz=82,slow=1.0,SNR=23							
CPUP	Villa Florida	155.50	172	PKIKP		PKPdf	14 53 34.7	+0.3
CPUP	Villa Florida	155.50	172			PKPdf	14 53 34.7	+0.3
CPUP	Villa Florida	155.50	172	*eP*		PKPdf	14 53 35.8	+1.4
SMRC	Santa Marta, M	155.64	57	*eP*		PKPdf	14 53 34.2	-0.6
DBBC	Dabeiba	155.68	68	*eP*		PKPdf	14 53 35.7	+0.7
HJA	Humahuaca	155.95	152	*eP*		PKPdf	14 53 37.2	+1.7
BBAC	Balboa, Cauca	155.97	81	*eP*		PKPdf	14 53 35.4	-0.2
GCUF	Volcan Galeras	155.98	83	*eP*		PKPdf	14 53 36.9	+0.9
UREC	San Jos de Ur	156.03	66	*eP*		PKPdf	14 53 34.6	-0.8
ARGC	Ariguani, Magd	156.26	60	*eP*		PKPdf	14 53 36.4	+0.6
PLMC	San Jos del P	156.27	73	*eP*		PKPdf	14 53 35.1	-0.7
PB11	IPOC Station P	156.31	139			PKPdf	14 53 34.5	-1.3
PB11				IAMs_20	IAMs_20		15 56 23.7	
	comp=Z,8µm,22.0s							
OBIP	Obispado Ponce	156.31	32			PKPdf	14 53 34.7	-0.9
PB08	IPOC Station P	156.35	141	⇑*iP*		PKPdf	14 53 37.8	+1.7
PB08	IPOC Station P	156.35	141	IAMs_20	IAMs_20		15 53 14.7	
	comp=Z,10µm,22.0s							
POPC	Popayan, Colom	156.44	79	*eP*		PKPdf	14 53 35.3	-1.0
YOTC	Yotoco, Valle	156.45	75	*eP*		PKPdf	14 53 35.9	-0.3
SJG	San Juan	156.50	31	PKIKP		PKPdf	14 53 34.3	-1.6
SJG	San Juan	156.50	31			PKPdf	14 53 34.3	-1.6
SJG	San Juan	156.50	31	IAMs_20	IAMs_20		16 01 11.5	
	comp=Z,9µm,22.0s							
HELC	Santa Helena	156.59	70	*eP*		PKPdf	14 53 37.1	+0.4
HUMP	Col San Antoni	156.63	31	PKPdf		PKPdf	14 53 33.8	-2.3
PDPR	Patillas Dam,	156.64	31			PKPdf	14 53 33.9	-2.1
GO01	Chusmiza	156.67	140	IAMs_20	IAMs_20		15 55 58.3	
	comp=Z,10µm,22.0s							
ZARC	Zaragoza, Cauc	156.74	66	*eP*		PKPdf	14 53 36.4	0.0
PCON	Cinco Dias	156.75	80	*eP*		PKPdf	14 53 37.4	+0.2
YJA	Yavi	156.78	151	*eP*		PKPdf	14 53 38.1	+1.3
MNMC	Minye Minye	156.80	138	IAMs_20	IAMs_20		16 00 14.7	
	comp=Z,8µm,21.0s							
AP01	Chacalluta	156.82	136	IAMs_20	IAMs_20		15 58 04.5	
	comp=Z,7µm,21.0s							
MTP	Monte Pirata	156.82	30			PKPdf	14 53 34.8	-1.5
PUAC	Puerto Asis, P	156.83	84	*eP*		PKPdf	14 53 36.8	+0.3
GUY2C	Guyana, Caldas	157.05	72	*eP*		PKPdf	14 53 37.8	+0.5
MARP	Paez Belalcaza	157.08	78	*eP*		PKPdf	14 53 38.6	+1.4
RREF	El Recreo	157.17	73	*eP*		PKPdf	14 53 38.3	+0.6
URIC	Uribia, Colomb	157.18	53	*eP*		PKPdf	14 53 36.4	-0.5
ANIL	Santa Ana	157.23	74	*eP*		PKPdf	14 53 37.6	+0.3
MAN01	Angra dos Reis	157.24	203	*eP*		PKPdf	14 53 37.9	+1.1
DUB01	Friburgo-RJ	157.25	208	*eP*		PKPdf	14 53 38.8	+1.9
TOLC	Tolima	157.28	73	*eP*		PKPdf	14 53 37.6	+0.1
ESAR	Angra dos Reis	157.28	202	*eP*		PKPdf	14 53 38.8	+2.0
PTGB	Pitanga	157.34	183	*eP*		PKPdf	14 53 38.8	+1.8
PB16	IPOC Station P	157.41	137	IAMs_20	IAMs_20		16 01 42.3	
	comp=Z,10µm,22.0s							
NORC	Norcasia	157.42	71	*eP*		PKPdf	14 53 36.9	-0.4
PTBC	PUERTO BERRIO	157.47	68	*eP*		PKPdf	14 53 36.3	-1.0
ORTC	Ortega, Tolima	157.53	75	*eP*		PKPdf	14 53 36.7	-0.7
VAS01	Vassouras-RJ	157.55	205	*eP*		PKPdf	14 53 38.8	+1.6
FLOC	Florencia	157.61	81	*eP*		PKPdf	14 53 37.4	-0.1
BETC	Betania	157.62	78	*eP*		PKPdf	14 53 36.0	-1.5
GARC	Garzon, Huila	157.66	79	*eP*		PKPdf	14 53 37.4	-0.5
SPB	Sao Paulo	157.70	195	IAMs_20	IAMs_20		16 09 28.2	
	comp=Z,12µm,22.0s							
BRRC	Barranca, Sant	157.94	66	*eP*		PKPdf	14 53 37.3	-0.5
SPBC	San Pablo de B	158.14	70	*eP*		PKPdf	14 53 37.5	-0.7
VAO	Valinhos	158.14	196	*eP*		PKPdf	14 53 39.6	+1.7
ROSC	El Rosal	158.16	72	PKP		PKPdf	14 53 40.4	+1.8
	comp=Z,190nm,0.8s,baz=173,slow=2.7,SNR=26							
ROSC	El Rosal	158.16	72	*eP*		PKPdf	14 53 39.6	+1.0
SEUS	St. Eustatius	158.54	25	*eP*		PKPdf	14 53 36.9	-1.5
SEUS	St. Eustatius	158.54	25	IAMs_20	IAMs_20		16 14 51.0	
	comp=Z,10µm,21.0s							
BARC	Barichara	158.62	66	*eP*		PKPdf	14 53 39.2	+0.3
PTLC	Puerto Leguiza	158.64	85	*eP*		PKPdf	14 53 38.1	-0.7
PAMC	Pamplona, Colo	158.76	64	*eP*		PKPdf	14 53 39.8	+0.3
CHIC	Chingaza	158.78	72	*eP*		PKPdf	14 53 38.9	-0.5
SKI	Saint Kitts	158.78	25	*eP*		PKPdf	14 53 37.1	-1.6
VILC	Villavicencio,	158.97	73	*eP*		PKPdf	14 53 39.8	+0.5
RUSC	La Rusia	158.98	68	*eP*		PKPdf	14 53 39.6	-0.1
BSFB	Barra de Sao F	159.13	216	*eP*		PKPdf	14 53 40.9	+1.8
BSCB	Bom Sucesso	159.24	204	*eP*		PKPdf	14 53 40.9	+1.6
TRCB	Terra Rica	159.28	182	*eP*		PKPdf	14 53 40.9	+1.6
MACC	Macarena, Meta	159.28	79	*eP*		PKPdf	14 53 39.2	-0.4
NAN01	Guarapari, ES	159.45	219	*eP*		PKPdf	14 53 40.9	+1.4
MLYT	Lee's Yard	159.56	24	*eP*		PKPdf	14 53 39.6	-0.1
LPAZ	La Paz	159.77	136	PKP		PKPdf	14 53 42.4	+1.7
	comp=Z,72nm,0.8s,baz=46,slow=0.5,SNR=80							
LPAZ	La Paz	159.77	136	*eP*		PKPdf	14 53 41.3	+0.6
SDV	Santo Domingo	159.84	57	*eP*		PKPdf	14 53 40.4	0.0
SDV	Santo Domingo	159.84	57			PKPdf	14 53 40.1	-0.2
SDV	Santo Domingo	159.84	57	*eP*		PKPdf	14 53 40.7	+0.3
TAMC	Tame, Arauca	159.95	65	*eP*		PKPab	14 54 22.6	+2.7
ABD	La Joyeuse, An	160.07	23	*eP*		PKPdf	14 53 28.9	-11
CZSB	Cruzeiro do Su	160.07	107	*eP*		PKPdf	14 53 41.3	+0.9
PCMB	Pacaembu	160.35	186	*eP*		PKPdf	14 53 42.2	+1.7
CBE	Ff, Capester	160.38	24	*eP*		PKPdf	14 53 42.0	+1.3
BB19B	Bebedouro	160.40	194	*eP*		PKPdf	14 53 41.5	+0.9
PTGC	Puerto Gaitan,	160.43	72	*eP*		PKPdf	14 53 39.3	-1.4
TDBA	Terre de Bas,	160.57	24	*eP*		PKPdf	14 53 36.9	-3.9
MAGL	Barre de l'ile	160.62	23	*eP*		PKPdf	14 53 38.3	-2.6
DSLB	Salisbury	161.03	24	*eP*		PKPdf	14 53 38.8	-2.5
MDN	Morne-Daniel	161.15	24	*eP*		PKPdf	14 53 43.2	+1.8
DLPL	La Plaine	161.20	24	*eP*		PKPdf	14 53 42.0	+0.5
AQDB	Aquidauana	161.48	174	*eP*		PKPdf	14 53 43.2	+1.5
FDF	Fort de France	161.78	24	*eP*		PKPdf	14 53 41.9	-0.3
FDF	Fort de France	161.78	24	PKIKP		PKPdf	14 53 40.4	-1.8
FDF	Fort de France	161.78	24			PKPdf	14 53 40.4	-1.8
ILAM	Ilet Lapin Mar	161.85	23	*eP*		PKPdf	14 53 37.9	-4.3
GDU01	Guandu, BA	161.92	229	*eP*		PKPdf	14 53 43.2	+0.9
RCBR	Riachuelo	162.00	257	PKP		PKPdf	14 53 43.8	+1.3
	comp=Z,32nm,0.9s,baz=52,slow=2.6,SNR=9.8							
RCBR					PKPab	PKPab	14 54 30.3	+1.4
	comp=Z,223nm,1.0s,baz=98,slow=4.5,SNR=17							
RCBR	Riachuelo	162.00	257	PKIKP		PKPdf	14 53 41.6	-0.9
RCBR	Riachuelo	162.00	257	PKPdf		PKPdf	14 53 41.6	-0.9
RCBR	Riachuelo	162.00	257	*eP*		PKPdf	14 53 44.5	+2.0
BIM	Bigot	162.00	24	*eP*		PKPdf	14 53 42.6	+0.2
BIM	Bigot	162.00	24	*e*		PKPab	14 54 31.8	+3.4
ITRB	Iturama	162.10	190	*eP*		PKPdf	14 53 44.1	+1.7
MPOM	Morne Pois Mar	162.16	24	*eP*		PKPdf	14 53 42.3	-0.2
SLBI	Saint Lucia, B	162.49	25	*eP*		PKPdf	14 53 39.7	-3.1
MCLT	Moule a Chique	162.78	25	*eP*		PKPdf	14 53 39.7	-3.4
SVB	Belmont	163.04	27	*eP*		PKPdf	14 53 41.7	-1.7
SVB	Belmont	163.04	27			PKPab	14 54 33.0	0.0
IPMB	Ipameri, GO	163.25	198	*eP*		PKPdf	14 53 46.0	+2.4
GCMP	Grenada, Carri	163.64	28	*eP*		PKPdf	14 53 41.9	-2.1
GRGR	Grenville	163.84	30	*eP*		PKPdf	14 53 42.4	-1.8
BBGH	Gun Hill	163.84	22	*eP*		PKPdf	14 53 45.6	+1.5
JANB	Januaria	164.12	214	*eP*		PKPdf	14 53 46.0	+1.5
SIV	San Ignacio	164.21	152	PKP		PKPdf	14 53 45.4	+0.9
	comp=Z,45nm,0.7s,baz=207,slow=1.7,SNR=72							
SIV					PKPab	PKPab	14 54 39.9	+1.8
	comp=Z,80nm,0.9s,baz=290,slow=4.1,SNR=3.2							
PP1B	Ponte de Pedra	164.41	175	*eP*		PKPdf	14 53 46.2	+1.6
TOSP	Speyside	165.10	28	*eP*		PKPdf	14 53 40.0	-5.3
ETMB	Extrema	165.18	122	*eP*		PKPdf	14 53 46.8	+1.4
BDFB	Brasilia	165.36	202	PKP		PKPdf	14 53 47.0	+1.4
	comp=Z,42nm,0.9s,baz=130,slow=0.9,SNR=36							
BDFB					PKPab	PKPab	14 54 44.6	+1.3
	comp=Z,54nm,0.8s,baz=164,slow=3.6,SNR=9.8							
BDFB	Brasilia	165.36	202	PKIKP		PKPdf	14 53 45.3	-0.3
BDFB	Brasilia	165.36	202			PKPdf	14 53 45.3	-0.3
TPP	Pointe-a-Pierr	165.48	33	*eP*		PKPdf	14 53 50.0	+4.4
PTLB	Pontes e Lacer	165.51	158	*eP*		PKPdf	14 53 47.2	+1.7
ARAG	Araguaiana, MT	166.24	187	*eP*		PKPdf	14 53 47.6	+1.5
SDBA	SAO DESIDERIO	166.55	219	*eP*		PKPdf	14 53 47.4	+0.9
VILB	Vilhena	167.24	149	*eP*		PKPdf	14 53 48.7	+1.7
SAML	Samuel	168.16	126	PKIKP		PKPdf	14 53 47.6	0.0
SAML	Samuel	168.16	126			PKPdf	14 53 47.6	0.0
SAML	Samuel	168.16	126	*eP*		PKPdf	14 53 49.5	+1.9
PEXB	Peixe	168.67	207	*eP*		PKPdf	14 53 49.3	+1.3
SNDB	Serra Nova Dou	169.81	192	*eP*		PKPdf	14 53 50.4	+1.7
ROSB	Rosrio	170.55	264	*eP*		PKPdf	14 53 49.8	+0.6
SMTB	Santa Maria do	170.95	221	*eP*		PKPdf	14 53 50.6	+1.2
MDP	Montagnes des	172.92	353	PKP		PKPdf	14 53 51.1	+0.8
	comp=Z,48nm,1.0s,baz=32,slow=2.0,SNR=7.2							
MDP					PKPab	PKPab	14 55 18.3	+1.7
	comp=Z,71nm,0.9s,baz=2.5,slow=3.6,SNR=7.7							
PRPB	Parauapebas	174.41	221	*eP*		PKPdf	14 53 52.7	+1.9
TMAB	Tom-Au,PA,Br	174.55	266	*eP*		PKPdf	14 53 52.7	+1.9
NPGB	Novo Progresso	174.64	160	*eP*		PKPdf	14 53 52.1	+1.2
ITTB	Itaituba	176.76	137	*eP*		PKPdf	14 53 52.9	+1.5
MALB	Monte Alegre	179.26	81	*eP*		PKPdf	14 53 53.3	+1.6

*RSNC **26** 14:41:42.6±0.9, 7°.34N×78°.10W, h0km±6km, ML2.9, Mw3.6*
*UPA **26** 14:41:43.1±0.8, 7°.37N×78°.27W, h78km±20km, MW4.1*

ISC 26 14:41:40.1±1.6, **7°.35N**±0°.04×**78°.26W**±0°.04, **h5**km±13km, **n34**,σ1°**04**/40, **1C-2D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
PTAC	Punta Ardita,	0.49	114	*eP*		Pg	14 41 49.5	-0.1
PTAC				*eS*		Sg	14 41 55.0	-1.0
UPD2	Meteti	1.22	12	*eP*		Pb	14 42 04.0	+0.4
UPD2				*eS*		Sb	14 42 21.1	+1.5
UPD2	Meteti	1.22	12	⇑*iP*		Pb	14 42 04.0	+0.4
UPD2				*i* S		Sb	14 42 20.4	+0.8
SOLC	Bahia Solano	1.40	143	*eP*		Pn	14 42 05.2	-1.1
SOLC				*eS*		Sn	14 42 24.4	-0.7
SOLC				*i*			14 42 27.8	
	comp=Z,130nm,0.5s							
CAPC	Capurgana	1.57	35	*eP*		Pn	14 42 08.5	0.0
CAPC				*eS*		Sb	14 42 29.2	-0.5
CAPC				*i*			14 42 34.4	
	comp=Z,188nm,0.1s							
CAP2	Capurgana	1.57	35	⇓*iP*		Pn	14 42 08.7	0.0
CAP2				*eS*		Sn	14 42 28.6	-0.8
CNTA3	Canitas, Panam	1.96	342	*eP*		Pn	14 42 15.7	+1.7
CHPO	Chepo, Panama	2.00	335	*eP*		Pn	14 42 14.1	-0.3
FLAM	Flamenco Islan	2.00	321	*eP*		Pn	14 42 15.1	+0.5
AZU	Azuero	2.04	283	⇓*iP*		Pn	14 42 15.2	+0.2
UPA	Univ. de Panam	2.05	322	*eP*		Pn	14 42 13.6	-1.6
UPA				*eS*		Sn	14 42 39.4	-1.8
DBBC	Dabeiba	2.06	99	*eP*		Pn	14 42 15.4	-0.1
ARRA3	Arraijan, Pana	2.12	319	*eP*		Pn	14 42 16.3	+0.2
CHOR3	La Chorrera	2.14	316	*eP*		Pn	14 42 16.4	-0.1
VTON	El Valle, Cocl	2.22	305	*eP*		Pn	14 42 18.6	+1.0
ZANG	Zanguenga, Cho	2.25	315	*eP*		Pn	14 42 18.1	+0.1
LCBC	Los crdobas,	2.40	51	*eP*		Pn	14 42 19.6	-0.4
MLIR	Monte Lirio	2.45	320	*eP*		Pn	14 42 20.4	-0.3
CACAO	El Cacao, Vera	2.58	270	*eP*		Pn	14 42 21.9	-0.5
UREC	San Jos de Ur	2.74	81	*eP*		Pn	14 42 25.6	+1.0
MOTC	Monteria, Cord	2.94	61	*eP*		Pn	14 42 28.7	+1.3
HELC	Santa Helena	2.95	113	*eP*		Pn	14 42 27.8	-0.1
HELC	Santa Helena	2.95	113	*eP*		Pn	14 42 28.3	+0.4
PLMC	San Jos del P	3.12	141	*eP*		Pn	14 42 30.8	+0.7
ZARC	Zaragoza, Cauc	3.38	87	*eP*		Pn	14 42 33.2	-0.3
GUY2C	Guyana, Caldas	3.57	126	*eP*		Pn	14 42 36.0	-0.5
RREF	El Recreo	3.78	130	*eP*		Pn	14 42 40.2	+0.6
NORC	Norcasia	3.81	118	*eP*		Pn	14 42 43.3	+3.8
YOTC	Yotoco, Valle	3.85	150	*eP*		Pn	14 42 40.5	+0.4
SJCC	San Jacinto, C	3.96	50	*eP*		Pn	14 42 41.5	-0.1
MARP	Paez Belalcaza	5.03	153	*eP*		Pn	14 42 58.6	+2.1
BARC	Barichara	5.10	98	*eP*		Pn	14 42 56.9	-0.5
RUSC	La Rusia	5.35	105	*eP*		Pn	14 43 00.9	-0.1
PAMC	Pamplona, Colo	5.52	90	*eP*		Pn	14 43 03.4	0.0

*UPA **26** 14:42:21.7±2.0, 7°.33N×78°.21W, h0km±6km, MW4.4*
*RSNC **26** 14:42:23.8±1.2, 7°.33N×78°.21W, h9km±5km, ML3.3, Mw3.9*

ISC 26 14:42:21.7±1.1, **7°.30N**±0°.02×**78°.26W**±0°.02, **h13**km±9km, **n56**,σ1°**63**/86, **5C-9D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time h m s	Res ISC
				Op				
PTAC	Punta Ardita,	0.47	109	⇓*iP*		Pg	14 42 31.1	+0.1
PTAC				*eS*		Sg	14 42 37.0	-0.3
PTAC	Punta Ardita,	0.47	109	*eP*		Pg	14 42 31.1	+0.1
PTAC				*eS*		Sg	14 42 36.7	-0.6
UPD2	Meteti	1.26	11	*eP*		Pb	14 42 45.5	+0.2
UPD2				*eS*		Sg	14 43 02.4	+0.1
UPD2	Meteti	1.26	11	⇑*iP*		Pb	14 42 45.6	+0.2
UPD2				*eS*		Sg	14 43 02.6	+0.1
SOLC	Bahia Solano	1.36	142	*eP*		Pb	14 42 47.4	+0.4
SOLC				*eS*		Sg	14 43 06.0	+0.4
SOLC				*i*			14 43 09.2	
	comp=Z,761nm,0.2s							
SOLC	Bahia Solano	1.36	142	*eP*		Pb	14 42 47.4	+0.4
SOLC				*eS*		Sg	14 43 06.0	+0.4
CAPC	Capurgana	1.60	34	*eP*		Pn	14 42 49.8	+0.1
CAPC				*eS*		Sn	14 43 09.8	-0.5
CAPC				*i*			14 43 14.4	
	comp=Z,676nm,0.7s							
CAP2	Capurgana	1.61	33	⇓*eP*		Pn	14 42 50.0	+0.2
CAP2				*eS*		Sn	14 43 10.0	-0.5
CNTA3	Canitas, Panam	2.01	342	⇓*eP*		Pb	14 42 57.5	-0.6
CNTA3				*eS*		Sn	14 43 20.7	+0.4
CHPO	Chepo, Panama	2.04	336	⇓*iP*		Pb	14 42 57.8	-0.9
CHPO				*i* S		Sb	14 43 23.7	-0.4
FLAM	Flamenco Islan	2.04	322	⇓*iP*		Pn	14 42 56.1	+0.3
DBBC	Dabeiba	2.05	98	*eP*		Pn	14 42 57.1	+1.1
DBBC	Dabeiba	2.05	98	*eP*		Pn	14 42 56.3	+0.3
DBBC				*eS*		Sb	14 43 24.1	-0.3
AZU	Azuero	2.06	284	⇓*iP*		Pn	14 42 56.8	+0.8
UPA	Univ. de Panam	2.10	323	*eS*		Sb	14 43 24.7	-0.9
UPA	Univ. de Panam	2.10	323	*eS*		Sn	14 43 22.4	0.0
ARRA3	Arraijan, Pana	2.16	320	⇓*iP*		Pn	14 42 58.3	+0.9
ARRA3				*i* S		Sb	14 43 26.9	-0.4
CHOR3	La Chorrera	2.18	317	⇓*eP*		Pn	14 42 58.4	+0.8
CHOR3				*i* S		Sb	14 43 27.9	-0.1
CHIT3	Chitre	2.24	287	⇑*iP*		Pn	14 42 59.6	+1.2
CHIT3				*i* S		Sn	14 43 24.6	-1.3
GAMB1	Gamboa	2.31	322	*eP*		Pn	14 43 00.6	+1.2
LCBC	Los crdobas,	2.43	50	*eP*		Pn	14 43 01.1	0.0
LCBC				*eS*		Sb	14 43 35.5	+0.3
LCBC				*i*			14 43 42.6	
	comp=Z,198nm,0.5s							
CRIS3	El Cristo, Coc	2.52	292	⇑*eP*		Pg	14 43 10.7	+0.6
CACAO	El Cacao, Vera	2.58	271	⇑*eP*		Pb	14 43 09.1	+1.2
UREC	San Jos de Ur	2.74	80	*eP*		Pn	14 42 56.6	-8.8
HELC	Santa Helena	2.92	112	*eP*		Pn	14 43 09.6	+1.3
HELC				*eS*		Sn	14 43 46.1	+2.7
HELC				*i*			14 43 56.2	
	comp=Z,72nm,0.7s							
HELC	Santa Helena	2.92	112	*eP*		Pn	14 43 09.5	+1.3
HELC				*eS*		Sn	14 43 45.5	+2.1
MOTC	Monteria, Cord	2.96	60	*eP*		Pn	14 43 06.3	-2.1
MOTC				*eS*		Sn	14 43 43.9	+0.1
MOTC				*i*			14 43 52.5	
	comp=Z,84nm,0.6s							
GMAL	Guarumal, Vera	2.98	279	⇑*eP*		Pn	14 43 10.7	+1.9
ZARC	Zaragoza, Cauc	3.38	87	*eP*		Pn	14 43 15.3	+1.1
ZARC				*eS*		Sn	14 43 53.6	-0.6
ZARC				*i*			14 43 58.8	
	comp=Z,146nm,0.4s							
MALC	Bahia Malaga	3.39	164	*eP*		Pn	14 43 14.6	+0.2
MALC				*eS*		Sn	14 43 53.1	-1.3
MALC				*i*			14 44 02.8	
	comp=Z,31nm,0.3s							
GUY2C	Guyana, Caldas	3.54	125	*eP*		Pn	14 43 17.8	+1.0
GUY2C				*eS*		Sb	14 44 03.5	-4.1
GUY2C				*i*			14 44 14.6	
	comp=Z,69nm,0.7s							
RREF	El Recreo	3.75	129	*eP*		Pn	14 43 21.0	+1.2
RREF				*eS*		Sb	14 44 12.7	-1.1
RREF				*i*			14 44 21.9	
	comp=Z,28nm,0.5s							
NORC	Norcasia	3.78	117	*eP*		Pn	14 43 20.7	+0.9
NORC				*eS*		Sb	14 44 11.6	-2.6
NORC				*i*			14 44 23.5	
	comp=Z,32nm,0.5s							
YOTC	Yotoco, Valle	3.80	150	*eP*		Pb	14 43 27.3	-1.5
PTBC	PUERTO BERRIO,	3.85	101	*eP*		Pn	14 43 21.1	+0.4
PTBC				*eS*		Sn	14 44 06.6	+0.8
PTBC				*i*			14 44 31.3	
	comp=Z,40nm,0.6s							
TOLC	Tolima	3.98	133	*eP*		Pn	14 43 25.7	+3.0
ANIL	Santa Ana	3.98	134	*eP*		Pn	14 43 23.4	+0.7
SJCC	San Jacinto, C	3.99	49	*eP*		Pn	14 43 23.9	+1.3
SJCC				*eS*		Sn	14 44 09.1	-0.3
SJCC				*i*			14 44 20.2	
	comp=Z,34nm,0.5s							
CHGR2	Aguacate	4.18	293	*eP*		Pb	14 43 33.0	-2.1
BCO2	Palmira	4.46	289	⇓*eP*		Pn	14 43 31.1	+2.0
SPBC	San Pablo de B	4.47	111	*eP*		Pn	14 43 30.8	+1.6
ORTC	Ortega, Tolima	4.51	138	*eP*		Pn	14 43 33.2	+3.4
BRRC	Barranca, Sant	4.51	92	*eP*		Pn	14 43 30.2	+0.4
BRRC				*eS*		Sn

*NEIC **26** 14:46:36.4±1.8, 2.09N±0.07×126.59E±0.07, h35km±2km, mb4.9/66, Error ellipse: s-maj=13.7km s-min=9.4km az=217.0*

ISC 26 14:46:37.9±0.3, 2.04N±0.04×126.59E±0.05, h47km, n153, σ1§17/153, mb4.8/61, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.48	148	P	Pn	14 47 01.8	-0.3
TNTI				S	Sn	14 47 22.1	+1.9
TNTI	Ternate	1.48	148	Pn	Pn	14 47 01.7	-0.3
SGSI	Sangihe	1.95	327	P	Pn	14 47 08.9	+0.4
KMSI	Cibinong	2.99	241	P	Pn	14 47 23.9	+1.1
GTOI	Gorontalo	3.84	249	P	Pn	14 47 37.3	+2.8
SANI	Sanana	4.11	188	P	Pn	14 47 38.5	+0.4
LUWI	Luwuk	4.90	231		Pn	14 47 50.5	+1.5
MRSI	Marisa	4.90	252	P	Pn	14 47 51.2	+2.1
NLAI	Namlea	5.27	174	P	Pn	14 47 55.5	+1.4
	1.3nm46nm,0.8s						
APSI	Ampana	5.75	239	P	Pn	14 48 02.9	+2.2
	13nm414nm,1.0s						
MSAI	Masohi	5.84	156	P	Pn	14 48 03.7	+1.8
	0.6nm20nm,0.7s						
TOLI2	Tolitoli	5.88	261	Pn	Pn	14 48 01.6	-1.0
FAKI	Fak Fak	7.50	131	Pn	Pn	14 48 24.5	-0.2
MYLDM	Lahad Datu	8.66	291	Pn	Pn	14 48 38.6	-2.0
KAPI	Kappang	9.79	224	Pn	Pn	14 48 56.9	+0.8
KKM	Kota Kinabalu	11.09	291	Pn	Pn	14 49 16.4	+2.4
MMRI	Maumere	11.46	202	Pn	Pn	14 49 20.6	+1.6
SOEI	Soe	11.94	191	Pn	Pn	14 49 27.4	+1.6
SBUM	Sibu	14.37	272	P	P	14 50 04.6	0.0
MTN	Manton Dam	15.46	163	P	Pn	14 50 12.3	-0.6
	baz=16,SNR=8.0						
MTN	Manton Dam	15.46	163	Pn	Pn	14 50 12.0	-0.9
KDU	Kakadu	15.75	158	P	P	14 50 18.6	-1.3
	baz=16,SNR=10						
JAGI	Jajag, Banyuwa	16.21	230	P	P	14 50 25.8	+0.7
JAGI				IAmb	IAmb	14 50 28.9	
	comp=Z,96nm,1.2s						
KNRA	Kununurra	17.73	173	P	Pn	14 50 40.6	-0.8
	baz=18,SNR=7.9						
KNRA	Kununurra	17.73	173	P	Pn	14 50 40.3	-1.2
SMRI	Semarang	18.48	241	P	Pn	14 50 50.2	-0.5
SMRI				IAmb	IAmb	14 50 54.1	
	comp=Z,179nm,1.3s						
UGM	Wanagama	18.83	238	P	Pn	14 50 55.0	+0.1
FITZ	Fitzroy Crossi	20.03	183	P	P	14 51 05.8	-1.2
	comp=Z,1.7nm,0.3s,baz=356,slow=6.7,SNR=16						
FITZ	Fitzroy Crossi	20.03	183	P	P	14 51 06.6	-0.5
	baz=20,SNR=11						
FITZ	Fitzroy Crossi	20.03	183	P	P	14 51 06.6	-0.5
DLV	T Lat	20.47	300	P	P	14 51 10.7	-1.4
CISI	Cisompet, Garu	21.02	243	P	P	14 51 18.1	+0.2
CISI				IAmb	IAmb	14 51 36.4	
	comp=Z,93nm,1.3s						
MANU	Manus Island	21.16	101	P	P	14 51 18.7	-0.6
TWG	Pinlang	21.34	346	P	P	14 51 19.5	-1.6
TWG				IAmb	IAmb	14 51 25.4	
	comp=Z,36nm,1.0s						
GUMO	Guam	21.41	57	P	P	14 51 21.4	-0.5
YULB	Yu-li	21.84	347	P	P	14 51 24.1	-2.4
YULB				IAmb	IAmb	14 51 27.2	
	comp=Z,22nm,0.6s						
TPUB	Ta-pu	21.91	345	P	P	14 51 25.9	-1.3
TPUB				IAmb	IAmb	14 51 32.5	
	comp=Z,37nm,0.5s						
SSLB	Suanglung	22.30	346	P	P	14 51 29.5	-1.9
NACB	Ninganchiao	22.53	348	P	P	14 51 31.6	-2.3
MYKOM	Kota Tinggi	22.73	270	P	P	14 51 36.2	0.0
COEN	Coen	22.86	135	P	P	14 51 38.3	+0.8
WB0	Warramunga Arr	22.98	161	P	P	14 51 37.0	-1.7
WB0				IAmb	IAmb	14 51 43.2	
	comp=Z,38nm,0.9s						
YHNB	Yeheng	23.06	348	P	P	14 51 38.7	-0.7
YHNB				IAmb	IAmb	14 51 49.7	
	comp=Z,29nm,0.9s						
WRAB	Tennant Creek	23.12	161	P	P	14 51 38.3	-1.8
WRAB				IAmb	IAmb	14 51 42.0	
	comp=Z,35nm,0.8s						
WRA	Warramunga Arr	23.13	161	P	P	14 51 38.4	-1.8
	comp=Z,23nm,0.5s,baz=339,slow=11,SNR=20						
WRA	Warramunga Arr	23.13	161	P	P	14 51 38.7	-1.4
WB2	Warramunga Arr	23.13	161	P	P	14 51 38.6	-1.6
WB2				IAmb	IAmb	14 51 42.1	
	comp=Z,34nm,0.8s						
WR0	Warramunga Arr	23.21	161	P	P	14 51 39.4	-1.6
WR0				IAmb	IAmb	14 51 43.8	
	comp=Z,61nm,1.3s						
PSA00	Pilbara Seismi	24.38	195	P	P	14 51 51.8	0.0
MNAI	Manna	24.46	255	P	P	14 51 51.8	-0.9
QIS	Mount Isa	25.83	151	P	P	14 52 05.6	+0.6
	baz=26,SNR=8.7						
RABL	Rabaul	26.29	104	P	P	14 52 08.9	-0.4
RABL				IAmb	IAmb	14 52 29.2	
	comp=Z,36nm,0.7s						
AS31	Alice Springs	26.52	165	P	P	14 52 10.4	-0.9
ASAR	Alice Springs	26.52	165	P	P	14 52 10.4	-0.9
	comp=Z,4.1nm,0.5s,baz=347,slow=14,SNR=11						
ASAR	Alice Springs	26.52	165	P	P	14 52 10.2	-1.1
WRKA	Warakurna	26.97	177	P	P	14 52 15.5	+0.3
	baz=27,SNR=8.6						
PSI	Prapat	27.66	272	P	P	14 52 20.2	-1.5
	comp=Z,6.7nm,0.7s,baz=176,slow=0.3,SNR=2.9						
JCJ	Chichijima	29.05	30	P	P	14 52 33.0	-0.8
CTA	Charters Tower	29.25	140	P	P	14 52 36.7	+1.0
	comp=Z,7.6nm,1.1s,baz=302,slow=9.5,SNR=1.9						
MEEK	Meekatharra	29.53	195	P	P	14 52 37.7	-0.4
	baz=30,SNR=4.6						
NJ2	Nanjing	30.73	347	eP	P	14 52 50.0	+1.4
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
JNU	Nakatsue	31.18	7	P	P	14 52 52.1	-0.5
	comp=Z,6.9nm,0.8s,baz=135,slow=12,SNR=1.8						
CMAR	Chiang Mai Arr	31.64	303	P	P	14 52 55.7	-1.1
	comp=Z,1.4nm,0.8s,baz=124,slow=7.0,SNR=4.2						
CHTO	Chiang Mai	31.80	303	P	P	14 52 56.7	-1.5
PATS	Pohnpei	31.97	80	P	P	14 52 58.5	-1.3
KMI	Kunming	32.49	317	eP	P	14 53 05.0	+0.5
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
MORW	Morawa	32.54	197	P	P	14 53 03.8	-0.8
	baz=33,SNR=5.7						
MORW	Morawa	32.54	197	P	P	14 53 03.7	-0.9
FORT	Forrest	32.67	178	P	P	14 53 05.0	-0.6
	baz=33,SNR=9.9						
FORT	Forrest	32.67	178	P	P	14 53 04.8	-0.8
BLDU	Ballidu	33.81	195	P	P	14 53 14.7	-0.9
	baz=34,SNR=7.1						
JWT	Wachi	34.07	13	P	P	14 53 17.3	-0.6
KLBR	Kellerberrin	34.48	193	P	P	14 53 20.7	-0.8
	baz=34,SNR=14						
JGF	Kuroka	34.86	15	P	P	14 53 24.8	+0.1
JGF				IAmb	IAmb	14 53 35.4	
	comp=Z,29nm,1.3s						
MUN	Mundaring	35.24	195	P	P	14 53 27.4	-0.5
	baz=35,SNR=4.5						
KSRS	Korea Array	35.26	2	P	P	14 53 30.9	+2.9
	comp=Z,3.9nm,0.6s,baz=178,slow=10.0,SNR=13						
NWAO	Narrogin (SRO)	35.89	193	P	P	14 53 31.5	-2.0
	comp=Z,12nm,0.8s,baz=30,slow=8.6,SNR=5.5						
NWAO	Narrogin (SRO)	35.89	193	P	P	14 53 33.1	-0.4
	baz=36,SNR=4.3						
NWAO	Narrogin (SRO)	35.89	193	P	P	14 53 32.7	-0.8
CD2	Chengdu	35.93	325	eP	P	14 53 37.3	+3.3
MJAR	Matsushiro Arr	35.97	16	P	P	14 53 35.0	+0.7
	comp=Z,4.2nm,0.7s,baz=182,slow=9.4,SNR=12						
MJAR	Matsushiro Arr	35.97	16	P	P	14 53 33.5	-0.7
MJB9	Matsu-Tunnel	35.98	16	P	P	14 53 34.9	+0.6
EIDS	Eidsvold	36.13	141	P	P	14 53 35.5	-0.2
EIDS				IAmb	IAmb	14 54 00.9	
	comp=Z,19nm,1.4s						
STKA	Stephens Creek	36.61	158	P	P	14 53 39.0	-0.7
	comp=Z,6.2nm,0.7s,baz=323,slow=10,SNR=12						
STKA	Stephens Creek	36.61	158	P	P	14 53 39.3	-0.4
	baz=37,SNR=6.8						
STKA	Stephens Creek	36.61	158	P	P	14 53 39.2	-0.6
HTT	Hallett	37.15	163	P	P	14 53 45.8	+1.4
	baz=37,SNR=4.0						
LZH	Lanzhou	39.89	331	eP	P	14 54 09.5	+2.0
LZH				pP	pwP	14 54 22.0	+0.2
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
ARMA	Armidale	40.15	145	P	P	14 54 09.4	-0.2
	baz=40,SNR=7.7						
ARMA	Armidale	40.15	145	P	P	14 54 09.8	+0.2
ARMA				IAmb	IAmb	14 54 22.3	
	comp=Z,25nm,1.4s						
HHC	Hu-ho-hao-te	40.95	343	eP	P	14 54 16.5	+0.4
HHC				pmax	pmax		
	comp=Z,17nm,0.8s						
ARPS	Mount Arapiles	41.13	161	P	P	14 54 17.6	+0.1
	baz=41,SNR=8.6						
USRK	Ussuriysk Ar.	42.25	6	P	P	14 54 28.5	+2.0
	comp=Z,0.0nm,0.5s,baz=193,slow=7.5,SNR=5.5						
TOO	Toolangi	43.13	158	P	P	14 54 33.6	-0.2
TOO				IAmb	IAmb	14 54 60.0	
	comp=Z,25nm,1.4s						
ASAJ	Asahikawa	44.24	17	P	P	14 54 44.9	+2.3
	comp=Z,3.7nm,0.6s,baz=235,slow=8.5,SNR=9.7						
JKA	Kamikawa-asahi	44.24	17	P	P	14 54 41.2	-1.4
JKA				IAmb	IAmb	14 55 05.2	
	comp=Z,15nm,1.1s						
GTA	Gaotai	44.48	330	eP	P	14 54 47.5	+2.7
GTA				pP	pP	14 54 53.0	-4.0
GTA				sP	pwP	14 54 55.5	-3.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TAPN	Taplejung	44.92	308	eP	P	14 54 47.1	-1.6
ODAN	Odare	44.95	307	eP	P	14 54 48.6	-0.3
	comp=Z,40nm,1.0s						
RAMN	Ramite	45.62	307	eP	P	14 54 53.7	-0.5
	comp=Z,16nm,0.6s						
GUN	Gumba	46.62	307	eP	P	14 55 01.1	-1.1
PKI	Pulchoki	46.85	307	eP	P	14 55 03.1	-0.8
PKIN	Phulchoki	46.86	307	eP	P	14 55 03.1	-0.9
YSS	Yuzh-Sakhalins	46.90	15	P	P	14 55 02.8	-0.7
YSS				IAmb	IAmb	14 55 21.8	
	comp=Z,14nm,0.9s						
KKN	Kakani	47.05	307	eP	P	14 55 03.8	-1.5
DMN	Daman	47.11	307	eP	P	14 55 04.5	-1.4
	comp=Z,32nm,1.0s						
GKN	Gorkha	47.65	307	eP	P	14 55 09.1	-0.9
KOLN	Koldanda	48.39	306	eP	P	14 55 14.9	-0.8
DANN	Dangsing	48.50	307	eP	P	14 55 15.7	-1.0
	comp=Z,45nm,0.9s						
ULN	Ulaanbaatar	48.68	343	P	P	14 55 17.8	+0.2
ULN				IAmb	IAmb	14 55 28.4	
	comp=Z,10nm,1.2s						
SONM	Songino Array	48.85	342	P	P	14 55 19.8	+0.9
	comp=Z,3.3nm,0.6s,baz=156,slow=10.0,SNR=5.5						
SONM	Songino Array	48.85	342	P	P	14 55 19.2	+0.4
PYUN	Piuthan	49.01	306	eP	P	14 55 20.0	-0.5
	comp=Z,34nm,0.7s						
WMQ	Urumqi	54.03	326	eP	P	14 55 58.5	+0.9
WMQ				pmax	pmax		
	comp=Z,20nm,1.1s						
PEA0B	Petropavlovsk-	57.04	22	P	P	14 56 20.6	+1.7
PETK	Petropavlovsk-	57.04	22	P	P	14 56 21.0	+2.0
	comp=Z,4.3nm,0.8s,baz=179,slow=3.8,SNR=6.2						
PETK	Petropavlovsk-	57.04	22	P	P	14 56 20.5	+1.5
NIL	Nilore	58.85	309	P	P	14 56 32.4	+0.3
NIL				IAmb	IAmb	14 56 47.2	
	comp=Z,9.6nm,0.8s						
MK31	Makanchi Array	58.86	326	P	P	14 56 31.7	-0.2
MK31				IAmb	IAmb	14 56 35.3	
	comp=Z,9.7nm,1.1s						
MKAR	Makanchi Array	58.86	326	P	P	14 56 31.8	-0.1
	comp=Z,5.2nm,0.5s,baz=120,slow=8.1,SNR=28						
MKAR	Makanchi Array	58.86	326	P	P	14 56 31.5	-0.4
MAKZ	Makanchi	59.05	326	P	P	14 56 32.9	-0.3
MAKZ				IAmb	IAmb	14 56 35.6	
	comp=Z,11nm,1.1s						
KDJ	Kajisay	59.52	319	P	P	14 56 36.8	+0.1
KDJ				IAmb	IAmb	14 56 38.7	
	comp=Z,11nm,0.8s						
LBZ	Lake Benmore	60.37	145	P	P	14 56 42.5	+0.2
KHZ	Kahutara	61.22	142	P	P	14 56 48.5	+0.4
BKZ	Black Stump Fm	61.43	137	P	P	14 56 49.3	-0.3
AAK	Ala-Archa	61.52	319	P	P	14 56 51.3	+0.9
	comp=Z,4.5nm,0.8s,baz=141,slow=6.5,SNR=3.5						
ZALV	Zalesovo Beam	62.03	334	P	P	14 56 53.0	-0.3
	comp=Z,1.4nm,0.4s,baz=121,slow=5.6,SNR=2.9						
KBL	Kabul	62.45	308	P	P	14 56 56.3	-0.5
KBL				IAmb	IAmb	14 56 57.4	
	comp=Z,9.1nm,0.7s						
AFI	Afiamalu	63.08	107	P	P	14 57 00.9	-0.2
KURBB	Kurchatov Arra	63.08	328	P	P	14 57 00.2	-0.2
	comp=Z,4.6nm,0.6s,baz=130,slow=6.6,SNR=25						
KURK	Kurchatov	63.09	328	P	P	14 57 00.1	-0.3
BVAR	Borovoye Array	68.66	327	P	P	14 57 36.1	-0.2
	comp=Z,1.4nm,0.4s,baz=112,slow=9.5,SNR=8.3						
BRVK	Borovoye	68.73	327	P	P	14 57 36.1	-0.6
BRVK				IAmb	IAmb	14 57 46.1	
	comp=Z,9.2nm,1.1s						
TIXI	Tiksi	69.52	1	P	P	14 57 40.8	-0.4
TIXI				IAmb	IAmb	14 57 54.3	
	comp=Z,9.7nm,1.1s						
BILL	Bilibino	71.21	15	P	P	14 57 52.2	+0.6
NRIK	Noril'sk	72.03	346	P	P	14 57 57.7	+1.2
	comp=Z,4.5nm,0.5s,baz=131,slow=6.7,SNR=6.2						
SOCY	Socotra	72.57	282	P	P	14 57 58.6	-2.4
SOCY				IAmb	IAmb	14 58 03.0	
	comp=Z,17nm,1.1s						
ABKAR	Akbulak array	73.37	321	P	P	14 58 04.8	-0.1
AKTO	Aktyubinsk	74.89	322	P	P	14 58 14.3	+0.5
	comp=Z,6.2nm,0.7s,baz=108,slow=8.2,SNR=9.3						
ARU	Arti	76.29	328	P	P	14 58 21.3	-0.3
ARU				IAmb	IAmb	14 58 30.0	
	comp=Z,26nm,1.4s						
SDPT	Sand Point	78.66	34	P	P	14 58 34.1	-0.8
OPO	Ambohidratompo	80.61	251	P	P	14 58 46.3	-0.1
	comp=Z,6.7nm,0.8s,baz=45,slow=3.2,SNR=5.1						
VNDA	Vanda	81.78	173	P	P	14 58 51.1	-0.1
	comp=Z,3.1nm,0.7s,baz=327,slow=5.7,SNR=8.5						
MAW	Mawson	82.13	200	P	P	14 58 53.1	-0.1
	comp=Z,4.0nm,0.9s,baz=54,slow=4.7,SNR=4.3						
TTA	Tatalina	82.46	27	P	P	14 58 57.2	+2.0
TTA				IAmb	IAmb	14 58 58.5	
	comp=Z,20nm,1.3s						
GEVA	Gevas	83.67	308	P	P	14 59 02.1	0.0
SYO	Syowa Base	90.81	201	IeX	P	14 59 44.0	+8.3
BRTR	Keskin Array B	90.99	310	P	P	14 59 37.4	-0.1
	comp=Z,0.8nm,0.6s,baz=130,slow=4.1,SNR=1.6						
QSPA	South Pole Qui	91.36	180	P	P	14 59 41.7	+0.4
	comp=Z,4.4nm,1.1s,baz=321,slow=6.5,SNR=1.1						
ARCES	ARCESS Array B	91.98	340	P	P	14 59 42.6	+1.4
	comp=Z,4.4nm,0.9s,baz=90,slow=7.6,SNR=1.9						
FINES	FINESS Array B	93.25	332	P	P	14 59 46.6	-0.6
	comp=Z,5.6nm,1.0s,baz=57,slow=5.1,SNR=2.1						

*IDC **26** 14:48:25.9±0.4, 1.93N×126.39E, h0km, mb4.8/29, mb1 4.8/31, mb1mx4.7/49, mbtmp4.7/31, ML4.6/2, Error ellipse: s-maj=19.1km s-min=10.1km az=82.0*

*BJI **26** 14:48:26.0±0.0, 1.32N×126.51E, h41km, mB5.2/2, mb5.0/34*

*NEIC **26** 14:48:31.6±1.7, 1.94N±0.07×126.43E±0.06, h43km±6km, mb5.1/101, Error ellipse: s-maj=10.5km s-min=9.0km az=205.0*

*KLM **26** 14:48:32.0, 2.02N×126.63E, h48km, mb5.3*

*DJA **26** 14:48:32.8±1.2, 2.1N±3°×12°7E±°, h37km±25km, M5.2/11, mb5.1/1, MLv5.3/11*

ISC 26 14:48:32.2±0.3, 1.94N±0.04×126.47E±0.06, h47km, n211, σ1§06/203, mb5.0/77, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.46	142	P	Pn	14 48 56.0	-0.2
TNTI	Ternate	1.46	142	Pn	Pn	14 48 55.8	-0.3
SGSI	Sangihe	1.98	332	P	Pn	14 49 04.6	+1.4
SGSI				S	Sn	14 49 28.0	+1.2
KMSI	Cibinong	2.83	242	P	Pn	14 49 17.3	+2.4
GTOI	Gorontalo	3.69	250	P	Pn	14 49 29.5	+2.8
SANI	Sanana	3.99	187	P	Pn	14 49 31.4	+0.6
LUWI	Luwuk	4.74	231	Pn	Pn	14 49 44.7	+3.6
MRSI	Marisa	4.75	252	P	Pn	14 49 43.4	+2.1
TOLI2	Tolitoli	5.74	262	Pn	Pn	14 49 55.8	+0.8
MSAI	Masohi	5.79	155	P	Pn	14 50 08.4	+13
MPSI	Mapaga	6.76	256	P	Pn	14 50 16.8	+7.9
FAKI	Fak Fak	7.53	130	Pn	Pn	14 50 20.4	+0.9
TTSI	Tana Toraja	8.29	233	P	Pn	14 50 37.2	+7.3
MYLDM	Lahad Datu	8.58	292	Pn	Pn	14 50 34.7	+0.8
SPSI	Sidrap Palu	8.90	229	P	Pn	14 50 48.2	+10
KAPI	Kappang	9.63	224	Pn	Pn	14 50 46.5	-1.7
	6.0nm,0.3s,baz=36,slow=14,SNR=4.6						
KAPI	Kappang	9.63	224	Pn	Pn	14 50 46.6	-1.6
BSSI	Bau Bau, Buton	10.00	217	P	Pn	14 51 02.4	+9.0
BAKI	Biak	10.12	108	P	Pn	14 51 02.0	+7.0
SPMM	Sapulut	10.36	286	P	Pn	14 51 00.0	+1.7
KKM	Kota Kinabalu	11.01	292	Pn	Pn	14 51 10.3	+3.0
SBUM	Sibu	14.25	272	P	P	14 51 55.0	-2.5
MTN	Manton Dam	15.40	163	P	Pn	14 52 08.1	+1.7
	baz=16,SNR=6.6						
MTN	Manton Dam	15.40	163		Pn	14 52 05.5	-0.9
MTN				IAmb	IAmb	14 52 13.7	
	comp=Z,38nm,0.6s						
KDU	Kakadu	15.70	158	P	P	14 52 13.1	-0.6
	baz=16,SNR=13						
JAGI	Jajag, Banyuwa	16.05	230	P	P	14 52 17.5	-0.1
JAGI				IAmb	IAmb	14 52 24.6	
	comp=Z,82nm,0.9s						
KSM	Kuching	16.16	269	P	P	14 52 18.9	+0.1
KSM	Kuching	16.16	269	P	P	14 52 18.0	-0.8
KNRA	Kununurra	17.65	173	P	Pn	14 52 35.2	+0.5
	baz=18,SNR=11						
KNRA	Kununurra	17.65	173	P	Pn	14 52 34.3	-0.4
UGM	Wanagama	18.67	238	P	P	14 52 45.3	-1.3
UGM				IAmb	IAmb	14 52 50.1	
	comp=Z,164nm,1.4s						
FITZ	Fitzroy Crossi	19.93	182	P	P	14 53 00.7	+0.6
	comp=Z,1.2nm,0.3s,baz=12,slow=10,SNR=0.8						
DLV	T Lat	20.41	300	Pn	P	14 53 06.9	+1.1
CISI	Cisompet, Garu	20.86	243	P	P	14 53 09.7	-0.8
CISI				IAmb	IAmb	14 53 19.9	
	comp=Z,52nm,0.6s						
TWG	Pinlang	21.41	346	P	P	14 53 13.8	-2.4
TWG				IAmb	IAmb	14 53 16.7	
	comp=Z,46nm,0.5s						
YULB	Yu-li	21.91	347	P	P	14 53 18.2	-3.4
YULB				IAmb	IAmb	14 53 19.9	
	comp=Z,36nm,0.5s						
TPUB	Ta-pu	21.98	346	P	P	14 53 19.6	-2.7
SSLB	Suanglung	22.37	347	P	P	14 53 23.8	-2.7
SSLB				IAmb	IAmb	14 53 26.4	
	comp=Z,27nm,0.6s						
MYKOM	Kota Tinggi	22.61	270	P	P	14 53 29.5	+0.4
YOJ	Yonaguni jima	22.64	352	P	P	14 53 27.0	-2.4
COEN	Coen	22.88	134	P	P	14 53 32.8	+0.7
	baz=23,SNR=7.2						
COEN	Coen	22.88	134	P	P	14 53 30.3	-1.7
WB0	Warramunga Arr	22.93	161	P	P	14 53 31.2	-1.2
WB0				IAmb	IAmb	14 53 36.7	
	comp=Z,54nm,0.6s						
WRAB	Tennant Creek	23.07	161	P	P	14 53 32.3	-1.5
WRAB				IAmb	IAmb	14 53 37.9	
	comp=Z,61nm,0.6s						
WRA	Warramunga Arr	23.07	161	P	P	14 53 32.9	-1.0
	comp=Z,38nm,0.5s,baz=338,slow=11,SNR=22						
WRA	Warramunga Arr	23.07	161	P	P	14 53 32.2	-1.7
WB2	Warramunga Arr	23.08	161	P	P	14 53 32.8	-1.1
WB2				IAmb	IAmb	14 53 36.5	
	comp=Z,60nm,0.6s						
YHNB	Yeheng	23.13	348	P	P	14 53 32.9	-1.6
YHNB				IAmb	IAmb	14 53 37.1	
	comp=Z,41nm,0.7s						
WR0	Warramunga Arr	23.16	160	P	P	14 53 33.2	-1.5
WR0				IAmb	IAmb	14 53 37.7	
	comp=Z,42nm,0.8s						
XMIS	Christmas Isla	24.11	239	P	P	14 53 43.2	-0.6
XMIS				IAmb	IAmb	14 53 47.8	
	comp=Z,84nm,1.1s						
PSA00	Pilbara Seismi	24.25	195	P	P	14 53 43.9	-1.0
PSA00				IAmb	IAmb	14 54 03.9	
	comp=Z,40nm,1.2s						
MNAI	Manna	24.32	255	P	P	14 53 44.7	-1.0
UBPT	Khong Chiam	24.59	304	P	P	14 53 47.9	-0.3
IPM	Ipoh	25.53	276	P	P	14 53 55.7	-1.0
IPM				IAmb	IAmb	14 54 15.8	
	comp=Z,38nm,1.3s						
QIS	Mount Isa	25.80	151	P	P	14 53 59.7	+0.6
	baz=26,SNR=12						
KULM	Kulim	25.98	278	P	P	14 54 00.2	-0.5
AS31	Alice Springs	26.46	165	P	P	14 54 04.4	-0.7
ASAR	Alice Springs	26.46	165	P	P	14 54 05.1	0.0
	comp=Z,12nm,0.5s,baz=352,slow=16,SNR=14						
ASAR	Alice Springs	26.46	165	P	P	14 54 04.8	-0.2
WRKA	Warakurna	26.87	176	P	P	14 54 09.0	+0.2
	baz=27,SNR=10						
GIRL	Giralia	27.19	205	P	P	14 54 12.9	+1.4
RPSI	Rantau Prapat	27.53	272	P	P	14 54 14.8	0.0
RPSI	Rantau Prapat	27.53	272	P	P	14 54 14.4	-0.4
PSI	Prapat	27.54	272	P	P	14 54 14.4	-0.5
	comp=Z,6.6nm,0.7s,baz=180,slow=6.9,SNR=3.1						
GSI	Gunungsitoli	28.89	269	P	P	14 54 27.0	+0.1
GSI				IAmb	IAmb	14 54 30.5	
	comp=Z,58nm,1.2s						
JCJ	Chichijima	29.20	30	P	P	14 54 28.8	-0.7
JCJ				IAmb	IAmb	14 54 33.1	
	comp=Z,64nm,0.9s						
CTA	Charters Tower	29.25	139	P	P	14 54 31.3	+1.3
	comp=Z,4.3nm,0.6s,baz=291,slow=8.6,SNR=2.6						
MEEK	Meekatharra	29.40	194	P	P	14 54 31.9	+0.7
	baz=30,SNR=4.0						
JSU	Suzuyama	29.65	7	P	P	14 54 32.9	-0.6
JSU				IAmb	IAmb	14 54 54.6	
	comp=Z,56nm,1.5s						
NJ2	Nanjing	30.80	347	eP	P	14 54 46.0

STKA	**Stephens Creek**	**36.56**	**158**	P		**P**	**14 55 33.9**	**+0.3**
	baz=37,SNR=14							
STKA	**Stephens Creek**	**36.56**	**158**	P		**P**	**14 55 33.7**	**+0.1**
DL2	**Dalian**	**37.06**	**354**	P		**P**	**14 55 39.3**	**+1.6**
DL2				pmax		pmax		
	comp=Z,37nm,0.7s							
HTT	**Hallett**	**37.09**	**163**	P		**P**	**14 55 39.5**	**+1.3**
	baz=37,SNR=6.7							
JSD	**Sado**	**37.52**	**15**	P		**P**	**14 55 41.7**	**0.0**
JMM	**Marumori**	**38.10**	**19**	P		**P**	**14 55 47.1**	**+0.6**
BJT	**Baijiatuau**	**39.05**	**347**	P		**P**	**14 55 55.3**	**+0.8**
BJT				IAmb		IAmb	14 55 60.0	
	comp=Z,17nm,1.0s							
LZH	**Lanzhou**	**39.92**	**331**	*e*P		**P**	**14 56 03.0**	**+0.9**
LZH				pP		pP	14 56 14.0	-0.1
LZH				sP		pwP	14 56 17.5	+1.0
LZH				pmax		pmax		
	comp=Z,23nm,1.0s							
ARMA	**Armidale**	**40.13**	**145**	P		**P**	**14 56 04.9**	**+1.1**
	baz=40,SNR=19							
ARMA	**Armidale**	**40.13**	**145**	P		**P**	**14 56 04.5**	**+0.6**
SHL	**Shillong**	**40.75**	**308**	P		**P**	**14 56 08.2**	**-0.9**
SHL				IAmb		IAmb	14 56 12.2	
	comp=Z,27nm,0.9s							
JTM	**Tenmabayashi**	**40.87**	**17**	P		**P**	**14 56 10.8**	**+1.3**
HHC	**Hu-ho-hao-te**	**41.02**	**343**	*e*P		**P**	**14 56 11.5**	**+0.5**
ARPS	**Mount Arapiles**	**41.08**	**161**	P		**P**	**14 56 12.2**	**+0.8**
	baz=41,SNR=9.5							
USA0B	**Ussuriysk Arra**	**42.37**	**6**	P		**P**	**14 56 22.5**	**+0.7**
USRK	**Ussuriysk Ar.**	**42.37**	**6**	P		**P**	**14 56 23.2**	**+1.4**
	comp=Z,17nm,0.8s,baz=193,slow=7.8,SNR=16							
USRK	**Ussuriysk Ar.**	**42.37**	**6**	P		**P**	**14 56 22.3**	**+0.5**
MDJ	**Mudanjiang**	**42.59**	**343**	P		**P**	**14 56 24.1**	**+0.5**
ERM	**Erimo**	**42.63**	**18**	P		**P**	**14 56 24.5**	**+0.6**
TOO	**Toolangi**	**43.08**	**158**	P		**P**	**14 56 28.8**	**+1.1**
LSA	**Lhasa**	**43.44**	**313**	P		**P**	**14 56 32.0**	**+0.7**
ASAJ	**Asahikawa**	**44.37**	**17**	P		**P**	**14 56 39.1**	**+1.2**
	comp=Z,16nm,0.8s,baz=232,slow=8.2,SNR=7.5							
JKA	**Kamikawa-asahi**	**44.37**	**17**	P		**P**	**14 56 38.3**	**+0.3**
JKA				IAmb		IAmb	14 56 40.5	
	comp=Z,16nm,0.9s							
GTA	**Gaotai**	**44.50**	**330**	*e*P		**P**	**14 56 39.5**	**+0.2**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
TAPN	**Taplejung**	**44.88**	**308**	*e*P		**P**	**14 56 42.1**	**-0.6**
	comp=Z,17nm,0.6s							
ODAN	**Odare**	**44.91**	**307**	*e*P		**P**	**14 56 42.6**	**-0.3**
	comp=Z,47nm,0.8s							
RAMN	**Ramite**	**45.59**	**307**	*e*P		**P**	**14 56 48.2**	**0.0**
	comp=Z,32nm,0.7s							
PALK	**Pallekele**	**45.90**	**278**	P		**P**	**14 56 50.4**	**-0.3**
PALK				IAmb		IAmb	14 56 54.9	
	comp=Z,46nm,1.4s							
GUN	**Gumba**	**46.59**	**308**	*e*P		**P**	**14 56 55.6**	**-0.6**
	comp=Z,33nm,0.4s							
PKI	**Pulchoki**	**46.81**	**307**	*e*P		**P**	**14 56 57.0**	**-1.0**
	comp=Z,8.6nm,0.4s							
PKIN	**Phulchoki**	**46.82**	**307**	*e*P		**P**	**14 56 57.0**	**-1.0**
KKN	**Kakani**	**47.01**	**307**	*e*P		**P**	**14 56 59.0**	**-0.4**
	comp=Z,12nm,0.4s							
YSS	**Yuzh-Sakhalins**	**47.03**	**15**	P		**P**	**14 56 59.5**	**+0.6**
YSS				IAmb		IAmb	14 57 00.1	
	comp=Z,50nm,1.5s							
DMN	**Daman**	**47.07**	**307**	*e*P		**P**	**14 56 59.9**	**0.0**
	comp=Z,22nm,0.8s							
KOLN	**Koldanda**	**48.35**	**306**	*e*P		**P**	**14 57 09.4**	**-0.3**
	comp=Z,35nm,0.5s							
DANN	**Dangsing**	**48.46**	**307**	*e*P		**P**	**14 57 10.4**	**-0.3**
	comp=Z,47nm,0.6s							
ULN	**Ulaanbaatar**	**48.74**	**343**	P		**P**	**14 57 12.5**	**+0.1**
ULN				IAmb		IAmb	14 57 19.7	
	comp=Z,12nm,0.9s							
SONM	**Songino Array**	**48.91**	**342**	P		**P**	**14 57 14.4**	**+0.8**
	comp=Z,8.0nm,0.6s,baz=151,slow=9.4,SNR=13							
SONM	**Songino Array**	**48.91**	**342**	P		**P**	**14 57 13.1**	**-0.5**
PYUN	**Piuthan**	**48.97**	**306**	*e*P		**P**	**14 57 14.2**	**-0.4**
WMQ	**Urumqi**	**54.05**	**326**	*e*P		**P**	**14 57 53.5**	**+1.5**
WMQ				pP		pP	14 58 01.3	-3.3
WMQ				pmax		pmax		
	comp=Z,20nm,1.1s							
MSVF	**Nonsavu**	**54.43**	**113**	P		**P**	**14 57 51.7**	**-3.6**
MSVF				IAmb		IAmb	14 58 10.0	
	comp=Z,31nm,1.4s							
PEA0B	**Petropavlovsk-**	**57.18**	**22**	P		**P**	**14 58 15.6**	**+1.3**
PEA0B				IAmb		IAmb	14 58 21.6	
	comp=Z,30nm,1.1s							
PETK	**Petropavlovsk-**	**57.18**	**22**	P		**P**	**14 58 15.7**	**+1.4**
	comp=Z,7.4nm,0.7s,baz=172,slow=3.8,SNR=15							
PETK	**Petropavlovsk-**	**57.18**	**22**	P		**P**	**14 58 15.5**	**+1.2**
NIL	**Nilore**	**58.82**	**309**	P		**P**	**14 58 26.0**	**-0.2**
NIL				IAmb		IAmb	14 58 34.8	
	comp=Z,18nm,1.1s							
MK31	**Makanchi Array**	**58.88**	**326**	P		**P**	**14 58 26.0**	**-0.4**
MK31				IAmb		IAmb	14 58 28.0	
	comp=Z,10.0nm,0.6s							
MKAR	**Makanchi Array**	**58.88**	**326**	P		**P**	**14 58 26.4**	**+0.1**
	comp=Z,14nm,0.4s,baz=120,slow=7.5,SNR=44							
MKAR	**Makanchi Array**	**58.88**	**326**	P		**P**	**14 58 25.8**	**-0.5**
PRZ	**Przheval'sk**	**58.90**	**320**	P		**P**	**14 58 27.8**	**+1.1**
MAKZ	**Makanchi**	**59.06**	**326**	P		**P**	**14 58 27.2**	**-0.4**
KSH	**Kashi**	**59.13**	**316**	*e*P		**P**	**14 58 30.0**	**+1.6**
KSH				pmax		pmax		
	comp=Z,20nm,1.0s							
KDJ	**Kajisay**	**59.51**	**319**	P		**P**	**14 58 30.6**	**-0.4**
KDJ				IAmb		IAmb	14 58 33.0	
	comp=Z,11nm,0.8s							
YAK	**Yakutsk**	**60.00**	**2**	P		**P**	**14 58 33.7**	**+0.1**
LBZ	**Lake Benmore**	**60.36**	**145**	P		**P**	**14 58 36.4**	**-0.2**
MA2	**Magadan**	**60.50**	**14**	P		**P**	**14 58 37.5**	**+0.3**
SNZO	**South Karori**	**61.35**	**140**	P		**P**	**14 58 43.2**	**0.0**
URZ	**Urewera**	**61.43**	**136**	P		**P**	**14 58 42.7**	**-1.2**
URZ				IAmb		IAmb	14 58 42.7	
	comp=Z,36nm,1.5s							
BKZ	**Black Stump Fm**	**61.44**	**137**	P		**P**	**14 58 43.4**	**-0.7**
BKZ				IAmb		IAmb	14 58 55.7	
	comp=Z,30nm,1.5s							
AAK	**Ala-Archa**	**61.51**	**319**	P		**P**	**14 58 44.8**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=164,slow=4.5,SNR=5.9							
AAK	**Ala-Archa**	**61.51**	**319**	IAmb		IAmb	14 58 50.1	
	comp=Z,6.5nm,1.1s							
ARSB	**Arslanbob**	**61.97**	**317**	P		**P**	**14 58 47.5**	**-0.1**
ARSB				IAmb		IAmb	14 58 49.5	
	comp=Z,9.5nm,0.8s							
BFZ	**Birch Farm**	**62.03**	**139**	P		**P**	**14 58 48.1**	**+0.2**
ZALV	**Zalesovo Beam**	**62.06**	**334**	P		**P**	**14 58 47.2**	**-0.7**
	comp=Z,3.7nm,0.5s,baz=140,slow=6.7,SNR=5.5							
ZALV	**Zalesovo Beam**	**62.06**	**334**	P		**P**	**14 58 46.6**	**-1.3**
KBL	**Kabul**	**62.41**	**308**	P		**P**	**14 58 49.7**	**-1.2**
KBL				IAmb		IAmb	14 58 53.0	
	comp=Z,9.2nm,0.6s							
KURBB	**Kurchatov Arra**	**63.11**	**328**	P		**P**	**14 58 55.0**	**+0.1**
	comp=Z,14nm,0.6s,baz=122,slow=6.8,SNR=27							
KURK	**Kurchatov**	**63.11**	**328**	P		**P**	**14 58 54.4**	**-0.5**
KK31	**Karatay Array**	**64.37**	**318**	P		**P**	**14 59 02.6**	**-0.8**
KKAR	**Karatay Array**	**64.37**	**318**	P		**P**	**14 59 02.5**	**-0.8**
KKAR	**Karatay Array**	**64.37**	**318**	P		**P**	**14 59 03.1**	**-0.3**
BRVK	**Borovoye**	**68.75**	**327**	P		**P**	**14 59 30.9**	**-0.2**
BRVK				IAmb		IAmb	14 59 35.6	
	comp=Z,25nm,1.4s							
TIXI	**Tiksi**	**69.63**	**1**	P		**P**	**14 59 36.1**	**-0.1**
TIXI				IAmb		IAmb	14 59 37.0	
	comp=Z,9.9nm,0.7s							
BILL	**Bilibino**	**71.34**	**15**	P		**P**	**14 59 47.0**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**71.81**	**309**	P		**P**	**14 59 49.7**	**-0.5**
NRIK	**Noril'sk**	**72.10**	**346**	P		**P**	**14 59 51.9**	**+0.6**
	comp=Z,14nm,0.7s,baz=124,slow=5.0,SNR=9.8							
SOCY	**Socotra**	**72.47**	**282**	P		**P**	**14 59 52.9**	**-1.7**
ABKAR	**Akbulak array**	**73.37**	**321**	P		**P**	**14 59 59.0**	**-0.2**
GAMB	**Gambell**	**76.13**	**24**	P		**P**	**15 00 14.8**	**0.0**
ARU	**Arti**	**76.31**	**328**	P		**P**	**15 00 15.9**	**-0.1**
ARU				IAmb		IAmb	15 00 19.0	
	comp=Z,22nm,0.8s							
SDPT	**Sand Point**	**78.82**	**34**	P		**P**	**15 00 31.0**	**+0.9**
OPO	**Ambohidratompo**	**80.46**	**251**	P		**P**	**15 00 40.6**	**+0.7**
	comp=Z,4.8nm,0.6s,baz=59,slow=5.8,SNR=4.4							
RAYN	**Ar Rayn**	**80.95**	**293**	P		**P**	**15 00 42.0**	**-0.3**
VNDA	**Vanda**	**81.69**	**173**	P		**P**	**15 00 45.7**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=322,slow=5.5,SNR=10							
VNDA	**Vanda**	**81.69**	**173**	P		**P**	**15 00 45.4**	**+0.3**
TTA	**Tatalina**	**82.61**	**27**	P		**P**	**15 00 51.2**	**+1.0**
TTA				IAmb		IAmb	15 00 53.1	
	comp=Z,16nm,1.2s							
GEVA	**Gevas**	**83.63**	**308**	P		**P**	**15 00 56.7**	**+0.4**
A21K	**Barrow**	**83.99**	**18**	P		**P**	**15 00 58.3**	**+1.2**
KBZ	**Khabaz**	**84.02**	**314**	P		**P**	**15 00 57.8**	**0.0**
	comp=Z,10.0nm,1.1s,baz=150,slow=5.9,SNR=5.0							
IMAR	**Indian Mountai**	**84.08**	**24**	P		**P**	**15 00 59.0**	**+1.3**
SUA	**Susitna One**	**84.85**	**29**	P		**P**	**15 01 02.6**	**+0.8**
COLD	**Coldfoot**	**85.64**	**23**	P		**P**	**15 01 06.4**	**+0.9**
COLD				IAmb		IAmb	15 01 09.3	
	comp=Z,9.3nm,0.9s							
ILAR	**Eielson Array**	**86.83**	**25**	P		**P**	**15 01 10.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=250,slow=4.5,SNR=8.0							
BMAR	**Burnt Mountain**	**87.82**	**23**	P		**P**	**15 01 17.0**	**+0.8**
K27K	**Chicken**	**88.91**	**26**	P		**P**	**15 01 22.6**	**+1.2**
K27K				IAmb		IAmb	15 01 24.1	
	comp=Z,10nm,1.1s							
SYO	**Syowa Base**	**90.67**	**201**	‖*e*pP		pP	15 01 40.5	-2.5
BRTR	**Keskin Array B**	**90.96**	**310**	P		**P**	**15 01 31.2**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=156,slow=2.9,SNR=2.2							
QSPA	**South Pole Qui**	**91.85**	**180**	P		**P**	**15 01 36.1**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=302,slow=4.7,SNR=6.8							
ARCES	**ARCESS Array B**	**92.03**	**340**	P		**P**	**15 01 34.8**	**-1.0**
	comp=Z,9.2nm,0.9s,baz=79,slow=5.4,SNR=6.7							
AKASG	**Malin Array Be**	**93.11**	**321**	P		**P**	**15 01 40.6**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=64,slow=4.9,SNR=3.0							
FINES	**FINESS Array B**	**93.28**	**332**	P		**P**	**15 01 40.9**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=56,slow=4.7,SNR=9.2							
C36M	**Paulatuk**	**94.98**	**20**	P		**P**	**15 01 49.2**	**-0.1**
C36M				IAmb		IAmb	15 01 50.5	
	comp=Z,7.8nm,0.9s							
BURAR	**Bucovina Array**	**96.16**	**318**	P		**P**	**15 01 55.1**	**-0.3**
HFS	**Hagfors**	**99.47**	**332**	P		**Pdif**	**15 02 08.9**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=119,slow=5.1,SNR=2.0							
NOA	**NORSAR Array B**	**100.27**	**333**	P		**Pdif**	**15 02 12.0**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=76,slow=4.2,SNR=3.9							
TXAR	**Lajitas Array**	**122.89**	**53**	PKP		**PKiKP**	**15 07 24.5**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=151,slow=2.1,SNR=1.2							
TORD	**Torodi Ar. Bea**	**123.21**	**287**	PKP		**PKiKP**	**15 07 25.5**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=39,slow=1.9,SNR=1.5							
TKL	**Tuckaleechee C**	**133.13**	**34**	PKP		**PKiKP**	**15 07 44.3**	**-0.2**
	comp=Z,7.3nm,0.8s,baz=176,slow=7.5,SNR=3.6							
PLCA	**Paso Flores**	**138.42**	**160**	PKP		**PKiKP**	**15 07 54.8**	**-0.4**
	comp=Z,2.3nm,0.9s,baz=218,slow=2.3,SNR=3.9							
JTS	**Las Juntas de**	**146.45**	**68**	PKPbc		**PKPdf**	**15 08 08.4**	**+0.5**
	comp=Z,2.8nm,0.4s,baz=333,slow=6.8,SNR=2.1							

IDC ***26*** *14:49:45.6±0.3,1.˚85N×126.˚44E,h0km,mb5.3/39, mb1 5.3/40,mb1mx5.2/48,mbtmp5.2/40,ML4.8/1,Error ellipse: s-maj=12.7km s-min=8.0km az=70.0*

BJI ***26*** *14:49:45.4±0.0,1.˚60N×126.˚43E,h23km,mB6.3/12, mb5.3/60,Ms5.9/11,Ms7 5.8/11*

MOS ***26*** *14:49:48.0±1.1,1.˚91N×126.˚40E,h29km,mb5.8/48,Error ellipse: s-maj=9.1km s-min=4.5km az=109.7*

NEIC ***26*** *14:49:49.6±1.6,1.˚81N±0.˚06×126.˚46E±0.˚06,h30km±3km, mb5.6/248,Error ellipse: s-maj=9.4km s-min=8.3km az=47.0*

DJA ***26*** *14:49:53.1±0.3,2.˚N±2.˚×12.˚7E±.˚,h48km±2km,M5.7/81, mb5.5/81,mB6.1/8,MLv5.5/15,Mw(mB)5.8/8,Mwp7.3/3*

KLM ***26*** *14:49:53.0,1.˚93N×126.˚68E,h64km,mb5.7*

ISC 26 14:49:51.2±0.2,1.˚91N±0.˚03×126.˚48E±0.˚04,h40km±1km, n890,σ1$44/900,mb5.6/244,11C-13D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**142**	P	**Pn**	**14 50 13.8**	**-0.9**
TNTI	**Ternate**	**1.43**	**142**	Pn	**Pn**	**14 50 13.1**	**-1.6**
SGSI	**Sangihe**	**2.01**	**332**	P	**Pn**	**14 50 21.1**	**-1.5**
KMSI	**Cibinong**	**2.83**	**242**	P	Pn	14 50 39.3	+5.4
GTOI	**Gorontalo**	**3.69**	**250**	P	Pn	14 50 52.1	+6.4
SANI	**Sanana**	**3.96**	**187**	P	**Pn**	**14 50 52.7**	**+3.2**
DDMP	**Don Marcelino,**	**4.24**	**350**	*e*P	**Pn**	**14 50 52.9**	**-0.4**
LUWI	**Luwuk**	**4.73**	**232**	Pn	**Pn**	**14 50 57.7**	**-2.3**
MRSI	**Marisa**	**4.76**	**253**	P	Pn	14 51 05.7	+5.3
NLAI	**Namlea**	**5.15**	**173**	P	Pn	14 51 11.8	+6.0
	2.3nm224nm,0.6s						
DAV	**Davao City (W)**	**5.21**	**350**	Pn	Pn	14 51 11.7	+5.1
	79nm,0.3s,baz=64,slow=12,SNR=1.9						
DAV				Sn	**Sn**	**14 52 14.1**	**+8.6**
	33nm,0.3s,baz=297,slow=21,SNR=1.7						
DAV	**Davao City (W)**	**5.21**	**350**		**Pn**	**14 51 07.3**	**+0.7**
APSI	**Ampana**	**5.58**	**240**	P	Pn	14 51 17.7	+5.9
	13nm4µm,1.2s						
TOLI2	**Toliloli**	**5.75**	**262**	Pn	**Pn**	**14 51 14.0**	**-0.1**
MSAI	**Masohi**	**5.76**	**155**	P	**Pn**	**14 51 17.7**	**+3.5**
	0.6nm119nm,1.0s						
BUKP	**Musuan**	**6.10**	**347**	*e*P	Pn	14 51 24.0	+5.1
BUKP				*e*S	**Sn**	**14 52 29.1**	**+1.6**
ZCP	**Zamboanga City**	**6.65**	**319**	‖*e*P	Pn	14 51 34.5	+8.1
ZCP				*e*S	**Sn**	**14 52 40.2**	**-0.8**
PAGZ	**Pagadian**	**6.66**	**332**	*e*P	**Pn**	**14 51 26.7**	**+0.2**
PAGZ				*e*S	**Sn**	**14 52 38.3**	**-3.0**
CGP	**Cagayan de Oro**	**6.74**	**345**	‖*e*P	Pn	14 51 33.8	+6.1
MPSI	**Mapaga**	**6.76**	**257**	P	**Pn**	**14 51 32.4**	**+4.4**
	2.1nm660nm,1.0s						
KDI	**Kendari**	**6.99**	**214**	P	**Pn**	**14 51 33.6**	**+2.5**
	2.0nm488nm,0.9s						
PCI	**Palu**	**7.21**	**247**	P	Pn	14 51 22.6	-11
FAKI	**Fak Fak**	**7.50**	**130**	P	Pn	14 51 44.6	+6.5
FAKI	**Fak Fak**	**7.50**	**130**	Pn	**Pn**	**14 51 36.9**	**-1.2**
GLSP	**General Luna,**	**7.83**	**357**	*e*P	Pn	14 51 50.1	+7.4
GLSP				*e*S	**Sn**	**14 53 08.4**	**-1.7**
TTSI	**Tana Toraja**	**8.28**	**234**	P	Pn	14 51 57.8	+9.0
MSLP	**Maasin**	**8.33**	**349**	*e*P	Pn	14 52 03.6	+14
MYLDM	**Lahad Datu**	**8.60**	**292**	Pn	**Pn**	**14 51 54.7**	**+1.5**
LLP	**Lapu-Lapu**	**8.72**	**343**	*e*P	**Pn**	**14 51 56.9**	**+2.0**
LLP				*e*S	Sn	14 53 55.3	+23
SPSI	**Sidrap Palu**	**8.89**	**229**	P	**Pn**	**14 52 00.6**	**+3.5**
	314nm,0.9s						
BNSI	**Bone**	**8.93**	**225**	P	**Pn**	**14 52 00.6**	**+2.8**
	334nm,0.7s						
OCLP	**Ormoc**	**9.27**	**349**	*e*P	**Pn**	**14 52 03.8**	**+1.4**
SMKI	**Samarinda**	**9.56**	**256**	P	Pn	14 52 14.3	+7.9
BKSI	**Bulukumba**	**9.59**	**221**	P	**Pn**	**14 52 10.1**	**+3.4**
	252nm,0.7s						
KAPI	**Kappang**	**9.62**	**224**	Pn	**Pn**	**14 52 10.3**	**+3.2**
	14nm,0.3s,baz=39,slow=9.3,SNR=11						
KAPI				Sn	**Sn**	**14 53 54.4**	**+0.4**
	0.5nm,0.3s,baz=30,slow=20,SNR=1.1						
KAPI	**Kappang**	**9.62**	**224**		**Pn**	**14 52 07.7**	**+0.6**
BSSI	**Bau Bau, Buton**	**9.99**	**217**	P	**Pn**	**14 52 15.8**	**+3.6**
	258nm,0.6s						
BKB	**Balikpapan**	**10.09**	**252**	P	**Pn**	**14 52 16.8**	**+3.2**
	307nm,1.2s						
BAKI	**Biak**	**10.11**	**108**	P	Pn	14 52 20.7	+6.9
SPMM	**Sapulut**	**10.38**	**286**	P	**Pn**	**14 52 21.0**	**+3.4**
SAUI	**Saumlaki**	**10.94**	**154**	Pn	**Pn**	**14 52 26.1**	**+0.8**
KKM	**Kota Kinabalu**	**11.03**	**292**	Pn	**Pn**	**14 52 28.6**	**+2.0**
OTRP	**Odiongan**	**11.29**	**337**	*e*P	**Pn**	**14 52 33.4**	**+3.4**
MMRI	**Maumere**	**11.29**	**202**	P	Pn	14 52 35.3	+5.2
	176nm,1.4s						
MMRI	**Maumere**	**11.29**	**202**	Pn	**Pn**	**14 52 30.8**	**+0.6**
KBKI	**Kotabaru**	**11.53**	**243**	P	Pn	14 52 39.0	+5.6
	1µm125nm,1.2s						
ENPP	**El Nido**	**11.59**	**323**	*e*P	**Pn**	**14 52 34.9**	**+0.7**
EDFI	**Ende, Flores**	**11.61**	**204**	P	**Pn**	**14 52 38.3**	**+3.7**
	60nm,1.4s						
SOEI	**Soe**	**11.79**	**191**	P	Pn	14 52 46.8	+10
SOEI	**Soe**	**11.79**	**191**	Pn	**Pn**	**14 52 38.0**	**+1.0**
MTKI	**Muara Teweh, K**	**11.92**	**256**	P	Pn	14 52 44.9	+6.2
	84nm,1.2s						
BATI	**Baumata**	**12.36**	**193**	Pn	Pn	14 52 50.2	+5.5
	4.0nm,0.3s,baz=72,slow=1.8,SNR=5.8						
BATI	**Baumata**	**12.36**	**193**	P	Pn	14 52 49.8	+5.1
	102nm,1.1s						
BBKI	**Banjar Baru**	**12.80**	**245**	P	**P**	**14 52 57.4**	**-3.5**
	157nm,1.5s						
SMPI	**Sarmi**	**12.82**	**108**	P	**P**	**14 52 58.6**	**-2.6**
LQP	**Lukban**	**13.07**	**338**	‖*e*P	**Pn**	**14 52 56.8**	**+2.2**
BASI	**Baing, Sumba**	**13.40**	**206**	P	P	14 53 14.3	+6.7
WBSI	**Waikabubak, Su**	**13.47**	**211**	P	**Pn**	**14 53 04.3**	**+4.4**
	199nm,1.0s						
PLAI	**Plampang**	**13.75**	**219**	P	**P**	**14 53 13.5**	**+2.1**
SBUM	**Sibu**	**14.26**	**272**	P	**Pn**	**14 53 14.4**	**+3.8**
SBUM	**Sibu**	**14.26**	**272**	P	P	**14 53 15.0**	**-2.2**
TWSI	**Taliwang, Sumb**	**14.26**	**222**	P	P	**14 53 19.1**	**+2.0**
GENI	**Genyem**	**14.39**	**108**	P	P	**14 53 20.9**	**+2.3**
JAY	**Jayapura**	**14.88**	**107**	Pn	**Pn**	**14 53 20.8**	**+1.7**
	0.4nm,0.3s,baz=272,slow=7.7,SNR=5.8						
JAY	**Jayapura**	**14.88**	**107**	P	**P**	**14 53 24.5**	**+0.4**
SRBI	**Singaraja**	**14.99**	**228**	P	**P**	**14 53 28.0**	**+2.7**
KMMI	**Kalianget**	**15.33**	**234**	P	**P**	**14 53 32.2**	**+3.1**
	464nm,1.4s						
MTN	**Manton Dam**	**15.37**	**163**	P	**P**	**14 53 28.0**	**-1.4**
	baz=15,SNR=4.4						
MTN	**Manton Dam**	**15.37**	**163**	Pn	**Pn**	**14 53 23.6**	**-1.7**
DNP	**Denpasar**	**15.39**	**227**	P	**P**	**14 53 33.4**	**+3.7**
PBKI	**Pangkalan Bun**	**15.50**	**253**	P	P	14 53 38.7	+7.8
ABJI	**Asem Bagus**	**15.56**	**232**	P	**P**	**14 53 34.4**	**+2.8**
	232nm,1.2s						
KDU	**Kakadu**	**15.67**	**158**	P	**P**	**14 53 31.8**	**-1.0**
	baz=16,SNR=14						
BLJI	**Banyuglugur**	**16.04**	**233**	P	**P**	**14 53 39.0**	**+2.1**
	305nm,1.2s						
JAGI	**Jajag, Banyuwa**	**16.04**	**230**	P	**P**	**14 53 40.8**	**+3.8**
	433nm,1.1s						
JAGI	**Jajag, Banyuwa**	**16.04**	**230**		**Pn**	**14 53 32.8**	**-1.3**
JAGI				IAmb	IAmb	14 53 50.0	
	comp=Z,1µm,1.5s						
KSM	**Kuching**	**16.17**	**269**	Pn	**Pn**	**14 53 35.1**	**-0.6**
KSM	**Kuching**	**16.17**	**269**	P	**P**	**14 53 39.0**	**+0.6**
GMJI	**Gumukmas**	**16.47**	**232**	P	**P**	**14 53 45.0**	**+3.3**
	comp=Z,270nm,1.1s						
KNRA	**Kununurra**	**17.62**	**173**	P	**P**	**14 53 54.5**	**+0.2**
	baz=18,SNR=11						
KNRA	**Kununurra**	**17.62**	**173**		**Pn**	**14 53 51.6**	**-2.1**
PWJI	**Pagerwojo**	**17.65**	**236**	P	**P**	**14 53 58.0**	**+3.2**
	comp=Z,253nm,1.0s						
WOJI	**Wonogiri, Jawa**	**18.29**	**238**	P	**Pn**	**14 54 05.4**	**+3.4**
	comp=Z,120nm,1.3s						
SMRI	**Semarang**	**18.31**	**241**	P	Pn	14 54 10.8	+8.5
SMRI	**Semarang**	**18.31**	**241**		**P**	**14 54 00.4**	**-1.8**
UGM	**Wanagama**	**18.67**	**238**	P	Pn	14 54 16.0	+9.3
UGM	**Wanagama**	**18.67**	**238**	P	P	**14 54 04.0**	**-2.0**
YOGI	**Yogyakarta**	**18.81**	**239**	P	**Pn**	**14 54 15.4**	**+7.0**
TPI	**Tanjungpandan**	**19.38**	**256**	P	**Pn**	**14 54 15.5**	**+0.3**
	comp=Z,101nm,1.2s						
KPJI	**Karang Pucung**	**19.77**	**242**	P	P	**14 54 18.6**	**+0.5**
	comp=Z,229nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.90**	**182**	P	P	**14 54 19.7**	**+0.4**
	comp=Z,2.1nm,0.3s,baz=14,slow=11,SNR=3.3						
FITZ	**Fitzroy Crossi**	**19.90**	**182**	P	**P**	**14 54 20.2**	**+0.8**
	baz=20,SNR=4.8						
FITZ	**Fitzroy Crossi**	**19.90**	**182**	P	P	**14 54 18.2**	**-1.2**
DLV	**T Lat**	**20.44**	**300**	P	P	**14 54 24.5**	**-1.0**
DLV				IAmb	IAmb	14 54 34.7	
	comp=Z,298nm,1.1s						
LEM	**Lembang**	**20.73**	**245**	P	P	**14 54 27.7**	**-1.0**
	comp=Z,72nm,0.8s,baz=52,slow=9.1,SNR=5.7						
PPBI	**Pangkal Pinang**	**20.74**	**259**	P	**P**	**14 54 29.9**	**+1.3**
	comp=Z,119nm,1.1s						
CISI	**Cisompet, Garu**	**20.86**	**243**	P	Pn	14 54 41.7	+9.1

comp=Z,69nm,0.7s
AS31 Alice Springs 26.43 165 P **P** **14 55 23.1 -1.3**
ASAR Alice Springs 26.43 165 P **P** **14 55 24.5 +0.1**
comp=Z,30nm,0.5s,baz=344,slow=11,SNR=9.3
ASAR PcP **PcP** **14 58 49.1 -0.1**
comp=Z,8.5nm,0.7s,baz=345,slow=2.1,SNR=4.8
ASAR S **S** **14 59 57.9 +2.5**
comp=Z,6.6nm,0.9s,baz=343,slow=18,SNR=4.5
ASAR Alice Springs 26.43 165 P **P** **14 55 22.9 -1.4**
MTSU Mount Surprise 26.55 139 P **P** **14 55 27.5 +1.9**
baz=27,SNR=12
WRKA Warakurna 26.84 176 P **P** **14 55 28.1 0.0**
baz=27,SNR=9.6
MNSI Mandailing Nat 26.92 268 P **P** **14 55 32.6 +3.7**
comp=Z,93nm,1.0s
SRAK Srakaew 26.98 298 P **P** **14 55 27.0 -2.5**
comp=Z,5µmcomp=Z,496nm,0.8s
GIRL Giralia 27.17 205 P **P** **14 55 32.2 +1.2**
baz=27,SNR=8.0
GIRL Giralia 27.17 205 P **P** **14 55 30.7 -0.3**
TRTT Trang 27.32 283 P **P** **14 55 35.5 +2.9**
comp=Z,81nm,1.4s
KHON Khomkaen 27.35 303 P **P** **14 55 36.2 +3.4**
comp=Z,3µmcomp=Z,78nm,1.2s
RPSI Rantau Prapat 27.55 272 P **P** **14 55 33.6 -0.9**
RPSI IAmb IAmb 14 55 39.2
comp=Z,94nm,1.0s
RPSI Rantau Prapat 27.55 272 P **P** **14 55 34.4 -0.1**
RPSI **ScP** **15 02 32.7 +3.0**
PSI Prapat 27.55 272 P **P** **14 55 34.4 -0.3**
comp=Z,52nm,0.9s,baz=177,slow=0.8,SNR=15
PSI ScP **ScP** **15 02 32.7 +2.8**
comp=Z,16nm,1.1s,baz=180,slow=3.2,SNR=7.0
CHAI Chaiyaphum 27.86 301 P **P** **14 55 38.2 +1.0**
comp=Z,853nmcomp=Z,103nm,0.9s
NONG Nongkai 27.97 307 P **P** **14 55 38.9 +0.7**
comp=Z,143nm,0.9s
SURT Suratani 28.42 285 P P 14 55 55.0 +13
PKDT Phuket 28.65 283 P **P** **14 55 46.0 +1.6**
comp=Z,60nm,0.9s
KCSI Kotacane, Aceh 28.72 274 P **P** **14 55 44.7 -0.4**
comp=Z,46nm,1.2s
PHET Kaeng Krachan 28.74 294 P **P** **14 55 47.8 +2.6**
comp=Z,48nm,1.0s
GSI Gunungsitoli 28.90 269 P **P** **14 55 47.7 +1.1**
comp=Z,128nm,0.8s
GSI Gunungsitoli 28.90 269 P **P** **14 55 45.0 -1.6**
GSI IAmb IAmb 14 55 52.4
comp=Z,96nm,0.8s
CTA Charters Tower 29.22 139 P **P** **14 55 50.0 +0.6**
comp=Z,43nm,1.2s,baz=318,slow=12,SNR=5.6
CTA Charters Tower 29.22 139 P **P** **14 55 50.0 +0.6**
CTAO Charters Tower 29.22 139 P **P** **14 55 48.8 -0.6**
JCJ Chichijima 29.23 30 P **P** **14 55 48.9 -0.4**
JCJ IAmb IAmb 14 56 01.7
comp=Z,173nm,0.9s
SLVN Son La 29.27 313 P **P** **14 55 49.4 -0.5**
MEEK Meekatharra 29.38 194 P **P** **14 55 50.8 +0.1**
baz=30,SNR=7.5
JSU Suzuyama 29.68 7 P **P** **14 55 52.8 -0.5**
JSU IAmb IAmb 14 55 55.2
comp=Z,98nm,1.3s
PHIT Phitsanulok 29.78 302 P **P** **14 55 57.0 +2.6**
comp=Z,2µmcomp=Z,224nm,0.9s
UTHA Uthaitani 29.91 299 P **P** **14 55 57.9 +2.4**
comp=Z,354nmcomp=Z,46nm,1.0s
UTTA Uttaradit 29.93 303 P **P** **14 55 58.6 +3.0**
comp=Z,38nm,0.9s
NANT Nan 30.33 305 P **P** **14 56 03.1 +3.8**
comp=Z,39µmcomp=Z,806nm,0.9s
PHRA Phrae 30.57 304 P **P** **14 56 03.7 +2.4**
comp=Z,529nm,1.0s
SUKH Sukhothai 30.58 302 P **P** **14 56 03.3 +1.9**
comp=Z,51nm,0.9s
WHN Wuhan 30.71 339⇑ *i*P **P** **14 56 03.5 +1.1**
WHN pmax pmax
comp=Z,58nm,0.9s
NJ2 Nanjing 30.84 347 *e*P **P** **14 56 04.5 +1.0**
NJ2 pmax pmax
comp=Z,30nm,0.7s
GYA Guiyang 30.96 324⇓ P **P** **14 56 05.5 +0.7**
GYA pmax pmax
comp=Z,28nm,1.2s
LAMP Lampang 31.07 304 P **P** **14 56 09.6 +3.9**
comp=Z,46nm,0.9s
PAYA Payao 31.29 305 P **P** **14 56 10.0 +2.3**
comp=Z,4µmcomp=Z,448nm,1.5s
JNU Nakatsue 31.32 7 P **P** **14 56 08.7 +0.9**
comp=Z,122nm,1.0s,baz=214,slow=11,SNR=20
JNU Nakatsue 31.32 7 P **P** **14 56 07.6 -0.2**
JNU IAmb IAmb 14 56 10.3
comp=Z,162nm,1.0s
CM36 Chiang Mai Arr 31.52 303 P **P** **14 56 12.0 +2.3**
CM35 Chiang Mai Arr 31.54 304 P **P** **14 56 11.0 +1.1**
CM04 Chiang Mai Arr 31.56 303 P **P** **14 56 13.0 +2.9**
comp=Z,21nm,1.1s
CM09 Chiang Mai Arr 31.57 303 P **P** **14 56 13.3 +3.1**
comp=Z,25nm,0.9s
CM01 Chiang Mai Arr 31.58 303 P **P** **14 56 13.0 +2.7**
comp=Z,25nm,0.9s
CM05 Chiang Mai Arr 31.59 303 P **P** **14 56 13.0 +2.7**
comp=Z,15nm,1.0s
CM02 Chiang Mai Arr 31.60 303 P **P** **14 56 13.7 +3.2**
comp=Z,19nm,0.9s
CM31 Chiang Mai Arr 31.61 303 P **P** **14 56 13.9 +3.3**
comp=Z,507nm,0.9s
CM31 Chiang Mai Arr 31.61 303 P **P** **14 56 10.3 -0.3**
CMAR Chiang Mai Arr 31.61 303 P **P** **14 56 11.8 +1.2**
comp=Z,14nm,0.9s,baz=121,slow=7.2,SNR=22
CMAR PcP **PcP** **14 59 04.3 +2.0**
comp=Z,16nm,1.0s,baz=169,slow=1.4,SNR=13
CMAR ScP **ScP** **15 02 45.6 +2.9**
comp=Z,3.4nm,1.1s,baz=207,slow=0.8,SNR=4.3
CM13 Chiang Mai Arr 31.63 303 P **P** **14 56 13.8 +3.1**
comp=Z,18nm,0.9s
CM15 Chiang Mai Arr 31.63 303 P **P** **14 56 13.7 +3.0**
comp=Z,20nm,0.9s
CM34 Chiang Mai Arr 31.63 304 P **P** **14 56 12.0 +1.3**
CMMT Chiang Mai 31.78 304 P **P** **14 56 13.8 +1.8**
comp=Z,22nm,1.6s
CM33 Chiang Mai Arr 31.78 304 P **P** **14 56 14.0 +1.9**
CHTO Chiang Mai 31.78 304 P **P** **14 56 11.4 -0.6**
CM32 Chiang Mai Arr 31.79 303 P **P** **14 56 14.0 +1.9**
PATS Pohnpei 32.10 80 P **P** **14 56 14.2 -0.8**
PATS IAmb IAmb 14 56 41.5
comp=Z,137nm,1.1s
MHMT Maesarieng 32.34 302 P **P** **14 56 19.7 +2.8**
MORW Morawa 32.38 197 P **P** **14 56 17.1 -0.1**
baz=32,SNR=6.7
MORW Morawa 32.38 197 P **P** **14 56 15.9 -1.2**
MORW IAmb IAmb 14 56 24.7
comp=Z,68nm,1.1s
JMN Monobe 32.41 12 P **P** **14 56 17.8 +0.4**
JMN IAmb IAmb 14 56 20.0
comp=Z,139nm,1.1s
ENH Enshi 32.49 332 P **P** **14 56 17.6 -0.6**
ENH IAmb IAmb 14 56 19.6
comp=Z,132nm,1.1s
KMI Kunming 32.51 317⇓ *e*P **P** **14 56 19.5 +0.9**
KMI pP pP 14 56 27.3 -1.8
KMI pmax pmax
comp=Z,38nm,1.1s
KMI LR LR
comp=Z,10µm,16.6s
KMI LR LR
comp=Z,6µm,21.2s
KMI LR LR
comp=Z,14µm,18.4s
FORT Forrest 32.54 177 P **P** **14 56 18.7 +0.2**
baz=33,SNR=13
FORT Forrest 32.54 177 P **P** **14 56 17.8 -0.7**
JTU Tsushima 32.56 4 P **P** **14 56 19.6 +0.9**
JTU IAmb IAmb 14 56 30.4
comp=Z,73nm,1.0s
COCO West Island 32.61 244 P **P** **14 56 18.2 -1.1**
COCO IAmb IAmb 14 56 20.2
comp=Z,108nm,1.1s
QLP Quilpie 33.10 150 P **P** **14 56 23.7 +0.2**
baz=33,SNR=3.3
KMBL Kambalda 33.38 187 P **P** **14 56 25.9 +0.1**
baz=34,SNR=8.3
JHS Saijyo 33.50 10 P **P** **14 56 28.3 +1.4**
JHS IAmb IAmb 14 56 30.2
comp=Z,154nm,1.2s
BLDU Ballidu 33.66 195 P **P** **14 56 28.1 -0.1**
baz=34,SNR=7.9

JWT Wachi 34.23 13 P **P** **14 56 34.2 +1.0**
TJN Taejon 34.31 1 *i*P **P** **14 56 33.5 -0.3**
KLBR Kellerberrin 34.33 193 P **P** **14 56 34.6 +0.5**
baz=34,SNR=8.9
JSG Sagara 34.38 17 P **P** **14 56 35.6 +1.1**
INU Inuyama 34.69 15 P **P** **14 56 37.9 +0.8**
JGF Kuroka 35.01 16 P **P** **14 56 40.4 +0.4**
JGF IAmb IAmb 14 56 41.8
comp=Z,90nm,1.2s
MUN Mundaring 35.08 195 P **P** **14 56 40.5 -0.1**
baz=35,SNR=4.8
HNR Honiara 35.19 109 P **P** **14 56 40.5 -1.3**
HNR IAmb IAmb 14 56 47.8
comp=Z,81nm,0.9s
KSAR Wonju Array Be 35.39 2 P **P** **14 56 43.7 +0.6**
KSRS Korea Array 35.40 2 P **P** **14 56 44.6 +1.4**
comp=Z,20nm,0.7s,baz=183,slow=10,SNR=18
KSRS PcP **PcP** **14 59 14.3 +1.7**
comp=Z,8.2nm,0.9s,baz=199,slow=2.8,SNR=8.1
INCN Inchon 35.40 0 P **P** **14 56 43.7 +0.4**
KS19 Wonju Array Si 35.45 2 P **P** **14 56 43.6 0.0**
KS19 IAmb IAmb 14 56 53.8
comp=Z,74nm,1.4s
RMQ Roma 35.49 144 P **P** **14 56 45.3 +1.1**
baz=36,SNR=4.6
NWAO Narrogin (SRO) 35.73 193 P **P** **14 56 46.2 +0.1**
comp=Z,29nm,1.0s,baz=19,slow=12,SNR=4.6
NWAO Narrogin (SRO) 35.73 193 P **P** **14 56 46.0 -0.2**
NWAO IAmb IAmb 14 56 53.3
comp=Z,72nm,1.1s
XAN Xi'an 35.94 335 P **P** **14 56 47.2 -0.7**
XAN IAmb IAmb 14 56 49.6
comp=Z,101nm,1.3s
CD2 Chengdu 35.98 326 P **P** **14 56 48.3 -0.1**
CD2 pmax pmax
comp=Z,120nm,1.3s
EIDS Eidsvold 36.10 140 P **P** **14 56 49.2 -0.2**
baz=36,SNR=10.0
EIDS Eidsvold 36.10 140 P **P** **14 56 48.4 -1.0**
EIDS IAmb IAmb 14 56 55.3
comp=Z,100nm,1.1s
MJAR Matsushiro Arr 36.13 16 P **P** **14 56 49.6 0.0**
comp=Z,58nm,0.9s,baz=188,slow=8.8,SNR=30
MJAR PcP **PcP** **14 59 16.4 +1.5**
comp=Z,14nm,0.9s,baz=177,slow=3.0,SNR=6.2
MJAR Matsushiro Arr 36.13 16 P **P** **14 56 49.3 -0.3**
MAJO Matsushiro 36.13 16*c i*P **P** **14 56 49.4 -0.2**
MAJO pmax pmax
comp=Z,98nm,1.1s
MAJO Matsushiro 36.13 16 P **P** **14 56 49.0 -0.6**
MAT Matsushiro 36.13 16 P **P** **14 56 49.2 -0.4**
MJB9 Matsu-Tunnel 36.13 16 P **P** **14 56 49.7 +0.1**
JYT Yasato 36.44 19 P **P** **14 56 50.6 -1.5**
JYT IAmb IAmb 14 56 51.5
comp=Z,209nm,1.5s
STKA Stephens Creek 36.53 158 P **P** **14 56 52.8 -0.3**
comp=Z,43nm,0.8s,baz=338,slow=8.4,SNR=9.1
STKA Stephens Creek 36.53 158 P **P** **14 56 53.2 +0.2**
baz=37,SNR=12
STKA Stephens Creek 36.53 158 P **P** **14 56 51.5 -1.5**
HTT Hallett 37.06 163 P **P** **14 56 58.0 +0.5**
baz=37,SNR=3.6
DL2 Dalian 37.09 354⇓ P **P** **14 56 59.5 +1.8**
DL2 S **S** **15 02 43.8 +2.7**
DL2 pmax pmax
comp=Z,140nm,1.0s
DL2 LR LR
comp=Z,6µm,15.4s
DL2 LR LR
comp=Z,12µm,21.6s
DL2 LR LR
comp=Z,13µm,18.0s
JSD Sado 37.55 15 P **P** **14 57 01.2 -0.4**
CMSA Cobar Meteorol 37.94 153 P **P** **14 57 05.5 +0.6**
baz=38,SNR=7.7
JMM Marumori 38.13 18 P **P** **14 57 06.8 +0.3**
BJT Baijiatuau 39.08 347 P **P** **14 57 14.1 -0.3**
BJT IAmb IAmb 14 57 18.5
comp=Z,68nm,0.9s
BJI Beijing 39.10 347 P **P** **14 57 15.3 +0.8**
BJI pmax pmax
comp=Z,33nm,1.1s
LZH Lanzhou 39.95 331 *e*P **P** **14 57 23.3 +1.3**
LZH pP pP 14 57 29.8 -2.9
LZH sP pwP 14 57 33.0 -2.0
LZH PcP **PcP** **14 59 29.0 +2.1**
LZH pmax pmax
comp=Z,23nm,1.4s
ARMA Armidale 40.10 145 P **P** **14 57 23.9 +0.7**
baz=40,SNR=19
ARMA Armidale 40.10 145 P **P** **14 57 22.3 -1.0**
ARMA IAmb IAmb 14 57 29.8
comp=Z,76nm,1.0s
SHL Shillong 40.78 308 P **P** **14 57 28.2 -0.8**
SHL IAmb IAmb 14 57 30.5
comp=Z,175nm,1.1s
JTM Tennmabayashi 40.89 17 P **P** **14 57 29.7 +0.3**
ARPS Mount Arapiles 41.05 161 P **P** **14 57 31.7 +0.9**
baz=41,SNR=16
HHC Hu-ho-hao-te 41.05 343 *e*P **P** **14 57 32.5 +1.6**
VLA Vladivostok 41.32 6 *i*P **P** **14 57 33.6 +0.7**
VLA pmax pmax
comp=Z,136nm,1.1s
YNG Young 41.49 152 P **P** **14 57 35.2 +0.7**
baz=42,SNR=13
CN2 Changchun 41.73 359 *e*P **P** **14 57 36.8 +0.5**
USRK Ussuriysk Ar. 42.40 6 P **P** **14 57 43.4 +1.7**
comp=Z,99nm,0.9s,baz=189,slow=7.5,SNR=52
USRK Ussuriysk Ar. 42.40 6 P **P** **14 57 42.4 +0.7**
USA0B Ussuriysk Arra 42.40 6 *i*P **P** **14 57 42.0 +0.3**
USA0B Ussuriysk Arra 42.40 6 P **P** **14 57 42.9 +1.1**
USA0B IAmb IAmb 14 57 44.9
comp=Z,134nm,1.0s
MDJ Mudanjiang 42.62 3 P **P** **14 57 45.3 +1.8**
MDJ pmax pmax
comp=Z,77nm,1.3s
MDJ Mudanjiang 42.62 3 P **P** **14 57 44.4 +0.9**
MDJ IAmb IAmb 14 57 46.6
comp=Z,78nm,1.0s
ERM Erimo 42.65 18 *i*P **P** **14 57 42.2 -1.6**
ERM pmax pmax
comp=Z,54nm,1.2s
JEW Eniwo 42.90 16 P **P** **14 57 46.5 +0.7**
TOO Toolangi 43.05 158 P **P** **14 57 48.4 +1.2**
baz=43,SNR=7.1
TOO Toolangi 43.05 158 P **P** **14 57 47.8 +0.6**
LSA Lhasa 43.47 313 P **P** **14 57 52.0 +0.8**
SANVU Saraoutou 43.80 115 P **P** **14 57 53.7 +0.2**
SANVU IAmb IAmb 14 57 59.2
comp=Z,158nm,1.1s
TEY Ternei 43.87 10⇑ *i*P **P** **14 57 55.2 +1.6**
TEY pmax pmax
comp=N,400nm,0.9s
TEY pmax pmax
comp=E,10.0nm,0.9s
TEY pmax pmax
comp=Z,210nm,0.9s
ASAJ Asahikawa 44.40 17 P **P** **14 57 59.8 +2.0**
comp=Z,94nm,1.0s,baz=223,slow=7.3,SNR=21
JKA Kamikawa-asahi 44.40 17 P **P** **14 57 59.2 +1.3**
JKA IAmb IAmb 14 58 01.4
comp=Z,124nm,1.0s
GTA Gaotai 44.53 330⇓ P **P** **14 57 59.5 +0.3**
GTA pP pP 14 58 07.3 -2.8
GTA sP pwP 14 58 11.0 -1.3
GTA PcP **PP** **14 59 44.0 +0.3**
GTA ScP **ScP** **15 03 35.3 +4.1**
GTA ScS **ScS** **15 07 54.5 +0.3**
GTA pmax pmax
comp=Z,19nm,1.3s
CHLP Challavanipeta 44.72 295 *e*P **P** **14 58 00.8 -0.1**
TAPN Taplejung 44.91 308 *e*P **P** **14 58 02.9 +0.3**
comp=Z,107nm,0.9s
ODAN Odare 44.94 307 *e*P **P** **14 58 03.3 +0.5**
comp=Z,152nm,1.0s
RAMN Ramite 45.61 307 *e*P **P** **14 58 08.5 +0.4**
comp=Z,178nm,1.1s
DZM Mont Dzumac 45.72 124 P **P** **14 58 09.4 +0.6**
comp=Z,38nm,1.0s,baz=330,slow=5.7,SNR=8.4
DZM Mont Dzumac 45.72 124 P **P** **14 58 08.6 -0.2**
DZM IAmb IAmb 14 58 10.2
comp=Z,60nm,1.1s
PALK Pallekele 45.92 278 P **P** **14 58 11.1 +0.6**
comp=Z,34nm,1.0s,baz=174,slow=6.5,SNR=8.9
PALK Pallekele 45.92 278 P **P** **14 58 09.8 -0.7**

GUN Gumba 46.61 308 *e*P **P** **14 58 16.1 0.0**
comp=Z,144nm,0.8s
PVM Polavaram 46.63 292 *e*P **P** **14 58 14.6 -1.4**
PKI Pulchoki 46.84 307 *e*P **P** **14 58 17.2 -0.7**
comp=Z,94nm,1.1s
PKIN Phulchoki 46.85 307 *e*P **P** **14 58 17.2 -0.7**
KKN Kakani 47.03 307 *e*P **P** **14 58 19.2 -0.1**
comp=Z,92nm,0.9s
YSS Yuzh-Sakhalins 47.05 15 *e*P **P** **14 58 20.0 +1.2**
YSS pmax pmax
comp=Z,90nm,1.1s
YSS Yuzh-Sakhalins 47.05 15 P **P** **14 58 19.1 +0.3**
KUR Kuril'sk 47.08 21 *i*P **P** **14 58 17.2 -1.8**
KUR pmax pmax
comp=Z,158nm,1.1s
DMN Daman 47.10 307 *e*P **P** **14 58 19.7 -0.1**
comp=Z,178nm,1.3s
KLR Kul'dur 47.36 5 *i*P **P** **14 58 20.5 -0.7**
KLR pmax pmax
comp=Z,91nm,1.0s
MYLAV Mylavaram 47.43 291 *e*P **P** **14 58 22.2 0.0**
HIA Hailar 47.53 354 *i*P **P** **14 58 23.5 +0.9**
HIA pmax pmax
comp=Z,67nm,1.1s
HIA Hailar 47.53 354 P **P** **14 58 22.7 +0.2**
HIA IAmb IAmb 14 58 32.5
comp=Z,78nm,1.2s
GKN Gorkha 47.64 307 *e*P **P** **14 58 23.1 -0.8**
comp=Z,171nm,1.2s
ADKI Addanki 47.86 290 *e*P **P** **14 58 25.9 +0.4**
KOLN Koldanda 48.37 306 *e*P **P** **14 58 29.3 -0.3**
comp=Z,225nm,0.7s
DANN Dangsing 48.49 307 *e*P **P** **14 58 29.9 -0.7**
NJS Nagarjunasagar 48.63 290 *e*P **P** **14 58 30.9 -0.6**
ULN Ulaanbaatar 48.77 343 *i*P **P** **14 58 31.5 -0.8**
ULN pmax pmax
comp=Z,36nm,1.0s
ULN Ulaanbaatar 48.77 343 P **P** **14 58 31.3 -1.0**
ULN IAmb IAmb 14 58 38.5
comp=Z,46nm,1.1s
ULN PcP **PcP** **14 59 57.7 +1.0**
SONM Songino Array 48.94 342 P **P** **14 58 34.1 +0.6**
comp=Z,24nm,0.8s,baz=156,slow=8.8,SNR=17
SONM PcP **PcP** **14 59 58.5 +1.1**
comp=Z,21nm,0.9s,baz=160,slow=3.9,SNR=7.6
SONM Songino Array 48.94 342 P **P** **14 58 33.3 -0.2**
SONM **PcP** **14 59 57.9 +0.5**
PYUN Piuthan 49.00 306 *e*P **P** **14 58 34.2 -0.3**
comp=Z,95nm,0.5s
CUPL Choutuppal 49.15 291 *e*P **P** **14 58 35.5 0.0**
RPR Rampur 49.17 293 *e*P **P** **14 58 35.2 -0.4**
GRNR Gornyy 49.41 8⇓ *i*P **P** **14 58 38.9 +2.0**
GRNR *e*S **S** **15 05 47.0 +5.9**
GRNR pmax pmax
comp=E,3.0nm,0.8s
GRNR pmax pmax
comp=N,30nm,1.0s
GRNR pmax pmax
comp=Z,60nm,1.1s
GRNR smax smax
comp=E,2.0nm,1.0s
GRNR MLR MLR
comp=E,2µm,14.0s
GRNR MLR MLR
comp=N,3µm,17.0s
GRNR MLR MLR
comp=Z,3µm,15.0s
HYBB Hyderabad (bro 49.52 291 *e*P **P** **14 58 37.5 -0.9**
NFK Norfolk Island 50.21 131 P **P** **14 58 44.7 +1.3**
baz=50,SNR=3.9
URV Uravakonda 50.25 288 *e*P **P** **14 58 43.6 -0.3**
TYV Tymovskoe 50.66 13 *e*P **P** **14 58 46.1 -0.3**
TYV pmax pmax
comp=Z,52nm,1.2s
CIT Chita 51.10 350 *e*P **P** **14 58 51.3 +1.5**
CIT *e* 14 59 03.0
CIT *e* 14 59 59.1
CIT *e* 15 06 09.0
CIT pmax pmax
comp=Z,338nm,1.6s
KLRI Killari 51.48 292 *e*P **P** **14 58 52.8 -0.3**
ZEA Zeya 51.66 1 *e*P **P** **14 58 54.4 +0.5**
ZEA pmax pmax
comp=N,20nm,0.9s
ZEA pmax pmax
comp=Z,30nm,0.9s
ZAK Zakamensk 52.16 341 *e*P P 14 58 49.8 -8.0
ZAK pmax pmax
comp=Z,12nm,1.2s
IRK Irkutsk 53.49 343 *e*P **P** **14 59 08.5 +1.1**
IRK pmax pmax
comp=Z,111nm,3.2s
FUNA Funafuti 53.56 102 P **P** **14 59 08.4 -0.2**
MOY Mondy 54.00 341 *e*P **P** **14 59 13.0 +1.6**
MOY pmax pmax
comp=Z,141nm,3.2s
WMQ Urumqi 54.08 326 *e*P **P** **14 59 13.0 +1.0**
WMQ pP pP 14 59 20.8 -2.3
WMQ sP pwP 14 59 25.3 0.0
WMQ PcP **PcP** **15 00 16.5 0.0**
WMQ pmax pmax
comp=Z,66nm,1.1s
WMQ pmax pmax
comp=Z,1µm,6.9s
WMQ LR LR
comp=Z,14µm,16.5s
WMQ LR LR
comp=Z,11µm,20.7s
WMQ LR LR
comp=Z,16µm,19.7s
WMQ Urumqi 54.08 326 P **P** **14 59 12.5 +0.5**
WMQ IAmb IAmb 14 59 18.3
comp=Z,46nm,0.9s
MSVF Nonsavu 54.40 113 *i*P **P** **14 59 12.8 -2.0**
MSVF pmax pmax
comp=Z,49nm,1.1s
MSVF Nonsavu 54.40 113 P **P** **14 59 15.0 +0.2**
MSVF IAmb IAmb 14 59 17.1
comp=Z,92nm,1.2s
BHK Bhakra 55.55 307 *ex* x 14 59 25.2
BOD Bodaibo 56.62 352 *e*P **P** **14 59 30.9 +1.0**
BOD pmax pmax
comp=Z,82nm,1.3s
PEA0B Petropavlovsk- 57.20 22 *i*P **P** **14 59 33.4 -0.8**
PEA0B Petropavlovsk- 57.20 22 P **P** **14 59 35.2 +1.1**
PEA0B IAmb IAmb 14 59 36.8
comp=Z,66nm,1.1s
PETK Petropavlovsk- 57.20 22 P **P** **14 59 35.8 +1.6**
comp=Z,21nm,0.8s,baz=179,slow=3.8,SNR=17
PETK Petropavlovsk- 57.20 22 P **P** **14 59 35.2 +1.1**
OUZ Omahuta 57.46 135 P **P** **14 59 37.1 +0.8**
PET Petropavlovsk 57.50 22 *i*P **P** **14 59 36.2 0.0**
PET pmax pmax
comp=Z,246nm,1.2s
PET Petropavlovsk 57.50 22 P **P** **14 59 37.9 +1.7**
PET IAmb IAmb 14 59 38.8
comp=Z,81nm,1.2s
ZSN Zaisan 57.90 328 *e*P **P** **14 59 39.0 -0.3**
comp=Z,12nm,1.0s,baz=328
ZSN Zaisan 57.90 328 *e*P **P** **14 59 38.9 -0.3**
ZSN pmax pmax
comp=Z,12nm,1.0s
SHLS Shalkode 58.59 321 *e*P **P** **14 59 42.5 -1.8**
comp=Z,27nm,0.9s,baz=321
SHLS Shalkode 58.59 321 *e*P **P** **14 59 42.4 -1.8**
SHLS pmax pmax
comp=Z,27nm,0.9s
NIL Nilore 58.85 309 P **P** **14 59 45.4 -0.7**
NIL IAmb IAmb 15 00 06.8
comp=Z,49nm,1.0s
MK31 Makanchi Array 58.91 326 *i*P **P** **14 59 45.7 -0.6**
MK31 pmax pmax
comp=Z,15nm,0.5s
MK31 Makanchi Array 58.91 326 P **P** **14 59 45.6 -0.7**
MK31 IAmb IAmb 14 59 48.8
comp=Z,47nm,1.1s
MK31 PcP **PcP** **15 00 35.5 +0.2**
MKAR Makanchi Array 58.91 326 P **P** **14 59 46.4 +0.1**
comp=Z,14nm,0.3s,baz=119,slow=7.5,SNR=30
MKAR Makanchi Array 58.91 326 P **P** **14 59 45.4 -0.8**
MKAR PcP **PcP** **15 00 35.5 +0.2**
PRZ Przheval'sk 58.92 320 P **P** **14 59 47.0 +0.3**
MAKZ Makanchi 59.09 326 P **P** **14 59 47.4 -0.1**
MAKZ Makanchi 59.09 326 P **P** **14 59 46.7 -0.9**
MAKZ IAmb IAmb 14 59 50.0

MAKZ PcP PcP 15 00 36.0 0.0
comp=Z,72nm,1.1s
KSH Kashi 59.16 316 P P 14 59 50.0 +1.7
KSH PcP PcP 15 00 38.5 +2.0
KSH S S 15 07 54.8 +1.5
KSH pmax pmax
comp=Z,57nm,0.8s
KSH pmax pmax
comp=Z,6µm,9.4s
KSH LR LR
comp=Z,5µm,13.4s
KSH LR LR
comp=Z,4µm,12.4s
KSH LR LR
comp=Z,17µm,20.4s
SATY Saty 59.21 321 *e*P P 14 59 48.7 +0.2
comp=Z,42nm,0.9s,baz=320
SATY Saty 59.21 321 *e*P P 14 59 48.7 +0.2
SATY pmax pmax
comp=Z,42nm,0.9s
KPKS Kokpek 59.24 321 *e*P P 14 59 48.4 -0.3
comp=Z,34nm,0.8s,baz=321
KPKS Kokpek 59.24 321 *e*P P 14 59 48.4 -0.3
KPKS pmax pmax
comp=Z,35nm,0.8s
KDJ Kajisay 59.54 319 P P 14 59 51.1 +0.1
KDJ IAmb IAmb 14 59 53.2
comp=Z,50nm,0.8s
QRZ Quartz Range 59.68 141 P P 14 59 52.4 +0.8
QRZ IAmb IAmb 15 00 03.6
comp=Z,73nm,1.3s
HIZ Hauiti 59.98 137 P P 14 59 54.0 +0.3
HIZ IAmb IAmb 14 59 56.0
comp=Z,93nm,1.2s
AIS Amsterdam Isla 59.99 224 P P 14 59 55.1 +1.4
YAK Yakutsk 60.03 2 *e*P P 14 59 54.7 +1.1
YAK *e**PP pP 15 00 02.6 -2.1
YAK *e*S S 15 08 06.9 +3.6
YAK *e**SS sS 15 08 32.9 +11
YAK pmax pmax
comp=Z,326nm,0.9s
YAK pmax pmax
comp=N,114nm,1.1s
YAK pmax pmax
comp=E,28nm,1.1s
YAK smax smax
comp=E,3µm,8.1s
YAK smax smax
comp=N,10µm,13.2s
YAK Yakutsk 60.03 2 P P 14 59 54.1 +0.5
WHZ Wether Hill Ro 60.04 148 P P 14 59 54.7 +0.7
WHZ IAmb IAmb 15 00 18.8
comp=Z,75nm,1.3s
MDOK Medeo 60.12 320 *e*P P 14 59 54.9 -0.1
baz=320
MDOK *e*S S 15 08 05.5 -0.2
baz=320
MDOK Medeo 60.12 320 *e*P P 14 59 54.8 -0.1
MDOK *e*S S 15 08 05.4 -0.2
TNSS Tian-Shan 60.13 320 *e*P P 14 59 55.0 -0.2
baz=320
TNSS Tian-Shan 60.13 320 *e*P P 14 59 55.0 -0.2
TDK Taldyqorghan 60.19 323 *e*P P 14 59 55.1 -0.1
comp=Z,37nm,0.8s,baz=322
TDK *e*S S 15 08 06.2 0.0
baz=322
TDK Taldyqorghan 60.19 323 *e*P P 14 59 55.1 -0.1
TDK *e*S S 15 08 06.1 0.0
TDK pmax pmax
comp=Z,37nm,0.8s
AAA Alma-Ata 60.23 320 *e*P P 14 59 55.7 +0.2
comp=Z,33nm,0.9s,baz=320
AAA *e*S S 15 08 07.6 +0.7
baz=320
AAA Alma-Ata 60.23 320 *e*P P 14 59 55.7 +0.2
AAA *e*S S 15 08 07.5 +0.7
AAA pmax pmax
comp=Z,33nm,0.9s
LBZ Lake Benmore 60.33 145 P P 14 59 55.7 -0.3
LBZ IAmb IAmb 15 00 01.7
comp=Z,49nm,0.9s
RPZ Rata Peaks 60.43 144 P P 14 59 56.6 -0.1
RPZ IAmb IAmb 15 00 08.5
comp=Z,80nm,1.2s
THZ Tophouse 60.43 141 P P 14 59 56.0 -0.9
THZ IAmb IAmb 15 00 07.5
comp=Z,27nm,0.8s
CHKK Chushkaly 60.50 321 *e*P P 14 59 56.8 -0.5
baz=321
CHKK Chushkaly 60.50 321 *e*P P 14 59 56.7 -0.5
MA2 Magadan 60.52 14 *d*iP P 14 59 56.7 -0.4
MA2 pmax pmax
comp=Z,149nm,1.0s
MA2 Magadan 60.52 14 P P 14 59 58.5 +1.4
BOOM Boomskoye usch 60.52 319 P P 14 59 57.8 +0.2
LTZ Lake Taylor 60.61 143 P P 14 59 58.1 0.0
LTZ IAmb IAmb 14 59 58.4
comp=Z,64nm,1.4s
TUWZ Tuamarina 60.90 141 P P 14 59 59.1 -0.9
KUU Kurty 60.93 321 *e*P P 15 00 00.2 -0.1
comp=Z,76nm,0.9s,baz=320
KUU Kurty 60.93 321 *e*P P 15 00 00.1 -0.1
KUU pmax pmax
comp=Z,76nm,0.9s
TKM2 Tokmak 2 60.95 319 P P 15 00 00.4 -0.2
SNR=17
BSWZ Blackbirch Sta 61.01 141 P P 14 59 59.8 -0.9
KHZ Kahutara 61.18 142 P P 15 00 01.4 -0.5
CMWZ Cape Campbell 61.24 141 P P 15 00 00.8 -1.5
KBK Karagaybulak 61.25 319 P P 15 00 03.3 +0.7
SNR=16
UCH Uchtor 61.35 318 P P 15 00 05.0 +1.4
SNR=17
URZ Urewera 61.40 136 P P 15 00 03.6 +0.2
comp=Z,20nm,0.8s,baz=14,slow=4.4,SNR=5.6
URZ Urewera 61.40 136 P P 15 00 02.7 -0.7
URZ IAmb IAmb 15 00 07.9
comp=Z,40nm,1.0s
BKZ Black Stump Fm 61.41 137 P P 15 00 02.6 -1.0
BKZ IAmb IAmb 15 00 09.9
comp=Z,102nm,1.5s
BHW Baring Head 61.48 140 P P 15 00 03.2 -0.7
CHMS Chumysh 61.54 319 P P 15 00 04.3 0.0
SNR=8.3
AAK Ala-Archa 61.54 319 P P 15 00 05.2 +0.6
comp=Z,16nm,0.8s,baz=174,slow=9.2,SNR=13
AAK Ala-Archa 61.54 319 *i* P P 15 00 04.1 -0.5
AAK pmax pmax
comp=Z,57nm,1.0s
MSWZ Moikau Station 61.73 140 P P 15 00 05.4 -0.2
PLWZ Palliser 61.81 140 P P 15 00 06.2 0.0
SGDS Sogindy 61.82 319 *e*P P 15 00 05.7 -0.6
comp=Z,5.1nm,1.0s,baz=319
SGDS Sogindy 61.82 319 *e*P P 15 00 05.7 -0.6
SGDS pmax pmax
comp=Z,5.0nm,1.0s
USP Ospenovka 61.82 319 P P 15 00 06.6 +0.4
SNR=28
AML Almayashu 61.85 318 P P 15 00 07.8 +0.9
SNR=27
EKS2 Erkin-Say 62.03 318 P P 15 00 08.3 +0.5
SNR=19
DRK Karamyk 62.09 314 P P 15 00 08.0 -0.5
ZAA0 Zalesovo Array 62.09 334 P P 15 00 07.0 -0.8
ZAA0 IAmb IAmb 15 00 09.8
comp=Z,35nm,1.1s
ZALV Zalesovo Beam 62.09 334 P P 15 00 07.2 -0.6
comp=Z,11nm,0.5s,baz=130,slow=5.1,SNR=18
ZALV Zalesovo Beam 62.09 334 P P 15 00 06.8 -1.0
SEM Semipalatinsk 62.11 328 *e*P P 15 00 07.4 -0.9
baz=328
SEM Semipalatinsk 62.11 328 *e*P P 15 00 07.3 -0.9
KBL Kabul 62.44 308 P P 15 00 09.6 -1.2
KBL IAmb IAmb 15 00 16.7
comp=Z,36nm,0.7s
BTLS Baital 62.92 321 *e*P P 15 00 13.0 -0.6
comp=Z,4.9nm,0.7s,baz=321
BTLS Baital 62.92 321 *e*P P 15 00 12.9 -0.6
BTLS pmax pmax
comp=Z,5.0nm,0.7s
BTK Batken 63.01 315 P P 15 00 14.1 -0.2
BTK IAmb IAmb 15 00 28.8
comp=Z,39nm,1.1s
KURBB Kurchatov Arra 63.14 328 P P 15 00 14.4 -0.4
comp=Z,32nm,0.5s,baz=128,slow=6.2,SNR=22
KURBB Kurchatov Arra 63.14 328 P P 15 00 13.8 -1.0
KURK Kurchatov 63.14 328 *i* P P 15 00 14.0 -0.8
KURK pmax pmax
comp=Z,82nm,1.1s
KURK Kurchatov 63.14 328 P P 15 00 14.2 -0.7
DZA Taraz 63.76 318 *e*P P 15 00 19.0 -0.2
baz=318
DZA Taraz 63.76 318 *e*P P 15 00 18.9 -0.2
SEY Seymchan 63.85 13 *d*iP P 15 00 19.1 -0.2
IUG luzhnay 64.35 317 *e*P P 15 00 23.0 -0.1
comp=Z,15nm,0.9s,baz=316
IUG luzhnay 64.35 317 *e*P P 15 00 23.0 -0.1
IUG pmax pmax
comp=Z,15nm,0.9s
KK31 Karatay Array 64.39 318 *i* P P 15 00 23.0 -0.3
KK31 Karatay Array 64.39 318 P P 15 00 23.0 -0.3
KKAR Karatay Array 64.39 318 P P 15 00 22.7 -0.6
KKAR Karatay Array 64.39 318 P P 15 00 22.8 -0.6
BRLS Borolday 64.82 317 *e*P P 15 00 25.7 -0.5
comp=Z,11nm,0.7s,baz=317
BRLS Borolday 64.82 317 *e*P P 15 00 25.6 -0.5
BRLS pmax pmax
comp=Z,11nm,0.7s
BRZS Berezniki 66.03 325 *e*P P 15 00 33.5 -0.3
comp=Z,14nm,1.3s,baz=325
BRZS Berezniki 66.03 325 *e*P P 15 00 33.5 -0.3
BRZS pmax pmax
comp=Z,14nm,1.3s
HRA Herat 67.80 306 P P 15 00 44.9 -0.7
BRVK Borovoye 68.78 327 *i* P P 15 00 51.1 0.0
BRVK pmax pmax
comp=Z,80nm,1.0s
BRVK Borovoye 68.78 327 P P 15 00 51.1 0.0
BRVK IAmb IAmb 15 00 54.2
comp=Z,70nm,0.9s
WSAR Wadi Sarin 68.93 294 P P 15 00 52.3 -0.3
comp=Z,5.4nm,0.8s,baz=114,slow=7.3,SNR=4.4
CASY Casey 68.99 187 P P 15 00 52.4 +0.4
CASY IAmb IAmb 15 00 57.1
comp=Z,77nm,1.4s
TIXI Tiksi 69.66 1 *i* P P 15 00 55.4 -0.7
TIXI Tiksi 69.66 1 P P 15 00 56.0 -0.2
TIXI IAmb IAmb 15 00 57.9
comp=Z,102nm,1.1s
ATKA Atka Island 70.13 34 P P 15 00 59.8 +0.4
ATKA IAmb IAmb 15 01 03.2
comp=Z,93nm,1.0s
UOSS Minazif 71.33 296 P P 15 01 06.9 -0.5
BILL Bilibino 71.37 15 *c*iP P 15 01 07.6 +0.9
BILL *e**PP pP 15 01 18.7 +0.7
BILL *e* 15 01 29.0
BILL *e* 15 10 47.5
BILL pmax pmax
comp=Z,14nm,1.2s
BILL MLR MLR
comp=Z,8µm,19.0s
BILL Bilibino 71.37 15 P P 15 01 07.3 +0.7
GYA0B ALIBECK ARRAY 71.84 309 P P 15 01 09.9 -0.3
NRIK Noril'sk 72.13 346 P P 15 01 12.2 +1.0
comp=Z,99nm,0.9s,baz=132,slow=5.9,SNR=31
NRIK Noril'sk 72.13 346 *i* P P 15 01 11.5 +0.3
NRIK pmax pmax
comp=Z,142nm,1.0s
SOCY Socotra 72.49 282 P P 15 01 13.5 -1.0
AB31 Akbulak array 73.40 321 P P 15 01 17.7 -1.4
ABKAR Akbulak array 73.40 321 P P 15 01 18.2 -0.9
UNV Unalaska Valle 75.06 34 P P 15 01 29.6 +0.9
SVE Sverdlovsk 75.38 329 *d*iP P 15 01 30.1 -0.4
SVE pmax pmax
comp=Z,243nm,1.2s
AKUT Akutan 75.56 34 P P 15 01 32.7 +1.2
GAMB Gambell 76.15 24 P P 15 01 35.1 +0.4
GAMB IAmb IAmb 15 01 38.7
comp=Z,124nm,1.2s
ARU Arti 76.34 328 *c*iP P 15 01 35.9 -0.1
ARU S S 15 11 20.6 +2.7
ARU pmax pmax
comp=Z,170nm,1.1s
ARU Arti 76.34 328 P P 15 01 34.8 -1.2
FALS False Pass 77.08 34 P P 15 01 40.0 -0.2
SDPT Sand Point 78.84 34 P P 15 01 50.6 +0.7
CNBA Chernabura Isl 79.22 34 P P 15 01 51.5 -0.5
CNBA IAmb IAmb 15 01 54.3
comp=Z,55nm,1.0s
CHGN Chignik 80.17 33 P P 15 01 57.4 +0.3
CHGN IAmb IAmb 15 01 59.0
comp=Z,78nm,1.2s
OPO Ambohidratompo 80.46 251 P P 15 02 00.6 +0.8
comp=Z,32nm,0.8s,baz=71,slow=4.2,SNR=14
ABPO Ambohimpanom 80.47 250 P P 15 01 59.6 -0.2
ABPO IAmb IAmb 15 02 08.6
comp=Z,58nm,1.1s
RAYN Ar Rayn 80.97 293 P P 15 02 02.0 -0.2
RDOG Red Dog Mine 81.06 21 P P 15 02 02.9 +1.1
RDOG IAmb IAmb 15 02 06.1
comp=Z,108nm,1.1s
KIRV Kirov 81.64 329 *i* P P 15 02 04.7 -0.2
VNDA Vanda 81.66 173 P P 15 02 05.2 +0.5
comp=Z,14nm,0.8s,baz=314,slow=6.7,SNR=14
VNDA Vanda 81.66 173 P P 15 02 04.8 +0.1
GROC Groznyy 81.90 313 *e*P P 15 02 05.6 -1.1
GROC *e* 15 02 10.7
GROC pmax pmax
comp=Z,101nm,1.1s
MAW Mawson 81.97 200 P P 15 02 06.7 +0.2
comp=Z,23nm,0.9s,baz=47,slow=6.0,SNR=14
MAW Mawson 81.97 200 P P 15 02 07.5 +1.1
baz=82,SNR=8.9
MAW Mawson 81.97 200 P P 15 02 07.1 +0.6
GNI Garni 82.46 310 *i* P P 15 02 09.9 0.0
GNI pmax pmax
comp=Z,37nm,1.0s
GNI Garni 82.46 310 P P 15 02 10.1 +0.2
GNI IAmb IAmb 15 02 25.5
comp=Z,54nm,0.9s
SVW2 Sparrevohn 82.51 29 P P 15 02 10.9 +1.4
SVW2 IAmb IAmb 15 02 13.6
comp=Z,90nm,1.2s
SII Sitkinak Islan 82.53 33 P P 15 02 11.0 +1.3
TTA Tatalina 82.63 27 P P 15 02 11.7 +1.5
OHAK Old Harbor 83.11 33 P P 15 02 13.9 +1.3
OHAK IAmb IAmb 15 02 15.3
comp=Z,80nm,1.2s
ZEI Tsey 83.26 313 *e*P P 15 02 13.0 -1.1
ZEI pmax pmax
comp=Z,125nm,1.3s
ATD Ata Tunnel 83.39 281 P P 15 02 16.1 +1.1
comp=Z,9.9nm,0.6s,baz=41,slow=2.6,SNR=4.4
KDAK Kodiak Island 83.56 32 P P 15 02 16.2 +1.3
GEVA Gevas 83.66 308 P P 15 02 16.1 -0.1
RSO Redoubt South 83.79 29 P P 15 02 16.8 +0.4
A21K Barrow 84.02 18 P P 15 02 19.6 +2.6
baz=258
A21K Barrow 84.02 18 P P 15 02 18.7 +1.7
GOF Gofitskoye 84.02 315 *i**eP P 15 02 18.4 +0.8
GOF pmax pmax
comp=Z,57nm,1.1s
KBZ Khabaz 84.05 314 P P 15 02 18.4 +0.7
comp=Z,17nm,0.9s,baz=188,slow=4.8,SNR=12
KBZ Khabaz 84.05 314 *i* P P 15 02 17.8 +0.1
KBZ pmax pmax
comp=Z,27nm,1.0s
IMAR Indian Mountai 84.10 24 P P 15 02 18.7 +1.1
KIV Kislovodsk 84.21 314 *e*P P 15 02 18.7 -0.1
KIV pmax pmax
comp=Z,99nm,1.0s
KIV Kislovodsk 84.21 314 P P 15 02 18.7 -0.1
KIV IAmb IAmb 15 02 37.8
comp=Z,35nm,1.0s
PPLA Purkeypile 84.35 27 P P 15 02 20.1 +1.0
CNPM China Poot 84.44 30 P P 15 02 20.2 +0.7
SKT Skwentna 84.55 28 P P 15 02 20.4 +0.4
SKT IAmb IAmb 15 02 22.0
comp=Z,60nm,0.9s
BRLK Bradley Lake 84.64 30 P P 15 02 21.2 +0.7
SUA Susitna One 84.87 29 P P 15 02 22.4 +0.7
KTH Kantishna Hill 85.00 26 P P 15 02 23.4 +1.1
CUT Chulitna 85.18 28 P P 15 02 23.7 +0.6
baz=265
MLY Manley 85.22 25 P P 15 02 24.9 +1.6
baz=264
VRH Novokhopyorsk 85.23 321 *e*P P 15 02 23.4 -0.2
VRH pmax pmax
comp=Z,430nm,1.0s
TRF Thorofare Moun 85.27 27 P P 15 02 24.2 +0.5
TRF IAmb IAmb 15 02 25.4
comp=Z,69nm,1.5s
O22K Cooper Landing 85.28 30 P P 15 02 24.8 +1.2
baz=266
O22K Cooper Landing 85.28 30 P P 15 02 24.5 +0.9
RC01 Rabbit Creek A 85.33 29 P P 15 02 24.8 +0.9
baz=265
SEW Seward 85.39 30 P P 15 02 24.9 +0.8
MARD Mardin 85.43 307 P P 15 02 25.1 0.0
MARD IAmb IAmb 15 02 26.7
comp=Z,42nm,0.9s
PMR Palmer 85.66 29 P P 15 02 26.0 +0.5
COLD Coldfoot 85.66 23 P P 15 02 27.2 +1.8
baz=264
COLD Coldfoot 85.66 23 P P 15 02 26.6 +1.2
COLD IAmb IAmb 15 02 30.0
comp=Z,45nm,0.9s
BWN Browne 85.69 26 P P 15 02 27.0 +1.4
BWN IAmb IAmb 15 02 29.8
comp=Z,40nm,1.0s
KOPT Kop Dagi 85.70 310 P P 15 02 26.9 +0.3
GHO Glory Hole Cre 85.77 28 P P 15 02 26.8 +0.6
GHO IAmb IAmb 15 02 28.8
comp=Z,74nm,1.4s
I23K Minto, Yukon-K 85.82 25 P P 15 02 27.4 +1.2
baz=265
I23K Minto, Yukon-K 85.82 25 P P 15 02 27.0 +0.8
I23K IAmb IAmb 15 02 30.4
comp=Z,49nm,1.2s
MCK McKinley 85.90 26 P P 15 02 27.7 +1.0
baz=266
NEA2 Nenana 85.90 25 P P 15 02 28.0 +1.3
baz=266
RND Reindeer 85.91 27 P P 15 02 26.5 -0.3
RND IAmb IAmb 15 02 33.3
comp=Z,38nm,1.3s
KNK Knik Glacier 85.97 29 P P 15 02 27.4 +0.3
TOLK Toolik Lake Re 86.02 21 P P 15 02 29.1 +1.8
baz=265
TOLK Toolik Lake Re 86.02 21 P P 15 02 28.3 +1.0
TOLK IAmb IAmb 15 02 31.2
comp=Z,62nm,1.1s
SML Sawmill 86.05 28 P P 15 02 27.9 +0.4
MDM Murphy Dome 86.28 25 P P 15 02 28.6 0.0
WRH Wood River Hil 86.31 26 P P 15 02 28.4 -0.3
SOC Sochi 86.35 313 *e*P P 15 02 26.0 -3.3
SOC *e*PPP PPP 15 07 42.8
SOC pmax pmax
comp=Z,89nm,0.9s
COLA College 86.44 25 *i* P P 15 02 28.1 -1.2
COLA pmax pmax
comp=Z,6.0nm,1.0s
CCB Clear Creek Bu 86.45 25 P P 15 02 28.8 -0.5
SCM Sheep Creek Mo 86.53 28 P P 15 02 30.3 +0.4
DHY Denali Highway 86.56 27 P P 15 02 30.0 -0.2
POKR Poker Plat Res 86.63 25 P P 15 02 32.8 +2.5
baz=267
HDA Harding Lake 86.81 26 P P 15 02 30.6 -0.5
baz=268
HDA Harding Lake 86.81 26 P P 15 02 30.1 -1.0
HDA IAmb IAmb 15 02 32.5
comp=Z,28nm,1.1s
VORR Voronezh 86.82 321 *e*P P 15 02 30.0 -1.4
VORR pmax pmax
comp=Z,500nm,1.6s
VSR Storozhevoye 86.84 321 *e*P P 15 02 31.2 -0.3
VSR pmax pmax
comp=Z,130nm,0.9s
IL31 86.85 25 P P 15 02 30.5 -0.8
ILAR Eielson Array 86.85 25 P P 15 02 30.6 -0.8
comp=Z,8.1nm,0.9s,baz=254,slow=4.3,SNR=21
ILAR Eielson Array 86.85 25 P P 15 02 30.0 -1.3
KLMR Klimovskoe 86.86 331 *e*P P 15 02 29.3 -2.1
KLMR pmax pmax
comp=Z,141nm,1.2s
KLMR Klimovskoe 86.86 331 *e*P P 15 02 29.4 -2.0
KLMR AMP 15 02 34.5
comp=Z,141nm,1.2s
LPSR Galich'ya Gora 87.01 322 *e*P P 15 02 32.7 +0.4
LPSR pmax pmax
comp=Z,270nm,1.0s
M24K Tolsona, Glenn 87.08 28 P P 15 02 34.2 +1.6
baz=268
M24K Tolsona, Glenn 87.08 28 P P 15 02 33.1 +0.5
M24K IAmb IAmb 15 02 36.5
comp=Z,55nm,1.1s
KLU Klutina 87.19 29 P P 15 02 33.3 +0.2
KLU IAmb IAmb 15 02 36.6
comp=Z,30nm,1.1s
EYAK Cordova Ski Ar 87.25 30 P P 15 02 33.3 0.0
PAX Paxson 87.42 27 P P 15 02 34.4 +0.1
PAX IAmb IAmb 15 02 36.7
comp=Z,38nm,1.2s
TMCR Tamitsa 87.62 334 *e*P P 15 02 34.7 -0.3
TMCR *e*S S 15 12 58.1 -15
TMCR pmax pmax
comp=Z,113nm,1.1s
RIDG Independent Ri 87.71 26 P P 15 02 35.6 0.0
RIDG IAmb IAmb 15 02 37.5
comp=Z,45nm,1.0s
MOS Moscow 87.79 326 *e*P P 15 02 33.1 -2.9
MOS *e* 15 13 10.0
MOS pmax pmax
comp=Z,208nm,1.2s
MOS pmax pmax
comp=Z,500nm,1.6s
N25K Chitina, Valde 87.82 29 P P 15 02 37.6 +1.4
baz=270
N25K Chitina, Valde 87.82 29 P P 15 02 36.5 +0.4
N25K IAmb IAmb 15 02 40.1
comp=Z,26nm,1.1s
BMAR Burnt Mountain 87.84 23 P P 15 02 37.3 +1.2
ANN Anapa 87.99 315 *e*P P 15 02 38.2 +1.0
DOT Dot Lake 88.06 27 P P 15 02 37.4 +0.2
DOT IAmb IAmb 15 02 39.2
comp=Z,27nm,1.2s
SCRK Sand Creek 88.09 26 P P 15 02 38.3 +0.8
baz=270
GLB Gilahina Butte 88.20 29 P P 15 02 38.4 +0.4
GLB IAmb IAmb 15 02 41.0
comp=Z,30nm,1.1s
MENT Mentasta 88.22 27 P P 15 02 38.7 +0.7
MENT IAmb IAmb 15 02 40.0
comp=Z,27nm,1.2s
GAZ Gaziantep 88.28 307 P P 15 02 38.4 -0.5
VRDI Verde Repeater 88.38 29 P P 15 02 39.0 +0.1
L26K Log Cabin Wild 88.39 27 P P 15 02 40.0 +1.2
baz=271
OBN Obninsk 88.40 325 *c*eP P 15 02 38.5 -0.4
OBN *i* *PP pwP 15 02 53.8 +0.7
OBN *e* 15 13 22.5
OBN *e*SS SS 15 19 09.5 -2.1
OBN pmax pmax
comp=Z,148nm,1.1s
OBN MLR MLR
comp=Z,9µm,20.0s
OBN Obninsk 88.40 325 P P 15 02 38.4 -0.4
CRQM Cirque 88.54 29 P P 15 02 40.3 +0.6
CRQM IAmb IAmb 15 02 45.3
comp=Z,32nm,1.2s
MCARA McCarthy VSAT 88.58 29 P P 15 02 40.9 +1.2
MCARA IAmb IAmb 15 02 46.0
comp=Z,35nm,1.1s
TGL Tana Glacier 88.69 29 P P 15 02 40.9 +0.5
TGL IAmb IAmb 15 02 46.6
comp=Z,34nm,1.2s
BALM Baldy 88.92 29 P P 15 02 42.1 +0.7
BALM IAmb IAmb 15 02 44.1
comp=Z,31nm,1.3s
ISLE Juniper Island 88.94 30 P P 15 02 41.6 0.0
ISLE IAmb IAmb 15 02 43.7
comp=Z,26nm,1.1s
K27K Chicken 88.94 26 P P 15 02 43.3 +2.0
baz=272
K27K Chicken 88.94 26 P P 15 02 42.4 +1.1
LVZ Lovozero 88.94 338 *i* P P 15 02 40.0 -1.3
LVZ pmax pmax
comp=Z,42nm,1.0s
BCAR Beaver Creek A 89.10 27 P P 15 02 42.9 +0.7
YAH Yahtse 89.24 30 P P 15 02 43.1 +0.1
YAH IAmb IAmb 15 02 48.8
comp=Z,54nm,1.4s
BARN Barnard Glacie 89.25 29 P P 15 02 43.1 +0.1
BARN IAmb IAmb 15 02 46.8
comp=Z,36nm,0.9s

KMBO Kilima Mbogo 89.27 269 P P 15 02 42.5 -1.7
KMBO IAmb IAmb 15 02 51.3
comp=Z,45nm,1.1s
EGAK Eagle 89.30 25 P P 15 02 43.2 +0.2
CTGM Chitina Glacie 89.41 29 P P 15 02 44.9 +1.2
CTGM IAmb IAmb 15 02 47.0
comp=Z,68nm,1.2s
APA Apatity 89.43 337 ⇓ iP P 15 02 42.1 -1.4
APA pmax pmax
comp=Z,25nm,1.0s
TABL Table Mountain 89.53 30 P P 15 02 45.4 +0.9
TABL IAmb IAmb 15 02 55.8
comp=Z,34nm,1.0s
PCA Pinnacle 89.99 30 P P 15 02 46.8 +0.3
DAWY Dawson 90.11 26 P P 15 02 47.6 +0.8
DAWY IAmb IAmb 15 02 49.5
comp=Z,40nm,1.2s
SYO Syowa Base 90.65 201 ⇑ iP P 15 02 48.5 -0.6
SYO Syowa Base 90.65 201 ⇓ ePcP PcP 15 02 50.5 +0.3
SYO Syowa Base 90.65 201 ⇓ ipP pP 15 02 57.8 -3.2
BR131 Keskin Array S 90.98 310 iP P 15 02 50.6 -1.0
BR131 Keskin Array S 90.98 310 P P 15 02 50.8 -0.8
BR131 IAmb IAmb 15 02 54.0
comp=Z,26nm,1.1s
BRTR Keskin Array B 90.98 310 P P 15 02 51.1 -0.5
comp=Z,12nm,1.0s,baz=119,slow=4.4,SNR=17
BRTR Keskin Array B 90.98 310 P P 15 02 50.2 -1.4
HYT Haines Junctio 91.29 29 P P 15 02 53.6 +1.1
HYT IAmb IAmb 15 02 55.7
comp=Z,49nm,1.5s
PUL Pulkovo 91.47 330 iP P 15 02 51.6 -1.6
PUL pmax pmax
comp=Z,79nm,0.8s
CSS Mathiatis 91.50 305 P P 15 02 53.0 -0.9
QSPA South Pole Qui 91.83 180 P P 15 02 55.3 +0.5
comp=Z,7.0nm,0.8s,baz=314,slow=2.1,SNR=6.3
QSPA South Pole Qui 91.83 180 P P 15 02 54.8 0.0
QSPA IAmb IAmb 15 03 00.7
comp=Z,41nm,1.4s
INK Inuvik 91.94 21 P P 15 02 55.8 +0.6
comp=Z,34nm,1.1s,baz=273,slow=6.2,SNR=20
INK Inuvik 91.94 21 P P 15 02 55.3 +0.2
ARD3 ARCESS Array S 92.05 340 P P 15 02 55.1 -0.6
ARD2 ARCESS Array S 92.05 340 P P 15 02 55.1 -0.6
ARD4 ARCESS Array S 92.05 340 P P 15 02 55.0 -0.7
ARC2 ARCESS Array S 92.06 340 P P 15 02 55.0 -0.7
ARC3 ARCESS Array S 92.06 340 P P 15 02 55.0 -0.7
ARA0 ARCESS Array S 92.06 340 eP P 15 02 54.9 -0.8
ARA1 ARCESS Array S 92.06 340 P P 15 02 55.2 -0.6
ARCES ARCESS Array B 92.06 340 P P 15 02 55.2 -0.6
comp=Z,55nm,0.9s,baz=76,slow=5.1,SNR=32
ARB5 ARCESS Array S 92.06 340 P P 15 02 55.1 -0.6
ARD7 ARCESS Array S 92.08 340 P P 15 02 55.2 -0.6
SPA0 Spitsbergen Ar 92.21 349 eP P 15 02 56.3 0.0
HAMF Hammerfest 92.44 341 eP P 15 02 56.9 -0.6
SKAG Skagway 92.54 30 P P 15 02 59.4 +1.3
WHY Whitehorse 92.59 29 P P 15 02 59.7 +1.2
KBS Kingsbay 92.74 350 eP P 15 02 58.9 +0.2
HSPB Hornsund (broa 92.79 348 eP P 15 02 58.9 -0.1
HSPB Hornsund (broa 92.79 348 eP P 15 02 59.5 +0.6
SIT Sitka 92.88 33 P P 15 03 01.1 +1.4
SIT IAmb IAmb 15 03 06.8
comp=Z,39nm,1.2s
BESE Bessie Mountai 92.91 31 P P 15 03 00.6 +0.7
KTK1 Kautokeino 92.96 339 eP P 15 02 58.5 -1.4
AKASG Malin Array Be 93.14 321 P P 15 03 00.5 -0.6
comp=Z,11nm,0.9s,baz=69,slow=4.3,SNR=17
AKASG Malin Array Be 93.14 321 P P 15 03 00.1 -1.0
AKBB Malin Array Si 93.14 321 iP P 15 03 00.6 -0.5
JIS Juneau Island 93.20 32 P P 15 03 02.4 +1.3
FIA1 FINESS Array S 93.31 332 P P 15 03 00.4 -1.2
FIA1 IAmb IAmb 15 03 01.8
comp=Z,30nm,1.1s
FINES FINESS Array B 93.31 332 P P 15 03 00.9 -0.6
comp=Z,12nm,0.9s,baz=92,slow=4.6,SNR=12
FINES FINESS Array B 93.31 332 P P 15 03 01.0 -0.6
FINES FINESS Array B 93.31 332 P P 15 03 00.4 -1.3
VSU Vasula 93.49 329 iP P 15 03 00.2 -2.3
VSU pmax pmax
comp=Z,55nm,1.0s
TRO Tromso 94.28 340 eP P 15 03 05.3 -0.6
WRAK Wrangell Islan 94.60 33 P P 15 03 08.4 +0.8
C36M Paulatuk 95.00 20 P P 15 03 09.7 +0.5
baz=289
C36M Paulatuk 95.00 20 P P 15 03 09.1 -0.1
MANT Manisa 95.03 309 P P 15 03 09.7 -0.7
DLBC Dease Lake 95.42 31 P P 15 03 11.3 -0.2
DLBC IAmb IAmb 15 03 14.8
comp=Z,35nm,1.4s
MBAR Mbarara 95.76 270 iP P 15 03 12.8 -1.3
MBAR pmax pmax
comp=Z,6.0nm,1.2s
MLR Muntele Rosu 96.03 316 P P 15 03 14.0 -0.6
MLR IAmb IAmb 15 03 15.5
comp=Z,42nm,1.2s
STEI Steigen 96.10 339 eP P 15 03 13.4 -0.8
BURAR Bucovina Array 96.19 318 P P 15 03 14.7 -0.6
BUR08 Bucovina Ar. S 96.19 318 P P 15 03 14.5 -0.8
BUR08 IAmb IAmb 15 03 17.1
comp=Z,28nm,0.9s
SUW Suwalki 96.26 325 eP P 15 03 14.9 -0.4
SUW eSKS SKSac 15 13 49.6 +0.9
FAUS Fauske 96.27 339 eP P 15 03 14.5 -0.6
EUNU Eureka 96.51 5 P P 15 03 15.9 -0.1
EUNU IAmb IAmb 15 03 17.4
comp=Z,20nm,1.3s
MOR8 Moi Rana 97.02 338 eP P 15 03 16.7 -1.8
KWP Kalwaria Pacla 97.45 320 eP P 15 03 16.9 -4.0
KWP Kalwaria Pacla 97.45 320 P P 15 03 20.1 -0.8
KWP IAmb IAmb 15 03 22.5
comp=Z,32nm,1.1s
KOLS Kolonicke sedl 97.87 320 eP Pdif 15 03 23.6 +0.8
UZH Uzhgorod 97.92 320 eP P 15 03 22.8 -0.1
UZH e 15 03 29.1
CRVS Cervenica-Dubn 98.40 320 eP Pdif 15 03 25.7 +0.6
CRVS Cervenica-Dubn 98.40 320 ePDIFF Pdif 15 03 25.7 +0.6
LSZ Lusaka 98.50 255 P P 15 03 24.2 -2.2
LSZ IAmb IAmb 15 03 27.1
comp=Z,18nm,1.2s
DAG Danmarks Havn 99.02 352 iP Pdif 15 03 27.1 -0.2
DAG pmax pmax
comp=Z,31nm,1.1s
DAG Danmarks Havn 99.02 352 iP Pdif 15 03 27.1 -0.2
comp=Z,31nm,1.1s
DAG Danmarks Havn 99.02 352 iP Pdif 15 03 27.1 -0.2
DAG IAmb IAmb 15 03 28.0
comp=Z,31nm,1.1s
NIE Niedzica 99.03 321 ePdif Pdif 15 03 27.4 -0.6
KECS Kecovo 99.12 320 eP Pdif 15 03 29.4 +1.0
KECS Kecovo 99.12 320 ePDIFF Pdif 15 03 29.4 +1.0
OJC Ojcow 99.15 321 ePdif Pdif 15 03 28.5 +0.1
OJC eSKS SKSac 15 13 58.2 -5.5
OJC Ojcow 99.15 321 P Pdif 15 03 27.3 -1.1
OJC IAmb IAmb 15 03 31.0
comp=Z,25nm,1.2s
HFS Hagfors 99.50 332 P Pdif 15 03 28.7 -1.1
comp=Z,8.8nm,0.9s,baz=84,slow=5.2,SNR=8.4
NC602 NORSAR Array S 100.27 333 ePdif Pdif 15 03 34.0 +0.8
NB2 NORSAR Subarra 100.30 333 P Pdif 15 03 32.0 -1.3
comp=Z,18nm,1.0s,baz=67,slow=4.6
NB2 NORSAR Subarra 100.30 333 P Pdif 15 03 32.0 -1.3
baz=67,slow=4.6
NOA NORSAR Array B 100.30 333 P Pdif 15 03 32.4 -0.9
comp=Z,10nm,0.9s,baz=67,slow=4.5,SNR=19
KRLC Kraliky 101.06 322 eP Pdif 15 03 36.5 -0.5
KRLC Kraliky 101.06 322 ePDIFF Pdif 15 03 36.5 -0.5
KSP Ksiaz 101.14 323 ePdif Pdif 15 03 37.9 +0.6
KSP eSKS 15 14 08.4
MOL Molde 101.22 336 ePdif Pdif 15 03 37.4 0.0
YKA Yellowknife Ar 101.25 24 P Pdif 15 03 39.0 +1.5
comp=Z,7.3nm,1.1s,baz=268,slow=3.7,SNR=11
YKA PKiKP PKiKP 15 08 02.3 +0.4
comp=Z,0.9nm,0.8s,baz=332,slow=0.8,SNR=4.4
DPC Dobruska-Polom 101.26 322 eP Pdif 15 03 38.7 +0.8
DPC Dobruska-Polom 101.26 322 ePDIFF Pdif 15 03 38.7 +0.8
DBG Daneborg 101.28 351 iP Pdif 15 03 38.0 +0.7
DBG IAmb IAmb 15 03 38.7
comp=Z,13nm,0.9s
AKN Aaknes 101.63 335 ePdif Pdif 15 03 40.1 +0.9
SKAR Skarslia 101.74 334 ePdif Pdif 15 03 39.9 +0.1
BRG Berggiesshubel 102.54 323 ePDIFF Pdif 15 03 44.1 +0.6
comp=Z,12nm,1.0s
BRG Berggiesshubel 102.54 323 eP Pdif 15 03 44.1 +0.6
BRG pmax pmax
comp=Z,12nm,1.0s
CLL Collm 102.96 324 ePdif Pdif 15 03 46.0 +0.7
CLL ePP PP 15 07 57.0 -2.6
CLL Collm 102.96 324 eP Pdif 15 03 46.0 +0.7
BLS5 Blasjo 103.14 333 ePdif Pdif 15 03 46.7 +0.7
KHC Kasperske Hory 103.33 322 eP Pdif 15 03 47.3 +0.2
KHC Kasperske Hory 103.33 322 ePDIFF Pdif 15 03 47.3 +0.2
SNAA Sanae 103.40 195 PKKPbc PKKPbc 15 19 40.4 -3.3
comp=Z,2.6nm,0.9s,baz=312,slow=2.8,SNR=8.7
YBH Yreka Blue Hor 104.11 46 Pdiff Pdif 15 03 50.6 -0.2
comp=Z,4.1nm,0.7s,baz=118,slow=6.2,SNR=7.4
O02D Mt. Diablo Mer 104.47 48 P Pdif 15 03 52.1 -0.4
baz=285
GMRC Granite Mounta 111.45 51 P PKiKP 15 08 23.4 +1.5
baz=288
PDAR Pinedale Array 112.88 42 PKiKP PKiKP 15 08 25.3 +0.8
comp=Z,1.2nm,0.8s,baz=309,slow=0.6,SNR=2.2
PDAR PKKPbc PKKPbc 15 19 12.4 -0.7
comp=Z,1.2nm,0.9s,baz=108,slow=3.3,SNR=3.6
LAO LASA Array 113.14 37 P PKiKP 15 08 26.0 +1.4
baz=300
RSSD Black Hills 115.77 38 P PKPdf 15 08 30.6 +0.6
baz=301
W18A Petrified Fore 115.89 49 P PKPdf 15 08 33.0 +2.6
baz=293
MVCO Mesa Verde 115.98 47 P PKPdf 15 08 32.9 +2.3
baz=294
MVCO Mesa Verde 115.98 47 PKiKP 15 08 30.0 -0.6
TUC Tucson 116.11 52 P PKiKP 15 08 32.4 +1.7
baz=291
MDND Maddock 116.26 33 P PKiKP 15 08 31.5 +1.0
baz=307
ULM Lac du Bonnet 116.67 29 PKP PKPdf 15 08 31.0 -0.2
comp=Z,8.0nm,0.9s,baz=267,slow=1.8,SNR=4.2
S22A 4UR Ranch, Cre 116.95 45 P PKiKP 15 08 34.4 +1.9
baz=296
319A Douglas 117.64 53 PKPdf PKPdf 15 08 32.4 -1.3
SDCO Great Sand Dun 117.89 45 P PKiKP 15 08 36.2 +1.9
baz=297
ANMO Albuquerque 118.42 48 PKP PKPdf 15 08 35.4 +0.1
comp=Z,6.6nm,1.0s,baz=236,slow=1.9,SNR=5.0
ANMO Albuquerque 118.42 48 P PKiKP 15 08 37.0 +1.6
baz=295
ANMO Albuquerque 118.42 48 PKPdf 15 08 33.2 -2.1
ESDC Sonseca Array 118.64 318 PKPdf 15 08 34.1 -1.3
T25A Trinidad 118.94 45 P PKiKP 15 08 37.5 +1.2
baz=298
F33A 5 Mile Ranch, 119.29 33 PKPdf 15 08 36.4 0.0
EYMN Ely 120.34 29 PKPdf 15 08 38.2 -0.2
ECSD EROS Data Cent 120.42 35 P PKiKP 15 08 39.1 +0.3
baz=308
ECSD EROS Data Cent 120.42 35 PKPdf 15 08 38.4 -0.3
MNTX Cornudas Mount 120.58 51 P PKiKP 15 08 41.1 +1.7
baz=294
MNTX Cornudas Mount 120.58 51 PKPdf PKPdf 15 08 39.5 +0.2
F36A Milaca 120.75 32 PKPdf 15 08 38.9 -0.3
E38A The Farm, Brul 121.25 30 PKPdf 15 08 40.1 0.0
I37A Lemond, Waseca 122.04 33 PKPdf 15 08 41.5 -0.2
R32A Long Quarter, 122.19 41 PKPdf 15 08 42.3 +0.1
SCHQ Schefferville 122.39 9 PKP PKPdf 15 08 42.2 +0.1
comp=Z,7.9nm,0.6s,baz=334,slow=3.2,SNR=8.2
G40A Rib Lake 122.86 30 PKPdf 15 08 43.5 +0.2
TXAR Lajitas Array 122.90 53 PKP PKiKP 15 08 44.9 +0.7
comp=Z,3.5nm,0.9s,baz=263,slow=2.0,SNR=6.4
TXAR PKKPbc PKKPab 15 18 37.6 +1.0
comp=Z,2.3nm,1.0s,baz=120,slow=7.4,SNR=10
TXAR Lajitas Array 122.90 53 PKPdf 15 08 43.6 -0.3
KSU1 Kansas State U 123.17 39 P PKiKP 15 08 44.6 +0.4
baz=305
TORD Torodi Ar. Bea 123.23 287 PKP PKPdf 15 08 45.1 +0.3
comp=Z,9.8nm,0.9s,baz=36,slow=1.9,SNR=12
TORD PKKPbc PKKPab 15 18 36.0 +0.8
comp=Z,2.6nm,0.8s,baz=278,slow=4.1,SNR=10
K38A Parkersburg 123.28 34 PKPdf 15 08 43.4 -0.7
F42A Maple Grove Fa 123.52 28 PKPdf 15 08 44.2 -0.3
WMOK Wichita Mounta 124.10 45 P PKPdf 15 08 46.1 +0.1
baz=301
WMOK Wichita Mounta 124.10 45 PKPdf 15 08 45.2 -0.8
JFWS Jewell Farm 124.48 32 P PKPdf 15 08 46.5 0.0
baz=314
JFWS Jewell Farm 124.48 32 PKPdf 15 08 45.9 -0.5
I42A Draeger Farm, 124.49 31 PKPdf 15 08 45.6 -0.8
L40A Anamosa 124.53 34 PKPdf 15 08 45.0 -0.5
H43A Windswept, Lux 124.64 29 PKPdf 15 08 45.8 -0.9
P38A Dawn 124.77 37 PKPdf 15 08 47.0 -0.1
E46A Sault Ste Mari 124.80 26 PKPdf 15 08 47.1 +0.2
OK030 Cody Creek RV 124.85 43 PKPdf 15 08 47.1 -0.2
L42A Oliver, Polo 125.42 33 PKPdf 15 08 47.5 -0.7
JCT Junction City 125.42 50 P PKiKP 15 08 49.9 +0.9
baz=298
JCT Junction City 125.42 50 PKPdf 15 08 48.9 +0.2
K43A Burlington 125.63 31 PKPdf 15 08 48.0 -0.7
N41A Harden Midland 125.64 35 PKPdf 15 08 48.7 0.0
P40A Paris 125.71 36 PKPdf 15 08 48.5 -0.4
S39A Bolivar 126.09 39 PKPdf 15 08 49.5 -0.2
U38A Gravette 126.15 41 PKPdf 15 08 49.7 -0.1
R40A Maddies Statio 126.37 38 PKPdf 15 08 50.2 +0.1
WHTX Lake Whitney, 126.45 47 P PKiKP 15 08 52.2 +1.2
baz=300
WHTX Lake Whitney, 126.45 47 PKPdf 15 08 50.5 0.0
HHAR Hobbs 126.54 41 PKPdf 15 08 50.7 +0.1
HDIL Hopedale 126.61 34 P PKiKP 15 08 51.5 +0.4
baz=313
HDIL Hopedale 126.61 34 PKPdf 15 08 50.9 +0.4
M44A Midewin, Midew 126.71 32 PKPdf 15 08 51.0 +0.3
833A Chaparral WMA, 126.72 52 P PKiKP 15 08 53.0 +1.4
baz=297
833A Chaparral WMA, 126.72 52 PKPdf 15 08 51.1 0.0
J47A Sunmer 126.98 28 PKPdf 15 08 51.6 +0.4
MGMO Mountain Grove 127.08 39 PKPdf 15 08 51.9 +0.3
P43A Skaggs, Pawnee 127.11 35 PKPdf 15 08 52.0 +0.4
CCM Cathedral Cave 127.14 37 P PKiKP 15 08 52.8 +0.6
baz=310
CCM Cathedral Cave 127.14 37 PKPdf 15 08 51.9 +0.3
L46A Eue Claire 127.17 30 PKPdf 15 08 52.0 +0.4
U40A Yellville 127.19 40 P PKiKP 15 08 53.0 +0.6
baz=307
U40A Yellville 127.19 40 PKPdf 15 08 52.2 +0.4
W39A Magazine 127.28 42 P PKiKP 15 08 53.2 +0.6
baz=306
W39A Magazine 127.28 42 PKiKP 15 08 52.5 0.0
FVM French Village 127.68 37 PKiKP 15 08 53.4 +0.2
MIAR Mount Ida 127.79 42 P PKiKP 15 08 55.1 +1.5
baz=306
MIAR Mount Ida 127.79 42 PKPdf 15 08 53.4 +0.4
T42A Van Buren 127.89 38 PKiKP 15 08 53.7 0.0
Q44A Meyer Farm, Va 127.90 35 PKiKP 15 08 53.7 0.0
SFIN Lafayette 127.94 32 P PKiKP 15 08 53.7 0.0
baz=316
SFIN Lafayette 127.94 32 PKPdf 15 08 53.2 +0.1
FCAR Ozark Folk Cen 127.95 40 PKPdf 15 08 53.3 0.0
LATQ La Tuque 128.09 17 PKPdf 15 08 53.4 +0.3
L48A N Adams 128.15 29 PKPdf 15 08 53.5 0.0
N47A Urbana 128.31 31 PKPdf 15 08 53.8 0.0
KOWA Kowa 128.35 290 PKPdf 15 08 53.9 -0.7
P46A Rosedale 128.42 33 PKiKP 15 08 54.7 0.0
LCAR Lake Charles 128.45 39 PKPdf 15 08 54.6 +0.4
PBMO Poplar Bluff 128.46 38 PKPdf 15 08 54.2 0.0
BLO Bloomington 129.11 33 PKPdf 15 08 55.8 +0.4
M50A Fremont 129.23 29 PKPdf 15 08 55.8 +0.3
P48A Milroy 129.49 32 PKPdf 15 08 56.3 +0.2
O49A Covington 129.52 31 PKPdf 15 08 56.0 -0.1
F60A Warwick 129.62 17 P PKiKP 15 08 57.1 +0.3
baz=336
P49A Miami Univ. Ec 129.81 31 P PKiKP 15 08 57.9 +0.5
baz=318
P49A Miami Univ. Ec 129.81 31 PKPdf 15 08 56.6 -0.1
WCI Wyandotte Cave 129.90 34 P PKiKP 15 08 58.6 +0.9
baz=315
WCI Wyandotte Cave 129.90 34 PKPdf 15 08 57.4 +0.5
ACSO Alum Creek Sta 130.16 30 P PKiKP 15 08 58.0 -0.1
baz=320
ACSO Alum Creek Sta 130.16 30 PKPdf 15 08 57.8 +0.4
W45A Hickory Valley 130.27 39 PKPdf 15 08 57.0 -0.7
WVT Waverly 130.46 37 P PKiKP 15 08 59.9 +1.1
baz=312
WVT Waverly 130.46 37 PKPdf 15 08 57.5 -0.5
OXF Oxford 130.54 40 PKPdf 15 08 57.5 -0.7
J57A Williamstown 130.57 22 PKPdf 15 08 57.3 -0.7
KIC Kosan Boka 130.62 280 ePKP1 PKiKP 15 09 01.7 +1.9
comp=Z,28nm,1.1s
DBIC Dimbokro 130.69 280 PKP PKiKP 15 09 00.7 +0.8
comp=Z,7.3nm,0.8s,baz=103,slow=5.0,SNR=5.5
DBIC Dimbokro 130.69 280 PKPdf PKPdf 15 08 57.9 -1.2
P51A Williamsport 130.69 30 P PKiKP 15 08 59.4 +0.2
baz=320
P51A Williamsport 130.69 30 PKPdf 15 08 58.3 -0.1
M54A Oil Creek Stat 130.69 26 P PKiKP 15 09 00.1 +0.8
baz=324
M54A Oil Creek Stat 130.69 26 PKPdf 15 08 58.2 -0.2
O52A Adamsville 130.81 29 P PKiKP 15 08 60.0 +0.5
baz=321
O52A Adamsville 130.81 29 PKPdf 15 08 58.7 +0.1
TIC Toumodi 130.85 280 ePKP1 PKiKP 15 09 00.6 +0.3
J58A Remsen 130.87 21 P PKiKP 15 09 00.5 +0.9
baz=331
J58A Remsen 130.87 21 PKPdf 15 08 58.5 -0.2
Q51A Peebles 130.89 31 PKPdf 15 08 58.6 -0.2
LIC Lamto 130.92 280 ePKP1 PKiKP 15 09 00.8 +0.4
comp=Z,12nm,0.5s
R50A Paris 130.93 32 PKPdf 15 08 59.2 +0.3
N54A Moraine State 130.99 27 PKPdf 15 08 59.5 +0.6
J59A Piesco 131.06 20 PKPdf 15 08 59.1 +0.1
PLAL Pickwick Lake 131.07 38 PKPdf 15 08 59.0 -0.2
V48A Smith Brothers 131.33 36 PKPdf 15 08 58.8 -0.9
U49A Red Boiling Sp 131.40 35 PKPdf 15 09 00.5 +0.6
T50A Nancy 131.57 34 PKPdf 15 09 00.1 -0.1
S51A Beattyville 131.80 32 PKPdf 15 09 00.7 +0.2
TRY Troy 131.99 20 PKPdf 15 09 00.5 -0.3
O56A Blue Knob Stat 132.19 26 PKPdf 15 09 01.3 0.0
N57A Milroy 132.22 25 P PKPdf 15 09 01.7 +0.4
baz=327
Q55A Buckhannon 132.53 28 P PKiKP 15 09 03.2 +0.2
baz=323
TZTN Tazewell 132.63 33 P PKiKP 15 09 03.7 +0.4
baz=317
TZTN Tazewell 132.63 33 PKPdf 15 09 02.1 -0.1
V52A Sevierville 133.11 34 PKPdf 15 09 03.0 -0.1
TKL Tuckaleechee C 133.15 34 PKP PKPdf 15 09 03.9 +0.8
comp=Z,29nm,1.1s,baz=148,slow=1.0,SNR=7.7
TKL Tuckaleechee C 133.15 34 PKPdf PKPdf 15 09 03.8 +0.6
Y52A Lilburn 134.26 36 PKPdf 15 09 05.3 0.0
S58A Poland Farm, P 134.59 28 P PKPdf 15 09 04.7 -1.0
baz=324
S58A Poland Farm, P 134.59 28 PKPdf 15 09 04.1 -1.7
U57A Blanch 134.91 30 P PKiKP 15 09 07.4 -0.5
baz=322
PLCA Paso Flores 138.39 160 PKP PKPdf 15 09 11.9 -1.0
comp=Z,15nm,1.1s,baz=183,slow=4.4,SNR=6.6
PLCA Paso Flores 138.39 160 PKPdf 15 09 12.5 -0.3
BO02 Sierra Bellavi 143.54 156 PKPbc 15 09 20.6 +1.0
CRIN San Cristobal 143.69 66 PKPbc 15 09 21.0 +0.4
MATN Matagalpa 144.62 64 PKPab 15 09 23.3 0.0
VA01 Torpederas 144.68 153 PKPab 15 09 23.0 +0.2
MT02 Curacav 144.70 154 PKPbc 15 09 23.8 +0.6
MT05 Renca 144.76 155 PKPdf 15 09 24.2 -0.3
ROC1 El Roble 145.00 154 PKPab 15 09 23.6 -0.8
PEL Peldehue 145.00 154 PKPab 15 09 23.3 -0.8
VA03 San Esteban 145.38 154 PKPbc 15 09 24.8 -0.7
FSCY Frank Sound, G 145.60 51 PKPab 15 09 26.6 0.0
ACON Acoyapa 145.66 66 PKPdf 15 09 26.4 0.0
SACV Santiago Islan 145.98 301 PKPdf 15 09 27.2 +0.3
LCCY Blossom Villag 146.24 49 PKPbc PKPbc 15 09 28.3 0.0
CBCY The Bluff, Cay 146.44 49 PKPdf 15 09 28.1 +0.5
JTS Las Juntas de 146.45 68 PKPbc PKPbc 15 09 28.8 -0.3
comp=Z,32nm,1.0s,baz=359,slow=3.5,SNR=8.5
JTS Las Juntas de 146.45 68 PKPdf 15 09 27.9 +0.1
CO02 Combarbal 146.50 152 PKPbc 15 09 28.7 -0.3
CO03 El Pedregal 146.95 152 PKPdf 15 09 28.8 +0.5
ZON Zonda 147.23 156 PKPdf 15 09 29.8 +1.1
GO04 Tololo Observa 147.45 151 PKPdf 15 09 30.1 +0.8
CO01 Juntas del Tor 147.95 152 PKPdf 15 09 31.7 +1.5
LCO Las Campanas 148.46 150 PKPdf 15 09 33.0 +1.9
AC04 Llanos de Chal 148.93 149 PKPbc 15 09 34.6 -0.9
MTDJ Mount Denham 149.03 49 PKPbc 15 09 34.9 -1.2
GO03 Copiap 149.86 149 PKPbc 15 09 37.0 -0.9
PLTB Pedras Altas 150.30 180 eP PKiKP 15 09 41.1 +1.5
AC01 Pan de Azucar 150.83 147 PKPbc 15 09 38.6 -1.6
AC02 Maricunga 151.04 150 PKPbc 15 09 38.8 -2.5
GO02 Mina Guanaco 152.16 148 PKPbc 15 09 43.1 -0.6
LVC Limon Verde 154.56 145 PKP PKPdf 15 09 41.5 +0.9
comp=Z,5.6nm,0.9s,baz=59,slow=11,SNR=2.8
ATAH Atahualpa 154.67 103 PKP PKPdf 15 09 42.5 +1.5
comp=Z,7.8nm,0.7s,baz=275,slow=4.2,SNR=6.1
OTAV Otavalo 154.98 85 eP PKPab 15 10 05.2 -0.6
PB01 IPOC Station P 155.42 142 PKPdf 15 09 51.1 +10
CPUP Villa Florida 155.44 172 PKP PKPdf 15 09 42.3 +1.1
comp=Z,6.0nm,1.0s,baz=81,slow=2.1,SNR=3.4
CPUP Villa Florida 155.44 172 PKPdf 15 09 40.3 -0.9
CPUP pPKPdf 15 09 50.8 -2.6
SJCC San Jacinto, C 155.45 61 eP PKPdf 15 09 43.2 +1.5
MOTC Monteria, Cord 155.51 64 eP PKPdf 15 09 42.6 +0.9
YOTC Yotoco, Valle 156.45 76 eP PKPdf 15 09 43.3 +0.2
ZARC Zaragoza, Cauc 156.75 66 eP PKPdf 15 09 43.4 +0.1
GUY2C Guyana, Caldas 157.06 72 eP PKPab 15 10 14.5 -0.2
MARP Paez Belalcaza 157.08 78 eP PKPdf 15 09 45.2 +1.1
RREF El Recreo 157.17 73 eP PKPdf 15 09 47.3 +2.7
TOLC Tolima 157.28 73 eP PKPdf 15 09 45.2 +0.8
PTBC PUERTO BERRIO 157.48 68 eP PKPdf 15 09 43.7 -0.6
GARC Garzon, Huila 157.66 80 eP PKPab 15 10 05.8 -11
SPBC San Pablo de B 158.14 70 eP PKPdf 15 09 45.7 +0.5
BARC Barichara 158.63 67 eP PKPab 15 10 21.4 +0.2
PAMC Pamplona, Colo 158.77 64 eP PKPdf 15 09 45.9 -0.5
RUSC La Rusia 158.98 68 eP PKPdf 15 09 46.7 0.0
MACC Macarena, Meta 159.28 79 eP PKPdf 15 09 46.7 +0.3
LPAZ La Paz 159.72 136 PKP PKPdf 15 09 48.2 +0.6
comp=Z,12nm,1.1s,baz=9.7,slow=2.5,SNR=11
LPAZ PKPab PKPab 15 10 27.8 +1.6
comp=Z,13nm,1.0s,baz=206,slow=3.2,SNR=5.5
LPAZ La Paz 159.72 136 PKPdf 15 09 47.9 +0.4
LPAZ PKPab 15 10 27.6 +1.4
SDV Santo Domingo 159.85 58 eP PKPdf 15 09 47.3 0.0
BB19B Bebedouro 160.34 194 eP PKPdf 15 09 57.6 +10
RCBR Riachuelo 162.00 257 PKPab PKPab 15 10 36.1 +0.4
comp=Z,32nm,1.0s,baz=109,slow=3.3,SNR=6.5
JANB Januaria 164.08 214 eP PKPdf 15 10 01.4 +10
SIV San Ignacio 164.15 152 PKP PKPdf 15 09 52.6 +1.2
comp=Z,8.7nm,1.0s,baz=262,slow=0.9,SNR=7.8
SIV PKPab PKPab 15 10 45.1 +0.4
comp=Z,16nm,1.0s,baz=220,slow=3.6,SNR=10
BDFB Brasilia 165.31 201 PKP PKPdf 15 09 52.4 -0.1
comp=Z,5.2nm,0.6s,baz=19,slow=2.4,SNR=5.3
BDFB PKPab PKPab 15 10 49.7 -0.2
comp=Z,1.8nm,0.5s,baz=26,slow=11,SNR=3.1
BDFB Brasilia 165.31 201 PKPdf PKPdf 15 09 51.4 -1.1
SAML Samuel 168.11 126 PKPdf 15 09 53.8 -0.8

IDC 26 14:54:53.0±2.3, 1.81N×126.32E, h0km, mb 3.9/3, mb1 4.2/3, mb1mx3.6/49, mbtmp4.0/3, Error ellipse: s-maj=182.5km s-min=29.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.00	160	P	P		14 59 59.2	-0.5
	2.0nm,0.5s,baz=339,slow=11,SNR=1.2							
ASAR	Alice Springs	26.38	164	P	P		15 00 31.9	+0.6
	7.7nm,1.2s,baz=346,slow=13,SNR=1.0							
MKAR	Makanchi Array	58.90	326	P	P		15 04 53.7	-0.2
	0.8nm,0.5s,baz=113,slow=7.8,SNR=2.6							

IDC 26 14:55:57.1±2.4, 1.86N×126.45E, h0km, mb 3.7/3, mb1 3.9/3, mb1mx3.5/50, mbtmp3.7/3, Error ellipse: s-maj=202.7km s-min=29.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.01	161	P	P		15 01 03.9	+0.1
	1.8nm,0.6s,baz=340,slow=11,SNR=1.4							
ASAR	Alice Springs	26.39	164	P	P		15 01 35.6	+0.1
	0.7nm,0.6s,baz=344,slow=12,SNR=0.9							
MKAR	Makanchi Array	58.93	326	P	P		15 05 58.0	-0.2
	1.1nm,0.8s,baz=115,slow=7.6,SNR=1.8							

SOME 26 14:57:43.6, 43.67N×78.13E, h10km
NNC 26 14:57:43.2±0.3, 43.67N×78.05E, h0km, mb 1.4, mpv 2.5, 3C-4D, Error ellipse: s-maj=3.5km s-min=1.9km az=172.0, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KURS	Kuram	0.20	154 ⇓ eP		Pg		14 57 47.5	+0.5

	1.5nm,0.1s								
KURS					*e*S		Sg	14 57 50.2	+0.7
	8.6nm,0.1s								
KURS	**Kuram**	**0.20**	**154**		P		Pg	14 57 47.5	+0.5
	1.5nm,0.1s								
KURS					S		Sg	14 57 50.4	+0.9
	8.6nm,0.1s								
MNBS	**Baschi**	**0.48**	**31**	⇑	*i*P		Pg	14 57 52.9	+0.4
	3.2nm,0.1s								
MNBS				⇓	*i*S		Sg	14 57 59.7	+0.9
	5.6nm,0.1s								
MNBS	**Baschi**	**0.48**	**31**		P		Pg	14 57 52.9	+0.4
	3.2nm,0.1s								
MNBS					S		Sg	14 57 59.7	+0.9
	5.6nm,0.1s								
KPKS	**Kokpek**	**0.50**	**113**		*e*P		Pg	14 57 52.2	-0.5
	5.1nm,0.1s								
KPKS					*e*S		Sg	14 57 58.6	-0.7
	13nm,0.1s								
ARXS	**Arharly**	**0.57**	**344**		*e*P		Pg	14 57 54.5	+0.4
	1.4nm,0.1s								
ARXS					*e*S		Sg	14 58 02.3	+0.7
	6.3nm,0.1s								
ARXS	**Arharly**	**0.57**	**344**		P		Pg	14 57 54.5	+0.4
	1.4nm,0.1s								
ARXS					S		Sg	14 58 02.3	+0.7
	6.3nm,0.1s								
SATY	**Saty**	**0.66**	**157**		*e*P		Pg	14 57 55.3	-0.5
	0.3nm,0.1s								
SATY					*e*S		Sg	14 58 03.6	-0.7
	7.1nm,0.1s								
KOTS	**Kotyrbulak**	**0.81**	**238**		*e*P		Pg	14 57 59.3	+0.6
	2.0nm,0.1s								
KOTS					*e*S		Sb	14 58 10.6	-1.2
	18nm,0.2s								
KOTS	**Kotyrbulak**	**0.81**	**238**		P		Pg	14 57 59.3	+0.6
	2.0nm,0.1s								
KOTS					S		Sb	14 58 10.6	-1.2
	18nm,0.2s								
KNDC	**Almaty**	**0.91**	**241**	⇑	P		Pg	14 58 00.8	+0.2
	6.0nm,0.3s								
KNDC				⇓	S		Sg	14 58 13.5	+1.1
	6.4nm,0.3s								
KTBS	**Karatobe**	**0.99**	**273**		*e*P		Pg	14 58 02.3	0.0
	0.5nm,0.1s								
KTBS					*e*S		Sg	14 58 15.5	+0.4
	6.5nm,0.2s								
PDGK	**Podgornoye**	**1.10**	**107**	⇑	P		Pg	14 58 04.4	+0.2
	0.6nm,0.5s								
PDGK				⇓	S		Sb	14 58 19.4	-0.7
	6.9nm,0.8s								

KRNET 26 14:57:49.6±0.1, 42°.17N×76°.56E, h27km, mb1.7, 6C, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.25**	**287**	⇑	*i*P	Pb	14 57 55.4	-0.9
	baz=87							
ULHL				⇑	*i*S	Sb	14 57 59.8	-1.1
	baz=87							
KDJ	**Kajisay**	**0.46**	**95**	⇑	*i*P	Pb	14 57 59.2	-0.3
	baz=95							
KDJ				⇑	*i*S	Sb	14 58 06.1	-0.1
	baz=95							
BOOM	**Boomskoye usch**	**0.56**	**305**	⇑	*i*P	Pb	14 58 00.6	-0.4
	baz=5.0							
BOOM				⇑	*i*S	Sb	14 58 08.5	-0.2
	baz=5.0							

IDC 26 14:59:42.3±2.3, 2°.10N×126°.75E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/54, mbtmp3.4/3, Error ellipse: s-maj=190.5km s-min=28.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.14**	**162**		P	P	15 04 49.2	-1.3
	0.7nm,0.6s,baz=340,slow=11,SNR=2.1							
ASAR	**Alice Springs**	**26.55**	**165**		P	P	15 05 23.2	+1.1
	0.3nm,0.7s,baz=349,slow=14,SNR=1.8							
MKAR	**Makanchi Array**	**58.90**	**326**		P	P	15 09 43.1	-0.1
	0.3nm,0.5s,baz=120,slow=7.8,SNR=4.4							

*IDC **26** 15:02:42.3±0.4, 1°.84N×126°.38E, h0km, mb4.7/32, mb1 4.7/37, mb1mx4.6/56, mbtmp4.6/37, ML4.2/4, Error ellipse: s-maj=17.7km s-min=9.4km az=83.0*
*MOS **26** 15:02:45.6±1.2, 1°.82N×126°.29E, h39km, mb5.2/44, Error ellipse: s-maj=10.5km s-min=5.4km az=108.4*
*BJI **26** 15:02:46.5±0.0, 1°.79N×126°.61E, h46km, mB5.6/3, mb4.8/45, Ms5.3/1, Ms7 5.2/1*
*DJA **26** 15:02:46.4±0.3, 2°.N±3°×12°.7E±°, h10km, M4.8/15, mb5.0/12, MLv4.8/15*
*NEIC **26** 15:02:47.8±2.1, 1°.84N±0°.07×126°.51E±0°.06, h35km±1km, mb5.0/80, Error ellipse: s-maj=12.6km s-min=9.2km az=212.0*

ISC 26 15:02:48.8±0.3, 1°.87N±0°.04×126°.50E±0°.05, h47km, n311, σ1§47/321, mb5.0/108, 12C-13D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**142**		P	**Pn**	**15 03 09.9**	**-2.0**
TNTI	**Ternate**	**1.39**	**142**	⇑	P	**Pn**	**15 03 10.3**	**-1.6**
TNTI	**Ternate**	**1.39**	**142**		**Pn**	**15 03 10.2**	**-1.6**
SGSI	**Sangihe**	**2.05**	**332**		P	**Pn**	**15 03 20.6**	**-0.2**
SGSI					S	**Sn**	**15 03 45.8**	**+0.6**
KMSI	**Cibinong**	**2.83**	**243**		P	**Pn**	**15 03 33.2**	**+1.7**
GTOI	**Gorontalo**	**3.70**	**251**		P	**Pn**	**15 03 46.2**	**+2.7**
SANI	**Sanana**	**3.93**	**187**		P	**Pn**	**15 03 45.8**	**-0.8**
DDMP	**Don Marcelino,**	**4.28**	**349**		*e*P	**Pn**	**15 03 50.1**	**-1.3**
LUWI	**Luwuk**	**4.72**	**232**		P	**Pn**	**15 03 59.2**	**+1.7**
LUWI	**Luwuk**	**4.72**	**232**		Pn	**Pn**	**15 03 59.6**	**+2.1**
MRSI	**Marisa**	**4.76**	**253**		P	**Pn**	**15 03 59.8**	**+1.7**
SKMP	**Bagumbayan, Su**	**5.01**	**337**		*e*P	**Pn**	**15 04 00.9**	**-0.6**
SKMP					*e*S	**Sn**	**15 04 57.8**	**-0.4**
MATI	**Mati**	**5.05**	**357**		*e*P	**Pn**	**15 04 01.0**	**-1.0**
NLAI	**Namlea**	**5.11**	**173**		P	**Pn**	**15 04 02.8**	**-0.1**
	0.4nm76nm,0.8s							
DAV	**Davao City (W)**	**5.25**	**350**		Pn	**Pn**	**15 04 03.9**	**-0.8**
	33nm,0.3s,baz=221,slow=18,SNR=1.7							
DAV					Sn	**Sn**	**15 05 09.0**	**+5.0**
	48nm,0.3s,baz=279,slow=23,SNR=1.6							
APSI	**Ampana**	**5.58**	**240**		P	**Pn**	**15 04 11.7**	**+2.3**
	1.2nm308nm,0.9s							
MSAI	**Masohi**	**5.72**	**155**		P	**Pn**	**15 04 11.5**	**+0.2**
	0.2nm48nm,0.9s							
TOLI2	**Tolitoli**	**5.77**	**263**			**Pn**	**15 04 11.2**	**-0.6**
BUKP	**Musuan**	**6.14**	**347**		*e*P	**Pn**	**15 04 18.4**	**+1.4**
PAGZ	**Pagadian**	**6.70**	**332**		*e*P	**Pn**	**15 04 23.7**	**-1.0**
PAGZ					*e*S	**Sn**	**15 05 37.6**	**-2.2**
MPSI	**Mapaga**	**6.77**	**257**		P	**Pn**	**15 04 27.6**	**+1.9**
	0.4nm69nm,0.8s							
FAKI	**Fak Fak**	**7.46**	**130**		P	Pn	15 04 41.7	+6.5
FAKI	**Fak Fak**	**7.46**	**130**	⇑	P	**Pn**	**15 04 39.7**	**+4.5**
FAKI	**Fak Fak**	**7.46**	**130**		Pn	**Pn**	**15 04 35.5**	**+0.3**
TTSI	**Tana Toraja**	**8.27**	**234**		P	**Pn**	**15 04 48.0**	**+1.7**
	72nm,0.7s							
MYLDM	**Lahad Datu**	**8.63**	**293**	⇓	P	**Pn**	**15 04 54.3**	**+3.0**
MYLDM	**Lahad Datu**	**8.63**	**293**		Pn	**Pn**	**15 04 53.1**	**+1.8**
SPSI	**Sidrap Palu**	**8.88**	**229**		P	**Pn**	**15 04 56.4**	**+1.8**
	41nm,0.7s							
BNSI	**Bone**	**8.92**	**226**		P	**Pn**	**15 04 55.7**	**+0.5**
	67nm,0.8s							
KAPI	**Kappang**	**9.60**	**225**		Pn	**Pn**	**15 05 01.8**	**-2.8**
	baz=62,slow=18,SNR=1.0							
KAPI					Sn	**Sn**	**15 06 49.0**	**-2.2**
	2.0nm,0.3s,baz=113,slow=10,SNR=1.4							
KAPI	**Kappang**	**9.60**	**225**		P	**Pn**	**15 05 06.4**	**+1.8**
KAPI	**Kappang**	**9.60**	**225**			**Pn**	**15 05 06.3**	**+1.8**
BSSI	**Bau Bau, Buton**	**9.97**	**217**		P	**Pn**	**15 05 11.1**	**+1.6**
KKM	**Kota Kinabalu**	**11.06**	**292**		Pn	**Pn**	**15 05 27.0**	**+2.4**
SOEI	**Soe**	**11.76**	**191**	⇓	P	Pn	15 05 41.7	+7.5
SOEI	**Soe**	**11.76**	**191**			**Pn**	**15 05 35.5**	**+1.3**
BATI	**Baumata**	**12.33**	**193**		Pn	**Pn**	**15 05 40.3**	**-1.5**
	0.9nm,0.3s,baz=79,slow=19,SNR=1.3							
SBUM	**Sibu**	**14.28**	**273**			**P**	**15 06 12.8**	**-1.7**
JAY	**Jayapura**	**14.85**	**107**		Pn	**Pn**	**15 06 14.7**	**-1.3**
	0.2nm,0.3s,baz=154,slow=21,SNR=2.9							
MTN	**Manton Dam**	**15.33**	**163**			**Pn**	**15 06 20.7**	**-1.4**
KDU	**Kakadu**	**15.63**	**158**	⇑	P	**P**	**15 06 29.1**	**-0.4**
KSM	**Kuching**	**16.19**	**269**	⇓	P	**P**	**15 06 41.0**	**+5.3**
KSM	**Kuching**	**16.19**	**269**		P	**P**	**15 06 37.5**	**+1.8**
KNRA	**Kununurra**	**17.58**	**173**		P	**Pn**	**15 06 48.8**	**-1.8**
FITZ	**Fitzroy Crossi**	**19.86**	**182**		P	**P**	**15 07 15.1**	**-1.0**
	0.7nm,0.3s,baz=17,slow=12,SNR=16							
FITZ	**Fitzroy Crossi**	**19.86**	**182**	⇑	P	**Pn**	**15 07 18.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**19.86**	**182**		P	**P**	**15 07 15.3**	**-0.9**
CISI	**Cisompet, Garu**	**20.86**	**243**		P	**P**	**15 07 26.3**	**-0.8**
CISI					IAmb	IAmb	15 07 54.4	
	comp=Z,65nm,1.3s							
TWG	**Pinlang**	**21.48**	**346**		P	**P**	**15 07 31.0**	**-2.6**
TWG					IAmb	IAmb	15 07 42.4	
	comp=Z,33nm,0.6s							
YULB	**Yu-li**	**21.98**	**347**		P	**P**	**15 07 37.0**	**-2.0**
YULB					IAmb	IAmb	15 07 48.8	
	comp=Z,92nm,1.5s							
TPUB	**Ta-pu**	**22.05**	**345**		P	**P**	**15 07 38.3**	**-1.4**
TPUB					IAmb	IAmb	15 07 41.4	
	comp=Z,70nm,0.9s							
SSLB	**Suanglung**	**22.44**	**347**		P	**P**	**15 07 42.6**	**-1.3**
MYKOM	**Kota Tinggi**	**22.64**	**270**		P	**P**	**15 07 46.9**	**+0.8**
YOJ	**Yonaguni jima**	**22.71**	**352**		P	**P**	**15 07 48.2**	**+1.5**
YOJ					pmax	pmax		
	comp=Z,110nm,1.1s							
YOJ	**Yonaguni jima**	**22.71**	**352**		P	**P**	**15 07 48.2**	**+1.5**
YOJ					IAmb	IAmb	15 07 58.7	
	comp=Z,110nm,1.1s							
COEN	**Coen**	**22.82**	**134**		P	**P**	**15 07 48.1**	**+0.2**
WB0	**Warramunga Arr**	**22.86**	**161**		P	**P**	**15 07 47.2**	**-1.1**
WB0					IAmb	IAmb	15 07 56.2	
	comp=Z,48nm,0.8s							
WRAB	**Tennant Creek**	**23.00**	**161**	*i*	P	**P**	**15 07 47.3**	**-2.5**
WRAB					pmax	pmax		
	comp=Z,51nm,1.0s							
WRAB	**Tennant Creek**	**23.00**	**161**	⇑	P	**P**	**15 07 48.4**	**-1.4**
WRAB	**Tennant Creek**	**23.00**	**161**		P	**P**	**15 07 48.6**	**-1.1**
WRAB					IAmb	IAmb	15 07 58.7	
	comp=Z,47nm,0.9s							
WRA	**Warramunga Arr**	**23.00**	**161**		P	**P**	**15 07 48.5**	**-1.4**
	comp=Z,32nm,0.7s,baz=339,slow=11,SNR=64							
WRA					PcP	**PcP**	**15 11 39.4**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=335,slow=2.0,SNR=2.5							
WRA					S	**S**	**15 11 55.9**	**-1.2**
	comp=Z,7.4nm,1.1s,baz=332,slow=20,SNR=5.6							
WRA	**Warramunga Arr**	**23.00**	**161**		P	**P**	**15 07 47.5**	**-2.3**
WRA					pmax	pmax		
	comp=Z,2.0nm,0.8s							
WRA	**Warramunga Arr**	**23.00**	**161**		P	**P**	**15 07 47.5**	**-2.3**
WB2	**Warramunga Arr**	**23.01**	**161**		P	**P**	**15 07 48.3**	**-1.6**
WB2					IAmb	IAmb	15 07 55.0	
	comp=Z,38nm,0.7s							
WR0	**Warramunga Arr**	**23.09**	**160**		P	**P**	**15 07 49.5**	**-1.1**
WR0					IAmb	IAmb	15 07 52.3	
	comp=Z,42nm,1.1s							
YHNB	**Yeheng**	**23.20**	**348**		P	**P**	**15 07 50.9**	**-0.9**
YHNB					IAmb	IAmb	15 07 54.8	
	comp=Z,36nm,0.8s							
PMG	**Port Moresby**	**23.43**	**119**	*i*	P	**P**	**15 07 55.0**	**+0.9**
PMG					pmax	pmax		
	comp=Z,19nm,1.0s							
PSA00	**Pilbara Seismi**	**24.19**	**195**		P	**P**	**15 08 01.4**	**+0.4**
PSA00					IAmb	IAmb	15 08 12.6	
	comp=Z,52nm,1.4s							
JOW	**Kunigami**	**24.88**	**4**	⇑	P	**P**	**15 08 09.7**	**+2.4**
JOW	**Kunigami**	**24.88**	**4**		P	**P**	**15 08 09.4**	**+2.2**
AS31	**Alice Springs**	**26.39**	**165**		P	**P**	**15 08 20.7**	**-0.3**
ASAR	**Alice Springs**	**26.39**	**165**		P	**P**	**15 08 20.4**	**-0.7**
	comp=Z,5.5nm,0.5s,baz=346,slow=6.8,SNR=61							
ASAR					PcP	**PcP**	**15 11 46.5**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=348,slow=2.4,SNR=4.6							
ASAR					S	**S**	**15 12 51.1**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=347,slow=20,SNR=4.9							
ASAR	**Alice Springs**	**26.39**	**165**		P	**P**	**15 08 20.7**	**-0.3**
ASAR	**Alice Springs**	**26.39**	**165**		P	**P**	**15 08 20.7**	**-0.3**
WRKA	**Warakurna**	**26.80**	**176**	⇑	P	**P**	**15 08 24.9**	**+0.1**
RPSI	**Rantau Prapat**	**27.57**	**272**		P	**P**	**15 08 30.9**	**-0.8**
PSI	**Prapat**	**27.57**	**272**		P	**P**	**15 08 30.9**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=1.4,slow=1.4,SNR=4.1							
CTA	**Charters Tower**	**29.18**	**139**		P	**P**	**15 08 46.8**	**+0.7**
	comp=Z,6.2nm,0.7s,baz=311,slow=14,SNR=4.6							
JCJ	**Chichijima**	**29.25**	**30**		P	**P**	**15 08 46.3**	**-0.2**
JSU	**Suzuyama**	**29.71**	**7**		P	**P**	**15 08 51.6**	**+1.0**
JSU					IAmb	IAmb	15 08 52.0	
	comp=Z,23nm,0.7s							
WHN	**Wuhan**	**30.75**	**339**		P	**P**	**15 09 00.8**	**+1.0**
NJ2	**Nanjing**	**30.87**	**347**		*e*P	**P**	**15 09 03.0**	**+2.2**
NJ2					pmax	pmax		
	comp=Z,22nm,0.6s							
JNU	**Nakatsue**	**31.36**	**7**		P	**P**	**15 09 05.6**	**+0.5**
	comp=Z,37nm,0.8s,baz=169,slow=3.8,SNR=15							
JNU	**Nakatsue**	**31.36**	**7**	⇓	P	**P**	**15 09 06.1**	**+1.0**
JNU	**Nakatsue**	**31.36**	**7**		P	**P**	**15 09 05.7**	**+0.5**
JNU					IAmb	IAmb	15 09 06.8	
	comp=Z,46nm,0.9s							
CMAR	**Chiang Mai Arr**	**31.65**	**303**		P	**P**	**15 09 07.7**	**-0.1**
	comp=Z,1.6nm,0.9s,baz=119,slow=7.5,SNR=10							
CHTO	**Chiang Mai**	**31.82**	**304**		P	**P**	**15 09 09.8**	**+0.5**
CHTO					pmax	pmax		
	comp=Z,7.0nm,1.1s							
CHTO	**Chiang Mai**	**31.82**	**304**		P	**P**	**15 09 09.8**	**+0.5**
MORW	**Morawa**	**32.36**	**197**		P	**P**	**15 09 13.7**	**-0.2**
MORW					IAmb	IAmb	15 09 28.3	
	comp=Z,24nm,1.2s							
JMN	**Monobe**	**32.44**	**12**	⇓	P	**P**	**15 09 16.5**	**+1.9**
JMN	**Monobe**	**32.44**	**12**		P	**P**	**15 09 15.6**	**+1.0**
JMN					IAmb	IAmb	15 09 17.1	
	comp=Z,36nm,0.8s							
FORT	**Forrest**	**32.50**	**178**		P	**P**	**15 09 14.9**	**-0.3**
ENH	**Enshi**	**32.53**	**332**		P	**P**	**15 09 14.9**	**-0.6**
ENH					IAmb	IAmb	15 09 22.1	
	comp=Z,15nm,0.9s							
JHS	**Saijyo**	**33.53**	**10**		P	**P**	**15 09 26.1**	**+2.0**
JHS					IAmb	IAmb	15 09 27.6	
	comp=Z,19nm,0.7s							
JWT	**Wachi**	**34.26**	**13**	⇑	P	**P**	**15 09 31.9**	**+1.5**
JWT	**Wachi**	**34.26**	**13**		P	**P**	**15 09 31.0**	**+0.6**
INU	**Inuyama**	**34.71**	**15**	⇓	P	**P**	**15 09 35.6**	**+1.3**
INU	**Inuyama**	**34.71**	**15**		P	**P**	**15 09 35.4**	**+1.1**
JGF	**Kuroka**	**35.04**	**16**		P	**P**	**15 09 37.7**	**+0.4**
JGF					IAmb	IAmb	15 09 38.8	
	comp=Z,22nm,0.9s							
KSAR	**Wonju Array Be**	**35.42**	**2**		P	**P**	**15 09 41.5**	**+1.1**
KSAR	**Wonju Array Be**	**35.42**	**2**		P	**P**	**15 09 41.5**	**+1.1**
KSRS	**Korea Array**	**35.43**	**2**		P	**P**	**15 09 41.2**	**+0.8**
	comp=Z,8.1nm,0.6s,baz=177,slow=9.8,SNR=34							
KS19	**Wonju Array Si**	**35.48**	**2**		P	**P**	**15 09 42.0**	**+1.1**
KS19					IAmb	IAmb	15 09 44.4	
	comp=Z,12nm,0.8s							
NWAO	**Narrogin (SRO)**	**35.70**	**193**		P	**P**	**15 09 42.1**	**-0.7**
	comp=Z,9.0nm,1.0s,baz=20,slow=7.8,SNR=1.2							
NWAO	**Narrogin (SRO)**	**35.70**	**193**		P	**P**	**15 09 43.4**	**+0.5**
NWAO					pmax	pmax		
	comp=Z,74nm,1.5s							
NWAO	**Narrogin (SRO)**	**35.70**	**193**		P	**P**	**15 09 43.4**	**+0.5**
XAN	**Xi'an**	**35.98**	**335**		P	**P**	**15 09 44.6**	**-0.7**
XAN					pmax	pmax		
	comp=Z,24nm,1.5s							
XAN	**Xi'an**	**35.98**	**335**		P	**P**	**15 09 44.6**	**-0.7**
XAN					IAmb	IAmb	15 09 45.8	
	comp=Z,24nm,1.5s							
CD2	**Chengdu**	**36.02**	**326**		*e*P	**P**	**15 09 48.5**	**+2.8**
EIDS	**Eidsvold**	**36.06**	**140**		P	**P**	**15 09 46.4**	**+0.4**
MJAR	**Matsushiro Arr**	**36.16**	**16**		P	**P**	**15 09 46.5**	**-0.2**
	comp=Z,15nm,0.8s,baz=184,slow=9.3,SNR=31							
MJAR	**Matsushiro Arr**	**36.16**	**16**		P	**P**	**15 09 46.4**	**-0.4**
MJAR					pmax	pmax		
	comp=Z,5.0nm,0.9s							
MJAR	**Matsushiro Arr**	**36.16**	**16**		P	**P**	**15 09 46.4**	**-0.4**
MAJO	**Matsushiro**	**36.16**	**16**	*i*	P	**P**	**15 09 46.2**	**-0.6**
MAJO					pmax	pmax		
	comp=Z,15nm,0.8s							
MAJO	**Matsushiro**	**36.16**	**16**	⇓	P	**P**	**15 09 47.0**	**+0.2**
MAJO	**Matsushiro**	**36.16**	**16**		P	**P**	**15 09 47.2**	**+0.5**
MAJO					IAmb	IAmb	15 09 49.4	
	comp=Z,23nm,0.9s							
MAT	**Matsushiro**	**36.16**	**16**		P	**P**	**15 09 46.6**	**-0.2**
STKA	**Stephens Creek**	**36.49**	**158**		P	**P**	**15 09 49.5**	**-0.2**
	comp=Z,6.6nm,0.7s,baz=337,slow=9.3,SNR=12							
STKA	**Stephens Creek**	**36.49**	**158**		P	**P**	**15 09 48.5**	**-1.2**
STKA					pmax	pmax		
	comp=Z,2.0nm,0.8s							
STKA	**Stephens Creek**	**36.49**	**158**		P	**P**	**15 09 48.5**	**-1.2**
DL2	**Dalian**	**37.13**	**354**		P	**P**	**15 09 57.0**	**+2.1**
DL2					pmax	pmax		
	comp=Z,36nm,0.7s							
JSD	**Sado**	**37.58**	**15**		P	**P**	**15 09 59.2**	**+0.4**
JMM	**Marumori**	**38.15**	**18**		P	**P**	**15 10 04.3**	**+0.7**
LZH	**Lanzhou**	**39.99**	**331**		*e*P	**P**	**15 10 19.0**	**-0.3**
LZH					pP	pP	15 10 29.3	-2.1
LZH					sP	pwP	15 10 34.3	+0.7
LZH					pmax	pmax		
	comp=Z,21nm,1.1s							
ARMA	**Armidale**	**40.06**	**145**	⇑	P	**P**	**15 10 21.2**	**+1.3**
ARMA	**Armidale**	**40.06**	**145**		P	**P**	**15 10 20.7**	**+0.8**
JTM	**Tenmabayashi**	**40.92**	**17**		P	**P**	**15 10 27.7**	**+1.0**
HHC	**Hu-ho-hao-te**	**41.09**	**343**		*e*P	**P**	**15 10 29.0**	**+0.8**
HHC					pmax	pmax		
	comp=Z,21nm,1.1s							
VLA	**Vladivostok**	**41.35**	**6**		*i*P	**P**	**15 10 31.2**	**+1.1**
VLA					pmax	pmax		
	comp=Z,29nm,0.9s							
USA0B	**Ussuriysk Arra**	**42.43**	**6**		*i*P	**P**	**15 10 39.4**	**+0.5**
USA0B	**Ussuriysk Arra**	**42.43**	**6**		P	**P**	**15 10 40.4**	**+1.5**
USA0B					IAmb	IAmb	15 10 41.2	
	comp=Z,26nm,0.8s							
USRK	**Ussuriysk Ar.**	**42.43**	**6**		P	**P**	**15 10 39.9**	**+1.0**
	comp=Z,22nm,0.8s,baz=194,slow=7.5,SNR=35							
USRK	**Ussuriysk Ar.**	**42.43**	**6**		P	**P**	**15 10 39.7**	**+0.8**
USRK	**Ussuriysk Ar.**	**42.43**	**6**		P	**P**	**15 10 39.6**	**+0.8**
ERM	**Erimo**	**42.68**	**18**		P	**P**	**15 10 43.4**	**+2.4**
ERM					pmax	pmax		
	comp=Z,92nm,1.5s							
ERM	**Erimo**	**42.68**	**18**		P	**P**	**15 10 43.4**	**+2.4**
ERM					IAmb	IAmb	15 11 05.5	
	comp=Z,92nm,1.4s							
TEY	**Ternei**	**43.90**	**10**	⇑	*i*P	**P**	**15 10 52.3**	**+1.5**
TEY					pmax	pmax		
	comp=N,40nm,0.8s							
TEY					pmax	pmax		
	comp=Z,100nm,0.6s							
TEY					pmax	pmax		
	comp=E,20nm,0.5s							
ASAJ	**Asahikawa**	**44.43**	**17**		P	**P**	**15 10 56.7**	**+1.6**
	comp=E,22nm,0.7s,baz=221,slow=9.9,SNR=27							
ASAJ	**Asahikawa**	**44.43**	**17**		P	**P**	**15 10 56.4**	**+1.4**
ASAJ					pmax	pmax		
	comp=Z,30nm,0.8s							
JKA	**Kamikawa-asahi**	**44.43**	**17**		P	**P**	**15 10 56.4**	**+1.4**
JKA					IAmb	IAmb	15 10 57.7	
	comp=Z,30nm,0.8s							
GTA	**Gaotai**	**44.58**	**330**	⇓	P	**P**	**15 10 56.5**	**0.0**
GTA					PcP	**PP**	**15 12 40.8**	**-0.4**
GTA					pmax	pmax		
	comp=Z,4.0nm,1.1s							
TAPN	**Taplejung**	**44.95**	**308**		*e*P	**P**	**15 10 59.3**	**-0.6**
ODAN	**Odare**	**44.98**	**307**		*e*P	**P**	**15 10 59.7**	**-0.3**
	comp=Z,35nm,0.9s							
RAMN	**Ramite**	**45.65**	**307**		*e*P	**P**	**15 11 05.1**	**-0.3**
	comp=Z,39nm,1.1s							
GUN	**Gumba**	**46.65**	**308**		*e*P	**P**	**15 11 12.6**	**-0.7**
	comp=Z,24nm,0.7s							
PKI	**Pulchoki**	**46.87**	**307**		*e*P	**P**	**15 11 14.0**	**-1.1**
PKIN	**Phulchoki**	**46.89**	**307**		*e*P	**P**	**15 11 14.5**	**-0.6**
KKN	**Kakani**	**47.07**	**307**		*e*P	**P**	**15 11 15.3**	**-1.2**
YSS	**Yuzh-Sakhalins**	**47.08**	**15**		*e*P	**P**	**15 11 16.2**	**+0.3**
YSS					pmax	pmax		
	comp=Z,30nm,0.6s							
YSS	**Yuzh-Sakhalins**	**47.08**	**15**		P	**P**	**15 11 17.4**	**+1.4**
YSS					IAmb	IAmb	15 11 17.9	
	comp=Z,22nm,0.7s							
DMN	**Daman**	**47.13**	**307**		*e*P	**P**	**15 11 16.8**	**-0.2**
KLR	**Kul'dur**	**47.40**	**5**		*i*P	**P**	**15 11 18.8**	**+0.5**
KLR					pmax	pmax		
	comp=Z,16nm,1.0s							
HIA	**Hailar**	**47.57**	**354**		*i*P	**P**	**15 11 19.1**	**-0.7**
HIA					pmax	pmax		
	comp=Z,10.0nm,1.1s							
GKN	**Gorkha**	**47.68**	**307**		*e*P	**P**	**15 11 20.1**	**-1.0**
	comp=Z,7.3nm,0.5s							
KOLN	**Koldanda**	**48.41**	**306**		*e*P	**P**	**15 11 26.2**	**-0.6**
	comp=Z,24nm,0.6s							
DANN	**Dangsing**	**48.52**	**307**		*e*P	**P**	**15 11 27.3**	**-0.5**
	comp=Z,33nm,0.8s							
ULN	**Ulaanbaatar**	**48.81**	**343**		*i*P	**P**	**15 11 26.8**	**-2.7**
ULN					pmax	pmax

	comp=N,16nm,1.0s						
YAK	Yakutsk	60.06	2	P	P	15 12 51.4	+0.7
MDOK	Medeo	60.16	320	eP	P	15 12 50.0	-2.1
	baz=320						
MDOK	Medeo	60.16	320	eP	P	15 12 49.9	-2.1
TDK	Taldyqorghan	60.23	323	eP	P	15 12 50.9	-1.4
	comp=N,5.2nm,0.5s,baz=323						
TDK	Taldyqorghan	60.23	323	eP	P	15 12 50.9	-1.4
TDK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AAA	Alma-Ata	60.27	320	eP	P	15 12 51.1	-1.6
	comp=Z,6.7nm,0.7s,baz=320						
AAA	Alma-Ata	60.27	320	eP	P	15 12 51.1	-1.6
AAA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LBZ	Lake Benmore	60.29	145	P	P	15 12 53.0	+0.4
CHKK	Chushkaly	60.54	321	eP	P	15 12 52.6	-1.8
	baz=321						
CHKK	Chushkaly	60.54	321	eP	P	15 12 52.6	-1.8
MA2	Magadan	60.55	14	i P	P	15 12 54.3	+0.1
MA2				pmax	pmax		
	comp=Z,24nm,0.8s						
MA2	Magadan	60.55	14	P	P	15 12 56.3	+2.1
KUU	Kurty	60.97	321	eP	P	15 12 55.3	-2.0
	comp=Z,14nm,1.0s,baz=321						
KUU	Kurty	60.97	321	eP	P	15 12 55.3	-2.0
KUU				pmax	pmax		
	comp=Z,14nm,1.0s						
KHZ	Kahutara	61.15	142	P	P	15 12 58.8	+0.3
BKZ	Black Stump Fm	61.37	137	P	P	15 12 59.3	-0.9
AAK	Ala-Archa	61.58	319	i P	P	15 12 57.6	-4.1
AAK				pmax	pmax		
	comp=Z,225nm,1.8s						
DRK	Karamyk	62.13	314	P	P	15 13 06.1	+0.5
ZAA0	Zalesovo Array	62.13	334	P	P	15 13 04.4	-0.6
ZALV	Zalesovo Beam	62.13	334	P	P	15 13 04.0	-0.9
	comp=Z,2.4nm,0.5s,baz=133,slow=7.1,SNR=4.8						
ZALV	Zalesovo Beam	62.13	334	P	P	15 13 04.7	-0.3
ZALV	Zalesovo Beam	62.13	334	P	P	15 13 04.7	-0.3
KBL	Kabul	62.48	308	P	P	15 13 06.8	-1.1
KBL				pmax	pmax		
	comp=Z,17nm,1.1s						
KBL	Kabul	62.48	308	P	P	15 13 06.8	-1.1
KBL				lAmb	lAmb	15 13 21.0	
	comp=Z,17nm,1.1s						
BTLS	Baital	62.95	321	eP	P	15 13 09.2	-1.5
	comp=Z,2.2nm,1.0s,baz=321						
BTLS	Baital	62.95	321	eP	P	15 13 09.1	-1.5
BTLS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURBB	Kurchatov Arra	63.18	328	P	P	15 13 11.7	-0.3
	comp=Z,14nm,0.5s,baz=121,slow=6.2,SNR=5.9						
KURK	Kurchatov	63.18	328	P	P	15 13 11.3	-0.7
KURK				pmax	pmax		
	comp=Z,40nm,0.6s						
KURK	Kurchatov	63.18	328	P	P	15 13 11.3	-0.7
DZA	Taraz	63.80	318	eP	P	15 13 14.5	-1.9
	comp=Z,16nm,1.1s,baz=318						
DZA	Taraz	63.80	318	eP	P	15 13 14.4	-1.9
DZA				pmax	pmax		
	comp=Z,16nm,1.1s						
SEY	Seymchan	63.88	13	i P	P	15 13 15.6	-0.8
BRVK	Borovoye	68.82	327	i P	P	15 13 45.4	-2.8
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TIXI	Tiksi	69.69	1	i P	P	15 13 52.0	-1.2
TIXI				pmax	pmax		
	comp=Z,51nm,0.9s						
NRIK	Noril'sk	72.17	346	P	P	15 14 08.2	-0.1
	comp=Z,24nm,0.8s,baz=123,slow=5.9,SNR=30						
NRIK	Noril'sk	72.17	346	i P	P	15 14 05.6	-2.7
NRIK				pmax	pmax		
	comp=Z,22nm,0.8s						
ABKAR	Akbulak array	73.44	321	⇓P	P	15 14 16.5	+0.3
ABKAR	Akbulak array	73.44	321	P	P	15 14 16.4	+0.1
ABKAR	Akbulak array	73.44	321	P	P	15 14 16.3	+0.1
AKTO	Aktyubinsk	74.97	322	P	P	15 14 25.1	-0.1
	comp=Z,7.8nm,0.7s,baz=112,slow=7.2,SNR=16						
SVE	Sverdlovsk	75.42	329	eP	P	15 14 27.9	+0.3
SVE				pmax	pmax		
	comp=Z,28nm,1.1s						
ARU	Arti	76.38	328	i P	P	15 14 30.1	-2.9
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
ARU	Arti	76.38	328	⇓P	P	15 14 32.9	-0.2
ARU	Arti	76.38	328	P	P	15 14 31.5	-1.6
ARU				lAmb	lAmb	15 14 40.4	
	comp=Z,14nm,0.8s						
RAYN	Ar Rayn	81.00	293	P	P	15 14 59.1	-0.2
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
RAYN	Ar Rayn	81.00	293	P	P	15 14 59.1	-0.2
VNDA	Vanda	81.62	173	P	P	15 15 02.1	+0.7
	comp=Z,3.8nm,0.9s,baz=319,slow=7.2,SNR=14						
VNDA	Vanda	81.62	173	P	P	15 15 01.1	-0.3
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VNDA	Vanda	81.62	173	P	P	15 15 01.1	-0.3
MAW	Mawson	81.94	200	P	P	15 15 04.0	+0.9
	comp=Z,3.8nm,0.8s,baz=87,slow=9.3,SNR=2.7						
TTA	Tatalina	82.65	27	P	P	15 15 08.7	+1.6
TTA				pmax	pmax		
	comp=Z,27nm,1.3s						
TTA	Tatalina	82.65	27	⇓P	P	15 15 09.5	+2.3
TTA	Tatalina	82.65	27	P	P	15 15 08.7	+1.6
TTA				lAmb	lAmb	15 15 10.1	
	comp=Z,27nm,1.3s						
ZEI	Tsey	83.30	313	eP	P	15 15 10.9	-0.2
ZEI				pmax	pmax		
	comp=Z,15nm,1.3s						
GEVA	Gevas	83.69	308	P	P	15 15 14.1	+0.9
GEVA				lAmb	lAmb	15 15 15.4	
	comp=Z,14nm,0.8s						
RSO	Redoubt South	83.81	29	P	P	15 15 13.1	-0.2
A21K	Barrow	84.04	18	P	P	15 15 16.6	+2.6
	baz=258						
A21K	Barrow	84.04	18	P	P	15 15 15.5	+1.5
KBZ	Khabaz	84.08	314	P	P	15 15 14.8	0.0
	comp=Z,2.5nm,0.9s,baz=122,slow=15,SNR=3.5						
IMAR	Indian Mountai	84.12	24	P	P	15 15 17.2	+1.2
KIV	Kislovodsk	84.25	314	eP	P	15 15 14.9	-0.9
KIV				pmax	pmax		
	comp=Z,20nm,0.9s						
MLY	Manley	85.25	25	P	P	15 15 22.2	+1.9
	baz=264						
VRH	Novokhopyorsk	85.27	321	eP	P	15 15 18.6	-2.0
VRH				pmax	pmax		
	comp=Z,30nm,1.1s						
RC01	Rabbit Creek A	85.35	29	P	P	15 15 22.1	+1.3
	baz=265						
COLD	Coldfoot	85.68	23	P	P	15 15 24.8	+2.4
	baz=264						
COLD	Coldfoot	85.68	23	P	P	15 15 23.4	+1.0
COLD				lAmb	lAmb	15 15 26.3	
	comp=Z,9.6nm,0.9s						
I23K	Minto, Yukon-K	85.84	25	P	P	15 15 24.9	+1.7
	baz=265						
MCK	McKinley	85.92	26	P	P	15 15 24.2	+0.6
	baz=266						
RND	Reindeer	85.93	27	P	P	15 15 23.8	0.0
RND				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RND	Reindeer	85.93	27	P	P	15 15 23.8	0.0
RND				lAmb	lAmb	15 15 25.2	
	comp=Z,4.7nm,0.7s						
TOLK	Toolik Lake Re	86.05	21	P	P	15 15 26.2	+2.0
	baz=265						
VORD	Divnogorie	86.79	321	eP	P	15 15 27.0	-1.1
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HDA	Harding Lake	86.83	26	P	P	15 15 28.0	0.0
	baz=268						
ILAR	Eielson Array	86.87	25	P	P	15 15 27.8	-0.5
	comp=Z,1.3nm,0.6s,baz=247,slow=4.9,SNR=18						
VSR	Storozhevoye	86.88	321	eP	P	15 15 27.0	-1.6
VSR				pmax	pmax		
	comp=Z,20nm,1.2s						
KLMR	Klimovskoe	86.90	331	eP	P	15 15 24.6	-3.8
KLMR				pmax	pmax		
	comp=Z,21nm,1.2s						
KLMR	Klimovskoe	86.90	331	eP	P	15 15 24.6	-3.8
KLMR				AMP		15 15 37.4	
	comp=Z,21nm,1.2s						
LPSR	Galich'ya Gora	87.05	322	eP	P	15 15 28.9	-0.4
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
TMCR	Tamitsa	87.66	334	eP	P	15 15 29.1	-2.9
TMCR				pmax	pmax		
	comp=Z,15nm,0.6s						
BMAR	Burnt Mountain	87.87	23	P	P	15 15 33.8	+0.7
DOT	Dot Lake	88.09	27	P	P	15 15 33.9	-0.2
SCRK	Sand Creek	88.12	26	P	P	15 15 35.6	+1.2
	baz=270						
L26K	Log Cabin Wild	88.42	27	P	P	15 15 37.1	+1.4
	baz=271						
OBN	Obninsk	88.44	325	⇓eP	P	15 15 35.7	-0.2
OBN				pmax	pmax		
	comp=Z,11nm,0.6s						
K27K	Chicken	88.96	26	P	P	15 15 40.5	+2.2
	baz=272						
K27K	Chicken	88.96	26	P	P	15 15 39.8	+1.5
K27K				lAmb	lAmb	15 15 41.0	
	comp=Z,8.9nm,1.0s						
BCAR	Beaver Creek A	89.13	27	P	P	15 15 39.4	+0.3
KMBO	Kilima Mbogo	89.28	269	P	P	15 15 43.4	+2.3
	comp=Z,1.3nm,0.5s,baz=88,slow=5.4,SNR=5.9						
KMBO	Kilima Mbogo	89.28	269	P	P	15 15 42.1	+1.0
KMBO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMBO	Kilima Mbogo	89.28	269	P	P	15 15 42.1	+1.0
MMAI	Mount Meron Ar	89.91	303	P	P	15 15 45.0	+1.5
	comp=Z,6.1nm,0.9s,baz=116,slow=5.6,SNR=1.3						
DAWY	Dawson	90.14	26	P	P	15 15 43.9	+0.1
SYO	Syowa Base	90.62	201	⇑eP	P	15 15 45.0	-0.8
BRTR	Keskin Array B	91.02	310	P	P	15 15 48.0	-0.6
	comp=Z,14nm,0.7s,baz=150,slow=1.2,SNR=2.7						
BRTR	Keskin Array B	91.02	310	P	P	15 15 47.4	-1.2
BRTR	Keskin Array B	91.02	310	P	P	15 15 47.4	-1.2
QSPA	South Pole Qui	91.79	180	P	P	15 15 51.4	-0.1
	comp=Z,1.9nm,1.0s,baz=332,slow=0.6,SNR=5.2						
QSPA	South Pole Qui	91.79	180	P	P	15 15 52.1	+0.6
QSPA				lAmb	lAmb	15 16 05.1	
	comp=Z,7.8nm,1.4s						
INK	Inuvik	91.96	21	P	P	15 15 52.4	+0.3
	comp=Z,3.6nm,1.0s,baz=339,slow=3.6,SNR=5.5						
INK	Inuvik	91.96	21	P	P	15 15 51.8	-0.3
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	Inuvik	91.96	21	P	P	15 15 51.8	-0.3
INK				lAmb	lAmb	15 15 53.4	
	comp=Z,6.4nm,1.2s						
ARCES	ARCESS Array B	92.10	340	P	P	15 15 52.3	-0.5
	comp=Z,7.6nm,0.8s,baz=29,slow=2.8,SNR=8.2						
SPITS	Spitsbergen Ar	92.25	349	P	P	15 15 53.0	-0.3
	comp=Z,12nm,1.0s,baz=15,slow=6.0,SNR=2.2						
AKASG	Malin Array Ba	93.18	321	P	P	15 15 57.0	-1.1
	comp=Z,0.8nm,0.6s,baz=65,slow=4.7,SNR=2.2						
FINES	FINESS Array B	93.35	332	P	P	15 15 57.8	-0.9
	comp=Z,1.5nm,0.7s,baz=50,slow=3.0,SNR=5.3						
FINES	FINESS Array B	93.35	332	P	P	15 15 57.1	-1.5
FINES	FINESS Array B	93.35	332	P	P	15 15 57.1	-1.5
C36M	Paulatuk	95.03	20	P	P	15 16 07.0	+0.8
	baz=289						
MLR	Muntele Rosu	96.07	316	P	P	15 16 10.6	-1.0
	comp=Z,2.0nm,0.4s,baz=130,slow=17,SNR=1.9						
BURAR	Bucovina Array	96.22	318	P	P	15 16 12.0	-0.3
BUR08	Bucovina Ar. S	96.23	318	P	P	15 16 11.6	-0.7
BUR08				lAmb	lAmb	15 16 18.7	
	comp=Z,10.0nm,1.4s						
DAG	Danmarks Havn	99.05	352	⇓P	Pdif	15 16 23.0	-1.3
NB2	NORSAR Subarra	100.34	333	P	Pdif	15 16 29.0	-1.4
	comp=Z,2.3nm,0.8s,baz=68,slow=4.6						
NOA	NORSAR Array B	100.34	333	P	Pdif	15 16 28.5	-1.9
	comp=Z,1.4nm,0.8s,baz=66,slow=4.6,SNR=5.1						
YKA	Yellowknife Ar	101.27	24	P	Pdif	15 16 36.1	+1.7
	comp=Z,0.7nm,0.7s,baz=322,slow=21,SNR=2.0						
TXAR	Lajitas Array	122.90	53	PKP	PKiKP	15 21 41.7	+0.8
	comp=Z,0.4nm,0.7s,baz=247,slow=2.6,SNR=4.1						
TXAR	Lajitas Array	122.90	53	PKIKP	PKiKP	15 21 41.1	+0.2
TXAR	Lajitas Array	122.90	53	PKPdf	PKiKP	15 21 41.1	+0.2
TORD	Torodi Ar. Bea	123.26	287	PKP	PKiKP	15 21 41.9	0.0
	comp=Z,0.9nm,0.7s,baz=16,slow=2.0,SNR=3.8						
TORD	Torodi Ar. Bea	123.26	287	PKPdf	PKiKP	15 21 41.7	-0.2
S39A	Bolivar	126.10	39		PKiKP	15 21 46.9	0.0
441A	DeRidder	130.21	46	PKPdf	PKPdf	15 21 54.5	0.0

*IDC **26** 15:11:48.7±2.0, 1°.81N×126°.33E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/44, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=120.0km s-min=26.7km az=68.0*
*DJA **26** 15:11:53.4±1.6,2°N±4°×12°6E±°, h11km±16km, M3.5/5, MLv3.5/5*
*NEIC **26** 15:11:54.1±2.2, 1°.88N±0°.04×126°.63E±0°.08, h35km±2km, mb4.1/13, Error ellipse: s-maj=13.3km s-min=6.7km az=272.0*

ISC 26 15:11:55.5±0.7, 1°.80N±0°.07×126°.61E±0°.08, h47km, n23, σ1$49/24, mb3.9/9, Northern Mocuca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.28	143	P	Pn	15 12 16.8	-0.2
TNTI				S	Sn	15 12 34.5	+1.6
TNTI	Ternate	1.28	143		Pn	15 12 16.9	0.0
SGSI	Sangihe	2.16	330	P	Pn	15 12 29.7	+0.7
SANI	Sanana	3.88	189	P	Pn	15 12 51.5	-1.1
LUWI	Luwuk	4.76	234	Pn	Pn	15 13 07.6	+2.8
TOLI2	Tolitoli	5.86	263	Pn	Pn	15 13 19.1	-0.9
KSM	Kuching	16.29	269	Pn	Pn	15 15 40.0	-1.3
FITZ	Fitzroy Crossi	19.80	183	P	P	15 16 20.3	-1.8
	0.1nm,0.3s,baz=4.1,slow=14,SNR=2.2						
FITZ	Fitzroy Crossi	19.80	183	P	P	15 16 21.1	-1.0
WB0	Warramunga Arr	22.76	161	P	P	15 16 54.6	+0.6
WB0				lAmb	lAmb	15 16 57.7	
	comp=Z,15nm,1.4s						
WRA	Warramunga Arr	22.90	161	P	P	15 16 55.0	-0.5
	comp=Z,1.6nm,0.6s,baz=339,slow=11,SNR=16						
WRA	Warramunga Arr	22.90	161	P	P	15 16 55.4	-0.2
WB2	Warramunga Arr	22.91	161	P	P	15 16 56.3	+0.8
WB2				lAmb	lAmb	15 17 00.9	
	comp=Z,2.9nm,0.7s						
WR0	Warramunga Arr	22.99	161	P	P	15 16 56.5	+0.2
WR0				lAmb	lAmb	15 17 00.5	
	comp=Z,5.7nm,1.1s						
AS31	Alice Springs	26.29	165	P	P	15 17 30.2	+3.3
ASAR	Alice Springs	26.29	165	P	P	15 17 27.5	+0.7
	comp=Z,0.4nm,0.3s,baz=348,slow=12,SNR=10						
JNU	Nakatsue	31.41	7	P	P	15 18 13.7	+1.4
MK31	Makanchi Array	59.06	326	P	P	15 21 49.6	-1.3
MK31				lAmb	lAmb	15 21 59.4	
	comp=Z,1.8nm,1.2s						
MKAR	Makanchi Array	59.06	326	P	P	15 21 49.5	-1.5
	comp=Z,0.4nm,0.5s,baz=122,slow=7.4,SNR=0.8						
MAKZ	Makanchi	59.25	326	P	P	15 21 51.4	-0.9
MAKZ				lAmb	lAmb	15 21 53.6	
	comp=Z,2.5nm,1.2s						
MCQ	Macquarie Isla	62.15	159	P	P	15 22 11.8	0.0
CHGN	Chignik	80.19	33	P	P	15 23 58.3	-2.5
TTA	Tatalina	82.67	27	P	P	15 24 15.6	+1.6
TTA				lAmb	lAmb	15 24 28.0	
	comp=Z,5.9nm,1.4s						

*IDC **26** 15:16:55.9±1.4, 1°.95N×126°.62E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/39, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=107.9km s-min=19.9km az=71.0*
*DJA **26** 15:16:59.2±0.6,2°N±8°×12°7E±°, h10km, M3.6/6, MLv3.6/6*

ISC 26 15:17:01.9±1.1, 2°.0N±0°.1×126°.7E±0°.1, h47km, n8, σ0$96/8, mb3.6/4, Northern Mocuca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.33	151	P	Pn	15 17 23.0	-1.1
GTOI	Gorontalo	3.94	251	P	Pn	15 17 58.9	-1.0
SANI	Sanana	4.04	191	P	Pn	15 18 01.4	+0.1
FITZ	Fitzroy Crossi	19.95	183	P	P	15 21 31.2	+1.1
	0.1nm,0.3s,baz=6.0,slow=12,SNR=1.3						
WRA	Warramunga Arr	23.00	161	P	P	15 22 02.4	-0.5
	1.4nm,0.5s,baz=339,slow=11,SNR=16						
ASAR	Alice Springs	26.40	165	P	P	15 22 34.4	+0.1
	0.9nm,0.8s,baz=341,slow=6.6,SNR=10						
SONM	Songino Array	48.98	342	P	P	15 25 44.8	+0.9
	0.3nm,0.4s,baz=148,slow=7.4,SNR=2.1						
MKAR	Makanchi Array	59.02	326	P	P	15 26 56.6	-0.5
	0.2nm,0.3s,baz=118,slow=7.2,SNR=9.0						

IDC 26 15:18:18.6±2.0, 1°.87N×126°.59E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/36, mbtmp3.5/4, ML3.1/1, Error ellipse: s-maj=124.0km s-min=24.3km az=69.0, Northern Mocuca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.86	183	P	P	15 22 50.7	-0.8
	0.0nm,0.3s,baz=17,slow=14,SNR=1.9						
WRA	Warramunga Arr	22.97	161	P	P	15 23 25.1	+0.2
	0.8nm,0.6s,baz=341,slow=11,SNR=6.4						
ASAR	Alice Springs	26.36	165	P	P	15 23 57.2	+0.5
	0.3nm,0.5s,baz=347,slow=13,SNR=1.4						
MKAR	Makanchi Array	59.00	326	P	P	15 28 20.1	-0.1
	0.2nm,0.3s,baz=117,slow=7.4,SNR=7.5						

*IDC **26** 15:18:44.6±0.6, 1°.88N×126°.41E, h0km, mb4.2/12, mb1 4.2/15, mb1mx4.0/38, mbtmp4.1/15, ML3.7/3, Error ellipse: s-maj=27.7km s-min=11.5km az=77.0*
*DJA **26** 15:18:48.1±0.3,2°N±4°×12°7E±°, h10km, M4.4/14, mB5.0/1, mb4.6/9, MLv4.4/14, Mw(mB)4.3/1*
*NEIC **26** 15:18:49.8±2.6, 1°.93N±0°.08×126°.55E±0°.07, h35km±2km, mb4.6/37, Error ellipse: s-maj=15.4km s-min=9.9km az=222.0*

ISC 26 15:18:51.5±0.4, 1°.95N±0°.05×126°.56E±0°.06, h47km, n84, σ1$49/88, mb4.5/32, 1D, Northern Mocuca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.42	146	P	Pn	15 19 13.5	-1.4
TNTI				S	Sn	15 19 33.7	+1.3
TNTI	Ternate	1.42	146	Pn	Pn	15 19 13.3	-1.6
TNTI	Ternate	1.42	146	⇓P	Pn	15 19 13.4	-1.5
SGSI	Sangihe	2.01	329	P	Pn	15 19 21.1	-1.9
KMSI	Cibinong	2.92	242	P	Pn	15 19 36.5	+1.0
GTOI	Gorontalo	3.79	250	P	Pn	15 19 49.3	+2.0
SANI	Sanana	4.02	188	P	Pn	15 19 49.4	-1.1
LUWI	Luwuk	4.82	232	P	Pn	15 20 02.5	+1.0
LUWI	Luwuk	4.82	232	Pn	Pn	15 20 02.3	+0.8
MRSI	Marisa	4.85	252	P	Pn	15 20 04.1	+2.1
APSI	Ampana	5.68	240	P	Pn	15 20 14.2	+0.9
	0.3nm97nm,0.9s						
MSAI	Masohi	5.77	156	P	Pn	15 20 15.6	+1.0
	0.1nm12nm,0.8s						
TOLI2	Tolitoli	5.84	262	Pn	Pn	15 20 15.9	+0.3
MPSI	Mapaga	6.86	257	P	Pn	15 20 31.4	+1.9
	0.1nm24nm,0.6s						
TTSI	Tana Toraja	8.37	234	P	Pn	15 20 48.6	-1.7
	27nm,0.9s						
MYLDM	Lahad Datu	8.66	292	Pn	Pn	15 20 57.1	+2.8
SPSI	Sidrap Palu	8.98	229	P	Pn	15 20 59.3	+0.6
	24nm,0.8s						
BNSI	Bone	9.03	226	P	Pn	15 20 59.7	+0.4
	22nm,0.8s						
KAPI	Kappang	9.71	225	Pn	Pn	15 21 05.0	-3.6
	0.4nm,0.3s,baz=208,slow=18,SNR=1.5						
KAPI	Kappang	9.71	225	Pn	Pn	15 21 09.0	+0.4
BSSI	Bau Bau, Buton	10.07	217	P	Pn	15 21 14.3	+0.7
KKMI	Kota Kinabalu	11.09	292	Pn	Pn	15 21 26.8	-0.9
GENI	Genyem	14.33	108	P	P	15 22 20.3	+2.6
SBUM	Sibu	14.34	272	P	P	15 22 18.8	+0.9
TWSI	Taliwang, Sumb	14.35	222	P	P	15 22 20.0	+2.0
JAY	Jayapura	14.82	107	Pn	Pn	15 22 18.1	-0.1
	0.1nm,0.3s,baz=333,slow=9.5,SNR=1.7						
MTN	Manton Dam	15.38	163	P	Pn	15 22 25.5	-0.1
KNRA	Kununurra	17.65	173	P	Pn	15 22 52.7	-1.3
FITZ	Fitzroy Crossi	19.94	183	P	P	15 23 18.9	-0.7
	0.6nm,0.3s,baz=17,slow=12,SNR=11						
FITZ	Fitzroy Crossi	19.94	183	P	P	15 23 19.0	-0.7
CISI	Cisompet, Garu	20.95	243	P	Pn	15 23 34.1	+0.3
CISI				lAmb	lAmb	15 23 41.5	
	comp=Z,43nm,1.0s						
TWG	Pinlang	21.42	346	P	P	15 23 35.9	+0.3
TWG				lAmb	lAmb	15 23 36.3	
	comp=Z,50nm,1.2s						
TPUB	Ta-pu	21.99	345	P	P	15 23 39.7	-2.0
SSLB	Suanglung	22.38	346	P	P	15 23 43.2	-2.7
SSLB				lAmb	lAmb	15 23 55.6	
	comp=Z,44nm,1.5s						
MYKOM	Kota Tinggi	22.70	270	P	P	15 23 48.3	-1.2
COEN	Coen	22.82	134	P	P	15 23 51.5	+0.8
COEN				lAmb	lAmb	15 23 59.7	
	comp=Z,19nm,1.4s						
WB0	Warramunga Arr	22.91	161	P	P	15 23 49.9	-1.7
WB0				lAmb	lAmb	15 23 54.4	
	comp=Z,38nm,1.4s						
WRAB	Tennant Creek	23.05	161	P	P	15 23 51.2	-1.7
WRAB				lAmb	lAmb	15 23 55.2	
	comp=Z,37nm,1.4s						
WRA	Warramunga Arr	23.06	161	P	P	15 23 51.1	-2.0
	comp=Z,5.9nm,0.4s,baz=340,slow=11,SNR=26						
WRA				PcP	PcP	15 27 40.1	-1.2
	comp=Z,0.4nm,0.5s,baz=333,slow=2.2,SNR=3.1						
WRA				S	S	15 28 00.1	-0.6
	comp=Z,0.6nm,0.7s,baz=337,slow=16,SNR=3.0						
WRA	Warramunga Arr	23.06	161	P	P	15 23 51.4	-1.7
WB2	Warramunga Arr	23.06	161	P	P	15 23 50.6	-2.4
WB2				lAmb	lAmb	15 23 55.2	
	comp=Z,35nm,1.4s						
YHNB	Yeheng	23.14	348	P	P	15 23 53.4	-0.5
YHNB				lAmb	lAmb	15 23 56.3	
	comp=Z,29nm,1.2s						
WR0	Warramunga Arr	23.14	161	P	P	15 23 52.2	-1.7
WR0				lAmb	lAmb	15 23 56.0	
	comp=Z,21nm,1.2s						
PSA00	Pilbara Seismi	24.29	195	P	P	15 24 04.5	0.0
PSA00				lAmb	lAmb	15 24 09.9	
	comp=Z,40nm,1.4s						
JOW	Kunigami	24.79	4	P	P	15 24 12.3	+3.2
AS31	Alice Springs	26.45	165	P	P	15 24 23.6	-0.6
ASAR	Alice Springs	26.45	165	P	P	15 24 23.6	-0.6
	comp=Z,2.0nm,0.4s,baz=344,slow=7.6,SNR=25						
ASAR				PcP	PcP	15 27 48.0	-0.8
	comp=Z,0.5nm,0.6s,baz=346,slow=2.7,

MAKZ	**Makanchi**	**59.10**	**326**	P	**P**	**15 28 45.6**	**-1.6**
MAKZ				IAmb	IAmb	15 28 46.7	
	comp=Z,2.6nm,0.9s						
KURK	**Kurchatov**	**63.15**	**328**	P	**P**	**15 29 12.1**	**-2.3**
KURK				IAmb	IAmb	15 29 14.1	
	comp=Z,5.0nm,0.8s						
TIXI	**Tiksi**	**69.61**	**1**	P	**P**	**15 29 55.5**	**+0.1**
SOCY	**Socotra**	**72.56**	**282**	P	**P**	**15 30 11.8**	**-2.8**
SOCY				IAmb	IAmb	15 30 25.9	
	comp=Z,8.0nm,1.0s						
ABKAR	**Akbulak array**	**73.42**	**321**	P	**P**	**15 30 17.8**	**-1.0**
ARU	**Arti**	**76.34**	**328**	P	**P**	**15 30 33.5**	**-2.0**
ARU				IAmb	IAmb	15 30 34.8	
	comp=Z,4.5nm,0.8s						
VNDA	**Vanda**	**81.69**	**173**	P	**P**	**15 31 04.5**	**0.0**
	comp=Z,2.1nm,0.8s,baz=317,slow=6.0,SNR=9.1						
VNDA	**Vanda**	**81.69**	**173**	P	**P**	**15 31 04.6**	**+0.2**
TTA	**Tatalina**	**82.55**	**27**	P	**P**	**15 31 10.2**	**+0.9**
TTA				IAmb	IAmb	15 31 13.8	
	comp=Z,4.9nm,1.2s						
SUA	**Susitna One**	**84.79**	**29**	P	**P**	**15 31 20.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**123.30**	**287**	PKP	**PKiKP**	**15 37 44.8**	**+0.2**
	comp=Z,0.5nm,1.0s,baz=131,slow=4.4,SNR=2.2						

*IDC **26** 15:20:19.0±2.4, 1°.89N×126°.60E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/35, mbtmp3.8/3, Error ellipse: s-maj=203.5km s-min=29.5km az=66.0*
*NEIC **26** 15:20:24.2±1.7, 1°.8N±0°.1×126°.4E±0°.1, h35km±10km, mb4.2/7, Error ellipse: s-maj=22.8km s-min=11.0km az=48.0*
ISC 26 15:20:24.9±0.8, **1°.8N**±0°.1×**126°.4E**±0°.1, **h47**km, **n16**, σ1**9**25/17, **mb4.0/7**, **Northern Moluca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.36**	**136**	Pn		**Pn**	**15 20 47.4**	**-0.1**
TNTI				Sn		**Sn**	**15 21 03.5**	**-1.0**
MMRI	**Maumere**	**11.13**	**202**	Pn		**Pn**	**15 23 00.6**	**-0.9**
WB0	**Warramunga Arr**	**22.77**	**160**	P		P	**15 25 24.3**	**+0.7**
WB0				IAmb		IAmb	15 25 27.8	
	comp=Z,5.1nm,0.8s							
WRAB	**Tennant Creek**	**22.91**	**161**	P		**P**	**15 25 25.6**	**+0.6**
WRAB				IAmb		IAmb	15 25 31.2	
	comp=Z,13nm,1.5s							
WRA	**Warramunga Arr**	**22.92**	**161**	P		**P**	**15 25 25.2**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=340,slow=11,SNR=2.0							
WRA	**Warramunga Arr**	**22.92**	**161**	P		**P**	**15 25 26.7**	**+1.6**
WR0	**Warramunga Arr**	**23.00**	**160**	P		**P**	**15 25 27.4**	**+1.4**
ASAR	**Alice Springs**	**26.30**	**164**	P		**P**	**15 25 57.7**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=350,slow=13,SNR=1.2							
KSAR	**Wonju Array Be**	**35.54**	**2**	P		**P**	**15 27 15.0**	**-2.6**
MK31	**Makanchi Array**	**59.00**	**326**	P		**P**	**15 30 19.5**	**-0.4**
MK31				IAmb		IAmb	15 30 35.2	
	comp=Z,2.4nm,1.2s							
MKAR	**Makanchi Array**	**59.00**	**326**	P		**P**	**15 30 20.3**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=126,slow=7.4,SNR=2.0							
MKAR	**Makanchi Array**	**59.00**	**326**	P		**P**	**15 30 20.1**	**+0.2**
MAKZ	**Makanchi**	**59.18**	**326**	P		**P**	**15 30 22.3**	**+1.1**
MAKZ				IAmb		IAmb	15 30 24.0	
	comp=Z,3.0nm,1.1s							
KURK	**Kurchatov**	**63.23**	**328**	P		**P**	**15 30 48.8**	**+0.3**
ABKAR	**Akbulak array**	**73.48**	**321**	P		**P**	**15 31 52.7**	**+0.1**
TTA	**Tatalina**	**82.80**	**27**	P		**P**	**15 32 46.0**	**+2.0**

*IDC **26** 15:21:11.9±2.1, 23°.76S×67°.01W, h181km±27km, mb3.1/1, mb1 3.3/5, mb1mx3.1/30, mbtmp3.8/5, Error ellipse: s-maj=40.7km s-min=26.1km az=146.0*
*GUC **26** 15:21:11.0±0.5, 24°.19S×67°.48W, h197km±7km, ML3.9*
ISC 26 15:21:08.6±1.0, **24°.20S**±0.0×**67°.3W**±0°.1, **h192**km±14km, **n21**, σ1**9**27/34, **10C**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.16**	**317**	P		**Pn**	**15 21 50.2**	**+1.5**
	23nm,0.3s,baz=129,slow=6.4,SNR=110							
LVC				S		**S**	**15 22 20.4**	**+0.7**
	34nm,0.3s,baz=281,slow=20,SNR=8.6							
LVC	**Limon Verde**	**2.16**	**317**	*e*P		**Pn**	**15 21 50.1**	**+1.4**
LVC				*i* S		**S**	**15 22 19.8**	**+0.1**
PB15	**IPOC Station P**	**2.22**	**296**	⇑*i*P		**Pn**	**15 21 50.3**	**+1.2**
PB15				*e*S		**S**	**15 22 19.6**	**-0.8**
GO02	**Mina Guanaco**	**2.29**	**245**	⇑*i*P		**Pn**	**15 21 51.2**	**+1.3**
GO02				*e*S		**S**	**15 22 22.5**	**+0.4**
GO02				IAML			15 22 23.7	
	comp=N,368nm,0.3s							
PB06	**IPOC Station P**	**2.56**	**305**	⇑*i*P		**Pn**	**15 21 54.3**	**+1.5**
PB06				*e*S		**S**	**15 22 26.9**	**-0.3**
PB06				IAML			15 22 29.4	
	comp=E,526nm,0.1s							
PB05	**IPOC Station P**	**2.98**	**296**	⇑*i*P		**Pn**	**15 21 58.8**	**+1.1**
PB05				*e*S		**S**	**15 22 34.9**	**-1.0**
PB05				IAML			15 22 41.2	
	comp=E,148nm,0.2s							
PB09	**IPOC Station P**	**2.98**	**323**	⇑*i*P		**Pn**	**15 21 59.7**	**+1.9**
PB09				*e*S		**S**	**15 22 36.8**	**+0.6**
PB09				IAML			15 22 41.1	
	comp=E,146nm,0.6s							
PB10	**IPOC Station P**	**3.06**	**282**	⇑*i*P		**Pn**	**15 21 59.6**	**+1.1**
PB10				*e*S		**S**	**15 22 36.1**	**-1.2**
PB10				IAML			15 22 43.8	
	comp=E,108nm,0.2s							
AC02	**Maricunga**	**3.10**	**212**	⇑*i*P		**Pn**	**15 22 00.6**	**+1.1**
PB03	**IPOC Station P**	**3.11**	**313**	⇑*i*P		**Pn**	**15 22 00.6**	**+1.3**
PB03				*e*S		**S**	**15 22 38.2**	**-0.6**
PB03				IAML			15 22 39.6	
	comp=N,290nm,0.4s							
PB04	**IPOC Station P**	**3.21**	**305**	⇑*i*P		**Pn**	**15 22 01.7**	**+1.2**
PB04				*e*S		**S**	**15 22 40.5**	**-0.4**
PB04				IAML			15 22 44.4	
	comp=N,272nm,0.3s							
PB07	**IPOC Station P**	**3.42**	**315**	⇑*i*P		**Pn**	**15 22 04.2**	**+1.1**
PB07				*e*S		**S**	**15 22 45.2**	**-0.6**
AC01	**Pan de Azucar**	**3.56**	**236**	*e*P		**Pn**	**15 22 04.6**	**0.0**
AC01				*i* S		**S**	**15 22 46.4**	**-2.1**
PB01	**IPOC Station P**	**3.73**	**327**	*e*P		**Pn**	**15 22 07.4**	**+0.5**
PB01				*i* S		**S**	**15 22 51.8**	**-0.7**
PB02	**IPOC Station P**	**3.73**	**320**	*e*P		**Pn**	**15 22 07.6**	**+0.7**
PB02				*i* S		**S**	**15 22 50.6**	**-1.9**
LPAZ	**La Paz**	**7.91**	**354**	P		**Pn**	**15 23 02.8**	**+1.5**
	comp=N,1.9nm,0.3s,baz=163,slow=7.8,SNR=33							
SIV	**San Ignacio**	**10.04**	**37**	P		**Pn**	**15 23 25.8**	**-2.8**
	comp=N,0.5nm,0.3s,baz=215,slow=11,SNR=6.5							
PLCA	**Paso Flores**	**16.71**	**189**	P		Pn	15 25 00.5	+8.6
	comp=N,0.2nm,0.3s,baz=359,slow=12,SNR=5.1							
BDFB	**Brasília**	**20.01**	**68**	P		**P**	**15 25 27.1**	**+0.1**
	comp=N,0.4nm,0.3s,baz=258,slow=12,SNR=4.0							
TORD	**Torodi Ar. Bea**	**76.90**	**69**	P		**P**	**15 32 41.0**	**+1.0**
	comp=N,0.3nm,0.5s,baz=228,slow=3.7,SNR=2.4							
MKAR	**Makanchi Array**	**146.85**	**39**	PKPbc		**PKiKP**	**15 40 31.4**	**+0.9**
	comp=N,0.4nm,0.6s,baz=318,slow=2.7,SNR=4.6							

IDC 26 15:24:56.5±2.2, **1°.82N×126°.38E**, **h0**km, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.3**/35, **mbtmp3.2**/3, **Error ellipse: s-maj=170.8km s-min=28.5km az=65.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.99**	**161**	P		P	15 30 03.3	+0.2
	0.5nm,0.4s,baz=339,slow=11,SNR=8.8							
ASAR	**Alice Springs**	**26.37**	**164**	P		P	15 30 34.6	-0.1
	0.1nm,0.4s,baz=349,slow=14,SNR=1.4							
MKAR	**Makanchi Array**	**58.92**	**326**	P		P	15 34 57.5	-0.1
	0.1nm,0.5s,baz=118,slow=7.3,SNR=1.5							

*IDC **26** 15:30:37.8±0.8, 1°.96N×126°.46E, h0km, mb4.0/12, mb1 4.1/14, mb1mx3.9/38, mbtmp4.0/14, ML3.8/2, MS4.8/1, Ms1 4.8/1, ms1mx3.9/41, Error ellipse: s-maj=33.2km s-min=13.8km az=78.0*
*DJA **26** 15:30:40.5±0.3, 2°.N±3°×12°.7E±°, h10km, M4.4/13, mb4.5/7, MLv4.4/13*
*NEIC **26** 15:30:43.5±2.2, 2°.10N±0°.09×126°.68E±0°.09, h35km±2km, mb4.2/19, Error ellipse: s-maj=17.8km s-min=10.5km az=224.0*
ISC 26 15:30:44.8±0.5, **2°.07N**±0°.06×**126°.65E**±0°.07, **h47**km, **n61**, σ1**9**25/59, **mb4.2**/21, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.48**	**151**	P		**Pn**	**15 31 08.0**	**-0.9**
TNTI	**Ternate**	**1.48**	**151**	Pn		**Pn**	**15 31 08.3**	**-0.6**
SGSI	**Sangihe**	**1.96**	**325**	P		Pn	15 31 10.5	-5.0
SGSI				S		**Sn**	**15 31 38.1**	**-0.8**
KMSI	**Cibinong**	**3.05**	**241**	P		**Pn**	**15 31 30.5**	**-0.1**
GTOI	**Gorontalo**	**3.91**	**249**	P		**Pn**	**15 31 41.1**	**-1.2**
SANI	**Sanana**	**4.15**	**189**	P		**Pn**	**15 31 44.0**	**-1.6**
LUWI	**Luwuk**	**4.96**	**231**	P		**Pn**	**15 31 57.9**	**+1.2**
	1.2nm99nm,0.7s							
LUWI	**Luwuk**	**4.96**	**231**	Pn		**Pn**	**15 31 57.2**	**+0.4**
MRSI	**Marisa**	**4.97**	**251**	P		**Pn**	**15 31 57.5**	**+0.7**
	0.4nm55nm,0.8s							
APSI	**Ampana**	**5.81**	**239**	P		**Pn**	**15 32 09.6**	**+1.2**
	0.4nm68nm,0.8s							
TOLI2	**Tolitoli**	**5.94**	**261**	Pn		**Pn**	**15 32 07.6**	**-2.6**
MPSI	**Mapaga**	**6.96**	**256**	P		**Pn**	**15 32 25.8**	**+1.5**
	0.1nm17nm,0.7s							
TTSI	**Tana Toraja**	**8.51**	**233**	P		Pn	15 32 50.5	+5.0
MYLDM	**Lahad Datu**	**8.70**	**291**	Pn		**Pn**	**15 32 49.2**	**+1.1**
SPSI	**Sidrap Palu**	**9.12**	**229**	P		**Pn**	**15 32 53.8**	**-0.1**
	9.7nm,0.6s							
BNSI	**Bone**	**9.17**	**225**	P		**Pn**	**15 32 54.0**	**-0.5**
	12nm,1.2s							
KKM	**Kota Kinabalu**	**11.13**	**291**	Pn		**Pn**	**15 33 23.2**	**+1.7**
SBUM	**Sibu**	**14.42**	**272**	P		**P**	**15 34 13.0**	**+0.9**
JAY	**Jayapura**	**14.77**	**108**	Pn		**Pn**	**15 34 12.1**	**+1.1**
	0.3nm,0.3s,baz=13,slow=22,SNR=2.1							
MTN	**Manton Dam**	**15.47**	**163**	P		**Pn**	**15 34 20.6**	**+0.7**
KNRA	**Kununurra**	**17.76**	**173**	P		**P**	**15 34 49.2**	**+0.2**
KNRA				IAmb		IAmb	15 34 51.2	
	comp=Z,9.2nm,0.8s							
FITZ	**Fitzroy Crossi**	**20.07**	**183**	P		**P**	**15 35 12.7**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=16,slow=9.2,SNR=12							
FITZ	**Fitzroy Crossi**	**20.07**	**183**	P		**P**	**15 35 14.8**	**+0.5**
TPUB	**Ta-pu**	**21.89**	**345**	P		**P**	**15 35 33.0**	**-1.0**
WB0	**Warramunga Arr**	**23.00**	**161**	P		**P**	**15 35 45.0**	**-0.7**
WB0				IAmb		IAmb	15 35 52.2	
	comp=Z,5.2nm,0.6s							
YHNB	**Yeheng**	**23.04**	**348**	P		**P**	**15 35 48.0**	**+1.9**
WRAB	**Tennant Creek**	**23.14**	**161**	P		**P**	**15 35 47.1**	**0.0**
WRAB				IAmb		IAmb	15 35 54.2	
	comp=Z,4.6nm,0.7s							
WRA	**Warramunga Arr**	**23.14**	**161**	P		**P**	**15 35 45.0**	**-2.2**
	comp=Z,1.8nm,0.3s,baz=339,slow=11,SNR=87							
WRA	**Warramunga Arr**	**23.14**	**161**	P		**P**	**15 35 47.1**	**-0.1**
WB2	**Warramunga Arr**	**23.15**	**161**	P		**P**	**15 35 46.9**	**-0.3**
WB2				IAmb		IAmb	15 35 48.9	
	comp=Z,11nm,1.2s							
WR0	**Warramunga Arr**	**23.22**	**161**	P		**P**	**15 35 47.6**	**-0.3**
WR0				IAmb		IAmb	15 35 49.2	
	comp=Z,16nm,1.5s							
KRVT	**Keravat (AS076**	**26.14**	**104**	LR		LR	15 45 49.1	
	comp=Z,2µm,18.6s,baz=248,slow=35							
AS31	**Alice Springs**	**26.54**	**165**	P		**P**	**15 36 17.7**	**-0.6**
ASAR	**Alice Springs**	**26.54**	**165**	P		**P**	**15 36 17.9**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=337,slow=7.0,SNR=10							
ASAR	**Alice Springs**	**26.54**	**165**	P		**P**	**15 36 17.1**	**-1.2**
CMAR	**Chiang Mai Arr**	**31.67**	**303**	P		**P**	**15 37 02.7**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=119,slow=7.3,SNR=1.5							
CMAR	**Chiang Mai Arr**	**31.67**	**303**	P		**P**	**15 37 01.7**	**-2.3**
FORT	**Forrest**	**32.70**	**178**	P		**P**	**15 37 15.1**	**+2.4**
KSRS	**Korea Array**	**35.23**	**2**	P		**P**	**15 37 35.7**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=180,slow=9.7,SNR=7.6							
MJAR	**Matsushiro Arr**	**35.93**	**16**	P		**P**	**15 37 39.9**	**-0.8**
	comp=Z,2.4nm,0.9s,baz=194,slow=10.0,SNR=4.6							
MJAR	**Matsushiro Arr**	**35.93**	**16**	P		**P**	**15 37 39.0**	**-1.8**
STKA	**Stephens Creek**	**36.62**	**158**	P		**P**	**15 37 43.9**	**-2.8**
	comp=Z,1.4nm,0.7s,baz=317,slow=15,SNR=2.0							
STKA	**Stephens Creek**	**36.62**	**158**	P		**P**	**15 37 47.4**	**+0.7**
HHC	**Hu-ho-hao-te**	**40.94**	**342**	*e*P		**P**	**15 38 24.5**	**+1.6**
HHC				pmax		pmax		
	comp=Z,17nm,0.9s							
USRK	**Ussuriysk Ar.**	**42.22**	**6**	P		**P**	**15 38 33.7**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=171,slow=5.0,SNR=4.0							
ASAJ	**Asahikawa**	**44.19**	**16**	P		**P**	**15 38 50.4**	**+1.3**
	comp=Z,7.1nm,1.1s,baz=148,slow=9.3,SNR=2.2							
GTA	**Gaotai**	**44.48**	**330**	*e*P		**P**	**15 38 51.5**	**-0.2**
GTA				pP		pP	15 38 57.3	-6.6
GTA				sP		pwP	15 39 01.0	-5.3
GTA				pmax		pmax		
	comp=Z,2.0nm,1.2s							
SONM	**Songino Array**	**48.84**	**342**	P		**P**	**15 39 25.5**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=153,slow=8.0,SNR=6.3							
SONM	**Songino Array**	**48.84**	**342**	P		**P**	**15 39 25.9**	**+0.2**
WMQ	**Urumqi**	**54.03**	**326**	*e*P		**P**	**15 40 07.5**	**+3.0**
PETK	**Petropavlovsk-**	**56.99**	**22**	P		**P**	**15 40 26.5**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=199,slow=3.9,SNR=4.3							
PETK	**Petropavlovsk-**	**56.99**	**22**	P		**P**	**15 40 25.8**	**+0.3**
MK31	**Makanchi Array**	**58.87**	**326**	P		**P**	**15 40 37.6**	**-1.2**
MK31				IAmb		IAmb	15 40 43.5	
	comp=Z,2.4nm,1.2s							
MKAR	**Makanchi Array**	**58.87**	**326**	P		**P**	**15 40 37.9**	**-0.9**
	comp=Z,1.2nm,0.4s,baz=120,slow=8.0,SNR=36							
MKAR	**Makanchi Array**	**58.87**	**326**	P		**P**	**15 40 37.8**	**-1.1**
MAKZ	**Makanchi**	**59.05**	**326**	P		**P**	**15 40 39.1**	**-1.0**
MAKZ				IAmb		IAmb	15 40 44.7	
	comp=Z,1.4nm,0.8s							
ARSB	**Arslanbob**	**61.99**	**317**	P		**P**	**15 41 00.7**	**+0.2**
KURK	**Kurchatov**	**63.09**	**328**	P		**P**	**15 41 07.0**	**-0.4**
KURK				IAmb		IAmb	15 41 20.5	
	comp=Z,3.1nm,0.9s							
KKAR	**Karatay Array**	**64.39**	**318**	P		**P**	**15 41 16.2**	**+0.1**
NRIK	**Noril'sk**	**72.01**	**346**	P		**P**	**15 42 03.0**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=143,slow=5.9,SNR=4.9							
ABKAR	**Akbulak array**	**73.38**	**321**	P		**P**	**15 42 10.3**	**-1.5**

*IDC **26** 15:31:50.2±0.9, 1°.94N×126°.54E, h0km, mb4.1/9, mb1 4.2/10, mb1mx3.9/38, mbtmp4.1/10, ML3.4/1, Error ellipse: s-maj=51.0km s-min=15.5km az=80.0*
*NEIC **26** 15:31:56.1±2.1, 1°.8N±0°.1×126°.44E±0°.09, h35km±2km, mb4.1/11, Error ellipse: s-maj=20.5km s-min=13.2km az=211.0*
*DJA **26** 15:31:56.3±1.8, 2°.N±5°×12°.7E±°, h31km±26km, M4.1/5, MLv4.1/5*
ISC 26 15:31:56.7±0.6, **1°.83N**±0°.07×**126°.45E**±0°.09, **h47**km, **n30**, σ1**9**25/31, **mb4.2**/13, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**139**	P		**Pn**	**15 32 18.3**	**-1.4**
TNTI				S		**Sn**	**15 32 36.6**	**-0.3**
TNTI	**Ternate**	**1.39**	**139**	Pn		**Pn**	**15 32 18.2**	**-1.4**
SGSI	**Sangihe**	**2.06**	**334**	P		**Pn**	**15 32 28.5**	**-0.4**
LUWI	**Luwuk**	**4.65**	**232**	Pn		**Pn**	**15 33 02.9**	**-1.5**
MTN	**Manton Dam**	**15.30**	**162**	P		**P**	**15 35 35.1**	**+1.4**
MTN				IAmb		IAmb	15 35 38.7	
	comp=Z,6.5nm,0.7s							
KNRA	**Kununurra**	**17.54**	**173**	P		**P**	**15 35 59.6**	**+1.1**
KNRA				IAmb		IAmb	15 36 09.9	
	comp=Z,16nm,1.1s							
FITZ	**Fitzroy Crossi**	**19.82**	**182**	P		**P**	**15 36 23.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=6,slow=9.2,SNR=1.9							
WB0	**Warramunga Arr**	**22.83**	**160**	P		**P**	**15 36 55.6**	**-0.3**
WB0				IAmb		IAmb	15 36 59.0	
	comp=Z,9.0nm,0.8s							
WRAB	**Tennant Creek**	**22.97**	**161**	P		**P**	**15 36 58.1**	**+0.8**
WRAB				IAmb		IAmb	15 37 02.4	
	comp=Z,7.7nm,0.6s							
WRA	**Warramunga Arr**	**22.98**	**161**	P		**P**	**15 36 56.3**	**-1.1**
	comp=Z,6.4nm,0.7s,baz=339,slow=11,SNR=9.3							
WRA	**Warramunga Arr**	**22.98**	**161**	P		**P**	**15 36 57.0**	**-0.4**
WB2	**Warramunga Arr**	**22.98**	**161**	P		**P**	**15 36 57.9**	**+0.5**
WR0	**Warramunga Arr**	**23.06**	**160**	P		**P**	**15 36 58.2**	**-0.1**
AS31	**Alice Springs**	**26.36**	**164**	P		**P**	**15 37 29.7**	**+1.1**
ASAR	**Alice Springs**	**26.36**	**164**	P		**P**	**15 37 30.5**	**+1.9**
	comp=Z,2.3nm,0.7s,baz=348,slow=14,SNR=6.6							
ASAR	**Alice Springs**	**26.36**	**164**	P		**P**	**15 37 29.5**	**+0.9**
MJAR	**Matsushiro Arr**	**36.22**	**16**	P		**P**	**15 38 53.1**	**-2.0**
	comp=Z,2.8nm,0.9s,baz=182,slow=9.2,SNR=4.8							
STKA	**Stephens Creek**	**36.47**	**158**	P		**P**	**15 38 57.2**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=21,slow=8.6,SNR=1.7							
STKA	**Stephens Creek**	**36.47**	**158**	P		**P**	**15 38 57.6**	**+0.3**
USRK	**Ussuriysk Ar.**	**42.48**	**6**	P		**P**	**15 39 45.2**	**-2.0**
	comp=Z,1.2nm,0.6s,baz=236,slow=37,SNR=2.9							
SONM	**Songino Array**	**49.01**	**342**	P		**P**	**15 40 38.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=166,slow=19,SNR=2.1							
PETK	**Petropavlovsk-**	**57.29**	**22**	P		**P**	**15 41 39.7**	**+0.2**
	comp=Z,4.0nm,0.9s,baz=189,slow=5.5,SNR=5.2							
PETK	**Petropavlovsk-**	**57.29**	**22**	P		**P**	**15 41 41.4**	**+1.9**
MK31	**Makanchi Array**	**58.96**	**326**	P		**P**	**15 41 51.2**	**-0.1**
MK31				IAmb		IAmb	15 41 56.8	
	comp=Z,2.0nm,0.9s							
MKAR	**Makanchi Array**	**58.96**	**326**	P		**P**	**15 41 51.4**	**0.0**
	comp=Z,1.6nm,0.4s,baz=120,slow=8.0,SNR=13							
MKAR	**Makanchi Array**	**58.96**	**326**	P		**P**	**15 41 51.2**	**-0.1**
NRIK	**Noril'sk**	**72.20**	**346**	P		**P**	**15 43 15.3**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=111,slow=6.4,SNR=3.6							
ABKAR	**Akbulak array**	**73.44**	**321**	P		**P**	**15 43 24.4**	**+0.3**
VNDA	**Vanda**	**81.59**	**173**	P		**P**	**15 44 11.9**	**+2.9**
VNDA				IAmb		IAmb	15 44 18.2	
	comp=Z,1.0nm,0.8s							
IMAR	**Indian Mountai**	**84.18**	**24**	P		**P**	**15 44 24.9**	**+2.2**

*IDC **26** 15:33:23.9±1.3, 5°.59N×61°.42E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.6/42, mbtmp3.9/5, Error ellipse: s-maj=42.8km s-min=30.3km az=166.0*
*NEIC **26** 15:33:24.4±1.7, 5°.6N±0°.1×61°.3E±0°.1, h10km±1km, mb4.0/6, Error ellipse: s-maj=29.2km s-min=8.0km az=214.0*
ISC 26 15:33:25.9±1.1, **5°.7N**±0°.2×**61°.3E**±0°.1, **h14**km, **n14**, σ1**9**38/14, **mb3.9**/7, **Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAYN	**Ar Rayn**	**23.38**	**321**	P		**P**	**15 38 32.6**	**-1.8**
RAYN				IAmb		IAmb	15 38 34.9	
	comp=Z,5.9nm,0.9s							
KMBO	**Kilima Mbogo**	**24.95**	**255**	P		**P**	**15 38 51.2**	**+1.8**
	comp=Z,1.4nm,0.4s,baz=44,slow=24,SNR=2.4							
KMBO	**Kilima Mbogo**	**24.95**	**255**	P		**P**	**15 38 50.3**	**+0.8**
KMBO				IAmb		IAmb	15 38 51.5	
	comp=Z,2.3nm,1.0s							
KK31	**Karatay Array**	**38.15**	**11**	P		**P**	**15 40 45.1**	**+0.2**
KK31				IAmb		IAmb	15 40 51.7	
	comp=Z,4.6nm,1.4s							
KKAR	**Karatay Array**	**38.15**	**11**	P		**P**	**15 40 45.9**	**+1.1**
AAK	**Ala-Archa**	**38.62**	**16**	P		**P**	**15 40 50.9**	**+2.0**
CMAR	**Chiang Mai Arr**	**38.84**	**68**	P		**P**	**15 40 52.3**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=260,slow=9.9,SNR=5.9							
ABKAR	**Akbulak array**	**43.44**	**359**	P		**P**	**15 41 28.0**	**-0.3**
ZALV	**Zalesovo Beam**	**51.78**	**17**	P		**P**	**15 42 32.2**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=210,slow=8.6,SNR=3.8							
BURAR	**Bucovina Array**	**51.94**	**330**	P		**P**	**15 42 34.5**	**0.0**
WRA	**Warramunga Arr**	**76.12**	**112**	P		**P**	**15 45 13.4**	**-0.6**
	comp=Z,2.1nm,1.0s,baz=286,slow=5.4,SNR=6.6							
WRA	**Warramunga Arr**	**76.12**	**112**	P		**P**	**15 45 12.6**	**-1.4**
WR0	**Warramunga Arr**	**76.31**	**112**	P		**P**	**15 45 13.8**	**-1.2**
ASAR	**Alice Springs**	**76.49**	**116**	P		**P**	**15 45 14.7**	**-1.4**
	comp=Z,0.9nm,0.9s,baz=286,slow=6.3,SNR=5.6							

*IDC **26** 15:33:48.8±0.7, 1°.92N×126°.44E, h0km, mb4.1/13, mb1 4.1/15, mb1mx4.0/40, mbtmp4.1/15, ML3.9/2, Error ellipse: s-maj=31.7km s-min=13.2km az=83.0*
*DJA **26** 15:33:53.3±0.3, 2°.N±3°×12°.7E±°, h10km, M4.4/9, mb4.6/2, MLv4.3/9*
*NEIC **26** 15:33:54±2.8, 1°.95N±0°.09×126°.71E±0°.07, h35km±2km, mb4.6/23, Error ellipse: s-maj=17.4km s-min=8.1km az=214.0*
ISC 26 15:33:55.2±0.5, **1°.96N**±0°.05×**126°.56E**±0°.08, **h47**km, **n54**, σ1**9**26/55, **mb4.3**/18, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.43**	**146**	P		**Pn**	**15 34 19.0**	**+0.2**
TNTI	**Ternate**	**1.43**	**146**			**Pn**	**15 34 18.7**	**0.0**
SGSI	**Sangihe**	**2.00**	**329**	P		**Pn**	**15 34 27.0**	**+0.4**
SGSI				S		**Sn**	**15 34 49.9**	**-0.5**
KMSI

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.48**	**137**	Pn	**Pn**	**15 34 48.6**	**-2.4**
FAKI	**Fak Fak**	**7.56**	**129**	Pn	**Pn**	**15 36 16.4**	**+1.8**
KNRA	**Kununurra**	**17.59**	**172**	P	**P**	**15 38 31.0**	**+1.8**
TPUB	**Ta-pu**	**22.02**	**346**	P	**P**	**15 39 17.5**	**+0.1**
WB0	**Warramunga Arr**	**22.90**	**160**	P	**P**	**15 39 27.3**	**+0.6**
WB0				IAmb	IAmb	15 39 31.9	
	comp=Z,7.6nm,0.7s						
WRAB	**Tennant Creek**	**23.04**	**160**	P	**P**	**15 39 27.9**	**-0.2**
WRAB				IAmb	IAmb	15 39 29.9	
	comp=Z,11nm,0.8s						
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**	**15 39 26.8**	**-1.4**
	comp=Z,9.3nm,0.7s,baz=339,slow=11,SNR=8.9						
WRA				PcP	**PcP**	**15 43 15.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=327,slow=2.2,SNR=1.9						
WRA	**Warramunga Arr**	**23.04**	**161**	P	**P**	**15 39 28.2**	**0.0**
WB2	**Warramunga Arr**	**23.05**	**160**	P	**P**	**15 39 27.8**	**-0.5**
WB2				IAmb	IAmb	15 39 29.5	
	comp=Z,11nm,0.7s						
WR0	**Warramunga Arr**	**23.13**	**160**	P	**P**	**15 39 28.2**	**-0.9**
WR0				IAmb	IAmb	15 39 33.7	
	comp=Z,6.4nm,0.6s						
ASAR	**Alice Springs**	**26.42**	**164**	P	**P**	**15 40 00.1**	**+0.8**
	comp=Z,5.7nm,0.9s,baz=350,slow=15,SNR=6.2						
ASAR				PcP	**PcP**	**15 43 23.9**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=347,slow=2.2,SNR=5.7						
CMAR	**Chiang Mai Arr**	**31.54**	**303**	P	**P**	**15 40 44.0**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=72,slow=5.4,SNR=2.0						
MORW	**Morawa**	**32.31**	**197**	P	**P**	**15 40 51.6**	**+0.1**
MORW				IAmb	IAmb	15 41 07.1	
	comp=Z,19nm,1.5s						
FORT	**Forrest**	**32.50**	**177**	P	**P**	**15 40 53.6**	**+0.5**
JWT	**Wachi**	**34.30**	**13**	P	**P**	**15 41 07.9**	**-0.8**
INU	**Inuyama**	**34.76**	**15**	P	**P**	**15 41 13.9**	**+1.2**
INU				IAmb	IAmb	15 41 29.9	
	comp=Z,7.8nm,0.9s						
KSAR	**Wonju Array Be**	**35.43**	**2**	P	**P**	**15 41 19.7**	**+1.2**
KSRS	**Korea Array**	**35.45**	**2**	P	**P**	**15 41 18.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=179,slow=10.0,SNR=4.1						
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**15 41 28.1**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=359,slow=11,SNR=2.0						
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**15 41 28.1**	**+0.1**
SONM	**Songino Array**	**36.54**	**342**	P	**P**	**15 43 09.2**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=161,slow=8.5,SNR=2.0						
SONM	**Songino Array**	**48.94**	**342**	P	**P**	**15 43 07.2**	**-1.3**
PETK	**Petropavlovsk-**	**57.29**	**22**	P	**P**	**15 44 09.0**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=169,slow=1.5,SNR=1.3						
PETK	**Petropavlovsk-**	**57.29**	**22**	P	**P**	**15 44 09.2**	**-0.5**
MK31	**Makanchi Array**	**58.88**	**326**	P	**P**	**15 44 20.4**	**-0.6**
MKAR	**Makanchi Array**	**58.88**	**326**	P	**P**	**15 44 20.3**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=121,slow=7.4,SNR=5.4						
MKAR	**Makanchi Array**	**58.88**	**326**	P	**P**	**15 44 20.1**	**-0.9**
MAKZ	**Makanchi**	**59.06**	**326**	P	**P**	**15 44 21.4**	**-0.9**
MAKZ				IAmb	IAmb	15 44 37.2	
	comp=Z,5.0nm,1.4s						
BKZ	**Black Stump Fm**	**61.46**	**137**	P	**P**	**15 44 38.5**	**-0.3**
ABKAR	**Akbulak array**	**73.36**	**321**	P	**P**	**15 45 53.5**	**-0.3**
VNDA	**Vanda**	**81.64**	**173**	P	**P**	**15 46 39.4**	**0.0**
	comp=Z,0.6nm,0.4s,baz=320,slow=7.1,SNR=2.4						
VNDA	**Vanda**	**81.64**	**173**	P	**P**	**15 46 39.5**	**+0.1**
TTA	**Tatalina**	**82.72**	**27**	P	**P**	**15 46 46.0**	**+0.5**
TTA				IAmb	IAmb	15 46 57.0	
	comp=Z,4.1nm,1.3s						
KBZ	**Khabaz**	**83.99**	**314**	P	**P**	**15 46 54.8**	**+2.5**
	comp=Z,0.9nm,0.7s,baz=335,slow=16,SNR=1.7						

IDC 26 15:42:28.6±1.4,1°.88N×126°.08E,h0km,mb3.1/4, mb1 3.3/4,mb1mx3.2/43,mbtmp3.1/4,Error ellipse: s-maj=88.9km s-min=26.4km az=72.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.16**	**160**	P	P	15 47 36.5	-0.3
	0.2nm,0.3s,baz=338,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**26.51**	**164**	P	P	15 48 08.6	+0.6
	0.2nm,0.6s,baz=342,slow=7.8,SNR=2.0						
MKAR	**Makanchi Array**	**58.71**	**326**	P	P	15 52 28.0	-0.2
	0.1nm,0.4s,baz=110,slow=9.7,SNR=1.1						
ILAR	**Eielson Array**	**87.04**	**25**	P	P	15 55 15.7	-0.1
	0.2nm,0.9s,baz=258,slow=3.6,SNR=1.1						

*IDC **26** 15:47:23.9±2.0,1°.46N×125°.53E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.2/45,mbtmp3.3/3,Error ellipse: s-maj=181.4km s-min=25.6km az=65.0*
*DJA **26** 15:47:27.4±2.0,2°.N±5°×12°.6E±°,h15km±18km,M3.4/6, MLv3.4/6*
ISC 26 15:47:28.2±1.2,1°.89N±0°.09×126°.6E±0°.1,h35km,n7, σ0°91/7,mb3.4/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.35**	**145**	P	**Pn**	**15 47 51.1**	**+0.6**
SGSI	**Sangihe**	**2.08**	**329**	P	**Pn**	**15 48 01.2**	**+0.6**
KMSI	**Cibinong**	**2.92**	**244**	P	**Pn**	**15 48 12.0**	**-0.2**
GTOI	**Gorontalo**	**3.79**	**251**	P	**Pn**	**15 48 25.2**	**+1.0**
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**15 52 29.1**	**-0.9**
	0.7nm,0.5s,baz=336,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.38**	**165**	P	**P**	**15 53 02.0**	**+0.6**
	0.2nm,0.4s,baz=344,slow=11,SNR=8.0						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**15 57 23.8**	**-0.7**
	0.1nm,0.3s,baz=121,slow=7.7,SNR=5.4						

IDC 26 15:51:53.5±7.1,14°.49S×174°.14W,h0km,mb4.0/3, mb1 4.3/3,mb1mx3.7/40,mbtmp4.0/3,Error ellipse: s-maj=311.0km s-min=39.2km az=138.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.36**	**256**	P	P	16 00 44.9	-0.2
	1.2nm,0.7s,baz=92,slow=7.2,SNR=21						
ASAR	**Alice Springs**	**49.72**	**251**	P	P	16 00 47.9	0.0
	6.2nm,0.7s,baz=86,slow=8.1,SNR=107						
ILAR	**Eielson Array**	**81.70**	**11**	P	P	16 04 13.4	0.0
	0.3nm,0.9s,baz=213,slow=6.5,SNR=2.4						

IDC 26 15:54:59.9±2.2,1°.88N×126°.47E,h0km,mb3.0/3, mb1 3.2/3,mb1mx3.0/43,mbtmp3.1/3,Error ellipse: s-maj=177.8km s-min=28.5km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.02**	**161**	P	P	16 00 05.7	-1.0
	0.2nm,0.5s,baz=339,slow=11,SNR=8.1						
ASAR	**Alice Springs**	**26.40**	**165**	P	P	16 00 39.6	+1.3
	0.2nm,0.7s,baz=347,slow=12,SNR=1.5						
MKAR	**Makanchi Array**	**58.93**	**326**	P	P	16 05 00.8	-0.2
	0.1nm,0.5s,baz=137,slow=5.3,SNR=1.7						

DJA 26 15:55:22.1±0.4,4°.S±3°×12°.0E±°,h10km,M2.6/7,MLv2.6/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNSI	**Bone**	**0.23**	**227**	P	Pg	15 55 28.3	+1.4
BNSI				S	Sg	15 55 32.1	+1.9
SPSI	**Sidrap Palu**	**0.58**	**298**	P	Pg	15 55 33.2	-0.2
SPSI				S	Sg	15 55 41.6	+0.6
BKSI	**Bulukumba**	**1.09**	**188**	P	Pg	15 55 43.1	+0.1
TTSI	**Tana Toraja**	**1.27**	**339**	P	Pg	15 55 48.0	+1.4
BSSI	**Bau Bau, Buton**	**1.90**	**174**	P	Pn	15 55 54.7	+0.1

IDC 26 15:56:35.4±2.2,1°.80N×126°.27E,h0km,mb3.1/3, mb1 3.3/3,mb1mx3.1/40,mbtmp3.1/3,Error ellipse: s-maj=187.9km s-min=27.3km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.01**	**160**	P	P	16 01 42.6	+0.5
	0.2nm,0.4s,baz=339,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**26.38**	**164**	P	P	16 02 13.3	-0.4
	0.1nm,0.3s,baz=340,slow=8.7,SNR=1.1						
MKAR	**Makanchi Array**	**58.88**	**326**	P	P	16 06 36.2	-0.1
	0.2nm,0.5s,baz=112,slow=8.2,SNR=4.5						

*NEIC **26** 15:56:40.6±0.7,21°.2N±0°.2×93°.7E±0°.2,h60km±11km, mb4.2/6,Error ellipse: s-maj=34.7km s-min=9.7km az=48.0*
*NDI **26** 15:56:41.9±1.9,21°.25N×93°.83E,h66km,ML3.3, mb4.2(NEIC)*
*IDC **26** 15:56:42.3±6.2,21°.20N×93°.82E,h75km±48km,mb3.0/4, mb1 3.3/5,mb1mx3.0/46,mbtmp3.3/5,ML3.8/1,Error ellipse: s-maj=78.6km s-min=22.8km az=59.0*
ISC 26 15:56:40.4±1.0,21°.23N±0°.10×93°.8E±0°.1,h50km,n21, σ1°67/24,mb3.8/7,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**1.47**	**329**	*e*P	**Pn**	**15 57 05.3**	**+0.7**
SAIH				*e*S	**Sn**	**15 57 25.0**	**+2.2**
SAIH				IAML		15 57 26.2	
	comp=N,2μm,0.5s						
SAIH				IAML		15 57 26.8	
	comp=E,741nm,0.5s						
KOHI	**KOHIMA**	**4.48**	**4**	*e*P	**Pn**	**15 57 47.9**	**+2.0**
KOHI				*e*S	**Sn**	**15 58 34.6**	**-2.3**
KOHI				IAML		15 58 40.9	
	comp=N,27nm,0.4s						
SHL	**Shillong**	**4.67**	**338**	Pn	**Pn**	**15 57 48.9**	**+0.4**
MOKO	**MOKOCHONG**	**5.12**	**7**	*e*P	**Pn**	**15 57 56.8**	**+2.2**
MOKO				IAML		15 58 55.8	
	comp=E,30nm,0.3s						
CHTO	**Chiang Mai**	**5.40**	**115**	Pn	**Pn**	**15 57 59.0**	**+0.6**
CM31	**Chiang Mai Arr**	**5.57**	**119**		**Pn**	**15 58 01.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**5.57**	**119**	P	**Pn**	**15 58 01.9**	**+1.1**
	comp=E,0.7nm,0.3s,baz=293,slow=13,SNR=12						
CMAR				S	**Sn**	**15 59 05.3**	**+1.8**
	comp=E,0.1nm,0.3s,baz=332,slow=42,SNR=1.0						
CMAR	**Chiang Mai Arr**	**5.57**	**119**	Pn	**Pn**	**15 58 01.6**	**+0.9**
ZIRO	**ZIRO**	**6.27**	**0**	*e*P	**Pn**	**15 58 10.5**	**-0.1**
SBUM	**Sibu**	**25.88**	**134**	P	**P**	**16 02 05.8**	**-2.0**
SBUM				IAmb	IAmb	16 02 20.6	
	comp=Z,5.0nm,1.2s						
MKAR	**Makanchi Array**	**27.17**	**343**	P	**P**	**16 02 19.8**	**+0.7**
	comp=Z,0.1nm,0.2s,baz=149,slow=8.5,SNR=1.7						
MAKZ	**Makanchi**	**27.27**	**342**	P	**P**	**16 02 23.9**	**+3.8**
WB0	**Warramunga Arr**	**56.89**	**133**	P	**P**	**16 06 19.8**	**-0.7**
WB0				IAmb	IAmb	16 06 35.6	
	comp=Z,4.5nm,1.3s						
WRA	**Warramunga Arr**	**56.97**	**133**	P	**P**	**16 06 20.2**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=319,slow=7.5,SNR=21						
WRA	**Warramunga Arr**	**56.97**	**133**	P	**P**	**16 06 19.5**	**-1.6**
WB2	**Warramunga Arr**	**56.98**	**133**	P	**P**	**16 06 20.3**	**-0.8**
WB2				IAmb	IAmb	16 06 22.6	
	comp=Z,3.3nm,1.1s						
WR0	**Warramunga Arr**	**57.12**	**133**	P	**P**	**16 06 21.3**	**-0.8**
ASAR	**Alice Springs**	**59.29**	**137**	P	**P**	**16 06 36.7**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=307,slow=6.4,SNR=5.1						
ASAR	**Alice Springs**	**59.29**	**137**	P	**P**	**16 06 37.4**	**+0.1**
ILAR	**Eielson Array**	**82.56**	**22**	P	**P**	**16 08 55.6**	**-2.1**
	comp=Z,0.1nm,0.4s,baz=285,slow=4.8,SNR=1.5						
ILAR	**Eielson Array**	**82.56**	**22**	P	**P**	**16 08 55.9**	**-1.8**

IDC 26 15:57:12.0±2.2,1°.56N×127°.79E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.2/39,mbtmp3.4/3,Error ellipse: s-maj=146.8km s-min=28.6km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.31**	**164**	P	P	16 02 11.1	-0.2
	0.8nm,0.6s,baz=344,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**25.77**	**167**	P	P	16 02 44.9	+0.2
	0.7nm,0.8s,baz=346,slow=11,SNR=5.9						
MKAR	**Makanchi Array**	**59.94**	**326**	P	P	16 07 20.1	0.0
	0.1nm,0.4s,baz=132,slow=8.3,SNR=1.3						

*IDC **26** 16:03:45.2±1.7,1°.90N×126°.37E,h0km,mb3.5/4, mb1 3.7/4,mb1mx3.4/36,mbtmp3.5/4,MS4.5/1,Ms1 4.5/1, ms1mx3.9/22,Error ellipse: s-maj=157.1km s-min=21.2km az=66.0*
*DJA **26** 16:03:49.5±0.3,2°.N±4°×12°.7E±°,h10km,M3.8/12,mb3.9/2, MLv3.7/12*
*NEIC **26** 16:03:50.6±1.7,2°.04N±0°.10×126°.8E±0°.1,h38km±7km, mb4.1/9,Error ellipse: s-maj=21.2km s-min=8.2km az=53.0*
ISC 26 16:03:51.7±0.9,1°.96N±0°.07×126°.72E±0°.09,h47km,n27, σ1°17/27,mb4.0/8,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.35**	**151**	P	**Pn**	**16 04 13.5**	**-0.6**
TNTI				S	**Sn**	**16 04 33.1**	**+2.2**
TNTI	**Ternate**	**1.35**	**151**	Pn	**Pn**	**16 04 13.6**	**-0.6**
SGSI	**Sangihe**	**2.09**	**325**	P	**Pn**	**16 04 24.7**	**+0.4**
KMSI	**Cibinong**	**3.06**	**243**	P	**Pn**	**16 04 37.1**	**-0.6**
GTOI	**Gorontalo**	**3.93**	**251**	P	**Pn**	**16 04 49.2**	**-0.4**
SANI	**Sanana**	**4.05**	**190**	P	**Pn**	**16 04 51.2**	**0.0**
LUWI	**Luwuk**	**4.95**	**233**	P	**Pn**	**16 05 03.1**	**-0.4**
LUWI	**Luwuk**	**4.95**	**233**	Pn	**Pn**	**16 05 04.0**	**+0.5**
MRSI	**Marisa**	**5.00**	**253**	P	**Pn**	**16 05 04.2**	**0.0**
TOLI2	**Tolitoli**	**5.99**	**262**	Pn	**Pn**	**16 05 15.9**	**-2.0**
MPSI	**Mapaga**	**7.01**	**257**	P	**Pn**	**16 05 31.8**	**0.0**
MYLDM	**Lahad Datu**	**8.80**	**292**	Pn	**Pn**	**16 05 59.8**	**+3.3**
JAY	**Jayapura**	**14.67**	**108**	LR	LR	16 12 59.0	
	comp=Z,2μm,20.5s,baz=47,slow=37						
TWG	**Pinlang**	**21.45**	**346**	P	**P**	**16 08 34.3**	**-1.8**
WB0	**Warramunga Arr**	**22.87**	**161**	P	**P**	**16 08 51.2**	**-0.1**
WB0				IAmb	IAmb	16 09 04.1	
	comp=Z,9.0nm,1.5s						
WRAB	**Tennant Creek**	**23.01**	**161**	P	**P**	**16 08 54.0**	**+1.2**
WRAB				IAmb	IAmb	16 09 00.7	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**16 08 52.1**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=340,slow=11,SNR=19						
WRA	**Warramunga Arr**	**23.02**	**161**	P	**P**	**16 08 51.8**	**-1.0**
WB2	**Warramunga Arr**	**23.02**	**161**	P	**P**	**16 08 53.5**	**+0.6**
WB2				IAmb	IAmb	16 09 03.7	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**23.10**	**161**	P	**P**	**16 08 52.8**	**-0.9**
ASAR	**Alice Springs**	**26.41**	**165**	P	**P**	**16 09 24.6**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=341,slow=7.2,SNR=9.8						
CTAO	**Charters Tower**	**29.11**	**140**	P	**P**	**16 09 49.4**	**+1.1**
MK31	**Makanchi Array**	**59.00**	**326**	P	**P**	**16 13 46.4**	**-0.3**
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**16 13 46.1**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=118,slow=7.7,SNR=9.6						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**16 13 46.4**	**-0.4**
KURBB	**Kurchatov Arra**	**63.22**	**328**	P	**P**	**16 14 13.7**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=128,slow=6.6,SNR=1.8						
KURK	**Kurchatov**	**63.22**	**328**	P	**P**	**16 14 15.0**	**-0.2**
KURK				IAmb	IAmb	16 14 22.1	
	comp=Z,2.0nm,1.1s						

IDC 26 16:04:19.5±2.0,1°.73N×126°.01E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/36,mbtmp3.4/4,Error ellipse: s-maj=204.3km s-min=24.8km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.04**	**160**	P	P	16 09 27.2	+0.7
	0.7nm,0.5s,baz=339,slow=11,SNR=2.1						
ASAR	**Alice Springs**	**26.39**	**164**	P	P	16 09 57.4	-0.5
	0.2nm,0.5s,baz=338,slow=9.7,SNR=1.6						
MKAR	**Makanchi Array**	**58.79**	**326**	P	P	16 14 19.4	-0.3
	0.2nm,0.3s,baz=116,slow=7.3,SNR=1.7						
KURBB	**Kurchatov Arra**	**63.03**	**328**	P	P	16 14 48.6	+0.2
	0.3nm,0.4s,baz=130,slow=6.1,SNR=1.3						

*IDC **26** 16:09:14.4±2.2,2°.12N×126°.79E,h0km,mb3.1/4, mb1 3.4/4,mb1mx3.2/32,mbtmp3.2/4,Error ellipse: s-maj=123.4km s-min=27.4km az=69.0*
*DJA **26** 16:09:21.4±1.8,2°.N±6°×12°.7E±°,h20km±16km,M3.0/4, MLv3.0/4*
ISC 26 16:09:20.8±1.6,1°.9N±0°.2×126°.6E±0°.4,h47km,n5,σ1°12/6, mb3.0/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.39**	**146**	P	**Pn**	**16 09 43.7**	**-0.1**
TNTI				S	**Sn**	**16 10 00.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**19.93**	**183**	P	**Pn**	**16 13 50.4**	**-0.4**
	1.8nm,1.0s,baz=12,slow=18,SNR=1.7						
WRA	**Warramunga Arr**	**23.03**	**161**	P	**P**	**16 14 21.5**	**-0.6**
	0.5nm,0.7s,baz=340,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**26.42**	**165**	P	**P**	**16 14 55.1**	**+1.8**
	0.2nm,0.7s,baz=346,slow=12,SNR=2.0						
MKAR	**Makanchi Array**	**58.95**	**326**	P	**P**	**16 19 15.2**	**-0.2**
	0.1nm,0.5s,baz=120,slow=7.2,SNR=1.8						

IDC 26 16:16:26.1±2.0,1°.87N×126°.10E,h0km,mb3.2/4, mb1 3.5/5,mb1mx3.4/34,mbtmp3.3/5,ML3.2/1,Error ellipse: s-maj=97.1km s-min=22.0km az=62.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.85**	**181**	P	Pn	16 21 00.4	+0.1
	0.1nm,0.3s,baz=22,slow=11,SNR=1.2						
WRA	**Warramunga Arr**	**23.14**	**160**	P	P	16 21 33.7	-0.4
	0.3nm,0.5s,baz=340,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**26.50**	**164**	P	P	16 22 05.0	-0.3
	0.1nm,0.4s,baz=345,slow=12,SNR=6.5						
CMAR	**Chiang Mai Arr**	**31.32**	**304**	P	P	16 22 46.7	-1.7
	0.2nm,0.4s,baz=102,slow=8.4,SNR=1.9						
MKAR	**Makanchi Array**	**58.73**	**326**	P	P	16 26 27.0	+1.2
	0.2nm,0.5s,baz=123,slow=8.4,SNR=2.0						

*IDC **26** 16:18:26.2±2.1,2°.08N×126°.77E,h0km,mb3.2/4, mb1 3.4/4,mb1mx3.3/34,mbtmp3.2/4,Error ellipse: s-maj=120.2km s-min=27.1km az=69.0*
*DJA **26** 16:18:31.4±1.8,2°.N±8°×12°.7E±°,h31km±27km,M3.1/4, MLv3.1/4*
ISC 26 16:18:31.1±1.7,2°.1N±0°.3×126°.7E±0°.5,h35km,n5,σ1°44/6, mb3.1/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.45**	**151**	P	**Pn**	**16 18 54.2**	**-0.7**
TNTI				S	**Sn**	**16 19 13.9**	**+1.2**
FITZ	**Fitzroy Crossi**	**20.05**	**183**	P	**P**	**16 23 01.3**	**-0.1**
	1.2nm,0.8s,baz=356,slow=14,SNR=1.4						
WRA	**Warramunga Arr**	**23.12**	**161**	P	**P**	**16 23 32.7**	**-1.6**
	0.6nm,0.8s,baz=340,slow=11,SNR=6.5						
ASAR	**Alice Springs**	**26.52**	**165**	P	**P**	**16 24 07.0**	**+1.3**
	0.2nm,0.4s,baz=345,slow=11,SNR=6.3						
MKAR	**Makanchi Array**	**58.90**	**326**	P	**P**	**16 28 27.0**	**+0.3**
	0.1nm,0.3s,baz=126,slow=7.1,SNR=2.1						

*ANF **26** 16:26:40.2±0.8,62°.53N×152°.18W,h8km±4km,ML3.6/15, Error ellipse: s-maj=4.6km s-min=1.7km az=83.0*
*AEIC **26** 16:26:40±2.0,62°.52N±0°.02×152°.10W±0°.06,h7km±4km, ML3.0,Error ellipse: s-maj=3.9km s-min=2.6km az=91.0*
*NEIC **26** 16:26:41.1±2.4,62°.50N±0°.02×152°.03W±0°.06,h11km±5km, Error ellipse: s-maj=4.2km s-min=3.3km az=96.0*
ISC 26 16:26:40.1±1.2,62°.51N±0°.02×152°.14W±0°.03,h7km±10km, n112,σ1°07/134,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPLA	**Purkeypile**	**0.39**	**357**		**Pg**	**16 26 47.8**	**0.0**
PPLA	**Purkeypile**	**0.39**	**357**		**Sg**	**16 26 54.1**	**+1.2**
SKT	**Skwentna**	**0.60**	**152**		**Pg**	**16 26 51.4**	**-0.3**
SKT					**Sg**	**16 26 60.0**	**+0.5**
CUT	**Chulitna**	**0.88**	**96**	P	**Pg**	**16 26 56.4**	**-0.6**
	baz=278,SNR=35						
CUT				S	**Sb**	**16 27 08.2**	**-1.3**
	baz=278						
CUT	**Chulitna**	**0.88**	**96**		**Pg**	**16 26 56.5**	**-0.4**
CUT					**Sn**	**16 27 09.9**	**-1.9**
CAST	**Castle Rocks**	**0.91**	**2**		**Pg**	**16 26 58.0**	**+0.4**
STLK	**Strandline Lak**	**1.02**	**172**		**Pg**	**16 26 58.5**	**-1.2**
SPNN	**North Nagishla**	**1.18**	**193**		**Pb**	**16 27 01.5**	**-1.4**
SPNN					**Sb**	**16 27 18.3**	**0.0**
KTH	**Kantishna Hill**	**1.19**	**27**		**Pb**	**16 27 01.6**	**-1.4**
SPCG	**Spurr Capps Gl**	**1.22**	**177**		**Pn**	**16 27 03.0**	**-0.8**
SPCG					**Sb**	**16 27 19.2**	**-0.5**
SUA	**Susitna One**	**1.24**	**147**		**Pb**	**16 27 03.2**	**-0.7**
HUR	**Hurricane**	**1.25**	**67**		**Pn**	**16 27 02.8**	**-1.2**
SPCP	**Crater Peak Br**	**1.25**	**180**		**Pn**	**16 27 03.3**	**-0.8**
SPCP					**Sb**	**16 27 20.0**	**-0.4**
SPBG	**Spurr Blockage**	**1.26**	**185**		**Pn**	**16 27 03.5**	**-0.7**
TRF	**Thorofare Moun**	**1.27**	**41**		**Pn**	**16 27 03.1**	**-1.3**
TRF					**Sb**	**16 27 20.0**	**-1.0**
SPCR	**Spurr Chakacha**	**1.31**	**181**		**Pn**	**16 27 04.6**	**-0.4**
SPCR					**Sb**	**16 27 21.8**	**-0.4**
CHUM	**Lake Minchumin**	**1.38**	**357**		**Pn**	**16 27 06.0**	**+0.1**
CHUM					**Sn**	**16 27 24.4**	**0.0**
WAT7	**Susitna Watana**	**1.55**	**76**		**Pn**	**16 27 08.3**	**0.0**
WAT7					**Sn**	**16 27 27.7**	**-1.1**
BPAW	**Bear Paw Mtn.**	**1.68**	**18**		**Pn**	**16 27 09.4**	**-0.6**
BPAW					**Sn**	**16 27 31.1**	**-0.7**
GHO	**Glory Hole Cre**	**1.68**	**115**	Pn	**Pn**	**16 27 09.6**	**-0.4**
WAT1	**Susitna Watana**	**1.69**	**77**		**Pn**	**16 27 09.5**	**-0.6**
PMR	**Palmer**	**1.69**	**122**	Pn	**Pn**	**16 27 09.6**	**-0.4**
WAT2	**Susitna Watana**	**1.70**	**73**		**Pn**	**16 27 09.5**	**-0.8**
RND	**Reindeer**	**1.75**	**58**	Pn	**Pn**	**16 27 10.9**	**-0.1**
RC01	**Rabbit Creek A**	**1.82**	**140**	P	**Pn**	**16 27 12.0**	**0.0**
	baz=323,SNR=11						
RC01				S	**Sb**	**16 27 36.4**	**-0.5**
	baz=323						
RC01	**Rabbit Creek A**	**1.82**	**140**		**Pn**	**16 27 12.2**	**+0.2**
TT01	**Tatalina**	**1.83**	**284

	baz=220						
TCOL	**CIGO, UAF Yank**	**3.04**	**37**	Pn	**Pn**	**16 27 28.7**	**+0.1**
COLA	**College**	**3.05**	**37**	Pn	**Pn**	**16 27 28.9**	**+0.2**
KLU	**Klutina**	**3.10**	**106**	Pn	**Pn**	**16 27 30.5**	**+0.9**
PAX	**Paxson**	**3.10**	**78**	Pn	**Pn**	**16 27 31.7**	**+2.1**
PS08	**TAPS Pump Stn8**	**3.14**	**47**		**Pn**	**16 27 30.6**	**+0.7**
FID	**Port Fidalgo**	**3.23**	**121**	Pn	**Pn**	**16 27 31.1**	**-0.1**
IL31		**3.26**	**44**	Pn	**Pn**	**16 27 31.4**	**-0.2**
ILAR	**Eielson Array**	**3.26**	**44**	Pn	**Pn**	**16 27 32.0**	**+0.3**
POKR	**Poker Plat Res**	**3.35**	**36**	P	**Pn**	**16 27 32.4**	**-0.5**
	baz=220						
POKR				Sb	**Sb**	**16 28 22.5**	**+1.9**
	baz=220						
POKR	**Poker Plat Res**	**3.35**	**36**	Pn	**Pn**	**16 27 32.5**	**-0.4**
HIN	**Hinchinbrook I**	**3.44**	**126**	Pn	**Pn**	**16 27 35.5**	**+1.4**
PS06	**TAPS Pump Stn6**	**3.52**	**16**		**Pn**	**16 27 35.5**	**+0.3**
RIDG	**Independent Ri**	**3.54**	**66**	Pn	**Pn**	**16 27 35.6**	**+0.1**
IM03		**3.56**	**349**		**Pn**	**16 27 35.8**	**0.0**
IMAR	**Indian Mountai**	**3.56**	**349**	Pn	**Pn**	**16 27 35.5**	**-0.2**
N25K	**Chitina, Valde**	**3.66**	**101**	P	**Pn**	**16 27 38.1**	**+0.8**
	baz=288						
N25K	**Chitina, Valde**	**3.66**	**101**	Pn	**Pn**	**16 27 38.5**	**+1.3**
DOT	**Dot Lake**	**3.85**	**69**	Pn	**Pn**	**16 27 41.1**	**+1.4**
MENT	**Mentasta**	**3.90**	**80**	Pn	**Pn**	**16 27 42.0**	**+1.6**
SCRK	**Sand Creek**	**3.97**	**65**	P	**Pn**	**16 27 41.1**	**-0.4**
	baz=252,SNR=17						
SCRK				Sb	**Sb**	**16 28 41.6**	**+2.9**
	baz=252						
SCRK	**Sand Creek**	**3.97**	**65**		**Pn**	**16 27 41.3**	**-0.2**
GLB	**Gilahina Butte**	**4.07**	**102**	Pn	**Pn**	**16 27 44.9**	**+2.0**
L26K	**Log Cabin Wild**	**4.07**	**79**	Sb	**Sb**	**16 28 45.0**	**+3.4**
	baz=267						
VRDI	**Verde Repeater**	**4.31**	**103**	Pn	**Pn**	**16 27 48.5**	**+2.3**
HMT	**Hamilton**	**4.37**	**116**	Pn	**Pn**	**16 27 48.0**	**+1.1**
MCARA	**McCarthy VSAT**	**4.45**	**101**	Pn	**Pn**	**16 27 50.4**	**+2.3**
KDAK	**Kodiak Island**	**4.75**	**183**	Pn	**Pn**	**16 27 53.1**	**+1.0**
TGL	**Tana Glacier**	**4.78**	**107**	Pn	**Pn**	**16 27 53.6**	**+1.0**
BC03		**4.79**	**79**		**Pn**	**16 27 53.8**	**+1.2**
BCAR	**Beaver Creek A**	**4.79**	**79**	Pn	**Pn**	**16 27 53.2**	**+0.6**
K27K	**Chicken**	**4.79**	**67**	Pn	**Pn**	**16 27 52.9**	**+0.2**
COLD	**Coldfoot**	**4.81**	**9**	P	**Pn**	**16 27 52.2**	**-0.8**
	baz=191						
COLD				S	**Sn**	**16 28 48.3**	**-0.5**
	baz=191						
COLD	**Coldfoot**	**4.81**	**9**	Pn	**Pn**	**16 27 52.7**	**-0.3**
BALM	**Baldy**	**4.88**	**103**	Pn	**Pn**	**16 27 56.5**	**+2.5**
ISLE	**Juniper Island**	**5.06**	**108**	Pn	**Pn**	**16 27 58.3**	**+1.8**
OHAK	**Old Harbor**	**5.33**	**187**	Pn	**Pn**	**16 28 01.4**	**+1.4**
CTGM	**Chitina Glacie**	**5.37**	**102**	Pn	**Pn**	**16 28 00.5**	**-0.2**
EGAK	**Eagle**	**5.40**	**60**	Pn	**Pn**	**16 28 01.3**	**+0.4**
BM03	**Burnt Mountain**	**5.87**	**30**		**Pn**	**16 28 07.7**	**+0.2**
BMAR	**Burnt Mountain**	**5.89**	**30**	Pn	**Pn**	**16 28 06.0**	**-1.7**
DAWY	**Dawson**	**5.96**	**69**	Pn	**Pn**	**16 28 08.5**	**-0.2**
TOLK	**Toolik Lake Re**	**6.25**	**9**	P	**Pn**	**16 28 13.1**	**+0.4**
	baz=191						
TOLK				S	**Sn**	**16 29 24.5**	**+0.2**
	baz=191						
TOLK	**Toolik Lake Re**	**6.25**	**9**	Pn	**Pn**	**16 28 14.4**	**+1.7**

*IDC **26** 16:30:05.8±2.0, 1°.93N×126°.46E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/33, mbtmp3.3/3, Error ellipse: s-maj=163.5km s-min=25.0km az=66.0*
*DJA **26** 16:30:09.7±0.4, 2°.1N±4°×12°.7E±°, h10km, M3.3/6, MLv3.3/6*
ISC 26 16:30:11.9±1.2, 2°.05N±0°.09×126°.7E±0°.1, h47km, n7, σ1§00/8, mb3.4/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.42**	**153**	P	**Pn**	**16 30 34.6**	**-0.7**
TNTI				S	**Sn**	**16 30 54.6**	**+1.8**
SGSI	**Sangihe**	**2.02**	**324**	P	**Pn**	**16 30 43.5**	**0.0**
KMSI	**Cibinong**	**3.11**	**242**	P	**Pn**	**16 30 57.6**	**-0.9**
GTOI	**Gorontalo**	**3.97**	**249**	P	**Pn**	**16 31 10.7**	**+0.4**
WRA	**Warramunga Arr**	**23.09**	**161**	P	**P**	**16 35 13.3**	**-0.5**
	0.8nm,0.5s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.50**	**165**	P	**P**	**16 35 44.9**	**-0.2**
	0.2nm,0.8s,baz=344,slow=8.0,SNR=5.0						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**16 40 06.4**	**-0.1**
	0.2nm,0.4s,baz=117,slow=8.1,SNR=7.0						

IDC 26 16:32:12.6±2.7, 2°.18N×127°.16E, h0km, mb3.0/3, mb1 3.2/3, mb1mx3.1/35, mbtmp3.0/3, Error ellipse: s-maj=226.6km s-min=29.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.09**	**163**	P	P	16 37 19.4	-0.7
	0.2nm,0.7s,baz=341,slow=11,SNR=2.0						
ASAR	**Alice Springs**	**26.52**	**166**	P	P	16 37 52.8	+0.7
	0.2nm,0.9s,baz=348,slow=8.5,SNR=1.6						
MKAR	**Makanchi Array**	**59.07**	**326**	P	P	16 42 14.5	-0.1
	0.1nm,0.4s,baz=111,slow=8.8,SNR=1.5						

IDC 26 16:33:03.1±2.0, 1°.97N×126°.54E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/36, mbtmp3.3/4, ML2.7/1, Error ellipse: s-maj=119.3km s-min=25.6km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.96**	**183**	P	Pn	16 37 37.9	-0.8
	0.0nm,0.3s,baz=3.8,slow=15,SNR=1.4						
WRA	**Warramunga Arr**	**23.08**	**161**	P	P	16 38 09.7	-0.9
	0.5nm,0.5s,baz=339,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.47**	**165**	P	P	16 38 42.9	+0.6
	0.3nm,0.8s,baz=348,slow=13,SNR=5.7						
MKAR	**Makanchi Array**	**58.90**	**326**	P	P	16 43 03.8	-0.2
	0.2nm,0.5s,baz=116,slow=7.7,SNR=4.1						

IDC 26 16:37:54.9±2.3, 1°.71N×126°.67E, h0km, mb3.0/3, mb1 3.2/3, mb1mx3.1/35, mbtmp3.0/3, Error ellipse: s-maj=177.8km s-min=28.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.79**	**161**	P	P	16 42 59.7	+0.3
	0.4nm,0.5s,baz=340,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**26.18**	**165**	P	P	16 43 31.3	-0.1
	0.1nm,0.4s,baz=346,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**59.18**	**326**	P	P	16 47 57.6	-0.1
	0.1nm,0.4s,baz=118,slow=7.0,SNR=1.5						

IDC 26 16:38:51.3±2.2, 1°.73N×126°.16E, h0km, mb3.0/3, mb1 3.2/3, mb1mx3.1/34, mbtmp3.0/3, Error ellipse: s-maj=184.8km s-min=28.6km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.99**	**160**	P	P	16 43 56.5	-1.3
	0.3nm,0.6s,baz=338,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**26.34**	**164**	P	P	16 44 30.7	+1.5
	0.2nm,0.6s,baz=348,slow=13,SNR=1.8						
MKAR	**Makanchi Array**	**58.87**	**326**	P	P	16 48 52.0	-0.1
	0.1nm,0.4s,baz=127,slow=8.7,SNR=1.9						

IDC 26 16:40:03.2±1.9, 1°.89N×126°.23E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/37, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=120.8km s-min=25.0km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.87**	**182**	P	P	16 44 35.7	-0.4
	0.0nm,0.3s,baz=8.1,slow=14,SNR=1.0						
WRA	**Warramunga Arr**	**23.11**	**160**	P	P	16 45 10.2	-0.7
	0.8nm,0.6s,baz=339,slow=11,SNR=9.2						
ASAR	**Alice Springs**	**26.47**	**164**	P	P	16 45 43.3	+1.1
	0.3nm,0.4s,baz=341,slow=11,SNR=6.2						
MKAR	**Makanchi Array**	**58.79**	**326**	P	P	16 50 03.0	-0.3
	0.3nm,0.6s,baz=126,slow=6.4,SNR=5.1						

*MOS **26** 16:40:28.2±1.1, 4°.67S×152°.95E, h50km, mb5.0/16, Error ellipse: s-maj=9.4km s-min=6.3km az=114.5*
*NEIC **26** 16:40:30.1±1.8, 4°.80S±0°.07×152°.96E±0°.07, h56km±5km, mb5.0/69, Error ellipse: s-maj=12.3km s-min=8.9km az=224.0*
*IDC **26** 16:40:31.1±0.9, 4°.81S×152°.90E, h58km±7km, mb4.4/24, mb1 4.4/27, mb1mx4.4/34, mbtmp4.7/27, Error ellipse: s-maj=10.0km s-min=8.3km az=83.0*
*DJA **26** 16:40:31.5±0.4, 5°S±3°×15°3E±°, h57km±4km, M5.2/45, mb5.1/45, mB5.7/14, MLv5.3/3, Mw(mB)5.2/14*
ISC 26 16:40:30.2±0.3, 4.74S±0°.04×153°.00E±0°.05, h55km, n364, σ1§27/383, mb5.0/126, 10C-3D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.00**	**303**	Pn	**Pn**	**16 40 48.5**	**+0.4**
KRVT	**Keravat (AS076**	**1.06**	**294**	P	**Pn**	**16 40 49.3**	**+0.3**
	1µm,0.3s,baz=146,slow=1.3,SNR=1267						
KRVT				S	**Sn**	**16 41 02.9**	**0.0**
	1µm,0.3s,baz=248,slow=23,SNR=8.2						
MANU	**Manus Island**	**6.23**	**295**		**Pn**	**16 42 03.1**	**+3.4**
PMG	**Port Moresby**	**7.42**	**231**	P	**Pn**	**16 42 16.7**	**+0.7**
	11nm,0.3s,baz=358,slow=3.5,SNR=31						
PMG				S	**Sn**	**16 43 38.3**	**-0.6**
	9.4nm,0.3s,baz=47,slow=20,SNR=3.5						
PMG	**Port Moresby**	**7.42**	**231**	P	**Pn**	**16 42 17.0**	**+1.0**
PMG	**Port Moresby**	**7.42**	**231**	Pn	**Pn**	**16 42 17.0**	**+1.0**
HNR	**Honiara**	**8.32**	**124**	P	**Pn**	**16 42 30.6**	**+2.3**
	22nm,0.3s,baz=228,slow=6.1,SNR=4.8						
HNR				S	**Sn**	**16 44 03.3**	**+2.5**
	baz=300,slow=11,SNR=1.1						
HNR	**Honiara**	**8.32**	**124**	P	**Pn**	**16 42 29.8**	**+1.5**
HNR	**Honiara**	**8.32**	**124**		**Pn**	**16 42 29.8**	**+1.5**
JAY	**Jayapura**	**12.47**	**280**	P	Pn	16 43 30.0	+4.9
	0.2nm,0.3s,baz=111,slow=9.2,SNR=5.2						
JAY	**Jayapura**	**12.47**	**280**	P	**Pn**	**16 43 26.5**	**+1.4**
	13nm,1.0s						
PATS	**Pohnpei**	**12.66**	**25**	Pn	**Pn**	**16 43 28.2**	**+0.6**
GENI	**Gegem**	**12.98**	**279**	P	**Pn**	**16 43 34.8**	**+2.7**
	53nm,1.3s						
COEN	**Coen**	**13.33**	**226**	P	**Pn**	**16 43 38.0**	**+1.2**
	baz=13,SNR=8.7						
COEN	**Coen**	**13.33**	**226**	Pn	**Pn**	**16 43 38.1**	**+1.2**
SMPI	**Sarmi**	**14.53**	**280**	P	**P**	**16 43 58.6**	**+0.5**
MTSU	**Mount Surprise**	**15.79**	**212**	P	**P**	**16 44 11.1**	**-1.0**
	baz=16,SNR=9.1						
CTA	**Charters Tower**	**16.61**	**203**	P	**Pn**	**16 44 20.3**	**+0.8**
	0.3nm,0.3s,baz=24,slow=13,SNR=6.0						
CTAO	**Charters Tower**	**16.61**	**203**	P	**Pn**	**16 44 20.3**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,20nm,1.2s						
CTAO	**Charters Tower**	**16.61**	**203**	P	**Pn**	**16 44 20.3**	**+0.8**
BAKI	**Biak**	**17.23**	**281**	P	**P**	**16 44 34.2**	**+6.0**
QIS	**Mount Isa**	**20.42**	**218**	P	**P**	**16 45 03.6**	**+0.6**
	baz=20,SNR=22						
EIDS	**Eidsvold**	**20.59**	**185**	P	**P**	**16 45 06.2**	**+1.3**
	baz=21,SNR=4.5						
EIDS	**Eidsvold**	**20.59**	**185**	P	Pn	16 45 07.2	-0.4
FAKI	**Fak Fak**	**20.79**	**274**	P	**P**	**16 45 07.0**	**0.0**
FAKI				IAmb	IAmb	16 45 08.2	
	comp=Z,32nm,0.7s						
DZM	**Mont Dzumac**	**21.59**	**144**	P	**P**	**16 45 16.3**	**+0.6**
	comp=Z,37nm,0.9s,baz=211,slow=9.8,SNR=18						
DZM	**Mont Dzumac**	**21.59**	**144**	P	**P**	**16 45 15.4**	**-0.3**
DZM				IAmb	IAmb	16 45 20.0	
	comp=Z,56nm,1.1s						
KDU	**Kakadu**	**21.76**	**247**	P	**P**	**16 45 16.6**	**-0.8**
	baz=22,SNR=52						
RMQ	**Roma**	**22.00**	**190**	P	**P**	**16 45 20.1**	**+0.2**
	baz=22,SNR=7.0						
MTN	**Manton Dam**	**23.05**	**248**	P	**P**	**16 45 30.7**	**-0.4**
	baz=23,SNR=20						
MTN	**Manton Dam**	**23.05**	**248**	P	**P**	**16 45 29.3**	**-1.8**
MTN				IAmb	IAmb	16 45 33.0	
	comp=Z,67nm,0.8s						
QLP	**Quilpie**	**23.28**	**200**	P	**P**	**16 45 32.6**	**-0.7**
	baz=23,SNR=20						
WB0	**Warramunga Arr**	**23.49**	**229**	P	**P**	**16 45 33.4**	**-1.9**
WR0	**Warramunga Arr**	**23.50**	**228**	P	**P**	**16 45 33.6**	**-1.8**
WC3	**Warramunga Arr**	**23.62**	**229**	P	**P**	**16 45 35.6**	**-1.0**
	baz=24						
WRAB	**Tennant Creek**	**23.62**	**229**	*c i* P	**P**	**16 45 35.2**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,103nm,0.9s						
WRAB	**Tennant Creek**	**23.62**	**229**	P	**P**	**16 45 35.1**	**-1.5**
WB2	**Warramunga Arr**	**23.63**	**229**	P	**P**	**16 45 35.2**	**-1.4**
WRA	**Warramunga Arr**	**23.64**	**229**	P	**P**	**16 45 35.7**	**-1.0**
	comp=Z,78nm,0.7s,baz=54,slow=9.8,SNR=154						
WRA				PcP	**PcP**	**16 49 20.4**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=65,slow=2.5,SNR=4.4						
WRA				S	**S**	**16 49 45.0**	**-2.5**
	comp=Z,1.6nm,1.0s,baz=56,slow=17,SNR=1.8						
WRA				ScP	**ScP**	**16 52 55.4**	**+1.3**
	comp=Z,1.6nm,1.0s,baz=53,slow=2.9,SNR=6.0						
WRA	**Warramunga Arr**	**23.64**	**229**	P	**P**	**16 45 34.6**	**-2.1**
WRA						16 49 20.4	
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	**Warramunga Arr**	**23.64**	**229**	P	**P**	**16 45 34.6**	**-2.1**
WRA				PcP	**PcP**	**16 49 20.4**	**+0.1**
ARMA	**Armidale**	**25.57**	**183**	P	**P**	**16 45 56.0**	**+1.6**
	baz=26,SNR=6.3						
NLAI	**Namlea**	**25.88**	**272**	P	**P**	**16 45 58.0**	**+0.8**
	comp=Z,1µmcomp=Z,37nm,0.5s						
KNRA	**Kununurra**	**26.18**	**244**	P	**P**	**16 45 59.2**	**-0.7**
	baz=26,SNR=96						
KNRA	**Kununurra**	**26.18**	**244**	P	**P**	**16 45 58.8**	**-1.0**
TNTI	**Ternate**	**26.19**	**281**	P	**P**	**16 45 59.3**	**-0.6**
TNTI				IAmb	IAmb	16 46 01.6	
	comp=Z,47nm,1.2s						
AS31	**Alice Springs**	**26.33**	**223**	P	**P**	**16 45 59.7**	**-1.5**
ASAR	**Alice Springs**	**26.33**	**223**	P	**P**	**16 46 00.1**	**-1.1**
	comp=Z,3.6nm,0.6s,baz=55,slow=8.6,SNR=78						
ASAR				PcP	**PcP**	**16 49 26.7**	**+0.4**
	comp=Z,2.4nm,0.8s,baz=53,slow=1.7,SNR=4.0						
ASAR				S	**S**	**16 50 29.1**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=36,slow=19,SNR=2.0						
ASAR				ScP	**ScP**	**16 53 02.5**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=48,slow=2.8,SNR=2.8						
ASAR	**Alice Springs**	**26.33**	**223**	P	**P**	**16 45 59.5**	**-1.7**
ASAR	**Alice Springs**	**26.33**	**223**	P	**P**	**16 45 59.5**	**-1.7**
ASAR					**PcP**	**16 49 26.3**	**0.0**
SANI	**Sanana**	**27.10**	**275**	P	**P**	**16 46 08.8**	**+0.6**
	comp=Z,58nm,0.7s						
LHI	**Lord Howe Isla**	**27.24**	**169**	P	**P**	**16 46 06.5**	**-2.7**
STKA	**Stephens Creek**	**29.04**	**200**	P	**P**	**16 46 24.4**	**-0.8**
	comp=Z,7.4nm,0.7s,baz=14,slow=7.8,SNR=19						
STKA	**Stephens Creek**	**29.04**	**200**	P	**P**	**16 46 24.8**	**-0.5**
	baz=29,SNR=9.2						
STKA	**Stephens Creek**	**29.04**	**200**	P	**P**	**16 46 24.2**	**-1.1**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**29.04**	**200**	P	**P**	**16 46 24.1**	**-1.1**
KMSI	**Cibinong**	**29.47**	**280**	P	**P**	**16 46 33.1**	**+3.8**
	comp=Z,µmcomp=Z,128nm,0.6s						
BATI	**Baumata**	**29.58**	**258**	P	**P**	**16 46 30.2**	**-0.1**
	comp=Z,36nm,0.7s,baz=202,slow=1.6,SNR=16						
BATI	**Baumata**	**29.58**	**258**	P	**P**	**16 46 31.6**	**+1.3**
	comp=Z,27nm,0.7s						
FITZ	**Fitzroy Crossi**	**29.86**	**241**	P	**P**	**16 46 31.6**	**-1.1**
	comp=Z,91nm,0.7s,baz=66,slow=7.3,SNR=210						
FITZ	**Fitzroy Crossi**	**29.86**	**241**	P	**P**	**16 46 31.6**	**-1.1**
	baz=30,SNR=99						
FITZ	**Fitzroy Crossi**	**29.86**	**241**	P	**P**	**16 46 31.0**	**-1.7**
LUWI	**Luwuk**	**30.41**	**276**	P	**P**	**16 46 37.9**	**+0.3**
GTOI	**Gorontalo**	**30.43**	**279**	P	**P**	**16 46 39.6**	**+1.8**
	comp=Z,43nm,0.6s						
WRKA	**Warakurna**	**31.15**	**227**	P	**P**	**16 46 42.8**	**-1.2**
	baz=31,SNR=26						
EDFI	**Ende, Flores**	**31.34**	**261**	P	**P**	**16 46 45.2**	**-0.8**
	comp=Z,9.8nm,0.7s						
HTT	**Hallett**	**31.42**	**203**	P	**P**	**16 46 45.5**	**-0.8**
	baz=31,SNR=14						
APSI	**Ampana**	**31.54**	**276**	P	**P**	**16 46 49.0**	**+1.4**
	comp=Z,579nmcomp=Z,45nm,1.2s						
TOLI2	**Tolitoli**	**32.71**	**279**	P	**P**	**16 46 56.1**	**-1.8**
TOLI2				IAmb	IAmb	16 46 59.4	
	comp=Z,10nm,0.8s						
BNSI	**Bone**	**32.79**	**269**	P	**P**	**16 46 58.7**	**+0.1**
	comp=Z,31nm,0.8s						
KAPI	**Kappang**	**33.13**	**268**	P	**P**	**16 47 00.4**	**-1.2**
	comp=Z,15nm,0.7s,baz=100,slow=6.1,SNR=6.3						
KAPI	**Kappang**	**33.13**	**268**	P	**P**	**16 47 00.7**	**-0.8**
KAPI				pmax	pmax		
	comp=Z,13nm,0.7s						
KAPI	**Kappang**	**33.13**	**268**	P	**P**	**16 47 00.7**	**-0.8**
KAPI				IAmb	IAmb	16 47 01.5	
	comp=Z,13nm,0.7s						
SPSI	**Sidrap Palu**	**33.15**	**270**	P	**P**	**16 47 01.2**	**-0.5**
	comp=Z,27nm,1.0s						
MPSI	**Mapaga**	**33.45**	**278**	P	**P**	**16 47 03.5**	**-0.8**
	comp=Z,42nm,0.9s						
ARPS	**Mount Arapiles**	**33.48**	**196**	P	**P**	**16 47 04.5**	**+0.2**
	baz=34,SNR=7.2						
WBSI	**Waikabubak, Su**	**33.69**	**260**	P	**P**	**16 47 05.6**	**-0.8**
	comp=Z,5µmcomp=Z,154nm,0.4s						
FORT	**Forrest**	**34.96**	**219**	P	**P**	**16 47 17.6**	**+0.4**
	baz=35,SNR=25						
FORT	**Forrest**	**34.96**	**219**	P	**P**	**16 47 15.4**	**-1.8**
MYLDM	**Lahad Datu**	**35.84**	**286**	P	**P**	**16 47 25.7**	**+0.7**
MYLDM				IAmb	IAmb	16 47 27.6	
	comp=Z,40nm,1.2s						
PSA00	**Pilbara Seismi**	**36.23**	**239**	P	**P**	**16 47 27.3**	**-0.9**
SPMM	**Sapulut**	**37.68**	**284**	P	**P**	**16 47 41.0**	**+0.3**
BBKI	**Banjar Baru**	**38.08**	**270**	P	**P**	**16 47 46.9**	**+2.9**
	comp=Z,16nm,1.8s						
MTKI	**Muara Teweh, K**	**38.24**	**274**	P	**P**	**16 47 48.2**	**+2.8**
MEEK	**Meekatharra**	**39.40**	**233**	P	**P**	**16 47 53.8**	**-1.1**
	baz=39,SNR=58						
KMBL	**Kambalda**	**39.44**	**224**	P	**P**	**16 47 54.3**	**-0.8**
	baz=39,SNR=5.1						
URZ	**Urewera**	**39.94**	**150**	P	**P**	**16 47 59.7**	**+0.6**
	comp=Z,9.3nm,0.7s,baz=345,slow=5.5,SNR=5.4						
PWJI	**Pagerwojo**	**41.06**	**263**	P	**P**	**16 48 10.3**	**+1.5**
	comp=Z,35nm,1.6s						
SBUM	**Sibu**	**41.37**	**279**	P	**P**	**16 48 11.4**	**0.0**
SBUM				IAmb	IAmb	16 48 13.2	
	comp=Z,26nm,1.3s						
SBUM	**Sibu**	**41.37**	**279**	P	**P**	**16 48 13.0**	**+1.6**
GIRL	**Giralia**	**41.47**	**241**	P	**P**	**16 48 13.1**	**+1.1**
	baz=41,SNR=9.6						
RPZ	**Rata Peaks**	**41.96**	**160**	P	**P**	**16 48 15.7**	**0.0**
	comp=Z,18nm,0.8s,baz=40,slow=19,SNR=1.7						
RPZ	**Rata Peaks**	**41.96**	**160**	P	**P**	**16 48 17.0**	**+1.3**
RPZ				IAmb	IAmb	16 48 28.6	
	comp=Z,43nm,1.2s						
KLBR	**Kellerberrin**	**42.49**	**227**	P	**P**	**16 48 18.5**	**-1.8**
	baz=42,SNR=8.0						
MORW	**Morawa**	**42.54**	**231**	P	**P**	**16 48 19.7**	**-1.0**
	baz=42,SNR=28						
MORW	**Morawa**	**42.54**	**231**	P	**P**	**16 48 19.4**	**-1.4**
MORW				IAmb	IAmb	16 48 24.8	
	comp=Z,18nm,0.8s						
BLDU	**Ballidu**	**42.77**	**229**	P	**P**	**16 48 21.4**	**-1.1**
	baz=43,SNR=11						
KSM	**Kuching**	**43.10**	**277**	P	**P**	**16 48 24.5**	**-1.0**
KSM				IAmb	IAmb	16 48 27.1	
	comp=Z,23nm,1.1s						
KSM	**Kuching**	**43.10**	**277**	P	**P**	**16 48 26.0**	**+0.5**
JNU	**Nakatsue**	**43.10**	**332**	P	**P**	**16 48 25.1**	**-0.1**
JNU				IAmb	IAmb	16 48 26.7	
	comp=Z,36nm,0.9s						
MJAR	**Matsushiro Arr**	**43.34**	**343**	P	**P**	**16 48 25.8**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=162,slow=8.6,SNR=2.6						
MJAR				PcP	**PcP**	**16 50 16.0**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=159,slow=4.8,SNR=2.7						
MJAR	**Matsushiro Arr**	**43.34**	**343**	P	**P**	**16 48 26.9**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MJAR	**Matsushiro Arr**	**43.34**	**343**	P	**P**	**16 48 26.9**	**-0.1**
NWAO	**Narrogin (SRO)**	**43.57**	**225**	P	**P**	**16 48 27.6**	**-1.4**
	comp=Z,3.8nm,0.7s,baz=29,slow=10,SNR=1.0						
MUN	**Mundaring**	**43.82**	**227**	P	**P**	**16 48 30.0**	**-1.1**
	baz=44,SNR=3.8						
KPJI	**Karang Pucung**	**43.89**	**264**	P	**P**	**16 48 33.9**	**+2.1**
	comp=Z,53nm,1.4s						
CISI	**Cisompet, Garu**	**45.00**	**264**	P	**P**	**16 48 39.5**	**-1.3**
	comp=Z,2µmcomp=Z,156nm,0.7s						
CISI	**Cisompet, Garu**	**45.00**	**264**	P	**P**	**16 48 39.1**	**-1.7**
LEM	**Lembang**	**45.19**	**265**	P	**P**	**16 48 42.3**	**-0.1**
	comp=Z,24nm,0.7s,baz=66,slow=12,SNR=5.8						
TPI	**Tanjungpandan**	**45.29**	**271**	P	**P**	**16 48 43.7**	**+0.7**
	comp=Z,28nm,1.2s						
PPBI	**Pangkal Pinang**	**46.84**	**271**	P	**P**	**16 48 56.3**	**+1.1**
	comp=Z,2µmcomp=Z,14nm,1.2s						
DLV	**T Lat**	**47.27**	**291**	P	**P**	**16 48 58.3**	**-0.4**
TJN	**Taejon**	**47.42**	**332**	*i* P	**P**	**16 48 57.9**	**-1.4**
KSRS	**Korea Array**	**48.04**	**333**	P	**P**	**16 49 04.9**	**+0.8**
	comp=Z,5.3nm,0.8s,baz=150,slow=8.5,SNR=27						
KSAR	**Wonju Array Be**	**48.05**	**333**	P	**P**	**16 49 03.8**	**-0.3**
KSAR	**Wonju Array Be**	**48.05**	**333**	P	**P**	**16 49 03.8**	**-0.3**
**

comp=Z,125nmcomp=Z,16nm,0.9s
CM09 Chiang Mai Arr 57.99 295 P **P** **16 50 19.0 +1.2**
comp=Z,127nmcomp=Z,17nm,1.2s
CM01 Chiang Mai Arr 58.01 295 P **P** **16 50 19.5 +1.6**
comp=Z,129nmcomp=Z,16nm,1.2s
CM05 Chiang Mai Arr 58.02 295 P **P** **16 50 19.0 +1.1**
comp=Z,118nmcomp=Z,14nm,0.7s
CM02 Chiang Mai Arr 58.02 295 P **P** **16 50 19.6 +1.6**
comp=Z,120nmcomp=Z,15nm,1.1s
CM31 Chiang Mai Arr 58.03 295 P **P** **16 50 19.8 +1.7**
comp=Z,5µmcomp=Z,415nm,0.7s
CMAR Chiang Mai Arr 58.03 295 P **P** **16 50 19.1 +1.1**
comp=Z,5.0nm,0.6s,baz=122,slow=5.7,SNR=61
CMAR Chiang Mai Arr 58.03 295 P **P** **16 50 18.8 +0.7**
CMAR Chiang Mai Arr 58.03 295 P **P** **16 50 18.8 +0.7**
CM15 Chiang Mai Arr 58.05 295 P **P** **16 50 19.0 +0.8**
comp=Z,127nmcomp=Z,16nm,0.9s
CM13 Chiang Mai Arr 58.06 295 P **P** **16 50 19.8 +1.5**
comp=Z,104nmcomp=Z,13nm,1.1s
CMMT Chiang Mai 58.14 295 P **P** **16 50 20.0 +1.2**
comp=Z,7.5nm,1.4s
CHTO Chiang Mai 58.14 295 P **P** **16 50 19.7 +0.9**
CHTO pmax pmax
comp=Z,29nm,1.5s
CHTO Chiang Mai 58.14 295 P **P** **16 50 19.7 +0.9**
CHTO IAmb IAmb 16 50 20.9
comp=Z,29nm,1.4s
CD2 Chengdu 58.85 310 P **P** **16 50 24.5 +0.9**
CD2 pmax pmax
comp=Z,40nm,0.5s
MHMT Maesarieng 58.87 294 P **P** **16 50 26.0 +2.2**
HHC Hu-ho-hao-te 59.12 324 *e*P **P** **16 50 26.0 +0.7**
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,270nm,5.3s
HIA Hailar 61.06 336 *i* P **P** **16 50 35.6 -2.8**
HIA pmax pmax
comp=Z,3.0nm,0.9s
LZH Lanzhou 61.33 316 *e*P **P** **16 50 42.0 +1.4**
LZH pP pP 16 50 58.3 +2.4
LZH sP sP 16 51 06.0 +3.8
LZH pmax pmax
comp=Z,24nm,1.2s
ZEA Zeya 62.15 343 *e*P **P** **16 50 46.3 +0.8**
ZEA pmax pmax
comp=Z,10.0nm,1.0s
GTA Gaotai 65.75 317 ⇑P **P** **16 51 11.0 +1.3**
GTA pP pP 16 51 23.0 -2.2
GTA sP sP 16 51 28.8 -2.7
GTA pmax pmax
comp=Z,12nm,1.1s
GTA pmax pmax
comp=Z,240nm,4.5s
GTA LR LR
comp=Z,800nm,22.2s
GTA LR LR
comp=Z,520nm,23.3s
GTA LR LR
comp=Z,1µm,23.6s
ULN Ulaanbaatar 66.05 328*ce*P **P** **16 51 10.8 -0.7**
ULN pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 66.05 328 P **P** **16 51 11.3 -0.2**
SONM Songino Array 66.38 328 P **P** **16 51 14.8 +1.2**
comp=Z,2.5nm,0.7s,baz=151,slow=6.0,SNR=13
SONM Songino Array 66.38 328 P **P** **16 51 14.4 +0.8**
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 66.38 328 P **P** **16 51 14.4 +0.8**
SHL Shillong 66.45 300 P **P** **16 51 13.6 -1.0**
SHL pmax pmax
comp=Z,22nm,1.0s
SHL Shillong 66.45 300 P **P** **16 51 13.6 -1.0**
SHL IAmb IAmb 16 51 18.3
comp=Z,22nm,1.0s
SEY Seymchan 67.49 360 *i* P **P** **16 51 18.0 -2.1**
LSA Lhasa 68.37 304 P **P** **16 51 26.3 -0.7**
LSA pmax pmax
comp=Z,6.0nm,0.7s
LSA Lhasa 68.37 304 P **P** **16 51 26.3 -0.7**
YAK Yakutsk 68.96 348*ce*P **P** **16 51 29.4 +0.1**
YAK pmax pmax
comp=Z,21nm,1.7s
YAK Yakutsk 68.96 348 P **P** **16 51 30.3 +1.0**
YAK IAmb IAmb 16 51 31.0
comp=Z,32nm,1.4s
ZAK Zakamensk 69.55 329 *e*P **P** **16 51 33.8 +0.4**
ZAK pmax pmax
comp=Z,9.0nm,1.1s
TAPN Taplejung 70.55 301 *e*P **P** **16 51 40.6 +0.4**
comp=Z,22nm,1.0s
ODAN Odare 70.69 300 *e*P **P** **16 51 41.9 +0.9**
comp=Z,40nm,0.6s
RAMN Ramite 71.39 300 *e*P **P** **16 51 46.2 +0.9**
comp=Z,7.7nm,0.5s
GUN Gumba 72.26 301 *e*P **P** **16 51 51.2 +0.6**
comp=Z,31nm,0.7s
PKI Pulchoki 72.58 301 *e*P **P** **16 51 52.6 +0.1**
comp=Z,15nm,0.8s
PKIN Phulchoki 72.59 301 *e*P **P** **16 51 52.5 0.0**
comp=Z,11nm,0.6s
KKN Kakani 72.74 301 *e*P **P** **16 51 53.7 +0.4**
comp=Z,16nm,0.5s
DMN Daman 72.85 301 *e*P **P** **16 51 54.7 +0.7**
VNDA Vanda 72.88 178 P **P** **16 51 53.8 +0.8**
comp=Z,3.8nm,0.7s,baz=334,slow=6.9,SNR=19
VNDA Vanda 72.88 178 P **P** **16 51 53.3 +0.3**
VNDA pmax pmax
comp=Z,7.0nm,1.0s
VNDA Vanda 72.88 178 P **P** **16 51 53.2 +0.3**
BILL Bilibino 73.21 5*de*P **P** **16 51 53.9 -1.1**
BILL *e**PP **pP** **16 52 07.8 -2.5**
BILL *e**SP **sP** **16 52 14.1 -2.2**
BILL SSS SSS 17 09 16.0
BILL pmax pmax
comp=Z,12nm,0.8s
BILL MLR MLR
comp=Z,949nm,21.0s
GKN Gorkha 73.35 301 *e*P **P** **16 51 56.9 +0.1**
KOLN Koldanda 74.18 300 *e*P **P** **16 52 01.7 -0.1**
comp=Z,15nm,0.7s
DANN Dangsing 74.19 301 *e*P **P** **16 52 02.0 +0.1**
PYUN Piuthan 74.78 301 *e*P **P** **16 52 05.4 +0.1**
comp=Z,29nm,0.6s
WMQ Urumqi 75.84 317 P **P** **16 52 11.8 +1.0**
WMQ pP pP 16 52 28.0 +1.5
WMQ pmax pmax
comp=Z,30nm,0.9s
WMQ LR LR
comp=Z,620nm,17.9s
WMQ LR LR
comp=Z,730nm,27.5s
WMQ LR LR
comp=Z,690nm,20.5s
WMQ Urumqi 75.84 317 P **P** **16 52 11.5 +0.7**
WMQ pmax pmax
comp=Z,22nm,1.2s
WMQ Urumqi 75.84 317 P **P** **16 52 11.5 +0.7**
WMQ IAmb IAmb 16 52 13.2
comp=Z,22nm,1.2s
TIXI Tiksi 77.87 352*ce*P **P** **16 52 20.7 -0.8**
TIXI Tiksi 77.87 352 P **P** **16 52 22.8 +1.3**
ZSN Zaisan 78.95 320 *e*P **P** **16 52 27.8 -0.4**
comp=Z,4.8nm,0.9s,baz=320
ZSN Zaisan 78.95 320 *e*P **P** **16 52 27.7 -0.4**
ZSN pmax pmax
comp=Z,5.0nm,0.9s
SML Sawmill 79.99 24 P **P** **16 52 33.5 0.0**
SML IAmb IAmb 16 52 34.5
comp=Z,22nm,1.1s
IMAR Indian Mountai 80.26 19 P **P** **16 52 35.0 +0.3**
MK31 Makanchi Array 80.41 319 P **P** **16 52 36.5 +0.4**
MK31 pmax pmax
comp=Z,15nm,1.2s
MK31 Makanchi Array 80.41 319 P **P** **16 52 36.5 +0.4**
MK31 IAmb IAmb 16 52 37.9
comp=Z,16nm,1.1s
MKAR Makanchi Array 80.41 319 P **P** **16 52 36.6 +0.5**
comp=Z,5.0nm,0.5s,baz=96,slow=7.0,SNR=41
MKAR Makanchi Array 80.41 319 P **P** **16 52 36.5 +0.4**
RND Reindeer 80.59 23 P **P** **16 52 35.5 -1.2**
RND pmax pmax
comp=Z,10.0nm,1.1s
RND Reindeer 80.59 23 P **P** **16 52 35.5 -1.2**
MAKZ Makanchi 80.62 319 P **P** **16 52 37.5 +0.3**
MAKZ pmax pmax
comp=Z,27nm,1.2s
MAKZ Makanchi 80.62 319 P **P** **16 52 37.5 +0.3**
MAKZ IAmb IAmb 16 52 39.0
comp=Z,27nm,1.1s
MCK McKinley 80.73 22 P **P** **16 52 37.2 -0.2**
baz=239
MLY Manley 80.76 21 P **P** **16 52 37.9 +0.4**
baz=237
NEA2 Nenana 81.13 22 P **P** **16 52 38.9 -0.6**
baz=239
ZAA0 Zalesovo Array 81.22 326 P **P** **16 52 39.2 -0.9**
ZALV Zalesovo Beam 81.22 326 P **P** **16 52 40.3 +0.2**
comp=Z,6.0nm,0.6s,baz=112,slow=5.2,SNR=27
ZALV Zalesovo Beam 81.22 326 P **P** **16 52 39.9 -0.2**
ZALV Zalesovo Beam 81.22 326 P **P** **16 52 39.9 -0.2**
I23K Minto, Yukon-K 81.31 21 P **P** **16 52 40.6 +0.2**
baz=238
SHLS Shalkode 81.33 315 *e*P **P** **16 52 39.4 -1.8**
baz=315
SHLS Shalkode 81.33 315 *e*P **P** **16 52 39.4 -1.8**
PDGK Podgornoye 81.36 315 P **P** **16 52 41.4 +0.1**
WRH Wood River Hil 81.43 22 P **P** **16 52 39.9 -1.2**
CRQM Cirque 81.72 26 P **P** **16 52 43.0 +0.1**
CRQM IAmb IAmb 16 52 45.2
comp=Z,14nm,1.1s
TCOL CIGO, UAF Yank 81.72 22 P **P** **16 52 41.4 -1.1**
TCOL IAmb IAmb 16 52 43.5
comp=Z,17nm,1.1s
COLA College 81.72 22 *i* P **P** **16 52 40.9 -1.6**
COLA pmax pmax
comp=Z,8.0nm,1.0s
KPKS Kokpek 81.96 315 *e*P **P** **16 52 43.9 -0.5**
comp=Z,6.3nm,1.5s,baz=315
KPKS Kokpek 81.96 315 *e*P **P** **16 52 43.8 -0.6**
KPKS pmax pmax
comp=Z,6.0nm,1.5s
POKR Poker Flat Res 82.00 22 P **P** **16 52 44.5 +0.5**
baz=240
IL31 82.03 22 P **P** **16 52 42.5 -1.6**
ILAR Eielson Array 82.03 22 P **P** **16 52 43.3 -0.9**
comp=Z,4.3nm,0.9s,baz=251,slow=5.1,SNR=28
ILAR Eielson Array 82.03 22 P **P** **16 52 42.7 -1.5**
ILAR Eielson Array 82.03 22 P **P** **16 52 42.6 -1.5**
MCARA McCarthy VSAT 82.03 26 P **P** **16 52 44.6 +0.3**
MCARA IAmb IAmb 16 52 45.7
comp=Z,9.8nm,1.0s
SATY Saty 82.06 314 *e*P **P** **16 52 44.6 -0.5**
baz=314
SATY Saty 82.06 314 *e*P **P** **16 52 44.5 -0.5**
COLD Coldfoot 82.14 19 P **P** **16 52 46.6 +1.9**
baz=237
BARN Barnard Glacie 82.50 26 P **P** **16 52 47.5 +0.5**
TDK Taldyqorghan 82.53 316 *e*P **P** **16 52 47.1 -0.3**
comp=Z,16nm,1.6s,baz=316
TDK Taldyqorghan 82.53 316 *e*P **P** **16 52 47.0 -0.3**
TDK pmax pmax
comp=Z,16nm,1.6s
DOT Dot Lake 82.59 24 P **P** **16 52 46.7 -0.5**
DOT IAmb IAmb 16 52 49.2
comp=Z,8.9nm,1.0s
CTGM Chitina Glacie 82.61 27 P **P** **16 52 48.0 +0.5**
CTGM IAmb IAmb 16 52 50.0
comp=Z,10nm,1.1s
L26K Log Cabin Wild 82.61 24 P **P** **16 52 48.0 +0.7**
baz=244
A21K Barrow 82.70 14 P **P** **16 52 48.3 +0.8**
baz=231
KDJ Kajisay 82.72 313 P **P** **16 52 49.3 +0.7**
KDJ pmax pmax
comp=Z,12nm,1.1s
KDJ Kajisay 82.72 313 P **P** **16 52 49.3 +0.7**
KDJ IAmb IAmb 16 52 50.2
comp=Z,12nm,1.1s
SEM Semipalatinsk 82.76 322 *e*P **P** **16 52 47.0 -1.6**
baz=322
SEM Semipalatinsk 82.76 322 *e*P **P** **16 52 47.0 -1.6**
SCRK Sand Creek 82.77 23 P **P** **16 52 48.5 +0.2**
baz=244
KSH Kashi 83.05 311 *e*P **P** **16 52 53.0 +2.8**
KSH pP pP 16 53 07.8 +1.7
KSH S S **17 03 09.8 +4.0**
KSH pmax pmax
comp=Z,13nm,0.7s
KSH pmax pmax
comp=Z,440nm,8.1s
KSH LR LR
comp=Z,310nm,8.1s
KSH LR LR
comp=Z,330nm,6.1s
KSH LR LR
comp=Z,910nm,17.2s
MDOK Medeo 83.05 314 *e*P **P** **16 52 50.0 -0.2**
baz=314
MDOK Medeo 83.05 314 *e*P **P** **16 52 50.0 -0.2**
TNSS Tian-Shan 83.09 314 *e*P **P** **16 52 50.4 -0.3**
baz=314
TNSS Tian-Shan 83.09 314 *e*P **P** **16 52 50.4 -0.3**
AAA Alma-Ata 83.16 314 *e*P **P** **16 52 50.6 0.0**
comp=Z,6.6nm,0.8s,baz=314
AAA Alma-Ata 83.16 314 *e*P **P** **16 52 50.6 0.0**
AAA pmax pmax
comp=Z,7.0nm,0.8s
BCAR Beaver Creek A 83.27 25 P **P** **16 52 50.3 -0.5**
K27K Chicken 83.55 24 P **P** **16 52 53.2 +1.1**
baz=245
KUU Kurty 83.72 315 *e*P **P** **16 52 52.7 -0.8**
comp=Z,27nm,1.3s,baz=315
KUU Kurty 83.72 315 *e*P **P** **16 52 52.6 -0.8**
KUU pmax pmax
comp=Z,27nm,1.3s
KURK Kurchatov 83.85 322 P **P** **16 52 53.1 -0.8**
KURK pmax pmax
comp=Z,27nm,1.2s
KURK Kurchatov 83.85 322 P **P** **16 52 53.1 -0.8**
KURK IAmb IAmb 16 52 55.3
comp=Z,27nm,1.1s
TKM2 Tokmak 2 84.03 314 P **P** **16 52 56.7 +1.3**
SNR=7.2
NIL Nilore 84.11 304 P **P** **16 52 55.3 -0.4**
NIL pmax pmax
comp=Z,25nm,1.0s
NIL Nilore 84.11 304 P **P** **16 52 55.3 -0.4**
NIL IAmb IAmb 16 52 57.2
comp=Z,25nm,1.0s
BMAR Burnt Mountain 84.12 20 P **P** **16 52 55.5 +0.4**
EGAK Eagle 84.23 23 P **P** **16 52 55.4 -0.1**
HYT Haines Junctio 84.29 27 P **P** **16 52 55.8 -0.3**
HYT IAmb IAmb 16 52 58.6
comp=Z,10nm,1.1s
KBK Karagaybulak 84.45 314 P **P** **16 52 58.3 +0.9**
SNR=7.0
H02S1 DAWSON INLET T 84.58 36 T T 18 26 17.6
SNR=31
CHMS Chumysh 84.66 314 P **P** **16 52 59.5 +1.2**
SNR=10
UCH Uchtor 84.68 313 P **P** **16 53 00.9 +2.0**
SNR=6.4
FRU1 Bishkek 84.71 314 P **P** **16 53 00.0 +1.4**
FRU1 pmax pmax
comp=Z,21nm,1.1s
FRU1 Bishkek 84.71 314 P **P** **16 52 60.0 +1.4**
FRU1 IAmb IAmb 16 53 00.7
comp=Z,21nm,1.1s
AAK Ala-Archa 84.77 313*ce*P **P** **16 52 56.9 -2.1**
AAK pmax pmax
comp=Z,88nm,1.7s
SGDS Sogindy 84.84 314 *e*P **P** **16 52 58.8 -0.4**
comp=Z,4.7nm,0.8s,baz=314
SGDS Sogindy 84.84 314 *e*P **P** **16 52 58.8 -0.4**
SGDS pmax pmax
comp=Z,5.0nm,0.8s
USP Ospenovka 84.89 314 P **P** **16 53 00.7 +1.2**
SNR=17
QSPA South Pole Qui 85.22 180 P **P** **16 53 00.5 -0.3**
AML Almayashu 85.26 313 P **P** **16 53 03.2 +1.5**
SNR=29
EKS2 Erkin-Say 85.30 313 P **P** **16 53 03.3 +1.7**
SNR=12
BTLS Baital 85.56 316 *e*P **P** **16 53 02.1 -0.6**
comp=Z,5.7nm,0.7s,baz=316
BTLS Baital 85.56 316 *e*P **P** **16 53 02.0 -0.6**
BTLS pmax pmax
comp=Z,6.0nm,0.7s
MAW Mawson 85.70 203 P **P** **16 53 02.8 0.0**
comp=Z,5.5nm,0.6s,baz=97,slow=3.3,SNR=16
MAW Mawson 85.70 203 P **P** **16 53 03.0 +0.1**
baz=86,SNR=12
MAW Mawson 85.70 203 P **P** **16 53 01.3 -1.6**
MAW pmax pmax
comp=Z,2.0nm,0.8s
MAW Mawson 85.70 203 P **P** **16 53 01.3 -1.6**
NRIK Noril'sk 85.97 341 P **P** **16 53 04.5 +0.3**
comp=Z,3.4nm,0.5s,baz=116,slow=4.1,SNR=12
NRIK Noril'sk 85.97 341*ce*P **P** **16 53 03.6 -0.6**
NRIK pmax pmax
comp=Z,8.0nm,1.2s
DRK Karamyk 86.22 310 P **P** **16 53 06.2 -0.3**
BTK Batken 87.06 310 P **P** **16 53 10.1 -0.1**
BTK pmax pmax
comp=Z,24nm,1.4s
BTK Batken 87.06 310 P **P** **16 53 10.1 -0.1**
DZA Taraz 87.11 313 *e*P **P** **16 53 10.7 +0.2**
baz=313
DZA Taraz 87.11 313 *e*P **P** **16 53 10.6 +0.2**
BRZS Berezniki 87.40 320 *e*P **P** **16 53 09.9 -1.7**
baz=320
BRZS Berezniki 87.40 320 *e*P **P** **16 53 09.9 -1.7**
KK31 Karatay Array 87.74 313 P **P** **16 53 13.5 +0.1**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KK31 Karatay Array 87.74 313 P **P** **16 53 13.5 +0.1**
KK31 IAmb IAmb 16 53 14.6
comp=Z,5.4nm,0.9s
KKAR Karatay Array 87.74 313 P **P** **16 53 13.7 +0.3**
KKAR Karatay Array 87.74 313 P **P** **16 53 13.7 +0.3**
IUG luzhnay 87.95 312 *e*P **P** **16 53 14.2 -0.3**
baz=312
IUG luzhnay 87.95 312 *e*P **P** **16 53 14.2 -0.3**
INK Inuvik 88.33 21 P **P** **16 53 15.4 -0.1**
comp=Z,1.0nm,0.5s,baz=246,slow=3.1,SNR=2.6
BRVK Borovoye 89.38 323 *i* P **P** **16 53 20.3 -0.6**
BRVK pmax pmax
comp=Z,18nm,0.9s
BRVK Borovoye 89.38 323 P **P** **16 53 19.6 -1.3**
NVAR Mina Array Bea 91.89 52 P **P** **16 53 34.2 +1.0**
comp=Z,0.2nm,0.5s,baz=231,slow=5.7,SNR=2.8
SYO Syowa Base 93.79 199‖ *e*P **P** **16 53 39.6 -1.4**
AB31 Akbulak array 95.56 319 *i* P **P** **16 53 48.1 -1.4**
ABKAR Akbulak array 95.56 319 *i* P **P** **16 53 47.8 -1.7**
ARU Arti 96.38 326*d i*P **P** **16 53 50.9 -2.2**
ARU 16 57 44.7
ARU S **SKSac** **17 04 22.9 -2.1**
ARU SS **SS** **17 11 38.1 -4.5**
ARU pmax pmax
comp=Z,14nm,1.1s
ARU Arti 96.38 326 P **P** **16 53 51.4 -1.6**
X18A Snowflake 98.47 56 P **P** **16 54 03.4 +0.2**
FINES FINESS Array B 111.08 336 Pdiff **Pdif** **16 54 57.3 -1.2**
comp=Z,0.5nm,0.5s,baz=72,slow=6.2,SNR=5.0
AKASG Malin Array Be 114.56 324 PKP **PKiKP** **16 59 04.0 -0.2**
comp=Z,1.5nm,0.4s,baz=52,slow=2.6,SNR=11
AKASG Malin Array Be 114.56 324 **PKiKP** **16 59 03.7 -0.6**
NOA NORSAR Array B 116.93 340 PKP **PKPdf** **16 59 07.4 -1.2**
comp=Z,0.5nm,0.7s,baz=48,slow=2.0,SNR=3.3
PLCA Paso Flores 119.70 143 PKP **PKiKP** **16 59 15.3 +0.6**
comp=Z,2.3nm,0.8s,baz=102,slow=2.3,SNR=5.2
PLCA PKKPbc **PKKPbc** **17 09 25.9 -0.4**
comp=Z,2.2nm,0.9s,baz=344,slow=2.9,SNR=3.7
BOSA Boshof 119.82 233 PKP **PKPdf** **16 59 14.7 -0.5**
comp=Z,3.5nm,1.0s,baz=315,slow=1.4,SNR=2.6
BOSA Boshof 119.82 233 PKIKP **PKPdf** **16 59 15.0 -0.3**
BOSA Boshof 119.82 233 **PKPdf** **16 59 15.0 -0.3**
MATP Matopo 120.07 243 PKP **PKPdf** **16 59 15.2 -0.7**
comp=Z,2.9nm,0.8s,baz=126,slow=2.1
KRLC Kraliky 121.76 328 *e*PKIKP **PKiKP** **16 59 19.4 +1.0**
KRLC Kraliky 121.76 328 *e*PKPDF **PKiKP** **16 59 19.4 +1.0**
LSZ Lusaka 121.85 249 PKP **PKPdf** **16 59 19.6 +0.2**
comp=Z,1.4nm,0.4s,baz=63,slow=3.9,SNR=3.1
CLL Collm 122.90 331 *i* PKPdf **PKiKP** **16 59 21.1 +0.6**
CLL *e*PKPdf **pPKPdf** **16 59 34.0 -2.7**
CLL Collm 122.90 331 *i* PKIKP **PKiKP** **16 59 21.1 +0.6**
CLL *e* 16 59 34.0
CONA Conrad Observa 123.51 327 *e*P **PKiKP** **16 59 22.5 +0.5**
comp=Z,1.5nm,0.5s
KHC Kasperske Hory 124.00 329 *e*PKIKP **PKiKP** **16 59 23.3 +0.5**
KHC Kasperske Hory 124.00 329 *e*PKPDF **PKiKP** **16 59 23.3 +0.5**
GERES GERESS Array B 124.11 329 PKP **PKiKP** **16 59 23.5 +0.3**
comp=Z,1.8nm,0.5s,baz=52,slow=2.2,SNR=13
GERES GERESS Array B 124.11 329 PKIKP **PKiKP** **16 59 23.2 +0.1**
GERES GERESS Array B 124.11 329 PKPdf **PKiKP** **16 59 23.2 +0.1**
ABTA Abfaltersbach 126.04 327 *e*P **PKPdf** **16 59 26.5 -0.1**
comp=Z,6.3nm,1.2s
WATA Walderalm 126.17 328 *e*P **PKiKP** **16 59 27.4 +0.1**
comp=Z,7.8nm,1.1s
WTTA Wattenberg 126.18 328 *e*P **PKiKP** **16 59 27.6 +0.2**
comp=Z,5.6nm,0.7s
MOTA Moosalm 126.41 329 *e*P **PKiKP** **16 59 27.9 0.0**
comp=Z,3.9nm,0.6s
SQTA Sankt Quirin 126.43 328 *e*P **PKiKP** **16 59 28.2 +0.4**
comp=Z,5.3nm,0.7s
FETA Feichten 126.81 328 *e*P **PKiKP** **16 59 29.1 +0.4**
comp=Z,5.6nm,0.7s
DAVA Damuels 127.08 329 *e*P **PKPdf** **16 59 25.9 -2.8**
comp=Z,5.5nm,1.0s
SNF Seneffe 127.38 335 PKPdf **PKPdf** **16 59 25.8 -3.1**
DAVOX Davos/Dischmat 127.41 329 PKP **PKiKP** **16 59 30.2 +0.4**
comp=Z,4.4nm,0.7s,baz=333,slow=6.8
LPAZ La Paz 134.27 118 PKP **PKiKP** **16 59 45.0 -0.1**
comp=Z,2.3nm,0.5s,baz=327,slow=2.3,SNR=12
LPAZ La Paz 134.27 118 PKIKP **PKiKP** **16 59 44.6 -0.5**
LPAZ La Paz 134.27 118 PKPdf **PKiKP** **16 59 44.6 -0.5**
CPUP Villa Florida 137.37 138 PKP **PKiKP** **16 59 49.8 -0.5**
comp=Z,3.3nm,0.6s,baz=238,slow=1.6,SNR=9.7
MDT Midelt 145.11 326 PKPbc **PKPdf** **17 00 03.0 +0.6**
comp=Z,12nm,0.8s,baz=55,slow=2.4,SNR=15
TORD Torodi Ar. Bea 150.48 288 PKPbc **PKPbc** **17 00 16.5 -0.3**
comp=Z,42nm,0.8s,baz=42,slow=2.4,SNR=8.7
BDFB Brasilia 150.96 135 PKP **PKPdf** **17 00 13.0 +0.6**
comp=Z,4.0nm,0.6s,baz=10,slow=2.8,SNR=5.1
BDFB PKPbc **PKiKP** **17 00 18.6 0.0**
comp=Z,28nm,0.8s,baz=264,slow=1.8,SNR=26
BDFB Brasilia 150.96 135 PKIKP **PKPbc** **17 00 18.4 +0.3**
BDFB Brasilia 150.96 135 **PKPbc** **17 00 18.4 +0.3**
KOWA Kowa 155.38 295 PKP **PKPdf** **17 00 19.7 +1.1**
comp=Z,0.6nm,0.3s,baz=166,slow=5.5,SNR=1.7
KOWA PKPbc **pPKPdf** **17 00 27.6 -7.5**
comp=Z,1.3nm,0.4s,baz=52,slow=1.6,SNR=7.9
KOWA PKPab **PKPab** **17 00 44.7 +0.6**
comp=Z,2.8nm,0.6s,baz=18,slow=5.9,SNR=5.9
KIC Kosan Boka 157.79 275 *e*PKP2 **PKPab** **17 00 55.1 +0.5**
comp=Z,29nm,0.9s
DBIC Dimbokro 157.89 276 PKPab **PKPab** **17 00 55.6 +0.5**
comp=Z,4.5nm,0.6s,baz=78,slow=4.5,SNR=7.1
TIC Toumodi 158.05 276 *e*PKP2 **PKPab** **17 00 56.1 +0.3**
LIC Lamto 158.08 275 *e*PKP2 **PKPab** **17 00 56.2 +0.3**
comp=Z,16nm,0.5s

JMA 26 16:40:33.1±0.2, 38°35N×144°55E, h44km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.37**	**289**	P		Pn	16 41 10.8	+1.4
OFUJ				S		Sn	16 41 38.6	+1.3
JIKH	**Ishinomakikobu**	**2.43**	**270**	P		Pn	16 41 11.3	+1.1
JIKH				*e*S		Sn	16 41 39.7	+1.0
JKMT	**Kesennumamotoy**	**2.45**	**282**	P		Pn	16 41 11.9	+1.3
MIYJ	**Miyakonagasawa**	**2.46**	**301**	P		Pn	16 41 11.7	+1.1
MIYJ				*e*S		Sn	16 41 40.1	+0.7
JMK	**Ichinoseki**	**2.68**	**284**	P		Pn	16 41 15.4	+1.8
JOM	**Ohasama**	**2.78**	**295**	P		Pn	16 41 16.7	+1.6
JOM				*e*S		Sn	16 41 49.4	+2.0
JANG	**Nango**	**3.10**	**312**	P		Pn	16 41 20.7	+1.2
JYK	**Kaneyama**	**3.33**	**281**	P		Pn	16 41 25.0	+2.3
JFT	**Otama**	**3.43**	**257**	P		Pn	16 41 26.3	+2.2
JFT				*e*S		Sn	16 42 05.5	+2.0
JOT	**Ohata**	**4.05**	**319**	P		Pn	16 41 33.9	+1.3
JOT				*e*S		Sn	16 42 17.9	-0.8
JCH	**Churui**	**4.36**	**348**	P		Pn	16 41 36.1	-0.6
JCH				*e*S		Sn	16 42 23.3	-2.9
JKB	**Kayabe**	**4.45**	**324**	P		Pn	16 41 39.8	+1.9
JKB				*e*S		Sn	16 42 26.8	-1.5
JRY	**Ryogami san**	**5.08**	**244**	P		Pn	16 41 48.0	+1.3
NEM2	**Nemuro 2**	**5.09**	**10**	P		Pn	16 41 44.4	-2.4
NEM2				*e*S		Sn	16 42 38.2	-6.0
JOD2	**Odawara 2**	**5.36**	**237**	*e*S		Sn	16 42 49.3	-1.6
JTKR	**Abashiri--Toko**	**5.64**	**355**	P		Pn	16 41 54.0	-0.3
JTKR				*e*S		Sn	16 42 53.7	-4.0

*IDC **26** 16:40:33.4±2.1,1.˚74N×127.˚41E,h0km,mb3.8/4, mb1 3.8/5,mb1mx3.7/37,mbtmp3.7/5,ML3.5/1,Error ellipse: s-maj=69.1km s-min=32.0km az=88.0*
*NEIC **26** 16:40:46.7±1.6,1.˚72N±0.˚09×127.˚4E±0.˚1,h110km±10km, mb4.5/11,Error ellipse: s-maj=16.7km s-min=11.1km az=59.0*
*DJA **26** 16:40:46.6±0.6,2.˚N±5.˚×127.˚7E±.˚,h87km±6km,M4.1/9, mb4.4/1,MLv4.0/9*

ISC 26 16:40:46.1±0.7,1.˚76N±0.˚07×127.˚34E±0.˚09,h100km,n31, σ1°29/32,mb4.5/9,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.98**	**178**	P	**Pn**	**16 41 07.0**	**+0.6**
TNTI				S	**Sn**	**16 41 21.5**	**-0.1**
TNTI	**Ternate**	**0.98**	**178**	Pn	**Pn**	**16 41 07.3**	**+0.9**
SGSI	**Sangihe**	**2.63**	**317**	P	**Pn**	**16 41 27.7**	**+0.7**
KMSI	**Cibinong**	**3.56**	**251**	P	**Pn**	**16 41 40.3**	**+0.9**
SANI	**Sanana**	**4.02**	**200**	P	**Pn**	**16 41 44.6**	**-1.0**
GTOI	**Gorontalo**	**4.47**	**256**	P	**Pn**	**16 41 54.4**	**+2.7**
LUWI	**Luwuk**	**5.35**	**239**	Pn	**Pn**	**16 42 04.6**	**+1.0**
TOLI2	**Tolitoli**	**6.59**	**264**	Pn	**Pn**	**16 42 21.3**	**+0.8**
FAKI	**Fak Fak**	**6.76**	**133**	Pn	**Pn**	**16 42 23.6**	**+0.8**
MMRI	**Maumere**	**11.51**	**206**	Pn	**Pn**	**16 43 26.9**	**-0.5**
KKM	**Kota Kinabalu**	**11.88**	**291**	Pn	**Pn**	**16 43 33.6**	**+1.2**
MTN	**Manton Dam**	**14.99**	**166**	P	**P**	**16 44 18.0**	**+2.1**
SBUM	**Sibu**	**15.13**	**273**	P	**P**	**16 44 18.8**	**+1.4**
KNRA	**Kununurra**	**17.39**	**175**	P	**P**	**16 44 40.9**	**-1.4**
KNRA				IAmb	IAmb	16 44 50.7	
	comp=Z,9.9nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.81**	**185**	P	**P**	**16 45 05.6**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=1.4						
FITZ	**Fitzroy Crossi**	**19.81**	**185**	P	**P**	**16 45 07.7**	**-1.1**
TPUB	**Ta-pu**	**22.38**	**344**	P	**P**	**16 45 36.9**	**+0.6**
GSI	**Gunungsitoli**	**29.76**	**270**	P	**P**	**16 46 42.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**32.41**	**303**	P	**P**	**16 47 06.6**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=121,slow=8.5,SNR=4.3						
CMAR	**Chiang Mai Arr**	**32.41**	**303**	P	**P**	**16 47 06.3**	**-0.5**
KSRS	**Korea Array**	**35.52**	**1**	P	**P**	**16 47 32.7**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=185,slow=9.0,SNR=3.6						
SONM	**Songino Array**	**49.34**	**341**	P	**P**	**16 49 24.7**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=152,slow=8.5,SNR=5.0						
SONM	**Songino Array**	**49.34**	**341**	P	**P**	**16 49 25.5**	**+0.1**
MK31	**Makanchi Array**	**59.51**	**326**	P	**P**	**16 50 38.7**	**-0.2**
MK31				IAmb	IAmb	16 50 39.3	
	comp=Z,1.7nm,0.7s						
MKAR	**Makanchi Array**	**59.51**	**326**	P	**P**	**16 50 38.4**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=126,slow=8.7,SNR=23						
MKAR	**Makanchi Array**	**59.51**	**326**	P	**P**	**16 50 38.7**	**-0.2**
MAKZ	**Makanchi**	**59.70**	**326**	P	**P**	**16 50 39.9**	**-0.3**
MAKZ				IAmb	IAmb	16 50 40.6	
	comp=Z,4.8nm,1.0s						
KURK	**Kurchatov**	**63.72**	**328**	P	**P**	**16 51 06.0**	**-1.0**
KURK				IAmb	IAmb	16 51 07.0	
	comp=Z,4.5nm,0.8s						
KKAR	**Karatay Array**	**65.08**	**317**	P	**P**	**16 51 17.5**	**+1.3**
BILL	**Bilibino**	**71.29**	**14**	P	**P**	**16 51 56.3**	**+1.9**
BILL				IAmb	IAmb	16 51 57.9	
	comp=Z,12nm,0.9s						
SOCY	**Socotra**	**73.36**	**282**	P	**P**	**16 52 05.9**	**-2.0**
SOCY				IAmb	IAmb	16 52 23.5	
	comp=Z,22nm,1.3s						

*IDC **26** 16:54:09.4±2.0,1.˚80N×126.˚29E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.4/37,mbtmp3.5/3,Error ellipse: s-maj=174.9km s-min=24.8km az=65.0*
*DJA **26** 16:54:16.0±0.3,2.˚N±4.˚×12.˚7E±.˚,h10km,M3.4/8,MLv3.4/8*

ISC 26 16:54:15.6±1.6,2.°0N±0.°1×126.°7E±0.°1,h47km,n9,σ1°41/9, mb3.5/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.34**	**150**	P	**Pn**	**16 54 38.5**	**+0.6**
TNTI				S	**Sn**	**16 54 55.9**	**+1.3**
SGSI	**Sangihe**	**2.09**	**326**	P	Pn	16 54 53.4	+5.2
KMSI	**Cibinong**	**3.04**	**243**	P	**Pn**	**16 55 00.8**	**-0.5**
GTOI	**Gorontalo**	**3.92**	**251**	P	**Pn**	**16 55 14.8**	**+1.6**
SANI	**Sanana**	**4.03**	**190**	P	**Pn**	**16 55 14.3**	**-0.6**
MRSI	**Marisa**	**4.98**	**253**	P	**Pn**	**16 55 28.1**	**+0.2**
WRA	**Warramunga Arr**	**23.01**	**161**	P	**P**	**16 59 14.3**	**-2.4**
	0.6nm,0.3s,baz=339,slow=10,SNR=17						
ASAR	**Alice Springs**	**26.41**	**165**	P	**P**	**16 59 48.9**	**+1.0**
	0.5nm,0.5s,baz=351,slow=15,SNR=14						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**17 04 10.2**	**-0.4**
	0.3nm,0.4s,baz=122,slow=7.9,SNR=6.3						

*IDC **26** 16:55:14.0±1.1,35.˚96N×135.˚50E,h362km±11km, mb3.3/16,mb1 3.5/20,mb1mx3.3/52,mbtmp4.0/20,Error ellipse: s-maj=15.3km s-min=9.7km az=76.0*
*JMA **26** 16:55:14.2±0.1,36.˚00N×135.˚51E,h352km±1km,M3.7*

ISC 26 16:55:13.3±0.6,35.°96N±0.°07×135.°56E±0.°06,h357km±6km, n41,σ0°95/49,mb3.7/16,4C-6D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**0.49**	**228**	⇓P	**Pn**	**16 55 59.1**	**+0.7**
JKY				S	**S**	**16 56 34.1**	**-0.4**
JWT	**Wachi**	**0.69**	**191**	⇓P	**Pn**	**16 55 59.6**	**+0.7**
JWT				S	**S**	**16 56 34.6**	**-0.7**
JKG	**Kaga**	**0.70**	**63**	⇓P	**Pn**	**16 55 59.4**	**+0.7**
JYTA	**Yamagatataniai**	**1.02**	**110**	P	**Pn**	**16 56 00.6**	**+0.7**
JYTA				S	**S**	**16 56 36.8**	**-0.5**
JWY	**Kouya**	**1.74**	**179**	⇑P	**Pn**	**16 56 04.6**	**+0.9**
JWY				eS	**S**	**16 56 43.5**	**-0.6**
JIE	**Ise**	**1.82**	**149**	⇑P	**Pn**	**16 56 05.3**	**+1.1**
JOI	**OKI**	**1.90**	**281**	⇓P	**Pn**	**16 56 05.0**	**+0.5**
JTNC	**Tanabenakahech**	**2.13**	**179**	⇑P	**Pn**	**16 56 06.8**	**+0.5**
JTNC				eS	**S**	**16 56 48.0**	**-0.9**
JHS	**Saijyo**	**2.21**	**245**	⇓P	**Pn**	**16 56 07.3**	**+0.5**
MAT	**Matsushiro**	**2.22**	**74**	P	**Pn**	**16 56 07.4**	**+0.6**
MAT				S	**S**	**16 56 50.3**	**+0.5**
MAT	**Matsushiro**	**2.22**	**74**	P	**Pn**	**16 56 07.6**	**+0.8**
MJAR	**Matsushiro Arr**	**2.22**	**74**	P	**Pn**	**16 56 07.8**	**+0.9**
	0.4nm,0.3s,baz=257,slow=8.0,SNR=7.7						
JAI	**Aioi**	**2.34**	**203**	P	**Pn**	**16 56 08.8**	**+0.9**
JAI				eS	**S**	**16 56 51.3**	**-0.3**
JYN	**Shimob**	**2.47**	**100**	⇑P	**Pn**	**16 56 09.3**	**+0.5**
TTO1	**TONANKAI O.B.S**	**2.54**	**156**	P	**Pn**	**16 56 10.6**	**+1.6**
JGT2	**ShimaneMisato**	**2.65**	**251**	P	**Pn**	**16 56 10.3**	**+0.1**
TK02	**Tokai 2**	**2.70**	**137**	P	**Pn**	**16 56 12.1**	**+1.7**
JHT	**Toyohira**	**2.87**	**244**	⇓P	**Pn**	**16 56 12.5**	**+0.3**
JOD2	**Odawara 2**	**2.96**	**103**	P	**Pn**	**16 56 13.8**	**+0.9**
JHJ	**Hachijo jima 2**	**4.49**	**128**	S	**S**	**16 57 24.6**	**-3.5**
	28nm,0.3s,baz=26,slow=14,SNR=2.2						
JNU	**Nakatsue**	**4.79**	**235**	P	**Pn**	**16 56 32.0**	**+1.0**
	4.5nm,0.3s,baz=122,slow=1.0,SNR=40						
KSRS	**Korea Array**	**6.31**	**286**	P	**Pn**	**16 56 48.9**	**+1.0**
	1.8nm,0.3s,baz=105,slow=12,SNR=96						
USRK	**Ussuriysk Ar.**	**8.67**	**343**	P	**Pn**	**16 57 16.1**	**+0.8**
	baz=157,slow=11,SNR=72						
ASAJ	**Asahikawa**	**9.77**	**31**	P	**Pn**	**16 57 26.1**	**-2.3**
	9.7nm,0.3s,baz=225,slow=12,SNR=107						
ASAJ				S		16 59 10.3	-8.7
	1.3nm,0.3s,baz=243,slow=30,SNR=6.3						
SONM	**Songino Array**	**24.59**	**308**	P	**P**	**17 00 01.9**	**-0.5**
	5.5nm,0.8s,baz=113,slow=9.5,SNR=21						
ZALV	**Zalesovo Beam**	**39.19**	**314**	P	**P**	**17 02 07.8**	**-0.1**
	1.1nm,0.4s,baz=103,slow=4.7,SNR=4.7						
MKAR	**Makanchi Array**	**40.70**	**302**	P	**P**	**17 02 20.5**	**+0.2**
	2.8nm,0.6s,baz=92,slow=9.9,SNR=32						
NRIK	**Noril'sk**	**42.34**	**337**	P	**P**	**17 02 33.1**	**0.0**
	2.6nm,0.5s,baz=123,slow=10,SNR=6.7						
ILAR	**Eielson Array**	**52.91**	**32**	P	**P**	**17 03 54.1**	**+0.6**
	0.5nm,0.7s,baz=268,slow=6.4,SNR=10						
FITZ	**Fitzroy Crossi**	**54.58**	**192**	P	**P**	**17 04 05.6**	**-0.4**
	1.6nm,0.8s,baz=355,slow=4.1,SNR=4.3						
WRA	**Warramunga Arr**	**55.61**	**181**	P	**P**	**17 04 13.1**	**-0.2**
	1.6nm,0.3s,baz=359,slow=7.6,SNR=55						
WRA				PcP	**PcP**	**17 05 08.9**	**+0.8**
	0.5nm,0.7s,baz=358,slow=4.7,SNR=2.4						
ASAR	**Alice Springs**	**59.32**	**182**	P	**P**	**17 04 39.0**	**+0.1**
	0.6nm,0.6s,baz=20,slow=11,SNR=20						
ARCES	**ARCESS Array B**	**63.29**	**338**	P	**P**	**17 05 04.6**	**-0.1**
	2.4nm,0.8s,baz=55,slow=9.1,SNR=8.0						
FINES	**FINESS Array B**	**67.50**	**331**	P	**P**	**17 05 31.0**	**-0.5**
	0.9nm,0.4s,baz=73,slow=6.2,SNR=14						
STKA	**Stephens Creek**	**67.72**	**174**	P	**P**	**17 05 33.5**	**+0.3**
	1.9nm,0.7s,baz=349,slow=10,SNR=4.3						
AKASG	**Malin Array Be**	**72.18**	**320**	P	**P**	**17 05 59.3**	**-0.6**
	0.8nm,0.5s,baz=51,slow=6.6,SNR=4.5						
NOA	**NORSAR Array B**	**73.27**	**335**	P	**P**	**17 06 05.8**	**-0.4**
	0.5nm,0.5s,baz=45,slow=5.7,SNR=1.8						
NVAR	**Mina Array Bea**	**79.35**	**50**	P	**P**	**17 06 41.6**	**+0.9**
	0.2nm,0.4s,baz=299,slow=5.9,SNR=3.5						
PDAR	**Pinedale Array**	**81.71**	**42**	P	**P**	**17 06 53.3**	**+0.2**
	0.4nm,0.7s,baz=345,slow=3.2,SNR=2.4						
TXAR	**Lajitas Array**	**94.45**	**49**	P	**P**	**17 07 54.2**	**+0.3**
	0.5nm,0.8s,baz=266,slow=3.2,SNR=4.5						
LPAZ	**La Paz**	**151.22**	**53**	PKPbc	**PKPbc**	**17 14 25.4**	**-0.8**
	1.0nm,0.7s,baz=284,slow=5.2,SNR=2.5						

IDC 26 17:05:05.7±3.0,30.°26S×177.°09W,h0km,mb3.4/2, mb1 3.7/2,mb1mx3.5/32,mbtmp3.4/2,Error ellipse: s-maj=61.2km s-min=32.0km az=76.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.23**	**324**	Pn	Pn	17 05 30.2	0.0
	45nm,0.3s,baz=262,slow=24,SNR=2.0						
RAO				Sn	Sn	17 05 49.0	+1.5
	75nm,0.3s,baz=55,slow=23,SNR=2.4						
ASAR	**Alice Springs**	**43.90**	**266**	P	P	17 13 14.2	-0.2
	0.2nm,0.6s,baz=103,slow=7.0,SNR=7.9						
WRA	**Warramunga Arr**	**44.88**	**272**	P	P	17 13 21.9	-0.3
	0.4nm,0.4s,baz=111,slow=7.8,SNR=15						
FINES	**FINESS Array B**	**145.28**	**341**	PKPbc	PKPbc	17 24 43.7	-0.7
	0.9nm,0.5s,baz=31,slow=3.2,SNR=1.5						

*IDC **26** 17:10:52.2±2.5,16.˚68N×146.˚44E,h53km±23km,mb4.1/28, mb1 4.3/30,mb1mx4.2/52,mbtmp4.4/30,ML4.6/2,MS4.0/2, Ms1 4.0/2,ms1mx3.5/41,Error ellipse: s-maj=18.0km s-min=9.7km az=87.0*
*NEIC **26** 17:10:53.5±1.2,16.˚64N±0.˚08×146.˚4E±0.˚1,h65km±6km, mb4.7/121,Error ellipse: s-maj=18.0km s-min=11.3km az=109.0*

ISC 26 17:10:50.2±0.4,16.°71N±0.°05×146.°56E±0.°09,h35km,n200, σ1°24/195,mb4.8/86,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.50**	**208**	P	**Pn**	**17 11 43.9**	**+1.7**
	58nm,0.3s,baz=46,slow=2.7,SNR=29						
GUMO				LR	LR	17 12 18.6	
	comp=Z,313nm,19.9s,baz=63,slow=25						
GUMO				S	**Sn**	**17 12 22.7**	**+0.2**
	201nm,0.3s,baz=171,slow=23,SNR=4.9						
GUMO	**Guam**	**3.50**	**208**	Pn	**Pn**	**17 11 44.5**	**+2.2**
MANU	**Manus Island**	**18.65**	**177**	P	**Pn**	**17 15 05.2**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**19.27**	**82**	T	T	17 36 09.5	
	baz=275,slow=78						
H11S1	**WAKE ISLAND Hy**	**19.28**	**82**	T	T	17 36 17.0	
	baz=275,slow=78						
H11S2	**WAKE ISLAND Hy**	**19.29**	**82**	T	T	17 36 10.8	
	baz=275,slow=78						
H11N1	**WAKE ISLAND Hy**	**19.55**	**78**	T	T	17 36 20.5	
	baz=264,slow=74,SNR=38						
H11N2	**WAKE ISLAND Hy**	**19.55**	**78**	T	T	17 36 22.1	
	baz=264,slow=74,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**19.56**	**78**	T	T	17 36 20.3	
	baz=264,slow=74,SNR=7.4						
JAY	**Jayapura**	**19.95**	**197**	P	**Pn**	**17 15 20.8**	**-0.6**
	1.6nm,0.3s,baz=341,slow=2.2,SNR=15						
JAY	**Jayapura**	**19.95**	**197**	P	**Pn**	**17 15 21.5**	**+0.1**
	29nm,1.5s						
SMPI	**Sarmi**	**20.13**	**203**	P	Pn	17 15 22.6	-0.8
	31nm,0.9s						
GENI	**Genyem**	**20.19**	**199**	P	Pn	17 15 24.1	0.0
	106nm,0.9s						
JGF	**Kuroka**	**20.53**	**338**	P	**P**	**17 15 26.2**	**+0.6**
BAKI	**Biak**	**20.56**	**211**	P	Pn	17 15 28.3	-0.1
	40nm,1.1s						
MJAR	**Matsshiro Arr**	**21.10**	**341**	P	**P**	**17 15 31.2**	**-0.5**
	3.3nm,0.6s,baz=167,slow=10,SNR=11						
MJAR	**Matsushiro Arr**	**21.10**	**341**	P	**P**	**17 15 31.7**	**0.0**
MAJO	**Matsushiro**	**21.10**	**341**	P	**P**	**17 15 31.8**	**+0.1**
MAT	**Matsushiro**	**21.10**	**341**	P	**P**	**17 15 33.3**	**+1.6**
KRVT	**Keravat (AS076**	**21.57**	**165**	P	**P**	**17 15 37.7**	**+0.8**
	26nm,0.9s,baz=209,slow=1.1,SNR=4.9						
JNU	**Nakatsue**	**21.62**	**322**	P	**P**	**17 15 37.6**	**+0.3**
	7.2nm,0.9s,baz=50,slow=17,SNR=2.1						
JNU	**Nakatsue**	**21.62**	**322**	IAmb	IAmb	17 16 05.8	
	comp=Z,42nm,1.3s						
JMM	**Majmori**	**21.68**	**348**	P	**P**	**17 15 39.3**	**+1.4**
WAMI	**Wamena**	**21.88**	**201**	P	**P**	**17 15 44.5**	**+4.3**
	comp=Z,1µmcomp=Z,70nm,0.8s						
FAKI	**Fak Fak**	**24.09**	**217**	P	**P**	**17 16 02.4**	**-0.2**
JTM	**Tenmabayashi**	**24.46**	**350**	P	**P**	**17 16 07.0**	**+1.1**
SSLB	**Suanglung**	**25.01**	**291**	P	**P**	**17 16 11.3**	**+0.3**
SSLB				IAmb	IAmb	17 16 22.8	
	comp=Z,51nm,1.4s						
PMG	**Port Moresby**	**25.95**	**179**	P	**P**	**17 16 19.6**	**+0.1**
	comp=Z,21nm,0.9s,baz=356,slow=11,SNR=3.8						
KSRS	**Korea Array**	**26.41**	**325**	P	**P**	**17 16 24.0**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=143,slow=8.9,SNR=11						
KSAR	**Wonju Array Be**	**26.42**	**325**	P	**P**	**17 16 23.7**	**+0.1**
SANI	**Sanana**	**27.56**	**229**	P	**P**	**17 16 38.1**	**+4.0**
USRK	**Ussuriysk Ar.**	**30.05**	**339**	P	**P**	**17 16 55.8**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=124,slow=8.9,SNR=2.0						
BATI	**Baumata**	**35.04**	**222**	P	**P**	**17 17 36.1**	**-3.9**
	comp=Z,14nm,0.8s,baz=286,slow=2.5,SNR=5.2						
SBUM	**Sibu**	**36.61**	**251**	P	**P**	**17 17 52.9**	**-0.5**
PETK	**Petropaviovsk-**	**37.36**	**11**	P	**P**	**17 18 00.4**	**+1.1**
	comp=Z,2.6nm,0.7s,baz=188,slow=8.7,SNR=2.7						
PETK				PcP	**PcP**	**17 20 17.9**	**0.0**
	comp=Z,21nm,1.2s,baz=171,slow=2.9,SNR=4.3						
WB0	**Warramunga Arr**	**38.17**	**199**	P	**P**	**17 18 05.7**	**-0.8**
WB0				IAmb	IAmb	17 18 22.7	
	comp=Z,9.7nm,0.8s						
WR0	**Warramunga Arr**	**38.30**	**198**	P	**P**	**17 18 06.8**	**-0.8**
WR0				IAmb	IAmb	17 18 24.0	
	comp=Z,9.4nm,0.8s						
WRAB	**Tennant Creek**	**38.34**	**199**	P	**P**	**17 18 06.9**	**-1.0**
WRAB				IAmb	IAmb	17 18 24.8	
	comp=Z,14nm,1.0s						
WB2	**Warramunga Arr**	**38.34**	**199**	P	**P**	**17 18 07.1**	**-0.9**
WB2				IAmb	IAmb	17 18 23.5	
	comp=Z,14nm,0.8s						
WRA	**Warramunga Arr**	**38.35**	**199**	P	**P**	**17 18 07.2**	**-0.8**
	comp=Z,3.8nm,0.4s,baz=27,slow=8.9,SNR=101						
WRA				PcP	**PcP**	**17 20 20.8**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=16,slow=3.6,SNR=3.1						
WRA	**Warramunga Arr**	**38.35**	**199**	P	**P**	**17 18 07.0**	**-1.1**
FITZ	**Fitzroy Crossi**	**40.25**	**212**	P	**P**	**17 18 23.2**	**-0.8**
	comp=Z,5.8nm,1.0s,baz=37,slow=9.3,SNR=22						
KHON	**Khonkaen**	**41.87**	**276**	P	**P**	**17 18 41.2**	**+3.9**
AS31	**Alice Springs**	**41.99**	**197**	P	**P**	**17 18 37.5**	**-0.7**
ASAR	**Alice Springs**	**41.99**	**197**	P	**P**	**17 18 37.3**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=5.8,slow=13,SNR=66						
ASAR				PcP	**PcP**	**17 20 31.9**	**-1.2**
	comp=Z,1.5nm,0.8s,baz=29,slow=2.1,SNR=4.9						
CHAI	**Chaiyaphum**	**42.72**	**276**	P	**P**	**17 18 47.5**	**+3.2**
DZM	**Mont Dzumac**	**43.18**	**153**	LR	LR	17 34 57.5	
	comp=Z,1µm,21.9s,baz=210,slow=33						
UTTA	**Uttaradit**	**43.87**	**278**	P	**P**	**17 18 57.6**	**+4.1**
ULN	**Ulaanbaatar**	**44.84**	**323**	P	**P**	**17 19 01.4**	**+0.3**
CM34	**Chiang Mai Arr**	**45.09**	**280**	P	**P**	**17 19 06.0**	**+2.6**
CM35	**Chiang Mai Arr**	**45.10**	**280**	P	**P**	**17 19 06.0**	**+2.5**
CM36	**Chiang Mai Arr**	**45.17**	**280**	P	**P**	**17 19 07.0**	**+3.0**
SONM	**Songino Array**	**45.21**	**322**	P	**P**	**17 19 04.0**	**0.0**
	comp=Z,3.2nm,0.6s,baz=138,slow=9.0,SNR=20						
SONM	**Songino Array**	**45.21**	**322**	P	**P**	**17 19 04.9**	**+0.8**
CMMT	**Chiang Mai**	**45.29**	**280**	P	**P**	**17 19 07.5**	**+2.6**
CM02	**Chiang Mai Arr**	**45.32**	**280**	P	**P**	**17 19 08.0**	**+2.8**
CM31	**Chiang Mai Arr**	**45.32**	**280**	P	**P**	**17 19 06.2**	**+1.0**
CM31				IAmb	IAmb	17 19 28.7	
	comp=Z,7.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**45.32**	**280**	P	**P**	**17 19 05.7**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=76,slow=6.5,SNR=26						
CMAR	**Chiang Mai Arr**	**45.32**	**280**	P	**P**	**17 19 05.2**	**0.0**
MHMT	**Maesarieng**	**46.31**	**279**	P	**P**	**17 19 16.0**	**+3.0**
YAK	**Yakutsk**	**46.82**	**349**	P	**P**	**17 19 15.3**	**-0.9**
STKA	**Stephens Creek**	**48.54**	**186**	P	**P**	**17 19 28.8**	**-1.2**
	comp=Z,4.8nm,0.8s,baz=351,slow=8.2,SNR=8.5						
STKA	**Stephens Creek**	**48.54**	**186**	P	**P**	**17 19 29.2**	**-0.8**
PSI	**Prapat**	**48.78**	**259**	P	**P**	**17 19 29.2**	**-3.2**
	comp=Z,2.9nm,0.3s,baz=360,slow=14,SNR=6.6						
RPSI	**Rantau Prapat**	**48.82**	**259**	P	**P**	**17 19 31.9**	**-0.6**
RPSI				IAmb	IAmb	17 19 50.4	
	comp=Z,14nm,1.0s						
GSI	**Gunungsitoli**	**50.56**	**258**	P	**P**	**17 19 45.9**	**+0.1**
LSA	**Lhasa**	**52.10**	**295**	P	**P**	**17 19 58.2**	**+0.5**
BILL	**Bilibino**	**52.84**	**9**	P	**P**	**17 20 03.4**	**+1.4**
TIXI	**Tiksi**	**55.93**	**353**	P	**P**	**17 20 24.2**	**-0.2**
ZALV	**Zalesovo Beam**	**60.09**	**323**	P	**P**	**17 20 52.5**	**-1.3**
	comp=Z,1.8nm,0.8s,baz=114,slow=6.5,SNR=2.1						
MKAR	**Makanchi Array**	**60.43**	**315**	P	**P**	**17 20 54.9**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=94,slow=7.6,SNR=5.5						
MKAR	**Makanchi Array**	**60.43**	**315**	P	**P**	**17 20 54.5**	**-1.8**
BRLK	**Bradley Lake**	**61.97**	**31**	P	**P**	**17 21 06.7**	**+0.2**
IMAR	**Indian Mountai**	**62.70**	**23**	P	**P**	**17 21 12.1**	**+0.8**
KTH	**Kantishna Hill**	**63.03**	**26**	P	**P**	**17 21 14.3**	**+0.7**
BPAW	**Bear Paw Mtn.**	**63.17**	**26**	P	**P**	**17 21 14.9**	**+0.5**
TRF	**Thorofare Moun**	**63.27**	**27**	P	**P**	**17 21 15.5**	**+0.2**
KURK	**Kurchatov**	**63.30**	**319**	P	**P**	**17 21 15.4**	**-0.1**
NRIK	**Noril'sk**	**63.75**	**340**	P	**P**	**17 21 17.6**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=132,slow=10,SNR=3.8						
BWN	**Browne**	**63.83**	**26**	P	**P**	**17 21 20.1**	**+1.3**
RND	**Reindeer**	**63.88**	**27**	P	**P**	**17 21 19.5**	**+0.3**
RND				IAmb	IAmb	17 21 30.2	
	comp=Z,5.9nm,0.7s						
RND				PcP	**PcP**	**17 21 55.1**	**+0.3**
A21K	**Barrow**	**63.93**	**17**	P	**P**	**17 21 20.2**	**+0.9**
I23K	**Minto, Yukon-K**	**64.15**	**25**	P	**P**	**17 21 21.9**	**+1.0**
SCM	**Sheep Creek Mo**	**64.17**	**29**	P	**P**	**17 21 22.2**	**+1.0**
DHY	**Denali Highway**	**64.44**	**27**	P	**P**	**17 21 23.3**	**+0.3**
DHY				IAmb	IAmb	17 21 24.9	
	comp=Z,17nm,1.4s						
COLD	**Coldfoot**	**64.46**	**23**	P	**P**	**17 21 24.3**	**+1.4**
COLD				IAmb	IAmb	17 21 25.5	
	comp=Z,12nm,1.2s						
WRH	**Wood River Hil**	**64.49**	**26**	P	**P**	**17 21 23.4**	**+0.3**
WRH				IAmb	IAmb	17 21 24.3	
	comp=Z,12nm,1.1s						
MDM	**Murphy Dome**	**64.56**	**25**	P	**P**	**17 21 24.1**	**+0.5**
MDM				IAmb	IAmb	17 21 42.0	
	comp=Z,7.6nm,1.0s						
CCB	**Clear Creek Bu**	**64.65**	**26**	P	**P**	**17 21 24.2**	**+0.1**
CCB				IAmb	IAmb	17 21 25.3	
	comp=Z,6.2nm,1.0s						
KLU	**Klutina**	**64.75**	**29**	P	**P**	**17 21 24.6**	**-0.4**
KLU				IAmb	IAmb	17 21 27.4	
	comp=Z,12nm,1.2s						
HDA	**Harding Lake**	**64.95**	**26**	P	**P**	**17 21 26.0**	**-0.2**
HDA				IAmb	IAmb	17 21 27.0	
	comp=Z,9.2nm,1.1s						
IL31		**65.07**	**26**	P	**P**	**17 21 26.1**	**-0.7**
IL31				IAmb	IAmb	17 21 27.6	
	comp=Z,13nm,1.1s						
ILAR	**Eielson Array**	**65.07**	**26**	P	**P**	**17 21 26.1**	**-0.7**
	comp=Z,8.2nm,1.1s,baz=261,slow=5.2,SNR=31						
TOLK	**Toolik Lake Re**	**65.14**	**21**	P	**P**	**17 21 28.7**	**+1.4**
TOLK				IAmb	IAmb	17 21 45.5	
	comp=Z,11nm,0.8s						
PAX	**Paxson**	**65.27**	**28**	P	**P**	**17 21 25.6**	**-2.7**
PAX				IAmb	IAmb	17 21 29.7	
	comp=Z,9.6nm,1.0s						
RIDG	**Independent Ri**	**65.70**	**27**	P	**P**	**17 21 31.9**	**+0.8**
GLB	**Gilahina Butte**	**65.74**	**30**	P	**P**	**17 21 32.4**	**+1.0**
GLB				IAmb	IAmb	17 21 33.7	
	com

KVN	**Kaiserville**	**83.70**	**51**	P	**P**	**17 23 17.0**	**+1.1**
KVN				IAmb	IAmb	17 23 18.3		
	comp=Z,7.4nm,0.9s							
NVAR	**Mina Array Bea**	**83.72**	**52**	P	**P**	**17 23 17.2**	**+1.1**
	comp=Z,5.9nm,0.8s,baz=262,slow=6.4,SNR=42							
NVAR	**Mina Array Bea**	**83.72**	**52**	P	**P**	**17 23 16.6**	**+0.5**
MFID	**Camas Ranch**	**84.08**	**47**	P	**P**	**17 23 16.6**	**-1.2**
MFID				IAmb	IAmb	17 23 19.7		
	comp=Z,10nm,0.9s							
ISA	**Isabella, Lake**	**84.36**	**55**	P	**P**	**17 23 19.2**	**-0.1**
TULEG	**Thule**	**84.57**	**8**	P	**P**	**17 23 19.4**	**+0.1**
TULEG	**Thule**	**84.57**	**8**	*i* P	**P**	**17 23 20.4**	**+1.1**
TULEG				IAmb	IAmb	17 23 20.9		
	comp=Z,55nm,1.2s							
ARCES	**ARCESS Array B**	**84.63**	**342**	P	**P**	**17 23 19.0**	**-0.9**
	comp=Z,5.4nm,0.9s,baz=69,slow=5.9,SNR=7.1							
TPH	**Tonopah**	**84.63**	**52**	P	**P**	**17 23 20.9**	**+0.2**
HLID	**Hailey**	**85.02**	**46**	P	**P**	**17 23 23.5**	**+1.0**
ELK	**Elko**	**85.30**	**49**	P	**P**	**17 23 25.2**	**+1.0**
ELK				IAmb	IAmb	17 23 26.1		
	comp=Z,5.7nm,0.8s							
TPNV	**Topopah Spring**	**85.70**	**53**	P	**P**	**17 23 26.6**	**+0.4**
TPNV				IAmb	IAmb	17 23 27.8		
	comp=Z,5.1nm,0.9s							
HRY	**Holter Researc**	**85.72**	**43**	P	**P**	**17 23 26.3**	**+0.4**
GSC	**Goldstone, Bar**	**85.77**	**55**	P	**P**	**17 23 27.0**	**+0.6**
GSC				IAmb	IAmb	17 23 28.6		
	comp=Z,5.7nm,1.0s							
R11A	**Troy Canyon, C**	**85.78**	**51**	P	**P**	**17 23 27.3**	**+0.8**
DAG	**Danmarks Havn**	**86.29**	**357**	*i* P	**P**	**17 23 27.0**	**-1.0**
	comp=Z,9.3nm,1.0s							
DAG	**Danmarks Havn**	**86.29**	**357**	*i* P	**P**	**17 23 27.0**	**-1.0**
DAG				IAmb	IAmb	17 23 28.6		
	comp=Z,9.3nm,1.0s							
PRN	**Pahroc Range**	**86.48**	**52**	P	**P**	**17 23 30.8**	**+0.9**
PRN				IAmb	IAmb	17 23 32.4		
	comp=Z,5.4nm,1.1s							
SPR3	**Spring Creek 3**	**86.51**	**50**	P	**P**	**17 23 30.9**	**+0.7**
SPR3				IAmb	IAmb	17 23 32.5		
	comp=Z,8.3nm,1.0s							
PFO	**Pinyon Flats O**	**86.55**	**56**	P	**P**	**17 23 30.7**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=218,slow=5.0,SNR=4.2							
PFO	**Pinyon Flats O**	**86.55**	**56**	P	**P**	**17 23 30.4**	**+0.1**
PFO				IAmb	IAmb	17 23 32.3		
	comp=Z,5.5nm,0.9s							
HVU	**Hansel Valley**	**86.73**	**47**	P	**P**	**17 23 32.0**	**+0.9**
PSUT	**Pine Spring**	**87.01**	**51**	P	**P**	**17 23 32.4**	**-0.2**
DUG	**Dugway, Tooele**	**87.23**	**49**	P	**P**	**17 23 34.4**	**+0.9**
DUG				IAmb	IAmb	17 23 35.4		
	comp=Z,7.2nm,0.8s							
IMW	**Indian Meadow**	**87.28**	**45**	P	**P**	**17 23 34.6**	**+0.8**
IMW				IAmb	IAmb	17 23 52.2		
	comp=Z,5.0nm,0.8s							
HWUT	**Hardware Ranch**	**87.64**	**47**	P	**P**	**17 23 35.8**	**+0.3**
HWUT				IAmb	IAmb	17 23 37.7		
	comp=Z,7.1nm,0.8s							
CCUT	**Cedar City**	**87.70**	**52**	P	**P**	**17 23 36.4**	**+0.4**
W13A	**Hualapai Mount**	**88.10**	**54**	P	**P**	**17 23 37.9**	**0.0**
KBZ	**Khabaz**	**88.12**	**315**	P	**P**	**17 23 37.5**	**0.0**
	comp=Z,2.0nm,0.8s,baz=360,slow=5.9,SNR=3.8							
MVU	**Marysvale**	**88.24**	**50**	P	**P**	**17 23 38.0**	**-0.5**
MSU	**Marysvale**	**88.26**	**50**	P	**P**	**17 23 38.8**	**+0.2**
KNB	**Kanab**	**88.29**	**52**	P	**P**	**17 23 38.2**	**-0.5**
FFC	**Flin Flon**	**88.32**	**33**	P	**P**	**17 23 38.6**	**+0.4**
MTPU	**Mount Pierson**	**88.42**	**51**	P	**P**	**17 23 40.5**	**+1.0**
PDAR	**Pinedale Array**	**88.63**	**46**	P	**P**	**17 23 40.8**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=297,slow=6.0,SNR=2.6							
U15A	**North Rim**	**88.89**	**52**	P	**P**	**17 23 40.6**	**-1.0**
U15A				IAmb	IAmb	17 23 44.8		
	comp=Z,7.0nm,1.1s							
FINES	**FINESS Array B**	**89.03**	**336**	P	**P**	**17 23 38.1**	**-3.2**
	comp=Z,1.2nm,0.6s,baz=57,slow=4.1,SNR=8.5							
SRU	**San Rafael Swe**	**89.27**	**49**	P	**P**	**17 23 43.8**	**+0.5**
WUAZ	**Wupatki**	**89.90**	**53**	P	**P**	**17 23 45.1**	**-1.2**
PV23	**Carpenter Ridg**	**90.61**	**50**	P	**P**	**17 23 49.9**	**+0.2**
PV14	**Lion Creek, Pa**	**90.63**	**50**	P	**P**	**17 23 48.6**	**-1.1**
PV19	**Morning Glory**	**90.68**	**50**	P	**P**	**17 23 49.9**	**0.0**
PV17	**East Wray Mesa**	**90.71**	**50**	P	**P**	**17 23 50.1**	**0.0**
ULM	**Lac du Bonnet**	**93.76**	**35**	P	**P**	**17 24 03.5**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=313,slow=8.0,SNR=3.3							
USHA	**Ushuaia**	**133.41**	**153**	PKP	**PKPdf**	**17 30 01.8**	**-0.6**
	comp=Z,28nm,0.5s,baz=22,slow=0.4,SNR=4.4							
TORD	**Torodi Ar. Bea**	**134.33**	**308**	PKP	**PKPdf**	**17 30 03.7**	**-1.7**
	comp=Z,1.7nm,0.9s,baz=26,slow=3.1,SNR=5.6							
SDV	**Santo Domingo**	**135.28**	**58**	PKP	**PKPdf**	**17 30 06.7**	**-0.7**
	comp=Z,4.5nm,0.7s,baz=39,slow=2.0,SNR=5.2							
PLCA	**Paso Flores**	**140.04**	**134**	PKP	**PKPdf**	**17 30 14.2**	**-1.1**
	comp=Z,5.2nm,1.1s,baz=189,slow=4.0,SNR=5.7							
PLCA	**Paso Flores**	**140.04**	**134**		**PKPdf**	**17 30 15.6**	**+0.2**
LVC	**Limon Verde**	**146.14**	**106**	PKPbc	**PKPdf**	**17 30 26.5**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=266,slow=5.2,SNR=5.2							
LPAZ	**La Paz**	**146.76**	**94**	PKPbc	**PKPbc**	**17 30 30.5**	**+0.2**
	comp=Z,7.6nm,0.9s,baz=302,slow=3.7,SNR=13							
SIV	**San Ignacio**	**153.48**	**92**	PKP	**PKPdf**	**17 30 38.2**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=265,slow=2.4,SNR=4.6							
SIV				PKPbc	**PKPbc**	**17 30 46.1**	**+0.1**
	comp=Z,4.2nm,1.0s,baz=213,slow=1.8,SNR=10							

INET ***26*** *17:14:07.7, 10°.95N×86°.75W, h10km, ML2.6, MW3.3*
UCR 26 17:14:07.3±1.5, 10°.67N×86°.81W, h28km±474km, MW3.8, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GBS3	**Finca Las Img**	**1.34**	**85**	*i* P	Pn	17 14 29.5	-0.6
GBS3				*i* S	Sb	17 14 48.6	0.0
GUAI	**GUAI**	**1.34**	**107**	*i* P	Pn	17 14 30.2	+0.1
GUAI				*i* S	Sn	17 14 47.1	0.0
LAPC	**Finca la Perla**	**1.36**	**86**	*i* P	Pn	17 14 29.9	-0.6
ORTG	**Ortega, Santa**	**1.37**	**103**	*e*P	Pn	17 14 30.4	-0.2
BUEV	**Buena Vista**	**1.39**	**85**	*e*P	Pn	17 14 30.6	-0.2
BUEV				*i* S	Sn	17 14 48.6	+0.2
BUAI	**Buenos Aires**	**1.47**	**82**	*i* P	Pn	17 14 31.9	0.0
PLVR	**Palo Verde**	**1.47**	**102**	*e*P	Pn	17 14 32.9	+0.8
CUI	**Cuipilapa**	**1.62**	**90**	*e*P	Pn	17 14 34.2	+0.1
JTS	**Las Juntas de**	**1.87**	**102**	*e*P	Pn	17 14 37.8	+0.4

MOS ***26*** *17:16:01.3±0.9, 1°.85N×126°.30E, h34km, mb5.2/36, Error ellipse: s-maj=9.3km s-min=5.0km az=110.5*
BJI ***26*** *17:16:01.5±0.0, 1°.74N×126°.49E, h38km, mB5.3/31, mb4.8/63, Ms4.7/14, Ms7 4.7/14*
NEIC ***26*** *17:16:02.9±2.3, 1°.77N±0°.06×126°.49E±0°.06, h35km±1km, mb5.0/80, Error ellipse: s-maj=13.0km s-min=7.8km az=47.0*
DJA ***26*** *17:16:03.1±1.0, 2°.N±2°.×12°.7E±°, h19km±8km, M4.7/28, mb4.8/28, mB5.2/12, MLv4.8/17, Mw(mB)4.5/12*
KLM ***26*** *17:16:04.0, 1°.84N×126°.72E, h51km, mb5.1*
IDC ***26*** *17:16:06.6±1.5, 1°.83N×126°.45E, h64km±13km, mb4.4/29, mb1 4.5/34, mb1mx4.4/46, mbtmp4.7/34, Error ellipse: s-maj=15.6km s-min=7.6km az=83.0*
ISC 26 17:16:04.5±0.3, 1°.89N±0°.04×126°.56E±0°.05, h47km, n356, σ1s57/376, mb4.9/128, 4C-6D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.37**	**144**	P	**Pn**	**17 16 25.6**	**-1.6**
TNTI				S	**Sn**	**17 16 45.3**	**+1.1**
TNTI	**Ternate**	**1.37**	**144**	Pn	**Pn**	**17 16 25.8**	**-1.4**
TNTI				Sn	**Sn**	**17 16 42.6**	**-1.6**
SGSI	**Sangihe**	**2.06**	**330**	P	**Pn**	**17 16 35.7**	**-1.0**
KMSI	**Cibinong**	**2.89**	**243**	P	**Pn**	**17 16 48.5**	**+0.4**
GTOI	**Gorontalo**	**3.76**	**251**	P	**Pn**	**17 17 00.8**	**+0.8**
SANI	**Sanana**	**3.95**	**188**	P	**Pn**	**17 17 01.9**	**-0.8**
LUWI	**Luwuk**	**4.78**	**232**	P	**Pn**	**17 17 15.7**	**+1.7**
LUWI	**Luwuk**	**4.78**	**232**	Pn	**Pn**	**17 17 15.5**	**+1.5**
MRSI	**Marisa**	**4.83**	**253**	P	**Pn**	**17 17 16.3**	**+1.6**
SKMP	**Bagumbayan, Su**	**5.02**	**336**	*e*P	**Pn**	**17 17 16.3**	**-1.1**
SKMP				*e*S	**Sn**	**17 18 13.9**	**-0.3**
NLAI	**Namlea**	**5.12**	**174**	P	**Pn**	**17 17 18.6**	**-0.1**
	0.5nm2μm100nm,0.8s						
DAV	**Davao City (W)**	**5.24**	**349**	P	**Pn**	**17 17 23.6**	**+3.3**
	39nm,0.3s,baz=252,slow=7.1,SNR=1.4						
DAV				S	**Sn**	**17 18 23.1**	**+3.6**
	90nm,0.3s,baz=360,slow=20,SNR=3.6						
DAV	**Davao City (W)**	**5.24**	**349**		**Pn**	**17 17 23.1**	**+2.8**
APSI	**Ampana**	**5.64**	**241**	P	**Pn**	**17 17 28.1**	**+2.2**
	1.5nm5μm487nm,1.4s						
MSAI	**Masohi**	**5.71**	**156**	P	**Pn**	**17 17 28.4**	**+1.5**
	0.2nm27nm,1.0s						
TOLI2	**Tolitoli**	**5.83**	**262**	Pn	**Pn**	**17 17 27.1**	**-1.3**
BUKP	**Musuan**	**6.13**	**346**	*e*P	**Pn**	**17 17 35.1**	**+2.4**
BUKP				*e*S	**Sn**	**17 18 37.1**	**-4.5**
PAGZ	**Pagadian**	**6.71**	**332**	*e*P	**Pn**	**17 17 39.4**	**-1.2**
PAGZ				*e*S	**Sn**	**17 18 55.0**	**-0.8**
CGP	**Cagayan de Oro**	**6.78**	**344**	*i* P	Pn	17 17 48.3	+6.7
MPSI	**Mapaga**	**6.84**	**257**	P	**Pn**	**17 17 45.1**	**+2.8**
	0.3nm1μm53nm,0.9s						
KDI	**Kendari**	**7.02**	**214**	P	**Pn**	**17 17 46.7**	**+1.9**
	0.4nm64nm,0.6s						
FAKI	**Fak Fak**	**7.43**	**130**	P	**Pn**	**17 17 52.3**	**+1.9**
	0.3nm971nm51nm,1.2s						
GLSP	**General Luna,**	**7.86**	**357**	*e*P	**Pn**	**17 17 59.9**	**+3.6**
TTSI	**Tana Toraja**	**8.33**	**234**	P	**Pn**	**17 18 02.8**	**0.0**
	987nm85nm,0.7s						
MYLDM	**Lahad Datu**	**8.68**	**292**	Pn	**Pn**	**17 18 07.7**	**+0.1**
SPSI	**Sidrap Palu**	**8.94**	**229**	P	**Pn**	**17 18 11.7**	**+0.6**
	739nm35nm,0.5s						
BNSI	**Bone**	**8.98**	**226**	P	**Pn**	**17 18 11.5**	**-0.2**
	668nm54nm,0.8s						
BKSI	**Bulukumba**	**9.63**	**222**	P	**Pn**	**17 18 21.0**	**+0.5**
	779nm42nm,0.9s						
KAPI	**Kapang**	**9.66**	**225**	P	**Pn**	**17 18 21.2**	**+0.3**
	3.6nm,0.3s,baz=91,slow=5.1,SNR=6.8						
KAPI	**Kappang**	**9.66**	**225**	P	**Pn**	**17 18 17.2**	**-3.8**
KAPI	**Kappang**	**9.66**	**225**	Pn	**Pn**	**17 18 17.2**	**-3.8**
SPMM	**Sapulut**	**10.46**	**286**	P	**Pn**	**17 18 34.0**	**+2.0**
KKM	**Kota Kinabalu**	**11.11**	**292**	Pn	**Pn**	**17 18 41.1**	**+0.1**
SOEI	**Soe**	**11.79**	**191**	P	Pn	17 18 58.6	+8.3
SOEI	**Soe**	**11.79**	**191**	Pn	**Pn**	**17 18 48.5**	**-1.8**
BATI	**Baumata**	**12.36**	**193**	P	**Pn**	**17 18 59.7**	**+1.8**
	0.2nm,0.3s,baz=91,slow=24,SNR=1.5						
SBUM	**Sibu**	**14.34**	**272**	Pn	**Pn**	**17 19 22.5**	**-2.4**
SBUM	**Sibu**	**14.34**	**272**	P	**P**	**17 19 28.0**	**-2.9**
JAY	**Jayapura**	**14.80**	**107**	P	**P**	**17 19 34.6**	**-1.4**
	1.1nm,0.3s,baz=297,slow=19,SNR=8.4						
JAY	**Jayapura**	**14.80**	**107**	P	**P**	**17 19 37.9**	**+1.8**
MTN	**Manton Dam**	**15.32**	**163**	Pn	**Pn**	**17 19 36.1**	**-1.7**
KMMI	**Kalianget**	**15.39**	**235**	P	**P**	**17 19 45.5**	**+3.0**
DNP	**Denpasar**	**15.43**	**227**	P	**P**	**17 19 49.3**	**+6.3**
KSM	**Kuching**	**16.25**	**269**	P	**P**	**17 19 51.7**	**-0.4**
KSM	**Kuching**	**16.25**	**269**	P	**P**	**17 19 54.0**	**+1.9**
GMJI	**Gumukmas**	**16.52**	**232**	P	P	17 20 04.6	+9.5
KNRA	**Kununurra**	**17.59**	**173**	P	**Pn**	**17 20 04.4**	**-2.0**
PWJI	**Pagerwojo**	**17.71**	**236**	P	P	17 20 17.9	+10
TPI	**Tanjungpandan**	**19.46**	**256**	P	**Pn**	**17 20 30.7**	**+1.7**
	23nm,1.4s						
KPJI	**Karang Pucung**	**19.83**	**242**	P	**P**	**17 20 32.1**	**+0.5**
	52nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.88**	**183**	P	**P**	**17 20 31.0**	**-1.0**
	1.0nm,0.3s,baz=21,slow=9.3,SNR=9.6						
FITZ	**Fitzroy Crossi**	**19.88**	**183**	P	**P**	**17 20 30.9**	**-1.2**
LEM	**Lembang**	**20.80**	**245**	P	**P**	**17 20 42.2**	**0.0**
	19nm,0.5s,baz=305,slow=21,SNR=2.0						
PPBI	**Pangkal Pinang**	**20.81**	**259**	P	**P**	**17 20 43.4**	**+1.2**
	22nm,1.0s						
TPUB	**Ta-pu**	**22.05**	**345**	P	**P**	**17 20 53.2**	**-2.2**
TPUB				IAmb	IAmb	17 20 59.3		
	comp=Z,63nm,0.9s							
SSLB	**Suanglung**	**22.44**	**346**	P	**P**	**17 20 58.6**	**-1.0**
SSLB				IAmb	IAmb	17 21 07.4		
	comp=Z,55nm,1.2s							
MYKOM	**Kota Tinggi**	**22.70**	**270**	P	**P**	**17 21 03.0**	**+0.5**
WB0	**Warramunga Arr**	**22.85**	**161**	P	**P**	**17 21 02.8**	**-1.2**
WRAB	**Tennant Creek**	**22.99**	**161**	*i* P	**P**	**17 21 04.0**	**-1.5**
WRAB				pmax	pmax			
	comp=Z,44nm,1.0s							
WRAB	**Tennant Creek**	**22.99**	**161**	P	**P**	**17 21 03.9**	**-1.5**
WRAB				IAmb	IAmb	17 21 08.1		
	comp=Z,60nm,1.1s							
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**17 21 04.3**	**-1.2**
	comp=Z,27nm,0.4s,baz=339,slow=11,SNR=92							
WRA				PcP	**PcP**	**17 24 53.5**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=333,slow=2.1,SNR=2.4							
WRA				S	**S**	**17 25 09.9**	**-2.8**
	comp=Z,1.9nm,1.0s,baz=340,slow=26,SNR=3.5							
WRA				ScP	**ScP**	**17 28 27.4**	**-1.0**
	comp=Z,0.7nm,1.0s,baz=336,slow=3.5,SNR=2.6							
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**17 21 03.4**	**-2.1**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.6s							
WRA	**Warramunga Arr**	**23.00**	**161**	P	**P**	**17 21 03.4**	**-2.1**
WB2	**Warramunga Arr**	**23.00**	**161**	P	**P**	**17 21 03.7**	**-1.8**
WR0	**Warramunga Arr**	**23.08**	**161**	P	**P**	**17 21 05.0**	**-1.3**
YHNB	**Yeheng**	**23.20**	**348**	P	**P**	**17 21 06.3**	**-1.1**
YHNB				IAmb	IAmb	17 21 10.8		
	comp=Z,48nm,1.0s							
QIZ	**Qiongzhong**	**23.63**	**317**	P	**P**	**17 21 11.0**	**-0.6**
QIZ				S	**S**	**17 25 26.8**	**+3.8**
QIZ				LR	LR			
	comp=Z,720nm,21.0s							
QIZ				LR	LR			
	comp=Z,810nm,20.0s							
QIZ				LR	LR			
	comp=Z,1μm,24.5s							
JOW	**Kunigami**	**24.86**	**4**	P	**P**	**17 21 22.9**	**+0.2**
AS31	**Alice Springs**	**26.39**	**165**	P	**P**	**17 21 36.2**	**-0.5**
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**17 21 37.5**	**+0.8**
	comp=Z,3.4nm,0.3s,baz=348,slow=14,SNR=31							
ASAR				PcP	**PcP**	**17 25 02.5**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=354,slow=2.1,SNR=4.9							
ASAR				S	**S**	**17 26 09.0**	**+2.0**
	comp=Z,1.3nm,0.9s,baz=348,slow=21,SNR=3.9							
ASAR				ScP	**ScP**	**17 28 33.9**	**-4.0**
	comp=Z,0.2nm,0.5s,baz=352,slow=3.0,SNR=1.4							
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**17 21 36.6**	**-0.1**
ASAR	**Alice Springs**	**26.39**	**165**	P	**P**	**17 21 36.5**	**-0.1**
RPSI	**Rantau Prapat**	**27.63**	**272**	P	**P**	**17 21 47.4**	**-0.5**
PSI	**Prapat**	**27.63**	**272**	P	**P**	**17 21 47.4**	**-0.7**
	comp=Z,6.8nm,0.8s,baz=179,slow=1.9,SNR=3.9							
CHAI	**Chaiyaphum**	**27.93**	**301**	P	**P**	**17 21 53.0**	**+2.3**
	comp=Z,21nm,0.8s							
NONG	**Nongkai**	**28.04**	**306**	P	**P**	**17 21 53.5**	**+1.9**
	comp=Z,9μmcomp=Z,27nm,0.9s							
CTA	**Charters Tower**	**29.16**	**139**	P	**P**	**17 22 05.3**	**+3.8**
	comp=Z,3.9nm,0.5s,baz=323,slow=10,SNR=5.2							
UTHA	**Uthaitani**	**29.99**	**298**	P	**P**	**17 22 12.5**	**+3.7**
	comp=Z,10nm,0.8s							
UTTA	**Uttaradit**	**30.01**	**303**	P	**P**	**17 22 12.8**	**+3.8**
	comp=Z,13nm,0.8s							
SUKH	**Sukhothai**	**30.66**	**302**	P	**P**	**17 22 19.0**	**+4.2**
	comp=Z,17nm,0.7s							
WHN	**Wuhan**	**30.76**	**339**	P	**P**	**17 22 18.8**	**+3.3**
NJ2	**Nanjing**	**30.87**	**347**	*e*P	**P**	**17 22 18.3**	**+1.8**
NJ2				pmax	pmax			
	comp=Z,14nm,0.8s							
NJ2				LR	LR			
	comp=Z,950nm,19.9s							
NJ2				LR	LR			
	comp=Z,840nm,20.6s							
NJ2				LR	LR			
	comp=Z,2μm,22.3s							
GYA	**Guiyang**	**31.02**	**324**	⇓P	P	17 22 25.5	+7.5
GYA				pmax	pmax			
	comp=Z,5.0nm,1.3s							
JNU	**Nakatsue**	**31.33**	**7**	P	**P**	**17 22 21.8**	**+1.1**
	comp=Z,41nm,0.8s,baz=172,slow=4.3,SNR=14							
JNU	**Nakatsue**	**31.33**	**7**	P	**P**	**17 22 21.9**	**+1.3**
PAYA	**Payao**	**31.36**	**305**	P	**P**	**17 22 23.8**	**+2.7**
	comp=Z,1μmcomp=Z,110nm,1.0s							
CM04	**Chiang Mai Arr**	**31.63**	**303**	P	P	17 22 30.7	+7.3
	comp=Z,36nmcomp=Z,4.4nm,1.0s							
CM09	**Chiang Mai Arr**	**31.64**	**303**	P	**P**	**17 22 27.0**	**+3.5**
	comp=Z,50nmcomp=Z,7.0nm,0.9s							
CM01	**Chiang Mai Arr**	**31.66**	**303**	P	**P**	**17 22 28.0**	**+4.3**
	comp=Z,40nmcomp=Z,5.1nm,1.0s							
CM02	**Chiang Mai Arr**	**31.68**	**303**	P	**P**	**17 22 28.0**	**+4.2**
	comp=Z,46nmcomp=Z,4.8nm,0.9s							
CM31	**Chiang Mai Arr**	**31.69**	**303**	P	**P**	**17 22 28.0**	**+4.1**
	comp=Z,109nm,0.7s							
CMAR	**Chiang Mai Arr**	**31.69**	**303**	P	**P**	**17 22 24.4**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=122,slow=7.5,SNR=13							
CMAR				PcP	**PcP**	**17 25 14.7**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=173,slow=1.6,SNR=7.1							
CMAR				PKiKP	**PKiKP**	**17 32 44.2**	**0.0**
	comp=Z,0.4nm,0.3s,baz=98,slow=1.8,SNR=5.8							
CMAR	**Chiang Mai Arr**	**31.69**	**303**	P	**P**	**17 22 23.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**31.69**	**303**	P	**P**	**17 22 23.2**	**-0.7**
CM13	**Chiang Mai Arr**	**31.70**	**303**	P	**P**	**17 22 27.0**	**+3.0**
	comp=Z,35nmcomp=Z,4.2nm,1.0s							
CM15	**Chiang Mai Arr**	**31.70**	**303**	P	**P**	**17 22 28.1**	**+4.1**
	comp=Z,5.9nm,0.7s							
CM34	**Chiang Mai Arr**	**31.71**	**304**	P	**P**	**17 22 26.0**	**+1.9**
CMMT	**Chiang Mai**	**31.86**	**304**	P	**P**	**17 22 26.9**	**+1.5**
	comp=Z,4.4nm,1.1s							
CM33	**Chiang Mai Arr**	**31.86**	**304**	P	**P**	**17 22 27.0**	**+1.6**
CHTO	**Chiang Mai**	**31.86**	**304**	P	**P**	**17 22 24.9**	**-0.5**
CHTO				pmax	pmax			
	comp=Z,6.0nm,0.8s							
CHTO	**Chiang Mai**	**31.86**	**304**	P	**P**	**17 22 24.9**	**-0.5**
CM32	**Chiang Mai Arr**	**31.86**	**303**	P	**P**	**17 22 29.0**	**+3.6**
MHMT	**Maesarieng**	**32.42**	**302**	P	**P**	17 22 39.3	+9.0
FORT	**Forrest**	**32.52**	**178**	P	**P**	**17 22 30.7**	**-0.3**
ENH	**Enshi**	**32.55**	**332**	P	**P**	**17 22 30.6**	**-0.7**
ENH				IAmb	IAmb	17 22 32.9		
	comp=Z,21nm,0.9s							
KMI	**Kunming**	**32.58**	**317**	⇓*e*P	**P**	**17 22 33.3**	**+1.4**
KMI				pmax	pmax			
	comp=Z,16nm,0.7s							
JWT	**Wachi**	**34.23**	**13**	P	**P**	**17 22 46.3**	**+0.4**
INU	**Inuyama**	**34.68**	**15**	P	**P**	**17 22 51.2**	**+1.4**
KSAR	**Wonju Array Be**	**35.40**	**2**	P	**P**	**17 22 55.3**	**-0.6**
KSAR	**Wonju Array Be**	**35.40**	**2**	P	**P**	**17 22 55.3**	**-0.6**
KSRS	**Korea Array**	**35.41**	**2**	P	**P**	**17 22 57.4**	**+1.4**
	comp=Z,8.8nm,0.8s,baz=182,slow=9.9,SNR=26							
KSRS				PcP	**PcP**	**17 25 25.6**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=150,slow=1.6,SNR=4.5							
KS19	**Wonju Array Si**	**35.46**	**2**	P	**P**	**17 22 56.6**	**+0.1**
KS19				IAmb	IAmb	17 23 00.3		
	comp=Z,16nm,1.0s							
XAN	**Xi'an**	**35.99**	**335**	P	**P**	**17 23 00.3**	**-0.8**
XAN				pP	pP	17 23 08.3	-4.7
XAN				pmax	pmax			
	comp=Z,14nm,0.9s							
XAN	**Xi'an**	**35.99**	**335**	P	**P**	**17 23 00.3**	**-0.8**
XAN				pmax	pmax			
	comp=Z,10.0nm,0.8s							
XAN	**Xi'an**	**35.99**	**335**	P	**P**	**17 23 00.3**	**-0.8**
XAN				IAmb	IAmb	17 23 02.4		
	comp=Z,9.7nm,0.8s							
CD2	**Chengdu**	**36.04**	**326**	P	**P**	**17 23 01.0**	**-0.6**
CD2				pmax	pmax			
	comp=Z,30nm,1.2s							
MJAR	**Matsushiro Arr**	**36.12**	**16**	P	**P**	**17 23 02.5**	**+0.4**
	comp=Z,19nm,0.9s,baz=187,slow=9.2,SNR=19							
MJAR	**Matsushiro Arr**	**36.12**	**16**	P	**P**	**17 23 01.3**	**-0.9**
MJAR				pmax	pmax			
	comp=Z,10.0nm,1.0s							
MJAR	**Matsushiro Arr**	**36.12**	**16**	P	**P**	**17 23 01.3**	**-0.9**
MAJO	**Matsushiro**	**36.13**	**16**	*i* P	**P**	**17 23 02.1**	**-0.1**
MAJO				pmax	pmax			
	comp=Z,26nm,0.9s							
MAJO	**Matsushiro**	**36.13**	**16**	P	**P**	**17 23 01.8**	**-0.4**
MAJO				IAmb	IAmb	17 23 05.3		
	comp=Z,30nm,0.9s							
MAT	**Matsushiro**	**36.13**	**16**	P	**P**	**17 23 02.1**	**-0.1**
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**17 23 05.5**	**+0.2**
	comp=Z,3.8nm,0.3s,baz=338,slow=9.6,SNR=10							
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**17 23 04.9**	**-0.4**
STKA				pmax	pmax			
	comp=Z,4.0nm,1.1s							
STKA	**Stephens Creek**	**36.49**	**158**	P	**P**	**17 23 04.9**	**-0.4**
DL2	**Dalian**	**37.12**	**354**	P	**P**	**17 23 13.0**	**+2.5**
DL2				pmax	pmax			
	comp=Z,39nm,0.7s							
BJT	**Baijiatuan**	**39.11**	**347**	P	**P**	**17 23 27.0**	**-0.4**
BJT				pmax	pmax			
	comp=Z,14nm,0.8s							
BJT	**Baijiatuan**	**39.11**	**347**	P	**P**	**17 23 27.0**	**-0.4**
BJT				IAmb	IAmb	17 23 31.4		
	comp=Z,14nm,0.8s							
BJI	**Beijing**	**39.13**	**347**	P	**P**	**17 23 30.0**

	comp=Z,9.0nm,1.0s								
ULN	**Ulaanbaatar**	**48.81**	**343**		P		**P**	17 24 44.4	**-0.8**
SONM	**Songino Array**	**48.98**	**342**		P		**P**	17 24 47.1	**+0.6**
	comp=Z,4.7nm,0.8s,baz=159,slow=9.8,SNR=12								
SONM					PcP		**PcP**	**17 26 10.4**	**+0.4**
	comp=Z,2.2nm,0.9s,baz=155,slow=4.8,SNR=2.3								
SONM	**Songino Array**	**48.98**	**342**		P		**P**	17 24 45.3	**-1.2**
SONM					pmax		pmax		
	comp=Z,4.0nm,0.8s								
SONM	**Songino Array**	**48.98**	**342**		P		**P**	17 24 45.3	**-1.2**
PYUN	**Piuthan**	**49.08**	**306**		*e*P		**P**	17 24 47.0	**-0.7**
	comp=Z,25nm,0.5s								
GRNR	**Gornyy**	**49.42**	**8**	‖	*i*P		**P**	**17 24 51.7**	**+2.1**
GRNR					pmax	pmax			
	comp=N,7.0nm,1.0s								
GRNR					pmax	pmax			
	comp=Z,10.0nm,0.9s								
GRNR					MLR	MLR			
	comp=E,130nm,13.0s								
GRNR					MLR	MLR			
	comp=N,170nm,14.0s								
GRNR					MLR	MLR			
	comp=Z,250nm,18.0s								
HYB	**Hyderabad**	**49.60**	**291**	*i*	P		**P**	**17 24 51.0**	**-0.6**
CIT	**Chita**	**51.13**	**350**	*e*	P		**P**	**17 25 04.6**	**+2.0**
CIT				*e*				17 25 13.1	
CIT				*e*				17 26 12.3	
CIT					pmax	pmax			
	comp=Z,75nm,1.4s								
ZEA	**Zeya**	**51.68**	**1**	*e*	P		**P**	**17 25 07.0**	**+0.4**
ZEA					pmax	pmax			
	comp=Z,10.0nm,0.7s								
ZAK	**Zakamensk**	**52.20**	**341**	*e*	P		**P**	**17 25 07.4**	**-3.3**
ZAK					pmax	pmax			
	comp=Z,4.0nm,1.4s								
WMQ	**Urumqi**	**54.14**	**326**	*e*	P		**P**	**17 25 27.5**	**+2.5**
WMQ					pP		pP	17 25 32.5	-5.0
WMQ					sP		pwP	17 25 37.8	-2.3
WMQ					pmax	pmax			
	comp=Z,15nm,0.9s								
WMQ					LR	LR			
	comp=Z,860nm,15.9s								
WMQ					LR	LR			
	comp=Z,630nm,23.9s								
WMQ					LR	LR			
	comp=Z,910nm,21.7s								
MSVF	**Nonsavu**	**54.32**	**113**	*i*	P		**P**	**17 25 25.9**	**-0.9**
MSVF					pmax	pmax			
	comp=Z,12nm,1.0s								
BOD	**Bodaibo**	**56.65**	**352**	*e*	P		**P**	**17 25 43.0**	**+0.3**
BOD					pmax	pmax			
	comp=Z,15nm,1.0s								
PETK	**Petropavlovsk-**	**57.19**	**22**		P		**P**	**17 25 48.4**	**+1.7**
	comp=Z,6.8nm,0.7s,baz=176,slow=4.0,SNR=19								
PETK	**Petropavlovsk-**	**57.19**	**22**		P		**P**	**17 25 48.0**	**+1.3**
PETK	**Petropavlovsk-**	**57.19**	**22**		P		**P**	**17 25 48.0**	**+1.3**
ZSN	**Zaisan**	**57.96**	**328**	*e*	P		**P**	**17 25 52.2**	**-0.1**
	baz=328								
ZSN				*e*	S		**S**	**17 33 49.2**	**+0.1**
	baz=328								
ZSN	**Zaisan**	**57.96**	**328**	*e*	P		**P**	**17 25 52.1**	**-0.1**
ZSN				*e*	S		**S**	**17 33 49.2**	**+0.1**
SHLS	**Shalkode**	**58.66**	**321**	*e*	P		**P**	**17 25 54.9**	**-2.4**
	comp=Z,4.9nm,0.8s,baz=321								
SHLS	**Shalkode**	**58.66**	**321**	*e*	P		**P**	**17 25 54.9**	**-2.4**
SHLS					pmax	pmax			
	comp=Z,5.0nm,0.8s								
NIL	**Nilore**	**58.92**	**309**		P		**P**	**17 25 57.7**	**-1.5**
NIL					pmax	pmax			
	comp=Z,21nm,1.4s								
NIL	**Nilore**	**58.92**	**309**		P		**P**	**17 25 57.7**	**-1.5**
NIL					lAmb	lAmb		17 26 18.6	
	comp=Z,21nm,1.4s								
MK31	**Makanchi Array**	**58.97**	**326**	*i*	P		**P**	**17 25 58.5**	**-0.8**
MK31	**Makanchi Array**	**58.97**	**326**		P		**P**	**17 25 58.2**	**-1.1**
MKAR	**Makanchi Array**	**58.97**	**326**		P		**P**	**17 25 58.9**	**-0.4**
	comp=Z,4.6nm,0.4s,baz=120,slow=7.7,SNR=91								
MKAR					PcP		**PcP**	**17 26 48.2**	**+0.2**
	comp=Z,8.9nm,0.9s,baz=115,slow=5.5,SNR=7.5								
MKAR	**Makanchi Array**	**58.97**	**326**		P		**P**	**17 25 58.1**	**-1.2**
MAKZ	**Makanchi**	**59.15**	**326**		P		**P**	**17 26 00.1**	**-0.4**
MAKZ					pmax	pmax			
	comp=Z,11nm,1.0s								
MAKZ	**Makanchi**	**59.15**	**326**		P		**P**	**17 26 00.1**	**-0.4**
MAKZ					lAmb	lAmb		17 26 08.9	
	comp=Z,11nm,1.0s								
KSH	**Kashi**	**59.23**	**316**	*e*	P		**P**	**17 26 04.0**	**+2.6**
KSH					sP		sP	17 26 18.5	-0.7
KSH					pmax	pmax			
	comp=Z,16nm,0.7s								
KSH					pmax	pmax			
	comp=Z,620nm,6.9s								
KPKS	**Kokpek**	**59.30**	**321**	*e*	P		**P**	**17 26 01.5**	**-0.2**
	comp=Z,4.6nm,0.7s,baz=321								
KPKS	**Kokpek**	**59.30**	**321**	*e*	P		**P**	**17 26 01.5**	**-0.2**
KPKS					pmax	pmax			
	comp=Z,5.0nm,0.7s								
KDJ	**Kajisay**	**59.61**	**319**		P		**P**	**17 26 04.0**	**0.0**
KDJ					pmax	pmax			
	comp=Z,10.0nm,0.8s								
KDJ	**Kajisay**	**59.61**	**319**		P		**P**	**17 26 04.0**	**0.0**
KDJ					lAmb	lAmb		17 26 06.9	
	comp=Z,9.9nm,0.8s								
YAK	**Yakutsk**	**60.04**	**2**	*e*	P		**P**	**17 26 07.0**	**+0.7**
YAK					pmax	pmax			
	comp=Z,79nm,0.9s								
YAK					pmax	pmax			
	comp=E,6.0nm,1.1s								
YAK					pmax	pmax			
	comp=N,19nm,0.9s								
YAK	**Yakutsk**	**60.04**	**2**		P		**P**	**17 26 06.2**	**-0.1**
MDOK	**Medeo**	**60.19**	**320**	*e*	P		**P**	**17 26 07.1**	**-0.8**
	baz=320								
MDOK	**Medeo**	**60.19**	**320**	*e*	P		**P**	**17 26 07.1**	**-0.8**
TNSS	**Tian-Shan**	**60.19**	**320**	*e*	P		**P**	**17 26 07.7**	**-0.6**
	baz=320								
TNSS	**Tian-Shan**	**60.19**	**320**	*e*	P		**P**	**17 26 07.6**	**-0.6**
TDK	**Taldyqorghan**	**60.26**	**323**	*e*	P		**P**	**17 26 08.5**	**+0.3**
	comp=N,4.5nm,0.6s,baz=323								
TDK	**Taldyqorghan**	**60.26**	**323**	*e*	P		**P**	**17 26 08.5**	**+0.3**
TDK					pmax	pmax			
	comp=Z,4.0nm,0.6s								
AAA	**Alma-Ata**	**60.30**	**320**	*e*	P		**P**	**17 26 08.8**	**+0.2**
	comp=Z,4.8nm,0.4s,baz=320								
AAA	**Alma-Ata**	**60.30**	**320**	*e*	P		**P**	**17 26 08.7**	**+0.2**
AAA					pmax	pmax			
	comp=Z,5.0nm,0.4s								
MA2	**Magadan**	**60.52**	**14**	*i*	P		**P**	**17 26 09.9**	**+0.2**
MA2					pmax	pmax			
	comp=Z,29nm,0.9s								
KUU	**Kurty**	**60.99**	**321**	*e*	P		**P**	**17 26 11.9**	**-1.3**
	comp=Z,12nm,1.0s,baz=321								
KUU	**Kurty**	**60.99**	**321**	*e*	P		**P**	**17 26 11.9**	**-1.3**
KUU					pmax	pmax			
	comp=Z,12nm,1.0s								
AAK	**Ala-Archa**	**61.61**	**319**		P		**P**	**17 26 17.8**	**+0.2**
	comp=Z,2.4nm,0.6s,baz=205,slow=8.9,SNR=7.8								
AAK	**Ala-Archa**	**61.61**	**319**	*i*	P		**P**	**17 26 16.7**	**-0.9**
AAK					pmax	pmax			
	comp=Z,9.0nm,0.9s								
ARSB	**Arslanbob**	**62.06**	**317**		P		**P**	**17 26 20.0**	**-0.7**
ARSB					pmax	pmax			
	comp=Z,12nm,1.1s								
ARSB	**Arslanbob**	**62.06**	**317**		P		**P**	**17 26 20.0**	**-0.7**
ARSB					lAmb	lAmb		17 26 23.4	
	comp=Z,12nm,1.1s								
ZAA0	**Zalesovo Array**	**62.15**	**334**		P		**P**	**17 26 20.6**	**-0.2**
ZALV	**Zalesovo Beam**	**62.15**	**334**		P		**P**	**17 26 19.1**	**-1.6**
	comp=Z,2.0nm,0.4s,baz=108,slow=4.8,SNR=11								
ZALV	**Zalesovo Beam**	**62.15**	**334**		P		**P**	**17 26 20.2**	**-0.6**
ZALV	**Zalesovo Beam**	**62.15**	**334**		P		**P**	**17 26 20.1**	**-0.6**
BTLS	**Baital**	**62.98**	**321**	*e*	P		**P**	**17 26 24.9**	**-1.7**
	baz=321								
BTLS	**Baital**	**62.98**	**321**	*e*	P		**P**	**17 26 24.8**	**-1.7**
BTK	**Batken**	**63.08**	**315**		P		**P**	**17 26 27.3**	**-0.1**
BTK					pmax	pmax			
	comp=Z,6.0nm,0.8s								
BTK	**Batken**	**63.08**	**315**		P		**P**	**17 26 27.3**	**-0.1**
BTK					lAmb	lAmb		17 26 55.7	
	comp=Z,6.1nm,0.8s								
KURK	**Kurchatov**	**63.20**	**328**		P		**P**	**17 26 26.8**	**-1.0**
KURK					pmax	pmax			
	comp=Z,17nm,0.9s								
KURK	**Kurchatov**	**63.20**	**328**		P		**P**	**17 26 26.8**	**-1.0**
KURK					lAmb	lAmb		17 26 34.1	
	comp=Z,17nm,0.8s								
SEY	**Seymchan**	**63.85**	**13**	*i*	P		**P**	**17 26 33.3**	**+1.4**
IUG	**Iuzhnay**	**64.42**	**317**	*e*	P		**P**	**17 26 35.6**	**-0.6**
	baz=317								
IUG	**Iuzhnay**	**64.42**	**317**	*e*	P		**P**	**17 26 35.6**	**-0.6**
KK31	**Karatay Array**	**64.46**	**318**		P		**P**	**17 26 36.0**	**-0.4**
KK31					pmax	pmax			
	comp=Z,5.0nm,0.9s								
KK31	**Karatay Array**	**64.46**	**318**		P		**P**	**17 26 36.0**	**-0.4**
KKAR	**Karatay Array**	**64.46**	**318**		P		**P**	**17 26 36.0**	**-0.4**
KKAR					pmax	pmax			
	comp=Z,5.0nm,0.9s								
KKAR	**Karatay Array**	**64.46**	**318**		P		**P**	**17 26 36.0**	**-0.4**
BRZS	**Berezniki**	**66.09**	**325**	*e*	P		**P**	**17 26 45.8**	**-1.0**
	baz=325								
BRZS	**Berezniki**	**66.09**	**325**	*e*	P		**P**	**17 26 45.7**	**-1.0**
BRVK	**Borovoye**	**68.84**	**327**	*i*	P		**P**	**17 27 04.1**	**+0.1**
BRVK					pmax	pmax			
	comp=Z,13nm,1.0s								
BRVK	**Borovoye**	**68.84**	**327**		P		**P**	**17 27 03.5**	**-0.6**
BRVK					lAmb	lAmb		17 27 06.9	
	comp=Z,10nm,0.8s								
TIXI	**Tiksi**	**69.67**	**1**	*i*	P		**P**	**17 27 08.6**	**-0.2**
TIXI	**Tiksi**	**69.67**	**1**		P		**P**	**17 27 08.5**	**-0.2**
TIXI					lAmb	lAmb		17 27 10.6	
	comp=Z,19nm,1.0s								
BILL	**Bilibino**	**71.36**	**15**	‖	*e*P		**P**	**17 27 20.4**	**+1.2**
BILL					*PP		**pwP**	**17 27 35.0**	**0.0**
BILL								17 27 39.0	
BILL					S		**S**	**17 36 30.0**	**-3.5**
BILL					pmax	pmax			
	comp=Z,4.0nm,1.2s								
NRIK	**Noril'sk**	**72.17**	**346**		P		**P**	**17 27 24.8**	**+0.8**
	comp=Z,26nm,0.8s,baz=131,slow=5.9,SNR=49								
NRIK	**Noril'sk**	**72.17**	**346**	*c*	*i*P		**P**	**17 27 23.5**	**-0.5**
NRIK					pmax	pmax			
	comp=Z,30nm,0.9s								
ABKAR	**Akbulak array**	**73.46**	**321**		P		**P**	**17 27 31.0**	**-1.1**
SVE	**Sverdlovsk**	**75.43**	**329**	*e*	P		**P**	**17 27 43.9**	**+0.5**
SVE					pmax	pmax			
	comp=Z,40nm,1.1s								
ARU	**Arti**	**76.39**	**328**	*c*	*i*P		**P**	**17 27 48.2**	**-0.7**
ARU					*PP		**pP**	**17 28 01.9**	**0.0**
ARU								17 30 35.5	
ARU					PPP		PPP	17 32 25.3	
ARU					S		**S**	**17 37 30.0**	**-0.5**
ARU					SS		**SS**	**17 42 23.8**	**-1.8**
ARU					pmax	pmax			
	comp=Z,28nm,1.2s								
ARU	**Arti**	**76.39**	**328**		P		**P**	**17 27 47.7**	**-1.1**
ARU					lAmb	lAmb		17 27 50.2	
	comp=Z,20nm,1.0s								
OPO	**Ambohidratompo**	**80.53**	**251**		P		**P**	**17 28 12.5**	**-0.2**
	comp=Z,4.6nm,1.0s,baz=130,slow=2.2,SNR=5.0								
RAYN	**Ar Rayn**	**81.05**	**293**		P		**P**	**17 28 14.3**	**-0.9**
RAYN					pmax	pmax			
	comp=Z,7.0nm,0.8s								
RAYN	**Ar Rayn**	**81.05**	**293**		P		**P**	**17 28 14.3**	**-0.9**
RDOG	**Red Dog Mine**	**81.05**	**21**		P		**P**	**17 28 16.5**	**+2.2**
RDOG					lAmb	lAmb		17 28 18.8	
	comp=Z,24nm,1.2s								
VNDA	**Vanda**	**81.63**	**173**		P		**P**	**17 28 16.8**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=312,slow=7.2,SNR=15								
VNDA	**Vanda**	**81.63**	**173**		P		**P**	**17 28 17.1**	**0.0**
VNDA					pmax	pmax			
	comp=Z,4.0nm,0.8s								
VNDA	**Vanda**	**81.63**	**173**		P		**P**	**17 28 17.1**	**0.0**
KIRV	**Kirov**	**81.70**	**329**	*i*	P		**P**	**17 28 17.5**	**-0.3**
MAW	**Mawson**	**81.98**	**200**		P		**P**	**17 28 19.6**	**+0.6**
	comp=Z,4.5nm,0.8s,baz=68,slow=4.3,SNR=6.3								
MAW	**Mawson**	**81.98**	**200**		P		**P**	**17 28 19.4**	**+0.3**
MAW					pmax	pmax			
	comp=Z,6.0nm,1.4s								
MAW	**Mawson**	**81.98**	**200**		P		**P**	**17 28 19.4**	**+0.3**
SVW2	**Sparrevohn**	**82.49**	**29**		P		**P**	**17 28 22.9**	**+0.9**
SII	**Sitkinak Islan**	**82.51**	**33**		P		**P**	**17 28 22.6**	**+0.5**
GNI	**Garni**	**82.53**	**310**	*i*	P		**P**	**17 28 21.5**	**-1.3**
GNI					pmax	pmax			
	comp=Z,8.0nm,1.1s								
TTA	**Tatalina**	**82.61**	**27**		P		**P**	**17 28 24.8**	**+2.2**
TTA					pmax	pmax			
	comp=Z,19nm,1.1s								
TTA	**Tatalina**	**82.61**	**27**		P		**P**	**17 28 24.8**	**+2.2**
TTA					lAmb	lAmb		17 28 26.1	
	comp=Z,19nm,1.1s								
ZEI	**Tsey**	**83.33**	**313**	*e*	P		**P**	**17 28 25.9**	**-1.1**
ZEI					pmax	pmax			
	comp=Z,21nm,1.3s								
RSO	**Redoubt South**	**83.77**	**29**		P		**P**	**17 28 26.4**	**-2.4**
A21K	**Barrow**	**84.01**	**18**		P		**P**	**17 28 32.3**	**+2.8**
	baz=258								
A21K	**Barrow**	**84.01**	**18**		P		**P**	**17 28 32.1**	**+2.6**
IMAR	**Indian Mountai**	**84.08**	**24**		P		**P**	**17 28 31.5**	**+1.4**
KBZ	**Khabaz**	**84.12**	**314**		P		**P**	**17 28 31.3**	**+0.6**
	comp=Z,3.4nm,0.9s,baz=111,slow=9.4,SNR=5.4								
KBZ	**Khabaz**	**84.12**	**314**	*i*	P		**P**	**17 28 30.0**	**-0.6**
KBZ					pmax	pmax			
	comp=Z,5.0nm,1.0s								
KIV	**Kislovodsk**	**84.28**	**314**	*e*	P		**P**	**17 28 29.5**	**-2.2**
KIV					pmax	pmax			
	comp=Z,21nm,1.0s								
CNPM	**China Poot**	**84.42**	**30**		P		**P**	**17 28 33.1**	**+1.2**
SKT	**Skwentna**	**84.53**	**28**		P		**P**	**17 28 32.9**	**+0.5**
BRLK	**Bradley Lake**	**84.62**	**30**		P		**P**	**17 28 34.0**	**+1.0**
SUA	**Susitna One**	**84.85**	**29**		P		**P**	**17 28 35.5**	**+1.3**
MLY	**Manley**	**85.21**	**25**		P		**P**	**17 28 37.8**	**+2.0**
	baz=264								
VRH	**Novokhopyorsk**	**85.30**	**321**	*e*	P		**P**	**17 28 35.7**	**-0.7**
VRH					pmax	pmax			
	comp=Z,90nm,1.3s								
RC01	**Rabbit Creek A**	**85.30**	**29**		P		**P**	**17 28 38.0**	**+1.7**
	baz=265								
PMR	**Palmer**	**85.63**	**29**		P		**P**	**17 28 39.3**	**+1.4**
PMR					pmax	pmax			
	comp=Z,20nm,1.1s								
PMR	**Palmer**	**85.63**	**29**		P		**P**	**17 28 39.3**	**+1.4**
COLD	**Coldfoot**	**85.64**	**23**		P		**P**	**17 28 40.5**	**+2.7**
	baz=264								
COLD	**Coldfoot**	**85.64**	**23**		P		**P**	**17 28 40.0**	**+2.2**
COLD					lAmb	lAmb		17 28 42.2	
	comp=Z,9.3nm,0.8s								
I23K	**Minto, Yukon-K**	**85.80**	**25**		P		**P**	**17 28 40.9**	**+2.2**
	baz=265								
MCK	**McKinley**	**85.88**	**26**		P		**P**	**17 28 40.7**	**+1.5**
	baz=266								
RND	**Reindeer**	**85.89**	**27**		P		**P**	**17 28 39.7**	**+0.4**
RND					pmax	pmax			
	comp=Z,8.0nm,1.0s								
RND	**Reindeer**	**85.89**	**27**		P		**P**	**17 28 39.7**	**+0.4**
RND					lAmb	lAmb		17 28 41.6	
	comp=Z,8.2nm,1.0s								
KNK	**Knik Glacier**	**85.94**	**29**		P		**P**	**17 28 40.5**	**+1.0**
TOLK	**Toolik Lake Re**	**86.01**	**21**		P		**P**	**17 28 42.3**	**+2.5**
	baz=265								
TOLK	**Toolik Lake Re**	**86.01**	**21**		P		**P**	**17 28 41.9**	**+2.2**
TOLK					lAmb	lAmb		17 28 43.9	
	comp=Z,7.2nm,0.8s								
SML	**Sawmill**	**86.03**	**28**		P		**P**	**17 28 41.5**	**+1.5**
SML					lAmb	lAmb		17 28 46.8	
	comp=Z,15nm,0.9s								
MDM	**Murphy Dome**	**86.27**	**25**		P		**P**	**17 28 41.6**	**+0.6**
SOC	**Sochi**	**86.42**	**313**	*e*	P		**P**	**17 28 38.4**	**-3.8**
SOC				*e*	PPP		PPP	17 34 02.8	
SOC				*e*	S		S	17 38 59.9	-15
SOC				*e*	SSS		SSS	17 48 20.8	
COLA	**College**	**86.42**	**25**	*i*	P		**P**	**17 28 41.3**	**-0.4**
COLA					pmax	pmax			
	comp=Z,3.0nm,1.0s								
CCB	**Clear Creek Bu**	**86.43**	**25**		P		**P**	**17 28 42.2**	**+0.5**
CCB					lAmb	lAmb		17 28 46.1	
	comp=Z,7.6nm,1.2s								
SCM	**Sheep Creek Mo**	**86.50**	**28**		P		**P**	**17 28 43.9**	**+1.6**
SCM					pmax	pmax			
	comp=Z,26nm,1.4s								
SCM	**Sheep Creek Mo**	**86.50**	**28**		P		**P**	**17 28 43.9**	**+1.6**
HDA	**Harding Lake**	**86.79**	**26**		P		**P**	**17 28 43.7**	**+0.2**
	baz=268								
HDA	**Harding Lake**	**86.79**	**26**		P		**P**	**17 28 43.5**	**0.0**
HDA					lAmb	lAmb		17 28 45.0	
	comp=Z,5.5nm,0.8s								
VORD	**Divnogorie**	**86.82**	**321**	*e*	P		**P**	**17 28 43.4**	**-0.6**
VORD					pmax	pmax			
	comp=Z,20nm,0.9s								
ILAR	**Eielson Array**	**86.83**	**25**		P		**P**	**17 28 43.4**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=253,slow=4.4,SNR=18								
ILAR	**Eielson Array**	**86.83**	**25**		P		**P**	**17 28 43.5**	**-0.3**
ILAR	**Eielson Array**	**86.83**	**25**		P		**P**	**17 28 43.5**	**-0.3**
VSR	**Storozhevoye**	**86.90**	**321**	*e*	P		**P**	**17 28 43.9**	**-0.5**
VSR					pmax	pmax			
	comp=Z,30nm,1.3s								
KLMR	**Klimovskoe**	**86.92**	**331**	*e*	P		**P**	**17 28 42.2**	**-2.0**
KLMR					pmax	pmax			
	comp=Z,24nm,1.2s								
KLMR	**Klimovskoe**	**86.92**	**331**	*e*	P		**P**	**17 28 42.3**	**-2.0**
KLMR					AMP			17 28 51.7	
	comp=Z,24nm,1.2s								
LPSR	**Galich'ya Gora**	**87.07**	**322**	*e*	P		**P**	**17 28 45.8**	**+0.7**
LPSR					pmax	pmax			
	comp=Z,30nm,1.0s								
TMCR	**Tamitsa**	**87.67**	**334**	*e*	P		**P**	**17 28 45.2**	**-2.6**
RIDG	**Independent Ri**	**87.69**	**26**		P		**P**	**17 28 48.6**	**+0.6**
RIDG					lAmb	lAmb		17 28 49.7	
	comp=Z,8.4nm,1.0s								
BMAR	**Burnt Mountain**	**87.83**	**23**		P		**P**	**17 28 50.2**	**+1.6**
MOS	**Moscow**	**87.85**	**326**	*e*	P		**P**	**17 28 46.8**	**-2.0**
SCRK	**Sand Creek**	**88.08**	**26**		P		**P**	**17 28 50.8**	**+0.9**
	baz=270								
GLB	**Gilahina Butte**	**88.18**	**29**		P		**P**	**17 28 51.9**	**+1.6**
GLB					lAmb	lAmb		17 28 56.6	
	comp=Z,7.9nm,1.2s								
MENT	**Mentasta**	**88.20**	**27**		P		**P**	**17 28 52.0**	**+1.5**
MENT					lAmb	lAmb		17 28 56.4	
	comp=Z,7.5nm,1.3s								
OBN	**Obninsk**	**88.46**	**325**	‖	*e*P		**P**	**17 28 51.4**	**-0.3**
OBN					*PP		**pP**	**17 29 03.0**	**-2.0**
OBN					*SP		**sP**	**17 29 10.0**	**0.0**
OBN					S		**SKSac**	**17 39 11.0**	**-5.8**
OBN					pmax	pmax			
	comp=Z,25nm,1.1s								
K27K	**Chicken**	**88.92**	**26**		P		**P**	**17 28 56.2**	**+2.5**
	baz=272								
K27K	**Chicken**	**88.92**	**26**		P		**P**	**17 28 55.5**	**+1.8**
K27K					lAmb	lAmb		17 28 57.4	
	comp=Z,11nm,1.1s								
LVZ	**Lovozero**	**88.99**	**338**	*i*	P		**P**	**17 28 55.1**	**+1.1**
LVZ					pmax	pmax			
	comp=Z,23nm,1.1s								
BCAR	**Beaver Creek A**	**89.08**	**27**		P		**P**	**17 28 56.0**	**+1.4**
BARN	**Barnard Glacie**	**89.23**	**29**		P		**P**	**17 28 56.8**	**+1.3**
BARN					lAmb	lAmb		17 28 58.3	
	comp=Z,8.6nm,1.1s								
KMBO	**Kilima Mbogo**	**89.35**	**269**		P		**P**	**17 28 56.0**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=99,slow=13,SNR=2.3								
KMBO	**Kilima Mbogo**	**89.35**	**269**		P		**P**	**17 28 56.8**	**-0.3**
KMBO					pmax	pmax			
	comp=Z,15nm,1.5s								
KMBO	**Kilima Mbogo**	**89.35**	**269**		P		**P**	**17 28 56.8**	**-0.3**
KMBO					lAmb	lAmb		17 29 04.5	
	comp=Z,15nm,1.5s								
DAWY	**Dawson**	**90.09**	**26**		P		**P**	**17 29 01.1**	**+1.8**
SYO	**Syowa Base**	**90.66**	**201**	‖	*e*P		**P**	**17 29 01.2**	**-0.5**
BR131	**Keskin Array S**	**91.06**	**310**	*i*	P		**P**	**17 29 03.8**	**-0.7**
BRTR	**Keskin Array B**	**91.06**	**310**		P		**P**	**17 29 03.5**	**-0.9**
	comp=Z,2.1nm,0.9s,baz=93,slow=5.8,SNR=3.8								
INK	**Inuvik**	**91.92**	**21**		P		**P**	**17 29 08.1**	**+0.5**
	comp=Z,5.9nm,1.1s,baz=279,slow=7.1,SNR=6.4								
INK	**Inuvik**	**91.92**	**21**		P		**P**	**17 29 08.2**	**+0.5**
INK					pmax	pmax			
	comp=Z,16nm,1.4s								
INK	**Inuvik**	**91.92**	**21**		P		**P**	**17 29 08.2**	**+0.5**
ARCES	**ARCESS Array B**	**92.11**	**340**		P		**P**	**17 29 07.5**	**-0.9**
	comp=Z,9.2nm,0.9s,baz=98,slow=5.6,SNR=9.1								
SPITS	**Spitsbergen Ar**	**92.24**	**349**		P		**P**	**17 29 08.9**	**-0.1**
	comp=Z,7.2nm,0.8s,baz=121,slow=7.6,SNR=2.8								
WHY	**Whitehorse**	**92.57**	**29**		P		**P**	**17 29 12.8**	**+1.9**
WHY					lAmb	lAmb		17 29 13.9	
	comp=Z,13nm,1.2s								
AKASG	**Malin Array Be**	**93.20**	**321**		P		**P**	**17 29 12.9**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=68,slow=3.9,SNR=5.9								
AKASG	**Malin Array Be**	**93.20**	**321**	*i*	P		**P**	**17 29 13.1**	**-0.8**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.7s								
FINES	**FINESS Array B**	**93.36**	**332**		P		**P**	**17 29 13.5**	**-0.9**
	comp=Z,4.0nm,0.9s,baz=88,slow=4.1,SNR=8.9								
FINES	**FINESS Array B**	**93.36**	**332**	*i*	P		**P**	**17 29 13.8**	**-0.6**
FINES					pmax	pmax			
	comp=Z,4.0nm,0.9s								
C36M	**Paulatuk**	**94.99**	**20**		P		**P**	**17 29 22.6**	**+1.0**
	baz=289								
C36M	**Paulatuk**	**94.99**	**20**		P		**P**

mb4.4/9, Error ellipse: s-maj=24.7km s-min=11.6km az=84.0

ISC 26 17:32:38.1±1.8, **29°98S**±0.08× **177°2W**±0.2, **h24**km, **n25**, σ1**§66**/25, **mb4.4/6, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.96**	**319**	Pn	**Pn**	**17 32 55.6**	**-0.4**
	1μm,0.3s,baz=91,slow=15,SNR=71						
RAO				Sn	**Sb**	**17 33 09.3**	**+1.0**
	1μm,0.3s,baz=90,slow=23,SNR=9.2						
OUZ	**Omahuta**	**9.35**	**234**	Pn	**Pn**	**17 34 49.0**	**-2.3**
URZ	**Urewera**	**9.50**	**208**	Pn	**Pn**	**17 34 54.5**	**+1.1**
	0.4nm,0.3s,baz=158,slow=13,SNR=1.4						
URZ				Sn	**Sn**	**17 36 40.5**	**+1.1**
	0.5nm,0.3s,baz=244,slow=22,SNR=1.3						
URZ	**Urewera**	**9.50**	**208**		**Pn**	**17 34 50.4**	**-3.1**
BKZ	**Black Stump Fm**	**10.53**	**208**	Pn	**Pn**	**17 35 05.4**	**-2.1**
NNZ	**Nelson**	**13.57**	**212**	Pn	**Pn**	**17 35 45.8**	**-3.2**
THZ	**Tophouse**	**14.21**	**212**	Pn	**Pn**	**17 35 59.9**	**+2.0**
KHZ	**Kahutara**	**14.47**	**208**	P	**Pn**	**17 36 03.3**	**+2.0**
LTZ	**Lake Taylor**	**15.31**	**211**	Pn	**Pn**	**17 36 10.7**	**-2.0**
MQZ	**McQueen's Vall**	**15.90**	**208**	Pn	**Pn**	**17 36 17.0**	**-3.3**
RPZ	**Rata Peaks**	**16.59**	**211**	Pn	**P**	**17 36 32.8**	**+1.3**
	1.0nm,0.3s,baz=15,slow=18,SNR=1.9						
AS31	**Alice Springs**	**43.82**	**266**	P	**P**	**17 40 42.3**	**-0.2**
ASAR	**Alice Springs**	**43.82**	**266**	P	**P**	**17 40 42.9**	**+0.4**
	0.4nm,0.5s,baz=102,slow=6.5,SNR=14						
ASAR				PcP	**PcP**	**17 42 29.1**	**+0.3**
	0.3nm,0.8s,baz=115,slow=4.2,SNR=2.0						
ASAR	**Alice Springs**	**43.82**	**266**	P	**P**	**17 40 42.8**	**+0.3**
WR0	**Warramunga Arr**	**44.59**	**271**	P	**P**	**17 40 49.7**	**+1.1**
WR0				IAmb	IAmb	17 41 08.7	
	comp=Z,7.1nm,1.4s						
WC3	**Warramunga Arr**	**44.74**	**271**	P	**P**	**17 40 50.6**	**+0.8**
WC3				IAmb	IAmb	17 41 08.6	
	comp=Z,7.9nm,1.5s						
WB2	**Warramunga Arr**	**44.77**	**271**	P	**P**	**17 40 50.6**	**+0.6**
WB2				IAmb	IAmb	17 40 51.4	
	comp=Z,7.4nm,1.2s						
WRAB	**Tennant Creek**	**44.77**	**271**	P	**P**	**17 40 51.0**	**+0.9**
WRA	**Warramunga Arr**	**44.77**	**271**	P	**P**	**17 40 50.4**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=110,slow=7.7,SNR=44						
WRA	**Warramunga Arr**	**44.77**	**271**	P	**P**	**17 40 50.2**	**+0.1**
WB0	**Warramunga Arr**	**44.80**	**272**	P	**P**	**17 40 50.4**	**+0.2**
WB0				IAmb	IAmb	17 41 18.0	
	comp=Z,8.4nm,1.5s						
H03S2	**Juan Fernandez**	**80.12**	**123**	T	T	19 13 02.1	
	baz=239						
H03S1	**Juan Fernandez**	**80.13**	**123**	T	T	19 13 02.4	
	baz=239						
H03S3	**Juan Fernandez**	**80.13**	**123**	T	T	19 13 01.4	
	baz=239						
FINES	**FINESS Array B**	**144.99**	**341**	PKP	**PKPdf**	**17 52 11.8**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=59,slow=3.6,SNR=7.4						

IDC 26 17:36:08.3±3.3, **2°14N**×**126°61E**, **h0**km, **mb3.3**/3, **mb1 3.5**/3, **mb1mx3.3**/39, **mbtmp3.3**/3, **Error ellipse: s-maj=331.6km s-min=29.3km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.22**	**161**	P	P	17 41 15.7	-1.5
	0.6nm,0.7s,baz=339,slow=11,SNR=1.9						
ASAR	**Alice Springs**	**26.61**	**165**	P	P	17 41 50.0	+1.3
	0.2nm,0.5s,baz=344,slow=9.3,SNR=4.1						
MKAR	**Makanchi Array**	**58.79**	**326**	P	P	17 46 08.2	-0.2
	0.3nm,0.7s,baz=129,slow=7.7,SNR=2.1						

*IDC **26** 17:40:29.1±1.3, 1°83N×125°98E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/41, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=104.9km s-min=19.3km az=70.0*
*DJA **26** 17:40:36.1±1.6, 2°N±5°×12°6E±°, h21km±16km, M3.8/10, mb4.9/1, mb3.9/2, MLv3.7/10, Mw(mB)4.2/1*

ISC 26 17:40:35.3±1.0, **2°01N**±0.07×**126°56E**±0.09, **h47**km, **n13**, σ1**§65**/12, **mb3.6/4, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.47**	**147**	P	**Pn**	**17 41 01.6**	**+2.2**
SGSI	**Sangihe**	**1.96**	**328**	P	**Pn**	**17 41 07.5**	**+1.4**
KMSI	**Cibinong**	**2.95**	**241**	P	**Pn**	**17 41 21.1**	**+1.5**
GTOI	**Gorontalo**	**3.80**	**249**	P	**Pn**	**17 41 33.0**	**+1.6**
SANI	**Sanana**	**4.07**	**188**	P	**Pn**	**17 41 36.0**	**+0.9**
MRSI	**Marisa**	**4.86**	**252**	P	**Pn**	**17 41 47.4**	**+1.4**
APSI	**Ampana**	**5.70**	**239**	P	**Pn**	17 42 07.6	+10
MPSI	**Mapaga**	**6.86**	**256**	P	**Pn**	**17 42 14.9**	**+1.4**
FITZ	**Fitzroy Crossi**	**20.00**	**183**	P	**P**	**17 45 01.4**	**-2.7**
	0.1nm,0.3s,baz=351,slow=12,SNR=1.0						
WRA	**Warramunga Arr**	**23.11**	**161**	P	**P**	**17 45 36.8**	**-0.6**
	0.9nm,0.4s,baz=338,slow=10,SNR=35						
ASAR	**Alice Springs**	**26.50**	**165**	P	**P**	**17 46 08.6**	**0.0**
	0.3nm,0.4s,baz=343,slow=7.6,SNR=20						
SONM	**Songino Array**	**48.87**	**342**	P	**P**	**17 49 16.2**	**-0.3**
	0.2nm,0.3s,baz=153,slow=8.1,SNR=2.0						
MKAR	**Makanchi Array**	**58.87**	**326**	P	**P**	**17 50 28.8**	**-0.6**
	0.4nm,0.4s,baz=120,slow=7.5,SNR=16						

*IDC **26** 17:43:48.0±0.7, 2°04N×126°73E, h0km, mb3.9/10, mb1 4.1/11, mb1mx3.8/42, mbtmp3.9/11, ML3.9/1, MS4.1/1, Ms1 4.1/1, ms1mx3.3/44, Error ellipse: s-maj=40.9km s-min=14.3km az=74.0*
*NEIC **26** 17:43:54.0±1.8, 1°95N±0.08×126°53E±0.07, h43km±7km, mb4.5/23, Error ellipse: s-maj=12.6km s-min=9.2km az=219.0*
*DJA **26** 17:43:54.3±1.5, 2°N±4°×12°7E±°, h19km±15km, M4.3/13, mB4.8/2, mb4.5/7, MLv4.3/13, Mw(mB)4.0/2*

ISC 26 17:43:54.6±0.5, **1°94N**±0.05×**126°56E**±0.08, **h47**km, **n58**, σ1**§11**/62, **mb4.3**/18, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**145**	P	**Pn**	**17 44 18.6**	**+0.7**
TNTI	**Ternate**	**1.41**	**145**	Pn	**Pn**	**17 44 17.9**	**+0.1**
SGSI	**Sangihe**	**2.02**	**329**	P	**Pn**	**17 44 27.5**	**+1.3**
KMSI	**Cibinong**	**2.92**	**242**	P	**Pn**	**17 44 40.5**	**+2.0**
GTSI	**Gorontalo**	**3.78**	**250**	P	**Pn**	**17 44 51.9**	**+1.6**
SANI	**Sanana**	**4.00**	**188**	P	**Pn**	**17 44 53.5**	**+0.1**
LUWI	**Luwuk**	**4.81**	**232**	P	**Pn**	**17 45 06.2**	**+1.7**
LUWI	**Luwuk**	**4.81**	**232**	Pn	**Pn**	**17 45 04.0**	**-0.5**
MRSI	**Marisa**	**4.84**	**253**	P	**Pn**	**17 45 07.4**	**+2.4**
NLAI	**Namlea**	**5.17**	**174**	P	**Pn**	**17 45 12.5**	**+3.0**
	0.1nm16nm,0.4s						
APSI	**Ampana**	**5.67**	**240**	P	**Pn**	**17 45 19.2**	**+2.9**
	0.4nm674nm44nm,0.6s						
TOLI2	**Tolitoli**	**5.84**	**262**	Pn	**Pn**	**17 45 18.1**	**-0.5**
MPSI	**Mapaga**	**6.85**	**257**	P	**Pn**	**17 45 34.0**	**+1.5**
	0.1nm693nm29nm,0.8s						
FAKI	**Fak Fak**	**7.46**	**130**	Pn	**Pn**	**17 45 41.7**	**+0.8**
TTSI	**Tana Toraja**	**8.36**	**234**	P	**Pn**	**17 45 54.8**	**+1.5**
	14nm,0.8s						
MYLDM	**Lahad Datu**	**8.66**	**292**	Pn	**Pn**	**17 45 57.6**	**+0.2**
KAPI	**Kappang**	**9.70**	**225**	Pn	**Pn**	**17 46 11.3**	**-0.2**
	1.0nm,0.3s,baz=104,slow=7.2,SNR=4.9						
KAPI				Sn	**Sn**	**17 47 59.3**	**+0.1**
	0.2nm,0.3s,baz=213,slow=23,SNR=1.4						
KAPI	**Kappang**	**9.70**	**225**	Pn	**Pn**	**17 46 10.9**	**-0.6**
KKM	**Kota Kinabalu**	**11.10**	**292**	Pn	**Pn**	**17 46 29.6**	**-1.2**
MTN	**Manton Dam**	**15.37**	**163**	Pn	**Pn**	**17 47 28.3**	**-0.2**
KNRA	**Kununurra**	**17.64**	**173**		**Pn**	**17 47 57.3**	**+0.3**
FITZ	**Fitzroy Crossi**	**19.93**	**183**	P	**P**	**17 48 22.8**	**+0.1**
	1.8nm,0.5s,baz=8.3,slow=9.9,SNR=17						
FITZ	**Fitzroy Crossi**	**19.93**	**183**	P	**P**	**17 48 21.8**	**-0.9**
FITZ				IAmb	IAmb	17 48 44.4	
	comp=Z,36nm,1.9s						
GUMO	**Guam**	**21.49**	**56**	LR	LR	17 56 00.2	
	comp=Z,499nm,21.2s,baz=165,slow=34						
TPUB	**Ta-pu**	**22.00**	**345**	P	**P**	**17 48 43.4**	**-1.5**
TPUB				IAmb	IAmb	17 49 00.7	
	comp=Z,68nm,1.2s						
SSLB	**Suanglung**	**22.39**	**346**	P	**P**	**17 48 48.0**	**-1.1**
WB0	**Warramunga Arr**	**22.90**	**161**	P	**P**	**17 48 54.0**	**-0.5**
WRAB	**Tennant Creek**	**23.04**	**161**	P	**P**	**17 48 55.4**	**-0.6**
WRAB				IAmb	IAmb	17 48 58.8	
	comp=Z,8.5nm,0.7s						
WRA	**Warramunga Arr**	**23.05**	**161**	P	**P**	**17 48 55.3**	**-0.7**
	comp=Z,5.8nm,0.7s,baz=339,slow=11,SNR=38						
WRA				PcP	**PcP**	**17 52 45.1**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=338,slow=2.1,SNR=1.8						
WRA	**Warramunga Arr**	**23.05**	**161**	P	**P**	**17 48 55.1**	**-0.9**
WB2	**Warramunga Arr**	**23.05**	**161**	P	**P**	**17 48 55.5**	**-0.6**
WB2				IAmb	IAmb	17 48 58.9	
	comp=Z,8.7nm,0.7s						
WR0	**Warramunga Arr**	**23.13**	**161**	P	**P**	**17 48 55.8**	**-1.0**
WR0				IAmb	IAmb	17 48 59.3	
	comp=Z,6.6nm,0.8s						
MNAI	**Manna**	**24.41**	**255**	P	**P**	**17 49 08.8**	**-0.1**
AS31	**Alice Springs**	**26.44**	**165**	P	**P**	**17 49 25.6**	**-1.6**
ASAR	**Alice Springs**	**26.44**	**165**	P	**P**	**17 49 27.0**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=341,slow=8.0,SNR=21						
ASAR				PcP	**PcP**	**17 52 52.4**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=350,slow=2.2,SNR=6.3						
ASAR	**Alice Springs**	**26.44**	**165**	P	**P**	**17 49 25.8**	**-1.5**
ASAR					**PcP**	**17 52 52.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**31.66**	**303**	P	**P**	**17 50 14.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=89,slow=7.3,SNR=1.6						
FORT	**Forrest**	**32.57**	**178**	P	**P**	**17 50 20.6**	**-0.9**
FORT				IAmb	IAmb	17 51 06.0	
	comp=Z,24nm,1.1s						
KSRS	**Korea Array**	**35.36**	**2**	P	**P**	**17 50 44.2**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=182,slow=9.9,SNR=4.7						
STKA	**Stephens Creek**	**36.53**	**158**	P	**P**	**17 50 55.8**	**0.0**
	comp=Z,1.0nm,0.3s,baz=343,slow=11,SNR=7.6						
STKA	**Stephens Creek**	**36.53**	**158**	P	**P**	**17 50 54.0**	**-1.7**
SONM	**Songino Array**	**48.93**	**342**	P	**P**	**17 52 35.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=150,slow=6.7,SNR=1.6						
SONM				PcP	**PcP**	**17 53 59.7**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=172,slow=4.4,SNR=2.3						
MK31	**Makanchi Array**	**58.93**	**326**	P	**P**	**17 53 48.8**	**-0.3**
MK31				IAmb	IAmb	17 53 49.3	
	comp=Z,3.2nm,1.1s						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**17 53 48.9**	**-0.1**
	comp=Z,1.4nm,0.4s,baz=120,slow=7.6,SNR=39						
MAKZ	**Makanchi**	**59.11**	**326**	P	**P**	**17 53 50.4**	**+0.1**
MAKZ				IAmb	IAmb	17 54 02.1	
	comp=Z,10nm,1.4s						
KURK	**Kurchatov**	**63.16**	**328**	P	**P**	**17 54 17.4**	**-0.1**
KURK				IAmb	IAmb	17 54 17.9	
	comp=Z,3.3nm,0.5s						
KKAR	**Karatay Array**	**64.42**	**318**	P	**P**	**17 54 25.6**	**-0.5**
NRIK	**Nord'sk**	**72.12**	**346**	P	**P**	**17 55 13.9**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=87,slow=3.6,SNR=1.7						
ABKAR	**Akbulak array**	**73.42**	**321**	P	**P**	**17 55 21.2**	**-0.7**
ABKAR				IAmb	IAmb	17 57 47.0	
	comp=Z,7.2nm,1.8s						
ABKAR	**Akbulak array**	**73.42**	**321**	P	**P**	**17 55 21.6**	**-0.3**
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**17 56 08.1**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=317,slow=7.4,SNR=8.3						
VNDA	**Vanda**	**81.68**	**173**	P	**P**	**17 56 08.2**	**+0.7**
VNDA				IAmb	IAmb	17 58 22.1	
	comp=Z,12nm,1.8s						
TTA	**Tatalina**	**82.56**	**27**	P	**P**	**17 56 14.3**	**+1.9**
IMAR	**Indian Mountai**	**84.04**	**24**	P	**P**	**17 56 21.7**	**+1.9**
CRQM	**Cirque**	**88.47**	**29**	P	**P**	**17 56 42.9**	**+1.0**
QSPA	**South Pole Qui**	**91.86**	**180**	P	**P**	**17 56 57.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**123.30**	**287**	PKP	**PKiKP**	**18 02 48.1**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=84,slow=2.3,SNR=1.4						
TORD	**Torodi Ar. Bea**	**123.30**	**287**		**PKiKP**	**18 02 47.6**	**0.0**

*IDC **26** 17:49:20.5±0.5, 30°16S×177°15W, h0km, mb4.5/16, mb1 4.6/17, mb1mx4.5/37, mbtmp4.5/17, ML3.6/1, MS4.5/2, Ms1 4.5/2, ms1mx3.6/37, Error ellipse: s-maj=19.0km s-min=14.5km az=49.0*
*NEIC **26** 17:49:22.6±1.6, 30°22S±0.08×177°4W±0.1, h10km±1km, mb4.9/61, Error ellipse: s-maj=22.3km s-min=12.9km az=77.0*

ISC 26 17:49:26.0±0.4, **30°31S**±0.06×**177°30W**±0.09, **h35**km, **n133**, σ1**§39**/132, **mb4.8**/41, **2C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.18**	**333**	Pn	**Pn**	**17 49 44.4**	**-1.6**
	588nm,0.3s,baz=216,slow=5.3,SNR=25						
RAO				Sn	**Sn**	**17 49 59.9**	**-1.0**
	2μm,0.3s,baz=103,slow=23,SNR=8.9						
OUZ	**Omahuta**	**9.10**	**235**	Pn	**Pn**	**17 51 36.6**	**+1.9**
URZ	**Urewera**	**9.18**	**209**	Pn	Pn	17 51 31.1	-4.8
	0.4nm,0.3s,baz=16,slow=17,SNR=1.2						
URZ				Sn	**Sn**	**17 53 16.1**	**-1.8**
	3.4nm,0.3s,baz=24,slow=22,SNR=2.0						
URZ	**Urewera**	**9.18**	**209**	Pn	**Pn**	**17 51 32.4**	**-3.5**
BKZ	**Black Stump Fm**	**10.21**	**208**	Pn	**Pn**	**17 51 46.8**	**-3.2**
TUWZ	**Tuamarina**	**13.17**	**210**	Pn	**Pn**	**17 52 29.3**	**-1.1**
MSVF	**Nonsavu**	**13.21**	**340**		**Pn**	**17 52 31.0**	**-0.3**
QRZ	**Quartz Range**	**13.36**	**215**	Pn	**Pn**	**17 52 33.4**	**+0.4**
BSWZ	**Blackbirch Sta**	**13.43**	**210**	Pn	**Pn**	**17 52 33.2**	**-0.8**
THZ	**Tophouse**	**13.90**	**212**	Pn	**Pn**	**17 52 39.2**	**-1.3**
KHZ	**Kahutara**	**14.15**	**209**	Pn	Pn	17 52 37.8	-6.0
LTZ	**Lake Taylor**	**14.99**	**211**	Pn	**Pn**	**17 52 50.2**	**-5.1**
OXZ	**Oxford**	**15.53**	**210**	Pn	**Pn**	**17 52 56.4**	**-5.9**
OXZ				IAmb	IAmb	17 53 12.2	
	comp=Z,51nm,0.8s						
RPZ	**Rata Peaks**	**16.28**	**211**	Pn	**Pn**	**17 53 08.2**	**-3.6**
	comp=Z,1.0nm,0.3s,baz=299,slow=15,SNR=2.7						
RPZ				Sn	Sn	17 55 59.2	-12
	comp=Z,0.6nm,0.3s,baz=157,slow=17,SNR=1.6						
DZM	**Mont Dzumac**	**16.73**	**296**	Pn	**Pn**	**17 53 17.6**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=104,slow=21,SNR=4.1						
DZM	**Mont Dzumac**	**16.73**	**296**	P	**Pn**	**17 53 17.1**	**-0.6**
DZM				IAmb	IAmb	17 53 26.9	
	comp=Z,118nm,1.3s						
ARMA	**Armidale**	**26.77**	**262**		**P**	**17 55 06.6**	**+3.9**
EIDS	**Eidsvold**	**28.34**	**272**	P	**P**	**17 55 16.1**	**-0.5**
TOO	**Toolangi**	**31.56**	**247**	P	**P**	**17 55 44.8**	**-0.3**
CTA	**Charters Tower**	**34.38**	**279**	P	**P**	**17 56 10.7**	**+0.7**
	comp=Z,10.0nm,0.7s,baz=109,slow=12,SNR=13						
CTAO	**Charters Tower**	**34.38**	**279**	P	**P**	**17 56 10.1**	**+0.2**
STKA	**Stephens Creek**	**35.09**	**257**	P	**P**	**17 56 17.2**	**+1.3**
	comp=Z,7.7nm,0.8s,baz=98,slow=9.4,SNR=11						
STKA				LR	LR	18 10 06.8	
	comp=Z,1μm,19.5s,baz=10,slow=35						
STKA	**Stephens Creek**	**35.09**	**257**	P	**P**	**17 56 17.5**	**+1.5**
KRVT	**Keravat (AS076**	**38.81**	**306**	P	**P**	**17 56 47.0**	**-0.6**
	comp=Z,13nm,0.8s,baz=170,slow=6.1,SNR=2.4						
AS31	**Alice Springs**	**43.72**	**267**	P	**P**	**17 57 27.6**	**-0.4**
ASAR	**Alice Springs**	**43.72**	**267**	P	**P**	**17 57 27.7**	**-0.3**
	comp=Z,5.9nm,0.7s,baz=105,slow=6.8,SNR=57						
ASAR				PcP	**PcP**	**17 59 15.8**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=116,slow=4.5,SNR=3.0						
ASAR				ScP	**ScP**	**18 03 08.0**	**+4.4**
	comp=Z,1.7nm,1.1s,baz=105,slow=5.0,SNR=4.2						
ASAR	**Alice Springs**	**43.72**	**267**	P	**P**	**17 57 26.8**	**-1.2**
ASAR					**ScP**	**18 03 07.8**	**+4.2**
WR0	**Warramunga Arr**	**44.52**	**272**	P	**P**	**17 57 34.1**	**-0.3**
WR0				IAmb	IAmb	17 57 49.7	
	comp=Z,27nm,1.2s						
WB2	**Warramunga Arr**	**44.69**	**272**	P	**P**	**17 57 35.4**	**-0.4**
WRAB	**Tennant Creek**	**44.69**	**272**	P	**P**	**17 57 35.2**	**-0.6**
WRA	**Warramunga Arr**	**44.70**	**272**	P	**P**	**17 57 35.7**	**-0.2**
	comp=Z,9.9nm,0.7s,baz=112,slow=7.5,SNR=81						
WRA	**Warramunga Arr**	**44.70**	**272**	P	**P**	**17 57 35.5**	**-0.4**
WB0	**Warramunga Arr**	**44.72**	**272**	P	**P**	**17 57 35.8**	**-0.3**
VNDA	**Vanda**	**48.25**	**186**	P	**P**	**17 58 04.0**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=318,slow=4.8,SNR=3.0						
VNDA	**Vanda**	**48.25**	**186**	P	**P**	**17 58 03.6**	**+0.7**
MTN	**Manton Dam**	**50.57**	**278**	P	**P**	**17 58 20.4**	**-1.0**
MTN				IAmb	IAmb	17 58 34.4	
	comp=Z,24nm,1.5s						
KNRA	**Kununurra**	**51.30**	**274**	P	**P**	**17 58 26.9**	**0.0**
KNRA				IAmb	IAmb	17 58 52.3	
	comp=Z,10.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**52.97**	**269**	P	**P**	**17 58 39.7**	**+0.4**
	comp=Z,12nm,1.1s,baz=137,slow=7.6,SNR=9.8						
FITZ	**Fitzroy Crossi**	**52.97**	**269**	P	**P**	**17 58 39.1**	**-0.2**
FITZ				IAmb	IAmb	17 58 41.7	
	comp=Z,21nm,1.4s						
QSPA	**South Pole Qui**	**59.80**	**180**	P	**P**	**17 59 29.1**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=32,slow=1.2,SNR=14						
QSPA	**South Pole Qui**	**59.80**	**180**	P	**P**	**17 59 29.9**	**+2.3**
SANI	**Sanana**	**60.52**	**286**	P	**P**	**17 59 31.4**	**-1.6**
	comp=Z,11nm,1.2s						
LUWI	**Luwuk**	**63.75**	**285**	P	**P**	**17 59 56.2**	**+1.6**
SYO	**Syowa Base**	**77.34**	**193**	*eP*	**P**	**18 01 17.2**	**+0.6**
SYO	**Syowa Base**	**77.34**	**193**	*eP*	**PcP**	**18 01 28.6**	**+1.5**
SNAA	**Sanae**	**78.23**	**178**	P	**P**	**18 01 22.8**	**+1.1**
SNAA	**Sanae**	**78.23**	**178**	P	**P**	**18 01 22.0**	**+0.3**
SNAA				IAmb	IAmb	18 01 47.1	
	comp=Z,9.3nm,1.0s						
VNA3	**Neumayer Olymp**	**78.36**	**176**	P	**P**	**18 01 22.6**	**+0.3**
MJAR	**Matsushiro Arr**	**78.51**	**325**	P	**P**	**18 01 22.9**	**-0.6**
	comp=Z,5.4nm,1.0s,baz=169,slow=5.1,SNR=5.9						
VNA2	**Neumayer--Watz**	**78.80**	**177**	P	**P**	**18 01 25.9**	**+1.2**
H03S2	**Juan Fernandez**	**80.01**	**123**	T	T	19 29 22.9	
	baz=239						
H03S1	**Juan Fernandez**	**80.02**	**123**	T	T	19 29 19.9	
	baz=239						
H03S3	**Juan Fernandez**	**80.03**	**123**	T	T	19 29 19.4	
	baz=239						
PLCA	**Paso Flores**	**82.13**	**133**	P	**P**	**18 01 42.3**	**-1.0**
	comp=Z,3.8nm,1.0s,baz=227,slow=8.3,SNR=5.7						
KSRS	**Korea Array**	**84.67**	**319**	P	**P**	**18 01 55.3**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=142,slow=6.0,SNR=7.6						
KSAR	**Wonju Array Be**	**84.68**	**319**	P	**P**	**18 01 55.6**	**-0.5**
YSS	**Yuzh-Sakhalins**	**84.93**	**334**	P	**P**	**18 01 57.8**	**+0.8**
PFO	**Pinyon Flats O**	**85.70**	**47**	P	**P**	**18 02 01.8**	**+0.3**
PFO				IAmb	IAmb	18 02 04.8	
	comp=Z,11nm,1.4s						
ISA	**Isabella, Lake**	**85.81**	**44**	P	**P**	**18 02 02.2**	**+0.4**
ISA				IAmb	IAmb	18 02 22.1	
	comp=Z,8.7nm,1.3s						
PETK	**Petropavlovsk-**	**85.87**	**345**	P	**P**	**18 02 01.8**	**+0.2**
	comp=Z,4.4nm,0.7s,baz=131,slow=6.7,SNR=7.5						
PETK	**Petropavlovsk-**	**85.87**	**345**	P	**P**	**18 02 02.6**	**+0.9**
CMB	**Columbia Colle**	**86.29**	**42**	P	**P**	**18 02 05.0**	**+0.8**
AFDM	**Forest Hills D**	**86.58**	**41**	P	**P**	**18 02 06.4**	**+0.9**
AFDM				IAmb	IAmb	18 02 09.2	
	comp=Z,10nm,1.2s						
GSC	**Goldstone, Bar**	**86.58**	**45**	P	**P**	**18 02 04.6**	**-1.2**
GSC				IAmb	IAmb	18 02 07.1	
	comp=Z,6.6nm,1.1s						
WDC	**Whiskeytown Da**	**86.86**	**39**	P	**P**	**18 02 07.8**	**+1.0**
WDC				IAmb	IAmb	18 02 10.9	
	comp=Z,12nm,1.2s						
WAKR	**Walker**	**87.15**	**42**	P	**P**	**18 02 09.2**	**+0.7**
WAKR				IAmb	IAmb	18 02 12.6	
	comp=Z,9.4nm,1.3s						
USA0B	**Ussuriysk Arra**	**87.42**	**326**	P	**P**	**18 02 09.4**	**0.0**
USRK	**Ussuriysk Ar.**	**87.42**	**326**	P	**P**	**18 02 09.5**	**+0.1**
	comp=Z,4.0nm,0.7s,baz=116,slow=4.4,SNR=8.7						
USRK	**Ussuriysk Ar.**	**87.42**	**326**	P	**P**	**18 02 09.4**	**0.0**
PNTR	**Pine Nut**	**87.46**	**41**	P	**P**	**18 02 10.7**	**+0.6**
PNTR				IAmb	IAmb	18 02 20.4	
	comp=Z,10nm,1.0s						
LHV	**Little Huntoon**	**87.52**	**42**	P	**P**	**18 02 10.7**	**+0.7**
LHV				IAmb	IAmb	18 02 17.6	
	comp=Z,9.8nm,1.1s						
NVAR	**Mina Array Bea**	**87.76**	**42**	P	**P**	**18 02 10.7**	**-0.9**
	comp=Z,4.3nm,0.9s,baz=222,slow=7.4,SNR=21						
RYN	**Ryan**	**87.77**	**42**	P	**P**	**18 02 12.2**	**+0.7**
NV11	**Mina Array Sit**	**87.85**	**42**	P	**P**	**18 02 11.6**	**-0.2**
NV11				IAmb	IAmb	18 02 15.0	
	comp=Z,6.2nm,1.0s						
TPNV	**Topopah Spring**	**88.00**	**45**	P	**P**	**18 02 13.1**	**+0.4**
TPNV				IAmb	IAmb	18 02 16.1	
	comp=Z,7.4nm,1.1s						
Y14A	**Wickenburg**	**88.12**	**49**	P	**P**	**18 02 13.8**	**+0.7**
Y14A				IAmb	IAmb	18 02 16.5	
	comp=Z,12nm,1.4s						
TPH	**Tonopah**	**88.16**	**43**	P	**P**	**18 02 13.4**	**0.0**
W13A	**Hualapai Mount**	**88.28**	**47**	P	**P**	**18 02 13.6**	**-0.5**
KVN	**Kaiserville**	**88.29**	**42**	P	**P**	**18 02 13.3**	**-0.7**
KVN				IAmb	IAmb	18

*KRNET **26** 17:57:18.2±0.1, 43.30N×76.85E, h18km, mb3.4*
*NNC **26** 17:57:18.3±0.2, 43.34N×76.84E, h0km, mb3.6, mpv3.8,*
Error ellipse: s-maj=1.5km s-min=0.9km az=50.0
*SOME **26** 17:57:18.2, 43.28N×76.85E, h15km*
*KNET **26** 17:57:20.9±1.1, 43.19N×76.69E, h17km±12km, ml2.3,*
Error ellipse: s-maj=8.7km s-min=3.8km az=53.0

ISC 26 17:57:17.6±0.9, 43.30N±0.01×76.77E±0.01, h8km±6km, n98, σ1.21/182, 68C-38D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAA	**Alma-Ata** baz=51	**0.14**	**132**	⇓*i*P	**Pg**	**17 57 21.2**	**+0.5**
AAA	baz=51			⇑*e*S	**Sg**	**17 57 22.9**	**+0.1**
AAA	**Alma-Ata** 2μm,0.1s	**0.14**	**132**	⇓*i*P	**Pg**	**17 57 21.2**	**+0.5**
AAA	2μm,0.1s			⇑*e*S	**Sg**	**17 57 22.8**	**+0.1**
AAA	**Alma-Ata** 2μm,0.1s	**0.14**	**132**	P	**Pg**	**17 57 21.2**	**+0.5**
AAA	2μm,0.1s			S	**Sg**	**17 57 22.8**	**+0.1**
KNDC	**Almaty** 102nm,0.2s	**0.17**	**121**	⇑P	**Pg**	**17 57 21.4**	**+0.3**
KNDC	1μm,0.3s			⇑S	**Sg**	**17 57 23.6**	**+0.1**
MDOK	**Medeo** baz=33	**0.25**	**124**	⇓*i*P	**Pg**	**17 57 22.5**	**-0.1**
MDOK	baz=33			⇓*i*S	**Sg**	**17 57 25.2**	**-0.7**
MDOK	**Medeo** 120nm,0.2s	**0.25**	**124**	⇓*i*P	**Pg**	**17 57 22.5**	**-0.1**
MDOK	815nm,0.2s			⇓*i*S	**Sg**	**17 57 25.2**	**-0.7**
MDOK	**Medeo** 120nm,0.2s	**0.25**	**124**	Pg	**Pg**	**17 57 22.5**	**-0.1**
MDOK	815nm,0.2s			Lg	Lg	17 57 25.2	
KOTS	**Kotyrbulak** baz=8.0	**0.26**	**105**	⇑*i*P	**Pg**	**17 57 22.8**	**0.0**
KOTS	baz=8.0			⇑*e*S	**Sg**	**17 57 25.7**	**-0.6**
KOTS	**Kotyrbulak** 522nm,0.2s	**0.26**	**105**	⇑*i*P	**Pg**	**17 57 22.8**	**0.0**
KOTS	2μm,0.3s			⇑*e*S	**Sg**	**17 57 25.7**	**-0.6**
KOTS	**Kotyrbulak** 522nm,0.2s	**0.26**	**105**	P	**Pg**	**17 57 22.8**	**0.0**
KOTS	2μm,0.3s			S	**Sg**	**17 57 25.7**	**-0.6**
IZV	**Izvestkoviy** baz=13	**0.29**	**203**	⇓*i*P	**Pg**	**17 57 24.9**	**+1.5**
IZV	baz=13			⇑*i*S	**Sg**	**17 57 29.5**	**+2.2**
IZV	**Izvestkoviy** 125nm,0.1s	**0.29**	**203**	⇓*i*P	**Pg**	**17 57 24.9**	**+1.5**
IZV	284nm,0.3s			⇑*i*S	**Sg**	**17 57 29.5**	**+2.2**
IZV	**Izvestkoviy** 125nm,0.1s	**0.29**	**203**	P	**Pg**	**17 57 24.9**	**+1.5**
IZV	284nm,0.3s			S	**Sg**	**17 57 29.5**	**+2.2**
TNSS	**Tian-Shan** baz=65	**0.30**	**154**	⇓*i*P	**Pg**	**17 57 24.0**	**+0.4**
TNSS	baz=65			⇑*i*S	**Sg**	**17 57 27.9**	**+0.3**
TNSS	**Tian-Shan** 92nm,0.2s	**0.30**	**154**	⇓*i*P	**Pg**	**17 57 24.0**	**+0.4**
TNSS	696nm,0.2s			⇑*i*S	**Sg**	**17 57 27.9**	**+0.3**
TNSS	**Tian-Shan** 92nm,0.2s	**0.30**	**154**	P	**Pg**	**17 57 24.0**	**+0.4**
TNSS	696nm,0.2s			S	**Sg**	**17 57 27.9**	**+0.3**
MTBS	**Maitube** baz=41	**0.30**	**235**	⇓*i*P	**Pb**	**17 57 25.4**	**0.0**
MTBS	baz=41			⇑*i*S	**Sb**	**17 57 30.4**	**-0.2**
MTBS	**Maitube** 50nm,0.2s	**0.30**	**235**	⇓*i*P	**Pb**	**17 57 25.4**	**0.0**
MTBS	1μm,0.3s			⇑*i*S	**Sb**	**17 57 30.4**	**-0.2**
MTBS	**Maitube** 50nm,0.2s	**0.30**	**235**	P	**Pb**	**17 57 25.4**	**0.0**
MTBS	1μm,0.3s			S	**Sb**	**17 57 30.4**	**-0.2**
KTBS	**Karatobe** baz=44	**0.41**	**351**	⇓*i*P	**Pb**	**17 57 26.8**	**-0.4**
KTBS	baz=44			⇑*e*S	**Sb**	**17 57 32.6**	**-1.2**
KTBS	**Karatobe** 32nm,0.1s	**0.41**	**351**	⇓*i*P	**Pb**	**17 57 26.8**	**-0.4**
KTBS	597nm,0.3s			⇑*e*S	**Sb**	**17 57 32.6**	**-1.2**
KTBS	**Karatobe** 32nm,0.1s	**0.41**	**351**	P	**Pb**	**17 57 26.8**	**-0.4**
KTBS	597nm,0.3s			S	**Sb**	**17 57 32.6**	**-1.2**
CHKK	**Chushkaly** baz=11	**0.57**	**16**	⇓*i*P	**Pg**	**17 57 29.2**	**+0.5**
CHKK	baz=11			⇓*i*S	**Sg**	**17 57 36.8**	**+0.6**
CHKK	**Chushkaly** 107nm,0.1s	**0.57**	**16**	⇓*i*P	**Pg**	**17 57 29.2**	**+0.5**
CHKK	261nm,0.2s			⇓*i*S	**Sg**	**17 57 36.8**	**+0.6**
CHKK	**Chushkaly** 107nm,0.1s	**0.57**	**16**	P	**Pg**	**17 57 29.2**	**+0.5**
CHKK	261nm,0.2s			S	**Sg**	**17 57 36.8**	**+0.6**
KST	**Kastek** baz=49	**0.65**	**247**	⇓*i*P	**Pb**	**17 57 31.7**	**+0.4**
KST	baz=49			⇓*i*S	**Sb**	**17 57 41.0**	**+0.5**
KST	**Kastek** 16nm,0.1s	**0.65**	**247**	⇓*i*P	**Pb**	**17 57 31.6**	**+0.4**
KST	109nm,0.3s			⇓*i*S	**Sb**	**17 57 40.9**	**+0.5**
KST	**Kastek** 16nm,0.1s	**0.65**	**247**	P	**Pb**	**17 57 31.6**	**+0.4**
KST	109nm,0.3s			S	**Sb**	**17 57 40.9**	**+0.5**
KUU	**Kurty** baz=28	**0.67**	**332**	⇓*i*P	**Pb**	**17 57 31.6**	**0.0**
KUU	baz=28			⇑*i*S	**Sb**	**17 57 40.8**	**-0.2**
KUU	**Kurty** 7.7nm,0.1s	**0.67**	**332**	⇓*i*P	**Pb**	**17 57 31.6**	**0.0**
KUU	215nm,0.3s			⇑*i*S	**Sb**	**17 57 40.8**	**-0.2**
KUU	**Kurty** 7.7nm,0.1s	**0.67**	**332**	P	**Pb**	**17 57 31.6**	**0.0**
KUU	215nm,0.3s			S	**Sb**	**17 57 40.7**	**-0.2**
DGS	**Degeres** baz=66	**0.73**	**266**	⇑*i*P	**Pn**	**17 57 33.2**	**-1.2**
DGS	baz=66			⇑*i*S	**Sn**	**17 57 43.7**	**-2.1**
DGS	**Degeres** 57nm,0.1s	**0.73**	**266**	⇑*i*P	**Pn**	**17 57 33.2**	**-1.2**
DGS	101nm,0.4s			⇑*i*S	**Sn**	**17 57 43.7**	**-2.1**
DGS	**Degeres** 57nm,0.1s	**0.73**	**266**	P	**Pn**	**17 57 33.2**	**-1.2**
DGS	101nm,0.4s			S	**Sn**	**17 57 43.7**	**-2.1**
ANVS	**Anan'yevo** baz=30	**0.84**	**128**	⇑*i*P	**Pb**	**17 57 32.9**	**-1.7**
ANVS	baz=30			⇑*i*S	**Sb**	**17 57 43.5**	**-2.6**
KRBS	**Karabastau** baz=95	**0.89**	**297**	⇑*i*P	**Pn**	**17 57 35.9**	**-0.6**
KRBS	baz=95			⇓*i*S	**Sn**	**17 57 48.2**	**-1.5**
KRBS	**Karabastau** 30nm,0.2s	**0.89**	**297**	⇑*i*P	**Pn**	**17 57 35.9**	**-0.6**
KRBS	131nm,0.2s			⇓*i*S	**Sn**	**17 57 48.1**	**-1.5**
KRBS	**Karabastau** 30nm,0.2s	**0.89**	**297**	P	**Pn**	**17 57 35.9**	**-0.6**
KRBS	131nm,0.2s			S	**Sn**	**17 57 48.1**	**-1.5**
TKM2	**Tokmak 2** baz=48	**0.94**	**246**	⇑*i*P	**Pn**	**17 57 36.8**	**-0.6**
TKM2	baz=48			⇑*i*S	**Sn**	**17 57 50.2**	**-0.9**
TKM2	**Tokmak 2**	**0.94**	**246**	⇓P	**Pn**	**17 57 37.0**	**-0.4**
	6.9nm,0.1s,SNR=6.2						
TKM2				⇑S	**Sn**	**17 57 50.4**	**-0.7**
BOOM	**Boomskoye usch** baz=20	**1.02**	**217**	⇑*i*P	**Pb**	**17 57 37.6**	**0.0**
BOOM	baz=20			⇑*i*S	**Sb**	**17 57 51.3**	**+0.1**
KURS	**Kuram** baz=78	**1.04**	**79**	⇑*i*P	**Pb**	**17 57 36.8**	**-1.1**
KURS	baz=78			⇑*e*S	**Sb**	**17 57 49.8**	**-1.9**
KURS	**Kuram** 6.6nm,0.1s	**1.04**	**79**	⇑*i*P	**Pb**	**17 57 36.8**	**-1.1**
KURS	24nm,0.4s			*e*S	**Sb**	**17 57 49.7**	**-1.9**
KURS	**Kuram** 6.6nm,0.1s	**1.04**	**79**	P	**Pb**	**17 57 36.8**	**-1.1**
KURS	24nm,0.4s			S	**Sb**	**17 57 49.7**	**-1.9**
ULHL	**Ulahol** baz=3.0	**1.13**	**200**	⇑*i*P	**Pb**	**17 57 39.0**	**-0.5**
ULHL	baz=3.0			⇑*i*S	**Sb**	**17 57 54.2**	**-0.2**
ULHL	**Ulahol** 7.2nm,0.1s,SNR=43	**1.13**	**200**	P	**Pb**	**17 57 39.6**	**+0.1**
ULHL	16nm,0.2s			⇑S	**Sb**	**17 57 54.2**	**-0.2**
ARXS	**Arharly** 73nm,0.1s	**1.19**	**40**	*e*P	**Pn**	**17 57 39.9**	**-0.8**
ARXS	147nm,0.2s			*e*S	**Sb**	**17 57 55.1**	**-1.0**
ARXS	**Arharly** 73nm,0.1s	**1.19**	**40**	P	**Pn**	**17 57 39.9**	**-0.8**
ARXS	147nm,0.2s			S	**Sb**	**17 57 55.1**	**-1.0**
KDJ	**Kajisay** baz=68	**1.21**	**165**	⇓*e*P	**Pn**	**17 57 40.1**	**-0.9**
KDJ	baz=68			⇓*i*S	**Sb**	**17 57 56.2**	**-0.6**
SATY	**Saty** baz=1.0	**1.22**	**101**	*e*P	**Pn**	**17 57 39.9**	**-1.3**
SATY	baz=1.0			*e*S	**Sb**	**17 57 55.0**	**-2.1**
SATY	**Saty** 16nm,0.1s	**1.22**	**101**	*e*P	**Pn**	**17 57 39.9**	**-1.3**
SATY	200nm,0.1s			*e*S	**Sb**	**17 57 55.0**	**-2.1**
SATY	**Saty** 16nm,0.1s	**1.22**	**101**	P	**Pn**	**17 57 39.9**	**-1.3**
SATY	200nm,0.1s			S	**Sb**	**17 57 55.0**	**-2.1**
ZHN	**Zhinishke** baz=96	**1.22**	**96**	*e*P	**Pn**	**17 57 40.2**	**-1.0**
ZHN	baz=96			*e*S	**Sb**	**17 57 55.5**	**-1.6**
ZHN	**Zhinishke** 30nm,0.1s	**1.22**	**96**	*e*P	**Pn**	**17 57 40.2**	**-1.0**
ZHN	89nm,0.2s			*e*S	**Sb**	**17 57 55.5**	**-1.6**
ZHN	**Zhinishke** 30nm,0.1s	**1.22**	**96**	P	**Pn**	**17 57 40.2**	**-1.0**
ZHN	50nm,0.1s			S	**Sb**	**17 57 55.5**	**-1.6**
KPKS	**Kokpek** baz=82	**1.41**	**83**	⇑*i*P	**Pn**	**17 57 43.2**	**-0.4**
KPKS	baz=82			⇑*e*S	**Sn**	**17 58 01.0**	**-1.4**
KPKS	**Kokpek** 116nm,0.1s	**1.41**	**83**	⇑*i*P	**Pn**	**17 57 43.2**	**-0.4**
KPKS	510nm,0.4s			*e*S	**Sn**	**17 58 01.0**	**-1.4**
MNBS	**Baschi** 27nm,0.1s	**1.42**	**56**	*e*P	**Pn**	**17 57 44.4**	**+0.6**
MNBS	318nm,0.3s			*e*S	**Sn**	**17 58 02.6**	**-0.1**
MNBS	**Baschi** 27nm,0.1s	**1.42**	**56**	P	**Pn**	**17 57 44.4**	**+0.6**
MNBS	129nm,0.2s			S	**Sn**	**17 58 02.6**	**-0.1**
PRZ	**Przheval'sk** baz=25	**1.45**	**124**	⇑*i*P	**Pn**	**17 57 44.4**	**0.0**
PRZ	baz=25			⇑*i*S	**Sn**	**17 58 03.4**	**-0.3**
KBK	**Karagaybulak** baz=46	**1.48**	**245**	⇓*e*P	**Pg**	**17 57 46.6**	**+0.5**
KBK	baz=46			⇓*i*S	**Sg**	**17 58 06.7**	**+1.3**
KBK	**Karagaybulak** 18nm,0.2s,SNR=15	**1.48**	**245**	⇑P	**Pg**	**17 57 47.0**	**+0.9**
KBK	36nm,0.2s			⇓S	**Sg**	**17 58 07.7**	**+2.3**
CHMS	**Chumysh** baz=60	**1.51**	**259**	⇑*i*P	**Pg**	**17 57 46.7**	**+0.2**
CHMS	baz=60			⇑*i*S	**Sg**	**17 58 07.3**	**+1.2**
CHMS	**Chumysh** 9.4nm,0.2s,SNR=16	**1.51**	**259**	⇑P	**Pg**	**17 57 46.8**	**+0.2**
CHMS	54nm,0.2s			⇓S	**Sg**	**17 58 07.4**	**+1.2**
SGDS	**Sogindy** 5.0nm,0.2s	**1.57**	**276**	P	**Pg**	**17 57 48.1**	**+0.5**
SGDS	27nm,0.2s			S	**Sg**	**17 58 09.3**	**+1.4**
FRU1	**Bishkek** baz=54	**1.64**	**253**	⇑*i*P	**Pg**	**17 57 49.1**	**0.0**
FRU1	baz=54			⇑*i*S	**Sg**	**17 58 11.8**	**+1.4**
UZB	**Uzynbulak** baz=95	**1.65**	**95**	*e*P	**Pn**	**17 57 47.7**	**+0.6**
UZB	baz=95			*e*S	**Sn**	**17 58 08.4**	**-0.2**
UZB	**Uzynbulak** 21nm,0.1s	**1.65**	**95**	*e*P	**Pn**	**17 57 47.7**	**+0.6**
UZB	61nm,0.1s			*e*S	**Sn**	**17 58 08.4**	**-0.2**
UZB	**Uzynbulak** 21nm,0.1s	**1.65**	**95**	P	**Pn**	**17 57 47.7**	**+0.6**
UZB	58nm,0.1s			S	**Sn**	**17 58 08.4**	**-0.2**
USP	**Ospenovka** baz=70	**1.66**	**270**	⇑*i*P	**Pg**	**17 57 49.4**	**0.0**
USP	baz=70			⇑*i*S	**Sg**	**17 58 12.3**	**+1.4**
USP	**Ospenovka** 18nm,0.2s,SNR=21	**1.66**	**270**	⇑P	**Pg**	**17 57 49.5**	**+0.1**
USP	16nm,0.1s			⇑S	**Sg**	**17 58 12.0**	**+1.1**
AAK	**Ala-Archa** baz=50	**1.80**	**249**	⇑*i*P	**Pg**	**17 57 52.0**	**-0.1**
AAK	baz=50			⇑*i*S	**Sg**	**17 58 16.4**	**+1.0**
AAK	**Ala-Archa** 8.7nm,0.2s,SNR=11	**1.80**	**249**	⇓P	**Pg**	**17 57 52.7**	**+0.6**
AAK	11nm,0.2s			⇓del		17 58 16.5	
SHLS	**Shalkode** 20nm,0.2s	**1.97**	**93**	*e*P	**Pg**	**17 57 59.0**	**+3.6**
SHLS	32nm,0.4s			*e*S	**Sg**	**17 58 28.0**	**+7.0**
SHLS	**Shalkode** 20nm,0.2s	**1.97**	**93**	Pg	**Pg**	**17 57 59.0**	**+3.6**
SHLS	32nm,0.4s			Lg	Lg	17 58 28.0	
UCH	**Uchtor** baz=39	**1.98**	**238**	⇑*i*P	**Pb**	**17 57 54.9**	**+0.7**
UCH	baz=39			⇑*i*S	**Sg**	**17 58 21.3**	**+0.1**
PDGK	**Podgornoye** 6.1nm,0.1s	**1.98**	**88**	P	**Pn**	**17 57 53.6**	**+1.9**
PDGK	21nm,0.3s			S	**Sn**	**17 58 18.5**	**+1.7**
PDGK	**Podgornoye** 5.4nm,0.3s	**1.98**	**88**	⇓Pn	**Pn**	**17 57 52.6**	**+1.0**
PDGK	16nm,0.4s			⇑Sn	**Sn**	**17 58 18.1**	**+1.3**
TDK	**Taldyqorghan** 93nm,0.4s	**2.07**	**34**	*e*P	**Pb**	**17 57 56.0**	**+0.5**
TDK	183nm,0.4s			*e*S	**Sb**	**17 58 22.4**	**+1.1**
TDK	**Taldyqorghan** 93nm,0.4s	**2.07**	**34**	Pg	**Pb**	**17 57 56.0**	**+0.5**
TDK	183nm,0.4s			Lg	Lg	17 58 22.4	
EKS2	**Erkin-Say** baz=55	**2.29**	**255**	⇑*i*P	**Pb**	**17 57 59.3**	**+0.1**
EKS2	baz=55			⇑*i*S	**Sb**	**17 58 28.7**	**+1.0**
EKS2	**Erkin-Say** 4.4nm,0.2s,SNR=10	**2.29**	**255**	⇓P	**Pb**	**17 58 00.3**	**+1.1**
ARLS	**Aral** baz=33	**2.31**	**232**	⇑*e*P	**Pb**	**17 57 59.2**	**-0.5**
ARLS	baz=33			⇑*i*S	**Sb**	**17 58 28.2**	**-0.2**
DJR	**Jarkent** 11nm,0.3s	**2.42**	**64**	*e*P	**Pb**	**17 58 01.3**	**-0.1**
DJR	26nm,0.4s			*e*S	**Sb**	**17 58 31.9**	**+0.6**
DJR	**Jarkent** 8.7nm,0.2s	**2.42**	**64**	Pg	**Pb**	**17 58 01.3**	**-0.1**
DJR	26nm,0.4s			Lg	Lg	17 58 31.9	
AML	**Almayashu** baz=44	**2.55**	**244**	⇑*i*P	**Pb**	**17 58 03.0**	**-0.9**
AML	baz=44			⇑*i*S	**Sb**	**17 58 35.2**	**-0.4**
AML	**Almayashu** 5.4nm,0.3s,SNR=6.3	**2.55**	**244**	⇑del		17 58 05.7	
KTMS	**Ketmen** 44nm,0.2s	**2.62**	**86**	*e*P	**Pb**	**17 58 03.5**	**-1.3**
KTMS	52nm,0.2s			*e*S	**Sn**	**17 58 35.4**	**+3.0**
BTLS	**Baital** 3.8nm,0.2s	**2.62**	**312**	*e*P	**Pg**	**17 58 07.5**	**-0.3**
BTLS	12nm,0.2s			*e*S	**Sg**	**17 58 42.0**	**+0.3**
BTLS	**Baital** 3.8nm,0.2s	**2.62**	**312**	Pg	**Pg**	**17 58 07.5**	**-0.3**
BTLS	11nm,0.2s			Lg	Lg	17 58 42.0	
MRKS	**Merke** 4.7nm,0.4s	**2.66**	**259**	*e*P	**Pg**	**17 58 07.6**	**-1.0**
MRKS	17nm,0.2s			*e*S	**Sg**	**17 58 42.8**	**-0.2**
MRKS	**Merke** 4.7nm,0.4s	**2.66**	**259**	Pg	**Pg**	**17 58 07.6**	**-1.0**
MRKS	17nm,0.2s			Lg	Lg	17 58 42.8	
KAPS	**Kapalarasan** 13nm,0.4s	**2.72**	**42**	*e*P	**Pb**	**17 58 06.5**	**0.0**
KAPS	43nm,0.5s			*e*S	**Sb**	**17 58 40.8**	**+0.8**
KAPS	**Kapalarasan** 13nm,0.4s	**2.72**	**42**	Pg	**Pb**	**17 58 06.5**	**0.0**
KAPS	43nm,0.5s			Lg	Lg	17 58 40.8	
KK31	**Karatay Array** 0.6nm,0.4s,baz=82,slow=14,SNR=7.3	**4.58**	**270**	⇑Pg	**Pg**	**17 58 44.0**	**-1.3**
KK31	2.4nm,0.5s,baz=74,slow=31,SNR=16			Lg	Lg	17 59 46.7	
MAKZ	**Makanchi** 3.1nm,1.1s	**5.09**	**45**	⇑Pn	**Pn**	**17 58 35.7**	**+1.5**
MAKZ	3.8nm,0.8s			⇓Lg	Lg	17 59 57.0	
IUG	**luzhnay**	**5.10**	**259**	*e*P	**Pg**	**17 58 53.0**	**-2.2**
IUG				*e*S	**Sg**	**18 00 00.6**	**-0.7**
MK31	**Makanchi Array** 0.4nm,0.2s,baz=222,slow=16,SNR=24	**5.24**	**46**	⇑Pn	**Pn**	**17 58 37.7**	**+1.4**
MK31	0.9nm,0.4s,baz=222,slow=31,SNR=4.7			⇑Lg	Lg	18 00 03.4	

*IDC **26** 17:58:36.3±1.7, 2.06N×126.76E, h0km, mb3.6/5,*
mb1 3.8/5, mb1mx3.5/48, mbtmp3.7/5, Error ellipse:
s-maj=118.6km s-min=20.7km az=69.0
*DJA **26** 17:58:40.6±0.6, 2.0N±0.2×126.7E±0.1, h47km, n9, σ0.38/8,*
mb3.8/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**149**	P	**Pn**	**17 59 06.1**	**+0.1**
KMSI	**Cibinong**	**3.01**	**242**	P	**Pn**	**17 59 27.8**	**-0.3**
GTOI	**Gorontalo**	**3.87**	**250**	P	**Pn**	**17 59 40.3**	**+0.3**
MRSI	**Marisa** 22nm,0.7s	**4.94**	**252**	P	Pn	18 00 00.1	+5.5
FITZ	**Fitzroy Crossi** 1.4nm,0.8s,baz=8.7,slow=13,SNR=1.7	**19.98**	**183**	P	**P**	**18 03 11.7**	**+0.3**
WRA	**Warramunga Arr** 2.2nm,0.5s,baz=340,slow=11,SNR=18	**23.06**	**161**	P	**P**	**18 03 43.9**	**-0.6**
ASAR	**Alice Springs** 0.8nm,0.6s,baz=350,slow=9.7,SNR=9.0	**26.45**	**165**	P	**P**	**18 04 15.6**	**-0.1**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=120,slow=8.5,SNR=5.5	**58.94**	**326**	P	**P**	**18 08 37.3**	**-0.2**
KURBB	**Kurchatov Arra** 0.5nm,0.2s,baz=127,slow=5.6,SNR=1.6	**63.16**	**328**	P	**P**	**18 09 06.2**	**+0.2**

IDC 26 18:00:34.8±1.7, 28.76N×102.12E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/54, mbtmp3.2/3, MS3.9/1, Ms1 3.9/1, ms1mx3.2/23, Error ellipse: s-maj=405.9km s-min=31.3km az=55.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=121,slow=11,SNR=2.5	**23.76**	**325**	P	P	18 05 48.8	0.0
WRA	**Warramunga Arr** 0.3nm,0.8s,baz=334,slow=7.9,SNR=2.1	**57.55**	**144**	P	P	18 10 25.4	-0.9
WRA	comp=Z,115nm,21.5s,baz=190,slow=38			LR	LR	18 37 17.5	
ASAR	**Alice Springs** 0.3nm,0.9s,baz=325,slow=6.7,SNR=2.2	**60.44**	**146**	P	P	18 10 47.2	+0.8

IDC 26 18:01:51.0±6.2, 9.55S×155.49E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.5/38, mbtmp3.9/4, ML4.0/1, Error ellipse: s-maj=116.0km s-min=38.6km az=82.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076** 3.5nm,0.3s,baz=200,slow=15,SNR=3.6	**6.24**	**326**	Pn	Pn	18 03 24.6	+0.1
KRVT	1.0nm,0.3s,baz=207,slow=19,SNR=1.3			Sn	Sn	18 04 32.6	-3.9
WRA	**Warramunga Arr** 1.4nm,0.8s,baz=65,slow=10,SNR=8.7	**22.89**	**241**	P	P	18 06 56.4	-0.1
ASAR	**Alice Springs** 1.6nm,0.8s,baz=64,slow=9.4,SNR=14	**24.95**	**233**	P	P	18 07 16.2	-0.1
STKA	**Stephens Creek** 2.1nm,0.7s,baz=32,slow=14,SNR=5.6	**25.68**	**208**	P	P	18 07 22.9	+0.1

IDC 26 18:03:01.1±1.7, 30.32S×177.02W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/26, mbtmp3.7/3, Error ellipse: s-maj=36.3km s-min=30.5km az=45.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island** 80nm,0.3s,baz=62,slow=22,SNR=3.4	**1.32**	**324**	Pn	Pn	18 03 27.6	+0.8
RAO	154nm,0.3s,baz=109,slow=22,SNR=5.9			Sn	Sn	18 03 45.5	+0.5
ASAR	**Alice Springs** 0.8nm,1.0s,baz=104,slow=7.4,SNR=7.1	**43.96**	**266**	P	P	18 11 09.9	-0.4
WRA	**Warramunga Arr** 1.6nm,0.9s,baz=111,slow=7.7,SNR=14	**44.94**	**272**	P	P	18 11 17.9	-0.2
NVAR	**Mina Array Bea** 0.5nm,0.9s,baz=228,slow=9.4,SNR=2.5	**87.61**	**42**	P	P	18 15 51.2	-0.3
FINES	**FINESS Array B** 2.1nm,0.7s,baz=48,slow=2.8,SNR=9.5	**145.35**	**341**	PKPbc	PKPbc	18 22 39.5	-0.6

IDC 26 18:04:14.1±2.4, 3.27N×66.81E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.3/51, mbtmp3.8/3, Error ellipse: s-maj=67.0km s-min=53.2km az=58.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr** 0.4nm,0.3s,baz=257,slow=8.8,SNR=5.3	**34.88**	**62**	P	P	18 11 07.5	-0.1
WRA	**Warramunga Arr** 1.4nm,0.9s,baz=291,slow=5.2,SNR=7.0	**70.14**	**112**	P	P	18 15 29.2	+0.1
ASAR	**Alice Springs** 0.9nm,0.9s,baz=282,slow=5.8,SNR=8.8	**70.51**	**116**	P	P	18 15 31.2	-0.1
TXAR	**Lajitas Array** 0.5nm,1.0s,baz=8.5,slow=1.8,SNR=3.2	**146.31**	**345**	PKPbc	PKPdf	18 23 56.9	+0.3

*IDC **26** 18:16:07.6±6.2, 17.97S×178.15W, h413km±63km,*
mb3.4/12, mb1 3.6/12, mb1mx3.4/39, mbtmp4.1/12, Error
ellipse: s-maj=24.5km s-min=19.4km az=125.0
*NEIC **26** 18:16:18.9±1.0, 17.9S±0.2×178.5W±0.1, h534km±8km,*

mb4.1/37, Error ellipse: s-maj=26.1km s-min=19.5km az=175.0

ISC 26 18:16:21.9±0.6, 18°1S±0"2×178°3W±0°1, h579km, n96, σ0s86/97, mb4.0/29, 11C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.46**	**275**	P	P	18 17 34.6	-7.6
NIUE	**Niue**	**8.04**	**99**	P	P	**18 18 18.4**	**-2.5**
JAY	**Jayapura**	**43.01**	**286**	P	P	**18 23 30.4**	**-1.4**
	5.2nm,0.6s,baz=147,slow=6.0,SNR=6.9						
WR0	**Warramunga Arr**	**44.48**	**260**	P	P	**18 23 42.2**	**-0.7**
WB0	**Warramunga Arr**	**44.64**	**260**	P	P	**18 23 43.4**	**-0.8**
WB0				IAmb	IAmb	18 23 44.2	
	comp=Z,4.4nm,1.1s						
WC3	**Warramunga Arr**	**44.64**	**260**	P	P	**18 23 43.2**	**-1.0**
WC3				IAmb	IAmb	18 24 09.6	
	comp=Z,8.4nm,1.4s						
WB2	**Warramunga Arr**	**44.66**	**260**	P	P	**18 23 43.1**	**-1.3**
WRA	**Warramunga Arr**	**44.68**	**260**	P	P	**18 23 43.4**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=97,slow=6.9,SNR=31						
WRA				PcP	PcP	**18 25 16.0**	**+1.6**
	comp=Z,0.2nm,0.4s,baz=90,slow=3.8,SNR=5.4						
AS31	**Alice Springs**	**44.82**	**254**	P	P	**18 23 44.6**	**-0.9**
ASAR	**Alice Springs**	**44.82**	**254**	P	P	**18 23 44.4**	**-1.2**
	comp=Z,6.7nm,0.6s,baz=88,slow=7.9,SNR=152						
ASAR				PcP	PcP	**18 25 16.6**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=100,slow=3.7,SNR=5.5						
ASAR	**Alice Springs**	**44.82**	**254**	P	P	**18 23 44.9**	**-0.6**
KNRA	**Kununurra**	**50.54**	**264**	P	P	**18 24 28.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**53.07**	**261**	P	P	**18 24 46.4**	**0.0**
	comp=Z,1.3nm,0.8s,baz=93,slow=5.5,SNR=7.4						
FITZ	**Fitzroy Crossi**	**53.07**	**261**	P	P	**18 24 47.1**	**+0.7**
FITZ				IAmb	IAmb	18 24 53.9	
	comp=Z,7.9nm,1.3s						
PSAC2	**Pilbara Seismi**	**57.89**	**256**	P	P	**18 25 19.7**	**-0.1**
PSAB2	**Pilbara Seismi**	**57.93**	**256**	P	P	**18 25 19.9**	**-0.1**
PSAB1	**Pilbara Seismi**	**57.97**	**255**	P	P	**18 25 20.1**	**-0.2**
PSAD1	**Pilbara Seismi**	**57.97**	**256**	P	P	**18 25 20.6**	**+0.2**
PSAC1	**Pilbara Seismi**	**57.98**	**256**	P	P	**18 25 20.4**	**+0.1**
PSAD3	**Pilbara Seismi**	**57.99**	**255**	P	P	**18 25 20.3**	**-0.2**
MJAR	**Matsushiro Arr**	**68.06**	**323**	P	P	**18 26 24.5**	**0.0**
	comp=Z,2.4nm,0.6s,baz=159,slow=5.9,SNR=6.3						
MJAR	**Matsushiro Arr**	**68.06**	**323**	P	P	**18 26 23.1**	**-1.4**
MAJO	**Matsushiro**	**68.06**	**323**	P	P	**18 26 23.5**	**-1.1**
MAJO				IAmb	IAmb	18 26 29.0	
	comp=Z,14nm,1.3s						
JHS	**Saijyo**	**70.05**	**319**	P	P	**18 26 36.1**	**-0.4**
ASAJ	**Asahikawa**	**71.43**	**331**	P	P	**18 26 45.5**	**+1.1**
	comp=Z,5.4nm,0.6s,baz=221,slow=8.3,SNR=9.5						
QSPA	**South Pole Qui**	**72.01**	**180**	P	P	**18 26 49.1**	**+1.5**
	comp=Z,1.0nm,0.7s,baz=355,slow=1.4,SNR=5.3						
QSPA	**South Pole Qui**	**72.01**	**180**	P	P	**18 26 49.1**	**+1.5**
KSRS	**Korea Array**	**74.85**	**318**	P	P	**18 27 05.1**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=114,slow=6.4,SNR=2.2						
OHAK	**Old Harbor**	**77.85**	**14**	P	P	**18 27 19.9**	**-0.1**
OHAK				IAmb	IAmb	18 27 31.7	
	comp=Z,8.5nm,1.2s						
KDAK	**Kodiak Island**	**78.52**	**14**	P	P	**18 27 23.8**	**+0.2**
KDAK				IAmb	IAmb	18 27 48.9	
	comp=Z,16nm,1.5s						
NVAR	**Mina Array Bea**	**79.47**	**44**	P	P	**18 27 29.8**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=227,slow=9.0,SNR=7.7						
SUA	**Susitna One**	**82.25**	**13**	P	P	**18 27 43.4**	**+0.4**
TTA	**Tatalina**	**82.60**	**10**	P	P	**18 27 45.2**	**+0.6**
YAH	**Yahtse**	**83.54**	**17**	P	P	**18 27 50.4**	**+0.8**
YAH				IAmb	IAmb	18 27 51.7	
	comp=Z,4.2nm,0.8s						
TABL	**Table Mountain**	**83.78**	**18**	P	P	**18 27 51.6**	**+0.8**
TABL				IAmb	IAmb	18 28 04.9	
	comp=Z,12nm,1.3s						
VRDI	**Verde Repeater**	**83.79**	**16**	P	P	**18 27 51.1**	**+0.3**
VRDI				IAmb	IAmb	18 28 09.6	
	comp=Z,5.7nm,1.2s						
N25K	**Chitina, Valde**	**83.81**	**15**	P	P	**18 27 51.5**	**+0.7**
N25K				IAmb	IAmb	18 27 52.1	
	comp=Z,3.2nm,0.7s						
GLB	**Gilahina Butte**	**83.88**	**16**	P	P	**18 27 51.6**	**+0.5**
GLB				IAmb	IAmb	18 27 52.2	
	comp=Z,3.6nm,0.7s						
BALM	**Baldy**	**83.93**	**17**	P	P	**18 27 52.0**	**+0.6**
BALM				IAmb	IAmb	18 27 52.6	
	comp=Z,4.0nm,1.0s						
TRF	**Thorofare Moun**	**84.13**	**12**	P	P	**18 27 52.2**	**-0.2**
TRF				IAmb	IAmb	18 27 53.1	
	comp=Z,5.1nm,0.7s						
BARN	**Barnard Glacie**	**84.14**	**17**	P	P	**18 27 52.4**	**-0.1**
BARN				IAmb	IAmb	18 27 54.2	
	comp=Z,3.5nm,0.8s						
CTGM	**Chitina Glacie**	**84.15**	**17**	P	P	**18 27 52.9**	**+0.4**
CTGM				IAmb	IAmb	18 28 04.0	
	comp=Z,11nm,1.4s						
RND	**Reindeer**	**84.39**	**13**	P	P	**18 27 53.8**	**+0.3**
RND				IAmb	IAmb	18 27 54.6	
	comp=Z,5.7nm,0.8s						
DHY	**Denali Highway**	**84.42**	**14**	P	P	**18 27 53.8**	**0.0**
DHY				IAmb	IAmb	18 28 18.2	
	comp=Z,6.3nm,1.5s						
WRH	**Wood River Hil**	**85.49**	**13**	P	P	**18 27 58.7**	**0.0**
DOT	**Dot Lake**	**85.68**	**15**	P	P	**18 28 00.5**	**+0.8**
CCB	**Clear Creek Bu**	**85.70**	**13**	P	P	**18 27 59.6**	**-0.1**
MDM	**Murphy Dome**	**85.89**	**12**	P	P	**18 28 00.6**	**-0.1**
MDM				IAmb	IAmb	18 28 19.1	
	comp=Z,7.1nm,1.5s						
IL31		**86.00**	**13**	P	P	**18 28 00.9**	**-0.2**
ILAR	**Eielson Array**	**86.00**	**13**	P	P	**18 28 00.8**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=229,slow=4.5,SNR=14						
ILAR	**Eielson Array**	**86.00**	**13**	P	P	**18 28 01.2**	**0.0**
TXAR	**Lajitas Array**	**86.01**	**58**	P	P	**18 28 02.8**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=225,slow=5.2,SNR=9.5						
PDAR	**Pinedale Array**	**87.40**	**43**	P	P	**18 28 09.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=258,slow=3.3,SNR=3.7						
BMAR	**Burnt Mountain**	**88.78**	**12**	P	P	**18 28 15.7**	**+1.4**
MKAR	**Makanchi Array**	**109.28**	**314**	PKiKP	**PKiKP**	**18 33 48.0**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=81,slow=0.5,SNR=1.5						
ARCES	**ARCESS Array B**	**126.46**	**350**	PKP	**PKiKP**	**18 34 20.1**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=48,slow=3.5,SNR=9.5						
FINES	**FINESS Array B**	**133.34**	**344**	PKP	**PKiKP**	**18 34 33.4**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=48,slow=2.8,SNR=4.6						
AKASG	**Malin Array Be**	**140.71**	**332**	PKhKP	PKPpre	18 34 41.2	
	comp=Z,0.7nm,0.4s,baz=42,slow=4.0,SNR=5.0						
BUR08	**Bucovina Ar. S**	**144.75**	**332**		**PKPab**	**18 34 56.0**	**+1.1**
BURAR	**Bucovina Array**	**144.77**	**332**	⇑P	**PKiKP**	**18 34 56.9**	**-0.7**
BURAR	**Bucovina Array**	**144.77**	**332**		**PKiKP**	**18 34 56.5**	**-1.1**
BIZ	**Bicaz**	**144.86**	**330**	⇑P	**PKiKP**	**18 34 57.0**	**-0.7**
TESR	**Tescani**	**144.91**	**330**	⇓P	**PKiKP**	**18 34 56.7**	**-1.1**
BRTR	**Keskin Array B**	**144.93**	**315**	PKPbc	**PKiKP**	**18 34 57.2**	**-1.1**
	comp=Z,1.1nm,0.4s,baz=46,slow=4.2,SNR=4.4						
BRTR	**Keskin Array B**	**144.93**	**315**		**PKPab**	**18 34 56.9**	**+1.0**
TPGR	**Topolog**	**145.15**	**326**	⇑P	**PKiKP**	**18 34 57.6**	**-0.8**
OSTC	**Ostas**	**145.56**	**344**	*e*PKP	**PKPab**	**18 34 58.3**	**+0.6**
CHVC	**Chvalec**	**145.56**	**344**	*e*PKP	**PKiKP**	**18 34 58.5**	**-0.5**
CLL	**Collm**	**145.61**	**347**	⇓*i*PKPbc	**PKPab**	**18 34 58.1**	**+0.2**
	comp=Z,11nm,0.9s						
CLL	**Collm**	**145.61**	**347**		**PKPab**	**18 34 57.5**	**-0.4**
UPC	**Upice**	**145.64**	**344**	⇑*e*PKP	**PKPab**	**18 34 58.5**	**+0.4**
DPC	**Dobruska-Polom**	**145.70**	**343**	⇑*e*PKP	**PKiKP**	**18 34 58.9**	**-0.4**
KRLC	**Kraliky**	**145.82**	**343**	⇑*e*PKP	**PKPab**	**18 34 59.0**	**+0.1**
MLR	**Muntele Rosu**	**145.99**	**329**	⇓P	**PKPdf**	**18 34 53.8**	**-2.0**
DRGR		**146.49**	**333**	⇑P	**PKiKP**	**18 35 01.1**	**0.0**
ARR	**Arges**	**146.71**	**330**	⇓P	**PKPab**	**18 35 02.9**	**+0.3**
KHC	**Kasperske Hory**	**147.53**	**345**	⇑*e*PKP	**PKiKP**	**18 35 03.6**	**+0.5**
KHC				*e*PKPAB	**PKPab**	**18 35 07.0**	**+1.3**
KHC	**Kasperske Hory**	**147.53**	**345**		**PKiKP**	**18 35 03.7**	**+0.5**
GEC2	**GERESS Array S**	**147.76**	**345**		**PKiKP**	**18 35 04.1**	**+0.4**
GERES	**GERESS Array B**	**147.76**	**345**	PKPbc	**PKiKP**	**18 35 04.1**	**+0.4**
	comp=Z,3.3nm,0.5s,baz=25,slow=2.9,SNR=33						
GERES	**GERESS Array B**	**147.76**	**345**		**PKiKP**	**18 35 03.9**	**+0.2**
CONA	**Conrad Observa**	**148.01**	**342**	*i* P	**PKiKP**	**18 35 04.9**	**+0.7**
	comp=Z,3.1nm,0.5s,SNR=5.0						
HERR	**Herculane**	**148.11**	**332**	⇑P	**PKiKP**	**18 35 05.0**	**+0.6**
WLF	**Walferdange**	**148.25**	**354**		**PKiKP**	**18 35 05.2**	**+0.7**
ARSA	**Arzberg**	**148.72**	**342**	*e*P	**PKPab**	**18 35 10.2**	**-0.5**
	comp=Z,4.4nm,1.2s						
KBA	**Koelnbreinsper**	**149.49**	**344**	*e*P	**PKiKP**	**18 35 07.5**	**+0.1**
	comp=Z,3.2nm,0.5s						
WATA	**Walderalm**	**149.67**	**347**	*e*P	**PKiKP**	**18 35 08.8**	**+1.0**
	comp=Z,3.2nm,0.5s						
RETA	**Reutte**	**149.70**	**348**	*e*P	**PKiKP**	**18 35 08.8**	**+1.1**
	comp=Z,1.1nm,0.4s						
WTTA	**Wattenberg**	**149.73**	**346**	*i* P	**PKiKP**	**18 35 09.0**	**+1.1**
	comp=Z,6.8nm,0.5s,SNR=5.4						
MOTA	**Moosalm**	**149.77**	**347**	*e*P	**PKiKP**	**18 35 08.9**	**+0.9**
	comp=Z,3.7nm,0.7s						
DIVS	**Divibare**	**149.79**	**333**		**PKiKP**	**18 35 09.4**	**+1.3**
MYKA	**Terra Mystica**	**149.83**	**343**	*e*P	**PKiKP**	**18 35 08.3**	**+0.3**
	comp=Z,3.2nm,0.4s						
SQTA	**Sankt Quirin**	**149.86**	**347**	*e*P	**PKiKP**	**18 35 09.5**	**+1.4**
	comp=Z,4.0nm,0.5s						
ABTA	**Abfaltersbach**	**150.01**	**345**	*i* P	**PKiKP**	**18 35 09.0**	**+0.6**
	comp=Z,5.9nm,0.6s,SNR=6.0						
DAVA	**Damuels**	**150.06**	**349**	*e*P	**PKiKP**	**18 35 10.3**	**+1.7**
	comp=Z,3.6nm,0.7s						
FETA	**Feichten**	**150.15**	**347**	*e*P	**PKiKP**	**18 35 10.1**	**+1.3**
	comp=Z,5.5nm,1.5s						

IDC 26 18:18:00.1±4.3, 5°01N×61°91E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.3/44, mbtmp3.5/3, Error ellipse: s-maj=111.7km s-min=75.6km az=116.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**38.54**	**67**	P	P	18 25 24.7	0.0
	0.1nm,0.3s,baz=266,slow=11,SNR=1.5						
WRA	**Warramunga Arr**	**75.31**	**112**	P	P	18 29 45.6	-0.2
	0.6nm,0.9s,baz=286,slow=5.1,SNR=2.7						
ASAR	**Alice Springs**	**75.65**	**116**	P	P	18 29 47.9	+0.2
	0.6nm,0.9s,baz=287,slow=4.4,SNR=4.4						
TXAR	**Lajitas Array**	**143.15**	**339**	PKP	PKPdf	18 37 36.9	-0.2
	0.3nm,0.8s,baz=60,slow=2.2,SNR=2.3						

*IDC **26** 18:22:54.6±1.8, 1°91N×126°51E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/38, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=115.2km s-min=22.7km az=68.0*
*NEIC **26** 18:23:00.4±0.6, 1°9N±0°1×126°61E±0°08, h46km±12km, mb4.0/12, Error ellipse: s-maj=16.8km s-min=9.3km az=208.0*
*DJA **26** 18:23:01.3±1.6, 2°N±4°×12°7E±°, h30km±21km, M3.8/11, mb4.0/2, MLv3.7/11*

ISC 26 18:23:00.8±0.8, 1°90N±0°06×126°63E±0°09, h47km, n32, σ0s80/33, mb3.8/9, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.34**	**147**	P	**Pn**	**18 23 22.9**	**-0.2**
TNTI	**Ternate**	**1.34**	**147**		**Pn**	**18 23 22.8**	**-0.3**
SGSI	**Sangihe**	**2.09**	**328**	P	**Pn**	**18 23 34.4**	**+1.0**
SGSI				S	**Sn**	**18 23 58.2**	**0.0**
KMSI	**Cibinong**	**2.96**	**244**	P	**Pn**	**18 23 45.5**	**+0.3**
GTOI	**Gorontalo**	**3.83**	**251**	P	**Pn**	**18 23 59.6**	**+2.4**
SANI	**Sanana**	**3.97**	**189**	P	**Pn**	**18 23 58.8**	**-0.4**
LUWI	**Luwuk**	**4.84**	**233**	P	**Pn**	**18 24 11.3**	**+0.2**
LUWI	**Luwuk**	**4.84**	**233**		**Pn**	**18 24 11.5**	**+0.4**
MRSI	**Marisa**	**4.90**	**253**	P	**Pn**	**18 24 12.7**	**+0.8**
APSI	**Ampana**	**5.71**	**241**	P	**Pn**	**18 24 24.8**	**+1.7**
TOLI2	**Tolitoli**	**5.90**	**262**	Pn	**Pn**	**18 24 24.3**	**-1.4**
MYLDM	**Lahad Datu**	**8.74**	**292**	Pn	**Pn**	**18 25 04.3**	**-0.4**
KKM	**Kota Kinabalu**	**11.18**	**292**	Pn	**Pn**	**18 25 37.6**	**-0.5**
KNRA	**Kununurra**	**17.59**	**173**		**P**	**18 27 01.9**	**-1.2**
KNRA				IAmb	IAmb	18 27 12.3	
	comp=Z,17nm,1.5s						
FITZ	**Fitzroy Crossi**	**19.89**	**183**	P	**P**	**18 27 28.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=7.0,slow=10.0,SNR=2.2						
FITZ	**Fitzroy Crossi**	**19.89**	**183**	P	**P**	**18 27 28.0**	**-0.4**
YOJ	**Yonaguni jima**	**22.70**	**351**	P	**P**	**18 27 58.2**	**-0.4**
WB0	**Warramunga Arr**	**22.84**	**161**	P	**P**	**18 27 59.7**	**-0.4**
WB0				IAmb	IAmb	18 28 03.5	
	comp=Z,4.7nm,1.1s						
WRAB	**Tennant Creek**	**22.98**	**161**	P	**P**	**18 28 01.4**	**-0.1**
WRAB				IAmb	IAmb	18 28 07.5	
	comp=Z,3.5nm,0.9s						
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**18 28 01.4**	**-0.2**
	comp=Z,1.2nm,0.4s,baz=339,slow=11,SNR=26						
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**18 28 00.5**	**-1.1**
WB2	**Warramunga Arr**	**22.99**	**161**	P	**P**	**18 28 01.6**	**-0.1**
WB2				IAmb	IAmb	18 28 10.3	
	comp=Z,8.5nm,1.4s						
WR0	**Warramunga Arr**	**23.07**	**161**	P	**P**	**18 28 02.2**	**-0.2**
WR0				IAmb	IAmb	18 28 19.7	
	comp=Z,4.2nm,1.1s						
AS31	**Alice Springs**	**26.38**	**165**	P	**P**	**18 28 32.8**	**0.0**
ASAR	**Alice Springs**	**26.38**	**165**	P	**P**	**18 28 33.2**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=353,slow=16,SNR=15						
ASAR	**Alice Springs**	**26.38**	**165**	P	**P**	**18 28 33.9**	**+1.0**
MK31	**Makanchi Array**	**59.00**	**326**	P	**P**	**18 32 55.2**	**-0.6**
MK31				IAmb	IAmb	18 32 55.4	
	comp=Z,2.0nm,1.1s						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**18 32 55.6**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=120,slow=7.6,SNR=10						
MKAR	**Makanchi Array**	**59.00**	**326**	P	**P**	**18 32 55.1**	**-0.7**
MAKZ	**Makanchi**	**59.19**	**326**	P	**P**	**18 32 56.1**	**-0.9**
KURK	**Kurchatov**	**63.23**	**328**	P	**P**	**18 33 24.3**	**0.0**
KURK				IAmb	IAmb	18 33 29.7	
	comp=Z,3.8nm,1.3s						
BMAR	**Burnt Mountain**	**87.79**	**23**	P	**P**	**18 35 45.0**	**+0.3**

IDC 26 18:26:10.3±2.2, 1°98N×126°44E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/37, mbtmp3.2/3, Error ellipse: s-maj=174.3km s-min=28.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.13**	**161**	P	P	18 31 18.7	+0.5
	0.3nm,0.5s,baz=340,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**26.51**	**165**	P	P	18 31 49.3	-0.4
	0.3nm,1.0s,baz=347,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	**58.82**	**326**	P	P	18 36 10.5	-0.2
	0.4nm,0.8s,baz=126,slow=8.5,SNR=2.2						

IDC 26 18:27:22.4±2.3, 1°92N×126°53E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/37, mbtmp3.2/3, Error ellipse: s-maj=180.2km s-min=28.5km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.04**	**161**	P	P	18 32 29.1	-0.4
	0.6nm,0.5s,baz=340,slow=11,SNR=8.9						
ASAR	**Alice Springs**	**26.43**	**165**	P	P	18 33 01.8	+0.7
	0.5nm,0.9s,baz=343,slow=11,SNR=1.4						
MKAR	**Makanchi Array**	**58.92**	**326**	P	P	18 37 23.1	-0.3
	0.2nm,0.6s,baz=127,slow=8.0,SNR=1.5						

*IDC **26** 18:29:22.1±2.9, 23°58S×179°89E, h518km±24km, mb3.3/7, mb1 3.5/8, mb1mx3.2/27, mbtmp4.2/8, Error ellipse: s-maj=87.2km s-min=21.8km az=159.0*
*NEIC **26** 18:29:23.5±1.0, 23°8S±0°4×179°9E±0°2, h545km±16km, mb4.2/13, Error ellipse: s-maj=66.9km s-min=23.4km az=160.0*

ISC 26 18:29:24.6±1.2, 23°6S±0°4×179°8E±0°2, h550km, n23, σ1s15/25, mb4.2/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.42**	**275**	P	**P**	**18 32 07.0**	**-0.7**
	0.5nm,0.3s,baz=159,slow=23,SNR=1.8						
CTA	**Charters Tower**	**31.29**	**270**	P	**P**	**18 35 01.1**	**+0.7**
	9.8nm,0.3s,baz=93,slow=11,SNR=6.0						
CTAO	**Charters Tower**	**31.29**	**270**	P	**P**	**18 35 01.3**	**+1.0**
STKA	**Stephens Creek**	**34.65**	**248**	P	**P**	**18 35 28.1**	**-0.5**
	1.2nm,0.5s,baz=96,slow=8.3,SNR=6.7						
STKA	**Stephens Creek**	**34.65**	**248**	P	**P**	**18 35 28.0**	**-0.5**
COEN	**Coen**	**35.90**	**279**	P	**P**	**18 35 39.6**	**+0.5**
COEN				IAmb	IAmb	18 35 43.9	
	comp=Z,9.9nm,1.3s						
AS31	**Alice Springs**	**41.90**	**260**	P	**P**	**18 36 27.4**	**-0.1**
ASAR	**Alice Springs**	**41.90**	**260**	P	**P**	**18 36 27.4**	**-0.1**
	comp=Z,2.3nm,0.4s,baz=96,slow=7.5,SNR=118						
ASAR				ScP	**ScP**	**18 41 11.8**	**+3.4**
	comp=Z,1.1nm,0.8s,baz=106,slow=4.3,SNR=11						
ASAR	**Alice Springs**	**41.90**	**260**	P	**P**	**18 36 27.0**	**-0.5**
WR0	**Warramunga Arr**	**42.05**	**266**	P	**P**	**18 36 28.2**	**-0.6**
WB2	**Warramunga Arr**	**42.23**	**266**	P	**P**	**18 36 29.6**	**-0.5**
WB2				IAmb	IAmb	18 36 30.0	
	comp=Z,5.9nm,0.5s						
WB0	**Warramunga Arr**	**42.23**	**266**	P	**P**	**18 36 29.5**	**-0.7**
WB0				IAmb	IAmb	18 36 30.2	
	comp=Z,7.0nm,0.7s						
WRAB	**Tennant Creek**	**42.24**	**266**	P	**P**	**18 36 29.7**	**-0.4**
WRA	**Warramunga Arr**	**42.24**	**266**	P	**P**	**18 36 29.8**	**-0.5**
	comp=Z,4.2nm,0.3s,baz=96,slow=8.4,SNR=322						
WRA				ScP	**ScP**	**18 41 13.0**	**+3.1**
	comp=Z,0.7nm,0.8s,baz=100,slow=3.9,SNR=4.6						
WRA	**Warramunga Arr**	**42.24**	**266**	P	**P**	**18 36 29.1**	**-1.2**
FORT	**Forrest**	**46.23**	**249**	P	**P**	**18 36 59.9**	**-0.9**
KNRA	**Kununurra**	**48.51**	**270**	P	**P**	**18 37 18.2**	**+0.1**
KNRA				IAmb	IAmb	18 37 42.6	
	comp=Z,16nm,1.4s						
FITZ	**Fitzroy Crossi**	**50.67**	**265**	P	**P**	**18 37 34.5**	**+0.5**
	comp=Z,2.1nm,0.5s,baz=116,slow=4.9,SNR=22						
FITZ	**Fitzroy Crossi**	**50.67**	**265**	P	**P**	**18 37 34.4**	**+0.5**
FITZ				IAmb	IAmb	18 37 35.4	
	comp=Z,3.3nm,0.8s						
MORW	**Morawa**	**56.79**	**250**	P	**P**	**18 38 16.6**	**-0.4**
MORW				IAmb	IAmb	18 38 26.0	
	comp=Z,9.9nm,1.1s						
NVAR	**Mina Array Bea**	**84.69**	**44**	P	**P**	**18 41 01.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=220,slow=6.5,SNR=2.3						
NVAR	**Mina Array Bea**	**84.69**	**44**	P	**P**	**18 41 00.5**	**-0.6**
TXAR	**Lajitas Array**	**90.45**	**58**	P	**P**	**18 41 27.8**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=201,slow=6.7,SNR=4.6						

IDC 26 18:46:32.8±3.8, 6°93S×155°09E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/38, mbtmp3.4/4, ML2.9/1, Error ellipse: s-maj=67.0km s-min=32.7km az=81.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.01**	**310**	Pn	Pn	18 47 36.5	+1.0
	0.9nm,0.3s,baz=148,slow=9.5,SNR=2.6						
KRVT				Sn	Sn	18 48 26.1	+2.8
	1.8nm,0.3s,baz=38,slow=19,SNR=1.5						
WRA	**Warramunga Arr**	**23.93**	**235**	P	P	18 51 49.7	+0.8
	0.6nm,0.4s,baz=60,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**26.29**	**228**	P	P	18 52 09.9	-0.4
	0.2nm,0.5s,baz=58,slow=9.3,SNR=6.5						
CMAR	**Chiang Mai Arr**	**60.84**	**295**	P	P	18 56 46.6	-0.9
	0.3nm,0.5s,baz=96,slow=5.5,SNR=2.5						

*REY **26** 18:53:12.4, 64°67N×17°38W, h4km*
*MOS **26** 18:53:13.2±1.5, 64°52N×17°60W, h10km, mb4.5/12, Error ellipse: s-maj=13.9km s-min=7.9km az=107.5*
*IDC **26** 18:53:13.6±0.6, 64°53N×17°54W, h0km, mb3.9/17, mb1 4.0/21, mb1mx3.8/62, mbtmp3.8/21, ML2.6/3, MS3.0/1, Ms1 3.1/1, ms1mx2.6/57, Error ellipse: s-maj=19.6km s-min=9.4km az=15.0*
*NEIC **26** 18:53:14.3±2.5, 64°53N±0°09×17°7W±0°1, h10km±1km, mb4.6/36, Error ellipse: s-maj=16.1km s-min=7.8km az=193.0*

ISC 26 18:53:14.9±0.4, 64°54N±0°03×17°53W±0°03, h10km, n165, σ1s88/155, mb4.2/56, 9C, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.16**	**324**	P	**Pg**	**18 53 15.6**	**-3.0**
	baz=269						
IVON				S	**Sg**	**18 53 18.9**	**-2.2**
	baz=269						
IDYN	**Dyngjuhals**	**0.26**	**16**	P	Pg	18 53 14.9	-5.4
	baz=3.1						
IVOT	**Vottur**	**0.31**	**150**	P	**Pg**	**18 53 19.6**	**-1.5**
	baz=168						
IURH	**Urdarhals**	**0.33**	**30**	P	Pg	18 53 16.1	-5.4
	baz=35						
ISKR	**Skrokkalda**	**0.37**	**273**	P	**Pg**	**18 53 21.2**	**-1.0**
	baz=255						
IJOK	**Jokulheimar**	**0.38**	**233**	P	**Pb**	**18 53 22.6**	**-1.1**
	baz=226						
IIEY	**Innrieyrar**	**0.52**	**210**	P	**Pg**	**18 53 24.0**	**-0.9**
	baz=209						
IIEY				S	**Sb**	**18 53 33.7**	**+0.2**
	baz=209						
THOR	**Thorvaldshraun**	**0.54**	**43**	P	Pg	18 53 20.8	-4.6
	baz=49						
IKRE	**Kreppuhraun**	**0.55**	**63**	P	Pg	18 53 20.3	-5.3
	baz=75						
**IKSK

ECH	**Echery**		**21.09**	**129**	P	**P**	**18**	**57**	**58.6 -0.5**
ECH					pmax	pmax			
	comp=Z,7.0nm,1.1s								
ECH	**Echery**		**21.09**	**129**	P	**P**	**18**	**57**	**58.6 -0.5**
NKC	**Novy Kostel**		**21.30**	**118**	*e*P	**P**	**18**	**58**	**06.5 +5.1**
NKC	**Novy Kostel**		**21.30**	**118**	*e*P	**P**	**18**	**58**	**06.5 +5.1**
BRG	**Berggiesshubel**		**21.37**	**115**	*e*P	**P**	**18**	**58**	**02.2 +0.1**
	comp=Z,18nm,1.4s								
BRG	**Berggiesshubel**		**21.37**	**115**	*e*P	**P**	**18**	**58**	**02.2 +0.1**
BRG					pmax	pmax			
	comp=Z,18nm,1.4s								
BFO	**Black Forest**		**21.39**	**127**	P	**P**	**18**	**58**	**02.3 0.0**
BFO					pmax	pmax			
	comp=Z,13nm,1.2s								
BFO	**Black Forest**		**21.39**	**127**	P	**P**	**18**	**58**	**02.2 0.0**
KSP	**Ksiaz**		**22.33**	**112**	*e*P	**P**	**18**	**58**	**13.0 +0.6**
KHC	**Kasperske Hory**		**22.63**	**118**	*ce*P	**P**	**18**	**58**	**16.7 +1.1**
KHC					pmax	pmax			
	comp=Z,23nm,2.5s								
KHC	**Kasperske Hory**		**22.63**	**118**	*e*P	**P**	**18**	**58**	**18.7 +3.1**
KHC	**Kasperske Hory**		**22.63**	**118**	P	**P**	**18**	**58**	**14.1 -1.6**
DPC	**Dobruska-Polom**		**22.73**	**113**	*e*P	**P**	**18**	**58**	**16.7 0.0**
DPC	**Dobruska-Polom**		**22.73**	**113**	*e*P	**P**	**18**	**58**	**16.7 0.0**
DAVA	**Damuels**		**22.82**	**126**	*e*P	**P**	**18**	**58**	**22.1 +4.3**
	comp=Z,5.4nm,1.1s								
GEC2	**GERESS Array S**		**22.91**	**118**	P	**P**	**18**	**58**	**19.5 +0.9**
GERES	**GERESS Array B**		**22.91**	**118**	P	**P**	**18**	**58**	**19.9 +1.2**
	comp=Z,1.7nm,0.9s,baz=326,slow=8.7,SNR=7.3								
GERES	**GERESS Array B**		**22.91**	**118**	P	**P**	**18**	**58**	**19.5 +0.9**
GERES	**GERESS Array B**		**22.91**	**118**	P	**P**	**18**	**58**	**19.5 +0.9**
RETA	**Reutte**		**22.96**	**124**	*e*P	**P**	**18**	**58**	**21.8 +2.6**
	comp=Z,7.0nm,1.6s								
MOTA	**Moosalm**		**23.20**	**124**	*e*P	**P**	**18**	**58**	**23.5 +1.7**
	comp=Z,4.5nm,0.9s								
DAVOX	**Davos/Dischmat**		**23.25**	**127**	P	**P**	**18**	**58**	**22.9 +0.6**
	comp=Z,1.6nm,0.7s,baz=305,slow=17,SNR=3.5								
FETA	**Feichten**		**23.34**	**125**	*e*P	**P**	**18**	**58**	**25.1 +1.9**
	comp=Z,8.0nm,1.7s								
SQTA	**Sankt Quirin**		**23.34**	**124**	*e*P	**P**	**18**	**58**	**26.6 +3.4**
	comp=Z,11nm,1.3s								
WATA	**Walderalm**		**23.38**	**124**	*e*P	**P**	**18**	**58**	**25.0 +1.4**
	comp=Z,2.9nm,0.7s								
WTTA	**Wattenberg**		**23.46**	**124**	*e*P	**P**	**18**	**58**	**25.5 +1.2**
	comp=Z,10nm,1.5s								
VRAC	**Vranov**		**23.66**	**114**	P	**P**	**18**	**58**	**27.5 +1.4**
	comp=Z,1.4nm,0.5s,baz=314,slow=8.9,SNR=5.7								
VRAC	**Vranov**		**23.66**	**114**	*e*P	**P**	**18**	**58**	**26.4 +0.3**
MORC	**Moravsky Berou**		**23.66**	**112**	*e*P	**P**	**18**	**58**	**26.4 +0.2**
MORC	**Moravsky Berou**		**23.66**	**112**	P	**P**	**18**	**58**	**23.8 -2.4**
MORC					pmax	pmax			
	comp=Z,12nm,1.4s								
MORC	**Moravsky Berou**		**23.66**	**112**	P	**P**	**18**	**58**	**23.8 -2.4**
KRUC	**Moravsky**		**23.77**	**114**	*e*P	**P**	**18**	**58**	**27.3 +0.1**
EUNU	**Eureka**		**23.78**	**336**	P	**P**	**18**	**58**	**29.3 +2.2**
EUNU					IAmb	IAmb	18	58	30.3
	comp=Z,28nm,1.7s								
OJC	**Ojcow**		**24.23**	**108**	*e*P	**P**	**18**	**58**	**33.0 +1.5**
KBA	**Koelnbreinsper**		**24.24**	**121**	*e*P	**P**	**18**	**58**	**35.6 +3.7**
	comp=Z,8.1nm,1.2s								
JAVC	**Velka Javorina**		**24.44**	**113**	*e*P	**P**	**18**	**58**	**34.7 +1.2**
CONA	**Conrad Observa**		**24.49**	**117**	*e*P	**P**	**18**	**58**	**35.2 +1.2**
	comp=Z,4.3nm,1.0s								
LANS	**Liptovska Anna**		**24.93**	**110**	*e*P	**P**	**18**	**58**	**40.6 +2.7**
LANS	**Liptovska Anna**		**24.93**	**110**	*e*P	**P**	**18**	**58**	**40.6 +2.7**
NIE	**Niedzica**		**25.06**	**109**	*e*P	**P**	**18**	**58**	**41.3 +2.2**
OBKA	**Obir**		**25.17**	**120**	*e*P	**P**	**18**	**58**	**41.6 +1.4**
	comp=Z,16nm,1.7s								
VYHS	**Vyhne**		**25.20**	**112**	*e*P	**P**	**18**	**58**	**42.3 +2.0**
VYHS	**Vyhne**		**25.20**	**112**	*e*P	**P**	**18**	**58**	**42.3 +2.0**
SOKA	**Soboth**		**25.21**	**120**	*e*P	**P**	**18**	**58**	**42.9 +2.4**
	comp=Z,4.5nm,1.3s								
KLMR	**Klimovskoe**		**25.66**	**72**	*e*P	**P**	**18**	**58**	**42.9 -1.3**
KLMR					pmax	pmax			
	comp=Z,16nm,1.5s								
KLMR	**Klimovskoe**		**25.66**	**72**	*e*P	**P**	**18**	**58**	**43.0 -1.3**
KLMR					AMP		18	58	58.6
	comp=Z,16nm,1.5s								
KWP	**Kalwaria Pacla**		**25.89**	**106**	P	**P**	**18**	**58**	**44.3 -2.3**
KWP					pmax	pmax			
	comp=Z,28nm,1.3s								
KWP	**Kalwaria Pacla**		**25.89**	**106**	P	**P**	**18**	**58**	**44.3 -2.3**
PSZ	**Piszkesteto**		**26.09**	**112**	P	**P**	**18**	**58**	**46.7 -1.7**
PSZ					pmax	pmax			
	comp=Z,12nm,1.2s								
PSZ	**Piszkesteto**		**26.09**	**112**	P	**P**	**18**	**58**	**46.7 -1.7**
PSZ					IAmb	IAmb	18	58	52.5
	comp=Z,12nm,1.2s								
ESDC	**Sonseca Array**		**26.14**	**156**	P	**P**	**18**	**58**	**49.1 +0.1**
	comp=Z,1.3nm,0.8s,baz=350,slow=8.8,SNR=9.3								
KOLS	**Kolonicke sedl**		**26.25**	**107**	*e*P	**P**	**18**	**58**	**53.1 +3.3**
KOLS	**Kolonicke sedl**		**26.25**	**107**	*e*P	**P**	**18**	**58**	**53.1 +3.3**
AKASG	**Malin Array Be**		**27.84**	**97**	P	**P**	**18**	**59**	**02.4 -1.7**
	comp=Z,0.3nm,0.3s,baz=332,slow=9.2,SNR=5.1								
AKASG	**Malin Array Be**		**27.84**	**97**	*i* P	**P**	**18**	**59**	**03.2 -0.9**
KIRV	**Kirov**		**31.04**	**69**	*ce*P	**P**	**18**	**59**	**31.9 -0.4**
NRIK	**Noril'sk**		**36.57**	**35**	*ce*P	**P**	**19**	**00**	**20.8 +0.6**
NRIK					pmax	pmax			
	comp=Z,3.0nm,1.1s								
BR131	**Keskin Array S**		**38.46**	**105**	*i* P	**P**	**19**	**00**	**39.6 +2.9**
KIV	**Kislovodsk**		**38.85**	**92**	*e*P	**P**	**19**	**00**	**40.9 +1.0**
KIV					pmax	pmax			
	comp=Z,14nm,1.0s								
KBZ	**Khabaz**		**39.12**	**92**	P	**P**	**19**	**00**	**42.6 +0.6**
	comp=Z,3.1nm,0.8s,baz=311,slow=17,SNR=4.3								
INK	**Inuvik**		**39.94**	**329**	P	**P**	**19**	**00**	**49.8 +1.2**
	comp=Z,2.9nm,1.0s,baz=1.8,slow=8.1,SNR=4.0								
AKTO	**Aktyubinsk**		**40.34**	**73**	P	**P**	**19**	**00**	**51.6 -0.5**
	comp=Z,1.2nm,0.9s,baz=306,slow=8.5,SNR=4.0								
A21K	**Barrow**		**41.54**	**341**	P	**P**	**19**	**01**	**05.3 +3.6**
TIXI	**Tiksi**		**42.16**	**15**	*ce*P	**P**	**19**	**01**	**07.5 +0.7**
TIXI					pmax	pmax			
	comp=Z,41nm,1.3s								
TIXI	**Tiksi**		**42.16**	**15**	P	**P**	**19**	**01**	**07.7 +1.0**
TIXI					IAmb	IAmb	19	01	10.9
	comp=Z,11nm,1.2s								
GNI	**Garni**		**42.84**	**94**	*ce*P	**P**	**19**	**01**	**14.7 +1.8**
GNI					pmax	pmax			
	comp=Z,11nm,1.7s								
GNI	**Garni**		**42.84**	**94**	P	**P**	**19**	**01**	**14.3 +1.4**
GNI					IAmb	IAmb	19	01	17.6
	comp=Z,19nm,1.3s								
TOLK	**Toolik Lake Re**		**42.86**	**336**	P	**P**	**19**	**01**	**15.8 +3.2**
BMAR	**Burnt Mountain**		**43.00**	**333**	P	**P**	**19**	**01**	**16.8 +3.0**
BRVK	**Borovoye**		**43.20**	**62**	*i* P	**P**	**19**	**01**	**17.3 +1.8**
BRVK					pmax	pmax			
	comp=Z,2.0nm,1.0s								
BRVK	**Borovoye**		**43.20**	**62**	P	**P**	**19**	**01**	**15.9 +0.4**
DAWY	**Dawson**		**44.80**	**328**	P	**P**	**19**	**01**	**26.0 -2.2**
DAWY					IAmb	IAmb	19	01	32.3
	comp=Z,6.7nm,1.2s								
IL31			**45.79**	**332**	P	**P**	**19**	**01**	**38.8 +2.8**
IL31					IAmb	IAmb	19	01	59.9
	comp=Z,13nm,1.6s								
ILAR	**Eielson Array**		**45.79**	**332**	P	**P**	**19**	**01**	**36.5 +0.4**
	comp=Z,2.1nm,1.1s,baz=21,slow=6.8,SNR=14								
ILAR					PcP	**PcP**	**19**	**03**	**13.9 +0.6**
	comp=Z,0.7nm,0.9s,baz=5.7,slow=1.8,SNR=5.1								
ILAR	**Eielson Array**		**45.79**	**332**	P	**P**	**19**	**01**	**36.1 +0.1**
MDM	**Murphy Dome**		**45.89**	**333**	P	**P**	**19**	**01**	**37.7 +0.9**
MDM					IAmb	IAmb	19	01	42.0
	comp=Z,14nm,1.3s								
I23K	**Minto, Yukon-K**		**45.94**	**334**	P	**P**	**19**	**01**	**38.9 +1.8**
I23K					IAmb	IAmb	19	01	44.1
	comp=Z,16nm,1.6s								
HDA	**Harding Lake**		**46.12**	**332**	P	**P**	**19**	**01**	**40.0 +1.3**
BCAR	**Beaver Creek A**		**46.21**	**329**	P	**P**	**19**	**01**	**40.4 +1.0**
N25K	**Chitina, Valde**		**48.12**	**329**	P	**P**	**19**	**01**	**54.7 +0.3**
KURK	**Kurchatov**		**48.19**	**58**	*ce*P	**P**	**19**	**01**	**54.7 -0.2**
KURK					pmax	pmax			
	comp=Z,5.0nm,0.8s								
KURK	**Kurchatov**		**48.19**	**58**	P	**P**	**19**	**01**	**54.4 -0.5**
KURK					IAmb	IAmb	19	01	56.9
	comp=Z,6.5nm,1.1s								
KURBB	**Kurchatov Arra**		**48.23**	**58**	P	**P**	**19**	**01**	**55.2 0.0**
	comp=Z,3.0nm,0.9s,baz=323,slow=7.5,SNR=4.4								
EGMT	**Eagleton**		**48.92**	**297**	P	**P**	**19**	**01**	**59.1 -1.5**
KKAR	**Karatay Array**		**51.33**	**70**	P	**P**	**19**	**02**	**18.6 -0.4**
KKAR	**Karatay Array**		**51.33**	**70**	P	**P**	**19**	**02**	**18.6 -0.4**
KKAR	**Karatay Array**		**51.33**	**70**	P	**P**	**19**	**02**	**18.6 -0.4**
KKAR					IAmb	IAmb	19	02	22.1
	comp=Z,7.0nm,1.5s								
YAK	**Yakutsk**		**51.40**	**19**	*i* P	**P**	**19**	**02**	**21.9 +2.8**
YAK					pmax	pmax			
	comp=Z,3.0nm,0.8s								
BOZ	**Bozeman (W)**		**51.65**	**297**	P	**P**	**19**	**02**	**20.3 -1.2**
BOZ					pmax	pmax			
	comp=Z,8.0nm,1.3s								
BOZ	**Bozeman (W)**		**51.65**	**297**	P	**P**	**19**	**02**	**20.3 -1.2**
BOZ					IAmb	IAmb	19	02	26.4
	comp=Z,7.8nm,1.2s								
MKAR	**Makanchi Array**		**52.80**	**58**	P	**P**	**19**	**02**	**29.8 -0.1**
	comp=Z,1.2nm,0.9s,baz=318,slow=5.8,SNR=5.5								
TORD	**Torodi Ar. Bea**		**53.03**	**156**	P	**P**	**19**	**02**	**31.6 -0.2**
	comp=Z,1.0nm,0.8s,baz=334,slow=8.0,SNR=5.0								
TORD	**Torodi Ar. Bea**		**53.03**	**156**	P	**P**	**19**	**02**	**31.2 -0.6**
PD31	**Pinedale Array**		**53.21**	**293**	P	**P**	**19**	**02**	**34.0 +0.7**
PD31					IAmb	IAmb	19	02	37.5
	comp=Z,14nm,1.6s								
PDAR	**Pinedale Array**		**53.21**	**293**	P	**P**	**19**	**02**	**33.4 +0.2**
	comp=Z,2.1nm,0.8s,baz=59,slow=7.1,SNR=11								
PDAR	**Pinedale Array**		**53.21**	**293**	P	**P**	**19**	**02**	**32.8 -0.4**
AAK	**Ala-Archa**		**53.32**	**67**	P	**P**	**19**	**02**	**34.6 +0.7**
	comp=Z,2.1nm,0.9s,baz=134,slow=11,SNR=6.1								
AAK	**Ala-Archa**		**53.32**	**67**	*ce*P	**P**	**19**	**02**	**34.8 +0.9**
AAK					pmax	pmax			
	comp=Z,10.0nm,1.0s								
AAK	**Ala-Archa**		**53.32**	**67**	P	**P**	**19**	**02**	**32.5 -1.5**
AAK					IAmb	IAmb	19	02	37.4
	comp=Z,3.9nm,1.1s								
HWUT	**Hardware Ranch**		**54.99**	**294**	P	**P**	**19**	**02**	**44.0 -2.1**
HRA	**Herat**		**55.22**	**82**	P	**P**	**19**	**02**	**48.0 +0.1**
HRA					IAmb	IAmb	19	02	50.0
	comp=Z,14nm,1.9s								
MA2	**Magadan**		**55.89**	**7**	*ce*P	**P**	**19**	**02**	**53.9 +1.8**
MA2					pmax	pmax			
	comp=Z,78nm,2.5s								
PV13	**Radium Mtn., P**		**56.83**	**290**	P	**P**	**19**	**02**	**56.8 -2.5**
PV13					IAmb	IAmb	19	03	03.4
	comp=Z,9.8nm,1.1s								
PV05	**Paradox Valley**		**57.01**	**290**	P	**P**	**19**	**02**	**57.5 -3.2**
PV05					IAmb	IAmb	19	03	04.0
	comp=Z,7.2nm,0.8s								
ELK	**Elko**		**57.16**	**296**	P	**P**	**19**	**03**	**00.5 -1.2**
ELK					pmax	pmax			
	comp=Z,5.0nm,1.6s								
ELK	**Elko**		**57.16**	**296**	P	**P**	**19**	**03**	**00.5 -1.2**
ELK					IAmb	IAmb	19	03	21.8
	comp=Z,5.4nm,1.6s								
MSU	**Marysvale**		**57.88**	**293**	P	**P**	**19**	**03**	**06.6 -0.2**
MSU	**Marysvale**		**57.88**	**293**	P	**P**	**19**	**03**	**06.6 -0.2**
MVU	**Marysvale**		**57.90**	**293**	P	**P**	**19**	**03**	**08.4 +1.4**
ANMO	**Albuquerque**		**58.61**	**286**	*i* P	P	19	03	17.3 +5.4
ANMO					pmax	pmax			
	comp=Z,1.0nm,1.1s								
R11A	**Troy Canyon, C**		**59.36**	**295**	P	**P**	**19**	**03**	**17.6 +0.5**
SONM	**Songino Array**		**59.75**	**40**	P	**P**	**19**	**03**	**19.8 +0.2**
	comp=Z,0.6nm,0.8s,baz=332,slow=5.7,SNR=4.7								
ULN	**Ulaanbaatar**		**59.90**	**40**	*ce*P	**P**	**19**	**03**	**19.9 -0.7**
ULN					pmax	pmax			
	comp=Z,8.0nm,2.5s								
TXAR	**Lajitas Array**		**62.29**	**280**	P	**P**	**19**	**03**	**37.5 +0.5**
	comp=Z,0.6nm,0.8s,baz=97,slow=6.4,SNR=3.7								
CMAR	**Chiang Mai Arr**		**84.21**	**59**	P	**P**	**19**	**05**	**46.4 +0.1**
	comp=Z,0.4nm,0.3s,baz=317,slow=6.9,SNR=6.5								

*NEIC **26** 18:53:45.6±2.0,24.12S±0.08×179.9W±0.1,h497km±5km, mb4.5/60, Error ellipse: s-maj=15.6km s-min=10.5km az=67.0*
*IDC **26** 18:53:46.4±1.2,24.04S×179.99E,h502km±11km, mb3.7/13,mb1 3.9/16,mb1mx3.6/39,mbtmp4.6/16, Error ellipse: s-maj=13.8km s-min=12.0km az=2.0*

ISC 26 18:53:45.8±0.4,24.13S±0.05×179.99E±0.06,h500km, n135,σ1.938/152,mb4.4/37,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**5.43**	**160**	P		**P**	**P**	**18 55 18.8**	**+2.1**
RIZ				S		**S**	**S**	**18 56 29.6**	**-1.3**
RAO	**Raoul Island**	**5.44**	**160**	P		**P**	**P**	**18 55 19.1**	**+2.4**
	46nm,0.3s,baz=30,slow=20,SNR=2.5								
RAO				S		**S**	**S**	**18 56 29.7**	**-1.3**
	88nm,0.3s,baz=69,slow=23,SNR=5.2								
RAO	**Raoul Island**	**5.44**	**160**	P		**P**	**P**	**18 55 16.6**	**-0.1**
GLKZ	**Green Lake**	**5.45**	**160**	P		**P**	**P**	**18 55 17.3**	**+0.6**
GLKZ				S		**S**	**S**	**18 56 36.0**	**+4.8**
MSVF	**Nonsavu**	**6.61**	**344**	P		**P**	**P**	**18 55 27.9**	**-0.4**
NIUE	**Niue**	**10.64**	**64**	P		**P**	**P**	**18 56 09.0**	**-1.1**
OUZ	**Omahuta**	**12.37**	**205**	S		**P**	**P**	**18 56 25.7**	**-2.5**
OUZ	**Omahuta**	**12.37**	**205**	P		**P**	**P**	**18 56 30.9**	**+2.7**
DZM	**Mont Dzumac**	**12.63**	**277**	P		**P**	**P**	**18 56 32.5**	**+1.2**
	0.8nm,0.3s,baz=88,slow=18,SNR=5.6								
DZM	**Mont Dzumac**	**12.63**	**277**	P		**P**	**P**	**18 56 33.2**	**+1.9**
WCZ	**Waipu Caves**	**12.74**	**201**	P		**P**	**P**	**18 56 29.0**	**-3.1**
KUZ	**Kuaotunu**	**13.10**	**195**	P		**P**	**P**	**18 56 37.6**	**+1.7**
WIAZ	**Waiheke Island**	**13.30**	**197**	P		**P**	**P**	**18 56 40.0**	**+2.0**
MXZ	**Matakaoa Point**	**13.47**	**186**	S		**S**	**S**	**18 59 03.3**	**+0.1**
MXZ	**Matakaoa Point**	**13.47**	**186**	P		**P**	**P**	**18 56 40.3**	**+0.5**
MKAZ	**Moumakai**	**13.58**	**197**	P		**P**	**P**	**18 56 42.8**	**+1.9**
URZ	**Urewera**	**14.30**	**189**	P		**P**	**P**	**18 56 48.3**	**-0.3**
	3.6nm,0.3s,baz=292,slow=2.6,SNR=10								
URZ				S		**S**	**S**	**18 59 16.8**	**-2.4**
	2.6nm,0.3s,baz=93,slow=22,SNR=14								
URZ	**Urewera**	**14.30**	**189**	P		**P**	**P**	**18 56 48.0**	**-0.5**
MWZ	**Matawai**	**14.32**	**188**	P		**P**	**P**	**18 56 51.4**	**+2.7**
MWZ				S		**S**	**S**	**18 59 19.7**	**0.0**
RTZ	**Ruatahuna**	**14.67**	**189**	P		**P**	**P**	**18 56 54.1**	**+1.6**
SANVU	**Saraoutou**	**14.80**	**303**	P		**P**	**P**	**18 56 54.8**	**+0.7**
MTHZ	**Maungataniwha**	**14.92**	**190**	P		**P**	**P**	**18 56 57.2**	**+2.1**
MTHZ				S		**S**	**S**	**18 59 30.1**	**-1.1**
HIZ	**Hauiti**	**14.99**	**196**	P		**P**	**P**	**18 56 58.9**	**+3.1**
HIZ	**Hauiti**	**14.99**	**196**	P		**P**	**P**	**18 56 56.9**	**+1.0**
BKZ	**Black Stump Fm**	**15.29**	**190**	P		**P**	**P**	**18 56 59.2**	**+0.4**
BKZ				S		**S**	**S**	**18 59 34.3**	**-3.8**
BKZ	**Black Stump Fm**	**15.29**	**190**	P		**P**	**P**	**18 56 56.1**	**-2.8**
BKZ				IAmb		IAmb	IAmb	18 57 13.0	
	comp=Z,18nm,1.2s								
WNVZ	**Wahianoa**	**15.61**	**193**	P		**P**	**P**	**18 57 02.4**	**+0.1**
BHHZ	**Black Hill Sta**	**15.67**	**191**	P		**P**	**P**	**18 57 02.2**	**-0.7**
KRHZ	**Kereru**	**15.77**	**190**	P		**P**	**P**	**18 57 03.4**	**-0.6**
KRHZ				S		**S**	**S**	**18 59 42.8**	**-4.6**
TSZ	**Takapari Road**	**16.25**	**191**	P		**P**	**P**	**18 57 05.4**	**-3.5**
TSZ				S		**S**	**S**	**18 59 52.5**	**-3.6**
QRZ	**Quartz Range**	**17.79**	**199**	P		**P**	**P**	**18 57 24.3**	**+0.2**
PLWZ	**Palliser**	**17.84**	**192**	P		**P**	**P**	**18 57 25.1**	**+0.5**
NNZ	**Nelson**	**17.92**	**196**	P		**P**	**P**	**18 57 24.1**	**-1.2**
TUWZ	**Tuamarina**	**17.98**	**195**	P		**P**	**P**	**18 57 24.9**	**-0.9**
BSWZ	**Blackbirch Sta**	**18.27**	**195**	P		**P**	**P**	**18 57 28.6**	**+0.2**
THZ	**Tophouse**	**18.55**	**197**	P		**P**	**P**	**18 57 31.0**	**-0.2**
KHZ	**Kahutara**	**19.01**	**195**	P		**P**	**P**	**18 57 33.8**	**-1.4**
LTZ	**Lake Taylor**	**19.67**	**197**	P		**P**	**P**	**18 57 40.1**	**-1.2**
LTZ				IAmb		IAmb	IAmb	18 58 05.5	
	comp=Z,24nm,1.2s								
OXZ	**Oxford**	**20.24**	**197**	P		**P**	**P**	**18 57 45.8**	**-0.7**
RPZ	**Rata Peaks**	**20.87**	**198**	P		**P**	**P**	**18 57 52.6**	**+0.4**
	comp=Z,7.3nm,0.5s,baz=313,slow=1.4,SNR=5.8								
RPZ	**Rata Peaks**	**20.87**	**198**	P		**P**	**P**	**18 57 52.5**	**+0.3**
FOZ	**Fox Glacier**	**21.09**	**201**	P		**P**	**P**	**18 57 54.4**	**+0.2**
ARMA	**Armidale**	**25.93**	**250**	P		**P**	**P**	**18 58 38.3**	**+0.6**
ARMA				IAmb		IAmb	IAmb	18 58 40.9	
	comp=Z,6.7nm,0.7s								
EIDS	**Eidsvold**	**26.26**	**261**	P		**P**	**P**	**18 58 42.2**	**+1.6**
EIDS				IAmb		IAmb	IAmb	18 58 42.9	
	comp=Z,11nm,0.6s								
CTA	**Charters Tower**	**31.47**	**271**	P		**P**	**P**	**18 59 27.5**	**+1.5**
	comp=Z,30nm,0.4s,baz=94,slow=11,SNR=77								
CTAO	**Charters Tower**	**31.47**	**271**	P		**P**	**P**	**18 59 27.6**	**+1.6**
TOO	**Toolangi**	**32.32**	**237**	P		**P**	**P**	**18 59 34.5**	**+1.4**
TAU	**Tasmania Unive**	**32.77**	**227**	P		**P**	**P**	**18 59 38.3**	**+1.5**
KRVT	**Keravat (AS076**	**33.38**	**302**	P		**P**	**P**	**18 59 41.7**	**-0.6**
	comp=Z,17nm,0.5s,baz=259,slow=1.6,SNR=5.3								
PMG	**Port Moresby**	**34.56**	**289**	P		**P**	**P**	**18 59 53.3**	**+1.0**
PMG				IAmb		IAmb	IAmb	18 59 54.0	
	comp=Z,17nm,0.7s								
STKA	**Stephens Creek**	**34.63**	**248**	P		**P**	**P**	**18 59 54.0**	**+1.4**
	comp=Z,4.5nm,0.6s,baz=91,slow=8.5,SNR=20								
STKA	**Stephens Creek**	**34.63**	**248**	P		**P**	**P**	**18 59 54.1**	**+1.4**
COEN	**Coen**	**36.14**	**279**	P		**P**	**P**	**19 00 06.7**	**+1.2**
COEN				IAmb		IAmb	IAmb	19 00 09.1	
	comp=Z,11nm,1.1s								
AS31	**Alice Springs**	**41.99**	**261**	P		**P**	**P**	**19 00 53.5**	**+0.6**
ASAR	**Alice Springs**	**41.99**	**261**	P		**P**	**P**	**19 00 53.5**	**+0.6**
	comp=Z,6.1nm,0.5s,baz=93,slow=7.5,SNR=142								
ASAR				ScP		**ScP**	**ScP**	**19 05 40.6**	**+1.4**
	comp=Z,2.2nm,0.8s,baz=112,slow=4.1,SNR=13								
ASAR				S		**S**	**S**	**19 06 33.9**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=97,slow=14,SNR=6.2								
ASAR	**Alice Springs**	**41.99**	**261**	P		**P**	**P**	**19 00 52.9**	**0.0**
ASAR				ScP		**ScP**	**ScP**	**19 05 40.9**	**+1.7**
WR0	**Warramunga Arr**	**42.19**	**266**	P		**P**	**P**	**19 00 54.6**	**+0.1**
WR0				IAmb		IAmb	IAmb	19 00 55.3	
	comp=Z,6.6nm,0.7s								
WB2	**Warramunga Arr**	**42.37**	**266**	P		**P**	**P**	**19 00 55.9**	**+0.1**
WB2				IAmb		IAmb	IAmb	19 00 56.7	
	comp=Z,13nm,0.6s								
WRAB	**Tennant Creek**	**42.37**	**266**	P		**P**	**P**	**19 00 55.9**	**0.0**
WRAB				IAmb		IAmb	IAmb	19 00 56.6	
	comp=Z,11nm,0.7s								
WB0	**Warramunga Arr**	**42.38**	**267**	P		**P**	**P**	**19 00 55.9**	**0.0**
WB0				IAmb		IAmb	IAmb	19 00 56.7	
	comp=Z,18nm,0.7s								
WRA	**Warramunga Arr**	**42.38**	**266**	P		**P**	**P**	**19 00 56.0**	**+0.1**
	comp=Z,13nm,0.6s,baz=103,slow=8.2,SNR=117								
WRA				ScP		**ScP**	**ScP**	**19 05 43.0**	**+2.2**
	comp=Z,2.9nm,0.9s,baz=100,slow=4.2,SNR=11								
WRA				S		**S**	**S**	**19 06 36.4**	**-4.5**
	comp=Z,1.7nm,1.1s,baz=100,slow=15,SNR=5.5								
WRA	**Warramunga Arr**	**42.38**	**266**	P		**P**	**P**	**19 00 55.4**	**-0.6**
JAY	**Jayapura**	**43.59**	**293**	P		**P**	**P**	**19 01 05.5**	**0.0**
	comp=Z,6.3nm,0.5s,baz=107,slow=3.0,SNR=12								
FORT	**Forrest**	**46.22**	**250**	P		**P**	**P**	**19 01 25.4**	**-0.1**
MTN	**Manton Dam**	**47.46**	**275**	P		**P**	**P**	**19 01 35.0**	**-0.1**
MTN				IAmb		IAmb	IAmb	19 01 42.3	
	comp=Z,28nm,1.5s								
KNRA	**Kununurra**	**48.67**	**270**	P		**P**	**P**	**19 01 44.8**	**+0.7**
KNRA				IAmb		IAmb	IAmb	19 01 45.5	
	comp=Z,18nm,0.9s								
FAKI	**Fak Fak**	**50.64**	**287**	P		**P**	**P**	**19 01 57.8**	**-0.8**
FAKI				IAmb		IAmb	IAmb	19 02 14.6	
	comp=Z,16nm,1.1s								
FITZ	**Fitzroy Crossi**	**50.80**	**266**	P		**P**	**P**	**19 02 00.5

	baz=269							
TWB1			*i* S		**Sn**	18 54 55.0	-0.1	
	baz=269							
EGS		**0.35 244**	P		**Pn**	18 54 40.7	+0.7	
	baz=241							
TIPB	**Shuangxi**	**0.42 266**	*i* P		**Pn**	18 54 40.6	+0.4	
	baz=264							
TIPB			*i* S		**Sn**	18 54 55.6	-0.6	
	baz=264							
NTC	**Toucheng**	**0.44 251**	*e*P		**Pn**	18 54 40.3	0.0	
	baz=249							
NTC			*e*S		**Sn**	18 54 55.2	-1.0	
	baz=249							
NWF	**Wu-fen Shan**	**0.46 279**	*i* P		**Pn**	18 54 41.0	+0.4	
	baz=277							
NWF			*i* S		**Sn**	18 54 56.5	-0.1	
	baz=277							
WFSB	**Wu-fen Shan**	**0.46 279**	P		**Pn**	18 54 40.9	+0.5	
	baz=277							
WFSB			S		**Sn**	18 54 56.5	0.0	
	baz=277							
TWC	**Suao**	**0.55 225**	*i* P		**Pn**	18 54 41.0	0.0	
	baz=223							
TWC			S		**Sn**	18 54 55.9	-1.4	
	baz=223							
TWE	**Neicheng**	**0.62 244**	*i* P		**Pn**	18 54 41.5	+0.1	
	baz=241							
TWE			S		**Sn**	18 54 57.3	-0.6	
	baz=241							
TWA	**Mucha**	**0.64 268**	*e*P		**Pn**	18 54 41.7	+0.3	
	baz=267							
TWA			*e*S		**Sn**	18 54 57.9	-0.2	
	baz=267							
PCYT	**Pengchaiyu**	**0.65 343**	P		**Pn**	18 54 42.1	+0.6	
	baz=343							
YM08	**YM08**	**0.66 287**	*e*P		**Pn**	18 54 41.2	-0.3	
	baz=285							
YM01	**YM01**	**0.66 283**	*e*P		**Pn**	18 54 42.2	+0.6	
	baz=281							
YM01			*e*S		**Sn**	18 54 58.0	-0.6	
	baz=281							
TWY	**Chenhua**	**0.68 294**	P		**Pn**	18 54 41.9	+0.3	
	baz=293							
TWY			S		**Sn**	18 54 58.4	-0.2	
	baz=293							
NHDH	**Xindian Distri**	**0.69 267**	*e*P		**Pn**	18 54 41.5	-0.2	
	baz=266							
NHDH			*e*S		**Sn**	18 54 59.2	+0.5	
	baz=266							
YM04	**YM04**	**0.69 283**	P		**Pn**	18 54 41.5	-0.3	
	baz=282							
YM04			S		**Sn**	18 54 57.6	-1.2	
	baz=282							
ENAH	**Nanao**	**0.70 218**	*i* P		**Pn**	18 54 42.5	+0.7	
	baz=217							
ENAH			*i* S		**Sn**	18 54 59.0	+0.2	
	baz=217							
TAP	**Taipei**	**0.71 273**	*e*S		**Sn**	18 54 59.4	+0.6	
	baz=272							
ANP	**Anpu**	**0.72 285**	P		**Pn**	18 54 42.8	+0.7	
	baz=284							
ANP			*e*S		**Sn**	18 54 58.4	-0.8	
	baz=284							
TATO	**Taipei**	**0.72 268**	*e*S		**Sn**	18 54 57.7	-1.3	
	baz=267							
NWLT	**Wulai**	**0.74 253**	*e*P		**Pn**	18 54 42.1	0.0	
	baz=251							
NWLT			S		**Sn**	18 54 59.4	0.0	
	baz=251							
ENTT	**Nioudou**	**0.74 241**	*i* P		**Pn**	18 54 42.6	+0.5	
	baz=239							
ENTT			S		**Sn**	18 54 59.9	+0.5	
	baz=239							
ENA	**Nanau**	**0.75 221**	*i* P		**Pn**	18 54 42.8	+0.6	
	baz=219							
ENA			*i* S		**Sn**	18 54 59.8	+0.2	
	baz=219							
NTST	**Danshui**	**0.77 282**	*e*S		**Sn**	18 54 59.4	-0.3	
	baz=281							
TWS1	**Kuangyinshan**	**0.79 277**	P		**Pn**	18 54 43.1	+0.7	
	baz=276							
TWS1			*e*S		**Sn**	18 54 59.6	-0.3	
	baz=276							
NDT	**Datong Townshi**	**0.80 241**	*i* P		**Pn**	18 54 43.3	+0.8	
	baz=239							
NDT			*i* S		**Sn**	18 55 00.7	+0.5	
	baz=239							
JYNG	**Yonagunijimaku**	**0.81 132**	P		**Pn**	18 54 42.8	+0.2	
JYNG			S		**Sn**	18 55 00.0	-0.3	
YOJ	**Yonaguni jima**	**0.85 129**	P		**Pn**	18 54 43.0	+0.1	
	baz=129							
YOJ			*e*S		**Sn**	18 55 00.4	-0.3	
	baz=129							
YOJ	**Yonaguni jima**	**0.85 129**	P		**Pn**	18 54 43.3	+0.4	
YOJ			S		**Sn**	18 55 00.0	-0.8	
YHNB	**Yeheng**	**0.89 248**	P		**Pn**	18 54 43.7	+0.4	
	baz=247							
YHNB			S		**Sn**	18 55 00.6	-0.8	
	baz=247							
NSK	**Sanguang**	**0.90 249**	*i* P		**Pn**	18 54 43.6	+0.3	
	baz=248							
NSK			*i* S		**Sn**	18 55 00.6	-1.0	
	baz=248							
NCU	**National Centr**	**0.99 268**	P		**Pn**	18 54 43.9	-0.1	
	baz=267							
NCU			S		**Sn**	18 55 02.4	-0.4	
	baz=267							
NCUH	**Zhongli**	**1.00 268**	*e*S		**Sn**	18 55 02.7	-0.1	
	baz=267							
NNSB	**Datong**	**1.00 235**	P		**Pn**	18 54 45.2	+0.9	
	baz=234							
NNSB			*e*S		**Sn**	18 55 02.0	-1.1	
	baz=234							
NNSH	**Datong**	**1.00 235**	P		**Pn**	18 54 45.2	+1.0	
	baz=234							
NNSH			S		**Sn**	18 55 03.3	+0.2	
	baz=234							
NNS	**Nan Shan**	**1.00 236**	*i* P		**Pn**	18 54 45.1	+0.9	
	baz=235							
NNS			S		**Sn**	18 55 02.6	-0.5	
	baz=235							
NACB	**Ninganchiao**	**1.03 217**	P		**Pn**	18 54 44.5	+0.1	
	baz=216							
NACB			S		**Sn**	18 55 02.9	-0.6	
	baz=216							
ETLH	**Xiulin Townshi**	**1.07 223**	P		**Pn**	18 54 45.2	+0.3	
	baz=222							
ETLH			S		**Sn**	18 55 03.6	-0.7	
	baz=222							
TWD	**Chiawan**	**1.11 214**	P		**Pn**	18 54 45.2	+0.1	
	baz=213							
TWD			*i* S		**Sn**	18 55 04.1	-0.5	
	baz=213							
NHW	**Xinwu Township**	**1.12 271**	S		**Sn**	18 55 05.2	+0.4	
	baz=269							
HWA	**Hwalien**	**1.19 211**	S		**Sn**	18 55 07.3	+1.4	
	baz=210							
SBCB	**Hsinchu**	**1.20 260**	*e*P		**Pn**	18 54 45.6	-0.2	
	baz=259							
SBCB			*e*S		**Sn**	18 55 05.7	-0.3	
	baz=259							
LIOB	**Emei**	**1.20 253**	*i* P		**Pn**	18 54 46.6	+0.6	
	baz=252							
LIOB			S		**Sn**	18 55 05.8	-0.4	
	baz=252							
FUSS	**Fushou**	**1.21 232**	*i* P		**Pn**	18 54 47.6	+1.3	
	baz=231							
FUSS			S		**Sn**	18 55 06.7	0.0	
	baz=231							
NSTT	**Nanjuang**	**1.22 253**	*i* P		**Pn**	18 54 46.4	+0.3	
	baz=251							
NSTT			*i* S		**Sn**	18 55 05.8	-0.7	
	baz=251							
WHF	**Hehuan Shan**	**1.26 228**	*i* P		**Pn**	18 54 47.9	+0.9	
	baz=226							
WHF			S		**Sn**	18 55 06.8	-1.1	
	baz=226							
CHGB	**Renai**	**1.38 227**	P		**Pn**	18 54 49.3	+1.4	
	baz=226							
CHGB			S		**Sn**	18 55 10.2	+0.6	
	baz=226							
ESL	**Shilin**	**1.41 213**	*i* P		**Pn**	18 54 47.4	-0.6	
	baz=212							
ESL			S		**Sn**	18 55 09.8	-0.1	
	baz=212							
WHP	**Taichung City**	**1.41 240**	*i* P		**Pn**	18 54 48.9	+0.8	
	baz=238							
WHP			S		**Sn**	18 55 09.4	-0.6	
	baz=238							
NMLH	**Miaoli**	**1.43 252**	P		**Pn**	18 54 48.5	+0.2	
	baz=250							
NMLH			S		**Sn**	18 55 10.4	+0.2	
	baz=250							
OWD	**Renai**	**1.45 224**	*e*P		**Pn**	18 54 49.5	+0.9	
	baz=223							
OWD			*e*S		**Sn**	18 55 10.6	-0.2	
	baz=223							
IRIF	**Iriomote-Funau**	**1.47 116**	P		**Pn**	18 54 48.6	0.0	
IRIF			S		**Sn**	18 55 09.9	-1.0	
NSY	**Sanyi**	**1.50 247**	P		**Pn**	18 54 49.5	+0.5	
	baz=246							
TWQ1	**Liyutan**	**1.52 245**	P		**Pn**	18 54 49.5	+0.3	
	baz=244							
TWQ1			S		**Sn**	18 55 11.6	-0.2	
	baz=244							
EGFH	**Guangfu**	**1.54 211**	P		**Pn**	18 54 50.9	+1.5	
	baz=210							
EGFH			*e*S		**Sn**	18 55 10.6	-1.6	
	baz=210							
WDJ	**Dajia District**	**1.63 247**	*e*P		**Pn**	18 54 50.7	+0.4	
	baz=246							
WDJ			*e*S		**Sn**	18 55 13.4	-0.5	
	baz=246							
HATJ	**Hateruma jima**	**1.68 124**	P		**Pn**	18 54 51.9	+1.1	
HATJ			S		**Sn**	18 55 15.2	+0.4	
SMLT	**Sun Moon Lake**	**1.68 229**	P		**Pn**	18 54 51.7	+0.7	
	baz=228							
SMLT			S		**Sn**	18 55 15.5	+0.3	
	baz=228							
HGSD	**Ruisui**	**1.69 208**	P		**Pn**	18 54 51.7	+0.7	
	baz=207							
HGSD			*e*S		**Sn**	18 55 15.5	+0.2	
	baz=207							
SSLB	**Suanglung**	**1.71 225**	P		**Pn**	18 54 52.1	+0.9	
	baz=224							
SSLB			S		**Sn**	18 55 15.5	-0.1	
	baz=224							
EHY	**Hungye**	**1.73 211**	P		**Pn**	18 54 52.5	+1.1	
	baz=210							
JKRS	**Kuro-shima**	**1.75 115**	P		**Pn**	18 54 52.1	+0.5	
JKRS			S		**Sn**	18 55 15.4	-0.8	
JIJ	**Ishigaki jima**	**1.81 110**	P		**Pn**	18 54 52.3	0.0	
JIJ			S		**Sn**	18 55 15.9	-1.5	
WNT	**Mingjian**	**1.84 233**	P		**Pn**	18 54 53.3	+0.7	
	baz=232							
WNT			S		**Sn**	18 55 18.5	+0.5	
	baz=232							
YULB	**Yu-li**	**1.84 210**	P		**Pn**	18 54 51.9	-0.7	
	baz=209							
WHYT	**Xinyi Township**	**1.84 225**	P		**Pn**	18 54 53.1	+0.4	
	baz=224							
WJS	**Zhushan**	**1.84 231**	*e*P		**Pn**	18 54 53.3	+0.7	
	baz=230							
WJS			*e*S		**Sn**	18 55 18.9	+0.8	
	baz=230							
EYUL	**Yuli**	**1.87 208**	*e*P		**Pn**	18 54 53.7	+0.8	
	baz=207							
TWF1	**Yuli**	**1.87 209**	P		**Pn**	18 54 52.7	-0.3	
	baz=208							
JISG	**Ishigakijimahi**	**1.89 102**	P		**Pn**	18 54 53.3	+0.1	
JISG			S		**Sn**	18 55 18.1	-1.0	
ALS	**Alishan**	**2.00 223**	P		**Pn**	18 54 55.8	+0.9	
	baz=221							
FULB	**Fuli**	**2.01 207**	P		**Pn**	18 54 55.8	+1.1	
	baz=206							
CHN5	**Tsauling**	**2.02 227**	P		**Pn**	18 54 55.6	+0.7	
	baz=226							
WDLH	**Douliu**	**2.06 231**	*e*P		**Pn**	18 54 55.2	0.0	
	baz=230							
WDLH			*e*S		**Sn**	18 55 20.8	-1.9	
	baz=230							
CHKT	**Chengkung**	**2.07 204**	*e*P		**Pn**	18 54 55.4	0.0	
	baz=203							
RLNB	**Erlin**	**2.07 238**	*e*P		**Pn**	18 54 55.6	+0.3	
	baz=237							
ELDTW	**Lidau**	**2.14 213**	*e*P		**Pn**	18 54 56.4	+0.1	
	baz=212							
WTK	**Tuku**	**2.17 233**	*e*P		**Pn**	18 54 57.0	+0.5	
	baz=232							
EDH	**Donghe**	**2.21 204**	*e*P		**Pn**	18 54 56.0	-1.0	
	baz=203							
JTJ	**Tarama**	**2.23 99**	P		**Pn**	18 54 57.7	+0.6	
JTJ			S		**Sn**	18 55 25.5	-0.7	
CHY	**Chiayi**	**2.26 229**	*e*P		**Pn**	18 54 57.8	+0.2	
	baz=228							
TPUB	**Ta-pu**	**2.27 222**	*e*P		**Pn**	18 54 58.4	+0.7	
	baz=221							
STYT	**Tauyuan**	**2.30 218**	*e*P		**Pn**	18 54 58.8	+0.7	
	baz=216							
WSF	**Szhu**	**2.32 235**	*e*P		**Pn**	18 54 58.0	-0.3	
	baz=233							
WTP	**Ta-pu**	**2.32 221**	*e*P		**Pn**	18 54 59.0	+0.7	
	baz=220							
PTTC	**Pingtan**	**2.33 283**	*e*P		**Pn**	18 54 58.0	-0.4	
	baz=282							
LONT	**Longtian**	**2.34 207**	*e*P		**Pn**	18 54 57.8	-0.7	
	baz=206							
WLGB	**Puzi**	**2.36 230**	*e*P		**Pn**	18 54 58.0	-0.8	
	baz=229							
TWK	**Hsinying**	**2.38 224**	*e*P		**Pn**	18 54 59.2	+0.1	
	baz=223							
CHN1	**Nanshi**	**2.42 222**	*e*P		**Pn**	18 54 59.2	-0.3	
	baz=221							
SGST	**Jiashian**	**2.46 219**	*e*P		**Pn**	18 54 59.8	-0.2	
	baz=218							
SLGT	**Liugui**	**2.50 217**	*e*P		**Pn**	18 55 00.8	+0.4	
	baz=216							
JIRB	**Irabujima**	**2.63 93**	P		**Pn**	18 55 03.0	+0.9	
JIRB			S		**Sn**	18 55 34.5	-0.5	
JIKM	**Ikemajima**	**2.69 91**	P		**Pn**	18 55 04.0	+1.2	
JIKM			S		**Sn**	18 55 36.2	-0.1	
JMJ2	**Miyako jima3**	**2.78 95**	P		**Pn**	18 55 04.8	+0.9	
JMJ2			S		**Sn**	18 55 37.1	-1.2	
JOGS	**Gusukube**	**2.85 94**	P		**Pn**	18 55 06.4	+1.6	
JOGS			S		**Sn**	18 55 39.5	-0.3	

*IDC **26** 19:16:37.1±2.3,5˚.57N×61˚.17E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.5/54, mbtmp3.7/7, Error ellipse: s-maj=64.8km s-min=28.2km az=63.0*
*NEIC **26** 19:16:38.8±0.3,5˚.6N±0˚.2×61˚.1E±0˚.2, h10km±2km, mb4.0/4, Error ellipse: s-maj=44.8km s-min=13.8km az=218.0*
ISC 26 19:16:39.1±1.9, 5˚.6N±0˚.3×61˚.2E±0˚.3, h10km, n16, σ0s88/15, mb3.7/9, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAYN	**Ar Rayn**	**23.34**	**321**	P	**P**	**19 21 47.6**	**-0.2**
RAYN				IAmb	IAmb	19 21 49.2	
	comp=Z,5.1nm,1.0s						
AAK	**Ala-Archa**	**38.69**	**16**	P	**P**	**19 24 04.3**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=42,slow=20,SNR=2.1						
AAK	**Ala-Archa**	**38.69**	**16**	IAmb	IAmb	19 24 17.0	
	comp=Z,5.0nm,1.5s						
CMAR	**Chiang Mai Arr**	**38.95**	**68**	P	**P**	**19 24 06.9**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=270,slow=8.0,SNR=4.4						
KBZ	**Khabaz**	**41.22**	**340**	P	**P**	**19 24 25.0**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=201,slow=17,SNR=2.0						
ABKAR	**Akbulak array**	**43.48**	**359**	P	**P**	**19 24 42.7**	**+0.2**
ABKAR	**Akbulak array**	**43.48**	**359**	P	**P**	**19 24 42.0**	**-0.5**
ABKAR				IAmb	IAmb	19 24 43.7	
	comp=Z,1.8nm,0.8s						
AB04	**Akbulak array**	**43.48**	**359**	P	**P**	**19 24 42.9**	**+0.4**
AB02	**Akbulak array**	**43.48**	**359**	P	**P**	**19 24 41.9**	**-0.7**
AB09	**Akbulak array**	**43.49**	**359**	P	**P**	**19 24 42.7**	**+0.2**
MKAR	**Makanchi Array**	**44.86**	**21**	P	**P**	**19 24 52.3**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=211,slow=10.0,SNR=2.3						
SONM	**Songino Array**	**57.01**	**35**	P	**P**	**19 26 23.8**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=236,slow=5.8,SNR=2.3						
WRA	**Warramunga Arr**	**76.20**	**112**	P	**P**	**19 28 28.6**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=298,slow=4.8,SNR=6.5						
WRA	**Warramunga Arr**	**76.20**	**112**	P	**P**	**19 28 28.8**	**+0.5**
ASAR	**Alice Springs**	**76.57**	**116**	P	**P**	**19 28 29.2**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=300,slow=5.5,SNR=5.3						
ASAR	**Alice Springs**	**76.57**	**116**	P	**P**	**19 28 30.4**	**0.0**

*IDC **26** 19:18:29.5±0.8,39˚.63N×143˚.75E, h0km, mb3.9/15, mb1 4.0/19, mb1mx3.9/56, mbtmp3.9/19, ML3.1/4, MS3.6/3, Ms1 3.6/3, ms1mx2.9/56, Error ellipse: s-maj=19.5km s-min=15.7km az=88.0*
*NEIC **26** 19:18:30.6±1.1, 39˚.45N±0˚.08×144˚.0E±0˚.2, h25km±7km, mb4.4/15, Error ellipse: s-maj=20.2km s-min=9.4km az=113.0*
*JMA **26** 19:18:31.5±0.1, 39˚.62N×143˚.61E, h32km, M4.3*
*NIED **26** 19:18:31.5, 39˚.63N×143˚.61E, h32km, MW4.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr1.23; Mθθ0.06; Mφφ-1.29; Mrθ0.34; Mrφ-0.50; Mθφ0.47; Fault plane solution: M0 1.46000×10^15^ NP1: φs 27.00000°, δ57.00000°, λ100.00000°. NP2: φs 189.00000°, δ35.00000°, λ75.00000°.*
*MOS **26** 19:18:33.5±1.3, 39˚.69N×143˚.44E, h37km, mb4.5/9 Error ellipse: s-maj=8.9km s-min=5.6km az=96.3*
ISC 26 19:18:31.5±0.6, 39˚.64N±0˚.04×143˚.54E±0˚.05, h11km, n112, σ1s50/124, mb4.2/29, 7C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.33**	**284**	P	**Pn**	**19 18 55.0**	**-1.0**
MIYJ	**Miyakonagasawa**	**1.33**	**268**	P	**Pn**	**19 18 55.3**	**-0.8**
MIYJ				S	**Sb**	**19 19 12.6**	**-1.0**
JKEN	**Kujiedanarisaw**	**1.52**	**292**	P	**Pn**	**19 18 57.7**	**-0.9**
JKEN				*e*S	**Sn**	**19 19 17.2**	**-1.2**
OFUJ	**Ofunato**	**1.56**	**250**	P	**Pn**	**19 18 58.3**	**-0.9**
JANG	**Nango**	**1.72**	**296**	P	**Pn**	**19 19 00.6**	**-0.9**
JOM	**Ohasama**	**1.75**	**265**	P	**Pn**	**19 19 01.7**	**-0.1**
JOM				*e*S	**Sn**	**19 19 23.7**	**-0.4**
JMK	**Ichinoseki**	**1.93**	**250**	P	**Pn**	**19 19 03.9**	**-0.4**
JMK				*e*S	**Sn**	**19 19 27.4**	**-1.1**
JIO	**Ouri**	**2.08**	**236**	P	**Pn**	**19 19 05.4**	**-0.9**
JIO				*e*S	**Sn**	**19 19 29.1**	**-3.1**
JTM	**Tenmabayashi**	**2.22**	**302**	P	**Pn**	**19 19 08.6**	**+0.4**
ERM	**Erimo**	**2.39**	**353**	*ce*P	**Pn**	**19 19 12.6**	**+2.0**
ERM				pmax	pmax		
	comp=Z,268nm,0.6s						
ERM	**Erimo**	**2.39**	**353**		**Pn**	**19 19 11.3**	**+0.7**
JYK	**Kaneyama**	**2.58**	**255**	P	**Pn**	**19 19 13.4**	**+0.2**
JOT	**Ohata**	**2.58**	**313**	P	**Pn**	**19 19 13.6**	**+0.4**
JNBK	**Urakawa-nobuka**	**2.71**	**347**	P	**Pn**	**19 19 16.6**	**+1.6**
JMM	**Marumori**	**2.79**	**231**		**Pn**	**19 19 15.3**	**-0.7**
JCH	**Churui**	**2.98**	**357**	P	**Pn**	**19 19 19.2**	**+0.5**
JCH				*e*S	**Sn**	**19 19 53.4**	**-1.0**
JFT	**Otama**	**3.29**	**231**	P	**Pn**	**19 19 22.8**	**-0.2**
JFT				*e*S	**Sn**	**19 20 01.8**	**-0.2**
JEW	**Eniwo**	**3.57**	**334**		**Pn**	**19 19 27.5**	**+0.7**
NMR	**Nemuro--Hokkai**	**4.07**	**23**	*e*P	**Pn**	**19 19 33.9**	**+0.2**
NMR				*i* S	**Sn**	**19 20 18.5**	**-2.9**
JYT	**Yasato**	**4.31**	**219**		**Pn**	**19 19 35.5**	**-1.5**
GLVR	**Golovnino**	**4.36**	**19**	*e*P	**Pn**	**19 19 38.8**	**+1.2**
GLVR				*e*S	**Sn**	**19 20 25.5**	**-2.8**
GLVR				pmax	pmax		
	comp=Z,35nm,0.1s						
GLVR				smax	smax		
	comp=N,249nm,0.5s						
GLVR				smax	smax		
	comp=E,582nm,0.4s						
JSD	**Sado**	**4.42**	**250**	Pn	**Pn**	**19 19 38.1**	**-0.5**
JKA	**Kamikawa-asahi**	**4.53**	**351**	Pn	**Pn**	**19 19 40.9**	**+0.8**
JKA	**Kamikawa-asahi**	**4.53**	**351**		**Sn**	**19 20 32.6**	**-0.1**
ASAJ	**Asahikawa**	**4.53**	**351**	Pn	**Pn**	**19 19 40.8**	**+0.8**
	comp=E,1.8nm,0.3s,baz=200,slow=19,SNR=18						
ASAJ				Sn	**Sn**	**19 20 32.6**	**-0.1**
	comp=E,5.1nm,0.3s,baz=207,slow=16,SNR=6.0						
RUSJ	**Misakicho**	**4.64**	**15**	*e*P	**Pn**	**19 19 40.9**	**-0.6**
RUSJ				*e*S	**Sn**	**19 20 33.9**	**-1.5**
GRPR	**Tuman**	**4.66**	**20**	*e*P	**Pn**	**19 19 43.7**	**+1.9**
GRPR				*e*S	**Sn**	**19 20 32.8**	**-3.0**
GRPR				smax	smax		
	comp=N,503nm,0.5s						
GRPR				smax	smax		
	comp=E,386nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.72**	**21**	*e*P	**Pn**	**19 19 44.7**	**+2.1**
YUK				*e*S	**Sn**	**19 20 34.9**	**-2.5**
YUK				pmax	pmax		
	comp=E,25nm,0.2s						
YUK				pmax	pmax		
	comp=Z,87nm,0.2s						
YUK				smax	smax		
	comp=N,133nm,0.3s						
YUK				smax	smax		
	comp=E,417nm,0.6s						
MJAR	**Matsushiro Arr**	**5.22**	**235**	Pn	**Pn**	**19 19 50.7**	**+1.2**
	comp=E,0.5nm,0.3s,baz=40,slow=12,SNR=39						
MJAR	**Matsushiro Arr**	**5.22**	**235**	P	**Pn**	**19 19 49.8**	**+0.2**
MJAR	**Matsushiro Arr**	**5.22**	**235**		**Pn**	**19 19 49.8**	**+0.2**
MAJO	**Matsushiro**	**5.22**	**235**	P	**Pn**	**19 19 50.2**	**+0.6**
MAJO	**Matsushiro**	**5.22**	**235**		**Pn**	**19 19 50.2**	**+0.6**
MAT	**Matsushiro**	**5.22**	**235**	P	**Pn**	**19 19 50.6**	**+1.0**
MAT				*e*S	**Sn**	**19 20 51.5**	**+1.7**
JGF	**Kuroka**	**6.35**	**233**		**Pn**	**19 20 06.0**	**+0.9**
KUR	**Kuril'sk**	**6.44**	**28**	*e*P	**Pn**	**19 20 07.2**	**+1.0**
KUR				*e*S	**Sn**	**19 21 16.3**	**-3.4**
KUR				pmax	pmax		
	comp=Z,28nm,0.5s						
KUR				smax	smax		
	comp=N,95nm,0.5s						
KUR				smax	smax		
	comp=E,49nm,0.5s						
INU	**Inuyama**	**6.73**	**233**		**Pn**	**19 20 09.5**	**-0.7**
YSS	**Yuzh-Sakhalins**	**7.33**	**356**	*e*P	**Pn**	**19 20 21.0**	**+2.5**
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
JWT	**Wachi**	**7.80**	**239**	Pn	**Pn**	**19 20 25.7**	**+0.7**
USA0B	**Ussuriysk Arra**	**9.74**	**302**	*i* P	**Pn**	**19 20 50.9**	**-0.6**
USA0B	**Ussuriysk Arra**	**9.74**	**302**		**Pn**	**19 20 55.4**	**+3.9**
USRK	**Ussuriysk Ar.**	**9.74**	**302**	Pn	**Pn**	**19 20 54.0**	**+2.5**
	baz=101,slow=13,SNR=12						
USRK				LR	LR	19 24 27.7	
	comp=Z,144nm,18.9s,baz=84,slow=36						
USRK	**Ussuriysk Ar.**	**9.74**	**302**	P	**Pn**	**19 20 54.0**	**+2.5**
USRK	**Ussuriysk Ar.**	**9.74**	**302**		**Pn**	**19 20 54.5**	**+3.0**
KSRS	**Korea Array**	**12.43**	**265**	Pn	**Pn**	**19 21 29.7**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=73,slow=13,SNR=2.9						
KSRS				LR	LR	19 26 13.4	
	comp=Z,186nm,20.4s,baz=109,slow=37						
KLR	**Kul'dur**	**12.75**	**323**	*i* P	**Pn**	**19 21 33.6**	**+0.9**
ZEA	**Zeya**	**17.93**	**327**	*e*P	**Pn**	**19 22 41.0**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA	**Hailar**	**19.46**	**307**	*i* P	**P**	**19 22 55.8**	**-2.3**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK	**Yakutsk**	**23.96**	**344**	*i* P	**P**	**19 23 43.5**	**-2.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK	**Yakutsk**	**23.96**	**344**	P	**P**	**19 23 45.3**	**-0.3**
YAK				IAmb	IAmb	19 24 02.3	
	comp=Z,11nm,0.8s						
ULN	**Ulaanbaatar**	**27.41**	**300**	*

	comp=Z,0.6nm,0.3s,baz=103,slow=4.6,SNR=1.7							
ZALV	**Zalesovo Beam**	**41.46**	**310**	P		**P**	**19 26 18.0**	**0.0**
ZALV							19 28 14.7	
ZALV	**Zalesovo Beam**	**41.46**	**310**	P		**P**	**19 26 18.0**	**0.0**
ZALV						**PcP**	**19 28 14.7**	**-0.9**
NRIK	**Noril'sk**	**41.64**	**334**	*i* P		**P**	**19 26 18.2**	**-1.2**
NRIK				pmax	pmax			
	comp=Z,2.0nm,1.0s							
CHTO	**Chiang Mai**	**43.58**	**255**	P		**P**	**19 26 35.1**	**-0.6**
CHTO				pmax	pmax			
	comp=Z,2.0nm,0.8s							
CHTO	**Chiang Mai**	**43.58**	**255**	P		**P**	**19 26 35.1**	**-0.6**
LSA	**Lhasa**	**43.68**	**274**	P		**P**	**19 26 38.2**	**+1.2**
LSA				pmax	pmax			
	comp=Z,5.0nm,1.3s							
LSA	**Lhasa**	**43.68**	**274**	P		**P**	**19 26 38.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**43.80**	**254**	P		**P**	**19 26 37.9**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=43,slow=6.9,SNR=5.9							
MK31	**Makanchi Array**	**44.21**	**300**	*ce*P		**P**	**19 26 37.6**	**-2.9**
MK31	**Makanchi Array**	**44.21**	**300**	P		**P**	**19 26 40.7**	**+0.1**
MK31				IAmb	IAmb		19 26 45.0	
	comp=Z,3.3nm,0.9s							
MKAR	**Makanchi Array**	**44.21**	**300**	P		**P**	**19 26 40.8**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=82,slow=10,SNR=13							
MKAR	**Makanchi Array**	**44.21**	**300**	P		**P**	**19 26 40.5**	**0.0**
BWN	**Browne**	**45.30**	**35**	P		P	19 26 44.0	-5.0
KURK	**Kurchatov**	**45.69**	**306**	*ce*P		**P**	**19 26 52.0**	**-0.2**
KURK				pmax	pmax			
	comp=Z,10.0nm,1.3s							
KURK	**Kurchatov**	**45.69**	**306**	P		**P**	**19 26 51.9**	**-0.4**
KURBB	**Kurchatov Arra**	**45.77**	**306**	P		**P**	**19 26 53.3**	**+0.5**
	baz=78,slow=8.7							
ILAR	**Eielson Array**	**46.40**	**34**	P		**P**	**19 26 55.7**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=268,slow=7.0,SNR=1.2							
PMG	**Port Moresby**	**48.91**	**175**	*ce*P		**P**	**19 27 20.0**	**+2.5**
PMG				pmax	pmax			
	comp=Z,10.0nm,1.0s							
BRVK	**Borovoye**	**50.15**	**311**	*ce*P		**P**	**19 27 25.9**	**-0.8**
BRVK				pmax	pmax			
	comp=Z,10.0nm,2.5s							
AAK	**Ala-Archa**	**50.76**	**297**	P		**P**	**19 27 31.3**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=97,slow=17,SNR=4.1							
AAK	**Ala-Archa**	**50.76**	**297**	*i* P		**P**	**19 27 29.7**	**-2.0**
AAK				pmax	pmax			
	comp=Z,4.0nm,0.9s							
AAK	**Ala-Archa**	**50.76**	**297**	P		**P**	**19 27 31.1**	**-0.7**
AAK				IAmb	IAmb		19 27 40.5	
	comp=Z,3.5nm,1.2s							
KKAR	**Karatay Array**	**53.30**	**299**	P		**P**	**19 27 49.6**	**-0.8**
KKAR	**Karatay Array**	**53.30**	**299**	P		**P**	**19 27 49.6**	**-0.8**
ARU	**Arti**	**55.54**	**318**	*c* iP		**P**	**19 28 07.3**	**+0.8**
ARU				*PP		**pwP**	**19 28 20.0**	**+7.7**
ARU							19 30 09.2	
ARU				S		**S**	**19 35 50.2**	**-1.3**
ARU				SS		**SS**	**19 39 33.0**	**-2.8**
ARU				pmax	pmax			
	comp=Z,5.0nm,0.8s							
ARU	**Arti**	**55.54**	**318**	P		**P**	**19 28 07.2**	**+0.7**
ABKAR	**Akbulak array**	**57.56**	**310**	P		**P**	**19 28 21.1**	**+0.1**
ABKAR				IAmb	IAmb		19 28 22.2	
	comp=Z,2.9nm,0.6s							
ABKAR	**Akbulak array**	**57.56**	**310**	P		**P**	**19 28 20.4**	**-0.6**
KBL	**Kabul**	**58.06**	**290**	P		**P**	**19 28 24.1**	**-0.9**
KBL				pmax	pmax			
	comp=Z,3.0nm,0.7s							
KBL	**Kabul**	**58.06**	**290**	P		**P**	**19 28 24.1**	**-0.9**
KBL				IAmb	IAmb		19 28 25.6	
	comp=Z,2.6nm,0.7s							
KIRV	**Kirov**	**59.19**	**323**	*i* P		**P**	**19 28 31.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**59.82**	**200**	P		**P**	**19 28 36.6**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=18,slow=6.4,SNR=2.2							
WRA	**Warramunga Arr**	**59.89**	**190**	P		**P**	**19 28 37.1**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=7.9,slow=7.1,SNR=17							
ASAR	**Alice Springs**	**63.62**	**190**	P		**P**	**19 29 03.0**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=8.4,slow=6.6,SNR=4.4							
ASAR	**Alice Springs**	**63.62**	**190**	P		**P**	**19 29 03.0**	**+0.5**
FINES	**FINESS Array B**	**67.29**	**332**	P		**P**	**19 29 26.4**	**+0.5**
	comp=Z,2.6nm,0.7s,baz=57,slow=7.0,SNR=5.6							
FINES	**FINESS Array B**	**67.29**	**332**	P		**P**	**19 29 26.1**	**+0.3**
FINES	**FINESS Array B**	**67.29**	**332**	P		**P**	**19 29 26.1**	**+0.3**
KIV	**Kislovodsk**	**70.46**	**311**	*e*P		**P**	**19 29 47.6**	**+1.6**
KIV				pmax	pmax			
	comp=Z,20nm,1.1s							
KIV				MLR	MLR			
	comp=Z,126nm,17.0s							
KBZ	**Khabaz**	**70.47**	**311**	P		**P**	**19 29 47.4**	**+1.5**
	comp=Z,2.9nm,0.9s,baz=45,slow=5.2,SNR=4.6							
NVAR	**Mina Array Bea**	**72.10**	**55**	P		**P**	**19 29 55.8**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=279,slow=7.2,SNR=1.9							
NB2	**NORSAR Subarra**	**72.42**	**338**	P		**P**	**19 29 58.1**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=37,slow=6.2							
NOA	**NORSAR Array B**	**72.42**	**338**	P		**P**	**19 29 58.3**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=37,slow=6.0,SNR=7.4							
AKASG	**Malin Array Be**	**73.25**	**323**	P		**P**	**19 30 02.8**	**+0.3**
	comp=Z,0.1nm,0.2s,baz=44,slow=6.3,SNR=6.5							
PDAR	**Pinedale Array**	**74.66**	**47**	P		**P**	**19 30 09.6**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=350,slow=1.0,SNR=1.2							
URZ	**Urewera**	**83.41**	**154**	LR		LR	20 03 19.2	
	comp=Z,105nm,20.6s,baz=19,slow=32							

IDC 26 19:28:21.2±1.9, 1.1°**98**N×126.2°**29E**, **h0**km, **mb3.5/4, mb1 3.7/5, mb1mx3.3**/47, **mbtmp3.5**/5, **ML2.9**/1, **Error ellipse: s-maj=113.1km s-min=26.4km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.96**	**182**	P	Pn	19 32 57.1	+0.3
	0.0nm,0.3s,baz=18,slow=9.6,SNR=1.3						
WRA	**Warramunga Arr**	**23.18**	**160**	P	P	19 33 29.6	-0.1
	0.6nm,0.4s,baz=337,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.55**	**164**	P	P	19 34 00.7	-0.3
	0.2nm,0.8s,baz=343,slow=8.0,SNR=1.6						
STKA	**Stephens Creek**	**36.67**	**158**	P	P	19 35 29.3	-0.6
	1.7nm,0.7s,baz=323,slow=8.2,SNR=2.8						
MKAR	**Makanchi Array**	**58.74**	**326**	P	P	19 38 20.9	-0.2
	0.7nm,0.9s,baz=133,slow=6.9,SNR=2.6						

*IDC **26** 19:28:47.2*±*0.8, 34.°12*N*×83.°22*E*, h0*km, *mb3.8/15, mb1 4.0/17, mb1mx3.8/48, mbtmp3.8/17, ML3.1/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/46, Error ellipse: s-maj=26.5km s-min=14.5km az=47.0*

*NEIC **26** 19:28:49.0*±*1.2, 34.°2N*±*0.°1×83.°6E*±*0.°1, h10km*±*1km, mb4.5/18, Error ellipse: s-maj=19.4km s-min=12.1km az=34.0*

ISC 26 19:28:52.4±0.6, **34.°16N**±0.°09×**83.°43E**±0.°08, **h35**km, **n49,** σ0**95**/47, **mb4.1**/22, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**7.93**	**122**	Pn	Pn	19 30 41.2	-4.4
NIL	**Nilore**	**8.47**	**269**		**Pn**	**19 30 52.6**	**-0.1**
AAK	**Ala-Archa**	**10.98**	**323**	Pn	**Pn**	**19 31 29.5**	**+2.3**
	0.1nm,0.3s,baz=166,slow=11,SNR=5.3						
AAK	**Ala-Archa**	**10.98**	**323**		**Pn**	**19 31 27.2**	**+0.1**
SHL	**Shillong**	**11.27**	**137**	Pn	**Pn**	**19 31 29.4**	**-1.8**
KBL	**Kabul**	**11.90**	**276**		**Pn**	**19 31 39.5**	**-0.3**
MK31	**Makanchi Array**	**12.65**	**356**	Pn	**Pn**	**19 31 47.5**	**-2.3**
MKAR	**Makanchi Array**	**12.65**	**356**	Pn	**Pn**	**19 31 48.6**	**-1.1**
	0.2nm,0.3s,baz=182,slow=12,SNR=5.9						
MKAR	**Makanchi Array**	**12.65**	**356**		**Pn**	**19 31 47.9**	**-1.8**
KURBB	**Kurchatov Arra**	**16.84**	**349**	Pn	**Pn**	**19 32 45.4**	**+0.1**
	0.1nm,0.3s,baz=170,slow=11,SNR=25						
KURK	**Kurchatov**	**16.91**	**349**	P	**Pn**	**19 32 47.5**	**+1.3**
KURK				IAmb	IAmb	19 32 48.5	
	comp=Z,11nm,0.9s						
HRA	**Herat**	**17.51**	**277**		**P**	**19 32 54.9**	**0.0**
ZAA0	**Zalesovo Array**	**19.81**	**2**	P	**P**	**19 33 18.9**	**-0.8**
ZALV	**Zalesovo Beam**	**19.81**	**2**	P	**P**	**19 33 19.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=185,slow=12,SNR=8.1						
CHTO	**Chiang Mai**	**20.61**	**134**	P	**P**	**19 33 29.0**	**+0.3**
CM31	**Chiang Mai Arr**	**20.89**	**135**	P	**P**	**19 33 31.6**	**-0.1**
CM31				IAmb	IAmb	19 33 39.6	
	comp=Z,3.1nm,0.9s						
CMAR	**Chiang Mai Arr**	**20.89**	**135**	P	**P**	**19 33 32.4**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=332,slow=9.2,SNR=2.9						
CMAR	**Chiang Mai Arr**	**20.89**	**135**	P	**P**	**19 33 31.9**	**+0.2**
BVAR	**Borovoye Array**	**21.03**	**338**	P	**P**	**19 33 32.6**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=156,slow=11,SNR=4.8						
BRVK	**Borovoye**	**21.09**	**338**	P	**P**	**19 33 33.6**	**0.0**
SONM	**Songino Array**	**21.96**	**45**	P	**P**	**19 33 45.3**	**+2.1**
	comp=Z,2.4nm,0.9s,baz=231,slow=8.4,SNR=16						
ABKAR	**Akbulak array**	**22.99**	**318**	P	**P**	**19 33 54.6**	**+0.7**
ABKAR				IAmb	IAmb	19 33 56.5	
	comp=Z,2.6nm,0.9s						
ABKAR	**Akbulak array**	**22.99**	**318**	P	**P**	**19 33 54.5**	**+0.5**
AKTO	**Aktyubinsk**	**24.68**	**319**	P	**P**	**19 34 09.2**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=120,slow=14,SNR=5.3						
NRIK	**Noril'sk**	**35.30**	**3**	P	**P**	**19 35 44.4**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=236,slow=7.2,SNR=3.7						
KSRS	**Korea Array**	**35.98**	**72**	LR	LR	19 53 00.3	
	comp=Z,7.7nm,20.6s,baz=220,slow=40						
AKASG	**Malin Array Be**	**42.29**	**310**	P	**P**	**19 36 41.2**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=79,slow=7.6,SNR=7.5						
MJAR	**Matsushiro Arr**	**44.24**	**71**	P	**P**	**19 37 00.5**	**+2.1**
	comp=Z,1.2nm,0.7s,baz=295,slow=9.9,SNR=2.3						
MLR	**Muntele Rosu**	**44.70**	**303**	P	**P**	**19 37 02.7**	**+0.6**
MLR				IAmb	IAmb	19 37 04.9	
	comp=Z,6.7nm,0.9s						
FIA1	**FINESS Array S**	**45.16**	**325**	P	**P**	**19 37 05.3**	**0.0**
FIA1				IAmb	IAmb	19 37 30.6	
	comp=Z,16nm,1.4s						
FINES	**FINESS Array B**	**45.16**	**325**	P	**P**	**19 37 04.8**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=102,slow=8.8,SNR=7.3						
FINES	**FINESS Array B**	**45.16**	**325**	P	**P**	**19 37 05.8**	**+0.4**
ARD4	**ARCESS Array S**	**47.29**	**336**	P	**P**	**19 37 22.0**	**0.0**
ARC3	**ARCESS Array S**	**47.30**	**336**	P	**P**	**19 37 21.9**	**-0.2**
ARC3				IAmb	IAmb	19 37 24.1	
	comp=Z,12nm,1.1s						
ARD5	**ARCESS Array S**	**47.30**	**336**	P	**P**	**19 37 22.5**	**+0.4**
ARC2	**ARCESS Array S**	**47.30**	**336**	P	**P**	**19 37 22.6**	**+0.5**
ARC2				IAmb	IAmb	19 37 43.2	
	comp=Z,12nm,1.1s						
ARB1	**ARCESS Array S**	**47.30**	**336**	P	**P**	**19 37 22.2**	**+0.1**
ARB1				IAmb	IAmb	19 37 43.3	
	comp=Z,14nm,1.2s						
NC405	**NORSAR Array S**	**52.05**	**324**	P	**P**	**19 37 58.8**	**+0.5**
NC303	**NORSAR Array S**	**52.21**	**324**	P	**P**	**19 37 59.7**	**+0.2**
NC303				IAmb	IAmb	19 38 06.6	
	comp=Z,12nm,0.9s						
NB2	**NORSAR Subarra**	**52.30**	**324**	P	**P**	**19 38 00.1**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=86,slow=7.4						
NOA	**NORSAR Array B**	**52.30**	**324**	P	**P**	**19 38 00.2**	**0.0**
	comp=Z,3.6nm,0.7s,baz=86,slow=7.3,SNR=14						
GERES	**GERESS Array B**	**52.45**	**309**	P	**P**	**19 38 01.7**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=93,slow=4.0,SNR=3.7						
NC204	**NORSAR Array S**	**52.50**	**324**	P	**P**	**19 38 02.0**	**+0.2**
ESDC	**Sonseca Array**	**67.38**	**303**	P	**P**	**19 39 43.0**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=47,slow=5.6,SNR=2.2						
WRA	**Warramunga Arr**	**72.40**	**130**	P	**P**	**19 40 16.0**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=326,slow=6.2,SNR=25						
WB2	**Warramunga Arr**	**72.41**	**130**	P	**P**	**19 40 16.0**	**+0.7**
WB2				IAmb	IAmb	19 40 44.9	
	comp=Z,4.4nm,1.2s						
ILAR	**Eielson Array**	**73.85**	**20**	P	**P**	**19 40 22.5**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=330,slow=3.4,SNR=4.4						
ASAR	**Alice Springs**	**74.89**	**133**	P	**P**	**19 40 30.7**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=315,slow=5.9,SNR=13						
YKA	**Yellowknife Ar**	**82.59**	**8**	P	**P**	**19 41 11.2**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=353,slow=5.4,SNR=5.2						

*NEIC **26** 19:29:27.4*±*1.3, 21.°S*±*1.°×170.°5E*±*0.°5, h94km*±*31km, mb4.3/5, Error ellipse: s-maj=217.6km s-min=12.9km az=161.0*

*IDC **26** 19:29:28.8*±*7.9, 21.°18S×170.°52E, h92km*±*47km, mb3.6/5, mb1 3.8/6, mb1mx3.5/39, mbtmp3.9/6, MS3.4/2, Ms1 3.4/2, ms1mx2.8/33, Error ellipse: s-maj=122.0km s-min=50.4km az=152.0*

ISC 26 19:29:27.1±2.4, **21.°5S**±0.°8×**170.°7E**±0.°3, **h100**km, **n17,** σ1**9**/**21**/17, **mb3.8/7, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.03**	**261**	P	**Pn**	**19 30 27.1**	**+0.3**
	7.3nm,0.3s,baz=145,slow=18,SNR=145						
DZM				S	**Sn**	**19 31 11.5**	**-1.6**
	17nm,0.3s,baz=113,slow=14,SNR=6.3						
DZM	**Mont Dzumac**	**4.03**	**261**		**Pn**	**19 30 26.9**	**+0.1**
DZM					**Sn**	**19 31 11.1**	**-2.0**
MSVF	**Nonsavu**	**7.84**	**63**		**Pn**	**19 31 17.5**	**-1.1**
CTA	**Charters Tower**	**22.92**	**269**	P	**P**	**19 34 25.4**	**+2.5**
	2.7nm,0.5s,baz=112,slow=9.8,SNR=5.5						
STKA	**Stephens Creek**	**27.94**	**242**	LR	LR	19 45 58.4	
	comp=Z,83nm,21.2s,baz=212,slow=36						
WB0	**Warramunga Arr**	**34.01**	**266**	P	**P**	**19 36 01.7**	**0.0**
WB0				IAmb	IAmb	19 36 19.6	
	comp=Z,7.8nm,1.4s						
AS31	**Alice Springs**	**34.02**	**259**	P	**P**	**19 36 01.9**	**+0.2**
ASAR	**Alice Springs**	**34.02**	**259**	P	**P**	**19 36 02.2**	**+0.4**
	comp=Z,4.7nm,0.7s,baz=81,slow=9.5,SNR=74						
ASAR	**Alice Springs**	**34.02**	**259**	P	**P**	**19 36 00.1**	**-1.7**
WB2	**Warramunga Arr**	**34.02**	**266**	P	**P**	**19 36 01.7**	**-0.1**
WB2				IAmb	IAmb	19 36 17.0	
	comp=Z,4.1nm,1.1s						
WRA	**Warramunga Arr**	**34.03**	**266**	P	**P**	**19 36 02.1**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=96,slow=8.3,SNR=17						
WRA	**Warramunga Arr**	**34.03**	**266**	P	**P**	**19 36 01.8**	**0.0**
FITZ	**Fitzroy Crossi**	**42.46**	**266**	P	**P**	**19 37 12.1**	**-0.4**
BATI	**Baumata**	**46.48**	**276**	LR	LR	19 58 42.2	
	comp=Z,52nm,20.1s,baz=145,slow=38						
CMAR	**Chiang Mai Arr**	**80.69**	**294**	P	**P**	**19 41 31.5**	**+1.8**
	comp=Z,0.2nm,0.9s,baz=11,slow=3.3,SNR=4.2						
CMAR	**Chiang Mai Arr**	**80.69**	**294**	P	**P**	**19 41 29.1**	**-0.5**
SONM	**Songino Array**	**89.84**	**323**	P	**P**	**19 42 14.7**	**0.0**
	comp=Z,0.2nm,0.6s,baz=116,slow=3.4,SNR=1.6						

IDC 26 19:33:54.6±1.6, **15.°92N**×**147.°61E**, **h0**km, **mb3.3**/3, **mb1 3.7**/4, **mb1mx3.4**/54, **mbtmp3.5**/4, **ML3.5**/1, **Error ellipse: s-maj=102.9km s-min=28.0km az=118.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.52**	**229**	Pn	Pn	19 34 48.8	-1.7
	3.9nm,0.3s,baz=330,slow=20,SNR=1.1						
GUMO				Sn	Sn	19 35 29.3	-3.6
	2.5nm,0.3s,baz=353,slow=22,SNR=1.3						
WRA	**Warramunga Arr**	**37.95**	**201**	P	P	19 41 13.5	-0.7
	0.2nm,0.4s,baz=28,slow=9.2,SNR=8.4						
ASAR	**Alice Springs**	**41.56**	**199**	P	P	19 41 45.7	+1.5
	0.3nm,0.7s,baz=10.0,slow=7.0,SNR=2.0						
ILAR	**Eielson Array**	**65.34**	**25**	P	P	19 44 38.2	-0.2
	0.4nm,0.9s,baz=254,slow=6.5,SNR=2.6						

*IDC **26** 19:36:00.5*±*0.6, 38.°24S×93.°81W, h0km, mb4.3/11, mb1 4.5/12, mb1mx4.3/37, mbtmp4.3/12, ML3.8/1, MS3.8/7, Ms1 3.7/7, ms1mx3.5/24, Error ellipse: s-maj=23.0km s-min=17.9km az=93.0*

*NEIC **26** 19:36:02.5*±*1.8, 38.°2S*±*0.°1×93.°86W*±*0.°09, h10km*±*1km, mb4.6/36, Error ellipse: s-maj=19.3km s-min=10.8km az=199.0*

ISC 26 19:36:04.3±0.6, **38.°21S**±0.°08×**93.°9W**±0.°1, **h25**km, **n84,** σ0**91**/73, **mb4.6**/22, **MS3.7**/5, **West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H03S2	**Juan Fernandez**	**12.84**	**75**	T	T	19 52 21.6	
	baz=244,slow=74,SNR=1030						
H03S1	**Juan Fernandez**	**12.85**	**75**	T	T	19 52 20.6	
	baz=244,slow=74,SNR=1339						
H03S3	**Juan Fernandez**	**12.86**	**75**	T	T	19 52 17.9	
	baz=244,slow=74,SNR=1753						
H03N2	**Juan Fernandez**	**13.00**	**73**	T	T	19 52 27.4	
	baz=250,slow=72,SNR=565						
H03N3	**Juan Fernandez**	**13.00**	**73**	T	T	19 52 26.8	
	baz=250,slow=72,SNR=427						
H03N1	**Juan Fernandez**	**13.02**	**73**	T	T	19 52 28.2	
	baz=250,slow=72,SNR=763						
RPN	**Rapa Nui**	**17.06**	**306**	LR	LR	19 44 46.4	
	comp=Z,438nm,19.0s,baz=110,slow=31						
BI02	**San Fabin de**	**17.99**	**92**	P	**Pn**	**19 40 11.6**	**-1.1**
PLCA	**Paso Flores**	**18.16**	**105**	P	**P**	**19 40 13.9**	**-0.9**
	0.1nm,0.3s,baz=272,slow=11,SNR=7.9						
PLCA				LR	LR	19 45 28.1	
	comp=Z,419nm,19.9s,baz=322,slow=31						
PLCA	**Paso Flores**	**18.16**	**105**	P	**P**	**19 40 16.6**	**+1.8**
PLCA	**Paso Flores**	**18.16**	**105**	*eP*	**P**	**19 40 16.1**	**+1.2**
MT05	**Renca**	**19.34**	**83**	Pn	**Pn**	**19 40 29.3**	**+0.3**
GO09	**Cerro Castillo**	**20.01**	**138**		**Pn**	**19 40 35.4**	**-1.4**
ZON	**Zonda**	**21.66**	**80**	P	**P**	**19 40 54.1**	**+1.1**
ZON				IAmb	IAmb	19 40 56.5	
	comp=Z,26nm,1.1s						
AC05	**El Transito**	**21.71**	**72**	P	**P**	**19 40 54.2**	**+0.5**
AC05				IAmb	IAmb	19 41 05.5	
	comp=Z,39nm,1.3s						
AC01	**Pan de Azucar**	**22.99**	**65**	P	**P**	**19 41 08.2**	**+1.1**
AC01				IAmb	IAmb	19 41 09.2	
	comp=Z,16nm,0.9s						
AC02	**Maricunga**	**23.66**	**69**	P	**P**	**19 41 15.0**	**+0.7**
AC02				IAmb	IAmb	19 41 19.0	
	comp=Z,18nm,0.9s						
PB14	**IPOC Station P**	**24.07**	**63**	P	**P**	**19 41 17.6**	**-0.5**
GO02	**Mina Guanaco**	**24.31**	**65**	P	**P**	**19 41 20.5**	**+0.2**
GO02				IAmb	IAmb	19 41 39.0	
	comp=Z,26nm,1.4s						
LVC	**Limon Verde**	**26.42**	**61**	P	**P**	**19 41 38.3**	**-1.1**
	comp=Z,9.1nm,1.0s,baz=239,slow=9.8,SNR=4.5						
LVC				LR	LR	19 49 25.7	
	comp=Z,200nm,20.1s,baz=230,slow=30						
LVC	**Limon Verde**	**26.42**	**61**	P	**P**	**19 41 40.3**	**+0.8**
LVC				IAmb	IAmb	19 41 45.9	
	comp=Z,21nm,1.4s						
PB08	**IPOC Station P**	**27.95**	**57**	P	**P**	**19 41 53.8**	**+0.6**
GO01	**Chusmiza**	**28.26**	**56**	P	**P**	**19 41 56.4**	**+0.3**
MNMC	**Minye Minye**	**28.39**	**55**	P	**P**	**19 41 56.6**	**-0.4**
MNMC				IAmb	IAmb	19 41 58.6	
	comp=Z,12nm,1.0s						
PB16	**IPOC Station P**	**29.03**	**54**	P	**P**	**19 42 03.8**	**+0.8**
NNA	**Nana**	**30.20**	**35**	LR	LR	19 51 03.2	
	comp=Z,157nm,20.9s,baz=184,slow=30						
LPAZ	**La Paz**	**31.43**	**53**	P	**P**	**19 42 24.6**	**+0.3**
	comp=Z,7.9nm,0.9s,baz=198,slow=7.6,SNR=25						
LPAZ	**La Paz**	**31.43**	**53**	P	**P**	**19 42 24.6**	**+0.3**
LPAZ				IAmb	IAmb	19 42 28.6	
	comp=Z,11nm,1.0s						
LPAZ	**La Paz**	**31.43**	**53**	*eP*	**P**	**19 42 25.0**	**+0.7**
CPUP	**Villa Florida**	**32.87**	**80**	LR	LR	19 54 22.2	
	comp=Z,133nm,18.9s,baz=246,slow=34						
ATAH	**Atahualpa**	**33.95**	**28**	P	**P**	**19 42 46.2**	**+0.1**
	comp=Z,22nm,0.9s,baz=192,slow=5.2,SNR=11						
AQDB	**Aquidauana**	**37.34**	**73**	*eP*	**P**	**19 43 14.8**	**0.0**
ETMB	**Extrema**	**37.61**	**49**	*eP*	**P**	**19 43 17.3**	**+0.2**
PTLB	**Pontes e Lacer**	**38.04**	**63**	*eP*	**P**	**19 43 21.0**	**+0.2**
SAML	**Samuel**	**40.12**	**51**	P	**P**	**19 43 36.6**	**-1.5**
OTAV	**Otavalo**	**40.80**	**24**	P	**P**	**19 43 45.2**	**+1.0**
OTAV	**Otavalo**	**40.80**	**24**	*eP*	**P**	**19 43 44.5**	**+0.3**
ARAG	**Araguaiana, MT**	**43.18**	**70**	*eP*	**P**	**19 44 02.9**	**-0.3**
SNDB	**Serra Nova Dou**	**45.99**	**67**	*eP*	**P**	**19 44 25.6**	**-0.1**
BDFB	**Brasilia**	**46.06**	**74**	P	**P**	**19 44 26.1**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=246,slow=8.6,SNR=3.3						
BDFB	**Brasilia**	**46.06**	**74**	P	**P**	**19 44 25.9**	**-0.5**
BDFB				IAmb	IAmb	19 44 26.9	
	comp=Z,5.2nm,1.0s						
MACA	**Manacapuru-AM**	**46.19**	**49**	*eP*	**P**	**19 44 27.0**	**-0.2**
BELA	**Belgrano 2**	**46.59**	**166**	P	**P**	**19 44 30.2**	**+0.6**
NPGB	**Novo Progresso**	**46.60**	**58**	*eP*	**P**	**19 44 30.2**	**-0.2**
SDV	**Santo Domingo**	**51.62**	**30**	P	**P**	**19 45 08.9**	**-0.1**
SDV				IAmb	IAmb	19 45 09.7	
	comp=Z,12nm,1.2s						
SDV	**Santo Domingo**	**51.62**	**30**	*eP*	**P**	**19 45 09.5**	**+0.5**
QSPA	**South Pole Qui**	**52.02**	**180**	P	**P**	**19 45 11.7**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=136,slow=2.4,SNR=4.5						
QSPA	**South Pole Qui**	**52.02**	**180**	P	**P**	**19 45 12.0**	**+0.6**
QSPA				IAmb	IAmb	19 45 12.6	
	comp=Z,19nm,1.8s						
MTO3	**Montecristo**	**52.49**	**5**	P	**P**	**19 45 14.2**	**-1.3**
VNA3	**Neumayer Olymp**	**52.51**	**156**	P	**P**	**19 45 15.2**	**+0.4**
VNA1	**Neumayer--Stat**	**53.06**	**155**	P	**P**	**19 45 19.5**	**+0.6**
VNA2

KNRA	**Kununurra**	**17.56**	**173**		**Pn**	**19 51 55.5**	**+0.3**
KNRA				IAmb	IAmb	19 52 04.4	
	comp=Z,25nm,1.2s						
FITZ	**Fitzroy Crossi**	**19.86**	**183**	P	**P**	**19 52 18.0**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=346,slow=17,SNR=2.0						
FITZ	**Fitzroy Crossi**	**19.86**	**183**	P	**P**	**19 52 20.0**	**-1.0**
TPUB	**Ta-pu**	**22.08**	**345**	P	**P**	**19 52 43.2**	**-1.7**
WB0	**Warramunga Arr**	**22.82**	**161**	P	**P**	**19 52 52.2**	**-0.6**
WB0				IAmb	IAmb	19 52 58.6	
	comp=Z,8.6nm,0.8s						
WRAB	**Tennant Creek**	**22.96**	**161**	P	**P**	**19 52 53.9**	**-0.3**
WRAB				IAmb	IAmb	19 53 00.1	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**22.97**	**161**	P	**P**	**19 52 53.4**	**-0.9**
	comp=Z,3.8nm,0.5s,baz=339,slow=11,SNR=42						
WRA				PcP	**PcP**	**19 56 43.7**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=349,slow=1.7,SNR=1.3						
WRA				S	**S**	**19 56 59.1**	**-2.1**
	comp=Z,1.1nm,1.0s,baz=334,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**22.97**	**161**	P	**P**	**19 52 53.4**	**-0.9**
WB2	**Warramunga Arr**	**22.97**	**161**	P	**P**	**19 52 53.8**	**-0.6**
WB2				IAmb	IAmb	19 53 00.2	
	comp=Z,13nm,0.8s						
WC3	**Warramunga Arr**	**22.99**	**161**	P	**P**	**19 52 53.8**	**-0.7**
WC3				IAmb	IAmb	19 53 00.4	
	comp=Z,15nm,0.7s						
WR0	**Warramunga Arr**	**23.05**	**161**	P	**P**	**19 52 54.6**	**-0.5**
WR0				IAmb	IAmb	19 53 01.0	
	comp=Z,12nm,0.9s						
KRVT	**Keravat (AS076**	**26.14**	**104**	LR	LR	20 02 54.3	
	comp=Z,36nm,20.0s,baz=214,slow=34						
AS31	**Alice Springs**	**26.36**	**165**	P	**P**	**19 53 26.2**	**+0.7**
ASAR	**Alice Springs**	**26.36**	**165**	P	**P**	**19 53 26.4**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=348,slow=13,SNR=27						
ASAR				PcP	**PcP**	**19 56 51.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=358,slow=2.9,SNR=2.8						
ASAR	**Alice Springs**	**26.36**	**165**	P	**P**	**19 53 26.5**	**+1.0**
CTA	**Charters Tower**	**29.12**	**139**	P	**P**	**19 53 51.4**	**+1.1**
	comp=Z,1.5nm,0.5s,baz=288,slow=6.4,SNR=2.6						
CMAR	**Chiang Mai Arr**	**31.73**	**303**	P	**P**	**19 54 12.8**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=122,slow=6.9,SNR=5.2						
CMAR				LR	LR	20 08 00.0	
	comp=Z,19nm,21.4s,baz=65,slow=38						
KSRS	**Korea Array**	**35.44**	**2**	P	**P**	**19 54 48.0**	**+2.7**
	comp=Z,0.9nm,0.7s,baz=174,slow=9.4,SNR=4.5						
STKA	**Stephens Creek**	**36.45**	**158**	P	**P**	**19 54 53.6**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=331,slow=8.6,SNR=9.1						
STKA	**Stephens Creek**	**36.45**	**158**	P	**P**	**19 54 53.9**	**-0.3**
MDJ	**Mudanjiang**	**42.65**	**3**	P	**P**	**19 55 44.5**	**-1.1**
LSA	**Lhasa**	**43.58**	**313**	P	**P**	**19 55 54.2**	**+0.3**
LSA				IAmb	IAmb	19 56 01.2	
	comp=Z,7.4nm,1.5s						
SONM	**Songino Array**	**49.01**	**342**	P	**P**	**19 56 36.4**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=155,slow=10.0,SNR=5.9						
SONM	**Songino Array**	**49.01**	**342**	P	**P**	**19 56 36.0**	**+0.2**
PETK	**Petropavlovsk-**	**57.20**	**22**	P	**P**	**19 57 37.6**	**+1.7**
	comp=Z,2.0nm,0.8s,baz=219,slow=8.9,SNR=1.7						
MK31	**Makanchi Array**	**59.01**	**326**	P	**P**	**19 57 48.4**	**-0.3**
MK31				IAmb	IAmb	19 58 05.4	
	comp=Z,3.9nm,1.2s						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**19 57 48.6**	**0.0**
	comp=Z,1.1nm,0.4s,baz=121,slow=7.8,SNR=22						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**19 57 48.4**	**-0.2**
MAKZ	**Makanchi**	**59.19**	**326**	P	**P**	**19 57 50.0**	**0.0**
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**19 58 16.5**	**-0.7**
AB01	**Akbulak array**	**73.50**	**321**	P	**P**	**19 59 20.4**	**-1.0**
AB31	**Akbulak array**	**73.50**	**321**	P	**P**	**19 59 20.9**	**-0.6**
AB31				IAmb	IAmb	19 59 26.2	
	comp=Z,2.4nm,1.1s						
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**19 59 21.1**	**-0.4**
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**19 59 21.3**	**-0.2**
ABKAR				IAmb	IAmb	19 59 26.3	
	comp=Z,2.4nm,1.1s						
AB04	**Akbulak array**	**73.51**	**321**	P	**P**	**19 59 20.7**	**-0.8**
AB08	**Akbulak array**	**73.51**	**321**	P	**P**	**19 59 20.9**	**-0.6**
AB05	**Akbulak array**	**73.51**	**321**	P	**P**	**19 59 19.7**	**-1.8**
AB09	**Akbulak array**	**73.52**	**321**	P	**P**	**19 59 19.8**	**-1.8**
VNDA	**Vanda**	**81.61**	**173**	P	**P**	**20 00 06.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=317,slow=5.3,SNR=2.2						
BMAR	**Burnt Mountain**	**87.83**	**23**	P	**P**	**20 00 36.9**	**-0.8**
ARCES	**ARCESS Array B**	**92.14**	**340**	P	**P**	**20 00 58.5**	**+0.7**
	comp=Z,3.1nm,0.9s,baz=76,slow=7.5,SNR=1.8						

JMA 26 19:51:28.7±0.2, 28°.92N×142°.87E, h54km, M4.1, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.92**	**199**	P	Pn	19 51 59.7	+0.8
CBIJ				S	Sn	19 52 22.6	+0.7
JOD2	**Odawara 2**	**7.09**	**334**	P	Pn	19 53 13.6	+3.7
JHU	**Hanno**	**7.55**	**337**	P	Pn	19 53 18.7	+2.6
JHO	**Hitachi**	**7.91**	**346**	P	Pn	19 53 21.3	+0.3
JHO				*e*S	Sn	19 54 45.5	-3.6
JAG	**Ashikaga**	**8.02**	**340**	P	Pn	19 53 24.1	+1.6
JAG				*e*S	Sn	19 54 50.2	-1.6

*IDC **26** 19:55:07.2±0.9, 1°.99N×126°.47E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.6/45, mbtmp3.8/7, ML3.4/1, Error ellipse: s-maj=66.4km s-min=18.3km az=76.0*
*NEIC **26** 19:55:13.2±0.5, 1°.9N±0°.1×126°.58E±0°.08, h43km±12km, mb4.1/6, Error ellipse: s-maj=22.0km s-min=8.7km az=204.0*
*DJA **26** 19:55:13.1±1.6, 2°N±5°×12°7E±°, h16km±15km, M3.9/11, mB4.3/1, mb4.2/2, MLv3.8/11, Mw(mB)3.5/1*
ISC 26 19:55:13.7±0.8, 1°.93N±0°.07×126°.66E±0°.07, h47km, n27, σ1§04/29, mb4.0/9, Northern Moluccas Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.35**	**148**	P	**Pn**	**19 55 37.2**	**+1.0**
TNTI	**Ternate**	**1.35**	**148**		**Pn**	**19 55 36.4**	**+0.2**
SGSI	**Sangihe**	**2.08**	**327**	P	**Pn**	**19 55 47.4**	**+1.3**
KMSI	**Cibinong**	**3.00**	**243**	P	**Pn**	**19 55 59.5**	**+0.8**
GTOI	**Gorontalo**	**3.87**	**251**	P	**Pn**	**19 56 13.2**	**+2.5**
SANI	**Sanana**	**4.01**	**190**	P	**Pn**	**19 56 12.8**	**+0.2**
LUWI	**Luwuk**	**4.88**	**233**		**Pn**	**19 56 23.3**	**-1.3**
MRSI	**Marisa**	**4.93**	**253**	P	**Pn**	**19 56 26.5**	**+1.2**
APSI	**Ampana**	**5.75**	**241**	P	**Pn**	**19 56 37.8**	**+1.3**
	0.1nm278nm31nm,1.0s						
TOLI2	**Tolitoli**	**5.93**	**262**		**Pn**	**19 56 37.5**	**-1.6**
MPSI	**Mapaga**	**6.94**	**257**	P	**Pn**	**19 56 53.8**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.93**	**183**	P	**P**	**19 59 41.2**	**-0.5**
	0.1nm,0.3s,baz=358,slow=12,SNR=1.9						
FITZ	**Fitzroy Crossi**	**19.93**	**183**	P	**P**	**19 59 41.5**	**-0.3**
WB0	**Warramunga Arr**	**22.86**	**161**	P	**P**	**20 00 13.2**	**0.0**
WB0				IAmb	IAmb	20 00 16.1	
	comp=Z,9.8nm,1.2s						
WRAB	**Tennant Creek**	**23.00**	**161**	P	**P**	**20 00 15.0**	**+0.3**
WRAB				IAmb	IAmb	20 00 17.5	
	comp=Z,5.9nm,0.9s						
WRA	**Warramunga Arr**	**23.01**	**161**	P	**P**	**20 00 15.4**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=338,slow=11,SNR=26						
WRA				PcP	**PcP**	**20 04 04.7**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=328,slow=2.3,SNR=1.7						
WRA	**Warramunga Arr**	**23.01**	**161**	P	**P**	**20 00 14.5**	**-0.2**
WB2	**Warramunga Arr**	**23.01**	**161**	P	**P**	**20 00 15.4**	**+0.6**
WR0	**Warramunga Arr**	**23.09**	**161**	P	**P**	**20 00 16.0**	**+0.5**
WR0				IAmb	IAmb	20 00 17.0	
	comp=Z,8.1nm,1.1s						
ASAR	**Alice Springs**	**26.40**	**165**	P	**P**	**20 00 46.5**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=344,slow=10,SNR=9.2						
ASAR				PcP	**PcP**	**20 04 11.3**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=347,slow=1.7,SNR=4.3						
ASAR	**Alice Springs**	**26.40**	**165**	P	**P**	**20 00 46.0**	**0.0**
SONM	**Songino Array**	**48.97**	**342**	P	**P**	**20 03 53.4**	**-2.2**
	comp=Z,0.5nm,0.9s,baz=149,slow=6.1,SNR=1.9						
PETK	**Petropavlovsk-**	**57.12**	**22**	P	**P**	**20 04 55.7**	**+0.3**
	comp=Z,3.4nm,1.0s,baz=209,slow=2.6,SNR=1.7						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**20 05 08.1**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=120,slow=8.4,SNR=13						
MKAR	**Makanchi Array**	**58.99**	**326**	P	**P**	**20 05 07.8**	**-0.8**
VNDA	**Vanda**	**81.66**	**173**	P	**P**	**20 07 26.9**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=339,slow=6.5,SNR=2.2						
VNDA	**Vanda**	**81.66**	**173**	P	**P**	**20 07 27.2**	**+0.7**

*IDC **26** 19:56:22.6±0.9, 34°.29N×138°.26E, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.5/61, mbtmp3.6/7, ML2.9/2, MS3.2/2, Ms1 3.3/2, ms1mx2.6/30, Error ellipse: s-maj=26.0km s-min=15.8km az=68.0*

*JMA **26** 19:56:26.4±0.1, 34°.84N×140°.02E, h68km±2km, M3.3*
JMA Felt I J1.
*NEIC **26** 19:56:26.2±0.7, 34°.86N±0°.02×140°.20E±0°.10, h68km±10km, mb4.4/7, Error ellipse: s-maj=11.5km s-min=2.1km az=87.0*
ISC 26 19:56:26.4±0.8, 34°.85N±0°.03×140°.05E±0°.04, h68km±6km, n49, σ0§83/56, mb4.0/8, 6C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TATJ	**Tateyama 2**	**0.22**	**324**	⇑P	**Pn**	**19 56 37.5**	**+0.6**
TATJ				S	**Sn**	**19 56 45.4**	**+0.8**
BSO4	**Boso 4**	**0.27**	**59**	⇑P	**Pn**	**19 56 37.8**	**+0.8**
BSO4				X		19 56 46.7	
JKUC	**kamogawauchiur**	**0.33**	**21**	⇑P	**Pn**	**19 56 37.7**	**+0.1**
JKUC				S	**Sn**	**19 56 45.6**	**-0.1**
KTR	**Katsuura**	**0.37**	**36**	⇑P	**Pn**	**19 56 38.1**	**+0.3**
KTR				S	**Sn**	**19 56 46.3**	**+0.1**
BSO3	**Boso 3**	**0.38**	**97**	⇑P	**Pn**	**19 56 38.4**	**+0.8**
BSO3				X		19 56 46.7	
JIM2	**Oshima 3**	**0.53**	**256**	⇓P	**Pn**	**19 56 39.1**	**-0.2**
JIM2				S	**Sn**	**19 56 47.9**	**-0.9**
JTHY	**Toshimahigashi**	**0.71**	**243**	P	**Pn**	**19 56 41.6**	**+0.4**
JTHY				S	**Sn**	**19 56 52.4**	**+0.2**
BSO1	**Boso 1**	**0.79**	**104**	⇑P	**Pn**	**19 56 42.2**	**+0.6**
BSO1				X		19 56 53.8	
JOD2	**Odawara 2**	**0.89**	**298**	⇓P	**Pn**	**19 56 43.0**	**-0.4**
JOD2				S	**Sn**	**19 56 54.8**	**-1.3**
JIZS	**Izushimoda**	**0.98**	**262**	⇓P	**Pn**	**19 56 44.6**	**+0.2**
JIZS				S	**Sn**	**19 56 57.3**	**-0.6**
JMKN	**Mikurajimanish**	**1.03**	**202**	P	**Pn**	**19 56 45.2**	**+0.1**
JMKN				S	**Sn**	**19 56 59.2**	**+0.1**
JFNN	**Fujinakano**	**1.17**	**287**	P	**Pn**	**19 56 47.3**	**+0.3**
JFNN				*e*S	**Sn**	**19 57 02.0**	**-0.4**
JYT	**Yasato**	**1.38**	**5**		**Pn**	**19 56 48.7**	**-0.9**
JYN	**Shimob**	**1.39**	**298**	⇓P	**Pn**	**19 56 50.2**	**+0.3**
JYN				S	**Sn**	**19 57 07.9**	**+0.3**
JRY	**Ryogami san**	**1.50**	**321**	⇓P	**Pn**	**19 56 51.5**	**+0.3**
JRY				*e*S	**Sn**	**19 57 09.2**	**-0.8**
SHZ3	**Shizuoka 3**	**1.53**	**279**	P	**Pn**	**19 56 52.4**	**+0.7**
JSG	**Sagara**	**1.55**	**264**	Pn	**Pn**	**19 56 52.7**	**+0.8**
JHJ	**Hachijo jima 2**	**1.74**	**187**	Pn	**Pn**	**19 56 55.0**	**+0.5**
	66nm,0.3s,baz=96,slow=21,SNR=10						
JHJ				Sn	**Sn**	**19 57 16.4**	**+0.6**
	315nm,0.3s,baz=310,slow=22,SNR=27						
JHJ2	**Mitsune**	**1.75**	**187**	Pn	**Pn**	**19 56 55.0**	**+0.4**
JHJ2					**Sn**	**19 57 13.7**	**-2.2**
MJAR	**Matsushiro Arr**	**2.26**	**319**	Pn	**Pn**	**19 57 02.3**	**+0.8**
	5.6nm,0.3s,baz=152,slow=12,SNR=279						
MJAR				Sn	**Sn**	**19 57 28.8**	**+0.6**
	1.8nm,0.3s,baz=154,slow=22,SNR=5.6						
MJAR	**Matsushiro Arr**	**2.26**	**319**		**Pn**	**19 57 01.6**	**+0.1**
MAJO	**Matsushiro**	**2.26**	**319**		**Pn**	**19 57 02.4**	**+1.0**
MAT	**Matsushiro**	**2.26**	**319**	P	**Pn**	**19 57 02.7**	**+1.2**
MAT				S	**Sn**	**19 57 28.7**	**+0.4**
MJB9	**Matsu-Tunnel**	**2.26**	**319**		**Pn**	**19 57 02.7**	**+1.2**
JGF	**Kuroka**	**2.33**	**289**	Pn	**Pn**	**19 57 04.4**	**+1.9**
INU	**Inuyama**	**2.54**	**282**		**Pn**	**19 57 06.3**	**+1.1**
JMM	**Matumori**	**3.07**	**11**	Pn	**Pn**	**19 57 13.4**	**+1.0**
JSD	**Sado**	**3.49**	**336**	Pn	**Pn**	**19 57 18.7**	**+0.5**
JNU	**Nakatsue**	**7.81**	**260**	Pn	Pn	19 57 55.4	-22
	0.3nm,0.3s,baz=138,slow=12,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**28.10**	**115**	T	T	20 31 53.1	
	baz=308,slow=75,SNR=25						
H11N1	**WAKE ISLAND Hy**	**28.10**	**115**	T	T	20 31 55.3	
	baz=308,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**28.11**	**115**	T	T	20 31 54.2	
	baz=308,slow=75,SNR=18						
H11S3	**WAKE ISLAND Hy**	**28.71**	**118**	T	T	20 32 43.9	
	baz=310,slow=76,SNR=7.8						
H11S1	**WAKE ISLAND Hy**	**28.72**	**118**	T	T	20 32 43.9	
	baz=310,slow=76,SNR=9.7						
H11S2	**WAKE ISLAND Hy**	**28.73**	**118**	T	T	20 32 43.9	
	baz=310,slow=76,SNR=8.4						
CMAR	**Chiang Mai Arr**	**39.90**	**257**	LR	LR	20 20 36.0	
	comp=Z,27nm,18.2s,baz=146,slow=38						
CMAR	**Chiang Mai Arr**	**39.90**	**257**	P	**P**	**20 03 54.9**	**+1.2**
ZALV	**Zalesovo Beam**	**42.60**	**314**	P	**P**	**20 04 13.4**	**-2.1**
	0.6nm,0.3s,baz=90,slow=7.2,SNR=2.4						
MKAR	**Makanchi Array**	**44.38**	**304**	P	**P**	**20 04 28.8**	**-1.1**
	0.2nm,0.6s,baz=94,slow=5.3,SNR=1.9						
KNRA	**Kununurra**	**51.38**	**194**	P	**P**	**20 05 24.4**	**+0.2**
ILAR	**Eielson Array**	**51.93**	**31**	P	P	20 05 41.4	+14
	0.1nm,0.5s,baz=272,slow=9.6,SNR=1.4						
WRAB	**Tennant Creek**	**54.75**	**187**	P	**P**	**20 05 49.3**	**+0.4**
WRAB				IAmb	IAmb	20 06 01.1	
	comp=Z,4.8nm,1.3s						
WR0	**Warramunga Arr**	**54.76**	**186**	P	**P**	**20 05 49.2**	**+0.2**
WR0				IAmb	IAmb	20 05 53.9	
	comp=Z,5.0nm,1.2s						
WB2	**Warramunga Arr**	**54.76**	**187**	P	**P**	**20 05 49.0**	**0.0**
WB2				IAmb	IAmb	20 06 09.3	
	comp=Z,5.4nm,1.3s						
WRA	**Warramunga Arr**	**54.76**	**187**	P	**P**	**20 05 49.2**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=1.5,slow=7.6,SNR=30						
WRA				PcP	**PcP**	**20 06 52.2**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=2.0,slow=4.2,SNR=1.7						
WRA	**Warramunga Arr**	**54.76**	**187**	P	**P**	**20 05 49.0**	**-0.1**
WC3	**Warramunga Arr**	**54.77**	**187**	P	**P**	**20 05 49.1**	**0.0**
TABL	**Table Mountain**	**55.03**	**36**	P	**P**	**20 05 50.1**	**-0.8**
ASAR	**Alice Springs**	**58.49**	**187**	P	**P**	**20 06 15.9**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=17,slow=12,SNR=6.6						
ASAR				LR	LR	20 28 34.4	
	comp=Z,31nm,21.2s,baz=172,slow=33						

*ATH **26** 19:58:44.6, 34°.52N×22°.48E, h42km±21km, ML3.2/10, Error ellipse: s-maj=21.9km s-min=1.9km az=209.0*
*THE **26** 19:58:46.6, 34°.51N×22°.51E, h62km±6km, ML3.1/5, Error ellipse: s-maj=7.2km s-min=0.8km az=50.0*
*HLW **26** 19:58:47.4, 34°.31N×22°.93E, h10km±12km, Md4.1, Ml4.3*
*GII **26** 19:58:53.9±0.0, 34°.23N×23°.68E, h10km*
ISC 26 19:58:43.1±1.1, 34°.35N±0°.05×22°.40E±0°.06, h35km, n130, σ1§42/140, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**1.48**	**70**	P	**Pn**	**19 59 08.8**	**+1.5**
GVD				AML	AML	19 59 26.8	
	comp=E,1739μm,0.3s						
GVD				AML	AML	19 59 31.7	
	comp=N,1224μm,0.2s						
GVD	**Gavdhos**	**1.48**	**70**	P	**Pn**	**19 59 08.8**	**+1.5**
GVD				S	**Sn**	**19 59 26.1**	**+0.8**
	comp=N,700nm,0.3s						
GVDS	**Gavdos**	**1.48**	**70**	P	**Pn**	**19 59 08.6**	**+1.3**
GVDS				S	**Sn**	**19 59 26.1**	**+0.7**
	comp=N,600nm,0.3s						
RODP	**Rodopos**	**1.65**	**42**	P	**Pn**	**19 59 11.0**	**+1.4**
ANKY	**Antikythira Is**	**1.69**	**26**	P	**Pn**	**19 59 11.6**	**+1.5**
ANKY	**Antikythira Is**	**1.69**	**26**	P	**Pn**	**19 59 11.6**	**+1.5**
ANKY				S	**Sn**	**19 59 29.6**	**-1.0**
	comp=N,235nm,0.9s						
IMMV	**Iera Moni Meta**	**1.71**	**49**	P	**Pn**	**19 59 11.4**	**+1.0**
IMMV				AML	AML	19 59 33.5	
	comp=N,806μm,0.4s						
IMMV				AML	AML	19 59 34.1	
	comp=E,659μm,0.8s						
IMMV	**Iera Moni Meta**	**1.71**	**49**	P	**Pn**	**19 59 11.5**	**+1.0**
IMMV				S	**Sn**	**19 59 31.4**	**+0.3**
VAM	**Vamos**	**1.82**	**54**	P	**Pn**	**19 59 12.9**	**+1.0**
VAM	**Vamos**	**1.82**	**54**	P	**Pn**	**19 59 12.9**	**+1.0**
KTHA	**Kythira Island**	**1.98**	**16**	P	**Pn**	**19 59 15.9**	**+1.7**
KTHA				AML	AML	19 59 41.3	
	comp=E,664μm,0.5s						
KTHA				AML	AML	19 59 41.3	
	comp=N,278μm,0.2s						
KTHA	**Kythira Island**	**1.98**	**16**	P	**Pn**	**19 59 16.1**	**+1.9**
KTHA				S	**Sn**	**19 59 37.8**	**-0.1**
	comp=N,240nm,0.4s						
SIVA	**Sivas**	**2.10**	**71**	P	**Pn**	**19 59 16.9**	**+1.1**
SIVA				AML	AML	19 59 48.0	
	comp=E,707μm,0.5s						
SIVA				AML	AML	19 59 49.8	
	comp=N,593μm,0.7s						
SIVA	**Sivas**	**2.10**	**71**	P	**Pn**	**19 59 16.9**	**+1.1**
SIVA				S	**Sn**	**19 59 42.1**	**+1.5**
	comp=N,335nm,0.6s						
IDI	**Anoyia**	**2.25**	**65**	P	**Pn**	**19 59 19.3**	**+1.3**
IDI	**Anoyia**	**2.25**	**65**	P	**Pn**	**19 59 19.3**	**+1.3**
MNVA	**Monemvasia**	**2.39**	**12**	P	**Pn**	**19 59 21.1**	**+1.3**
VLI	**Veliai**	**2.41**	**10**	P	**Pn**	**19 59 22.3**	**+2.2**
VLI				S	**Sn**	**19 59 47.1**	**-1.2**
VLI				AML	AML	19 59 51.2	
	comp=N,437μm,0.4s						
VLI				AML	AML	19 59 52.0	
	comp=E,205μm,0.4s						
VLI	**Veliai**	**2.41**	**10**	P	**Pn**	**19 59 22.3**	**+2.2**
PYL	**PYLOS**	**2.60**	**348**	P	**Pn**	**19 59 24.0**	**+1.3**
PYL	**PYLOS**	**2.60**	**348**	P	**Pn**	**19 59 24.1**	**+1.4**
LAST	**Lasithi**	**2.66**	**71**	P	**Pn**	**19 59 25.5**	**+1.9**
LAST	**Lasithi**	**2.66**	**71**	P	**Pn**	**19 59 25.5**	**+1.9**
LAST				S	**Sn**	**19 59 55.6**	**+0.9**
NPS	**Neapolis**	**2.80**	**70**	P	**Pn**	**19 59 27.6**	**+2.2**
NPS	**Neapolis**	**2.80**	**70**	P	**Pn**	**19 59 27.6**	**+2.2**
NPS				S	**Sn**	**19 59 59.3**	**+1.3**
MHLO	**Agia Marina, M**	**2.85**	**34**	P	**Pn**	**19 59 26.4**	**+0.2**
MHLO				AML	AML	19 59 57.7	
	comp=E,1589μm,0.3s						
MHLO				AML	AML	19 59 59.4	
	comp=N,2096μm,0.3s						
MHLO	**Agia Marina, M**	**2.85**	**34**	P	**Pn**	**19 59 26.4**	**+0.2**
ITM	**Ithomi**	**2.85**	**352**	P	**Pn**	**19 59 27.7**	**+1.5**
MHLA	**Plaka, Milos I**	**2.91**	**34**	P	**Pn**	**19 59 27.5**	**+0.6**
KRND	**KRANIDI**	**3.09**	**11**	P	**Pn**	**19 59 30.6**	**+1.1**
KRND	**KRANIDI**	**3.09**	**11**	P	**Pn**	**19 59 30.6**	**+1.1**
TRIP	**Tripoli**	**3.18**	**358**	P	**Pn**	**19 59 32.8**	**+2.1**
TRIP	**Tripoli**	**3.18**	**358**	P	**Pn**	**19 59 33.1**	**+2.4**
ZKR	**Zakros**	**3.24**	**75**	P	**Pn**	**19 59 33.5**	**+2.0**
ZKR	**Zakros**	**3.24**	**75**	P	**Pn**	**19 59 33.5**	**+2.0**
EPID	**Epidavros**	**3.31**	**10**	P	**Pn**	**19 59 33.7**	**+1.2**
EPID	**Epidavros**	**3.31**	**10**	P	**Pn**	**19 59 33.8**	**+1.2**
DRO	**Drossia**	**3.64**	**351**	P	**Pn**	**19 59 39.3**	**+2.2**
DRO	**Drossia**	**3.64**	**351**	P	**Pn**	**19 59 39.2**	**+2.2**
LOUT	**Loutraki**	**3.67**	**7**	P	**Pn**	**19 59 38.4**	**+1.1**
LOUT	**Loutraki**	**3.67**	**7**	P	**Pn**	**19 59 38.4**	**+1.1**
VLY	**Voula,Athens**	**3.68**	**17**	P	**Pn**	**19 59 37.7**	**+0.2**
VLY	**Voula,Athens**	**3.68**	**17**	P	**Pn**	**19 59 37.7**	**+0.2**
THAL	**Thalero**	**3.69**	**3**	P	**Pn**	**19 59 38.4**	**+0.7**
THAL				AML	AML	20 00 21.8	
	comp=E,596μm,0.3s						
THAL				AML	AML	20 00 22.3	
	comp=N,504μm,0.4s						
THAL	**Thalero**	**3.69**	**3**	P	**Pn**	**19 59 38.4**	**+0.7**
KLV	**Kalavryta, Ach**	**3.70**	**357**	P	**Pn**	**19 59 40.0**	**+2.2**
KLV				AML	AML	20 00 24.4	
	comp=E,116μm,0.4s						
KLV				AML	AML	20 00 27.4	
	comp=N,83μm,0.3s						
KLV	**Kalavryta, Ach**	**3.70**	**357**	P	**Pn**	**19 59 40.0**	**+2.2**
LTK	**Loutraki**	**3.70**	**7**	P	**Pn**	**19 59 38.9**	**+1.1**
LTK	**Loutraki**	**3.70**	**7**	P	**Pn**	**19 59 38.9**	**+1.1**
SLUM	**Salum**	**3.70**	**139**	P	**Pn**	**19 59 41.9**	**+4.0**
	baz=145						
SLUM				S	**Sn**	**20 00 18.8**	**-1.4**
	baz=145						
APE	**Apeiranthos**	**3.73**	**42**	P	**Pn**	**19 59 37.7**	**-0.5**
APE	**Apeiranthos**	**3.73**	**42**	P	**Pn**	**19 59 37.7**	**-0.5**
ATH	**Athens Observa**	**3.77**	**16**	P	**Pn**	**19 59 39.1**	**+0.3**
ATH	**Athens Observa**	**3.77**	**16**	P	**Pn**	**19 59 39.1**	**+0.3**
RLS	**Riolos of Patr**	**3.78**	**349**	P	**Pn**	**19 59 41.5**	**+2.6**
RLS	**Riolos of Patr**	**3.78**	**349**	P	**Pn**	**19 59 41.5**	**+2.6**
ATHU	**Athens Univers**	**3.78**	**17**	P	**Pn**	**19 59 38.7**	**-0.3**
ATHU	**Athens Univers**	**3.78**	**17**	P	**Pn**	**19 59 38.7**	**-0.3**
VLMS	**Volimes, Zakyn**	**3.79**	**339**	P	**Pn**	**19 59 40.2**	**+1.1**
VLMS	**Volimes, Zakyn**	**3.79**	**339**	P	**Pn**	**19 59 40.2**	**+1.1**
PTL

SOKA	**Soboth**	**13.53**	**338**	*e*Pn		**Pn**	**20 01 51.0**	**-1.5**
	comp=E,1.5nm,0.3s							
OBKA	**Obir**	**13.53**	**336**	*e*Pn		**Pn**	**20 01 52.3**	**-0.3**
	comp=E,0.5nm,0.1s							

WEL 26 20:02:31.6, 38°S±1′×17°8E±′, h13km±1km, M3.5/18, ML3.9/18, MLv3.5/18, Error ellipse: s-maj=0.0km s-min=0.0km az=41.9, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**0.04**	**37**	P	Pg	20 02 34.4	+0.5
WMGZ				S	Sg	20 02 37.3	+1.8
PUZ	**Puketiti**	**0.24**	**205**	P	Pb	20 02 37.8	-0.1
PUZ				S	Sb	20 02 43.1	+0.9
PKGZ	**Pakihiroa**	**0.25**	**261**	P	Pb	20 02 37.9	-0.2
PKGZ				S	Sb	20 02 41.9	-0.4
MXZ	**Matakaoa Point**	**0.29**	**347**	P	Pb	20 02 38.3	-0.4
MXZ				S	Sb	20 02 44.1	+0.7
TWGZ	**Tauwhareparae**	**0.46**	**224**	P	Pb	20 02 42.5	+0.9
HAZ	**Te Kaha**	**0.49**	**281**	P	Pb	20 02 42.0	0.0
HAZ				S	Sb	20 02 50.1	+1.1
RUGZ	**Raukumara Rang**	**0.57**	**258**	P	Pb	20 02 43.9	+0.3
RUGZ				S	Sb	20 02 53.0	+1.3
CNGZ	**Carnagh Statio**	**0.65**	**193**	P	Pn	20 02 45.7	-0.8
TKGZ	**Te Karaka**	**0.73**	**216**	P	Pb	20 02 46.8	+0.7
MWZ	**Matawai**	**0.83**	**234**	P	Pb	20 02 48.4	+0.5
RIGZ	**Rimuhau**	**0.99**	**210**	P	Pb	20 02 50.2	-0.4
RAGZ	**Rawiri**	**1.00**	**230**	P	Pn	20 02 51.5	0.0
RAGZ				S	Sn	20 03 06.8	+1.3
WIZ	**White Island**	**1.00**	**288**	P	Pg	20 02 51.0	+0.1
URZ	**Urewera**	**1.09**	**247**	P	Pn	20 02 52.9	+0.4
WHRZ	**Whale Island**	**1.12**	**269**	P	Pg	20 02 53.5	+0.4
PRGZ	**Paritu Road**	**1.14**	**200**	P	Pb	20 02 52.1	-1.2
SNGZ	**Shannon Statio**	**1.24**	**221**	P	Pn	20 02 54.5	-0.2
KNZ	**Kokohu**	**1.30**	**205**	P	Pn	20 02 53.5	-1.9
EDGZ	**Edgecumbe**	**1.33**	**258**	P	Pb	20 02 56.4	0.0
RTZ	**Ruatahuna**	**1.35**	**235**	P	Pn	20 02 56.7	0.0
MHGZ	**Mahia Peninsul**	**1.35**	**196**	P	Pn	20 02 54.3	-2.0
MUGZ	**Murupara**	**1.42**	**243**	P	Pn	20 02 57.3	+0.1
OPRZ	**Ohinepanea**	**1.45**	**270**	P	Pn	20 02 57.4	-0.2
WHHZ	**Waihua**	**1.52**	**216**	P	Pn	20 02 58.1	-0.4
TARZ	**Mount Tarawera**	**1.54**	**255**	P	Pb	20 02 59.6	-0.4
RRRZ	**Republican Roa**	**1.56**	**251**	P	Pb	20 03 00.4	+0.2
MTHZ	**Maungataniwha**	**1.57**	**230**	P	Pn	20 02 59.1	-0.2
KARZ	**Kaharoa**	**1.70**	**264**	P	Pn	20 03 01.4	+0.3
ARHZ	**Aropaoanui**	**1.78**	**217**	P	Pn	20 03 01.7	-0.4
BKZ	**Black Stump Fm**	**1.98**	**228**	P	Pn	20 03 04.8	-0.2
MCHZ	**McNeill Hill**	**2.07**	**219**	P	Pn	20 03 05.4	-0.7
CKHZ	**Cape Kidnapper**	**2.08**	**209**	P	Pn	20 03 04.0	-2.2
TOZ	**Tahuroa Road**	**2.29**	**272**	P	Pb	20 03 10.9	-1.8
KRHZ	**Kereru**	**2.39**	**221**	P	Pn	20 03 09.0	-1.5
KUZ	**Kuaotunu**	**2.39**	**297**	P	Pn	20 03 10.0	-0.5
BHHZ	**Black Hill Sta**	**2.45**	**227**	P	Pn	20 03 10.4	-0.9
TMVZ	**Te Maari**	**2.46**	**238**	P	Pn	20 03 11.2	-0.3
ETVZ	**East Tongariro**	**2.46**	**238**	P	Pn	20 03 13.4	+1.8
MOVZ	**Moawhango**	**2.58**	**232**	P	Pn	20 03 12.3	-0.9
WNVZ	**Wahianoa**	**2.64**	**235**	P	Pn	20 03 13.4	-0.7
MKAZ	**Moumakai**	**2.67**	**285**	P	Pn	20 03 14.4	+0.1
GRZ	**Great Barrier**	**2.83**	**303**	P	Pn	20 03 16.6	+0.1
ETAZ	**East Tamaki Re**	**2.90**	**287**	P	Pn	20 03 18.1	+0.7
MBAZ	**Motutapu North**	**2.98**	**290**	P	Pn	20 03 19.2	+0.6
AWAZ	**Awhitu Peninsu**	**3.08**	**284**	P	Pn	20 03 20.7	+0.8
KHEZ	**Kahui Hut**	**3.72**	**246**	P	Pn	20 03 30.1	+1.3
WCZ	**Waipu Caves**	**3.76**	**299**	P	Pn	20 03 30.3	+1.0
CMWZ	**Cape Campbell**	**5.05**	**218**	P	Pn	20 03 47.3	+0.3
CTZ	**Chatham Island**	**7.00**	**149**	P	Pn	20 04 10.9	-2.8
CTZ				S	Sn	20 05 22.5	-11

*IDC **26** 20:17:43.7±1.6, 35°.75N×140°.95E, h0km, mb3.5/4, mb1 3.6/6, mb1mx3.5/33, mbtmp3.5/6, ML3.9/1, MS3.2/2, Ms1 3.2/2, ms1mx2.5/34, Error ellipse: s-maj=41.4km s-min=21.6km az=60.0*
*JMA **26** 20:17:47.6±0.1, 35°.81N×140°.96E, h30km±1km, M3.4*
JMA Felt I J1.

ISC 26 20:17:47.1±1.2, 35°.86N±0°.04×141°.01E±0°.08, h27km±7km, n24, σ0s66/25, mb3.6/4, 2C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.19**	**218**	⇑P	**Pb**	**20 17 53.0**	**+0.1**
CHOJ				S	**Sb**	**20 17 56.5**	**-0.3**
JIHU	**Itakohorinouch**	**0.41**	**286**	⇓P	**Pn**	**20 17 56.8**	**-0.3**
JIHU				S	**Sb**	**20 18 02.7**	**+0.9**
JSMT	**Sammumatsuo**	**0.50**	**245**	⇑P	**Pb**	**20 17 57.5**	**+0.1**
JHYU	**Hitachinakayam**	**0.59**	**325**	⇓P	**Pn**	**20 17 59.8**	**+0.1**
JHYU				S	**Sn**	**20 18 08.4**	**0.0**
JYT	**Yasato**	**0.76**	**300**	⇓P	**Pb**	**20 18 01.2**	**-0.5**
JYT				S	**Sb**	**20 18 10.8**	**-0.8**
JHO	**Hitachi**	**0.83**	**335**	P	**Pn**	**20 18 03.1**	**0.0**
JHO				S	**Sn**	**20 18 14.0**	**-0.4**
BSO4	**Boso 4**	**1.02**	**212**	P	**Pb**	**20 18 05.4**	**+0.3**
BSO3	**Boso 3**	**1.13**	**201**	P	**Pn**	**20 18 06.2**	**-0.6**
BSO1	**Boso 1**	**1.20**	**181**	P	**Pn**	**20 18 06.7**	**-0.9**
MJAR	**Matsushiro Arr**	**2.36**	**288**	Pn	**Pn**	**20 18 24.6**	**+0.5**
	0.5nm,0.3s,baz=97,slow=13,SNR=22						
MJAR				Sn	**Sn**	**20 18 52.5**	**+0.3**
	0.9nm,0.3s,baz=134,slow=15,SNR=3.3						
MAT	**Matsushiro**	**2.37**	**288**	P	**Pn**	**20 18 24.5**	**+0.4**
MAT				S	**Sb**	**20 18 56.4**	**-1.4**
JHJ	**Hachijo jima 2**	**2.91**	**201**	Sn	**Sn**	**20 19 05.1**	**-0.6**
	8.0nm,0.3s,baz=86,slow=14,SNR=1.7						
ASAJ	**Asahikawa**	**8.34**	**8**	Pn	**Pn**	**20 19 46.8**	**+0.6**
	1.4nm,0.3s,baz=193,slow=9.0,SNR=15						
ASAJ				Sn	**Sn**	**20 21 18.5**	**-1.0**
	0.1nm,0.3s,baz=155,slow=19,SNR=1.5						
JNU	**Nakatsue**	**8.79**	**255**	LR	LR	20 23 44.7	
	comp=Z,158nm,21.0s,baz=72,slow=41						
H11N2	**WAKE ISLAND Hy**	**27.85**	**118**	T	T	20 52 39.0	
	baz=311,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**27.86**	**118**	T	T	20 52 39.2	
	baz=311,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**27.87**	**118**	T	T	20 52 40.0	
	baz=311,slow=75,SNR=20						
SONM	**Songino Array**	**28.19**	**306**	P	**P**	**20 23 37.2**	**-0.2**
	0.4nm,0.8s,baz=117,slow=8.1,SNR=2.8						
H11S1	**WAKE ISLAND Hy**	**28.52**	**120**	T	T	20 53 26.9	
	baz=312,slow=75,SNR=38						
H11S3	**WAKE ISLAND Hy**	**28.52**	**121**	T	T	20 53 28.2	
	baz=312,slow=75,SNR=24						
H11S2	**WAKE ISLAND Hy**	**28.54**	**121**	T	T	20 53 28.4	
	baz=312,slow=75,SNR=28						
MKAR	**Makanchi Array**	**44.48**	**303**	P	**P**	**20 25 57.0**	**+1.1**
	0.8nm,0.6s,baz=94,slow=9.1,SNR=4.8						
WRA	**Warramunga Arr**	**55.85**	**188**	P	**P**	**20 27 21.7**	**-0.5**
	0.3nm,0.4s,baz=1.0,slow=7.7,SNR=10						
WRA				LR	LR	20 50 49.0	
	comp=Z,20nm,19.6s,baz=235,slow=36						
ASAR	**Alice Springs**	**59.58**	**188**	P	**P**	**20 27 48.9**	**+0.5**
	0.2nm,0.6s,baz=17,slow=6.8,SNR=2.5						

*CNRM **26** 20:22:09.3±1.8, 35°.85N×7°.59W, h88km±40km, Error ellipse: s-maj=13.7km s-min=7.9km az=88.0*
*IGIL **26** 20:22:12.9, 35°.88N×7°.53W, h30km, ML2.4*
*MDD **26** 20:22:12.4±0.9, 36°.08N×7°.46W, h0km, mbLg2.7/20, Error ellipse: s-maj=9.8km s-min=4.6km az=24.0, PRXIMO*
*SFS **26** 20:22:13.0, 35°.92N×7°.54W, ML3.7, GOLFO DE CADIZ*
*INMG **26** 20:22:14.0±1.2, 35°.89N×7°.57W, h31km, ML2.4, Error ellipse: s-maj=3.4km s-min=2.4km az=45.0*

ISC 26 20:22:11.7±1.2, 35°.92N±0°.04×7°.49W±0°.03, h35km, n69, σ1s57/127, 5D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**1.37**	**345**	P	**Pn**	**20 22 35.4**	**+1.1**
PBDV				S	**Sn**	**20 22 51.8**	**+0.6**
	10.0nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.37**	**345**	⇓*e*Pn	**Pn**	**20 22 35.4**	**+1.1**
PBDV				*e*Sn	**Sn**	**20 22 51.8**	**+0.6**
PBDV				A	A	20 22 54.4	
	10.0nm,0.4s						
PVAQ	**Vaqueiros**	**1.49**	**353**	P	**Pn**	**20 22 37.2**	**+1.2**
PVAQ				S	**Sn**	**20 22 54.6**	**+0.3**
	59nm,0.2s						
PVAQ	**Vaqueiros**	**1.49**	**353**	P	**Pn**	**20 22 36.9**	**+0.9**
PVAQ				S	**Sn**	**20 22 55.0**	**+0.8**
PVAQ	**Vaqueiros**	**1.49**	**353**	⇓*e*Pn	**Pn**	**20 22 37.2**	**+1.2**
PVAQ				*e*Sn	**Sn**	**20 22 54.6**	**+0.3**
PVAQ				A	A	20 22 56.0	
	59nm,0.2s						
EGRO	**El Granado**	**1.61**	**0**	P	**Pn**	**20 22 39.2**	**+1.6**
	16nm,0.1s,SNR=72						
EGRO				S	**Sn**	**20 22 58.1**	**+0.9**
	47nm,0.1s,SNR=23						
PFVI	**Vila Bisbo**	**1.62**	**319**	P	**Pn**	**20 22 38.3**	**+0.6**
	4.7nm,0.1s,SNR=16						
PFVI				S	**Sn**	**20 22 57.1**	**-0.3**
	23nm,0.1s,SNR=8.0						
PFVI	**Vila Bisbo**	**1.62**	**319**	*e*Pn	**Pn**	**20 22 38.3**	**+0.6**
PFVI				*e*Sn	**Sn**	**20 22 57.3**	**-0.1**
PFVI				A	A	20 23 05.3	
	18nm,0.5s						
ESPR	**Espera**	**1.63**	**54**	P	**Pn**	**20 22 39.9**	**+2.1**
	1.5nm,0.1s,SNR=4.5						
ESPR				S	**Sn**	**20 22 59.0**	**+1.5**
	24nm,0.2s,SNR=7.1						
MORF	**Marmelete**	**1.67**	**326**	*e*P	**Pn**	**20 22 39.1**	**+0.5**
MORF				*e*S	**Sn**	**20 22 58.0**	**-0.7**
MORF				AML	AML	20 23 00.5	
	comp=N,32nm,0.1s						
MORF	**Marmelete**	**1.67**	**326**	P	**Pn**	**20 22 39.0**	**+0.5**
MORF				S	**Sn**	**20 22 58.6**	**-0.1**
	comp=N,29nm,0.2s						
MORF	**Marmelete**	**1.67**	**326**	⇓*e*Pn	**Pn**	**20 22 39.0**	**+0.5**
MORF				*e*Sn	**Sn**	**20 22 58.6**	**-0.1**
MORF				A	A	20 23 04.0	
	comp=N,29nm,0.2s						
EJIF	**Jimena Fronter**	**1.72**	**71**	P	**Pn**	**20 22 41.7**	**+2.5**
	SNR=7.9						
PCVE	**Castro Verde**	**1.77**	**346**	P	**Pn**	**20 22 41.3**	**+1.5**
PCVE				S	**Sn**	**20 23 01.7**	**+0.7**
	comp=N,34nm,0.4s						
PCVE	**Castro Verde**	**1.77**	**346**	*e*Pn	**Pn**	**20 22 41.3**	**+1.5**
PCVE				*e*Sn	**Sn**	**20 23 01.7**	**+0.7**
PCVE				A	A	20 23 02.5	
	comp=N,34nm,0.4s						
PTEO	**Sao Teotonio**	**1.90**	**329**	P	**Pn**	**20 22 42.6**	**+1.0**
PTEO				S	**Sn**	**20 23 04.4**	**+0.1**
	comp=N,6.2nm,0.7s						
PTEO	**Sao Teotonio**	**1.90**	**329**	*e*Pn	**Pn**	**20 22 42.6**	**+1.0**
PTEO				*e*Sn	**Sn**	**20 23 04.4**	**+0.1**
PTEO				A	A	20 23 10.7	
	comp=N,12nm,0.7s						
CHEFC	**Chefchaouen**	**1.93**	**114**	S	**Sn**	**20 23 09.7**	**+4.5**
EMIN	**Mina Concepcio**	**1.96**	**19**	P	**Pn**	**20 22 44.2**	**+1.8**
	comp=N,0.8nm,0.1s,SNR=17						
EMIN				S	**Sn**	**20 23 05.8**	**+0.1**
	comp=N,9.4nm,0.1s,SNR=21						
PBEJ	**Beja**	**2.12**	**352**	P	**Pn**	**20 22 46.1**	**+1.4**
PBEJ				S	**Sn**	**20 23 09.9**	**0.0**
	comp=N,5.5nm,0.3s						
PBEJ	**Beja**	**2.12**	**352**	*e*Pn	**Pn**	**20 22 46.1**	**+1.4**
PBEJ				*e*Sn	**Sn**	**20 23 09.9**	**0.0**
PBEJ				A	A	20 23 11.1	
	comp=N,11nm,0.3s						
PNCL	**Nicolau / Gran**	**2.34**	**340**	P	**Pn**	**20 22 48.6**	**+0.9**
PNCL				S	**Sn**	**20 23 15.1**	**-0.1**
	comp=N,6.5nm,0.3s						
PNCL	**Nicolau / Gran**	**2.34**	**340**	⇓*e*Pn	**Pn**	**20 22 48.6**	**+0.9**
PNCL				*e*Sn	**Sn**	**20 23 15.1**	**-0.1**
PNCL				A	A	20 23 21.9	
	comp=N,6.5nm,0.3s						
ZHG	**ZHG**	**2.56**	**164**	P	**Pn**	**20 22 50.8**	**0.0**
ZHG				S	**Sn**	**20 23 18.8**	**-2.0**
EMAL	**Malaga-Limoner**	**2.61**	**70**	*e*P	**Pn**	**20 22 52.9**	**+1.5**
EMAL				*e*S	**Sn**	**20 23 23.6**	**+1.7**
HORN	**Hornachuelos**	**2.63**	**42**	P	**Pn**	**20 22 52.7**	**+1.1**
HORN				S	**Sn**	**20 23 22.1**	**-0.2**
EVO	**Evora**	**2.64**	**351**	P	**Pn**	**20 22 53.2**	**+1.4**
EVO				S	**Sn**	**20 23 22.5**	**-0.1**
	comp=N,12nm,0.1s						
EVO	**Evora**	**2.64**	**351**	*e*P	**Pn**	**20 22 53.0**	**+1.2**
EVO				*e*S	**Sn**	**20 23 22.6**	**-0.1**
EVO	**Evora**	**2.64**	**351**	*e*Pn	**Pn**	**20 22 53.2**	**+1.4**
EVO				*e*Sn	**Sn**	**20 23 22.5**	**-0.1**
EVO				A	A	20 23 24.1	
	comp=N,12nm,0.1s						
ECAB	**El Cabril**	**2.72**	**37**	P	**Pn**	**20 22 54.2**	**+1.3**
	comp=N,0.8nm,0.1s,SNR=13						
ECAB				S	**Sn**	**20 23 23.7**	**-0.9**
	comp=N,8.4nm,0.2s,SNR=14						
PESTR	**Estremoz**	**2.94**	**359**	*e*Pn	**Pn**	**20 22 57.3**	**+1.3**
PESTR				*e*Sn	**Sn**	**20 23 28.9**	**-1.2**
PESTR				A	A	20 23 32.8	
	comp=N,5.3nm,0.4s						
EGOR	**Sierra Gorda,**	**2.97**	**65**	P	**Pn**	**20 22 58.6**	**+2.1**
	comp=N,1.2nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**20 23 30.5**	**-0.5**
	comp=N,7.0nm,0.3s,SNR=7.9						
IFR	**Ifrane**	**3.09**	**140**	*e*S	**Sn**	**20 23 29.8**	**-4.1**
LCRM	**LCR**	**3.11**	**135**	P	**Pn**	**20 22 58.1**	**-0.3**
PMTG	**Montargil**	**3.20**	**350**	P	**Pn**	**20 23 00.7**	**+1.3**
PMTG	**Montargil**	**3.20**	**350**	*e*Pn	**Pn**	**20 23 00.7**	**+1.3**
PMTG				*e*Sn	**Sn**	**20 23 35.8**	**-0.5**
PMTG				A	A	20 23 41.5	
	comp=N,4.1nm,0.3s						
EADA	**Adamuz**	**3.24**	**45**	P	**Pn**	**20 23 01.8**	**+1.8**
	comp=N,1.1nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**20 23 36.2**	**-1.1**
	comp=N,4.0nm,0.1s,SNR=7.9						
ELGU	**Los Guajares,**	**3.26**	**72**	P	**Pn**	**20 23 01.6**	**+1.2**
	comp=N,1.5nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**20 23 38.5**	**+0.5**
	comp=N,2.2nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.35**	**335**	P	**Pn**	**20 23 03.1**	**+1.5**
	comp=N,5.8nm,0.2s,SNR=7.4						
PMAFR				S	**Sn**	**20 23 38.9**	**-1.2**
	comp=N,20nm,0.2s,SNR=5.8						
PMAFR	**Mafra**	**3.35**	**335**	*e*Pn	**Pn**	**20 23 02.9**	**+1.4**
PMAFR				*e*Sn	**Sn**	**20 23 39.2**	**-0.9**
PMAFR				A	A	20 23 42.5	
	comp=N,20nm,0.6s						
SRHM	**Skhour des Reh**	**3.46**	**186**	P	**Pn**	**20 23 02.5**	**-0.5**
PMRV	**Marv??o**	**3.50**	**1**	*e*Pn	**Pn**	**20 23 05.1**	**+1.4**
PMRV				*e*Sn	**Sn**	**20 23 42.7**	**-1.2**
PMRV				A	A	20 23 45.5	
	comp=N,7.0nm,1.2s						
EQUE	**Quentar**	**3.51**	**67**	P	**Pn**	**20 23 06.0**	**+2.2**
	comp=N,1.3nm,0.2s,SNR=9.1						
EQUE				S	**Sn**	**20 23 44.7**	**+0.6**
	comp=N,2.7nm,0.3s						
PSBE	**So Bento**	**3.73**	**344**	*e*Pn	**Pn**	**20 23 08.4**	**+1.5**
PSBE				*e*Sn	**Sn**	**20 23 48.7**	**-0.9**
MD31	**MD31**	**3.79**	**143**	P	**Pn**	**20 23 07.0**	**-0.7**
MD31				S	**Sn**	**20 23 47.4**	**-3.7**
EBER	**Berja**	**3.84**	**74**	P	**Pn**	**20 23 09.2**	**+0.8**
	comp=N,0.8nm,0.2s,SNR=7.9						
MDT	**Midelt**	**3.91**	**142**	P	**Pn**	**20 23 08.9**	**-0.4**
MDT				S	**Sn**	**20 23 50.3**	**-3.7**
EQES	**Quesada**	**4.01**	**61**	P	**Pn**	**20 23 12.4**	**+1.7**
	comp=N,0.7nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**20 23 55.9**	**-0.8**
	comp=N,2.7nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**4.29**	**15**	P	**Pn**	**20 23 16.2**	**+1.7**
	comp=N,0.4nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**20 24 02.0**	**-1.2**
	comp=N,3.2nm,0.2s,SNR=7.9						
JBK	**JBK**	**4.33**	**110**	P	**Pn**	**20 23 14.6**	**-0.7**
JBK				S	**Sn**	**20 24 02.7**	**-2.0**
PAB	**San Pablo**	**4.40**	**34**	P	**Pn**	**20 23 17.9**	**+1.9**
	comp=N,0.3nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**20 24 04.4**	**-1.6**
	comp=N,5.5nm,0.3s,SNR=7.9						
MTE	**Manteigas**	**4.47**	**359**	*e*Pn	**Pn**	**20 23 18.4**	**+1.4**
MTE				*e*Sn	**Sn**	**20 24 06.4**	**-1.5**
SESP	**Santiago Espad**	**4.53**	**60**	P	**Pn**	**20 23 19.4**	**+1.6**
	comp=N,1.8nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**20 24 08.1**	**-1.3**
	comp=N,3.9nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**4.53**	**60**	P	**Pn**	**20 23 16.8**	**-1.1**
SESP				S	**Sn**	**20 24 07.9**	**-1.5**
ESDC	**Sonseca Array**	**4.68**	**36**	S	**Sn**	**20 24 09.7**	**-3.2**
	baz=220,slow=23,SNR=7.9						
PVIS	**Viseu**	**4.80**	**356**	*e*Sn	**Sn**	**20 24 14.8**	**-1.1**
MVO	**Moncorvo**	**5.25**	**4**	*e*Pn	**Pn**	**20 23 29.1**	**+1.4**
MVO				*e*Sn	**Sn**	**20 24 25.1**	**-1.9**
MVO				A	A	20 24 27.9	
	comp=N,6.9nm,0.6s						
PVRL	**Vila Real**	**5.35**	**358**	*e*Sn	**Sn**	**20 24 27.9**	**-1.6**
POLO	**Lamas de Olo**	**5.45**	**358**	*e*Pn	**Pn**	**20 23 31.8**	**+1.3**
POLO				*e*Sn	**Sn**	**20 24 30.3**	**-1.7**
POLO				A	A	20 24 33.0	
	comp=N,2.7nm,0.3s						
ETOB	**Tobarra**	**5.47**	**58**	⇓P	**Pn**	**20 23 31.9**	**+1.2**
	comp=N,3.0nm,0.1s,SNR=18						
ETOB				S	**Sn**	**20 24 29.9**	**-2.5**
	comp=N,3.0nm,0.1s,SNR=7.9						
PCAB	**Cabril**	**5.80**	**356**	*e*Sn	**Sn**	**20 24 38.8**	**-1.7**
PBRG	**Braganca**	**5.91**	**5**	*e*Pn	**Pn**	**20 23 37.9**	**+1.2**
PBRG				*e*Sn	**Sn**	**20 24 40.8**	**-2.4**
PBRG				A	A	20 24 44.4	
	comp=N,1.9nm,0.2s						
ELOB	**Lobios**	**5.96**	**356**	P	**Pn**	**20 23 38.4**	**+0.9**
	comp=N,0.5nm,0.1s,SNR=7.9						
ELOB				S	**Sn**	**20 24 41.8**	**-2.7**
	comp=N,2.8nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.04**	**5**	P	**Pn**	**20 23 39.6**	**+1.0**
	comp=N,0.9nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**20 24 44.1**	**-2.5**
	comp=N,4.5nm,0.4s,SNR=7.9						
PGAV	**Gavieira, Arco**	**6.07**	**355**	*e*Pn	**Pn**	**20 23 40.3**	**+1.3**
PGAV				*e*Sn	**Sn**	**20 24 46.4**	**-0.8**
PGAV				A	A	20 24 48.4	
	comp=N,1.7nm,0.3s						
EBEN2	**Beniarda presa**	**6.44**	**63**	P	**Pn**	**20 23 45.1**	**+1.1**
	comp=N,0.5nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**20 24 53.7**	**-2.6**
	comp=N,2.2nm,0.3s,SNR=7.9						
ETOR	**Torete**	**6.49**	**39**	P	**Pn**	**20 23 46.9**	**+2.1**
	comp=N,2.8nm,0.2s,SNR=5.7						
ETOR				S	**Sn**	**20 24 54.7**	**-3.0**
	comp=N,8.4nm,0.2s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.89**	**356**	P	**Pn**	**20 23 51.5**	**+1.3**
	comp=N,0.4nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**20 25 04.0**	**-3.3**
	comp=N,1.2nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**7.09**	**49**	P	**Pn**	**20 23 54.4**	**+1.3**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**20 25 08.5**	**-4.1**
	comp=N,0.9nm,0.3s,SNR=7.9						

*IDC **26** 20:37:59.4±2.1, 1°.97N×126°.29E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/26, mbtmp3.3/3, Error ellipse: s-maj=180.0km s-min=26.3km az=65.0*
*DJA **26** 20:38:04.4±0.4, 2°.1N±5°×12°.7E±°, h10km, M3.2/6, MLv3.2/6*

ISC 26 20:38:06.2±1.2, 1°.89N±0°.10×126°.6E±0°.1, h47km, n7, σ2s03/7, mb3.1/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**147**	P	**Pn**	**20 38 28.8**	**+0.5**
SGSI	**Sangihe**	**2.10**	**328**	P	**Pn**	**20 38 40.4**	**+1.5**
GTOI	**Gorontalo**	**3.84**	**251**	P	**Pn**	**20 39 05.0**	**+2.3**
MRSI	**Marisa**	**4.91**	**253**	P	**Pn**	**20 39 16.2**	**-1.2**
WRA	**Warramunga Arr**	**22.98**	**161**	P	**P**	**20 43 07.4**	**+0.5**
	0.3nm,0.4s,baz=339,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.37**	**165**	P	**P**	**20 43 39.7**	**+1.5**
	0.2nm,0.4s,baz=344,slow=11,SNR=1.9						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**20 47 59.0**	**-2.2**
	0.2nm,0.4s,baz=121,slow=7.4,SNR=5.4						

*NSSP **26** 20:42:06.6, 38°.50N×46°.77E, h10km, Ms2.9*
*TEH **26** 20:42:08.0, 38°.48N×46°.82E, h20km, ML2.9*

ISC 26 20:42:06.7±1.3, 38°.50N±0°.04×46°.90E±0°.08, h10km, n10, σ0s98/15, 1C-1D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TABZ	**Tabriz**	**0.63**	**226**	*e*Pg	**Pb**	**20 42 19.5**	**-0.4**
TABZ				*e*Sg	**Sg**	**20 42 27.6**	**+0.4**
TABZ				*e*		20 42 32.7	
ISRB	**Sarab**	**0.91**	**138**	*e*Pg	**Pn**	**20 42 25.8**	**+0.1**
ISRB				*e*		20 42 41.3	
IMRD	**Marand**	**0.96**	**283**	*e*Pg	**Pg**	**20 42 25.2**	**0.0**
IMRD				*e*		20 42 26.8	
GRS	**Goris**	**1.09**	**336**	⇑*i*P	**Pg**	**20 42 27.0**	**-0.7**
GRS				⇓*i*S	**Sb**	**20 42 42.0**	**-0.2**
IAZR	**Azarshahr**	**1.09**	**222**	*e*Pg	**Pg**	**20 42 27.3**	**-0.4**
MAHB

	baz=311,SNR=49						
E63A				S	**Sn**	**21 02 18.6**	**-0.2**
	baz=311						
F60A	**Warwick**	**1.93 211**		P	**Pn**	**21 01 54.9**	**-0.5**
	baz=31,SNR=9.8						
F60A				Sb	**Sb**	**21 02 22.4**	**+0.4**
	baz=31						
E64A	**Bridgewater**	**2.19 122**		P	**Pn**	**21 01 58.8**	**-0.3**
	baz=305						
E64A				S	**Sn**	**21 02 27.1**	**+0.3**
	baz=305						
E58A	**La Victoria**	**2.27 238**		Sb	**Sb**	**21 02 32.1**	**+0.2**
	baz=56						
CNQ	**Baie Comeau**	**2.33 43**		PN	**Pn**	**21 02 01.1**	**+0.2**
CNQ				SN	**Sn**	**21 02 29.2**	**-0.9**
CNQ				Trac		21 02 33.1	
	comp=Z,8.4nm,0.2s						
F59A	**Saint Guilaume**	**2.37 222**		Sb	**Sb**	**21 02 34.9**	**+0.3**
	baz=41						
G62A	**West of Eustis**	**2.41 180**		Sb	**Sb**	**21 02 35.7**	**-0.1**
	baz=1.0						

IDC ***26*** *21:03:20.7±1.5, 43.˚50N× 105.˚30W, h0km, mb3.8/1, mb1 3.6/5, mb1mx3.4/46, mbtmp3.4/5, ML2.7/3, Error ellipse: s-maj=39.2km s-min=9.6km az=153.0*

NEIC ***26*** *21:03:23.2±1.0, 43.˚79N±0.˚05× 105.˚33W±0.˚03, h0km±2km, ML3.4/61, Error ellipse: s-maj=8.2km s-min=3.1km az=16.0*

ISC 26 21:03:22.4±1.0**, 43.˚78N**±0.˚06×**105.˚34W**±0.˚06**, h0**km, n56, σ0s90/54, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RSSD	**Black Hills**	**1.00**	**70**	Pg		**Pg**	**21 03 41.2**	**-0.4**
K22A	**Casper**	**1.43**	**218**			**Pn**	**21 03 48.6**	**-1.1**
K22A				IAML			21 04 13.4	
	comp=E,365nm,0.8s							
K22A				IAML			21 04 21.4	
	comp=N,444nm,0.3s							
PHWY	**Pilot Hill**	**2.48**	**182**	Pn		**Pn**	**21 04 04.6**	**+0.2**
RWWY	**Rawlins**	**2.50**	**214**			**Pn**	**21 04 05.5**	**+0.8**
RWWY				IAML			21 04 42.9	
	comp=N,231nm,0.9s							
RWWY				IAML			21 04 47.4	
	comp=N,232nm,0.7s							
N23A	**Red Feather La**	**2.92**	**189**	Pn		**Pn**	**21 04 11.0**	**+0.6**
N23A				IAML			21 04 54.9	
	comp=N,124nm,0.6s							
N23A				IAML			21 04 59.6	
	comp=E,103nm,0.8s							
LAO	**LASA Array**	**2.97**	**348**			**Pn**	**21 04 12.0**	**+1.1**
RLMT	**Red Lodge**	**3.11**	**297**	Pn		**Pn**	**21 04 13.9**	**+0.9**
RLMT				IAML			21 05 10.4	
	comp=E,90nm,0.9s							
BW06	**Boulder Array**	**3.24**	**253**			**Pn**	**21 04 16.0**	**+1.2**
PD31	**Pinedale Array**	**3.24**	**253**	Pn		**Pn**	**21 04 15.7**	**+0.9**
PDAR	**Pinedale Array**	**3.24**	**253**	Pn		**Pn**	**21 04 15.4**	**+0.7**
	comp=E,4.0nm,0.3s,baz=76,slow=14,SNR=22							
PDAR				Lg		Lg	21 05 00.1	
	comp=E,7.0nm,0.3s,baz=77,slow=34,SNR=4.9							
PDAR	**Pinedale Array**	**3.24**	**253**			**Pn**	**21 04 15.6**	**+0.9**
YNE	**Yellowstone No**	**3.56**	**292**			**Pn**	**21 04 19.9**	**+0.7**
YMP	**Mirror Lake PI**	**3.59**	**287**			**Pn**	**21 04 20.3**	**+0.7**
GCMT	**Greycliff**	**3.68**	**305**			**Pn**	**21 04 21.8**	**+1.1**
OGNE	**Ogallala**	**3.75**	**138**	Pn		**Pn**	**21 04 22.3**	**+0.7**
LOHW	**Long Hollow**	**3.82**	**269**			**Pn**	**21 04 22.8**	**0.0**
FLWY	**Flagg Ranch**	**3.88**	**276**			**Pn**	**21 04 24.1**	**+0.5**
FLWY				IAML			21 05 35.4	
	comp=E,68nm,1.9s							
FLWY				IAML			21 05 39.5	
	comp=E,55nm,1.0s							
YPP	**Pitchstone Pla**	**3.97**	**279**			**Pn**	**21 04 25.6**	**+0.7**
REDW	**Red Top Meadow**	**4.03**	**266**			**Pn**	**21 04 26.6**	**+1.1**
REDW				IAML			21 05 38.6	
	comp=E,53nm,1.9s							
REDW				IAML			21 05 44.6	
	comp=E,56nm,1.8s							
IMW	**Indian Meadow**	**4.05**	**274**	Pn		**Pn**	**21 04 27.6**	**+1.7**
IMW				IAML			21 05 35.6	
	comp=E,32nm,0.8s							
IMW				IAML			21 05 37.7	
	comp=E,44nm,0.7s							
YHH	**Holmes Hill**	**4.08**	**286**			**Pn**	**21 04 27.5**	**+1.2**
TPAW	**Teton Pass**	**4.08**	**268**			**Pn**	**21 04 26.6**	**+0.2**
TPAW				IAML			21 05 45.0	
	comp=E,39nm,1.0s							
TPAW				IAML			21 05 54.7	
	comp=E,50nm,0.7s							
O20A	**White River Ci**	**4.24**	**212**			**Pn**	**21 04 28.0**	**-0.4**
AHID	**Auburn Hatcher**	**4.33**	**258**	Pn		**Pn**	**21 04 30.3**	**+0.6**
AHID				IAML			21 06 04.0	
	comp=E,35nm,3.9s							
YHL	**Hebgen Lake**	**4.33**	**286**			**Pn**	**21 04 30.1**	**+0.4**
RDMU	**Red Mountain**	**4.49**	**226**			**Pn**	**21 04 32.6**	**+0.7**
SUSD	**Miller**	**4.64**	**80**	Pn		**Pn**	**21 04 35.5**	**+1.6**
DGMT	**Dagmar**	**4.75**	**9**			**Pn**	**21 04 36.4**	**+1.0**
Q24A	**Divide**	**4.82**	**178**			**Pn**	**21 04 37.4**	**+0.9**
BOZ	**Bozeman (W)**	**4.84**	**294**			**Pn**	**21 04 37.0**	**+0.3**
BOZ				IAML			21 06 00.1	
	comp=E,27nm,1.0s							
BOZ				IAML			21 06 02.4	
	comp=E,20nm,0.9s							
K31A	**O'Neill**	**4.95**	**101**			**Sg**	**21 06 02.0**	**+0.5**
HWUT	**Hardware Ranch**	**5.08**	**247**	Pn		**Pn**	**21 04 39.9**	**0.0**
HWUT				IAML			21 06 13.5	
	comp=E,28nm,0.9s							
KSCO	**Kaye Shedlock'**	**5.18**	**156**	Pn		**Pn**	**21 04 41.5**	**+0.1**
TCUT	**Toone Canyon**	**5.22**	**241**	Pn		**Pn**	**21 04 43.8**	**+1.8**
EGMT	**Eagleton**	**5.24**	**326**			**Pn**	**21 04 42.9**	**+0.8**
SPUT	**South Promonto**	**5.80**	**247**			**Pn**	**21 04 50.5**	**+0.6**
PV07	**Paradox Valley**	**5.89**	**206**			**Pn**	**21 04 52.4**	**+1.2**
PV04	**Paradox Valley**	**6.02**	**208**	Pn		**Pn**	**21 04 54.1**	**+1.2**
SDCO	**Great Sand Dun**	**6.03**	**181**	Pn		**Pn**	**21 04 53.9**	**+0.7**
SRU	**San Rafael Swe**	**6.08**	**222**			**Pn**	**21 04 53.9**	**+0.2**
PV16	**Nyswonger Mesa**	**6.10**	**208**			**Pn**	**21 04 55.2**	**+1.2**
S22A	**4UR Ranch, Cre**	**6.13**	**191**			**Pn**	**21 04 55.5**	**+1.0**
PV01	**Paradox Valley**	**6.15**	**205**			**Pn**	**21 04 55.9**	**+1.2**
TMUT	**Trail Mountain**	**6.28**	**226**	Pn		**Pn**	**21 04 57.9**	**+1.3**
ECSD	**EROS Data Cent**	**6.32**	**87**	Pn		**Pn**	**21 04 57.4**	**+0.6**
BGU	**Big Grassy Mou**	**6.37**	**246**	Pn		**Pn**	**21 04 58.7**	**+1.0**
T25A	**Trinidad**	**6.67**	**174**	Pn		**Pn**	**21 05 01.6**	**-0.4**
F33A	**5 Mile Ranch,**	**6.76**	**69**	Pn		**Pn**	**21 05 03.6**	**+0.8**
L34A	**Svendsen Farm,**	**6.83**	**102**	Pn		**Pn**	**21 05 04.3**	**+0.5**
ELK	**Elko**	**7.94**	**251**	Pn		**Pn**	**21 05 18.4**	**-1.0**
	comp=E,0.1nm,0.3s,baz=74,slow=7.4,SNR=2.3							
ELK				Lg		Lg	21 07 30.2	
	comp=E,0.1nm,0.3s,baz=169,slow=19,SNR=1.2							
AGMN	**Agassiz Nation**	**7.99**	**52**	Pn		**Pn**	**21 05 19.4**	**-0.4**
I10CA	**LAC DU BONNET**	**9.04**	**41**	*i*			22 03 20.0	
	baz=218,slow=334,SNR=1.0							
ULM	**Lac du Bonnet**	**9.14**	**42**	Pn		**Pn**	**21 05 34.3**	**-1.2**
	comp=E,1.1nm,0.3s,baz=226,slow=10,SNR=7.5							
ULM				Lg		Lg	21 08 03.2	
	comp=E,0.2nm,0.3s,baz=125,slow=22,SNR=1.8							
NVAR	**Mina Array Bea**	**11.14**	**246**	Pn		**Pn**	**21 06 03.5**	**+0.3**
	comp=E,0.1nm,0.3s,baz=63,slow=13,SNR=2.9							
TXAR	**Lajitas Array**	**14.48**	**174**	Pg		P	21 07 40.8	+45
	comp=E,0.1nm,0.3s,baz=1.2,slow=18,SNR=1.7							
MKAR	**Makanchi Array**	**89.56**	**355**	P		**P**	**21 16 20.8**	**-0.8**
	comp=E,0.3nm,0.6s,baz=13,slow=4.1,SNR=2.4							

IDC ***26*** *21:07:51.2±0.6, 1.˚76N× 126.˚28E, h0km, mb4.2/15, mb1 4.3/16, mb1mx4.2/34, mbtmp4.2/16, ML3.6/1, MS3.4/6, Ms1 3.4/6, ms1mx3.0/34, Error ellipse: s-maj=33.4km s-min=13.3km az=80.0*

NEIC ***26*** *21:07:55.5±1.6, 1.˚81N±0.˚07× 126.˚47E±0.˚06, h29km±5km, mb4.6/56, Error ellipse: s-maj=10.8km s-min=7.4km az=220.0*

DJA ***26*** *21:07:55.4±0.3, 2.˚N±3.˚× 12.˚7E±.˚, h10km, M4.5/13, mB5.0/6, mb4.7/8, MLv4.5/13, Mw(mB)4.3/6*

ISC 26 21:07:57.5±0.3**, 1.˚82N**±0.˚04×**126.˚46E**±0.˚06**, h47**km**, n121, σ1s19/127, mb4.5**/46**, MS3.3**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.38**	**139**	P		**Pn**	**21 08 19.0**	**-1.4**
TNTI				S		**Sn**	**21 08 38.8**	**+1.4**
TNTI	**Ternate**	**1.38**	**139**	Pn		**Pn**	**21 08 18.8**	**-1.6**
TNTI				Sn		**Sn**	**21 08 34.9**	**-2.5**
SGSI	**Sangihe**	**2.08**	**333**	P		**Pn**	**21 08 29.2**	**-0.8**
KMSI	**Cibinong**	**2.77**	**244**	P		**Pn**	**21 08 41.3**	**+1.8**
GTOI	**Gorontalo**	**3.65**	**251**	P		**Pn**	**21 08 53.4**	**+1.9**
SANI	**Sanana**	**3.87**	**187**	P		**Pn**	**21 08 55.1**	**+0.5**
DDMP	**Don Marcelino,**	**4.32**	**350**	*eP*		**Pn**	**21 09 00.7**	**-0.1**
LUWI	**Luwuk**	**4.66**	**232**	P		**Pn**	**21 09 07.8**	**+2.4**
LUWI	**Luwuk**	**4.66**	**232**	Pn		**Pn**	**21 09 03.5**	**-1.9**
MRSI	**Marisa**	**4.71**	**254**	P		**Pn**	**21 09 09.0**	**+2.9**
SKMP	**Bagumbayan, Su**	**5.05**	**338**	*eP*		**Pn**	**21 09 09.7**	**-1.0**
SKMP				*eS*		**Sn**	**21 10 07.0**	**-0.8**
NLAI	**Namlea**	**5.06**	**173**	P		**Pn**	**21 09 12.4**	**+1.4**
	0.2nm3µm39nm,0.9s							
MATI	**Mati**	**5.10**	**358**	*eP*		**Pn**	**21 09 13.2**	**+1.7**
MATI				*eS*		**Sn**	**21 10 08.6**	**-0.5**
APSI	**Ampana**	**5.52**	**241**	P		**Pn**	**21 09 20.5**	**+3.2**
	0.6nm2µm259nm,1.0s							
TOLI2	**Tolitoli**	**5.72**	**263**	Pn		**Pn**	**21 09 19.6**	**-0.4**
BUKP	**Musuan**	**6.18**	**347**	*eP*		**Pn**	**21 09 27.1**	**+0.8**
BUKP				*eS*		Sn	21 10 23.6	-12
MPSI	**Mapaga**	**6.73**	**257**	P		**Pn**	**21 09 36.3**	**+2.5**
	0.2nm749nm43nm,0.9s							
PAGZ	**Pagadian**	**6.73**	**333**	*eP*		**Pn**	**21 09 32.5**	**-1.4**
PAGZ				*eS*		**Sn**	**21 10 48.0**	**-1.2**
TTSI	**Tana Toraja**	**8.21**	**234**	P		**Pn**	**21 09 56.6**	**+2.4**
	513nm51nm,1.0s							
MYLDM	**Lahad Datu**	**8.62**	**293**	Pn		**Pn**	**21 10 00.1**	**+0.4**
BNSI	**Bone**	**8.86**	**226**	P		**Pn**	**21 10 05.7**	**+2.6**
	21nm,0.7s							
BKSI	**Bulukumba**	**9.51**	**222**	P		**Pn**	**21 10 13.5**	**+1.6**
	16nm,0.9s							
KAPI	**Kappang**	**9.54**	**225**	Pn		**Pn**	**21 10 11.1**	**-1.3**
KKM	**Kota Kinabalu**	**11.05**	**293**			**Pn**	**21 10 34.3**	**+1.1**
BATI	**Baumata**	**12.27**	**193**	LR		LR	21 16 29.7	
	comp=Z,154nm,20.2s,baz=360,slow=43							
SBUM	**Sibu**	**14.25**	**273**			**Pn**	**21 11 17.4**	**+0.7**
MTN	**Manton Dam**	**15.29**	**162**	Pn		**Pn**	**21 11 30.4**	**+0.1**
JAGI	**Jajag, Banyuwa**	**15.97**	**230**	Pn		**Pn**	**21 11 37.8**	**-1.4**
JAGI				IAmb		IAmb	21 11 55.8	
	comp=Z,36nm,0.8s							
KSM	**Kuching**	**16.15**	**269**	Pn		**Pn**	**21 11 38.9**	**-2.6**
KNRA	**Kununurra**	**17.53**	**173**	P		**Pn**	**21 11 58.3**	**-0.4**
KNRA				IAmb		IAmb	21 12 02.9	
	comp=Z,31nm,0.9s							
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P		**P**	**21 12 23.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=326,slow=7.3,SNR=3.6							
FITZ	**Fitzroy Crossi**	**19.81**	**182**	P		**P**	**21 12 24.0**	**-0.2**
CISI	**Cisompet, Garu**	**20.80**	**243**	P		**P**	**21 12 35.6**	**+0.4**
YULB	**Yu-li**	**22.02**	**347**	P		**P**	**21 12 47.0**	**-1.1**
YULB				IAmb		IAmb	21 12 52.3	
	comp=Z,31nm,1.3s							
TPUB	**Ta-pu**	**22.09**	**346**	P		**P**	**21 12 46.3**	**-2.6**
SSLB	**Suanglung**	**22.48**	**347**	P		**P**	**21 12 51.3**	**-1.8**
SSLB				IAmb		IAmb	21 12 51.8	
	comp=Z,20nm,1.1s							
WB0	**Warramunga Arr**	**22.82**	**160**	P		**P**	**21 12 55.7**	**-1.0**
WB0				IAmb		IAmb	21 13 01.4	
	comp=Z,24nm,1.0s							
WRAB	**Tennant Creek**	**22.96**	**161**	P		**P**	**21 12 57.2**	**-0.9**
WRAB				IAmb		IAmb	21 13 02.3	
	comp=Z,17nm,0.8s							
WRA	**Warramunga Arr**	**22.96**	**161**	P		**P**	**21 12 56.8**	**-1.4**
	comp=Z,15nm,0.9s,baz=340,slow=11,SNR=84							
WRA				PcP		**PcP**	**21 16 47.7**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=340,slow=2.4,SNR=1.8							
WRA				S		**S**	**21 17 04.9**	**-0.3**
	comp=Z,2.5nm,1.0s,baz=330,slow=18,SNR=5.0							
WRA	**Warramunga Arr**	**22.96**	**161**	P		**P**	**21 12 57.0**	**-1.2**
WR0	**Warramunga Arr**	**23.05**	**160**	P		**P**	**21 12 58.5**	**-0.5**
WR0				IAmb		IAmb	21 13 03.2	
	comp=Z,15nm,0.6s							
PMG	**Port Moresby**	**23.44**	**119**	LR		LR	21 23 13.6	
	comp=Z,110nm,21.2s,baz=286,slow=39							
XMIS	**Christmas Isla**	**24.05**	**239**	P		**P**	**21 13 06.2**	**-2.4**
XMIS				IAmb		IAmb	21 13 24.6	
	comp=Z,41nm,1.1s							
PSA00	**Pilbara Seismi**	**24.13**	**195**	P		**P**	**21 13 09.5**	**+0.3**
PSA00				IAmb		IAmb	21 13 12.5	
	comp=Z,20nm,1.2s							
KRVT	**Keravat (AS076**	**26.26**	**103**	LR		LR	21 23 16.2	
	comp=Z,97nm,20.0s,baz=259,slow=35							
AS31	**Alice Springs**	**26.34**	**164**	P		**P**	**21 13 29.9**	**+0.5**
ASAR	**Alice Springs**	**26.34**	**164**	P		**P**	**21 13 28.9**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=345,slow=11,SNR=16							
ASAR				PcP		**PcP**	**21 16 55.6**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=342,slow=2.3,SNR=2.7							
ASAR				S		**S**	**21 17 57.9**	**-1.5**
	comp=Z,1.1nm,1.0s,baz=355,slow=20,SNR=2.2							
ASAR	**Alice Springs**	**26.34**	**164**	P		**P**	**21 13 29.8**	**+0.4**
WHN	**Wuhan**	**30.79**	**339**	P		P	21 14 22.0	+13
NJ2	**Nanjing**	**30.92**	**347**	*eP*		**P**	**21 14 10.5**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
JNU	**Nakatsue**	**31.41**	**7**			**P**	**21 14 15.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**31.65**	**303**	P		**P**	**21 14 16.0**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=119,slow=7.3,SNR=4.8							
CMAR				LR		LR	21 28 14.0	
	comp=Z,56nm,20.1s,baz=182,slow=39							
CMAR	**Chiang Mai Arr**	**31.65**	**303**	P		**P**	**21 14 15.7**	**-0.9**
CHTO	**Chiang Mai**	**31.82**	**304**	P		**P**	**21 14 17.8**	**-0.3**
MORW	**Morawa**	**32.29**	**197**	P		**P**	**21 14 21.9**	**-0.1**
MORW				IAmb		IAmb	21 14 31.7	
	comp=Z,11nm,1.1s							
ENH	**Enshi**	**32.56**	**332**	P		**P**	**21 14 24.0**	**-0.5**
ENH				IAmb		IAmb	21 14 33.3	
	comp=Z,10nm,0.9s							
JWT	**Wachi**	**34.32**	**13**	P		**P**	**21 14 40.8**	**+1.2**
INU	**Inuyama**	**34.78**	**15**	P		**P**	**21 14 43.9**	**+0.3**
INU				IAmb		IAmb	21 14 58.5	
	comp=Z,9.7nm,0.9s							
KSRS	**Korea Array**	**35.49**	**2**	P		**P**	**21 14 50.6**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=178,slow=10.0,SNR=8.6							
BBOO	**Buckleboo**	**35.62**	**166**	P		**P**	**21 14 50.5**	**-0.4**
NWAO	**Narrogin (SRO)**	**35.64**	**193**	LR		LR	21 30 51.0	
	comp=Z,23nm,21.0s,baz=213,slow=39							
NWAO	**Narrogin (SRO)**	**35.64**	**193**	P		**P**	**21 14 51.4**	**+0.3**
EIDS	**Eidsvold**	**36.04**	**140**	P		**P**	**21 14 54.6**	**0.0**
EIDS				IAmb		IAmb	21 15 07.1	
	comp=Z,12nm,1.3s							
CD2	**Chengdu**	**36.04**	**326**	*eP*		**P**	**21 14 53.8**	**-0.8**
MJAR	**Matsushiro Arr**	**36.22**	**16**	P		**P**	**21 14 55.7**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=184,slow=9.3,SNR=5.5							
LZH	**Lanzhou**	**40.02**	**331**	*eP*		**P**	**21 15 29.5**	**+1.3**
LZH				pP		pP	21 15 38.3	-2.0
LZH				sP		pwP	21 15 42.5	-0.3
LZH				pmax		pmax		
	comp=Z,24nm,1.0s							
SHL	**Shillong**	**40.82**	**308**	P		**P**	**21 15 34.3**	**-0.7**
SHL				IAmb		IAmb	21 15 39.5	
	comp=Z,12nm,0.9s							
HHC	**Hu-ho-hao-te**	**41.13**	**343**	*eP*		**P**	**21 15 37.5**	**+0.3**
HHC				pmax		pmax		
	comp=Z,14nm,1.0s							
HHC				pmax		pmax		
	comp=Z,140nm,5.1s							
USRK	**Ussuriysk Ar.**	**42.49**	**6**	P		**P**	**21 15 49.1**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=194,slow=7.6,SNR=8.5							
USRK	**Ussuriysk Ar.**	**42.49**	**6**	P		**P**	**21 15 48.5**	**+0.4**
LSA	**Lhasa**	**43.52**	**313**	P		**P**	**21 15 57.2**	**-0.1**
ASAJ	**Asahikawa**	**44.49**	**17**	P		**P**	**21 16 05.7**	**+1.4**
	comp=Z,3.4nm,0.6s,baz=220,slow=10,SNR=4.4							
JKA	**Kamikawa-asahi**	**44.49**	**17**	P		**P**	**21 16 05.1**	**+0.9**
JKA				IAmb		IAmb	21 16 13.1	
	comp=Z,6.2nm,0.8s							
GTA	**Gaotai**	**44.60**	**330**	*eP*		**P**	**21 16 05.5**	**+0.1**
GTA				pP		pP	21 16 09.3	-8.4
GTA				sP		pwP	21 16 12.0	-8.1
GTA				PcP		**PP**	**21 17 50.3**	**0.0**
GTA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
HIA	**Hailar**	**47.62**	**354**	P		**P**	**21 16 29.0**	**+0.1**
HIA				IAmb		IAmb	21 16 37.8	
	comp=Z,5.4nm,0.5s							
ULN	**Ulaanbaatar**	**48.85**	**343**	P		**P**	**21 16 38.3**	**-0.2**
SONM	**Songino Array**	**49.02**	**342**	P		**P**	**21 16 39.7**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=157,slow=8.1,SNR=9.4							
SONM				PcP		**PcP**	**21 18 04.0**	**+0.8**
	comp=Z,0.8nm,0.9s,baz=142,slow=3.5,SNR=2.5							
SONM	**Songino Array**	**49.02**	**342**	P		**P**	**21 16 39.8**	**-0.1**
WMQ	**Urumqi**	**54.14**	**326**	*eP*		**P**	**21 17 20.0**	**+1.9**
PETK	**Petropavlovsk-**	**57.29**	**22**	P		**P**	**21 17 41.5**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=198,slow=3.9,SNR=4.3							
PETK	**Petropavlovsk-**	**57.29**	**22**	P		**P**	**21 17 41.4**	**+1.0**
NIL	**Nilore**	**58.89**	**309**	P		**P**	**21 17 51.9**	**-0.1**
NIL				IAmb		IAmb	21 17 58.2	
	comp=Z,9.4nm,1.2s							
MK31	**Makanchi Array**	**58.97**	**326**	P		**P**	**21 17 52.4**	**0.0**
MK31				IAmb		IAmb	21 17 54.2	
	comp=Z,8.3nm,1.1s							
MKAR	**Makanchi Array**	**58.97**	**326**	P		**P**	**21 17 51.5**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=119,slow=7.5,SNR=35							
MKAR				LR		LR	21 43 52.8	
	comp=Z,58nm,21.5s,baz=132,slow=37							
MKAR	**Makanchi Array**	**58.97**	**326**	P		**P**	**21 17 52.0**	**-0.4**
MAKZ	**Makanchi**	**59.16**	**326**	P		**P**	**21 17 53.3**	**-0.4**
KSH	**Kashi**	**59.21**	**316**	*eP*		**P**	**21 17 56.5**	**+2.2**
KSH				pmax		pmax		
	comp=Z,11nm,0.7s							
KSH				pmax		pmax		
	comp=Z,150nm,3.1s							
YAK	**Yakutsk**	**60.12**	**2**	P		**P**	**21 18 00.3**	**+0.4**
AAK	**Ala-Archa**	**61.60**	**319**	P		**P**	**21 18 10.3**	**-0.3**
ZAA0	**Zalesovo Array**	**62.17**	**334**	P		**P**	**21 18 14.2**	**+0.3**
ZALV	**Zalesovo Beam**	**62.17**	**334**	P		**P**	**21 18 12.9**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=126,slow=7.4,SNR=1.9							
KBL	**Kabul**	**62.48**	**308**	P		**P**	**21 18 16.3**	**-0.4**
KBL				IAmb		IAmb	21 18 17.8	
	comp=Z,5.4nm,0.9s							
KURK	**Kurchatov**	**63.21**	**328**	P		**P**	**21 18 20.8**	**-0.1**
KK31	**Karatay Array**	**64.45**	**318**	P		**P**	**21 18 28.8**	**-0.5**
KK31				IAmb		IAmb	21 18 30.9	
	comp=Z,6.3nm,1.2s							
KKAR	**Karatay Array**	**64.45**	**318**	P		**P**	**21 18 28.8**	**-0.6**
KKAR				IAmb		IAmb	21 18 31.0	
	comp=Z,6.3nm,1.2s							
KKAR	**Karatay Array**	**64.45**	**318**	P		**P**	**21 18 28.7**	**-0.6**
BRVK	**Borovoye**	**68.84**	**327**	P		**P**	**21 18 57.0**	**-0.1**
BRVK				IAmb		IAmb	21 19 01.8	
	comp=Z,4.5nm,0.9s							
TIXI	**Tiksi**	**69.75**	**1**	P		**P**	**21 19 02.7**	**+0.4**
TIXI				IAmb		IAmb	21 19 03.6	
	comp=Z,3.3nm,0.8s							
GYA0B	**ALIBECK ARRAY**	**71.88**	**309**	P		**P**	**21 19 15.9**	**-0.1**
GYA0B				IAmb		IAmb	21 19 32.9	
	comp=Z,3.9nm,0.7s							
NRIK	**Noril'sk**	**72.21**	**346**	P		**P**	**21 19 18.1**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=130,slow=5.6,SNR=7.0							
ABKAR	**Akbulak array**	**73.46**	**321**	P		**P**	**21 19 25.3**	**+0.2**
ABKAR	**Akbulak array**	**73.46**	**321**	P		**P**	**21 19 24.7**	**-0.3**
ABKAR				IAmb		IAmb	21 19 30.5	
	comp=Z,4.3nm,1.1s							
ARU	**Arti**	**76.40**	**328**	P		**P**	**21 19 41.6**	**-0.4**
ARU				IAmb		IAmb	21 19 43.0	
	comp=Z,8.6nm,1.0s							
SDPT	**Sand Point**	**78.92**	**34**	P		**P**	**21 19 56.8**	**+0.9**
RAYN	**Ar Rayn**	**80.99**	**293**	P		**P**	**21 20 08.0**	**+0.1**
RDOG	**Red Dog Mine**	**81.15**	**21**	P		**P**	**21 20 08.4**	**+0.5**
RDOG				IAmb		IAmb	21 20 15.4	
	comp=Z,8.6nm,1.2s							
VNDA	**Vanda**	**81.58**	**173**	P		**P**	**21 20 10.6**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=309,slow=5.8,SNR=11							
VNDA	**Vanda**	**81.58**	**173**	P		**P**	**21 20 10.3**	**+0.5**
OHAK	**Old Harbor**	**83.19**	**33**	P		**P**	**21 20 19.9**	**+1.3**
KDAK	**Kodiak Island**	**83.64**	**32**	P		**P**	**21 20 21.4**	**+0.5**
A21K	**Barrow**	**84.11**	**18**	P		**P**	**21 20 24.7**	**+1.6**
IMAR	**Indian Mountai**	**84.19**	**24**	P		**P**	**21 20 25.2**	**+1.6**
COLD	**Coldfoot**	**85.75**	**23**	P		**P**	**21 20 33.1**	**+1.7**
COLD				IAmb		IAmb	21 20 36.2	
	comp=Z,4.0nm,1.1s							
KLMR	**Klimovskoe**	**86.93**	**331**	*eP*		**P**	**21 20 34.9**	**-2.4**
KLMR				AMP

H11S3	**WAKE ISLAND Hy**	**28.48**	**121**	T	T	21 54 18.7			
	baz=313,slow=76,SNR=68								
H11S2	**WAKE ISLAND Hy**	**28.49**	**121**	T	T	21 54 22.7			
	baz=313,slow=76,SNR=50								
ZALV	**Zalesovo Beam**	**42.48**	**313**	P	**P**	**21 26 26.8**	**+0.7**		
	0.5nm,0.3s,baz=94,slow=7.7,SNR=1.4								
MKAR	**Makanchi Array**	**44.51**	**303**	P	**P**	**21 26 43.2**	**+0.6**		
	0.6nm,0.8s,baz=81,slow=9.2,SNR=2.8								
ILAR	**Eielson Array**	**50.49**	**32**	P	**P**	**21 27 29.6**	**+0.8**		
	0.2nm,0.6s,baz=271,slow=6.8,SNR=2.2								
WRA	**Warramunga Arr**	**56.00**	**188**	P	**P**	**21 28 09.4**	**-0.3**		
	1.0nm,0.8s,baz=4.9,slow=7.4,SNR=12								
ASAR	**Alice Springs**	**59.72**	**188**	P	**P**	**21 28 36.4**	**+0.4**		
	0.5nm,0.7s,baz=22,slow=9.7,SNR=7.0								

*IDC **26** 21:23:59.6±0.9,5°.84N×61°.32E, h0km, mb3.9/12, mb1 4.1/12, mb1mx3.9/44, mbtmp3.9/12, MS3.4/9, Ms1 3.4/9, ms1mx3.1/39, Error ellipse: s-maj=24.6km s-min=19.7km az=7.0*

*NEIC **26** 21:24:01.1±1.1,5°.70N±0°.05×61°.2E±0°.2, h10km±2km, mb4.4/18, Error ellipse: s-maj=26.1km s-min=8.6km az=278.0*

ISC 26 21:24:01.6±0.8,5°.8N±0°.1×61°.3E±0°.1, h10km, n63, σ1s16/58, mb4.3/30, MS3.3/7, 6C-6D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.53**	**352**	LR	LR	21 33 40.8	
	comp=Z,128nm,19.8s,baz=199,slow=33						
PALK	**Pallekele**	**19.35**	**85**	LR	LR	21 34 16.4	
	comp=Z,167nm,20.5s,baz=5.2,slow=32						
RAYN	**Ar Rayn**	**23.27**	**321**	P	**P**	**21 29 08.9**	**-0.6**
RAYN				IAmb	IAmb	21 29 10.5	
	comp=Z,9.9nm,1.0s						
OPO	**Ambohidratompo**	**27.92**	**210**	LR	LR	21 38 11.8	
	comp=Z,85nm,18.9s,baz=169,slow=30						
KBL	**Kabul**	**29.49**	**13**	P	**P**	**21 30 07.5**	**+1.3**
KBL				IAmb	IAmb	21 30 10.0	
	comp=Z,11nm,1.6s						
GEYT	**Alibeck**	**32.11**	**355**	LR	LR	21 42 10.0	
	comp=Z,48nm,21.7s,baz=35,slow=34						
LSA	**Lhasa**	**36.86**	**46**	P	**P**	**21 31 11.8**	**+0.9**
LSA				IAmb	IAmb	21 31 13.1	
	comp=Z,4.4nm,1.1s						
KK31	**Karatay Array**	**38.04**	**11**	P	**P**	**21 31 20.7**	**+0.5**
KKAR	**Karatay Array**	**38.04**	**11**	P	**P**	**21 31 19.4**	**-0.8**
KKAR	**Karatay Array**	**38.04**	**11**	P	**P**	**21 31 20.3**	**+0.2**
KKAR				IAmb	IAmb	21 31 36.9	
	comp=Z,5.7nm,1.4s						
AAK	**Ala-Archa**	**38.51**	**16**	P	**P**	**21 31 24.6**	**+0.2**
CM31	**Chiang Mai Arr**	**38.82**	**68**	P	**P**	**21 31 27.9**	**+0.8**
CM31				IAmb	IAmb	21 31 29.4	
	comp=Z,5.3nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.82**	**68**	P	**P**	**21 31 26.8**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=260,slow=9.3,SNR=16						
CMAR				PcP	**PcP**	**21 33 38.1**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=233,slow=3.8,SNR=4.8						
CMAR				LR	LR	21 45 57.5	
	comp=Z,40nm,20.0s,baz=215,slow=34						
CMAR	**Chiang Mai Arr**	**38.82**	**68**	P	**P**	**21 31 28.8**	**+1.7**
LSZ	**Lusaka**	**38.90**	**237**	P	**P**	**21 31 28.9**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=107,slow=11,SNR=3.8						
CHTO	**Chiang Mai**	**38.90**	**67**	P	**P**	**21 31 28.7**	**+0.9**
KBZ	**Khabaz**	**41.09**	**340**	LR	LR	21 48 55.0	
	comp=Z,42nm,20.2s,baz=98,slow=36						
BRTR	**Keskin Array B**	**41.95**	**328**	P	**P**	**21 31 52.7**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=101,slow=6.0,SNR=4.6						
BRTR				LR	LR	21 49 47.7	
	comp=Z,28nm,18.8s,baz=135,slow=37						
ABKAR	**Akbulak array**	**43.32**	**359**	P	**P**	**21 32 04.1**	**+0.4**
ABKAR				IAmb	IAmb	21 32 05.5	
	comp=Z,5.5nm,0.9s						
ABKAR	**Akbulak array**	**43.32**	**359**	P	**P**	**21 32 04.2**	**+0.5**
MK31	**Makanchi Array**	**44.68**	**21**	P	**P**	**21 32 14.4**	**-0.3**
MK31				IAmb	IAmb	21 32 15.5	
	comp=Z,3.6nm,1.1s						
MKAR	**Makanchi Array**	**44.68**	**21**	P	**P**	**21 32 14.2**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=199,slow=6.2,SNR=6.9						
BOSA	**Boshof**	**48.72**	**223**	LR	LR	21 51 51.9	
	comp=Z,82nm,18.4s,baz=44,slow=34						
NEHR	**Nehoiu**	**49.81**	**328**	⇑P	**P**	**21 32 56.3**	**+1.6**
VRI	**Vrincioaia**	**49.88**	**329**	⇑P	**P**	**21 32 57.5**	**+2.3**
PLOR	**Plostina**	**49.91**	**329**	⇑P	**P**	**21 32 56.7**	**+1.2**
MLR	**Muntele Rosu**	**50.04**	**328**	P	**P**	**21 32 56.4**	**-0.2**
MLR				IAmb	IAmb	21 33 07.9	
	comp=Z,11nm,1.4s						
TESR	**Tescani**	**50.36**	**329**	⇑P	**P**	**21 32 59.2**	**+0.3**
VOIR		**50.48**	**327**	⇓P	**P**	**21 32 59.9**	**+0.1**
OZUR		**50.52**	**328**	⇓P	**P**	**21 33 00.9**	**+0.8**
ARU	**Arti**	**50.54**	**358**	P	**P**	**21 32 59.9**	**-0.1**
DOPR	**Dopca**	**50.64**	**328**	⇓P	**P**	**21 33 01.5**	**+0.4**
SORM	**Soroca**	**50.66**	**332**	⇑P	**P**	**21 33 00.3**	**-0.7**
PRAR	**RASCA**	**51.15**	**330**	⇓P	**P**	**21 33 05.2**	**+0.4**
HERR	**Herculane**	**51.58**	**325**	⇓P	**P**	**21 33 07.8**	**-0.2**
ZALV	**Zalesovo Beam**	**51.67**	**18**	P	**P**	**21 33 08.0**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=218,slow=6.8,SNR=4.6						
ZALV				LR	LR	21 55 39.6	
	comp=Z,51nm,20.0s,baz=40,slow=37						
BURAR	**Bucovina Array**	**51.82**	**330**	⇓P	**P**	**21 33 10.5**	**+0.6**
BURAR	**Bucovina Array**	**51.82**	**330**	P	**P**	**21 33 10.0**	**+0.1**
AKASG	**Malin Array Be**	**52.14**	**335**	P	**P**	**21 33 11.5**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=130,slow=6.2,SNR=5.4						
BZS	**Buzias**	**52.48**	**326**	⇑P	**P**	**21 33 14.6**	**-0.2**
SONM	**Songino Array**	**56.83**	**35**	P	**P**	**21 33 46.4**	**0.0**
	comp=Z,1.3nm,0.9s,baz=226,slow=8.0,SNR=8.0						
SONM	**Songino Array**	**56.83**	**35**	P	**P**	**21 33 46.4**	**0.0**
CONA	**Conrad Observa**	**57.04**	**325**	*eP*	**P**	**21 33 47.4**	**-0.6**
	comp=Z,6.8nm,1.1s						
OBKA	**Obir**	**57.07**	**323**	*eP*	**P**	**21 33 51.9**	**+3.7**
	comp=Z,13nm,1.4s						
MOA	**Moln**	**57.92**	**324**	*eP*	**P**	**21 33 53.4**	**-0.7**
	comp=Z,4.6nm,0.8s						
KBA	**Koelnbreinsper**	**58.07**	**323**	*eP*	**P**	**21 33 53.7**	**-1.6**
	comp=Z,8.8nm,1.3s						
GERES	**GERESS Array B**	**58.75**	**325**	P	**P**	**21 33 58.3**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=131,slow=7.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**59.11**	**282**	P	**P**	**21 34 02.2**	**-0.6**
	comp=Z,0.8nm,1.0s,baz=92,slow=5.9,SNR=3.3						
WTTA	**Wattenberg**	**59.18**	**323**	*eP*	**P**	**21 34 02.7**	**-0.3**
	comp=Z,8.0nm,1.3s						
WATA	**Walderalm**	**59.25**	**323**	*eP*	**P**	**21 34 02.5**	**-1.0**
	comp=Z,7.5nm,1.3s						
SQTA	**Sankt Quirin**	**59.42**	**323**	*eP*	**P**	**21 34 03.2**	**-1.4**
	comp=Z,3.7nm,0.8s						
MOTA	**Moosalm**	**59.54**	**323**	*eP*	**P**	**21 34 04.6**	**-0.9**
	comp=Z,4.0nm,0.7s						
FETA	**Feichten**	**59.62**	**322**	*eP*	**P**	**21 34 10.1**	**+4.1**
	comp=Z,4.6nm,1.5s						
RETA	**Reutte**	**59.81**	**323**	*eP*	**P**	**21 34 06.1**	**-1.2**
	comp=Z,7.4nm,1.7s						
DAVA	**Damuels**	**60.26**	**322**	*eP*	**P**	**21 34 09.5**	**-0.9**
	comp=Z,7.5nm,1.3s						
FIA1	**FINESS Array S**	**61.40**	**342**	P	**P**	**21 34 19.6**	**+1.9**
SENIN	**Lac Senin/Sane**	**61.47**	**320**	P	**P**	**21 34 18.1**	**-0.7**
KSRS	**Korea Array**	**68.00**	**52**	P	**P**	**21 34 59.2**	**-2.0**
	comp=Z,1.7nm,0.9s,baz=265,slow=8.0,SNR=7.0						
WRA	**Warramunga Arr**	**76.19**	**112**	P	**P**	**21 35 50.1**	**-0.6**
	comp=Z,3.5nm,0.9s,baz=286,slow=5.1,SNR=4.9						
WRA	**Warramunga Arr**	**76.19**	**112**	P	**P**	**21 35 50.4**	**-0.3**
WB2	**Warramunga Arr**	**76.20**	**112**	P	**P**	**21 35 50.7**	**-0.1**
ASAR	**Alice Springs**	**76.57**	**116**	P	**P**	**21 35 52.1**	**-0.7**
	comp=Z,2.3nm,0.8s,baz=285,slow=5.5,SNR=5.9						
ASAR	**Alice Springs**	**76.57**	**116**	P	**P**	**21 35 52.7**	**-0.1**

*IDC **26** 21:28:45.0±0.6, 1°.96N×126°.55E, h0km, mb4.3/16, mb1 4.4/17, mb1mx4.2/32, mbtmp4.2/17, ML4.1/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/35, Error ellipse: s-maj=29.9km s-min=13.2km az=82.0*

*DJA **26** 21:28:49.9±1.1, 2°.N±3°×12°.7E±°, h20km±9km, M4.4/13, mB4.8/3, mb4.6/13, MLv4.4/13, Mw(mB)4.1/3*

*NEIC **26** 21:28:50.1±1.5, 2°.05N±0°.08×126°.66E±0°.08, h38km±1km, mb4.5/45, Error ellipse: s-maj=13.7km s-min=8.0km az=225.0*

ISC 26 21:28:51.2±0.3, 2°.04N±0°.05×126°.69E±0°.07, h47km, n100, σ0s94/103, mb4.4/43, MS3.2/4, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.43**	**152**	P	**Pn**	**21 29 13.3**	**-1.4**
TNTI				S	**Sn**	**21 29 33.2**	**+0.9**
TNTI	**Ternate**	**1.43**	**152**		**Pn**	**21 29 13.7**	**-1.0**
TNTI				Sn	**Sn**	**21 29 33.8**	**+1.5**
SGSI	**Sangihe**	**2.01**	**325**	P	**Pn**	**21 29 22.4**	**-0.3**
KMSI	**Cibinong**	**3.07**	**242**	P	**Pn**	**21 29 37.8**	**+0.5**
GTOI	**Gorontalo**	**3.93**	**249**	P	**Pn**	**21 29 49.2**	**+0.1**
SANI	**Sanana**	**4.12**	**190**	P	**Pn**	**21 29 52.5**	**+0.8**
LUWI	**Luwuk**	**4.97**	**232**	P	**Pn**	**21 30 06.0**	**+2.6**
LUWI	**Luwuk**	**4.97**	**232**	Pn	**Pn**	**21 30 03.3**	**0.0**
MRSI	**Marisa**	**4.99**	**252**	P	**Pn**	**21 30 04.7**	**+1.0**
NLAI	**Namlea**	**5.26**	**176**	P	**Pn**	**21 30 06.7**	**-0.6**
	0.3nm2µm29nm,0.9s						
APSI	**Ampana**	**5.83**	**240**	P	**Pn**	**21 30 16.0**	**+0.8**
	0.4nm1µm110nm,0.9s						
TOLI2	**Tolitoli**	**5.98**	**261**	Pn	**Pn**	**21 30 15.4**	**-1.8**
MPSI	**Mapaga**	**7.00**	**256**	P	**Pn**	**21 30 31.8**	**+0.6**
	0.1nm21nm,0.8s						
FAKI	**Fak Fak**	**7.42**	**132**	Pn	**Pn**	**21 30 35.4**	**-1.7**
TTSI	**Tana Toraja**	**8.52**	**234**	P	**Pn**	**21 30 52.3**	**+0.2**
	29nm,0.8s						
MYLDM	**Lahad Datu**	**8.75**	**291**	Pn	**Pn**	**21 30 55.1**	**-0.1**
SPSI	**Sidrap Palu**	**9.13**	**229**	P	**Pn**	**21 30 59.8**	**-0.7**
	19nm,0.9s						
BNSI	**Bone**	**9.17**	**226**	P	**Pn**	**21 31 01.0**	**0.0**
	14nm,0.7s						
BKSI	**Bulukumba**	**9.82**	**222**	P	**Pn**	**21 31 09.8**	**-0.1**
	14nm,0.7s						
KKM	**Kota Kinabalu**	**11.18**	**291**	Pn	**Pn**	**21 31 27.6**	**-1.0**
TWSI	**Taliwang, Sumb**	**14.50**	**222**	P	**P**	**21 32 19.8**	**+0.5**
JAY	**Jayapura**	**14.72**	**108**	P	P	21 32 32.5	+11
MTN	**Manton Dam**	**15.43**	**163**	Pn	**Pn**	**21 32 24.4**	**-1.5**
MTN				IAmb	IAmb	21 32 34.3	
	comp=Z,40nm,1.5s						
KNRA	**Kununurra**	**17.72**	**173**		**Pn**	**21 32 53.3**	**-1.4**
FITZ	**Fitzroy Crossi**	**20.03**	**183**	P	**P**	**21 33 20.2**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=24,slow=9.8,SNR=9.5						
FITZ	**Fitzroy Crossi**	**20.03**	**183**		**P**	**21 33 20.4**	**0.0**
YULB	**Yu-li**	**21.86**	**347**	P	**P**	**21 33 39.0**	**-1.2**
YULB				IAmb	IAmb	21 33 55.2	
	comp=Z,13nm,0.9s						
TPUB	**Ta-pu**	**21.94**	**345**	P	**P**	**21 33 40.7**	**-0.2**
TPUB				IAmb	IAmb	21 33 44.3	
	comp=Z,32nm,1.0s						
SSLB	**Suanglung**	**22.32**	**346**	P	**P**	**21 33 44.0**	**-1.1**
SSLB				IAmb	IAmb	21 34 00.7	
	comp=Z,17nm,1.0s						
COEN	**Coen**	**22.79**	**135**	P	**P**	**21 33 50.0**	**-0.1**
WB0	**Warramunga Arr**	**22.95**	**161**	P	**P**	**21 33 50.9**	**-0.8**
WB0				IAmb	IAmb	21 33 57.0	
	comp=Z,18nm,0.9s						
WRA	**Warramunga Arr**	**23.10**	**161**	P	**P**	**21 33 51.7**	**-1.5**
	comp=Z,12nm,0.7s,baz=338,slow=11,SNR=89						
WRA				PcP	**PcP**	**21 37 41.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=333,slow=2.1,SNR=3.8						
WRA				S	**S**	**21 38 00.2**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=336,slow=20,SNR=3.8						
WB2	**Warramunga Arr**	**23.10**	**161**	P	**P**	**21 33 52.3**	**-0.9**
WB2				IAmb	IAmb	21 33 54.6	
	comp=Z,17nm,0.8s						
PSA00	**Pilbara Seismi**	**24.40**	**196**	P	**P**	**21 34 04.6**	**-0.8**
PSA00				IAmb	IAmb	21 34 24.0	
	comp=Z,11nm,1.1s						
UBPT	**Khong Chiam**	**24.72**	**303**	P	**P**	**21 34 08.4**	**0.0**
UBPT				IAmb	IAmb	21 34 11.9	
	comp=Z,12nm,1.3s						
AS31	**Alice Springs**	**26.49**	**165**	P	**P**	**21 34 25.2**	**+0.8**
ASAR	**Alice Springs**	**26.50**	**165**	P	**P**	**21 34 23.9**	**-0.5**
	comp=Z,4.2nm,0.7s,baz=345,slow=7.8,SNR=20						
ASAR				PcP	**PcP**	**21 37 49.2**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=347,slow=2.1,SNR=4.3						
ASAR				S	**S**	**21 38 56.5**	**+1.1**
	comp=Z,0.5nm,1.0s,baz=344,slow=18,SNR=2.0						
ASAR	**Alice Springs**	**26.50**	**165**	P	**P**	**21 34 24.8**	**+0.4**
WHN	**Wuhan**	**30.67**	**339**	P	P	21 35 14.3	+13
NJ2	**Nanjing**	**30.76**	**347**	*eP*	**P**	**21 35 03.5**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
GYA	**Guiyang**	**30.98**	**323**	⇑P	P	21 35 09.5	+5.1
GYA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
JNU	**Nakatsue**	**31.17**	**7**	LR	LR	21 49 05.2	
	comp=Z,52nm,18.8s,baz=62,slow=39						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**21 35 10.7**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=129,slow=7.1,SNR=3.7						
CMAR				PcP	**PcP**	**21 38 03.7**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=122,slow=2.3,SNR=4.2						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**21 35 10.3**	**-0.6**
CHTO	**Chiang Mai**	**31.89**	**303**	P	**P**	**21 35 12.1**	**-0.3**
MORW	**Morawa**	**32.57**	**197**	P	**P**	**21 35 17.7**	**-0.5**
FORT	**Forrest**	**32.66**	**178**	P	**P**	**21 35 19.1**	**+0.1**
JWT	**Wachi**	**34.06**	**13**	P	**P**	**21 35 31.8**	**+0.7**
KSRS	**Korea Array**	**35.26**	**2**	P	**P**	**21 35 43.2**	**+1.8**
	comp=Z,2.2nm,0.6s,baz=177,slow=9.7,SNR=11						
KSRS				LR	LR	21 51 35.9	
	comp=Z,9.7nm,19.8s,baz=195,slow=39						
BBOO	**Buckleboo**	**35.77**	**166**	P	**P**	**21 35 46.4**	**+0.5**
MJAR	**Matsushiro Arr**	**35.95**	**16**	P	**P**	**21 35 47.8**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=183,slow=8.7,SNR=7.8						
MJAR				LR	LR	21 49 51.3	
	comp=Z,34nm,21.2s,baz=205,slow=35						
MJAR	**Matsushiro Arr**	**35.95**	**16**	P	**P**	**21 35 45.8**	**-1.6**
MAJO	**Matsushiro**	**35.95**	**16**	P	**P**	**21 35 46.0**	**-1.4**
STKA	**Stephens Creek**	**36.58**	**158**	LR	LR	21 52 52.7	
	comp=Z,46nm,19.4s,baz=24,slow=40						
LZH	**Lanzhou**	**39.94**	**331**	*eP*	**P**	**21 36 22.0**	**+0.7**
LZH				pP	pP	21 36 30.0	-3.4
LZH				sP	pwP	21 36 33.5	-2.3
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
ARMA	**Armidale**	**40.09**	**146**	P	**P**	**21 36 22.4**	**-0.1**
ARMA				IAmb	IAmb	21 36 24.0	
	comp=Z,18nm,1.5s						
JTM	**Tenmabayashi**	**40.71**	**17**	P	**P**	**21 36 26.1**	**-1.2**
SHL	**Shillong**	**40.86**	**308**	P	**P**	**21 36 27.6**	**-1.5**
SHL				IAmb	IAmb	21 36 30.2	
	comp=Z,6.8nm,0.6s						
HHC	**Hu-ho-hao-te**	**40.99**	**342**	*eP*	**P**	**21 36 30.5**	**+0.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
USA0B	**Ussuriysk Arra**	**42.25**	**6**	P	**P**	**21 36 40.9**	**+1.1**
USA0B				IAmb	IAmb	21 36 43.0	
	comp=Z,9.6nm,0.9s						
USRK	**Ussuriysk Ar.**	**42.25**	**6**	P	**P**	**21 36 41.5**	**+1.7**
	comp=Z,6.8nm,0.8s,baz=194,slow=6.9,SNR=15						
USRK	**Ussuriysk Ar.**	**42.25**	**6**	P	**P**	**21 36 39.6**	**-0.2**
LSA	**Lhasa**	**43.54**	**313**	P	**P**	**21 36 50.8**	**-0.3**
LSA				IAmb	IAmb	21 37 08.8	
	comp=Z,9.0nm,1.5s						
GTA	**Gaotai**	**44.53**	**330**	*eP*	**P**	**21 36 56.8**	**-1.7**
GTA				pP	pP	21 37 03.8	-7.0
GTA				sP	pwP	21 37 07.3	-5.8
GTA				PcP	**PP**	**21 38 42.5**	**-0.7**
GTA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
ULN	**Ulaanbaatar**	**48.71**	**342**	P	**P**	**21 37 31.5**	**+0.3**
ULN				IAmb	IAmb	21 37 43.2	
	comp=Z,5.5nm,1.4s						
SONM	**Songino Array**	**48.88**	**342**	P	**P**	**21 37 32.5**	**0.0**
	comp=Z,1.5nm,0.8s,baz=157,slow=6.8,SNR=10						
SONM	**Songino Array**	**48.88**	**342**	P	**P**	**21 37 31.7**	**-0.7**
WMQ	**Urumqi**	**54.09**	**326**	*eP*	**P**	**21 38 13.0**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,73nm,4.9s						
PETK	**Petropavlovsk-**	**57.01**	**22**	P	**P**	**21 38 34.0**	**+1.9**
	comp=Z,5.6nm,0.9s,baz=166,slow=5.2,SNR=6.7						
PETK	**Petropavlovsk-**	**57.01**	**22**	P	**P**	**21 38 33.6**	**+1.5**
MK31	**Makanchi Array**	**58.92**	**326**	P	**P**	**21 38 45.2**	**-0.4**
MK31				IAmb	IAmb	21 38 48.2	
	comp=Z,2.8nm,0.8s						
MKAR	**Makanchi Array**	**58.92**	**326**	P	**P**	**21 38 45.1**	**-0.6**
	comp=Z,2.2nm,0.5s,baz=119,slow=7.6,SNR=49						
MKAR	**Makanchi Array**	**58.92**	**326**	P	**P**	**21 38 45.0**	**-0.7**
MAKZ	**Makanchi**	**59.10**	**326**	P	**P**	**21 38 46.3**	**-0.6**
MAKZ				IAmb	IAmb	21 39 00.8	
	comp=Z,12nm,1.5s						
YAK	**Yakutsk**	**59.89**	**2**	P	**P**	**21 38 52.0**	**0.0**
BKZ	**Black Stump Fm**	**61.37**	**137**	P	**P**	**21 39 03.1**	**+0.6**
AAK	**Ala-Archa**	**61.59**	**318**	P	**P**	**21 39 04.9**	**+0.7**
ZALV	**Zalesovo Beam**	**62.07**	**333**	P	**P**	**21 39 06.3**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=113,slow=6.8,SNR=2.7						
KBL	**Kabul**	**62.52**	**308**	P	**P**	**21 39 09.8**	**-0.9**
KBL				IAmb	IAmb	21 39 14.0	
	comp=Z,3.8nm,0.5s						
KURK	**Kurchatov**	**63.14**	**328**	P	**P**	**21 39 13.5**	**-0.7**
KK31	**Karatay Array**	**64.44**	**318**	P	**P**	**21 39 22.1**	**-0.8**
KKAR	**Karatay Array**	**64.44**	**318**	P	**P**	**21 39 22.3**	**-0.6**
BRVK	**Borovoye**	**68.78**	**327**	P	**P**	**21 39 49.8**	**-0.6**
BRVK				IAmb	IAmb	21 39 53.3	
	comp=Z,2.9nm,0.9s						
TIXI	**Tiksi**	**69.53**	**1**	P	**P**	**21 39 54.5**	**-0.1**
TIXI				IAmb	IAmb	21 39 55.8	
	comp=Z,4.4nm,1.2s						
GYA0	**ALIBECK ARRAY**	**71.92**	**309**	P	**P**	**21 40 10.1**	**+0.2**
GYA0				IAmb	IAmb	21 40 17.0	
	comp=Z,3.1nm,0.8s						
NRIK	**Noril'sk**	**72.05**	**346**	P	**P**	**21 40 10.5**	**+0.5**
	comp=Z,1.9nm,0.5s,baz=133,slow=5.5,SNR=6.2						
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**21 40 18.4**	**-0.2**
RAR	**Rarotonga**	**75.43**	**112**	P	**P**	**21 40 30.1**	**-0.7**
ARU	**Arti**	**76.34**	**328**	P	**P**	**21 40 34.4**	**-0.9**
ARU				IAmb	IAmb	21 40 36.1	
	comp=Z,9.0nm,1.0s						
OPO	**Ambohidratompo**	**80.70**	**251**	P	**P**	**21 41 00.5**	**+0.2**
	comp=Z,4.3nm,0.7s,baz=358,slow=7.2,SNR=4.2						
RAYN	**Ar Rayn**	**81.11**	**293**	P	**P**	**21 41 01.4**	**-0.9**
VNDA	**Vanda**	**81.76**	**173**	P	**P**	**21 41 04.8**	**+0.3**
	comp=Z,2.7nm,1.0s,baz=311,slow=7.0,SNR=7.4						
VNDA	**Vanda**	**81.76**	**173**	P	**P**	**21 41 04.7**	**+0.1**
COLD	**Coldfoot**	**85.46**	**23**	P	**P**	**21 41 25.1**	**+1.4**
COLD				IAmb	IAmb	21 41 27.9	
	comp=Z,2.2nm,0.8s						
TOLK	**Toolik Lake Re**	**85.83**	**21**	P	**P**	**21 41 26.1**	**+0.6**
TOLK				IAmb	IAmb	21 41 36.1	
	comp=Z,9.2nm,1.4s						
ILAR	**Eielson Array**	**86.64**	**25**	P	**P**	**21 41 29.2**	**-0.4**
	comp=Z,0.4nm,1.0s,baz=264,slow=4.8,SNR=2.5						
ARCES	**ARCESS Array B**	**92.01**	**340**	P	**P**	**21 41 55.6**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=88,slow=6.4,SNR=2.2						
FINES	**FINESS Array B**	**93.30**	**332**	P	**P**	**21 42 02.0**	**+1.2**
	comp=Z,2.1nm,0.9s,baz=86,slow=8.5,SNR=2.4						
TXAR	**Lajitas Array**	**122.65**	**53**	PKP	**PKiKP**	**21 47 43.8**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=316,slow=2.5,SNR=2.2						
TORD	**Torodi Ar. Bea**	**123.39**	**287**	PKP	**PKPdf**	**21 47 44.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=114,slow=1.9,SNR=2.1						

IDC 26 21:43:30.7±13.0, 21°.25N×144°.15E, h88km±123km, mb3.1/8, mb1 3.3/8, mb1mx3.2/35, mbtmp3.5/8, Error ellipse: s-maj=46.7km s-min=21.7km az=86.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**21.41**	**322**	P	P	21 48 11.1	-0.2
	0.8nm,0.6s,baz=141,slow=9.3,SNR=4.4						
SONM	**Songino Array**	**40.26**	**320**	P	P	21 50 58.8	-0.3
	0.3nm,0.7s,baz=134,slow=8.3,SNR=2.2						
WRA	**Warramunga Arr**	**42.05**	**194**	P	P	21 51 14.2	+0.3
	0.8nm,1.1s,baz=17,slow=9.0,SNR=2.9						
ASAR	**Alice Springs**	**45.75**	**193**	P	P	21 51 43.0	-0.4
	0.1nm,0.4s,baz=8.1,slow=8.5,SNR=1.4						
ZALV	**Zalesovo Beam**	**55.12**	**322**	P	P	21 52 53.0	-0.6
	0.6nm,0.3s,baz=90,slow=10,SNR=2.1						
MKAR	**Makanchi Array**	**55.66**	**313**	P	P	21 52 58.2	+0.5
	0.4nm,0.8s,baz=90,slow=8.6,SNR=2.3						
ILAR	**Eielson Array**	**62.02**	**27**	P	P	21 53 42.8	+1.4

33nm,0.3s,baz=286,slow=15,SNR=4.6
URZ Urewera 2.31 257 P **Pn** 22 01 12.1 +1.1
URZ S **Sn** 22 01 39.4 -0.6
URZ Urewera 2.31 257 **Pn** 22 01 10.0 -1.0
MARZ Manawahe 2.62 264 P **Pn** 22 01 16.7 +1.5
MUGZ Murupara 2.62 253 P **Pn** 22 01 15.7 +0.5
OPRZ Ohinepanea 2.71 267 P **Pn** 22 01 16.5 +0.1
RRRZ Republican Roa 2.79 257 P **Pn** 22 01 17.2 -0.4
RRRZ S **Sn** 22 01 53.6 +1.8
OMRZ Omania 2.87 262 P **Pn** 22 01 19.0 +0.3
HLRZ Highlands Stat 2.90 259 P **Pn** 22 01 20.3 +1.1
PRRZ Plateau Road 2.92 254 P **Pn** 22 01 19.7 +0.4
TGRZ Tauranga 2.94 270 P **Pn** 22 01 19.7 0.0
KARZ Kaharoa 2.96 264 P **Pn** 22 01 20.1 +0.1
ALRZ Allen Road 2.97 253 P **Pn** 22 01 20.7 +0.6
HRRZ Handcock Road 2.98 257 P **Pn** 22 01 20.6 +0.5
HSRZ Hossack Road 2.99 258 P **Pn** 22 01 21.1 +0.7
MYRZ Mayor Island 3.01 278 P **Pn** 22 01 20.3 -0.3
NGRZ Ngongotaha 3.01 262 P **Pn** 22 01 21.7 +1.1
BKZ Black Stump Fm 3.07 242 **Pn** 22 01 21.7 +0.2
KWHZ Kaweka Forest 3.24 238 P **Pn** 22 01 24.6 +0.9
RITZ Rihia Road 3.45 248 P **Pn** 22 01 28.7 +2.0
TOZ Tahuroa Road 3.54 269 P **Pn** 22 01 27.9 0.0
ETVZ East Tongariro 3.61 246 P **Pn** 22 01 29.9 +0.9
WTVZ West Tongariro 3.69 247 P **Pn** 22 01 32.3 +2.2
NGZ Ngauruhoe 3.71 246 P **Pn** 22 01 32.4 +2.1
WHVZ Whangaehu Hut 3.76 245 P **Pn** 22 01 32.5 +1.4
WNVZ Wahianoa 3.77 244 P **Pn** 22 01 33.3 +2.1
GRZ Great Barrier 3.92 291 P **Pn** 22 01 32.9 -0.2
WIAZ Waiheke Island 3.98 283 P **Pn** 22 01 33.4 -0.5
ETAZ East Tamaki Re 4.10 280 P **Pn** 22 01 35.7 +0.2
HIZ Hauiti 4.10 258 P **Pn** 22 01 36.4 +0.8
HIZ Hauiti 4.10 258 **Pn** 22 01 35.3 -0.3
BFZ Birch Farm 4.10 224 **Pn** 22 01 35.2 -0.4
MBAZ Motutapu North 4.17 282 P **Pn** 22 01 36.6 +0.1
PRWZ Pori Road 4.17 227 P **Pn** 22 01 36.9 +0.3
AWAZ Awhitu Peninsu 4.30 278 P **Pn** 22 01 38.9 +0.6
MSWZ Moikau Station 5.16 224 **Pn** 22 01 47.5 -2.6
PLWZ Palliser 5.26 222 Pn **Pn** 22 01 50.3 -1.2
BHW Baring Head 5.36 226 Pn **Pn** 22 01 50.8 -2.1
SNZO South Karori 5.39 227 Pn **Pn** 22 01 52.1 -1.3
BSWZ Blackbirch Sta 6.13 228 Pn **Pn** 22 02 02.5 -1.0
NNZ Nelson 6.15 234 Pn **Pn** 22 02 02.5 -1.2
CTZ Chatham Island 6.50 158 P **Pn** 22 02 11.8 +3.3
CTZ S **Sn** 22 03 19.6 -3.7
QRZ Quartz Range 6.53 240 Pn **Pn** 22 02 08.4 -0.5
THZ Tophouse 6.75 232 Pn **Pn** 22 02 10.5 -1.5
OXZ Oxford 8.20 225 Pn **Pn** 22 02 31.1 -0.8
LBZ Lake Benmore 9.91 225 Pn **Pn** 22 02 53.1 -2.2
WKZ Wanaka 10.84 226 Pn **Pn** 22 03 07.5 -0.6
DZM Mont Dzumac 19.51 319 P **P** 22 04 59.5 -1.0
DZM IAmb IAmb 22 05 03.3
comp=Z,29nm,1.3s
MSVF Nonsavu 20.03 355 P Pn 22 05 08.8 +0.9
STKA Stephens Creek 31.89 269 P **P** **22 06 59.1 +0.4**
comp=Z,1.5nm,0.5s,baz=94,slow=13,SNR=3.5
STKA Stephens Creek 31.89 269 P **P** **22 06 56.4 -2.3**
CTA Charters Tower 34.13 292 P **P** **22 07 17.8 -0.5**
comp=Z,2.9nm,0.5s,baz=136,slow=10,SNR=5.7
CTAO Charters Tower 34.13 292 P **P** **22 07 17.3 -1.0**
CTAO IAmb IAmb 22 07 24.9
comp=Z,10nm,1.2s
BBOO Buckleboo 35.94 264 P **P** **22 07 32.3 -1.5**
COEN Coen 40.34 296 P **P** **22 08 10.0 -1.0**
VNDA Vanda 40.61 186 P **P** **22 08 14.3 +1.7**
AS31 Alice Springs 41.62 276 P **P** **22 08 20.4 -1.3**
AS31 IAmb IAmb 22 08 21.0
comp=Z,2.9nm,0.6s
ASAR Alice Springs 41.62 276 P **P** **22 08 20.1 -1.5**
comp=Z,6.2nm,0.6s,baz=122,slow=8.0,SNR=56
ASAR Alice Springs 41.62 276 P **P** **22 08 19.6 -2.0**
FORT Forrest 43.01 263 P **P** **22 08 31.7 -1.1**
FORT IAmb IAmb 22 08 41.1
comp=Z,15nm,0.8s
WR0 Warramunga Arr 43.11 281 P **P** **22 08 32.1 -1.7**
WR0 IAmb IAmb 22 08 41.2
comp=Z,7.9nm,1.1s
WRAB Tennant Creek 43.27 281 P **P** **22 08 33.0 -2.1**
WRAB IAmb IAmb 22 08 33.9
comp=Z,5.6nm,0.6s
WRA Warramunga Arr 43.27 281 P **P** **22 08 33.4 -1.7**
comp=Z,4.2nm,0.5s,baz=121,slow=7.8,SNR=35
WRA Warramunga Arr 43.27 281 P **P** **22 08 32.8 -2.2**
FITZ Fitzroy Crossi 51.11 277 P **P** **22 09 35.3 -0.9**
comp=Z,5.2nm,0.7s,baz=118,slow=12,SNR=15
FITZ Fitzroy Crossi 51.11 277 P **P** **22 09 35.1 -1.1**
FITZ IAmb IAmb 22 09 36.1
comp=Z,5.1nm,0.8s
MORW Morawa 53.16 259 P **P** **22 09 50.9 -0.5**
MORW IAmb IAmb 22 10 06.4
comp=Z,11nm,1.2s
PSAD2 Pilbara Seismi 53.70 270 P **P** **22 09 53.1 -2.4**
SNAA Sanae 70.85 179 P **P** **22 11 52.1 +2.4**
SNAA IAmb IAmb 22 11 57.3
comp=Z,3.3nm,1.4s
H03S2 Juan Fernandez 77.82 123 T T 23 38 19.0
baz=230,slow=74,SNR=34
H03S1 Juan Fernandez 77.83 123 T T 23 38 20.2
baz=230,slow=74,SNR=31
H03S3 Juan Fernandez 77.84 123 T T 23 38 19.1
baz=230,slow=74,SNR=34
H03N3 Juan Fernandez 78.05 123 T T 23 38 41.3
baz=234,slow=72,SNR=61
H03N2 Juan Fernandez 78.05 123 T T 23 38 38.4
baz=234,slow=72,SNR=30
H03N1 Juan Fernandez 78.07 123 T T 23 38 39.6
baz=234,slow=72,SNR=57
ARCES ARCESS Array B 145.33 345 PKP **PKPab** **22 20 10.7 +0.5**
comp=Z,1.6nm,0.7s,baz=46,slow=3.9,SNR=1.7
FINES FINESS Array B 151.26 334 PKPbc **PKiKP** **22 20 28.5 +1.9**
comp=Z,1.2nm,0.6s,baz=57,slow=4.1,SNR=2.3
TORD Torodi Ar. Bea 155.43 184 PKPab **PKPab** **22 20 58.6 +5.8**
comp=Z,0.7nm,0.8s,baz=166,slow=3.5,SNR=3.1

IDC 26 22:01:50.8±1.9, 2°.14N×126°.74E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/55, mbtmp3.7/4, Error ellipse: s-maj=176.0km s-min=21.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.18**	**162**	P	P	22 06 58.5	-0.8
	2.2nm,0.6s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.58**	**165**	P	P	22 07 31.8	+0.9
	0.5nm,0.5s,baz=345,slow=10,SNR=6.5						
MKAR	**Makanchi Array**	**58.86**	**326**	P	P	22 11 51.2	-0.2
	0.4nm,0.4s,baz=118,slow=7.9,SNR=14						
KURBB	**Kurchatov Array**	**63.08**	**328**	P	P	22 12 20.0	+0.1
	0.3nm,0.4s,baz=131,slow=6.2,SNR=1.9						

*IDC **26** 22:05:33.2±3.0, 5°.54N×61°.10E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.5/60, mbtmp3.7/7, Error ellipse: s-maj=83.8km s-min=29.2km az=66.0*
*NEIC **26** 22:05:41.0±1.6, 5°.8N±0°.1×61°.2E±0°.1, h10km±2km, mb4.6/32, Error ellipse: s-maj=24.7km s-min=16.3km az=209.0*

ISC 26 22:05:42.0±1.0, 5°.9N±0°.1×61°.23E±0°.09, h14km, n68, σ2s 905/54, mb4.5/30, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.48**	**312**	Pn	Pn	22 08 02.7	+4.4
SHAO	**Shalim**	**13.21**	**336**	P	**Pn**	**22 08 50.4**	**+1.0**
DMTO	**DMTO**	**13.23**	**333**	P	**Pn**	**22 08 50.9**	**+1.3**
MHTO	**MHTO**	**15.30**	**348**	P	**Pn**	**22 09 16.4**	**-1.4**
	SNR=12						
JLN	**Jalan Bani Buh**	**16.23**	**354**	P	**P**	**22 09 37.8**	**+5.0**
	SNR=6.4						
JMDO	**Jabal Madar**	**16.63**	**350**	P	**Pn**	**22 09 34.9**	**0.0**
WBK	**Wadi Bani Khal**	**16.73**	**353**	P	**P**	**22 09 37.9**	**-0.5**
BSY	**Bisya**	**17.17**	**347**	P	**P**	**22 09 43.3**	**0.0**
	SNR=13						
SMDO	**Samad**	**17.31**	**350**	P	Pn	22 09 32.9	-11
	SNR=9.7						
BIDO	**Bidbid**	**17.75**	**351**	P	**P**	**22 09 50.6**	**+0.9**
HOQ	**Hoqain**	**17.96**	**348**	P	**Pn**	**22 09 50.4**	**-1.1**
	SNR=6.8						
SOHO	**SOHO**	**18.66**	**346**	P	**P**	**22 09 57.7**	**-2.0**
SOHO				S	S	22 13 54.7	+23
ATD	**Arta Tunnel**	**19.00**	**288**		**P**		**-1.5**
UOSS	**Minazif**	**19.52**	**346**	P	P	22 10 00.5	-8.6
UOSS	**Minazif**	**19.52**	**346**	P	**P**	**22 10 08.7**	**-0.4**
MDH	**Madha**	**19.84**	**347**	P	**P**	**22 10 06.1**	**-6.4**
HYB	**Hyderabad**	**20.43**	**55**	*i* P	**P**	**22 10 18.0**	**-1.2**
FURI	**Furi**	**22.55**	**279**	P	**P**	**22 10 41.1**	**-1.3**
RAYN	**Ar Rayn**	**23.14**	**321**	P	**P**	**22 10 47.1**	**-1.1**
RAYN				IAmb	IAmb	22 11 06.0	
	comp=Z,12nm,1.1s						
HRA	**Herat**	**28.34**	**2**	P	**P**	**22 11 35.3**	**-0.5**
KBL	**Kabul**	**29.38**	**13**	P	**P**	**22 11 45.9**	**+0.8**
KBL				IAmb	IAmb	22 12 03.5	
	comp=Z,7.4nm,1.2s						
NIL	**Nilore**	**29.76**	**20**	P	**P**	**22 11 49.3**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**31.98**	**355**	P	**P**	**22 12 08.2**	**+0.3**
GYA0B				IAmb	IAmb	22 12 23.2	
	comp=Z,6.7nm,1.1s						
SHL	**Shillong**	**35.23**	**53**	P	**P**	**22 12 38.0**	**+1.6**
SHL				IAmb	IAmb	22 12 51.9	
	comp=Z,14nm,1.3s						
MARD	**Mardin**	**36.39**	**332**	P	**P**	**22 12 46.5**	**+0.2**
MARD				IAmb	IAmb	22 12 59.6	
	comp=Z,8.3nm,1.1s						
LSA	**Lhasa**	**36.81**	**46**	P	**P**	**22 12 48.9**	**-1.4**
GNI	**Garni**	**37.16**	**339**	P	**P**	**22 12 52.8**	**0.0**
GNI				IAmb	IAmb	22 13 05.0	
	comp=Z,14nm,1.4s						
KK31	**Karatay Array**	**37.93**	**11**	P	**P**	**22 12 57.9**	**-1.2**
KK31				IAmb	IAmb	22 13 16.2	
	comp=Z,12nm,1.5s						
KKAR	**Karatay Array**	**37.93**	**11**	P	**P**	**22 12 57.6**	**-1.5**
KKAR				IAmb	IAmb	22 13 16.2	
	comp=Z,12nm,1.5s						
AAK	**Ala-Archa**	**38.41**	**16**	P	**P**	**22 13 01.1**	**-2.2**
	comp=Z,1.1nm,0.7s,baz=225,slow=7.3,SNR=4.3						
AAK	**Ala-Archa**	**38.41**	**16**	P	**P**	**22 13 01.7**	**-1.6**
AKH	**Akhalkalaki**	**38.72**	**339**	P	**P**	**22 13 05.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**38.81**	**68**	P	**P**	**22 13 02.3**	**-4.6**
	comp=Z,0.3nm,0.3s,baz=257,slow=8.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**38.81**	**68**	P	**P**	**22 13 07.2**	**+0.3**
CHTO	**Chiang Mai**	**38.90**	**67**	P	**P**	**22 13 08.7**	**+1.1**
CHTO				IAmb	IAmb	22 13 23.6	
	comp=Z,11nm,1.2s						
WMQ	**Urumqi**	**44.33**	**27**	P	**P**	**22 13 52.8**	**+0.9**
WMQ				IAmb	IAmb	22 14 09.5	
	comp=Z,21nm,1.4s						
AKTO	**Aktyubinsk**	**44.44**	**357**	P	**P**	**22 13 48.7**	**-3.8**
	comp=Z,0.6nm,0.5s,baz=160,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**44.58**	**21**	P	**P**	**22 13 49.2**	**-4.5**
	comp=Z,0.5nm,0.7s,baz=208,slow=7.8,SNR=2.2						
KURBB	**Kurchatov Arra**	**46.85**	**15**	P	**P**	**22 14 07.4**	**-4.1**
	comp=Z,0.2nm,0.3s,baz=219,slow=7.2,SNR=1.5						
BRVK	**Borovoye**	**47.57**	**7**	P	**P**	**22 14 18.7**	**+1.5**
BRVK				IAmb	IAmb	22 14 33.5	
	comp=Z,11nm,1.6s						
ARU	**Arti**	**50.41**	**358**	P	**P**	**22 14 39.6**	**+0.7**
ARU				IAmb	IAmb	22 14 54.4	
	comp=Z,4.9nm,0.8s						
SBUM	**Sibu**	**50.96**	**92**	P	**P**	**22 14 43.7**	**0.0**
SBUM				IAmb	IAmb	22 14 59.0	
	comp=Z,11nm,1.1s						
ENH	**Enshi**	**51.37**	**56**	P	**P**	**22 14 47.5**	**+0.9**
ZAA0	**Zalesovo Array**	**51.57**	**18**	P	**P**	**22 14 48.7**	**+1.1**
ZAA0				IAmb	IAmb	22 15 03.8	
	comp=Z,14nm,1.6s						
ZALV	**Zalesovo Beam**	**51.57**	**18**	P	**P**	**22 14 48.6**	**+0.9**
BURAR	**Bucovina Array**	**51.69**	**330**	P	**P**	**22 14 50.4**	**+1.6**
XAN	**Xi'an**	**52.19**	**51**	P	**P**	**22 14 53.7**	**+1.0**
SOKA	**Soboth**	**56.74**	**324**	*eP*	P	22 15 38.8	+13
	comp=Z,5.8nm,1.3s						
ARSA	**Arzberg**	**56.75**	**324**	*eP*	P	22 15 39.7	+14
	comp=Z,7.6nm,1.3s						
SONM	**Songino Array**	**56.75**	**35**	P	**P**	**22 15 27.6**	**+1.9**
CONA	**Conrad Observa**	**56.92**	**325**	*eP*	P	22 15 40.4	+14
	comp=Z,8.3nm,1.5s						
MORC	**Moravsky Berou**	**57.02**	**328**	*eP*	**P**	**22 15 30.5**	**+3.0**
MORC	**Moravsky Berou**	**57.02**	**328**	P	**P**	**22 15 27.6**	**+0.1**
MORC				IAmb	IAmb	22 15 44.1	
	comp=Z,7.3nm,1.2s						
KRUC	**Moravsky**	**57.23**	**327**	*eP*	P	22 15 32.7	+3.7
VRAC	**Vranov**	**57.26**	**327**	*eP*	P	**22 15 32.7**	**+3.5**
MYKA	**Terra Mystica**	**57.55**	**323**	*eP*	P	22 15 41.8	+10
MOA	**Molln**	**57.79**	**324**	*eP*	P	22 15 46.1	+13
	comp=Z,12nm,1.8s						
ABTA	**Abfaltersbach**	**58.28**	**323**	*eP*	P	22 15 47.7	+11
	comp=Z,8.1nm,1.6s						
MOTA	**Moosalm**	**59.41**	**323**	*eP*	P	22 15 56.5	+12
	comp=Z,2.4nm,0.9s						
DAVA	**Damuels**	**60.13**	**322**	*eP*	P	22 16 02.0	+13
	comp=Z,4.6nm,1.3s						
SENIN	**Senin/Sane**	**61.34**	**320**	P	**P**	**22 15 58.5**	**+0.7**
PAB	**San Pablo**	**67.48**	**310**	P	**P**	**22 16 38.5**	**+0.6**
KSAR	**Wonju Array Be**	**67.93**	**52**	P	**P**	**22 16 41.4**	**+0.8**
WRA	**Warramunga Arr**	**76.28**	**112**	P	P	22 17 24.7	-6.3
	comp=Z,0.7nm,0.8s,baz=290,slow=5.3,SNR=3.9						
WRA	**Warramunga Arr**	**76.28**	**112**	P	**P**	**22 17 29.9**	**-1.2**
WB2	**Warramunga Arr**	**76.29**	**112**	P	**P**	**22 17 30.4**	**-0.7**
WB2				IAmb	IAmb	22 17 45.6	
	comp=Z,8.4nm,0.9s						
WC3	**Warramunga Arr**	**76.32**	**112**	P	**P**	**22 17 31.1**	**-0.1**
ASAR	**Alice Springs**	**76.66**	**116**	P	P	22 17 26.2	-7.0
	comp=Z,0.2nm,0.3s,baz=275,slow=5.3,SNR=2.0						

*IDC **26** 22:05:35.7±0.4, 1°.96N×126°.48E, h0km, mb4.6/30, mb1 4.7/32, mb1mx4.5/56, mbtmp4.6/32, ML4.2/2, MS3.7/10, Ms1 3.7/10, ms1mx3.4/39, Error ellipse: s-maj=20.9km s-min=9.7km az=78.0*
*BJI **26** 22:05:40.1±0.0, 2°.05N×126°.49E, h32km, mB5.0/36, mb4.7/55, Ms4.8/27, Ms7 4.6/26*
*NEIC **26** 22:05:41.7±1.4, 1°.96N±0°.07×126°.57E±0°.02, h42km±5km, mb4.8/85, Error ellipse: s-maj=10.1km s-min=3.0km az=189.0*
*KLM **26** 22:05:42.0, 2°.01N×126°.74E, h50km, mb5.0*
*DJA **26** 22:05:42.1±0.3, 2°.N±3°×12°.7E±°, h46km±4km, M4.6/33, mb4.8/33, mB5.1/13, MLv4.8/15, Mw(mB)4.5/13*
*GCMT **26** 22:05:44.7±0.4, 2°.20N±0°.03×126°.60E±0°.03, h32km±1km, MW5.0/60, Moment Tensor Solution. s30,c35; s60,c81; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr4.21±.36; Mθθ-0.40±.19; Mφφ-3.81±.24; Mrθ0.20±.29; Mrφ-1.50±.17; Mθφ-1.45±.30; Best double couple: Ms4.53700×10^16 NP1:φs192.00000°, δ54.00000°, λ79.00000°. Principal axes: T 4.5080, Plg78.0000°, Azm63.0000°; N 0.0610, Plg9.0000°, Azm198.0000°; P -4.5660, Plg8.0000°, Azm289.0000°; nsta1 refers to body wave waves, cutoff=50s. Triangular moment-rate function*

ISC 26 22:05:42.5±0.3, 1°.98N±0°.03×126°.62E±0°.05, h47km, n234, σ1s 40/239, mb4.7/91, MS4.1/14, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**148**	P	**Pn**	**22 06 04.6**	**-1.2**
TNTI	**Ternate**	**1.41**	**148**	Pn	**Pn**	**22 06 04.3**	**-1.4**
TNTI				Sn	**Sn**	**22 06 22.6**	**-0.5**
SGSI	**Sangihe**	**2.02**	**327**	P	**Pn**	**22 06 12.9**	**-1.2**
LBMI	**Labuha**	**2.74**	**161**	P	**Pn**	**22 06 24.6**	**+0.6**
KMSI	**Cibinong**	**2.99**	**242**	P	**Pn**	**22 06 28.4**	**+1.0**
GTOI	**Gorontalo**	**3.85**	**250**	P	**Pn**	**22 06 40.1**	**+0.8**
SANI	**Sanana**	**4.05**	**189**	P	**Pn**	**22 06 42.6**	**+0.6**
DDMP	**Don Marcelino,**	**4.20**	**348**	*eP*	**Pn**	**22 06 42.9**	**-1.2**
DDMP				*eS*	**Sn**	**22 07 28.3**	**-3.6**
LUWI	**Luwuk**	**4.88**	**232**	P	**Pn**	**22 06 55.3**	**+1.9**
LUWI	**Luwuk**	**4.88**	**232**	Pn	**Pn**	**22 06 53.7**	**+0.3**
MRSI	**Marisa**	**4.91**	**252**	P	**Pn**	**22 06 55.3**	**+1.4**
	1.5nm4μm313nm,0.5s						
MATI	**Mati**	**4.95**	**356**	*eP*	**Pn**	**22 06 55.7**	**+1.3**
MATI				*eS*	**Sn**	**22 07 49.9**	**-0.4**
SKMP	**Bagumbayan, Su**	**4.97**	**335**	*eP*	**Pn**	**22 06 52.8**	**-1.9**
SKMP				*eS*	**Sn**	**22 07 49.3**	**-1.5**
NLAI	**Namlea**	**5.20**	**175**	P	**Pn**	**22 06 59.0**	**+1.2**
	0.6nm1μm73nm,0.6s						
APSI	**Ampana**	**5.74**	**240**	P	**Pn**	**22 07 07.5**	**+2.3**
	1.3nm4μm294nm,0.7s						
MSAI	**Masohi**	**5.77**	**156**	P	**Pn**	**22 07 07.6**	**+2.0**
	0.1nm37nm,0.9s						
TOLI2	**Tolitoli**	**5.90**	**262**	Pn	**Pn**	**22 07 05.7**	**-1.8**
BUKP	**Musuan**	**6.07**	**345**	*eP*	**Pn**	**22 07 11.5**	**+1.8**
BUKP				*eS*	**Sn**	**22 08 20.7**	**+2.8**
PAGZ	**Pagadian**	**6.67**	**331**	*eP*	**Pn**	**22 07 16.4**	**-1.5**
MPSI	**Mapaga**	**6.92**	**256**	P	**Pn**	**22 07 23.4**	**+2.0**
	0.5nm1μm176nm,0.9s						
KDI	**Kendari**	**7.12**	**214**	P	Pn	22 07 31.7	+7.5
FAKI	**Fak Fak**	**7.43**	**131**	P	Pn	22 07 43.1	+15
FAKI	**Fak Fak**	**7.43**	**131**	Pn	**Pn**	**22 07 28.0**	**-0.5**
GLSP	**General Luna,**	**7.77**	**356**	*eP*	**Pn**	**22 07 33.1**	**0.0**
TTSI	**Tana Toraja**	**8.44**	**234**	P	**Pn**	**22 07 43.5**	**+1.3**
	0.3nm1μm80nm,0.9s						
MYLDM	**Lahad Datu**	**8.71**	**292**	Pn	**Pn**	**22 07 46.4**	**+0.5**
SPSI	**Sidrap Palu**	**9.04**	**229**	P	**Pn**	**22 07 52.5**	**+2.0**
	41nm,0.6s						
BNSI	**Bone**	**9.09**	**226**	P	**Pn**	**22 07 51.8**	**+0.7**
	772nm49nm,0.7s						
BKSI	**Bulukumba**	**9.73**	**222**	P	**Pn**	**22 08 02.7**	**+2.7**
	429nm38nm,0.7s						
KAPI	**Kappang**	**9.77**	**225**	LR	LR	22 11 33.6	
	comp=Z,350nm,21.4s,baz=54,slow=37						
KAPI	**Kappang**	**9.77**	**225**	Pn	**Pn**	**22 08 00.4**	**-0.1**
BAKI	**Biak**	**9.99**	**108**	P	Pn	22 08 11.6	+8.1
BKB	**Balikpapan**	**10.24**	**252**	P	**Pn**	**22 08 07.9**	**+0.9**
	82nm,0.5s						
BKB	**Balikpapan**	**10.24**	**252**		**Pn**	**22 08 05.8**	**-1.2**
KKM	**Kota Kinabalu**	**11.14**	**292**		**Pn**	**22 08 19.6**	**+0.2**
EDFI	**Ende, Flores**	**11.74**	**205**	P	**Pn**	**22 08 29.3**	**+1.8**
	185nm16nm,1.0s						
SMPI	**Sarmi**	**12.71**	**108**	P	P	22 08 56.2	+5.5
BBKI	**Banjar Baru**	**12.96**	**245**	P	**Pn**	**22 08 46.1**	**+2.0**
	20nm,0.9s						
LQP	**Lukban**	**13.06**	**338**	*eP*	**P**	**22 08 52.6**	**-2.2**
PLAI	**Plampang**	**13.89**	**219**	P	**Pn**	**22 08 59.0**	**+2.1**
	631nm75nm,1.0s						
GENI	**Genyem**	**14.28**	**108**	P	**P**	**22 09 11.2**	**+3.0**
SBUM	**Sibu**	**14.40**	**272**		**Pn**	**22 09 03.8**	**+0.1**
SBUM	**Sibu**	**14.40**	**272**	P	**P**	**22 09 11.0**	**+1.4**
TWSI	**Taliwang, Sumb**	**14.41**	**222**	P	**P**	**22 09 11.7**	**+2.1**
JAY	**Jayapura**	**14.77**	**108**	Pn	**Pn**	**22 09 06.8**	**-1.9**
	0.3nm,0.3s,baz=315,slow=8.6,SNR=2.6						
JAY				LR	LR	22 14 27.7	
	comp=Z,366nm,19.6s,baz=336,slow=36						
JAY	**Jayapura**	**14.77**	**108**	P	**P**	**22 09 15.5**	**+1.8**
MTN	**Manton Dam**	**15.39**	**163**	Pn	**Pn**	**22 09 15.4**	**-1.3**
KMMI	**Kalianget**	**15.49**	**235**	P	**Pn**	**22 09 20.6**	**+2.6**
	1μm80nm,1.1s						
JAGI	**Jajag, Banyuwa**	**16.20**	**230**	Pn	**Pn**	**22 09 24.2**	**-2.8**
JAGI				IAmb	IAmb	22 09 37.0	
	comp=Z,104nm,1.3s						
KSM	**Kuching**	**16.32**	**268**		**Pn**	**22 09 28.1**	**-0.5**
KSM	**Kuching**	**16.32**	**268**	P	**P**	**22 09 35.0**	**+4.2**
KNRA	**Kununurra**	**17.67**	**173**	P	**Pn**	**22 09 44.1**	**-1.2**
KNRA				IAmb	IAmb	22 09 47.6	
	comp=Z,41nm,0.7s						
KPJI	**Karang Pucung**	**19.93**	**242**	P	**P**	**22 10 13.0**	**+2.4**
FITZ	**Fitzroy Crossi**	**19.97**	**183**	P	**P**	**22 10 09.9**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=19,slow=11,SNR=18						
FITZ				LR	LR	22 19 46.7	
	comp=Z,71nm,18.3s,baz=14,slow=43						
FITZ	**Fitzroy Crossi**	**19.97**	**183**	P	**P**	**22 10 10.1**	**-0.9**
LEM	**Lembang**	**20.89**	**245**	LR	LR	22 20 20.4	
	comp=Z,231nm,19.4s,baz=58,slow=43						
CISI	**Cisompet, Garu**	**21.02**	**243**		**P**	**22 10 21.1**	**-1.4**
CISI				IAmb	IAmb	22 10 27.6	
	comp=Z,37nm,1.1s						
YULB	**Yu-li**	**21.91**	**347**	P	**P**	**22 10 30.5**	**-1.3**
YULB				IAmb	IAmb	22 10 34.5	
	comp=Z,32nm,1.1s						
TPUB	**Ta-pu**	**21.98**	**345**	P	**P**	**22 10 32.0**	**-0.7**
SSLB	**Suanglung**	**22.37**	**346**	P	**P**	**22 10 35.0**	**-1.8**
SSLB				IAmb	IAmb	22 10 41.7	
	comp=Z,42nm,1.2s						
COEN	**Coen**	**22.80**	**134**	P	**P**	**22 10 40.9**	**-0.6**
KLSI		**22.86**	**253**	P	P	22 10 56.5	+14
WRAB	**Tennant Creek**	**23.06**	**161**	P	**P**	**22 10 42.7**	**-1.3**
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	**22 10 42.7**	**-1.4**
	comp=Z,55nm,0.7s,baz=339,slow=11,SNR=126						
WRA				PcP	**PcP**	**22 14 32.5**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=332,slow=2.2,SNR=6.5						
WRA				S	**S**	**22 14 51.5**	**-0.2**
	comp=Z,3.5nm,1.0s,baz=334,slow=17,SNR=7.7						
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	**22 10 44.3**	**+0.2**
WR0	**Warramunga Arr**	**23.14**	**161**	P	**P**	**22 10 43.5**	**-1.4**
WR0				IAmb	IAmb	22 10 46.4	
	comp=Z,38nm,0.8s						
PMG	**Port Moresby**	**23.38**	**119**	LR	LR	22 20 57.2	
	comp=Z,271nm,21.3s,baz=322,slow=39						
QIZ	**Qiongzhong**	**23.61**	**317**	P	**P**	**22 10 50.0**	**+0.6**
QIZ				S	**S**	**22 15 02.5**	**+1.8**
QIZ				LR	LR		
	comp=Z,490nm,11.4s						
QIZ	**Qiongzhong**	**23.61**	**317**	P	**P**	**22 10 48.4**	**-1.0**
QIZ				IAmb	IAmb	22 11 00.8	
	comp=Z,44nm,1.5s						
PSA00	**Pilbara Seismi**	**24.33**	**195**	P	**P**	**22 10 55.6**	**-0.4**
PSA00				IAmb	IAmb	22 10 56.2	
	comp=Z,38nm,1.5s						
JOW	**Kunigami**	**24.76**	**4**	P	**P**	**22 10 59.9**	**-0.1**
JOW				IAmb	IAmb	22 11 02.8	
	comp=Z,41nm,1.0s						
IPM	**Ipoh**	**25.68**	**276**	P	**P**	**22 11 07.8**	**-0.6**
IPM	**Ipoh**	**25.68**	**276**	P	**P**	**22 11 09.0**	**+0.6**
KULM	**Kulim**	**26.13**	**278**	P	**P**	**22 11 12.1**	**-0.4**
KRVT	**Karavat (AS076**	**26.14**	**104**	LR	LR	22 20 00.2	
	comp=Z,

INU	**Inuyama**	**34.58**	**15**	P	**P**	**22 12 26.8**	**-0.1**
JGF	**Kuroka**	**34.91**	**15**	P	**P**	**22 12 30.1**	**+0.3**
JGF				IAmb	IAmb	22 12 30.6	
	comp=Z,13nm,0.9s						
KSAR	**Wonju Array Be**	**35.31**	**2**	P	**P**	**22 12 32.9**	**-0.3**
KSRS	**Korea Array**	**35.33**	**2**	P	**P**	**22 12 34.2**	**+1.0**
	comp=Z,5.1nm,0.7s,baz=176,slow=9.9,SNR=20						
KS19	**Wonju Array Si**	**35.37**	**2**	P	**P**		
KS19				IAmb	IAmb	22 12 44.4	
	comp=Z,15nm,1.2s						
BBOO	**Buckleboo**	**35.73**	**166**	P	**P**	**22 12 36.6**	**-0.3**
NWAO	**Narrogin (SRO)**	**35.83**	**194**	P	**P**	**22 12 37.3**	**-0.5**
	comp=Z,3.2nm,0.4s,baz=26,slow=8.2,SNR=11						
NWAO	**Narrogin (SRO)**	**35.83**	**194**	P	**P**	**22 12 37.2**	**-0.5**
NWAO				IAmb	IAmb	22 12 43.7	
	comp=Z,21nm,1.2s						
XAN	**Xi'an**	**35.93**	**335**	P	**P**	**22 12 38.0**	**-0.6**
XAN				pP	pP	22 12 45.5	-5.1
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
XAN	**Xi'an**	**35.93**	**335**	P	**P**	**22 12 37.5**	**-1.1**
XAN				IAmb	IAmb	22 12 38.6	
	comp=Z,8.6nm,0.8s						
CD2	**Chengdu**	**36.00**	**325**	P	**P**	**22 12 38.3**	**-1.0**
CD2				S	**S**	**22 18 16.5**	**+1.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,180nm,9.0s						
CD2				LR	LR		
	comp=Z,590nm,17.6s						
CD2				LR	LR		
	comp=Z,760nm,19.8s						
CD2				LR	LR		
	comp=Z,870nm,17.6s						
MJAR	**Matsushiro Arr**	**36.02**	**16**	P	**P**	**22 12 38.2**	**-1.2**
	comp=Z,8.6nm,0.6s,baz=183,slow=9.9,SNR=4.8						
MJAR	**Matsushiro Arr**	**36.02**	**16**	P	**P**	**22 12 38.1**	**-1.2**
MAJO	**Matsushiro**	**36.02**	**16**	P	**P**	**22 12 38.5**	**-0.8**
MAJO				IAmb	IAmb	22 12 43.7	
	comp=Z,25nm,1.1s						
MAT	**Matsushiro**	**36.02**	**16**	P	**P**	**22 12 38.4**	**-0.9**
EIDS	**Eidsvold**	**36.06**	**140**	P	**P**	**22 12 39.0**	**-0.8**
EIDS				IAmb	IAmb	22 12 47.1	
	comp=Z,14nm,1.2s						
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**22 12 43.2**	**-0.6**
	comp=Z,4.6nm,0.4s,baz=346,slow=7.2,SNR=11						
STKA				LR	LR	22 29 24.9	
	comp=Z,151nm,21.9s,baz=4.7,slow=39						
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**22 12 43.2**	**-0.6**
DL2	**Dalian**	**37.04**	**354**	P	**P**	**22 12 49.0**	**+1.1**
DL2				S	**S**	**22 18 34.3**	**+3.9**
DL2				pmax	pmax		
	comp=Z,41nm,0.6s						
DL2				LR	LR		
	comp=Z,210nm,13.8s						
DL2				LR	LR		
	comp=Z,280nm,10.0s						
DL2				LR	LR		
	comp=Z,250nm,14.3s						
JMM	**Marumori**	**38.01**	**18**	P	**P**	**22 12 56.3**	**+0.1**
BJT	**Baijiatuan**	**39.04**	**347**	P	**P**	**22 13 04.8**	**+0.1**
BJI	**Beijing**	**39.06**	**347**	P	**P**	**22 13 04.5**	**-0.4**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LZH	**Lanzhou**	**39.96**	**331**	*e*P	**P**	**22 13 13.0**	**+0.3**
LZH				pP	pP	22 13 21.5	-3.3
LZH				sP	pwP	22 13 25.0	-2.2
LZH				pmax	pmax		
	comp=Z,24nm,1.5s						
LZH				LR	LR		
	comp=Z,300nm,12.7s						
LZH				LR	LR		
	comp=Z,700nm,13.3s						
LZH				LR	LR		
	comp=Z,680nm,16.8s						
ARMA	**Armidale**	**40.08**	**145**	P	**P**	**22 13 13.6**	**-0.1**
SHL	**Shillong**	**40.84**	**308**	P	**P**	**22 13 18.5**	**-1.7**
SHL				IAmb	IAmb	22 13 28.9	
	comp=Z,16nm,0.8s						
HHC	**Hu-ho-hao-te**	**41.02**	**343**	*e*P	**P**	**22 13 22.8**	**+1.5**
HHC				sP	pP	22 13 35.3	+1.8
HHC				S	**S**	**22 19 34.0**	**+3.4**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
HHC				LR	LR		
	comp=Z,800nm,15.7s						
HHC				LR	LR		
	comp=Z,380nm,22.4s						
HHC				LR	LR		
	comp=Z,580nm,16.2s						
CN2	**Changchun**	**41.66**	**359**	*e*P	**P**	**22 13 29.8**	**+3.4**
USA0B	**Ussuriysk Arra**	**42.31**	**6**	P	**P**	**22 13 31.7**	**0.0**
USRK	**Ussuriysk Ar.**	**42.31**	**6**	P	**P**	**22 13 32.0**	**+0.4**
	comp=Z,8.3nm,0.8s,baz=193,slow=7.4,SNR=18						
USRK				LR	LR	22 33 03.7	
	comp=Z,22nm,19.1s,baz=213,slow=39						
H11S3	**WAKE ISLAND Hy**	**42.55**	**65**	T	T	22 59 12.9	
	baz=252,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hy**	**42.57**	**65**	T	T	22 59 08.7	
	baz=252,slow=75,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**42.57**	**65**	T	T	22 59 08.9	
	baz=252,slow=75,SNR=5.9						
LSA	**Lhasa**	**43.53**	**313**	P	**P**	**22 13 42.2**	**-0.1**
ASAJ	**Asahikawa**	**44.29**	**16**	P	**P**	**22 13 48.9**	**+1.2**
	comp=Z,7.4nm,0.4s,baz=227,slow=12,SNR=7.6						
JKA	**Kamikawa-asahi**	**44.29**	**16**	P	**P**	**22 13 48.3**	**+0.7**
JKA				IAmb	IAmb	22 13 49.8	
	comp=Z,19nm,0.9s						
GTA	**Gaotai**	**44.55**	**330**	P	**P**	**22 13 48.8**	**-1.2**
GTA				pP	pP	22 13 56.0	-6.2
GTA				sP	pwP	22 13 59.3	-5.3
GTA				PcP	**PcP**	**22 15 33.8**	**+1.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,59nm,4.7s						
GTA				LR	LR		
	comp=Z,930nm,22.2s						
GTA				LR	LR		
	comp=Z,1μm,20.4s						
GTA				LR	LR		
	comp=Z,1μm,20.4s						
DZM	**Mont Dzumac**	**45.63**	**124**	LR	LR	22 34 09.0	
	comp=Z,136nm,19.7s,baz=257,slow=38						
YSS	**Yuzh-Sakhalins**	**46.95**	**15**	P	**P**	**22 14 08.7**	**+0.1**
HIA	**Hailar**	**47.48**	**354**	P	**P**	**22 14 12.8**	**+0.1**
HIA				IAmb	IAmb	22 14 19.7	
	comp=Z,6.4nm,0.8s						
ULN	**Ulaanbaatar**	**48.74**	**343**	P	**P**	**22 14 22.2**	**-0.5**
ULN				IAmb	IAmb	22 14 23.5	
	comp=Z,8.1nm,1.1s						
SONM	**Songino Array**	**48.92**	**342**	P	**P**	**22 14 23.6**	**-0.4**
	comp=Z,2.7nm,0.4s,baz=155,slow=9.2,SNR=29						
SONM	**Songino Array**	**48.92**	**342**	P	**P**	**22 14 23.6**	**-0.4**
WMQ	**Urumqi**	**54.10**	**326**	*e*P	**P**	**22 15 04.5**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,17nm,1.5s						
WMQ				LR	LR		
	comp=Z,500nm,20.5s						
WMQ				LR	LR		
	comp=Z,1μm,18.3s						
WMQ				LR	LR		
	comp=Z,1μm,21.9s						
PEA0B	**Petropavlovsk-**	**57.08**	**22**	P	**P**	**22 15 24.9**	**+0.9**
PETK	**Petropavlovsk-**	**57.08**	**22**	P	**P**	**22 15 24.4**	**+0.4**
	comp=Z,5.9nm,0.5s,baz=177,slow=4.3,SNR=32						
ZSN	**Zaisan**	**57.92**	**328**	*e*P	**P**	**22 15 28.3**	**-1.6**
	baz=328						
ZSN				*e*S	**S**	**22 23 27.9**	**+1.3**
	baz=328						
SHLS	**Shalkode**	**58.63**	**321**	*e*P	**P**	**22 15 32.4**	**-2.8**
	comp=Z,4.0nm,0.8s,baz=321						
NIL	**Nilore**	**58.92**	**309**	P	**P**	**22 15 36.5**	**-0.7**
NIL				IAmb	IAmb	22 15 39.9	
	comp=Z,6.2nm,0.6s						
MK31	**Makanchi Array**	**58.93**	**326**	P	**P**	**22 15 36.1**	**-0.9**
MK31				IAmb	IAmb	22 15 42.9	
	comp=Z,7.7nm,1.2s						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**22 15 36.0**	**-1.0**
	comp=Z,5.4nm,0.4s,baz=119,slow=7.5,SNR=193						
MKAR	**Makanchi Array**	**58.93**	**326**	P	**P**	**22 15 35.9**	**-1.1**
MAKZ	**Makanchi**	**59.12**	**326**	P	**P**	**22 15 37.1**	**-1.2**
MAKZ				IAmb	IAmb	22 15 40.7	
	comp=Z,17nm,1.3s						
KSH	**Kashi**	**59.21**	**316**	P	P	22 15 45.5	+6.3
KSH				S	**S**	**22 23 47.5**	**+3.6**
KSH				pmax	pmax		
	comp=Z,17nm,1.2s						
KSH				pmax	pmax		
	comp=Z,400nm,8.0s						
KSH				LR	LR		
	comp=Z,180nm,5.7s						
KSH				LR	LR		
	comp=Z,200nm,5.4s						
KSH				LR	LR		
	comp=Z,230nm,5.3s						
SATY	**Saty**	**59.24**	**321**	*e*P	**P**	**22 15 38.2**	**-1.1**
	comp=Z,4.6nm,0.8s,baz=320						
KPKS	**Kokpek**	**59.27**	**321**	*e*P	**P**	**22 15 38.4**	**-1.2**
	comp=Z,4.7nm,0.6s,baz=321						
YAK	**Yakutsk**	**59.95**	**2**	P	**P**	**22 15 43.9**	**+0.2**
MDOK	**Medeo**	**60.16**	**320**	*e*P	**P**	**22 15 44.8**	**-0.9**
	baz=320						
MDOK				*e*S	**S**	**22 23 57.6**	**+1.5**
	baz=320						
TNSS	**Tian-Shan**	**60.17**	**320**	*e*P	**P**	**22 15 45.1**	**-1.0**
	baz=320						
TDK	**Taldyqorghan**	**60.23**	**322**	*e*P	**P**	**22 15 44.9**	**-1.0**
	baz=322						
AAA	**Alma-Ata**	**60.27**	**320**	*e*P	**P**	**22 15 45.0**	**-1.4**
	baz=320						
LBZ	**Lake Benmore**	**60.31**	**145**	P	**P**	**22 15 46.4**	**-0.1**
MA2	**Magadan**	**60.42**	**14**	P	**P**	**22 15 46.8**	**-0.2**
CHKK	**Chushkaly**	**60.53**	**321**	*e*P	**P**	**22 15 46.5**	**-1.6**
	baz=320						
KUU	**Kurty**	**60.96**	**321**	*e*P	**P**	**22 15 49.9**	**-1.2**
	comp=Z,8.0nm,0.7s,baz=320						
AAK	**Ala-Archa**	**61.59**	**319**	P	**P**	**22 15 54.7**	**-0.8**
	comp=Z,2.3nm,0.6s,baz=168,slow=5.8,SNR=5.2						
AAK	**Ala-Archa**	**61.59**	**319**	P	**P**	**22 15 54.5**	**-0.9**
ZAA0	**Zalesovo Array**	**62.09**	**334**	P	**P**	**22 15 57.4**	**-1.0**
ZAA0				IAmb	IAmb	22 16 05.0	
	comp=Z,10.0nm,1.4s						
ZALV	**Zalesovo Beam**	**62.09**	**334**	P	**P**	**22 15 57.2**	**-1.2**
	comp=Z,2.0nm,0.4s,baz=141,slow=6.8,SNR=6.2						
SEM	**Semipalatinsk**	**62.12**	**328**	*e*P	**P**	**22 15 56.9**	**-2.0**
	baz=328						
KBL	**Kabul**	**62.51**	**308**	P	**P**	**22 15 59.7**	**-2.2**
KBL				IAmb	IAmb	22 16 03.6	
	comp=Z,4.2nm,0.7s						
BTLS	**Baital**	**62.95**	**321**	*e*P	**P**	**22 16 02.7**	**-1.6**
	baz=321						
KURBB	**Kurchatov Arra**	**63.15**	**328**	P	**P**	**22 16 04.5**	**-1.0**
	comp=Z,12nm,0.6s,baz=129,slow=6.0,SNR=49						
KURK	**Kurchatov**	**63.16**	**328**	P	**P**	**22 16 04.8**	**-0.8**
DZA	**Taraz**	**63.80**	**318**	*e*P	**P**	**22 16 08.0**	**-2.1**
	baz=318						
IUG	**Iuzhnay**	**64.40**	**316**	*e*P	**P**	**22 16 12.9**	**-1.1**
	baz=316						
KK31	**Karatay Array**	**64.44**	**318**	P	**P**	**22 16 13.3**	**-0.9**
KKAR	**Karatay Array**	**64.44**	**318**	P	**P**	**22 16 13.4**	**-0.8**
KKAR	**Karatay Array**	**64.44**	**318**	P	**P**	**22 16 13.4**	**-0.8**
BRZS	**Berezniki**	**66.05**	**325**	*e*P	**P**	**22 16 23.4**	**-1.1**
	comp=Z,3.8nm,1.1s,baz=325						
BVAR	**Borovoye Array**	**68.73**	**327**	P	**P**	**22 16 39.9**	**-1.5**
	comp=Z,1.6nm,0.4s,baz=116,slow=10,SNR=11						
BRVK	**Borovoye**	**68.80**	**327**	P	**P**	**22 16 41.0**	**-0.8**
BRVK				IAmb	IAmb	22 16 45.0	
	comp=Z,6.6nm,0.7s						
TIXI	**Tiksi**	**69.58**	**1**	P	**P**	**22 16 45.9**	**-0.4**
TIXI				IAmb	IAmb	22 16 47.1	
	comp=Z,8.6nm,1.1s						
NRIK	**Noril'sk**	**72.10**	**346**	P	**P**	**22 17 01.8**	**+0.2**
	comp=Z,8.8nm,0.6s,baz=135,slow=6.0,SNR=12						
SOCY	**Socotra**	**72.61**	**282**	P	**P**	**22 17 03.5**	**-2.3**
SOCY				IAmb	IAmb	22 17 09.7	
	comp=Z,14nm,0.9s						
ABKAR	**Akbulak array**	**73.44**	**321**	P	**P**	**22 17 09.0**	**-1.0**
ABKAR	**Akbulak array**	**73.44**	**321**	P	**P**	**22 17 08.9**	**-1.0**
AKTO	**Aktyubinsk**	**74.96**	**322**	P	**P**	**22 17 18.0**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=103,slow=7.9,SNR=12						
ARU	**Arti**	**76.35**	**328**	P	**P**	**22 17 26.0**	**-0.7**
ARU				IAmb	IAmb	22 17 26.9	
	comp=Z,15nm,0.9s						
SDPT	**Sand Point**	**78.70**	**34**	P	**P**	**22 17 40.0**	**+0.3**
OPO	**Ambohidratompo**	**80.62**	**251**	P	**P**	**22 17 51.1**	**0.0**
	comp=Z,6.2nm,0.8s,baz=55,slow=4.9,SNR=5.5						
OPO				LR	LR	22 52 33.8	
	comp=Z,47nm,18.0s,baz=255,slow=35						
RAYN	**Ar Rayn**	**81.07**	**293**	P	**P**	**22 17 52.4**	**-1.0**
CHIR	**Chirikof Islan**	**81.49**	**34**	P	**P**	**22 17 55.6**	**+0.8**
VNDA	**Vanda**	**81.71**	**173**	P	**P**	**22 17 55.4**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=314,slow=7.2,SNR=40						
VNDA	**Vanda**	**81.71**	**173**	P	**P**	**22 17 55.6**	**0.0**
MAW	**Mawson**	**82.08**	**200**	P	**P**	**22 17 58.3**	**+0.7**
	comp=Z,8.0nm,1.2s,baz=63,slow=9.0,SNR=2.8						
MAW	**Mawson**	**82.08**	**200**	P	**P**	**22 17 58.2**	**+0.6**
SII	**Sitkinak Islan**	**82.40**	**33**	P	**P**	**22 18 00.6**	**+1.0**
SII				IAmb	IAmb	22 18 09.0	
	comp=Z,17nm,1.0s						
TTA	**Tatalina**	**82.50**	**27**	P	**P**	**22 18 01.3**	**+1.2**
TTA				IAmb	IAmb	22 18 02.6	
	comp=Z,13nm,1.1s						
OHAK	**Old Harbor**	**82.97**	**33**	P	**P**	**22 18 03.2**	**+0.7**
OHAK				IAmb	IAmb	22 18 07.7	
	comp=Z,16nm,1.4s						
AKH	**Akhalkalaki**	**83.54**	**311**	P	**P**	**22 18 06.2**	**+0.1**
GEVA	**Gevas**	**83.73**	**308**	P	**P**	**22 18 06.9**	**-0.2**
A21K	**Barrow**	**83.90**	**18**	P	**P**	**22 18 07.8**	**+0.8**
IMAR	**Indian Mountai**	**83.98**	**24**	P	**P**	**22 18 08.7**	**+1.1**
KBZ	**Khabaz**	**84.10**	**314**	P	**P**	**22 18 08.2**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=143,slow=5.5,SNR=3.9						
SUA	**Susitna One**	**84.74**	**29**	P	**P**	**22 18 12.1**	**+0.5**
RND	**Reindeer**	**85.78**	**27**	P	**P**	**22 18 16.3**	**-0.4**
RND				IAmb	IAmb	22 18 18.4	
	comp=Z,3.6nm,0.6s						
TOLK	**Toolik Lake Re**	**85.91**	**21**	P	**P**	**22 18 17.8**	**+0.6**
TOLK				IAmb	IAmb	22 18 20.5	
	comp=Z,4.5nm,0.8s						
ILAR	**Eielson Array**	**86.72**	**25**	P	**P**	**22 18 19.6**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=254,slow=4.5,SNR=12						
ILAR	**Eielson Array**	**86.72**	**25**	P	**P**	**22 18 20.1**	**-1.1**
KLMR	**Klimovskoe**	**86.87**	**331**	*e*P	**P**	**22 18 19.6**	**-2.4**
KLMR				AMP		22 18 23.6	
	comp=Z,14nm,1.1s						
BMAR	**Burnt Mountain**	**87.72**	**23**	P	**P**	**22 18 26.8**	**+0.7**
K27K	**Chicken**	**88.81**	**26**	P	**P**	**22 18 32.2**	**+1.0**
K27K				IAmb	IAmb	22 18 33.5	
	comp=Z,7.0nm,1.1s						
BCAR	**Beaver Creek A**	**88.98**	**27**	P	**P**	**22 18 32.4**	**+0.3**
MMAI	**Mount Meron Ar**	**89.96**	**303**	P	**P**	**22 18 38.1**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=84,slow=7.6,SNR=5.1						
SYO	**Syowa Base**	**90.76**	**201**	*i*eP	**P**	**22 18 39.8**	**-0.4**
QSPA	**South Pole Qui**	**91.89**	**180**	P	**P**	**22 18 45.7**	**+0.1**
	comp=Z,1.4nm,0.3s,baz=44,slow=2.3,SNR=2.9						
ARCES	**ARCESS Array B**	**92.05**	**340**	P	**P**	**22 18 46.0**	**-0.2**
	comp=Z,6.0nm,1.1s,baz=69,slow=6.9,SNR=5.7						
AKASG	**Malin Array Be**	**93.18**	**321**	P	**P**	**22 18 50.4**	**-1.4**
	comp=Z,0.4nm,0.4s,baz=66,slow=4.2,SNR=2.1						
FINES	**FINESS Array B**	**93.32**	**332**	P	**P**	**22 18 50.8**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=74,slow=5.9,SNR=6.8						
FINES	**FINESS Array B**	**93.32**	**332**	P	**P**	**22 18 51.0**	**-1.2**
MLR	**Muntele Rosu**	**96.08**	**316**	P	**P**	**22 19 04.8**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=73,slow=19,SNR=2.5						
BURAR	**Bucovina Array**	**96.23**	**318**	P	**P**	**22 19 05.5**	**-0.5**
BUR08	**Bucovina Ar. S**	**96.23**	**318**	P	**P**	**22 19 05.9**	**-0.2**
BUR08				IAmb	IAmb	22 19 21.5	
	comp=Z,7.8nm,1.4s						
NOA	**NORSAR Array B**	**100.30**	**333**	P	**Pdif**	**22 19 23.3**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=58,slow=5.8,SNR=2.0						
SCHQ	**Schefferville**	**122.30**	**9**	PKP	**PKPdf**	**22 24 32.6**	**+0.2**
	comp=Z,3.0nm,0.5s,baz=326,slow=3.6,SNR=6.9						
TORD	**Torodi Ar. Bea**	**123.34**	**287**	PKP	**PKPdf**	**22 24 34.5**	**-1.0**
	comp=Z,1.6nm,0.9s,baz=94,slow=2.2,SNR=7.4						
TORD				PKKPab	**PKKPbc**	**22 34 25.1**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=280,slow=3.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**123.34**	**287**		**PKPdf**	**22 24 34.7**	**-0.7**
TKL	**Tuckaleechee C**	**133.01**	**34**	PKP	**PKPdf**	**22 24 53.1**	**-0.3**
	comp=Z,5.4nm,0.3s,baz=312,slow=0.4,SNR=16						
TKL	**Tuckaleechee C**	**133.01**	**34**		**PKPdf**	**22 24 54.0**	**+0.6**
PLCA	**Paso Flores**	**138.41**	**160**	PKP	**PKPdf**	**22 25 03.7**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=215,slow=5.2,SNR=4.0						

*IDC **26** 22:05:51.9±0.8, 5.78N×61.41E, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.0/60, mbtmp4.1/18, MS4.8/4. Ms1 4.8/4, ms1mx4.1/15, Error ellipse: s-maj=21.1km s-min=16.9km az=23.0*

*GCMT **26** 22:05:53.0±0.2, 5.74N±0.01×61.29E±0.01, h12km, MW5.1/129, Moment Tensor Solution. s50,c63; s129,c231; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=6.58±.10; Mθθ4.41±.09; Mϕϕ2.17±.10; Mrθ1.22±.34; Mθϕ-2.75±.08; Mϕr0.09±.40; Best double couple: M06.53200×1016 NP1:ϕs130.00000°, δ41.00000°, λ-81.00000°. NP2:ϕs298.00000°, δ50.00000°, λ-98.00000°. Principal axes: T 6.3320, Plg4.0000°, Azm33.0000°; N 0.4000, Plg6.0000°, Azm303.0000°; P -6.7320, Plg83.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 22:05:54.0±0.7, 5.38N±0.1×61.4E±0.1, h10km, n38, σ1ᵍ56/34, mb4.2/18, MS4.9/3, 6C-3D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.69**	**311**	P	Pn	22 08 20.7	+7.1
RBK	**Rabkut**	**13.58**	**329**	P	**Pn**	**22 09 10.0**	**+3.1**
WHFO	**Wadi Hawf**	**14.15**	**329**	P	**P**	**22 09 18.3**	**-4.0**
DQM	**DQM**	**14.51**	**345**	P	**Pn**	**22 09 22.6**	**+3.1**
PALK	**Pallekele**	**19.20**	**85**	LR	LR	22 16 16.7	
	comp=Z,2μm,18.4s,baz=12,slow=32						
AAK	**Ala-Archa**	**38.43**	**16**	P	**P**	**22 13 15.2**	**-0.9**
	4.3nm,0.8s,baz=205,slow=9.7,SNR=12						
CMAR	**Chiang Mai Arr**	**38.66**	**68**	P	**P**	**22 13 18.6**	**+0.5**
	2.4nm,0.8s,baz=257,slow=9.2,SNR=12						
LSZ	**Lusaka**	**39.05**	**237**	P	**P**	**22 13 20.4**	**-1.1**
	0.6nm,0.3s,baz=40,slow=9.3,SNR=3.1						
BRTR	**Keskin Array B**	**42.01**	**327**	P	**P**	**22 13 45.2**	**-0.5**
	2.3nm,0.8s,baz=150,slow=10.0,SNR=4.8						
AKTO	**Aktyubinsk**	**44.54**	**357**	P	**P**	**22 14 06.7**	**+0.8**
	3.7nm,0.8s,baz=176,slow=6.4,SNR=8.8						
MKAR	**Makanchi Array**	**44.59**	**20**	P	**P**	**22 14 06.5**	**+0.2**
	1.9nm,0.8s,baz=206,slow=8.1,SNR=8.9						
KURBB	**Kurchatov Arra**	**46.88**	**15**	P	**P**	**22 14 24.7**	**+0.4**
	1.6nm,0.8s,baz=214,slow=8.1,SNR=8.5						
BOSA	**Boshof**	**48.86**	**224**	LR	LR	22 33 36.6	
	comp=Z,1μm,18.6s,baz=49,slow=34						
VRI	**Vrincioaia**	**49.93**	**329**	↑P	**P**	**22 14 48.6**	**+0.6**
PLOR	**Plostina**	**49.96**	**329**	↓P	**P**	**22 14 49.8**	**+1.5**
MLR	**Muntele Rosu**	**50.09**	**328**	P	**P**	**22 14 50.4**	**+1.0**
	2.5nm,0.8s,baz=138,slow=13,SNR=2.8						
TESR	**Tescani**	**50.40**	**329**	↑P	**P**	**22 14 53.0**	**+1.5**
VOIR		**50.53**	**327**	↑P	**P**	**22 14 52.7**	**+0.1**
OZUR		**50.57**	**328**	↓P	**P**	**22 14 53.4**	**+0.5**
DOPR	**Dopca**	**50.69**	**328**	↑P	**P**	**22 14 53.7**	**-0.1**
ARR	**Arges**	**50.71**	**327**	↑P	**P**	**22 14 54.7**	**+0.8**
ZALV	**Zalesovo Beam**	**51.59**	**17**	P	**P**	**22 15 00.6**	**+0.3**
	2.8nm,0.8s,baz=218,slow=7.0,SNR=7.5						
HERR	**Herculane**	**51.64**	**325**	↑P	**P**	**22 14 59.0**	**-1.9**
AKASG	**Malin Array Be**	**52.17**	**335**	P	**P**	**22 15 04.4**	**-0.3**
	0.3nm,0.3s,baz=145,slow=6.1,SNR=4.4						
BZS	**Buzias**	**52.53**	**326**	↓P	**P**	**22 15 07.7**	**+0.2**
KOLS	**Kolonicke sedl**	**54.22**	**329**	e	**P**	**22 15 21.7**	**+1.8**
SONM	**Songino Array**	**56.71**	**35**	P	**P**	**22 15 36.5**	**-1.5**
	2.5nm,0.9s,baz=229,slow=6.3,SNR=2.9						
SONM				LR	LR	22 40 52.7	
	comp=Z,776nm,18.3s,baz=202,slow=37						
GERES	**GERESS Array B**	**58.81**	**325**	P	**P**	**22 15 52.7**	**0.0**
	0.2nm,0.4s,baz=131,slow=6.1,SNR=3.8						
KHC	**Kasperske Hory**	**59.02**	**325**	*e*P	**P**	**22 15 52.1**	**-2.0**
TORD	**Torodi Ar. Bea**	**59.25**	**282**	P	**P**	**22 15 56.5**	**+0.3**
	0.6nm,0.8s,baz=107,slow=5.4,SNR=2.8						
DAVOX	**Davos/Dischmat**	**60.10**	**322**	P	**P**	**22 16 00.3**	**-1.5**
	2.8nm,0.9s,baz=180,slow=9.1,SNR=4.5						
ESDC	**Sonseca Array**	**67.42**	**311**	P	**P**	**22 16 48.9**	**-1.2**
	1.5nm,1.1s,baz=90,slow=6.6,SNR=5.3						
KSRS	**Korea Array**	**67.85**	**52**	P	**P**	**22 16 51.9**	**-0.8**
	4.3nm,1.0s,baz=255,slow=7.2,SNR=8.7						
WRA	**Warramunga Arr**	**76.06**	**112**	P	**P**	**22 17 42.0**	**-0.4**
	6.5nm,1.0s,baz=289,slow=5.1,SNR=12						
ASAR	**Alice Springs**	**76.44**	**116**	P	**P**	**22 17 44.2**	**-0.3**
	5.9nm,1.0s,baz=290,slow=5.4,SNR=13						
VNA2	**Neumayer--Watz**	**88.70**	**198**	P	**P**	**22 18 50.0**	**+2.7**
	baz=95,slow=6.2						
VNA3	**Neumayer Olymp**	**89.50**	**198**	P	**P**	**22 18 53.3**	**+2.2**
QSPA	**South Pole Qui**	**95.79**	**180**	LR	LR	22 56 12.0	
	comp=Z,479nm,20.8s,baz=288,slow=32						

IDC 26 22:11:01.5±4.9, 6.06N×61.78E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.4/57, mbtmp3.8/3, Error ellipse: s-maj=807.6km s-min=33.7km az=33.0, Carlsberg Ridge

| Code | Station Name | Δ° | AZ° | Phase | ID | Time | Res |
|---|---|---|---|---

MW5.5/142,Moment Tensor Solution. s122,c222; s142,c288; Duration: 1ˢ4 Moment tensor: Scale 10¹⁷ Nm; Mrr=0.22±.02; Mθθ=0.60±.02; Mφφ=-0.38±.03; Mrθ=-0.11±.05; Mrφ=-2.16±.02; Mθφ=-0.13±.06; Best double couple: M₀2.22300×10¹⁷ NP1:φs353.00000°,δ86.00000°, λ-4.00000°. NP2:φs84.00000°,δ86.00000°,λ-176.00000°. Principal axes: T 2.3250, Plg0.0000°, Azm219.0000°; N -0.2040, Plg85.0000°, Azm128.0000°; P -2.1200, Plg5.0000°, Azm309.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 26 22:26:00.8±0.4,**8°32N**±0'.06×**104°10W**±0'.06,**h10**km,**n848,** σ1ˢ**44**/561,**mb5.0**/108,**MS5.1**/363,**2D**,**Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**10.65**	**30**	Pn		**Pn**		**22 28 34.7**	**+0.9**
MOIG	**Morelia**	**11.64**	**14**	Pn		**Pn**		**22 28 48.7**	**+1.4**
CMIG	**Matias Romero**	**12.52**	**45**	Pn		**Pn**		**22 28 57.2**	**-2.0**
	0.4nm,0.3s,baz=194,slow=4.2,SNR=3.2								
CMIG				LR		LR		22 32 36.7	
	comp=Z,20μm,20.9s,baz=197,slow=31								
CCIG	**Comitan**	**14.11**	**55**			**P**		**22 29 27.6**	**-1.3**
HUEH	**Huehuetenango**	**14.16**	**59**	Pn		**Pn**		**22 29 20.5**	**-1.3**
ZAIG	**Zacatecas**	**14.45**	**6**	Pn		**Pn**		**22 29 27.2**	**+1.5**
SNET	**Serv Nac Est T**	**15.54**	**69**			**P**		**22 29 45.8**	**+1.1**
ESQI	**Esquipulas**	**15.74**	**65**			**P**		**22 29 45.1**	**-1.8**
PETF	**Flores**	**16.30**	**57**	Pn		**Pn**		**22 29 51.0**	**+1.0**
PAYG	**Puerto Ayora**	**16.42**	**122**	*eP*		**P**		**22 29 53.5**	**-0.8**
PAYG	**Puerto Ayora**	**16.42**	**122**	P		**Pn**		**22 29 52.6**	**+1.0**
LPIG	**La Paz**	**16.78**	**340**	LR		LR		22 34 47.0	
	comp=Z,9μm,20.1s,baz=162,slow=31								
CRIN	**San Cristobal**	**17.32**	**74**	Pn		**Pn**		**22 30 03.0**	**0.0**
CRIN				IAmb		IAmb		22 30 33.9	
	comp=Z,280nm,1.5s								
TGUH	**Tegucigalpa,Un**	**17.46**	**69**	*eP*		**Pn**		**22 30 04.3**	**-0.6**
TGUH	**Tegucigalpa,Un**	**17.46**	**69**			**P**		**22 30 06.8**	**+0.7**
TGUH				IAmb		IAmb		22 30 18.6	
	comp=Z,318nm,1.6s								
MATN	**Matagalpa**	**18.44**	**74**	P		**P**		**22 30 16.7**	**-0.2**
MATN				IAmb		IAmb		22 30 28.9	
	comp=Z,144nm,1.5s								
HPIG		**18.58**	**356**	P		**P**		**22 30 18.8**	**+0.5**
HPIG				IAmb		IAmb		22 30 48.4	
	comp=Z,183nm,1.7s								
ACON	**Acoyapa**	**18.98**	**77**	P		**Pn**		**22 30 23.7**	**+0.4**
JTS	**Las Juntas de**	**19.00**	**83**	P		**Pn**		**22 30 25.5**	**+1.9**
	baz=354,slow=8.3,SNR=4.3								
JTS				LR		LR		22 35 49.5	
	comp=Z,2μm,18.7s,baz=317,slow=31								
JTS	**Las Juntas de**	**19.00**	**83**	*eP*		**Pn**		**22 30 25.2**	**+1.6**
JTS	**Las Juntas de**	**19.00**	**83**	P		**Pn**		**22 30 24.5**	**+0.8**
JTS				pmax		pmax			
	comp=Z,124nm,1.6s								
JTS	**Las Juntas de**	**19.00**	**83**	P		**Pn**		**22 30 24.4**	**+0.8**
JTS				IAmb		IAmb		22 30 38.1	
	comp=Z,124nm,1.6s								
ESPN	**Las Esperanzas**	**19.86**	**77**	P		**Pn**		**22 30 32.8**	**-1.1**
ESPN				IAmb		IAmb		22 31 15.9	
	comp=Z,120nm,1.4s								
833A	**Chaparral WMA,**	**20.39**	**12**	P		**P**		**22 30 38.7**	**+0.7**
	baz=194								
833A	**Chaparral WMA,**	**20.39**	**12**	P		**P**		**22 30 38.8**	**+0.8**
SRIG	**Santa Rosalia**	**20.41**	**339**	IAMs_20		IAMs_20		22 36 37.2	
	comp=Z,6μm,18.0s								
TX31	**Lajitas Ar. Si**	**20.91**	**1**	P		**P**		**22 30 44.3**	**+0.6**
TX31				IAmb		IAmb		22 30 57.6	
	comp=Z,143nm,1.1s								
TX32	**Lajitas Array**	**20.91**	**1**	P		**P**		**22 30 44.5**	**+0.8**
TXAR	**Lajitas Array**	**20.91**	**1**	P		**P**		**22 30 44.0**	**+0.3**
	comp=Z,8.7nm,1.0s,baz=182,slow=12,SNR=17								
TXAR				LR		LR		22 38 17.7	
	comp=Z,8μm,19.6s,baz=0.0,slow=35								
735A	**Kenedy**	**21.27**	**15**	P		**P**		**22 30 47.9**	**+0.4**
735A				IAmb		IAmb		22 30 52.8	
	comp=Z,94nm,1.1s								
735A				IAMs_20		IAMs_20		22 38 49.2	
	comp=Z,6μm,21.0s								
JCT	**Junction City**	**22.41**	**10**	P		**P**		**22 30 59.9**	**+0.1**
JCT				pmax		pmax			
	comp=Z,119nm,1.5s								
JCT				MLR		MLR			
	comp=Z,18μm,18.0s								
JCT	**Junction City**	**22.41**	**10**	P		**P**		**22 31 00.2**	**+0.4**
	baz=191,SNR=6.9								
JCT	**Junction City**	**22.41**	**10**	P		**P**		**22 30 59.9**	**+0.1**
JCT				IAmb		IAmb		22 31 17.3	
	comp=Z,119nm,1.5s								
MAPC	**Malpelo**	**22.77**	**99**	*eP*		**P**		**22 30 59.0**	**-4.7**
HKT	**Hockley**	**22.88**	**19**	P		**P**		**22 31 05.0**	**+0.4**
HKT				pmax		pmax			
	comp=Z,194nm,1.7s								
HKT				MLR		MLR			
	comp=Z,4μm,18.0s								
HKT	**Hockley**	**22.88**	**19**	P		**P**		**22 31 05.0**	**+0.4**
435B	**Jarrell**	**23.17**	**14**	P		**P**		**22 31 08.1**	**+0.4**
	baz=197								
435B	**Jarrell**	**23.17**	**14**	P		**P**		**22 31 08.4**	**+0.7**
435B				IAmb		IAmb		22 31 12.4	
	comp=Z,124nm,1.4s								
MNTX	**Cornudas Mount**	**23.29**	**357**	P		**P**		**22 31 09.1**	**+0.1**
	baz=177,SNR=18								
MNTX	**Cornudas Mount**	**23.29**	**357**	P		**P**		**22 31 08.6**	**-0.4**
MNTX				IAmb		IAmb		22 31 57.5	
	comp=Z,112nm,1.8s								
PNME	**Penonome**	**23.52**	**88**	*eP*		**P**		**22 31 13.9**	**+2.5**
AZU	**Azuero**	**23.60**	**90**	*eP*		**P**		**22 31 12.8**	**+0.7**
GDL2	**Guadalupe Moun**	**23.77**	**359**	P		**P**		**22 31 13.4**	**-0.3**
121A	**Cookes Peak, D**	**24.34**	**352**	P		**P**		**22 31 18.4**	**-0.8**
	baz=171								
121A	**Cookes Peak, D**	**24.34**	**352**	P		**P**		**22 31 20.3**	**+1.2**
121A				IAmb		IAmb		22 31 55.3	
	comp=Z,52nm,1.3s								
WHTX	**Lake Whitney,**	**24.35**	**14**	P		**P**		**22 31 18.4**	**-0.7**
	baz=196								
WHTX	**Lake Whitney,**	**24.35**	**14**	P		**P**		**22 31 18.9**	**-0.1**
WHTX				IAmb		IAmb		22 31 24.8	
	comp=Z,127nm,1.6s								
WHTX				IAMs_20		IAMs_20		22 40 30.8	
	comp=Z,5μm,18.0s								
ABTX	**Abilene, Hawle**	**24.54**	**9**	P		**P**		**22 31 20.2**	**-0.6**
	baz=191,SNR=14								
ABTX	**Abilene, Hawle**	**24.54**	**9**	P		**P**		**22 31 20.1**	**-0.8**
ABTX				IAmb		IAmb		22 31 31.1	
	comp=Z,51nm,1.0s								
TUC	**Tucson**	**24.67**	**346**	P		**P**		**22 31 21.7**	**-0.3**
TUC				pmax		pmax			
	comp=Z,18nm,1.0s								
TUC				MLR		MLR			
	comp=Z,2μm,18.0s								
TUC	**Tucson**	**24.67**	**346**	P		**P**		**22 31 21.4**	**-0.6**
	baz=164								
TUC	**Tucson**	**24.67**	**346**	P		**P**		**22 31 21.7**	**-0.3**
237A	**Washetta, Mont**	**24.80**	**17**	P		**P**		**22 31 24.2**	**+1.1**
214A	**Organ Pipe Nat**	**24.88**	**342**	P		**P**		**22 31 23.6**	**-0.3**
	baz=159								
NATX	**Nacogdoches**	**24.93**	**19**	P		**P**		**22 31 24.4**	**+0.1**
	baz=203								
NATX	**Nacogdoches**	**24.93**	**19**	P		**P**		**22 31 24.0**	**-0.3**
545A	**Edgard**	**25.10**	**29**	IAMs_20		IAMs_20		22 41 19.5	
	comp=Z,5μm,22.0s								
MSTX	**Muleshoe**	**25.56**	**3**	P		**P**		**22 31 30.1**	**0.0**
	baz=183								
MSTX	**Muleshoe**	**25.56**	**3**	P		**P**		**22 31 30.1**	**0.0**
MSTX				IAmb		IAmb		22 31 39.2	
	comp=Z,81nm,1.4s								
Z35A	**Perchaven, San**	**25.68**	**13**	P		**P**		**22 31 31.0**	**-0.1**
Z35A				IAmb		IAmb		22 31 35.6	
	comp=Z,28nm,0.9s								
Z35A				IAMs_20		IAMs_20		22 41 03.1	
	comp=Z,5μm,19.0s								
Y22D	**IRIS PASSCAL I**	**25.76**	**355**	IAMs_20		IAMs_20		22 40 39.1	
	comp=Z,4μm,18.0s								
UPD2	**Meteti**	**25.81**	**88**	*eP*		**P**		**22 31 31.9**	**-0.6**
BNM	**Barren Site**	**25.81**	**355**	P		**P**		**22 31 32.2**	**-0.4**
LENM	**Lemitar**	**25.86**	**355**	P		**P**		**22 31 32.6**	**-0.4**
ESJX	**Sierra Juarez**	**26.02**	**337**	P		**P**		**22 31 34.2**	**-0.2**
ESJX				IAMs_20		IAMs_20		22 39 52.6	
	comp=Z,4μm,18.0s								
CPBX	**Cerro Prieto**	**26.14**	**338**	IAMs_20		IAMs_20		22 39 49.9	
	comp=Z,4μm,20.0s								
PAC1	**Pacto, Paraso**	**26.46**	**106**	*eP*		**P**		**22 31 38.3**	**-0.3**
AMTX	**Amarillo**	**26.53**	**4**	P		**P**		**22 31 39.2**	**+0.2**
	baz=185								
AMTX	**Amarillo**	**26.53**	**4**	P		**P**		**22 31 40.0**	**+1.1**
AMTX				IAmb		IAmb		22 31 49.8	
	comp=Z,52nm,1.1s								
GLA	**Glamis**	**26.54**	**340**	P		**P**		**22 31 39.5**	**+0.5**
GLA				pmax		pmax			
	comp=Z,49nm,1.1s								
GLA				MLR		MLR			
	comp=Z,5μm,22.0s								
GLA	**Glamis**	**26.54**	**340**	P		**P**		**22 31 39.1**	**+0.1**
	baz=156								
GLA	**Glamis**	**26.54**	**340**	P		**P**		**22 31 39.5**	**+0.5**
GLA				IAmb		IAmb		22 32 00.8	
	comp=Z,49nm,1.1s								
GLA				IAMs_20		IAMs_20		22 39 44.5	
	comp=Z,5μm,22.0s								
ANMO	**Albuquerque**	**26.59**	**356**	P		**P**		**22 31 40.0**	**+0.5**
	comp=Z,2.2nm,0.9s,baz=168,slow=12,SNR=5.4								
ANMO				LR		LR		22 42 20.6	
	comp=Z,4μm,18.1s,baz=178,slow=37								
ANMO	**Albuquerque**	**26.59**	**356**	P		**P**		**22 31 40.4**	**+0.8**
ANMO				pmax		pmax			
	comp=Z,19nm,1.4s								
ANMO				MLR		MLR			
	comp=Z,4μm,18.0s								
ANMO	**Albuquerque**	**26.59**	**356**	P		**P**		**22 31 39.8**	**+0.3**
	baz=175								
ANMO	**Albuquerque**	**26.59**	**356**	P		**P**		**22 31 40.4**	**+0.8**
ANMO	**Albuquerque**	**26.59**	**356**	IAMs_20		IAMs_20		22 42 09.0	
	comp=Z,4μm,18.0s								
IKP	**In-Ko-Pah, Jac**	**26.65**	**337**	P		**P**		**22 31 39.7**	**-0.3**
	baz=153								
WMOK	**Wichita Mounta**	**26.75**	**10**	P		**P**		**22 31 41.4**	**+0.6**
WMOK				pmax		pmax			
	comp=Z,55nm,2.0s								
WMOK				MLR		MLR			
	comp=Z,10μm,20.0s								
WMOK	**Wichita Mounta**	**26.75**	**10**	P		**P**		**22 31 40.9**	**+0.1**
	baz=192								
WMOK	**Wichita Mounta**	**26.75**	**10**	P		**P**		**22 31 41.4**	**+0.6**
Y14A	**Wickenburg**	**26.79**	**343**	P		**P**		**22 31 41.8**	**+0.6**
OTAV	**Otavalo**	**26.79**	**106**	*eP*		**P**		**22 31 43.2**	**+1.3**
OTAV	**Otavalo**	**26.79**	**106**	P		**P**		**22 31 41.3**	**-0.6**
OTAV				pmax		pmax			
	comp=Z,67nm,1.1s								
OTAV				MLR		MLR			
	comp=Z,6μm,22.0s								
OTAV	**Otavalo**	**26.79**	**106**	P		**P**		**22 31 41.3**	**-0.6**
OTAV				IAmb		IAmb		22 31 46.2	
	comp=Z,67nm,1.1s								
OTAV	**Otavalo**	**26.79**	**106**	IAMs_20		IAMs_20		22 39 24.3	
	comp=Z,6μm,22.0s								
SWSC	**Sam W. Stewart**	**26.79**	**338**	P		**P**		**22 31 41.0**	**-0.2**
	baz=154								
CUSE	**Cuicocha Este**	**26.82**	**106**	*eP*		**P**		**22 31 44.7**	**+2.6**
Z41A	**Richland Creek**	**26.93**	**21**	IAMs_20		IAMs_20		22 43 40.0	
	comp=Z,4μm,20.0s								
143A	**Socs Landing,**	**26.97**	**24**	P		**P**		**22 31 43.7**	**+0.9**
MONP2	**Monument Peak**	**26.98**	**337**	P		**P**		**22 31 43.4**	**+0.2**
	baz=152								
W18A	**Petrified Fore**	**27.17**	**350**	P		**P**		**22 31 44.4**	**-0.4**
	baz=168								
WLAR	**White Oak Lake**	**27.21**	**20**	IAMs_20		IAMs_20		22 43 13.4	
	comp=Z,4μm,20.0s								
109C	**Camp Elliot, M**	**27.25**	**336**	IAMs_20		IAMs_20		22 39 40.4	
	comp=Z,4μm,20.0s								
BC3	**Big Chuckawall**	**27.30**	**339**	P		**P**		**22 31 45.6**	**-0.3**
	baz=155								
X37A	**Cayuya**	**27.35**	**16**	IAMs_20		IAMs_20		22 42 30.2	
	comp=Z,5μm,19.0s								
BBAC	**Balboa, Cauca**	**27.46**	**102**	*eP*		**P**		**22 31 48.4**	**+0.7**
PDMCI	**Parker Dam,Lak**	**27.46**	**342**	P		**P**		**22 31 47.8**	**+0.6**
	baz=158								
GCUF	**Volcan Galeras**	**27.56**	**103**	*eP*		**P**		**22 31 50.8**	**+1.9**
TPFO	**Pinon Flats**	**27.63**	**337**	P		**P**		**22 31 49.1**	**+0.2**
	baz=153,SNR=5.1								
PFO	**Pinyon Flats O**	**27.64**	**337**	P		**P**		**22 31 50.5**	**+1.6**
	comp=Z,10.0nm,0.9s,baz=154,slow=7.0,SNR=8.8								
PFO				LR		LR		22 40 52.7	
	comp=Z,3μm,18.1s,baz=138,slow=32								
PFO	**Pinyon Flats O**	**27.64**	**337**	P		**P**		**22 31 48.7**	**-0.2**
PFO				pmax		pmax			
	comp=Z,31nm,1.3s								
PFO				MLR		MLR			
	comp=Z,2μm,19.0s								
PFO	**Pinyon Flats O**	**27.64**	**337**	P		**P**		**22 31 49.1**	**+0.2**
	baz=153,SNR=5.9								
PFO	**Pinyon Flats O**	**27.64**	**337**	P		**P**		**22 31 48.7**	**-0.2**
PFO				IAmb		IAmb		22 32 10.3	
	comp=Z,31nm,1.3s								
IRM	**Iron Mountain**	**27.65**	**340**	P		**P**		**22 31 49.3**	**+0.4**
	baz=156								
DBBC	**Dabeiba**	**27.67**	**91**	*eP*		**P**		**22 31 49.0**	**-0.4**
BELC	**Belle Mtn. Jos**	**27.81**	**338**	P		**P**		**22 31 51.1**	**+0.6**
	baz=154								
OK025	**Westminster Rd**	**27.83**	**12**	IAMs_20		IAMs_20		22 42 31.0	
	comp=Z,6μm,18.0s								
PLMC	**San Jos del P**	**27.84**	**95**	*eP*		**P**		**22 31 50.6**	**-0.3**
MIAR	**Mount Ida**	**27.84**	**19**	P		**P**		**22 31 51.4**	**+0.8**
MIAR				pmax		pmax			
	comp=Z,52nm,1.3s								
MIAR				MLR		MLR			
	comp=Z,3μm,18.0s								
MIAR	**Mount Ida**	**27.84**	**19**	P		**P**		**22 31 50.8**	**+0.3**
	baz=203,SNR=7.4								
MIAR	**Mount Ida**	**27.84**	**19**	P		**P**		**22 31 51.4**	**+0.8**
MIAR				IAmb		IAmb		22 31 56.5	
	comp=Z,52nm,1.3s								
MIAR				IAMs_20		IAMs_20		22 43 30.1	
	comp=Z,3μm,18.0s								
WUAZ	**Wupatki**	**27.88**	**347**	P		**P**		**22 31 51.1**	**-0.1**
	baz=165								
WUAZ	**Wupatki**	**27.88**	**347**	P		**P**		**22 31 51.8**	**+0.7**
POPC	**Popayan, Colom**	**27.89**	**100**	*eP*		**P**		**22 31 52.8**	**+1.2**
CCAR	**Cane Creek**	**27.90**	**22**	IAMs_20		IAMs_20		22 44 31.7	
	comp=Z,3μm,18.0s								
YOTC	**Yotoco, Valle**	**27.93**	**97**	*eP*		**P**		**22 31 49.1**	**-2.6**
CBOC	**Ciudad Bolivar**	**27.98**	**93**	*eP*		**P**		**22 31 54.7**	**+2.4**
X40A	**Basin Creek Fa**	**28.03**	**20**	IAMs_20		IAMs_20		22 44 00.2	
	comp=Z,4μm,18.0s								
SOTA	**Richlanco**	**28.05**	**101**	*eP*		**P**		**22 31 55.1**	**+1.9**
MOTC	**Monteria, Cord**	**28.12**	**87**	*eP*		**P**		**22 31 55.9**	**+2.5**
061Z	**Ochoppi**	**28.13**	**49**	IAMs_20		IAMs_20		22 42 48.4	
	comp=Z,5μm,18.0s								
PCON	**Cinco Dias**	**28.21**	**101**	*eP*		**P**		**22 31 56.4**	**+1.6**
UREC	**San Jos de Ur**	**28.30**	**89**	*eP*		**P**		**22 31 56.0**	**+1.1**
OK031	**S. Brethren Rd**	**28.30**	**13**	IAMs_20		IAMs_20		22 42 46.2	
	comp=Z,5μm,20.0s								
W39A	**Magazine**	**28.38**	**18**	P		**P**		**22 31 55.9**	**+0.5**
	baz=202								
GMRC	**Granite Mounta**	**28.40**	**340**	P		**P**		**22 31 55.8**	**0.0**
	baz=156								
HELC	**Santa Helena**	**28.42**	**92**	*eP*		**P**		**22 31 57.3**	**+0.9**
UALR	**University of**	**28.46**	**21**	IAMs_20		IAMs_20		22 44 15.6	
	comp=Z,4μm,20.0s								
PUAC	**Puerto Asis, P**	**28.50**	**104**	*eP*		**P**		**22 31 58.0**	**+1.3**
TUL1	**Leonard**	**28.50**	**14**	P		**P**		**22 31 56.7**	**+0.3**
	baz=197								
TUL1	**Leonard**	**28.50**	**14**	P		**P**		**22 31 57.3**	**+0.8**
TUL1				IAMs_20		IAMs_20		22 42 53.5	
	comp=Z,4μm,21.0s								
MARP	**Paez Belalcaza**	**28.53**	**99**	*eP*		**P**		**22 31 58.8**	**+1.5**
SJCC	**San Jacinto, C**	**28.60**	**85**	*eP*		**P**		**22 31 59.5**	**+1.8**
SNCC	**San Nicolas Is**	**28.61**	**332**	IAMs_20		IAMs_20		22 40 25.4	
	comp=Z,5μm,19.0s								
BFSC	**Mount Baldy Ra**	**28.66**	**336**	P		**P**		**22 31 58.2**	**+0.2**
	baz=151								
HEC	**Hector,Ludlow**	**28.68**	**339**	P		**P**		**22 31 58.7**	**+0.5**
	baz=154								
T25A	**Trinidad**	**28.69**	**359**	P		**P**		**22 31 58.3**	**-0.2**
	baz=180,SNR=6.1								
T25A	**Trinidad**	**28.69**	**359**	P		**P**		**22 31 59.8**	**+1.4**
GUY2C	**Guyana, Caldas**	**28.70**	**94**	*eP*		**P**		**22 31 59.4**	**+0.4**
RREF	**El Recreo**	**28.76**	**95**	*eP*		**P**		**22 32 01.4**	**+1.7**
ANIL	**Santa Ana**	**28.77**	**96**	*eP*		**P**		**22 32 02.0**	**+2.6**
MWC	**Mount Wilson**	**28.81**	**336**	P		**P**		**22 32 00.1**	**+0.7**
MWC				pmax		pmax			
	comp=Z,42nm,1.6s								
MWC				MLR		MLR			
	comp=Z,3μm,22.0s								
MWC	**Mount Wilson**	**28.81**	**336**	P		**P**		**22 32 00.1**	**+0.7**
MWC				IAmb		IAmb		22 32 20.7	
	comp=Z,42nm,1.6s								
TOLC	**Tolima**	**28.84**	**96**	*eP*		**P**		**22 32 00.1**	**+0.1**
W41B	**Gary Mavity, V**	**28.86**	**20**	P		**P**		**22 31 59.1**	**-0.5**
	baz=205								
W41B	**Gary Mavity, V**	**28.86**	**20**	P		**P**		**22 32 00.3**	**+0.7**
W41B				IAMs_20		IAMs_20		22 44 26.0	
	comp=Z,4μm,19.0s								
WHAR	**Wooly Hollow**	**28.95**	**20**	P		**P**		**22 32 01.7**	**+1.3**
WHAR				IAMs_20		IAMs_20		22 44 28.4	
	comp=Z,4μm,18.0s								
ZARC	**Zaragoza, Cauc**	**28.98**	**90**	*eP*		**P**		**22 32 02.5**	**+1.5**
ORTC	**Ortega, Tolima**	**29.02**	**97**	*eP*		**P**		**22 32 01.6**	**+0.2**
MVCO	**Mesa Verde**	**29.04**	**353**	P		**P**		**22 32 00.4**	**-1.1**
	baz=171								
MVCO	**Mesa Verde**	**29.04**	**353**	P		**P**		**22 32 02.1**	**+0.6**
BETC	**Betania**	**29.06**	**99**	*eP*		**P**		**22 32 01.3**	**-0.5**
TUQ	**Turquoise Moun**	**29.08**	**340**	P		**P**		**22 32 01.9**	**+0.2**
	baz=156								
FLOC	**Florencia**	**29.11**	**102**	*eP*		**P**		**22 32 02.8**	**+0.6**
GARC	**Garzon, Huila**	**29.12**	**100**	*eP*		**P**		**22 32 04.4**	**+1.9**
656A	**Willston**	**29.14**	**41**	IAMs_20		IAMs_20		22 43 35.3	
	comp=Z,4μm,20.0s								
NORC	**Norcasia**	**29.14**	**93**	*eP*		**P**		**22 32 04.6**	**+2.1**
060A	**Indiantown**	**29.20**	**47**	IAMs_20		IAMs_20		22 41 49.7	
	comp=Z,5μm,21.0s								
LRAL	**Lakeview Retre**	**29.25**	**30**	P		**P**		**22 32 03.1**	**0.0**
	baz=216								
GSC	**Goldstone, Bar**	**29.27**	**338**	P		**P**		**22 32 03.7**	**+0.3**
GSC				pmax		pmax			
	comp=Z,20nm,1.2s								
GSC				MLR		MLR			
	comp=Z,4μm,21.0s								
GSC	**Goldstone, Bar**	**29.27**	**338**	P		**P**		**22 32 03.4**	**-0.1**
	baz=154,SNR=5.9								
GSC	**Goldstone, Bar**	**29.27**	**338**	P		**P**		**22 32 03.7**	**+0.3**
GSC				IAMs_20		IAMs_20		22 41 16.8	
	comp=Z,4μm,21.0s								
T35A	**Sooner Cattle**	**29.29**	**12**	P		**P**		**22 32 04.3**	**+0.8**
T35A				IAmb		IAmb		22 32 09.2	
	comp=Z,79nm,1.6s								
SDCO	**Great Sand Dun**	**29.32**	**358**	P		**P**		**22 32 04.4**	**+0.3**
	baz=177								
SDCO	**Great Sand Dun**	**29.32**	**358**	P		**P**		**22 32 03.9**	**-0.2**
SDCO				IAmb		IAmb		22 32 16.2	
	comp=Z,39nm,1.9s								
SDCO				IAMs_20		IAMs_20		22 42 51.4	
	comp=Z,5μm,19.0s								
HHAR	**Hobbs**	**29.34**	**17**	P		**P**		**22 32 04.1**	**+0.1**
HHAR				IAmb		IAmb		22 32 09.4	
	comp=Z,52nm,1.8s								
EDW2	**Edwards Air Fo**	**29.35**	**336**	P		**P**		**22 32 03.9**	**-0.2**
	baz=151,SNR=5.6								
U38A	**Gravette**	**29.36**	**16**	IAMs_20		IAMs_20		22 43 51.4	
	comp=Z,4μm,18.0s								
S22A	**4UR Ranch, Cre**	**29.40**	**356**	P		**P**		**22 32 04.6**	**-0.2**
	baz=175								
S22A	**4UR Ranch, Cre**	**29.40**	**356**	P		**P**		**22 32 05.0**	**+0.2**
S22A				IAMs_20		IAMs_20		22 43 09.4	
	comp=Z,4μm,18.0s								
PTBC	**PUERTO BERRIO,**	**29.45**	**91**	*eP*		**P**		**22 32 06.0**	**+0.9**
KNB	**Kanab**	**29.65**	**346**	P		**P**		**22 32 07.5**	**+0.6**
KNB				pmax		pmax			
	comp=Z,16nm,1.1s								
KNB	**Kanab**	**29.65**	**346**	P		**P**		**22 32 07.5**	**+0.6**
U40A	**Yellville**	**29.73**	**19**	P		**P**		**22 32 07.3**	**-0.2**
	baz=203								
U40A	**Yellville**	**29.73**	**19**	IAMs_20		IAMs_20		22 44 28.3	
	comp=Z,4μm,18.0s								
LRMC	**Laurel Mtn Rad**	**29.75**	**337**	P		**P**		**22 32 07.7**	**0.0**
	baz=152,SNR=6.1								
ROSC	**El Rosal**	**29.78**	**95**	P		**P**		**22 32 11.2**	**+2.6**
	comp=Z,8.9nm,0.4s,baz=280,slow=8.4,SNR=14								
ROSC				LR		LR		22 41 13.1	
	comp=Z,5μm,21.3s,baz=287,slow=30								
ROSC	**El Rosal**	**29.78**	**95**	*eP*		**P**		**22 32 05.7**	**-2.9**
ROSC	**El Rosal**	**29.78**	**95**	P		**P**		**22 32 08.0**	**-0.6**
ROSC				pmax		pmax			
	comp=Z,243nm,2.0s								
ROSC				MLR		MLR			
	comp=Z,2μm,19.0s								
ROSC	**El Rosal**	**29.78**	**95**	P		**P**		**22 32 08.0**	**-0.6**
ATAH	**Atahualpa**	**29.88**	**120**	P

SRU San Rafael Swe 31.20 350 P P 22 32 20.3 -0.2
HENM Henderson Moun 31.25 23 IAMs_20 IAMs_20 22 46 14.3
comp=Z,3µm,19.0s
PSUT Pine Spring 31.34 345 P P 22 32 22.0 +0.2
TIN Tinemaha, Big 31.35 338 P P 22 32 22.3 +0.5
baz=153
KSU1 Kansas State U 31.38 11 P P 22 32 22.1 +0.1
baz=194
WVT Waverly 31.41 26 P P 22 32 22.5 +0.3
baz=212
TMUT Trail Mountain 31.50 349 P P 22 32 23.1 -0.2
P17A Butcher Ranch, 31.59 350 P P 22 32 24.8 +0.8
R11A Troy Canyon, C 31.64 343 P P 22 32 24.5 +0.1
baz=158
R40A Maddies Statio 31.70 18 P P 22 32 25.3 +0.6
R40A IAMs_20 IAMs_20 22 45 17.2
comp=Z,4µm,19.0s
URIC Uribia, Colomb 31.79 81 eP P 22 32 25.0 -0.8
CCM Cathedral Cave 31.80 19 P P 22 32 26.7 +1.0
CCM pmax pmax
comp=Z,56nm,1.9s
CCM MLR MLR
comp=Z,4µm,20.0s
CCM Cathedral Cave 31.80 19 P P 22 32 26.6 +1.0
CCM IAmb IAmb 22 32 47.4
comp=Z,56nm,1.9s
CCM Cathedral Cave 31.80 19 IAMs_20 IAMs_20 22 45 43.1
comp=Z,4µm,20.0s
T45A Paducah 31.84 24 IAMs_20 IAMs_20 22 46 44.8
comp=Z,3µm,18.0s
GUVC San Jose del G 31.84 99 eP P 22 32 27.5 +1.2
O20A White River Ci 31.90 354 P P 22 32 27.3 +0.6
baz=172
O20A White River Ci 31.90 354 P P 22 32 27.3 +0.6
SPR3 Spring Creek 3 31.90 345 P P 22 32 27.5 +0.6
FVM French Village 32.02 21 P P 22 32 27.2 -0.4
FVM pmax pmax
comp=Z,103nm,1.9s
FVM MLR MLR
comp=Z,4µm,19.0s
FVM French Village 32.02 21 P P 22 32 27.2 -0.4
FVM IAMs_20 IAMs_20 22 46 11.7
comp=Z,4µm,19.0s
TAMC Tame, Arauca 32.09 91 eP P 22 32 29.1 +0.5
OMMB Old Mammoth Mi 32.13 337 IAMs_20 IAMs_20 22 43 11.6
comp=Z,4µm,21.0s
MDPB Devils Postpil 32.18 337 IAMs_20 IAMs_20 22 43 53.8
comp=Z,3µm,18.0s
S44A Carbondale 32.19 22 P P 22 32 29.3 +0.3
SIUC Southern Illin 32.22 22 P P 22 32 29.1 -0.1
MPU Maple Canyon 32.27 349 P P 22 32 30.6 +0.6
SAO San Andreas Ge 32.41 333 IAMs_20 IAMs_20 22 42 40.9
comp=Z,4µm,19.0s
T47A Sharon Grove 32.45 26 IAMs_20 IAMs_20 22 47 34.1
comp=Z,3µm,18.0s
N23A Red Feather La 32.48 357 IAMs_20 IAMs_20 22 45 17.0
comp=Z,5µm,20.0s
RDMU Red Mountain 32.48 352 P P 22 32 33.1 +1.2
LHV Little Huntoon 32.51 339 P P 22 32 33.6 +1.7
LHV IAmb IAmb 22 32 49.7
comp=Z,62nm,1.9s
LHV IAMs_20 IAMs_20 22 43 08.7
comp=Z,3µm,20.0s
NV11 Mina Array Sit 32.55 339 P P 22 32 33.2 +0.8
NV11 IAMs_20 IAMs_20 22 43 11.7
comp=Z,4µm,21.0s
P38A Dawn 32.58 15 IAMs_20 IAMs_20 22 45 29.6
comp=Z,3µm,20.0s
NVAR Mina Array Bea 32.60 339 P P 22 32 34.5 +1.6
comp=Z,1.7nm,0.9s,baz=158,slow=9.6,SNR=10
NVAR LR LR 22 43 33.8
comp=Z,3µm,21.2s,baz=149,slow=32
NVAR Mina Array Bea 32.60 339 P P 22 32 32.8 -0.2
SLM Saint Louis 32.67 20 P P 22 32 33.1 -0.1
SLM pmax pmax
comp=Z,45nm,1.3s
SLM MLR MLR
comp=Z,4µm,18.0s
SLM Saint Louis 32.67 20 P P 22 32 33.1 -0.1
SLM IAmb IAmb 22 32 39.2
comp=Z,45nm,1.2s
SLM IAMs_20 IAMs_20 22 46 29.9
comp=Z,4µm,18.0s
DUG Dugway, Tooele 32.68 348 P P 22 32 33.5 0.0
DUG pmax pmax
comp=Z,13nm,1.2s
DUG MLR MLR
comp=Z,2µm,20.0s
DUG Dugway, Tooele 32.68 348 P P 22 32 33.3 -0.2
baz=164
DUG Dugway, Tooele 32.68 348 P P 22 32 33.5 0.0
Y55A Saluda 32.72 36 P P 22 32 33.1 -0.7
baz=224
RYN Ryan 32.85 339 IAMs_20 IAMs_20 22 43 20.7
comp=Z,3µm,21.0s
X54A Belton 32.87 34 P P 22 32 35.1 +0.1
baz=222
PHWY Pilot Hill 32.87 358 IAMs_20 IAMs_20 22 45 46.3
comp=Z,4µm,18.0s
P40A Paris 32.90 17 P P 22 32 34.8 -0.5
P40A IAmb IAmb 22 32 41.7
comp=Z,47nm,1.2s
P40A IAMs_20 IAMs_20 22 45 53.2
comp=Z,4µm,19.0s
TKL Tuckaleechee C 32.95 31 P P 22 32 37.2 +1.4
comp=Z,6.8nm,0.9s,baz=212,slow=14,SNR=2.9
TKL Tuckaleechee C 32.95 31 IAMs_20 IAMs_20 22 47 23.4
comp=Z,3µm,21.0s
USIN University of 33.04 24 IAMs_20 IAMs_20 22 47 21.9
comp=Z,3µm,20.0s
WAKR Walker 33.08 338 IAMs_20 IAMs_20 22 44 15.7
comp=Z,4µm,19.0s
KVN Kaiserville 33.08 340 P P 22 32 37.8 +0.7
KVN pmax pmax
comp=Z,19nm,1.4s
KVN MLR MLR
comp=Z,4µm,20.0s
KVN Kaiserville 33.08 340 P P 22 32 37.8 +0.7
KVN IAMs_20 IAMs_20 22 43 40.8
comp=Z,4µm,20.0s
SDV Santo Domingo 33.09 86 eP P 22 32 37.9 +0.3
SDV Santo Domingo 33.09 86 P P 22 32 36.6 -0.9
SDV Santo Domingo 33.09 86 eP P 22 32 37.7 +0.2
V52A Sevierville 33.19 31 IAMs_20 IAMs_20 22 47 19.6
comp=Z,3µm,20.0s
N35A Tabor 33.27 12 IAMs_20 IAMs_20 22 45 50.9
comp=Z,4µm,19.0s
Q44A Meyer Farm, Va 33.34 22 P P 22 32 39.0 -0.1
Q44A IAMs_20 IAMs_20 22 47 12.7
comp=Z,3µm,19.0s
W54A Cherokee Point 33.37 34 P P 22 32 39.7 +0.3
baz=222
BGNE Belgrade 33.38 8 P P 22 32 39.6 +0.2
BGU Big Grassy Mou 33.43 348 P P 22 32 41.1 +1.1
V53A Saluda 33.47 32 IAMs_20 IAMs_20 22 46 42.0
comp=Z,3µm,22.0s
SDDR Presa de Saban 33.54 68 IAMs_20 IAMs_20 22 44 05.4
comp=Z,4µm,22.0s
PNTR Pine Nut 33.65 338 IAMs_20 IAMs_20 22 44 34.8
comp=Z,3µm,20.0s
SPUT South Promonto 33.68 349 P P 22 32 43.6 +1.4
N38A Joes South For 33.76 15 P P 22 32 42.9 +0.2
N38A IAMs_20 IAMs_20 22 46 19.8
comp=Z,3µm,19.0s
ELK Elko 33.78 345 P P 22 32 44.2 +1.0
ELK pmax pmax
comp=Z,15nm,1.6s
ELK MLR MLR
comp=Z,1µm,18.0s
ELK Elko 33.78 345 P P 22 32 44.2 +1.0
NNA Nana 33.79 126 i P P 22 32 44.2 +0.8
NNA pmax pmax
comp=Z,30nm,1.0s
NNA Nana 33.79 126 IAMs_20 IAMs_20 22 42 55.0
comp=Z,3µm,22.0s
HWUT Hardware Ranch 33.81 350 P P 22 32 44.5 +1.1
HWUT IAmb IAmb 22 32 55.6
comp=Z,30nm,1.4s
P43A Skaggs, Pawnee 33.81 20 IAMs_20 IAMs_20 22 47 07.3
comp=Z,4µm,19.0s
RUBR Rubicon Trail 33.83 337 IAMs_20 IAMs_20 22 44 26.5
comp=Z,3µm,19.0s
VCNR Virginia City 33.85 338 IAMs_20 IAMs_20 22 44 41.1
comp=Z,3µm,21.0s
KMSC Kings Mountain 33.88 35 P P 22 32 43.8 -0.1
baz=223

Y58A Scranton 33.99 38 IAMs_20 IAMs_20 22 47 18.9
comp=Z,3µm,19.0s
V54A Nebo 34.01 33 P P 22 32 44.8 -0.2
baz=222
AFDM Forest Hills D 34.06 336 P P 22 32 45.6 +0.2
MCCM Marconi Confer 34.19 333 IAMs_20 IAMs_20 22 43 11.1
comp=Z,3µm,20.0s
HVU Hansel Valley 34.20 348 P P 22 32 48.0 +1.3
HVU pmax pmax
comp=Z,20nm,1.4s
HVU Hansel Valley 34.20 348 P P 22 32 48.0 +1.3
W56A Indian Trail 34.30 35 P P 22 32 48.0 +0.5
baz=224
N41A Harden Midland 34.34 18 P P 22 32 48.0 +0.2
N41A IAmb IAmb 22 33 08.6
comp=Z,25nm,0.9s
N41A IAMs_20 IAMs_20 22 46 49.3
comp=Z,4µm,20.0s
V55A Taylorsville 34.47 34 P P 22 32 49.1 +0.1
baz=223
Y59A Loris 34.53 39 IAMs_20 IAMs_20 22 47 05.2
comp=Z,3µm,19.0s
BEKR Beckworth 34.62 338 P P 22 32 50.5 0.0
BEKR IAMs_20 IAMs_20 22 44 53.3
comp=Z,3µm,20.0s
U54A Nelsons Funny 34.63 33 P P 22 32 50.2 -0.3
baz=221
U54A Nelsons Funny 34.63 33 IAMs_20 IAMs_20 22 47 14.9
comp=Z,3µm,21.0s
O44A Mansfield 34.64 21 P P 22 32 50.2 -0.2
O44A IAmb IAmb 22 32 52.9
comp=Z,31nm,0.9s
O44A IAMs_20 IAMs_20 22 47 53.1
comp=Z,3µm,19.0s
BW06 Boulder Array 34.65 353 P P 22 32 50.7 -0.1
baz=171
BW06 Boulder Array 34.65 353 P P 22 32 51.4 +0.7
BW06 IAmb IAmb 22 33 01.6
comp=Z,27nm,1.2s
PD31 Pinedale Array 34.65 353 P P 22 32 51.1 +0.4
PD31 IAmb IAmb 22 33 01.6
comp=Z,27nm,1.3s
PDAR Pinedale Array 34.65 353 P P 22 32 51.0 +0.2
comp=Z,5.4nm,0.9s,baz=160,slow=9.1,SNR=24
PDAR Pinedale Array 34.65 353 P P 22 32 50.4 -0.3
GDXM Geysers 34.70 334 IAMs_20 IAMs_20 22 44 00.6
comp=Z,3µm,21.0s
HDIL Hopedale 34.71 20 P P 22 32 50.7 -0.3
baz=206,SNR=8.5
HDIL Hopedale 34.71 20 P P 22 32 50.5 -0.5
HDIL IAMs_20 IAMs_20 22 47 33.0
comp=Z,4µm,20.0s
R50A Paris 34.76 28 IAMs_20 IAMs_20 22 49 02.3
comp=Z,3µm,18.0s
ORV Oroville 34.79 336 P P 22 32 53.5 +1.8
ORV pmax pmax
comp=Z,31nm,1.4s
ORV MLR MLR
comp=Z,2µm,22.0s
ORV Oroville 34.79 336 P P 22 32 53.5 +1.8
ORV IAmb IAmb 22 33 14.6
comp=Z,31nm,1.4s
SCIA State Center 34.81 14 IAMs_20 IAMs_20 22 46 49.7
comp=Z,4µm,21.0s
V56A Mocksville 34.84 35 P P 22 32 51.6 -0.6
baz=224
AHID Auburn Hatcher 34.86 351 P P 22 32 52.7 +0.2
Y60A Bolivia 34.95 39 IAMs_20 IAMs_20 22 47 17.3
comp=Z,3µm,21.0s
HOPS Hopland Field 34.98 334 IAMs_20 IAMs_20 22 43 20.8
comp=Z,3µm,21.0s
W58A Raeford 35.02 37 P P 22 32 52.3 -1.4
baz=226
T54A Tazewell 35.17 32 P P 22 32 54.0 -1.1
baz=221
V57A Coltrane Farms 35.30 35 P P 22 32 55.4 -0.8
baz=225
SFIN Lafayette 35.35 23 P P 22 32 55.7 -0.7
baz=210
SFIN Lafayette 35.35 23 P P 22 32 56.5 0.0
S53A Williamson 35.35 31 P P 22 32 55.8 -0.9
baz=220
REDW Red Top Meadow 35.41 351 P P 22 32 58.0 +0.8
REDW IAmb IAmb 22 33 37.6
comp=Z,50nm,1.6s
L40A Anamosa 35.48 17 IAMs_20 IAMs_20 22 47 22.4
comp=Z,3µm,19.0s
RPN Rapa Nui 35.60 188 IAMs_20 IAMs_20 22 43 45.8
comp=Z,4µm,19.0s
P49A Miami Univ. Ec 35.61 26 P P 22 32 57.6 -1.2
baz=214
P49A Miami Univ. Ec 35.61 26 IAMs_20 IAMs_20 22 49 01.7
comp=Z,2µm,19.0s
LOHW Long Hollow 35.61 352 P P 22 32 59.2 +0.2
LOHW IAmb IAmb 22 33 20.6
comp=Z,26nm,1.3s
K38A Parkersburg 35.62 14 IAMs_20 IAMs_20 22 47 34.0
comp=Z,4µm,18.0s
V58A Wily Hill, Pi 35.62 36 P P 22 32 57.5 -1.4
baz=226
RSSD Black Hills 35.67 0 P P 22 33 00.1 +0.6
RSSD pmax pmax
comp=Z,45nm,1.7s
RSSD MLR MLR
comp=Z,7µm,18.0s
RSSD Black Hills 35.67 0 P P 22 32 58.7 -0.7
baz=180
RSSD Black Hills 35.67 0 P P 22 33 00.1 +0.6
RSSD IAmb IAmb 22 33 20.9
comp=Z,45nm,1.7s
S54A Dingess, Beckl 35.86 32 P P 22 32 59.7 -1.4
baz=221
ECSD EROS Data Cent 35.88 9 P P 22 33 00.3 -0.7
baz=193
M44A Midewin, Midew 35.88 21 P P 22 33 01.5 +0.4
M44A IAMs_20 IAMs_20 22 48 30.0
comp=Z,4µm,20.0s
L42A Oliver, Polo 35.89 18 P P 22 33 01.3 +0.1
L42A IAMs_20 IAMs_20 22 47 57.3
comp=Z,4µm,19.0s
BLA Blacksburg 35.90 33 P P 22 33 00.0 -1.3
baz=223
U57A Blanch 35.94 35 P P 22 33 00.7 -0.9
baz=225
R53A Hurricane 35.94 30 P P 22 33 00.5 -1.2
baz=219
R53A Hurricane 35.94 30 IAMs_20 IAMs_20 22 49 05.5
comp=Z,3µm,21.0s
W60A Pink Hill 35.96 38 P P 22 33 00.8 -1.0
baz=228
CNNC Cliffs of the 35.97 38 IAMs_20 IAMs_20 22 48 21.3
comp=Z,3µm,20.0s
T56A Rocky Mt 35.98 34 P P 22 33 00.1 -1.9
baz=223
FLWY Flagg Ranch 36.09 352 P P 22 33 03.6 +0.5
FLWY IAmb IAmb 22 33 38.0
comp=Z,40nm,1.4s
V59A Middlesex 36.12 37 P P 22 33 01.7 -1.4
baz=227
HLID Hailey 36.25 347 P P 22 33 03.9 -0.6
baz=163
HLID Hailey 36.25 347 P P 22 33 05.1 +0.7
S55A Lewisburg 36.27 32 P P 22 33 03.5 -1.0
baz=222
Q52A Bidwell 36.28 29 P P 22 33 03.9 -0.6
baz=218
P51A Williamsport 36.31 28 P P 22 33 04.2 -0.6
baz=217
P51A Williamsport 36.31 28 IAMs_20 IAMs_20 22 49 48.3
comp=Z,2µm,19.0s
HQIL Hanson Quary C 36.31 21 IAMs_20 IAMs_20 22 48 33.4
comp=Z,4µm,18.0s
WVOR Wild Horse Val 36.31 342 P P 22 33 05.9 +1.0
WVOR pmax pmax
comp=Z,18nm,1.4s
WVOR MLR MLR
comp=Z,2µm,19.0s
WVOR Wild Horse Val 36.31 342 P P 22 33 05.9 +1.0
WVOR IAMs_20 IAMs_20 22 46 07.3
comp=Z,3µm,19.0s
R54A Victor 36.32 31 P P 22 33 03.8 -1.1
baz=221
U58A Oxford 36.36 36 P P 22 33 03.8 -1.5
baz=226
H17A Grant Village 36.38 352 P P 22 33 05.0 -0.6
baz=169
MOD Modoc Plateau 36.38 339 IAMs_20 IAMs_20 22 46 47.1
comp=Z,2µm,18.0s
T57A Hurt 36.39 35 P P 22 33 04.4 -1.0
baz=224
MFID Camas Ranch 36.44 346 P P 22 33 06.7 +0.7
MFID IAmb IAmb 22 33 48.2
comp=Z,40nm,1.9s
LKWY Lake 36.52 352 IAMs_20 IAMs_20 22 48 31.9
comp=Z,4µm,22.0s
JFWS Jewell Farm 36.55 17 P P 22 33 06.2 -0.6
baz=203
JFWS Jewell Farm 36.55 17 IAMs_20 IAMs_20 22 48 04.6
comp=Z,3µm,20.0s
V60A Jim Taylor Roa 36.70 38 IAMs_20 IAMs_20 22 48 51.6
comp=Z,3µm,18.0s
T58A Grand View Acr 36.76 35 P P 22 33 07.8 -0.8
baz=225
YHH Holmes Hill 36.80 352 P P 22 33 11.1 +1.8
KHMM Horse Mountain 36.82 335 IAMs_20 IAMs_20 22 45 54.6
comp=Z,4µm,18.0s
M04C Macdoel 36.84 338 P P 22 33 08.1 -1.3
baz=150
R55A Marlinton 36.85 32 IAMs_20 IAMs_20 22 50 49.5
comp=Z,3µm,18.0s
P52A Corning 36.87 29 P P 22 33 09.1 -0.5
baz=218
P52A Corning 36.87 29 IAMs_20 IAMs_20 22 50 20.1
comp=Z,3µm,18.0s
YHL Hebgen Lake 36.91 352 P P 22 33 10.9 +0.7
QLMT Earthquake Lak 36.93 351 P P 22 33 10.3 +0.1
RLMT Red Lodge 36.94 354 P P 22 33 09.4 -0.9
baz=172
RLMT Red Lodge 36.94 354 IAMs_20 IAMs_20 22 48 14.9
comp=Z,2µm,21.0s
ACSO Alum Creek Sta 36.95 27 P P 22 33 09.3 -0.9
baz=216
ACSO Alum Creek Sta 36.95 27 IAMs_20 IAMs_20 22 50 06.2
comp=Z,3µm,19.0s
K43A Burlington 36.95 19 IAMs_20 IAMs_20 22 48 40.4
comp=Z,4µm,20.0s
Q54A Coxs Mills 37.00 31 P P 22 33 09.7 -1.0
baz=220
Q54A Coxs Mills 37.00 31 IAMs_20 IAMs_20 22 49 35.6
comp=Z,3µm,21.0s
L46A Eue Claire 37.06 22 IAMs_20 IAMs_20 22 48 49.2
comp=Z,2µm,19.0s
S57A Dark Hollow, R 37.10 34 P P 22 33 10.5 -1.0
baz=224
S57A Dark Hollow, R 37.10 34 P P 22 33 12.3 +0.7
J08A Circle Bar Ran 37.10 343 P P 22 33 12.8 +1.2
J08A IAMs_20 IAMs_20 22 46 54.2
comp=Z,2µm,19.0s
YBH Yreka Blue Hor 37.13 337 P P 22 33 12.1 +0.3
comp=Z,1.5nm,0.9s,baz=176,slow=15,SNR=2.6
YBH Yreka Blue Hor 37.13 337 IAMs_20 IAMs_20 22 45 53.8
comp=Z,2µm,20.0s
V61A Roper 37.14 38 P P 22 33 10.4 -1.4
baz=229
MCMT McKenzie Canyo 37.16 350 P P 22 33 12.7 +0.5
U60A Pendleton 37.24 37 P P 22 33 12.0 -0.6
baz=228
R56A Bull Pasture M 37.32 33 P P 22 33 12.4 -1.1
baz=223
T59A Double "B" Far 37.34 36 P P 22 33 12.3 -1.3
baz=227
I40A Norwalk 37.34 16 P P 22 33 13.8 +0.3
I40A IAMs_20 IAMs_20 22 48 30.6
comp=Z,3µm,20.0s
V62A Hyde County Ai 37.38 39 P P 22 33 12.2 -1.7
baz=230
L04D Klamath Falls 37.39 338 P P 22 33 13.1 -1.0
baz=150
O52A Adamsville 37.39 29 P P 22 33 12.9 -1.0
baz=218
O52A Adamsville 37.39 29 IAMs_20 IAMs_20 22 50 34.8
comp=Z,3µm,18.0s
KRMB Red Mountain 37.43 335 IAMs_20 IAMs_20 22 46 05.8
comp=Z,3µm,18.0s
DLMT Dillon 37.63 350 P P 22 33 16.7 +0.6
DLMT IAmb IAmb 22 33 33.1
comp=Z,32nm,1.4s
BOZ Bozeman (W) 37.71 351 P P 22 33 16.6 -0.1
baz=168
BOZ Bozeman (W) 37.71 351 IAMs_20 IAMs_20 22 49 34.2
comp=Z,2µm,20.0s
R57A Stanardsville 37.72 34 P P 22 33 16.1 -0.7
baz=224
L48A N Adams 37.73 24 P P 22 33 15.9 -0.9
N51A Ashland 37.77 27 IAMs_20 IAMs_20 22 50 30.1
comp=Z,3µm,19.0s
O53A New Philadelph 37.79 29 IAMs_20 IAMs_20 22 50 48.4
comp=Z,4µm,19.0s
I42A Draeger Farm, 37.84 18 P P 22 33 17.8 +0.2
I42A IAmb IAmb 22 33 25.7
comp=Z,74nm,1.4s
I42A IAMs_20 IAMs_20 22 49 04.7
comp=Z,4µm,18.0s
L02E Cave Junction 37.84 336 P P 22 33 18.0 +0.2
baz=148
Q56A Snyder Ridge, 37.90 32 IAMs_20 IAMs_20 22 50 45.3
comp=Z,3µm,19.0s
J05D Fort Rock, OR 37.93 340 P P 22 33 18.6 -0.1
baz=152
HUMO Hull Mountain 37.97 337 IAMs_20 IAMs_20 22 46 19.0
comp=Z,3µm,21.0s
R58A Rapidan 38.01 34 P P 22 33 19.1 -0.1
baz=225
MCWV Mont Chateau 38.02 31 P P 22 33 19.2 -0.1
baz=221
LRM Limekiln Ridge 38.05 351 P P 22 33 19.7 -0.1
PLID Pearl Lake 38.05 346 P P 22 33 19.3 -0.5
I07A Izee 38.07 342 IAMs_20 IAMs_20 22 47 06.9
comp=Z,2µm,20.0s
M51A Elyria 38.19 27 P P 22 33 20.8 0.0
baz=217
PINE Pine Mountain 38.27 340 P P 22 33 22.2 +0.5
LAO LASA Array 38.28 358 P P 22 33 21.3 -0.2
baz=177
Q57A Strasburg 38.31 33 P P 22 33 21.3 -0.5
baz=224
N53A Lisbon 38.40 29 IAMs_20 IAMs_20 22 51 05.7
comp=Z,4µm,20.0s
J47A Sunmer 38.67 23 P P 22 33 25.0 +0.3
J47A IAmb IAmb 22 33 30.6
comp=Z,62nm,1.2s
J47A IAMs_20 IAMs_20 22 49 54.8
comp=Z,2µm,20.0s
H43A Windswept, Lux 38.71 19 IAMs_20 IAMs_20 22 49 43.0
comp=Z,4µm,20.0s
G40A Rib Lake 38.73 16 IAMs_20 IAMs_20 22 49 12.3
comp=Z,3µm,22.0s
M52A Chesterland 38.73 28 P P 22 33 25.4 +0.1
M52A IAMs_20 IAMs_20 22 50 59.5
comp=Z,3µm,21.0s
I04A Tendick Farm, 38.79 339 P P 22 33 26.1 +0.4
baz=150
P57A Homestead Farm 38.85 33 IAMs_20 IAMs_20 22 50 41.4
comp=Z,3µm,20.0s
N54A Moraine State 38.93 29 IAMs_20 IAMs_20 22 51 34.7
comp=Z,3µm,20.0s
O56A Blue Knob Stat 39.12 32 P P 22 33 29.4 +0.7
O56A IAmb IAmb 22 34 00.5
comp=Z,116nm,1.7s
D32A Dogwood Acres, 39.15 8 P P 22 33 28.9 +0.2
D32A IAmb IAmb 22 33 31.5
comp=Z,123nm,1.9s
K50A Casco 39.17 25 P P 22 33 29.0 +0.1
K50A IAmb IAmb 22 33 32.6
comp=Z,73nm,1.4s
F10A Beach Ranch, E 39.18 345 IAMs_20 IAMs_20 22 48 39.2
comp=Z,2µm,18.0s
MSO Missoula 39.29 349 P P 22 33 29.7 -0.2
baz=165
MSO Missoula 39.29 349 P P 22 33 31.1 +1.1
H04A Detroit Lake 39.48 340 IAMs_20 IAMs_20 22 47 31.2
comp=Z,3µm,21.0s
M54A Oil Creek Stat 39.51 29 P P 22 33 31.8 0.0
baz=220
M54A Oil Creek Stat 39.51 29 IAMs_20 IAMs_20 22 51 49.9
comp=Z,3µm,20.0s
L53A Girard 39.57 28 P P 22 33 32.8 +0.5
baz=219
E38A The Farm, Brul 39.64 14 IAMs_20 IAMs_20 22 49 42.4
comp=Z,4µm,22.0s
SSPA Standing Stone 39.75 32 IAMs_20 IAMs_20 22 50 57.2
comp=Z,3µm,19.0s
TAOE Nuku Hiva Isla 39.76 245 eLQ LQ 22 42 54.6
comp=Z,6µm,27.6s

TAOE eLR LR 22 44 11.0
comp=Z,4µm,25.3s,baz=63
TAOE Nuku Hiva Isla 39.76 245 eT T 23 15 29.4
comp=Z,82nm,0.3s
TAOE Nuku Hiva Isla 39.76 245 IAMs_20 IAMs_20 22 44 31.1
comp=Z,3µm,19.0s
F42A Maple Grove Fa 39.76 18 IAMs_20 IAMs_20 22 50 05.7
comp=Z,3µm,19.0s
COWI Conover 39.78 16 P **P** **22 33 34.2 +0.1**
COWI IAmb IAmb 22 33 40.2
comp=Z,45nm,1.3s
COWI IAMs_20 IAMs_20 22 49 56.3
comp=Z,3µm,20.0s
COR Corvallis 39.79 338 IAMs_20 IAMs_20 22 48 25.4
comp=Z,2µm,20.0s
P59A Jarrettsville 39.80 34 P **P** **22 33 34.4 +0.2**
baz=226
F07A Phinny Hill Vi 39.84 343 IAMs_20 IAMs_20 22 48 13.7
comp=Z,3µm,20.0s
EGMT Eagleton 39.86 354 P **P** **22 33 35.8 +1.1**
baz=171
EGMT Eagleton 39.86 354 P **P** **22 33 36.0 +1.2**
EGMT IAmb IAmb 22 33 59.0
comp=Z,56nm,1.6s
O58A Lewisberry 39.89 33 P **P** **22 33 34.9 -0.1**
baz=225
E09A Wood Farm, Sta 39.92 345 IAMs_20 IAMs_20 22 49 26.7
comp=Z,2µm,18.0s
G45A Suttons Bay 39.92 20 IAMs_20 IAMs_20 22 50 42.9
comp=Z,3µm,18.0s
DGMT Dagmar 40.02 360 P **P** **22 33 35.9 0.0**
baz=180
DGMT Dagmar 40.02 360 P **P** **22 33 36.4 +0.5**
I49A Point Hope 40.05 24 IAMs_20 IAMs_20 22 49 32.2
comp=Z,3µm,22.0s
GLMI Grayling 40.10 22 P **P** **22 33 36.6 -0.1**
baz=211
E08A Dider Farm, El 40.14 344 IAMs_20 IAMs_20 22 49 01.6
comp=Z,2µm,18.0s
HAWA Hanford 40.18 343 P **P** **22 33 38.7 +1.4**
M56A Emporium 40.22 31 P **P** **22 33 37.4 -0.4**
baz=222
JTMT Jette 40.23 349 IAMs_20 IAMs_20 22 51 13.1
comp=Z,2µm,20.0s
E07A Sunnyside 40.42 343 P **P** **22 33 40.1 +0.8**
E07A IAmb IAmb 22 34 00.9
comp=Z,78nm,1.7s
E07A IAMs_20 IAMs_20 22 48 42.1
comp=Z,2µm,20.0s
AGMN Agassiz Nation 40.45 8 P **P** **22 33 39.2 -0.3**
baz=193,SNR=14
AGMN Agassiz Nation 40.45 8 P **P** **22 33 39.2 -0.3**
AGMN IAmb IAmb 22 33 49.5
comp=Z,82nm,1.4s
N58A Sunbury 40.51 32 IAMs_20 IAMs_20 22 51 50.4
comp=Z,2µm,18.0s
PSUB Penn St. - Bra 40.56 35 IAMs_20 IAMs_20 22 50 54.9
comp=Z,4µm,22.0s
D08A Wollman Farm, 40.62 344 P **P** **22 33 42.3 +1.4**
E43A Lone Tree Farm 40.66 18 IAMs_20 IAMs_20 22 50 41.6
comp=Z,3µm,19.0s
WVNY West Valley, N 40.70 29 IAMs_20 IAMs_20 22 52 26.5
comp=Z,3µm,18.0s
D41A Chassel 40.82 16 IAMs_20 IAMs_20 22 50 48.8
comp=Z,3µm,20.0s
B35A Bob, Littlefor 40.86 11 P **P** **22 33 43.8 +0.9**
B35A IAmb IAmb 22 33 52.5
comp=Z,38nm,1.4s
L56A Greenwood 41.02 30 P **P** **22 33 43.4 -0.9**
baz=222
M58A Price's Panora 41.02 32 P **P** **22 33 43.6 -0.8**
baz=224
SEUS St. Eustatius 41.03 73 IAMs_20 IAMs_20 22 50 26.7
comp=Z,3µm,19.0s
C09A Chrisman Ranch 41.15 345 IAMs_20 IAMs_20 22 50 06.2
comp=Z,2µm,18.0s
LON Longmire 41.18 341 P **P** **22 33 46.4 +0.7**
LON pmax pmax
comp=Z,12nm,1.1s
LON Longmire 41.18 341 P **P** **22 33 46.4 +0.7**
SKI Saint Kitts 41.24 73 IAMs_20 IAMs_20 22 50 28.2
comp=Z,3µm,20.0s
E04D Cinebar 41.26 341 P **P** **22 33 45.6 -0.5**
baz=152
L57A Andrews Acres 41.28 31 P **P** **22 33 45.6 -0.8**
baz=223
NEW Newport 41.31 347 P **P** **22 33 47.6 +0.9**
comp=Z,4.6nm,0.8s,baz=166,slow=10,SNR=5.4
NEW Newport 41.31 347 P **P** **22 33 47.9 +1.3**
NEW pmax pmax
comp=Z,13nm,1.0s
NEW MLR MLR
comp=Z,2µm,20.0s
NEW Newport 41.31 347 P **P** **22 33 45.8 -0.8**
baz=160
NEW Newport 41.31 347 P **P** **22 33 47.9 +1.3**
J54A Appleton 41.34 28 IAMs_20 IAMs_20 22 52 34.5
comp=Z,2µm,19.0s
MEDO Medina 41.35 29 IAMs_20 IAMs_20 22 52 53.7
comp=Z,2µm,22.0s
WALA Waterton Lakes 41.44 350 P **P** **22 33 48.1 +0.3**
E46A Sault Ste Mari 41.54 21 IAMs_20 IAMs_20 22 51 42.8
comp=Z,3µm,19.0s
K56A Middlesex 41.55 30 P **P** **22 33 47.7 -1.0**
baz=222
J55A Hilton 41.73 29 IAMs_20 IAMs_20 22 53 07.8
comp=Z,3µm,20.0s
ETMB Extrema 41.81 115 eP **P** **22 33 50.1 -1.0**
L58A Harry Jones Me 41.83 32 P **P** **22 33 50.0 -0.9**
baz=224
B08A Colville Reser 41.93 345 P **P** **22 33 53.6 +1.8**
TRNY Table Rock, Ra 42.08 34 IAMs_20 IAMs_20 22 51 28.9
comp=Z,2µm,19.0s
J56A Wolcott 42.20 30 IAMs_20 IAMs_20 22 53 02.3
comp=Z,2µm,20.0s
SADO Sadowa 42.27 27 IAMs_20 IAMs_20 22 52 45.2
comp=Z,2µm,18.0s
ULM Lac du Bonnet 42.36 8 P **P** **22 33 54.9 -0.2**
comp=Z,12nm,1.0s,baz=198,slow=6.1,SNR=6.3
ULM LR LR 22 51 01.0
comp=Z,3µm,20.1s,baz=197,slow=35
ULM Lac du Bonnet 42.36 8 P **P** **22 33 55.2 +0.1**
ULM pmax pmax
comp=Z,97nm,2.0s
ULM MLR MLR
comp=Z,4µm,20.0s
ULM Lac du Bonnet 42.36 8 P **P** **22 33 55.2 +0.1**
ULM IAmb IAmb 22 33 57.7
comp=Z,97nm,1.9s
H53A Bobcaygeon 42.37 27 P **P** **22 33 54.8 -0.5**
baz=219
K58A Earlville 42.44 31 P **P** **22 33 55.3 -0.6**
baz=224
M61A Granite Spring 42.44 34 P **P** **22 33 55.1 -0.8**
baz=228
AP01 Chacalluta 42.58 129 IAMs_20 IAMs_20 22 47 35.0
comp=Z,3µm,22.0s
B06A Marblemount 42.67 343 IAMs_20 IAMs_20 22 49 43.5
comp=Z,3µm,20.0s
J57A Williamstown 42.73 30 P **P** **22 33 57.6 -0.7**
baz=223
J57A Williamstown 42.73 30 IAMs_20 IAMs_20 22 53 35.2
comp=Z,2µm,18.0s
J58A Remsen 43.05 31 P **P** **22 34 00.4 -0.5**
baz=224
J58A Remsen 43.05 31 IAMs_20 IAMs_20 22 53 53.8
comp=Z,2µm,18.0s
LPAZ La Paz 43.19 124 P **P** **22 34 03.4 +0.3**
comp=Z,26nm,0.9s,baz=318,slow=8.6,SNR=29
LPAZ LR LR 22 51 22.9
comp=Z,2µm,18.2s,baz=311,slow=35
LPAZ La Paz 43.19 124 eP **P** **22 34 03.5 +0.4**
LPAZ La Paz 43.19 124 P **P** **22 34 02.4 -0.6**
LPAZ pmax pmax
comp=Z,45nm,1.1s
LPAZ La Paz 43.19 124 P **P** **22 34 02.4 -0.6**
LPAZ IAmb IAmb 22 34 07.4
comp=Z,45nm,1.1s
LPAZ La Paz 43.19 124 eP **P** **22 34 03.7 +0.7**
PB16 IPOC Station P 43.21 128 P **P** **22 34 03.0 -0.1**
PB16 IAmb IAmb 22 34 07.4
comp=Z,37nm,1.2s
PB16 IAMs_20 IAMs_20 22 48 10.6
comp=Z,3µm,21.0s
G54A Lake Saint Pet 43.23 27 P **P** **22 34 01.0 -1.3**
baz=219
I57A Carthage 43.28 30 P **P** **22 34 01.6 -1.2**
baz=223
PGC Sidney 43.38 341 IAMs_20 IAMs_20 22 50 36.3
comp=Z,2µm,19.0s
I58A Old Forge 43.45 31 P **P** **22 34 03.5 -0.6**
baz=224
PSGCX Pisagua 43.47 130 P **P** **22 34 03.5 -1.2**
PSGCX IAmb IAmb 22 34 09.1
comp=Z,67nm,1.5s
PSGCX IAMs_20 IAMs_20 22 48 38.4
comp=Z,2µm,19.0s
J59A Piesco 43.53 31 P **P** **22 34 03.6 -1.2**
baz=225
J59A Piesco 43.53 31 IAMs_20 IAMs_20 22 54 15.4
comp=Z,3µm,18.0s
MNMC Minye Minye 43.60 129 P **P** **22 34 05.8 -0.1**
MNMC IAmb IAmb 22 34 10.5
comp=Z,70nm,1.5s
MNMC IAMs_20 IAMs_20 22 48 04.9
comp=Z,2µm,22.0s
K61A Williamstown 43.63 33 P **P** **22 34 05.0 -0.6**
baz=227
BBSR BB Station 43.65 51 IAMs_20 IAMs_20 22 49 44.3
comp=Z,2µm,21.0s
ALGO Algonquin Park 43.68 26 P **P** **22 34 05.8 -0.1**
baz=219
H57A Richville 43.80 30 P **P** **22 34 06.2 -0.7**
baz=223
PB11 IPOC Station P 43.92 130 P **P** **22 34 08.1 -0.2**
PB11 IAmb IAmb 22 34 11.8
comp=Z,61nm,1.3s
PB11 IAMs_20 IAMs_20 22 48 52.4
comp=Z,2µm,19.0s
TA01 Diego Aracena 44.01 131 P **P** **22 34 08.5 -0.3**
TA01 IAmb IAmb 22 34 12.6
comp=Z,52nm,1.3s
TA01 IAMs_20 IAMs_20 22 48 15.6
comp=Z,2µm,21.0s
NCB Newcomb 44.03 31 IAMs_20 IAMs_20 22 55 32.7
comp=Z,2µm,19.0s
I59A Olmsteadville 44.09 32 P **P** **22 34 08.7 -0.5**
baz=226
PATCX Punta Patache 44.18 131 IAMs_20 IAMs_20 22 48 07.2
comp=Z,2µm,21.0s
GO01 Chusmiza 44.22 129 P **P** **22 34 10.8 -0.3**
GO01 IAmb IAmb 22 34 15.3
comp=Z,43nm,1.4s
SAML Samuel 44.23 112 eP **P** **22 34 09.0 -1.7**
SAML Samuel 44.23 112 P **P** **22 34 09.4 -1.4**
SAML pmax pmax
comp=Z,55nm,1.4s
SAML MLR MLR
comp=Z,6µm,22.0s
SAML Samuel 44.23 112 P **P** **22 34 09.4 -1.4**
SAML IAmb IAmb 22 34 12.7
comp=Z,55nm,1.4s
SAML Samuel 44.23 112 eP **P** **22 34 10.1 -0.6**
LONY Lake Ozonia 44.31 30 IAMs_20 IAMs_20 22 54 41.0
comp=Z,2µm,19.0s
H58A Gabriels 44.37 31 P **P** **22 34 11.4 -0.1**
baz=225
I60A Shoreham 44.42 32 P **P** **22 34 11.4 -0.5**
baz=226
G57A Newington 44.46 29 P **P** **22 34 11.8 -0.3**
baz=223
HRV Adam Dziewonsk 44.47 35 IAMs_20 IAMs_20 22 53 09.2
comp=Z,2µm,21.0s
PB08 IPOC Station P 44.52 130 P **P** **22 34 13.4 -0.1**
PB08 IAMs_20 IAMs_20 22 48 17.4
comp=Z,2µm,22.0s
K63A Dunstable 44.61 34 P **P** **22 34 12.7 -0.7**
baz=229
H59A Cadyville 44.78 31 P **P** **22 34 14.0 -0.8**
baz=225
MACA Manacapuru-AM 44.78 103 eP **P** **22 34 12.8 -2.4**
PB01 IPOC Station P 44.81 131 P **P** **22 34 15.7 +0.3**
PB01 IAmb IAmb 22 34 48.7
comp=Z,20nm,0.5s
PB01 IAMs_20 IAMs_20 22 48 26.9
comp=Z,2µm,20.0s
PB07 IPOC Station P 44.93 132 IAMs_20 IAMs_20 22 48 29.0
comp=Z,3µm,21.0s
G58A Ormstown 44.95 30 P **P** **22 34 15.3 -0.8**
baz=224
VT1 Waterbury 45.04 32 IAMs_20 IAMs_20 22 56 24.2
comp=Z,2µm,19.0s
I61A Oroboro, Fairl 45.06 33 P **P** **22 34 15.6 -1.4**
baz=228
G59A Clarenceville 45.34 31 P **P** **22 34 17.4 -1.8**
baz=226,SNR=5.2
PB09 IPOC Station P 45.45 132 P **P** **22 34 20.4 -0.1**
PB09 IAmb IAmb 22 34 25.0
comp=Z,43nm,1.3s
PB09 IAMs_20 IAMs_20 22 48 56.7
comp=Z,3µm,20.0s
I62A Tamworth 45.49 33 IAMs_20 IAMs_20 22 54 52.2
comp=Z,2µm,20.0s
D55A Sainte-Anne-du 45.64 27 P **P** **22 34 20.6 -1.0**
baz=222
PB06 IPOC Station P 45.76 133 P **P** **22 34 22.6 -0.5**
H62A Milan 46.05 33 IAMs_20 IAMs_20 22 55 48.0
comp=Z,3µm,18.0s
LVC Limon Verde 46.18 132 P **P** **22 34 26.5 0.0**
comp=Z,8.6nm,1.1s,baz=294,slow=5.1,SNR=9.4
LVC Limon Verde 46.18 132 P **P** **22 34 26.6 0.0**
LVC pmax pmax
comp=Z,50nm,1.5s
LVC Limon Verde 46.18 132 P **P** **22 34 26.6 0.0**
LVC IAmb IAmb 22 34 31.2
comp=Z,50nm,1.5s
LVC Limon Verde 46.18 132 IAMs_20 IAMs_20 22 49 17.2
comp=Z,3µm,20.0s
LVC Limon Verde 46.18 132 eP **P** **22 34 29.0 +2.4**
E58A La Victoria 46.20 29 P **P** **22 34 24.9 -1.1**
baz=225
FFC Flin Flon 46.31 2 P **P** **22 34 27.2 +0.5**
FFC pmax pmax
comp=Z,28nm,1.4s
FFC MLR MLR
comp=Z,13µm,18.0s
FFC Flin Flon 46.31 2 P **P** **22 34 27.2 +0.5**
FFC IAmb IAmb 22 34 36.2
comp=Z,28nm,1.4s
LSQQ Lebel-sur-Quev 46.56 24 P **P** **22 34 27.8 -1.0**
baz=218
F60A Warwick 46.58 31 P **P** **22 34 28.0 -1.0**
baz=226
G62A West of Eustis 46.81 32 P **P** **22 34 29.6 -1.2**
baz=229
G62A West of Eustis 46.81 32 IAMs_20 IAMs_20 22 54 42.1
comp=Z,2µm,19.0s
MATQ Matagami 46.85 23 P **P** **22 34 29.7 -1.3**
baz=217
D58A Chemin du LacG 46.91 29 P **P** **22 34 29.7 -1.8**
baz=224
E60A Ste Agathe de 47.11 31 P **P** **22 34 32.2 -0.9**
baz=227
LATQ La Tuque 47.16 29 P **P** **22 34 31.7 -1.8**
baz=224
PKME Peaks-Kenny Pk 47.50 33 P **P** **22 34 34.9 -1.3**
baz=230
G64A Maxfield 47.79 33 P **P** **22 34 36.9 -1.5**
baz=230
F63A Nahmakanta, Br 47.89 33 P **P** **22 34 37.9 -1.3**
baz=230
F63A Nahmakanta, Br 47.89 33 IAMs_20 IAMs_20 22 55 40.7
comp=Z,2µm,21.0s
H03N2 Juan Fernandez 47.93 151 T T 23 26 07.3
baz=328,slow=77,SNR=210
H03N1 Juan Fernandez 47.94 151 T T 23 26 13.6
baz=328,slow=77,SNR=269
H03N3 Juan Fernandez 47.94 151 T T 23 26 10.8
baz=328,slow=77,SNR=261
BBB Bella Bella 47.95 340 IAMs_20 IAMs_20 22 52 36.0
comp=Z,2µm,21.0s
VA04 Juan Fernndez 48.14 151 IAMs_20 IAMs_20 22 49 57.5
comp=Z,2µm,19.0s
EMMW East Machias 48.17 35 IAMs_20 IAMs_20 22 57 36.1
comp=Z,2µm,18.0s
CHGQ Chibougamau 48.30 25 P **P** **22 34 40.8 -1.5**
baz=221
F64A Sherman 48.40 33 P **P** **22 34 41.3 -1.8**
baz=231
F64A Sherman 48.40 33 IAMs_20 IAMs_20 22 55 41.1
comp=Z,2µm,20.0s
G65A Princeton 48.41 34 P **P** **22 34 41.1 -2.1**
baz=232
G65A Princeton 48.41 34 IAMs_20 IAMs_20 22 57 43.5
comp=Z,3µm,19.0s
VILB Vilhena 48.46 115 eP **P** **22 34 43.0 -1.1**
AC02 Maricunga 48.70 137 P **P** **22 34 44.5 -1.7**
AC02 IAmb IAmb 22 34 55.5
comp=Z,10nm,0.6s
PMOR Pomariorio Ree 49.20 242 eT T 23 27 17.5
comp=Z,5.9nm,0.3s
D63A Stockholm 49.27 32 P **P** **22 34 48.4 -1.4**
baz=230
AC05 El Transito 49.29 140 P **P** **22 34 50.2 -0.1**
ITTB Itaituba 49.86 103 eP **P** **22 34 52.4 -2.4**
GO04 Tololo Observa 49.88 142 IAMs_20 IAMs_20 22 50 30.9
comp=Z,2µm,21.0s
HAL Halifax 50.37 37 IAMs_20 IAMs_20 22 55 05.5
comp=Z,3µm,21.0s
CO03 El Pedregal 50.42 142 IAMs_20 IAMs_20 22 50 47.0
comp=Z,2µm,22.0s
PTLB Pontes e Lacer 50.42 118 eP **P** **22 34 58.1 -0.9**
CO02 Combarbal 50.49 143 IAMs_20 IAMs_20 22 50 49.9
comp=Z,3µm,21.0s
MALB Monte Alegre 50.71 99 eP **P** **22 35 00.0 -1.2**
FCC Fort Churchill 50.91 7 P **P** **22 35 02.3 +0.3**
FCC pmax pmax
comp=Z,104nm,1.6s
FCC MLR MLR
comp=Z,3µm,19.0s
FCC Fort Churchill 50.91 7 P **P** **22 35 02.3 +0.3**
NPGB Novo Progresso 50.94 106 eP **P** **22 35 00.8 -2.2**
CLDB Colider 51.71 111 eP **P** **22 35 06.3 -2.5**
PPT2 Papeete2 51.77 240 eS **S** **22 42 33.5 +1.8**
comp=Z,1µm,27.0s
PPT2 eLQ LQ 22 47 56.6
comp=Z,1µm,22.0s
PPT2 eLR LR 22 49 49.5
comp=Z,4µm,25.0s,baz=57
VA03 San Esteban 51.87 144 IAMs_20 IAMs_20 22 51 49.4
comp=Z,3µm,21.0s
GBN Guysborough 52.03 37 IAMs_20 IAMs_20 22 56 56.3
comp=Z,2µm,20.0s
PEL Peldehue 52.06 144 IAMs_20 IAMs_20 22 51 55.7
comp=Z,2µm,20.0s
ZON Zonda 52.14 141 P **P** **22 35 11.0 -0.8**
ZON pmax pmax
comp=Z,16nm,1.3s
ZON MLR MLR
comp=Z,2µm,18.0s
ZON Zonda 52.14 141 P **P** **22 35 11.0 -0.8**
ZON IAMs_20 IAMs_20 22 53 19.7
comp=Z,2µm,18.0s
MT05 Renca 52.21 144 P **P** **22 35 11.3 -1.0**
MCPB Macapa, AP 52.58 97 eP **P** **22 35 13.9 -1.3**
BO02 Sierra Bellavi 53.21 146 IAMs_20 IAMs_20 22 52 10.7
comp=Z,2µm,21.0s
DLBC Dease Lake 53.82 343 IAMs_20 IAMs_20 22 56 43.3
comp=Z,2µm,20.0s
BI02 San Fabin de 54.33 148 P **P** **22 35 27.2 -0.5**
BI02 IAmb IAmb 22 35 31.4
comp=Z,17nm,1.1s
BI02 IAMs_20 IAMs_20 22 52 43.3
comp=Z,2µm,22.0s
TBI Tubuai 54.38 234 eS **S** **22 43 07.8 +1.0**
comp=Z,736nm,28.8s
YKA Yellowknife Ar 54.62 354 P **P** **22 35 28.6 -0.8**
comp=Z,0.9nm,0.6s,baz=163,slow=8.2,SNR=4.3
YKA LR LR 22 57 03.7
comp=Z,2µm,20.7s,baz=0.0,slow=34
JIS Juneau Island 55.00 341 IAMs_20 IAMs_20 22 56 07.6
comp=Z,1µm,20.0s
PP1B Ponte de Pedra 55.02 118 eP **P** **22 35 32.2 -0.9**
SCHQ Schefferville 55.05 25 P **P** **22 35 32.4 -0.3**
comp=Z,10nm,0.9s,baz=307,slow=3.0,SNR=4.5
SCHQ LR LR 23 00 26.6
comp=Z,2µm,19.6s,baz=233,slow=37
BESE Bessie Mountai 55.39 341 IAMs_20 IAMs_20 22 56 19.0
comp=Z,1µm,22.0s
AQDB Aquidauana 55.53 122 eP **P** **22 35 37.3 +0.7**
LC01 Cunco 55.71 150 P **P** **22 35 40.7 +3.1**
LC01 IAMs_20 IAMs_20 22 54 12.2
comp=Z,1µm,19.0s
PRPB Parauapebas 56.02 103 eP **P** **22 35 39.5 -0.8**
SNDB Serra Nova Dou 56.24 110 eP **P** **22 35 41.7 -0.2**
CPUP Villa Florida 56.99 129 P **P** **22 35 46.5 -0.5**
comp=Z,14nm,1.0s,baz=312,slow=8.9,SNR=14
CPUP Villa Florida 56.99 129 P **P** **22 35 46.5 -0.5**
CPUP pmax pmax
comp=Z,54nm,1.4s
CPUP Villa Florida 56.99 129 P **P** **22 35 46.5 -0.5**
CPUP Villa Florida 56.99 129 eP **P** **22 35 48.8 +1.8**
ARAG Araguaiana, MT 57.02 115 eP **P** **22 35 47.1 -0.3**
WHY Whitehorse 57.05 343 IAMs_20 IAMs_20 22 57 38.9
comp=Z,2µm,21.0s
PLCA Paso Flores 57.77 150 P **P** **22 35 51.7 -0.7**
comp=Z,2.6nm,1.0s,baz=232,slow=7.5,SNR=2.6
PLCA LR LR 22 55 37.7
comp=Z,2µm,18.2s,baz=316,slow=31
PLCA Paso Flores 57.77 150 eP P 22 36 04.8 +12
HYT Haines Junctio 57.99 341 IAMs_20 IAMs_20 22 57 40.6
comp=Z,2µm,22.0s
SMTB Santa Maria do 58.83 106 eP **P** **22 36 00.2 0.0**
PEXB Peixe 59.07 109 eP **P** **22 36 01.8 0.0**
TRCB Terra Rica 59.10 123 eP **P** **22 36 03.2 +1.2**
CTGM Chitina Glacie 59.35 340 IAMs_20 IAMs_20 23 02 56.5
comp=Z,1µm,22.0s
BARN Barnard Glacie 59.52 340 IAMs_20 IAMs_20 23 03 25.2
comp=Z,1µm,22.0s
CRQM Cirque 59.83 339 IAMs_20 IAMs_20 23 04 00.6
comp=Z,1µm,18.0s
MCARA McCarthy VSAT 60.22 340 IAMs_20 IAMs_20 23 03 58.7
comp=Z,1µm,21.0s
VRDI Verde Repeater 60.26 339 IAMs_20 IAMs_20 22 57 42.7
comp=Z,1µm,22.0s
PTGB Pitanga 60.41 124 eP **P** **22 36 12.7 +1.7**
BDFB Brasilia 60.44 113 P **P** **22 36 11.3 0.0**
comp=Z,8.9nm,1.0s,baz=312,slow=2.4,SNR=7.2
BDFB LR LR 23 01 23.6
comp=Z,2µm,18.4s,baz=295,slow=35
BDFB Brasilia 60.44 113 P **P** **22 36 10.8 -0.5**
BDFB pmax pmax
comp=Z,21nm,1.3s
BDFB MLR MLR
comp=Z,2µm,18.0s
BDFB Brasilia 60.44 113 P **P** **22 36 10.8 -0.5**
BDFB IAmb IAmb 22 36 13.1
comp=Z,21nm,1.3s
GLB Gilahina Butte 60.53 339 IAMs_20 IAMs_20 23 04 10.9
comp=Z,1µm,20.0s
DAWY Dawson 61.03 343 IAMs_20 IAMs_20 23 01 33.1
comp=Z,1µm,21.0s
FID Port Fidalgo 61.04 338 IAMs_20 IAMs_20 23 06 24.0
comp=Z,1µm,19.0s
IPMB Ipameri, GO 61.05 116 eP **P** **22 36 14.9 -0.6**
ITAB Concordia 61.48 127 eP **P** **22 36 19.8 +1.6**
K27K Chicken 61.80 342 P **P** **22 36 20.4 +0.7**
K27K IAmb IAmb 22 36 29.9
comp=Z,11nm,0.9s
RAR Rarotonga 62.03 241 LR LR 22 55 44.8
comp=Z,780nm,21.3s,baz=64,slow=29
EGAK Eagle 62.08 343 P **P** **22 36 21.4 -0.1**
EGAK IAmb IAmb 22 37 05.0
comp=Z,34nm,1.8s
EGAK IAMs_20 IAMs_20 23 02 12.7
comp=Z,1µm,19.0s
DOT Dot Lake 62.15 341 P **P** **22 36 21.9 -0.2**
DOT IAmb IAmb 22 36 41.4
comp=Z,8.2nm,0.9s
DOT IAMs_20 IAMs_20 22 58 49.7
comp=Z,1µm,22.0s
KNK Knik Glacier 62.20 338 IAMs_20 IAMs_20 22 56 09.0
comp=Z,1µm,21.0s
SCRK Sand Creek 62.36 341 P **P** **22 36 22.4 -1.2**
baz=134
RIDG Independent Ri 62.47 341 P **P** **22 36 24.0 -0.3**
RIDG IAmb IAmb 22 36 43.7
comp=Z,13nm,1.0s
RIDG IAMs_20 IAMs_20 23 00 06.0
comp=Z,1µm,22.0s
INK Inuvik 63.01 348 P **P** **22 36 27.7 +0.1**
INK pmax pmax
comp=Z,20nm,1.4s
INK Inuvik 63.01 348 P **P** **22 36 27.7 +0.1**
INK IAmb IAmb 22 36 41.5
comp=Z,20nm,1.4s
HDA Harding Lake 63.60 341 P **P** **22 36 30.7 -1.0**
baz=131
IL31 63.82 341 P **P** **22 36 32.5 -0.6**
IL31 IAmb IAmb 22 36 41.8

comp=Z,12nm,1.1s
ILAR Eielson Array 63.82 341 P **P** **22 36 32.2 -0.9**
comp=Z,1.6nm,0.8s,baz=153,slow=4.7,SNR=18
MCK McKinley 63.83 340 P **P** **22 36 32.1 -1.1**
baz=129
WRH Wood River Hil 64.02 340 IAms_20 IAms_20 23 02 57.0
comp=Z,944nm,20.0s
TRF Thorofare Moun 64.13 339 IAms_20 IAms_20 23 06 09.0
comp=Z,2μm,21.0s
COLA College 64.20 341 *i* P **P** **22 36 35.7 +0.1**
COLA pmax pmax
comp=Z,9.0nm,1.2s
COLA College 64.20 341 IAms_20 IAms_20 22 58 22.0
comp=Z,1μm,21.0s
TCOL CIGO, UAF Yank 64.21 341 IAms_20 IAms_20 22 58 22.0
comp=Z,1μm,21.0s
POKR Poker Plat Res 64.23 341 IAms_20 IAms_20 23 06 44.5
comp=Z,901nm,19.0s
NEA2 Nenana 64.42 340 P **P** **22 36 36.7 -0.4**
baz=129
BPAW Bear Paw Mtn. 64.78 339 IAms_20 IAms_20 23 06 33.0
comp=Z,1μm,19.0s
I23K Minto, Yukon-K 64.87 341 P **P** **22 36 39.4 -0.6**
baz=129
MLY Manley 65.26 340 P **P** **22 36 42.0 -0.6**
baz=128
COLD Coldfoot 66.45 342 P **P** **22 36 49.5 -0.6**
baz=129
RES Resolute Bay 66.54 3 P **P** **22 36 51.3 +0.7**
RES pmax pmax
comp=Z,17nm,1.4s
RES MLR MLR
comp=Z,1μm,19.0s
RES Resolute Bay 66.54 3 P **P** **22 36 51.2 +0.7**
RES IAmb IAmb 22 36 59.7
comp=Z,16nm,1.4s
RES IAms_20 IAms_20 23 04 35.6
comp=Z,1μm,19.0s
TOLK Toolik Lake Re 67.17 344 P **P** **22 36 54.0 -0.8**
baz=130
TOLK Toolik Lake Re 67.17 344 P **P** **22 36 54.8 0.0**
TOLK IAmb IAmb 22 37 36.4
comp=Z,12nm,1.1s
TOLK IAms_20 IAms_20 23 07 50.3
comp=Z,2μm,20.0s
GDU01 Guandu, BA 67.68 108 *e*P **P** **22 36 59.2 +0.3**
RCBR Riachuelo 69.45 99 *e*P **P** **22 37 10.6 +0.6**
ILULI Ilulissat 69.70 18 IAms_20 IAms_20 23 08 47.4
comp=Z,1μm,19.0s
A21K Barrow 70.73 344 IAms_20 IAms_20 23 06 06.2
comp=Z,937nm,22.0s
TULEG Thule 70.79 8 IAms_20 IAms_20 23 07 36.0
comp=Z,1μm,20.0s
RDOG Red Dog Mine 70.98 340 IAms_20 IAms_20 23 12 39.1
comp=Z,780nm,19.0s
EUNU Eureka 72.22 3 P **P** **22 37 26.5 +0.8**
EUNU IAms_20 IAms_20 23 11 58.5
comp=Z,2μm,22.0s
SUMG Summit 74.93 17 P **P** **22 37 42.2 -0.1**
SUMG pmax pmax
comp=Z,44nm,1.3s
SUMG MLR MLR
comp=Z,2μm,20.0s
SUMG Summit 74.93 17 P **P** **22 37 42.2 -0.1**
SUMG Summit 74.93 17 *i* P **P** **22 37 41.6 -0.6**
comp=Z,43nm,1.0s
SUMG Summit 74.93 17 *i* P **P** **22 37 41.6 -0.6**
SUMG IAmb IAmb 22 37 44.2
comp=Z,43nm,1.0s
DAG Danmarks Havn 80.91 13 *i* P **P** **22 38 15.1 +0.2**
DAG pmax pmax
comp=Z,56nm,1.7s
DAG Danmarks Havn 80.91 13 *i* P **P** **22 38 15.1 +0.2**
comp=Z,56nm,1.7s
DAG Danmarks Havn 80.91 13 *i* P **P** **22 38 15.1 +0.2**
DAG IAmb IAmb 22 38 24.0
comp=Z,56nm,1.7s
MSVF Nonsavu 81.08 251 *i* P **P** **22 38 15.4 -1.6**
MSVF pmax pmax
comp=Z,14nm,1.3s
BILL Bilibino 82.21 338|| *e*P **P** **22 38 20.0 -1.9**
BILL *e* 22 38 26.5
BILL *e*S **S** **22 48 30.8 -6.2**
BILL pmax pmax
comp=Z,13nm,1.7s
BILL MLR MLR
comp=Z,508nm,21.0s
MXZ Matakaoa Point 85.31 231 IAms_20 IAms_20 23 07 22.1
comp=Z,1μm,21.0s
URZ Urewera 86.39 231 LR LR 23 08 39.6
comp=Z,807nm,20.6s,baz=34,slow=30
URZ Urewera 86.39 231 IAms_20 IAms_20 23 07 33.8
comp=Z,1μm,22.0s
KBS Kingsbay 86.73 10 IAms_20 IAms_20 23 17 37.3
comp=Z,732nm,21.0s
PETK Petropavlovsk- 88.30 323 LR LR 23 11 45.2
comp=Z,307nm,20.6s,baz=90,slow=31
OUZ Omahuta 88.51 234 P **P** **22 38 53.6 -0.3**
MTE Manteigas 89.63 49 IAms_20 IAms_20 23 13 49.5
comp=Z,910nm,18.0s
RPZ Rata Peaks 91.97 226 LR LR 23 14 17.0
comp=Z,1μm,18.2s,baz=84,slow=32
ESDC Sonseca Array 92.47 50 IAms_20 IAms_20 23 19 02.0
comp=Z,419nm,18.1s,baz=280,slow=34
ES05 SONSECA Array 92.48 50 IAms_20 IAms_20 23 11 32.8
comp=Z,966nm,22.0s
ES06 SONSECA Array 92.48 49 IAms_20 IAms_20 23 11 59.9
comp=Z,675nm,20.0s
ES03 SONSECA Array 92.49 50 IAms_20 IAms_20 23 13 02.3
comp=Z,795nm,20.0s
ES08 SONSECA Array 92.50 49 IAms_20 IAms_20 23 12 35.3
comp=Z,904nm,22.0s
ES11 SONSECA Array 92.51 50 IAms_20 IAms_20 23 14 27.7
comp=Z,852nm,20.0s
DZM Mont Dzumac 92.57 248 LR LR 23 11 38.5
comp=Z,504nm,21.8s,baz=80,slow=30
DZM Mont Dzumac 92.57 248 IAms_20 IAms_20 23 10 56.8
comp=Z,643nm,20.0s
TIXI Tiksi 93.01 345 *i* P **P** **22 39 13.5 -0.7**
TIXI Tiksi 93.01 345 P **P** **22 39 13.3 -1.0**
TIXI IAmb IAmb 22 39 35.8
comp=Z,4.8nm,0.9s
TIXI IAms_20 IAms_20 23 21 39.2
comp=Z,778nm,21.0s
NOA NORSAR Array B 94.61 26 LR LR 23 22 07.3
comp=Z,467nm,19.1s,baz=280,slow=36
ARCES ARCESS Array B 95.01 16 LR LR 23 22 45.4
comp=Z,963nm,19.7s,baz=350,slow=36
CART Cartagena 95.22 51 IAms_20 IAms_20 23 12 43.5
comp=Z,810nm,21.0s
ECH Echery 97.65 39 IAms_20 IAms_20 23 19 19.2
comp=Z,693nm,22.0s
DBIC Dimbokro 98.13 82 LR LR 23 21 50.8
comp=Z,509nm,19.7s,baz=264,slow=34
QSPA South Pole Qui 98.29 180 IAms_20 IAms_20 23 16 22.6
comp=Z,819nm,20.0s
BFO Black Forest 98.34 39 IAms_20 IAms_20 23 18 39.2
comp=Z,724nm,21.0s
SENIN Lac Senin/Sane 98.42 41 IAms_20 IAms_20 23 22 59.6
comp=Z,576nm,20.0s
YAK Yakutsk 98.56 337 *i* P **P** **22 39 39.5 -0.2**
YAK pmax pmax
comp=Z,7.0nm,0.9s
YAK Yakutsk 98.56 337 IAms_20 IAms_20 23 31 29.1
comp=Z,628nm,18.0s
STU Stuttgart 98.69 38 IAms_20 IAms_20 23 19 29.7
comp=Z,928nm,22.0s
VNDA Vanda 98.94 193 LR LR 23 14 41.5
comp=Z,387nm,21.6s,baz=98,slow=30
YSS Yuzh-Sakhalins 99.31 320 *i* P **Pdif** **22 39 43.4 0.0**
YSS pmax pmax
comp=Z,8.0nm,0.9s
YSS Yuzh-Sakhalins 99.31 320 IAms_20 IAms_20 23 17 17.5
comp=Z,604nm,20.0s
GRA1 Grafenberg Arr 99.53 37 IAms_20 IAms_20 23 21 15.8
comp=Z,709nm,22.0s
CLL Collm 99.86 35 *e*Pdif **Pdif** **22 39 46.0 +0.3**
CLL Collm 99.86 35 IAms_20 IAms_20 23 19 41.1
comp=Z,694nm,22.0s
CLL Collm 99.86 35 *e*PS PS 22 52 50.0 +1.3
CLL Collm 99.86 35 *e*PPS PPS 22 53 32.0
CLL Collm 99.86 35 *e*SS SS 22 58 16.0 +4.7
JKA Kamikawa-asahi 100.50 318 IAms_20 IAms_20 23 23 17.5
comp=Z,619nm,20.0s
MSSA Maissana 100.64 42 IAms_20 IAms_20 23 18 41.3
comp=Z,784nm,22.0s
VLC Villacollemand 101.27 42 IAms_20 IAms_20 23 19 12.2
comp=Z,522nm,22.0s
CASP Castiglione de 102.14 43 IAms_20 IAms_20 23 19 05.1
comp=Z,698nm,22.0s
TRI Trieste 102.80 39 IAms_20 IAms_20 23 20 21.5
comp=Z,751nm,22.0s
TOB5 Torodi Ar. Sit 103.28 74 IAms_20 IAms_20 23 26 33.1
comp=Z,713nm,20.0s
TOB1 Torodi Ar. Sit 103.29 74 IAms_20 IAms_20 23 26 32.4
comp=Z,670nm,20.0s
TOA0 Torodi Ar. Sit 103.30 74 IAms_20 IAms_20 23 26 32.5
comp=Z,685nm,20.0s
TOC1 Torodi Ar. Sit 103.30 74 IAms_20 IAms_20 23 26 32.6
comp=Z,769nm,20.0s
TOA2 Torodi Ar. Sit 103.30 74 IAms_20 IAms_20 23 26 32.7
comp=Z,699nm,20.0s
TOC2 Torodi Ar. Sit 103.32 74 IAms_20 IAms_20 23 26 34.1
comp=Z,700nm,21.0s
KEST Kesra 103.70 50 IAms_20 IAms_20 23 21 15.0
comp=Z,670nm,22.0s
RABL Rabaul 104.17 268 IAms_20 IAms_20 23 29 32.1
comp=Z,551nm,18.0s
TAM Tamanrasset 104.56 64 IAms_20 IAms_20 23 26 08.7
comp=Z,496nm,19.0s
PAOL Paolisi 105.38 44 IAms_20 IAms_20 23 19 43.0
comp=Z,520nm,21.0s
SGRT San Giovanni R 105.85 42 IAms_20 IAms_20 23 22 02.4
comp=Z,658nm,22.0s
EIDS Eidsvold 106.87 246 IAms_20 IAms_20 23 18 27.3
comp=Z,420nm,21.0s
DIVS Divibare 107.46 39 IAms_20 IAms_20 23 23 52.6
comp=Z,641nm,22.0s
CEL Celeste 107.51 46 IAms_20 IAms_20 23 23 33.5
comp=Z,433nm,20.0s
SCTE Santa Cesarea 108.46 43 IAms_20 IAms_20 23 29 59.5
comp=Z,399nm,20.0s
MDJ Mudanjiang 108.53 323 IAms_20 IAms_20 23 24 33.6
comp=Z,518nm,20.0s
AKBB Malin Array Si 108.72 29 IAms_20 IAms_20 23 30 49.2
comp=Z,735nm,20.0s
TIR Tirane 108.77 41 IAms_20 IAms_20 23 23 15.4
comp=Z,587nm,22.0s
KIS Kishinev 110.89 32 *e*P **Pdif** **22 40 50.0 +15**
KIS Kishinev 110.89 32 *e*P **Pdif** **22 40 50.0 +15**
HIA Hailar 111.03 331 IAms_20 IAms_20 23 39 13.2
comp=Z,495nm,18.0s
CTAO Charters Tower 111.21 252 IAms_20 IAms_20 23 20 28.7
comp=Z,407nm,22.0s
ITM Ithomi 112.24 44 IAms_20 IAms_20 23 38 09.5
comp=Z,424nm,20.0s
INCN Inchon 114.28 317 IAms_20 IAms_20 23 23 48.3
comp=Z,589nm,22.0s
JSU Suzuyama 114.55 310 IAms_20 IAms_20 23 24 27.8
comp=Z,656nm,20.0s
ANN Anapa 116.79 30 *e*P **Pdif** **22 41 05.0 +3.8**
ANN pmax pmax
comp=Z,109nm,2.0s
ISP Isparta 117.56 39 IAms_20 IAms_20 23 36 12.6
comp=Z,382nm,21.0s
ULN Ulaanbaatar 117.64 337 IAms_20 IAms_20 23 30 17.7
comp=Z,526nm,22.0s
BRVK Borovoye 118.68 4 *i* PKIKP **PKPdf** **22 44 49.1 -0.2**
SOC Sochi 118.80 29 *i* PKIKP **PKPdf** **22 44 49.9 +0.1**
SOC *e* 22 46 07.1
SOC *e*PPP PPP 22 48 36.6
SOC *e*SSS SSS 23 06 51.4
BJT Baijiatuau 119.20 325 IAms_20 IAms_20 23 42 23.6
comp=Z,596nm,20.0s
TOKA Tokat 119.46 34 IAms_20 IAms_20 23 37 57.9
comp=Z,474nm,20.0s
KIV Kislovodsk 119.91 27 *i* PKIKP **PKPdf** **22 44 50.3 -1.8**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,1μm,21.0s
KIV Kislovodsk 119.91 27 IAms_20 IAms_20 23 35 12.0
comp=Z,517nm,22.0s
HHC Hu-ho-hao-te 121.08 329 *e*PKP **PKPdf** **22 44 54.0 -0.4**
HHC PP **PP** **22 46 28.0 +4.8**
HHC AMB AMB
comp=Z,73nm,8.4s
HHC LR LR
comp=Z,340nm,19.6s
HHC LR LR
comp=Z,590nm,21.4s
HHC LR LR
comp=Z,930nm,20.1s
CSS Mathiatis 121.11 40 IAms_20 IAms_20 23 36 13.1
comp=Z,406nm,22.0s
SSE Sheshan 121.56 314 IAms_20 IAms_20 23 30 20.1
comp=Z,496nm,20.0s
KOPT Kop Dagi 121.83 32 IAms_20 IAms_20 23 41 08.4
comp=Z,340nm,22.0s
WB0 Warramunga Arr 122.37 252 IAms_20 IAms_20 23 36 52.4
comp=Z,594nm,20.0s
WB7 Warramunga Arr 122.38 252 IAms_20 IAms_20 23 36 34.1
comp=Z,457nm,20.0s
WB8 Warramunga Arr 122.38 252 IAms_20 IAms_20 23 36 43.7
comp=Z,531nm,19.0s
WB6 Warramunga Arr 122.39 252 IAms_20 IAms_20 23 37 44.9
comp=Z,546nm,19.0s
WB3 Warramunga Arr 122.39 252 IAms_20 IAms_20 23 29 15.1
comp=Z,489nm,20.0s
WRA Warramunga Arr 122.41 252 PKP **PKPdf** **22 44 56.0 -1.4**
comp=Z,0.7nm,0.8s,baz=91,slow=2.3,SNR=5.8
WRA Warramunga Arr 122.41 252 PKIKP **PKPdf** **22 44 55.9 -1.4**
WRA Warramunga Arr 122.41 252 **PKPdf** **22 44 55.9 -1.4**
ASAR Alice Springs 122.55 247 PKP **PKPdf** **22 44 56.5 -1.1**
comp=Z,0.2nm,0.3s,baz=95,slow=2.5,SNR=2.0
ASAR Alice Springs 122.55 247 PKIKP **PKPdf** **22 44 57.2 -0.4**
ASAR Alice Springs 122.55 247 **PKPdf** **22 44 57.2 -0.4**
NJ2 Nanjing 122.62 317 *e*PKP **PKPdf** **22 44 55.5 -2.0**
MAK Makhachkala 122.79 25 *e*P **Pdif** **22 41 24.1 -3.8**
MAK *i* 22 44 55.6
MAK *e* 22 46 32.7
MAK pmax pmax
comp=Z,346nm,1.2s
FAKI Fak Fak 123.70 272 IAms_20 IAms_20 23 30 15.0
comp=Z,542nm,21.0s
GNI Gani 123.84 29 IAms_20 IAms_20 23 37 50.2
comp=Z,523nm,22.0s
GEVA Gevas 124.43 31 IAms_20 IAms_20 23 39 37.1
comp=Z,369nm,22.0s
MKAR Makanchi Array 124.84 355 PKP **PKPdf** **22 45 01.3 -0.1**
comp=Z,0.6nm,0.8s,baz=18,slow=0.5,SNR=2.5
MAKZ Makanchi 124.85 355 IAms_20 IAms_20 23 43 12.7
comp=Z,554nm,20.0s
NACB Ningan Chiao 124.94 307 IAms_20 IAms_20 23 29 16.4
comp=Z,637nm,22.0s
MTN Manton Dam 125.60 260 IAms_20 IAms_20 23 32 11.7
comp=Z,342nm,20.0s
WMQ Urumqi 127.01 349 *e*PKP **PKPdf** **22 45 05.8 +0.1**
WMQ AMB AMB
comp=Z,200nm,4.9s
WMQ LR LR
comp=Z,1μm,21.1s
WMQ LR LR
comp=Z,720nm,22.9s
WMQ LR LR
comp=Z,2μm,21.9s
GTA Gaotai 127.58 337 *e*PKP **PKiKP** **22 45 11.8 +4.3**
KNRA Kununurra 127.88 257 IAms_20 IAms_20 23 42 17.0
comp=Z,471nm,18.0s
TNTI Ternate 127.91 277 IAms_20 IAms_20 23 30 53.6
comp=Z,334nm,20.0s
LZH Lanzhou 128.60 331 *e*PKP **PKPdf** **22 45 03.5 -5.5**
LZH sPKP 22 45 15.0
LZH LR LR
comp=Z,330nm,15.5s
LZH LR LR
comp=Z,520nm,15.2s
LZH LR LR
comp=Z,600nm,16.3s
ENH Enshi 129.87 321 IAms_20 IAms_20 23 39 12.4
comp=Z,445nm,21.0s
GYA0B ALIBECK ARRAY 131.09 19 IAms_20 IAms_20 23 50 34.3
comp=Z,480nm,19.0s
ASHT Ashkhabad 131.16 18 IAms_20 IAms_20 23 45 01.2
comp=Z,574nm,22.0s
HKPS Hong Kong Po S 131.74 310 IAms_20 IAms_20 23 32 56.2
comp=Z,486nm,20.0s
RAYN Ar Rayn 136.59 43 IAms_20 IAms_20 23 57 13.3
comp=Z,269nm,19.0s
QIZ Qiongzhong 136.89 309 PKP **PKPdf** **22 45 23.0 -1.9**
QIZ PP **PP** **22 48 06.3 -1.0**
QIZ SS SS 23 06 12.0 -0.2
QIZ LR LR
comp=Z,240nm,21.4s
QIZ LR LR
comp=Z,230nm,15.6s
QIZ LR LR
comp=Z,350nm,24.5s
QIZ Qiongzhong 136.89 309 IAms_20 IAms_20 23 34 44.7
comp=Z,410nm,22.0s
KMI Kunming 137.71 323|| *e*P **PKiKP** **22 45 34.5 +6.0**
KMI pmax pmax
comp=Z,13nm,0.5s
KMI LR LR
comp=N,250nm,22.2s
KMI LR LR
comp=E,420nm,21.7s
KMI LR LR
comp=Z,580nm,22.4s
LSA Lhasa 139.45 339 IAms_20 IAms_20 23 58 48.9
comp=Z,486nm,20.0s
SLVN Son La 139.69 317 IAms_20 IAms_20 23 59 40.3
comp=Z,330nm,18.0s
ATD Arta Tunnel 141.67 60 IAms_20 IAms_20 23 54 35.5
comp=Z,436nm,20.0s
UOSS Minazif 141.77 30 IAms_20 IAms_20 23 46 40.2
comp=Z,340nm,22.0s
DLV T Lat 141.85 301 IAms_20 IAms_20 23 41 21.9
comp=Z,374nm,21.0s
SBUM Sibu 142.23 285 IAms_20 IAms_20 23 37 26.1
comp=Z,406nm,22.0s
KSM Kuching 144.34 284 **PKPab** **22 45 36.4 0.0**
WSAR Wadi Sarin 144.38 28 PKP PKPbc 22 45 36.8 +0.2
comp=Z,5.6nm,0.9s,baz=314,slow=8.2,SNR=3.6
CM34 Chiang Mai Arr 144.58 320 P **PKiKP** **22 45 45.0 +2.6**
CHTO Chiang Mai 144.74 320 PKIKP **PKPab** **22 45 38.2 +0.5**
CHTO Chiang Mai 144.74 320 **PKPab** **22 45 38.2 +0.5**
CHTO Chiang Mai 144.74 320 IAms_20 IAms_20 00 00 31.5
comp=Z,339nm,18.0s
PHIT Phitsanulok 144.93 316 P **PKiKP** **22 45 45.3 +2.1**
CM09 Chiang Mai Arr 144.98 320 P **PKiKP** **22 45 45.0 +1.7**
comp=Z,0.0nmcomp=Z,84nmcomp=Z,7.6nm,0.8s
CM31 Chiang Mai Arr 145.00 320 P **PKiKP** **22 45 47.4 +4.1**
comp=Z,1.3nmcomp=Z,167nm,0.9s
CMAR Chiang Mai Arr 145.00 320 PKP **PKPbc** **22 45 38.2 -0.5**
comp=Z,1.4nm,0.8s,baz=5.3,slow=1.5,SNR=4.4
CM02 Chiang Mai Arr 145.01 320 P **PKiKP** **22 45 44.0 +0.7**
comp=Z,0.0nmcomp=Z,69nmcomp=Z,7.4nm,0.9s
CM15 Chiang Mai Arr 145.01 320 P **PKiKP** **22 45 44.9 +1.6**
comp=Z,0.0nmcomp=Z,7.3nm,0.9s
CM01 Chiang Mai Arr 145.01 320 P **PKiKP** **22 45 44.6 +1.3**
comp=Z,0.0nmcomp=Z,92nmcomp=Z,10nm,1.2s
CM04 Chiang Mai Arr 145.02 320 P **PKiKP** **22 45 44.0 +0.7**
comp=Z,0.0nmcomp=Z,75nmcomp=Z,8.2nm,1.0s
CM13 Chiang Mai Arr 145.05 320 P **PKiKP** **22 45 43.0 -0.3**
comp=Z,0.0nmcomp=Z,78nmcomp=Z,5.9nm,1.4s
SUKH Sukhothai 145.25 318 P **PKPdf** **22 45 41.4 +1.5**
comp=Z,0.1nmcomp=Z,19nm,0.9s
SMRI Semarang 145.75 270 **PKPdf** **22 45 40.1 -0.8**
SRAK Srakaew 145.86 310 P **PKiKP** **22 45 44.9 -0.2**
comp=Z,0.5nmcomp=Z,2μmcomp=Z,131nm,1.3s
CISI Cisompet, Garu 148.38 269 **PKPdf** **22 45 46.0 +0.7**
CISI IAms_20 IAms_20 23 47 23.0
comp=Z,296nm,21.0s
SOCY Socotra 150.18 47 IAms_20 IAms_20 23 57 36.9
comp=Z,391nm,21.0s
MYKOM Kota Tinggi 150.37 289 IAms_20 IAms_20 00 07 03.7
comp=Z,260nm,18.0s
KULM Kulim 151.85 298 IAms_20 IAms_20 00 10 05.3
comp=Z,437nm,22.0s
BKNI Bangkinang 153.51 288 IAms_20 IAms_20 23 52 49.9
comp=Z,385nm,21.0s

WEL 26 22:30:30.8±0.9, 38°S±7′×18°0E±°, h33km, M3.3/14, ML3.6/14, MLv3.3/14, Error ellipse: s-maj=0.0km s-min=0.0km az=23.7, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.24**	**265**	P	Pn	22 30 51.5	-0.2
WMGZ				S	Sb	22 31 08.8	-0.6
MXZ	**Matakaoa Point**	**1.33**	**276**	P	Pn	22 30 52.5	-0.5
MXZ				S	Sn	22 31 08.3	-1.4
PKGZ	**Pakihiroa**	**1.51**	**263**	P	Pn	22 30 55.2	-0.4
PKGZ				S	Sn	22 31 14.1	-0.1
CNGZ	**Carnagh Statio**	**1.59**	**241**	P	Pn	22 30 57.6	+1.1
TWGZ	**Tauwhareparae**	**1.64**	**253**	P	Pn	22 30 57.8	+0.5
TWGZ				S	Sn	22 31 17.6	+0.3
HAZ	**Te Kaha**	**1.74**	**268**	P	Pn	22 30 58.8	+0.2
HAZ				S	Sn	22 31 19.7	0.0
RUGZ	**Raukumara Rang**	**1.84**	**262**	P	Pn	22 30 60.0	-0.1
RUGZ				S	Sn	22 31 22.3	+0.1
RIGZ	**Rimuhau**	**2.00**	**240**	P	Pn	22 31 01.6	-0.6
RIGZ				S	Sn	22 31 27.8	+1.6
MWZ	**Matawai**	**2.03**	**252**	P	Pn	22 31 02.4	-0.2
MWZ				S	Sn	22 31 26.2	-0.6
PRGZ	**Paritu Road**	**2.04**	**233**	P	Pn	22 31 03.3	+0.6
PRGZ				S	Sn	22 31 29.1	+2.0
MHGZ	**Mahia Peninsul**	**2.16**	**228**	P	Pn	22 31 05.2	+0.7
KNZ	**Kokohu**	**2.23**	**234**	P	Pn	22 31 05.4	+0.1
KNZ				S	Sn	22 31 32.2	+0.5
URZ	**Urewera**	**2.33**	**256**	P	Pn	22 31 07.5	+0.8
URZ				S	Sn	22 31 34.7	+0.6
RTZ	**Ruatahuna**	**2.52**	**248**	P	Pn	22 31 10.3	+0.8
RTZ				S	Sn	22 31 39.7	+0.5
MUGZ	**Murupara**	**2.64**	**252**	P	Pn	22 31 11.2	+0.2
ARHZ	**Aropaoanui**	**2.80**	**236**	P	Pn	22 31 14.3	+1.1
MCHZ	**McNeill Hill**	**3.09**	**235**	P	Pn	22 31 18.2	+0.9
CTZ	**Chatham Island**	**6.54**	**158**	P	Pn	22 32 06.7	+2.1
CTZ				S	Sn	22 33 15.2	-2.8

*IDC **26** 22:38:23.3±1.1, 5°.67N×61°.32E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/39, mbtmp3.8/7, Error ellipse: s-maj=35.5km s-min=26.6km az=33.0*

ISC 26 22:38:25.6±1.3, 5°.7N±0°.2×61°.3E±0°.2, h14km, n7, σ0s78/7, mb3.8/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**38.60**	**16**	P	**P**	**22 45 49.3**	**+0.8**
	1.3nm,0.7s,baz=187,slow=8.1,SNR=3.8						
MKAR	**Makanchi Array**	**44.76**	**20**	P	**P**	**22 46 38.0**	**-0.8**
	0.8nm,0.9s,baz=206,slow=6.5,SNR=2.0						
SONM	**Songino Array**	**56.88**	**35**	P	**P**	**22 48 10.5**	**+0.3**
	0.2nm,0.4s,baz=226,slow=6.4,SNR=2.8						
TORD	**Torodi Ar. Bea**	**59.17**	**282**	P	**P**	**22 48 27.4**	**+0.6**
	0.7nm,0.9s,baz=91,slow=7.6,SNR=3.6						
ESDC	**Sonseca Array**	**67.43**	**311**	P	**P**	**22 49 20.3**	**-0.9**
	1.2nm,1.0s,baz=110,slow=5.1,SNR=4.5						
WRA	**Warramunga Arr**	**76.11**	**112**	P	**P**	**22 50 13.7**	**+0.1**
	0.9nm,1.1s,baz=290,slow=5.5,SNR=5.1						
ASAR	**Alice Springs**	**76.48**	**116**	P	**P**	**22 50 15.6**	**-0.1**
	1.3nm,0.8s,baz=289,slow=5.6,SNR=8.5						

*IPEC **26** 22:38:43.8±0.1, 50°.17N×19°.01E, h0km, ML1.6/4, Error ellipse: s-maj=2.0km s-min=0.7km az=163.0*

PRU 26 22:38:44.6±0.0, 50°.20N×18°.96E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.54**	**88**	*e*Pg	Pg	22 38 53.6	-1.3
OJC				*e*Sg	Sg	22 39 00.4	-1.5
OKC	**Ostrava-Krasne**	**0.64**	**236**	*e*PG	Pg	22 38 56.4	-0.4
OKC				*e*SG	Sg	22 39 05.1	+0.1
	comp=Z,11nm,0.4s						
MORC	**Moravsky Berou**	**1.01**	**246**	*e*PG	Pg	22 39 03.7	-0.2
MORC				*e*SG	Sg	22 39 15.9	-1.1
MORC	**Moravsky Berou**	**1.01**	**246**	*e*Pg	Pg	22 39 03.7	-0.2
	baz=67						
MORC				*e*Sg	Sg	22 39 15.9	-1.1
	18nm,0.3s,baz=67						
LANS	**Liptovska Anna**	**1.10**	**162**	*e*PG	Pg	22 39 05.5	-0.2
LANS				*e*SG	Sb	22 39 21.2	-0.2
LANS				*e*LG	Lg	22 39 26.8	
NIE	**Niedzica**	**1.17**	**132**	*e*Pg	Pg	22 39 06.3	-0.6
NIE				*e*Sg	Sb	22 39 23.1	-0.3
KRLC	**Kraliky**	**1.41**	**266**	*e*PG	Pn	22 39 10.6	-0.9
KRLC				*e*SG	Sg	22 39 29.7	-0.1
	comp=Z,21nm,0.3s						
JAVC	**Velka Javorina**	**1.58**	**213**	*e*PN	Pn	22 39 13.2	-0.8
JAVC				*e*SG	Sn	22 39 32.7	-2.5
JAVC	**Velka Javorina**	**1.58**	**213**	*e*Pn	Pn	22 39 13.1	-0.9
	baz=33						
JAVC				*e*Sg	Sn	22 39 32.7	-2.5
	2.7nm,0.2s,baz=33						
DPC	**Dobruska-Polom**	**1.70**	**276**	*e*PG	Pn	22 39 15.5	0.0

DPC			*e*SG	Sg	22 39 39.1	-0.1
	comp=Z,21nm,0.7s						
VYHS	**Vyhne**	**1.71 183**	*e*PN	Pn	22 39 14.7	-1.0
VYHS			*e*SN	Sg	22 39 39.5	0.0
VRAC	**Vranov**	**1.77 241**	*e*PN	Pn	22 39 16.3	-0.3
VRAC			*e*SG	Sn	22 39 39.8	0.0
VRAC	**Vranov**	**1.77 241**	*e*Pn	Pn	22 39 16.3	-0.3
	baz=60						
VRAC			*e*Sg	Sn	22 39 39.8	0.0
	5.7nm,0.3s,baz=60						
OSTC	**Ostas**	**1.79 283**	*e*PG	Pn	22 39 16.7	-0.1
OSTC			*e*SG	Sg	22 39 43.0	+0.8
	comp=Z,6.4nm,0.4s						
KSP	**Ksiaz**	**1.82 292**	*e*Pg	Pg	22 39 19.4	0.0
KSP			*e*Sg	Sg	22 39 43.7	+0.7
CHVC	**Chvalec**	**1.90 283**	*e*PG	Pn	22 39 18.2	-0.1
CHVC			*e*SG	Sg	22 39 46.0	+0.4
	comp=Z,6.3nm,0.5s						
UPC	**Upice**	**1.91 280**	*e*SG	Sg	22 39 45.7	-0.3
	comp=Z,8.3nm,0.4s						
KRUC	**Moravsky**	**2.02 237**	*e*PN	Pn	22 39 19.2	-0.7
KRUC			*e*SG	Sb	22 39 47.3	-0.5
KRUC	**Moravsky**	**2.02 241**	*e*Pn	Pn	22 39 19.1	-0.8
	baz=56						
KRUC			*e*Sg	Sb	22 39 47.3	-0.5
	2.7nm,0.2s,baz=56						
PVCC	**Panska Ves**	**2.83 278**	*e*SG	Sg	22 40 16.0	+0.5
	comp=Z,5.4nm,0.4s						
PRU	**Pruhonice**	**2.85 267**	*e*SG	Sg	22 40 14.9	-1.3
	comp=Z,3.5nm,0.4s						
BRG	**Berggiesshubel**	**3.27 284**	SG	Sg	22 40 30.3	+0.7
	3.2nm,0.4s						
KHC	**Kasperske Hory**	**3.66 255**	*e*PN	Pn	22 39 42.4	0.0
KHC			*e*SG	Sg	22 40 40.2	-1.8
	comp=Z,5.0nm,0.7s						
CLL	**Collm**	**3.94 289**	*e*Sg	Sg	22 40 51.0	-0.2

WEL ***26*** *22:50:50.1±0.9,38°S±7″×18°0W±″, h33km, M3.6/20, ML3.9/20, MLv3.6/20, Error ellipse: s-maj=0.0km s-min=0.0km az=28.5*

IDC ***26*** *22:50:51.4±3.5,37°.05S×179°.14E, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/39, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=84.9km s-min=33.2km az=131.0*

ISC 26 22:50:46.8±2.4,**37°.72S**±0°.07×**179°.95E**±0°.07,**h7**km±12km, **n54**,σ1°**43**/59,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.22**	**265**	P	**Pn**	**22 51 11.2**	**+0.8**
WMGZ				S	**Sn**	**22 51 28.3**	**+1.0**
MXZ	**Matakaoa Point**	**1.32**	**276**	P	**Pn**	**22 51 12.0**	**+0.3**
MXZ				S	**Sn**	**22 51 28.6**	**-0.9**
PKGZ	**Pakihiroa**	**1.50**	**263**	P	**Pn**	**22 51 14.8**	**+0.6**
PKGZ				S	**Sg**	**22 51 33.9**	**-1.1**
CNGZ	**Carnagh Statio**	**1.57**	**241**	P	**Pg**	**22 51 17.4**	**+0.4**
TWGZ	**Tauwhareparae**	**1.62**	**253**	P	**Pb**	**22 51 17.5**	**+0.3**
TWGZ				S	**Sb**	**22 51 37.0**	**-1.0**
HAZ	**Te Kaha**	**1.72**	**268**	P	**Pb**	**22 51 18.3**	**-0.5**
HAZ				S	**Sb**	**22 51 39.4**	**-1.3**
TKGZ	**Te Karaka**	**1.81**	**246**	P	**Pb**	**22 51 20.1**	**-0.2**
TKGZ				S	**Sb**	**22 51 43.2**	**0.0**
RUGZ	**Raukumara Rang**	**1.82**	**262**	P	**Pn**	**22 51 19.7**	**+1.0**
RIGZ	**Rimuhau**	**1.99**	**240**	P	**Pn**	**22 51 22.8**	**+1.9**
RIGZ				S	**Sb**	**22 51 47.3**	**-1.1**
MWZ	**Matawai**	**2.01**	**252**	P	**Pn**	**22 51 22.1**	**+0.9**
MWZ				S	**Sn**	**22 51 46.1**	**-0.6**
PRGZ	**Paritu Road**	**2.02**	**233**	P	**Pn**	**22 51 23.2**	**+1.8**
MHGZ	**Mahia Peninsul**	**2.15**	**228**	P	**Pn**	**22 51 25.1**	**+1.9**
KNZ	**Kokohu**	**2.21**	**233**	P	**Pn**	**22 51 25.1**	**+1.1**
URZ	**Urewera**	**2.31**	**256**	Pn	**Pn**	**22 51 26.4**	**+1.1**
	11nm,0.3s,baz=56,slow=7.3,SNR=59						
URZ				Sn	**Sn**	**22 51 53.5**	**-0.5**
	33nm,0.3s,baz=341,slow=22,SNR=35						
URZ	**Urewera**	**2.31**	**256**	P	**Pn**	**22 51 27.1**	**+1.8**
URZ				S	**Sn**	**22 51 53.6**	**-0.5**
WHRZ	**Whale Island**	**2.36**	**266**	P	**Pn**	**22 51 27.5**	**+1.4**
RTZ	**Ruatahuna**	**2.51**	**248**	P	**Pn**	**22 51 29.9**	**+1.8**
WHHZ	**Waihua**	**2.53**	**237**	P	**Pn**	**22 51 30.3**	**+2.0**
RAHZ	**Arahi**	**2.55**	**241**	P	**Pn**	**22 51 30.6**	**+1.9**
MUGZ	**Murupara**	**2.62**	**252**	P	**Pn**	**22 51 31.0**	**+1.4**
OPRZ	**Ohinepanea**	**2.70**	**266**	P	**Pn**	**22 51 31.3**	**+0.7**
MTHZ	**Maungataniwha**	**2.70**	**244**	P	**Pn**	**22 51 32.4**	**+1.7**
ARHZ	**Aropaoanui**	**2.79**	**236**	P	**Pn**	**22 51 34.1**	**+2.2**
NMHZ	**Naumai**	**2.83**	**240**	P	**Pn**	**22 51 34.9**	**+2.3**
KARZ	**Kaharoa**	**2.95**	**263**	P	**Pn**	**22 51 35.5**	**+1.4**
CKHZ	**Cape Kidnapper**	**2.97**	**228**	P	**Pn**	**22 51 35.5**	**+1.1**
BKZ	**Black Stump Fm**	**3.08**	**241**	P	**Pn**	**22 51 37.5**	**+1.5**
MCHZ	**McNeill Hill**	**3.08**	**235**	P	**Pn**	**22 51 37.7**	**+1.8**
KAHZ	**Kahuranaki**	**3.17**	**228**	P	**Pn**	**22 51 38.8**	**+1.5**
KWHZ	**Kaweka Forest**	**3.25**	**237**	P	**Pn**	**22 51 39.7**	**+1.4**
PXZ	**Pawanui**	**3.34**	**225**	P	**Pn**	**22 51 40.1**	**+0.6**
KRHZ	**Kereru**	**3.40**	**235**	P	**Pn**	**22 51 41.4**	**+1.1**
KUZ	**Kuaotunu**	**3.52**	**285**	P	**Pn**	**22 51 41.8**	**-0.1**
BHHZ	**Black Hill Sta**	**3.52**	**239**	P	**Pn**	**22 51 43.6**	**+1.6**
TOZ	**Tahuroa Road**	**3.53**	**269**	P	**Pn**	**22 51 42.6**	**+0.5**
WPHZ	**Waipukurau**	**3.60**	**228**	P	**Pn**	**22 51 43.5**	**+0.4**
MOVZ	**Moawhango**	**3.70**	**242**	P	**Pn**	**22 51 46.2**	**+1.7**
MKAZ	**Moumakai**	**3.87**	**278**	P	**Pn**	**22 51 47.2**	**+0.5**
GRZ	**Great Barrier**	**3.89**	**291**	P	**Pn**	**22 51 47.1**	**+0.1**
TSZ	**Takapari Road**	**3.89**	**232**	P	**Pn**	**22 51 47.8**	**+0.6**
MRZ	**Mangatainoka R**	**4.49**	**228**	P	**Pn**	**22 51 55.7**	**+0.4**
TCW	**Tory Channel**	**5.61**	**230**	P	**Pn**	**22 52 10.7**	**+0.1**
OUZ	**Omahuta**	**5.70**	**294**	P	**Pn**	**22 52 13.1**	**+1.2**
CTZ	**Chatham Island**	**6.55**	**158**	P	**Pn**	**22 52 27.2**	**+3.7**
CTZ				S	**Sn**	**22 53 34.7**	**-3.7**
THZ	**Tophouse**	**6.77**	**231**	P	**Pn**	**22 52 26.0**	**-0.7**
ASAR	**Alice Springs**	**41.60**	**276**	P	**P**	**22 58 35.4**	**-0.3**
	0.9nm,0.6s,baz=118,slow=7.7,SNR=7.7						
WRA	**Warramunga Arr**	**43.25**	**281**	P	**P**	**22 58 48.3**	**-0.8**
	0.6nm,0.4s,baz=124,slow=7.7,SNR=12						
H03S2	**Juan Fernandez**	**77.86**	**123**	T	T	00 28 34.2	
	baz=230,slow=74,SNR=6.8						
H03S1	**Juan Fernandez**	**77.86**	**123**	T	T	00 28 30.7	
	baz=230,slow=74,SNR=8.2						
H03S3	**Juan Fernandez**	**77.87**	**123**	T	T	00 28 33.3	
	baz=230,slow=74,SNR=8.2						
H03N3	**Juan Fernandez**	**78.09**	**123**	T	T	00 28 53.0	
	baz=234,slow=72,SNR=9.3						
H03N2	**Juan Fernandez**	**78.09**	**123**	T	T	00 28 56.8	
	baz=234,slow=72,SNR=10.0						
H03N1	**Juan Fernandez**	**78.10**	**123**	T	T	00 28 52.5	
	baz=234,slow=72,SNR=11						
FINES	**FINESS Array B**	**151.21**	**334**	PKPbc	**PKiKP**	**23 10 43.2**	**+2.6**
	3.0nm,1.1s,baz=54,slow=7.1,SNR=1.7						

IDC ***26*** *22:51:13.0±1.2,5°.78S×146°.66E, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.6/39, mbtmp3.7/7, ML3.6/1, Error ellipse: s-maj=38.1km s-min=24.9km az=106.0*

ISC 26 22:51:20.3±1.1,**6°.0S**±0°.1×**146°.6E**±0°.2,**h52**km,**n11**, σ0°**86**/10,**mb3.8**/5,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.47**	**171**	Pn	**Pn**	**22 52 12.3**	**+0.5**
	7.3nm,0.3s,baz=28,slow=4.9,SNR=11						
PMG				Sn	**Sn**	**22 52 50.9**	**-0.8**
	19nm,0.3s,baz=7.4,slow=19,SNR=7.7						
WRA	**Warramunga Arr**	**18.34**	**220**	P	**Pn**	**22 55 30.2**	**-0.8**
	0.2nm,0.3s,baz=42,slow=11,SNR=17						
WRA				PcP	**PcP**	**23 00 01.8**	**+1.2**
	0.0nm,0.3s,baz=45,slow=2.6,SNR=7.1						
ASAR	**Alice Springs**	**21.45**	**214**	P	**P**	**22 56 04.8**	**+0.3**
	0.5nm,0.4s,baz=55,slow=9.0,SNR=6.3						
FITZ	**Fitzroy Crossi**	**23.78**	**238**	P	**P**	**22 56 27.8**	**-0.6**
	3.4nm,0.8s,baz=84,slow=7.8,SNR=7.9						
H11N1	**WAKE ISLAND Hy 32.37**	**38**		T	T	23 31 42.6	
	baz=219,slow=76,SNR=5.9						
H11N3	**WAKE ISLAND Hy 32.39**	**38**		T	T	23 31 46.1	
	baz=219,slow=76,SNR=4.2						
H11N2	**WAKE ISLAND Hy 32.39**	**38**		T	T	23 31 46.2	
	baz=219,slow=76,SNR=4.6						
CMAR	**Chiang Mai Arr**	**52.91**	**298**	P	**P**	**23 00 32.1**	**+0.4**
	0.4nm,0.3s,baz=116,slow=6.3,SNR=2.6						
VNDA	**Vanda**	**71.98**	**177**	P	**P**	**23 02 38.6**	**+0.6**
	0.2nm,0.6s,baz=317,slow=5.5,SNR=3.8						
ILAR	**Eielson Array**	**85.58**	**23**	P	**P**	**23 03 51.6**	**-1.2**
	0.5nm,0.7s,baz=257,slow=4.9,SNR=6.5						
TORD	**Torodi Ar. Bea**	**144.73**	**284**	PKP	**PKPab**	**23 10 51.4**	**+0.1**
	0.7nm,0.8s,baz=70,slow=2.9,SNR=5.7						

IDC 26 22:56:56.0±1.7,**2°.39N**×**126°.91E**, **h0**km, **mb3.7**/5, **mb1 3.8**/5, **mb1mx3.4**/45, **mbtmp3.7**/5, **Error ellipse: s-maj=168.7km s-min=20.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.36**	**162**	P	P	23 02 05.1	-1.3
	0.5nm,0.5s,baz=341,slow=10,SNR=9.6						
ASAR	**Alice Springs**	**26.78**	**166**	P	P	23 02 38.9	+1.0
	0.2nm,0.3s,baz=347,slow=7.6,SNR=1.9						
STKA	**Stephens Creek**	**36.82**	**159**	P	P	23 04 06.3	+0.3
	1.8nm,0.8s,baz=318,slow=12,SNR=3.4						
MKAR	**Makanchi Array**	**58.75**	**326**	P	P	23 06 56.0	0.0
	0.3nm,0.4s,baz=118,slow=7.8,SNR=7.5						
KURBB	**Kurchatov Arra**	**62.96**	**328**	P	P	23 07 24.4	-0.1
	0.4nm,0.5s,baz=125,slow=6.1,SNR=5.5						

IDC ***26*** *22:56:58.3±3.0,21°.60S×178°.99W, h580km±33km, mb3.3/14, mb1 3.4/14, mb1mx3.3/39, mbtmp4.2/14, Error ellipse: s-maj=21.0km s-min=14.6km az=69.0*

NEIC ***26*** *22:56:59.8±1.2,21°.75S±0°.1×179.0W±0°.1, h601km±6km, mb4.2/17, Error ellipse: s-maj=21.3km s-min=13.7km az=61.0*

ISC 26 22:56:59.8±0.6,**21°.78S**±0°.08×**179°.1W**±0°.1,**h600**km,**n47**, σ1°**32**/49,**mb4.0**/20,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.86**	**325**	P	**P**	**22 58 31.3**	**-0.5**
URZ	**Urewera**	**16.76**	**191**	P	**P**	**23 00 22.4**	**-1.5**
	1.5nm,0.3s,baz=300,slow=3.5,SNR=6.1						
URZ				S	**S**	**23 03 05.0**	**-5.0**
	0.4nm,0.3s,baz=106,slow=19,SNR=1.5						
URZ	**Urewera**	**16.76**	**191**	P	**P**	**23 00 21.9**	**-2.0**
URZ				IAmb	IAmb	23 00 34.3	
	comp=Z,15nm,1.1s						
BKZ	**Black Stump Fm**	**17.75**	**191**	P	**P**	**23 00 31.6**	**-1.4**
BKZ				IAmb	IAmb	23 00 38.7	
	comp=Z,11nm,1.2s						
ARMA	**Armidale**	**27.64**	**246**	P	**P**	**23 02 02.7**	**+1.4**
CTA	**Charters Tower**	**32.41**	**267**	P	**P**	**23 02 42.5**	**+0.3**
	comp=Z,1.9nm,0.5s,baz=100,slow=6.1,SNR=2.0						
TOO	**Toolangi**	**34.36**	**235**	P	**P**	**23 02 59.0**	**+0.7**
TOO				IAmb	IAmb	23 03 00.1	
	comp=Z,6.2nm,0.8s						
TAU	**Tasmania Unive**	**35.03**	**225**	P	**P**	**23 03 04.8**	**+1.0**
STKA	**Stephens Creek**	**36.36**	**246**	P	**P**	**23 03 15.5**	**+0.6**
	comp=Z,4.0nm,0.8s,baz=91,slow=9.5,SNR=7.4						
STKA	**Stephens Creek**	**36.36**	**246**	P	**P**	**23 03 15.7**	**+0.7**
BBOO	**Buckleboo**	**41.11**	**245**	P	**P**	**23 03 53.2**	**+0.1**
BBOO				IAmb	IAmb	23 03 54.3	
	comp=Z,17nm,1.1s						
WR0	**Warramunga Arr**	**43.28**	**264**	P	**P**	**23 04 09.8**	**-0.4**
WR0				IAmb	IAmb	23 04 19.7	
	comp=Z,1.7nm,0.9s						
ASAR	**Alice Springs**	**43.28**	**258**	P	**P**	**23 04 10.3**	**+0.1**
	comp=Z,4.2nm,0.8s,baz=90,slow=8.2,SNR=34						
ASAR				S	**S**	**23 09 54.9**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=92,slow=16,SNR=8.9						
ASAR	**Alice Springs**	**43.28**	**258**	P	**P**	**23 04 10.1**	**-0.2**
WB0	**Warramunga Arr**	**43.45**	**264**	P	**P**	**23 04 11.3**	**-0.2**
WB0				IAmb	IAmb	23 04 12.3	
	comp=Z,4.6nm,0.8s						
WRA	**Warramunga Arr**	**43.47**	**264**	P	**P**	**23 04 11.1**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=97,slow=7.9,SNR=27						
WRA				ScP	**ScP**	**23 08 44.3**	**+3.2**
	comp=Z,0.3nm,0.7s,baz=97,slow=3.6,SNR=5.2						
WRA				S	**S**	**23 09 55.6**	**-2.5**
	comp=Z,0.6nm,0.7s,baz=96,slow=14,SNR=5.6						
WRA	**Warramunga Arr**	**43.47**	**264**	P	**P**	**23 04 11.7**	**-0.1**
JAY	**Jayapura**	**43.54**	**290**	P	**P**	**23 04 12.3**	**-0.1**
	comp=Z,14nm,0.6s,baz=140,slow=7.9,SNR=8.9						
MTN	**Manton Dam**	**48.21**	**272**	P	**P**	**23 04 47.3**	**-0.3**
MTN				IAmb	IAmb	23 04 59.4	
	comp=Z,5.7nm,1.1s						
VNDA	**Vanda**	**56.56**	**185**	P	**P**	**23 05 48.3**	**+2.2**
	comp=Z,0.7nm,0.6s,baz=5.2,slow=6.4,SNR=12						
VNDA	**Vanda**	**56.56**	**185**	P	**P**	**23 05 47.9**	**+1.9**
QSPA	**South Pole Qui**	**68.30**	**180**	P	**P**	**23 07 03.1**	**+1.2**
	comp=Z,4.7nm,0.7s,baz=1.9,slow=1.3,SNR=15						
QSPA	**South Pole Qui**	**68.30**	**180**	P	**P**	**23 07 03.0**	**+1.1**
QSPA				IAmb	IAmb	23 07 04.0	
	comp=Z,4.0nm,0.8s						
MJAR	**Matsushiro Arr**	**70.66**	**325**	P	**P**	**23 07 15.6**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=157,slow=5.6,SNR=2.8						
PEA0B	**Petropavlovsk-**	**77.26**	**346**	P	**P**	**23 07 53.1**	**+0.1**
PETK	**Petropavlovsk-**	**77.26**	**346**	P	**P**	**23 07 52.5**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=156,slow=7.3,SNR=2.5						
BELA	**Belgrano 2**	**78.42**	**173**	P	**P**	**23 07 59.2**	**+0.1**
USRK	**Ussuriysk Ar.**	**79.47**	**327**	P	**P**	**23 08 06.0**	**+1.0**
	comp=Z,1.5nm,0.6s,baz=107,slow=5.5,SNR=3.0						
MAW	**Mawson**	**80.03**	**200**	P	**P**	**23 08 08.5**	**+0.9**
NVAR	**Mina Array Bea**	**82.62**	**44**	P	**P**	**23 08 21.7**	**0.0**
	comp=Z,0.5nm,0.7s,baz=223,slow=8.3,SNR=4.9						
NVAR	**Mina Array Bea**	**82.62**	**44**	P	**P**	**23 08 21.2**	**-0.4**
SNAA	**Sanae**	**86.76**	**179**	P	**P**	**23 08 40.2**	**-0.8**
SNAA	**Sanae**	**86.76**	**179**	P	**P**	**23 08 40.7**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=196,slow=7.4,SNR=12						
SNAA	**Sanae**	**86.76**	**179**	P	**P**	**23 08 40.6**	**-0.4**
VNA3	**Neumayer Olymp**	**86.93**	**177**	P	**P**	**23 08 41.6**	**-0.1**
VNA2	**Neumayer--Watz**	**87.36**	**177**	P	**P**	**23 08 43.8**	**+0.1**
	baz=174,slow=4.6						
VNA1	**Neumayer--Stat**	**87.60**	**177**	P	**P**	**23 08 45.3**	**+0.5**
TRF	**Thorofare Moun**	**87.90**	**12**	P	**P**	**23 08 44.4**	**-1.9**
TRF				IAmb	IAmb	23 08 50.3	
	comp=Z,7.9nm,1.2s						
IMAR	**Indian Mountai**	**89.58**	**10**	P	**P**	**23 08 53.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P	**P**	**23 08 56.5**	**+1.3**
	comp=Z,2.0nm,1.0s,baz=139,slow=3.3,SNR=8.8						
CMAR	**Chiang Mai Arr**	**89.62**	**290**	P	**P**	**23 08 55.9**	**+0.7**
ILAR	**Eielson Array**	**89.77**	**13**	P	**P**	**23 08 53.1**	**-1.7**
	comp=Z,0.4nm,1.0s,baz=202,slow=6.8,SNR=1.5						
ARCES	**ARCESS Array B**	**129.99**	**349**	PKP	**PKPdf**	**23 15 00.9**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=190,slow=0.7,SNR=5.2						
AKASG	**Malin Array Be**	**143.63**	**329**	PKP	PKPab	23 15 24.3	-1.9
	comp=Z,2.1nm,0.6s,baz=43,slow=4.6,SNR=11						
AKASG	**Malin Array Be**	**143.63**	**329**		PKPab	23 15 24.8	-1.4
GERES	**GERESS Array B**	**151.14**	**342**	PKPbc	**PKPbc**	**23 15 45.7**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=18,slow=3.1,SNR=2.8						
TORD	**Torodi Ar. Bea**	**171.39**	**185**	PKPab	**PKPab**	**23 17 25.2**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=161,slow=3.9,SNR=3.1						

IDC 26 22:58:29.0±3.3,**8°.55N**×**103°.35W**, **h0**km, **mb3.5**/4, **mb1 3.9**/4, **mb1mx3.7**/30, **mbtmp3.5**/4, **Error ellipse: s-maj=142.0km s-min=29.4km az=59.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**20.68**	**359**	P	P	23 03 11.0	+0.2
	0.8nm,0.9s,baz=183,slow=12,SNR=4.8						
PDAR	**Pinedale Array**	**34.52**	**352**	P	P	23 05 18.9	-0.4
	0.6nm,0.8s,baz=159,slow=13,SNR=2.8						
LPAZ	**La Paz**	**42.71**	**125**	P	P	23 06 28.8	-0.1
	1.0nm,0.8s,baz=309,slow=7.0,SNR=3.9						
H03N2	**Juan Fernandez**	**47.78**	**152**	T	T	23 58 30.6	
	baz=328,slow=78,SNR=8.0						
H03N1	**Juan Fernandez**	**47.79**	**152**	T	T	23 58 34.7	
	baz=328,slow=78,SNR=7.9						
H03N3	**Juan Fernandez**	**47.79**	**152**	T	T	23 58 28.6	
	baz=328,slow=78,SNR=11						
ILAR	**Eielson Array**	**63.85**	**341**	P	P	23 09 03.3	+0.2
	0.6nm,1.0s,baz=153,slow=6.1,SNR=4.0						

MEX 26 23:03:11.5±0.3,**27°.79N**×**105°.58W**, **h5**km±6km, **MD3.9**, **Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPIG		**0.86**	**185**	*i* P	Pg	23 03 26.4	-1.6
	baz=4.8,slow=14						
HPIG				*i* S	Sg	23 03 38.0	-1.1
PDIG	**Papasquiaro**	**2.75**	**176**	*i* P	Pn	23 03 53.5	-3.0
PDIG				*i* S	Sn	23 04 25.9	-4.2
SSIG	**Sanalona**	**3.27**	**206**	*i* P	Pn	23 04 01.4	-2.1
SSIG				*i* S	Sn	23 04 39.9	-2.9
CGIG		**3.31**	**321**	*i* P	Pn	23 04 02.0	-2.1
CGIG				*i* S	Sn	23 04 40.0	-3.9
HSIG		**4.88**	**286**	*i* P	Pn	23 04 23.4	-2.2
HSIG				*i* S	Sn	23 05 19.3	-3.2
LNIG	**Linares**	**6.20**	**116**	*i* P	Pn	23 04 39.2	-4.5

IDC 26 23:14:55.6±1.4,**5°.51N**×**61°.41E**, **h0**km, **mb3.6**/4, **mb1 3.8**/4, **mb1mx3.4**/29, **mbtmp3.6**/4, **Error ellipse: s-maj=57.5km s-min=34.8km az=19.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**56.99**	**35**	P	P	23 24 43.2	-0.1
	0.2nm,0.5s,baz=230,slow=6.6,SNR=1.8						
TORD	**Torodi Ar. Bea**	**59.30**	**282**	P	P	23 24 59.8	-0.1
	0.4nm,0.9s,baz=106,slow=6.5,SNR=2.0						
WRA	**Warramunga Arr**	**75.97**	**112**	P	P	23 26 45.5	+0.4
	1.0nm,0.9s,baz=290,slow=5.3,SNR=5.4						
ASAR	**Alice Springs**	**76.32**	**116**	P	P	23 26 47.0	-0.2
	0.5nm,0.5s,baz=293,slow=5.3,SNR=6.5						

PRU 26 23:24:24.0±0.0,**50°.15N**×**19°.11E**, **h0**km, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.45**	**81**	*e*Pg	Pg	23 24 31.9	-0.7
OJC				*e*Sg	Sg	23 24 37.8	-0.6
OKC	**Ostrava-Krasne**	**0.70**	**244**	*e*SG	Sg	23 24 46.7	+0.4
	comp=Z,6.1nm,0.5s						
LANS	**Liptovska Anna**	**1.03**	**167**	*e*PG	Pg	23 24 43.1	-0.6
LANS				*e*SG	Sg	23 24 56.7	-0.3
LANS				*e*LG	Lg	23 25 01.5	
NIE	**Niedzica**	**1.06**	**133**	*e*Pg	Pg	23 24 44.7	+0.3
NIE				*e*Sg	Sb	23 24 60.0	+0.2
MORC	**Moravsky Berou**	**1.08**	**250**	*e*PG	Pg	23 24 45.0	+0.3
MORC				*e*SG	Sg	23 24 57.4	-1.2
KRLC	**Kraliky**	**1.50**	**268**	*e*PG	Pn	23 24 50.6	-1.6
KRLC				*e*SG	Sn	23 25 12.7	+0.2
	comp=Z,5.8nm,0.3s						
VYHS	**Vyhne**	**1.67**	**186**	*e*PN	Pn	23 24 53.1	-1.4
VYHS				*e*SN	Sn	23 25 14.9	-1.7
DPC	**Dobruska-Polom**	**1.80**	**277**	*e*PG	Pb	23 24 57.4	-0.5
DPC				*e*SG	Sg	23 25 22.4	+0.6
	comp=Z,4.8nm,0.6s						
VRAC	**Vranov**	**1.84**	**244**	*e*SG	Sn	23 25 21.0	+0.2
OSTC	**Ostas**	**1.90**	**283**	*e*PG	Pn	23 24 58.3	+0.6
OSTC				*e*SG	Sg	23 25 25.2	+0.3
CHVC	**Chvalec**	**2.00**	**284**	*e*PG	Pb	23 25 00.8	-0.5
CHVC				*e*SG	Sg	23 25 28.6	+0.2
KRUC	**Moravsky**	**2.08**	**239**	*e*SG	Sb	23 25 28.9	+0.1
KHC	**Kasperske Hory**	**3.74**	**256**	*e*SG	Sg	23 26 22.2	-1.8

IDC ***26*** *23:36:49.1±2.8,37°.33N×68°.90E, h0km, mb3.3/2, mb1 3.6/5, mb1mx3.3/39, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=61.9km s-min=15.4km az=148.0*

NNC ***26*** *23:36:56.5±3.3,37°.53N×68°.60E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=31.9km s-min=19.2km az=134.0*

ISC 26 23:36:50.1±1.5,**37°.2N**±0°.1×**68°.99E**±0°.09,**h10**km,**n15**, σ2°**03**/20,**2C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.00**	**11**	⇓Pn	**Pn**	**23 38 22.5**	**+3.5**
	1.8nm,0.6s,baz=206,slow=17,SNR=15						
KK31				⇓Pg	**Pg**	**23 38 42.3**	**-2.7**
	3.6nm,0.5s,baz=194,slow=17,SNR=4.6						
KK31				⇑Sn	**Sn**	**23 39 31.0**	**+3.2**
	7.5nm,0.5s						
KK31				⇓Lg	Lg	23 40 00.1	
	7.5nm,0.5s,baz=190,slow=26,SNR=6.0						
AML	**Almayashu**	**6.11**	**35**	P	**Pn**	**23 38 23.6**	**+2.8**
	SNR=10						
AAK	**Ala-Archa**	**6.88**	**36**	Pn	**Pn**	**23 38 32.8**	**+1.7**
	baz=217,slow=8.7						
AAK				Sn	**Sn**	**23 39 49.5**	**0.0**
	0.4nm,0.3s,baz=135,slow

NIS1						AML	AML	23 37 37.3		
	comp=E,3825μm,0.4s									
NIS1						AML	AML	23 37 37.7		
	comp=N,3030μm,0.3s									
NIS1	**Nisyros Isl.**	**1.08**	**312**		PN	**Pg**		**23 37 17.9**	**+1.3**	
NIS1	**Nisyros Isl.**	**1.08**	**312**		P	**Pg**		**23 37 16.8**	**+0.2**	
NIS1					S	**Sn**		**23 37 32.3**	**+1.0**	
	comp=N,2μm,0.4s									
KSL	**Kastellorizon**	**1.16**	**77**		P	**Pg**		**23 37 18.4**	**+0.2**	
KSL	**Kastellorizon**	**1.16**	**77**		P	**Pg**		**23 37 17.9**	**-0.3**	
KSL					S	**Sg**		**23 37 34.2**	**+0.8**	
KSL	**Kastellorizon**	**1.16**	**77**		P	**Pg**		**23 37 18.3**	**+0.2**	
AKAS	**Kas**	**1.20**	**73**		PN	**Pg**		**23 37 18.9**	**0.0**	
YER	**Yerkesik**	**1.25**	**4**		PN	**Pg**		**23 37 19.6**	**-0.2**	
YER	**Yerkesik**	**1.25**	**4**		P	**Pb**		**23 37 19.0**	**-0.1**	
YER					S	**Sg**		**23 37 37.2**	**+1.1**	
KOSK	**Kos Island**	**1.30**	**312**		PN	**Pg**		**23 37 21.5**	**+0.7**	
BDRM	**Kayabasi**	**1.32**	**333**	*i*	P	**Pg**		**23 37 21.2**	**+0.1**	
BDRM				*i*	S	**Sg**		**23 37 38.7**	**+0.4**	
BODT	**Bodrum**	**1.37**	**329**		PN	**Pg**		**23 37 21.5**	**-0.6**	
BODT	**Bodrum**	**1.37**	**329**		P	**Pb**		**23 37 21.2**	**+0.1**	
BODT					S	**Sg**		**23 37 39.0**	**-0.9**	
CAME	**Cameli-Denizli**	**1.39**	**40**		PN	**Pb**		**23 37 21.8**	**+0.3**	
ELL	**Elmali**	**1.64**	**58**		PN	**Pb**		**23 37 25.5**	**-0.2**	
ELL	**Elmali**	**1.64**	**58**		P	**Pn**		**23 37 23.3**	**-0.8**	
TAVA	**DENIZLI_Tavas**	**1.68**	**20**	*i*	P	**Pb**		**23 37 26.4**	**0.0**	
TAVA					IAML			23 37 56.0		
	comp=E,52nm,0.7s									
TAVA					IAML			23 37 57.0		
	comp=N,48nm,0.4s									
GOLH	**Golhisar**	**1.74**	**39**	*i*	P	**Pb**		**23 37 28.0**	**+0.4**	
GOLH				*i*	S	**Sg**		**23 37 52.6**	**+0.7**	
GOLH					IAML			23 38 02.0		
	comp=N,48nm,1.2s									
ZKR	**Zakros**	**1.78**	**245**		P	**Pg**		**23 37 29.7**	**-0.2**	
ZKR	**Zakros**	**1.78**	**245**		PN	**Pg**		**23 37 29.4**	**-0.5**	
ZKR	**Zakros**	**1.78**	**245**		P	**Pg**		**23 37 29.6**	**-0.3**	
AYDN	**Tasoluk**	**1.79**	**352**	*i*	P	**Pb**		**23 37 27.7**	**-0.5**	
GCAM	**G?zelcaml?**	**1.96**	**337**		PN	**Pb**		**23 37 30.8**	**-0.4**	
GCAM	**G?zelcaml?**	**1.96**	**337**	*i*	P	**Pb**		**23 37 29.7**	**-1.5**	
AYDB	**Zeytinkoy-Aydi**	**2.07**	**354**		PN	**Pb**		**23 37 31.9**	**-1.2**	
KORT	**Korkueli**	**2.07**	**57**		PN	**Pb**		**23 37 31.7**	**-1.4**	
SMG	**Samos**	**2.12**	**330**		P	**Pn**		**23 37 31.4**	**+0.8**	
SMG	**Samos**	**2.12**	**330**		P	**Pn**		**23 37 31.4**	**+0.8**	
NPS	**Neapolis**	**2.19**	**254**		P	**Pb**		**23 37 34.8**	**-0.3**	
NPS					S	**Sb**		**23 38 01.5**	**-0.5**	
NPS	**Neapolis**	**2.19**	**254**		P	**Pb**		**23 37 34.5**	**-0.6**	
NPS					S	**Sb**		**23 38 01.5**	**-0.5**	
LAST	**Lasithi**	**2.32**	**253**		P	**Pb**		**23 37 36.7**	**-0.7**	
LAST	**Lasithi**	**2.32**	**253**		P	**Pb**		**23 37 36.7**	**-0.7**	
IDI	**Anoyia**	**2.75**	**258**		P	**Pn**		**23 37 41.8**	**+2.3**	
IDI	**Anoyia**	**2.75**	**258**		P	**Pn**		**23 37 41.0**	**+1.6**	
AKMS	**Akamas**	**3.50**	**103**		P	**Pn**		**23 37 49.9**	**+0.2**	
AKMS					AML	AML		23 38 32.7		
	comp=N,0.4nm,0.9s									
AKMS					AML	AML		23 38 33.1		
	comp=N,0.3nm,0.9s									
ALFC	**Alefka**	**3.67**	**100**		P	**Pn**		**23 37 52.3**	**+0.2**	
NATA	**Nata**	**3.75**	**106**		P	**Pn**		**23 37 53.5**	**+0.3**	
SZAC	**Souni**	**4.00**	**105**		P	**Pn**		**23 37 56.9**	**+0.2**	
SZAC					S	**Sn**		**23 38 44.2**	**+0.8**	
SZAC					AML	AML		23 38 46.9		
	comp=N,0.2nm,0.6s									
SZAC					AML	AML		23 38 46.9		
	comp=N,0.2nm,0.6s									
SZAC					AML	AML		23 38 51.3		
	comp=N,0.2nm,0.5s									
SZAC					AML	AML		23 38 51.3		
	comp=N,0.2nm,0.5s									
ASGA	**Asgata**	**4.28**	**103**		P	**Pn**		**23 38 00.6**	**+0.1**	
CSS	**Mathiatis**	**4.30**	**101**		P	**Pn**		**23 38 00.6**	**-0.1**	
MVOU	**Mavrovouni**	**4.53**	**99**		P	**Pn**		**23 38 03.3**	**-0.5**	
MMC7	**Mount Meron ar**	**6.60**	**114**		Pn	**Pn**		**23 38 32.2**	**-0.2**	
MMA0B	**Mount Meron ar**	**6.61**	**114**		Pn	**Pn**		**23 38 32.8**	**+0.3**	
SLTI	**Sal'it**	**6.75**	**121**		Pn	**Pn**		**23 38 33.6**	**-0.8**	
HMDT	**Nahal Hemdat**	**7.09**	**119**		Pn	**Pn**		**23 38 38.7**	**-0.3**	
KZIT	**Kziot**	**7.18**	**132**		Pn	**Pn**		**23 38 40.0**	**-0.3**	
YTIR	**Yattir**	**7.33**	**126**		Pn	**Pn**		**23 38 41.1**	**-1.3**	
DSI	**Dead Sea**	**7.38**	**124**		Pn	**Pn**		**23 38 41.9**	**-1.1**	
EIL	**Elat**	**8.42**	**136**		Pn	**Pn**		**23 38 58.4**	**+1.2**	

IDC 26 23:41:44.8±2.5, 5°52S×129°66E, h0km, mb3.5/1, mb1 4.2/4, mb1mx3.7/24, mbtmp4.0/4, ML4.0/3, Error ellipse: s-maj=117.2km s-min=29.8km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**7.55**	**232**	Sn	Sn	23 45 02.7	+0.1
	4.5nm,0.3s,baz=329,slow=7.8,SNR=8.9						
FITZ	**Fitzroy Crossi**	**13.11**	**197**	Pn	Pn	23 44 53.3	+0.9
	0.5nm,0.3s,baz=19,slow=10,SNR=20						
FITZ				Sn	Sn	23 47 04.1	-15
	0.2nm,0.3s,baz=95,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**15.04**	**163**	Pn	Pn	23 45 19.6	+0.7
	0.6nm,0.3s,baz=335,slow=12,SNR=26						
WRA				Sn	Sn	23 47 54.8	-12
	0.3nm,0.3s,baz=332,slow=21,SNR=2.4						
ASAR	**Alice Springs**	**18.50**	**168**	P	P	23 46 01.6	-1.2
	1.3nm,0.3s,baz=345,slow=10.0,SNR=54						
MKAR	**Makanchi Array**	**66.81**	**327**	P	P	23 52 38.5	+0.1
	0.5nm,0.9s,baz=130,slow=7.6,SNR=1.9						

*LDG **26** 23:45:52.6±0.1, 43°16N×10°66E, h10km, Md2.1/1, Ml2.1/9, Error ellipse: s-maj=1.8km s-min=1.4km az=27.0*

ROM 26 23:45:52.6±0.2, 43°146N±0°007×10°722E±0°010, h10km±1km, ML1.8/1, 1C, Error ellipse: s-maj=0.8km s-min=0.5km az=232.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRIF	**Trifonti**	**0.14**	**103**	⇑P	Pg	23 45 56.2	+0.5
TRIF				S	Sg	23 45 58.5	+0.6
TRIF				AML	AML		
	comp=E,1350μm,0.8s						
TRIF				AML	AML		
	comp=N,1075μm,0.2s						
TRIF				AML	AML		
	comp=N,1075μm,0.2s						
TRIF				AML	AML		
	comp=E,1350μm,0.8s						
FROS	**Frosini**	**0.32**	**78**	P	Pg	23 45 59.5	+0.5
FROS				S	Sb	23 46 04.6	-1.2
FROS				AML	AML		
	comp=E,354μm,0.1s						
FROS				AML	AML		
	comp=N,275μm,1.0s						
FROS				AML	AML		
	comp=E,354μm,0.1s						
FROS				AML	AML		
	comp=N,275μm,1.0s						
CASP	**Castiglione de**	**0.37**	**163**	P	Pg	23 46 00.5	+0.6
CASP				S	Sb	23 46 06.0	-1.1
CASP				AML	AML		
	comp=N,302μm,0.6s						
CASP				AML	AML		
	comp=E,402μm,0.5s						
CASP				AML	AML		
	comp=N,303μm,0.6s						
CASP				AML	AML		
	comp=E,403μm,0.5s						
CSNT	**Castellina Chi**	**0.53**	**52**	P	Pg	23 46 03.0	+0.2
CSNT				S	Sg	23 46 10.2	+0.4
CSNT				AML	AML		
	comp=E,66μm,1.2s						
CSNT				AML	AML		
	comp=N,42μm,1.5s						
CSNT				AML	AML		
	comp=E,66μm,1.2s						
CSNT				AML	AML		
	comp=E,91μm,0.7s						
CSNT				AML	AML		
	comp=N,100μm,1.2s						
CSNT				AML	AML		
	comp=N,40μm,1.4s						
OSSC	**Osservatorio P**	**0.54**	**45**	P	Pg	23 46 03.2	+0.2
OSSC				AML	AML		
	comp=N,86μm,0.5s						
OSSC				AML	AML		
	comp=E,80μm,1.2s						
OSSC				AML	AML		
	comp=E,100μm,0.6s						
OSSC				AML	AML		
	comp=N,168μm,0.6s						
CELB	**S.Piero in Cam**	**0.55**	**223**	P	Pg	23 46 03.4	+0.2
GROG	**Isola di Gorgo**	**0.67**	**295**	P	Pg	23 46 05.0	-0.5
CRMI	**Carmignano**	**0.67**	**16**	P	Pg	23 46 05.5	0.0
CRMI				AML	AML		
	comp=E,170μm,1.3s						
CRMI				AML	AML		
	comp=N,174μm,1.4s						
CRMI				AML	AML		
	comp=E,63μm,1.3s						
CRMI				AML	AML		
	comp=N,70μm,1.4s						
CRMI				AML	AML		
	comp=E,151μm,1.3s						
CRMI				AML	AML		
	comp=E,63μm,1.3s						
CRMI				AML	AML		
	comp=N,37μm,1.0s						
CRMI				AML	AML		
	comp=N,89μm,1.0s						
CRMI				AML	AML		
	comp=E,57μm,1.3s						
MAON	**Monte Argentar**	**0.78**	**157**	P	Pb	23 46 08.3	+0.1
MAON				AML	AML		
	comp=E,134μm,0.8s						
MAON				AML	AML		
	comp=N,125μm,0.9s						
MAON				AML	AML		
	comp=E,134μm,0.8s						
MAIM	**Mastiano**	**0.79**	**348**	P	Pg	23 46 06.8	-0.9
MAIM	**Mastiano**	**0.79**	**348**	P	Pg	23 46 06.8	-0.9
MAIM				AML	AML		
	comp=E,75μm,0.8s						
MAIM				AML	AML		
	comp=N,63μm,0.8s						
MAIM				AML	AML		
	comp=E,56μm,0.2s						
MAIM				AML	AML		
	comp=N,60μm,0.8s						
MCIV	**Monte Civitell**	**0.79**	**117**	P	Pg	23 46 06.9	-0.9
CARD	**Cardoso**	**0.90**	**349**	P	Pg	23 46 08.8	-1.1
POPM	**Popiglio**	**0.90**	**2**	P	Pg	23 46 09.4	-0.5
POPM	**Popiglio**	**0.90**	**2**	AML	AML		
	comp=E,166μm,0.3s						
POPM				AML	AML		
	comp=N,214μm,0.8s						
RUFI	**Rufina**	**0.90**	**39**	P	Pg	23 46 09.8	-0.1
MTCR	**Monte La Croce**	**0.90**	**13**	P	Pg	23 46 09.6	-0.4
BDI	**Bagni Di Lucca**	**0.92**	**354**	AML	AML		
	comp=N,81μm,0.4s						
BDI				AML	AML		
	comp=E,94μm,1.1s						
BDI				AML	AML		
	comp=E,120μm,0.5s						
BDI				AML	AML		
	comp=N,123μm,0.4s						
BDI				AML	AML		
	comp=E,101μm,0.6s						
BDI				AML	AML		
	comp=N,91μm,0.4s						
CAFI	**Castiglion Fio**	**0.93**	**78**	P	Pb	23 46 10.8	+0.1
CRE	**Caprese Michel**	**1.01**	**62**	P	Pb	23 46 12.3	0.0
CRE				AML	AML		
	comp=E,162μm,0.3s						
CRE				AML	AML		
	comp=N,288μm,1.2s						
FNVD	**Fontana Vidola**	**1.06**	**16**	P	Pg	23 46 13.0	0.0
SARO	**Sassorosso**	**1.06**	**347**	P	Pg	23 46 11.9	-1.1
EQUI	**Equi**	**1.10**	**338**	P	Pb	23 46 11.4	-2.3
EQUI	**Equi**	**1.10**	**338**	P	Pb	23 46 12.7	-1.0
SFI	**Santa Sofia**	**1.12**	**47**	P	Pb	23 46 14.0	0.0
BRIS	**BRISIGHELLA**	**1.16**	**29**	AML	AML		
	comp=E,1680μm,0.6s						
BRIS				AML	AML		
	comp=N,3720μm,1.2s						
LMD	**Lutirano**	**1.18**	**37**	AML	AML		
	comp=N,3235μm,0.2s						
LMD				AML	AML		
	comp=E,3175μm,0.3s						
ATTE	**AVT- Monte Tez**	**1.20**	**87**	P	Pb	23 46 15.1	-0.3
PARC	**Parchiule**	**1.21**	**65**	P	Pn	23 46 15.3	-0.4
ZCCA	**Zocca**	**1.22**	**9**	P	Pn	23 46 15.6	-0.2
ATPI	**Pietralunga -**	**1.26**	**75**	P	Pn	23 46 15.6	-0.8
APEC	**Apecchio**	**1.31**	**71**	P	Pn	23 46 16.4	-0.5
CPGN	**Carpegna, Ital**	**1.33**	**60**	P	Pn	23 46 17.0	-0.4
PGF	**Pioggiola**	**1.40**	**245**	*e*Pn	Pn	23 46 16.3	-2.0
PGF				*e*Sn	Sb	23 46 33.5	-3.3
	comp=E,4.7nm,0.2s						
PGF	**Pioggiola**	**1.40**	**245**	AML	AML		
	comp=E,56μm,1.5s						
PGF				AML	AML		
	comp=N,67μm,1.5s						
ASSB	**Assisi San Ben**	**1.42**	**93**	P	Pn	23 46 18.0	-0.5
GRAM	**Graiana**	**1.43**	**341**	P	Pn	23 46 18.9	+0.3
MSSA	**Maissana**	**1.46**	**324**	P	Pn	23 46 19.1	0.0
TEOL	**Teolo**	**2.32**	**17**	AML	AML		
	comp=N,140μm,0.8s						
TEOL				AML	AML		
	comp=E,210μm,0.7s						
SBF	**Sospel**	**2.50**	**288**	*e*Pn	Pn	23 46 30.9	-2.4
CTI	**Castel Tesino**	**2.98**	**13**	AML	AML		
	comp=N,49μm,0.3s						
CTI				AML	AML		
	comp=E,44μm,1.5s						
FRF	**La Foret Royal**	**3.00**	**279**	*e*Pn	Pn	23 46 37.2	-3.0
LMR	**La Mourre**	**3.08**	**275**	*e*Pn	Pn	23 46 38.8	-2.5
POLC	**Polcenigo**	**3.15**	**23**	AML	AML		
	comp=N,70μm,0.7s						
POLC				AML	AML		
	comp=E,64μm,1.0s						
MBDF	**Montbardon**	**3.26**	**300**	*e*Pn	Pn	23 46 40.5	-3.4
LPG	**La Plagne**	**3.69**	**311**	*e*Pn	Pn	23 46 47.7	-2.3
LPG				*e*Sn	Sn	23 47 28.3	-5.4
	comp=E,0.7nm,0.3s						
LPL	**La Plagne**	**3.72**	**311**	*e*Pn	Pn	23 46 47.8	-2.4
LPL				*e*Sn	Sn	23 47 29.0	-5.1
	comp=E,0.5nm,0.4s						
SMRF	**Simiane la Rot**	**3.83**	**284**	*e*Pn	Pn	23 46 48.7	-2.9
SMRF				*e*Sn	Sn	23 47 31.5	-5.2
	comp=E,0.3nm,0.2s						
CMPR	**Campora**	**4.44**	**128**	AML	AML		
	comp=N,94370μm,0.3s						
CMPR				AML	AML		
	comp=E,54370μm,0.3s						

*LDG **26** 23:46:08.4±0.2, 44°20N×11°95E, h2km, Md2.4/2, Ml2.4/20, Error ellipse: s-maj=3.6km s-min=2.2km az=99.0*
*VIE **26** 23:46:16.2±0.5, 44°28N×11°73E, h15km, mb2.1/8, ml2.0/18, Error ellipse: s-maj=4.7km s-min=2.5km az=155.0 40 km SE of Bologna*

ROM 26 23:46:15.6±0.1, 44°154N±0°007×11°58E±0°01, h27km±1km, ML2.2/1, 1D, Error ellipse: s-maj=0.8km s-min=0.4km az=223.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRIS	**BRISIGHELLA**	**0.05**	**265**	P	Pb	23 46 20.0	-0.2
BRIS				S	Sb	23 46 24.3	+1.0
IMOL	**Imola, Italy**	**0.24**	**30**	P	Pb	23 46 21.5	-0.3
IMOL				S	Sb	23 46 27.9	+1.8
MTRZ	**Monterenzio**	**0.24**	**340**	P	Pb	23 46 20.8	-1.1
MTRZ				S	Sb	23 46 26.4	+0.1
MTRZ				AML	AML		
	comp=E,3605μm,0.6s						
MTRZ				AML	AML		
	comp=N,3045μm,0.5s						
MTRZ				AML	AML		
	comp=E,3700μm,0.6s						
MTRZ				AML	AML		
	comp=N,3125μm,0.5s						
MTRZ				AML	AML		
	comp=E,3600μm,0.6s						
FAEN	**Faenza**	**0.25**	**58**	P	Pb	23 46 21.9	-0.2
FAEN				S	Sn	23 46 28.6	+0.1
SFI	**Santa Sofia**	**0.32**	**142**	⇓P	Pb	23 46 22.6	-0.4
SFI				S	Sb	23 46 28.8	+0.8
SFI				AML	AML		
	comp=E,603μm,0.8s						
SFI				AML	AML		
	comp=N,654μm,0.8s						
SFI				AML	AML		
	comp=E,564μm,0.5s						
SFI				AML	AML		
	comp=N,653μm,0.8s						
SFI				AML	AML		
	comp=E,603μm,0.8s						
SFI				AML	AML		
	comp=N,772μm,0.6s						
RUFI	**Rufina**	**0.32**	**189**	P	Pb	23 46 23.0	0.0
FNVD	**Fontana Vidola**	**0.33**	**273**	P	Pb	23 46 22.5	-0.7
FNVD				S	Sb	23 46 28.8	+0.4
FNVD				AML	AML		
	comp=E,677μm,0.5s						
FNVD				AML	AML		
	comp=N,810μm,0.6s						
ASQU	**Asqua**	**0.39**	**157**	P	Pb	23 46 24.0	-0.1
ASQU				S	Sn	23 46 31.0	-1.0
PTF	**Prato**	**0.42**	**242**	P	Pb	23 46 24.5	0.0
MTCR	**Monte La Croce**	**0.44**	**253**	P	Pb	23 46 24.8	-0.1
FIR	**Firenze**	**0.45**	**212**	P	Pb	23 46 25.4	+0.4
CMPO	**Campotto Po**	**0.46**	**21**	P	Pn	23 46 25.7	-0.6
FIU	**Minerbio Fiu**	**0.49**	**353**	P	Pn	23 46 26.4	-0.3
FIU				AML	AML		
	comp=E,326μm,0.8s						
FIU				AML	AML		
	comp=N,404μm,0.7s						
CRMI	**Carmignano**	**0.57**	**231**	P	Pb	23 46 27.1	0.0
CRMI				S	Sb	23 46 35.6	+0.8
CRMI				AML	AML		
	comp=E,170μm,1.3s						
CRMI				AML	AML		
	comp=N,174μm,1.4s						
CRMI				AML	AML		
	comp=E,63μm,1.3s						
CRMI				AML	AML		
	comp=N,70μm,1.4s						
CRMI				AML	AML		
	comp=E,63μm,1.3s						
CRMI				AML	AML		
	comp=N,70μm,1.4s						
CRE	**Caprese Michel**	**0.60**	**153**	P	Pb	23 46 27.5	-0.1
OSSC	**Osservatorio P**	**0.68**	**201**	P	Pb	23 46 28.9	+0.1
OSSC				S	Sn	23 46 39.1	+0.1
RAVA	**Ravarino**	**0.69**	**331**	P	Pn	23 46 30.8	+1.3
PARC	**Parchiule**	**0.69**	**136**	P	Pb	23 46 28.9	-0.2
PARC				AML	AML		
	comp=N,112μm,0.6s						
PARC				AML	AML		
	comp=E,94μm,1.4s						
CSNT	**Castellina Chi**	**0.71**	**197**	P	Pn	23 46 29.7	-0.2
CSNT				AML	AML		
	comp=N,100μm,1.2s						
CSNT				AML	AML		
	comp=E,91μm,0.7s						
CSNT				AML	AML		
	comp=N,100μm,1.2s						
PE3	**Peglio**	**0.81**	**124**	P	Pb	23 46 31.0	0.0
PE3				AML	AML		
	comp=E,292μm,0.5s						
PE3				AML	AML		
	comp=N,366μm,0.4s						
MAIM	**Mastiano**	**0.82**	**253**	P	Pb	23 46 30.5	-0.7
CAVE	**Cavezzo**	**0.82**	**330**	P	Pn	23 46 32.4	+1.0
CAVE				AML	AML		
	comp=N,376μm,1.4s						
CAVE				AML	AML		
	comp=E,192μm,0.5s						
SARO	**Sassorosso**	**0.85**	**272**	P	Pn	23 46 34.6	+2.7
CAFI	**Castiglion Fio**	**0.87**	**161**	P	Pn	23 46 32.2	+0.2
CAFI				AML	AML		
	comp=E,110μm,0.4s						
CAFI				AML	AML		
	comp=N,62μm,0.3s						
SERM	**Sermide**	**0.88**	**347**	P	Pb	23 46 32.4	+0.3
NARO	**Abbazia di Nar**	**0.91**	**127**	P	Pn	23 46 32.3	-0.2
FSSB	**Fossombrone**	**0.98**	**118**	P	Pb	23 46 34.2	+0.3
FSSB				AML	AML		
	comp=N,193μm,1.4s						
FSSB				AML	AML		
	comp=E,149μm,0.8s						
MPAG	**Monte Paganucc**	**1.00**	**121**	P	Pb	23 46 34.4	+0.1
ATTE	**AVT- Monte Tez**	**1.11**	**149**	P	Pb	23 46 36.6	+0.5
ATTE				AML	AML		
	comp=E,80μm,0.4s						
ATTE				AML	AML		
	comp=N,74μm,1.4s						
ARVD	**Arcevia**	**1.18**	**123**	P	Pb	23 46 37.7	+0.3
TEOL	**Teolo**	**1.21**	**3**	*e*Pg	Pn	23 46 35.6	-1.1
TEOL				*e*Sg	Sb	23 46 52.9	0.0
MGAB	**Montegabbione**	**1.30**	**162**	P	Pn	23 46 38.3	+0.3
MGAB				AML	AML		
	comp=E,108μm,0.6s						
MGAB				AML	AML		
	comp=N,76μm,1.0s						
ROVR	**Rover Verones**	**1.54**	**347**	P	Pn	23 46 40.7	-0.6
ROVR				AML	AML		
	comp=N,45μm,0.7s						
ROVR				AML	AML		
	comp=E,29μm,0.4s						
CGRP	**Cima Grappa**	**1.73**	**5**	*e*Pg	Pn	23 46 43.0	-1.1
CGRP				*e*Sg	Sn	23 47 05.2	-0.2
MAGA	**Magasa**	**1.76**	**338**	P	Pn	23 46 43.9	-0.5
MAGA				AML	AML		
	comp=E,120μm,0.6s						
MAGA				AML	AML		
	comp=N,92μm,0.4s						
VARN	**Col Varnada, M**	**1.88**	**11**	*e*Pn	Pn	23 46 44.7	-1.3
KOSI	**Kohlern**	**2.31**	**357**	P	Pn	23 46 52.6	+0.5
PGF	**Pioggiola**	**2.47**	**230**	*e*P	Pn	23 46 54.4	+0.2
PGF				*e*Sn	Sn	23 47 22.7	-0.8
	comp=N,2.3nm,0.3s						
MUGIO	**Muggio**	**2.52**	**315**	P	Pn	23 46 54.5	-0.4
ABTA	**Abfaltersbach**	**2.67**	**14**	*e*Pn	Pn	23 46 56.8	-0.2
	comp=N,0.5nm,0.1s						
ABTA				*e*Sn	Sn	23 47 29.0	+0.5
	comp=N,0.2nm,0.1s						
TUE	**Stuetta**	**2.80**	**327**	P	Pn	23 46 59.6	+0.8
MYKA	**Terra Mystica**	**2.87**	**30**	*e*Sn	Sn	23 47 33.4	+0.1
	comp=N,0.3nm,0.1s						
FETA	**Feichten**	**2.93**	**349**	*e*Pn	Pn	23 47 01.9	+1.4
	comp=N,0.3nm,0.2s						
FETA				*e*Sn	Sn	23 47 36.1	+1.3
	comp=N,0.5nm,0.4s						
SBF	**Sospel**	**3.00**	**266**	*e*Pn	Pn	23 46 59.1	-2.3
SBF				*e*Sn	Sn	23 47 36.1	-0.5
	comp=N,1.5nm,0.2s						
SQTA	**Sankt Quirin**	**3.08**	**355**	*e*Pn	Pn	23 47 03.4	+0.9
	comp=N,1.4nm,0.1s						
SQTA				*e*Sn	Sn	23 47 38.7	+0.2
	comp=N,1.9nm,0.3s						
WTTA	**Wattenberg**	**3.11**	**1**	*e*Pn	Pn	23 47 04.1	+1.1
	comp=N,0.8nm,0.2s						
WTTA				*e*Sn	Sn	23 47 40.3	+1.0
	comp=N,1.0nm,0.3s						
OBKA	**Obir**	**3.15**	**41**	*e*Pn	Pn	23 47 03.4	-0.1
	comp=N,0.2nm,0.2s						
OBKA				*e*Sn	Sn	23 47 39.4	-0.8
	comp=N,2.7nm,0.5s						
KBA	**Koelnbreinsper**	**3.18**	**22**	*e*Pn	Pn	23 47 03.8	-0.1
	comp=N,0.8nm,0.2s						
KBA				*e*Sn	Sn	23 47 38.6	-2.3
	comp=N,0.3nm,0.2s						
WATA	**Walderalm**	**3.18**	**360**	*e*Pn	Pn	23 47 05.0	+1.0
	comp=N,1.4nm,0.2s						
WATA				*e*Sn	Sn	23 47 38.5	-2.6
	comp=N,0.8nm,0.3s						
MOTA	**Moosalm**	**3.21**	**354**	*e*Pn	Pn	23 47 05.6	+1.3
	comp=N,0.6nm,0.2s						
MOTA				*e*Sn	Sn	23 47 44.0	+2.3
	comp=N,0.4nm,0.2s						
DAVA	**Damuels**	**3.35**	**340**	*e*Pn	Pn	23 47 07.1	+0.8
	comp=N,1.3nm,0.3s						
DAVA				*e*Sn	Sn	23 47 46.7	+1.5
	comp=N,1.1nm,0.3s						
RETA	**Reutte**	**3.38**	**351**	*e*Pn	Pn	23 47 06.6	0.0
	comp=N,0.1nm,0.1s						
RETA				*e*Sn	Sn	23 47 45.1	-0.8
	comp=N,0.2nm,0.1s						

LPL	**La Plagne**	**3.71**	**293**	*e*P	Pn	23 47 11.8	+0.6
LPL				*e*Sn	Sn	23 47 52.5	-1.6
	comp=N,1.8nm,0.4s						
LMR	**La Mourre**	**3.76**	**259**	*e*P	Pn	23 47 12.5	+0.7
LMR				*e*Sn	Sn	23 47 54.2	-1.0
	comp=N,0.9nm,0.2s						
LMR				*e*Sg	Sb	23 48 14.3	+7.9
	comp=N,0.8nm,0.3s						
MOA	**Molln**	**4.14**	**26**	*e*Pn	Pn	23 47 16.7	-0.3
	comp=N,0.4nm,0.2s						
MOA				*e*Sn	Sn	23 48 02.9	-1.6
	comp=N,0.4nm,0.2s						
ORIF	**Oris-en-Rattie**	**4.15**	**283**	*e*P	Pn	23 47 18.0	+0.9
ARSA	**Arzberg**	**4.15**	**40**	*e*Pn	Pn	23 47 16.4	-0.7
	comp=N,0.4nm,0.2s						
ARSA				*e*Sn	Sn	23 48 02.9	-1.9
	comp=N,0.4nm,0.4s						
SMRF	**Simiane la Rot**	**4.33**	**270**	*e*P	Pn	23 47 20.7	+1.1
CABF	**La Chapelle**	**4.58**	**304**	*e*P	Pn	23 47 23.5	+0.4
CABF				*e*Sn	Sn	23 48 12.1	-3.4
	comp=N,0.6nm,0.3s						
CONA	**Conrad Observa**	**4.81**	**37**	*e*Sn	Sn	23 48 19.9	-1.2
	comp=N,0.3nm,0.2s						
HINF	**Hinteralfeld**	**4.92**	**320**	*e*P	Pn	23 47 27.4	-0.4
HINF				*e*Sn	Sn	23 48 19.5	-4.4
	comp=N,2.0nm,0.3s						
VIVF	**Saint-Julien-l**	**4.99**	**280**	*e*P	Pn	23 47 29.6	+0.9
VIVF				*e*Sn	Sn	23 48 23.3	-2.2
	comp=N,0.8nm,0.4s						
CDF	**Champ du Feu**	**5.20**	**327**	*e*P	Pn	23 47 31.1	-0.5
CDF				*e*Sn	Sn	23 48 24.9	-5.8
	comp=N,2.4nm,0.4s						
HAU	**Haudompre**	**5.30**	**318**	*e*P	Pn	23 47 32.6	-0.3
HAU				*e*Sn	Sn	23 48 28.2	-4.9
	comp=N,3.3nm,0.2s						
PAGF	**Fort de Pagny**	**5.98**	**319**	*e*P	Pn	23 47 42.0	-0.3
PAGF				*e*Sn	Sn	23 48 43.9	-5.9
	comp=N,0.8nm,0.4s						
LOR	**Lormes**	**6.24**	**303**	*e*P	Pn	23 47 46.1	+0.3
	baz=120						
LOR				*e*Sn	Sn	23 48 52.0	-4.2
	comp=N,1.6nm,0.3s						
SSF	**Saint Saulge**	**6.37**	**300**	*e*P	Pn	23 47 48.8	+1.3
SSF				*e*Sn	Sn	23 48 54.9	-4.4
	comp=N,1.5nm,0.4s						
BGF	**Bois d'Agland**	**6.61**	**294**	*e*Pn	Pn	23 47 48.1	-2.7
BGF				*e*Sn	Sn	23 49 01.3	-3.9
	comp=N,2.0nm,0.3s						
MTLF	**Montolieu**	**6.83**	**266**	*e*P	Pn	23 47 55.3	+1.4
MTLF				*e*Sn	Sn	23 49 07.6	-3.1
	comp=N,1.2nm,0.5s						

MOS ***27*** *00:18:25.8±0.9,5.84N×61.20E,h10km,mb5.4/100, MS4.2/8,Error ellipse: s-maj=6.1km s-min=3.7km az=97.2*

IDC ***27*** *00:18:26.4±0.3,5.83N×61.30E,h0km,mb4.9/41, mb1 4.9/44,mb1mx4.9/61,mbtmp4.9/44,ML3.8/3,MS4.2/29, Ms1 4.2/29,ms1mx4.1/48,Error ellipse: s-maj=10.6km s-min=9.2km az=26.0*

BJI ***27*** *00:18:27.0±0.0,5.80N×61.30E,h10km,mB5.3/53, mb5.1/68,Ms4.7/50,Ms7 4.5/50*

NEIC ***27*** *00:18:27.9±1.6,5.81N±0.09×61.30E±0.08,h10km±1km, mb5.3/153,Error ellipse: s-maj=15.6km s-min=13.6km az=210.0*

GCMT ***27*** *00:18:27.9±0.2,5.76N±0.02×61.22E±0.02,h12km, MW4.9/106,Moment Tensor Solution. s39,c45; s106,c160; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.05±.09; Mθθ0.97±.08; Mϕϕ2.08±.08; Mrθ-0.41±.31; Mθϕ-1.71±.06; Mϕr0.17±.28; Best double couple: Mo3.21800×10¹⁶ NP1:ϕs329.00000°,δ42.00000°, λ-83.00000°. NP2:ϕs139.00000°,δ49.00000°, λ-96.00000°. Principal axes: T 3.3450, Plg3.0000°, Azm234.0000°; N -0.2550, Plg5.0000°, Azm144.0000°; P -3.0910, Plg84.0000°, Azm0.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BGR ***27*** *00:18:50.4±0.0,7.75N×58.81E,h33km,mb5.3,Ms4.1*

ISC 27 00:18:27.9±1.0,5.80N±0.04×61.24E±0.04,h10km±5km, n788,σ1ϕ07/834,mb5.3/268,MS4.3/50,70C-26D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**9.57**	**312**	P	Pn	00 20 51.6	+5.6
SOCY	**Socotra**	**9.57**	**312**	Pn	**Pn**	**00 20 50.3**	**+4.3**
SHAO	**Shalim**	**13.33**	**336**	*i* P	**Pn**	**00 21 39.8**	**+2.4**
	SNR=6.3						
SHAO	**Shalim**	**13.33**	**336**	P	**Pn**	**00 21 40.0**	**+2.6**
	SNR=5.5						
DMTO	**DMTO**	**13.35**	**333**	P	**Pn**	**00 21 40.5**	**+2.9**
	SNR=7.3						
RBK	**Rabkut**	**13.52**	**330**	P	**Pn**	**00 21 42.9**	**+2.9**
	SNR=12						
RBK				P	**Pn**	**00 21 42.9**	**+2.9**
	SNR=12						
ABTO	**Aybut**	**13.87**	**327**	P	**Pn**	**00 21 47.7**	**+2.9**
	SNR=27						
ABTO				P	**Pn**	**00 21 47.7**	**+2.9**
	SNR=27						
WHFO	**Wadi Hawf**	**14.09**	**329**	P	**Pn**	**00 21 50.7**	**+2.9**
	SNR=22						
WHFO				P	**Pn**	**00 21 50.7**	**+2.9**
	SNR=22						
DQM	**DQM**	**14.50**	**346**	P	**Pn**	**00 21 54.1**	**+0.7**
	SNR=9.2						
DQM				P	**Pn**	**00 21 54.1**	**+0.7**
	SNR=9.2						
MHTO	**MHTO**	**15.43**	**348**	P	**Pn**	**00 22 05.6**	**-0.2**
	SNR=143						
MHTO				P	**Pn**	**00 22 05.6**	**-0.2**
	SNR=143						
GOA	**Goa**	**15.66**	**51**	*e*P	**Pn**	**00 22 08.4**	**-0.5**
TRD	**Trivandrum**	**15.82**	**79**	*e*P	**P**	**00 22 14.0**	**-0.8**
JLN	**Jalan Bani Buh**	**16.35**	**354**	P	**Pn**	**00 22 17.5**	**-0.3**
	SNR=51						
JLN				P	**Pn**	**00 22 17.5**	**-0.3**
	SNR=51						
JMDO	**Jabal Madar**	**16.75**	**350**	P	**Pn**	**00 22 23.2**	**+0.3**
	SNR=42						
WBK	**Wadi Bani Khal**	**16.86**	**353**	P	**Pn**	**00 22 24.4**	**+0.2**
	SNR=21						
BSY	**Bisya**	**17.30**	**347**	P	**Pn**	**00 22 30.1**	**+0.4**
	SNR=119						
SMDO	**Samad**	**17.44**	**350**	P	**Pn**	**00 22 31.5**	**-0.1**
	SNR=60						
WSAR	**Wadi Sarin**	**17.52**	**352**	P	**Pn**	**00 22 32.7**	**+0.2**
	0.2nm,0.3s,baz=192,slow=13,SNR=23						
WSAR				LR	LR	00 27 45.5	
	comp=Z,720nm,21.6s,baz=190,slow=32						
POO	**Poona**	**17.64**	**43**	*e*P	**Pn**	**00 22 34.2**	**+0.1**
BIDO	**Bidbid**	**17.88**	**351**	P	**Pn**	**00 22 37.1**	**+0.2**
	SNR=59						
ARQ	**Araqi**	**18.02**	**346**	P	**P**	**00 22 39.4**	**+0.2**
	SNR=39						
ARQ				P	**P**	**00 22 39.4**	**+0.2**
	SNR=39						
HOQ	**Hoqain**	**18.08**	**348**	P	**Pn**	**00 22 39.5**	**0.0**
	SNR=40						
SOHO	**SOHO**	**18.79**	**347**	*i* P	**P**	**00 22 47.6**	**0.0**
	SNR=18						
SOHO	**SOHO**	**18.79**	**347**	P	**P**	**00 22 47.9**	**+0.4**
SOHO				P	**P**	**00 22 47.9**	**+0.4**
ALNE	**Al Ain**	**18.91**	**344**	*i* P	**Pn**	**00 22 49.5**	**0.0**
	SNR=22						
ATD	**Arta Tunnel**	**19.05**	**289**	P	**Pn**	**00 22 52.5**	**+1.1**
	0.3nm,0.3s,baz=114,slow=7.4,SNR=10						
ATD				LR	LR	00 29 05.4	
	comp=Z,218nm,20.5s,baz=77,slow=34						
ATD	**Arta Tunnel**	**19.05**	**289**	P	**P**	**00 22 51.0**	**+0.4**
BHUJ	**Bhuj**	**19.16**	**24**	*e*P	**Pn**	**00 22 53.4**	**+0.9**
PALK	**Pallekele**	**19.39**	**85**	P	**Pn**	**00 22 55.6**	**+0.2**
	0.4nm,0.3s,baz=21,slow=8.9,SNR=6.9						
PALK				LR	LR	00 28 53.0	
	comp=Z,1μm,18.7s,baz=12,slow=32						
PALK	**Pallekele**	**19.39**	**85**	P	**P**	**00 22 54.4**	**+0.1**
PALK				pmax	pmax		
	comp=Z,271nm,1.9s						
PALK	**Pallekele**	**19.39**	**85**	P	**P**	**00 22 54.4**	**+0.1**
PALK				IAmb	IAmb	00 23 00.1	
	comp=Z,271nm,1.9s						
ASHO	**Ashiyiah**	**19.43**	**346**	*i* P	**P**	**00 22 55.0**	**+0.4**
	SNR=19						
ASHO	**Ashiyiah**	**19.43**	**346**	P	**P**	**00 22 55.2**	**+0.6**
	SNR=17						
ASHO				P	**P**	**00 22 55.2**	**+0.6**
	SNR=17						
HATD	**Hatta, Dubai**	**19.55**	**346**	*i* P	**P**	**00 22 55.3**	**-0.6**
	SNR=26						
HATD	**Hatta, Dubai**	**19.55**	**346**	P	**P**	**00 22 56.6**	**+0.7**
	SNR=20						
HATD				P	**P**	**00 22 56.6**	**+0.7**
	SNR=20						
ASUD	**Al Ashush, Dub**	**19.56**	**344**	*i* P	**P**	**00 22 55.4**	**-0.7**
	SNR=16						
ASUD	**Al Ashush, Dub**	**19.56**	**344**	P	**P**	**00 22 56.9**	**+0.8**
	SNR=8.4						
AJN	**Ajban**	**19.60**	**343**	*i* P	**P**	**00 22 56.7**	**+0.2**
	SNR=6.6						
AJN	**Ajban**	**19.60**	**343**	P	**P**	**00 22 56.9**	**+0.4**
	SNR=5.5						
AJN				P	**P**	**00 22 56.9**	**+0.4**
	SNR=5.5						
FAQ	**Al Faqa, Dubai**	**19.61**	**345**	*i* P	**P**	**00 22 56.8**	**+0.3**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**19.61**	**345**	P	**P**	**00 22 57.0**	**+0.4**
	SNR=9.7						
FAQ				P	**P**	**00 22 57.0**	**+0.4**
	SNR=9.7						
UOSS	**Minazif**	**19.64**	**346**	*i* P	**P**	**00 22 57.2**	**+0.2**
	SNR=19						
UOSS	**Minazif**	**19.64**	**346**	P	**P**	**00 22 57.2**	**+0.2**
UOSS				P	**P**	**00 22 57.2**	**+0.2**
UOSS	**Minazif**	**19.64**	**346**	P	**P**	**00 22 56.7**	**-0.3**
UOSS				IAmb	IAmb	00 23 01.0	
	comp=Z,165nm,1.2s						
NAZ	**Nazwa, Dubai**	**19.82**	**345**	*i* P	**P**	**00 22 58.9**	**0.0**
	SNR=13						
NAZ	**Nazwa, Dubai**	**19.82**	**345**	P	**P**	**00 22 59.5**	**+0.6**
	SNR=13						
NAZ				P	**P**	**00 22 59.5**	**+0.6**
	SNR=13						
MDH	**Madha**	**19.96**	**347**	*i* P	**P**	**00 22 59.7**	**-0.8**
	SNR=5.5						
MDH	**Madha**	**19.96**	**347**	P	**P**	**00 23 01.5**	**+1.1**
MSFE	**Esma-Masafi**	**20.05**	**346**	*i* P	**P**	**00 23 00.6**	**-0.9**
	SNR=11						
MDRS	**Chennai**	**20.08**	**68**	*e*P	**P**	**00 23 02.1**	**+0.4**
UMQ	**Umm Al-Quwin**	**20.33**	**345**	P	Pn	00 23 05.8	-0.6
HYB	**Hyderabad**	**20.49**	**54**	*i* P	**P**	**00 23 07.0**	**+0.7**
BANOM	**Banah**	**20.56**	**347**	*i* P	**P**	**00 23 06.3**	**-0.7**
	SNR=6.0						
BANOM	**Banah**	**20.56**	**347**	P	**P**	**00 23 07.5**	**+0.5**
BANOM				P	**P**	**00 23 07.5**	**+0.5**
SHME	**Shamm**	**20.72**	**347**	P	**P**	**00 23 08.7**	**0.0**
TEND	**Ethiopian Broa**	**20.86**	**288**	*e*P	Pn	00 23 12.8	-0.1
ANKE	**Ethiopia-Afar**	**21.64**	**281**	*e*P	**P**	**00 23 21.1**	**+1.9**
SBV	**Sambava**	**22.19**	**210**	P	**P**	**00 23 25.2**	**+0.7**
	SNR=6.6						
FURI	**Furi**	**22.59**	**279**	P	**P**	**00 23 31.1**	**+1.8**
FURI				IAmb	IAmb	00 23 41.5	
	comp=Z,102nm,1.0s						
RAYN	**Ar Rayn**	**23.25**	**321**	*i* P	**P**	**00 23 34.7**	**-1.0**
	SNR=90						
RAYN	**Ar Rayn**	**23.25**	**321**	P	**P**	**00 23 34.3**	**-1.4**
RAYN				pmax	pmax		
	comp=Z,96nm,1.1s						
RAYN	**Ar Rayn**	**23.25**	**321**	P	**P**	**00 23 34.3**	**-1.4**
RAYN				IAmb	IAmb	00 23 37.0	
	comp=Z,96nm,1.1s						
BHPL	**Bhopal**	**23.32**	**40**	*e*P	**P**	**00 23 38.2**	**+1.8**
BHPL				IAmb	IAmb	00 23 40.7	
	comp=Z,194nm,1.2s						
KIBK	**Kibwezi**	**24.54**	**251**	P	**P**	**00 23 48.4**	**+0.2**
	SNR=17						
LODK	**Lodwar**	**25.90**	**266**	P	**P**	**00 24 03.2**	**+2.6**
	SNR=11						
OPO	**Ambohidratompo**	**27.90**	**209**	P	**P**	**00 24 20.0**	**+1.5**
	comp=Z,16nm,1.1s,baz=25,slow=8.1,SNR=6.9						
OPO				LR	LR	00 32 29.4	
	comp=Z,531nm,21.5s,baz=182,slow=30						
ABPO	**Ambohimpanom**	**28.26**	**209**	P	**P**	**00 24 22.3**	**+0.5**
ABPO				pmax	pmax		
	comp=Z,26nm,1.3s						
ABPO	**Ambohimpanom**	**28.26**	**209**	P	**P**	**00 24 22.2**	**+0.5**
HRA	**Herat**	**28.46**	**2**	P	**P**	**00 24 23.6**	**+0.1**
SMLA	**Simla**	**29.30**	**29**	*e*P	**P**	**00 24 32.4**	**+1.7**
SMLA				IAmb	IAmb	00 24 46.3	
	comp=Z,14nm,1.1s						
KBL	**Kabul**	**29.50**	**13**	P	**P**	**00 24 35.6**	**+3.0**
	SNR=21						
KBL	**Kabul**	**29.50**	**13**	P	**P**	**00 24 34.0**	**+1.3**
KBL				pmax	pmax		
	comp=Z,75nm,1.5s						
KBL	**Kabul**	**29.50**	**13**	P	**P**	**00 24 34.0**	**+1.3**
KBL				IAmb	IAmb	00 24 36.8	
	comp=Z,75nm,1.4s						
BOK	**Bokaro**	**29.70**	**50**	*e*P	**P**	**00 24 35.0**	**+0.7**
DHRM	**DHARAMSHALA**	**29.84**	**26**	*e*P	**P**	**00 24 38.1**	**+2.4**
DHRM				IAmb	IAmb	00 24 44.9	
	comp=Z,196nm,1.9s						
NIL	**Nilore**	**29.87**	**20**	P	**P**	**00 24 38.1**	**+2.3**
NIL				P	**P**	**00 24 38.1**	**+2.3**
NIL	**Nilore**	**29.87**	**20**	P	**P**	**00 24 36.9**	**+1.1**
NIL				pmax	pmax		
	comp=Z,50nm,1.1s						
NIL	**Nilore**	**29.87**	**20**	P	**P**	**00 24 36.9**	**+1.1**
NIL				IAmb	IAmb	00 24 39.4	
	comp=Z,50nm,1.1s						
DANN	**Dangsing**	**30.96**	**41**	*e*P	**P**	**00 24 47.3**	**+1.5**
	comp=Z,107nm,1.2s						
MBAR	**Mbarara**	**31.11**	**259**	P	**P**	**00 24 47.4**	**+0.2**
MBAR				pmax	pmax		
	comp=Z,20nm,1.5s						
MBAR	**Mbarara**	**31.11**	**259**	P	**P**	**00 24 47.4**	**+0.2**
DMN	**Daman**	**31.38**	**44**	*e*P	**P**	**00 24 51.3**	**+1.8**
	comp=Z,80nm,0.9s						
PKIN	**Phulchoki**	**31.56**	**44**	*e*P	**P**	**00 24 52.4**	**+1.3**
	comp=Z,94nm,1.3s						
PKI	**Pulchoki**	**31.57**	**44**	*e*P	**P**	**00 24 52.5**	**+1.3**
	comp=Z,96nm,1.2s						
KKN	**Kakani**	**31.62**	**44**	*e*P	**P**	**00 24 52.9**	**+1.4**
	comp=Z,121nm,1.3s						
RAMN	**Ramite**	**32.03**	**46**	*e*P	**P**	**00 24 56.7**	**+1.5**
	comp=Z,50nm,0.8s						
GUN	**Gumba**	**32.10**	**44**	*e*P	**P**	**00 24 57.5**	**+1.6**
	comp=Z,105nm,1.0s						
GEYT	**Alibeck**	**32.11**	**355**	P	**P**	**00 24 56.2**	**+0.7**
	comp=Z,25nm,0.5s,baz=208,slow=16,SNR=4.1						
GEYT				LR	LR	00 38 18.0	
	comp=Z,261nm,20.1s,baz=150,slow=37						
GYA0B	**ALIBECK ARRAY**	**32.11**	**355**	P	**P**	**00 24 55.4**	**-0.1**
ODAN	**Odare**	**32.55**	**47**	*e*P	**P**	**00 25 01.1**	**+1.4**
	comp=Z,69nm,1.2s						
TAPN	**Taplejung**	**33.06**	**47**	*e*P	**P**	**00 25 05.4**	**+1.1**
FOMA	**Nahampoana Res**	**33.59**	**204**	P	**P**	**00 25 08.8**	**+0.2**
FOMA				IAmb	IAmb	00 25 26.6	
	comp=Z,63nm,1.3s						
BELO	**BELONIA**	**33.87**	**56**	*e*P	**P**	**00 25 14.3**	**+3.2**
EIL	**Elat**	**34.34**	**317**	P	**P**	**00 25 15.0**	**0.0**
	comp=Z,16nm,1.0s,baz=100,slow=6.3,SNR=5.6						
EIL				LR	LR	00 38 26.0	
	comp=Z,488nm,19.2s,baz=126,slow=35						
SAIH	**SAIHA**	**34.84**	**58**	*e*P	**P**	**00 25 22.1**	**+2.4**
SAIH				IAmb	IAmb	00 25 26.0	
	comp=Z,55nm,1.0s						
DRK	**Karamyk**	**34.86**	**14**	P	**P**	**00 25 20.3**	**+0.5**
BTK	**Batken**	**35.18**	**13**	P	**P**	**00 25 23.4**	**+1.1**
BTK				pmax	pmax		
	comp=Z,98nm,1.4s						
BTK	**Batken**	**35.18**	**13**	P	**P**	**00 25 23.4**	**+1.1**
BTK				IAmb	IAmb	00 25 25.5	
	comp=Z,98nm,1.4s						
SHL	**Shillong**	**35.29**	**53**	*e*P	**P**	**00 25 24.8**	**+1.2**
SHL	**Shillong**	**35.29**	**53**	P	**P**	**00 25 25.3**	**+1.8**
	SNR=14						
SHL	**Shillong**	**35.29**	**53**	P	**P**	**00 25 23.8**	**+0.3**
SHL				pmax	pmax		
	comp=Z,65nm,1.3s						
SHL	**Shillong**	**35.29**	**53**	P	**P**	**00 25 23.8**	**+0.3**
SHL				IAmb	IAmb	00 25 25.6	
	comp=Z,65nm,1.3s						
GUWA	**GUWAHATI**	**35.44**	**52**	*e*P	**P**	**00 25 25.5**	**+0.9**
LHMI	**Lhok Sumawe**	**35.54**	**89**	P	**P**	**00 25 26.4**	**+0.8**
SILR	**SILCHAR**	**35.66**	**55**	*e*P	**P**	**00 25 27.6**	**+1.1**
KSH	**Kashi**	**36.11**	**19**	P	**P**	**00 25 27.0**	**-3.3**
KSH				PcP	**PcP**	**00 27 55.3**	**-1.0**
KSH				S	S	00 30 55.0	-15
KSH				pmax	pmax		
	comp=Z,45nm,1.0s						
KSH				pmax	pmax		
	comp=Z,460nm,4.1s						
KSH				LR	LR		
	comp=Z,420nm,5.8s						
KSH				LR	LR		
	comp=Z,430nm,6.0s						
KSH				LR	LR		
	comp=Z,750nm,15.7s						
MMAI	**Mount Meron Ar**	**36.22**	**322**	LR	LR	00 40 01.4	
	comp=Z,526nm,18.3s,baz=145,slow=36						
GEVA	**Gevas**	**36.34**	**336**	P	**P**	**00 25 33.2**	**+0.9**
TEZP	**TEZPUR**	**36.51**	**52**	*e*P	**P**	**00 25 34.6**	**+0.8**
PKDT	**Phuket**	**36.88**	**85**	P	**P**	**00 25 38.6**	**+1.6**
	comp=Z,26nm,1.1s						
LSA	**Lhasa**	**36.88**	**46**	P	**P**	**00 25 38.5**	**+1.1**
LSA				pmax	pmax		
	comp=Z,110nm,1.0s						
LSA	**Lhasa**	**36.88**	**46**	P	**P**	**00 25 38.6**	**+1.1**
LSA	**Lhasa**	**36.88**	**46**	P	**P**	**00 25 38.6**	**+1.1**
LSA				P	**P**	**00 25 38.6**	**+1.1**
LSA	**Lhasa**	**36.88**	**46**	P	**P**	**00 25 38.0**	**+0.5**
LSA				pmax	pmax		
	comp=Z,30nm,1.0s						
LSA	**Lhasa**	**36.88**	**46**	P	**P**	**00 25 38.0**	**+0.5**
ARSB	**Arslanbob**	**36.90**	**15**	P	**P**	**00 25 37.4**	**+0.3**
ARSB				pmax	pmax		
	comp=Z,39nm,1.2s						
ARSB	**Arslanbob**	**36.90**	**15**	P	**P**	**00 25 37.4**	**+0.3**
IUG	**Iuzhnay**	**37.03**	**11**	*e*P	**P**	**00 25 38.0**	**-0.2**
	comp=Z,36nm,1.5s,baz=11						
IUG	**Iuzhnay**	**37.03**	**11**	*e*P	**P**	**00 25 37.9**	**-0.2**
IUG				pmax	pmax		
	comp=Z,36nm,1.5s						
KOHI	**KOHIMA**	**37.14**	**54**	*e*P	**P**	**00 25 40.8**	**+1.5**
KOHI				IAmb	IAmb	00 25 53.8	
	comp=Z,66nm,1.6s						
GNI	**Garni**	**37.28**	**339**	P	**P**	**00 25 41.4**	**+1.1**
	comp=Z,28nm,1.0s,baz=192,slow=2.6,SNR=22						
GNI	**Garni**	**37.28**	**339**	P	**P**	**00 25 42.1**	**+1.7**
GNI	**Garni**	**37.28**	**339**	P	**P**	**00 25 41.7**	**+1.4**
GNI	**Garni**	**37.28**	**339**	*i* P	**P**	**00 25 39.6**	**-0.7**
GNI				pmax	pmax		
	comp=Z,40nm,1.1s						
GNI	**Garni**	**37.28**	**339**	P	**P**	**00 25 41.2**	**+0.8**
GNI				IAmb	IAmb	00 25 43.2	
	comp=Z,76nm,1.2s						
PSI	**Prapat**	**37.69**	**93**	LR	LR	00 38 55.5	
	comp=Z,973nm,21.0s,baz=91,slow=33						
PSI	**Prapat**	**37.69**	**93**	P	**P**	**00 25 44.9**	**+0.8**
PSI				pmax	pmax		
	comp=Z,37nm,1.4s						
RPSI	**Rantau Prapat**	**37.70**	**93**	P	**P**	**00 25 44.9**	**+0.9**
MOKO	**MOKOCHONG**	**37.73**	**54**	*e*P	**P**	**00 25 46.1**	**+1.8**
MOKO				IAmb	IAmb	00 25 57.2	
	comp=Z,112nm,1.3s						
ZIRO	**ZIRO**	**37.77**	**51**	*e*P	**P**	**00 25 43.6**	**-1.1**
AML	**Almayashu**	**37.84**	**15**	P	**P**	**00 25 46.1**	**+0.8**
	SNR=8.3						
MHMT	**Maesarieng**	**37.85**	**68**	P	**P**	**00 25 47.1**	**+1.9**
	comp=Z,64nm,1.2s						
KK31	**Karatay Array**	**38.05**	**11**	P	**P**	**00 25 47.5**	**+0.9**
KK31				pmax	pmax		
	comp=Z,42nm,1.4s						
KK31	**Karatay Array**	**38.05**	**11**	P	**P**	**00 25 47.5**	**+0.9**
KKAR	**Karatay Array**	**38.05**	**11**	P	**P**	**00 25 47.6**	**+1.0**
KKAR	**Karatay Array**	**38.05**	**11**	P	**P**	**00 25 47.6**	**+1.0**
KKAR	**Karatay Array**	**38.05**	**11**	P	**P**	**00 25 47.8**	**+1.2**
KKAR				IAmb	IAmb	00 25 49.4	
	comp=Z,42nm,1.4s						
UCH	**Uchtor**	**38.15**	**16**	P	**P**	**00 25 49.7**	**+1.7**
	SNR=7.2						
GAZ	**Gaziantep**	**38.17**	**328**	P	**P**	**00 25 48.4**	**+0.6**
EKS2	**Erkin-Say**	**38.36**	**15**	P	**P**	**00 25 51.2**	**+1.9**
	SNR=57						
PHET	**Kaeng Krachan**	**38.49**	**77**	P	**P**	**00 25 53.0**	**+2.3**
	comp=Z,23nm,0.9s						
AAK	**Ala-Archa**	**38.52**	**16**	P	**P**	**00 25 52.4**	**+1.6**
	SNR=28						
AAK	**Ala-Archa**	**38.52**	**16**	*i* P	**P**	**00 25 52.6**	**+1.9**
	SNR=34						
AAK	**Ala-Archa**	**38.52**	**16**	P	**P**	**00 25 52.2**	**+1.4**
AAK				P	**P**	**00 25 52.2**	**+1.4**
AAK	**Ala-Archa**	**38.52**	**16**	*ce*P	**P**	**00 25 49.8**	**-1.0**
AAK				pmax	pmax		
	comp=Z,216nm,1.7s						
AAK	**Ala-Archa**	**38.52**	**16**	P	**P**	**00 25 52.0**	**+1.2**
AAK				IAmb	IAmb	00 25 53.9	
	comp=Z,150nm,1.9s						
KBK	**Karagaybulak**	**38.66**	**16**	P	**P**	**00 25 53.7**	**+1.7**
	SNR=37						
ULHL	**Ulahol**	**38.66**	**18**	P	**P**	**00 25 53.9**	**+1.9**
	SNR=5.6						
UTHA	**Uthaitani**	**38.71**	**72**	P	**P**	**00 25 54.2**	**+1.6**
	comp=Z,666nmcomp=Z,84nm,0.9s						
FRU1	**Bishkek**	**38.72**	**16**	P	**P**	**00 25 53.8**	**+1.5**
FRU1				pmax	pmax		
	comp=Z,74nm,1.0s						
FRU1	**Bishkek**	**38.72**	**16**	P	**P**	**00 25 53.8**	**+1.5**
FRU1				IAmb	IAmb	00 25 55.4	
	comp=Z,74nm,0.9s						
BOOM	**Boomskoye usch**	**38.80**	**17**	P	**P**	**00 25 54.6**	**+1.5**
BOOM				pmax	pmax		
	comp=Z,67nm,1.3s						
BOOM	**Boomskoye usch**	**38.80**	**17**	P	**P**	**00 25 54.6**	**+1.5**
BOOM				IAmb	IAmb	00 25 55.8	
	comp=Z,67nm,1.2s						
CM13	**Chiang Mai Arr**	**38.80**	**68**	P	**P**	**00 25 55.0**	**+1.6**
	comp=Z,223nmcomp=Z,23nm,1.2s						
CM32	**Chiang Mai Arr**	**38.81**	**67**	P	**P**	**00 25 54.0**	**+0.7**
CM15	**Chiang Mai Arr**	**38.83**	**68**	P	**P**	**00 25 55.0**	**+1.5**
	comp=Z,290nmcomp=Z,28nm,1.0s						
CM05	**Chiang Mai Arr**	**38.84**	**68**	P	**P**	**00 25 55.2**	**+1.6**
	comp=Z,243nmcomp=Z,26nm,1.1s						
AKH	**Akhalkalaki**	**38.84**	**339**	P	**P**	**00 25 54.1**	**+0.6**
AKH

comp=Z,120nm,15.0s
CM36 Chiang Mai Arr 39.00 68 P **P** **00 25 56.0 +1.0**
TKM2 Tokmak 2 39.09 17 P **P** **00 25 56.7 +1.0**
SNR=18
CM35 Chiang Mai Arr 39.09 67 P **P** **00 25 56.0 +0.3**
USP Ospenovka 39.11 15 P **P** **00 25 56.6 +1.1**
SNR=21
CM34 Chiang Mai Arr 39.13 67 P **P** **00 25 57.0 +0.9**
KULM Kulim 39.22 89 P **P** **00 25 56.8 0.0**
KULM Kulim 39.22 89 P **P** **00 25 57.0 +0.2**
LKP Lekhapani 39.25 53 *e*P **P** **00 25 58.1 +1.2**
SGDS Sogindy 39.32 15 *e*P **P** **00 25 56.8 -0.5**
comp=Z,42nm,1.5s,baz=15
SGDS Sogindy 39.32 15 *e*P **P** **00 25 56.8 -0.5**
SGDS pmax pmax
comp=Z,42nm,1.5s
LAMP Lampang 39.50 68 P **P** **00 26 00.9 +1.7**
comp=Z,35nm,1.0s
TNSS Tian-Shan 39.60 18 *e*P **P** **00 25 59.5 -0.7**
baz=18
TNSS Tian-Shan 39.60 18 *e*P **P** **00 25 59.4 -0.7**
IPM Ipoh 39.64 90 P **P** **00 25 59.6 -0.7**
GROC Groznyy 39.67 342 *e*P **P** **00 26 00.7 +0.5**
GROC *e* 00 27 31.1
GROC *e* 00 28 07.1
GROC pmax pmax
comp=Z,94nm,1.3s
MDOK Medeo 39.75 18 *e*P **P** **00 26 00.7 -0.3**
baz=18
MDOK *e*S **S** **00 32 05.2 +0.1**
baz=18
MDOK LR LR 00 42 46.1
comp=Z,161nm,14.2s,baz=18
MDOK Medeo 39.75 18 *e*P **P** **00 26 00.7 -0.3**
MDOK *e*S **S** **00 32 05.1 +0.1**
MDOK MLR MLR
comp=Z,161nm,14.0s
AAA Alma-Ata 39.75 18 *e*P **P** **00 26 00.6 -0.4**
comp=Z,19nm,0.8s,baz=18
AAA Alma-Ata 39.75 18 *e*P **P** **00 26 00.5 -0.4**
AAA pmax pmax
comp=Z,19nm,0.8s
ZEI Tsey 39.91 340 *e*P **P** **00 26 00.8 -1.6**
ZEI pmax pmax
comp=Z,17nm,1.3s
PAYA Payao 39.92 67 P **P** **00 26 04.3 +1.7**
comp=Z,5μmcomp=Z,407nm,1.4s
PHIT Phitsanulok 39.93 70 P **P** **00 26 04.8 +2.0**
comp=Z,109nm,1.0s
PHRA Phrae 40.04 68 P **P** **00 26 04.0 +0.4**
comp=Z,300nm,1.4s
SATY Saty 40.09 20 *e*P **P** **00 26 02.9 -0.9**
comp=Z,34nm,1.4s,baz=20
SATY Saty 40.09 20 *e*P **P** **00 26 02.9 -0.9**
SATY pmax pmax
comp=Z,35nm,1.4s
BKNI Bangkinang 40.09 96 P **P** **00 26 04.0 -0.2**
UTTA Uttaradit 40.18 69 P **P** **00 26 07.3 +2.5**
comp=Z,187nmcomp=Z,13nm,1.2s
KUU Kurty 40.20 17 *e*P **P** **00 26 03.3 -1.4**
comp=Z,57nm,2.0s,baz=17
KUU Kurty 40.20 17 *e*P **P** **00 26 03.2 -1.4**
KUU pmax pmax
comp=Z,57nm,2.0s
CHKK Chushkaly 40.35 18 *e*P **P** **00 26 05.7 -0.3**
baz=18
CHKK Chushkaly 40.35 18 *e*P **P** **00 26 05.6 -0.3**
SHLS Shalkode 40.54 21 *e*P **P** **00 26 08.2 +0.6**
comp=Z,27nm,1.0s,baz=21
SHLS Shalkode 40.54 21 *e*P **P** **00 26 08.1 +0.6**
SHLS pmax pmax
comp=Z,27nm,1.0s
KPKS Kokpek 40.55 20 *e*P **P** **00 26 06.9 -0.7**
comp=Z,47nm,1.1s,baz=20
KPKS Kokpek 40.55 20 *e*P **P** **00 26 06.9 -0.7**
KPKS pmax pmax
comp=Z,47nm,1.1s
BTLS Baital 40.66 14 *e*P **P** **00 26 07.9 -0.4**
comp=Z,29nm,1.4s,baz=14
BTLS Baital 40.66 14 *e*P **P** **00 26 07.9 -0.4**
BTLS pmax pmax
comp=Z,29nm,1.4s
TOKA Tokat 40.94 331 P **P** **00 26 11.7 +0.9**
TOKA IAmb IAmb 00 26 13.3
comp=Z,68nm,1.0s
KBZ Khabaz 41.09 340 P **P** **00 26 12.8 +0.9**
comp=Z,18nm,0.9s,baz=167,slow=6.0,SNR=28
KBZ PP **PP** **00 27 48.1 +1.4**
comp=Z,14nm,1.0s,baz=148,slow=9.9,SNR=5.1
KBZ LR LR 00 44 24.1
comp=Z,241nm,18.9s,baz=145,slow=38
KBZ Khabaz 41.09 340*c**e*P **P** **00 26 11.2 -0.7**
KBZ pmax pmax
comp=Z,31nm,1.1s
CHAI Chaiyaphum 41.18 73 P **P** **00 26 14.5 +1.5**
comp=Z,1μmcomp=Z,77nm,1.0s
KIV Kislovodsk 41.36 340 *i* P **P** **00 26 15.3 +1.0**
SNR=7.1
KIV Kislovodsk 41.36 340 P **P** **00 26 14.9 +0.6**
KIV Kislovodsk 41.36 340 P **P** **00 26 15.0 +0.8**
KIV pmax pmax
comp=Z,45nm,1.1s
KIV Kislovodsk 41.36 340 P **P** **00 26 15.0 +0.8**
KIV IAmb IAmb 00 26 16.5
comp=Z,45nm,1.1s
MATP Matopo 41.41 230 P **P** **00 26 15.3 +0.4**
comp=Z,25nm,1.0s,baz=46,slow=9.3,SNR=30
TDK Taldyqorghan 41.83 18 *e*P **P** **00 26 17.3 -0.7**
comp=Z,120nm,1.1s,baz=18
TDK LR LR 00 44 00.3
comp=Z,203nm,16.0s,baz=18
TDK Taldyqorghan 41.83 18 *e*P **P** **00 26 17.3 -0.7**
TDK pmax pmax
comp=Z,120nm,1.1s
TDK MLR MLR
comp=Z,203nm,16.0s
BR131 Keskin Array S 41.94 328*d i*P **P** **00 26 18.9 -0.3**
BR131 Keskin Array S 41.94 328 P **P** **00 26 19.3 +0.2**
BRTR Keskin Array B 41.94 328 P **P** **00 26 19.8 +0.6**
comp=Z,16nm,0.9s,baz=140,slow=9.7,SNR=33
BRTR PP **PP** **00 27 56.8 +0.6**
comp=Z,5.8nm,1.0s,baz=143,slow=12,SNR=4.2
BRTR PcP **PcP** **00 28 14.7 +0.1**
comp=Z,3.9nm,0.9s,baz=143,slow=5.0,SNR=5.1
BRTR LR LR 00 44 23.1
comp=Z,168nm,18.8s,baz=124,slow=37
BRTR Keskin Array B 41.94 328 P **P** **00 26 19.1 -0.1**
BRTR Keskin Array B 41.94 328 P **P** **00 26 19.1 -0.1**
KHON Khomkaen 42.04 72 P **P** **00 26 21.0 +0.9**
comp=Z,42nm,0.9s
ELL Elmali 42.07 321 P **P** **00 26 20.9 +0.6**
ELL pmax pmax
comp=Z,309nm,1.6s
ELL Elmali 42.07 321 P **P** **00 26 20.9 +0.6**
SOC Sochi 42.14 337 *e*P **P** **00 26 18.6 -1.9**
SOC *e* 00 27 54.6
SOC *e*PPP PPP 00 28 24.7
SOC *e*S **S** **00 32 41.9 +1.6**
SOC *e*SS **SS** **00 35 44.6 -3.6**
SOC pmax pmax
comp=Z,25nm,1.3s
SOC MLR MLR
comp=Z,239nm,15.0s
GOF Gofitskoye 42.21 341 ⇓ *i*P **P** **00 26 21.3 +0.2**
GOF pmax pmax
comp=Z,52nm,1.1s
BR231 Keskin MP Arra 42.49 327 P **P** **00 26 24.4 +0.8**
BR231 IAmb IAmb 00 26 25.7
comp=Z,74nm,1.1s
NONG Nongkai 42.66 70 P **P** **00 26 26.0 +0.8**
ILGA Ilgaz 42.87 329 P **P** **00 26 26.9 +0.1**
ILGA IAmb IAmb 00 26 32.7
comp=Z,92nm,1.4s
ABKAR Akbulak array 43.32 359 P **P** **00 26 30.4 +0.4**
ABKAR IAmb IAmb 00 26 32.2
comp=Z,85nm,1.1s
ABKAR Akbulak array 43.32 359 P **P** **00 26 30.4 +0.4**
MDUB Mudurnu 43.79 326 P **P** **00 26 34.0 -0.1**
MANT Manisa 44.00 322 P **P** **00 26 36.2 +0.3**
SLVN Son La 44.08 65 P **P** **00 26 37.1 +0.5**
SLVN IAmb IAmb 00 26 39.3
comp=Z,52nm,1.2s
KMI Kunming 44.12 60⇑ *e*P **P** **00 26 38.5 +1.4**
KMI pP sP 00 26 41.5 +1.7
KMI sP pwP 00 26 42.5 -1.6
KMI S **S** **00 33 11.5 +1.1**
KMI sS sS 00 33 17.3 +3.6
KMI pmax pmax
comp=Z,32nm,1.3s
KMI pmax pmax
comp=Z,200nm,4.4s
KMI LR LR
comp=Z,240nm,14.7s
KMI LR LR
comp=Z,240nm,19.4s
KMI LR LR
comp=Z,370nm,18.1s
KMI Kunming 44.12 60 P **P** **00 26 36.9 -0.2**
KMI pmax pmax
comp=Z,36nm,1.1s
KMI Kunming 44.12 60 P **P** **00 26 36.9 -0.2**
KMI IAmb IAmb 00 26 39.3
comp=Z,36nm,1.1s
WMQ Urumqi 44.44 27 P **P** **00 26 40.5 +1.3**
WMQ pP sP 00 26 44.0 +2.2
WMQ S **S** **00 33 14.8 +0.6**
WMQ pmax pmax
comp=Z,66nm,1.3s
WMQ pmax pmax
comp=Z,540nm,4.3s
WMQ LR LR
comp=Z,440nm,20.5s
WMQ LR LR
comp=Z,710nm,19.7s
WMQ LR LR
comp=Z,730nm,25.9s
WMQ Urumqi 44.44 27 P **P** **00 26 39.8 +0.6**
WMQ pmax pmax
comp=Z,40nm,1.0s
WMQ Urumqi 44.44 27 P **P** **00 26 39.8 +0.6**
WMQ IAmb IAmb 00 26 41.5
comp=Z,40nm,1.0s
IDI Anoyia 44.50 316 P **P** **00 26 41.1 +1.3**
comp=Z,23nm,0.9s,baz=135,slow=8.7,SNR=6.6
IDI Anoyia 44.50 316 P **P** **00 26 40.6 +0.7**
IDI IAmb IAmb 00 26 42.4
comp=Z,52nm,1.1s
AKTO Aktyubinsk 44.57 357 P **P** **00 26 40.4 +0.4**
comp=Z,33nm,1.0s,baz=171,slow=7.5,SNR=52
AKTO LR LR 00 46 13.9
comp=Z,279nm,18.7s,baz=170,slow=37
MAKZ Makanchi 44.59 20 P **P** **00 26 40.5 +0.1**
MAKZ pmax pmax
comp=Z,36nm,1.2s
MAKZ Makanchi 44.59 20 P **P** **00 26 40.5 +0.1**
MAKZ IAmb IAmb 00 26 41.9
comp=Z,36nm,1.1s
MK31 Makanchi Array 44.69 21*c**e*P **P** **00 26 40.6 -0.5**
MK31 Makanchi Array 44.69 21 P **P** **00 26 41.4 +0.3**
MKAR Makanchi Array 44.69 21 P **P** **00 26 41.0 -0.1**
comp=Z,10nm,0.9s,baz=206,slow=8.1,SNR=45
MKAR PcP **PcP** **00 28 23.3 -0.3**
comp=Z,4.2nm,0.9s,baz=242,slow=5.1,SNR=4.6
MKAR LR LR 00 47 09.2
comp=Z,157nm,18.7s,baz=212,slow=39
MKAR Makanchi Array 44.69 21*c**e*P **P** **00 26 41.0 -0.1**
MKAR pmax pmax
comp=Z,11nm,0.9s
MKAR Makanchi Array 44.69 21 P **P** **00 26 40.7 -0.4**
BRZS Berezniki 45.08 10 *e*P **P** **00 26 43.3 -0.9**
comp=Z,27nm,2.0s,baz=10
BRZS Berezniki 45.08 10 *e*P **P** **00 26 43.2 -0.9**
BRZS pmax pmax
comp=Z,27nm,2.0s
SIM Simferopol' 45.62 333 *e*P **P** **00 26 48.4 -0.1**
SIM pmax pmax
comp=Z,89nm,1.2s
ZSN Zaisan 46.18 22 *e*P **P** **00 26 51.1 -1.8**
baz=22
ZSN Zaisan 46.18 22 *e*P **P** **00 26 51.9 -1.0**
LBTB Lobatse 46.26 227 LR LR 00 43 31.9
comp=Z,695nm,21.1s,baz=55,slow=32
LBTB Lobatse 46.26 227 P **P** **00 26 54.4 +0.4**
LBTB pmax pmax
comp=Z,66nm,1.3s
LBTB Lobatse 46.26 227 P **P** **00 26 54.4 +0.4**
ALN Alexandroupoli 47.02 323 P **P** **00 27 00.0 +0.4**
ALN pmax pmax
comp=Z,67nm,1.2s
ALN Alexandroupoli 47.02 323 P **P** **00 27 00.0 +0.4**
CD2 Chengdu 47.03 53 P **P** **00 26 59.0 -0.9**
CD2 PP **PP** **00 28 49.5 -1.0**
CD2 S **S** **00 33 53.3 +1.4**
CD2 sS sS 00 33 58.3 +3.1
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 pmax pmax
comp=Z,260nm,11.0s
CD2 LR LR
comp=Z,350nm,13.5s
CD2 LR LR
comp=Z,460nm,26.1s
CD2 LR LR
comp=Z,500nm,12.0s
KURK Kurchatov 47.07 15 P **P** **00 27 00.1 +0.3**
KURK P **P** **00 27 00.1 +0.3**
KURK Kurchatov 47.07 15*c**e*P **P** **00 26 59.7 -0.1**
KURK pmax pmax
comp=Z,33nm,1.3s
KURK Kurchatov 47.07 15 P **P** **00 27 00.0 +0.3**
KURK IAmb IAmb 00 27 01.3
comp=Z,27nm,1.1s
SEM Semipalatinsk 47.23 16 *e*P **P** **00 27 00.1 -1.3**
comp=Z,47nm,1.7s,baz=16
SEM Semipalatinsk 47.23 16 *e*P **P** **00 27 00.0 -1.3**
SEM pmax pmax
comp=Z,47nm,1.7s
ITM Ithomi 47.53 317 P **P** **00 27 03.9 +0.2**
BVAR Borovoye Array 47.68 7 P **P** **00 27 05.0 +0.5**
comp=Z,3.9nm,1.0s,baz=222,slow=24,SNR=4.2
BRVK Borovoye 47.70 7 P **P** **00 27 04.7 +0.1**
BRVK P **P** **00 27 04.7 +0.1**
BRVK Borovoye 47.70 7*c**e*P **P** **00 27 04.5 -0.1**
BRVK pmax pmax
comp=Z,57nm,2.5s
BRVK Borovoye 47.70 7 P **P** **00 27 04.9 +0.3**
JMB Yambol 47.70 325 *i* P **P** **00 27 04.8 0.0**
PRD Provadia 47.72 327 *i* P **P** **00 27 04.3 -0.7**
KDZ Kurdzhali 47.86 324 *i* P **P** **00 27 06.2 +0.1**
GYA Guiyang 47.89 59 ⇑P **P** **00 27 06.8 0.0**
GYA pP sP 00 27 11.5 +2.1
GYA PcP **PcP** **00 28 35.3 -0.1**
GYA PP **PP** **00 29 00.0 +1.2**
GYA S **S** **00 34 06.8 +2.3**
GYA pmax pmax
comp=Z,47nm,0.9s
GYA LR LR
comp=Z,170nm,11.5s
GYA LR LR
comp=Z,310nm,18.6s
GYA LR LR
comp=Z,310nm,19.7s
LEM Lembang 47.95 105 LR LR 00 43 34.2
comp=Z,510nm,19.0s,baz=212,slow=32
TIRR Tirgusor 48.03 329 ⇑P **P** **00 27 07.5 +0.1**
TIRR Tirgusor 48.03 329 P **P** **00 27 07.4 +0.1**
TIRR pmax pmax
comp=Z,183nm,1.1s
TIRR Tirgusor 48.03 329 P **P** **00 27 07.4 +0.1**
VRH Novokhopyorsk 48.09 344 *e*P **P** **00 27 06.8 -0.9**
VRH pmax pmax
comp=Z,60nm,1.1s
GTA Gaotai 48.23 40 ⇓P **P** **00 27 09.0 -0.2**
GTA pP pwP 00 27 15.5 -0.8
GTA sP sP 00 27 19.3 +7.5
GTA PcP **PcP** **00 28 36.5 +0.1**
GTA PP **PP** **00 29 03.0 +1.3**
GTA S **S** **00 34 12.5 +3.5**
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,250nm,5.5s
GTA LR LR
comp=Z,520nm,20.4s
GTA LR LR
comp=Z,500nm,20.7s
GTA LR LR
comp=Z,620nm,20.0s
AGG Agios Georgios 48.24 319 P **P** **00 27 08.3 -0.9**
AGG pmax pmax
comp=Z,36nm,1.1s
AGG Agios Georgios 48.24 319 P **P** **00 27 08.3 -0.9**
AGG IAmb IAmb 00 27 09.5
comp=Z,36nm,1.1s
TLBR Topalu 48.28 328 ⇑P **P** **00 27 09.5 +0.2**
RZN Rozhen 48.29 323 *i* P **P** **00 27 09.9 +0.2**
TPGR Topolog 48.30 329 ⇑P **P** **00 27 09.4 -0.1**
HARR Harsova 48.44 328 ⇑P **P** **00 27 11.1 +0.6**
RAZG Razgrad 48.45 326 ⇑P **P** **00 27 11.4 +0.7**
CFR Carcaliu 48.57 329 ⇑P **P** **00 27 12.4 +0.1**
BOSA Boshof 48.70 223 P **P** **00 27 13.4 +0.4**
comp=Z,15nm,0.9s,baz=56,slow=8.1,SNR=14
BOSA LR LR 00 46 00.6
comp=Z,541nm,18.8s,baz=30,slow=34
BOSA Boshof 48.70 223 P **P** **00 27 13.1 +0.2**
BOSA pmax pmax
comp=Z,26nm,1.1s
BOSA Boshof 48.70 223 P **P** **00 27 13.1 +0.2**
BOSA IAmb IAmb 00 27 13.5
comp=Z,26nm,1.1s
MMB Musomiste 48.83 323 *i* P **P** **00 27 13.2 -0.4**
VSR Storozhevoye 48.86 342 *e*P **P** **00 27 12.6 -1.1**
VSR pmax pmax
comp=Z,60nm,1.0s
QIZ Qiongzhong 49.08 70 P **P** **00 27 15.5 -0.4**
QIZ S **S** **00 34 20.8 -0.4**
QIZ pmax pmax
comp=Z,17nm,1.3s
QIZ LR LR
comp=Z,350nm,10.7s
QIZ LR LR
comp=Z,360nm,13.4s
QIZ LR LR
comp=Z,350nm,9.9s
KSM Kuching 49.14 93 P **P** **00 27 16.4 -0.1**
KSM IAmb IAmb 00 27 30.4
comp=Z,16nm,0.7s
KSM Kuching 49.14 93 P **P** **00 27 18.0 +1.6**
PGB Panagyurishte 49.14 324 *i* P **P** **00 27 15.8 -0.3**
VORR Voronezh 49.24 342 P **P** **00 27 17.0 +0.4**
VORR pmax pmax
comp=Z,250nm,1.4s
LZH Lanzhou 49.30 46 *e*P **P** **00 27 17.5 0.0**
LZH pP sP 00 27 20.8 +0.6
LZH sP pwP 00 27 23.5 -1.1
LZH *e*S **S** **00 34 28.5 +4.3**
LZH sS sS 00 34 38.3 +11
LZH pmax pmax
comp=Z,13nm,1.0s
LZH pmax pmax
comp=Z,59nm,4.3s
LZH LR LR
comp=Z,1μm,11.7s
LZH LR LR
comp=Z,1μm,11.9s
LZH LR LR
comp=Z,1μm,15.2s
VARL Varlezi 49.31 330 ⇑P **P** **00 27 18.0 +0.8**
VAY Valandovo 49.38 322 *i* P **P** **00 27 17.7 -0.1**
KKB Krupnik 49.38 323 *i* P **P** **00 27 17.4 -0.5**
ISR Istrita 49.46 328 ⇑P **P** **00 27 20.2 +1.8**
COPA Copaceanca 49.53 326 ⇑P **P** **00 27 20.0 +1.1**
MILM Milestii Mici 49.56 331 ⇑P **P** **00 27 18.9 -0.1**
KIS Kishinev 49.61 331 ⇓ *i*P **P** **00 27 19.1 -0.4**
comp=Z,110nm,1.5s
KIS Kishinev 49.61 331 *e*PP PP 00 29 22.0 +8.1
KIS Kishinev 49.61 331*d i*P **P** **00 27 19.0 -0.4**
KIS pmax pmax
comp=Z,110nm,1.5s
ODBI Odobesti 49.62 329 ⇑P **P** **00 27 22.1 +2.5**
GHRR 49.65 329 ⇑P **P** **00 27 21.1 +1.3**
TSUM Tsumeb 49.65 239 P **P** **00 27 21.4 +1.1**
TSUM IAmb IAmb 00 27 22.7
comp=Z,38nm,1.0s
BISRR Bisoca 49.66 328 ⇑P **P** **00 27 21.8 +1.8**
VTS Vitosha 49.73 323 *i* P **P** **00 27 20.6 -0.1**
NEHR Nehoiu 49.79 328 ⇑P **P** **00 27 22.6 +1.6**
STIP Stip 49.83 322 *i* P **P** **00 27 20.5 -0.7**
VRI Vrincioaia 49.86 329 ⇑P **P** **00 27 22.5 +1.0**
PLOR Plostina 49.89 329 ⇑P **P** **00 27 23.0 +1.3**
VLAD Vladila 49.90 326 ⇑P **P** **00 27 22.5 +0.8**
HUMR Humele 49.91 326 ⇑P **P** **00 27 22.5 +0.7**
MLR Muntele Rosu 50.02 328 LR LR 00 50 02.5
comp=Z,269nm,18.6s,baz=142,slow=38
MLR Muntele Rosu 50.02 328 ⇑P **P** **00 27 23.9 +1.1**
MLR Muntele Rosu 50.02 328 P **P** **00 27 23.5 +0.7**
MLR pmax pmax
comp=Z,101nm,1.3s
MLR Muntele Rosu 50.02 328 P **P** **00 27 23.4 +0.7**
LPSR Galich'ya Gora 50.14 342 *e*P **P** **00 27 22.4 -1.0**
LPSR pmax pmax
comp=Z,30nm,1.1s
TESR Tescani 50.34 329 ⇑P **P** **00 27 25.4 +0.3**
IAS Iasi 50.36 331 ⇑P **P** **00 27 26.2 +1.0**
VOIR 50.46 327 ⇑P **P** **00 27 26.5 +0.4**
OZUR 50.50 328 ⇑P **P** **00 27 26.8 +0.4**
ARU Arti 50.54 358*d i*P **P** **00 27 26.1 -0.2**
ARU 00 28 39.4
ARU 00 29 16.0
ARU PPP PPP 00 30 18.8
ARU S **S** **00 34 41.8 +1.4**
ARU SS **SS** **00 38 10.9 -3.7**
ARU pmax pmax
comp=Z,60nm,1.0s
ARU MLR MLR
comp=Z,271nm,18.0s
ARU Arti 50.54 358 P **P** **00 27 26.1 -0.2**
ARU IAmb IAmb 00 27 27.5
comp=Z,55nm,1.0s
DOPR Dopca 50.63 328 ⇑P **P** **00 27 27.6 +0.3**
ARR Arges 50.64 327 ⇑P **P** **00 27 27.6 +0.2**
SORM Soroca 50.64 332 ⇑P **P** **00 27 26.9 -0.4**
SVE Sverdlovsk 50.89 360*c i*P **P** **00 27 29.0 0.0**
SVE pmax pmax
comp=Z,51nm,1.4s
BIZ Bicaz 50.91 329 ⇑P **P** **00 27 30.1 +0.8**
SBUM Sibu 50.94 92 P **P** **00 27 30.3 +0.2**
SBUM IAmb IAmb 00 27 32.3
comp=Z,34nm,1.0s
SBUM Sibu 50.94 92 P **P** **00 27 31.0 +0.9**
PRAR RASCA 51.13 330 ⇑P **P** **00 27 31.2 +0.2**
LOT Lotru 51.16 327 ⇑P **P** **00 27 31.4 -0.1**
WOJI Wonogiri, Jawa 51.37 105 P **P** **00 27 32.5 -0.8**
comp=Z,44nm,1.8s
ENH Enshi 51.42 56 P **P** **00 27 32.6 -1.0**
ENH IAmb IAmb 00 28 00.2
comp=Z,27nm,1.0s
HERR Herculane 51.57 325 ⇑P **P** **00 27 34.5 +0.2**
GZR Gura Zlata 51.68 326 ⇑P **P** **00 27 35.5 +0.2**
ZAA0 Zalesovo Array 51.69 18 P **P** **00 27 34.4 -0.6**
ZAA0 IAmb IAmb 00 27 35.6
comp=Z,27nm,1.0s
ZALV Zalesovo Beam 51.69 18 P **P** **00 27 34.4 -0.7**
comp=Z,13nm,0.8s,baz=231,slow=7.1,SNR=44
ZALV PcP **PcP** **00 28 47.3 -1.1**
comp=Z,2.6nm,0.8s,baz=211,slow=2.5,SNR=4.2
ZALV LR LR 00 50 05.9
comp=Z,232nm,20.2s,baz=231,slow=37
ZALV Zalesovo Beam 51.69 18 P **P** **00 27 34.0 -1.0**
ZALV Zalesovo Beam 51.69 18 P **P** **00 27 34.0 -1.0**
BURAR Bucovina Array 51.81 330 ⇑P **P** **00 27 37.1 +0.9**
BURAR Bucovina Array 51.81 330 P **P** **00 27 36.3 +0.1**
BUR08 Bucovina Ar. S 51.84 330 P **P** **00 27 36.5 +0.1**
ARCR ARCALIA 51.90 329 ⇑P **P** **00 27 37.7 +0.9**
MDVR Moldovita 51.91 325 ⇑P **P** **00 27 36.9 0.0**
PDG Podgorica 52.05 321 ⇑P **P** **00 27 37.0 -1.0**
CJR Cluj-Napoca 52.06 328 ⇑P **P** **00 27 38.8 +0.8**
AKASG Malin Array Be 52.13 335 P **P** **00 27 37.7 -0.7**
comp=Z,22nm,1.1s,baz=130,slow=6.5,SNR=65
AKASG PcP **PcP** **00 28 49.6 -0.6**
comp=Z,8.5nm,1.0s,baz=125,slow=2.6,SNR=12
AKASG LR LR 00 51 57.1
comp=Z,153nm,19.9s,baz=115,slow=39
AKASG Malin Array Be 52.13 335*c**e*P **P** **00 27 37.7 -0.7**
AKASG pmax pmax
comp=Z,16nm,1.0s
AKBB Malin Array Si 52.13 335 P **P** **00 27 37.9 -0.5**
AKBB pmax pmax
comp=Z,47nm,1.2s
AKBB Malin Array Si 52.13 335 P **P** **00 27 37.9 -0.5**
AKBB IAmb IAmb 00 27 39.2
comp=Z,47nm,1.1s
XAN Xi'an 52.25 51 P **P** **00 27 39.3 -0.4**
XAN pP pwP 00 27 45.8 -0.9

XAN pmax pmax
comp=Z,58nm,0.8s
XAN Xi'an 52.25 51 P **P 00 27 39.0 -0.7**
XAN pmax pmax
comp=Z,65nm,1.2s
XAN Xi'an 52.25 51 P **P 00 27 39.0 -0.7**
XAN IAmb IAmb 00 27 40.3
comp=Z,65nm,1.2s
PWJI Pagerwojo 52.26 105 P **P 00 27 39.2 -0.8**
comp=Z,34nm,0.9s
BZS Buzias 52.46 326 ⇑P **P 00 27 41.0 +0.1**
DIVS Divibare 52.52 323 ⇓*i*P **P 00 27 40.8 -0.7**
DIVS Divibare 52.52 323 P **P 00 27 41.1 -0.4**
DIVS IAmb IAmb 00 27 42.5
comp=Z,45nm,1.2s
DRGR 52.58 327 ⇑P **P 00 27 42.6 +0.6**
UPM Unac-Piva 52.68 322 *e*P **P 00 27 40.5 -2.4**
BMR Baia Mare 52.73 329 ⇑P **P 00 27 43.7 +0.8**
BBLS Lazići 52.74 323 ⇓*i*P **P 00 27 42.6 -0.6**
BRY Bratogost 52.75 321 *e*P **P 00 27 42.7 -0.6**
MATE Matera 52.79 318 ⇑P **P 00 27 44.2 +0.7**
SIRR Siria 52.83 326 ⇓P **P 00 27 44.4 +0.7**
OBN Obninsk 53.02 343 *e*P **P 00 27 44.0 -0.9**
OBN *e* 00 29 43.9
OBN *e*PPP PPP 00 30 47.6
OBN pmax pmax
comp=Z,52nm,1.7s
OBN MLR MLR
comp=Z,159nm,19.0s
OBN Obninsk 53.02 343 P **P 00 27 44.1 -0.7**
OBN IAmb IAmb 00 27 46.6
comp=Z,40nm,1.2s
HAPS Han Pijesak,BI 53.13 323 *e*P **P 00 27 45.3 -0.8**
MOS Moscow 53.25 344 *e*P **P 00 27 45.5 -1.1**
MOS *e* 00 28 52.2
MOS *e* 00 29 46.5
MOS pmax pmax
comp=Z,104nm,1.4s
STON Ston 53.26 321 ⇓*i*P **P 00 27 46.4 -0.5**
KIRV Kirov 53.45 352 *ce*P **P 00 27 47.2 -0.8**
LVV L'vov 53.87 331 *e*P **P 00 27 50.9 -0.3**
CORL Corleone 53.94 313 P **P 00 27 52.2 +0.1**
UZH Uzhgorod 53.96 329 *e*P **P 00 27 51.4 -0.5**
UZH *e* 00 27 57.8
KOLS Kolonicke sedl 54.16 329 *e*P **P 00 27 53.8 +0.4**
KOLS pmax pmax
comp=Z,92nm,1.2s
KOLS Kolonicke sedl 54.16 329 *e*P **P 00 27 53.8 +0.4**
KWP Kalwaria Pacla 54.39 330 *e*P **P 00 27 55.1 0.0**
KWP Kalwaria Pacla 54.39 330 P **P 00 27 55.1 0.0**
KWP pmax pmax
comp=Z,89nm,1.1s
KWP Kalwaria Pacla 54.39 330 P **P 00 27 55.1 0.0**
PAOL Paolisi 54.40 317 P **P 00 27 54.8 -0.6**
MORH Mrgy, Hungar 54.50 325 ⇓*i*P **P 00 27 55.8 -0.1**
CRVS Cervenica-Dubn 54.55 329 *e*P **P 00 27 56.4 +0.1**
CRVS pmax pmax
comp=Z,122nm,1.3s
CRVS Cervenica-Dubn 54.55 329 *e*P **P 00 27 56.4 +0.1**
BLY Banja Luka 54.56 323 ⇓*i*P **P 00 27 56.5 +0.1**
PSZ Piszkesteto 54.78 327 ⇑P **P 00 27 57.8 -0.3**
PSZ Piszkesteto 54.78 327 P **P 00 27 57.3 -0.8**
PSZ pmax pmax
comp=Z,31nm,1.0s
PSZ Piszkesteto 54.78 327 P **P 00 27 57.3 -0.8**
PSZ IAmb IAmb 00 27 58.7
comp=Z,31nm,1.0s
KECS Kecovo 54.81 328 *e*P **P 00 27 58.1 0.0**
KECS pmax pmax
comp=Z,8.0nm,1.0s
KECS Kecovo 54.81 328 *e*P **P 00 27 58.1 0.0**
INTR Introdacqua 55.29 318 P **P 00 28 01.3 -0.5**
INTR IAmb IAmb 00 28 02.7
comp=Z,38nm,1.2s
NIE Niedzica 55.47 329 *e*P **P 00 28 02.8 -0.2**
BTO Baotou 55.65 44 *e*P **P 00 28 03.0 -1.5**
VYHS Vyhne 55.70 327 *e*P **P 00 28 04.0 -0.6**
VYHS pmax pmax
comp=Z,50nm,1.2s
VYHS Vyhne 55.70 327 *e*P **P 00 28 04.0 -0.6**
LANS Liptovska Anna 55.75 328 *e*P **P 00 28 05.2 +0.2**
LANS pmax pmax
comp=Z,31nm,1.1s
LANS Liptovska Anna 55.75 328 *e*P **P 00 28 05.2 +0.2**
KOGS Kog 56.01 324 *i*P **P 00 28 06.7 -0.2**
KEST Kesra 56.09 310 P **P 00 28 08.9 +1.1**
comp=Z,11nm,1.0s,baz=351,slow=3.8,SNR=8.3
KEST Kesra 56.09 310 P **P 00 28 08.2 +0.4**
CRES Cresnjev 56.16 323 ⇓*i*P **P 00 28 07.6 -0.3**
NRCA Norcia 56.19 319 P **P 00 28 07.8 -0.5**
NRCA IAmb IAmb 00 28 09.6
comp=Z,44nm,1.3s
OJC Ojcow 56.22 329 *e*P **P 00 28 07.5 -0.8**
OJC *e*PP **PP 00 30 13.6 +0.1**
OJC Ojcow 56.22 329 P **P 00 28 07.2 -1.1**
OJC pmax pmax
comp=Z,29nm,1.1s
OJC Ojcow 56.22 329 P **P 00 28 07.2 -1.1**
OJC IAmb IAmb 00 28 08.8
comp=Z,29nm,1.1s
TAM Tamanrasset 56.23 293 P **P 00 28 09.4 +0.3**
TAM pmax pmax
comp=Z,24nm,1.2s
TAM Tamanrasset 56.23 293 P **P 00 28 09.4 +0.3**
NACGM Naroch 56.24 337 *e* **P 00 28 08.0 -0.3**
TIY Taiyuan 56.24 48 *e*P **P 00 28 08.0 -0.8**
TIY pmax pmax
comp=Z,46nm,1.1s
GROS Grobnik 56.46 324 *i*P **P 00 28 09.7 -0.4**
SMOL Smolenice 56.47 326 *e*P **P 00 28 09.2 -0.9**
SMOL pmax pmax
comp=Z,12nm,1.1s
SMOL Smolenice 56.47 326 *e*P **P 00 28 09.2 -0.9**
ZST Bratislava 56.48 326 *e*P **P 00 28 09.7 -0.4**
ZST pmax pmax
comp=Z,148nm,1.5s
ZST Bratislava 56.48 326 *e*P **P 00 28 09.7 -0.4**
MODS Modra-Piesok 56.48 326 *e*P **P 00 28 08.7 -1.5**
MODS pmax pmax
comp=Z,56nm,1.1s
MODS Modra-Piesok 56.48 326 *e*P **P 00 28 08.6 -1.6**
JAVC Velka Javorina 56.54 327 ⇓*i*P **P 00 28 11.0 +0.4**
IDID Didziasalis 56.56 337 *e*P **P 00 28 10.7 +0.1**
ZAK Zakamensk 56.62 31 *e*P **P 00 28 08.6 -2.7**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
CEY Cerknica 56.74 322 ⇓*i*P **P 00 28 11.2 -0.9**
BEL Belsk 56.74 331 *e*P **P 00 28 12.0 +0.1**
IIGN Ignalina 56.79 337 *e*P **P 00 28 12.1 -0.1**
HHC Hu-ho-hao-te 56.82 44 *e*P **P 00 28 13.3 +0.4**
HHC pmax pmax
comp=Z,28nm,1.1s
HHC pmax pmax
comp=Z,230nm,5.1s
HHC LR LR
comp=Z,410nm,16.2s
HHC LR LR
comp=Z,370nm,15.9s
HHC LR LR
comp=Z,380nm,15.5s
LJU Ljubljana 56.83 323 *i*P **P 00 28 12.9 +0.2**
LJU Ljubljana 56.83 323 ⇓*i*P **P 00 28 12.4 -0.3**
SONM Songino Array 56.84 35 P **P 00 28 13.2 +0.2**
comp=Z,12nm,0.9s,baz=229,slow=7.3,SNR=72
SONM LR LR 00 53 26.2
comp=Z,371nm,18.8s,baz=200,slow=37
SONM Songino Array 56.84 35 P **P 00 28 12.7 -0.2**
SONM Songino Array 56.84 35 P **P 00 28 12.7 -0.2**
OKC Ostrava-Krasne 56.85 328 *e*P **P 00 28 12.2 -0.5**
OKC Ostrava-Krasne 56.85 328 *e*P **P 00 28 12.2 -0.5**
SOKA Soboth 56.85 324 *i*P **P 00 28 12.6 -0.4**
comp=Z,29nm,1.2s,SNR=11
ARSA Arzberg 56.86 324 *i*P **P 00 28 13.0 +0.1**
comp=Z,28nm,1.0s,SNR=16
LATE Laterza 56.96 318 P **P 00 28 13.2 -0.5**
ISAL Salakas 56.99 337 *e*P **P 00 28 13.6 0.0**
CONA Conrad Observa 57.03 325 *i*P **P 00 28 13.9 -0.3**
comp=Z,68nm,1.3s,SNR=28
OBKA Obir 57.05 323 *i*P **P 00 28 14.2 -0.2**
comp=Z,36nm,1.5s,SNR=7.5
IZAR Zarasai 57.07 337 *e*P **P 00 28 14.5 +0.3**
SUW Suwalki 57.09 334 P **P 00 28 13.9 -0.5**
SUW pmax pmax
comp=Z,104nm,1.0s
SUW Suwalki 57.09 334 P **P 00 28 13.9 -0.5**
MORC Moravsky Berou 57.13 328 ⇑P **P 00 28 14.6 -0.2**
MORC Moravsky Berou 57.13 328 ⇓*i*P **P 00 28 14.2 -0.6**
MORC Moravsky Berou 57.13 328 P **P 00 28 14.0 -0.8**
MORC pmax pmax
comp=Z,47nm,1.0s
MORC Moravsky Berou 57.13 328 P **P 00 28 14.0 -0.8**
MORC IAmb IAmb 00 28 15.7
comp=Z,47nm,1.0s
ULN Ulaanbaatar 57.24 35 *ce*P **P 00 28 15.4 -0.3**
ULN pmax pmax
comp=Z,33nm,2.5s
ULN Ulaanbaatar 57.24 35 P **P 00 28 15.5 -0.2**
TWSI Taliwang, Sumb 57.32 104 P **P 00 28 13.5 -3.2**
comp=Z,20nm,1.1s
KLMR Klimovskoe 57.32 348 *e*P **P 00 28 12.3 -3.5**
KLMR *e* 00 29 06.2
KLMR pmax pmax
comp=Z,94nm,1.5s
KLMR Klimovskoe 57.32 348 *e*P **P 00 28 12.3 -3.5**
KLMR AMP 00 28 16.9
comp=Z,94nm,1.5s
KLMR *e*PcP **PcP 00 29 06.2 -3.7**
KRUC Moravsky 57.35 327 ⇓*i*P **P 00 28 15.6 -0.7**
VRAC Vranov 57.38 327 ⇑P **P 00 28 16.6 0.0**
VRAC Vranov 57.38 327 ⇓*i*P **P 00 28 16.2 -0.3**
VSL Villasalto 57.39 314 P **P 00 28 16.5 -0.3**
PRED Cave del Predi 57.61 323 P **P 00 28 17.8 -0.4**
MYKA Terra Mystica 57.65 323 *i*P **P 00 28 18.4 -0.2**
comp=Z,43nm,1.2s,SNR=12
KRLC Kraliky 57.71 328 *e*P **P 00 28 18.3 -0.6**
KRLC Kraliky 57.71 328 *e*P **P 00 28 18.3 -0.6**
PABE Paberze 57.80 336 *e*P **P 00 28 19.1 -0.1**
MOA Molln 57.90 324 *i*P **P 00 28 19.7 -0.5**
comp=Z,74nm,1.1s,SNR=33
TREC Trest 57.97 326 *e*P **P 00 28 20.3 -0.4**
TREC Trest 57.97 326 *e*P **P 00 28 20.3 -0.4**
ZOU Zoufplan 58.02 323 P **P 00 28 20.8 -0.6**
ZOU IAmb IAmb 00 28 23.1
comp=Z,78nm,1.9s
KBA Koelnbreinsper 58.05 323 *i*P **P 00 28 21.1 -0.4**
comp=Z,32nm,1.2s,SNR=9.4
DPC Dobruska-Polom 58.10 328 *e*P **P 00 28 21.4 -0.3**
DPC Dobruska-Polom 58.10 328 *e*P **P 00 28 21.4 -0.3**
PLAI Plampang 58.20 104 P **P 00 28 20.3 -2.6**
comp=Z,51nm,1.0s
ZCCA Zocca 58.25 320 P **P 00 28 23.4 +0.5**
TEOL Teolo 58.26 321 P **P 00 28 22.5 -0.3**
TEOL IAmb IAmb 00 28 23.7
comp=Z,46nm,1.0s
OSTC Ostas 58.28 328 *e*P **P 00 28 22.3 -0.5**
UPC Upice 58.36 328 *e*P **P 00 28 23.0 -0.4**
UPC Upice 58.36 328 *e*P **P 00 28 23.0 -0.4**
CHVC Chvalec 58.38 328 *e*P **P 00 28 22.8 -0.8**
ABTA Abfaltersbach 58.39 323 *i*P **P 00 28 23.5 -0.3**
comp=Z,40nm,1.2s,SNR=11
KSP Ksiaz 58.40 328 *e*P **P 00 28 23.2 -0.4**
CTI Castel Tesino 58.59 322 P **P 00 28 24.7 -0.5**
CTI pmax pmax
comp=Z,28nm,1.0s
CTI Castel Tesino 58.59 322 P **P 00 28 24.7 -0.5**
CTI IAmb IAmb 00 28 26.0
comp=Z,28nm,1.0s
RJOB Jochberg 58.70 324 *e*P **P 00 28 24.7 -1.2**
comp=Z,8.8nm,1.2s,baz=120,slow=7.0
GEC2 GERESS Array S 58.73 325 *e*P **P 00 28 24.6 -1.5**
comp=Z,14nm,1.3s,baz=120,slow=7.0
GEC2 GERESS Array S 58.73 325 P **P 00 28 25.0 -1.2**
GERES GERESS Array B 58.73 325 P **P 00 28 25.0 -1.2**
comp=Z,31nm,0.8s,baz=120,slow=7.8,SNR=23
GERES GERESS Array B 58.73 325 P **P 00 28 24.1 -2.0**
GERES GERESS Array B 58.73 325 P **P 00 28 24.1 -2.0**
MPSI Mapaga 58.79 93 P **P 00 28 26.8 -0.2**
comp=Z,1µmcomp=Z,36nm,1.2s
PRMA PARMA 58.86 320 P **P 00 28 27.7 +0.7**
PRU Pruhonice 58.87 327 *e*P **P 00 28 25.9 -1.0**
PRU Pruhonice 58.87 327 *e*P **P 00 28 25.9 -1.0**
VSU Vasula 58.91 340 *e*P **P 00 28 26.4 -0.7**
VSU Vasula 58.91 340 *i*P **P 00 28 25.5 -1.6**
KHC Kasperske Hory 58.95 325 *e*P **P 00 28 26.0 -1.6**
KHC Kasperske Hory 58.95 325 *e*P **P 00 28 26.0 -1.6**
KHC *ex* x 00 28 38.5
KHC Kasperske Hory 58.95 325 P **P 00 28 26.1 -1.6**
PRA Prague 58.97 327 *e*P **P 00 28 27.2 -0.4**
PRA Prague 58.97 327 *e*P **P 00 28 27.2 -0.4**
PBCC Pribram 59.01 326 *e*P **P 00 28 26.8 -1.1**
TOA0 Torodi Ar. Sit 59.08 282 P **P 00 28 28.4 -0.6**
TORD Torodi Ar. Bea 59.08 282 P **P 00 28 29.1 +0.1**
comp=Z,4.1nm,1.0s,baz=90,slow=7.1,SNR=20
TORD PcP **PcP 00 29 18.2 +0.4**
comp=Z,3.5nm,0.9s,baz=86,slow=3.4,SNR=4.6
TORD Torodi Ar. Bea 59.08 282 P **P 00 28 28.6 -0.4**
SALO Salr 59.10 321 P **P 00 28 28.4 -0.3**
PVCC Panska Ves 59.14 327 *e*P **P 00 28 28.1 -0.7**
PVCC Panska Ves 59.14 327 *e*P **P 00 28 28.1 -0.7**
WTTA Wattenberg 59.16 323 *i*P **P 00 28 28.6 -0.7**
comp=Z,52nm,1.1s,SNR=13
WATA Walderlm 59.23 323 *i*P **P 00 28 28.5 -1.2**
comp=Z,48nm,1.1s,SNR=13
TIA Tai'an 59.31 51 P **P 00 28 29.5 -0.8**
TIA pmax pmax
comp=Z,24nm,1.4s
GKP Gorka Klasztor 59.33 331 *e*P **P 00 28 29.6 -0.5**
WET Wettzell 59.35 325 *e*P **P 00 28 28.2 -2.2**
comp=Z,13nm,1.2s,baz=120,slow=7.0
WET *e*L L 00 51 38.0
comp=Z,210nm,18.3s
KAPI Kappang 59.40 99 P **P 00 28 30.8 -0.4**
comp=Z,4.8nm,0.3s,baz=254,slow=8.0,SNR=12
KAPI LR LR 00 52 05.6
comp=Z,155nm,21.1s,baz=272,slow=34
KAPI Kappang 59.40 99 P **P 00 28 30.3 -0.9**
KAPI pmax pmax
comp=Z,28nm,1.1s
KAPI Kappang 59.40 99 P **P 00 28 30.3 -0.9**
KAPI IAmb IAmb 00 28 31.7
comp=Z,28nm,1.1s
SQTA Sankt Quirin 59.40 323 *i*P **P 00 28 29.9 -1.0**
comp=Z,26nm,1.0s,SNR=11
MOTA Moosalm 59.52 323 *i*P **P 00 28 30.4 -1.4**
comp=Z,49nm,1.1s,SNR=19
TOLI2 Tolitoli 59.59 92 P **P 00 28 31.3 -1.2**
TOLI2 IAmb IAmb 00 28 45.5
comp=Z,25nm,1.2s
FETA Feichten 59.60 322 *i*P **P 00 28 31.5 -0.8**
comp=Z,19nm,1.1s,SNR=7.0
NJ2 Nanjing 59.63 56 ⇓P **P 00 28 32.0 -0.5**
NJ2 pP **pwP 00 28 39.0 -0.6**
NJ2 sP sP 00 28 46.0 +11
NJ2 pmax pmax
comp=Z,29nm,1.0s
BNSI Bone 59.65 99 P **P 00 28 32.6 -0.3**
comp=Z,985nmcomp=Z,67nm,1.1s
BRG Berggiesshubel 59.66 327 *i*P **P 00 28 31.0 -1.4**
comp=Z,36nm,1.5s
BRG *i*PCP **PcP 00 29 19.9 +0.4**
comp=Z,14nm,1.3s
BRG Berggiesshubel 59.66 327 *i*P **P 00 28 31.0 -1.4**
BRG *i* 00 29 19.9
BRG pmax pmax
comp=Z,36nm,1.5s
BRG pmax pmax
comp=Z,14nm,1.3s
BRG Berggiesshubel 59.66 327 *e*P **P 00 28 31.7 -0.7**
comp=Z,36nm,1.5s,baz=120,slow=7.0
BJT Baijiatuao 59.78 47 P **P 00 28 32.6 -0.8**
BJT pmax pmax
comp=Z,65nm,1.5s
BJT Baijiatuao 59.78 47 P **P 00 28 32.6 -0.8**
BJI Beijing 59.79 47 P **P 00 28 33.5 0.0**
BJI pmax pmax
comp=Z,24nm,1.3s
BJI pmax pmax
comp=Z,200nm,4.3s
BJI LR LR
comp=Z,190nm,16.3s
BJI LR LR
comp=Z,200nm,12.9s
BJI LR LR
comp=Z,300nm,20.8s
RETA Reutte 59.79 323 *i*P **P 00 28 32.2 -1.3**
comp=Z,20nm,1.2s,SNR=6.8
BKSI Bulukumba 59.81 100 P P 00 28 41.8 +7.7
WBSI Waikabubak, Su 59.93 105 P **P 00 28 34.8 -0.1**
comp=Z,52nm,0.8s
SLIT Slitere, Latvi 59.95 337 *e*P **P 00 28 33.5 -0.7**
FBE Freiberg 60.00 327 *e*P **P 00 28 34.5 -0.2**
comp=Z,64nm,1.4s,baz=120,slow=7.0
ROTZ Rotzenmuhle 60.04 326 *e*P **P 00 28 34.1 -1.0**
comp=Z,24nm,1.4s,baz=120,slow=7.0
NKC Novy Kostel 60.14 326 *e*P **P 00 28 35.8 0.0**
NKC Novy Kostel 60.14 326 *e*P **P 00 28 35.8 0.0**
TUE Stuetta 60.21 321 P **P 00 28 35.8 -0.7**
TUE IAmb IAmb 00 28 40.2
comp=Z,28nm,1.2s
MANZ Manzenberg 60.21 326 *e*P **P 00 28 35.3 -1.0**
comp=Z,23nm,1.5s,baz=120,slow=7.0
WERN Wernitzgruen 60.21 326 *e*P **P 00 28 36.1 -0.2**
comp=Z,70nm,1.1s,baz=120,slow=7.0
TANN Tannenbergstha 60.23 326 *e*P **P 00 28 35.8 -0.6**
comp=Z,44nm,1.3s,baz=120,slow=7.0
DAVA Damuels 60.24 322 *i*P **P 00 28 36.1 -0.6**
comp=Z,54nm,1.6s,SNR=12
GUNZ Gunzen 60.27 326 *e*P **P 00 28 36.5 -0.2**
comp=Z,63nm,1.1s,baz=120,slow=7.0
UBR Ueberruh 60.28 323 *e*P **P 00 28 35.7 -1.1**
comp=Z,39nm,1.3s,baz=120,slow=7.0
WERD Werda 60.33 326 *e*P **P 00 28 36.6 -0.5**
comp=Z,31nm,1.2s,baz=120,slow=7.0
CLL Collm 60.39 327 *i*P **P 00 28 36.8 -0.6**
comp=Z,76nm,1.6s
CLL Lm MLR 00 52 00.0
comp=Z,200nm,20.0s
CLL Collm 60.39 327 *i*P **P 00 28 36.8 -0.6**
CLL pmax pmax
comp=Z,76nm,1.6s
CLL Collm 60.39 327 *e*P **P 00 28 36.9 -0.6**
comp=Z,76nm,1.6s,baz=120,slow=7.0
CLL *e*L L 00 53 07.1
comp=Z,181nm,20.0s
CLL Collm 60.39 327 P **P 00 28 36.7 -0.7**
CLL IAmb IAmb 00 28 38.4
comp=Z,58nm,1.5s
PLN Plauen 60.43 326 *e*P **P 00 28 37.7 0.0**
comp=Z,34nm,1.6s,baz=120,slow=7.0
GRA1 Grafenberg Arr 60.56 325 P **P 00 28 37.7 -1.0**
GRF Grafenberg Arr 60.56 325 P **P 00 28 37.7 -1.0**
GRF pmax pmax
comp=Z,49nm,1.0s
GRF Grafenberg Arr 60.56 325 *e*P **P 00 28 37.7 -1.0**
comp=Z,62nm,1.1s,baz=120,slow=7.0
GRF *e*L L 00 49 56.5
comp=Z,87nm,19.3s
TMCR Tamitsa 60.60 349 *e*P **P 00 28 37.8 -0.8**
TMCR pmax pmax
comp=Z,58nm,1.4s
RUE Ruedersdorf 60.61 329 *e*P **P 00 28 38.8 0.0**
RUE Ruedersdorf 60.61 329 *e*P **P 00 28 38.6 -0.2**
comp=Z,106nm,1.2s,baz=120,slow=7.0
MRSI Marisa 60.80 93 P **P 00 28 40.3 -0.6**
comp=Z,801nmcomp=Z,56nm,1.0s
MOX Moxa 60.81 326 *e*P **P 00 28 39.9 -0.4**
comp=Z,16nm,1.2s,baz=120,slow=7.0
MOX *e*L L 00 51 57.5
comp=Z,167nm,20.2s
NEUB Neuenburg 61.01 327 *e*P **P 00 28 41.2 -0.4**
comp=Z,43nm,1.3s,baz=120,slow=7.0
STU Stuttgart 61.31 324 P **P 00 28 42.8 -0.9**
STU pmax pmax
comp=Z,21nm,1.2s
STU Stuttgart 61.31 324 P **P 00 28 42.8 -0.9**
STU IAmb IAmb 00 28 43.6
comp=Z,21nm,1.2s
FINES FINESS Array B 61.39 342 P **P 00 28 42.8 -1.2**
comp=Z,6.4nm,0.8s,baz=120,slow=11,SNR=11
FINES LR LR 00 57 21.4
comp=Z,213nm,21.5s,baz=132,slow=38
FINES FINESS Array B 61.39 342 *ce*P **P 00 28 43.4 -0.6**
FINES pmax pmax
comp=Z,6.0nm,0.9s
FINES FINESS Array B 61.39 342 P **P 00 28 43.1 -0.9**
SENIN Lac Senin/Sane 61.45 320 P **P 00 28 44.3 -0.7**
BFO Black Forest 61.63 323 P **P 00 28 45.2 -0.8**
BFO pmax pmax
comp=Z,70nm,1.3s
BFO Black Forest 61.63 323 *e*P **P 00 28 45.4 -0.5**
comp=Z,80nm,1.4s,baz=120,slow=7.0
BFO *e*L L 00 49 22.7
comp=Z,101nm,19.4s
BFO Black Forest 61.63 323 P **P 00 28 45.2 -0.8**
UBBA Unterbreizbach 61.79 326 *e*P **P 00 28 46.5 -0.3**
comp=Z,45nm,1.6s,baz=120,slow=7.0
GTOI Gorontalo 61.85 92 P **P 00 28 46.4 -1.6**
comp=Z,404nmcomp=Z,24nm,1.0s
ASSE Asse, Remlinge 62.06 327 *e*P **P 00 28 48.3 -0.3**
comp=Z,56nm,1.4s,baz=120,slow=7.0
CLZ Clausthal 62.08 327 *e*P **P 00 28 48.9 0.0**
comp=Z,69nm,1.2s,baz=120,slow=7.0
ECH Echery 62.30 322 P **P 00 28 49.8 -0.6**
ECH pmax pmax
comp=Z,43nm,1.2s
ECH Echery 62.30 322 P **P 00 28 49.8 -0.6**
TNS Taunus Mts 62.40 325 *e*P **P 00 28 50.6 -0.5**
comp=Z,49nm,1.5s,baz=120,slow=7.0
TNS *e*L L 00 53 35.7
comp=Z,138nm,20.3s
MMRI Maumere 62.48 103 P **P 00 28 53.5 +1.3**
comp=Z,46nm,0.9s
NRDL Niedersach Rie 62.54 328 *e*P **P 00 28 52.1 +0.3**
comp=Z,58nm,1.4s,baz=120,slow=7.0
SSB Saint Sauveur 62.83 318 P **P 00 28 53.3 -0.7**
SSB pmax pmax
comp=Z,26nm,1.1s
SSB Saint Sauveur 62.83 318 P **P 00 28 53.3 -0.7**
SSB IAmb IAmb 00 28 54.1
comp=Z,26nm,1.1s
MORW Morawa 63.02 127 P **P 00 28 56.6 +1.0**
baz=63,SNR=11
MORW Morawa 63.02 127 P **P 00 28 55.6 +0.1**
BSEG Bad Segeberg 63.15 329 *e*L L 00 58 04.0
comp=Z,159nm,19.4s
AHRW Bad Neuenahr-A 63.33 325 *e*P **P 00 28 58.0 +0.8**
comp=Z,52nm,1.2s,baz=120,slow=7.0
DL2 Dalian 63.49 49 P **P 00 28 58.3 -0.2**
DL2 *e*S **S 00 37 33.5 +1.6**
DL2 pmax pmax
DL2 comp=Z,37nm,0.9s LR LR
DL2 comp=Z,400nm,18.9s LR LR
DL2 comp=Z,330nm,19.1s LR LR
DL2 comp=Z,360nm,20.0s LR LR
WLF Walferdange 63.50 323 P **P 00 28 58.2 -0.1**
WLF PcP **PcP 00 29 33.8 -1.2**
WLF Walferdange 63.50 323 P **P 00 28 57.8 -0.5**
WLF pmax pmax
comp=Z,32nm,1.1s
WLF Walferdange 63.50 323 *e*P **P 00 28 58.2 -0.1**
comp=Z,40nm,1.3s,baz=120,slow=7.0
WLF Walferdange 63.50 323 P **P 00 28 57.8 -0.5**
WLF IAmb IAmb 00 28 59.4
comp=Z,32nm,1.1s
PSA00 Pilbara Seismi 63.52 117 P **P 00 28 59.1 +0.1**
BUG Bochum-Univer 63.61 326 *e*P **P 00 28 59.2 +0.2**
comp=Z,36nm,1.3s,baz=120,slow=7.0
IBBN Ibbenburen 63.73 327 *e*P **P 00 28 59.7 0.0**
comp=Z,208nm,2.3s,baz=120,slow=7.0
BHOU Houvegnez 63.87 324 P **P 00 29 00.9 +0.1**
comp=Z,29nm,2.5s
BTNL Ternell 63.89 324 P **P 00 29 01.1 +0.1**
comp=Z,26nm,2.1s
BTNL PcP **PcP 00 29 37.8 +1.2**
BATI Baumata 64.16 104 P P 00 29 02.7 -0.7
comp=Z,23nm,0.7s,baz=152,slow=4.1,SNR=6.0
BATI Baumata 64.16 104 P **P 00 29 05.9 +2.5**
comp=Z,18nm,0.8s
MEEK Meekatharra 64.19 123 P **P 00 29 03.7 +0.4**
baz=64,SNR=6.9
BLDU Ballidu 64.19 128 P **P 00 29 03.5 +0.3**
baz=64,SNR=5.9
BSTI Sart Tilman 64.22 324 P **P 00 29 03.6 +0.5**
BSTI PcP **PcP 00 29 37.1 -0.8**
BEBN Eben Emael 64.24 324 P **P 00 29 03.7 +0.5**
RCHB Rochefort 64.24 324 P **P 00 29 02.0 -1.2**
RCHB PcP **PcP 00 29 39.2 +1.2**
BCLA Clavier 64.31 324 P **P 00 29 03.2 -0.5**
comp=Z,23nm,1.6s
BCLA x x 00 29 14.0
BCLA PcP **PcP 00 29 38.5 +0.2**
MUN Mundaring 64.37 129 P **P 00 29 04.8 +0.4**

baz=64,SNR=3.3
BGES Gesves 64.42 324 P P 00 29 04.1 -0.3
APA Apatity 64.51 349 ⇓ iP P 00 29 03.0 -1.7
APA pmax pmax
comp=Z,12nm,0.8s
APA MLR MLR
comp=Z,600nm,14.0s
LVZ Lovozero 64.56 349 ceP P 00 29 03.1 -1.9
LVZ pmax pmax
comp=Z,55nm,2.5s
BMRD Maredsous 64.57 324 P P 00 29 05.2 -0.2
BMRD PcP PcP 00 29 39.8 +0.4
DOU Dourbes 64.59 323 P P 00 29 05.0 -0.5
DOU PcP PcP 00 29 39.6 +0.2
KOWA Kowa 64.64 283 P P 00 29 07.2 +0.7
comp=Z,4.1nm,0.8s,baz=77,slow=5.2,SNR=8.7
KOWA Kowa 64.64 283 P P 00 29 06.8 +0.3
SOEI Soe 64.66 104 P P 00 29 13.4 +6.7
SOEI Soe 64.66 104 P P 00 29 06.2 -0.5
SNF Seneffe 64.94 324 P P 00 29 07.8 +0.1
comp=Z,25nm,1.2s
MUD Monsted U'grnd 64.98 331 i P P 00 29 08.1 +0.2
MUD pmax pmax
comp=Z,110nm,1.3s
MUD Monsted U'grnd 64.98 331 i P P 00 29 08.1 +0.2
comp=Z,108nm,1.3s
MUD Monsted U'grnd 64.98 331 i P P 00 29 08.1 +0.2
MUD IAmb IAmb 00 29 09.2
comp=Z,108nm,1.3s
UCC Uccle 65.01 324 P P 00 29 07.8 -0.3
UCC Uccle 65.01 324 P P 00 29 07.9 -0.3
UCC pmax pmax
comp=Z,34nm,0.9s
UCC Uccle 65.01 324 P P 00 29 07.9 -0.3
UCC IAmb IAmb 00 29 09.0
comp=Z,34nm,0.9s
SANI Sanana 65.12 95 P P 00 29 08.9 -0.8
comp=Z,24nm,1.1s
CLF Chambon-Foret 65.26 321 P P 00 29 09.9 0.0
HIA Hailar 65.39 38 i P P 00 29 10.8 0.0
HIA pmax pmax
comp=Z,9.0nm,0.9s
HIA Hailar 65.39 38 P P 00 29 10.4 -0.4
KLBR Kellerberrin 65.41 128 P P 00 29 11.2 0.0
baz=66,SNR=6.8
NWAO Narrogin (SRO) 65.56 130 P P 00 29 12.3 +0.1
baz=66,SNR=5.0
NWAO Narrogin (SRO) 65.56 130 P P 00 29 12.2 +0.1
NWAO pmax pmax
comp=Z,27nm,0.9s
NWAO Narrogin (SRO) 65.56 130 P P 00 29 12.2 +0.1
NWAO IAmb IAmb 00 29 19.6
comp=Z,27nm,0.8s
KIC Kosan Boka 65.58 274 eP P 00 29 13.5 +0.9
comp=Z,22nm,1.0s
DBIC Dimbokro 65.67 275 P P 00 29 14.1 +0.9
comp=Z,6.6nm,0.8s,baz=61,slow=7.3,SNR=7.0
DBIC LR LR 00 58 53.6
comp=Z,149nm,18.1s,baz=72,slow=37
DBIC Dimbokro 65.67 275 P P 00 29 13.1 -0.1
DBIC pmax pmax
comp=Z,18nm,1.0s
DBIC Dimbokro 65.67 275 P P 00 29 13.1 -0.1
DBIC IAmb IAmb 00 29 21.5
comp=Z,18nm,0.9s
NRIK Noril'sk 65.77 10 P P 00 29 12.5 -0.4
comp=Z,3.2nm,0.7s,baz=204,slow=7.7,SNR=9.5
NRIK Noril'sk 65.77 10 ceP P 00 29 11.9 -0.9
NRIK pmax pmax
comp=Z,8.0nm,1.2s
TIC Toumodi 65.83 275 eP P 00 29 15.2 +0.9
LIC Lamto 65.87 274 eP P 00 29 14.3 -0.2
comp=Z,32nm,0.8s
BOD Bodaibo 65.98 28 eP P 00 29 13.6 -0.8
BOD pmax pmax
comp=Z,16nm,1.9s
TNTI Ternate 66.17 92 P P 00 29 15.3 -1.1
NC602 NORSAR Array S 66.20 336 P P 00 29 15.0 -0.7
NLAI Namlea 66.38 96 P P 00 29 18.6 +0.8
comp=Z,1μmcomp=Z,30nm,1.0s
KONO Kongsberg 66.42 334 ceP P 00 29 14.5 -2.7
KONO pmax pmax
comp=Z,77nm,1.7s
KONO Kongsberg 66.42 334 P P 00 29 17.0 -0.2
NB2 NORSAR Subarra 66.50 336 P P 00 29 16.5 -1.2
comp=Z,87nm,1.4s,baz=115,slow=7.4
NB2 NORSAR Subarra 66.50 336 P P 00 29 16.5 -1.2
baz=115,slow=7.4
NOA NORSAR Array B 66.50 336 P P 00 29 16.7 -1.0
comp=Z,14nm,1.1s,baz=116,slow=7.2,SNR=14
NOA LR LR 01 00 10.1
comp=Z,105nm,20.3s,baz=105,slow=38
NAO01 NORSAR Array S 66.53 336 P P 00 29 17.6 -0.2
MDT Midelt 66.62 303 P P 00 29 18.3 -0.8
comp=Z,6.6nm,0.9s,baz=126,slow=4.1,SNR=6.3
ESBB Sonseca Array 67.31 311 P P 00 29 22.9 -0.4
ESBB IAmb IAmb 00 29 24.3
comp=Z,38nm,1.5s
ESDC Sonseca Array 67.31 311 P P 00 29 22.9 -0.4
comp=Z,9.0nm,1.0s,baz=86,slow=5.0,SNR=29
ESDC Sonseca Array 67.31 311 P P 00 29 22.7 -0.7
TJN Taejon 67.40 53 ceP P 00 29 20.8 -3.1
CN2 Changchun 67.50 45 eP P 00 29 22.5 -1.9
CN2 eS S 00 38 21.3 +0.4
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,200nm,16.0s
CN2 LR LR
comp=Z,300nm,16.0s
PAB San Pablo 67.57 310 P P 00 29 24.9 -0.1
PAB pmax pmax
comp=Z,47nm,1.4s
PAB San Pablo 67.57 310 P P 00 29 24.9 -0.1
PAB IAmb IAmb 00 29 26.1
comp=Z,47nm,1.4s
KEV Kevo 67.64 348 P P 00 29 24.6 -0.1
KEV pmax pmax
comp=Z,31nm,0.9s
KEV Kevo 67.64 348 P P 00 29 24.6 -0.1
KEV IAmb IAmb 00 29 25.4
comp=Z,31nm,0.9s
ARD4 ARCESS Array S 67.78 347 P P 00 29 25.5 -0.2
ARA0 ARCESS Array S 67.79 347 P P 00 29 25.5 -0.2
ARCES ARCESS Array B 67.79 347 P P 00 29 25.6 -0.1
comp=Z,14nm,0.8s,baz=141,slow=6.2,SNR=21
ARCES LR LR 01 01 35.0
comp=Z,77nm,18.6s,baz=160,slow=38
FITZ Fitzroy Crossi 67.79 112 P P 00 29 27.3 +0.6
comp=Z,19nm,0.9s,baz=283,slow=6.6,SNR=25
FITZ Fitzroy Crossi 67.79 112 P P 00 29 27.1 +0.5
baz=68,SNR=9.1
FITZ Fitzroy Crossi 67.79 112 P P 00 29 26.5 -0.1
FITZ IAmb IAmb 00 29 35.3
comp=Z,27nm,1.0s
KS19 Wonju Array Si 67.99 52 P P 00 29 26.6 -1.0
KS19 IAmb IAmb 00 29 27.5
comp=Z,24nm,1.1s
KSRS Korea Array 68.02 52 P P 00 29 26.4 -1.3
comp=Z,17nm,1.0s,baz=259,slow=7.7,SNR=52
KSRS LR LR 00 59 59.5
comp=Z,184nm,20.6s,baz=260,slow=37
JNU Nakatsue 69.81 57 P P 00 29 39.1 0.0
comp=Z,29nm,1.0s,baz=218,slow=15,SNR=6.4
JNU Nakatsue 69.81 57 P P 00 29 38.7 -0.4
KNRA Kununurra 70.15 109 P P 00 29 40.7 -0.6
KNRA IAmb IAmb 00 30 02.0
comp=Z,34nm,1.3s
MDJ Mudanjiang 70.58 45 P P 00 29 43.0 -0.5
MDJ pP sP 00 29 47.0 +0.8
MDJ pmax pmax
comp=Z,27nm,1.4s
MDJ pmax pmax
comp=Z,240nm,4.1s
MDJ LR LR
comp=Z,140nm,10.0s
MDJ LR LR
comp=Z,390nm,10.0s
MDJ LR LR
comp=Z,510nm,15.7s
MDJ Mudanjiang 70.58 45 P P 00 29 43.0 -0.5
MDJ IAmb IAmb 00 29 45.2
comp=Z,33nm,1.2s
ESK Eskdalemuir 70.88 327 P P 00 29 44.7 -0.3
ESK pmax pmax
comp=Z,16nm,1.0s
ESK Eskdalemuir 70.88 327 P P 00 29 44.7 -0.3
ESK IAmb IAmb 00 29 45.3
comp=Z,16nm,1.0s
ZEA Zeya 71.27 35 eP P 00 29 47.6 +0.1
ZEA pmax pmax
comp=Z,10.0nm,0.7s
ZEA MLR MLR
comp=Z,200nm,21.0s
FAKI Fak Fak 71.44 95 P P 00 29 58.8 +10
FAKI Fak Fak 71.44 95 P P 00 29 49.0 -0.3
FAKI IAmb IAmb 00 29 58.4
comp=Z,25nm,0.9s
WRKA Warakurna 71.96 119 P P 00 29 52.9 +0.6
baz=72,SNR=20
DSB Dublin 72.07 324 P P 00 29 52.3 0.0
DSB IAmb IAmb 00 29 53.5
comp=Z,48nm,1.1s
USRK Ussuriysk Ar. 72.20 45 P P 00 29 52.0 -1.3
comp=Z,3.6nm,0.8s,baz=258,slow=6.2,SNR=6.7
USRK LR LR 01 03 15.4
comp=Z,299nm,18.9s,baz=238,slow=37
USRK Ussuriysk Ar. 72.20 45 P P 00 29 51.8 -1.5
USRK Ussuriysk Ar. 72.20 45 P P 00 29 51.8 -1.5
JMN Monobe 72.37 57 P P 00 29 54.3 -0.3
KLR Kul'dur 72.94 40 ceP P 00 29 55.5 -2.1
KLR pmax pmax
comp=Z,15nm,1.2s
KDU Kakadu 73.11 105 P P 00 29 59.2 0.0
baz=73
MAW Mawson 73.24 179 P P 00 29 59.5 +0.6
comp=Z,6.7nm,0.9s,baz=342,slow=8.8,SNR=8.2
MAW LR LR 00 54 21.9
comp=Z,163nm,21.3s,baz=50,slow=29
MAW Mawson 73.24 179 P P 00 29 59.9 +1.1
baz=73
MAW Mawson 73.24 179 P P 00 30 00.0 +1.1
MAW pmax pmax
comp=Z,9.0nm,1.5s
MAW Mawson 73.24 179 P P 00 29 60.0 +1.1
YAK Yakutsk 74.88 27 eP P 00 30 07.9 -0.8
YAK eS SKiKP 00 39 37.7 +4.0
YAK e 00 40 10.1
YAK pmax pmax
comp=Z,43nm,0.9s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK smax smax
comp=E,74nm,2.8s
YAK smax smax
comp=N,52nm,2.4s
MAJO Matsushiro 76.10 54 i P P 00 30 14.3 -2.0
MAJO pmax pmax
comp=Z,11nm,1.0s
MAT Matsushiro 76.10 54 P P 00 30 15.2 -1.1
MJAR Matsushiro Arr 76.10 54 P P 00 30 15.2 -1.1
comp=Z,5.3nm,0.9s,baz=267,slow=9.8,SNR=10
SYO Syowa Base 76.14 188 ⇑ iP P 00 30 15.2 -0.5
SYO Syowa Base 76.14 188 ⇓ epP pP 00 30 20.3 +2.4
GRNR Gornyy 76.16 39 ⇑ iP P 00 30 15.5 -0.8
GRNR pmax pmax
comp=Z,4.0nm,0.7s
GRNR MLR MLR
comp=E,190nm,18.0s
GRNR MLR MLR
comp=N,140nm,19.0s
GRNR MLR MLR
comp=Z,280nm,18.0s
WRA Warramunga Arr 76.22 112 P P 00 30 17.0 -0.3
comp=Z,31nm,0.9s,baz=289,slow=5.0,SNR=132
WRA Warramunga Arr 76.22 112 P P 00 30 16.9 -0.3
WRA pmax pmax
comp=Z,5.0nm,1.0s
WRA Warramunga Arr 76.22 112 P P 00 30 16.9 -0.3
WRAB Tennant Creek 76.23 112 ceP P 00 30 16.7 -0.6
WRAB pmax pmax
comp=Z,46nm,0.8s
WRAB Tennant Creek 76.23 112 P P 00 30 17.0 -0.3
WB2 Warramunga Arr 76.23 112 P P 00 30 16.8 -0.6
baz=76
WB2 Warramunga Arr 76.23 112 P P 00 30 17.0 -0.3
WB0 Warramunga Arr 76.24 112 P P 00 30 16.6 -0.7
WB0 IAmb IAmb 00 30 25.4
comp=Z,39nm,1.0s
ASAR Alice Springs 76.59 116 P P 00 30 19.0 -0.3
comp=Z,22nm,0.9s,baz=286,slow=5.6,SNR=120
ASAR Alice Springs 76.59 116 P P 00 30 18.7 -0.6
ASAR Alice Springs 76.59 116 P P 00 30 18.7 -0.6
AS31 Alice Springs 76.59 116 P P 00 30 18.7 -0.6
TIXI Tiksi 77.58 17 ceP P 00 30 22.3 -1.5
TIXI Tiksi 77.58 17 P P 00 30 22.5 -1.4
TIXI IAmb IAmb 00 30 24.0
comp=Z,30nm,1.1s
YSS Yuzh-Sakhalins 80.00 43 ⇑ iP P 00 30 36.8 -0.8
YSS e 00 30 43.6
YSS pmax pmax
comp=Z,50nm,1.1s
YSS MLR MLR
comp=Z,300nm,18.0s
YSS MLR MLR
comp=E,300nm,19.0s
YSS Yuzh-Sakhalins 80.00 43 P P 00 30 36.4 -1.2
YSS IAmb IAmb 00 30 38.2
comp=Z,68nm,1.2s
BBOO Buckleboo 80.48 125 P P 00 30 39.8 -0.8
QIS Mount Isa 81.19 112 P P 00 30 44.5 -0.2
baz=81,SNR=11
DAG Danmarks Havn 82.08 347 ⇓ iP P 00 30 47.7 -0.5
DAG pmax pmax
comp=Z,25nm,1.2s
DAG Danmarks Havn 82.08 347 ⇓ iP P 00 30 47.7 -0.5
comp=Z,33nm,1.2s
DAG Danmarks Havn 82.08 347 ⇓ iP P 00 30 47.7 -0.5
DAG IAmb IAmb 00 30 48.6
comp=Z,25nm,1.2s
DBG Daneborg 82.14 344 ⇓ iP P 00 30 48.0 -0.6
DBG IAmb IAmb 00 30 49.9
comp=Z,13nm,1.2s
NVL N'lazarevskaya 83.12 195 eP P 00 30 53.8 +0.2
NVL eS S 00 41 06.1 -7.0
NVL pmax pmax
comp=Z,19nm,1.1s
STKA Stephens Creek 84.89 123 P P 00 31 03.2 -0.3
comp=Z,11nm,0.8s,baz=296,slow=6.4,SNR=18
STKA Stephens Creek 84.89 123 P P 00 31 03.3 -0.2
baz=85,SNR=14
STKA Stephens Creek 84.89 123 P P 00 31 02.9 -0.6
STKA pmax pmax
comp=Z,4.0nm,0.9s
STKA Stephens Creek 84.89 123 P P 00 31 02.9 -0.6
MTSU Mount Surprise 85.23 109 P P 00 31 05.4 -0.1
baz=85,SNR=5.3
SEY Seymchan 85.40 27 i P P 00 31 03.8 -1.6
ARPS Mount Arapiles 85.94 127 P P 00 31 09.6 +1.0
baz=86,SNR=11
QLP Quilpie 86.33 117 P P 00 31 11.2 +0.5
baz=86,SNR=5.1
PMG Port Moresby 86.92 100 P P 00 31 14.5 +0.5
comp=Z,13nm,0.3s,baz=311,slow=7.4,SNR=5.4
PMG Port Moresby 86.92 100 ceP P 00 31 13.8 -0.2
PMG pmax pmax
comp=Z,35nm,1.3s
PMG Port Moresby 86.92 100 P P 00 31 14.0 0.0
CTA Charters Tower 87.30 110 P P 00 31 15.3 -0.4
comp=Z,10nm,0.8s,baz=278,slow=7.7,SNR=10
CTAO Charters Tower 87.30 110 P P 00 31 15.4 -0.3
CTAO pmax pmax
comp=Z,14nm,1.0s
CTAO Charters Tower 87.30 110 P P 00 31 15.4 -0.3
CTAO IAmb IAmb 00 31 17.5
comp=Z,14nm,0.9s
SUMG Summit 87.41 343 i P P 00 31 15.1 -0.5
SUMG Summit 87.41 343 P P 00 31 15.9 +0.2
SUMG IAmb IAmb 00 31 16.7
comp=Z,44nm,1.6s
SUMG Summit 87.41 343 i P P 00 31 15.1 -0.5
SUMG Summit 87.41 343 i P P 00 31 15.2 -0.5
SNAA Sanae 87.57 197 P P 00 31 16.8 +0.8
SNAA Sanae 87.57 197 ceP P 00 31 15.1 -0.9
SNAA pmax pmax
comp=Z,11nm,1.7s
SNAA Sanae 87.57 197 P P 00 31 17.1 +1.1
SNAA IAmb IAmb 00 31 25.0
comp=Z,22nm,1.7s
CMSA Cobar Meteorol 88.28 122 P P 00 31 20.4 +0.3
baz=88,SNR=9.3
VNA2 Neumayer--Watz 88.60 198 P P 00 31 21.8 +1.1
baz=63,slow=6.0
VNA1 Neumayer--Stat 88.77 198 P P 00 31 22.0 +0.4
VNA3 Neumayer Olymp 89.41 198 P P 00 31 25.2 +0.6
BILL Bilibino 90.23 21 eP P 00 31 27.6 -1.0
BILL e 00 35 02.9
BILL pmax pmax
comp=Z,16nm,1.1s
BILL Bilibino 90.23 21 P P 00 31 28.8 +0.3
BILL IAmb IAmb 00 31 29.9
comp=Z,19nm,1.1s
RMQ Roma 90.33 116 P P 00 31 31.1 +1.2
baz=90,SNR=6.2
YNG Young 90.88 124 P P 00 31 32.9 +0.6
baz=91
EUNU Eureka 92.71 355 P P 00 31 40.7 +0.7
EUNU IAmb IAmb 00 31 42.0
comp=Z,24nm,1.2s
ARMA Armidale 93.23 120 P P 00 31 44.6 +1.2
baz=93,SNR=3.8
VNDA Vanda 97.92 168 LR LR 01 10 44.4
comp=Z,169nm,19.5s,baz=278,slow=32
RIB01 Linhares ES 102.86 252 eP Pdif 00 32 26.0 -0.8
BSFB Barra de Sao F 103.27 252 eP Pdif 00 32 28.1 -0.6
DUB01 Friburgo-RJ 104.76 249 eP Pdif 00 32 36.0 +0.7
ROSB Rosrio 105.57 269 eP Pdif 00 32 38.6 -0.4
MAN01 Angra dos Reis 106.23 248 eP Pdif 00 32 40.7 -1.2
JANB Januaria 106.48 256 eP Pdif 00 32 42.5 -0.6
PLCA Paso Flores 124.69 224 PKP PKiKP 00 37 29.0 +0.3
comp=Z,1.6nm,0.9s,baz=165,slow=7.3,SNR=3.3
LC01 Cunco 126.40 225 PKPdf PKPdf 00 37 31.3 -0.4
LAO LASA Array 126.57 349 PKPdf 00 37 32.2 +0.4
SUSD Miller 126.91 342 PKPdf PKPdf 00 37 32.5 0.0
MSO Missoula 127.43 356 PKPdf PKPdf 00 37 32.9 -0.7
ETMB Extrema 127.83 262 eP PKPdf 00 37 34.7 -0.3
FVM French Village 129.09 331 PKIKP PKPdf 00 37 36.8 0.0
FVM French Village 129.09 331 PKPdf 00 37 36.8 0.0
LVC Limon Verde 129.14 246 eP PKPdf 00 37 37.4 -0.3
LPAZ La Paz 129.36 254 PKP PKPdf 00 37 37.5 -1.1
comp=Z,2.6nm,1.1s,baz=88,slow=1.7,SNR=6.0
LPAZ La Paz 129.36 254 PKIKP PKPdf 00 37 37.1 -1.5
LPAZ La Paz 129.36 254 PKPdf PKPdf 00 37 37.1 -1.5
LPAZ La Paz 129.36 254 eP PKPdf 00 37 38.7 +0.1
BCYI Bear Canyon 129.89 355 PKPdf 00 37 38.0 -0.5
GO01 Chusmiza 129.92 249 PKPdf 00 37 39.8 +0.3
PB11 IPOC Station P 130.34 249 PKPdf PKPdf 00 37 40.0 +0.2
REDW Red Top Meadow 130.55 352 PKPdf 00 37 40.1 +0.3
MGMO Mountain Grove 130.63 332 PKPdf PKPdf 00 37 38.6 -1.2
MFID Camas Ranch 130.95 357 PKPdf 00 37 40.1 -0.2
BW06 Boulder Array 130.95 351 PKPdf 00 37 39.6 -1.0
PD31 Pinedale Array 130.95 351 PKPdf PKPdf 00 37 39.4 -1.1
PDAR Pinedale Array 130.95 351 PKP PKPdf 00 37 39.7 -0.8
comp=Z,1.7nm,0.8s,baz=48,slow=2.2,SNR=11
PDAR Pinedale Array 130.95 351 PKPdf 00 37 39.3 -1.3
NVAR Mina Array Bea 136.00 359 PKP PKPdf 00 37 50.9 +0.7
comp=Z,2.3nm,0.9s,baz=348,slow=1.2,SNR=13
MNTX Cornudas Mount 140.59 342 PKPdf PKPdf 00 37 58.4 -0.1
TXAR Lajitas Array 142.18 338 PKhKP PKPpre 00 37 56.0
comp=Z,3.2nm,0.9s,baz=49,slow=2.3,SNR=21
TLIG Tlapa 149.40 320 PKPbc 00 38 19.0 +0.5

IDC ***27*** *00:24:16.4±0.9, 13.°33N×44.°75W, h0km, mb4.0/9, mb1 4.3/10, mb1mx3.8/55, mbtmp4.0/10, ML4.1/1, MS3.6/11, Ms1 3.6/11, ms1mx3.4/32, Error ellipse: s-maj=25.2km s-min=21.7km az=132.0*

NEIC ***27*** *00:24:17.9±1.2, 13.°15N±0.°09×44.°8W±0.°1, h10km±1km, mb4.8/37, Error ellipse: s-maj=21.3km s-min=12.0km az=304.0*

ISC 27 00:24:18.0±0.6, 13.°2N±0.°1×44.°78W±0.°10, h10km, n60, σ0=86/53, mb4.7/24, MS3.5/10, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**11.17**	**225**	Pn	**Pn**		**00 26 58.2**	**+0.2**
	1.4nm,0.3s,baz=39,slow=13,SNR=33							
MDP				Sn	Sn		00 28 52.6	-10
	0.3nm,0.3s,baz=39,slow=8.0,SNR=1.9							
MDP				LR	LR		00 30 35.5	
	comp=Z,178nm,19.5s,baz=81,slow=34							
H05S1	**Guadeloupe/Mar**	**15.64**	**276**	T	T		00 43 56.4	
	SNR=13							
RCBR	**Riachuelo**	**20.86**	**154**	LR	LR		00 34 58.0	
	comp=Z,232nm,21.8s,baz=335,slow=31							
SJG	**San Juan**	**21.14**	**286**	LR	LR		00 35 52.0	
	comp=Z,139nm,20.9s,baz=90,slow=33							
SDV	**Santo Domingo**	**25.72**	**263**	P	**P**		**00 29 49.3**	**+0.2**
	2.3nm,0.5s,baz=12,slow=21,SNR=3.6							
SDV				LR	LR		00 39 11.4	
	comp=Z,70nm,19.2s,baz=86,slow=35							
SDV	**Santo Domingo**	**25.72**	**263**	P	**P**		**00 29 48.4**	**-0.7**
MBQ	**M'Bour**	**27.05**	**84**	P	**P**		**00 30 00.3**	**-0.5**
SAML	**Samuel**	**28.60**	**221**	P	**P**		**00 30 14.2**	**-0.4**
BDFB	**Brasilia**	**28.83**	**186**	P	**P**		**00 30 18.3**	**+1.5**
	4.0nm,0.8s,baz=354,slow=9.7,SNR=4.1							
ROSC	**El Rosal**	**30.30**	**257**	LR	LR		00 43 51.4	
	comp=Z,93nm,18.2s,baz=118,slow=39							
OTAV	**Otavalo**	**35.76**	**252**	P	**P**		**00 31 17.0**	**-1.0**
LPAZ	**La Paz**	**37.30**	**219**	P	**P**		**00 31 31.9**	**+0.7**
	2.1nm,0.8s,baz=19,slow=7.2,SNR=7.9							
LPAZ				LR	LR		00 46 37.0	
	comp=Z,100nm,21.4s,baz=36,slow=36							
LPAZ	**La Paz**	**37.30**	**219**	P	**P**		**00 31 30.2**	**-1.1**
KOWA	**Kowa**	**39.57**	**83**	P	**P**		**00 31 49.5**	**-0.3**
PLAL	**Pickwick Lake**	**44.64**	**307**	P	**P**		**00 32 31.2**	**+0.2**
PLAL				IAmb	IAmb		00 32 34.0	
	comp=Z,14nm,1.1s							
WVT	**Waverly**	**44.82**	**308**	P	**P**		**00 32 32.5**	**+0.1**
WVT				IAmb	IAmb		00 32 35.0	
	comp=Z,16nm,1.1s							
TORD	**Torodi Ar. Bea**	**45.20**	**85**	P	**P**		**00 32 36.3**	**+0.6**
	comp=Z,3.0nm,1.2s,baz=298,slow=3.7,SNR=4.6							
TORD				LR	LR		00 50 42.3	
	comp=Z,208nm,18.9s,baz=255,slow=35							
TORD	**Torodi Ar. Bea**	**45.20**	**85**	P	**P**		**00 32 36.0**	**+0.3**
OXF	**Oxford**	**45.55**	**306**	P	**P**		**00 32 39.4**	**+1.2**
Q44A	**Meyer Farm, Va**	**46.66**	**312**	P	**P**		**00 32 47.4**	**+0.5**
LCAR	**Lake Charles**	**47.36**	**307**	P	**P**		**00 32 52.7**	**+0.3**
LCAR				IAmb	IAmb		00 33 00.5	
	comp=Z,7.2nm,1.5s							
U40A	**Yellville**	**48.76**	**307**	P	**P**		**00 33 02.8**	**-0.5**
U40A				IAmb	IAmb		00 33 05.2	
	comp=Z,14nm,1.1s							
P40A	**Paris**	**49.09**	**311**	P	**P**		**00 33 06.2**	**+0.5**
TUL1	**Leonard**	**50.96**	**306**	P	**P**		**00 33 19.7**	**-0.3**
TUL1				IAmb	IAmb		00 33 22.0	
	comp=Z,22nm,1.2s							
CBKS	**Cedar Bluff**	**54.66**	**308**	P	**P**		**00 33 47.4**	**0.0**
ULM	**Lac du Bonnet**	**55.49**	**323**	LR	LR		00 53 52.9	
	comp=Z,75nm,22.0s,baz=96,slow=32							
BI03	**Tigo**	**56.44**	**207**	P	**P**		**00 33 59.8**	**-0.2**
TXAR	**Lajitas Array**	**56.63**	**296**	P	**P**		**00 34 02.0**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=115,slow=8.4,SNR=5.6							
TXAR				LR	LR		00 56 44.9	
	comp=Z,47nm,21.9s,baz=0.0,slow=34							
PLCA	**Paso Flores**	**58.73**	**203**	P	**P**		**00 34 15.7**	**-0.5**
SDCO	**Great Sand Dun**	**58.95**	**306**	P	**P**		**00 34 18.1**	**-0.1**
GERES	**GERESS Array B**	**59.56**	**41**	LR	LR		00 57 43.8	
	comp=Z,33nm,19.8s,baz=136,slow=34							
CLL	**Collm**	**59.84**	**38**	*i* (P)	**P**		**00 34 26.8**	**+3.1**
	comp=Z,54nm,2.5s							
RDMU	**Red Mountain**	**62.42**	**309**	P	**P**		**00 34 41.6**	**-0.1**
PD31	**Pinedale Array**	**62.67**	**311**		**P**		**00 34 43.0**	**-0.4**
PD31				IAmb	IAmb		00 34 46.0	
	comp=Z,5.3nm,1.2s							
PDAR	**Pinedale Array**	**62.67**	**311**	P	**P**		**00 34 43.8**	**+0.4**
	comp=Z,4.1nm,1.1s,baz=99,slow=7.7,SNR=9.2							
PDAR	**Pinedale Array**	**62.67**	**311**	P	**P**		**00 34 42.8**	**-0.6**
FLWY	**Flagg Ranch**	**63.66**	**313**	P	**P**		**00 34 50.4**	**+0.5**
FLWY				IAmb	IAmb		00 34 57.4	
	comp=Z,12nm,1.1s							
TCUT	**Toone Canyon**	**63.86**	**309**	P	**P**		**00 34 52.1**	**+0.8**
YMR	**Madison River**	**63.93**	**313**	P	**P**		**00 34 52.3**	**+0.7**
HWUT	**Hardware Ranch**	**64.03**	**310**		**P**		**00 34 52.6**	**+0.3**
HWUT				IAmb	IAmb		00 34 54.5	
	comp=Z,10nm,1.1s							
YHB	**Horse Butte**	**64.10**	**313**	P	**P**		**00 34 53.2**	**+0.5**

HRY	**Holter Researc**	**64.79 316**	P	**P**	**00 34 57.1**	**0.0**
BGU	**Big Grassy Mou**	**65.07 309**	P	**P**	**00 34 59.1**	**0.0**
CCUT	**Cedar City**	**65.14 305**		**P**	**00 35 00.3**	**+0.5**
DLMT	**Dillon**	**65.16 314**		**P**	**00 34 59.7**	**+0.1**
DLMT			IAmb	IAmb	00 35 03.2	
	comp=Z,13nm,1.4s					
HLID	**Hailey**	**66.29 312**		**P**	**00 35 07.2**	**+0.2**
JTMT	**Jette**	**66.58 316**		**P**	**00 35 08.7**	**0.0**
JTMT			IAmb	IAmb	00 35 11.2	
	comp=Z,14nm,1.3s					
ELK	**Elko**	**66.73 309**		**P**	**00 35 09.9**	**-0.1**
ELK			IAmb	IAmb	00 35 12.8	
	comp=Z,5.9nm,1.1s					
NEW	**Newport**	**68.52 317**		**P**	**00 35 21.0**	**+0.1**
NEW			IAmb	IAmb	00 35 23.0	
	comp=Z,10nm,1.1s					
NVAR	**Mina Array Bea**	**69.06 306**	P	**P**	**00 35 23.3**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=83,slow=7.7,SNR=4.1					
E09A	**Wood Farm, Sta**	**69.11 315**	P	**P**	**00 35 25.9**	**+1.5**
E09A			IAmb	IAmb	00 35 26.6	
	comp=Z,13nm,1.3s					
AKASG	**Malin Array Be**	**69.78 41**	P	**P**	**00 35 25.9**	**-2.6**
	comp=Z,0.2nm,0.4s,baz=268,slow=4.5,SNR=1.7					
K05A	**Summer Lake**	**71.00 311**		**P**	**00 35 37.4**	**+1.0**
BOSA	**Boshof**	**79.38 123**	LR	LR	01 03 23.7	
	comp=Z,136nm,19.6s,baz=308,slow=30					
GEVA	**Gevas**	**80.28 53**	P	**P**	**00 36 28.3**	**-1.4**
GEVA			IAmb	IAmb	00 36 30.1	
	comp=Z,11nm,1.1s					
BCAR	**Beaver Creek A**	**81.50 333**	P	**P**	**00 36 35.1**	**-0.4**
BMAR	**Burnt Mountain**	**81.65 337**	P	**P**	**00 36 37.1**	**+0.9**
IL31		**83.26 335**	P	**P**	**00 36 44.9**	**+0.4**
IL31			IAmb	IAmb	00 36 54.9	
	comp=Z,7.6nm,1.3s					
ILAR	**Eielson Array**	**83.26 335**	P	**P**	**00 36 44.4**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=73,slow=5.1,SNR=9.8					
ILAR	**Eielson Array**	**83.26 335**	P	**P**	**00 36 44.1**	**-0.6**

*WEL **27** 00:32:59.7±0.9,36°S±5°×17°9E±°, h33km, M4.4/22, ML4.7/22, MLv4.4/22, Error ellipse: s-maj=0.0km s-min=0.0km az=75.5*
*IDC **27** 00:33:00.5±2.2,35°92S×178°17E, h0km, mb4.2/3, mb1 4.4/4, mb1mx4.0/36, mbtmp4.2/4, ML4.0/1, MS3.7/10, Ms1 3.7/10, ms1mx3.5/28, Error ellipse: s-maj=49.0km s-min=26.9km az=77.0*
ISC 27 00:33:02.6±1.1, 36°07S±0°05×178°10E±0°06, h10km, n76, σ1s99/79, mb4.2/3, MS3.9/6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.50**	**174**	P	**Pn**	**00 33 27.3**	**-2.2**
MXZ				S	Sn	**00 33 48.1**	**-1.0**
WIZ	**White Island**	**1.63**	**207**	P	**Pg**	**00 33 35.5**	**+1.7**
HAZ	**Te Kaha**	**1.70**	**189**	P	**Pn**	**00 33 31.7**	**-0.6**
HAZ				S	**Sg**	**00 33 58.2**	**+0.9**
WMGZ	**Waiomatatini S**	**1.76**	**172**	P	**Pn**	**00 33 32.6**	**-0.5**
WMGZ				S	**Sg**	**00 34 02.1**	**+2.9**
PKGZ	**Pakihiroa**	**1.81**	**181**	P	**Pn**	**00 33 33.1**	**-0.8**
RUGZ	**Raukumara Rang**	**1.92**	**190**	P	**Pn**	**00 33 35.7**	**+0.2**
RUGZ				S	**Sg**	**00 34 02.9**	**-1.4**
WHRZ	**Whale Island**	**2.00**	**207**	P	**Pg**	**00 33 41.6**	**+0.7**
WHRZ				S	**Sg**	**00 34 09.9**	**+3.1**
PUZ	**Puketiti**	**2.00**	**177**	P	**Pb**	**00 33 38.7**	**-0.4**
PUZ				S	**Sg**	**00 34 06.6**	**-0.3**
KUZ	**Kuaotunu**	**2.04**	**250**	P	**Pn**	**00 33 37.1**	**+0.2**
TWGZ	**Tauwhareparae**	**2.10**	**183**	P	**Pb**	**00 33 40.4**	**-0.5**
TWGZ				S	**Sg**	**00 34 13.4**	**+3.1**
GRZ	**Great Barrier**	**2.15**	**264**	P	**Pb**	**00 33 39.6**	**-1.9**
OPRZ	**Ohinepanea**	**2.16**	**215**	P	**Pg**	**00 33 43.6**	**-0.4**
OPRZ				S	Sg	00 34 20.4	+8.4
MARZ	**Manawahe**	**2.23**	**210**	P	**Pg**	**00 33 44.0**	**-1.3**
MWZ	**Matawai**	**2.31**	**191**	P	**Pn**	**00 33 41.1**	**+0.5**
URZ	**Urewera**	**2.32**	**200**	Pn	**Pn**	**00 33 41.3**	**+0.5**
	34nm,0.3s,baz=270,slow=3.6,SNR=92						
URZ				Sn	**Sb**	**00 34 12.5**	**-0.8**
	71nm,0.3s,baz=272,slow=23,SNR=31						
URZ				LR	LR	00 34 55.0	
	comp=Z,1μm,20.4s,baz=36,slow=46						
URZ	**Urewera**	**2.32**	**200**	P	**Pn**	**00 33 41.4**	**+0.5**
URZ				S	**Sb**	**00 34 11.9**	**-1.4**
TKGZ	**Te Karaka**	**2.37**	**185**	P	**Pb**	**00 33 44.1**	**-1.3**
TKGZ				S	**Sg**	**00 34 19.1**	**+0.3**
CNGZ	**Carnagh Statio**	**2.41**	**178**	P	**Pb**	**00 33 43.8**	**-2.2**
RAGZ	**Rawiri**	**2.48**	**193**	P	**Pn**	**00 33 44.2**	**+1.1**
MKAZ	**Moumakai**	**2.58**	**246**	P	**Pb**	**00 33 46.1**	**-2.8**
MUGZ	**Murupara**	**2.63**	**203**	P	**Pn**	**00 33 46.3**	**+1.2**
RIGZ	**Rimuhau**	**2.64**	**186**	P	**Pb**	**00 33 47.5**	**-2.5**
TOZ	**Tahuroa Road**	**2.66**	**231**	P	**Pb**	**00 33 47.5**	**-2.8**
RTZ	**Ruatahuna**	**2.69**	**199**	P	**Pb**	**00 33 47.9**	**-3.0**
SNGZ	**Shannon Statio**	**2.77**	**192**	P	**Pb**	**00 33 49.9**	**-2.4**
MTHZ	**Maungataniwha**	**2.95**	**199**	P	**Pb**	**00 33 53.7**	**-1.6**
RAHZ	**Arahi**	**2.95**	**196**	P	**Pb**	**00 33 53.0**	**-2.3**
KNZ	**Kokohu**	**2.96**	**186**	P	**Pn**	**00 33 50.8**	**+1.1**
KNZ				S	**Sb**	**00 34 30.0**	**-1.8**
WCZ	**Waipu Caves**	**3.05**	**271**	P	**Pn**	**00 33 51.5**	**+0.7**
MRHZ	**Matea Rd**	**3.07**	**205**	P	**Pb**	**00 33 54.6**	**-2.6**
WHHZ	**Waihua**	**3.08**	**193**	P	**Pb**	**00 33 53.9**	**-3.5**
MHNZ	**Mahia Peninsul**	**3.08**	**183**	P	**Pn**	**00 33 52.3**	**+1.0**
NMHZ	**Naumai**	**3.19**	**198**	P	**Pn**	**00 33 56.5**	**-2.9**
ARHZ	**Aropaoanui**	**3.31**	**195**	P	**Pn**	**00 33 56.7**	**+2.3**
ARHZ				S	**Sb**	**00 34 41.3**	**-0.3**
BKZ	**Black Stump Fm**	**3.34**	**202**	P	**Pn**	**00 33 57.7**	**+2.7**
RATZ	**Rangitukua**	**3.35**	**213**	P	**Pb**	**00 34 01.2**	**-0.9**
MCHZ	**McNeill Hill**	**3.55**	**198**	P	**Pn**	**00 33 59.3**	**+1.6**
HIZ	**Hauiti**	**3.56**	**226**	P	**Pn**	**00 34 00.1**	**+2.3**
KRVZ	**Karewarewa**	**3.60**	**212**	P	**Pb**	**00 34 03.5**	**-2.9**
WTVZ	**West Tongariro**	**3.64**	**213**	P	**Pb**	**00 34 04.0**	**-3.0**
OTVZ	**Oturere**	**3.64**	**211**	P	**Pb**	**00 34 03.4**	**-3.8**
TWVZ	**Taurewa**	**3.67**	**214**	P	**Pb**	**00 34 04.9**	**-2.7**
CKHZ	**Cape Kidnapper**	**3.67**	**192**	P	**Pn**	**00 34 00.3**	**+0.9**
NGZ	**Ngauruhoe**	**3.68**	**212**	P	**Pb**	**00 34 03.4**	**-4.4**
OUZ	**Omahuta**	**3.77**	**282**	P	**Pn**	**00 34 00.2**	**-0.5**
FWVZ	**Far West T-bar**	**3.77**	**212**	P	**Pb**	**00 34 05.5**	**-3.8**
BHHZ	**Black Hill Sta**	**3.78**	**205**	P	**Pn**	**00 34 03.5**	**+2.6**
WNVZ	**Wahianoa**	**3.81**	**211**	P	Pb	00 34 05.0	-4.9
MOVZ	**Moawhango**	**3.82**	**209**	P	**Pn**	**00 34 03.4**	**+2.0**
KRHZ	**Kereru**	**3.82**	**201**	P	**Pn**	**00 34 03.0**	**+1.5**
KAHZ	**Kahuranaki**	**3.84**	**194**	P	**Pn**	**00 34 03.2**	**+1.4**
VRZ	**Vera Road**	**4.04**	**220**	P	**Pb**	**00 34 12.3**	**-1.5**
PXZ	**Pawanui**	**4.07**	**194**	P	**Pn**	**00 34 03.1**	**-1.8**
TSZ	**Takapari Road**	**4.33**	**202**	P	**Pn**	**00 34 09.9**	**+1.5**
WAZ	**Wanganui**	**4.43**	**213**	P	**Pb**	**00 34 16.0**	**-4.4**
KHEZ	**Kahui Hut**	**4.57**	**224**	P	**Pb**	**00 34 22.9**	**+0.1**
BFZ	**Birch Farm**	**4.83**	**197**	P	**Pn**	**00 34 15.5**	**+0.2**
MRZ	**Mangatainoka R**	**4.99**	**203**	P	**Pn**	**00 34 18.4**	**+0.8**
CAW	**Cannon Point**	**5.56**	**204**	P	**Pn**	**00 34 28.4**	**+3.0**
TRWZ	**Traveller**	**5.64**	**199**	P	Pn	00 34 32.3	+5.8
PAWZ	**Paruwai Farm**	**5.70**	**201**	P	**Pn**	**00 34 30.0**	**+2.7**
RAO	**Raoul Island**	**7.58**	**27**	LR	LR	00 36 58.2	
	comp=Z,279nm,21.2s,baz=142,slow=32						
RPZ	**Rata Peaks**	**9.36**	**213**	LR	LR	00 39 23.5	
	comp=Z,557nm,20.0s,baz=38,slow=40						
DZM	**Mont Dzumac**	**17.25**	**321**	LR	LR	00 42 09.7	
	comp=Z,578nm,20.8s,baz=114,slow=32						
PMG	**Port Moresby**	**38.66**	**306**	LR	LR	00 54 42.8	
	comp=Z,180nm,18.6s,baz=150,slow=34						
ASAR	**Alice Springs**	**39.96**	**276**	P	**P**	**00 40 37.5**	**+0.2**
	4.7nm,0.8s,baz=117,slow=7.9,SNR=17						
ASAR				LR	LR	00 56 44.3	
	comp=Z,192nm,19.0s,baz=130,slow=36						
WRA	**Warramunga Arr**	**41.48**	**281**	P	**P**	**00 40 49.3**	**-0.6**
	2.3nm,0.8s,baz=122,slow=7.6,SNR=10						
WRA				LR	LR	00 57 55.7	
	comp=Z,260nm,18.1s,baz=135,slow=36						
QSPA	**South Pole Qui**	**54.05**	**180**	P	**P**	**00 42 28.8**	**+1.8**
	1.5nm,0.5s,baz=40,slow=6.4,SNR=1.9						
MAW	**Mawson**	**65.85**	**202**	LR	LR	01 11 30.5	
	comp=Z,75nm,19.5s,baz=54,slow=35						
SNAA	**Sanae**	**72.56**	**180**	P	**P**	**00 44 29.2**	**-0.2**
VNA3	**Neumayer Olymp**	**72.84**	**177**	P	**P**	**00 44 31.0**	**-0.1**
VNA2	**Neumayer--Watz**	**73.23**	**178**	P	**P**	**00 44 32.2**	**-1.1**
	baz=169,slow=4.7						
VNA1	**Neumayer--Stat**	**73.48**	**178**	P	**P**	**00 44 35.5**	**+0.7**
KSRS	**Korea Array**	**86.68**	**322**	LR	LR	01 18 01.7	
	comp=Z,14nm,21.7s,baz=190,slow=31						
CMAR	**Chiang Mai Arr**	**92.28**	**291**	LR	LR	01 30 10.9	
	comp=Z,14nm,21.1s,baz=290,slow=37						
FINES	**FINESS Array B**	**149.08**	**334**	PKPbc	**PKPdf**	**00 52 47.8**	**+1.8**
	1.1nm,0.7s,baz=117,slow=4.8,SNR=1.5						

*IDC **27** 00:33:40.1±1.2,64°67N×17°55W, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/62, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=32.9km s-min=13.0km az=11.0*
ISC 27 00:33:41.3±1.0, 64°6N±0°2×17°7W±0°1, h10km, n6, σ0s72/6, mb3.5/4, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.56**	**276**	Pg	**Pn**	**00 34 08.5**	**-0.5**
	4.8nm,0.3s,baz=45,slow=20,SNR=14						
BORG				Lg	Lg	00 34 32.7	
	3.6nm,0.3s,baz=20,slow=23,SNR=6.0						
EKA	**Eskdalemuir Ar**	**11.79**	**135**	Pn	**Pn**	**00 36 28.8**	**-0.5**
	baz=325,slow=13,SNR=5.1						
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**	**00 39 17.2**	**+0.8**
	0.7nm,0.9s,baz=352,slow=8.3,SNR=4.1						
KURBB	**Kurchatov Arra**	**48.25**	**58**	P	**P**	**00 42 21.7**	**-0.1**
	0.4nm,0.3s,baz=325,slow=7.6,SNR=7.7						
PDAR	**Pinedale Array**	**53.11**	**293**	P	**P**	**00 42 59.4**	**+0.5**
	0.6nm,0.8s,baz=58,slow=8.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P	**P**	**00 42 59.2**	**+0.2**
	0.4nm,0.8s,baz=357,slow=8.4,SNR=2.0						

WEL 27 00:34:10.7, 42°S±1°×17°4E±°, h16km±2km, M3.4/15, ML3.7/15, MLv3.4/15, Error ellipse: s-maj=0.0km s-min=0.0km az=150.3, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.07**	**151**	P	Pg	00 34 14.2	+0.3
CMWZ				S	Sg	00 34 17.3	+1.4
BSWZ	**Blackbirch Sta**	**0.22**	**263**	P	Pb	00 34 16.2	-0.1
BSWZ				S	Sb	00 34 20.2	+0.1
TUWZ	**Tuamarina**	**0.31**	**327**	P	Pb	00 34 18.0	+0.2
TUWZ				S	Sb	00 34 23.1	+0.6
TCW	**Tory Channel**	**0.48**	**10**	P	Pb	00 34 20.9	+0.1
TCW				S	Sb	00 34 28.1	+0.5
BHW	**Baring Head**	**0.60**	**62**	P	Pb	00 34 23.3	+0.6
NNZ	**Nelson**	**0.76**	**308**	P	Pb	00 34 25.8	+0.4
NNZ				S	Sb	00 34 36.2	+0.7
PLWZ	**Palliser**	**0.82**	**82**	P	Pn	00 34 27.5	-0.1
MSWZ	**Moikau Station**	**0.85**	**72**	P	Pn	00 34 28.1	+0.1
KHZ	**Kahutara**	**0.87**	**213**	P	Pn	00 34 28.1	0.0
DUWZ	**D'Urville Isla**	**0.90**	**348**	P	Pg	00 34 28.2	0.0
DUWZ				S	Sn	00 34 41.7	+0.3
THZ	**Tophouse**	**0.95**	**265**	P	Pg	00 34 29.0	0.0
PAWZ	**Paruwai Farm**	**0.99**	**73**	P	Pb	00 34 29.3	-0.2
KIW	**Kapiti Island**	**1.00**	**34**	P	Pg	00 34 29.9	0.0
KIW	**Kapiti Island**	**1.00**	**34**	P	Pn	00 34 30.0	0.0
MTW	**Mount Morrison**	**1.13**	**63**	P	Pb	00 34 31.9	+0.1
MTW	**Mount Morrison**	**1.13**	**63**	P	Pb	00 34 31.9	0.0
OGWZ	**Otaki Gorge**	**1.15**	**41**	P	Pg	00 34 32.7	-0.2
HOWZ	**Holdsworth Sta**	**1.28**	**53**	P	Pb	00 34 34.6	+0.1
TMWZ	**Te Maipa**	**1.42**	**66**	P	Pn	00 34 35.8	0.0
MRZ	**Mangatainoka R**	**1.48**	**47**	P	Pn	00 34 37.1	+0.5
QRZ	**Quartz Range**	**1.51**	**304**	P	Pb	00 34 38.7	+0.4
GVZ	**Greta Valley S**	**1.53**	**213**	P	Pb	00 34 37.5	+0.1
OHWZ	**Ohakea**	**1.72**	**31**	P	Pb	00 34 42.1	+0.3
CPWZ	**Castlepoint**	**1.72**	**64**	P	Pg	00 34 46.5	+2.9
DSZ	**Denniston Nort**	**1.77**	**267**	P	Pb	00 34 42.6	-0.2
POWZ	**Post Office Ro**	**1.77**	**44**	P	Pn	00 34 41.3	+0.7
LTZ	**Lake Taylor**	**1.78**	**232**	P	Pn	00 34 41.2	+0.3
WAZ	**Wanganui**	**2.03**	**18**	P	Pb	00 34 48.3	+1.2
DVHZ	**Dannevirke**	**2.05**	**48**	P	Pg	00 34 49.3	-0.7
OKCZ	**Okains Bay**	**2.19**	**202**	P	Pn	00 34 44.5	-2.0
OXZ	**Oxford**	**2.27**	**223**	P	Pn	00 34 46.4	-1.1
INZ	**Inchbonnie**	**2.27**	**242**	P	Pn	00 34 48.4	+0.9
MQZ	**McQueen's Vall**	**2.31**	**208**	P	Pn	00 34 46.1	-1.9
PREZ	**Palmer Road**	**2.34**	**360**	P	Pb	00 34 52.2	-0.3
PNHZ	**Pukenui**	**2.35**	**42**	P	Pg	00 34 54.6	-1.1
AKCZ	**Akaroa Harbour**	**2.37**	**203**	P	Pn	00 34 47.5	-1.4
VRZ	**Vera Road**	**2.60**	**10**	P	Pb	00 34 56.0	-0.8
TMVZ	**Te Maari**	**2.82**	**25**	P	Pb	00 35 01.9	+1.1
WACZ	**Wakanui South**	**2.83**	**216**	P	Pn	00 34 54.1	-1.0
WVZ	**Waitaha Valley**	**2.90**	**240**	P	Pb	00 35 00.8	-1.1
RPZ	**Rata Peaks**	**3.06**	**228**	P	Pn	00 34 57.9	-0.5
RATZ	**Rangitukua**	**3.07**	**24**	P	Pg	00 35 07.4	-2.1
WATZ	**Wairara**	**3.21**	**22**	P	Pb	00 35 09.5	+2.2
HIZ	**Hauiti**	**3.21**	**10**	P	Pb	00 35 05.1	-2.3
GCSZ	**Gaunt Creek Bo**	**3.27**	**239**	P	Pb	00 35 06.7	-1.6
TLZ	**Tolley Road**	**3.51**	**18**	P	Pb	00 35 10.4	-2.1
FOZ	**Fox Glacier**	**3.70**	**239**	P	Pn	00 35 10.9	+3.7
ODZ	**Otahua Downs**	**4.23**	**216**	P	Pn	00 35 12.9	-1.4
JCZ	**Jackson Bay**	**4.62**	**237**	P	Pn	00 35 23.3	+3.5

*MOS **27** 00:35:12.7±1.2,64°66N×17°51W,h13km, mb4.7/23, Error ellipse: s-maj=14.9km s-min=9.5km az=104.7*
*IDC **27** 00:35:12.8±0.6,64°64N×17°67W, h0km, mb3.9/18, mb1 4.1/21, mb1mx3.9/63, mbtmp3.9/21, ML2.7/2, MS3.1/3, Ms1 3.1/3, ms1mx2.8/45, Error ellipse: s-maj=18.1km s-min=9.2km az=9.0*
*REY **27** 00:35:12.0,64°66N×17°51W, h6km*
*NEIC **27** 00:35:13.8±1.1,64°59N±0°09×17°6W±0°1, h8km±4km, mb4.5/37, Error ellipse: s-maj=13.0km s-min=8.6km az=192.0*
*BGR **27** 00:35:14.6±0.0,65°09N×17°60W, h10km, mb4.8, Ms3.2*
ISC 27 00:35:13.4±0.3, 64°63N±0°03×17°59W±0°02, h10km, n213, σ1s81/202, mb4.3/67, 1C-1D, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.09**	**304**	P	**Pg**	**00 35 14.4**	**-1.5**
	baz=278						
IDYN	**Dyngjuhals**	**0.19**	**30**	P	Pg	00 35 15.2	-2.4
	baz=24						
IDJK	**Dyngjujokull**	**0.20**	**128**	P	**Pg**	**00 35 16.0**	**-1.6**
	baz=143						
IGRF	**Grimsfjall**	**0.26**	**147**	P	**Pg**	**00 35 17.2**	**-1.6**
	baz=158						
IURH	**Urdarhals**	**0.27**	**44**	P	Pg	00 35 16.5	-2.5
	baz=43						
IHUS	**Husbondi**	**0.33**	**185**	P	**Pg**	**00 35 19.0**	**-1.1**
	baz=190						
ISKR	**Skrokkalda**	**0.35**	**259**	P	**Pg**	**00 35 19.3**	**-1.1**
	baz=256						
IVOT	**Vottur**	**0.40**	**153**	P	**Pg**	**00 35 19.6**	**-1.7**
	baz=160						
IJOK	**Jokulheimar**	**0.42**	**222**	P	**Pb**	**00 35 20.4**	**-2.5**
	baz=222						
IJOK				S	**Sb**	**00 35 26.9**	**-2.4**
	baz=222						
IKRE	**Kreppuhraun**	**0.54**	**72**	P	Pg	00 35 20.9	-3.1
	baz=75						
IIEY	**Innrieyrar**	**0.58**	**204**	P	**Pb**	**00 35 23.3**	**-2.4**
	baz=206						
IIEY				S	**Sb**	**00 35 31.9**	**-2.1**
	baz=206						
IASK	**Askja**	**0.59**	**43**	P	Pg	00 35 21.6	-3.3
	baz=42						
IMKO	**Mokollar**	**0.64**	**56**	P	Pg	00 35 22.7	-3.2
	baz=57						
IMKO				S	**Sg**	**00 35 31.0**	**-3.3**
	baz=57						
IKSK	**Karasker**	**0.67**	**133**	P	**Pg**	**00 35 23.6**	**-2.8**
	baz=138						
IKAL	**Kalfafell**	**0.68**	**184**	P	**Pg**	**00 35 24.6**	**-1.9**
	baz=186						
IVAT	**Vatnsfell**	**0.73**	**233**	P	**Pb**	**00 35 25.8**	**-2.3**
	baz=233						
ISVA	**Svartarkot**	**0.73**	**11**	P	Pg	00 35 24.2	-3.3
	baz=8.8						
ISVA				S	**Sg**	**00 35 34.0**	**-3.1**
	baz=8.8						
IFAG	**Fagurholsmyri**	**0.86**	**151**	S	**Sg**	**00 35 38.3**	**-2.8**
	baz=154						
IFAG				P	**Pg**	**00 35 27.3**	**-2.6**
	baz=154						
IHVE	**Hveravellir**	**0.88**	**287**	P	**Pg**	**00 35 27.6**	**-2.8**
	baz=284						
IHVE				S	**Sg**	**00 35 40.1**	**-1.8**
	baz=284						
IADA	**Aoalbol**	**0.95**	**64**	P	Pg	00 35 27.5	-4.2
	baz=66						
IADA				S	**Sg**	**00 35 40.0**	**-4.0**
	baz=66						
ISNB	**Snabyli**	**1.00**	**208**	P	**Pg**	**00 35 30.5**	**-2.2**
	baz=208						
IMEL	**Melhnausar**	**1.03**	**22**	P	Pb	00 35 29.0	-4.3
	baz=21						
IREN	**Reynihlio**	**1.07**	**15**	P	Pb	00 35 29.8	-4.2
	baz=14						
IREN				S	**Sb**	**00 35 43.1**	**-4.8**
	baz=14						
IFED	**Fedgar**	**1.10**	**238**	P	**Pg**	**00 35 31.9**	**-2.6**
	baz=237						
IRJU	**Rjupnafell**	**1.12**	**206**	P	**Pg**	**00 35 32.4**	**-2.5**
	baz=207						
IKVO	**Krokottuvotn**	**1.13**	**15**	P	Pn	00 35 30.8	-4.6
	baz=14						
IKVO				S	**Sb**	**00 35 45.5**	**-4.4**
	baz=14						
IMJO	**Mjoaskard**	**1.14**	**234**	P	**Pg**	**00 35 33.1**	**-2.3**
	baz=233						
IGYG	**Gygjarholskot**	**1.19**	**254**	P	**Pg**	**00 35 33.2**	**-3.0**
	baz=253						
IGRS	**Grimsstaoir**	**1.19**	**31**	P	Pn	00 35 31.7	-4.4
	baz=30						
IHAU	**Haukadalur**	**1.23**	**239**	P	**Pb**	**00 35 34.0**	**-2.7**
	baz=238						
IHVO	**Lagu-Hvolar**	**1.23**	**207**	P	**Pb**	**00 35 34.5**	**-2.3**
	baz=208						
IGHA	**Grjothals**	**1.28**	**17**	P	Pn	00 35 33.1	-4.3
	baz=16						
IGRA	**Granastaoir**	**1.30**	**0**	P	Pn	00 35 33.5	-4.1
	baz=359						
IGRA				S	**Sn**	**00 35 50.6**	**-4.3**
	baz=359						
IALF	**Alftagrof**	**1.34**	**212**	P	**Pb**	**00 35 36.2**	**-2.4**
	baz=213						
IHLA	**Hella**	**1.37**	**346**	P	Pn	00 35 35.0	-3.5
	baz=344						
IDIM	**Dimmadalss**	**1.37**	**11**	P	Pn	00 35 34.6	-4.0
	baz=10						
IESK	**Eystri-Skogar**	**1.38**	**217**	P	**Pn**	**00 35 36.3**	**-2.3**
	baz=218						
ISAU	**Saurbar**	**1.39**	**244**	P	**Pn**	**00 35 36.2**	**-2.5**
	baz=243						
IMID	**Miomork**	**1.40**	**227**	P	**Pn**	**00 35 37.3**	**-1.7**
	baz=227						
IHED	**Heoinshofoi**	**1.47**	**4**	P	Pn	00 35 36.0	-3.9
	baz=3.2						
IBRE	**Brettingsstaoi**	**1.51**	**355**	P	Pn	00 35 37.0	-3.5
	baz=354						
IASM	**Asmuli**	**1.54**	**240**	P	**Pn**	**00 35 39.2**	**-1.7**
	baz=240						
IGIL	**Gilhagi**	**1.55**	**19**	P	Pn	00 35 37.1	-3.9
	baz=18						
BORG	**Borgarnes**	**1.61**	**276**	Pg	**Pn**	**00 35 39.6**	**-2.3**
	42nm,0.3s,baz=88,slow=6.8,SNR=28						
BORG				LR	LR	00 35 50.4	
	comp=Z,115nm,19.4s,baz=68,slow=24						
BORG				Lg	Lg	00 36 02.8	
	27nm,0.3s,baz=280,slow=23,SNR=4.2						
BORG	**Borgarnes**	**1.61**	**276**	Pn	**Pn**	**00 35 39.7**	**-2.2**
BORG				Sn	**Sg**	**00 36 03.0**	**-2.2**
ISIG	**Siglufjorour**	**1.61**	**340**	P	**Pn**	**00 35 38.7**	**-3.2**
	baz=339						
ISOL	**Solvholt**	**1.62**	**246**	P	**Pn**	**00 35 40.2**	**-1.8**
	baz=246						
IKRO	**Krokur**	**1.62**	**253**	P	**Pn**	**00 35 40.0**	**-2.1**
	baz=252						
IHEI	**Heioarbar**	**1.64**	**257**	P	**Pn**	**00 35 40.4**	**-1.9**
	baz=256						
IVME	**Vestmnaeyjar**	**1.69**	**226**	P	**Pb**	**00 35 42.6**	**-2.0**
	baz=226						
IBJA	**Bjarnastaoir**	**1.76**	**249**	P	**Pn**	**00 35 42.4**	**-1.5**
	baz=248						
IHRN	**Hraun**	**1.83**	**326**	P	**Pn**	**00 35 42.1**	**-2.8**
	baz=324						
ILEI	**Leirhofn**	**1.85**	**14**	P	Pn	00 35 41.9	-3.2
	baz=13						
SCO	**Scoresbysund**	**6.12**	**346**	*e*	Pn	00 36 39.6	-4.0
	baz=163,slow=9.3						
SCO				*i* P	**Pn**	**00 36 43.3**	**-0.4**
SCO				*i* S	**Sn**	**00 37 55.2**	**+1.7**
SCO				IAML		00 38 11.8	
	comp=Z,2.3nm,0.5s						
DBG	**Daneborg**	**9.77**	**356**	*e* P	**Pn**	**00 37 38.0**	**+4.2**
EKA	**Eskdalemuir Ar**	**11.76**	**136**	Pn	**Pn**	**00 38 01.1**	**+0.1**
	baz=321,slow=13,SNR=18						
ESK	**Eskdalemuir**	**11.76**	**136**	P	**Pn**	**00 38 01.0**	**0.0**
ESK	**Eskdalemuir**	**11.76**	**136**	Pn	**Pn**	**00 38 01.0**	**0.0**
DAG	**Danmarks Havn**	**12.21**	**359**	*i* P	**Pn**	**00 38 10.0**	**+2.9**

VRAC Vranov 23.71 114 eP P 00 40 27.5 +2.3
MORC Moravsky Berou 23.72 112 eP P 00 40 27.1 +1.8
MORC Moravsky Berou 23.72 112 P P 00 40 26.8 +1.5
MORC pmax pmax
comp=Z,23nm,1.6s
MORC Moravsky Berou 23.72 112 P P 00 40 26.8 +1.5
MORC IAmb IAmb 00 40 39.4
comp=Z,23nm,1.6s
KRUC Moravsky 23.83 115 eP P 00 40 28.4 +2.1
MOA Molln 24.00 119 eP P 00 40 32.7 +4.7
comp=Z,3.1nm,0.9s
ABTA Abfaltersbach 24.28 123 eP P 00 40 34.0 +3.3
comp=Z,8.9nm,1.4s
OJC Ojcow 24.29 108 eP P 00 40 30.8 +0.2
OJC Ojcow 24.29 108 P P 00 40 31.1 +0.5
OJC pmax pmax
comp=Z,19nm,1.7s
OJC Ojcow 24.29 108 P P 00 40 31.1 +0.5
OJC IAmb IAmb 00 40 49.5
comp=Z,19nm,1.7s
KBA Koelnbreinsper 24.31 121 eP P 00 40 35.8 +4.8
comp=Z,6.1nm,1.2s
CONA Conrad Observa 24.55 117 eP P 00 40 32.2 -0.9
comp=Z,10nm,2.2s
SMOL Smolenice 24.68 114 eP P 00 40 35.7 +1.5
SMOL pmax pmax
comp=Z,4.0nm,1.1s
SMOL Smolenice 24.68 114 eP P 00 40 35.7 +1.5
ARSA Arzberg 24.98 118 eP P 00 40 36.3 -0.6
comp=Z,2.3nm,0.8s
VYHS Vyhne 25.25 112 eP P 00 40 40.7 +1.4
VYHS Vyhne 25.25 112 eP P 00 40 40.6 +1.3
SOKA Soboth 25.27 120 eP P 00 40 42.1 +2.6
comp=Z,3.6nm,1.1s
KLMR Klimovskoe 25.65 72 eP P 00 40 40.8 -2.0
KLMR pmax pmax
comp=Z,14nm,1.4s
KLMR Klimovskoe 25.65 72 eP P 00 40 40.8 -2.0
KLMR AMP 00 40 46.4
comp=Z,14nm,1.4s
KWP Kalwaria Pacla 25.94 106 P P 00 40 46.5 +1.0
KWP pmax pmax
comp=Z,31nm,1.4s
KWP Kalwaria Pacla 25.94 106 P P 00 40 46.5 +1.0
SCHQ Schefferville 26.00 271 P P 00 40 47.5 +1.5
comp=Z,9.0nm,1.0s,baz=55,slow=4.2,SNR=3.6
SCHQ Schefferville 26.00 271 P P 00 40 47.1 +1.0
SCHQ IAmb IAmb 00 40 54.1
comp=Z,25nm,1.6s
PSZ Piszkesteto 26.14 112 P P 00 40 48.1 +0.6
PSZ pmax pmax
comp=Z,38nm,1.8s
PSZ Piszkesteto 26.14 112 P P 00 40 48.1 +0.6
ESDC Sonseca Array 26.23 156 P P 00 40 49.7 +1.4
comp=Z,1.0nm,0.7s,baz=350,slow=9.0,SNR=7.5
ESDC Sonseca Array 26.23 156 P P 00 40 49.1 +0.8
KOLS Kolonicke sedl 26.30 107 eP P 00 40 49.8 +1.0
KOLS Kolonicke sedl 26.30 107 eP P 00 40 49.8 +1.0
RES Resolute Bay 26.48 324 LR LR 00 51 41.6
comp=Z,82nm,19.3s,baz=234,slow=37
AKASG Malin Array Be 27.88 97 P P 00 41 04.5 +1.6
comp=Z,0.2nm,0.3s,baz=322,slow=9.5,SNR=2.0
OBN Obninsk 27.93 84 eP P 00 41 02.4 -0.9
OBN pmax pmax
comp=Z,8.0nm,1.1s
BURAR Bucovina Array 28.55 106 P P 00 41 10.2 +1.1
KIRV Kirov 31.03 69 iP P 00 41 29.9 -0.9
BELG Belogornoye 34.53 79 iP P 00 42 00.0 -1.4
BELG pmax pmax
comp=Z,2.0nm,0.9s
ARU Arti 36.13 66d iP P 00 42 12.4 -2.8
ARU S S 00 47 53.8 -0.6
ARU SS SnSn 00 50 19.1 -0.2
ARU pmax pmax
comp=Z,7.0nm,1.5s
NRIK Noril'sk 36.51 35 P P 00 42 19.4 +1.1
comp=Z,3.5nm,1.1s,baz=319,slow=6.4,SNR=3.8
NRIK Noril'sk 36.51 35 iP P 00 42 13.1 -5.2
NRIK pmax pmax
comp=Z,6.0nm,1.2s
BRTR Keskin Array B 38.51 105 P P 00 42 37.7 +2.0
comp=Z,0.6nm,0.4s,baz=304,slow=38,SNR=5.1
KBZ Khabaz 39.15 92 iP P 00 42 39.3 -1.5
KBZ pmax pmax
comp=Z,14nm,3.0s
AKTO Aktyubinsk 40.34 73 P P 00 42 51.6 +0.9
comp=Z,1.1nm,0.7s,baz=304,slow=12,SNR=4.1
A21K Barrow 41.45 341 P P 00 43 01.2 +1.6
A21K IAmb IAmb 00 43 05.5
comp=Z,13nm,1.0s
ABKAR Akbulak array 42.04 73 P P 00 43 05.1 +0.4
TIXI Tiksi 42.08 15 iP P 00 43 00.2 -4.5
TIXI Tiksi 42.08 15 P P 00 43 06.0 +1.3
TOLK Toolik Lake Re 42.77 336 P P 00 43 11.1 +0.7
TOLK IAmb IAmb 00 43 13.5
comp=Z,8.7nm,0.9s
GNI Garni 42.87 94 iP P 00 43 11.5 -0.2
GNI pmax pmax
comp=Z,12nm,1.5s
BMAR Burnt Mountain 42.91 333 P P 00 43 12.7 +1.1
BRVK Borovoye 43.19 62 P P 00 43 14.3 +0.4
BRVK pmax pmax
comp=Z,7.0nm,1.4s
BRVK Borovoye 43.19 62 P P 00 43 14.2 +0.4
BVAR Borovoye Array 43.25 62 P P 00 43 14.7 +0.2
comp=Z,0.8nm,0.7s,baz=3.1,slow=29,SNR=5.1
IL31 45.70 332 P P 00 43 34.7 +0.9
IL31 IAmb IAmb 00 43 38.5
comp=Z,8.6nm,1.4s
ILAR Eielson Array 45.70 332 P P 00 43 35.1 +1.2
comp=Z,4.3nm,1.2s,baz=23,slow=5.6,SNR=14
ILAR PcP PcP 00 45 11.7 +0.2
comp=Z,1.2nm,0.8s,baz=13,slow=2.6,SNR=6.6
ILAR Eielson Array 45.70 332 P P 00 43 34.7 +0.8
ILAR Eielson Array 45.70 332 P P 00 43 34.7 +0.8
MDM Murphy Dome 45.80 333 P P 00 43 36.3 +1.6
IMAR Indian Mountai 45.88 337 P P 00 43 36.3 +1.0
BCAR Beaver Creek A 46.12 328 P P 00 43 38.8 +1.5
ZAA0 Zalesovo Array 47.69 51 P P 00 43 50.7 +1.2
ZAA0 IAmb IAmb 00 43 52.7
comp=Z,4.1nm,1.1s
ZALV Zalesovo Beam 47.69 51 P P 00 43 49.9 +0.3
comp=Z,1.5nm,0.8s,baz=320,slow=6.7,SNR=5.7
ZALV Zalesovo Beam 47.69 51 P P 00 43 49.7 +0.1
ZALV Zalesovo Beam 47.69 51 P P 00 43 49.7 +0.1
KURK Kurchatov 48.17 58 P P 00 43 53.3 0.0
KURK pmax pmax
comp=Z,5.0nm,0.9s
KURK Kurchatov 48.17 58 P P 00 43 53.3 0.0
KURK IAmb IAmb 00 43 56.2
comp=Z,5.2nm,0.8s
KURBB Kurchatov Arra 48.21 58 P P 00 43 54.0 +0.4
comp=Z,4.7nm,1.0s,baz=324,slow=7.3,SNR=18
EGMT Eagleton 48.86 297 P P 00 43 59.6 +0.8
HRY Holter Researc 50.74 298 P P 00 44 13.7 +0.6
KOWA Kowa 50.94 163 P P 00 44 15.4 +0.6
KOWA IAmb IAmb 00 44 22.1
comp=Z,10nm,1.7s
KK31 Karatay Array 51.33 70 P P 00 44 19.5 +2.0
KK31 pmax pmax
comp=Z,6.0nm,1.3s
KK31 Karatay Array 51.33 70 P P 00 44 19.5 +2.0
KKAR Karatay Array 51.33 70 P P 00 44 19.5 +2.0
KKAR pmax pmax
comp=Z,6.0nm,1.3s
KKAR Karatay Array 51.33 70 P P 00 44 19.5 +2.0
KKAR Karatay Array 51.33 70 P P 00 44 18.7 +1.2
BOZ Bozeman (W) 51.59 297 P P 00 44 20.9 +1.3
BOZ pmax pmax
comp=Z,15nm,1.5s
BOZ Bozeman (W) 51.59 297 P P 00 44 20.9 +1.3
BOZ IAmb IAmb 00 44 23.7
comp=Z,15nm,1.5s
MK31 Makanchi Array 52.78 58 ceP P 00 44 35.4 +7.1
MKAR Makanchi Array 52.78 58 P P 00 44 28.7 +0.5
comp=Z,1.8nm,0.8s,baz=325,slow=7.2,SNR=6.4
MKAR Makanchi Array 52.78 58 P P 00 44 27.8 -0.5
MKAR Makanchi Array 52.78 58 P P 00 44 27.8 -0.5
TOA0 Torodi Ar. Sit 53.12 156 P P 00 44 31.4 +0.4
TOA0 IAmb IAmb 00 44 40.0
comp=Z,9.0nm,1.6s
TORD Torodi Ar. Bea 53.12 156 P P 00 44 30.8 -0.2
comp=Z,1.2nm,0.8s,baz=344,slow=8.8,SNR=6.4
TORD Torodi Ar. Bea 53.12 156 P P 00 44 30.2 -0.8
BW06 Boulder Array 53.16 293 P P 00 44 31.6 +0.3
BW06 IAmb IAmb 00 44 34.5
comp=Z,6.7nm,1.1s
PD31 Pinedale Array 53.16 293 P P 00 44 31.2 -0.1
PD31 IAmb IAmb 00 44 34.5
comp=Z,5.4nm,1.1s
PDAR Pinedale Array 53.16 293 P P 00 44 32.1 +0.8
comp=Z,2.5nm,0.9s,baz=38,slow=7.5,SNR=12
PDAR Pinedale Array 53.16 293 P P 00 44 32.3 +1.0
HWUT Hardware Ranch 54.93 294 P P 00 44 44.7 +0.5
HWUT IAmb IAmb 00 44 48.8
comp=Z,12nm,1.4s
TCUT Toone Canyon 55.29 293 P P 00 44 47.8 +0.9
KSH Kashi 56.55 68 P P 00 44 58.8 +3.0
KSH pmax pmax
comp=Z,14nm,0.7s
KSH pmax pmax
comp=Z,220nm,5.1s
PV13 Radium Mtn., P 56.77 290 P P 00 44 58.2 +0.7
MSU Marysvale 57.82 292 P P 00 45 06.0 +1.0
MSU Marysvale 57.82 292 P P 00 45 06.0 +1.0
BNM Barren Site 59.32 285 P P 00 45 16.1 +0.7
U15A North Rim 59.67 291 P P 00 45 18.2 +0.3
NVAR Mina Array Bea 60.29 297 P P 00 45 22.9 +0.9
comp=Z,0.3nm,0.7s,baz=46,slow=6.6,SNR=3.3
NIL Nilore 60.50 73 P P 00 45 24.3 +1.0
NIL pmax pmax
comp=Z,12nm,1.0s
NIL Nilore 60.50 73 P P 00 45 24.3 +1.0
TXAR Lajitas Array 62.25 280 P P 00 45 36.5 +1.2
comp=Z,0.9nm,0.9s,baz=97,slow=4.0,SNR=5.1
TXAR Lajitas Array 62.25 280 P P 00 45 36.0 +0.7
TXAR Lajitas Array 62.25 280 P P 00 45 36.0 +0.7
GTA Gaotai 65.36 49 eP P 00 45 57.0 +1.3
GTA pmax pmax
comp=Z,3.0nm,1.3s
GTA pmax pmax
comp=Z,3.0nm,2.1s
HHC Hu-ho-hao-te 67.57 40 eP P 00 46 11.5 +1.7
HHC pmax pmax
comp=Z,28nm,1.1s
HHC pmax pmax
comp=Z,80nm,5.7s
YSS Yuzh-Sakhalins 67.70 14 eP P 00 46 01.9 -8.4
YSS pmax pmax
comp=Z,10.0nm,1.0s
YSS MLR MLR
comp=Z,100nm,19.0s
LZH Lanzhou 69.69 47 eP P 00 46 20.8 -2.3
LZH pmax pmax
comp=Z,14nm,1.3s
LSA Lhasa 71.07 61 P P 00 46 32.5 +0.5
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 71.07 61 P P 00 46 32.5 +0.5
LSA IAmb IAmb 00 46 36.2
comp=Z,3.1nm,0.6s
CD2 Chengdu 74.42 50 P P 00 46 49.3 -2.1
CD2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 Nanjing 77.79 37 eP P 00 47 12.3 +1.8
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
ASAR Alice Springs 135.02 38 PKP PKiKP 00 54 33.9 0.0
comp=Z,0.6nm,0.8s,baz=282,slow=1.7,SNR=4.3

*NEIC **27** 00:35:37.9±1.7, 1°.61S±0°.06×99°.33E±0°.06, h10km, mb4.9/79, Error ellipse: s-maj=11.6km s-min=9.5km az=55.0*
*BJI **27** 00:35:37.3±0.0, 1°.64S×98°.71E, h12km, mB4.9/23, mb4.7/39, Ms4.6/6, Ms7 4.3/6*
*IDC **27** 00:35:37.4±0.3, 1°.40S×99°.43E, h0km, mb4.5/43, mb1 4.6/46, mb1mx4.5/68, mbtmp4.5/46, ML4.2/3, MS3.5/3, Ms1 3.5/3, ms1mx3.0/43, Error ellipse: s-maj=13.5km s-min=9.0km az=56.0*
*DJA **27** 00:35:40.1±0.4, 2°.5S×99°.9E, h12km±3km, M4.6/14, mB5.2/12, mb4.7/14, MLv4.7/14, Mw(mB)4.5/12*
*KLM **27** 00:35:44.0, 1°.67S×99°.29E, h55km, mb4.8*
ISC 27 00:35:38.5±0.3, 1°.60S±0°.05×99°.30E±0°.04, h10km, n301, σ1§41/282, mb4.8/105, 14C-4D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SISI	Saibi	0.34	323	P		Pb	00 35 47.5	+0.8
SISI				S		Sb	00 35 53.0	+0.7
PBSI	Pulau Batu	1.84	327	P		Pn	00 36 10.4	+0.2
KRJI	Kerinci	2.22	103	P		Pn	00 36 16.7	+1.3
KRJI				S		Sb	00 36 45.8	-0.5
SDSI	Sungai Dareh	2.23	73	P		Pn	00 36 14.9	-0.7
MNSI	Mandailing Nat	2.40	7	P		Pn	00 36 17.4	-0.5
BKNI	Bangkinang	2.59	42	P		Pn	00 36 22.3	+1.8
BKNI	Bangkinang	2.59	42	Pn		Pn	00 36 19.2	-1.3
SBSI	Sibolga	3.16	353	P		Pn	00 36 26.2	-2.1
RGNI	Rengat	3.28	68	P		Pn	00 36 31.7	+1.7
MASI	Mauroa Aman, Be	3.31	118	P		Pn	00 36 32.6	+2.1
GSI	Gunungsitoli	3.36	329	P		Pn	00 36 31.6	+0.5
GSI	Gunungsitoli	3.36	329	Pn		Pn	00 36 30.9	-0.3
KSI	Kapahiang	3.87	122	P		Pn	00 36 40.6	+2.4
RPSI	Rantau Prapat	4.29	355	Pn		Pn	00 36 43.3	-0.5
PSI	Prapat	4.39	355	Pn		Pn	00 36 43.2	-2.1
	2.7nm,0.3s,baz=180,slow=8.6,SNR=12							
PSI				Lg		Lg	00 37 48.5	
	3.2nm,0.3s,baz=180,slow=18,SNR=1.6							
MNAI	Manna	4.57	127	P		Pn	00 36 49.5	+1.8
MNAI	Manna	4.57	127	Pn		Pn	00 36 48.3	+0.6
LHSI	Lahat	4.76	118	P		Pn	00 36 53.1	+2.7
SNSI	Sinabang, Aceh	4.97	323	P		Pn	00 36 54.6	+1.4
TSI	Tuntungan	5.12	352	P		Pb	00 37 06.5	-1.8
TPTI		5.27	336	P		Pn	00 36 58.6	+1.2
	0.3nm584nm40nm,1.0s							
KCSI	Kotacane, Aceh	5.31	343	P		Pn	00 37 01.0	+3.0
	0.5nm2µm93nm,0.9s							
MYKOM	Kota Tinggi	5.66	54	Pn		Pn	00 37 03.5	+0.7
MYKOM	Kota Tinggi	5.66	54	P		Pn	00 37 08.0	+5.2
LWLI	Liwa	5.84	126	P		Pn	00 37 06.9	+1.6
	2.4nm9µm406nm,0.8s							
KLSI		6.23	120	P		Pn	00 37 13.1	+2.5
	0.1nm41nm,0.8s							
IPM	Ipoh	6.28	16	Pn		Pn	00 37 11.9	+0.5
IPM	Ipoh	6.28	16	P		Pn	00 37 19.0	+7.7
KASI	Kota Agung	6.49	127	P		Pn	00 37 15.1	+1.0
	1.0nm125nm,0.6s							
PPBI	Pangkal Pinang	6.86	95	P		Pb	00 37 29.8	-8.1
KULM	Kulim	6.98	11			Pn	00 37 21.1	+0.2
KULM	Kulim	6.98	11	P		Pb	00 37 32.0	-7.9
LHMI	Lhok Sumawe	7.18	341	Pn		Pn	00 37 23.9	+0.3
TPI	Tanjungpandan	8.43	98	P		Pb	00 37 53.7	-11
DBJI	Dramaga	8.91	124	P		Pn	00 37 53.9	+6.5
LEM	Lembang	9.78	122	Pn		Pn	00 38 01.4	+1.9
	5.7nm,0.3s,baz=288,slow=22,SNR=2.4							
CISI	Cisompet, Garu	10.34	125	P		Pn	00 38 06.2	-0.9
	3µm83nm,0.7s							
CISI	Cisompet, Garu	10.34	125	Pn		Pn	00 38 04.4	-2.7
COCO	West Island	10.80	193	Pn		Pn	00 38 11.2	-2.0
XMIS	Christmas Isla	10.85	145	Pn		Pn	00 38 10.1	-3.9
KPJI	Karang Pucung	11.16	121	P		Pn	00 38 26.1	+7.8
SMRI	Semarang	12.36	116	Pn		Pn	00 38 33.6	-1.0
UGM	Wanagama	12.82	120	Pn		Pn	00 38 39.2	-1.8
SBUM	Sibu	13.53	73	Pn		Pn	00 38 51.0	+0.3
SBUM	Sibu	13.53	73	P		P	00 39 02.0	+2.1
BBKI	Banjar Baru	15.64	97	P		P	00 39 36.9	+14
JAGI	Jajag, Banyuwa	16.29	115	Pn		Pn	00 39 26.1	-1.4
SPMM	Sapulut	18.26	70	P		P	00 40 05.0	+13
KKM	Kota Kinabalu	18.52	66	P		P	00 39 54.3	-1.1
SUKH	Sukhothai	18.97	1	P		Pn	00 40 07.9	+7.1
	17nm,1.1s							
UTTA	Uttaradit	19.27	4	P		Pn	00 40 11.3	+6.9
	15nm,0.8s							
CM04	Chiang Mai Arr	19.88	359	P		Pn	00 40 11.0	-0.7
	108nm16nm,1.0s							
CM05	Chiang Mai Arr	19.88	359	P		Pn	00 40 14.4	+2.7
	77nm9.4nm,0.9s							
CM01	Chiang Mai Arr	19.90	359	P		Pn	00 40 12.8	+0.8
	287nm20nm,0.9s							
CM13	Chiang Mai Arr	19.90	359	P		Pn	00 40 12.7	+0.7
	103nm13nm,1.0s							
NONG	Nongkai	19.91	11	P		Pn	00 40 18.5	+6.5
CM02	Chiang Mai Arr	19.91	359	P		Pn	00 40 13.2	+1.1
	92nm12nm,0.8s							
CM31	Chiang Mai Arr	19.94	359	P		P	00 40 11.0	+0.3
CMAR	Chiang Mai Arr	19.94	359	P		P	00 40 10.1	-0.7
	0.5nm,0.3s,baz=188,slow=10,SNR=16							
CMAR	Chiang Mai Arr	19.94	359	P		P	00 40 10.2	-0.5
PHRA	Phrae	20.00	3	P		Pn	00 40 15.8	+2.7
	147µm170nm,0.9s							
LAMP	Lampang	20.00	1	P		Pn	00 40 18.9	+5.7
	35nm,0.9s							
CM32	Chiang Mai Arr	20.13	359	P		Pn	00 40 20.0	+5.3
CHTO	Chiang Mai	20.29	359			P	00 40 14.9	+0.3
CM33	Chiang Mai Arr	20.30	359	P		Pn	00 40 19.0	+2.3
MYLDM	Lahad Datu	20.33	71	P		P	00 40 14.9	-0.2
MYLDM				IAmb		IAmb	00 40 28.2	
	comp=Z,28nm,0.8s							
PALK	Pallekele	20.54	296	P		Pn	00 40 19.9	+0.2
	comp=Z,9.0nm,0.6s,baz=224,slow=7.9,SNR=6.1							
PALK				LR		LR	00 47 49.3	
	comp=Z,147nm,18.5s,baz=202,slow=36							
PALK	Pallekele	20.54	296	P		Pn	00 40 18.9	-0.8
TTSI	Tana Toraja	20.55	94	P		Pn	00 40 19.0	-0.7
	comp=Z,44nm,1.0s							
SPSI	Sidrap Palu	20.58	97	P		Pn	00 40 24.5	+4.5
MPSI	Mapaga	20.69	85	P		P	00 40 18.6	-0.4
	comp=Z,401nmcomp=Z,45nm,1.1s							
KAPI	Kappang	20.70	100	P		P	00 40 19.9	+0.8
	comp=Z,11nm,0.5s,baz=66,slow=12,SNR=2.4							
KAPI	Kappang	20.70	100	P		P	00 40 17.7	-1.4
KAPI				IAmb		IAmb	00 40 26.7	
	comp=Z,61nm,1.2s							
BNSI	Bone	20.96	98	P		P	00 40 22.3	+0.3
	comp=Z,763nmcomp=Z,80nm,1.0s							
BKSI	Bulukumba	21.11	101	P		P	00 40 24.4	+0.9
	comp=Z,1µmcomp=Z,55nm,1.0s							
TOLI2	Tolitoli	21.65	83	P		P	00 40 27.5	-1.9
TOLI2				IAmb		IAmb	00 40 30.9	
	comp=Z,30nm,0.6s							
WSI	Waingapu	22.37	112	P		P	00 40 38.3	+1.3
	comp=Z,668nm,0.5s							
MRSI	Marisa	22.73	85	P		P	00 40 43.6	+2.6
	comp=Z,1µmcomp=Z,73nm,1.0s							
LUWI	Luwuk	23.48	89	P		P	00 40 46.8	-1.8
GTOI	Gorontalo	23.82	85	P		P	00 40 57.3	+5.4
SAIH	SAIHA	24.73	346	ex		x	00 41 00.4	
BATI	Baumata	25.68	110	LR		LR	00 53 06.3	
	comp=Z,245nm,20.4s,baz=336,slow=41							
KMI	Kunming	26.78	7	eP		P	00 41 21.0	+2.0
KMI				pmax		pmax		
	comp=Z,14nm,0.5s							
H08S2	Diego Garcia H	27.37	256	T		T	01 09 21.1	
	baz=78,slow=76,SNR=458							
H08S3	Diego Garcia H	27.38	257	T		T	01 09 21.1	
	baz=78,slow=76,SNR=704							
H08S1	Diego Garcia H	27.39	256	T		T	01 09 22.1	
	baz=78,slow=76,SNR=90							
DAV	Davao City (W)	27.61	72	LR		LR	00 54 58.3	
	comp=Z,37nm,19.2s,baz=269,slow=42							
NLAI	Namlea	27.82	94	P		P	00 41 30.1	+1.8
	comp=Z,15nm,0.6s							
SHL	Shillong	27.95	346	P		P	00 41 28.1	-1.3
SHL				IAmb		IAmb	00 41 35.5	
	comp=Z,14nm,0.7s							
BOK	Bokaro	28.41	333	eP		P	00 41 33.4	0.0
FITZ	Fitzroy Crossi	30.61	124	P		P	00 41 52.5	-0.5
	comp=Z,9.9nm,1.0s,baz=319,slow=10.0,SNR=9.9							
FITZ	Fitzroy Crossi	30.61	124	P		P	00 41 52.0	-1.1
FITZ				IAmb		IAmb	00 41 53.4	
	comp=Z,19nm,1.2s							
LSA	Lhasa	32.09	347	P		P	00 42 06.2	-0.2
LSA				IAmb		IAmb	00 42 16.1	
	comp=Z,8.9nm,0.7s							
KNRA	Kununurra	32.24	117	P		P	00 42 06.2	-1.2
KNRA				IAmb		IAmb	00 42 11.5	
	comp=Z,14nm,0.9s							
NWAO	Narrogin (SRO)	35.42	153	P		P	00 42 36.5	+1.5
	comp=Z,12nm,1.0s,baz=331,slow=9.1,SNR=4.9							
NWAO	Narrogin (SRO)	35.42	153	P		P	00 42 35.3	+0.4
NWAO				IAmb		IAmb	00 42 38.3	
	comp=Z,16nm,0.9s							
XAN	Xi'an	36.59	13	P		P	00 42 45.5	+0.6
XAN				pP		sP	00 42 52.0	+2.9
XAN				pmax		pmax		
	comp=Z,8.0nm,0.7s							
XAN	Xi'an	36.59	13	P		P	00 42 45.0	+0.1
NJ2	Nanjing	38.26	27	eP		P	00 42 59.0	0.0
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
SMLA	Simla	38.76	329	eP		P	00 43 02.2	-1.1
WB0	Warramunga Arr	38.77	120	P		P	00 43 02.6	-1.0
WRA	Warramunga Arr	38.80	120	P		P	00 43 03.4	-0.5
	comp=Z,3.2nm,0.4s,baz=302,slow=9.3,SNR=46							
WRA				PcP		PcP	00 45 15.8	+0.5
	comp=Z,1.7nm,0.5s,baz=316,slow=2.4,SNR=6.9							
WRA				S		S	00 48 53.6	-8.1
	comp=Z,3.0nm,1.0s,baz=292,slow=18,SNR=8.5							
WRA	Warramunga Arr	38.80	120	P		P	00 43 02.6	-1.2
WB2	Warramunga Arr	38.81	120	P		P	00 43 02.2	-1.7
WR0	Warramunga Arr	38.98	120	P		P	00 43 03.8	-1.5
WR0				IAmb		IAmb	00 43 13.8	
	comp=Z,13nm,0.6s							
FORT	Forrest	39.80	140	P		P	00 43 10.7	-1.3
FORT				IAmb		IAmb	00 43 14.9	
	comp=Z,34nm,0.8s							
ASAR	Alice Springs	40.05	126	P		P	00 43 14.2	0.0
	comp=Z,5.4nm,0.6s,baz=304,slow=7.9,SNR=35							
ASAR				PcP		PcP	00 45 19.8	+0.6
	comp=Z,3.0nm,0.8s,baz=301,slow=2.4,SNR=8.6							
ASAR				S		S	00 49 16.4	-4.0
	comp=Z,3.6nm,1.0s,baz=299,slow=15,SNR=16							
ASAR	Alice Springs	40.05	126	P		P	00 43 13.5	-0.8
AS31	Alice Springs	40.05	126	P		P	00 43 13.2	-1.0
GTA	Gaotai	40.82	1	P		P	00 43 21.8	+1.4
GTA				pP		sP	00 43 27.5	+3.0
GTA				sP		pP	00 43 30.5	+7.1
GTA				pmax		pmax		
	comp=Z,5.0nm,1.4s							
NIL	Nilore	42.79	327	P		P	00 43 35.5	-1.1
NIL				IAmb		IAmb	00 43 36.7	
	comp=Z,22nm,0.8s							
HHC	Hu-ho-hao-te	43.71	13	eP		P	00 43 43.8	-0.1
HHC				pmax		pmax		
	comp=Z,27nm,1.0s							
HHC				pmax		pmax		
	comp=Z,140nm,5.7s							
HHC				LR		LR		
	comp=Z,430nm,13.7s							
HHC				LR		LR		
	comp=Z,350nm,15.2s							
HHC				LR		LR		
	comp=Z,380nm,15.4s							
JNU	Nakatsue	45.61	38	P		P	00 43 57.1	-2.2
	comp=Z,5.9nm,0.7s,baz=38,slow=12,SNR=2.0							
JNU	Nakatsue	45.61	38	P		P	00 43 58.5	-0.7
WMQ	Urumqi	46.40	348	eP		P	00 44 06.0	+0.7
WMQ				sP		sP	00 44 12.5	+3.1
WMQ				pmax		pmax		
	comp=Z,52nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,45nm,8.1s							
WMQ	Urumqi	46.40	348	P		P	00 44 05.1	-0.2
BBOO	Buckleboo	46.42	136	P		P	00 44 05.5	0.0
BBOO				IAmb		IAmb	00 44 16.6	
	comp=Z,23nm,1.2s							
WSAR	Wadi Sarin	46.64	304	P		P	00 44 08.4	+0.9
	comp=Z,2.3nm,0.6s,baz=111,slow=0.9,SNR=2.5							
KSRS	Korea Array	47.04	31	P		P	00 44 09.3	-1.0
	comp=Z,1.0nm,0.4s,baz=224,slow=8.4,SNR=5.6							
KDJ	Kajisay	47.91	338	P		P	00 44 16.8	-0.4
SHLS	Shalkode	48.00	340	eP		P	00 44 16.5	-1.4
	comp=Z,14nm,1.4s,baz=341							
DRK	Karamyk	48.04	331	P		P	00 44 18.3	-0.1
JHS	Saijyo	48.25	38	P		P	00 44 20.5	+0.7
SATY	Saty	48.27	340	eP		P	00 44 19.7	-0.2
	comp=Z,9.2nm,1.5s,baz=340							
KPKS	Kokpek	48.53	340	eP		P	00 44 21.3	-0.6
	comp=Z,3.9nm,1.1s,baz=340							
BOOM	Boomskoye usch	48.69	337	P		P	00 44 23.3	0.0
BOOM				IAmb		IAmb	00 44 38.5	
	comp=Z,9.2nm,0.8s							
TNSS	Tian-Shan	48.78	338	eP		P	00 44 23.8	-0.4
	baz=338							
MDOK	Medeo	48.85	338	eP		P	00 44 24.1	-0.4
	baz=339							
ARSB	Arslanbob	48.96	334	P		P	00 44 25.4	+0.1
BTK	Batken	48.96	331	P		P	00 44 24.9	-0.4
BTK				IAmb		IAmb	00 44 36.9	
	comp=Z,18nm,1.0s							
AAK	Ala-Archa	49.40	336	P		P	00 44 28.1	-0.6
CTA	Charters Tower	49.40	115	P		P	00 44 28.4	-0.5
	comp=Z,2.2nm,0.7s,baz=294,slow=9.8,SNR=5.7							
CTAO	Charters Tower	49.40	115	P		P	00 44 28.1	-0.8

CTAO				IAmb	IAmb	00 44 40.0		
	comp=Z,15nm,1.1s							
CHKK	**Chushkaly**	**49.47**	**339**	*eP*	**P**	**00 44 27.7**	**-1.3**
	baz=339							
SONM	**Songino Array**	**49.62**	**6**	P	**P**	**00 44 29.4**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=189,slow=9.1,SNR=14							
SONM				PcP	**PcP**	**00 45 50.9**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=190,slow=3.8,SNR=1.9							
SONM	**Songino Array**	**49.62**	**6**	P	**P**	**00 44 30.0**	**-0.3**
ULN	**Ulaanbaatar**	**49.73**	**7**	P	**P**	**00 44 31.0**	**-0.1**
KUU	**Kurty**	**49.74**	**338**	*eP*	**P**	**00 44 30.0**	**-1.1**
	comp=Z,29nm,2.0s,baz=338							
HRA	**Herat**	**49.90**	**319**	P	**P**	**00 44 31.2**	**-1.5**
STKA	**Stephens Creek**	**49.94**	**132**	P	**P**	**00 44 33.6**	**+0.8**
	comp=Z,7.0nm,0.7s,baz=308,slow=8.9,SNR=15							
STKA	**Stephens Creek**	**49.94**	**132**	P	**P**	**00 44 32.3**	**-0.5**
ZSN	**Zaisan**	**50.46**	**347**	*eP*	**P**	**00 44 36.1**	**-0.4**
	baz=348							
MK31	**Makanchi Array**	**50.46**	**345**	P	**P**	**00 44 36.0**	**-0.5**
MK31				IAmb	IAmb	00 44 45.9		
	comp=Z,11nm,1.1s							
MKAR	**Makanchi Array**	**50.46**	**345**	P	**P**	**00 44 36.0**	**-0.6**
	comp=Z,5.7nm,0.5s,baz=155,slow=8.9,SNR=68							
MKAR	**Makanchi Array**	**50.46**	**345**	P	**P**	**00 44 35.7**	**-0.8**
MAKZ	**Makanchi**	**50.56**	**345**	P	**P**	**00 44 36.3**	**-0.9**
IUG	**luzhnay**	**50.96**	**332**	*eP*	**P**	**00 44 39.7**	**-0.7**
	baz=332							
KK31	**Karatay Array**	**51.48**	**333**	P	**P**	**00 44 43.1**	**-1.2**
KKAR	**Karatay Array**	**51.48**	**333**	P	**P**	**00 44 43.2**	**-1.1**
BTLS	**Baital**	**51.58**	**337**	*eP*	**P**	**00 44 43.7**	**-1.3**
	baz=337							
USA0B	**Ussuriysk Arra**	**54.14**	**29**	P	**P**	**00 45 05.8**	**+1.9**
USA0B				IAmb	IAmb	00 45 11.4		
	comp=Z,14nm,0.9s							
USRK	**Ussuriysk Ar.**	**54.14**	**29**	P	**P**	**00 45 04.5**	**+0.6**
	comp=Z,1.9nm,0.6s,baz=238,slow=5.1,SNR=4.3							
USRK	**Ussuriysk Ar.**	**54.14**	**29**	P	**P**	**00 45 04.2**	**+0.3**
SEM	**Semipalatinsk**	**54.32**	**345**	*eP*	**P**	**00 45 03.6**	**-1.8**
	baz=345							
GYA0B	**ALIBECK ARRAY**	**54.70**	**320**	P	**P**	**00 45 08.2**	**+0.1**
GYA0B				IAmb	IAmb	00 45 08.6		
	comp=Z,9.1nm,0.8s							
KURBB	**Kurchatov Arra**	**54.98**	**344**	P	**P**	**00 45 09.0**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=163,slow=7.1,SNR=22							
KURK	**Kurchatov**	**55.03**	**344**	P	**P**	**00 45 09.6**	**-0.6**
KURK				IAmb	IAmb	00 45 19.0		
	comp=Z,20nm,1.3s							
EIDS	**Eidsvold**	**55.16**	**120**	P	**P**	**00 45 11.4**	**-0.3**
EIDS				IAmb	IAmb	00 45 20.8		
	comp=Z,7.9nm,0.8s							
BRZS	**Berezniki**	**56.24**	**340**	*eP*	**P**	**00 45 19.1**	**+0.2**
	baz=340							
ZAA0	**Zalesovo Array**	**56.65**	**350**	P	**P**	**00 45 20.5**	**-1.3**
ZALV	**Zalesovo Beam**	**56.65**	**350**	P	**P**	**00 45 20.8**	**-0.9**
	comp=Z,5.6nm,0.6s,baz=163,slow=5.7,SNR=24							
ZALV	**Zalesovo Beam**	**56.65**	**350**	P	**P**	**00 45 20.3**	**-1.5**
RAYN	**Ar Rayn**	**57.93**	**299**	P	**P**	**00 45 29.8**	**-1.7**
BVAR	**Borovoye Array**	**59.57**	**340**	P	**P**	**00 45 40.3**	**-2.0**
	comp=Z,1.0nm,0.7s,baz=96,slow=8.8,SNR=5.3							
BRVK	**Borovoye**	**59.64**	**340**	P	**P**	**00 45 41.1**	**-1.6**
BRVK				IAmb	IAmb	00 45 50.8		
	comp=Z,14nm,1.4s							
ABKAR	**Akbulak array**	**60.96**	**332**	P	**P**	**00 45 50.0**	**-1.8**
ABKAR				IAmb	IAmb	00 46 01.9		
	comp=Z,6.9nm,0.9s							
ABKAR	**Akbulak array**	**60.96**	**332**	P	**P**	**00 45 50.3**	**-1.6**
AKTO	**Aktyubinsk**	**62.68**	**332**	P	**P**	**00 46 02.0**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=133,slow=2.4,SNR=4.1							
GNI	**Garni**	**64.76**	**316**	P	**P**	**00 46 17.4**	**-0.2**
	comp=Z,4.8nm,1.0s,baz=267,slow=20,SNR=3.3							
GNI	**Garni**	**64.76**	**316**	P	**P**	**00 46 17.4**	**-0.2**
GNI				IAmb	IAmb	00 46 18.9		
	comp=Z,11nm,1.2s							
MARD	**Mardin**	**66.46**	**312**	P	**P**	**00 46 28.5**	**0.0**
ARU	**Arti**	**66.57**	**337**	P	**P**	**00 46 27.3**	**-1.4**
ARU				IAmb	IAmb	00 46 39.2		
	comp=Z,6.7nm,1.0s							
KBZ	**Khabaz**	**67.55**	**319**	P	**P**	**00 46 35.4**	**+0.2**
	comp=Z,7.9nm,0.8s,baz=130,slow=5.8,SNR=12							
KIV	**Kislovodsk**	**67.79**	**319**	P	**P**	**00 46 35.7**	**-1.1**
KIV				IAmb	IAmb	00 46 48.5		
	comp=Z,9.5nm,0.9s							
EIL	**Elat**	**68.72**	**303**	P	**P**	**00 46 44.0**	**+1.1**
	comp=Z,12nm,0.7s,baz=271,slow=2.2,SNR=8.6							
GAZ	**Gaziantep**	**69.08**	**311**	P	**P**	**00 46 44.2**	**-0.8**
GAZ				IAmb	IAmb	00 46 46.6		
	comp=Z,11nm,0.9s							
MMAI	**Mount Meron Ar**	**69.24**	**306**	P	**P**	**00 46 47.5**	**+1.4**
	comp=Z,4.8nm,0.7s,baz=95,slow=9.3,SNR=6.6							
MAW	**Mawson**	**70.50**	**194**	P	**P**	**00 46 55.9**	**+2.9**
	comp=Z,9.2nm,0.9s,baz=19,slow=5.9,SNR=6.4							
MAW	**Mawson**	**70.50**	**194**	P	**P**	**00 46 52.1**	**-0.9**
NRIK	**Noril'sk**	**71.25**	**356**	P	**P**	**00 46 56.2**	**-1.4**
	comp=Z,3.1nm,0.9s,baz=194,slow=4.8,SNR=6.7							
LSZ	**Lusaka**	**71.36**	**255**	P	**P**	**00 47 01.6**	**+2.1**
	comp=Z,1.8nm,0.7s,baz=81,slow=7.4,SNR=3.6							
MATP	**Matopo**	**71.46**	**249**	P	**P**	**00 47 02.2**	**+2.2**
	comp=Z,7.6nm,0.7s,baz=81,slow=5.3,SNR=18							
BRTR	**Keskin Array B**	**72.54**	**313**	P	**P**	**00 47 05.3**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=128,slow=6.7,SNR=5.4							
PETK	**Petropavlovsk-**	**72.93**	**32**	P	**P**	**00 47 08.4**	**+0.4**
	comp=Z,5.3nm,1.0s,baz=299,slow=1.5,SNR=4.1							
LBTB	**Lobatse**	**74.56**	**245**	P	**P**	**00 47 19.7**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=91,slow=3.7,SNR=3.5							
BOSA	**Boshof**	**75.23**	**241**	P	**P**	**00 47 24.1**	**+2.0**
	comp=Z,2.4nm,0.6s,baz=102,slow=6.0,SNR=5.7							
BOSA	**Boshof**	**75.23**	**241**	P	**P**	**00 47 23.1**	**+1.0**
BOSA				IAmb	IAmb	00 47 33.9		
	comp=Z,16nm,1.2s							
TIXI	**Tiksi**	**75.58**	**9**	P	**P**	**00 47 22.2**	**-0.8**
TIXI				IAmb	IAmb	00 47 24.4		
	comp=Z,5.3nm,0.5s							
OBN	**Obninsk**	**76.09**	**328**	P	**P**	**00 47 25.3**	**-0.9**
KARP	**Karpathos**	**76.47**	**307**	P	**P**	**00 47 28.8**	**-0.2**
KLMR	**Klimovskoe**	**77.17**	**334**	*eP*	**P**	**00 47 30.6**	**-1.7**
KLMR				AMP		00 47 40.6		
	comp=Z,15nm,1.3s							
MILM	**Milestii Mici**	**77.95**	**319**	⇓P	**P**	**00 47 35.9**	**-1.0**
SYO	**Syowa Base**	**78.02**	**199**	⇓*eP*	**P**	**00 47 38.1**	**+1.2**
IDI	**Anoyia**	**78.24**	**306**	P	**P**	**00 47 39.1**	**+0.2**
	comp=Z,6.8nm,0.5s,baz=83,slow=7.2,SNR=12							
IDI	**Anoyia**	**78.24**	**306**	P	**P**	**00 47 39.1**	**+0.2**
SORM	**Soroca**	**78.58**	**320**	⇑P	**P**	**00 47 39.6**	**-0.8**
AKASG	**Malin Array Be**	**78.74**	**322**	P	**P**	**00 47 40.0**	**-1.3**
	comp=Z,0.8nm,0.5s,baz=86,slow=4.9,SNR=8.4							
AKASG	**Malin Array Be**	**78.74**	**322**	P	**P**	**00 47 39.3**	**-2.0**
BKZ	**Black Stump Fm**	**79.06**	**129**	P	**P**	**00 47 42.9**	**-0.5**
VRI	**Vrincioaia**	**79.08**	**317**	⇑P	**P**	**00 47 43.8**	**+0.5**
PLOR	**Plostina**	**79.14**	**317**	⇑P	**P**	**00 47 42.8**	**-0.8**
TESR	**Tescani**	**79.29**	**318**	⇑P	**P**	**00 47 44.3**	**-0.1**
SUR	**Sutherland**	**79.42**	**238**	P	**P**	**00 47 46.6**	**+1.0**
MLR	**Muntele Rosu**	**79.53**	**317**	P	**P**	**00 47 46.3**	**+0.4**
	comp=Z,10nm,0.9s,baz=154,slow=2.7,SNR=14							
MLR	**Muntele Rosu**	**79.53**	**317**	⇑P	**P**	**00 47 45.4**	**-0.5**
MLR	**Muntele Rosu**	**79.53**	**317**	P	**P**	**00 47 45.8**	**0.0**
MLR				IAmb	IAmb	00 47 57.3		
	comp=Z,22nm,1.1s							
PRAR	**RASCA**	**79.78**	**319**	⇑P	**P**	**00 47 47.0**	**0.0**
VOIR		**80.13**	**317**	⇑P	**P**	**00 47 48.2**	**-0.9**
ARR	**Arges**	**80.41**	**316**	⇑P	**P**	**00 47 50.5**	**0.0**
BURAR	**Bucovina Array**	**80.50**	**319**	⇓P	**P**	**00 47 50.8**	**-0.2**
BURAR	**Bucovina Array**	**80.50**	**319**	P	**P**	**00 47 51.3**	**+0.2**
BUR08	**Bucovina Ar. S**	**80.52**	**319**	P	**P**	**00 47 51.4**	**+0.2**
BUR08				IAmb	IAmb	00 47 52.7		
	comp=Z,11nm,0.8s							
LIT	**Litokhoron**	**80.96**	**311**	P	**P**	**00 47 52.3**	**-1.2**
LIT				IAmb	IAmb	00 47 53.3		
	comp=Z,14nm,0.8s							
NACGM	**Naroch**	**81.33**	**326**	*e*	**P**	**00 47 53.0**	**-2.1**
IDID	**Didziasalis**	**81.46**	**327**	*eP*	**P**	**00 47 57.0**	**+1.2**
GZR	**Gura Zlata**	**81.69**	**316**	⇑P	**P**	**00 47 57.9**	**+0.4**
IGN	**Ignalina**	**81.75**	**326**	*eP*	**P**	**00 47 57.5**	**+0.1**
ISAL	**Salakas**	**81.87**	**327**	*eP*	**P**	**00 47 57.8**	**-0.2**
DRGR		**82.00**	**318**	⇓P	**P**	**00 47 58.9**	**-0.1**
BZS	**Buzias**	**82.54**	**316**	⇑P	**P**	**00 48 01.7**	**0.0**
KWP	**Kalwaria Pacla**	**82.55**	**320**	P	**P**	**00 48 01.9**	**+0.2**
KWP				IAmb	IAmb	00 48 03.5		
	comp=Z,20nm,1.4s							
SIRR	**Siria**	**82.62**	**317**	⇑P	**P**	**00 48 02.3**	**+0.1**
VNDA	**Vanda**	**82.68**	**169**	P	**P**	**00 48 03.4**	**+1.5**
	comp=Z,4.0nm,0.9s,baz=306,slow=5.1,SNR=19							
VNDA	**Vanda**	**82.68**	**169**	P	**P**	**00 48 02.9**	**+1.1**
KOLS	**Kolonicke sedl**	**82.70**	**320**	*eP*	**P**	**00 48 03.2**	**+0.7**
PABE	**Paberze**	**83.04**	**326**	*eP*	**P**	**00 48 04.1**	**0.0**
SUW	**Suwalki**	**83.16**	**325**	P	**P**	**00 48 03.8**	**-0.9**
DIVS	**Divibare**	**83.43**	**315**	P	**P**	**00 48 05.2**	**-1.4**
DIVS				IAmb	IAmb	00 48 18.6		
	comp=Z,16nm,1.4s							
FIA1	**FINESS Array S**	**83.44**	**332**	P	**P**	**00 48 04.7**	**-1.3**
FIA1				IAmb	IAmb	00 48 06.2		
	comp=Z,6.4nm,0.9s							
FINES	**FINESS Array B**	**83.44**	**332**	P	**P**	**00 48 05.8**	**-0.2**
	comp=Z,3.3nm,0.7s,baz=104,slow=5.6,SNR=14							
FINES	**FINESS Array B**	**83.44**	**332**	P	**P**	**00 48 05.3**	**-0.7**
PDG	**Podgorica**	**83.72**	**313**	P	**P**	**00 48 07.7**	**-0.3**
PSZ	**Piszkesteto**	**84.08**	**318**	⇑P	**P**	**00 48 09.7**	**-0.1**
PSZ	**Piszkesteto**	**84.08**	**318**	P	**P**	**00 48 09.3**	**-0.5**
PSZ				IAmb	IAmb	00 48 10.8		
	comp=Z,5.9nm,0.9s							
VYHS	**Vyhne**	**84.87**	**319**	*eP*	**P**	**00 48 13.6**	**0.0**
JAVC	**Velka Javorina**	**85.68**	**319**	*eP*	**P**	**00 48 18.6**	**+0.8**
ARCES	**ARCESS Array B**	**85.86**	**340**	P	**P**	**00 48 18.3**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=91,slow=5.4,SNR=4.7							
MODS	**Modra-Piesok**	**85.88**	**319**	*eP*	**P**	**00 48 18.0**	**-0.7**
MORC	**Moravsky Berou**	**85.88**	**320**	⇑P	**P**	**00 48 18.9**	**+0.2**
MORC	**Moravsky Berou**	**85.88**	**320**	*eP*	**P**	**00 48 18.8**	**+0.1**
KRLC	**Kraliky**	**86.41**	**320**	*eP*	**P**	**00 48 22.0**	**+0.7**
DPC	**Dobruska-Polom**	**86.73**	**320**	*eP*	**P**	**00 48 23.6**	**+0.7**
DPC				*ex*	x	00 48 32.2		
CONA	**Conrad Observa**	**86.77**	**318**	*eP*	**P**	**00 48 23.1**	**-0.2**
	comp=Z,6.5nm,1.5s							
OSTC	**Ostas**	**86.82**	**321**	*eP*	**P**	**00 48 24.0**	**+0.7**
CHVC	**Chvalec**	**86.93**	**321**	*eP*	**P**	**00 48 24.5**	**+0.7**
ARSA	**Arzberg**	**86.93**	**317**	*eP*	**P**	**00 48 23.9**	**0.0**
	comp=Z,1.4nm,0.7s							
SOKA	**Soboth**	**87.21**	**317**	*eP*	**P**	**00 48 25.4**	**0.0**
	comp=Z,4.7nm,0.9s							
PRU	**Pruhonice**	**87.84**	**320**	*eP*	**P**	**00 48 28.6**	**+0.4**
PRED	**Cave del Predi**	**88.20**	**316**	P	**P**	**00 48 29.5**	**-0.6**
PRED				IAmb	IAmb	00 48 31.1		
	comp=Z,7.9nm,0.9s							
GEC2	**GERESS Array S**	**88.29**	**319**	*eP*	**P**	**00 48 29.1**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=93,slow=4.0							
GEC2	**GERESS Array S**	**88.29**	**319**	P	**P**	**00 48 30.6**	**0.0**
GEC2				IAmb	IAmb	00 48 31.9		
	comp=Z,14nm,1.5s							
GEC2B	**GERESS ARRAY S**	**88.29**	**319**	P	**P**	**00 48 30.0**	**-0.5**
GERES	**GERESS Array B**	**88.29**	**319**	P	**P**	**00 48 30.5**	**0.0**
	comp=Z,2.0nm,0.7s,baz=87,slow=4.5,SNR=18							
GERES	**GERESS Array B**	**88.29**	**319**	P	**P**	**00 48 30.0**	**-0.5**
BRG	**Berggiesshubel**	**88.29**	**321**	*eP*	**P**	**00 48 30.6**	**+0.3**
	comp=Z,4.3nm,0.1s							
BRG				*e*		00 48 39.5		
	comp=Z,4.4nm,1.1s							
BRG	**Berggiesshubel**	**88.29**	**321**	*eP*	**P**	**00 48 29.1**	**-1.2**
	comp=Z,2.2nm,0.8s,baz=93,slow=4.0							
QSPA	**South Pole Qui**	**88.36**	**180**		**P**	**00 48 31.7**	**+1.2**
KHC	**Kasperske Hory**	**88.39**	**319**	*eP*	**P**	**00 48 31.1**	**+0.2**
KHC				*ex*	x	00 48 39.9		
RUE	**Ruedersdorf**	**88.52**	**322**	*eP*	**P**	**00 48 29.8**	**-1.5**
	comp=Z,21nm,1.0s,baz=93,slow=4.0							
FBE	**Freiberg**	**88.67**	**321**	*eP*	**P**	**00 48 32.0**	**-0.1**
	comp=Z,9.4nm,1.0s,baz=93,slow=4.0							
RJOB	**Jochberg**	**88.81**	**318**	*eP*	**P**	**00 48 32.4**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=93,slow=4.0							
WET	**Wettzell**	**88.85**	**319**	*eP*	**P**	**00 48 33.5**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=93,slow=4.0							
CLL	**Collm**	**88.92**	**321**	*eP*	**P**	**00 48 34.0**	**+0.8**
	comp=Z,8.0nm,1.1s							
CLL	**Collm**	**88.92**	**321**	*eP*	**P**	**00 48 33.4**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=93,slow=4.0							
ABTA	**Abfaltersbach**	**88.95**	**317**	*eP*	**P**	**00 48 33.6**	**-0.1**
RGN	**Rugen**	**88.95**	**324**	*eP*	**P**	**00 48 33.6**	**+0.3**
	comp=Z,46nm,1.0s,baz=93,slow=4.0							
CIMO	**Cimolais**	**88.97**	**316**	P	**P**	**00 48 33.8**	**+0.1**
HFS	**Hagfors**	**89.18**	**330**	P	**P**	**00 48 33.7**	**-0.6**
	comp=Z,7.2nm,1.1s,baz=163,slow=7.7,SNR=4.8							
TANN	**Tannenbergstha**	**89.20**	**320**	*eP*	**P**	**00 48 33.6**	**-1.1**
	comp=Z,5.4nm,1.0s,baz=93,slow=4.0							
LATE	**Laterza**	**89.22**	**312**	P	**P**	**00 48 34.8**	**-0.1**
LATE				IAmb	IAmb	00 48 37.1		
	comp=Z,9.7nm,1.1s							
GUNZ	**Gunzen**	**89.28**	**320**	*eP*	**P**	**00 48 33.5**	**-1.5**
	comp=Z,3.8nm,1.1s,baz=93,slow=4.0							
WERD	**Werda**	**89.30**	**320**	*eP*	**P**	**00 48 33.8**	**-1.3**
	comp=Z,3.1nm,0.9s,baz=93,slow=4.0							
ROTZ	**Rotzenmuhle**	**89.33**	**320**	*eP*	**P**	**00 48 34.6**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=93,slow=4.0							
MANZ	**Manzenberg**	**89.40**	**320**	*eP*	**P**	**00 48 34.2**	**-1.4**
	comp=Z,4.8nm,0.9s,baz=93,slow=4.0							
WTTA	**Wattenberg**	**89.57**	**317**	*eP*	**P**	**00 48 35.2**	**-1.5**
	comp=Z,9.1nm,1.2s							
NEUB	**Neuenburg**	**89.68**	**321**	*eP*	**P**	**00 48 35.2**	**-1.6**
	comp=Z,5.9nm,0.7s,baz=93,slow=4.0							
GRB4	**Grafenberg Arr**	**89.73**	**319**	*e*PcP	**P**	**00 48 37.2**	**0.0**
MOX	**Moxa**	**89.75**	**320**	*eL*	L	01 35 45.3		
	comp=Z,46nm,18.5s							
SQTA	**Sankt Quirin**	**89.86**	**317**	*i* P	**P**	**00 48 37.3**	**-0.7**
	comp=Z,5.3nm,0.7s,SNR=5.2							
MOTA	**Moosalm**	**89.94**	**317**	*i* P	**P**	**00 48 37.9**	**-0.5**
	comp=Z,9.3nm,1.1s,SNR=5.0							
GRF	**Grafenberg Arr**	**89.96**	**320**	*eL*	L	01 34 05.2		
	comp=Z,38nm,18.1s							
SPITS	**Spitsbergen Ar**	**90.10**	**348**	P	**P**	**00 48 37.2**	**-1.1**
	comp=Z,8.2nm,0.8s,baz=96,slow=7.6,SNR=7.9							
RETA	**Reutte**	**90.18**	**317**	*i* P	**P**	**00 48 38.8**	**-0.5**
	comp=Z,4.8nm,0.8s,SNR=6.2							
FETA	**Feichten**	**90.18**	**317**	*eP*	**P**	**00 48 39.7**	**+0.2**
	comp=Z,6.7nm,1.3s							
NOA	**NORSAR Array B**	**90.46**	**331**	P	**P**	**00 48 39.7**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=84,slow=5.4,SNR=3.5							
DAVOX	**Davos/Dischmat**	**90.76**	**317**	P	**P**	**00 48 42.8**	**+0.6**
	comp=Z,8.8nm,0.9s,baz=151,slow=7.5,SNR=12							
DAVA	**Damuels**	**90.77**	**317**	*eP*	**P**	**00 48 42.6**	**+0.4**
	comp=Z,14nm,1.1s							
KEST	**Kesra**	**90.89**	**306**	P	**P**	**00 48 44.1**	**+1.1**
	comp=Z,12nm,0.9s,baz=269,slow=1.8,SNR=12							
KEST	**Kesra**	**90.89**	**306**	P	**P**	**00 48 44.1**	**+1.1**
SNAA	**Saaa**	**92.30**	**198**	P	**P**	**00 48 51.4**	**+2.7**
VNA2	**Neumayer--Watz**	**93.91**	**198**	P	**P**	**00 48 58.6**	**+2.5**
TORD	**Torodi Ar. Bea**	**97.77**	**283**	P	Pdif	00 49 15.3	+0.4
	comp=Z,0.9nm,0.9s,baz=14,slow=4.3,SNR=4.1							
NVAR	**Mina Array Bea**	**129.73**	**39**	PKP	**PKiKP**	**00 54 49.4**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=291,slow=3.1,SNR=6.3							
NVAR	**Mina Array Bea**	**129.73**	**39**		**PKPdf**	**00 54 48.8**	**-0.1**
PDAR	**Pinedale Array**	**131.57**	**28**	PKP	**PKPdf**	**00 54 52.2**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=291,slow=0.8,SNR=2.7							
CPUP	**Villa Florida**	**144.21**	**218**	PKP	**PKPdf**	**00 55 15.1**	**-0.5**
	comp=Z,25nm,0.7s,baz=126,slow=2.6,SNR=64							
CPUP	**Villa Florida**	**144.21**	**218**	PKPdf	**PKPdf**	**00 55 14.8**	**-0.8**
TXAR	**Lajitas Array**	**144.81**	**36**	PKP	PKPbc	00 55 15.5	-0.1
	comp=Z,4.7nm,0.7s,baz=253,slow=1.0,SNR=44							
TXAR	**Lajitas Array**	**144.81**	**36**	PKPdf	**PKPab**	**00 55 15.1**	**-0.5**
LPAZ	**La Paz**	**158.32**	**214**	PKP	**PKPdf**	**00 55 38.3**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=62,slow=16,SNR=4.5							
LPAZ				PKPab	**pPKPab**	**00 56 13.4**	**-1.8**
	comp=Z,1.3nm,0.7s,baz=145,slow=5.2,SNR=5.1							
LPAZ	**La Paz**	**158.32**	**214**		**PKPdf**	**00 55 37.6**	**-0.3**

*IDC **27** 00:36:49.8±1.1, 5.°69N×61.°18E, h0km, mb4.0/13, mb1 4.2/13, mb1mx3.8/62, mbtmp4.0/13, Error ellipse: s-maj=37.7km s-min=19.4km az=38.0*

ISC 27 00:36:51.4±1.2, 5.°7N±0.°2×61.°2E±0.°1, h10km, n26, σ1§11/25, mb4.0/13, 9C-1D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**38.61**	**16**	P	**P**	**00 44 14.9**	**-0.1**
	1.3nm,0.6s,baz=173,slow=4.6,SNR=5.6						
CMAR	**Chiang Mai Arr**	**38.91**	**68**	P	**P**	**00 44 18.3**	**+0.6**
	0.6nm,0.3s,baz=267,slow=6.8,SNR=1.9						
KBZ	**Khabaz**	**41.15**	**340**	P	**P**	**00 44 36.4**	**+0.6**
	2.3nm,0.9s,baz=155,slow=2.7,SNR=4.0						
BRTR	**Keskin Array B**	**41.99**	**328**	P	**P**	**00 44 43.8**	**+0.7**
	1.9nm,0.7s,baz=139,slow=7.5,SNR=5.1						
WMQ	**Urumqi**	**44.53**	**27**	*eP*	**P**	**00 45 04.5**	**+1.1**
AKTO	**Aktyubinsk**	**44.65**	**357**	P	**P**	**00 45 04.5**	**+0.3**
	1.8nm,0.9s,baz=163,slow=6.1,SNR=4.0						
GTA	**Gaotai**	**48.32**	**40**	P	P	00 45 21.5	-12
GTA				pP	pP	00 45 30.5	-5.0
GTA				sP	sP	00 45 34.0	-2.4
LZH	**Lanzhou**	**49.38**	**46**	*eP*	**P**	**00 45 40.0**	**-1.7**
LZH				pP	pwP	00 45 54.0	+5.9
LZH				sP	sP	00 45 58.3	+14
MILM	**Milestii Mici**	**49.61**	**331**	⇑P	**P**	**00 45 43.2**	**+0.3**
NEHR	**Nehoiu**	**49.85**	**328**	⇑P	**P**	**00 45 46.8**	**+1.9**
VRI	**Vrincioaia**	**49.92**	**329**	⇑P	**P**	**00 45 46.7**	**+1.3**
PLOR	**Plostina**	**49.95**	**329**	⇑P	**P**	**00 45 47.4**	**+1.8**
MLR	**Muntele Rosu**	**50.07**	**328**	P	**P**	**00 45 46.6**	**-0.1**
	2.7nm,0.8s,baz=168,slow=9.3						
TESR	**Tescani**	**50.40**	**329**	⇑P	**P**	**00 45 49.5**	**+0.6**
VOIR		**50.51**	**327**	⇑P	**P**	**00 45 49.3**	**-0.7**
DOPR	**Dopca**	**50.68**	**328**	⇑P	**P**	**00 45 51.7**	**+0.6**
ARR	**Arges**	**50.69**	**327**	⇓P	**P**	**00 45 51.7**	**+0.4**
HERR	**Herculane**	**51.62**	**325**	⇑P	**P**	**00 45 58.8**	**+0.6**
BZS	**Buzias**	**52.51**	**326**	⇑P	**P**	**00 46 01.6**	**-3.2**
VRAC	**Vranov**	**57.43**	**327**	P	**P**	**00 46 40.3**	**0.0**
	2.7nm,0.8s,baz=125,slow=2.3,SNR=5.1						
TORD	**Torodi Ar. Bea**	**59.06**	**282**	P	**P**	**00 46 52.7**	**+0.3**
	0.9nm,1.1s,baz=102,slow=6.9,SNR=3.1						
FINES	**FINESS Array B**	**61.46**	**342**	P	**P**	**00 47 07.7**	**-0.3**
	2.6nm,1.0s,baz=120,slow=8.2,SNR=2.4						
HFS	**Hagfors**	**65.04**	**336**	P	**P**	**00 47 31.6**	**-0.1**
	2.4nm,0.7s,baz=300,slow=1.2,SNR=5.6						
EKA	**Eskdalemuir Ar**	**70.91**	**327**	P	**P**	**00 48 07.8**	**-0.9**
	1.2nm,0.7s,baz=113,slow=7.3,SNR=4.6						
WRA	**Warramunga Arr**	**76.22**	**112**	P	**P**	**00 48 40.9**	**+0.2**
	1.5nm,1.0s,baz=289,slow=5.1,SNR=7.0						
ASAR	**Alice Springs**	**76.59**	**116**	P	**P**	**00 48 42.9**	**+0.1**
	0.8nm,0.7s,baz=288,slow=5.7,SNR=5.2						

*TUL **27** 00:54:23.9±1.7, 36.°59N±0.°01×97.°81W±0.°01, h6km±6km, ML3.1, Error ellipse: s-maj=1.7km s-min=1.5km az=152.0*
*NEIC **27** 00:54:23.9±0.9, 36.°57N±0.°01×97.°802W±0.°009, h5km±7km, Error ellipse: s-maj=1.7km s-min=1.1km az=180.0*
*ANF **27** 00:54:24.2±0.3, 36.°54N×97.°78W, h0km, ML3.6/6, Error ellipse: s-maj=3.8km s-min=2.2km az=151.0*

ISC 27 00:54:24.2±0.9, 36.°56N±0.°02×97.°82W±0.°03, h8km±9km, n41, σ0§80/49, Oklahoma

| Code | Station Name | Δ° |

LMN	**Caledonia Moun**	**9.31**	**308**	PN	Pn	01 29 44.2	-1.3
LMN				SN	Sn	01 31 21.9	-7.8
LMN				Trac		01 31 26.2	
	comp=Z,5.9nm,0.2s						
SVNB	**Stilesville Qu**	**9.51**	**309**	PN	Pn	01 29 46.9	-1.3
SVNB				SN	Sn	01 31 26.6	-8.0
SVNB				Trac		01 31 35.4	
	comp=Z,5.7nm,0.1s						
ELNB	**Elgin, New Bru**	**9.52**	**307**	PN	Pn	01 29 47.5	-0.8
ELNB				SN	Sn	01 31 27.4	-7.4
ELNB				Trac		01 31 31.4	
	comp=Z,2.7nm,0.2s						
WCNB	**Wards Creek**	**9.64**	**305**	PN	Pn	01 29 49.0	-1.0
WCNB				SN	Sn	01 31 29.4	-8.4
WCNB				Trac		01 31 36.6	
	comp=Z,8.7nm,0.2s						
HKNB	**Havelock Quarr**	**9.72**	**307**	PN	Pn	01 29 49.7	-1.4
HKNB				SN	Sn	01 31 32.4	-7.3
HKNB				Trac		01 31 38.0	
	comp=Z,9.5nm,0.3s						
SRNB	**Snider Mountai**	**9.81**	**306**	PN	Pn	01 29 50.9	-1.4
SRNB				SN	Sn	01 31 33.8	-8.1
SRNB				Trac		01 31 37.9	
	comp=Z,2.4nm,0.1s						
GGN	**Saint George**	**10.28**	**300**	PN	Pn	01 29 57.5	-1.3
GGN				SN	Sn	01 31 43.9	-10
GGN				Trac		01 31 52.1	
	comp=Z,94nm,0.9s						
BATG	**Bathurst New B**	**10.80**	**312**	PN	Pn	01 30 04.8	-1.1
BATG				SN	Sn	01 31 57.5	-8.7
BATG				Trac		01 32 00.7	
	comp=Z,5.5nm,0.2s						
NATG	**Natashquan Que**	**11.37**	**331**	SN	Sn	01 32 11.7	-8.3
PKME	**Peaks-Kenny Pk**	**11.97**	**298**	PN	Pn	01 30 22.5	+0.7
PKME				SN	Sn	01 32 24.1	-11
PKME				Trac		01 32 27.6	
	comp=Z,242nm,1.9s						

IDC 27 01:31:09.0±3.0, 22°.70S×179°.47W, h0km, mb4.1/3, mb1 4.4/3, mb1mx3.8/30, mbtmp4.1/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/29, Error ellipse: s-maj=275.0km s-min=35.4km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.67**	**168**	LR	LR	01 34 38.6	
	comp=Z,82nm,19.9s,baz=54,slow=31						
ASAR	**Alice Springs**	**42.73**	**259**	P	P	01 39 08.1	-0.2
	1.9nm,0.6s,baz=94,slow=7.3,SNR=20						
WRA	**Warramunga Arr**	**42.99**	**265**	P	P	01 39 10.3	-0.1
	2.8nm,0.3s,baz=102,slow=8.2,SNR=115						
TXAR	**Lajitas Array**	**89.38**	**58**	P	P	01 44 08.0	0.0
	0.2nm,0.7s,baz=226,slow=8.7,SNR=3.5						

IDC 27 01:34:18.7±3.8, 0°.92S×100°.21E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/38, mbtmp3.6/5, MS3.4/2, Ms1 3.4/2, ms1mx2.7/30, Error ellipse: s-maj=173.2km s-min=22.9km az=56.0

DJA 27 01:34:19.9±2.3, 1°.5S±9°.9×9°.9E±1°.7, h18km±7km, M3.8/5, MLv3.8/5

ISC 27 01:34:18.6±0.8, 1°.25S±0°.06×99°.41E±0°.05, h10km, n20, σ1℘70/13, mb3.6/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISI	**Saibi**	**0.33**	**257**	P	**Pg**	**01 34 26.3**	**+1.1**
SISI				S	**Sg**	**01 34 30.7**	**+1.1**
SDSI	**Sungai Dareh**	**2.04**	**81**	P	**Pn**	**01 34 53.5**	**+0.5**
MNSI	**Mandailing Nat**	**2.04**	**5**	P	**Pb**	**01 34 55.7**	**-0.1**
KRJI	**Kerinci**	**2.21**	**112**	P	**Pg**	**01 35 03.6**	**+2.6**
BKNI	**Bangkinang**	**2.26**	**46**	P	**Pg**	**01 35 02.8**	**+0.8**
SBSI	**Sibolga**	**2.83**	**349**	P	**Pg**	**01 35 14.9**	**+2.0**
BATI	**Baumata**	**25.69**	**111**	LR	LR	01 51 00.5	
	comp=Z,20nm,19.5s,baz=313,slow=40						
H08S2	**Diego Garcia H**	**27.57**	**256**	T	T	02 08 12.0	
	baz=78,slow=75,SNR=15						
H08S3	**Diego Garcia H**	**27.57**	**256**	T	T	02 08 12.0	
	baz=78,slow=75,SNR=60						
H08S1	**Diego Carcia H**	**27.58**	**256**	T	T	02 08 12.0	
	baz=78,slow=75,SNR=4.6						
H01W3	**Cape Leeuwin H**	**36.17**	**159**	T	T	02 19 16.0	
	baz=335,slow=76,SNR=25						
H01W2	**Cape Leeuwin H**	**36.18**	**159**	T	T	02 19 17.0	
	baz=335,slow=76,SNR=24						
H01W1	**Cape Leeuwin H**	**36.18**	**159**	T	T	02 19 17.2	
	baz=335,slow=76,SNR=25						
WRA	**Warramunga Arr**	**38.88**	**121**	P	**P**	**01 41 41.9**	**-2.6**
	0.6nm,0.5s,baz=301,slow=9.4,SNR=7.0						
ASAR	**Alice Springs**	**40.16**	**126**	P	**P**	**01 41 53.4**	**-1.9**
	0.2nm,0.4s,baz=310,slow=7.2,SNR=1.6						
SONM	**Songino Array**	**49.27**	**6**	P	**P**	**01 43 05.8**	**-1.8**
	0.3nm,0.4s,baz=202,slow=9.9,SNR=2.4						
MKAR	**Makanchi Array**	**50.16**	**345**	P	**P**	**01 43 15.1**	**+0.8**
	0.7nm,0.4s,baz=161,slow=8.4,SNR=13						
ZALV	**Zalesovo Beam**	**56.33**	**350**	P	**P**	**01 44 00.3**	**+0.7**
	0.5nm,0.3s,baz=152,slow=6.7,SNR=3.8						
FINES	**FINESS Array B**	**83.18**	**332**	LR	LR	02 27 09.0	
	comp=Z,71nm,18.0s,baz=154,slow=38						
TXAR	**Lajitas Array**	**144.46**	**36**	PKP	**PKPab**	**01 53 54.6**	**+0.3**
	0.1nm,0.4s,baz=220,slow=1.7,SNR=4.2						

IDC 27 01:35:12.3±3.9, 5°.22N×61°.31E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.5/33, mbtmp3.8/3, MS3.6/6, Ms1 3.6/6, ms1mx3.1/38, Error ellipse: s-maj=827.3km s-min=33.1km az=17.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**18.10**	**352**	LR	LR	01 44 37.3	
	comp=Z,116nm,21.5s,baz=179,slow=31						
PALK	**Pallekele**	**19.39**	**83**	LR	LR	01 45 27.7	
	comp=Z,102nm,20.6s,baz=7.2,slow=32						
LSZ	**Lusaka**	**38.62**	**238**	LR	LR	01 56 22.9	
	comp=Z,102nm,20.8s,baz=3.0,slow=33						
AAK	**Ala-Archa**	**39.06**	**15**	LR	LR	01 58 54.4	
	comp=Z,80nm,21.0s,baz=227,slow=36						
MATP	**Matopo**	**41.09**	**231**	LR	LR	01 57 58.9	
	comp=Z,142nm,18.5s,baz=53,slow=33						
LBTB	**Lobatse**	**45.92**	**227**	LR	LR	02 00 28.3	
	comp=Z,93nm,21.6s,baz=56,slow=33						
TORD	**Torodi Ar. Bea**	**59.26**	**282**	P	P	01 45 16.2	-0.1
	0.6nm,0.9s,baz=88,slow=6.4,SNR=3.4						
WRA	**Warramunga Arr**	**75.95**	**112**	P	P	01 47 01.9	+0.2
	1.0nm,0.7s,baz=292,slow=4.8,SNR=15						
ASAR	**Alice Springs**	**76.29**	**116**	P	P	01 47 03.4	-0.2
	0.9nm,0.7s,baz=284,slow=5.7,SNR=9.0						

ISN 27 01:40:33.5±0.9, 32°.79N×47°.61E, h14km±6km, ML3.3
TEH 27 01:40:34.3, 32°.70N×47°.55E, h8km, ML3.3
THR 27 01:40:36.6±0.3, 32°.60N×47°.65E, h14km±10km, ML3.3

ISC 27 01:40:35.9±0.9, 32°.68N±0°.04×47°.48E±0°.04, h10km, n40, σ1℘08/46, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.90**	**20**	*e*Pg	**Pg**	**01 40 51.1**	**-2.1**
IKMR	**Kamar-syah**	**1.13**	**42**	*e*Pg	**Pb**	**01 40 54.9**	**-2.6**
IKMR				*e*		01 41 15.6	
IDOB	**Doab**	**1.25**	**28**	*e*Pg	**Pn**	**01 40 58.7**	**-1.0**
IBDR	**Badra**	**1.38**	**289**	*e*Pg	**Pn**	**01 41 00.0**	**-1.1**
IBDR				*e*Sg	**Sn**	**01 41 19.0**	**-0.4**
IBDR				AML	AML	01 41 25.4	
	comp=N,494nm,0.5s						
IBDR				AML	AML	01 41 26.5	
	comp=E,591nm,0.8s						
IKOM	**Komasi**	**1.50**	**1**	*e*		01 41 05.8	
IKOM				*e*Pg	**Pn**	**01 41 03.0**	**0.0**
KCHF	**Cheshme Sefid,**	**1.64**	**347**	*e*		01 41 30.9	
KCHF				*e*Pg	**Pn**	**01 41 05.7**	**+0.8**
AHWZ	**Ahwaz**	**1.67**	**143**	*e*Pg	**Pb**	**01 41 06.3**	**-0.3**
HSAM	**Samen**	**1.80**	**31**	*e*		01 41 39.2	
HSAM				*e*Pg	**Pn**	**01 41 07.9**	**+0.7**
IBZA	**Bozab**	**1.82**	**10**	*e*		01 41 17.0	
IBZA				*e*Pg	**Pn**	**01 41 08.4**	**+0.9**
IGHG	**Ghaleghazi**	**1.82**	**335**	*e*		01 41 49.4	
IGHG				*e*Pg	**Pn**	**01 41 09.0**	**+1.5**
IVIS	**Veis**	**1.92**	**344**	*e*Pn	**Pn**	**01 41 10.0**	**+1.2**
IVIS				*e*		01 41 41.3	
NSR	**Nassriya**	**2.02**	**215**	*e*Pn	**Pn**	**01 41 10.0**	**+0.1**
NSR				*e*Sn	**Sn**	**01 41 37.0**	**+1.9**
NSR				AML	AML	01 41 47.0	
	comp=E,243nm,0.5s						
IDHR	**Dehrash**	**2.22**	**336**	*e*Pn	**Pn**	**01 41 13.2**	**+0.3**
IDHR				*e*		01 41 56.8	
IALM	**Almabolaq**	**2.25**	**14**	*e*Pn	**Pn**	**01 41 12.9**	**-0.6**
ILIN	**Lien**	**2.28**	**349**	*e*Pn	**Pn**	**01 41 15.3**	**+1.5**
ILIN				*e*		01 41 59.2	
KHMZ	**Khomeyn**	**2.33**	**62**	*e*Pn	**Pn**	**01 41 15.5**	**+1.0**
KHMZ				*e*Sg	**Sb**	**01 41 47.5**	**+0.4**
KHMZ	**Khomeyn**	**2.33**	**62**	*e*Pn	**Pn**	**01 41 15.5**	**+1.0**
SNGE	**Sanandaj**	**2.41**	**357**	*e*Pn	**Pb**	**01 41 19.1**	**-0.4**
SNGE				*e*Sg	**Sg**	**01 41 55.0**	**+1.5**
HSRG	**Sareghieh**	**2.65**	**14**	*e*Pn	**Pn**	**01 41 20.1**	**+1.2**
HSRG				*e*		01 42 09.1	
BHD	**Baghdad**	**2.67**	**284**	*e*Pn	**Pn**	**01 41 19.0**	**0.0**
BHD				*e*Sn	**Sn**	**01 41 53.0**	**+1.6**
BHD				AML	AML	01 42 22.8	
	comp=E,198nm,0.6s						
ASAO	**Ashtian**	**2.83**	**48**	*e*Pn	**Pn**	**01 41 22.8**	**+1.5**
ASAO				*e*Sg	**Sb**	**01 42 03.6**	**+2.2**
ASAO	**Ashtian**	**2.83**	**48**	*e*Pn	**Pn**	**01 41 22.8**	**+1.5**
IPIR	**Pirpir**	**2.88**	**89**	*e*Pn	**Pn**	**01 41 22.6**	**+0.6**
IRAZ	**Razeghan**	**3.40**	**36**	*e*Pn	**Pn**	**01 41 30.4**	**+1.3**
QABG	**Abgarm-Qazvin**	**3.49**	**29**	*e*Pn	**Pn**	**01 41 30.4**	**-0.1**
IKLH	**Kolahrood**	**3.50**	**78**	*e*Pn	**Pn**	**01 41 31.4**	**+0.8**
IKLH				*e*		01 41 42.9	
GHVR	**GHOM**	**3.66**	**59**	*e*Pn	**Pn**	**01 41 33.3**	**+0.7**
GHVR	**GHOM**	**3.66**	**59**	*e*Pn	**Pn**	**01 41 33.3**	**+0.7**
IGAR	**Gharneh**	**3.86**	**93**	*e*Pn	**Pn**	**01 41 35.6**	**+0.1**
KLNJ	**Kolanjah**	**3.87**	**114**	*e*Pn	**Pn**	**01 41 35.6**	**-0.2**
KLNJ				*e*		01 42 49.5	
QSDN	**Sirdan**	**4.07**	**20**	*e*Pn	**Pn**	**01 41 39.2**	**+0.8**
IZEF	**Zefreh**	**4.09**	**86**	*e*Pn	**Pn**	**01 41 39.5**	**+0.8**
KRSH	**Karshahi**	**4.10**	**70**	*e*Pn	**Pn**	**01 41 39.1**	**+0.3**
IRAM	**Ramesheh**	**4.24**	**100**	*e*Pn	**Pn**	**01 41 40.8**	**+0.1**
MAHB	**Mahabad**	**4.34**	**341**	*e*Pn	**Pn**	**01 41 42.7**	**+0.7**
NASN	**Na'in**	**4.49**	**87**	*e*Pn	**Pn**	**01 41 44.6**	**+0.3**
NASN	**Na'in**	**4.49**	**87**	*e*Pn	**Pn**	**01 41 44.6**	**+0.3**
QALM	**Alamut, Qazvin**	**4.57**	**34**	*e*Pn	**Pn**	**01 41 45.5**	**+0.2**
IDMV	**Damavand**	**4.76**	**51**	*e*Pn	**Pn**	**01 41 48.6**	**+0.7**
ILAS	**Lasjerd**	**5.29**	**58**	*e*Pn	**Pn**	**01 41 55.6**	**+0.4**

NEIC 27 01:48:17.7±1.4, 5°.6N±0°.2×61°.4E±0°.1, h10km±2km, mb4.5/17, Error ellipse: s-maj=27.9km s-min=19.1km az=191.0

IDC 27 01:48:18.4±1.0, 5°.70N×61°.41E, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.8/40, mbtmp4.0/9, MS3.7/15, Ms1 3.7/15, ms1mx3.5/26, Error ellipse: s-maj=31.3km s-min=20.8km az=27.0

GCMT 27 01:48:21.7±0.3, 5°.61N±0°.03×61°.42E±0°.04, h18km±1km, MW4.8/86, Moment Tensor Solution. s14,c15; s86,c116; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.41±.18; Mθθ1.52±.11; Mϕϕ0.89±.10; Mrθ0.06±.27; Mϕθ-0.67±.05; Mrϕ-0.26±.33; Best double couple: Mo2.19100×10¹⁶ NP1:ϕs119.00000°, δ43.00000°, λ-95.00000°. NP2: ϕs306.00000°, δ48.00000°, λ-85.00000°. Principal axes: T 1.9520, Plg2.0000°, Azm33.0000°; N 0.4790, Plg4.0000°, Azm123.0000°; P -2.4300, Plg86.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 27 01:48:19.4±1.0, 5°.8N±0°.2×61°.4E±0°.1, h10km, n49, σ1℘39/40, mb4.3/16, MS3.6/13, 8D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**17.58**	**351**	LR	LR	01 57 53.1	
	comp=Z,320nm,19.4s,baz=191,slow=33						
PALK	**Pallekele**	**19.19**	**84**	LR	LR	01 58 40.5	
	comp=Z,402nm,19.0s,baz=12,slow=32						
ATD	**Arta Tunnel**	**19.25**	**289**	P	**P**	**01 52 42.7**	**-1.6**
FURI	**Furi**	**22.79**	**279**	P	**P**	**01 53 20.5**	**-2.3**
RAYN	**Ar Rayn**	**23.39**	**321**	P	**P**	**01 53 28.7**	**+0.1**
RAYN				IAmb	IAmb	01 53 32.1	
	comp=Z,6.1nm,0.9s						
DRK	**Karamyk**	**34.84**	**14**	P	**P**	**01 55 10.9**	**-0.1**
SHL	**Shillong**	**35.15**	**53**	P	**P**	**01 55 12.2**	**-1.6**
SHL				IAmb	IAmb	01 55 17.1	
	comp=Z,10nm,1.1s						
BTK	**Batken**	**35.17**	**13**	P	**P**	**01 55 14.8**	**+1.2**
BTK				IAmb	IAmb	01 55 18.3	
	comp=Z,19nm,1.6s						
MARD	**Mardin**	**36.63**	**332**	P	**P**	**01 55 24.8**	**-1.5**
MARD				IAmb	IAmb	01 55 30.1	
	comp=Z,13nm,1.3s						
LSA	**Lhasa**	**36.76**	**46**	P	**P**	**01 55 28.5**	**+0.6**
LSA				IAmb	IAmb	01 55 31.9	
	comp=Z,27nm,1.7s						
PSI	**Prapat**	**37.49**	**93**	LR	LR	02 08 34.4	
	comp=Z,188nm,20.7s,baz=270,slow=32						
KK31	**Karatay Array**	**38.04**	**11**	P	**P**	**01 55 37.7**	**-0.3**
KKAR	**Karatay Array**	**38.04**	**11**	P	**P**	**01 55 37.7**	**-0.3**
KKAR	**Karatay Array**	**38.04**	**11**	P	**P**	**01 55 39.3**	**+1.3**
KKAR				IAmb	IAmb	01 55 42.1	
	comp=Z,3.5nm,0.9s						
AAK	**Ala-Archa**	**38.50**	**16**	P	**P**	**01 55 44.6**	**+2.6**
	comp=Z,2.0nm,0.6s,baz=192,slow=2.1,SNR=8.8						
AAK	**Ala-Archa**	**38.50**	**16**	P	**P**	**01 55 41.8**	**-0.2**
AAK				IAmb	IAmb	01 55 46.7	
	comp=Z,22nm,1.8s						
CMAR	**Chiang Mai Arr**	**38.68**	**68**	P	**P**	**01 55 46.1**	**+2.4**
	comp=Z,0.6nm,0.3s,baz=260,slow=8.2,SNR=8.2						
CMAR				LR	LR	02 10 45.5	
	comp=Z,76nm,21.3s,baz=317,slow=35						
CMAR	**Chiang Mai Arr**	**38.68**	**68**	P	**P**	**01 55 43.5**	**-0.3**
FRU1	**Bishkek**	**38.69**	**16**	P	**P**	**01 55 42.6**	**-1.0**
CHTO	**Chiang Mai**	**38.77**	**67**	P	**P**	**01 55 44.0**	**-0.5**
CHTO				IAmb	IAmb	01 55 48.0	
	comp=Z,11nm,1.4s						
KBZ	**Khabaz**	**41.18**	**340**	LR	LR	02 13 07.9	
	comp=Z,82nm,21.6s,baz=156,slow=36						
BRTR	**Keskin Array B**	**42.07**	**328**	P	**P**	**01 56 13.6**	**+1.9**
	comp=Z,1.5nm,0.9s,baz=178,slow=8.7,SNR=4.5						
BRTR				LR	LR	02 14 04.4	
	comp=Z,81nm,20.4s,baz=131,slow=37						
BRTR	**Keskin Array B**	**42.07**	**328**	P	**P**	**01 56 12.1**	**+0.4**
ABKAR	**Akbulak array**	**43.35**	**359**	P	**P**	**01 56 21.9**	**+0.2**
ABKAR				IAmb	IAmb	01 56 25.4	
	comp=Z,12nm,1.4s						
ABKAR	**Akbulak array**	**43.35**	**359**	P	**P**	**01 56 22.4**	**+0.6**
MKAR	**Makanchi Array**	**44.65**	**20**	P	**P**	**01 56 31.6**	**-0.7**
VRI	**Vrincioaia**	**49.99**	**329**	⇓P	**P**	**01 57 16.6**	**+2.6**
PLOR	**Plostina**	**50.02**	**329**	⇓P	**P**	**01 57 17.4**	**+3.2**
VOIR		**50.59**	**327**	⇓P	**P**	**01 57 20.2**	**+1.6**
ARR	**Arges**	**50.77**	**327**	⇓P	**P**	**01 57 20.5**	**+0.6**
ZALV	**Zalesovo Beam**	**51.66**	**17**	P	**P**	**01 57 25.4**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=219,slow=11,SNR=1.7						
ZALV				LR	LR	02 19 49.6	
	comp=Z,138nm,20.7s,baz=294,slow=37						
ZALV	**Zalesovo Beam**	**51.66**	**17**	P	**P**	**01 57 25.6**	**-0.7**
HERR	**Herculane**	**51.70**	**325**	⇓P	**P**	**01 57 28.5**	**+1.7**
BURAR	**Bucovina Array**	**51.93**	**329**	⇓P	**P**	**01 57 30.1**	**+1.5**
MDVR	**Moldovita**	**52.05**	**325**	⇓P	**P**	**01 57 30.3**	**+0.9**
BZS	**Buzias**	**52.60**	**326**	⇓P	**P**	**01 57 33.5**	**+0.1**
KEST	**Kesra**	**56.26**	**309**	LR	LR	02 23 12.4	
	comp=Z,48nm,19.1s,baz=308,slow=37						
SONM	**Songino Array**	**56.76**	**35**	P	**P**	**01 58 03.1**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=228,slow=5.8,SNR=6.0						
SONM				LR	LR	02 23 18.9	
	comp=Z,148nm,18.5s,baz=176,slow=37						
SONM	**Songino Array**	**56.76**	**35**	P	**P**	**01 58 02.6**	**-1.2**
GERES	**GERESS Array B**	**58.87**	**325**	LR	LR	02 24 04.8	
	comp=Z,51nm,20.8s,baz=132,slow=36						
TORD	**Torodi Ar. Bea**	**59.28**	**282**	P	**P**	**01 58 23.1**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=75,slow=5.7,SNR=3.6						
ESDC	**Sonseca Array**	**67.47**	**311**	P	**P**	**01 59 15.8**	**0.0**
	comp=Z,1.5nm,0.8s,baz=86,slow=5.6,SNR=9.4						
FITZ	**Fitzroy Crossi**	**67.60**	**112**	LR	LR	02 23 38.2	
	comp=Z,29nm,20.7s,baz=325,slow=31						
MAW	**Mawson**	**73.20**	**179**	LR	LR	02 23 58.3	
	comp=Z,80nm,21.2s,baz=52,slow=29						
WRA	**Warramunga Arr**	**76.03**	**112**	P	**P**	**02 00 08.2**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=288,slow=4.8,SNR=7.8						
WRA				LR	LR	02 29 54.3	
	comp=Z,24nm,20.6s,baz=310,slow=33						
WRA	**Warramunga Arr**	**76.03**	**112**	P	**P**	**02 00 05.8**	**-1.8**
ASAR	**Alice Springs**	**76.40**	**116**	P	**P**	**02 00 10.3**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=289,slow=5.7,SNR=14						
ASAR				LR	LR	02 29 04.2	
	comp=Z,27nm,20.5s,baz=304,slow=32						
STKA	**Stephens Creek**	**84.70**	**123**	LR	LR	02 35 08.4	
	comp=Z,60nm,19.7s,baz=207,slow=33						
TXAR	**Lajitas Array**	**142.28**	**338**	PKP	**PKPdf**	**02 07 54.6**	**+1.5**
	comp=Z,0.1nm,0.8s,baz=45,slow=1.4,SNR=1.6						

IDC 27 01:50:33.8±1.4, 5°.45N×61°.17E, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.5/40, mbtmp3.9/4, Error ellipse: s-maj=69.5km s-min=32.3km az=6.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**39.05**	**67**	P	P	01 58 02.6	-0.1
	0.9nm,0.3s,baz=260,slow=8.3,SNR=6.6						
TORD	**Torodi Ar. Bea**	**59.08**	**282**	P	P	02 00 36.4	-0.1
	0.6nm,1.0s,baz=93,slow=7.2,SNR=2.2						
WRA	**Warramunga Arr**	**76.16**	**112**	P	P	02 02 24.4	0.0
	2.1nm,1.0s,baz=288,slow=5.5,SNR=6.6						
ASAR	**Alice Springs**	**76.51**	**116**	P	P	02 02 26.4	+0.1
	0.8nm,0.8s,baz=294,slow=5.5,SNR=7.4						

NEIC 27 02:17:06.0±0.6, 18°.2S±0°.1×178°.5W±0°.1, h607km±8km, mb4.2/21, Error ellipse: s-maj=22.0km s-min=18.4km az=147.0

IDC 27 02:17:07.8±2.4, 17°.99S×178°.58W, h613km±28km, mb3.4/20, mb1 3.6/21, mb1mx3.5/41, mbtmp4.3/21, Error ellipse: s-maj=20.9km s-min=12.3km az=148.0

ISC 27 02:17:05.9±0.5, 18°.1S±0°.1×178°.47W±0°.08, h600km, n114, σ0℘88/117, mb4.0/29, 17C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.33**	**275**	P	**P**	**02 18 27.9**	**+0.7**
MSVF				S	**S**	**02 19 34.8**	**+1.5**
NIUE	**Niue**	**8.16**	**98**	P	**P**	**02 19 08.3**	**+1.6**
DZM	**Mont Dzumac**	**14.73**	**252**	P	**P**	**02 20 12.5**	**+0.7**
	0.5nm,0.3s,baz=32,slow=15,SNR=2.5						
URZ	**Urewera**	**20.50**	**190**	P	**P**	**02 21 01.9**	**-2.0**
URZ				IAmb	IAmb	02 21 13.0	
	comp=Z,8.2nm,0.9s						
THZ	**Tophouse**	**24.76**	**196**	P	**P**	**02 21 41.3**	**-0.5**
CTA	**Charters Tower**	**33.37**	**261**	P	**P**	**02 22 56.7**	**+0.3**
	comp=Z,2.0nm,0.4s,baz=103,slow=11,SNR=7.1						
CTAO	**Charters Tower**	**33.37**	**261**	P	**P**	**02 22 56.5**	**+0.1**
CTAO				IAmb	IAmb	02 23 10.3	
	comp=Z,5.2nm,1.0s						
COEN	**Coen**	**37.05**	**271**	P	**P**	**02 23 27.8**	**+1.0**
COEN				IAmb	IAmb	02 23 40.2	
	comp=Z,8.6nm,1.1s						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**02 23 39.3**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=103,slow=12,SNR=6.5						
STKA	**Stephens Creek**	**38.51**	**241**	P	**P**	**02 23 37.9**	**-0.6**
WAKE	**Wake Island**	**39.88**	**338**	P	**P**	**02 23 50.2**	**+0.7**
JAY	**Jayapura**	**42.90**	**286**	P	**P**	**02 24 14.1**	**+0.7**
	comp=Z,14nm,0.6s,baz=75,slow=4.5,SNR=4.0						
BBOO	**Buckleboo**	**43.29**	**241**	P	**P**	**02 24 16.8**	**+0.6**
BBOO				IAmb	IAmb	02 24 17.0	
	comp=Z,6.2nm,0.7s						
WB0	**Warramunga Arr**	**44.52**	**260**	P	**P**	**02 24 25.2**	**-0.7**
WB2	**Warramunga Arr**	**44.54**	**260**	P	**P**	**02 24 25.7**	**-0.4**
WB2				IAmb	IAmb	02 24 26.5	
	comp=Z,5.0nm,0.6s						
WRAB	**Tennant Creek**	**44.54**	**260**	P	**P**	**02 24 25.1**	**-0.9**
WRAB				IAmb	IAmb	02 24 29.5	
	comp=Z,7.8nm,1.1s						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**02 24 25.9**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=96,slow=7.1,SNR=69						
WRA				PcP	**PcP**	**02 25 56.3**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=92,slow=3.6,SNR=6.0						
WRA	**Warramunga Arr**	**44.55**	**260**	P	**P**	**02 24 25.5**	**-0.7**
ASAR	**Alice Springs**	**44.70**	**254**	P	**P**	**02 24 27.6**	**+0.3**
	comp=Z,14nm,0.5s,baz=88,slow=8.9,SNR=35						
ASAR				PcP	**PcP**	**02 25 56.5**	**0.0**
	comp=Z,1.3nm,0.5s,baz=102,slow=3.7,SNR=5.7						
ASAR				S	**S**	**02 30 19.9**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=95,slow=15,SNR=4.6						
ASAR	**Alice Springs**	**44.70**	**254**	P	**P**	**02 24 26.5**	**-0.7**
FITZ	**Fitzroy Crossi**	**52.95**	**261**	P	**P**	**02 25 27.6**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=70,slow=4.7,SNR=9.0						
FITZ	**Fitzroy Crossi**	**52.95**	**261**	P	**P**	**02 25 27.5**	**-0.6**
VNDA	**Vanda**	**60.30**	**185**	P	**P**	**02 26 18.8**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=339,slow=3.9,SNR=5.4						
MJAR	**Matsushiro Arr**	**67.99**	**323**	P	**P**	**02 27 06.3**	**-0.2**

DPC	**Dobruska-Polom**	**145.67**	**343**	*e*PKP	**PKPbc**	**02 35 38.6**	**0.0**
KRLC	**Kraliky**	**145.79**	**342**	*e*PKP	**PKPbc**	**02 35 39.3**	**+0.4**
BRG	**Berggiesshubel**	**145.79**	**346**	*e*PKP	**PKPbc**	**02 35 39.1**	**+0.3**
	comp=Z,5.2nm,0.7s						
MORC	**Moravsky Berou**	**145.83**	**341**	*e*PKP	**PKPbc**	**02 35 39.2**	**+0.2**
DOPR	**Dopca**	**145.85**	**330**	⇑P	**PKPab**	**02 35 40.1**	**-1.1**
ISR	**Istrita**	**145.89**	**328**	⇑P	**PKiKP**	**02 35 42.4**	**+0.6**
MLR	**Muntele Rosu**	**145.93**	**329**	⇑P	**PKPbc**	**02 35 39.5**	**0.0**
PVCC	**Panska Ves**	**145.97**	**345**	*e*PKP	**PKPab**	**02 35 40.0**	**-1.4**
MMAI	**Mount Meron Ar**	**146.18**	**303**	PKPbc	**PKPbc**	**02 35 41.2**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=74,slow=6.2,SNR=14						
VOIR		**146.44**	**329**	⇑P	**PKPbc**	**02 35 41.4**	**+0.6**
DRGR		**146.44**	**333**	⇑P	**PKPbc**	**02 35 41.0**	**+0.2**
PRU	**Pruhonice**	**146.47**	**345**	*e*PKP	**PKPbc**	**02 35 41.0**	**+0.3**
VRAC	**Vranov**	**146.53**	**342**	*e*PKP	**PKPbc**	**02 35 41.1**	**+0.2**
JAVC	**Velka Javorina**	**146.60**	**341**	*e*PKP	**PKiKP**	**02 35 42.4**	**-0.8**
PSZ	**Piszkesteto**	**146.65**	**337**	⇑P	**PKPbc**	**02 35 40.7**	**-0.6**
ARR	**Arges**	**146.66**	**330**	⇑P	**PKiKP**	**02 35 42.1**	**-1.3**
KRUC	**Moravsky**	**146.81**	**342**	*e*PKP	**PKPbc**	**02 35 41.8**	**+0.1**
SIRR	**Siria**	**147.30**	**334**	⇑P	**PKPbc**	**02 35 43.4**	**+0.3**
KHC	**Kasperske Hory**	**147.50**	**345**	*e*PKP	**PKPbc**	**02 35 43.8**	**+0.3**
KHC	**Kasperske Hory**	**147.50**	**345**		**PKPbc**	**02 35 43.1**	**-0.4**
GEC2	**GERESS Array S**	**147.74**	**345**		**PKPbc**	**02 35 43.8**	**-0.4**
GERES	**GERESS Array B**	**147.74**	**345**	PKPbc	**PKPbc**	**02 35 44.3**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=25,slow=3.1,SNR=32						
GERES	**GERESS Array B**	**147.74**	**345**		**PKPbc**	**02 35 43.8**	**-0.4**
CONA	**Conrad Observa**	**147.98**	**342**	*i* P	**PKiKP**	**02 35 45.3**	**-0.8**
	comp=Z,5.1nm,0.8s,SNR=4.6						
MOA	**Molln**	**148.51**	**343**	*e*P	**PKPbc**	**02 35 46.1**	**0.0**
	comp=Z,4.0nm,1.2s						
SOKA	**Soboth**	**149.36**	**342**	*e*P	**PKPbc**	**02 35 47.2**	**-1.0**
	comp=Z,6.9nm,1.1s						
KBA	**Koelnbreinsper**	**149.47**	**344**	*e*P	**PKPbc**	**02 35 47.4**	**-1.1**
	comp=Z,5.5nm,1.1s						
OBKA	**Obir**	**149.65**	**342**	*e*P	**PKPbc**	**02 35 47.2**	**-1.7**
	comp=Z,8.6nm,1.5s						
WATA	**Walderalm**	**149.65**	**346**	*i* P	**PKPbc**	**02 35 48.7**	**-0.3**
	comp=Z,14nm,1.8s,SNR=4.8						
RETA	**Reutte**	**149.68**	**348**	*e*P	**PKPbc**	**02 35 48.7**	**-0.2**
	comp=Z,2.4nm,1.0s						
WTTA	**Wattenberg**	**149.71**	**346**	*i* P	**PKiKP**	**02 35 49.1**	**-0.7**
	comp=Z,6.4nm,0.5s,SNR=7.4						
MOTA	**Moosalm**	**149.75**	**347**	*e*P	**PKiKP**	**02 35 49.2**	**-0.7**
	comp=Z,5.0nm,1.0s						
MYKA	**Terra Mystica**	**149.80**	**343**	*e*P	**PKPbc**	**02 35 47.4**	**-1.9**
	comp=Z,4.0nm,0.6s						
SQTA	**Sankt Quirin**	**149.84**	**347**	*e*P	**PKiKP**	**02 35 49.4**	**-0.7**
	comp=Z,4.4nm,0.6s						
ABTA	**Abfaltersbach**	**149.99**	**345**	*i* P	**PKPbc**	**02 35 49.2**	**-0.5**
	comp=Z,8.1nm,0.7s,SNR=8.1						
DAVA	**Damuels**	**150.05**	**349**	*e*P	**PKPbc**	**02 35 49.2**	**-0.7**
	comp=Z,6.2nm,1.1s						
FETA	**Feichten**	**150.13**	**347**	*e*P	**PKiKP**	**02 35 50.3**	**-0.4**
	comp=Z,3.9nm,0.7s						
CIMO	**Cimolais**	**150.41**	**345**		**PKPbc**	**02 35 50.2**	**-0.4**
APE	**Apeiranthos**	**151.65**	**317**	⇑P	**PKPdf**	**02 35 44.0**	**-2.8**
TORD	**Torodi Ar. Bea**	**175.12**	**182**	PKP	**PKPdf**	**02 36 08.0**	**-0.7**
	comp=Z,0.6nm,1.0s,baz=172,slow=0.2,SNR=2.8						

IDC 27 02:20:17.8±18.0, 20°52S×175°28W, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.8/38, mbtmp4.1/5, Error ellipse: s-maj=336.9km s-min=155.0km az=81.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**36.03**	**264**	P	P	02 27 22.1	+1.0
	0.8nm,0.4s,baz=85,slow=13,SNR=5.8						
STKA	**Stephens Creek**	**40.08**	**245**	P	P	02 27 54.2	-0.9
	0.9nm,0.6s,baz=106,slow=15,SNR=3.2						
ASAR	**Alice Springs**	**47.00**	**256**	P	P	02 28 50.6	-0.5
	1.3nm,0.4s,baz=95,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**47.12**	**261**	P	P	02 28 51.5	-0.6
	1.0nm,0.4s,baz=94,slow=8.3,SNR=40						
FITZ	**Fitzroy Crossi**	**55.55**	**262**	P	P	02 29 55.8	+0.4
	0.8nm,0.5s,baz=90,slow=7.1,SNR=4.1						

IDC 27 02:31:15.8±4.0, 4°87N×62°14E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.4/61, mbtmp3.8/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/33, Error ellipse: s-maj=102.2km s-min=64.0km az=116.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**27.56**	**212**	LR	LR	02 44 43.4	
	comp=Z,25nm,21.2s,baz=211,slow=29						
CMAR	**Chiang Mai Arr**	**38.39**	**66**	P	P	02 38 39.2	-0.1
	0.6nm,0.3s,baz=264,slow=8.1,SNR=3.8						
NOA	**NORSAR Array B**	**67.70**	**336**	LR	LR	03 12 56.3	
	comp=Z,7.9nm,20.4s,baz=30,slow=37						
WRA	**Warramunga Arr**	**75.05**	**112**	P	P	02 42 59.7	-0.4
	0.8nm,0.9s,baz=286,slow=4.8,SNR=5.7						
ASAR	**Alice Springs**	**75.39**	**116**	P	P	02 43 02.5	+0.4
	0.8nm,0.8s,baz=295,slow=5.0,SNR=7.5						
TXAR	**Lajitas Array**	**143.36**	**339**	PKP	PKPdf	02 50 52.8	-0.5
	0.2nm,0.8s,baz=19,slow=3.8,SNR=2.7						

WEL 27 02:58:38.9, 43°S±1°×172°2E±0°9, h9km±4km, M2.1/6, ML2.2/6, MLv2.1/6, Error ellipse: s-maj=0.0km s-min=0.0km az=18.1, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OXZ	**Oxford**	**0.17**	**331**	P	Pg	02 58 44.0	+1.5
RACZ	**Rakaia**	**0.25**	**182**	P	Pb	02 58 45.9	+0.2
MHCZ	**Mount Hutt**	**0.43**	**262**	P	Pb	02 58 49.0	+0.3
MQZ	**McQueen's Vall**	**0.43**	**123**	P	Pb	02 58 49.0	+0.2
WACZ	**Wakanui South**	**0.52**	**205**	P	Pb	02 58 51.1	+0.8
AKCZ	**Akaroa Harbour**	**0.68**	**126**	P	Pb	02 58 53.7	+0.7
LTZ	**Lake Taylor**	**0.70**	**7**	P	Pn	02 58 54.3	-0.7
OKCZ	**Okains Bay**	**0.71**	**111**	P	Pn	02 58 54.4	-0.8
GVZ	**Greta Valley S**	**0.82**	**52**	P	Pg	02 58 54.5	-0.3
ARCZ	**Arundel**	**0.85**	**236**	P	Pn	02 58 56.9	-0.2
ODZ	**Otahua Downs**	**1.91**	**214**	P	Pg	02 59 16.5	+1.1
PRHZ	**Porangahau**	**4.63**	**48**	P	Pn	02 59 52.4	+3.3

IDC 27 02:59:46.6±43.0, 34°66N×99°84E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.3/35, mbtmp3.7/4, ML3.6/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/32, Error ellipse: s-maj=597.0km s-min=74.2km az=160.0

BJI 27 02:59:57.2±0.0, 35°71N×99°14E, h7km, ML3.4/8

ISC 27 02:59:59.9±1.5, 35°7N±0°1×99°16E±0°07, h10km, n7, σ0°96/14, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**3.73**	**8**	Pn	**Pn**	**03 00 57.5**	**-0.1**
GTA				Pg	**Pb**	**03 01 05.5**	**-0.4**
GTA				Sn	**Sn**	**03 01 40.8**	**-0.8**
GTA				Sg	**Sb**	**03 01 52.0**	**+0.9**
LZH	**Lanzhou**	**3.82**	**83**	*e*Pg	**Pb**	**03 01 06.0**	**-1.5**
LZH				Sn	**Sn**	**03 01 44.8**	**+0.8**
LZH				Sg	**Sb**	**03 01 55.8**	**+1.9**
LZH				smax	smax		
	comp=N,180nm,0.7s						
LZH				smax	smax		
	comp=E,470nm,0.6s						
WMQ	**Urumqi**	**11.96**	**316**	*e*P	**Pn**	**03 02 50.5**	**0.0**
WMQ				sP		03 02 57.0	
WMQ				PP	**PnPn**	**03 02 59.0**	**+0.8**
WMQ				S	**Sn**	**03 05 04.0**	**0.0**
SONM	**Songino Array**	**13.25**	**22**	Pn	**Pn**	**03 03 07.4**	**-0.7**
	0.3nm,0.3s,baz=202,slow=14,SNR=6.4						
MKAR	**Makanchi Array**	**16.80**	**316**	Pn	**Pn**	**03 03 54.9**	**-0.2**
	0.3nm,0.3s,baz=125,slow=14,SNR=9.5						
MKAR				LR	LR	03 10 12.8	
	comp=Z,19nm,18.9s,baz=338,slow=35						
ZALV	**Zalesovo Beam**	**20.80**	**336**	P	**P**	**03 04 41.7**	**+0.5**
	1.1nm,0.5s,baz=143,slow=12,SNR=3.0						
KURBB	**Kurchatov Arra**	**21.07**	**321**	P	**P**	**03 04 45.0**	**+0.9**
	0.8nm,0.5s,baz=125,slow=12,SNR=4.3						

IDC 27 03:27:41.8±2.5, 1°82S×98°74E, h0km, mb3.8/2, mb1 3.7/3, mb1mx3.3/45, mbtmp3.7/3, ML3.1/1, Error ellipse: s-maj=127.9km s-min=50.8km az=81.0

DJA 27 03:27:47.1±0.4, 1°S±5°×9°9E±°, h10km, M3.9/6, MLv3.9/6

ISC 27 03:27:47.4±1.1, 1°44S±0°10×99°2E±0°1, h25km, n18, σ1°9±40°13, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.19**	**308**	P	**Pb**	**03 27 52.5**	**-0.4**
PBSI	**Pulau Batu**	**1.68**	**325**	P	**Pb**	**03 28 17.1**	**-0.5**
PBSI				S	**Sb**	**03 28 38.5**	**+0.1**
SDSI	**Sungai Dareh**	**2.25**	**77**	P	**Pn**	**03 28 20.9**	**-2.0**
MNSI	**Mandailing Nat**	**2.25**	**9**	P	**Pn**	**03 28 23.6**	**+0.6**
KRJI	**Kerinci**	**2.31**	**106**	P	**Pn**	**03 28 24.3**	**+0.3**
KRJI				S	**Sn**	**03 28 54.3**	**+2.6**
BKNI	**Bangkinang**	**2.52**	**46**	P	**Pn**	**03 28 26.7**	**0.0**
PSI	**Prapat**	**4.23**	**356**	Pn	**Pn**	**03 28 51.9**	**+1.5**
	0.9nm,0.3s,baz=180,slow=16,SNR=2.6						
MNAI	**Manna**	**4.71**	**128**	P	**Pn**	**03 28 57.7**	**+0.9**
H08S2	**Diego Garcia H**	**27.35**	**256**	T	T	04 01 28.0	
	baz=78,slow=75,SNR=16						
H08S3	**Diego Garcia H**	**27.36**	**256**	T	T	04 01 28.1	
	baz=78,slow=75,SNR=86						
H08S1	**Diego Garcia H**	**27.37**	**256**	T	T	04 01 27.7	
	baz=78,slow=75,SNR=7.5						
H01W3	**Cape Leeuwin H**	**36.05**	**159**	T	T	04 12 35.1	
	baz=335,slow=76,SNR=26						
H01W2	**Cape Leeuwin H**	**36.06**	**159**	T	T	04 12 36.0	
	baz=335,slow=76,SNR=25						
H01W1	**Cape Leeuwin H**	**36.07**	**159**	T	T	04 12 35.9	
	baz=335,slow=76,SNR=25						
MKAR	**Makanchi Array**	**50.30**	**345**	P	**P**	**03 36 41.7**	**-0.2**
	0.5nm,0.4s,baz=156,slow=8.1,SNR=8.7						
ZALV	**Zalesovo Beam**	**56.49**	**350**	P	**P**	**03 37 27.3**	**+0.1**
	0.5nm,0.3s,baz=164,slow=7.3,SNR=2.4						
CPUP	**Villa Florida**	**144.30**	**218**	PKP	**PKPdf**	**03 47 20.0**	**-2.1**
	0.9nm,0.4s,baz=113,slow=2.3,SNR=4.0						
TXAR	**Lajitas Array**	**144.71**	**36**	PKPbc	PKPbc	03 47 21.1	-0.7
	0.2nm,0.4s,baz=196,slow=0.5,SNR=5.5						

IDC 27 03:28:19.0±2.0, 1°96N×126°60E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/38, mbtmp3.5/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/24, Error ellipse: s-maj=170.4km s-min=24.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**14.78**	**107**	LR	LR	03 37 39.4	
	comp=Z,35nm,20.4s,baz=349,slow=38						
WRA	**Warramunga Arr**	**23.05**	**161**	P	P	03 33 24.6	-1.6
	0.8nm,0.5s,baz=339,slow=11,SNR=17						
ASAR	**Alice Springs**	**26.45**	**165**	P	P	03 33 59.6	+1.8
	0.4nm,0.5s,baz=349,slow=14,SNR=5.1						
CMAR	**Chiang Mai Arr**	**31.69**	**303**	LR	LR	03 48 32.0	
	comp=Z,9.9nm,19.4s,baz=175,slow=38						
ASAJ	**Asahikawa**	**44.31**	**17**	LR	LR	03 56 45.7	
	comp=Z,14nm,18.5s,baz=356,slow=38						
MKAR	**Makanchi Array**	**58.93**	**326**	P	P	03 38 19.9	-0.2
	0.3nm,0.4s,baz=123,slow=8.4,SNR=5.2						

DJA 27 03:30:12.4±0.2, 9°S±2°×12°4E±°, h10km, M4.5/14, mB5.2/7, mb4.8/9, MLv4.3/14, Mw(mB)4.6/7

IDC 27 03:30:13.2±7.2, 8°51S×124°78E, h27km±49km, mb3.6/2, mb1 4.3/7, mb1mx3.8/35, mbtmp4.2/7, ML4.3/5, MS2.9/4, Ms1 2.9/4, ms1mx2.6/24, Error ellipse: s-maj=34.8km s-min=20.5km az=65.0

NEIC 27 03:30:16.6±0.8, 8°70S±0°08×124°32E±0°08, h43km±5km, mb4.2/5, Error ellipse: s-maj=13.3km s-min=9.6km az=219.0

ISC 27 03:30:14.4±1.2, 8°69S±0°06×124°49E±0°07, h41km±13km, n41, σ2°52/46, mb4.1/4, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.08**	**192**	P	**Pn**	**03 30 34.1**	**+0.9**
SOEI				S	**Sn**	**03 30 49.7**	**+2.7**
BATI	**Baumata**	**1.71**	**208**	Pn	**Pn**	**03 30 44.9**	**+3.1**
	310nm,0.3s,baz=24,slow=3.3,SNR=65						
BATI				Sn	**Sn**	**03 31 10.5**	**+8.1**
	171nm,0.3s,baz=155,slow=23,SNR=33						
BATI	**Baumata**	**1.71**	**208**	P	**Pn**	**03 30 43.9**	**+2.1**
MMRI	**Maumere**	**2.22**	**271**	P	**Pn**	**03 30 48.4**	**-0.4**
MMRI				S	**Sn**	**03 31 15.7**	**+0.6**
MMRI	**Maumere**	**2.22**	**271**		**Pn**	**03 30 46.8**	**-2.1**
MMRI				Sn	**Sn**	**03 31 12.5**	**-2.6**
EDFI	**Ende, Flores**	**2.76**	**269**	P	**Pn**	**03 30 55.9**	**-0.4**
EDFI				S	**Sn**	**03 31 29.4**	**+0.8**
BASI	**Baing, Sumba**	**4.14**	**248**	P	**Pn**	**03 31 16.6**	**+1.4**
BSSI	**Bau Bau, Buton**	**4.70**	**302**	P	**Pn**	**03 31 22.5**	**-0.4**
WBSI	**Waikabubak, Su**	**5.12**	**259**	P	**Pn**	**03 31 29.8**	**+1.1**
	0.3nm68nm,0.8s						
BKSI	**Bulukumba**	**5.47**	**307**	P	**Pn**	**03 31 33.1**	**-0.4**
	0.1nm2µm36nm,0.7s						
KAPI	**Kappang**	**5.95**	**308**	Pn	**Pn**	**03 31 43.1**	**+3.0**
	2.5nm,0.3s,baz=72,slow=16,SNR=4.3						
KAPI				Sn	**Sn**	**03 32 51.2**	**+4.1**
	0.4nm,0.3s,baz=227,slow=21,SNR=3.6						
KAPI	**Kappang**	**5.95**	**308**		Pn	03 31 38.5	-1.7
BNSI	**Bone**	**6.09**	**314**	P	**Pn**	**03 31 43.5**	**+1.5**
	0.2nm53nm,0.8s						
PLAI	**Plampang**	**6.63**	**268**	P	**Pn**	**03 31 49.3**	**-0.1**
	0.3nm927nm116nm,0.8s						
SPSI	**Sidrap Palu**	**6.64**	**315**	P	**Pn**	**03 31 50.2**	**+0.7**
	0.1nm18nm,0.7s						
TWSI	**Taliwang, Sumb**	**7.52**	**269**	P	**Pn**	**03 32 02.9**	**+1.3**
	0.1nm23nm,0.6s						
MTN	**Manton Dam**	**7.72**	**123**		**Pn**	**03 32 06.5**	**+2.1**
LUWI	**Luwuk**	**7.79**	**347**	P	**Pn**	**03 32 05.5**	**+0.2**
	0.8nm3µm167nm,1.1s						
LUWI	**Luwuk**	**7.79**	**347**	Pn	**Pn**	**03 32 05.1**	**-0.2**
KNRA	**Kunumurra**	**8.10**	**149**		**Pn**	**03 32 10.8**	**+1.2**
FITZ	**Fitzroy Crossi**	**9.42**	**173**	Pn	**Pn**	**03 32 27.5**	**-0.1**
	2.9nm,0.3s,baz=7.0,slow=9.2,SNR=100						
FITZ				Sn	**Sn**	**03 34 06.0**	**-6.2**
	9.9nm,0.3s,baz=198,slow=4.7,SNR=18						
FITZ				LR	LR	03 36 20.9	
	comp=Z,30nm,19.6s,baz=8.0,slow=38						
FITZ	**Fitzroy Crossi**	**9.42**	**173**		**Pn**	**03 32 27.7**	**+0.1**
TOLI2	**Tolitoli**	**10.42**	**339**	Pn	**Pn**	**03 32 40.8**	**-0.6**
WRA	**Warramunga Arr**	**14.69**	**141**	Pn	**Pn**	**03 33 38.3**	**-1.4**
	1.9nm,0.3s,baz=319,slow=13,SNR=116						
WRA				Sn	Sn	03 36 08.6	-13
	0.5nm,0.3s,baz=318,slow=17,SNR=3.8						
WRA				LR	LR	03 39 58.2	
	comp=Z,50nm,19.9s,baz=310,slow=40						
WRAB	**Tennant Creek**	**14.69**	**141**	Pn	**Pn**	**03 33 38.2**	**-1.5**
AS31	**Alice Springs**	**17.41**	**150**		**P**	**03 34 16.1**	**+0.8**
ASAR	**Alice Springs**	**17.41**	**150**	P	**P**	**03 34 15.6**	**+0.3**
	0.6nm,0.3s,baz=322,slow=11,SNR=16						
ASAR				S	**Sn**	**03 37 18.9**	**-8.4**
	0.5nm,0.3s,baz=313,slow=18,SNR=12						
ASAR	**Alice Springs**	**17.41**	**150**	Pn	**Pn**	**03 34 14.2**	**-0.2**
COEN	**Coen**	**19.05**	**108**		**Pn**	**03 34 36.2**	**+1.7**
FORT	**Forrest**	**22.23**	**172**	P	**P**	**03 35 08.7**	**+1.1**
FORT				IAmb	IAmb	03 35 15.5	
	comp=Z,14nm,0.7s						
BBOO	**Buckleboo**	**26.28**	**158**	P	**P**	**03 35 46.4**	**+0.2**
BBOO				IAmb	IAmb	03 35 57.0	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**28.02**	**148**	LR	LR	03 47 44.3	
	comp=Z,33nm,18.2s,baz=25,slow=38						
MKAR	**Makanchi Array**	**66.79**	**330**	P	**P**	**03 41 02.0**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=123,slow=8.7,SNR=7.5						
MKAR	**Makanchi Array**	**66.79**	**330**	P	**P**	**03 41 01.8**	**0.0**
MAW	**Mawson**	**71.41**	**201**	LR	LR	04 11 30.4	
	comp=Z,14nm,18.0s,baz=231,slow=35						
VNDA	**Vanda**	**71.49**	**172**	P	**P**	**03 41 32.4**	**+2.0**
	comp=Z,0.6nm,0.7s,baz=299,slow=10,SNR=2.9						
VNDA	**Vanda**	**71.49**	**172**	P	**P**	**03 41 30.7**	**+0.3**
VNDA				IAmb	IAmb	03 41 33.3	
	comp=Z,0.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**123.75**	**280**	PKP	**PKPdf**	**03 49 08.6**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=88,slow=1.3,SNR=7.3						
TORD	**Torodi Ar. Bea**	**123.75**	**280**		**PKPdf**	**03 49 08.0**	**-0.8**
CPUP	**Villa Florida**	**145.14**	**177**	PKPbc	**PKPdf**	**03 49 49.8**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=147,slow=1.9,SNR=3.6						
CPUP	**Villa Florida**	**145.14**	**177**		**PKPbc**	**03 49 47.9**	**+0.1**

IDC 27 03:48:14.6±3.7, 5°55S×150°97E, h0km, mb3.1/2, mb1 3.5/2, mb1mx3.2/29, mbtmp3.2/2, Error ellipse: s-maj=151.8km s-min=49.7km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.59**	**227**	P	P	03 53 06.8	+0.5
	0.5nm,0.5s,baz=53,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**24.38**	**221**	P	P	03 53 34.4	-0.4
	0.3nm,0.5s,baz=55,slow=9.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**148.78**	**286**	PKPbc	PKPbc	04 08 04.6	-0.6
	0.9nm,0.6s,baz=94,slow=3.5,SNR=8.5						

IDC 27 04:02:43.8±1.3, 53°14N×85°42E, h0km, mb1 3.1/2, mb1mx3.0/31, mbtmp3.1/2, ML2.7/2, Error ellipse: s-maj=13.1km s-min=7.8km az=95.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**0.88**	**336**	*i*		04 09 00.0	
	baz=154,slow=314,SNR=1.6						
ZALV	**Zalesovo Beam**	**0.88**	**336**	Pg	Pg	04 03 00.5	-0.1
	1.0nm,0.3s,baz=156,slow=19,SNR=13						
ZALV				Lg	Lg	04 03 12.6	
	2.4nm,0.3s,baz=155,slow=30,SNR=17						
KURBB	**Kurchatov Arra**	**4.96**	**242**	Pn	Pn	04 04 01.2	+1.8
	0.2nm,0.3s,baz=58,slow=14,SNR=2.9						
KURBB				Lg	Lg	04 05 17.9	
	0.1nm,0.3s,baz=43,slow=19,SNR=5.1						
MKAR	**Makanchi Array**	**6.67**	**199**	Pn	Pn	04 04 24.6	+1.6
	0.3nm,0.3s,baz=22,slow=13,SNR=19						
MKAR				Sn	Sn	04 05 38.7	-0.9
	0.1nm,0.3s,baz=31,slow=29,SNR=5.4						
MKAR				Lg	Lg	04 06 12.2	
	0.1nm,0.3s,baz=30,slow=32,SNR=4.0						

IDC 27 04:21:48.2±2.1, 17°87S×176°56W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.7/29, mbtmp3.6/5, Error ellipse: s-maj=139.5km s-min=24.3km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.37**	**259**	P	P	04 30 16.3	-0.3
	0.2nm,0.3s,baz=98,slow=6.9,SNR=8.1						
ASAR	**Alice Springs**	**46.50**	**254**	P	P	04 30 17.8	+0.1
	0.6nm,0.4s,baz=90,slow=8.6,SNR=18						
NVAR	**Mina Array Bea**	**78.19**	**43**	P	P	04 33 50.6	+0.7
	0.2nm,0.6s,baz=227,slow=9.2,SNR=3.2						
TXAR	**Lajitas Array**	**84.49**	**57**	P	P	04 34 23.3	-0.2
	0.6nm,0.9s,baz=214,slow=4.2,SNR=5.1						
ILAR	**Eielson Array**	**85.47**	**12**	P	P	04 34 26.2	-1.1
	0.3nm,0.9s,baz=214,slow=4.2,SNR=2.1						

IDC 27 04:34:59.1±1.1, 43°73N×147°26E, h0km, mb3.6/4, mb1 4.0/5, mb1mx3.5/35, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=44.0km s-min=25.2km az=137.0

JMA 27 04:35:14.0±0.3, 44°34N×145°79E, h156km±2km, M3.1

ISC 27 04:35:14.6±0.9, 44°33N±0°09×145°80E±0°08, h152km±8km, n26, σ0°50/29, mb3.4/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	**0.63**	**231**	P	**Pn**	**04 35 36.7**	**-0.1**
JRA				*e*S	**Sn**	**04 35 54.6**	**+0.9**
JNSB	**Nemuroshibetsu**	**0.80**	**226**	P	**Pn**	**04 35 38.2**	**+0.3**
NEM2	**Nemuro 2**	**0.97**	**182**	P	**Pn**	**04 35 39.0**	**-0.2**
NEM2				*e*S	**Sn**	**04 35 57.5**	**-0.5**
JNK	**Nakash**	**1.08**	**227**	P	**Pn**	**04 35 40.4**	**+0.2**
JKHN	**Kushirohamanak**	**1.33**	**201**	P	**Pn**	**04 35 42.5**	**-0.1**
JKHN				*e*S	**Sn**	**04 36 04.1**	**+0.2**
JTKR	**Abashiri--Toko**	**1.41**	**256**	P	**Pn**	**04 35 42.9**	**-0.4**
JTKR				*e*S	**Sn**	**04 36 04.6**	**-0.7**
JAK	**Akkeshi**	**1.56**	**211**	P	**Pn**	**04 35 44.7**	**-0.1**
JAK				S	**Sn**	**04 36 08.1**	**+0.1**
JMP	**Maruseppu**	**1.79**	**260**	P	**Pn**	**04 35 46.9**	**-0.5**
JAR	**Ashorobuto**	**1.80**	**236**	P	**Pn**	**04 35 47.8**	**+0.3**
JOB	**Onbets**	**2.02**	**226**	P	**Pn**	**04 35 50.0**	**0.0**
JOB				S	**Sn**	**04 36 17.5**	**+0.3**
JKK2	**Kamakawa 2**	**2.25**	**259**	P	**Pn**	**04 35 52.8**	**+0.1**
JKK2				*e*S	**Sn**	**04 36 22.2**	**+0.2**
ASAJ	**Asahikawa**	**2.31**	**266**	Pn	**Pn**	**04 35 53.8**	**+0.3**
	4.6nm,0.3s,baz=82,slow=14,SNR=15						
ASAJ	**Asahikawa**	**2.31**	**266**	P	**

ASAR S S 05 02 15.9 +0.4
comp=Z,0.4nm,0.6s,baz=71,slow=17,SNR=4.2
ASAR ScP ScP 05 03 07.8 +2.3
comp=Z,1.5nm,1.0s,baz=76,slow=3.9,SNR=5.6
ASAR Alice Springs 33.48 246 P P 04 57 16.0 -0.3
BBOO Buckleboo 34.98 229 P P 04 57 29.2 +0.2
MTN Manton Dam 35.15 265 P P 04 57 29.9 -0.7
KNRA Kununurra 37.37 260 P P 04 57 48.7 -0.6
KNRA IAmb IAmb 04 58 03.1
comp=Z,20nm,1.1s
FITZ Fitzroy Crossi 40.40 257 P P 04 58 13.9 -0.4
MJAR Matsushiro Arr 55.78 332 P P 05 00 10.0 -0.9
comp=Z,5.0nm,0.8s,baz=164,slow=9.1,SNR=5.5
MAT Matsushiro 55.79 332 P P 05 00 10.1 -0.8
KSRS Korea Array 61.75 325 P P 05 00 51.7 0.0
comp=Z,2.2nm,0.9s,baz=147,slow=6.2,SNR=7.7
KSAR Wonju Array Be 61.76 325 P P 05 00 51.5 -0.3
NJ2 Nanjing 63.93 315 *eP* P 05 01 08.0 +1.9
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
USRK Ussuriysk Ar. 64.75 333 P P 05 01 12.1 +0.9
comp=Z,4.2nm,0.7s,baz=118,slow=4.9,SNR=8.0
USRK Ussuriysk Ar. 64.75 333 P P 05 01 10.9 -0.3
VNDA Vanda 65.20 181 P P 05 01 14.7 +1.1
comp=Z,1.1nm,0.5s,baz=355,slow=6.1,SNR=8.6
PETK Petropavlovsk- 65.72 354 P P 05 01 16.2 -0.9
comp=Z,4.6nm,0.8s,baz=143,slow=8.7,SNR=4.9
CN2 Changchun 67.59 329 *eP* P 05 01 30.0 +0.9
CN2 pmax pmax
comp=Z,10.0nm,1.1s
ENH Enshi 69.81 309 P P 05 01 42.5 -0.5
ENH IAmb IAmb 05 01 44.1
comp=Z,12nm,0.8s
HHC Hu-ho-hao-te 73.74 319 *eP* P 05 02 06.0 -0.2
HHC pmax pmax
comp=Z,27nm,1.4s
HHC pmax pmax
comp=Z,93nm,7.3s
CMAR Chiang Mai Arr 73.91 293 P P 05 02 09.0 +1.4
comp=Z,3.4nm,0.7s,baz=111,slow=4.0,SNR=18
CMAR Chiang Mai Arr 73.91 293 P P 05 02 07.0 -0.5
CD2 Chengdu 74.51 307 P P 05 02 11.5 +0.7
CD2 pmax pmax
comp=Z,20nm,0.5s
OHAK Old Harbor 76.64 21 P P 05 02 22.6 +0.5
LZH Lanzhou 76.67 312 *eP* P 05 02 25.5 +2.4
LZH pP pP 05 03 30.0 -1.8
LZH sP sP 05 03 55.3 -8.0
LZH pmax pmax
comp=Z,18nm,1.0s
QSPA South Pole Qui 77.64 180 P P 05 02 29.1 +1.2
QSPA IAmb IAmb 05 02 29.6
comp=Z,11nm,0.9s
BRLK Bradley Lake 79.39 20 P P 05 02 37.5 +0.3
ULN Ulaanbaatar 80.19 324 P P 05 02 41.7 -0.2
ULN IAmb IAmb 05 02 43.9
comp=Z,7.8nm,1.1s
BILL Bilibino 80.20 360 P P 05 02 41.2 -0.1
BILL IAmb IAmb 05 02 42.6
comp=Z,19nm,1.0s
SONM Songino Array 80.55 323 P P 05 02 44.9 +1.1
comp=Z,1.1nm,0.4s,baz=141,slow=5.6,SNR=11
SONM Songino Array 80.55 323 P P 05 02 43.6 -0.2
RC01 Rabbit Creek A 80.76 20 P P 05 02 44.4 0.0
baz=223
GTA Gaotai 80.97 314 P P 05 02 47.5 +1.3
GTA pmax pmax
comp=Z,6.0nm,1.1s
PMR Palmer 81.33 20 P P 05 02 47.7 +0.4
PMR IAmb IAmb 05 02 48.2
comp=Z,17nm,1.1s
GHO Glory Hole Cre 81.53 19 P P 05 02 49.0 +0.4
GHO IAmb IAmb 05 02 49.7
comp=Z,9.2nm,0.6s
CUT Chulitna 81.57 19 P P 05 02 48.7 +0.1
baz=222
SCM Sheep Creek Mo 82.10 20 P P 05 02 52.0 +0.5
KTH Kantishna Hill 82.23 18 P P 05 02 51.6 -0.5
KTH IAmb IAmb 05 02 52.5
comp=Z,7.0nm,0.6s
KLU Klutina 82.33 21 P P 05 02 53.1 +0.4
KLU IAmb IAmb 05 02 53.5
comp=Z,11nm,1.0s
TRF Thorofare Moun 82.34 18 P P 05 02 52.5 -0.3
TRF IAmb IAmb 05 02 53.8
comp=Z,18nm,1.0s
M24K Tolsona, Glenn 82.68 20 P P 05 02 55.6 +1.1
baz=226,SNR=7.5
M24K Tolsona, Glenn 82.68 20 P P 05 02 54.9 +0.5
RND Reindeer 82.75 18 P P 05 02 55.0 +0.2
CRQM Cirque 82.83 22 P P 05 02 55.7 +0.3
N25K Chitina, Valde 82.87 21 P P 05 02 56.0 +0.5
baz=227,SNR=9.5
N25K Chitina, Valde 82.87 21 P P 05 02 55.9 +0.5
N25K IAmb IAmb 05 02 56.9
comp=Z,20nm,1.0s
TGL Tana Glacier 82.94 22 P P 05 02 56.3 +0.4
MCK McKinley 82.96 18 P P 05 02 55.4 -0.4
baz=223,SNR=8.7
DHY Denali Highway 82.97 19 P P 05 02 54.5 -1.5
DHY IAmb IAmb 05 03 03.1
comp=Z,12nm,1.1s
ISLE Juniper Island 83.02 23 P P 05 02 56.7 +0.3
VRDI Verde Repeater 83.03 22 P P 05 02 56.7 +0.3
VRDI IAmb IAmb 05 02 56.9
comp=Z,11nm,0.9s
GLB Gilahina Butte 83.04 21 P P 05 02 56.4 +0.1
GLB IAmb IAmb 05 02 57.4
comp=Z,23nm,1.1s
RDOG Red Dog Mine 83.05 11 P P 05 02 56.8 +0.6
RDOG IAmb IAmb 05 02 58.0
comp=Z,18nm,1.0s
BWN Browne 83.12 18 P P 05 02 56.9 +0.3
O02D Mt. Diablo Mer 83.19 46 P P 05 02 58.8 +1.2
baz=248
MCARA McCarthy VSAT 83.29 22 P P 05 02 58.1 +0.7
BALM Baldy 83.31 22 P P 05 02 58.2 +0.5
BALM IAmb IAmb 05 02 58.8
comp=Z,12nm,0.8s
IMAR Indian Mountai 83.33 15 P P 05 02 58.2 +0.6
MLY Manley 83.40 17 P P 05 02 57.9 -0.1
baz=221,SNR=6.5
PCA Pinnacle 83.50 24 P P 05 02 59.2 +0.5
PAX Paxson 83.51 20 P P 05 02 59.0 +0.2
WDC Whiskeytown Da 83.52 46 P P 05 02 59.4 +0.3
N02D Trinity Center 83.55 46 P P 05 03 00.6 +1.2
baz=248
NEA2 Nenana 83.55 17 P P 05 02 58.2 -0.6
baz=223,SNR=6.7
K02D Willamette Mer 83.55 44 P P 05 03 00.3 +0.9
baz=247
BARN Barnard Glacie 83.58 22 P P 05 02 59.5 +0.3
M02C Callahan 83.61 45 P P 05 03 00.8 +1.1
baz=248
CTGM Chitina Glacie 83.64 23 P P 05 02 59.7 +0.3
WRH Wood River Hil 83.75 18 P P 05 02 59.4 -0.3
YBH Yreka Blue Hor 83.83 45 P P 05 03 01.1 +0.3
YBH IAmb IAmb 05 03 02.7
comp=Z,18nm,1.1s
ORV Oroville 83.88 47 P P 05 03 01.2 +0.2
I23K Minto, Yukon-K 83.88 17 P P 05 03 00.2 -0.1
baz=223
O03E Paynes Creek 83.93 47 P P 05 03 00.8 -0.6
baz=248
CCB Clear Creek Bu 83.97 18 P P 05 03 00.3 -0.5
HUMO Hull Mountain 84.00 44 P P 05 03 01.8 +0.3
AFDM Forest Hills D 84.04 48 P P 05 03 02.1 +0.2
HDA Harding Lake 84.05 18 P P 05 03 01.4 +0.1
baz=225,SNR=50
HDA Harding Lake 84.05 18 P P 05 03 01.4 +0.1
MDM Murphy Dome 84.06 17 P P 05 03 00.6 -0.8
MENT Mentasta 84.08 20 P P 05 03 02.0 +0.6
TCOL CIGO, UAF Yank 84.11 18 P P 05 03 01.3 -0.2
baz=224,SNR=8.1
TCOL CIGO, UAF Yank 84.11 18 P P 05 03 01.2 -0.3
COLA College 84.12 18 P P 05 03 01.2 -0.3
CMB Columbia Colle 84.15 49 P P 05 03 02.6 +0.2
CMB IAmb IAmb 05 03 03.6
comp=Z,7.5nm,1.1s
RIDG Independent Ri 84.25 19 P P 05 03 02.9 +0.6
L26K Log Cabin Wild 84.26 20 P P 05 03 02.7 +0.3
baz=228,SNR=7.1
L04D Klamath Falls 84.30 45 P P 05 03 03.9 +0.7
baz=248
IL31 84.33 18 P P 05 03 02.2 -0.4

ILAR Eielson Array 84.33 18 P P 05 03 02.1 -0.6
comp=Z,19nm,0.7s,baz=228,slow=5.7,SNR=255
ILAR pP pP 05 04 07.4 -5.1
comp=Z,2.0nm,1.1s,baz=229,slow=4.9,SNR=2.0
POKR Poker Plat Res 84.41 18 P P 05 03 02.9 -0.2
baz=224,SNR=7.2
POKR Poker Plat Res 84.41 18 P P 05 03 02.7 -0.4
DOT Dot Lake 84.44 20 P P 05 03 03.7 +0.4
DOT IAmb IAmb 05 03 04.5
comp=Z,20nm,1.1s
SCRK Sand Creek 84.69 19 P P 05 03 04.8 +0.2
baz=228,SNR=11
ISA Isabella, Lake 84.79 52 P P 05 03 06.2 +0.5
baz=251
I04A Tendick Farm, 84.82 43 P P 05 03 06.1 +0.4
baz=248
BCAR Beaver Creek A 84.83 21 P P 05 03 05.5 +0.3
EDW2 Edwards Air Fo 84.91 53 P P 05 03 07.0 +0.7
baz=251
BFSC Mount Baldy Ra 84.96 54 P P 05 03 06.8 +0.1
baz=252
WAKR Walker 85.01 49 P P 05 03 06.9 0.0
WAKR IAmb IAmb 05 03 08.1
comp=Z,7.3nm,1.1s
OMMB Old Mammoth Mi 85.03 50 P P 05 03 07.1 -0.1
PNTR Pine Nut 85.09 48 P P 05 03 07.4 +0.1
PNTR IAmb IAmb 05 03 09.0
comp=Z,8.5nm,1.0s
COLD Coldfoot 85.20 15 P P 05 03 08.1 +1.2
baz=222,SNR=10
COLD Coldfoot 85.20 15 P P 05 03 07.5 +0.6
COLD IAmb IAmb 05 03 09.2
comp=Z,16nm,1.0s
CWC Cottonwood Cre 85.34 51 P P 05 03 09.0 +0.5
baz=251
K27K Chicken 85.36 20 P P 05 03 08.8 +1.0
baz=229
K27K Chicken 85.36 20 P P 05 03 08.4 +0.6
K27K IAmb IAmb 05 03 10.0
comp=Z,3.8nm,0.5s
J05D Fort Rock, OR 85.43 44 P P 05 03 09.3 +0.5
baz=248
PAHR Pah Rah Range 85.46 48 P P 05 03 09.2 +0.2
PAHR IAmb IAmb 05 03 10.6
comp=Z,8.6nm,1.1s
MONP2 Monument Peak 85.53 55 P P 05 03 09.8 +0.2
baz=252
MOD Modoc Plateau 85.57 46 P P 05 03 09.7 +0.1
LHV Little Huntoon 85.61 49 P P 05 03 09.9 +0.3
LHV IAmb IAmb 05 03 11.0
comp=Z,7.8nm,1.1s
MPMC Manual Prospec 85.67 52 P P 05 03 10.7 +0.4
baz=251
RYN Ryan 85.73 49 P P 05 03 10.4 +0.1
I05D Terrebonne, OR 85.75 43 P P 05 03 11.0 +0.8
baz=248
NVAR Mina Array Bea 85.82 49 P P 05 03 11.3 +0.3
comp=Z,2.9nm,0.9s,baz=234,slow=8.8,SNR=17
NVAR pP pP 05 04 17.8 -3.1
comp=Z,1.4nm,1.0s,baz=240,slow=6.9,SNR=4.5
NVAR Mina Array Bea 85.82 49 P P 05 03 10.9 -0.1
D03D Eldon 85.84 40 P P 05 03 11.2 +0.7
baz=247
NV11 Mina Array Sit 85.93 49 P P 05 03 11.4 0.0
NV11 IAmb IAmb 05 03 13.0
comp=Z,8.0nm,1.1s
GRAC Grapevine Rang 86.06 51 P P 05 03 12.6 +0.7
baz=252
EGAK Eagle 86.15 20 P P 05 03 11.7 +0.1
EGAK IAmb IAmb 05 03 13.3
comp=Z,19nm,1.1s
KVN Kaiserville 86.18 49 P P 05 03 12.7 +0.1
HEC Hector,Ludlow 86.18 53 P P 05 03 13.0 +0.4
baz=252
BELC Belle Mtn. Jos 86.20 54 P P 05 03 12.8 +0.1
baz=252
F05D White Salmon 86.24 42 P P 05 03 13.3 +0.7
baz=248
FURC Furnace Creek, 86.28 52 P P 05 03 13.6 +0.7
baz=252
DAWY Dawson 86.29 21 P P 05 03 12.9 +0.5
DAWY IAmb IAmb 05 03 14.0
comp=Z,6.3nm,1.0s
TOLK Toolik Lake Re 86.41 15 P P 05 03 13.8 +0.9
baz=222,SNR=5.1
TOLK Toolik Lake Re 86.41 15 P P 05 03 13.7 +0.9
TOLK IAmb IAmb 05 03 14.9
comp=Z,14nm,1.1s
A04D Lummi Island 86.54 39 P P 05 03 14.9 +1.1
baz=247
TUQ Turquoise Moun 86.69 53 P P 05 03 15.5 +0.5
baz=252
GMRC Granite Mounta 86.70 54 P P 05 03 15.7 +0.5
baz=253
BMAR Burnt Mountain 86.86 17 P P 05 03 15.8 +0.7
I07A Izee 86.89 44 P P 05 03 16.0 +0.2
I07A IAmb IAmb 05 03 17.5
comp=Z,7.3nm,0.9s
TPNV Topopah Spring 86.90 51 P P 05 03 16.6 +0.5
baz=253
TPNV Topopah Spring 86.90 51 P P 05 03 16.2 +0.1
WVOR Wild Horse Val 86.92 46 P P 05 03 16.2 +0.3
IRM Iron Mountain 86.92 54 P P 05 03 17.0 +0.9
baz=253
J08A Circle Bar Ran 87.34 45 P P 05 03 18.1 +0.2
J08A IAmb IAmb 05 03 19.1
comp=Z,6.8nm,0.8s
E07A Sunnyside 87.52 41 P P 05 03 19.1 +0.5
E07A IAmb IAmb 05 03 20.2
comp=Z,10nm,0.9s
SHPR Sheep Range 87.60 52 P P 05 03 19.6 +0.2
TIXI Tiksi 87.65 349 P P 05 03 18.9 +0.3
G08A Pilot Rock 87.67 43 P P 05 03 19.7 +0.2
G08A IAmb IAmb 05 03 21.1
comp=Z,12nm,1.1s
HAWA Hanford 87.67 42 P P 05 03 19.6 +0.3
HAWA IAmb IAmb 05 03 20.5
comp=Z,7.4nm,0.9s
PDMCI Parker Dam,Lak 87.76 54 P P 05 03 21.1 +1.1
baz=254
R11A Troy Canyon, C 87.82 50 P P 05 03 20.6 +0.1
baz=252
R11A Troy Canyon, C 87.82 50 P P 05 03 20.5 +0.1
PRN Pahroc Range 87.95 51 P P 05 03 21.2 +0.1
E08A Dider Farm, El 88.01 42 P P 05 03 21.4 +0.5
E08A IAmb IAmb 05 03 22.7
comp=Z,8.5nm,0.9s
W13A Hualapai Mount 88.19 54 P P 05 03 22.3 0.0
E09A Wood Farm, Sta 88.61 42 P P 05 03 24.1 +0.4
BMO Blue Mountains 88.63 44 P P 05 03 24.2 +0.3
BMO IAmb IAmb 05 03 24.8
comp=Z,6.0nm,1.1s
ELK Elko 88.80 48 P P 05 03 25.0 0.0
SPR3 Spring Creek 3 88.95 50 P P 05 03 25.7 -0.2
SPR3 IAmb IAmb 05 03 26.9
comp=Z,5.0nm,0.9s
F10A Beach Ranch, E 89.04 43 P P 05 03 26.3 +0.4
F10A IAmb IAmb 05 03 26.6
comp=Z,7.8nm,0.8s
BELA Belgrano 2 89.07 175 P P 05 03 26.2 +0.8
PSUT Pine Spring 89.18 50 P P 05 03 26.9 0.0
MFID Camas Ranch 89.18 45 P P 05 03 26.8 +0.2
MFID IAmb IAmb 05 03 28.3
comp=Z,5.9nm,0.9s
LCMT Little Creek M 89.22 52 P P 05 03 27.1 +0.1
CCUT Cedar City 89.28 51 P P 05 03 27.4 0.0
SZCU Shurtz Canyon 89.50 51 P P 05 03 28.4 +0.1
PLID Pearl Lake 89.58 44 P P 05 03 28.8 +0.2
PLID IAmb IAmb 05 03 29.8
comp=Z,8.4nm,1.0s
U15A North Rim 89.80 53 P P 05 03 29.8 -0.1
U15A IAmb IAmb 05 03 32.2
comp=Z,9.0nm,1.1s
NEW Newport 89.85 40 P P 05 03 29.8 +0.2
baz=251
NEW Newport 89.85 40 P P 05 03 29.9 +0.4
NEW IAmb IAmb 05 03 30.8
comp=Z,6.3nm,0.9s
TUC Tucson 89.94 57 P P 05 03 31.6 +1.3
baz=255
TUC Tucson 89.94 57 P P 05 03 30.5 +0.2
HLID Hailey 90.21 45 P P 05 03 32.3 +0.8
baz=253
HLID Hailey 90.21 45 P P 05 03 31.6 +0.1
HLID IAmb IAmb 05 03 33.4
comp=Z,7.0nm,1.1s

WUAZ Wupatki 90.28 54 P P 05 03 33.2 +1.3
baz=255
MTPU Mount Pierson 90.31 51 P P 05 03 32.1 -0.2
MVU Marysvale 90.41 51 P P 05 03 32.6 0.0
DUG Dugway, Tooele 90.41 49 P P 05 03 33.1 +0.7
baz=254
BGU Big Grassy Mou 90.45 48 P P 05 03 32.8 +0.2
HVU Hansel Valley 90.87 47 P P 05 03 34.8 +0.2
SYO Syowa Base 90.92 197 *eP* P 05 03 33.0 -1.1
SYO Syowa Base 90.92 197 *eP* P 05 03 34.3 +0.2
319A Douglas 90.95 58 P P 05 03 35.1 0.0
319A IAmb IAmb 05 03 37.5
comp=Z,12nm,1.0s
WMQ Urumqi 91.01 315 *eP* P 05 03 35.5 +0.5
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,190nm,4.7s
W18A Petrified Fore 91.47 54 P P 05 03 38.1 +0.5
baz=256
DLMT Dillon 91.96 44 P P 05 03 39.7 +0.2
DLMT IAmb IAmb 05 03 41.2
comp=Z,5.5nm,1.1s
BOZ Bozeman (W) 92.68 44 P P 05 03 43.9 +1.1
baz=255
BOZ Bozeman (W) 92.68 44 P P 05 03 43.0 +0.2
BOZ IAmb IAmb 05 03 44.6
comp=Z,5.0nm,1.1s
PDAR Pinedale Array 93.43 47 P P 05 03 47.0 +0.5
comp=Z,0.2nm,0.3s,baz=159,slow=3.0,SNR=4.5
O20A White River Ci 93.79 50 P P 05 03 48.5 +0.4
baz=257
C36M Paulatuk 94.22 19 P P 05 03 48.1 -0.9
baz=246
S22A 4UR Ranch, Cre 94.35 52 P P 05 03 51.2 +0.3
baz=258
TXAR Lajitas Array 95.25 61 P P 05 03 55.0 +0.2
comp=Z,0.6nm,0.6s,baz=226,slow=5.9,SNR=5.9
TXAR Lajitas Array 95.25 61 P P 05 03 54.9 +0.1
MK31 Makanchi Array 95.43 317 P P 05 03 55.2 0.0
MK31 IAmb IAmb 05 03 56.8
comp=Z,7.4nm,1.0s
MKAR Makanchi Array 95.43 317 P P 05 03 55.9 +0.6
comp=Z,7.6nm,0.8s,baz=97,slow=6.1,SNR=28
MKAR Makanchi Array 95.43 317 P P 05 03 55.2 0.0
YKA Yellowknife Ar 95.51 27 P P 05 03 54.0 -1.1
comp=Z,2.5nm,0.8s,baz=259,slow=4.3,SNR=7.2
SNAA Sanae 95.88 183 P P 05 03 56.8 -0.1
VNA3 Neumayer Olymp 96.55 181 P P 05 03 59.7 -0.2
VNA2 Neumayer--Watz 96.82 182 P P 05 04 01.3 +0.3
baz=182,slow=4.7
FRB Frobisher Bay 115.82 24 PKP PKPdf 05 09 10.8 -0.1
comp=Z,12nm,0.8s,baz=243,slow=4.5,SNR=4.6
ARCES ARCESS Array B 117.96 346 PKP PKiKP 05 09 15.3 +0.4
comp=Z,2.7nm,0.4s,baz=89,slow=2.5,SNR=88
SCHQ Schefferville 120.39 33 PKP PKPdf 05 09 19.4 -0.6
comp=Z,6.2nm,1.0s,baz=315,slow=2.9,SNR=5.6
FINES FINESS Array B 123.50 339 PKP PKiKP 05 09 26.4 +0.4
comp=Z,1.9nm,0.4s,baz=90,slow=1.5,SNR=21
NB2 NORSAR Subarra128.33 345 PKPdf PKPdf 05 09 35.4 +0.3
comp=Z,3.6nm,1.0s,baz=31,slow=1.9
NOA NORSAR Array B128.33 345 PKP PKiKP 05 09 36.0 +0.2
comp=Z,1.5nm,0.7s,baz=35,slow=2.0,SNR=5.3
AKASG Malin Array Be 128.73 327 PKP PKiKP 05 09 36.8 0.0
comp=Z,0.1nm,0.3s,baz=66,slow=2.6,SNR=6.3
AKASG Malin Array Be 128.73 327 PKiKP 05 09 36.6 -0.1
BRTR Keskin Array B 130.88 312 PKP PKiKP 05 09 41.6 -0.1
comp=Z,0.4nm,0.4s,baz=140,slow=3.0,SNR=1.3
KOLS Kolonicke sedl 133.40 329 *e*PKP PKiKP 05 09 47.1 +0.8
EKA Eskdalemuir Ar 136.47 352 PKP PKPdf 05 09 50.8 +0.2
comp=Z,0.3nm,0.4s,baz=354,slow=2.1,SNR=3.8
GERES GERESS Array B 137.50 334 PKP PKiKP 05 09 54.0 -0.8
comp=Z,1.2nm,0.7s,baz=104,slow=1.7,SNR=8.8
ARSA Arzberg 137.87 331 *e*P PKPdf 05 09 54.3 +0.9
comp=Z,1.3nm,0.5s
KBA Koelnbreinsper 139.00 333 *e*P PKiKP 05 09 57.0 -1.0
comp=Z,12nm,1.7s
WTTA Wattenberg 139.60 334 *e*P PKiKP 05 09 58.3 -1.0
comp=Z,5.4nm,0.9s
ABTA Abfaltersbach 139.62 333 *e*P PKPdf 05 09 57.1 +0.4
comp=Z,4.9nm,0.8s
MOTA Moosalm 139.76 335 *e*P PKPdf 05 09 58.1 +1.1
comp=Z,2.7nm,0.7s
RETA Reutte 139.79 335 *e*P PKPdf 05 09 58.0 +1.0
comp=Z,6.2nm,1.3s
SQTA Sankt Quirin 139.82 335 *e*P PKiKP 05 10 00.1 +0.5
comp=Z,5.2nm,1.0s
FETA Feichten 140.18 335 *e*P PKPdf 05 09 58.8 +1.0
DAVA Damuels 140.31 336 *e*P PKPdf 05 09 54.9 -3.1
comp=Z,3.9nm,1.6s
DAVOX Davos/Dischmat 140.72 335 PKP PKPdf 05 09 59.4 +0.6
comp=Z,2.8nm,0.6s,baz=101,slow=5.2,SNR=4.8
KEST Kesra 149.31 323 PKPbc PKiKP 05 10 19.4 0.0
comp=Z,12nm,0.9s,baz=303,slow=5.8,SNR=12
PBRG Braganca 150.20 351 *e*PKPbc PKiKP 05 10 21.3 +0.3
POLO Lamas de Olo 150.77 352 *e*PKPbc PKiKP 05 10 22.6 +0.3
MVO Moncorvo 150.87 351 *e*PKPbc PKiKP 05 10 23.1 +0.6
ESDC Sonseca Array 151.70 345 PKPbc PKiKP 05 10 24.9 +0.7
comp=Z,2.2nm,0.5s,baz=16,slow=2.2,SNR=18
ESDC PKPab PKPab 05 10 34.5 +0.8
comp=Z,3.0nm,0.8s,baz=13,slow=3.3,SNR=9.2
MTE Manteigas 151.70 351 *e*PKPdf PKPdf 05 10 17.1 -0.2
MTE Manteigas 151.70 351 *e*PKPbc PKiKP 05 10 24.9 +0.7
PCAS Casmilo, Conde 152.16 353 *e*PKPbc PKiKP 05 10 25.8 +0.7
PCBR Castelo Branco 152.23 351 *e*PKPdf PKPdf 05 10 19.5 +1.5
PCBR Castelo Branco 152.23 351 *e*PKPbc PKiKP 05 10 25.8 +0.6
PMRV Marv??o 152.62 351 *e*PKPbc PKiKP 05 10 27.0 +0.9
EVO Evora 153.60 351 *e*PKPbc PKiKP 05 10 29.0 +0.9
TORD Torodi Ar. Bea 165.80 275 PKP PKPdf 05 10 33.8 -0.6
comp=Z,1.4nm,1.0s,baz=270,slow=1.1,SNR=4.7
TORD PKPab PKPab 05 11 36.5 +0.7
comp=Z,2.0nm,1.0s,baz=75,slow=5.8,SNR=7.6
TORD Torodi Ar. Bea 165.80 275 PKPdf 05 10 34.1 -0.3
TORD PKPab 05 11 34.6 -1.2

IDC ***27*** *05:10:49.3±1.9, 1°.02N×124°.55E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/23, mbtmp3.6/3, Error ellipse: s-maj=127.3km s-min=25.7km az=53.0*
NEIC ***27*** *05:11:00.5±1.1, 0°.06S±0°.07×123°.1E±0°.1, h79km±7km, mb4.1/5, Error ellipse: s-maj=22.9km s-min=6.1km az=67.0*
DJA ***27*** *05:11:03.0±0.3, 0°S±4°×12°3E±°, h43km±32km, M4.3/13, mB4.9/4, mb4.6/4, MLv4.2/13, Mw(mB)4.2/4*
ISC 27 05:11:02.6±0.8, 0.11S±0°.05×123°.01E±0°.05, h100km, n24, σ1s65/29, mb3.9/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
GTOI	**Gorontalo**	**0.74**	**360**	P **Pn**	**05 11 19.4**	**-1.0**
LUWI	**Luwuk**	**0.96**	**195**	P **Pn**	**05 11 20.1**	**-2.5**
LUWI	**Luwuk**	**0.96**	**195**	**Pn**	**05 11 20.3**	**-2.3**
LUWI				Sn **Sn**	**05 11 34.8**	**-2.8**
KMSI	**Cibinong**	**1.18**	**55**	P **Pn**	**05 11 23.5**	**-1.5**
MRSI	**Marisa**	**1.22**	**298**	P **Pn**	**05 11 23.1**	**-2.4**
MRSI				S **Sn**	**05 11 39.6**	**-3.2**
APSI	**Ampana**	**1.58**	**240**	P **Pn**	**05 11 28.7**	**-1.1**
TOLI2	**Tolitoli**	**2.54**	**298**	**Pn**	**05 11 41.5**	**-0.7**
TOLI2				Sn **Sn**	**05 12 11.3**	**-1.3**
MPSI	**Mapaga**	**3.15**	**278**	P **Pn**	**05 11 51.0**	**+0.7**
TTSI	**Tana Toraja**	**4.33**	**228**	P **Pn**	**05 12 05.8**	**-0.4**
TNTI	**Ternate**	**4.44**	**79**	Pn **Pn**	**05 12 04.7**	**-3.1**
LBMI	**Labuha**	**4.52**	**97**	P **Pn**	**05 12 09.0**	**+0.2**
SPSI	**Sidrap Palu**	**5.02**	**220**	P **Pn**	**05 12 15.2**	**-0.4**
	0.3nm2µm74nm,0.7s					
NLAI	**Namlea**	**5.13**	**127**	P **Pn**	**05 12 16.8**	**-0.4**
	0.4nm2µm19nm,0.6s					
BNSI	**Bone**	**5.16**	**214**	P **Pn**	**05 12 17.9**	**+0.4**
	0.2nm802nm57nm,0.7s					
KAPI	**Kappang**	**5.86**	**214**	**Pn**	**05 12 26.4**	**-0.7**
BSSI	**Bau Bau, Buton**	**6.50**	**203**	P **Pn**	**05 12 36.5**	**+0.7**
WB0	**Warramunga Arr**	**22.50**	**151**	P **P**	**05 15 53.4**	**-0.7**
WB0				IAmb IAmb	05 16 04.3	
	comp=Z,9.2nm,1.5s					
WRA	**Warramunga Arr**	**22.62**	**151**	P **P**	**05 15 54.8**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=336,slow=10,SNR=9.3					
WRA				PcP **PcP**	**05 19 46.7**	**+1.8**
	comp=Z,0.1nm,0.4s,baz=324,slow=2.4,SNR=2.9					
WB2	**Warramunga Arr**	**22.63**	**151**	P **P**	**05 15 55.5**	**+0.2**
ASAR	**Alice Springs**	**25.70**	**156**	P **P**	**05 16 25.5**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=343,slow=15,SNR=4.2					
ASAR				PcP **PcP**	**05 19 52.4**	**+0.8**
	comp=Z,0.4nm,0.4s,baz=345,slow=2,SNR=6.3					
CMAR	**Chiang Mai Arr**	**29.99**	**309**	P **P**	**05 17 04.5**	**+2.6**

	comp=Z,0.9nm,0.3s,baz=128,slow=7.0,SNR=6.7							
CHTO	**Chiang Mai**	**30.20**	**310**	P	**P**	**05 17 05.2**	**+1.4**
CHTO				IAmb	IAmb	05 17 07.1	
	comp=Z,4.8nm,1.1s							
MKAR	**Makanchi Array**	**58.71**	**328**	P	**P**	**05 20 49.4**	**-0.5**
KURK	**Kurchatov**	**63.07**	**330**	P	**P**	**05 21 19.3**	**0.0**

IDC ***27*** *05:26:33.3±0.5, 1.84N×126.58E, h0km, mb4.4/18, mb1 4.5/20, mb1mx4.3/39, mbtmp4.4/20, ML4.1/2, MS3.1/10, Ms1 3.2/10, ms1mx2.9/33, Error ellipse: s-maj=27.2km s-min=11.8km az=82.0*

NEIC ***27*** *05:26:38.5±2.5, 1.80N±0.08×126.46E±0.08, h35km±2km, mb4.7/47, Error ellipse: s-maj=16.1km s-min=8.9km az=225.0*

DJA ***27*** *05:26:39.2±0.2,2.7N±2.7×12.7E±.7, h48km±5km, M4.5/14, mB5.2/7, mb4.7/13, MLv4.5/14, Mw(mB)4.5/7, Mwp5.3/1*

ISC 27 05:26:39.3±1.0, 1.83N±0.04×126.55E±0.05, h40km±10km, n115, σ1§69/120, mb4.6/44, MS3.1/10, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.33**	**142**	P	**Pn**	**05 27 01.0**	**-0.4**
TNTI				S	**Sn**	**05 27 19.6**	**+1.7**
TNTI	**Ternate**	**1.33**	**142**	Pn	**Pn**	**05 27 01.2**	**-0.2**
TNTI				Sn	**Sn**	**05 27 19.3**	**+1.5**
SGSI	**Sangihe**	**2.11**	**331**	P	**Pn**	**05 27 10.6**	**-1.5**
SGSI				S	**Sn**	**05 27 36.5**	**-0.7**
LBMI	**Labuha**	**2.63**	**159**	P	**Pn**	**05 27 20.5**	**+1.3**
LBMI				S	**Sn**	**05 27 52.2**	**+2.3**
KMSI	**Cibinong**	**2.85**	**244**	P	**Pn**	**05 27 23.0**	**+0.7**
KMSI				S	**Sn**	**05 27 58.1**	**+2.6**
GTOI	**Gorontalo**	**3.73**	**252**	P	**Pn**	**05 27 35.4**	**+1.0**
LUWI	**Luwuk**	**4.73**	**233**	P	**Pn**	**05 27 49.8**	**+1.6**
LUWI	**Luwuk**	**4.73**	**233**		**Pn**	**05 27 48.2**	**+0.1**
MRSI	**Marisa**	**4.80**	**254**	P	**Pn**	**05 27 50.4**	**+1.3**
NLAI	**Namlea**	**5.06**	**174**	P	**Pn**	**05 27 52.1**	**-0.6**
	0.2nm1μm44nm,0.7s						
NLAI				S	**Sn**	**05 28 52.0**	**+2.1**
	0.2nm1μm44nm,0.7s						
KCP	**Kidapawan**	**5.35**	**344**	⇓P	Pn	05 28 00.7	+4.0
KCP				*i* S	**Sn**	**05 29 02.8**	**+5.6**
APSI	**Ampana**	**5.60**	**241**	P	**Pn**	**05 28 01.6**	**+1.4**
	0.5nm1μm155nm,0.9s						
MSAI	**Masohi**	**5.66**	**155**	P	**Pn**	**05 28 01.6**	**+0.6**
TOLI2	**Tolitoli**	**5.81**	**263**		**Pn**	**05 28 01.3**	**-1.7**
MPSI	**Mapaga**	**6.81**	**258**	P	**Pn**	**05 28 19.2**	**+2.4**
	0.1nm34nm,0.7s						
TTSI	**Tana Toraja**	**8.29**	**234**	P	**Pn**	**05 28 38.3**	**+1.3**
	7μm2μm54nm,0.7s						
MYLDM	**Lahad Datu**	**8.70**	**293**	Pn	**Pn**	**05 28 43.8**	**+1.2**
SPSI	**Sidrap Palu**	**8.89**	**230**	P	**Pn**	**05 28 47.4**	**+2.1**
	26nm,0.5s						
BNSI	**Bone**	**8.93**	**226**	P	Pn	05 28 59.4	+14
BKSI	**Bulukumba**	**9.57**	**222**	P	**Pn**	**05 28 58.9**	**+4.3**
KAPI	**Kappang**	**9.61**	**225**	Pn	**Pn**	**05 28 55.5**	**+0.4**
	3.1nm,0.3s,baz=47,slow=6.3,SNR=5.0						
KAPI				Sn	**Sn**	**05 30 39.5**	**-2.3**
	0.6nm,0.3s,baz=15,slow=20,SNR=3.5						
BSSI	**Bau Bau, Buton**	**9.96**	**217**	P	**Pn**	**05 29 00.9**	**+0.9**
	24nm,0.6s						
BAKI	**Biak**	**10.02**	**107**	P	Pn	05 29 09.2	+8.5
KKM	**Kota Kinabalu**	**11.13**	**292**		**Pn**	**05 29 12.1**	**-3.9**
SOEI	**Soe**	**11.73**	**191**	P	Pn	05 29 31.7	+7.4
BATI	**Baumata**	**12.29**	**193**	LR	LR	05 34 57.1	
	comp=Z,75nm,19.1s,baz=16,slow=41						
PLAI	**Plampang**	**13.73**	**219**	P	**P**	**05 30 03.5**	**+4.2**
SBUM	**Sibu**	**14.33**	**273**		**Pn**	**05 29 56.4**	**-3.3**
MTN	**Manton Dam**	**15.27**	**163**		**Pn**	**05 30 12.8**	**+0.7**
JAGI	**Jajag, Banyuwa**	**16.04**	**230**	Pn	**Pn**	**05 30 19.3**	**-2.9**
KSM	**Kuching**	**16.24**	**269**	Pn	**Pn**	**05 30 21.4**	**-3.3**
KNRA	**Kununurra**	**17.53**	**173**	P	**Pn**	**05 30 40.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**19.82**	**183**	P	**P**	**05 31 06.2**	**-0.4**
	0.3nm,0.3s,baz=307,slow=12,SNR=3.8						
FITZ	**Fitzroy Crossi**	**19.82**	**183**	P	**P**	**05 31 05.4**	**-1.2**
LEM	**Lembang**	**20.76**	**245**	LR	LR	05 40 13.9	
	comp=Z,114nm,19.2s,baz=170,slow=40						
MANU	**Manus Island**	**21.16**	**100**	P	**P**	**05 31 24.1**	**+2.7**
TWG	**Pinlang**	**21.54**	**346**	P	**P**	**05 31 24.3**	**-0.9**
YULB	**Yu-li**	**22.04**	**347**	P	**P**	**05 31 28.8**	**-1.8**
YULB				IAmb	IAmb	05 31 31.9	
	comp=Z,20nm,1.1s						
TPUB	**Ta-pu**	**22.11**	**345**	P	**P**	**05 31 30.9**	**-0.4**
PMBI	**Palembang**	**22.28**	**258**	P	**P**	**05 31 31.2**	**-2.1**
COEN	**Coen**	**22.75**	**134**	P	**P**	**05 31 35.8**	**-2.5**
WB0	**Warramunga Arr**	**22.80**	**161**	P	**P**	**05 31 37.7**	**-1.0**
WB0				IAmb	IAmb	05 31 43.1	
	comp=Z,18nm,0.6s						
WRAB	**Tennant Creek**	**22.94**	**161**	P	**P**	**05 31 39.1**	**-1.1**
WRAB				IAmb	IAmb	05 31 43.6	
	comp=Z,22nm,0.9s						
WRA	**Warramunga Arr**	**22.94**	**161**	P	**P**	**05 31 38.9**	**-1.3**
	comp=Z,13nm,0.6s,baz=339,slow=11,SNR=69						
WRA				S	**S**	**05 35 45.1**	**-2.6**
	comp=Z,2.6nm,0.8s,baz=344,slow=17,SNR=8.4						
WRA	**Warramunga Arr**	**22.94**	**161**	P	**P**	**05 31 39.6**	**-0.7**
WB2	**Warramunga Arr**	**22.95**	**161**	P	**P**	**05 31 39.1**	**-1.2**
WB2				IAmb	IAmb	05 31 42.8	
	comp=Z,31nm,1.1s						
WC3	**Warramunga Arr**	**22.97**	**161**	P	**P**	**05 31 39.3**	**-1.2**
WC3				IAmb	IAmb	05 31 44.8	
	comp=Z,23nm,0.7s						
WR0	**Warramunga Arr**	**23.03**	**160**	P	**P**	**05 31 39.8**	**-1.3**
WR0				IAmb	IAmb	05 31 43.1	
	comp=Z,17nm,0.9s						
PMG	**Port Moresby**	**23.37**	**119**	LR	LR	05 43 06.5	
	comp=Z,50nm,19.0s,baz=168,slow=42						
SDSI	**Sungai Dareh**	**25.27**	**264**	P	**P**	**05 32 08.4**	**+6.3**
KRVT	**Keravat (AS076**	**26.18**	**104**	LR	LR	05 41 00.2	
	comp=Z,60nm,19.8s,baz=279,slow=33						
AS31	**Alice Springs**	**26.33**	**165**	P	**P**	**05 32 12.6**	**+1.0**
ASAR	**Alice Springs**	**26.33**	**165**	P	**P**	**05 32 11.5**	**-0.1**
	comp=Z,3.2nm,0.4s,baz=349,slow=14,SNR=30						
ASAR				PcP	**PcP**	**05 35 37.0**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=352,slow=2.2,SNR=6.2						
ASAR				S	**S**	**05 36 43.3**	**+1.3**
	comp=Z,1.0nm,1.0s,baz=350,slow=22,SNR=4.3						
ASAR	**Alice Springs**	**26.33**	**165**	P	**P**	**05 32 12.8**	**+1.2**
NJ2	**Nanjing**	**30.93**	**347**	*e*P	**P**	**05 32 54.5**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	**Nakatsue**	**31.40**	**7**	P	**P**	**05 32 55.6**	**-1.0**
	comp=Z,10nm,0.9s,baz=140,slow=1.9,SNR=4.4						
CMAR	**Chiang Mai Arr**	**31.72**	**303**	P	**P**	**05 32 59.4**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=113,slow=6.5,SNR=4.2						
CMAR				PcP	**PcP**	**05 35 50.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=94,slow=3.1,SNR=4.4						
CMAR				LR	LR	05 45 37.1	
	comp=Z,32nm,21.2s,baz=178,slow=36						
MORW	**Morawa**	**32.33**	**197**	P	**P**	**05 33 04.3**	**-0.5**
MORW				IAmb	IAmb	05 33 05.5	
	comp=Z,22nm,1.4s						
FORT	**Forrest**	**32.45**	**178**	P	**P**	**05 33 06.3**	**+0.4**
JMN	**Monobe**	**32.47**	**11**	P	**P**	**05 33 06.9**	**+0.9**
JMN				IAmb	IAmb	05 33 33.2	
	comp=Z,17nm,1.1s						
JWT	**Wachi**	**34.29**	**13**	P	**P**	**05 33 22.5**	**+0.7**
JGF	**Kuroka**	**35.07**	**15**	P	**P**	**05 33 29.1**	**+0.5**
JGF				IAmb	IAmb	05 33 48.3	
	comp=Z,16nm,1.5s						
KSRS	**Korea Array**	**35.48**	**2**	P	**P**	**05 33 32.3**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=180,slow=9.2,SNR=8.3						
KSRS				LR	LR	05 49 49.1	
	comp=Z,13nm,19.4s,baz=155,slow=39						
BBOO	**Buckleboo**	**35.60**	**166**	P	**P**	**05 33 32.6**	**-0.6**
BBOO				IAmb	IAmb	05 33 40.7	
	comp=Z,22nm,1.4s						
NWAO	**Narrogin (SRO)**	**35.67**	**194**	P	**P**	**05 33 32.4**	**-1.3**
NWAO				IAmb	IAmb	05 33 41.0	
	comp=Z,17nm,1.2s						
MAT	**Matsushiro**	**36.19**	**16**	P	**P**	**05 33 38.6**	**+0.4**
MJAR	**Matsushiro Arr**	**36.19**	**16**	P	**P**	**05 33 36.9**	**-1.2**
	comp=Z,5.9nm,0.8s,baz=181,slow=9.2,SNR=12						
MJAR				LR	LR	05 48 11.9	
	comp=Z,17nm,21.4s,baz=220,slow=36						
MJAR	**Matsushiro Arr**	**36.19**	**16**	P	**P**	**05 33 38.2**	**+0.1**
STKA	**Stephens Creek**	**36.43**	**158**	P	**P**	**05 33 40.1**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=338,slow=9.2,SNR=12						
STKA	**Stephens Creek**	**36.43**	**158**	P	**P**	**05 33 40.0**	**-0.3**
JMM	**Marumori**	**38.18**	**18**	P	**P**	**05 33 55.7**	**+0.7**
LZH	**Lanzhou**	**40.06**	**331**	*e*P	**P**	**05 34 11.8**	**+0.8**
LZH				pP	pP	05 34 20.5	-1.2
LZH				sP	sP	05 34 25.0	-1.2
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
JTM	**Tenmabayashi**	**40.95**	**17**	P	**P**	**05 34 19.3**	**+1.3**
HHC	**Hu-ho-hao-te**	**41.14**	**343**	*e*P	**P**	**05 34 20.5**	**+0.7**
HHC				S	S	05 40 17.0	-13
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,4.8s						
HHC				LR	LR		
	comp=N,120nm,14.1s						
HHC				LR	LR		
	comp=E,140nm,15.0s						
HHC				LR	LR		
	comp=Z,110nm,14.5s						
USRK	**Ussuriysk Ar.**	**42.47**	**6**	P	**P**	**05 34 30.8**	**+0.4**
	comp=Z,5.6nm,0.8s,baz=184,slow=5.4,SNR=12						
USRK				LR	LR	05 52 23.8	
	comp=Z,15nm,21.2s,baz=148,slow=36						
USRK	**Ussuriysk Ar.**	**42.47**	**6**	P	**P**	**05 34 31.1**	**+0.6**
GTA	**Gaotai**	**44.64**	**330**	*e*P	**P**	**05 34 50.5**	**+2.3**
GTA				pP	pP	05 35 00.0	+1.0
GTA				sP	sP	05 35 04.5	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ULN	**Ulaanbaatar**	**48.87**	**343**	P	**P**	**05 35 22.7**	**+1.6**
SONM	**Songino Array**	**49.04**	**342**	P	**P**	**05 35 21.8**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=158,slow=9.2,SNR=9.4						
SONM				PcP	**PcP**	**05 36 45.9**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=160,slow=4.6,SNR=2.1						
SONM				LR	LR	05 56 32.9	
	comp=Z,59nm,20.2s,baz=141,slow=37						
SONM	**Songino Array**	**49.04**	**342**	P	**P**	**05 35 20.9**	**-1.5**
WMQ	**Urumqi**	**54.18**	**326**	*e*P	**P**	**05 36 01.5**	**+0.6**
PEA0B	**Petropavlovsk-**	**57.25**	**22**	P	**P**	**05 36 23.4**	**+0.7**
PETK	**Petropavlovsk-**	**57.25**	**22**	P	**P**	**05 36 23.6**	**+1.0**
	comp=Z,3.5nm,0.5s,baz=176,slow=4.7,SNR=6.9						
MK31	**Makanchi Array**	**59.01**	**326**	P	**P**	**05 36 34.0**	**-1.1**
MK31				IAmb	IAmb	05 36 37.4	
	comp=Z,2.7nm,0.5s						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**05 36 33.6**	**-1.5**
	comp=Z,4.2nm,0.4s,baz=120,slow=7.6,SNR=44						
MKAR				LR	LR	06 02 36.1	
	comp=Z,32nm,20.7s,baz=99,slow=37						
MKAR	**Makanchi Array**	**59.01**	**326**	P	**P**	**05 36 33.7**	**-1.4**
MAKZ	**Makanchi**	**59.20**	**326**	P	**P**	**05 36 35.1**	**-1.2**
MAKZ				IAmb	IAmb	05 36 38.3	
	comp=Z,5.4nm,0.7s						
ZALV	**Zalesovo Beam**	**62.20**	**334**	P	**P**	**05 36 57.6**	**+1.0**
	comp=Z,1.1nm,0.4s,baz=116,slow=5.6,SNR=3.4						
GAR	**Garm**	**63.08**	**313**	P	**P**	**05 37 01.2**	**-1.8**
GAR				IAmb	IAmb	05 37 07.3	
	comp=Z,9.4nm,1.0s						
KURK	**Kurchatov**	**63.24**	**328**	P	**P**	**05 37 02.0**	**-1.6**
KKAR	**Karatay Array**	**64.50**	**318**	P	**P**	**05 37 10.4**	**-1.8**
BRVK	**Borovoye**	**68.88**	**327**	P	**P**	**05 37 39.7**	**-0.1**
BRVK				IAmb	IAmb	05 37 43.6	
	comp=Z,4.2nm,0.9s						
TIXI	**Tiksi**	**69.74**	**1**	P	**P**	**05 37 43.5**	**-1.2**
TIXI				IAmb	IAmb	05 37 44.6	
	comp=Z,3.3nm,0.7s						
NRIK	**Noril'sk**	**72.22**	**346**	P	**P**	**05 37 59.3**	**-0.6**
	comp=Z,6.0nm,0.7s,baz=131,slow=6.5,SNR=6.5						
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**05 38 06.3**	**-1.6**
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**05 38 07.2**	**-0.7**
ABKAR				IAmb	IAmb	05 38 11.8	
	comp=Z,2.6nm,0.7s						
ARU	**Arti**	**76.44**	**328**	P	**P**	**05 38 21.9**	**-2.8**
ARU				IAmb	IAmb	05 38 25.5	
	comp=Z,9.9nm,1.3s						
VNDA	**Vanda**	**81.57**	**173**	P	**P**	**05 38 52.4**	**0.0**
	comp=Z,1.6nm,0.6s,baz=318,slow=6.3,SNR=16						
VNDA	**Vanda**	**81.57**	**173**	P	**P**	**05 38 51.9**	**-0.5**
TTA	**Tatalina**	**82.67**	**27**	P	**P**	**05 38 59.6**	**+1.1**
TTA				IAmb	IAmb	05 38 59.9	
	comp=Z,6.7nm,1.2s						
IMAR	**Indian Mountai**	**84.14**	**24**	P	**P**	**05 39 07.2**	**+1.3**
KBZ	**Khabaz**	**84.15**	**314**	P	**P**	**05 39 07.0**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=180,slow=2.0,SNR=2.5						
CNPM	**China Poot**	**84.48**	**30**	P	**P**	**05 39 08.1**	**+0.3**
BRLK	**Bradley Lake**	**84.68**	**30**	P	**P**	**05 39 09.2**	**+0.4**
PMR	**Palmer**	**85.69**	**29**	P	**P**	**05 39 14.1**	**+0.4**
PMR				IAmb	IAmb	05 39 14.7	
	comp=Z,6.6nm,1.0s						
COLD	**Coldfoot**	**85.70**	**23**	P	**P**	**05 39 15.0**	**+1.2**
COLD				IAmb	IAmb	05 39 16.4	
	comp=Z,4.3nm,1.1s						
TOLK	**Toolik Lake Re**	**86.07**	**21**	P	**P**	**05 39 16.5**	**+0.9**
TOLK				IAmb	IAmb	05 39 32.6	
	comp=Z,8.2nm,1.5s						
ILAR	**Eielson Array**	**86.89**	**25**	P	**P**	**05 39 18.1**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=230,slow=5.1,SNR=9.2						
KLMR	**Klimovskoe**	**86.97**	**331**	*e*P	**P**	**05 39 18.0**	**-2.0**
KLMR				AMP		05 39 25.3	
	comp=Z,5.0nm,0.9s						
BMAR	**Burnt Mountain**	**87.89**	**23**	P	**P**	**05 39 25.7**	**+1.3**
BARN	**Barnard Glacie**	**89.29**	**29**	P	**P**	**05 39 32.7**	**+1.4**
BARN				IAmb	IAmb	05 39 39.0	
	comp=Z,8.8nm,1.3s						
ARCES	**ARCESS Array B**	**92.16**	**340**	P	**P**	**05 39 46.1**	**+1.7**
	comp=Z,3.5nm,1.0s,baz=70,slow=5.2,SNR=3.9						
FINES	**FINESS Array B**	**93.41**	**332**	P	**P**	**05 39 49.7**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=321,slow=2.0,SNR=3.2						
TXAR	**Lajitas Array**	**122.89**	**53**	PKP	**PKPdf**	**05 45 32.0**	**0.0**
	comp=Z,0.2nm,0.8s,baz=250,slow=1.8,SNR=2.1						
TORD	**Torodi Ar. Bea**	**123.32**	**287**	PKP	**PKPdf**	**05 45 32.1**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=101,slow=2.2,SNR=2.5						

IDC ***27*** *05:31:24.9±2.1, 19.55S×173.10W, h0km, mb4.0/6, mb1 4.3/6, mb1mx4.0/37, mbtmp4.0/6, MS3.2/5, Ms1 3.2/5, ms1mx2.8/32, Error ellipse: s-maj=127.2km s-min=22.6km az=154.0*

ISC 27 05:31:26.0±2.3, 19.8S±0.8×173.0W±0.4, h10km, n13, σ0§92/6, mb4.0/6, MS3.2/5, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAR	**Rarotonga**	**12.45**	**99**	LR	LR	05 39 10.6	
	comp=Z,76nm,18.2s,baz=264,slow=37						
DZM	**Mont Dzumac**	**19.36**	**260**	LR	LR	05 42 04.3	
	comp=Z,78nm,19.3s,baz=38,slow=33						
DZM	**Mont Dzumac**	**19.36**	**260**	*e*LR	LR	05 40 37.6	
	comp=Z,110nm,26.4s						
TBI	**Tubuai**	**22.15**	**103**	*e*LR	LR	05 41 16.4	
	comp=Z,96nm,27.5s						
PPT2	**Papeete2**	**22.27**	**88**	*e*LR	LR	05 41 28.8	
	comp=Z,113nm,25.5s						
PPT	**Papeete**	**22.27**	**88**	LR	LR	05 42 23.1	
	comp=Z,44nm,20.6s,baz=296,slow=29						
CTA	**Charters Tower**	**38.26**	**262**	P	**P**	**05 38 47.7**	**+0.9**
	4.0nm,0.8s,baz=89,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**49.27**	**255**	P	**P**	**05 40 14.9**	**-0.5**
	3.6nm,0.9s,baz=86,slow=8.1,SNR=20						
WRA	**Warramunga Arr**	**49.37**	**260**	P	**P**	**05 40 15.3**	**-0.9**
	1.7nm,1.0s,baz=97,slow=6.9,SNR=7.0						
WRA				LR	LR	06 01 08.1	
	comp=Z,44nm,18.2s,baz=115,slow=36						
FITZ	**Fitzroy Crossi**	**57.80**	**261**	LR	LR	06 03 54.1	
	comp=Z,18nm,21.3s,baz=210,slow=34						
NVAR	**Mina Array Bea**	**77.33**	**41**	P	**P**	**05 43 21.9**	**+0.6**
	0.3nm,0.8s,baz=237,slow=10,SNR=4.0						
TXAR	**Lajitas Array**	**82.74**	**55**	P	**P**	**05 43 50.4**	**-0.2**
	1.1nm,1.0s,baz=212,slow=4.4,SNR=6.1						
ILAR	**Eielson Array**	**86.66**	**11**	P	**P**	**05 44 08.9**	**-0.5**
	0.8nm,1.0s,baz=210,slow=5.2,SNR=3.4						

WEL 27 05:41:53.7, 38°S±2°×17°E±°, h189km±4km, M3.2/60, MLv3.2/60, Error ellipse: s-maj=0.0km s-min=0.0km az=19.3, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARZ	**Kaharoa**	**0.13**	**175**	P	Pn	05 42 18.7	+0.1
TGRZ	**Tauranga**	**0.16**	**9**	P	Pn	05 42 18.6	0.0
KMRZ	**Kaimai**	**0.23**	**281**	P	Pn	05 42 19.0	+0.2
OMRZ	**Omania**	**0.24**	**153**	P	Pn	05 42 18.9	+0.1
OPRZ	**Ohinepanea**	**0.26**	**80**	P	Pn	05 42 18.7	-0.1
TARZ	**Mount Tarawera**	**0.41**	**148**	P	Pn	05 42 19.7	+0.4
EDRZ	**Edgecumbe**	**0.46**	**118**	P	Pn	05 42 19.5	+0.1
HRRZ	**Handcock Road**	**0.50**	**175**	P	Pn	05 42 19.8	+0.3
RRRZ	**Republican Roa**	**0.50**	**153**	P	Pn	05 42 19.5	-0.1
TOZ	**Tahuroa Road**	**0.60**	**285**	P	Pn	05 42 20.2	+0.3
PRRZ	**Plateau Road**	**0.62**	**168**	P	Pn	05 42 20.2	+0.2
WPRZ	**Whakapapatarin**	**0.63**	**185**	P	Pn	05 42 20.6	+0.5
ALRZ	**Allen Road**	**0.68**	**172**	P	Pn	05 42 20.7	+0.4
TLZ	**Tolley Road**	**0.70**	**231**	P	Pn	05 42 20.9	+0.4
MUGZ	**Murupara**	**0.72**	**144**	P	Pn	05 42 20.4	-0.2
MUGZ				S	Sn	05 42 39.8	-1.7
URZ	**Urewera**	**0.79**	**118**	P	Pn	05 42 20.5	-0.4
URZ				S	Sn	05 42 40.1	-1.8
WATZ	**Wairara**	**0.91**	**205**	P	Pn	05 42 22.2	+0.5
RTZ	**Ruatahuna**	**0.93**	**141**	P	Pn	05 42 21.8	-0.1
RTZ				S	Sn	05 42 42.5	-1.3
MRHZ	**Matea Rd**	**0.95**	**171**	P	Pn	05 42 22.0	-0.1
HATZ	**Hinemaiaia**	**1.00**	**186**	P	Pn	05 42 22.4	0.0
RATZ	**Rangitukua**	**1.04**	**200**	P	Pn	05 42 22.8	+0.2
MTHZ	**Maungataniwha**	**1.07**	**154**	P	Pn	05 42 22.8	-0.1
MTHZ				S	Sn	05 42 44.5	-1.1
RAGZ	**Rawiri**	**1.11**	**123**	P	Pn	05 42 23.3	+0.1
RAGZ				S	Sn	05 42 44.9	-1.2
MWZ	**Matawai**	**1.11**	**114**	P	Pn	05 42 23.0	-0.2
MWZ				S	Sn	05 42 44.7	-1.3
RITZ	**Rihia Road**	**1.12**	**195**	P	Pn	05 42 23.7	+0.5
RUGZ	**Raukumara Rang**	**1.15**	**94**	P	Pn	05 42 22.4	-1.1
MKAZ	**Moumakai**	**1.16**	**312**	P	Pn	05 42 23.8	+0.3
KATZ	**Kakaramea**	**1.16**	**201**	P	Pn	05 42 24.0	+0.3
KUZ	**Kuaotunu**	**1.21**	**340**	P	Pn	05 42 23.9	-0.1
RAHZ	**Arahi**	**1.23**	**147**	P	Pn	05 42 24.4	+0.4
RAHZ				S	Sn	05 42 47.6	0.0
HAZ	**Te Kaha**	**1.24**	**84**	P	Pn	05 42 23.7	-0.4
HAZ				S	Sn	05 42 45.4	-2.1
SNGZ	**Shannon Statio**	**1.25**	**136**	P	Pn	05 42 23.1	-1.1
SNGZ				S	Sn	05 42 46.7	-1.3
HIZ	**Hauiti**	**1.25**	**240**	P	Pn	05 42 24.5	+0.3
NMHZ	**Naumai**	**1.29**	**160**	P	Pn	05 42 25.3	+0.7
KRVZ	**Karewarewa**	**1.29**	**201**	P	Pn	05 42 24.6	0.0
BKZ	**Black Stump Fm**	**1.29**	**171**	P	Pn	05 42 24.3	-0.3
BKZ				S	Sn	05 42 46.7	-2.0
TMVZ	**Te Maari**	**1.29**	**198**	P	Pn	05 42 24.6	-0.1
ETVZ	**East Tongariro**	**1.31**	**198**	P	Pn	05 42 24.9	0.0
WTVZ	**West Tongariro**	**1.32**	**202**	P	Pn	05 42 24.9	0.0
TWVZ	**Taurewa**	**1.33**	**208**	P	Pn	05 42 25.1	+0.1
OTVZ	**Oturere**	**1.35**	**199**	P	Pn	05 42 25.5	+0.3
NGZ	**Ngauruhoe**	**1.37**	**201**	P	Pn	05 42 25.7	+0.3
TKGZ	**Te Karaka**	**1.39**	**114**	P	Pn	05 42 25.7	+0.3
ETAZ	**East Tamaki Re**	**1.40**	**312**	P	Pn	05 42 25.6	+0.1
WIAZ	**Waiheke Island**	**1.40**	**321**	P	Pn	05 42 25.8	+0.2
TWGZ	**Tauwhareparae**	**1.41**	**102**	P	Pn	05 42 26.0	+0.4
WHHZ	**Waihua**	**1.42**	**147**	P	Pn	05 42 26.0	+0.3
TUVZ	**Tukino**	**1.45**	**198**	P	Pn	05 42 26.2	+0.1
RIGZ	**Rimuhau**	**1.45**	**124**	P	Pn	05 42 26.3	+0.3
PKGZ	**Pakihiroa**	**1.46**	**90**	P	Pn	05 42 26.1	0.0
FWVZ	**Far West T-bar**	**1.46**	**201**	P	Pn	05 42 26.3	0.0
DRZ	**Dome Shelter**	**1.48**	**200**	P	Pn	05 42 27.0	+0.5
WHVZ	**Whangaehu Hut**	**1.48**	**200**	P	Pn	05 42 26.4	-0.1
ARHZ	**Aropaoanui**	**1.50**	**157**	P	Pn	05 42 26.7	+0.4
TRVZ	**Turoa**	**1.50**	**201**	P	Pn	05 42 26.7	0.0
AWAZ	**Awhitu Peninsu**	**1.51**	**303**	P	Pn	05 42 26.5	0.0
WNVZ	**Wahianoa**	**1.52**	**199**	P	Pn	05 42 26.6	-0.2
KWHZ	**Kaweka Forest**	**1.54**	**174**	P	Pn	05 42 26.9	0.0
MBAZ	**Motutapu North**	**1.54**	**316**	P	Pn	05 42 27.0	+0.2
MOVZ	**Moawhango**	**1.56**	**194**	P	Pn	05 42 26.5	-0.6
PKVZ	**Pokaka**	**1.56**	**206**	P	Pn	05 42 27.0	0.0

ATPI				AML	AML		
	comp=E,154μm,0.8s						
ATVO	**AVT- Monte Val**	**0.12**	**245**	⇑P	Pg	06 17 37.1	+0.2
ATVO				S	Sg	06 17 39.1	+0.6
ATVO				AML	AML		
	comp=N,60μm,1.5s						
ATVO				AML	AML		
	comp=E,74μm,1.3s						
APEC	**Apecchio**	**0.16**	**324**	P	Pg	06 17 38.1	+0.4
APEC				S	Sg	06 17 41.0	+1.2
MURB	**Monte Urbino**	**0.17**	**186**	⇑P	Pg	06 17 38.3	+0.5
MURB				S	Sg	06 17 41.5	+1.4
MURB				AML	AML		
	comp=N,232μm,1.4s						
MURB				AML	AML		
	comp=E,170μm,1.5s						
NARO	**Abbazia di Nar**	**0.18**	**7**	P	Pg	06 17 38.6	+0.5
NARO				AML	AML		
	comp=N,47μm,1.6s						
NARO				AML	AML		
	comp=E,69μm,1.5s						

IDC 27 06:25:54.9±3.9, 2°83S×139°68E, h64km±40km, mb2.9/3, mb1 3.2/4, mb1mx3.0/23, mbtmp3.2/4, ML3.4/1, MS2.6/1, Ms1 2.6/1, ms1mx2.1/13, Error ellipse: s-maj=79.9km s-min=20.1km az=127.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.07**	**73**	P	Pn	06 26 14.3	+0.2
	49nm,0.3s,baz=231,slow=12,SNR=147						
JAY				S	Sn	06 26 28.4	+0.1
	28nm,0.3s,baz=283,slow=20,SNR=9.5						
WRA	**Warramunga Arr**	**17.79**	**197**	P	P	06 29 57.9	-0.3
	0.1nm,0.3s,baz=10,slow=13,SNR=11						
WRA				S	Sn	06 33 03.3	-13
	0.1nm,0.3s,baz=8.6,slow=23,SNR=4.3						
FITZ	**Fitzroy Crossi**	**20.49**	**221**	P	P	06 30 27.9	+0.2
	1.2nm,0.9s,baz=39,slow=14,SNR=5.4						
FITZ				LR	LR	06 39 00.7	
	comp=Z,18nm,20.3s,baz=88,slow=38						
ASAR	**Alice Springs**	**85.54**	**24**	P	P	06 30 38.2	+0.1
	0.2nm,0.6s,baz=24,slow=11,SNR=2.0						
ILAR	**Eielson Array**	**85.54**	**24**	P	P	06 38 25.7	-0.1
	0.2nm,0.7s,baz=250,slow=4.5,SNR=2.9						

TAP ***27*** *06:28:53.5, 24°.40N×121°.88E, h46km, ML2.5, B*
JMA ***27*** *06:28:53.3±0.1, 24°.41N×121°.91E, h48km±3km*
ISC 27 06:28:54.1±1.3, 24°39N±0°.03×121°91E±0°.03, h43km±7km, n39, σ0s43/72, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.11**	**304**	P	**Pn**	**06 29 01.0**	**-0.1**
	baz=309						
ENAH				*e*S	**Sn**	**06 29 06.7**	**+0.7**
	baz=309						
ENA	**Nanau**	**0.16**	**284**	P	**Pn**	**06 29 01.2**	**-0.2**
	baz=284						
ENA				*e*S	**Sn**	**06 29 06.9**	**+0.4**
	baz=284						
TWC	**Suao**	**0.23**	**346**	P	**Pn**	**06 29 01.7**	**-0.2**
	baz=354						
TWC				*e*S	**Sn**	**06 29 07.6**	**+0.2**
	baz=354						
NACB	**Ninganchiao**	**0.36**	**233**	P	**Pn**	**06 29 02.6**	**-0.6**
	baz=229						
NACB				S	**Sn**	**06 29 10.0**	**+0.4**
	baz=229						
TWE	**Neicheng**	**0.40**	**326**	P	**Pn**	**06 29 03.4**	**-0.3**
	baz=330						
TWE				S	**Sn**	**06 29 10.6**	**+0.2**
	baz=330						
ENTT	**Nioudou**	**0.40**	**309**	P	**Pn**	**06 29 03.4**	**-0.4**
	baz=310						
ENTT				*e*S	**Sn**	**06 29 10.8**	**+0.3**
	baz=310						
NDT	**Datong Townshi**	**0.42**	**301**	*e*P	**Pn**	**06 29 03.8**	**-0.1**
	baz=301						
NDT				*e*S	**Sn**	**06 29 11.3**	**+0.4**
	baz=301						
TWD	**Chiawan**	**0.42**	**223**	P	**Pn**	**06 29 03.8**	**-0.2**
	baz=218						
TWD				*e*S	**Sn**	**06 29 11.4**	**+0.5**
	baz=218						
ETLH	**Xiulin Townshi**	**0.43**	**245**	*e*P	**Pn**	**06 29 03.7**	**-0.5**
	baz=242						
ETLH				*e*S	**Sn**	**06 29 11.1**	**-0.1**
	baz=242						
NTC	**Toucheng**	**0.47**	**351**	*e*P	**Pn**	**06 29 04.3**	**-0.3**
	baz=354						
NTC				*e*S	**Sn**	**06 29 12.1**	**+0.2**
	baz=354						
NNSB	**Datong**	**0.48**	**275**	P	**Pn**	**06 29 04.3**	**-0.5**
	baz=274						
NNSB				S	**Sn**	**06 29 12.3**	**-0.1**
	baz=274						
NNSH	**Datong**	**0.48**	**275**	*e*P	**Pn**	**06 29 04.2**	**-0.6**
	baz=274						
NNSH				*e*S	**Sn**	**06 29 12.1**	**-0.4**
	baz=274						
NNS	**Nan Shan**	**0.49**	**276**	P	**Pn**	**06 29 04.4**	**-0.6**
	baz=275						
NNS				S	**Sn**	**06 29 12.5**	**-0.1**
	baz=275						
NWLT	**Wulai**	**0.53**	**316**	*e*P	**Pn**	**06 29 05.0**	**-0.4**
	baz=317						
NWLT				*e*S	**Sn**	**06 29 13.3**	**-0.1**
	baz=317						
YHNB	**Yeheng**	**0.56**	**300**	*e*P	**Pn**	**06 29 05.3**	**-0.5**
	baz=300						
NSK	**Sanguang**	**0.58**	**300**	P	**Pn**	**06 29 05.6**	**-0.5**
	baz=300						
NSK				*e*S	**Sn**	**06 29 14.2**	**-0.4**
	baz=300						
TIPB	**Shuangxi**	**0.58**	**353**	*e*P	**Pn**	**06 29 06.2**	**+0.1**
	baz=354						
TIPB				S	**Sn**	**06 29 15.1**	**+0.4**
	baz=354						
TWB1	**Santiao Chiao**	**0.62**	**7**	P	**Pn**	**06 29 06.5**	**0.0**
	baz=9.0						
TWB1				S	**Sn**	**06 29 16.0**	**+0.6**
	baz=9.0						
FUSS	**Fushou**	**0.62**	**257**	*e*P	**Pn**	**06 29 06.5**	**-0.3**
	baz=255						
FUSS				*e*S	**Sn**	**06 29 15.5**	**-0.4**
	baz=255						
WHF	**Hehuan Shan**	**0.64**	**248**	*e*P	**Pn**	**06 29 06.7**	**-0.4**
	baz=245						
WHF				*e*S	**Sn**	**06 29 16.2**	**-0.3**
	baz=245						
TWA	**Mucha**	**0.66**	**333**	*e*P	**Pn**	**06 29 07.1**	**0.0**
	baz=335						
TWA				*e*S	**Sn**	**06 29 17.1**	**+0.7**
	baz=335						
TWT	**Tachien**	**0.68**	**259**	*e*P	**Pn**	**06 29 07.5**	**0.0**
	baz=257						
TWT				*e*S	**Sn**	**06 29 17.7**	**+0.5**
	baz=257						
NWF	**Wu-fen Shan**	**0.69**	**350**	*e*P	**Pn**	**06 29 07.5**	**0.0**
	baz=352						
NWF				*e*S	**Sn**	**06 29 17.6**	**+0.5**
	baz=352						
WFSB	**Wu-fen Shan**	**0.69**	**350**	*e*P	**Pn**	**06 29 07.6**	**+0.1**
	baz=352						
WFSB				*e*S	**Sn**	**06 29 17.7**	**+0.6**
	baz=352						
TDCB	**Techi**	**0.70**	**259**	*e*P	**Pn**	**06 29 07.6**	**-0.1**
	baz=257						
TDCB				*e*S	**Sn**	**06 29 17.4**	**-0.1**
	baz=257						
ESL	**Shilin**	**0.72**	**217**	*e*P	**Pn**	**06 29 07.8**	**-0.1**
	baz=214						
CHGB	**Renai**	**0.75**	**244**	*e*P	**Pn**	**06 29 08.4**	**0.0**
	baz=242						
CHGB				*e*S	**Sn**	**06 29 19.0**	**+0.3**
	baz=242						
OWD	**Renai**	**0.80**	**237**	*e*P	**Pn**	**06 29 08.9**	**-0.1**
	baz=235						
OWD				*e*S	**Sn**	**06 29 19.8**	**0.0**
	baz=235						
YM05	**YM05**	**0.83**	**338**	*e*P	**Pn**	**06 29 09.2**	**-0.3**
	baz=339						
YM05				*e*S	**Sn**	**06 29 21.1**	**+0.5**
	baz=339						
YM04	**YM04**	**0.83**	**336**	*e*P	**Pn**	**06 29 09.3**	**-0.1**
	baz=337						
YM04				*e*S	**Sn**	**06 29 20.1**	**-0.4**
	baz=337						
NSTT	**Nanjuang**	**0.86**	**286**	*e*P	**Pn**	**06 29 09.2**	**-0.5**
	baz=286						
WHP	**Taichung City**	**0.89**	**263**	*e*P	**Pn**	**06 29 10.6**	**+0.4**
	baz=262						
WHP				*e*S	**Sn**	**06 29 22.2**	**+0.2**
	baz=262						
JYNG	**Yonaguni jima**	**0.95**	**86**	P	**Pn**	**06 29 10.7**	**-0.2**
JYNG				S	**Sn**	**06 29 21.9**	**-1.4**
HGSD	**Ruisui**	**1.00**	**206**	*e*P	**Pn**	**06 29 12.4**	**+0.8**
	baz=204						
YOJ	**Yonaguni jima**	**1.01**	**86**	*e*S	**Sn**	**06 29 25.8**	**+1.0**
	baz=85						
YOJ	**Yonaguni jima**	**1.01**	**86**	P	**Pn**	**06 29 11.3**	**-0.5**
YOJ				*e*S	**Sn**	**06 29 24.3**	**-0.5**
SMLT	**Sun Moon Lake**	**1.05**	**241**	*e*P	**Pn**	**06 29 12.9**	**+0.5**
	baz=240						
YULB	**Yu-li**	**1.14**	**210**	*e*P	**Pn**	**06 29 13.6**	**0.0**
	baz=208						
YULB				*e*S	**Sn**	**06 29 27.9**	**-0.1**
	baz=208						
TWF1	**Yuli**	**1.18**	**209**	*e*P	**Pn**	**06 29 14.2**	**+0.2**
	baz=206						
TWF1				*e*S	**Sn**	**06 29 29.2**	**+0.3**
	baz=206						

IDC 27 06:35:40.3±9.8, 1°63S×19°25W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/27, mbtmp3.7/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/32, Error ellipse: s-maj=370.9km s-min=43.1km az=165.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**25.44**	**54**	P	P	06 41 10.2	+0.1
	1.1nm,0.9s,baz=226,slow=11,SNR=5.5						
LPAZ	**La Paz**	**50.27**	**250**	LR	LR	07 04 25.9	
	comp=Z,24nm,21.8s,baz=80,slow=34						
BRTR	**Keskin Array B**	**63.44**	**43**	LR	LR	07 14 27.9	
	comp=Z,10nm,21.5s,baz=244,slow=37						
AKASG	**Malin Array Be**	**66.44**	**31**	P	P	06 46 31.2	-0.1
	0.3nm,0.4s,baz=230,slow=6.1,SNR=5.6						
KBZ	**Khabaz**	**71.39**	**43**	LR	LR	07 19 32.2	
	comp=Z,18nm,20.9s,baz=256,slow=37						
TXAR	**Lajitas Array**	**85.92**	**299**	P	P	06 48 22.9	+0.1
	0.4nm,0.9s,baz=123,slow=4.6,SNR=3.6						

TAP ***27*** *07:28:46.9, 24°.17N×122°.24E, h19km, ML2.8, D*
JMA ***27*** *07:28:46.6±0.1, 24°.05N×122°.29E, h24km±3km, M2.2*
ISC 27 07:28:46.9±1.2, 24°13N±0°.03×122°27E±0°.02, h20km±4km, n65, σ0s62/85, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.53**	**307**	P	**Pb**	**07 28 57.2**	**-0.3**
	baz=304						
ENAH				*e*S	**Sg**	**07 29 05.2**	**+0.5**
	baz=304						
ENA	**Nanau**	**0.57**	**302**	*e*P	**Pg**	**07 28 58.7**	**+0.4**
	baz=299						
ENA				S	**Sb**	**07 29 05.6**	**-0.2**
	baz=299						
TWC	**Suao**	**0.61**	**321**	P	**Pb**	**07 28 58.3**	**-0.6**
	baz=321						
TWC				*e*S	**Sb**	**07 29 05.9**	**-1.2**
	baz=321						
NACB	**Ninganchiao**	**0.62**	**274**	P	**Pb**	**07 28 58.9**	**-0.1**
	baz=269						
TWD	**Chiawan**	**0.62**	**266**	*e*P	**Pg**	**07 28 59.7**	**+0.5**
	baz=260						
JYNG	**Yonagunijimaku**	**0.69**	**62**	P	**Pb**	**07 29 00.2**	**-0.1**
JYNG				*e*S	**Sb**	**07 29 09.1**	**-0.3**
ETLH	**Xiulin Townshi**	**0.73**	**276**	P	**Pb**	**07 29 00.8**	**-0.1**
	baz=272						
ETLH				*e*S	**Sg**	**07 29 11.2**	**+0.3**
	baz=272						
YOJ	**Yonaguni jima**	**0.75**	**64**	*e*P	**Pb**	**07 29 01.0**	**-0.3**
	baz=67						
YOJ	**Yonaguni jima**	**0.75**	**64**	P	**Pb**	**07 29 01.0**	**-0.3**
YOJ				*e*S	**Sg**	**07 29 11.5**	**-0.2**
ILA	**Ilan**	**0.79**	**323**	*e*P	**Pb**	**07 29 01.8**	**-0.2**
	baz=323						
TWE	**Neicheng**	**0.81**	**317**	*e*P	**Pg**	**07 29 02.5**	**-0.2**
	baz=316						
ENTT	**Nioudou**	**0.82**	**308**	*e*P	**Pb**	**07 29 02.6**	**+0.1**
	baz=307						
NTC	**Toucheng**	**0.83**	**331**	*e*P	**Pb**	**07 29 02.6**	**0.0**
	baz=331						
NTC				*e*S	**Sb**	**07 29 13.6**	**+0.4**
	baz=331						
ESL	**Shilin**	**0.83**	**248**	*e*P	**Pg**	**07 29 02.9**	**-0.2**
	baz=243						
NDT	**Datong Townshi**	**0.84**	**304**	*e*P	**Pg**	**07 29 03.1**	**-0.2**
	baz=302						
NDT				*e*S	**Sb**	**07 29 13.7**	**0.0**
	baz=302						
NNSB	**Datong**	**0.86**	**290**	P	**Pb**	**07 29 03.2**	**-0.1**
	baz=287						
NNSB				S	**Sb**	**07 29 14.9**	**+0.4**
	baz=287						
NNSH	**Datong**	**0.86**	**290**	P	**Pb**	**07 29 03.1**	**-0.1**
	baz=287						
NNSH				*e*S	**Sb**	**07 29 14.8**	**+0.3**
	baz=287						
NNS	**Nan Shan**	**0.88**	**291**	*e*P	**Pg**	**07 29 03.8**	**-0.3**
	baz=288						
TWB1	**Santiao Chiao**	**0.91**	**344**	*e*P	**Pb**	**07 29 03.5**	**-0.5**
	baz=345						
TWB1				*e*S	**Sb**	**07 29 15.6**	**-0.2**
	baz=345						
WHF	**Hehuan Shan**	**0.92**	**271**	P	**Pb**	**07 29 04.0**	**-0.5**
	baz=268						
TIPB	**Shuangxi**	**0.93**	**334**	*e*P	**Pb**	**07 29 04.4**	**0.0**
	baz=334						
TIPB				S	**Sb**	**07 29 16.4**	**0.0**
	baz=334						
FUSS	**Fushou**	**0.95**	**277**	*e*P	**Pb**	**07 29 04.8**	**0.0**
	baz=274						
NWLT	**Wulai**	**0.95**	**313**	*e*P	**Pg**	**07 29 05.8**	**+0.3**
	baz=311						
YHNB	**Yeheng**	**0.98**	**304**	*e*P	**Pb**	**07 29 05.2**	**0.0**
	baz=302						
YHNB				*e*S	**Sg**	**07 29 18.3**	**-0.6**
	baz=302						
NSK	**Sanguang**	**0.99**	**303**	*e*P	**Pb**	**07 29 05.4**	**-0.1**
	baz=301						
NSK				*e*S	**Sb**	**07 29 17.9**	**-0.3**
	baz=301						
HGSD	**Ruisui**	**1.00**	**231**	*e*P	**Pn**	**07 29 05.8**	**-0.1**
	baz=227						
CHGB	**Renai**	**1.01**	**266**	*e*P	**Pb**	**07 29 05.3**	**-0.5**
	baz=263						
TWT	**Tachien**	**1.01**	**277**	P	**Pn**	**07 29 05.9**	**-0.1**
	baz=274						
OWD	**Renai**	**1.02**	**260**	*e*P	**Pb**	**07 29 04.9**	**-1.0**
	baz=257						
OWD				*e*S	**Sb**	**07 29 18.1**	**-0.8**
	baz=257						
TDCB	**Techi**	**1.02**	**277**	P	**Pb**	**07 29 05.8**	**-0.2**
	baz=274						
NWF	**Wu-fen Shan**	**1.04**	**335**	*e*P	**Pb**	**07 29 06.0**	**-0.2**
	baz=334						
NWF				*e*S	**Sb**	**07 29 19.9**	**+0.5**
	baz=334						
WFSB	**Wu-fen Shan**	**1.04**	**335**	*e*P	**Pb**	**07 29 06.1**	**-0.1**
	baz=334						
WFSB				*e*S	**Sb**	**07 29 19.8**	**+0.4**
	baz=334						
TWA	**Mucha**	**1.05**	**324**	*e*P	**Pb**	**07 29 06.2**	**-0.2**
	baz=323						
EHY	**Hungye**	**1.07**	**235**	*e*P	**Pn**	**07 29 06.8**	**+0.1**
	baz=231						
TATO	**Taipei**	**1.10**	**320**	*e*P	**Pn**	**07 29 06.3**	**-0.9**
	baz=319						
TATO				*e*S	**Sb**	**07 29 20.4**	**-0.8**
	baz=319						
YULB	**Yu-li**	**1.16**	**231**	*e*P	**Pn**	**07 29 06.4**	**-1.6**
	baz=227						
TWF1	**Yuli**	**1.18**	**229**	*e*P	**Pb**	**07 29 08.5**	**-0.2**
	baz=226						
YM01	**YM01**	**1.20**	**328**	*e*P	**Pn**	**07 29 08.6**	**+0.1**
	baz=327						
YM10	**YM10**	**1.21**	**328**	*e*P	**Pn**	**07 29 08.5**	**-0.3**
	baz=327						
YM11	**YM11**	**1.21**	**329**	*e*P	**Pb**	**07 29 09.2**	**+0.1**
	baz=328						
YM05	**YM05**	**1.21**	**328**	*e*P	**Pn**	**07 29 08.4**	**-0.4**
	baz=328						
WHP	**Taichung City**	**1.22**	**277**	*e*P	**Pb**	**07 29 09.2**	**-0.2**
	baz=274						
YM08	**YM08**	**1.22**	**330**	*e*P	**Pn**	**07 29 08.3**	**-0.6**
	baz=329						
SMLT	**Sun Moon Lake**	**1.28**	**259**	*e*P	**Pn**	**07 29 09.8**	**0.0**
	baz=256						
FULB	**Fuli**	**1.29**	**224**	*e*P	**Pn**	**07 29 07.6**	**-2.2**
	baz=221						
TYC	**Yuchr**	**1.31**	**260**	*e*P	**Pn**	**07 29 10.3**	**+0.3**
	baz=257						
IRIF	**Iriomote-Funau**	**1.35**	**81**	P	**Pn**	**07 29 10.4**	**-0.2**
IRIF				*e*S	**Sb**	**07 29 28.8**	**+0.5**
HATJ	**Hateruma jima**	**1.40**	**93**	*e*S	**Sn**	**07 29 29.2**	**-0.1**
EDH	**Donghe**	**1.46**	**218**	*e*P	**Pn**	**07 29 09.8**	**-2.2**
	baz=215						
ALS	**Alishan**	**1.48**	**246**	*e*P	**Pn**	**07 29 12.5**	**-0.1**
	baz=243						
ELDTW	**Lidau**	**1.48**	**231**	*e*P	**Pn**	**07 29 12.9**	**+0.4**
	baz=228						
JKRS	**Kuro-shima**	**1.59**	**86**	*e*S	**Sb**	**07 29 35.5**	**+0.2**
STYT	**Tauyuan**	**1.69**	**236**	*e*P	**Pn**	**07 29 15.8**	**+0.5**
	baz=233						
TWG	**Pinlang**	**1.71**	**220**	*e*P	**Pn**	**07 29 16.3**	**+0.7**
	baz=218						
TPUB	**Te-pu**	**1.72**	**242**	*e*P	**Pn**	**07 29 16.2**	**+0.5**
	baz=239						
CHN4	**Tsaushan**	**1.72**	**244**	*e*P	**Pn**	**07 29 15.9**	**+0.1**
	baz=241						
JIJ	**Ishigaki jima**	**1.72**	**82**	*e*S	**Sb**	**07 29 39.0**	**-0.1**
TWK	**Hsinying**	**1.85**	**243**	*e*P	**Pb**	**07 29 18.8**	**-1.2**
	baz=240						
CHN1	**Nanshi**	**1.85**	**240**	*e*P	**Pn**	**07 29 18.7**	**+1.1**
	baz=237						
SLGT	**Liugui**	**1.87**	**233**	*e*P	**Pn**	**07 29 18.4**	**+0.6**
	baz=231						
SLGT				*e*S	**Sn**	**07 29 41.1**	**+0.2**
	baz=231						
SSD	**Sandimen**	**2.04**	**228**	*e*P	**Pn**	**07 29 21.5**	**+1.3**
	baz=225						
TSMG	**Majia**	**2.06**	**227**	*e*S	**Sn**	**07 29 46.2**	**+0.6**
	baz=225						
MASBT	**Mashibuluo**	**2.13**	**225**	*e*P	**Pn**	**07 29 22.0**	**+0.6**
	baz=223						
EAST	**Anshuo**	**2.18**	**217**	*e*P	**Pn**	**07 29 22.9**	**+0.9**
	baz=215						
SLIU	**Shizi**	**2.34**	**216**	*e*P	**Pn**	**07 29 25.3**	**+1.1**
	baz=214						

NEIC ***27*** *07:29:27.4±1.3, 5°.55S±0°.06×150°.6E±0°.1, h102km±9km, mb4.1/16, Error ellipse: s-maj=17.6km s-min=4.7km az=114.0*
IDC ***27*** *07:29:28.0±1.4, 5°.56S×150°.60E, h116km±13km, mb3.8/14, mb1 3.9/15, mb1mx3.7/37, mbtmp4.2/15, MS2.9/2, Ms1 2.9/2, ms1mx2.4/42, Error ellipse: s-maj=17.8km s-min=10.7km az=108.0*
ISC 27 07:29:28.1±0.5, 5°.54S±0°.07×150°.59E±0°.09, h114km, n42, σ1s07/47, mb4.0/18, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.88**	**50**	P	**Pn**	**07 29 58.8**	**-1.1**
	84nm,0.3s,baz=304,slow=0.7,SNR=32						
RABL	**Rabaul**	**2.06**	**50**		**Pn**	**07 30 00.8**	**-1.3**
PMG	**Port Moresby**	**5.13**	**221**	P	**Pn**	**07 30 42.9**	**0.0**
	14nm,0.3s,baz=33,slow=7.8,SNR=22						
PMG				S	**Sn**	**07 31 39.2**	**-1.8**
	29nm,0.3s,baz=187,slow=23,SNR=14						
PMG	**Port Moresby**	**5.13**	**221**		**Pn**	**07 30 41.5**	**-1.3**
CTA	**Charters Tower**	**15.07**	**196**	P	**P**	**07 32 58.7**	**+1.0**
	0.4nm,0.3s,baz=20,slow=13,SNR=7.1						
CTAO	**Charters Tower**	**15.07**	**196**	P	**P**	**07 32 58.4**	**+0.7**
CTAO				IAmb	IAmb	07 33 00.7	
	comp=Z,11nm,0.9s						
EIDS	**Eidsvold**	**19.73**	**179**	P	**P**	**07 33 50.1**	**+1.2**
EIDS				IAmb	IAmb	07 33 50.9	
	comp=Z,11nm,0.7s						
WB0	**Warramunga Arr**	**21.18**	**227**	P	**P**	**07 34 04.5**	**-0.1**
WB0				IAmb	IAmb	07 34 28.5	
	comp=Z,8.1nm,1.2s						
WRAB	**Tennant Creek**	**21.32**	**226**	P	**P**	**07 34 05.3**	**-0.7**
WRAB				IAmb	IAmb	07 34 29.9	
	comp=Z,5.2nm,0.8s						
WB2	**Warramunga Arr**	**21.32**	**226**	P	**P**	**07 34 05.5**	**-0.6**
WB2				IAmb	IAmb	07 34 06.0	
	comp=Z,6.3nm,0.9s						
WRA	**Warramunga Arr**	**21.33**	**226**	P	**P**	**07 34 05.4**	**-0.8**
	comp=Z,2.3nm,0.4s,baz=52,slow=10,SNR=53						
WRA				PcP	**PcP**	**07 38 06.3**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=43,slow=2.0,SNR=6.9						
WRA				ScP	**ScP**	**07 41 32.9**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=50,slow=2.6,SNR=5.9						
WRA	**Warramunga Arr**	**21.33**	**226**	P	**P**	**07 34 05.5**	**-1.7**
DZM	**Mont Dzumac**	**22.48**	**138**	P	**P**	**07 34 18.3**	**0.0**
	comp=Z,6.6nm,0.5s,baz=245,slow=9.3,SNR=13						
DZM	**Mont Dzumac**	**22.48**	**138**	P	**P**	**07 34 18.7**	**+0.4**
DZM				IAmb	IAmb	07 34 19.2	
	comp=Z,9.1nm,0.7s						
KNRA	**Kununurra**	**23.68**	**243**	P	**P**	**07 34 29.5**	**-0.1**
KNRA				IAmb	IAmb	07 34 52.9	
	comp=Z,35nm,1.4s						
AS31	**Alice Springs**	**24.15**	**220**	P	**P**	**07 34 34.7**	**+0.9**
ASAR	**Alice Springs**	**24.15**	**220**	P	**P**	**07 34 34.1**	**+0.3**
	comp=Z,2.1nm,0.4s,baz=57,slow=9.3,SNR=37						
ASAR				PcP	**PcP**	**07 38 09.4**	**-2.6**
	comp=Z,0.4nm,0.7s,baz=60,slow=5.5,SNR=2.6						
ASAR				S	**S**	**07 38 42.6**	**-1.2**
	comp=Z,0.8nm,0.8s,baz=45,slow=14,SNR=5.3						
ASAR	**Alice Springs**	**24.15**	**220**	P	**P**	**07 34 34.7**	**+0.9**
ARMA	**Armidale**	**24.77**	**178**	P	**P**	**07 34 40.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**27.38**	**241**	P	**P**	**07 35 02.5**	**-0.4**
	comp=Z,2.3nm,0.3s,baz=48,slow=7.6,SNR=16						
FITZ				LR	LR	07 45 58.2	
	comp=Z,16nm,18.4s,baz=280,slow=36						
FITZ	**Fitzroy Crossi**	**27.38**	**241**	P	**P**	**07 35 02.8**	**-0.2**
FITZ				IAmb	IAmb	07 35 06.7	
	comp=Z,5.4nm,1.0s						
STKA	**Stephens Creek**	**27.52**	**197**	P	**P**	**07 35 03.7**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=22,slow=7.1,SNR=7.0						
STKA	**Stephens Creek**	**27.52**	**197**	P	**P**	**07 35 04.1**	**0.0**
URZ	**Urewera**	**40.51**	**147**	P	**P**	**07 36 56.8**	**+0.9**
	comp=Z,3.5nm,0.6s,baz=248,slow=11,SNR=1.4						
TUWZ	**Tuamarina**	**41.38**	**153**	P	**P**	**07 37 03.9**	**+0.8**
JMN	**Monobe**	**42.14**	**339**	P	**P**	**07 37 10.8**	**+1.4**
JNU	**Nakatsue**	**42.76**	**335**	P	**P**	**07 37 16.1**	**+1.7**
	comp=Z,8.2nm,0.9s,baz=211,slow=5.9,SNR=2.6						
KSRS	**Korea Array**	**47.71**	**336**	P	**P**	**07 37 54.5**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=155,slow=9.7,SNR=6.3						
PETK	**Petropavlovsk-**	**58.73**	**5**	P	**P**	**07 39 13.7**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=166,slow=6.6,SNR=6.4						
PETK	**Petropavlovsk-**	**58.73**	**5**	P	**P**	**07 39 14.5**	**+0.7**
SONM	**Songino Array**	**65.80**	**329**	P	**P**	**07 40 02.5**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=153,slow=4.6,SNR=5.4						
SONM	**Songino Array**	**65.80**	**329**	P	**P**	**07 40 02.7**	**+1.5**
VNDA	**Vanda**	**72.19**	**177**	P	**P**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSD	**Sado**	**2.35**	**100**	P	**Pn**	**07 38 38.9**	**-0.5**
MJAR	**Matsushiro Arr**	**3.00**	**129**	P	**Pn**	**07 38 44.3**	**-0.1**
	0.1nm,0.3s,baz=309,slow=10.0,SNR=5.0						
JAW	**Awa shima**	**3.07**	**89**	P	**Pn**	**07 38 44.8**	**-0.1**
JHS	**Saijyo**	**3.91**	**208**	P	**Pn**	**07 38 51.7**	**-0.8**
JRG	**Rokugo**	**4.23**	**76**	P	**Pn**	**07 38 55.7**	**+0.3**
JFK	**Kawauchi**	**4.52**	**103**	P	**Pn**	**07 38 57.5**	**-0.8**
JMK	**Ichinoseki**	**4.63**	**82**	P	**Pn**	**07 38 59.3**	**0.0**
JOT	**Ohata**	**5.26**	**55**	P	**Pn**	**07 39 06.2**	**+0.5**
KSRS	**Korea Array**	**5.95**	**262**	P	**Pn**	**07 39 13.1**	**-0.1**
	0.2nm,0.3s,baz=80,slow=11,SNR=11						
USRK	**Ussuriysk Ar.**	**6.24**	**337**	P	**Pn**	**07 39 15.9**	**-0.3**
	baz=146,slow=9.2,SNR=4.7						
ASAJ	**Asahikawa**	**7.84**	**42**	P	**P**	**07 39 34.1**	**-0.5**
	2.4nm,0.3s,baz=240,slow=9.9,SNR=11						
WRA	**Warramunga Arr**	**58.12**	**181**	P	**P**	**07 46 55.6**	**+0.9**
	0.2nm,0.8s,baz=1.8,slow=7.1,SNR=2.4						

*IDC **27** 07:39:03.3±1.0, 11.85N×144.33E, h0km, mb3.5/6, mb1 3.8/6, mb1mx3.6/44, mbtmp3.5/6, Error ellipse: s-maj=55.6km s-min=17.7km az=108.0*

ISC 27 07:39:07.5±1.0, 11.9N±0.1×144.3E±0.3, h29km, n10, σ1§32/8, mb3.5/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.75**	**17**	Pn	**Pb**	**07 39 37.4**	**-1.6**
	94nm,0.3s,baz=64,slow=4.9,SNR=27						
GUMO				Sn	**Sb**	**07 40 02.0**	**+1.5**
	79nm,0.3s,baz=19,slow=22,SNR=11						
H11N1	**WAKE ISLAND Hy**	**23.03**	**67**	T	T	08 08 42.5	
	baz=255,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**23.04**	**67**	T	T	08 08 41.9	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**23.05**	**67**	T	T	08 08 49.4	
	baz=255						
WRA	**Warramunga Arr**	**33.15**	**197**	P	**P**	**07 45 41.1**	**-0.4**
	0.4nm,0.8s,baz=19,slow=9.9,SNR=4.8						
ASAR	**Alice Springs**	**36.80**	**196**	P	**P**	**07 46 13.1**	**+0.1**
	0.1nm,0.4s,baz=37,slow=7.3,SNR=5.4						
MKAR	**Makanchi Array**	**62.34**	**317**	P	**P**	**07 49 27.7**	**+0.3**
	0.8nm,0.9s,baz=104,slow=8.1,SNR=2.6						
ILAR	**Eielson Array**	**70.30**	**25**	P	**P**	**07 50 16.8**	**-1.3**
	0.3nm,0.7s,baz=256,slow=5.0,SNR=5.2						
YKA	**Yellowknife Ar**	**84.58**	**27**	P	**P**	**07 51 39.3**	**+1.4**
	0.5nm,0.6s,baz=291,slow=4.5,SNR=5.6						
NVAR	**Mina Array Bea**	**88.37**	**51**	P	**P**	**07 51 58.0**	**+0.6**
	0.2nm,0.7s,baz=259,slow=8.2,SNR=2.9						

*INET **27** 07:49:47.4, 12.46N×88.25W, h24km, ML3.5*
*UCR **27** 07:49:48.8±0.8, 12.57N×88.24W, h27km±4km, ML3.7*
*SNET **27** 07:49:49.1±0.8, 12.59N×88.26W, h27km±4km, ML3.7*

ISC 27 07:49:48.9±1.9, 12.60N±0.08×88.23W±0.06, h23km±16km, n23, σ0§39/33, 4D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCND	**La Caada**	**0.78**	**25**	⇓*i*P	**Pb**	**07 50 03.7**	**-0.1**
LCND				*e*S	**Sn**	**07 50 15.5**	**0.0**
LCND				IAML		07 50 22.2	
	comp=Z,3µm,0.3s						
LCND	**La Caada**	**0.78**	**25**	⇓*i*P	**Pb**	**07 50 03.7**	**-0.1**
LCND				*e*S	**Sn**	**07 50 15.5**	**0.0**
LCND				IAML		07 50 22.2	
	comp=Z,3µm,0.3s						
ALJI	**Alcalda de J**	**0.80**	**335**	*e*P	**Pb**	**07 50 04.3**	**+0.2**
ALJI				IAML		07 50 21.9	
	comp=Z,3µm,0.2s						
ALJI	**Alcalda de J**	**0.80**	**335**	*e*P	**Pb**	**07 50 04.3**	**+0.2**
ALJI				IAML		07 50 21.9	
	comp=Z,3µm,0.2s						
LCY	**Lacayo**	**0.82**	**356**	*e*P	**Pb**	**07 50 04.9**	**+0.3**
LCY	**Lacayo**	**0.82**	**356**	*e*P	**Pb**	**07 50 04.9**	**+0.3**
RANC	**El Ranchito**	**0.83**	**356**	*e*P	**Pb**	**07 50 05.0**	**+0.2**
RANC	**El Ranchito**	**0.83**	**356**	*e*P	**Pb**	**07 50 05.0**	**+0.2**
PACA	**Pacayal**	**0.87**	**354**	*e*P	**Pb**	**07 50 05.9**	**+0.4**
PACA				*e*S	**Sn**	**07 50 18.4**	**+0.5**
PACA	**Pacayal**	**0.87**	**354**	*e*P	**Pb**	**07 50 05.9**	**+0.4**
PACA				*e*S	**Sn**	**07 50 18.4**	**+0.5**
TECA	**Tecapa**	**0.93**	**343**	*e*P	**Pn**	**07 50 06.4**	**-0.4**
TECA				*e*S	**Sn**	**07 50 19.9**	**+0.4**
TECA	**Tecapa**	**0.93**	**343**	*e*P	**Pn**	**07 50 06.4**	**-0.4**
TECA				*e*S	**Sn**	**07 50 19.9**	**+0.4**
COEB	**Comit de Eme**	**0.94**	**342**	⇓*e*P	**Pn**	**07 50 06.3**	**-0.5**
COEB				*e*S	**Sn**	**07 50 20.0**	**+0.3**
COEB				IAML		07 50 22.9	
	comp=Z,2µm,0.3s						
COEB	**Comit de Eme**	**0.94**	**342**	⇓*e*P	**Pn**	**07 50 06.3**	**-0.5**
COEB				*e*S	**Sn**	**07 50 20.0**	**+0.3**
COEB				IAML		07 50 22.9	
	comp=Z,2µm,0.3s						
COEG	**Centro de Oper**	**1.20**	**328**	*e*P	**Pn**	**07 50 09.7**	**-0.6**
COEG				IAML		07 50 30.5	
	comp=Z,1µm,0.3s						
COEG	**Centro de Oper**	**1.20**	**328**	*e*P	**Pn**	**07 50 09.7**	**-0.6**
COEG				IAML		07 50 30.5	
	comp=Z,1µm,0.3s						
LBRS	**Las Brisas**	**1.39**	**325**	*e*P	**Pn**	**07 50 13.0**	**+0.1**
LBRS				*e*S	**Sb**	**07 50 31.4**	**-0.1**
LBRS	**Las Brisas**	**1.39**	**325**	*e*P	**Pn**	**07 50 13.0**	**+0.1**
LBRS				*e*S	**Sb**	**07 50 31.4**	**-0.1**
SNET	**Serv Nac Est T**	**1.46**	**318**	*e*P	**Pn**	**07 50 13.2**	**-0.7**
SNET				IAML		07 50 38.1	
	comp=Z,999nm,0.3s						
SNET	**Serv Nac Est T**	**1.46**	**318**	*e*P	**Pn**	**07 50 13.2**	**-0.7**
SNET				IAML		07 50 38.1	
	comp=Z,999nm,0.3s						
TGUH	**Tegucigalpa,Un**	**1.72**	**33**	*e*P	**Pn**	**07 50 17.4**	**-0.2**
TGUH	**Tegucigalpa,Un**	**1.72**	**33**	*e*P	**Pn**	**07 50 17.4**	**-0.2**
EDLM	**Las Mercedes**	**5.62**	**125**	*e*P	**Pn**	**07 51 11.2**	**0.0**

*IDC **27** 07:54:38.9±6.1, 19.21N×108.86W, h0km, mb3.4/5, mb1 3.8/6, mb1mx3.7/45, mbtmp3.4/6, ML3.6/1, MS3.1/9, Ms1 3.1/9, ms1mx3.0/21, Error ellipse: s-maj=116.8km s-min=22.8km az=136.0*

ISC 27 07:54:43.6±4.1, 19.2N±0.4×108.9W±0.3, h35km, n18, σ0§88/10, mb3.3/4, MS2.9/4, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H06E1	**SOCORRO T-PHAS**	**1.92**	**259**	Pn	**Pn**	**07 55 14.3**	**+0.5**
H06E1				Sn	**Sn**	**07 55 37.2**	**+0.4**
H06E1				T	T	07 57 18.5	
	SNR=8.4						
H06S1	**SOCORRO T**	**1.96**	**258**	Pn	**Pn**	**07 55 14.2**	**-0.1**
H06S1				Sn	**Sn**	**07 55 36.7**	**-1.0**
	SNR=23						
H06S1				T	T	07 57 33.3	
	SNR=10						
LPIG	**La Paz**	**5.08**	**346**	LR	LR	07 57 25.7	
	comp=Z,236nm,20.7s,baz=178,slow=33						
TXAR	**Lajitas Array**	**11.21**	**24**	Pn	**Pn**	**07 57 21.9**	**+0.3**
	0.1nm,0.3s,baz=196,slow=13,SNR=4.4						
TXAR				LR	LR	08 01 04.7	
	comp=Z,64nm,21.2s,baz=0.0,slow=35						
CMIG	**Matias Romero**	**13.52**	**97**	LR	LR	08 02 48.1	
	comp=Z,85nm,18.2s,baz=284,slow=36						
ANMO	**Albuquerque**	**15.88**	**7**	LR	LR	08 04 15.1	
	comp=Z,78nm,18.6s,baz=192,slow=36						
PFO	**Pinyon Flats O**	**15.88**	**336**	LR	LR	08 03 31.1	
	comp=Z,131nm,21.3s,baz=150,slow=34						
NVAR	**Mina Array Bea**	**20.86**	**339**	P	**P**	**07 59 23.4**	**+0.7**
	2.8nm,0.9s,baz=167,slow=8.3,SNR=12						
ELK	**Elko**	**22.18**	**347**	P	**P**	**07 59 36.1**	**-0.9**
	0.9nm,0.7s,baz=160,slow=8.2,SNR=3.6						
PDAR	**Pinedale Array**	**23.54**	**359**	P	**P**	**07 59 49.4**	**-1.6**
	0.3nm,0.4s,baz=174,slow=8.8,SNR=5.3						
PDAR				LR	LR	08 08 53.5	
	comp=Z,36nm,19.2s,baz=132,slow=36						
TKL	**Tuckaleechee C**	**27.62**	**48**	LR	LR	08 11 17.2	
	comp=Z,20nm,18.1s,baz=272,slow=36						
INK	**Inuvik**	**51.51**	**349**	P	**P**	**08 03 45.8**	**+0.3**
	0.3nm,0.3s,baz=169,slow=10,SNR=3.3						
ILAR	**Eielson Array**	**52.10**	**340**	P	**P**	**08 03 50.2**	**+0.2**
	0.4nm,1.0s,baz=150,slow=7.3,SNR=4.0						
PPT	**Papeete**	**54.10**	**230**	LR	LR	08 21 48.9	
	comp=Z,13nm,21.8s,baz=200,slow=30						
H03N2	**Juan Fernandez**	**59.63**	**151**	T	T	09 10 06.2	
	baz=329,slow=78,SNR=12						
H03N1	**Juan Fernandez**	**59.64**	**151**	T	T	09 10 09.6	
	baz=329,slow=78,SNR=16						
H03N3	**Juan Fernandez**	**59.65**	**151**	T	T	09 10 08.5	
	baz=329,slow=78,SNR=12						
PLCA	**Paso Flores**	**69.45**	**150**	LR	LR	08 28 57.9	
	comp=Z,36nm,19.5s,baz=312,slow=30						

*IDC **27** 07:56:52.1±4.2, 37.24N×71.91E, h180km±29km, mb3.4/3, mb1 3.3/8, mb1mx2.9/65, mbtmp3.9/8, Error ellipse: s-maj=44.1km s-min=20.1km az=164.0*
*NNC **27** 07:56:59.2±3.2, 37.82N×71.91E, h225km±24km, mb2.7, mpv3.5, Error ellipse: s-maj=21.9km s-min=14.6km az=21.0*

ISC 27 07:56:52.1±0.8, 37.28N±0.07×71.81E±0.07, h200km, n32, σ1§85/39, mb3.6/3, 2C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.06**	**16**	P	**Pn**	**07 58 08.3**	**+0.7**
	SNR=20						
UCH	**Uchtor**	**5.36**	**22**	P	**Pn**	**07 58 11.7**	**+0.1**
	SNR=5.6						
EKS2	**Erkin-Say**	**5.58**	**15**	P	**Pn**	**07 58 15.6**	**+1.5**
	SNR=16						
AAK	**Ala-Archa**	**5.74**	**20**	P	**Pn**	**07 58 17.0**	**+1.0**
	2.8nm,0.3s,baz=150,slow=4.6,SNR=23						
AAK				S	**Sn**	**07 59 20.9**	**-1.5**
	3.3nm,0.3s,baz=335,slow=20,SNR=30						
AAK	**Ala-Archa**	**5.74**	**20**	P	**Pn**	**07 58 17.6**	**+1.6**
	SNR=9.6						
AAK	**Ala-Archa**	**5.74**	**20**	⇓P	**Pn**	**07 58 17.0**	**+1.0**
	3.6nm,0.5s						
AAK				⇓S	**Sn**	**07 59 20.2**	**-2.2**
	48nm,0.7s						
THN	**Thein Dam**	**5.80**	**145**	*e*P	Pn	07 58 07.5	-9.3
THN				*e*S	**Sn**	**07 59 20.5**	**-3.3**
KK31	**Karatay Array**	**5.90**	**351**	P	**Pn**	**07 58 19.1**	**+1.0**
	1.8nm,0.3s,baz=164,slow=11,SNR=44						
KK31				⇑S	**Sn**	**07 59 22.5**	**-3.6**
	7.2nm,0.2s,baz=165,slow=18,SNR=15						
TKM2	**Tokmak 2**	**6.34**	**26**	P	**Pn**	**07 58 24.4**	**+0.5**
	SNR=5.5						
TKM2	**Tokmak 2**	**6.34**	**26**	⇑P	**Pn**	**07 58 24.1**	**+0.2**
	2.3nm,0.5s						
TKM2				⇓S	**Sn**	**07 59 32.1**	**-4.5**
	14nm,1.1s						
GEYT	**Alibeck**	**10.88**	**278**	P	**Pn**	**07 59 23.4**	**+0.7**
	1.0nm,0.3s,baz=97,slow=11,SNR=5.8						
GEYT				S	**Sn**	**08 01 20.9**	**-3.3**
	1.3nm,0.3s,baz=91,slow=17,SNR=6.8						
MKAR	**Makanchi Array**	**12.28**	**36**	P	**Pn**	**07 59 41.6**	**+1.2**
	0.1nm,0.3s,baz=233,slow=14,SNR=4.0						
PYUN	**Piuthan**	**13.12**	**131**	*e*P	**Pn**	**07 59 49.5**	**-1.8**
	39nm,0.3s						
DANN	**Dangsing**	**13.41**	**128**	*e*P	**Pn**	**07 59 53.8**	**-1.3**
	14nm,0.3s						
KOLN	**Koldanda**	**13.73**	**130**	*e*P	**Pn**	**07 59 57.5**	**-1.4**
	11nm,0.3s						
KURBB	**Kurchatov Arra**	**14.18**	**18**	P	**P**	**08 00 06.4**	**+0.7**
	0.1nm,0.3s,baz=206,slow=10,SNR=5.8						
GKN	**Gorkha**	**14.21**	**127**	*e*P	**Pn**	**08 00 04.6**	**-0.2**
	28nm,0.3s						
AB31	**Akbulak array**	**14.74**	**328**	P	**Pn**	**08 00 12.2**	**+1.2**
	1.7nm,0.6s,baz=144,slow=12,SNR=30						
AB31				S	**S**	**08 02 51.3**	**-3.3**
	2.2nm,0.5s,baz=151,slow=22,SNR=10						
KKN	**Kakani**	**14.77**	**126**	*e*P	**Pn**	**08 00 11.3**	**-0.5**
	15nm,0.4s						
DMN	**Daman**	**14.78**	**127**	*e*P	**Pn**	**08 00 11.8**	**-0.2**
	22nm,0.4s						
PKIN	**Phulchoki**	**14.99**	**126**	*e*P	**Pn**	**08 00 14.8**	**+0.3**
	20nm,0.4s						
PKI	**Pulchoki**	**15.00**	**126**	*e*P	**Pn**	**08 00 14.9**	**+0.2**
	12nm,0.3s						
GUN	**Gumba**	**15.08**	**124**	*e*P	**Pn**	**08 00 16.0**	**+0.3**
	18nm,0.3s						
RAMN	**Ramite**	**16.20**	**125**	*e*P	**Pn**	**08 00 29.2**	**+0.1**
	22nm,0.5s						
AKTO	**Aktyubinsk**	**16.45**	**327**	P	**Pn**	**08 00 33.7**	**+2.1**
	1.2nm,0.3s,baz=135,slow=11,SNR=20						
AKTO	**Aktyubinsk**	**16.45**	**327**	⇓P	**Pn**	**08 00 32.6**	**+1.0**
	6.7nm,0.6s						
AKTO				⇓S	**S**	**08 03 29.2**	**-3.4**
	6.6nm,1.1s						
TAPN	**Taplejung**	**16.67**	**122**	*e*P	**Pn**	**08 00 35.2**	**+0.4**
	7.3nm,0.3s						
ODAN	**Odare**	**16.78**	**124**	*e*P	**Pn**	**08 00 36.2**	**+0.2**
	18nm,0.4s						
ZALV	**Zalesovo Beam**	**18.94**	**24**	P	**P**	**08 00 59.0**	**+1.2**
	0.8nm,0.3s,baz=204,slow=10,SNR=6.8						
SONM	**Songino Array**	**27.36**	**56**	P	**P**	**08 02 19.7**	**+1.0**
	1.1nm,0.9s,baz=256,slow=9.3,SNR=4.6						
ARCES	**ARCESS Array B**	**40.68**	**337**	P	**P**	**08 04 14.6**	**+2.1**
	1.5nm,0.9s,baz=118,slow=11,SNR=3.7						
HFS	**Hagfors**	**42.86**	**321**	P	**P**	**08 04 32.9**	**+2.6**
	2.0nm,0.8s,baz=110,slow=12,SNR=3.0						

JMA 27 08:02:09.8±0.1, 37.46N×141.58E, h44km±2km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.57**	**261**	P	Pn	08 02 21.6	0.0
JFK				S	Sn	08 02 29.7	-0.4
JMST	**Minamisoumatoc**	**0.61**	**296**	P	Pn	08 02 22.0	-0.1
JMST				*e*S	Sn	08 02 30.6	-0.4
ONAJ	**Iwakimizuishiy**	**0.72**	**240**	P	Pn	08 02 23.5	-0.1
ONAJ				*e*S	Sn	08 02 32.9	-0.7
JMM	**Marumori**	**0.74**	**303**	P	Pn	08 02 24.1	+0.2
JMM				S	Sn	08 02 34.0	-0.1
JIKH	**Ishinomakikobu**	**0.85**	**354**	P	Pn	08 02 25.4	0.0
JIKH				S	Sn	08 02 36.0	-0.8
JFT	**Otama**	**0.99**	**274**	P	Pn	08 02 28.1	+0.8
JFT				S	Sn	08 02 40.7	+0.6
JIO	**Ouri**	**1.01**	**350**	P	Pn	08 02 27.7	+0.2
JIO				S	Sn	08 02 39.8	-0.8
JOU	**Okura**	**1.16**	**322**	P	Pn	08 02 30.1	+0.5
JOU				S	Sn	08 02 45.1	+0.8
JHO	**Hitachi**	**1.17**	**224**	P	Pn	08 02 29.3	-0.4
JHO				*e*S	Sn	08 02 43.1	-1.4
JYS	**Shirataka**	**1.42**	**303**	P	Pn	08 02 34.3	+1.2
JFY	**Yanaizu**	**1.49**	**269**	P	Pn	08 02 36.1	+0.9
JMK	**Ichinoseki**	**1.52**	**349**	P	Pn	08 02 35.3	+0.8
JMK				S	Sn	08 02 53.8	+0.8
MAT	**Matsushiro**	**2.85**	**252**	P	Pn	08 02 55.0	+2.2
MAT				*e*S	Sn	08 03 28.7	+2.8

*REY **27** 08:06:27.5, 64.62N×17.40W, h7km*
*NEIC **27** 08:06:28.8±1.1, 64.42N±0.09×17.76W±0.07, h4km±4km, mb4.3/18, Error ellipse: s-maj=12.5km s-min=4.4km az=173.0*
*IDC **27** 08:06:29.1±0.7, 64.41N×17.94W, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.8/44, mbtmp3.8/12, ML3.0/3, MS3.0/7, Ms1 3.0/7, ms1mx2.7/43, Error ellipse: s-maj=26.0km s-min=12.6km az=21.0*

ISC 27 08:06:29.7±0.4, 64.53N±0.03×17.60W±0.03, h10km, n83, σ1§66/75, mb4.1/17, MS3.0/4, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDJK	**Dyngjujokull**	**0.16**	**98**	P	**Pg**	**08 06 30.6**	**-2.7**
	baz=149						
IVON	**Vonarskard**	**0.16**	**335**	P	**Pg**	**08 06 30.8**	**-2.6**
	baz=288						
IDYN	**Dyngjuhals**	**0.28**	**20**	P	Pg	08 06 31.1	-4.4
	baz=5.3						
IVOT	**Vottur**	**0.31**	**145**	P	**Pg**	**08 06 34.4**	**-1.6**
	baz=165						
ISKR	**Skrokkalda**	**0.34**	**276**	P	**Pg**	**08 06 35.5**	**-1.0**
	baz=262						
IJOK	**Jokulheimar**	**0.34**	**232**	P	**Pb**	**08 06 36.0**	**-2.0**
	baz=229						
IJOK				S	**Sb**	**08 06 42.9**	**-0.6**
	baz=229						
IIEY	**Innrieyrar**	**0.49**	**208**	P	**Pg**	**08 06 38.5**	**-0.7**
	baz=211						
IIEY				S	**Sb**	**08 06 47.4**	**-0.3**
	baz=211						
IKAL	**Kalfafell**	**0.58**	**184**	P	**Pg**	**08 06 39.7**	**-1.3**
	baz=190						
IKAL				S	**Sb**	**08 06 49.1**	**-1.1**
	baz=190						
IKRE	**Kreppuhraun**	**0.58**	**63**	P	Pg	08 06 35.9	-5.1
	baz=69						
IKRE				S	**Sg**	**08 06 42.5**	**-6.2**
	baz=69						
IKSK	**Karasker**	**0.61**	**126**	P	**Pg**	**08 06 38.0**	**-3.5**
	baz=139						
IASK	**Askja**	**0.67**	**37**	P	Pg	08 06 37.1	-5.5
	baz=36						
IASK				S	Sg	08 06 44.8	-6.6
	baz=36						
IVAT	**Vatnsfell**	**0.67**	**240**	P	**Pg**	**08 06 41.5**	**-1.1**
	baz=237						
IVAT				S	**Sb**	**08 06 51.8**	**-1.0**
	baz=237						
IMKO	**Mokollar**	**0.70**	**49**	P	Pg	08 06 37.9	-5.4
	baz=52						
IFAG	**Fagurholsmyri**	**0.77**	**147**	P	**Pg**	**08 06 41.9**	**-2.7**
	baz=156						
IFAG				S	**Sg**	**08 06 53.0**	**-1.7**
	baz=156						
ISVA	**Svartarkot**	**0.83**	**10**	P	Pg	08 06 40.2	-5.4
	baz=5.0						
IVSH	**V-Sauoahnukur**	**0.85**	**70**	P	Pg	08 06 40.5	-5.6
	baz=75						
IHVE	**Hveravellir**	**0.91**	**293**	P	**Pg**	**08 06 44.1**	**-3.2**
	baz=286						
IHVE				S	**Sg**	**08 06 56.9**	**-2.3**
	baz=286						
ISNB	**Snabyli**	**0.91**	**210**	P	**Pg**	**08 06 45.4**	**-1.9**
	baz=212						
IADA	**Aoalbol**	**1.00**	**59**	P	Pg	08 06 42.7	-6.2
	baz=62						
IADA				S	Sg	08 06 54.4	-7.5
	baz=62						
IRJU	**Rjupnafell**	**1.03**	**208**	P	**Pg**	**08 06 47.8**	**-1.6**
	baz=209						
IFED	**Fedgar**	**1.04**	**242**	P	**Pg**	**08 06 48.2**	**-1.5**
	baz=240						
IMJO	**Mjoaskard**	**1.08**	**238**	P	**Pg**	**08 06 48.9**	**-1.6**
	baz=236						
IMEL	**Melhnausar**	**1.12**	**20**	P	Pb	08 06 44.5	-6.6
	baz=18						
IHVO	**Lagu-Hvolar**	**1.15**	**209**	P	**Pg**	**08 06 49.8**	**-1.9**
	baz=211						
IGYG	**Gygjarholskot**	**1.16**	**259**	P	**Pb**	**08 06 49.8**	**-2.1**
	baz=256						
IREN	**Reynihlio**	**1.16**	**14**	P	Pn	08 06 45.5	-6.5
	baz=11						
IHAU	**Haukadalur**	**1.18**	**243**	P	**Pb**	**08 06 50.6**	**-1.5**
	baz=241						
IKVO	**Krokottuvotn**	**1.23**	**14**	P	Pn	08 06 46.7	-6.3
	baz=11						
IGRS	**Grimsstaoir**	**1.28**	**29**	P	Pn	08 06 46.9	-6.7
	baz=27						
BORG	**Borgarnes**	**1.62**	**280**	Pn	**Pn**	**08 06 56.3**	**-2.0**
	25nm,0.3s,baz=92,slow=8.1,SNR=76						
BORG				LR	LR	08 07 04.1	
	comp=Z,56nm,19.1s,baz=106,slow=23						
BORG				Sn	**Sn**	**08 07 17.9**	**-1.3**
	19nm,0.3s,baz=224,slow=23,SNR=11						
BORG	**Borgarnes**	**1.62**	**280**		**Pn**	**08 06 57.2**	**-1.1**
BORG					**Sb**	**08 07 18.6**	**-1.6**
SCO	**Scoresbysund**	**6.21**	**346**		**Pn**	**08 08 01.7**	**+0.4**
SCO	**Scoresbysund**	**6.21**	**346**	*i* P	**Pn**	**08 08 01.0**	**-0.3**
SCO				*e*S	**Sn**	**08 09 14.0**	**+1.8**
JMIC	**Jan Mayen**	**7.34**	**24**	LR	LR	08 10 06.7	
	comp=Z,66nm,21.0s,baz=267,slow=29						
ANGG	**Ammassalik, Gr**	**8.53**	**286**	Pn	**Pn**	**08 08 30.3**	**-2.7**
EKA	**Eskdalemuir Ar**	**11.69**	**135**	Pn	**Pn**	**08 09 15.4**	**-0.9**
	baz=331,slow=13,SNR=5.6						
DAG	**Danmarks Havn**	**12.31**	**359**	*e*P	Pn	08 09 33.7	+9.0
NOA	**NORSAR Array B**	**13.57**	**92**	Pn	**Pn**	**08 09 43.0**	**+1.0**
	0.0nm,0.3s,baz=299,slow=13,SNR=3.0						
SPITS	**Spitsbergen Ar**	**17.01**	**23**	LR	LR	08 15 20.8	
	comp=Z,72nm,18.3s,baz=230,slow=31						
FINES	**FINESS Array B**	**19.77**	**79**	P	**P**	**08 11 01.0**	**+1.4**
	0.1nm,0.3s,baz=327,slow=15,SNR=3.2						
FINES				LR	LR	08 17 34.0	
	comp=Z,61nm,21.4s,baz=280,slow=33						
CLL	**Collm**	**20.68**	**115**	*e*P	**P**	**08 11 09.0**	**-0.5**
CLL	**Collm**	**20.68**	**115**	P	**P**	**08 11 09.7**	**+0.2**
CLL				IAmb	IAmb	08 11 16.3	
	comp=Z,12nm,1.2s						
ECH	**Echery**	**21.10**	**129**	P	**P**	**08 11 13.6**	**-0.5**
BRG	**Berggiesshubel**	**21.39**	**115**	*e*P	**P**	**08 11 16.8**	**-0.4**
	comp=Z,8.4nm,1.2s						
BFO	**Black Forest**	**21.40**	**127**	P	**P**	**08 11 17.1**	**-0.2**
KHC	**Kasperske Hory**	**22.64**	**118**	P	**P**	**08 11 30.4**	**-0.2**
KHC				IAmb	IAmb	08 11 40.3	
	comp=Z,12nm,1.4s						
SSB	**Saint Sauveur**	**22.88**	**137**	P	**P**	**08 11 32.2**	**-0.9**
SSB				IAmb	IAmb	08 11 47.1	
	comp=Z,12nm,1.3s						
GERES	**GERESS Array B**	**22.93**	**118**	P	**P**	**08 11 35.8**	**+2.1**
	comp=Z,1.8nm,0.9s,baz=329,slow=9.3,SNR=5.7						
GERES	**GERESS Array B**	**22.93**	**118**	P	**P**	**08 11 32.7**	**-1.0**
DAVOX	**Davos/Dischmat**	**23.27**	**127**	LR	LR	08 20 40.4	
	comp=Z,48nm,18.3s,baz=270,slow=36						
MORC	**Moravsky Berou**	**23.68**	**112**	P	**P**	**08 11 41.0**	**-0.3**
MORC				IAmb	IAmb	08 11 43.8	
	comp=Z,6.8nm,1.2s						
OJC	**Ojcow**	**24.26**	**108**	P	**P**	**08 11 46.7**	**+0.1**
OJC				IAmb	IAmb	08 11 54.0	
	comp=Z,12nm,1.3s						
KWP	**Kalwaria Pacla**	**25.91**	**106**	P	**P**	**08 12 00.7**	**-0.9**
PSZ	**Piszkesteto**	**26.11**	**111**	P	**P**	**08 12 03.9**	**+0.5**
PSZ

0.1nm,0.4s,baz=348,slow=13,SNR=3.4
MKAR Makanchi Array 59.17 326 P P 08 57 14.6 -0.1
0.2nm,0.5s,baz=136,slow=5.9,SNR=2.4

IDC 27 08:55:53.0±2.2, 2.06N×126.70E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/57, mbtmp3.4/3, Error ellipse: s-maj=182.1km s-min=26.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.12**	**161**	P	P	09 00 59.4	-1.4
	0.6nm,0.5s,baz=340,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**26.52**	**165**	P	P	09 01 33.9	+1.4
	0.5nm,0.8s,baz=350,slow=14,SNR=2.8						
MKAR	**Makanchi Array**	**58.90**	**326**	P	P	09 05 53.6	-0.3
	0.3nm,0.4s,baz=118,slow=8.0,SNR=4.4						

NNC 27 08:57:51.3±1.7, 54.66N×85.87E, h0km, mb3.8, mpv2.9, 2C-3D, Error ellipse: s-maj=76.3km s-min=9.6km az=132.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**0.94**	**222**	⇑P	Pg	08 58 09.4	+0.1
	0.3nm,0.3s						
ZAA0				⇑S	Sb	08 58 22.5	-1.0
	1.9nm,0.3s						
KURBB	**Kurchatov Arra**	**6.02**	**231**	⇓Pn	Pn	08 59 21.7	+0.2
	3.6nm,0.7s						
KURBB				⇓Lg	Lg	09 01 02.7	
	3.9nm,0.7s						
MK31	**Makanchi Array**	**8.19**	**198**	⇓Pn	Pn	08 59 51.8	+0.4
	1.2nm,0.6s,baz=26,slow=13,SNR=20						

IDC 27 09:00:16.5±5.2, 52.00N×36.16E, h0km, mb1 3.6/3, mb1mx3.2/47, mbtmp3.5/3, ML2.7/4, Error ellipse: s-maj=65.0km s-min=17.8km az=129.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OBN	**Obninsk**	**3.13**	**4**	Lg	Lg	09 01 49.6	
	1.5nm,0.3s,baz=20,slow=22,SNR=1.4						
AKASG	**Malin Array Be**	**4.54**	**256**	Pn	Pn	09 01 25.9	-0.4
	0.8nm,0.3s,baz=57,slow=15,SNR=1.5						
AKASG				Pg	Pb	09 01 35.5	-1.4
	1.3nm,0.3s,baz=58,slow=15,SNR=3.6						
AKASG				Sn	Sn	09 02 16.1	-3.6
	1.9nm,0.3s,baz=62,slow=18,SNR=2.4						
AKASG				Lg	Lg	09 02 33.6	
	3.2nm,0.3s,baz=68,slow=30,SNR=4.8						
I43RU	**DUBNA INFRASON 4.78**		**7**	*i*		09 25 40.0	
	baz=182,slow=299,SNR=2.9						
FINES	**FINESS Array B**	**10.96**	**334**	Pn	Pn	09 02 49.4	-4.9
	0.1nm,0.3s,baz=153,slow=16,SNR=1.0						
FINES				Sn	Sn	09 04 44.2	-13
	0.4nm,0.3s,baz=156,slow=21,SNR=2.6						
I31KZ	**AKTYUBINSK INF**	**13.80**	**88**	*i*		10 25 10.0	
	baz=286,slow=324,SNR=2.4						
NOA	**NORSAR Array B**	**16.38**	**313**	Pn	Pn	09 03 59.8	-7.7
	0.0nm,0.3s,baz=119,slow=10,SNR=3.3						
ARCES	**ARCESS Array B**	**18.30**	**348**	P	Pn	09 04 29.4	-2.0
	baz=166,slow=12,SNR=1.4						
I46RU	**ZALESOVO INFRA**	**28.91**	**67**	*i*		11 59 50.0	
	baz=286,slow=340,SNR=2.0						

JMA 27 09:07:01.5±0.1, 24.19N×124.21E, h7km±4km, M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIJ	**Ishigaki jima**	**0.18**	**340**	P	**Pg**	**09 07 05.5**	**+0.9**
JIJ				S	**Sg**	**09 07 08.0**	**+1.7**
JKRS	**Kuro-shima**	**0.19**	**285**	P	**Pg**	**09 07 05.6**	**-0.9**
JKRS				S	**Sg**	**09 07 08.7**	**-0.8**
HATJ	**Hateruma jima**	**0.39**	**250**	P	**Pg**	**09 07 09.1**	**-2.0**
HATJ				S	**Sg**	**09 07 14.7**	**-2.5**
JISG	**Ishigakijimahi**	**0.41**	**13**	P	**Pb**	**09 07 09.5**	**-1.0**
JISG				S	**Sb**	**09 07 15.1**	**-1.0**
IRIF	**Iriomote-Funau**	**0.46**	**288**	P	**Pg**	**09 07 10.7**	**-0.7**
JTJ	**Tarama**	**0.64**	**45**	P	**Pb**	**09 07 14.3**	**-0.2**
JTJ				S	**Sb**	**09 07 23.5**	**+0.6**

TAP 27 09:07:31.3, 24.58N×122.17E, h43km, ML2.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.29**	**276**	*i* P	Pn	09 07 39.6	-0.2
	baz=277						
TWC				*i* S	Sn	09 07 45.5	-0.2
	baz=277						
ENAH	**Nanao**	**0.35**	**249**	P	Pn	09 07 40.6	+0.3
	baz=250						
ENAH				S	Sn	09 07 47.5	+0.7
	baz=250						
NTC	**Toucheng**	**0.41**	**312**	P	Pn	09 07 41.4	+0.3
	baz=320						
NTC				*i* S	Sn	09 07 48.5	+0.4
	baz=320						
ENA	**Nanau**	**0.42**	**249**	*i* P	Pn	09 07 41.4	+0.2
	baz=249						
ENA				*i* S	Sn	09 07 49.1	+1.0
	baz=249						
TWB1	**Santiao Chiao**	**0.46**	**339**	*i* P	Pn	09 07 41.8	+0.1
	baz=329						
TWB1				*i* S	Sn	09 07 49.2	+0.2
	baz=329						
TWE	**Neicheng**	**0.48**	**287**	P	Pn	09 07 42.5	+0.6
	baz=291						
TWE				*e*S	Sn	09 07 50.4	+0.9
	baz=291						
TIPB	**Shuangxi**	**0.50**	**321**	*i* P	Pn	09 07 42.3	0.0
	baz=322						
TIPB				*i* S	Sn	09 07 50.3	+0.3
	baz=322						
ENTT	**Nioudou**	**0.55**	**277**	*i* P	Pn	09 07 43.8	+0.9
	baz=282						
ENTT				*e*S	Sn	09 07 51.7	+0.6
	baz=282						
NDT	**Datong Townshi**	**0.60**	**273**	*i* P	Pn	09 07 44.7	+1.2
	baz=275						
NDT				S	Sn	09 07 53.1	+0.9
	baz=275						
NWF	**Wu-fen Shan**	**0.61**	**324**	P	Pn	09 07 43.8	+0.2
	baz=324						
NWF				S	Sn	09 07 52.5	0.0
	baz=324						
WFSB	**Wu-fen Shan**	**0.61**	**324**	P	Pn	09 07 43.7	+0.2
	baz=324						
WFSB				S	Sn	09 07 52.7	+0.3
	baz=324						
NWLT	**Wulai**	**0.64**	**288**	*i* P	Pn	09 07 44.5	+0.5
	baz=288						
NWLT				S	Sn	09 07 53.6	+0.4
	baz=288						
NACB	**Ninganchiao**	**0.66**	**233**	P	Pn	09 07 44.3	0.0
	baz=221						
NACB				S	Sn	09 07 55.3	+1.7
	baz=221						
TWA	**Mucha**	**0.67**	**307**	P	Pn	09 07 44.6	+0.2
	baz=307						
TWA				S	Sn	09 07 54.1	+0.3
	baz=307						
ETLH	**Xiulin Townshi**	**0.73**	**240**	P	Pn	09 07 45.2	-0.1
	baz=229						
ETLH				S	Sn	09 07 56.9	+1.5
	baz=229						
YHNB	**Yeheng**	**0.73**	**277**	P	Pn	09 07 46.0	+0.7
	baz=282						
YHNB				S	Sn	09 07 56.0	+0.6
	baz=282						
NNSB	**Datong**	**0.73**	**259**	P	Pn	09 07 45.9	+0.5
	baz=259						
NNSB				S	Sn	09 07 56.9	+1.3
	baz=259						
NNSH	**Datong**	**0.73**	**259**	*i* P	Pn	09 07 45.8	+0.5
	baz=259						
NNSH				S	Sn	09 07 57.4	+1.9
	baz=259						
NNS	**Nan Shan**	**0.74**	**260**	*i* P	Pn	09 07 46.0	+0.5
	baz=259						
NNS				*i* S	Sn	09 07 57.5	+1.8
	baz=259						
NSK	**Sanguang**	**0.75**	**278**	*i* P	Pn	09 07 46.6	+1.1
	baz=282						
NSK				*i* S	Sn	09 07 56.3	+0.5
	baz=282						
YM10	**YM10**	**0.80**	**316**	P	Pn	09 07 46.1	-0.1
	baz=316						
YM04	**YM04**	**0.81**	**315**	P	Pn	09 07 46.5	+0.1
	baz=315						
YM04				S	Sn	09 07 57.2	-0.2
	baz=315						
TWS1	**Kuangyinshan**	**0.86**	**307**	*i* P	Pn	09 07 47.1	+0.1
	baz=317						
TWS1				*e*S	Sn	09 07 58.8	+0.3
	baz=317						
FUSS	**Fushou**	**0.91**	**249**	P	Pn	09 07 47.8	0.0
	baz=249						
FUSS				S	Sn	09 08 01.3	+1.4
	baz=249						
WHF	**Hehuan Shan**	**0.93**	**243**	*i* P	Pn	09 07 48.3	-0.1
	baz=242						
WHF				S	Sn	09 08 01.4	+0.6
	baz=242						
TDCB	**Techi**	**0.98**	**251**	P	Pn	09 07 49.4	+0.7
	baz=243						
CHGB	**Renai**	**1.04**	**241**	P	Pn	09 07 50.3	+0.6
	baz=228						
CHGB				S	Sn	09 08 04.2	+1.0
	baz=228						
LIOB	**Emei**	**1.05**	**274**	*i* P	Pn	09 07 51.3	+1.7
	baz=283						
LIOB				*i* S	Sn	09 08 06.0	+2.9
	baz=283						
NSTT	**Nanjuang**	**1.07**	**273**	*i* P	Pn	09 07 51.3	+1.5
	baz=283						
NSTT				*i* S	Sn	09 08 06.0	+2.5
	baz=283						
OWD	**Renai**	**1.10**	**236**	P	Pn	09 07 50.1	-0.3
	baz=224						
OWD				S	Sn	09 08 04.4	-0.1
	baz=224						
WHP	**Taichung City**	**1.16**	**255**	*i* P	Pn	09 07 52.2	+1.1
	baz=249						
WHP				S	Sn	09 08 07.3	+1.5
	baz=249						
HGSD	**Ruisui**	**1.28**	**212**	*e*P	Pn	09 07 53.6	+0.9
	baz=202						
HGSD				*e*S	Sn	09 08 09.1	+0.5
	baz=202						
EHY	**Hungye**	**1.32**	**216**	*e*S	Sn	09 08 08.5	-1.1
	baz=202						
SMLT	**Sun Moon Lake**	**1.35**	**239**	P	Pn	09 07 55.4	+1.6
	baz=228						
SMLT				*e*S	Sn	09 08 13.3	+2.7
	baz=228						
TYC	**Yuchr**	**1.37**	**241**	*e*P	Pn	09 07 55.5	+1.6
	baz=231						
TYC				*e*S	Sn	09 08 13.4	+2.5
	baz=231						
YULB	**Yu-li**	**1.43**	**214**	*e*P	Pn	09 07 53.9	-0.9
	baz=226						
YULB				*e*S	Sn	09 08 11.4	-0.9
	baz=226						
FULB	**Fuli**	**1.59**	**211**	P	Pn	09 07 57.4	+0.4
	baz=199						
FULB				*e*S	Sn	09 08 15.9	-0.5
	baz=199						
ALS	**Alishan**	**1.64**	**230**	P	Pn	09 07 58.9	+1.0
	baz=217						
CHN5	**Tsauling**	**1.68**	**235**	P	Pn	09 07 59.8	+1.5
	baz=222						
CHN5				S	Sn	09 08 20.8	+2.2
	baz=222						
EDH	**Donghe**	**1.78**	**207**	P	Pn	09 07 58.8	-0.8
	baz=197						
CHN4	**Tsaushan**	**1.89**	**230**	P	Pn	09 08 02.7	+1.6
	baz=218						
CHN4				S	Sn	09 08 27.0	+3.2
	baz=218						
TPUB	**Ta-pu**	**1.90**	**228**	S	Sn	09 08 26.0	+2.0
	baz=217						

*CNRM **27** 09:14:23.2±1.3, 36.48N×6.26W, h75km±33km, Error ellipse: s-maj=11.0km s-min=6.7km az=52.0*
*SFS **27** 09:14:25.0, 36.50N×6.20W, ML2.5, PUERTO REAL (CADIZ)*
*INMG **27** 09:14:26.4±1.5, 36.54N×6.20W, h29km±3km, ML2.5, Error ellipse: s-maj=2.6km s-min=1.9km az=34.0*
*IGIL **27** 09:14:26.1, 36.51N×6.22W, h30km, ML2.8*
*MDD **27** 09:14:26.0±0.4, 36.56N×6.19W, h40km±5km, mbLg2.6/22, Error ellipse: s-maj=4.5km s-min=2.9km az=20.0, PRXIMO*

ISC 27 09:14:24.6±1.4, 36.58N±0.03×6.19W±0.02, h35km±1km, n93, σ1.970/173, 2C-4D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNIL	**Conil**	**0.24**	**152**	P	**Pn**	**09 14 32.0**	**-0.4**
CNIL				S	**Sn**	**09 14 39.7**	**+0.9**
CNIL	**Conil**	**0.24**	**152**	⇑*i*P	**Pn**	**09 14 32.0**	**-0.4**
CNIL				*e*S	**Sn**	**09 14 39.7**	**+0.9**
ESPR	**Espera**	**0.40**	**43**	⇓P	**Pn**	**09 14 34.8**	**+1.1**
	26nm,0.1s,SNR=18						
ESPR				S	**Sn**	**09 14 41.6**	**+1.4**
	352nm,0.2s,SNR=6.2						
ALJ	**Aljibe**	**0.44**	**96**	P	**Pn**	**09 14 35.0**	**+0.6**
ALJ				S	**Sn**	**09 14 46.0**	**+4.8**
ALJ	**Aljibe**	**0.44**	**96**	*e*P	**Pn**	**09 14 35.0**	**+0.6**
ALJ				*e*S	**Sn**	**09 14 46.0**	**+4.8**
EJIF	**Jimena Fronter**	**0.60**	**102**	P	**Pn**	**09 14 37.1**	**+0.4**
	14μm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**09 14 47.2**	**+2.1**
	74μm,0.3s,SNR=7.9						
LIJA	**Lijar**	**0.71**	**63**	P	**Pn**	**09 14 39.0**	**+0.7**
LIJA				S	**Sn**	**09 14 50.0**	**+2.0**
LIJA	**Lijar**	**0.71**	**63**	*e*P	**Pn**	**09 14 39.0**	**+0.7**
LIJA				*e*S	**Sn**	**09 14 50.0**	**+2.0**
ECEU	**Ceuta**	**0.95**	**136**	P	**Pn**	**09 14 41.4**	**0.0**
	14nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**09 14 54.1**	**+0.4**
	19nm,0.1s,SNR=7.9						
CEU	**Ceuta**	**0.95**	**136**	P	**Pn**	**09 14 42.3**	**+0.9**
CEU				S	**Sn**	**09 14 55.2**	**+1.5**
CEU	**Ceuta**	**0.95**	**136**	*e*P	**Pn**	**09 14 42.3**	**+0.9**
CEU				*e*S	**Sn**	**09 14 55.2**	**+1.5**
SMIR	**Smir Dam**	**1.11**	**144**	P	**Pn**	**09 14 43.2**	**-0.4**
SMIR				S	**Sn**	**09 14 57.8**	**+0.1**
EMIN	**Mina Concepcio**	**1.25**	**342**	⇓P	**Pn**	**09 14 46.5**	**+1.0**
	8.1nm,0.1s,SNR=18						
EMIN				S	**Sn**	**09 15 02.5**	**+1.4**
	13nm,0.1s						
EGRO	**El Granado**	**1.41**	**313**	⇓P	**Pn**	**09 14 48.9**	**+1.2**
	18nm,0.2s,SNR=18						
EGRO				S	**Sn**	**09 15 05.7**	**+0.7**
	17nm,0.1s,SNR=4.8						
EMAL	**Malaga-Limoner**	**1.43**	**82**	P	**Pn**	**09 14 47.7**	**-0.3**
EMAL				S	**Sn**	**09 15 07.2**	**+1.6**
EMAL	**Malaga-Limoner**	**1.43**	**82**	*e*P	**Pn**	**09 14 47.7**	**-0.3**
EMAL				*e*S	**Sn**	**09 15 07.2**	**+1.6**
HORN	**Hornachuelos**	**1.47**	**30**	P	**Pn**	**09 14 49.1**	**+0.6**
HORN				S	**Sn**	**09 15 09.4**	**+2.9**
PVAQ	**Vaqueiros**	**1.47**	**304**	P	**Pn**	**09 14 49.6**	**+1.0**
PVAQ				S	**Sn**	**09 15 07.1**	**+0.4**
	50nm,0.2s						
PVAQ	**Vaqueiros**	**1.47**	**304**	P	**Pn**	**09 14 49.3**	**+0.7**
PVAQ				S	**Sn**	**09 15 07.1**	**+0.4**
PVAQ	**Vaqueiros**	**1.47**	**304**	*e*Pn	**Pn**	**09 14 49.6**	**+1.0**
PVAQ				*e*Sn	**Sn**	**09 15 07.1**	**+0.4**
PVAQ				A	A	09 15 08.4	
	50nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.54**	**296**	P	**Pn**	**09 14 50.5**	**+0.9**
PBDV				S	**Sn**	**09 15 09.0**	**+0.6**
	24nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.54**	**296**	*e*Pn	**Pn**	**09 14 50.5**	**+0.9**
PBDV				*e*Sn	**Sn**	**09 15 09.0**	**+0.6**
PBDV				A	A	09 15 10.7	
	24nm,0.2s						
ECAB	**El Cabril**	**1.61**	**22**	P	**Pn**	**09 14 51.8**	**+1.2**
	0.6nm,0.2s,SNR=10						
ECAB				S	**Sn**	**09 15 11.0**	**+0.8**
	5.5nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.75**	**72**	P	**Pn**	**09 14 54.0**	**+1.4**
	0.6nm,0.0s,SNR=7.9						
EGOR				S	**Sn**	**09 15 13.4**	**-0.3**
	2.0nm,0.1s,SNR=7.9						
PCVE	**Castro Verde**	**1.81**	**306**	P	**Pn**	**09 14 54.3**	**+1.0**
PCVE				S	**Sn**	**09 15 15.4**	**+0.4**
	18nm,0.2s						
PCVE	**Castro Verde**	**1.81**	**306**	⇓*e*Pn	**Pn**	**09 14 54.3**	**+1.0**
PCVE				*e*Sn	**Sn**	**09 15 15.4**	**+0.4**
PCVE				A	A	09 15 16.9	
	18nm,0.2s						
PBEJ	**Beja**	**1.97**	**318**	P	**Pn**	**09 14 56.6**	**+1.2**
PBEJ				S	**Sn**	**09 15 19.0**	**+0.1**
	4.9nm,0.2s						
PBEJ	**Beja**	**1.97**	**318**	*e*Pn	**Pn**	**09 14 56.6**	**+1.2**
PBEJ				*e*Sn	**Sn**	**09 15 19.0**	**+0.1**
PBEJ				A	A	09 15 24.5	
	9.8nm,0.2s						
EADA	**Adamuz**	**2.04**	**39**	P	**Pn**	**09 14 57.3**	**+0.8**
	1.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**09 15 19.5**	**-1.2**
	4.7nm,0.1s,SNR=7.9						
ELGU	**Los Guajares,**	**2.08**	**81**	P	**Pn**	**09 14 58.1**	**+1.0**
	0.4nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**09 15 22.7**	**+0.9**
	11nm,0.2s,SNR=7.9						
PVLZ	**Peæn de**	**2.08**	**132**	S	**Sn**	**09 15 20.0**	**-1.6**
PVLZ	**Peæn de**	**2.08**	**132**	*e*S	**Sn**	**09 15 20.0**	**-1.6**
MORF	**Marmelete**	**2.10**	**291**	*e*P	**Pn**	**09 14 58.0**	**+0.7**
MORF				*e*S	**Sn**	**09 15 21.4**	**-0.8**
MORF				AML	AML	09 15 23.3	
	comp=N,55nm,0.1s						
MORF	**Marmelete**	**2.10**	**291**	P	**Pn**	**09 14 58.1**	**+0.8**
MORF				S	**Sn**	**09 15 22.2**	**0.0**
	comp=N,22nm,0.2s						
MORF	**Marmelete**	**2.10**	**291**	*e*Pn	**Pn**	**09 14 58.1**	**+0.8**
MORF				*e*Sn	**Sn**	**09 15 22.2**	**0.0**
MORF				A	A	09 15 26.2	
	comp=N,22nm,0.2s						
PFVI	**Vila Bisbo**	**2.18**	**285**	P	**Pn**	**09 14 59.1**	**+0.8**
	comp=N,4.0nm,0.1s,SNR=5.8						
PFVI				S	**Sn**	**09 15 23.4**	**-0.8**
	comp=N,44nm,0.1s,SNR=5.6						
PFVI	**Vila Bisbo**	**2.18**	**285**	P	**Pn**	**09 14 59.7**	**+1.3**
PFVI				S	**Sn**	**09 15 23.4**	**-0.8**
PFVI	**Vila Bisbo**	**2.18**	**285**	*e*Pn	**Pn**	**09 14 59.2**	**+0.8**
PFVI				*e*Sn	**Sn**	**09 15 23.7**	**-0.5**
PFVI				A	A	09 15 27.7	
	comp=N,24nm,0.7s						
PTEO	**Sao Teotonio**	**2.24**	**296**	P	**Pn**	**09 15 00.6**	**+1.4**
PTEO				S	**Sn**	**09 15 26.0**	**+0.4**
	comp=N,5.2nm,0.4s						
PTEO	**Sao Teotonio**	**2.24**	**296**	*e*Pn	**Pn**	**09 15 00.6**	**+1.4**
PTEO				*e*Sn	**Sn**	**09 15 26.0**	**+0.4**
PTEO				A	A	09 15 26.9	
	comp=N,10nm,0.4s						
EQUE	**Quentar**	**2.29**	**73**	P	**Pn**	**09 15 01.5**	**+1.5**
	comp=N,1.0nm,0.2s,SNR=4.0						
EQUE				S	**Sn**	**09 15 27.2**	**+0.1**
	comp=N,2.1nm,0.1s,SNR=7.9						
PNCL	**Nicolau / Gran**	**2.41**	**310**	P	**Pn**	**09 15 02.6**	**+1.1**
PNCL				S	**Sn**	**09 15 29.1**	**-0.7**
	comp=N,24nm,0.1s						
PNCL	**Nicolau / Gran**	**2.41**	**310**	*e*Pn	**Pn**	**09 15 02.6**	**+1.1**
PNCL				*e*Sn	**Sn**	**09 15 29.1**	**-0.7**
PNCL				A	A	09 15 31.3	
	comp=N,24nm,0.1s						
EVO	**Evora**	**2.43**	**324**	P	**Pn**	**09 15 03.2**	**+1.4**
EVO				S	**Sn**	**09 15 30.3**	**+0.1**
	comp=N,26nm,0.1s						
EVO	**Evora**	**2.43**	**324**	*e*Pn	**Pn**	**09 15 03.2**	**+1.4**
EVO				*e*Sn	**Sn**	**09 15 30.3**	**+0.1**
EVO				A	A	09 15 31.9	
	comp=N,26nm,0.1s						
PESTR	**Estremoz**	**2.54**	**335**	P	**Pn**	**09 15 04.1**	**+0.8**
PESTR				S	**Sn**	**09 15 32.1**	**-0.9**
PESTR	**Estremoz**	**2.54**	**335**	*e*Pn	**Pn**	**09 15 05.0**	**+1.7**
PESTR				*e*Sn	**Sn**	**09 15 32.8**	**-0.2**
PESTR				A	A	09 15 36.0	
	comp=N,6.9nm,0.3s						
EALB	**Alboran**	**2.63**	**103**	S	**Sn**	**09 15 33.0**	**-2.2**
	comp=N,12nm,0.2s,SNR=7.9						
EBER	**Berja**	**2.67**	**82**	P	**Pn**	**09 15 06.3**	**+1.0**
	comp=N,0.1nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**09 15 36.3**	**-0.2**
	comp=N,0.9nm,0.1s,SNR=7.9						
GORA	**Gorafe**	**2.68**	**69**	S	**Sn**	**09 15 40.7**	**+4.3**
	comp=N,10.0nm,0.1s,SNR=7.9						
EQES	**Quesada**	**2.77**	**63**	P	**Pn**	**09 15 07.7**	**+1.0**
	comp=N,0.1nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**09 15 38.7**	**-0.2**
	comp=N,2.1nm,0.1s,SNR=7.9						
AKLM	**AKL**	**2.81**	**137**	S	**Sn**	**09 15 39.2**	**-0.5**
GOG	**Mont Gurugu**	**2.93**	**117**	S	**Sn**	**09 15 38.6**	**-4.0**
PMTG	**Montargil**	**2.96**	**328**	P	**Pn**	**09 15 10.2**	**+1.1**
PMTG				S	**Sn**	**09 15 42.5**	**-0.9**
	comp=N,10nm,0.3s						
PMTG	**Montargil**	**2.96**	**328**	*e*Pn	**Pn**	**09 15 10.2**	**+1.1**
PMTG				*e*Sn	**Sn**	**09 15 42.5**	**-0.9**
PMTG				A	A	09 15 46.2	
	comp=N,10nm,0.3s						
PMRV	**Marv??o**	**3.00**	**342**	P	**Pn**	**09 15 11.0**	**+1.4**
PMRV				S	**Sn**	**09 15 43.4**	**-0.9**
	comp=N,7.8nm,0.2s						
PMRV	**Marv??o**	**3.00**	**342**	*e*Pn	**Pn**	**09 15 11.0**	**+1.4**
PMRV				*e*Sn	**Sn**	**09 15 43.4**	**-0.9**
PMRV				A	A	09 15 46.4	
	comp=N,7.8nm,0.2s						
ZHG	**ZHG**	**3.15**	**187**	P	**Pn**	**09 15 10.6**	**-1.1**
ZHG				S	**Sn**	**09 15 44.0**	**-4.1**
SESP	**Santiago Espad**	**3.29**	**61**	P	**Pn**	**09 15 14.3**	**+0.6**
	comp=N,0.6nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**09 15 44.5**	**-7.2**
	comp=N,3.1nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**3.29**	**61**	P	**Pn**	**09 15 13.9**	**+0.1**
PAB	**San Pablo**	**3.30**	**26**	P	**Pn**	**09 15 15.3**	**+1.4**
	comp=N,0.5nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**09 15 49.7**	**-2.1**
	comp=N,5.5nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**3.41**	**343**	P	**Pn**	**09 15 16.7**	**+1.5**
PCBR				S	**Sn**	**09 15 53.2**	**-1.2**
	comp=N,5.4nm,0.1s						
PCBR	**Castelo Branco**	**3.41**	**343**	*e*Pn	**Pn**	**09 15 16.7**	**+1.5**
PCBR				*e*Sn	**Sn**	**09 15 53.2**	**-1.2**
PCBR				A	A	09 15 55.9	
	comp=N,11nm,0.1s						
EPLA	**Plasencia**	**3.48**	**1**	P	**Pn**	**09 15 18.3**	**+2.1**
	comp=N,14nm,0.1s,SNR=12						
EPLA				S	**Sn**	**09 15 54.4**	**-1.8**
	comp=N,12nm,0.1s,SNR=6.0						
ESDC	**Sonseca Array**	**3.55**	**29**	P	**Pn**	**09 15 18.9**	**+1.6**
	comp=N,0.7nm,0.2s,baz=212,slow=13,SNR=3.6						
ESDC				S	**Sn**	**09 15 56.9**	**-1.2**
	comp=N,2.2nm,0.3s,baz=212,slow=23,SNR=12						
PSBE	**So Bento**	**3.58**	**326**	*e*Pn	**Pn**	**09 15 19.3**	**+1.7**
PSBE				*e*Sn	**Sn**	**09 15 59.4**	**+0.7**
PSBE				A	A	09 16 05.9	
	comp=N,13nm,0.7s						
MD31	**MD31**	**3.89**	**162**	P	**Pn**	**09 15 20.6**	**-1.4**
PCAS	**Casmilo, Conde**	**3.91**	**333**	P	**Pn**	**09 15 23.7**	**+1.5**
PCAS				S	**Sn**	**09 16 05.4**	**-1.5**
	comp=N,6.6nm,0.6s						
PCAS	**Casmilo, Conde**	**3.91**	**333**	*e*Pn	**Pn**	**09 15 23.7**

GUD				S		**Sn**	**09 16 16.5**	**-1.6**
	comp=N,1.2nm,0.1s,SNR=9.4							
MVO	**Moncorvo**	**4.62**	**352**	*i*Pn		**Pn**	**09 15 33.8**	**+1.8**
MVO				*e*Sn		**Sn**	**09 16 23.3**	**-1.2**
MVO				A		A	09 16 25.2	
	comp=N,5.7nm,0.3s							
PVRL	**Vila Real**	**4.84**	**346**	P		**Pn**	**09 15 36.4**	**+1.5**
PVRL				S		**Sn**	**09 16 28.3**	**-1.4**
	comp=N,6.7nm,0.3s							
PVRL	**Vila Real**	**4.84**	**346**	*e*Pn		**Pn**	**09 15 36.4**	**+1.5**
PVRL				*e*Sn		**Sn**	**09 16 28.3**	**-1.4**
PVRL				A		A	09 16 30.9	
	comp=N,13nm,0.3s							
AFON	**Font Roja**	**4.95**	**63**	P		**Pn**	**09 15 36.5**	**0.0**
	comp=N,1.0nm,0.1s,SNR=7.9							
POLO	**Lamas de Olo**	**4.95**	**346**	P		**Pn**	**09 15 37.8**	**+1.3**
POLO				S		**Sn**	**09 16 30.7**	**-1.8**
	comp=N,3.4nm,0.3s							
POLO	**Lamas de Olo**	**4.95**	**346**	*e*Pn		**Pn**	**09 15 37.8**	**+1.3**
POLO				*e*Sn		**Sn**	**09 16 30.7**	**-1.8**
POLO				A		A	09 16 33.6	
	comp=N,3.4nm,0.3s							
ECHE	**Chera**	**5.10**	**52**	P		**Pn**	**09 15 38.7**	**+0.1**
	comp=N,0.8nm,0.1s,SNR=7.9							
ECHE				S		**Sn**	**09 16 33.6**	**-2.6**
	comp=N,0.4nm,0.1s,SNR=7.9							
PBRG	**Braganca**	**5.24**	**355**	S		**Sn**	**09 16 37.7**	**-1.8**
	comp=N,1.2nm,0.5s							
PBRG	**Braganca**	**5.24**	**355**	*e*Sn		**Sn**	**09 16 37.7**	**-1.8**
PBRG				A		A	09 16 39.5	
	comp=N,2.5nm,0.5s							
ETOR	**Torete**	**5.33**	**36**	P		**Pn**	**09 15 42.9**	**+1.1**
	comp=N,5.1nm,0.1s,SNR=10							
ETOR				S		**Sn**	**09 16 38.0**	**-3.9**
	comp=N,14nm,0.2s,SNR=7.2							
ECAL	**Calabor**	**5.37**	**356**	P		**Pn**	**09 15 43.9**	**+1.6**
	comp=N,1.2nm,0.2s,SNR=7.9							
ECAL				S		**Sn**	**09 16 40.6**	**-2.3**
	comp=N,1.8nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**5.48**	**345**	P		**Pn**	**09 15 45.0**	**+1.2**
	comp=N,0.3nm,0.1s,SNR=7.9							
ELOB				S		**Sn**	**09 16 42.9**	**-2.6**
	comp=N,1.9nm,0.1s,SNR=7.9							
PGAV	**Gavieira, Arco**	**5.61**	**344**	P		**Pn**	**09 15 46.9**	**+1.3**
PGAV				S		**Sn**	**09 16 45.8**	**-3.1**
	comp=N,2.5nm,0.7s							
PGAV	**Gavieira, Arco**	**5.61**	**344**	*e*Pn		**Pn**	**09 15 46.9**	**+1.3**
PGAV				*e*Sn		**Sn**	**09 16 45.8**	**-3.1**
PGAV				A		A	09 16 50.8	
	comp=N,2.5nm,0.7s							
EAGO	**Agolada(Pontev**	**6.38**	**347**	P		**Pn**	**09 15 56.8**	**+0.7**
	comp=N,0.2nm,0.1s,SNR=7.9							
EAGO				S		**Sn**	**09 17 04.8**	**-3.0**
	comp=N,0.8nm,0.1s,SNR=7.9							
EARI	**Arriondas**	**6.76**	**6**	P		**Pn**	**09 16 03.1**	**+1.9**
	comp=N,0.1nm,0.1s,SNR=7.9							
EARI				S		**Sn**	**09 17 13.3**	**-3.6**
	comp=N,0.4nm,0.1s,SNR=7.9							
EALK	**Alkurruntz**	**7.54**	**27**	S		**Sn**	**09 17 33.8**	**-2.6**
	comp=N,14nm,0.5s,SNR=7.9							

IDC 27 09:35:34.4±3.1, 53°.62N×87°.78E, h0km, mb1 3.4/2, mb1mx3.1/57, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=28.6km s-min=15.0km az=60.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**282**	*i*		09 47 58.4	
	baz=96,slow=346,SNR=1.5						
ZALV	**Zalesovo Beam**	**1.79**	**282**	Pg	Pn	09 36 06.8	+0.3
	3.9nm,0.3s,baz=101,slow=17,SNR=10						
ZALV				Lg	Lg	09 36 30.3	
	3.6nm,0.3s,baz=102,slow=21,SNR=10						
KURBB	**Kurchatov Arra**	**6.44**	**246**	Pn	Pn	09 37 11.6	+1.2
	0.2nm,0.3s,baz=62,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**7.69**	**209**	Pn	Pn	09 37 28.8	+1.2
	0.3nm,0.3s,baz=29,slow=14,SNR=12						
MKAR				Sn	Sn	09 38 54.2	-1.1
	0.1nm,0.3s,baz=34,slow=27,SNR=2.2						
MKAR				Lg	Lg	09 39 37.7	
	0.1nm,0.3s,baz=30,slow=32,SNR=2.9						

IDC 27 09:44:16.2±2.2, 16°.54S×168°.48E, h0km, mb3.9/4, mb1 4.2/5, mb1mx3.8/37, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=60.0km s-min=32.5km az=133.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.83**	**199**	Pn	Pn	09 45 44.8	+0.7
	4.0nm,0.3s,baz=125,slow=18,SNR=40						
DZM				Sn	Sn	09 46 45.0	-6.7
	baz=105,slow=20,SNR=1.4						
WRA	**Warramunga Arr**	**32.57**	**259**	P	P	09 50 49.7	+0.1
	0.3nm,0.4s,baz=82,slow=6.1,SNR=13						
ASAR	**Alice Springs**	**33.17**	**252**	P	P	09 50 53.0	-1.9
	2.1nm,0.4s,baz=82,slow=8.9,SNR=56						
FITZ	**Fitzroy Crossi**	**40.86**	**261**	P	P	09 52 01.6	+1.4
	2.3nm,1.1s,baz=90,slow=4.0,SNR=3.9						
ILAR	**Eielson Array**	**87.89**	**18**	P	P	09 57 07.2	-0.1
	0.4nm,0.7s,baz=240,slow=4.9,SNR=5.0						

IDC 27 09:44:18.2±2.6, 7°.62N×94°.89E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.3/56, mbtmp3.5/5, ML5.1/1, MS3.2/2, Ms1 3.2/2, ms1mx2.5/44, Error ellipse: s-maj=168.0km s-min=18.8km az=55.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.47**	**20**	LR	LR	09 51 03.3	
	comp=Z,16nm,22.0s,baz=52,slow=35						
LEM	**Lembang**	**19.16**	**138**	P	P	09 48 43.9	+0.4
	5.2nm,0.3s,baz=315,slow=19,SNR=2.6						
H08S3	**Diego Garcia H**	**26.99**	**236**	T	T	10 16 34.1	
	baz=56,slow=76,SNR=13						
H08S2	**Diego Garcia H**	**26.99**	**236**	T	T	10 16 34.2	
	baz=56,slow=76,SNR=9.8						
H08S1	**Diego Garcia H**	**27.01**	**236**	T	T	10 16 35.5	
	baz=56,slow=76,SNR=3.5						
MKAR	**Makanchi Array**	**40.50**	**347**	P	P	09 51 58.8	-0.1
	1.2nm,0.7s,baz=148,slow=7.1,SNR=6.0						
KURBB	**Kurchatov Arra**	**44.98**	**345**	P	P	09 52 35.2	+0.2
	1.1nm,0.7s,baz=168,slow=6.8,SNR=5.5						
WRA	**Warramunga Arr**	**47.51**	**126**	P	P	09 52 55.3	-0.2
	0.2nm,0.7s,baz=307,slow=8.4,SNR=3.2						
ASAR	**Alice Springs**	**49.18**	**130**	P	P	09 53 08.2	-0.2
	0.2nm,0.7s,baz=300,slow=7.4,SNR=3.0						
AKTO	**Aktyubinsk**	**52.53**	**331**	P	P	09 53 32.9	-0.3
	0.7nm,0.6s,baz=120,slow=8.1,SNR=2.7						
SPITS	**Spitsbergen Ar**	**80.24**	**348**	LR	LR	10 39 57.4	
	comp=Z,134nm,20.8s,baz=320,slow=42						

*UPP **27** 09:58:45.5±2.8, 64°.57N×31°.07E, h0km, ML1.9, Suspected explosion*
*KOLA **27** 09:58:47.5, 64°.75N×30°.23E, h0km*
*HEL **27** 09:58:47.8±0.2, 64°.76N×30°.72E, h0km, ML2.1, Explosion*
*NAO **27** 09:58:48.9±1.5, 64°.79N×30°.62E, ML2.5*
*IDC **27** 09:58:49.5±2.5, 64°.76N×30°.72E, h0km, mb1 3.0/3, mb1mx2.9/35, mbtmp2.9/3, ML2.2/3, Error ellipse: s-maj=39.0km s-min=8.5km az=101.0*
*BER **27** 09:58:50.2±4.1, 64°.83N×30°.45E, h0km, ML2.5(NAO), Suspected explosion*

ISC 27 09:58:48.8±0.9, 64°.83N±0°.02×30°.44E±0°.04, h0km, n45, σ1s53/79, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.22**	**349**	PG	**Pg**	**09 59 11.1**	**-1.1**
KU6				MSG		09 59 27.5	
	comp=Z,11nm,0.2s						
KU6				SG	**Sg**	**09 59 28.0**	**0.0**
MSF	**Maaselka**	**1.23**	**332**	PG	**Pg**	**09 59 11.8**	**-0.7**
MSF				SG	**Sb**	**09 59 29.7**	**+0.3**
OUL	**Oulu**	**1.95**	**280**	PG	**Pb**	**09 59 24.6**	**-0.5**
OUL				SG	**Sg**	**09 59 50.5**	**-0.8**
JOF	**Joensuu**	**1.96**	**168**	PG	**Pn**	**09 59 20.9**	**-2.4**
	baz=351						
JOF				SG	**Sn**	**09 59 48.0**	**-0.6**
OUF	**Merijarvi**	**2.50**	**262**	PB	**Pn**	**09 59 32.1**	**+1.4**
	baz=81						
OUF				MSG		10 00 05.0	
	comp=Z,18nm,0.2s						
OUF				SG	**Sb**	**10 00 06.7**	**+0.8**
RNF	**Rovaniemi**	**2.55**	**316**	PG	**Pb**	**09 59 34.2**	**-1.3**
	baz=128						
RNF				SG	**Sb**	**10 00 08.3**	**+0.9**
OBF0	**Syolatti, Pyha**	**2.69**	**266**	PB	**Pn**	**09 59 34.8**	**+1.5**
OBF0				SG	**Sg**	**10 00 14.0**	**-1.0**
TOF	**Tornio**	**2.84**	**299**	PB	**Pn**	**09 59 37.0**	**+1.6**
TOF				MSG		10 00 15.4	
	comp=Z,7.4nm,0.2s						
TOF				SB	**Sb**	**10 00 15.8**	**+0.1**
SUF	**Sumiainen**	**2.85**	**224**	PB	**Pn**	**09 59 37.0**	**+1.5**
SUF				MSG		10 00 12.8	
	comp=Z,8.0nm,0.2s						
SUF				SG	**Sb**	**10 00 15.3**	**-0.5**
VRF	**Varrio**	**2.95**	**354**	PB	**Pn**	**09 59 37.4**	**+0.6**
VRF				MSG		10 00 16.9	
	comp=Z,3.3nm,0.2s						
VRF				SG	**Sg**	**10 00 21.7**	**-1.7**
APA0	**Apatity Array**	**2.97**	**19**	P	**Pn**	**09 59 36.7**	**-0.5**
APA0				S	**Sn**	**10 00 13.6**	**+0.1**
APA0	**Apatity Array**	**2.97**	**19**	Pn	**Pn**	**09 59 36.5**	**-0.6**
	baz=196,slow=14						
APA0				Sn	**Sn**	**10 00 13.3**	**-0.2**
	baz=180,slow=22						
APA0				Lg	Lg	10 00 22.4	
	baz=189,slow=37						
APA0	**Apatity Array**	**2.97**	**19**	Pn	**Pn**	**09 59 36.5**	**-0.6**
	baz=196,slow=14						
APA0				Sn	**Sn**	**10 00 13.3**	**-0.2**
	baz=180,slow=22						
APA0				Sg	**Sg**	**10 00 22.4**	**-1.8**
	baz=189,slow=37						
APA	**Apatity**	**3.00**	**22**	P	**Pn**	**09 59 37.2**	**-0.4**
APA				S	**Sn**	**10 00 14.3**	**+0.1**
KALU	**Kalix**	**3.14**	**292**	P	**Pn**	**09 59 41.0**	**+1.6**
KALU				S	**Sb**	**10 00 22.1**	**-2.1**
KALU	**Kalix**	**3.14**	**292**	PB	**Pn**	**09 59 41.8**	**+2.3**
KALU				SG	**Sb**	**10 00 25.9**	**+1.7**
KAF	**Kangasniemi**	**3.30**	**216**	PB	**Pn**	**09 59 43.7**	**+2.0**
	baz=32						
KEF	**Keuruu**	**3.66**	**226**	PB	**Pn**	**09 59 48.3**	**+1.7**
KEF				SG	**Sg**	**10 00 43.4**	**-2.8**
PAJU	**Pajala**	**3.72**	**310**	P	**Pn**	**09 59 48.1**	**+0.7**
PAJU	**Pajala**	**3.72**	**310**	PN	**Pn**	**09 59 49.0**	**+1.5**
PAJU				SG	**Sg**	**10 00 47.3**	**-0.9**
SJUU	**Sjulsmark**	**3.79**	**284**	P	**Pn**	**09 59 49.0**	**+0.7**
SJUU				S	**Sn**	**10 00 37.0**	**+3.5**
ERTU	**Ertsjaerv**	**3.82**	**301**	P	**Pn**	**09 59 50.3**	**+1.4**
ERTU	**Ertsjaerv**	**3.82**	**301**	PN	**Pn**	**09 59 50.6**	**+1.7**
VAF	**Ylistaro**	**3.87**	**246**	PB	**Pn**	**09 59 51.6**	**+2.1**
VAF				SG	**Sg**	**10 00 50.6**	**-2.3**
BURU	**Burvik**	**3.90**	**270**	P	**Pn**	**09 59 50.0**	**+0.1**
BURU	**Burvik**	**3.90**	**270**	PN	**Pn**	**09 59 50.1**	**+0.3**
BURU				SN	**Sn**	**10 00 37.5**	**+1.3**
FIA0	**FINESS Array S**	**3.93**	**212**	Pn	**Pn**	**09 59 50.6**	**+0.3**
	baz=36,slow=14						
FIA0				Pg	**Pb**	**09 59 59.0**	**+0.1**
	baz=26,slow=16						
FIA0				Sn	**Sn**	**10 00 37.2**	**+0.1**
	baz=27,slow=18						
FIA0				Lg	Lg	10 00 50.4	
	baz=32,slow=28						
FIA0				Rg	Rg	10 01 10.4	
	baz=36,slow=37						
FIA0	**FINESS Array S**	**3.93**	**212**	PN	**Pn**	**09 59 50.4**	**0.0**
	baz=30						
FIA0				SG	**Sg**	**10 00 52.2**	**-2.8**
FIA0	**FINESS Array S**	**3.93**	**212**	Pn	**Pn**	**09 59 50.6**	**+0.3**
	baz=36,slow=14						
FIA0				Pg	**Pb**	**09 59 59.0**	**+0.1**
	baz=26,slow=16						
FIA0				Sn	**Sn**	**10 00 37.2**	**+0.1**
	baz=27,slow=18						
FIA0				Sg	**Sb**	**10 00 50.4**	**+3.4**
	baz=32,slow=28						
FINES	**FINESS Array B**	**3.93**	**212**	Pn	**Pn**	**09 59 50.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=34,slow=13,SNR=5.9						
FINES				Pg	**Pb**	**09 59 58.5**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=28,slow=15,SNR=8.7						
FINES				Sn	**Sn**	**10 00 38.2**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=42,slow=20,SNR=3.8						
FINES				Lg	Lg	10 00 50.4	
	comp=Z,1.6nm,0.3s,baz=31,slow=25,SNR=13						
HARU	**Harads**	**4.16**	**293**	P	**Pn**	**09 59 55.0**	**+1.5**
ODEU	**Stanfors**	**4.21**	**269**	P	**Pn**	**09 59 53.7**	**-0.4**
UMAU	**Umeaa**	**4.35**	**262**	PN	**Pn**	**09 59 55.6**	**-0.5**
	baz=70						
UMAU				SG	**Sg**	**10 01 06.4**	**-1.9**
LILU	**Lilltraesk**	**4.51**	**281**	P	**Pn**	**09 59 58.8**	**+0.6**
VJF	**Virojoki**	**4.51**	**198**	SG	**Sb**	**10 01 07.5**	**+4.0**
DUNU	**Dundret**	**4.64**	**304**	P	**Pn**	**10 00 01.8**	**+1.7**
ARA0	**ARCESS Array S**	**5.10**	**340**	Pn	**Pn**	**10 00 06.2**	**-0.2**
	baz=154,slow=14						
ARA0				Sn	**Sn**	**10 01 04.4**	**-1.4**
	baz=157,slow=28						
ARA0				Lg	Lg	10 01 25.8	
	baz=150,slow=37						
ARA0	**ARCESS Array S**	**5.10**	**340**	Pn	**Pn**	**10 00 06.2**	**-0.2**
	baz=154,slow=14						
ARA0				Sn	**Sn**	**10 01 04.4**	**-1.4**
	baz=157,slow=28						
ARA0				Sg	**Sb**	**10 01 25.8**	**+5.3**
	baz=150,slow=37						
ARCES	**ARCESS Array B**	**5.10**	**340**	Pn	**Pn**	**10 00 06.2**	**-0.2**
	baz=157,slow=14,SNR=60						
ARCES				Sn	**Sn**	**10 01 03.5**	**-2.3**
	baz=158,slow=20,SNR=1.6						
ARCES				Lg	Lg	10 01 25.0	
	baz=157,slow=34,SNR=6.4						
I43RU	**DUBNA INFRASON**	**8.78**	**155**	*i*		10 53 20.0	
	baz=349,slow=332,SNR=1.0						
NB2	**NORSAR Subarra**	**9.53**	**255**	Pn	**Pn**	**10 01 07.3**	**+0.2**
	baz=65,slow=16						
NB2	**NORSAR Subarra**	**9.53**	**255**	Pn	**Pn**	**10 01 07.3**	**+0.2**
	baz=65,slow=16						
NOA	**NORSAR Array B**	**9.53**	**255**	Pn	**Pn**	**10 01 06.7**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=57,slow=12,SNR=1.6						
NOA				Lg	Lg	10 03 44.2	
	comp=Z,0.0nm,0.3s,baz=42,slow=26,SNR=2.3						
NRA0	**NORESS Array S**	**9.56**	**253**	Pn	**Pn**	**10 01 07.4**	**-0.1**
	baz=55,slow=11						
NRA0	**NORESS Array S**	**9.56**	**253**	Pn	**Pn**	**10 01 07.4**	**-0.1**
	baz=55,slow=11						

*TIR **27** 09:59:41.5, 41°.82N×20°.18E, h4km±1km, Md3.0*
*BEO **27** 09:59:42.4±0.3, 41°.80N×20°.24E, h5km±3km, ML2.4/12*
*PDG **27** 09:59:43.2±0.2, 41°.86N×20°.08E, h8km, MD3.2/2, ML2.4/13, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*

ISC 27 09:59:42.0±1.0, 41°.83N±0°.02×20°.19E±0°.02, h5km±9km, n56, σ0s95/85, 3C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.23**	**128**	P	**Pg**	**09 59 46.6**	**0.0**
	baz=123						
PHP				S	**Sg**	**09 59 50.8**	**+1.1**
	baz=123						
PUK	**Puka**	**0.31**	**314**	P	**Pg**	**09 59 48.2**	**+0.1**
	baz=317						
PUK				S	**Sg**	**09 59 53.1**	**+0.9**
	baz=317						
TIR	**Tirane**	**0.54**	**207**	*e*Pg	**Pg**	**09 59 52.0**	**-0.4**
TIR				*e*Sg	**Sg**	**10 00 00.0**	**+0.6**
TIR	**Tirane**	**0.54**	**207**	P	**Pg**	**09 59 51.6**	**-0.8**
	baz=207						
TIR				S	**Sg**	**10 00 00.1**	**+0.8**
	baz=207						
BCI	**Bajram Curri**	**0.55**	**350**	P	**Pg**	**09 59 52.8**	**+0.3**
	baz=352						
BCI				S	**Sb**	**10 00 01.1**	**-1.2**
	baz=352						
ULC	**Ulcinj**	**0.72**	**281**	*i*Pg	**Pg**	**09 59 55.0**	**-0.8**
ULC				*i*Sg	**Sg**	**10 00 04.9**	**-0.3**
PVY	**Plav**	**0.79**	**347**	*e*Pg	**Pg**	**09 59 56.9**	**-0.2**
PVY				*i*Sg	**Sb**	**10 00 08.6**	**-0.6**
DRME	**Dracevica, Mon**	**0.83**	**296**	*e*Pg	**Pg**	**09 59 56.8**	**-1.2**
DRME				*i*Sg	**Sg**	**10 00 08.6**	**-0.2**
DRME	**Dracevica, Mon**	**0.83**	**296**	*e*Pg	**Pg**	**09 59 57.3**	**-0.7**
OHR	**Ohrid**	**0.85**	**147**	*i*Pg	**Pg**	**09 59 56.8**	**-1.5**
OHR				*i*Sg	**Sg**	**10 00 09.9**	**+0.6**
OHR				*e*Lg	Lg	10 00 11.1	
	comp=N,349nm,0.3s						

PDG	**Podgorica**	**0.92**	**311**	*e*Pg		**Pg**	**09 59 58.6**	**-1.1**
PDG				*e*Sg		**Sb**	**10 00 13.4**	**+0.4**
PDG	**Podgorica**	**0.92**	**311**	*e*Pg		**Pg**	**09 59 58.6**	**-1.1**
TTG	**Podgorica**	**0.92**	**311**	*e*Pg		**Pg**	**09 59 58.7**	**-1.0**
TTG				*i* Sg		**Sg**	**10 00 11.9**	**+0.3**
SKO	**Skopje**	**0.94**	**81**	*e*Sg		**Sg**	**10 00 12.5**	**+0.2**
IVA	**Berane**	**1.07**	**348**	*i*Pg		**Pg**	**10 00 02.0**	**-0.5**
IVA				*e*Sg		**Sn**	**10 00 18.6**	**-0.4**
BUM	**Brajici-Budva**	**1.08**	**296**	*e*Pg		**Pg**	**10 00 01.5**	**-1.1**
BUM				*i* Sg		**Sg**	**10 00 16.7**	**+0.1**
KOME	**Kolasin**	**1.14**	**334**	*i*Pg		**Pg**	**10 00 03.1**	**-0.7**
KOME				*i* Sg		**Sn**	**10 00 20.2**	**-0.5**
CEME	**Cevo**	**1.19**	**308**	*e*Pg		**Pg**	**10 00 03.3**	**-1.5**
CEME				*i* Sg		**Sb**	**10 00 20.9**	**+0.1**
NKME	**Niksic**	**1.31**	**316**	*e*Pg		**Pn**	**10 00 06.3**	**-0.8**
NKME				*i* Sg		**Sn**	**10 00 25.4**	**+0.4**
NKY	**Niksic**	**1.33**	**318**	*e*Pg		**Pn**	**10 00 06.5**	**-0.8**
NKY				*i* Sg		**Sn**	**10 00 26.2**	**+0.8**
HCY	**Herceg Novi**	**1.41**	**297**	*i*Pg		**Pn**	**10 00 07.1**	**-1.2**
HCY				*i* Sg		**Sn**	**10 00 28.3**	**+1.1**
HCY	**Herceg Novi**	**1.41**	**297**	*e*Pn		**Pn**	**10 00 07.2**	**-1.1**
SJES	**Sjenica**	**1.44**	**354**	*e*Pg		**Pn**	**10 00 08.9**	**0.0**
SJES				*e*Sg		**Sn**	**10 00 29.8**	**+1.6**
SELS	**Selova**	**1.55**	**26**	*e*Pg		**Pn**	**10 00 09.7**	**-0.6**
PLE	**Pljevlja**	**1.61**	**339**	*e*Pg		**Pb**	**10 00 12.0**	**-0.3**
PLE				*i* Sg		**Sg**	**10 00 35.4**	**+1.5**
BRY	**Bratogost**	**1.63**	**312**	*i*Pg		**Pn**	**10 00 11.7**	**+0.2**
BRY				*i* Sg		**Sg**	**10 00 35.1**	**+0.8**
BRY	**Bratogost**	**1.63**	**312**	*e*Pn		**Pn**	**10 00 11.7**	**+0.2**
TREB	**Trebinje**	**1.63**	**304**	*e*Pg		**Pb**	**10 00 12.8**	**+0.2**
TREB				*e*Sg		**Sg**	**10 00 37.3**	**+2.9**
TREB	**Trebinje**	**1.63**	**304**	*e*Pn		**Pn**	**10 00 11.3**	**-0.1**
UPM	**Unac-Piva**	**1.67**	**326**	*e*Pn		**Pn**	**10 00 12.5**	**+0.4**
UPM				*i* Sn		**Sg**	**10 00 36.2**	**+0.5**
UPM	**Unac-Piva**	**1.67**	**326**	*e*Pn		**Pb**	**10 00 13.0**	**-0.4**
LSK	**Leskovik**	**1.71**	**169**	P		**Pb**	**10 00 13.5**	**-0.4**
	baz=168							
LSK				S		**Sg**	**10 00 38.9**	**+2.1**
	baz=168							
IVAS	**Ivanjica**	**1.75**	**359**	*e*Pg		**Pn**	**10 00 13.3**	**+0.3**
IVAS				*e*Sg		**Sg**	**10 00 38.6**	**+0.5**
BOSS	**Bosilegrad**	**1.83**	**68**	*e*Pg		**Pb**	**10 00 15.8**	**-0.1**
VAY	**Valandovo**	**1.85**	**105**	*e*Pn		**Pn**	**10 00 13.4**	**-1.0**
VAY				*e*Sg		**Sb**	**10 00 39.3**	**-0.5**
SRN	**Sarande**	**1.95**	**184**	P		**Pb**	**10 00 18.5**	**+0.5**
	baz=184							
GRUS	**Gruza**	**2.10**	**10**	*e*Pn		**Pn**	**10 00 17.8**	**+0.1**
BBLS	**Lazići**	**2.12**	**344**	*e*Pn		**Pn**	**10 00 18.8**	**+0.6**
BBLS	**Lazići**	**2.12**	**344**	*e*Pn		**Pn**	**10 00 18.7**	**+0.6**
STON	**Ston**	**2.12**	**300**	*e*Pg		**Pb**	**10 00 20.8**	**-0.1**
STON				*e*Sg		**Sg**	**10 00 51.0**	**+0.9**
STON	**Ston**	**2.12**	**300**	*e*Pn		**Pn**	**10 00 18.2**	**+0.1**
STON	**Ston**	**2.12**	**300**	*e*Pn		**Pn**	**10 00 18.4**	**+0.3**
STON				Sn		**Sg**	**10 00 50.0**	**-0.2**
DIVS	**Divibare**	**2.27**	**356**	*e*Pg		**Pb**	**10 00 23.1**	**-0.5**
DIVS				*e*Sn		**Sn**	**10 00 49.4**	**+0.7**
DIVS	**Divibare**	**2.27**	**356**	*e*Pn		**Pn**	**10 00 21.7**	**+1.4**
TRUS	**Trudelj**	**2.40**	**4**	*e*Pn		**Pb**	**10 00 23.8**	**-1.9**
HAPS	**Han Pijesak,Bl**	**2.43**	**338**	*e*Pn		**Pn**	**10 00 23.3**	**+0.8**
HAPS	**Han Pijesak,Bl**	**2.43**	**338**	*e*Pn		**Pn**	**10 00 23.1**	**+0.6**
LSTV	**Lastovo**	**2.62**	**292**	Sn		**Sb**	**10 01 03.1**	**+1.2**
TEKS	**Tekeris**	**2.76**	**350**	*e*Pn		**Pn**	**10 00 27.9**	**+1.0**
RICI	**Ricice**	**2.81**	**307**	Sn		**Sb**	**10 01 05.8**	**-1.5**
KIJV	**Kijevo**	**3.53**	**309**	Sn		**Sn**	**10 01 22.1**	**+2.4**
ZIRJ	**Zirje**	**3.81**	**300**	*e*Pn		**Pn**	**10 00 42.4**	**+1.0**
DUGI	**Dugi Otok**	**4.35**	**302**	*e*Pn		**Pn**	**10 00 48.6**	**-0.1**
MORH	**Mrgy, Hungar**	**4.53**	**346**	*e*Pn		**Pn**	**10 00 52.1**	**+1.0**
CRES	**Cresnjev**	**5.26**	**321**	*e*Pn		**Pn**	**10 01 01.2**	**-0.1**
CEY	**Cerknica**	**5.72**	**315**	*e*Pn		**Pn**	**10 01 05.2**	**-2.3**

IDC 27 10:05:19.4±2.2, 1°.77N×126°.23E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/47, mbtmp3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/26, Error ellipse: s-maj=176.5km s-min=28.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.00**	**160**	P	P	10 10 25.5	-0.6
	0.6nm,0.6s,baz=339,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**26.36**	**164**	P	P	10 10 58.3	+0.7
	0.2nm,0.7s,baz=342,slow=7.1,SNR=2.2						
ASAR				LR	LR	10 21 38.5	
	comp=Z,24nm,20.2s,baz=202,slow=37						
MKAR	**Makanchi Array**	**58.88**	**326**	P	P	10 15 20.1	-0.1
	1.3nm,0.8s,baz=112,slow=8.4,SNR=2.3						

**WEL 27 10:12:39.8±0.8, 38°S±6°×178°0E±°, h

JWT					eS	S	10 32 05.5	+0.1
JYN	**Shimob**	**1.37**	**87**		P	Pn	10 31 34.0	+0.6
MAT	**Matsushiro**	**1.55**	**44**		P	Pn	10 31 34.9	+0.4
MAT					S	S	10 32 09.8	+0.7
MAT	**Matsushiro**	**1.55**	**44**		P	Pn	10 31 34.9	+0.4
MJAR	**Matsushiro Arr**	**1.55**	**44**		P	Pn	10 31 34.9	+0.4
	1.5nm,0.3s,baz=209,slow=7.8,SNR=35							
MJAR					S	S	10 32 09.8	+0.7
	baz=134,slow=40,SNR=0.9							
JWY	**Kouya**	**1.60**	**221**		P	Pn	10 31 35.9	+0.9
JRY	**Ryogami san**	**1.75**	**70**		P	Pn	10 31 36.3	+0.4
JOD2	**Odawara 2**	**1.82**	**95**		P	Pn	10 31 37.1	+0.7
JTNC	**Tanabenakahech**	**1.91**	**213**		P	Pn	10 31 37.9	+0.7
JAG	**Ashikaga**	**2.32**	**64**		P	Pn	10 31 39.6	-0.8
JAI	**Aioi**	**2.58**	**231**		P	Pn	10 31 42.7	-0.1
JHS	**Saijyo**	**3.11**	**263**		P	Pn	10 31 48.1	+0.2
WRA	**Warramunga Arr**	**55.12**	**183**		P	P	10 39 51.2	-1.6
	0.3nm,0.2s,baz=358,slow=7.7,SNR=5.7							
ASAR	**Alice Springs**	**58.84**	**183**		P	P	10 40 18.6	-0.2
	0.2nm,0.5s,baz=354,slow=6.9,SNR=1.9							

DNK ***27*** *10:34:16.9±0.4,58°.94N×18°.93E,h0km±23km,ML2.1, Explosion*
UPP ***27*** *10:34:19.6±0.1,58°.98N×18°.21E,h0km,ML1.8,Explosion*
HEL ***27*** *10:34:20.7±0.1,59°.00N×18°.17E,h0km,ML1.7, ML1.8(UPP),Explosion*
BER ***27*** *10:34:21.0±2.3,59°.02N×18°.28E,h0km,ML1.3, ML1.8(UPP),Suspected explosion*
IDC ***27*** *10:34:23.3±2.5,59°.25N×18°.07E,h0km,mb1 3.5/2, mb1mx3.0/43,mbtmp3.4/2,ML1.8/2,Error ellipse: s-maj=33.5km s-min=7.9km az=179.0*
ISC 27 10:34:19.0±0.8,59°.00N±0°.02×18°.10E±0°.03,h0km,n68,
*σ*0**675/84,Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRTU	**Norrtaelje**	**0.73**	**22**		P		**Pg**	**10 34 33.3**	**+0.2**
NRTU					S		**Sg**	**10 34 42.8**	**+0.2**
NRTU	**Norrtaelje**	**0.73**	**22**	*i*	P		**Pg**	**10 34 33.3**	**+0.2**
NRTU				*i*	S		**Sg**	**10 34 42.8**	**+0.2**
NRTU	**Norrtaelje**	**0.73**	**22**		P		**Pg**	**10 34 33.3**	**+0.2**
NRTU					S		**Sg**	**10 34 42.8**	**+0.2**
NRTU	**Norrtaelje**	**0.73**	**22**		P		**Pg**	**10 34 33.3**	**+0.2**
NRTU					S		**Sg**	**10 34 42.8**	**+0.2**
VIKU	**Vikbolandet**	**0.88**	**236**		P		**Pb**	**10 34 37.0**	**-0.2**
VIKU	**Vikbolandet**	**0.88**	**236**	*eP*			**Pb**	**10 34 37.0**	**-0.2**
VIKU	**Vikbolandet**	**0.88**	**236**		P		**Pb**	**10 34 37.0**	**-0.2**
VIKU	**Vikbolandet**	**0.88**	**236**		P		**Pb**	**10 34 37.0**	**-0.2**
UPP	**Uppsala**	**0.90**	**345**		P		**Pb**	**10 34 37.4**	**-0.1**
UPP	**Uppsala**	**0.90**	**345**	*eP*			**Pb**	**10 34 37.4**	**-0.1**
ESKU	**Eskilstuna**	**0.91**	**286**		P		**Pb**	**10 34 37.4**	**-0.2**
ESKU	**Eskilstuna**	**0.91**	**286**	*eP*			**Pb**	**10 34 37.4**	**-0.2**
ESKU	**Eskilstuna**	**0.91**	**286**		P		**Pb**	**10 34 37.4**	**-0.2**
ESKU	**Eskilstuna**	**0.91**	**286**		P		**Pb**	**10 34 37.4**	**-0.2**
FIBU	**Brunna**	**0.98**	**338**		P		**Pb**	**10 34 38.5**	**-0.4**
FIBU	**Brunna**	**0.98**	**338**		P		**Pb**	**10 34 38.5**	**-0.4**
FIBU	**Brunna**	**0.98**	**338**		P		**Pb**	**10 34 38.5**	**-0.4**
BACU	**Backbrunna**	**1.00**	**330**		P		**Pb**	**10 34 38.8**	**-0.3**
BACU	**Backbrunna**	**1.00**	**330**	*eP*			**Pb**	**10 34 38.8**	**-0.3**
BACU	**Backbrunna**	**1.00**	**330**		P		**Pb**	**10 34 38.8**	**-0.3**
BACU	**Backbrunna**	**1.00**	**330**		P		**Pb**	**10 34 38.8**	**-0.3**
FLYU	**Flymyra**	**1.14**	**355**		P		**Pg**	**10 34 41.2**	**+0.3**
FLYU	**Flymyra**	**1.14**	**355**	*eP*			**Pg**	**10 34 41.2**	**+0.3**
FLYU	**Flymyra**	**1.14**	**355**		P		**Pg**	**10 34 41.2**	**+0.3**
FLYU	**Flymyra**	**1.14**	**355**		P		**Pg**	**10 34 41.2**	**+0.3**
OSTU	**Oestervaala**	**1.33**	**339**		P		**Pn**	**10 34 44.8**	**-0.1**
OSTU	**Oestervaala**	**1.33**	**339**	*eP*			**Pn**	**10 34 44.8**	**-0.1**
OSTU	**Oestervaala**	**1.33**	**339**		P		**Pn**	**10 34 44.8**	**-0.1**
OSTU	**Oestervaala**	**1.33**	**339**		P		**Pn**	**10 34 44.8**	**-0.1**
GOTU	**Gotland**	**1.34**	**169**		P		**Pg**	**10 34 43.9**	**-0.8**
GOTU	**Gotland**	**1.34**	**169**	*eP*			**Pg**	**10 34 43.9**	**-0.8**
GOTU	**Gotland**	**1.34**	**169**		P		**Pg**	**10 34 43.9**	**-0.8**
GOTU	**Gotland**	**1.34**	**169**		P		**Pg**	**10 34 43.9**	**-0.8**
GRAU	**Graesoe**	**1.36**	**9**		P		**Pg**	**10 34 44.9**	**-0.2**
GRAU	**Graesoe**	**1.36**	**9**	*eP*			**Pg**	**10 34 44.9**	**-0.2**
GRAU	**Graesoe**	**1.36**	**9**		P		**Pg**	**10 34 44.9**	**-0.2**
GRAU	**Graesoe**	**1.36**	**9**		P		**Pg**	**10 34 44.9**	**-0.2**
FORU	**Forsmark**	**1.40**	**2**		P		**Pn**	**10 34 45.6**	**-0.1**
FORU	**Forsmark**	**1.40**	**2**	*eP*			**Pn**	**10 34 45.6**	**-0.1**
FORU	**Forsmark**	**1.40**	**2**		P		**Pn**	**10 34 45.6**	**-0.1**
FORU	**Forsmark**	**1.40**	**2**		P		**Pn**	**10 34 45.6**	**-0.1**
AAL	**Aland**	**1.53**	**38**		P		**Pn**	**10 34 47.3**	**-0.2**
AAL	**Aland**	**1.53**	**38**	*eP*			**Pn**	**10 34 47.3**	**-0.2**
AAL				*eS*			**Sn**	**10 35 07.1**	**-1.0**
LNKU	**Linkoeping**	**1.56**	**241**		P		**Pg**	**10 34 49.2**	**+0.2**
LNKU	**Linkoeping**	**1.56**	**241**	*eP*			**Pg**	**10 34 49.2**	**+0.2**
LNKU	**Linkoeping**	**1.56**	**241**		P		**Pg**	**10 34 49.2**	**+0.2**
LNKU	**Linkoeping**	**1.56**	**241**		P		**Pg**	**10 34 49.2**	**+0.2**
VSTU	**Vaestervik**	**1.57**	**212**		P		**Pg**	**10 34 49.1**	**-0.1**
VSTU	**Vaestervik**	**1.57**	**212**	*eP*			**Pg**	**10 34 49.1**	**-0.1**
VSTU	**Vaestervik**	**1.57**	**212**		P		**Pg**	**10 34 49.1**	**-0.1**
VSTU	**Vaestervik**	**1.57**	**212**		P		**Pg**	**10 34 49.1**	**-0.1**
NRAU	**Nora**	**1.67**	**291**		P		**Pg**	**10 34 51.1**	**+0.1**
NRAU	**Nora**	**1.67**	**291**	*eP*			**Pg**	**10 34 51.1**	**+0.1**
NRAU	**Nora**	**1.67**	**291**		P		**Pg**	**10 34 51.1**	**+0.1**
NRAU	**Nora**	**1.67**	**291**		P		**Pg**	**10 34 51.1**	**+0.1**
HFS	**Hagfors**	**2.52**	**299**		Lg		Lg	10 35 37.6	
	3.4nm,0.3s,baz=118,slow=30,SNR=5.2								
RAF	**Rauma**	**2.74**	**41**	*eP*			**Pn**	**10 35 05.3**	**+1.1**
RAF				*eS*			**Sn**	**10 35 38.5**	**+0.6**
RAF				MSG				10 35 46.0	
	comp=Z,2.1nm,0.1s								
DEL	**Delary**	**3.40**	**224**	*e*			**Pn**	**10 35 14.0**	**+0.8**
	baz=45,slow=11								
DEL				*eP*			**Pn**	**10 35 15.0**	**+1.7**
DEL				*i*	P		**Pn**	**10 35 15.3**	**+2.1**
DEL				IAML				10 36 13.7	
	comp=Z,1.0nm,0.3s								
STRU	**Stroemstad**	**3.58**	**274**	*i*	P		**Pb**	**10 35 19.9**	**-3.2**
NOA	**NORSAR Array B**	**4.02**	**304**		Pn		**Pn**	**10 35 22.7**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=127,slow=11,SNR=7.5								
NOA					Pg		**Pb**	**10 35 29.6**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=124,slow=15,SNR=7.9								
NOA					Lg		Lg	10 36 24.4	
	comp=Z,0.1nm,0.3s,baz=130,slow=24,SNR=7.8								
BSD	**Bornholm Skovb**	**4.26**	**205**	*eP*			**Pn**	**10 35 25.6**	**+0.5**
BSD				*i*	S		**Sn**	**10 36 15.7**	**+0.2**
BSD				IAML				10 36 34.1	
	comp=Z,2.9nm,0.3s								
BSD	**Bornholm Skovb**	**4.26**	**205**	*i*	P		**Pn**	**10 35 25.6**	**+0.5**
BSD				*i*	S		**Sn**	**10 36 15.7**	**+0.2**
BSD	**Bornholm Skovb**	**4.26**	**205**	*eP*			**Pn**	**10 35 25.6**	**+0.5**
BSD				*i*	S		**Sn**	**10 36 15.7**	**+0.2**
BSD				IAML				10 36 34.1	
	comp=Z,2.9nm,0.3s								
KEF	**Keuruu**	**4.61**	**44**	*eP*			**Pn**	**10 35 31.3**	**+1.5**
KEF				*eS*			**Sn**	**10 36 23.8**	**-0.3**
FIA0	**FINESS Array S**	**4.67**	**55**	*eP*			**Pn**	**10 35 32.1**	**+1.4**
FIA0				*eS*			**Sn**	**10 36 24.3**	**-1.3**
FINES	**FINESS Array B**	**4.67**	**55**		Pn		**Pn**	**10 35 32.5**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=250,slow=13,SNR=7.9								
FINES					Pg		**Pb**	**10 35 42.8**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=243,slow=14,SNR=7.6								
FINES					Sn		**Sn**	**10 36 25.6**	**0.0**
	comp=Z,0.8nm,0.3s,baz=246,slow=23,SNR=9.8								
FINES					Lg		Lg	10 36 43.5	
	comp=Z,1.1nm,0.3s,baz=246,slow=26,SNR=10.0								
FIA1	**FINESS Array S**	**4.67**	**55**	*eP*			**Pn**	**10 35 32.4**	**+1.6**
FIA1				*eS*			**Sn**	**10 36 24.6**	**-1.0**
ARCES	**ARCESS Array B**	**11.05**	**14**		Pn		**Pn**	**10 36 56.1**	**-1.9**
	baz=189,slow=13,SNR=10								

NEIC ***27*** *11:10:17.9±1.3,57°.89S±0°.07×25°.5W±0°.2,h35km±1km, mb5.1/55, Error ellipse: s-maj=15.8km s-min=12.2km az=254.0*
IDC ***27*** *11:10:20.7±0.6,57°.97S×25°.64W,h60km±4km,mb4.7/12, mb1 4.8/13,mb1mx4.6/21,mbtmp5.0/13,MS4.6/15, Ms1 4.5/15,ms1mx4.5/16,Error ellipse: s-maj=17.2km s-min=12.2km az=57.0*
MOS ***27*** *11:10:20.4±1.1,57°.89S×25°.61W,h62km,mb5.2/9,Error ellipse: s-maj=26.6km s-min=11.6km az=111.7*
GCMT ***27*** *11:10:21.9±0.1,58°.10S±0°.01×24°.93W±0°.02,h53km, MW5.3/132,Moment Tensor Solution. s131,c213; s132,c213; Duration: 1s1 Moment tensor: Scale 10^17 Nm; Mrr1.12±.02; Mθθ0.06±.01; Mφφ-1.18±.01; Mrθ0.04±.01; Mθφ0.20±.01; Mrφ0.17±.01; Best double couple: M0 1.18000×10^17 NP1:φs167.00000°,δ41.00000°, λ84.00000°. NP2:φs355.00000°,δ49.00000°,λ95.00000°. Principal axes: T 1.1360, Plg85.0000°, Azm305.0000°; N 0.0840, Plg4.0000°, Azm171.0000°; P -1.2230, Plg4.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 11:10:20.7±0.5,58°.00S±0°.06×25°.50W±0°.06,h60km±4km, h60km:pP-P,n535,σ1§18/551,mb5.1/36,8C-2D,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**7.18**	**297**		P		**Pn**	**11 12 03.8**	**+0.9**
HOPE	**Hope Point**	**7.18**	**297**				**Pn**	**11 12 03.8**	**+0.9**
VNA1	**Neumayer--Stat**	**14.64**	**157**		P		**Pn**	**11 13 43.3**	**-0.7**
VNA3	**Neumayer Olymp**	**14.84**	**160**		P		**Pn**	**11 13 45.5**	**-1.2**
VNA2	**Neumayer--Watz**	**15.04**	**157**		P		**Pn**	**11 13 48.3**	**-0.9**
	baz=322,slow=12								
SNAA	**Sanae**	**16.58**	**155**		P		**Pn**	**11 14 09.4**	**+0.6**
SNAA	**Sanae**	**16.58**	**155**		P		**Pn**	**11 14 09.4**	**+0.6**
	14nm,0.3s,baz=315,slow=14,SNR=270								
SNAA					S		Sn	11 16 59.3	-13
	1.2nm,0.3s,baz=331,slow=14,SNR=1.8								
SNAA	**Sanae**	**16.58**	**155**	*ce*	P		**Pn**	**11 14 09.2**	**+0.3**
SNAA						pmax	pmax		
	comp=Z,30nm,0.4s								
SNAA	**Sanae**	**16.58**	**155**				**Pn**	**11 14 09.4**	**+0.6**
PMSA	**Palmer Station**	**19.40**	**234**		P		**Pn**	**11 14 44.0**	**+1.0**
	comp=Z,2.6nm,0.3s,baz=65,slow=7.8,SNR=14								
PMSA	**Palmer Station**	**19.40**	**234**		P		**Pn**	**11 14 43.0**	**+0.1**
PMSA						IAmb	IAmb	11 14 53.7	
	comp=Z,89nm,0.9s								
PMSA	**Palmer Station**	**19.40**	**234**	*eP*			**P**	**11 14 38.9**	**-2.4**
EFI	**East Falkland**	**19.65**	**275**	*ce*	P		**Pn**	**11 14 45.7**	**-0.4**
EFI						pmax	pmax		
	comp=Z,74nm,1.0s								
EFI	**East Falkland**	**19.65**	**275**				**P**	**11 14 44.3**	**+0.1**
EFI						IAmb	IAmb	11 14 49.3	
	comp=Z,70nm,0.9s								
NVL	**N'lazarevskaya**	**20.13**	**144**	*eP*			Pn	11 14 54.4	+2.8
NVL				*eS*			**S**	**11 18 33.7**	**+2.1**
NVL						pmax	pmax		
	comp=Z,73nm,1.2s								
BELA	**Belgrano 2**	**20.21**	**186**		P		**P**	**11 14 50.3**	**+0.2**
MG01	**Puerto William**	**23.20**	**259**		P		**P**	**11 15 22.7**	**+0.8**
MG01						IAmb	IAmb	11 15 46.3	
	comp=Z,95nm,1.1s								
GO09	**Cerro Castillo**	**27.45**	**264**		P		**P**	**11 16 00.6**	**0.0**
GO09						IAmb	IAmb	11 16 17.6	
	comp=Z,80nm,1.4s								
SYO	**Syowa Base**	**29.50**	**138**	*e*	P		**P**	**11 16 14.6**	**-3.9**
SYO	**Syowa Base**	**29.50**	**138**	*e*	pP		P	11 16 23.7	+5.2
SYO	**Syowa Base**	**29.50**	**138**	*e*	sP		P	11 16 27.1	+8.6
QSPA	**South Pole Qui**	**32.25**	**180**		P		**P**	**11 16 44.1**	**+1.1**
QSPA						IAmb	IAmb	11 16 45.8	
	comp=Z,25nm,0.8s								
PLTB	**Pedras Altas**	**32.49**	**312**	*eP*			**P**	**11 16 44.7**	**-0.6**
LL01	**San Ignacio de**	**33.08**	**277**		P		**P**	**11 16 50.3**	**0.0**
PLCA	**Paso Flores**	**33.27**	**281**		P		**P**	**11 16 51.6**	**-0.5**
	comp=Z,14nm,0.8s,baz=142,slow=8.7,SNR=28								
PLCA					PcP		**PcP**	**11 19 32.6**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=56,slow=3.6,SNR=1.9								
PLCA					LR		LR	11 30 23.5	
	comp=Z,796nm,18.7s,baz=130,slow=36								
PLCA	**Paso Flores**	**33.27**	**281**		P		**P**	**11 16 51.6**	**-0.5**
PLCA						pmax	pmax		
	comp=Z,19nm,1.0s								
PLCA	**Paso Flores**	**33.27**	**281**		P		**P**	**11 16 51.6**	**-0.5**
PLCA						IAmb	IAmb	11 16 53.9	
	comp=Z,19nm,0.9s								
PLCA	**Paso Flores**	**33.27**	**281**	*eP*			**P**	**11 16 51.7**	**-0.5**
CPSB	**Cacapava Do Su**	**33.62**	**313**	*eP*			**P**	**11 16 54.9**	**-0.2**
CPSB				*epP*			**P**	**11 16 58.2**	**+3.1**
CNLB	**Canela**	**33.64**	**318**	*eP*			**P**	**11 16 55.2**	**-0.2**
LC01	**Cunco**	**35.31**	**282**		P		**P**	**11 17 05.7**	**-4.0**
ITQB	**Itaqui**	**35.55**	**309**	*eP*			**P**	**11 17 10.8**	**-1.0**
ITAB	**Concordia**	**35.99**	**317**	*eP*			**P**	**11 17 16.6**	**+1.1**
TIJ01	**Guaruva-PR**	**36.68**	**323**	*eP*			**P**	**11 17 21.2**	**-0.4**
PET01	**Itanhaem-SP**	**37.11**	**326**	*eP*			**P**	**11 17 25.3**	**+0.2**
ESAR	**Angra dos Reis**	**37.52**	**331**	*eP*			**P**	**11 17 28.8**	**+0.2**
PARB	**Paraibuna**	**37.53**	**329**	*eP*			**P**	**11 17 29.2**	**+0.4**
MAN01	**Angra dos Reis**	**37.54**	**331**	*eP*			**P**	**11 17 29.6**	**+0.7**
SPB	**Sao Paulo**	**37.81**	**326**		P		**P**	**11 17 29.7**	**-1.3**
SPB						IAmb	IAmb	11 17 33.5	
	comp=Z,30nm,1.0s								
SPB	**Sao Paulo**	**37.81**	**326**	*eP*			**P**	**11 17 32.4**	**+1.3**
DUB01	**Friburgo-RJ**	**37.91**	**334**	*eP*			**P**	**11 17 32.1**	**+0.2**
VAS01	**Vassouras-RJ**	**37.97**	**332**	*eP*			**P**	**11 17 33.6**	**+1.2**
MAW	**Mawson**	**38.04**	**142**		P		**P**	**11 17 33.2**	**+0.7**
	comp=Z,7.5nm,0.8s,baz=230,slow=9.2,SNR=16								
MAW					PcP		**PcP**	**11 19 46.8**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=338,slow=3.7,SNR=3.8								
MAW					LR		LR	11 30 59.3	
	comp=Z,825nm,20.8s,baz=254,slow=32								
MAW	**Mawson**	**38.04**	**142**		P		**P**	**11 17 33.5**	**+1.1**
VAO	**Valinhos**	**38.23**	**327**	*eP*			**P**	**11 17 34.5**	**-0.1**
PTGB	**Pitanga**	**38.27**	**319**	*eP*			**P**	**11 17 34.5**	**-0.5**
PTGB				*eS*			**S**	**11 23 29.4**	**+4.8**
FRTB	**Fartura**	**38.70**	**323**	*eP*			**P**	**11 17 38.7**	**+0.1**
CPUP	**Villa Florida**	**38.79**	**311**		P		**P**	**11 17 37.9**	**-1.4**
	comp=Z,6.7nm,0.9s,baz=153,slow=8.6,SNR=12								
CPUP					LR		LR	11 31 56.8	
	comp=Z,572nm,20.9s,baz=158,slow=34								
CPUP	**Villa Florida**	**38.79**	**311**		P		**P**	**11 17 37.9**	**-1.4**
CPUP						pmax	pmax		
	comp=Z,12nm,1.0s								
CPUP	**Villa Florida**	**38.79**	**311**		P		**P**	**11 17 37.9**	**-1.4**
CPUP	**Villa Florida**	**38.79**	**311**	*eP*			**P**	**11 17 37.9**	**-1.4**
BSCB	**Bom Sucesso**	**39.54**	**331**	*eP*			**P**	**11 17 45.7**	**+0.1**
RIB01	**Linhares ES**	**40.16**	**338**	*eP*			**P**	**11 17 51.9**	**+1.3**
TRCB	**Terra Rica**	**40.23**	**319**	*eP*			**P**	**11 17 52.1**	**+0.8**
BB19B	**Bebedouro**	**40.52**	**326**	*eP*			**P**	**11 17 54.4**	**+0.7**
BSFB	**Barra de Sao F**	**40.72**	**337**	*eP*			**P**	**11 17 56.0**	**+0.7**
PCMB	**Pacaembu**	**40.87**	**322**	*eP*			**P**	**11 17 56.7**	**+0.1**
PCMB					*epP*		**P**	**11 18 00.5**	**+3.9**
ITRB	**Iturama**	**42.36**	**324**	*eP*			**P**	**11 18 09.1**	**+0.3**
ITRB					*epP*		**P**	**11 18 12.4**	**+3.6**
IPMB	**Ipameri, GO**	**43.34**	**328**	*eP*			**P**	**11 18 17.2**	**+0.5**
AQDB	**Aquidauana**	**43.46**	**317**	*eP*			**P**	**11 18 15.8**	**-1.8**
AC02	**Maricunga**	**43.58**	**297**		P		**P**	**11 18 18.2**	**-0.9**
VNDA	**Vanda**	**44.66**	**182**		P		**P**	**11 18 28.3**	**+1.7**
	comp=Z,17nm,0.7s,baz=186,slow=6.4,SNR=59								
VNDA					LR		LR	11 35 57.8	
	comp=Z,446nm,22.0s,baz=187,slow=34								
VNDA	**Vanda**	**44.66**	**182**		P		**P**	**11 18 28.1**	**+1.5**
VNDA						pmax	pmax		
	comp=Z,23nm,0.9s								
VNDA	**Vanda**	**44.66**	**182**		P		**P**	**11 18 28.1**	**+1.5**
VNDA						IAmb	IAmb	11 18 30.3	
	comp=Z,23nm,0.8s								
AC01	**Pan de Azucar**	**44.86**	**295**		P		**P**	**11 18 28.0**	**-0.8**
AC01						IAmb	IAmb	11 18 40.8	
	comp=Z,35nm,1.3s								
JANB	**Januaria**	**45.13**	**334**	*eP*			**P**	**11 18 31.5**	**+0.4**
JANB					*epP*		**P**	**11 18 35.0**	**+3.9**
GO02	**Mina Guanaco**	**45.21**	**297**		P		**P**	**11 18 31.5**	**-0.5**
GO02						IAmb	IAmb	11 18 38.3	
	comp=Z,10nm,0.6s								
GDU01	**Guandu, BA**	**45.45**	**341**	*eP*			**P**	**11 18 33.6**	**0.0**
BDFB	**Brasilia**	**45.51**	**329**		P		**P**	**11 18 34.9**	**+0.7**
	comp=Z,13nm,0.6s,baz=142,slow=5.1,SNR=16								
BDFB					LR		LR	11 35 10.4	
	comp=Z,439nm,21.5s,baz=130,slow=33								
BDFB	**Brasilia**	**45.51**	**329**		P		**P**	**11 18 34.0**	**-0.2**
BDFB						pmax	pmax		
	comp=Z,15nm,0.7s								
BDFB	**Brasilia**	**45.51**	**329**		P		**P**	**11 18 34.0**	**-0.2**
BDFB						IAmb	IAmb	11 18 36.8	
	comp=Z,15nm,0.7s								
BOSA	**Boshof**	**45.62**	**72**		P		**P**	**11 18 35.3**	**+0.4**
	comp=Z,10.0nm,0.9s,baz=186,slow=6.4,SNR=8.5								
BOSA					LR		LR	11 33 41.2	
	comp=Z,2μm,21.7s,baz=232,slow=31								
PP1B	**Ponte de Pedra**	**45.82**	**319**	*eP*			**P**	**11 18 36.5**	**+0.1**
ARAG	**Araguaiana, MT**	**46.57**	**324**	*eP*			**P**	**11 18 42.8**	**+0.4**
PB10	**IPOC Station P**	**47.07**	**297**		P		**P**	**11 18 44.8**	**-1.4**
PB10						IAmb	IAmb	11 18 59.9	
	comp=Z,41nm,1.5s								
LVC	**Limon Verde**	**47.08**	**300**		P		**P**	**11 18 46.5**	**-0.2**
LVC						pmax	pmax		
	comp=Z,7.0nm,0.7s								
LVC	**Limon Verde**	**47.08**	**300**		P		**P**	**11 18 46.5**	**-0.2**
LVC	**Limon Verde**	**47.08**	**300**	*eP*			**P**	**11 18 45.6**	**-1.1**
LVC				*epP*			**P**	**11 18 49.3**	**+2.6**
SDBA	**SAO DESIDERIO**	**47.82**	**334**	*eP*			**P**	**11 18 52.5**	**+0.3**
PB04	**IPOC Station P**	**47.89**	**299**		P		**P**	**11 18 52.3**	**-0.5**
PB04						IAmb	IAmb	11 19 10.0	
	comp=Z,15nm,0.9s								
PB09	**IPOC Station P**	**47.93**	**300**		P		**P**	**11 18 52.4**	**-0.7**
PB07	**IPOC Station P**	**48.29**	**299**		P		**P**	**11 18 54.3**	**-1.6**
PB07						IAmb	IAmb	11 19 21.7	
	comp=Z,45nm,1.6s								
PB01	**IPOC Station P**	**48.70**	**300**		P		**P**	**11 18 57.9**	**-1.0**
PTLB	**Pontes e Lacer**	**49.34**	**315**	*eP*			**P**	**11 19 02.7**	**-0.9**
PTLB				*epP*			**P**	**11 19 06.9**	**+3.3**
GO01	**Chusmiza**	**49.76**	**301**		P		**P**	**11 19 06.3**	**-1.2**
GO01						IAmb	IAmb	11 19 24.1	
	comp=Z,7.2nm,0.6s								
SNDB	**Serra Nova Dou**	**49.94**	**326**	*eP*			**P**	**11 19 08.7**	**+0.4**
SNDB				*epP*			**P**	**11 19 12.5**	**+4.2**
PSGCX	**Pisagua**	**50.24**	**301**		P		**P**	**11 19 10.2**	**-0.5**
PSGCX						IAmb	IAmb	11 19 34.5	
	comp=Z,26nm,1.3s								
MNMC	**Minye Minye**	**50.41**	**301**		P		**P**	**11 19 11.1**	**-1.1**
MNMC						IAmb	IAmb	11 19 37.9	
	comp=Z,16nm,0.7s								
SMTB	**Santa Maria do**	**51.89**	**332**	*eP*			**P**	**11 19 23.4**	**+0.4**
SMTB				*epP*			**P**	**11 19 27.1**	**+4.2**
VILB	**Vilhena**	**52.02**	**315**	*eP*			**P**	**11 19 22.9**	**-1.1**
VILB				*epP*			**P**	**11 19 27.2**	**+3.2**
LPAZ	**La Paz**	**52.25**	**305**		P		**P**	**11 19 25.3**	**-1.0**
	comp=Z,7.3nm,0.6s,baz=168,slow=6.5,SNR=19								
LPAZ	**La Paz**	**52.25**	**305**	*eP*			**P**	**11 19 25.5**	**-0.8**
LPAZ	**La Paz**	**52.25**	**305**		P		**P**	**11 19 25.4**	**-1.0**
LPAZ						pmax	pmax		
	comp=Z,9.0nm,0.7s								
LPAZ	**La Paz**	**52.25**	**305**		P		**P**	**11 19 25.4**	**-1.0**
LPAZ	**La Paz**	**52.25**	**305**	*eP*			**P**	**11 19 25.2**	**-1.2**
CLDB	**Colider**	**52.39**	**321**	*eP*			**P**	**11 19 24.8**	**-1.9**
RCBR	**Riachuelo**	**52.66**	**347**	*eP*			**P**	**11 19 29.5**	**+0.8**
RCBR				*epP*			**P**	**11 19 32.7**	**+4.0**
PRPB	**Parauapebas**	**55.05**	**330**	*eP*			**P**	**11 19 46.6**	**+0.5**
NPGB	**Novo Progresso**	**55.84**	**323**	*eP*			**P**	**11 19 50.9**	**-0.8**
SAML	**Samuel**	**56.83**	**314**	*eP*			**P**	**11 19 57.4**	**-1.4**
SAML	**Samuel**	**56.83**	**314**		P		**P**	**11 19 57.6**	**-1.2**
SAML						pmax	pmax		
	comp=Z,19nm,0.7s								
SAML	**Samuel**	**56.83**	**314**		P		**P**	**11 19 57.6**

comp=Z,6.1nm,0.7s,baz=172,slow=3.8,SNR=13
STKA Stephens Creek 89.82 169 P **P** 11 23 13.3 +0.8
STKA pmax pmax
comp=Z,2.0nm,1.0s
STKA Stephens Creek 89.82 169 P **P** 11 23 13.3 +0.8
PPT2 Papeete2 91.74 232 *e*LR LR 11 52 49.0
comp=Z,1µm,25.0s,baz=156
PPT Papeete 91.76 232 LR LR 11 55 31.0
comp=Z,468nm,21.4s,baz=140,slow=30
TAOE Nuku Hiva Isla 95.17 244 *e*SP SP 11 36 15.2 +10
comp=Z,211nm,27.5s
TAOE Nuku Hiva Isla 95.17 244 *e*LQ LQ 11 50 22.8
comp=Z,2µm,33.0s
TAOE *e*LR LR 11 54 14.8
ASAR Alice Springs 96.85 161 P **P** 11 23 44.4 -0.6
comp=Z,5.6nm,0.7s,baz=188,slow=3.9,SNR=37
ASAR PP **PP** 11 27 40.4 +0.7
comp=Z,0.7nm,0.8s,baz=185,slow=7.8,SNR=3.5
ASAR PKKP **PKKPdf** 11 40 28.8 +5.1
comp=Z,0.4nm,0.6s,baz=16,slow=2.0,SNR=5.3
ASAR LR LR 12 05 19.8
comp=Z,393nm,19.3s,baz=196,slow=34
ASAR Alice Springs 96.85 161 P **P** 11 23 44.5 -0.5
AS31 Alice Springs 96.85 161 P **P** 11 23 44.6 -0.4
KEST Kesra 97.85 28 LR LR 12 02 04.0
comp=Z,316nm,21.6s,baz=192,slow=32
ESDC Sonseca Array 98.97 17 LR LR 12 04 31.7
comp=Z,88nm,18.8s,baz=175,slow=33
WRA Warramunga Arr 100.56 161 P **Pdif** **11 24 00.5 -1.1**
comp=Z,1.4nm,0.7s,baz=196,slow=4.1,SNR=11
WRA PKKPbc **PKKPdf** 11 40 17.0 -0.1
comp=Z,0.5nm,0.6s,baz=1.2,slow=3.0,SNR=8.6
WRA Warramunga Arr 100.56 161 *i* P **Pdif** 11 24 01.0 -0.6
WRA Warramunga Arr 100.56 161 **Pdif** 11 24 01.0 -0.6
TXAR Lajitas Array 108.49 296 PKiKP **PKiKP** 11 28 41.7 -0.3
comp=Z,0.4nm,0.8s,baz=146,slow=2.4,SNR=4.4
PMG Port Moresby 112.56 172 *i* PKIKP **PKiKP** 11 28 46.4 -3.7
PMG pmax pmax
comp=Z,12nm,0.8s
CLL Collm 113.41 25 *e*PS PS 11 39 24.0 +5.4
CLL *e*SS SS 11 45 30.0 +5.3
T25A Trinidad 115.28 300 P **PKiKP** 11 28 55.0 +0.2
baz=145
X18A Snowflake 115.79 294 **PKiKP** 11 28 56.4 +0.6
SDCO Great Sand Dun 116.28 299 P **PKPdf** 11 28 56.6 -0.2
baz=144
SDCO Great Sand Dun 116.28 299 **PKiKP** 11 28 56.7 0.0
X16A Lo Mia Camp, P 116.43 293 **PKiKP** 11 28 57.2 +0.1
Y14A Wickenburg 116.81 291 **PKPdf** 11 28 57.1 -0.5
S22A 4UR Ranch, Cre 116.89 299 P **PKiKP** 11 28 58.2 +0.2
baz=144
S22A 4UR Ranch, Cre 116.89 299 PKPdf **PKiKP** 11 28 58.4 +0.4
AKASG Malin Array Be 117.24 36 *i* PKIKP **PKiKP** 11 29 01.2 +3.4
AKASG pmax pmax
comp=Z,1.0nm,0.3s
MVCO Mesa Verde 117.25 297 P **PKiKP** 11 28 58.7 +0.1
baz=144
WUAZ Wupatki 117.28 294 P **PKiKP** 11 28 59.0 +0.4
baz=143
IKP In-Ko-Pah, Jac 117.34 288 P **PKiKP** 11 28 58.9 +0.2
baz=143
CBX Cerro Bola 117.35 288 **PKiKP** 11 28 59.7 +0.9
PDMCI Parker Dam,Lak 117.67 291 P **PKPdf** 11 28 58.5 -0.7
baz=143
MONP2 Monument Peak 117.69 288 P **PKiKP** 11 29 00.0 +0.5
baz=143
109C Camp Elliot, M 118.03 288 **PKiKP** 11 29 00.1 +0.2
IRM Iron Mountain 118.06 290 P **PKiKP** 11 29 00.4 +0.4
baz=143
PV15 Paradox Valley 118.15 298 **PKiKP** 11 29 01.8 +1.5
W13A Hualapai Mount 118.18 292 PKPdf **PKiKP** 11 29 00.5 0.0
PV03 Paradox Valley 118.25 297 **PKiKP** 11 29 00.8 +0.3
PV12 Saucer Basin, 118.28 297 **PKiKP** 11 29 00.9 +0.3
PV11 David Mesa, Pa 118.30 297 **PKiKP** 11 29 00.7 +0.1
PV17 East Wray Mesa 118.32 297 **PKiKP** 11 29 00.7 +0.1
PV16 Nyswonger Mesa 118.33 297 **PKiKP** 11 29 01.1 +0.4
BELC Belle Mtn. Jos 118.36 289 P **PKiKP** 11 29 01.4 +0.7
baz=143
PV14 Lion Creek, Pa 118.43 297 **PKiKP** 11 29 01.4 +0.6
U15A North Rim 118.45 294 **PKiKP** 11 29 01.4 +0.4
GMRC Granite Mounta 118.81 290 P **PKiKP** 11 29 02.2 +0.6
baz=143
N23A Red Feather La 119.01 301 P **PKPdf** 11 29 01.9 0.0
baz=143
BBRC Big Bear Solar 119.03 289 P **PKiKP** 11 29 02.6 +0.4
baz=142
CIS Catalina Islan 119.11 287 P **PKiKP** 11 29 02.8 +0.8
baz=142
KNB Kanab 119.18 294 PKiKP **PKiKP** 11 29 02.7 +0.4
KNB Kanab 119.18 294 **PKiKP** 11 29 02.7 +0.4
BFSC Mount Baldy Ra 119.39 288 P **PKiKP** 11 29 02.7 0.0
baz=142
O20A White River Ci 119.46 299 P **PKPdf** 11 29 02.6 0.0
baz=143
O20A White River Ci 119.46 299 **PKPdf** 11 29 02.7 0.0
MTPU Mount Pierson 119.68 295 **PKiKP** 11 29 04.0 +0.5
SRU San Rafael Swe 119.73 297 PKiKP **PKPdf** 11 29 03.0 -0.2
SRU San Rafael Swe 119.73 297 **PKPdf** 11 29 03.0 -0.2
GSC Goldstone, Bar 119.79 290 PKiKP **PKPdf** 11 29 03.2 -0.1
GSC Goldstone, Bar 119.79 290 P **PKiKP** 11 29 03.4 0.0
baz=142
GSC Goldstone, Bar 119.79 290 PKPdf **PKPdf** 11 29 03.2 -0.1
CCUT Cedar City 119.86 294 PKPdf **PKiKP** 11 29 04.4 +0.7
SHPR Sheep Range 119.92 292 PKPdf **PKiKP** 11 29 04.7 +0.9
SHOC Shoshone, Teco 120.00 290 P **PKiKP** 11 29 04.0 +0.3
baz=142
MSU Marysvale 120.05 295 PKiKP **PKiKP** 11 29 04.9 +0.9
MSU Marysvale 120.05 295 PKPdf **PKiKP** 11 29 04.9 +0.9
MVU Marysvale 120.06 295 **PKiKP** 11 29 05.0 +1.0
EDW2 Edwards Air Fo 120.06 288 P **PKiKP** 11 29 04.2 +0.2
baz=142
P17A Butcher Ranch, 120.11 297 **PKiKP** 11 29 06.1 +2.1
TMUT Trail Mountain 120.20 296 **PKiKP** 11 29 04.3 -0.1
RWWY Rawlins 120.22 301 **PKPdf** 11 29 02.5 -1.7
LRMC Laurel Mtn Rad 120.37 289 P **PKiKP** 11 29 04.8 +0.2
baz=142
RDMU Red Mountain 120.43 299 PKPdf **PKiKP** 11 29 04.6 -0.1
PRN Pahroc Range 120.58 292 **PKiKP** 11 29 06.1 +1.2
K22A Casper 120.67 302 P **PKPdf** 11 29 04.1 -0.8
baz=142
K22A Casper 120.67 302 **PKPdf** 11 29 04.3 -0.6
RSSD Black Hills 120.73 305 PKiKP **PKPdf** 11 29 04.5 -0.5
RSSD Black Hills 120.73 305 P **PKPdf** 11 29 04.5 -0.5
baz=143
RSSD Black Hills 120.73 305 PKPdf **PKPdf** 11 29 04.5 -0.5
MPMC Manual Prospec 120.73 290 P **PKiKP** 11 29 05.8 +0.4
baz=142
FURC Furnace Creek, 120.74 290 P **PKiKP** 11 29 06.0 +0.9
baz=142
TPNV Topopah Spring 120.81 291 PKiKP **PKiKP** 11 29 05.7 +0.2
TPNV Topopah Spring 120.81 291 P **PKiKP** 11 29 06.0 +0.5
baz=142
TPNV Topopah Spring 120.81 291 **PKiKP** 11 29 05.7 +0.2
PSUT Pine Spring 120.87 294 **PKiKP** 11 29 06.5 +0.9
ISA Isabella, Lake 120.92 289 PKiKP **PKPdf** 11 29 04.9 -0.6
ISA Isabella, Lake 120.92 289 P **PKiKP** 11 29 05.6 0.0
baz=142
ISA Isabella, Lake 120.92 289 PKPdf **PKPdf** 11 29 04.9 -0.6
MPU Maple Canyon 120.97 297 **PKiKP** 11 29 06.1 +0.4
PKM Mcpherson Peak 120.99 287 P **PKiKP** 11 29 06.6 +0.7
baz=142
CWC Cottonwood Cre 121.33 289 P **PKiKP** 11 29 06.9 +0.5
baz=141
JLU Jordanelle 121.34 297 **PKPdf** 11 29 05.8 -0.5
SMMC Simmler 121.42 287 P **PKiKP** 11 29 07.6 +1.0
baz=142
SPR3 Spring Creek 3 121.47 294 PKPdf **PKiKP** 11 29 07.4 +0.5
R11A Troy Canyon, C 121.58 293 P **PKiKP** 11 29 07.3 +0.3
baz=141
R11A Troy Canyon, C 121.58 293 PKPdf **PKiKP** 11 29 07.0 0.0
DUG Dugway, Tooele 121.67 296 PKiKP **PKiKP** 11 29 07.2 +0.2
DUG Dugway, Tooele 121.67 296 P **PKiKP** 11 29 07.4 +0.4
baz=141
DUG Dugway, Tooele 121.67 296 **PKiKP** 11 29 07.2 +0.2
TCUT Toone Canyon 121.72 298 **PKiKP** 11 29 07.9 +0.6
NB2 NORSAR Subarra 122.12 20 PKPdf **PKiKP** 11 29 07.1 0.0
comp=Z,1.6nm,0.8s,baz=202,slow=1.9
NOA NORSAR Array B 122.12 20 pPKP pPKPdf 11 29 23.7 +0.3
comp=Z,2.1nm,0.9s,baz=198,slow=1.7,SNR=3.9
PD31 Pinedale Array 122.14 300 **PKPdf** 11 29 07.0 -0.8
PDAR Pinedale Array 122.14 300 PKP **PKPdf** 11 29 07.0 -0.8
comp=Z,1.8nm,0.6s,baz=136,slow=4.9,SNR=18
PDAR PKKPbc **PKKPbc** 11 39 04.0 +0.8
comp=Z,0.4nm,0.6s,baz=0.0,slow=1.5,SNR=4.4
PDAR Pinedale Array 122.14 300 **PKPdf** 11 29 06.8 -1.0
BW06 Boulder Array 122.14 300 P **PKPdf** 11 29 06.8 -1.0
baz=141
BW06 Boulder Array 122.14 300 **PKPdf** 11 29 07.1 -0.7
TPH Tonopah 122.17 291 PKiKP **PKiKP** 11 29 08.9 +0.7
TPH Tonopah 122.17 291 **PKiKP** 11 29 08.9 +0.7
HWUT Hardware Ranch 122.18 298 **PKPdf** 11 29 07.8 -0.1
ULM Lac du Bonnet 122.29 314 PKP **PKPdf** 11 29 06.5 -1.0
comp=Z,6.4nm,0.8s,baz=29,slow=2.0,SNR=13
ULM pPKP **pPKPdf** 11 29 24.2 +0.1
comp=Z,4.7nm,0.8s,baz=174,slow=1.9,SNR=3.3
BGU Big Grassy Mou 122.34 296 PKPdf **PKPdf** 11 29 08.2 0.0
SPUT South Promonto 122.36 297 **PKPdf** 11 29 08.2 0.0
AHID Auburn Hatcher 122.86 299 **PKiKP** 11 29 09.4 0.0
HVU Hansel Valley 122.88 297 PKiKP **PKiKP** 11 29 09.6 +0.2
HVU Hansel Valley 122.88 297 **PKiKP** 11 29 09.6 +0.2
NV11 Mina Array Sit 122.91 291 **PKiKP** 11 29 10.1 +0.6
LHV Little Huntoon 122.94 290 **PKiKP** 11 29 09.8 +0.4
NVAR Mina Array Bea 122.98 291 PKP **PKiKP** 11 29 10.4 +0.6
comp=Z,2.3nm,0.7s,baz=130,slow=2.9,SNR=17
NVAR Mina Array Bea 122.98 291 **PKiKP** 11 29 10.2 +0.4
PYUN Piuthan 123.08 89 *e*P **PKPdf** 11 29 09.3 -0.7
KOLN Koldanda 123.14 90 *e*P **PKPdf** 11 29 08.9 -1.3
comp=Z,15nm,0.8s
REDW Red Top Meadow 123.20 300 **PKPdf** 11 29 08.8 -1.0
RYN Ryan 123.25 291 **PKiKP** 11 29 11.2 +1.0
ELK Elko 123.26 295 PKiKP **PKiKP** 11 29 10.9 +0.6
ELK Elko 123.26 295 PKPdf **PKiKP** 11 29 10.9 +0.6
LOHW Long Hollow 123.28 300 **PKPdf** 11 29 09.4 -0.6
OBN Obninsk 123.33 37 *e*PKIKP **PKPdf** 11 29 08.9 -0.4
OBN pmax pmax
comp=Z,3.0nm,0.9s
TPAW Teton Pass 123.35 300 **PKiKP** 11 29 10.8 +0.4
KVN Kaiserville 123.36 291 PKiKP **PKiKP** 11 29 11.1 +0.7
KVN Kaiserville 123.36 291 PKPdf **PKiKP** 11 29 11.1 +0.7
CMAR Chiang Mai Arr 123.52 110 PKP **PKPdf** 11 29 11.0 +0.1
comp=Z,5.8nm,0.8s,baz=232,slow=3.8,SNR=24
CMAR pPKP **pPKPdf** 11 29 27.4 -0.1
comp=Z,3.7nm,0.7s,baz=233,slow=3.2,SNR=5.1
WAKR Walker 123.61 290 **PKiKP** 11 29 12.4 +1.4
IMW Indian Meadow 123.66 300 PKPdf **PKiKP** 11 29 11.2 +0.2
DANN Dangsing 123.69 90 *e*P **PKPdf** 11 29 10.3 -1.0
comp=Z,25nm,0.8s
FLWY Flagg Ranch 123.69 300 **PKPdf** 11 29 10.1 -0.6
LAO LASA Array 123.70 305 P **PKPdf** 11 29 10.3 -0.1
baz=141
LAO LASA Array 123.70 305 **PKiKP** 11 29 10.8 0.0
CMB Columbia Colle 123.72 289 PKiKP **PKiKP** 11 29 11.4 +0.4
CMB Columbia Colle 123.72 289 **PKiKP** 11 29 11.4 +0.4
GKN Gorkha 123.88 91 *e*P **PKPdf** 11 29 10.5 -1.0
PKIN Phulchoki 123.94 92 *e*P **PKPdf** 11 29 11.4 -0.4
comp=Z,8.8nm,0.5s
PKI Pulchoki 123.94 92 *e*P **PKPdf** 11 29 10.5 -1.4
comp=Z,9.4nm,0.7s
KKN Kakani 124.05 91 *e*P **PKPdf** 11 29 11.3 -0.6
comp=Z,16nm,0.6s
CHGR Chuyangaron 124.08 70 **PKiKP** 11 29 12.5 +0.7
RAMN Ramite 124.08 93 *e*P **PKPdf** 11 29 12.0 -0.1
comp=Z,19nm,0.6s
PNTR Pine Nut 124.14 290 **PKiKP** 11 29 12.2 +0.2
DGMT Dagmar 124.22 308 P **PKPdf** 11 29 11.1 -0.2
baz=141
DGMT Dagmar 124.22 308 **PKPdf** 11 29 10.9 -0.5
YMR Madison River 124.26 301 **PKPdf** 11 29 10.8 -1.0
YHH Holmes Hill 124.30 301 **PKiKP** 11 29 12.4 +0.1
GUN Gumba 124.47 92 *e*P **PKPdf** 11 29 11.5 -1.4
comp=Z,38nm,1.1s
PAHR Pah Rah Range 124.50 291 **PKiKP** 11 29 13.1 +0.4
YHL Hebgen Lake 124.50 301 **PKiKP** 11 29 12.7 0.0
GCMT Greycliff 124.53 302 **PKiKP** 11 29 12.6 +0.1
AFDM Forest Hills D 124.72 289 **PKiKP** 11 29 12.9 0.0
HLID Hailey 125.02 297 P **PKiKP** 11 29 13.6 0.0
baz=139,SNR=5.4
HLID Hailey 125.02 297 **PKiKP** 11 29 13.5 0.0
BEKR Beckworth 125.11 290 **PKiKP** 11 29 14.0 +0.1
MCMT McKenzie Canyo 125.25 299 **PKiKP** 11 29 14.5 +0.4
BOZ Bozeman (W) 125.27 301 P **PKPdf** 11 29 09.0 -4.6
baz=139,SNR=5.6
ORV Oroville 125.44 289 PKiKP **PKPdf** 11 29 13.9 0.0
ORV Oroville 125.44 289 **PKPdf** 11 29 13.9 0.0
DLMT Dillon 125.54 300 **PKiKP** 11 29 14.8 +0.3
MFID Camas Ranch 125.58 296 **PKiKP** 11 29 14.7 +0.1
FINES FINESS Array B 125.68 28 PKP **PKPdf** 11 29 13.2 -0.4
comp=Z,6.2nm,0.7s,baz=164,slow=2.3,SNR=20
FINES pPKP **pPKPdf** 11 29 29.8 -0.4
comp=Z,5.9nm,0.5s,baz=133,slow=3.0,SNR=7.7
FRB Frobisher Bay 125.81 338 PKP **PKPdf** 11 29 12.0 -1.8
comp=Z,6.8nm,0.7s,baz=178,slow=4.7,SNR=4.6
LRM Limekiln Ridge 125.82 301 **PKPdf** 11 29 14.1 -0.7
O03E Paynes Creek 126.16 290 P **PKPdf** 11 29 15.4 0.0
baz=139
WVOR Wild Horse Val 126.20 294 PKiKP **PKiKP** 11 29 16.5 +0.6
WVOR Wild Horse Val 126.20 294 **PKiKP** 11 29 16.4 +0.6
HRY Holter Researc 126.21 302 **PKiKP** 11 29 15.7 0.0
EGMT Eagleton 126.27 304 P **PKPdf** 11 29 15.3 -0.1
baz=139
EGMT Eagleton 126.27 304 PKPdf **PKPdf** 11 29 14.8 -0.5
O02D Mt. Diablo Mer 126.56 289 P **PKiKP** 11 29 16.8 +0.2
baz=139
MOD Modoc Plateau 126.62 292 PKPdf **PKiKP** 11 29 17.4 +0.6
WDC Whiskeytown Da 126.74 289 PKiKP **PKPdf** 11 29 16.3 -0.1
WDC Whiskeytown Da 126.74 289 **PKPdf** 11 29 16.3 -0.1
J08A Circle Bar Ran 126.81 295 **PKiKP** 11 29 17.2 +0.1
PLID Pearl Lake 126.92 298 **PKiKP** 11 29 17.4 0.0
N02D Trinity Center 127.12 290 P **PKiKP** 11 29 18.4 +0.7
baz=138
MSO Missoula 127.26 300 P **PKiKP** 11 29 17.9 0.0
baz=138,SNR=20
MSO Missoula 127.26 300 **PKPdf** 11 29 17.5 +0.2
M04C Macdoel 127.29 291 P **PKiKP** 11 29 18.3 +0.2
baz=138
BMO Blue Mountains 127.36 297 PKiKP **PKPdf** 11 29 17.7 +0.1
BMO Blue Mountains 127.36 297 **PKPdf** 11 29 17.7 +0.1
M02C Callahan 127.50 290 P **PKiKP** 11 29 18.3 -0.2
baz=138
K05A Summer Lake 127.52 292 **PKiKP** 11 29 18.7 +0.1
ABKAR Akbulak array 127.71 56 PKPdf **PKPdf** 11 29 17.8 -0.1
ABKAR Akbulak array 127.71 56 **PKPdf** 11 29 17.6 -0.3
AKTO Aktyubinsk 127.75 53 PKP **PKPdf** 11 29 17.8 -0.2
comp=Z,3.6nm,0.9s,baz=16,slow=3.8,SNR=8.0
I07A Izee 127.85 294 PKPdf **PKiKP** 11 29 19.9 +0.8
JTMT Jette 128.09 301 **PKPdf** 11 29 18.7 -0.2
KK31 Karatay Array 128.11 68 PKiKP **PKPdf** 11 29 19.0 0.0
KK31 Karatay Array 128.11 68 PKPdf **PKPdf** 11 29 18.9 0.0
KKAR Karatay Array 128.11 68 PKiKP **PKPdf** 11 29 18.5 -0.5
KKAR Karatay Array 128.11 68 PKPdf **PKPdf** 11 29 18.9 0.0
KKAR Karatay Array 128.11 68 PKPdf **PKPdf** 11 29 18.5 -0.5
F10A Beach Ranch, E 128.16 298 **PKPdf** 11 29 18.3 -0.7
KSH Kashi 128.19 75 PKP **PKiKP** 11 29 21.0 +1.0
KSH sPKP 11 29 35.0
G08A Pilot Rock 128.48 296 **PKPdf** 11 29 20.0 +0.3
K02D Willamette Mer 128.88 290 P **PKiKP** 11 29 21.7 +0.5
baz=137
KLMR Klimovskoe 128.90 35 *e*PKIKP **PKPdf** 11 29 17.9 -1.9
KLMR pmax pmax
comp=Z,19nm,1.2s
KLMR Klimovskoe 128.90 35 *e*PKPdf **PKPdf** 11 29 17.9 -1.9
KLMR AMP 11 29 20.5
comp=Z,19nm,1.2s
I05D Terrebonne, OR 128.93 293 P **PKiKP** 11 29 21.9 +0.7
baz=137
E09A Wood Farm, Sta 128.99 297 **PKiKP** 11 29 20.8 -0.4
AAK Ala-Archa 129.75 71 PKP **PKPdf** 11 29 22.3 0.0
comp=Z,3.6nm,0.6s,baz=156,slow=3.1,SNR=14
AAK pPKP **pPKPdf** 11 29 40.0 +1.3
comp=Z,4.1nm,0.7s,baz=146,slow=4.1,SNR=5.4
AAK Ala-Archa 129.75 71 *c i* PKIKP **PKPdf** 11 29 21.8 -0.5
AAK pmax pmax
comp=Z,15nm,0.7s
NEW Newport 129.78 300 PKiKP **PKiKP** 11 29 22.7 -0.1
NEW Newport 129.78 300 P **PKPdf** 11 29 22.1 +0.1
baz=136
NEW Newport 129.78 300 **PKiKP** 11 29 22.7 -0.1
E07A Sunnyside 129.83 296 **PKiKP** 11 29 23.2 +0.3
C09A Chrisman Ranch 129.98 299 **PKiKP** 11 29 22.9 -0.2
B08A Colville Reser 130.88 298 **PKPdf** 11 29 24.0 -0.1
PNT Penticton 131.69 299 PKHKP PKPpre 11 29 12.2
D03D Elden 132.08 295 P **PKiKP** 11 29 27.6 +0.3
baz=135
B05A Bryant 132.11 297 P **PKiKP** 11 29 27.7 +0.3
baz=134
ARU Arti 132.31 48 *i* PKIKP **PKPdf** 11 29 26.6 +0.2
ARU 11 31 49.1
ARU SS SS 11 49 22.2 -2.3
ARU MLR MLR
comp=Z,247nm,20.0s
ARCES ARCESS Array B 132.41 22 PKP **PKPdf** 11 29 25.9 -0.3
comp=Z,1.2nm,0.4s,baz=220,slow=1.9,SNR=19
ARCES ARCESS Array B 132.41 22 PKIKP **PKPdf** 11 29 26.0 -0.3
BRVK Borovoye 135.01 58 *c i* PKIKP **PKiKP** 11 29 32.7 -0.4
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 135.01 58 **PKiKP** 11 29 33.9 +0.9
MK31 Makanchi Array 136.62 72 *c i* PKIKP **PKiKP** 11 29 37.6 +1.0
MK31 Makanchi Array 136.62 72 PKPdf **PKiKP** 11 29 37.1 +0.5
MKAR Makanchi Array 136.62 72 PKhKP PKPpre 11 29 23.0
comp=Z,0.3nm,0.6s,baz=235,slow=4.6,SNR=2.2
MKAR PKP **PKPdf** 11 29 35.2 +0.3
comp=Z,1.7nm,0.8s,baz=270,slow=1.2,SNR=8.9
KURBB Kurchatov Arra 137.28 66 PKhKP PKPpre 11 29 25.1
comp=Z,0.5nm,0.6s,baz=235,slow=3.6,SNR=5.9
KURBB PKP **PKiKP** 11 29 37.0 -0.8
comp=Z,1.2nm,0.6s,baz=236,slow=2.6,SNR=6.4
WMQ Urumqi 137.38 79 *e*PKP **PKiKP** 11 29 38.0 -0.3
WMQ AMB AMB
comp=Z,120nm,5.5s
WMQ LR LR
comp=Z,530nm,22.1s
WMQ LR LR
comp=Z,550nm,27.1s
KURK Kurchatov 137.39 66 PKIKP **PKPdf** 11 29 36.5 +0.4
KURK Kurchatov 137.39 66 **PKPdf** 11 29 36.5 +0.4
YKA Yellowknife Ar 138.23 316 PKhKP PKPpre 11 29 30.9
comp=Z,1.4nm,0.9s,baz=117,slow=3.2,SNR=5.4
YKA PKP **PKPdf** 11 29 37.1 -0.2
comp=Z,9.3nm,0.7s,baz=126,slow=2.7,SNR=24
LZH Lanzhou 140.34 101 *e*PKP **PKPdf** 11 29 38.8 -3.4
GTA Gaotai 140.69 94 PKP **PKiKP** 11 29 44.5 -0.8
GTA sPKP 11 29 59.3
GTA LR LR
comp=Z,120nm,19.3s
GTA LR LR
comp=Z,150nm,19.6s
GTA LR LR
comp=Z,130nm,20.0s
XAN Xi'an 141.36 108 PKP **PKPdf** 11 29 40.0 -4.0
ZALV Zalesovo Beam 142.37 65 PKhKP PKPpre 11 29 39.6
comp=Z,2.2nm,0.4s,baz=226,slow=3.5,SNR=7.8
NJ2 Nanjing 144.54 121 *e*PKP **PKPdf** 11 29 51.3 +1.7
C36M Paulatuk 145.04 322 P PKPbc 11 29 48.2 -0.6
baz=113
C36M Paulatuk 145.04 322 PKPbc 11 29 48.2 -0.6
SKAG Skagway 145.08 303 **PKPbc** 11 29 49.0 -0.2
WHY Whitehorse 145.46 305 **PKPdf** 11 29 49.5 -0.9
HYT Haines Junctio 146.68 304 PKPdf **PKPdf** 11 29 52.3 -0.2
BTO Baotou 146.93 102 *e*PKPbc **PKPdf** 11 29 53.5 0.0
PCA Pinnacle 147.59 302 **PKPbc** 11 29 57.5 +0.7
INK Inuvik 147.89 318 PKPbc **PKPbc** 11 29 57.0 -0.2
comp=Z,42nm,0.9s,baz=80,slow=2.5,SNR=62
INK Inuvik 147.89 318 PKIKP **PKPdf** 11 29 54.4 +0.4
INK Inuvik 147.89 318 PKPdf **PKPdf** 11 29 54.4 +0.4
HHC Hu-ho-hao-te 147.91 103 *e*PKPbc **PKPbc** 11 29 57.3 -1.0
HHC sPKP 11 30 15.8
HHC LR LR
comp=Z,210nm,20.7s
HHC LR LR
comp=Z,210nm,19.5s
HHC LR LR
comp=Z,250nm,21.1s
TABL Table Mountain 148.14 302 **PKPbc** 11 29 58.5 +0.1
YAH Yahtse 148.38 302 **PKPbc** 11 29 57.8 -1.2
MESA MESA 148.39 301 **PKPbc** 11 29 59.1 0.0
CTGM Chitina Glacie 148.44 303 **PKPbc** 11 29 58.7 -0.3
BARN Barnard Glacie 148.62 303 **PKPbc** 11 29 58.3 -1.3
ISLE Juniper Island 148.74 302 **PKPbc** 11 29 59.2 -0.6
DAWY Dawson 148.76 309 **PKPbc** 11 29 59.0 -0.7
BALM Baldy 148.92 303 **PKPbc** 11 30 00.6 +0.3
TGL Tana Glacier 149.03 302 **PKPbc** 11 30 00.8 +0.3
CRQM Cirque 149.17 302 **PKPbc** 11 30 01.3 +0.3
MOY Mondy 149.26 78 *e*PKP2 **PKiKP** 11 30 02.7 +0.2
MOY pmax pmax
comp=Z,47nm,2.9s
MCARA McCarthy VSAT 149.36 303 **PKPbc** 11 30 00.8 -0.4
KAIM Kayak Island 149.42 300 **PKiKP** 11 30 01.9 -0.6
BCAR Beaver Creek A 149.42 307 **PKPdf** 11 29 54.6 -2.2
VRDI Verde Repeater 149.49 303 **PKPdf** 11 29 55.6 -1.6
HMT Hamilton 149.51 301 **PKPbc** 11 30 01.8 +0.2
BJT Baijiatuan 149.65 110 PKP2 **PKiKP** 11 30 03.5 0.0
BJT Baijiatuan 149.65 110 **PKiKP** 11 30 03.5 0.0
BJI Beijing 149.67 109 PKPbc **PKPbc** 11 30 02.5 -0.1
BJI pPKP **pPKPdf** 11 30 13.3 -1.2
EGAK Eagle 149.72 310 **PKPbc** 11 30 01.5 -0.4
RAGM Ragged Mountai 149.72 301 **PKPbc** 11 30 01.6 -0.5
GLB Gilahina Butte 149.73 303 **PKPbc** 11 30 02.5 +0.3
ZAK Zakamensk 149.74 82 *e*PKP2 **PKPbc** 11 30 02.4 -0.2
ZAK pmax pmax
comp=Z,44nm,1.6s
K27K Chicken 149.87 308 P **PKPbc** 11 30 02.7 +0.3
baz=108
K27K Chicken 149.87 308 **PKPbc** 11 30 00.8 -1.5
SONM Songino Array 149.89 89 PKPbc **PKPbc** 11 30 02.6 -0.5
comp=Z,15nm,0.7s,baz=223,slow=2.9,SNR=4.5
SONM pPKPbc **sPKPdf** 11 30 20.5 -0.2
comp=Z,8.9nm,0.6s,baz=238,slow=2.3,SNR=6.9
NRIK Noril'sk 149.92 41 PKPbc **PKPbc** 11 30 01.7 -0.6
comp=Z,7.0nm,0.8s,baz=341,slow=1.1,SNR=12
NRIK Noril'sk 149.92 41 *c i* PKP2 **PKPbc** 11 30 02.6 +0.3
L26K Log Cabin Wild 150.08 306 P **PKPbc** 11 30 03.2 +0.3
baz=109,SNR=26
N25K Chitina, Valde 150.14 303 P **PKiKP** 11 30 03.8 -0.2
baz=111,SNR=18
N25K Chitina, Valde 150.14 303 **PKPbc** 11 30 02.3 -0.9
MENT Mentasta 150.21 306 **PKPbc** 11 30 03.5 +0.3
ULN Ulaanbaatar 150.26 89 PKIKP **PKPbc** 11 30 04.1 +0.1
ULN Ulaanbaatar 150.26 89 **PKPbc** 11 30 04.1 +0.1
EYAK Cordova Ski Ar 150.28 301 **PKiKP** 11 30 04.1 -0.1
JNU Nakatsue 150.43 137 PKPbc **PKPbc** 11 30 04.3 -0.4
comp=Z,19nm,0.8s,baz=82,slow=1.7,SNR=8.9
HIN Hinchinbrook I 150.56 300 **PKiKP** 11 30 04.6 -0.2
DOT Dot Lake 150.58 307 **PKiKP** 11 30 04.6 -0.2
TLY Talaya 150.65 80 PKPbc **PKPbc** 11 30 05.0 +0.4
comp=Z,12nm,0.7s,baz=223,slow=5.2,SNR=5.7
TLY Talaya 150.65 80 *e*PKIKP **PKPbc** 11 30 05.0 +0.4
TLY pmax pmax
comp=Z,43nm,0.9s
TLY Talaya 150.65 80 **PKPbc** 11 30 04.6 0.0
SCRK Sand Creek 150.65 308 P **PKiKP** 11 30 04.9 -0.2
baz=107
FID Port Fidalgo 150.68 301 **PKiKP** 11 30 04.7 -0.3
KLU Klutina 150.69 302 **PKPbc** 11 30 04.7 +0.2
RIDG Independent Ri 150.94 307 **PKiKP** 11 30 05.9 +0.3
PAX Paxson 150.98 305 PKIKP **PKPbc** 11 30 04.8 -0.3
PAX Paxson 150.98 305 **PKPbc** 11 30 04.8 -0.3
M24K Tolsona, Glenn 151.01 303 P **PKiKP** 11 30 06.1 +0.3
baz=109,SNR=19
M24K Tolsona, Glenn 151.01 303 **PKiKP** 11 30 05.8 +0.1
SCM Sheep Creek Mo 151.44 303 PKIKP **PKiKP** 11 30 06.7 0.0
SCM Sheep Creek Mo 151.44 303 **PKiKP** 11 30 06.7 0.0
BMAR Burnt Mountain 151.73 315 **PKPbc** 11 30 06.6 -0.1
KNK Knik Glacier 151.81 301 **PKPbc** 11 30 06.5 -0.5
SEW Seward 151.83 298 **PKiKP** 11 30 07.2 -0.1
DHY Denali Highway 151.84 305 **PKiKP** 11 30 07.8 +0.2
SML Sawmill 151.88 302 **PKiKP** 11 30 07.7 +0.2
TJN Taejon 151.92 129 *c i* PKIKP **PKiKP** 11 30 08.8 +0.5
HDA Harding Lake 152.02 308 P **PKPbc** 11 30 07.2 -0.2
baz=104,SNR=25
HDA Harding Lake 152.02 308 **PKPbc** 11 30 07.2 -0.2
IL31 152.08 309 **PKPbc** 11 30 06.6 -0.8
ILAR Eielson Array 152.08 309 PKP **PKPdf** 11 29 59.0 -1.8
comp=Z,0.6nm,0.8s,baz=296,slow=1.1,SNR=8.1
ILAR PKPbc **PKPbc** 11 30 07.3 -0.1
comp=Z,54nm,0.9s,baz=137,slow=2.7,SNR=235
ILAR Eielson Array 152.08 309 PKIKP **PKPbc** 11 30 07.2 -0.3
ILAR Eielson Array 152.08 309 PKPbc **PKPbc** 11 30 07.2 -0.3
O22K Cooper Landing 152.09 299 P **PKiKP** 11 30 07.8 -0.1
baz=110,SNR=6.6
O22K Cooper Landing 152.09 299 **PKiKP** 11 30 08.1 +0.2
GHO Glory Hole Cre 152.14 302 **PKiKP** 11 30 08.2 +0.1
PMR Palmer 152.18 301 PKIKP **PKiKP** 11 30 07.9 -0.1
PMR Palmer 152.18 301 **PKiKP** 11 30 07.9 -0.1
RC01 Rabbit Creek A 152.29 300 P **PKiKP** 11 30 08.5 +0.2
baz=108,SNR=14
BRLK Bradley Lake 152.39 297 **PKiKP** 11 30 08.5 -0.1
POKR Poker Flat Res 152.39 309 P **PKPbc** 11 30 07.9 -0.3
baz=103
POKR Poker Flat Res 152.39 309 PKPbc **PKPbc** 11 30 07.2 -1.0
POKR **pPKPdf** 11 30 17.9 +0.1
KDAK Kodiak Island 152.47 292 PKIKP **PKPbc** 11 30 07.9 -0.6

KDAK	Kodiak Island	152.47 292			PKPbc		11 30 07.9	-0.6
CNPM	China Poot	152.47 296			PKiKP		11 30 08.8	+0.1
COLA	College	152.51 309		PKIKP	PKPbc		11 30 08.2	-0.2
COLA	College	152.51 309			PKPbc		11 30 08.2	-0.2
TCOL	CIGO, UAF Yank baz=103,SNR=9.2	152.51 309	P		PKPbc		11 30 08.0	-0.4
TCOL	CIGO, UAF Yank	152.51 309			PKPbc		11 30 08.2	-0.3
WRH	Wood River Hil	152.51 308			PKPdf		11 30 00.9	-0.5
RND	Reindeer	152.57 305	PKIKP		PKiKP		11 30 09.1	+0.2
RND	Reindeer	152.57 305			PKiKP		11 30 09.1	+0.2
OHAK	Old Harbor	152.59 291			PKiKP		11 30 09.1	0.0
MDM	Murphy Dome	152.68 309			PKPbc		11 30 08.2	-0.6
MCK	McKinley baz=104,SNR=26	152.69 306	P		PKiKP		11 30 09.3	+0.2
SII	Sitkinak Islan	152.76 289			PKiKP		11 30 09.9	+0.4
CUT	Chulitna baz=106,SNR=20	152.93 303	P		PKiKP		11 30 09.9	+0.4
NEA2	Nenana baz=102,SNR=16	152.95 308	P		PKPbc		11 30 09.1	-0.4
BWN	Browne	153.03 307			PKPbc		11 30 09.5	-0.1
KSAR	Wonju Array Be	153.04 128	PKP2		PKPab		11 30 23.0	+0.9
KSAR							12 30 00.2	
KSAR	Wonju Array Be	153.04 128	PKPdf		PKPdf		11 30 00.2	-2.9
KSAR			PKPbc		PKPbc		11 30 10.0	-0.5
KSAR					PKPab		11 30 23.0	+0.9
KSRS	Korea Array comp=Z,3.5nm,0.8s,baz=203,slow=2.2,SNR=16	153.07 128	PKPbc		PKPbc		11 30 10.4	-0.1
KSRS			PKPab		PKPab		11 30 22.9	+0.6
	comp=Z,2.7nm,0.8s,baz=222,slow=4.6,SNR=7.9							
I23K	Minto, Yukon-K baz=101,SNR=5.7	153.19 309	P		PKPbc		11 30 09.4	-0.4
I23K	Minto, Yukon-K	153.19 309			PKPbc		11 30 09.5	-0.4
TRF	Thorofare Moun	153.21 305	PKPdf		PKPdf		11 30 03.8	+1.0
SKT	Skwentna	153.38 302	PKPdf		PKPdf		11 30 01.8	-1.0
SKT					PKiKP		11 30 10.5	-0.1
RSO	Redoubt South	153.50 298			PKPbc		11 30 10.9	-0.1
KTH	Kantishna Hill	153.51 305			PKPbc		11 30 09.0	-1.8
MLY	Manley baz=100,SNR=7.7	153.74 308	P		PKiKP		11 30 11.3	0.0
TOLK	Toolik Lake Re baz=94,SNR=21	153.75 317	P		PKiKP		11 30 11.6	+0.4
TOLK	Toolik Lake Re	153.75 317	PKPdf		PKPdf		11 30 01.8	-1.4
TOLK					PKiKP		11 30 11.6	+0.4
COLD	Coldfoot baz=96,SNR=17	153.85 313	P		PKiKP		11 30 12.1	+0.8
COLD	Coldfoot	153.85 313			PKiKP		11 30 12.2	+0.8
PPLA	Purkeypile	153.91 303			PKiKP		11 30 11.8	0.0
IMAR	Indian Mountai	155.12 310			PKPdf		11 30 05.9	+0.8
MJAR	Matsushiro Arr comp=Z,2.5nm,0.8s,baz=173,slow=4.9,SNR=4.8	155.98 146	PKPab		PKPab		11 30 34.7	0.0
MJAR			pPKPab		pPKPab		11 30 52.5	+1.6
	comp=Z,2.4nm,0.7s,baz=188,slow=4.9,SNR=3.6							
A21K	Barrow	156.08 323	PKPdf		PKPdf		11 30 10.0	+3.8
MDJ	Mudanjiang	159.62 120	PKP		PKPdf		11 30 13.8	+2.4
MDJ			AMB		AMB			
	comp=Z,400nm,5.4s							
USRK	Ussuriysk Ar. comp=Z,1.5nm,0.6s,baz=50,slow=1.1,SNR=2.6	160.37 125	PKPab		PKPab		11 30 52.4	-1.1
USRK			pPKPab		pPKPab		11 31 10.5	+0.8
	comp=Z,4.3nm,0.8s,baz=212,slow=1.8,SNR=5.7							
KLR	Kul'dur	163.97 113	PKP		PKPdf		11 30 15.7	-0.1
	comp=Z,1.9nm,0.9s,baz=295,slow=8.4,SNR=4.1							
KLR			PKPab		PKPab		11 31 08.5	-0.7
	comp=Z,3.3nm,0.7s,baz=232,slow=1.9,SNR=8.6							
BILL	Bilibino	168.62 337	*e*PKIKP		PKPdf		11 30 18.6	-0.2
BILL			pmax		pmax			
	comp=Z,2.0nm,1.1s							
PET	Petropavlovsk	174.49 207	*i* PKIKP		PKPdf		11 30 26.8	+4.7
PET			*e*				11 35 48.3	
PET			*e*SS		SS		11 57 03.0	-0.7
PET			pmax		pmax			
	comp=Z,200nm,18.1s							
PETK	Petropavlovsk- comp=Z,3.2nm,0.9s,baz=333,slow=5.0,SNR=3.5	174.78 202	PKP		PKPdf		11 30 21.3	-0.9
PETK			PKPab		PKPab		11 31 56.1	-0.7
	comp=Z,5.7nm,0.9s,baz=108,slow=4.8,SNR=4.7							

IDC 27 11:14:28.0±7.9, **6°97S**×**129°64E**, **h250**km±85km, **mb2.8**/1, **mb1 3.0**/5, **mb1mx2.7**/45, **mbtmp3.6**/5, **Error ellipse: s-maj=80.5km s-min=24.4km az=43.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.73**	**241**	P	Pn	11 16 05.5	+0.1
	4.5nm,0.3s,baz=79,slow=10,SNR=3.6						
BATI				S	S	11 17 24.2	+0.8
	4.1nm,0.3s,baz=54,slow=7.6,SNR=1.6						
FITZ	**Fitzroy Crossi**	**11.73**	**199**	P	Pn	11 17 08.3	0.0
	0.2nm,0.3s,baz=15,slow=7.4,SNR=20						
FITZ				S	S	11 19 16.5	-2.8
	0.6nm,0.3s,baz=238,slow=17,SNR=7.7						
WRA	**Warramunga Arr**	**13.68**	**161**	P	Pn	11 17 30.5	-1.8
	0.3nm,0.3s,baz=341,slow=12,SNR=22						
WRA				S	S	11 19 58.4	-5.6
	0.5nm,0.3s,baz=324,slow=24,SNR=9.4						
ASAR	**Alice Springs**	**17.11**	**167**	P	P	11 18 11.7	+0.7
	0.2nm,0.3s,baz=346,slow=11,SNR=5.6						
ASAR				S	S	11 21 23.4	+7.1
	0.1nm,0.3s,baz=358,slow=28,SNR=1.6						
MKAR	**Makanchi Array**	**68.00**	**327**	P	P	11 25 00.2	-0.1
	0.1nm,0.3s,baz=115,slow=8.7,SNR=1.1						

*IDC **27** 11:17:26.6*±*1.6, 22°.03N*×*95°.84E, h0*km*, mb3.8/6, mb1 4.0/7, mb1mx3.6/66, mbtmp3.8/7, ML4.2/1, MS3.6/5, Ms1 3.6/5, ms1mx2.9/56, Error ellipse: s-maj=79.5km s-min=15.4km az=60.0*

*NEIC **27** 11:17:29.7*±*1.0, 22°.1N*±*0°.1*×*95°.9E*±*0°.1, h22km*±*4km, mb4.1/7, Error ellipse: s-maj=23.9km s-min=8.1km az=50.0*

ISC 27 11:17:28.2±0.7, **22°17N**±0°.08×**96°13E**±0°.09, **h10**km, **n54**, σ1**s57**/48, **mb3.9**/9, **MS3.6**/4, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAIH	**SAIHA**	**2.92**	**277**	*e*P	**Pn**	**11 18 16.8**	**+2.0**
SAIH				*e*S	**Sn**	**11 18 52.4**	**+2.3**
SAIH				IAML		11 18 59.6	
	comp=N,181nm,0.9s						
SAIH				IAML		11 19 01.4	
	comp=E,141nm,1.0s						
KOHI	**KOHIMA**	**3.99**	**333**	*ex*	**Pn**	**11 18 33.4**	**+3.9**
KOHI				*ex*	x	11 19 28.8	
CM33	**Chiang Mai Arr**	**4.25**	**141**	P	**Pn**	**11 18 34.0**	**+0.9**
CHTO	**Chiang Mai**	**4.25**	**141**	Pn	**Pn**	**11 18 34.1**	**+1.0**
CMMT	**Chiang Mai**	**4.26**	**141**	P	**Pn**	**11 18 33.8**	**+0.7**
MHMT	**Maesariang**	**4.32**	**157**	P	**Pn**	**11 18 34.0**	**+0.1**
CM32	**Chiang Mai Arr**	**4.33**	**143**	P	**Pn**	**11 18 36.0**	**+1.9**
CM34	**Chiang Mai Arr**	**4.35**	**139**	P	**Pn**	**11 18 35.0**	**+0.6**
PAYA	**Payao**	**4.48**	**128**	P	**Pn**	**11 18 38.0**	**+1.8**
CM35	**Chiang Mai Arr**	**4.48**	**140**	P	**Pn**	**11 18 37.0**	**+0.8**
CM15	**Chiang Mai Arr**	**4.53**	**144**	P	**Pn**	**11 18 40.0**	**+3.0**
CM31	**Chiang Mai Arr**	**4.54**	**144**	P	**Pn**	**11 18 38.6**	**+1.6**
CM31	**Chiang Mai Arr**	**4.54**	**144**	Pn	**Pn**	**11 18 38.1**	**+1.1**
CMAR	**Chiang Mai Arr**	**4.54**	**144**	Pn	**Pn**	**11 18 37.9**	**+0.9**
	comp=E,2.7nm,0.3s,baz=319,slow=13,SNR=26						
CMAR				Pg	**Pg**	**11 18 54.0**	**-1.2**
	comp=E,10nm,0.3s,baz=319,slow=17,SNR=28						
CMAR				Lg	Lg	11 19 53.5	
	comp=E,32nm,0.3s,baz=320,slow=30,SNR=11						
CMAR				LR	LR	11 20 12.9	
	comp=E,190nm,20.6s,baz=90,slow=36						
CMAR	**Chiang Mai Arr**	**4.54**	**144**		**Pn**	**11 18 38.5**	**+1.5**
CM13	**Chiang Mai Arr**	**4.55**	**145**	P	**Pn**	**11 18 38.0**	**+0.9**
CM02	**Chiang Mai Arr**	**4.56**	**144**	P	**Pn**	**11 18 38.0**	**+0.7**
CM36	**Chiang Mai Arr**	**4.58**	**142**	P	**Pn**	**11 18 39.0**	**+1.5**
CM09	**Chiang Mai Arr**	**4.58**	**144**	P	**Pn**	**11 18 38.8**	**+1.3**
CM01	**Chiang Mai Arr**	**4.58**	**144**	P	**Pn**	**11 18 38.6**	**+1.1**
CM05	**Chiang Mai Arr**	**4.59**	**144**	P	**Pn**	**11 18 38.0**	**+0.4**
CM04	**Chiang Mai Arr**	**4.61**	**144**	P	**Pn**	**11 18 39.0**	**+1.1**
LAMP	**Lampang**	**4.89**	**137**	P	**Pn**	**11 18 43.3**	**+1.4**
SHL	**Shillong**	**5.15**	**312**	*ex*	**Pn**	**11 18 46.8**	**+1.2**
SHL	**Shillong**	**5.15**	**312**	Pn	**Pn**	**11 18 45.5**	**0.0**
PHRA	**Phrae**	**5.30**	**133**	P	**Pn**	**11 18 50.1**	**+2.6**
TEZP	**TEZPUR**	**5.37**	**326**	*ex*	**Pn**	**11 18 49.3**	**+0.9**
SUKH	**Sukhothai**	**5.71**	**144**	P	**Pn**	**11 18 54.0**	**+0.9**
UTTA	**Uttaradit**	**6.06**	**136**	P	**Pn**	**11 18 59.0**	**+1.2**
PHIT	**Phitsanulok**	**6.39**	**140**	P	Pn	11 19 10.7	+8.2
UTHA	**Uthaitani**	**7.29**	**154**	P	**Pn**	**11 19 16.0**	**+1.3**
CHAI	**Chaiyaphum**	**8.34**	**137**	P	Pn	11 19 41.9	+13
LSA	**Lhasa**	**8.73**	**330**	Pn	**Pn**	**11 19 32.5**	**-2.6**
XAN	**Xi'an**	**16.33**	**41**	Pn	**P**	**11 21 19.9**	**-0.7**

NIL	**Nilore**	**23.17**	**305**	P	**P**		**11 22 32.5**	**-2.6**
NIL				IAmb	IAmb		11 22 41.2	
	comp=Z,8.9nm,0.8s							
SONM	**Songino Array**	**26.91**	**15**	P	**P**		**11 23 11.3**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=201,slow=8.7,SNR=5.8							
SONM	**Songino Array**	**26.91**	**15**	P	**P**		**11 23 10.9**	**+1.4**
MK31	**Makanchi Array**	**27.00**	**339**	P	**P**		**11 23 10.2**	**-0.1**
MK31				IAmb	IAmb		11 23 12.6	
	comp=Z,4.4nm,1.2s							
MKAR	**Makanchi Array**	**27.00**	**339**	P	**P**		**11 23 10.8**	**+0.6**
	comp=Z,2.0nm,0.7s,baz=150,slow=9.5,SNR=13							
MKAR	**Makanchi Array**	**27.00**	**339**	P	**P**		**11 23 10.7**	**+0.4**
GAR	**Garm**	**27.70**	**313**	P	**P**		**11 23 12.9**	**-3.9**
KURBB	**Kurchatov Arra**	**31.57**	**338**	P	**P**		**11 23 50.8**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=152,slow=8.4,SNR=4.6							
KURK	**Kurchatov**	**31.62**	**339**	P	**P**		**11 23 50.8**	**-0.3**
KURK	**Kurchatov**	**31.62**	**339**	IAmb	IAmb		11 23 52.3	
	comp=Z,2.0nm,0.8s							
ZALV	**Zalesovo Beam**	**32.87**	**348**	P	**P**		**11 24 02.7**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=176,slow=10.0,SNR=3.9							
ABKAR	**Akbulak array**	**39.32**	**322**	P	**P**		**11 24 56.7**	**-0.7**
ARU	**Arti**	**43.94**	**331**	LR	LR		11 45 58.9	
	comp=Z,47nm,18.9s,baz=39,slow=39							
NRIK	**Noril'sk**	**47.47**	**356**	LR	LR		11 47 02.7	
	comp=Z,46nm,19.2s,baz=20,slow=37							
ATD	**Arta Tunnel**	**51.85**	**267**	LR	LR		11 48 02.0	
	comp=Z,84nm,19.3s,baz=336,slow=36							
WRA	**Warramunga Arr**	**56.08**	**135**	P	**P**		**11 27 08.1**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=331,slow=7.2,SNR=4.9							
WRA	**Warramunga Arr**	**56.08**	**135**	IAmb	IAmb		11 27 10.9	
	comp=Z,0.2nm,1.2s							
ASAR	**Alice Springs**	**58.53**	**139**	P	**P**		**11 27 25.3**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=317,slow=6.7,SNR=3.2							
DZM	**Mont Dzumac**	**81.41**	**118**	LR	LR		12 07 58.2	
	comp=Z,180nm,18.5s,baz=216,slow=37							
TXAR	**Lajitas Array**	**125.36**	**21**	PKP	**PKiKP**		**11 36 31.2**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=354,slow=0.9,SNR=2.6							

IDC 27 11:22:19.8±3.0, **5°69S**×**152°86E**, **h0**km, **mb3.7**/2, **mb1 4.0**/2, **mb1mx3.5**/45, **mbtmp3.7**/2, **MS2.5**/1, **Ms1 2.5**/1, **ms1mx2.1**/41, **Error ellipse: s-maj=60.7km s-min=14.6km az=75.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.60**	**329**	Pg	Pg	11 22 50.9	+0.2
	214nm,0.3s,baz=187,slow=0.9,SNR=160						
KRVT				Lg	Lg	11 23 09.6	
	264nm,0.3s,baz=323,slow=23,SNR=44						
PMG	**Port Moresby**	**6.75**	**236**	LR	LR	11 26 46.4	
	comp=Z,39nm,18.9s,baz=320,slow=39						
WRA	**Warramunga Arr**	**22.91**	**230**	P	P	11 27 24.6	-1.0
	1.2nm,0.6s,baz=53,slow=9.9,SNR=16						
ASAR	**Alice Springs**	**25.55**	**224**	P	P	11 27 51.4	+0.8
	1.6nm,0.8s,baz=58,slow=9.0,SNR=11						
TORD	**Torodi Ar. Bea**	**150.63**	**287**	PKPbc	PKPbc	11 42 13.9	-1.0
	0.8nm,0.7s,baz=78,slow=2.8,SNR=4.7						

*NEIC **27** 11:22:33.9*±*1.4, 14°.30N*±*0°.07*×*145°.5E*±*0°.1, h115km*±*7km, mb4.0/5, Error ellipse: s-maj=15.5km s-min=8.4km az=120.0*

*IDC **27** 11:22:33.0*±*3.3, 14°.39N*×*145°.55E, h100km*±*61km, mb3.6/4, mb1 3.9/4, mb1mx3.3/55, mbtmp3.9/4, Error ellipse: s-maj=115.7km s-min=41.8km az=180.0*

ISC 27 11:22:33.6±0.8, **14°4N**±0°.1×**145°5E**±0°.1, **h109**km, **n13**, σ0**s87**/15, **mb3.9**/6, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.97**	**219**	P	**Pn**	**11 22 55.1**	**+0.7**
	253nm,0.3s,baz=119,slow=5.3,SNR=114						
GUMO				S	**Sn**	**11 23 09.5**	**-0.5**
	102nm,0.3s,baz=354,slow=23,SNR=6.2						
GUMO	**Guam**	**0.97**	**219**		**Pn**	**11 22 55.1**	**+0.7**
GUMO				Sn	**Sn**	**11 23 10.0**	**-0.1**
PATS	**Pohnpei**	**14.64**	**119**	Pn	**Pn**	**11 25 55.3**	**-0.1**
MANU	**Manus Island**	**16.39**	**173**		**Pn**	**11 26 16.6**	**-0.8**
MANU				IAmb	IAmb	11 26 27.2	
	comp=Z,7.6nm,0.9s						
WRAB	**Tennant Creek**	**35.79**	**198**	P	**P**	**11 29 22.6**	**+0.2**
WRAB				IAmb	IAmb	11 29 30.6	
	comp=Z,3.0nm,1.0s						
MK31	**Makanchi Array**	**61.37**	**316**	P	**P**	**11 32 38.0**	**-0.1**
MK31				IAmb	IAmb	11 33 03.4	
	comp=Z,2.0nm,1.1s						
MKAR	**Makanchi Array**	**61.37**	**316**	P	**P**	**11 32 39.4**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=91,slow=8.4,SNR=7.7						
MKAR	**Makanchi Array**	**61.37**	**316**	P	**P**	**11 32 37.8**	**-0.3**
IL31		**67.62**	**25**	P	**P**	**11 33 17.6**	**-0.7**
ILAR	**Eielson Array**	**67.62**	**25**	P	**P**	**11 33 17.6**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=248,slow=5.8,SNR=5.6						
DOT	**Dot Lake**	**68.58**	**27**	P	**P**	**11 33 25.2**	**+0.7**
NVAR	**Mina Array Bea**	**85.97**	**52**	P	**P**	**11 35 03.4**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=282,slow=4.4,SNR=2.7						
FINES	**FINESS Array B**	**90.73**	**335**	P	**P**	**11 35 22.5**	**-1.5**
	comp=Z,2.3nm,0.8s,baz=62,slow=6.5,SNR=2.7						

*REY **27** 11:23:24.7, 64°.66N*×*17°.40W, h3km*

*IDC **27** 11:23:26.9*±*0.8, 64°.50N*×*17°.62W, h0km, mb3.8/11, mb1 4.1/12, mb1mx3.8/50, mbtmp3.8/12, ML4.1/1, MS3.4/4, Ms1 3.5/4, ms1mx2.9/56, Error ellipse: s-maj=32.2km s-min=10.5km az=18.0*

ISC 27 11:23:25.2±0.7, **64°69N**±0°.03×**17°37W**±0°.03, **h10**km, **n43**, σ1**s95**/40, **mb3.8**/12, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.11**	**2**	P	**Pg**	**11 23 27.6**	**-0.3**
	baz=6.2						
IVON	**Vonarskard**	**0.17**	**266**	S	**Sg**	**11 23 30.9**	**-0.4**
	baz=274						
IVON				P	**Pg**	**11 23 27.9**	**-1.0**
	baz=274						
IURH	**Urdarhals**	**0.17**	**35**	P	**Pg**	**11 23 28.8**	**-0.1**
	baz=34						
IDJK	**Dyngjujokull**	**0.19**	**162**	P	**Pg**	**11 23 28.4**	**-0.9**
	baz=156						
IGRF	**Grimsfjall**	**0.28**	**171**	P	**Pg**	**11 23 29.9**	**-1.0**
	baz=168						
IHUS	**Husbondi**	**0.41**	**198**	P	**Pg**	**11 23 32.1**	**-1.1**
	baz=197						
IVOT	**Vottur**	**0.42**	**169**	P	**Pg**	**11 23 32.5**	**-1.0**
	baz=167						
IKRE	**Kreppuhraun**	**0.44**	**76**	P	**Pb**	**11 23 33.1**	**-1.9**
	baz=74						
IKRE				S	**Sb**	**11 23 39.6**	**-2.0**
	baz=74						
ISKR	**Skrokkalda**	**0.45**	**254**	P	**Pb**	**11 23 33.1**	**-2.2**
	baz=257						
IASK	**Askja**	**0.48**	**40**	P	**Pb**	**11 23 33.9**	**-1.9**
	baz=39						
IASK				S	**Sb**	**11 23 41.3**	**-1.7**
	baz=39						
IJOK	**Jokulheimar**	**0.52**	**225**	P	**Pg**	**11 23 34.0**	**-1.4**
	baz=226						
IMKO	**Mokollar**	**0.53**	**56**	P	**Pb**	**11 23 34.9**	**-1.7**
	baz=55						
IKSK	**Karasker**	**0.66**	**143**	S	**Sg**	**11 23 45.3**	**-1.1**
	baz=141						
IKSK				P	**Pg**	**11 23 36.2**	**-1.6**
	baz=141						
ISVA	**Svartarkot**	**0.66**	**4**	P	**Pb**	**11 23 36.9**	**-1.9**
	baz=5.1						
IVSH	**V-Sauoahnukur**	**0.72**	**79**	P	**Pg**	**11 23 37.7**	**-1.3**
	baz=78						
IVSH				S	**Sg**	**11 23 47.5**	**-0.8**
	baz=78						
IKAL	**Kalfafell**	**0.75**	**191**	P	**Pg**	**11 23 38.0**	**-1.7**
	baz=190						
IVAT	**Vatnsfell**	**0.84**	**234**	P	**Pb**	**11 23 39.7**	**-2.0**
	baz=235						
IADA	**Aoalbol**	**0.84**	**66**	P	**Pg**	**11 23 39.7**	**-1.6**
	baz=65						
IFAG	**Fagurholsmyri**	**0.87**	**159**	P	**Pg**	**11 23 40.0**	**-1.9**
	baz=157						
IFAG				S	**Sg**	**11 23 52.0**	**-1.2**
	baz=157						
IMEL	**Melhnausar**	**0.94**	**18**	P	**Pb**	**11 23 41.5**	**-2.0**
	baz=19						
IHVE	**Hveravellir**	**0.96**	**282**	P	**Pn**	**11 23 42.2**	**-2.5**
	baz=284						
IREN	**Reynihlio**	**0.99**	**11**	P	**Pb**	**11 23 42.2**	**-2.1**
	baz=12						

IKVO	**Krokottuvotn**	**1.05**	**11**	P	**Pn**		**11 23 43.4**	**-2.6**
	baz=12							
IGRS	**Grimsstaoir**	**1.09**	**28**	P	**Pb**		**11 23 44.1**	**-2.1**
	baz=28							
ISNB	**Snabyli**	**1.10**	**211**	P	**Pb**		**11 23 44.0**	**-2.3**
	baz=211							
BORG	**Borgarnes**	**1.70**	**274**	Pg	**Pb**		**11 23 54.3**	**-2.1**
	7.7nm,0.3s,baz=93,slow=6.9,SNR=38							
BORG				Lg	Lg		11 24 18.4	
	8.8nm,0.3s,baz=238,slow=22,SNR=9.5							
SCO	**Scoresbysund**	**6.08**	**345**	*e*	**Pn**		**11 24 52.1**	**-2.8**
	baz=165,slow=7.9							
SCO				*i* P	Pn		11 24 58.0	+3.1
SCO				*i* S	Sn		11 26 10.8	+6.4
SCO				IAML			11 26 28.0	
	comp=Z,0.9nm,0.4s							
JMIC	**Jan Mayen**	**7.15**	**24**	LR	LR		11 27 29.7	
	comp=Z,86nm,21.6s,baz=298,slow=33							
EKA	**Eskdalemuir Ar**	**11.73**	**136**	Pn	**Pn**		**11 26 13.9**	**+1.5**
	baz=326,slow=13,SNR=6.4							
SFJD	**Kangerlussuaq**	**13.71**	**295**	LR	LR		11 31 32.3	
	comp=Z,142nm,18.5s,baz=112,slow=36							
HFS	**Hagfors**	**14.99**	**93**	LR	LR		11 32 33.7	
	comp=Z,69nm,19.1s,baz=281,slow=36							
BRG	**Berggiesshubel**	**21.37**	**115**	*e*P	**P**		**11 28 14.7**	**+2.3**
	comp=Z,7.2nm,1.1s							
	comp=N,344nm,31.8s							
	comp=E,358nm,20.1s							
	comp=Z,290nm,16.4s							
GERES	**GERESS Array B**	**22.92**	**119**	P	**P**		**11 28 32.0**	**+3.0**
	comp=Z,0.5nm,0.2s,baz=335,slow=8.6,SNR=5.1							
SCHQ	**Schefferville**	**26.09**	**271**	P	**P**		**11 29 02.5**	**+3.8**
	comp=Z,5.0nm,0.8s,baz=26,slow=6.8,SNR=4.1							
ESDC	**Sonseca Array**	**26.25**	**156**	P	**P**		**11 29 03.2**	**+3.0**
	comp=Z,1.0nm,0.8s,baz=356,slow=9.1,SNR=6.5							
BRTR	**Keskin Array B**	**38.43**	**105**	P	P		11 30 50.1	+3.3
	comp=Z,1.0nm,0.8s,baz=278,slow=10.0,SNR=1.9							
KBZ	**Khabaz**	**39.06**	**93**	P	P		11 30 57.2	+5.5
	comp=Z,2.7nm,0.8s,baz=313,slow=12,SNR=4.0							
TORD	**Torodi Ar. Bea**	**53.14**	**157**	P	**P**		**11 32 44.2**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=335,slow=6.0,SNR=3.2							
PDAR	**Pinedale Array**	**53.22**	**293**	P	P		11 32 46.5	+3.0
	comp=Z,1.4nm,0.8s,baz=54,slow=7.5,SNR=7.2							
DBIC	**Dimbokro**	**58.59**	**165**	P	**P**		**11 33 23.6**	**+1.6**
	comp=Z,1.8nm,0.7s,baz=353,slow=3.0,SNR=3.2							
NVAR	**Mina Array Bea**	**60.34**	**297**	P	P		11 33 37.8	+3.7
	comp=Z,0.3nm,0.8s,baz=39,slow=5.8,SNR=2.6							
TXAR	**Lajitas Array**	**62.33**	**280**	P	P		11 33 50.9	+3.3
	comp=Z,0.3nm,0.8s,baz=77,slow=5.4,SNR=3.4							
CMAR	**Chiang Mai Arr**	**84.08**	**59**	P	P		11 35 59.2	+3.2
	comp=Z,0.5nm,0.3s,baz=321,slow=8.1,SNR=4.4							
CMAR				LR	LR		12 13 37.1	
	comp=Z,145nm,18.3s,baz=245,slow=36							

*IDC **27** 11:23:34.1*±*0.8, 1°.94N*×*126°.39E, h0km, mb4.1/8, mb1 4.2/10, mb1mx3.8/49, mbtmp4.1/10, ML4.5/2, Error ellipse: s-maj=49.4km s-min=16.1km az=68.0*

*NEIC **27** 11:23:38.8*±*1.2, 1°.96N*±*0°.05×126°.6E*±*0°.1, h35km*±*1km, mb4.4/20, Error ellipse: s-maj=18.3km s-min=5.2km az=67.0*

*DJA **27** 11:23:41.4*±*0.3, 2°.N*±*4°×12°.7E*±*°, h59km*±*11km, M4.2/10, mb4.4/3, MLv4.2/10*

ISC 27 11:23:40.1±0.6, **1°98N**±0°.06×**126°60E**±0°.08, **h47**km, **n44**, σ1**s34**/44, **mb4.3**/16, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.42**	**147**	P	**Pn**	**11 24 05.0**	**+1.4**
TNTI	**Ternate**	**1.42**	**147**		**Pn**	**11 24 04.8**	**+1.2**
SGSI	**Sangihe**	**2.00**	**328**	P	**Pn**	**11 24 12.2**	**+0.6**
KMSI	**Cibinong**	**2.97**	**242**	P	**Pn**	**11 24 27.3**	**+2.5**
GTOI	**Gorontalo**	**3.83**	**250**	P	**Pn**	**11 24 39.6**	**+3.0**
SANI	**Sanana**	**4.05**	**189**	P	**Pn**	**11 24 40.1**	**+0.5**
LUWI	**Luwuk**	**4.86**	**232**	Pn	**Pn**	**11 24 49.5**	**-1.3**
MRSI	**Marisa**	**4.89**	**252**	P	**Pn**	**11 24 53.3**	**+2.1**
APSI	**Ampana**	**5.72**	**240**	P	Pn	11 25 12.3	+10
TOLI2	**Tolitoli**	**5.88**	**262**		**Pn**	**11 25 03.7**

ATD	**Arta Tunnel**	**19.10 289**	P		**Pn**	**11 41 30.4**	**+0.7**
	baz=102,slow=14,SNR=4.2						
ATD	**Arta Tunnel**	**19.10 289**	IAmb		IAmb	11 41 34.3	
	comp=Z,15nm,1.2s						
PALK	**Pallekele**	**19.37 84**	LR		LR	11 47 21.5	
	comp=Z,160nm,21.1s,baz=73,slow=32						
RAYN	**Ar Rayn**	**23.32 321**	P		**P**	**11 42 12.8**	**-1.4**
RAYN			IAmb		IAmb	11 42 29.4	
	comp=Z,8.8nm,0.9s						
GEYT	**Alibeck**	**32.19 355**	LR		LR	11 56 27.1	
	comp=Z,31nm,21.1s,baz=200,slow=36						
KKAR	**Karatay Array**	**38.11 11**	P		**P**	**11 44 24.9**	**0.0**
AAK	**Ala-Archa**	**38.59 16**	P		**P**	**11 44 30.9**	**+1.9**
	comp=Z,2.1nm,0.7s,baz=177,slow=6.7,SNR=7.4						
AAK	**Ala-Archa**	**38.59 16**	IAmb		IAmb	11 44 38.7	
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**38.85 68**	P		**P**	**11 44 33.4**	**+1.9**
	comp=Z,1.0nm,0.3s,baz=260,slow=9.2,SNR=16						
CMAR			PcP		**PcP**	**11 46 43.0**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=247,slow=4.6,SNR=1.7						
CMAR	**Chiang Mai Arr**	**38.85 68**	P		**P**	**11 44 31.4**	**0.0**
CHTO	**Chiang Mai**	**38.94 67**	P		**P**	**11 44 32.9**	**+0.7**
CHTO			IAmb		IAmb	11 44 41.4	
	comp=Z,7.1nm,1.1s						
BRTR	**Keskin Array B**	**42.01 328**	P		**P**	**11 44 58.1**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=123,slow=9.0,SNR=5.0						
ABKAR	**Akbulak array**	**43.39 359**	P		**P**	**11 45 08.6**	**+0.2**
ABKAR			IAmb		IAmb	11 45 18.1	
	comp=Z,6.3nm,1.1s						
ABKAR	**Akbulak array**	**43.39 359**	P		**P**	**11 45 09.6**	**+1.2**
AKTO	**Aktyubinsk**	**44.64 357**	P		**P**	**11 45 19.5**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=178,slow=7.6,SNR=4.8						
MKAR	**Makanchi Array**	**44.75 20**	P		**P**	**11 45 18.8**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=217,slow=7.6,SNR=8.0						
MKAR			PcP		**PcP**	**11 47 00.3**	**-1.2**
	comp=Z,1.0nm,0.9s,baz=241,slow=1.5,SNR=3.2						
MKAR	**Makanchi Array**	**44.75 20**	P		**P**	**11 45 19.0**	**-0.4**
LEM	**Lembang**	**47.91 104**	LR		LR	12 02 28.3	
	comp=Z,187nm,21.9s,baz=208,slow=32						
ZALV	**Zalesovo Beam**	**51.75 18**	P		**P**	**11 46 13.1**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=232,slow=7.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**51.75 18**	P		**P**	**11 46 12.6**	**-0.6**
BURAR	**Bucovina Array**	**51.88 330**	P		**P**	**11 46 14.0**	**-0.5**
AKASG	**Malin Array Be**	**52.20 335**	P		**P**	**11 46 16.2**	**-0.5**
	comp=Z,0.2nm,0.2s,baz=126,slow=6.2,SNR=1.5						
SONM	**Songino Array**	**56.89 35**	P		**P**	**11 46 50.6**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=227,slow=8.0,SNR=6.3						
SONM	**Songino Array**	**56.89 35**	P		**P**	**11 46 50.4**	**-0.6**
TORD	**Torodi Ar. Bea**	**59.12 282**	P		**P**	**11 47 07.3**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=84,slow=4.3,SNR=6.0						
TORD			PcP		**PcP**	**11 47 55.7**	**0.0**
	comp=Z,0.1nm,0.3s,baz=82,slow=35,SNR=2.2						
TORD	**Torodi Ar. Bea**	**59.12 282**	IAmb		IAmb	11 47 16.4	
	comp=Z,3.2nm,1.4s						
ESDC	**Sonseca Array**	**67.37 311**	P		**P**	**11 48 01.1**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=78,slow=5.2,SNR=5.2						
ESDC	**Sonseca Array**	**67.37 311**	IAmb		IAmb	11 48 10.1	
	comp=Z,7.1nm,1.2s						
ARCES	**ARCESS Array B**	**67.87 347**	LR		LR	12 19 53.9	
	comp=Z,158nm,21.4s,baz=170,slow=38						
KSRS	**Korea Array**	**68.05 52**	P		**P**	**11 48 04.8**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=259,slow=7.6,SNR=8.6						
KLR	**Kul'dur**	**72.98 40**	LR		LR	12 22 24.7	
	comp=Z,42nm,18.6s,baz=324,slow=37						
MAW	**Mawson**	**73.16 179**	LR		LR	12 12 45.4	
	comp=Z,57nm,20.6s,baz=59,slow=29						
WRA	**Warramunga Arr**	**76.17 112**	P		**P**	**11 48 54.8**	**+0.1**
	comp=Z,4.9nm,1.0s,baz=288,slow=5.1,SNR=22						
WRA	**Warramunga Arr**	**76.17 112**	P		**P**	**11 48 53.8**	**-0.9**
WB2	**Warramunga Arr**	**76.18 112**	P		**P**	**11 48 54.1**	**-0.6**
ASAR	**Alice Springs**	**76.54 116**	P		**P**	**11 48 57.1**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=282,slow=5.5,SNR=23						
ASAR	**Alice Springs**	**76.54 116**	P		**P**	**11 48 56.5**	**-0.3**
STKA	**Stephens Creek**	**84.83 123**	P		**P**	**11 49 41.2**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=304,slow=8.4,SNR=3.9						
STKA	**Stephens Creek**	**84.83 123**	IAmb		IAmb	11 49 42.0	
	comp=Z,0.9nm,1.0s						
VNDA	**Vanda**	**97.84 168**	LR		LR	12 30 08.3	
	comp=Z,45nm,19.1s,baz=267,slow=33						
NVAR	**Mina Array Bea**	**136.07 360**	PKP		**PKPdf**	**11 56 28.6**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=1.8,slow=2.9,SNR=2.5						
TXAR	**Lajitas Array**	**142.25 338**	PKhKP		PKPpre	11 56 33.1	
	comp=Z,0.3nm,0.8s,baz=20,slow=2.9,SNR=2.6						

ECX ***27*** *11:49:01.2±0.6,30.°17N×114.°23W,h6km±5km,MD3.1, ML3.3*
MEX ***27*** *11:49:04.5±1.2,30.°12N×114.°31W,h10km,MD4.0*
ISC 27 11:49:01.1±1.3**,30.°31N**±0.°08×**114.°22W**±0.°07**,h10**km**,n11,** σ0°**83**/15**,4C-3D,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFX	**San Felipe**	**0.91 324**	⇓	*eP*	**Pg**	**11 49 18.4**	**-0.2**
SFX				*eS*	**Sn**	**11 49 32.3**	**-0.7**
SPX	**San Pedro Mart**	**1.29 305**	⇑	*eP*	**Pn**	**11 49 25.5**	**0.0**
SPIG	**San Pedro Mart**	**1.30 305**		*eP*	**Pn**	**11 49 25.5**	**-0.1**
SPIG				*eP*	**Pn**	**11 49 25.6**	**-0.1**
	baz=133,slow=10						
SPIG				*eS*	**Sn**	**11 49 43.9**	**+0.7**
SPIG	**San Pedro Mart**	**1.30 305**	⇑	*eP*	**Pn**	**11 49 25.5**	**-0.1**
ECBX	**El Chinero**	**1.36 329**	⇓	*eP*	**Pn**	**11 49 25.6**	**-0.5**
PIX	**Pinacate**	**1.41 27**		*eP*	**Pg**	**11 49 27.8**	**-0.4**
SQX	**San Quintin**	**1.45 281**	⇑	*eP*	**Pn**	**11 49 26.7**	**-0.7**
SQX				*eS*	**Sn**	**11 49 46.5**	**+0.1**
SQX				IAML		11 49 49.8	
	comp=N,410nm,0.5s						
SQX			⇓	*e*		11 49 49.8	
SQX				IAML		11 49 51.7	
	comp=E,522nm,0.7s						
SQX				*e*		11 49 51.7	
VTX	**Valle De La Tr**	**1.73 309**	⇑	*eP*	**Pn**	**11 49 31.7**	**+0.5**
CBX	**Cerro Bola**	**2.89 314**		IAML		11 50 48.9	
	comp=E,113nm,0.8s						
TJIG	**Tijuana**	**2.98 316**		*eP*	**Pn**	**11 49 50.9**	**+2.4**
TJIG				*i* S	**Sg**	**11 50 36.4**	**-0.5**
HSIG		**3.12 113**		*eP*	**Pg**	**11 50 00.8**	**-0.1**

WEL 27 11:51:50.4,41°S±2°×**17°3E**±°,**h91**km±6km,**M2.6**/13, **ML2.5**/9,**MLv2.6**/13,**Error ellipse: s-maj=0.0km s-min=0.0km az=93.1,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	**Tophouse**	**0.36 160**		P	Pn	11 52 06.0	+0.7
NNZ	**Nelson**	**0.53 67**		P	Pn	11 52 05.7	+0.3
QRZ	**Quartz Range**	**0.62 345**		P	Pn	11 52 06.9	+0.6
DSZ	**Denniston Hort**	**0.77 245**		P	Pn	11 52 08.5	+0.8
BSWZ	**Blackbirch Sta**	**0.90 109**		P	Pn	11 52 10.5	+1.4
TUWZ	**Tuamarina**	**0.91 91**		P	Pn	11 52 09.8	+0.7
DUWZ	**D'Urville Isla**	**1.09 56**		P	Pn	11 52 11.6	+0.4
KHZ	**Kahutara**	**1.16 149**		P	Pn	11 52 12.4	+0.5
TCW	**Tory Channel**	**1.18 80**		P	Pn	11 52 12.5	+0.3
LTZ	**Lake Taylor**	**1.40 194**		P	Pn	11 52 15.8	+0.8
GVZ	**Greta Valley S**	**1.56 172**		P	Pn	11 52 17.2	+0.3
OXZ	**Oxford**	**1.97 195**		P	Pn	11 52 21.8	-0.4
MHCZ	**Mount Hutt**	**2.28 202**		P	Pn	11 52 25.9	-0.3
OKCZ	**Okains Bay**	**2.31 174**		P	Pn	11 52 26.2	-0.5
VRZ	**Vera Road**	**2.77 35**		P	Pn	11 52 33.5	+0.7

IDC ***27*** *11:56:46.7±3.8,6.°43S×130.°76E,h79km±36km,mb3.8/9, mb1 3.9/10,mb1mx3.7/36,mbtmp4.1/10,Error ellipse: s-maj=28.5km s-min=17.4km az=59.0*
NEIC ***27*** *11:56:46.6±2.5,6.°53S±0.°06×130.°70E±0.°09,h85km±7km, mb4.4/18,Error ellipse: s-maj=13.0km s-min=9.2km az=88.0*
DJA ***27*** *11:56:46.3±0.2,7°S±2°×13°1E±°,h123km±6km,M4.7/13, mb4.6/13,mB5.3/7,MLv4.7/13,Mw(mB)4.7/7*
ISC 27 11:56:47.5±0.5**,6.°65S**±0.°05×**130.°82E**±0.°06**,h100**km**,n73,** σ1°**79**/72**,mb4.2**/16**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.41 160**		P	**Pn**	**11 57 13.9**	**+1.2**
SAUI				S	**Sn**	**11 57 33.2**	**+1.4**
SAUI	**Saumlaki**	**1.41 160**			**Pn**	**11 57 15.3**	**+2.6**
BNDI	**Bandanaira**	**2.30 337**		P	**Pn**	**11 57 22.5**	**-1.5**
MSAI	**Masohi**	**3.78 330**		P	**Pn**	**11 57 43.2**	**-0.6**
FAKI	**Fak Fak**	**3.97 21**		P	**Pn**	**11 57 43.9**	**-2.4**
FAKI	**Fak Fak**	**3.97 21**		Pn	**Pn**	**11 57 44.2**	**-2.1**
NLAI	**Namlea**	**5.02 312**		P	**Pn**	**11 58 00.9**	**+0.4**
	3µm0.4nm61nm,0.6s						

MTN	**Manton Dam**	**6.17 177**		Pn	**Pn**	**11 58 16.9**	**+0.8**
SANI	**Sanana**	**6.63 313**		P	**Pn**	**11 58 23.0**	**+0.5**
	0.1nm688nm19nm,0.6s						
SOEI	**Soe**	**7.18 244**		P	**Pn**	**11 58 30.0**	**0.0**
	0.4nm34nm,0.7s						
SOEI	**Soe**	**7.18 244**		Pn	**Pn**	**11 58 29.8**	**-0.3**
BAKI	**Biak**	**7.56 44**		P	**Pn**	**11 58 33.9**	**-1.2**
	0.2nm60nm,0.9s						
BATI	**Baumata**	**7.91 243**		P	**Pn**	**11 58 40.8**	**+0.9**
	6.8nm,0.3s,baz=316,slow=8.2,SNR=6.7						
BATI				S	**Sn**	**12 00 04.9**	**-2.9**
	21nm,0.3s,baz=279,slow=23,SNR=14						
BATI	**Baumata**	**7.91 243**		P	**Pn**	**11 58 40.3**	**+0.4**
	20nm,0.6s						
TNTI	**Ternate**	**8.13 335**		P	**Pn**	**11 58 42.9**	**0.0**
	3µm191nm,0.5s						
TNTI	**Ternate**	**8.13 335**		Pn	**Pn**	**11 58 40.2**	**-2.7**
KNRA	**Kununurra**	**9.20 192**		Pn	**Pn**	**11 58 56.5**	**-0.8**
KMSI	**Cibinong**	**9.90 316**		P	**Pn**	**11 59 06.9**	**0.0**
	2µm114nm,0.8s						
MRSI	**Marisa**	**11.34 308**		P	Pn	11 59 36.7	+10
SGSI	**Sangihe**	**11.54 333**		P	Pn	11 59 22.9	-6.3
FITZ	**Fitzroy Crossi**	**12.45 203**		P	**Pn**	**11 59 37.8**	**-3.4**
	3.0nm,0.3s,baz=28,slow=11,SNR=160						
FITZ				S	Sn	12 01 46.9	-11
	4.4nm,0.3s,baz=164,slow=20,SNR=8.3						
FITZ	**Fitzroy Crossi**	**12.45 203**			**Pn**	**11 59 37.6**	**-3.6**
WB0	**Warramunga Arr**	**13.50 165**			**Pn**	**11 59 51.8**	**-3.2**
WRA	**Warramunga Arr**	**13.65 166**		P	**Pn**	**11 59 53.2**	**-3.9**
	7.4nm,0.3s,baz=351,slow=13,SNR=142						
WRA				S	Sn	12 02 17.3	-10
	6.6nm,0.3s,baz=346,slow=22,SNR=9.4						
WRA	**Warramunga Arr**	**13.65 166**			Pn	11 59 52.1	-4.9
WB2	**Warramunga Arr**	**13.66 166**		Pn	**Pn**	**11 59 54.0**	**-3.1**
WR0	**Warramunga Arr**	**13.72 165**		Pn	**Pn**	**11 59 56.6**	**-1.3**
COEN	**Coen**	**14.16 122**		Pn	**Pn**	**12 00 03.2**	**-0.5**
BBKI	**Banjar Baru**	**16.22 280**		P	**P**	**12 00 35.3**	**+4.3**
AS31	**Alice Springs**	**17.18 170**		P	**Pn**	**12 00 40.1**	**-1.4**
AS31				IAmb	IAmb	12 00 46.0	
	comp=Z,14nm,1.0s						
ASAR	**Alice Springs**	**17.18 170**		P	**Pn**	**12 00 40.4**	**-1.1**
	comp=Z,5.4nm,0.3s,baz=351,slow=12,SNR=131						
ASAR				S	**Sn**	**12 03 45.9**	**-6.7**
	comp=Z,1.7nm,0.3s,baz=352,slow=27,SNR=7.7						
ASAR	**Alice Springs**	**17.18 170**		P	**Pn**	**12 00 41.5**	**0.0**
PSA00	**Pilbara Seismi**	**18.24 214**		P	**P**	**12 00 53.0**	**-0.2**
PSA00	**Pilbara Seismi**	**18.24 214**		P	**P**	**12 00 53.1**	**0.0**
PSA00				IAmb	IAmb	12 00 55.9	
	comp=Z,11nm,0.8s						
CTA	**Charters Tower**	**20.08 133**		P	Pn	12 01 16.4	+0.5
	comp=Z,6.1nm,0.7s,baz=299,slow=13,SNR=7.7						
CTAO	**Charters Tower**	**20.08 133**		P	Pn	12 01 15.1	-0.8
CISI	**Cisompet, Garu**	**22.84 266**		P	**P**	**12 01 40.8**	**-1.8**
FORT	**Forrest**	**24.15 186**		P	**P**	**12 01 56.6**	**+2.3**
FORT				IAmb	IAmb	12 01 57.9	
	comp=Z,22nm,0.7s						
BBOO	**Buckleboo**	**26.49 170**		P	**P**	**12 02 16.9**	**+1.3**
BBOO				IAmb	IAmb	12 02 18.7	
	comp=Z,28nm,1.4s						
STKA	**Stephens Creek**	**27.05 160**		P	**P**	**12 02 22.9**	**+2.3**
	comp=Z,1.5nm,0.6s,baz=333,slow=11,SNR=5.4						
STKA	**Stephens Creek**	**27.05 160**		P	**P**	**12 02 22.5**	**+1.9**
NWAO	**Narrogin (SRO)**	**29.04 204**		P	**P**	**12 02 40.1**	**+1.9**
NWAO				IAmb	IAmb	12 02 55.1	
	comp=Z,17nm,1.2s						
CMAR	**Chiang Mai Arr**	**40.13 309**		P	**P**	**12 04 12.4**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=141,slow=7.3,SNR=8.5						
CMAR				PcP	**PcP**	**12 06 18.9**	**+2.3**
	comp=Z,0.6nm,0.5s,baz=176,slow=3.2,SNR=4.3						
MJAR	**Matsushiro Arr**	**43.52 9**		P	**P**	**12 04 39.0**	**-2.2**
	comp=Z,1.4nm,0.7s,baz=181,slow=9.8,SNR=5.1						
ODAN	**Odare**	**53.64 310**		*eP*	**P**	**12 05 59.1**	**-0.2**
	comp=Z,11nm,0.4s						
TAPN	**Taplejung**	**53.66 311**		*eP*	**P**	**12 05 59.1**	**-0.4**
	comp=Z,8.2nm,0.4s						
RAMN	**Ramite**	**54.29 310**		*eP*	**P**	**12 06 03.9**	**-0.1**
	comp=Z,26nm,0.5s						
GUN	**Gumba**	**55.34 311**		*eP*	**P**	**12 06 11.2**	**-0.5**
	comp=Z,17nm,0.6s						
PKI	**Pulchoki**	**55.52 310**		*eP*	**P**	**12 06 12.4**	**-0.6**
	comp=Z,4.7nm,0.4s						
GKN	**Gorkha**	**56.32 310**		*eP*	**P**	**12 06 18.0**	**-0.5**
	comp=Z,8.6nm,0.3s						
KOLN	**Koldanda**	**57.00 309**		*eP*	**P**	**12 06 23.2**	**-0.2**
	comp=Z,6.5nm,0.3s						
DANN	**Dangsing**	**57.17 310**		*eP*	**P**	**12 06 24.6**	**-0.1**
	comp=Z,6.9nm,0.5s						
PYUN	**Piuthan**	**57.63 309**		*eP*	**P**	**12 06 27.7**	**-0.1**
	comp=Z,17nm,0.7s						
SONM	**Songino Array**	**58.37 341**		P	**P**	**12 06 33.1**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=162,slow=6.0,SNR=4.8						
PETK	**Petropavlovsk-**	**63.74 18**		P	**P**	**12 07 09.8**	**+1.2**
	comp=Z,2.9nm,0.6s,baz=169,slow=4.3,SNR=11						
PETK	**Petropavlovsk-**	**63.74 18**		P	**P**	**12 07 09.4**	**+0.9**
MK31	**Makanchi Array**	**68.38 326**		P	**P**	**12 07 39.1**	**+0.7**
MK31				IAmb	IAmb	12 07 39.8	
	comp=Z,8.0nm,0.8s						
MKAR	**Makanchi Array**	**68.38 326**		P	**P**	**12 07 39.1**	**+0.7**
	comp=Z,9.3nm,0.4s,baz=114,slow=8.2,SNR=195						
MKAR	**Makanchi Array**	**68.38 326**		P	**P**	**12 07 38.8**	**+0.4**
MAKZ	**Makanchi**	**68.56 326**		P	**P**	**12 07 39.9**	**+0.4**
SEY	**Seymchan**	**71.31 10**		P	**P**	**12 07 57.0**	**+1.0**
	comp=Z,3.0nm,0.8s,baz=114,slow=4.9,SNR=6.5						
ZALV	**Zalesovo Beam**	**71.63 333**		P	**P**	**12 07 57.8**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=116,slow=6.8,SNR=7.1						
GAR	**Garm**	**71.99 315**		P	**P**	**12 08 01.1**	**+0.3**
KURK	**Kurchatov**	**72.64 328**		P	**P**	**12 08 03.4**	**-0.8**
KURK				IAmb	IAmb	12 08 05.3	
	comp=Z,4.4nm,0.8s						
CHGR	**Chuyangaron**	**72.68 314**		P	**P**	**12 08 05.8**	**+0.9**
BRVK	**Borovoye**	**78.27 328**		P	**P**	**12 08 36.8**	**+0.4**
BRVK				IAmb	IAmb	12 08 37.3	
	comp=Z,2.9nm,0.9s						
ABKAR	**Akbulak array**	**82.74 321**		P	**P**	**12 09 00.1**	**-0.2**
ABKAR	**Akbulak array**	**82.74 321**		P	**P**	**12 08 59.5**	**-0.8**
ABKAR				IAmb	IAmb	12 09 01.0	
	comp=Z,1.4nm,1.1s						
QSPA	**South Pole Qui**	**83.33 180**		P	**P**	**12 09 04.8**	**+1.5**
QSPA				IAmb	IAmb	12 09 30.7	
	comp=Z,5.9nm,1.5s						
ILAR	**Eielson Array**	**92.68 25**		P	**P**	**12 09 47.1**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=262,slow=4.3,SNR=6.9						
GERES	**GERESS Array B**	**112.67 320**		PKiKP	**PKiKP**	**12 15 12.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=347,slow=2.9,SNR=4.8						
TORD	**Torodi Ar. Bea**	**129.53 282**		PKiKP	**PKiKP**	**12 15 46.6**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=68,slow=1.7,SNR=5.1						
LPAZ	**La Paz**	**150.49 141**		PKPbc	**PKiKP**	**12 16 31.5**	**+1.4**
	comp=Z,1.2nm,0.4s,baz=301,slow=1.2,SNR=7.5						

IDC ***27*** *12:07:10.3±9.3,18.°21S×170.°70E,h155km±59km,mb3.5/3, mb1 3.7/4,mb1mx3.3/36,mbtmp4.0/4,Error ellipse: s-maj=125.1km s-min=74.9km az=125.0*
ISC 27 12:07:13.4±1.9**,17.°9S**±0.°2×**170.°1E**±0.°3**,h150**km**,n6,** σ1°**00**/7**,mb3.8**/3**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.39 219**		P	**Pn**	**12 08 31.1**	**-0.9**
	6.5nm,0.3s,baz=18,slow=20,SNR=140						
DZM				S	**Sn**	**12 09 34.6**	**+1.1**
	4.1nm,0.3s,baz=308,slow=22,SNR=3.3						
STKA	**Stephens Creek**	**29.25 236**		P	**P**	**12 13 00.5**	**-1.0**
	1.3nm,0.7s,baz=77,slow=12,SNR=4.3						
WRA	**Warramunga Arr**	**33.85 261**		P	**P**	**12 13 42.5**	**+0.7**
	0.1nm,0.3s,baz=92,slow=8.3,SNR=8.1						
ASAR	**Alice Springs**	**34.26 254**		P	**P**	**12 13 45.8**	**+0.5**
	3.3nm,0.4s,baz=81,slow=8.9,SNR=120						
SNAA	**Sanae**	**90.53 182**		P	**P**	**12 19 58.5**	**+0.4**
VNA3	**Neumayer Olymp**	**91.09 180**		P	**P**	**12 20 01.1**	**+0.4**

KRSC ***27*** *12:14:52.2±0.7,55.°70N×161.°60E,h113km±8km,ML4.5, FELT [II] at GMS Kronoki.*
MOS ***27*** *12:14:52.9±0.7,55.°76N×161.°48E,h116km,mb4.4/10, Error ellipse: s-maj=10.6km s-min=4.2km az=75.3*
NEIC ***27*** *12:14:54.1±1.5,55.°74N±0.°10×161.°4E±0.°1,h109km±7km, mb4.3/37,Error ellipse: s-maj=15.1km s-min=8.1km az=156.0*
IDC ***27*** *12:14:56.2±2.1,55.°81N×161.°24E,h126km±20km, mb3.7/25,mb1 3.8/29,mb1mx3.7/66,mbtmp4.0/29,MS3.9/2, Ms1 4.1/2,ms1mx2.9/49,Error ellipse: s-maj=14.3km s-min=10.5km az=159.0*
ISC 27 12:14:54.0±0.6**,55.°71N**±0.°03×**161.°58E**±0.°03**,h109**km±4km,

n193, σ0°**98**/235**,mb4.2**/46**,Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZLN	**Zelenaya**	**0.53 305**		*eP*	**Pn**	**12 15 11.3**	**+0.2**
ZLN	**Zelenaya**	**0.53 305**		PN	**Pn**	**12 15 11.3**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**0.55 295**		*eP*	**Pn**	**12 15 11.4**	**+0.2**
BZGR				*eS*	**Sn**	**12 15 24.2**	**0.0**
BZGR	**Bezymyannyi-Gr**	**0.55 295**		PN	**Pn**	**12 15 11.4**	**+0.2**
BZGR				S	**Sn**	**12 15 24.2**	**0.0**
CIRR	**Tsirk**	**0.62 311**		*eP*	**Pn**	**12 15 12.0**	**+0.2**
CIRR	**Tsirk**	**0.62 311**		PN	**Pn**	**12 15 12.0**	**+0.2**
LGNR	**Loginova**	**0.62 307**		*eP*	**Pn**	**12 15 12.1**	**+0.1**
LGNR				*eS*	**Sn**	**12 15 25.1**	**-0.4**
LGNR	**Loginova**	**0.62 307**		PN	**Pn**	**12 15 12.1**	**+0.1**
LGNR				S	**Sn**	**12 15 25.1**	**-0.4**
BZMR	**Bezymyannaya**	**0.65 290**		*eP*	**Pn**	**12 15 12.0**	**-0.1**
BZMR				*eS*	**Sn**	**12 15 25.6**	**0.0**
BZMR	**Bezymyannaya**	**0.65 290**		PN	**Pn**	**12 15 12.0**	**-0.1**
BZMR				S	**Sn**	**12 15 25.6**	**0.0**
BZWR	**Bezymyannyi-We**	**0.66 293**		*eP*	**Pn**	**12 15 12.1**	**0.0**
BZWR				*eS*	**Sn**	**12 15 26.1**	**+0.3**
BZWR	**Bezymyannyi-We**	**0.66 293**		PN	**Pn**	**12 15 12.1**	**0.0**
BZWR				S	**Sn**	**12 15 26.1**	**+0.3**
KIRR	**Kirishev**	**0.74 290**		*eP*	**Pn**	**12 15 12.5**	**-0.3**
KIRR				*eS*	**Sn**	**12 15 26.1**	**-0.8**
KIRR	**Kirishev**	**0.74 290**		PN	**Pn**	**12 15 12.5**	**-0.3**
KIRR				S	**Sn**	**12 15 26.1**	**-0.8**
KMNR	**Kamenistaya**	**0.76 274**		*eP*	**Pn**	**12 15 12.7**	**-0.2**
KMNR				*eS*	**Sn**	**12 15 28.1**	**+1.0**
KMNR	**Kamenistaya**	**0.76 274**		PN	**Pn**	**12 15 12.7**	**-0.2**
KMNR				S	**Sn**	**12 15 28.1**	**+1.0**
KRSR	**Krestovskiy**	**0.76 312**		*eP*	**Pn**	**12 15 12.5**	**-0.4**
KRSR				*eS*	**Sn**	**12 15 26.5**	**-0.7**
KRSR	**Krestovskiy**	**0.76 312**		PN	**Pn**	**12 15 12.5**	**-0.4**
KRSR				S	**Sn**	**12 15 26.5**	**-0.7**
KLY	**Klyuchi**	**0.80 320**		*eP*	**Pn**	**12 15 12.2**	**-0.9**
KLY				*eS*	**Sn**	**12 15 25.9**	**-1.6**
KLY	**Klyuchi**	**0.80 320**		PN	**Pn**	**12 15 12.2**	**-0.9**
KLY				S	**Sn**	**12 15 25.9**	**-1.6**
KBG	**Krutoberegovo**	**0.83 49**		*eP*	**Pn**	**12 15 13.6**	**+0.2**
KBG				*eS*	**Sn**	**12 15 28.7**	**+0.6**
KBG	**Krutoberegovo**	**0.83 49**		PN	**Pn**	**12 15 13.6**	**+0.2**
KBG				S	**Sn**	**12 15 28.7**	**+0.6**
TUMD	**Tumrok D**	**0.84 233**		*eP*	**Pn**	**12 15 13.4**	**-0.2**
TUMD				*eS*	**Sn**	**12 15 28.1**	**-0.2**
KBTR	**Krutoberegovo**	**0.86 54**		*i* P	**Pn**	**12 15 13.8**	**+0.1**
KBTR				*eS*	**Sn**	**12 15 28.8**	**+0.3**
KBTR	**Krutoberegovo**	**0.86 54**		PN	**Pn**	**12 15 13.8**	**+0.1**
KBTR				S	**Sn**	**12 15 28.8**	**+0.3**
SMKR	**Semkarok**	**0.88 356**		*i* P	**Pn**	**12 15 14.0**	**+0.1**
SMKR				*eS*	**Sn**	**12 15 29.4**	**+0.4**
SMKR	**Semkarok**	**0.88 356**		PN	**Pn**	**12 15 14.0**	**+0.1**
SMKR				S	**Sn**	**12 15 29.4**	**+0.4**
BDR	**Baidarnaya**	**0.88 347**		*eP*	**Pn**	**12 15 14.1**	**+0.1**
BDR				*eS*	**Sn**	**12 15 28.

SKR eS Sn 12 17 28.8 +1.0
SKR smax smax
comp=N,137nm,0.9s
SKR smax smax
comp=E,202nm,1.1s
SKR MLR MLR
comp=Z,1μm,19.0s
SEY Seymchan 8.63 331 P Pn 12 16 56.3 +0.6
comp=Z,0.2nm,0.3s,baz=140,slow=14,SNR=5.6
JKA Kamikawa-asahi 16.79 234 P P 12 18 42.0 -0.6
JKA IAmb IAmb 12 18 46.8
comp=Z,53nm,1.4s
ASAJ Asahikawa 16.79 234 P P 12 18 44.2 +1.6
comp=Z,1.2nm,0.3s,baz=65,slow=9.0,SNR=14
ASAJ Asahikawa 16.79 234 P P 12 18 42.0 -0.6
ASAJ pmax pmax
comp=Z,53nm,1.4s
NIKH Nikolski High 17.39 87 P Pn 12 18 50.4 +0.9
ERM Erimo 18.21 229 P Pn 12 18 58.6 -0.9
ERM pmax pmax
comp=Z,54nm,1.3s
ERM Erimo 18.21 229 P Pn 12 18 58.5 -0.9
ERM IAmb IAmb 12 19 15.1
comp=Z,54nm,1.3s
KLR Kul'dur 19.19 263 P Pn 12 19 09.7 -1.2
comp=Z,0.3nm,0.3s,baz=54,slow=12,SNR=6.6
TIXI Tiksi 21.12 332 P P 12 19 30.1 +0.6
TIXI pmax pmax
comp=Z,11nm,0.8s
TIXI Tiksi 21.12 332 P P 12 19 30.1 +0.6
TIXI IAmb IAmb 12 19 32.4
comp=Z,11nm,0.8s
USRK Ussuriysk Ar. 22.07 251 P P 12 19 40.3 +0.6
comp=Z,1.7nm,0.6s,baz=45,slow=16,SNR=3.3
TTA Tatalina 22.44 54 P P 12 19 43.5 -0.1
TTA pmax pmax
comp=Z,4.0nm,1.2s
TTA Tatalina 22.44 54 P P 12 19 43.5 -0.1
IMAR Indian Mountai 23.52 46 P P 12 19 54.3 +0.6
A21K Barrow 23.59 32 P P 12 19 54.7 +0.3
PPLA Purkeypile 24.19 54 P P 12 20 00.7 +0.7
OHAK Old Harbor 24.64 68 P P 12 20 04.3 +0.5
OHAK IAmb IAmb 12 20 31.9
comp=Z,9.4nm,1.3s
KDAK Kodiak Island 24.85 66 P P 12 20 06.1 +0.3
KDAK pmax pmax
comp=Z,22nm,1.3s
KDAK Kodiak Island 24.85 66 P P 12 20 06.1 +0.3
KDAK IAmb IAmb 12 20 07.6
comp=Z,22nm,1.3s
MJAR Matsushiro Arr 24.89 229 P P 12 20 05.7 -0.7
comp=Z,2.6nm,0.7s,baz=28,slow=7.6,SNR=8.0
MJAR LR LR 12 31 21.4
comp=Z,52nm,20.1s,baz=190,slow=40
TRF Thorofare Moun 25.01 52 P P 12 20 08.0 +0.6
COLD Coldfoot 25.02 43 P P 12 20 07.5 +0.2
CNPM China Poot 25.13 62 P P 12 20 09.7 +1.3
CNPM IAmb IAmb 12 20 32.8
comp=Z,14nm,1.0s
BOD Bodaibo 25.74 295 eP P 12 20 12.2 -1.7
BOD pmax pmax
comp=Z,8.0nm,0.8s
DHY Denali Highway 26.36 53 P P 12 20 20.5 +0.9
DHY IAmb IAmb 12 20 32.9
comp=Z,8.7nm,1.4s
IL31 26.39 49 P P 12 20 19.0 -0.7
ILAR Eielson Array 26.39 49 P P 12 20 20.2 +0.5
comp=Z,0.6nm,0.5s,baz=260,slow=7.3,SNR=19
ILAR Eielson Array 26.39 49 P P 12 20 20.7 +0.9
ILAR Eielson Array 26.39 49 P P 12 20 20.7 +0.9
SCM Sheep Creek Mo 26.57 56 P P 12 20 22.3 +0.8
SCM pmax pmax
comp=Z,16nm,1.4s
SCM Sheep Creek Mo 26.57 56 P P 12 20 22.3 +0.8
SCM IAmb IAmb 12 20 48.4
comp=Z,16nm,1.4s
BMAR Burnt Mountain 27.20 43 P P 12 20 28.4 +1.5
N25K Chitina, Valde 27.89 56 P P 12 20 33.4 +0.1
N25K IAmb IAmb 12 20 54.3
comp=Z,9.7nm,1.5s
EGAK Eagle 28.83 48 P P 12 20 41.7 +0.2
BCAR Beaver Creek A 28.87 52 P P 12 20 43.8 +2.0
INCN Inchon 29.70 247 P P 12 20 52.4 +3.0
INCN pmax pmax
comp=Z,22nm,0.6s
INCN Inchon 29.70 247 P 12 20 52.4 +3.0
INK Inuvik 31.28 40 P P 12 21 04.0 +1.0
comp=Z,1.5nm,0.6s,baz=310,slow=10,SNR=4.5
INK Inuvik 31.28 40 P P 12 21 04.0 +1.0
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 31.28 40 IAmb IAmb 12 21 04.9
comp=Z,1.8nm,0.7s
HYT Haines Junctio 31.41 55 P P 12 21 05.8 +1.5
HYT IAmb IAmb 12 21 27.8
comp=Z,7.8nm,1.5s
SONM Songino Array 34.21 280 P P 12 21 29.1 +0.1
comp=Z,0.5nm,0.4s,baz=61,slow=9.2,SNR=4.6
SONM Songino Array 34.21 280 IAmb IAmb 12 21 30.7
comp=Z,0.9nm,0.8s
C36M Paulatuk 34.41 37 P P 12 21 30.9 +0.7
C36M IAmb IAmb 12 21 31.9
comp=Z,4.6nm,0.8s
H11N2 WAKE ISLAND Hy 36.15 171 T T 13 01 05.7
baz=357,slow=76,SNR=3.6
H11N3 WAKE ISLAND Hy 36.16 171 T T 13 01 17.4
baz=357,slow=76,SNR=4.0
H11N1 WAKE ISLAND Hy 36.16 171 T T 13 01 18.4
baz=357,slow=76,SNR=5.0
EUNU Eureka 39.19 15 P P 12 22 11.8 +1.1
EUNU IAmb IAmb 12 22 12.4
comp=Z,3.6nm,0.8s
SPA0 Spitsbergen Ar 44.69 350 P P 12 22 55.7 +0.4
SPITS Spitsbergen Ar 44.69 350 P P 12 22 55.3 0.0
comp=Z,21nm,1.0s,baz=54,slow=5.6,SNR=25
WMQ Urumqi 46.95 288 P P 12 23 12.6 -1.0
WMQ pmax pmax
comp=Z,15nm,0.6s
WMQ Urumqi 46.95 288 P P 12 23 12.6 -1.0
KURK Kurchatov 47.12 301 P P 12 23 12.8 -1.8
KURK pmax pmax
comp=Z,7.0nm,0.5s
KURK Kurchatov 47.12 301 P P 12 23 12.8 -1.8
MK31 Makanchi Array 47.83 294 IAmb IAmb 12 23 20.8
comp=Z,2.5nm,0.7s
MKAR Makanchi Array 47.83 294 P P 12 23 18.1 -2.1
comp=Z,2.7nm,0.6s,baz=52,slow=6.6,SNR=28
MKAR Makanchi Array 47.83 294 P P 12 23 19.1 -1.2
MKAR Makanchi Array 47.83 294 P P 12 23 19.1 -1.2
NEW Newport 47.89 63 P P 12 23 20.8 +0.1
comp=Z,0.7nm,0.6s,baz=328,slow=9.5,SNR=1.8
BRVK Borovoye 49.49 307 P P 12 23 30.6 -2.2
BRVK pmax pmax
comp=Z,2.0nm,0.7s
BRVK Borovoye 49.49 307 P P 12 23 30.6 -2.2
BRVK IAmb IAmb 12 23 31.9
comp=Z,2.4nm,0.7s
ARCES ARCESS Array B 51.07 342 P P 12 23 44.2 -0.3
comp=Z,1.8nm,0.9s,baz=14,slow=6.9,SNR=3.8
ARU Arti 52.07 317 P P 12 23 50.2 -1.8
comp=Z,1.2nm,0.3s,baz=51,slow=3.4,SNR=6.1
NVAR Mina Array Bea 54.08 73 P P 12 24 09.8 +2.4
comp=Z,1.0nm,0.7s,baz=304,slow=7.2,SNR=12
NVAR LR LR 12 45 16.1
comp=Z,764nm,20.5s,baz=160,slow=34
AAK Ala-Archa 54.71 295 P P 12 24 10.7 -1.1
comp=Z,0.8nm,0.5s,baz=61,slow=13,SNR=4.0
AAK Ala-Archa 54.71 295 P P 12 24 10.7 -1.1
AAK pmax pmax
comp=Z,3.0nm,1.3s
AAK Ala-Archa 54.71 295 IAmb IAmb 12 24 31.8
comp=Z,3.3nm,1.3s
PDAR Pinedale Array 55.52 63 P P 12 24 19.7 +2.0
comp=Z,0.7nm,0.6s,baz=336,slow=3.0,SNR=7.4
KK31 Karatay Array 56.38 298 P P 12 24 22.4 -1.2
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KK31 Karatay Array 56.38 298 P P 12 24 22.4 -1.2
KK31 IAmb IAmb 12 24 23.0
comp=Z,2.8nm,0.7s
KKAR Karatay Array 56.38 298 P P 12 24 22.3 -1.3
KKAR pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 56.38 298 P P 12 24 22.3 -1.3
KKAR IAmb IAmb 12 24 23.1
comp=Z,2.8nm,0.7s
KKAR Karatay Array 56.38 298 P P 12 24 21.9 -1.7
ULM Lac du Bonnet 56.41 49 P P 12 24 24.3 +0.7
comp=Z,1.7nm,0.3s,baz=343,slow=2.3,SNR=8.2
ULM Lac du Bonnet 56.41 49 P P 12 24 24.3 +0.7
ULM pmax pmax
comp=Z,10.0nm,1.4s
ULM Lac du Bonnet 56.41 49 IAmb IAmb 12 24 26.4
comp=Z,10nm,1.4s
AKTO Aktyubinsk 56.70 312 P P 12 24 24.2 -1.5
comp=Z,1.8nm,0.5s,baz=81,slow=7.7,SNR=6.7
ABKAR Akbulak array 56.77 310 P P 12 24 24.2 -1.9
ABKAR IAmb IAmb 12 24 25.3
comp=Z,2.1nm,0.6s
ABKAR Akbulak array 56.77 310 P P 12 24 24.0 -2.1
FINES FINESS Array B 58.06 337 P P 12 24 34.1 -0.9
comp=Z,0.7nm,0.6s,baz=20,slow=6.7,SNR=5.0
CHGR Chuyangaron 60.38 296 P P 12 24 50.9 -0.6
NB2 NORSAR Subarra 61.26 344 P P 12 24 56.3 -0.7
comp=Z,0.7nm,0.6s,baz=18,slow=6.9
NOA NORSAR Array B 61.26 344 P P 12 24 56.4 -0.7
comp=Z,1.2nm,0.6s,baz=19,slow=6.8,SNR=5.0
HFS Hagfors 61.72 342 P P 12 24 58.9 -1.1
comp=Z,1.3nm,0.4s,baz=51,slow=5.9,SNR=7.2
PIX Pinacate 61.85 75 P 12 25 03.8 +2.4
AKASG Malin Array Be 66.81 329 P P 12 25 33.1 -0.2
comp=Z,0.6nm,0.3s,baz=28,slow=6.8,SNR=3.1
EKA Eskdalemuir Ar 68.61 351 P P 12 25 44.4 -0.3
comp=Z,1.7nm,0.6s,baz=24,slow=6.4,SNR=4.9
TXAR Lajitas Array 68.85 69 P P 12 25 48.4 +1.8
comp=Z,1.4nm,0.7s,baz=296,slow=4.6,SNR=16
TXAR Lajitas Array 68.85 69 P P 12 25 48.3 +1.7
TXAR Lajitas Array 68.85 69 P P 12 25 48.3 +1.7
GERES GERESS Array B 72.40 338 P P 12 26 08.1 +0.1
comp=Z,0.2nm,0.3s,baz=9.5,slow=4.1,SNR=3.5
WRA Warramunga Arr 78.82 206 P P 12 26 44.1 -0.5
comp=Z,0.6nm,0.5s,baz=14,slow=5.8,SNR=1.2
ASAR Alice Springs 82.50 205 P P 12 27 04.7 +0.5
comp=Z,1.2nm,0.8s,baz=12,slow=5.5,SNR=11
VAE Valguarnera 83.04 334 P P 12 27 05.5 -1.6
comp=Z,46nm,0.5s,baz=0.0,slow=1.0,SNR=6.1
ESDC Sonseca Array 84.19 349 P P 12 27 12.8 0.0
comp=Z,0.5nm,0.8s,baz=354,slow=6.0,SNR=4.9

BEO ***27*** *12:18:38.2±1.3,38.36N±26.00E,h77km±9km, ML4.4/12*
SOF ***27*** *12:18:54.3,40.03N×25.40E,h8km,MD3.8*
IDC ***27*** *12:18:57.8±1.4,40.19N×25.31E,h0km, mb3.3/2,*
mb1 3.5/6,mb1mx3.3/59,mbtmp3.4/6,ML3.6/4, Error
ellipse: s-maj=20.5km s-min=14.2km az=80.0
ISK ***27*** *12:18:58.9,40.22N×25.23E,h16km, ML4.0/19*
ATH ***27*** *12:18:58.8,40.21N×25.22E,h28km±1km, ML3.6/13, Error*
ellipse: s-maj=1.3km s-min=0.7km az=33.0
THE ***27*** *12:18:59.8,40.21N×25.22E,h15km, ML3.6/10, Error*
ellipse: s-maj=0.8km s-min=0.4km az=64.0
DDA ***27*** *12:19:00.8,40.20N×25.34E,h28km, MW3.7*
ISC 27 12:18:59.2±1.0, 40.20N±0.01×25.26E±0.01, h16km±8km, n148,σ1§03/205, 12C-9D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
LIA	**Limnos Island**	**0.30**	**192**	P	P	**Pb**	**12 19 06.7**	**+0.5**
LIA				S	S	**Sb**	**12 19 11.3**	**+0.3**
LIA				AML	AML		12 19 11.6	
	comp=N,13705μm,0.3s							
LIA				AML	AML		12 19 12.5	
	comp=E,11373μm,0.3s							
LIA	**Limnos Island**	**0.30**	**192**	P	P	**Pb**	**12 19 06.7**	**+0.5**
LIA				S	S	**Sb**	**12 19 10.8**	**-0.2**
SMTH	**Samothraki Isl**	**0.34**	**37**	P	P	**Pb**	**12 19 06.8**	**-0.1**
SMTH				S	S	**Sb**	**12 19 12.0**	**-0.2**
SMTH				AML	AML		12 19 12.8	
	comp=E,13388μm,0.2s							
SMTH				AML	AML		12 19 15.2	
	comp=N,11386μm,0.3s							
SMTH	**Samothraki Isl**	**0.34**	**37**	P	P	**Pb**	**12 19 06.8**	**-0.1**
SMTH				S	S	**Sb**	**12 19 12.0**	**-0.2**
GADA	**Gvkgeada**	**0.49**	**91**	PG	Pn		**12 19 10.4**	**-1.1**
GADA				SG	Sn		**12 19 17.4**	**-2.3**
GADA	**Gvkgeada**	**0.49**	**91**	P	Pn		**12 19 10.3**	**-1.2**
GADA				S	Sb		**12 19 17.3**	**+1.0**
	comp=N,5μm,0.2s							
GOKA	**anakkale-Gk**	**0.49**	**91**	*i* P	Pn		**12 19 10.6**	**-1.0**
GOKA				*i* S	Sn		**12 19 17.7**	**-2.1**
THAS	**Thassos island**	**0.58**	**315**	P	Pg		**12 19 10.5**	**-0.1**
THAS				S	Sg		**12 19 18.4**	**-0.1**
THAS				AML	AML		12 19 20.7	
	comp=N,11790μm,0.2s							
THAS				AML	AML		12 19 22.6	
	comp=E,7662μm,0.4s							
THAS	**Thassos island**	**0.58**	**315**	P	Pg		**12 19 10.6**	**-0.1**
THAS				S	Sg		**12 19 18.7**	**+0.2**
	comp=E,5μm,0.2s							
EFSA	**Agios Efstrati**	**0.69**	**198**	P	Pn		**12 19 13.8**	**-0.5**
EFSA				S	Sb		**12 19 22.5**	**+0.5**
EFSA				AML	AML		12 19 26.0	
	comp=N,16268μm,0.4s							
EFSA				AML	AML		12 19 26.6	
	comp=E,21289μm,0.5s							
BOZC	**Bozcaada**	**0.70**	**120**	PG	Pn		**12 19 13.7**	**-0.8**
BOZC				SG	Sn		**12 19 24.3**	**-0.7**
BOZC	**Bozcaada**	**0.70**	**120**	*i* P	Pn		**12 19 14.2**	**-0.3**
BOZC				*i* P	Pn		**12 19 14.2**	**-0.3**
BOZC				*i* S	Sn		**12 19 23.7**	**-1.3**
ENEZ	**Enez**	**0.87**	**51**	PG	Pn		**12 19 16.6**	**-0.2**
ENEZ				SG	Sn		**12 19 29.1**	**+0.1**
ENEZ	**Enez**	**0.87**	**51**	P	Pn		**12 19 16.5**	**-0.2**
ENEZ				S	Sn		**12 19 29.3**	**+0.3**
	comp=E,20μm,0.3s							
EZN	**Ezine**	**0.90**	**114**	PG	Pn		**12 19 17.4**	**+0.3**
EZN	**Ezine**	**0.90**	**114**	P	Pn		**12 19 17.4**	**+0.3**
EZN				S	Sn		**12 19 29.8**	**+0.1**
	comp=E,10μm,0.5s							
ALN	**Alexandroupoli**	**0.92**	**40**	P	Pn		**12 19 17.0**	**-0.5**
ALN				S	Sn		**12 19 30.1**	**-0.3**
ALN				AML	AML		12 19 31.8	
	comp=N,11527μm,0.6s							
ALN				AML	AML		12 19 32.6	
	comp=E,8748μm,0.5s							
ALN	**Alexandroupoli**	**0.92**	**40**	PG	Pn		**12 19 17.0**	**-0.5**
ALN				SG	Sn		**12 19 30.3**	**0.0**
ALN	**Alexandroupoli**	**0.92**	**40**	P	Pn		**12 19 17.0**	**-0.5**
ALN				S	Sn		**12 19 30.3**	**0.0**
	comp=E,5μm,0.5s							
GELI	**Tayfur-Gelibol**	**0.95**	**77**	PG	Pn		**12 19 17.9**	**+0.1**
RDO	**Rodhopi**	**0.97**	**12**	P	Pg		**12 19 17.7**	**-0.2**
RDO				S	Sg		**12 19 30.9**	**+0.2**
RDO				AML	AML		12 19 32.3	
	comp=N,2837μm,0.4s							
RDO				AML	AML		12 19 35.0	
	comp=E,3169μm,0.3s							
RDO	**Rodhopi**	**0.97**	**12**	PG	Pg		**12 19 17.8**	**-0.2**
RDO	**Rodhopi**	**0.97**	**12**	P	Pg		**12 19 17.8**	**-0.2**
KAVA	**Kavala**	**0.98**	**325**	P	Pb		**12 19 17.8**	**0.0**
KAVA				S	Sb		**12 19 30.3**	**-0.2**
KAVA				AML	AML		12 19 31.5	
	comp=N,7987μm,0.6s							
KAVA				AML	AML		12 19 32.0	
	comp=E,12828μm,0.5s							
KAVA	**Kavala**	**0.98**	**325**	P	Pb		**12 19 17.9**	**+0.1**
KAVA				S	Sb		**12 19 30.9**	**+0.4**
	comp=E,4μm,0.5s							
OUR	**Ouranopolis**	**0.99**	**278**	P	Pb		**12 19 17.8**	**-0.1**
OUR				S	Sb		**12 19 30.3**	**-0.5**
OUR				AML	AML		12 19 33.1	
	comp=E,7467μm,0.5s							
OUR				AML	AML		12 19 34.6	
	comp=N,4552μm,0.5s							
OUR	**Ouranopolis**	**0.99**	**278**	PG	Pb		**12 19 17.9**	**-0.1**
OUR	**Ouranopolis**	**0.99**	**278**	P	Pb		**12 19 17.8**	**-0.1**
OUR				S	Sb		**12 19 30.9**	**+0.1**
	comp=N,3μm,0.5s							
KVLA	**Kavala**	**1.00**	**318**	P	Pb		**12 19 18.0**	**0.0**
KVLA				S	Sb		**12 19 30.4**	**-0.6**
KVLA				AML	AML		12 19 32.0	
	comp=N,17460μm,0.4s							
KVLA				AML	AML		12 19 33.3	
	comp=E,9813μm,0.5s							
ERIK	**Erikli-Kesan**	**1.06**	**63**	PG	Pn		**12 19 19.2**	**-0.2**
SIGR	**SIGRI**	**1.08**	**155**	P	Pg		**12 19 20.7**	**+0.5**
SIGR				S	Sg		**12 19 35.2**	**+0.9**
SIGR				AML	AML		12 19 37.0	
	comp=E,16662μm,0.4s							
SIGR				AML	AML		12 19 37.0	
	comp=N,17128μm,0.4s							
SIGR	**SIGRI**	**1.08**	**155**	PN	Pg		**12 19 20.8**	**+0.7**
SIGR	**SIGRI**	**1.08**	**155**	P	Pg		**12 19 20.2**	**+0.1**
SIGR				S	Sg		**12 19 35.4**	**+1.1**
	comp=N,8μm,0.4s							
BAYC	**CANAKKALE_Bayr**	**1.09**	**114**	*i* P	Pg		**12 19 20.7**	**+0.5**
BAYC				*i* S	Sn		**12 19 35.4**	**+0.9**
LPK	**Lapseki**	**1.16**	**81**	PN	Pg		**12 19 21.3**	**-0.2**
PRK	**Paraskevi**	**1.23**	**140**	P	Pg		**12 19 23.2**	**+0.4**
PRK				S	Sg		**12 19 39.1**	**+0.3**
PRK				AML	AML		12 19 44.7	
	comp=E,16592μm,0.6s							
PRK				AML	AML		12 19 45.0	
	comp=N,11430μm,0.5s							
PAIG	**Paliouri**	**1.25**	**258**	P	Pn		**12 19 21.2**	**-0.7**
PAIG				S	Sn		**12 19 38.3**	**-0.1**
PAIG				AML	AML		12 19 41.5	
	comp=N,2033μm,0.4s							
PAIG				AML	AML		12 19 49.5	
	comp=E,1317μm,0.7s							
PAIG	**Paliouri**	**1.25**	**258**	P	Pn		**12 19 21.1**	**-0.8**
PAIG				S	Sb		**12 19 37.8**	**-0.3**
	comp=E,682nm,0.5s							
KESN	**Edirne-Kesan**	**1.25**	**59**	*i* P	Pb		**12 19 22.1**	**-0.5**
KESN				*i* S	Sg		**12 19 40.2**	**+0.5**
UKOP	**Uzunkopru-Edir**	**1.40**	**48**	PN	Pb		**12 19 24.7**	**-0.2**
PLG	**Polygyros**	**1.40**	**278**	P	Pn		**12 19 23.8**	**-0.3**
PLG	**Polygyros**	**1.40**	**278**	P	Pn		**12 19 23.8**	**-0.3**
AYVA	**Ayvalık**	**1.41**	**128**	*i* P	Pg		**12 19 25.6**	**-0.8**
AYVA				*i* S	Sb		**12 19 42.7**	**-0.2**
SKY	**Skiros Island**	**1.43**	**203**	P	Pn		**12 19 24.6**	**+0.1**
SKY				S	Sb		**12 19 43.8**	**+0.4**
KDZ	**Kurdzhali**	**1.46**	**5**	P	Pn		**12 19 24.5**	**-0.4**
KDZ	**Kurdzhali**	**1.46**	**5**	Pg	Pb		**12 19 26.4**	**+0.5**
KDZ	**Kurdzhali**	**1.46**	**5**	PN	Pn		**12 19 24.7**	**-0.2**
AOS	**Alonnisos**	**1.48**	**227**	P	Pn		**12 19 24.7**	**-0.5**
AOS				S	Sb		**12 19 45.5**	**+0.7**
AOS				AML	AML		12 19 51.5	
	comp=N,1731μm,0.5s							
AOS				AML	AML		12 19 51.7	
	comp=E,2080μm,0.5s							
AOS	**Alonnisos**	**1.48**	**227**	PN	Pn		**12 19 25.0**	**-0.2**
AOS	**Alonnisos**	**1.48**	**227**	P	Pn		**12 19 24.8**	**-0.4**
AOS				S	Sb		**12 19 44.4**	**-0.5**
	comp=E,938nm,0.8s							
RKY	**Sarkoy-Tekirda**	**1.54**	**71**	PN	Pb		**12 19 26.5**	**-0.9**
SART	**Tekirdag**	**1.54**	**71**	*i* P	Pb		**12 19 26.4**	**-1.1**
SART				*i* S	Sg		**12 19 50.2**	**+1.3**
RZN	**Rozhen**	**1.55**	**345**	P	Pn		**12 19 26.6**	**+0.3**
RZN	**Rozhen**	**1.55**	**345**	Pg	Pg		**12 19 28.9**	**0.0**
NVR	**Nevrokopi**	**1.57**	**318**	P	Pn		**12 19 26.2**	**-0.2**
NVR	**Nevrokopi**	**1.57**	**318**	P	Pn		**12 19 26.1**	**-0.3**
SRS	**Serrai**	**1.57**	**306**	*e*Pn	Pn		**12 19 26.1**	**-0.4**
SRS	**Serrai**	**1.57**	**306**	P	Pn		**12 19 26.1**	**-0.4**
SRS	**Serrai**	**1.57**	**306**	P	Pn		**12 19 26.0**	**-0.4**
SOH	**Sokhos**	**1.58**	**294**	P	Pn		**12 19 26.4**	**-0.2**
SOH	**Sokhos**	**1.58**	**294**	P	Pn		**12 19 26.4**	**-0.2**
MAR3	**Marsite Statio**	**1.64**	**70**	PN	Pn		**12 19 27.4**	**0.0**
MAR2	**Marsite Statio**	**1.65**	**71**	PN	Pn		**12 19 27.4**	**-0.1**
PSRA	**Psara**	**1.67**	**172**	P	Pb		**12 19 28.5**	**-1.0**
DKL	**Dikili**	**1.69**	**131**	PN	Pb		**12 19 29.5**	**-0.5**
HORT	**Hortiatis**	**1.70**	**284**	P	Pn		**12 19 27.9**	**-0.4**
HORT	**Hortiatis**	**1.70**	**284**	PN	Pn		**12 19 28.0**	**-0.2**
HORT	**Hortiatis**	**1.70**	**284**	P	Pn		**12 19 28.1**	**-0.2**
KNL	**Balıkesir**	**1.73**	**87**	*i* P	Pg		**12 19 31.3**	**-1.2**
KNL				*i* S	Sg		**12 19 51.5**	**+0.8**
XOR	**Xorichti**	**1.80**	**243**	P	Pn		**12 19 28.8**	**-0.8**
XOR	**Xorichti**	**1.80**	**243**	P	Pn		**12 19 28.8**	**-0.8**
KYMI	**Kymi, Euboea I**	**1.80**	**210**	P	Pn		**12 19 29.2**	**-0.5**
KYMI	**Kymi, Euboea I**	**1.80**	**210**	P	Pn		**12 19 29.1**	**-0.5**
MMB	**Musomiste**	**1.81**	**321**	P	Pn		**12 19 29.6**	**-0.2**
ZEDA	**zmir-Bergama**	**1.86**	**131**	*i* P	Pb		**12 19 32.6**	**-0.3**
ZEDA				*i* S	Sg		**12 19 58.7**	**-0.5**
BALY	**Balya**	**1.87**	**103**	*i* P	Pb		**12 19 32.5**	**-0.4**
BALY				*i* S	Sg		**12 19 59.4**	**+0.1**
PLD	**Plovdiv**	**1.95**	**348**	PN	Pn		**12 19 31.9**	**+0.2**
EDRB	**Edirne**	**1.99**	**34**	PN	Pn		**12 19 32.0**	**-0.2**
STEP	**BALIKESIR_Sava**	**2.06**	**113**	*i* P	Pb		**12 19 34.9**	**-1.3**
STEP				*i* S	Sg		**12 20 05.9**	**+0.4**
KIRK	**Kırklareli**	**2.10**	**41**	*i* P	Pn		**12 19 34.8**	**+1.0**
KIRK				*i* S	Sg		**12 20 04.9**	**-2.0**
URLA	**Izmir**	**2.11**	**150**	PN	Pn		**12 19 34.9**	**+1.1**
URLA	**Izmir**	**2.11**	**150**	*i* P	Pb		**12 19 35.0**	**-2.0**
URLA				*i* S	Sg		**12 20 06.1**	**-0.8**
KARY	**Karystos**	**2.26**	**197**	P	Pn		**12 19 35.7**	**-0.1**
GRG	**Griva**	**2.31**	**290**	PN	Pn		**12 19 37.3**	**+0.7**
VAY	**Valandovo**	**2.33**	**300**	*e*Pn	Pn		**12 19 35.5**	**-1.4**
VAY				*e*Sn	Sg		**12 20 13.8**	**-0.4**
VAY	**Valandovo**	**2.33**	**300**	*i* Pn	Pg		**12 19 44.1**	**+0.2**
KKB	**Krupnik**	**2.34**	**316**	P	Pn		**12 19 37.1**	**0.0**
AKHS	**Akhisar**	**2.37**	**123**	*i* P	Pb		**12 19 39.2**	**-2.3**
AKHS				*i* S	Sg		**12 20 15.1**	**-0.3**
DGB	**zmir**	**2.48**	**149**	*i* P	Pn		**12 19 37.5**	**-1.4**
PGB	**Panagyurishte**	**2.49**	**341**	P	Pn		**12 19 39.4**	**+0.3**
VILL	**Villia**	**2.53**	**217**	P	Pn		**12 19 39.4**	**-0.3**
AGG	**Agios Georgios**	**2.55**	**244**	PN	Pn		**12 19 40.4**	**+0.5**
ELBA	**Catalca**	**2.59**	**67**	*i* P	Pb		**12 19 44.7**	**-0.5**
ELBA				*i* S	Sg		**12 20 21.8**	**-0.6**
STIP	**Stip**	**2.77**	**304**	*i* Pn	Pn		**12 19 41.9**	**-1.0**
SMG	**Samos**	**2.77**	**153**	P	Pn		**12 19 44.2**	**+1.2**
SMG	**Samos**	**2.77**	**153**	P	Pn		**12 19 44.1**	**+1.2**
VTS	**Vitosha**	**2.86**	**328**	P	Pn		**12 19 45.3**	**+0.8**
ULDT	**Uludag**	**2.97**	**90**	*i* P	Pn		**12 19 47.1**	**+1.3**
ULDT				*i* S	Sg		**12 20 33.8**	**-0.7**
IGD	**Bursa**	**3.02**	**87**	*i* P	Pn		**12 19 47.0**	**+0.8**
IGD				*i* S	Sg		**12 20 34.9**	**-1.2**
MANT	**Manisa**	**3.07**	**123**	*i* P	Pn		**12 19 49.3**	**+2.0**
BOSS	**Bosilegrad**	**3.11**	**319**	*e*Pn	Pn		**12 19 49.1**	**+1.5**
BOSS				*e*Sn	Sg		**12 20 37.7**	**-1.3**
APE	**Apeiranthos**	**3.13**	**176**	⇑P	Pg		**12 19 58.2**	**-1.0**
USAK	**Uak-Merkez**	**3.26**	**116**	*i* P	Pn		**12 19 52.0**	**+2.3**
PRVS	**Prvonek**	**3.33**	**315**	*e*Pn	Pn		**12 19 51.6**	**+1.0**
PRVS				*e*Sn	Sb		**12 20 41.8**	**+3.6**
GDZ	**Gediz**	**3.44**	**107**	*i* P	Pn		**12 19 55.0**	**+2.7**
RAZG	**Razgrad**	**3.49**	**15**	⇓P	Pn		**12 19 53.8**	**+0.9**
BILE	**Bilecik/Merkez**	**3.53**	**89**	*i* P	Pn		**12 19 55.0**	**+1.5**
ANDZ	**Kutahya, Merke**	**3.63**	**99**	*i* P	Pn		**12 19 57.0**	**+2.1**
ZAPS	**Zavoj**	**3.65**	**328**	*e*Pn	Pn		**12 19 58.2**	**+3.2**
ZAPS				*e*Sn	Sg		**12 20 52.8**	**-3.6**
KAND	**Kocaeli-Kandir**	**3.86**	**75**	*i* P	Pn		**12 19 58.0**	**+0.2**
GEYV	**SAKARYA_Geyve**	**3.86**	**84**	*i* P	Pn		**12 19 58.8**	**+0.9**
KAYN	**Sakarya, Kayna**	**3.94**	**77**	*i* P	Pn		**12 19 59.6**	**+0.6**
TAVA	**DENİZLİ_Tavas**	**3.94**	**133**	*i* P	Pn		**12 20 01.7**	**+2.6**
BORA	**Eskisehir**	**4.00**	**93**	*i* P	Pn		**12 20 01.4**	**+1.6**
KZIL	**AFYON_Kizioren**	**4.25**	**116**	*i* P	Pn		**12 20 07.2**	**+3.8**
ZAGS	**Zajecar**	**4.26**	**329**	*e*Pn	Pn		**12 20 03.5**	**+0.1**
ZAGS				*e*Sn	Sb		**12 21 06.7**	**+1.8**
SELS	**Selova**	**4.33**	**316**	*e*Pn	Pn		**12 20 03.8**	**-0.6**
SELS				*e*Sn	Sb		**12 21 05.2**	**-1.7**
HUMR	**Humele**	**4.33**	**357**	⇓P	Pn		**12 20 03.

TESR	Tescani	6.39	9	‖P		Pn	12 20 32.8	+0.2
BRTR	Keskin Array B	6.45	92	Pn		Pn	12 20 35.1	+1.5
	comp=E,1.9nm,0.3s,baz=271,slow=14,SNR=23							
BRTR				Sn		Sn	12 21 45.5	-1.5
	comp=E,0.3nm,0.3s,baz=268,slow=15,SNR=1.3							
BRTR				Lg		Lg	12 22 26.8	
	comp=E,0.2nm,0.3s,baz=262,slow=22,SNR=3.0							
TIP	Timpagrande	6.64	264	‖P		Pn	12 20 36.9	+0.8
BURAR	Bucovina Array	7.42	360	↑P		Pn	12 20 47.9	+1.1
AKASG	Malin Array Be	10.86	13	Pn		Pn	12 21 32.6	-1.4
	comp=E,0.8nm,0.3s,baz=201,slow=13,SNR=1.6							
TORD	Torodi Ar. Bea	33.98	224	P		P	12 25 42.9	+0.8
	comp=E,0.3nm,0.7s,baz=39,slow=9.3,SNR=1.7							
MKAR	Makanchi Array	41.10	61	P		P	12 26 43.5	+1.3
	comp=E,0.3nm,0.6s,baz=282,slow=7.2,SNR=1.9							

IDC 27 12:24:46.2±2.1, 1°.81N×126°.24E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/40, mbtmp3.6/3, Error ellipse: s-maj=194.6km s-min=24.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	23.03	160	P		P	12 29 51.4	-1.8
	0.9nm,0.5s,baz=338,slow=11,SNR=9.3							
ASAR	Alice Springs	26.39	164	P		P	12 30 26.1	+1.5
	0.6nm,0.6s,baz=348,slow=13,SNR=8.2							
MKAR	Makanchi Array	58.86	326	P		P	12 34 46.7	-0.2
	0.2nm,0.4s,baz=130,slow=7.0,SNR=7.1							

WEL 27 12:27:48.3±1.2, 34°S±23°×17°9W±3°8, h33km, M4.0/10, mB4.7/2, ML4.1/10, MLv4.0/10, Mw(mB)3.9/2, Error ellipse: s-maj=0.1km s-min=0.0km az=120.4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MXZ	Matakaoa Point	4.32	208	P		Pn	12 28 52.3	+0.6
MXZ				S		Sn	12 29 41.8	+1.1
WMGZ	Waiomatatini S	4.50	205	P		Pn	12 28 56.4	+2.2
PKGZ	Pakihiroa	4.69	208	P		Pn	12 28 56.7	-0.1
PKGZ				S		Sn	12 29 50.4	+0.3
HAZ	Te Kaha	4.69	211	P		Pn	12 28 56.5	-0.3
HAZ				S		Sn	12 29 53.7	+3.6
RUGZ	Raukumara Rang	4.92	210	P		Pn	12 29 00.7	+0.8
RUGZ				S		Sn	12 29 56.7	+1.0
CNGZ	Carnagh Statio	5.17	203	P		Pn	12 29 05.4	+2.0
MWZ	Matawai	5.29	209	P		Pn	12 29 04.7	-0.3
MWZ				S		Sn	12 30 05.9	+1.0
URZ	Urewera	5.41	213	P		Pn	12 29 05.2	-1.4
URZ				S		Sn	12 30 08.4	+0.7
RAGZ	Rawiri	5.47	209	P		Pn	12 29 08.7	+1.1
RAGZ				S		Sn	12 30 11.1	+1.6
MUGZ	Murupara	5.74	214	P		Pn	12 29 10.4	-0.8
MUGZ				S		Sn	12 30 15.6	-0.3
SNGZ	Shannon Statio	5.75	208	P		Pn	12 29 10.7	-0.6
SNGZ				S		Sn	12 30 18.6	+2.4
KNZ	Kokohu	5.84	205	P		Pn	12 29 12.1	-0.4
KNZ				S		Sn	12 30 15.6	-2.6
ARHZ	Aropaoanui	6.30	208	P		Pn	12 29 17.4	-1.5
ARHZ				S		Sn	12 30 29.0	-0.7

*IDC **27** 12:31:12.4±0.6, 18°.20N×104°.31W, h0km, mb4.5/21, mb1 4.7/25, mb1mx4.6/47, mbtmp4.5/25, ML4.2/5, MS4.5/31, Ms1 4.5/31, ms1mx4.4/44, Error ellipse: s-maj=20.3km s-min=11.3km az=62.0*

*NEIC **27** 12:31:13.4±2.4, 18°.27N±0°.04×104°.36W±0°.04, h10km±1km, mb4.8/321, Md5.0/31(MEX), Error ellipse: s-maj=7.5km s-min=6.4km az=150.0*

*MEX **27** 12:31:14.0±0.8, 18°.13N×104°.46W, h10km, MD5.0*

*GCMT **27** 12:31:16.4±0.2, 18°.26N±0°.01×104°.45W±0°.01, h21km, MW5.2/129, Moment Tensor Solution. s72,c107; s129,c222; Duration: 1ſ0 Moment tensor: Scale 10^16 Nm; Mrr0.39±.16; Mθθ-1.89±.14; Mϕϕ1.50±.13; Mrθ1.71±.25; Mθϕ-7.63±.14; Mϕr2.23±.25; Best double couple: M₀8.25400×10^16 NP1:ϕs278.00000°,δ74.00000°, λ-172.00000°. NP2:ϕs185.00000°,δ82.00000°, λ-16.00000°. Principal axes: T 7.6870, Plg6.0000°, Azm232.0000°; N 1.1390, Plg72.0000°, Azm340.0000°; P -8.8220, Plg17.0000°, Azm141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 12:31:13.1±1.7, 18°.21N±0°.05×104°.40W±0°.05, h8km±9km, n509, σ1ſ58/386, mb4.8/126, MS4.6/36, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMIG	Aquila	1.00	85	eP		Pg	12 31 31.0	-1.5
MMIG				i S		Sg	12 31 44.9	-0.6
MMIG	Aquila	1.00	85			Pg	12 31 31.0	-1.5
MMIG						Sg	12 31 44.9	-0.6
R15V		1.03	22	eP		Pg	12 31 31.4	-1.6
R15V				i S		Sg	12 31 45.5	-0.9
R15V		1.03	22			Pg	12 31 31.4	-1.6
COIG	Colima	1.18	35	eP		Pb	12 31 34.3	-1.5
COIG				i S		Sg	12 31 50.4	-0.6
EZ5V		1.47	31	eP		Pn	12 31 39.1	-1.1
EZ5V				i S		Sn	12 31 57.7	-2.1
EZ5V		1.47	31			Pn	12 31 39.1	-1.1
ANIG	Ahuacatlan	2.83	358	eP		Pn	12 31 58.3	-0.5
ANIG				i S		Sn	12 32 32.4	-0.8
ANIG	Ahuacatlan	2.83	358			Pn	12 31 58.3	-0.5
ANIG						Sn	12 32 32.4	-0.8
MOIG	Morelia	3.37	64	eP		Pn	12 32 05.4	-0.9
MOIG				i S		Sn	12 32 46.3	-0.4
MOIG	Morelia	3.37	64			Sn	12 32 46.3	-0.4
MOIG	Morelia	3.37	64	Pn		Pn	12 32 07.1	+0.8
IGIG	Irapuato, Guan	3.85	48	i P		Pn	12 32 12.6	-0.3
IGIG	Irapuato, Guan	3.85	48			Pn	12 32 12.6	-0.3
CAIG	El Cayaco	4.11	106	i P		Pn	12 32 15.3	-1.0
ZAIG	Zacatecas	4.85	20	i P		Pn	12 32 27.0	+0.3
ZAIG				i S		Sn	12 33 22.5	-0.7
ZAIG	Zacatecas	4.85	20	Pn		Pn	12 32 28.3	+1.6
UNM	Universidad Na	5.07	77	Pn		Pn	12 32 28.6	-1.1
YAIG	Yautepec	5.10	82	i P		Pn	12 32 30.1	+0.1
YAIG				i S		Sn	12 33 28.4	-0.9
YAIG	Yautepec	5.10	82			Pn	12 32 30.1	+0.1
YAIG						Sn	12 33 29.0	-0.3
DEIG	Demacu	5.48	67	i P		Pn	12 32 35.6	+0.3
TLIG	Tlapa	5.59	96	eP		Pn	12 32 36.6	-0.2
TLIG	Tlapa	5.59	96	Pn		Pn	12 32 36.0	-0.8
H06E1	SOCORRO T-PHAS	6.22	276	T		T	12 38 59.1	
	SNR=135							
H06S1	SOCORRO T	6.25	276	T		T	12 39 13.9	
	SNR=65							
PNIG	Pinotepa	6.26	106	eP		Pn	12 32 45.7	-0.1
PNIG	Pinotepa	6.26	106			Pn	12 32 46.2	+0.4
H06N1	SOCORRO T-PHAS	6.28	277	T		T	12 39 23.3	
	SNR=4.1							
HLIG	Huajuapan de L	6.29	92	eP		Pn	12 32 46.5	0.0
PEIG	Puerto Escondi	7.28	107	i P		Pn	12 32 59.8	-0.1
SLBS	Sierra La Lagu	7.52	317	Pn		Pn	12 33 03.4	+0.2
LPIG	La Paz	8.05	318	Pn		Pn	12 33 12.4	+2.1
	4.8nm,0.3s,baz=338,slow=4.8,SNR=9.7							
LPIG				LR		LR	12 35 33.4	
	comp=Z,4μm,20.2s,baz=140,slow=32							
HPIG		8.76	353			Pn	12 33 22.9	+2.6
CMIG	Matias Romero	9.14	96	Pn		Pn	12 33 26.6	+1.2
	6.7nm,0.3s,baz=273,slow=9.9,SNR=46							
CMIG				Lg		Lg	12 35 57.9	
	baz=50,slow=20,SNR=3.6							
833A	Chaparral WMA,	11.06	24	P		Pn	12 33 56.5	+4.7
	baz=205							
833A	Chaparral WMA,	11.06	24	Pn		Pn	12 33 54.2	+2.4
TX31	Lajitas Ar. Si	11.09	3			Pn	12 33 54.4	+2.2
TX32	Lajitas Array	11.09	3			Pn	12 33 54.7	+2.5
TXAR	Lajitas Array	11.09	3	Pn		Pn	12 33 55.8	+3.5
	0.4nm,0.3s,baz=186,slow=14,SNR=31							
TXAR				Lg		Lg	12 36 59.1	
	0.2nm,0.3s,baz=188,slow=26,SNR=3.3							
TXAR				LR		LR	12 38 08.6	
	comp=Z,1μm,19.9s,baz=0.0,slow=38							
TXAR	Lajitas Array	11.09	3			Pn	12 33 54.3	+2.0
SRIG	Santa Rosalia	11.59	323			Pn	12 34 02.8	+3.8
CCIG	Comitan	11.87	97	i P		Pn	12 34 03.4	+0.4
CCIG	Comitan	11.87	97	Pn		Pn	12 34 02.9	-0.1
HSIG		12.32	332			Pn	12 34 10.4	+1.5
JCT	Junction City	12.91	18	P		Pn	12 34 20.8	+3.8
	baz=200,SNR=5.5							
JCT	Junction City	12.91	18	Pn		Pn	12 34 16.1	-0.9
MNTX	Cornudas Mount	13.46	356	P		Pn	12 34 27.4	+3.0
	baz=176,SNR=12							
MNTX	Cornudas Mount	13.46	356	Pn		Pn	12 34 24.6	+0.1
319A	Douglas	13.83	342			Pn	12 34 30.0	+0.3
GDL2	Guadalupe Moun	13.93	0			Pn	12 34 29.3	-1.7
435B	Jarrell	13.96	25			Pn	12 34 30.2	-1.2
121A	Cookes Peak, D	14.58	349	P		Pn	12 34 42.3	+2.3
	baz=167							
ABTX	Abilene, Hawle	14.98	16	P		Pn	12 34 46.6	+1.3
	baz=197,SNR=12							
WHTX	Lake Whitney,	15.09	23	P		P	12 34 50.1	-1.9
	baz=206,SNR=15							
WHTX	Lake Whitney,	15.09	23			Pn	12 34 46.1	-0.5
TUC	Tucson	15.17	339	P		P	12 34 50.7	-2.4
	baz=156							
TUC	Tucson	15.17	339	Pn		Pn	12 34 45.4	-2.5
TUC				IAmb		IAmb	12 35 05.4	
	comp=Z,32nm,1.0s							
214A	Organ Pipe Nat	15.65	333	P		P	12 34 57.1	-1.3
	baz=149,SNR=20							
214A	Organ Pipe Nat	15.65	333	IAmb		IAmb	12 34 58.5	
	comp=Z,94nm,1.3s							
MSTX	Muleshoe	15.76	5	P		Pn	12 34 57.2	+1.5
	baz=185,SNR=12							
237A	Washetta, Mont	15.77	28	IAmb		IAmb	12 35 19.7	
	comp=Z,50nm,0.9s							
SFX	San Felipe	15.90	325	Pn		Pn	12 34 57.4	+0.1
Y22D	IRIS PASSCAL I	15.96	352	Pn		Pn	12 34 57.2	-1.0
BNM	Barren Site	16.00	353	P		Pn	12 34 59.9	+1.1
LENM	Lemitar	16.05	352			Pn	12 34 59.7	+0.2
441A	DeRidder	16.11	37			Pn	12 34 58.8	-1.2
NATX	Nacogdoches	16.11	31	P		Pn	12 35 01.5	+1.5
	baz=215							
NATX	Nacogdoches	16.11	31	Pn		Pn	12 34 59.9	-0.1
SPX	San Pedro Mart	16.24	324	P		P	12 35 03.8	-1.4
SPX				IAmb		IAmb	12 35 18.6	
	comp=Z,106nm,1.4s							
Z35A	Perchaven, San	16.36	22			Pn	12 35 02.8	-0.5
Z35A				IAmb		IAmb	12 35 07.2	
	comp=Z,51nm,0.7s							
ANMO	Albuquerque	16.77	354	Pn		P	12 35 11.2	+0.3
	comp=Z,0.3nm,0.3s,baz=160,slow=13,SNR=18							
ANMO				Lg		Lg	12 40 15.7	
	comp=Z,0.1nm,0.3s,baz=68,slow=12,SNR=3.3							
ANMO				LR		LR	12 41 19.9	
	comp=Z,2μm,19.7s,baz=178,slow=36							
ANMO	Albuquerque	16.77	354	P		P	12 35 12.0	+1.1
	baz=173							
ANMO	Albuquerque	16.77	354	P		P	12 35 10.6	-0.3
AMTX	Amarillo	16.78	8	P		P	12 35 11.5	+0.5
	baz=189							
AMTX	Amarillo	16.78	8			Pn	12 35 09.6	+0.9
X18A	Snowflake	16.99	344	P		P	12 35 13.8	+0.5
342A	Flagon Creek P	17.07	38	P		Pn	12 35 12.1	-0.1
Z38A	Mt. Pleasant	17.20	28	P		Pn	12 35 12.4	-1.5
WMOK	Wichita Mounta	17.20	16	P		Pn	12 35 13.9	0.0
	baz=198,SNR=19							
WMOK	Wichita Mounta	17.20	16			Pn	12 35 13.9	0.0
ESJX	Sierra Juarez	17.24	325	P		P	12 35 16.6	+0.5
Y14A	Wickenburg	17.45	335	P		Pn	12 35 17.3	+0.3
GLA	Glamis	17.50	330	P		P	12 35 20.5	+1.7
	baz=145,SNR=6.0							
GLA	Glamis	17.50	330	P		P	12 35 19.0	+0.2
CCX	Cicese	17.54	323	P		Pn	12 35 18.5	+0.4
RMX	La Rumorosa	17.77	326	P		P	12 35 22.2	+0.3
IKP	In-Ko-Pah, Jac	17.83	326	P		P	12 35 25.4	+3.0
	baz=141,SNR=13							
CBX	Cerro Bola	17.87	324	P		P	12 35 22.9	-0.2
SWSC	Sam W. Stewart	17.89	327	P		P	12 35 25.2	+2.0
	baz=142,SNR=6.5							
TKX	Tecate	18.03	325	IAmb		IAmb	12 35 30.6	
	comp=Z,31nm,0.5s							
344A	Wetbrook Farm	18.08	41	P		Pn	12 35 23.9	-0.8
MONP2	Monument Peak	18.18	326	P		P	12 35 30.0	+3.5
	baz=141,SNR=9.8							
X37A	Clayton	18.19	25	P		Pn	12 35 25.7	-0.4
PDMCI	Parker Dam,Lak	18.23	333	P		P	12 35 29.5	+2.6
	baz=149,SNR=10							
Z41A	Richland Creek	18.24	33	P		P	12 35 26.8	-0.2
	baz=217							
BC3	Big Chuckawall	18.29	329	P		P	12 35 30.5	+2.8
	baz=144,SNR=16							
WUAZ	Wupatki	18.32	342	P		P	12 35 30.7	+2.8
	baz=158,SNR=24							
WUAZ	Wupatki	18.32	342	IAmb		IAmb	12 35 34.3	
	comp=Z,87nm,1.4s							
BCOK	Bluff Creek, N	18.39	18	IAmb		IAmb	12 35 40.3	
	comp=Z,72nm,0.6s							
109C	Camp Elliot, M	18.55	324	P		Pn	12 35 32.7	+2.2
	baz=139							
IRM	Iron Mountain	18.56	331	P		Pn	12 35 34.4	+3.8
	baz=148,SNR=26							
143A	Socs Landing,	18.57	37	IAmb		IAmb	12 35 35.7	
	comp=Z,120nm,1.5s							
TPFO	Pinon Flats	18.75	327	P		Pn	12 35 35.5	+2.4
	baz=142,SNR=26							
PFO	Pinyon Flats O	18.76	327	P		Pn	12 35 35.0	+1.8
	comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=23							
PFO				LR		LR	12 42 05.1	
	comp=Z,1μm,18.9s,baz=152,slow=35							
PFO	Pinyon Flats O	18.76	327	P		Pn	12 35 35.5	+2.3
	baz=142,SNR=23							
PFO	Pinyon Flats O	18.76	327	P		P	12 35 31.2	-1.6
BELC	Belle Mtn. Jos	18.84	329	P		Pn	12 35 35.7	+1.6
	baz=144,SNR=17							
T25A	Trinidad	18.86	360	P		Pn	12 35 35.7	+1.3
	baz=180,SNR=6.7							
MIAR	Mount Ida	18.91	29	P		P	12 35 33.0	-1.3
	baz=213							
CROK	Carrier	19.08	16	IAmb		IAmb	12 36 04.5	
	comp=Z,70nm,1.0s							
MURC	Murrieta	19.14	326	P		Pn	12 35 39.6	+1.9
	baz=140							
TUL1	Leonard	19.21	22	P		P	12 35 37.4	-0.2
	baz=205,SNR=22							
TUL1	Leonard	19.21	22	IAmb		IAmb	12 35 41.0	
	comp=Z,59nm,0.7s							
X40A	Basin Creek Fa	19.21	30	P		P	12 35 36.5	-1.1
	baz=215							
X40A	Basin Creek Fa	19.21	30	P		P	12 35 36.0	-1.6
MVCO	Mesa Verde	19.27	350	P		Pn	12 35 40.3	+0.9
	baz=168							
GMRC	Granite Mounta	19.31	331	P		Pn	12 35 40.8	+0.9
	baz=146,SNR=18							
W39A	Magazine	19.37	27	P		P	12 35 39.1	-0.3
	baz=212							
U15A	North Rim	19.44	341			P	12 35 38.3	-2.1
U15A				IAmb		IAmb	12 36 01.3	
	comp=Z,77nm,1.4s							
SDCO	Great Sand Dun	19.49	357	P		Pn	12 35 42.5	+0.4
	baz=177,SNR=10							
SDCO	Great Sand Dun	19.49	357	P		P	12 35 39.4	-1.5
BBRC	Big Bear Solar	19.51	327	P		Pn	12 35 44.6	+2.2
	baz=142							
ACON	Acoyapa	19.57	106	P		Pn	12 35 46.6	+3.7
ACON				IAmb		IAmb	12 35 47.6	
	comp=Z,49nm,1.1s							
S22A	4UR Ranch, Cre	19.58	354	P		Pn	12 35 43.4	+0.2
	baz=173,SNR=16							
CIS	Catalina Islan	19.67	323	P		Pn	12 35 44.9	+0.9
	baz=137,SNR=7.4							
HEC	Hector,Ludlow	19.67	330	P		Pn	12 35 45.4	+1.3
	baz=144,SNR=22							
BFSC	Mount Baldy Ra	19.87	326	P		Pn	12 35 47.2	+0.6
	baz=140,SNR=30							
KS20	Mayfield South	19.88	16	P		P	12 35 44.0	-0.9
KS20				IAmb		IAmb	12 35 45.5	
	comp=Z,27nm,0.7s							
T35A	Sooner Cattle	19.89	19	IAmb		IAmb	12 35 47.4	
	comp=Z,104nm,1.4s							
146A	Union	19.92	41	IAmb		IAmb	12 35 51.6	
	comp=Z,49nm,1.2s							
TUQ	Turquoise Moun	19.97	331	P		Pn	12 35 49.8	+2.0
	baz=146,SNR=40							
W41B	Gary Mavity, V	20.05	30	P		P	12 35 46.6	-0.1
	baz=215,SNR=7.1							
PASC	Pasadena Art C	20.11	325	IAmb		IAmb	12 35 56.9	
	comp=Z,66nm,1.4s							
WHAR	Wooly Hollow	20.13	30	IAmb		IAmb	12 35 49.2	
	comp=Z,37nm,1.0s							
U38A	Gravette	20.20	24	P		P	12 35 47.2	-1.1
SNCC	San Nicolas Is	20.21	321	P		Pn	12 35 53.3	+2.9
	baz=134							
X43A	Marvell	20.22	34	P		P	12 35 49.0	+0.3
	baz=220,SNR=6.4							
PV13	Radium Mtn., P	20.25	350	IAmb		IAmb	12 36 04.5	
	comp=Z,36nm,1.0s							
GSC	Goldstone, Bar	20.28	330	P		Pn	12 35 51.7	+0.4
	baz=144,SNR=29							
BRAL	Brewton	20.33	47	P		P	12 35 49.3	-0.5
	baz=234,SNR=6.1							
PV03	Paradox Valley	20.34	350	IAmb		IAmb	12 36 05.6	
	comp=Z,56nm,1.3s							
PV18	Skein Mesa, Pa	20.35	350	IAmb		IAmb	12 36 05.6	
	comp=Z,45nm,1.1s							
PV15	Paradox Valley	20.37	351	IAmb		IAmb	12 36 06.7	
	comp=Z,58nm,1.3s							
PV11	David Mesa, Pa	20.39	350	IAmb		IAmb	12 36 06.3	
	comp=Z,86nm,1.4s							
PV12	Saucer Basin,	20.40	350	IAmb		IAmb	12 36 09.2	
	comp=Z,68nm,1.2s							
JTS	Las Juntas de	20.41	110	P		Pn	12 35 53.2	+0.2
	comp=Z,9.1nm,0.9s,baz=323,slow=14,SNR=2.4							
JTS				LR		LR	12 42 27.6	
	comp=Z,512nm,18.7s,baz=355,slow=33							
JTS	Las Juntas de	20.41	110	IAmb		IAmb	12 36 17.6	
	comp=Z,46nm,1.2s							
PV16	Nyswonger Mesa	20.41	350	IAmb		IAmb	12 36 06.4	
	comp=Z,62nm,1.3s							
PV19	Morning Glory	20.42	350	IAmb		IAmb	12 36 08.6	
	comp=Z,62nm,1.3s							
PV20	West Nyswonger	20.45	350	P		P	12 35 50.4	-0.9
PV20						IAmb	12 36 06.7	
	comp=Z,75nm,1.4s							
Y45A	Yeager Farm, C	20.48	38	IAmb		IAmb	12 35 52.0	
	comp=Z,52nm,0.7s							
PV04	Paradox Valley	20.49	350	IAmb		IAmb	12 36 00.1	
	comp=Z,79nm,1.4s							
PV14	Lion Creek, Pa	20.49	350	IAmb		IAmb	12 36 09.3	
	comp=Z,38nm,1.0s							
SHOC	Shoshone, Teco	20.52	332	P		Pn	12 35 54.4	+0.3
	baz=146,SNR=23							
EDW2	Edwards Air Fo	20.54	327	P		Pn	12 35 54.0	-0.4
	baz=140,SNR=18							
SHPR	Sheep Range	20.55	335	IAmb		IAmb	12 35 59.6	
	comp=Z,60nm,1.2s							
Q24A	Divide	20.69	358	P		Pn	12 35 55.2	-1.1
	baz=178							
OSI	Osito Audit: C	20.73	325	P		P	12 35 52.2	-2.1
OSI				IAmb		IAmb	12 36 16.3	
	comp=Z,83nm,1.4s							
R32A	Long Quarter,	20.74	13	IAmb		IAmb	12 36 21.5	
	comp=Z,35nm,0.9s							
U40A	Yellville	20.75	27	P		P	12 35 53.4	-1.0
	baz=212,SNR=24							
U40A	Yellville	20.75	27	IAmb		IAmb	12 35 55.2	
	comp=Z,32nm,0.7s							
KSCO	Kaye Shedlock'	20.78	4	P		Pn	12 35 56.7	-0.5
	baz=184							
KSCO	Kaye Shedlock'	20.78	4	P		P	12 35 54.7	-0.2
KSCO				IAmb		IAmb	12 36 22.2	
	comp=Z,74nm,1.4s							
LRMC	Laurel Mtn Rad	20.85	328	P		Pn	12 35 57.7	-0.3
	baz=142,SNR=16							
MTPU	Mount Pierson	20.90	343	P		P	12 35 57.6	+1.2
Z47A	Carrollton	20.91	41	IAmb		IAmb	12 35 57.5	
	comp=Z,43nm,0.7s							
CBKS	Cedar Bluff	20.93	10	P		P	12 35 56.0	-0.3
	baz=192							
CBKS	Cedar Bluff	20.93	10	IAmb		IAmb	12 36 23.1	
	comp=Z,50nm,1.0s							
SMCO	Snowmass	21.01	354	P		P	12 35 59.3	+1.7
OXF	Oxford	21.03	37	P		P	12 35 56.6	-0.8
	baz=223							
OXF	Oxford	21.03	37	IAmb		IAmb	12 36 02.2	
	comp=Z,58nm,0.9s							
ARVC	Arvin	21.17	326	P		P	12 36 01.0	+2.1
	baz=139,SNR=10							
MPMC	Manual Prospec	21.21	330	P		P	12 36 01.7	+2.1
	baz=144,SNR=26							
FURC	Furnace Creek,	21.25	331	P		P	12 36 01.8	+2.0
	baz=146,SNR=13							
PRN	Pahroc Range	21.29	336	P		P	12 35 59.3	-1.0
PRN				IAmb		IAmb	12 36 18.9	
	comp=Z,50nm,1.2s							
LCAR	Lake Charles	21.30	31	P		P	12 35 58.5	-1.8
MSU	Marysvale	21.34	343	P		P	12 36 00.6	-0.3
MVU	Marysvale	21.34	343	P		P	12 36 01.2	+0.3
250A	Grady	21.34	47	P		P	12 35 56.8	-4.1
TPNV	Topopah Spring	21.38	333	P		P	12 36 04.0	+2.6
	baz=148,SNR=57							
TPNV	Topopah Spring	21.38	333	P		P	12 36 01.3	-0.1
ISA	Isabella, Lake	21.39	327	P		P	12 36 04.1	+2.7
	baz=141,SNR=24							
ISA	Isabella, Lake	21.39	327	P		P	12 36 01.8	+0.4
ISA				IAmb		IAmb	12 36 11.4	
	comp=Z,51nm,1.2s							
LRAL	Lakeview Retre	21.50	43	P		P	12 36 01.4	-1.0
	baz=231,SNR=7.0							
PKM	Mcpherson Peak	21.54	323	P		P	12 36 05.5	+2.4
	baz=136,SNR=7.4							
S39A	Bolivar	21.70	24	P		P	12 36 03.8	-0.8
CWC	Cottonwood Cre	21.81	329	P		P	12 36 07.9	+2.0
	baz=143							
VES	Vestal, Richgr	21.85	326	P		P	12 36 09.0	+2.8
	baz=140,SNR=21							
KSU1	Kansas State U	21.89	16	P		P	12 36 06.6	0.0
	baz=200,SNR=12							
KSU1	Kansas State U	21.89	16	IAmb		IAmb	12 36 12.9	
	com

comp=Z,0.5nm,0.8s,baz=178,slow=4.2,SNR=3.5
NVAR Mina Array Bea 23.52 332 P P 12 36 25.6 +1.6
RWWY Rawlins 23.52 355 IAmb IAmb 12 36 28.7
comp=Z,36nm,1.3s
SWET Sewanee 23.57 40 IAmb IAmb 12 36 23.8
comp=Z,24nm,0.7s
P40A Paris 23.79 24 P P 12 36 23.8 -2.6
P40A IAmb IAmb 12 36 27.8
comp=Z,38nm,0.9s
SLM Saint Louis 23.80 28 P P 12 36 24.4 -2.1
SLM IAmb IAmb 12 36 26.7
comp=Z,36nm,0.8s
CLTN Cedars of Leba 23.92 38 P P 12 36 25.1 -2.6
CLTN IAmb IAmb 12 36 28.1
comp=Z,23nm,0.6s
KVN Kaiserville 23.94 333 IAmb IAmb 12 36 56.2
comp=Z,48nm,1.5s
W50A Signal Mountai 23.95 41 IAmb IAmb 12 36 38.3
comp=Z,24nm,0.7s
SPUT South Promonto 24.03 345 P P 12 36 28.5 -0.4
WAKR Walker 24.10 330 IAmb IAmb 12 36 58.0
comp=Z,35nm,1.3s
GOGA Godfrey 24.10 47 P P 12 36 27.7 -1.7
baz=236,SNR=25
GOGA Godfrey 24.10 47 P P 12 36 26.5 -2.8
T47A Sharon Grove 24.11 36 IAmb IAmb 12 36 30.2
comp=Z,29nm,0.7s
HWUT Hardware Ranch 24.11 347 IAmb IAmb 12 36 45.1
comp=Z,36nm,1.2s
ELK Elko 24.32 340 P P 12 36 33.6 +2.0
comp=Z,7.0nm,1.0s,baz=163,slow=8.3,SNR=16
ELK LR LR 12 45 51.3
comp=Z,933nm,19.3s,baz=164,slow=36
ELK Elko 24.32 340 IAmb IAmb 12 36 38.2
comp=Z,45nm,1.5s
K22A Casper 24.43 356 P P 12 36 32.9 +0.4
baz=175
K22A Casper 24.43 356 IAmb IAmb 12 36 57.3
comp=Z,24nm,1.1s
U49A Red Boiling Sp 24.53 38 P P 12 36 30.9 -2.4
U49A IAmb IAmb 12 36 39.7
comp=Z,14nm,0.6s
Q44A Meyer Farm, Va 24.58 30 P P 12 36 32.3 -1.4
CPCT Cooper Cave 24.61 42 IAmb IAmb 12 36 34.4
comp=Z,21nm,0.8s
PNTR Pine Nut 24.64 331 IAmb IAmb 12 36 41.5
comp=Z,19nm,0.9s
W52A Murphy 24.77 43 IAmb IAmb 12 36 36.5
comp=Z,33nm,1.0s
K31A O'Neill 24.80 10 IAmb IAmb 12 36 46.7
comp=Z,19nm,0.8s
VCNR Virginia City 24.83 331 IAmb IAmb 12 36 51.2
comp=Z,27nm,1.2s
BW06 Boulder Array 24.87 351 P P 12 36 37.4 +0.9
baz=168
BW06 Boulder Array 24.87 351 IAmb IAmb 12 37 01.0
comp=Z,22nm,1.3s
PDAR Pinedale Array 24.87 351 P P 12 36 37.8 +1.2
comp=Z,4.7nm,0.9s,baz=152,slow=11,SNR=21
PDAR PcP PcP 12 40 11.9 -0.6
comp=Z,0.7nm,0.9s,baz=156,slow=2.5,SNR=2.9
PDAR LR LR 12 46 55.4
comp=Z,1μm,18.4s,baz=178,slow=38
PDAR Pinedale Array 24.87 351 P P 12 36 36.2 -0.3
V51A Loudon 24.94 41 IAmb IAmb 12 36 37.5
comp=Z,26nm,0.9s
PAHR Pah Rah Range 25.04 332 IAmb IAmb 12 37 02.9
comp=Z,24nm,1.2s
AFDM Forest Hills D 25.19 328 P P 12 36 39.9 +0.7
TKL Tuckaleechee C 25.21 42 P P 12 36 38.7 -0.7
comp=Z,16nm,0.7s,baz=203,slow=9.9,SNR=38
TKL LR LR 12 47 31.2
comp=Z,642nm,21.9s,baz=246,slow=39
TKL Tuckaleechee C 25.21 42 P P 12 36 37.5 -1.9
TKL IAmb IAmb 12 36 39.2
comp=Z,17nm,0.8s
HODGE Hodges 25.39 47 IAmb IAmb 12 36 41.4
comp=Z,24nm,0.8s
V52A Sevierville 25.44 42 IAmb IAmb 12 36 42.1
comp=Z,20nm,0.7s
WCI Wyandotte Cave 25.45 35 P P 12 36 40.9 -0.6
baz=223
WCI Wyandotte Cave 25.45 35 P P 12 36 41.0 -0.6
WCI IAmb IAmb 12 36 44.6
comp=Z,24nm,0.8s
SCIA State Center 25.48 20 P P 12 36 41.6 -0.1
baz=205
X54A Belton 25.49 46 P P 12 36 41.3 -0.6
baz=236,SNR=23
157A Early Branch 25.50 51 P P 12 36 41.6 -0.4
baz=241
Y55A Saluda 25.51 48 P P 12 36 41.8 -0.4
baz=238,SNR=5.5
Z56A Williston 25.54 49 P P 12 36 41.9 -0.5
baz=239
BEKR Beckworth 25.62 331 IAmb IAmb 12 36 50.0
comp=Z,26nm,1.3s
HDIL Hopedale 25.79 27 P P 12 36 43.8 -0.8
baz=214,SNR=5.7
HDIL Hopedale 25.79 27 IAmb IAmb 12 36 44.7
comp=Z,22nm,0.8s
Y56A Pelion 25.83 49 P P 12 36 45.2 +0.2
baz=239
RSSD Black Hills 25.83 1 P P 12 36 45.5 +0.3
baz=181
RSSD Black Hills 25.83 1 P P 12 36 44.5 -0.7
LOHW Long Hollow 25.86 350 IAmb IAmb 12 37 06.6
comp=Z,31nm,1.1s
TZTN Tazewell 25.91 41 P P 12 36 45.7 0.0
baz=230
TZTN Tazewell 25.91 41 IAmb IAmb 12 37 06.8
comp=Z,18nm,1.0s
W54A Cherokee Point 25.92 45 P P 12 36 46.0 +0.2
baz=235,SNR=8.4
ORV Oroville 25.92 329 P P 12 36 45.6 -0.2
ORV IAmb IAmb 12 36 55.6
comp=Z,20nm,1.2s
X55A Gracelyn & Ava 25.95 47 P P 12 36 45.9 -0.3
baz=237
Z57A Bowman 26.01 50 P P 12 36 46.7 0.0
baz=240
PAULI Pauline 26.02 46 IAmb IAmb 12 36 49.3
comp=Z,20nm,0.9s
BLO Bloomington 26.02 33 IAmb IAmb 12 36 48.7
comp=Z,16nm,0.7s
GDXM Geysers 26.03 326 P P 12 36 47.1 +0.2
IMW Indian Meadow 26.19 349 IAmb IAmb 12 36 54.6
comp=Z,38nm,1.4s
ECSD EROS Data Cent 26.28 13 P P 12 36 48.7 -0.3
baz=197
NHSC New Hope 26.31 51 P P 12 36 50.1 +0.7
baz=241,SNR=8.2
NHSC New Hope 26.31 51 P P 12 36 49.5 +0.1
FLWY Flagg Ranch 26.33 350 IAmb IAmb 12 37 07.7
comp=Z,46nm,1.4s
X56A White Oak 26.39 47 P P 12 36 49.7 -0.4
baz=238
V54A Nebo 26.47 44 P P 12 36 50.9 0.0
baz=234
KMSC Kings Mountain 26.53 46 P P 12 36 50.5 -0.8
baz=236,SNR=6.6
KMSC Kings Mountain 26.53 46 IAmb IAmb 12 36 53.5
comp=Z,16nm,0.8s
YPP Pitchstone Pla 26.53 350 P P 12 36 49.3 -2.4
R50A Paris 26.59 37 IAmb IAmb 12 37 15.6
comp=Z,25nm,1.4s
S51A Beattyville 26.59 39 IAmb IAmb 12 37 11.0
comp=Z,17nm,0.9s
Y57A Sumter 26.59 49 P P 12 36 51.6 -0.3
baz=240,SNR=6.7
H17A Grant Village 26.62 350 P P 12 36 54.7 +2.3
baz=167
H17A Grant Village 26.62 350 P P 12 36 52.9 +0.6
H17A IAmb IAmb 12 36 59.4
comp=Z,23nm,1.4s
O03E Paynes Creek 26.64 329 P P 12 36 54.5 +2.1
baz=141,SNR=7.8
HLID Hailey 26.65 344 P P 12 36 54.0 +1.4
baz=158
SFIN Lafayette 26.66 30 P P 12 36 51.9 -0.5
baz=219,SNR=7.3
BIRD Birdtown, Kers 26.87 48 IAmb IAmb 12 36 57.6
comp=Z,30nm,1.2s
MFID Camas Ranch 26.92 341 P P 12 36 56.1 +1.2
MFID IAmb IAmb 12 37 02.0
comp=Z,31nm,1.4s
YMR Madison River 26.95 350 P P 12 36 54.7 -0.6

U54A Nelsons Funny 26.99 43 P P 12 36 54.7 -1.0
baz=233,SNR=5.2
U54A Nelsons Funny 26.99 43 IAmb IAmb 12 36 57.5
comp=Z,20nm,0.8s
WVOR Wild Horse Val 27.01 336 IAmb IAmb 12 37 01.7
comp=Z,18nm,1.1s
W56A Indian Trail 27.04 47 P P 12 36 54.7 -1.3
baz=237
Y58A Scranton 27.06 50 P P 12 36 56.1 0.0
baz=241,SNR=8.6
QLMT Earthquake Lak 27.19 349 P P 12 36 59.0 +1.6
MOD Modoc Plateau 27.24 333 IAmb IAmb 12 37 05.1
comp=Z,23nm,1.3s
P49A Miami Univ. Ec 27.24 35 P P 12 36 56.4 -1.3
baz=224
P49A Miami Univ. Ec 27.24 35 IAmb IAmb 12 36 57.6
comp=Z,14nm,0.8s
I37A Lemond, Waseca 27.34 17 P P 12 36 57.2 -1.4
JFWS Jewell Farm 27.39 23 P P 12 36 58.7 -0.3
baz=210
JFWS Jewell Farm 27.39 23 IAmb IAmb 12 37 03.9
comp=Z,15nm,0.9s
W57A Gilead 27.46 47 P P 12 36 59.4 -0.4
baz=238,SNR=5.8
W57A Gilead 27.46 47 IAmb IAmb 12 37 02.7
comp=Z,24nm,0.8s
V56A Mocksville 27.46 46 P P 12 36 59.0 -0.8
baz=236
T54A Tazewell 27.47 42 P P 12 36 58.6 -1.3
baz=233
S53A Williamson 27.51 41 P P 12 36 58.7 -1.5
baz=231
X58A Rowland 27.62 49 P P 12 37 00.6 -0.6
baz=240
X58A Rowland 27.62 49 IAmb IAmb 12 37 12.7
comp=Z,17nm,0.6s
Q51A Peebles 27.65 37 IAmb IAmb 12 37 01.5
comp=Z,16nm,0.8s
J08A Circle Bar Ran 27.75 338 P P 12 37 01.6 -0.8
J08A IAmb IAmb 12 37 20.3
comp=Z,15nm,1.0s
M04C Macdoel 27.82 331 P P 12 37 04.3 +1.2
baz=142
U56A King 27.84 45 P P 12 37 02.3 -0.9
baz=236
DLMT Dillon 27.92 348 P P 12 37 03.0 -0.9
DLMT IAmb IAmb 12 37 10.2
comp=Z,22nm,1.2s
W58A Raeford 27.93 48 P P 12 37 03.4 -0.6
baz=239
BOZ Bozeman (W) 27.96 349 P P 12 37 05.5 +1.2
baz=165,SNR=8.6
BOZ Bozeman (W) 27.96 349 IAmb IAmb 12 37 21.8
comp=Z,23nm,1.5s
V57A Coltrane Farms 28.00 46 P P 12 37 03.7 -0.8
baz=237
T55A Pulaski 28.02 43 P P 12 37 04.8 0.0
baz=234
R53A Hurricane 28.02 40 P P 12 37 04.4 -0.3
baz=230
S54A Dingess, Beckl 28.09 41 P P 12 37 05.7 +0.3
baz=232
P51A Williamsport 28.13 37 IAmb IAmb 12 37 09.6
comp=Z,11nm,0.7s
YBH Yreka Blue Hor 28.18 330 LR LR 12 48 21.9
comp=Z,525nm,19.1s,baz=121,slow=36
Q52A Bidwell 28.24 38 P P 12 37 05.4 -1.3
baz=229
V58A Windy Hill, Pi 28.41 47 P P 12 37 08.0 -0.2
baz=238
T56A Rocky Mt 28.46 44 P P 12 37 07.4 -1.3
baz=235
PLID Pearl Lake 28.50 343 P P 12 37 08.0 -1.1
S55A Lewisburg 28.58 42 P P 12 37 09.9 +0.1
baz=233
Q53A Leroy 28.61 39 P P 12 37 09.7 -0.3
baz=230
SPMN Marine on St. 28.62 17 P P 12 37 09.3 -0.7
baz=203,SNR=7.7
I42A Draeger Farm, 28.73 24 P P 12 37 10.3 -0.7
I42A IAmb IAmb 12 37 38.4
comp=Z,34nm,1.4s
J05D Fort Rock, OR 28.77 334 P P 12 37 14.0 +2.5
baz=145
F36A Mitta 29.01 16 IAmb IAmb 12 37 13.9
comp=Z,9.4nm,0.7s
Q54A Coxs Mills 29.11 40 P P 12 37 13.3 -1.1
baz=231
R55A Marlinton 29.13 42 P P 12 37 14.9 +0.2
R55A IAmb IAmb 12 37 41.9
comp=Z,24nm,1.4s
T58A Grand View Acr 29.41 45 P P 12 37 16.7 -0.5
baz=237
MOTC Monteria, Cord 29.43 105 eP P 12 37 19.0 +1.5
G40A Rib Lake 29.46 21 P P 12 37 17.4 -0.2
S57A Dark Hollow, R 29.58 44 P P 12 37 18.9 +0.3
baz=236
S57A Dark Hollow, R 29.58 44 IAmb IAmb 12 37 43.4
comp=Z,22nm,1.4s
G08A Pilot Rock 29.61 339 IAmb IAmb 12 37 24.5
comp=Z,16nm,1.2s
MSO Missoula 29.61 347 P P 12 37 20.5 +1.6
baz=161
MSO Missoula 29.61 347 IAmb IAmb 12 37 24.6
comp=Z,29nm,1.4s
DBBC Dabeiba 29.62 108 eP P 12 37 22.7 +3.4
F10A Beach Ranch, E 29.66 342 IAmb IAmb 12 37 31.4
comp=Z,15nm,0.9s
I05D Terrebonne, OR 29.68 335 P P 12 37 21.1 +1.7
baz=146,SNR=9.5
O53A New Philadelph 29.70 37 P P 12 37 18.6 -1.0
baz=229
O53A New Philadelph 29.70 37 P P 12 37 18.8 -0.8
O53A IAmb IAmb 12 37 27.1
comp=Z,28nm,1.5s
EGMT Eagleton 30.06 353 P P 12 37 23.8 +1.0
baz=170,SNR=9.8
T59A Double "B" Far 30.09 46 P P 12 37 22.7 -0.4
Q56A Snyder Ridge, 30.16 41 P P 12 37 23.4 -0.4
Q56A IAmb IAmb 12 37 30.3
comp=Z,17nm,1.1s
PLMC San Jos del P 30.49 112 eP P 12 37 27.7 +0.7
COWI Conover 30.55 21 IAmb IAmb 12 37 27.8
comp=Z,12nm,0.8s
ZARC Zaragoza, Cauc 30.66 107 eP P 12 37 29.8 +1.4
AGMN Agassiz Nation 30.81 11 P P 12 37 29.0 -0.3
baz=196
YOTC Yotoco, Valle 30.88 114 eP P 12 37 32.0 +1.5
F05D White Salmon 31.02 337 P P 12 37 34.2 +3.0
baz=147
GUY2C Guyana, Caldas 31.16 111 eP P 12 37 36.1 +2.8
RREF El Recreo 31.32 111 eP P 12 37 38.1 +3.2
PTBC PUERTO BERRIO, 31.40 108 eP P 12 37 37.0 +2.0
M54A Oil Creek Stat 31.41 37 P P 12 37 33.9 -0.8
baz=230
NORC Norcasia 31.45 110 eP P 12 37 38.1 +2.6
EYMN Ely 31.48 17 P P 12 37 34.6 -0.7
baz=204,SNR=5.6
TOLC Tolima 31.49 112 eP P 12 37 39.2 +3.1
PCON Cinco Dias 31.67 117 eP P 12 37 37.5 -0.4
NEW Newport 31.72 344 P P 12 37 38.0 +0.6
baz=156
NEW Newport 31.72 344 IAmb IAmb 12 37 44.5
comp=Z,15nm,1.4s
MARP Paez Belalcaza 31.78 115 eP P 12 37 41.7 +3.1
N56A West Decatur 31.84 39 P P 12 37 38.0 -0.6
baz=232
ORTC Ortega, Tolima 31.87 113 eP P 12 37 41.2 +2.0
N57A Milroy 32.19 40 P P 12 37 40.6 -1.0
baz=234
M56A Emporium 32.25 38 P P 12 37 40.9 -1.3
baz=232
ROSC El Rosal 32.26 111 LR LR 12 50 04.9
comp=Z,270nm,18.4s,baz=336,slow=35
ULM Lac du Bonnet 32.69 10 P P 12 37 44.5 -1.3
comp=Z,5.0nm,0.7s,baz=175,slow=10,SNR=7.5
ULM LR LR 12 50 36.4
comp=Z,648nm,20.6s,baz=198,slow=36
PAMC Pamplona, Colo 32.69 105 eP P 12 37 48.9 +2.1
CHIC Chingaza 32.87 111 eP P 12 37 50.9 +2.6
RUSC La Rusia 32.91 108 eP P 12 37 50.2 +1.4
K56A Middlesex 33.51 37 P P 12 37 52.3 -0.9
baz=231
SADO Sadowa 33.86 33 P P 12 37 55.1 -1.0
comp=Z,7.7nm,0.4s,baz=246,slow=8.8,SNR=9.9
MACC Macarena, Meta 33.95 115 eP P 12 37 59.2 +1.9
H53A Bobcaygeon 34.02 34 P P 12 37 56.2 -1.3
baz=228
SDV Santo Domingo 34.05 101 eP P 12 37 59.5 +1.1
SDV Santo Domingo 34.05 101 P P 12 38 00.2 +1.8
G54A Lake Saint Pet 34.84 33 P P 12 38 03.4 -1.2
baz=227
ATAH Atahualpa 35.96 132 P P 12 38 16.1 +1.0
comp=Z,9.2nm,0.8s,baz=332,slow=8.4,SNR=4.2
SJG San Juan 36.30 84 eP P 12 38 08.6 -8.9
G57A Newington 36.32 36 P P 12 38 16.8 -0.5
baz=232
FFC Flin Flon 36.49 2 P P 12 38 17.2 -1.5
FFC IAmb IAmb 12 38 19.2
comp=Z,13nm,0.8s
G58A Ormstown 36.87 37 P P 12 38 21.7 -0.3
baz=233
D55A Sainte-Anne-du 37.27 33 P P 12 38 25.0 -0.5
baz=229
E57A Chemin Saint G 37.59 35 P P 12 38 27.9 -0.3
baz=232
D56A ZEC Mazanza, M 37.67 34 P P 12 38 28.5 -0.3
baz=230
LSQQ Lebel-sur-Quev 37.91 30 P P 12 38 30.0 -0.8
baz=225
MATQ Matagami 38.11 28 P P 12 38 31.6 -0.9
baz=224
DLBC Dease Lake 44.36 341 LR LR 12 57 44.7
comp=Z,610nm,18.3s,baz=132,slow=36
DLBC Dease Lake 44.36 341 IAmb IAmb 12 39 30.7
comp=Z,16nm,0.9s
TAOE Nuku Hiva Isla 44.37 236 eT T 13 26 14.6
comp=Z,24nm,0.2s
YKA Yellowknife Ar 44.81 353 P P 12 39 26.8 -0.4
comp=Z,6.2nm,0.9s,baz=165,slow=7.3,SNR=14
YKA LR LR 12 57 49.5
comp=Z,2μm,18.2s,baz=0.0,slow=36
SCHQ Schefferville 46.43 29 P P 12 39 40.7 +0.5
comp=Z,10nm,0.6s,baz=244,slow=12,SNR=12
SCHQ Schefferville 46.43 29 P P 12 39 39.7 -0.5
SAML Samuel 48.82 120 P P 12 39 56.7 -2.7
SAML IAmb IAmb 12 39 59.5
comp=Z,9.3nm,0.9s
LPAZ La Paz 49.50 132 P P 12 40 05.2 -0.1
comp=Z,7.2nm,0.8s,baz=330,slow=8.4,SNR=29
LPAZ LR LR 12 59 44.6
comp=Z,307nm,20.4s,baz=312,slow=35
LPAZ La Paz 49.50 132 P P 12 40 03.5 -1.7
LPAZ IAmb IAmb 12 40 07.0
comp=Z,8.8nm,0.8s
PB16 IPOC Station P 49.95 135 P P 12 40 07.3 -1.3
PB16 IAmb IAmb 12 40 11.3
comp=Z,8.9nm,0.8s
BALM Baldy 50.49 337 IAmb IAmb 12 40 14.6
comp=Z,14nm,1.2s
GLB Gilahina Butte 51.30 337 IAmb IAmb 12 40 24.2
comp=Z,19nm,1.2s
DAWY Dawson 51.58 341 IAmb IAmb 12 40 38.4
comp=Z,14nm,1.3s
N25K Chitina, Valde 51.69 337 P P 12 40 21.2 +0.6
baz=128
N25K Chitina, Valde 51.69 337 IAmb IAmb 12 40 27.3
comp=Z,17nm,1.4s
KLU Klutina 52.12 336 IAmb IAmb 12 40 41.9
comp=Z,16nm,1.2s
L26K Log Cabin Wild 52.15 339 P P 12 40 25.4 +1.5
baz=131
K27K Chicken 52.40 340 P P 12 40 27.7 +2.0
baz=133,SNR=12
K27K Chicken 52.40 340 IAmb IAmb 12 40 33.0
comp=Z,14nm,1.0s
M24K Tolsona, Glenn 52.59 337 P P 12 40 29.1 +1.9
baz=127
M24K Tolsona, Glenn 52.59 337 P P 12 40 26.9 -0.4
EGAK Eagle 52.63 341 P P 12 40 28.1 +0.7
EGAK IAmb IAmb 12 40 40.6
comp=Z,15nm,1.1s
PAX Paxson 52.86 338 P P 12 40 30.4 +1.1
SCRK Sand Creek 52.99 339 P P 12 40 31.9 +1.7
baz=131
BRLK Bradley Lake 53.19 333 IAmb IAmb 12 40 33.8
comp=Z,17nm,1.0s
INK Inuvik 53.34 347 IAmb IAmb 12 40 45.7
comp=Z,14nm,0.9s
PMR Palmer 53.44 335 P P 12 40 34.3 +0.9
PMR IAmb IAmb 12 40 47.6
comp=Z,24nm,1.4s
DHY Denali Highway 53.62 337 IAmb IAmb 12 40 54.3
comp=Z,19nm,1.4s
HDA Harding Lake 54.27 339 P P 12 40 40.4 +0.9
baz=128
HDA Harding Lake 54.27 339 IAmb IAmb 12 40 49.2
comp=Z,20nm,1.5s
IL31 54.48 339 IAmb IAmb 12 41 01.5
comp=Z,16nm,1.1s
ILAR Eielson Array 54.48 339 P P 12 40 42.2 +1.3
comp=Z,22nm,1.2s,baz=151,slow=6.1,SNR=50
ILAR LR LR 13 04 55.7
comp=Z,506nm,18.1s,baz=119,slow=37
ILAR Eielson Array 54.48 339 P P 12 40 40.0 -1.0
MCK McKinley 54.57 337 P P 12 40 42.5 +0.8
baz=125,SNR=6.3
SKT Skwentna 54.61 335 P P 12 40 43.1 +1.1
WRH Wood River Hil 54.71 338 IAmb IAmb 12 41 01.7
comp=Z,14nm,1.3s
POKR Poker Plat Res 54.87 339 P P 12 40 44.9 +1.1
baz=128
MDM Murphy Dome 55.05 339 IAmb IAmb 12 41 01.5
comp=Z,20nm,1.3s
NEA2 Nenana 55.12 338 P P 12 40 46.6 +0.9
baz=125
BMAR Burnt Mountain 55.47 342 P P 12 40 48.1 -0.1
I23K Minto, Yukon-K 55.55 339 P P 12 40 49.6 +0.9
baz=125
MLY Manley 55.96 338 P P 12 40 52.8 +1.1
baz=124
H03N2 Juan Fernandez 56.83 155 T T 13 43 22.2
baz=333,slow=77,SNR=47
H03N1 Juan Fernandez 56.84 155 T T 13 43 21.2
baz=333,slow=77,SNR=55
H03N3 Juan Fernandez 56.84 155 T T 13 43 21.2
baz=333,slow=77,SNR=41
TTA Tatalina 56.89 335 IAmb IAmb 12 40 59.8
comp=Z,11nm,0.8s
PPT Papeete 56.91 234 LR LR 12 58 21.6
comp=Z,336nm,21.2s,baz=58,slow=29
PPT2 Papeete2 56.92 234 eS S 12 48 48.0 -5.7
comp=Z,404nm,24.2s
PPT2 eLR LR 12 57 27.3
comp=Z,1μm,26.2s,baz=50
COLD Coldfoot 57.04 341 P P 12 41 00.8 +1.5
baz=126
IMAR Indian Mountai 57.53 338 P P 12 41 00.7 -2.1
TOLK Toolik Lake Re 57.69 342 P P 12 41 04.5 +0.6
baz=127
TOLK Toolik Lake Re 57.69 342 IAmb IAmb 12 41 09.7
comp=Z,14nm,1.0s
TBI Tubuai 60.35 228 eS S 12 49 31.9 -6.2
comp=Z,372nm,31.2s
TBI eLR LR 12 58 59.2
comp=Z,1μm,28.2s,baz=48
EUNU Eureka 62.41 3 P P 12 41 35.3 -0.9
BI02 San Fabin de 62.91 150 P P 12 41 40.1 0.0
BI02 IAmb IAmb 12 41 42.4
comp=Z,10nm,1.1s
CPUP Villa Florida 63.64 133 P P 12 41 45.7 +0.6
comp=Z,3.9nm,1.0s,baz=337,slow=8.5,SNR=5.4
CPUP LR LR 13 09 20.1
comp=Z,220nm,18.9s,baz=333,slow=36
CPUP Villa Florida 63.64 133 P P 12 41 43.4 -1.7
CPUP IAmb IAmb 12 41 46.0
comp=Z,6.8nm,1.1s
ICESG Greenland Ices 64.18 21 i P P 12 41 49.1 +0.7
ICESG IAmb IAmb 12 41 51.2
comp=Z,28nm,0.8s
BDFB Brasilia 64.93 118 P P 12 41 54.3 +0.5
comp=Z,1.4nm,0.4s,baz=266,slow=9.5,SNR=3.4
BDFB Brasilia 64.93 118 IAmb IAmb 12 41 57.6
comp=Z,15nm,1.4s
SUMG Summit 65.61 18 P P 12 41 56.5 -1.3
SUMG Summit 65.61 18 i P P 12 41 58.1 +0.4
comp=Z,97nm,1.0s
SUMG Summit 65.61 18 i P P 12 41 58.1 +0.4
SUMG IAmb IAmb 12 42 01.7
comp=Z,97nm,1.0s
PLCA Paso Flores 66.55 153 P P 12 42 03.9 +0.1
comp=Z,3.7nm,0.8s,baz=329,slow=8.3,SNR=13
PLCA LR LR 13 04 33.9
comp=Z,328nm,20.6s,baz=338,slow=30

PLCA	**Paso Flores**	**66.55**	**153**	P	**P**	**12 42 03.5**	**-0.3**
PLCA				IAmb	IAmb	12 42 14.3	
	comp=Z,7.4nm,1.1s						
LL01	**San Ignacio de**	**67.12**	**155**	P	**P**	**12 42 06.2**	**-1.0**
DBG	**Daneborg**	**71.03**	**17**	*i* P	**P**	**12 42 34.5**	**+3.3**
DAG	**Danmarks Havn**	**71.43**	**14**	*i* P	**P**	**12 42 33.0**	**-0.5**
DAG	**Danmarks Havn**	**71.43**	**14**	*i* P	**P**	**12 42 33.0**	**-0.5**
BILL	**Bilibino**	**73.02**	**337**	P	**P**	**12 42 43.5**	**+0.3**
BILL				IAmb	IAmb	12 42 48.5	
	comp=Z,9.7nm,1.0s						
AFI	**Afiamalu**	**73.69**	**249**	P	**P**	**12 42 47.5**	**-0.6**
SPITS	**Spitsbergen Ar**	**78.25**	**10**	P	**P**	**12 43 12.7**	**-0.3**
	comp=Z,15nm,1.1s,baz=349,slow=2.9,SNR=1.5						
SPITS				LR	LR	13 18 03.9	
	comp=Z,590nm,18.2s,baz=325,slow=36						
FUL	**Funchal**	**78.37**	**59**	*e*P	**P**	**12 43 14.9**	**+0.4**
PETK	**Petropavlovsk-**	**80.27**	**323**	P	**P**	**12 43 24.7**	**+0.2**
	comp=Z,2.5nm,0.8s,baz=76,slow=12,SNR=2.5						
EKA	**Eskdalemuir Ar**	**81.43**	**35**	LR	LR	13 20 36.1	
	comp=Z,296nm,18.6s,baz=330,slow=36						
MA2	**Magadan**	**81.75**	**330**	LR	LR	13 18 38.8	
	comp=Z,670nm,18.9s,baz=352,slow=35						
POLO	**Lamas de Olo**	**82.98**	**49**	*e*P	**P**	**12 43 40.5**	**+1.3**
PMTG	**Montargil**	**83.37**	**51**	*e*P	**P**	**12 43 44.2**	**+3.0**
	comp=Z,40nm,1.7s						
TIXI	**Tiksi**	**83.42**	**345**	P	**P**	**12 43 39.7**	**-1.0**
TIXI				IAmb	IAmb	12 43 44.7	
	comp=Z,8.9nm,0.9s						
MTE	**Manteigas**	**83.46**	**50**	*e*P	**P**	**12 43 45.1**	**+3.4**
PMRV	**Marv??o**	**83.88**	**51**	*e*P	**P**	**12 43 46.2**	**+2.4**
	comp=Z,30nm,1.8s						
ARCES	**ARCESS Array B**	**85.62**	**16**	P	**P**	**12 43 52.8**	**+0.9**
	comp=Z,10nm,1.0s,baz=292,slow=6.4,SNR=5.8						
ARCES				LR	LR	13 23 24.1	
	comp=Z,466nm,18.0s,baz=340,slow=37						
NB2	**NORSAR Subarra**	**85.91**	**26**	P	**P**	**12 43 57.6**	**+4.0**
	comp=Z,6.8nm,1.2s,baz=305,slow=5.3						
NOA	**NORSAR Array B**	**85.91**	**26**	P	**P**	**12 43 55.1**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=305,slow=5.2,SNR=4.2						
NOA				LR	LR	13 22 45.2	
	comp=Z,205nm,20.2s,baz=300,slow=36						
ESDC	**Sonseca Array**	**86.29**	**50**	P	**P**	**12 43 57.3**	**+1.4**
	comp=Z,2.0nm,0.8s,baz=308,slow=5.4,SNR=7.7						
ESDC				LR	LR	13 23 30.0	
	comp=Z,223nm,18.4s,baz=285,slow=36						
ESDC	**Sonseca Array**	**86.29**	**50**	P	**P**	**12 43 56.5**	**+0.6**
HFS	**Hagfors**	**87.43**	**26**	LR	LR	13 23 40.5	
	comp=Z,270nm,20.8s,baz=291,slow=36						
FINES	**FINESS Array B**	**91.38**	**21**	LR	LR	13 25 06.3	
	comp=Z,322nm,20.8s,baz=320,slow=35						
NRIK	**Noril'sk**	**92.27**	**356**	P	**P**	**12 44 24.2**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=52,slow=1.6,SNR=5.3						
NRIK				LR	LR	13 26 57.7	
	comp=Z,364nm,20.5s,baz=21,slow=36						
KHC	**Kasperske Hory**	**93.36**	**36**	AMS	AMS	13 27 10.0	
	comp=Z,400nm,18.1s						
PRU	**Pruhonice**	**93.42**	**34**	AMS	AMS	13 19 00.0	
	comp=Z,300nm,18.6s						
GERES	**GERESS Array B**	**93.59**	**36**	P	**P**	**12 44 31.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=289,slow=3.0,SNR=4.3						
GERES				LR	LR	13 26 40.9	
	comp=Z,253nm,20.8s,baz=334,slow=36						
UPC	**Upice**	**93.91**	**34**	AMS	AMS	13 25 20.0	
	comp=Z,300nm,17.7s						
DPC	**Dobruska-Polom**	**94.16**	**34**	AMS	AMS	13 25 30.0	
	comp=Z,300nm,17.1s						
KRLC	**Kraliky**	**94.56**	**34**	AMS	AMS	13 25 50.0	
	comp=Z,300nm,17.6s						
DZM	**Mont Dzumac**	**95.92**	**249**	*e*LR	LR	13 15 40.6	
	comp=Z,768nm,27.5s						
KLR	**Kul'dur**	**96.46**	**327**	LR	LR	13 27 27.4	
	comp=Z,50nm,18.7s,baz=18,slow=35						
KEST	**Kesra**	**97.52**	**49**	LR	LR	13 30 41.2	
	comp=Z,108nm,18.1s,baz=297,slow=37						
MJAR	**Matsushiro Arr**	**99.67**	**314**	LR	LR	13 22 35.9	
	comp=Z,52nm,20.7s,baz=75,slow=31						
HHC	**Hu-ho-hao-te**	**112.41**	**331**	*e*PKP	**PKiKP**	**12 49 50.0**	**-0.3**
HHC				LR	LR		
	comp=Z,280nm,19.2s						
HHC				LR	LR		
	comp=Z,220nm,21.2s						
HHC				LR	LR		
	comp=Z,330nm,21.1s						
WMQ	**Urumqi**	**117.28**	**350**	*e*PKP	**PKPdf**	**12 49 59.0**	**-0.5**
WMQ				AMB	AMB		
	comp=Z,170nm,5.5s						
GTA	**Gaotai**	**118.37**	**339**	*e*PKP	**PKiKP**	**12 50 06.0**	**+4.1**
GTA				sPKP		12 50 14.5	
LZH	**Lanzhou**	**119.74**	**334**	*e*PKP	**PKPdf**	**12 50 00.8**	**-3.8**
LZH				sPKP		12 50 12.5	
WRA	**Warramunga Arr**	**124.71**	**258**	PKP	**PKPdf**	**12 50 13.3**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=80,slow=2.3,SNR=24						
ASAR	**Alice Springs**	**125.58**	**254**	PKP	**PKPdf**	**12 50 14.7**	**-1.2**
	comp=Z,1.8nm,0.8s,baz=84,slow=1.9,SNR=8.6						

NEIC ***27*** *12:40:01.3±1.4, 7.°04S±0.°08×155.°66E±0.°07, h10km±1km, mb4.6/27, Error ellipse: s-maj=14.6km s-min=9.6km az=30.0*

IDC ***27*** *12:40:09.9±1.5, 7.°08S×155.°56E, h76km±14km, mb3.9/15, mb1 4.0/19, mb1mx3.8/37, mbtmp4.2/19, MS3.5/6, Ms1 3.4/6, ms1mx3.1/34, Error ellipse: s-maj=14.4km s-min=10.2km az=42.0*

ISC 27 12:40:06.9±0.4, 7.°11S±0.°06×155.°62E±0.°05, h50km, n72, σ1§66/74, mb4.4/31, MS3.6/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**4.50**	**310**	Pn	Pn	12 41 07.2	-5.5
KRVT	**Keravat (AS076**	**4.53**	**308**	P	**Pn**	**12 41 14.8**	**+1.7**
	3.1nm,0.3s,baz=146,slow=7.3,SNR=1.8						
KRVT				S	**Sn**	**12 42 05.7**	**+1.1**
	11nm,0.3s,baz=34,slow=14,SNR=2.0						
HNR	**Honiara**	**4.86**	**119**	P	**Pn**	**12 41 20.0**	**+2.5**
	5.6nm,0.3s,baz=208,slow=14,SNR=1.4						
HNR				S	**Sn**	**12 42 20.0**	**+7.4**
	20nm,0.3s,baz=202,slow=9.5,SNR=3.6						
HNR				LR	LR	12 43 10.3	
	comp=Z,562nm,20.2s,baz=307,slow=36						
HNR	**Honiara**	**4.86**	**119**	Pn	**Pn**	**12 41 15.1**	**-2.5**
HNR				Sn	**Sn**	**12 42 13.1**	**+0.5**
PMG	**Port Moresby**	**8.68**	**254**	P	**Pn**	**12 42 12.4**	**+2.4**
	2.7nm,0.3s,baz=62,slow=6.2,SNR=7.2						
PMG				S	**Sn**	**12 43 51.2**	**+4.6**
	0.6nm,0.3s,baz=131,slow=23,SNR=4.4						
PMG				LR	LR	12 45 19.7	
	comp=Z,247nm,21.1s,baz=92,slow=36						
PMG	**Port Moresby**	**8.68**	**254**	Pn	**Pn**	**12 42 07.9**	**-2.1**
PMG					**Sn**	**12 43 46.7**	**+0.1**
COEN	**Coen**	**14.00**	**240**	Pn	**Pn**	**12 43 21.2**	**-1.5**
CTAO	**Charters Tower**	**15.78**	**214**	Pn	**Pn**	**12 43 44.3**	**-1.7**
DZM	**Mont Dzumac**	**18.17**	**146**	P	**Pn**	**12 44 17.6**	**+1.8**
	0.6nm,0.3s,baz=268,slow=9.8,SNR=6.6						
DZM				LR	LR	12 50 51.4	
	comp=Z,119nm,18.2s,baz=136,slow=35						
DZM	**Mont Dzumac**	**18.17**	**146**	Pn	**P**	**12 44 11.1**	**-4.5**
FAKI	**Fak Fak**	**23.65**	**279**	P	**P**	**12 45 14.2**	**+0.2**
FAKI				IAmb	IAmb	12 45 21.9	
	comp=Z,12nm,0.9s						
WR0	**Warramunga Arr**	**24.11**	**236**	P	**P**	**12 45 18.6**	**+0.4**
WR0				IAmb	IAmb	12 45 28.8	
	comp=Z,23nm,1.2s						
WB0	**Warramunga Arr**	**24.14**	**237**	P	**P**	**12 45 18.6**	**+0.1**
WB0				IAmb	IAmb	12 45 29.1	
	comp=Z,26nm,1.4s						
WB2	**Warramunga Arr**	**24.26**	**236**	P	**P**	**12 45 19.3**	**-0.3**
WB2					**P**	**12 45 23.0**	**+3.4**
WB2				IAmb	IAmb	12 45 30.3	
	comp=Z,20nm,1.1s						
WRA	**Warramunga Arr**	**24.27**	**236**	P	**P**	**12 45 19.5**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=60,slow=9.5,SNR=21						
WRA				PcP	**PcP**	**12 48 59.3**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=63,slow=2.5,SNR=4.8						
WRA	**Warramunga Arr**	**24.27**	**236**	P	**P**	**12 45 19.4**	**-0.3**
WRA					**P**	**12 45 21.4**	**+1.7**
MSVF	**Nonsavu**	**24.28**	**118**	P	**P**	**12 45 19.2**	**-0.7**
MTN	**Manton Dam**	**24.77**	**255**	P	**P**	**12 45 24.7**	**+0.4**
ASAR	**Alice Springs**	**26.57**	**229**	P	**P**	**12 45 39.9**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=60,slow=9.3,SNR=5.6						
ASAR				PcP	**PcP**	**12 49 04.2**	**0.0**
	comp=Z,0.6nm,0.5s,baz=56,slow=2.1,SNR=5.3						
ASAR				LR	LR	12 55 32.5	
	comp=Z,80nm,19.1s,baz=96,slow=35						
ASAR	**Alice Springs**	**26.57**	**229**	P	**P**	**12 45 40.4**	**-0.2**

KNRA	**Kununurra**	**27.64**	**250**	P	**P**	**12 45 49.7**	**-0.5**
KNRA				IAmb	IAmb	12 46 11.2	
	comp=Z,17nm,1.4s						
H11S3	**WAKE ISLAND Hy**	**27.68**	**23**	T	T	13 14 12.4	
	baz=203,slow=76,SNR=65						
H11S2	**WAKE ISLAND Hy**	**27.69**	**23**	T	T	13 14 11.4	
	baz=203,slow=76,SNR=56						
H11S1	**WAKE ISLAND Hy**	**27.70**	**23**	T	T	13 14 12.8	
	baz=203,slow=76,SNR=40						
STKA	**Stephens Creek**	**27.90**	**206**	P	**P**	**12 45 51.5**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=341,slow=19,SNR=2.9						
STKA				LR	LR	12 56 58.6	
	comp=Z,136nm,18.1s,baz=23,slow=36						
STKA	**Stephens Creek**	**27.90**	**206**	P	**P**	**12 45 52.5**	**+0.2**
H11N1	**WAKE ISLAND Hy**	**28.87**	**22**	T	T	13 16 02.8	
	baz=203,slow=76,SNR=6.0						
H11N3	**WAKE ISLAND Hy**	**28.88**	**22**	T	T	13 15 54.0	
	baz=203,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**28.89**	**22**	T	T	13 16 03.1	
	baz=203,slow=76,SNR=4.9						
FITZ	**Fitzroy Crossi**	**31.18**	**247**	P	**P**	**12 46 21.1**	**-0.4**
FITZ				IAmb	IAmb	12 46 31.5	
	comp=Z,5.9nm,0.7s						
DAV	**Davao City (W)**	**33.11**	**295**	LR	LR	12 57 38.7	
	comp=Z,52nm,21.1s,baz=328,slow=32						
BKZ	**Black Stump Fm**	**37.04**	**153**	P	**P**	**12 47 12.6**	**+0.4**
BKZ				IAmb	IAmb	12 47 20.8	
	comp=Z,12nm,1.0s						
KSRS	**Korea Array**	**51.33**	**332**	P	**P**	**12 49 06.2**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=143,slow=8.2,SNR=8.1						
QIZ	**Qiongzhong**	**52.05**	**301**	P	**P**	**12 49 10.8**	**-1.3**
QIZ				S	**S**	**12 56 35.8**	**+3.2**
QIZ				LR	LR		
	comp=N,210nm,16.3s						
QIZ				LR	LR		
	comp=E,200nm,20.4s						
QIZ				LR	LR		
	comp=Z,200nm,21.4s						
NJ2	**Nanjing**	**52.40**	**320**	*e*P	**P**	**12 49 13.5**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	**Ussuriysk Ar.**	**55.35**	**339**	P	**P**	**12 49 35.6**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=143,slow=6.3,SNR=5.9						
KLR	**Kul'dur**	**59.86**	**342**	P	**P**	**12 50 07.4**	**0.0**
	comp=Z,1.2nm,0.6s,baz=165,slow=6.8,SNR=5.6						
PEA0B	**Petropavlovsk-**	**60.01**	**1**	P	**P**	**12 50 07.9**	**-0.4**
PETK	**Petropavlovsk-**	**60.01**	**1**	P	**P**	**12 50 09.1**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=145,slow=7.2,SNR=10						
PETK	**Petropavlovsk-**	**60.01**	**1**	P	**P**	**12 50 08.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**61.40**	**295**	P	**P**	**12 50 19.6**	**+1.1**
	comp=Z,5.5nm,0.7s,baz=118,slow=5.3,SNR=38						
CMAR	**Chiang Mai Arr**	**61.40**	**295**	P	**P**	**12 50 18.6**	**+0.1**
CHTO	**Chiang Mai**	**61.51**	**296**	P	**P**	**12 50 18.2**	**-1.0**
HHC	**Hu-ho-hao-te**	**62.55**	**324**	*e*P	**P**	**12 50 25.8**	**-0.1**
HHC				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC				pmax	pmax		
	comp=Z,96nm,5.5s						
HHC				LR	LR		
	comp=N,130nm,14.5s						
HHC				LR	LR		
	comp=E,180nm,14.8s						
HHC				LR	LR		
	comp=Z,160nm,16.6s						
GTA	**Gaotai**	**69.25**	**317**	*e*P	**P**	**12 51 11.8**	**+2.7**
GTA				pP	pP	12 51 16.8	-6.3
GTA				sP	sP	12 51 20.0	-8.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	**Songino Array**	**69.77**	**327**	P	**P**	**12 51 12.6**	**+0.5**
	comp=Z,3.2nm,0.7s,baz=141,slow=5.4,SNR=17						
SONM	**Songino Array**	**69.77**	**327**	P	**P**	**12 51 11.2**	**-0.9**
VNDA	**Vanda**	**70.45**	**179**	P	**P**	**12 51 15.9**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=321,slow=4.7,SNR=6.7						
VNDA	**Vanda**	**70.45**	**179**	P	**P**	**12 51 16.8**	**+1.1**
BILL	**Bilibino**	**75.35**	**4**	P	**P**	**12 51 44.9**	**+0.2**
BILL				IAmb	IAmb	12 52 11.7	
	comp=Z,4.0nm,0.9s						
WMQ	**Urumqi**	**79.33**	**317**	*e*P	**P**	**12 52 07.8**	**+0.2**
IMAR	**Indian Mountai**	**81.63**	**19**	P	**P**	**12 52 19.2**	**-0.2**
DHY	**Denali Highway**	**82.15**	**23**	P	**P**	**12 52 21.7**	**-0.7**
DHY				IAmb	IAmb	12 52 49.8	
	comp=Z,6.9nm,1.3s						
N25K	**Chitina, Valde**	**82.48**	**25**	P	**P**	**12 52 21.3**	**-2.7**
N25K				IAmb	IAmb	12 52 40.1	
	comp=Z,6.3nm,1.4s						
GLB	**Gilahina Butte**	**82.73**	**25**	P	**P**	**12 52 24.8**	**-0.4**
GLB				IAmb	IAmb	12 52 40.8	
	comp=Z,7.3nm,1.4s						
CCB	**Clear Creek Bu**	**82.85**	**21**	P	**P**	**12 52 24.5**	**-1.2**
QSPA	**South Pole Qui**	**82.87**	**180**	P	**P**	**12 52 26.4**	**+0.3**
HDA	**Harding Lake**	**83.03**	**22**	P	**P**	**12 52 25.7**	**-1.0**
HDA				IAmb	IAmb	12 52 52.5	
	comp=Z,4.3nm,1.1s						
IL31		**83.25**	**21**	P	**P**	**12 52 26.6**	**-1.2**
ILAR	**Eielson Array**	**83.25**	**21**	P	**P**	**12 52 26.2**	**-1.6**
	comp=Z,0.7nm,0.5s,baz=245,slow=4.8,SNR=20						
ILAR	**Eielson Array**	**83.25**	**21**	P	**P**	**12 52 26.4**	**-1.4**
MK31	**Makanchi Array**	**83.90**	**319**	P	**P**	**12 52 31.9**	**+0.3**
MKAR	**Makanchi Array**	**83.90**	**319**	P	**P**	**12 52 31.4**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=104,slow=5.4,SNR=12						
MKAR	**Makanchi Array**	**83.90**	**319**	P	**P**	**12 52 31.1**	**-0.6**
TOLK	**Toolik Lake Re**	**84.54**	**18**	P	**P**	**12 52 34.8**	**+0.4**
TOLK				IAmb	IAmb	12 52 43.1	
	comp=Z,4.9nm,1.2s						
ZALV	**Zalesovo Beam**	**84.62**	**326**	P	**P**	**12 52 33.9**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=92,slow=4.3,SNR=6.1						
NRIK	**Noril'sk**	**89.05**	**341**	P	**P**	**12 52 55.2**	**-1.0**
	comp=Z,4.3nm,0.6s,baz=102,slow=4.7,SNR=7.0						
YKA	**Yellowknife Ar**	**96.14**	**28**	P	**P**	**12 53 28.8**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=266,slow=3.8,SNR=2.7						
AKASG	**Malin Array Be**	**117.99**	**325**	PKP	**PKPdf**	**12 58 47.4**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=70,slow=1.5,SNR=1.5						
GERES	**GERESS Array B**	**127.47**	**329**	PKP	**PKiKP**	**12 59 07.3**	**+0.1**
	comp=Z,0.4nm,0.2s,baz=57,slow=6.0,SNR=1.3						
BDFB	**Brasilia**	**147.46**	**134**	PKPbc	**PKPbc**	**12 59 45.8**	**-0.8**
	comp=Z,6.8nm,0.8s,baz=169,slow=3.2,SNR=7.4						
TORD	**Torodi Ar. Bea**	**153.66**	**285**	PKPbc	**PKPbc**	**13 00 00.2**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=34,slow=2.9,SNR=2.4						

ISN ***27*** *12:44:18.5±1.8, 32.°90N×47.°70E, h27km, ML2.6*

TEH ***27*** *12:44:20.3, 32.°76N×47.°49E, h10km, ML2.8*

ISC 27 12:44:19.1±1.4, 32.°66N±0.°05×47.°48E±0.°05, h8km±15km, n9, σ1§06/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.92**	**20**	*e*Pg	**Pg**	**12 44 35.7**	**-1.0**
IKFM				*e*		12 44 48.2	
IKMR	**Kamar-syah**	**1.14**	**41**	*e*Pg	**Pn**	**12 44 41.0**	**-0.3**
IKMR				*e*		12 44 57.8	
IBDR	**Badra**	**1.38**	**289**	*e*Pn	**Pn**	**12 44 45.0**	**+0.5**
IBDR				*e*Sn	**Sg**	**12 45 04.0**	**+0.6**
IBDR				AML	AML	12 45 11.7	
	comp=E,174nm,0.4s						
IBDR				AML	AML	12 45 12.6	
	comp=N,133nm,0.4s						
IBDR				AML	AML	12 45 16.0	
	comp=Z,140nm,0.4s						
IKOM	**Komasi**	**1.51**	**1**	*e*Pg	**Pg**	**12 44 48.1**	**0.0**
IKOM				*e*		12 44 49.4	
IKOM				*e*Sg	**Sg**	**12 45 07.8**	**+0.1**
BMDN	**Meydan**	**1.52**	**48**	*e*Pg	**Pg**	**12 44 48.1**	**-0.1**
BMDN				*e*		12 45 12.5	
HSAM	**Samen**	**1.81**	**31**	*e*Pg	**Pb**	**12 44 52.9**	**+0.3**
HSAM				*e*		12 44 55.9	
HSAM				*e*Sg	**Sg**	**12 45 18.7**	**+1.3**
NSR	**Nassriya**	**2.00**	**215**	*e*Pn	**Pb**	**12 44 56.0**	**+0.3**
NSR				*e*Sn	**Sg**	**12 45 23.0**	**-0.3**
NSR				AML	AML	12 45 34.1	
	comp=E,10nm,1.0s						
IDHR	**Dehrash**	**2.23**	**336**	*e*Pg	**Pg**	**12 45 01.2**	**-0.6**
IDHR				*e*		12 45 34.1	
BHD	**Baghdad**	**2.67**	**284**	*e*Pn	**Pn**	**12 45 04.0**	**+1.6**
BHD				*e*Sn	**Sb**	**12 45 38.0**	**-2.1**

NEIC ***27*** *12:45:11.9±1.1, 59.°96N±0.°04×152.°78W±0.°07, h104km±5km, Error ellipse: s-maj=7.1km s-min=2.1km az=134.0*

ANF ***27*** *12:45:13.7±0.6, 59.°99N×152.°47W, h104km±6km, ML3.6/10, Error ellipse: s-maj=5.9km s-min=4.5km az=98.0*

AEIC ***27*** *12:45:13±1.0, 59.°95N±0.°03×152.°8W±0.°1, h98km±5km, ML3.0, Error ellipse: s-maj=7.8km s-min=4.0km az=107.0*

ISC 27 12:45:11.1±1.4, 59.°94N±0.°04×152.°79W±0.°04, h111km±7km, n139, σ0§97/163, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	**Iliamna Volcan**	**0.14**	**305**		**Pn**	**12 45 26.3**	**-0.3**
IVE					**Sn**	**12 45 37.5**	**-0.9**
ILS	**Iliamna Low So**	**0.14**	**278**		**Pn**	**12 45 26.3**	**-0.3**
ILW	**Iliamna West**	**0.21**	**305**		**Pn**	**12 45 27.6**	**+0.6**
OPT	**Oil Point**	**0.36**	**218**		**Pn**	**12 45 27.3**	**-0.1**
RED	**Redoubt Volcan**	**0.48**	**1**		**Pn**	**12 45 27.9**	**-0.2**
RED					**Sn**	**12 45 39.5**	**-1.4**
RDSO	**Redoubt South**	**0.52**	**2**		**Pn**	**12 45 28.2**	**-0.2**
RDSO					**Sn**	**12 45 40.0**	**-1.4**
RSO	**Redoubt South**	**0.53**	**2**		**Pn**	**12 45 28.4**	**-0.1**
RDWB	**Redoubt West**	**0.55**	**357**		**Pn**	**12 45 28.3**	**-0.3**
RDWB					**Sn**	**12 45 40.4**	**-1.4**
NCT	**North Crescent**	**0.63**	**354**		**Pn**	**12 45 29.0**	**-0.1**
NCT					**Sn**	**12 45 41.3**	**-1.4**
AU22	**Augustine Moun**	**0.64**	**207**		**Pn**	**12 45 29.2**	**+0.1**
AU22					**Sn**	**12 45 42.2**	**-1.3**
HOM	**Homer**	**0.64**	**115**	P	**Pn**	**12 45 29.6**	**+0.5**
	baz=298,SNR=12						
HOM				S	**Sn**	**12 45 42.9**	**+0.3**
	baz=298						
HOM	**Homer**	**0.64**	**115**		**Pn**	**12 45 29.6**	**+0.5**
HOM					**Sn**	**12 45 42.9**	**+0.3**
AUL	**Augustine Lava**	**0.65**	**211**		**Pn**	**12 45 29.3**	**+0.1**
AUL					**Sn**	**12 45 42.9**	**+0.2**
DFR	**Drift River**	**0.66**	**4**		**Pn**	**12 45 29.3**	**-0.1**
DFR					**Sn**	**12 45 41.9**	**-1.2**
AUH	**Augustine H**	**0.67**	**210**		**Pn**	**12 45 29.6**	**+0.2**
AUCH	**Augustine Cone**	**0.67**	**210**		**Pn**	**12 45 29.5**	**+0.1**
CNPM	**China Poot**	**0.89**	**117**		**Pn**	**12 45 31.1**	**-0.2**
CNPM	**China Poot**	**0.89**	**117**		**Sn**	**12 45 46.2**	**-0.3**
BRLK	**Bradley Lake**	**0.97**	**99**		**Pn**	**12 45 32.5**	**+0.3**
BRSE	**Bradley Lake S**	**1.05**	**100**		**Pn**	**12 45 33.3**	**+0.4**
BRSE					**Sn**	**12 45 49.0**	**-0.4**
CAPN	**Captain Cook N**	**1.16**	**44**	P	**Pn**	**12 45 36.1**	**+2.1**
	baz=225						
CAPN				S	**Sn**	**12 45 54.8**	**+3.4**
	baz=225						
CAPN	**Captain Cook N**	**1.16**	**44**		**Pn**	**12 45 36.1**	**+2.1**
CKL	**Chakachamna La**	**1.28**	**10**		**Pn**	**12 45 36.0**	**+0.5**
SPCR	**Spurr Chakacha**	**1.30**	**12**		**Pn**	**12 45 36.1**	**+0.4**
SPBG	**Spurr Blockage**	**1.34**	**9**		**Pn**	**12 45 36.8**	**+0.6**
SPBG					**Sn**	**12 45 55.2**	**0.0**
SPCP	**Crater Peak Br**	**1.37**	**13**		**Pn**	**12 45 37.2**	**+0.6**
SPCP					**Sn**	**12 45 56.0**	**0.0**
SLKM	**Skilak Lake**	**1.40**	**65**		**Pn**	**12 45 37.4**	**+0.6**
SLKM					**Sn**	**12 45 55.9**	**-0.5**
SPCG	**Spurr Capps Gl**	**1.41**	**15**		**Pn**	**12 45 37.6**	**+0.6**
KAPH	**Katmai Pasha**	**1.57**	**211**		**Pn**	**12 45 39.5**	**+0.7**
O22K	**Cooper Landing**	**1.62**	**69**	P	**Pn**	**12 45 39.8**	**+0.4**
	baz=252,SNR=13						
O22K				S	**Sn**	**12 46 00.4**	**-0.6**
	baz=252						
O22K	**Cooper Landing**	**1.62**	**69**		**Pn**	**12 45 39.8**	**+0.4**
STLK	**Strandline Lak**	**1.64**	**16**		**Pn**	**12 45 40.6**	**+0.9**
SEW	**Seward**	**1.68**	**83**		**Pn**	**12 45 40.1**	**0.0**
KAHC	**Katmai Hardscr**	**1.72**	**222**		**Pn**	**12 45 41.4**	**+0.6**
SVW2	**Sparrevohn**	**1.81**	**311**		**Pn**	**12 45 41.2**	**+0.1**
SUA	**Susitna One**	**1.83**	**32**		**Pn**	**12 45 43.2**	**+1.1**
RC01	**Rabbit Creek A**	**1.90**	**51**	P	**Pn**	**12 45 43.2**	**+0.4**
	baz=234,SNR=17						
RC01				S	**Sn**	**12 46 06.4**	**-0.6**
	baz=234						
RC01	**Rabbit Creek A**	**1.90**	**51**		**Pn**	**12 45 43.3**	**+0.4**
KAKN	**Katmai Knife C**	**2.02**	**216**		**Pn**	**12 45 45.2**	**+0.7**
KCG	**Knife Ck. Glac**	**2.03**	**217**		**Pn**	**12 45 45.4**	**+0.9**
KABU	**Katmai Buttres**	**2.11**	**219**		**Pn**	**12 45 46.7**	**+1.0**
SKT	**Skwentna**	**2.14**	**16**		**Pn**	**12 45 46.6**	**+0.7**
KDAK	**Kodiak Island**	**2.16**	**177**		**Pn**	**12 45 45.7**	**-0.5**
CAHL	**Cahill**	**2.30**	**216**		**Pn**	**12 45 49.3**	**+1.3**
PWL	**Port Wells**	**2.40**	**65**		**Pn**	**12 45

baz=207,SNR=12
TCOL CIGO, UAF Yank 5.46 23 Pn 12 46 30.7 +0.7
COLA College 5.46 23 Pn 12 46 30.4 +0.5
I23K Minto, Yukon-K 5.46 15 P Pn 12 46 31.2 +1.2
baz=198,SNR=12
MDM Murphy Dome 5.46 21 Pn 12 46 30.7 +0.6
YAH Yahtse 5.53 81 Pn 12 46 32.6 +1.3
GRNC Granite Creek 5.54 77 Pn 12 46 32.2 +0.9
DOT Dot Lake 5.56 44 Pn Pn 12 46 32.9 +1.4
IL31 5.57 27 Pn 12 46 31.6 0.0
ILAR Eielson Array 5.57 27 Pn Pn 12 46 31.9 +0.3
BARN Barnard Glacie 5.61 74 Pn 12 46 33.6 +1.3
RKAV Rock Avalanche 5.73 81 Pn 12 46 34.4 +0.5
POKR Poker Plat Res 5.76 23 P Pn 12 46 35.0 +0.9
baz=208
POKR Poker Plat Res 5.76 23 Pn 12 46 35.0 +0.9
CTGM Chitina Glacie 5.76 75 Pn 12 46 35.2 +0.9
SCRK Sand Creek 5.80 42 P Pn 12 46 35.1 +0.3
baz=230
SCRK S **Sn 12 47 37.5 -2.4**
baz=230
TABL Table Mountain 5.83 80 Pn Pn 12 46 36.1 +0.8
CHX Chaix Hills 5.86 84 Pn 12 46 36.5 +1.0
LOGN Logan Glacier 5.91 76 Pn 12 46 36.9 +0.5
IM03 6.08 356 Pn 12 46 38.5 +0.1
IMAR Indian Mountai 6.08 356 Pn Pn 12 46 39.5 +1.1
BC03 6.13 54 Pn 12 46 39.7 +0.7
PCA Pinnacle 6.29 83 Pn 12 46 42.1 +0.8
K27K Chicken 6.50 46 Pn Pn 12 46 45.4 +1.3
COLD Coldfoot 7.41 8 P Pn 12 46 57.3 +0.9
baz=190
COLD Coldfoot 7.41 8 Pn 12 46 57.0 +0.7
DAWY Dawson 7.54 51 Pn 12 46 58.1 -0.1
HYT Haines Junctio 7.63 77 Pn Pn 12 47 01.3 +1.8
JIS Juneau Island 9.61 92 Pn Pn 12 47 29.4 +3.3

IDC ***27*** *12:50:11.4±0.5, 45.˚46N× 151.˚40E, h0km, mb4.5/30, mb1 4.6/37, mb1mx4.5/44, mbtmp4.4/37, ML3.4/6, MS4.1/14, Ms1 4.1/14, ms1mx3.7/47, Error ellipse: s-maj=13.6km s-min=10.8km az=147.0*
BJI ***27*** *12:50:13.2±0.0, 45.˚24N× 151.˚41E, h26km, mB5.0/42, mb4.9/62, Ms4.4/43, Ms7 4.2/43*
NIED ***27*** *12:50:14.0, 45.˚50N× 151.˚60E, h30km, MW4.6, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr4.26; Mθθ0.42; Mϕϕ-4.68; Mrθ-1.48; Mθϕ-3.57; Mϕr5.35; Fault plane solution: M0 7.97000×10¹⁵ NP1: ϕs357.00000°, δ71.00000°, λ60.00000°. NP2: ϕs238.00000°, δ35.00000°, λ145.00000°.*
JMA ***27*** *12:50:14.0±0.5, 45.˚50N× 151.˚60E, h30km, M4.8*
SKHL ***27*** *12:50:14.1±0.7, 45.˚13N× 151.˚77E, h50km±10km, mb5.1/11, Ms4.4/7*
MOS ***27*** *12:50:15.3±1.1, 45.˚39N× 151.˚43E, h41km, mb5.1/40, MS3.6/6, Error ellipse: s-maj=6.2km s-min=5.3km az=93.7*
NEIC ***27*** *12:50:16.2±2.2, 45.˚32N±0.˚09× 151.˚4E±0.˚1, h33km±5km, mb4.9/102, Error ellipse: s-maj=16.3km s-min=9.1km az=138.0*
ISC 27 12:50:15.6±0.8, 45˚24N±0.˚05× 151˚52E±0.˚05, h34km±2km, n463, σ1°73/462, mb4.9/162, MS4.2/20, 48C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.58**	**271**	*e*	PN	**Pn**	**12 50 55.9**	**+1.0**
KUR				*i*	S	**Sn**	**12 51 27.0**	**+2.0**
KUR					pmax	pmax		
	comp=Z,846nm,0.3s							
KUR					pmax	pmax		
	comp=N,161nm,0.2s							
KUR					pmax	pmax		
	comp=E,403nm,0.2s							
KUR					smax	smax		
	comp=E,3μm,0.4s							
KUR					smax	smax		
	comp=N,1μm,0.6s							
YUK	**Yuzh-Kuril'sk**	**4.21**	**255**	*c*	PN	**Pn**	**12 51 18.7**	**+1.4**
YUK				*e*	S	**Sn**	**12 52 06.6**	**+1.3**
YUK					pmax	pmax		
	comp=N,151nm,0.2s							
YUK					pmax	pmax		
	comp=E,82nm,0.2s							
YUK					pmax	pmax		
	comp=Z,984nm,0.2s							
YUK					smax	smax		
	comp=N,1μm,0.6s							
YUK					smax	smax		
	comp=E,1μm,0.7s							
YUK					smax	smax		
	comp=N,1μm,1.3s							
YUK					smax	smax		
	comp=E,2μm,1.0s							
YUK					MLR	MLR		
	comp=Z,209nm,10.0s							
YUK					MLR	MLR		
	comp=E,578nm,12.0s							
YUK					MLR	MLR		
	comp=N,384nm,11.0s							
GRPR	**Tuman**	**4.29**	**255**	⇓ *i*	PN	**Pn**	**12 51 19.7**	**+1.3**
GRPR				*i*	S	**Sn**	**12 52 08.6**	**+1.5**
GRPR					smax	smax		
	comp=E,859nm,0.6s							
GRPR					smax	smax		
	comp=N,792nm,0.4s							
GRPR					smax	smax		
	comp=N,987nm,1.0s							
GRPR					smax	smax		
	comp=E,1μm,0.7s							
GLVR	**Golovnino**	**4.54**	**253**	*c*	PN	**Pn**	**12 51 23.3**	**+1.4**
GLVR				*e*	S	**Sn**	**12 52 14.5**	**+1.0**
GLVR					pmax	pmax		
	comp=Z,655nm,0.2s							
GLVR					pmax	pmax		
	comp=N,21nm,0.1s							
GLVR					smax	smax		
	comp=N,1μm,0.3s							
GLVR					smax	smax		
	comp=E,683nm,0.2s							
GLVR					smax	smax		
	comp=E,2μm,1.0s							
GLVR					smax	smax		
	comp=N,1μm,0.9s							
NEM2	**Nemuro 2**	**4.55**	**248**		P	**Pn**	**12 51 22.0**	**+0.1**
NEM2				*e*	S	**Sn**	**12 52 12.8**	**-0.7**
NMR	**Nemuro--Hokkai**	**4.55**	**248**	⇑ *i*	PN	**Pn**	**12 51 22.3**	**+0.3**
RUSJ	**Misakicho**	**4.61**	**258**	⇓ *i*	PN	**Pn**	**12 51 25.5**	**+2.7**
RUSJ				*e*	S	**Sn**	**12 52 19.7**	**+4.5**
JRA	**Rausu**	**4.75**	**256**		P	**Pn**	**12 51 26.8**	**+2.1**
JRA				*e*	S	**Sn**	**12 52 21.7**	**+3.2**
JNK	**Nakash**	**5.14**	**254**		P	**Pn**	**12 51 31.7**	**+1.6**
JNK				*e*	S	**Sn**	**12 52 29.5**	**+1.3**
JAK	**Akkeshi**	**5.40**	**248**		P	**Pn**	**12 51 33.7**	**+0.1**
JAK				*e*	S	**Sn**	**12 52 33.2**	**-1.3**
JTKR	**Abashiri--Toko**	**5.58**	**260**		P	**Pn**	**12 51 38.2**	**+2.1**
JAR	**Ashorobuto**	**5.89**	**254**		P	**Pn**	**12 51 42.2**	**+1.8**
JAR				*e*	S	**Sn**	**12 52 47.4**	**+0.7**
JMP	**Maruseppu**	**5.95**	**261**		P	**Pn**	**12 51 44.2**	**+2.9**
JOB	**Onbets**	**6.00**	**250**		P	**Pn**	**12 51 43.0**	**+1.0**
JOB				*e*	S	**Sn**	**12 52 49.7**	**+0.2**
SKR	**Severo-Kuril's**	**6.26**	**28**	⇓ *i*	PN	**Pn**	**12 51 46.3**	**+0.8**
SKR				*e*	S	**Sn**	**12 52 56.1**	**+0.3**
SKR					pmax	pmax		
	comp=Z,228nm,0.6s							
SKR					smax	smax		
	comp=N,279nm,0.8s							
SKR					smax	smax		
	comp=E,347nm,0.9s							
SKR					MLR	MLR		
	comp=Z,500nm,14.0s							
SKR					MLR	MLR		
	comp=Z,700nm,11.0s							
JSE	**Soyaes**	**6.33**	**271**		P	**Pn**	**12 51 49.3**	**+2.9**
YSS	**Yuzh-Sakhalins**	**6.33**	**289**	*e*	PN	**Pn**	**12 51 48.2**	**+1.8**
YSS				*e*	S	**Sn**	**12 52 59.1**	**+1.6**
YSS					pmax	pmax		
	comp=Z,100nm,1.1s							
YSS					MLR	MLR		
	comp=Z,2μm,14.0s							
YSS					MLR	MLR		
	comp=N,600nm,13.0s							
YSS					MLR	MLR		
	comp=E,1μm,14.0s							
YSS	**Yuzh-Sakhalins**	**6.33**	**289**		Pn	**Pn**	**12 51 48.0**	**+1.6**
JKK2	**Kamakawa 2**		**6.41**	**261**	P	**Pn**	**12 51 50.1**	**+2.5**
JCH	**Churui**		**6.45**	**249**	P	**Pn**	**12 51 48.6**	**+0.6**
JCH					*e*S	**Sn**	**12 52 59.1**	**-1.2**
JKA	**Kamikawa-asahi**		**6.46**	**263**		**Pn**	**12 51 50.4**	**+2.2**
ASAJ	**Asahikawa**		**6.46**	**263**	Pn	**Pn**	**12 51 51.0**	**+2.8**
	comp=E,8.3nm,0.3s,baz=73,slow=16,SNR=91							
ASAJ					LR	LR	12 54 32.6	
	comp=E,1μm,18.4s,baz=106,slow=41							
ASAJ	**Asahikawa**		**6.46**	**263**	P	**Pn**	**12 51 51.2**	**+3.0**
ASAJ	**Asahikawa**		**6.46**	**263**	PN	**Pn**	**12 51 50.4**	**+2.2**
JFR	**Furan**		**6.74**	**255**	P	**Pn**	**12 51 54.2**	**+2.1**
JFR					*e*S	**Sn**	**12 53 09.5**	**+1.9**
JWK2	**Keihoku**		**6.79**	**274**	P	**Pn**	**12 51 57.4**	**+4.7**
JEM	**Erimo**		**6.87**	**245**	P	**Pn**	**12 51 55.5**	**+1.7**
JEM					*e*S	**Sn**	**12 53 11.0**	**+0.3**
JEM	**Erimo**		**6.87**	**245**		**Pn**	**12 51 50.0**	**-3.8**
ERM	**Erimo**		**6.87**	**245**	*c**e*PN	**Pn**	**12 51 56.4**	**+2.6**
ERM					pmax	pmax		
	comp=Z,203nm,1.0s							
ERM	**Erimo**		**6.87**	**245**		**Pn**	**12 51 55.9**	**+2.1**
JAB	**Ashibetsu**		**6.88**	**259**	P	**Pn**	**12 51 57.3**	**+3.3**
JNBK	**Urakawa-nobuka**		**7.00**	**248**	P	**Pn**	**12 51 55.8**	**+0.2**
JNBK					*e*S	**Sn**	**12 53 11.1**	**-2.9**
JBT2	**Biratori 2**		**7.04**	**253**	P	**Pn**	**12 51 57.1**	**+0.9**
JHR	**Hokuryu**		**7.16**	**261**	P	**Pn**	**12 52 01.2**	**+3.4**
JRBN	**Rebuntou**		**7.37**	**275**	P	**Pn**	**12 52 04.0**	**+3.3**
JEW	**Eniwo**		**7.64**	**255**	P	**Pn**	**12 52 06.4**	**+2.2**
JEW	**Eniwo**		**7.64**	**255**		**Pn**	**12 52 06.1**	**+1.7**
JNB	**Noboribetsu**		**8.06**	**254**	P	**Pn**	**12 52 11.5**	**+1.3**
JNB					*e*S	**Sn**	**12 53 39.0**	**-1.1**
TYV	**Tymovskoe**		**8.18**	**317**	*e*PN	**Pn**	**12 52 13.8**	**+2.0**
TYV					pmax	pmax		
	comp=Z,40nm,0.7s							
TYV					pmax	pmax		
	comp=Z,100nm,2.2s							
TYV					MLR	MLR		
	comp=Z,1μm,15.0s							
JKB	**Kayabe**		**8.32**	**250**	P	**Pn**	**12 52 13.8**	**+0.1**
JKB					*e*S	**Sn**	**12 53 41.8**	**-4.5**
JYM2	**Yakumo 2**		**8.66**	**253**	P	**Pn**	**12 52 18.8**	**+0.4**
JSH	**Shimam**		**8.68**	**257**	P	**Pn**	**12 52 20.3**	**+1.7**
JANG	**Nango**		**8.81**	**240**	P	**Pn**	**12 52 18.9**	**-1.6**
JANG					*e*S	**Sn**	**12 53 50.5**	**-8.0**
JTM	**Tenmabayashi**		**8.85**	**244**	P	**Pn**	**12 52 20.5**	**-0.5**
JTM					*e*S	**Sn**	**12 53 53.2**	**-6.3**
JTM	**Tenmabayashi**		**8.85**	**244**	Pn	**Pn**	**12 52 20.6**	**-0.4**
PEA0B	**Petropavlovsk-**		**8.86**	**25**	PN	**Pn**	**12 52 21.3**	**+0.2**
PEA0B	**Petropavlovsk-**		**8.86**	**25**		**Pn**	**12 52 21.2**	**+0.2**
PETK	**Petropavlovsk-**		**8.86**	**25**	Pn	**Pn**	**12 52 20.1**	**-1.0**
	comp=Z,1.4nm,0.3s,baz=186,slow=8.8,SNR=43							
PETK	**Petropavlovsk-**		**8.86**	**25**	PN	**Pn**	**12 52 22.6**	**+1.5**
PETK	**Petropavlovsk-**		**8.86**	**25**		**Pn**	**12 52 22.6**	**+1.5**
JTH	**Tanohata**		**8.87**	**237**	P	**Pn**	**12 52 18.7**	**-2.6**
JTH					*e*S	**Sn**	**12 53 51.8**	**-8.2**
JSR	**Shiriuchi**		**8.89**	**249**	P	**Pn**	**12 52 22.0**	**+0.5**
JSR					*e*S	**Sn**	**12 53 55.6**	**-4.8**
PET	**Petropavlovsk**		**9.09**	**28**	*e*PN	**Pn**	**12 52 25.3**	**+1.1**
PET					MLR	MLR		
	comp=Z,900nm,16.0s							
PET					MLR	MLR		
	comp=Z,500nm,10.0s							
PET	**Petropavlovsk**		**9.09**	**28**	Pn	**Pn**	**12 52 25.2**	**+1.0**
JOSM	**Okushiri--Mats**		**9.28**	**254**	P	**Pn**	**12 52 27.1**	**+0.2**
OFUJ	**Ofunato**		**9.55**	**233**	P	**Pn**	**12 52 29.5**	**-1.1**
OFUJ					*e*S	**Sn**	**12 54 09.3**	**-7.4**
JRG	**Rokugo**		**9.95**	**238**	P	**Pn**	**12 52 36.0**	**0.0**
JRG					*e*S	**Sn**	**12 54 22.3**	**-4.1**
JIO	**Ouri**		**10.16**	**232**	P	**Pn**	**12 52 37.4**	**-1.6**
JIO					*e*S	**Sn**	**12 54 24.7**	**-7.0**
TEY	**Ternei**		**10.54**	**274**	⇑ *e*PN	**Pn**	**12 52 44.7**	**+0.5**
TEY					pmax	pmax		
	comp=Z,10.0nm,1.2s							
JMM	**Marumori**		**10.89**	**231**	Pn	**Pn**	**12 52 47.2**	**-1.8**
JYA	**Atsumi**		**11.01**	**237**	P	**Pn**	**12 52 50.1**	**-0.5**
JFK	**Kawauchi**		**11.21**	**229**	*e*S	**Sn**	**12 54 49.2**	**-8.3**
GRNR	**Gornyy**		**11.52**	**304**	⇑ *i*PN	**Pn**	**12 53 01.7**	**+4.1**
GRNR					pmax	pmax		
	comp=E,4.0nm,0.9s							
GRNR					pmax	pmax		
	comp=Z,3.0nm,0.9s							
GRNR					MLR	MLR		
	comp=E,520nm,11.0s							
GRNR					MLR	MLR		
	comp=N,380nm,17.0s							
GRNR					MLR	MLR		
	comp=Z,680nm,16.0s							
JSD	**Sado**		**12.24**	**239**	Pn	**Pn**	**12 53 06.7**	**-0.7**
JYT	**Yasato**		**12.43**	**228**		Sn	12 55 17.5	-10
MAJO	**Matsushiro**		**13.28**	**234**	PN	**Pn**	**12 53 22.4**	**+0.7**
MAJO	**Matsushiro**		**13.28**	**234**	Pn	**Pn**	**12 53 22.4**	**+0.7**
MAT	**Matsushiro**		**13.28**	**234**	P	**Pn**	**12 53 21.4**	**-0.3**
MAT					*e*S	**Sn**	**12 55 41.8**	**-6.3**
MJAR	**Matsushiro Arr**		**13.28**	**234**	Pn	**Pn**	**12 53 20.8**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=22,slow=14,SNR=11							
MJAR					LR	LR	12 59 09.2	
	comp=Z,217nm,21.1s,baz=45,slow=40							
MJAR	**Matsushiro Arr**		**13.28**	**234**	PN	**Pn**	**12 53 22.4**	**+0.7**
MJAR	**Matsushiro Arr**		**13.28**	**234**		**Pn**	**12 53 22.4**	**+0.7**
USA0B	**Ussuriysk Arra**		**13.93**	**273**	*i* P	**Pn**	**12 53 30.5**	**+0.1**
USA0B	**Ussuriysk Arra**		**13.93**	**273**	Pn	**Pn**	**12 53 29.9**	**-0.5**
USRK	**Ussuriysk Ar.**		**13.93**	**273**	Pn	**Pn**	**12 53 28.5**	**-1.9**
	baz=85,slow=12,SNR=10							
USRK					LR	LR	12 58 52.8	
	comp=Z,542nm,18.9s,baz=65,slow=38							
USRK	**Ussuriysk Ar.**		**13.93**	**273**	P	**Pn**	**12 53 30.5**	**+0.1**
USRK	**Ussuriysk Ar.**		**13.93**	**273**		**Pn**	**12 53 30.4**	**+0.1**
KLR	**Kul'dur**		**14.01**	**294**	Pn	**Pn**	**12 53 30.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=98,slow=13,SNR=4.8							
KLR					LR	LR	12 59 09.0	
	comp=Z,593nm,19.2s,baz=98,slow=39							
KLR	**Kul'dur**		**14.01**	**294**	*i* P	**Pn**	**12 53 31.9**	**+0.4**
KLR					pmax	pmax		
	comp=Z,20nm,1.0s							
MA2	**Magadan**		**14.37**	**358**	Pn	**Pn**	**12 53 36.1**	**-0.3**
	comp=Z,5.8nm,0.3s,baz=182,slow=13,SNR=7.6							
MA2	**Magadan**		**14.37**	**358**	*i* P	**Pn**	**12 53 34.8**	**-1.6**
MA2					pmax	pmax		
	comp=Z,1.0nm,0.3s							
JGF	**Kuroka**		**14.44**	**233**		**Pn**	**12 53 38.3**	**+0.8**
MDJ	**Mudanjiang**		**15.54**	**276**	P	**Pn**	**12 53 50.5**	**-1.5**
MDJ					S	**Sn**	**12 56 41.0**	**-1.9**
MDJ					PcP	**PcP**	**12 58 54.3**	**+1.5**
MDJ					pmax	pmax		
	comp=Z,68nm,0.9s							
MDJ					pmax	pmax		
	comp=Z,280nm,4.3s							
MDJ					LR	LR		
	comp=Z,390nm,13.5s							
MDJ					LR	LR		
	comp=Z,740nm,16.4s							
MDJ					LR	LR		
	comp=Z,1μm,16.4s							
MDJ	**Mudanjiang**		**15.54**	**276**	Pn	**Pn**	**12 53 51.2**	**-0.8**
MDJ					IAmb	IAmb	12 53 56.3	
	comp=Z,45nm,0.8s							
JWT	**Wachi**		**15.79**	**237**	Pn	**Pn**	**12 53 56.3**	**+1.0**
JHS	**Saijyo**		**17.36**	**240**	P	**Pn**	**12 54 14.8**	**-0.3**
SEY	**Seymchan**		**17.74**	**1**	P	**Pn**	**12 54 17.4**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=185,slow=19,SNR=3.9							
SEY	**Seymchan**		**17.74**	**1**	*i* P	**Pn**	**12 54 17.9**	**-1.7**
ZEA	**Zeya**		**17.84**	**307**	*e*P	**Pn**	**12 54 20.2**	**-0.7**
ZEA					pmax	pmax		
	comp=E,20nm,1.2s							
ZEA					pmax	pmax		
	comp=N,10.0nm,1.1s							
ZEA					pmax	pmax		
	comp=Z,30nm,1.1s							
ZEA					MLR	MLR		
	comp=E,400nm,19.0s							
ZEA					MLR	MLR		
	comp=Z,400nm,13.0s							
CN2	**Changchun**		**18.62**	**275**	*e*P	**P**	**12 54 28.8**	**-1.2**
CN2					S	**Sn**	**12 57 56.0**	**-1.6**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					pmax	pmax		
	comp=Z,100nm,3.0s							
CN2					LR	LR		
	comp=Z,500nm,16.0s							
CN2					LR	LR		
	comp=Z,700nm,16.0s							
CN2					LR	LR		
	comp=Z,800nm,17.0s							
KSRS	**Korea Array**		**19.30**	**255**	P	**Pn**	**12 54 38.4**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=63,slow=11,SNR=25							
KSRS					LR	LR	13 02 16.3	
	comp=Z,296nm,18.2s,baz=54,slow=38							
JNU	**Nakatsue**		**19.99**	**240**	P	Pn	12 54 47.4	+0.4
	comp=Z,44nm,1.0s,baz=24,slow=13,SNR=8.1							
JNU					LR	LR	13 03 23.3	
	comp=Z,355nm,19.5s,baz=66,slow=40							
TJN	**Taejon**		**20.25**	**253**	*c**e*P	Pn	12 54 49.8	-0.2
YAK	**Yakutsk**		**21.05**	**331**	P	**P**	**12 54 55.1**	**-1.2**
	comp=Z,9.6nm,0.3s,baz=338,slow=1.4,SNR=13							
YAK					LR	LR	13 03 21.1	
	comp=Z,227nm,18.9s,baz=90,slow=38							
YAK	**Yakutsk**		**21.05**	**331**	*e*P	**P**	**12 54 55.1**	**-1.2**
YAK					*e*PP	**pwP**	**12 55 09.3**	**-0.4**
YAK					*e*		12 55 16.2	
YAK					*e*S	**S**	**12 58 44.2**	**-4.3**
YAK					*e*SS	**pS**	**12 59 01.7**	**-0.1**
YAK					pmax	pmax		
	comp=Z,85nm,0.9s							
YAK					pmax	pmax		
	comp=N,13nm,0.8s							
YAK					pmax	pmax		
	comp=E,11nm,0.8s							
YAK					pmax	pmax		
	comp=Z,61nm,1.8s							
YAK					pmax	pmax		
	comp=N,63nm,1.9s							
YAK					pmax	pmax		
	comp=E,62nm,1.8s							
YAK					smax	smax		
	comp=E,190nm,2.4s							
YAK					smax	smax		
	comp=N,118nm,2.7s							
YAK	**Yakutsk**		**21.05**	**331**	P	**P**	**12 54 55.0**	**-1.2**
YAK					IAmb	IAmb	12 55 04.0	
	comp=Z,83nm,0.8s							
JSU	**Suzuyama**		**21.38**	**237**		**P**	**12 54 58.9**	**-1.2**
JSU					IAmb	IAmb	12 55 08.0	
	comp=Z,70nm,1.0s							
DL2	**Dalian**		**22.99**	**265**	*e*P	**P**	**12 55 14.0**	**-3.2**
DL2					pmax	pmax		
	comp=Z,41nm,1.1s							
BILL	**Bilibino**		**24.12**	**14**	*e*P	**P**	**12 55 25.4**	**-2.4**
BILL					pmax	pmax		
	comp=Z,5.0nm,1.0s							
BILL	**Bilibino**		**24.12**	**14**	P	**P**	**12 55 26.2**	**-1.7**
BJI	**Beijing**		**26.37**	**271**	P	**P**	**12 55 50.0**	**+1.5**
BJI					S	**S**	**13 00 24.0**	**+4.7**
BJI					pmax	pmax		
	comp=Z,29nm,0.9s							
BJI					LR	LR		
	comp=Z,260nm,13.8s							
BJI					LR	LR		
	comp=Z,420nm,15.0s							
BJI					LR	LR		
	comp=Z,270nm,16.7s							
H11N2	**WAKE ISLAND Hy**		**28.45**	**148**	T	T	13 26 51.2	
	baz=340,slow=74,SNR=872							
H11N1	**WAKE ISLAND Hy**		**28.46**	**148**	T	T	13 26 52.3	
	baz=340,slow=74,SNR=549							
H11N3	**WAKE ISLAND Hy**		**28.46**	**148**	T	T	13 26 51.4	
	baz=340							
NJ2	**Nanjing**		**28.50**	**254**	*e*P	**P**	**12 56 08.8**	**+1.2**
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
NJ2					LR	LR		
	comp=Z,470nm,13.3s							
NJ2					LR	LR		
	comp=Z,310nm,15.7s							
NJ2					LR	LR		
	comp=Z,380nm,17.5s							
TIXI	**Tiksi**		**28.63**	**345**	*c**e*P	**P**	**12 56 04.7**	**-3.7**
TIXI	**Tiksi**		**28.63**	**345**	P	**P**	**12 56 05.5**	**-2.9**
HHC	**Hu-ho-hao-te**		**29.31**	**276**	*e*P	**P**	**12 56 16.0**	**+1.1**
HHC					S	**S**	**13 01 11.0**	**+5.1**
HHC					pmax	pmax		
	comp=Z,38nm,0.9s							
HHC					pmax	pmax		
	comp=Z,210nm,4.6s							
HHC					LR	LR		
	comp=Z,410nm,15.1s							
HHC					LR	LR		
	comp=Z,660nm,13.9s							
HHC					LR	LR		
	comp=Z,830nm,13.5s							
H11S1	**WAKE ISLAND Hy**		**29.50**	**150**	T	T	13 28 10.9	
	baz=338,slow=76,SNR=578							
H11S3	**WAKE ISLAND Hy**		**29.51**	**150**	T	T	13 28 13.5	
	baz=338,slow=76,SNR=328							
H11S2	**WAKE ISLAND Hy**		**29.52**	**150**	T	T	13 28 12.8	
	baz=338,slow=76,SNR=336							
ULN	**Ulaanbaatar**		**30.38**	**291**	*c**e*P	**P**	**12 56 25.0**	**+0.7**
ULN					pmax	pmax		
	comp=Z,3.0nm,0.6s							
SONM	**Songino Array**		**30.82**	**291**	P	**P**	**12 56 28.0**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=77,slow=7.7,SNR=15							
SONM					PcP	**PcP**	**12 59 23.5**	**-1.1**
	comp=Z,1.4nm,1.0s,baz=96,slow=2.9,SNR=3.3							
SONM					LR	LR	13 09 53.4	
	comp=Z,364nm,18.9s,baz=91,slow=38							
SONM	**Songino Array**		**30.82**	**291**	P	**P**	**12 56 27.6**	**-0.6**
SONM					pmax	pmax		
	comp=Z,3.0nm,1.0s							
SONM	**Songino Array**		**30.82**	**291**	P	**P**	**12 56 27.6**	**-0.6**
TLY	**Talaya**		**31.91**	**299**	LR	LR	13 10 29.5	
	comp=Z,446nm,18.0s,baz=107,slow=38							
SVW2	**Sparrevohn**		**34.35**	**43**	P	**P**	**12 56 59.9**	**+1.1**
IMAR	**Indian Mountai**		**35.65**	**35**	P	**P**	**12 57 09.9**	**+0.1**
A21K	**Barrow**		**35.86**	**26**	P	**P**	**12 57 11.5**	**-0.1**
A21K					IAmb	IAmb	12 57 12.8	
	comp=Z,28nm,1.4s							
KDAK	**Kodiak Island**		**35.93**	**49**	P	**P**	**12 57 12.5**	**+0.1**
KDAK					pmax	pmax		
	comp=Z,29nm,1.3s							
KDAK	**Kodiak Island**		**35.93**	**49**	P	**P**	**12 57 12.5**	**+0.1**
KDAK					IAmb	IAmb	12 57 19.1	
	comp=Z,30nm,1.3s							
CNPM	**China Poot**		**36.52**	**46**	P	**P**	**12 57 17.2**	**-0.2**
CNPM					IAmb	IAmb	12 57 19.3	
	comp=Z,20nm,1.2s							
BRLK	**Bradley Lake**		**36.68**	**46**	P	**P**	**12 57 18.8**	**0.0**
BRLK					IAmb	IAmb	12 57 35.0	
	comp=Z,27nm,1.5s							
LZH	**Lanzhou**		**36.84**	**273**	*e*P	**P**	**12 57 22.0**	**+1.4**
LZH					pP	pP	12 57 28.0	-1.0
LZH					sP	sP	12 57 30.5	-1.5
LZH					pmax	pmax		
	comp=Z,65nm,1.1s							
LZH					pmax	pmax		
	comp=Z,240nm,4.8s							
LZH					LR	LR		
	comp=Z,230nm,14.4s							
LZH					LR	LR		
	comp=Z,280nm,12.5s							
LZH					LR	LR		
	comp=Z,200nm,14.6s							
COLD	**Coldfoot**		**37.21**	**33**	P	**P**	**12 57

ILAR Eielson Array 38.43 37 P **P** **12 57 33.3 -0.2**
ILAR Eielson Array 38.43 37 P **P** **12 57 33.3 -0.2**
M24K Tolsona, Glenn 38.84 42 P P **12 57 38.5 +1.5**
M24K IAmb IAmb 12 57 39.4
comp=Z,16nm,1.0s
M24K **ScP** **13 03 33.9 +1.0**
BMAR Burnt Mountain 39.40 33 P P **12 57 42.4 +0.8**
NRIK Noril'sk 39.50 330 P P **12 57 40.5 -1.8**
comp=Z,1.2nm,0.5s,baz=14,slow=9.9,SNR=3.7
NRIK Noril'sk 39.50 330 *ce*P P **12 57 39.8 -2.6**
NRIK pmax pmax
comp=Z,7.0nm,1.4s
CD2 Chengdu 39.65 266 P P **12 57 45.3 +1.1**
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 LR LR
comp=Z,190nm,16.7s
CD2 LR LR
comp=Z,230nm,13.3s
CD2 LR LR
comp=Z,360nm,15.7s
VRDI Verde Repeater 40.22 43 P P **12 57 49.7 +1.0**
GYA Guiyang 40.30 258 ⇑P P **12 57 51.0 +1.3**
GYA sP sP 12 58 01.8 +0.1
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA LR LR
comp=Z,220nm,15.5s
K27K Chicken 40.55 38 P P **12 57 52.2 +1.1**
K27K IAmb IAmb 12 57 53.3
comp=Z,18nm,1.1s
BALM Baldy 40.77 43 IAmb IAmb 12 58 04.5
comp=Z,22nm,1.4s
BCAR Beaver Creek A 40.77 40 P P **12 57 54.0 +0.9**
EGAK Eagle 40.88 37 P P **12 57 54.3 +0.4**
BARN Barnard Glacie 41.10 43 IAmb IAmb 12 57 58.6
comp=Z,17nm,0.9s
CTGM Chitina Glacie 41.27 43 P P **12 57 58.7 +1.4**
CTGM IAmb IAmb 12 57 59.8
comp=Z,20nm,0.9s
DAWY Dawson 41.72 38 P P **12 58 02.1 +1.3**
ZALV Zalesovo Beam 42.61 307 P P **12 58 06.2 -2.0**
comp=Z,0.7nm,0.3s,baz=78,slow=6.0,SNR=5.0
ZALV PcP **PcP** **13 00 00.5 +0.7**
comp=Z,5.9nm,0.9s,baz=64,slow=3.4,SNR=16
HYT Haines Junctio 43.14 43 P P **12 58 15.0 +2.5**
HYT IAmb IAmb 12 58 15.8
comp=Z,30nm,1.3s
QIZ Qiongzhong 43.23 247 P P **12 58 13.5 0.0**
QIZ S S **13 04 40.5 +2.3**
QIZ LR LR
comp=Z,200nm,18.0s
QIZ LR LR
comp=Z,170nm,21.8s
QIZ LR LR
comp=Z,180nm,16.9s
INK Inuvik 43.52 31 P P **12 58 16.1 +0.8**
comp=Z,7.2nm,0.9s,baz=270,slow=7.6,SNR=16
INK Inuvik 43.52 31 P P **12 58 16.6 +1.3**
INK pmax pmax
comp=Z,10.0nm,1.0s
INK Inuvik 43.52 31 P P **12 58 16.6 +1.3**
WHY Whitehorse 44.43 42 P P **12 58 24.8 +2.0**
WHY IAmb IAmb 12 58 26.6
comp=Z,18nm,1.1s
WMQ Urumqi 44.45 292 *e*P P **12 58 24.5 +1.3**
WMQ pP pP 12 58 32.3 +0.4
WMQ sP sP 12 58 36.0 +1.2
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,130nm,5.1s
WMQ LR LR
comp=Z,390nm,17.5s
WMQ LR LR
comp=Z,210nm,18.5s
MK31 Makanchi Array 46.66 298 *ce*P P **12 58 39.6 -1.0**
MK31 Makanchi Array 46.66 298 P P **12 58 40.5 -0.1**
MKAR Makanchi Array 46.66 298 P P **12 58 39.8 -0.8**
comp=Z,1.9nm,0.5s,baz=68,slow=7.3,SNR=24
MKAR PcP **PcP** **13 00 14.8 +0.9**
comp=Z,3.0nm,0.7s,baz=67,slow=4.5,SNR=6.7
MKAR Makanchi Array 46.66 298 *i* P P **12 58 40.9 +0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.5s
C36M Paulatuk 46.69 29 IAmb IAmb 12 58 42.0
comp=Z,20nm,1.5s
MAKZ Makanchi 46.85 298 P P **12 58 41.7 -0.3**
MAKZ pmax pmax
comp=Z,4.0nm,0.7s
MAKZ Makanchi 46.85 298 P P **12 58 41.7 -0.3**
KURK Kurchatov 47.29 304 P P **12 58 43.7 -1.7**
KURK pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 47.29 304 P P **12 58 43.7 -1.7**
KURBB Kurchatov Arra 47.38 304 P P **12 58 44.8 -1.3**
comp=Z,3.8nm,0.7s,baz=70,slow=8.5,SNR=14
DLBC Dease Lake 47.45 44 P P **12 58 47.9 +1.2**
comp=Z,8.0nm,1.1s,baz=304,slow=18,SNR=5.0
NONG Nongkai 48.35 252 P P **12 58 56.0 +2.1**
LSA Lhasa 49.25 273 P P **12 59 03.5 +2.1**
LSA pmax pmax
comp=Z,63nm,0.8s
LSA Lhasa 49.25 273 P P **12 59 03.4 +2.1**
LSA pmax pmax
comp=Z,15nm,0.8s
LSA Lhasa 49.25 273 P P **12 59 03.4 +2.1**
LSA IAmb IAmb 12 59 04.4
comp=Z,15nm,0.8s
PAYA Payao 49.67 256 P P 12 59 09.5 +5.4
comp=Z,2μmcomp=Z,130nm,0.8s
PHRA Phrae 50.02 255 P P **12 59 08.8 +2.1**
LAMP Lampang 50.41 256 P P 12 59 14.6 +4.9
comp=Z,20nm,0.8s
CM34 Chiang Mai Arr 50.52 256 P P **12 59 13.0 +2.5**
CM35 Chiang Mai Arr 50.63 256 P P **12 59 13.0 +1.6**
CHAI Chaiyaphum 50.66 251 P P **12 59 13.0 +1.4**
comp=Z,12nm,0.8s
CMMT Chiang Mai 50.68 256 P P **12 59 13.7 +1.9**
comp=Z,4.8nm,0.7s
CHTO Chiang Mai 50.68 256 P P **12 59 12.7 +0.9**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 50.68 256 P P **12 59 12.7 +0.9**
CHTO IAmb IAmb 12 59 27.9
comp=Z,8.7nm,0.9s
CM36 Chiang Mai Arr 50.78 256 P P **12 59 16.0 +3.5**
EUNU Eureka 50.83 11 IAmb IAmb 12 59 12.8
comp=Z,18nm,1.1s
CM32 Chiang Mai Arr 50.86 256 P P **12 59 16.0 +2.9**
CMAR Chiang Mai Arr 50.93 256 P P **12 59 15.3 +1.7**
comp=Z,2.3nm,0.8s,baz=33,slow=7.4,SNR=18
CMAR PcP **PcP** **13 00 32.5 +2.8**
comp=Z,2.0nm,0.9s,baz=37,slow=2.4,SNR=6.1
CMAR LR LR 13 23 12.6
comp=Z,94nm,18.6s,baz=86,slow=39
CMAR Chiang Mai Arr 50.93 256 P P **12 59 13.7 +0.1**
CMAR Chiang Mai Arr 50.93 256 P P **12 59 13.7 +0.1**
CM02 Chiang Mai Arr 50.94 256 P P **12 59 17.0 +3.3**
comp=Z,48nmcomp=Z,6.1nm,0.9s
CM01 Chiang Mai Arr 50.94 256 P P **12 59 17.0 +3.3**
comp=Z,4.8nm,0.9s
CM04 Chiang Mai Arr 50.94 256 P P **12 59 17.6 +3.9**
comp=Z,49nmcomp=Z,5.5nm,1.0s
CM15 Chiang Mai Arr 50.95 256 P P **12 59 18.0 +4.2**
CM05 Chiang Mai Arr 50.97 256 P P **12 59 17.4 +3.5**
comp=Z,40nmcomp=Z,3.4nm,1.1s
CM13 Chiang Mai Arr 50.98 256 P P **12 59 17.8 +3.7**
comp=Z,4.2nm,0.8s
BRVK Borovoye 51.01 310 *ce*P P **12 59 11.5 -2.3**
BRVK pmax pmax
comp=Z,2.0nm,0.7s
SHL Shillong 51.22 269 P P **12 59 16.5 +0.5**
SHL pmax pmax
comp=Z,46nm,0.8s
SHL Shillong 51.22 269 P P **12 59 16.5 +0.5**
MRSI Marisa 51.66 219 P P 12 59 33.8 +15
comp=Z,9.7nm,1.0s
MHMT Maesarieng 51.82 257 P P **12 59 23.0 +2.7**
comp=Z,26nm,0.9s
SRAK Srakaew 51.98 249 P P **12 59 21.1 -0.4**
comp=Z,142nm,0.8s
KDJ Kajisay 52.06 295 P P **12 59 22.6 +0.6**
KDJ pmax pmax
comp=Z,16nm,0.8s
KDJ Kajisay 52.06 295 P P **12 59 22.6 +0.6**
KDJ IAmb IAmb 12 59 23.7
comp=Z,16nm,0.8s
ULHL Ulahol 52.60 295 P P **12 59 27.0 +0.9**
SNR=5.1
UTHA Uthaitani 52.61 253 P P 12 59 32.3 +6.1
comp=Z,312nmcomp=Z,14nm,0.8s
RES Resolute Bay 52.62 18 P P **12 59 24.3 -1.2**
comp=Z,5.4nm,0.7s,baz=342,slow=8.7,SNR=7.0
BOOM Boomskoye usch 52.67 296 P P **12 59 27.4 +0.8**
BOOM pmax pmax
comp=Z,44nm,1.5s
BOOM Boomskoye usch 52.67 296 P P **12 59 27.4 +0.8**
YKA Yellowknife Ar 52.80 36 P P **12 59 28.0 +1.0**
comp=Z,3.7nm,0.9s,baz=302,slow=7.7,SNR=8.2
TAPN Taplejung 53.07 273 *e*P P **12 59 30.9 +1.0**
comp=Z,38nm,0.7s
USP Ospenovka 53.19 297 P P **12 59 30.8 +0.6**
SNR=11
KBK Karagaybulak 53.22 296 P P **12 59 31.6 +1.0**
SNR=7.0
AAK Ala-Archa 53.51 297 P P **12 59 33.0 +0.3**
SNR=8.3
AAK Ala-Archa 53.51 297 *ce*P P **12 59 32.3 -0.5**
AAK pmax pmax
comp=Z,21nm,0.8s
AAK Ala-Archa 53.51 297 P P **12 59 33.6 +0.8**
AAK IAmb IAmb 12 59 34.2
comp=Z,8.8nm,0.9s
ODAN Odare 53.60 273 *e*P P **12 59 34.9 +1.2**
EKS2 Erkin-Say 53.95 297 P P **12 59 36.4 +0.4**
SNR=10
GUN Gumba 54.02 275 *e*P P **12 59 37.9 +1.0**
RAMN Ramite 54.10 274 *e*P P **12 59 38.3 +1.0**
comp=Z,64nm,0.6s
KSH Kashi 54.20 293 P P **12 59 42.0 +4.2**
KSH pP sP 12 59 49.0 -0.8
KSH pmax pmax
comp=Z,23nm,0.7s
KSH pmax pmax
comp=Z,410nm,5.3s
KSH LR LR
comp=Z,340nm,10.4s
KSH LR LR
comp=Z,380nm,8.1s
KSH LR LR
comp=Z,360nm,10.8s
AML Almayashu 54.28 296 P P **12 59 40.0 +1.3**
SNR=5.7
PHET Kaeng Krachan 54.39 251 P P **12 59 42.3 +3.1**
KKN Kakani 54.52 275 *e*P P **12 59 41.4 +1.0**
comp=Z,34nm,0.7s
PKI Pulchoki 54.56 275 *e*P P **12 59 41.5 +0.7**
comp=Z,14nm,0.6s
PKIN Phulchoki 54.57 275 *e*P P **12 59 41.6 +0.8**
comp=Z,23nm,0.6s
DMN Daman 54.75 275 *e*P P **12 59 43.3 +1.2**
comp=Z,51nm,0.9s
GKN Gorkha 54.84 276 *e*P P **12 59 43.6 +1.0**
comp=Z,29nm,0.5s
DANN Dangsing 55.25 277 *e*P P **12 59 47.1 +1.4**
comp=Z,74nm,0.7s
ARU Arti 55.38 318 *d*iP P **12 59 43.8 -2.1**
ARU 13 01 44.5
ARU S S **13 07 27.3 -0.3**
ARU SS SS **13 11 09.0 -2.7**
ARU pmax pmax
comp=Z,8.0nm,0.9s
ARU Arti 55.38 318 P P **12 59 43.8 -2.1**
ARU IAmb IAmb 12 59 50.5
comp=Z,9.1nm,0.6s
KOLN Koldanda 55.71 276 *e*P P **12 59 50.1 +1.1**
comp=Z,51nm,0.8s
KK31 Karatay Array 55.76 299 IAmb IAmb 12 59 49.7
comp=Z,9.5nm,0.8s
KKAR Karatay Array 55.76 299 P P **12 59 48.5 -0.3**
KKAR Karatay Array 55.76 299 P P **12 59 48.5 -0.3**
KKAR Karatay Array 55.76 299 IAmb IAmb 12 59 49.7
comp=Z,9.5nm,0.8s
TULEG Thule 55.82 11 *i* P P **12 59 47.8 -1.0**
TULEG IAmb IAmb 12 59 48.5
comp=Z,11nm,0.7s
PYUN Piuthan 55.94 277 *e*P P **12 59 51.6 +1.0**
comp=Z,77nm,0.8s
BTK Batken 57.23 296 IAmb IAmb 13 00 00.8
comp=Z,16nm,0.8s
DAG Danmarks Havn 58.11 357 *i* P P **13 00 03.7 -1.2**
DAG pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 58.11 357 *i* P P **13 00 03.7 -1.2**
comp=Z,6.2nm,0.8s
DAG Danmarks Havn 58.11 357 *i* P P **13 00 03.8 -1.2**
DAG IAmb IAmb 13 00 04.8
comp=Z,6.2nm,0.8s
KIRV Kirov 58.32 323 LR LR 13 27 52.2
comp=Z,410nm,19.3s,baz=343,slow=39
BBKI Banjar Baru 58.45 224 P P 13 00 22.2 +14
comp=Z,12nm,0.8s
ABKAR Akbulak array 58.54 310 P P **13 00 06.8 -1.6**
ABKAR IAmb IAmb 13 00 10.8
comp=Z,5.9nm,0.6s
ABKAR Akbulak array 58.54 310 P P **13 00 07.6 -0.8**
AKTO Aktyubinsk 58.91 312 LR LR 13 27 59.6
comp=Z,419nm,18.4s,baz=38,slow=39
ARCES ARCESS Array B 58.91 341 P P **13 00 10.1 -0.6**
comp=Z,5.8nm,0.9s,baz=34,slow=7.1,SNR=15
ARD7 ARCESS Array S 58.93 341 P P **13 00 09.9 -0.9**
ARD7 IAmb IAmb 13 00 11.7
comp=Z,12nm,0.9s
NEW Newport 58.98 51 P P **13 00 12.3 +0.7**
comp=Z,0.5nm,0.4s,baz=331,slow=19,SNR=2.6
NEW Newport 58.98 51 P P **13 00 12.3 +0.7**
NEW pmax pmax
comp=Z,5.0nm,1.1s
CHGR Chuyangaron 59.09 295 P P **13 00 12.2 -0.3**
NIL Nilore 59.33 288 P P **13 00 15.0 +0.9**
NIL pmax pmax
comp=Z,58nm,0.9s
NIL Nilore 59.33 288 P P **13 00 15.0 +0.9**
DBG Daneborg 60.62 357 *i* P P **13 00 20.6 -1.7**
DBG IAmb IAmb 13 00 22.5
comp=Z,8.3nm,1.2s
KBL Kabul 61.59 291 P P **13 00 28.9 -0.9**
KBL pmax pmax
comp=Z,28nm,0.9s
KBL Kabul 61.59 291 P P **13 00 28.9 -0.9**
BEKR Beckworth 61.99 61 P P **13 00 34.1 +1.7**
SUMG Summit 62.28 3 *i* P P **13 00 33.6 -0.5**
SUMG pmax pmax
comp=Z,58nm,1.0s
SUMG Summit 62.28 3 P P **13 00 33.6 -0.5**
SUMG Summit 62.28 3 *i* P P **13 00 33.6 -0.5**
comp=Z,58nm,1.0s
SUMG Summit 62.28 3 *i* P P **13 00 33.6 -0.5**
SUMG IAmb IAmb 13 00 35.7
comp=Z,58nm,1.0s
SDSI Sungai Dareh 63.78 239 P P 13 00 58.9 +15
KVN Kaiserville 63.88 60 P P **13 00 46.1 +1.2**
KVN pmax pmax
comp=Z,5.0nm,1.0s
KVN Kaiserville 63.88 60 P P **13 00 46.1 +1.2**
LHV Little Huntoon 64.12 61 IAmb IAmb 13 01 05.8
comp=Z,8.9nm,1.1s
NVAR Mina Array Bea 64.13 61 P P **13 00 47.6 +0.9**
comp=Z,1.4nm,0.9s,baz=281,slow=7.4,SNR=9.4
NVAR Mina Array Bea 64.13 61 P P **13 00 47.2 +0.6**
SCO Scoresbysund 64.50 358 P P **13 00 48.5 +0.3**
SCO pmax pmax
comp=Z,11nm,0.9s
SCO Scoresbysund 64.50 358 P P **13 00 48.5 +0.3**
SCO IAmb IAmb 13 00 49.3
comp=Z,11nm,0.9s
FIA1 FINESS Array S 64.93 334 P P **13 00 49.4 -1.8**
FIA1 IAmb IAmb 13 00 50.6
comp=Z,18nm,1.0s
FINES FINESS Array B 64.93 334 P P **13 00 49.5 -1.7**
comp=Z,10nm,0.7s,baz=46,slow=8.2,SNR=25
FINES FINESS Array B 64.93 334 *i* P P **13 00 50.2 -1.0**
FINES pmax pmax
comp=Z,10.0nm,0.7s
ICESG Greenland Ices 65.69 4 *i* P P **13 00 56.3 -0.2**
ICESG IAmb IAmb 13 00 57.9
comp=Z,16nm,0.8s
OBN Obninsk 65.92 325 *e*P P **13 00 56.2 -1.5**
OBN *e* 13 01 26.7
OBN *e* 13 03 21.8
OBN pmax pmax
comp=Z,4.0nm,0.9s
TPNV Topopah Spring 66.33 61 P P **13 01 02.8 +1.9**
TPNV pmax pmax
comp=Z,14nm,1.5s
TPNV Topopah Spring 66.33 61 P P **13 01 02.8 +1.9**
TPNV IAmb IAmb 13 01 03.2
comp=Z,14nm,1.5s
DUG Dugway, Tooele 66.33 56 P P **13 01 01.3 +0.5**
DUG pmax pmax
comp=Z,5.0nm,1.1s
DUG Dugway, Tooele 66.33 56 P P **13 01 01.3 +0.5**
GEYT Alibeck 66.42 301 P P **13 01 01.6 +0.4**
comp=Z,14nm,0.5s,baz=27,slow=4.0,SNR=8.5
VRH Novokhopyorsk 66.45 320 *e*P P **13 00 59.2 -1.9**
VRH pmax pmax
comp=Z,10.0nm,0.5s
PDAR Pinedale Array 66.55 52 P P **13 01 02.8 +0.6**
comp=Z,0.7nm,0.8s,baz=268,slow=4.5,SNR=1.5
LPSR Galich'ya Gora 66.72 322 *e*P P **13 01 01.2 -1.6**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
WRA Warramunga Arr 66.72 198 P P **13 01 04.9 +1.8**
comp=Z,3.7nm,0.8s,baz=16,slow=6.8,SNR=23
VSR Storozhevoye 67.59 321 *e*P P **13 01 07.6 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 67.72 321 *e*P P **13 01 08.1 -1.1**
VORD pmax pmax
comp=Z,10.0nm,0.7s
MAK Makhachkala 69.21 310 *e*P P **13 01 16.5 -2.1**
MAK *e* 13 03 50.3
MAK *e*PPP PPP 13 05 32.6
MAK *e*S S **13 10 18.9 -3.2**
MAK *e*SS SS **13 14 45.7 -2.3**
MAK pmax pmax
comp=Z,336nm,1.2s
NOA NORSAR Array B 69.29 341 P P **13 01 18.5 -0.5**
comp=Z,17nm,0.9s,baz=28,slow=6.3,SNR=33
HFS Hagfors 69.48 339 P P **13 01 19.2 -0.8**
comp=Z,13nm,0.5s,baz=57,slow=5.3,SNR=7.4
GOF Gofitskoye 70.09 314 ⇑*i*P P **13 01 24.7 +0.6**
GOF pmax pmax
comp=Z,91nm,1.0s
ASAR Alice Springs 70.43 197 P P **13 01 28.5 +2.3**
comp=Z,2.9nm,0.8s,baz=14,slow=5.6,SNR=23
KIV Kislovodsk 71.05 314 P P **13 01 31.2 +1.1**
KIV pmax pmax
comp=Z,30nm,0.8s
KIV Kislovodsk 71.05 314 P P **13 01 31.2 +1.1**
KBZ Khabaz 71.10 313 P P **13 01 31.2 +1.0**
comp=Z,38nm,0.8s,baz=74,slow=3.0,SNR=48
KBZ LR LR 13 36 38.2
comp=Z,318nm,19.9s,baz=348,slow=39
ZEI Tsey 71.25 312 *e*P P **13 01 29.3 -2.1**
ZEI pmax pmax
comp=Z,20nm,0.9s
F33A 5 Mile Ranch, 71.37 43 IAmb IAmb 13 01 38.6
comp=Z,17nm,1.4s
AKASG Malin Array Be 72.18 326 P P **13 01 35.9 -0.7**
comp=Z,3.6nm,0.3s,baz=35,slow=6.3,SNR=26
AKASG Malin Array Be 72.18 326 P P **13 01 34.7 -1.9**
AKBB Malin Array Si 72.18 326 P P **13 01 34.9 -1.7**
AKBB pmax pmax
comp=Z,15nm,0.9s
AKBB Malin Array Si 72.18 326 P P **13 01 34.9 -1.7**
AKBB IAmb IAmb 13 01 36.7
comp=Z,15nm,0.8s
AKH Akhalkalaki 72.43 311 ⇑P P **13 01 39.6 +1.1**
GNI Garni 72.65 310 P P **13 01 42.1 +2.3**
GNI pmax pmax
comp=Z,25nm,0.9s
GNI Garni 72.65 310 P P **13 01 42.1 +2.3**
I37A Lemond, Waseca 74.11 43 IAmb IAmb 13 01 49.5
comp=Z,17nm,0.9s
GKP Gorka Klasztor 74.37 333 *e*P P **13 01 49.2 -0.2**
BEL Belsk 74.40 331 *e*P P **13 01 50.2 +0.5**
SORM Soroca 74.55 324 ⇑P P **13 01 49.1 -1.5**
LVV L'vov 74.89 328 *e*P P **13 01 52.0 -0.6**
KOPT Kop Dagi 75.01 312 IAmb IAmb 13 01 59.1
comp=Z,19nm,0.9s
SCHQ Schefferville 75.13 22 P P **13 01 53.2 -0.7**
comp=Z,10nm,1.0s,baz=314,slow=4.7,SNR=4.2
SCHQ Schefferville 75.13 22 IAmb IAmb 13 01 54.7
comp=Z,22nm,1.1s
KWP Kalwaria Pacla 75.54 328 *e*P P **13 01 56.8 +0.5**
KWP Kalwaria Pacla 75.54 328 P P **13 01 55.0 -1.3**
KWP pmax pmax
comp=Z,53nm,0.9s
KWP Kalwaria Pacla 75.54 328 P P **13 01 55.0 -1.3**
BSEG Bad Segeberg 75.81 338 *e*L L 13 27 01.6
comp=Z,254nm,20.6s
OJC Ojcow 76.10 330 *e*P P **13 01 59.7 +0.2**
BUR08 Bucovina Ar. S 76.21 326 P P **13 02 00.1 -0.2**
BURAR Bucovina Array 76.23 326 ⇑P P **13 02 00.5 +0.1**
BURAR Bucovina Array 76.23 326 P P **13 01 60.0 -0.4**
KOLS Kolonicke sedl 76.28 328 *e*P P **13 02 00.9 +0.4**
KOLS pmax pmax
comp=Z,15nm,0.9s
KOLS Kolonicke sedl 76.28 328 *e*P P **13 02 00.9 +0.4**
BIZ Bicaz 76.42 325 ⇑P P **13 02 01.6 +0.2**
DIKM Dikmen 76.45 316 ⇑P P **13 02 02.8 +1.2**
UZH Uzhgorod 76.52 328 *e*P P **13 02 01.0 -0.9**
UZH *e* 13 02 14.6
TESR Tescani 76.54 324 ⇑P P **13 02 02.0 0.0**
NIE Niedzica 76.59 330 *e*P P **13 02 03.0 +0.7**
CRVS Cervenica-Dubn 76.61 329 *e*P P **13 02 02.2 -0.2**
CRVS pmax pmax
comp=Z,26nm,1.1s
CRVS Cervenica-Dubn 76.61 329 *e*P P **13 02 02.2 -0.2**
TLCR 76.68 322 ⇑P P **13 02 03.0 +0.2**
KSP Ksiaz 76.75 333 *e*P P **13 02 03.3 +0.2**
MARD Mardin 76.84 310 IAmb IAmb 13 02 06.5
comp=Z,20nm,1.0s
CFR Carcaliu 76.98 323 ⇑P P **13 02 04.5 -0.1**
VRI Vrincioaia 77.03 324 ⇑P P **13 02 04.5 -0.3**
CHVC Chvalec 77.05 333 *e*P P **13 02 05.3 +0.4**
LANS Liptovska Anna 77.11 330 *e*P P **13 02 06.4 +1.1**
LANS pmax pmax
comp=Z,18nm,0.9s
LANS Liptovska Anna 77.11 330 *e*P P **13 02 06.4 +1.1**
TPGR Topolog 77.11 322 ⇑P P **13 02 05.8 +0.5**
UPC Upice 77.13 333 *e*P P **13 02 05.8 +0.5**
UPC Upice 77.13 333 *e*P P **13 02 05.8 +0.5**
NRDL Niedersach Rie 77.16 337 *e*P P **13 02 05.5 +0.2**
comp=Z,13nm,1.1s,baz=28,slow=5.8
DPC Dobruska-Polom 77.16 332 *e*P P **13 02 06.2 +0.7**
DPC Dobruska-Polom 77.16 332 *e*P P **13 02 06.2 +0.7**
KRLC Kraliky 77.25 332 *e*P P **13 02 06.5 +0.5**
KRLC Kraliky 77.25 332 *e*P P **13 02 06.5 +0.5**
MORC Moravsky Berou 77.25 331 ⇑P P **13 02 06.5 +0.5**
MORC Moravsky Berou 77.25 331 *e*P P **13 02 06.3 +0.3**
BISRR Bisoca 77.29 324 ⇑P P **13 02 05.6 -0.8**
CLL Collm 77.37 335 ⇑*i*P P **13 02 06.3 -0.3**
comp=Z,31nm,1.1s
CLL *i* sP **pwP** **13 02 22.7 +0.3**
CLL LmV 13 26 00.0
comp=Z,300nm,20.0s
CLL LmV 13 39 00.0
comp=Z,200nm,20.3s
CLL Collm 77.37 335 ⇑*i*P P **13 02 06.3 -0.3**
CLL *i* 13 02 22.7
CLL pmax pmax
comp=Z,31nm,1.1s
CLL Collm 77.37 335 *e*P P **13 02 06.4 -0.3**
comp=Z,31nm,1.1s,baz=28,slow=5.8
TIRR Tirgusor 77.43 322 ⇑P P **13 02 07.3 +0.2**
HARR Harsova 77.46 323 ⇑P P **13 02 07.6 +0.4**
BRG Berggiesshubel 77.47 334 *i* P P **13 02 06.8 -0.4**
comp=Z,13nm,1.2s
BRG Berggiesshubel 77.47 334 *i* P P **13 02 06.8 -0.4**
BRG pmax pmax
comp=Z,13nm,1.2s
BRG Berggiesshubel 77.47 334 *e*P P **13 02 07.0 -0.1**
comp=Z,13nm,1.1s,baz=28,slow=5.8
DOPR Dopca 77.50 325 ⇑P P **13 02 07.9 +0.4**
FBE Freiberg 77.61 334 *e*P P **13 02 08.0 +0.1**
comp=Z,26nm,1.1s,baz=28,slow=5.8
MLR Muntele Rosu 77.65 324 ⇑P P **13 02 08.8 +0.3**
ILGA Ilgaz 77.66 317 P P **13 02 09.6 +0.9**
CLZ Clausthal 77.67 337 *e*P P **13 02 08.8 +0.5**
comp=Z,29nm,1.2s,baz=28,slow=5.8
ISR Istrita 77.70 324 ⇑P P **13 02 07.9 -0.8**
NEUB Neuenburg 77.83 335 *e*P P **13 02 09.2 0.0**
comp=Z,40nm,1.3s,baz=28,slow=5.8

DRGR		**77.88**	**327**	⇑P	**P**	**13 02 09.6**	**-0.1**
VYHS	**Vyhne**	**77.89**	**330**	*e*P	**P**	**13 02 10.1**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,18nm,1.1s						
VYHS	**Vyhne**	**77.89**	**330**	*e*P	**P**	**13 02 10.1**	**+0.5**
VRAC	**Vranov**	**77.97**	**332**	⇑P	**P**	**13 02 10.3**	**+0.3**
VRAC	**Vranov**	**77.97**	**332**	*e*P	**P**	**13 02 10.6**	**+0.6**
ICOR	**Ion Corvin**	**77.97**	**322**	⇑P	**P**	**13 02 11.2**	**+1.2**
JAVC	**Velka Javorina**	**77.99**	**331**	*e*P	**P**	**13 02 11.5**	**+1.3**
PSZ	**Piszkesteto**	**78.00**	**329**	⇑P	**P**	**13 02 10.9**	**+0.6**
PSZ	**Piszkesteto**	**78.00**	**329**	P	**P**	**13 02 11.1**	**+0.8**
PSZ				pmax	pmax		
	comp=Z,15nm,0.9s						
PSZ	**Piszkesteto**	**78.00**	**329**	P	**P**	**13 02 11.1**	**+0.8**
PSZ				IAmb	IAmb	13 02 11.9	
	comp=Z,15nm,0.9s						
PRU	**Pruhonice**	**78.05**	**333**	*e*P	**P**	**13 02 10.6**	**+0.2**
PRU	**Pruhonice**	**78.05**	**333**	*e*P	**P**	**13 02 10.6**	**+0.2**
VOIR		**78.06**	**325**	⇑P	**P**	**13 02 11.2**	**+0.5**
KRUC	**Moravsky**	**78.25**	**332**	*e*P	**P**	**13 02 11.9**	**+0.3**
ARR	**Arges**	**78.29**	**325**	⇑P	**P**	**13 02 13.0**	**+1.0**
WERD	**Werda**	**78.34**	**335**	*e*P	**P**	**13 02 12.1**	**+0.1**
	comp=Z,8.7nm,0.9s,baz=28,slow=5.8						
PLN	**Plauen**	**78.35**	**335**	*e*P	**P**	**13 02 12.0**	**-0.1**
	comp=Z,12nm,1.3s,baz=28,slow=5.8						
SMOL	**Smolenice**	**78.37**	**331**	*e*P	**P**	**13 02 13.3**	**+1.1**
SMOL				pmax	pmax		
	comp=Z,12nm,1.1s						
SMOL	**Smolenice**	**78.37**	**331**	*e*P	**P**	**13 02 13.3**	**+1.1**
MOX	**Moxa**	**78.37**	**335**	*e*P	**P**	**13 02 12.2**	**0.0**
	comp=Z,18nm,1.2s,baz=28,slow=5.8						
MOX				*e*L	L	13 22 28.9	
	comp=Z,330nm,21.7s						
GUNZ	**Gunzen**	**78.41**	**335**	*e*P	**P**	**13 02 12.7**	**+0.2**
	comp=Z,13nm,1.0s,baz=28,slow=5.8						
WERN	**Wernitzgruen**	**78.46**	**335**	*e*P	**P**	**13 02 13.0**	**+0.3**
	comp=Z,17nm,1.0s,baz=28,slow=5.8						
NKC	**Novy Kostel**	**78.49**	**335**	*e*P	**P**	**13 02 13.0**	**+0.1**
NKC	**Novy Kostel**	**78.49**	**335**	*e*P	**P**	**13 02 13.0**	**+0.1**
PBCC	**Pribram**	**78.49**	**333**	*e*P	**P**	**13 02 13.0**	**+0.1**
MODS	**Modra-Piesok**	**78.54**	**331**	*e*P	**P**	**13 02 12.7**	**-0.5**
MODS				pmax	pmax		
	comp=Z,23nm,1.1s						
MODS	**Modra-Piesok**	**78.54**	**331**	*e*P	**P**	**13 02 12.7**	**-0.5**
BRTR	**Keskin Array B**	**78.72**	**316**	P	**P**	**13 02 15.1**	**+0.5**
	comp=Z,5.6nm,0.8s,baz=39,slow=5.7,SNR=13						
BRTR	**Keskin Array B**	**78.72**	**316**	P	**P**	**13 02 14.8**	**+0.3**
BRTR	**Keskin Array B**	**78.72**	**316**	P	**P**	**13 02 14.8**	**+0.3**
SIRR	**Siria**	**78.72**	**327**	⇑P	**P**	**13 02 14.4**	**+0.1**
ZST	**Bratislava**	**78.75**	**331**	*e*P	**P**	**13 02 15.5**	**+1.2**
ZST	**Bratislava**	**78.75**	**331**	*e*P	**P**	**13 02 15.5**	**+1.2**
ROTZ	**Rotzenmuhle**	**78.97**	**334**	*e*P	**P**	**13 02 15.8**	**+0.3**
	comp=Z,14nm,1.0s,baz=28,slow=5.8						
GZR	**Gura Zlata**	**79.02**	**326**	⇑P	**P**	**13 02 16.1**	**+0.2**
KHC	**Kasperske Hory**	**79.11**	**333**	*e*P	**P**	**13 02 16.7**	**+0.4**
KHC				*e*		13 02 32.0	
KHC	**Kasperske Hory**	**79.11**	**333**	*e*P	**P**	**13 02 16.7**	**+0.4**
KHC				*es*P	**pwP**	**13 02 32.0**	**-0.1**
KHC	**Kasperske Hory**	**79.11**	**333**	IAmb	IAmb	13 02 17.8	
	comp=Z,7.5nm,0.9s						
TX31	**Lajitas Ar. Si**	**79.21**	**59**	IAmb	IAmb	13 02 38.9	
	comp=Z,17nm,1.2s						
TXAR	**Lajitas Array**	**79.21**	**59**	P	**P**	**13 02 18.1**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=287,slow=4.8,SNR=10						
TXAR	**Lajitas Array**	**79.21**	**59**	P	**P**	**13 02 17.1**	**-0.2**
TXAR	**Lajitas Array**	**79.21**	**59**	P	**P**	**13 02 17.1**	**-0.2**
BZS	**Buzias**	**79.28**	**327**	⇑P	**P**	**13 02 17.1**	**-0.2**
WET	**Wettzell**	**79.31**	**334**	*e*P	**P**	**13 02 18.0**	**+0.5**
	comp=Z,25nm,1.1s,baz=28,slow=5.8						
WET				*e*L	L	13 26 01.6	
	comp=Z,284nm,19.1s						
GEC2	**GERESS Array S**	**79.32**	**333**	*e*P	**P**	**13 02 17.6**	**0.0**
	comp=Z,14nm,1.2s,baz=28,slow=5.8						
GEC2				*e*L	L	13 26 19.3	
	comp=Z,300nm,20.2s						
GEC2	**GERESS Array S**	**79.32**	**333**	IAmb	IAmb	13 02 18.5	
	comp=Z,12nm,1.1s						
GERES	**GERESS Array B**	**79.32**	**333**	P	**P**	**13 02 17.5**	**0.0**
	comp=Z,4.7nm,0.8s,baz=35,slow=4.9,SNR=23						
GERES	**GERESS Array B**	**79.33**	**335**	P	**P**	**13 02 16.8**	**-0.7**
GERES	**GERESS Array B**	**79.32**	**333**	P	**P**	**13 02 16.8**	**-0.7**
GRF	**Grafenberg Arr**	**79.33**	**335**	*e*L	L	13 23 46.6	
	comp=Z,232nm,20.2s						
CONA	**Conrad Observa**	**79.41**	**331**	*i* P	**P**	**13 02 18.6**	**+0.6**
	comp=Z,13nm,1.2s,SNR=5.5						
TNS	**Taunus Mts**	**79.66**	**337**	*e*P	**P**	**13 02 19.5**	**+0.2**
	comp=Z,19nm,1.2s,baz=28,slow=5.8						
TNS				*e*L	L	13 25 38.3	
	comp=Z,287nm,18.0s						
MDVR	**Moldovita**	**79.94**	**326**	⇑P	**P**	**13 02 19.2**	**-1.8**
MOA	**Molln**	**80.01**	**332**	*e*P	**P**	**13 02 20.6**	**-0.6**
	comp=Z,9.0nm,1.2s						
ARSA	**Arzberg**	**80.11**	**331**	*e*P	**P**	**13 02 20.4**	**-1.4**
	comp=Z,9.1nm,1.2s						
U40A	**Yellville**	**80.16**	**48**	IAmb	IAmb	13 02 23.5	
	comp=Z,19nm,1.4s						
BHOU	**Houvegnez**	**80.19**	**338**	P	**P**	**13 02 22.3**	**+0.1**
BCLA	**Clavier**	**80.31**	**339**	PcP	**PcP**	**13 02 28.5**	**-1.4**
BGES	**Gesves**	**80.40**	**339**	P	**P**	**13 02 23.2**	**0.0**
BMRD	**Maredsous**	**80.56**	**339**	P	**P**	**13 02 23.7**	**-0.4**
BMRD				PcP	**PcP**	**13 02 29.7**	**-1.2**
FUR	**Furstenfeldbru**	**80.68**	**334**	*e*L	L	13 26 38.0	
	comp=Z,248nm,19.5s						
SOKA	**Soboth**	**80.77**	**331**	*e*P	**P**	**13 02 25.7**	**+0.2**
	comp=Z,13nm,1.1s						
DOU	**Dourbes**	**80.79**	**339**	P	**P**	**13 02 25.3**	**0.0**
DOU				PcP	**PcP**	**13 02 31.2**	**-0.8**
KBA	**Koelnbreinsper**	**80.98**	**333**	*e*P	**P**	**13 02 27.5**	**+0.9**
	comp=Z,20nm,1.3s						
OBKA	**Obir**	**81.08**	**332**	*e*P	**P**	**13 02 27.0**	**-0.2**
	comp=Z,2.8nm,0.6s						
PMOR	**Pomariorio Ree**	**81.18**	**122**	*e*T	T	14 32 05.5	
	comp=Z,5.6nm,0.2s						
MYKA	**Terra Mystica**	**81.28**	**332**	*e*P	**P**	**13 02 28.0**	**-0.2**
	comp=Z,5.6nm,1.0s						
WATA	**Walderalm**	**81.32**	**334**	*e*P	**P**	**13 02 28.9**	**+0.5**
	comp=Z,28nm,1.5s						
WTTA	**Wattenberg**	**81.37**	**334**	*i* P	**P**	**13 02 29.1**	**+0.4**
	comp=Z,9.3nm,0.6s,SNR=5.9						
BFO	**Black Forest**	**81.40**	**336**	P	**P**	**13 02 29.5**	**+0.8**
BFO				pmax	pmax		
	comp=Z,11nm,1.0s						
BFO	**Black Forest**	**81.40**	**336**	*e*L	L	13 25 54.5	
	comp=Z,288nm,20.7s						
BFO	**Black Forest**	**81.40**	**336**	P	**P**	**13 02 29.5**	**+0.8**
BFO				IAmb	IAmb	13 02 32.5	
	comp=Z,11nm,1.0s						
RETA	**Reutte**	**81.44**	**334**	*e*P	**P**	**13 02 30.0**	**+1.0**
	comp=Z,10nm,1.1s						
MOTA	**Moosalm**	**81.46**	**334**	*e*P	**P**	**13 02 29.7**	**+0.6**
	comp=Z,13nm,0.9s						
PRED	**Cave del Predi**	**81.47**	**332**	P	**P**	**13 02 27.7**	**-1.5**
SQTA	**Sankt Quirin**	**81.54**	**334**	*e*P	**P**	**13 02 30.1**	**+0.6**
	comp=Z,16nm,1.0s						
ABTA	**Abfaltersbach**	**81.55**	**333**	*e*P	**P**	**13 02 29.7**	**+0.1**
	comp=Z,3.3nm,0.8s						
ECH	**Echery**	**81.83**	**337**	IAmb	IAmb	13 02 34.4	
	comp=Z,8.4nm,0.8s						
FETA	**Feichten**	**81.86**	**334**	*e*P	**P**	**13 02 31.8**	**+0.4**
	comp=Z,8.6nm,1.6s						
DAVA	**Damuels**	**81.89**	**335**	*e*P	**P**	**13 02 31.9**	**+0.5**
	comp=Z,15nm,1.1s						
STAL	**STALIGIAL**	**81.91**	**333**	IAmb	IAmb	13 02 35.8	
	comp=Z,17nm,1.4s						
PPT	**Papeete**	**82.19**	**124**	P	**P**	**13 02 35.2**	**+2.1**
	comp=Z,56nm,1.1s,baz=351,slow=17,SNR=4.0						
PPT				LR	LR	13 38 10.0	
	comp=Z,57nm,18.8s,baz=321,slow=35						
PPT2	**Papeete2**	**82.21**	**124**	*e*LR	LR	13 28 24.9	
	comp=Z,175nm,24.0s						
PPT2	**Papeete2**	**82.21**	**124**	*e*T	T	14 33 23.3	
	comp=Z,1.5nm,0.3s						
TUE	**Stuetta**	**82.78**	**335**	P	**P**	**13 02 36.5**	**+0.3**
TUE				IAmb	IAmb	13 02 40.9	
	comp=Z,8.5nm,0.7s						
PDG	**Podgorica**	**82.88**	**326**	⇑P	**P**	**13 02 35.9**	**-0.6**
SENIN	**Lac Senin/Sane**	**83.48**	**336**	P	**P**	**13 02 41.9**	**+2.1**
SENIN				IAmb	IAmb	13 02 48.2	
	comp=Z,15nm,1.1s						
RAYN	**Ar Rayn**	**84.15**	**298**	P	**P**	**13 02 44.5**	**+1.1**
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RAYN	**Ar Rayn**	**84.15**	**298**	P	**P**	**13 02 44.5**	**+1.1**
RAYN				IAmb	IAmb	13 02 45.4	
	comp=Z,9.6nm,1.0s						

IDI	**Anoyia**	**86.44**	**319**	⇑P	**P**	**13 02 54.4**	**-0.3**
TIP	**Timpagrande**	**86.64**	**326**	⇑P	**P**	**13 02 54.9**	**-0.7**
TBI	**Tubuai**	**86.83**	**128**	*e*LR	LR	13 30 21.4	
	comp=Z,110nm,23.2s						
TBI	**Tubuai**	**86.83**	**128**	*e*T	T	14 39 09.0	
	comp=Z,3.8nm,0.3s						
KEST	**Kesra**	**92.44**	**330**	P	**P**	**13 03 22.8**	**-0.2**
	comp=Z,8.0nm,0.9s,baz=316,slow=7.8,SNR=6.8						
ESDC	**Sonseca Array**	**92.65**	**341**	P	**P**	**13 03 22.9**	**-0.9**
	comp=Z,0.5nm,0.6s,baz=25,slow=3.5,SNR=4.5						
H03N2	**Juan Fernandez**	**139.85**	**91**	T	T	15 45 41.1	
	baz=307,slow=77,SNR=18						
H03N1	**Juan Fernandez**	**139.86**	**91**	T	T	15 45 44.8	
	baz=307,slow=77,SNR=19						
H03N3	**Juan Fernandez**	**139.86**	**91**	T	T	15 45 31.0	
	baz=307,slow=77,SNR=34						
BDFB	**Brasilia**	**146.22**	**35**	PKPbc	**PKPbc**	**13 09 52.9**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=45,slow=4.3,SNR=2.2						
NVL	**N'lazarevskaya**	**147.80**	**204**	*e*PKP2	PKPab	13 10 09.1	+11
NVL				pmax	pmax		
	comp=Z,12nm,0.8s						
PLCA	**Paso Flores**	**149.16**	**97**	PKPbc	**PKPbc**	**13 10 00.3**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=307,slow=3.4,SNR=5.6						
CPUP	**Villa Florida**	**150.18**	**61**	PKPbc	**PKPbc**	**13 10 02.9**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=344,slow=5.1,SNR=5.5						
SNAA	**Sanae**	**150.79**	**196**	PKPbc	**PKiKP**	**13 10 03.7**	**+0.1**
VNA2	**Neumayer--Watz**	**152.26**	**195**	PKPbc	**PKiKP**	**13 10 07.0**	**+0.4**
VNA3	**Neumayer Olymp**	**152.37**	**193**	PKPdf	**PKPbc**	**13 10 05.5**	**-1.1**

UPP ***27*** *13:06:00.8±0.1,58.°99N×18.°20E, h0km, ML2.2, Explosion*
IDC ***27*** *13:06:01.2±2.4,58.°87N×18.°39E, h0km, mb1 3.1/4, mb1mx3.0/46, mbtmp3.0/4, ML2.1/4, Error ellipse: s-maj=32.1km s-min=8.3km az=173.0*
DNK ***27*** *13:06:01.2±0.5,58.°99N×18.°19E, h0km, ML2.2(UPP), Explosion*

ISC 27 13:05:59.8±0.8, 58.°97N±0.°03×18.°24E±0.°04, h0km, n37, σ0s82/49, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRTU	**Norrtaelje**	**0.74**	**15**	P	**Pg**	**13 06 14.5**	**+0.4**
NRTU				S	**Sg**	**13 06 23.7**	**0.0**
NRTU	**Norrtaelje**	**0.74**	**15**	P	**Pg**	**13 06 14.5**	**+0.4**
NRTU				S	**Sg**	**13 06 23.7**	**0.0**
NRTU	**Norrtaelje**	**0.74**	**15**	P	**Pg**	**13 06 14.5**	**+0.4**
NRTU				S	**Sg**	**13 06 23.7**	**0.0**
VIKU	**Vikbolandet**	**0.93**	**241**	P	**Pg**	**13 06 18.2**	**+0.6**
VIKU				S	**Sg**	**13 06 32.2**	**+0.5**
VIKU	**Vikbolandet**	**0.93**	**241**	P	**Pg**	**13 06 18.2**	**+0.6**
VIKU				S	**Sg**	**13 06 30.2**	**+0.5**
VIKU	**Vikbolandet**	**0.93**	**241**	P	**Pg**	**13 06 18.2**	**+0.6**
VIKU				S	**Sg**	**13 06 30.2**	**+0.5**
UPP	**Uppsala**	**0.95**	**341**	P	**Pg**	**13 06 18.1**	**+0.1**
ESKU	**Eskilstuna**	**0.99**	**286**	P	**Pg**	**13 06 18.6**	**-0.2**
ESKU	**Eskilstuna**	**0.99**	**286**	P	**Pg**	**13 06 18.6**	**-0.2**
ESKU	**Eskilstuna**	**0.99**	**286**	P	**Pg**	**13 06 18.6**	**-0.2**
FIBU	**Brunna**	**1.04**	**335**	P	**Pg**	**13 06 19.7**	**-0.1**
FIBU				S	**Sg**	**13 06 32.7**	**-0.6**
FIBU	**Brunna**	**1.04**	**335**	P	**Pg**	**13 06 19.7**	**-0.1**
FIBU				S	**Sg**	**13 06 32.7**	**-0.6**
FIBU	**Brunna**	**1.04**	**335**	P	**Pg**	**13 06 19.7**	**-0.1**
FIBU				S	**Sg**	**13 06 32.7**	**-0.6**
BACU	**Backbrunna**	**1.06**	**327**	P	**Pg**	**13 06 20.0**	**-0.2**
BACU	**Backbrunna**	**1.06**	**327**	P	**Pg**	**13 06 20.0**	**-0.2**
BACU	**Backbrunna**	**1.06**	**327**	P	**Pg**	**13 06 20.0**	**-0.2**
FLYU	**Flymyra**	**1.18**	**351**	P	**Pg**	**13 06 22.4**	**-0.1**
FLYU	**Flymyra**	**1.18**	**351**	P	**Pg**	**13 06 22.4**	**-0.1**
FLYU	**Flymyra**	**1.18**	**351**	P	**Pg**	**13 06 22.4**	**-0.1**
GOTU	**Gotland**	**1.29**	**172**	P	**Pb**	**13 06 25.0**	**0.0**
GOTU	**Gotland**	**1.29**	**172**	P	**Pb**	**13 06 25.0**	**0.0**
GOTU	**Gotland**	**1.29**	**172**	P	**Pb**	**13 06 25.0**	**0.0**
GRAU	**Graesoe**	**1.38**	**6**	P	**Pg**	**13 06 26.2**	**-0.1**
GRAU	**Graesoe**	**1.38**	**6**	P	**Pg**	**13 06 26.2**	**-0.1**
GRAU	**Graesoe**	**1.38**	**6**	P	**Pg**	**13 06 26.2**	**-0.1**
OSTU	**Oestervaala**	**1.39**	**337**	P	**Pg**	**13 06 26.0**	**-0.4**
OSTU	**Oestervaala**	**1.39**	**337**	P	**Pg**	**13 06 26.0**	**-0.4**
OSTU	**Oestervaala**	**1.39**	**337**	P	**Pg**	**13 06 26.0**	**-0.4**
FORU	**Forsmark**	**1.43**	**359**	P	**Pn**	**13 06 26.8**	**-0.2**
FORU	**Forsmark**	**1.43**	**359**	P	**Pn**	**13 06 26.8**	**-0.2**
FORU	**Forsmark**	**1.43**	**359**	P	**Pn**	**13 06 26.8**	**-0.2**
HFS	**Hagfors**	**2.59**	**299**	Pn	**Pn**	**13 06 44.8**	**+1.8**
	0.7nm,0.3s,baz=121,slow=16,SNR=26						
HFS				Sn	**Sb**	**13 07 17.9**	**-1.7**
	5.1nm,0.3s,baz=115,slow=28,SNR=26						
NOA	**NORSAR Array B**	**4.10**	**304**	Pn	**Pn**	**13 07 04.7**	**+1.0**
	0.0nm,0.3s,baz=131,slow=19,SNR=9.6						
NOA				Sn	**Sn**	**13 07 54.4**	**+2.1**
	0.0nm,0.3s,baz=222,slow=26,SNR=2.3						
NOA				Lg	Lg	13 08 07.7	
	0.1nm,0.3s,baz=109,slow=7.4,SNR=8.2						
BSD	**Bornholm Skovb**	**4.27**	**207**	*i* P	**Pn**	**13 07 03.8**	**-2.2**
BSD	**Bornholm Skovb**	**4.27**	**207**	*i* P	**Pn**	**13 07 03.8**	**-2.2**
FINES	**FINESS Array B**	**4.63**	**54**	Pn	**Pn**	**13 07 12.4**	**+1.5**
	0.4nm,0.3s,baz=244,slow=13,SNR=13						
FINES				Sn	**Sn**	**13 08 06.6**	**+1.2**
	1.2nm,0.3s,baz=247,slow=23,SNR=11						
FINES				Lg	Lg	13 08 24.0	
	1.6nm,0.3s,baz=248,slow=27,SNR=10.0						
ARCES	**ARCESS Array B**	**11.06**	**13**	Pn	**Pn**	**13 08 37.4**	**-1.7**
	baz=196,slow=12,SNR=7.8						

IDC 27 13:14:36.1±1.5, 43.°88N×39.°46E, h0km, mb1 3.2/4, mb1mx3.0/51, mbtmp3.0/4, ML2.8/4, Error ellipse: s-maj=32.8km s-min=12.4km az=170.0, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KVAR	**Kislovodsk Arr**	**2.34**	**87**	Pn	Pb	13 15 18.9	-0.2
	baz=246,slow=20,SNR=2.3						
KVAR				Lg	Lg	13 15 48.3	
	baz=299,slow=22,SNR=5.0						
KBZ	**Khabaz**	**2.49**	**92**	Pn	Pb	13 15 21.4	-0.3
	0.8nm,0.3s,baz=260,slow=11,SNR=8.0						
KBZ				Lg	Lg	13 15 52.7	
	0.7nm,0.3s,baz=273,slow=20,SNR=2.4						
BRTR	**Keskin Array B**	**6.01**	**228**	Pn	Pn	13 16 07.9	+1.5
	0.2nm,0.3s,baz=49,slow=13,SNR=1.9						
FINES	**FINESS Array B**	**19.30**	**340**	P	P	13 19 01.1	-1.3
	0.2nm,0.3s,baz=152,slow=12,SNR=4.9						

NEIC 27 13:19:07.3±2.5, 35.°00N±0.°03×113.°21W±0.°04, h5km±2km, ML2.6/44, Error ellipse: s-maj=6.2km s-min=3.9km az=226.0, Western Arizona

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
W13A	**Hualapai Mount**	**0.56**	**281**	Pg	Pg	13 19 17.6	-0.5
W13A				Sg	Sg	13 19 25.0	-0.5
Y14A	**Wickenburg**	**1.07**	**171**		Pg	13 19 26.8	-0.9
Y14A				Sg	Sg	13 19 40.8	-0.8
Y14A				IAML		13 19 43.2	
	comp=E,197nm,0.4s						
X16A	**Lo Mia Camp, P**	**1.57**	**111**		Pn	13 19 36.4	+0.4
X16A				Sn	Sn	13 19 55.7	-1.1
WUAZ	**Wupatki**	**1.59**	**70**	Pn	Pb	13 19 37.2	-0.1
WUAZ				IAML		13 19 58.8	
	comp=E,110nm,0.3s						
WUAZ				IAML		13 20 00.9	
	comp=E,88nm,0.3s						
U15A	**North Rim**	**1.61**	**27**		Pn	13 19 36.5	-0.2
U15A				IAML		13 20 00.8	
	comp=N,85nm,0.7s						
U15A				IAML		13 20 02.9	
	comp=E,86nm,0.6s						
LCMT	**Little Creek M**	**2.01**	**359**		Pb	13 19 43.7	-0.7
KNB	**Kanab**	**2.04**	**9**		Pb	13 19 45.0	0.0
SHPR	**Sheep Range**	**2.19**	**314**	Pg	Pb	13 19 47.2	-0.2
PKCU	**Pink Cliffs**	**2.55**	**16**		Pb	13 19 53.7	0.0
CCUT	**Cedar City**	**2.55**	**357**		Pb	13 19 53.6	-0.2
GSC	**Goldstone, Bar**	**2.96**	**277**	Pn	Pn	13 19 53.9	-1.1
GSC				IAML		13 20 58.5	
	comp=N,13nm,3.6s						
GSC				IAML		13 21 11.2	
	comp=E,14nm,4.2s						
214A	**Organ Pipe Nat**	**3.05**	**174**		Pb	13 20 02.6	+0.6
214A				IAML		13 20 46.8	
	comp=E,23nm,1.1s						
214A				IAML		13 20 48.4	
	comp=N,16nm,0.4s						
TPNV	**Topopah Spring**	**3.14**	**309**		Pg	13 20 05.7	-1.8
TPNV				IAML		13 20 50.0	
	comp=N,12nm,1.0s						
TPNV				IAML		13 20 52.3	
	comp=N,13nm,0.7s						
MTPU	**Mount Pierson**	**3.15**	**15**	Pg	Pb	13 20 03.4	-0.6
TUC	**Tucson**	**3.36**	**142**		Pb	13 20 08.7	+1.3
TUC				IAML		13 21 23.9	
	comp=N,9.6nm,4.7s						
PIX	**Pinacate**	**3.43**	**184**	Pg	Pb	13 20 10.8	+2.2
PIX				IAML		13 20 36.2	
	comp=N,22nm,3.4s						
PIX				IAML		13 21 48.1	
	comp=E,21nm,1.3s						
MVU	**Marysvale**	**3.59**	**13**	Pg	Pb	13 20 12.3	+0.9
MVCO	**Mesa Verde**	**4.41**	**59**	Pn	Pn	13 20 12.7	-2.4
PV03	**Paradox Valley**	**4.79**	**46**	Pn	Pn	13 20 22.2	+2.0

WEL 27 13:37:59.6, 44.°S±1.°×17.°2E±.°, h12km±2km, M2.4/8, ML2.4/8, MLv2.4/8, Error ellipse: s-maj=0.0km s-min=0.0km az=131.8, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.22**	**123**	P	Pb	13 38 05.5	0.0
RACZ	**Rakaia**	**0.24**	**233**	P	Pb	13 38 06.3	+0.5
OXZ	**Oxford**	**0.37**	**314**	P	Pg	13 38 07.5	+0.6
AMCZ	**Amberley**	**0.45**	**24**	P	Pb	13 38 09.6	+0.2
AKCZ	**Akaroa Harbour**	**0.47**	**128**	P	Pb	13 38 10.2	+0.5
OKCZ	**Okains Bay**	**0.50**	**106**	P	Pb	13 38 10.7	+0.5
WACZ	**Wakanui South**	**0.54**	**229**	P	Pn	13 38 12.1	-1.0
MHCZ	**Mount Hutt**	**0.61**	**275**	P	Pb	13 38 12.7	+0.6
GVZ	**Greta Valley S**	**0.77**	**37**	P	Pn	13 38 15.8	-0.5
LTZ	**Lake Taylor**	**0.81**	**353**	P	Pb	13 38 16.0	+0.4
ARCZ	**Arundel**	**0.96**	**247**	P	Pn	13 38 19.5	+0.6
RPZ	**Rata Peaks**	**0.99**	**262**	P	Pn	13 38 20.1	+0.9
KHZ	**Kahutara**	**1.44**	**36**	P	Pn	13 38 25.0	-0.4

IDC ***27*** *13:49:13.2±0.8,21.°76N×143.°55E, h0km, mb3.6/10, mb1 3.9/10, mb1mx3.7/45, mbtmp3.7/10, Error ellipse: s-maj=31.4km s-min=19.9km az=90.0*
NEIC ***27*** *13:49:15.2±3.0,21.°64N±0.°03×142.°9E±0.°2, h10km±2km, mb4.2/7, Error ellipse: s-maj=34.3km s-min=6.2km az=90.0*

ISC 27 13:49:14.5±0.7, 21.°70N±0.°09×143.°2E±0.°2, h10km, n25, σ1s67/19, mb4.0/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**8.21**	**169**	Pn	**Pn**	**13 51 14.7**	**+1.0**
JNU	**Nakatsue**	**15.79**	**319**	Pn	**Pn**	**13 52 55.9**	**-1.2**
JNU				IAmb	IAmb	13 53 11.2	
	comp=Z,19nm,1.2s						
JMM	**Marumori**	**16.25**	**353**	Pn	**Pn**	**13 53 03.6**	**+0.8**
NACB	**Ninganchiao**	**20.08**	**281**	P	**P**	**13 53 45.3**	**-3.0**
NACB				IAmb	IAmb	13 53 52.6	
	comp=Z,14nm,0.8s						
KSRS	**Korea Array**	**20.55**	**323**	P	**P**	**13 53 56.2**	**+3.1**
	comp=Z,0.7nm,0.7s,baz=148,slow=8.9,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**22.21**	**91**	T	T	14 16 45.5	
	baz=278,slow=74						
H11N2	**WAKE ISLAND Hy**	**22.21**	**91**	T	T	14 16 47.9	
	baz=278,slow=74						
H11N3	**WAKE ISLAND Hy**	**22.23**	**91**	T	T	14 16 48.9	
	baz=278						
H11S3	**WAKE ISLAND Hy**	**22.25**	**94**	T	T	14 16 47.9	
	baz=283,slow=74						
H11S1	**WAKE ISLAND Hy**	**22.25**	**94**	T	T	14 16 47.8	
	baz=283,slow=74						
H11S2	**WAKE ISLAND Hy**	**22.26**	**94**	T	T	14 16 48.5	
	baz=283,slow=74						
KLR	**Kul'dur**	**28.96**	**344**	P	**P**	**13 55 14.8**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=138,slow=8.6,SNR=8.6						
SONM	**Songino Array**	**39.37**	**320**	P	**P**	**13 56 44.8**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=95,slow=6.1,SNR=2.0

comp=Z,57nm,18.7s,baz=140,slow=38
SONM Songino Array 39.54 320 P **P** 14 11 45.4 +0.1
KNRA Kununurra 39.93 203 P **P** 14 11 49.0 +0.4
KNRA IAmb IAmb 14 11 58.5
comp=Z,6.0nm,1.0s
CMAR Chiang Mai Arr 41.94 274 P **P** 14 12 06.2 +0.9
comp=Z,0.6nm,0.3s,baz=74,slow=7.6,SNR=1.7
WB0 Warramunga Arr 42.23 193 P **P** 14 12 05.6 -1.9
WB2 Warramunga Arr 42.40 193 P **P** 14 12 09.4 +0.4
WB2 IAmb IAmb 14 12 24.9
comp=Z,7.6nm,1.1s
WRA Warramunga Arr 42.41 193 P **P** 14 12 09.0 0.0
comp=Z,0.7nm,0.5s,baz=14,slow=9.1,SNR=15
WRA Warramunga Arr 42.41 193 P **P** 14 12 09.0 0.0
TLY Talaya 42.94 324 LR LR 14 29 48.5
comp=Z,52nm,20.4s,baz=124,slow=36
FITZ Fitzroy Crossi 43.32 205 P **P** 14 12 15.7 -0.7
FITZ IAmb IAmb 14 12 30.6
comp=Z,6.0nm,1.5s
AS31 Alice Springs 46.11 192 P **P** 14 12 37.6 -1.0
ASAR Alice Springs 46.11 192 P **P** 14 12 38.4 -0.3
comp=Z,0.8nm,0.5s,baz=18,slow=12,SNR=26
STKA Stephens Creek 53.35 182 P **P** 14 13 32.0 -1.6
comp=Z,2.3nm,0.8s,baz=295,slow=9.2,SNR=4.1
ZALV Zalesovo Beam 54.40 322 P **P** 14 13 40.0 -1.2
comp=Z,1.0nm,0.5s,baz=104,slow=9.1,SNR=5.3
ZALV LR LR 14 38 37.0
comp=Z,32nm,19.9s,baz=50,slow=38
MKAR Makanchi Array 54.94 313 P **P** 14 13 44.4 -0.8
comp=Z,1.1nm,0.9s,baz=98,slow=6.8,SNR=3.2
MKAR Makanchi Array 54.94 313 P **P** 14 13 45.1 -0.2
KURK Kurchatov 57.69 317 P **P** 14 14 03.9 -0.9
KURK IAmb IAmb 14 14 23.4
comp=Z,2.7nm,0.8s
NRIK Noril'sk 58.08 340 LR LR 14 40 38.8
comp=Z,54nm,18.5s,baz=16,slow=38
ILAR Eielson Array 61.83 27 P **P** 14 14 32.6 -0.4
comp=Z,1.3nm,0.8s,baz=252,slow=5.7,SNR=11
ILAR LR LR 14 38 40.6
comp=Z,32nm,21.1s,baz=288,slow=33
ILAR Eielson Array 61.83 27 P **P** 14 14 31.6 -1.4
BMAR Burnt Mountain 63.15 24 P **P** 14 14 42.0 +0.2
KKAR Karatay Array 63.31 308 P **P** 14 14 43.5 +0.1
INK Inuvik 67.38 24 P **P** 14 15 09.6 +0.4
comp=Z,1.6nm,0.6s,baz=229,slow=4.5,SNR=5.6
INK Inuvik 67.38 24 P **P** 14 15 08.7 -0.4
ABKAR Akbulak array 69.77 316 P **P** 14 15 24.3 -0.2
ABKAR IAmb IAmb 14 15 31.5
comp=Z,4.3nm,1.1s
ARCES ARCESS Array B 78.99 342 P **P** 14 16 17.9 +0.1
comp=Z,3.3nm,0.9s,baz=81,slow=8.3,SNR=1.4
ARCES LR LR 14 53 56.0
comp=Z,18nm,18.6s,baz=275,slow=38
NEW Newport 80.00 42 LR LR 14 44 32.0
comp=Z,55nm,20.5s,baz=290,slow=30
BEKR Beckworth 80.81 51 P **P** 14 16 29.0 +0.5
BEKR IAmb IAmb 14 16 40.5
comp=Z,5.2nm,1.0s
BMO Blue Mountains 81.13 45 P **P** 14 16 30.2 +0.2
CMB Columbia Colle 81.44 53 P **P** 14 16 32.6 +0.9
CMB IAmb IAmb 14 16 33.4
comp=Z,3.0nm,0.6s
PNTR Pine Nut 81.64 51 P **P** 14 16 33.6 +0.6
PNTR IAmb IAmb 14 16 35.1
comp=Z,2.4nm,0.8s
WAKR Walker 81.97 52 P **P** 14 16 35.0 +0.3
WAKR IAmb IAmb 14 16 36.6
comp=Z,1.5nm,0.6s
RYN Ryan 82.59 51 P **P** 14 16 36.0 -1.9
RYN IAmb IAmb 14 16 50.0
comp=Z,2.3nm,1.0s
KBZ Khabaz 82.60 314 P **P** 14 16 37.6 +0.1
comp=Z,3.4nm,0.9s,baz=11,slow=2.0,SNR=2.8
KVN Kaiserville 82.74 51 P **P** 14 16 39.0 +0.3
KVN IAmb IAmb 14 16 50.3
comp=Z,4.0nm,1.2s
NVAR Mina Array Bea 82.82 52 P **P** 14 16 40.1 +1.0
comp=Z,1.7nm,0.6s,baz=282,slow=5.6,SNR=26
NVAR Mina Array Bea 82.82 52 P **P** 14 16 40.0 +0.8
FINES FINESS Array B 83.30 335 P **P** 14 16 40.0 -0.8
comp=Z,1.5nm,0.9s,baz=79,slow=7.5,SNR=1.4
FINES LR LR 14 56 22.8
comp=Z,30nm,18.7s,baz=14,slow=38
HRY Holter Researc 83.91 42 P **P** 14 16 45.4 +1.0
ELK Elko 84.12 49 LR LR 14 48 18.8
comp=Z,26nm,20.4s,baz=310,slow=32
TPNV Topopah Spring 84.90 52 P **P** 14 16 49.5 -0.2
GSC Goldstone, Bar 85.13 54 P **P** 14 16 50.3 -0.5
PFO Pinyon Flats O 86.06 55 LR LR 14 50 50.0
comp=Z,24nm,18.9s,baz=320,slow=32
PDAR Pinedale Array 87.10 45 P **P** 14 17 00.4 -0.2
comp=Z,0.4nm,0.7s,baz=268,slow=3.4,SNR=2.0
PDAR LR LR 14 50 38.9
comp=Z,39nm,19.7s,baz=336,slow=32
AKASG Malin Array Be 87.68 325 LR LR 14 59 36.6
comp=Z,47nm,18.0s,baz=85,slow=38
NOA NORSAR Array B 89.03 339 LR LR 15 00 07.3
comp=Z,27nm,19.5s,baz=285,slow=38

*IDC **27** 14:16:14.8±2.1,23˚.14S×179˚.31E,h551km±23km, mb3.4/18,mb1 3.6/20,mb1mx3.5/44,mbtmp4.3/20,Error ellipse: s-maj=18.9km s-min=14.4km az=149.0*

ISC 27 14:16:14.6±0.5,23˚.18S±0˚.09×179˚.3E±0˚.1,h550km,n53, σ0s98/60,mb3.8/18,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.96**	**273**	P	**P**	**14 18 53.1**	**+0.2**
	0.4nm,0.3s,baz=79,slow=19,SNR=3.0						
MXZ	**Matakaoa Point**	**14.37**	**183**	P	**P**	**14 19 17.4**	**+0.1**
HAZ	**Te Kaha**	**14.59**	**185**	P	**P**	**14 19 19.9**	**+0.3**
WMGZ	**Waiomatatini S**	**14.62**	**183**	P	**P**	**14 19 22.9**	**+3.0**
PKGZ	**Pakihiroa**	**14.70**	**184**	P	**P**	**14 19 22.7**	**+1.8**
TGRZ	**Tauranga**	**14.74**	**190**	P	**P**	**14 19 23.5**	**+2.2**
RUGZ	**Raukumara Rang**	**14.81**	**185**	P	**P**	**14 19 23.4**	**+1.3**
OPRZ	**Ohinepanea**	**14.81**	**185**	P	**P**	**14 19 24.4**	**+2.5**
TWGZ	**Tauwhareparae**	**15.00**	**184**	P	**P**	**14 19 24.3**	**+0.4**
URZ	**Urewera**	**15.15**	**187**	P	**P**	**14 19 25.0**	**-0.5**
	3.9nm,0.3s,baz=331,slow=1.4,SNR=28						
URZ				S	**S**	**14 21 59.7**	**-2.7**
	0.8nm,0.3s,baz=172,slow=22,SNR=6.5						
URZ	**Urewera**	**15.15**	**187**	P	**P**	**14 19 24.4**	**-1.0**
MWZ	**Matawai**	**15.19**	**185**	P	**P**	**14 19 25.1**	**-0.8**
TKGZ	**Te Karaka**	**15.27**	**184**	P	**P**	**14 19 27.8**	**+1.2**
RPZ	**Rata Peaks**	**21.59**	**196**	P	**P**	**14 20 24.9**	**+0.1**
	4.8nm,0.5s,baz=270,slow=4.0,SNR=1.2						
CTA	**Charters Tower**	**30.87**	**269**	P	**P**	**14 21 47.2**	**+0.4**
	21nm,0.6s,baz=86,slow=10,SNR=6.0						
STKA	**Stephens Creek**	**34.44**	**247**	P	**P**	**14 22 16.9**	**+0.2**
	2.5nm,0.5s,baz=88,slow=14,SNR=7.0						
ASAR	**Alice Springs**	**41.56**	**260**	P	**P**	**14 23 14.7**	**-0.1**
	3.3nm,0.8s,baz=92,slow=6.9,SNR=37						
ASAR				PcP	**PcP**	**14 24 58.8**	**-0.3**
	1.0nm,0.7s,baz=90,slow=5.1,SNR=5.7						
ASAR				ScP	**ScP**	**14 27 57.1**	**0.0**
	0.3nm,0.6s,baz=95,slow=4.6,SNR=4.0						
WRA	**Warramunga Arr**	**41.85**	**266**	P	**P**	**14 23 16.1**	**-1.1**
	2.4nm,0.7s,baz=96,slow=8.1,SNR=83						
WRA				PcP	**PcP**	**14 25 00.1**	**0.0**
	0.5nm,0.6s,baz=99,slow=6.3,SNR=2.2						
FITZ	**Fitzroy Crossi**	**50.28**	**265**	P	**P**	**14 24 21.7**	**+0.6**
	baz=104,slow=6.3						
MJAR	**Matsushiro Arr**	**70.96**	**326**	P	**P**	**14 26 36.0**	**-1.0**
	2.4nm,0.8s,baz=161,slow=5.5,SNR=6.0						
KSRS	**Korea Array**	**77.31**	**320**	P	**P**	**14 27 13.1**	**+0.4**
	1.9nm,0.8s,baz=137,slow=6.1,SNR=9.4						
PETK	**Petropavlovsk-**	**78.26**	**347**	P	**P**	**14 27 17.1**	**-0.4**
	5.2nm,0.7s,baz=112,slow=6.9,SNR=18						
USRK	**Ussuriysk Ar.**	**79.83**	**327**	P	**P**	**14 27 25.4**	**-0.7**
	2.5nm,0.7s,baz=321,slow=2.4,SNR=5.2						
KLR	**Kul'dur**	**83.61**	**331**	P	**P**	**14 27 45.1**	**0.0**
	1.0nm,0.6s,baz=130,slow=7.9,SNR=2.2						
NVAR	**Mina Array Bea**	**84.66**	**44**	P	**P**	**14 27 51.6**	**+0.7**
	0.9nm,0.7s,baz=227,slow=8.7,SNR=8.0						
SNAA	**Sanae**	**85.39**	**179**	P	**P**	**14 27 53.5**	**-0.3**
VNA3	**Neumayer Olymp**	**85.62**	**177**	P	**P**	**14 27 54.9**	**+0.1**
VNA2	**Neumayer--Watz**	**86.03**	**178**	P	**P**	**14 27 57.0**	**+0.2**
	baz=185,slow=4.4						
ELK	**Elko**	**87.92**	**44**	P	**P**	**14 28 07.0**	**+0.7**
	1.0nm,0.7s,baz=171,slow=6.5,SNR=4.3						
CMAR	**Chiang Mai Arr**	**88.71**	**291**	P	**P**	**14 28 11.2**	**+0.9**
	0.6nm,0.3s,baz=126,slow=3.2,SNR=7.9						
TXAR	**Lajitas Array**	**90.57**	**58**	P	**P**	**14 28 19.8**	**+1.1**
	1.0nm,0.8s,baz=235,slow=4.4,SNR=10						
ANMO	**Albuquerque**	**90.99**	**52**	P	**P**	**14 28 21.0**	**+0.3**
	0.4nm,0.3s,baz=194,slow=5.3,SNR=4.0						
ILAR	**Eielson Array**	**91.48**	**14**	P	**P**	**14 28 21.4**	**-0.6**
	0.5nm,0.6s,baz=222,slow=5.0,SNR=11						
PDAR	**Pinedale Array**	**92.59**	**44**	P	**P**	**14 28 27.9**	**0.0**
	0.5nm,0.6s,baz=204,slow=3.5,SNR=4.3						
SONM	**Songino Array**	**96.16**	**320**	P	**P**	**14 28 45.5**	**+1.7**
	0.3nm,0.4s,baz=121,slow=6.2,SNR=2.4						
MKAR	**Makanchi Array**	**111.22**	**313**	PKiKP	**PKiKP**	**14 33 44.8**	**-1.2**
	0.3nm,0.4s,baz=273,slow=0.8,SNR=4.5						
ARCES	**ARCESS Array B**	**131.06**	**348**	PKP	**PKPdf**	**14 34 22.4**	**-0.9**
	1.6nm,0.6s,baz=83,slow=2.7,SNR=11						
FINES	**FINESS Array B**	**137.57**	**341**	PKhKP	PKPpre	14 34 24.4	
	0.6nm,0.6s,baz=131,slow=4.0,SNR=1.1						
FINES				PKP	**PKPdf**	**14 34 36.5**	**+0.8**
	2.4nm,0.8s,baz=42,slow=2.3,SNR=6.0						
AKASG	**Malin Array Be**	**144.04**	**327**	PKP	PKPbc	14 34 46.0	-1.0
	2.9nm,0.4s,baz=44,slow=4.0,SNR=18						
BRTR	**Keskin Array B**	**146.66**	**308**	PKPbc	**PKPbc**	**14 34 54.5**	**-0.8**
	1.6nm,0.6s,baz=186,slow=2.5,SNR=4.5						
EKA	**Eskdalemuir Ar**	**147.83**	**3**	PKPbc	**PKPbc**	**14 34 56.9**	**-0.7**
	1.3nm,0.4s,baz=348,slow=2.3,SNR=13						
OSTC	**Ostas**	**149.67**	**338**	*e*PKP	**PKiKP**	**14 35 02.9**	**-0.1**
CHVC	**Chvalec**	**149.70**	**339**	*e*PKP	**PKPbc**	**14 35 02.5**	**+0.1**
DPC	**Dobruska-Polom**	**149.81**	**338**	*e*PKP	**PKPbc**	**14 35 03.0**	**+0.3**
DPC				*ep*PKP	**PKPab**	**14 35 11.0**	**+0.5**
KRLC	**Kraliky**	**149.88**	**337**	*e*PKP	**PKPbc**	**14 35 03.0**	**+0.2**
CLL	**Colim**	**149.99**	**343**	*i* PKPbc	**PKPbc**	**14 35 02.8**	**-0.2**
	comp=Z,21nm,0.9s						
CLL				*e*PKPab	**PKPab**	**14 35 11.0**	**-0.1**
BRG	**Berggiesshubel**	**150.11**	**341**	*i* PKP	**PKPbc**	**14 35 03.2**	**-0.1**
	comp=Z,12nm,1.0s						
PVCC	**Panska Ves**	**150.23**	**340**	*e*PKP	**PKPbc**	**14 35 03.9**	**+0.3**
PRU	**Pruhonice**	**150.71**	**340**	*e*PKP	**PKPbc**	**14 35 04.6**	**-0.1**
KHC	**Kasperske Hory**	**151.76**	**340**	*e*PKP	**PKPbc**	**14 35 07.2**	**0.0**
KHC				*ep*PKP	**PKPab**	**14 35 19.0**	**+0.3**
GERES	**GERESS Array B**	**151.97**	**340**	PKPbc	**PKPbc**	**14 35 07.0**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=12,slow=1.9,SNR=7.1						
ESDC	**Sonseca Array**	**163.32**	**9**	PKPab	**PKPab**	**14 36 08.4**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=325,slow=4.5,SNR=5.0						
TORD	**Torodi Ar. Bea**	**169.78**	**193**	PKP	**PKPdf**	**14 35 18.3**	**-1.8**
	comp=Z,1.4nm,1.0s,baz=318,slow=0.8,SNR=3.7						
TORD				PKPab	**PKPab**	**14 36 38.1**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=172,slow=2.4,SNR=3.1						

WEL 27 14:32:05.0,43˚S±1˚×17˚3E±˚,h12km±2km,M2.2/8,ML2.2/8, MLv2.2/8,Error ellipse: s-maj=0.0km s-min=0.0km az=40.7,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.23**	**207**	P	Pb	14 32 11.3	+0.2
OKCZ	**Okains Bay**	**0.29**	**140**	P	Pb	14 32 12.3	+0.1
AMCZ	**Amberley**	**0.34**	**341**	P	Pb	14 32 13.2	+0.2
AKCZ	**Akaroa Harbour**	**0.38**	**168**	P	Pb	14 32 14.1	+0.4
RACZ	**Rakaia**	**0.53**	**244**	P	Pn	14 32 17.5	-0.9
GVZ	**Greta Valley S**	**0.56**	**18**	P	Pb	14 32 17.2	+0.5
OXZ	**Oxford**	**0.58**	**287**	P	Pb	14 32 17.8	+0.7
LTZ	**Lake Taylor**	**0.81**	**331**	P	Pn	14 32 22.0	-0.3
WACZ	**Wakanui South**	**0.83**	**237**	P	Pn	14 32 23.1	+0.6
MHCZ	**Mount Hutt**	**0.90**	**267**	P	Pn	14 32 24.2	+0.7
ARCZ	**Arundel**	**1.26**	**249**	P	Pg	14 32 31.1	+1.9
RPZ	**Rata Peaks**	**1.29**	**260**	P	Pg	14 32 31.4	+1.7
THZ	**Tophouse**	**1.74**	**3**	P	Pn	14 32 34.3	-0.8
PXZ	**Pawanui**	**4.61**	**43**	P	Pn	14 33 19.6	+5.2
BHHZ	**Black Hill Sta**	**4.70**	**33**	P	Pn	14 33 17.2	+1.5

IDC 27 14:35:23.9±55.0,16˚.79S×178˚.26W,h0km,mb4.3/3, mb1 4.5/3,mb1mx3.7/37,mbtmp4.3/3,Error ellipse: s-maj=1019.0km s-min=161.7km az=78.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.30**	**240**	P	P	14 42 56.1	+1.4
	2.0nm,0.8s,baz=70,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**44.98**	**258**	P	P	14 43 40.5	-0.9
	0.7nm,0.3s,baz=97,slow=7.6,SNR=36						
ASAR	**Alice Springs**	**45.24**	**253**	P	P	14 43 43.1	-0.3
	5.8nm,0.4s,baz=89,slow=7.7,SNR=274						

IDC 27 14:59:09.6±2.3,2˚.09N×126˚.75E,h0km,mb3.2/3, mb1 3.4/3,mb1mx3.1/45,mbtmp3.2/3,Error ellipse: s-maj=179.6km s-min=28.7km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.13**	**162**	P	P	15 04 17.8	+0.2
	0.4nm,0.6s,baz=340,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**26.53**	**165**	P	P	15 04 49.2	0.0
	0.3nm,0.9s,baz=345,slow=13,SNR=2.3						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	15 09 10.4	-0.2
	0.2nm,0.4s,baz=117,slow=7.4,SNR=1.6						

*BGR **27** 15:05:43.6±0.0,21˚.66S×175˚.41W,h33km,Ms4.2*
*BJI **27** 15:05:45.5±0.0,21˚.13S×175˚.65W,h42km,mB5.4/18, mb5.0/30,Ms4.9/5,Ms7 4.7/3*
*MOS **27** 15:05:47.3±2.8,20˚.93S×175˚.69W,h42km,mb5.3/36, Error ellipse: s-maj=10.5km s-min=9.1km az=50.7*
*NEIC **27** 15:05:50.5±2.9,21˚.07S±0˚.08×175˚.48W±0˚.10,h77km±4km, mb5.2/224, Error ellipse: s-maj=13.5km s-min=10.3km az=117.0*
*IDC **27** 15:05:52.6±0.6,21˚.13S×175˚.63W,h94km±5km,mb4.6/23, mb1 4.8/23,mb1mx4.7/33,mbtmp5.0/23,MS3.5/19, Ms1 3.5/19,ms1mx3.5/27,Error ellipse: s-maj=12.5km s-min=10.8km az=147.0*
*GCMT **27** 15:05:54.5±0.2,21˚.34S±0˚.01×175˚.06W±0˚.01, h109km±2km,MW5.0/119,Moment Tensor Solution. s70,c103; s119,c185; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.12±.12; Mθθ0.60±.14; Mϕϕ-0.71±.15; Mrθ1.18±.08; Mθϕ0.88±.14; Mϕr-4.52±.07; Best double couple: Ms4.73100×10^16^ NP1:ϕ287.00000°, δ7.00000°, λ31.00000°. NP2:ϕ167.00000°, δ87.00000°, λ96.00000°. Principal axes: T 4.2620, Plg48.0000°, Azm83.0000°; N 0.9380, Plg6.0000°, Azm346.0000°; P -5.2010, Plg41.0000°, Azm251.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 15:05:48.3±0.4,21˚.16S±0˚.04×175˚.37W±0˚.05,h62km±3km, h63km:pP-P,n629,σ1s67/601,mb5.2/149,48C-8D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.52**	**69**	P	**Pn**	**15 07 07.5**	**-0.4**
	baz=5.3,SNR=283						
NIUE	**Niue**	**5.52**	**69**	Pn	**Pn**	**15 07 07.5**	**-0.4**
NIUE					**Sn**	**15 08 01.8**	**-8.2**
MSVF	**Nonsavu**	**7.08**	**298**	*i* P	Pn	15 07 38.6	+9.1
MSVF	**Nonsavu**	**7.08**	**298**		Pn	15 07 39.0	+10
AFI	**Afiamalu**	**7.98**	**26**	P	**Pn**	**15 07 40.2**	**-1.6**
AFI	**Afiamalu**	**7.98**	**26**	Pn	**Pn**	**15 07 40.2**	**-1.6**
AFI				Sn	Sn	15 09 01.7	-9.0
RIZ	**Raoul Island**	**8.38**	**196**	P	**Pn**	**15 07 50.5**	**+3.4**
RIZ				S	**Sn**	**15 09 18.1**	**-2.1**
RAO	**Raoul Island**	**8.38**	**195**	P	**Pn**	**15 07 47.4**	**+0.3**
	113nm,0.3s,baz=37,slow=21,SNR=6.5						
RAO				S	**Sn**	**15 09 18.3**	**-2.0**
	706nm,0.3s,baz=276,slow=23,SNR=15						
RAO	**Raoul Island**	**8.38**	**195**		**Pn**	**15 07 47.1**	**-0.1**
RAO					**Sn**	**15 09 17.8**	**-2.6**
GLKZ	**Green Lake**	**8.39**	**195**	P	**Pn**	**15 07 48.7**	**+1.5**
GLKZ				S	**Sn**	**15 09 18.1**	**-2.4**
RAR	**Rarotonga**	**14.55**	**93**	P	**Pn**	**15 09 10.5**	**-0.5**
	9.1nm,0.3s,baz=258,slow=7.0,SNR=24						
RAR				S	Sn	15 11 37.6	-13
	33nm,0.3s,baz=284,slow=23,SNR=9.7						
RAR				LR	LR	15 13 52.3	
	comp=Z,286nm,20.4s,baz=278,slow=32						
RAR	**Rarotonga**	**14.55**	**93**	P	**Pn**	**15 09 09.8**	**-1.2**
RAR	**Rarotonga**	**14.55**	**93**	P	**Pn**	**15 09 09.8**	**-1.2**
DZM	**Mont Dzumac**	**16.94**	**264**	P	**P**	**15 09 46.9**	**+4.3**
	4.7nm,0.3s,baz=89,slow=15,SNR=76						
DZM				LR	LR	15 13 55.8	
	comp=Z,276nm,19.4s,baz=163,slow=29						
DZM	**Mont Dzumac**	**16.94**	**264**	*e*P	**P**	**15 09 46.8**	**+4.3**
	476nm,1.0s						
DZM	**Mont Dzumac**	**16.94**	**264**		**P**	**15 09 46.9**	**+4.3**
DZM					IAmb	IAmb	15 09 49.2
	comp=Z,171nm,0.8s						
NFK	**Norfolk Island**	**17.02**	**239**	P	**P**	**15 09 45.5**	**+2.2**
	baz=17,SNR=4.5						
OUZ	**Omahuta**	**17.04**	**212**	P	**P**	**15 09 44.5**	**+1.1**
OUZ	**Omahuta**	**17.04**	**212**	P	**P**	**15 09 44.9**	**+1.5**
GRZ	**Great Barrier**	**17.04**	**206**	P	**P**	**15 09 46.2**	**+2.8**
MXZ	**Matakaoa Point**	**17.24**	**197**	P	**Pn**	**15 09 41.9**	**-3.0**
MXZ				S	Sn	15 12 34.7	-21
MXZ	**Matakaoa Point**	**17.24**	**197**	P	**Pn**	**15 09 41.0**	**-3.9**
WCZ	**Waipu Caves**	**17.26**	**209**	P	**P**	**15 09 47.2**	**+1.4**
SANVU	**Saraoutou**	**17.49**	**286**	P	**P**	**15 09 52.6**	**+4.1**
HAZ	**Te Kaha**	**17.57**	**198**	P	**Pn**	**15 09 43.6**	**-5.3**
HAZ				S	Sn	15 12 42.4	-22
ABAZ	**Army Bay**	**17.60**	**207**	P	**P**	**15 09 51.6**	**+2.0**
PKGZ	**Pakihiroa**	**17.61**	**197**	P	Pn	15 09 40.2	-9.3
PKGZ				S	Sn	15 12 41.5	-24
WIAZ	**Waiheke Island**	**17.64**	**206**	P	**P**	**15 09 51.9**	**+1.9**
RUGZ	**Raukumara Rang**	**17.80**	**198**	P	**Pn**	**15 09 49.3**	**-2.6**
RUGZ				S	Sn	15 12 49.3	-20
RVAZ	**Riverhead Bore**	**17.85**	**207**	P	**P**	**15 09 53.7**	**+1.3**
ETAZ	**East Tamaki Re**	**17.86**	**206**	P	**P**	**15 09 54.3**	**+1.8**
EPAZ	**Eden Park BICE**	**17.87**	**207**	P	**P**	**15 09 54.3**	**+1.8**
TWGZ	**Tauwhareparae**	**17.91**	**197**	P	**Pn**	**15 09 53.0**	**-0.2**
TWGZ				S	Sn	15 12 55.9	-16
URZ	**Urewera**	**18.24**	**199**	P	**P**	**15 09 55.8**	**-0.8**
	comp=Z,2.9nm,0.3s,baz=261,slow=3.8,SNR=16						
URZ				S	Sn	15 13 02.9	-17
	comp=Z,3.7nm,0.3s,baz=341,slow=3.6,SNR=3.9						
URZ	**Urewera**	**18.24**	**199**	P	**P**	**15 09 52.1**	**-4.5**
URZ				S	Sn	15 13 00.1	-20
URZ	**Urewera**	**18.24**	**199**	P	**P**	**15 09 53.6**	**-3.0**
KNTN	**Kanton**	**18.61**	**11**	P	**P**	**15 10 02.4**	**+1.5**
HIZ	**Hauiti**	**19.24**	**204**	P	**Pn**	**15 10 08.8**	**-0.4**
HIZ				IAmb	IAmb	15 10 21.9	
	comp=Z,144nm,1.1s						
BKZ	**Black Stump Fm**	**19.26**	**199**	P	**P**	**15 10 04.4**	**-3.5**
BKZ				IAmb	IAmb	15 10 14.7	
	comp=Z,50nm,0.5s						
BFZ	**Birch Farm**	**20.73**	**198**	P	**P**	**15 10 23.4**	**-0.4**
BFZ				IAmb	IAmb	15 10 30.5	
	comp=Z,84nm,0.6s						
MSWZ	**Moikau Station**	**21.70**	**199**	P	**P**	**15 10 31.6**	**-2.6**
SNZO	**South Karori**	**21.78**	**200**	P	**P**	**15 10 32.6**	**-2.4**
SNZO				IAmb	IAmb	15 10 39.2	
	comp=Z,112nm,0.8s						
BHW	**Baring Head**	**21.81**	**200**	P	**P**	**15 10 33.1**	**-2.2**
PLWZ	**Palliser**	**21.84**	**199**	P	**P**	**15 10 33.4**	**-2.3**
QRZ	**Quartz Range**	**22.14**	**205**	P	**P**	**15 10 36.0**	**-2.9**
TUWZ	**Tuamarina**	**22.14**	**202**	P	**P**	**15 10 34.5**	**-4.3**
NNZ	**Nelson**	**22.15**	**203**	P	**P**	**15 10 35.5**	**-3.5**
CMWZ	**Cape Campbell**	**22.34**	**201**	P	**P**	**15 10 37.8**	**-3.1**
BSWZ	**Blackbirch Sta**	**22.42**	**201**	P	**P**	**15 10 38.7**	**-3.2**
THZ	**Tophouse**	**22.80**	**203**	P	**P**	**15 10 42.4**	**-3.6**
THZ				IAmb	IAmb	15 10 50.5	
	comp=Z,100nm,0.8s						
KHZ	**Kahutara**	**23.16**	**201**	P	**P**	**15 10 46.6**	**-2.8**
KHZ				IAmb	IAmb	15 10 54.5	
	comp=Z,95nm,0.8s						
LTZ	**Lake Taylor**	**23.92**	**203**	P	**P**	**15 10 53.5**	**-3.1**
TBI	**Tubuai**	**24.07**	**100**	*e*P	**P**	**15 10 58.6**	**+0.5**
	comp=Z,327nm,1.0s						
TBI	**Tubuai**	**24.07**	**100**	*e*T	T	15 35 38.9	
	comp=Z,22nm,0.2s						
OXZ	**Oxford**	**24.48**	**203**	P	**P**	**15 10 59.1**	**-2.5**
PAE	**Paea**	**24.56**	**86**	*e*P	**P**	**15 11 03.0**	**+0.4**
	comp=Z,30nm,0.9s						
PAE	**Paea**	**24.56**	**86**	*e*T	T	15 36 17.7	
	comp=Z,47nm,0.3s						
PPT2	**Papeete2**	**24.58**	**86**	*e*P	**P**	**15 11 03.8**	**+0.9**
	comp=Z,254nm,1.0s						
PPT2	**Papeete2**	**24.58**	**86**	*e*T	T	15 36 20.0	
	comp=Z,25nm,0.3s						
PPT	**Papeete**	**24.59**	**86**	P	**P**	**15 11 04.3**	**+1.5**
	comp=Z,296nm,0.9s,baz=272,slow=1.7,SNR=20						
PPT				LR	LR	15 18 37.8	
	comp=Z,184nm,19.9s,baz=270,slow=31						
PPTF	**Pamatai, Papee**	**24.59**	**86**	P	**P**	**15 11 03.0**	**+0.1**
MQZ	**McQueen's Vall**	**24.60**	**201**	P	**P**	**15 11 00.8**	**-1.8**
MQZ				IAmb	IAmb	15 11 01.2	
	comp=Z,218nm,1.6s						
TIAR	**Tiarei**	**24.80**	**86**	*e*P	**P**	**15 11 05.8**	**+1.0**
	comp=Z,105nm,0.9s						
TIAR	**Tiarei**	**24.80**	**86**	*e*T	T	15 36 35.8	
	comp=Z,8.3nm,0.3s						
TVO	**Taravao**	**24.84**	**87**	*e*P	**P**	**15 11 05.8**	**+0.6**
	comp=Z,54nm,0.9s						
TVO	**Taravao**	**24.84**	**87**	*e*T	T	15 36 38.5	
	comp=Z,9.3nm,0.3s						
LHI	**Lord Howe Isla**	**25.07**	**240**	P	**P**	**15 11 05.4**	**-1.7**
	baz=25,SNR=3.3						
LHI	**Lord Howe Isla**	**25.07**	**240**	P	**P**	**15 11 07.1**	**0.0

TOO Toolangi 37.52 235 P P 15 12 55.6 -0.9
MOO Moorlands 37.83 227 P P 15 12 58.5 -0.5
baz=38,SNR=4.4
PMG Port Moresby 37.89 282 P P 15 12 59.1 -0.6
comp=Z,58nm,1.0s,baz=86,slow=4.5,SNR=11
PMG Port Moresby 37.89 282 *ce*P P 15 12 59.5 -0.2
PMG pmax pmax
comp=Z,79nm,1.0s
PMG Port Moresby 37.89 282 P P 15 12 59.3 -0.4
TAU Tasmania Unive 37.92 226 P P 15 12 59.5 -0.2
TAU pmax pmax
comp=Z,93nm,1.5s
TAU Tasmania Unive 37.92 226 P P 15 12 59.5 -0.2
MTSU Mount Surprise 38.02 267 P P 15 13 00.7 -0.2
baz=38,SNR=25
JOHN Johnston Islan 38.09 9 P P 15 12 59.2 -2.1
STKA Stephens Creek 39.73 245 P P 15 13 14.2 -0.9
comp=Z,34nm,0.5s,baz=96,slow=11,SNR=83
STKA LR LR 15 27 40.6
comp=Z,85nm,19.3s,baz=45,slow=33
STKA Stephens Creek 39.73 245 P P 15 13 14.1 -0.9
baz=40,SNR=135
STKA Stephens Creek 39.73 245 P P 15 13 14.2 -0.9
STKA pmax pmax
comp=Z,7.0nm,0.7s
STKA Stephens Creek 39.73 245 P P 15 13 14.2 -0.9
COEN Coen 40.08 273 P P 15 13 18.1 -0.1
baz=40,SNR=29
COEN Coen 40.08 273 P P 15 13 18.0 -0.1
ARPS Mount Arapiles 40.19 238 P P 15 13 17.8 -1.0
baz=40,SNR=12
MANU Manus Island 40.97 293 P P 15 13 25.8 +0.3
HTT Hallett 42.11 243 P P 15 13 33.6 -1.1
baz=42,SNR=35
BBOO Buckleboo 44.47 244 P P 15 13 51.8 -1.9
baz=45,SNR=36
BBOO Buckleboo 44.47 244 P P 15 13 51.7 -1.9
JAY Jayapura 46.59 287 P P 15 14 11.0 +0.4
comp=Z,399nmcomp=Z,46nm,0.9s
WR0 Warramunga Arr 46.76 262 P P 15 14 09.9 -1.9
WR0 PcP PcP 15 15 44.4 -0.1
AS31 Alice Springs 46.76 257 P P 15 14 10.3 -1.6
ASAR Alice Springs 46.77 257 P P 15 14 10.3 -1.6
comp=Z,26nm,0.8s,baz=96,slow=9.0,SNR=232
ASAR PcP PcP 15 15 44.0 -0.4
comp=Z,8.5nm,0.9s,baz=105,slow=4.8,SNR=6.4
ASAR ScP ScP 15 19 31.6 -1.4
comp=Z,1.5nm,0.8s,baz=94,slow=4.8,SNR=4.3
ASAR S S 15 20 47.2 -11
comp=Z,0.8nm,0.9s,baz=93,slow=16,SNR=3.9
ASAR LR LR 15 33 44.8
comp=Z,82nm,18.6s,baz=105,slow=36
WB0 Warramunga Arr 46.93 262 P P 15 14 11.1 -2.1
WB0 IAmb IAmb 15 14 18.4
comp=Z,22nm,0.6s
WB0 PcP PcP 15 15 44.9 -0.2
WB2 Warramunga Arr 46.94 262 P P 15 14 11.5 -1.8
WB2 IAmb IAmb 15 14 12.4
comp=Z,20nm,0.9s
WB2 PcP PcP 15 15 44.7 -0.4
WRAB Tennant Creek 46.94 262 *ce*P P 15 14 11.4 -1.9
WRAB pmax pmax
comp=Z,21nm,1.3s
WRAB Tennant Creek 46.94 262 P P 15 14 11.1 -2.2
WRAB IAmb IAmb 15 14 12.4
comp=Z,21nm,1.1s
WRAB PcP PcP 15 15 46.2 +1.1
WRA Warramunga Arr 46.95 262 P P 15 14 11.1 -2.3
comp=Z,12nm,0.9s,baz=96,slow=8.0,SNR=96
WRA pP sP 15 14 35.7 -0.3
comp=Z,8.7nm,0.8s,baz=98,slow=7.0,SNR=5.8
WRA PcP PcP 15 15 44.9 -0.3
comp=Z,6.9nm,0.9s,baz=100,slow=3.4,SNR=5.8
WRA ScP ScP 15 19 31.5 -2.3
comp=Z,2.0nm,1.0s,baz=100,slow=4.2,SNR=5.5
WRA S S 15 20 49.5 -11
comp=Z,0.4nm,0.9s,baz=154,slow=28,SNR=1.4
WRA LR LR 15 31 48.1
comp=Z,87nm,20.0s,baz=80,slow=33
WRA Warramunga Arr 46.95 262 P P 15 14 11.3 -2.0
WRA 15 15 45.0
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 46.95 262 P P 15 14 11.3 -2.0
WRA PcP PcP 15 15 45.0 -0.1
GENI Genyem 47.03 287 P P 15 14 18.7 +4.7
KDU Kakadu 50.42 271 P P 15 14 38.7 -1.3
baz=51,SNR=8.5
FORT Forrest 51.30 247 P P 15 14 44.6 -1.9
baz=52,SNR=26
FORT Forrest 51.30 247 P P 15 14 44.5 -1.9
FORT PcP PcP 15 16 01.3 +0.5
MTN Manton Dam 51.63 270 P P 15 14 47.4 -1.7
baz=52,SNR=5.3
MTN Manton Dam 51.63 270 P P 15 14 47.4 -1.7
MTN IAmb IAmb 15 14 54.4
comp=Z,13nm,0.7s
WRKA Warakurna 51.66 254 P P 15 14 47.5 -1.8
baz=52,SNR=85
GUMO Guam 52.13 308 P P 15 14 50.8 -1.9
GUMO pmax pmax
comp=Z,320nm,1.2s
GUMO Guam 52.13 308 P P 15 14 50.8 -1.9
KNRA Kununurra 53.07 266 P P 15 14 58.3 -1.4
baz=53,SNR=29
KNRA Kununurra 53.07 266 P P 15 14 57.9 -1.8
FAKI Fak Fak 54.04 282 P P 15 15 05.6 -1.3
FITZ Fitzroy Crossi 55.38 262 P P 15 15 15.3 -1.3
baz=56,SNR=23
FITZ Fitzroy Crossi 55.38 262 P P 15 15 15.2 -1.4
FITZ IAmb IAmb 15 15 16.6
comp=Z,32nm,1.6s
BNDI Bandanaira 55.56 279 P P 15 15 17.8 -0.1
comp=Z,2µmcomp=Z,73nm,1.0s
MSAI Masohi 56.91 280 P P 15 15 33.0 +5.4
VNDA Vanda 57.49 186 P P 15 15 32.5 +1.9
comp=Z,15nm,0.9s,baz=1.6,slow=7.5,SNR=60
VNDA PcP PcP 15 16 24.3 +0.7
comp=Z,5.6nm,0.8s,baz=346,slow=6.2,SNR=4.9
VNDA ScP ScP 15 20 16.5 -1.8
comp=Z,2.9nm,1.1s,baz=19,slow=4.7,SNR=3.8
VNDA LR LR 15 35 24.9
comp=Z,15nm,20.4s,baz=358,slow=31
VNDA Vanda 57.49 186 P P 15 15 32.9 +2.2
VNDA 15 16 24.6
VNDA pmax pmax
comp=Z,23nm,1.0s
VNDA Vanda 57.49 186 P P 15 15 32.9 +2.2
VNDA IAmb IAmb 15 15 34.1
comp=Z,23nm,1.0s
VNDA PcP PcP 15 16 24.6 +1.0
VNDA ScP 15 20 17.5 -0.8
NLAI Namlea 58.64 279 P P 15 15 41.7 +2.0
comp=Z,22nm,0.9s
SOEI Soe 58.98 271 P P 15 15 42.6 +0.4
comp=Z,42nm,0.7s
SOEI Soe 58.98 271 P P 15 15 42.1 -0.1
BATI Baumata 59.40 270 P P 15 15 48.9 +3.9
PSA00 Pilbara Seismi 59.91 257 P P 15 15 46.1 -2.3
PSA00 IAmb IAmb 15 16 15.0
comp=Z,31nm,1.2s
PSA00 PcP PcP 15 16 33.7 -0.6
TNTI Ternate 60.01 284 P P 15 15 49.0 -0.1
comp=Z,36nm,1.1s
TNTI Ternate 60.01 284 P P 15 15 48.1 -1.0
KLBR Kellerberrin 60.01 245 P P 15 15 47.7 -1.2
baz=60,SNR=8.7
MEEK Meekatharra 60.03 251 P P 15 15 47.2 -1.9
baz=60,SNR=11
MBWA Marble Bar 60.11 257 P P 15 15 47.8 -1.9
SANI Sanana 60.12 280 P P 15 15 48.3 -1.6
comp=Z,32nm,1.0s
NWAO Narrogin (SRO) 60.27 243 P P 15 15 49.4 -1.3
comp=Z,15nm,0.7s,baz=110,slow=6.8,SNR=8.7
NWAO Narrogin (SRO) 60.27 243 P P 15 15 49.7 -1.0
baz=60,SNR=7.5
NWAO Narrogin (SRO) 60.27 243 P P 15 15 49.5 -1.3
NWAO pmax pmax
comp=Z,18nm,0.9s
NWAO Narrogin (SRO) 60.27 243 P P 15 15 49.5 -1.3
NWAO IAmb IAmb 15 15 53.8
comp=Z,18nm,0.8s
NWAO Narrogin (SRO) 60.27 243 P P 15 15 49.8 -1.0
NWAO IAmb IAmb 15 15 53.8
comp=Z,15nm,0.8s
BLDU Ballidu 61.03 246 P P 15 15 54.3 -1.6
baz=61,SNR=14
MUN Mundaring 61.26 244 P P 15 15 56.4 -1.0
baz=61,SNR=4.6
EDFI Ende, Flores 61.71 271 P P 15 16 01.1 +0.3
comp=Z,11nm,1.0s
MORW Morawa 61.85 248 P P 15 15 60.0 -1.5
baz=62,SNR=14
MORW Morawa 61.85 248 P P 15 15 59.8 -1.7
MORW IAmb IAmb 15 16 00.8
comp=Z,16nm,1.0s
LUWI Luwuk 63.47 280 P P 15 16 14.5 +2.1
comp=Z,56nm,1.0s
LUWI Luwuk 63.47 280 P P 15 16 12.0 -0.4
GTOI Gorontalo 63.92 282 P P 15 16 17.5 +2.2
comp=Z,14nm,0.7s
CASY Casey 64.43 206 P P 15 16 18.0 +0.2
SPSI Sidrap Palu 65.15 276 P P 15 16 25.0 +1.6
comp=Z,11nm,0.6s
MPSI Mapaga 66.65 280 P P 15 16 33.5 +0.4
comp=Z,18nm,0.8s
QSPA South Pole Qui 68.92 180 P P 15 16 48.1 +1.5
comp=Z,68nm,0.9s,baz=31,slow=1.2,SNR=261
QSPA South Pole Qui 68.92 180 P P 15 16 48.1 +1.5
MYLDM Lahad Datu 69.88 284 P P 15 16 53.4 +0.2
MYLDM IAmb IAmb 15 17 13.0
comp=Z,23nm,0.9s
MJAR Matsushiro Arr 72.21 322 P P 15 17 05.7 -1.1
comp=Z,5.5nm,0.9s,baz=162,slow=5.8,SNR=9.1
MJAR LR LR 15 49 24.0
comp=Z,14nm,18.1s,baz=220,slow=36
MJAR Matsushiro Arr 72.21 322 P P 15 17 05.8 -1.1
MJAR pmax pmax
comp=Z,4.0nm,0.9s
MJAR Matsushiro Arr 72.21 322 P P 15 17 05.8 -1.1
MAT Matsushiro 72.22 322 P P 15 17 05.7 -1.2
JHS Saijyo 74.22 318 P P 15 17 18.7 -0.1
JHS IAmb IAmb 15 17 21.2
comp=Z,28nm,0.9s
SBUM Sibu 74.54 279 P P 15 17 21.0 -0.1
LEM Lembang 75.48 268 P P 15 17 25.6 -1.1
comp=Z,17nm,0.6s,baz=94,slow=8.2,SNR=6.0
SNCC San Nicolas Is 75.92 46 P P 15 17 31.4 +2.9
baz=233
SNCC San Nicolas Is 75.92 46 P P 15 17 30.0 +1.4
SNCC IAmb IAmb 15 17 32.6
comp=Z,49nm,1.2s
KSM Kuching 75.94 277 P P 15 17 28.0 -1.1
SCZ2 Santa Cruz Isl 76.30 45 P P 15 17 32.8 +2.0
baz=233
SCI2 San Clemente I 76.41 46 P P 15 17 33.2 +1.8
baz=234,SNR=5.4
SBC Santa Barbara 76.52 45 P P 15 17 34.1 +2.2
baz=232
PKM Mcpherson Peak 76.72 44 P P 15 17 35.8 +2.4
baz=232,SNR=10
CIS Catalina Islan 76.75 46 P P 15 17 34.9 +1.5
baz=234,SNR=5.8
SAO San Andreas Ge 76.85 42 P P 15 17 35.5 +1.7
SAO pmax pmax
comp=Z,42nm,1.1s
SAO San Andreas Ge 76.85 42 P P 15 17 35.5 +1.7
SAO IAmb IAmb 15 17 37.1
comp=Z,42nm,1.1s
SMMC Simmler 76.86 44 P P 15 17 36.5 +2.5
baz=232,SNR=14
PMPB Monarch Peak 76.91 43 P P 15 17 36.1 +1.9
PMPB IAmb IAmb 15 17 37.8
comp=Z,45nm,1.1s
PAGB Antelope Grade 76.96 43 P P 15 17 36.8 +2.3
PAGB IAmb IAmb 15 17 38.0
comp=Z,32nm,1.0s
HOPS Hopland Field 77.29 39 P P 15 17 38.4 +2.2
HOPS IAmb IAmb 15 17 39.5
comp=Z,44nm,1.2s
CBX Cerro Bola 77.31 48 P P 15 17 37.7 +1.1
DECC Green Verdugo 77.31 45 P P 15 17 38.2 +1.7
baz=233
109C Camp Elliot, M 77.34 47 P P 15 17 38.4 +1.8
baz=234
MWC Mount Wilson 77.48 46 IAmb IAmb 15 17 40.3
comp=Z,21nm,1.0s
ARVC Arvin 77.51 44 P P 15 17 39.7 +2.2
baz=233
BAR Barrett 77.52 48 P P 15 17 39.4 +1.7
PEA0B Petropavlovsk- 77.56 344 *ce*P P 15 17 38.8 +1.4
PETK Petropavlovsk- 77.56 344 P P 15 17 37.6 +0.2
comp=Z,15nm,0.9s,baz=131,slow=8.1,SNR=16
PETK pP sP 15 18 02.5 +2.2
comp=Z,7.4nm,0.7s,baz=120,slow=7.5,SNR=5.6
PETK LR LR 15 45 33.8
comp=Z,30nm,20.5s,baz=164,slow=31
PETK Petropavlovsk- 77.56 344 P P 15 17 38.0 +0.7
PETK Petropavlovsk- 77.56 344 P P 15 17 38.0 +0.7
YSS Yuzh-Sakhalins 77.60 332 *eP* P 15 17 35.7 -2.0
ESJX Sierra Juarez 77.63 48 P P 15 17 40.0 +1.5
MURC Murrieta 77.69 47 P P 15 17 40.6 +2.0
baz=234,SNR=10
KMRM Mail Ridge 77.73 38 P P 15 17 41.2 +2.5
BFSC Mount Baldy Ra 77.75 46 P P 15 17 40.6 +1.5
baz=234,SNR=8.8
VES Vestal, Richgr 77.77 44 P P 15 17 40.8 +1.9
baz=233,SNR=21
MONP2 Monument Peak 77.81 48 P P 15 17 41.4 +1.9
baz=235,SNR=19
RMX La Rumorosa 77.88 48 IAmb IAmb 15 17 42.8
comp=Z,17nm,0.9s
IKP In-Ko-Pah, Jac 77.89 48 P P 15 17 41.9 +2.1
baz=235,SNR=11
EDW2 Edwards Air Fo 77.91 45 P P 15 17 41.8 +2.0
baz=234,SNR=33
ISA Isabella, Lake 78.06 44 P P 15 17 42.9 +2.2
baz=233,SNR=26
ISA Isabella, Lake 78.06 44 IAmb IAmb 15 17 44.0
comp=Z,39nm,1.1s
KHMM Horse Mountain 78.15 37 IAmb IAmb 15 17 44.7
comp=Z,27nm,1.0s
PFO Pinyon Flats O 78.20 47 *i*P P 15 17 42.7 +1.2
PFO pmax pmax
comp=Z,17nm,0.9s
PFO Pinyon Flats O 78.20 47 P P 15 17 43.3 +1.7
baz=235,SNR=18
PFO Pinyon Flats O 78.20 47 P P 15 17 43.2 +1.7
O02D Mt. Diablo Mer 78.23 38 P P 15 17 44.0 +2.5
baz=229,SNR=15
SWSC Sam W. Stewart 78.27 48 P P 15 17 43.3 +1.5
baz=235
CMB Columbia Colle 78.30 41 IAmb IAmb 15 17 44.9
comp=Z,26nm,1.1s
LRMC Laurel Mtn Rad 78.47 45 P P 15 17 44.8 +1.8
baz=234,SNR=21
AFDM Forest Hills D 78.52 40 P P 15 17 44.5 +1.5
BELA Belgrano 2 78.58 172 P P 15 17 43.1 +0.2
ORV Oroville 78.59 40 P P 15 17 44.9 +1.5
ORV pmax pmax
comp=Z,18nm,1.1s
ORV Oroville 78.59 40 P P 15 17 44.9 +1.5
WDC Whiskeytown Da 78.64 38 P P 15 17 45.3 +1.7
WDC pmax pmax
comp=Z,36nm,1.2s
WDC Whiskeytown Da 78.64 38 P P 15 17 45.3 +1.7
WDC IAmb IAmb 15 17 46.9
comp=Z,36nm,1.2s
BELC Belle Mtn. Jos 78.74 47 P P 15 17 46.4 +1.9
baz=235,SNR=25
CWC Cottonwood Cre 78.78 44 P P 15 17 46.5 +1.8
baz=233
N02D Trinity Center 78.80 38 P P 15 17 47.3 +2.6
baz=229,SNR=8.7
MDPB Devils Postpil 78.87 42 IAmb IAmb 15 17 48.4
comp=Z,31nm,1.0s
O03E Paynes Creek 78.88 39 P P 15 17 46.6 +1.5
baz=230,SNR=13
OMMB Old Mammoth Mi 78.90 42 IAmb IAmb 15 17 48.7
comp=Z,36nm,1.4s
BC3 Big Chuckawall 78.91 47 P P 15 17 47.5 +2.1
baz=235,SNR=7.7
MPMC Manual Prospec 78.94 44 P P 15 17 47.7 +2.1
baz=234,SNR=28
GSC Goldstone, Bar 78.94 45 P P 15 17 47.2 +1.6
baz=234,SNR=13
GSC Goldstone, Bar 78.94 45 IAmb IAmb 15 17 48.5
comp=Z,22nm,1.1s
HEC Hector,Ludlow 78.98 46 P P 15 17 47.5 +1.7
baz=235,SNR=22
M02C Callahan 78.99 37 P P 15 17 48.0 +2.4
baz=229,SNR=7.6
GLA Glamis 79.00 48 P P 15 17 48.2 +2.3
baz=236
GLA Glamis 79.00 48 IAmb IAmb 15 17 49.2
comp=Z,16nm,0.8s
MLAC Mammoth, Mammo 79.02 42 P P 15 17 48.7 +2.6
baz=232,SNR=8.8
KSRS Korea Array 79.02 317 P P 15 17 46.0 +0.3
comp=Z,3.3nm,1.1s,baz=140,slow=6.9,SNR=9.7
KSAR Wonju Array Be 79.04 317 P P 15 17 46.5 +0.6
KSAR Wonju Array Be 79.04 317 P P 15 17 46.5 +0.6
TIN Tinemaha, Big 79.06 43 P P 15 17 48.6 +2.5
baz=233,SNR=6.5
WAKR Walker 79.18 41 IAmb IAmb 15 17 50.2
comp=Z,38nm,1.0s
YBH Yreka Blue Hor 79.29 37 P P 15 17 49.3 +2.0
YBH pmax pmax
comp=Z,28nm,1.0s
YBH Yreka Blue Hor 79.29 37 P P 15 17 49.3 +2.0
YBH IAmb IAmb 15 17 50.7
comp=Z,28nm,1.0s
IRM Iron Mountain 79.41 47 P P 15 17 50.2 +2.1
baz=236,SNR=14
GMRC Granite Mounta 79.41 46 P P 15 17 50.0 +1.8
baz=235,SNR=9.7
BEKR Beckworth 79.46 40 IAmb IAmb 15 17 51.3
comp=Z,24nm,1.2s
VCNR Virginia City 79.54 41 IAmb IAmb 15 17 52.0
comp=Z,22nm,1.0s
GRAC Grapevine Rang 79.57 44 P P 15 17 51.4 +2.5
baz=234,SNR=11
FURC Furnace Creek, 79.59 44 P P 15 17 50.7 +1.9
baz=234,SNR=7.8
LHV Little Huntoon 79.60 42 IAmb IAmb 15 17 52.5
comp=Z,38nm,1.2s
TUQ Turquoise Moun 79.61 46 P P 15 17 51.3 +2.0
baz=235,SNR=14
SHOC Shoshone, Teco 79.64 45 P P 15 17 51.1 +1.8
baz=234,SNR=9.4
HUMO Hull Mountain 79.73 36 P P 15 17 52.2 +2.6
M04C Macdoel 79.82 38 P P 15 17 52.3 +2.0
baz=230
RYN Ryan 79.82 42 IAmb IAmb 15 17 53.5
comp=Z,31nm,1.4s
214A Organ Pipe Nat 79.83 50 P P 15 17 52.1 +1.7
baz=237
NVAR Mina Array Bea 79.84 42 P P 15 17 52.4 +1.9
comp=Z,12nm,0.8s,baz=224,slow=8.0,SNR=95
NVAR pP sP 15 18 16.8 +2.4
comp=Z,3.9nm,0.7s,baz=224,slow=7.5,SNR=3.9
NVAR Mina Array Bea 79.84 42 P P 15 17 51.9 +1.3
L04D Klamath Falls 79.84 37 P P 15 17 51.8 +1.5
baz=229,SNR=5.9
NV11 Mina Array Sit 79.93 42 IAmb IAmb 15 17 54.0
comp=Z,31nm,1.2s
PAHR Pah Rah Range 79.95 40 IAmb IAmb 15 17 54.1
comp=Z,27nm,1.1s
NEE2 Needles Airpor 80.11 47 P P 15 17 54.2 +2.4
baz=236
PDMCI Parker Dam,Lak 80.18 47 P P 15 17 54.3 +2.2
baz=236,SNR=7.2
TPNV Topopah Spring 80.27 44 P P 15 17 54.9 +2.0
baz=234,SNR=19
TPNV Topopah Spring 80.27 44 IAmb IAmb 15 17 55.9
comp=Z,32nm,1.3s
KVN Kaiserville 80.34 42 P P 15 17 54.6 +1.4
KVN pmax pmax
comp=Z,18nm,1.2s
KVN Kaiserville 80.34 42 P P 15 17 54.6 +1.4
SHPR Sheep Range 80.73 45 P P 15 17 57.2 +1.9
MOD Modoc Plateau 80.78 38 P P 15 17 56.8 +1.4
MOD IAmb IAmb 15 17 58.3
comp=Z,22nm,1.0s
USRK Ussuriysk Ar. 80.91 325 P P 15 17 56.3 +0.5
comp=Z,3.6nm,0.9s,baz=132,slow=2.1,SNR=7.3
USRK Ussuriysk Ar. 80.91 325 P P 15 17 56.9 +1.1
USRK Ussuriysk Ar. 80.91 325 P P 15 17 56.9 +1.1
K05A Summer Lake 80.96 37 P P 15 17 58.6 +2.1
K05A IAmb IAmb 15 17 59.8
comp=Z,50nm,1.1s
H04D Lebanon 81.11 35 P P 15 17 58.7 +1.8
baz=229
J05D Fort Rock, OR 81.13 37 P P 15 17 59.5 +2.2
baz=230
PRN Pahroc Range 81.32 44 IAmb IAmb 15 18 02.0
comp=Z,26nm,1.1s
TUC Tucson 81.47 51 P P 15 18 00.8 +1.6
TUC pmax pmax
comp=Z,17nm,1.0s
TUC Tucson 81.47 51 P P 15 18 01.5 +2.2
baz=238
TUC Tucson 81.47 51 P P 15 18 00.8 +1.6
R11A Troy Canyon, C 81.51 43 P P 15 18 01.2 +1.7
baz=235,SNR=8.2
I05D Terrebonne, OR 81.75 36 P P 15 18 02.1 +1.8
baz=230
MAW Mawson 81.77 199 P P 15 18 00.7 +0.6
comp=Z,29nm,0.9s,baz=139,slow=5.9,SNR=28
MAW LR LR 15 52 23.7
comp=Z,34nm,19.5s,baz=62,slow=34
MAW Mawson 81.77 199 P P 15 17 57.6 -2.5
baz=82,SNR=28
MAW Mawson 81.77 199 P P 15 18 00.7 +0.6
MAW pmax pmax
comp=Z,8.0nm,1.0s
MAW Mawson 81.77 199 P P 15 18 00.7 +0.6
MYKOM Kota Tinggi 82.05 275 P P 15 18 02.0 -0.6
WVOR Wild Horse Val 82.08 39 IAmb IAmb 15 18 05.3
comp=Z,35nm,1.2s
319A Douglas 82.09 52 IAmb IAmb 15 18 05.8
comp=Z,20nm,0.9s
X16A Lo Mia Camp, P 82.11 49 IAmb IAmb 15 18 06.2
comp=Z,22nm,0.9s
NJ2 Nanjing 82.20 309 *eP* P 15 18 04.0 +1.1
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
MDJ Mudanjiang 82.48 324 P P 15 18 05.3 +1.2
MDJ pP pP 15 18 20.0 -0.7
MDJ sP sP 15 18 27.0 -0.3
MDJ pmax pmax
comp=Z,17nm,1.4s
MDJ Mudanjiang 82.48 324 IAmb IAmb 15 18 06.3
comp=Z,43nm,1.6s
E04D Cinebar 82.55 34 P P 15 18 06.4 +2.0
baz=229
I07A Izee 82.61 37 P P 15 18 06.9 +2.0
I07A IAmb IAmb 15 18 08.1
comp=Z,26nm,1.3s
U15A North Rim 82.61 46 IAmb IAmb 15 18 08.9
comp=Z,32nm,0.8s
SPR3 Spring Creek 3 82.69 43 P P 15 18 07.2 +1.4
J08A Circle Bar Ran 82.74 38 IAmb IAmb 15 18 08.6
comp=Z,27nm,1.2s
WUAZ Wupatki 82.74 48 P P 15 18 08.4 +2.5
baz=238
WUAZ Wupatki 82.74 48 IAmb IAmb 15 18 09.3
comp=Z,19nm,1.1s
ELK Elko 83.11 42 P P 15 18 09.3 +1.5
ELK pmax pmax
comp=Z,16nm,1.2s
ELK Elko 83.11 42 P P 15 18 09.2 +1.5
H03S2 Juan Fernandez 83.59 124 T T 16 50 35.8
baz=247,slow=75
H03S1 Juan Fernandez 83.60 124 T T 16 50 31.2
baz=247,slow=75
H03S3 Juan Fernandez 83.60 124 T T 16 50 34.5
baz=247,slow=75
G08A Pilot Rock 83.66 36 P P 15 18 12.4 +2.1
G08A IAmb IAmb 15 18 13.3
comp=Z,29nm,1.0s
W18A Petrified Fore 83.67 49 P P 15 18 13.0 +2.3
baz=239
W18A Petrified Fore 83.67 49 IAmb IAmb 15 18 14.1
comp=Z,25nm,1.3s
H03N2 Juan Fernandez 83.72 123 T T 16 50 27.1
baz=249,slow=70
H03N3 Juan Fernandez 83.73 123 T T 16 50 19.1
baz=249,slow=70
H03N1 Juan Fernandez 83.74 123 T T 16 50 27.2
baz=249,slow=70
121A Cookes Peak, D 83.77 52 P P 15 18 13.7 +2.4
baz=240
121A Cookes Peak, D 83.77 52 IAmb IAmb 15 18 14.7
comp=Z,17nm,0.9s
MVU Marysvale 83.79 45 P P 15 18 13.8 +2.4
B05A Bryant 83.92 33 P P 15 18 13.3 +1.9
baz=229
E07A Sunnyside 83.97 35 P P 15 18 14.0 +2.2
E07A IAmb IAmb 15 18 14.8

LTY Liberty 83.99 34 lAmb lAmb 15 18 14.4
comp=Z,14nm,0.9s
HAWA Hanford 84.04 35 P P **15 18 14.0 +1.9**
HAWA lAmb lAmb 15 18 14.6
comp=Z,18nm,0.9s
MFID Camas Ranch 84.32 39 P P **15 18 15.1 +1.4**
MFID lAmb lAmb 15 18 16.4
comp=Z,14nm,0.9s
BMO Blue Mountains 84.32 37 lAmb lAmb 15 18 16.1
comp=Z,67nm,2.0s
DUG Dugway, Tooele 84.33 43 P P **15 18 15.2 +1.3**
baz=236
CN2 Changchun 84.33 321 *e*P P **15 18 14.3 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,1.4s
E08A Dider Farm, El 84.36 35 lAmb lAmb 15 18 16.5
comp=Z,14nm,0.9s
E09A Wood Farm, Sta 84.87 36 lAmb lAmb 15 18 18.8
comp=Z,42nm,1.6s
F10A Beach Ranch, E 85.04 36 lAmb lAmb 15 18 45.9
comp=Z,28nm,0.9s
MNTX Cornudas Mount 85.14 53 P P **15 18 19.9 +1.9**
baz=242
MNTX Cornudas Mount 85.14 53 P P **15 18 19.8 +1.7**
MNTX lAmb lAmb 15 18 20.9
comp=Z,24nm,0.9s
SPUT South Promonto 85.17 42 P P **15 18 19.1 +0.9**
PLID Pearl Lake 85.20 38 lAmb lAmb 15 18 49.2
comp=Z,22nm,1.4s
HLID Hailey 85.24 40 P P **15 18 20.3 +1.9**
baz=235
HLID Hailey 85.24 40 P P **15 18 20.0 +1.5**
HLID lAmb lAmb 15 18 49.5
comp=Z,13nm,0.8s
TX32 Lajitas Array 85.36 56 lAmb lAmb 15 18 22.2
comp=Z,23nm,1.1s
TXAR Lajitas Array 85.36 56 P P **15 18 21.0 +1.7**
comp=Z,11nm,0.9s,baz=217,slow=7.9,SNR=91
TXAR LR LR 15 47 43.6
comp=Z,34nm,21.0s,baz=0.0,slow=29
TXAR Lajitas Array 85.36 56 P P **15 18 20.8 +1.5**
TXAR Lajitas Array 85.36 56 P P **15 18 20.8 +1.5**
MVCO Mesa Verde 85.61 47 P P **15 18 21.9 +1.4**
baz=239
CUT Chulitna 85.64 11 P P **15 18 20.3 +0.6**
baz=204
MNSI Mandailing Nat 85.67 273 P P **15 18 21.1 0.0**
comp=Z,7.9nm,0.8s
PV17 East Wray Mesa 85.84 46 lAmb lAmb 15 18 50.2
comp=Z,26nm,1.6s
ANMO Albuquerque 85.91 50 *ce*P P **15 18 22.4 +0.4**
ANMO pmax pmax
comp=Z,8.0nm,0.9s
ANMO Albuquerque 85.91 50 P P **15 18 23.7 +1.7**
baz=241
ANMO Albuquerque 85.91 50 P P **15 18 23.7 +1.7**
PV04 Paradox Valley 85.93 46 lAmb lAmb 15 18 53.8
comp=Z,43nm,1.9s
N25K Chitina, Valde 86.09 14 P P **15 18 23.1 +1.0**
baz=209
NEW Newport 86.49 35 P P **15 18 25.1 +0.8**
baz=233
TRF Thorofare Moun 86.60 11 lAmb lAmb 15 18 51.9
comp=Z,14nm,0.8s
SYO Syowa Base 86.61 192⇑ *i*P P **15 18 22.8 -1.9**
SYO Syowa Base 86.61 192⇓ *i*PcP PcP **15 18 27.0 0.0**
AHID Auburn Hatcher 86.81 42 lAmb lAmb 15 19 41.1
comp=Z,25nm,0.8s
RND Reindeer 86.82 12 lAmb lAmb 15 19 05.3
comp=Z,12nm,0.8s
PSI Prapat 87.00 274 LR LR 15 59 57.5
comp=Z,27nm,18.2s,baz=90,slow=37
S22A 4UR Ranch, Cre 87.02 48 P P **15 18 28.9 +1.3**
baz=240
S22A 4UR Ranch, Cre 87.02 48 lAmb lAmb 15 18 59.5
comp=Z,39nm,1.6s
PLCA Paso Flores 87.03 133 P P **15 18 28.8 +1.4**
comp=Z,5.0nm,1.0s,baz=244,slow=7.7,SNR=7.6
PLCA LR LR 15 52 23.9
comp=Z,33nm,18.1s,baz=195,slow=32
PLCA Paso Flores 87.03 133 P P **15 18 28.8 +1.4**
PLCA pmax pmax
comp=Z,16nm,1.4s
PLCA Paso Flores 87.03 133 P P **15 18 28.8 +1.4**
MCK McKinley 87.10 11 P P **15 18 27.3 +0.4**
baz=205
O20A White River Ci 87.26 45 P P **15 18 29.6 +1.1**
baz=239
O20A White River Ci 87.26 45 lAmb lAmb 15 19 01.8
comp=Z,40nm,1.9s
SNAA Sanae 87.27 178 P P **15 18 27.7 -0.3**
SNAA Sanae 87.27 178 *d* *i*P P **15 18 27.7 -0.3**
SNAA pmax pmax
comp=Z,18nm,1.1s
SNAA Sanae 87.27 178 P P **15 18 27.6 -0.3**
SNAA lAmb lAmb 15 18 29.0
comp=Z,15nm,1.0s
VNA3 Neumayer Olymp 87.31 175 P P **15 18 28.1 0.0**
SEY Seymchan 87.59 346 *i*P P **15 18 29.4 +0.2**
L26K Log Cabin Wild 87.62 14 P P **15 18 30.8 +1.3**
baz=210
BW06 Boulder Array 87.77 42 P P **15 18 31.6 +0.6**
baz=238
PDAR Pinedale Array 87.77 42 P P **15 18 31.6 +0.6**
comp=Z,2.6nm,0.7s,baz=210,slow=2.9,SNR=25
PDAR pP **sP** **15 18 57.0 +2.0**
comp=Z,1.9nm,0.9s,baz=197,slow=4.6,SNR=4.0
PDAR LR LR 15 50 56.1
comp=Z,23nm,18.9s,baz=296,slow=31
PDAR Pinedale Array 87.77 42 P P **15 18 31.3 +0.3**
VNA2 Neumayer--Watz 87.78 176 P P **15 18 30.8 +0.5**
baz=174,slow=4.4
WRH Wood River Hil 87.93 11 lAmb lAmb 15 18 38.2
comp=Z,17nm,1.2s
SDCO Great Sand Dun 87.94 48 P P **15 18 32.8 +0.9**
baz=241
VNA1 Neumayer--Stat 87.99 176 P P **15 18 31.5 +0.2**
BCAR Beaver Creek A 88.02 15 P P **15 18 32.5 +1.1**
BOZ Bozeman (W) 88.03 39 P P **15 18 32.9 +0.9**
baz=237
HDA Harding Lake 88.09 12 P P **15 18 33.0 +1.4**
baz=206
BJI Beijing 88.10 314 P P **15 18 34.0 +1.8**
BJI pmax pmax
comp=Z,8.0nm,0.7s
MSTX Muleshoe 88.14 53 P P **15 18 34.1 +1.3**
baz=243
MSTX Muleshoe 88.14 53 lAmb lAmb 15 18 34.4
comp=Z,14nm,0.7s
CCB Clear Creek Bu 88.14 11 lAmb lAmb 15 19 30.7
comp=Z,47nm,2.0s
COLA College 88.34 11⇓ *e*P P **15 18 32.6 -0.1**
COLA pmax pmax
comp=Z,4.0nm,0.7s
IMAR Indian Mountai 88.41 9 P P **15 18 33.8 +0.6**
IL31 88.43 12 lAmb lAmb 15 19 51.1
comp=Z,21nm,1.9s
ILAR Eielson Array 88.43 12 P P **15 18 33.5 +0.2**
comp=Z,1.0nm,0.6s,baz=209,slow=5.6,SNR=10
ILAR LR LR 15 53 07.7
comp=Z,30nm,22.0s,baz=288,slow=32
ENH Enshi 88.45 303 lAmb lAmb 15 18 36.3
comp=Z,30nm,1.4s
AMTX Amarillo 89.36 52 lAmb lAmb 15 18 40.4
comp=Z,14nm,0.9s
DAWY Dawson 89.44 15 lAmb lAmb 15 19 10.7
comp=Z,28nm,1.6s
ABTX Abilene, Hawle 89.91 55 P P **15 18 42.2 +1.2**
baz=245
ABTX Abilene, Hawle 89.91 55 lAmb lAmb 15 18 44.0
comp=Z,17nm,1.1s
BILL Bilibino 89.96 353 *e*P P 15 18 37.1 -3.2
BILL *e* 15 22 18.3
BILL *e*PPP PPP 15 24 12.3
BILL pmax pmax
comp=Z,4.0nm,1.3s
COLD Coldfoot 90.09 10 P P **15 18 42.6 +1.6**
baz=204
XAN Xi'an 90.49 306 P P **15 18 44.0 +0.3**
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN Xi'an 90.49 306 lAmb lAmb 15 18 50.3
comp=Z,7.8nm,0.6s
CO02 Combarbal 90.77 124 P P **15 18 46.7 +1.4**
BMAR Burnt Mountain 91.23 11 P P **15 18 47.6 +1.3**
WHTX Lake Whitney, 91.33 56 P P **15 18 48.4 +0.9**
baz=246
GO04 Tololo Observa 91.37 123 P P **15 18 49.7 +1.4**
WMOK Wichita Mounta 91.45 53 P P **15 18 49.0 +0.9**
baz=245
HHC Hu-ho-hao-te 91.58 313 *e*P P **15 18 49.0 +0.3**
HHC pmax pmax
comp=Z,23nm,1.4s
HHC pmax pmax
comp=Z,210nm,6.9s
HHC LR LR
comp=Z,130nm,17.3s
HHC LR LR
comp=Z,130nm,17.0s
HKT Hockley 91.78 59 *i*P P **15 18 51.3 +1.7**
HKT pmax pmax
comp=Z,7.0nm,1.1s
LAO LASA Array 91.81 40 P P **15 18 51.8 +2.3**
baz=241
RSSD Black Hills 91.94 43 P P **15 18 51.1 +0.7**
RSSD pmax pmax
comp=Z,14nm,1.1s
RSSD Black Hills 91.94 43 P P **15 18 50.9 +0.6**
baz=242
RSSD Black Hills 91.94 43 P P **15 18 51.1 +0.7**
RSSD lAmb lAmb 15 18 52.1
comp=Z,14nm,1.1s
CMAR Chiang Mai Arr 92.65 289 P P **15 18 54.1 +0.2**
comp=Z,1.8nm,0.7s,baz=125,slow=2.7,SNR=20
CMAR LR LR 15 58 29.8
comp=Z,8.6nm,21.5s,baz=255,slow=34
CMAR Chiang Mai Arr 92.65 289 *i*P P **15 18 54.5 +0.5**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 92.65 289 P P **15 18 53.7 -0.3**
CHTO Chiang Mai 92.78 289 P P **15 18 54.7 +0.1**
CHTO pmax pmax
comp=Z,4.0nm,0.6s
CHTO Chiang Mai 92.78 289 P P **15 18 54.7 +0.1**
CHTO lAmb lAmb 15 18 55.3
comp=Z,4.2nm,0.6s
YAK Yakutsk 93.65 337 *ce*P P **15 18 58.2 +0.7**
YAK pmax pmax
comp=Z,26nm,2.5s
DGMT Dagmar 93.86 39 P P **15 19 00.8 +1.9**
baz=242
T35A Sooner Cattle 94.02 52 P P **15 19 01.1 +1.2**
T35A lAmb lAmb 15 19 28.2
comp=Z,14nm,1.1s
TUL1 Leonard 94.16 53 P P **15 19 01.2 +0.7**
baz=247
TUL1 Leonard 94.16 53 P P **15 19 01.2 +0.7**
K31A O'Neill 94.74 46 P P **15 19 04.5 +1.4**
LZH Lanzhou 95.13 307 *e*P P **15 19 04.3 -0.9**
LZH pmax pmax
comp=Z,22nm,1.0s
YKA Yellowknife Ar 96.09 24 P P **15 19 09.0 +0.3**
comp=Z,1.8nm,0.7s,baz=237,slow=4.0,SNR=8.8
YKA LR LR 15 55 05.1
comp=Z,34nm,21.6s,baz=0.0,slow=31
ECSD EROS Data Cent 96.62 46 P P **15 19 12.3 +0.7**
baz=247
GTA Gaotai 99.30 309 *e*P **Pdif** **15 19 24.0 +0.1**
GTA pP pP 15 19 34.3 -6.5
GTA sP sP 15 19 38.0 -9.3
GTA pmax pmax
comp=Z,1.0nm,1.2s
GTA pmax pmax
comp=Z,77nm,4.7s
GTA LR LR
comp=Z,67nm,20.0s
GTA LR LR
comp=Z,120nm,20.7s
LPAZ La Paz 99.53 112 LR LR 15 57 41.1
comp=Z,33nm,18.3s,baz=234,slow=31
ZALV Zalesovo Beam 112.55 321 PKiKP **PKiKP** **15 24 16.3 -1.1**
comp=Z,3.2nm,0.7s,baz=172,slow=1.7,SNR=14
ZALV Zalesovo Beam 112.55 321 *i* PKiKP **PKiKP** **15 24 15.7 -1.6**
ZALV Zalesovo Beam 112.55 321 **PKiKP** **15 24 15.7 -1.6**
MKAR Makanchi Array 113.44 313 PKiKP **PKiKP** **15 24 18.3 -1.1**
comp=Z,1.4nm,0.6s,baz=65,slow=0.0,SNR=15
SHLS Shalkode 115.04 309 *e*PKP **PKPdf** **15 24 20.6 -2.0**
baz=309
SHLS Shalkode 115.04 309 *e*PKiKP **PKPdf** **15 24 20.6 -2.0**
SEM Semipalatinsk 115.09 317 *e*PKP **PKiKP** **15 24 21.0 -1.6**
baz=317
SEM Semipalatinsk 115.09 317 *e*PKiKP **PKiKP** **15 24 21.0 -1.6**
TDK Taldyqorghan 115.97 311 *e*PKP **PKPdf** **15 24 22.5 -1.8**
comp=Z,4.8nm,0.5s,baz=311
TDK Taldyqorghan 115.97 311 *e*PKiKP **PKPdf** **15 24 22.4 -1.8**
TDK pmax pmax
comp=Z,5.0nm,0.5s
KURK Kurchatov 116.14 317 PKiKP **PKPdf** **15 24 23.0 -1.3**
KURK Kurchatov 116.14 317 **PKPdf** **15 24 23.0 -1.3**
KURBB Kurchatov Arra 116.20 317 PKP **PKPdf** **15 24 23.1 -1.3**
comp=Z,4.0nm,0.8s,baz=98,slow=1.9,SNR=36
KURBB pPKP sPKPdf 15 24 50.9 +2.4
comp=Z,2.0nm,0.8s,baz=88,slow=1.8,SNR=3.8
KUU Kurty 117.37 309 *e*PKP **PKPdf** **15 24 25.0 -2.0**
comp=Z,1.6nm,0.7s,baz=310
KUU Kurty 117.37 309 *e*PKiKP **PKPdf** **15 24 24.9 -2.0**
KUU pmax pmax
comp=Z,2.0nm,0.7s
BTLS Baital 119.06 311 *e*PKP **PKPdf** **15 24 28.9 -1.3**
comp=Z,2.1nm,0.8s,baz=311
BTLS Baital 119.06 311 *e*PKiKP **PKPdf** **15 24 28.8 -1.3**
BTLS pmax pmax
comp=Z,2.0nm,0.8s
BRZS Berezniki 119.95 316 *e*PKP **PKPdf** **15 24 29.6 -2.1**
comp=Z,1.8nm,0.9s,baz=316
BRZS Berezniki 119.95 316 *e*PKiKP **PKPdf** **15 24 29.6 -2.1**
BRZS pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 121.16 320 PKP **PKPdf** **15 24 32.6 -1.4**
comp=Z,2.2nm,0.3s,baz=96,slow=1.4,SNR=37
BRVK Borovoye 121.22 320 *c* *i*PKiKP **PKPdf** **15 24 33.6 -0.5**
BRVK pmax pmax
comp=Z,8.0nm,1.0s
BRVK Borovoye 121.22 320 PKPdf **PKPdf** **15 24 33.2 -0.9**
KBL Kabul 122.36 298 PKiKP **PKPdf** **15 24 36.9 -0.2**
KBL Kabul 122.36 298 PKPdf **PKPdf** **15 24 36.9 -0.2**
SVE Sverdlovsk 125.92 326 *e*PKiKP **PKPdf** **15 24 42.9 0.0**
SVE pmax pmax
comp=Z,13nm,0.9s
BOSA Boshof 126.66 203 PKP **PKPdf** **15 24 45.3 -0.2**
comp=Z,3.3nm,0.8s,baz=349,slow=2.3,SNR=4.8
ARU Arti 127.13 326 *i* PKiKP **PKPdf** **15 24 45.1 -0.2**
ARU 15 26 41.8
ARU 15 31 41.9
ARU Arti 127.13 326 PKPdf **PKPdf** **15 24 44.8 -0.5**
ABKAR Akbulak array 128.25 317 PKPdf **PKPdf** **15 24 47.6 0.0**
ABKAR Akbulak array 128.25 317 PKPdf **PKPdf** **15 24 47.6 0.0**
AKTO Aktyubinsk 129.19 319 PKP **PKPdf** **15 24 48.9 -0.5**
comp=Z,3.9nm,0.8s,baz=72,slow=1.5,SNR=11
ARCES ARCESS Array B 129.99 351 PKP **PKPdf** **15 24 50.0 -0.4**
comp=Z,3.2nm,0.6s,baz=0.0,slow=1.2,SNR=15
ARCES ARCESS Array B 129.99 351 PKiKP **PKPdf** **15 24 50.0 -0.4**
KIRV Kirov 130.74 331 *i* PKiKP **PKPdf** **15 24 52.7 +0.7**
KLMR Klimovskoe 133.45 337 *e*PKiKP **PKPdf** **15 24 53.3 -3.8**
KLMR pmax pmax
comp=Z,15nm,1.4s
KLMR Klimovskoe 133.45 337 *e*PKPdf **PKPdf** **15 24 53.3 -3.8**
KLMR AMP 15 24 58.6
comp=Z,15nm,1.4s
KLMR *e*SKP 15 28 16.4
BELG Belogornoye 134.58 324 *i* PKiKP **PKPdf** **15 24 59.5 0.0**
LSZ Lusaka 137.04 214 PKiKP **PKPdf** **15 25 07.0 +1.6**
LSZ Lusaka 137.04 214 **PKPdf** **15 25 07.0 +1.6**
FINES FINESS Array B 137.07 345 PKhKP PKPpre 15 24 54.4
comp=Z,2.1nm,0.9s,baz=132,slow=2.8,SNR=4.6
FINES PKP **PKPdf** **15 25 04.2 +0.3**
comp=Z,4.0nm,0.9s,baz=31,slow=3.2,SNR=4.2
FINES PKKP **PKKPdf** **15 34 42.0 +0.6**
comp=Z,7.3nm,1.2s,baz=150,slow=4.2,SNR=4.0
OBN Obninsk 138.49 333 *e*PKiKP **PKPdf** **15 25 06.3 -0.3**
OBN pmax pmax
comp=Z,10.0nm,1.1s
NB2 NORSAR Subarra 139.88 355 PKP PKPdf 15 25 01.3 -7.8
comp=Z,6.3nm,1.4s,baz=17,slow=2.6
NOA NORSAR Array B 139.88 355 PKhKP PKPdf 15 25 02.0 -7.1
comp=Z,1.8nm,1.0s,baz=8.5,slow=2.4,SNR=4.3
RAYN Ar Rayn 142.21 281 PKHKP **PKPdf** **15 25 09.0 -5.4**
RAYN Ar Rayn 142.21 281 **PKPdf** **15 25 09.0 -5.4**
SUW Suwałki 144.28 341 *e*PKP **PKPab** **15 25 15.7 +0.6**
MUD Monsted U'grnd 144.59 356 *e*PKiKP **PKPab** **15 25 16.6 +0.5**
MUD pmax pmax
comp=Z,19nm,0.8s
MUD Monsted U'grnd 144.59 356 *i* P **PKPab** **15 25 16.6 +0.5**
comp=Z,18nm,0.8s
MUD Monsted U'grnd 144.59 356 *e*P **PKPab** **15 25 16.7 +0.5**
MUD lAmb lAmb 15 25 17.7
comp=Z,18nm,0.8s
AKASG Malin Array Be 144.75 333 PKP **PKPab** **15 25 16.2 -0.7**
comp=Z,5.1nm,0.6s,baz=39,slow=4.3,SNR=27
AKASG Malin Array Be 144.75 333 PKPdf **PKPab** **15 25 16.1 -0.8**
AKBB Malin Array Si 144.75 333 PKPdf **PKPab** **15 25 16.2 -0.8**
MARD Mardin 144.84 305 PKPdf **PKPbc** **15 25 17.8 -0.2**
BSD Bornholm Skovb 145.22 350 *e*PKiKP **PKPbc** **15 25 18.0 -0.4**
BSD pmax pmax
comp=Z,46nm,1.2s
BSD Bornholm Skovb 145.22 350 *i* P **PKPbc** **15 25 18.0 -0.4**
comp=Z,46nm,1.2s
BSD Bornholm Skovb 145.22 350 *e*P **PKPbc** **15 25 18.0 -0.4**
BSD lAmb lAmb 15 25 18.7
comp=Z,46nm,1.2s
MBAR Mbarara 146.55 233 PKP2 **PKPbc** **15 25 24.7 +0.7**
MBAR Mbarara 146.55 233 **PKPbc** **15 25 24.7 +0.7**
BEL Belsk 146.90 342 *e*PKP **PKPbc** **15 25 24.6 +1.0**
BSEG Bad Segeberg 146.99 354 *e*PKPbc **PKPbc** **15 25 24.6 +0.8**
baz=13,slow=2.4
SORM Soroca 147.02 330 ⇑P **PKPdf** **15 25 23.9 +2.0**
SORM Soroca 147.02 330 ⇑PKiKP **PKPdf** **15 25 23.9 +2.0**
LVV L'vov 147.53 336 *e*PKiKP **PKPdf** **15 25 25.2 +2.4**
RUE Ruedersdorf 147.94 349 *e*PKPbc **PKPbc** **15 25 27.2 +0.8**
baz=13,slow=2.4
KWP Kalwaria Pacla 148.17 338 *e*PKP **PKPbc** **15 25 27.5 +0.3**
ILGA Ilgaz 148.39 315 **PKPdf** **15 25 28.2 +3.4**
NRDL Niedersach Rie 148.43 354 *e*PKPbc **PKPbc** **15 25 28.2 +0.6**
baz=13,slow=2.4
OJC Ojcow 148.62 341 *e*PKP **PKPbc** **15 25 28.5 +0.2**
OJC Ojcow 148.62 341 PKiKP **PKPbc** **15 25 28.3 0.0**
OJC Ojcow 148.62 341 **PKPbc** **15 25 28.2 0.0**
ASSE Asse, Remlinge 148.73 353 *e*PKPbc **PKPbc** **15 25 28.9 +0.5**
baz=13,slow=2.4
BURAR Bucovina Array 148.81 333 ⇑P **PKPbc** **15 25 29.8 +0.8**
BURAR Bucovina Array 148.81 333 ⇑PKP2 **PKPbc** **15 25 29.8 +0.8**
BURAR Bucovina Array 148.81 333 **PKPdf** **15 25 25.1 0.0**
BURAR PKPbc **PKPbc** **15 25 29.8 +0.8**
KOLS Kolonicke sedl 148.91 337 *e*PKP2 **PKPbc** **15 25 29.8 +0.7**
KOLS Kolonicke sedl 148.91 337 *e*PKP **PKPbc** **15 25 29.8 +0.7**
KOLS *e* 15 25 34.3
BIZ Bicaz 148.93 331 ⇑P **PKPbc** **15 25 29.5 +0.3**
KSP Ksiaz 148.99 346 *e*PKP **PKPbc** **15 25 29.9 +0.7**
TESR Tescani 149.00 330 ⇑P **PKPbc** **15 25 29.4 0.0**
CLZ Clausthal 149.05 353 *e*PKPbc **PKPbc** **15 25 30.1 +0.7**
baz=13,slow=2.4
BRTR Keskin Array B 149.09 313 PKPbc **PKPdf** **15 25 29.6 +3.8**
comp=Z,6.8nm,0.5s,baz=131,slow=3.4,SNR=19
BRTR Keskin Array B 149.09 313 PKiKP **PKPdf** **15 25 29.5 +3.7**
BRTR Keskin Array B 149.09 313 **PKPdf** **15 25 29.5 +3.7**
UZH Uzhgorod 149.15 337⇑ *i*PKP2 **PKPbc** **15 25 30.0 +0.3**
NIE Niedzica 149.17 340 *e*PKP **PKPbc** **15 25 30.7 +0.9**
CLL Collm 149.20 350 *e*PKPdf **PKPdf** **15 25 27.0 +1.6**
CLL ⇓ *i*PKPbc **PKPbc** **15 25 30.0 +0.3**
comp=Z,35nm,0.9s
CLL *e*PKPab **PKPab** **15 25 35.0 +0.8**
CLL *e* 15 25 41.0
CLL *e*PKPbc **sPKPdf** **15 25 49.2 -0.9**
CLL *e*PKPab **sPKPab** **15 25 56.0 -2.3**
CLL Collm 149.20 350⇓ *e*PKiKP **PKPdf** **15 25 27.0 +1.6**
CLL *i* 15 25 30.0
CLL pmax pmax
comp=Z,35nm,0.9s
CFR Carcaliu 149.21 327 ⇑P **PKPbc** **15 25 29.9 0.0**
CFR Carcaliu 149.21 327 ⇑PKiKP **PKPbc** **15 25 29.9 0.0**
CRVS Cervenica-Dubn 149.22 338 *e*PKP2 **PKPbc** **15 25 30.5 +0.6**
CRVS Cervenica-Dubn 149.22 338 *e*PKP **PKPbc** **15 25 30.5 +0.6**
OSTC Ostas 149.27 345⇑ *e*PKP **PKPbc** **15 25 30.7 +0.7**
CHVC Chvalec 149.28 346⇑ *e*PKP **PKPbc** **15 25 30.6 +0.6**
TPGR Topolog 149.28 326 ⇓P **PKPbc** **15 25 30.4 +0.2**
UPC Upice 149.37 346 *e*PKP2 **PKPbc** **15 25 30.7 +0.5**
UPC Upice 149.37 346⇑ *e*PKP **PKPbc** **15 25 30.7 +0.5**
VRI Vrincioaia 149.43 329 ⇑P **PKPbc** **15 25 30.6 +0.1**
VRI Vrincioaia 149.43 329 ⇑PKP2 **PKPbc** **15 25 30.6 +0.1**
DPC Dobruska-Polom 149.44 345 *e*PKP2 **PKPbc** **15 25 31.1 +0.7**
DPC Dobruska-Polom 149.44 345⇑ *e*PKP **PKPbc** **15 25 31.1 +0.7**
DPC *e*PKPAB **PKiKP** **15 25 34.4 +2.9**
DPC *ep*PKP **sPKPab** **15 25 57.9 -1.6**
BRG Berggiesshubel 149.45 348 *i* PKP **PKPbc** **15 25 30.9 +0.5**
comp=Z,20nm,0.8s
BRG *i* 15 25 36.7
comp=Z,18nm,1.0s
BRG *e* 15 25 56.3
comp=Z,19nm,1.4s
BRG Berggiesshubel 149.45 348 *i* PKP2 **PKPbc** **15 25 30.9 +0.5**
BRG pmax pmax
comp=Z,21nm,0.8s
BRG pmax pmax
comp=Z,18nm,1.0s
BRG pmax pmax
comp=Z,19nm,1.4s
BRG Berggiesshubel 149.45 348 *e*PKPbc **PKPbc** **15 25 30.9 +0.5**
baz=13,slow=2.4
PLOR Plostina 149.48 329 ⇑P **PKPdf** **15 25 28.9 +2.8**
PLOR Plostina 149.48 329 ⇑PKiKP **PKPdf** **15 25 28.9 +2.8**
FBE Freiberg 149.51 349 *e*PKPbc **PKPbc** **15 25 31.5 +1.0**
baz=13,slow=2.4
KRLC Kraliky 149.58 344 *e*PKP2 **PKPbc** **15 25 31.4 +0.6**
KRLC Kraliky 149.58 344⇑ *e*PKP **PKPbc** **15 25 31.4 +0.6**
HARR Harsova 149.65 326 ⇑P **PKPdf** **15 25 29.7 +3.3**
MORC Moravsky Berou 149.66 343 ⇑P **PKPbc** **15 25 30.9 -0.1**
MORC Moravsky Berou 149.66 343 *e*PKP **PKPbc** **15 25 31.3 +0.3**
MORC Moravsky Berou 149.66 343 **PKPbc** **15 25 31.1 +0.1**
LANS Liptovska Anna 149.66 341 *e*PKP2 **PKPbc** **15 25 32.3 +1.3**
LANS Liptovska Anna 149.66 341 *e*PKP **PKPbc** **15 25 32.3 +1.3**
OZUR 149.71 330 ⇑P **PKPbc** **15 25 31.3 +0.1**
DOPR Dopca 149.99 330 ⇑P **PKPbc** **15 25 32.4 +0.6**
ISR Istrita 150.06 328 ⇑P **PKPbc** **15 25 32.5 +0.4**
MOX Moxa 150.06 351 *e*PKPbc **PKPbc** **15 25 32.4 +0.6**
baz=13,slow=2.4
MOX *e*L L 16 20 02.2
comp=Z,38nm,18.4s
MLR Muntele Rosu 150.08 329 ⇑P **PKPbc** **15 25 32.2 -0.1**
PLN Plauen 150.14 350 *e*PKPbc **PKPbc** **15 25 32.6 +0.6**
baz=13,slow=2.4
WERD Werda 150.15 350 *e*PKPbc **PKPbc** **15 25 32.7 +0.6**
baz=13,slow=2.4
TANN Tannenbergstha 150.16 350 *e*PKPbc **PKPbc** **15 25 32.8 +0.6**
baz=13,slow=2.4
PRU Pruhonice 150.18 347⇑ *e*PKP **PKPbc** **15 25 32.6 +0.4**
PRU *e*PKPAB **PKiKP** **15 25 36.2 +3.2**
PRU *ep*PKP **sPKPab** **15 25 59.1 -3.3**
GUNZ Gunzen 150.23 350 *e*PKPbc **PKPbc** **15 25 33.0 +0.7**
baz=13,slow=2.4
MMAI Mount Meron Ar 150.27 300 PKPbc **PKPbc** **15 25 33.3 +0.3**
comp=Z,18nm,0.6s,baz=78,slow=7.8,SNR=26
WERN Wernitzgruen 150.29 350 *e*PKPbc **PKPbc** **15 25 33.3 +0.8**
baz=13,slow=2.4
MDUB Mudurnu 150.33 316 **PKPbc** **15 25 32.7 -0.3**
NKC Novy Kostel 150.33 350 *e*PKiKP **PKPbc** **15 25 32.9 +0.3**
NKC Novy Kostel 150.33 350⇑ *e*PKP **PKPbc** **15 25 32.9 +0.3**
VRAC Vranov 150.34 344 ⇑P **PKPbc** **15 25 33.0 +0.4**
VRAC Vranov 150.34 344 *e*PKP **PKPbc** **15 25 32.9 +0.4**
VRAC Vranov 150.34 344 ⇑PKiKP **PKPbc** **15 25 33.0 +0.4**
VYHS Vyhne 150.44 341 *e*PKiKP **PKPbc** **15 25 33.4 +0.5**
VYHS *e* 15 25 38.5
VYHS Vyhne 150.44 341 *e*PKP **PKPbc** **15 25 33.4 +0.5**
VYHS *e* 15 25 38.5
JAVC Velka Javorina 150.46 342 *e*PKP **PKPbc** **15 25 34.4 +1.4**
VOIR 150.54 330 ⇑P **PKPbc** **15 25 33.4 +0.1**
VOIR 150.54 330 ⇑PKiKP **PKPbc** **15 25 33.4 +0.1**
PBCC Pribram 150.58 348⇑ *e*PKP **PKPbc** **15 25 33.6 +0.5**
MEM Membach 150.59 358 PKiKP **PKPbc** **15 25 33.7 +0.6**
PSZ Piszkesteto 150.60 339 ⇑P **PKPdf** **15 25 32.2 +4.3**
PSZ Piszkesteto 150.60 339 ⇑PKiKP **PKPdf** **15 25 32.2 +4.3**
PSZ Piszkesteto 150.60 339 **PKPbc** **15 25 33.0 -0.4**
BTNL Ternell 150.61 358 PKiKP **PKPbc** **15 25 33.4 +0.2**
BTNL PKPab **PKPab** **15 25 39.4 -0.7**
KRUC Moravsky 150.61 344 *e*PKP **PKPbc** **15 25 33.5 +0.3**
BSTI Sart Tilman 150.62 359 PKPab **PKPab** **15 25 39.0 -1.1**
MANZ Manzenberg 150.63 350 *e*PKPbc **PKPbc** **15 25 33.9 +0.6**
baz=13,slow=2.4
SNF Seneffe 150.71 0 PKiKP **PKPbc** **15 25 33.5 +0.1**
ARR Arges 150.79 330 ⇑P **PKPbc** **15 25 34.8 +0.9**
ROTZ Rotzenmuhle 150.82 350 *e*PKPbc **PKPbc** **15 25 34.2 +0.5**
baz=13,slow=2.4
SMOL Smolenice 150.84 342 *e*PKiKP **PKPbc** **15 25 35.0 +1.2**
SMOL Smolenice 150.84 342 *e*PKP **PKPbc** **15 25 35.0 +1.2**
TNS Taunus Mts 150.84 355 *e*L L 16 18 31.8
comp=Z,41nm,19.8s

BMRD	**Maredsous**	**150.91**	**360**	PKiKP	**PKPbc**	**15 25 34.2**	**+0.4**
BMRD				PKPab	**PKPab**	**15 25 40.4**	**-0.9**
MODS	**Modra-Piesok**	**151.01**	**342**	*e*PKiKP	**PKPbc**	**15 25 34.0**	**-0.2**
MODS				*e*		15 25 39.8	
MODS	**Modra-Piesok**	**151.01**	**342**	*e*PKP	**PKPbc**	**15 25 34.0**	**-0.2**
MODS				*e*		15 25 39.8	
GRF	**Grafenberg Arr**	**151.05**	**351**	*e*L	L	16 26 35.3	
	comp=Z,34nm,19.4s						
DOU	**Dourbes**	**151.12**	**0**	PKPdf	**PKPdf**	**15 25 27.1**	**-1.4**
DOU				PKiKP	**PKPbc**	**15 25 34.7**	**+0.3**
DOU				PKPab	**PKPab**	**15 25 40.3**	**-1.8**
KHC	**Kasperske Hory**	**151.19**	**348**	*e*PKiKP	**PKPdf**	**15 25 28.5**	**-0.2**
KHC				*e*		15 25 34.8	
KHC				*e*		15 25 39.7	
KHC	**Kasperske Hory**	**151.19**	**348**	*e*PKPDF	**PKPdf**	**15 25 28.5**	**-0.2**
KHC			⇑	*e*PKP	**PKPbc**	**15 25 34.8**	**+0.2**
KHC				*e*PKPAB	**PKiKP**	**15 25 39.7**	**+4.5**
KHC				*ep*PKP	**pPKPab**	**15 26 01.1**	**+1.1**
CSS	**Mathiatis**	**151.30**	**305**		**PKPbc**	**15 25 34.1**	**-1.3**
WET	**Wettzell**	**151.31**	**349**	*e*L	L	16 23 08.1	
	comp=Z,29nm,20.3s						
SIRR	**Siria**	**151.35**	**335**	⇑P	**PKPbc**	**15 25 35.6**	**+0.5**
EIL	**Elat**	**151.40**	**293**	PKPbc	**PKPbc**	**15 25 35.7**	**0.0**
	comp=Z,16nm,0.7s,baz=319,slow=2.1,SNR=16						
GEC2	**GERESS Array S**	**151.44**	**347**	*e*PKPbc	**PKPbc**	**15 25 35.6**	**+0.3**
	baz=13,slow=2.4						
GEC2				*e*L	L	16 33 06.7	
	comp=Z,46nm,18.0s						
GERES	**GERESS Array B**	**151.44**	**347**	PKP	**PKPdf**	**15 25 29.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=98,slow=2.7,SNR=5.0						
GERES				PKPbc	**PKPbc**	**15 25 35.1**	**-0.2**
	comp=Z,6.2nm,0.8s,baz=48,slow=2.0,SNR=28						
WLF	**Walferdange**	**151.53**	**358**	PKiKP	**PKPbc**	**15 25 36.4**	**+1.0**
WLF				PKPab	**PKPab**	**15 25 42.7**	**-1.2**
WLF	**Walferdange**	**151.53**	**358**	*e*PKPbc	**PKPbc**	**15 25 36.4**	**+1.0**
	baz=13,slow=2.4						
LEF	**Lefka**	**151.58**	**305**	⇓P	**PKPbc**	**15 25 35.6**	**-0.3**
GZR	**Gura Zlata**	**151.59**	**333**	⇑P	**PKPbc**	**15 25 35.3**	**-0.5**
GZR	**Gura Zlata**	**151.59**	**333**	⇑PKiKP	**PKPbc**	**15 25 35.3**	**-0.5**
CONA	**Conrad Observa**	**151.80**	**344**	*e*P	**PKPbc**	**15 25 36.2**	**+0.1**
	comp=Z,10nm,0.8s						
BZS	**Buzias**	**151.90**	**334**	⇑P	**PKPbc**	**15 25 35.7**	**-0.6**
BZS	**Buzias**	**151.90**	**334**	⇑PKiKP	**PKPbc**	**15 25 35.7**	**-0.6**
HERR	**Herculane**	**152.16**	**332**	⇑P	**PKPbc**	**15 25 36.7**	**-0.2**
MOA	**Molln**	**152.26**	**346**	*e*P	**PKPbc**	**15 25 37.3**	**+0.2**
	comp=Z,5.8nm,0.9s						
ARSA	**Arzberg**	**152.51**	**344**	*e*P	**PKPdf**	**15 25 35.7**	**+5.0**
	comp=Z,4.9nm,1.1s						
BFO	**Black Forest**	**152.73**	**355**	*e*PKPbc	**PKPbc**	**15 25 38.1**	**-0.1**
	baz=13,slow=2.4						
BFO				*e*L	L	16 20 01.0	
	comp=Z,46nm,18.7s						
SOKA	**Soboth**	**153.17**	**344**	*e*P	**PKPbc**	**15 25 37.5**	**-1.7**
	comp=Z,4.6nm,1.0s						
KBA	**Koelnbreinsper**	**153.19**	**347**	*e*P	**PKPbc**	**15 25 38.5**	**-0.9**
	comp=Z,5.8nm,1.0s						
RETA	**Reutte**	**153.27**	**351**	*e*P	**PKPdf**	**15 25 32.7**	**+0.8**
	comp=Z,4.5nm,1.1s						
WTTA	**Wattenberg**	**153.34**	**349**	*e*P	**PKPbc**	**15 25 38.6**	**-1.2**
	comp=Z,3.6nm,0.5s						
MOTA	**Moosalm**	**153.35**	**350**	*e*P	**PKPdf**	**15 25 34.2**	**+2.0**
	comp=Z,12nm,1.3s						
OBKA	**Obir**	**153.45**	**345**	*e*P	**PKPbc**	**15 25 39.8**	**-0.1**
	comp=Z,5.9nm,1.2s						
SQTA	**Sankt Quirin**	**153.46**	**350**	*e*P	**PKPbc**	**15 25 37.8**	**-2.1**
	comp=Z,5.4nm,0.9s						
MYKA	**Terra Mystica**	**153.55**	**346**	*e*P	**PKPbc**	**15 25 38.4**	**-1.7**
	comp=Z,4.9nm,0.7s						
DAVA	**Damuels**	**153.59**	**352**	*e*P	**PKPdf**	**15 25 37.5**	**+5.0**
	comp=Z,7.6nm,0.9s						
ABTA	**Abfaltersbach**	**153.68**	**348**	*e*P	**PKPdf**	**15 25 31.6**	**-0.9**
	comp=Z,5.6nm,0.9s						
FETA	**Feichten**	**153.73**	**351**	*e*P	**PKPdf**	**15 25 32.1**	**-0.6**
	comp=Z,6.6nm,1.3s						
PRED	**Cave del Predi**	**153.74**	**346**	PKPab	**PKPab**	**15 25 52.6**	**-0.9**
ESDC	**Sonseca Array**	**160.13**	**20**	PKP	**PKPdf**	**15 25 40.3**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=3.8,slow=3.9,SNR=3.2						
LIC	**Lamto**	**162.45**	**146**	*e*PKiKP	**PKPdf**	**15 25 43.5**	**-0.6**
	comp=Z,2.0nm,0.3s						
KIC	**Kosan Boka**	**162.72**	**147**	*e*PKiKP	**PKPdf**	**15 25 43.8**	**-0.5**
	comp=Z,9.2nm,0.7s						
TIC	**Toumodi**	**162.81**	**146**	*e*PKiKP	**PKPdf**	**15 25 44.0**	**-0.5**
TOA0	**Torodi Ar. Sit**	**171.56**	**160**	PKPab	**PKPab**	**15 27 13.7**	**+1.9**
TORD	**Torodi Ar. Bea**	**171.56**	**160**	PKP	**PKPdf**	**15 25 49.5**	**-1.3**
	comp=Z,2.2nm,1.0s,baz=308,slow=1.3,SNR=6.6						
TORD				PKPab	**PKPab**	**15 27 12.9**	**+1.1**
	comp=Z,5.3nm,0.9s,baz=173,slow=2.9,SNR=13						
TORD				PP	**PP**	**15 31 02.4**	**+0.9**
	comp=Z,1.3nm,1.1s,baz=191,slow=3.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**171.56**	**160**		**PKPdf**	**15 25 48.6**	**-2.2**
TORD				PKPab	**PKPab**	**15 27 12.1**	**+0.3**

TEH ***27*** *15:08:34.6,32.°91N×47.°30E,h8km,ML2.7*
ISN ***27*** *15:08:36.2±0.7,32.°95N×47.°29E,h26km±4km, ML2.4*
ISC 27 15:08:35.4±1.1,32.°91N±0.°06×47.°34E±0.°06,h10km,n9, σ0s87/13,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**0.75**	**35**		*e*Pg	**Pg**		**15 08 49.4**	**-0.4**
IKFM					*e*			15 09 06.7	
IKMR	**Kamar-syah**	**1.06**	**55**		*e*Pn	**Pg**		**15 08 55.4**	**-0.5**
IBDR	**Badra**	**1.20**	**280**		*e*Pg	**Pn**		**15 08 57.0**	**-1.2**
IBDR					*e*Sg	**Sb**		**15 09 13.0**	**-0.7**
IBDR					AML	AML		15 09 21.8	
	comp=N,85nm,0.4s								
IBDR					AML	AML		15 09 31.4	
	comp=E,112nm,0.6s								
IKOM	**Komasi**	**1.27**	**7**		*e*Pg	**Pn**		**15 08 58.8**	**-0.5**
IKOM					*e*			15 09 05.2	
IGHG	**Ghaleghazi**	**1.55**	**336**		*e*Sg	**Sg**		**15 09 26.8**	**+1.4**
IGHG					*e*Pn	**Pn**		**15 09 03.8**	**+0.5**
IGHG					*e*			15 09 35.1	
HSAM	**Samen**	**1.67**	**39**		*e*			15 09 34.6	
HSAM					*e*Pn	**Pb**		**15 09 06.5**	**0.0**
IDHR	**Dehrash**	**1.95**	**336**		*e*			15 09 41.9	
IDHR					*e*Pn	**Pn**		**15 09 09.7**	**+0.9**
NSR	**Nassriya**	**2.15**	**208**		*e*Pn	**Pn**		**15 09 12.0**	**+0.7**
NSR					*e*Sn	**Sn**		**15 09 38.0**	**0.0**
BHD	**Baghdad**	**2.51**	**279**		*e*Pn	**Pn**		**15 09 17.0**	**+0.8**
BHD					*e*Sn	**Sn**		**15 09 46.0**	**-0.8**
BHD					AML	AML		15 09 53.3	
	comp=E,23nm,0.6s								

IDC 27 15:13:13.6±30.0,3.°49N×66.°38E,h0km,mb4.0/3, mb1 4.3/3,mb1mx3.4/43,mbtmp4.0/3,MS3.1/4,Ms1 3.1/4, ms1mx2.7/40,Error ellipse: s-maj=728.3km s-min=56.6km az=108.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**35.16**	**63**		P	P		15 20 09.7	+0.1
	2.9nm,0.9s,baz=257,slow=9.4,SNR=14								
CMAR					LR	LR		15 34 47.9	
	comp=Z,22nm,20.1s,baz=202,slow=37								
BOSA	**Boshof**	**50.78**	**228**		LR	LR		15 40 26.9	
	comp=Z,38nm,19.5s,baz=60,slow=32								
TLY	**Talaya**	**57.19**	**27**		LR	LR		15 44 50.5	
	comp=Z,12nm,21.7s,baz=280,slow=33								
KSRS	**Korea Array**	**65.47**	**50**		LR	LR		15 54 33.1	
	comp=Z,14nm,18.5s,baz=120,slow=38								
WRA	**Warramunga Arr**	**70.62**	**112**		P	P		15 24 31.6	0.0
	1.8nm,1.0s,baz=288,slow=4.9,SNR=6.5								
ASAR	**Alice Springs**	**71.00**	**116**		P	P		15 24 33.7	-0.1
	1.2nm,1.0s,baz=290,slow=6.2,SNR=8.1								

KRNET ***27*** *15:22:40.7±0.1,42.°89N×70.°20E,mb2.8*
SOME ***27*** *15:22:47.5,42.°85N×70.°42E,h15km*
NNC ***27*** *15:22:48.6±0.7,42.°88N×70.°45E,h0km,mb3.8,mpv3.1, Error ellipse: s-maj=4.3km s-min=3.0km az=16.0*
ISC 27 15:22:47.1±1.0,42.°84N±0.°04×70.°38E±0.°05,h17km±8km, n33,σ1s20/59,33C-10D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK07	**Karatay Array**	**0.26**	**20**		⇓P	**Pg**		**15 22 53.0**	**0.0**
KK07					⇑S	**Sg**		**15 22 56.8**	**-0.2**
KK06	**Karatay Array**	**0.28**	**23**		⇑P	**Pg**		**15 22 53.1**	**-0.1**
KK06					⇑S	**Sg**		**15 22 57.1**	**-0.2**
KK08	**Karatay Array**	**0.28**	**17**		⇓P	**Pg**		**15 22 53.2**	**0.0**
KK08					⇓S	**Sg**		**15 22 57.1**	**-0.2**
KK03	**Karatay Array**	**0.28**	**19**		⇓P	**Pg**		**15 22 53.2**	**0.0**
KK03					⇑S	**Sg**		**15 22 57.1**	**-0.2**
KK02	**Karatay Array**	**0.28**	**21**		⇓P	**Pg**		**15 22 53.2**	**-0.1**
KK02					⇑S	**Sg**		**15 22 57.3**	**-0.2**
KK31	**Karatay Array**	**0.28**	**21**		⇓P	**Pg**		**15 22 53.2**	**-0.1**
	3.8nm,0.2s,baz=191,slow=18,SNR=129								
KK31					⇑S	**Sg**		**15 22 57.3**	**-0.2**
	9.4nm,0.2s,baz=191,slow=32,SNR=6.8								
KK01	**Karatay Array**	**0.28**	**20**		⇓P	**Pg**		**15 22 53.2**	**0.0**
KK01					⇑S	**Sg**		**15 22 57.2**	**-0.3**
KK04	**Karatay Array**	**0.28**	**20**		⇑P	**Pg**		**15 22 53.3**	**0.0**
KK04					⇑S	**Sg**		**15 22 57.4**	**-0.1**
KK09	**Karatay Array**	**0.29**	**18**		⇑P	**Pg**		**15 22 53.5**	**0.0**
KK09					⇑S	**Sg**		**15 22 57.6**	**-0.3**
KK05	**Karatay Array**	**0.30**	**21**		⇑P	**Pg**		**15 22 53.5**	**0.0**
KK05					⇑S	**Sg**		**15 22 57.6**	**-0.2**
DZA	**Taraz**	**0.70**	**86**		*e*P	**Pg**		**15 23 00.4**	**-0.5**
	46nm,0.1s								
DZA					*e*S	**Sg**		**15 23 09.6**	**-0.7**
	132nm,0.2s								
DZA	**Taraz**	**0.70**	**86**		P	**Pg**		**15 23 00.4**	**-0.5**
	46nm,0.1s								
DZA					S	**Sg**		**15 23 09.6**	**-0.7**
	132nm,0.2s								
IUG	**Iuzhnay**	**0.74**	**200**		*e*P	**Pg**		**15 23 01.5**	**-0.1**
	11nm,0.2s								
IUG					*e*S	**Sg**		**15 23 11.8**	**+0.4**
	95nm,0.3s								
IUG	**Iuzhnay**	**0.74**	**200**		P	**Pg**		**15 23 01.1**	**-0.4**
	6.6nm,0.2s								
IUG					S	**Sg**		**15 23 11.8**	**+0.4**
	95nm,0.3s								
TRKS	**Terek-Say**	**1.43**	**156**	⇑	*i*P	**Pn**		**15 23 10.3**	**-2.1**
	baz=53								
TRKS				⇑	*i*S	**Sn**		**15 23 32.2**	**+1.3**
	baz=53								
MNAS	**Manas**	**1.61**	**102**	⇑	*i*P	**Pn**		**15 23 12.6**	**-2.3**
	baz=2.0								
MNAS				⇑	*i*S	**Sn**		**15 23 35.8**	**+0.4**
	baz=2.0								
MRKS	**Merke**	**2.10**	**92**		*e*P	**Pb**		**15 23 25.1**	**+0.3**
	10nm,0.3s								
MRKS					*e*S	**Sb**		**15 23 51.7**	**+1.0**
	22nm,0.2s								
MRKS	**Merke**	**2.10**	**92**		Pg	**Pb**		**15 23 24.9**	**+0.1**
	10nm,0.3s								
MRKS					Lg	Lg		15 23 52.6	
	22nm,0.2s								
ARSB	**Arslanbob**	**2.46**	**127**	⇓	*i*P	**Pn**		**15 23 25.3**	**-1.3**
	baz=26								
ARSB				⇓	*i*S	**Sn**		**15 23 57.4**	**+1.0**
	baz=26								
EKS2	**Erkin-Say**	**2.51**	**93**	⇑	*i*P	**Pn**		**15 23 25.4**	**-1.9**
	baz=94								
EKS2				⇑	*i*S	**Sn**		**15 23 58.4**	**+0.8**
	baz=94								
AML	**Almayashu**	**2.56**	**105**	⇑	*e*P	**Pn**		**15 23 26.2**	**-1.9**
	baz=5.0								
AML				⇑	*i*S	**Sn**		**15 23 59.6**	**+0.6**
	baz=5.0								
BTK	**Batken**	**2.80**	**173**	⇑	*i*P	Pn		15 23 28.2	-3.0
	baz=70								
BTK				⇑	*i*S	**Sn**		**15 24 03.5**	**-1.2**
	baz=70								
AAK	**Ala-Archa**	**3.04**	**92**	⇑	*i*P	**Pn**		**15 23 33.1**	**-1.5**
	baz=93								
AAK				⇑	*i*S	**Sn**		**15 24 11.2**	**+0.5**
	baz=93								
AAK	**Ala-Archa**	**3.04**	**92**	⇓	Lg	Lg		15 24 22.5	
	8.3nm,0.7s								
USP	**Ospenovka**	**3.05**	**81**	⇑	*i*P	**Pn**		**15 23 33.3**	**-1.3**
	baz=82								
USP				⇑	*i*S	**Sn**		**15 24 11.6**	**+0.8**
	baz=82								
ARLS	**Aral**	**3.08**	**107**	⇑	*i*P	**Pn**		**15 23 33.7**	**-1.5**
	baz=7.0								
ARLS				⇑	*i*S	**Sn**		**15 24 12.0**	**+0.2**
	baz=7.0								
UCH	**Uchtor**	**3.12**	**100**	⇑	*i*P	**Pn**		**15 23 34.4**	**-1.5**
	baz=0.0								
UCH				⇑	*i*S	**Sn**		**15 24 13.4**	**+0.4**
	baz=0.0								
SGDS	**Sogindy**	**3.17**	**77**		Pg	**Pb**		**15 23 43.1**	**0.0**
	1.2nm,0.3s								
SGDS					Lg	Lg		15 24 23.7	
	4.9nm,0.2s								
BTLS	**Baital**	**3.44**	**49**		*e*P	**Pb**		**15 23 49.5**	**+1.8**
	1.1nm,0.3s								
BTLS					*e*S	**Sg**		**15 24 34.6**	**-3.1**
	4.0nm,0.3s								
BTLS	**Baital**	**3.44**	**49**		Pg	**Pb**		**15 23 46.7**	**-0.9**
	0.6nm,0.1s								
BTLS					Lg	Lg		15 24 29.5	
	2.1nm,0.3s								
TKM2	**Tokmak 2**	**3.84**	**87**	⇑	*i*P	**Pn**		**15 23 44.3**	**-1.3**
	baz=88								
TKM2				⇑	*i*S	**Sn**		**15 24 30.6**	**+0.2**
	baz=88								
KST	**Kastek**	**4.11**	**85**		*e*P	**Pb**		**15 24 00.4**	**+1.4**
	2.2nm,0.3s								
KST					*e*S	**Sb**		**15 24 53.2**	**+4.8**
	3.7nm,0.5s								
KST	**Kastek**	**4.11**	**85**		Pg	**Pb**		**15 24 00.4**	**+1.4**
	2.2nm,0.3s								
KST					Lg	Lg		15 24 53.2	
	3.7nm,0.5s								

IDC ***27*** *15:44:01.9±1.4,4.°05S×144.°99E,h0km,mb4.1/6, mb1 4.1/10,mb1mx3.8/40,mbtmp4.0/10,ML3.2/4,MS3.3/11, Ms1 3.2/11,ms1mx3.0/30,Error ellipse: s-maj=27.8km s-min=20.0km az=59.0*
NEIC ***27*** *15:44:03.9±2.4,3.°76S±0.°07×145.°05E±0.°07,h32km±4km, mb4.1/20,Error ellipse: s-maj=10.1km s-min=9.7km az=126.0*
DJA ***27*** *15:44:05.4±0.5,4.°3S±5.°×14.°5E±.°,h67km±8km,M4.4/12, mb4.6/12,mB5.0/4,MLv4.3/3,Mw(mB)4.4/4*
ISC 27 15:44:06.4±1.2,3.°9S±0.°1×145.°0E±0.°1,h35km,n60, σ1s80/51,mb4.6/23,MS3.2/8,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.04**	**52**				Pn	15 44 45.0	-7.0
JAY	**Jayapura**	**4.50**	**288**			Pn	**Pn**	**15 45 10.9**	**-1.2**
	1.4nm,0.3s,baz=89,slow=13,SNR=1.8								
PMG	**Port Moresby**	**5.84**	**158**			Pn	**Pn**	**15 45 29.5**	**-1.1**
	4.1nm,0.3s,baz=49,slow=7.7,SNR=15								
PMG						Sn	**Sn**	**15 46 37.6**	**+1.2**
	2.1nm,0.3s,baz=307,slow=20,SNR=1.8								
PMG						LR	LR	15 48 14.9	
	comp=Z,369nm,18.9s,baz=336,slow=44								
PMG	**Port Moresby**	**5.84**	**158**				**Pn**	**15 45 30.4**	**-0.2**
KRVT	**Keravat (AS076**	**7.04**	**93**			Pn	Pn	15 45 45.8	-1.2
	0.7nm,0.3s,baz=185,slow=23,SNR=1.8								
COEN	**Coen**	**10.11**	**190**			Pn	**Pn**	**15 46 32.0**	**+2.8**
FAKI	**Fak Fak**	**12.75**	**274**			Pn	**Pn**	**15 47 04.9**	**-0.4**
HNR	**Honiara**	**15.83**	**111**			LR	LR	15 52 45.8	
	comp=Z,19nm,18.3s,baz=328,slow=33								
MTN	**Manton Dam**	**16.30**	**236**			Pn	**Pn**	**15 47 51.9**	**-0.8**
MTN						IAmb	IAmb	15 47 52.7	
	comp=Z,27nm,1.3s								
TNTI	**Ternate**	**18.21**	**285**			P	**Pn**	**15 48 16.3**	**-0.3**
TNTI						IAmb	IAmb	15 48 18.1	
	comp=Z,11nm,0.8s								
WB0	**Warramunga Arr**	**18.82**	**212**			P	**Pn**	**15 48 23.3**	**-0.6**
WR0	**Warramunga Arr**	**18.90**	**212**			P	**Pn**	**15 48 24.9**	**0.0**
WRAB	**Tennant Creek**	**18.98**	**212**			P	**Pn**	**15 48 24.7**	**-1.1**
WRAB						IAmb	IAmb	15 48 45.1	
	comp=Z,11nm,1.3s								
WB2	**Warramunga Arr**	**18.98**	**212**			P	**Pn**	**15 48 25.0**	**-0.9**
WB2						IAmb	IAmb	15 48 45.3	
	comp=Z,11nm,1.2s								
WRA	**Warramunga Arr**	**18.99**	**212**			P	**P**	**15 48 24.5**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=41,slow=12,SNR=15								
WRA						LR	LR	15 56 54.2	
	comp=Z,261nm,19.9s,baz=35,slow=41								
WRA	**Warramunga Arr**	**18.99**	**212**			P	**P**	**15 48 24.3**	**-0.8**
SANI	**Sanana**	**19.06**	**275**			P	**P**	**15 48 23.2**	**-2.7**
	comp=Z,7.3nm,1.0s								
KNRA	**Kununurra**	**19.76**	**233**			P	**P**	**15 48 33.4**	**-0.1**
KNRA						IAmb	IAmb	15 48 48.1	
	comp=Z,12nm,0.9s								
SOEI	**Soe**	**21.35**	**253**			P	**P**	**15 48 52.4**	**+1.4**
	comp=Z,31nm,1.1s								
SOEI	**Soe**	**21.35**	**253**			P	**P**	**15 48 48.8**	**-2.2**
KMSI	**Cibinong**	**21.46**	**282**			P	**P**	**15 48 51.5**	**-0.5**
	comp=Z,40nm,1.0s								
BATI	**Baumata**	**22.04**	**252**			P	**P**	**15 48 59.6**	**+1.3**
	comp=Z,20nm,0.5s,baz=118,slow=2.4,SNR=8.6								
BATI						LR	LR	16 00 13.3	
	comp=Z,69nm,18.4s,baz=84,slow=44								
BATI	**Baumata**	**22.04**	**252**			P	**P**	**15 49 01.0**	**+2.8**
	comp=Z,23nm,0.9s								
EIDS	**Eidsvold**	**22.10**	**165**			P	**P**	**15 48 58.0**	**-0.7**
EIDS						IAmb	IAmb	15 48 58.4	
	comp=Z,9.3nm,0.9s								
AS31	**Alice Springs**	**22.34**	**208**			P	**P**	**15 49 00.9**	**-0.5**
ASAR	**Alice Springs**	**22.34**	**208**			P	**P**	**15 49 00.9**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=38,slow=8.8,SNR=15								
ASAR						LR	LR	15 58 28.3	
	comp=Z,78nm,18.1s,baz=30,slow=39								
LUWI	**Luwuk**	**22.37**	**277**			P	**P**	**15 48 57.8**	**-4.0**
GTOI	**Gorontalo**	**22.42**	**281**			P	**P**	**15 49 04.3**	**+2.0**
	comp=Z,26nm,0.9s								
MRSI	**Marisa**	**23.44**	**280**			P	**P**	**15 49 12.4**	**-0.3**
	comp=Z,18nm,0.6s								
FITZ	**Fitzroy Crossi**	**23.59**	**232**			P	**P**	**15 49 13.0**	**-1.1**
	comp=Z,7.8nm,0.7s,baz=51,slow=8.1,SNR=32								
FITZ						LR	LR	15 59 17.5	
	comp=Z,113nm,18.5s,baz=58,slow=39								
FITZ	**Fitzroy Crossi**	**23.59**	**232**			P	**P**	**15 49 13.4**	**-0.8**
FITZ						IAmb	IAmb	15 49 14.0	
	comp=Z,8.9nm,0.8s								
TOLI2	**Tolitoli**	**24.70**	**281**			P	**P**	**15 49 21.6**	**-2.9**
KAPI	**Kappang**	**25.17**	**267**			LR	LR	16 01 11.8	
	comp=Z,37nm,20.3s,baz=86,slow=41								
MPSI	**Mapaga**	**25.42**	**279**			P	**P**	**15 49 30.0**	**-1.0**
	comp=Z,17nm,0.9s								
DZM	**Mont Dzumac**	**27.53**	**133**			LR	LR	15 59 39.1	
	comp=Z,70nm,18.1s,baz=326,slow=34								
STKA	**Stephens Creek**	**27.97**	**186**			P	**P**	**15 49 52.6**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=9.9,slow=13,SNR=1.0								
STKA						LR	LR	16 01 20.4	
	comp=Z,62nm,18.4s,baz=23,slow=37								
MTKI	**Muara Teweh, K**	**30.20**	**275**			P	P	15 50 23.7	+10
TOO	**Toolangi**	**33.48**	**179**			P	**P**	**15 50 43.1**	**+0.7**
LEM	**Lembang**	**37.30**	**264**			LR	LR	16 10 15.1	
	comp=Z,14nm,19.1s,baz=296,slow=42								
JGF	**Kuroka**	**39.98**	**350**			P	P	15 51 35.5	-2.2
SDSI	**Sungai Dareh**	**43.61**	**273**			P	**P**	**15 52 07.0**	**-0.7**
KSRS	**Korea Array**	**44.14**	**340**			LR	LR	16 08 28.7	
	comp=Z,33nm,20.0s,baz=150,slow=33								
GSI	**Gunungsitoli**	**47.66**	**275**			P	**P**	**15 52 37.2**	**-2.7**
PHRA	**Phrae**	**49.40**	**298**			P	**P**	**15 52 55.5**	**+2.5**
	comp=Z,105μmcomp=Z,76nm,0.9s								
CM35	**Chiang Mai Arr**	**50.41**	**298**			P	**P**	**15 53 01.0**	**+0.2**
CM04	**Chiang Mai Arr**	**50.46**	**298**			P	**P**	**15 53 03.6**	**+2.5**
	comp=Z,4.5nm,0.8s								
CM09	**Chiang Mai Arr**	**50.47**	**298**			P	**P**	**15 53 03.0**	**+1.8**
	comp=Z,6.2nm,0.9s								
CM01	**Chiang Mai Arr**	**50.49**	**298**			P	**P**	**15 53 03.9**	**+2.5**
	comp=Z,5.4nm,0.9s								
CM05	**Chiang Mai Arr**	**50.49**	**298**			P	**P**	**15 53 03.8**	**+2.4**
	comp=Z,36nmcomp=Z,3.9nm,0.7s								
CM02	**Chiang Mai Arr**	**50.50**	**298**			P	**P**	**15 53 04.0**	**+2.5**
	comp=Z,53nmcomp=Z,5.1nm,0.8s								
CMAR	**Chiang Mai Arr**	**50.51**	**298**			P	**P**	**15 53 02.4**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=120,slow=6.1,SNR=19								
CM15	**Chiang Mai Arr**	**50.53**	**298**			P	**P**	**15 53 04.1**	**+2.4**
	comp=Z,6.8nm,0.8s								
CM13	**Chiang Mai Arr**	**50.53**	**298**			P	**P**	**15 53 04.0**	**+2.3**
	comp=Z,44nmcomp=Z,5.4nm,0.8s								
CMMT	**Chiang Mai**	**50.64**	**298**			P	**P**	**15 53 05.3**	**+2.8**
	comp=Z,1.7nm,0.9s								
CM33	**Chiang Mai Arr**	**50.64**	**298**			P	**P**	**15 53 05.0**	**+2.4**
CHTO	**Chiang Mai**

AMCZ	**Amberley**	**0.46**	**39**	P		Pb	16 10 24.7 +1.2
WACZ	**Wakanui South**	**0.51**	**216**	P		Pb	16 10 25.4 +0.9
AKCZ	**Akaroa Harbour**	**0.58**	**126**	P		Pb	16 10 26.3 +0.6
OKCZ	**Okains Bay**	**0.61**	**109**	P		Pb	16 10 27.0 +0.7
LTZ	**Lake Taylor**	**0.75**	**1**	P		Pn	16 10 29.4 -0.7
GVZ	**Greta Valley S**	**0.80**	**45**	P		Pn	16 10 31.0 +0.3
ARCZ	**Arundel**	**0.89**	**242**	P		Pn	16 10 32.3 +0.3
KHZ	**Kahutara**	**1.46**	**41**	P		Pg	16 10 44.8 +3.4
MRZ	**Mangatainoka R**	**3.78**	**42**	P		Pn	16 11 11.9 +0.1

IDC ***27*** *16:18:28.2±0.9, 22°.61N×145°.01E, h0km, mb3.8/13, mb1 3.9/13, mb1mx3.8/44, mbtmp3.8/13, Error ellipse: s-maj=30.3km s-min=17.4km az=86.0*
NEIC ***27*** *16:18:33.1±1.6, 22°.7N±0°.1×145°.4E±0°.2, h46km±11km, mb4.4/16, Error ellipse: s-maj=35.0km s-min=8.9km az=63.0*

ISC 27 16:18:29.9±0.7, **22°.64N**±0°.07×**145°.1E**±0°.2, **h10**km, **n37,** σ1§**16**/36, **mb4.1**/19, **North Pacific Ocean**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.15**	**330**	Pn			**Pn**	**16 19 45.9**	**-1.2**
JGF	**Kuroka**	**14.56**	**334**	Pn			**Pn**	**16 21 57.3**	**+1.3**
JNU	**Nakatsue**	**16.30**	**313**	P			**P**	**16 22 22.8**	**+0.8**
JNU					IAmb	IAmb		16 22 38.1	
	comp=Z,49nm,1.6s								
KSRS	**Korea Array**	**20.88**	**319**	P			**P**	**16 23 13.8**	**+1.6**
	comp=Z,2.5nm,0.9s,baz=135,slow=12,SNR=7.9								
USRK	**Ussuriysk Ar.**	**24.05**	**336**	P			**P**	**16 23 46.8**	**+1.6**
	comp=Z,4.5nm,0.8s,baz=153,slow=9.5,SNR=12								
USRK	**Ussuriysk Ar.**	**24.05**	**336**	P			**P**	**16 23 46.9**	**+1.7**
KLR	**Kul'dur**	**28.55**	**342**	P			**P**	**16 24 25.3**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=121,slow=5.7,SNR=5.3								
COEN	**Coen**	**36.42**	**183**	P			**P**	**16 25 35.8**	**+0.9**
COEN					IAmb	IAmb		16 25 51.0	
	comp=Z,19nm,1.5s								
KAPI	**Kappang**	**36.99**	**225**	P			**P**	**16 25 41.4**	**+1.6**
SONM	**Songino Array**	**39.75**	**319**	P			**P**	**16 26 01.4**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=126,slow=7.3,SNR=2.0								
SONM	**Songino Array**	**39.75**	**319**	P			**P**	**16 26 04.1**	**+1.2**
KNRA	**Kununurra**	**41.30**	**204**	P			**P**	**16 26 15.3**	**-0.4**
KNRA					IAmb	IAmb		16 26 29.9	
	comp=Z,33nm,1.6s								
CMAR	**Chiang Mai Arr**	**43.26**	**273**	P			**P**	**16 26 31.9**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=78,slow=8.4,SNR=2.1								
CMAR	**Chiang Mai Arr**	**43.26**	**273**	P			**P**	**16 26 34.8**	**+2.8**
WB0	**Warramunga Arr**	**43.42**	**195**	P			**P**	**16 26 33.0**	**-0.1**
WB0					IAmb	IAmb		16 26 38.4	
	comp=Z,8.1nm,1.4s								
WR0	**Warramunga Arr**	**43.57**	**194**	P			**P**	**16 26 34.1**	**-0.2**
WR0					IAmb	IAmb		16 26 55.4	
	comp=Z,8.8nm,1.5s								
WRAB	**Tennant Creek**	**43.59**	**195**	P			**P**	**16 26 34.6**	**+0.2**
WRAB					IAmb	IAmb		16 26 37.6	
	comp=Z,5.4nm,0.8s								
WB2	**Warramunga Arr**	**43.60**	**195**	P			**P**	**16 26 34.5**	**+0.1**
WRA	**Warramunga Arr**	**43.60**	**195**	P			**P**	**16 26 34.3**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=17,slow=9.2,SNR=92								
WRA	**Warramunga Arr**	**43.60**	**195**	IAmb		IAmb		16 26 35.6	
	comp=Z,0.4nm,1.4s								
FITZ	**Fitzroy Crossi**	**44.73**	**207**	P			**P**	**16 26 43.0**	**-0.5**
AS31	**Alice Springs**	**47.29**	**194**	P			**P**	**16 27 03.3**	**-0.5**
ASAR	**Alice Springs**	**47.30**	**194**	P			**P**	**16 27 03.2**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=13,slow=7.7,SNR=14								
ASAR	**Alice Springs**	**47.30**	**194**	P			**P**	**16 27 03.7**	**-0.1**
STKA	**Stephens Creek**	**54.31**	**184**	P			**P**	**16 27 56.3**	**-0.2**
ZALV	**Zalesovo Beam**	**54.57**	**321**	P			**P**	**16 27 56.7**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=74,slow=11,SNR=3.9								
MK31	**Makanchi Array**	**55.36**	**312**	P			**P**	**16 28 03.4**	**-0.6**
MK31					IAmb	IAmb		16 28 41.1	
	comp=Z,5.9nm,1.5s								
MKAR	**Makanchi Array**	**55.36**	**312**	P			**P**	**16 28 03.0**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=88,slow=9.1,SNR=8.6								
FORT	**Forrest**	**55.57**	**198**	P			**P**	**16 28 05.1**	**-0.5**
NRIK	**Noril'sk**	**57.73**	**339**	P			**P**	**16 28 22.2**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=118,slow=8.4,SNR=3.9								
MORW	**Morawa**	**58.53**	**210**	P			**P**	**16 28 25.3**	**-1.3**
ILAR	**Eielson Array**	**60.40**	**27**	P			**P**	**16 28 39.0**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=248,slow=5.0,SNR=6.2								
KK31	**Karatay Array**	**63.85**	**308**	P			**P**	**16 29 01.5**	**-1.2**
KK31					IAmb	IAmb		16 29 38.0	
	comp=Z,3.8nm,1.4s								
KKAR	**Karatay Array**	**63.85**	**308**	P			**P**	**16 29 01.1**	**-1.6**
ABKAR	**Akbulak array**	**70.09**	**316**	P			**P**	**16 29 40.9**	**-1.3**
NVAR	**Mina Array Bea**	**81.19**	**52**	P			**P**	**16 30 47.4**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=289,slow=2.8,SNR=2.9								
FINES	**FINESS Array B**	**83.08**	**335**	P			**P**	**16 30 54.5**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=45,slow=4.7,SNR=7.1								

WEL 27 16:23:14.7±0.9, **38°S**±6°×**18°0E**±°, **h33**km, **M3.4**/16, **ML3.6**/16, **MLv3.4**/16, **Error ellipse: s-maj=0.0km s-min=0.0km az=17.8, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.26**	**260**	P			Pn	16 23 36.0	+0.1
WMGZ				S			Sn	16 23 52.7	+1.0
MXZ	**Matakaoa Point**	**1.33**	**272**	P			Pn	16 23 36.1	-0.9
MXZ				S			Sn	16 23 52.4	-1.2
PUZ	**Puketiti**	**1.44**	**251**	P			Pb	16 23 40.5	-0.5
PUZ				S			Sn	16 23 56.8	+0.5
PKGZ	**Pakihiroa**	**1.54**	**259**	P			Pn	16 23 39.4	-0.4
PKGZ				S			Sn	16 23 57.8	-0.8
CNGZ	**Carnagh Statio**	**1.65**	**238**	P			Pn	16 23 42.3	+1.0
HAZ	**Te Kaha**	**1.75**	**265**	P			Pn	16 23 42.6	-0.1
HAZ				S			Sn	16 24 03.6	-0.2
RUGZ	**Raukumara Rang**	**1.86**	**258**	P			Pn	16 23 44.3	0.0
RUGZ				S			Sn	16 24 05.7	-1.0
TKGZ	**Te Karaka**	**1.88**	**243**	P			Pn	16 23 44.7	+0.3
TKGZ				S			Sn	16 24 07.9	+1.0
RIGZ	**Rimuhau**	**2.06**	**237**	P			Pn	16 23 47.5	+0.5
RIGZ				S			Sn	16 24 13.7	+2.1
MWZ	**Matawai**	**2.07**	**249**	P			Pn	16 23 47.2	+0.1
MWZ				S			Sn	16 24 12.1	+0.3
PRGZ	**Paritu Road**	**2.11**	**231**	P			Pn	16 23 48.2	+0.6
RAGZ	**Rawiri**	**2.21**	**246**	P			Pn	16 23 49.7	+0.6
RAGZ				S			Sn	16 24 15.5	+0.1
MHGZ	**Mahia Peninsul**	**2.24**	**226**	P			Pn	16 23 50.4	+1.0
MHGZ				S			Sb	16 24 19.6	-2.2
KNZ	**Kokohu**	**2.30**	**232**	P			Pn	16 23 50.6	+0.5
URZ	**Urewera**	**2.36**	**253**	P			Pn	16 23 51.6	+0.6
URZ				S			Sn	16 24 19.1	+0.2
SNGZ	**Shannon Statio**	**2.39**	**240**	P			Pn	16 23 51.9	+0.5
SNGZ				S			Sn	16 24 21.1	+1.5
RAHZ	**Arahi**	**2.62**	**239**	P			Pn	16 23 55.2	+0.5
MTHZ	**Maungataniwha**	**2.77**	**243**	P			Pn	16 23 57.0	+0.4
MTHZ				S			Sn	16 24 30.1	+1.1
ARHZ	**Aropaoanui**	**2.87**	**234**	P			Pn	16 23 59.1	+1.1
ARHZ				S			Sn	16 24 30.9	-0.5
CKHZ	**Cape Kidnapper**	**3.06**	**227**	P			Pn	16 24 00.4	-0.2
CKHZ				S			Sn	16 24 35.6	-0.4
CTZ	**Chatham Island**	**6.64**	**158**	P			Pn	16 24 52.3	+2.5
CTZ				S			Sn	16 26 00.4	-3.8

IDC ***27*** *16:28:47.9±4.5, 6°.57S×146°.98E, h85km±60km, mb3.1/2, mb1 3.4/5, mb1mx3.1/32, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=72.2km s-min=20.5km az=119.0*

ISC 27 16:28:44.2±1.3, **6°.4S**±0°.1×**146°.7E**±0°.1, **h35**km, **n6,** σ1§**28**/7, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.07**	**171**	P			**Pn**	**16 29 31.5**	**+1.2**
	6.1nm,0.3s,baz=289,slow=15,SNR=28								
PMG				S			**Sn**	**16 30 04.4**	**-1.4**
	12nm,0.3s,baz=356,slow=15,SNR=5.0								
KRVT	**Keravat (AS076**	**5.72**	**69**	P			**Pn**	**16 30 07.4**	**+0.6**
	3.4nm,0.3s,baz=167,slow=1.8,SNR=7.8								
WRA	**Warramunga Arr**	**18.04**	**220**	P			**Pn**	**16 32 52.6**	**+0.3**
	0.1nm,0.3s,baz=42,slow=11,SNR=9.0								
ASAR	**Alice Springs**	**21.13**	**214**	P			**P**	**16 33 26.1**	**-0.2**
	0.8nm,0.9s,baz=54,slow=9.0,SNR=14								
FITZ	**Fitzroy Crossi**	**23.59**	**238**	P			**P**	**16 33 52.6**	**+0.6**
	2.7nm,1.1s,baz=46,slow=8.5,SNR=9.6								
TORD	**Torodi Ar. Bea**	**144.84**	**284**	PKPbc			**PKPab**	**16 48 16.2**	**-1.5**
	0.3nm,0.4s,baz=86,slow=5.0,SNR=2.2								

INET ***27*** *16:41:35.6, 12°.94N×89°.12W, h18km, ML4.0*

SNET ***27*** *16:41:36.8±1.3, 13°.04N×89°.10W, h47km±11km, ML4.0*
UCR ***27*** *16:41:37.1±1.6, 13°.06N×89°.09W, h49km±12km, ML4.0*
GCG ***27*** *16:41:38.1±0.3, 13°.15N×89°.18W, h11km, MD4.1*

ISC 27 16:41:38.4±4.7, **13°.06N**±0°.05×**89°.08W**±0°.04, **h38**km±6km, **n51,** σ0§**83**/79, **1C-20D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LALI	**Alcalda de L**	**0.49**	**331**	*i* P			**Pn**	**16 41 48.0**	**-0.8**
LALI					*e*	S	**Sn**	**16 41 56.3**	**+0.2**
LALI	**Alcalda de L**	**0.49**	**331**	P			**Pn**	**16 41 48.0**	**-0.8**
LALI					*e*	S	**Sn**	**16 41 56.3**	**+0.2**
LFRS	**El Faro**	**0.56**	**1**	P			**Pn**	**16 41 49.2**	**-0.9**
LFRS	**El Faro**	**0.56**	**1**	P			**Pn**	**16 41 49.2**	**-0.9**
COEG	**Centro de Oper**	**0.59**	**19**	P			**Pn**	**16 41 49.4**	**-1.1**
COEG					*e*	S	**Sn**	**16 41 59.5**	**+0.7**
COEG						IAML		16 42 05.8	
	comp=Z,4μm,0.3s								
COEG	**Centro de Oper**	**0.59**	**19**	*i* P			**Pn**	**16 41 49.4**	**-1.1**
COEG					*e*	S	**Sn**	**16 41 59.5**	**+0.7**
COEG						IAML		16 42 05.8	
	comp=Z,4μm,0.3s								
SNET	**Serv Nac Est T**	**0.64**	**346**	*e* P			**Pn**	**16 41 50.0**	**-1.1**
SNET					*e*	S	**Sn**	**16 42 00.2**	**+0.1**
SNET	**Serv Nac Est T**	**0.64**	**346**	*e* P			**Pn**	**16 41 50.0**	**-1.1**
SNET					*e*	S	**Sn**	**16 42 00.2**	**+0.1**
OPAM	**Oficina de Pla**	**0.66**	**350**	*e* P			**Pn**	**16 41 50.4**	**-0.9**
OPAM	**Oficina de Pla**	**0.66**	**350**	*e* P			**Pn**	**16 41 50.4**	**-0.9**
PAVA	**Las Pavas**	**0.66**	**12**	*i* P			**Pn**	**16 41 50.6**	**-0.8**
PAVA					*e*	S	**Sn**	**16 42 01.7**	**+1.0**
PAVA						IAML		16 42 03.1	
	comp=Z,3μm,0.3s								
PAVA	**Las Pavas**	**0.66**	**12**	*i* P			**Pn**	**16 41 50.6**	**-0.8**
PAVA					*e*	S	**Sn**	**16 42 01.7**	**+1.0**
PAVA						IAML		16 42 03.1	
	comp=Z,3μm,0.3s								
UEES	**Universidad Ev**	**0.67**	**346**	*e* P			**Pn**	**16 41 50.5**	**-1.0**
UEES						IAML		16 42 04.1	
	comp=Z,5μm,0.2s								
UEES	**Universidad Ev**	**0.67**	**346**	*e* P			**Pn**	**16 41 50.5**	**-1.0**
UEES						IAML		16 42 04.1	
	comp=Z,5μm,0.2s								
LBRS	**Las Brisas**	**0.67**	**3**	*i* P			**Pn**	**16 41 50.9**	**-0.6**
LBRS	**Las Brisas**	**0.67**	**3**	*i* P			**Pn**	**16 41 50.9**	**-0.6**
COEB	**Comit de Eme**	**0.69**	**51**	*i* P			**Pn**	**16 41 51.0**	**-0.8**
COEB					*e*	S	**Sn**	**16 42 02.0**	**+0.8**
COEB						IAML		16 42 06.3	
	comp=Z,9μm,0.3s								
COEB	**Comit de Eme**	**0.69**	**51**	*i* P			**Pn**	**16 41 51.0**	**-0.8**
COEB					*e*	S	**Sn**	**16 42 02.0**	**+0.8**
COEB						IAML		16 42 06.3	
	comp=Z,9μm,0.3s								
BOQS	**Boqueron**	**0.70**	**343**	*i* P			**Pn**	**16 41 51.2**	**-0.8**
BOQS					*e*	S	**Sn**	**16 42 02.8**	**+1.1**
BOQS	**Boqueron**	**0.70**	**343**	*i* P			**Pn**	**16 41 51.2**	**-0.8**
BOQS					*e*	S	**Sn**	**16 42 02.8**	**+1.1**
TECA	**Tecapa**	**0.70**	**52**	*i* P			**Pn**	**16 41 51.4**	**-0.7**
TECA	**Tecapa**	**0.70**	**52**	*i* P			**Pn**	**16 41 51.4**	**-0.7**
CEDA	**San Andres**	**0.80**	**337**	*i* P			**Pn**	**16 41 52.2**	**-1.0**
CEDA					*e*	S	**Sn**	**16 42 04.7**	**+0.7**
CEDA						IAML		16 42 13.8	
	comp=Z,4μm,0.3s								
CEDA	**San Andres**	**0.80**	**337**	*i* P			**Pn**	**16 41 52.2**	**-1.0**
CEDA					*e*	S	**Sn**	**16 42 04.7**	**+0.7**
CEDA						IAML		16 42 13.8	
	comp=Z,4μm,0.3s								
JUCU	**Jucuarįn**	**0.83**	**77**	*e* P			**Pn**	**16 41 52.2**	**-1.4**
JUCU					*e*	S	**Sn**	**16 42 04.3**	**-0.4**
JUCU	**Jucuarįn**	**0.83**	**77**	*e* P			**Pn**	**16 41 52.2**	**-1.4**
JUCU					*e*	S	**Sn**	**16 42 04.3**	**-0.4**
PACA	**Pacayal**	**0.84**	**61**	*e* P			**Pn**	**16 41 53.4**	**-0.4**
PACA					*e*	S	**Sn**	**16 42 06.2**	**+1.2**
PACA	**Pacayal**	**0.84**	**61**	*e* P			**Pn**	**16 41 53.4**	**-0.4**
PACA					*e*	S	**Sn**	**16 42 06.2**	**+1.2**
LCY	**Lacayo**	**0.84**	**65**	*i* P			**Pn**	**16 41 53.0**	**-0.8**
LCY	**Lacayo**	**0.84**	**65**	*i* P			**Pn**	**16 41 53.0**	**-0.8**
TACO	**Tacachico**	**0.94**	**343**	*i* P			**Pn**	**16 41 54.1**	**-1.1**
TACO					*e*	S	**Sn**	**16 42 08.1**	**+0.6**
TACO	**Tacachico**	**0.94**	**343**	*i* P			**Pn**	**16 41 54.1**	**-1.1**
TACO					*e*	S	**Sn**	**16 42 08.1**	**+0.6**
RTR	**El Retiro**	**1.00**	**326**	*e* P			**Pn**	**16 41 55.2**	**-0.8**
RTR	**El Retiro**	**1.00**	**326**	*e* P			**Pn**	**16 41 55.2**	**-0.8**
NUBE	**Las Nubes**	**1.08**	**321**	*i* P			**Pn**	**16 41 55.9**	**-1.3**
NUBE					*e*	S	**Sn**	**16 42 10.5**	**-0.4**
NUBE	**Las Nubes**	**1.08**	**321**	*i* P			**Pn**	**16 41 55.9**	**-1.3**
NUBE					*e*	S	**Sn**	**16 42 10.5**	**-0.4**
LCND	**La Caada**	**1.18**	**78**	*e* P			**Pn**	**16 41 57.3**	**-1.0**
LCND					*e*	S	**Sn**	**16 42 13.3**	**+0.1**
LCND						IAML		16 42 15.2	
	comp=Z,6μm,0.3s								
LCND	**La Caada**	**1.18**	**78**	*e* P			**Pn**	**16 41 57.3**	**-1.0**
LCND					*e*	S	**Sn**	**16 42 13.3**	**+0.1**
LCND						IAML		16 42 15.2	
	comp=Z,6μm,0.3s								
MTO3	**Montecristo**	**1.36**	**348**	*e* P			**Pn**	**16 42 00.2**	**-0.8**
MTO3					*e*	S	**Sn**	**16 42 17.0**	**-0.9**
MTO3	**Montecristo**	**1.36**	**348**	*e* P			**Pn**	**16 42 00.2**	**-0.8**
MTO3					*e*	S	**Sn**	**16 42 17.0**	**-0.9**
ESQI	**Esquipulas**	**1.51**	**350**	*i* P			**Pn**	**16 42 03.0**	**-0.1**
ESQI					*e*	S	**Sn**	**16 42 22.3**	**+0.8**
NBG	**Las Nubes**	**1.96**	**321**	*e* P			**Pn**	**16 42 09.8**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.01**	**60**	*i* P			**Pn**	**16 42 09.2**	**-0.7**
TGUH	**Tegucigalpa,Un**	**2.01**	**60**	*i* P			**Pn**	**16 42 09.2**	**-0.7**
MRL	**Marmol**	**2.09**	**344**	*e* P			**Pn**	**16 42 11.9**	**+0.8**
FUG	**Fuego 3**	**2.20**	**309**	*e* P			**Pn**	**16 42 12.9**	**+0.4**
FUG					*e*	S	**Sn**	**16 42 38.9**	**+0.2**
GBS3	**Finca Las Img**	**4.21**	**122**	*e* P			**Pn**	**16 42 40.4**	**+0.4**
LAPC	**Finca la Perla**	**4.23**	**122**	*e* P			**Pn**	**16 42 40.8**	**+0.5**
GB1A	**Borinquen Arri**	**4.23**	**121**	*e* P			**Pn**	**16 42 40.3**	**+0.1**
GUAI	**GUAI**	**4.46**	**128**	*e* P			**Pn**	**16 42 42.8**	**-0.7**
COLC	**Colonia**	**4.48**	**122**	*e* P			**Pn**	**16 42 44.1**	**+0.3**

IDC ***27*** *17:10:30.2±1.2, 12°.51N×124°.92E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/59, mbtmp3.9/8, MS3.2/3, Ms1 3.3/3, ms1mx2.7/34, Error ellipse: s-maj=67.6km s-min=16.8km az=65.0*
MAN ***27*** *17:10:35.6, 12°.49N×124°.60E, h7km, mb5.1, ML4.0, MS4.1*
MAN Intensity IV - San Roque, Northern Samar; Intensity III - Catarman and Laoang, Northern Samar; Intensity III - Allen, Northern Samar.
NEIC ***27*** *17:10:37.5±2.3, 12°.5N±0°.1×124°.8E±0°.2, h53km±9km, mb4.3/12, Error ellipse: s-maj=28.6km s-min=15.8km az=86.0*

ISC 27 17:10:31.6±1.8, **12°.52N**±0°.04×**124°.89E**±0°.07, **h7**km±11km, **n45,** σ1§**81**/42, **mb4.2**/14, **MS3.1**/3, **3C-3D, Samar**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PVCP	**Virac**	**1.29**	**326**	*e* P			**Pn**	**17 10 56.8**	**+0.8**
PVCP					*e*	S	**Sn**	**17 11 14.8**	**+1.2**
LLP	**Lapu-Lapu**	**2.37**	**203**	*i* P			**Pb**	**17 11 13.0**	**-1.6**
LLP					*e*	S	**Sg**	**17 11 46.9**	**-0.8**
MSLP	**Maasin**	**2.37**	**181**	*e* P			**Pg**	**17 11 16.3**	**-0.7**
MSLP					*e*	S	**Sg**	**17 11 50.6**	**+2.9**
GQP	**Guinayangan**	**2.75**	**300**	*e* P			**Pn**	**17 11 17.8**	**+1.7**
GQP					*e*	S	**Sn**	**17 11 45.4**	**-4.2**
JCNP	**Jose Panganiba**	**2.77**	**310**	*e* P			**Pn**	**17 11 18.2**	**+1.9**
JCNP					*e*	S	**Sn**	**17 11 51.7**	**+1.7**
OTRP	**Odiongan**	**2.81**	**267**	*e* P			**Pn**	**17 11 17.7**	**+0.8**
OTRP					*e*	S	**Sn**	**17 11 49.2**	**-1.8**
GUIM	**Jordan**	**2.94**	**230**	*e* P			**Pn**	**17 11 20.2**	**+1.6**
JAP	**San Jose, Anti**	**3.38**	**239**	*e* P			Pn	17 11 11.2	-14
LQP	**Lukban**	**3.63**	**296**	*i* P			**Pn**	**17 11 31.2**	**+2.9**
LQP					*i*	S	**Sg**	**17 12 31.4**	**+3.2**
CGP	**Cagayan de Oro**	**4.04**	**183**	*e* P			**Pb**	**17 11 39.2**	**-3.9**
PAGZ	**Pagadian**	**4.87**	**198**	*e* P			**Pn**	**17 11 48.9**	**+3.6**
PAGZ					*e*	S	**Sn**	**17 12 45.7**	**+3.7**
KCP	**Kidapawan**	**5.48**	**178**	*e* P			Pb	17 12 02.6	-5.0
KSAR	**Wonju Array Be**	**24.96**	**6**	P			**P**	**17 15 55.2**	**-0.5**
KSRS	**Korea Array**	**24.98**	**6**	LR			LR	17 25 28.3	
	comp=Z,26nm,20.8s,baz=195,slow=36								
KS19	**Wonju Array Si**	**25.02**	**6**	P			**P**	**17 15 55.3**	**-0.9**
KS19						IAmb	IAmb	17 15 55.9	
	comp=Z,12nm,0.9s								
CMAR	**Chiang Mai Arr**	**25.68**	**287**	P			**P**	**17 16 02.4**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=99,slow=7.1,SNR=4.8								
XAN	**Xi'an**	**25.89**	**328**	P			**P**	**17 16 04.3**	**0.0**
XAN						IAmb	IAmb	17 16 07.2	
	comp=Z,5.0nm,0.8s								
PSI	**Prapat**	**27.45**	**252**	LR			LR	17 27 54.2	

	comp=Z,45nm,19.1s,baz=86,slow=38								
FITZ	**Fitzroy Crossi**	**30.43**	**179**	P			**P**	**17 16 43.3**	**-1.6**
	comp=Z,1.1nm,0.7s,baz=318,slow=12,SNR=1.2								
WRA	**Warramunga Arr**	**33.57**	**164**	P			**P**	**17 17 11.8**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=346,slow=9.0,SNR=12								
WRA	**Warramunga Arr**	**33.57**	**164**	P			**P**	**17 17 11.8**	**-0.6**
WB2	**Warramunga Arr**	**33.57**	**164**	P			**P**	**17 17 11.4**	**-1.1**
WB2					IAmb	IAmb		17 17 27.6	
	comp=Z,5.7nm,1.3s								
WC3	**Warramunga Arr**	**33.59**	**164**	P			**P**	**17 17 11.4**	**-1.3**
WC3					IAmb	IAmb		17 17 26.8	
	comp=Z,3.7nm,1.1s								
WR0	**Warramunga Arr**	**33.64**	**163**	P			**P**	**17 17 12.3**	**-0.8**
WR0					IAmb	IAmb		17 17 23.4	
	comp=Z,4.4nm,1.2s								
AS31	**Alice Springs**	**37.03**	**166**	P			**P**	**17 17 42.5**	**+0.3**
ASAR	**Alice Springs**	**37.03**	**166**	P			**P**	**17 17 42.5**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=345,slow=7.5,SNR=43								
H11S3	**WAKE ISLAND Hy**	**40.64**	**76**	T			T	18 01 43.0	
	baz=268,slow=75,SNR=23								
H11S1	**WAKE ISLAND Hy**	**40.66**	**76**	T			T	18 01 46.4	
	baz=268,slow=75,SNR=14								
H11S2	**WAKE ISLAND Hy**	**40.66**	**76**	T			T	18 01 46.4	
	baz=268,slow=75,SNR=30								
H11N1	**WAKE ISLAND Hy**	**40.90**	**74**	T			T	18 02 05.3	
	baz=267,slow=75,SNR=239								
H11N2	**WAKE ISLAND Hy**	**40.90**	**74**	T			T	18 02 04.7	
	baz=267,slow=75,SNR=237								
H11N3	**WAKE ISLAND Hy**	**40.91**	**74**	T			T	18 02 09.3	
	baz=267,slow=75,SNR=177								
NWAO	**Narrogin (SRO)**	**45.78**	**189**	P			**P**	**17 18 53.6**	**-0.3**
BBOO	**Buckleboo**	**46.32**	**167**	P			**P**	**17 18 58.1**	**-0.1**
STKA	**Stephens Creek**	**46.95**	**160**	P			**P**	**17 19 03.4**	**+0.2**
MKAR	**Makanchi Array**	**49.43**	**322**	P			**P**	**17 19 23.0**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=116,slow=8.2,SNR=5.9								
ZALV	**Zalesovo Beam**	**52.02**	**331**	P			**P**	**17 19 41.3**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=113,slow=5.3,SNR=4.9								
ZALV	**Zalesovo Beam**	**52.02**	**331**	P			**P**	**17 19 41.4**	**-0.2**
KURK	**Kurchatov**	**53.46**	**325**	P			**P**	**17 19 53.0**	**+0.7**
KURBB	**Kurchatov Arra**	**53.47**	**325**	P			**P**	**17 19 52.2**	**-0.1**
	comp=Z,3.8nm,0.7s,baz=124,slow=7.5,SNR=23								
TIXI	**Tiksi**	**59.15**	**1**	P			**P**	**17 20 33.4**	**+0.8**
TIXI					IAmb	IAmb		17 20 33.9	
	comp=Z,2.8nm,0.8s								
IMAR	**Indian Mountai**	**75.14**	**25**	P			**P**	**17 22 15.9**	**+1.6**
FINES	**FINESS Array B**	**83.28**	**331**	P			**P**	**17 22 57.6**	**-1.2**
	comp=Z,1.7nm,0.8

comp=Z,29nm,21.3s,baz=162,slow=35
KSRS Korea Array 35.93 2 P **P** 17 24 33.4 +1.3
comp=Z,0.8nm,0.6s,baz=178,slow=10.0,SNR=4.4
STKA Stephens Creek 35.95 158 P **P** 17 24 32.7 +0.3
comp=Z,2.3nm,0.5s,baz=360,slow=12,SNR=4.4
STKA Stephens Creek 35.95 158 P **P** 17 24 32.4 0.0
MJAR Matsushiro Art 36.59 16 P **P** 17 24 38.1 +0.3
comp=Z,1.7nm,0.7s,baz=183,slow=9.7,SNR=3.7
MJAR Matsushiro Arr 36.59 16 IAmb IAmb 17 24 40.1
comp=Z,1.7nm,1.0s
USRK Ussuriysk Ar. 42.91 6 P **P** 17 25 31.1 +1.0
comp=Z,3.5nm,0.8s,baz=180,slow=5.7,SNR=6.1
USRK Ussuriysk Ar. 42.91 6 P **P** 17 25 29.8 -0.4
LSA Lhasa 44.01 313 P **P** 17 25 38.7 -1.2
ASAJ Asahikawa 44.85 16 P **P** 17 25 47.0 +1.3
comp=Z,13nm,1.1s,baz=160,slow=32,SNR=3.0
KLR Kul'dur 47.88 4 P **P** 17 26 10.0 +0.5
comp=Z,2.7nm,0.9s,baz=216,slow=4.2,SNR=6.2
SONM Songino Array 49.52 342 P **P** 17 26 23.3 +1.0
comp=Z,0.9nm,0.7s,baz=159,slow=10,SNR=5.2
SONM LR LR 17 50 28.7
comp=Z,16nm,18.4s,baz=16,slow=40
SONM Songino Array 49.52 342 P **P** 17 26 21.6 -0.7
MK31 Makanchi Array 59.48 326 P **P** 17 27 33.8 -0.7
MK31 IAmb IAmb 17 27 55.7
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 59.48 326 P **P** 17 27 33.5 -1.0
comp=Z,1.2nm,0.3s,baz=120,slow=7.6,SNR=32
MKAR LR LR 17 53 33.9
comp=Z,37nm,21.4s,baz=115,slow=36
MKAR Makanchi Array 59.48 326 P **P** 17 27 33.2 -1.2
ZALV Zalesovo Beam 62.68 334 P **P** 17 27 54.7 -1.2
comp=Z,0.4nm,0.3s,baz=123,slow=4.5,SNR=2.9
ZALV Zalesovo Beam 62.68 334 P **P** 17 27 55.0 -0.9
KURBB Kurchatov Arra 63.71 328 P **P** 17 28 02.2 -0.6
comp=Z,3.7nm,0.7s,baz=127,slow=6.1,SNR=20
KURK Kurchatov 63.72 328 P **P** 17 28 02.0 -0.8
KKAR Karatay Array 64.95 318 P **P** 17 28 10.2 -1.0
KKAR Karatay Array 64.95 318 P **P** 17 28 10.0 -1.2
KKAR IAmb IAmb 17 28 28.9
comp=Z,1.8nm,0.9s
BRVK Borovoye 69.36 327 P **P** 17 28 39.1 +0.3
BRVK IAmb IAmb 17 28 44.9
comp=Z,4.9nm,0.9s
TIXI Tiksi 70.19 1 P **P** 17 28 43.7 0.0
TIXI IAmb IAmb 17 28 47.9
comp=Z,7.5nm,1.5s
NRIK Noril'sk 72.71 346 P **P** 17 28 59.5 +0.7
comp=Z,2.1nm,0.7s,baz=119,slow=6.1,SNR=6.8
ABKAR Akbulak array 73.96 321 P **P** 17 29 06.1 -0.6
ABKAR Akbulak array 73.96 321 P **P** 17 29 06.0 -0.6
ARU Arti 76.92 328 P **P** 17 29 20.3 -3.1
ARU IAmb IAmb 17 29 24.6
comp=Z,5.8nm,0.9s
VNDA Vanda 81.10 173 P **P** 17 29 46.5 +0.5
comp=Z,3.3nm,1.0s,baz=323,slow=7.5,SNR=9.5
VNDA Vanda 81.10 173 P **P** 17 29 46.6 +0.7
VNDA IAmb IAmb 17 29 51.0
comp=Z,4.3nm,1.1s
PPT Papeete 84.42 108 LR LR 18 07 42.9
comp=Z,22nm,18.3s,baz=194,slow=36
ILAR Eielson Array 87.24 25 P **P** 17 30 18.1 +0.7
comp=Z,0.1nm,0.5s,baz=238,slow=5.2,SNR=1.6
KLMR Klimovskoe 87.44 331 *eP* **P** 17 30 17.5 -0.9
KLMR AMP 17 30 19.4
comp=Z,8.0nm,1.3s
ARCES ARCESS Array B 92.65 340 P **P** 17 30 41.8 -0.8
comp=Z,5.6nm,1.0s,baz=11,slow=5.5,SNR=2.4
FINES FINESS Array B 93.89 332 P **P** 17 30 48.7 +0.2
comp=Z,1.2nm,0.8s,baz=21,slow=8.1,SNR=1.4
TORD Torodi Ar. Bea 125.60 287 PKP **PKPdf** 17 36 29.2 -0.4
comp=Z,0.7nm,0.8s,baz=40,slow=2.0,SNR=3.9

WEL 27 17:27:15.5±0.6,37°S±5°×17°7E±°,**h12**km,**M3.4**/24,
ML3.5/22,**MLv3.4**/24,**Error ellipse: s-maj=0.0km s-min=0.0km az=32.1,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.88**	**179**	P	Pg	17 27 32.2	-0.3
WIZ				S	Sg	17 27 44.0	0.0
KUZ	**Kuaotunu**	**1.18**	**265**	P	Pb	17 27 35.8	-2.0
KUZ				S	Sb	17 27 50.2	-2.7
HAZ	**Te Kaha**	**1.21**	**157**	P	Pn	17 27 36.8	-1.5
MXZ	**Matakaoa Point**	**1.29**	**136**	P	Pn	17 27 38.2	-1.1
MXZ				S	Sb	17 27 55.2	-0.9
OPRZ	**Ohinepanea**	**1.30**	**202**	P	Pn	17 27 38.0	-1.4
TGRZ	**Tauranga**	**1.31**	**214**	P	Pn	17 27 38.2	-1.4
RUGZ	**Raukumara Rang**	**1.38**	**163**	P	Pn	17 27 39.8	-0.9
RUGZ				S	Sb	17 27 57.7	-1.2
PKGZ	**Pakihiroa**	**1.43**	**150**	S	Sn	17 27 58.9	-1.3
GRZ	**Great Barrier**	**1.44**	**285**	P	Pn	17 27 40.3	-1.1
GRZ				S	Sn	17 27 59.5	-0.8
WMGZ	**Waiomatatini S**	**1.53**	**140**	P	Pb	17 27 43.4	-0.5
KMRZ	**Kaimai**	**1.55**	**219**	P	Pn	17 27 42.2	-0.8
KMRZ				S	Sb	17 28 03.6	-0.3
URZ	**Urewera**	**1.61**	**182**	P	Pn	17 27 42.7	-1.1
URZ				S	Sg	17 28 06.7	-0.7
WIAZ	**Waiheke Island**	**1.65**	**264**	P	Pn	17 27 44.9	+0.6
WIAZ				S	Sn	17 28 05.8	+0.4
TWGZ	**Tauwhareparae**	**1.66**	**158**	P	Pn	17 27 44.5	0.0
MKAZ	**Moumakai**	**1.68**	**254**	P	Pn	17 27 43.8	-0.9
MKAZ				S	Sb	17 28 06.9	-0.6
TOZ	**Tahuroa Road**	**1.72**	**230**	P	Pn	17 27 44.4	-0.9
TOZ				S	Sn	17 28 07.9	+0.7
ETAZ	**East Tamaki Re**	**1.83**	**260**	P	Pb	17 27 48.0	-0.9
ETAZ				S	Sb	17 28 11.1	-0.7
RAGZ	**Rawiri**	**1.86**	**174**	P	Pn	17 27 47.2	-0.1
ABAZ	**Army Bay**	**1.89**	**271**	P	Pb	17 27 49.7	-0.2
ABAZ				S	Sb	17 28 12.8	-0.7
AWAZ	**Awhitu Peninsu**	**2.08**	**258**	P	Pn	17 27 49.7	-0.5
RVAZ	**Riverhead Bore**	**2.09**	**266**	P	Pn	17 27 50.7	+0.3
RIGZ	**Rimuhau**	**2.11**	**167**	P	Pn	17 27 52.3	-1.4
WTAZ	**Waiatarua**	**2.11**	**261**	P	Pn	17 27 50.9	+0.2
TLZ	**Tolley Road**	**2.13**	**217**	P	Pn	17 27 50.2	-0.7
WCZ	**Waipu Caves**	**2.40**	**286**	P	Pn	17 27 54.8	+0.2
HIZ	**Hauiti**	**2.62**	**224**	P	Pn	17 27 57.6	-0.1
WTVZ	**West Tongariro**	**2.77**	**207**	P	Pn	17 27 59.4	-0.4
TWVZ	**Taurewa**	**2.79**	**209**	P	Pn	17 27 58.2	-1.8
FWVZ	**Far West T-bar**	**2.91**	**206**	P	Pn	17 28 03.6	+1.8
KRHZ	**Kereru**	**3.06**	**192**	P	Pn	17 28 05.8	+2.0
VRZ	**Vera Road**	**3.13**	**217**	P	Pn	17 28 05.4	+0.7
OUZ	**Omahuta**	**3.24**	**295**	P	Pn	17 28 06.1	0.0
TSZ	**Takapari Road**	**3.54**	**195**	P	Pn	17 28 11.4	+1.0
CAW	**Cannon Point**	**4.75**	**200**	P	Pn	17 28 26.8	-0.2

*IDC **27** 17:39:18.6±2.4, 18°.15N×102°.43W, h0km, mb3.8/4, mb1 4.1/6, mb1mx3.8/34, mbtmp3.7/6, ML3.6/2, MS3.1/10, Ms1 3.1/10, ms1mx2.9/31, Error ellipse: s-maj=55.3km s-min=31.1km az=47.0*
*NEIC **27** 17:39:22.2±1.9, 18°.04N±0°.05×102°.37W±0°.05, h25km±3km, mb4.3/16, Md4.6/33(MEX), Error ellipse: s-maj=8.1km s-min=5.4km az=211.0*
*MEX **27** 17:39:22.8±0.5, 18°.04N×102°.35W, h5km, MD4.6*
ISC 27 17:39:20.5±2.8,**18°.08N**±0°.04×**102°.34W**±0°.03,
h11km±19km,**n70**,σ1**57**/77,**mb4.2**/10,**MS3.0**/5,
Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.96**	**119**	*eP*	**Pb**	**17 39 38.6**	**-0.5**
ZIIG				*i* S	**Sb**	**17 39 51.5**	**-0.3**
ZIIG	**Zihuatanejo**	**0.96**	**119**		**Pb**	**17 39 38.6**	**-0.5**
ZIIG					**Sb**	**17 39 51.5**	**-0.3**
MMIG	**Aquila**	**0.98**	**283**	*eP*	**Pb**	**17 39 39.1**	**-0.3**
MMIG				*eS*	**Sb**	**17 39 52.3**	**0.0**
MMIG	**Aquila**	**0.98**	**283**		**Pb**	**17 39 39.1**	**-0.3**
MMIG					**Sb**	**17 39 52.3**	**0.0**
URUA	**Uruapan**	**1.36**	**11**	*eP*	**Pn**	**17 39 45.0**	**-0.6**
URUA				*eS*	**Sb**	**17 40 02.6**	**-1.1**
URUA	**Uruapan**	**1.36**	**11**		**Pn**	**17 39 45.0**	**-0.6**
URUA					**Sb**	**17 40 02.6**	**-1.1**
COIG	**Colima**	**1.68**	**311**	*eP*	**Pb**	**17 39 50.3**	**-1.2**
EZ5V		**1.84**	**320**	*eP*	**Pb**	**17 39 53.5**	**-0.8**
EZ5V		**1.84**	**320**		**Pb**	**17 39 53.5**	**-0.8**
ARIG	**Puente Sto Nin**	**1.91**	**84**	*eP*	**Pn**	**17 39 52.9**	**-0.1**
ARIG				*i* S	**Sn**	**17 40 16.9**	**-0.1**
ARIG	**Puente Sto Nin**	**1.91**	**84**		**Pn**	**17 39 52.9**	**-0.1**
ARIG					**Sn**	**17 40 16.9**	**-0.1**
MOIG	**Morelia**	**1.93**	**34**	Pn	**Pn**	**17 39 53.7**	**+0.2**
CAIG	**El Cayaco**	**2.23**	**117**	*eP*	**Pn**	**17 39 57.1**	**-0.2**
CAIG				*i* S	**Sn**	**17 40 23.8**	**-1.1**
CAIG	**El Cayaco**	**2.23**	**117**		**Pn**	**17 39 57.1**	**-0.2**
CAIG					**Sn**	**17 40 23.8**	**-1.1**
MEIG	**Mezcala**	**2.60**	**93**	*i* P	**Pn**	**17 40 02.4**	**0.0**
MEIG				*i* S	**Sn**	**17 40 33.5**	**-0.6**
MEIG	**Mezcala**	**2.60**	**93**		**Pn**	**17 40 02.4**	**0.0**
MEIG					**Sn**	**17 40 33.5**	**-0.6**
MAVM	**Malinalco, Edo**	**2.84**	**72**	*eP*	**Pb**	**17 40 09.2**	**-2.2**
MAVM	**Malinalco, Edo**	**2.84**	**72**		**Pb**	**17 40 09.2**	**-2.2**
ACIG	**Acambay**	**3.00**	**51**	*eP*	**Pn**	**17 40 10.7**	**+2.5**
YAIG	**Yautepec**	**3.21**	**75**	*eP*	**Pn**	**17 40 10.7**	**-0.3**
YAIG				*i* S	**Sn**	**17 40 50.1**	**+0.9**
YAIG	**Yautepec**	**3.21**	**75**		**Pn**	**17 40 10.7**	**-0.3**
YAIG					**Sn**	**17 40 50.1**	**+0.9**
UNM	**Universidad Na**	**3.25**	**67**	*i* P	**Pn**	**17 40 12.9**	**+1.2**
UNM				*eS*	**Sn**	**17 40 50.6**	**+0.2**
UNM	**Universidad Na**	**3.25**	**67**	Pn	**Pn**	**17 40 13.3**	**+1.7**
TLIG	**Tlapa**	**3.63**	**98**	*eP*	**Pn**	**17 40 16.8**	**0.0**
TLIG				*i* S	**Sn**	**17 40 60.0**	**+0.2**
TLIG	**Tlapa**	**3.63**	**98**		**Pn**	**17 40 17.5**	**+0.7**
TLIG					**Sn**	**17 40 59.3**	**-0.4**
PPM	**Popocatepetl**	**3.66**	**74**	*eP*	**Pn**	**17 40 18.4**	**+0.9**
PPM				*i* S	**Sn**	**17 41 01.7**	**+0.8**
VTVM	**Tizayuca**	**3.77**	**63**	*eP*	**Pn**	**17 40 21.8**	**+2.9**
VTVM	**Tizayuca**	**3.77**	**63**		**Pn**	**17 40 21.8**	**+2.9**
FTIG	**Fresnillo de T**	**4.01**	**92**	*eP*	**Pn**	**17 40 21.8**	**-0.2**
FTIG				*i* S	**Sn**	**17 41 10.0**	**+0.9**
ZAIG	**Zacatecas**	**4.67**	**357**	Pn	**Pn**	**17 40 32.1**	**+0.9**
CMIG	**Matias Romero**	**7.18**	**97**	Pn	**Pn**	**17 41 07.6**	**+2.1**
	1.2nm,0.3s,baz=257,slow=14,SNR=11						
CMIG					Sn	**Sn**	**17 42 34.3**	**+7.2**
	1.4nm,0.3s,baz=64,slow=21,SNR=2.1						
CMIG					Lg	Lg	17 42 59.7
	2.3nm,0.3s,baz=57,slow=16,SNR=5.8						
CMIG					LR	LR	17 44 16.4
	comp=Z,103nm,18.1s,baz=296,slow=41						
H06E1	**SOCORRO T-PHAS**	**8.18**	**276**	T	T	17 49 32.5
	SNR=13						
H06S1	**SOCORRO T**	**8.21**	**276**	T	T	17 49 35.5
	SNR=4.7						
LPIG	**La Paz**	**9.55**	**310**	LR	LR	17 44 25.3
	comp=Z,27nm,20.3s,baz=28,slow=32						
TX32	**Lajitas Array**	**11.27**	**354**		**Pn**	**17 42 06.0**	**+4.4**
TXAR	**Lajitas Array**	**11.27**	**354**	Pn	**Pn**	**17 42 02.9**	**+1.3**
	0.1nm,0.3s,baz=173,slow=15,SNR=15						
TXAR					Lg	Lg	17 45 14.0
	0.1nm,0.3s,baz=207,slow=25,SNR=3.7						
TXAR					LR	LR	17 46 57.1
	comp=Z,128nm,21.0s,baz=0.0,slow=41						
TXAR	**Lajitas Array**	**11.27**	**354**	Pn	**Pn**	**17 42 05.6**	**+4.0**
TX31	**Lajitas Ar. Si**	**11.27**	**354**		**Pn**	**17 42 02.0**	**+0.4**
WMOK	**Wichita Mounta**	**16.90**	**10**	P	**P**	**17 43 19.4**	**+0.4**
ANMO	**Albuquerque**	**17.20**	**349**	LR	LR	17 50 21.6
	comp=Z,118nm,18.1s,baz=162,slow=39						
KAN05	**Bluff City Nor**	**19.36**	**11**	P	**P**	**17 43 46.5**	**+0.4**
T35A	**Sooner Cattle**	**19.46**	**14**	P	**P**	**17 43 47.5**	**+0.4**
T35A					IAmb	IAmb	17 43 55.8
	comp=Z,13nm,0.6s						
SDCO	**Great Sand Dun**	**19.79**	**353**	P	**Pn**	**17 43 52.7**	**0.0**
PFO	**Pinyon Flats O**	**19.98**	**323**	LR	LR	17 50 52.3
	comp=Z,52nm,20.3s,baz=51,slow=35						
S22A	**4UR Ranch, Cre**	**19.99**	**350**	P	**P**	**17 43 51.6**	**-1.7**
S39A	**Bolivar**	**21.08**	**20**	P	**P**	**17 44 06.0**	**+1.2**
S39A					IAmb	IAmb	17 44 15.0
	comp=Z,9.3nm,0.6s						
PLAL	**Pickwick Lake**	**21.09**	**34**	P	**P**	**17 44 04.7**	**-0.2**
PLAL					IAmb	IAmb	17 44 15.0
	comp=Z,8.9nm,0.9s						
MTPU	**Mount Pierson**	**21.68**	**339**	P	**P**	**17 44 11.4**	**-0.2**
T47A	**Sharon Grove**	**23.13**	**32**	P	**P**	**17 44 28.1**	**+1.5**
T47A					IAmb	IAmb	17 44 33.4
	comp=Z,9.5nm,0.8s						
P40A	**Paris**	**23.17**	**21**	P	**P**	**17 44 27.1**	**+0.1**
P40A					IAmb	IAmb	17 44 33.2
	comp=Z,7.2nm,0.7s						
N38A	**Joes South For**	**23.96**	**17**		**P**	**17 44 33.4**	**-1.4**
TKL	**Tuckaleechee C**	**24.03**	**40**	LR	LR	17 54 52.7
	comp=Z,29nm,20.9s,baz=230,slow=39						
WCI	**Wyandotte Cave**	**24.49**	**32**	P	**P**	**17 44 36.9**	**-2.8**
WCI					IAmb	IAmb	17 44 47.5
	comp=Z,8.8nm,0.8s						
NVAR	**Mina Array Bea**	**24.60**	**329**	P	**P**	**17 44 41.2**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=140,slow=10,SNR=16						
NVAR	**Mina Array Bea**	**24.60**	**329**	P	**P**	**17 44 41.6**	**+0.6**
KVN	**Kaiserville**	**24.99**	**330**	P	**P**	**17 44 44.6**	**+0.2**
KVN					IAmb	IAmb	17 44 57.3
	comp=Z,2.5nm,0.8s						
ELK	**Elko**	**25.17**	**337**	LR	LR	17 55 52.1
	comp=Z,56nm,18.1s,baz=164,slow=40						
PDAR	**Pinedale Array**	**25.36**	**348**	LR	LR	17 55 51.9
	comp=Z,42nm,18.1s,baz=144,slow=39						
BCYI	**Bear Canyon**	**27.76**	**343**	P	**P**	**17 45 10.3**	**+0.9**
ULM	**Lac du Bonnet**	**32.51**	**8**	LR	LR	17 59 56.1
	comp=Z,96nm,18.4s,baz=344,slow=38						
YKA	**Yellowknife Ar**	**45.19**	**352**	P	**P**	**17 47 34.3**	**-2.8**
	comp=Z,0.5nm,0.6s,baz=160,slow=7.7,SNR=4.3						
INK	**Inuvik**	**53.92**	**346**	P	**P**	**17 48 42.5**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=151,slow=12,SNR=3.8						
INK	**Inuvik**	**53.92**	**346**	P	**P**	**17 48 42.1**	**-1.6**
INK					IAmb	IAmb	17 48 46.0
	comp=Z,4.2nm,1.2s						
ILAR	**Eielson Array**	**55.30**	**339**	P	**P**	**17 48 53.0**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=138,slow=5.5,SNR=7.9						
TRF	**Thorofare Moun**	**55.82**	**336**	P	**P**	**17 48 57.5**	**-0.2**
H03N2	**Juan Fernandez**	**55.89**	**156**	T	T	18 49 17.8
	baz=334,slow=77,SNR=137						
H03N1	**Juan Fernandez**	**55.90**	**156**	T	T	18 49 19.7
	baz=334,slow=77,SNR=113						
H03N3	**Juan Fernandez**	**55.91**	**156**	T	T	18 49 09.5
	baz=334,slow=77,SNR=170						
RES	**Resolute Bay**	**56.77**	**2**	P	**P**	**17 49 05.7**	**+1.6**
NOA	**NORSAR Array B**	**85.16**	**27**	LR	LR	18 29 26.5
	comp=Z,5.0nm,20.1s,baz=300,slow=35						

*ISN **27** 17:58:32.3±1.1, 32°.87N×47°.95E, h7km, ML2.4*
*TEH **27** 17:58:34.8, 32°.71N×47°.69E, h10km, ML2.8*
ISC 27 17:58:35.6±1.4,**32.71N**±0°.06×**47.78E**±0°.08,**h10**km,**n8,**
σ0**63**/12,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**0.81**	**4**	*eP*g	**Pg**	**17 58 51.3**	**0.0**
IKFM				*e*		17 59 05.2	
IKMR	**Kamar-syah**	**0.95**	**32**	*eP*g	**Pg**	**17 58 53.5**	**-0.4**
IKMR				*e*		17 58 57.2	
IKOM	**Komasi**	**1.48**	**351**	*e*		17 59 09.0	
IKOM				*eP*g	**Pg**	**17 59 04.1**	**+0.1**
IKOM				*eS*g	**Sg**	**17 59 24.3**	**+1.2**
IBDR	**Badra**	**1.60**	**285**	*eP*n	**Pn**	**17 59 03.0**	**-1.0**
IBDR				*eS*n	**Sn**	**17 59 24.0**	**-0.7**
IBDR				AML	AML	17 59 34.0	
	comp=E,54nm,0.4s						
IBDR				AML	AML	17 59 34.5	
	comp=N,53nm,0.5s						
HSAM	**Samen**	**1.65**	**25**	*e*		17 59 07.9	
HSAM				*eP*g	**Pg**	**17 59 07.2**	**0.0**
NSR	**Nassriya**	**2.19**	**220**	*eP*n	**Pn**	**17 59 12.0**	**-0.1**
NSR				*eS*n	**Sn**	**17 59 40.0**	**+0.7**
IDHR	**Dehrash**	**2.30**	**330**	*eP*g	**Pb**	**17 59 17.2**	**-0.1**
IDHR				*e*		17 59 19.5	
BHD	**Baghdad**	**2.91**	**282**	*eP*n	**Pn**	**17 59 22.0**	**+0.1**
BHD				*eS*n	**Sn**	**17 59 57.0**	**+0.1**

*IDC **27** 18:03:04.5±1.1, 67°.08N×20°.20E, h0km, mb1 2.9/3, mb1mx2.8/29, mbtmp2.8/3, ML1.8/3, Error ellipse: s-maj=12.8km s-min=5.1km az=153.0*
*UPP **27** 18:03:05.0±0.1, 67°.06N×20°.92E, h0km, ML1.7, Explosion*
*HEL **27** 18:03:05.8±0.1, 67°.07N×20°.97E, h0km, ML2.1, ML1.7(UPP), Explosion*
*KOLA **27** 18:03:19.7, 67°.92N×20°.26E, h0km*
*NAO **27** 18:03:20.0±0.9, 66°.93N×21°.62E, ML2.7*
*BER **27** 18:03:21.6±2.9, 66°.97N×21°.08E, h0km, ML1.8, ML2.7(NAO), Suspected explosion*
ISC 27 18:03:04.5±0.8,**67°.04N**±0°.02×**20°.87E**±0°.02,**h0**km,**n61,**
σ1**73**/65,**Sweden**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MASU	**Masugnsbyn**	**0.61**	**45**	P	**Pg**	**18 03 16.2**	**+0.1**
MASU	**Masugnsbyn**	**0.61**	**45**	*i* P	**Pg**	**18 03 16.2**	**+0.1**
ERTU	**Ertsjaerv**	**0.71**	**132**	P	**Pg**	**18 03 18.4**	**+0.3**
ERTU	**Ertsjaerv**	**0.71**	**132**	*e*P	**Pg**	**18 03 18.1**	**0.0**
ERTU				*e*S	**Sg**	**18 03 27.6**	**+0.3**
HARU	**Harads**	**0.88**	**177**	P	**Pg**	**18 03 21.9**	**+0.7**
HARU				S	**Sg**	**18 03 34.6**	**+2.0**
HARU	**Harads**	**0.88**	**177**	*e*P	**Pg**	**18 03 21.9**	**+0.7**
HARU				*e*S	**Sg**	**18 03 34.6**	**+2.0**
PAJU	**Pajala**	**0.88**	**90**	P	**Pg**	**18 03 21.0**	**-0.3**
PAJU	**Pajala**	**0.88**	**90**	*e*P	**Pg**	**18 03 20.8**	**-0.5**
PAJU				*e*SB	**Sg**	**18 03 32.9**	**+0.3**
RATU	**Laukkuluspa**	**0.93**	**329**	P	**Pg**	**18 03 22.2**	**-0.1**
RATU				S	**Sg**	**18 03 34.7**	**+0.3**
RATU	**Laukkuluspa**	**0.93**	**329**	*e*P	**Pg**	**18 03 22.2**	**-0.1**
RATU				*e*S	**Sg**	**18 03 34.7**	**+0.3**
SALU	**Saltoluokta**	**0.98**	**292**	P	**Pg**	**18 03 23.7**	**+0.4**
SALU	**Saltoluokta**	**0.98**	**292**	*e*P	**Pg**	**18 03 23.7**	**+0.4**
NIKU	**Nikkaluokta**	**1.09**	**320**	P	**Pg**	**18 03 25.3**	**-0.1**
NIKU	**Nikkaluokta**	**1.09**	**320**	*e*P	**Pg**	**18 03 25.3**	**-0.1**
LANU	**Lannavaara**	**1.10**	**22**	P	**Pg**	**18 03 24.7**	**-0.9**
LANU	**Lannavaara**	**1.10**	**22**	*e*P	**Pg**	**18 03 24.5**	**-1.0**
LANU				*e*SB	**Sg**	**18 03 39.3**	**-0.5**
KALU	**Kalix**	**1.55**	**139**	P	**Pn**	**18 03 33.5**	**+0.3**
KALU	**Kalix**	**1.55**	**139**	*e*P	**Pn**	**18 03 33.4**	**+0.2**
	baz=326						
SJUU	**Sjulsmark**	**1.56**	**169**	P	**Pn**	**18 03 34.2**	**+0.8**
SJUU	**Sjulsmark**	**1.56**	**169**	*e*P	**Pn**	**18 03 34.2**	**+0.8**
TOF	**Tornio**	**1.68**	**123**	*e*P	**Pn**	**18 03 35.6**	**+0.5**
TOF				MSG		18 03 55.7	
	comp=Z,16nm,0.2s						
KIF	**Kilpisjarvi**	**1.98**	**359**	Pn	Pg	18 03 55.5	+13
KIF				Sn	Sg	18 04 23.2	+15
KIF	**Kilpisjarvi**	**1.98**	**359**	*e*PB	**Pb**	**18 03 40.7**	**-0.5**
KIF				MSG		18 04 04.0	
	comp=Z,18nm,0.2s						
KIF				*e*SG	**Sg**	**18 04 09.1**	**+1.2**
KIF	**Kilpisjarvi**	**1.98**	**359**	*e*P	**Pb**	**18 03 40.8**	**-0.5**
KIF	**Kilpisjarvi**	**1.98**	**359**	*e*P	Pg	18 03 55.2	+13
RNF	**Rovaniemi**	**2.08**	**100**	*e*PB	**Pn**	**18 03 41.7**	**+1.2**
RNF				*e*SG	**Sb**	**18 04 09.6**	**+0.2**
KTK1	**Kautokeino**	**2.17**	**23**	Pn	Pg	18 03 56.1	+10
KTK1				Sn	Sg	18 04 25.9	+12
KTK1	**Kautokeino**	**2.17**	**23**	Pn	Pg	18 03 56.1	+10
KTK1				Sn	Sg	18 04 25.9	+12
KTK1				IAML		18 04 31.5	
	comp=Z,10nm,0.3s						
FAUS	**Fauske**	**2.20**	**282**	*e*P	Pg	18 03 59.5	+13
FAUS				IAML		18 04 37.8	
	comp=Z,19nm,0.5s						
I37NO	**I37NO**	**2.22**	**338**	*i*		18 18 30.0
	baz=163,slow=329,SNR=1.7						
SGF	**Sodankyl**	**2.24**	**77**	*e*PB	**Pn**	**18 03 43.8**	**+1.1**
STEI	**Steigen**	**2.35**	**295**	*e*P	Pg	18 04 00.6	+11
BURU	**Burvik**	**2.47**	**175**	*e*P	**Pn**	**18 03 47.9**	**+2.0**
	baz=359						
OUL	**Oulu**	**2.83**	**131**	*e*PB	**Pb**	**18 03 54.1**	**-1.7**
OBF0	**Syolatti, Pyha**	**2.90**	**150**	*e*PB	**Pb**	**18 03 55.8**	**-1.2**
ARA0	**ARCESS Array S**	**3.04**	**32**	Pn	Pg	18 04 09.2	+6.5
	baz=210,slow=14						
ARA0				Sn	**Sg**	**18 04 45.7**	**+3.6**
	baz=218,slow=22						
ARA0	**ARCESS Array S**	**3.04**	**32**	*e*P	**Pn**	**18 03 54.3**	**+0.5**
	baz=215						
ARA0				*e*SG	**Sg**	**18 04 39.4**	**-2.7**
ARA0	**ARCESS Array S**	**3.04**	**32**	*e*P	**Sn**	**18 03 54.2**	**+0.5**
ARA0	**ARCESS Array S**	**3.04**	**32**	*e*P	Pg	18 04 08.5	+5.8
ARA0				Pn	Pb	18 04 09.2	+10
	baz=210,slow=14						
ARA0				Sn	**Sg**	**18 04 45.7**	**+3.6**
	baz=218,slow=22						
ARA0				IAML		18 04 58.3	
	comp=Z,6.7nm,0.2s						
ARCES	**ARCESS Array B**	**3.04**	**32**	Pn	**Pn**	**18 03 54.3**	**+0.5**
	baz=221,slow=13,SNR=1.9						
ARCES				Sn	**Sn**	**18 04 32.9**	**+2.1**
	baz=206,slow=28,SNR=3.0						
ARCES				Lg	Lg	18 04 46.0	
	baz=212,slow=26,SNR=2.3						
OUF	**Merijarvi**	**3.12**	**147**	*e*P	**Pn**	**18 03 57.9**	**+3.1**
OUF				MSG		18 04 37.9	
	comp=Z,2.8nm,0.2s						
UMAU	**Umeaa**	**3.17**	**182**	*e*P	**Pn**	**18 03 57.5**	**+2.0**
MSF	**Maaselka**	**3.46**	**105**	*e*P	**Pn**	**18 04 01.1**	**+1.5**
	baz=292						
KU6	**Riekki**	**3.75**	**102**	*e*P	**Pn**	**18 04 05.1**	**+1.7**
HUSU	**Husum**	**3.78**	**191**	*e*SG	**Sg**	**18 05 04.9**	**-0.7**
VAF	**

KMSI				S	Sn	18 23 53.8	-0.8
TNTI	**Ternate**	**2.04**	**78**	P	Pn	18 23 44.9	+0.2
GTOI	**Gorontalo**	**2.38**	**277**	P	Pb	18 23 52.2	-1.0
GTOI				S	Sb	18 24 24.3	+1.7
SANI	**Sanana**	**2.44**	**165**	P	Pn	18 23 48.7	-1.5
SANI				S	Sn	18 24 15.9	-4.2
LUWI	**Luwuk**	**2.93**	**242**	P	Pb	18 24 00.3	-2.3
NLAI	**Namlea**	**3.94**	**154**	P	Pn	18 24 10.7	-0.1
MSAI	**Masohi**	**5.10**	**136**	P	Pn	18 24 28.5	+1.8
TTSI	**Tana Toraja**	**6.48**	**239**	P	Pn	18 24 48.8	+3.0
BNDI	**Bandanaira**	**6.62**	**137**	P	Pn	18 24 47.5	-0.1
	0.2nm2µm27nm,1.2s						

JMA 27 19:40:05.4±0.2, 25°.00N×123°.53E, h21km±5km, M2.6, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IRIF	**Iriomote-Funau**	**0.69**	**165**	P	Pb	19 40 18.4	-0.3
IRIF				S	Sb	19 40 27.4	-0.4
YOJ	**Yonaguni jima**	**0.71**	**221**	P	Pb	19 40 19.0	-0.2
YOJ				S	Sb	19 40 28.2	-0.3
JYNG	**Yonagunijimaku**	**0.76**	**224**	P	Pb	19 40 19.6	-0.3
JYNG				S	Sb	19 40 29.8	-0.1
JISG	**Ishigakijimahi**	**0.82**	**120**	P	Pb	19 40 20.7	-0.2
JISG				S	Sb	19 40 31.7	+0.2
JIJ	**Ishigaki jima**	**0.84**	**139**	P	Pb	19 40 20.7	-0.7
JIJ				S	Sb	19 40 31.6	-0.6
JKRS	**Kuro-shima**	**0.88**	**150**	P	Pb	19 40 21.8	-0.1
JKRS				S	Sb	19 40 33.1	0.0
HATJ	**Hateruma jima**	**0.97**	**165**	P	Pb	19 40 23.2	-0.3
HATJ				S	Sb	19 40 35.9	0.0
JTJ	**Tarama**	**1.12**	**108**	P	Pn	19 40 25.7	-0.2

TAP 27 19:40:54.0, 24°.55N×121°.85E, h12km, ML1.8, 3C-1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.06**	**1**	⇑*i* P	Pg	19 40 56.9	+0.5
	baz=9.0						
TWC				*i* S	Sg	19 40 58.4	+0.2
	baz=9.0						
ENAH	**Nanao**	**0.10**	**199**	*i* P	Pb	19 40 57.7	-0.2
	baz=199						
ENAH				*i* S	Sg	19 40 59.9	+0.9
	baz=199						
ENA	**Nanau**	**0.15**	**219**	⇓*i* P	Pb	19 40 58.4	-0.4
	baz=216						
ENA				*i* S	Sg	19 41 01.3	+1.1
	baz=216						
TWE	**Neicheng**	**0.24**	**316**	P	Pg	19 40 59.5	+0.5
	baz=318						
TWE				*i* S	Sg	19 41 04.2	+1.8
	baz=318						
ENTT	**Nioudou**	**0.27**	**290**	*i* P	Pb	19 41 00.9	0.0
	baz=289						
ENTT				S	Sb	19 41 04.7	-0.7
	baz=289						
NDT	**Datong Townshi**	**0.31**	**280**	*i* P	Pb	19 41 01.5	0.0
	baz=280						
NDT				S	Sb	19 41 06.1	-0.4
	baz=280						
NWLT	**Wulai**	**0.39**	**306**	*e*P	Pb	19 41 02.4	-0.5
	baz=306						
NWLT				*e*S	Sb	19 41 08.4	-0.3
	baz=306						
TIPB	**Shuangxi**	**0.42**	**357**	*i* P	Pb	19 41 03.0	-0.4
	baz=357						
TIPB				*e*S	Sg	19 41 08.7	+0.7
	baz=357						
NACB	**Ninganchiao**	**0.44**	**212**	P	Pb	19 41 03.7	0.0
	baz=211						
NACB				S	Sb	19 41 09.7	-0.5
	baz=211						
NNSB	**Datong**	**0.44**	**254**	⇑P	Pb	19 41 03.7	0.0
	baz=254						
NNSB				S	Sb	19 41 10.0	-0.3
	baz=254						
NNSH	**Datong**	**0.44**	**254**	*e*P	Pb	19 41 03.6	-0.2
	baz=254						
NNSH				*e*S	Sb	19 41 09.5	-0.8
	baz=254						
NNS	**Nan Shan**	**0.45**	**256**	*i* P	Pg	19 41 03.2	+0.3
	baz=255						
NNS				*i* S	Sb	19 41 09.9	-0.6
	baz=255						
YHNB	**Yeheng**	**0.45**	**286**	⇑P	Pb	19 41 04.1	+0.2
	baz=285						
YHNB				S	Sb	19 41 10.8	+0.3
	baz=285						
NSK	**Sanguang**	**0.46**	**286**	P	Pb	19 41 04.3	+0.1
	baz=285						
NSK				S	Sb	19 41 11.1	+0.1
	baz=285						
ETLH	**Xiulin Townshi**	**0.48**	**225**	P	Pb	19 41 04.1	-0.3
	baz=224						
ETLH				S	Sb	19 41 11.4	0.0
	baz=224						
TWB1	**Santiao Chiao**	**0.48**	**16**	S	Sg	19 41 10.3	+0.6
	baz=16						
TWD	**Chiawan**	**0.52**	**206**	*i* P	Pb	19 41 04.8	-0.2
	baz=205						
FUSS	**Fushou**	**0.63**	**242**	*e*P	Pb	19 41 07.5	+0.5
	baz=241						
FUSS				*e*S	Sb	19 41 15.8	-0.1
	baz=241						
YM10	**YM10**	**0.66**	**337**	*e*P	Pb	19 41 07.6	+0.2
	baz=336						
YM05	**YM05**	**0.67**	**337**	*e*P	Pb	19 41 07.5	-0.1
	baz=337						
WHF	**Hehuan Shan**	**0.67**	**233**	*i* P	Pb	19 41 08.0	+0.2
	baz=232						
WHF				*i* S	Sb	19 41 16.8	-0.4
	baz=232						
TWT	**Tachien**	**0.68**	**245**	*e*P	Pb	19 41 08.0	+0.2
	baz=244						
TWT				*e*S	Sn	19 41 18.8	-1.4
	baz=244						
TDCB	**Techi**	**0.69**	**245**	P	Pb	19 41 07.9	-0.2
	baz=244						
TDCB				S	Sb	19 41 17.9	+0.2
	baz=244						
LIOB	**Emei**	**0.76**	**277**	*e*S	Sb	19 41 20.4	+0.8
	baz=277						
NSTT	**Nanjuang**	**0.78**	**276**	*e*S	Sb	19 41 20.1	+0.2
	baz=276						
CHGB	**Renai**	**0.78**	**232**	P	Pb	19 41 10.2	+0.5
	baz=231						
CHGB				S	Sn	19 41 21.7	-1.1
	baz=231						
OWD	**Renai**	**0.85**	**226**	*e*S	Sn	19 41 23.9	-0.5
	baz=226						
SSLB	**Suanglung**	**1.11**	**227**	P	Pb	19 41 15.2	0.0
	baz=227						
SSLB				S	Sn	19 41 30.5	-0.2
	baz=227						

NEIC ***27*** *19:43:30.9±2.2, 9°.19N±0°.07×75°.22W±0°.08, h26km±4km, mb4.4/30, Error ellipse: s-maj=12.0km s-min=9.7km az=69.0*

RSNC ***27*** *19:43:32.2±2.2, 9°.27N×75°.34W, h58km±13km, ML4.1, Fault plane solution: NP1:φs=85.00000°, δ42.00000°, λ-82.00000°.*

IDC ***27*** *19:43:33.3±1.9, 9°.18N×75°.30W, h49km±18km, mb3.7/12, mb1 3.9/14, mb1mx3.8/33, mbtmp4.0/14, ML3.4/3, MS3.3/15, Ms1 3.3/15, ms1mx3.1/32, Error ellipse: s-maj=20.3km s-min=12.7km az=58.0*

VAO ***27*** *19:43:55.2±0.4, 7°.47N×73°.10W, h10km, mb4.3*

ISC 27 19:43:31.4±1.1, 9°.23N±0°.03×75°.29W±0°.03, h32km±8km, n135, σ1°92/167, mb4.3/25, MS3.4/11, 9C-3D, Near north coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOTC	**Monteria, Cord**	**0.58**	**219**	⇑*i* P	**Pn**	**19 43 43.9**	**+0.4**
MOTC				*e*S	**Sn**	**19 43 53.6**	**+1.7**
MOTC				*i*		19 43 55.9	
	comp=Z,6µm,0.4s						
SJCC	**San Jacinto, C**	**0.67**	**10**	⇑*e*P	**Pn**	**19 43 45.2**	**+0.4**
SJCC				*e*S	**Sn**	**19 43 55.7**	**+1.4**
SJCC				*i*		19 44 02.6	
	comp=Z,5µm,0.5s						
LCBC	**Los crdobas,**	**1.12**	**251**	⇓*e*P	**Pb**	**19 43 52.4**	**+0.1**
LCBC				*e*S	**Sb**	**19 44 08.7**	**+2.1**
LCBC				*i*		19 44 19.3	
	comp=Z,2µm,0.3s						
ARGC	**Ariguani, Magd**	**1.21**	**59**	⇑*e*P	**Pn**	**19 43 52.5**	**+0.4**
ARGC				*e*S	**Sb**	**19 44 10.2**	**+1.2**
ARGC				*i*		19 44 14.6	
	comp=Z,2µm,0.5s						
UREC	**San Jos de Ur**	**1.49**	**189**	*e*P	**Pn**	**19 43 56.3**	**+0.3**
UREC				*e*S	**Sn**	**19 44 14.9**	**+0.5**
UREC				*i*		19 44 19.8	
	comp=Z,2µm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.78**	**166**	*e*P	**Pn**	**19 44 00.2**	**+0.2**
ZARC				*e*S	**Sn**	**19 44 23.0**	**+1.4**
CAPC	**Capurgana**	**2.12**	**254**	⇓*e*P	**Pn**	**19 44 04.3**	**-0.4**
CAPC				*e*S	**Sn**	**19 44 28.9**	**-1.0**
OCAC	**Ocana**	**2.19**	**117**	*e*P	**Pn**	**19 44 05.9**	**+0.2**
OCAC				*e*S	**Sn**	**19 44 33.7**	**+1.9**
OCAC				*i*		19 44 42.1	
	comp=Z,2µm,0.5s						
SMRC	**Santa Marta, M**	**2.19**	**29**	*e*P	**Pn**	**19 44 05.8**	**+0.2**
SMRC				*e*S	**Sn**	**19 44 31.2**	**-0.5**
SMRC				*i*		19 44 47.0	
	comp=Z,448nm,0.5s						
CVALL	**Valledupar, Ce**	**2.37**	**57**	*e*P	**Pn**	**19 44 08.2**	**0.0**
CVALL				*e*S	**Sn**	**19 44 36.3**	**0.0**
CVALL				*i*		19 44 44.5	
	comp=Z,732nm,0.3s						
DBBC	**Dabeiba**	**2.38**	**203**	*e*P	**Pn**	**19 44 07.8**	**-0.5**
DBBC				*e*S	**Sb**	**19 44 39.7**	**-2.9**
DBBC				*i*		19 44 49.2	
	comp=Z,2µm,0.5s						
BRRC	**Barranca, Sant**	**2.63**	**143**	⇑*e*P	**Pn**	**19 44 12.7**	**+1.0**
BRRC				*e*S	**Sn**	**19 44 44.4**	**+1.9**
BRRC				*i*		19 45 00.5	
	comp=Z,484nm,0.5s						
UPD2	**Meteti**	**2.77**	**256**	⇓*i* P	**Pn**	**19 44 13.9**	**+0.2**
UPD2				*e*S	**Sn**	**19 44 45.3**	**-0.8**
UPD2				*i*		19 44 53.0	
	comp=Z,409nm,0.8s						
PTBC	**PUERTO BERRIO,**	**2.80**	**163**	⇑*e*P	**Pn**	**19 44 15.1**	**+1.0**
PTBC				*e*S	**Sn**	**19 44 46.9**	**+0.1**
PTBC				*i*		19 45 03.1	
	comp=Z,910nm,0.4s						
CRJC	**Cerrejon, Guaj**	**2.97**	**53**	⇑*i* P	**Pn**	**19 44 15.9**	**-0.6**
CRJC				*e*S	**Sn**	**19 44 49.6**	**-1.4**
HELC	**Santa Helena**	**3.03**	**184**	*e*P	**Pn**	**19 44 18.2**	**+0.6**
HELC				*e*S	**Sb**	**19 45 01.3**	**-0.3**
HELC				*i*		19 45 08.3	
	comp=Z,422nm,0.6s						
PAMC	**Pamplona, Colo**	**3.18**	**126**	⇑*e*P	**Pn**	**19 44 21.1**	**+1.4**
PAMC				*e*S	**Sn**	**19 44 58.4**	**+1.5**
PAMC				*i*		19 45 11.8	
	comp=Z,1µm,0.4s						
PTAC	**Punta Ardita,**	**3.24**	**230**	*e*P	**Pn**	**19 44 21.2**	**+1.1**
PTAC				*e*S	**Sn**	**19 44 56.3**	**-1.2**
PTAC				*i*		19 45 02.2	
	comp=Z,549nm,0.2s						
BARC	**Barichara**	**3.35**	**141**	*e*P	**Pn**	**19 44 23.2**	**+1.4**
BARC				*e*S	**Sn**	**19 45 02.0**	**+1.3**
BARC				*i*		19 45 26.0	
	comp=Z,555nm,0.4s						
CBOC	**Ciudad Bolivar**	**3.42**	**192**	*e*P	**Pn**	**19 44 23.7**	**+0.9**
CBOC				*e*S	**Sn**	**19 45 03.1**	**+0.8**
CBOC				*i*		19 45 23.7	
	comp=Z,255nm,0.5s						
NORC	**Norcasia**	**3.67**	**173**	⇑*e*P	**Pn**	**19 44 26.1**	**+0.1**
NORC				*e*S	**Sn**	**19 45 08.8**	**+0.6**
NORC				*i*		19 45 29.1	
	comp=Z,370nm,0.4s						
SPBC	**San Pablo de B**	**3.75**	**161**	*e*P	**Pn**	**19 44 27.7**	**+0.4**
SPBC				*e*S	**Sn**	**19 45 10.4**	**-0.1**
SPBC				*i*		19 45 27.8	
	comp=Z,295nm,0.5s						
RUSC	**La Rusia**	**3.97**	**146**	*e*P	**Pn**	**19 44 32.2**	**+1.5**
RUSC				*e*S	**Sn**	**19 45 16.7**	**+0.3**
RUSC				*i*		19 45 36.9	
	comp=Z,303nm,0.6s						
GUY2C	**Guyana, Caldas**	**3.98**	**181**	*e*P	**Pn**	**19 44 31.5**	**+0.8**
GUY2C				*e*S	**Sn**	**19 45 17.2**	**+0.6**
GUY2C				*i*		19 45 46.4	
	comp=Z,276nm,0.6s						
URIC	**Uribia, Colomb**	**4.07**	**53**	*e*P	**Pn**	**19 44 31.1**	**-0.5**
URIC				*e*S	**Sn**	**19 45 16.6**	**-1.6**
URIC				*i*		19 45 37.2	
	comp=Z,192nm,0.6s						
RREF	**El Recreo**	**4.30**	**181**	*e*P	**Pn**	**19 44 36.7**	**+1.4**
RREF				*e*S	**Sn**	**19 45 26.9**	**+2.2**
RREF				*i*		19 45 54.5	
	comp=Z,224nm,0.6s						
PLMC	**San Jos del P**	**4.41**	**193**	*e*P	**Pn**	**19 44 37.8**	**+1.5**
PLMC				*e*S	**Sb**	**19 45 39.0**	**-2.0**
PLMC				*i*		19 45 56.8	
	comp=Z,64nm,0.7s						
TAMC	**Tame, Arauca**	**4.44**	**128**	*e*P	**Pn**	**19 44 37.2**	**+0.5**
TAMC				*e*S	**Sn**	**19 45 28.3**	**+0.9**
TAMC				*i*		19 45 56.7	
	comp=Z,171nm,0.5s						
ROSC	**El Rosal**	**4.47**	**167**	P	**Pn**	**19 44 39.8**	**+2.4**
	comp=Z,8.4nm,0.3s,baz=134,slow=14,SNR=5.3						
ROSC				S	**Sn**	**19 45 29.6**	**+1.2**
	comp=Z,33nm,0.3s,baz=247,slow=22,SNR=5.3						
ROSC				LR	LR	19 46 39.0	
	comp=Z,671nm,18.1s,baz=0.5,slow=42						
ROSC	**El Rosal**	**4.47**	**167**	*e*P	**Pn**	**19 44 41.2**	**+3.9**
ROSC				*e*S	**Sn**	**19 45 29.0**	**+0.5**
ROSC				*i*		19 45 55.6	
	comp=Z,158nm,0.5s						
ROSC	**El Rosal**	**4.47**	**167**	Pn	**Pn**	**19 44 37.0**	**-0.3**
TOLC	**Tolima**	**4.61**	**180**	*e*P	**Pn**	**19 44 42.0**	**+2.7**
TOLC				*e*S	**Sb**	**19 45 43.5**	**-3.6**
SDV	**Santo Domingo**	**4.62**	**94**	P	**Pn**	**19 44 40.2**	**+1.0**
	comp=Z,39nm,0.3s,baz=272,slow=6.7,SNR=174						
SDV				S	**Sn**	**19 45 28.7**	**-3.1**
	comp=Z,166nm,0.3s,baz=354,slow=5.3,SNR=11						
SDV				LR	LR	19 47 04.4	
	comp=Z,540nm,19.0s,baz=257,slow=46						
SDV	**Santo Domingo**	**4.62**	**94**	⇑*e*P	**Pn**	**19 44 40.0**	**+0.8**
SDV				*e*S	**Sn**	**19 45 30.5**	**-1.3**
SDV				*i*		19 45 32.7	
	comp=Z,356nm,0.5s						
SDV	**Santo Domingo**	**4.62**	**94**	*e*P	**Pn**	**19 44 40.1**	**+1.0**
ANIL	**Santa Ana**	**4.71**	**181**	*e*P	Pn	19 44 45.4	+4.8
ANIL				*e*S	**Sb**	**19 45 43.3**	**-6.6**
CHIC	**Chingaza**	**4.83**	**161**	*e*P	**Pn**	**19 44 42.5**	**+0.3**
CHIC				*e*S	**Sn**	**19 45 37.5**	**+0.2**
CHIC				*i*		19 45 54.2	
	comp=Z,104nm,0.4s						
AZU	**Azuero**	**5.13**	**254**	*e*P	**Pn**	**19 44 47.3**	**+1.2**
AZU				*e*S	**Sn**	**19 45 41.7**	**-2.6**
ORTC	**Ortega, Tolima**	**5.29**	**179**	*e*P	**Pn**	**19 44 52.8**	**+4.5**
ORTC				*e*S	**Sn**	**19 45 52.5**	**+4.3**
ORTC				*i*		19 46 23.0	
	comp=Z,166nm,0.7s						
VILC	**Villavicencio,**	**5.33**	**163**	*e*P	**Pn**	**19 44 49.3**	**+0.4**
VILC				*e*S	**Sn**	**19 45 49.7**	**+0.4**
VILC				*i*		19 45 54.4	
	comp=Z,292nm,0.5s						
MTDJ	**Mount Denham**	**9.21**	**347**	Pn	**Pn**	**19 45 44.0**	**+1.9**
OTAV	**Otavalo**	**9.47**	**200**	Pn	**Pn**	**19 45 46.7**	**+0.5**
JTS	**Las Juntas de**	**9.58**	**277**	P	**Pn**	**19 45 47.2**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=327,slow=2.2,SNR=2.6						
JTS				LR	LR	19 50 09.1	
	comp=Z,103nm,21.4s,baz=174,slow=41						
JTS	**Las Juntas de**	**9.58**	**277**		**Pn**	**19 45 47.5**	**+0.2**
GTBY	**Guantanamo Bay**	**10.64**	**1**	Pn	**Pn**	**19 46 03.3**	**+1.6**
DR12	**Loma Pena Alta**	**11.10**	**30**	Pn	**Pn**	**19 46 07.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**11.80**	**41**	Pn	**Pn**	**19 46 14.1**	**-3.5**
MLPR	**Magueyes Islan**	**11.82**	**42**	Pn	**Pn**	**19 46 14.4**	**-3.5**
AOPR	**Arecibo Observ**	**12.28**	**42**	Pn	**Pn**	**19 46 20.9**	**-3.3**
SJG	**San Juan**	**12.52**	**44**	P	**Pn**	**19 46 24.4**	**-3.1**
	comp=Z,1.3nm,0.3s,baz=353,slow=22,SNR=2.0						
SJG				LR	LR	19 51 28.2	
	comp=Z,88nm,20.7s,baz=256,slow=38						
SJG	**San Juan**	**12.52**	**44**	Pn	**Pn**	**19 46 24.0**	**-3.5**
PDPR	**Patillas Dam,**	**12.54**	**45**	Pn	**Pn**	**19 46 23.4**	**-4.5**
GCPR	**Guaynabo City**	**12.70**	**44**	Pn	**Pn**	**19 46 26.3**	**-3.7**
CBYP	**Canovanas**	**12.83**	**45**	Pn	**Pn**	**19 46 28.6**	**-3.2**
MTP	**Monte Pirata**	**12.93**	**46**	Pn	**Pn**	**19 46 29.2**	**-3.8**
CUPR	**Culebra, Puert**	**13.26**	**46**	Pn	**Pn**	**19 46 33.7**	**-3.8**
CZSB	**Cruzeiro do Su**	**17.04**	**171**	*e*P	**P**	**19 47 28.4**	**-0.7**
MACA	**Manacapuru-AM**	**19.07**	**130**	*e*P	P	19 47 43.9	-7.5
CMIG	**Matias Romero**	**20.60**	**294**	LR	LR	19 56 51.3	
	comp=Z,31nm,20.0s,baz=76,slow=39						
ETMB	**Extrema**	**20.97**	**154**	*e*P	**P**	**19 48 11.1**	**-0.9**
NNA	**Nana**	**21.13**	**184**	LR	LR	19 57 44.5	
	comp=Z,198nm,20.2s,baz=352,slow=40						
SAML	**Samuel**	**21.71**	**146**	P	**P**	**19 48 17.5**	**-2.6**
SAML	**Samuel**	**21.71**	**146**	*e*P	**P**	**19 48 17.9**	**-2.2**
MDP	**Montagnes des**	**22.84**	**99**	LR	LR	19 59 01.8	
	comp=Z,51nm,20.6s,baz=261,slow=41						
MALB	**Monte Alegre**	**23.67**	**117**	*e*P	**P**	**19 48 39.0**	**-1.4**
ITTB	**Itaituba**	**23.72**	**124**	*e*P	**P**	**19 48 38.1**	**-2.7**
MCPB	**Macapa, AP**	**25.02**	**111**	*e*P	**P**	**19 48 54.0**	**+1.1**
NPGB	**Novo Progresso**	**25.61**	**128**	*e*P	**P**	**19 48 58.2**	**-0.1**
LPAZ	**La Paz**	**26.32**	**164**	P	**P**	**19 49 04.2**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=59,slow=4.7,SNR=6.3						
LPAZ				LR	LR	20 00 29.1	
	comp=Z,115nm,18.8s,baz=28,slow=39						
LPAZ	**La Paz**	**26.32**	**164**	P	**P**	**19 49 03.9**	**-1.5**
LPAZ				IAmb	IAmb	19 49 23.2	
	comp=Z,12nm,1.3s						
LPAZ	**La Paz**	**26.32**	**164**	*e*P	**P**	**19 49 10.7**	**+5.4**
LPAZ				*e*S	**S**	**19 53 30.1**	**-6.8**
VILB	**Vilhena**	**26.65**	**146**	*e*P	**P**	**19 49 10.2**	**+2.6**
TKL	**Tuckaleechee C**	**27.42**	**345**	LR	LR	20 00 23.4	
	comp=Z,57nm,19.4s,baz=164,slow=37						
CLDB	**Colider**	**27.84**	**135**	*e*P	**P**	**19 49 20.4**	**+2.1**
PB16	**IPOC Station P**	**27.98**	**168**	P	**P**	**19 49 16.7**	**-3.4**
PB16				IAmb	IAmb	19 49 33.2	
	comp=Z,5.1nm,0.8s						
SIV	**San Ignacio**	**28.74**	**151**	P	**P**	**19 49 25.9**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=336,slow=12,SNR=4.4						
SIV				LR	LR	20 01 40.4	
	comp=Z,194nm,18.2s,baz=334,slow=38						
PTLB	**Pontes e Lacer**	**29.28**	**147**	*e*P	**P**	**19 49 33.8**	**+2.7**
PB11	**IPOC Station P**	**29.34**	**169**	P	**P**	**19 49 28.8**	**-2.9**
PRPB	**Parauapebas**	**29.64**	**120**	*e*P	**P**	**19 49 36.3**	**+1.9**
FCAR	**Ozark Folk Cen**	**30.65**	**333**	P	**P**	**19 49 44.0**	**+1.0**
FCAR				IAmb	IAmb	19 49 44.6	
	comp=Z,8.8nm,1.0s						
U40A	**Yellville**	**31.37**	**332**	P	**P**	**19 49 49.8**	**+0.4**
Z35A	**Perchaven, San**	**31.39**	**323**	P	**P**	**19 49 50.8**	**+1.2**
Z35A				IAmb	IAmb	19 49 54.8	
	comp=Z,4.5nm,0.6s						
FVM	**French Village**	**31.71**	**337**	P	**P**	**19 49 53.8**	**+1.5**
SNDB	**Serra Nova Dou**	**31.82**	**131**	*e*P	**P**	**19 49 56.3**	**+2.7**
CCM	**Cathedral Cave**	**32.10**	**336**	P	**P**	**19 49 56.8**	**+1.1**
U38A	**Gravette**	**32.16**	**330**	P	**P**	**19 49 56.7**	**+0.3**
U38A				IAmb	IAmb	19 49 57.6	
	comp=Z,4.3nm,0.8s						
LVC	**Limon Verde**	**32.25**	**169**	*e*P	P	19 50 05.9	+8.3
TXAR	**Lajitas Array**	**33.27**	**311**	P	**P**	**19 50 06.9**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=126,slow=8.9,SNR=15						
TXAR				PcP	**PcP**	**19 52 48.1**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=116,slow=2.9,SNR=5.1						
TXAR				LR	LR	20 06 47.2	
	comp=Z,11nm,21.1s,baz=0.0,slow=42						
TX31	**Lajitas Ar. Si**	**33.27**	**311**	P	**P**	**19 50 07.2**	**+0.9**
TX31				IAmb	IAmb	19 50 28.4	
	comp=Z,3.7nm,1.0s						
TX32	**Lajitas Array**	**33.27**	**311**	P	**P**	**19 50 07.3**	**+1.1**
PP1B	**Ponte de Pedra**	**33.43**	**143**	*e*P	**P**	**19 50 10.6**	**+3.0**
PEXB	**Peixe**	**34.19**	**128**	*e*P	**P**	**19 50 16.7**	**+2.4**
KSU1	**Kansas State U**	**35.34**	**331**	P	**P**	**19 50 23.7**	**-0.2**
MNTX	**Cornudas Mount**	**35.77**	**313**	P	**P**	**19 50 28.6**	**+0.9**
MNTX				IAmb	IAmb	19 50 29.9	
	comp=Z,3.9nm,0.8s						
BDFB	**Brasilia**	**36.62**	**132**	LR	LR	20 06 40.6	
	comp=Z,200nm,18.2s,baz=318,slow=38						
SDBA	**SAO DESIDERIO**	**37.07**	**125**	*e*P	**P**	**19 50 41.8**	**+2.8**
SDBA				*e*S	S	19 56 09.6	-14
ITRB	**Iturama**	**37.81**	**140**	*e*S	S	19 56 22.0	-12
121A	**Cookes Peak, D**	**37.94**	**312**	P	**P**	**19 50 48.0**	**+1.6**
121A				IAmb	IAmb	19 50 49.8	
	comp=Z,6.3nm,0.9s						
ANMO	**Albuquerque**	**38.30**	**317**	P	**P**	**19 50 50.2**	**+0.8**
CPUP	**Villa Florida**	**39.42**	**154**	P	**P**	**19 51 00.8**	**+2.2**
	comp=Z,1.4nm,0.6s,baz=344,slow=10,SNR=3.2						
CPUP				LR	LR	20 08 40.4	
	comp=Z,100nm,18.1s,baz=24,slow=38						
CPUP	**Villa Florida**	**39.42**	**154**	*e*P	P	19 51 04.4	+5.8
PV01	**Paradox Valley**	**41.51**	**319**	P	**P**	**19 51 16.1**	**-0.1**
X16A	**Lo Mia Camp, P**	**41.52**	**313**	P	**P**	**19 51 16.9**	**+0.7**
PV13	**Radium Mtn., P**	**41.69**	**319**	P	**P**	**19 51 19.3**	**+1.7**
PV13				IAmb	IAmb	19 51 33.7	
	comp=Z,10.0nm,1.3s						
WUAZ	**Wupatki**	**42.01**	**314**	P	**P**	**19 51 22.2**	**+2.0**
WUAZ				IAmb	IAmb	19 51 24.3	
	comp=Z,6.5nm,1.0s						
RCBR	**Riachuelo**	**42.01**	**109**	*e*P	P	19 51 25.5	+5.1
ITQB	**Itaqui**	**42.65**	**156**	*e*P	P	19 51 31.7	+6.5
PET01	**Itanhaem-SP**	**43.11**	**141**	*e*P	**P**	**19 51 33.5**	**+4.5**
U15A	**North Rim**	**43.11**	**315**	P	**P**	**19 51 31.0**	**+1.8**
BO02	**Sierra Bellavi**	**43.99**	**175**	P	**P**	**19 51 35.9**	**-0.1**
LCMT	**Little Creek M**	**44.06**	**315**	P	**P**	**19 51 37.1**	**+0.3**
ULM	**Lac du Bonnet**	**44.32**	**341**	LR	LR	20 12 13.4	
	comp=Z,39nm,18.3s,baz=122,slow=39						
PDAR	**Pinedale Array**	**44.88**	**324**	P	**P**	**19 51 43.5**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=110,slow=8.1,SNR=4.4						
PDAR				PcP	**PcP**	**19 53 23.2**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=120,slow=8.8,SNR=3.8						
DUG	**Dugway, Tooele**	**45.40**	**319**	P	**P**	**19 51 49.1**	**+1.8**
DUG				IAmb

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.66**	**166**	P	**Pg**	**20 29 12.7**	**+0.3**
IRIF				S	**Sg**	**20 29 21.6**	**+0.5**
YOJ	**Yonaguni jima**	**0.71**	**224**	P	**Pg**	**20 29 13.3**	**0.0**
YOJ				S	**Sg**	**20 29 22.5**	**-0.1**
JYNG	**Yonagunijimaku**	**0.76**	**226**	P	**Pg**	**20 29 14.1**	**-0.2**
JYNG				S	**Sg**	**20 29 24.2**	**0.0**
JISG	**Ishigakijimahi**	**0.80**	**119**	P	**Pg**	**20 29 14.9**	**-0.1**
JISG				S	**Sg**	**20 29 26.0**	**+0.7**
JIJ	**Ishigaki jima**	**0.82**	**139**	P	**Pg**	**20 29 15.0**	**-0.4**
JIJ				S	**Sg**	**20 29 26.0**	**0.0**
JKRS	**Kuro-shima**	**0.85**	**150**	P	**Pg**	**20 29 16.1**	**+0.1**
JKRS				S	**Sg**	**20 29 27.7**	**+0.6**
HATJ	**Hateruma jima**	**0.95**	**166**	P	**Pg**	**20 29 17.3**	**-0.6**
HATJ				S	**Sg**	**20 29 30.0**	**-0.2**
JTJ	**Tarama**	**1.10**	**108**	P	**Pg**	**20 29 20.5**	**-0.3**
JTJ				eS	**Sg**	**20 29 34.8**	**-0.3**
JNU	**Nakatsue**	**10.34**	**37**	LR	LR	20 36 23.4	
	comp=Z,178nm,18.7s,baz=266,slow=42						
KSRS	**Korea Array**	**12.98**	**16**	P	Pn	20 32 12.0	+7.2
	baz=201,slow=11,SNR=2.6						
KSRS				LR	LR	20 37 00.1	
	comp=Z,53nm,21.0s,baz=228,slow=36						
MJAR	**Matsushiro Arr**	**17.05**	**44**	LR	LR	20 40 40.1	
	comp=Z,30nm,21.1s,baz=215,slow=40						
CMAR	**Chiang Mai Arr**	**23.74**	**259**	P	**P**	**20 34 13.0**	**0.0**
	0.7nm,0.9s,baz=59,slow=8.5,SNR=6.0						
SONM	**Songino Array**	**26.54**	**334**	P	**P**	**20 34 39.6**	**+1.1**
	0.4nm,0.8s,baz=153,slow=7.6,SNR=2.6						
PSI	**Prapat**	**32.39**	**231**	LR	LR	20 47 45.6	
	comp=Z,20nm,19.4s,baz=270,slow=34						
MKAR	**Makanchi Array**	**39.29**	**314**	P	**P**	**20 36 29.4**	**-0.1**
	0.4nm,0.7s,baz=91,slow=12,SNR=2.5						
ZALV	**Zalesovo Beam**	**40.78**	**326**	P	**P**	**20 36 41.2**	**-0.4**
	0.3nm,0.4s,baz=104,slow=6.1,SNR=4.4						
WRA	**Warramunga Arr**	**45.87**	**166**	P	**P**	**20 37 22.2**	**-0.9**
	1.1nm,0.7s,baz=348,slow=8.8,SNR=13						
ASAR	**Alice Springs**	**49.39**	**167**	P	**P**	**20 37 50.8**	**+0.3**
	0.3nm,0.5s,baz=353,slow=12,SNR=6.4						

*ISK **27** 20:33:58.3, 39˙.36N×29˙.03E, h5km, ML2.6/5*
*DDA **27** 20:33:58.6, 39˙.34N×29˙.02E, h7km±1km, ML2.1*
ISC 27 20:33:58.7±1.1, 39˙.36N±0˙.03×29˙.01E±0˙.04, h10km±11km, n14, σ0°32/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIMA	**Simav-Kutahya**	**0.28**	**184**	PG	**Pg**	**20 34 04.5**	**+0.2**
SIMA				SG	**Sg**	**20 34 08.4**	**+0.3**
TVSB	**Tavsanli**	**0.36**	**76**	PG	**Pg**	**20 34 05.8**	**-0.1**
TVSB				SG	**Sg**	**20 34 10.9**	**+0.2**
SHAP	**Saphane-Kutahy**	**0.38**	**154**	PG	**Pg**	**20 34 06.1**	**0.0**
SHAP				SG	**Sg**	**20 34 11.4**	**+0.3**
DST	**Dursunbey**	**0.39**	**309**	PG	**Pg**	**20 34 06.4**	**+0.1**
GEDZ	**Gediz**	**0.45**	**135**	PG	**Pg**	**20 34 07.3**	**-0.1**
GDZ	**Gediz**	**0.46**	**126**	*i* P	**Pg**	**20 34 07.5**	**-0.1**
GDZ				*i* S	**Sg**	**20 34 18.7**	**0.0**
USAK	**Uak-Merkez**	**0.65**	**179**	*i* P	**Pg**	**20 34 11.1**	**-0.1**
ANDZ	**Kutahya, Merke**	**0.71**	**78**	*i* P	**Pg**	**20 34 12.1**	**-0.2**
ULDT	**Uludag**	**0.79**	**7**	*i* P	**Pg**	**20 34 13.9**	**0.0**
ULDT				*i* S	**Sb**	**20 34 25.1**	**-0.2**
IGD	**Bursa**	**0.92**	**9**	*i* P	**Pg**	**20 34 16.4**	**+0.1**
IGD				*i* S	**Sb**	**20 34 28.9**	**0.0**
IGD				IAML		20 34 32.0	
	comp=N,71nm,0.4s						
IGD				IAML		20 34 32.0	
	comp=E,71nm,0.2s						
MANT	**Manisa**	**0.94**	**202**	*i* P	**Pg**	**20 34 16.5**	**-0.2**
MANT				IAML		20 34 28.0	
	comp=N,51nm,0.2s						
MANT				IAML		20 34 28.0	
	comp=E,64nm,0.3s						
MANT				*i* S	**Sg**	**20 34 28.2**	**-0.7**
AUBOZ	**BOZOYUK**	**0.96**	**55**	*i* P	**Pb**	**20 34 17.2**	**-0.3**
AUBOZ				*i* S	**Sb**	**20 34 30.9**	**+0.5**
AUBOZ				IAML		20 34 34.0	
	comp=N,120nm,0.4s						
AUBOZ				IAML		20 34 35.0	
	comp=E,94nm,0.5s						
BILE	**Bilecik/Merkez**	**1.04**	**40**	*i* P	**Pg**	**20 34 18.4**	**-0.3**
BILE				IAML		20 34 36.0	
	comp=N,104nm,0.2s						
BILE				IAML		20 34 37.0	
	comp=E,99nm,0.2s						
BORA	**Eskisehir**	**1.23**	**65**	*i* P	**Pg**	**20 34 21.9**	**-0.4**
BORA				*i* S	**Sn**	**20 34 39.4**	**+0.6**
BORA				IAML		20 34 40.0	
	comp=E,26nm,0.6s						

*NCEDC **27** 20:36:15.5±2.2, 38˙.35N±0˙.02×122˙.37W±0˙.03, h5km±5km, ML3.0/61, Error ellipse: s-maj=3.3km s-min=1.8km az=63.0*
NEIC 27 20:36:15.8±1.8, 38˙.36N±0˙.01×122˙.35W±0˙.01, h11km±5km, Error ellipse: s-maj=2.0km s-min=1.4km az=183.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVS	**Carmenet Viney**	**0.09**	**261**		Pg	20 36 17.5	-0.9
HERB	**Hercules**	**0.35**	**169**		Pg	20 36 23.0	+0.1
RFSB	**Richmond Field**	**0.44**	**179**		Pg	20 36 24.6	+0.1
BRIB	**Briones**	**0.47**	**161**		Pg	20 36 25.0	0.0
MCCM	**Marconi Confer**	**0.47**	**243**		Pg	20 36 24.6	-0.4
BL88	**Building 88, L**	**0.49**	**171**		Pg	20 36 25.6	+0.2
VAK	**Adit at Lawren**	**0.49**	**171**		Pg	20 36 25.4	0.0
BL67	**Building 67, L**	**0.49**	**171**		Pg	20 36 25.5	+0.1
BRK	**Berkeley--Havi**	**0.49**	**172**		Pg	20 36 25.4	0.0
BKS	**Berkeley--Byer**	**0.49**	**170**		Pg	20 36 25.4	0.0
MNRC	**McLaughlin Min**	**0.52**	**352**		Pg	20 36 26.4	+0.4
SMCB	**Saint Mary's C**	**0.55**	**160**		Pg	20 36 26.7	+0.1
BDM	**Black Diamond**	**0.56**	**137**		Pg	20 36 27.0	+0.4
GDXM	**Geysers**	**0.57**	**322**		Pg	20 36 26.5	-0.4
GSGM	**Seigler Mounta**	**0.58**	**331**		Pg	20 36 27.6	+0.5
CMCM	**Mills College**	**0.59**	**167**		Pg	20 36 27.2	-0.1
FTR	**Fort Ross**	**0.66**	**285**		Pg	20 36 28.4	-0.3
GPMM	**Pine Mountain**	**0.68**	**316**		Pg	20 36 29.1	+0.2
GWKM	**Walker Ridge**	**0.70**	**351**		Pb	20 36 30.2	+0.1
FARB	**Farallon Islan**	**0.84**	**218**		Pg	20 36 31.2	-0.8
HOPS	**Hopland Field**	**0.85**	**318**		Pg	20 36 32.3	0.0
WENL	**Wente Vineyard**	**0.87**	**147**		Pg	20 36 32.6	0.0
JRSC	**Jasper Ridge**	**0.96**	**175**		Pg	20 36 33.3	-1.0
SUTB	**Sutter Butte**	**0.97**	**27**		Pg	20 36 32.8	-1.8
MHC	**Mount Hamilton**	**1.16**	**151**		Pb	20 36 36.6	-1.4
AFDM	**Forest Hills D**	**1.23**	**61**		Pn	20 36 37.1	-1.9
GASB	**Alder Springs**	**1.32**	**348**		Pn	20 36 40.6	+0.1
ORV	**Oroville**	**1.39**	**29**		Pn	20 36 38.9	-2.0
GHS	**Gilroy Hot Spr**	**1.45**	**150**		Pn	20 36 40.8	-1.2
HCOM	**Corn Cob Canyo**	**1.55**	**161**		Pn	20 36 42.4	-1.0
HFEM	**San Felipe**	**1.56**	**151**		Pn	20 36 42.5	-1.1
CMB	**Columbia Colle**	**1.58**	**101**		Pn	20 36 42.9	-1.0
PACP	**Pacheco Peak**	**1.59**	**148**		Pn	20 36 43.2	-0.8
SAO	**San Andreas Ge**	**1.75**	**156**		Pn	20 36 45.0	-1.1
SCZ	**Santa Cruz**	**1.91**	**157**		Pn	20 36 46.7	-1.7
BJCM	**Johnson Can.**	**1.96**	**157**		Pn	20 36 47.4	-1.7
HAST	**Hastings Reser**	**2.07**	**162**		Pn	20 36 48.9	-1.7
BSMM	**Soledad Missio**	**2.10**	**159**		Pn	20 36 50.2	-0.9
BEKR	**Beckworth**	**2.16**	**45**		Pn	20 36 52.6	+0.6
WDC	**Whiskeytown Da**	**2.22**	**356**		Pn	20 36 51.3	-1.3
PNTR	**Pine Nut**	**2.27**	**70**		Pn	20 36 54.3	+0.7
WAKR	**Walker**	**2.29**	**85**		Pn	20 36 55.4	+1.6
VCNR	**Virginia City**	**2.31**	**65**		Pb	20 36 56.0	-1.6
PMPB	**Monarch Peak**	**2.47**	**150**		Pn	20 36 55.3	-0.8
PAPM	**Alder Peak**	**2.56**	**162**		Pn	20 36 56.2	-1.2
PAHR	**Pah Rah Range**	**2.67**	**59**		Pn	20 36 58.6	-0.3
MDPB	**Devils Postpil**	**2.68**	**105**		Pn	20 36 59.6	+0.4
OMMB	**Old Mammoth Mi**	**2.75**	**105**		Pn	20 37 00.4	+0.2
RYN	**Ryan**	**3.01**	**84**		Pn	20 37 04.2	+0.5
LHV	**Little Huntoon**	**3.02**	**91**		Pn	20 37 05.0	+1.3
NVAR	**Mina Array Bea**	**3.18**	**87**		Pn	20 37 07.9	+1.9
NV11	**Mina Array Sit**	**3.29**	**87**		Pn	20 37 07.4	-0.1
KVN	**Kaiserville**	**3.39**	**77**		Pn	20 37 09.1	+0.1
ISA	**Isabella, Lake**	**4.11**	**130**		Pn	20 37 18.6	0.0

*ISK **27** 20:36:43.5, 39˙.35N×29˙.03E, h5km, ML3.5/19*
*DDA **27** 20:36:43.5, 39˙.35N×29˙.01E, h8km±1km, ML3.4*
ISC 27 20:36:44.0±1.0, 39˙.36N±0˙.02×29˙.02E±0˙.02, h8km±9km, n49, σ0°91/69, 5C-2D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIMA	**Simav-Kutahya**	**0.27**	**185**	PG	**Pg**	**20 36 49.5**	**0.0**
SIMA				SG	**Sg**	**20 36 53.4**	**+0.3**
TVSB	**Tavsanli**	**0.36**	**75**	PG	**Pg**	**20 36 50.7**	**-0.4**
TVSB				SG	**Sg**	**20 36 56.0**	**+0.2**
SHAP	**Saphane-Kutahy**	**0.37**	**154**	PG	**Pg**	**20 36 51.2**	**-0.1**
SHAP				SG	**Sg**	**20 36 56.2**	**+0.1**
DST	**Dursunbey**	**0.40**	**309**	PG	**Pg**	**20 36 51.5**	**-0.3**
GEDZ	**Gediz**	**0.44**	**135**	PG	**Pg**	**20 36 52.4**	**-0.1**
GEDZ				SG	**Sb**	**20 36 58.9**	**-1.8**
USAK	**Uak-Merkez**	**0.64**	**180**	*i* P	**Pg**	**20 36 56.0**	**-0.4**
USAK				*i* S	**Sg**	**20 37 04.4**	**-0.3**
ORLT	**Orhaneli**	**0.70**	**352**	PG	**Pg**	**20 36 57.3**	**-0.1**
ANDZ	**Kutahya, Merke**	**0.70**	**77**	*i* P	**Pg**	**20 36 57.0**	**-0.6**
ANDZ				*i* S	**Sg**	**20 37 07.0**	**+0.3**
ULDT	**Uludag**	**0.79**	**7**	*i* P	**Pg**	**20 36 58.8**	**-0.5**
ULDT				*i* S	**Sg**	**20 37 09.7**	**+0.1**
ULDT				IAML		20 37 14.0	
	comp=N,2μm,0.3s						
KULA	**Kula-Manisa**	**0.88**	**198**	PG	**Pg**	**20 37 00.7**	**-0.3**
IGD	**Bursa**	**0.92**	**9**	*i* P	**Pg**	**20 37 01.1**	**-0.5**
IGD				*i* S	**Sg**	**20 37 13.9**	**+0.2**
BALB	**Balikesir**	**0.92**	**288**	PG	**Pb**	**20 37 02.5**	**+0.2**
MANT	**Manisa**	**0.94**	**203**	*i* P	**Pg**	**20 37 01.3**	**-0.7**
MANT				*i* S	**Sg**	**20 37 13.3**	**-0.9**
AUBOZ	**BOZOYUK**	**0.96**	**54**	*i* P	**Pg**	**20 37 01.9**	**-0.6**
AUBOZ				*i* S	**Sn**	**20 37 16.7**	**-1.1**
AUBOZ				IAML		20 37 19.0	
	comp=N,1μm,0.4s						
AUBOZ				IAML		20 37 20.0	
	comp=E,1μm,0.4s						
STEP	**BALIKESIR_Sava**	**1.01**	**272**	*i* P	**Pb**	**20 37 03.4**	**-0.3**
STEP				*i* S	**Sb**	**20 37 17.4**	**+0.3**
STEP				IAML		20 37 20.0	
	comp=E,1μm,0.2s						
STEP				IAML		20 37 20.0	
	comp=N,1μm,0.6s						
MDNY	**Mudanya-Bursa**	**1.02**	**354**	PG	**Pg**	**20 37 03.2**	**-0.4**
BILE	**Bilecik/Merkez**	**1.04**	**39**	*i* P	**Pg**	**20 37 03.7**	**-0.4**
BILE				*i* S	**Sb**	**20 37 18.2**	**-0.1**
BILE				IAML		20 37 22.0	
	comp=N,846nm,0.4s						
AKHS	**Akhisar**	**1.05**	**243**	*i* P	**Pg**	**20 37 03.8**	**-0.4**
AKHS				*i* S	**Sb**	**20 37 18.8**	**+0.5**
AKS	**Akhisar**	**1.05**	**243**	PG	**Pb**	**20 37 04.3**	**-0.1**
CAVI	**Cavuskoy**	**1.06**	**37**	PG	**Pb**	**20 37 04.5**	**-0.1**
GOMA	**Golmarmara-Man**	**1.07**	**233**	PG	**Pn**	**20 37 04.7**	**-0.6**
GEMT	**Gemlik**	**1.09**	**7**	PN	**Pn**	**20 37 05.4**	**-0.1**
BALY	**Balya**	**1.15**	**290**	*i* P	**Pn**	**20 37 06.5**	**+0.2**
BALY				*i* S	**Sb**	**20 37 21.1**	**-0.1**
AFYO	**Afyonkarahisar**	**1.15**	**119**	*i* P	**Pn**	**20 37 06.8**	**+0.3**
AFYO				*i* S	**Sn**	**20 37 23.4**	**+1.0**
AUKIR	**Kırka- Seyitga**	**1.18**	**93**	*i* P	**Pn**	**20 37 07.4**	**+0.5**
AUKIR				*i* S	**Sn**	**20 37 24.6**	**+1.4**
ADVT	**Abdulvahap**	**1.21**	**27**	PN	**Pn**	**20 37 07.6**	**+0.3**
BORA	**Eskisehir**	**1.23**	**64**	*i* P	**Pg**	**20 37 06.9**	**-0.7**
BORA				*i* S	**Sn**	**20 37 24.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.24**	**304**	PN	**Pn**	**20 37 07.8**	**+0.2**
EDC	**Edincik**	**1.33**	**319**	PN	**Pg**	**20 37 09.5**	**0.0**
KZIL	**AFYON_Kizioren**	**1.41**	**141**	*i* P	**Pg**	**20 37 10.3**	**-0.7**
KZIL				*i* S	**Sg**	**20 37 30.6**	**+1.4**
SRCK	**Saricakaya, Es**	**1.42**	**61**	PN	**Pb**	**20 37 10.1**	**-0.6**
SGAZ	**Eskisehir, Sey**	**1.42**	**82**	*i* P	**Pn**	**20 37 09.4**	**-0.8**
SHUT	**Suhut-Afyon**	**1.44**	**123**	PN	**Pb**	**20 37 10.8**	**-0.4**
KNL	**Balıkesir**	**1.47**	**309**	*i* P	**Pg**	**20 37 11.8**	**-0.3**
KNL				*i* S	**Sg**	**20 37 30.8**	**-0.4**
GEYV	**SAKARYA_Geyve**	**1.50**	**41**	*i* P	**Pg**	**20 37 12.1**	**-0.7**
GEYV				*i* S	**Sg**	**20 37 34.2**	**+2.0**
GEYV				IAML		20 37 35.0	
	comp=N,556nm,0.4s						
GEYV				IAML		20 37 36.0	
	comp=E,391nm,0.4s						
ZEDA	**zmir-Bergama**	**1.56**	**256**	*i* P	**Pb**	**20 37 12.4**	**-0.6**
ZEDA				*i* S	**Sg**	**20 37 33.9**	**-0.2**
GULT	**Gulveren**	**1.58**	**47**	PN	**Pn**	**20 37 12.5**	**+0.1**
CIFT	**Cifteler, Eski**	**1.59**	**89**	PN	**Pn**	**20 37 12.1**	**-0.4**
BRDR	**BURDUR-Merkez**	**1.85**	**153**	*i* P	**Pg**	**20 37 18.9**	**-0.6**
BRDR				*i* S	**Sg**	**20 37 48.2**	**+4.8**
AUSIV	**SIVRIHISAR**	**1.96**	**87**	*i* P	**Pg**	**20 37 20.3**	**-1.3**
RASA	**Rasa**	**5.05**	**345**	⇑P	**Pb**	**20 38 13.7**	**+1.1**
TIRR	**Tirgusor**	**5.12**	**355**	⇓P	**Pn**	**20 38 01.1**	**+0.1**
KKB	**Krupnik**	**5.17**	**301**	*e*P	Pg	20 38 29.0	+6.1
VTS	**Vitosha**	**5.46**	**309**	*e*P	Pg	20 38 35.7	+7.2
TPGR	**Topolog**	**5.51**	**356**	⇓P	**Pn**	**20 38 06.2**	**-0.2**
CFR	**Carcaliu**	**5.86**	**354**	⇑P	**Pn**	**20 38 10.6**	**-0.5**
MLR	**Muntele Rosu**	**6.54**	**341**	⇑P	**Pn**	**20 38 21.8**	**+1.2**
VRI	**Vrincioaia**	**6.72**	**346**	⇑P	**Pn**	**20 38 23.7**	**+0.7**
VOIR		**6.75**	**336**	⇑P	**Pn**	**20 38 21.6**	**-1.8**

*IDC **27** 21:22:27.0±1.3, 5˙.70N×61˙.27E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/41, mbtmp3.6/7, MS3.2/9, Ms1 3.2/9, ms1mx3.0/29, Error ellipse: s-maj=38.6km s-min=26.1km az=28.0*
ISC 27 21:22:28.7±1.3, 5˙.7N±0˙.2×61˙.3E±0˙.2, h10km, n14, σ0°53/7, mb3.6/7, MS3.2/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**17.60**	**352**	LR	LR	21 31 58.1	
	comp=Z,56nm,18.4s,baz=186,slow=32						
PALK	**Pallekele**	**19.37**	**84**	LR	LR	21 33 02.9	
	comp=Z,35nm,18.4s,baz=357,slow=33						
OPO	**Ambohidratompo**	**27.85**	**210**	LR	LR	21 36 28.3	
	comp=Z,59nm,20.9s,baz=236,slow=30						
CMAR	**Chiang Mai Arr**	**38.85**	**68**	P	**P**	**21 29 54.4**	**-0.1**
	0.2nm,0.3s,baz=263,slow=9.9,SNR=5.5						
CMAR				LR	LR	21 44 47.3	
	comp=Z,26nm,18.7s,baz=255,slow=34						
KBZ	**Khabaz**	**41.16**	**340**	LR	LR	21 48 39.1	
	comp=Z,29nm,18.6s,baz=116,slow=38						
BRTR	**Keskin Array B**	**42.01**	**328**	P	**P**	**21 30 19.9**	**-0.6**
	0.7nm,0.8s,baz=128,slow=9.3,SNR=3.7						
BRTR				LR	LR	21 48 18.1	
	comp=Z,17nm,20.2s,baz=136,slow=37						
MKAR	**Makanchi Array**	**44.75**	**20**	P	**P**	**21 30 43.1**	**+0.8**
	0.4nm,0.8s,baz=224,slow=9.7,SNR=2.0						
BOSA	**Boshof**	**48.66**	**224**	LR	LR	21 50 29.8	
	comp=Z,54nm,19.5s,baz=108,slow=35						
ZALV	**Zalesovo Beam**	**51.75**	**18**	LR	LR	21 53 57.9	
	comp=Z,25nm,19.5s,baz=144,slow=36						
SONM	**Songino Array**	**56.89**	**35**	P	**P**	**21 32 13.6**	**-0.4**
	0.7nm,1.1s,baz=267,slow=2.9,SNR=2.2						
TORD	**Torodi Ar. Bea**	**59.12**	**282**	P	**P**	**21 32 30.3**	**+0.3**
	0.4nm,0.8s,baz=66,slow=3.6,SNR=2.7						
ARCES	**ARCESS Array B**	**67.87**	**347**	LR	LR	22 03 56.3	
	comp=Z,19nm,19.6s,baz=20,slow=37						
WRA	**Warramunga Arr**	**76.17**	**112**	P	**P**	**21 34 17.6**	**-0.1**
	0.9nm,0.9s,baz=286,slow=5.8,SNR=6.0						
ASAR	**Alice Springs**	**76.54**	**116**	P	**P**	**21 34 19.8**	**0.0**
	0.7nm,0.8s,baz=280,slow=5.3,SNR=5.8						

IDC 27 21:32:45.4±1.4, 5˙.17S×150˙.86E, h0km, mb3.2/2, mb1 3.6/2, mb1mx3.3/24, mbtmp3.3/2, Error ellipse: s-maj=99.6km s-min=13.3km az=142.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.45**	**54**	Pg	Pn	21 33 12.7	-0.2
	111nm,0.3s,baz=188,slow=0.8,SNR=40						
KRVT				Lg	Lg	21 33 31.5	
	112nm,0.3s,baz=125,slow=22,SNR=19						
KRVT				LR	LR	21 33 33.7	
	comp=Z,48nm,18.1s,baz=208,slow=33						
WRA	**Warramunga Arr**	**21.77**	**226**	P	P	21 37 40.6	+1.6
	1.0nm,0.7s,baz=52,slow=9.9,SNR=12						
ASAR	**Alice Springs**	**24.60**	**220**	P	P	21 38 07.1	-0.5
	0.5nm,0.7s,baz=52,slow=10.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**148.57**	**287**	PKPbc	PKPdf	21 52 33.3	+1.5
	0.6nm,1.1s,baz=71,slow=2.3,SNR=1.6						

IDC 27 22:08:57.4±3.0, 3˙.81S×141˙.67E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.4/31, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=62.7km s-min=14.5km az=71.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.60**	**323**	Pg	Pn	22 09 27.4	+0.4
	4.1nm,0.3s,baz=170,slow=8.8,SNR=16						
JAY				Lg	Lg	22 09 47.5	
	12nm,0.3s,baz=292,slow=13,SNR=9.7						
WRA	**Warramunga Arr**	**17.56**	**203**	P	Pn	22 13 03.1	-0.5
	0.2nm,0.3s,baz=22,slow=13,SNR=8.2						
ASAR	**Alice Springs**	**21.12**	**200**	P	P	22 13 43.8	-0.1
	1.0nm,0.6s,baz=30,slow=11,SNR=14						
FITZ	**Fitzroy Crossi**	**21.16**	**227**	P	P	22 13 44.8	+0.5
	1.0nm,0.7s,baz=29,slow=10,SNR=1.6						
MKAR	**Makanchi Array**	**72.47**	**322**	P	P	22 20 25.7	-0.2
	0.3nm,0.7s,baz=82,slow=13,SNR=2.3						

*CRAAG **27** 22:10:18.0, 36˙.49N×3˙.06E, Ml3.6*
*MDD **27** 22:10:20.1±0.3, 36˙.48N×3˙.08E, h0km, mb3.8/27, Error ellipse: s-maj=5.0km s-min=3.6km az=69.0, PRXIMO*
*LDG **27** 22:10:20.6±0.2, 36˙.54N×3˙.01E, h30km, Ml3.0/14, Error ellipse: s-maj=4.0km s-min=3.1km az=167.0*
ISC 27 22:10:18.7±0.8, 36˙.55N±0˙.04×3˙.12E±0˙.03, h18km, n109, σ3°17/159, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.26**	**345**	P	**Pb**	**22 10 26.0**	**+1.2**
ABA	**Alger-Bouzarea**	**0.26**	**345**	P	**Pb**	**22 10 26.0**	**+1.2**
EMHD	**Djebel Mahouad**	**0.37**	**201**	P	**Pg**	**22 10 25.3**	**-1.3**
EMHD	**Djebel Mahouad**	**0.37**	**201**	P	**Pg**	**22 10 25.3**	**-1.3**
ADJB	**Djebel Djouab**	**0.47**	**147**	P	**Pg**	**22 10 27.8**	**-0.4**
ADJB	**Djebel Djouab**	**0.47**	**147**	P	**Pg**	**22 10 27.8**	**-0.4**
AKET	**Djebel Ketaf**	**0.79**	**129**	P	**Pn**	**22 10 34.4**	**-0.7**
AKET	**Djebel Ketaf**	**0.79**	**129**	P	**Pn**	**22 10 34.4**	**-0.7**
ATAF	**Djebel Tarf**	**1.15**	**126**	P	**Pg**	**22 10 41.1**	**+0.1**
ATAF	**Djebel Tarf**	**1.15**	**126**	P	**Pg**	**22 10 41.1**	**+0.1**
EBNR	**Beni Rached**	**1.31**	**259**	P	**Pg**	**22 10 45.0**	**+1.0**
ECHA	**Ech Chlef**	**1.47**	**255**	P	**Pg**	**22 10 47.0**	**0.0**
ECHF	**Ech Chlef**	**1.49**	**255**	P	**Pg**	**22 10 47.0**	**-0.4**
EANR	**'Ain N'Sour**	**1.74**	**250**	P	**Pb**	**22 10 51.0**	**+0.9**
EANR	**'Ain N'Sour**	**1.74**	**250**	P	**Pb**	**22 10 51.0**	**+0.9**
SET	**Setif**	**1.87**	**100**	P	**Pg**	**22 10 56.0**	**+1.3**
SET	**Setif**	**1.87**	**100**	P	**Pg**	**22 10 56.0**	**+1.3**
ETRT	**Tiaret**	**1.88**	**232**	P	**Pb**	**22 10 53.0**	**+0.5**
ETRT	**Tiaret**	**1.88**	**232**	P	**Pb**	**22 10 53.0**	**+0.5**
OKGL	**Djebel Kef Gue**	**2.07**	**256**	P	**Pn**	**22 10 52.1**	**-0.4**
	3.3nm,0.1s,SNR=7.9						
OKGL				S	**Sb**	**22 11 19.6**	**-1.5**
	48nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.84**	**331**	P	**Pn**	**22 11 05.5**	**+2.3**
	8.6nm,0.2s,SNR=64						
EIBI				S	**Sn**	**22 11 37.2**	**+0.2**
	23nm,0.2s,SNR=9.0						
ETOS	**Mallorca**	**3.22**	**356**	P	**Pn**	**22 11 10.4**	**+2.0**
	5.5nm,0.2s,SNR=18						
ETOS				S	**Sn**	**22 11 46.3**	**0.0**
	9.0nm,0.3s,SNR=4.6						
EBEN2	**Beniarda presa**	**3.38**	**310**	P	**Pn**	**22 11 12.8**	**+2.2**
	1.1nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**22 11 49.4**	**-0.9**
	6.8nm,0.2s,SNR=7.9						
AFON	**Font Roja**	**3.59**	**307**	P	**Pn**	**22 11 17.0**	**+3.4**
	2.4nm,0.2s,SNR=7.9						
AFON				S	**Sn**	**22 11 55.8**	**+0.1**
	9.1nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**3.71**	**292**	P	**Pn**	**22 11 15.9**	**+0.7**
	1.8nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**22 11 57.5**	**-1.0**
	3.1nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**4.26**	**301**	P	**Pn**	**22 11 24.1**	**+1.4**
	3.3nm,0.2s,SNR=14						
ETOB				S	**Sn**	**22 12 12.0**	**0.0**
	5.8n

ATE	**Arette**	**7.16**	**337**	S		**Sn**	**22 13 22.2**	**-1.1**
	1.2nm,0.3s,SNR=7.9							
LMR	**La Mourre**	**7.26**	**20**	P		**Pn**	**22 12 03.6**	**-0.2**
LMR				S		**Sn**	**22 13 20.9**	**-4.8**
	1.2nm,0.2s							
LMR	**La Mourre**	**7.26**	**20**	*e*Pn		**Pn**	**22 12 03.6**	**-0.2**
LMR				*e*Sn		**Sn**	**22 13 20.9**	**-4.8**
	2.4nm,0.2s							
SJPF	**Ste Jean**	**7.36**	**334**	P		**Pn**	**22 12 03.3**	**-1.9**
SJPF				S		**Sn**	**22 13 21.6**	**-6.6**
	0.0nm,0.2s							
SJPF	**Ste Jean**	**7.36**	**334**	*e*Pn		**Pn**	**22 12 03.3**	**-1.9**
SJPF				*e*Sn		**Sn**	**22 13 21.6**	**-6.6**
	1.0nm,0.2s							
FRF	**La Foret Royal**	**7.50**	**20**	P		**Pn**	**22 12 09.0**	**+1.8**
FRF				S		**Sn**	**22 13 28.1**	**-3.7**
	1.9nm,0.3s							
FRF	**La Foret Royal**	**7.50**	**20**	*e*P		**Pn**	**22 12 09.0**	**+1.8**
FRF				*e*Sn		**Sn**	**22 13 28.1**	**-3.7**
	3.9nm,0.3s							
PGF	**Pioggiola**	**7.51**	**35**	P		**Pn**	**22 12 07.8**	**+0.4**
PGF				S		**Sn**	**22 13 28.0**	**-4.2**
	1.6nm,0.2s							
PGF	**Pioggiola**	**7.51**	**35**	*e*Pn		**Pn**	**22 12 07.8**	**+0.4**
PGF				*e*Sn		**Sn**	**22 13 28.0**	**-4.2**
	3.2nm,0.2s							
LASF	**Ste Croix**	**7.54**	**4**	P		**Pn**	**22 12 10.3**	**+2.6**
LASF				S		**Sn**	**22 13 28.0**	**-4.7**
	0.3nm,0.2s							
LASF	**Ste Croix**	**7.54**	**4**	*e*P		**Pn**	**22 12 10.3**	**+2.6**
LASF				*e*Sn		**Sn**	**22 13 28.0**	**-4.7**
	0.6nm,0.2s							
SMRF	**Simiane la Rot**	**7.65**	**13**	P		**Pn**	**22 12 13.4**	**+4.2**
SMRF				S		**Sn**	**22 13 30.0**	**-5.4**
	1.0nm,0.4s							
SMRF	**Simiane la Rot**	**7.65**	**13**	*e*P		**Pn**	**22 12 13.4**	**+4.2**
SMRF				*e*Sn		**Sn**	**22 13 30.0**	**-5.4**
	1.0nm,0.4s							
SBF	**Sospel**	**8.01**	**23**	P		**Pn**	**22 12 13.3**	**-0.9**
SBF				S		**Sn**	**22 13 39.8**	**-4.6**
	1.4nm,0.3s							
SBF	**Sospel**	**8.01**	**23**	*e*Pn		**Pn**	**22 12 13.3**	**-0.9**
SBF				*e*Sn		**Sn**	**22 13 39.8**	**-4.6**
	2.8nm,0.3s							
ELAN	**Lanestosa**	**8.36**	**325**	P		**Pn**	**22 12 22.9**	**+4.0**
	0.2nm,0.2s,SNR=7.9							
VIVF	**Saint-Julien-l**	**8.38**	**8**	P		**Pn**	**22 12 22.7**	**+3.5**
VIVF				S		**Sn**	**22 13 47.2**	**-6.2**
	0.6nm,0.2s							
VIVF	**Saint-Julien-l**	**8.38**	**8**	*e*P		**Pn**	**22 12 22.7**	**+3.5**
VIVF				*e*Sn		**Sn**	**22 13 47.2**	**-6.2**
	1.1nm,0.2s							
CAF	**Calviac**	**8.40**	**355**	P		**Pn**	**22 12 17.9**	**-1.7**
CAF	**Calviac**	**8.40**	**355**	*e*Pn		**Pn**	**22 12 17.9**	**-1.7**
LFF	**La Frestale**	**8.57**	**349**	P		**Pn**	**22 12 25.4**	**+3.6**
LFF	**La Frestale**	**8.57**	**349**	*e*P		**Pn**	**22 12 25.4**	**+3.6**
ORIF	**Oris-en-Rattie**	**8.62**	**13**	P		**Pn**	**22 12 27.1**	**+4.6**
ORIF				S		**Sn**	**22 13 53.9**	**-5.4**
	0.4nm,0.4s							
ORIF	**Oris-en-Rattie**	**8.62**	**13**	*e*P		**Pn**	**22 12 27.1**	**+4.6**
ORIF				*e*Sn		**Sn**	**22 13 53.9**	**-5.4**
	0.9nm,0.4s							
MBDF	**Montbardon**	**8.62**	**18**	P		**Pn**	**22 12 25.8**	**+3.1**
MBDF				S		**Sn**	**22 13 53.5**	**-6.1**
	0.1nm,0.2s							
MBDF	**Montbardon**	**8.62**	**18**	*e*P		**Pn**	**22 12 25.8**	**+3.1**
MBDF				*e*Sn		**Sn**	**22 13 53.5**	**-6.1**
	0.2nm,0.2s							
RJF	**Les Rejaudoux**	**8.83**	**353**	P		**Pn**	**22 12 28.3**	**+2.9**
RJF	**Les Rejaudoux**	**8.83**	**353**	*e*P		**Pn**	**22 12 28.3**	**+2.9**
EARI	**Arriondas**	**9.29**	**319**	P		**Pn**	**22 12 35.6**	**+3.9**
	1.7nm,0.4s,SNR=5.9							
TCF	**Toulx Ste Croi**	**9.75**	**356**	P		**Pn**	**22 12 41.7**	**+3.7**
TCF	**Toulx Ste Croi**	**9.75**	**356**	*e*P		**Pn**	**22 12 41.7**	**+3.7**
BGF	**Bois d'Agland**	**10.00**	**359**	P		**Pn**	**22 12 45.7**	**+4.3**
BGF	**Bois d'Agland**	**10.00**	**359**	*e*P		**Pn**	**22 12 45.7**	**+4.3**
SMF	**Signal de Mont**	**10.10**	**3**	P		**Pn**	**22 12 47.2**	**+4.4**
SMF	**Signal de Mont**	**10.10**	**3**	*e*P		**Pn**	**22 12 47.2**	**+4.4**
AVF	**Avril sur Loir**	**10.23**	**1**	P		**Pn**	**22 12 48.4**	**+3.8**
AVF	**Avril sur Loir**	**10.23**	**1**	*e*P		**Pn**	**22 12 48.4**	**+3.8**
CABF	**La Chapelle**	**10.29**	**12**	P		**Pn**	**22 12 44.1**	**-1.4**
CABF	**La Chapelle**	**10.29**	**12**	*e*Pn		**Pn**	**22 12 44.1**	**-1.4**
CABF	**La Chapelle**	**10.29**	**12**	*e*P		**Pn**	**22 12 49.6**	**+4.1**
MFF	**Saint Martin d**	**10.34**	**347**	P		**Pn**	**22 12 43.8**	**-2.2**
MFF	**Saint Martin d**	**10.34**	**347**	*e*Pn		**Pn**	**22 12 43.8**	**-2.2**
SSF	**Saint Saulge**	**10.51**	**1**	P		**Pn**	**22 12 52.7**	**+4.4**
SSF	**Saint Saulge**	**10.51**	**1**	*e*P		**Pn**	**22 12 52.7**	**+4.4**
LOR	**Lormes**	**10.72**	**3**	P		**Pn**	**22 12 56.0**	**+4.7**
LOR	**Lormes**	**10.72**	**3**	*e*P		**Pn**	**22 12 56.0**	**+4.7**
MEZF	**Maizieres J'vi**	**12.03**	**6**	P		**Pn**	**22 13 12.1**	**+3.0**
MEZF	**Maizieres J'vi**	**12.03**	**6**	*e*P		**Pn**	**22 13 12.1**	**+3.0**
GRR	**Gorron**	**12.19**	**347**	P		**Pn**	**22 13 09.1**	**-2.2**
GRR	**Gorron**	**12.19**	**347**	*e*Pn		**Pn**	**22 13 09.1**	**-2.2**
CDF	**Champ du Feu**	**12.24**	**13**	P		**Pn**	**22 13 11.0**	**-1.1**
CDF	**Champ du Feu**	**12.24**	**13**	*e*Pn		**Pn**	**22 13 11.0**	**-1.1**
CDF	**Champ du Feu**	**12.24**	**13**	*e*P		**Pn**	**22 13 16.2**	**+4.1**
QUIF	**Quistinic**	**12.27**	**340**	P		**Pn**	**22 13 10.9**	**-1.5**
QUIF	**Quistinic**	**12.27**	**340**	*e*Pn		**Pn**	**22 13 10.9**	**-1.5**

*JMA **27** 22:15:52.9±0.4, 44°.49N×146°.63E, h143km±3km, M2.6*
*IDC **27** 22:15:53.2±2.3, 44°.82N×146°.43E, h146km±21km, mb3.1/5, mb1 3.3/9, mb1mx3.0/38, mbtmp3.6/9, Error ellipse: s-maj=45.7km s-min=19.1km az=146.0*

ISC 27 22:15:52.1±0.9, 44°.59N±0'.09×146°.57E±0'.09, h150km, n23, σ1§12/25, mb3.3/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	**1.23**	**238**	P	**Pn**	**22 16 19.1**	**+0.2**
NEM2	**Nemuro 2**	**1.36**	**206**	P	**Pn**	**22 16 19.7**	**-0.6**
NEM2				*e*S	**Sn**	**22 16 40.5**	**-1.2**
JNSB	**Nemuroshibetsu**	**1.39**	**234**	P	**Pn**	**22 16 21.0**	**+0.5**
JNK	**Nakash**	**1.67**	**234**	P	**Pn**	**22 16 23.8**	**+0.3**
JKHN	**Kushirohamanak**	**1.82**	**214**	P	**Pn**	**22 16 25.5**	**+0.3**
JKHN				*e*S	**Sn**	**22 16 49.7**	**-0.8**
JTKR	**Abashiri--Toko**	**2.01**	**253**	P	**Pn**	**22 16 27.6**	**+0.3**
JTKR				*e*S	**Sn**	**22 16 55.1**	**+0.8**
JAK	**Akkeshi**	**2.09**	**221**	P	**Pn**	**22 16 28.5**	**+0.2**
JAR	**Ashorobuto**	**2.40**	**238**	P	**Pn**	**22 16 33.1**	**+1.1**
JKK2	**Kamakawa 2**	**2.84**	**257**	P	**Pn**	**22 16 38.6**	**+1.2**
ASAJ	**Asahikawa**	**2.89**	**262**	P	**Pn**	**22 16 39.3**	**+1.3**
	3.0nm,0.3s,baz=83,slow=19,SNR=23						
ASAJ				S	**Sn**	**22 17 10.1**	**-3.3**
	0.4nm,0.3s,baz=3.6,slow=32,SNR=1.7						
JCH	**Churui**	**3.05**	**231**	P	**Pn**	**22 16 40.5**	**+0.4**
JCH				*e*S	**Sn**	**22 17 16.6**	**-0.6**
JNBK	**Urakawa-nobuka**	**3.61**	**232**	P	**Pn**	**22 16 46.9**	**-0.4**
MJAR	**Matsushiro Arr**	**10.25**	**221**	P	**Pn**	**22 18 16.7**	**+1.4**
	0.0nm,0.3s,baz=21,slow=14,SNR=2.4						
USRK	**Ussuriysk Ar.**	**10.44**	**273**	P	**Pn**	**22 18 16.7**	**-1.2**
	baz=85,slow=18,SNR=2.6						
PETK	**Petropavlovsk-**	**11.23**	**37**	P	**Pn**	**22 18 27.3**	**-0.8**
	0.4nm,0.3s,baz=197,slow=11,SNR=7.2						
SONM	**Songino Array**	**27.77**	**291**	P	**P**	**22 21 26.1**	**-0.7**
	0.4nm,0.6s,baz=82,slow=10,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**30.01**	**139**	T	T	22 53 03.3	
	baz=320						
H11N1	**WAKE ISLAND Hy**	**30.03**	**139**	T	T	22 53 01.7	
	baz=320						
H11N3	**WAKE ISLAND Hy**	**30.03**	**139**	T	T	22 53 04.5	
	baz=320						
ILAR	**Eielson Array**	**41.06**	**37**	P	**P**	**22 23 20.6**	**+0.3**
	0.2nm,0.6s,baz=269,slow=8.1,SNR=2.3						
MKAR	**Makanchi Array**	**43.83**	**297**	P	**P**	**22 23 42.5**	**-0.5**
	0.3nm,0.4s,baz=76,slow=9.5,SNR=7.8						
CMAR	**Chiang Mai Arr**	**47.37**	**252**	P	**P**	**22 24 12.7**	**+1.6**
	0.2nm,0.3s,baz=43,slow=7.5,SNR=4.8						
NOA	**NORSAR Array B**	**68.66**	**338**	P	**P**	**22 26 39.3**	**+0.6**
	0.9nm,1.0s,baz=39,slow=17,SNR=3.3						

KRSC 27 23:03:21.6±3.2, 49°.86N×158°.50E, h49km±25km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.73**	**299**	*e*P	Pn	23 03 49.2	0.0
SKR				*e*S	Sn	23 04 10.6	+0.5
PAU	**Pauzhetka**	**1.93**	**327**	*e*P	Pn	23 03 54.2	+2.3
PAU				*e*S	Sn	23 04 18.6	+3.6
KDTR	**Khodutka, Kamc**	**1.97**	**352**	*e*P	Pn	23 03 54.7	+2.3
KDTR				*e*S	Sn	23 04 19.1	+3.2
ALID	**Alaid**	**2.14**	**299**	*e*P	Pn	23 04 03.6	+8.7
ASAK	**Asacha**	**2.55**	**352**	*e*P	Pn	23 04 04.4	+3.9
RUS	**Russkaya**	**2.57**	**0**	*e*P	Pn	23 04 03.4	+2.7
RUS				*e*S	Sn	23 04 33.9	+3.1
MTVR	**Mutnovka**	**2.63**	**356**	*e*P	Pn	23 04 04.8	+3.1
MTVR				*e*S	Sn	23 04 35.9	+3.5
GRL	**Gorelyy**	**2.71**	**355**	*e*P	Pn	23 04 05.8	+3.1
GRL				*e*S	Sn	23 04 38.0	+3.8
KRMR	**Karymshinskiy**	**2.98**	**356**	*e*P	Pn	23 04 11.0	+4.7
KRMR				*e*S	Sn	23 04 46.3	+5.5
UGLR	**Uglovaya**	**3.36**	**3**	*e*P	Pn	23 04 15.6	+4.0
SPN	**Mys Shipunski**	**3.38**	**16**	*e*P	Pn	23 04 14.7	+2.9
SPN				*e*S	Sn	23 04 54.0	+3.4
AVH	**Avacha**	**3.41**	**2**	*e*P	Pn	23 04 17.6	+5.3
SMAR	**Somma**	**3.41**	**3**	*e*P	Pn	23 04 16.5	+4.1
SDLR	**Sedlovina**	**3.43**	**4**	*e*P	Pn	23 04 15.8	+3.2
KOK	**Koryaka**	**3.44**	**1**	*e*P	Pn	23 04 17.5	+4.8
KRER	**Koryakskii**	**3.45**	**3**	*e*P	Pn	23 04 17.2	+4.2
KRX	**Arik**	**3.50**	**2**	*e*P	Pn	23 04 17.6	+4.0
GNL	**Ganaly**	**3.85**	**355**	*e*P	Pn	23 04 22.9	+4.5
MKZ	**Mys Kozlova**	**5.10**	**22**	*e*P	Pn	23 04 38.4	+3.0
MKZ				*e*S	Sn	23 05 34.5	+1.6
KZV	**Kizimen**	**5.37**	**11**	*e*P	Pn	23 04 44.3	+5.0
KBTR	**Krutoberegovo**	**6.87**	**21**	*e*P	Pn	23 05 03.1	+3.5

*IDC **27** 23:22:07.9±0.5, 1°.92N×126°.43E, h0km, mb4.3/19, mb1 4.4/21, mb1mx4.3/32, mbtmp4.3/21, ML4.2/2, MS3.4/15, Ms1 3.4/15, ms1mx3.2/33, Error ellipse: s-maj=24.7km s-min=12.0km az=77.0*
*NEIC **27** 23:22:13.4±1.4, 2°.00N±0°.05×126°.49E±0°.06, h42km±5km, mb4.5/75, Error ellipse: s-maj=10.8km s-min=4.2km az=47.0*
*DJA **27** 23:22:15.3±0.3, 2°.N±3°×127°.7E±°, h40km±4km, M4.6/21, mb4.6/21, mB5.3/7, MLv4.6/16, Mw(mB)4.7/7*

ISC 27 23:22:14.2±0.3, 1°.96N±0°.04×126°.60E±0°.06, h47km, n185, σ1§62/184, mb4.5/64, MS3.5/14, 2C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**147**	P	**Pn**	**23 22 37.6**	**+0.1**
TNTI	**Ternate**	**1.41**	**147**		**Pn**	**23 22 37.7**	**+0.2**
TNTI				*e*S	**Sn**	**23 22 55.6**	**+0.6**
SGSI	**Sangihe**	**2.02**	**328**	P	**Pn**	**23 22 44.8**	**-1.0**
LBMI	**Labuha**	**2.74**	**161**	P	**Pn**	**23 22 57.2**	**+1.5**
KMSI	**Cibinong**	**2.96**	**242**	P	**Pn**	**23 23 00.1**	**+1.4**
GTOI	**Gorontalo**	**3.82**	**250**	P	**Pn**	**23 23 11.3**	**+0.8**
SANI	**Sanana**	**4.03**	**189**	P	Pn	23 23 18.5	+5.0
LUWI	**Luwuk**	**4.85**	**232**	P	**Pn**	**23 23 27.7**	**+3.0**
LUWI	**Luwuk**	**4.85**	**232**	Pn	**Pn**	**23 23 24.4**	**-0.3**
MRSI	**Marisa**	**4.88**	**252**	P	**Pn**	**23 23 27.5**	**+2.3**
DAV	**Davao City (W)**	**5.17**	**349**	Pn	**Pn**	**23 23 26.5**	**-2.6**
	17nm,0.3s,baz=279,slow=13,SNR=1.6						
DAV				*e*S	**Sn**	**23 24 32.8**	**+5.2**
	16nm,0.3s,baz=302,slow=10,SNR=1.1						
NLAI	**Namlea**	**5.19**	**174**	P	Pn	23 23 39.5	+10
KCP	**Kidapawan**	**5.23**	**343**	*e*P	**Pn**	**23 23 33.3**	**+3.2**
KCP				*i* S	**Sn**	**23 24 34.9**	**+5.8**
APSI	**Ampana**	**5.71**	**240**	P	**Pn**	**23 23 39.0**	**+2.5**
	0.8nm2µm170nm,1.2s						
TOLI2	**Tolitoli**	**5.88**	**262**	Pn	**Pn**	**23 23 36.2**	**-2.5**
MPSI	**Mapaga**	**6.89**	**257**	P	**Pn**	**23 23 56.8**	**+4.1**
	0.2nm757nm58nm,1.0s						
FAKI	**Fak Fak**	**7.45**	**131**	Pn	**Pn**	**23 23 59.9**	**-0.5**
TTSI	**Tana Toraja**	**8.41**	**234**	P	**Pn**	**23 24 18.3**	**+4.8**
	0.2nm40nm,1.0s						
MYLDM	**Lalhad Datu**	**8.69**	**292**	Pn	**Pn**	**23 24 18.4**	**+1.0**
SPSI	**Sidrap Palu**	**9.01**	**229**	P	Pn	23 24 29.2	+7.4
BNSI	**Bone**	**9.06**	**226**	P	Pn	23 24 34.5	+12
KAPI	**Kappang**	**9.74**	**225**	Pn	**Pn**	**23 24 34.5**	**+2.7**
	1.3nm,0.3s,baz=156,slow=1.6,SNR=4.0						
KAPI				LR	LR	23 28 56.7	
	comp=Z,203nm,21.2s,baz=46,slow=43						
KAPI	**Kappang**	**9.74**	**225**	Pn	**Pn**	**23 24 32.0**	**+0.2**
BAKI	**Biak**	**10.01**	**108**	P	Pn	23 24 44.2	+8.7
BSSI	**Bau Bau, Buton**	**10.10**	**217**	P	Pn	23 24 50.0	+13
KKM	**Kota Kinabalu**	**11.12**	**292**	Pn	**Pn**	**23 24 52.1**	**+1.3**
GENI	**Genyem**	**14.30**	**108**	P	**P**	**23 25 43.7**	**+3.5**
SBUM	**Sibu**	**14.38**	**272**	Pn	**Pn**	**23 25 36.1**	**+1.1**
TWSI	**Taliwang, Sumb**	**14.38**	**222**	P	**P**	**23 25 43.3**	**+2.3**
JAY	**Jayapura**	**14.79**	**107**	Pn	**P**	**23 25 44.8**	**-0.9**
	0.6nm,0.3s,baz=304,slow=9.7,SNR=4.5						
JAY				LR	LR	23 30 42.2	
	comp=Z,270nm,21.7s,baz=322,slow=34						
MTN	**Manton Dam**	**15.38**	**163**	Pn	**Pn**	**23 25 48.2**	**-0.1**
JAGI	**Jajag, Banyuwa**	**16.17**	**230**		**Pn**	**23 25 58.7**	**+0.4**
JAGI				IAmb	IAmb	23 26 15.3	
	comp=Z,48nm,1.0s						
KSM	**Kuching**	**16.29**	**269**		**Pn**	**23 25 59.9**	**0.0**
GMJI	**Gumukmas**	**16.60**	**232**	P	**P**	**23 26 09.9**	**+4.3**
	comp=Z,33nm,0.9s						
KNRA	**Kununurra**	**17.66**	**173**		**Pn**	**23 26 16.1**	**-0.8**
KNRA				IAmb	IAmb	23 26 24.2	
	comp=Z,28nm,0.9s						
PWJI	**Pagerwojo**	**17.78**	**236**	P	**P**	**23 26 25.4**	**+6.7**
	comp=Z,21nm,1.0s						
UGM	**Wanagama**	**18.80**	**238**	P	**P**	**23 26 29.7**	**-0.3**
KPJI	**Karang Pucung**	**19.90**	**242**	P	**Pn**	**23 26 43.8**	**-0.1**
	comp=Z,24nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.96**	**183**	P	**P**	**23 26 42.7**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=6.2,slow=7.9,SNR=11						
FITZ				S	**S**	**23 30 18.3**	**-6.3**
	comp=Z,0.1nm,0.3s,baz=308,slow=19,SNR=1.8						
FITZ				LR	LR	23 34 35.0	
	comp=Z,80nm,21.3s,baz=10.0,slow=38						
FITZ	**Fitzroy Crossi**	**19.96**	**183**	P	**P**	**23 26 42.6**	**+0.1**
LEM	**Lembang**	**20.86**	**245**	LR	LR	23 36 01.9	
	comp=Z,108nm,20.4s,baz=24,slow=40						
YULB	**Yu-li**	**21.91**	**347**	P	**P**	**23 27 01.1**	**-2.5**
TPUB	**Ta-pu**	**21.98**	**345**	P	**P**	**23 27 01.8**	**-2.6**
TPUB				IAmb	IAmb	23 27 07.3	
	comp=Z,35nm,0.9s						
SSLB	**Suanglung**	**22.37**	**346**	P	**P**	**23 27 07.9**	**-0.7**
SSLB				IAmb	IAmb	23 27 17.7	
	comp=Z,16nm,0.9s						
NACB	**Ninganchiao**	**22.60**	**348**	P	**P**	**23 27 09.8**	**-1.2**
NACB				IAmb	IAmb	23 27 25.1	
	comp=Z,21nm,1.1s						
MYKOM	**Kota Tinggi**	**22.74**	**270**	P	**P**	**23 27 11.0**	**-1.5**
MYKOM				IAmb	IAmb	23 27 16.0	
	comp=Z,15nm,1.0s						
COEN	**Coen**	**22.81**	**134**	P	**P**	**23 27 12.6**	**-0.7**
WB0	**Warramunga Arr**	**22.91**	**161**	P	**P**	**23 27 13.6**	**-0.7**
WRAB	**Tennant Creek**	**23.05**	**161**	P	**P**	**23 27 14.7**	**-1.0**
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	**23 27 14.9**	**-0.9**
	comp=Z,9.6nm,0.7s,baz=338,slow=10,SNR=56						
WRA				S	**S**	**23 31 22.7**	**-0.7**
	comp=Z,1.2nm,1.0s,baz=350,slow=21,SNR=4.2						
WRA	**Warramunga Arr**	**23.06**	**161**	P	**P**	**23 27 14.7**	**-1.1**
WB2	**Warramunga Arr**	**23.06**	**161**	P	**P**	**23 27 15.2**	**-0.7**
WC3	**Warramunga Arr**	**23.08**	**161**	P	**P**	**23 27 15.6**	**-0.4**
WR0	**Warramunga Arr**	**23.14**	**161**	P	**P**	**23 27 15.7**	**-0.9**
WR0				IAmb	IAmb	23 27 19.2	
	comp=Z,13nm,0.8s						
KASI	**Kota Agung**	**23.29**	**251**	P	**P**	**23 27 20.5**	**+2.3**
	comp=Z,28nm,1.0s						
PMG	**Port Moresby**	**23.39**	**119**	LR	LR	23 37 10.2	
	comp=Z,183nm,21.5s,baz=284,slow=38						
PSAD1	**Pilbara Seismi**	**24.20**	**196**	P	**P**	**23 27 26.1**	**-0.4**
PSAD1				IAmb	IAmb	23 27 43.4	
	comp=Z,16nm,1.1s						
PSAC2	**Pilbara Seismi**	**24.28**	**195**	P	**P**	**23 27 27.1**	**-0.2**
PSAA2	**Pilbara Seismi**	**24.30**	**195**	P	**P**	**23 27 27.5**	**+0.1**
PSAA2				IAmb	IAmb	23 27 44.0	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**24.31**	**195**	P	**P**	**23 27 27.1**	**-0.4**
PSAA3	**Pilbara Seismi**	**24.31**	**195**	P	**P**	**23 27 27.6**	**+0.1**
PSAA3				IAmb	IAmb	23 27 41.6	
	comp=Z,21nm,1.1s						
PSAA1	**Pilbara Seismi**	**24.31**	**195**	P	**P**	**23 27 27.8**	**+0.2**
PSAA1				IAmb	IAmb	23 27 35.4	
	comp=Z,18nm,1.1s						
SDSI	**Sungai Dareh**	**25.33**	**264**	P	P	23 27 49.7	+13
IPM	**Ipoh**	**25.65**	**276**	P	**P**	**23 27 38.7**	**-1.2**
KRVT	**Keravat (AS076**	**26.16**	**104**	LR	LR	23 37 06.3	
	comp=Z,114nm,19.9s,baz=260,slow=34						
AS31	**Alice Springs**	**26.45**	**165**	P	**P**	**23 27 47.8**	**+0.8**
ASAR	**Alice Springs**	**26.45**	**165**	P	**P**	**23 27 46.8**	**-0.1**
	comp=Z,15nn,0.9s,baz=339,slow=9.1,SNR=28						
ASAR				PcP	**PcP**	**23 31 12.6**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=344,slow=2.0,SNR=7.0						
ASAR				S	**S**	**23 32 20.2**	**+2.5**
	comp=Z,0.9nm,1.1s,baz=345,slow=21,SNR=4.4						
ASAR	**Alice Springs**	**26.45**	**165**	P	**P**	**23 27 47.8**	**+0.8**
RPSI	**Rantau Prapat**	**27.66**	**272**	P	**P**	**23 27 56.1**	**-1.8**
PSI	**Prapat**	**27.66**	**272**	P	**P**	**23 27 56.1**	**-2.0**
	comp=Z,3.1nm,0.4s,baz=360,slow=5.0,SNR=4.8						
WHN	**Wuhan**	**30.70**	**339**	↑P	P	23 28 32.5	+7.8
NJ2	**Nanjing**	**30.80**	**347**	*e*P	**P**	**23 28 27.3**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA	**Guiyang**	**30.98**	**324**	*e*P	**P**	**23 28 26.5**	**-0.9**
GYA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
CMAR	**Chiang Mai Arr**	**31.68**	**303**	P	**P**	**23 28 34.1**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=123,slow=6.6,SNR=8.9						
CMAR				PcP	**PcP**	**23 31 26.6**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=126,slow=1.2,SNR=4.6						
CMAR				LR	LR	23 41 43.1	
	comp=Z,59nm,21.8s,baz=164,slow=37						
CHTO	**Chiang Mai**	**31.85**	**304**	P	**P**	**23 28 33.8**	**-1.2**
MORW	**Morawa**	**32.47**	**197**	P	**P**	**23 28 40.5**	**+0.2**
KMI	**Kunming**	**32.55**	**317**	P	**P**	**23 28 39.4**	**-2.0**
FORT	**Forrest**	**32.59**	**178**	P	**P**	**23 28 42.0**	**+0.6**
JWT	**Wachi**	**34.15**	**13**	P	**P**	**23 28 55.2**	**+0.4**
JWT				IAmb	IAmb	23 28 58.8	
	comp=Z,7.9nm,0.8s						
HNR	**Honiara**	**35.10**	**109**	LR	LR	23 44 48.1	
	comp=Z,40nm,19.2s,baz=201,slow=39						
KSRS	**Korea Array**	**35.34**	**2**	P	**P**	**23 29 06.5**	**+1.4**
	comp=Z,1.9nm,0.6s,baz=178,slow=11,SNR=6.8						
KS19	**Wonju Array Si**	**35.38**	**2**	P	**P**	**23 29 03.2**	**-2.3**
KS19				IAmb	IAmb	23 29 21.6	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**35.73**	**166**	P	**P**	**23 29 08.6**	**+0.1**
BBOO				IAmb	IAmb	23 29 19.5	
	comp=Z,5.6nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.81**	**194**	P	**P**	**23 29 09.4**	**+0.1**
NWAO				IAmb	IAmb	23 29 10.8	
	comp=Z,7.9nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.81**	**194**	P	**P**	**23 29 09.0**	**-0.2**
NWAO				IAmb	IAmb	23 29 10.8	
	comp=Z,6.4nm,1.1s						
XAN	**Xi'an**	**35.93**	**335**	P	**P**	**23 29 08.6**	**-1.8**
XAN				IAmb	IAmb	23 29 10.2	
	comp=Z,7.6nm,0.9s						
MJAR	**Matsushiro Arr**	**36.04**	**16**	P	**P**	**23 29 10.9**	**-0.3**
	comp=Z,4.6nm,0.8s,baz=186,slow=10,SNR=10						
MJAR				LR	LR	23 46 17.6	
	comp=Z,16nm,19.2s,baz=190,slow=40						
MJAR	**Matsushiro Arr**	**36.04**	**16**	P	**P**	**23 29 11.5**	**+0.3**
MAJO	**Matsushiro**	**36.04**	**16**	P	**P**	**23 29 11.0**	**-0.2**
EIDS	**Eidsvold**	**36.07**	**140**	P	**P**	**23 29 11.7**	**+0.2**
EIDS				IAmb	IAmb	23 29 15.6	
	comp=Z,7.7nm,1.1s						
STKA	**Stephens Creek**	**36.54**	**158**	P	**P**	**23 29 15.6**	**+

ARSB	**Arslanbob**	**62.03**	**317**	P	**P**	**23 32 29.2**	**-0.9**
ARSB				IAmb	IAmb	23 32 33.7		
	comp=Z,5.1nm,1.0s							
ZAA0	**Zalesovo Array**	**62.09**	**334**	P	**P**	**23 32 29.2**	**-0.9**
ZAA0				IAmb	IAmb	23 32 35.2		
	comp=Z,4.4nm,1.1s							
ZALV	**Zalesovo Beam**	**62.09**	**334**	P	**P**	**23 32 28.2**	**-1.9**
	comp=Z,1.3nm,0.7s,baz=103,slow=4.6,SNR=3.8							
ZALV	**Zalesovo Beam**	**62.09**	**334**	P	**P**	**23 32 29.1**	**-1.0**
SEM	**Semipalatinsk**	**62.12**	**328**	*eP*	**P**	**23 32 29.9**	**-0.7**
	baz=328							
KBL	**Kabul**	**62.49**	**308**	P	**P**	**23 32 32.4**	**-1.1**
KBL				IAmb	IAmb	23 32 36.0		
	comp=Z,6.9nm,1.1s							
BTLS	**Baital**	**62.95**	**321**	*eP*	**P**	**23 32 35.1**	**-0.9**
	baz=321							
KURK	**Kurchatov**	**63.15**	**328**	P	**P**	**23 32 36.8**	**-0.4**
IUG	**Iuzhnay**	**64.39**	**317**	*eP*	**P**	**23 32 44.9**	**-0.8**
	comp=Z,4.2nm,1.4s,baz=317							
KK06	**Karatay Array**	**64.42**	**318**	P	**P**	**23 32 44.2**	**-1.5**
KK05	**Karatay Array**	**64.43**	**318**	P	**P**	**23 32 44.3**	**-1.5**
KK02	**Karatay Array**	**64.43**	**318**	P	**P**	**23 32 44.6**	**-1.2**
KK31	**Karatay Array**	**64.43**	**318**	P	**P**	**23 32 44.7**	**-1.1**
KK31				IAmb	IAmb	23 32 49.6		
	comp=Z,5.4nm,1.1s							
KKAR	**Karatay Array**	**64.43**	**318**	P	**P**	**23 32 44.5**	**-1.4**
KKAR				IAmb	IAmb	23 32 49.6		
	comp=Z,5.4nm,1.1s							
KK07	**Karatay Array**	**64.43**	**318**	P	**P**	**23 32 44.5**	**-1.4**
KK01	**Karatay Array**	**64.44**	**318**	P	**P**	**23 32 44.5**	**-1.4**
KK03	**Karatay Array**	**64.44**	**318**	P	**P**	**23 32 44.5**	**-1.4**
KK04	**Karatay Array**	**64.44**	**318**	P	**P**	**23 32 44.4**	**-1.5**
KK09	**Karatay Array**	**64.45**	**318**	P	**P**	**23 32 44.9**	**-1.1**
KK08	**Karatay Array**	**64.45**	**318**	P	**P**	**23 32 45.3**	**-0.7**
BRZS	**Berezniki**	**66.05**	**325**	*eP*	**P**	**23 32 54.7**	**-1.5**
	baz=325							
BRVK	**Borovoye**	**68.79**	**327**	P	**P**	**23 33 12.6**	**-0.8**
BRVK				IAmb	IAmb	23 33 16.2		
	comp=Z,7.0nm,1.0s							
GEYT	**Alibeck**	**71.90**	**309**	P	**P**	**23 33 32.1**	**-0.7**
	comp=Z,38nm,0.5s,baz=89,slow=16,SNR=1.0							
NRIK	**Noril'sk**	**72.10**	**346**	P	**P**	**23 33 33.5**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=134,slow=7.1,SNR=6.3							
AB06	**Akbulak array**	**73.41**	**321**	P	**P**	**23 33 40.6**	**-0.9**
AB07	**Akbulak array**	**73.41**	**321**	P	**P**	**23 33 40.9**	**-0.6**
AB02	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.5**	**-1.0**
AB03	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 41.0**	**-0.6**
AB01	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.5**	**-1.0**
AB31	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.8**	**-0.7**
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.9**	**-0.7**
ABKAR	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.6**	**-1.0**
AB04	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.6**	**-1.0**
AB08	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.1**	**-1.5**
AB05	**Akbulak array**	**73.43**	**321**	P	**P**	**23 33 40.9**	**-0.7**
AB09	**Akbulak array**	**73.45**	**321**	P	**P**	**23 33 40.4**	**-1.3**
ARU	**Arti**	**76.35**	**328**	P	**P**	**23 33 57.5**	**-0.8**
VNDA	**Vanda**	**81.70**	**173**	P	**P**	**23 34 27.4**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=314,slow=8.1,SNR=12							
VNDA	**Vanda**	**81.70**	**173**	P	**P**	**23 34 27.4**	**+0.2**
VNDA				IAmb	IAmb	23 34 32.9		
	comp=Z,4.4nm,1.1s							
TTA	**Tatalina**	**82.53**	**27**	P	**P**	**23 34 33.3**	**+1.4**
OHAK	**Old Harbor**	**83.00**	**33**	P	**P**	**23 34 35.4**	**+1.1**
OHAK				IAmb	IAmb	23 34 44.5		
	comp=Z,4.2nm,1.0s							
KDAK	**Kodiak Island**	**83.44**	**32**	P	**P**	**23 34 37.3**	**+0.7**
KDAK				IAmb	IAmb	23 34 40.0		
	comp=Z,7.0nm,1.0s							
GEVA	**Gevas**	**83.71**	**308**	P	**P**	**23 34 38.2**	**-0.5**
A21K	**Barrow**	**83.92**	**18**	P	**P**	**23 34 38.3**	**-0.5**
IMAR	**Indian Mountai**	**84.00**	**24**	P	**P**	**23 34 40.9**	**+1.5**
KBZ	**Khabaz**	**84.09**	**314**	P	**P**	**23 34 40.4**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=120,slow=8.1,SNR=2.7							
KBZ				LR	LR	00 18 21.2		
	comp=Z,15nm,19.4s,baz=51,slow=40							
PPLA	**Purkeypile**	**84.25**	**27**	P	**P**	**23 34 40.8**	**0.0**
CNPM	**China Poot**	**84.33**	**30**	P	**P**	**23 34 40.4**	**-0.8**
SKT	**Skwentna**	**84.45**	**28**	P	**P**	**23 34 42.0**	**+0.2**
SKT				IAmb	IAmb	23 34 43.0		
	comp=Z,3.2nm,0.9s							
BRLK	**Bradley Lake**	**84.53**	**30**	P	**P**	**23 34 42.0**	**-0.2**
SUA	**Susitna One**	**84.77**	**29**	P	**P**	**23 34 43.4**	**0.0**
SUA				IAmb	IAmb	23 34 45.3		
	comp=Z,6.0nm,0.9s							
ILAR	**Eielson Array**	**86.75**	**25**	P	**P**	**23 34 53.7**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=253,slow=1.5,SNR=3.2							
KLMR	**Klimovskoe**	**86.87**	**331**	*eP*	**P**	**23 34 52.6**	**-1.1**
KLMR				AMP		23 35 00.9		
	comp=Z,21nm,1.5s							
BRTR	**Keskin Array B**	**91.04**	**310**	P	**P**	**23 35 13.8**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=149,slow=5.2,SNR=4.2							
BRTR				PP	**PP**	**23 38 49.0**	**-1.9**
	comp=Z,0.7nm,0.8s,baz=14,slow=7.6,SNR=4.0							
BRTR				LR	LR	00 22 18.8		
	comp=Z,7.9nm,18.2s,baz=110,slow=40							
ARCES	**ARCESS Array B**	**92.05**	**340**	P	**P**	**23 35 19.4**	**+1.4**
	comp=Z,3.2nm,0.8s,baz=340,slow=18,SNR=1.4							
FINES	**FINESS Array B**	**93.31**	**332**	P	**P**	**23 35 24.1**	**+0.2**
	comp=Z,2.6nm,0.9s,baz=57,slow=5.1,SNR=2.3							
FINES	**FINESS Array B**	**93.31**	**332**	P	**P**	**23 35 24.8**	**+1.0**
TXAR	**Lajitas Array**	**122.77**	**53**	PKP	**PKiKP**	**23 41 06.4**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=211,slow=1.6,SNR=4.5							
TORD	**Torodi Ar. Bea**	**123.32**	**287**	PKP	**PKPdf**	**23 41 06.5**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=78,slow=2.5,SNR=2.2							

GUC 27 23:34:36.9±0.5,**35°81S**×**73°77W,h38**km±5km**,ML3.7,2C,**
Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI03	**Tigo**	**1.19**	**150**	⇑*iP*	Pn	23 34 57.1	+0.1
BI03				*i* S	Sn	23 35 12.7	+0.7
LAJA	**Laja**	**1.69**	**150**	*eP*	Pn	23 35 04.5	+0.5
BO03	**Pichilemu**	**1.98**	**49**	*eP*	Pn	23 35 08.3	+0.5
BO03				IAML		23 35 46.1	
	comp=N,432nm,0.7s						
BI02	**San Fabin de**	**2.19**	**114**	⇑*iP*	Pn	23 35 11.6	+0.8
BI02				*i* S	Sn	23 35 38.0	+1.3
BI02				IAML		23 35 43.3	
	comp=E,507nm,0.3s						
BO02	**Sierra Bellavi**	**2.65**	**68**	*eP*	Pn	23 35 17.9	+0.8
BO02				*eS*	Sn	23 35 49.1	+1.0
VA05	**Santo Domingo**	**2.79**	**40**	*eP*	Pn	23 35 19.6	+0.6
MT09	**Talagante**	**3.06**	**49**	*eP*	Pn	23 35 23.8	+1.0
MT09				IAML		23 36 24.3	
	comp=N,251nm,0.6s						
LC01	**Cunco**	**3.43**	**154**	*eP*	Pn	23 35 29.1	+1.2
LMEL	**Las Melosas**	**3.53**	**57**	*eP*	Pn	23 35 31.3	+2.0
LMEL				IAML		23 36 38.4	
	comp=N,182nm,0.7s						
ROCH	**El Roble**	**3.64**	**40**	*eP*	Pn	23 35 32.0	+1.1
PEL	**Peldehue**	**3.69**	**45**	*eP*	Pn	23 35 32.9	+1.5
VA03	**San Esteban**	**4.04**	**42**	*eP*	Pn	23 35 37.9	+1.6
CO02	**Combarbal**	**5.15**	**28**	*eP*	Pn	23 35 52.8	+1.3
CO02				*i* S	Sn	23 36 48.1	-1.6

*IDC **27** 23:49:22.3±2.1, 1°.07N×100°.12E, h132km±23km, mb3.2/3, mb1 3.5/5, mb1mx3.1/34, mbtmp3.7/5, MS2.5/1, Ms1 2.5/1, ms1mx2.1/22, Error ellipse: s-maj=114.1km s-min=21.7km az=56.0*
*DJA **27** 23:49:23.2±0.3, 1°N±3°×10°0E±°, h138km±4km, M3.9/13, mb4.0/2, MLv3.8/13*

ISC 27 23:49:22.6±0.9,**0°90N**±0°.07×**99°60E**±0°.07,**h149**km±7km,
n18,σ1°**14**/23,**mb3.6**/3,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**0.10**	**192**	P	**Pn**	**23 49 42.3**	**-0.3**
MNSI				S	**Sn**	**23 49 57.6**	**-0.2**
BKNI	**Bangkinang**	**1.55**	**111**	P	**Sn**	**23 50 17.0**	**+1.5**
PSI	**Prapat**	**2.01**	**340**	P	**Pn**	**23 49 57.8**	**-0.1**
	9.0nm,0.3s,baz=180,slow=9.2,SNR=37						
PSI				S	**Sn**	**23 50 22.7**	**-2.4**
	baz=180,slow=19,SNR=1.3						
GSI	**Gunungsitoli**	**2.06**	**281**	P	**Pn**	**23 49 59.8**	**+1.4**
GSI				S	**Sn**	**23 50 26.6**	**+0.7**
SISI	**Saibi**	**2.27**	**193**	P	**Pn**	**23 49 59.4**	**-1.4**
SDSI	**Sungai Dareh**	**2.58**	**135**	P	**Pn**	**23 50 04.5**	**-0.1**
KCSI	**Kotacane, Aceh**	**3.19**	**325**	P	**Pn**	**23 50 13.4**	**+1.1**
KCSI				S	**Sn**	**23 50 50.8**	**0.0**
TPTI		**3.37**	**314**	P	**Pn**	**23 50 15.8**	**+1.1**
TPTI				S	**Sn**	**23 50 55.5**	**+0.5**
KRJI	**Kerinci**	**3.50**	**148**	P	**Pn**	**23 50 17.0**	**+0.5**
SNSI	**Sinabang, Aceh**	**3.60**	**295**	S	**Sn**	**23 50 59.1**	**-1.2**
MLSI	**Meulaboh, Aceh**	**4.63**	**316**	P	**Pn**	**23 50 32.4**	**+1.3**
LHSI	**Lahat**	**6.11**	**140**	P	**Pn**	**23 50 51.0**	**+0.2**
	0.3nm56nm,0.8s						
KLSI		**7.55**	**137**	P	**Pn**	**23 51 09.4**	**-0.7**
LEM	**Lembang**	**11.08**	**134**	LR	LR	23 56 05.0	
	comp=Z,25nm,18.2s,baz=356,slow=37						
CMAR	**Chiang Mai Arr**	**17.46**	**358**	P	**P**	**23 53 16.1**	**-0.1**
	0.3nm,0.3s,baz=185,slow=18,SNR=5.7						
WRA	**Warramunga Arr**	**39.85**	**123**	P	**P**	**23 56 40.2**	**-1.6**
	0.4nm,0.3s,baz=304,slow=9.0,SNR=9.4						
WRA				PcP	**PcP**	**23 58 45.0**	**0.0**
	0.4nm,0.9s,baz=301,slow=3.2,SNR=2.1						
MKAR	**Makanchi Array**	**48.15**	**344**	P	**P**	**23 57 48.9**	**+1.3**
	0.4nm,0.4s,baz=160,slow=8.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**54.27**	**349**	P	**P**	**23 58 34.1**	**+1.1**
	0.4nm,0.4s,baz=142,slow=5.4,SNR=2.9						

*NNC **28** 00:01:44.0±2.6, 43°.67N×86°.50E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=20.3km s-min=11.2km az=131.0*
*SOME **28** 00:01:43.9, 43°.65N×86°.42E, h15km*

ISC 28 00:01:43.3±2.6,**43°41N**±0°.10×**86°4E**±0°.1,**h10**km,**n25,**
σ1°**68**/34,**6C-2D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**4.17**	**346**	*eP*	**Pb**	**00 02 57.6**	**+0.9**
	9.7nm,0.4s						
ZSN				*eS*	**Sb**	**00 03 50.1**	**+3.0**
	18nm,0.5s						
ZSN	**Zaisan**	**4.17**	**346**	Pg	**Pb**	**00 02 57.6**	**+0.9**
	9.7nm,0.4s						
ZSN				Lg	Lg	00 03 50.1	
	18nm,0.5s						
KTMS	**Ketmen**	**4.37**	**272**	*eP*	**Pg**	**00 03 04.5**	**-2.6**
	0.7nm,0.0s						
KTMS				*eS*	**Sg**	**00 04 01.5**	**-2.2**
	11nm,0.3s						
KTMS	**Ketmen**	**4.37**	**272**	Pg	**Pg**	**00 03 04.8**	**-2.2**
	0.7nm,0.0s						
KTMS				Lg	Lg	00 04 01.5	
	11nm,0.3s						
MK31	**Makanchi Array**	**4.44**	**321**	⇑Pn	**Pn**	**00 02 50.0**	**-0.6**
	0.3nm,0.2s,baz=136,slow=15,SNR=71						
MK31				Pg	**Pb**	**00 03 01.5**	**+0.2**
	2.3nm,0.5s,baz=134,slow=17,SNR=11						
MK31				Lg	Lg	00 04 07.0	
	2.3nm,0.3s,baz=135,slow=29,SNR=4.8						
MAKZ	**Makanchi**	**4.60**	**319**	⇓Pn	**Pn**	**00 02 52.2**	**-0.6**
	0.8nm,0.3s						
MAKZ				⇓Pg	**Pb**	**00 03 04.6**	**+0.6**
	1.2nm,0.4s						
MAKZ				⇑Lg	Lg	00 04 08.3	
	2.8nm,0.5s						
DJR	**Jarkent**	**4.83**	**283**	*eP*	**Pg**	**00 03 13.6**	**-2.2**
	4.0nm,0.3s						
DJR				*eS*	**Sg**	**00 04 17.7**	**-0.7**
	14nm,0.4s						
DJR	**Jarkent**	**4.83**	**283**	Pg	**Pg**	**00 03 13.6**	**-2.2**
	4.0nm,0.3s						
DJR				Lg	Lg	00 04 17.7	
	14nm,0.4s						
PDGK	**Podgornoye**	**5.01**	**271**	⇑Pg	**Pb**	**00 03 13.5**	**+2.5**
	1.4nm,0.4s						
PDGK				⇑Lg	Lg	00 04 23.0	
	11nm,0.6s						
SHLS	**Shalkode**	**5.04**	**269**	*eP*	**Pb**	**00 03 12.2**	**+0.6**
	5.4nm,0.3s						
SHLS				*eS*	**Sb**	**00 04 15.0**	**+2.8**
	32nm,0.4s						
SHLS	**Shalkode**	**5.04**	**269**	Pg	**Pb**	**00 03 12.9**	**+1.3**
	5.4nm,0.3s						
SHLS				Lg	Lg	00 04 15.0	
	32nm,0.4s						
KAPS	**Kapalarasan**	**5.36**	**293**	*eP*	**Pg**	**00 03 23.7**	**-2.2**
	1.7nm,0.2s						
KAPS				*eS*	**Sg**	**00 04 35.2**	**0.0**
	15nm,0.5s						
KAPS	**Kapalarasan**	**5.36**	**293**	Pg	**Pg**	**00 03 24.1**	**-1.7**
	1.7nm,0.2s						
KAPS				Lg	Lg	00 04 35.2	
	15nm,0.5s						
UZB	**Uzunbulak**	**5.36**	**270**	*eP*	**Pg**	**00 03 24.0**	**-1.9**
	2.5nm,0.3s						
UZB				*eS*	**Sg**	**00 04 35.6**	**+0.2**
	5.3nm,0.4s						
UZB	**Uzunbulak**	**5.36**	**270**	Pg	**Pg**	**00 03 24.9**	**-1.0**
	2.5nm,0.3s						
UZB				Lg	Lg	00 04 35.6	
	5.3nm,0.4s						
KPKS	**Kokpek**	**5.59**	**273**	*eP*	**Pg**	**00 03 28.5**	**-1.7**
	5.8nm,0.3s						
KPKS				*eS*	**Sg**	**00 04 43.3**	**+0.7**
	14nm,0.5s						
MNBS	**Baschi**	**5.80**	**279**	*eP*	**Pg**	**00 03 31.8**	**-2.5**
	3.2nm,0.2s						
MNBS				*eS*	**Sg**	**00 04 48.8**	**-0.7**
	8.3nm,0.3s						
MNBS	**Baschi**	**5.80**	**279**	Pg	**Pg**	**00 03 32.5**	**-1.9**
	3.2nm,0.2s						
MNBS				Lg	Lg	00 04 48.8	
	8.3nm,0.3s						
SATY	**Saty**	**5.82**	**269**	*eP*	**Pg**	**00 03 32.8**	**-1.9**
	4.1nm,0.8s						
SATY				*eS*	**Sg**	**00 04 50.6**	**+0.6**
	12nm,0.7s						
SATY	**Saty**	**5.82**	**269**	Pg	**Pg**	**00 03 33.6**	**-1.0**
	4.1nm,0.8s						
SATY				Lg	Lg	00 04 50.6	
	12nm,0.7s						
ARXS	**Arharly**	**6.22**	**280**	Pg	**Pg**	**00 03 41.6**	**-0.8**
	3.1nm,0.3s						
ARXS				Lg	Lg	00 05 04.9	
	11nm,0.5s						
CHKK	**Chushkaly**	**6.81**	**277**	Pg	**Pg**	**00 03 53.8**	**+0.1**
	0.6nm,0.1s						
CHKK				Lg	Lg	00 05 25.8	
	4.1nm,0.3s						
KUU	**Kurty**	**7.28**	**277**	Pg	**Pg**	**00 04 01.3**	**-1.3**
	1.3nm,0.6s						
KUU				Lg	Lg	00 05 38.2	
	6.9nm,0.5s						
KURBB	**Kurchatov Arra**	**8.97**	**326**	⇑Lg	Lg	00 06 30.4	
	6.7nm,0.7s						
KURK	**Kurchatov**	**9.01**	**327**	⇑Lg	Lg	00 06 31.2	
	3.3nm,0.6s						

*IDC **28** 00:21:58.0±0.6, 1°.39N×126°.87E, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.0/41, mbtmp4.1/15, ML4.1/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/34, Error ellipse: s-maj=32.5km s-min=13.2km az=79.0*
*DJA **28** 00:22:02.3±1.2, 1°N±4°×12°7E±°, h15km±13km, M4.4/10, mB4.9/4, mb4.7/7, MLv4.4/10, Mw(mB)4.2/4, Mwp5.2/1*
*NEIC **28** 00:22:03.3±1.9, 1°.30N±0°.06×126°.70E±0°.06, h39km±4km, mb4.6/54, Error ellipse: s-maj=10.6km s-min=7.0km az=219.0*

ISC 28 00:22:04.3±0.4,**1°28N**±0°.05×**126°75E**±0°.06,**h47**km,**n112,**
σ1°**39**/115,**mb4.5**/39,**1C,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.80**	**129**	P	**Pn**	**00 22 19.9**	**+0.6**
TNTI	**Ternate**	**0.80**	**129**		**Pn**	**00 22 19.8**	**+0.6**
TNTI				Sn	**Sn**	**00 22 28.1**	**-2.0**
LBMI	**Labuha**	**2.04**	**158**	P	**Pn**	**00 22 37.9**	**+1.6**
SGSI	**Sangihe**	**2.69**	**333**	P	**Pn**	**00 22 42.7**	**-2.4**
KMSI	**Cibinong**	**2.85**	**256**	P	**Pn**	**00 22 46.6**	**-0.7**
GTOI	**Gorontalo**	**3.79**	**260**	P	**Pn**	**00 23 00.1**	**-0.1**
NLAI	**Namlea**	**4.50**	**175**	P	Pn	00 23 19.1	+9.1
LUWI	**Luwuk**	**4.59**	**240**		**Pn**	**00 23 11.4**	**+0.2**
MRSI	**Marisa**	**4.87**	**261**	P	**Pn**	**00 23 15.5**	**+0.5**
APSI	**Ampana**	**5.54**	**247**	P	**Pn**	**00 23 26.4**	**+2.1**
	0.4nm1μm111nm,0.6s						
KCP	**Kidapawan**	**5.93**	**344**	*eP*	**Pn**	**00 23 33.0**	**+3.3**
TOLI2	**Tolitoli**	**5.96**	**268**	Pn	**Pn**	**00 23 28.4**	**-1.7**
FAKI	**Fak Fak**	**6.90**	**127**	Pn	**Pn**	**00 23 41.8**	**-1.2**
MPSI	**Mapaga**	**6.91**	**262**	P	**Pn**	**00 23 44.1**	**+1.0**
	0.1nm922nm30nm,0.7s						
TTSI	**Tana Toraja**	**8.15**	**238**	P	**Pn**	**00 24 02.3**	**+2.3**
	32nm,0.6s						
SPSI	**Sidrap Palu**	**8.70**	**233**	P	**Pn**	**00 24 08.8**	**+1.2**
	805nm28nm,0.8s						
BNSI	**Bone**	**8.71**	**230**	P	**Pn**	**00 24 10.0**	**+2.3**
	26nm,0.7s						
MYLDM	**Lahad Datu**	**9.10**	**295**	Pn	**Pn**	**00 24 12.0**	**-1.1**
BKSI	**Bulukumba**	**9.31**	**225**	P	**Pn**	**00 24 19.2**	**+3.2**
KAPI	**Kappang**	**9.37**	**228**	Pn	**Pn**	**00 24 18.7**	**+1.9**
	3.0nm,0.3s,baz=14,slow=11,SNR=5.2						
KAPI				Sn	**Sn**	**00 26 00.9**	**-0.1**
	0.5nm,0.3s,baz=27,slow=22,SNR=1.1						
KAPI	**Kappang**	**9.37**	**228**	Pn	**Pn**	**00 24 17.2**	**+0.3**
BKB	**Balikpapan**	**10.16**	**256**	Pn	**Pn**	**00 24 25.1**	**-2.6**
SOEI	**Soe**	**11.23**	**193**	Pn	Pn	00 24 37.7	-4.8
SBUM	**Sibu**	**14.56**	**275**		**Pn**	**00 25 24.7**	**-3.0**
MTN	**Manton Dam**	**14.69**	**163**	Pn	**Pn**	**00 25 30.0**	**+0.7**
JAGI	**Jajag, Banyuwa**	**15.85**	**232**	Pn	**Pn**	**00 25 44.0**	**-0.4**
JAGI				IAmb	IAmb	00 25 54.9	
	comp=Z,43nm,0.9s						
KSM	**Kuching**	**16.43**	**271**	Pn	**Pn**	**00 25 47.6**	**-4.2**
KNRA	**Kununurra**	**16.96**	**173**		**Pn**	**00 25 57.4**	**-1.0**
SMRI	**Semarang**	**18.25**	**243**	P	**P**	**00 26 12.7**	**-1.4**
SMRI				IAmb	IAmb	00 26 18.9	
	comp=Z,42nm,1.1s						
FITZ	**Fitzroy Crossi**	**19.28**	**183**	P	**P**	**00 26 25.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=350,slow=6.8,SNR=15						
FITZ	**Fitzroy Crossi**	**19.28**	**183**	P	**P**	**00 26 25.4**	**+0.1**
CISI	**Cisompet, Garu**	**20.82**	**245**	P	**P**	**00 26 41.6**	**-0.6**
CISI				IAmb	IAmb	00 26 51.3	
	comp=Z,19nm,0.8s						
WB0	**Warramunga Arr**	**22.22**	**161**	P	**P**	**00 26 57.4**	**+0.4**
WB0				IAmb	IAmb	00 27 05.4	
	comp=Z,23nm,1.0s						
COEN	**Coen**	**22.23**	**133**	P	**P**	**00 26 57.3**	**+0.1**
WRAB	**Tennant Creek**	**22.36**	**161**	P	**P**	**00 26 58.8**	**+0.3**
WRAB				IAmb	IAmb	00 27 00.8	
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**22.36**	**161**	P	**P**	**00 26 58.9**	**+0.2**
	comp=Z,15nm,0.6s,baz=340,slow=11,SNR=132						
WRA				PcP	**PcP**	**00 30 53.4**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=313,slow=2.3,SNR=1.8						
WRA				S	**S**	**00 31 04.0**	**+2.4**
	comp=Z,0.7nm,0.8s,baz=330,slow=21,SNR=3.6						
WRA	**Warramunga Arr**	**22.36**	**161**	P	**P**	**00 26 58.6**	**0.0**
WB2	**Warramunga Arr**	**22.37**	**161**	P	**P**	**00 26 58.8**	**+0.1**
WB2				IAmb	IAmb	00 27 00.9	
	comp=Z,18nm,0.7s						
WR0	**Warramunga Arr**	**22.45**	**160**	P	**P**	**00 26 59.2**	**-0.3**
WR0				IAmb	IAmb	00 27 14.3	
	comp=Z,12nm,0.7s						
AS31	**Alice Springs**	**25.75**	**165**	P	**P**	**00 27 31.5**	**+0.8**
ASAR	**Alice Springs**	**25.75**	**165**	P	**P**	**00 27 31.6**	**+0.8**
	comp=Z,3.8nm,0.4s,baz=345,slow=7.3,SNR=79						
ASAR				PcP	**PcP**	**00 31 01.2**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=354,slow=2.0,SNR=3.1						
ASAR				S	**S**	**00 31 58.5**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=133,slow=40,SNR=3.4						
CTAO	**Charters Tower**	**28.58**	**139**	P	**P**	**00 27 56.2**	**+0.1**
NJ2	**Nanjing**	**31.50**	**347**	*eP*	**P**	**00 28 25.0**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FORT	**Forrest**	**31.90**	**178**	P	**P**	**00 28 24.8**	**-0.6**
CMAR	**Chiang Mai Arr**	**32.18**	**304**	P	**P**	**00 28 29.4**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=119,slow=7.3,SNR=2.4						
BBOO	**Buckleboo**	**35.02**	**166**	P	**P**	**00 28 52.7**	**+0.1**
BBOO				IAmb	IAmb	00 28 59.4	
	comp=Z,13nm,1.1s						
NWAO	**Narrogin (SRO)**	**35.18**	**194**	P	**P**	**00 28 53.0**	**-0.9**
NWAO				IAmb	IAmb	00 29 00.1	
	comp=Z,8.5nm,1.0s						
STKA	**Stephens Creek**	**35.85**	**158**	P	**P**	**00 28 59.5**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=340,slow=12,SNR=2.3						
STKA	**Stephens Creek**	**35.85**	**158**	P	**P**	**00 28 60.0**	**+0.3**
KSRS	**Korea Array**	**36.02**	**2**	LR	LR	00 45 24.2	
	comp=Z,15nm,19.9s,baz=198,slow=39						
CD2	**Chengdu**	**36.65**	**326**	P	**P**	**00 29 06.5**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
MJAR	**Matsushiro Arr**	**36.66**	**16**	P	**P**	**00 29 04.9**	**-1.6**
	comp=Z,1.1nm,0.4s,baz=182,slow=9.0,SNR=1.8						
MJAR				LR	LR	00 42 54.7	
	comp=Z,19nm,21.4s,baz=210,slow=34						
ARMA	**Armidale**	**39.44**	**145**	P	**P**	**00 29 30.4**	**+0.2**
ARMA				IAmb	IAmb	00 29 38.4	
	comp=Z,11nm,1.1s						
HHC	**Hu-ho-hao-te**	**41.73**	**343**	*eP*	**P**	**00 29 48.8**	**-

KDAK	Kodiak Island	83.94	32	P	P	00 34 28.3	-1.0
A21K	Barrow	84.53	18	P	P	00 34 32.6	+0.7
A21K				IAmb	IAmb	00 34 39.1	
	comp=Z,7.7nm,0.9s						
IMAR	Indian Mountai	84.57	24	P	P	00 34 32.6	+0.3
CNPM	China Poot	84.85	30	P	P	00 34 35.0	+1.1
BRLK	Bradley Lake	85.05	30	P	P	00 34 35.2	+0.3
RND	Reindeer	86.35	27	P	P	00 34 41.9	+0.5
RND				IAmb	IAmb	00 34 57.0	
	comp=Z,2.0nm,0.9s						
POKR	Poker Plat Res	87.08	25	P	P	00 34 44.7	-0.1
POKR				IAmb	IAmb	00 34 55.1	
	comp=Z,3.5nm,0.6s						
HDA	Harding Lake	87.26	26	P	P	00 34 48.5	+2.9
ILAR	Eielson Array	87.30	25	P	P	00 34 45.8	0.0
	comp=Z,0.2nm,0.6s,baz=253,slow=4.6,SNR=4.3						
ILAR	Eielson Array	87.30	25	P	P	00 34 41.3	-4.6
DOT	Dot Lake	88.51	27	P	P	00 34 50.1	-1.5
K27K	Chicken	89.38	26	P	P	00 34 56.7	+1.0
K27K				IAmb	IAmb	00 35 13.5	
	comp=Z,2.2nm,1.1s						
BCPM	Bancas Point	90.73	30	P	P	00 35 02.1	+0.1
BURAR	Bucovina Array	96.83	318	P	P	00 35 31.4	+0.9
TXAR	Lajitas Array	123.06	53	PKP	PKPdf	00 40 56.6	0.0
	comp=Z,0.2nm,0.7s,baz=344,slow=2.9,SNR=2.2						
TORD	Torodi Ar. Bea	123.66	287	PKP	PKPdf	00 40 57.7	-0.1
	comp=Z,0.5nm,0.7s,baz=98,slow=2.9,SNR=3.1						

*IDC **28** 00:23:31.7±0.8,34°.12N×141°.75E,h0km,mb3.7/14, mb1 3.9/15,mb1mx3.8/47,mbtmp3.7/15,ML2.6/1,MS2.6/3, Ms1 2.6/3,ms1mx2.4/47,Error ellipse: s-maj=23.4km s-min=16.5km az=91.0*

*JMA **28** 00:23:36.7±0.6,34°.17N×141°.47E,h31km,M3.0*

*NEIC **28** 00:23:36.2±2.0,34°.11N±0°.05×141°.74E±0°.08,h32km±3km, mb4.4/11,Error ellipse: s-maj=9.8km s-min=6.9km az=93.0*

ISC 28 00:23:35.5±0.6,**34°.15N**±0°.05×**141°.66E**±0°.07,**h24**km,**n56,** σ1§**04**/58,**mb3.8**/18,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	0.76	312	P	Pb	00 23 48.9	-0.7
BSO3	Boso 3	1.15	305	P	Pn	00 23 55.2	-0.6
BSO3				eS	Sn	00 24 08.5	-2.2
BSO4	Boso 4	1.38	308	P	Pn	00 23 59.0	-0.1
JKUC	kamogawauchiur	1.57	310	P	Pn	00 24 01.1	-0.7
JMKN	Mikurajimanish	1.73	262	P	Pn	00 24 03.2	-0.9
JHJ2	Mitsune	1.85	237	P	Pn	00 24 06.1	+0.4
JHJ2				eS	Sn	00 24 27.7	-0.6
JHJ2	Mitsune	1.85	237	Pn	Pn	00 24 06.5	+0.9
JHJ2				Sn	Sn	00 24 29.6	+1.3
JHJ	Hachijo jima 2	1.87	237	Pn	Pn	00 24 06.4	+0.5
	118nm,0.3s,baz=36,slow=18,SNR=8.8						
JHJ				Sn	Sn	00 24 27.7	-1.1
	406nm,0.3s,baz=81,slow=22,SNR=16						
JYT	Yasato	2.40	330	Pn	Pn	00 24 13.9	+0.7
MJAR	Matsushiro Arr	3.69	311	Pn	Pn	00 24 32.4	+1.3
	0.4nm,0.3s,baz=135,slow=12,SNR=9.7						
MJAR				LR	LR	00 26 15.7	
	comp=Z,64nm,21.0s,baz=140,slow=44						
MJAR	Matsushiro Arr	3.69	311		Pn	00 24 32.7	+1.6
MAJO	Matsushiro	3.70	311	Pn	Pn	00 24 33.1	+2.0
MAT	Matsushiro	3.70	311	P	Pn	00 24 31.7	+0.6
MAT				S	Sn	00 25 15.1	+1.2
JMM	Marumori	3.78	350	Pn	Pn	00 24 32.4	+0.2
JGF	Kuroka	3.82	294		Pn	00 24 33.9	+1.1
INU	Inuyama	4.00	289	Pn	Pn	00 24 37.8	+2.5
JSD	Sado	4.76	326		Pn	00 24 45.8	+0.1
JWT	Wachi	5.28	284	Pn	Pn	00 24 53.6	+0.8
JMN	Monobe	6.48	268	Pn	Pn	00 25 10.3	+1.0
JTM	Tenmabayashi	6.64	356	Pn	Pn	00 25 11.5	-0.1
JCJ	Chichijima	7.04	176	Pn	Pn	00 25 15.7	-1.4
JHS	Saijyo	7.10	279	Pn	Pn	00 25 17.0	-0.9
ERM	Erimo	7.94	8	Pn	Pn	00 25 28.5	-0.9
ASAJ	Asahikawa	9.98	4	LR	LR	00 29 53.4	
	comp=Z,34nm,21.3s,baz=70,slow=38						
KSRS	Korea Array	11.63	290	LR	LR	00 31 10.7	
	comp=Z,44nm,20.3s,baz=124,slow=39						
KS19	Wonju Array Si	11.68	291	Pn	Pn	00 26 20.8	+0.2
USA0B	Ussuriysk Arra	12.52	326	Pn	Pn	00 26 33.0	+0.9
YULB	Yu-li	20.78	244	P	P	00 28 15.6	+0.8
TWG	Pinlang	21.28	243		P	00 28 20.4	+0.2
TWG				IAmb	IAmb	00 28 30.1	
	comp=Z,15nm,0.6s						
PETK	Petropavlovsk-	22.14	26	P	P	00 28 27.2	-2.0
SONM	Songino Array	29.64	308	P	P	00 29 40.6	+1.4
	comp=Z,0.5nm,0.7s,baz=99,slow=9.4,SNR=3.9						
SONM	Songino Array	29.64	308		P	00 29 39.3	+0.2
ZALV	Zalesovo Beam	44.04	315	P	P	00 31 41.7	+0.6
	comp=Z,0.5nm,0.6s,baz=79,slow=7.8,SNR=2.3						
MKAR	Makanchi Array	45.87	305	P	P	00 31 55.4	-0.3
	comp=Z,0.5nm,0.8s,baz=83,slow=9.4,SNR=2.8						
NRIK	Noril'sk	45.98	336	P	P	00 31 55.0	-1.3
	comp=Z,0.7nm,0.4s,baz=169,slow=5.2,SNR=3.7						
RDOG	Red Dog Mine	46.00	25	P	P	00 31 58.5	+2.0
RDOG				IAmb	IAmb	00 31 59.3	
	comp=Z,7.2nm,1.0s						
ILAR	Eielson Array	51.84	31	P	P	00 32 41.6	+0.3
	comp=Z,0.7nm,0.7s,baz=263,slow=6.0,SNR=9.9						
FITZ	Fitzroy Crossi	54.15	199	P	P	00 32 58.5	-0.2
	comp=Z,1.2nm,0.7s,baz=0.9,slow=9.5,SNR=5.8						
FITZ	Fitzroy Crossi	54.15	199	P	P	00 32 58.1	-0.7
FITZ				IAmb	IAmb	00 32 59.7	
	comp=Z,3.8nm,1.1s						
BCAR	Beaver Creek A	54.18	33	P	P	00 32 59.7	+1.1
WR0	Warramunga Arr	54.23	188	P	P	00 32 58.9	-0.5
WB2	Warramunga Arr	54.24	188	P	P	00 32 58.8	-0.6
WB2				IAmb	IAmb	00 33 04.4	
	comp=Z,3.4nm,1.0s						
WRA	Warramunga Arr	54.24	188	P	P	00 32 59.0	-0.4
	comp=Z,1.1nm,0.6s,baz=6.2,slow=7.6,SNR=16						
WRA	Warramunga Arr	54.24	188	IAmb	IAmb	00 33 00.5	
	comp=Z,0.1nm,0.7s						
ASAR	Alice Springs	57.96	188	P	P	00 33 25.5	-0.5
	comp=Z,0.7nm,0.7s,baz=17,slow=11,SNR=6.3						
EUNU	Eureka	63.01	8	P	P	00 34 00.6	+0.7
FORT	Forrest	65.84	193	P	P	00 34 19.4	+0.5
ARA1	ARCESS Array S	66.77	340	P	P	00 34 26.0	+1.6
MORW	Morawa	67.38	204	P	P	00 34 27.1	-1.7
MORW				IAmb	IAmb	00 34 36.1	
	comp=Z,3.4nm,0.9s						
FINES	FINESS Array B	71.46	333	P	P	00 34 53.4	-0.2
	comp=Z,1.3nm,0.9s,baz=69,slow=9.4,SNR=1.5						
NVAR	Mina Array Bea	76.57	53	P	P	00 35 24.2	0.0
	comp=Z,0.1nm,0.4s,baz=295,slow=8.6,SNR=1.7						
AKASG	Malin Array Be	76.71	323	P	P	00 35 24.3	-0.1
	comp=Z,0.3nm,0.4s,baz=54,slow=3.9,SNR=2.0						
NOA	NORSAR Array B	76.92	338	P	P	00 35 26.4	+0.9
	comp=Z,1.4nm,1.2s,baz=64,slow=8.9,SNR=1.6						
GERES	GERESS Array B	85.27	328	P	P	00 36 09.9	-0.3
	comp=Z,0.4nm,0.7s,baz=33,slow=5.1,SNR=3.6						
TXAR	Lajitas Array	91.72	53	P	P	00 36 42.3	+1.0
	comp=Z,0.2nm,0.7s,baz=343,slow=2.8,SNR=2.5						
TXAR	Lajitas Array	91.72	53	P	P	00 36 40.6	-0.8

*IDC **28** 00:42:08.5±3.0,6°.75S×148°.45E,h82km±22km,mb4.0/2, mb1 4.1/4,mb1mx3.4/31,mbtmp4.1/4,MS3.0/3,Ms1 3.1/3, ms1mx2.6/37,Error ellipse: s-maj=83.3km s-min=20.4km az=114.0*

*NEIC **28** 00:42:09.5±1.3,6°.8S±0°.1×148°.4E±0°.1,h87km±5km, mb4.1/16,Error ellipse: s-maj=23.8km s-min=16.6km az=140.0*

ISC 28 00:42:09.8±1.3,**6°.8S**±0°.1×**148°.4E**±0°.1,**h100**km,**n26,** σ1§**75**/28,**mb4.3**/8,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	2.87	205	P	Pn	00 42 52.8	-1.0
	13nm,0.3s,baz=48,slow=6.7,SNR=10						
PMG				S	Sn	00 43 28.0	+0.4
	30nm,0.3s,baz=68,slow=22,SNR=21						
PMG				LR	LR	00 44 10.1	
	comp=Z,75nm,18.7s,baz=332,slow=41						
PMG	Port Moresby	2.87	205		Pn	00 42 52.9	-0.9
PMG				Sn	Sn	00 43 30.4	+2.7
KRVT	Keravat (AS076	4.40	56	LR	LR	00 44 57.4	
	comp=Z,72nm,21.5s,baz=265,slow=39						
COEN	Coen	8.77	215	Pn	Pn	00 44 12.9	-0.8
WB0	Warramunga Arr	18.73	225	P	P	00 46 21.2	+0.5
WR0	Warramunga Arr	18.75	224	P	Pn	00 46 22.1	-0.5
WRAB	Tennant Creek	18.87	225	P	Pn	00 46 23.3	-0.7
WRAB				IAmb	IAmb	00 46 23.5	
	comp=Z,3.9nm,0.6s						
WC3	Warramunga Arr	18.87	225	P	P	00 46 22.4	+0.1
WB2	Warramunga Arr	18.87	225		P	00 46 22.9	+0.6
WB2				IAmb	IAmb	00 46 24.8	
	comp=Z,3.2nm,0.8s						
WRA	Warramunga Arr	18.88	225	P	Pn	00 46 23.3	-0.8
	comp=Z,0.7nm,0.3s,baz=51,slow=11,SNR=32						
WRA				S	S	00 49 47.3	-4.7
	comp=Z,0.0nm,0.3s,baz=50,slow=21,SNR=3.2						
KNRA	Kununurra	21.14	244	P	P	00 46 46.1	-0.8
KNRA				IAmb	IAmb	00 47 04.1	
	comp=Z,7.1nm,1.0s						
AS31	Alice Springs	21.79	218	P	P	00 46 52.5	-1.3
AS31				IAmb	IAmb	00 46 56.5	
	comp=Z,1.4nm,0.4s						
ASAR	Alice Springs	21.79	218	P	P	00 46 54.5	+0.6
	comp=Z,2.6nm,0.6s,baz=52,slow=9.3,SNR=26						
ASAR				S	S	00 50 52.8	+3.7
	comp=Z,1.5nm,0.9s,baz=31,slow=23,SNR=7.8						
ASAR	Alice Springs	21.79	218	P	P	00 46 53.2	-0.6
FITZ	Fitzroy Crossi	24.84	241	P	P	00 47 24.5	+1.4
	comp=Z,9.8nm,0.5s,baz=54,slow=9.0,SNR=64						
FITZ	Fitzroy Crossi	24.84	241	P	P	00 47 24.4	+1.4
FITZ				IAmb	IAmb	00 47 25.3	
	comp=Z,11nm,0.8s						
FORT	Forrest	30.53	216	P	P	00 48 15.6	+1.8
MSVF	Nonsavu	30.93	113	P	P	00 48 17.5	-0.1
MSVF				IAmb	IAmb	00 48 19.4	
	comp=Z,13nm,1.1s						
PSAD2	Pilbara Seismi	31.15	239	P	P	00 48 20.5	+1.1
PSAD2				IAmb	IAmb	00 48 28.4	
	comp=Z,6.3nm,1.1s						
PSAC2	Pilbara Seismi	31.18	239	P	P	00 48 21.2	+1.5
PSAC2				IAmb	IAmb	00 48 27.7	
	comp=Z,14nm,1.1s						
PSAD1	Pilbara Seismi	31.20	239	P	P	00 48 21.5	+1.7
PSAD1				IAmb	IAmb	00 48 34.3	
	comp=Z,6.3nm,1.1s						
LTZ	Lake Taylor	41.60	153	P	P	00 49 44.8	-3.2
CMWZ	Cape Campbell	41.70	151	P	P	00 49 49.6	+0.8
WHZ	Wether Hill Ro	42.48	160	P	P	00 49 55.8	+0.7
VNDA	Vanda	71.06	177	LR	LR	01 21 53.7	
	comp=Z,99nm,18.6s,baz=316,slow=34						
TORD	Torodi Ar. Bea	146.60	284	PKPbc	PKPbc	01 01 41.2	+0.4
	comp=Z,1.5nm,0.6s,baz=58,slow=3.4,SNR=18						

*NEIC **28** 01:07:08.2±1.8,19°.1S±0°.2×177°.7W±0°.1,h563km±11km, mb4.2/11,Error ellipse: s-maj=35.9km s-min=16.9km az=161.0*

*IDC **28** 01:07:10.6±5.3,18°.99S×177°.85W,h582km±61km,mb3.1/7, mb1 3.4/8,mb1mx3.2/27,mbtmp4.1/8,Error ellipse: s-maj=85.1km s-min=23.5km az=150.0*

ISC 28 01:07:07.6±0.8,**19°.0S**±0°.2×**177°.7W**±0°.1,**h550**km,**n23,** σ0§**94**/23,**mb3.9**/9,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.18	286	P	P	01 08 35.0	+4.1
NIUE	Niue	7.38	92	P	P	01 08 58.9	-0.4
AFI	Afiamalu	7.60	50	P	P	01 09 00.8	-0.8
DZM	Mont Dzumac	15.15	255	P	P	01 10 20.8	+2.1
	1.0nm,0.3s,baz=84,slow=19,SNR=9.4						
CTAO	Charters Tower	33.92	262	P	P	01 13 06.0	+0.5
TOO	Toolangi	37.03	232	P	P	01 13 30.5	-0.6
COEN	Coen	37.76	272	P	P	01 13 38.0	+0.7
COEN				IAmb	IAmb	01 13 39.9	
	comp=Z,7.1nm,0.7s						
STKA	Stephens Creek	38.71	242	P	P	01 13 44.3	-0.6
	comp=Z,3.2nm,0.6s,baz=87,slow=9.6,SNR=9.0						
STKA	Stephens Creek	38.71	242	IAmb	IAmb	01 13 46.4	
	comp=Z,3.3nm,1.4s						
BBOO	Buckleboo	43.48	242	P	P	01 14 21.8	-0.8
WB0	Warramunga Arr	45.06	261	P	P	01 14 34.4	-0.6
WRAB	Tennant Creek	45.08	260	P	P	01 14 34.6	-0.5
WRA	Warramunga Arr	45.08	260	P	P	01 14 34.9	-0.3
	comp=Z,3.5nm,0.4s,baz=98,slow=7.8,SNR=111						
WRA				PcP	PcP	01 16 04.0	-0.2
	comp=Z,0.3nm,0.5s,baz=103,slow=3.1,SNR=1.9						
WRA	Warramunga Arr	45.08	260	P	P	01 14 32.8	-2.4
AS31	Alice Springs	45.14	255	P	P	01 14 35.2	-0.4
AS31				IAmb	IAmb	01 14 37.4	
	comp=Z,2.4nm,0.6s						
ASAR	Alice Springs	45.14	255	P	P	01 14 35.6	0.0
	comp=Z,4.5nm,0.5s,baz=85,slow=8.1,SNR=44						
ASAR				PcP	PcP	01 16 04.1	-0.2
	comp=Z,0.5nm,0.5s,baz=86,slow=4.5,SNR=2.1						
ASAR	Alice Springs	45.14	255	P	P	01 14 34.7	-0.9
KSAR	Wonju Array Be	75.92	318	P	P	01 17 56.8	-1.3
KS19	Wonju Array Si	75.97	318	P	P	01 17 58.6	+0.2
NVAR	Mina Array Bea	79.73	43	P	P	01 18 19.5	+0.6
	comp=Z,0.4nm,0.7s,baz=209,slow=12,SNR=4.5						
TXAR	Lajitas Array	86.01	57	P	P	01 18 51.5	+1.0
	comp=Z,0.5nm,0.6s,baz=219,slow=6.6,SNR=7.7						
ILAR	Eielson Array	86.75	13	P	P	01 18 53.2	+0.2
	comp=Z,0.3nm,0.8s,baz=221,slow=5.5,SNR=5.2						
PDAR	Pinedale Array	87.67	43	P	P	01 18 58.4	+0.3
	comp=Z,0.2nm,0.5s,baz=231,slow=2.9,SNR=2.2						

*IDC **28** 01:09:38.9±0.7,17°.25N×96°.34E,h0km,mb4.1/16, mb1 4.3/17,mb1mx4.2/31,mbtmp4.1/17,ML4.2/1,MS3.3/1, Ms1 3.6/1,ms1mx2.7/59,Error ellipse: s-maj=18.9km s-min=13.9km az=33.0*

*NEIC **28** 01:09:41.7±1.1,17°.28N±0°.10×96°.35E±0°.09,h15km±4km, mb4.4/29,Error ellipse: s-maj=15.5km s-min=11.0km az=217.0*

ISC 28 01:09:40.3±0.5,**17°.22N**±0°.06×**96°.35E**±0°.08,**h10**km,**n87,** σ1§**32**/87,**mb4.3**/31,**1C-1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHMT	Maesarieng	1.78	58	P	Pn	01 10 09.6	-1.6
CM13	Chiang Mai Arr	2.71	64	P	Pn	01 10 22.3	-1.7
CM05	Chiang Mai Arr	2.74	64	P	Pn	01 10 22.7	-1.7
CM15	Chiang Mai Arr	2.74	63	P	Pn	01 10 22.8	-1.6
CM02	Chiang Mai Arr	2.75	64	P	Pn	01 10 22.9	-1.6
CM01	Chiang Mai Arr	2.76	64	P	Pn	01 10 22.9	-1.8
CM31	Chiang Mai Arr	2.76	63	Pn	Pn	01 10 24.4	-0.2
CMAR	Chiang Mai Arr	2.76	63	Pn	Pn	01 10 22.9	-1.7
	10nm,0.3s,baz=246,slow=14,SNR=47						
CMAR				Lg	Lg	01 11 06.4	
	58nm,0.3s,baz=244,slow=33,SNR=8.7						
CMAR				LR	LR	01 11 47.8	
	comp=Z,599nm,19.7s,baz=240,slow=47						
CMAR	Chiang Mai Arr	2.76	63		Pn	01 10 24.1	-0.5
CM04	Chiang Mai Arr	2.77	65	P	Pn	01 10 23.2	-1.6
CM09	Chiang Mai Arr	2.79	64	P	Pn	01 10 23.5	-1.6
CHTO	Chiang Mai	2.93	57	Pn	Pn	01 10 25.5	-1.5
SUKH	Sukhothai	3.15	85	P	Pn	01 10 27.0	-3.0
PHIT	Phitsanulok	3.89	90	P	Pn	01 10 37.5	-2.7
PHRA	Phrae	3.91	70	P	Pn	01 10 38.8	-1.7
SRDT	SRDT	3.91	137	P	Pn	01 10 37.9	-2.5
PAYA	Payao	3.96	57	P	Pn	01 10 40.0	-1.3
CRAI	Chiangrai	4.85	51	P	Pn	01 10 52.9	-0.4
SHL	Shillong	9.28	334	Pn	Pn	01 11 53.8	-0.6
KMI	Kunming	9.86	36	eP	Pn	01 12 14.0	+12
KMI				pP		01 12 20.0	
KMI				sP		01 12 22.5	
KMI				pmax	pmax		
	comp=Z,71nm,0.9s						
KMI				pmax	pmax		
	comp=Z,97nm,5.3s						
KMI				LR	LR		
	comp=N,560nm,10.0s						
KMI				LR	LR		
	comp=E,450nm,8.4s						
KMI				LR	LR		
	comp=Z,560nm,13.4s						
ODAN	Odare	12.68	321	eP	Pn	01 12 39.2	-1.8
TAPN	Taplejung	12.86	323	eP	Pn	01 12 41.9	-1.6
	comp=Z,91nm,0.8s						
RAMN	Ramite	13.23	319	eP	Pn	01 12 46.9	-1.7
	comp=Z,32nm,0.4s						
LSA	Lhasa	13.30	340	Pn	Pn	01 12 48.8	-0.9
PKI	Pulchoki	14.43	317	eP	Pn	01 13 02.7	-2.3
	comp=Z,36nm,0.6s						
PKIN	Phulchoki	14.44	317	eP	Pn	01 13 03.1	-2.0
	comp=Z,41nm,0.4s						
DMN	Daman	14.65	317	eP	Pn	01 13 06.1	-1.8
	comp=Z,38nm,0.7s						
KKN	Kakani	14.66	318	eP	Pn	01 13 06.6	-1.4
CD2	Chengdu	15.21	25	P	P	01 13 17.0	-3.3
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				LR	LR		
	comp=N,310nm,6.9s						
CD2				LR	LR		
	comp=E,490nm,10.2s						
CD2				LR	LR		
	comp=Z,370nm,13.3s						
GKN	Gorkha	15.22	317	eP	Pn	01 13 13.6	-1.9
	comp=Z,37nm,0.4s						
KOLN	Koldanda	15.76	314	eP	Pn	01 13 21.5	-1.2
	comp=Z,120nm,0.8s						
DANN	Dangsing	16.03	316	eP	Pn	01 13 24.5	-1.7
	comp=Z,103nm,0.7s						
PYUN	Piuthan	16.39	314	eP	Pn	01 13 30.2	-0.6
	comp=Z,57nm,0.6s						
BKNI	Bangkinang	17.41	164		P	01 13 45.4	+0.6
LZH	Lanzhou	19.93	18	eP	Pn	01 14 13.8	-0.4
LZH				pP	sP	01 14 17.8	+1.1
LZH				sP	pP	01 14 20.8	+5.4
LZH				ePP	PnPn	01 14 32.0	+3.6
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,82nm,4.5s						
LZH				LR	LR		
	comp=N,200nm,11.2s						
LZH				LR	LR		
	comp=E,210nm,11.5s						
LZH				LR	LR		
	comp=Z,290nm,13.7s						
GTA	Gaotai	22.31	7	⇓P	P	01 14 39.3	+1.1
GTA				pP	sP	01 14 43.5	+1.2
GTA				sP	pP	01 14 46.0	+4.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,49nm,4.2s						
GTA				LR	LR		
	comp=N,120nm,13.4s						
GTA				LR	LR		
	comp=E,190nm,13.8s						
GTA				LR	LR		
	comp=Z,140nm,13.5s						
NIL	Nilore	26.41	313	P	P	01 15 17.6	+0.4
NIL				IAmb	IAmb	01 15 18.6	
	comp=Z,8.9nm,0.7s						
HHC	Hu-ho-hao-te	26.96	26	eP	P	01 15 22.5	+0.3
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,4.1s						
HHC				LR	LR		
	comp=N,210nm,11.4s						
HHC				LR	LR		
	comp=E,200nm,12.8s						
HHC				LR	LR		
	comp=Z,140nm,12.2s						
WMQ	Urumqi	27.51	346	eP	P	01 15 29.0	+2.0
KSH	Kashi	28.41	326	P	P	01 15 34.0	-1.3
KSH				S	S	01 20 19.0	-3.5
KSH				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,180nm,4.4s						
KSH				LR	LR		
	comp=N,370nm,5.3s						
KSH				LR	LR		
	comp=E,480nm,5.3s						
KSH				LR	LR		
	comp=Z,570nm,6.6s						
KBL	Kabul	29.87	311	P	P	01 15 49.5	+1.1
KBL				IAmb	IAmb	01 16 39.1	
	comp=Z,3.8nm,1.1s						
DRK	Karamyk	30.78	321	P	P	01 15 57.4	+1.0
SONM	Songino Array	31.62	13	P	P	01 16 04.8	+1.3
	comp=Z,0.2nm,0.3s,baz=183,slow=12,SNR=2.5						
MK31	Makanchi Array	31.70	341	P	P	01 16 04.2	+0.1
MK31				IAmb	IAmb	01 16 05.4	
	comp=Z,2.7nm,0.8s						
MKAR	Makanchi Array	31.70	341	P	P	01 16 04.5	+0.3
	comp=Z,2.6nm,0.6s,baz=164,slow=8.5,SNR=21						
MKAR	Makanchi Array	31.70	341	P	P	01 16 03.6	-0.5
BTK	Batken	31.73	321	P	P	01 16 05.5	+1.0
BTK				IAmb	IAmb	01 16 07.4	
	comp=Z,6.8nm,1.3s						
LUWI	Luwuk	31.74	122	P	P	01 16 06.0	+1.2
KK31	Karatay Array	33.86	325	P	P	01 16 23.0	-0.1
KK31				IAmb	IAmb	01 16 24.8	
	comp=Z,3.6nm,1.3s						
KKAR	Karatay Array	33.86	325	P	P	01 16 23.0	-0.1
KKAR				IAmb	IAmb	01 16 24.8	
	comp=Z,3.6nm,1.3s						
KKAR	Karatay Array	33.86	325	P	P	01 16 23.2	+0.1
KURK	Kurchatov	36.30	341	P	P	01 16 44.3	+0.3
KURK				IAmb	IAmb	01 16 45.0	
	comp=Z,6.7nm,0.8s						
ZAA0	Zalesovo Array	37.73	349	P	P	01 16 56.0	-0.1
ZAA0				IAmb	IAmb	01 16 57.3	
	comp=Z,2.7nm,0.8s						
ZALV	Zalesovo Beam	37.73	349	P	P	01 16 56.3	+0.2
	comp=Z,2.0nm,0.6s,baz=169,slow=8.6,SNR=15						
BRVK	Borovoye	41.16	336	P	P	01 17 24.5	-0.3
ABKAR	Akbulak array	43.42	326	P	P	01 17 43.5	+0.3
KBZ	Khabaz	52.03	312	P	P	01 18 49.4	-0.7
	comp=Z,1.8nm,0.9s,baz=108,slow=7.5,SNR=4.4						
KIV	Kislovodsk	52.23	313	P	P	01 18 52.7	+1.0
NRIK	Noril'sk	52.39	356	P	P	01 18 52.2	-0.1
	comp=Z,1.0nm,0.6s,baz=158,slow=6.1,SNR=4.0						
WB0	Warramunga Arr	52.42	133	P	P	01 18 54.3	+1.0
WRA	Warramunga Arr	52.50	133	P	P	01 18 53.6	-0.3
	comp=Z,6.3nm,0.9s,baz=320,slow=7.6,SNR=29						
WRAB	Tennant Creek	52.50	133	P	P	01 18 54.7	+0.8
MARD	Mardin	52.52	304

MS4.3/10,Error ellipse: s-maj=6.3km s-min=3.7km az=111.1

NDI ***28*** *01:18:43.5±3.4, 12°.56N×.92°.74E, h10km, mb5.2, ML5.0, mb5.3(NEIC)*

BGR ***28*** *01:18:44.9±0.0, 12°.83N×.93°.68E, h44km, mb4.8*

NEIC ***28*** *01:18:45.6±1.3, 12°.51N±0°.06×92°.80E±0°.07, h44km±4km, mb5.3/170,Error ellipse: s-maj=10.3km s-min=8.1km az=100.0*

GCMT ***28*** *01:18:45.6±0.2, 12°.40N±0°.01×92°.79E±0°.01, h36km±1km, MW5.1/111,Moment Tensor Solution. s63,c83; s111,c178; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.64±.17; Mθθ=2.81±.12; Mφφ=3.44±.12; Mrθ=0.72±.15; Mθφ=3.70±.11; Mφr=2.29±.17; Best double couple: M=5.28400×10^16 NP1=φs252.00000°,δ72.00000°, λ10.00000°. NP2=φs159.00000°,δ80.00000°,λ162.00000°. Principal axes: T 6.0110, Plg20.0000°, Azm114.0000°; N -1.4590, Plg70.0000°, Azm311.0000°; P -4.5570, Plg5.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***28*** *01:18:45.0±1.3, 12°.41N×.92°.82E, h42km±10km, mb4.6/38, mb1 4.7/41,mb1mx4.7/45,mbtmp4.8/41,ML4.5/3,MS4.0/35, Ms1 4.0/35,ms1mx3.9/48 Error ellipse: s-maj=12.0km s-min=9.3km az=61.0*

KLM ***28*** *01:18:47.0, 12.51N×.92°.81E, h63km, mb5.4*

DJA ***28*** *01:18:47.7±0.3, 12°N±2°×.9°3E±°, h60km±3km, M5.3/90, mB5.7/46, mb5.5/90, MLv5.6/2, Mw(mB)5.2/46, Mwp5.2/2*

ISC 28 01:18:45.1±0.3, 12.43N±0.03×92.76E±0.03, h43km±2km, h43km:pP-P, n778, σ1§64/815, mb5.2/220, MS4.1/51, 29C-45D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.77**	**181**		*eP*		Pn	01 19 01.8	+2.2
PBA					*eS*		Sn	01 19 14.4	+4.4
PBA					*eS*			01 19 14.7	
PBA					IAML			01 19 16.7	
	comp=E,364μm,0.4s								
PBA					IAML			01 19 16.9	
	comp=N,275μm,0.3s								
PBA	**Port Blair**	**0.77**	**181**				Pn	01 19 01.7	+2.1
SRDT	**SRDT**	**6.48**	**72**	P			**Pn**	**01 20 20.4**	**+2.4**
	comp=N,0.8nmcomp=N,168nm,0.6s								
PHET	**Kaeng Krachan**	**6.72**	**85**	P			**Pn**	**01 20 24.1**	**+2.7**
	comp=N,4.8nmcomp=N,13μmcomp=N,1μm,0.6s								
SURT	**Suratani**	**6.86**	**120**	P			**Pn**	**01 20 26.0**	**+2.8**
	comp=N,0.1nmcomp=N,216nmcomp=N,21nm,0.8s								
UTHA	**Uthaitani**	**7.20**	**64**	P			**Pn**	**01 20 30.0**	**+2.1**
	comp=N,1.5nmcomp=N,4μmcomp=N,463nm,0.8s								
MHMT	**Maesarieng**	**7.59**	**40**	P			**Pn**	**01 20 33.6**	**+0.4**
	comp=N,2.5nmcomp=N,4μmcomp=N,575nm,0.8s								
PATY	**Pattaya**	**7.93**	**86**	P			**Pn**	**01 20 40.0**	**+2.1**
	comp=N,4.2nmcomp=N,17μmcomp=N,1μm,0.6s								
TRTT	**Trang**	**8.21**	**123**	P			**Pn**	**01 20 44.7**	**+2.9**
	comp=N,1.4nmcomp=N,4μmcomp=N,398nm,0.7s								
LHMI	**Lhok Sumawe**	**8.26**	**150**	P			**Pn**	**01 20 46.9**	**+4.4**
	comp=N,3μmcomp=N,280nm,0.6s								
LHMI	**Lhok Sumawe**	**8.26**	**150**	Pn			**Pn**	**01 20 45.9**	**+3.4**
SUKH	**Sukhothai**	**8.33**	**52**	P			**Pn**	**01 20 45.0**	**+1.7**
	comp=N,1.2nmcomp=N,351nm,0.8s								
CM13	**Chiang Mai Arr**	**8.40**	**44**	P			**Pn**	**01 20 45.0**	**+0.6**
	comp=N,0.6nmcomp=N,2μmcomp=N,201nm,0.8s								
CM05	**Chiang Mai Arr**	**8.42**	**44**	P			**Pn**	**01 20 45.2**	**+0.6**
	comp=N,0.8nmcomp=N,2μmcomp=N,290nm,0.8s								
CM15	**Chiang Mai Arr**	**8.44**	**44**	P			**Pn**	**01 20 45.5**	**+0.6**
	comp=N,0.7nmcomp=N,2μmcomp=N,221nm,0.8s								
CM01	**Chiang Mai Arr**	**8.44**	**44**	P			**Pn**	**01 20 45.0**	**+0.1**
	comp=N,0.9nmcomp=N,2μmcomp=N,332nm,0.8s								
CM04	**Chiang Mai Arr**	**8.44**	**45**	P			**Pn**	**01 20 45.7**	**+0.8**
	comp=N,1.4nmcomp=N,2μmcomp=N,306nm,0.9s								
CM02	**Chiang Mai Arr**	**8.44**	**44**	P			**Pn**	**01 20 45.6**	**+0.7**
	comp=N,0.8nmcomp=N,2μmcomp=N,270nm,0.8s								
CM31	**Chiang Mai Arr**	**8.45**	**44**	P			**Pn**	**01 20 45.8**	**+0.6**
	comp=N,20nmcomp=N,48μmcomp=N,5μm,0.7s								
CM31	**Chiang Mai Arr**	**8.45**	**44**	Pn			**Pn**	**01 20 45.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**8.45**	**44**	P			**Pn**	**01 20 43.5**	**-1.6**
	comp=N,5.3nm,0.3s,baz=237,slow=15,SNR=184								
CMAR				S			**Sn**	**01 22 15.7**	**-3.6**
	comp=N,5.8nm,0.3s,baz=236,slow=28,SNR=6.0								
CMAR	**Chiang Mai Arr**	**8.45**	**44**	*i* P			**Pn**	**01 20 45.7**	**+0.6**
CMAR				pmax			pmax		
	comp=Z,87nm,0.7s								
CMAR	**Chiang Mai Arr**	**8.45**	**44**				**Pn**	**01 20 44.9**	**-0.2**
CM09	**Chiang Mai Arr**	**8.48**	**44**	P			**Pn**	**01 20 46.2**	**+0.8**
	comp=Z,0.7nmcomp=Z,μmcomp=Z,268nm,0.9s								
CM32	**Chiang Mai Arr**	**8.53**	**43**	P			**Pn**	**01 20 46.0**	**-0.1**
CM36	**Chiang Mai Arr**	**8.60**	**44**	P			**Pn**	**01 20 47.0**	**-0.1**
CHTO	**Chiang Mai**	**8.71**	**42**	P			**Pn**	**01 20 48.7**	**+0.1**
CHTO	**Chiang Mai**	**8.71**	**42**	Pn			**Pn**	**01 20 48.7**	**+0.1**
CM33	**Chiang Mai Arr**	**8.71**	**42**	P			**Pn**	**01 20 48.0**	**-0.6**
CM35	**Chiang Mai Arr**	**8.75**	**44**	P			**Pn**	**01 20 49.0**	**-0.2**
PHIT	**Phitsanulok**	**8.79**	**56**	P			**Pn**	**01 20 52.0**	**+2.3**
	comp=Z,7μmcomp=Z,906nm,0.8s								
CM34	**Chiang Mai Arr**	**8.87**	**43**	P			**Pn**	**01 20 51.0**	**+0.2**
MLSI	**Meulaboh, Aceh**	**8.87**	**156**	P			**Pn**	**01 20 51.0**	**+0.1**
	comp=Z,7μmcomp=Z,796nm,0.8s								
SRAK	**Srakaew**	**9.18**	**79**	P			Pn	01 21 05.0	+10
PHRA	**Phrae**	**9.39**	**49**	P			**Pn**	**01 21 00.3**	**+2.3**
	comp=Z,42μmcomp=Z,505nm,0.7s								
CHAI	**Chaiyaphum**	**9.59**	**68**	P			**Pn**	**01 21 04.1**	**+3.4**
	comp=Z,2μmcomp=Z,220nm,1.1s								
PAYA	**Payao**	**9.71**	**44**	P			**Pn**	**01 21 03.4**	**+1.0**
	comp=Z,22μmcomp=Z,2μm,0.6s								
SAIH	**SAIHA**	**10.01**	**1**		*eP*		**Pn**	**01 21 05.0**	**-1.6**
SAIH					*eS*		**Sn**	**01 22 50.0**	**-7.7**
SAIH					IAML			01 23 00.1	
	comp=E,199nm,0.7s								
SAIH					IAML			01 23 01.5	
	comp=N,222nm,0.7s								
TPTI		**10.10**	**154**	P			**Pn**	**01 21 06.5**	**-1.2**
	comp=N,830nmcomp=N,89nm,0.9s								
KCSI	**Kotacane, Aceh**	**10.14**	**150**	P			**Pn**	**01 21 09.0**	**+0.7**
	comp=N,8μmcomp=N,126nm,0.8s								
BWNR	**Bhubaneshwar**	**10.28**	**320**		*eP*		**Pn**	**01 21 07.2**	**-2.9**
BWNR					*eS*		Sn	01 22 51.0	-13
BWNR					IAML			01 22 55.1	
	comp=N,1μm,0.7s								
BWNR					IAML			01 22 55.5	
	comp=E,3μm,0.7s								
CHLP	**Challavanipeta**	**10.34**	**307**		*eP*		**Pn**	**01 21 09.6**	**-1.3**
VIS	**Vishakhapatnam**	**10.52**	**301**		*eP*		**Pn**	**01 21 12.2**	**-1.2**
VIS					*eS*		Sn	01 22 59.8	-10
KULM	**Kulim**	**10.54**	**132**	Pn			**Pn**	**01 21 15.6**	**+1.9**
KULM	**Kulim**	**10.54**	**132**	P			**Pn**	**01 21 17.0**	**+3.3**
TSI	**Tuntungan**	**10.57**	**147**	P			**Pn**	**01 21 17.8**	**+3.7**
	comp=E,234nm,1.0s								
PSI	**Prapat**	**11.35**	**147**	P			**Pn**	**01 21 23.9**	**-0.9**
	comp=E,0.7nm,0.3s,baz=360,slow=9.3,SNR=2.5								
PSI					LR		LR	01 26 40.2	
	comp=E,2μm,20.0s,baz=271,slow=42								
PSI	**Prapat**	**11.35**	**147**	P			**Pn**	**01 21 28.1**	**+3.2**
IPM	**Ipoh**	**11.36**	**133**	Pn			**Pn**	**01 21 25.7**	**+0.7**
IPM	**Ipoh**	**11.36**	**133**	P			**Pn**	**01 21 27.0**	**+2.0**
RPSI	**Rantau Prapat**	**11.44**	**147**				**Pn**	**01 21 28.1**	**+2.1**
NONG	**Nongkai**	**11.48**	**60**	P			**Pn**	**01 21 30.0**	**+3.4**
PVM	**Polavaram**	**11.78**	**295**		*eP*		**Pn**	**01 21 29.4**	**-1.3**
MDRS	**Chennai**	**12.22**	**274⇑**		*eP*		**Pn**	**01 21 36.1**	**-0.7**
SILR	**SILCHAR**	**12.29**	**0⇑**		*eP*		**Pn**	**01 21 36.1**	**-1.5**
MYLAV	**Mylavaram**	**12.50**	**292**		*eP*		**Pn**	**01 21 38.6**	**-1.8**
ADKI	**Addanki**	**12.86**	**287**		*eP*		**Pn**	**01 21 43.8**	**-1.6**
PALK	**Pallekele**	**12.93**	**248**	P			**Pn**	**01 21 45.8**	**-0.8**
	comp=E,2.6nm,0.3s,baz=162,slow=13,SNR=11								
PALK					S		Sn	01 23 55.5	-14
	comp=E,19nm,0.3s,baz=148,slow=13,SNR=4.4								
PALK					LR		LR	01 26 28.8	
	comp=E,860nm,21.6s,baz=165,slow=36								
PALK	**Pallekele**	**12.93**	**248**	P			**Pn**	**01 21 47.9**	**+1.4**
PALK	**Pallekele**	**12.93**	**248**				**Pn**	**01 21 47.9**	**+1.4**
BOK	**Bokaro**	**13.05**	**331**		*eP*		**Pn**	**01 21 46.6**	**-1.4**
BOK					IAmb		IAmb	01 21 52.9	
	comp=Z,86nm,0.4s								
BOK					*eS*		Sn	01 24 00.5	-11
SHL	**Shillong**	**13.10**	**357**		*eP*		**Pn**	**01 21 44.6**	**-4.2**
SHL					*eS*		Sn	01 24 02.3	-11
SHL					IAML			01 24 11.8	
	comp=N,48nm,0.4s								
SHL					IAML			01 24 12.4	
	comp=E,63nm,0.5s								
SHL	**Shillong**	**13.10**	**357**	P			**Pn**	**01 21 44.4**	**-4.4**
SHL	**Shillong**	**13.10**	**357**	Pn			**Pn**	**01 21 44.4**	**-4.4**
GGR	**Gangavaram**	**13.26**	**295**		*eP*		**Pn**	**01 21 49.5**	**-1.4**
KOHI	**KOHIMA**	**13.29**	**5**		*eP*		**Pn**	**01 21 48.9**	**-2.4**
KOHI					*eS*		Sn	01 24 06.9	-11
KOHI					*eS*		Sn	01 24 06.9	-11
KOHI					IAML			01 24 19.9	
	comp=E,259nm,0.6s								
KOHI					IAML			01 24 19.9	
	comp=N,183nm,0.6s								
MNSI	**Mandailing Nat**	**13.39**	**149**	P			**Pn**	**01 21 48.9**	**-3.8**
NJS	**Nagarjunasagar**	**13.66**	**289**		*eP*		**Pn**	**01 21 55.3**	**-1.1**
NJS					IVmB_BB			01 22 17.7	
	comp=Z,606nm,0.6s								
GUWA	**GUWAHATI**	**13.73**	**356**		*eP*		**Pn**	**01 21 55.1**	**-2.2**
GUWA					*eS*		Sn	01 24 17.9	-11
GUWA					*eS*		Sn	01 24 18.1	-10
GUWA					IAML			01 24 23.5	
	comp=N,39nm,1.0s								
GUWA					IAML			01 24 23.6	
	comp=E,54nm,0.8s								
SLVN	**Son La**	**13.86**	**49**				**Pn**	**01 21 58.0**	**-1.1**
MOKO	**MOKOCHONG**	**13.92**	**7**		*eP*		**Pn**	**01 21 58.3**	**-1.7**
MOKO					IAML			01 24 33.4	
	comp=E,207nm,0.5s								
MOKO					IAML			01 24 37.4	
	comp=N,218nm,0.8s								
TEZP	**TEZPUR**	**14.12**	**0**		*eP*		**Pn**	**01 21 59.1**	**-3.4**
CUPL	**Choutuppal**	**14.22**	**292**		*eP*		**Pn**	**01 22 03.0**	**-1.0**
CUPL					IVmB_BB			01 22 23.9	
	comp=Z,437nm,0.7s								
RPR	**Rampur**	**14.45**	**298**		*eP*		**Pn**	**01 22 06.0**	**-1.1**
RPR					IVmBBB			01 22 17.2	
	comp=Z,440nm,0.3s								
BKNI	**Bangkinang**	**14.56**	**145**	P			P	01 22 19.2	+5.0
BKNI	**Bangkinang**	**14.56**	**145**	Pn			**Pn**	**01 22 09.0**	**+0.5**
HYB	**Hyderabad**	**14.60**	**292**	*i* P			**Pn**	**01 22 07.0**	**-2.0**
HYB					*eS*		**Sn**	**01 24 48.0**	**-1.6**
HYBB	**Hyderabad (bro**	**14.60**	**292**		*eP*		**Pn**	**01 22 08.1**	**-1.0**
HYBB					IVmB_BB			01 22 27.7	
	comp=Z,701nm,2.0s								
ZIRO	**ZIRO**	**15.06**	**4**		*eP*		**Pn**	**01 22 11.4**	**-3.8**
ZIRO					*eS*		Sn	01 24 48.7	-12
LKP	**Lekhapani**	**15.11**	**11**		*eP*		**Pn**	**01 22 13.1**	**-2.6**
ODAN	**Odare**	**15.22**	**341**		*eP*		**Pn**	**01 22 14.9**	**-2.5**
MYKOM	**Kota Tinggi**	**15.25**	**133**	Pn			**Pn**	**01 22 18.0**	**+0.4**
MYKOM	**Kota Tinggi**	**15.25**	**133**	P			**P**	**01 22 23.0**	**+1.1**
URV	**Uravakonda**	**15.27**	**281**		*eP*		**Pn**	**01 22 17.2**	**-0.7**
URV					IVmB_BB			01 22 35.3	
	comp=Z,686nm,0.8s								
DLV	**T Lat**	**15.38**	**90**	Pn			**Pn**	**01 22 17.6**	**-2.0**
RAMN	**Ramite**	**15.56**	**339**		*eP*		**Pn**	**01 22 17.5**	**-4.4**
TAPN	**Taplejung**	**15.58**	**343**		*eP*		**Pn**	**01 22 20.1**	**-2.1**
NGP	**Nagpur**	**15.72**	**305**		*eP*		**Pn**	**01 22 24.9**	**+1.1**
NGP					*eS*		Sn	01 25 03.2	-14
NGP					IAML			01 25 39.0	
	comp=E,204nm,0.8s								
NGP					IAML			01 25 39.1	
	comp=N,224nm,1.0s								
KMI	**Kunming**	**15.76**	**35**		*eP*		**P**	**01 22 30.0**	**+2.2**
KMI					pP		pP	01 22 37.5	-0.6
KMI					sP		sP	01 22 41.0	-2.6
KMI					pmax		pmax		
	comp=N,71nm,0.9s								
KMI					pmax		pmax		
	comp=N,200nm,4.2s								
KMI					LR		LR		
	comp=N,820nm,14.9s								
KMI					LR		LR		
	comp=N,710nm,11.5s								
KMI					LR		LR		
	comp=N,550nm,15.7s								
KMI	**Kunming**	**15.76**	**35**	P			**Pn**	**01 22 23.9**	**-0.5**
KMI				pmax			pmax		
	comp=Z,94nm,1.0s								
KMI	**Kunming**	**15.76**	**35**	Pn			**Pn**	**01 22 23.9**	**-0.5**
SDSI	**Sungai Dareh**	**15.82**	**146**	P			**Pn**	**01 22 22.5**	**-2.5**
	comp=Z,37nm,0.6s								
PKI	**Pulchoki**	**16.57**	**337**		*eP*		**Pn**	**01 22 31.4**	**-3.3**
KLRI	**Killari**	**16.57**	**292**		*eP*		**Pn**	**01 22 32.7**	**-1.9**
KLRI					IVmB_BB			01 22 48.9	
	comp=Z,1μm,0.9s								
PKIN	**Phulchoki**	**16.58**	**336**		*eP*		**Pn**	**01 22 30.8**	**-4.0**
DMN	**Daman**	**16.72**	**336**		*eP*		**Pn**	**01 22 33.7**	**-2.9**
KKN	**Kakani**	**16.81**	**337**		*eP*		**Pn**	**01 22 34.7**	**-3.0**
KRJI	**Kerinci**	**16.82**	**148**	P			**P**	**01 22 40.7**	**+1.3**
	comp=Z,213nm,0.5s								
LSA	**Lhasa**	**17.25**	**355**	P			**P**	**01 22 44.0**	**-0.5**
LSA	**Lhasa**	**17.25**	**355**	P			**Pn**	**01 22 42.9**	**-0.5**
LSA				pmax			pmax		
	comp=Z,181nm,1.3s								
LSA	**Lhasa**	**17.25**	**355**				**Pn**	**01 22 42.9**	**-0.5**
GKN	**Gorkha**	**17.26**	**335**		*eP*		**Pn**	**01 22 39.8**	**-3.4**
DSRI	**Dabo**	**17.38**	**137**	P			**P**	**01 22 45.4**	**-0.1**
	comp=Z,2μmcomp=Z,106nm,0.9s								
KOLN	**Kolḍanda**	**17.51**	**332**		*eP*		**Pn**	**01 22 43.4**	**-2.9**
	comp=Z,152nm,0.6s								
QIZ	**Qiongzhong**	**17.70**	**66**	P			**Pn**	**01 22 47.8**	**-0.8**
QIZ				S			**Sn**	**01 26 03.5**	**-1.5**
QIZ				pmax			pmax		
	comp=Z,18nm,0.7s								
QIZ				LR			LR		
	comp=Z,730nm,21.0s								
QIZ				LR			LR		
	comp=Z,510nm,10.0s								
QIZ				LR			LR		
	comp=Z,470nm,13.9s								
QIZ	**Qiongzhong**	**17.70**	**66**				**P**	**01 22 49.1**	**+0.1**
DANN	**Dangsing**	**17.93**	**333**		*eP*		**Pn**	**01 22 48.4**	**-3.3**
	comp=Z,102nm,0.6s								
PYUN	**Piuthan**	**18.07**	**331**		*eP*		**Pn**	**01 22 51.1**	**-2.2**
	comp=Z,145nm,0.7s								
BHPL	**Bhopal**	**18.11**	**309**		*eP*		**Pn**	**01 22 54.7**	**+1.1**
BHPL					IAmb		IAmb	01 22 58.7	
	comp=Z,66nm,0.6s								
BHPL					*eS*		Sn	01 26 02.5	-13
KSI	**Kapahiang**	**18.73**	**148**	P			**P**	**01 22 59.3**	**-1.1**
	comp=Z,79nm,0.7s								
GYA	**Guiyang**	**19.12**	**41**	⇑P			**Pn**	**01 23 06.0**	**+0.1**
GYA					pP		pP	01 23 12.0	-3.2
GYA					PP		**sP**	**01 23 22.8**	**+2.1**
GYA					S		**Sn**	**01 26 36.5**	**-3.0**
GYA					sS		sS	01 26 48.3	-8.0
GYA					SS		**SnSn**	**01 27 06.0**	**+12**
GYA					pmax		pmax		
	comp=Z,27nm,0.7s								
GYA					LR		LR		
	comp=Z,330nm,12.9s								
GYA					LR		LR		
	comp=Z,350nm,12.1s								
GYA					LR		LR		
	comp=Z,420nm,13.1s								
POO	**Poona**	**19.20**	**291⇑**		*eP*		**Pn**	**01 23 07.2**	**+0.4**
POO					*eS*		S	01 26 26.4	-15
PMBI	**Palembang**	**19.37**	**141**	P			**P**	**01 23 06.9**	**-0.5**
LHSI	**Lahat**	**19.37**	**146**	P			**P**	**01 23 07.2**	**-0.2**
	comp=Z,53nm,0.6s								
MNAI	**Manna**	**19.52**	**148**	P			**P**	**01 23 09.0**	**0.0**
MNAI					IAmb		IAmb	01 23 10.4	
	comp=Z,125nm,0.6s								
PPBI	**Pangkal Pinang**	**19.66**	**137**	P			**P**	**01 23 10.9**	**+0.3**
	comp=Z,17μmcomp=Z,353nm,1.0s								
KSM	**Kuching**	**20.52**	**121**	P			**P**	**01 23 19.5**	**-0.5**
KSM					IAmb		IAmb	01 23 38.0	
	comp=Z,85nm,0.9s								
KSM	**Kuching**	**20.52**	**121**	P			**P**	**01 23 20.0**	**+0.1**
LWLI	**Liwa**	**20.65**	**146**	P			Pn	01 23 26.0	+1.9
	comp=Z,108nm,0.7s								
KLSI		**20.75**	**144**	P			**P**	**01 23 19.5**	**-3.0**
	comp=Z,14nm,0.7s								
CD2	**Chengdu**	**21.02**	**27⇓**	*i* P			**P**	**01 23 25.0**	**-0.2**
CD2					pP		pP	01 23 36.8	+1.0
CD2					sP		sP	01 23 42.5	+1.3
CD2					S		**S**	**01 27 13.3**	**-3.7**
CD2					sS		sS	01 27 30.0	-4.0
CD2					SS		**SnSn**	**01 27 50.0**	**+10**
CD2					pmax		pmax		
	comp=Z,110nm,1.0s								
CD2					pmax		pmax		
	comp=Z,560nm,10.4s								
CD2					LR		LR		
	comp=Z,610nm,27.7s								
CD2					LR		LR		
	comp=Z,1μm,27.9s								
CD2					LR		LR		
	comp=Z,500nm,25.3s								
TPI	**Tanjungpandan**	**21.13**	**135**	P			**P**	**01 23 26.6**	**+0.1**
KASI	**Kota Agung**	**21.31**	**146**	P			**P**	**01 23 24.7**	**-3.7**
	comp=Z,59nm,0.5s								
SBUM	**Sibu**	**21.67**	**116**	P			**P**	**01 23 32.4**	**0.0**
SBUM	**Sibu**	**21.67**	**116**	P			**P**	**01 23 33.0**	**+0.7**
DDI	**Dehra Dun**	**22.42**	**325**		*eS*		**S**	**01 27 39.0**	**-5.0**
SMLA	**Simla**	**23.53**	**325**		*eS*		**S**	**01 28 04.0**	**+1.6**
SMLA					IAML			01 28 16.3	
	comp=E,111nm,1.0s								
ENH	**Enshi**	**23.57**	**39**	P			**P**	**01 23 51.1**	**-0.8**
ENH					IAmb		IAmb	01 24 18.8	
	comp=Z,142nm,1.0s								
KKM	**Kota Kinabalu**	**23.99**	**103**	P			**P**	**01 23 56.0**	**-0.2**
PBKI	**Pangkalan Bun**	**24.06**	**127**	P			**P**	**01 23 59.2**	**+2.6**
	comp=Z,211nm,0.5s								
LEM	**Lembang**	**24.17**	**142**	P			**P**	**01 23 54.8**	**-2.9**
	comp=Z,13nm,0.3s,baz=124,slow=9.2,SNR=4.5								
LEM					LR		LR	01 34 12.2	
	comp=Z,508nm,20.3s,baz=302,slow=38								
BHUJ	**Bhuj**	**24.45**	**299**		IAmb		IAmb	01 24 17.7	
	comp=Z,47nm,1.1s								
DHRM	**DHARAMSHALA**	**24.86**	**325**		IAmb		IAmb	01 24 17.9	
	comp=Z,103nm,0.9s								
DHRM					*eS*		S	01 28 37.6	+13
KPJI	**Karang Pucung**	**25.37**	**140**	P			**P**	**01 24 12.7**	**+4.2**
	comp=Z,34nm,0.6s								
LZH	**Lanzhou**	**25.59**	**21**		*eP*		**P**	**01 24 10.5**	**0.0**
LZH					pP		pP	01 24 23.0	+0.9
LZH					sP		sP	01 24 29.0	+1.7
LZH					PP		**PnPn**	**01 24 49.8**	**+1.8**
LZH					*eS*		**S**	**01 28 32.0**	**-3.7**
LZH					sS		sS	01 28 49.0	-6.1
LZH					SS		**SnSn**	**01 29 38.5**	**+6.1**
LZH					pmax		pmax		
	comp=Z,72nm,1.1s								
LZH					pmax		pmax		
	comp=Z,300nm,4.1s								
LZH					LR		LR		
	comp=Z,510nm,11.7s								
LZH					LR		LR		
	comp=Z,970nm,12.0s								
LZH					LR		LR		
	comp=Z,970nm,14.6s								
MTKI	**Muara Teweh, K**	**25.68**	**120**	P			**P**	**01 24 12.4**	**+1.1**
	comp=Z,70nm,0.8s								
XAN	**Xi'an**	**26.07**	**32**	P			**P**	**01 24 14.5**	**-0.3**
XAN					pP		pP	01 24 24.0	-2.3
XAN					S		**S**	**01 28 38.0**	**-5.1**
XAN					pmax		pmax		
	comp=Z,68nm,0.7s								
XAN					pmax		pmax		
	comp=Z,240nm,4.3s								
XAN					LR		LR		
	comp=Z,650nm,17.7s								
XAN					LR		LR		
	comp=Z,640nm,21.6s								
XAN					LR		LR		
	comp=Z,500nm,17.7s								
XAN	**Xi'an**	**26.07**	**32**	P			**P**	**01 24 14.3**	**-0.5**
XAN					pmax		pmax		
	comp=Z,54nm,0.9s								
XAN	**Xi'an**	**26.07**	**32**	P			**P**	**01 24 14.3**	**-0.5**
XAN					IAmb		IAmb	01 24 30.5	
	comp=Z,54nm,0.9s								
SMRI	**Semarang**	**26.14**	**137**	P			**P**	**01 24 17.8**	**+2.3**
	comp=Z,123nm,1.0s								
SMRI	**Semarang**	**26.14**	**137**	P			**P**	**01 24 16.2**	**+0.7**
MYLDM	**Lahad Datu**	**26.42**	**104**		IAmb		IAmb	01 24 22.2	
	comp=Z,86nm,0.7s								
BBKI	**Banjar Baru**	**27.03**	**124**	P			**P**	**01 24 24.2**	**+0.6**
	comp=Z,15μmcomp=Z,40nm,0.8s								
WOJI	**Wonogiri, Jawa**	**27.04**	**137**	P			**P**	**01 24 26.5**	**+2.9**
	comp=Z,38nm,1.2s								
GRJI	**Gresik**	**27.45**	**133**	P			**P**	**01 24 28.5**	**+1.2**
	comp=Z,1μmcomp=Z,182nm,0.8s								
GTA	**Gaotai**	**27.59**	**12**	⇓P			**P**	**01 24 29.5**	**+1.0**
GTA					pP		pP	01 24 40.0	-0.1
GTA					sP		sP	01 24 45.8	+0.5
GTA					PcP		**PcP**	**01 27 47.5**	**+2.1**
GTA					S		**S**	**01 29 09.0**	**+1.8**
GTA					sS		sS	01 29 29.0	+2.4
GTA					ScP		**ScP**	**01 31 23.0**	**+0.2**
GTA					ScS		**ScS**	**01 35 13.5**	**-1.2**
GTA					pmax		pmax		
	comp=Z,22n

WMQ Urumqi 31.59 353 *e*P **P** **01 25 05.5 +1.7**
WMQ pP pP 01 25 16.0 +0.6
WMQ sP sP 01 25 23.5 +2.9
WMQ pmax pmax
comp=Z,15nm,1.1s
WMQ pmax pmax
comp=Z,250nm,4.9s
WMQ LR LR
comp=Z,430nm,21.7s
WMQ LR LR
comp=Z,790nm,29.5s
WMQ LR LR
comp=Z,490nm,21.3s
WMQ Urumqi 31.59 353 P **P** **01 25 04.7 +0.9**
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ Urumqi 31.59 353 P **P** **01 25 04.7 +0.9**
TWSI Taliwang, Sumb 31.89 130 P **P** **01 25 03.7 -2.9**
comp=Z,581nmcomp=Z,56nm,0.8s
BNSI Bone 31.91 120 P **P** **01 25 07.2 +0.3**
comp=Z,28nm,0.8s
BTO Baotou 31.91 25 *e*P **P** **01 25 05.5 -1.2**
KAPI Kappang 31.94 121 P **P** **01 25 06.3 -0.8**
KAPI IAmb IAmb 01 25 07.6
comp=Z,24nm,0.6s
KAPI **PcP** **01 27 57.3 +0.4**
BKSI Bulukumba 32.42 121 P **P** **01 25 12.1 +0.8**
comp=Z,42nm,1.1s
PLAI Plampang 32.62 129 P **P** **01 25 10.4 -2.7**
comp=Z,930nmcomp=Z,100nm,0.7s
LUWI Luwuk 32.66 112 P **P** **01 25 13.4 0.0**
comp=Z,4µmcomp=Z,172nm,0.8s
DRK Karamyk 32.71 329 IAmb IAmb 01 25 44.9
comp=Z,19nm,0.6s
SHLS Shalkode 32.71 342 *e*P **P** **01 25 13.2 -0.6**
comp=Z,5.1nm,0.7s,baz=342
SHLS *e*S **S** **01 30 26.9 -0.5**
baz=342
SHLS Shalkode 32.71 342 *e*P **P** **01 25 13.1 -0.6**
SHLS *e*S **S** **01 30 26.8 -0.5**
SHLS pmax pmax
comp=Z,5.0nm,0.7s
HHC Hu-ho-hao-te 32.77 27 *e*P **P** **01 25 15.0 +0.7**
HHC sP sP 01 25 32.5 +1.4
HHC S **S** **01 30 28.0 -0.4**
HHC pmax pmax
comp=Z,32nm,0.9s
HHC pmax pmax
comp=Z,110nm,4.8s
HHC LR LR
comp=Z,320nm,12.3s
HHC LR LR
comp=Z,420nm,12.9s
HHC LR LR
comp=Z,330nm,12.5s
PDGK Podgornoye 32.86 342 P **P** **01 25 16.0 +1.0**
SATY Saty 32.95 340 *e*P **P** **01 25 16.4 +0.5**
comp=Z,4.6nm,0.8s,baz=340
SATY Saty 32.95 340 *e*P **P** **01 25 16.3 +0.5**
SATY pmax pmax
comp=Z,5.0nm,0.8s
KMSI Cibinong 33.12 108 P **P** **01 25 19.4 +1.9**
comp=Z,154nm,0.6s
BSSI Bau Bau, Buton 33.17 122 P **P** **01 25 17.0 -0.9**
comp=Z,581nmcomp=Z,45nm,0.8s
KPKS Kokpek 33.23 341 *e*P **P** **01 25 18.4 +0.2**
comp=Z,7.9nm,0.8s,baz=341
KPKS Kokpek 33.23 341 *e*P **P** **01 25 18.4 +0.2**
KPKS pmax pmax
comp=Z,8.0nm,0.8s
TNSS Tian-Shan 33.43 339 *e*P **P** **01 25 20.7 +0.4**
baz=338
TNSS Tian-Shan 33.43 339 *e*P **P** **01 25 20.7 +0.4**
MDOK Medeo 33.51 339 *e*P **P** **01 25 21.1 +0.3**
baz=339
MDOK Medeo 33.51 339 *e*P **P** **01 25 21.0 +0.3**
ARSB Arslanbob 33.59 333 IAmb IAmb 01 25 44.6
comp=Z,58nm,1.0s
AAA Alma-Ata 33.59 339 *e*P **P** **01 25 21.9 +0.6**
comp=Z,21nm,0.8s,baz=338
AAA *e*S **S** **01 30 42.5 +1.5**
baz=338
AAA Alma-Ata 33.59 339 *e*P **P** **01 25 21.9 +0.6**
AAA *e*S **S** **01 30 42.4 +1.5**
AAA pmax pmax
comp=Z,21nm,0.8s
BTK Batken 33.64 329 IAmb IAmb 01 26 00.8
comp=Z,48nm,0.8s
TKM2 Tokmak 2 33.83 337 P **P** **01 25 24.8 +1.2**
SNR=13
TKM2 Tokmak 2 33.83 337 *i* P **P** **01 25 23.9 +0.3**
TKM2 pmax pmax
comp=Z,10.0nm,0.7s
KBK Karagaybulak 33.85 336 P **P** **01 25 25.8 +2.1**
SNR=15
AML Almayashu 33.93 334 P **P** **01 25 26.2 +1.5**
SNR=23
AAK Ala-Archa 34.02 336 LR LR 01 41 42.0
comp=Z,273nm,18.4s,baz=150,slow=40
AAK Ala-Archa 34.02 336 P **P** **01 25 26.9 +1.7**
SNR=15
AAK Ala-Archa 34.02 336 *i* P **P** **01 25 26.4 +1.2**
AAK pmax pmax
comp=Z,20nm,0.9s
CHKK Chushkaly 34.13 339 *e*P **P** **01 25 26.2 +0.1**
baz=339
CHKK Chushkaly 34.13 339 *e*P **P** **01 25 26.1 +0.1**
WSAR Wadi Sarin 34.14 293 LR LR 01 38 58.4
comp=Z,450nm,21.1s,baz=111,slow=36
CHMS Chumysh 34.22 336 P **P** **01 25 27.9 +1.1**
SNR=9.0
EKS2 Erkin-Say 34.33 335 P **P** **01 25 29.7 +1.8**
SNR=19
WBSI Waikabubak, Su 34.36 128 P **P** **01 25 23.9 -4.4**
comp=Z,2µmcomp=Z,261nm,0.8s
BJI Beijing 34.39 33 P **P** **01 25 30.0 +1.8**
BJI sP **sP** **01 25 47.3 +2.2**
BJI S **S** **01 30 56.0 +2.9**
BJI pmax pmax
comp=Z,12nm,0.5s
BJI pmax pmax
comp=Z,150nm,4.1s
BJI LR LR
comp=Z,310nm,26.7s
BJI LR LR
comp=Z,480nm,22.7s
BJI LR LR
comp=Z,430nm,22.7s
KUU Kurty 34.40 339 *e*P **P** **01 25 27.6 -0.7**
comp=Z,10nm,1.1s,baz=338
KUU Kurty 34.40 339 *e*P **P** **01 25 27.5 -0.7**
KUU pmax pmax
comp=Z,10.0nm,1.1s
USP Ospenovka 34.55 336 P **P** **01 25 30.7 +1.1**
SNR=35
SGDS Sogindy 34.65 337 *e*P **P** **01 25 31.1 +0.6**
comp=Z,3.2nm,0.9s,baz=336
SGDS Sogindy 34.65 337 *e*P **P** **01 25 31.1 +0.6**
SGDS pmax pmax
comp=Z,3.0nm,0.9s
TDK Taldyqorghan 34.70 342 *e*P **P** **01 25 31.3 +0.3**
baz=342
TDK *e*S **S** **01 30 59.2 +1.3**
baz=342
TDK Taldyqorghan 34.70 342 *e*P **P** **01 25 31.2 +0.3**
TDK *e*S **S** **01 30 59.2 +1.3**
HRA Herat 35.30 313 P **P** **01 25 36.5 +0.1**
TAS Tashkent 35.36 329 P **P** **01 25 37.7 +1.1**
TAS pmax pmax
comp=Z,65nm,0.9s
TAS Tashkent 35.36 329 P **P** **01 25 37.7 +1.1**
MK31 Makanchi Array 35.38 348 P **P** **01 25 37.2 +0.5**
MK31 pmax pmax
comp=Z,32nm,0.9s
MK31 Makanchi Array 35.38 348 P **P** **01 25 37.2 +0.5**
MK31 IAmb IAmb 01 25 50.5
comp=Z,32nm,0.9s
MKAR Makanchi Array 35.38 348 P **P** **01 25 36.9 +0.2**
comp=Z,19nm,0.7s,baz=164,slow=8.4,SNR=122
MKAR PcP **PcP** **01 28 06.5 +0.5**
comp=Z,2.6nm,0.8s,baz=172,slow=2.9,SNR=1.4
MKAR ScP **ScP** **01 31 48.0 -0.5**
comp=Z,0.6nm,0.7s,baz=335,slow=20,SNR=4.0
MKAR LR LR 01 44 32.0
comp=Z,192nm,18.0s,baz=164,slow=44
MKAR Makanchi Array 35.38 348 *i* P **P** **01 25 37.0 +0.3**

MKAR pmax pmax
comp=Z,19nm,0.7s
MAKZ Makanchi 35.46 347 P **P** **01 25 37.2 -0.1**
MAKZ pmax pmax
comp=Z,29nm,0.9s
MAKZ Makanchi 35.46 347 P **P** **01 25 37.2 -0.1**
MAKZ IAmb IAmb 01 25 51.0
comp=Z,29nm,0.8s
ZSN Zaisan 35.54 351 *e*P **P** **01 25 37.7 -0.3**
comp=Z,5.6nm,0.8s,baz=350
ZSN Zaisan 35.54 351 *e*P **P** **01 25 37.7 -0.3**
ZSN pmax pmax
comp=Z,6.0nm,0.8s
IUG luzhnay 35.61 330 *e*P **P** **01 25 39.7 +0.9**
comp=Z,11nm,0.8s,baz=330
IUG luzhnay 35.61 330 *e*P **P** **01 25 39.7 +0.9**
IUG pmax pmax
comp=Z,11nm,0.8s
EDFI Ende, Flores 35.63 125 P **P** **01 25 36.2 -3.1**
comp=Z,511nmcomp=Z,53nm,0.6s
BASI Baing, Sumba 35.63 128 P **P** **01 25 36.7 -2.5**
comp=Z,2µmcomp=Z,226nm,0.9s
MMRI Maumere 36.00 124 P **P** **01 25 40.7 -1.7**
comp=Z,3µmcomp=Z,99nm,0.7s
KK31 Karatay Array 36.12 332 P **P** **01 25 43.6 +0.5**
KK31 pmax pmax
comp=Z,20nm,0.9s
KK31 Karatay Array 36.12 332 P **P** **01 25 43.6 +0.5**
KKAR Karatay Array 36.12 332 P **P** **01 25 43.7 +0.6**
KKAR pmax pmax
comp=Z,20nm,0.9s
KKAR Karatay Array 36.12 332 P **P** **01 25 43.7 +0.6**
KKAR Karatay Array 36.12 332 P **P** **01 25 43.5 +0.4**
TNTI Ternate 36.21 106 P **P** **01 25 42.8 -1.4**
BTLS Baital 36.22 337 *e*P **P** **01 25 43.5 -0.4**
comp=Z,5.3nm,0.8s,baz=337
BTLS Baital 36.22 337 *e*P **P** **01 25 43.5 -0.4**
BTLS pmax pmax
comp=Z,5.0nm,0.8s
UOSS Minazif 36.68 295 P **P** **01 25 48.7 +0.6**
UOSS IAmb IAmb 01 26 04.1
comp=Z,30nm,1.1s
DL2 Dalian 36.75 39 P P 01 25 43.3 -5.2
DL2 *e*S **S** **01 31 22.5 -7.0**
DL2 sS sS 01 31 36.8 -12
DL2 pmax pmax
comp=Z,60nm,0.7s
DL2 LR LR
comp=N,420nm,18.6s
DL2 LR LR
comp=E,740nm,16.4s
DL2 LR LR
comp=Z,430nm,16.9s
SONM Songino Array 37.10 15 P **P** **01 25 52.0 +0.5**
comp=Z,12nm,0.8s,baz=198,slow=6.6,SNR=37
SONM PcP **PcP** **01 28 12.0 +0.6**
comp=Z,8.4nm,0.7s,baz=199,slow=3.6,SNR=7.9
SONM ScP **ScP** **01 31 54.4 -0.6**
comp=Z,2.0nm,0.9s,baz=188,slow=3.4,SNR=4.6
SONM Songino Array 37.10 15 P **P** **01 25 51.4 0.0**
ULN Ulaanbaatar 37.30 16*ce*P **P** **01 25 53.7 +0.5**
ULN pmax pmax
comp=Z,14nm,1.0s
ULN Ulaanbaatar 37.30 16 P **P** **01 25 53.4 +0.2**
NLAI Namlea 37.50 112 P **P** **01 25 55.0 -0.2**
comp=Z,666nmcomp=Z,45nm,0.5s
SOCY Socotra 37.86 274 P **P** **01 25 59.3 +1.0**
BATI Baumata 38.05 125 PcP **PcP** **01 28 14.8 +0.1**
comp=Z,47nm,0.6s,baz=301,slow=5.9,SNR=6.2
BATI ScP **ScP** **01 31 58.2 -0.8**
comp=Z,24nm,0.5s,baz=206,slow=8.3,SNR=3.9
BATI Baumata 38.05 125 P **P** **01 25 57.1 -2.7**
comp=Z,865nmcomp=Z,79nm,0.7s
SOEI Soe 38.28 124 P **P** **01 25 58.8 -3.1**
comp=Z,47nm,0.6s
AAI Ambon 38.68 112 P **P** **01 26 05.7 +0.6**
comp=Z,123nm,0.5s
ZAK Zakamensk 38.82 11 *e*P **P** **01 26 06.6 +0.7**
ZAK *e* 01 28 19.8
ZAK pmax pmax
comp=Z,15nm,1.3s
ZAK pmax pmax
comp=Z,13nm,0.8s
ZAK pmax pmax
comp=Z,11nm,0.9s
TJN Taejon 39.18 47*ce*P **P** **01 26 09.4 +0.4**
MSAI Masohi 39.20 111 P **P** **01 26 08.9 -0.6**
comp=Z,1µmcomp=Z,47nm,0.6s
SEM Semipalatinsk 39.24 347 *e*P **P** **01 26 08.1 -1.4**
comp=Z,5.2nm,0.9s,baz=347
SEM Semipalatinsk 39.24 347 *e*P **P** **01 26 08.1 -1.4**
SEM pmax pmax
comp=Z,5.0nm,0.9s
KURBB Kurchatov Arra 39.83 346 P **P** **01 26 14.7 +0.5**
comp=Z,16nm,0.8s,baz=148,slow=6.4,SNR=3.0
KURBB ScP **ScP** **01 32 04.1 -1.1**
comp=Z,2.5nm,0.8s,baz=155,slow=3.1,SNR=6.6
KURBB Kurchatov Arra 39.83 346 P **P** **01 26 14.0 -0.2**
KURK Kurchatov 39.89 346 P **P** **01 26 15.1 +0.4**
KURK pmax pmax
comp=Z,54nm,0.9s
KURK Kurchatov 39.89 346 **ScP** **01 32 04.1 -1.3**
KURK Kurchatov 39.89 346 P **P** **01 26 15.1 +0.4**
KURK IAmb IAmb 01 26 28.6
comp=Z,54nm,0.9s
GEYT Alibeck 39.97 316 P **P** **01 26 15.7 +0.1**
comp=Z,16nm,0.6s,baz=102,slow=14,SNR=4.6
GEYT LR LR 01 44 01.6
comp=Z,204nm,21.4s,baz=205,slow=38
KSAR Wonju Array Be 40.06 45 P **P** **01 26 16.0 -0.3**
KSAR Wonju Array Be 40.06 45 P **P** **01 26 16.0 -0.3**
KS19 Wonju Array Si 40.08 45 IAmb IAmb 01 26 17.6
comp=Z,131nm,1.6s
KSRS Korea Array 40.09 45 P **P** **01 26 16.1 -0.4**
comp=Z,17nm,0.7s,baz=243,slow=9.1,SNR=32
KSRS PcP **PcP** **01 28 21.2 +0.5**
comp=Z,1.6nm,0.6s,baz=248,slow=4.6,SNR=2.0
KSRS ScP **ScP** **01 32 05.3 -1.2**
comp=Z,3.6nm,0.8s,baz=242,slow=3.2,SNR=6.5
KSRS LR LR 01 43 48.9
comp=Z,200nm,18.8s,baz=238,slow=38
TLY Talaya 40.13 11 P **P** **01 26 17.7 +0.9**
comp=Z,5.6nm,0.7s,baz=180,slow=10
TLY LR LR 01 46 26.2
comp=Z,88nm,18.9s,baz=180,slow=41
TLY Talaya 40.13 11 *e*P **P** **01 26 19.6 +2.9**
TLY *e* 01 27 59.4
TLY *e*S **S** **01 32 22.3 +2.1**
TLY *e*SS SnSn 01 35 44.3 +20
TLY pmax pmax
comp=Z,90nm,1.3s
TLY MLR MLR
comp=Z,501nm,15.0s
GIRL Giralia 40.71 149 P **P** **01 26 21.2 -0.6**
baz=41,SNR=17
GIRL Giralia 40.71 149 P **P** **01 26 21.7 -0.2**
BRZS Berezniki 40.92 340 *e*P **P** **01 26 23.3 -0.1**
comp=Z,4.9nm,0.8s,baz=340
BRZS Berezniki 40.92 340 *e*P **P** **01 26 23.2 -0.1**
BRZS pmax pmax
comp=Z,5.0nm,0.8s
ZAA0 Zalesovo Array 41.90 353 P **P** **01 26 31.1 -0.1**
ZALV Zalesovo Beam 41.90 353 P **P** **01 26 31.2 0.0**
comp=Z,12nm,0.7s,baz=176,slow=9.1,SNR=74
ZALV ScP **ScP** **01 32 13.9 +0.6**
comp=Z,0.7nm,0.6s,baz=151,slow=6.6,SNR=2.2
ZALV LR LR 01 48 15.5
comp=Z,166nm,19.1s,baz=182,slow=42
ZALV Zalesovo Beam 41.90 353 P **P** **01 26 31.1 -0.1**
CN2 Changchun 42.03 36 *e*P **P** **01 26 32.5 0.0**
CN2 sP sP 01 26 51.3 +1.8
CN2 PP **PP** **01 28 13.8 +3.5**
CN2 S **S** **01 32 48.5 -0.1**
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 LR LR
comp=Z,300nm,20.0s
CN2 LR LR
comp=Z,300nm,20.0s
CN2 LR LR
comp=Z,300nm,23.0s
FAKI Fak Fak 42.09 109 P **P** **01 26 32.4 -1.0**
JHS Saijyo 42.84 51 P **P** **01 26 38.9 -0.4**
JMN Monobe 42.99 53 P **P** **01 26 40.6 +0.2**
JMN IAmb IAmb 01 26 42.9
comp=Z,47nm,0.9s

PSA00 Pilbara Seismi 43.00 142 P **P** **01 26 39.5 -1.0**
BVAR Borovoye Array 44.27 341 P **P** **01 26 49.7 -0.7**
comp=Z,2.9nm,0.7s
BRVK Borovoye 44.33 341 P **P** **01 26 51.0 +0.1**
BRVK pmax pmax
comp=Z,23nm,1.0s
BRVK Borovoye 44.33 341 P **P** **01 26 51.0 +0.1**
FITZ Fitzroy Crossi 44.42 132 PcP **PcP** **01 28 35.9 +0.6**
comp=Z,15nm,0.5s,baz=309,slow=2.2,SNR=4.3
FITZ ScP **ScP** **01 32 24.1 0.0**
comp=Z,4.0nm,0.8s,baz=335,slow=8.8,SNR=4.3
FITZ Fitzroy Crossi 44.42 132 P **P** **01 26 50.5 -1.4**
baz=44,SNR=567
FITZ Fitzroy Crossi 44.42 132 P **P** **01 26 50.6 -1.4**
MDJ Mudanjiang 44.92 37 P **P** **01 26 56.5 +0.8**
MDJ pmax pmax
comp=Z,9.0nm,1.1s
MDJ pmax pmax
comp=Z,250nm,5.1s
KNRA Kununurra 45.27 127 P **P** **01 26 57.0 -1.8**
baz=45,SNR=22
KNRA Kununurra 45.27 127 P **P** **01 26 57.0 -1.8**
KNRA IAmb IAmb 01 26 57.9
comp=Z,44nm,0.8s
MTN Manton Dam 45.60 122 P **P** **01 26 59.6 -1.9**
baz=46,SNR=8.4
MTN Manton Dam 45.60 122 P **P** **01 26 59.4 -2.1**
MTN IAmb IAmb 01 27 00.2
comp=Z,29nm,0.6s
AB31 Akbulak array 45.62 330 P **P** **01 27 01.6 +0.4**
ABKAR Akbulak array 45.62 330 P **P** **01 27 01.6 +0.4**
ABKAR IAmb IAmb 01 27 21.5
comp=Z,20nm,0.7s
INU Inuyama 45.97 53 IAmb IAmb 01 27 04.9
comp=Z,21nm,0.8s
RAYN Ar Rayn 46.10 291 P **P** **01 27 05.9 +0.4**
RAYN pmax pmax
comp=Z,22nm,1.2s
RAYN Ar Rayn 46.10 291 P **P** **01 27 05.8 +0.4**
USA0B Ussuriysk Arra 46.15 39 *i* P **P** **01 27 05.3 -0.1**
USA0B Ussuriysk Arra 46.15 39 P **P** **01 27 04.9 -0.6**
USRK Ussuriysk Ar. 46.15 39 P **P** **01 27 04.9 -0.5**
comp=Z,9.0nm,0.7s,baz=248,slow=7.7,SNR=22
USRK ScP **ScP** **01 32 29.5 -1.4**
comp=Z,1.5nm,0.7s,baz=187,slow=1.2,SNR=3.0
USRK LR LR 01 48 02.5
comp=Z,205nm,19.4s,baz=229,slow=38
USRK Ussuriysk Ar. 46.15 39 P **P** **01 27 05.3 -0.1**
MEEK Meekatharra 46.25 147 P **P** **01 27 05.6 -0.9**
baz=46,SNR=9.5
JGF Kuroka 46.31 52 IAmb IAmb 01 27 07.6
comp=Z,70nm,1.6s
KDU Kakadu 46.63 121 P **P** **01 27 07.5 -2.1**
baz=47,SNR=35
MORW Morawa 46.98 152 P **P** **01 27 11.5 -0.6**
baz=47,SNR=22
MJB9 Matsu-Tunnel 47.26 51 P **P** **01 27 14.2 -0.1**
MJB9 IAmb IAmb 01 27 16.7
comp=Z,35nm,0.7s
MAJO Matsushiro 47.26 51 P **P** **01 27 14.3 0.0**
MAJO 01 28 45.3
MAJO pmax pmax
comp=Z,25nm,1.0s
MAJO Matsushiro 47.26 51 P **P** **01 27 14.3 0.0**
MAJO IAmb IAmb 01 27 15.2
comp=Z,24nm,1.0s
MAJO PcP **PcP** **01 28 45.3 +0.2**
MAT Matsushiro 47.26 51 P **P** **01 27 14.3 0.0**
MAT S **S** **01 34 00.8 -3.9**
MJAR Matsushiro Arr 47.26 51 P **P** **01 27 14.2 -0.1**
comp=Z,8.8nm,0.7s,baz=260,slow=9.1,SNR=17
MJAR PcP **PcP** **01 28 45.2 +0.1**
comp=Z,16nm,0.6s,baz=228,slow=2.4,SNR=15
MJAR ScP **ScP** **01 32 35.2 -0.6**
comp=Z,4.0nm,0.3s,baz=253,slow=4.2,SNR=6.3
MJAR LR LR 01 50 21.3
comp=Z,95nm,19.6s,baz=275,slow=40
MJAR Matsushiro Arr 47.26 51 P **P** **01 27 15.1 +0.8**
MJAR **PcP** **01 28 45.3 +0.2**
AKTO Aktyubinsk 47.34 330 P **P** **01 27 15.0 +0.4**
comp=Z,4.9nm,0.6s,baz=124,slow=7.6,SNR=3.3
AKTO LR LR 01 50 10.4
comp=Z,90nm,21.5s,baz=138,slow=40
JSD Sado 47.79 49 IAmb IAmb 01 27 19.1
comp=Z,27nm,0.8s
BOD Bodaibo 48.10 15 *e*P **P** **01 27 21.2 +0.8**
BOD pmax pmax
comp=Z,30nm,1.4s
BLDU Ballidu 48.60 152 P **P** **01 27 23.9 -0.8**
baz=49,SNR=11
KLR Kul'dur 48.76 33 PcP **PcP** **01 28 50.9 +0.8**
comp=Z,3.5nm,0.8s,baz=225,slow=2.9,SNR=2.1
KLR ScP **ScP** **01 32 40.6 -1.2**
comp=Z,3.3nm,1.0s,baz=315,slow=8.6,SNR=4.1
KLR Kul'dur 48.76 33*ce*P **P** **01 27 26.4 +0.7**
KLR pmax pmax
comp=Z,3.0nm,0.5s
ATD Arta Tunnel 48.78 275 LR LR 01 45 14.0
comp=Z,116nm,20.9s,baz=80,slow=32
RER Riviere de l'E 49.36 228 P **P** **01 27 32.1 +1.4**
TEY Ternei 49.43 40‖ *e*P **P** **01 27 31.0 +0.1**
TEY pmax pmax
comp=E,10.0nm,0.9s
TEY pmax pmax
comp=Z,30nm,0.7s
ZEA Zeya 49.44 26 *e*P **P** **01 27 33.1 +2.4**
ZEA pmax pmax
comp=Z,10.0nm,0.6s
MAK Makhachkala 49.46 317 *e*P **P** **01 27 30.9 -0.2**
MAK *e* 01 29 20.0
MAK *e*PPP PPP 01 30 17.1
MAK *e*S **S** **01 34 36.2 +0.8**
MAK *e*SS **SS** **01 38 06.6 -1.1**
MAK *e*SSS SSS 01 39 33.4
MAK pmax pmax
comp=Z,354nm,1.3s
MAK MLR MLR
comp=Z,153nm,17.0s
MUN Mundaring 49.54 154 P **P** **01 27 31.2 -0.6**
baz=50,SNR=38
KLBR Kellerberrin 49.90 152 P **P** **01 27 33.8 -0.8**
baz=50,SNR=17
GNI Garni 50.34 312 P **P** **01 27 37.8 -0.3**
GNI pmax pmax
comp=Z,89nm,1.0s
GNI Garni 50.34 312 P **P** **01 27 37.8 -0.3**
SVE Sverdlovsk 50.70 338*ce*P **P** **01 27 40.9 +0.6**
SVE pmax pmax
comp=Z,57nm,1.1s
NWAO Narrogin (SRO) 50.80 153 P **P** **01 27 40.5 -0.8**
baz=51,SNR=54
NWAO Narrogin (SRO) 50.80 153 P **P** **01 27 40.5 -0.8**
NWAO pmax pmax
comp=Z,113nm,0.8s
NWAO Narrogin (SRO) 50.80 153 P **P** **01 27 40.5 -0.8**
WRKA Warakurna 50.87 137 P **P** **01 27 40.6 -1.4**
baz=51,SNR=33
GEVA Gevas 51.02 309 P **P** **01 27 43.4 +0.1**
ARU Arti 51.20 336 P **P** **01 27 44.3 +0.3**
comp=Z,2.7nm,0.6s,baz=122,slow=3.1,SNR=19
ARU LR LR 01 51 33.4
comp=Z,316nm,20.3s,baz=134,slow=38
ARU Arti 51.20 336*d i*P **P** **01 27 43.9 -0.2**
ARU *PP **pP** **01 27 56.4 +0.2**
ARU 01 29 38.8
ARU S **S** **01 35 02.9 +3.7**
ARU SS **SS** **01 38 35.8 +0.9**
ARU pmax pmax
comp=Z,14nm,0.9s
ARU MLR MLR
comp=Z,476nm,24.0s
ARU Arti 51.20 336 P **P** **01 27 43.8 -0.2**
KMBL Kambalda 51.74 148 P **P** **01 27 47.5 -0.9**
baz=52,SNR=8.4
ZEI Tsey 51.84 315 *e*P **P** **01 27 49.8 +0.4**
ZEI pmax pmax
comp=Z,28nm,0.9s
WRA Warramunga Arr 52.05 128 P **P** **01 27 49.4 -1.6**
comp=Z,74nm,0.6s,baz=300,slow=10.0,SNR=1305
WRA PcP **PcP** **01 29 02.6 -0.1**
comp=Z,18nm,0.6s,baz=315,slow=3.2,SNR=12
WRA ScP **ScP** **01 32 54.4 -2.1**
comp=Z,4.6nm,0.8s,baz=314,slow=4.0,SNR=11
WRA S **S** **01 35 05.1 -6.9**
comp=Z,2.6nm,1.0s,baz=310,slow=13,SNR=7.5
WRA LR LR 01 50 46.1

comp=Z,131nm,20.6s,baz=295,slow=37
WRA Warramunga Arr 52.05 128 *i* P **P 01 27 49.4 -1.6**
WRA pmax pmax
comp=Z,58nm,0.5s
WRAB Tennant Creek 52.05 128 *ce*P **P 01 27 49.7 -1.2**
WRAB pmax pmax
comp=Z,173nm,1.3s
WRAB Tennant Creek 52.05 128 P **P 01 27 49.8 -1.2**
WB2 Warramunga Arr 52.06 128 P **P 01 27 50.0 -1.1**
baz=52
WC3 Warramunga Arr 52.09 128 P **P 01 27 50.0 -1.2**
GRNR Gornyy 52.13 34⇑ *i*P **P 01 27 52.0 +0.9**
GRNR pmax pmax
comp=Z,6.0nm,0.9s
GRNR MLR MLR
comp=E,470nm,14.0s
GRNR MLR MLR
comp=N,470nm,18.0s
GRNR MLR MLR
comp=Z,190nm,16.0s
MARD Mardin 52.50 308 P **P 01 27 54.8 +0.5**
MARD IAmb IAmb 01 28 07.3
comp=Z,14nm,0.7s
KBZ Khabaz 52.86 316 P **P 01 27 57.3 +0.7**
comp=Z,3.3nm,0.7s,baz=94,slow=8.0,SNR=9.7
KBZ LR LR 01 54 39.1
comp=Z,119nm,19.4s,baz=104,slow=41
JKA Kamikawa-asahi 52.98 44 IAmb IAmb 01 28 00.6
comp=Z,25nm,0.8s
KIV Kislovodsk 53.08 316 P **P 01 27 59.4 +1.0**
KIV pmax pmax
comp=Z,45nm,1.0s
KIV Kislovodsk 53.08 316 P **P 01 27 59.4 +1.0**
KIV IAmb IAmb 01 28 12.5
comp=Z,45nm,1.0s
FURI Furi 53.19 272 P **P 01 28 00.2 +0.3**
GOF Gofitskoye 53.24 318⇑ *eP* P 01 28 12.2 +13
GOF pmax pmax
comp=Z,40nm,1.0s
BELG Belogornoye 53.75 327⇑ *i*P **P 01 28 02.3 -0.7**
BELG pmax pmax
comp=Z,2.0nm,0.6s
AS31 Alice Springs 53.90 132 P **P 01 28 03.4 -1.2**
AS31 IAmb IAmb 01 28 04.6
comp=Z,19nm,0.9s
ASAR Alice Springs 53.90 132 P **P 01 28 03.5 -1.1**
comp=Z,39nm,0.4s,baz=311,slow=7.3,SNR=438
ASAR PcP **PcP 01 29 09.9 +0.2**
comp=Z,12nm,0.6s,baz=320,slow=3.6,SNR=8.9
ASAR ScP **ScP 01 33 02.7 -1.8**
comp=Z,5.7nm,0.7s,baz=312,slow=4.7,SNR=11
ASAR S **S 01 35 31.6 -5.6**
comp=Z,5.1nm,0.9s,baz=302,slow=13,SNR=17
ASAR LR LR 01 53 07.3
comp=Z,140nm,20.8s,baz=299,slow=38
ASAR Alice Springs 53.90 132 P **P 01 28 03.2 -1.4**
ASAR PcP **PcP 01 29 09.3 -0.5**
YSS Yuzh-Sakhalins 54.13 40⇑ *eP* **P 01 28 05.8 -0.1**
YSS *e*PPP PPP 01 31 23.0
YSS *e*S **S 01 35 38.8 -0.8**
YSS pmax pmax
comp=Z,60nm,0.7s
YSS pmax pmax
comp=E,40nm,0.9s
YSS pmax pmax
comp=Z,400nm,3.7s
YSS pmax pmax
comp=N,300nm,3.2s
YSS pmax pmax
comp=E,200nm,2.6s
YSS smax smax
comp=N,200nm,8.3s
YSS smax smax
comp=E,300nm,3.3s
YSS MLR MLR
comp=Z,400nm,13.0s
YSS Yuzh-Sakhalins 54.13 40 P **P 01 28 06.4 +0.5**
FORT Forrest 54.74 142 P **P 01 28 10.1 -0.4**
baz=55,SNR=5.7
FORT Forrest 54.74 142 P **P 01 28 10.0 -0.4**
SOC Sochi 54.99 315 *eP* **P 01 28 14.5 +2.3**
SOC *e* 01 30 14.3
SOC *e*PPP PPP 01 31 24.3
SOC *e*S **S 01 35 55.9 +4.6**
SOC *e*SS **SS 01 39 28.4 -7.0**
SOC MLR MLR
comp=Z,165nm,17.0s
YUK Yuzh-Kuril'sk 55.17 45 *eP* **P 01 28 10.9 -2.6**
YUK *e* 01 30 15.7
YUK *e*PPP PPP 01 31 27.5
YUK *e*S **S 01 35 53.1 -0.5**
YUK *e*SS **SS 01 39 39.9 +1.8**
YUK MLR MLR
comp=Z,183nm,17.0s
GAZ Gaziantep 55.24 307 IAmb IAmb 01 28 35.2
comp=Z,16nm,0.8s
YAK Yakutsk 56.17 20 *eP* **P 01 28 20.3 0.0**
YAK *e**PP **sP 01 28 35.3 -2.3**
YAK *e* 01 29 18.3
YAK *e*S **S 01 36 04.6 -1.7**
YAK *e* 01 38 03.0
YAK *e*SS **SS 01 39 53.2 +0.1**
YAK *e*SSS SSS 01 42 00.3
YAK pmax pmax
comp=Z,39nm,1.1s
YAK pmax pmax
comp=N,13nm,1.5s
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=Z,344nm,3.0s
YAK pmax pmax
comp=N,232nm,3.2s
YAK pmax pmax
comp=E,175nm,3.0s
YAK smax smax
comp=N,467nm,3.3s
YAK smax smax
comp=E,449nm,3.3s
YAK Yakutsk 56.17 20 P **P 01 28 20.0 -0.3**
KIRV Kirov 56.34 334 P **P 01 28 22.1 +0.6**
comp=E,17nm,0.5s,baz=72,slow=2.4,SNR=3.8
KIRV LR LR 01 54 34.0
comp=E,127nm,18.9s,baz=133,slow=38
KIRV Kirov 56.34 334 *ce*P **P 01 28 22.3 +0.7**
COEN Coen 56.42 116 P **P 01 28 21.6 -1.2**
baz=56,SNR=14
COEN Coen 56.42 116 P **P 01 28 21.7 -1.1**
VRH Novokhopyorsk 56.45 324 *eP* **P 01 28 22.0 -0.5**
VRH pmax pmax
comp=Z,40nm,0.8s
QIS Mount Isa 56.53 125 P **P 01 28 22.7 -0.9**
baz=56,SNR=28
ANN Anapa 56.92 316 *eP* **P 01 28 22.6 -3.3**
ANN *e**PP **pP 01 28 35.9 -2.4**
ANN *e* 01 30 29.5
ANN *e*S **S 01 36 13.9 -3.0**
ANN *e*SS **SS 01 40 03.8 -1.8**
ANN pmax pmax
comp=Z,15nm,1.0s
NRIK Noril'sk 56.96 358 P **P 01 28 26.0 +0.2**
comp=Z,3.7nm,0.5s,baz=163,slow=5.7,SNR=12
NRIK LR LR 01 55 05.5
comp=Z,125nm,20.1s,baz=200,slow=38
NRIK Noril'sk 56.96 358 *ce*P **P 01 28 26.3 +0.5**
NRIK pmax pmax
comp=Z,4.0nm,0.8s
VORD Divnogorie 57.77 323 *eP* **P 01 28 31.1 -0.7**
VORD pmax pmax
comp=Z,70nm,1.9s
VSR Storozhevoye 57.94 323 *eP* **P 01 28 32.2 -0.8**
VSR pmax pmax
comp=Z,10.0nm,0.8s
PMG Port Moresby 58.24 109 *ce*P **P 01 28 36.0 +0.3**
PMG pmax pmax
comp=Z,22nm,0.8s
PMG Port Moresby 58.24 109 P **P 01 28 35.7 0.0**
BRTR Keskin Array B 58.48 309 P **P 01 28 36.8 -0.5**
comp=Z,7.6nm,0.7s,baz=121,slow=7.8,SNR=61
BRTR LR LR 01 57 32.0
comp=Z,44nm,18.8s,baz=114,slow=40
BRTR Keskin Array B 58.48 309 P **P 01 28 36.4 -0.9**
LPSR Galich'ya Gora 58.59 325 *eP* **P 01 28 37.0 -0.6**
LPSR pmax pmax
comp=Z,30nm,1.7s

ILGA Ilgaz 58.67 311 P **P 01 28 39.4 +0.7**
BR231 Keskin MP Arra 59.16 309 P **P 01 28 41.7 -0.2**
BR231 IAmb IAmb 01 28 59.9
comp=Z,16nm,0.9s
SIM Simferopol' 59.23 315 *eP* **P 01 28 42.4 +0.2**
SIM pmax pmax
comp=Z,58nm,0.8s
MTSU Mount Surprise 59.24 120 P **P 01 28 42.1 -0.5**
baz=59,SNR=19
MDUB Mudurnu 60.45 310 P **P 01 28 51.2 +0.4**
MOS Moscow 60.52 328 *eP* **P 01 28 49.6 -1.2**
MOS *e* 01 29 00.3
MOS pmax pmax
comp=Z,23nm,0.9s
OBN Obninsk 60.84 327 P **P 01 28 52.7 -0.2**
comp=Z,2.5nm,0.4s,baz=50,slow=7.9,SNR=4.2
OBN Obninsk 60.84 327⇓ P **P 01 28 48.6 -4.4**
OBN Obninsk 60.84 327⇑ *eP* **P 01 28 52.7 -0.2**
OBN *i* 01 29 05.3
OBN *i* 01 29 34.2
OBN *i* 01 31 08.5
OBN *e*S **S 01 37 08.9 +1.6**
OBN *e*SS **SS 01 41 08.3 +1.6**
OBN pmax pmax
comp=Z,45nm,2.5s
OBN MLR MLR
comp=Z,156nm,19.0s
OBN Obninsk 60.84 327 P **P 01 28 52.7 -0.2**
OBN IAmb IAmb 01 29 09.4
comp=Z,34nm,1.0s
ELL Elmali 60.96 305 P **P 01 28 53.8 -0.5**
ELL pmax pmax
comp=Z,113nm,0.8s
ELL Elmali 60.96 305 P **P 01 28 53.8 -0.5**
BBOO Buckleboo 61.09 139 P **P 01 28 54.1 -0.8**
baz=61,SNR=79
BBOO Buckleboo 61.09 139 P **P 01 28 54.2 -0.8**
CTAO Charters Tower 61.76 121 P **P 01 28 59.3 -0.4**
CTAO pmax pmax
comp=Z,37nm,1.1s
CTAO Charters Tower 61.76 121 P **P 01 28 59.3 -0.4**
CTAO IAmb IAmb 01 29 00.3
comp=Z,37nm,1.1s
KLMR Klimovskoe 61.80 334 *eP* **P 01 28 56.2 -3.1**
KLMR pmax pmax
comp=Z,32nm,1.2s
KLMR Klimovskoe 61.80 334 *eP* **P 01 28 56.3 -3.1**
KLMR AMP 01 29 13.1
comp=Z,32nm,1.2s
MANT Manisa 62.22 307 P **P 01 29 02.7 -0.2**
MANT IAmb IAmb 01 29 15.4
comp=Z,31nm,0.9s
PURM Purcari 62.48 316 ⇓P **P 01 29 06.1 +1.9**
MBAR Mbarara 62.87 263 P **P 01 29 08.4 +0.9**
MBAR pmax pmax
comp=Z,16nm,1.1s
MBAR Mbarara 62.87 263 P **P 01 29 08.4 +0.9**
MBAR IAmb IAmb 01 29 23.0
comp=Z,16nm,1.1s
TLCR 62.96 314 ⇓P **P 01 29 07.3 -0.1**
TLCR 62.96 314 ⇓P **P 01 29 07.3 -0.1**
TIXI Tiksi 63.08 12 *ce*P **P 01 29 07.2 -0.5**
TIXI pmax pmax
comp=Z,135nm,1.3s
TIXI Tiksi 63.08 12 P **P 01 29 07.2 -0.5**
TIRR Tirgusor 63.12 314 ⇓P **P 01 29 08.2 -0.3**
TIRR Tirgusor 63.12 314 ⇓P **P 01 29 08.2 -0.3**
TPGR Topolog 63.18 314 ⇓P **P 01 29 08.6 -0.3**
MILM Milestii Mici 63.27 316 ⇓P **P 01 29 08.6 -0.8**
QLP Quilpie 63.28 128 P **P 01 29 09.9 +0.2**
baz=63,SNR=8.9
HTT Hallett 63.35 138 P **P 01 29 09.9 -0.3**
baz=63,SNR=37
MA2 Magadan 63.42 29 P **P 01 29 10.4 +0.2**
comp=Z,24nm,0.8s,baz=208,slow=5.6,SNR=8.4
MA2 Magadan 63.42 29 *ce*P **P 01 29 13.0 +2.8**
MA2 pmax pmax
comp=Z,68nm,2.5s
MA2 Magadan 63.42 29 P **P 01 29 09.3 -0.9**
CFR Carcaliu 63.43 314 ⇓P **P 01 29 10.6 +0.1**
CFR Carcaliu 63.43 314 ⇓P **P 01 29 10.6 +0.1**
ICOR Ion Corvin 63.50 313 ⇓P **P 01 29 11.4 +0.4**
PRD Provadia 63.66 312 *eP* **P 01 29 14.8 +2.7**
VARL Varlezi 63.75 315 ⇓P **P 01 29 13.5 +0.8**
AKASG Malin Array Be 63.78 321 P **P 01 29 12.7 -0.1**
comp=Z,7.4nm,0.8s,baz=86,slow=5.1,SNR=23
AKASG Malin Array Be 63.78 321 P **P 01 29 11.6 -1.1**
AKBB Malin Array Si 63.78 321 *ce*P **P 01 29 12.7 0.0**
AKBB Malin Array Si 63.78 321 P **P 01 29 11.8 -0.9**
SORM Soroca 63.81 318 ⇓P **P 01 29 12.5 -0.4**
SORM Soroca 63.81 318 ⇓P **P 01 29 12.5 -0.4**
STKA Stephens Creek 64.24 135 P **P 01 29 15.4 -0.6**
comp=Z,42nm,0.7s,baz=317,slow=6.0,SNR=107
STKA LR LR 01 57 10.6
comp=Z,188nm,21.9s,baz=280,slow=36
STKA Stephens Creek 64.24 135 P **P 01 29 15.4 -0.6**
baz=64,SNR=82
STKA Stephens Creek 64.24 135 P **P 01 29 15.4 -0.6**
STKA pmax pmax
comp=Z,10.0nm,0.7s
STKA Stephens Creek 64.24 135 P **P 01 29 15.4 -0.6**
BISRR Bisoca 64.48 315 ⇓P **P 01 29 19.3 +1.7**
VRI Vrincioaia 64.52 315 ⇓P **P 01 29 18.7 +1.0**
VRI Vrincioaia 64.52 315 ⇓P **P 01 29 18.7 +1.0**
ISR Istrita 64.54 314 ⇓P **P 01 29 19.3 +1.4**
ISR Istrita 64.54 314 ⇓P **P 01 29 19.3 +1.4**
PLOR Plostina 64.57 315 ⇓P **P 01 29 19.3 +1.2**
PLOR Plostina 64.57 315 ⇓P **P 01 29 19.3 +1.2**
TESR Tescani 64.67 316 ⇓P **P 01 29 18.2 -0.4**
NEHR Nehoiu 64.75 314 ⇓P **P 01 29 21.0 +1.8**
SGRR Singureni 64.82 313 ⇓P **P 01 29 18.4 -1.3**
MLR Muntele Rosu 65.01 314 ⇓P **P 01 29 21.8 +0.7**
MLR Muntele Rosu 65.01 314 ⇓P **P 01 29 21.8 +0.7**
BIZ Bicaz 65.10 316 ⇓P **P 01 29 22.0 +0.5**
PETK Petropavlovsk- 65.16 37 P **P 01 29 20.8 -0.9**
comp=Z,4.2nm,0.7s,baz=232,slow=4.0,SNR=9.9
PETK LR LR 02 02 59.9
comp=Z,82nm,19.0s,baz=260,slow=41
ZIMR 65.19 312 ⇓P **P 01 29 21.9 -0.2**
ZIMR 65.19 312 ⇓P **P 01 29 21.9 -0.2**
SEY Seymchan 65.41 26 P **P 01 29 22.5 -0.6**
comp=Z,5.9nm,0.7s,baz=245,slow=5.0,SNR=8.5
MICGM Minsk 65.44 325 *e* **P 01 29 24.0 +0.5**
MNK Minsk 65.44 325 *eP* **P 01 29 24.0 +0.5**
DOPR Dopca 65.46 315 ⇑P **P 01 29 23.2 -0.6**
RZN Rozhen 65.47 310 *eP* **P 01 29 23.9 -0.3**
VOIR 65.62 314 ⇓P **P 01 29 24.5 -0.5**
VOIR 65.62 314 ⇓P **P 01 29 24.5 -0.5**
BURAR Bucovina Array 65.80 317 P **P 01 29 26.5 +0.4**
BUR08 Bucovina Ar. S 65.81 317 P **P 01 29 26.5 +0.3**
ARR Arges 65.91 314 ⇓P **P 01 29 26.7 -0.1**
VLAD Vladila 65.92 313 ⇑P **P 01 29 28.3 +1.5**
NACGM Naroch 66.16 325 *e* **P 01 29 26.0 -2.1**
IDID Didziasalis 66.27 325 *eP* **P 01 29 27.9 -1.0**
IGN Ignalina 66.57 325 *eP* **P 01 29 30.4 -0.4**
VTS Vitosha 66.64 311 *eP* **P 01 29 31.4 -0.3**
IZAR Zarasai 66.64 326 *eP* **P 01 29 31.1 -0.1**
ISAL Salakas 66.67 325 *eP* **P 01 29 31.1 -0.3**
KKB Krupnik 66.70 310 *eP* **P 01 29 31.6 -0.3**
RMQ Roma 66.75 126 P **P 01 29 33.3 +1.0**
baz=67,SNR=14
LVV L'vov 66.89 319 *eP* **P 01 29 32.7 -0.2**
CMSA Cobar Meteorol 66.95 132 P **P 01 29 33.6 0.0**
baz=67,SNR=186
VSU Vasula 67.01 329 *eP* **P 01 29 33.4 -0.1**
APA Apatity 67.14 339⇓ *i*P P 01 29 46.6 +12
APA pmax pmax
comp=Z,20nm,0.8s
APA MLR MLR
comp=Z,700nm,21.0s
ARPS Mount Arapiles 67.27 139 P **P 01 29 35.3 -0.2**
baz=67,SNR=18
DRGR 67.39 316 ⇑P **P 01 29 36.4 +0.1**
DRGR 67.39 316 ⇑P **P 01 29 36.4 +0.1**
HERR Herculane 67.42 314 ⇓P **P 01 29 36.2 -0.2**
KWP Kalwaria Pacla 67.72 319 *eP* **P 01 29 38.5 +0.4**
PABE Paberze 67.86 325 *eP* **P 01 29 39.1 +0.2**
UZH Uzhgorod 67.87 318 *eP* **P 01 29 42.0 +2.9**
UZH *i* 01 29 52.4
KOLS Kolonicke sedl 67.92 318 *eP* **P 01 29 40.5 +1.0**
KOLS Kolonicke sedl 67.92 318 *eP* **P 01 29 40.5 +1.0**
SUW Suwalki 68.05 323 *eP* **P 01 29 40.2 0.0**
SIRR Siria 68.07 315 ⇓P **P 01 29 41.0 +0.5**

FIA1 FINESS Array S 68.08 332 IAmb IAmb 01 30 05.4
comp=Z,14nm,0.8s
FINES FINESS Array B 68.08 332 P **P 01 29 40.1 -0.1**
comp=Z,10nm,0.6s,baz=101,slow=5.8,SNR=38
FINES LR LR 02 02 51.7
comp=Z,102nm,20.7s,baz=114,slow=39
EIDS Eidsvold 68.10 124 P **P 01 29 40.9 0.0**
baz=68,SNR=4.9
EIDS Eidsvold 68.10 124 P **P 01 29 40.6 -0.3**
EIDS IAmb IAmb 01 29 41.6
comp=Z,15nm,0.9s
CRVS Cervenica-Dubn 68.45 318 *eP* **P 01 29 43.5 +0.7**
CRVS *e* 01 29 56.4
CRVS pmax pmax
comp=Z,121nm,2.1s
CRVS Cervenica-Dubn 68.45 318 *eP* **P 01 29 43.5 +0.7**
CRVS *e* 01 29 56.4
KECS Kecovo 69.05 317 *eP* **P 01 29 47.1 +0.6**
KECS pmax pmax
comp=Z,6.0nm,0.8s
KECS Kecovo 69.05 317 *eP* **P 01 29 47.1 +0.6**
PBUR Paburge 69.08 325 *eP* **P 01 29 46.9 +0.4**
DIVS Divibare 69.10 313 *eP* **P 01 29 46.9 -0.1**
FRGS Fruska Gora 69.28 314 *eP* **P 01 29 47.5 -0.5**
PSZ Piszkesteto 69.40 317 ⇓P P 01 29 42.0 -6.8
PSZ Piszkesteto 69.40 317 P **P 01 29 49.0 +0.2**
PSZ Piszkesteto 69.40 317 P **P 01 29 49.0 +0.2**
BBLS Lazi?i 69.51 312 *eP* **P 01 29 48.4 -1.1**
PDG Podgorica 69.57 311 ⇑P **P 01 29 48.5 -1.2**
PDG Podgorica 69.57 311 *eP* **P 01 29 48.6 -1.2**
LSZ Lusaka 69.58 248 P **P 01 29 51.2 +0.7**
LSZ Lusaka 69.58 248 P **P 01 29 51.2 +0.7**
DRME Dracevica, Mon 69.61 310 *eP* **P 01 29 47.9 -2.2**
OJC Ojcow 69.65 319 *eP* **P 01 29 50.4 +0.2**
LANS Liptovska Anna 69.78 318 *eP* **P 01 29 52.0 +1.0**
LANS Liptovska Anna 69.78 318 *eP* **P 01 29 52.0 +1.0**
HAPS Han Pijesak,Bl 69.85 313 *eP* **P 01 29 51.0 -0.7**
UPM Unac-Piva 69.85 312 *eP* **P 01 29 50.6 -1.2**
BRY Bratogost 70.11 311 *eP* **P 01 29 51.8 -1.5**
TOO Toolangi 70.11 138 P **P 01 29 53.5 +0.2**
baz=70,SNR=6.9
TOO Toolangi 70.11 138 P **P 01 29 53.4 +0.2**
TOO pmax pmax
comp=Z,69nm,0.7s
TOO Toolangi 70.11 138 P **P 01 29 53.4 +0.2**
HCY Herceg Novi 70.13 311 *eP* **P 01 29 50.4 -2.9**
VYHS Vyhne 70.15 317 *eP* **P 01 29 53.8 +0.5**
VYHS *e* 01 30 06.7
VYHS Vyhne 70.15 317 *eP* **P 01 29 53.8 +0.5**
VYHS *e* 01 30 06.7
MORH Mrgy, Hungar 70.15 315 *eP* **P 01 29 52.5 -0.8**
TREB Trebinje 70.24 311 *eP* **P 01 29 52.6 -1.4**
YNG Young 70.33 133 P **P 01 29 54.4 -0.3**
baz=70,SNR=5.5
ARD4 ARCESS Array S 70.54 340 P **P 01 29 55.0 -0.3**
ARA0 ARCESS Array S 70.55 340 *eP* **P 01 29 55.9 +0.6**
ARCES ARCESS Array B 70.55 340 P **P 01 29 55.8 +0.5**
comp=Z,8.8nm,0.6s,baz=89,slow=5.9,SNR=49
OKC Ostrava-Krasne 70.68 319 *eP* **P 01 29 57.2 +0.7**
OKC Ostrava-Krasne 70.68 319 *eP* **P 01 29 57.2 +0.7**
ARMA Armidale 70.82 128 P **P 01 29 58.9 +1.1**
baz=71,SNR=24
ARMA Armidale 70.82 128 P **P 01 29 58.9 +1.1**
JAVC Velka Javorina 70.94 318 *eP* **P 01 29 59.4 +1.2**
MORC Moravsky Berou 71.07 318 ⇓P **P 01 29 59.8 +0.8**
MORC Moravsky Berou 71.07 318 *eP* **P 01 29 59.6 +0.7**
MORC Moravsky Berou 71.07 318 ⇓P **P 01 29 59.8 +0.8**
MORC Moravsky Berou 71.07 318 P **P 01 29 58.9 -0.1**
MORC IAmb IAmb 01 30 19.8
comp=Z,17nm,0.7s
MODS Modra-Piesok 71.18 317 *eP* **P 01 29 58.8 -0.8**
MODS *e* 01 30 11.4
MODS pmax pmax
comp=Z,18nm,1.2s
MODS Modra-Piesok 71.18 317 *eP* **P 01 29 58.8 -0.8**
MODS *e* 01 30 11.4
KTK1 Kautokeino 71.18 339 *eP* **P 01 29 59.4 +0.2**
ZST Bratislava 71.29 317 *eP* **P 01 30 00.6 +0.3**
ZST Bratislava 71.29 317 *eP* **P 01 30 00.5 +0.3**
TIP Timpagrande 71.45 307 ⇓P **P 01 30 01.3 -0.2**
HAMF Hammerfest 71.46 341 *eP* **P 01 30 01.4 +0.6**
CNB Canberra Magne 71.54 134 P **P 01 30 01.5 -0.4**
baz=72,SNR=20
KRLC Kraliky 71.58 319 *eP* **P 01 30 02.5 +0.5**
KRLC *e* 01 30 18.4
KRLC Kraliky 71.58 319 *eP* **P 01 30 02.5 +0.5**
KRLC *ep*P **sP 01 30 18.4 -1.2**
VRAC Vranov 71.67 318 *eP* **P 01 30 03.0 +0.5**
MGCD Mangrove Creek 71.75 131 P **P 01 30 03.9 +0.7**
baz=72,SNR=4.9
KRUC Moravsky 71.79 318 *eP* **P 01 30 03.5 +0.3**
DPC Dobruska-Polom 71.88 319 *eP* **P 01 30 04.9 +1.1**
DPC *e* 01 30 15.9
DPC Dobruska-Polom 71.88 319 *eP* **P 01 30 04.9 +1.1**
DPC *ep*P **pP 01 30 15.9 -0.6**
KSP Ksiaz 71.92 320 *eP* **P 01 30 04.7 +0.7**
OSTC Ostas 71.96 319 *eP* **P 01 30 05.2 +0.9**
CHVC Chvalec 72.06 319 *eP* **P 01 30 05.7 +0.8**
CONA Conrad Observa 72.11 317 *eP* **P 01 30 05.5 +0.2**
comp=Z,2.9nm,0.9s
ARSA Arzberg 72.33 316 *eP* **P 01 30 06.9 +0.4**
comp=Z,3.5nm,0.7s
CRES Cresnjev 72.36 314 *i* P **P 01 30 07.2 +0.5**
CRES Cresnjev 72.36 314 *eP* **P 01 30 06.8 +0.1**
BILL Bilibino 72.40 22 *ce*P **P 01 30 07.5 +1.0**
BILL *i* 01 30 24.3
BILL *i* 01 32 48.0
BILL pmax pmax
comp=Z,20nm,1.3s
BILL MLR MLR
comp=Z,180nm,21.0s
BILL Bilibino 72.40 22 P **P 01 30 06.9 +0.4**
SOKA Soboth 72.66 315 *i* P **P 01 30 08.9 +0.3**
comp=Z,7.2nm,0.9s,SNR=7.2
TRO Tromso 72.81 339 *eP* **P 01 30 08.8 -0.1**
OBKA Obir 72.99 315 *i* P **P 01 30 11.0 +0.4**
comp=Z,7.0nm,0.8s,SNR=7.9
PVCC Panska Ves 73.01 319 *eP* **P 01 30 11.3 +0.8**
PVCC Panska Ves 73.01 319 *eP* **P 01 30 11.3 +0.8**
LJU Ljubljana 73.01 315 *eP* **P 01 30 11.2 +0.6**
LJU Ljubljana 73.01 315 *eP* **P 01 30 10.7 +0.1**
PRU Pruhonice 73.02 319 *eP* **P 01 30 11.2 +0.7**
PRU *e* 01 30 21.8
PRU Pruhonice 73.02 319 *eP* **P 01 30 11.2 +0.7**
PRU *ep*P **pP 01 30 21.8 -1.4**
CEY Cerknica 73.08 314 *eP* **P 01 30 10.4 -0.7**
MOA Molln 73.18 316 *eP* **P 01 30 11.6 0.0**
comp=Z,3.6nm,0.7s
PBCC Pribram 73.37 318 *eP* **P 01 30 13.3 +0.7**
PBCC *ex* x 01 30 23.4
BRG Berggiesshubel 73.41 320 *eP* **P 01 30 13.6 +0.8**
comp=Z,11nm,0.8s
BRG *i* pP **pP 01 30 26.3 +0.8**
comp=Z,28nm,1.2s
BRG Berggiesshubel 73.41 320 *eP* **P 01 30 13.6 +0.8**
BRG *i* *PP **pP 01 30 26.3 +0.8**
BRG pmax pmax
comp=Z,11nm,0.8s
BRG pmax pmax
comp=Z,28nm,1.2s
VOJS Vojsko 73.46 315 *eP* **P 01 30 13.3 0.0**
RUE Ruedersdorf 73.54 321 *eP* **P 01 30 14.1 +0.6**
GEC2 GERESS Array S 73.56 317 P **P 01 30 13.9 +0.1**
GERES GERESS Array B 73.56 317 P **P 01 30 13.9 +0.1**
comp=Z,8.2nm,0.6s,baz=85,slow=5.9,SNR=96
GERES GERESS Array B 73.56 317 P **P 01 30 14.0 +0.1**
GERES GERESS Array B 73.56 317 P **P 01 30 14.0 +0.1**
MYKA Terra Mystica 73.62 315 *eP* **P 01 30 14.4 +0.1**
comp=Z,3.1nm,0.5s
N2IH Innhavet 73.62 337 *eP* **P 01 30 13.6 -0.1**
KHC Kasperske Hory 73.64 318 *ce*P **P 01 30 15.0 +0.7**
KHC pmax pmax
comp=Z,11nm,0.6s
KHC Kasperske Hory 73.64 318 *eP* **P 01 30 14.3 0.0**
KHC *ep*P **pP 01 30 25.4 -1.6**
KHC Kasperske Hory 73.64 318 P **P 01 30 14.5 +0.2**
PRED Cave del Predi 73.67 315 IAmb IAmb 01 30 15.8
comp=Z,17nm,0.7s
FAUS Fauske 73.79 337 *eP* **P 01 30 14.8 +0.1**
KBA Koelnbreinsper 73.81 316 *eP* **P 01 30 15.1 -0.4**
comp=Z,2.0nm,0.6s
HFS Hagfors 73.87 329 P **P 01 30 15.4 +0.1**
comp=Z,13nm,0.6s,baz=116,slow=5.1,SNR=38

STEI	Steigen	73.87	337	eP		P	01 30 14.4	-0.7
N2TV	TYrnvik	73.88	337	eP		P	01 30 15.0	-0.1
MOR8	Moi Rana	73.99	336	eP		P	01 30 15.4	-0.5
CLL	Collm	74.01	320	eP		P	01 30 16.0	-0.3
CLL				epP		pP	01 30 27.0	-2.0
CLL				i PcP		PcP	01 30 29.1	-2.3
	comp=Z,27nm,1.4s							
CLL				esP		sP	01 30 33.0	-0.9
CLL	Collm	74.01	320	eP		P	01 30 16.0	-0.3
CLL				e*PP		pP	01 30 27.0	-2.0
TAU	Tasmania Unive	74.27	142	P		P	01 30 18.6	+0.7
TAU				pmax	pmax			
	comp=Z,23nm,0.7s							
TAU	Tasmania Unive	74.27	142	P		P	01 30 18.6	+0.7
TAU				IAmb	IAmb		01 30 19.0	
	comp=Z,23nm,0.7s							
N2VI	Vinje	74.31	338	eP		P	01 30 17.4	-0.3
NBB30	Finnes	74.35	336	eP		P	01 30 18.0	0.0
ABTA	Abfaltersbach	74.39	315	eP		P	01 30 17.9	-0.9
	comp=Z,4.2nm,0.7s							
CIMO	Cimolais	74.46	315	IAmb	IAmb		01 30 46.7	
	comp=Z,24nm,0.8s							
LOF	Lofoten	74.53	338	eP		P	01 30 18.5	-0.5
KONS	Konsvik	74.56	336	eP		P	01 30 18.9	-0.3
N2SV	S rv¥gen	74.71	337	eP		P	01 30 18.9	-1.2
NC405	NORSAR Array S	74.89	330	IAmb	IAmb		01 30 36.8	
	comp=Z,58nm,1.1s							
NSS	Namsos	74.91	334	eP		P	01 30 21.1	-0.1
WTTA	Wattenberg	74.98	316	eP		P	01 30 21.5	-0.7
	comp=Z,12nm,0.8s							
CTI	Castel Tesino	75.01	315	IAmb	IAmb		01 30 42.7	
	comp=Z,22nm,0.8s							
WATA	Walderalm	75.01	316	eP		P	01 30 21.5	-0.9
	comp=Z,3.4nm,0.5s							
NB2	NORSAR Subarra	75.13	330	P		P	01 30 21.8	-0.9
	comp=Z,4.7nm,0.6s,baz=90,slow=5.9							
NB2	NORSAR Subarra	75.13	330	P		P	01 30 21.8	-0.9
	baz=90,slow=5.9							
NOA	NORSAR Array B	75.13	330	P		P	01 30 22.3	-0.4
	comp=Z,4.7nm,0.5s,baz=90,slow=5.7,SNR=38							
NOA				LR	LR		02 06 12.3	
	comp=Z,129nm,21.7s,baz=115,slow=38							
SPA0	Spitsbergen Ar	75.13	348	eP		P	01 30 20.8	-1.6
SPITS	Spitsbergen Ar	75.13	348	P		P	01 30 22.6	+0.2
	comp=Z,8.8nm,0.7s,baz=98,slow=10,SNR=12							
GRF	Grafenberg Arr	75.17	318	eP		P	01 30 24.2	+1.0
	comp=Z,7.4nm,0.8s,baz=98,slow=4.7							
GRF				epP		PcP	01 30 36.7	+0.2
	baz=98,slow=4.9							
SQTA	Sankt Quirin	75.27	316	eP		P	01 30 23.4	-0.5
	comp=Z,8.8nm,0.8s							
LBTB	Lobatse	75.28	240	P		P	01 30 25.4	+1.1
LBTB				pmax	pmax			
	comp=Z,48nm,1.4s							
LBTB	Lobatse	75.28	240	P		P	01 30 25.4	+1.1
LBTB				IAmb	IAmb		01 30 26.4	
	comp=Z,48nm,1.4s							
NAO01	NORSAR Array S	75.28	330	eP		P	01 30 23.9	+0.3
MOTA	Moosalm	75.33	316	i P		P	01 30 23.4	-0.9
	comp=Z,9.3nm,0.8s,SNR=8.3							
OSL	Oslo	75.35	329	eP		P	01 30 25.5	+1.6
RETA	Reutte	75.56	316	i P		P	01 30 25.1	-0.4
	comp=Z,9.0nm,0.7s,SNR=9.2							
FETA	Feichten	75.61	316	eP		P	01 30 25.2	-0.7
	comp=Z,5.5nm,0.7s							
DOMB	Dombas	76.16	331	eP		P	01 30 28.7	+0.1
DAVA	Damuels	76.17	316	i P		P	01 30 29.1	0.0
	comp=Z,8.3nm,0.6s,SNR=10							
SKAR	Skarslia	76.55	330	eP		P	01 30 31.6	+0.7
TUE	Stuetta	76.59	315	P		P	01 30 31.5	0.0
MOL	Molde	76.86	332	eP		P	01 30 32.8	+0.3
BOSA	Boshof	76.89	237	P		P	01 30 33.4	0.0
	comp=Z,12nm,0.7s,baz=92,slow=4.4,SNR=24							
BOSA				LR	LR		02 00 36.7	
	comp=Z,92nm,18.3s,baz=40,slow=33							
BOSA	Boshof	76.89	237	P		P	01 30 34.3	+0.9
BOSA				pmax	pmax			
	comp=Z,40nm,1.5s							
BOSA	Boshof	76.89	237	P		P	01 30 34.3	+0.9
BOSA				IAmb	IAmb		01 31 20.1	
	comp=Z,40nm,1.5s							
LHI	Lord Howe Isla	77.05	127	P		P	01 30 34.6	+0.5
	baz=77,SNR=3.6							
LHI	Lord Howe Isla	77.05	127	P		P	01 30 34.3	+0.3
KEST	Kesra	77.56	304	P		P	01 30 36.9	-0.1
	comp=Z,9.7nm,0.8s,baz=11,slow=2.8,SNR=9.3							
KEST				LR	LR		02 10 31.5	
	comp=Z,45nm,18.7s,baz=296,slow=40							
KEST	Kesra	77.56	304	IAmb	IAmb		01 30 57.5	
	comp=Z,22nm,0.9s							
SENIN	Lac Senin/Sane	78.01	315	IAmb	IAmb		01 30 53.3	
	comp=Z,46nm,1.5s							
SANVU	Saraoutou	78.69	109	P		P	01 30 43.8	+0.3
DZM	Mont Dzumac	79.94	115	P		P	01 30 50.8	+0.4
DZM				IAmb	IAmb		01 30 52.1	
	comp=Z,28nm,0.8s							
MAW	Mawson	82.70	191	P		P	01 31 04.4	+0.6
	comp=Z,16nm,0.9s,baz=9.4,slow=6.8,SNR=19							
MAW				LR	LR		02 00 32.3	
	comp=Z,70nm,21.9s,baz=60,slow=30							
MAW	Mawson	82.70	191	P		P	01 31 04.9	+1.1
	baz=83,SNR=12							
MAW	Mawson	82.70	191	P		P	01 31 04.8	+1.0
MAW				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MAW	Mawson	82.70	191	P		P	01 31 04.8	+1.0
TAM	Tamanrasset	82.77	292	P		P	01 31 05.5	+0.1
TAM				pmax	pmax			
	comp=Z,15nm,1.2s							
TAM	Tamanrasset	82.77	292	P		P	01 31 05.5	+0.1
EKA	Eskdalemuir Ar	83.23	325	PKKPbc	PKKPbc		01 49 29.8	+0.7
	comp=Z,1.2nm,0.6s,baz=254,slow=2.7,SNR=5.1							
A21K	Barrow	84.75	18	P		P	01 31 15.8	+1.4
	baz=293							
ESDC	Sonseca Array	87.27	310	P		P	01 31 27.7	+0.1
	comp=Z,1.8nm,0.8s,baz=63,slow=4.3,SNR=14							
ESDC				LR	LR		02 15 31.2	
	comp=Z,45nm,18.6s,baz=220,slow=39							
ESDC	Sonseca Array	87.27	310	P		P	01 31 27.8	+0.2
EUNU	Eureka	87.67	360	IAmb	IAmb		01 31 51.6	
	comp=Z,13nm,0.8s							
IMAR	Indian Mountai	87.95	22	P		P	01 31 30.7	+0.4
TOLK	Toolik Lake Re	88.12	19	P		P	01 31 31.9	+0.9
	baz=300							
TOLK	Toolik Lake Re	88.12	19	IAmb	IAmb		01 31 53.5	
	comp=Z,19nm,0.9s							
TOA0	Torodi Ar. Sit	88.24	283	P		P	01 31 33.2	+0.6
TOA0				IAmb	IAmb		01 31 46.9	
	comp=Z,17nm,1.1s							
TORD	Torodi Ar. Bea	88.24	283	P		P	01 31 33.0	+0.4
	comp=Z,5.4nm,0.8s,baz=83,slow=4.6,SNR=32							
TORD				PP		PP	01 35 01.4	+1.1
	comp=Z,1.6nm,0.9s,baz=87,slow=6.5,SNR=4.9							
TORD				PKKPbc		PKKPbc	01 49 16.7	+0.8
	comp=Z,1.4nm,0.6s,baz=300,slow=2.5,SNR=16							
TORD				LR	LR		02 10 17.6	
	comp=Z,103nm,21.4s,baz=100,slow=35							
TORD	Torodi Ar. Bea	88.24	283	P		P	01 31 32.9	+0.2
TTA	Tatalina	88.38	25	IAmb	IAmb		01 31 51.0	
	comp=Z,26nm,1.5s							
MSVF	Nonsavu	89.33	108	P		P	01 31 38.5	+0.8
MSVF				pmax	pmax			
	comp=Z,22nm,1.0s							
MSVF	Nonsavu	89.33	108	P		P	01 31 38.5	+0.8
MSVF				IAmb	IAmb		01 31 40.0	
	comp=Z,22nm,1.0s							
SYO	Syowa Base	89.34	197	eP		P	01 31 36.5	0.0
SYO	Syowa Base	89.34	197	ePcP		PcP	01 31 37.9	0.0
SYO	Syowa Base	89.34	197	eX		pP	01 31 49.2	-0.3
SUMG	Summit	89.43	347	i P		pP	01 31 51.4	+0.8
SUMG	Summit	89.43	347	i P		pP	01 31 51.5	+0.8
MLY	Manley	89.51	22	P		P	01 31 38.4	+0.8
	baz=299							
I23K	Minto, Yukon-K	89.96	22	P		P	01 31 41.5	+1.9
	baz=300							
I23K	Minto, Yukon-K	89.96	22	IAmb	IAmb		01 32 03.4	
	comp=Z,13nm,1.0s							
PPLA	Purkeypile	89.97	25	IAmb	IAmb		01 31 43.9	
	comp=Z,14nm,0.7s							
BMAR	Burnt Mountain	90.36	19	P		P	01 31 43.3	+1.8
TRF	Thorofare Moun	90.46	24	IAmb	IAmb		01 31 46.3	
	comp=Z,10nm,0.7s							
MDM	Murphy Dome	90.47	22	IAmb	IAmb		01 32 06.8	
	comp=Z,14nm,1.0s							
SKT	Skwentna	90.67	25	P		P	01 31 42.6	-0.4
POKR	Poker Plat Res	90.67	22	IAmb	IAmb		01 31 48.1	
	comp=Z,5.9nm,0.7s							
CCB	Clear Creek Bu	90.79	22	IAmb	IAmb		01 32 16.7	
	comp=Z,20nm,1.8s							
MCK	McKinley	90.84	23	P		P	01 31 44.3	+0.5
	baz=301							
RND	Reindeer	91.04	23	IAmb	IAmb		01 31 57.7	
	comp=Z,19nm,1.4s							
ILAR	Eielson Array	91.05	22	P		P	01 31 44.0	-0.7
	comp=Z,4.7nm,0.7s,baz=292,slow=4.1,SNR=30							
ILAR				PKKPbc		PKKPbc	01 49 10.4	-0.1
	comp=Z,0.4nm,0.5s,baz=140,slow=1.7,SNR=7.7							
ILAR				LR	LR		02 18 18.7	
	comp=Z,107nm,19.6s,baz=295,slow=39							
ILAR	Eielson Array	91.05	22	P		P	01 31 44.4	-0.4
ILAR	Eielson Array	91.05	22	P		P	01 31 44.4	-0.4
HDA	Harding Lake	91.23	22	IAmb	IAmb		01 32 04.5	
	comp=Z,6.6nm,0.6s							
RC01	Rabbit Creek A	91.85	26	P		P	01 31 49.1	+0.5
	baz=300							
SML	Sawmill	92.07	25	P		P	01 31 50.4	+0.7
SCRK	Sand Creek	92.55	22	P		P	01 31 52.4	+0.5
	baz=305							
DOT	Dot Lake	92.71	22	IAmb	IAmb		01 33 04.3	
	comp=Z,17nm,1.4s							
M24K	Tolsona, Glenn	92.77	24	P		P	01 31 54.6	+1.8
	baz=303							
INK	Inuvik	93.01	16	P		P	01 31 54.2	+0.5
	comp=Z,3.9nm,0.6s,baz=319,slow=2.9,SNR=12							
INK	Inuvik	93.01	16	IAmb	IAmb		01 32 17.1	
	comp=Z,16nm,1.2s							
EGAK	Eagle	93.06	20	IAmb	IAmb		01 31 57.9	
	comp=Z,9.6nm,1.0s							
K27K	Chicken	93.19	21	P		P	01 31 56.6	+1.8
	baz=307							
K27K	Chicken	93.19	21	IAmb	IAmb		01 32 14.6	
	comp=Z,11nm,0.8s							
KLU	Kluna	93.21	24	IAmb	IAmb		01 32 08.4	
	comp=Z,8.0nm,0.8s							
URZ	Urewera	93.22	128	P		P	01 31 53.8	-1.4
	comp=Z,18nm,0.8s,baz=236,slow=0.9,SNR=7.5							
URZ				LR	LR		02 13 08.8	
	comp=Z,130nm,19.9s,baz=213,slow=35							
L26K	Log Cabin Wild	93.33	22	P		P	01 31 57.0	+1.6
	baz=306							
KOWA	Kowa	93.35	286	P		P	01 31 56.6	+0.2
KOWA				IAmb	IAmb		01 32 10.8	
	comp=Z,12nm,0.9s							
N25K	Chitina, Valde	93.67	24	P		P	01 31 58.4	+1.3
	baz=304							
N25K	Chitina, Valde	93.67	24	IAmb	IAmb		01 32 01.5	
	comp=Z,8.1nm,0.6s							
BCAR	Beaver Creek A	93.88	22	P		P	01 31 58.9	+0.9
DAWY	Dawson	94.10	20	IAmb	IAmb		01 32 03.5	
	comp=Z,7.5nm,0.8s							
C36M	Paulatuk	94.44	12	P		P	01 32 00.4	+0.1
	baz=324							
BARN	Barnard Glacie	95.14	23	IAmb	IAmb		01 32 48.4	
	comp=Z,14nm,1.2s							
RAO	Raoul Island	95.39	119	LR	LR		02 18 48.8	
	comp=Z,42nm,19.0s,baz=90,slow=38							
DBIC	Dimbokro	95.97	278	LR	LR		02 16 50.9	
	comp=Z,50nm,18.2s,baz=62,slow=36							
VNDA	Vanda	97.64	168	P	Pdif		01 32 14.9	+0.3
	comp=Z,1.4nm,0.5s,baz=312,slow=6.9,SNR=22							
VNDA				LR	LR		02 13 30.5	
	comp=Z,205nm,18.1s,baz=316,slow=34							
VNDA	Vanda	97.64	168	P	Pdif		01 32 15.7	+1.1
VNDA				pmax	pmax			
	comp=Z,13nm,1.9s							
VNDA	Vanda	97.64	168	P	Pdif		01 32 15.7	+1.1
VNDA				IAmb	IAmb		01 33 17.5	
	comp=Z,13nm,1.9s							
SCHQ	Schefferville	110.81	348	PKKPbc	PKKPbc		01 48 12.1	-1.5
	comp=Z,4.4nm,0.8s,baz=224,slow=6.1,SNR=6.3							
MSO	Missoula	116.34	20	P		PKPdf	01 37 24.9	+0.5
	baz=331							
MSO	Missoula	116.34	20	PKPdf		PKPdf	01 37 24.7	+0.3
J05D	Fort Rock, OR	116.45	27	P		PKiKP	01 37 26.4	+1.7
	baz=322							
ULM	Lac du Bonnet	117.14	6	PKP		PKPdf	01 37 25.3	-0.3
	comp=Z,5.0nm,0.6s,baz=314,slow=3.7,SNR=4.9							
ULM				PKKPbc		PKKPbc	01 47 51.6	-0.3
	comp=Z,2.0nm,0.4s,baz=179,slow=4.9,SNR=7.1							
ULM				PKKPab		PKKPab	01 47 56.2	+0.1
	comp=Z,2.1nm,0.5s,baz=232,slow=2.8,SNR=4.5							
O03E	Paynes Creek	118.53	30	P		PKiKP	01 37 29.2	+0.4
	baz=321							
HLID	Hailey	119.01	22	P		PKiKP	01 37 30.9	+1.1
	baz=329							
D56A	ZEC Mazanza, M	119.75	350	P		PKiKP	01 37 34.5	+3.6
	baz=14							
D55A	Sainte-Anne-du	119.89	351	P		PKiKP	01 37 35.0	+3.9
	baz=13							
LOHW	Long Hollow	120.29	19			PKiKP	01 37 33.2	+0.8
ELK	Elko	121.09	25	PKIKP		PKiKP	01 37 34.8	+0.8
ELK	Elko	121.09	25	PKPdf		PKiKP	01 37 34.8	+0.8
BW06	Boulder Array	121.39	19	P		PKiKP	01 37 35.1	+0.6
	baz=334							
PDAR	Pinedale Array	121.39	19	PKP		PKiKP	01 37 34.9	+0.3
	comp=Z,3.7nm,0.7s,baz=35,slow=1.2,SNR=19							
PDAR				PKKPbc		PKKPbc	01 47 34.3	-2.2
	comp=Z,0.3nm,0.5s,baz=147,slow=5.3,SNR=3.3							
PDAR	Pinedale Array	121.39	19	PKPdf		PKPdf	01 37 34.4	0.0
NVAR	Mina Array Bea	121.66	28	PKP		PKiKP	01 37 35.8	+0.6
	comp=Z,0.9nm,0.6s,baz=319,slow=2.1,SNR=34							
RSSD	Black Hills	121.68	14	PKIKP		PKiKP	01 37 35.6	+0.6
RSSD	Black Hills	121.68	14	PKPdf		PKiKP	01 37 35.6	+0.6
K22A	Casper	122.41	17	P		PKiKP	01 37 36.9	+0.5
	baz=338							
DUG	Dugway, Tooele	122.52	23	PKIKP		PKiKP	01 37 36.7	0.0
DUG	Dugway, Tooele	122.52	23	P		PKiKP	01 37 37.9	+1.2
	baz=330							
DUG	Dugway, Tooele	122.52	23			PKiKP	01 37 36.7	0.0
R11A	Troy Canyon, C	122.95	26	P		PKiKP	01 37 39.1	+1.4
	baz=327							
GRAC	Grapevine Rang	123.25	29	P		PKiKP	01 37 40.2	+2.0
	baz=324							
CWC	Cottonwood Cre	123.36	30	P		PKiKP	01 37 39.0	+0.5
	baz=323							
ECSD	EROS Data Cent	123.46	8	P		PKiKP	01 37 38.8	+0.5
	baz=349							
TPNV	Topopah Spring	123.81	28	PKIKP		PKiKP	01 37 39.4	0.0
TPNV	Topopah Spring	123.81	28	P		PKiKP	01 37 39.9	+0.5
	baz=325							
TPNV	Topopah Spring	123.81	28			PKiKP	01 37 39.4	0.0
MPMC	Manual Prospec	123.95	29	P		PKiKP	01 37 41.0	+1.3
	baz=324							
O20A	White River Ci	124.19	19	P		PKiKP	01 37 40.8	+0.7
	baz=335							
LRMC	Laurel Mtn Rad	124.32	30	P		PKiKP	01 37 41.3	+1.0
	baz=323							
EDW2	Edwards Air Fo	124.64	31	P		PKiKP	01 37 41.9	+0.9
	baz=323							
GSC	Goldstone, Bar	124.89	29	P		PKiKP	01 37 42.8	+1.3
	baz=324							
L42A	Oliver, Polo	125.80	2	PKPdf		PKiKP	01 37 44.0	+1.1
GMRC	Granite Mounta	125.86	29	P		PKiKP	01 37 44.8	+1.4
	baz=325							
BELC	Belle Mtn. Jos	126.33	30	P		PKiKP	01 37 46.0	+1.6
	baz=324							
O60A	Telford	126.39	349	P		PKiKP	01 37 46.6	+2.4
	baz=14							
PFO	Pinyon Flats O	126.42	30	PKP		PKiKP	01 37 45.4	+0.8
	comp=Z,2.7nm,0.7s,baz=273,slow=2.9,SNR=7.9							
PFO	Pinyon Flats O	126.42	30	P		PKiKP	01 37 45.4	+0.8
	baz=324							
IRM	Iron Mountain	126.61	29	P		PKiKP	01 37 46.0	+1.1
	baz=325							
BC3	Big Chuckawall	126.87	30	P		PKiKP	01 37 46.7	+1.2
	baz=325							
PDMCI	Parker Dam,Lak	126.96	28	P		PKiKP	01 37 46.8	+1.4
	baz=327							
MONP2	Monument Peak	127.01	31	P		PKiKP	01 37 47.5	+1.6
	baz=324							
SDCO	Great Sand Dun	127.23	18	P		PKiKP	01 37 46.7	+0.3
	baz=338							
IKP	In-Ko-Pah, Jac	127.36	31	P		PKiKP	01 37 47.8	+1.3
	baz=324							
RMX	La Rumorosa	127.42	31	PKPdf		PKiKP	01 37 48.6	+1.9
GLA	Glamis	127.67	29	P		PKiKP	01 37 48.4	+1.3
	baz=325							
Q56A	Snyder Ridge,	128.25	352	P		PKiKP	01 37 52.8	+4.8
	baz=9.9							
Q55A	Buckhannon	128.41	353	P		PKiKP	01 37 52.9	+4.6
	baz=8.8							
Q53A	Leroy	128.70	354	P		PKiKP	01 37 52.9	+4.1
	baz=7.1							
S57A	Dark Hollow, R	129.48	351	P		PKiKP	01 37 55.7	+5.3
	baz=10							
ANMO	Albuquerque	129.48	21	PKIKP		PKiKP	01 37 51.0	+0.2
ANMO	Albuquerque	129.48	21	P		PKiKP	01 37 51.7	+0.9
	baz=336							
ANMO	Albuquerque	129.48	21	PKPdf		PKiKP	01 37 51.0	+0.2
S58A	Poland Farm, P	129.48	351	P		PKiKP	01 37 55.4	+4.9
	baz=12							
TUC	Tucson	130.14	26	P		PKiKP	01 37 53.8	+1.8
	baz=329							
T55A	Pulaski	130.35	353	P		PKiKP	01 37 56.1	+3.9
	baz=8.2							
WVT	Waverly	131.70	1	P		PKiKP	01 37 55.4	+0.4
	baz=359							
CLTN	Cedars of Leba	131.74	359	PKPdf		PKiKP	01 37 55.1	+0.1
MNTX	Cornudas Mount	132.80	21	P		PKiKP	01 37 57.5	+0.1
	baz=336							
TX32	Lajitas Array	135.56	21	PKPdf		PKPdf	01 38 01.6	0.0
TXAR	Lajitas Array	135.56	21	PKP		PKiKP	01 38 02.6	-0.5
	comp=Z,2.0nm,0.5s,baz=72,slow=0.8,SNR=26							
TXAR	Lajitas Array	135.56	21	PKPdf		PKPdf	01 38 02.2	+0.6
JCT	Junction City	135.66	16	P		PKiKP	01 38 04.0	+0.8
	baz=342							
BDFB	Brasilia	141.85	260	PKP		PKiKP	01 38 15.2	-1.0
	comp=Z,2.3nm,0.5s,baz=169,slow=12,SNR=3.0							
GRGR	Grenville	144.78	313	PKPdf		PKPdf	01 38 18.4	-0.1
SDDR	Presa de Saban	145.05	333			PKPbc	01 38 18.1	-0.1
BANI	BANI	145.14	331	PKPbc		PKPdf	01 38 19.0	-0.1
MOIG	Morelia	145.27	23			PKPdf	01 38 19.4	-0.1
LL01	San Ignacio de	147.49	201			PKPbc	01 38 25.0	+0.3
LL01				PKPab		PKiKP	01 38 28.7	+1.8
PLCA	Paso Flores	148.22	204	PKPbc		PKPbc	01 38 26.6	-0.3
	comp=Z,12nm,0.8s,baz=157,slow=1.6,SNR=17							
PLCA	Paso Flores	148.22	204			PKPbc	01 38 27.6	+0.7
PLCA				PKPab		PKPab	01 38 32.2	+2.3
CPUP	Villa Florida	148.67	239	PKPbc		PKiKP	01 38 29.3	-0.6
	comp=Z,6.5nm,0.8s,baz=104,slow=4.8,SNR=11							
LC01	Cunco	150.31	205			PKPbc	01 38 32.4	+0.3
LC01				PKPab		PKPab	01 38 37.3	-1.0
BI02	San Fabin de	151.92	208			PKiKP	01 38 37.2	+0.8
SAML	Samuel	156.11	276	PKP2		PKPab	01 39 04.2	+0.6
SAML	Samuel	156.11	276			PKPab	01 39 04.2	+0.6
LPAZ	La Paz	161.09	256	PKP		PKPdf	01 38 43.3	+0.7
	comp=Z,1.7nm,0.8s,baz=36,slow=3.0,SNR=5.0							
LPAZ				PKPab		PKPab	01 39 25.7	-0.2
	comp=Z,4.0nm,0.8s,baz=89,slow=4.2,SNR=6.3							
LPAZ	La Paz	161.09	256			PKPdf	01 38 42.7	+0.1

IDC ***28*** *01:31:40.3±1.9, 19°.37N×38°.76E, h0km, mb3.8/9, mb1 3.8/9, mb1mx3.6/57, mbtmp3.8/9, MS3.4/4, Ms1 3.4/4, ms1mx2.9/40, Error ellipse: s-maj=63.4km s-min=20.0km az=150.0*

NEIC ***28*** *01:31:41.5±0.8, 19°.4N±0°.1×38°.81E±0°.10, h10km±2km, mb4.1/12, Error ellipse: s-maj=20.1km s-min=14.8km az=159.0*

ISC 28 01:31:42.8±1.3, 19°.4N±0°.2×38°.8E±0°.1, h18km, n29, σ0s.83/25, mb4.1/12, Red Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RAYN	Ar Rayn	7.45	55	Pn		Pn	01 33 30.1	-0.6
RAYN				Sn		Sn	01 34 54.6	-0.2
EIL	Elat	10.81	342	LR		LR	01 37 32.0	
	comp=Z,85nm,20.8s,baz=176,slow=32							
MMAI	Mount Meron Ar	13.90	348	LR		LR	01 39 44.5	
	comp=Z,74nm,19.7s,baz=185,slow=35							
MARD	Mardin	17.93	5	Pn		Pn	01 35 50.4	-0.9
MARD				IAmb		IAmb	01 36 34.1	
	comp=Z,4.3nm,0.4s							
BR131	Keskin Array S	20.74	349	P		P	01 36 22.8	+0.2
BRTR	Keskin Array B	20.74	349	P		P	01 36 22.9	+0.2
	comp=Z,0.5nm,0.7s,baz=166,slow=12,SNR=3.9							
TOKA	Tokat	20.95	355	P		P	01 36 24.9	+0.2
HRA	Herat	25.59	50	P		P	01 37 11.8	+0.6
ABKAR	Akbulak array	34.27	25	P		P	01 38 28.1	+0.3
ABKAR				IAmb		IAmb	01 38 38.1	
	comp=Z,9.0nm,2.0s							
KK31	Karatay Array	35.60	41	P		P	01 38 39.4	0.0
KK31				IAmb		IAmb	01 39 58.5	
	comp=Z,4.9nm,1.6s							
KKAR	Karatay Array	35.60	41	P		P	01 38 39.8	+0.4
TOA0	Torodi Ar. Sit	36.12	266	P		P	01 38 44.0	-0.2
TORD	Torodi Ar. Bea	36.12	266	P		P	01 38 43.9	-0.3
	comp=Z,2.7nm,0.8s,baz=74,slow=7.9,SNR=11							
ARU	Arti	39.81	17	P		P	01 39 15.8	+1.0
	comp=Z,0.3nm,0.3s,baz=214,slow=11,SNR=3.3							
BVAR	Borovoye Array	41.50	29	P		P	01 39 29.2	+0.5
	comp=Z,0.5nm,0.6s,baz=270

FETY				IAML		01 37 14.0		
	comp=N,96nm,0.5s							
FETY				IAML		01 37 14.0		
	comp=E,160nm,0.5s							
FETY	**Fethiye**	**0.81**	**124**	P	**Pb**	**01 36 58.2**	**-1.2**	
CAME	**Cameli-Denizli**	**0.85**	**99**	PG	**Pg**	**01 36 59.4**	**0.0**	
ARG	**Arkhangelos**	**0.87**	**187**	P	**Pb**	**01 36 59.4**	**-1.1**	
ARG				S	**Sb**	**01 37 11.1**	**-1.3**	
ARG				AML	AML	01 37 17.1		
	comp=N,2009µm,0.5s							
ARG				AML	AML	01 37 17.7		
	comp=E,969µm,0.5s							
ARG	**Arkhangelos**	**0.87**	**187**	PG	**Pg**	**01 36 59.9**	**+0.2**	
ARG	**Arkhangelos**	**0.87**	**187**	P	**Pb**	**01 36 59.4**	**-1.1**	
ARG				S	**Sn**	**01 37 13.5**	**-1.3**	
	comp=E,748nm,0.5s							
AYDB	**Zeytinkoy-Aydi**	**0.91**	**342**	PG	**Pb**	**01 37 00.1**	**-1.1**	
NIS1	**Nisyros Isl.**	**0.98**	**241**	P	**Pb**	**01 37 01.5**	**-0.9**	
NIS1				AML	AML	01 37 25.5		
	comp=N,2455µm,0.3s							
NIS1				AML	AML	01 37 29.8		
	comp=E,1874µm,0.5s							
NIS1	**Nisyros Isl.**	**0.98**	**241**	PG	**Pn**	**01 37 02.2**	**-1.1**	
NIS1	**Nisyros Isl.**	**0.98**	**241**	P	**Pg**	**01 37 02.0**	**+0.1**	
NIS1				S	**Sn**	**01 37 18.4**	**+0.8**	
GCAM	**G?zelcaml?**	**1.01**	**307**	PG	**Pg**	**01 37 02.6**	**+0.1**	
GCAM	**G?zelcaml?**	**1.01**	**307**	*i* P	**Pb**	**01 37 02.2**	**-0.7**	
GCAM				IAML		01 37 17.0		
	comp=E,203nm,0.2s							
GCAM				IAML		01 37 19.0		
	comp=N,275nm,0.4s							
NISR	**Nisiros**	**1.02**	**243**	P	**Pb**	**01 37 02.1**	**-0.8**	
NISR				S	**Sb**	**01 37 15.2**	**-1.3**	
NISR				AML	AML	01 37 23.4		
	comp=N,740µm,0.5s							
NISR				AML	AML	01 37 27.4		
	comp=E,986µm,0.7s							
GOLH	**Golhisar**	**1.06**	**81**	*i* P	**Pg**	**01 37 03.2**	**-0.1**	
GOLH				IAML		01 37 23.0		
	comp=N,154nm,0.5s							
GOLH				*i* S	**Sn**	**01 37 23.1**	**+3.5**	
KOSK	**Kos Island**	**1.07**	**252**	PN	**Pg**	**01 37 04.3**	**+0.7**	
KOSK	**Kos Island**	**1.07**	**252**	P	**Pg**	**01 37 04.2**	**+0.7**	
KOSK				S	**Sn**	**01 37 20.8**	**+1.2**	
	comp=N,352nm,0.4s							
SMG	**Samos**	**1.28**	**299**	P	**Pb**	**01 37 07.0**	**-0.6**	
SMG				S	**Sg**	**01 37 24.5**	**+0.2**	
SMG				AML	AML	01 37 30.6		
	comp=N,602µm,0.3s							
SMG				AML	AML	01 37 31.0		
	comp=E,478µm,0.4s							
SMG	**Samos**	**1.28**	**299**	P	**Pb**	**01 37 06.9**	**-0.6**	
SMG				S	**Sg**	**01 37 25.1**	**+0.8**	
ELL	**Elmali**	**1.37**	**104**	PN	**Pg**	**01 37 08.8**	**-0.5**	
AKAS	**Kas**	**1.38**	**128**	PN	**Pg**	**01 37 09.1**	**-0.4**	
AKAS	**Kas**	**1.38**	**128**	*i* P	**Pg**	**01 37 09.6**	**+0.1**	
AKAS				*i* S	**Sg**	**01 37 32.8**	**+5.4**	
AKAS				IAML		01 37 36.0		
	comp=N,162nm,0.5s							
AKAS				IAML		01 37 37.0		
	comp=E,128nm,0.8s							
KSL	**Kastellorizon**	**1.42**	**131**	P	**Pg**	**01 37 10.0**	**-0.2**	
KSL				S	**Sg**	**01 37 29.2**	**+0.5**	
KSL				AML	AML	01 37 35.7		
	comp=N,295µm,0.7s							
KSL				AML	AML	01 37 38.9		
	comp=E,416µm,0.6s							
KSL	**Kastellorizon**	**1.42**	**131**	P	**Pg**	**01 37 09.4**	**-0.9**	
KSL				S	**Sg**	**01 37 28.6**	**-0.1**	
MANT	**Manisa**	**1.42**	**10**	*i* P	**Pb**	**01 37 09.3**	**-0.7**	
MANT				*i* S	**Sg**	**01 37 28.1**	**-0.7**	
MANT				IAML		01 37 31.0		
	comp=N,38nm,0.3s							
MANT				IAML		01 37 31.0		
	comp=E,54nm,0.3s							
DGB	**zmir**	**1.45**	**312**	*i* P	**Pb**	**01 37 09.1**	**-1.3**	
DGB				IAML		01 37 31.0		
	comp=E,47nm,0.8s							
DGB				IAML		01 37 35.0		
	comp=N,51nm,0.6s							
KULA	**Kula-Manisa**	**1.46**	**13**	PN	**Pb**	**01 37 09.8**	**-0.8**	
KULA	**Kula-Manisa**	**1.46**	**13**	P	**Pb**	**01 37 09.6**	**-1.0**	
BRDR	**BURDUR-Merkez**	**1.57**	**67**	*i* P	**Pg**	**01 37 13.0**	**0.0**	
BRDR				*i* S	**Sg**	**01 37 35.1**	**+1.8**	
BRDR				IAML		01 37 39.0		
	comp=N,47nm,0.4s							
BRDR				IAML		01 37 40.0		
	comp=E,60nm,0.4s							
BASM	**Basmaki-Afyon**	**1.66**	**59**	PN	**Pb**	**01 37 12.9**	**-1.0**	
KORT	**Korkueli**	**1.68**	**92**	PN	**Pb**	**01 37 13.7**	**-0.7**	
KORT	**Korkueli**	**1.68**	**92**	*i* P	**Pg**	**01 37 14.9**	**-0.4**	
KORT				IAML		01 37 47.0		
	comp=N,40nm,0.5s							
KORT				IAML		01 37 48.0		
	comp=E,75nm,0.7s							
AKUM	**Antalya-Kumluc**	**1.85**	**114**	*i* P	**Pg**	**01 37 18.7**	**+0.3**	
AKUM				IAML		01 37 49.0		
	comp=N,27nm,0.3s							
AKUM				IAML		01 37 50.0		
	comp=E,42nm,0.4s							
AMGA	**Amorgos Island**	**1.90**	**263**	P	**Pn**	**01 37 15.3**	**-0.6**	
ANAF	**Anafi Island**	**2.12**	**251**	P	**Pn**	**01 37 18.9**	**0.0**	
ANAF				AML	AML	01 38 01.8		
	comp=E,226µm,0.5s							
ANAF				AML	AML	01 38 04.4		
	comp=N,218µm,0.4s							
APE	**Apeiranthos**	**2.17**	**270**	P	**Pn**	**01 37 19.5**	**-0.2**	
APE				S	**Sn**	**01 37 45.7**	**-1.2**	
ZKR	**Zakros**	**2.56**	**221**	P	**Pn**	**01 37 24.8**	**-0.3**	
PRK	**Paraskevi**	**2.66**	**325**	P	**Pn**	**01 37 27.3**	**+1.0**	
NPS	**Neapolis**	**2.80**	**230**	P	**Pn**	**01 37 28.9**	**+0.6**	
SIGR	**SIGRI**	**2.84**	**319**	P	**Pn**	**01 37 28.8**	**0.0**	
IDI	**Anoyia**	**3.26**	**238**	Pn	**Pn**	**01 37 36.0**	**+1.4**	
	comp=N,1.5nm,0.3s,baz=73,slow=17,SNR=21							
IDI				Sn	**Sn**	**01 38 14.5**	**+0.8**	
	comp=N,0.8nm,0.3s,baz=324,slow=8.4,SNR=6.1							
IDI	**Anoyia**	**3.26**	**238**	P	**Pn**	**01 37 34.6**	**0.0**	
LIA	**Limnos Island**	**3.70**	**320**	P	**Pn**	**01 37 41.0**	**+0.4**	
SMTH	**Samothraki Isl**	**3.99**	**329**	P	**Pn**	**01 37 44.7**	**+0.1**	
BRTR	**Keskin Array B**	**4.99**	**56**	Pn	**Pn**	**01 37 59.8**	**+1.4**	
	comp=N,0.3nm,0.3s,baz=238,slow=14,SNR=12							
BRTR				Sn	**Sn**	**01 38 56.7**	**+0.2**	
	comp=N,0.3nm,0.3s,baz=237,slow=25,SNR=7.2							
MMAI	**Mount Meron Ar**	**7.13**	**123**	Pn	**Pn**	**01 38 27.1**	**-0.9**	
	comp=N,1.6nm,0.3s,baz=312,slow=12,SNR=13							
MMAI				Sn	**Sn**	**01 39 46.1**	**-3.2**	
	comp=N,1.1nm,0.3s,baz=320,slow=51,SNR=1.8							
EIL	**Elat**	**9.28**	**141**	Pn	**Pn**	**01 38 57.7**	**+0.5**	
	comp=N,0.5nm,0.3s,baz=320,slow=3.4,SNR=7.1							
ESDC	**Sonseca Array**	**25.31**	**286**	P	**P**	**01 42 10.7**	**+0.4**	
	comp=N,1.0nm,1.0s,baz=76,slow=11,SNR=2.5							
TORD	**Torodi Ar. Bea**	**33.64**	**232**	P	**P**	**01 43 25.9**	**+1.4**	
	comp=N,0.2nm,0.4s,baz=27,slow=9.9,SNR=6.0							

IDC 28 01:52:25.2±1.3,2°.00N×126°.47E,h0km,mb3.5/4, mb1 3.7/5,mb1mx3.5/34,mbtmp3.5/5,ML3.3/1,Error ellipse: s-maj=105.1km s-min=20.4km az=71.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.98**	**182**	P	P	01 56 59.5	+0.1
	0.1nm,0.3s,baz=2.9,slow=11,SNR=1.3						
WRA	**Warramunga Arr**	**23.13**	**161**	P	P	01 57 32.1	-1.1
	1.2nm,0.5s,baz=340,slow=11,SNR=14						
WRA				PcP	PcP	02 01 22.2	-0.2
	0.2nm,0.9s,baz=341,slow=2.0,SNR=1.7						
ASAR	**Alice Springs**	**26.51**	**165**	P	P	01 58 06.1	+1.4
	0.3nm,0.3s,baz=343,slow=11,SNR=2.6						
SONM	**Songino Array**	**48.85**	**342**	P	P	02 01 12.9	+0.2
	0.2nm,0.5s,baz=140,slow=7.9,SNR=1.6						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	02 02 25.3	-0.4
	0.4nm,0.5s,baz=120,slow=8.3,SNR=10						

*IDC **28** 02:06:55.8±1.4, 15°.38N×92°.84W,h165km±17km,mb3.2/2, mb1 3.6/5,mb1mx3.2/35,mbtmp3.8/5,Error ellipse: s-maj=104.5km s-min=16.4km az=44.0*
*MEX **28** 02:06:56.4±1.1,15°.83N×92°.58W,h199km±8km,MD3.8*
ISC 28 02:06:56.9±0.9,15°.75N±0°.10×92°.64W±0°.08,h184km±7km, n11,σ1°24/17,Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.56**	**266**	*e*P	**Pn**	**02 07 22.6**	**+0.2**
PCIG				*i* S	**Sn**	**02 07 43.0**	**+1.1**
CCIG	**Comitan**	**0.72**	**42**	*e*P	**Pn**	**02 07 22.8**	**-0.6**
CCIG				*i* S	**Sn**	**02 07 42.6**	**-1.3**
THIG		**0.91**	**157**	*i* P	**Pn**	**02 07 24.6**	**+0.3**
THIG				*i* S	**Sn**	**02 07 46.8**	**+1.2**
TGIG		**1.13**	**336**	*e*P	**Pn**	**02 07 26.1**	**+0.1**
TGIG				*i* S	**Sn**	**02 07 48.5**	**-0.2**
CMIG	**Matias Romero**	**2.54**	**302**	P	**Pn**	**02 07 40.1**	**-0.2**
	45nm,0.3s,baz=139,slow=10,SNR=373						
CMIG				S	**Sn**	**02 08 12.4**	**-1.7**
	8.7nm,0.3s,baz=237,slow=23,SNR=1.4						
CMIG	**Matias Romero**	**2.54**	**302**	*e*P	**Pn**	**02 07 40.0**	**-0.3**
CMIG				*i* S	**Sn**	**02 08 12.4**	**-1.7**
HUIG	**Huatulco**	**3.34**	**271**	*e*P	**Pn**	**02 07 49.0**	**-1.0**
JTS	**Las Juntas de**	**9.24**	**125**	P	**Pn**	**02 09 05.2**	**-1.4**
	0.9nm,0.3s,baz=12,slow=19,SNR=6.2						
TXAR	**Lajitas Array**	**16.91**	**325**	P	**Pn**	**02 10 44.3**	**+1.1**
	0.1nm,0.3s,baz=151,slow=12,SNR=10.0						
NVAR	**Mina Array Bea**	**31.94**	**320**	P	**P**	**02 13 07.7**	**+2.0**
	0.6nm,0.7s,baz=127,slow=9.1,SNR=6.7						
LPAZ	**La Paz**	**39.98**	**142**	P	**P**	**02 14 13.4**	**-1.1**
	0.9nm,0.6s,baz=319,slow=11,SNR=4.3						

IDC 28 02:13:02.8±3.1,33°.10S×179°.16W,h0km,mb3.4/2, mb1 3.6/3,mb1mx3.5/38,mbtmp3.4/3,ML3.2/1,Error ellipse: s-maj=72.3km s-min=46.6km az=114.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.98**	**209**	Pn	Pn	02 14 32.3	-0.1
	0.6nm,0.3s,baz=55,slow=2.9,SNR=9.7						
URZ				Sn	Sn	02 15 37.8	-3.8
	1.5nm,0.3s,baz=146,slow=15,SNR=8.6						
ASAR	**Alice Springs**	**42.06**	**270**	P	P	02 20 56.4	0.0
	0.5nm,0.7s,baz=115,slow=7.5,SNR=2.8						
WRA	**Warramunga Arr**	**43.29**	**276**	P	P	02 21 06.2	-0.2
	0.2nm,0.4s,baz=116,slow=7.5,SNR=7.1						
FINES	**FINESS Array B**	**147.30**	**338**	PKPbc	PKPbc	02 32 46.8	-0.7
	3.5nm,1.1s,baz=48,slow=2.8,SNR=4.5						

*IDC **28** 02:16:58.9±3.2,41°.27N×83°.62E,h0km,mb1 3.1/6, mb1mx3.0/59,mbtmp3.1/6,ML2.9/6,Error ellipse: s-maj=29.8km s-min=24.8km az=149.0*
*BJI **28** 02:17:01.2±0.0,41°.29N×83°.75E,h6km,ML3.8/10*
*SOME **28** 02:17:03.7,41°.18N×83°.62E,h10km*
*NNC **28** 02:17:06.8±2.4,41°.32N×83°.52E,h0km,mb4.5,mpv4.1, Error ellipse: s-maj=17.7km s-min=14.6km az=1.0*
ISC 28 02:17:00.4±1.4,41°.30N±0°.08×83°.76E±0°.04,h10km,n44, σ2°30/58,6C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**3.31**	**311**	*e*P	**Pg**	**02 18 03.5**	**-0.4**
	333nm,0.3s						
KTMS				*e*S	**Sg**	**02 18 46.5**	**-0.3**
	38nm,0.2s						
KTMS	**Ketmen**	**3.31**	**311**	Pg	**Pg**	**02 18 03.5**	**-0.4**
	333nm,0.3s						
KTMS				Lg	Lg	02 18 46.5	
	38nm,0.2s						
SHLS	**Shalkode**	**3.69**	**302**	*e*P	**Pb**	**02 18 05.4**	**-0.4**
	49nm,0.2s						
SHLS				*e*S	**Sb**	**02 18 49.3**	**-1.3**
	96nm,0.4s						
SHLS	**Shalkode**	**3.69**	**302**	Pg	**Pb**	**02 18 04.8**	**-1.0**
	49nm,0.2s						
SHLS				Lg	Lg	02 18 49.3	
	96nm,0.4s						
PDGK	**Podgornoye**	**3.76**	**304**	⇑Pg	**Pg**	**02 18 13.4**	**+1.0**
	18nm,0.6s						
PDGK				⇓Lg	Lg	02 19 03.6	
	41nm,0.5s						
WMQ	**Urumqi**	**3.84**	**48**	*e*Pn	**Pb**	**02 18 05.3**	**-3.1**
WMQ				Sn	**Sn**	**02 18 48.5**	**+3.5**
WMQ				smax	smax		
	comp=N,260nm,0.9s						
WMQ				smax	smax		
	comp=E,190nm,0.7s						
UZB	**Uzunbulak**	**3.97**	**299**	*e*P	**Pg**	**02 18 14.3**	**-2.2**
	7.3nm,0.3s						
UZB				*e*S	**Sg**	**02 19 05.2**	**-2.7**
	28nm,0.4s						
UZB	**Uzunbulak**	**3.97**	**299**	Pg	**Pg**	**02 18 14.3**	**-2.2**
	7.3nm,0.3s						
UZB				Lg	Lg	02 19 05.2	
	28nm,0.4s						
DJR	**Jarkent**	**4.21**	**317**	*e*P	**Pg**	**02 18 21.6**	**+0.6**
	15nm,0.4s						
DJR				*e*S	**Sg**	**02 19 17.0**	**+1.6**
	18nm,0.4s						
DJR	**Jarkent**	**4.21**	**317**	Pg	**Pg**	**02 18 21.6**	**+0.6**
	15nm,0.4s						
DJR				Lg	Lg	02 19 17.0	
	18nm,0.4s						
KPKS	**Kokpek**	**4.33**	**302**	*e*P	**Pg**	**02 18 21.0**	**-2.5**
	19nm,0.2s						
KPKS				*e*S	**Sg**	**02 19 15.8**	**-3.8**
	61nm,0.4s						
SATY	**Saty**	**4.35**	**296**	*e*P	**Pg**	**02 18 24.0**	**+0.3**
	9.1nm,0.2s						
SATY				*e*S	**Sg**	**02 19 21.5**	**+1.5**
	41nm,0.5s						
SATY	**Saty**	**4.35**	**296**	Pg	**Pg**	**02 18 24.0**	**+0.3**
	9.1nm,0.2s						
SATY				Lg	Lg	02 19 21.5	
	41nm,0.5s						
MNBS	**Baschi**	**4.83**	**307**	*e*P	**Pg**	**02 18 29.7**	**-3.1**
	17nm,0.3s						
MNBS				*e*S	**Sg**	**02 19 31.4**	**-3.9**
	28nm,0.3s						
MNBS	**Baschi**	**4.83**	**307**	Pg	**Pg**	**02 18 29.7**	**-3.1**
	17nm,0.3s						
MNBS				Lg	Lg	02 19 31.4	
	28nm,0.3s						
KAPS	**Kapalarasan**	**5.11**	**323**	*e*P	**Pg**	**02 18 36.7**	**-1.7**
	9.4nm,0.3s						
KAPS				*e*S	**Sg**	**02 19 42.8**	**-1.8**
	17nm,0.5s						
KAPS	**Kapalarasan**	**5.11**	**323**	Pg	**Pg**	**02 18 36.7**	**-1.7**
	9.4nm,0.3s						
KAPS				Lg	Lg	02 19 42.8	
	17nm,0.5s						
ARXS	**Arharly**	**5.25**	**306**	*e*P	**Pg**	**02 18 41.5**	**+0.6**
	12nm,0.5s						
ARXS				*e*S	**Sg**	**02 19 51.1**	**+2.3**
	27nm,0.7s						
ARXS	**Arharly**	**5.25**	**306**	Pg	**Pg**	**02 18 41.5**	**+0.6**
	12nm,0.5s						
ARXS				Lg	Lg	02 19 51.1	
	27nm,0.7s						
KOTS	**Kotyrbulak**	**5.29**	**294**	*e*P	**Pg**	**02 18 42.2**	**+0.4**
	16nm,0.3s						
KOTS				*e*S	**Sg**	**02 19 52.6**	**+2.2**
	18nm,0.5s						
MDOK	**Medeo**	**5.32**	**293**	*e*P	**Pg**	**02 18 43.7**	**+1.4**
	7.2nm,0.3s						
MDOK				*e*S	**Sg**	**02 19 55.3**	**+4.2**
	21nm,1.2s						
MDOK	**Medeo**	**5.32**	**293**	Pg	**Pg**	**02 18 43.7**	**+1.4**
	7.2nm,0.3s						
MDOK				Lg	Lg	02 19 55.3	
	21nm,1.2s						
TNSS	**Tian-Shan**	**5.35**	**291**	*e*P	**Pg**	**02 18 41.9**	**-1.0**
	6.2nm,0.5s						
TNSS				*e*S	**Sg**	**02 19 52.3**	**+0.1**
	6.7nm,0.3s						
TNSS	**Tian-Shan**	**5.35**	**291**	Pg	**Pg**	**02 18 41.9**	**-1.0**
	6.2nm,0.5s						
TNSS				Lg	Lg	02 19 52.3	
	6.7nm,0.3s						
TDK	**Taldyqorghan**	**5.38**	**315**	*e*P	**Pg**	**02 18 46.3**	**+2.8**
	46nm,0.4s						
TDK				*e*S	**Sg**	**02 19 59.9**	**+6.6**
	151nm,1.0s						
TDK	**Taldyqorghan**	**5.38**	**315**	Pg	**Pg**	**02 18 46.3**	**+2.8**
	46nm,0.4s						
TDK				Lg	Lg	02 19 59.9	
	151nm,1.0s						
MK31	**Makanchi Array**	**5.59**	**350**	⇑Pn	Pb	02 18 33.2	-4.9
	5.1nm,0.6s,baz=162,slow=15,SNR=4.5						
MK31				⇓Lg	Lg	02 20 03.3	
	37nm,0.6s,baz=166,slow=27,SNR=5.4						
MKAR	**Makanchi Array**	**5.59**	**350**	Pn	**Pn**	**02 18 26.9**	**+3.3**
	0.7nm,0.3s,baz=172,slow=16,SNR=6.5						
MKAR				Pg	**Pg**	**02 18 45.1**	**-2.3**
	1.1nm,0.3s,baz=151,slow=13,SNR=6.7						
MKAR				Sn	**Sn**	**02 19 30.4**	**+2.5**
	1.8nm,0.3s,baz=161,slow=25,SNR=4.5						
MKAR				Lg	Lg	02 19 57.5	
	2.5nm,0.3s,baz=177,slow=28,SNR=5.5						
CHKK	**Chushkaly**	**5.61**	**299**	*e*P	**Pg**	**02 18 45.0**	**-2.8**
	5.1nm,0.5s						
CHKK				*e*S	**Sg**	**02 19 57.2**	**-3.3**
	12nm,0.3s						
CHKK	**Chushkaly**	**5.61**	**299**	Pg	**Pg**	**02 18 45.0**	**-2.8**
	5.1nm,0.5s						
CHKK				Lg	Lg	02 19 57.2	
	12nm,0.3s						
MAKZ	**Makanchi**	**5.65**	**347**	⇑Lg	Lg	02 20 05.7	
	58nm,0.9s						
KST	**Kastek**	**6.05**	**289**	*e*P	**Pg**	**02 18 55.4**	**-0.8**
	4.9nm,0.4s						
KST				*e*S	**Sg**	**02 20 15.5**	**+1.0**
	10nm,0.6s						
KUU	**Kurty**	**6.06**	**298**	*e*P	**Pg**	**02 18 54.7**	**-1.6**
	1.3nm,0.1s						
KUU				*e*S	**Sg**	**02 20 14.3**	**-0.5**
	12nm,0.5s						
KUU	**Kurty**	**6.06**	**298**	Pg	**Pg**	**02 18 54.7**	**-1.6**
	1.3nm,0.1s						
KUU				Lg	Lg	02 20 14.3	
	12nm,0.5s						
ZSN	**Zaisan**	**6.20**	**7**	Pg	**Pg**	**02 19 00.7**	**+1.7**
	9.1nm,0.4s						
ZSN				Lg	Lg	02 20 24.5	
	73nm,0.8s						
KSH	**Kashi**	**6.21**	**256**	Pg	Pg	02 18 53.0	-6.2
KSH				smax	smax		
	comp=N,180nm,0.5s						
KSH				smax	smax		
	comp=E,110nm,0.4s						
TKM2	**Tokmak 2**	**6.28**	**288**	⇓Pn	Pn	02 18 38.2	+4.8
	1.5nm,0.2s						
TKM2				⇑Lg	Lg	02 20 24.7	
	9.1nm,0.5s						
AAK	**Ala-Archa**	**7.03**	**284**	Pn	**Pn**	**02 18 45.4**	**+1.8**
	0.3nm,0.3s,baz=100,slow=5.7,SNR=2.3						
AAK				Pg	Pg	02 19 08.7	-6.4
	0.4nm,0.3s,baz=138,slow=15,SNR=2.3						
AAK				Lg	Lg	02 20 41.6	
	0.6nm,0.3s,baz=266,slow=16,SNR=1.7						
KURBB	**Kurchatov Arra**	**10.00**	**340**	Pn	**Pn**	**02 19 23.4**	**-0.7**
	0.1nm,0.3s,baz=153,slow=13,SNR=2.4						
KURBB				Lg	Lg	02 22 18.4	
	0.1nm,0.3s,baz=158,slow=32,SNR=6.7						
KURBB	**Kurchatov Arra**	**10.00**	**340**	⇑Lg	Lg	02 22 21.7	
	26nm,0.8s						
KURK	**Kurchatov**	**10.06**	**341**	⇑Lg	Lg	02 22 20.3	
	28nm,1.0s						
ZALV	**Zalesovo Beam**	**12.67**	**3**	Pn	**Pn**	**02 20 00.8**	**+0.2**
	0.1nm,0.3s,baz=181,slow=11,SNR=2.4						
ZALV				Sn	**Sn**	**02 22 17.2**	**-4.4**
	0.1nm,0.3s,baz=187,slow=23,SNR=1.1						
ZALV				Lg	Lg	02 23 41.7	
	0.0nm,0.3s,baz=187,slow=23,SNR=1.5						
BVAR	**Borovoye Array**	**14.81**	**327**	Pn	**Pn**	**02 20 28.9**	**-0.9**
	0.1nm,0.3s,baz=106,slow=14,SNR=2.4						
BVAR				Lg	Lg	02 24 43.4	
	0.1nm,0.3s,baz=128,slow=28,SNR=1.9						
SONM	**Songino Array**	**17.37**	**60**	P	**P**	**02 21 04.9**	**+0.6**
	0.0nm,0.3s,baz=245,slow=14,SNR=2.5						
SONM				Lg	Lg	02 26 10.8	
	baz=119,slow=19,SNR=1.6						

*MOS **28** 02:30:05.7±0.9,39°.40N×29°.08E,h9km,mb4.6/11,Error ellipse: s-maj=7.4km s-min=4.6km az=75.0*
*IDC **28** 02:30:06.0±0.7,39°.34N×29°.12E,h0km,mb4.0/15, mb1 4.0/23,mb1mx4.0/49,mbtmp3.9/23,ML3.6/7,MS3.3/14, Ms1 3.3/14,ms1mx3.0/49,Error ellipse: s-maj=11.7km s-min=9.8km az=38.0*
*DDA **28** 02:30:06.7,39°.33N×29°.01E,h11km±2km,MW4.3*
*ISK **28** 02:30:06.8,39°.35N×29°.02E,h4km,ML4.5/43*
*MED_RC **28** 02:30:06.0±0.3,39°.40N×29°.04E,h15km±1km,MW4.3/12, Moment Tensor Solution.Mantle waves: s12,c18; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr-3.82±.52; Mθθ3.92±.31; Mϕϕ-0.11±.29; Mrθ-0.71±.28; Mθϕ-1.26±.17; Mϕr1.03±.52; Best double couple: Mo4.25000×10¹⁵ NP1:ϕs274.00000°,δ40.00000°, λ-109.00000°. NP2:ϕs118.00000°,δ53.00000°, λ-75.00000°. Principal axes: T 4.4000, Plg7.0000°, Azm197.0000°; N -0.3000, Plg12.0000°, Azm289.0000°; P -4.1000, Plg76.0000°, Azm78.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*NEIC **28** 02:30:06.8±1.4,39°.36N±0°.03×28°.99E±0°.06,h6km±5km Error ellipse: s-maj=6.8km s-min=4.8km az=100.0*
*NEIC **28** 02:30:07.2,39°.36N×29°.00E,h11km,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-5.46; Mθθ6.66; Mϕϕ-1.21; Mrθ-2.37; Mϕr-1.00; Mθr2.54; Fault plane solution: Mo7.13000×10¹⁵ NP1:ϕs117.15000°, δ60.28000°,λ-66.36000°. NP2:ϕs255.71000°,δ37.28000°, λ-125.09000°. Principal axes: T 7.3663, Plg12.0000°, Azm190.0000°; N -0.4959, Plg20.0000°, Azm285.0000°; P -6.8704, Plg66.0000°, Azm71.0000°;*
*THE **28** 02:30:09.4,39°.24N×28°.90E,h6km±3km,ML4.3/4 Error ellipse: s-maj=3.7km s-min=0.7km az=107.0*
ISC 28 02:30:07.2±0.9,39°.37N±0°.01×29°.02E±0°.01,h10km±6km, n306,σ1°26/370,mb4.2/31,MS3.3/10,52C-22D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIMA	**Simav-Kutahya**	**0.29**	**185**	PG	**Pg**	**02 30 12.9**	**-0.1**
SIMA				SG	**Sg**	**02 30 16.9**	**0.0**
SIMA	**Simav-Kutahya**	**0.29**	**185**		**Pg**	**02 30 12.1**	**-0.9**
TVSB	**Tavsanli**	**0.35**	**77**	PG	**Pg**	**02 30 14.3**	**+0.1**
TVSB				SG	**Sg**	**02 30 19.3**	**+0.4**
TVSB	**Tavsanli**	**0.35**	**77**		**Pg**	**02 30 13.5**	**-0.7**
SHAP	**Saphane-Kutahy**	**0.38**	**155**	PG	**Pg**	**02 30 14.5**	**-0.2**
SHAP				SG	**Sg**	**02 30 19

AUBOZ *i* S Sn 02 30 40.0 -0.4
AUBOZ IAML 02 30 42.0
comp=N,12µm,0.6s
AUBOZ IAML 02 30 43.0
comp=E,13µm,0.6s
AUKUT KUTAHYA 0.97 53 *i* P Pg 02 30 24.7 -1.1
AUKUT *i* S Sg 02 30 33.0 -5.5
MDNY Mudanya-Bursa 1.00 354 PG Pb 02 30 27.1 +0.4
STEP BALIKESIR_Sava 1.01 271 ⇓*i*P Pb 02 30 26.5 -0.2
STEP *i* S Sb 02 30 40.8 +0.7
BILE Bilecik/Merkez 1.03 40⇑*i*P Pg 02 30 26.4 -0.6
BILE *i* S Sn 02 30 43.8 +1.4
BILE IAML 02 30 44.0
comp=N,19µm,1.1s
BILE IAML 02 30 45.0
comp=E,13µm,0.9s
CAVI Cavuskoy 1.05 37 PG Pb 02 30 27.7 +0.3
AKHS Akhisar 1.06 243⇑*i*P Pb 02 30 27.4 -0.2
AKHS *i* S Sb 02 30 41.4 -0.1
AKS Akhisar 1.06 243 PG Pb 02 30 27.2 -0.4
AKS SG Sn 02 30 42.5 -0.4
GEMT Gemlik 1.07 7 PN Pb 02 30 28.2 +0.3
GOMA Golmarmara-Man 1.08 233 PG Pn 02 30 28.0 -0.4
KHL Karahalli 1.12 159 PN Pn 02 30 28.9 -0.1
BALY Balya 1.14 289 ⇓*i*P Pg 02 30 28.8 -0.3
BALY *i* S Sb 02 30 44.4 +0.4
BALY IAML 02 30 50.0
comp=N,7µm,0.6s
BALY IAML 02 30 51.0
comp=E,8µm,1.1s
AFYO Afyonkarahisar 1.16 120 ⇓*i*P Pn 02 30 29.5 0.0
AFYO *i* S Sn 02 30 47.9 +2.5
AFYO IAML 02 30 48.0
comp=E,13µm,0.7s
AFYO IAML 02 30 49.0
comp=N,11µm,1.0s
AUKIR Kırka- Seyitga 1.18 94 ⇓*i*P Pn 02 30 30.0 +0.2
AUKIR *i* S Sn 02 30 50.0 +3.9
AUKIR IAML 02 30 50.0
comp=E,4µm,0.7s
AUKIR IAML 02 30 51.0
comp=N,4µm,1.0s
ADVT Abdulvahap 1.20 27 PN Pn 02 30 30.3 +0.3
BORA Eskisehir 1.22 65⇑*i*P Pg 02 30 29.8 -0.8
BORA *i* S Sn 02 30 47.1 0.0
BORA IAML 02 30 51.0
comp=E,2µm,0.2s
GONE Gonen-Balikesi 1.23 304 PN Pn 02 30 30.8 +0.3
GONE Gonen-Balikesi 1.23 304 Pg 02 30 30.1 -0.7
EDC Edincik 1.32 318 PN Pg 02 30 32.9 +0.4
GPA Golpazari 1.35 47 PN Pg 02 30 33.8 +0.6
SRCK Saricakaya, Es 1.41 61 PN Pg 02 30 34.1 -0.2
KZIL AFYON_Kizioren 1.42 141 ⇓*i*P Pb 02 30 33.1 -0.7
KZIL *i* S Sn 02 30 52.1 +0.2
KZIL IAML 02 30 57.0
comp=E,2µm,1.0s
KZIL IAML 02 31 00.0
comp=N,1µm,0.8s
SGAZ Eskisehir, Sey 1.42 83 ⇓*i*P Pn 02 30 33.3 +0.1
SGAZ *i* S Sg 02 30 54.8 +2.0
SGAZ IAML 02 30 55.0
comp=N,3µm,0.6s
SGAZ IAML 02 30 55.0
comp=E,4µm,0.6s
SHUT Suhut-Afyon 1.45 124 PN Pb 02 30 34.0 -0.3
KNL Balıkesir 1.46 309 ⇓*i*P Pn 02 30 33.9 +0.2
KNL *i* S Sg 02 30 54.9 +0.8
KNL IAML 02 30 57.0
comp=N,5µm,0.4s
KNL IAML 02 30 57.0
comp=E,9µm,0.5s
GEYV SAKARYA_Geyve 1.48 41 ⇓*i*P Pn 02 30 34.0 0.0
GEYV *i* S Sg 02 30 57.7 +2.8
GEYV IAML 02 31 04.0
comp=N,7µm,0.7s
GEYV IAML 02 31 04.0
comp=E,5µm,1.5s
ZEDA zmir-Bergama 1.56 256⇑*i*P Pn 02 30 34.7 -0.3
ZEDA IAML 02 30 58.0
comp=N,5µm,0.5s
ZEDA *i* S Sg 02 30 58.3 +0.9
ZEDA IAML 02 31 01.0
comp=E,4µm,0.4s
GULT Gulveren 1.57 47 PN Pb 02 30 36.1 -0.2
CIFT Cifteler, Eski 1.59 90 PN Pn 02 30 35.6 +0.2
AVCI Avcilar-stanb 1.64 352 PN Pb 02 30 37.9 +0.4
MRMT Marmara Adasi 1.65 319 PN Pb 02 30 37.8 +0.1
SPNC Sapanca-Adapaz 1.65 37 PN Pb 02 30 37.7 +0.1
DKL Dikili 1.67 260 PN Pb 02 30 37.4 -0.6
AYDB Zeytinkoy-Aydi 1.67 212 PN Pn 02 30 36.9 +0.2
AYDB Zeytinkoy-Aydi 1.67 212 Pn 02 30 35.1 -1.6
KAVV Kandilli-Istan 1.69 1 PN Pn 02 30 37.8 +1.0
ISK Istanbul-Kandi 1.69 1 PN Pb 02 30 38.2 -0.3
ISK Istanbul-Kandi 1.69 1 P Pg 02 30 39.5 -0.2
SAUV Serdivan-Sakar 1.70 36 PN Pb 02 30 38.6 +0.1
AYVA Ayvalik 1.81 269 *i* P Pn 02 30 38.4 0.0
AYVA *i* S Sg 02 31 05.9 +0.7
BGKT Bogazkoy 1.82 354 PN Pb 02 30 40.9 +0.3
ELBA Catalca 1.83 346 *i* P Pn 02 30 39.4 +0.1
ELBA *i* S Sg 02 31 05.8 -0.2
SILT Sile 1.84 15 PN Pn 02 30 39.5 +0.6
BRDR BURDUR-Merkez 1.86 154 *i* P Pn 02 30 38.6 -0.6
BRDR *i* S Sg 02 31 09.8 +2.8
BRDR IAML 02 31 11.0
comp=E,2µm,0.8s
BRDR IAML 02 31 12.0
comp=N,2µm,0.7s
MAR2 Marsite Statio 1.88 316 PN Pn 02 30 40.4 +1.0
KLYT Kilyos 1.88 1 PN Pb 02 30 40.9 -0.7
KAYN Sakarya, Kayna 1.89 32 ⇓*i*P Pn 02 30 39.7 +0.2
KAYN *i* S Sn 02 31 03.9 +0.5
TAVA DENIZLI_Tavas 1.90 182 *i* P Pn 02 30 39.0 -0.9
TAVA *i* S Sg 02 31 10.9 +2.6
CTKS Kestanelik-??a 1.91 348 PN Pb 02 30 41.6 -0.4
AYDN Tasoluk 1.93 208⇑*i*P Pn 02 30 39.3 -0.8
AYDN *i* S Sg 02 31 12.6 +3.5
RKY Sarkoy-Tekirda 1.93 314 PN Pn 02 30 41.1 +0.9
SART Tekirdag 1.93 314 *i* P Pn 02 30 40.4 +0.3
SART *i* S Sg 02 31 09.4 +0.2
KAND Kocaeli-Kandir 1.94 27 *i* P Pn 02 30 40.6 +0.4
KAND *i* S Sn 02 31 06.3 +1.6
SVRH Sivrihisar-ESK 1.94 87 PN Pb 02 30 41.7 -1.1
ISP Isparta 1.94 142 PN Pb 02 30 41.5 -1.3
ISP Isparta 1.94 142 P Pn 02 30 40.1 -0.3
ISP Isparta 1.94 142 Pn 02 30 40.1 -0.3
BAYC CANAKKALE_Bayr 1.94 282 *i* P Pn 02 30 40.5 +0.1
BAYC *i* S Sg 02 31 09.7 0.0
BAGO Egridir - ISPA 1.95 134 *i* P Pn 02 30 40.4 -0.2
BAGO *i* S Sg 02 31 12.6 +2.6
AUSIV SIVRIHISAR 1.96 87 *i* P Pn 02 30 40.6 +0.1
AUSIV *i* S Sg 02 31 09.3 -0.8
AUSIV IAML 02 31 15.0
comp=E,446nm,0.6s
AUSIV IAML 02 31 18.0
comp=N,951nm,0.6s
SLVT Silivri 1.96 342 PN Pn 02 30 41.9 +1.4
AUMIH MIHALICIK 1.97 75 *i* P Pn 02 30 40.6 -0.2
AUMIH *i* S Sg 02 31 12.5 +2.0
AUMIH IAML 02 31 13.0
comp=N,3µm,0.7s
AUMIH IAML 02 31 14.0
comp=E,3µm,0.7s
TKR Tekirdag 1.98 325 PN Pn 02 30 42.1 +1.4
LPK Lapseki 2.00 301 PN Pb 02 30 42.6 -1.2
MDUB Mudurnu 2.00 56 PN Pb 02 30 42.8 -1.0
MDUB Mudurnu 2.00 56 Pn 02 30 41.1 -0.1
SAHE Sakarya_HENDEK 2.04 43 *i* P Pn 02 30 41.9 +0.2
SAHE *i* S Sg 02 31 13.7 +0.9
DGB zmir 2.13 232 *i* P Pn 02 30 41.6 -1.2
DGB *i* S Sg 02 31 14.7 -0.8
EZN Ezine 2.13 283 PN Pn 02 30 44.1 +1.3
EZN Ezine 2.13 283 P Pn 02 30 43.6 +0.8
EZN S Sn 02 31 09.4 +0.1
comp=E,3µm,0.4s
PRK Paraskevi 2.13 268 P Pn 02 30 44.2 +1.3
PRK S Sn 02 31 08.5 -0.9
comp=E,10µm,0.5s
URLA Izmir 2.14 243 PN Pn 02 30 43.8 +0.7
URLA Izmir 2.14 243 *i* P Pn 02 30 41.6 -1.5
URLA *i* S Sg 02 31 15.5 -0.6
GOLH Golhisar 2.17 168 *i* P Pn 02 30 43.2 -0.3
GOLH *i* S Sg 02 31 23.4 +6.4

GCAM G?zelcaml? 2.18 221 PN Pn 02 30 44.1 +0.6
GCAM G?zelcaml? 2.18 221 *i* P Pn 02 30 42.2 -1.3
GCAM *i* S Sg 02 31 15.7 -1.4
BCK Bucak 2.27 147 PN Pn 02 30 45.7 +0.8
MLSB Milas 2.29 206 PN Pn 02 30 46.3 +1.2
YER Yerkesik 2.31 195 PN Pn 02 30 46.5 +1.2
YER Yerkesik 2.31 195 P Pn 02 30 44.8 -0.5
KESN Edirne-Kesan 2.31 310 *i* P Pn 02 30 45.8 +0.1
KESN *i* S Sg 02 31 20.8 -0.6
BOZC Bozcaada 2.34 283 *i* P Pn 02 30 46.2 +0.5
BOZC *i* S Sn 02 31 14.7 +0.2
SMG Samos 2.38 227 P Pn 02 30 44.9 -1.4
SMG S Sn 02 31 14.3 -1.3
comp=E,5µm,0.6s
KIBS BOLU 2.42 63 *i* P Pn 02 30 47.5 +0.5
KIBS *i* S Sg 02 31 26.0 +1.1
DOGA KONYA_Doganhis 2.43 121 *i* P Pn 02 30 47.5 +0.4
DOGA *i* S Sg 02 31 29.2 +4.1
CAME Cameli-Denizli 2.43 175 PN Pn 02 30 47.9 +0.7
YIGI Dzce 2.45 49 *i* P Pn 02 30 47.3 0.0
YIGI *i* S Sg 02 31 26.3 +0.4
SIGR SIGRI 2.46 267 P Pn 02 30 47.6 +0.2
GADA Gvkgeada 2.54 290 P Pn 02 30 49.4 +0.9
GADA S Sn 02 31 19.9 +0.4
comp=E,2µm,0.7s
ENEZ Enez 2.59 303 P Pn 02 30 50.3 +1.2
BODT Bodrum 2.67 211 P Pn 02 30 49.5 -0.8
KDZE Karadeniz Ereo 2.68 43⇑P Pn 02 30 50.9 +0.4
ELL Elmali 2.71 165 P Pn 02 30 51.9 +0.9
ELL Elmali 2.71 165 Pn Pn 02 30 51.9 +0.9
FETY Fethiye 2.73 179 P Pn 02 30 51.6 +0.5
ALN Alexandroupoli 2.74 305 P Pn 02 30 51.4 +0.2
ALN Alexandroupoli 2.74 305 Pn Pn 02 30 51.4 +0.2
ALN Alexandroupoli 2.74 305 P Pn 02 30 51.9 +0.7
SMTH Samothraki Isl 2.90 293 P Pn 02 30 54.2 +0.8
BR231 Keskin MP Arra 2.94 80 Pn 02 30 54.7 +0.6
LIA Limnos Island 3.01 281 P Pn 02 30 55.7 +0.8
NIS1 Nisyros Isl. 3.12 208 P Pn 02 30 56.1 -0.4
AKAS Kas 3.17 171 Pn 02 30 57.8 +0.6
RDO Rodhopi 3.20 305 P Pn 02 30 58.5 +1.0
ARG Arkhangelos 3.23 193 P Pn 02 30 58.4 +0.5
KSL Kastellorizon 3.25 172 P Pn 02 30 58.9 +0.7
APE Apeiranthos 3.58 231⇑P Pn 02 31 01.7 -1.1
APE Apeiranthos 3.58 231 *e*P Pn 02 31 02.0 -0.8
BR131 Keskin Array S 3.59 83 P Pn 02 31 03.6 +0.5
BR131 Keskin Array S 3.59 83 Pn Pn 02 31 03.6 +0.5
BRTR Keskin Array B 3.59 83 Pn Pn 02 31 03.5 +0.4
comp=E,5.2nm,0.3s,baz=255,slow=14,SNR=182
BRTR Pg **Pg** 02 31 14.8 -1.2
comp=E,7.7nm,0.3s,baz=260,slow=15,SNR=31
BRTR Sn **Sn** 02 31 45.0 -0.7
comp=E,4.5nm,0.3s,baz=167,slow=8.1,SNR=5.6
BRTR Lg Lg 02 32 00.5
comp=E,1.2nm,0.3s,baz=262,slow=37,SNR=4.3
BRTR LR LR 02 32 52.3
comp=E,344nm,18.4s,baz=267,slow=47
BRTR Keskin Array B 3.59 83 P **Pn** 02 31 03.1 0.0
BRTR 02 31 45.0
BRTR Keskin Array B 3.59 83 Pn 02 31 03.1 0.0
KAVA Kavala 3.81 297 P Pn 02 31 06.7 +0.7
ILGA Ilgaz 3.97 63 Pn Pn 02 31 09.1 +0.7
THR6 Thira Island, 4.15 225 P Pn 02 31 10.6 -0.1
PLG Polygyros 4.40 285 P Pn 02 31 14.8 +0.7
NVR Nevrokopi 4.41 298 P Pn 02 31 15.0 +0.8
MANR Mangalia 4.46 356⇑P Pn 02 31 15.4 +0.6
SRS Serrai 4.50 295 P Pn 02 31 16.2 +0.7
TEKE Tekeli-Mersin 4.57 134 Pn 02 31 19.1 +2.7
BZK Bozkurt 4.59 54⇑P Pn 02 31 17.7 +1.0
RAZG Razgrad 4.60 337⇑P Pn 02 31 17.6 +0.8
STIA Sitia Lasithi 4.77 210 P Pn 02 31 20.4 +1.3
ZKR Zakros 4.80 209 P Pn 02 31 20.6 +1.0
MFTR Murfatlar 4.83 355⇑P Pn 02 31 20.5 +0.7
ICOR Ion Corvin 4.83 350⇓P Pn 02 31 20.9 +1.0
NPS Neapolis 4.92 215 P Pn 02 31 21.3 +0.1
LIT Litokhoron 5.08 280 P Pn 02 31 24.2 +0.7
LIT Litokhoron 5.08 280 Pn Pn 02 31 24.2 +0.7
ZIMR 5.08 329⇑P Pn 02 31 23.3 -0.1
TIRR Tirgusor 5.10 355⇓P Pn 02 31 24.2 +0.5
TIRR Tirgusor 5.10 355 P Pn 02 31 24.2 +0.5
TIRR Tirgusor 5.10 355 Pn Pn 02 31 24.2 +0.5
AGG Agios Georgios 5.21 268 P Pn 02 31 25.7 +0.5
AGG Agios Georgios 5.21 268 Pn Pn 02 31 25.7 +0.5
IDI Anoyia 5.24 220 Pn Pn 02 31 25.9 +0.3
comp=E,1.6nm,0.3s,baz=48,slow=13,SNR=23
IDI Lg Lg 02 32 55.1
comp=E,0.4nm,0.3s,baz=25,slow=14,SNR=1.7
IDI Anoyia 5.24 220⇑P **Pn** 02 31 25.6 0.0
IDI Anoyia 5.24 220 Pn Pn 02 31 25.1 -0.5
DIKM Dikmen 5.27 62⇓P Pn 02 31 27.2 +1.2
HARR Harsova 5.38 352⇓P Pn 02 31 28.0 +0.5
AMRR Amara 5.38 347⇑P Pn 02 31 27.7 +0.1
JURR Jurilovca 5.39 359⇑P Pn 02 31 27.9 +0.3
TPGR Topolog 5.50 356⇑P Pn 02 31 29.3 +0.1
COPA Copaceanca 5.54 330⇑P Pn 02 31 29.0 -0.7
CSS Mathiatis 5.59 141 Pn 02 31 30.6 +0.2
SULR 5.69 340⇑P Pn 02 31 32.7 +0.9
STIP Stip 5.70 296 *i* Pn Pn 02 31 30.3 -1.6
VLAD Vladila 5.77 325⇑P Pn 02 31 33.5 +0.7
TLCR 5.81 359⇑P Pn 02 31 34.1 +0.6
TOKA Tokat 5.82 78 Pn Pn 02 31 34.1 +0.5
CFR Carcaliu 5.84 354⇓P Pn 02 31 34.0 +0.2
HUMR Humele 5.97 331⇑P Pn 02 31 35.4 -0.2
ITM Ithomi 5.99 251 Pn Pn 02 31 37.6 +1.7
ISR Istrita 6.03 343⇑P Pn 02 31 37.5 +1.0
GRER 6.19 347⇑P Pn 02 31 40.5 +1.8
SEV Sevastopol' 6.22 32 *e*P Pn 02 31 39.2 +0.1
SEV *i* S Sn 02 32 47.1 -3.2
YAL Yalta 6.39 35 *e*P Pn 02 31 41.3 0.0
YAL *e*S Sn 02 32 51.0 -3.3
BISRR Bisoca 6.41 345⇑P Pn 02 31 42.8 +1.1
PETR Petresti 6.49 349⇓P Pn 02 31 43.0 +0.3
MLR Muntele Rosu 6.53 341 Pn Pn 02 31 45.2 +1.8
comp=E,0.8nm,0.3s,baz=167,slow=2.1,SNR=14
MLR Sn **Sn** 02 32 59.3 +1.4
comp=E,1.8nm,0.3s,baz=151,slow=13,SNR=2.0
MLR Lg Lg 02 33 36.0
comp=E,2.9nm,0.3s,baz=83,slow=22,SNR=4.5
MLR LR LR 02 34 40.9
comp=E,203nm,20.9s,baz=138,slow=42
MLR Muntele Rosu 6.53 341⇑P Pn 02 31 44.4 +1.0
MLR Muntele Rosu 6.53 341 P Pn 02 31 44.4 +1.0
MLR Muntele Rosu 6.53 341 Pn 02 31 44.4 +1.0
MTUR Matau 6.54 335⇑P Pn 02 31 44.8 +1.2
ODBI Odobesti 6.55 348⇓P Pn 02 31 45.6 +2.0
ALU Alushta 6.65 35 *e*P Pn 02 31 39.9 -5.0
PLOR Plostina 6.71 346⇑P Pn 02 31 47.3 +1.5
VRI Vrincioaia 6.71 346⇑P Pn 02 31 46.9 +1.2
VOIR 6.74 335⇑P Pn 02 31 47.0 +0.8
SIM Simferopol' 6.74 33 *e*P Pn 02 31 45.7 -0.5
SIM *e*S Sn 02 32 58.9 -4.1
GHRR 6.79 350⇑P Pn 02 31 48.2 +1.3
GAZ Gaziantep 6.81 106 Pn 02 31 48.6 +1.4
ARR Arges 6.81 333⇑P Pn 02 31 47.7 +0.4
SRE Strehaia 6.83 323⇑P Pn 02 31 47.9 +0.4
BIR Birlad 6.97 352⇓P Pn 02 31 50.7 +1.4
SUDU Sudak 7.08 37 *e*P Pn 02 31 51.8 +0.9
SUDU *e*S Sn 02 33 10.6 -0.8
DOPR Dopca 7.11 339⇑P Pn 02 31 52.5 +1.2
OZUR 7.13 342⇑P Pn 02 31 52.0 +0.4
VASR Vaslui 7.32 353⇓P Pn 02 31 54.9 +0.7
TESR Tescani 7.35 347⇓P Pn 02 31 55.4 +0.9
FEO Feodosiya 7.36 38 *e*P Pn 02 31 55.2 +0.5
FEO *e*S Sn 02 33 17.0 -1.3
HERR Herculane 7.37 320⇑P Pn 02 31 54.4 -0.5
MILM Milestii Mici 7.55 359⇓P Pn 02 31 58.2 +1.0
MDB Medias 7.58 335⇑P Pn 02 31 58.5 +0.8
PDG Podgorica 8.00 296⇑P Pn 02 32 04.1 +0.7
MMAI Mount Meron Ar 8.17 139 Pn Pn 02 32 06.6 +0.6
comp=E,2.2nm,0.3s,baz=313,slow=12,SNR=26
MMAI Sn **Sn** 02 33 37.6 -0.8
comp=E,1.1nm,0.3s,baz=310,slow=26,SNR=2.4
DIVS Divibare 8.24 308 Pn 02 32 06.8 0.0
ANN Anapa 8.28 46 *e*P Pn 02 32 03.8 -3.5
ANN *e*S Sn 02 33 37.2 -3.6
ANN pmax pmax
comp=Z,16nm,1.2s
BZS Buzias 8.29 321⇑P **Pn** 02 32 07.5 0.0
BURAR Bucovina Array 8.69 343⇑P Pn 02 32 14.8 +1.7
BURAR Bucovina Array 8.69 343 Pn 02 32 13.8 +0.7
BUR08 Bucovina Ar. S 8.72 343 Pn 02 32 13.6 +0.1
DRGR 8.73 330⇓P Pn 02 32 13.8 +0.2

SORM Soroca 8.78 357⇑P Pn 02 32 13.7 -0.4
SOC Sochi 9.06 59 *e*P Pn 02 32 15.8 -2.3
SOC *e* 02 33 59.6
SOC MLR MLR
comp=Z,182nm,11.0s
MARD Mardin 9.47 99 Pn Pn 02 32 24.8 +1.1
KOLS Kolonicke sedl 10.71 335 *e*P Pn 02 32 43.0 +2.4
KOLS Kolonicke sedl 10.71 335 *e*PN Pn 02 32 43.0 +2.4
EIL Elat 10.84 151 Pn Pn 02 32 42.5 +0.1
comp=E,0.3nm,0.3s,baz=326,slow=15,SNR=1.7
EIL Sn **Sn** 02 34 39.5 -4.4
comp=E,0.8nm,0.3s,baz=17,slow=18,SNR=4.5
EIL LR LR 02 38 01.0
comp=Z,58nm,21.1s,baz=75,slow=44
KBZ Khabaz 11.27 63 Pn Pn 02 32 50.2 +2.0
comp=Z,0.0nm,0.3s,baz=263,slow=13,SNR=2.7
KBZ LR LR 02 38 27.8
comp=Z,173nm,18.0s,baz=262,slow=45
AKASG Malin Array Be 11.33 1 Pn Pn 02 32 49.1 0.0
comp=Z,0.9nm,0.3s,baz=179,slow=12,SNR=6.4
AKASG Sn **Sn** 02 34 53.8 -1.9
comp=Z,1.1nm,0.3s,baz=193,slow=24,SNR=2.0
AKASG Malin Array Be 11.33 1 Pn Pn 02 32 50.1 +1.0
AKBB Malin Array Si 11.33 1 P Pn 02 32 50.4 +1.3
AKBB Malin Array Si 11.33 1 Pn Pn 02 32 50.4 +1.3
SOKA Soboth 12.56 310 *i* Pn Pn 02 33 07.6 +1.6
comp=Z,0.5nm,0.5s
CONA Conrad Observa 12.79 316 *e*Pn Pn 02 33 10.7 +1.6
comp=Z,3.3nm,1.1s
VRAC Vranov 13.31 322 LR LR 02 38 44.7
comp=Z,70nm,18.2s,baz=234,slow=39
VSR Storozhevoye 13.81 28 *e*P Pn 02 33 21.8 -1.2
VSR pmax pmax
comp=Z,10.0nm,1.4s
ABTA Abfaltersbach 14.12 307 *e*Pn Pn 02 33 29.7 +2.3
comp=Z,0.9nm,0.5s
MAK Makhachkala 14.38 70 *e*P Pn 02 33 26.3 -4.4
MAK *e*S Sn 02 36 03.4 -6.8
MAK pmax pmax
comp=Z,293nm,1.4s
MAK MLR MLR
comp=Z,102nm,14.0s
GERES GERESS Array B 14.49 316 Pn Pn 02 33 35.1 +2.7
comp=Z,0.1nm,0.3s,baz=128,slow=12,SNR=2.7
VRH Novokhopyorsk 14.80 33 *e*P Pn 02 33 36.0 -0.5
VRH pmax pmax
comp=Z,20nm,1.0s
WTTA Wattenberg 14.89 308 *e*Pn Pn 02 33 39.5 +1.6
comp=Z,11nm,1.5s
LPSR Galich'ya Gora 14.90 24 *e*P Pn 02 33 36.0 -1.7
LPSR pmax pmax
comp=Z,10.0nm,0.9s
WATA Walderalm 14.96 308 *e*Pn Pn 02 33 40.3 +1.6
comp=Z,6.5nm,1.1s
SQTA Sankt Quirin 15.13 307 *e*Pn Pn 02 33 41.9 +0.9
comp=Z,3.1nm,0.6s
FETA Feichten 15.35 306 *e*Pn Pn 02 33 45.6 +1.6
comp=Z,8.8nm,1.0s
RETA Reutte 15.52 307 *e*Pn P 02 33 51.8 +1.3
comp=Z,14nm,1.4s
DAVA Damuels 15.99 306 *e*Pn P 02 33 55.8 -0.1
comp=Z,7.1nm,1.4s
OBN Obninsk 16.55 15 Pn Pn 02 33 58.8 -0.4
comp=Z,0.3nm,0.3s,baz=194,slow=18,SNR=3.1
OBN Obninsk 16.55 15⇑*e*P Pn 02 33 58.5 -0.7
OBN *e*S Sn 02 37 01.7 -1.1
OBN pmax pmax
comp=Z,20nm,1.3s
OBN MLR MLR
comp=Z,67nm,16.0s
OBN Obninsk 16.55 15 Pn Pn 02 33 59.5 +0.3
OBN IAmb IAmb 02 34 21.8
comp=Z,44nm,1.5s
MOS Moscow 17.35 16 *e*P Pn 02 34 09.1 -0.2
MOS pmax pmax
comp=Z,36nm,1.4s
BELG Belogornoye 18.30 39 *i* P Pn 02 34 19.4 -1.6
BELG pmax pmax
comp=Z,5.0nm,1.3s
VSU Vasula 19.16 356 *i* P Pn 02 34 31.8 +0.3
VSU pmax pmax
comp=Z,39nm,0.7s
RAYN Ar Rayn 21.10 134 P P 02 34 52.0 0.0
RAYN pmax pmax
comp=Z,19nm,1.9s
RAYN Ar Rayn 21.10 134 P P 02 34 52.0 0.0
FINES FINESS Array B 22.18 356 P P 02 35 04.1 +0.9
comp=Z,3.3nm,0.7s,baz=181,slow=9.5,SNR=14
FINES LR LR 02 43 42.3
comp=Z,85nm,18.9s,baz=168,slow=37
FIA1 FINESS Array S 22.18 356 P P 02 35 02.2 -0.9
FIA1 IAmb IAmb 02 35 10.9
comp=Z,21nm,1.2s
KLMR Klimovskoe 22.48 13 *e*P P 02 35 04.9 -1.5
KLMR pmax pmax
comp=Z,37nm,1.5s
KLMR Klimovskoe 22.48 13 *e*P P 02 35 05.0 -1.5
KLMR AMP 02 35 08.8
comp=Z,37nm,1.5s
HFS Hagfors 22.91 340 P P 02 35 12.1 +1.1
comp=Z,1.7nm,0.6s,baz=133,slow=10,SNR=6.1
AKTO Aktyubinsk 23.18 52 P P 02 35 13.3 -0.5
comp=Z,5.3nm,0.7s,baz=250,slow=9.7,SNR=24
AKTO LR LR 02 45 58.8
comp=Z,47nm,18.9s,baz=249,slow=41
KIRV Kirov 23.26 28 P P 02 35 14.5 0.0
comp=Z,5.0nm,0.7s,baz=248,slow=5.4,SNR=4.0
ABKAR Akbulak array 24.08 56 P P 02 35 22.4 -0.3
NB2 NORSAR Subarra 24.34 339 P P 02 35 24.7 -0.3
comp=Z,1.3nm,0.7s,baz=140,slow=10
NOA NORSAR Array B 24.34 339 P P 02 35 25.2 +0.2
comp=Z,3.0nm,0.9s,baz=144,slow=9.4,SNR=6.8
NOA LR LR 02 45 31.7
comp=Z,55nm,19.6s,baz=155,slow=38
ARU Arti 25.85 39 P P 02 35 39.1 +0.5
comp=Z,3.1nm,0.6s,baz=241,slow=9.2,SNR=21
ARU Arti 25.85 39*d* *i*P P 02 35 38.6 0.0
ARU 02 36 13.9
ARU S S 02 40 09.7 +1.6
ARU pmax pmax
comp=Z,13nm,0.8s
ARU Arti 25.85 39 P P 02 35 38.6 0.0
EKA Eskdalemuir Ar 26.70 317 P P 02 35 48.1 +1.7
comp=Z,1.3nm,0.5s,baz=115,slow=11,SNR=11
HRA Herat 26.95 90 P P 02 35 50.4 +1.3
ARCES ARCESS Array B 30.29 358 LR LR 02 48 22.2
comp=Z,87nm,18.5s,baz=200,slow=36
BRVK Borovoye 31.20 50 P P 02 36 27.1 +0.7
BRVK pmax pmax
comp=Z,7.0nm,1.6s
BRVK Borovoye 31.20 50 P P 02 36 27.1 +0.7
BRVK IAmb IAmb 02 36 43.2
comp=Z,6.8nm,1.6s
KK31 Karatay Array 31.20 70 P P 02 36 27.1 +0.6
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KK31 Karatay Array 31.20 70 P P 02 36 27.1 +0.6
KK31 IAmb IAmb 02 36 28.0
comp=Z,4.4nm,0.9s
KKAR Karatay Array 31.20 70 P P 02 36 26.8 +0.2
KKAR Karatay Array 31.20 70 P P 02 36 26.8 +0.2
KKAR IAmb IAmb 02 36 28.0
comp=Z,4.4nm,0.9s
KKAR Karatay Array 31.20 70 P P 02 36 26.8 +0.2
KBL Kabul 32.16 86 P P 02 36 36.8 +1.5
KBL pmax pmax
comp=Z,4.0nm,1.1s
KBL Kabul 32.16 86 P P 02 36 36.8 +1.5
KBL IAmb IAmb 02 36 37.4
comp=Z,4.2nm,1.1s
AAK Ala-Archa 34.16 70*ce*P P 02 36 52.8 +0.1
AAK pmax pmax
comp=Z,22nm,1.7s
TORD Torodi Ar. Bea 35.55 230 P P 02 37 05.1 +0.5
comp=Z,1.3nm,0.8s,baz=37,slow=9.0,SNR=7.5
NIL Nilore 35.73 85 P P 02 37 07.0 +0.8
NIL pmax pmax
comp=Z,12nm,1.0s
NIL Nilore 35.73 85 P P 02 37 07.0 +0.8
KURK Kurchatov 36.19 55*ce*P P 02 37 09.3 -0.5
KURK pmax pmax
comp=Z,6.0nm,1.7s
KURK Kurchatov 36.19 55 P P 02 37 10.3 +0.5
KURK IAmb IAmb 02 37 11.0
comp=Z,7.3nm,1.1s
MK31 Makanchi Array 38.97 61 *i* P P 02 37 33.3 -0.1

MK31	**Makanchi Array**	**38.97**	**61**	P		**P**		**02 37 34.0**	**+0.6**
MKAR	**Makanchi Array**	**38.97**	**61**	P		**P**		**02 37 33.7**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=272,slow=8.5,SNR=14								
MKAR				LR		LR		02 54 52.7	
	comp=Z,32nm,19.4s,baz=264,slow=38								
ZAA0	**Zalesovo Array**	**39.90**	**50**	P		**P**		**02 37 41.1**	**0.0**
ZAA0				IAmb		IAmb		02 37 41.9	
	comp=Z,9.3nm,1.5s								
ZALV	**Zalesovo Beam**	**39.90**	**50**	P		**P**		**02 37 41.2**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=266,slow=9.6,SNR=9.0								
ZALV				LR		LR		02 55 17.0	
	comp=Z,29nm,19.6s,baz=310,slow=38								
ZALV	**Zalesovo Beam**	**39.90**	**50**	P		**P**		**02 37 40.8**	**-0.3**
ZALV	**Zalesovo Beam**	**39.90**	**50**	P		**P**		**02 37 40.8**	**-0.3**
NRIK	**Noril'sk**	**42.76**	**26**	LR		LR		02 57 45.8	
	comp=Z,49nm,18.2s,baz=198,slow=39								
WMQ	**Urumqi**	**43.31**	**64**	*e*P		**P**		**02 38 11.3**	**+2.0**
GTA	**Gaotai**	**53.34**	**66**	↑P		**P**		**02 39 27.3**	**+0.5**
GTA				pP		sP		02 39 31.0	-0.6
GTA				sP		pP		02 39 34.3	+4.1
GTA				pmax		pmax			
	comp=Z,4.0nm,1.3s								
GTA				pmax		pmax			
	comp=Z,31nm,4.9s								
GTA				LR		LR			
	comp=N,64nm,15.3s								
GTA				LR		LR			
	comp=E,180nm,16.7s								
GTA				LR		LR			
	comp=Z,92nm,16.4s								
SHL	**Shillong**	**53.81**	**85**	P		**P**		**02 39 30.1**	**-0.4**
SHL				pmax		pmax			
	comp=Z,10.0nm,0.4s								
SHL	**Shillong**	**53.81**	**85**	P		**P**		**02 39 30.1**	**-0.4**
SONM	**Songino Array**	**54.48**	**54**	P		**P**		**02 39 35.2**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=295,slow=7.5,SNR=8.8								
SONM	**Songino Array**	**54.48**	**54**	P		**P**		**02 39 35.6**	**+0.6**
ULN	**Ulaanbaatar**	**54.88**	**54**	*ce*P		**P**		**02 39 36.9**	**-1.0**
ULN				pmax		pmax			
	comp=Z,13nm,2.5s								
LZH	**Lanzhou**	**57.67**	**68**	*e*P		**P**		**02 39 58.8**	**+0.8**
LZH				pP		sP		02 40 01.0	-1.8
LZH				sP		pP		02 40 02.0	+0.5
LZH				*e*PP		**PP**		**02 42 07.5**	**+1.9**
LZH				pmax		pmax			
	comp=Z,17nm,1.3s								
LZH				pmax		pmax			
	comp=Z,76nm,6.5s								
HHC	**Hu-ho-hao-te**	**60.80**	**60**	*e*P		**P**		**02 40 23.0**	**+3.5**
HHC				pmax		pmax			
	comp=Z,14nm,1.1s								
HHC				pmax		pmax			
	comp=Z,190nm,5.9s								
CMAR	**Chiang Mai Arr**	**63.17**	**88**	P		**P**		**02 40 35.1**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=297,slow=8.2,SNR=6.9								
CMAR	**Chiang Mai Arr**	**63.17**	**88**	P		**P**		**02 40 35.5**	**-0.1**
USRK	**Ussuriysk Ar.**	**71.71**	**48**	P		**P**		**02 41 30.8**	**+1.5**
USRK	**Ussuriysk Ar.**	**71.71**	**48**	P		**P**		**02 41 30.8**	**+1.5**
KSRS	**Korea Array**	**73.32**	**55**	P		**P**		**02 41 38.3**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=295,slow=5.0,SNR=4.9								
KSRS				LR		LR		03 17 29.2	
	comp=Z,24nm,18.9s,baz=320,slow=39								
YKA	**Yellowknife Ar**	**74.35**	**343**	P		**P**		**02 41 44.1**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=24,slow=6.7,SNR=3.8								
ILAR	**Eielson Array**	**76.15**	**358**	P		**P**		**02 41 54.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=335,slow=5.1,SNR=5.4								
PETK	**Petropavlovsk-**	**77.76**	**29**	LR		LR		03 19 03.9	
	comp=Z,27nm,19.0s,baz=272,slow=38								
COCO	**West Island**	**81.17**	**114**	*i* P		**P**		**02 42 23.6**	**+0.4**

*IDC **28** 02:38:12.7±1.0,1.84N×126.73E,h0km,mb3.9/5, mb1 4.0/7,mb1mx3.7/38,mbtmp3.9/7,ML3.5/2,Error ellipse: s-maj=53.3km s-min=18.1km az=74.0*
*DJA **28** 02:38:17.1±0.3,2.1N±3.3×12.7E±.1,h10km,M4.2/11,mB4.6/1, mb4.4/4,MLv4.1/11,Mw(mB)3.9/1*
*NEIC **28** 02:38:17.4±1.0,1.85N±0.07×126.68E±0.07,h35km±2km, mb4.2/10,Error ellipse: s-maj=12.5km s-min=11.4km az=234.0*

ISC 28 02:38:19.0±0.8,1.80N±0.08×126.63E±0.10,h47km,n31, σ1s23/32,mb4.1/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.26**	**144**	P	**Pn**	**02 38 39.5**	**-0.7**
TNTI				S	**Sn**	**02 38 57.3**	**+1.3**
TNTI	**Ternate**	**1.26**	**144**		**Pn**	**02 38 39.3**	**-0.9**
SGSI	**Sangihe**	**2.17**	**330**	P	**Pn**	**02 38 52.1**	**-0.7**
KMSI	**Cibinong**	**2.91**	**245**	P	**Pn**	**02 39 02.4**	**-0.5**
GTOI	**Gorontalo**	**3.79**	**252**	P	**Pn**	**02 39 15.6**	**+0.6**
LUWI	**Luwuk**	**4.78**	**234**	P	**Pn**	**02 39 27.3**	**-1.2**
LUWI	**Luwuk**	**4.78**	**234**	Pn	**Pn**	**02 39 28.0**	**-0.5**
MRSI	**Marisa**	**4.87**	**254**	P	Pn	02 39 34.7	+5.0
APSI	**Ampana**	**5.66**	**242**	P	**Pn**	**02 39 40.1**	**-0.5**
	0.2nm583nm60nm,0.7s						
TOLI2	**Tolitoli**	**5.88**	**263**	Pn	**Pn**	**02 39 43.2**	**-0.5**
TTSI	**Tana Toraja**	**8.33**	**235**	P	**Pn**	**02 40 21.5**	**+4.2**
MYLDM	**Lahad Datu**	**8.78**	**293**	Pn	**Pn**	**02 40 23.1**	**-0.3**
BNSI	**Bone**	**8.96**	**227**	P	**Pn**	**02 40 25.3**	**-0.7**
	12nm,0.7s						
KAPI	**Kappang**	**9.64**	**225**	Pn	**Pn**	**02 40 34.9**	**-0.3**
	0.6nm,0.3s,baz=54,slow=19,SNR=4.3						
FITZ	**Fitzroy Crossi**	**19.79**	**183**	P	**P**	**02 42 45.8**	**+0.2**
	0.1nm,0.3s,baz=5.0,slow=12,SNR=3.1						
WB0	**Warramunga Arr**	**22.75**	**161**	P	**P**	**02 43 15.7**	**-1.6**
WB0				IAmb	IAmb	02 43 20.9	
	comp=Z,5.4nm,0.7s						
WRAB	**Tennant Creek**	**22.89**	**161**	P	**P**	**02 43 16.5**	**-2.3**
WRAB				IAmb	IAmb	02 43 22.5	
	comp=Z,7.7nm,0.8s						
WRA	**Warramunga Arr**	**22.89**	**161**	P	**P**	**02 43 17.6**	**-1.3**
	comp=Z,5.7nm,0.8s,baz=339,slow=11,SNR=49						
WRA				PcP	**PcP**	**02 47 09.4**	**+1.0**
	comp=Z,0.4nm,1.0s,baz=331,slow=2.0,SNR=2.1						
WRA	**Warramunga Arr**	**22.89**	**161**	IAmb	IAmb	02 43 24.3	
	comp=Z,0.3nm,0.9s						
WR0	**Warramunga Arr**	**22.97**	**161**	P	**P**	**02 43 18.9**	**-0.8**
WR0				IAmb	IAmb	02 43 23.9	
	comp=Z,5.4nm,0.9s						
AS31	**Alice Springs**	**26.28**	**165**	P	**P**	**02 43 48.8**	**-1.5**
ASAR	**Alice Springs**	**26.28**	**165**	P	**P**	**02 43 50.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=348,slow=12,SNR=5.1						
ASAR				PcP	**PcP**	**02 47 16.7**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=344,slow=2.6,SNR=2.6						
SONM	**Songino Array**	**49.09**	**342**	P	**P**	**02 47 02.6**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=159,slow=7.0,SNR=2.8						
MK31	**Makanchi Array**	**59.08**	**326**	P	**P**	**02 48 14.0**	**-0.6**
MK31				IAmb	IAmb	02 48 38.9	
	comp=Z,2.7nm,1.1s						
MKAR	**Makanchi Array**	**59.08**	**326**	P	**P**	**02 48 14.7**	**+0.1**
	comp=Z,1.9nm,0.5s,baz=121,slow=8.2,SNR=51						
KDJ	**Kajisay**	**59.72**	**319**	P	**P**	**02 48 17.3**	**-2.0**
ZALV	**Zalesovo Beam**	**62.26**	**334**	P	**P**	**02 48 35.6**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=130,slow=5.8,SNR=3.7						
KURK	**Kurchatov**	**63.31**	**328**	P	**P**	**02 48 42.9**	**-0.2**
KK31	**Karatay Array**	**64.58**	**318**	P	**P**	**02 48 51.3**	**-0.3**
KK31				IAmb	IAmb	02 48 55.3	
	comp=Z,7.1nm,1.7s						
KKAR	**Karatay Array**	**64.58**	**318**	P	**P**	**02 48 51.2**	**-0.4**
ABKAR	**Akbulak array**	**73.58**	**321**	P	**P**	**02 49 46.9**	**-0.3**

*IDC **28** 03:00:07.6±1.3,8.07S×123.70E,h0km,mb4.0/2, mb1 4.0/7,mb1mx3.7/40,mbtmp3.9/7,ML3.7/5,MS2.9/1, Ms1 2.9/1,ms1mx2.4/29,Error ellipse: s-maj=56.3km s-min=17.3km az=71.0*
*DJA **28** 03:00:10.1±0.2,8.3S±3.3×12.3E±.1,h10km,M4.3/13,mB4.7/4, mb4.5/7,MLv4.2/13,Mw(mB)4.0/4*
*NEIC **28** 03:00:12.2±1.0,8.51S±0.06×122.87E±0.05,h35km±1km, mb4.4/4,Error ellipse: s-maj=13.0km s-min=5.7km az=218.0*

ISC 28 03:00:09.7±0.7,8.46S±0.05×123.02E±0.05,h10km,n36, σ1s57/39,mb4.4/4,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.79**	**257**	P	**Pg**	**03 00 25.6**	**+0.7**
MMRI	**Maumere**	**0.79**	**257**	Pn	**Pg**	**03 00 24.4**	**-0.5**
EDFI	**Ende, Flores**	**1.34**	**258**	P	**Pn**	**03 00 33.8**	**-0.8**
SOEI	**Soe**	**1.78**	**136**	P	**Pn**	**03 00 41.3**	**+0.7**
SOEI	**Soe**	**1.78**	**136**	Pn	**Pb**	**03 00 42.1**	**-0.4**
BATI	**Baumata**	**1.85**	**160**	Pn	**Pg**	**03 00 45.3**	**+0.2**
	30nm,0.3s,baz=330,slow=2.7,SNR=10						
BATI				Sn	**Sg**	**03 01 11.9**	**+2.8**
	24nm,0.3s,baz=19,slow=19,SNR=8.4						
BATI	**Baumata**	**1.85**	**160**	P	**Pb**	**03 00 43.0**	**-0.6**
BASI	**Baing, Sumba**	**2.97**	**234**	P	**Pn**	**03 00 59.8**	**+2.9**
BSSI	**Bau Bau, Buton**	**3.41**	**312**	P	**Pn**	**03 01 02.8**	**-0.1**
WBSI	**Waikabubak, Su**	**3.77**	**252**	P	**Pn**	**03 01 09.7**	**+1.8**
BKSI	**Bulukumba**	**4.24**	**317**	P	**Pn**	**03 01 13.9**	**-0.5**
KAPI	**Kappang**	**4.72**	**316**	Pn	**Pn**	**03 01 22.1**	**+1.2**
	4.1nm,0.3s,baz=137,slow=6.1,SNR=11						
KAPI				Sn	**Sn**	**03 02 15.7**	**0.0**
	3.1nm,0.3s,baz=276,slow=23,SNR=6.4						
KAPI				LR	LR	03 03 17.0	
	comp=Z,131nm,19.7s,baz=96,slow=38						
KAPI	**Kappang**	**4.72**	**316**		**Pn**	**03 01 18.7**	**-2.2**
BNSI	**Bone**	**4.96**	**324**	P	**Pn**	**03 01 25.3**	**+1.0**
PLAI	**Plampang**	**5.19**	**266**	P	**Pn**	**03 01 30.2**	**+2.7**
	0.4nm1μm54nm,0.6s						
TWSI	**Taliwang, Sumb**	**6.07**	**267**	P	**Pn**	**03 01 42.3**	**+2.7**
	0.1nm473nm30nm,0.8s						
NLAI	**Namlea**	**6.59**	**38**	P	**Pn**	**03 01 45.2**	**-1.5**
	0.1nm672nm19nm,0.6s						
LUWI	**Luwuk**	**7.38**	**358**	Pn	**Pn**	**03 01 57.8**	**+0.3**
APSI	**Ampana**	**7.62**	**350**	P	**Pn**	**03 02 00.3**	**-0.6**
	0.1nm414nm22nm,0.8s						
MTN	**Manton Dam**	**9.09**	**119**	Pn	**Pn**	**03 02 22.3**	**+1.4**
KNRA	**Kununurra**	**9.11**	**142**	Pn	**Pn**	**03 02 20.6**	**-0.6**
TOLI2	**Tolitoli**	**9.77**	**347**		**Pn**	**03 02 31.6**	**+1.3**
FITZ	**Fitzroy Crossi**	**9.91**	**165**	Pn	**Pn**	**03 02 33.0**	**+0.8**
	0.5nm,0.3s,baz=2.9,slow=9.4,SNR=14						
FITZ				Sn	**Sn**	**03 04 20.1**	**-3.6**
	0.6nm,0.3s,baz=198,slow=5.1,SNR=5.6						
FITZ	**Fitzroy Crossi**	**9.91**	**165**	Pn	**Pn**	**03 02 32.4**	**+0.1**
FAKI	**Fak Fak**	**10.71**	**60**	Pn	**Pn**	**03 02 45.5**	**+2.3**
WRA	**Warramunga Arr**	**15.82**	**137**	Pn	**Pn**	**03 03 49.1**	**-3.6**
	0.2nm,0.3s,baz=317,slow=14,SNR=14						
WRA				Sn	Sn	03 06 32.3	-16
	0.3nm,0.3s,baz=302,slow=24,SNR=4.8						
WRA	**Warramunga Arr**	**15.82**	**137**		**Pn**	**03 03 52.9**	**+0.2**
WRAB	**Tennant Creek**	**15.82**	**137**	Pn	**Pn**	**03 03 53.8**	**+1.1**
WRAB				IAmb	IAmb	03 04 33.3	
	comp=Z,8.3nm,0.8s						
AS31	**Alice Springs**	**18.37**	**147**		**P**	**03 04 24.9**	**+0.2**
ASAR	**Alice Springs**	**18.37**	**147**	P	**Pn**	**03 04 24.1**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=325,slow=13,SNR=19						
ASAR				S	Sn	03 07 38.4	-12
	comp=Z,0.2nm,0.3s,baz=322,slow=24,SNR=4.9						
ASAR	**Alice Springs**	**18.37**	**147**	P	**Pn**	**03 04 24.3**	**-0.4**
NWAO	**Narrogin (SRO)**	**24.93**	**192**	P	**P**	**03 05 32.7**	**-0.4**
NWAO				IAmb	IAmb	03 06 11.3	
	comp=Z,63nm,0.9s						
MK31	**Makanchi Array**	**65.87**	**331**	P	**P**	**03 10 54.0**	**-1.6**
MK31				IAmb	IAmb	03 11 44.6	
	comp=Z,3.7nm,1.1s						
MKAR	**Makanchi Array**	**65.87**	**331**	P	**P**	**03 10 55.2**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=130,slow=8.3,SNR=7.7						
MKAR	**Makanchi Array**	**65.87**	**331**	P	**P**	**03 10 54.1**	**-1.5**
ZALV	**Zalesovo Beam**	**70.02**	**337**	P	**P**	**03 11 20.8**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=133,slow=6.3,SNR=5.1						

*IDC **28** 03:00:42.0±1.0,8.16S×123.32E,h0km,mb4.0/5, mb1 4.2/10,mb1mx3.9/41,mbtmp4.0/10,ML3.8/5,MS3.4/3, Ms1 3.4/3,ms1mx2.8/28,Error ellipse: s-maj=55.7km s-min=17.4km az=67.0*
*NEIC **28** 03:00:46.9±2.1,8.50S±0.08×122.94E±0.07,h38km±13km, mb4.0/5,Error ellipse: s-maj=13.8km s-min=7.3km az=215.0*

ISC 28 03:00:45.8±0.7,8.53S±0.09×123.0E±0.1,h35km,n22, σ2s38/22,mb4.1/6,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.71**	**261**	Pn	**Pn**	**03 00 59.1**	**-0.2**
SOEI	**Soe**	**1.79**	**133**	Pn	**Pn**	**03 01 14.6**	**+0.4**
BATI	**Baumata**	**1.81**	**157**	Pn	Pn	03 01 19.8	+5.2
	38nm,0.3s,baz=10,slow=19,SNR=8.6						
BATI				Sn	Sn	03 01 48.7	+12
	35nm,0.3s,baz=360,slow=18,SNR=4.3						
BATI				LR	LR	03 02 21.5	
	comp=Z,2μm,18.1s,baz=338,slow=48						
KAPI	**Kappang**	**4.72**	**318**	Pn	**Pn**	**03 01 55.2**	**+0.7**
	3.9nm,0.3s,baz=148,slow=19,SNR=4.1						
KAPI				Sn	**Sn**	**03 02 48.6**	**+0.6**
	3.9nm,0.3s,baz=274,slow=19,SNR=1.9						
KNRA	**Kununurra**	**9.10**	**142**	Pn	**Pn**	**03 02 56.5**	**+1.8**
TOLI2	**Tolitoli**	**9.81**	**347**	Pn	Pn	03 03 05.5	+1.0
FITZ	**Fitzroy Crossi**	**9.87**	**165**	Pn	**Pn**	**03 03 07.8**	**+2.6**
	0.6nm,0.3s,baz=350,slow=10,SNR=6.9						
FITZ				Sn	**Sn**	**03 04 57.1**	**+2.3**
	1.0nm,0.3s,baz=105,slow=18,SNR=4.2						
WRA	**Warramunga Arr**	**15.82**	**137**	Pn	**Pn**	**03 04 24.7**	**-1.3**
	0.4nm,0.3s,baz=311,slow=12,SNR=7.2						
WRA				LR	LR	03 11 22.7	
	comp=Z,162nm,18.1s,baz=330,slow=40						
WR0	**Warramunga Arr**	**15.97**	**137**		**P**	**03 04 31.3**	**+0.2**
WR0				IAmb	IAmb	03 04 34.9	
	comp=Z,9.3nm,0.7s						
AS31	**Alice Springs**	**18.35**	**146**	P	**Pn**	**03 04 59.4**	**+1.8**
AS31				IAmb	IAmb	03 05 04.0	
	comp=Z,3.0nm,0.8s						
ASAR	**Alice Springs**	**18.35**	**146**	P	**Pn**	**03 04 58.6**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=322,slow=10,SNR=9.4						
ASAR				S	**Sn**	**03 08 12.9**	**-8.8**
	comp=Z,0.1nm,0.3s,baz=314,slow=22,SNR=5.6						
ASAR	**Alice Springs**	**18.35**	**146**	P	**Pn**	**03 04 59.3**	**+1.6**
KRVT	**Keravat (AS076**	**29.19**	**84**	LR	LR	03 19 06.8	
	comp=Z,32nm,19.3s,baz=258,slow=38						
CMAR	**Chiang Mai Arr**	**35.78**	**319**	P	**P**	**03 07 41.2**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=140,slow=7.1,SNR=1.2						
USRK	**Ussuriysk Ar.**	**53.11**	**8**	P	**P**	**03 09 58.3**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=188,slow=8.7,SNR=2.5						
SONM	**Songino Array**	**58.00**	**347**	P	**P**	**03 10 35.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=176,slow=5.8,SNR=2.3						
MK31	**Makanchi Array**	**65.89**	**331**	P	**P**	**03 11 27.8**	**-0.2**
MKAR	**Makanchi Array**	**65.89**	**331**	P	**P**	**03 11 28.6**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=145,slow=7.2,SNR=5.7						
ZAA0	**Zalesovo Array**	**70.06**	**337**	P	**P**	**03 11 53.9**	**-0.1**
ZAA0				IAmb	IAmb	03 11 59.1	
	comp=Z,3.7nm,1.1s						
ZALV	**Zalesovo Beam**	**70.06**	**337**	P	**P**	**03 11 54.5**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=128,slow=5.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**70.06**	**337**	P	**P**	**03 11 53.9**	**-0.1**
KURK	**Kurchatov**	**70.36**	**332**	P	**P**	**03 11 57.1**	**+1.2**

*IDC **28** 03:01:37.5±6.2,25.71S×111.86E,h0km,mb3.9/3, mb1 4.3/5,mb1mx3.8/41,mbtmp4.2/5,ML4.5/1,Error ellipse: s-maj=79.3km s-min=46.4km az=92.0*
*NEIC **28** 03:01:44.6±2.5,26.09S±0.08×112.5E±0.2,h15km±8km, Error ellipse: s-maj=23.6km s-min=11.5km az=82.0*

ISC 28 03:01:44.6±1.6,25.97S±0.06×112.6E±0.1,h10km,n31, σ2s17/30,Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIRL	**Giralia**	**3.63**	**24**	P	**Pn**	**03 02 42.9**	**+2.1**
	baz=3.7,SNR=22						
GIRL				S	**Sn**	**03 03 23.1**	**-0.7**
	baz=3.7						
GIRL	**Giralia**	**3.63**	**24**		**Pn**	**03 02 42.8**	**+1.9**
MORW	**Morawa**	**4.33**	**136**	P	**Pn**	**03 02 51.0**	**+0.5**
	baz=4.3,SNR=19						
MORW				S	**Sn**	**03 03 41.6**	**+0.6**
	baz=4.3						
MORW	**Morawa**	**4.33**	**136**		**Pn**	**03 02 50.8**	**+0.3**
MEEK	**Meekatharra**	**5.42**	**98**	P	**Pn**	**03 03 06.7**	**+1.1**
	baz=5.4,SNR=44						
MEEK				S	**Sn**	**03 04 04.8**	**-3.2**
	baz=5.4						
BLDU	**Ballidu**	**5.86**	**143**	P	**Pn**	**03 03 11.5**	**-0.1**
	baz=5.8,SNR=22						
MUN	**Mundaring**	**6.76**	**153**	P	**Pn**	**03 03 23.5**	**-0.4**
	baz=6.7,SNR=4.1						
PSA00	**Pilbara Seismi**	**7.93**	**58**	Pn	**Pn**	**03 03 40.9**	**+0.8**
NWAO	**Narrogin (SRO)**	**8.01**	**151**	Pn	**Pn**	**03 03 41.1**	**0.0**
	1.1nm,0.3s,baz=328,slow=13,SNR=2.9						
NWAO				Sn	**Sn**	**03 05 12.6**	**+0.8**
	2.4nm,0.3s,baz=273,slow=20,SNR=4.4						
NWAO				Lg	Lg	03 05 55.8	
	5.4nm,0.3s,baz=61,slow=19,SNR=7.5						
NWAO	**Narrogin (SRO)**	**8.01**	**151**	P	**Pn**	**03 03 40.4**	**-0.7**
	baz=8.0,SNR=3.6						
NWAO	**Narrogin (SRO)**	**8.01**	**151**		**Pn**	**03 03 38.9**	**-2.2**
H01W3	**Cape Leeuwin H**	**8.98**	**172**	T	T	03 13 07.4	
	baz=352						
H01W1	**Cape Leeuwin H**	**8.99**	**172**	T	T	03 13 06.0	
	baz=352,SNR=3.7						
H01W2	**Cape Leeuwin H**	**8.99**	**172**	T	T	03 13 06.2	
	baz=352						
RKGY	**Rocky Gully**	**9.39**	**157**	P	**Pn**	**03 03 59.6**	**-0.5**
	baz=9.4,SNR=7.5						
WRKA	**Warakurna**	**14.19**	**90**	P	**Pn**	**03 05 05.0**	**-0.7**
	baz=14						
FITZ	**Fitzroy Crossi**	**14.38**	**60**	Pn	**Pn**	**03 05 08.1**	**-0.3**
	1.5nm,0.3s,baz=240,slow=12,SNR=2.2						
FITZ				Sn	Sn	03 07 36.5	-12
	3.2nm,0.3s,baz=144,slow=19,SNR=4.3						
FORT	**Forrest**	**14.40**	**113**	P	**Pn**	**03 05 05.8**	**-2.9**
	baz=14,SNR=27						
FORT	**Forrest**	**14.40**	**113**		**Pn**	**03 05 06.9**	**-1.8**
JAGI	**Jajag, Banyuwa**	**17.47**	**5**	Pn	**P**	**03 05 47.8**	**-1.9**
ASAR	**Alice Springs**	**19.45**	**88**	P	**P**	**03 06 11.9**	**+0.4**
	5.7nm,0.6s,baz=261,slow=10.0,SNR=19						
ASAR				S	S	03 09 37.1	-15
	2.2nm,0.5s,baz=263,slow=23,SNR=5.5						
ASAR	**Alice Springs**	**19.45**	**88**	P	**P**	**03 06 10.0**	**-1.6**
AS31	**Alice Springs**	**19.45**	**88**	P	**P**	**03 06 10.5**	**-1.1**
AS31				IAmb	IAmb	03 06 20.9	
	comp=Z,3.5nm,0.6s						
WRA	**Warramunga Arr**	**20.87**	**78**	P	**P**	**03 06 28.3**	**+1.3**
	comp=Z,1.8nm,0.4s,baz=256,slow=11,SNR=7.5						
WRA				S	S	03 10 10.3	-9.5
	comp=Z,1.4nm,0.7s,baz=255,slow=23,SNR=5.5						
WB2	**Warramunga Arr**	**20.88**	**78**	P	**P**	**03 06 27.8**	**+0.7**
WB0	**Warramunga Arr**	**20.98**	**77**	P	**P**	**03 06 28.7**	**+0.6**
WB0				IAmb	IAmb	03 07 21.6	
	comp=Z,8.6nm,0.8s						
STKA	**Stephens Creek**	**25.99**	**110**	P	**P**	**03 07 20.2**	**+2.5**
	comp=Z,2.8nm,1.0s,baz=276,slow=11,SNR=2.1						
STKA				S	**S**	**03 11 56.9**	**+8.5**
	comp=Z,1.2nm,0.7s,baz=319,slow=20,SNR=1.1						
STKA	**Stephens Creek**	**25.99**	**110**	P	**P**	**03 07 16.8**	**-0.9**
H08S2	**Diego Garcia H**	**42.29**	**288**	T	T	03 54 14.2	
	baz=120,slow=76,SNR=190						
H08S1	**Diego Garcia H**	**42.30**	**288**	T	T	03 54 15.4	
	baz=120,slow=76,SNR=46						
H08S3	**Diego Garcia H**	**42.30**	**288**	T	T	03 54 15.5	
	baz=120,slow=76,SNR=1883						

IDC 28 03:28:48.8±1.9,1.82N×126.15E,h0km,mb3.5/3, mb1 3.7/4,mb1mx3.5/41,mbtmp3.5/4,ML3.1/1,Error ellipse: s-maj=124.5km s-min=24.9km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.79**	**181**	P	P	03 33 20.9	0.0
	0.0nm,0.3s,baz=20,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	**23.07**	**160**	P	P	03 33 55.5	-0.6
	1.1nm,0.5s,baz=338,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.43**	**164**	P	P	03 34 28.1	+0.6
	0.4nm,0.4s,baz=348,slow=14,SNR=6.8						
MKAR	**Makanchi Array**	**58.80**	**326**	P	P	03 38 49.0	0.0
	0.3nm,0.5s,baz=119,slow=7.1,SNR=4.9						

JMA 28 03:59:42.5,37.64N×141.77E,h47km±1km,M3.6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMST	**Minamisoumatoc**	**0.70**	**277**	P	Pn	03 59 56.3	+0.1
JMST				S	Sn	04 00 06.1	0.0
JIKH	**Ishinomakikobu**	**0.71**	**340**	P	Pn	03 59 56.4	+0.1
JIKH				S	Sn	04 00 06.2	0.0
JFK	**Kawauchi**	**0.76**	**249**	P	Pn	03 59 57.0	0.0
JFK				*e*S	Sn	04 00 07.4	-0.1
JMM	**Marumori**	**0.81**	**287**	P	Pn	03 59 57.8	+0.3
JMM				S	Sn	04 00 08.6	+0.1
JIO	**Ouri**	**0.88**	**338**	P	Pn	03 59 58.7	+0.2
JIO				S	Sn	04 00 10.1	-0.1
ONAJ	**Iwakimizuishiy**	**0.94**	**236**	P	Pn	03 59 59.4	0.0
ONAJ				S	Sn	04 00 11.7	-0.1
JOU	**Okura**	**1.14**	**310**	P	Pn	04 00 02.4	+0.4
JOU	

GCUF	**Volcan Galeras**	**5.08**	**358**	*eP*		**Pn**	**04 07 30.9**	**+0.9**
FLOC	**Florencia**	**5.64**	**16**	*eP*		**Pn**	**04 07 36.2**	**-0.9**
CZSB	**Cruzeiro do Su**	**5.85**	**131**	*eP*		**Pn**	**04 07 41.0**	**+1.0**
BBAC	**Balboa, Cauca**	**5.87**	**359**	*eP*		**Pn**	**04 07 41.0**	**+0.6**
PCON	**Cinco Dias**	**6.22**	**7**	*eP*		**Pn**	**04 07 45.8**	**+0.3**
GARC	**Garzon, Huila**	**6.26**	**16**	*eP*		**Pn**	**04 07 44.9**	**-0.8**
BETC	**Betania**	**6.75**	**15**	*eP*		**Pn**	**04 07 52.6**	**+0.5**
GUVC	**San Jose del G**	**7.83**	**35**	*eP*		**Pn**	**04 08 05.6**	**-1.2**
NNA	**Nana**	**8.05**	**178**	P		**Pn**	**04 08 10.7**	**+0.8**
	22nm,0.3s,baz=350,slow=11,SNR=36							
NNA				S		**Sn**	**04 09 32.9**	**-6.4**
	11nm,0.3s,baz=55,slow=18,SNR=14							
NNA	**Nana**	**8.05**	**178**			**Pn**	**04 08 10.1**	**+0.2**
ANIL	**Santa Ana**	**8.51**	**12**	*eP*		**Pn**	**04 08 18.8**	**+2.6**
TOLC	**Tolima**	**8.61**	**12**	*eP*		**Pn**	**04 08 21.0**	**+3.2**
VILC	**Villavicencio,**	**8.67**	**24**	*eP*		**Pn**	**04 08 18.0**	**-0.3**
RREF	**El Recreo**	**8.91**	**12**	*eP*		Pn	04 08 26.7	+4.6
ROSC	**El Rosal**	**9.12**	**18**	P		**Pn**	**04 08 27.5**	**+2.9**
	1.7nm,0.3s,baz=131,slow=20,SNR=2.1							
ETMB	**Extrema**	**12.36**	**119**	*eP*		**Pn**	**04 09 08.0**	**+0.1**
PAYG	**Puerto Ayora**	**13.49**	**283**	Pn		**Pn**	**04 09 22.1**	**-0.5**
SDV	**Santo Domingo**	**14.26**	**27**	P		**P**	**04 09 33.9**	**-2.8**
	1.2nm,0.3s,baz=256,slow=5.1,SNR=3.0							
SDV	**Santo Domingo**	**14.26**	**27**	Pn		**Pn**	**04 09 32.9**	**+0.1**
SDV	**Santo Domingo**	**14.26**	**27**	*eP*		**P**	**04 09 34.0**	**-2.8**
SAML	**Samuel**	**14.77**	**111**			**Pn**	**04 09 38.7**	**-0.4**
LPAZ	**La Paz**	**15.19**	**145**	P		**P**	**04 09 48.3**	**+0.8**
	0.2nm,0.3s,baz=333,slow=11,SNR=6.3							
LPAZ	**La Paz**	**15.19**	**145**	Pn		**Pn**	**04 09 44.1**	**-0.8**
MACA	**Manacapuru-AM**	**16.46**	**88**	*eP*		**P**	**04 10 01.3**	**+0.3**
PCRV	**Puerto La Cruz**	**18.73**	**42**	P		**Pn**	**04 10 29.1**	**+1.5**
	0.4nm,0.3s,baz=236,slow=7.3,SNR=1.8							
SIV	**San Ignacio**	**19.87**	**128**	P		**Pn**	**04 10 40.2**	**-0.8**
	0.3nm,0.3s,baz=309,slow=8.9,SNR=8.2							
ITTB	**Itaituba**	**21.38**	**92**	*eP*		**P**	**04 10 55.4**	**+0.9**
AOPR	**Arecibo Observ**	**24.36**	**25**	P		**P**	**04 11 23.7**	**+0.2**
PDPR	**Patillas Dam,**	**24.38**	**26**	P		**P**	**04 11 23.2**	**-0.6**
PDPR				IAmb		IAmb	04 11 25.2	
	comp=Z,12nm,0.8s							
SJG	**San Juan**	**24.41**	**26**	P		**P**	**04 11 25.1**	**+1.1**
	comp=Z,15nm,0.6s,baz=192,slow=5.7,SNR=9.0							
SJG	**San Juan**	**24.41**	**26**	P		**P**	**04 11 25.1**	**+1.1**
CBYP	**Canovanas**	**24.68**	**27**	P		**P**	**04 11 27.1**	**+0.6**
SEUS	**St. Eustatius**	**25.44**	**33**	P		**P**	**04 11 34.3**	**+0.9**
MDP	**Montagnes des**	**26.07**	**70**	P		**P**	**04 11 42.0**	**+2.8**
	comp=Z,5.7nm,0.6s,baz=247,slow=9.0,SNR=14							
833A	**Chaparral WMA,**	**38.51**	**328**	P		**P**	**04 13 26.0**	**-1.4**
143A	**Socs Landing,**	**38.82**	**341**	P		**P**	**04 13 29.2**	**-0.6**
V48A	**Smith Brothers**	**40.45**	**348**	P		**P**	**04 13 42.8**	**-0.6**
TXAR	**Lajitas Array**	**41.68**	**324**	P		**P**	**04 13 54.0**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=136,slow=9.8,SNR=4.6							
TXAR				PcP		**PcP**	**04 15 49.3**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=130,slow=5.1,SNR=4.9							
W35A	**Tecumseh**	**43.02**	**336**	P		**P**	**04 14 03.5**	**-0.9**
ANMO	**Albuquerque**	**47.43**	**327**	P		**P**	**04 14 40.4**	**+0.9**
ANMO				IAmb		IAmb	04 14 40.8	
	comp=Z,12nm,1.6s							
PV15	**Paradox Valley**	**51.05**	**328**	P		**P**	**04 15 07.6**	**+0.6**
PV15				IAmb		IAmb	04 15 09.1	
	comp=Z,7.2nm,1.2s							
PD31	**Pinedale Array**	**54.91**	**331**	P		**P**	**04 15 35.3**	**0.0**
PDAR	**Pinedale Array**	**54.91**	**331**	P		**P**	**04 15 35.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=127,slow=9.0,SNR=9.3							
PDAR				PcP		**PcP**	**04 16 35.7**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=131,slow=5.0,SNR=2.4							
PDAR	**Pinedale Array**	**54.91**	**331**	P		**P**	**04 15 35.0**	**-0.3**
NVAR	**Mina Array Bea**	**56.74**	**322**	P		**P**	**04 15 49.2**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=123,slow=7.5,SNR=11							
NVAR				pP		**pP**	**04 16 16.0**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=104,slow=6.3,SNR=2.2							
NVAR				PcP		**PcP**	**04 16 43.4**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=141,slow=3.8,SNR=4.1							
NVAR	**Mina Array Bea**	**56.74**	**322**	P		**P**	**04 15 49.1**	**+0.6**
BCYI	**Bear Canyon**	**57.94**	**330**	P		**P**	**04 15 57.4**	**+0.6**
MSO	**Missoula**	**60.02**	**332**	P		**P**	**04 16 10.9**	**0.0**
MSO				IAmb		IAmb	04 16 12.3	
	comp=Z,3.9nm,0.8s							
YKA	**Yellowknife Ar**	**72.05**	**343**	P		**P**	**04 17 27.0**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=132,slow=7.7,SNR=3.3							
VNA3	**Neumayer Olymp**	**79.21**	**162**	P		**P**	**04 18 09.1**	**+0.8**
VNA2	**Neumayer--Watz**	**79.81**	**162**	P		**P**	**04 18 12.0**	**+0.6**
	baz=310,slow=4.2							
TORD	**Torodi Ar. Bea**	**80.06**	**76**	P		**P**	**04 18 14.6**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=283,slow=6.3,SNR=18							
SNAA	**Sanae**	**81.42**	**162**	P		**P**	**04 18 20.8**	**+0.7**
INK	**Inuvik**	**81.78**	**342**	P		**P**	**04 18 22.5**	**+0.6**
IL31		**84.99**	**336**	P		**P**	**04 18 38.5**	**+0.1**
ILAR	**Eielson Array**	**84.99**	**336**	P		**P**	**04 18 38.7**	**+0.2**
	comp=Z,1.3nm,1.1s,baz=126,slow=3.1,SNR=5.6							
IMAR	**Indian Mountai**	**88.09**	**337**	P		**P**	**04 18 53.7**	**+0.2**
GERES	**GERESS Array B**	**93.47**	**41**	P		**P**	**04 19 19.4**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=272,slow=4.7,SNR=2.6							
ZALV	**Zalesovo Beam**	**127.96**	**13**	PKP		**PKiKP**	**04 25 09.2**	**0.0**
	comp=Z,1.2nm,0.7s,baz=218,slow=1.7,SNR=5.0							
MKAR	**Makanchi Array**	**133.69**	**19**	PKP		**PKiKP**	**04 25 20.1**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=7.1,slow=4.6,SNR=3.6							
WRA	**Warramunga Arr**	**141.03**	**231**	PKhKP	PKPpre		04 25 28.5	
	comp=Z,0.6nm,0.8s,baz=123,slow=2.7,SNR=5.0							

NIED ***28*** *04:13:21.5,36.74N×137.88E,h4km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.19; $M_{\theta\theta}$3.25; $M_{\phi\phi}$-4.44; $M_{r\theta}$-1.83; $M_{\theta\phi}$0.09; $M_{\phi r}$0.58; Fault plane solution: $M_0$4.42000×10^{14} NP1: ϕ_s318.00000°,δ74.00000°,λ27.00000°. NP2: ϕ_s220.00000°,δ64.00000°,λ162.00000°.*

JMA 28 04:13:21.5,36.74N×137.88E,h4km±1km,M3.6,1C-1D Broadband fault plane solution: P waves. NP1: ϕ_s168.00000°,δ32.00000°,λ112.00000°. **NP2:** ϕ_s322.00000°,δ61.00000°,λ77.00000°. **Principal axes:** T Plg71.0000°, Azm203.0000°; N Plg11.0000°, Azm329.0000°; P Plg15.0000°, Azm62.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.33**	**127**	P	Pg	04 13 27.6	-0.2
MAT				S	Sg	04 13 32.0	-0.2
MAT	**Matsushiro**	**0.33**	**127**	P	Pg	04 13 27.5	-0.3
MAT				*e*S	Sg	04 13 31.9	-0.3
JNG	**Nsakai**	**0.38**	**152**	⇑P	Pg	04 13 28.5	-0.3
JNG				S	Sg	04 13 33.8	+0.1
JTT	**Ttatey**	**0.46**	**253**	P	Pg	04 13 30.8	+0.5
JGK	**Kuni**	**0.64**	**106**	⇓P	Pg	04 13 33.4	-0.3
JGK				*e*S	Sg	04 13 41.8	-0.2
JGN	**Niukaw**	**0.69**	**222**	P	Pg	04 13 34.5	-0.2
JGN				S	Sg	04 13 43.7	+0.1

IDC 28 04:16:55.3±2.3,1°.93N×126°.40E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/37,mbtmp3.3/3 Error ellipse: s-maj=188.0km s-min=28.4km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.09**	**161**	P	P	04 22 01.9	-1.0
	0.6nm,0.5s,baz=339,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.47**	**164**	P	P	04 22 35.6	+1.2
	0.3nm,0.6s,baz=344,slow=13,SNR=2.5						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	04 26 55.8	-0.1
	0.2nm,0.5s,baz=124,slow=6.2,SNR=2.1						

ANF ***28*** *04:16:57.8±0.4,29°.42N×102°.48W,h0km,ML4.6/7,Error ellipse: s-maj=6.2km s-min=3.0km az=19.0*

NEIC ***28*** *04:16:58.6±1.5,29°.36N±0°.05×102°.52W±0°.05,h15km±7km, mb_Lg3.4/60,ML3.3/16,Error ellipse: s-maj=8.5km s-min=5.6km az=141.0*

ISC 28 04:16:58.6±1.1,29°.32N±0°.07×102°.53W±0°.05,h10km,n58, σ1°.20/48,Texas-Mexico border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**1.00**	**271**	Pn	**Pg**	**04 17 17.9**	**+0.1**
TX31	**Lajitas Ar. Si**	**1.00**	**271**	Pn	**Pn**	**04 17 18.8**	**0.0**
TX32	**Lajitas Array**	**1.00**	**271**	Pn	**Pn**	**04 17 18.7**	**0.0**
JCT	**Junction City**	**2.63**	**63**	P	**Pn**	**04 17 41.1**	**-0.1**
	baz=246						
JCT	**Junction City**	**2.63**	**63**		**Pn**	**04 17 40.6**	**-0.6**
JCT				IAmb_Lg		04 18 24.7	
	comp=Z,224nm,0.8s						

833A	**Chaparral WMA,**	**2.92**	**109**	P		**Pn**	**04 17 44.9**	**-0.3**
	baz=293							
833A	**Chaparral WMA,**	**2.92**	**109**			**Pn**	**04 17 44.7**	**-0.4**
CLNB	**Carlsbad**	**3.15**	**339**			**Pn**	**04 17 48.6**	**+0.1**
GDL2	**Guadalupe Moun**	**3.28**	**332**	Pn		**Pn**	**04 17 49.9**	**-0.2**
MNTX	**Cornudas Mount**	**3.42**	**315**	P		**Pn**	**04 17 52.1**	**+0.1**
	baz=132							
MNTX				Sb		**Sb**	**04 18 42.0**	**+1.1**
	baz=132							
MNTX	**Cornudas Mount**	**3.42**	**315**			**Pn**	**04 17 52.2**	**+0.2**
MNTX				IAML			04 18 47.6	
	comp=Z,68nm,0.7s							
MNTX				IAML			04 18 49.5	
	comp=Z,66nm,0.5s							
CPRX	**Cap Rock**	**3.87**	**343**			**Pn**	**04 17 59.0**	**+0.7**
ABTX	**Abilene, Hawle**	**4.12**	**36**	P		**Pn**	**04 18 00.2**	**-1.4**
	baz=218							
ABTX	**Abilene, Hawle**	**4.12**	**36**			**Pn**	**04 18 00.3**	**-1.4**
735A	**Kenedy**	**4.16**	**95**	Pn		**Pn**	**04 18 02.4**	**+0.3**
735A				IAmb_Lg			04 19 19.4	
	comp=Z,77nm,0.8s							
435B	**Jarrell**	**4.52**	**70**	P		**Pn**	**04 18 06.7**	**-0.5**
	baz=253							
435B	**Jarrell**	**4.52**	**70**			**Pn**	**04 18 06.4**	**-0.8**
MSTX	**Muleshoe**	**4.64**	**357**	Sb		**Sb**	**04 19 18.1**	**+2.0**
	baz=177							
MSTX	**Muleshoe**	**4.64**	**357**			**Pn**	**04 18 07.8**	**-1.1**
WHTX	**Lake Whitney,**	**5.12**	**57**	P		**Pn**	**04 18 14.6**	**-0.7**
	baz=240							
WHTX	**Lake Whitney,**	**5.12**	**57**			**Pn**	**04 18 14.2**	**-1.1**
WHTX				IAmb_Lg			04 19 52.5	
	comp=Z,96nm,1.0s							
121A	**Cookes Peak, D**	**5.54**	**307**	P		**Pn**	**04 18 21.5**	**+0.3**
	baz=123							
121A	**Cookes Peak, D**	**5.54**	**307**			**Pn**	**04 18 21.0**	**-0.2**
AMTX	**Amarillo**	**5.59**	**7**			**Pn**	**04 18 21.2**	**-0.7**
HKT	**Hockley**	**5.86**	**82**	Pn		**Pn**	**04 18 25.2**	**-0.2**
BNM	**Barren Site**	**5.95**	**325**	Pn		**Pn**	**04 18 27.0**	**+0.1**
Z35A	**Perchaven, San**	**6.03**	**47**	Pn		**Pn**	**04 18 25.0**	**-2.8**
Z35A				Pg		**Pb**	**04 18 46.3**	**+2.6**
Y22D	**IRIS PASSCAL I**	**6.04**	**323**	Pn		**Pn**	**04 18 27.2**	**-0.9**
LENM	**Lemitar**	**6.14**	**323**	Pn		**Pn**	**04 18 28.9**	**-0.6**
319A	**Douglas**	**6.19**	**291**	Pn		**Pn**	**04 18 29.0**	**-1.1**
WMOK	**Wichita Mounta**	**6.27**	**30**	P		**Pn**	**04 18 30.1**	**-1.0**
	baz=212							
WMOK	**Wichita Mounta**	**6.27**	**30**			**Pn**	**04 18 30.0**	**-1.1**
237A	**Washetta, Mont**	**6.37**	**64**			**Pn**	**04 18 31.7**	**-0.8**
ANMO	**Albuquerque**	**6.52**	**330**	Pn		**Pn**	**04 18 36.0**	**+1.1**
ZAIG	**Zacatecas**	**6.53**	**180**	Pn		**Pn**	**04 18 35.1**	**+0.1**
NATX	**Nacogdoches**	**7.21**	**68**	IAmb_Lg			04 21 07.0	
	comp=Z,44nm,0.9s							
OKCFA	**Oklahoma City**	**7.44**	**34**	IAmb_Lg			04 21 02.0	
	comp=Z,52nm,0.7s							
W35A	**Tecumseh**	**7.53**	**38**			**Pn**	**04 18 47.0**	**-1.5**
Z38A	**Mt. Pleasant**	**7.55**	**57**	IAmb_Lg			04 21 09.2	
	comp=Z,46nm,0.8s							
OK025	**Westminster Rd**	**7.63**	**34**			**Pb**	**04 19 09.5**	**-1.5**
OK025				IAmb_Lg			04 21 12.2	
	comp=Z,40nm,0.8s							
U32A	**Winter Ranch,**	**7.64**	**22**	IAmb_Lg			04 21 10.5	
	comp=Z,32nm,0.7s							
TUC	**Tucson**	**7.70**	**295**	IAmb_Lg			04 21 07.3	
	comp=Z,12nm,0.9s							
TUC	**Tucson**	**7.70**	**295**	IAmb_Lg			04 21 07.3	
	comp=Z,13nm,0.9s							
OK029	**Liberty Lake**	**7.74**	**32**	IAmb_Lg			04 21 09.2	
	comp=Z,58nm,0.9s							
X37A	**Clayton**	**8.03**	**47**			**Pn**	**04 18 55.1**	**-0.2**
OK031	**S. Brethren Rd**	**8.17**	**34**	IAmb_Lg			04 21 25.5	
	comp=Z,27nm,0.8s							
OK030	**Cody Creek RV**	**8.17**	**35**	IAmb_Lg			04 21 29.7	
	comp=Z,27nm,0.7s							
TUL1	**Leonard**	**8.68**	**39**	IAmb_Lg			04 21 31.1	
	comp=Z,30nm,0.9s							
KS21	**Milan North St**	**8.92**	**26**	IAmb_Lg			04 21 48.2	
	comp=Z,48nm,1.1s							
WLAR	**White Oak Lake**	**9.14**	**59**	Pn		**Pn**	**04 19 10.5**	**0.0**
WLAR				IAmb_Lg			04 22 06.3	
	comp=Z,26nm,0.7s							
MIAR	**Mount Ida**	**9.21**	**53**	Pn		**Pn**	**04 19 10.1**	**-1.5**
MIAR				IAmb_Lg			04 21 56.8	
	comp=Z,37nm,1.1s							
W39A	**Magazine**	**9.44**	**49**	IAmb_Lg			04 22 05.8	
	comp=Z,29nm,0.8s							
U38A	**Gravette**	**9.86**	**42**	Pn		**Pn**	**04 19 19.1**	**-1.2**
U38A				IAmb_Lg			04 22 23.7	
	comp=Z,32nm,0.9s							
HHAR	**Hobbs**	**10.02**	**44**			**Pn**	**04 19 20.6**	**-1.9**
UALR	**University of**	**10.21**	**55**			**Pn**	**04 19 23.3**	**-1.8**
W41B	**Gary Mavity, V**	**10.47**	**54**			**Pn**	**04 19 26.5**	**-2.3**
U40A	**Yellville**	**10.74**	**47**			**Pn**	**04 19 29.6**	**-2.8**
MGMO	**Mountain Grove**	**11.60**	**45**			**Pn**	**04 19 43.1**	**-1.2**

PRE ***28*** *04:20:48.2±1.2,26°.96S×26°.83E,h2km,ML2.8*

EAF ***28*** *04:20:53.2±1.7,27°.02S×26°.86E,h10km,MD4.0*

ISC 28 04:20:49.2±1.3,26°.97S±0°.03×26°.84E±0°.04,h11km±10km, n18,σ1°.42/36,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.47**	**84**	*e*P	**Pg**	**04 20 57.2**	**-1.2**
PRYS				*e*S	**Sg**	**04 21 04.7**	**+0.2**
PRYS				AML	AML	04 21 11.8	
	comp=Z,632nm,0.8s						
KSR	**Koster**	**1.12**	**3**	*e*P	**Pb**	**04 21 09.3**	**-1.4**
KSR				*e*S	**Sb**	**04 21 24.2**	**-1.1**
KSR				AML	AML	04 21 30.8	
	comp=Z,1μm,0.1s						
SWZ	**Schweizer**	**1.36**	**261**	*e*P	**Pn**	**04 21 13.9**	**-0.5**
SWZ				*e*S	**Sb**	**04 21 32.1**	**-0.2**
SWZ				AML	AML	04 21 36.3	
	comp=Z,292nm,0.2s						
ERPM	**east rand prop**	**1.40**	**64**	*e*P	**Pb**	**04 21 15.6**	**+0.1**
ERPM				*e*S	**Sg**	**04 21 35.9**	**+1.5**
ERPM				AML	AML	04 21 43.8	
	comp=Z,63nm,0.4s						
BOSA	**Boshof**	**2.15**	**220**	*i* P	**Pb**	**04 21 27.9**	**-0.4**
BOSA				*i* S	**Sb**	**04 21 55.5**	**+0.4**
BOSA	**Boshof**	**2.15**	**220**	*e*P	**Pn**	**04 21 26.8**	**+1.5**
BOSA				*e*S	**Sn**	**04 21 53.5**	**+1.4**
BOSA				AML	AML	04 21 59.0	
	comp=Z,48nm,0.3s						
BOSA	**Boshof**	**2.15**	**220**	*i* P	**Pb**	**04 21 27.9**	**-0.4**
BOSA				*i* S	**Sb**	**04 21 55.5**	**+0.4**
LBTB	**Lobatse**	**2.25**	**330**	*i* P	**Pb**	**04 21 29.4**	**-0.6**
LBTB				*i* S	**Sb**	**04 21 59.2**	**+1.4**
LBTB	**Lobatse**	**2.25**	**330**	*e*P	**Pn**	**04 21 27.5**	**+1.0**
LBTB				*e*S	**Sn**	**04 21 55.4**	**+1.1**
LBTB				AML	AML	04 22 00.6	
	comp=Z,142nm,0.2s						
LBTB	**Lobatse**	**2.25**	**330**	*i* P	**Pb**	**04 21 29.4**	**-0.6**
LBTB				*i* S	**Sb**	**04 21 59.2**	**+1.4**
POGA	**Pongola**	**4.35**	**96**	*i* P	**Pn**	**04 21 58.0**	**+2.7**
POGA				*i* S	**Sn**	**04 22 46.9**	**+0.9**
POGA	**Pongola**	**4.35**	**96**	*e*P	**Pn**	**04 21 56.2**	**+0.8**
POGA				*e*S	**Sn**	**04 22 44.9**	**-1.2**
POGA				AML	AML	04 23 09.3	
	comp=Z,38nm,0.4s						
POGA	**Pongola**	**4.35**	**96**	*i* P	**Pn**	**04 21 58.0**	**+2.7**
POGA				*i* S	**Sn**	**04 22 46.9**	**+0.9**
UPI	**Upington**	**5.15**	**253**	*e*P	**Pn**	**04 22 06.8**	**+0.4**
UPI				*e*S	**Sn**	**04 23 04.2**	**-1.6**
UPI				AML	AML	04 23 35.6	
	comp=Z,7.0nm,0.6s						
MOPA	**Mopani**	**5.37**	**51**	*e*P	**Pn**	**04 22 10.5**	**+1.1**
MOPA				*e*S	**Sn**	**04 23 10.2**	**-1.0**
MOPA				AML	AML	04 23 42.4	
	comp=Z,13nm,0.4s						
GRAN	**Grantham**	**6.69**	**216**	*e*P	**Pn**	**04 22 28.4**	**+1.0**
GRAN				*e*S	**Sn**	**04 23 41.8**	**-1.9**
GRAN				AML	AML	04 24 10.7	
	comp=Z,4.6nm,0.5s						
BLWY	**Bulawayo**	**6.99**	**14**	*i* P	**Pn**	**04 22 34.7**	**+2.9**
BLWY				*i* S	**Sn**	**04 23 50.7**	**-0.7**
BLWY	**Bulawayo**	**6.99**	**14**	*i* P	**Pn**	**04 22 34.7**	**+2.9**
BLWY				*i* S	**Sn**	**04 23 50.7**	**-0.7**

IDC ***28*** *04:28:13.4±0.5,5°.80N×61°.33E,h0km,mb4.2/22, mb1 4.4/23,mb1mx4.2/37,mbtmp4.2/23,ML3.5/1,MS4.2/40, Ms1 4.2/40,ms1mx4.2/48,Error ellipse: s-maj=14.7km s-min=13.7km az=131.0*

GCMT ***28*** *04:28:14.5±0.2,5°.72N±0°.01×61°.22E±0°.01,h12km, MW5.0/138,Moment Tensor Solution. s53,c67; s138,c216; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.28±.07; $M_{\theta\theta}$3.27±.07; $M_{\phi\phi}$1.01±.08; $M_{r\theta}$2.07±.24; $M_{\theta\phi}$-1.44±.06; $M_{\phi r}$-0.27±.26; Best double couple: $M_0$4.61900×10^{16} NP1:ϕ_s123.00000°,δ33.00000°, λ-78.00000°. NP2:ϕ_s288.00000°,δ58.00000°, λ-98.00000°. Principal axes: T 4.4270, Plg13.0000°, Azm24.0000°; N 0.3850, Plg7.0000°, Azm292.0000°; P -4.8120, Plg75.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***28*** *04:28:15.5±1.8,5°.88N±0°.10×61°.32E±0°.09,h10km±1km, mb4.7/56 Error ellipse: s-maj=17.8km s-min=14.6km az=215.0*

ISC 28 04:28:15.3±0.4,5°.77N±0°.06×61°.32E±0°.06,h10km,n214, σ1°.77/217,mb4.7/65,MS4.3/42,17C-13D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**9.65**	**312**	P	Pn	04 30 41.2	+6.8
SOCY	**Socotra**	**9.65**	**312**	Pn	**Pn**	**04 30 36.5**	**+2.1**
SHAO	**Shalim**	**13.39**	**336**	P	**Pn**	**04 31 28.6**	**+3.1**
DMTO	**DMTO**	**13.41**	**333**	P	**Pn**	**04 31 29.0**	**+3.2**
RBK	**Rabkut**	**13.58**	**330**	P	**Pn**	**04 31 29.6**	**+1.4**
RBK				P	**Pn**	**04 31 29.6**	**+1.4**
ABTO	**Aybut**	**13.93**	**326**	P	**Pn**	**04 31 34.5**	**+1.5**
ABTO				P	**Pn**	**04 31 34.5**	**+1.5**
WHFO	**Wadi Hawf**	**14.15**	**329**	P	**Pn**	**04 31 38.1**	**+2.2**
WHFO				P	**Pn**	**04 31 38.1**	**+2.2**
DQM	**DQM**	**14.54**	**346**	P	**Pn**	**04 31 42.1**	**+0.8**
DQM				P	**Pn**	**04 31 42.1**	**+0.8**
MHTO	**MHTO**	**15.47**	**348**	P	**P**	**04 31 56.4**	**-1.8**
	SNR=35						
MHTO				P	**P**	**04 31 56.4**	**-1.8**
	SNR=35						
JLN	**Jalan Bani Buh**	**16.39**	**354**	P	**Pn**	**04 32 04.9**	**-0.6**
	SNR=7.2						
JLN				P	**Pn**	**04 32 04.9**	**-0.6**
	SNR=7.2						
JMDO	**Jabal Madar**	**16.79**	**350**	P	**P**	**04 32 14.0**	**+1.1**
	SNR=6.0						
JMDO				P	**P**	**04 32 14.0**	**+1.1**
	SNR=6.0						
BSY	**Bisya**	**17.34**	**347**	P	**P**	**04 32 21.1**	**+2.1**
	SNR=22						
BSY				P	**P**	**04 32 21.1**	**+2.1**
	SNR=22						
SMDO	**Samad**	**17.47**	**350**	P	**P**	**04 32 22.0**	**+1.4**
	SNR=9.9						
SMDO				P	**P**	**04 32 22.0**	**+1.4**
	SNR=9.9						
WSAR	**Wadi Sarin**	**17.56**	**352**	P	**P**	**04 32 21.2**	**-0.2**
	0.1nm,0.3s,baz=191,slow=7.3,SNR=3.6						
WSAR				LR	LR	04 37 36.6	
	comp=Z,994nm,21.5s,baz=196,slow=32						
BIDO	**Bidbid**	**17.91**	**350**	P	**P**	**04 32 29.0**	**+3.7**
	SNR=7.8						
ARQ	**Araqi**	**18.07**	**346**	P	**P**	**04 32 30.0**	**+3.0**
	SNR=13						
ARQ				P	**P**	**04 32 30.0**	**+3.0**
	SNR=13						
HOQ	**Hoqain**	**18.12**	**348**	P	**P**	**04 32 28.0**	**+0.4**
	SNR=14						
HOQ				P	**P**	**04 32 28.0**	**+0.4**
	SNR=14						
ATD	**Arta Tunnel**	**19.13**	**289**	LR	LR	04 39 01.2	
	comp=Z,325nm,18.8s,baz=92,slow=34						
BHUJ	**Bhuj**	**19.15**	**24**	*ex*	**P**	**04 32 39.6**	**+0.7**
PALK	**Pallekele**	**19.31**	**85**	LR	LR	04 38 40.8	
	comp=Z,823nm,18.9s,baz=12,slow=32						
ASHO	**Ashiyiah**	**19.47**	**346**	P	**Pn**	**04 32 48.0**	**+4.3**
	SNR=7.8						
ASHO				P	**Pn**	**04 32 48.0**	**+4.3**
	SNR=7.8						
UOSS	**Minazif**	**19.69**	**346**	P	**P**	**04 32 44.8**	**0.0**
UOSS				IAmb	IAmb	04 32 54.6	
	comp=Z,74

BKNI	Bangkinang	40.01	96	P		P		04 35 52.1	+1.3
SDSI	Sungai Dareh	40.60	98	P		P		04 35 54.4	-1.3
TOKA	Tokat	41.00	331	P		P		04 35 58.5	-0.2
TOKA	comp=Z,19nm,1.1s			IAmb		IAmb		04 36 02.0	
KBZ	Khabaz	41.13	340	P		P		04 35 59.8	+0.2
KBZ	comp=Z,2.8nm,0.9s,baz=182,slow=13,SNR=3.3			LR		LR		04 54 15.8	
MATP	comp=Z,234nm,20.3s,baz=148,slow=38 Matopo	41.45	230	P		P		04 36 02.7	0.0
MATP	comp=Z,2.4nm,0.8s,baz=353,slow=9.1,SNR=3.8			LR		LR		04 51 08.3	
BRTR	comp=Z,1μm,18.8s,baz=58,slow=33 Keskin Array B	42.00	328	P		P		04 36 06.6	-0.5
BRTR	comp=Z,4.2nm,1.0s,baz=150,slow=9.0,SNR=20			LR		LR		04 53 55.7	
BRTR	comp=Z,249nm,20.0s,baz=131,slow=37 Keskin Array B	42.00	328	P		P		04 36 06.0	-1.0
BR131	Keskin Array S	42.00	328	P		P		04 36 06.5	-0.5
BR231	Keskin MP Arra	42.55	327	P		S		04 36 11.2	-0.3
BR231	comp=Z,17nm,1.1s			IAmb		IAmb		04 36 13.3	
ABKAR	Akbulak array	43.35	359	P		P		04 36 17.5	-0.1
SLVN	Son La	44.02	65	P		P		04 36 24.5	+0.9
SLVN	comp=Z,16nm,1.3s			IAmb		IAmb		04 36 39.0	
MANT	Manisa	44.07	322	P		P		04 36 22.6	-1.2
WMQ	Urumqi	44.42	27	*e*P		P		04 36 27.5	+1.0
WMQ				pP		sP		04 36 30.8	+1.9
WMQ				sP		pwP		04 36 34.0	0.0
WMQ	comp=Z,5.0nm,0.7s			pmax		pmax			
WMQ	comp=Z,200nm,5.3s			pmax		pmax			
WMQ	comp=N,130nm,10.5s			LR		LR			
WMQ	comp=E,630nm,17.3s			LR		LR			
WMQ	comp=Z,690nm,21.1s			LR		LR			
KLSI	comp=Z,6.3nm,2.0s	44.58	103	P		P		04 36 28.5	+0.5
MAKZ	Makanchi	44.59	20	P		P		04 36 27.7	0.0
MAKZ	comp=Z,12nm,1.2s			IAmb		IAmb		04 36 28.6	
MK31	Makanchi Array	44.69	20	P		P		04 36 28.2	-0.3
MKAR	Makanchi Array	44.69	20	P		P		04 36 27.8	-0.7
MKAR	comp=Z,2.6nm,0.9s,baz=198,slow=7.6,SNR=7.6			LR		LR		04 57 30.7	
LBTB	comp=Z,210nm,18.7s,baz=214,slow=39 Lobatse	46.30	227	P		P		04 36 41.6	0.0
LBTB	comp=Z,2.5nm,0.8s,baz=52,slow=15,SNR=2.4			LR		LR		04 53 27.3	
LBTB	comp=Z,782nm,20.6s,baz=60,slow=33 Lobatse	46.30	227	P		P		04 36 42.4	+0.7
KURK	Kurchatov	47.08	15	P		P		04 36 47.1	-0.1
BRVK	Borovoye	47.71	7	P		P		04 36 51.6	-0.5
GYA	Guiyang	47.84	59	⇑P		P		04 36 53.5	-0.2
GYA				sP		pwP		04 36 59.8	-1.4
GYA				PP		PP		04 38 37.5	-8.2
GYA				S		S		04 43 52.3	+1.2
GYA	comp=Z,11nm,1.2s			pmax		pmax			
GYA	comp=N,280nm,14.9s			LR		LR			
GYA	comp=E,310nm,16.0s			LR		LR			
GYA	comp=Z,390nm,18.3s			LR		LR			
LEM	Lembang	47.87	105	LR		LR		04 53 21.0	
GTA	comp=Z,121nm,21.5s,baz=206,slow=32 Gaotai	48.20	40	*e*P		P		04 36 56.3	-0.1
GTA				pP		pwP		04 37 02.8	-1.1
GTA				sP		sP		04 37 05.8	+6.9
GTA				S		S		04 44 03.0	+7.1
GTA	comp=Z,4.0nm,1.2s			pmax		pmax			
GTA	comp=Z,140nm,4.9s			pmax		pmax			
GTA	comp=N,580nm,19.6s			LR		LR			
GTA	comp=E,940nm,22.2s			LR		LR			
GTA	comp=Z,680nm,21.1s			LR		LR			
TPGR	Topolog	48.36	329	⇓P		P		04 36 56.9	-0.4
HARR	Harsova	48.50	328	⇓P		P		04 36 58.2	-0.2
CFR	Carcaliu	48.73	329	⇑P		P		04 36 59.6	-0.5
BOSA	Boshof	48.73	224	LR		LR		04 55 55.1	
LZH	comp=Z,653nm,18.8s,baz=39,slow=34 Lanzhou	49.26	46	*e*P		P		04 37 05.3	+0.7
LZH				pP		sP		04 37 08.5	+1.4
LZH				sP		pwP		04 37 10.3	-1.8
LZH				*e*PP		PP		04 38 59.5	+0.9
LZH	comp=Z,23nm,1.3s			pmax		pmax			
LZH	comp=Z,120nm,6.5s			LR		LR			
LZH	comp=N,250nm,14.7s			LR		LR			
LZH	comp=E,260nm,14.5s			LR		LR			
ISR	comp=Z,450nm,16.9s Istrita	49.52	328	⇓P		P		04 37 05.8	-0.5
MILM	Milestii Mici	49.61	331	⇑P		P		04 37 05.6	-1.2
TSUM	Tsumeb	49.70	239	P		P		04 37 08.6	+0.5
TSUM	comp=Z,3.8nm,0.9s,baz=41,slow=8.0,SNR=5.2 Tsumeb	49.70	239	P		P		04 37 08.4	+0.2
BISRR	Bisoca	49.72	328	⇓P		P		04 37 06.9	-0.9
NEHR	Nehoiu	49.85	328	⇑P		P		04 37 07.8	-1.0
VRI	Vrincioaia	49.92	329	⇓P		P		04 37 08.6	-0.7
PLOR	Plostina	49.95	329	⇓P		P		04 37 08.5	-1.0
HUMR	Humele	49.98	326	⇑P		P		04 37 10.3	+0.6
MLR	Muntele Rosu	50.08	328	⇓P		P		04 37 10.5	-0.1
TESR	Tescani	50.40	329	⇑P		P		04 37 12.4	-0.4
VOIR		50.52	327	⇑P		P		04 37 13.5	-0.4
ARU	Arti	50.56	358	P		P		04 37 13.5	-0.4
BAIL	Bailesti	50.58	325	⇑P		P		04 37 13.7	-0.6
DOPR	Dopca	50.69	328	⇑P		P		04 37 14.4	-0.7
SORM	Soroca	50.70	332	⇓P		P		04 37 13.5	-1.5
BIZ	Bicaz	50.97	329	⇑P		P		04 37 17.1	-0.1
HERR	Herculane	51.63	325	⇑P		P		04 37 21.8	-0.3
ZAA0	Zalesovo Array	51.69	17	IAmb		IAmb		04 37 31.6	
ZALV	comp=Z,9.6nm,1.2s Zalesovo Beam	51.69	17	P		P		04 37 21.4	-1.0
ZALV	comp=Z,4.8nm,1.0s,baz=234,slow=5.0,SNR=12			LR		LR		04 59 55.5	
ZALV	comp=Z,259nm,20.9s,baz=212,slow=37 Zalesovo Beam	51.69	17	P		P		04 37 21.1	-1.3
GZR	Gura Zlata	51.74	326	⇑P		P		04 37 22.2	-0.8
BURAR	Bucovina Array	51.87	330	⇓P		P		04 37 23.0	-1.0
BURAR	Bucovina Array	51.87	330	P		P		04 37 23.5	-0.5
BUR08	Bucovina Ar. S	51.90	330	IAmb		IAmb		04 37 38.9	
ARCR	comp=Z,11nm,1.2s ARCALIA	51.96	329	⇑P		P		04 37 23.6	-1.0
AKASG	Malin Array Be	52.18	335	P		P		04 37 25.1	-1.0
AKASG	comp=Z,1.5nm,0.8s,baz=134,slow=6.4,SNR=14			LR		LR		05 01 28.1	
AKBB	comp=Z,131nm,20.0s,baz=120,slow=38 Malin Array Si	52.18	335	IAmb		IAmb		04 37 26.0	
XAN	comp=Z,19nm,1.4s Xi'an	52.21	51	P		P		04 37 26.2	-0.5
BZS	Buzias	52.52	326	⇓P		P		04 37 26.6	-0.2
DRGR		52.64	327	⇑P		P		04 37 29.4	-0.3
SIRR	Siria	52.89	326	⇑P		P		04 37 31.5	0.0
OBN	Obninsk	53.06	342	P		P		04 37 31.5	-1.1
KOLS	Kolonicke sedl	54.22	329	*e*P		P		04 37 40.6	-0.6
CRVS	Cervenica-Dubn	54.62	329	*e*P		P		04 37 43.0	-1.1
PSZ	Piszkesteto	54.85	327	⇓P		P		04 37 45.2	-0.7
VYHS	Vyhne	55.76	327	*e*P		P		04 37 50.7	-1.7
LANS	Liptovska Anna	55.81	328	*e*P		P		04 37 52.7	-0.1
KEST	Kesra	56.17	310	LR		LR		05 00 35.8	
TAM	comp=Z,93nm,21.2s,baz=324,slow=35 Tamanrasset	56.31	293	P		P		04 37 56.6	-0.4
TAM	comp=Z,11nm,1.3s			IAmb		IAmb		04 38 05.7	
MODS	Modra-Piesok	56.54	326	*e*P		P		04 37 55.6	-2.4
JAVC	Velka Javorina	56.60	327	*e*P		P		04 37 58.3	-0.1
HHC	Hu-ho-hao-te	56.78	44	*e*P		P		04 38 01.5	+1.5
HHC				S		S		04 45 56.8	+3.5
HHC	Hu-ho-hao-te	56.78	44	SS		SS		04 49 35.0	-6.4
HHC	comp=Z,17nm,1.0s			pmax		pmax			
HHC	comp=Z,180nm,5.9s			pmax		pmax			
HHC	comp=N,500nm,16.6s			LR		LR			
HHC	comp=E,330nm,17.5s			LR		LR			
HHC	comp=Z,450nm,16.3s			LR		LR			
SONM	Songino Array	56.82	35	P		P		04 37 59.7	-0.5
SONM	comp=Z,2.4nm,1.0s,baz=227,slow=6.7,SNR=12			LR		LR		05 03 16.0	
SONM	comp=Z,421nm,18.4s,baz=214,slow=37 Songino Array	56.82	35	P		P		04 37 60.0	-0.2
SOKA	Soboth	56.91	324	*e*P		P		04 37 59.9	-0.9
SOKA	comp=Z,7.9nm,1.2s			*e*P		PKiKP		04 45 24.1	+0.4
ARSA	comp=Z,4.5nm,1.1s Arzberg	56.92	324	*e*P		P		04 37 59.9	-0.8
CONA	comp=Z,10nm,1.2s Conrad Observa	57.09	325	*e*P		P		04 38 01.6	-0.4
CONA	comp=Z,18nm,1.4s			*e*P		PKiKP		04 45 27.1	+3.2
OBKA	comp=Z,9.1nm,1.5s Obir	57.12	323	*e*P		P		04 38 01.7	-0.5
OBKA	comp=Z,9.7nm,1.4s			*e*P		PKiKP		04 45 18.8	-5.2
MORC	comp=Z,12nm,1.8s Moravsky Berou	57.19	328	⇑P		P		04 38 01.5	-1.1
MORC	Moravsky Berou	57.19	328	*e*P		P		04 38 01.5	-1.1
ULN	Ulaanbaatar	57.21	35	P		P		04 38 02.0	-1.0
KLMR	Klimovskoe	57.36	348	*e*P		P		04 38 00.4	-3.1
KLMR	comp=Z,26nm,1.5s			AMP				04 38 10.0	
KRUC	Moravsky	57.41	327	*e*P		P		04 38 02.9	-1.2
VRAC	Vranov	57.44	327	⇓P		P		04 38 02.5	-1.8
VRAC	Vranov	57.44	327	*e*P		P		04 38 03.5	-0.8
MYKA	Terra Mystica	57.72	323	*e*P		P		04 38 05.9	-0.5
MYKA	comp=Z,17nm,1.2s			*e*P		PKiKP		04 45 25.6	+0.9
KRLC	comp=Z,9.2nm,1.1s Kraliky	57.77	328	*e*P		P		04 38 05.4	-1.3
MOA	Molln	57.96	324	*e*P		P		04 38 06.9	-1.2
MOA	comp=Z,19nm,1.1s			*e*P		PKiKP		04 45 28.1	+3.3
TREC	comp=Z,7.7nm,1.2s Trest	58.04	326	*e*P		P		04 38 07.2	-1.3
KBA	Koelnbreinsper	58.12	323	*e*P		P		04 38 08.1	-1.2
KBA	comp=Z,8.8nm,1.1s			*e*P		PKiKP		04 45 26.9	+1.7
OSTC	comp=Z,8.5nm,2.0s Ostas	58.34	328	*e*P		P		04 38 09.6	-1.0
OSTC				*ex*		x		04 38 21.7	
CHVC	Chvalec	58.44	328	*e*P		P		04 38 09.2	-2.2
ABTA	Abfaltersbach	58.46	323	*e*P		P		04 38 10.5	-1.1
ABTA	comp=Z,9.2nm,1.0s			*e*P		PKiKP		04 45 28.2	+2.6
GERES	comp=Z,4.7nm,1.5s GERESS Array B	58.80	325	P		P		04 38 12.5	-1.5
GERES	comp=Z,0.6nm,0.8s,baz=140,slow=6.4,SNR=5.8			LR		LR		05 05 16.7	
KHC	comp=Z,70nm,19.7s,baz=139,slow=38 Kasperske Hory	59.01	325	*e*P		P		04 38 12.7	-2.7
KHC				*ex*		x		04 38 21.2	
TORD	Torodi Ar. Bea	59.16	282	P		P		04 38 16.1	-0.8
TORD	comp=Z,2.1nm,1.0s,baz=90,slow=7.0,SNR=8.4			PcP		PcP		04 39 04.9	-0.6
TORD	comp=Z,1.4nm,0.9s,baz=60,slow=4.5,SNR=4.2			LR		LR		05 05 24.2	
TORD	comp=Z,142nm,18.0s,baz=55,slow=38 Torodi Ar. Bea	59.16	282	P		P		04 38 16.6	-0.3
WTTA	Wattenberg	59.23	323	*e*P		P		04 38 15.4	-1.7
WATA	comp=Z,20nm,1.7s Walderalm	59.30	323	*e*P		P		04 38 16.3	-1.2
SQTA	comp=Z,11nm,1.0s Sankt Quirin	59.47	323	*e*P		P		04 38 17.1	-1.6
SQTA	comp=Z,6.9nm,1.1s			*e*P		PKiKP		04 45 29.3	+2.4
BNSI	comp=Z,2.8nm,0.7s Bone	59.57	99	P		P		04 38 19.9	+0.1
NJ2	comp=Z,539nmcomp=Z,11nm,0.7s Nanjing	59.58	56	*e*P		P		04 38 19.3	-0.3
NJ2	comp=Z,11nm,0.5s			pmax		pmax			
MOTA	Moosalm	59.59	323	*e*P		P		04 38 17.9	-1.6
MOTA	comp=Z,8.7nm,1.0s			*e*P		PKiKP		04 45 31.0	+3.9
FETA	comp=Z,8.5nm,1.1s Feichten	59.67	322	*e*P		P		04 38 18.5	-1.6
FETA	comp=Z,9.1nm,1.3s			*e*P		PKiKP		04 45 30.9	+3.8
NKC	comp=Z,7.2nm,1.5s Novy Kostel	60.21	326	*e*P		P		04 38 23.0	-0.6
DAVA	Damuels	60.30	322	*e*P		P		04 38 23.1	-1.4
CLL	comp=Z,10nm,1.2s Collm	60.45	327	*i* P		P		04 38 24.0	-1.2
CLL	comp=Z,20nm,1.6s			*i*				04 38 31.8	
CLL				*e*S		S		04 46 42.0	+1.5
CLL	Collm	60.45	327	P		P		04 38 24.0	-1.2
MRSI	Marisa	60.73	93	P		P		04 38 25.6	-2.1
FINES	comp=Z,11nm,0.8s FINESS Array B	61.44	342	LR		LR		05 07 37.3	
SENIN	comp=Z,190nm,20.8s,baz=152,slow=38 Lac Senin/Sane	61.52	320	P		P		04 38 31.6	-1.3
BFO	Black Forest	61.70	323	P		P		04 38 32.7	-1.1
GTOI	Gorontalo	61.77	92	P		P		04 38 31.3	-3.5
KMSI	comp=Z,5.3nm,1.5s Cibinong	62.75	92	P		P		04 38 41.1	-0.3
MORW	comp=Z,26μmcomp=Z,198nm,0.4s Morawa	62.95	127	P		P		04 38 43.2	+0.8
PSA00	Pilbara Seismi	63.45	117	P		P		04 38 48.0	+2.2
DBIC	Dimbokro	65.75	275	LR		LR		05 07 15.7	
NRIK	comp=Z,181nm,20.1s,baz=71,slow=36 Noril'sk	65.78	10	LR		LR		05 09 54.4	
NOA	comp=Z,464nm,21.0s,baz=200,slow=38 NORSAR Array B	66.56	336	P		P		04 39 04.7	-0.8
NOA	comp=Z,2.7nm,1.1s,baz=121,slow=6.8,SNR=5.1			LR		LR		05 10 13.7	
ESDC	comp=Z,128nm,21.0s,baz=120,slow=38 Sonseca Array	67.38	311	P		P		04 39 10.5	-0.7
ESDC	comp=Z,2.0nm,1.0s,baz=79,slow=7.7,SNR=5.1 Sonseca Array	67.38	311	P		P		04 39 10.7	-0.4
FITZ	Fitzroy Crossi	67.71	112	P		P		04 39 13.8	+0.3
ARCES	ARCESS Array B	67.83	347	LR		LR		05 11 36.5	
KSRS	comp=Z,110nm,18.6s,baz=125,slow=38 Korea Array	67.98	52	P		P		04 39 13.5	-1.4
KSRS	comp=Z,2.4nm,0.8s,baz=265,slow=7.4,SNR=6.1			LR		LR		05 11 08.0	
JNU	comp=Z,157nm,18.4s,baz=268,slow=38 Nakatsue	69.76	57	LR		LR		05 12 00.7	
USRK	comp=Z,284nm,18.1s,baz=276,slow=38 Ussuriysk Ar.	72.16	45	LR		LR		05 13 04.3	
MAW	comp=Z,353nm,19.2s,baz=269,slow=37 Mawson	73.21	179	P		P		04 39 46.1	+0.1
MAW	comp=Z,1.0nm,0.5s,baz=359,slow=5.0,SNR=7.5			LR		LR		05 03 42.5	
MAW	comp=Z,288nm,21.8s,baz=46,slow=29 Mawson	73.21	179	IAmb		IAmb		04 39 54.8	
MJAR	comp=Z,1.5nm,1.1s Matsushiro Arr	76.06	54	P		P		04 40 02.0	-1.4
MJAR	comp=Z,0.8nm,0.3s,baz=274,slow=8.0,SNR=4.2			LR		LR		05 16 27.0	
SYO	comp=Z,65nm,18.5s,baz=210,slow=38 Syowa Base	76.12	188	⇓eX		P		04 40 02.0	-0.9
SYO	Syowa Base	76.12	188	*e*sP		sP		04 40 09.1	+3.2
WRA	Warramunga Arr	76.14	112	P		P		04 40 03.5	-0.6
WRA	comp=Z,10nm,1.0s,baz=289,slow=5.1,SNR=25			LR		LR		05 09 47.1	
WRAB	comp=Z,39nm,20.5s,baz=165,slow=33 Tennant Creek	76.15	112	P		P		04 40 04.1	-0.1
WB2	Warramunga Arr	76.15	112	P		P		04 40 04.0	-0.2
WR0	Warramunga Arr	76.33	112	P		P		04 40 05.0	-0.2
ASAR	Alice Springs	76.52	116	P		P		04 40 05.9	-0.4
ASAR	comp=Z,6.5nm,0.9s,baz=286,slow=5.2,SNR=35 Alice Springs	76.52	116	P		P		04 40 05.6	-0.6
AS31	Alice Springs	76.52	116	P		P		04 40 05.6	-0.6
JHJ	Hachijo jima 2	77.21	57	LR		LR		05 15 27.9	
TIXI	comp=Z,88nm,20.9s,baz=286,slow=37 Tiksi	77.58	17	P		P		04 40 09.9	-1.3
MA2	Magadan	84.79	31	LR		LR		05 21 51.9	
STKA	comp=Z,103nm,18.1s,baz=270,slow=38 Stephens Creek	84.81	123	P		P		04 40 50.0	-0.5
STKA	comp=Z,3.2nm,0.8s,baz=308,slow=7.3,SNR=5.3			LR		LR		05 14 39.6	
STKA	comp=Z,174nm,20.2s,baz=214,slow=33 Stephens Creek	84.81	123	P		P		04 40 50.0	-0.5
VNA2	Neumayer--Watz	88.60	198	P		P		04 41 08.7	+0.6
VNA1	baz=100,slow=5.2 Neumayer--Stat	88.77	198	P		P		04 41 10.3	+1.4
PETK	Petropavlovsk-	89.25	37	LR		LR		05 24 19.1	
VNA3	comp=Z,233nm,18.4s,baz=267,slow=38 Neumayer Olymp	89.41	198	P		P		04 41 12.4	+0.4
KRVT	Keravat (AS076	91.13	94	LR		LR		05 23 10.9	
VNDA	comp=Z,21nm,20.1s,baz=257,slow=36 Vanda	97.88	168	LR		LR		05 20 17.1	
TXAR	comp=Z,254nm,19.5s,baz=307,slow=32 Lajitas Array	142.23	338	PKhKP		PKPdf		04 47 44.1	-4.8
HPIG	comp=Z,0.7nm,0.9s,baz=47,slow=4.0,SNR=2.4	145.13	339	PKPbc		PKPbc		04 47 52.8	-0.9
SRIG	Santa Rosalia	146.52	350	PKPdf		PKPdf		04 47 56.1	-0.2

GCMT ***28*** *04:35:44.6±0.4, 5.77N±0.03×61.10E±0.04, h23km, MW4.9/86, Moment Tensor Solution. s18,c19; s86,c106; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.06±.22; Mθθ 2.04±.13; Mϕϕ 1.03±.13; Mrθ 0.41±.16; Mrϕ -1.00±.07; Mθϕ 0.36±.20; Best double couple: Mo2.89800×10^16 NP1:φs130.00000°, δ44.00000°, λ-78.00000°. NP2: φs293.00000°, δ47.00000°, λ-101.00000°. Principal axes: T 2.6560, Plg2.0000°, Azm31.0000°; N 0.4940, Plg8.0000°, Azm301.0000°; P -3.1400, Plg82.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***28*** *04:35:46.3±0.7, 5.68N×61.33E, h0km, mb4.0/15, mb1 4.2/15, mb1mx3.9/45, mbtmp4.0/15 Error ellipse: s-maj=22.6km s-min=17.1km az=48.0*

NEIC ***28*** *04:35:47.6±1.8, 5.6N±0.1×61.3E±0.1, h10km±1km, mb4.4/21, Error ellipse: s-maj=27.8km s-min=7.9km az=234.0*

ISC 28 04:35:48.1±0.6, 5.7N±0.1×61.4E±0.1, h10km, n50, σ0§99/46, mb4.2/19, 4C-4D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	9.79	312	Pn	Pn	04 38 11.7	+2.5
UOSS	Minazif	19.82	346	P	P	04 40 18.3	-0.7
RAYN	Ar Rayn	23.46	321	P	P	04 40 56.6	-1.4
RAYN	comp=Z,22nm,1.5s			IAmb	IAmb	04 41 08.4	
HRA	Herat	28.60	1	P	P	04 41 44.6	-0.3
HRA	comp=Z,11nm,1.5s			IAmb	IAmb	04 42 31.9	
KBL	Kabul	29.60	13	P	P	04 41 55.0	+1.3
KBL	comp=Z,11nm,1.4s			IAmb	IAmb	04 42 03.4	
NIL	Nilore	29.95	20	P	P	04 41 58.3	+1.7
BTK	Batken	35.28	13	P	P	04 42 44.0	+0.7
MARD	Mardin	36.72	332	P	P	04 42 56.8	+1.1
LSA	Lhasa	36.86	46	P	P	04 42 56.9	-0.5
KK31	Karatay Array	38.15	11	P	P	04 43 08.1	+0.4
KK31	comp=Z,10nm,1.6s			IAmb	IAmb	04 43 22.9	
KKAR	Karatay Array	38.15	11	P	P	04 43 08.2	+0.6
AAK	Ala-Archa	38.61	16	P	P	04 43 10.9	-0.8
AAK	comp=Z,1.2nm,0.7s,baz=203,slow=13,SNR=3.8 Ala-Archa	38.61	16	IAmb	IAmb	04 43 20.6	
CMAR	comp=Z,12nm,1.4s Chiang Mai Arr	38.74	67	P	P	04 43 13.0	+0.1
CHTO	comp=Z,1.2nm,0.3s,baz=264,slow=8.1,SNR=5.2 Chiang Mai	38.83	67	P	P	04 43 13.7	-0.1
BR131	Keskin Array S	42.15	328	P	P	04 43 39.6	-1.5
BRTR	Keskin Array B	42.15	328	P	P	04 43 40.0	-1.0
ABKAR	comp=Z,1.4nm,0.8s,baz=154,slow=8.3,SNR=8.3 Akbulak array	43.47	359	P	P	04 43 51.0	-0.4
MKAR	Makanchi Array	44.77	20	P	P	04 44 01.5	-0.4
KURBB	comp=Z,0.4nm,0.8s,baz=217,slow=7.0,SNR=1.8 Kurchatov Arra	47.06	15	P	P	04 44 19.2	-0.6
VASR	comp=Z,0.3nm,0.4s,baz=214,slow=7.6,SNR=1.3 Vaslui	50.07	330	⇓P	P	04 44 53.8	+11
VRI	Vrincioaia	50.07	329	⇓P	P	04 44 44.2	+1.0
PLOR	Plostina	50.10	329	⇑P	P	04 44 41.8	-1.6
MLR	Muntele Rosu	50.23	328	⇓P	P	04 44 44.9	+0.4
VOIR		50.67	327	⇑P	P	04 44 46.5	-1.3
ARU	Arti	50.69	358	P	P	04 44 48.0	+0.4
ARR	Arges	50.85	327	⇑P	P	04 44 48.0	-1.2
ZALV	Zalesovo Beam	51.77	17	P	P	04 44 55.7	-0.1
ZALV	comp=Z,1.3nm,0.7s,baz=216,slow=4.6,SNR=1.7 Zalesovo Beam	51.77	17	P	P	04 44 57.3	+1.5
GZR	Gura Zlata	51.89	326	⇓P	P	04 45 09.7	+13
BURAR	Bucovina Array	52.02	330	P	P	04 44 56.9	-1.0
XAN	Xi'an	52.21	51	P	P	04 44 59.0	-0.5
AKASG	Malin Array Be	52.33	335	P	P	04 45 00.5	+0.5
BZS	comp=Z,0.2nm,0.3s,baz=143,slow=6.4,SNR=5.0 Buzias	52.67	326	⇑P	P	04 45 01.1	-1.5
SONM	Songino Array	56.87	35	P	P	04 45 33.1	-0.1
SONM	comp=Z,0.4nm,0.6s,baz=235,slow=5.8,SNR=1.5 Songino Array	56.87	35	IAmb	IAmb	04 45 40.4	
GERES	comp=Z,3.2nm,1.2s GERESS Array B	58.95	325	P	P	04 45 47.3	-0.5
TORD	comp=Z,0.8nm,0.9s,baz=160,slow=6.0,SNR=2.6 Torodi Ar. Bea	59.27	282	P	P	04 45 49.4	-1.1
TORD	comp=Z,2.2nm,1.0s,baz=90,slow=4.3,SNR=7.0			PcP	PcP	04 46 37.9	-0.8
ESDC	comp=Z,1.3nm,1.1s,baz=84,slow=2.6,SNR=2.9 Sonseca Array	67.53	311	P	P	04 46 43.4	-1.5
MAW	comp=Z,1.8nm,1.1s,baz=97,slow=6.0,SNR=4.2 Mawson	73.09	179	P	P	04 47 18.4	+0.3
WRA	comp=Z,1.1nm,0.3s,baz=346,slow=1.7,SNR=6.6 Warramunga Arr	76.01	112	P	P	04 47 36.5	+0.3
WRAB	comp=Z,4.4nm,1.0s,baz=287,slow=5.1,SNR=12 Tennant Creek	76.02	112	P	P	04 47 36.1	-0.1
WB2	Warramunga Arr	76.02	112	P	P	04 47 36.1	-0.1
ASAR	Alice Springs	76.38	116	P	P	04 47 38.6	+0.4
ASAR	comp=Z,4.3nm,1.0s,baz=288,slow=5.1,SNR=15 Alice Springs	76.38	116	P	P	04 47 37.4	-0.9
STKA	Stephens Creek	84.67	123	P	P	04 48 22.9	+0.3
STKA	comp=Z,1.7nm,0.8s,baz=306,slow=8.7,SNR=3.6 Stephens Creek	84.67	123	IAmb	IAmb	04 48 30.7	
VNA2	comp=Z,2.8nm,1.5s Neumayer--Watz	88.52	198	P	P	04 48 41.5	+0.9
VNA3	baz=73,slow=6.0 Neumayer Olymp	89.33	198	P	P	04 48 45.4	+1.0
TXAR	Lajitas Array	142.37	338	PKhKP	PKPpre	04 55 15.9	
TXAR	comp=Z,0.4nm,1.0s,baz=95,slow=4.0,SNR=2.6			PKP	PKPdf	04 55 22.4	+0.4
	comp=Z,0.2nm,0.7s,baz=110,slow=3.3,SNR=3.5						

UPA ***28*** *04:36:21.6±2.0,

CAPC eS Sn 04 36 37.9 +0.4
CAPC i 04 36 39.0
comp=Z,138µm,0.3s
UPD2 Meteti 0.58 250⇑ iP Pn 04 36 34.6 -1.1
UPD2 eS Sn 04 36 43.3 -1.3
UPD2 i 04 36 57.4
comp=Z,60µm,0.4s
UPD2 Meteti 0.58 250 i P Pn 04 36 34.4 -1.3
UPD2 eS Sn 04 36 43.3 -1.3
LCBC Los crdobas, 1.09 84⇑ eP Pn 04 36 43.6 +1.3
LCBC eS Sn 04 36 57.3 +0.9
LCBC i 04 37 04.0
comp=Z,33µm,0.3s
CNTA3 Canitas, Panam 1.49 289 eP Pn 04 36 47.5 -0.2
CNTA3 eS Sn 04 37 05.8 -0.3
PTAC Punta Ardita, 1.62 192⇓ iP Pn 04 36 48.5 -1.2
PTAC eS Sn 04 37 08.3 -1.1
CHPO Chepo, Panama 1.69 285 eP Pn 04 36 49.3 -1.2
CHPO eS Sn 04 37 08.7 -2.3
MOTC Monteria, Cord 1.78 89⇑ iP Pn 04 36 52.3 +0.6
MOTC eS Sn 04 37 14.3 +1.2
MOTC i 04 37 16.4
comp=Z,5µm,0.3s
MONA Monteria 1.78 89 eP Pn 04 36 52.0 +0.2
MONA eS Sn 04 37 13.9 +0.6
MIRA3 Miramar, Colon 2.02 294 eP Pn 04 36 54.9 -0.1
MIRA3 eS Sn 04 37 18.1 -1.1
UPA Univ. de Panam 2.06 277⇑ eP Pn 04 36 54.9 -0.7
UPA eS Sn 04 37 19.4 -0.8
UPA i 04 37 23.3
comp=Z,5µm,0.5s
UPA Univ. de Panam 2.06 277 eP Pn 04 36 54.6 -1.0
UPA eS Sn 04 37 19.1 -1.0
UPA Univ. de Panam 2.06 277 eP Pn 04 36 54.8 -0.7
UPA eS Sn 04 37 20.0 -0.2
TABO3 Taboga, Panama 2.07 272 eP Pn 04 36 54.7 -1.0
DBBC Dabeiba 2.12 144⇑ iP Pn 04 36 56.5 +0.1
UREC San Jos de Ur 2.15 117⇑ eP Pn 04 36 56.9 0.0
UREC eS Sn 04 37 22.4 +0.1
CHOR3 La Chorrera 2.28 274 eP Pn 04 36 58.1 -0.5
CHOR3 eS Sn 04 37 25.4 -0.2
ZANG Zanguenga, Cho 2.39 275 eP Pn 04 36 59.3 -0.8
ZANG eS Sn 04 37 28.3 +0.2
SOLC Bahia Solano 2.50 179 eP Pn 04 37 00.7 -1.0
SOLC eS Sn 04 37 30.2 -0.7
SOLC i 04 37 40.7
comp=Z,2µm,0.6s
SJCC San Jacinto, C 2.53 63⇓ eP Pn 04 37 02.9 +0.9
SJCC eS Sn 04 37 31.8 +0.2
SJCC i 04 37 36.8
comp=Z,3µm,0.4s
SJCC San Jacinto, C 2.53 63⇓ iP Pn 04 37 02.8 +0.8
SJCC eS Sn 04 37 31.6 0.0
VTON El Valle, Cocl 2.62 267 eP Pn 04 37 02.9 -0.5
PNME Penonome 2.84 265⇑ eP Pn 04 37 06.1 -0.2
PNME eS Sn 04 37 38.5 -0.9
PNME i 04 37 52.8
comp=Z,3µm,0.6s
PNME Penonome 2.84 265⇑ iP Pn 04 37 05.9 -0.5
PNME eS Sn 04 37 38.0 -1.4
ZARC Zaragoza, Cauc 2.86 116⇑ eP Pn 04 37 06.7 +0.1
ZARC eS Sn 04 37 39.4 -0.5
ZARC i 04 37 42.6
comp=Z,6µm,0.5s
AZU Azuero 2.94 251 eP Pn 04 37 06.9 -0.8
AZU i 04 37 48.9
comp=Z,6µm,0.1s
AZU Azuero 2.94 251 eP Pn 04 37 07.2 -0.5
AZU eS Sn 04 37 38.3 -3.4
AZU Azuero 2.94 251 eP Pn 04 37 06.7 -1.0
HELC Santa Helena 3.18 143⇑ iP Pn 04 37 11.4 +0.2
HELC eS Sn 04 37 49.2 +1.1
HELC i 04 38 13.0
comp=Z,885nm,0.7s
CBOC Ciudad Bolivar 3.20 153⇑ eP Pn 04 37 12.7 +1.3
CBOC eS Sn 04 37 48.7 +0.3
CBOC i 04 38 05.0
ARGC Ariguani, Magd 3.36 71 eP Pn 04 37 14.8 +1.4
ARGC i 04 37 52.9
comp=Z,4µm,0.2s
ARGC eS Sn 04 37 53.2 +1.0
CACAO El Cacao, Vera 3.64 248 eP Pn 04 37 16.6 -0.7
CACAO eS Sn 04 37 56.7 -2.3
PTBC PUERTO BERRIO, 3.70 126⇑ iP Pn 04 37 17.4 -0.6
PTBC eS Sn 04 37 59.3 -1.1
PTBC i 04 38 04.0
comp=Z,2µm,0.5s
PIZC Pizarro, Choco 3.75 178 eP Pn 04 37 19.1 +0.3
PLMC San Jos del P 3.99 163⇑ eP Pn 04 37 21.3 -0.8
PLMC eS Sn 04 38 07.2 -0.5
SMRC Santa Marta, M 3.99 53 eP Pn 04 37 23.3 +1.2
SMRC eS Sn 04 38 07.6 -0.1
SMRC i 04 38 11.7
comp=Z,1µm,0.4s
BRRC Barranca, Sant 4.05 113⇑ eP Pn 04 37 23.4 +0.4
BRRC eS Sn 04 38 09.1 -0.1
BRRC i 04 38 18.7
comp=Z,1µm,0.4s
GUY2C Guyana, Caldas 4.07 149⇑ eP Pn 04 37 24.9 +1.3
GUY2C eS Sn 04 38 13.5 +3.3
GUY2C i 04 38 43.4
comp=Z,728nm,0.7s
NORC Norcasia 4.07 141⇑ eP Pn 04 37 24.2 +0.9
NORC eS Sn 04 38 11.0 +1.3
NORC i 04 38 44.2
comp=Z,480nm,0.6s
OCAC Ocana 4.13 97⇑ eP Pn 04 37 24.1 0.0
OCAC eS Sn 04 38 11.0 -0.2
RREF El Recreo 4.36 151⇑ eP Pn 04 37 29.3 +1.7
RREF eS Sn 04 38 22.4 +4.9
RREF i 04 38 27.9
comp=Z,341nm,0.5s
CVALL Valledupar, Ce 4.50 67 eP Pn 04 37 29.5 +0.4
CVALL eS Sn 04 38 17.8 -2.4
SPBC San Pablo de B 4.55 132⇑ eP Pn 04 37 29.5 -0.4
SPBC eS Sn 04 38 20.8 -0.8
SPBC i 04 38 44.4
comp=Z,380nm,0.3s
TOLC Tolima 4.65 153 eP Pn 04 37 35.2 +3.8
TOLC i 04 38 49.5
comp=Z,710nm,0.6s
ANIL Santa Ana 4.69 154 eP Pn 04 37 34.6 +2.6
ANIL eS Sn 04 38 34.6 +9.3
MALC Bahia Malaga 4.70 178 eP Pn 04 37 33.3 +1.4
BARC Barichara 4.75 116 eP Pn 04 37 33.1 +0.4
BARC eS Sn 04 38 24.7 -1.9
BARC i 04 38 51.4
comp=Z,1µm,0.6s
PAMC Pamplona, Colo 4.92 106⇑ eP Pn 04 37 35.6 +0.4
PAMC eS Sn 04 38 31.7 +0.6
PAMC i 04 38 36.0
comp=Z,2µm,0.5s
ROSC El Rosal 4.98 141 P Pn 04 37 37.9 +1.9
comp=Z,67nm,0.3s,baz=344,slow=14,SNR=88
ROSC S Sn 04 38 34.5 +2.0
comp=Z,63nm,0.3s,baz=162,slow=20,SNR=2.0
ROSC LR LR 04 39 45.3
comp=Z,4µm,19.6s,baz=340,slow=40
ROSC El Rosal 4.98 141⇑ iP Pn 04 37 38.1 +2.2
ROSC eS Sn 04 38 34.9 +2.4
ROSC i 04 38 54.2
comp=Z,335nm,0.6s
ROSC El Rosal 4.98 141 Pn Pn 04 37 37.8 +1.8
BRU2 Volcan 5.17 271⇓ iP Pn 04 37 39.0 +0.6
BRU2 eS Sn 04 38 37.9 +1.1
BRU2 Volcan 5.17 271 eP Pn 04 37 39.0 +0.6
RUSC La Rusia 5.18 123⇑ eP Pn 04 37 38.1 -0.8
RUSC eS Sn 04 38 36.1 -1.6
ORTC Ortega, Tolima 5.28 155⇑ eP Pn 04 37 42.5 +2.6
ORTC eS Sn 04 38 43.7 +4.2
ORTC i 04 39 01.7
comp=Z,313nm,0.8s
EDSV San Vito 5.45 271 eP Pn 04 37 43.4 +1.2
CHIC Chingaza 5.52 138⇑ iP Pn 04 37 44.4 +1.0
CHIC eS Sn 04 38 46.8 +1.0
CHIC i 04 38 53.0
comp=Z,614nm,0.6s
DRK0 Durika 5.74 276 eP Pn 04 37 46.0 -0.2
EDBA Buenos Aires 5.76 275 eP Pn 04 37 46.9 +0.5
PTJ1 Puerto Jimnez 5.78 268 eP Pn 04 37 47.7 +1.1
EDPN Palmar Norte 5.93 273 eP Pn 04 37 49.7 +1.0
VILC Villavicencio, 5.93 141 eP Pn 04 37 51.1 +2.3
VILC eS Sn 04 38 54.7 -0.9
VILC eS Sn 04 38 54.7 -0.9
VILC i 04 39 02.1
comp=Z,513nm,0.5s
VILC i 04 39 02.1
comp=Z,513nm,0.5s
PRVC Isla de Provid 5.99 321 eP Pn 04 37 46.9 -2.6
PRVC eP Pn 04 37 46.9 -2.6
PRVC eS Sn 04 38 51.1 -5.6
PRVC eS Sn 04 38 51.1 -5.6
PRVC i 04 38 59.3
comp=Z,576nm,0.5s
PRVC i 04 38 59.3
comp=Z,576nm,0.5s
BATAN Batan 5.99 283 eP Pn 04 37 49.8 +0.3
MARP Paez Belalcaza 6.05 166⇑ eP Pn 04 37 53.0 +2.3
MARP ⇑eP Pn 04 37 53.0 +2.3
MARP eS Sn 04 38 59.7 +1.0
MARP eS Sn 04 38 59.7 +1.0
MARP i 04 39 06.6
comp=Z,1µm,1.3s
MARP i 04 39 06.6
comp=Z,1µm,1.3s
TAMC Tame, Arauca 6.07 112 eP Pn 04 37 51.0 +0.3
TAMC eP Pn 04 37 51.0 +0.3
TAMC eS Sn 04 39 01.9 +3.0
TAMC eS Sn 04 39 01.9 +3.0
TAMC i 04 39 28.0
comp=Z,492nm,0.6s
TAMC i 04 39 28.0
comp=Z,492nm,0.6s
EDLM Las Mercedes 6.08 275 eP Pn 04 37 51.3 +0.5
URIC Uribia, Colomb 6.13 61 eP Pn 04 37 52.5 +1.1
URIC eP Pn 04 37 52.5 +1.1
URIC eS Sn 04 37 59.9 -2.4
URIC eS Sn 04 37 59.9 -2.4
URIC i 04 39 07.6
comp=Z,881nm,0.5s
URIC i 04 39 07.6
comp=Z,881nm,0.5s
PEZE Perez Zeledon, 6.17 276 eP Pn 04 37 52.5 +0.4
POPC Popayan, Colom 6.21 173 eS Sn 04 39 05.0 +2.3
POPC eS Sn 04 39 05.0 +2.3
MAPC Malpelo 6.26 221 eP Pn 04 37 53.4 +0.2
MAPC eP Pn 04 37 53.4 +0.2
CDM Cerro de Muert 6.28 278 eP Pn 04 37 53.3 -0.5
CVTR Volcan Turrial 6.34 282 eP Pn 04 37 54.5 -0.2
EDDO Dominical 6.34 275 eP Pn 04 37 55.2 +0.8
BETA Betania 6.35 161 eP Pn 04 37 57.1 +2.6
BETC eP Pn 04 37 57.1 +2.6
RIMA Rio Macho 6.40 280 eP Pn 04 37 55.3 0.0
PCON Cinco Dias 6.46 171 eP Pn 04 37 60.0 +3.5
PCON eP Pn 04 37 60.0 +3.5
LCR2 La Lucha 2 6.53 279 eP Pn 04 37 56.9 -0.3
HDC3 Heredia 3 6.68 281 eP Pn 04 37 60.0 +0.8
HDC Heredia 6.68 281 eP Pn 04 37 59.8 +0.7
HDC Heredia 6.68 281 Pn 04 37 59.1 0.0
SDV Santo Domingo 6.75 88 P Pn 04 38 00.7 +0.6
comp=Z,47nm,0.3s,baz=273,slow=12,SNR=265
SDV S Sn 04 39 14.3 -1.5
comp=Z,518nm,0.3s,baz=28,slow=20,SNR=27
SDV LR LR 04 41 27.3
comp=Z,847nm,19.0s,baz=264,slow=45
SDV Santo Domingo 6.75 88 eP Pn 04 38 00.4 +0.3
SDV eP Pn 04 38 00.4 +0.3
SDV eS Sn 04 39 13.5 -2.3
SDV eS Sn 04 39 13.5 -2.3
SDV Santo Domingo 6.75 88 Pn Pn 04 38 00.3 +0.2
GARC Garzon, Huila 6.80 163⇑ eP Pn 04 38 02.4 +1.5
GARC ⇑eP Pn 04 38 02.4 +1.5
SRA1 San Ramn 7.05 281 eP Pn 04 38 05.2 +1.0
COVE Coope Vega, Sa 7.12 287 eP Pn 04 38 05.2 +0.2
JACO JACO, Garabito 7.17 278 eP Pn 04 38 07.0 +1.3
FLOC Florencia 7.34 166⇑ eP Pn 04 38 09.5 +1.5
FLOC ⇑eP Pn 04 38 09.5 +1.5
FLOC eS Sn 04 39 30.1 +0.1
FLOC eS Sn 04 39 30.1 +0.1
CEDE Laguna Cedeo 7.35 284 eP Pn 04 38 09.4 +1.2
ARE1 Arenal 1 7.36 284 eP Pn 04 38 09.2 +0.9
CASO Castillo 7.37 284 eP Pn 04 38 09.6 +1.2
GCUF Volcan Galeras 7.47 179 eP Pn 04 38 11.8 +1.5
GCUF eP Pn 04 38 11.8 +1.5
GCUF eS Sn 04 39 28.8 -5.1
GCUF eS Sn 04 39 28.8 -5.1
GCUF i 04 39 41.2
comp=Z,80nm,0.5s
GCUF i 04 39 41.2
comp=Z,80nm,0.5s
CPAS2 Pasto 7.48 178 eP Pn 04 38 12.0 +1.7
CPAS2 eP Pn 04 38 12.0 +1.7
MACC Macarena, Meta 7.48 151 eP Pn 04 38 10.3 +0.4
MACC eP Pn 04 38 10.3 +0.4
MACC i 04 40 12.5
comp=Z,80nm,0.5s
MACC i 04 40 12.5
comp=Z,80nm,0.5s
CPAS1 Pasto 7.51 179 eP Pn 04 38 12.8 +2.1
CPAS1 eP Pn 04 38 12.8 +2.1
JTS Las Juntas de 7.55 282 P Pn 04 38 11.5 +0.6
comp=Z,19nm,0.3s,baz=149,slow=9.0,SNR=108
JTS S Sn 04 39 36.2 +1.1
comp=Z,6.7nm,0.3s,baz=335,slow=19,SNR=1.2
JTS LR LR 04 41 33.1
comp=Z,1µm,21.5s,baz=178,slow=41
JTS Las Juntas de 7.55 282 iP Pn 04 38 11.9 +1.0
JTS pmax pmax
comp=Z,447nm,0.9s
JTS Las Juntas de 7.55 282 eP Pn 04 38 11.5 +0.6
ESPN Las Esperanzas 7.55 298 Pn Pn 04 38 10.5 -0.4
PTEN Parque Tenorio 7.67 285 eP Pn 04 38 13.1 +0.5
ACAL Aguas Claras 7.70 285 eP Pn 04 38 13.5 +0.5
GUVC San Jose del G 7.81 142 eP Pn 04 38 14.4 -0.2
GUVC eP Pn 04 38 14.4 -0.2
GUVC eS Sn 04 39 40.1 -1.6
GUVC eS Sn 04 39 40.1 -1.6
GUVC i 04 39 52.2
comp=Z,82nm,0.3s
GUVC i 04 39 52.2
comp=Z,82nm,0.3s
CUI Cuipilapa 7.83 285 eP Pn 04 38 14.8 0.0
HORNC Hornillas 7.86 285 eP Pn 04 38 15.3 +0.1
COLC Colonia 7.87 285 eP Pn 04 38 15.7 +0.3
GUAB Guayabo de Bag 7.90 285 eP Pn 04 38 16.6 +0.8
GPS2 Hotel Rincn d 8.03 285 eP Pn 04 38 18.0 +0.4
GPS1 Guardaparques 8.03 285 eP Pn 04 38 17.6 0.0
BUAI Buenos Aires 8.04 286 eP Pn 04 38 17.9 +0.2
GPS3 Bodega del ICE 8.04 285 eP Pn 04 38 18.1 +0.3
GB1A Borinquen Arri 8.09 285 eP Pn 04 38 19.4 +1.0
BUEV Buena Vista 8.09 285 eP Pn 04 38 19.4 +1.0
LAPC Finca la Perla 8.11 285 eP Pn 04 38 18.8 +0.2
GBS3 Finca Las Img 8.13 285 eP Pn 04 38 19.4 +0.5
ACON Acoyapa 8.24 294 Pn 04 38 20.4 -2.0
HZTE Horizontes, Gu 8.25 284 eP Pn 04 38 21.8 +1.2
CUSE Cuicocha Este 8.44 186⇓ eP Pn 04 38 24.3 +0.8
CUSE ⇓eP Pn 04 38 24.3 +0.8
CUSE eS Sn 04 39 56.1 -1.5
CUSE eS Sn 04 39 56.1 -1.5
OTAV Otavalo 8.51 187 eP Pn 04 38 25.6 +1.2
OTAV eP Pn 04 38 25.6 +1.2
OTAV eS Sn 04 39 53.2 -6.1
OTAV eS Sn 04 39 53.2 -6.1
OTAV i 04 40 03.6
comp=Z,39nm,0.6s
OTAV i 04 40 03.6
comp=Z,39nm,0.6s
OTAV Otavalo 8.51 187 P Pn 04 38 25.1 +0.6
OTAV Otavalo 8.51 187 Pn Pn 04 38 25.1 +0.6
PAC1 Pacto, Paraso 8.53 189 eP Pn 04 38 24.7 +0.3
PAC1 eP Pn 04 38 24.7 +0.3
PAC1 eS Sn 04 39 55.7 -3.7
PAC1 eS Sn 04 39 55.7 -3.7
PAC1 i 04 40 01.1
comp=Z,87nm,0.3s
PAC1 i 04 40 01.1
comp=Z,87nm,0.3s
PCJ Portland Cotta 8.95 2 iP Pn 04 38 31.7 +1.6
MCJ Malvern 9.13 359⇑ iP Pn 04 38 33.6 +1.0
MCJ iS Sn 04 40 10.8 -3.2
HOJ Hope 9.23 4⇑ iP Pn 04 38 35.3 +1.3
MATN Matagalpa 9.30 297 eP Pn 04 38 36.1 +1.1
MATN Matagalpa 9.30 297 Pn Pn 04 38 35.5 +0.6
STH Stony Hill 9.30 4 iP Pn 04 38 35.9 +1.0
GWJ Greenwich 9.30 4 iP Pn 04 38 35.7 +0.7
CMJ Castle Mountai 9.40 6⇑ iP Pn 04 38 37.8 +1.6
MTDJ Mount Denham 9.43 360 Pn Pn 04 38 37.2 +0.5
BNJ Bonny Gate 9.53 3⇓ iP Pn 04 38 39.4 +1.3
BBJ Bamboo Saint A 9.58 1⇓ iP Pn 04 38 40.5 +1.6
CRIN San Cristobal 10.21 293 Pn 04 38 48.2 +0.8
LGNH Logne 10.79 25 Pn 04 38 56.0 +0.7
TGUH Tegucigalpa,Un 10.97 300 Pn Pn 04 38 57.4 -0.5
GTBY Guantanamo Bay 11.35 11 Pn Pn 04 39 03.8 +0.9
SDDR Presa de Saban 11.81 30 Pn Pn 04 39 09.7 +0.5
BANI BANI 11.81 35 Pn 04 39 09.8 +0.5
SDD Santo Domingo 12.12 36 Pn 04 39 12.3 -1.1
SNET Serv Nac Est T 12.55 294 Pn Pn 04 39 18.3 -1.0
PCRV Puerto La Cruz 12.73 83 P Pn 04 39 20.3 -1.6
comp=Z,17nm,0.3s,baz=244,slow=4.5,SNR=51
PCRV S Sn 04 41 37.8 -4.5
comp=Z,5.3nm,0.3s,baz=162,slow=20,SNR=3.2
PCRV LR LR 04 46 15.0
comp=Z,1µm,20.7s,slow=46
PLCV Puerto La Cruz 12.78 83 Pn 04 39 20.3 -2.2
GRTK Grand Turk 14.08 25 Pn Pn 04 39 39.5 -0.7
SJG San Juan 14.40 49 P Pn 04 39 40.0 -4.4
comp=Z,40nm,0.3s,baz=221,slow=12,SNR=76
SJG S Sn 04 42 10.0 -13
comp=Z,29nm,0.3s,baz=57,slow=22,SNR=12
SJG LR LR 04 45 40.5
comp=Z,306nm,21.2s,baz=232,slow=38
SJG San Juan 14.40 49 eP Pn 04 39 39.3 -5.2
SJG eP Pn 04 39 39.3 -5.2
SJG eS Sn 04 42 07.3 -16
SJG eS Sn 04 42 07.3 -16
SJG San Juan 14.40 49 P Pn 04 39 40.7 -3.8
SJG San Juan 14.40 49 Pn Pn 04 39 40.7 -3.8
PETF Flores 14.56 305 P P 04 39 51.2 -0.6
HUEH Huehuetenango 15.20 297 IAmb IAmb 04 40 04.7
comp=Z,111nm,0.9s
ATAH Atahualpa 15.80 183 P Pn 04 40 03.0 0.0
comp=Z,0.4nm,0.3s,baz=319,slow=8.3,SNR=4.0
TRN Trinidad (W) 15.94 82 eP P 04 40 08.0 +0.8
CCIG Comitan 16.16 299 Pn Pn 04 40 06.7 -0.6
GCMP Grenada, Carri 16.19 75 eP Pn 04 40 02.6 -5.0
TBH Brigand Hill 16.26 83 eP P 04 40 11.0 +0.3
SVB Belmont 16.53 73 eP Pn 04 40 05.5 -6.5
SVB Belmont 16.53 73 Pn Pn 04 40 08.6 -3.4
SVOC Richmond Hill, 16.53 73 e Pn 04 40 09.3 -2.6
SEUS St. Eustatius 16.56 57 Pn Pn 04 40 10.4 -1.7
SKI Saint Kitts 16.68 58 P Pn 04 40 12.3 -1.5
SKI pmax pmax
comp=Z,151nm,0.5s
SKI Saint Kitts 16.68 58 Pn 04 40 12.3 -1.5
TOSP Speyside 16.86 80 eP Pn 04 40 16.5 +0.5
SLB Belfond 16.87 71 eP Pn 04 40 11.0 -5.2
MCLT Moule a Chique 16.93 72 eP Pn 04 40 13.6 -3.3
SLBI Saint Lucia, B 16.99 71 eP Pn 04 40 11.0 -6.6
CZSB Cruzeiro do Su 17.04 164 eP Pn 04 40 16.4 -1.9
FDF Fort de France 17.04 68 eP Pn 04 40 13.0 -5.2
CBE Ff, Capester 17.10 63 eP Pn 04 40 14.6 -4.4
CBE eS P 04 40 24.9 +4.7
MAGL Barre de l'ile 17.34 64 eP P 04 40 25.8 +3.1
CMIG Matias Romero 18.89 298 P P 04 40 39.7 -0.1
comp=Z,0.4nm,0.3s,baz=112,slow=13,SNR=3.3
CMIG LR LR 04 49 32.0
comp=Z,230nm,19.4s,baz=118,slow=42
DWPF Disney Wildern 19.63 350 P Pn 04 40 52.3 +2.8
baz=168
MACA Manacapuru-AM 20.49 125 eP P 04 40 57.2 0.0
NNA Nana 20.61 178 P P 04 40 58.1 -0.4
comp=Z,22nm,0.8s,baz=355,slow=11,SNR=8.6
NNA LR LR 04 50 35.8
comp=Z,331nm,21.8s,baz=356,slow=41
NNA Nana 20.61 178 P P 04 40 58.7 +0.2
NNA pmax pmax
comp=Z,58nm,1.0s
NNA Nana 20.61 178 P P 04 40 58.7 +0.2
ETMB Extrema 21.57 148 eP P 04 41 07.9 -0.9
SAML Samuel 22.61 141 P P 04 41 18.0 -2.0
SAML pmax pmax
comp=Z,147nm,1.1s
SAML Samuel 22.61 141 P P 04 41 18.0 -2.0
TIGA Tifton 23.29 347 P P 04 41 29.3 +2.6
baz=165
255A Hazlehurst 23.53 349 P P 04 41 29.4 +0.4
352A Blakely 23.67 344 P P 04 41 31.8 +1.5
352A IAmb IAmb 04 41 33.1
comp=Z,85nm,0.8s
152A Waverly Hall 24.74 345 IAmb IAmb 04 41 42.7
comp=Z,62nm,0.7s
MDP Montagnes des 24.90 97 P P 04 41 41.8 +0.1
comp=Z,24nm,0.8s,baz=281,slow=7.9,SNR=8.8
MDP LR LR 04 52 28.3
comp=Z,336nm,21.2s,baz=270,slow=39
Y58A Scranton 25.12 356 P P 04 41 45.5 +1.9
baz=175
Y60A Bolivia 25.15 359 P P 04 41 45.3 +1.6
baz=178
Y59A Loris 25.16 357 P P 04 41 45.8 +1.9
baz=177
GOGA Godfrey 25.17 348 P P 04 41 45.7 +1.8
baz=166,SNR=13
GOGA Godfrey 25.17 348 IAmb IAmb 04 41 46.6
comp=Z,52nm,0.8s
ITTB Itaituba 25.28 120 eP P 04 41 45.1 -0.1
Y55A Saluda 25.40 351 P P 04 41 48.0 +1.9
baz=170,SNR=5.4
MOIG Morelia 25.40 298 P P 04 41 46.8 +0.3
MALB Monte Alegre 25.41 113 eP P 04 41 46.2 -0.1
Z51A Franklin 25.47 345 IAmb IAmb 04 41 50.0
comp=Z,70nm,0.8s
X60A Albert Glenn T 25.72 359 P P 04 41 50.5 +1.6
baz=179
X59A McDuffie Farm, 25.73 358 P P 04 41 49.9 +0.9
baz=177
LRAL Lakeview Retre 25.73 341 P P 04 41 51.0 +1.9
baz=158,SNR=12
LRAL Lakeview Retre 25.73 341 IAmb IAmb 04 42 12.0
comp=Z,72nm,1.0s
X58A Rowland 25.75 356 P P 04 41 50.2 +1.0
baz=176
X56A White Oak 25.84 353 P P 04 41 51.6 +1.6
baz=172
X55A Gracelyn & Ava 25.89 352 P P 04 41 52.1 +1.6
baz=171
BIRD Birdtown, Kers 25.93 354 P P 04 41 51.6 +0.8
BIRD IAmb IAmb 04 41 59.8
comp=Z,170nm,1.8s
X54A Belton 26.07 351 P P 04 41 54.1 +1.9
baz=169,SNR=6.5
W58A Raeford 26.20 357 P P 04 41 54.7 +1.4
baz=176
PAULI Pauline 26.26 352 IAmb IAmb 04 41 59.3
comp=Z,65nm,1.3s
Y49A Blount Mountai 26.32 343 IAmb IAmb 04 42 16.9
comp=Z,138nm,1.7s
W56A Indian Trail 26.42 354 P P 04 41 56.6 +1.3
baz=173
LPAZ La Paz 26.53 160 P P 04 41 56.7 -0.4
comp=Z,20nm,0.9s,baz=346,slow=11,SNR=39
LPAZ LR LR 04 55 23.0
comp=Z,168nm,19.7s,baz=316,slow=43
LPAZ La Paz 26.53 160 P P 04 41 56.6 -0.5
LPAZ La Paz 26.53 160 eP P 04 41 56.3 -0.9
W54A Cherokee Point 26.57 351 P P 04 41 58.4 +1.7
baz=170
X51A Calhoun 26.58 346 IAmb IAmb 04 41 59.1
comp=Z,38nm,0.8s
FPAL Fort Paine 26.74 345 IAmb IAmb 04 42 00.6
comp=Z,40nm,0.9s
MCPB Macapa, AP 26.88 108 eP P 04 41 59.4 -0.3
V59A Middlesex 26.91 359 P P 04 42 01.2 +1.6
baz=178
V58A Windy Hill, Pi 26.97 357 P P 04 42 01.7 +1.4
baz=176
NPGB Novo Progresso 27.04 125 eP P 04 42 00.7 -0.5
V56A Mocksville 27.08 355 P P 04 42 03.1 +1.9
baz=174
V57A Coltrane Farms 27.10 356 P P 04 42 02.5 +1.1
baz=175,SNR=5.1
V54A Nebo 27.22 352 P P 04 42 04.4 +1.9
baz=170
HKT Hockley 27.22 323 P P 04 42 02.8 +0.3
HKT pmax pmax
comp=Z,48nm,1.4s
HKT Hockley 27.22 323 P P 04 42 02.8 +0.3
W50A Signal Mountai 27.30 346 IAmb IAmb 04 42 05.8
comp=Z,41nm,0.9s

TKL **Tuckaleechee C** 27.40 349 P **P** 04 42 05.4 +1.3
comp=Z,111nm,1.0s,baz=172,slow=9.2,SNR=8.4
TKL LR LR 04 52 46.4
comp=Z,214nm,20.6s,baz=163,slow=36
U58A **Oxford** 27.54 358 P **P** 04 42 06.7 +1.3
baz=178
VILB **Vilhena** 27.54 141 *e*P **P** 04 42 04.9 -0.8
U56A **King** 27.61 355 P **P** 04 42 08.3 +2.3
baz=174
U57A **Blanch** 27.61 357 P **P** 04 42 07.4 +1.4
baz=176
V51A **Loudon** 27.66 348 IAmb IAmb 04 42 08.7
comp=Z,34nm,0.8s
PLAL **Pickwick Lake** 27.87 341 IAmb IAmb 04 42 31.9
comp=Z,56nm,1.4s
U54A **Nelsons Funny** 27.93 352 P **P** 04 42 10.9 +1.9
baz=171
U54A **Nelsons Funny** 27.93 352 IAmb IAmb 04 42 30.6
comp=Z,72nm,1.2s
PB16 **IPOC Station P** 28.03 164 P **P** 04 42 09.8 -0.7
T58A **Grand View Acr** 28.09 358 P **P** 04 42 11.0 +0.7
baz=178
T59A **Double "B" Far** 28.10 360 P **P** 04 42 11.8 +1.5
baz=180
T57A **Hurt** 28.18 357 P **P** 04 42 12.3 +1.3
baz=176
V48A **Smith Brothers** 28.20 344 IAmb IAmb 04 42 13.8
comp=Z,48nm,0.9s
TZTN **Tazewell** 28.22 350 P **P** 04 42 13.2 +1.7
baz=167
T56A **Rocky Mt** 28.25 356 P **P** 04 42 13.9 +2.1
baz=175,SNR=5.4
CCAR **Cane Creek** 28.31 334 IAmb IAmb 04 42 52.0
comp=Z,70nm,1.2s
T55A **Pulaski** 28.41 354 P **P** 04 42 15.5 +2.3
baz=173
T54A **Tazewell** 28.44 353 P **P** 04 42 15.0 +1.6
baz=172,SNR=5.1
BLA **Blacksburg** 28.47 355 P **P** 04 42 15.9 +2.2
baz=174
T53A **Wise** 28.49 351 P **P** 04 42 15.6 +1.7
baz=170
WLAR **White Oak Lake** 28.71 332 IAmb IAmb 04 42 43.4
comp=Z,95nm,1.7s
MNMC **Minye Minye** 28.76 164 P **P** 04 42 17.4 +0.7
WVT **Waverly** 28.85 342 P **P** 04 42 17.4 +0.3
WVT pmax pmax
comp=Z,15nm,0.9s
WVT **Waverly** 28.85 342 P **P** 04 42 17.9 +0.8
baz=158
WVT **Waverly** 28.85 342 P **P** 04 42 17.4 +0.3
S56A **Natural Bridge** 28.87 357 P **P** 04 42 18.9 +1.7
baz=176
S59A **Mechanicsville** 28.89 0 P **P** 04 42 19.1 +1.7
baz=180
S57A **Dark Hollow, R** 28.92 358 P **P** 04 42 18.9 +1.3
baz=177
S55A **Lewisburg** 29.03 355 P **P** 04 42 20.9 +2.2
baz=174
CLDB **Colider** 29.06 132 *e*P **P** 04 42 17.0 -2.1
PSGCX **Pisagua** 29.07 166 P **P** 04 42 19.1 -0.1
R58B **Mineral** 29.09 359 P **P** 04 42 20.6 +1.5
baz=179
S53A **Williamson** 29.12 352 P **P** 04 42 21.0 +1.6
baz=171,SNR=5.3
X40A **Basin Creek Fa** 29.25 333 P **P** 04 42 21.0 +0.3
baz=148,SNR=7.4
HBAR **Harrisburg** 29.29 338 IAmb IAmb 04 42 36.4
comp=Z,73nm,1.0s
PB11 **IPOC Station P** 29.35 165 P **P** 04 42 21.1 -0.7
R58A **Rapidan** 29.43 359 P **P** 04 42 24.1 +2.0
baz=179
SIV **San Ignacio** 29.45 146 P **P** 04 42 21.2 -1.4
comp=Z,26nm,0.9s,baz=334,slow=9.3,SNR=75
SIV LR LR 04 55 21.4
comp=Z,388nm,18.2s,baz=316,slow=39
R55A **Marlinton** 29.51 356 P **P** 04 42 25.3 +2.4
baz=175
R56A **Bull Pasture M** 29.59 357 P **P** 04 42 25.8 +2.2
baz=176
MIAR **Mount Ida** 29.64 332 P **P** 04 42 24.0 -0.1
baz=146
PB08 **IPOC Station P** 29.84 164 P **P** 04 42 26.9 +0.4
HENM **Henderson Moun** 29.91 340 IAmb IAmb 04 42 49.6
comp=Z,56nm,1.1s
PARMO **Parma** 29.95 340 P **P** 04 42 27.4 +0.6
PARMO IAmb IAmb 04 42 29.2
comp=Z,54nm,0.9s
R50A **Paris** 30.05 349 IAmb IAmb 04 42 30.4
comp=Z,35nm,0.8s
Q58A **Fox Den Farm,** 30.07 360 P **P** 04 42 29.6 +1.8
baz=180
PTLB **Pontes e Lacer** 30.12 143 *e*P **P** 04 42 26.7 -1.8
Q57A **Strasburg** 30.17 359 P **P** 04 42 30.9 +2.2
baz=178
Q53A **Leroy** 30.21 354 P **P** 04 42 30.7 +1.7
baz=172
Q56A **Snyder Ridge,** 30.21 357 P **P** 04 42 30.9 +1.8
baz=177
Q55A **Buckhannon** 30.21 356 P **P** 04 42 31.2 +2.0
baz=175
R49A **Shelbyville** 30.23 348 IAmb IAmb 04 42 31.5
comp=Z,74nm,1.4s
Q54A **Coxs Mills** 30.26 355 P **P** 04 42 31.4 +1.9
baz=173
W39A **Magazine** 30.27 333 P **P** 04 42 30.6 +1.0
baz=147
PBMO **Poplar Bluff** 30.29 339 IAmb IAmb 04 42 44.5
comp=Z,24nm,0.8s
Q52A **Bidwell** 30.40 353 P **P** 04 42 32.3 +1.6
baz=171,SNR=5.9
WCI **Wyandotte Cave** 30.42 346 P **P** 04 42 31.7 +0.8
WCI pmax pmax
comp=Z,65nm,0.8s
WCI **Wyandotte Cave** 30.42 346 P **P** 04 42 32.2 +1.3
baz=163
WCI **Wyandotte Cave** 30.42 346 P **P** 04 42 31.7 +0.8
X37A **Clayton** 30.53 330 IAmb IAmb 04 42 58.5
comp=Z,67nm,1.6s
Q51A **Peebles** 30.61 351 IAmb IAmb 04 42 35.3
comp=Z,47nm,0.8s
P57A **Homestead Farm** 30.61 359 P **P** 04 42 34.8 +2.2
baz=179
P58A **Pank, Wackersv** 30.61 0 P **P** 04 42 34.0 +1.4
baz=180
PB01 **IPOC Station P** 30.62 165 P **P** 04 42 32.8 -0.1
P56A **Dayton Farm, R** 30.65 358 P **P** 04 42 35.4 +2.4
baz=177,SNR=5.7
S44A **Carbondale** 30.73 342 IAmb IAmb 04 42 35.4
comp=Z,27nm,0.8s
U40A **Yellville** 30.85 335 P **P** 04 42 35.3 +0.5
baz=149,SNR=16
U40A **Yellville** 30.85 335 IAmb IAmb 04 42 56.2
comp=Z,59nm,1.6s
P51A **Williamsport** 31.02 352 P **P** 04 42 37.7 +1.5
baz=169,SNR=8.1
P51A **Williamsport** 31.02 352 IAmb IAmb 04 42 38.6
comp=Z,32nm,0.8s
P52A **Corning** 31.04 353 P **P** 04 42 38.3 +1.9
baz=171,SNR=6.4
P52A **Corning** 31.04 353 IAmb IAmb 04 42 58.0
comp=Z,34nm,1.1s
O58A **Lewisberry** 31.25 1 P **P** 04 42 39.9 +1.6
baz=181
TMAB **Tom-Au,PA,Br** 31.29 109 *e*P **P** 04 42 39.1 +0.2
PRPB **Parauapebas** 31.29 117 *e*P **P** 04 42 38.7 -0.2
MGMO **Mountain Grove** 31.31 337 IAmb IAmb 04 43 01.4
comp=Z,71nm,1.9s
O57A **Amberson** 31.34 360 P **P** 04 42 41.2 +2.2
baz=180
P49A **Miami Univ. Ec** 31.34 349 P **P** 04 42 40.1 +1.1
baz=166,SNR=5.9
P49A **Miami Univ. Ec** 31.34 349 IAmb IAmb 04 42 40.9
comp=Z,29nm,0.8s
PAGS **Pennsylvania G** 31.36 1 P **P** 04 42 40.9 +1.8
PAGS IAmb IAmb 04 42 42.1
comp=Z,54nm,1.4s
FVM **French Village** 31.38 340 IAmb IAmb 04 42 41.8
comp=Z,65nm,1.1s
ABTX **Abilene, Hawle** 31.41 322 IAmb IAmb 04 42 58.8
comp=Z,53nm,1.0s
O56A **Blue Knob Stat** 31.41 358 P **P** 04 42 41.9 +2.3
baz=178
O59A **Robesonia** 31.46 2 P **P** 04 42 42.2 +2.2
baz=182
O52A **Adamsville** 31.48 354 P **P** 04 42 42.2 +1.9
baz=172
O52A **Adamsville** 31.48 354 IAmb IAmb 04 42 55.7
comp=Z,80nm,1.5s
O53A **New Philadelph** 31.55 355 P **P** 04 42 42.9 +2.0
baz=173,SNR=6.6
O53A **New Philadelph** 31.55 355 IAmb IAmb 04 42 43.7
comp=Z,28nm,0.8s
CCM **Cathedral Cave** 31.72 339 P **P** 04 42 42.5 +0.1
CCM pmax pmax
comp=Z,52nm,0.7s
CCM **Cathedral Cave** 31.72 339 P **P** 04 42 42.9 +0.5
baz=154
CCM **Cathedral Cave** 31.72 339 P **P** 04 42 42.5 +0.1
ACSO **Alum Creek Sta** 31.74 352 P **P** 04 42 44.1 +1.6
baz=170,SNR=5.5
ACSO **Alum Creek Sta** 31.74 352 IAmb IAmb 04 42 45.1
comp=Z,23nm,0.8s
SSPA **Standing Stone** 31.76 359 P **P** 04 42 44.7 +2.0
baz=179
SSPA **Standing Stone** 31.76 359 P **P** 04 42 44.2 +1.5
LUPA **Lehigh Univers** 31.78 3 IAmb IAmb 04 43 05.3
comp=Z,27nm,1.0s
TUL1 **Leonard** 31.79 331 P **P** 04 42 42.9 -0.2
baz=144,SNR=6.1
TUL1 **Leonard** 31.79 331 IAmb IAmb 04 42 55.8
comp=Z,20nm,0.8s
N57A **Milroy** 31.88 360 P **P** 04 42 45.5 +1.7
baz=180
O49A **Covington** 31.91 350 IAmb IAmb 04 43 04.9
comp=Z,42nm,1.1s
N58A **Sunbury** 31.97 1 P **P** 04 42 46.1 +1.6
baz=181
N61A **South Mountain** 32.00 5 P **P** 04 42 46.7 +1.9
baz=186
TX32 **Lajitas Array** 32.00 313 IAmb IAmb 04 43 05.2
comp=Z,40nm,1.1s
TXAR **Lajitas Array** 32.00 313 P **P** 04 42 45.2 +0.2
comp=Z,4.3nm,0.9s,baz=133,slow=9.6,SNR=36
TXAR pP **pP** 04 42 57.7 -0.7
comp=Z,17nm,0.9s,baz=135,slow=9.0,SNR=31
TXAR sP **sP** 04 43 04.2 -0.2
comp=Z,20nm,0.9s,baz=135,slow=10,SNR=17
TXAR PcP **PcP** 04 45 34.4 +0.2
comp=Z,2.7nm,1.1s,baz=145,slow=3.3,SNR=3.1
TXAR **Lajitas Array** 32.00 313 P **P** 04 42 44.8 -0.3
N56A **West Decatur** 32.05 359 P **P** 04 42 47.4 +2.1
baz=178
N60A **Cedar Hill Far** 32.06 3 P **P** 04 42 47.5 +2.2
baz=184
N59A **State Game Lan** 32.08 2 P **P** 04 42 47.8 +2.3
baz=183
N54A **Moraine State** 32.16 356 P **P** 04 42 47.9 +1.6
baz=175
N54A **Moraine State** 32.16 356 IAmb IAmb 04 42 49.3
comp=Z,30nm,0.8s
HPIG 32.25 308 P **P** 04 42 47.5 +0.1
LVC **Limon Verde** 32.27 165 P **P** 04 42 48.1 +0.4
comp=Z,22nm,1.0s,baz=359,slow=6.1,SNR=8.3
LVC **Limon Verde** 32.27 165 P **P** 04 42 48.6 +0.9
LVC pmax pmax
comp=Z,22nm,0.9s
LVC **Limon Verde** 32.27 165 P **P** 04 42 48.6 +0.9
LVC IAmb IAmb 04 42 49.3
comp=Z,22nm,0.9s
LVC **Limon Verde** 32.27 165 *e*P **P** 04 42 47.1 -0.6
PAL **Palisades** 32.28 5 P **P** 04 42 48.8 +1.6
baz=187
R40A **Maddies Statio** 32.30 338 IAmb IAmb 04 42 48.7
comp=Z,22nm,0.6s
QUOK **Quay** 32.45 330 IAmb IAmb 04 43 01.4
comp=Z,19nm,0.7s
M57A **Sunshine Farm,** 32.46 0 P **P** 04 42 51.1 +2.2
baz=181,SNR=7.0
BCOK **Bluff Creek, N** 32.50 329 P **P** 04 42 48.3 -1.0
WSPT **Westport, CT** 32.50 6 IAmb IAmb 04 42 51.3
comp=Z,51nm,1.0s
M58A **Price's Panora** 32.51 1 P **P** 04 42 51.2 +1.9
baz=182
OK029 **Liberty Lake** 32.53 329 IAmb IAmb 04 43 08.3
comp=Z,32nm,0.7s
M61A **Granite Spring** 32.60 5 P **P** 04 42 51.5 +1.5
baz=187
M56A **Emporium** 32.61 359 P **P** 04 42 52.0 +1.8
baz=179
SFIN **Lafayette** 32.65 346 P **P** 04 42 51.1 +0.6
baz=162,SNR=24
M54A **Oil Creek Stat** 32.69 357 P **P** 04 42 53.2 +2.3
baz=176,SNR=5.3
M54A **Oil Creek Stat** 32.69 357 IAmb IAmb 04 42 54.2
comp=Z,36nm,0.8s
KSPA **Keystone Colle** 32.71 2 IAmb IAmb 04 42 54.2
comp=Z,31nm,0.8s
M59A **Waymart** 32.71 3 P **P** 04 42 53.0 +1.9
baz=184
T35A **Sooner Cattle** 32.95 331 IAmb IAmb 04 42 57.5
comp=Z,22nm,0.9s
L57A **Andrews Acres** 33.13 1 P **P** 04 42 56.3 +1.6
baz=181,SNR=5.3
M64A **Tiverton** 33.14 9 P **P** 04 42 57.3 +2.6
baz=191
SNDB **Serra Nova Dou** 33.17 128 *e*P **P** 04 42 55.0 -0.3
L58A **Harry Jones Me** 33.20 2 P **P** 04 42 57.3 +2.0
baz=183,SNR=7.6
L60A **Shokan** 33.23 4 P **P** 04 42 57.7 +2.1
baz=186
L56A **Greenwood** 33.26 360 P **P** 04 42 57.5 +1.7
baz=180
P40A **Paris** 33.32 339 IAmb IAmb 04 42 58.0
comp=Z,43nm,1.4s
BINY **Binghamton** 33.35 2 P **P** 04 42 58.5 +1.9
baz=183
BINY **Binghamton** 33.35 2 IAmb IAmb 04 42 60.0
comp=Z,46nm,1.1s
L59A **Walton** 33.38 3 P **P** 04 42 58.3 +1.4
baz=184
HDIL **Hopedale** 33.38 344 P **P** 04 42 56.9 0.0
baz=158
L62A **Suffield** 33.42 6 P **P** 04 42 59.4 +2.2
baz=189,SNR=6.4
L61A **Hillsdale 1, H** 33.49 5 P **P** 04 42 59.7 +1.9
baz=187
GC02 **Grant County #** 33.55 330 P **P** 04 42 58.3 -0.2
U32A **Winter Ranch,** 33.78 328 IAmb IAmb 04 43 19.3
comp=Z,27nm,0.8s
K56A **Middlesex** 33.82 0 P **P** 04 43 02.0 +1.3
baz=180
L61B **Northampton** 33.84 6 P **P** 04 43 02.2 +1.4
baz=188
K57A **Scipio Center** 33.86 1 P **P** 04 43 02.7 +1.7
baz=182
PB14 **IPOC Station P** 33.87 168 P **P** 04 43 02.2 +0.5
PB14 IAmb IAmb 04 43 03.5
comp=Z,39nm,1.1s
K58A **Earlville** 33.92 2 P **P** 04 43 03.5 +1.9
baz=183
K58A **Earlville** 33.92 2 IAmb IAmb 04 43 04.0
comp=Z,26nm,0.8s
K59A **Cooperstown** 33.98 3 P **P** 04 43 03.9 +1.8
baz=185
K61A **Williamstown** 33.99 6 P **P** 04 43 04.0 +1.9
baz=187
HRV **Adam Dziewonsk** 34.03 8 P **P** 04 43 04.5 +2.0
baz=190
K62A **Royalston** 34.10 7 P **P** 04 43 05.0 +1.9
baz=189,SNR=6.9
K63A **Dunstable** 34.21 8 P **P** 04 43 05.8 +1.8
baz=190
MSTX **Muleshoe** 34.24 321 P **P** 04 43 03.9 -0.7
baz=131
PP1B **Ponte de Pedra** 34.40 140 *e*P **P** 04 43 05.3 -0.6
J56A **Wolcott** 34.40 1 P **P** 04 43 07.4 +1.7
baz=181
SMTB **Santa Maria do** 34.52 120 *e*P **P** 04 43 07.2 +0.1
J58A **Remsen** 34.53 3 P **P** 04 43 08.3 +1.5
baz=184,SNR=6.0
J58A **Remsen** 34.53 3 IAmb IAmb 04 43 09.8
comp=Z,39nm,1.0s
J60A **Lant Hill Farm** 34.55 5 P **P** 04 43 08.9 +1.9
baz=187
J57A **Williamstown** 34.56 2 P **P** 04 43 08.6 +1.5
baz=183
GO02 **Mina Guanaco** 34.56 167 IAmb IAmb 04 43 09.3
comp=Z,24nm,0.7s
MNTX **Cornudas Mount** 34.56 315 P **P** 04 43 07.1 -0.2
baz=125,SNR=14
MNTX **Cornudas Mount** 34.56 315 P **P** 04 43 06.7 -0.6
MNTX IAmb IAmb 04 43 26.3
comp=Z,38nm,1.1s
J59A **Piesco** 34.68 4 P **P** 04 43 09.9 +1.8
baz=185
J59A **Piesco** 34.68 4 IAmb IAmb 04 43 11.0
comp=Z,21nm,0.9s
J62A **Henniker** 34.70 7 P **P** 04 43 10.4 +2.1
baz=190
J61A **Chester** 34.73 6 P **P** 04 43 10.8 +2.2
baz=188
KSU1 **Kansas State U** 34.77 333 P **P** 04 43 08.2 -0.7
baz=146,SNR=9.6
KSU1 **Kansas State U** 34.77 333 IAmb IAmb 04 43 10.0
comp=Z,28nm,0.8s
N38A **Joes South For** 34.86 339 IAmb IAmb 04 43 10.7
comp=Z,36nm,0.9s
I58A **Old Forge** 34.88 3 P **P** 04 43 11.9 +2.1
baz=184,SNR=7.1
LPIG **La Paz** 34.89 300 LR LR 04 57 17.9
comp=Z,123nm,21.5s,baz=94,slow=36
I59A **Olmsteadville** 35.06 5 P **P** 04 43 13.2 +1.9
baz=186,SNR=6.2
I51A **Listowel** 35.06 356 P **P** 04 43 12.3 +0.8
baz=174
I57A **Carthage** 35.09 2 P **P** 04 43 13.3 +1.6
baz=183
ARAG **Araguaiana, MT** 35.15 134 *e*P **P** 04 43 11.4 -1.0
I60A **Shoreham** 35.16 5 P **P** 04 43 14.4 +2.3
baz=187
R32A **Long Quarter,** 35.20 330 IAmb IAmb 04 43 25.9
comp=Z,21nm,0.8s
NCB **Newcomb** 35.21 4 IAmb IAmb 04 43 15.1
comp=Z,22nm,0.8s
I61A **Oroboro, Fairl** 35.35 7 P **P** 04 43 16.3 +2.4
baz=189
H57A **Richville** 35.63 3 P **P** 04 43 16.6 +0.4
baz=184
H58A **Gabriels** 35.65 4 P **P** 04 43 18.1 +1.6
baz=186,SNR=9.2
I63A **Otisfield** 35.68 9 P **P** 04 43 18.4 +1.7
baz=192
I63A **Otisfield** 35.68 9 IAmb IAmb 04 43 20.1
comp=Z,31nm,0.8s
LBNH **Lisbon** 35.69 7 P **P** 04 43 18.4 +1.6
LBNH pmax pmax
comp=Z,33nm,0.9s
LBNH **Lisbon** 35.69 7 P **P** 04 43 18.7 +1.9
baz=189
LBNH **Lisbon** 35.69 7 P **P** 04 43 18.4 +1.6
LBNH IAmb IAmb 04 43 19.9
comp=Z,33nm,0.8s
I64A **Boothbay** 35.70 10 P **P** 04 43 19.1 +2.3
baz=193
H53A **Bobcaygeon** 35.71 359 P **P** 04 43 18.1 +1.2
baz=178
LONY **Lake Ozonia** 35.83 4 P **P** 04 43 19.6 +1.6
baz=185,SNR=8.1
JFWS **Jewell Farm** 35.84 344 P **P** 04 43 17.9 -0.2
baz=158,SNR=37
SCIA **State Center** 35.84 340 P **P** 04 43 18.9 +0.8
baz=153
H59A **Cadyville** 35.92 5 P **P** 04 43 20.2 +1.4
baz=186
H60A **Morristown** 35.92 6 P **P** 04 43 20.0 +1.2
baz=188
SADO **Sadowa** 35.92 358 LR LR 04 59 00.0
comp=Z,310nm,18.1s,baz=194,slow=38
H61A **Lyndonville** 35.98 7 P **P** 04 43 21.3 +2.0
baz=189
CBKS **Cedar Bluff** 36.01 330 P **P** 04 43 19.7 0.0
baz=140,SNR=9.2
CBKS **Cedar Bluff** 36.01 330 IAmb IAmb 04 43 24.1
comp=Z,33nm,0.9s
AQDB **Aquidauana** 36.07 144 *e*P **P** 04 43 18.8 -1.5
FRNY **Flat Rock** 36.11 5 P **P** 04 43 21.8 +1.4
FRNY IAmb IAmb 04 43 22.8
comp=Z,29nm,0.9s
H62A **Milan** 36.11 8 P **P** 04 43 22.3 +1.8
baz=191
G57A **Newington** 36.29 3 P **P** 04 43 23.2 +1.4
baz=184,SNR=5.4
G58A **Ormstown** 36.39 4 P **P** 04 43 24.4 +1.7
baz=186,SNR=5.2
H64A **Troy** 36.47 10 P **P** 04 43 25.7 +2.3
baz=194
GLMI **Grayling** 36.48 351 P **P** 04 43 24.4 +0.8
baz=168
G60A **Masonville** 36.49 6 P **P** 04 43 25.7 +2.1
baz=189
G54A **Lake Saint Pet** 36.52 359 P **P** 04 43 25.2 +1.3
baz=179
121A **Cookes Peak, D** 36.72 314 IAmb IAmb 04 43 46.5
comp=Z,31nm,0.9s
G61A **St-Isidore-de-** 36.76 7 P **P** 04 43 28.6 +2.6
baz=190
G62A **West of Eustis** 36.83 8 P **P** 04 43 29.1 +2.6
baz=192,SNR=5.6
BNM **Barren Site** 36.85 318 P **P** 04 43 26.4 -0.8
G63A **Kingsbury** 36.87 9 P **P** 04 43 29.0 +2.1
baz=193
PKME **Peaks-Kenny Pk** 37.06 10 P **P** 04 43 29.1 +0.6
baz=194
ALGO **Algonquin Park** 37.08 359 P **P** 04 43 30.0 +1.4
baz=179,SNR=12
G64A **Maxfield** 37.14 10 P **P** 04 43 31.0 +1.9
baz=194
ANMO **Albuquerque** 37.21 319 *e*P **P** 04 43 29.5 -0.7
ANMO pmax pmax
comp=Z,9.0nm,0.8s
ANMO **Albuquerque** 37.21 319 P **P** 04 43 30.8 +0.6
baz=128
ANMO **Albuquerque** 37.21 319 P **P** 04 43 30.7 +0.6
G65A **Princeton** 37.32 12 P **P** 04 43 31.6 +1.0
baz=196
T25A **Trinidad** 37.35 323 P **P** 04 43 33.0 +1.7
baz=132
T25A **Trinidad** 37.35 323 IAmb IAmb 04 43 52.1
comp=Z,54nm,1.4s
F60A **Warwick** 37.39 6 P **P** 04 43 33.0 +1.7
baz=189
F61A **St Evariste** 37.51 7 P **P** 04 43 34.2 +2.0
baz=190
E55A **Montcerf-Lytto** 37.59 2 P **P** 04 43 34.5 +1.5
baz=182
E57A **Chemin Saint G** 37.64 4 P **P** 04 43 34.9 +1.5
baz=185,SNR=7.3
KSCO **Kaye Shedlock'** 37.65 327 P **P** 04 43 34.6 +0.8
baz=137,SNR=6.2
KSCO **Kaye Shedlock'** 37.65 327 IAmb IAmb 04 43 53.8
comp=Z,38nm,1.0s
E58A **La Victoria** 37.66 5 P **P** 04 43 35.3 +1.7
baz=187,SNR=6.4
SRIG **Santa Rosalia** 37.69 304 P **P** 04 43 34.4 +0.3
SRIG IAmb IAmb 04 43 54.9
comp=Z,35nm,1.0s
E56A **St. Veronique** 37.72 3 P **P** 04 43 35.2 +1.1
baz=184
F64A **Sherman** 37.81 10 P **P** 04 43 36.5 +1.7
baz=195
E59A **St. Maurice** 37.84 6 P **P** 04 43 37.1 +2.1
baz=188
E60A **Ste Agathe de** 37.84 7 P **P** 04 43 36.4 +1.3
baz=190
BDFB **Brasilia** 37.92 130 P **P** 04 43 36.3 +0.1
comp=Z,23nm,1.0s,baz=299,slow=10,SNR=19
BDFB LR LR 05 00 12.7
comp=Z,684nm,19.2s,baz=311,slow=38
BDFB **Brasilia** 37.92 130 P **P** 04 43 36.8 +0.6
BDFB pmax pmax
comp=Z,35nm,1.0s
BDFB **Brasilia** 37.92 130 P **P** 04 43 36.8 +0.6
BDFB IAmb IAmb 04 43 38.1
comp=Z,35nm,1.0s
AC05 **El Transito** 38.00 170 IAmb IAmb 04 43 38.4
comp=Z,24nm,0.8s
E61A **Lac Etchemin** 38.03 8 P **P** 04 43 39.2 +2.6
baz=191,SNR=5.3
D55A **Sainte-Anne-du** 38.18 2 P **P** 04 43 39.4 +1.5
baz=183,SNR=6.0
D56A **ZEC Mazanza, M** 38.24 3 P **P** 04 43 39.8 +1.3
baz=184,SNR=5.2
VCA **Vinchina** 38.32 167 *i* P **P** 04 43 40.6 +1.2
E63A **Oxbow** 38.34 10 P **P** 04 43 41.1 +1.9
baz=194
E62A **Clayton Lake** 38.35 9 P **P** 04 43 41.6 +2.3
baz=193,SNR=11
SDCO **Great Sand Dun** 38.40 323 P **P** 04 43 41.4 +1.1
baz=132,SNR=13
SDCO **Great Sand Dun** 38.40 323 IAmb IAmb 04 44 01.0
comp=Z,25nm,1.0s
D58A **Chemin du LacG** 38.42 5 P **P** 04 43 41.6 +1.7

baz=187,SNR=9.0
D59A Saint-Raymond 38.43 6 P P 04 43 41.9 +2.0
baz=189
E64A Bridgewater 38.44 11 P P 04 43 42.1 +2.0
baz=195
D60A Saint Jean D'O 38.44 7 P P 04 43 42.1 +2.0
baz=190
SDBA SAO DESIDERIO 38.58 123 eP P 04 43 41.5 -0.3
CYA Choya 38.65 163 i P P 04 43 40.6 -1.4
ECSD EROS Data Cent 38.65 338 P P 04 43 40.7 -1.2
baz=149,SNR=18
ECSD EROS Data Cent 38.65 338 IAmb IAmb 04 43 42.1
comp=Z,15nm,0.7s
SPMN Marine on St. 38.69 343 P P 04 43 41.7 -0.5
baz=155,SNR=11
SPMN Marine on St. 38.69 343 IAmb IAmb 04 43 42.7
comp=Z,61nm,1.4s
LATQ La Tuque 38.71 5 P P 04 43 44.3 +2.0
baz=187,SNR=9.7
TUC Tucson 38.76 312 P P 04 43 43.7 +0.6
TUC pmax pmax
comp=Z,25nm,1.0s
TUC Tucson 38.76 312 P P 04 43 43.7 +0.6
baz=120
TUC Tucson 38.76 312 P P 04 43 43.7 +0.6
TUC IAmb IAmb 04 44 03.2
comp=Z,25nm,1.0s
D61A St Aubert, Com 38.82 8 P P 04 43 44.6 +1.4
baz=192,SNR=5.7
D62A Allapoint, All 38.87 9 P P 04 43 45.9 +2.2
baz=193
ITRB Iturama 38.88 137 eP P 04 43 43.1 -1.0
D63A Stockholm 38.98 10 P P 04 43 46.8 +2.1
baz=195
S22A 4UR Ranch, Cre 39.20 322 P P 04 43 48.1 +1.2
baz=130,SNR=14
S22A 4UR Ranch, Cre 39.20 322 IAmb IAmb 04 44 07.7
comp=Z,31nm,1.1s
VLDQ Val d'Or 39.23 0 IAmb IAmb 04 43 49.0
comp=Z,21nm,0.8s
IPMB Ipameri, GO 39.24 133 eP P 04 43 46.5 -0.7
ACLC CERRO LA CRUZ 39.27 165 i P P 04 43 47.5 +0.1
X18A Snowflake 39.32 316 IAmb IAmb 04 44 08.6
comp=Z,32nm,1.1s
AROD Rodeo 39.44 169 i P P 04 43 50.8 +1.8
W18A Petrified Fore 39.50 317 P P 04 43 50.8 +1.4
baz=124
PCMB Pacaembu 39.64 140 eP P 04 43 49.0 -1.4
TRCB Terra Rica 39.67 143 eP P 04 43 48.3 -2.4
MVCO Mesa Verde 39.90 320 P P 04 43 53.2 +0.4
baz=128
ACCO Cerro Coronel 39.93 169 i P P 04 43 54.0 +0.9
CPUP Villa Florida 39.98 151 P P 04 43 54.7 +1.6
comp=Z,1.4nm,0.9s,baz=352,slow=8.5,SNR=2.4
CPUP LR LR 05 03 58.6
comp=Z,110nm,18.6s,baz=333,slow=41
214A Organ Pipe Nat 40.10 310 P P 04 43 54.9 +0.7
baz=118
214A Organ Pipe Nat 40.10 310 IAmb IAmb 04 44 14.6
comp=Z,27nm,1.1s
LSQQ Lebel-sur-Quev 40.18 0 P P 04 43 55.5 +0.9
baz=181
X16A Lo Mia Camp, P 40.30 314 P P 04 43 56.8 +0.7
X16A PcP 04 45 58.2 -0.7
APLL PUNTA DE LOS L 40.31 165 i P P 04 43 55.4 -0.5
AVFE Valle Fertil 40.34 167 i P P 04 43 56.4 +0.2
F33A 5 Mile Ranch, 40.35 340 IAmb IAmb 04 43 55.7
comp=Z,43nm,1.4s
JANB Januaria 40.48 126 eP P 04 43 56.1 -1.5
PV07 Paradox Valley 40.74 321 P P 04 44 00.5 +0.8
RTLL Cerro Villicun 40.76 168 i P P 04 43 59.8 +0.2
N23A Red Feather La 40.78 326 P P 04 44 01.2 +1.1
baz=134
WUAZ Wupatki 40.84 316 P P 04 44 01.6 +1.2
baz=123,SNR=23
WUAZ Wupatki 40.84 316 P P 04 44 01.1 +0.6
EYMN Ely 40.84 346 P P 04 43 59.3 -0.7
baz=159,SNR=10
EYMN Ely 40.84 346 P P 04 43 59.5 -0.6
EYMN IAmb IAmb 04 44 00.7
comp=Z,37nm,0.8s
PV17 East Wray Mesa 40.84 321 IAmb IAmb 04 44 20.9
comp=Z,40nm,0.9s
PV19 Morning Glory 40.87 321 IAmb IAmb 04 44 21.1
comp=Z,27nm,1.0s
PV04 Paradox Valley 40.88 321 IAmb IAmb 04 44 22.2
comp=Z,34nm,1.1s
MATQ Matagami 40.88 360 P P 04 44 01.6 +1.2
baz=180,SNR=23
PV20 West Nyswonger 40.88 321 IAmb IAmb 04 44 21.2
comp=Z,27nm,0.9s
PV22 Blue Mesa, Par 40.89 321 IAmb IAmb 04 44 21.4
comp=Z,38nm,1.0s
ZON Zonda 40.93 169 IAmb IAmb 04 44 02.7
comp=Z,48nm,1.6s
PV14 Lion Creek, Pa 40.94 321 IAmb IAmb 04 44 21.6
comp=Z,36nm,1.2s
PV10 Paradox Valley 40.95 321 IAmb IAmb 04 44 15.4
comp=Z,32nm,0.9s
PV23 Carpenter Ridg 40.98 321 IAmb IAmb 04 44 23.2
comp=Z,31nm,0.9s
BB19B Bebedouro 41.06 137 eP P 04 44 01.0 -1.3
RTLS Leoncito 41.06 169 i P P 04 44 03.5 +1.1
CHGQ Chibougamau 41.12 3 P P 04 44 03.5 +1.2
baz=185
RTCV Cerro Valdivia 41.27 168 i P P 04 44 04.0 +0.2
AUSP Uspallata 41.46 170 i P P 04 44 06.5 +0.9
PTGB Pitanga 41.47 144 eP P 04 44 04.8 -0.8
O20A White River Ci 41.58 324 P P 04 44 07.4 +0.9
baz=130
TCA Tanti 41.72 163 eP P 04 44 06.0 -1.5
VA03 San Esteban 41.80 171 P P 04 44 09.0 +0.8
ASAL Salagasta 41.92 169 i P P 04 44 09.8 +0.6
ROC1 El Roble 41.94 172 P P 04 44 10.2 +0.7
U15A North Rim 41.95 316 IAmb IAmb 04 44 30.5
comp=Z,35nm,1.1s
FRTB Fartura 41.97 140 eP P 04 44 08.3 -1.3
RSSD Black Hills 42.14 331 P P 04 44 11.0 0.0
RSSD pmax pmax
comp=Z,17nm,1.2s
RSSD Black Hills 42.14 331 P P 04 44 11.2 +0.2
baz=139
RSSD Black Hills 42.14 331 P P 04 44 11.0 0.0
ARCO CERRO ARCO 42.14 169 i P P 04 44 11.5 +0.4
PDMCI Parker Dam,Lak 42.18 313 P P 04 44 12.1 +0.9
baz=118
K22A Casper 42.32 328 P P 04 44 12.6 +0.1
baz=135
K22A Casper 42.32 328 IAmb IAmb 04 44 32.6
comp=Z,40nm,1.6s
AGMN Agassiz Nation 42.37 342 P P 04 44 12.0 -0.6
baz=152,SNR=19
AGMN Agassiz Nation 42.37 342 IAmb IAmb 04 44 13.8
comp=Z,41nm,0.9s
MT05 Renca 42.39 172 P P 04 44 14.1 +1.2
MT05 IAmb IAmb 04 44 40.0
comp=Z,55nm,1.4s
AAGR Agrelo 42.40 169 i P P 04 44 14.3 +1.2
E28A Huff 42.61 336 IAmb IAmb 04 44 15.4
comp=Z,42nm,0.8s
SWSC Sam W. Stewart 42.80 310 P P 04 44 17.4 +1.1
baz=116
IRM Iron Mountain 42.85 312 P P 04 44 17.7 +1.0
baz=117
BC3 Big Chuckawall 42.85 311 P P 04 44 17.9 +1.1
baz=117
TMUT Trail Mountain 42.86 321 P P 04 44 17.4 +0.4
IKP In-Ko-Pah, Jac 42.91 309 P P 04 44 17.9 +0.6
baz=115
MDND Maddock 43.25 338 P P 04 44 19.0 -0.7
baz=147,SNR=9.3
MONP2 Monument Peak 43.25 309 P P 04 44 20.9 +0.7
baz=115
BELC Belle Mtn. Jos 43.41 311 P P 04 44 21.8 +0.4
baz=116,SNR=11
VAO Valinhos 43.43 137 eP P 04 44 20.4 -1.2
GMRC Granite Mounta 43.52 312 P P 04 44 22.9 +0.7
baz=118
TPFO Pinon Flats 43.58 310 P P 04 44 23.6 +0.9
baz=116,SNR=11
PFO Pinyon Flats O 43.59 310 eP P 04 44 22.2 -0.6
PFO pmax pmax
comp=Z,8.0nm,0.9s
PFO Pinyon Flats O 43.59 310 P P 04 44 23.8 +0.9
baz=116,SNR=9.3
PFO Pinyon Flats O 43.59 310 P P 04 44 23.0 +0.2

GDU01 Guandu, BA 43.73 120 eP P 04 44 23.5 -0.5
109C Camp Elliot, M 43.77 309 P P 04 44 25.3 +1.1
baz=114
109C Camp Elliot, M 43.77 309 IAmb IAmb 04 44 45.0
comp=Z,37nm,1.4s
RCBR Riachuelo 43.89 108 P P 04 44 26.0 +0.6
comp=Z,12nn,1.0s,baz=284,slow=6.3,SNR=4.3
RCBR Riachuelo 43.89 108 P P 04 44 26.0 +0.6
RCBR pmax pmax
comp=Z,41nm,1.5s
RCBR Riachuelo 43.89 108 IAmb IAmb 04 44 51.6
comp=Z,41nm,1.4s
SHPR Sheep Range 43.98 315 P P 04 44 26.4 +0.5
SHPR IAmb IAmb 04 44 46.5
comp=Z,26nm,1.0s
TUQ Turquoise Moun 44.01 313 P P 04 44 26.8 +0.6
baz=118
HEC Hector,Ludlow 44.03 312 P P 04 44 27.0 +0.7
baz=117,SNR=7.5
BW06 Boulder Array 44.04 326 P P 04 44 26.7 +0.2
baz=131,SNR=12
PDAR Pinedale Array 44.04 326 P P 04 44 26.7 +0.3
comp=Z,5.7nm,0.9s,baz=128,slow=9.7,SNR=21
PDAR pP pP 04 44 39.6 -0.4
comp=Z,2.3nm,0.6s,baz=126,slow=10,SNR=4.5
PDAR Pinedale Array 44.04 326 P P 04 44 26.2 -0.3
ULM Lac du Bonnet 44.12 343 P P 04 44 25.9 -0.7
comp=Z,52nm,0.8s,baz=154,slow=8.0,SNR=64
ULM LR LR 05 02 18.9
comp=Z,166nm,21.3s,baz=150,slow=35
ULM Lac du Bonnet 44.12 343 i P P 04 44 26.4 -0.2
MURC Murrieta 44.14 310 P P 04 44 28.3 +1.1
baz=115,SNR=6.7
DUG Dugway, Tooele 44.38 321 P P 04 44 30.1 +1.0
baz=125,SNR=15
DUG Dugway, Tooele 44.38 321 IAmb IAmb 04 44 49.6
comp=Z,28nm,0.8s
SHOC Shoshone, Teco 44.48 313 P P 04 44 31.0 +1.2
baz=118
GSC Goldstone, Bar 44.59 312 P P 04 44 31.5 +0.8
baz=117
GSC Goldstone, Bar 44.59 312 IAmb IAmb 04 44 51.2
comp=Z,30nm,1.2s
SPR3 Spring Creek 3 44.69 318 IAmb IAmb 04 44 52.0
comp=Z,30nm,1.1s
AHID Auburn Hatcher 44.91 325 IAmb IAmb 04 44 53.0
comp=Z,30nm,1.3s
SCI2 San Clemente I 44.92 309 P P 04 44 34.5 +1.2
baz=113
TPNV Topopah Spring 44.95 315 P P 04 44 34.3 +0.5
TPNV pmax pmax
comp=Z,23nm,1.1s
TPNV Topopah Spring 44.95 315 P P 04 44 35.0 +1.2
baz=119,SNR=8.9
TPNV Topopah Spring 44.95 315 P P 04 44 34.2 +0.5
TPNV IAmb IAmb 04 44 54.5
comp=Z,23nm,1.1s
CIS Catalina Islan 44.99 309 P P 04 44 35.1 +1.2
baz=114
LAO LASA Array 45.08 332 P P 04 44 35.3 +0.9
baz=138
REDW Red Top Meadow 45.15 326 IAmb IAmb 04 44 55.3
comp=Z,33nm,0.9s
SNOW Snow King Moun 45.16 326 IAmb IAmb 04 44 55.5
comp=Z,26nm,1.0s
FURC Furnace Creek, 45.16 314 P P 04 44 36.8 +1.6
baz=118
R11A Troy Canyon, C 45.19 317 P P 04 44 36.5 +0.9
baz=121,SNR=10
EDW2 Edwards Air Fo 45.28 311 P P 04 44 36.8 +0.5
baz=115,SNR=7.2
LRMC Laurel Mtn Rad 45.31 312 P P 04 44 37.0 +0.5
baz=116
BSFB Barra de Sao F 45.33 127 eP P 04 44 36.5 -0.2
MPMC Manual Prospec 45.42 313 P P 04 44 37.6 0.0
baz=117
RLMT Red Lodge 45.46 328 P P 04 44 37.9 +0.2
baz=133
BI02 San Fabin de 45.54 173 P P 04 44 38.5 +0.3
DGMT Dagmar 45.55 335 P P 04 44 37.4 -0.7
baz=142
DGMT Dagmar 45.55 335 IAmb IAmb 04 44 42.1
comp=Z,20nm,0.8s
GRAC Grapevine Rang 45.77 314 P P 04 44 40.8 +0.8
baz=118
RIB01 Linhares ES 45.95 128 eP P 04 44 41.4 -0.3
ISA Isabella, Lake 45.97 312 P P 04 44 42.4 +0.8
baz=116
ARVC Arvin 46.00 311 P P 04 44 42.8 +0.9
baz=115
CWC Cottonwood Cre 46.02 313 P P 04 44 42.7 +0.5
baz=117
ELK Elko 46.23 320 P P 04 44 44.2 +0.4
comp=Z,2.3nm,0.6s,baz=114,slow=7.3
VES Vestal, Richgr 46.49 312 P P 04 44 47.6 +1.9
baz=115
PKM Mcpherson Peak 46.64 310 P P 04 44 47.9 +0.8
baz=114
SCHQ Schefferville 46.74 8 P P 04 44 48.2 +0.9
comp=Z,48nm,0.9s,baz=188,slow=7.0,SNR=28
SCHQ sP sP 04 45 08.3 +1.2
comp=Z,16nm,0.7s,baz=214,slow=7.8,SNR=4.1
SCHQ LR LR 05 06 08.9
comp=Z,104nm,18.6s,baz=84,slow=38
SCHQ Schefferville 46.74 8 P P 04 44 48.1 +0.7
SMMC Simmler 46.95 311 P P 04 44 50.3 +0.9
baz=114
NV11 Mina Array Sit 46.99 316 IAmb IAmb 04 45 10.2
comp=Z,31nm,1.1s
BOZ Bozeman (W) 47.02 327 P P 04 44 50.3 +0.5
baz=131,SNR=5.8
NVAR Mina Array Bea 47.09 315 P P 04 44 51.3 +0.7
comp=Z,6.7nm,1.0s,baz=119,slow=7.3,SNR=26
NVAR pP pP 04 45 03.9 -0.4
comp=Z,11nm,1.0s,baz=128,slow=7.3,SNR=16
NVAR PcP PcP 04 46 23.1 +1.1
comp=Z,0.4nm,0.5s,baz=133,slow=4.5,SNR=4.1
NVAR Mina Array Bea 47.09 315 P P 04 44 50.0 -0.6
LHV Little Huntoon 47.15 315 IAmb IAmb 04 45 16.2
comp=Z,24nm,1.0s
RPN Rapa Nui 47.18 220 LR LR 05 01 01.5
comp=Z,70nm,19.9s,baz=67,slow=31
OMMB Old Mammoth Mi 47.21 314 IAmb IAmb 04 45 13.7
comp=Z,30nm,1.5s
KVN Kenerville 47.25 316 IAmb IAmb 04 45 11.8
comp=Z,22nn,1.1s
PAGB Antelope Grade 47.31 311 IAmb IAmb 04 45 12.2
comp=Z,27nm,0.8s
HLID Hailey 47.32 324 P P 04 44 52.8 +0.5
baz=126,SNR=8.8
RYN Ryan 47.34 316 P P 04 44 52.5 0.0
RYN IAmb IAmb 04 45 12.6
comp=Z,24nm,1.1s
LC01 Cuneo 47.68 174 IAmb IAmb 04 44 55.4
comp=Z,25nm,0.9s
EGMT Eagleton 47.71 331 P P 04 44 55.0 -0.1
baz=134
EGMT Eagleton 47.71 331 IAmb IAmb 04 45 15.0
comp=Z,19nm,1.1s
PMPB Monarch Peak 47.91 312 P P 04 44 57.1 +0.3
PMPB IAmb IAmb 04 45 16.4
comp=Z,23nm,1.1s
WAKR Walker 47.91 315 IAmb IAmb 04 45 17.6
comp=Z,21nm,1.0s
MFID Camas Ranch 48.07 323 P P 04 44 57.7 -0.3
MFID IAmb IAmb 04 45 18.1
comp=Z,18nm,1.1s
PNTR Pine Nut 48.30 316 IAmb IAmb 04 45 24.7
comp=Z,21nm,0.8s
VCNR Virginia City 48.42 316 IAmb IAmb 04 45 21.3
comp=Z,16nm,1.1s
MSO Missoula 49.04 327 P P 04 45 05.7 +0.3
baz=129,SNR=13
MSO Missoula 49.04 327 IAmb IAmb 04 45 09.5
comp=Z,13nm,0.9s
BEKR Beckworth 49.17 316 P P 04 45 06.8 +0.1
BEKR IAmb IAmb 04 45 26.6
comp=Z,24nm,1.5s
PLCA Paso Flores 49.64 173 P P 04 45 09.8 -0.1
comp=Z,9.0nm,0.9s,baz=358,slow=9.5,SNR=10
PLCA LR LR 05 06 52.8
comp=Z,80nm,19.9s,baz=352,slow=37
PLCA Paso Flores 49.64 173 IAmb IAmb 04 45 10.9
comp=Z,17nm,1.1s
PLCA Paso Flores 49.64 173 eP P 04 45 10.3 +0.3
J08A Circle Bar Ran 49.66 321 IAmb IAmb 04 45 30.4
comp=Z,18nm,1.0s

ORV Oroville 49.82 315 IAmb IAmb 04 45 31.6
comp=Z,45nm,1.6s
FFC Flin Flon 49.85 342 P P 04 45 11.2 -0.1
FFC pmax pmax
comp=Z,29nm,0.9s
FFC Flin Flon 49.85 342 P P 04 45 11.2 -0.1
F10A Beach Ranch, E 50.35 325 IAmb IAmb 04 45 34.9
comp=Z,19nm,1.1s
O03E Paynes Creek 50.35 316 P P 04 45 15.0 -0.5
baz=116
G08A Pilot Rock 50.98 323 IAmb IAmb 04 45 40.7
comp=Z,18nm,1.2s
M04C Macdoel 51.05 318 P P 04 45 20.9 +0.2
baz=117
E09A Wood Farm, Sta 51.18 325 IAmb IAmb 04 45 41.2
comp=Z,32nm,1.3s
L04D Klamath Falls 51.55 318 P P 04 45 24.4 -0.1
baz=117
YBH Yreka Blue Hor 51.61 317 LR LR 05 10 48.1
comp=Z,151nm,20.7s,baz=96,slow=40
NEW Newport 51.62 327 P P 04 45 24.8 -0.1
comp=Z,11nm,0.9s,baz=119,slow=9.3
NEW Newport 51.62 327 P P 04 45 24.5 -0.4
baz=126,SNR=8.8
F07A Phinny Hill Vi 51.88 323 IAmb IAmb 04 45 47.7
comp=Z,51nm,1.7s
G05D Wamic, OR 52.38 322 P P 04 45 35.3 +4.9
baz=120
H04A Detroit Lake 52.64 321 IAmb IAmb 04 45 54.1
comp=Z,28nm,0.9s
B08A Colville Reser 52.88 326 IAmb IAmb 04 45 35.0
comp=Z,18nm,0.9s
YKA Yellowknife Ar 60.03 341 P P 04 46 24.4 -0.3
comp=Z,55nm,0.7s,baz=129,slow=7.5,SNR=287
YKA pP pP 04 46 38.5 -0.3
comp=Z,8.1nm,0.6s,baz=128,slow=7.6,SNR=4.4
YKA sP sP 04 46 44.2 -0.4
comp=Z,14nm,0.8s,baz=129,slow=7.0,SNR=2.6
YKA LR LR 05 14 36.3
comp=Z,76nm,18.2s,baz=0.0,slow=38
DLBC Dease Lake 63.61 332 LR LR 05 17 33.2
comp=Z,81nm,18.2s,baz=182,slow=39
DLBC Dease Lake 63.61 332 P P 04 46 49.1 +0.2
DLBC IAmb IAmb 04 46 50.8
comp=Z,30nm,1.2s
ICESG Greenland Ices 65.08 14 i P P 04 46 58.0 -0.6
ICESG IAmb IAmb 04 47 00.6
comp=Z,24nm,0.8s
ICESG i 04 47 18.4
LIS Lisbon 67.67 52 eP P 04 47 15.8 +0.4
MORF Marmelete 67.91 53 eP P 04 47 18.6 +1.6
TULEG Thule 67.93 2 i P P 04 47 16.1 -0.2
TULEG IAmb IAmb 04 47 17.1
comp=Z,33nm,1.2s
SUMG Summit 67.95 12 P P 04 47 17.1 +0.1
SUMG Summit 67.95 12 P P 04 47 17.1 +0.1
SUMG Summit 67.95 12 i P P 04 47 16.9 -0.1
comp=Z,65nm,0.7s
SUMG Summit 67.95 12 i P P 04 47 16.9 -0.1
SUMG IAmb IAmb 04 47 17.5
comp=Z,65nm,0.7s
HYT Haines Junctio 68.07 333 IAmb IAmb 04 47 19.7
comp=Z,39nm,1.7s
PCAS Casmilo, Conde 68.33 50 eP P 04 47 20.9 +1.3
comp=Z,198nm,1.8s
COI Coimbra 68.42 50 P P 04 47 21.2 +1.2
COI pmax pmax
comp=Z,83nm,1.1s
COI Coimbra 68.42 50 eP P 04 47 21.5 +1.4
comp=Z,139nm,1.4s
COI Coimbra 68.42 50 P P 04 47 21.2 +1.2
EVO Evora 68.54 52 eP P 04 47 21.8 +0.9
comp=Z,54nm,1.9s
PVIS Viseu 68.87 50 eP P 04 47 23.9 +0.9
POLO Lamas de Olo 69.03 49 eP P 04 47 24.9 +0.9
comp=Z,56nm,1.8s
PCBR Castelo Branco 69.09 51 eP P 04 47 25.1 +0.8
PMRV Marv??o 69.11 51 eP P 04 47 25.3 +0.9
comp=Z,50nm,1.5s
MVO Moncorvo 69.57 49 eP P 04 47 28.2 +0.9
comp=Z,58nm,1.1s
INK Inuvik 69.80 341 IAmb IAmb 04 47 29.1
comp=Z,26nm,0.7s
PBRG Braganca 69.86 49 eP P 04 47 30.1 +1.1
CTGM Chitina Glacie 69.87 332 IAmb IAmb 04 47 31.1
comp=Z,60nm,1.7s
BARN Barnard Glacie 70.05 332 IAmb IAmb 04 47 32.2
comp=Z,70nm,1.8s
DAWY Dawson 70.11 336 IAmb IAmb 04 47 50.9
comp=Z,24nm,1.3s
TGL Tana Glacier 70.50 332 IAmb IAmb 04 47 54.7
comp=Z,27nm,1.1s
BCAR Beaver Creek A 70.76 334 P P 04 47 34.2 +0.1
MCARA McCarthy VSAT 70.78 332 IAmb IAmb 04 47 56.1
comp=Z,29nm,1.2s
EGAK Eagle 71.09 336 P P 04 47 36.7 +0.7
EGAK IAmb IAmb 04 47 38.6
comp=Z,19nm,1.0s
GLB Gilahina Butte 71.16 332 IAmb IAmb 04 47 58.7
comp=Z,32nm,1.2s
K27K Chicken 71.20 335 P P 04 47 37.9 +1.1
baz=109
K27K Chicken 71.20 335 IAmb IAmb 04 47 58.5
comp=Z,20nm,1.1s
L26K Log Cabin Wild 71.42 334 P P 04 47 39.3 +1.2
baz=108
PAB San Pablo 71.47 51 P P 04 47 39.8 +0.9
PAB pmax pmax
comp=Z,34nm,1.2s
PAB San Pablo 71.47 51 P P 04 47 39.8 +0.9
PAB IAmb IAmb 04 47 41.0
comp=Z,34nm,1.2s
N25K Chitina, Valde 71.56 332 P P 04 47 40.1 +1.1
baz=106,SNR=5.6
TIC Toumodi 71.72 86 eP P 04 47 40.9 +0.1
LIC Lamto 71.77 86 eP P 04 47 41.3 +0.2
comp=Z,73nm,0.6s
ESDC Sonseca Array 71.78 51 P P 04 47 41.6 +0.9
comp=Z,24nm,0.9s,baz=273,slow=6.0,SNR=61
ESDC sP sP 04 48 02.3 +1.4
comp=Z,5.5nm,0.9s,baz=274,slow=5.9,SNR=4.5
ESDC Sonseca Array 71.78 51 P P 04 47 41.8 +1.1
ESDC IAmb IAmb 04 47 43.2
comp=Z,70nm,1.1s
ESBB Sonseca Array 71.78 51 IAmb IAmb 04 47 42.9
comp=Z,23nm,0.9s
DBIC Dimbokro 71.88 86 P P 04 47 42.2 +0.4
comp=Z,22nn,0.8s,baz=264,slow=6.5,SNR=16
DBIC Dimbokro 71.88 86 P P 04 47 42.1 +0.4
DBIC IAmb IAmb 04 47 43.1
comp=Z,25nm,0.8s
KOWA Kowa 71.92 78 P P 04 47 42.6 +0.7
DOT Dot Lake 71.92 334 P P 04 47 41.9 +0.8
SCRK Sand Creek 71.99 335 P P 04 47 42.5 +0.9
baz=108,SNR=24
KIC Kosan Boka 72.03 86 eP P 04 47 43.1 +0.4
comp=Z,20nm,0.6s
KLU Klutina 72.14 332 IAmb IAmb 04 48 03.7
comp=Z,31nm,1.2s
PAX Paxson 72.33 334 P P 04 47 44.3 +0.6
PAX pmax pmax
comp=Z,44nm,1.4s
PAX Paxson 72.33 334 P P 04 47 44.3 +0.6
PAX IAmb IAmb 04 48 04.6
comp=Z,44nm,1.4s
M24K Tolsona, Glenn 72.42 333 P P 04 47 45.2 +1.0
baz=105,SNR=5.9
SCM Sheep Creek Mo 72.88 332 IAmb IAmb 04 48 07.9
comp=Z,38nm,1.0s
HDA Harding Lake 73.35 335 P P 04 47 49.5 -0.1
baz=105,SNR=16
IL31 73.42 335 IAmb IAmb 04 48 10.5
comp=Z,39nm,1.4s
ILAR Eielson Array 73.42 335 P P 04 47 49.9 -0.1
comp=Z,11nm,0.9s,baz=111,slow=4.1,SNR=79
ILAR pP pP 04 48 04.4 -0.2
comp=Z,4.1nm,0.7s,baz=104,slow=4.6,SNR=6.7
ILAR Eielson Array 73.42 335 P P 04 47 49.4 -0.5
SEW Seward 73.51 330 IAmb IAmb 04 48 11.4
comp=Z,29nm,1.2s
GHO Glory Hole Cre 73.60 332 IAmb IAmb 04 48 12.4
comp=Z,42nm,1.0s
PMR Palmer 73.66 332 IAmb IAmb 04 47 52.5
comp=Z,58nm,1.8s
O22K Cooper Landing 73.72 331 P P 04 47 53.0 +1.2
baz=101
POKR Poker Plat Res 73.73 336 P P 04 47 52.2 +0.4

baz=105
POKR Poker Plat Res 73.73 336 IAmb IAmb 04 48 12.8
comp=Z,38nm,1.4s
CCB Clear Creek Bu 73.77 335 IAmb IAmb 04 48 12.3
comp=Z,28nm,1.6s
RC01 Rabbit Creek A 73.84 331 P **P** **04 47 53.0 +0.5**
baz=101
COLA College 73.85 335 P **P** **04 47 52.4 0.0**
COLA pmax pmax
comp=Z,31nm,1.2s
COLA College 73.85 335 P **P** **04 47 52.4 0.0**
COLA IAmb IAmb 04 48 13.0
comp=Z,31nm,1.2s
TCOL CIGO, UAF Yank 73.85 335 P **P** **04 47 52.9 +0.5**
baz=104
TCOL CIGO, UAF Yank 73.85 335 IAmb IAmb 04 48 13.0
comp=Z,31nm,1.2s
MDM Murphy Dome 74.02 335 IAmb IAmb 04 48 14.2
comp=Z,43nm,1.4s
MCK McKinley 74.04 334 P **P** **04 47 54.1 +0.5**
baz=103,SNR=13
BRLK Bradley Lake 74.16 330 IAmb IAmb 04 48 15.6
comp=Z,32nm,1.1s
NEA2 Nenana 74.29 335 P **P** **04 47 55.4 +0.4**
baz=103
CUT Chulitna 74.35 332 P **P** **04 47 55.9 +0.5**
baz=101
SUA Susitna One 74.40 331 IAmb IAmb 04 48 16.7
comp=Z,32nm,1.0s
I23K Minto, Yukon-K 74.53 335 P **P** **04 47 57.0 +0.6**
baz=103,SNR=8.4
DAG Danmarks Havn 74.64 12 *i* P **P** **04 47 55.9 -0.9**
DAG pmax pmax
comp=Z,7.0nm,0.8s
DAG Danmarks Havn 74.64 12 *i* P **P** **04 47 55.9 -0.9**
comp=Z,6.5nm,0.8s
DAG Danmarks Havn 74.64 12 *i* P **P** **04 47 56.0 -0.9**
DAG IAmb IAmb 04 47 56.9
comp=Z,6.5nm,0.8s
SKT Skwentna 74.86 332 P **P** **04 47 58.2 -0.2**
KTH Kantishna Hill 74.87 334 IAmb IAmb 04 48 19.2
comp=Z,28nm,1.2s
MLY Manley 75.08 335 P **P** **04 48 00.2 +0.5**
baz=102,SNR=10
COLD Coldfoot 75.33 337 P **P** **04 48 02.2 +1.2**
baz=103,SNR=14
COLD Coldfoot 75.33 337 IAmb IAmb 04 48 22.7
comp=Z,31nm,1.1s
TOLK Toolik Lake Re 75.42 339 P **P** **04 48 01.8 +0.2**
baz=104,SNR=6.3
PPT2 Papeete2 75.86 249 *e*LR LR 05 11 35.7
comp=Z,90nm,24.5s
SVW2 Sparrevohn 76.65 331 IAmb IAmb 04 48 28.5
comp=Z,22nm,1.0s
TTA Tatalina 77.05 333 IAmb IAmb 04 48 31.2
comp=Z,29nm,1.1s
TBI Tubuai 77.22 244 *e*LQ LQ 05 09 00.6
comp=Z,234nm,38.5s
TBI *e*LR LR 05 12 14.7
comp=Z,265nm,31.5s
TOA0 Torodi Ar. Sit 77.57 78 P **P** **04 48 15.3 +0.6**
TOA0 IAmb IAmb 04 48 15.3
comp=Z,9.0nm,0.6s
TORD Torodi Ar. Bea 77.57 78 P **P** **04 48 14.8 +0.2**
comp=Z,8.4nm,0.5s,baz=288,slow=6.0,SNR=39
TORD PP **PP** **04 51 08.5 -1.6**
comp=Z,2.0nm,1.0s,baz=279,slow=9.4,SNR=3.9
TORD LR LR 05 24 26.9
comp=Z,36nm,18.3s,baz=80,slow=37
DOU Dourbes 78.26 41 P **P** **04 48 18.4 +0.6**
A21K Barrow 78.29 341 P **P** **04 48 17.7 +0.1**
baz=98,SNR=12
A21K Barrow 78.29 341 IAmb IAmb 04 48 38.4
comp=Z,39nm,1.1s
BGES Gesves 78.58 40 P **P** **04 48 20.2 +0.6**
BSTI Sart Tilman 78.88 40 P **P** **04 48 22.0 +0.8**
MEM Membach 79.16 40 P **P** **04 48 23.3 +0.5**
WLF Walferdange 79.27 41 P **P** **04 48 24.6 +1.2**
comp=Z,20nm,1.0s
WLF Walferdange 79.27 41 P **P** **04 48 23.9 +0.5**
WLF pmax pmax
comp=Z,20nm,0.8s
WLF Walferdange 79.27 41 P **P** **04 48 23.9 +0.5**
WLF IAmb IAmb 04 48 25.4
comp=Z,20nm,0.8s
CASM Ain Smara 80.03 55 P **P** **04 48 28.4 +0.5**
SENIN Lac Senin/Sane 80.13 44 IAmb IAmb 04 48 45.8
comp=Z,38nm,1.6s
CKFL Kef-Lekhel 80.21 55 P **P** **04 48 30.6 +1.7**
RDOG Red Dog Mine 80.25 338 IAmb IAmb 04 48 49.2
comp=Z,37nm,1.1s
CMAH Djebel Manchou 80.75 54 P **P** **04 48 31.6 -0.2**
NB2 NORSAR Subarra 81.78 29 P **P** **04 48 37.3 +0.7**
comp=Z,1.5nm,0.8s,baz=274,slow=5.6
NOA NORSAR Array B 81.78 29 P **P** **04 48 37.1 +0.5**
comp=Z,3.3nm,0.9s,baz=274,slow=5.4,SNR=7.1
NOA LR LR 05 23 04.9
comp=Z,49nm,18.8s,baz=115,slow=34
DAVA Damuels 81.85 43 *i* P **P** **04 48 37.9 +0.4**
comp=Z,16nm,0.9s,SNR=9.7
KEST Kesra 82.38 55 P **P** **04 48 41.4 +1.0**
comp=Z,9.2nm,0.8s,baz=261,slow=5.3,SNR=9.6
RETA Reutte 82.43 43 *e*P **P** **04 48 40.9 +0.5**
comp=Z,4.2nm,0.9s
FETA Feichten 82.44 44 *i* P **P** **04 48 41.7 +1.1**
comp=Z,10nm,0.9s,SNR=14
MOTA Moosalm 82.67 43 *e*P **P** **04 48 42.1 +0.3**
comp=Z,4.7nm,0.8s
SQTA Sankt Quirin 82.75 43 *e*P **P** **04 48 42.8 +0.7**
comp=Z,5.9nm,0.8s
WTTA Wattenberg 83.04 43 *e*P **P** **04 48 43.2 -0.5**
comp=Z,11nm,1.5s
CTI Castel Tesino 83.16 45 P **P** **04 48 44.7 +0.4**
CTI pmax pmax
comp=Z,9.0nm,0.9s
CTI Castel Tesino 83.16 45 P **P** **04 48 44.7 +0.4**
NKC Novy Kostel 83.29 40 *e*P **P** **04 48 46.1 +1.3**
NKC Novy Kostel 83.29 40 *e*P **P** **04 48 46.1 +1.3**
CLL Collm 83.54 39 *i* P **P** **04 48 47.1 +1.2**
comp=Z,8.0nm,1.3s
CLL Collm 83.54 39 P **P** **04 48 47.1 +1.2**
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 83.54 39 P **P** **04 48 47.1 +1.2**
ABTA Abfaltersbach 83.69 44 *e*P **P** **04 48 47.1 +0.2**
comp=Z,2.3nm,0.7s
KHC Kasperske Hory 84.14 41 *e*P **P** **04 48 49.8 +0.7**
KHC Kasperske Hory 84.14 41 *e*P **P** **04 48 49.8 +0.7**
BRG Berggiesshubel 84.17 40 *e*P **P** **04 48 50.0 +0.8**
comp=Z,10nm,1.3s
BRG Berggiesshubel 84.17 40 *e*P **P** **04 48 50.0 +0.8**
BRG pmax pmax
comp=Z,10.0nm,1.3s
KBA Koelnbreinsper 84.22 43 *i* P **P** **04 48 50.6 +0.8**
comp=Z,13nm,1.1s,SNR=7.3
GERES GERESS Array B 84.25 42 P **P** **04 48 50.6 +0.8**
comp=Z,4.9nm,0.9s,baz=270,slow=4.0,SNR=27
GERES pP **pP** **04 49 04.7 +0.1**
comp=Z,1.8nm,0.9s,baz=251,slow=4.1,SNR=3.3
GERES LR LR 05 24 00.8
comp=Z,38nm,20.4s,baz=266,slow=34
GERES GERESS Array B 84.25 42 P **P** **04 48 50.0 +0.2**
MYKA Terra Mystica 84.47 44 *e*P **P** **04 48 51.6 +0.6**
comp=Z,6.5nm,0.6s
PRU Pruhonice 84.66 40 *e*P **P** **04 48 53.2 +1.5**
PRU Pruhonice 84.66 40 *e*P **P** **04 48 53.2 +1.5**
MOA Molln 84.75 43 *i* P **P** **04 48 53.0 +0.8**
comp=Z,6.3nm,0.8s,SNR=6.2
JAVS Javornik 84.85 45 *e*P **P** **04 48 54.0 +1.1**
OBKA Obir 85.11 44 *e*P **P** **04 48 55.8 +1.6**
comp=Z,10nm,1.7s
LJU Ljubljana 85.15 44 *e*P **P** **04 48 55.5 +1.2**
SOKA Soboth 85.42 44 *i* P **P** **04 48 56.0 +0.3**
comp=Z,11nm,1.3s,SNR=5.7
CHVC Chvalec 85.54 40 *e*P **P** **04 48 57.2 +1.1**
OSTC Ostas 85.65 40 *e*P **P** **04 48 57.9 +1.2**
ARSA Arzberg 85.67 43 *e*P **P** **04 48 57.7 +0.8**
comp=Z,8.1nm,0.8s
DPC Dobruska-Polom 85.75 40 *e*P **P** **04 48 58.4 +1.2**
DPC Dobruska-Polom 85.75 40 *e*P **P** **04 48 58.4 +1.2**
DOBS Dobrina 85.79 44 *e*P **P** **04 48 58.4 +1.0**
CONA Conrad Observa 85.80 42 *e*P **P** **04 48 58.3 +0.8**
comp=Z,9.2nm,0.9s
KRUC Moravsky 85.98 41 *e*P **P** **04 48 59.2 +0.9**
VRAC Vranov 86.08 41 *e*P **P** **04 49 00.0 +1.2**
KRLC Kraliky 86.08 40 *e*P **P** **04 49 00.3 +1.5**
KRLC Kraliky 86.08 40 *e*P **P** **04 49 00.3 +1.5**
ARCES ARCESS Array B 86.37 20 P **P** **04 48 59.8 0.0**
comp=Z,3.2nm,0.6s,baz=282,slow=3.8,SNR=18
ZST Bratislava 86.58 42 *e*P **P** **04 49 02.0 +0.7**
ZST Bratislava 86.58 42 *e*P **P** **04 49 02.0 +0.7**
MORC Moravsky Berou 86.61 40 *e*P **P** **04 49 02.8 +1.3**
MODS Modra-Piesok 86.67 42 *e*P **P** **04 49 01.9 +0.2**
MODS pmax pmax
comp=Z,18nm,1.3s
MODS Modra-Piesok 86.67 42 *e*P **P** **04 49 01.9 +0.2**
JAVC Velka Javorina 86.85 41 *e*P **P** **04 49 05.0 +2.4**
VYHS Vyhne 87.67 41 *e*P **P** **04 49 07.9 +1.3**
VYHS pmax pmax
comp=Z,15nm,1.4s
VYHS Vyhne 87.67 41 *e*P **P** **04 49 07.9 +1.3**
PSZ Piszkesteto 88.47 42 P **P** **04 49 12.5 +2.0**
PSZ Piszkesteto 88.47 42 P **P** **04 49 12.5 +2.0**
FINES FINESS Array B 88.78 28 P **P** **04 49 11.6 +0.1**
comp=Z,3.2nm,0.9s,baz=270,slow=3.8,SNR=6.4
VNA3 Neumayer Olymp 91.26 163 P **P** **04 49 22.8 0.0**
BILL Bilibino 91.41 340 *e*P **P** **04 49 23.9 +0.3**
BILL *i* 04 49 43.3
BILL *i* 04 53 00.9
BILL *e*S **SKSac** **04 59 50.4 -1.2**
BILL *e*SS SS 05 06 35.7 +11
BILL pmax pmax
BILL comp=Z,17nm,1.3s MLR MLR
comp=Z,174nm,18.0s
BILL Bilibino 91.41 340 P **P** **04 49 23.9 +0.3**
VNA2 Neumayer--Watz 91.82 162 P **P** **04 49 25.0 -0.4**
baz=284,slow=5.0
BUR08 Bucovina Ar. S 92.02 41 IAmb IAmb 04 51 30.0
comp=Z,20nm,1.9s
BURAR Bucovina Array 92.04 41 P **P** **04 49 28.4 +1.2**
SNAA Sanae 93.46 162 P **P** **04 49 32.5 -0.6**
SNAA Sanae 93.46 162 *i* P **P** **04 49 33.2 +0.2**
SNAA pmax pmax
comp=Z,3.0nm,1.1s
SNAA Sanae 93.46 162 P **P** **04 49 33.0 0.0**
SNAA IAmb IAmb 04 49 48.6
comp=Z,6.4nm,1.0s
AKASG Malin Array Be 93.67 38 P **P** **04 49 34.3 -0.1**
comp=Z,0.6nm,0.6s,baz=282,slow=4.5,SNR=1.7
IDI Anoyia 94.94 53 P **P** **04 49 41.0 +0.3**
comp=Z,9.7nm,0.7s,baz=300,slow=7.7,SNR=14
KLMR Klimovskoe 95.04 26 *e*P **P** **04 49 36.4 -4.1**
KLMR pmax pmax
comp=Z,11nm,1.3s
KLMR Klimovskoe 95.04 26 *e*P **P** **04 49 36.4 -4.1**
KLMR AMP 04 49 49.4
comp=Z,11nm,1.3s
TSUM Tsumeb 97.56 108 LR LR 05 30 46.2
comp=Z,57nm,21.1s,baz=312,slow=33
TIXI Tiksi 97.90 352 *i* P **P** **04 49 51.2 -2.0**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
MDUB Mudurnu 98.26 47 P **P** **04 49 55.5 -0.1**
BR131 Keskin Array S 100.27 47 *i* P **Pdif** **04 50 04.8 +0.1**
BR131 Keskin Array S 100.27 47 Pdif **Pdif** **04 50 04.8 +0.1**
BRTR Keskin Array B 100.27 47 P **Pdif** **04 50 05.5 +0.7**
comp=Z,0.9nm,0.8s,baz=258,slow=4.9,SNR=4.9
BRTR Keskin Array B 100.27 47 Pdif **Pdif** **04 50 04.8 +0.1**
NRIK Noril'sk 101.40 5 P **Pdif** **04 50 09.8 +0.9**
comp=Z,0.9nm,0.3s,baz=22,slow=5.4,SNR=4.9
MKAR Makanchi Array 121.84 16 PKP **PKPdf** **04 55 11.5 -0.6**
comp=Z,0.7nm,0.6s,baz=287,slow=2.8,SNR=3.9
SONM Songino Array 123.57 357 PKP **PKPdf** **04 55 15.4 -0.2**
comp=Z,0.7nm,0.8s,baz=198,slow=0.5,SNR=2.3
WMQ Urumqi 125.98 13 *e*PKP **PKPdf** **04 55 20.5 +0.3**
WMQ LR LR
comp=Z,380nm,29.2s
HHC Hu-ho-hao-te 129.96 351 *e*PKP **PKPdf** **04 55 28.0 +0.1**
HHC LR LR
comp=Z,200nm,21.6s
HHC LR LR
comp=Z,240nm,20.4s
HHC LR LR
comp=Z,210nm,20.2s
GTA Gaotai 132.03 3 PKP **PKiKP** **04 55 33.3 +0.3**
GTA LR LR
comp=Z,150nm,20.4s
GTA LR LR
comp=Z,180nm,18.5s
LZH Lanzhou 135.39 358 *e*PKP **PKPdf** **04 55 37.0 -1.4**
LZH sPKP 04 55 58.5
LZH LR LR
comp=Z,160nm,18.0s
LZH LR LR
comp=Z,160nm,18.3s
LZH LR LR
comp=Z,240nm,20.1s
NJ2 Nanjing 136.54 340 *e*PKP **PKPdf** **04 55 40.3 -0.1**
STKA Stephens Creek 137.09 232 PKP **PKPdf** **04 55 39.8 -1.6**
comp=Z,2.2nm,0.7s,baz=14,slow=4.2,SNR=4.5
GYA Guiyang 144.78 354 PKP **PKPab** **04 55 54.0 -0.4**
GYA sPKP 04 56 14.8
KMI Kunming 146.34 360 *e*PKPbc **PKPbc** **04 56 00.0 +0.4**
KMI pPKP PKiKP 04 56 08.0 +5.3
KMI Kunming 146.34 360 PKP2 **PKPdf** **04 55 59.2 +0.8**
KMI Kunming 146.34 360 PKPbc **PKPdf** **04 55 59.2 +0.8**
AS31 Alice Springs 146.53 240 PKPbc **PKPdf** **04 55 59.0 +0.5**
ASAR Alice Springs 146.53 240 PKPbc **PKPdf** **04 55 58.3 -0.2**
comp=Z,13nm,0.6s,baz=120,slow=3.7,SNR=122
ASAR pPKPbc pPKPbc 04 56 14.3 -1.1
comp=Z,6.1nm,0.5s,baz=118,slow=3.7,SNR=6.6
WR0 Warramunga Arr 147.12 247 PKPbc **PKPbc** **04 56 01.8 +0.1**
WB2 Warramunga Arr 147.30 247 PKPbc **PKPdf** **04 56 00.7 +0.9**
WRAB Tennant Creek 147.30 247 PKIKP **PKPdf** **04 55 59.8 0.0**
WRAB 04 56 02.5
WRAB Tennant Creek 147.30 247 **PKPdf** **04 55 59.8 0.0**
WRAB PKPbc **PKPbc** **04 56 02.5 +0.3**
WB0 Warramunga Arr 147.30 247 PKPdf **PKPdf** **04 55 59.6 -0.3**
WB0 PKPbc **PKPbc** **04 56 02.7 +0.5**
WRA Warramunga Arr 147.31 247 PKPbc **PKPdf** **04 55 59.7 -0.1**
comp=Z,19nm,0.6s,baz=99,slow=3.6,SNR=38
WRA PKPab **PKPab** **04 56 04.2 +0.1**
comp=Z,20nm,0.6s,baz=98,slow=3.7,SNR=60
SLVN Son La 150.08 357 **PKiKP** **04 56 10.2 -0.1**
CMAR Chiang Mai Arr 152.74 7 PKPbc **PKPbc** **04 56 15.6 +0.1**
comp=Z,4.1nm,0.6s,baz=325,slow=2.4,SNR=23
CMAR PKPab **PKPab** **04 56 25.9 -0.3**
comp=Z,7.9nm,0.7s,baz=330,slow=5.0,SNR=18
CMAR Chiang Mai Arr 152.74 7 **PKPbc** **04 56 15.0 -0.5**

GCMT 28 04:40:01.0±0.4, 5.71N±0.04×61.38E±0.05, h14km±2km, MW4.8/78, Moment Tensor Solution. s16,c17; s78,c101; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-1.43±.17; $M_{\theta\theta}$0.87±.11; $M_{\phi\phi}$0.56±.10; $M_{r\theta}$0.95±.28; $M_{\theta\phi}$-0.43±.06; $M_{\phi r}$-1.12±.32; Best double couple: $M_0$1.95900×10^{16} NP1:ϕ_s120.00000°, δ21.00000°, λ-104.00000°. NP2:ϕ_s316.00000°, δ69.00000°, λ-85.00000°. Principal axes: T 1.8130, Plg24.0000°, Azm41.0000°; N 0.2950, Plg5.0000°, Azm134.0000°; P -2.1050, Plg65.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Carlsberg Ridge

*IDC **28** 04:48:09.1±6.5, 24.28S×179.85E, h515km±53km, mb2.9/4, mb1 3.1/6, mb1mx2.9/31, mbtmp4.0/6 Error ellipse: s-maj=75.4km s-min=24.2km az=49.0*
ISC 28 04:48:09.2±1.6, 24.4S±0.2×179.9E±0.2, h517km, n11, σ0s85/12, mb3.4/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.61**	**278**	P	**P**	**04 50 54.9**	**+0.6**
	0.3nm,0.3s,baz=77,slow=19,SNR=3.5						
URZ	**Urewera**	**14.01**	**189**	P	**P**	**04 51 07.9**	**-0.6**
	0.7nm,0.3s,baz=2.6,slow=13,SNR=2.3						
URZ				S	**S**	**04 53 35.9**	**-0.5**
	0.4nm,0.3s,baz=74,slow=23,SNR=5.7						
ASAR	**Alice Springs**	**41.88**	**261**	P	**P**	**04 55 13.8**	**-0.4**
	0.3nm,0.3s,baz=92,slow=6.6,SNR=5.5						
WRA	**Warramunga Arr**	**42.30**	**267**	P	**P**	**04 55 16.8**	**-0.7**
	0.6nm,0.4s,baz=103,slow=8.2,SNR=31						
VNDA	**Vanda**	**53.86**	**185**	P	**P**	**04 56 44.4**	**+1.5**
	0.3nm,0.5s,baz=17,slow=7.7,SNR=5.2						
MAW	**Mawson**	**77.24**	**200**	P	**P**	**04 59 09.9**	**+0.6**
	1.2nm,0.5s,baz=144,slow=4.5,SNR=6.8						
SNAA	**Sanae**	**84.15**	**179**	P	**P**	**04 59 44.6**	**-0.7**
VNA3	**Neumayer Olymp**	**84.36**	**177**	P	**P**	**04 59 45.7**	**-0.5**
VNA2	**Neumayer--Watz**	**84.78**	**178**	P	**P**	**04 59 47.9**	**-0.4**
	baz=179,slow=4.7						
BRTR	**Keskin Array B**	**147.83**	**306**	PKPbc	**PKPbc**	**05 06 55.0**	**-1.1**
	0.5nm,0.6s,baz=90,slow=5.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**168.66**	**189**	PKPab	**PKPab**	**05 08 31.2**	**+0.5**
	0.4nm,0.7s,baz=188,slow=2.2,SNR=2.1						

IDC 28 04:56:48.9±4.3, 55.48N×86.06E, h0km, mb1 2.9/1, mb1mx2.8/43, mbtmp2.9/1, ML2.5/1, Error ellipse: s-maj=32.5km s-min=28.9km az=9.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.70**	**206**	*i*		05 07 30.0	
	baz=24,slow=346,SNR=11						
ZALV	**Zalesovo Beam**	**1.70**	**205**	Pn	Pn	04 57 18.9	-0.8
	1.6nm,0.3s,baz=28,slow=14,SNR=30						
ZALV				Lg	Lg	04 57 42.7	
	1.2nm,0.3s,baz=26,slow=28,SNR=8.3						
MKAR	**Makanchi Array**	**9.02**	**197**	Pn	Pn	04 59 00.6	+0.4
	0.1nm,0.3s,baz=13,slow=12,SNR=1.7						

*IDC **28** 05:01:05.9±3.6, 19.12N×147.28E, h92km±34km, mb3.4/11, mb1 3.6/11, mb1mx3.4/49, mbtmp3.7/11, Error ellipse: s-maj=26.9km s-min=17.2km az=91.0*
ISC 28 05:01:00.1±0.8, 19.30N±0.09×147.4E±0.2, h35km, n12, σ1s86/14, mb3.7/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**6.18**	**204**	P	**Pn**	**05 02 31.6**	**+2.7**
	baz=11,slow=16						
GUMO				S	**Sn**	**05 03 39.3**	**+0.9**
	19nm,0.3s,baz=4.0,slow=17,SNR=4.3						
KSRS	**Korea Array**	**24.84**	**321**	P	**P**	**05 06 22.2**	**+3.0**
	1.1nm,0.5s,baz=147,slow=9.6,SNR=2.2						
WRA	**Warramunga Arr**	**41.05**	**199**	P	**P**	**05 08 38.6**	**-1.8**
	0.4nm,0.3s,baz=18,slow=8.1,SNR=8.6						
WRA				PcP	**PcP**	**05 10 38.4**	**-1.5**
	0.2nm,0.5s,baz=13,slow=3.4,SNR=1.7						
FITZ	**Fitzroy Crossi**	**42.88**	**211**	P	**P**	**05 08 54.1**	**-1.2**
	1.8nm,0.9s,baz=18,slow=6.5,SNR=1.9						
SONM	**Songino Array**	**43.71**	**320**	P	**P**	**05 09 02.8**	**+0.9**
	0.5nm,0.6s,baz=129,slow=9.2,SNR=3.4						
ASAR	**Alice Springs**	**44.69**	**198**	P	**P**	**05 09 07.4**	**-2.5**
	0.3nm,0.4s,baz=13,slow=7.9,SNR=4.1						
CMAR	**Chiang Mai Arr**	**45.75**	**277**	P	**P**	**05 09 17.4**	**-1.1**
	0.8nm,0.3s,baz=66,slow=8.1,SNR=6.2						
ZALV	**Zalesovo Beam**	**58.54**	**322**	P	**P**	**05 10 52.2**	**-0.8**
	0.3nm,0.4s,baz=158,slow=5.8,SNR=1.6						
MKAR	**Makanchi Array**	**59.23**	**313**	P	**P**	**05 10 55.9**	**-2.0**
	0.4nm,0.6s,baz=76,slow=12,SNR=1.5						
ILAR	**Eielson Array**	**62.40**	**26**	P	**P**	**05 11 19.1**	**-0.1**
	0.3nm,0.9s,baz=272,slow=8.0,SNR=4.3						
YKA	**Yellowknife Ar**	**76.70**	**28**	P	**P**	**05 12 47.8**	**+0.4**
	0.6nm,0.8s,baz=297,slow=5.1,SNR=2.4						
NVAR	**Mina Array Bea**	**81.49**	**52**	P	**P**	**05 13 15.7**	**+1.2**
	0.7nm,0.7s,baz=262,slow=6.3,SNR=5.8						

*IDC **28** 05:11:47.8±3.7, 8.74S×124.45E, h56km±35km, mb3.6/5, mb1 1.4/8, mb1mx3.5/47, mbtmp4.1/8, ML4.3/3, Error ellipse: s-maj=52.2km s-min=22.4km az=60.0*
*DJA **28** 05:11:53.1±0.4, 9.S±5.×12.4E±.°, h118km±4km, M4.4/8, mB4.9/5, mb4.9/4, MLv4.3/8, Mw(mB)4.2/5*
ISC 28 05:11:52.1±0.7, 9.12S±0.08×123.94E±0.09, h100km, n23, σ2s02/24, mb3.9/5, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.71**	**153**	P	**Pn**	**05 12 13.2**	**+3.4**
SOEI				S	**Sn**	**05 12 27.3**	**+4.3**
BATI	**Baumata**	**1.11**	**194**	P	**Pn**	**05 12 15.5**	**+1.6**
	412nm,0.3s,baz=115,slow=0.8,SNR=163						
BATI				S	**Sn**	**05 12 32.2**	**+1.9**
	352nm,0.3s,baz=40,slow=17,SNR=17						
BATI	**Baumata**	**1.11**	**194**	P	**Pn**	**05 12 15.8**	**+1.9**
BATI				S	**Sn**	**05 12 31.6**	**+1.4**
MMRI	**Maumere**	**1.75**	**286**	P	**Pn**	**05 12 23.8**	**+2.3**
MMRI				S	**Sn**	**05 12 45.5**	**+1.6**
EDFI	**Ende, Flores**	**2.25**	**279**	P	**Pn**	**05 12 29.5**	**+1.4**
BSSI	**Bau Bau, Buton**	**4.52**	**311**	P	**Pn**	**05 13 00.6**	**+2.2**
PLAI	**Plampang**	**6.09**	**272**	P	**Pn**	**05 13 19.8**	**+0.1**
	0.4nm2µm61nm,0.5s						
TWSI	**Taliwang, Sumb**	**6.98**	**273**	P	**Pn**	**05 13 31.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**9.08**	**170**	P	**Pn**	**05 13 58.6**	**-1.7**
	3.6nm,0.3s,baz=359,slow=8.9,SNR=113						
FITZ				S	Sn	05 15 31.9	-8.8
	2.3nm,0.3s,baz=31,slow=7.2,SNR=4.0						
WRA	**Warramunga Arr**	**14.73**	**138**	P	**Pn**	**05 15 11.3**	**-4.2**
	1.0nm,0.3s,baz=226,slow=14,SNR=44						
WRA				S	Sn	05 17 45.6	-12
	1.1nm,0.3s,baz=325,slow=25,SNR=7.7						
ASAR	**Alice Springs**	**17.32**	**148**	P	**P**	**05 15 46.8**	**-0.9**
	1.0nm,0.3s,baz=322,slow=12,SNR=34						
ASAR				S	Sn	05 18 48.1	-13
	0.3nm,0.3s,baz=321,slow=24,SNR=5.2						
CMAR	**Chiang Mai Arr**	**36.87**	**318**	P	**P**	**05 18 50.0**	**-1.1**
	0.8nm,0.3s,baz=143,slow=7.7,SNR=2.3						
H08S2	**Diego Garcia H**	**50.88**	**268**	T	T	06 17 18.1	
	baz=95,slow=74						
H08S3	**Diego Garcia H**	**50.90**	**268**	T	T	06 17 18.3	
	baz=95,slow=74						
H08S1	**Diego Carcia H**	**50.90**	**268**	T	T	06 17 16.8	
	baz=95						
SONM	**Songino Array**	**58.80**	**346**	P	**P**	**05 21 39.6**	**-0.4**
	0.9nm,0.6s,baz=156,slow=6.9,SNR=5.0						
MKAR	**Makanchi Array**	**66.88**	**330**	P	**P**	**05 22 33.9**	**+0.3**
	1.0nm,0.6s,baz=137,slow=7.3,SNR=9.9						
ZALV	**Zalesovo Beam**	**70.98**	**337**	P	**P**	**05 22 58.2**	**-0.6**
	0.5nm,0.3s,baz=179,slow=5.9,SNR=2.8						
KURBB	**Kurchatov Arra**	**71.32**	**331**	P	**P**	**05 23 00.7**	**-0.2**
	0.4nm,0.5s,baz=140,slow=5.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**123.29**	**280**	PKP	**PKiKP**	**05 30 38.6**	**0.0**
	0.7nm,0.9s,baz=82,slow=1.6,SNR=2.7						
TXAR	**Lajitas Array**	**131.16**	**59**	PKP	**PKiKP**	**05 30 53.7**	**-0.4**
	0.4nm,0.9s,baz=217,slow=5.7,SNR=2.5						
CPUP	**Villa Florida**	**144.74**	**178**	PKPbc	**PKPdf**	**05 31 19.1**	**+1.1**
	1.3nm,0.8s,baz=169,slow=4.7,SNR=4.0						
BDFB	**Brasilia**	**154.14**	**198**	PKPbc	**PKiKP**	**05 31 43.5**	**+2.0**
	1.1nm,0.5s,baz=184,slow=4.9,SNR=3.6						

*UPA **28** 05:21:00.7±0.5, 8.65N×77.50W, h53km±3km, MW3.3 RSNC **28** 05:21:01.0±0.6, 8.75N×77.50W, h50km±3km, ML2.7*
ISC 28 05:21:00.7±1.2, 8.78N±0.06×77.49W±0.03, h49km±8km, n22, σ0s82/40, 5C-2D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAP2	**Capurgana**	**0.18**	**135**	⇓*i*P	**Pn**	**05 21 08.8**	**0.0**
CAP2				*e*S	**Sn**	**05 21 15.0**	**+0.5**
CAPC	**Capurgana**	**0.20**	**136**	⇓*i*P	**Pn**	**05 21 08.8**	**-0.1**
CAPC				*e*S	**Sn**	**05 21 15.1**	**+0.3**
CAPC				*i*		05 21 16.8	
	comp=Z,976nm,0.2s						
UPD2	**Meteti**	**0.57**	**246**	⇑*e*P	**Pn**	**05 21 12.1**	**-0.6**
UPD2				*e*S	**Sn**	**05 21 20.9**	**-0.4**
UPD2				*i*		05 21 23.2	
	comp=Z,322nm,0.2s						
UPD2	**Meteti**	**0.57**	**246**	⇑*i*P	**Pn**	**05 21 12.1**	**-0.6**
UPD2				*e*S	**Sn**	**05 21 20.9**	**-0.4**
CNTA3	**Canitas, Panam**	**1.45**	**288**	*e*P	**Pn**	**05 21 25.4**	**+0.9**
CNTA3				*e*S	**Sn**	**05 21 43.5**	**+1.0**
CHPO	**Chepo, Panama**	**1.65**	**284**	*e*P	**Pn**	**05 21 27.1**	**-0.2**
CHPO				*e*S	**Sn**	**05 21 47.2**	**-0.2**
MOTC	**Monteria, Cord**	**1.80**	**90**	⇑*e*P	**Pn**	**05 21 29.8**	**+0.5**
MOTC				*e*S	**Sn**	**05 21 50.6**	**-0.5**
MOTC				*i*		05 21 54.5	
	comp=Z,34nm,0.5s						
MONA	**Monteria**	**1.81**	**90**	*e*P	**Pn**	**05 21 29.9**	**+0.4**
MONA				*e*S	**Sn**	**05 21 51.4**	**+0.1**
UPA	**Univ. de Panam**	**2.03**	**276**	*e*P	**Pn**	**05 21 32.3**	**-0.2**
UPA				*e*S	**Sn**	**05 21 56.4**	**-0.3**
DBBC	**Dabeiba**	**2.16**	**144**	⇑*e*P	**Pn**	**05 21 34.0**	**-0.3**
DBBC				*e*S	**Sn**	**05 21 59.7**	**-0.3**

ZARC				*eS*		**Sn**	**05 22 16.6**	**-1.5**
ZARC				*i*			05 22 20.7	
	comp=Z,38nm,0.4s							
HELC	**Santa Helena**	**3.22**	**143**	*eP*		**Pn**	**05 21 48.6**	**-0.5**
HELC				*eS*		**Sn**	**05 22 27.7**	**+1.2**
ARGC	**Ariguani, Magd**	**3.38**	**71**	*eP*		**Pn**	**05 21 51.6**	**+0.7**
ARGC				*eS*		**Sn**	**05 22 29.4**	**-0.4**
ARGC				*i*			05 22 30.0	
	comp=Z,21nm,0.3s							
PTBC	**PUERTO BERRIO,**	**3.74**	**126**	*eP*		**Pn**	**05 21 55.4**	**-0.6**
PTBC				*eS*		**Sn**	**05 22 37.6**	**-1.2**
PTBC				*i*			05 22 41.6	
	comp=Z,6.8nm,0.3s							
BRRC	**Barranca, Sant**	**4.09**	**114**	*eP*		**Pn**	**05 22 00.8**	**0.0**
BRRC				*eS*		**Sn**	**05 22 47.1**	**-0.4**
BRRC				*i*			05 22 54.3	
	comp=Z,9.1nm,0.3s							
GUY2C	**Guyana, Caldas**	**4.11**	**149**	*eP*		**Pn**	**05 22 02.1**	**+0.6**
NORC	**Norcasia**	**4.12**	**141**	*eP*		**Pn**	**05 22 01.7**	**+0.5**
OCAC	**Ocana**	**4.16**	**97**	*eP*		**Pn**	**05 22 01.6**	**-0.3**
OCAC				*eS*		**Sn**	**05 22 48.9**	**-0.4**
OCAC				*i*			05 22 52.7	
	comp=Z,19nm,0.2s							
SPBC	**San Pablo de B**	**4.60**	**132**	*eP*		**Pn**	**05 22 07.3**	**-0.5**
TOLC	**Tolima**	**4.69**	**153**	*eP*		**Pn**	**05 22 12.6**	**+3.4**
PAMC	**Pamplona, Colo**	**4.95**	**106**	*eP*		**Pn**	**05 22 13.0**	**-0.1**
PAMC				*eS*		**Sn**	**05 23 08.8**	**-0.5**
PAMC				*i*			05 23 13.6	
	comp=Z,8.3nm,0.5s							

*IDC **28** 05:21:35.8±0.8,5°.82N×61°.27E, h0km, mb4.0/15, mb1 4.1/15,mb1mx3.9/53,mbtmp4.0/15,MS3.6/16, Ms1 3.6/16,ms1mx3.3/49, Error ellipse: s-maj=22.3km s-min=17.9km az=151.0*
*NEIC **28** 05:21:36.8±2.4,5°.8N±0°.1×61°.3E±0°.1, h10km±1km, mb4.4/14, Error ellipse: s-maj=28.1km s-min=4.9km az=133.0*

ISC 28 05:21:36.9±0.7,5°.8N±0°.1×61°25E±0°.10, h10km,n53, σ1s00/42,mb4.1/19,MS3.7/14,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.52**	**352**	LR	LR	05 31 07.6	
	comp=Z,162nm,19.6s,baz=200,slow=33						
PALK	**Pallekele**	**19.38**	**85**	LR	LR	05 32 02.8	
	comp=Z,160nm,18.8s,baz=8.7,slow=32						
UOSS	**Minazif**	**19.64**	**346**	P	**P**	**05 26 07.0**	**+1.1**
UOSS				IAmb	IAmb	05 26 13.2	
	comp=Z,29nm,1.2s						
RAYN	**Ar Rayn**	**23.25**	**321**	P	**P**	**05 26 43.4**	**-1.3**
RAYN				IAmb	IAmb	05 26 46.6	
	comp=Z,11nm,0.9s						
OPO	**Ambohidratompo**	**27.91**	**210**	LR	LR	05 35 36.7	
	comp=Z,112nm,20.6s,baz=172,slow=30						
KBL	**Kabul**	**29.49**	**13**	P	**P**	**05 27 42.1**	**+0.5**
KBL				IAmb	IAmb	05 27 54.7	
	comp=Z,8.8nm,1.4s						
MBAR	**Mbarara**	**31.13**	**259**	P	**P**	**05 27 55.6**	**-0.7**
MBAR				IAmb	IAmb	05 27 58.7	
	comp=Z,2.9nm,0.7s						
BTK	**Batken**	**35.17**	**13**	P	**P**	**05 28 33.4**	**+2.2**
BTK				IAmb	IAmb	05 28 35.0	
	comp=Z,8.4nm,1.2s						
SHL	**Shillong**	**35.28**	**53**	P	**P**	**05 28 30.4**	**-2.0**
MARD	**Mardin**	**36.51**	**332**	P	**P**	**05 28 44.3**	**+1.5**
PSI	**Prapat**	**37.67**	**93**	LR	LR	05 42 06.8	
	comp=Z,70nm,19.8s,baz=269,slow=33						
KK31	**Karatay Array**	**38.04**	**11**	P	**P**	**05 28 55.8**	**+0.2**
KKAR	**Karatay Array**	**38.04**	**11**	P	**P**	**05 28 56.5**	**+0.9**
AAK	**Ala-Archa**	**38.51**	**16**	P	**P**	**05 29 01.2**	**+1.5**
	comp=Z,2.3nm,0.7s,baz=188,slow=14,SNR=4.1						
CMAR	**Chiang Mai Arr**	**38.84**	**68**	P	**P**	**05 29 03.1**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=257,slow=9.5,SNR=9.0						
CMAR				PcP	**PcP**	**05 31 15.2**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=254,slow=4.0,SNR=4.4						
CMAR				LR	LR	05 43 12.1	
	comp=Z,46nm,21.2s,baz=304,slow=33						
CMAR	**Chiang Mai Arr**	**38.84**	**68**	P	**P**	**05 29 02.8**	**+0.2**
LSZ	**Lusaka**	**38.88**	**237**	LR	LR	05 43 16.4	
	comp=Z,142nm,19.4s,baz=50,slow=33						
CHTO	**Chiang Mai**	**38.92**	**67**	P	**P**	**05 29 03.0**	**-0.3**
TOKA	**Tokat**	**40.94**	**331**	P	**P**	**05 29 19.8**	**0.0**
KBZ	**Khabaz**	**41.08**	**340**	LR	LR	05 47 46.4	
	comp=Z,41nm,19.9s,baz=150,slow=38						
MATP	**Matopo**	**41.42**	**230**	P	**P**	**05 29 24.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=45,slow=1.4,SNR=1.5						
MATP				LR	LR	05 43 41.2	
	comp=Z,198nm,20.6s,baz=352,slow=32						
BR131	**Keskin Array S**	**41.94**	**328**	P	**P**	**05 29 28.3**	**+0.1**
BR131				IAmb	IAmb	05 29 30.3	
	comp=Z,6.1nm,0.9s						
BRTR	**Keskin Array B**	**41.94**	**328**	P	**P**	**05 29 28.4**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=153,slow=9.8,SNR=14						
BRTR	**Keskin Array B**	**41.94**	**328**	P	**P**	**05 29 27.9**	**-0.3**
ABKAR	**Akbulak array**	**43.31**	**359**	P	**P**	**05 29 40.0**	**+1.0**
AKTO	**Aktyubinsk**	**44.56**	**357**	P	**P**	**05 29 49.6**	**+0.6**
	comp=Z,1.0nm,0.4s,baz=198,slow=7.2,SNR=6.9						
MKAR	**Makanchi Array**	**44.68**	**21**	P	**P**	**05 29 48.9**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=201,slow=6.5,SNR=5.6						
MKAR				LR	LR	05 49 50.7	
	comp=Z,73nm,21.8s,baz=298,slow=38						
MKAR	**Makanchi Array**	**44.68**	**21**	P	**P**	**05 29 48.4**	**-1.6**
KURBB	**Kurchatov Arra**	**46.95**	**15**	P	**P**	**05 30 07.8**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=211,slow=8.2,SNR=6.0						
BOSA	**Boshof**	**48.72**	**223**	LR	LR	05 48 38.9	
	comp=Z,111nm,20.0s,baz=25,slow=33						
TSUM	**Tsumeb**	**49.66**	**239**	P	**P**	**05 30 30.1**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=44,slow=10,SNR=3.9						
TSUM	**Tsumeb**	**49.66**	**239**	P	**P**	**05 30 28.9**	**-0.6**
TSUM				IAmb	IAmb	05 30 32.3	
	comp=Z,4.6nm,0.9s						
MLR	**Muntele Rosu**	**50.02**	**328**	P	**P**	**05 30 32.9**	**+1.1**
ZALV	**Zalesovo Beam**	**51.68**	**18**	P	**P**	**05 30 43.8**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=243,slow=6.5,SNR=5.7						
ZALV				PcP	**PcP**	**05 31 57.8**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=243,slow=0.3,SNR=2.1						
ZALV	**Zalesovo Beam**	**51.68**	**18**	P	**P**	**05 30 43.0**	**-0.9**
BURAR	**Bucovina Array**	**51.81**	**330**	P	**P**	**05 30 44.7**	**-0.5**
AKASG	**Malin Array Be**	**52.13**	**335**	P	**P**	**05 30 47.6**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=134,slow=6.6,SNR=3.9						
AKASG	**Malin Array Be**	**52.13**	**335**	P	**P**	**05 30 46.9**	**-0.4**
SONM	**Songino Array**	**56.83**	**35**	P	**P**	**05 31 22.7**	**+0.9**
	comp=Z,1.3nm,1.0s,baz=234,slow=7.1,SNR=6.2						
SONM	**Songino Array**	**56.83**	**35**	P	**P**	**05 31 22.8**	**+0.9**
TORD	**Torodi Ar. Bea**	**59.09**	**282**	P	**P**	**05 31 38.5**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=236,slow=4.3,SNR=4.7						
CLL	**Colm**	**60.39**	**327**	*eP*	**P**	**05 31 44.0**	**-2.4**
DBIC	**Dimbokro**	**65.68**	**275**	LR	LR	06 00 17.2	
	comp=Z,46nm,20.1s,baz=84,slow=35						
NRIK	**Noril'sk**	**65.77**	**10**	LR	LR	06 03 55.8	
	comp=Z,70nm,18.2s,baz=199,slow=39						
ESDC	**Sonseca Array**	**67.31**	**311**	P	**P**	**05 32 32.3**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=73,slow=4.3,SNR=4.8						
KSRS	**Korea Array**	**68.01**	**52**	P	**P**	**05 32 36.4**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=246,slow=6.9,SNR=3.2						
KLR	**Kul'dur**	**72.93**	**40**	LR	LR	06 05 53.5	
	comp=Z,52nm,21.9s,baz=266,slow=36						
MAW	**Mawson**	**73.24**	**179**	LR	LR	05 58 18.2	
	comp=Z,61nm,20.1s,baz=66,slow=30						
WRA	**Warramunga Arr**	**76.22**	**112**	P	**P**	**05 33 26.1**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=286,slow=5.5,SNR=10						
ASAJ	**Asahikawa**	**79.77**	**46**	LR	LR	06 10 10.3	
	comp=Z,50nm,19.0s,baz=52,slow=36						
MA2	**Magadan**	**84.79**	**31**	LR	LR	06 13 27.7	
	comp=Z,32nm,19.4s,baz=334,slow=37						
NVAR	**Mina Array Bea**	**135.99**	**360**	PKP	**PKPdf**	**05 40 60.0**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=277,slow=1.5,SNR=1.4						
TXAR	**Lajitas Array**	**142.18**	**338**	PKhKP	PKPpre	05 41 04.3	
	comp=Z,0.1nm,0.4s,baz=29,slow=2.1,SNR=2.6						
TXAR				PKP	**PKPdf**	**05 41 10.1**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=46,slow=2.6,SNR=2.6						

IDC 28 05:24:51.8±1.3,5°.76N×60°.25E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.5/53, mbtmp3.8/5, Error ellipse: s-maj=58.6km s-min=27.2km az=23.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**39.78**	**68**	P	P	05 32 27.3	+0.4
	2.0nm,0.7s,baz=262,slow=6.2,SNR=2.8						
BRTR	**Keskin Array B**	**41.45**	**329**	P	P	05 32 40.0	-0.6
	0.1nm,0.3s,baz=132,slow=11,SNR=1.0						
TORD	**Torodi Ar. Bea**	**58.12**	**282**	P	P	05 34 48.1	+0.3
	0.2nm,0.6s,baz=111,slow=5.6,SNR=1.5						
WRA	**Warramunga Arr**	**77.13**	**112**	P	P	05 36 47.6	-0.3
	1.2nm,0.9s,baz=284,slow=5.6,SNR=5.8						
ASAR	**Alice Springs**	**77.47**	**116**	P	P	05 36 50.0	+0.1
	0.8nm,0.8s,baz=276,slow=4.9,SNR=5.1						

*IDC **28** 05:27:38.6±5.8, 39°.55N×144°.44E, h0km, mb3.7/5, mb1 3.7/8, mb1mx3.5/50, mbtmp3.7/8, ML3.0/3, Error ellipse: s-maj=102.8km s-min=35.7km az=106.0*
*JMA **28** 05:27:45.2±0.2, 39°.55N×143°.59E, h32km, M3.6*
ISC 28 05:27:45.4±3.4, 39°.58N±0°.05×143°.47E±0°.09, h10km±18km, n27, σ0s71/31, mb3.6/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.27**	**270**	P	**Pn**	**05 28 08.8**	**-0.4**
MIYJ				*eS*	**Sb**	**05 28 25.8**	**-0.1**
JTH	**Tanohata**	**1.29**	**287**	P	**Pn**	**05 28 08.9**	**-0.5**
JTH				*eS*	**Sg**	**05 28 26.5**	**-0.3**
OFUJ	**Ofunato**	**1.48**	**251**	P	**Pn**	**05 28 11.5**	**-0.6**
OFUJ				*eS*	**Sn**	**05 28 30.9**	**-0.6**
JKEN	**Kujiedanarisaw**	**1.49**	**295**	P	**Pn**	**05 28 11.6**	**-0.6**
JOM	**Ohasama**	**1.69**	**267**	P	**Pn**	**05 28 15.2**	**+0.3**
JANG	**Nango**	**1.70**	**298**	P	**Pn**	**05 28 14.8**	**-0.3**
JANG				*eS*	**Sn**	**05 28 37.0**	**+0.2**
JMK	**Ichinoseki**	**1.85**	**251**	P	**Pn**	**05 28 17.1**	**-0.1**
JMK				*eS*	**Sn**	**05 28 40.7**	**0.0**
JIO	**Ouri**	**2.00**	**236**	P	**Pn**	**05 28 18.3**	**-0.9**
JTM	**Tenmabayashi**	**2.20**	**304**	P	**Pn**	**05 28 22.0**	**+0.1**
JTM				*eS*	**Sn**	**05 28 49.7**	**+0.5**
JRG	**Rokugo**	**2.20**	**266**	P	**Pn**	**05 28 22.7**	**+0.7**
JYK	**Kaneyama**	**2.50**	**256**	P	**Pn**	**05 28 26.9**	**+0.8**
JOT	**Ohata**	**2.58**	**315**	P	**Pn**	**05 28 27.7**	**+0.6**
JNBK	**Urakawa-nobuka**	**2.75**	**349**	P	**Pn**	**05 28 30.3**	**+0.8**
JNBK				*eS*	**Sn**	**05 29 03.5**	**+0.7**
JCH	**Churui**	**3.03**	**359**	*eS*	**Sn**	**05 29 08.2**	**-1.5**
JFT	**Otama**	**3.20**	**231**	P	**Pn**	**05 28 35.5**	**-0.3**
ASAJ	**Asahikawa**	**4.58**	**352**	Pn	Pn	05 28 50.1	-4.5
	1.5nm,0.3s,baz=219,slow=31,SNR=2.0						
ASAJ				Sn	**Sn**	**05 29 46.8**	**-1.1**
	1.1nm,0.3s,baz=71,slow=34,SNR=1.7						
MJAR	**Matsushiro Arr**	**5.14**	**235**	Pn	**Pn**	**05 29 03.4**	**+1.0**
	0.3nm,0.3s,baz=39,slow=12,SNR=17						
MAT	**Matsushiro**	**5.14**	**236**	P	**Pn**	**05 29 03.6**	**+1.2**
MAT				*eS*	**Sn**	**05 30 01.6**	**-0.2**
USRK	**Ussuriysk Ar.**	**9.72**	**302**	Pn	Pn	05 30 10.0	+4.7
	baz=92,slow=12,SNR=2.4						
SONM	**Songino Array**	**27.82**	**300**	P	**P**	**05 33 36.0**	**+1.2**
	0.4nm,0.7s,baz=108,slow=8.5,SNR=1.8						
H11N2	**WAKE ISLAND Hy**	**28.24**	**128**	T	T	06 03 06.4	
	baz=320,slow=75,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**28.25**	**128**	T	T	06 03 06.4	
	baz=320,slow=75,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**28.26**	**128**	T	T	06 03 10.4	
	baz=320,slow=75,SNR=5.8						
ZALV	**Zalesovo Beam**	**41.45**	**310**	P	**P**	**05 35 31.6**	**-0.4**
	0.5nm,0.3s,baz=101,slow=7.5,SNR=2.4						
MKAR	**Makanchi Array**	**44.19**	**300**	P	**P**	**05 35 54.5**	**+0.2**
	0.7nm,0.7s,baz=72,slow=7.8,SNR=5.2						
KURBB	**Kurchatov Arra**	**45.75**	**306**	P	**P**	**05 36 06.7**	**0.0**
	1.4nm,0.5s,baz=79,slow=8.4,SNR=9.5						
BVAR	**Borovoye Array**	**50.09**	**311**	P	**P**	**05 36 39.4**	**-0.8**
	0.3nm,0.4s,baz=73,slow=7.4,SNR=2.5						

*IDC **28** 05:27:54.3±1.0,8°.26S×112°.95E, h0km, mb3.8/6, mb1 3.9/8, mb1mx3.7/44, mbtmp3.8/8, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/35, Error ellipse: s-maj=65.2km s-min=17.5km az=44.0*
*DJA **28** 05:27:57.2±0.3, 9°.3S±3°×111°.2E±°, h10km, M4.2/19, mb4.4/4, MLv4.2/19*
*NEIC **28** 05:27:59.6±2.2, 9°.06S±0°.09×112°.53E±0°.05, h48km±8km, mb4.1/8, Error ellipse: s-maj=13.2km s-min=7.2km az=186.0*
ISC 28 05:27:58.8±0.9, 9°.04S±0°.06×112°.50E±0°.04, h38km±1km, n49, σ1s49/58, mb4.0/9, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.20**	**51**	P	**Pn**	**05 28 17.9**	**-1.2**
PWJI	**Pagerwojo**	**1.22**	**326**	P	**Pn**	**05 28 18.7**	**-0.6**
PWJI				S	**Sn**	**05 28 32.8**	**-1.8**
BLJI	**Banyuglugur**	**1.68**	**40**	P	**Pn**	**05 28 26.4**	**+0.7**
BLJI				S	**Sn**	**05 28 47.4**	**+1.5**
JAGI	**Jajag, Banyuwa**	**1.73**	**71**	P	**Pn**	**05 28 26.4**	**+0.1**
JAGI				S	**Sn**	**05 28 46.4**	**-0.7**
JAGI	**Jajag, Banyuwa**	**1.73**	**71**		**Pn**	**05 28 26.6**	**+0.3**
JAGI				Sn	**Sn**	**05 28 47.1**	**0.0**
WOJI	**Wonogiri, Jawa**	**1.96**	**307**	P	**Pn**	**05 28 30.0**	**+0.5**
WOJI				S	**Sn**	**05 28 53.5**	**+0.6**
GRJI	**Gresik**	**2.11**	**359**	P	**Pn**	**05 28 32.5**	**+0.9**
GRJI				S	**Sn**	**05 28 57.6**	**+1.0**
ABJI	**Asem Bagus**	**2.11**	**54**	P	**Pn**	**05 28 33.0**	**+1.4**
UGM	**Wanagama**	**2.25**	**300**	P	**Pn**	**05 28 34.3**	**+0.8**
UGM				S	**Sn**	**05 28 59.6**	**-0.5**
UGM	**Wanagama**	**2.25**	**300**		**Pn**	**05 28 34.4**	**+0.8**
TBJI	**Tambak Boyo**	**2.30**	**344**	P	**Pn**	**05 28 34.5**	**+0.3**
KMMI	**Kalianget**	**2.45**	**36**	P	**Pn**	**05 28 36.9**	**+0.6**
YOGI	**Yogyakarta**	**2.50**	**299**	P	**Pn**	**05 28 37.9**	**+1.0**
SMRI	**Semarang**	**2.84**	**314**	P	**Pn**	**05 28 43.0**	**+1.4**
SMRI	**Semarang**	**2.84**	**314**		**Pn**	**05 28 43.1**	**+1.5**
SRBI	**Singaraja**	**2.84**	**71**	P	**Pn**	**05 28 42.5**	**+0.8**
SRBI				S	**Sn**	**05 29 15.1**	**+0.4**
KPJI	**Karang Pucung**	**3.92**	**295**	P	**Pn**	**05 28 57.1**	**+0.7**
TWSI	**Taliwang, Sumb**	**4.34**	**86**	P	**Pn**	**05 29 03.4**	**+1.2**
CISI	**Cisompet, Garu**	**4.87**	**287**	P	**Pn**	**05 29 09.6**	**+0.1**
CISI	**Cisompet, Garu**	**4.87**	**287**	Pn	**Pn**	**05 29 09.8**	**+0.3**
PLAI	**Plampang**	**5.22**	**88**	P	**Pn**	**05 29 15.7**	**+1.4**
	0.4nm50nm,0.7s						
LEM	**Lembang**	**5.31**	**294**	Pn	**Pn**	**05 29 17.9**	**+2.2**
	9.2nm,0.3s,baz=43,slow=19,SNR=4.9						
LEM				Sn	**Sn**	**05 30 18.1**	**+2.3**
	2.2nm,0.3s,baz=316,slow=21,SNR=1.8						
LEM	**Lembang**	**5.31**	**294**	P	**Pn**	**05 29 16.2**	**+0.4**
	0.1nm22nm,0.7s						
XMIS	**Christmas Isla**	**6.90**	**257**	Pn	**Pn**	**05 29 37.8**	**+0.4**
KAPI	**Kappang**	**8.23**	**61**	LR	LR	05 33 35.2	
	comp=Z,61nm,18.6s,baz=204,slow=46						
MNAI	**Manna**	**10.56**	**296**	Pn	**Pn**	**05 30 29.0**	**+1.4**
GIRL	**Giralia**	**13.63**	**173**	Pn	**Pn**	**05 31 09.0**	**-0.6**
PSA00	**Pilbara Seismi**	**14.33**	**151**	Pn	**Pn**	**05 31 20.6**	**+1.5**
MYLDM	**Lahad Datu**	**15.34**	**23**	Pn	**Pn**	**05 31 32.8**	**+0.2**
MYLDM					IAmb	IAmb	05 31 59.1
	comp=Z,21nm,1.3s						
FITZ	**Fitzroy Crossi**	**15.62**	**127**	Pn	**Pn**	**05 31 36.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=22,slow=14,SNR=2.1						
FITZ				Sn	**Sn**	**05 34 22.6**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=84,slow=8.2,SNR=2.5						
FITZ	**Fitzroy Crossi**	**15.62**	**127**		**Pn**	**05 31 35.4**	**-0.9**
COCO	**West Island**	**15.71**	**257**	Pn	**Pn**	**05 31 36.9**	**-0.5**
KNRA	**Kununurra**	**17.19**	**114**	P	**Pn**	**05 31 57.3**	**+1.1**
WB0	**Warramunga Arr**	**23.70**	**119**	P	**P**	**05 33 07.6**	**+0.1**
WB0				IAmb	IAmb	05 33 33.7	
	comp=Z,8.1nm,1.4s						
WRA	**Warramunga Arr**	**23.73**	**120**	P	**P**	**05 33 08.4**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=294,slow=12,SNR=15						
WRAB	**Tennant Creek**	**23.73**	**120**	P	**P**	**05 33 07.4**	**-0.3**
WB2	**Warramunga Arr**	**23.74**	**120**	P	**P**	**05 33 09.3**	**+1.5**
WB2				IAmb	IAmb	05 33 20.3	
	comp=Z,6.9nm,1.1s						
ASAR	**Alice Springs**	**25.11**	**128**	P	**P**	**05 33 22.4**	**+2.0**
	comp=Z,1.6nm,0.7s,baz=305,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**25.11**	**128**	P	**P**	**05 33 21.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**30.42**	**334**	P	**P**	**05 34 08.2**	**+0.4**
STKA	**Stephens Creek**	**35.28**	**134**	P	**P**	**05 34 53.4**	**+3.2**
	comp=Z,1.4nm,0.6s,baz=315,slow=9.3,SNR=4.5						
STKA	**Stephens Creek**	**35.28**	**134**	P	**P**	**05 34 53.6**	**+3.4**
MK31	**Makanchi Array**	**61.77**	**337**	P	**P**	**05 38 12.2**	**-1.4**
MK31				IAmb	IAmb	05 38 26.0	
	comp=Z,2.0nm,1.2s						
MKAR	**Makanchi Array**	**61.77**	**337**	P	**P**	**05 38 11.6**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=142,slow=8.5,SNR=8.5						
ZALV	**Zalesovo Beam**	**66.97**	**343**	P	**P**	**05 38 44.7**	**-2.7**
	comp=Z,0.6nm,0.5s,baz=133,slow=6.3,SNR=3.8						
ABKAR	**Akbulak array**	**74.00**	**327**	P	**P**	**05 39 29.2**	**-1.3**
BRTR	**Keskin Array B**	**87.26**	**311**	P	**P**	**05 40 41.5**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=126,slow=8.1,SNR=3.5						
NVAR	**Mina Array Bea**	**125.94**	**49**	PKP	**PKPdf**	**05 46 57.5**	**0.0**
	comp=Z,0.1nm,0.3s,baz=256,slow=2.7,SNR=2.0						
TXAR	**Lajitas Array**	**140.56**	**54**	PKhKP	PKPpre	05 47 18.6	
	comp=Z,0.2nm,0.8s,baz=284,slow=5.0,SNR=1.5						
TXAR				PKP	**PKPdf**	**05 47 23.9**	**-1.2**
	comp=Z,0.1nm,0.7s,baz=216,slow=2.9,SNR=1.5						

*IDC **28** 05:31:36.9±1.1,5°.74N×61°.26E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/49, mbtmp3.8/9, MS3.4/5, Ms1 3.4/5, ms1mx2.9/48, Error ellipse: s-maj=33.9km s-min=21.2km az=35.0*
*NEIC **28** 05:31:38.4±1.7,5°.72N±0°.05×61°.4E±0°.1, h10km±1km, mb4.3/19, Error ellipse: s-maj=22.2km s-min=8.2km az=271.0*
ISC 28 05:31:38.4±1.1,5°.8N±0°.2×61°.3E±0°.1, h10km, n39, σ0s97/36, mb4.2/17, MS3.3/3, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.58**	**352**	LR	LR	05 41 00.5	
	comp=Z,76nm,18.5s,baz=210,slow=32						
PALK	**Pallekele**	**19.32**	**84**	LR	LR	05 42 01.8	
	comp=Z,143nm,18.0s,baz=19,slow=32						
RAYN	**Ar Rayn**	**23.33**	**321**	P	**P**	**05 36 46.5**	**-0.4**
RAYN				IAmb	IAmb	05 36 54.5	
	comp=Z,13nm,1.4s						
KBL	**Kabul**	**29.53**	**13**	P	**P**	**05 37 45.7**	**+2.3**
KBL				IAmb	IAmb	05 37 49.5	
	comp=Z,2.8nm,0.6s						
GEYT	**Ailbeck**	**32.16**	**355**	LR	LR	05 51 24.3	
	comp=Z,36nm,20.1s,baz=285,slow=37						
BTK	**Batken**	**35.21**	**13**	P	**P**	**05 38 31.8**	**-1.2**
BTK				IAmb	IAmb	05 38 42.0	
	comp=Z,6.0nm,1.2s						
SHL	**Shillong**	**35.26**	**53**	P	**P**	**05 38 32.1**	**-1.7**
SHL				IAmb	IAmb	05 38 37.5	
	comp=Z,3.4nm,0.8s						
MARD	**Mardin**	**36.59**	**332**	P	**P**	**05 38 44.2**	**-0.7**
MARD				IAmb	IAmb	05 38 48.1	
	comp=Z,9.3nm,1.3s						
KK31	**Karatay Array**	**38.08**	**11**	P	**P**	**05 38 57.1**	**-0.2**
KKAR	**Karatay Array**	**38.08**	**11**	P	**P**	**05 38 57.1**	**-0.2**
AAK	**Ala-Archa**	**38.55**	**16**	P	**P**	**05 39 02.9**	**+1.5**
CMAR	**Chiang Mai Arr**	**38.80**	**68**	P	**P**	**05 39 05.7**	**+1.9**
	comp=Z,0.9nm,0.3s,baz=258,slow=8.7,SNR=5.9						
CMAR				PcP	**PcP**	**05 41 16.4**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=256,slow=2.7,SNR=1.7						
CMAR				LR	LR	05 53 45.9	
	comp=Z,46nm,20.2s,baz=342,slow=34						
CMAR	**Chiang Mai Arr**	**38.80**	**68**	P	**P**	**05 39 02.5**	**-1.3**
CHTO	**Chiang Mai**	**38.89**	**67**	P	**P**	**05 39 04.4**	**-0.1**
TOKA	**Tokat**	**41.02**	**331**	P	**P**	**05 39 23.5**	**+1.6**
BR131	**Keskin Array S**	**42.02**	**328**	P	**P**	**05 39 30.8**	**+0.5**
BR131				IAmb	IAmb	05 39 32.9	
	comp=Z,9.7nm,1.3s						
BRTR	**Keskin Array B**	**42.02**	**328**	P	**P**	**05 39 29.9**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=158,slow=4.5,SNR=7.6						
BRTR	**Keskin Array B**	**42.02**	**328**	P	**P**	**05 39 31.0**	**+0.7**
ABKAR	**Akbulak array**	**43.37**	**359**	P	**P**	**05 39 41.8**	**+0.9**
ABKAR				IAmb	IAmb	05 39 43.4	
	comp=Z,4.2nm,0.9s						
SLVN	**Son La**	**44.03**	**65**	P	**P**	**05 39 47.5**	**+0.7**
MANT	**Manisa**	**44.08**	**322**	P	**P**	**05 39 47.3**	**+0.2**

UPD2	**Meteti**	**0.52**	**256**	⇓	*eP*	**Pn**	**05 43 06.0**	**-0.2**
UPD2					*eS*	**Sn**	**05 43 15.1**	**+0.4**
UPD2					*i*		05 43 18.9	
	comp=Z,123nm,0.1s							
UPD2	**Meteti**	**0.52**	**256**	*i*	P	**Pn**	**05 43 06.0**	**-0.2**
UPD2					*eS*	**Sn**	**05 43 15.3**	**+0.7**
CHPO	**Chepo, Panama**	**1.67**	**287**	*eP*		**Pn**	**05 43 21.2**	**-0.1**
CHPO					*eS*	**Sn**	**05 43 41.2**	**-0.4**
MOTC	**Monteria, Cord**	**1.82**	**87**	*eP*		**Pn**	**05 43 23.8**	**+0.4**
MOTC					*eS*	**Sn**	**05 43 45.5**	**+0.2**
MOTC					*i*		05 43 46.9	
	comp=Z,111nm,0.2s							
MONA	**Monteria**	**1.82**	**87**	*eP*		**Pn**	**05 43 23.5**	**0.0**
MONA					*eS*	**Sn**	**05 43 45.3**	**-0.2**
UPA	**Univ. de Panam**	**2.03**	**279**	*eS*		**Sn**	**05 43 50.4**	**-0.1**
ZARC	**Zaragoza, Cauc**	**2.87**	**114**	*eP*		**Pn**	**05 43 38.0**	**+0.2**
ZARC					*eS*	**Sn**	**05 44 10.5**	**-0.7**
ZARC					*i*		05 44 13.5	
	comp=Z,16nm,0.3s							
HELC	**Santa Helena**	**3.15**	**141**	*eP*		**Pn**	**05 43 42.6**	**+0.7**
HELC					*eS*	**Sn**	**05 44 17.7**	**-0.8**
PTBC	**PUERTO BERRIO,**	**3.69**	**125**	*eP*		**Pn**	**05 43 49.2**	**+0.2**
PTBC					*eS*	**Sn**	**05 44 30.4**	**-0.9**
PTBC					*i*		05 44 33.9	
	comp=Z,4.5nm,0.5s							
NORC	**Norcasia**	**4.05**	**140**	*eP*		**Pn**	**05 43 54.0**	**0.0**
NORC					*i*		05 44 05.9	
	comp=Z,3.1nm,0.2s							
BRRC	**Barranca, Sant**	**4.07**	**112**	*eP*		**Pn**	**05 43 54.8**	**+0.6**
BRRC					*eS*	**Sn**	**05 44 41.2**	**+0.7**
BRRC					*i*		05 44 45.2	
	comp=Z,3.6nm,0.2s							
OCAC	**Ocana**	**4.16**	**96**	*eP*		**Pn**	**05 43 55.7**	**+0.1**
OCAC					*eS*	**Sn**	**05 44 42.7**	**-0.4**
OCAC					*i*		05 44 56.1	
	comp=Z,5.4nm,0.3s							

IDC ***28*** *05:59:40.7±1.6, 11°.34N×125°.88E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.5/46, mbtmp3.8/6, Error ellipse: s-maj=79.2km s-min=20.4km az=60.0*

MAN ***28*** *05:59:46.8, 11°.29N×125°.56E, h1km, mb4.5, ML3.4, MS3.2*

ISC 28 05:59:42.7±1.0, 11°.43N±0°.04×125°.87E±0°.07, h10km, n15, σ1§41/17, mb3.7/6, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**1.59**	**312**		*eP*		**Pg**	**06 00 13.1**	**-0.2**
CNP						*eS*	**Sg**	**06 00 36.5**	**+2.5**
GLSP	**General Luna,**	**1.66**	**171**		*eP*		**Pg**	**06 00 16.5**	**+1.9**
GLSP						*eS*	**Sg**	**06 00 38.3**	**+2.2**
LLP	**Lapu-Lapu**	**2.17**	**239**		*eP*		**Pb**	**06 00 21.2**	**-0.9**
LLP						*eS*	**Sb**	**06 00 50.2**	**+1.0**
PVCP	**Virac**	**2.72**	**322**		*eP*		**Pb**	**06 00 31.8**	**+0.2**
PVCP						*eS*	**Sg**	**06 01 10.9**	**+0.6**
CNOP	**Candoni, Negro**	**3.55**	**244**		*eP*		**Pn**	**06 00 39.2**	**+1.3**
CNOP						*eS*	**Sn**	**06 01 18.9**	**-1.2**
KCP	**Kidapawan**	**4.46**	**190**	⇓	*iP*		**Pg**	**06 01 07.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**26.91**	**288**		P		**P**	**06 05 24.4**	**+0.1**
	0.4nm,0.3s,baz=105,slow=6.6,SNR=4.1								
WRA	**Warramunga Arr**	**32.27**	**165**		P		**P**	**06 06 09.9**	**-1.9**
	0.8nm,1.2s,baz=346,slow=9.1,SNR=5.4								
ASAR	**Alice Springs**	**35.76**	**167**		P		**P**	**06 06 40.5**	**-1.6**
	0.3nm,0.4s,baz=344,slow=7.1,SNR=5.0								
H11N1	**WAKE ISLAND Hy**	**40.28**	**73**		T		T	06 50 39.3	
	baz=264,slow=75,SNR=20								
H11N2	**WAKE ISLAND Hy**	**40.29**	**73**		T		T	06 50 42.5	
	baz=264,slow=75,SNR=10.0								
H11N3	**WAKE ISLAND Hy**	**40.30**	**73**		T		T	06 50 42.7	
	baz=264,slow=75,SNR=14								
STKA	**Stephens Creek**	**45.62**	**161**		P		**P**	**06 08 03.0**	**-0.5**
	1.9nm,0.6s,baz=322,slow=9.5,SNR=5.3								
ZALV	**Zalesovo Beam**	**53.42**	**331**		P		**P**	**06 09 02.6**	**-0.2**
	0.3nm,0.3s,baz=140,slow=11,SNR=1.8								
KURBB	**Kurchatov Arra**	**54.90**	**325**		P		**P**	**06 09 13.7**	**+0.2**
	2.0nm,0.6s,baz=129,slow=7.3,SNR=2.9								

IDC 28 05:59:48.2±2.7, 54°.26N×86°.14E, h0km, mb1 2.9/2, mb1mx2.8/46, mbtmp2.9/2, ML2.8/2, Error ellipse: s-maj=20.5km s-min=11.9km az=56.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**0.84**	**249**	*i*				06 03 02.7	
	baz=67,slow=330,SNR=4.3								
ZALV	**Zalesovo Beam**	**0.84**	**249**			Pg	Pg	06 00 02.5	-1.8
	0.9nm,0.3s,baz=65,slow=18,SNR=8.2								
ZALV						Lg	Lg	06 00 16.9	
	5.1nm,0.3s,baz=70,slow=29,SNR=7.1								
KURBB	**Kurchatov Arra**	**5.91**	**235**			Pn	Pn	06 01 18.3	+1.4
	0.1nm,0.3s,baz=52,slow=13,SNR=5.1								
MKAR	**Makanchi Array**	**7.86**	**200**			Pn	Pn	06 01 44.6	+0.8
	0.2nm,0.3s,baz=23,slow=13,SNR=6.5								

NEIC ***28*** *06:14:00.3±2.0, 64°.64N±0°.07×17°.4W±0°.1, h9km±4km, mb4.8/53, ML4.9(REY), Error ellipse: s-maj=10.6km s-min=7.8km az=180.0*

REY ***28*** *06:14:02.2, 64°.67N×17°.46W, h7km*

IDC ***28*** *06:14:03.4±0.5, 64°.54N×17°.77W, h0km, mb4.3/28, mb1 4.4/34, mb1mx4.2/58, mbtmp4.3/34, ML2.9/4, MS4.2/41, Ms1 4.2/41, ms1mx4.1/48, Error ellipse: s-maj=15.2km s-min=7.7km az=12.0*

BGS ***28*** *06:14:04.3±3.5, 64°.64N×17°.44W, h5km, MS4.7*

BJI ***28*** *06:14:04.0±0.0, 64°.90N×17°.60W, h5km, mB5.3/12, mb4.7/15, Ms4.9/8, Ms7 4.7/8*

MOS ***28*** *06:14:05.1±1.4, 64°.77N×17°.79W, h10km, mb4.9/47, MS4.4/16, Error ellipse: s-maj=9.7km s-min=7.2km az=96.6*

IEPN ***28*** *06:14:07.0, 64°.72N×18°.14W, h10km*

DNK ***28*** *06:14:08.4±7.1, 64°.90N×15°.73W, h15km±227km, ML3.1, Ms4.7*

GCMT ***28*** *06:14:09.3±0.2, 64°.60N±0°.02×17°.38W±0°.03, h12km, MW4.9/100, Moment Tensor Solution. s32,c39; s100,c139; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.76±.07; Mθθ-0.08±.07; Mϕϕ1.84±.05; Mrθ-2.64±.26; Mrϕ-0.85±.05; Mθϕ-0.82±.19; Best double couple: M0 3.05700×10^16 NP1:ϕs4.00000°, δ48.00000°, λ-37.00000°. NP2:ϕs121.00000°, δ64.00000°, λ-132.00000°. Principal axes: T 2.1870, Plg9.0000°, Azm239.0000°; N 1.7380, Plg37.0000°, Azm143.0000°; P -3.9270, Plg52.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 06:14:01.4±0.7, 64°.66N±0°.02×17°.46W±0°.02, h5km±4km, n503, σ2§81/248, mb4.7/112, MS4.3/56, 34C-9D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.13**	**276**			P	**Pg**	**06 14 04.9**	**+0.8**
	baz=270								
IDYN	**Dyngjuhals**	**0.14**	**16**			P	**Pg**	**06 14 05.0**	**+0.8**
	baz=20								
IDJK	**Dyngjujokull**	**0.18**	**149**			P	**Pg**	**06 14 06.2**	**+1.2**
	baz=150								
IURH	**Urdarhals**	**0.21**	**39**			P	**Pg**	**06 14 06.3**	**+0.8**
	baz=43								
IURH						S	**Sg**	**06 14 09.2**	**+1.0**
	baz=43								
IHAM	**Hamarinn**	**0.24**	**222**			P	**Pg**	**06 14 07.1**	**+1.1**
	baz=219								
IHAM						S	**Sg**	**06 14 10.8**	**+1.6**
	baz=219								
IGRF	**Grimsfjall**	**0.27**	**162**			P	**Pg**	**06 14 07.6**	**+1.1**
	baz=162								
IGRF						S	**Sg**	**06 14 11.7**	**+1.6**
	baz=162								
IVOT	**Vottur**	**0.41**	**163**			P	**Pb**	**06 14 10.1**	**-1.0**
	baz=163								
ISKR	**Skrokkalda**	**0.41**	**256**			P	**Pb**	**06 14 09.7**	**-1.4**
	baz=254								
THOR	**Thorvaldshraun**	**0.43**	**50**			P	**Pb**	**06 14 10.1**	**-1.4**
	baz=52								
IKRE	**Kreppuhraun**	**0.48**	**74**			P	**Pb**	**06 14 10.7**	**-1.5**
	baz=76								
IASK	**Askja**	**0.52**	**41**			P	**Pb**	**06 14 11.5**	**-1.6**
	baz=42								
IASK						S	**Sb**	**06 14 18.6**	**-2.3**
	baz=42								
IMKO	**Mokollar**	**0.57**	**56**			P	**Pb**	**06 14 12.5**	**-1.4**
	baz=57								
IMKO						S	**Sb**	**06 14 20.0**	**-2.4**
	baz=57								
IIEY	**Innrieyrar**	**0.64**	**207**			P	**Pb**	**06 14 13.7**	**-1.2**
	baz=207								
IIEY						S	**Sb**	**06 14 22.7**	**-1.4**
	baz=207								
IKSK	**Karasker**	**0.66**	**139**			P	**Pb**	**06 14 13.6**	**-1.8**
	baz=140								
ISVA	**Svartarkot**	**0.69**	**7**			P	**Pg**	**06 14 14.2**	**-0.3**
	baz=7.5								
ISVA						S	**Sg**	**06 14 23.2**	**-0.2**
	baz=7.5								
IKAL	**Kalfafell**	**0.72**	**188**			P	**Pb**	**06 14 15.3**	**-1.0**
	baz=188								
IVSH	**V-Sauoahnukur**	**0.76**	**78**			P	**Pb**	**06 14 15.4**	**-1.6**
	baz=79								
IVAT	**Vatnsfell**	**0.79**	**234**			P	**Pb**	**06 14 16.4**	**-1.2**
	baz=233								
IFAG	**Fagurholsmyri**	**0.86**	**156**			P	**Pn**	**06 14 17.6**	**-2.4**
	baz=156								
IADA	**Aoalbol**	**0.88**	**65**			P	**Pb**	**06 14 17.4**	**-1.7**
	baz=66								
IADA						S	**Sb**	**06 14 29.4**	**-1.8**
	baz=66								
IHVE	**Hveravellir**	**0.93**	**284**			P	**Pg**	**06 14 18.1**	**-1.1**
	baz=283								
IMEL	**Melhnausar**	**0.97**	**20**			P	**Pg**	**06 14 19.0**	**-1.1**
	baz=20								
IREN	**Reynihlio**	**1.02**	**13**			P	**Pg**	**06 14 19.7**	**-1.1**
	baz=13								
IREN						S	**Sg**	**06 14 32.8**	**-1.3**
	baz=13								
ISNB	**Snabyli**	**1.06**	**210**			P	**Pb**	**06 14 20.9**	**-1.2**
	baz=209								
IKVO	**Krokottuvotn**	**1.09**	**13**			P	**Pb**	**06 14 20.8**	**-1.8**
	baz=13								
IGRS	**Grimsstaoir**	**1.13**	**29**			P	**Pb**	**06 14 21.7**	**-1.7**
	baz=30								
IRJU	**Rjupnafell**	**1.17**	**208**			P	**Pg**	**06 14 22.8**	**-1.0**
	baz=207								
IMJO	**Mjoaskard**	**1.21**	**234**			P	**Pg**	**06 14 23.9**	**-0.6**
	baz=233								
ISKI	**Skildingahlsh**	**1.23**	**8**			P	**Pn**	**06 14 23.4**	**-1.8**
	baz=8.5								
IGHA	**Grjothals**	**1.23**	**15**			P	**Pn**	**06 14 23.3**	**-2.0**
	baz=16								
IGYG	**Gygjarholskot**	**1.25**	**254**			P	**Pg**	**06 14 24.6**	**-0.8**
	baz=253								
IGRA	**Granastaoir**	**1.27**	**358**			P	**Pn**	**06 14 23.8**	**-1.8**
	baz=358								
IHVO	**Lagu-Hvolar**	**1.29**	**209**			P	**Pg**	**06 14 25.0**	**-1.1**
	baz=208								
IHAU	**Haukadalur**	**1.29**	**239**			P	**Pn**	**06 14 24.7**	**-1.3**
	baz=238								
IDIM	**Dimmadalss**	**1.33**	**9**			P	**Pn**	**06 14 24.9**	**-1.6**
	baz=9.6								
IHLA	**Hella**	**1.35**	**344**			P	**Pn**	**06 14 25.4**	**-1.3**
	baz=344								
IALF	**Alftagrof**	**1.40**	**214**			P	**Pb**	**06 14 26.6**	**-1.2**
	baz=213								
IHED	**Heoinshofoi**	**1.43**	**2**			P	**Pn**	**06 14 26.4**	**-1.5**
	baz=2.6								
BORG	**Borgarnes**	**1.67**	**275**			Pg	**Pn**	**06 14 30.0**	**-1.1**
	57nm,0.3s,baz=106,slow=7.9,SNR=68								
BORG						Lg	Lg	06 14 54.3	
	111nm,0.3s,baz=11,slow=22,SNR=13								
BORG	**Borgarnes**	**1.67**	**275**				**Pn**	**06 14 30.3**	**-0.8**
BORG						Sn	**Sn**	**06 14 49.8**	**-3.0**
SCO	**Scoresbysund**	**6.10**	**346**	*i*	P		**Pn**	**06 15 33.0**	**+1.1**
SCO					*i*	S	**Sn**	**06 16 48.5**	**+6.6**
SCO						MLR	MLR		
	comp=Z,10μm,12.0s								
SCO	**Scoresbysund**	**6.10**	**346**			Pn	**Pn**	**06 15 31.9**	**0.0**
SCO						Sn	**Sn**	**06 16 39.3**	**-2.6**
SCO	**Scoresbysund**	**6.10**	**346**	*i*	P		**Pn**	**06 15 33.0**	**+1.1**
SCO					*i*	S	**Sn**	**06 16 48.5**	**+6.6**
	comp=Z,10μm,12.0s								
SCO	**Scoresbysund**	**6.10**	**346**	*i*	P		**Pn**	**06 15 33.0**	**+1.1**
SCO					*i*	S	**Sn**	**06 16 48.6**	**+6.6**
SCO						IAML		06 17 39.2	
	comp=Z,10nm,0.5s								
SCO						IAMs_20	IAMs_20	06 17 40.6	
	comp=Z,10μm,12.5s								
JMIC	**Jan Mayen**	**7.19**	**24**			Pn	**Pn**	**06 15 49.9**	**+3.0**
	baz=294,slow=20,SNR=1.5								
LEWI	**Lewis, Hebride**	**8.27**	**137**	*eP*		Pn		06 16 05.6	+3.8
ANGG	**Ammassalik, Gr**	**8.55**	**286**		Pn	**Pn**		**06 16 05.1**	**-0.5**
ANGG					Sn	**Sn**		**06 17 42.3**	**+0.1**
ANGG	**Ammassalik, Gr**	**8.55**	**286**		IAMs_20	IAMs_20		06 19 48.0	
	comp=Z,18μm,7.8s								
KAC	**Achnashellach**	**9.27**	**135**	*eP*		**Pn**		**06 16 17.1**	**+1.6**
KPL	**Plockton**	**9.30**	**137**	*eP*		**Pn**		**06 16 17.0**	**+1.2**
DBG	**Daneborg**	**9.74**	**356**		IAMs_20	IAMs_20		06 19 58.1	
	comp=Z,4μm,10.5s								
ICESG	**Greenland Ices**	**9.76**	**307**	*eP*		Pn		06 16 37.4	+15
LAWE	**Loch Awe, Argy**	**10.29**	**139**	*eP*		Pn		06 16 32.9	+3.5
INVG	**Invergeldie, C**	**10.55**	**135**	*eP*		**Pn**		**06 16 34.9**	**+1.9**
INVG					IAMs_20	IAMs_20		06 21 27.2	
	comp=Z,6μm,12.4s								
PGBU	**Glenifferbraes**	**10.94**	**138**	*eP*		**Pn**		**06 16 40.9**	**+2.6**
PGBU					IAMs_20	IAMs_20		06 21 58.2	
	comp=Z,5μm,11.2s								
SUMG	**Summit**	**10.96**	**325**	*eP*		Pn		06 16 48.0	+9.1
SUMG	**Summit**	**10.96**	**325**		Pn	**Pn**		**06 16 38.2**	**-0.7**
SUMG	**Summit**	**10.96**	**325**	*i*	P	Pn		06 16 48.0	+9.1
SUMG	**Summit**	**10.96**	**325**	*eP*		Pn		06 16 48.1	+9.2
SUMG					IAMs_20	IAMs_20		06 21 01.6	
	comp=Z,22μm,8.9s								
NEWG	**New Galloway**	**11.62**	**139**	*eP*		Pn		06 16 50.6	+3.1
NEWG					IAMs_20	IAMs_20		06 21 58.4	
	comp=Z,7μm,11.4s								
GAL1	**Galloway**	**11.71**	**141**	*eP*		Pn		06 16 54.6	+5.9
GAL1					IAMs_20	IAMs_20		06 22 56.5	
	comp=Z,5μm,12.7s								
EKB9	**Eskdalemuir Ar**	**11.72**	**136**			Pn	**Pn**	**06 16 47.9**	**-1.1**
EKA	**Eskdalemuir Ar**	**11.74**	**136**			Pn	**Pn**	**06 16 50.9**	**+1.7**
	baz=324,slow=14,SNR=18								
ESK	**Eskdalemuir**	**11.74**	**136**	*eP*			**Pn**	**06 16 52.0**	**+2.8**
ESK					IAMs_20	IAMs_20		06 22 23.5	
	comp=Z,5μm,11.9s								
ESK	**Eskdalemuir**	**11.74**	**136**		P	**Pn**		**06 16 48.5**	**-0.8**
ESK	**Eskdalemuir**	**11.74**	**136**		Pn	**Pn**		**06 16 48.5**	**-0.8**
DY2G	**Dye2**	**12.01**	**292**		IAMs_20	IAMs_20		06 21 35.3	
	comp=Z,7μm,10.0s								
DAG	**Danmarks Havn**	**12.18**	**359**	*eP*		Pn		06 17 01.8	+6.6
DAG	**Danmarks Havn**	**12.18**	**359**	*i*	P	Pn		06 17 01.8	+6.6
DAG	**Danmarks Havn**	**12.18**	**359**	*eP*		Pn		06 17 01.9	+6.7
DAG					IAMs_20	IAMs_20		06 22 47.1	
	comp=Z,2μm,8.9s								
DSB	**Dublin**	**12.77**	**148**			Pn	**Pn**	**06 17 03.4**	**+0.1**
NRS	**Narsarsuaq**	**13.15**	**267**		IAMs_20	IAMs_20		06 23 20.7	
	comp=Z,6μm,8.4s								
NC204	**NORSAR Array S**	**13.21**	**92**			Pn	**Pn**	**06 17 09.3**	**-0.1**
NBO00	**NORSAR Array S**	**13.33**	**93**			Pn	**Pn**	**06 17 12.0**	**+1.0**
NAO01	**NORSAR Array S**	**13.47**	**93**			Pn	**Pn**	**06 17 11.8**	**-1.0**
NB2	**NORSAR Subarra**	**13.52**	**92**			Pn	**P**	**06 17 18.6**	**-4.3**
	comp=Z,94nm,2.5s,baz=297,slow=14								
NOA	**NORSAR Array B**	**13.52**	**92**			Pn	P	06 17 16.6	-6.3
	comp=Z,0.0nm,0.3s,baz=298,slow=12,SNR=2.6								
NOA						LR	LR	06 22 34.6	
	comp=Z,721nm,20.8s,baz=295,slow=38								
NB201	**NORSAR Array S**	**13.54**	**92**			Pn	**Pn**	**06 17 13.3**	**-0.6**
SFJD	**Kangerlussuaq**	**13.69**	**295**			Lg	Lg	06 21 13.1	
	comp=Z,0.2nm,0.3s,baz=172,slow=21,SNR=4.7								
SFJD	**Kangerlussuaq**	**13.69**	**295**		IAMs_20	IAMs_20		06 22 24.9	
	comp=Z,479nm,9.2s								
NC405	**NORSAR Array S**	**13.70**	**92**			Pn	**Pn**	**06 17 14.0**	**-1.9**
NC605	**NORSAR Array S**	**13.72**	**93**			Pn	**Pn**	**06 17 15.8**	**-0.5**
ILULI	**Ilulissat**	**13.81**	**304**		IAMs_20	IAMs_20		06 23 59.8	
	comp=Z,10μm,6.4s								
NUUK	**Nuuk**	**14.71**	**284**		IAMs_20	IAMs_20		06 23 32.4	
	comp=Z,7μm,6.8s								
NUUG	**Nuugaatsiaq**	**14.78**	**313**		IAMs_20	IAMs_20		06 23 33.7	
	comp=Z,9μm,7.8s								
HFS	**Hagfors**	**15.03**	**93**			Pn	**P**	**06 17 35.4**	**-4.2**
	comp=Z,0.1nm,0.3s,baz=299,slow=9.7,SNR=1.7								
HFS						LR	LR	06 23 30.9	
	comp=Z,786nm,19.6s,baz=292,slow=37								
UPNV	**Upernavik**	**15.90**	**317**		IAMs_20	IAMs_20		06 24 29.7	
	comp=Z,6μm,8.0s								
HSPB	**Hornsund (broa**	**16.07**	**26**	*eP*			**P**	**06 17 49.7**	**-1.3**
HSPB						*eS*	**Sn**	**06 20 46.3**	**+0.6**
KBS	**Kingsbay**	**16.64**	**19**	*eP*			**P**	**06 18 02.3**	**+5.0**
KBS						*eS*	**S**	**06 21 09.6**	**-1.6**
KBS	**Kingsbay**	**16.64**	**19**	*i*	P		**P**	**06 17 58.8**	**+1.5**
KBS					pmax	pmax			
	comp=Z,115nm,2.1s								
KBS	**Kingsbay**	**16.64**	**19**				**Pn**	**06 17 54.1**	**-0.7**
KBS	**Kingsbay**	**16.64**	**19**		IAMs_20	IAMs_20		06 18 09.0	
	comp=Z,7μm,6.7s								
SPA0	**Spitsbergen Ar**	**16.87**	**23**	*eP*			**P**	**06 18 02.6**	**+2.7**
SPA0						*eS*	**S**	**06 21 09.2**	**-6.7**
SPITS	**Spitsbergen Ar**	**16.87**	**23**		LR	LR		06 22 58.4	
	comp=Z,787nm,20.2s,baz=245,slow=31								
ARD8	**ARCESS Array S**	**17.09**	**55**		P		**Pn**	**06 17 59.7**	**-0.9**
ARD9	**ARCESS Array S**	**17.10**	**55**		P		**P**	**06 18 00.5**	**-2.0**
ARCES	**ARCESS Array B**	**17.11**	**55**		P		**P**	**06 18 05.6**	**+3.0**
	baz=265,slow=9.7,SNR=1.4								
ARCES					LR	LR		06 23 30.7	
	comp=Z,902nm,19.4s,baz=295,slow=33								
HOPEN	**Hopen**	**17.83**	**31**	*eP*			**P**	**06 18 13.2**	**+2.7**
HOPEN				*eS*			**S**	**06 21 31.5**	**-3.9**
BMRD	**Maredsous**	**18.54**	**130**	P		Pn		06 18 24.3	+5.7
BMRD				x		x		06 18 32.9	
BSTI	**Sart Tilman**	**18.57**	**128**	P		**Pn**		**06 18 23.9**	**+5.0**
BGES	**Gesves**	**18.58**	**130**	P		Pn		06 18 24.3	+5.3
BGES				PnPn		**PnPn**		**06 18 28.9**	**-1.6**
BCLA	**Clavier**	**18.62**	**129**	P		Pn		06 18 24.8	+5.3
DOU	**Dourbes**	**18.66**	**131**	Pn		**P**		**06 18 17.9**	**-1.9**
MEM	**Membach**	**18.69**	**128**	P		Pn		06 18 25.8	+5.4
MEM				PnPn		**PnPn**		**06 18 30.6**	**-1.5**
BTNL	**Ternell**	**18.75**	**128**	P		**Pn**		**06 18 26.1**	**+4.9**
RCHB	**Rochefort**	**18.82**	**130**	Pn		**Pn**		**06 18 19.9**	**-2.0**
RCHB	**Rochefort**	**18.82**	**130**	P		**Pn**		**06 18 26.2**	**+4.2**
BHOU	**Houvegnez**	**18.91**	**128**	P		**Pn**		**06 18 27.8**	**+4.7**
	comp=Z,75nm,3.2s								
WLF	**Walferdange**	**19.55**	**129**	P		**Pn**		**06 18 28.3**	**-2.5**
WLF	**Walferdange**	**19.55**	**129**	P		**Pn**		**06 18 28.3**	**-2.5**
FINES	**FINESS Array B**	**19.69**	**79**	P		**Pn**		**06 18 36.4**	**+4.1**
	comp=Z,0.2nm,0.3s,baz=316,slow=8.0,SNR=12								
FINES				LR		LR		06 26 16.3	
	comp=Z,462nm,19.9s,baz=302,slow=37								
FINES	**FINESS Array B**	**19.69**	**79**	P			**P**	**06 18 29.0**	**-1.9**
FIA1	**FINESS Array S**	**19.69**	**79**	P			**P**	**06 18 28.6**	**-2.4**
FIA1				IAmb		IAmb		06 18 44.3	
	comp=Z,59nm,1.4s								
TULEG	**Thule**	**19.87**	**327**	P			**Pn**	**06 18 32.4**	**-2.0**
TULEG				IAmb		IAmb		06 18 46.1	
	comp=Z,81nm,1.4s								
TULEG	**Thule**	**19.87**	**327**	*eP*			**Pn**	**06 18 39.2**	**+4.8**
TULEG				IAMs_20		IAMs_20		06 26 20.8	
	comp=Z,5μm,10.7s								
APA	**Apatity**	**20.32**	**59**	⇑	*iP*		Pn	06 18 50.0	+10
APA					pmax	pmax			
	comp=Z,20nm,0.9s								
APA					MLR	MLR			
	comp=Z,900nm,14.0s								
CLL	**Collm**	**20.68**	**116**	*i*	P		Pn	06 18 48.4	+4.3
	comp=Z,41nm,1.4s								
CLL				*i*				06 18 52.9	
	comp=Z,84nm,1.3s								
CLL				*i*				06 18 58.1	
CLL				*eS*		Sn		06 22 39.0	+1.5
CLL				*eSSS*		SSS		06 23 18.0	
CLL	**Collm**	**20.68**	**116**	*i*	P		Pn	06 18 48.4	+4.3
CLL				*i*				06 18 52.9	
CLL				*eS*		Sn		06 22 39.0	+1.5
CLL				pmax		pmax			
	comp=Z,41nm,1.4s								
CLL	**Collm**	**20.68**	**116**	P		Pn		06 18 42.0	-2.1
CLL				IAmb		IAmb		06 18 54.5	
	comp=Z,77nm,1.3s								
GKP	**Gorka Klasztor**	**20.89**	**107**	*eP*		Pn		06 18 52.0	+5.4
ECH	**Echery**	**21.13**	**129**	P		**P**		**06 18 43.7**	**-3.1**
ECH				pmax		pmax			
	comp=Z,57nm,1.3s								
ECH	**Echery**	**21.13**	**129**	P		**P**		**06 18 43.7**	**-3.1**
ECH				IAmb		IAmb		06 18 59.0	
	comp=Z,57nm,1.3s								
GRA1	**Grafenberg Arr**	**21.31**	**121**	P		**P**		**06 18 47.9**	**-0.8**
GRA1				IAmb		IAmb		06 19 08.7	
	comp=Z,91nm,1.5s								
GRF	**Grafenberg Arr**	**21.31**	**121**	P		**P**		**06 18 47.9**	**-0.8**
GRF				pm

GEC2B **GERESS ARRAY S** 22.93 119 P **P** 06 19 03.2 -2.8
GERES **GERESS Array B** 22.93 119 P **P** 06 19 10.1 +4.0
comp=Z,10nm,1.1s,baz=331,slow=8.1,SNR=16
GERES LR LR 06 28 44.4
comp=Z,612nm,19.2s,baz=330,slow=38
RETA Reutte 23.00 125 *eP* P 06 19 15.3 +8.6
comp=Z,6.6nm,0.9s
IZAR Zarasai 23.01 92 *eP* P 06 19 12.8 +6.1
ZFI Zemlya Franca- 23.07 22 *eP* P 06 19 15.9 +8.8
comp=Z,129nm,2.1s
ZFI *eS* Sn 06 23 29.9 -4.3
ISAL Salakas 23.07 93 *eP* P 06 19 13.5 +6.2
KRLC Kraliky 23.14 113 *eP* P 06 19 15.0 +6.9
KRLC MLR MLR
comp=Z,2µm,9.0s
KRLC Kraliky 23.14 113 *eP* P 06 19 15.0 +6.9
KRLC AMS AMS 06 33 00.0
comp=Z,2µm,9.0s
MOTA Moosalm 23.24 125 *eP* P 06 19 21.8 +12
comp=Z,44nm,1.9s
TREC Trest 23.25 116 *eP* P 06 19 16.0 +6.7
TREC *eS* Sn 06 23 32.5 -6.6
TREC MLR MLR
comp=Z,1µm,8.9s
TREC Trest 23.25 116 *eP* P 06 19 16.0 +6.7
TREC *eS* Sn 06 23 32.5 -6.6
TREC AMS AMS 06 32 50.0
comp=Z,1µm,8.9s
IIGN Ignalina 23.26 93 *eP* P 06 19 15.6 +6.3
DAVOX **Davos/Dischmat** 23.30 127 P **P** 06 19 13.5 +3.5
comp=Z,2.9nm,0.7s,baz=342,slow=13,SNR=3.4
DAVOX LR LR 06 29 18.7
comp=Z,615nm,18.9s,baz=298,slow=39
TMCR Tamitsa 23.33 66 *eP* P 06 19 15.8 +6.0
TMCR Tamitsa 23.33 66 *eP* P 06 19 15.8 +5.9
TMCR pmax pmax
comp=Z,74nm,1.1s
SQTA Sankt Quirin 23.38 125 *eP* P 06 19 23.3 +13
comp=Z,31nm,1.3s
FETA Feichten 23.39 125 *eP* P 06 19 20.7 +10
comp=Z,20nm,2.0s
TUE Stuetta 23.39 128 P **P** 06 19 09.1 -1.7
TUE IAmb IAmb 06 19 32.4
comp=Z,77nm,1.4s
WATA Walderalm 23.42 124 *eP* P 06 19 18.6 +7.5
comp=Z,31nm,1.3s
BEL Belsk 23.42 105 *eP* P 06 19 19.1 +8.3
WTTA Wattenberg 23.50 124 *eP* **P** 06 19 16.6 +4.6
comp=Z,45nm,1.6s
IDID Didziasalis 23.51 92 *eP* P 06 19 17.9 +6.2
VRAC Vranov 23.67 114 P **P** 06 19 17.3 +3.8
comp=Z,5.7nm,0.8s,baz=328,slow=11,SNR=11
VRAC LR LR 06 29 38.1
comp=Z,626nm,18.5s,baz=328,slow=39
VRAC Vranov 23.67 114 *eP* P 06 19 20.3 +6.8
VRAC *eS* Sn 06 23 42.4 -6.7
MORC Moravsky Berou 23.68 112 *eP* P 06 19 20.2 +6.7
MORC *eS* Sn 06 23 41.8 -7.4
MORC Moravsky Berou 23.68 112 P **P** 06 19 12.3 -1.2
MORC pmax pmax
comp=Z,28nm,1.5s
MORC Moravsky Berou 23.68 112 P **P** 06 19 12.3 -1.2
EUNU Eureka 23.68 336 P **P** 06 19 15.1 +1.8
EUNU IAmb IAmb 06 19 27.5
comp=Z,36nm,1.1s
BNI Bardonecchia 23.78 134 P **P** 06 19 12.5 -2.2
BNI pmax pmax
comp=Z,25nm,1.3s
BNI Bardonecchia 23.78 134 P **P** 06 19 12.5 -2.2
KRUC Moravsky 23.79 115 *eP* P 06 19 20.7 +6.1
KRUC *eS* Sn 06 23 43.8 -8.2
NACGM **Naroch** 23.80 93 *eP* P 06 19 20.0 +5.4
NACGM *eS* **S** 06 23 32.0 +1.7
NACGM *eLQ* LQ 06 28 18.0
NACGM *eLR* LR 06 30 03.0
OKC Ostrava-Krasne 23.87 111 *eS* Sn 06 23 49.0 -4.8
OKC AMS AMS 06 33 00.0
comp=Z,900nm,10.7s
MOA Molln 23.97 119 *eP* P 06 19 23.4 +7.1
comp=Z,20nm,1.8s
OJC Ojcow 24.24 109 *eP* P 06 19 25.0 +6.2
OJC Ojcow 24.24 109 P **P** 06 19 17.2 -1.6
OJC pmax pmax
comp=Z,25nm,1.5s
OJC Ojcow 24.24 109 P **P** 06 19 17.2 -1.6
ABTA Abfaltersbach 24.25 123 *eP* P 06 19 29.4 +10
comp=Z,23nm,1.6s
KBA Koelnbreinsper 24.27 122 *eP* P 06 19 29.7 +10
comp=Z,41nm,2.0s
JAVC Velka Javorina 24.46 113 *eP* P 06 19 28.6 +7.7
JAVC *eS* S 06 24 04.3 +23
CONA Conrad Observa 24.51 117 *eP* P 06 19 27.8 +6.4
comp=Z,9.4nm,1.0s
MICGM **Minsk** 24.54 93⇑ *eP* P 06 19 28.0 +6.5
MICGM PM 06 19 30.0
comp=Z,0.3nm,2.2s
MICGM *ePP* PnPn 06 20 09.0 +17
MICGM *ePPP* PPP 06 20 26.0
MICGM *eS* **S** 06 23 48.0 +5.8
MICGM *eLR* LR 06 28 20.0
MNK Minsk 24.54 93⇑ *eP* P 06 19 28.0 +6.5
MNK *e* 06 20 09.0
MNK *eS* **S** 06 23 48.0 +5.8
MNK pmax pmax
comp=Z,310nm,2.2s
CTI Castel Tesino 24.55 125 P **P** 06 19 18.5 -3.2
CTI pmax pmax
comp=Z,44nm,1.3s
CTI Castel Tesino 24.55 125 P **P** 06 19 18.5 -3.2
CTI IAmb IAmb 06 19 43.7
comp=Z,44nm,1.3s
ZOU Zoufplan 24.58 123 P **P** 06 19 20.2 -1.9
CIMO Cimolais 24.60 124 P **P** 06 19 22.3 +0.1
CIMO IAmb IAmb 06 19 47.4
comp=Z,33nm,1.4s
SMOL Smolenice 24.64 114 *eP* P 06 19 29.3 +6.8
SMOL Smolenice 24.64 114 *eP* P 06 19 29.2 +6.7
MODS Modra-Piesok 24.70 115 *eP* P 06 19 30.0 +7.0
MODS pmax pmax
comp=Z,92nm,1.7s
MODS Modra-Piesok 24.70 115 *eP* P 06 19 29.9 +6.9
STAL STALIGIAL 24.74 124 P **P** 06 19 22.1 -1.3
MYKA Terra Mystica 24.76 122 *eP* P 06 19 32.2 +8.6
comp=Z,4.0nm,0.7s
ZST Bratislava 24.77 115 *eP* P 06 19 32.0 +8.4
ZST Bratislava 24.77 115 *eP* P 06 19 32.0 +8.4
PRED Cave del Predi 24.89 122 P **P** 06 19 22.6 -2.2
PRED IAmb IAmb 06 19 38.1
comp=Z,31nm,1.3s
ARSA Arzberg 24.94 118 *eP* P 06 19 31.7 +6.5
comp=Z,10nm,1.2s
LANS Liptovska Anna 24.94 111 *eP* P 06 19 32.4 +7.2
LANS pmax pmax
comp=Z,8.0nm,0.9s
LANS Liptovska Anna 24.94 111 *eP* P 06 19 32.4 +7.2
NIE Niedzica 25.07 109 *eP* P 06 19 34.3 +8.0
OBKA Obir 25.20 121 *eP* **P** 06 19 31.9 +4.3
comp=Z,11nm,1.2s
VYHS Vyhne 25.21 112 *eP* P 06 19 34.5 +6.9
VYHS pmax pmax
comp=Z,73nm,1.6s
VYHS Vyhne 25.21 112 *eP* P 06 19 34.5 +6.9
SOKA Soboth 25.24 120 *eP* P 06 19 33.5 +5.6
comp=Z,6.6nm,1.0s
KLMR Klimovskoe 25.59 72 *eP* **P** 06 19 35.6 +4.7
comp=Z,43nm,1.6s
KLMR *eS* **S** 06 24 05.7 +6.9
KLMR Klimovskoe 25.59 72 *eP* **P** 06 19 35.5 +4.7
KLMR *eS* **S** 06 24 05.9 +7.1
KLMR pmax pmax
comp=Z,40nm,1.5s
KLMR Klimovskoe 25.59 72 *eP* **P** 06 19 35.6 +4.7
KLMR AMP 06 19 38.9
comp=Z,40nm,1.5s
KLMR *eS* **S** 06 24 05.9 +7.1
KLMR *eS* **S** 06 24 05.9 +7.1
KLMR LQ LQ 06 26 34.2
KLMR LQ LQ 06 26 34.2
KLMR LR LR 06 28 00.6
KWP Kalwaria Pacla 25.89 106 P **P** 06 19 31.2 -2.5
KWP pmax pmax
comp=Z,77nm,1.3s
KWP Kalwaria Pacla 25.89 106 P **P** 06 19 31.2 -2.5
CRVS Cervenica-Dubn 25.95 109 *eP* P 06 19 41.4 +7.1
CRVS Cervenica-Dubn 25.95 109 *eP* P 06 19 41.4 +7.1
SCHQ Schefferville 26.06 271 P **P** 06 19 38.3 +3.1
comp=Z,23nm,0.9s,baz=42,slow=5.6,SNR=9.3
SCHQ LR LR 06 28 35.4
comp=Z,589nm,21.6s,baz=47,slow=34
PSZ Piszkesteto 26.10 112 ⇑P P 06 19 43.0 +7.3
PSZ Piszkesteto 26.10 112 ⇑P P 06 19 43.0 +7.3
PSZ Piszkesteto 26.10 112 P **P** 06 19 33.4 -2.3
ESDC Sonseca Array 26.24 156 P **P** 06 19 37.9 +0.9
comp=Z,1.4nm,0.8s,baz=350,slow=9.0,SNR=11
ESDC LR LR 06 29 52.6
comp=Z,893nm,18.5s,baz=335,slow=36
ESDC Sonseca Array 26.24 156 P **P** 06 19 33.1 -4.0
KOLS Kolonicke sedl 26.25 108 *eP* P 06 19 44.8 +7.7
KOLS pmax pmax
comp=Z,57nm,1.5s
KOLS Kolonicke sedl 26.25 108 *eP* P 06 19 44.8 +7.7
LVV L'vov 26.30 104 *eP* P 06 19 45.1 +7.7
LVV *i* S **S** 06 24 15.7 +5.5
LVV MLR MLR
comp=Z,450nm,14.4s
RES Resolute Bay 26.48 324 P **P** 06 19 41.2 +2.3
comp=Z,1.5nm,0.9s,baz=37,slow=10,SNR=1.4
RES LR LR 06 30 04.6
comp=Z,620nm,18.3s,baz=60,slow=36
UZH Uzhgorod 26.50 108 *eP* **P** 06 19 43.5 +4.3
UZH *i* 06 19 47.7
UZH *e* 06 20 34.0
UZH *e* 06 23 12.4
UZH *eS* **S** 06 24 13.5 +0.1
UZH *e* 06 25 24.6
OSSC Osservatorio P 26.62 129 P **P** 06 19 40.5 +0.1
OSSC IAmb IAmb 06 19 54.2
comp=Z,54nm,1.2s
MURB Monte Urbino 27.28 127 P **P** 06 19 44.0 -2.4
AKASG Malin Array Be 27.82 98 P **P** 06 19 53.7 +2.6
comp=Z,0.9nm,0.6s,baz=326,slow=9.2,SNR=3.4
AKASG LR LR 06 31 21.3
comp=Z,306nm,19.9s,baz=325,slow=37
AKASG Malin Array Be 27.82 98 *ceP* P 06 19 59.0 +7.9
AKASG pmax pmax
comp=Z,8.0nm,1.0s
AKASG Malin Array Be 27.82 98 P **P** 06 19 48.2 -2.9
AKBB Malin Array Si 27.82 98 *ceP* **P** 06 19 55.7 +4.6
AKBB Malin Array Si 27.82 98 P **P** 06 19 48.7 -2.4
AKBB IAmb IAmb 06 20 09.9
comp=Z,34nm,1.5s
OBN Obninsk 27.86 84 P P 06 19 57.3 +5.9
comp=Z,4.6nm,0.3s,baz=342,slow=20,SNR=1.0
OBN Obninsk 27.86 84⇑ *eP* **P** 06 19 53.8 +2.4
OBN *i* 06 19 57.9
OBN *e* 06 23 13.6
OBN *i* S S 06 24 48.9 +14
OBN *eSS* **SnSn** 06 25 59.8 +13
OBN pmax pmax
comp=Z,32nm,1.2s
OBN MLR MLR
comp=Z,317nm,14.0s
MOS Moscow 27.90 82 *eP* **P** 06 19 56.6 +4.9
MOS *e* 06 20 44.0
MOS MLR MLR
comp=Z,400nm,13.0s
BUR08 Bucovina Ar. S 28.48 106 P **P** 06 19 54.2 -2.9
BURAR Bucovina Array 28.50 106 ⇑P P 06 20 06.7 +9.4
BURAR Bucovina Array 28.50 106 ⇑P P 06 20 06.7 +9.3
BURAR Bucovina Array 28.50 106 P **P** 06 19 56.1 -1.2
GZR Gura Zlata 29.31 112 ⇑P P 06 20 11.4 +6.9
GZR Gura Zlata 29.31 112 ⇑P P 06 20 11.4 +7.0
SORM Soroca 29.41 102 ⇓P P 06 20 11.6 +6.4
SORM Soroca 29.41 102 ⇓P P 06 20 11.6 +6.4
DOPR Dopca 29.90 108 ⇑P P 06 20 16.7 +7.1
VOIR 30.19 109 ⇑P P 06 20 17.7 +5.5
VOIR 30.19 109 ⇑P P 06 20 17.7 +5.4
PLOR Plostina 30.51 107 ⇓P P 06 20 22.6 +7.5
PLOR Plostina 30.51 107 ⇓P P 06 20 22.6 +7.6
MLR Muntele Rosu 30.51 108 ⇑P P 06 20 19.5 +4.3
MLR Muntele Rosu 30.51 108 ⇑P P 06 20 19.5 +4.3
MLR Muntele Rosu 30.51 108 P **P** 06 20 14.1 -1.1
MLR IAmb IAmb 06 20 30.2
comp=Z,15nm,1.2s
VRI Vrincioaia 30.53 107 ⇓P P 06 20 20.9 +5.7
VRI Vrincioaia 30.53 107 ⇓P P 06 20 20.9 +5.7
LPSR Galich'ya Gora 30.61 86 *eP* P 06 20 20.6 +4.8
LPSR pmax pmax
comp=Z,10.0nm,0.9s
NEHR Nehoiu 30.70 108 ⇓P P 06 20 23.9 +7.2
KIRV Kirov 30.97 69 P P 06 20 22.9 +4.0
comp=Z,7.6nm,0.5s,baz=295,slow=9.2,SNR=7.0
KIRV LR LR 06 32 13.8
comp=Z,544nm,19.5s,baz=309,slow=35
KIRV Kirov 30.97 69 *ceP* P 06 20 25.0 +6.1
CFR Carcaliu 31.67 106 ⇑P P 06 20 32.0 +6.8
CFR Carcaliu 31.67 106 ⇑P P 06 20 32.0 +6.8
VSR Storozhevoye 31.71 88 *eP* P 06 20 31.8 +6.3
VSR pmax pmax
comp=Z,10.0nm,1.1s
VTS Vitosha 31.81 114 *eP* P 06 20 34.1 +7.5
VORD Divnogorie 31.95 88 *eP* P 06 20 32.5 +4.9
VORD pmax pmax
comp=Z,10.0nm,1.3s
TPGR Topolog 32.05 106 ⇑P P 06 20 34.5 +5.9
SZH Strazhica 32.34 110 *eP* P 06 20 38.5 +7.4
KKB Krupnik 32.38 115 *eP* P 06 20 36.2 +4.6
VRH Novokhopyorsk 32.82 85 *eP* P 06 20 41.4 +6.2
VRH pmax pmax
comp=Z,90nm,1.9s
MMB Musomiste 32.87 114 *eP* P 06 20 43.8 +7.9
KEST Kesra 33.14 138 LR LR 06 34 04.7
comp=Z,432nm,18.9s,baz=312,slow=36
KEST Kesra 33.14 138 P **P** 06 20 35.9 -2.4
KEST IAmb IAmb 06 20 50.3
comp=Z,29nm,1.4s
E60A Ste Agathe de 34.27 264 P P 06 20 53.9 +6.0
baz=38
ALN Alexandroupoli 34.38 112 P **P** 06 20 46.4 -2.5
ALN pmax pmax
comp=Z,37nm,1.3s
ALN Alexandroupoli 34.38 112 P **P** 06 20 46.4 -2.5
BELG Belogornoye 34.47 79 *i* P P 06 20 53.0 +3.5
BELG pmax pmax
comp=Z,6.0nm,1.0s
AGG Agios Georgios 34.55 118 P **P** 06 20 48.8 -1.6
AGG pmax pmax
comp=Z,56nm,1.4s
AGG Agios Georgios 34.55 118 P **P** 06 20 48.8 -1.6
D56A ZEC Mazanza, M 35.16 268 P P 06 21 01.8 +6.2
baz=39
E57A Chemin Saint G 35.39 267 P P 06 21 03.5 +5.8
baz=38
E56A St. Veronique 35.67 268 P P 06 21 05.0 +5.0
baz=38
ANN Anapa 35.89 97 *eP* **P** 06 21 02.4 +0.5
ANN *e*PP **sP** 06 21 07.3 +2.4
ANN *e* 06 22 23.1
ANN *eS* **S** 06 26 39.4 -0.6
ANN *eSS* **SS** 06 29 07.3 -8.5
ANN pmax pmax
comp=Z,26nm,0.8s
ANN MLR MLR
comp=Z,862nm,16.0s
ARU Arti 36.07 66 P P 06 21 08.7 +5.4
comp=Z,0.9nm,0.4s,baz=279,slow=5.6,SNR=7.3
ARU LR LR 06 35 12.3
comp=Z,579nm,19.0s,baz=307,slow=35
ARU Arti 36.07 66 *d iP* P 06 21 09.8 +6.5
ARU 06 22 29.4
ARU PPP PPP 06 22 48.7
ARU S S 06 26 53.8 +11
ARU SS **SS** 06 29 17.6 -1.5
ARU pmax pmax
comp=Z,46nm,2.3s
ARU MLR MLR
comp=Z,468nm,16.0s
ARU Arti 36.07 66 P **P** 06 21 00.9 -2.4
NRIK Noril'sk 36.45 35 P P 06 21 11.7 +5.3
comp=Z,3.4nm,0.8s,baz=319,slow=7.1,SNR=7.2
NRIK LR LR 06 38 13.7
comp=Z,294nm,18.2s,baz=18,slow=40
NRIK Noril'sk 36.45 35 *ceP* P 06 21 11.3 +4.9
NRIK pmax pmax
comp=Z,7.0nm,1.1s
G57A Newington 36.78 266 P P 06 21 13.4 +3.9
baz=37
C36M Paulatuk 36.84 325 P **P** 06 21 08.4 -1.3
C36M IAmb IAmb 06 21 25.5
comp=Z,20nm,1.4s
ILGA Ilgaz 37.38 104 P **P** 06 21 12.9 -2.0
ILGA IAmb IAmb 06 21 40.0
comp=Z,15nm,1.1s
MANT Manisa 37.44 112 P **P** 06 21 12.5 -2.9
SOC Sochi 37.85 96 *eP* **P** 06 21 18.5 -0.1
SOC *e* 06 22 51.5
SOC *ePPP* PPP 06 23 11.0
SOC *eS* **S** 06 27 08.3 -1.5
SOC *eSS* **SS** 06 30 00.8 +5.4
SOC MLR MLR
comp=Z,483nm,13.0s
BR131 Keskin Array S 38.46 105 P **P** 06 21 22.7 -1.3
BR131 pmax pmax
comp=Z,13nm,1.2s
BR131 Keskin Array S 38.46 105 P **P** 06 21 22.7 -1.3
BRTR Keskin Array B 38.46 105 P P 06 21 28.6 +4.7
comp=Z,4.9nm,0.9s,baz=331,slow=7.5,SNR=12
BRTR LR LR 06 39 48.9
comp=Z,79nm,18.9s,baz=326,slow=40
BRTR Keskin Array B 38.46 105 *ceP* P 06 21 31.7 +7.8
BRTR pmax pmax
comp=Z,5.0nm,0.9s
IDI Anoyia 38.80 118 P P 06 21 29.9 +3.2
comp=Z,5.8nm,0.8s,baz=351,slow=5.5,SNR=4.7
IDI PcP **PcP** 06 23 40.1 +2.2
comp=Z,4.3nm,0.8s,baz=324,slow=3.5,SNR=3.9
IDI Anoyia 38.80 118 P **P** 06 21 25.0 -1.7
KVAR Kislovodsk Arr 38.83 92 LR LR 06 37 42.1
comp=Z,550nm,19.8s,baz=254,slow=36
KBZ Khabaz 39.10 92 P P 06 21 33.5 +4.5
comp=Z,6.0nm,1.1s,baz=281,slow=5.9,SNR=3.6
KBZ LR LR 06 37 58.6
comp=Z,514nm,21.5s,baz=325,slow=37
KBZ Khabaz 39.10 92 *ceP* P 06 21 34.9 +5.9
KBZ pmax pmax
comp=Z,9.0nm,0.9s
YKA Yellowknife Ar 39.23 313 P **P** 06 21 32.0 +2.0
comp=Z,5.2nm,1.1s,baz=38,slow=8.9,SNR=13
YKA PcP **PcP** 06 23 42.9 +4.2
comp=Z,1.3nm,0.9s,baz=33,slow=3.7,SNR=4.5
YKA LR LR 06 37 53.8
comp=Z,289nm,19.2s,baz=0.0,slow=36
YKA Yellowknife Ar 39.23 313 *ceP* P 06 21 35.5 +5.5
YKA pmax pmax
comp=Z,5.0nm,1.1s
ELL Elmali 39.48 112 P **P** 06 21 30.3 -2.2
ELL pmax pmax
comp=Z,138nm,1.3s
ELL Elmali 39.48 112 P **P** 06 21 30.3 -2.2
AKTO Aktyubinsk 40.27 73 P P 06 21 44.5 +5.7
comp=Z,7.4nm,1.1s,baz=326,slow=8.6,SNR=12
AKTO LR LR 06 38 13.1
comp=Z,676nm,18.6s,baz=326,slow=36
ZEI Tsey 40.29 92 *eP* P 06 21 43.1 +3.9
ZEI pmax pmax
comp=Z,11nm,1.5s
N58A Sunbury 40.98 264 P P 06 21 51.3 +6.6
baz=34
A21K Barrow 41.44 341 P P 06 21 55.5 +7.3
baz=25,SNR=12
A21K Barrow 41.44 341 P **P** 06 21 46.6 -1.5
ULM Lac du Bonnet 41.62 289 LR LR 06 37 43.5
comp=Z,329nm,21.4s,baz=46,slow=34
MAK Makhachkala 41.70 89 *eP* **P** 06 21 51.6 +1.0
MAK *eS* **S** 06 28 08.6 +1.1
MAK *eSS* **SnSn** 06 31 17.5 -5.0
MAK pmax pmax
comp=Z,256nm,1.1s
MAK MLR MLR
comp=Z,305nm,15.0s
ABKAR **Akbulak array** 41.98 73 P **P** 06 21 50.8 -2.0
TIXI Tiksi 42.03 15 *ceP* P 06 21 56.8 +3.8
TIXI pmax pmax
comp=Z,159nm,1.7s
CSS Mathiatis 42.41 109 P **P** 06 21 54.5 -2.0
TOLK Toolik Lake Re 42.76 336 P P 06 22 02.9 +3.9
baz=28,SNR=15
GNI Garni 42.81 94 P P 06 22 04.9 +5.0
comp=Z,5.7nm,0.3s,baz=336,slow=20,SNR=1.5
GNI Garni 42.81 94 *ceP* P 06 22 07.5 +7.6
GNI pmax pmax
comp=Z,63nm,2.5s
BRVK Borovoye 43.12 62 *ceP* P 06 22 08.0 +6.0
BRVK pmax pmax
comp=Z,32nm,2.5s
AGMN Agassiz Nation 43.14 287 P P 06 22 09.0 +6.8
baz=38
O53A New Philadelph 43.40 268 P P 06 22 10.8 +6.3
baz=34
O52A Adamsville 43.78 268 P P 06 22 13.9 +6.4
baz=34
COLD Coldfoot 44.13 336 P P 06 22 16.3 +6.3
baz=27
ACSO Alum Creek Sta 44.17 269 P **P** 06 22 12.6 +1.9
baz=34
P52A Corning 44.30 268 P P 06 22 17.2 +5.5
baz=34
SPMN Marine on St. 44.31 282 P P 06 22 15.1 +3.4
baz=36
R53A Hurricane 45.31 267 P P 06 22 25.5 +5.8
baz=33
K27K Chicken 45.35 329 P P 06 22 26.3 +6.5
baz=30,SNR=5.4
P49A Miami Univ. Ec 45.50 270 P P 06 22 26.9 +5.7
baz=34
POKR Poker Plat Res 45.50 333 P P 06 22 27.7 +6.8
baz=28
ILAR Eielson Array 45.70 332 P **P** 06 22 25.6 +3.0
comp=Z,7.6nm,1.1s,baz=26,slow=5.5,SNR=19
ILAR PcP **PcP** 06 24 01.9 +1.7
comp=Z,2.0nm,0.9s,baz=359,slow=2.6,SNR=5.9
ILAR LR LR 06 42 44.4
comp=Z,274nm,20.6s,baz=26,slow=38
ILAR Eielson Array 45.70 332 P **P** 06 22 21.0 -1.5
COLA College 45.80 333 *i* P P 06 22 29.0 +5.7
COLA pmax pmax
comp=Z,7.0nm,1.1s
HDA Harding Lake 46.03 332 P **P** 06 22 28.2 +3.0
baz=27,SNR=6.0
MLY Manley 46.21 335 P P 06 22 33.6 +7.0
baz=26,SNR=5.7
T54A Tazewell 46.22 265 P P 06 22 31.6 +4.5
baz=32
BRZS Berezniki 46.47 63 *eP* P 06 22 34.7 +5.9
comp=Z,4.0nm,1.0s,baz=63
BRZS *eS* S 06 29 24.7 +7.8
baz=63
BRZS Berezniki 46.47 63 *eP* P 06 22 34.6 +5.8
BRZS *eS* S 06 29 24.7 +7.7
BRZS pmax pmax
comp=Z,4.0nm,1.0s
L26K Log Cabin Wild 46.51 329 P P 06 22 33.5 +4.5
baz=29
HDIL Hopedale 46.62 275 P P 06 22 33.5 +3.5
baz=34
V56A Mocksville 46.81 264 P P 06 22 35.5 +3.9
baz=32
MCK McKinley 47.04 333 P P 06 22 39.8 +6.8
baz=26
ECSD EROS Data Cent 47.12 284 P P 06 22 39.6 +5.6
baz=35
WCI Wyandotte Cave 47.27 271 P **P** 06 22 37.8 +2.6
baz=33
BILL Bilibino 47.56 358⇑ *iP* P 06 22 43.2 +6.2
BILL *eS* S 06 29 42.4 +10
BILL pmax pmax
comp=Z,17nm,1.9s
BILL MLR MLR
comp=Z,222nm,16.0s
ZALV Zalesovo Beam 47.62 51 P **P** 06 22 40.5 +2.8
comp=Z,1.2nm,0.6s,baz=326,slow=6.9,SNR=8.5
ZALV PcP **PcP** 06 24 09.2 +2.1
comp=Z,0.4nm,0.3s,baz=316,slow=4.0,SNR=1.6
ZALV LR LR 06 43 14.0
comp=Z,86nm,20.1s,baz=338,slow=37
KURK Kurchatov 48.10 58 *i* P P 06 22 46.1 +4.7
KURK pmax pmax
comp=Z,8.0nm,0.9s
KURK Kurchatov 48.10 58 P **P** 06 22 39.3 -2.1
KURK IAmb IAmb 06 22 51.4
comp=Z,9.6nm,1.0s
KURBB **Kurchatov Arra** 48.14 58 P **P** 06 22 44.1 +2.3
comp=Z,4.8nm,1.0s,baz=325,slow=7.4,SNR=5.2
LAO LASA Array 48.62 293 P P 06 22 52.4 +6.8
baz=35

EGMT	Eagleton	48.89	297	P		P		06 22 51.6 +3.9
	baz=35,SNR=8.9							
SEM	Semipalatinsk	48.95	57	*eP*		P		06 22 53.2 +5.0
	baz=57							
SEM	Semipalatinsk	48.95	57	*eP*		P		06 22 53.2 +4.9
RC01	Rabbit Creek A	49.59	332	P		P		06 22 59.4 +6.6
	baz=25							
GEYT	Allbeck	50.41	84	LR		LR		06 45 19.1
	comp=Z,179nm,21.0s,baz=350,slow=37							
BTLS	Baital	51.05	66	*eP*		P		06 23 09.6 +5.5
	baz=65							
BTLS	Baital	51.05	66	*eP*		P		06 23 09.5 +5.5
MSO	Missoula	51.47	299	P		P		06 23 13.0 +5.6
	baz=33							
BOZ	Bozeman (W)	51.63	297	P		P		06 23 14.2 +5.7
	baz=33,SNR=12							
U40A	Yellville	51.66	275	P		P		06 23 13.8 +5.1
	baz=32							
DZA	Taraz	51.77	69	*eP*		P		06 23 15.4 +5.9
	baz=69							
DZA	Taraz	51.77	69	*eP*		P		06 23 15.4 +5.9
IUG	Iuzhnay	51.87	71	*eP*		P		06 23 16.1 +5.8
	baz=70							
IUG	Iuzhnay	51.87	71	*eP*		P		06 23 16.1 +5.8
LRAL	Lakeview Retre	51.97	268	P		P		06 23 15.5 +4.5
	baz=31							
K22A	Casper	52.08	291	P		P		06 23 15.6 +3.6
	baz=33							
CBKS	Cedar Bluff	52.51	283	P		P		06 23 21.0 +5.9
	baz=32							
MAKZ	Makanchi	52.59	59	P		**P**		**06 23 12.6 -2.9**
MAKZ				IAmb		IAmb		06 23 28.4
	comp=Z,12nm,1.4s							
SGDS	Sogindy	52.61	66	*eP*		P		06 23 21.6 +5.8
	baz=66							
SGDS				*eS*		S		06 30 50.9 +7.7
	baz=66							
SGDS	Sogindy	52.61	66	*eP*		P		06 23 21.5 +5.7
SGDS				*eS*		S		06 30 50.8 +7.6
MKAR	Makanchi Array	52.71	58	P		**P**		**06 23 18.5 +2.1**
	comp=Z,2.8nm,1.1s,baz=347,slow=5.9,SNR=3.0							
MKAR	Makanchi Array	52.71	58	*ceP*		P		06 23 22.7 +6.3
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.9s							
MKAR	Makanchi Array	52.71	58	P		**P**		**06 23 13.9 -2.5**
TDK	Taldyqorghan	52.77	62	*eP*		P		06 23 22.6 +5.7
	baz=62							
TDK				*eS*		S		06 30 52.6 +7.3
	baz=62							
TDK	Taldyqorghan	52.77	62	*eP*		P		06 23 22.5 +5.6
TDK				*eS*		S		06 30 52.5 +7.3
LOHW	Long Hollow	52.90	295	P		**P**		**06 23 17.6 -0.4**
KUU	Kurty	52.91	65	*eP*		P		06 23 23.7 +5.8
	comp=Z,10nm,1.6s,baz=64							
KUU				*eS*		S		06 30 54.6 +7.5
	baz=64							
KUU	Kurty	52.91	65	*eP*		P		06 23 23.7 +5.8
KUU				*eS*		S		06 30 54.6 +7.5
KUU				pmax		pmax		
	comp=Z,10.0nm,1.6s							
W39A	Magazine	53.04	275	P		P		06 23 23.9 +4.9
	baz=32							
ZSN	Zaisan	53.09	56	*eP*		P		06 23 24.4 +5.2
	baz=56							
ZSN	Zaisan	53.09	56	*eP*		P		06 23 24.3 +5.1
TORD	Torodi Ar. Bea	53.13	156	P		**P**		**06 23 21.3 +1.6**
	comp=Z,8.8nm,1.1s,baz=341,slow=8.3,SNR=19							
TORD				LR		LR		06 45 58.0
	comp=Z,196nm,19.6s,baz=305,slow=36							
TORD	Torodi Ar. Bea	53.13	156	P		**P**		**06 23 17.9 -1.8**
CHKK	Chushkaly	53.20	64	*eP*		P		06 23 25.5 +5.5
	baz=64							
CHKK	Chushkaly	53.20	64	*eP*		P		06 23 25.5 +5.5
BW06	Boulder Array	53.20	293	P		P		06 23 25.3 +5.0
	baz=32,SNR=12							
BW06	Boulder Array	53.20	293	P		**P**		**06 23 18.8 -1.5**
BW06				IAmb		IAmb		06 23 26.5
	comp=Z,11nm,1.0s							
PDAR	Pinedale Array	53.20	293	P		**P**		**06 23 22.4 +2.1**
	comp=Z,4.0nm,0.8s,baz=54,slow=7.5,SNR=25							
PDAR				PP		**PP**		**06 25 21.4 +1.5**
	comp=Z,1.0nm,0.9s,baz=58,slow=5.4,SNR=3.5							
PDAR				LR		LR		06 45 29.7
	comp=Z,284nm,18.3s,baz=32,slow=36							
AAK	Ala-Archa	53.24	67	P		P		06 23 24.4 +3.8
	comp=Z,2.4nm,0.7s,baz=279,slow=4.9,SNR=7.4							
AAK				LR		LR		06 45 58.3
	comp=Z,324nm,19.7s,baz=326,slow=36							
AAK	Ala-Archa	53.24	67	*ceP*		P		06 23 23.8 +3.2
AAK				pmax		pmax		
	comp=Z,15nm,0.9s							
N23A	Red Feather La	53.33	289	P		P		06 23 27.3 +6.0
	baz=32,SNR=7.1							
BCYI	Bear Canyon	53.39	297	P		**P**		**06 23 21.1 -0.7**
KSCO	Kaye Shedlock'	53.55	285	P		**P**		**06 23 21.9 -1.0**
KSCO				IAmb		IAmb		06 23 29.9
	comp=Z,14nm,1.1s							
PLID	Pearl Lake	53.71	300	P		**P**		**06 23 22.7 -1.4**
PLID				IAmb		IAmb		06 23 34.1
	comp=Z,13nm,1.3s							
MDOK	Medeo	53.80	65	*eP*		P		06 23 30.0 +5.3
	baz=64							
MDOK	Medeo	53.80	65	*eP*		P		06 23 29.9 +5.2
KPKS	Kokpek	54.18	63	*eP*		P		06 23 32.5 +5.2
	comp=Z,12nm,2.2s,baz=63							
KPKS	Kokpek	54.18	63	*eP*		P		06 23 32.5 +5.2
KPKS				pmax		pmax		
	comp=Z,12nm,2.2s							
HLID	Hailey	54.41	297	P		P		06 23 33.1 +3.9
	baz=32							
MOY	Mondy	54.65	42	*eP*		P		06 23 38.7 +8.0
MOY				pmax		pmax		
	comp=Z,65nm,2.4s							
SHLS	Shalkode	54.74	63	*eP*		P		06 23 38.4 +6.9
	comp=Z,4.8nm,1.1s,baz=62							
SHLS	Shalkode	54.74	63	*eP*		P		06 23 38.3 +6.8
SHLS				pmax		pmax		
	comp=Z,5.0nm,1.1s							
O20A	White River Ci	54.90	290	P		P		06 23 37.5 +4.8
	baz=32							
TLY	Talaya	55.39	40	LR		LR		06 48 43.0
	comp=Z,141nm,20.8s,baz=338,slow=37							
WMOK	Wichita Mounta	55.56	279	P		P		06 23 43.2 +5.9
	baz=31							
SDCO	Great Sand Dun	55.81	287	P		P		06 23 44.2 +4.8
	baz=31							
T25A	Trinidad	55.88	285	P		P		06 23 47.0 +7.2
	baz=31							
S22A	4UR Ranch, Cre	56.36	288	P		P		06 23 49.6 +6.2
	baz=31							
ZAK	Zakamensk	56.45	41	*eP*		P		06 23 49.5 +5.9
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.4s							
KSH	Kashi	56.48	68	P		P		06 23 50.0 +6.0
KSH				S		S		06 31 42.5 +7.0
KSH				SS		**SS**		**06 35 24.5 +2.6**
KSH				pmax		pmax		
	comp=Z,17nm,0.7s							
KSH				pmax		pmax		
	comp=Z,550nm,5.7s							
KSH				LR		LR		
	comp=Z,200nm,5.1s							
KSH				LR		LR		
	comp=Z,190nm,5.6s							
KSH				LR		LR		
	comp=Z,410nm,6.2s							
DUG	Dugway, Tooele	56.67	294	P		P		06 23 51.8 +6.5
	baz=31,SNR=7.0							
J05D	Fort Rock, OR	57.19	302	P		P		06 23 56.0 +7.0
	baz=30							
WMQ	Urumqi	57.22	56	*eP*		**P**		**06 23 49.8 +0.7**
WHTX	Lake Whitney,	57.36	276	P		P		06 23 55.6 +5.4
	baz=30							
MVCO	Mesa Verde	57.50	289	P		P		06 23 58.3 +6.9
	baz=31							
DBIC	Dimbokro	58.58	165	LR		LR		06 49 51.1
	comp=Z,323nm,18.9s,baz=344,slow=37							
TIC	Toumodi	58.59	165	*eP*		P		06 24 03.1 +4.2
ANMO	Albuquerque	58.61	286	*ceP*		P		06 24 05.1 +6.0
ANMO				pmax		pmax		
	comp=Z,14nm,2.5s							
ANMO	Albuquerque	58.61	286	P		P		06 24 05.5 +6.4
	baz=30							
KIC	Kosan Boka	58.90	165	*eP*		P		06 24 05.2 +4.2
	comp=Z,17nm,0.8s							
LIC	Lamto	59.00	166	*eP*		P		06 24 05.9 +4.2
	comp=Z,42nm,0.9s							
R11A	Troy Canyon, C	59.34	295	P		P		06 24 07.8 +3.6
	baz=30,SNR=8.9							
Y22D	IRIS PASSCAL I	59.55	286	P		P		06 24 13.2 +7.5
	baz=30							
SONM	Songino Array	59.63	40	LR		LR		06 52 10.0
	comp=Z,320nm,19.6s,baz=352,slow=38							
JCT	Junction City	59.66	278	P		P		06 24 12.0 +5.6
	baz=30,SNR=7.5							
ULN	Ulaanbaatar	59.79	40	*ceP*		P		06 24 13.8 +6.7
ULN				pmax		pmax		
	comp=Z,22nm,2.5s							
WUAZ	Wupatki	60.13	290	P		P		06 24 14.4 +4.8
	baz=30,SNR=8.0							
NVAR	Mina Array Bea	60.32	297	P		**P**		**06 24 12.8 +1.8**
	comp=Z,1.0nm,0.9s,baz=46,slow=4.3,SNR=4.0							
TPNV	Topopah Spring	60.82	295	P		P		06 24 20.3 +5.9
	baz=29							
MNTX	Cornudas Mount	60.97	283	P		P		06 24 20.2 +5.0
	baz=29							
GRAC	Grapevine Rang	61.21	296	P		P		06 24 23.4 +6.6
	baz=29							
121A	Cookes Peak, D	61.25	286	P		P		06 24 23.6 +6.3
	baz=29							
833A	Chaparral WMA,	61.36	276	P		P		06 24 22.8 +4.9
	baz=29							
SHOC	Shoshone, Teco	61.75	294	P		P		06 24 26.9 +6.5
	baz=29							
CWC	Cottonwood Cre	61.98	296	P		P		06 24 28.6 +6.5
	baz=28							
PDMCI	Parker Dam,Lak	62.30	292	P		P		06 24 27.6 +3.5
	baz=29							
TXAR	Lajitas Array	62.30	280	P		**P**		**06 24 26.6 +2.3**
	comp=Z,1.5nm,0.9s,baz=35,slow=4.6,SNR=11							
TXAR				LR		LR		06 51 21.8
	comp=Z,296nm,18.3s,baz=0.0,slow=36							
GMRC	Granite Mounta	62.48	293	P		P		06 24 31.4 +5.9
	baz=29,SNR=6.0							
PET	Petropavlovsk	62.61	3	P		**P**		**06 24 22.8 -3.1**
PET				pmax		pmax		
	comp=Z,25nm,1.3s							
PET	Petropavlovsk	62.61	3	P		**P**		**06 24 22.8 -3.1**
LRMC	Laurel Mtn Rad	62.66	295	P		P		06 24 33.5 +6.8
	baz=28							
TUC	Tucson	62.68	288	P		P		06 24 33.6 +6.8
	baz=29							
HEC	Hector,Ludlow	62.71	294	P		P		06 24 33.8 +6.8
	baz=28							
ISA	Isabella, Lake	62.81	296	P		P		06 24 33.8 +6.2
	baz=28							
IRM	Iron Mountain	62.82	293	P		P		06 24 33.4 +5.8
	baz=29							
BELC	Belle Mtn. Jos	63.30	293	P		P		06 24 37.8 +6.9
	baz=28,SNR=6.2							
EDW2	Edwards Air Fo	63.31	295	P		P		06 24 37.7 +6.8
	baz=28							
BC3	Big Chuckawall	63.39	293	P		P		06 24 37.7 +6.2
	baz=28,SNR=6.2							
GLA	Glamis	63.67	292	P		P		06 24 40.3 +7.0
	baz=28							
214A	Organ Pipe Nat	63.81	289	P		P		06 24 40.6 +6.4
	baz=28							
PFO	Pinyon Flats O	63.82	293	P		P		06 24 40.6 +6.2
	baz=28							
KLR	Kul'dur	63.94	22	LR		LR		06 51 55.2
	comp=Z,108nm,20.9s,baz=342,slow=35							
SWSC	Sam W. Stewart	64.15	292	P		P		06 24 41.7 +5.3
	baz=28							
MONP2	Monument Peak	64.44	293	P		P		06 24 44.7 +6.1
	baz=28							
IKP	In-Ko-Pah, Jac	64.53	293	P		P		06 24 46.3 +7.3
	baz=28							
109C	Camp Elliot, M	64.71	293	P		P		06 24 46.2 +6.1
	baz=28							
GTA	Gaotai	65.29	49	P		P		06 24 50.3 +6.4
GTA				pmax		pmax		
	comp=Z,8.0nm,1.7s							
GTA				pmax		pmax		
	comp=Z,180nm,5.3s							
GTA				LR		LR		
	comp=Z,160nm,17.1s							
GTA				LR		LR		
	comp=Z,340nm,18.2s							
GTA				LR		LR		
	comp=Z,170nm,17.4s							
SNCC	San Nicolas Is	65.34	296	P		**P**		**06 24 41.5 -2.7**
SPX	San Pedro Mart	65.69	291	P		**P**		**06 24 45.3 -1.6**
SPX				IAmb		IAmb		06 24 55.1
	comp=Z,10.0nm,1.4s							
SDV	Santo Domingo	66.83	239	P		**P**		**06 24 52.7 -1.5**
SDV	Santo Domingo	66.83	239	*eP*		P		06 25 00.4 +6.2
HHC	Hu-ho-hao-te	67.50	40	*eP*		**P**		**06 24 57.3 -0.8**
HHC				pmax		pmax		
	comp=Z,24nm,1.0s							
HHC				pmax		pmax		
	comp=Z,210nm,5.5s							
HHC				LR		LR		
	comp=N,180nm,14.9s							
HHC				LR		LR		
	comp=E,350nm,14.4s							
HHC				LR		LR		
	comp=Z,250nm,14.8s							
ZAIG	Zacatecas	67.59	276	P		**P**		**06 24 59.3 +0.3**
ZAIG				IAmb		IAmb		06 25 07.1
	comp=Z,9.0nm,1.2s							
MCPB	Macapa, AP	69.60	217	*eP*		P		06 25 19.3 +8.1
LZH	Lanzhou	69.62	48	*eP*		**P**		**06 25 10.0 -1.4**
LZH				pP		pP		06 25 13.0 -0.5
LZH				sP		sP		06 25 14.5 +0.2
LZH				*ePP*		**PP**		**06 27 45.3 +0.6**
LZH				pmax		pmax		
	comp=Z,23nm,1.3s							
LZH				pmax		pmax		
	comp=Z,110nm,5.1s							
LZH				LR		LR		
	comp=N,230nm,16.0s							
LZH				LR		LR		
	comp=E,230nm,16.1s							
LZH				LR		LR		
	comp=Z,360nm,18.2s							
SPBC	San Pablo de B	71.10	241	*eP*		P		06 25 24.4 +3.9
NORC	Norcasia	71.48	242	*eP*		P		06 25 28.2 +5.4
MALB	Monte Alegre	71.62	219	*eP*		P		06 25 32.5 +9.0
CBOC	Ciudad Bolivar	71.64	243	*eP*		P		06 25 30.2 +6.3
ROSC	El Rosal	71.94	241	P		**P**		**06 25 28.1 +2.1**
	comp=Z,3.1nm,0.3s,baz=45,slow=8.6,SNR=1.8							
ROSC				LR		LR		06 53 21.2
	comp=Z,84nm,21.7s,baz=236,slow=33							
ROSC	El Rosal	71.94	241	P		**P**		**06 25 23.5 -2.5**
ROSC				pmax		pmax		
	comp=Z,14nm,0.8s							
ROSC	El Rosal	71.94	241	P		**P**		**06 25 23.5 -2.5**
GUY2C	Guyana, Caldas	71.98	243	*eP*		P		06 25 30.7 +4.4
VILC	Villavicencio,	72.37	240	*eP*		P		06 25 33.0 +4.8
TOLC	Tolima	72.55	242	*eP*		P		06 25 36.8 +7.3
MBAR	Mbarara	73.89	129	*ceP*		P		06 25 45.9 +8.6
MBAR				pmax		pmax		
	comp=Z,6.0nm,1.7s							
CD2	Chengdu	74.35	50	P		**P**		**06 25 36.5 -3.2**
CD2				LR		LR		
	comp=N,440nm,22.1s							
CD2				LR		LR		
	comp=E,540nm,18.6s							
CD2				LR		LR		
	comp=Z,550nm,15.2s							
ITTB	Itaituba	74.42	220	*eP*		P		06 25 46.6 +6.5
PRPB	Parauapebas	74.63	213	*eP*		P		06 25 49.8 +8.5
KSRS	Korea Array	74.65	28	LR		LR		07 02 14.4
	comp=Z,92nm,18.1s,baz=350,slow=39							
SMTB	Santa Maria do	76.72	211	*eP*		P		06 26 01.6 +8.3
NPGB	Novo Progresso	76.88	219	*eP*		P		06 26 03.1 +9.0
MJAR	Matsushiro Arr	77.33	20	LR		LR		07 00 13.1
	comp=Z,49nm,19.6s,baz=265,slow=36							
NJ2	Nanjing	77.73	37	*eP*		**P**		**06 25 57.3 -1.6**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.5s							
OTAV	Otavalo	77.74	244	P		**P**		**06 25 58.0 -1.6**
OTAV				pmax		pmax		
	comp=Z,16nm,1.4s							
OTAV	Otavalo	77.74	244	P		**P**		**06 25 58.0 -1.6**
OTAV				IAmb		IAmb		06 26 11.2
	comp=Z,16nm,1.4s							
OTAV	Otavalo	77.74	244	*eP*		P		06 26 05.5 +5.9
CZSB	Cruzeiro do Su	82.96	235	*eP*		P		06 26 34.4 +7.3
BDFB	Brasilia	83.39	210	LR		LR		06 57 33.3
	comp=Z,185nm,21.1s,baz=104,slow=31							
VILB	Vilhena	83.85	222	*eP*		P		06 26 39.4 +7.7
CMAR	Chiang Mai Arr	84.12	59	P		P		06 26 38.2 +5.0
	comp=Z,1.6nm,0.3s,baz=323,slow=5.8,SNR=2.4							
CMAR				LR		LR		07 06 06.8
	comp=Z,39nm,19.0s,baz=305,slow=37							
ARAG	Araguaiana, MT	84.30	213	*eP*		P		06 26 42.4 +8.6
IPMB	Ipameri, GO	85.70	209	*eP*		P		06 26 47.3 +6.4
LPAZ	La Paz	89.41	228	LR		LR		07 03 36.4
	comp=Z,47nm,20.8s,baz=3.5,slow=33							
CPUP	Villa Florida	95.84	215	LR		LR		07 06 47.1
	comp=Z,109nm,18.6s,baz=30,slow=33							
BOSA	Boshof	98.74	143	LR		LR		07 14 48.2
	comp=Z,341nm,18.2s,baz=1.5,slow=37							
ASAR	Alice Springs	134.96	38	PKP		**PKiKP**		**06 33 23.4 +0.9**
	comp=Z,0.8nm,1.0s,baz=336,slow=2.0,SNR=2.2							
STKA	Stephens Creek	144.72	32	PKP		**PKiKP**		**06 33 40.1 -2.0**
	comp=Z,3.3nm,0.9s,baz=318,slow=7.1,SNR=4.8							

*IDC **28** 06:19:17.2±5.8, 36.64N×71.26E, h201km±46km, mb3.3/6, mb1 3.4/10, mb1mx3.1/48, mbtmp3.8/10, Error ellipse: s-maj=58.3km s-min=19.0km az=58.0*
*NNC **28** 06:19:17.6±13.0, 37.15N×70.57E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=125.0km s-min=83.4km az=154.0*
ISC 28 06:19:17.1±1.1, 36.71N±0.09×71.0E±0.1, h200km, n21, σ1§19/25, mb3.4/6, 4C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.79	20	P		Pn	06 20 42.2	+0.3
	SNR=100							
UCH	Uchtor	6.13	25	P		Pn	06 20 46.6	+0.3
	SNR=8.7							
EKS2	Erkin-Say	6.31	19	P		Pn	06 20 49.0	+0.6
	SNR=34							
KK31	Karatay Array	6.40	357	⇑P		Pn	06 20 49.0	-0.3
	1.8nm,0.2s,baz=176,slow=13,SNR=75							
KK31				⇓S		Sn	06 21 59.4	-3.2
	1.6nm,0.3s,baz=188,slow=25,SNR=5.5							
AAK	Ala-Archa	6.49	23	P		Pn	06 20 51.3	+0.6
	5.2nm,0.3s,baz=171,slow=6.5,SNR=52							
AAK				S		Sn	06 22 03.4	-1.6
	0.6nm,0.3s,baz=190,slow=12,SNR=7.4							
AAK	Ala-Archa	6.49	23	P		Pn	06 20 51.5	+0.7
	SNR=15							
AAK	Ala-Archa	6.49	23	⇑P		Pn	06 20 51.0	+0.3
	5.0nm,0.3s							
AAK				⇑S		Sn	06 22 04.6	-0.4
	4.9nm,0.6s							
KBK	Karagaybulak	6.66	26	P		Pn	06 20 54.0	+1.1
	SNR=8.4							
CHMS	Chumysh	6.90	23	P		Pn	06 20 56.5	+0.6
	SNR=5.9							
USP	Ospenovka	7.07	21	P		Pn	06 20 58.5	+0.4
	SNR=14							
TKM2	Tokmak 2	7.12	28	P		Pn	06 20 60.0	+1.0
	SNR=7.2							
TKM2	Tokmak 2	7.12	28	⇓P		Pn	06 20 59.4	+0.4
	16nm,0.6s							
TKM2				⇑S		Sn	06 22 19.4	-0.6
	5.2nm,1.0s							
MKAR	Makanchi Array	13.10	36	P		Pn	06 22 16.2	+0.5
	0.1nm,0.3s,baz=224,slow=14,SNR=1.8							
BVAR	Borovoye Array	16.32	359	P		Pn	06 22 55.1	+0.1
	0.1nm,0.3s,baz=152,slow=6.5,SNR=1.6							
ZALV	Zalesovo Beam	19.71	25	P		P	06 23 31.6	+0.6
	0.3nm,0.3s,baz=217,slow=11,SNR=5.3							
CMAR	Chiang Mai Arr	30.53	119	P		P	06 25 12.1	+0.2
	1.1nm,0.3s,baz=265,slow=7.0,SNR=4.5							
ARCES	ARCESS Array B	40.96	337	P		P	06 26 40.8	+1.1
	3.1nm,1.0s,baz=107,slow=6.5,SNR=5.7							
INK	Inuvik	73.69	9	P		P	06 30 29.5	+1.1
	0.3nm,0.3s,baz=270,slow=2.0,SNR=1.3							
YKA	Yellowknife Ar	81.03	3	P		P	06 31 10.0	+0.8
	0.2nm,0.3s,baz=360,slow=5.2,SNR=2.0							
WRA	Warramunga Arr	82.08	122	P		P	06 31 12.9	-2.4
	0.3nm,0.5s,baz=324,slow=5.0,SNR=6.9							
ASAR	Alice Springs	84.35	125	P		P	06 31 24.9	-2.0
	0.5nm,0.6s,baz=310,slow=4.8,SNR=8.7							

IDC 28 06:23:06.2±11.0, 19.36S×178.02W, h535km±138km, mb2.9/4, mb1 3.2/4, mb1mx2.9/24, mbtmp3.8/4, Error ellipse: s-maj=140.3km s-min=46.6km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.75	261	P		P	06 30 32.2	-0.1
	0.8nm,0.3s,baz=96,slow=7.6,SNR=57							
ASAR	Alice Springs	44.77	256	P		P	06 30 32.3	-0.2
	1.5nm,0.5s,baz=97,slow=7.6,SNR=19							
TXAR	Lajitas Array	86.46	57	P		P	06 34 52.5	-0.1
	0.1nm,0.6s,baz=213,slow=4.3,SNR=2.0							
ILAR	Eielson Array	87.22	13	P		P	06 34 55.1	-0.1
	0.3nm,0.5s,baz=214,slow=5.8,SNR=4.9							
BRTR	Keskin Array B	146.06	314	PKPbc		PKPdf	06 41 45.6	+0.8
	0.4nm,0.5s,baz=88,slow=3.6,SNR=2.2							
GERES	GERESS Array B	149.10	345	PKPbc		PKPbc	06 41 54.2	0.0
	0.7nm,0.6s,baz=15,slow=4.1,SNR=2.0							

IDC 28 06:31:52.2±2.7, 54.17N×86.33E, h0km, mb1 3.1/2, mb1mx3.0/35, mbtmp3.1/2, ML2.5/2, Error ellipse: s-maj=21.0km s-min=12.8km az=55.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.92	257	*i*			06 38 50.0	
	baz=75,slow=333,SNR=2.6							
ZALV	Zalesovo Beam	0.92	257	Pg		Pg	06 32 08.8	-1.0
	3.1nm,0.3s,baz=77,slow=18,SNR=29							
ZALV				Lg		Lg	06 32 23.0	
	2.0nm,0.3s,baz=77,slow=34,SNR=19							
ZALV				Rg		Rg	06 32 29.5	
	4.2nm,0.3s,baz=74,slow=38,SNR=7.3							
KURBB	Kurchatov Arra	5.95	237	Pn		Pn	06 33 22.6	+1.1
	0.1nm,0.3s,baz=52,slow=13,SNR=2.1							
MKAR	Makanchi Array	7.82	201	Pn		Pn	06 33 48.4	+1.2
	0.1nm,0.3s,baz=23,slow=14,SNR=6.7							

*IDC **28** 06:43:44.8±2.9, 53.75N×88.09E, h0km, mb1 3.4/2, mb1mx3.1/45, mbtmp3.4/2, ML3.0/2, Error ellipse: s-maj=23.7km s-min=15.8km az=57.0*
*NNC **28** 06:43:47.6±2.3, 53.69N×87.82E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=21.2km s-min=15.5km az=169.0, Suspected Mining explosion.*
ISC 28 06:43:47.3±3.9, 53.7N±0.1×87.9E±0.2, h0km, n7, σ0§41/11, 4C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.82	278	*i*	

MKAR					Sn	Sn	06 47 10.2	-0.7
	0.3nm,0.3s,baz=32,slow=26,SNR=6.6							
MKAR					Lg	Lg	06 47 53.1	
	0.2nm,0.3s,baz=27,slow=31,SNR=3.1							

IDC ***28*** *06:58:56.2±1.0, 30.°15N×41.°90W, h0km, mb3.9/10, mb1 4.2/10, mb1mx3.9/41, mbtmp3.9/10, MS3.5/11, Ms1 3.5/11, ms1mx3.2/41, Error ellipse: s-maj=28.8km s-min=22.7km az=6.0*

ISC 28 06:58:57.6±0.9, 30.°2N±0.°2×41.°9W±0.°1, h10km, n20, σ1§11/10, mb4.1/10, MS3.6/11, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H05S1	**Guadeloupe/Mar**	**23.45**	**232**	T	T	07 27 42.8	
SJG	**San Juan**	**25.12**	**247**	LR	LR	07 11 52.5	
	comp=Z,22nm,20.1s,baz=64,slow=31						
SCHQ	**Schefferville**	**30.45**	**331**	P	**P**	**07 05 10.4**	**+0.2**
	7.2nm,1.0s,baz=139,slow=13,SNR=2.2						
SCHQ				LR	LR	07 16 27.1	
	comp=Z,89nm,19.7s,baz=55,slow=34						
ESDC	**Sonseca Array**	**32.31**	**63**	LR	LR	07 15 10.2	
	comp=Z,50nm,20.5s,baz=350,slow=30						
ROSC	**El Rosal**	**39.62**	**237**	LR	LR	07 20 15.5	
	comp=Z,46nm,21.1s,baz=212,slow=32						
DBIC	**Dimbokro**	**41.88**	**116**	LR	LR	07 21 36.5	
	comp=Z,76nm,19.6s,baz=290,slow=32						
TORD	**Torodi Ar. Bea**	**43.60**	**103**	P	**P**	**07 07 01.5**	**-0.8**
	0.5nm,1.0s,baz=316,slow=10.0,SNR=1.9						
ULM	**Lac du Bonnet**	**44.75**	**312**	LR	LR	07 24 21.2	
	comp=Z,50nm,18.7s,baz=82,slow=34						
GERES	**GERESS Array B**	**45.68**	**50**	P	**P**	**07 07 19.6**	**+0.9**
	0.4nm,0.5s,baz=254,slow=7.0,SNR=2.3						
BDFB	**Brasilia**	**45.92**	**188**	LR	LR	07 24 35.0	
	comp=Z,70nm,18.2s,baz=109,slow=34						
LPAZ	**La Paz**	**52.65**	**212**	P	**P**	**07 08 13.8**	**+0.9**
	1.7nm,0.8s,baz=36,slow=6.8,SNR=4.9						
TXAR	**Lajitas Array**	**53.04**	**286**	P	**P**	**07 08 13.7**	**-1.5**
	0.6nm,0.9s,baz=106,slow=9.2,SNR=5.3						
PDAR	**Pinedale Array**	**54.52**	**303**	P	**P**	**07 08 24.9**	**-1.1**
	2.0nm,0.8s,baz=80,slow=9.3,SNR=10						
PDAR				LR	LR	07 30 33.2	
	comp=Z,84nm,18.8s,baz=97,slow=35						
AKASG	**Malin Array Be**	**55.66**	**47**	P	**P**	**07 08 33.1**	**-0.7**
	1.4nm,0.7s,baz=278,slow=7.4,SNR=1.8						
YKA	**Yellowknife Ar**	**55.79**	**328**	LR	LR	07 32 02.3	
	comp=Z,55nm,18.1s,baz=0.0,slow=36						
NVAR	**Mina Array Bea**	**62.02**	**300**	P	**P**	**07 09 19.5**	**+1.0**
	0.4nm,0.7s,baz=81,slow=5.4,SNR=4.5						
INK	**Inuvik**	**62.95**	**335**	P	**P**	**07 09 24.2**	**+0.4**
	2.6nm,0.8s,baz=61,slow=12,SNR=8.0						
ILAR	**Eielson Array**	**69.17**	**334**	P	**P**	**07 10 05.1**	**+1.1**
	1.4nm,0.9s,baz=60,slow=4.1,SNR=13						
ILAR				LR	LR	07 39 44.4	
	comp=Z,98nm,19.1s,baz=83,slow=35						
H09W1	**TRISTAN DA CUN**	**72.41**	**156**	T	T	08 29 17.6	
	SNR=38						
PETK	**Petropavlovsk-**	**95.34**	**348**	LR	LR	07 51 24.0	
	comp=Z,28nm,20.3s,baz=63,slow=33						

KRNET ***28*** *07:07:40.2±0.1, 41.°13N×78.°53E, h35km, mb2.1*
SOME ***28*** *07:07:40.3, 40.°95N×79.°92E, h5km*
NNC ***28*** *07:07:41.3±1.6, 40.°95N×79.°93E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=10.8km s-min=9.4km az=135.0*

ISC 28 07:07:40.5±3.2, 41.°0N±0.°1×78.°28E±0.°08, h13km±12km, n22, σ2§79/18, 10C, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**1.44**	**325**	⇑*i* P	Pn	07 08 06.0	-0.5
KDJ				⇑*i* S	**Sg**	**07 08 24.6**	**-2.3**
	baz=15						
PRZ	**Przheval'sk**	**1.53**	**3**	⇑*i* P	Pn	07 08 05.0	-2.8
PRZ	baz=57			⇑*i* S	**Sg**	**07 08 23.0**	**-7.0**
	baz=57						
ANVS	**Anan'yevo**	**1.89**	**346**	⇑*i* P	Pn	07 08 11.3	-1.4
ANVS	baz=39			⇑*i* S	**Sn**	**07 08 34.4**	**-2.1**
	baz=39						
SATY	**Saty**	**2.11**	**2**	*e*P	Pg	07 08 25.7	+4.7
SATY	6.9nm,0.2s			*e*S	Sg	07 08 58.5	+10
	3.1nm,0.2s						
SATY	**Saty**	**2.11**	**2**	Pg	Pg	07 08 25.7	+4.7
SATY	6.9nm,0.2s			Lg	Lg	07 08 58.5	
	3.1nm,0.2s						
UZB	**Uzunbulak**	**2.26**	**14**	*e*P	**Pg**	**07 08 23.8**	**-0.2**
UZB	5.5nm,0.3s			*e*S	**Sg**	**07 08 55.2**	**+1.9**
	10nm,0.4s						
UZB	**Uzunbulak**	**2.26**	**14**	Pg	**Pg**	**07 08 23.7**	**-0.2**
UZB	5.5nm,0.3s			Lg	Lg	07 08 55.2	
	10nm,0.4s						
BOOM	**Boomskoye usch**	**2.33**	**312**	⇑*i* P	**Pn**	**07 08 19.7**	**+0.9**
BOOM	baz=6.0			⇑*i* S	**Sn**	**07 08 48.5**	**+1.1**
	baz=6.0						
SHLS	**Shalkode**	**2.37**	**21**	*e*P	Pn	07 08 22.8	+3.4
SHLS	20nm,0.2s			*e*S	**Sb**	**07 08 53.5**	**+1.0**
	27nm,0.3s						
SHLS	**Shalkode**	**2.37**	**21**	Pg	Pn	07 08 22.4	+3.1
SHLS	20nm,0.2s			Lg	Lg	07 08 53.5	
	27nm,0.3s						
KOTS	**Kotyrbulak**	**2.44**	**340**	*e*P	Pg	07 08 37.3	+10
KOTS	10nm,0.3s			*e*S	Sg	07 09 18.2	+19
	6.2nm,0.4s						
KOTS	**Kotyrbulak**	**2.44**	**340**	Pg	Pg	07 08 37.3	+10
KOTS	10nm,0.3s			Lg	Lg	07 09 18.2	
	6.2nm,0.4s						
KPKS	**Kokpek**	**2.53**	**7**	*e*P	**Pg**	**07 08 30.0**	**+1.0**
KPKS	9.9nm,0.2s			*e*S	**Sg**	**07 09 05.9**	**+4.0**
	17nm,0.4s						
PDGK	**Podgornoye**	**2.54**	**20**	⇑Pg	Pn	07 08 25.3	+3.7
PDGK	1.9nm,0.3s			⇑Lg	Lg	07 08 57.5	
	7.2nm,0.6s						
KST	**Kastek**	**2.71**	**321**	*e*P	Pg	07 08 47.2	+15
KST	1.9nm,0.3s			*e*S	Sg	07 09 35.3	+28
	4.9nm,0.5s						
KST	**Kastek**	**2.71**	**321**	Pg	Pg	07 08 47.2	+15
KST	1.9nm,0.3s			Lg	Lg	07 09 35.3	
	4.9nm,0.5s						
KTMS	**Ketmen**	**2.93**	**31**	*e*P	Pn	07 08 26.5	-0.5
KTMS	7.4nm,0.3s			*e*S	**Sn**	**07 08 59.9**	**-2.3**
	20nm,0.4s						
KTMS	**Ketmen**	**2.93**	**31**	Pg	Pn	07 08 26.5	-0.5
KTMS	7.4nm,0.3s			Lg	Lg	07 08 59.9	
	20nm,0.4s						
MNBS	**Baschi**	**3.13**	**2**	*e*P	**Pg**	**07 08 41.4**	**+0.9**
MNBS	1.3nm,0.3s			*e*S	**Sg**	**07 09 25.3**	**+4.3**
	3.5nm,0.3s						
MNBS	**Baschi**	**3.13**	**2**	Pg	**Pg**	**07 08 40.5**	**0.0**
MNBS	0.7nm,0.0s			Lg	Lg	07 09 24.0	
	3.8nm,0.4s						
DJR	**Jarkent**	**3.56**	**18**	*e*P	**Pb**	**07 08 42.5**	**-0.9**
DJR	0.9nm,0.2s			*e*S	**Sb**	**07 09 27.1**	**+0.5**
	1.5nm,0.3s						
DJR	**Jarkent**	**3.56**	**18**	Pg	**Pb**	**07 08 42.5**	**-0.9**
DJR	0.9nm,0.2s			Lg	Lg	07 09 27.1	
	1.5nm,0.3s						

TAP 28 07:09:27.3, 24.°54N×121.°74E, h8km, ML1.3, 2D, B, Taiwan

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

ENAH	**Nanao**	**0.11**	**145**	P	Pg	07 09 30.5	+0.7
	baz=145								
ENAH				S	Sg	07 09 33.0	+1.6		
	baz=145								
ENA	**Nanao**	**0.11**	**180**	*i* P	Pg	07 09 30.0	+0.3		
	baz=176								
ENA				S	Sg	07 09 32.8	+1.3		
	baz=176								
TWC	**Suao**	**0.12**	**54**	⇓*i* P	Pg	07 09 30.9	+0.9		
	baz=57								
TWC				*i* S	Sg	07 09 33.1	+1.3		
	baz=57								
ENTT	**Nioudou**	**0.19**	**302**	⇓*i* P	Pg	07 09 32.2	+1.1		
	baz=302								
ENTT				*i* S	Sg	07 09 35.5	+1.7		
	baz=302								
NDT	**Datong Townshi**	**0.22**	**287**	*i* P	Pg	07 09 32.7	+1.0		
	baz=286								
NDT				S	Sg	07 09 36.0	+1.4		
	baz=286								
NWLT	**Wulai**	**0.32**	**318**	*e*P	Pb	07 09 34.9	-0.5		
	baz=317								
NWLT				*e*S	Sb	07 09 39.6	-1.1		
	baz=317								
NNSB	**Datong**	**0.34**	**252**	P	Pg	07 09 34.5	+0.4		
	baz=251								
NNSB				S	Sb	07 09 40.9	-0.6		
	baz=251								
NNSH	**Datong**	**0.34**	**252**	*e*P	Pg	07 09 34.9	+0.8		
	baz=251								
YHNB	**Yeheng**	**0.36**	**292**	P	Pb	07 09 35.6	-0.4		
	baz=291								
NSK	**Sanguang**	**0.38**	**292**	P	Pb	07 09 35.9	-0.3		
	baz=291								
NSK				S	Sb	07 09 41.2	-1.1		
	baz=291								
NACB	**Ninganchiao**	**0.39**	**200**	P	Pb	07 09 36.6	+0.2		
	baz=200								
NACB				*e*S	Sb	07 09 41.9	-0.6		
	baz=200								
ETLH	**Xiulin Townshi**	**0.41**	**216**	P	Pb	07 09 36.6	-0.2		
	baz=215								
ETLH				*e*S	Sb	07 09 42.5	-0.7		
	baz=215								

JMA 28 07:10:15.6±0.2, 24.°91N×123.°39E, h11km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**218**	P	Pg	07 10 26.5	-0.1
YOJ				S	Sg	07 10 33.7	-0.3
JYNG	**Yonagunijimaku**	**0.61**	**222**	P	Pg	07 10 27.6	+0.1
JYNG				S	Sg	07 10 35.7	+0.2
IRIF	**Iriomote-Funau**	**0.65**	**152**	P	Pg	07 10 28.1	-0.1
IRIF				S	Sg	07 10 37.1	+0.3
JIJ	**Ishigaki jima**	**0.88**	**128**	P	Pg	07 10 32.1	-0.4
JIJ				*e*S	Sg	07 10 43.4	-0.5
JKRS	**Kuro-shima**	**0.88**	**140**	P	Pg	07 10 32.1	-0.4
JKRS				S	Sg	07 10 43.6	-0.3
JISG	**Ishigakijimahi**	**0.90**	**111**	P	Pg	07 10 32.4	-0.5
HATJ	**Hateruma jima**	**0.93**	**156**	P	Pg	07 10 33.5	0.0

UPA ***28*** *07:15:45.8±1.1, 8.°67N×77.°48W, h51km±6km, MW3.1*
RSNC ***28*** *07:15:46.0±0.9, 8.°68N×77.°48W, h52km±6km, ML2.1*

ISC 28 07:15:45.4±1.3, 8.°67N±0.°06×77.°48W±0.°03, h54km±8km, n11, σ0§74/21, 1C-1D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAP2	**Capurgana**	**0.12**	**100**	⇓*i* P	**Pn**	**07 15 53.8**	**0.0**
CAP2				*e*S	**Sn**	**07 16 00.1**	**+0.2**
CAPC	**Capurgana**	**0.14**	**106**	*e*P	**Pn**	**07 15 53.8**	**0.0**
CAPC				*e*S	**Sn**	**07 15 59.9**	**0.0**
CAPC				*i*		07 16 01.7	
	comp=Z,270nm,0.1s						
UPD2	**Meteti**	**0.54**	**257**	⇑*i* P	**Pn**	**07 15 57.1**	**-0.3**
UPD2				*e*S	**Sn**	**07 16 06.1**	**+0.1**
PTAC	**Punta Ardita,**	**1.55**	**192**	*e*P	**Pn**	**07 16 09.9**	**-0.7**
PTAC				*e*S	**Sn**	**07 16 30.7**	**+1.0**
PTAC				*i*		07 16 33.3	
	comp=Z,51nm,0.2s						
CHPO	**Chepo, Panama**	**1.69**	**287**	*e*P	**Pn**	**07 16 12.8**	**+0.3**
CHPO				*e*S	**Sn**	**07 16 32.4**	**-0.7**
MOTC	**Monteria, Cord**	**1.80**	**87**	*e*P	**Pn**	**07 16 14.6**	**+0.6**
MOTC				*e*S	**Sn**	**07 16 35.3**	**-0.5**
MOTC				*i*		07 16 38.4	
	comp=Z,7.6nm,0.1s						
MONA	**Monteria**	**1.80**	**87**	*e*P	**Pn**	**07 16 15.1**	**+0.9**
MONA				*e*S	**Sn**	**07 16 35.7**	**-0.3**
UPA	**Univ. de Panam**	**2.05**	**279**	*e*S	**Sn**	**07 16 42.5**	**+0.6**
UREC	**San Jos de Ur**	**2.14**	**115**	*e*P	**Pn**	**07 16 18.8**	**+0.1**
UREC				*e*S	**Sn**	**07 16 44.3**	**+0.2**
UREC				*i*		07 16 48.3	
	comp=Z,5.8nm,1.7s						
SJCC	**San Jacinto, C**	**2.58**	**62**	*e*P	**Pn**	**07 16 25.6**	**+0.8**
SJCC				*e*S	**Sn**	**07 16 53.0**	**-2.0**
SJCC				*i*		07 16 59.0	
	comp=Z,3.8nm,0.8s						
ZARC	**Zaragoza, Cauc**	**2.85**	**114**	*e*P	**Pn**	**07 16 28.7**	**+0.2**
ZARC				*e*S	**Sn**	**07 17 01.1**	**-0.5**
ZARC				*i*		07 17 04.9	
	comp=Z,7.2nm,0.4s						

IDC ***28*** *07:28:09.4±1.2, 5.°67N×61.°16E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/56, mbtmp3.7/9, MS3.3/13, Ms1 3.3/13, ms1mx3.1/45, Error ellipse: s-maj=38.0km s-min=21.2km az=37.0*

ISC 28 07:28:11.1±1.3, 5.°7N±0.°2×61.°2E±0.°2, h10km, n18, σ0§95/9, mb3.6/9, MS3.2/12, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**19.48**	**84**	LR	LR	07 38 17.0	
	comp=Z,126nm,21.2s,baz=356,slow=31						
MBAR	**Mbarara**	**31.01**	**259**	LR	LR	07 47 21.1	
	comp=Z,41nm,18.2s,baz=54,slow=37						
PSI	**Prapat**	**37.77**	**93**	LR	LR	07 48 40.4	
	comp=Z,43nm,19.8s,baz=270,slow=33						
CMAR	**Chiang Mai Arr**	**38.96**	**68**	P	**P**	**07 35 37.8**	**0.0**
	0.5nm,0.3s,baz=259,slow=9.1,SNR=1.5						
CMAR				LR	LR	07 49 11.6	
	comp=Z,32nm,21.8s,baz=326,slow=32						
KBZ	**Khabaz**	**41.14**	**340**	P	**P**	**07 35 56.0**	**+0.5**
	1.3nm,0.7s,baz=180,slow=20,SNR=2.1						
KBZ				LR	LR	07 54 07.0	
	comp=Z,26nm,19.0s,baz=176,slow=38						
BRTR	**Keskin Array B**	**41.97**	**328**	P	**P**	**07 36 03.8**	**+1.2**
	1.2nm,0.9s,baz=153,slow=9.4,SNR=5.4						
AKTO	**Aktyubinsk**	**44.66**	**357**	LR	LR	07 55 50.5	
	comp=Z,21nm,19.3s,baz=191,slow=37						
MKAR	**Makanchi Array**	**44.81**	**21**	P	**P**	**07 36 25.6**	**+0.3**
	0.5nm,0.8s,baz=229,slow=8.8,SNR=2.5						
MKAR				LR	LR	07 56 45.1	
	comp=Z,26nm,18.7s,baz=208,slow=38						
LEM	**Lembang**	**48.01**	**104**	LR	LR	07 53 31.7	
	comp=Z,34nm,21.9s,baz=279,slow=32						
BOSA	**Boshof**	**48.57**	**223**	LR	LR	07 55 52.5	
	comp=Z,77nm,18.5s,baz=44,slow=34						
ZALV	**Zalesovo Beam**	**51.80**	**18**	LR	LR	07 59 38.8	
	comp=Z,26nm,20.8s,baz=120,slow=36						
AKASG	**Malin Array Be**	**52.18**	**335**	P	**P**	**07 37 20.0**	**-1.9**
	0.1nm,0.3s,baz=153,slow=7.2,SNR=4.2						
SONM	**Songino Array**	**56.97**	**35**	P	**P**	**07 37 57.3**	**+0.3**
	0.3nm,0.6s,baz=235,slow=6.8,SNR=2.1						
SONM				LR	LR	08 03 21.2	
	comp=Z,55nm,18.0s,baz=52,slow=37						
TORD	**Torodi Ar. Bea**	**59.01**	**282**	P	**P**	**07 38 11.9**	**+0.2**
	0.6nm,0.9s,baz=90,slow=4.3,SNR=2.2						
DBIC	**Dimbokro**	**65.59**	**275**	LR	LR	08 07 33.1	
	comp=Z,46nm,18.5s,baz=123,slow=36						
KSRS	**Korea Array**	**68.15**	**52**	LR	LR	08 08 57.6	
	comp=Z,24nm,21.1s,baz=150,slow=36						
WRA	**Warramunga Arr**	**76.27**	**112**	P	**P**	**07 40 00.5**	**-0.2**
	1.4nm,0.9s,baz=289,slow=5.0,SNR=9.0						
ASAR	**Alice Springs**	**76.63**	**116**	P	**P**	**07 40 02.8**	**0.0**
	1.5nm,0.9s,baz=284,slow=5.5,SNR=10						

NNC ***28*** *07:38:48.5±0.5, 50.°02N×78.°77E, h0km, mb3.3, mpv2.8, Error ellipse: s-maj=16.0km s-min=2.2km az=70.0, Suspected Mining explosion.*

IDC ***28*** *07:38:49.3±0.9, 50.°06N×78.°80E, h0km, mb1 2.7/2, mb1mx2.6/58, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=13.5km s-min=6.0km az=64.0*

ISC 28 07:38:48.5±1.5, 50.°09N±0.°08×78.°7E±0.°2, h0km, n16, σ0§60/28, 16C-9D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.51**	**347**	⇑*s* P	**Pb**	**07 38 59.8**	**-0.5**
KUR07				⇑S	**Sb**	**07 39 08.3**	**+0.1**
KUR06	**Kurchatov Arra**	**0.53**	**348**	⇑P	**Pb**	**07 39 00.2**	**-0.4**
KUR06				⇑S	**Sb**	**07 39 08.9**	**+0.1**
KUR14	**Kurchatov Arra**	**0.53**	**353**	⇑P	**Pb**	**07 39 00.0**	**-0.7**
KUR14				⇓S	**Sb**	**07 39 08.7**	**-0.2**
KUR15	**Kurchatov Arra**	**0.54**	**351**	⇑P	**Pb**	**07 39 00.3**	**-0.5**
KUR15				⇓S	**Sb**	**07 39 09.1**	**0.0**
KURBB	**Kurchatov Arra**	**0.55**	**349**	Pg	**Pb**	**07 39 00.4**	**-0.5**
	1.4nm,0.3s,baz=164,slow=19,SNR=77						
KURBB				Lg	Lg	07 39 09.7	
	1.8nm,0.3s,baz=164,slow=31,SNR=22						
KURBB	**Kurchatov Arra**	**0.55**	**349**	⇑P	**Pb**	**07 39 00.6**	**-0.3**
	17nm,0.4s						
KURBB				⇓S	**Sb**	**07 39 09.5**	**+0.2**
	45nm,0.7s						
KUR16	**Kurchatov Arra**	**0.55**	**347**	⇑P	**Pb**	**07 39 00.6**	**-0.5**
KUR16				⇑S	**Sb**	**07 39 09.9**	**+0.4**
KUR17	**Kurchatov Arra**	**0.56**	**346**	⇓P	**Pb**	**07 39 00.9**	**-0.3**
KUR17				⇑S	**Sb**	**07 39 10.5**	**+0.7**
KUR05	**Kurchatov Arra**	**0.56**	**350**	⇑P	**Pb**	**07 39 00.8**	**-0.4**
KUR05				⇓S	**Sb**	**07 39 09.7**	**-0.2**
KUR04	**Kurchatov Arra**	**0.58**	**351**	⇑P	**Pb**	**07 39 01.2**	**-0.4**
KUR04				⇑S	**Sb**	**07 39 10.5**	**+0.1**
KURK	**Kurchatov**	**0.63**	**356**	⇑P	**Pb**	**07 39 01.9**	**-0.5**
	6.2nm,0.4s						
KURK				⇑S	**Sb**	**07 39 12.1**	**+0.3**
	13nm,0.8s						
MAKZ	**Makanchi**	**3.94**	**145**	⇓Pg	**Pb**	**07 39 59.3**	**+0.5**
	1.8nm,0.6s						
MAKZ				⇓Lg	Lg	07 40 47.2	
	1.2nm,0.5s						
MK31	**Makanchi Array**	**4.08**	**143**	⇓Pn	**Pn**	**07 39 52.8**	**+0.7**
	baz=225,slow=2.2,SNR=23						
MK31				⇑Pg	**Pb**	**07 40 01.3**	**+0.3**
	baz=329,slow=13,SNR=16						
MK31				⇓Lg	Lg	07 40 57.0	
	2.2nm,0.4s,baz=330,slow=27,SNR=9.1						
MKAR	**Makanchi Array**	**4.08**	**143**	Pn	**Pn**	**07 39 52.8**	**+0.7**
	0.2nm,0.3s,baz=321,slow=10,SNR=14						
MKAR				Pg	**Pb**	**07 39 59.7**	**-1.4**
	0.6nm,0.3s,baz=326,slow=14,SNR=16						
MKAR				Sn	**Sn**	**07 40 39.0**	**-1.4**
	0.5nm,0.3s,baz=323,slow=19,SNR=6.9						
MKAR				Lg	Lg	07 40 53.0	
	1.0nm,0.3s,baz=333,slow=27,SNR=8.6						
I46RU	**ZALESOVO INFRA**	**5.41**	**42**	*i*		08 12 50.0	
	baz=222,slow=339,SNR=2.8						
ZALV	**Zalesovo Beam**	**5.41**	**42**	Pn	**Pn**	**07 40 11.1**	**+0.8**
	0.3nm,0.3s,baz=226,slow=14,SNR=3.6						
ZALV				Lg	Lg	07 41 39.3	
	0.2nm,0.3s,baz=221,slow=24,SNR=2.1						

IDC 28 07:41:19.4±1.9, 1.°80N×126.°29E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/51, mbtmp3.4/4, MS3.2/2, Ms1 3.2/2, ms1mx2.4/24, Error ellipse: s-maj=176.2km s-min=23.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.01**	**160**	P	P	07 46 26.0	-0.1
	0.7nm,0.5s,baz=339,slow=11,SNR=12						
PMG	**Port Moresby**	**23.59**	**119**	LR	LR	07 56 34.5	
	comp=Z,30nm,19.0s,baz=230,slow=39						
ASAR	**Alice Springs**	**26.38**	**164**	P	P	07 46 57.9	+0.2
	0.2nm,0.6s,baz=344,slow=11,SNR=1.7						
MKAR	**Makanchi Array**	**58.89**	**326**	P	P	07 51 20.2	-0.1
	0.2nm,0.4s,baz=124,slow=7.8,SNR=1.4						
AAK	**Ala-Archa**	**61.49**	**319**	LR	LR	08 20 52.3	
	comp=Z,43nm,21.6s,baz=138,slow=39						
KURBB	**Kurchatov Arra**	**63.12**	**328**	P	P	07 51 48.9	0.0
	0.1nm,0.3s,baz=124,slow=5.1,SNR=2.9						

IDC 28 07:42:10.2±12.0, 5.°45N×61.°09E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.3/52, mbtmp3.7/3, MS3.7/1, Ms1 3.7/1, ms1mx2.5/47, Error ellipse: s-maj=954.3km s-min=33.2km az=44.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**42.15**	**328**	P	P	07 50 04.7	-0.1
	0.7nm,0.7s,baz=150,slow=4.9,SNR=4.2						
TGY	**Tagaytay City**	**59.47**	**77**	LR	LR	08 16 35.0	
	comp=Z,63nm,20.8s,baz=174,slow=35						
WRA	**Warramunga Arr**	**76.23**	**112**	P	P	07 54 00.9	-0.3
	0.4nm,0.7s,baz=283,slow=5.3,SNR=4.6						
ASAR	**Alice Springs**	**76.58**	**116**	P	P	07 54 03.6	+0.4
	0.7nm,0.9s,baz=281,slow=5.4,SNR=5.7						

IDC 28 07:51:46.3±3.7, 55.°52N×86.°18E, h0km, mb1 2.8/2, mb1mx2.7/44, mbtmp2.8/2, ML2.6/2, Error ellipse: s-maj=30.3km s-min=26.0km az=46.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.76**	**207**	*i*		08 02 20.0	
	baz=26,slow=347,SNR=1.7						
ZALV	**Zalesovo Beam**	**1.76**	**207**	Pg	Pn	07 52 17.4	-0.6
	2.5nm,0.3s,baz=29,slow=17,SNR=28						
ZALV				Lg	Lg	07 52 42.7	
	2.4nm,0.3s,baz=26,slow=26,SNR=9.1						
KURBB	**Kurchatov Arra**	**6.73**	**226**	Pn	Pn	07 53 26.2	-0.1
	0.1nm,0.3s,baz=44,slow=14,SNR=5.2						
MKAR	**Makanchi Array**	**9.07**	**197**	Pn	Pn	07 53 58.9	+0.4
	0.1nm,0.3s,baz=18,slow=13,SNR=2.1						

IDC 28 07:53:35.2±3.6, 53.°59N×90.°68E, h0km, mb1 3.1/3, mb1mx3.0/45, mbtmp3.1/3, ML2.5/3, Error ellipse: s-maj=33.1km s-min=24.7km az=34.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.50**	**278**	*i*		08 19 10.0	
	baz=87,slow=342,SNR=1.8						
ZALV	**Zalesovo Beam**	**3.50**	**278**	Pn	Pn	07 54 33.0	+2.2
	0.8nm,0.3s,baz=95,slow=12,SNR=6.7						
ZALV				Lg	Lg	07 55 26.1	
	1.5nm,0.3s,baz=93,slow=25,SNR=10						
KURBB	**Kurchatov Arra**	**8.05**	**253**	Pn	Pn	07 55 32.9	-0.4
	0.1nm,0.3s,baz=64,slow=14,SNR=4.9						
KURBB				Sn	Sn	07 57 03.5	-1.3
	0.0

BAYT					SG	**Sb**	**07 57 06.9**	**+0.6**
BAYB	**BAYBURT**	**0.86**	**167**	*i*	P	**Pg**	**07 56 59.5**	**+0.3**
BAYB					S	**Sb**	**07 57 11.7**	**+1.1**
BAYB					IAML		07 57 14.0	
	comp=N,106nm,0.2s							
KELT	**Kelkit**	**1.11**	**211**	*i*	P	**Pb**	**07 57 02.3**	**-1.1**
KELT					S	**Sb**	**07 57 16.7**	**-1.0**
KELT					IAML		07 57 17.0	
	comp=N,112nm,0.2s							
DBOC	**Borcka**	**1.28**	**78**	*i*	P	**Pn**	**07 57 05.1**	**-0.6**
DBOC					S	**Sg**	**07 57 23.3**	**-0.5**
DBOC					IAML		07 57 25.0	
	comp=E,68nm,0.1s							
DBAD	**Bademkaya**	**1.28**	**93**	*i*	P	**Pb**	**07 57 06.3**	**0.0**
DBAD					S	**Sg**	**07 57 23.9**	**+0.1**
DBAD					IAML		07 57 25.0	
	comp=N,168nm,0.3s							
EMRE	**Erzurum,Aziziy**	**1.30**	**145**	*i*	P	**Pg**	**07 57 08.2**	**+0.7**
EMRE					S	**Sg**	**07 57 27.5**	**+3.0**
EMRE					IAML		07 57 32.0	
	comp=N,88nm,0.9s							
DDEM	**Demirkent**	**1.34**	**98**	*i*	P	**Pb**	**07 57 07.3**	**+0.1**
DDEM					S	**Sg**	**07 57 26.7**	**+1.1**
DDEM					IAML		07 57 29.0	
	comp=N,924nm,0.3s							
DAGI	**Agillar**	**1.44**	**90**	*i*	P	**Pb**	**07 57 09.0**	**-0.1**
DAGI					S	**Sg**	**07 57 28.5**	**-0.5**
DAGI					IAML		07 57 30.0	
	comp=N,33nm,0.5s							
ORDU	**Ordu-Boztepe**	**1.63**	**267**	*i*	P	**Pg**	**07 57 17.6**	**+3.8**
ORDU					IAML		07 57 28.0	
	comp=N,43nm,1.0s							
ORDU					S	**Sn**	**07 57 28.1**	**-3.1**
SUSE	**Susehri**	**1.64**	**238**	*i*	P	**Pn**	**07 57 10.8**	**0.0**
SUSE					S	**Sn**	**07 57 31.9**	**+0.3**
SUSE					IAML		07 57 36.0	
	comp=N,92nm,0.3s							
REFA	**Refahiye_ERZN**	**1.95**	**210**	*i*	P	Pn	07 57 09.9	-5.1
REFA					S	Sn	07 57 27.5	-12

TEH ***28*** *08:13:56.3,34.˚94N×49.˚90E, h8km, ML3.5*
THR ***28*** *08:13:57.9±0.5, 34.˚88N×49.˚96E, h14km±6km, ML3.6*

ISC 28 08:13:56.5±0.9, 34.˚87N±0.˚02×49.˚95E±0.˚03, h10km, n49, σ1§53/49, Western Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAO	**Ashtian**	**0.32**	**170**	*e*P	g	**Pb**		**08 14 05.0**	**+0.6**
ASAO				*e*S	g	**Sb**		**08 14 10.3**	**+0.4**
ASAO	**Ashtian**	**0.32**	**170**	*e*P		**Pb**		**08 14 05.1**	**+0.6**
IRAZ	**Razeghan**	**0.54**	**358**	*e*				08 14 15.1	
IRAZ				*e*P	g	**Pg**		**08 14 06.6**	**-0.4**
QABG	**Abgarm-Qazvin**	**0.89**	**340**	*e*P	g	**Pg**		**08 14 11.9**	**-1.8**
IQOM	**Qom**	**0.92**	**91**	*e*P	n	**Pn**		**08 14 15.1**	**-0.6**
IQOM				*e*				08 14 29.1	
IMHD	**Mahdasht**	**1.00**	**35**	*e*P	g	**Pb**		**08 14 15.7**	**-0.3**
IMHD				*e*S	g	**Sb**		**08 14 29.0**	**-0.3**
IMHD				*e*				08 14 30.5	
KHMZ	**Khomeyn**	**1.13**	**180**	*e*P	g	**Pn**		**08 14 18.9**	**+0.4**
KHMZ	**Khomeyn**	**1.13**	**180**	*e*Pn		**Pn**		**08 14 18.9**	**+0.4**
GHVR	**GHOM**	**1.17**	**109**	*e*Pg		**Pn**		**08 14 18.8**	**-0.2**
GHVR	**GHOM**	**1.17**	**109**	*e*Pn		**Pn**		**08 14 18.8**	**-0.2**
IHSB	**Hasanabad**	**1.22**	**62**	*e*Pg		**Pg**		**08 14 20.3**	**+0.3**
IHSB				*e*				08 14 38.0	
THKV	**Tehran--Karaj**	**1.29**	**36**	IAML				08 14 37.7	
	comp=N,2μm,0.2s								
HSAM	**Samen**	**1.29**	**240**	*e*Pg		**Pn**		**08 14 20.8**	**0.0**
HSAM				*e*				08 14 43.7	
HSRG	**Sareghieh**	**1.42**	**286**	*e*Pg		**Pn**		**08 14 22.7**	**0.0**
HSRG				*e*				08 14 45.0	
TEH	**Tehran**	**1.46**	**53**	*e*Pg		**Pg**		**08 14 24.5**	**+0.1**
IVRN	**Varamin**	**1.46**	**84**	*e*Pg		**Pg**		**08 14 24.7**	**+0.2**
IVRN				*e*				08 14 57.8	
IALM	**Almabolaq**	**1.47**	**270**	*e*Pg		**Pn**		**08 14 23.4**	**+0.1**
IGZV	**Ghazvin**	**1.53**	**8**	*e*Pg		**Pb**		**08 14 24.7**	**-0.4**
IGZV				*e*				08 14 26.7	
QALM	**Alamut, Qazvin**	**1.66**	**20**	*e*Pg		**Pb**		**08 14 26.9**	**-0.4**
QALM				*e*				08 14 54.3	
QSDN	**Sirdan**	**1.75**	**339**	*e*Pg		**Pb**		**08 14 28.5**	**-0.3**
IBZA	**Bozab**	**1.77**	**258**	*e*Pn		**Pb**		**08 14 29.6**	**+0.4**
IBZA				*e*				08 14 53.6	
DAMV	**Damavand**	**1.82**	**65**	IAML				08 14 59.1	
	comp=E,429nm,0.3s								
IDMV	**Damavand**	**1.84**	**67**	*e*Pg		**Pg**		**08 14 30.6**	**-1.2**
IDMV				*e*				08 15 02.1	
IKMR	**Kamar-syah**	**1.87**	**225**	*e*Pn		**Pb**		**08 14 31.2**	**+0.4**
IKMR				*e*				08 15 08.3	
IKLH	**Kolahrood**	**2.05**	**138**	*e*Pn		**Pg**		**08 14 35.0**	**-0.8**
IKLH				*e*				08 15 06.0	
ZNJK	**Zanjan**	**2.07**	**331**	*e*Pn		**Pb**		**08 14 34.3**	**0.0**
ZNJK	**Zanjan**	**2.07**	**331**	*e*Pn		**Pb**		**08 14 34.3**	**0.0**
IKOM	**Komasi**	**2.13**	**252**	*e*Pn		**Pb**		**08 14 35.6**	**+0.3**
IKOM				*e*				08 15 20.6	
SNGE	**Sanandaj**	**2.15**	**277**	*e*Pn		**Pb**		**08 14 35.6**	**0.0**
SNGE				IAML				08 15 11.6	
	comp=N,177nm,0.4s								
SNGE	**Sanandaj**	**2.15**	**277**	*e*Pn		**Pb**		**08 14 35.6**	**0.0**
IKFM	**Kafar-mosalman**	**2.20**	**233**	*e*Pn		**Pb**		**08 14 36.9**	**+0.6**
IKFM				*e*				08 15 15.0	
IPIR	**Pirpir**	**2.31**	**160**	*e*Pn		**Pg**		**08 14 39.9**	**-0.9**
IPIR				*e*				08 14 46.6	
KER	**Kermanshah**	**2.38**	**259**	*e*Pn		**Pb**		**08 14 38.5**	**-0.9**
IPRN	**Peran**	**2.38**	**54**	*e*Pn		**Pb**		**08 14 38.5**	**-1.0**
IPRN				*e*				08 15 22.4	
IFIR	**Firoozkooh**	**2.42**	**71**	*e*Pn		**Pb**		**08 14 38.4**	**-1.8**
IVIS	**Veis**	**2.58**	**263**	*e*Pn		**Pb**		**08 14 42.3**	**-0.6**
IVIS				*e*				08 14 48.8	
IALA	**Alasht**	**2.63**	**62**	*e*Pn		**Pb**		**08 14 41.6**	**-2.2**
IALA				*e*				08 15 22.1	
IZEF	**Zefreh**	**2.79**	**134**	*e*Pn		**Pb**		**08 14 46.1**	**+0.2**
IZEF				*e*				08 15 30.3	
IGHG	**Ghaleghazi**	**2.84**	**260**	*e*Pn		**Pb**		**08 14 45.7**	**-1.8**
IGHG				*e*				08 15 33.4	
IDHR	**Dehrash**	**2.94**	**268**	*e*Pn		**Pb**		**08 14 46.7**	**-2.4**
IDHR				*e*				08 14 52.6	
NASN	**Na'in**	**3.15**	**130**	*e*Pn		**Pb**		**08 14 49.6**	**-3.1**
NASN	**Na'in**	**3.15**	**130**	*e*Pn		**Pb**		**08 14 49.6**	**-3.1**
IGLO	**Ghaloghah**	**3.55**	**62**	*e*Pn		**Pn**		**08 14 53.9**	**+2.0**
ANAR	**Anarak**	**3.55**	**117**	*e*Pn		**Pn**		**08 14 54.8**	**+3.0**
IRAM	**Rameshеh**	**3.67**	**146**	*e*Pn		**Pb**		**08 14 58.3**	**-3.2**
IHRS	**Heris**	**4.17**	**327**	*e*Pn		**Pn**		**08 15 02.2**	**+1.9**
TNSJ	**Nastanj**	**5.57**	**97**	*e*Pn		**Pn**		**08 15 23.0**	**+3.4**
TPRV	**Parvadeh(Tabas**	**5.89**	**106**	*e*Pn		**Pn**		**08 15 27.2**	**+3.3**
TKDS	**Koohdasht(Taba**	**6.07**	**100**	*e*Pn		**Pn**		**08 15 29.6**	**+3.3**

IDC ***28*** *08:20:08.4±1.2, 11.˚01S×165.˚17E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/37, mbtmp4.0/8, ML3.7/1, MS3.2/3, Ms1 3.1/3, ms1mx2.6/37, Error ellipse: s-maj=37.8km s-min=25.4km az=123.0*
NEIC ***28*** *08:20:10.6±1.9, 11.˚10S±0.˚10×165.˚0E±0.˚1, h10km±2km, mb4.4/8, Error ellipse: s-maj=24.2km s-min=6.3km az=48.0*

ISC 28 08:20:10.2±0.7, 11.˚11S±0.˚07×165.˚08E±0.˚09, h10km, n28, σ1§05/25, mb3.9/9, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.79**	**155**			**Pn**		**08 21 22.5**	**+0.1**
SANVU					Sn	**Sn**		**08 22 17.4**	**-0.6**
HNR	**Honiara**	**5.32**	**288**	LR		LR		08 23 54.9	
	comp=Z,130nm,18.2s,baz=170,slow=42								
HNR	**Honiara**	**5.32**	**288**	Pn		**Pn**		**08 21 29.2**	**-0.5**
HNR						**Sn**		**08 22 29.3**	**-1.8**
DZM	**Mont Dzumac**	**10.98**	**173**	Pn		**Pn**		**08 22 47.6**	**0.0**
	0.5nm,0.3s,baz=306,slow=16,SNR=11								
DZM					Sn	**Sn**		**08 24 47.9**	**-2.7**
	0.2nm,0.3s,baz=270,slow=20,SNR=0.9								
DZM	**Mont Dzumac**	**10.98**	**173**			**Pn**		**08 22 47.8**	**+0.2**
TARA	**Tarawa**	**14.63**	**33**	Pn		**Pn**		**08 23 37.4**	**-0.1**
EIDS	**Eidsvold**	**19.41**	**221**	P		**P**		**08 24 35.5**	**-1.2**
EIDS				IAmb		IAmb		08 24 49.2	
	comp=Z,43nm,1.8s								
CTA	**Charters Tower**	**20.19**	**241**	P		**P**		**08 24 46.5**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=67,slow=13,SNR=3.6								
CTAO	**Charters Tower**	**20.19**	**241**	P		**P**		**08 24 46.6**	**+1.3**
CTAO				IAmb		IAmb		08 24 49.1	
	comp=Z,14nm,1.1s								
H11S2	**WAKE ISLAND Hy**	**29.45**	**3**	T		T		08 56 49.0	
	baz=182,slow=74,SNR=4.4								
H11S3	**WAKE ISLAND Hy**	**29.46**	**3**	T		T		08 56 47.9	
	baz=182,slow=74,SNR=3.2								
H11S1	**WAKE ISLAND Hy**	**29.47**	**3**	T		T		08 56 48.5	
	baz=182								
STKA	**Stephens Creek**	**29.95**	**223**	P		**P**		**08 26 19.8**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=72,slow=14,SNR=3.1								
STKA				LR		LR		08 37 14.1	
	comp=Z,54nm,18.8s,baz=198,slow=34								
H11N1	**WAKE ISLAND Hy**	**30.68**	**3**	T		T		08 58 25.0	
	baz=181								
H11N3	**WAKE ISLAND Hy**	**30.68**	**3**	T		T		08 58 23.8	
	baz=181								
H11N2	**WAKE ISLAND Hy**	**30.70**	**3**	T		T		08 58 25.6	
	baz=181								
WC3	**Warramunga Arr**	**30.82**	**250**	P		**P**		**08 26 27.9**	**+1.2**
WC3				IAmb		IAmb		08 26 30.4	
	comp=Z,13nm,1.5s								
WB2	**Warramunga Arr**	**30.84**	**250**	P		**P**		**08 26 27.1**	**+0.3**
WB2				IAmb		IAmb		08 26 28.4	
	comp=Z,17nm,1.6s								
WRA	**Warramunga Arr**	**30.85**	**250**	P		**P**		**08 26 27.5**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=82,slow=8.7,SNR=11								
WRA				PcP		**PcP**		**08 29 23.8**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=80,slow=3.3,SNR=3.8								
WRA	**Warramunga Arr**	**30.85**	**250**	P		**P**		**08 26 27.6**	**+0.7**
TOO	**Toolangi**	**31.68**	**210**	P		**P**		**08 26 35.6**	**+1.6**
AS31	**Alice Springs**	**32.18**	**243**	P		**P**		**08 26 39.1**	**+0.5**
AS31				IAmb		IAmb		08 26 39.8	
	comp=Z,1.0nm,0.6s								
ASAR	**Alice Springs**	**32.18**	**243**	P		**P**		**08 26 39.2**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=66,slow=10,SNR=48								
ASAR				PcP		**PcP**		**08 29 27.2**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=68,slow=2.9,SNR=6.4								
ASAR	**Alice Springs**	**32.18**	**243**	P		**P**		**08 26 38.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**38.73**	**255**	LR		LR		08 42 25.5	
	comp=Z,30nm,19.7s,baz=122,slow=34								
VNDA	**Vanda**	**66.42**	**181**	P		**P**		**08 30 60.0**	**+0.8**
	comp=Z,0.8nm,1.0s,baz=8.2,slow=9.2,SNR=3.6								
ILAR	**Eielson Array**	**83.78**	**19**	P		**P**		**08 32 38.4**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=237,slow=5.0,SNR=8.6								
MKAR	**Makanchi Array**	**93.12**	**317**	P		**P**		**08 33 24.8**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=100,slow=7.9,SNR=1.6								

IDC 28 08:21:04.4±32.0, 2.˚75N×66.˚48E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.3/49, mbtmp3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.4/51, Error ellipse: s-maj=1066.0km s-min=42.9km az=71.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**35.41**	**62**	LR		LR		08 43 19.0	
	comp=Z,7.3nm,18.5s,baz=85,slow=38								
MKAR	**Makanchi Array**	**45.98**	**15**	P		P		08 29 29.2	-0.1
	0.4nm,0.6s,baz=188,slow=7.0,SNR=2.2								
KSRS	**Korea Array**	**65.87**	**50**	LR		LR		09 02 30.1	
	comp=Z,4.3nm,19.9s,baz=135,slow=38								
WRA	**Warramunga Arr**	**70.24**	**112**	P		P		08 32 20.2	+0.2
	1.1nm,1.0s,baz=290,slow=5.5,SNR=5.8								
ASAR	**Alice Springs**	**70.57**	**116**	P		P		08 32 21.8	-0.2
	0.6nm,0.8s,baz=283,slow=5.8,SNR=5.2								
KLR	**Kul'dur**	**71.95**	**39**	LR		LR		09 03 04.9	
	comp=Z,14nm,18.9s,baz=242,slow=35								

NEIC ***28*** *08:22:07.1,30.˚255×71.˚67W, h31km, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr2.99; Mθθ0.96; Mθφ-3.96; Mrθ1.24; Mφφ-0.96; Mφr-1.17; Fault plane solution: Mo4.07000×10¹⁵ NP1:ϕs166.11000°, δ58.08000°, λ57.44000°. NP2:ϕs36.48000°, δ44.32000°, λ130.83000°. Principal axes: T 3.8553, Plg62.0000°, Azm23.0000°; N 0.4050, Plg27.0000°, Azm185.0000°; P -4.2603, Plg8.0000°, Azm279.0000°;*
VAO ***28*** *08:22:07.6±0.6, 30.˚07S×71.˚55W, h10km, mb4.4*
NEIC ***28*** *08:22:07.0±2.5, 30.˚24S±0.˚04×71.˚70W±0.˚05, h26km±3km, mb4.7/13, Mwr4.3/33, ML4.4(GUC), Error ellipse: s-maj=6.8km s-min=5.3km az=75.0*
IDC ***28*** *08:22:08.8±0.5, 30.˚31S×71.˚36W, h35km±3km, mb3.9/9, mb1 4.1/14, mb1mx4.0/24, mbtmp4.1/14, ML4.2/5, MS3.7/12, Ms1 3.7/12, ms1mx3.5/21, Error ellipse: s-maj=20.1km s-min=15.5km az=64.0*
GUC ***28*** *08:22:09.2±0.7, 30.˚31S×71.˚50W, h52km±7km, ML4.5*
SJA ***28*** *08:22:09.6±0.7, 30.˚27S×71.˚47W, h28km±3km, ML4.5, MW4.7*

ISC 28 08:22:08.0±0.5, 30.˚28S±0.˚02×71.˚61W±0.˚04, h33km±1km, n145, σ1§77/155, mb4.4/15, MS3.8/8, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**0.71**	**82**	⇓*i*P		**Pn**		**08 22 22.0**	**+0.1**
GO04				*i* S		**Sn**		**08 22 32.3**	**+0.4**
GO04	**Tololo Observa**	**0.71**	**82**			**Pn**		**08 22 21.9**	**0.0**
GO04					Sg	**Sn**		**08 22 31.2**	**-0.7**
GO04	**Tololo Observa**	**0.71**	**82**	*e*P		**Pn**		**08 22 22.1**	**+0.1**
GO04				*e*S		**Sn**		**08 22 31.3**	**-0.6**
CO03	**El Pedregal**	**0.97**	**125**	⇓*i*P		**Pb**		**08 22 25.4**	**-1.1**
CO03				*i* S		**Sb**		**08 22 37.6**	**-1.4**
CO03				IAML				08 22 41.2	
	comp=N,15μm,0.7s								
CO03	**El Pedregal**	**0.97**	**125**			**Pb**		**08 22 25.5**	**-1.0**
CO03					Sg	**Sb**		**08 22 38.5**	**-0.6**
CO02	**Combarbal**	**1.06**	**150**	*e*P		**Pb**		**08 22 27.1**	**-0.8**
CO02				*i* S		**Sb**		**08 22 41.5**	**-0.2**
CO02				IAML				08 22 44.0	
	comp=N,48μm,0.4s								
CO02	**Combarbal**	**1.06**	**150**	Pn		**Pb**		**08 22 27.3**	**-0.6**
CO02						**Sb**		**08 22 41.4**	**-0.2**
CO01	**Juntas del Tor**	**1.35**	**77**	*e*P		**Pb**		**08 22 31.7**	**-1.2**
CO01				*i* S		**Sb**		**08 22 48.4**	**-1.5**
CO01				IAML				08 22 53.6	
	comp=N,9μm,0.3s								
CO01	**Juntas del Tor**	**1.35**	**77**			**Pb**		**08 22 31.7**	**-1.2**
LCO	**Las Campanas**	**1.49**	**32**			**Pn**		**08 22 33.4**	**+0.7**
AC05	**El Transito**	**1.85**	**39**	⇓*i*P		**Pb**		**08 22 39.2**	**-2.1**
AC05				*i* S		**Sb**		**08 23 01.8**	**-2.4**
AC05				IAML				08 23 08.2	
	comp=E,6μm,0.6s								
AC05	**El Transito**	**1.85**	**39**			**Pb**		**08 22 39.0**	**-2.3**
AROD	**Rodeo**	**1.86**	**87**	*e*P		**Pb**		**08 22 40.7**	**-0.8**
AROD				*e*S		**Sb**		**08 23 03.8**	**-0.7**
AC04	**Llanos de Chal**	**2.12**	**13**	⇓*i*P		**Pn**		**08 22 42.0**	**+0.9**
AC04				*i* S		**Sn**		**08 23 08.5**	**+2.2**
AC04				IAML				08 23 16.9	
	comp=E,2μm,0.3s								
AC04	**Llanos de Chal**	**2.12**	**13**			**Pn**		**08 22 42.1**	**+1.0**
ACDV	**Cuesta del Vie**	**2.16**	**88**	*e*P		**Pb**		**08 22 45.8**	**-0.8**
ACDV				IAML				08 23 21.4	
	comp=Z,2μm,1.2s								
ACCO	**Cerro Coronel**	**2.22**	**99**	*e*P		**Pb**		**08 22 46.5**	**-1.2**
ACCO				IAML				08 23 16.7	
	comp=Z,1μm,0.8s								
RTLS	**Leoncito**	**2.50**	**128**	*e*P		**Pb**		**08 22 50.2**	**-2.1**
RTLS				IAML				08 23 28.6	
	comp=Z,2μm,0.6s								
VA03	**San Esteban**	**2.64**	**160**	*e*P		**Pb**		**08 22 50.9**	**-3.7**
VA03				*i* S		**Sb**		**08 23 24.7**	**-2.0**
VA03				IAML				08 23 37.7	
	comp=N,5μm,0.6s								
VA03	**San Esteban**	**2.64**	**160**			**Pb**		**08 22 50.9**	**-3.7**
AUSP	**Uspallata**	**2.72**	**136**	*e*P		**Pb**		**08 22 53.3**	**-2.8**
ROCH	**El Roble**	**2.73**	**169**	*e*P		**Pn**		**08 22 51.4**	**+1.7**
ROCH				*i* S		**Sb**		**08 23 25.7**	**-3.8**
VA01	**Torpederas**	**2.73**	**181**	*e*P		**Pn**		**08 22 50.7**	**+1.2**
VA01	**Torpederas**	**2.73**	**181**			**Pn**		**08 22 51.0**	**+1.5**
ROC1	**El Roble**	**2.74**	**169**			**Pn**		**08 22 51.4**	**+1.6**
ROC1	**El Roble**	**2.74**	**169**	*e*P		**Pn**		**08 22 51.6**	**+1.8**
ROC1				*e*S		**Sb**		**08 23 31.1**	**+1.5**
ZON	**Zonda**	**2.82**	**117**			**Pb**		**08 22 54.1**	**-3.6**
ZON	**Zonda**	**2.82**	**117**	*e*P		**Pb**		**08 22 54.6**	**-3.1**
ZON				IAML				08 23 47.0	
	comp=Z,1μm,0.9s								
RTLL	**Cerro Villicun**	**2.90**	**112**	*e*P		**Pb**		**08 22 54.9**	**-4.1**
RTLL				IAML				08 23 45.6	
	comp=Z,3μm,1.0s								
SJA	**San Juan**	**2.90**	**116**	*e*P		**Pb**		**08 22 56.3**	**-2.8**
SJA				IAML				08 23 42.5	
	comp=Z,1μm,1.3s								
GO03	**Copiap**	**2.94**	**25**			**Pn**		**08 22 53.7**	**+1.4**
GO03	**Copiap**	**2.94**	**25**	*e*P		**Pn**		**08 22 53.8**	**+1.4**
GO03				*e*S		**Sb**		**08 23 34.1**	**-1.1**
PEL	**Peldehue**	**2.96**	**165**	*e*P		**Pn**		**08 22 55.0**	**+2.3**
PEL				*i* S		**Sn**		**08 23 29.0**	**+1.9**
PEL	**Peldehue**	**2.96**	**165**			**Pn**		**08 22 55.1**	**+2.3**
PEL	**Peldehue**	**2.96**	**165**	*e*P		**Pn**		**08 22 55.0**	**+2.3**
PEL				*e*S		**Sb**		**08 23 31.5**	**-4.4**
MT02	**Curacav**	**3.00**	**172**	*e*P		**Pn**		**08 22 55.5**	**+2.3**
MT02	**Curacav**	**3.00**	**172**			**Pn**		**08 22 54.7**	**+1.6**
RTCV	**Cerro Valdivia**	**3.07**	**122**	*e*P		**Pb**		**08 22 57.8**	**-4.2**
RTCV				IAML				08 23 52.1	
	comp=Z,1μm,0.9s								
MT05	**Renca**	**3.19**	**167**			**Pn**		**08 22 58.1**	**+2.2**
ASAL	**Salagasta**	**3.31**	**135**	*e*P		**Pb**		**08 23 02.1**	**-3.9**
ASAL				IAML				08 24 03.5	
	comp=Z,1μm,1.0s								
VCA	**Vinchina**	**3.34**	**63**	*e*P		**Pb**		**08 23 03.1**	**-3.6**
VCA				IAML				08 24 02.9	
	comp=Z,2μm,0.4s								
ARCO	**CERRO ARCO**	**3.43**	**139**	*e*P		**Pb**		**08 23 04.4**	**-3.7**
ARCO				IAML				08 24 11.8	
	comp=Z,928nm,0.7s								
AVFE	**Valle Fertil**	**3.61**	**97**	*e*P		Pb		08 23 04.2	-6.9
AVFE				IAML				08 24 09.2	
	comp=Z,887nm,0.6s								
AAGR	**Agrelo**	**3.67**	**140**	*e*P		Pb		08 23 07.0	-5.2
AAGR				IAML				08 24 16.2	
	comp=Z,1μm,1.3s								
AC02	**Maricunga**	**4.07**	**33**			**Pn**		**08 23 10.2**	**+1.9**
ACLC	**CERRO LA CRUZ**	**4.14**	**79**	*e*P		Pn		08 23 12.0	+3.0
ACLC				IAML				08 24 21.0	
	comp=Z,755nm,0.7s								
AC01	**Pan de Azucar**	**4.21**	**13**			**Pn**		**08 23 09.3**	**-0.5**
AANI	**Anillaco**	**4.33**	**71**	*e*P		Pn		08 23 15.2	+3.6
AANI				IAML				08 24 32.7	
	comp=Z,1μm,0.8s								
ACHE	**Chepes**	**4.35**	**103**	*e*P		**Pn**		**08 23 14.0**	**+2.1**
APLL	**PUNTA DE LOS L**	**4.40**	**93**	*e*P		Pn		08 23 15.2	+2.7
APLL				IAML				08 24 31.3	
	comp=Z,555nm,0.7s								
BO02	**Sierra Bellavi**	**4.55**	**171**			**Pn**		**08 23 16.8**	**+2.1**
RFA	**San Rafael**	**5.21**	**150**	*e*P		**Pn**		**08 23 25.8**	**+2.2**
RFA				IAML				08 25 02.0	
	comp=Z,306nm,1.5s								
CYA	**Choya**	**5.39**	**72**	*e*P		**Pn**		**08 23 27.9**	**+1.8**
CYA				*e*S		**Sn**		**08 24 23.9**	**-3.2**
CYA				IAML				08 24 58.7	
	comp=Z,308nm,0.7s								
GO02	**Mina Guanaco**	**5.40**	**20**			**Pn**		**08 23 26.2**	**-0.4**
MRA	**San Martin**	**5.48**	**114**	*e*P		**Pn**		**08 23 28.7**	**+1.4**
MRA				IAML				08 25 07.2	
	comp=Z,605nm,1.1s								
PB14	**IPOC Station P**	**5.73**	**11**			**Pn**		**08 23 29.8**	**-1.3**
PB14	**IPOC Station P**	**5.73**	**11**	*e*P		**Pn**		**08 23 29.5**	**-1.6**
PB14				*e*S		**Sb**		**08 24 51.7**	**-4.2**
PB14				IAML				08 25 19.1	
	comp=Z,280nm,0.8s								
TCA	**Tanti**	**6.13**	**102**	*e*P		**Pn**		**08 23 37.4**	**+1.1**
TCA				IAML				08 25 38.3	
	comp=Z,334nm,0.8s								
BI02	**San Fabin de**	**6.37**	**178**			**Pn**		**08 23 41.1**	**+1.5**
AHML	**Horco Molle**	**6.53**	**59**	*e*P		**Pn**		**08 23 43.0**	**+1.2**
AHML				IAML				08 25 42.2	
	comp=Z,163nm,0.8s								
BI03	**Tigo**	**6.65**	**190**			**Pn**		**08 23 42.9**	**-0.5**
H03N1	**Juan Fernandez**	**6.96**	**241**	Pn		**Pn**		**08 23 47.4**	**0.0**
	baz=114,slow=19,SNR=1691								
H03N1					Sn	Sn		08 24 57.5	-7.8
	baz=170,slow=77,SNR=11								
H03N1				T		T		08 30 49.8	
	baz=70,slow=72,SNR=2280								
H03N2	**Juan

SNAA	**Sanae**	**54.90**	**159**	P	**P**	**08**	**31**	**35.3 +0.3**
SNAA	**Sanae**	**54.90**	**159**	P	**P**	**08**	**31**	**35.8 +0.8**
SNAA				IAmb	IAmb	08	31	47.4
	comp=Z,16nm,1.1s							
QSPA	**South Pole Qui**	**59.95**	**180**	P	**P**	**08**	**32**	**10.2 -0.5**
H06E1	**SOCORRO T-PHAS**	**51.73**	**317**	T	T	09	39	26.0
	SNR=11							
250A	**Grady**	**63.46**	**346**	P	**P**	**08**	**32**	**33.8 -0.7**
250A				IAmb	IAmb	08	32	35.3
	comp=Z,15nm,1.0s							
TXAR	**Lajitas Array**	**66.69**	**330**	P	**P**	**08**	**32**	**57.5 +1.8**
	comp=Z,0.8nm,0.7s,baz=152,slow=8.1,SNR=11							
TXAR				pP	**pP**	**08**	**33**	**08.1 +2.4**
	comp=Z,0.9nm,0.6s,baz=154,slow=8.3,SNR=9.3							
TXAR				LR	LR	08	57	35.2
	comp=Z,42nm,18.4s,baz=0.0,slow=32							
VNDA	**Vanda**	**67.81**	**191**	pP	pP	08	33	13.7 +1.2
	comp=Z,0.8nm,0.8s,baz=137,slow=8.2,SNR=3.5							
VNDA	**Vanda**	**67.81**	**191**	P	**P**	**08**	**33**	**02.6 +0.5**
SYO	**Syowa Base**	**69.19**	**159**	||/P	P	08	33	20.0 +9.2
ANMO	**Albuquerque**	**72.71**	**331**	LR	LR	09	00	44.1
	comp=Z,54nm,20.3s,baz=168,slow=32							
DBIC	**Dimbokro**	**73.67**	**72**	P	**P**	**08**	**33**	**38.0 -0.7**
	comp=Z,4.1nm,0.9s,baz=278,slow=14,SNR=1.6							
DBIC				pP	**pP**	**08**	**33**	**49.1 0.0**
	comp=Z,4.6nm,0.8s,baz=218,slow=4.4,SNR=2.1							
DBIC	**Dimbokro**	**73.67**	**72**	P	**P**	**08**	**33**	**38.4 -0.3**
DBIC				IAmb	IAmb	08	33	52.6
	comp=Z,13nm,1.1s							
SUR	**Sutherland**	**76.33**	**120**	LR	LR	09	03	50.5
	comp=Z,33nm,20.3s,baz=195,slow=33							
MAW	**Mawson**	**76.64**	**164**	P	**P**	**08**	**33**	**54.9 0.0**
	comp=Z,1.4nm,0.6s,baz=226,slow=8.8,SNR=2.6							
MAW				pP	**PcP**	**08**	**34**	**06.6 +0.3**
	comp=Z,4.3nm,0.5s,baz=216,slow=7.4,SNR=9.9							
MAW	**Mawson**	**76.64**	**164**	P	**P**	**08**	**33**	**55.7 +0.8**
MAW				IAmb	IAmb	08	34	07.3
	comp=Z,5.4nm,1.4s							
TSUM	**Tsumeb**	**79.89**	**106**	LR	LR	09	08	16.1
	comp=Z,30nm,18.9s,baz=323,slow=35							
PDAR	**Pinedale Array**	**80.62**	**333**	P	**P**	**08**	**34**	**19.1 +1.7**
	comp=Z,0.2nm,0.3s,baz=120,slow=4.7,SNR=1.3							
PDAR				pP	**pP**	**08**	**34**	**29.1 +1.3**
	comp=Z,0.9nm,0.8s,baz=159,slow=4.6,SNR=2.5							
NVAR	**Mina Array Bea**	**81.06**	**325**	P	**P**	**08**	**34**	**21.9 +2.1**
	comp=Z,0.6nm,0.8s,baz=143,slow=6.1,SNR=5.1							
NVAR				pP	**pP**	**08**	**34**	**32.1 +2.1**
	comp=Z,1.9nm,0.9s,baz=160,slow=7.0,SNR=10							
BOSA	**Boshof**	**81.49**	**118**	P	**P**	**08**	**34**	**21.4 -1.0**
BOSA				pP	**pP**	**08**	**34**	**32.7 -0.2**
	comp=Z,3.3nm,0.9s,baz=225,slow=5.7,SNR=1.6							
BOSA				pP	**pP**	**08**	**34**	**32.7 -0.2**
	comp=Z,7.6nm,0.7s,baz=235,slow=4.3,SNR=7.3							
BOSA				LR	LR	09	07	50.7
	comp=Z,40nm,18.6s,baz=194,slow=34							
BOSA	**Boshof**	**81.49**	**118**	P	**P**	**08**	**34**	**20.6 -1.8**
BOSA				IAmb	IAmb	08	34	33.9
	comp=Z,12nm,0.8s							
TORD	**Torodi Ar. Bea**	**82.61**	**70**	P	**P**	**08**	**34**	**28.1 -0.1**
	comp=Z,2.2nm,0.7s,baz=278,slow=5.4,SNR=13							
TORD				pP	**pP**	**08**	**34**	**39.1 +0.4**
	comp=Z,1.9nm,0.7s,baz=279,slow=5.1,SNR=5.3							
TORD	**Torodi Ar. Bea**	**82.61**	**70**	P	**P**	**08**	**34**	**28.3 +0.1**
ULM	**Lac du Bonnet**	**83.01**	**345**	pP	pP	08	34	40.4 +0.4
	comp=Z,4.0nm,1.0s,baz=155,slow=2.9,SNR=3.9							
RAO	**Raoul Island**	**88.18**	**237**	LR	LR	09	06	40.7
	comp=Z,52nm,18.9s,baz=46,slow=30							
MATP	**Matopo**	**88.19**	**113**	P	**P**	**08**	**34**	**56.6 +0.4**
	comp=Z,0.3nm,0.3s,baz=222,slow=14,SNR=1.0							
MATP				pP	**pP**	**08**	**35**	**07.2 +0.3**
	comp=Z,2.2nm,0.7s,baz=221,slow=5.4,SNR=3.0							
LSZ	**Lusaka**	**90.62**	**108**	pP	pP	08	35	18.9 +0.6
	comp=Z,1.4nm,0.3s,baz=238,slow=2.4,SNR=3.7							
ESDC	**Sonseca Array**	**93.74**	**46**	LR	LR	09	17	29.9
	comp=Z,34nm,18.2s,baz=300,slow=36							
AKASG	**Malin Array Be**	**119.38**	**46**	pPKP	pPKPdf	08	41	04.4 -0.1
	comp=Z,0.3nm,0.2s,baz=264,slow=2.7,SNR=2.4							
ASAR	**Alice Springs**	**121.03**	**207**	PKP	**PKPdf**	**08**	**40**	**56.9 -0.8**
	comp=Z,0.4nm,0.9s,baz=142,slow=1.2,SNR=2.3							
ASAR				pPKP	**pPKPdf**	**08**	**41**	**08.9 +0.3**
	comp=Z,0.5nm,0.8s,baz=150,slow=1.0,SNR=4.6							
WRA	**Warramunga Arr**	**124.17**	**210**	PKP	**PKPdf**	**08**	**41**	**03.1 -0.7**
	comp=Z,0.7nm,0.9s,baz=167,slow=1.6,SNR=3.2							
H11S2	**WAKE ISLAND Hyd**	**126.11**	**272**	T	T	10	59	55.2
	baz=115,slow=74,SNR=189							
H11S1	**WAKE ISLAND Hyd**	**126.12**	**272**	T	T	10	59	55.8
	baz=115,slow=74,SNR=225							
H11S3	**WAKE ISLAND Hyd**	**126.12**	**272**	T	T	10	59	55.8
	baz=115,slow=74,SNR=125							
ZALV	**Zalesovo Beam**	**150.85**	**29**	PKPbc	**PKiKP**	**08**	**41**	**57.3 +0.2**
	comp=Z,9.6nm,0.6s,baz=300,slow=3.2,SNR=48							
ZALV				pPKPbc	**pPKPbc**	**08**	**42**	**08.2 +0.9**
	comp=Z,42nm,0.9s,baz=298,slow=3.5,SNR=34							
MKAR	**Makanchi Array**	**153.93**	**43**	PKPbc	**PKPbc**	**08**	**42**	**03.8 0.0**
	comp=Z,0.9nm,0.8s,baz=300,slow=2.8,SNR=3.8							
MKAR				pPKPbc	**pPKPbc**	**08**	**42**	**14.8 +0.2**
	comp=Z,2.8nm,0.9s,baz=322,slow=2.3,SNR=9.3							

DJA 28 08:43:40.8±0.4,9°S±4°,12°1E±°,h145km±5km,M3.9/12, mb4.1/1,MLv3.7/12,Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.43**	**121**	P	Pn	08 44 02.5	+1.1
EDFI				S	Sn	08 44 19.1	+2.1
MMRI	**Maumere**	**0.91**	**97**	P	Pn	08 44 04.6	+0.2
MMRI				S	Sn	08 44 23.1	+0.8
BASI	**Baing, Sumba**	**1.83**	**204**	P	Pn	08 44 13.1	-0.6
WBSI	**Waikabubak, Su**	**2.20**	**240**	P	Pn	08 44 18.0	-0.1
BSSI	**Bau Bau, Buton**	**2.51**	**341**	P	Pn	08 44 21.5	-0.4
BATI	**Baumata**	**2.85**	**126**	P	Pn	08 44 26.3	+0.2
SOEI	**Soe**	**3.15**	**113**	P	Pn	08 44 29.8	-0.3
BKSI	**Bulukumba**	**3.40**	**339**	P	Pn	08 44 33.3	+0.1
PLAI	**Plampang**	**3.52**	**265**	P	Pn	08 44 34.9	+0.3
BNSI	**Bone**	**4.28**	**344**	P	Pn	08 44 45.4	+0.8
TWSI	**Taliwang, Sumb**	**4.39**	**267**	P	Pn	08 44 46.3	+0.2
TTSI	**Tana Toraja**	**5.65**	**345**	P	Pn	08 45 01.1	-1.7

IDC 28 08:50:00.7±2.8,53°.77N×86°.95E,h0km,mb1 2.8/2, mb1mx2.7/58,mbtmp2.8/2,ML2.4/2,Error ellipse: s-maj=26.5km s-min=14.0km az=70.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.27**	**279**	*i*		08 59 11.8	
	baz=98,slow=342,SNR=0.4						
ZALV	**Zalesovo Beam**	**1.27**	**279**	Pg	Pg	08 50 23.3	-1.7
	1.0nm,0.3s,baz=95,slow=13,SNR=16						
ZALV				Lg	Lg	08 50 41.9	
	1.2nm,0.3s,baz=99,slow=26,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.06**	**242**	Pn	Pn	08 51 32.6	+1.2
	0.0nm,0.3s,baz=59,slow=14,SNR=5.1						
MKAR	**Makanchi Array**	**7.60**	**205**	Pn	Pn	08 51 54.1	+1.5
	0.1nm,0.3s,baz=26,slow=14,SNR=6.9						
MKAR				Sn	Sn	08 53 18.5	-0.8
	0.1nm,0.3s,baz=27,slow=26,SNR=2.0						

IDC 28 08:53:35.3±3.4,54°.16N×87°.36E,h0km,mb1 3.0/2, mb1mx2.9/58,mbtmp3.0/2,ML2.6/2,Error ellipse: s-maj=29.8km s-min=20.3km az=44.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.51**	**263**	*i*		09 03 25.0	
	baz=81,slow=341						
ZALV	**Zalesovo Beam**	**1.51**	**263**	Pg	Pn	08 54 02.4	-1.2
	5.6nm,0.3s,baz=79,slow=16,SNR=11						
ZALV				Lg	Lg	08 54 23.3	
	3.8nm,0.3s,baz=83,slow=23,SNR=7.2						
KURBB	**Kurchatov Arra**	**6.46**	**240**	Pn	Pn	08 55 12.1	+0.5
	0.1nm,0.3s,baz=55,slow=14,SNR=3.1						
KURBB				Lg	Lg	08 57 00.5	
	0.0nm,0.3s,baz=55,slow=32,SNR=3.3						
MKAR	**Makanchi Array**	**8.05**	**206**	Pn	Pn	08 55 34.8	+1.4
	0.1nm,0.3s,baz=26,slow=13,SNR=2.6						

IDC 28 08:55:45.5±5.9,13°.82N×92°.57W,h0km,mb3.8/5, mb1 4.0/7,mb1mx3.8/42,mbtmp3.8/7,ML3.4/2,MS2.9/4, Ms1 2.9/4,ms1mx2.7/34,Error ellipse: s-maj=114.4km s-min=53.5km az=10.0
MEX 28 08:55:51.8±0.8,14°.14N×92°.66W,h19km±41km,MD4.0

NEIC 28 08:55:51.1±2.3,14°.28N±0°.03×92°.75W±0°.04,h10km±6km, Error ellipse: s-maj=6.9km s-min=2.5km az=121.0
ISC 28 08:55:49.7±2.2,14°.29N±0°.07×92°.73W±0°.06,h3km±14km, n37,σ1§24/43,mb3.8/6,MS2.9/3,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.76**	**36**	*eP*	**Pb**	**08 56 05.6**	**0.0**
THIG				*eS*	**Sb**	**08 56 16.6**	**+0.3**
THIG		**0.76**	**36**		**Pb**	**08 56 05.6**	**0.0**
THIG					**Sb**	**08 56 16.6**	**+0.3**
RTAL	**Retalhuleu**	**1.03**	**77**	Pn	**Pg**	**08 56 09.2**	**-0.2**
PCIG		**1.49**	**342**	*eP*	**Pn**	**08 56 16.5**	**-0.8**
PCIG				*i* S	**Sn**	**08 56 36.3**	**-0.9**
PCIG		**1.49**	**342**		**Pn**	**08 56 16.5**	**-0.8**
PCIG					**Sn**	**08 56 36.3**	**-0.9**
HUEH	**Huehuetenango**	**1.57**	**49**		**Pn**	**08 56 18.6**	**0.0**
CCIG	**Comitan**	**2.06**	**16**	*eP*	**Pn**	**08 56 26.8**	**+1.4**
CCIG				*i* S	**Sn**	**08 56 49.6**	**-2.2**
CCIG	**Comitan**	**2.06**	**16**		**Pb**	**08 56 27.1**	**-0.8**
CCIG					**Sn**	**08 56 51.0**	**-0.7**
TGIG		**2.50**	**351**	*i* P	**Pn**	**08 56 32.1**	**+0.8**
TGIG				*i* S	**Sn**	**08 57 02.3**	**-0.2**
TGIG		**2.50**	**351**		**Pn**	**08 56 32.1**	**+0.8**
TGIG					**Sn**	**08 57 02.3**	**-0.2**
ESQI	**Esquipulas**	**3.29**	**85**		**Pn**	**08 56 39.0**	**-3.3**
CMIG	**Matias Romero**	**3.48**	**324**	Pn	**Pn**	**08 56 45.2**	**+0.5**
	2.5nm,0.3s,baz=142,slow=15,SNR=34						
CMIG				Sn	**Sn**	**08 57 25.8**	**-0.5**
	18nm,0.3s,baz=77,slow=13,SNR=9.4						
CMIG				LR	LR	08 58 22.1	
	comp=Z,96nm,19.6s,baz=121,slow=40						
CMIG	**Matias Romero**	**3.48**	**324**	*eP*	**Pn**	**08 56 45.5**	**+0.8**
CMIG				*i* S	**Sn**	**08 57 25.9**	**-0.5**
PETP	**Flores**	**3.80**	**46**		**Pn**	**08 57 16.3**	**+0.4**
TGUH	**Tegucigalpa,Un**	**5.30**	**92**	Pn	**Pn**	**08 57 11.5**	**+1.6**
CRIN	**San Cristobal**	**5.75**	**105**	Pn	**Pn**	**08 57 16.3**	**+0.4**
MATN	**Matagalpa**	**6.75**	**101**	Pn	**Pn**	**08 57 32.1**	**+2.3**
TEIG	**Tepich**	**7.28**	**35**	Pn	**Pn**	**08 57 37.7**	**+0.7**
JTS	**Las Juntas de**	**8.57**	**117**	Lg	Lg	09 00 05.2	
	0.3nm,0.3s,baz=231,slow=10,SNR=5.3						
TXAR	**Lajitas Array**	**18.07**	**328**	P	**P**	**09 00 04.8**	**+2.3**
	0.0nm,0.3s,baz=156,slow=12,SNR=13						
TXAR	**Lajitas Array**	**18.07**	**328**	P	**Pn**	**08 59 59.9**	**-2.1**
TX31	**Lajitas Ar. Si**	**18.07**	**328**	P	**Pn**	**09 00 00.6**	**-1.5**
TX31				IAmb	IAmb	09 00 58.7	
	comp=Z,14nm,1.5s						
MIAR	**Mount Ida**	**20.18**	**358**	P	**P**	**09 00 25.5**	**0.0**
MIAR				IAmb	IAmb	09 00 32.1	
	comp=Z,7.4nm,0.8s						
Y49A	**Blount Mountai**	**20.31**	**15**	P	**P**	**09 00 26.2**	**-0.7**
Y49A				IAmb	IAmb	09 01 12.6	
	comp=Z,12nm,1.1s						
MNTX	**Cornudas Mount**	**20.85**	**328**	P	**P**	**09 00 33.8**	**+1.0**
TKL	**Tuckaleechee C**	**22.75**	**19**	LR	LR	09 09 43.8	
	comp=Z,36nm,21.7s,baz=162,slow=36						
ANMO	**Albuquerque**	**24.01**	**331**	P	**P**	**09 01 07.0**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=151,slow=13,SNR=6.5						
ANMO	**Albuquerque**	**24.01**	**331**	P	**P**	**09 01 07.5**	**+1.6**
ATAH	**Atahualpa**	**25.60**	**145**	LR	LR	09 08 59.8	
	comp=Z,37nm,20.9s,baz=321,slow=32						
SJG	**San Juan**	**25.80**	**78**	LR	LR	09 11 07.2	
	comp=Z,36nm,19.6s,baz=256,slow=36						
MVCO	**Mesa Verde**	**26.81**	**331**	P	**P**	**09 01 32.0**	**+0.6**
MVCO				IAmb	IAmb	09 01 34.0	
	comp=Z,3.7nm,0.9s						
SADO	**Sadowa**	**32.50**	**18**	P	**P**	**09 02 22.1**	**+0.5**
	comp=Z,6.4nm,0.8s,baz=270,slow=19,SNR=3.1						
REDW	**Red Top Meadow**	**32.88**	**335**	P	**P**	**09 02 26.0**	**+0.7**
SNOW	**Snow King Moun**	**32.93**	**336**	P	**P**	**09 02 26.3**	**+0.7**
NVAR	**Mina Array Bea**	**33.01**	**322**	P	**P**	**09 02 28.4**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=144,slow=7.7,SNR=2.6						
YKA	**Yellowknife Ar**	**50.59**	**347**	P	**P**	**09 04 48.1**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=149,slow=7.3,SNR=7.5						
ILAR	**Eielson Array**	**62.30**	**337**	P	**P**	**09 06 12.1**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=132,slow=4.8,SNR=4.7						

WEL 28 08:56:53.1,44°S±2°×17°2E±°,h13km±4km,M2.3/8,ML2.3/8, MLv2.3/8,Error ellipse: s-maj=0.0km s-min=0.0km az=11.4,South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MHCZ	**Mount Hutt**	**0.02**	**206**	P	Pg	08 56 53.1	-2.4
OXZ	**Oxford**	**0.38**	**61**	P	Pb	08 57 01.8	+0.2
RPZ	**Rata Peaks**	**0.43**	**242**	P	Pb	08 57 02.9	+0.3
RACZ	**Rakaia**	**0.46**	**118**	P	Pb	08 57 03.8	+0.8
WACZ	**Wakanui South**	**0.47**	**156**	P	Pb	08 57 04.2	+1.0
ARCZ	**Arundel**	**0.52**	**214**	P	Pb	08 57 05.1	+1.0
WVZ	**Waitaha Valley**	**0.76**	**305**	P	Pb	08 57 08.6	+0.6
INZ	**Inchbonnie**	**0.80**	**353**	P	Pn	08 57 09.4	-0.5
MQZ	**McQueen's Vall**	**0.80**	**104**	P	Pb	08 57 09.3	+0.5
AMCZ	**Amberley**	**0.85**	**67**	P	Pn	08 57 11.4	+0.7
LTZ	**Lake Taylor**	**0.89**	**35**	P	Pb	08 57 10.5	+0.2
GCSZ	**Gaunt Creek Bo**	**0.93**	**282**	P	Pn	08 57 13.2	+1.4
AKCZ	**Akaroa Harbour**	**1.03**	**111**	P	Pn	08 57 14.4	+1.3
OKCZ	**Okains Bay**	**1.09**	**102**	P	Pn	08 57 14.0	-0.1
LBZ	**Lake Benmore**	**1.33**	**229**	P	Pg	08 57 19.8	+1.1

IDC 28 08:58:02.9±2.9,54°.35N×86°.75E,h0km,mb1 3.2/2, mb1mx3.0/55,mbtmp3.2/2,ML2.9/2,Error ellipse: s-maj=25.3km s-min=16.8km az=47.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.21**	**251**	*i*		09 07 22.0	
	baz=69,slow=321,SNR=4.5						
ZALV	**Zalesovo Beam**	**1.21**	**251**	Pg	Pg	08 58 24.8	-1.2
	2.5nm,0.3s,baz=71,slow=17,SNR=15						
ZALV				Lg	Lg	08 58 41.8	
	2.6nm,0.3s,baz=69,slow=28,SNR=13						
KURBB	**Kurchatov Arra**	**6.25**	**237**	Pn	Pn	08 59 37.5	+1.2
	0.2nm,0.3s,baz=53,slow=13,SNR=20						
KURBB				Lg	Lg	09 01 22.5	
	0.0nm,0.3s,baz=48,slow=30,SNR=4.3						
MKAR	**Makanchi Array**	**8.08**	**202**	Pn	Pn	09 00 02.1	+0.7
	0.2nm,0.3s,baz=25,slow=13,SNR=8.9						
MKAR				Lg	Lg	09 02 18.4	
	0.0nm,0.3s,baz=16,slow=32,SNR=5.2						

IDC 28 08:58:54.7±3.4,54°.22N×87°.32E,h0km,mb1 3.0/2, mb1mx2.9/55,mbtmp3.0/2,ML2.3/2,Error ellipse: s-maj=29.2km s-min=20.3km az=51.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.50**	**261**	*i*		09 09 07.9	
	baz=79,slow=340,SNR=4.3						
ZALV	**Zalesovo Beam**	**1.50**	**261**	Pg	Pn	08 59 21.7	-1.1
	2.8nm,0.3s,baz=81,slow=21,SNR=5.0						
ZALV				Lg	Lg	08 59 41.5	
	0.5nm,0.3s,baz=78,slow=27,SNR=1.8						
KURBB	**Kurchatov Arra**	**6.47**	**240**	Pn	Pn	09 00 32.0	+1.0
	0.1nm,0.3s,baz=58,slow=14,SNR=4.9						
KURBB				Lg	Lg	09 02 21.1	
	0.0nm,0.3s,baz=51,slow=30,SNR=3.0						
MKAR	**Makanchi Array**	**8.09**	**205**	Pn	Pn	09 00 54.3	+0.9
	0.0nm,0.3s,baz=26,slow=16,SNR=2.2						

IDC 28 09:00:27.3±3.5,54°.22N×87°.19E,h0km,mb1 2.8/2, mb1mx2.8/54,mbtmp2.8/2,ML2.5/2,Error ellipse: s-maj=33.8km s-min=20.8km az=47.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.42**	**260**	*i*		09 10 10.0	
	baz=78,slow=334,SNR=1.3						
ZALV	**Zalesovo Beam**	**1.42**	**260**	Pg	Pn	09 00 52.8	-1.6
	0.7nm,0.3s,baz=81,slow=18,SNR=1.4						
ZALV				Lg	Lg	09 01 12.3	
	1.6nm,0.3s,baz=60,slow=19,SNR=2.9						
KURBB	**Kurchatov Arra**	**6.41**	**239**	Pn	Pn	09 02 03.9	+1.0
	0.0nm,0.3s,baz=56,slow=14,SNR=2.1						
MKAR	**Makanchi Array**	**8.06**	**205**	Pn	Pn	09 02 26.8	+1.1
	0.1nm,0.3s,baz=25,slow=14,SNR=6.2						

SOME 28 09:05:49.5,39°.50N×77°.03E,h5km

KRNET 28 09:05:50.1±0.1,39°.53N×77°.53E,mb2.6
NNC 28 09:05:51.7±2.1,39°.62N×77°.04E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=14.8km s-min=13.7km az=98.0
ISC 28 09:06:02.1±3.0,40°.0N±0°.1×77°.09E±0°.06,h19km±4km,n22, σ1§49/37,16C-2D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**2.11**	**2**	⇑*iP*	**Pn**	**09 06 35.8**	**-0.8**
	baz=55						
KDJ				⇑*iS*	**Sg**	**09 07 09.0**	**-1.1**
	baz=55						
ULHL	**Ulahol**	**2.32**	**344**	⇑*eP*	**Pn**	**09 06 39.3**	**-0.1**
	baz=41						
ULHL				⇑*iS*	**Sg**	**09 07 15.7**	**-1.0**
	baz=41						
BOOM	**Boomskoye usch**	**2.62**	**341**	⇑*iP*	**Pn**	**09 06 44.1**	**+0.6**
	baz=38						
BOOM				⇑*iS*	**Sb**	**09 07 22.8**	**+2.5**
	baz=38						
ARLS	**Aral**	**2.79**	**312**	⇑*iP*	**Pn**	**09 06 46.7**	**+0.8**
	baz=15						
ARLS				⇑*iS*	**Sb**	**09 07 27.9**	**+2.6**
	baz=15						
ANVS	**Anan'yevo**	**2.79**	**9**	⇑*iP*	**Pn**	**09 06 44.6**	**-1.4**
	baz=2.0						
ANVS				⇑*iS*	**Sb**	**09 07 24.2**	**-1.3**
	baz=2.0						
TNSS	**Tian-Shan**	**3.02**	**358**	*eP*	**Pb**	**09 06 53.1**	**-2.4**
	3.4nm,0.3s						
TNSS				*eS*	**Sg**	**09 07 39.0**	**-0.2**
	2.6nm,0.4s						
TNSS	**Tian-Shan**	**3.02**	**358**	Pg	**Pb**	**09 06 53.0**	**-2.4**
	3.4nm,0.3s						
TNSS				Lg	Lg	09 07 39.5	
	2.6nm,0.4s						
TKM2	**Tokmak 2**	**3.11**	**339**	⇑*iP*	**Pn**	**09 06 50.8**	**+0.5**
	baz=37						
TKM2				⇑*iS*	**Sb**	**09 07 35.8**	**+1.3**
	baz=37						
KST	**Kastek**	**3.14**	**345**	*eP*	**Pb**	**09 06 56.2**	**-1.1**
	2.7nm,0.4s						
KST				*eS*	**Sg**	**09 07 44.5**	**+1.5**
	4.4nm,0.4s						
KST	**Kastek**	**3.14**	**345**	Pg	**Pb**	**09 06 56.2**	**-1.1**
	2.7nm,0.4s						
KST				Lg	Lg	09 07 44.5	
	4.4nm,0.4s						
MDOK	**Medeo**	**3.14**	**359**	*eP*	**Pb**	**09 06 55.9**	**-1.6**
	3.2nm,0.4s						
MDOK				*eS*	**Sg**	**09 07 43.8**	**+0.7**
	6.3nm,0.6s						
MDOK	**Medeo**	**3.14**	**359**	Pg	**Pb**	**09 06 55.9**	**-1.6**
	3.2nm,0.4s						
MDOK				Lg	Lg	09 07 43.8	
	6.3nm,0.6s						
SATY	**Saty**	**3.19**	**18**	*eP*	**Pb**	**09 06 58.0**	**-0.2**
	3.3nm,0.4s						
SATY				*eS*	**Sg**	**09 07 47.6**	**+2.9**
	4.1nm,0.3s						
SATY	**Saty**	**3.19**	**18**	Pg	**Pb**	**09 06 58.0**	**-0.2**
	3.3nm,0.4s						
SATY				Lg	Lg	09 07 47.6	
	4.1nm,0.3s						
KOTS	**Kotyrbulak**	**3.21**	**0**	*eP*	**Pb**	**09 06 57.2**	**-1.4**
	7.4nm,0.4s						
KOTS				*eS*	**Sg**	**09 07 46.1**	**+0.8**
	21nm,0.6s						
KOTS	**Kotyrbulak**	**3.21**	**0**	Pg	**Pb**	**09 06 57.2**	**-1.4**
	7.4nm,0.4s						
KOTS				Lg	Lg	09 07 46.1	
	21nm,0.6s						
AAK	**Ala-Archa**	**3.27**	**324**	⇑*iP*	**Pn**	**09 06 53.4**	**+0.9**
	baz=25						
AAK				⇑*iS*	**Sb**	**09 07 39.5**	**+0.5**
	baz=25						
AAK	**Ala-Archa**	**3.27**	**324**	⇓Pg	**Pb**	**09 06 57.8**	**-1.8**
	1.5nm,0.7s						
AAK				⇓Lg	Lg	09 07 45.9	
	7.0nm,0.7s						
AML	**Almayashu**	**3.33**	**310**	⇑*eP*	**Pn**	**09 06 53.8**	**+0.3**
	baz=13						
AML				⇑*iS*	**Sb**	**09 07 40.9**	**0.0**
	baz=13						
DGS	**Degeres**	**3.37**	**343**	*eP*	**Pb**	**09 06 59.3**	**-2.0**
	2.0nm,0.5s						
DGS				*eS*	**Sg**	**09 07 49.8**	**-0.6**
	4.7nm,0.6s						
DGS	**Degeres**	**3.37**	**343**	Pg	**Pb**	**09 06 59.3**	**-2.0**
	2.0nm,0.5s						
DGS				Lg	Lg	09 07 49.9	
	4.7nm,0.6s						
UZB	**Uzynbulak**	**3.44**	**24**	*eP*	**Pb**	**09 07 02.2**	**-0.4**
	1.4nm,0.3s	

KDTR				*e*S	**Sn**	**09 13 01.1**	**-1.0**
KZV	**Kizimen**	**1.84**	**29**	*e*P	**Pn**	**09 12 37.1**	**+0.6**
TUMD	**Tumrok D**	**1.95**	**29**	*e*P	**Pn**	**09 12 37.9**	**+0.4**
TUMR	**Tumrok**	**1.96**	**24**	*e*P	**Pn**	**09 12 38.5**	**+0.9**
TUMR				*e*S	**Sn**	**09 13 07.2**	**+1.0**
MKZ	**Mys Kozlova**	**2.04**	**58**	*e*P	**Pn**	**09 12 38.9**	**+0.5**
MKZ				*e*S	**Sn**	**09 13 06.0**	**-1.6**
KMNR	**Kamenistaya**	**2.41**	**20**	*e*P	**Pn**	**09 12 43.8**	**+1.1**
ESO	**Esso**	**2.42**	**359**	*e*P	**Pn**	**09 12 42.9**	**+0.2**
BZWR	**Bezymyannyi-We**	**2.66**	**22**	*e*P	**Pn**	**09 12 48.1**	**+2.5**
BZGR	**Bezymyannyi-Gr**	**2.68**	**24**	*e*P	**Pn**	**09 12 47.4**	**+1.5**
ZLN	**Zelenaya**	**2.78**	**24**	*e*P	**Pn**	**09 12 49.1**	**+2.1**
CIRR	**Tsirk**	**2.85**	**23**	*e*P	**Pn**	**09 12 50.4**	**+2.5**
SRDR	**Sredinnyy**	**2.87**	**11**	*e*P	**Pn**	**09 12 48.5**	**+0.5**
SRKR	**Sorokina**	**3.44**	**23**	*e*P	**Pn**	**09 12 56.4**	**+1.4**
SMKR	**Semkarok**	**3.45**	**26**	*e*P	**Pn**	**09 12 56.2**	**+1.0**
KBG	**Krutoberegovo**	**3.57**	**38**	*e*P	**Pn**	**09 12 58.1**	**+1.5**
KBG				*e*S	**Sn**	**09 13 39.1**	**-1.0**
KBTR	**Krutoberegovo**	**3.58**	**39**	*e*P	**Pn**	**09 12 57.5**	**+0.8**
BKI	**Bering**	**4.55**	**65**	*e*P	**Pn**	**09 13 09.2**	**+0.3**
BKI				*e*S	**Sn**	**09 13 59.1**	**-3.2**
SONM	**Songino Array**	**33.03**	**282**	P	**P**	**09 18 18.3**	**-0.7**
	0.2nm,0.3s,baz=72,slow=9.3,SNR=2.0						
KURBB	**Kurchatov Arra**	**46.94**	**301**	P	**P**	**09 20 11.7**	**-1.4**
	1.1nm,0.4s,baz=59,slow=7.5,SNR=6.5						
FINES	**FINESS Array B**	**59.42**	**336**	P	**P**	**09 21 43.3**	**-0.6**
	1.9nm,0.9s,baz=34,slow=11,SNR=1.4						
WRA	**Warramunga Arr**	**76.13**	**204**	P	**P**	**09 23 30.0**	**+1.3**
	0.3nm,0.8s,baz=24,slow=6.6,SNR=2.1						
ASAR	**Alice Springs**	**79.82**	**203**	P	**P**	**09 23 51.2**	**+2.2**
	0.4nm,0.9s,baz=5.4,slow=6.0,SNR=3.0						

*NNC **28** 09:16:04.3±0.8,50°.93N×73°.72E,h0km,mb3.7,mpv3.5, Error ellipse: s-maj=7.1km s-min=5.0km az=152.0, Suspected Mining explosion.*

*IDC **28** 09:16:06.0±1.9,50°.95N×73°.63E,h0km,mb1 2.4/3, mb1mx2.4/44,mbtmp2.4/3,ML1.9/3,Error ellipse: s-maj=36.3km s-min=9.9km az=28.0*

ISC 28 09:16:03.6±0.9,50°.82N±0°.05×73°.54E±0°.05,h0km,n25, σ2^{s}39/23,5C-3D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRZS	**Berezniki**	**1.00**	**214**	P	**Pn**	**09 16 25.2**	**+0.2**
	2.9nm,0.2s						
BRZS				S	**Sn**	**09 16 43.4**	**+3.6**
	88nm,1.2s						
OTUK	**Ortayu**	**2.69**	**197**	⇓Pg	**Pg**	**09 16 54.5**	**-0.7**
	4.1nm,0.6s						
OTUK				⇑Lg	Lg	09 17 31.1	
	27nm,1.0s						
BVAR	**Borovoye Array**	**2.95**	**320**	Pn	**Pn**	**09 16 51.9**	**+0.1**
	0.5nm,0.3s,baz=132,slow=21,SNR=4.8						
BVAR				Pg	**Pb**	**09 16 58.6**	**+1.5**
	0.5nm,0.3s,baz=140,slow=21,SNR=5.4						
BVAR				Lg	Lg	09 17 36.3	
	1.5nm,0.3s,baz=108,slow=32,SNR=7.8						
BVB5	**Borovoye Array**	**2.96**	**320**	⇑Pg	**Pg**	**09 16 59.4**	**-0.9**
	1.4nm,0.6s						
BVB5				⇑Lg	Lg	09 17 36.7	
	43nm,0.8s						
KURBB	**Kurchatov Arra**	**3.17**	**92**	Pn	**Pn**	**09 16 56.1**	**+1.3**
	0.1nm,0.3s,baz=278,slow=14,SNR=16						
KURBB				Lg	Lg	09 17 41.0	
	0.1nm,0.3s,baz=280,slow=32,SNR=7.4						
KURBB	**Kurchatov Arra**	**3.17**	**92**	⇓Pg	**Pb**	**09 16 59.5**	**-1.4**
	8.1nm,0.8s						
KURBB				⇑Lg	Lg	09 17 43.4	
	69nm,0.8s,baz=318,slow=26						
KURK	**Kurchatov**	**3.23**	**90**	⇑Pg	**Pb**	**09 17 01.1**	**-0.7**
	3.2nm,0.6s						
KURK				⇓Lg	Lg	09 17 45.3	
	47nm,1.0s						
SEM	**Semipalatinsk**	**4.29**	**93**	Pg	**Pb**	**09 17 19.7**	**-0.4**
	2.7nm,0.1s						
SEM				Lg	Lg	09 18 16.6	
	12nm,0.1s						
KAPS	**Kapalarasan**	**6.77**	**143**	Pg	**Pb**	**09 18 06.6**	**+4.5**
	0.9nm,0.7s						
KAPS				Lg	Lg	09 19 36.9	
	11nm,0.7s						
MK31	**Makanchi Array**	**7.04**	**122**	Lg	Lg	09 19 49.5	
	11nm,0.8s,baz=315,slow=26,SNR=5.4						
MKAR	**Makanchi Array**	**7.04**	**122**	Pg	**Pb**	**09 18 06.9**	**+0.2**
	0.1nm,0.3s,baz=316,slow=12,SNR=2.5						
MKAR				Lg	Lg	09 19 44.6	
	0.2nm,0.3s,baz=300,slow=27,SNR=5.8						
KUU	**Kurty**	**7.18**	**164**	Pg	**Pg**	**09 18 21.5**	**+0.3**
	1.9nm,0.1s						
KUU				Lg	Lg	09 20 01.7	
	14nm,0.8s						
ARXS	**Arharly**	**7.21**	**155**	Pg	Pb	09 18 15.1	+5.4
	1.3nm,0.5s						
ARXS				Lg	Lg	09 19 51.4	
	12nm,0.8s						
CHKK	**Chushkaly**	**7.35**	**160**	Pg	**Pg**	**09 18 21.3**	**-3.0**
	1.1nm,0.1s						
CHKK				Lg	Lg	09 20 01.6	
	11nm,0.8s						
SGDS	**Sogindy**	**7.41**	**174**	Pg	**Pg**	**09 18 21.4**	**-4.1**
	3.6nm,0.6s						
SGDS				Lg	Lg	09 20 01.2	
	3.1nm,0.6s						
MNBS	**Baschi**	**7.50**	**152**	Pg	**Pg**	**09 18 23.7**	**-3.6**
	0.7nm,0.3s						
MNBS				Lg	Lg	09 20 05.5	
	9.3nm,0.9s						
I46RU	**ZALESOVO INFRA**	**7.58**	**61**	*i*		10 02 50.0	
	baz=246,slow=338,SNR=1.8						
ZALV	**Zalesovo Beam**	**7.58**	**61**	Pn	**Pn**	**09 17 57.0**	**+1.7**
	0.1nm,0.3s,baz=250,slow=17,SNR=1.6						
ZALV				Sn	**Sn**	**09 19 22.0**	**+0.2**
	0.1nm,0.3s,baz=257,slow=26,SNR=1.9						
ZALV				Lg	Lg	09 20 02.8	
	0.2nm,0.3s,baz=259,slow=23,SNR=2.3						
DGS	**Degeres**	**7.73**	**168**	Pg	**Pg**	**09 18 28.3**	**-3.3**
	1.8nm,0.5s						
DGS				Lg	Lg	09 20 14.1	
	15nm,1.2s						
DJR	**Jarkent**	**7.74**	**145**	Pg	Pb	09 18 24.6	+5.9
	2.4nm,0.4s						
DJR				Lg	Lg	09 20 07.7	
	4.0nm,0.7s						
KST	**Kastek**	**7.95**	**167**	Pg	**Pg**	**09 18 34.2**	**-1.7**
	4.0nm,0.8s						
KST				Lg	Lg	09 20 23.5	
	20nm,1.0s						
TNSS	**Tian-Shan**	**8.12**	**162**	Pg	**Pg**	**09 18 37.1**	**-2.1**
	0.9nm,0.3s						
TNSS				Lg	Lg	09 20 28.1	
	3.3nm,0.8s						
AAK	**Ala-Archa**	**8.21**	**175**	Lg	Lg	09 20 25.2	
	0.2nm,0.3s,baz=294,slow=4.1,SNR=3.2						
SATY	**Saty**	**8.44**	**155**	Pg	**Pg**	**09 18 44.1**	**-1.1**
	5.5nm,1.2s						
UZB	**Uzynbulak**	**8.54**	**152**	Pg	**Pg**	**09 18 43.6**	**-3.5**
	2.5nm,0.7s						
UZB				Lg	Lg	09 20 39.2	
	7.9nm,1.3s						

IDC 28 09:23:21.8±3.1,53°.49N×87°.70E,h0km,mb1 2.7/2, mb1mx2.7/47,mbtmp2.7/2,ML2.5/2,Error ellipse: s-maj=28.7km s-min=16.7km az=56.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.77**	**286**	*i*		09 34 59.0	
	baz=103,slow=343,SNR=3.0						
ZALV	**Zalesovo Beam**	**1.77**	**286**	Pg	Pn	09 23 53.0	-0.6
	1.3nm,0.3s,baz=107,slow=16,SNR=11						
ZALV				Lg	Lg	09 24 18.3	
	1.0nm,0.3s,baz=106,slow=25,SNR=7.7						
KURBB	**Kurchatov Arra**	**6.34**	**247**	Pn	Pn	09 24 57.1	+0.7
	0.1nm,0.3s,baz=63,slow=14,SNR=3.0						
KURBB				Lg	Lg	09 26 43.9	
	0.0nm,0.3s,baz=67,slow=36,SNR=1.5						
MKAR	**Makanchi Array**	**7.55**	**210**	Pn	Pn	09 25 14.3	+1.3
	0.1nm,0.3s,baz=29,slow=12,SNR=5.1						

*IDC **28** 09:27:43.5±1.9,2°.02N×126°.45E,h0km,mb3.4/4, mb1 3.7/4,mb1mx3.4/37,mbtmp3.5/4,Error ellipse: s-maj=124.6km s-min=24.3km az=68.0*

*DJA **28** 09:27:48.9±1.4,2°.N±3°×12°.7E±°,h27km±13km,M3.6/6, MLv3.6/6*

ISC 28 09:27:49.3±1.1,2°.11N±0°.09×126°.7E±0°.1,h47km,n7, σ0^{s}94/9,mb3.4/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.51**	**152**	P	**Pn**	**09 28 13.6**	**-0.3**
TNTI				S	**Sn**	**09 28 33.0**	**+0.7**
SGSI	**Sangihe**	**1.93**	**325**	P	**Pn**	**09 28 18.7**	**-0.9**
SGSI				S	**Sn**	**09 28 43.8**	**+1.1**
GTOI	**Gorontalo**	**3.92**	**248**	P	**Pn**	**09 28 46.8**	**-0.2**
FITZ	**Fitzroy Crossi**	**20.10**	**183**	P	**P**	**09 32 17.8**	**-1.4**
	1.7nm,1.0s,baz=14,slow=12,SNR=2.2						
WRA	**Warramunga Arr**	**23.17**	**161**	P	**P**	**09 32 51.5**	**-0.5**
	0.9nm,0.6s,baz=340,slow=10,SNR=9.4						
ASAR	**Alice Springs**	**26.57**	**165**	P	**P**	**09 33 23.6**	**+0.5**
	0.8nm,0.7s,baz=349,slow=9.4,SNR=8.8						
MKAR	**Makanchi Array**	**58.84**	**326**	P	**P**	**09 37 43.8**	**+0.6**
	0.2nm,0.4s,baz=131,slow=8.5,SNR=5.9						

KRNET 28 09:29:41.1±0.1,43°.59N×77°.60E,h30km,mb2.2,8C,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANVS	**Anan'yevo**	**0.81**	**177**	⇑*i*P	Pn	09 29 56.6	0.0
	baz=76						
ANVS				⇑*i*S	Sn	09 30 07.7	+0.1
	baz=76						
PRZ	**Przheval'sk**	**1.25**	**152**	⇑*i*P	Pb	09 30 04.2	+0.1
	baz=51						
PRZ				⇑*i*S	Sb	09 30 20.4	+0.5
	baz=51						
KDJ	**Kajisay**	**1.49**	**192**	⇑*i*P	Pb	09 30 07.7	-0.5
	baz=92						
KDJ				⇑*i*S	Sb	09 30 27.3	+0.5
	baz=92						
BOOM	**Boomskoye usch**	**1.64**	**229**	⇑*i*P	Pb	09 30 09.5	-1.2
	baz=29						
BOOM				⇑*i*S	Sb	09 30 30.8	-0.2
	baz=29						

*SOME **28** 09:30:40.8,43°.95N×77°.08E*

NNC 28 09:30:41.1±0.5,43°.95N×77°.07E,h0km,mb3.0,mpv3.1, 2C,Error ellipse: s-maj=5.1km s-min=2.8km az=157.0, Suspected Mining explosion.,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKK	**Chushkaly**	**0.11**	**209**	P	Pg	09 30 43.3	+0.1
	22nm,0.2s						
CHKK				S	Sg	09 30 45.5	+0.8
	212nm,0.3s						
KUU	**Kurty**	**0.53**	**264**	P	Pg	09 30 51.3	+0.1
	3.6nm,0.2s						
KUU				S	Sg	09 30 59.0	+0.9
	22nm,0.2s						
ARXS	**Arharly**	**0.61**	**64**	P	Pg	09 30 52.4	-0.3
	20nm,0.3s						
ARXS				S	Sg	09 31 00.9	+0.4
	20nm,0.5s						
KOTS	**Kotyrbulak**	**0.72**	**177**	P	Pg	09 30 54.8	0.0
	20nm,0.2s						
KOTS				S	Sg	09 31 05.2	+1.1
	15nm,0.3s						
TNSS	**Tian-Shan**	**0.92**	**185**	P	Pg	09 30 58.6	0.0
	3.3nm,0.1s						
TNSS				S	Sg	09 31 11.6	+1.0
	2.5nm,0.3s						
MNBS	**Baschi**	**0.97**	**82**	P	Pg	09 30 59.2	-0.5
	3.4nm,0.2s						
MNBS				S	Sg	09 31 12.7	+0.4
	5.7nm,0.3s						
DGS	**Degeres**	**1.18**	**233**	P	Pg	09 31 03.0	-0.6
	4.1nm,0.1s						
DGS				S	Sg	09 31 18.9	0.0
	7.9nm,0.4s						
KST	**Kastek**	**1.21**	**222**	P	Pg	09 31 03.8	-0.5
	6.9nm,0.1s						
KST				S	Sg	09 31 20.6	+0.6
	4.4nm,0.2s						
SATY	**Saty**	**1.32**	**132**	P	Pg	09 31 05.3	-1.1
	3.4nm,0.1s						
SATY				S	Sg	09 31 23.1	-0.4
	6.7nm,0.1s						
TKM2	**Tokmak 2**	**1.49**	**227**	⇑P	Pn	09 31 08.3	-1.0
	0.7nm,0.2s						
TKM2				⇑S	Sg	09 31 28.9	+0.1
	2.2nm,0.3s						
UZB	**Uzynbulak**	**1.64**	**119**	P	Pn	09 31 11.7	+0.4
	5.4nm,0.2s						
UZB				S	Sg	09 31 33.9	+0.3
	16nm,0.3s						
SGDS	**Sogindy**	**1.83**	**255**	P	Pb	09 31 14.9	-0.7
	3.5nm,0.2s						
SGDS				S	Sb	09 31 39.6	+0.5
	3.5nm,0.2s						
DJR	**Jarkent**	**2.00**	**78**	Pg	Pb	09 31 17.6	-0.7
	3.3nm,0.2s						
DJR				Lg	Lg	09 31 45.2	
	2.8nm,0.2s						
KAPS	**Kapalarasan**	**2.11**	**50**	Pg	Pn	09 31 18.5	+0.8
	0.8nm,0.1s						
KAPS				Lg	Lg	09 31 45.9	
	4.2nm,0.4s						

*IDC **28** 09:42:11.5±1.2,10°.34S×124°.72E,h0km,mb4.1/3, mb1 4.4/7,mb1mx3.9/35,mbtmp4.2/7,ML4.0/4,MS3.3/7, Ms1 3.3/7,ms1mx2.9/39,Error ellipse: s-maj=26.3km s-min=13.2km az=13.0*

*DJA **28** 09:42:15.5±0.3,11°.S±3°×12°.4E±°,h10km,M4.4/12, mB5.0/2,mb4.6/6,MLv4.3/12,Mw(mB)4.3/2*

*NEIC **28** 09:42:16.2±2.9,10°.55S±0°.05×124°.41E±0°.09,h35km±1km, mb4.2/3,Error ellipse: s-maj=16.1km s-min=7.2km az=247.0*

ISC 28 09:42:13.1±0.7,10°.58S±0°.05×124°.59E±0°.07,h10km,n43, σ1^{s}60/42,mb4.5/5,MS3.1/3,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.88**	**339**	P	**Pn**	**09 42 31.2**	**-0.4**
SOEI				S	**Sn**	**09 42 44.2**	**-0.4**
SOEI	**Soe**	**0.88**	**339**		**Pn**	**09 42 31.3**	**-0.4**
BATI	**Baumata**	**0.98**	**292**	Pg	**Pg**	**09 42 32.3**	**+0.3**
	210nm,0.3s,baz=140,slow=3.3,SNR=84						
BATI				Lg	Lg	09 42 45.1	
	194nm,0.3s,baz=209,slow=19,SNR=6.7						
BATI				LR	LR	09 43 09.4	
	comp=Z,647nm,19.2s,baz=136,slow=56						
BATI	**Baumata**	**0.98**	**292**	P	**Pg**	**09 42 32.1**	**+0.1**
MMRI	**Maumere**	**3.02**	**310**	P	**Pn**	**09 43 02.3**	**+1.3**
MMRI	**Maumere**	**3.02**	**310**		**Pn**	**09 43 02.1**	**+1.2**
EDFI	**Ende, Flores**	**3.39**	**302**	P	**Pn**	**09 43 06.6**	**+0.4**
BASI	**Baing, Sumba**	**3.96**	**275**	Pg	**Pg**	**09 43 27.6**	**-1.4**
WBSI	**Waikabubak, Su**	**5.20**	**280**	P	**Pn**	**09 43 31.9**	**+0.9**
	0.2nm41nm,0.8s						
BSSI	**Bau Bau, Buton**	**5.99**	**317**	P	**Pn**	**09 43 43.1**	**+1.2**
	0.1nm38nm,0.9s						
KNRA	**Kununurra**	**6.49**	**142**		**Pn**	**09 43 51.4**	**+2.6**
MTN	**Manton Dam**	**6.79**	**110**		Pn	09 43 57.2	+4.3
BKSI	**Bukukumba**	**6.85**	**319**	P	**Pn**	**09 43 55.7**	**+2.1**
	0.2nm53nm,0.8s						
PLAI	**Plampang**	**6.94**	**284**	P	**Pn**	**09 43 55.4**	**+0.5**
	0.2nm70nm,0.8s						
KAPI	**Kappang**	**7.32**	**319**	Pn	**Pn**	**09 43 60.0**	**-0.1**
	0.8nm,0.3s,baz=172,slow=13,SNR=5.4						
KAPI				LR	LR	09 47 12.0	
	comp=Z,258nm,19.5s,baz=150,slow=42						
KAPI	**Kappang**	**7.32**	**319**		**Pn**	**09 43 56.5**	**-3.6**
FITZ	**Fitzroy Crossi**	**7.54**	**172**	Pn	**Pn**	**09 44 05.9**	**+2.8**
	1.5nm,0.3s,baz=2.4,slow=12,SNR=81						
FITZ				Sn	**Sn**	**09 45 29.1**	**+0.4**
	4.0nm,0.3s,baz=285,slow=3.2,SNR=7.8						
FITZ				LR	LR	09 47 25.0	
	comp=Z,108nm,21.2s,baz=40,slow=40						
FITZ	**Fitzroy Crossi**	**7.54**	**172**		**Pn**	**09 44 04.6**	**+1.5**
BNSI	**Bone**	**7.58**	**324**	P	Pn	09 44 10.9	+7.2
TWSI	**Taliwang, Sumb**	**7.81**	**283**	P	**Pn**	**09 44 06.7**	**-0.2**
FAKI	**Fak Fak**	**10.76**	**45**	Pn	**Pn**	**09 44 49.8**	**+2.4**
PSA00	**Pilbara Seismi**	**11.84**	**202**	Pn	**Pn**	**09 45 03.2**	**+1.1**
WB0	**Warramunga Arr**	**13.14**	**135**		**Pn**	**09 45 19.9**	**-0.1**
WRA	**Warramunga Arr**	**13.23**	**136**	Pn	**Pn**	**09 45 20.4**	**-0.7**
	0.7nm,0.3s,baz=308,slow=14,SNR=30						
WRA				Sn	**Sn**	**09 47 44.9**	**-3.5**
	0.9nm,0.3s,baz=305,slow=22,SNR=18						
WRA				LR	LR	09 51 14.0	
	comp=Z,140nm,18.2s,baz=295,slow=41						
WRA	**Warramunga Arr**	**13.23**	**136**		**Pn**	**09 45 22.0**	**+0.9**
WRAB	**Tennant Creek**	**13.23**	**136**		**Pn**	**09 45 21.5**	**+0.4**
WB2	**Warramunga Arr**	**13.23**	**136**		**Pn**	**09 45 21.3**	**+0.1**
WR0	**Warramunga Arr**	**13.38**	**135**		**Pn**	**09 45 23.1**	**-0.1**
AS31	**Alice Springs**	**15.75**	**147**		**Pn**	**09 45 56.2**	**+1.0**
AS31				IAmb	IAmb	09 46 03.5	
	comp=Z,4.3nm,0.7s						
ASAR	**Alice Springs**	**15.75**	**147**	Pn	**Pn**	**09 45 55.8**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=320,slow=11,SNR=198						
ASAR				Sn	**Sn**	**09 48 46.2**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=319,slow=24,SNR=11						
ASAR				LR	LR	09 52 23.8	
	comp=Z,117nm,21.5s,baz=308,slow=38						
ASAR	**Alice Springs**	**15.75**	**147**		**Pn**	**09 45 56.8**	**+1.5**
KASI	**Kota Agung**	**20.51**	**283**	P	**P**	**09 46 52.6**	**+1.0**
NWAO	**Narrogin (SRO)**	**23.24**	**196**	LR	LR	09 57 44.5	
	comp=Z,67nm,18.1s,baz=75,slow=40						
STKA	**Stephens Creek**	**26.39**	**146**	LR	LR	09 59 20.5	
	comp=Z,90nm,18.6s,baz=206,slow=39						
KRVT	**Keravat (AS076**	**27.90**	**79**	LR	LR	10 00 24.6	
	comp=Z,33nm,18.8s,baz=271,slow=39						
CMAR	**Chiang Mai Arr**	**38.38**	**319**	P	**P**	**09 49 31.9**	**-2.9**
	comp=Z,1.1nm,0.4s,baz=140,slow=6.7,SNR=8.1						
MK31	**Makanchi Array**	**68.46**	**330**	P	**P**	**09 53 14.7**	**-0.8**
MK31				IAmb	IAmb	09 53 15.9	
	comp=Z,2.5nm,0.8s						
MKAR	**Makanchi Array**	**68.46**	**330**	P	**P**	**09 53 15.2**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=137,slow=8.1,SNR=12						
MKAR	**Makanchi Array**	**68.46**	**330**	P	**P**	**09 53 14.8**	**-0.6**
ZAA0	**Zalesovo Array**	**72.57**	**337**	P	**P**	**09 53 39.1**	**-1.2**
ZAA0				IAmb	IAmb	09 53 45.0	
	comp=Z,5.6nm,1.4s						
ZALV	**Zalesovo Beam**	**72.57**	**337**	P	**P**	**09 53 38.8**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=142,slow=5.1,SNR=3.6						
ZALV	**Zalesovo Beam**	**72.57**	**337**	P	**P**	**09 53 38.9**	**-1.4**
TORD	**Torodi Ar. Bea**	**124.15**	**279**	PKP	**PKiKP**	**10 01 14.7**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=87,slow=1.9,SNR=3.9						

*IDC **28** 09:55:47.0±0.7,5°.51N×61°.26E,h0km,mb3.9/14, mb1 4.1/14,mb1mx3.9/35,mbtmp3.9/14,MS3.8/32, Ms1 3.8/32,ms1mx3.7/45,Error ellipse: s-maj=20.6km s-min=18.5km az=165.0*

*NEIC **28** 09:55:47.6±1.8,5°.6N±0°.1×61°.2E±0°.1,h10km±1km, mb4.7/38,Error ellipse: s-maj=19.7km s-min=17.3km az=189.0*

*GCMT **28** 09:55:48.6±0.3,5°.69N±0°.02×61°.16E±0°.03,h13km±1km, MW4.8/89,Moment Tensor Solution. s26,c29; s89,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.98±.13; $M_{\theta\theta}$1.51±.09; $M_{\phi\phi}$0.47±.07; $M_{r\theta}$0.50±.20; $M_{\theta\phi}$-0.24±.05; $M_{\phi r}$0.50±.26; Best double couple: $M_0$1.88200×10^{16} NP1:ϕ_s113.00000°,δ40.00000°,λ-70.00000°. NP2: ϕ_s268.00000°,δ53.00000°,λ-106.00000°. Principal axes: T 1.6070, Plg7.0000°, Azm9.0000°; N 0.5520, Plg13.0000°, Azm278.0000°; P -2.1570, Plg76.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 09:55:47.6±0.5,5°.54N±0°.08×61°.21E±0°.07,h10km,n136, σ1^{s}48/104,mb4.6/46,MS3.8/32,2C-2D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHAO	**Shalim**	**13.55**	**337**	P	**Pn**	**09 59 00.7**	**+0.6**
DMTO	**DMTO**	**13.56**	**334**	P	**P**	**09 59 07.2**	**-2.2**
RBK	**Rabkut**	**13.72**	**331**	P	**P**	**09 59 10.5**	**-0.7**
ABTO	**Aybut**	**14.06**	**327**	P	**P**	**09 59 12.0**	**-3.0**
	SNR=10						
WHFO	**Wadi Hawf**	**14.29**	**330**	P	**Pn**	**09 59 12.6**	**+2.3**
DQM	**DQM**	**14.74**	**346**	P	**P**	**09 59 26.0**	**+3.5**
	SNR=6.0						
MHTO	**MHTO**	**15.67**	**349**	P	**P**	**09 59 34.0**	**+1.1**
	SNR=41						
JLN	**Jalan Bani Buh**	**16.61**	**354**	P	**P**	**09 59 47.0**	**+3.8**
	SNR=8.3						
JMDO	**Jabal Madar**	**17.00**	**350**	P	P	09 59 55.0	+7.4
	SNR=6.3						
DGAR	**Diego Garcia**	**17.07**	**139**	P	**P**	**09 59 47.9**	**-0.4**
DGAR				IAmb	IAmb	09 59 57.0	
	comp=Z,82nm,1.6s						
WBK	**Wadi Bani Khal**	**17.11**	**353**	P	P	09 59 56.0	+7.2
	SNR=5.4						
BSY	**Bisya**	**17.54**	**348**	P	**Pn**	**09 59 49.8**	**-2.6**
	SNR=27						
SMDO	**Samad**	**17.68**	**350**	P	**Pn**	**09 59 52.2**	**-2.1**
	SNR=7.4						
WSAR	**Wadi Sarin**	**17.77**	**352**	LR	LR	10 05 09.7	
	comp=Z,403nm,21.6s,baz=193,slow=32						
BIDO	**Bidbid**	**18.12**	**351**	P	**P**	**10 00 06.0**	**+6.0**
	SNR=8.6						
ARQ	**Araqi**	**18.26**	**346**	P	**Pn**	**10 00 00.9**	**-0.5**
	SNR=8.1						
HOQ	**Hoqain**	**18.33**	**349**	P	**P**	**10 00 06.2**	**+4.0**
	SNR=7.2						
ATD	**Arta Tunnel**	**19.10**	**289**	LR	LR	10 06 43.3	
	comp=Z,133nm,18.9s,baz=36,slow=34						
PALK	**Pallekele**	**19.45**	**84**	LR	LR	10 06 13.9	
	comp=Z,266nm,18.8s,baz=11,slow=32						
PALK	**Pallekele**	**19.45**	**84**	P	**P**	**10 00 13.6**	**-1.0**
PALK				IAmb	IAmb	10 00 29.6	
	comp=Z,50nm,1.6s						
HATD	**Hatta, Dubai**	**19.79**	**346**	P	**P**	**10 00 18.2**	**-0.1**
	SNR=5.5						
UOSS	**Minazif**	**19.89**	**347**		**P**	**10 00 17.1**	**-2.2**
UOSS				IAmb	IAmb	10 00 28.9	
	comp=Z,63nm,1.4s						
FURI	**Furi**	**22.60**	**280**	P	**P**	**10 00

KVAR	**Kislovodsk Arr**	**41.58**	**340**	LR	LR	10 20 34.8	
	comp=Z,105nm,19.7s,baz=93,slow=36						
BRTR	**Keskin Array B**	**42.14**	**328**	P	**P**	**10 03 41.0**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=139,slow=11,SNR=4.3						
BRTR				LR	LR	10 21 28.9	
	comp=Z,110nm,19.7s,baz=128,slow=36						
BRTR	**Keskin Array B**	**42.14**	**328**	P	**P**	**10 03 39.0**	**-1.5**
ILGA	**Ilgaz**	**43.07**	**329**	P	**P**	**10 03 46.7**	**-1.4**
ILGA				IAmb	IAmb	10 03 55.9	
	comp=Z,33nm,1.6s						
ABKAR	**Akbulak array**	**43.58**	**359**	P	**P**	**10 03 51.1**	**-0.7**
WMQ	**Urumqi**	**44.68**	**27** *eP*	P	**P**	**10 03 59.5**	**-1.4**
WMQ				pP	pwP	10 04 06.3	-0.7
WMQ				LR	LR		
	comp=N,550nm,29.2s						
WMQ				LR	LR		
	comp=E,3μm,29.1s						
WMQ				LR	LR		
	comp=Z,510nm,25.3s						
AKTO	**Aktyubinsk**	**44.82**	**357**	LR	LR	10 23 18.5	
	comp=Z,152nm,20.9s,baz=164,slow=37						
MK31	**Makanchi Array**	**44.94**	**20**	P	**P**	**10 04 02.3**	**-0.5**
MKAR	**Makanchi Array**	**44.94**	**20**	P	**P**	**10 04 04.8**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=213,slow=6.4,SNR=2.1						
MKAR	**Makanchi Array**	**44.94**	**20**	P	**P**	**10 04 02.0**	**-0.8**
ALN	**Alexandroupoli**	**47.20**	**323**	P	**P**	**10 04 18.8**	**-1.9**
KURK	**Kurchatov**	**47.33**	**15**	P	**P**	**10 04 20.7**	**-0.8**
ITM	**Ithomi**	**47.70**	**317**	P	**P**	**10 04 24.1**	**-0.6**
GYA	**Guiyang**	**48.05**	**59** *eP*	P	P	10 04 41.0	+13
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TIRR	**Tirgusor**	**48.23**	**329**	P	**P**	**10 04 28.0**	**-0.6**
GTA	**Gaotai**	**48.45**	**40** *eP*	P	**P**	**10 04 29.8**	**-0.8**
GTA				pP	pwP	10 04 38.0	+1.2
GTA				sP	sP	10 04 40.8	+7.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BOSA	**Boshof**	**48.49**	**224**	LR	LR	10 23 27.7	
	comp=Z,295nm,18.6s,baz=29,slow=34						
TSUM	**Tsumeb**	**49.49**	**239**	P	**P**	**10 04 40.4**	**+1.5**
	comp=Z,3.7nm,0.9s,baz=77,slow=7.9,SNR=4.0						
TSUM	**Tsumeb**	**49.49**	**239**	P	**P**	**10 04 39.3**	**+0.4**
TSUM				IAmb	IAmb	10 04 45.0	
	comp=Z,12nm,1.2s						
LZH	**Lanzhou**	**49.50**	**46** *eP*	P	**P**	**10 04 40.0**	**+1.2**
LZH				pP	sP	10 04 43.5	+1.6
LZH				sP	pwP	10 04 45.0	0.0
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,6.7s						
LZH				LR	LR		
	comp=N,250nm,14.6s						
LZH				LR	LR		
	comp=E,250nm,14.4s						
LZH				LR	LR		
	comp=Z,450nm,16.8s						
VRI	**Vrincioaia**	**50.06**	**329** ⇓P	P	**P**	**10 04 43.1**	**+0.4**
PLOR	**Plostina**	**50.09**	**329** ⇓P	P	**P**	**10 04 43.7**	**+0.8**
MLR	**Muntele Rosu**	**50.22**	**328** ⇑P	P	**P**	**10 04 46.5**	**+2.4**
MLR	**Muntele Rosu**	**50.22**	**328** P	P	**P**	**10 04 43.9**	**-0.1**
MLR				IAmb	IAmb	10 04 53.1	
	comp=Z,11nm,1.0s						
ARU	**Arti**	**50.79**	**358**	P	**P**	**10 04 47.2**	**-0.8**
ARU				IAmb	IAmb	10 04 54.7	
	comp=Z,11nm,1.0s						
ARR	**Arges**	**50.84**	**327** ⇑P	P	**P**	**10 04 48.6**	**0.0**
ZAA0	**Zalesovo Array**	**51.94**	**17** P	P	**P**	**10 04 55.1**	**-1.5**
ZALV	**Zalesovo Beam**	**51.94**	**17** P	P	**P**	**10 04 56.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=204,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**51.94**	**17** P	P	**P**	**10 04 55.5**	**-1.1**
BURAR	**Bucovina Array**	**52.01**	**330**	P	**P**	**10 04 56.2**	**-1.3**
BUR08	**Bucovina Ar. S**	**52.04**	**330**	P	**P**	**10 04 57.7**	**+0.1**
BUR08				IAmb	IAmb	10 05 23.5	
	comp=Z,15nm,1.6s						
AKASG	**Malin Array Be**	**52.35**	**335**	P	**P**	**10 05 00.9**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=139,slow=5.1,SNR=5.5						
AKASG				LR	LR	10 29 12.0	
	comp=Z,47nm,20.4s,baz=150,slow=38						
KOLS	**Kolonicke sedl**	**54.36**	**329** *eP*	P	**P**	**10 05 15.6**	**+1.0**
KOLS				*e*		10 05 22.4	
VYHS	**Vyhne**	**55.89**	**327** *e*	P		10 05 32.3	+6.6
KEST	**Kesra**	**56.23**	**310**	LR	LR	10 30 19.4	
	comp=Z,42nm,18.3s,baz=247,slow=37						
JAVC	**Velka Javorina**	**56.73**	**327** *eP*	P	**P**	**10 05 33.5**	**+1.8**
HHC	**Hu-ho-hao-te**	**57.02**	**44** *eP*	P	**P**	**10 05 34.3**	**+0.3**
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=N,240nm,15.3s						
HHC				LR	LR		
	comp=E,190nm,16.3s						
HHC				LR	LR		
	comp=Z,230nm,15.9s						
SOKA	**Soboth**	**57.04**	**324** *eP*	P	**P**	**10 05 35.6**	**+1.7**
	comp=Z,2.2nm,0.6s						
ARSA	**Arzberg**	**57.05**	**324** *eP*	P	**P**	**10 05 34.4**	**+0.4**
	comp=Z,6.2nm,0.9s						
SONM	**Songino Array**	**57.07**	**35** P	P	**P**	**10 05 34.5**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=251,slow=4.4,SNR=2.2						
SONM				LR	LR	10 30 58.4	
	comp=Z,173nm,18.6s,baz=203,slow=37						
CONA	**Conrad Observa**	**57.22**	**325** *eP*	P	**P**	**10 05 36.1**	**+0.9**
	comp=Z,7.2nm,1.2s						
OBKA	**Obir**	**57.24**	**323** *eP*	P	**P**	**10 05 36.5**	**+1.1**
	comp=Z,4.7nm,0.8s						
MORC	**Moravsky Berou**	**57.33**	**328** *eP*	P	**P**	**10 05 35.1**	**-0.8**
MORC	**Moravsky Berou**	**57.33**	**328** P	P	**P**	**10 05 35.4**	**-0.5**
KRUC	**Moravsky**	**57.54**	**327** *eP*	P	**P**	**10 05 36.9**	**-0.5**
KLMR	**Klimovskoe**	**57.56**	**348** *eP*	P	**P**	**10 05 38.9**	**+1.6**
KLMR				AMP		10 05 54.6	
	comp=Z,17nm,1.5s						
VRAC	**Vranov**	**57.57**	**327** *eP*	P	**P**	**10 05 37.2**	**-0.4**
MYKA	**Terra Mystica**	**57.84**	**323** *eP*	P	**P**	**10 05 39.4**	**-0.3**
	comp=Z,6.2nm,0.9s						
KRLC	**Kraliky**	**57.90**	**328** *eP*	P		10 05 46.2	+6.2
MOA	**Molin**	**58.09**	**325** *eP*	P	**P**	**10 05 41.4**	**+0.1**
	comp=Z,16nm,1.1s						
KBA	**Koelnbreinsper**	**58.24**	**323** *eP*	P	**P**	**10 05 42.6**	**+0.1**
	comp=Z,11nm,1.3s						
ABTA	**Abfaltersbach**	**58.57**	**323** *eP*	P	**P**	**10 05 44.7**	**-0.1**
	comp=Z,9.4nm,1.2s						
TOA0	**Torodi Ar. Sit**	**59.10**	**282** P	P	**P**	**10 05 48.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**59.10**	**282** P	P	**P**	**10 05 49.9**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=101,slow=5.6,SNR=6.6						
TORD				LR	LR	10 30 12.7	
	comp=Z,47nm,20.9s,baz=110,slow=35						
TORD	**Torodi Ar. Bea**	**59.10**	**282** P	P	**P**	**10 05 49.9**	**+1.0**
KHC	**Kasperske Hory**	**59.14**	**326** *eP*	P		10 05 54.6	+6.0
WTTA	**Wattenberg**	**59.35**	**323** *eP*	P	**P**	**10 05 52.0**	**+1.7**
	comp=Z,12nm,1.2s						
KAPI	**Kappang**	**59.39**	**99** P	P	**P**	**10 05 51.1**	**+0.2**
WATA	**Walderalm**	**59.42**	**323** *eP*	P	**P**	**10 05 51.0**	**+0.3**
	comp=Z,11nm,1.3s						
SQTA	**Sankt Quirin**	**59.58**	**323** *eP*	P	**P**	**10 05 53.0**	**+1.2**
	comp=Z,1.8nm,0.4s						
MOTA	**Moosalm**	**59.70**	**323** *eP*	P	**P**	**10 05 53.5**	**+0.8**
	comp=Z,11nm,1.1s						
NJ2	**Nanjing**	**59.80**	**56** *eP*	P	**P**	**10 05 52.3**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CLL	**Collm**	**60.59**	**328** *eP*	P	**P**	**10 05 57.0**	**-1.5**
GRA1	**Grafenberg Arr**	**60.76**	**325** P	P	**P**	**10 05 58.2**	**-1.5**
FINES	**FINESS Array B**	**61.62**	**342**	LR	LR	10 34 37.2	
	comp=Z,100nm,21.2s,baz=154,slow=38						
DAV	**Davao City (W)**	**63.95**	**85**	LR	LR	10 33 12.0	
	comp=Z,32nm,20.1s,baz=303,slow=35						
NWAO	**Narrogin (SRO)**	**65.42**	**130**	LR	LR	10 29 51.9	
	comp=Z,59nm,18.4s,baz=58,slow=31						
DBIC	**Dimbokro**	**65.66**	**275**	LR	LR	10 33 55.6	
	comp=Z,72nm,21.3s,baz=88,slow=35						
NRIK	**Noril'sk**	**66.03**	**10**	LR	LR	10 37 58.7	
	comp=Z,157nm,19.9s,baz=200,slow=38						
NOA	**NORSAR Array B**	**66.72**	**336**	LR	LR	10 37 47.0	
	comp=Z,53nm,21.1s,baz=115,slow=38						
FITZ	**Fitzroy Crossi**	**67.73**	**112**	LR	LR	10 30 28.6	
	comp=Z,58nm,19.2s,baz=218,slow=31						
ARCES	**ARCESS Array B**	**68.03**	**347**	LR	LR	10 38 48.4	
	comp=Z,48nm,21.2s,baz=60,slow=38						
KSRS	**Korea Array**	**68.21**	**52** P	P	**P**	**10 06 48.6**	**0.0**
	comp=Z,1.1nm,0.8s,baz=258,slow=7.3,SNR=1.9						
KSRS				LR	LR	10 38 41.6	
	comp=Z,57nm,18.4s,baz=264,slow=38						
USRK	**Ussuriysk Ar.**	**72.40**	**45**	LR	LR	10 40 37.8	
	comp=Z,149nm,19.2s,baz=256,slow=37						
MAW	**Mawson**	**72.98**	**179**	LR	LR	10 31 25.2	
	comp=Z,127nm,21.1s,baz=64,slow=29						
KLR	**Kul'dur**	**73.15**	**40**	LR	LR	10 40 49.5	
	comp=Z,104nm,19.8s,baz=220,slow=37						
WRA	**Warramunga Arr**	**76.16**	**112**	P	**P**	**10 07 36.8**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=293,slow=4.2,SNR=9.6						
WRA	**Warramunga Arr**	**76.16**	**112**	P	**P**	**10 07 36.8**	**+0.2**
WRAB	**Tennant Creek**	**76.17**	**112**	P	**P**	**10 07 37.2**	**+0.6**
WRAB				IAmb	IAmb	10 07 45.2	
	comp=Z,11nm,1.0s						
WB2	**Warramunga Arr**	**76.17**	**112**	P	**P**	**10 07 36.6**	**0.0**
WB2				IAmb	IAmb	10 07 45.1	
	comp=Z,11nm,0.9s						
MJAR	**Matsushiro Arr**	**76.28**	**54**	LR	LR	10 43 38.5	
	comp=Z,22nm,18.2s,baz=205,slow=38						
WR0	**Warramunga Arr**	**76.35**	**112**	P	**P**	**10 07 38.2**	**+0.5**
WR0				IAmb	IAmb	10 07 46.6	
	comp=Z,14nm,1.2s						
ASAR	**Alice Springs**	**76.51**	**116**	P	**P**	**10 07 39.4**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=283,slow=5.0,SNR=14						
ASAR	**Alice Springs**	**76.51**	**116**	P	**P**	**10 07 39.2**	**+0.6**
AS31	**Alice Springs**	**76.51**	**116**	P	**P**	**10 07 39.1**	**+0.5**
JAY	**Jayapura**	**79.80**	**94**	LR	LR	10 45 42.1	
	comp=Z,34nm,18.7s,baz=221,slow=38						
STKA	**Stephens Creek**	**84.78**	**123**	LR	LR	10 44 22.7	
	comp=Z,75nm,18.1s,baz=206,slow=34						
PETK	**Petropavlovsk-**	**89.50**	**37**	LR	LR	10 51 52.3	
	comp=Z,105nm,18.2s,baz=278,slow=38						
NRS	**Narsarsuaq**	**93.11**	**332**	P	**P**	**10 09 01.9**	**+0.2**
VNDA	**Vanda**	**97.68**	**168**	LR	LR	10 47 49.2	
	comp=Z,180nm,18.4s,baz=336,slow=32						
TXAR	**Lajitas Array**	**142.40**	**338**	PKhKP	PKPpre	10 15 17.5	
	comp=Z,0.8nm,1.1s,baz=69,slow=3.0,SNR=3.2						

*JMA **28** 10:16:27.7,29.81N×140.96E,h105km,M4.0*
*IDC **28** 10:16:28.4±5.0,29.59N×139.78E,h158km±53km,mb3.3/3, mb1 3.4/4,mb1mx3.0/46,mbtmp3.7/4,Error ellipse: s-maj=211.6km s-min=28.9km az=85.0*

ISC 28 10:16:24.0±1.0,29.52N±0.07×140.1E±0.2,h100km,n12, σ2s36/17,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**3.05**	**142**	P	**Pn**	**10 17 13.1**	**+2.6**
CBIJ				*eS*	**Sn**	**10 17 48.1**	**+1.8**
JHCJ	**Hachijojimakas**	**3.55**	**356**	*eS*	**Sn**	**10 17 59.3**	**+1.1**
JHJ2	**Mitsune**	**3.59**	**357**	*eS*	**Sn**	**10 18 00.9**	**+1.8**
JHJ	**Hachijo jima 2**	**3.60**	**356**	S	**Sn**	**10 18 02.7**	**+3.4**
	18nm,0.3s,baz=252,slow=23,SNR=1.5						
BSO1	**Boso 1**	**5.18**	**8**	P	**Pn**	**10 17 39.5**	**+0.9**
BSO1				*eS*	**Sn**	**10 18 34.4**	**-2.4**
BSO3	**Boso 3**	**5.28**	**4**	P	**Pn**	**10 17 41.6**	**+1.3**
BSO3				*eS*	**Sn**	**10 18 36.9**	**-2.8**
BSO4	**Boso 4**	**5.46**	**2**	P	**Pn**	**10 17 44.8**	**+1.9**
BSO4				*eS*	**Sn**	**10 18 43.5**	**-0.8**
JOD2	**Odawara 2**	**5.79**	**352**	P	**Pn**	**10 17 51.0**	**+3.6**
MJAR	**Matsushiro Arr**	**7.17**	**348**	P	**Pn**	**10 18 09.0**	**+2.7**
	0.3nm,0.3s,baz=161,slow=11,SNR=14						
KLR	**Kul'dur**	**20.68**	**344**	P	**P**	**10 20 54.5**	**-1.4**
	2.4nm,0.5s,baz=163,slow=8.6,SNR=10						
WRA	**Warramunga Arr**	**49.48**	**187**	P	**P**	**10 25 03.1**	**-1.3**
	0.6nm,0.4s,baz=5.1,slow=7.6,SNR=22						
WRA				PcP	**PcP**	**10 26 22.6**	**-2.4**
	0.3nm,0.5s,baz=2.5,slow=4.3,SNR=1.8						
ASAR	**Alice Springs**	**53.21**	**187**	P	**P**	**10 25 30.6**	**-1.5**
	0.4nm,0.3s,baz=359,slow=4.8,SNR=22						

*IDC **28** 10:18:58.3±2.2,38.28N×141.39E,h90km±20km,mb3.4/6, mb1 3.5/10,mb1mx3.3/56,mbtmp3.7/10,Error ellipse: s-maj=24.5km s-min=14.9km az=101.0*
*JMA **28** 10:18:58.1,38.22N×141.21E,h76km±1km,M3.8*
JMA Felt I J1.
*NIED **28** 10:18:58.2,38.22N×141.21E,h76km,MW3.7,Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}1.26; $M_{\theta\theta}$-0.30; $M_{\phi\phi}$-0.95; $M_{r\theta}$-1.32; $M_{\theta\phi}$-0.45; $M_{\phi r}$-2.90; Fault plane solution: $M_0$3.42000×10^{14} NP1: ϕ_s205.00000°,δ80.00000°,λ89.00000°. NP2:ϕ_s31.00000°,δ59.00000°,λ94.00000°. Principal axes: T 3.2590, Plg76.0000°, Azm314.0000°; N -0.7000, Plg4.0000°, Azm209.0000°; P -2.5660, Plg13.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **28** 11:32:12.3±0.0,17.45S×173.18W,h37km,mB5.4/9, mb5.0/19,Ms5.1/5,Ms7 4.7/3*

ISC 28 11:32:07.7±0.4,17.71S±0.07×173.03W±0.09,h10km, n169,σ1s50/156,mb4.9/55,MS4.3/22,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.25**	**115**	P	Pn	11 32 49.0	-10
	baz=2.8,SNR=51						
NIUE				S	Sn	11 33 20.6	-17
	baz=2.8						
NIUE	**Niue**	**3.25**	**115**		Pn	11 32 49.5	-9.3
AFI	**Afiamalu**	**3.96**	**18**		Pn	11 33 01.3	-7.4
MSVF	**Nonsavu**	**8.50**	**268**		**Pn**	**11 34 10.9**	**-0.1**
RAO	**Raoul Island**	**12.33**	**200**	LR	LR	11 39 26.7	
	comp=Z,392nm,19.9s,baz=26,slow=36						
RAR	**Rarotonga**	**12.98**	**108**	Pn	Pn	11 35 03.1	-9.2
	5.1nm,0.3s,baz=266,slow=12,SNR=9.1						
RAR				LR	LR	11 39 23.2	
	comp=Z,1μm,19.3s,baz=256,slow=34						
RAR	**Rarotonga**	**12.98**	**108**		Pn	11 35 02.7	-10
KNTN	**Kanton**	**14.90**	**5**	Pn	**Pn**	**11 35 36.0**	**-2.6**
DZM	**Mont Dzumac**	**19.78**	**254**	P	**Pn**	**11 36 39.4**	**-0.4**
	0.2nm,0.3s,baz=93,slow=22,SNR=3.1						
DZM				LR	LR	11 43 18.4	
	comp=Z,910nm,18.8s,baz=82,slow=34						
DZM	**Mont Dzumac**	**19.78**	**254** *eP*	P	**Pn**	**11 36 42.9**	**+3.1**
	78nm,1.4s						
DZM				*eLR*	LR	11 41 37.8	
	comp=Z,629nm,22.0s						
DZM	**Mont Dzumac**	**19.78**	**254**	P	**P**	**11 36 38.0**	**-0.3**
OUZ	**Omahuta**	**21.11**	**212**	P	**P**	**11 36 52.5**	**-0.1**
OUZ				IAmb	IAmb	11 36 58.8	
	comp=Z,48nm,1.1s						
URZ	**Urewera**	**22.22**	**201**	P	**P**	**11 37 05.0**	**+0.6**
	comp=Z,73nm,0.8s,baz=15,slow=7.1,SNR=18						
URZ				S	**S**	**11 41 00.2**	**-8.8**
	comp=Z,8.2nm,1.0s,baz=167,slow=18,SNR=1.5						
PAE	**Paea**	**22.34**	**93** *eT*		T	11 59 17.1	
	comp=Z,1.9nm,0.3s						
PPT2	**Papeete2**	**22.35**	**93** *eLQ*		LQ	11 41 16.8	
	comp=Z,529nm,23.2s						
PPT2				*eLR*	LR	11 42 12.9	
	comp=Z,524nm,21.0s,baz=255						
PPT2	**Papeete2**	**22.35**	**93** *eT*		T	11 59 18.6	
	comp=Z,2.2nm,0.3s						
PPT	**Papeete**	**22.35**	**93**	LR	LR	11 44 09.3	
	comp=Z,892nm,18.1s,baz=258,slow=32						
TBI	**Tubuai**	**22.76**	**108** *eLQ*		LQ	11 41 31.5	
	comp=Z,546nm,24.8s						
TBI				*eLR*	LR	11 42 28.2	
	comp=Z,808nm,27.8s,baz=286						
BKZ	**Black Stump Fm**	**23.25**	**201**	P	**P**	**11 37 15.8**	**+0.5**
BKZ				IAmb	IAmb	11 37 21.1	
	comp=Z,29nm,0.9s						
HIZ	**Hauiti**	**23.27**	**205**	P	**P**	**11 37 17.8**	**+2.2**
MEH	**Mehetia**	**23.77**	**94** *eT*		T	12 01 04.8	
	comp=Z,11nm,0.2s						
BFZ	**Birch Farm**	**24.69**	**200**	P	**P**	**11 37 30.9**	**+1.9**
BFZ				IAmb	IAmb	11 37 34.3	
	comp=Z,29nm,0.9s						
SNZO	**South Karori**	**25.77**	**202**	P	**P**	**11 37 39.2**	**+0.5**
TUWZ	**Tuamarina**	**26.15**	**203**	P	**P**	**11 37 45.2**	**+3.0**
NNZ	**Nelson**	**26.18**	**204**	P	**P**	**11 37 43.2**	**+0.8**
HNR	**Honiara**	**27.50**	**284**	LR	LR	11 47 16.9	
	comp=Z,890nm,18.0s,baz=131,slow=33						
OXZ	**Oxford**	**28.50**	**203**	P	**P**	**11 38 04.8**	**+1.5**
LHI	**Lord Howe Isla**	**28.76**	**236**	P	**P**	**11 38 07.8**	**+2.2**
	baz=29,SNR=3.1						
RPZ	**Rata Peaks**	**29.21**	**204**	P	P	11 38 15.8	+6.3
	comp=Z,21nm,0.6s,baz=33,slow=13,SNR=11						
WKZ	**Wanaka**	**30.94**	**205**	P	**P**	**11 38 27.3**	**+2.4**
CTAO	**Charters Tower**	**38.53**	**260**	P	**P**	**11 39 29.8**	**-0.9**
CMSA	**Cobar Meteorol**	**39.73**	**242**	P	**P**	**11 39 39.4**	**-1.3**
	baz=40,SNR=6.4						
COEN	**Coen**	**42.23**	**269**	P	**P**	**11 40 01.0**	**-0.5**
STKA	**Stephens Creek**	**43.23**	**242**	P	**P**	**11 40 08.6**	**-0.9**
	comp=Z,6.7nm,1.0s,baz=65,slow=7.5,SNR=8.3						

*IDC **28** 10:35:27.0±5.5,36.21N×70.47E,h180km±50km,mb3.2/6, mb1 3.3/9,mb1mx3.0/45,mbtmp3.7/9,Error ellipse: s-maj=41.1km s-min=27.0km az=30.0*
*NNC **28** 10:35:34.3±8.1,36.87N×70.45E,h189km±118km,mb2.8, mpv3.9,Error ellipse: s-maj=78.7km s-min=49.9km az=1.0*

ISC 28 10:35:30.3±1.2,36.6N±0.1×70.6E±0.1,h204km,n19, σ1s24/23,mb3.3/5,1C-5D,Hindu Kush region

*IDC **28** 11:32:06.4±0.6,17.73S×172.99W,h0km,mb4.4/18, mb1 4.6/19,mb1mx4.5/27,mbtmp4.4/19,ML3.7/1,MS4.3/21, Ms1 4.3/21,ms1mx4.2/33,Error ellipse: s-maj=21.1km s-min=15.1km az=122.0*
*NEIC **28** 11:32:07.7±2.2,17.5S±0.1×173.1W±0.1,h10km±1km, mb4.9/73,Error ellipse: s-maj=21.2km s-min=15.7km az=145.0*
*GCMT **28** 11:32:11.7±0.3,17.81S±0.03×172.47W±0.02,h21km, MW4.9/98,Moment Tensor Solution. s45,c53; s98,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.93±.13; $M_{\theta\theta}$-0.99±.09; $M_{\phi\phi}$-1.95±.08; $M_{r\theta}$0.83±.16; $M_{\theta\phi}$-0.62±.05; $M_{\phi r}$1.04±.14; Best double couple: $M_0$2.91200×10^{16} NP1:ϕ_s203.00000°,δ32.00000°,λ83.00000°. NP2: ϕ_s31.00000°,δ58.00000°,λ97.00000°. Principal axes: T 3.2590, Plg76.0000°, Azm314.0000°; N -0.7000, Plg4.0000°, Azm209.0000°; P -2.5660, Plg13.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC 28 10:36:38.4±1.8,1.33N×126.41E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.4/42,mbtmp3.7/4,Error ellipse: s-maj=178.8km s-min=22.3km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.53**	**160**	P	P	10 41 40.2	+0.1
	2.2nm,0.5s,baz=339,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**25.90**	**164**	P	P	10 42 12.2	-0.1
	0.4nm,0.3s,baz=342,slow=8.0,SNR=18						
MKAR	**Makanchi Array**	**59.34**	**326**	P	P	10 46 42.4	0.0
	0.3nm,0.5s,baz=121,slow=7.0,SNR=2.7						
KURBB	**Kurchatov Arra**	**63.58**	**328**	P	P	10 47 10.9	-0.1
	0.4nm,0.5s,baz=127,slow=6.4,SNR=3.8						

STKA LR LR 11 57 21.0
comp=Z,525nm,18.2s,baz=49,slow=35
STKA Stephens Creek 43.23 242 P **P** **11 40 08.5 -0.9**
baz=44,SNR=4.8
STKA Stephens Creek 43.23 242 P **P** **11 40 09.1 -0.3**
BBOO Buckleboo 48.00 242 P **P** **11 40 46.6 -0.5**
baz=49,SNR=6.7
BBOO Buckleboo 48.00 242 P **P** **11 40 46.4 -0.7**
WR0 Warramunga Arr 49.51 259 **P** **11 40 57.9 -1.0**
WB0 Warramunga Arr 49.67 259 **P** **11 40 59.0 -1.2**
WB0 IAmb IAmb 11 41 02.1
comp=Z,12nm,0.8s
WB2 Warramunga Arr 49.69 259 **P** **11 40 58.6 -1.7**
WB2 IAmb IAmb 11 41 14.1
comp=Z,11nm,0.8s
WRAB Tennant Creek 49.69 259 P **P** **11 40 57.0 -3.3**
WRAB IAmb IAmb 11 41 23.2
comp=Z,13nm,0.9s
WRA Warramunga Arr 49.70 259 P **P** **11 40 59.1 -1.2**
comp=Z,5.1nm,0.7s,baz=96,slow=7.0,SNR=89
WRA PcP **PcP** **11 42 23.2 +1.6**
comp=Z,1.7nm,0.9s,baz=91,slow=4.3,SNR=1.9
WRA LR LR 12 02 41.6
comp=Z,605nm,18.2s,baz=90,slow=37
WRA Warramunga Arr 49.70 259 P **P** **11 40 58.3 -2.1**
AS31 Alice Springs 49.77 254 **P** **11 40 59.4 -1.5**
AS31 IAmb IAmb 11 41 01.7
comp=Z,9.2nm,0.7s
ASAR Alice Springs 49.77 254 P **P** **11 41 00.2 -0.7**
comp=Z,32nm\,0.7s,baz=89,slow=8.4,SNR=279
ASAR PcP **PcP** **11 42 22.6 +0.7**
comp=Z,2.3nm,0.8s,baz=104,slow=4.2,SNR=1.0
ASAR LR LR 12 01 50.6
comp=Z,269nm,18.1s,baz=97,slow=36
ASAR Alice Springs 49.77 254 P **P** **11 40 59.1 -1.8**
KDU Kakadu 52.68 267 P **P** **11 41 21.8 -1.0**
baz=53,SNR=4.0
MTN Manton Dam 53.92 267 P **P** **11 41 30.9 -1.1**
baz=55,SNR=4.5
MTN Manton Dam 53.92 267 P **P** **11 41 30.3 -1.7**
MTN IAmb IAmb 11 41 50.2
comp=Z,14nm,1.1s
FORT Forrest 54.72 245 P **P** **11 41 36.4 -1.1**
WRKA Warakurna 54.77 252 P **P** **11 41 37.6 -0.5**
baz=55,SNR=19
KNRA Kununurra 55.60 263 P **P** **11 41 43.6 -0.5**
baz=56,SNR=7.5
KNRA Kununurra 55.60 263 P **P** **11 41 42.7 -1.4**
KNRA IAmb IAmb 11 41 45.2
comp=Z,20nm,1.1s
FITZ Fitzroy Crossi 58.11 259 P **P** **11 42 01.9 0.0**
baz=59,SNR=5.4
FITZ Fitzroy Crossi 58.11 259 P **P** **11 42 01.4 -0.5**
VNDA Vanda 61.13 186 P **P** **11 42 21.6 -0.2**
comp=Z,1.8nm,1.0s,baz=16,slow=5.5,SNR=7.0
VNDA LR LR 12 05 06.7
comp=Z,134nm,19.7s,baz=338,slow=32
VNDA Vanda 61.13 186 P **P** **11 42 24.1 +2.3**
PSA00 Pilbara Seismi 62.91 254 P **P** **11 42 35.0 +0.3**
PSA00 Pilbara Seismi 62.91 254 P **P** **11 42 34.1 -0.5**
PSA00 IAmb IAmb 11 42 35.6
comp=Z,8.8nm,0.9s
MEEK Meekatharra 63.29 249 P **P** **11 42 36.5 -0.7**
baz=64,SNR=3.1
NWAO Narrogin (SRO) 63.82 242 P **P** **11 42 40.4 -0.1**
NWAO IAmb IAmb 11 42 45.4
comp=Z,13nm,1.1s
MORW Morawa 65.24 246 P **P** **11 42 50.1 +0.1**
MJAR Matsushiro Arr 70.92 320 P **P** **11 43 25.5 +0.1**
comp=Z,5.9nm,1.0s,baz=162,slow=5.7,SNR=7.5
MJAR LR LR 12 09 36.7
comp=Z,126nm,21.6s,baz=130,slow=32
MJAR Matsushiro Arr 70.92 320 P **P** **11 43 25.8 +0.5**
QSPA South Pole Qui 72.35 180 P **P** **11 43 34.3 +0.6**
comp=Z,4.0nm,1.0s,baz=63,slow=6.8,SNR=8.3
QSPA South Pole Qui 72.35 180 P **P** **11 43 35.2 +1.5**
QSPA IAmb IAmb 11 43 37.6
comp=Z,20nm,1.4s
PETK Petropavlovsk- 74.92 342 P **P** **11 43 48.5 -0.2**
comp=Z,4.3nm,0.9s,baz=126,slow=7.3,SNR=3.4
PETK LR LR 12 14 25.9
comp=Z,82nm,18.6s,baz=150,slow=34
PETK Petropavlovsk- 74.92 342 P **P** **11 43 48.6 0.0**
NVAR Mina Array Bea 75.81 41 P **P** **11 43 53.9 -0.5**
comp=Z,1.5nm,0.7s,baz=229,slow=9.2,SNR=10.0
NVAR Mina Array Bea 75.81 41 P **P** **11 43 53.8 -0.6**
NV11 Mina Array Sit 75.90 41 P **P** **11 43 55.1 +0.2**
NV11 IAmb IAmb 11 44 07.7
comp=Z,15nm,1.4s
PAHR Pah Rah Range 75.91 40 P **P** **11 43 56.0 +1.2**
PAHR IAmb IAmb 11 44 23.9
comp=Z,14nm,1.5s
214A Organ Pipe Nat 75.92 50 P **P** **11 43 55.3 +0.3**
TPH Tonopah 76.28 42 P **P** **11 43 57.0 -0.1**
KVN Kaiserville 76.31 41 P **P** **11 43 56.7 -0.5**
SHPR Sheep Range 76.74 45 P **P** **11 43 59.9 +0.2**
PRN Pahroc Range 77.31 44 P **P** **11 44 03.9 +1.1**
PRN IAmb IAmb 11 44 29.6
comp=Z,13nm,1.4s
TUC Tucson 77.58 50 P **P** **11 44 04.1 -0.3**
KSM Kuching 77.75 276 **P** **11 44 03.9 -1.8**
KSRS Korea Array 78.05 316 P **P** **11 44 08.3 +1.5**
comp=Z,8.3nm,1.0s,baz=138,slow=6.3,SNR=13
KSRS LR LR 12 16 02.7
comp=Z,53nm,19.8s,baz=117,slow=34
KSAR Wonju Array Be 78.07 316 P **P** **11 44 04.5 -2.3**
X16A Lo Mia Camp, P 78.18 48 P **P** **11 44 08.2 +0.4**
LCMT Little Creek M 78.30 45 P **P** **11 44 08.6 +0.3**
PSUT Pine Spring 78.73 43 P **P** **11 44 13.7 +2.9**
ELK Elko 79.08 41 P **P** **11 44 11.4 -1.2**
USRK Ussuriysk Ar. 79.43 323 P **P** **11 44 14.6 +0.4**
comp=Z,1.9nm,0.9s,baz=134,slow=8.3,SNR=4.1
USRK LR LR 12 13 38.7
comp=Z,171nm,21.0s,baz=130,slow=31
TMUT Trail Mountain 80.88 44 P **P** **11 44 23.0 +0.5**
HLID Hailey 81.19 39 P **P** **11 44 23.6 -0.3**
MNTX Cornudas Mount 81.32 53 P **P** **11 44 24.9 +0.2**
GHO Glory Hole Cre 81.51 11 P **P** **11 44 24.5 -0.5**
GHO IAmb IAmb 11 44 38.4
comp=Z,16nm,1.1s
TXAR Lajitas Array 81.61 56 P **P** **11 44 26.6 +0.2**
comp=Z,1.1nm,0.9s,baz=242,slow=5.3,SNR=7.3
TXAR LR LR 12 14 32.0
comp=Z,91nm,18.9s,baz=0.0,slow=31
NJ2 Nanjing 81.83 307 *eP* **P** **11 44 27.3 -0.1**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
PV12 Saucer Basin, 81.99 46 P **P** **11 44 26.9 -1.5**
PV12 IAmb IAmb 11 44 41.4
comp=Z,24nm,1.4s
ANMO Albuquerque 82.01 50 P **P** **11 44 28.5 -0.1**
ANMO IAmb IAmb 11 44 42.9
comp=Z,14nm,1.4s
PV01 Paradox Valley 82.06 46 P **P** **11 44 29.1 +0.3**
RND Reindeer 83.03 11 P **P** **11 44 31.9 -1.0**
RND IAmb IAmb 11 44 45.9
comp=Z,14nm,1.2s
S22A 4UR Ranch, Cre 83.07 47 P **P** **11 44 34.8 +0.6**
S22A IAmb IAmb 11 44 47.4
comp=Z,19nm,1.4s
CN2 Changchun 83.07 320 *eP* **P** **11 44 34.8 +1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
REDW Red Top Meadow 83.25 41 P **P** **11 44 32.6 -2.2**
REDW IAmb IAmb 11 44 47.5
comp=Z,18nm,1.4s
LOHW Long Hollow 83.53 40 P **P** **11 44 34.6 -1.6**
LOHW IAmb IAmb 11 44 48.9
comp=Z,15nm,1.4s
LRM Limekiln Ridge 83.61 38 P **P** **11 44 34.2 -2.5**
BWN Browne 83.63 10 P **P** **11 44 34.0 -2.0**
BW06 Boulder Array 83.74 42 P **P** **11 44 36.9 -0.5**
BW06 IAmb IAmb 11 45 02.0
comp=Z,12nm,1.4s
PD31 Pinedale Array 83.75 42 P **P** **11 44 35.4 -2.0**
PD31 IAmb IAmb 11 45 02.0
comp=Z,12nm,1.5s
PDAR Pinedale Array 83.75 42 P **P** **11 44 37.3 -0.1**
comp=Z,0.8nm,0.8s,baz=217,slow=4.7,SNR=6.6
PDAR LR LR 12 17 12.8
comp=Z,171nm,18.4s,baz=298,slow=32
PDAR Pinedale Array 83.75 42 P **P** **11 44 36.0 -1.4**
YHL Hebgen Lake 83.83 39 P **P** **11 44 37.3 -0.6**
BOZ Bozeman (W) 83.97 38 P **P** **11 44 36.8 -1.5**
BOZ IAmb IAmb 11 44 51.8
comp=Z,14nm,1.4s
YHH Holmes Hill 84.00 39 P **P** **11 44 38.4 -0.3**
WRH Wood River Hil 84.14 11 P **P** **11 44 37.8 -0.8**
DOT Dot Lake 84.17 13 P **P** **11 44 37.8 -0.9**
DOT IAmb IAmb 11 44 49.4
comp=Z,10nm,1.1s
HDA Harding Lake 84.29 11 P **P** **11 44 38.7 -0.6**
CCB Clear Creek Bu 84.35 11 P **P** **11 44 38.9 -0.8**
CCB IAmb IAmb 11 44 50.5
comp=Z,13nm,1.1s
TCOL CIGO, UAF Yank 84.55 11 P **P** **11 44 40.3 -0.4**
COLA College 84.55 11 P **P** **11 44 40.4 -0.2**
MDM Murphy Dome 84.57 10 P **P** **11 44 37.6 -3.1**
IL31 84.63 11 P **P** **11 44 40.0 -1.0**
IL31 IAmb IAmb 11 44 52.0
comp=Z,14nm,1.4s
ILAR Eielson Array 84.63 11 P **P** **11 44 40.5 -0.6**
comp=Z,1.7nm,0.8s,baz=226,slow=5.9,SNR=16
ILAR LR LR 12 18 12.6
comp=Z,143nm,20.4s,baz=208,slow=33
ILAR Eielson Array 84.63 11 P **P** **11 44 39.9 -1.2**
IMAR Indian Mountai 84.70 8 P **P** **11 44 40.6 -0.8**
POKR Poker Plat Res 84.85 11 P **P** **11 44 41.4 -0.8**
POKR IAmb IAmb 11 44 52.5
comp=Z,18nm,1.1s
DAWY Dawson 85.56 14 P **P** **11 44 45.7 -0.1**
DAWY IAmb IAmb 11 44 56.8
comp=Z,8.6nm,1.0s
MAW Mawson 85.73 199 P **P** **11 44 47.5 +0.8**
comp=Z,1.8nm,0.8s,baz=92,slow=7.9,SNR=2.2
MAW LR LR 12 22 30.4
comp=Z,349nm,18.5s,baz=77,slow=35
BILL Bilibino 86.83 352 P **P** **11 44 50.7 -1.2**
BILL IAmb IAmb 11 44 53.3
comp=Z,11nm,1.0s
BJI Beijing 87.31 313 P **P** **11 44 56.5 +1.6**
BJI S **S** **11 55 31.3 -3.9**
BJI pmax pmax
comp=Z,12nm,1.0s
BJI LR LR
comp=Z,170nm,4.1s
BMAR Burnt Mountain 87.44 11 P **P** **11 44 55.4 +0.5**
PLCA Paso Flores 87.71 132 LR LR 12 17 18.9
comp=Z,215nm,18.2s,baz=273,slow=31
TOLK Toolik Lake Re 87.76 8 P **P** **11 44 56.0 -0.5**
TOLK IAmb IAmb 11 44 58.8
comp=Z,7.7nm,1.3s
GYA Guiyang 89.43 298 *eP* **P** **11 45 08.0 +2.6**
GYA pmax pmax
comp=Z,10.0nm,1.2s
VNA3 Neumayer Olymp 90.54 175 P **P** **11 45 09.2 -0.5**
SNAA Sanae 90.59 177 P **P** **11 45 09.8 -0.2**
HHC Hu-ho-hao-te 90.85 313 SKS S 11 56 21.8 +13
HHC pmax pmax
comp=Z,27nm,1.4s
HHC pmax pmax
comp=Z,180nm,7.7s
HHC LR LR
comp=N,210nm,17.2s
HHC LR LR
comp=E,250nm,18.0s
HHC LR LR
comp=Z,150nm,17.9s
YKA Yellowknife Ar 92.06 23 P **P** **11 45 16.9 +0.2**
comp=Z,0.7nm,0.8s,baz=231,slow=4.1,SNR=4.2
CMAR Chiang Mai Arr 93.67 288 P **P** **11 45 27.0 +1.9**
comp=Z,2.1nm,0.8s,baz=92,slow=3.1,SNR=16
LZH Lanzhou 94.87 306 *eP* **P** **11 45 32.0 +1.5**
LZH pP pwP 11 45 43.5 +6.6
LZH sP sP 11 45 47.8 +14
LZH PP **PP** **11 49 22.3 +2.7**
LZH pmax pmax
comp=Z,20nm,1.4s
LZH pmax pmax
comp=Z,89nm,5.3s
LZH LR LR
comp=Z,170nm,17.3s
LZH LR LR
comp=Z,180nm,17.0s
LZH LR LR
comp=Z,250nm,19.7s
ULM Lac du Bonnet 95.50 39 LR LR 12 26 18.2
comp=Z,344nm,18.2s,baz=277,slow=34
SONM Songino Array 96.79 318 P **P** **11 45 40.8 +1.9**
comp=Z,0.2nm,0.4s,baz=86,slow=4.5,SNR=1.6
SONM LR LR 12 23 25.2
comp=Z,86nm,21.6s,baz=164,slow=32
LPAZ La Paz 98.69 110 LR LR 12 21 29.9
comp=Z,112nm,19.6s,baz=258,slow=30
GTA Gaotai 98.89 308 P Pdif 11 45 49.0 +0.4
GTA pP pwP 11 45 57.3 +2.3
GTA sP sP 11 46 02.5 +11
GTA pmax pmax
comp=Z,2.0nm,1.5s
KSP Ksiaz 146.11 349 *e*PKP **PKPab** **11 51 49.0 +0.4**
CLL Colim 146.13 353 *i* PKPbc **PKPab** **11 51 48.1 -0.6**
comp=Z,40nm,1.1s
CLL *i* 11 51 55.1
CLL *e* 11 52 00.0
CHVC Chvalec 146.40 350 *e*PKP **PKPab** **11 51 50.3 +0.5**
OSTC Ostas 146.40 349 *e*PKP **PKPab** **11 51 50.3 +0.5**
BRG Berggiesshubel 146.45 352 *i* PKP **PKPab** **11 51 49.0 -0.8**
comp=Z,38nm,1.4s
DPC Dobruska-Polom 146.58 349 *e*PKP **PKPab** **11 51 50.7 +0.2**
MORC Moravsky Berou 146.89 347 *e*PKP **PKPab** **11 51 50.6 -1.1**
VRAC Vranov 147.53 348 *e*PKP **PKPab** **11 51 53.7 -0.5**
JAVC Velka Javorina 147.73 347 *e*PKP **PKiKP** **11 51 54.4 -0.4**
KRUC Moravsky 147.80 348 *e*PKP **PKPbc** **11 51 53.0 +0.1**
BRTR Keskin Array B 148.14 319 PKPbc **PKiKP** **11 51 55.4 -0.7**
comp=Z,7.7nm,0.9s,baz=174,slow=2.4,SNR=13
BRTR Keskin Array B 148.14 319 PKPbc **PKiKP** **11 51 55.1 -1.0**
KHC Kasperske Hory 148.20 352 *e*PKP **PKPab** **11 51 56.5 -0.4**
KHC *ep*PKP **sPKPab** **11 52 05.0 +4.9**
GERES GERESS Array B 148.46 351 PKPbc **PKiKP** **11 51 55.4 -1.0**
comp=Z,1.6nm,0.8s,baz=29,slow=3.0,SNR=9.1
GERES GERESS Array B 148.46 351 **PKiKP** **11 51 55.1 -1.2**
CONA Conrad Observa 148.99 348 *eP* **PKiKP** **11 51 57.3 -0.2**
comp=Z,6.8nm,1.1s
MOA Molln 149.35 350 *eP* **PKPab** **11 52 02.6 +1.0**
comp=Z,11nm,1.2s
ARSA Arzberg 149.71 348 *eP* **PKiKP** **11 51 58.9 0.0**
comp=Z,3.5nm,1.0s
RETA Reutte 150.14 355 *eP* **PKiKP** **11 51 59.8 -0.1**
comp=Z,11nm,1.2s
KBA Koelnbreinsper 150.24 351 *eP* **PKPab** **11 52 03.1 -2.3**
comp=Z,7.7nm,1.0s
MOTA Moosalm 150.25 354 *eP* **PKiKP** **11 51 59.6 -0.6**
comp=Z,21nm,1.3s
WTTA Wattenberg 150.28 354 *eP* **PKPbc** **11 51 57.6 -1.8**
comp=Z,7.0nm,0.8s
SOKA Soboth 150.35 349 *eP* **PKiKP** **11 51 59.6 -0.7**
comp=Z,8.9nm,1.3s
SQTA Sankt Quirin 150.36 354 *eP* **PKiKP** **11 51 59.9 -0.5**
comp=Z,14nm,1.1s
DAVA Damuels 150.41 356 *eP* **PKiKP** **11 52 00.6 +0.1**
comp=Z,14nm,1.4s
FETA Feichten 150.60 355 *eP* **PKiKP** **11 52 01.0 +0.1**
comp=Z,15nm,1.0s
ABTA Abfaltersbach 150.68 352 *eP* **PKPbc** **11 52 00.1 -0.2**
comp=Z,12nm,1.0s
TORD Torodi Ar. Bea 173.19 131 PKPab **PKPab** **11 53 45.1 -0.6**
comp=Z,2.2nm,1.2s,baz=240,slow=6.0,SNR=3.9
TORD Torodi Ar. Bea 173.19 131 **PKPab** **11 53 44.3 -1.5**

IDC 28 11:38:57.1±501.0, 45.25S×171.75W, h0km, Error ellipse: s-maj=223.3km s-min=93.2km az=102.0, Chatham Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I36NZ	**CHATHAM INFRAS**	**3.64**	**290**	*i*		12 05 50.0	
	baz=111,slow=272,SNR=1.0						
I22FR	**PORTLAGUERRE I2**	**8.92**	**316**	*i*		14 47 30.0	
	baz=151,slow=318,SNR=2.1						
I05AU	**HOBART INFRASO**	**29.16**	**261**	*i*		14 31 55.0	
	baz=111,slow=311,SNR=2.3						
I55US	**WINDLESS BIGHT**	**33.61**	**188**	*i*		15 05 00.0	
	baz=26,slow=340,SNR=2.0						
I07AU	**WARRAMUNGA IN**	**50.86**	**281**	*i*		17 02 20.0	
	baz=134,slow=314,SNR=4.7						

*JMA **28** 11:57:11.8±0.2,39.55N×143.73E,h31km,M4.2*
*IDC **28** 11:57:11.8±0.9,39.50N×143.58E,h0km,mb3.8/11,*
mb1 3.9/16,mb1mx3.8/36,mbtmp3.8/16,ML3.3/5,MS3.8/2,
Ms1 3.9/2,ms1mx2.8/55,Error ellipse: s-maj=21.5km
s-min=17.4km az=128.0
*NIED **28** 11:57:11.8,39.55N×143.73E,h31km,MW3.9,Moment*
Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm;
M_{rr}6.92; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-6.74; $M_{r\theta}$1.39; $M_{r\phi}$-1.79; $M_{\theta\phi}$2.32;
Fault plane solution: $M_0$7.56000×10^{14} NP1:ϕ_s20.00000°,
δ55.00000°,λ97.00000°. NP2:ϕ_s188.00000°,δ35.00000°,
λ80.00000°.
*NEIC **28** 11:57:16.4±2.2,39.46N±0.07×143.38E±0.10,h31km±6km,*
mb4.3/10 Error ellipse: s-maj=13.7km s-min=5.3km
az=132.0

ISC 28 11:57:16.8±0.7, 39.57N±0.05×143.54E±0.07, h35km, n67, σ1ᵍ51/68, mb4.0/14, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.33**	**271**	P	**Pn**	**11 57 37.0**	**-1.9**
MIYJ				*eS*	**Sn**	**11 57 54.9**	**-0.5**
JTH	**Tanohata**	**1.35**	**287**	P	**Pn**	**11 57 37.0**	**-2.1**
OFUJ	**Ofunato**	**1.53**	**252**	P	**Pn**	**11 57 39.7**	**-2.0**
JKEN	**Kujiedanarisaw**	**1.55**	**295**	P	**Pn**	**11 57 39.6**	**-2.2**
JOM	**Ohasama**	**1.74**	**268**	P	**Pn**	**11 57 43.3**	**-1.3**
JANG	**Nango**	**1.75**	**298**	P	**Pn**	**11 57 42.7**	**-2.0**
JANG				*eS*	**Sn**	**11 58 05.9**	**+0.1**
JMK	**Ichinoseki**	**1.91**	**252**	P	**Pn**	**11 57 45.2**	**-1.6**
JMK				*eS*	**Sn**	**11 58 09.5**	**0.0**
JIO	**Ouri**	**2.04**	**238**	P	**Pn**	**11 57 46.4**	**-2.2**
JTM	**Tenmabayashi**	**2.25**	**304**	Pn	**Pn**	**11 57 51.0**	**-0.5**
ERM	**Erimo**	**2.46**	**353**	Pn	**Pn**	**11 57 54.7**	**+0.3**
JYK	**Kaneyama**	**2.56**	**256**	P	**Pn**	**11 57 54.8**	**-0.9**
JOT	**Ohata**	**2.63**	**314**	P	**Pn**	**11 57 55.7**	**-1.0**
JMM	**Marumori**	**2.74**	**233**	Pn	**Pn**	**11 57 56.0**	**-2.3**
JNBK	**Urakawa-nobuka**	**2.77**	**348**	P	**Pn**	**11 57 58.5**	**-0.2**
JNBK				*eS*	**Sn**	**11 58 31.5**	**+0.5**
JCH	**Churui**	**3.05**	**357**	S	**Sn**	**11 58 36.1**	**-1.6**
JFT	**Otama**	**3.24**	**232**	P	**Pn**	**11 58 03.6**	**-1.6**
JFT				*eS*	**Sn**	**11 58 41.9**	**-0.6**
JAK	**Akkeshi**	**3.53**	**14**	*eS*	**Sn**	**11 58 47.5**	**-2.2**
JEW	**Eniwo**	**3.63**	**335**		**Pn**	**11 58 12.2**	**+1.8**
JYT	**Yasato**	**4.26**	**219**		**Pn**	**11 58 16.2**	**-2.9**
JSD	**Sado**	**4.40**	**251**	Pn	**Pn**	**11 58 20.2**	**-0.9**
JKA	**Kamikawa-asahi**	**4.60**	**352**		**Pn**	**11 58 24.1**	**+0.3**
ASAJ	**Asahikawa**	**4.60**	**351**	Pn	**Pn**	**11 58 23.7**	**-0.1**
	2.6nm,0.3s,baz=199,slow=13,SNR=32						
ASAJ				Sn	**Sn**	**11 59 10.8**	**-5.1**
	2.4nm,0.3s,baz=191,slow=18,SNR=4.3						
MAJO	**Matsushiro**	**5.18**	**236**		**Pn**	**11 58 31.2**	**-0.7**
MAT	**Matsushiro**	**5.18**	**236**	P	**Pn**	**11 58 31.6**	**-0.3**
MAT				*eS*	**Sn**	**11 59 34.3**	**+3.9**
MJAR	**Matsushiro Arr**	**5.18**	**236**	Pn	**Pn**	**11 58 31.6**	**-0.3**
	1.0nm,0.3s,baz=38,slow=12,SNR=65						
MJAR	**Matsushiro Arr**	**5.18**	**236**		**Pn**	**11 58 31.1**	**-0.8**
MJB9	**Matsu-Tunnel**	**5.18**	**236**		**Pn**	**11 58 29.4**	**-2.4**
JGF	**Kuroka**	**6.31**	**233**		**Pn**	**11 58 46.6**	**-0.7**
INU	**Inuyama**	**6.68**	**233**		**Pn**	**11 58 50.7**	**-1.7**
JWT	**Wachi**	**7.76**	**239**	Pn	**Pn**	**11 59 07.4**	**+0.1**
USRK	**Ussuriysk Ar.**	**9.78**	**302**	Pn	**Pn**	**11 59 36.4**	**+1.6**
	baz=97,slow=13,SNR=8.8						
USRK	**Ussuriysk Ar.**	**9.78**	**302**		**Pn**	**11 59 37.5**	**+2.6**
KSRS	**Korea Array**	**12.42**	**265**	Pn	**Pn**	**12 00 12.6**	**+1.6**
	0.3nm,0.3s,baz=119,slow=32,SNR=2.3						
KLR	**Kul'dur**	**12.81**	**323**	Pn	**Pn**	**12 00 16.4**	**+0.2**
	0.1nm,0.3s,baz=95,slow=23,SNR=1.9						
SEY	**Seymchan**	**24.00**	**10**	P	**P**	**12 02 28.4**	**+0.5**
	3.9nm,0.8s,baz=188,slow=10.0,SNR=5.9						
SONM	**Songino Array**	**27.88**	**300**	P	**P**	**12 03 03.6**	**+0.3**
	1.2nm,0.6s,baz=91,slow=9.1,SNR=6.3						
SONM	**Songino Array**	**27.88**	**300**	P	**P**	**12 03 03.5**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**28.19**	**128**	T	T	12 32 30.6	
	baz=316,slow=75						
H11N1	**WAKE ISLAND Hy**	**28.20**	**128**	T	T	12 32 32.5	
	baz=316,slow=75						
H11N3	**WAKE ISLAND Hy**	**28.21**	**128**	T	T	12 32 31.5	
	baz=316,slow=75						
H11S1	**WAKE ISLAND Hy**	**29.01**	**130**	T	T	12 33 36.9	
	baz=322						
H11S3	**WAKE ISLAND Hy**	**29.01**	**130**	T	T	12 33 37.6	
	baz=322						
H11S2	**WAKE ISLAND Hy**	**29.02**	**130**	T	T	12 33 38.1	
	baz=322						
ZAA0	**Zalesovo Array**	**41.50**	**310**	P	**P**	**12 05 00.5**	**+0.3**
ZALV	**Zalesovo Beam**	**41.50**	**310**	P	**P**	**12 05 00.5**	**+0.2**
	2.1nm,0.6s,baz=85,slow=7.2,SNR=9.1						
ZALV				PcP	**PcP**	**12 06 57.9**	**+0.6**
	0.7nm,0.5s,baz=90,slow=1.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**41.50**	**310**	P	**P**	**12 05 00.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**43.77**	**254**	P	**P**	**12 05 19.1**	**0.0**
	0.6nm,0.4s,baz=43,slow=8.3,SNR=4.4						
CMAR				LR	LR	12 23 44.2	
	comp=Z,60nm,19.3s,baz=145,slow=36						
CMAR	**Chiang Mai Arr**	**43.77**	**254**	P	**P**	**12 05 17.7**	**-1.5**
MK31	**Makanchi Array**	**44.24**	**300**	P	**P**	**12 05 22.3**	**-0.3**
MKAR	**Makanchi Array**	**44.24**	**300**	P	**P**	**12 05 22.6**	**0.0**
	1.9nm,0.7s,baz=82,slow=9.8,SNR=11						
MKAR	**Makanchi Array**	**44.24**	**300**	P	**P**	**12 05 22.3**	**-0.3**
KURK	**Kurchatov**	**45.73**	**306**	P	**P**	**12 05 34.3**	**-0.1**
KURK				IAmb	IAmb	12 05 52.3	
	comp=Z,4.2nm,0.9s						
ILAR	**Eielson Array**	**46.46**	**34**	P	**P**	**12 05 39.3**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=267,slow=6.4,SNR=5.3						
ILAR	**Eielson Array**	**46.46**	**34**	P	**P**	**12 05 40.6**	**+0.6**
BRVK	**Borovoye**	**50.19**	**311**	P	**P**	**12 06 09.2**	**+0.4**
BRVK				IAmb	IAmb	12 06 09.9	
	comp=Z,2.3nm,0.9s						
INK	**Inuvik**	**51.37**	**28**	P	**P**	**12 06 18.6**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=308,slow=6.4,SNR=5.1						
INK	**Inuvik**	**51.37**	**28**	P	**P**	**12 06 19.0**	**+1.6**
INK				IAmb	IAmb	12 06 48.0	
	comp=Z,13nm,1.6s						
ABKAR	**Akbulak array**	**57.60**	**310**	P	**P**	**12 07 02.8**	**-0.2**
ABKAR				IAmb	IAmb	12 07 03.9	
	comp=Z,1.7nm,0.7s						
WB0	**Warramunga Arr**	**59.64**	**190**	P	**P**	**12 07 16.1**	**-1.3**
WR0	**Warramunga Arr**	**59.81**	**190**	P	**P**	**12 07 17.1**	**-1.4**
WRA	**Warramunga Arr**	**59.82**	**190**	P	**P**	**12 07 17.2**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=11,slow=6.9,SNR=1.9						
WRA	**Warramunga Arr**	**59.82**	**190**	P	**P**	**12 07 16.5**	**-2.2**
ASAR	**Alice Springs**	**63.55**	**190**	P	**P**	**12 07 43.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=356,slow=5.9,SNR=1.8						
FINES	**FINESS Array B**	**67.35**	**332**	P	**P**	**12 08 07.5**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=44,slow=5.8,SNR=3.8						
FINES	**FINESS Array B**	**67.35**	**332**	P	**P**	**12 08 07.8**	**0.0**
NVAR	**Mina Array Bea**	**72.14**	**55**	P	**P**	**12 08 40.4**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=307,slow=5.4,SNR=3.7						
ESDC	**Sonseca Array**	**95.72**	**335**	LR	LR	13 00 36.6	
	comp=Z,66nm,18.8s,baz=305,slow=40						

*UPP **28** 12:13:41.4±0.1,58.99N×18.21E,h0km,ML2.5,Explosion*
*HEL **28** 12:13:42.2±0.1,58.99N×18.20E,h0km,ML2.2,*
ML2.5(UPP),Explosion
*BER **28** 12:13:43.7±4.4,59.05N×18.24E,h0km,ML1.5,*
ML2.3(NAO),Suspected explosion
*NAO **28** 12:13:44.1±1.9,59.16N×18.07E,ML2.3*
*IDC **28** 12:13:45.6±2.0,59.30N×18.03E,h0km,mb1 3.1/4,*
mb1mx2.9/52,mbtmp3.0/4,ML2.1/4,Error ellipse:
s-maj=29.9km s-min=6.3km az=1.0

ISC 28 12:13:40.9±0.7, 58.99N±0.02×18.19E±0.02, h0km, n74, σ1ᵍ15/106, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRTU	**Norrtaelje**	**0.73**	**18**	P	**Pg**	**12 13 55.0**	**+0.2**
NRTU				S	**Sg**	**12 14 04.6**	**+0.4**
NRTU	**Norrtaelje**	**0.73**	**18**	*i* P	**Pg**	**12 13 55.0**	**+0.2**
NRTU				*i* S	**Sg**	**12 14 04.6**	**+0.4**
NRTU	**Norrtaelje**	**0.73**	**18**	P	**Pg**	**12 13 55.0**	**+0.2**
NRTU				S	**Sg**	**12 14 04.6**	**+0.4**
VIKU	**Vikbolandet**	**0.92**	**238**	P	**Pg**	**12 13 58.8**	**+0.4**
VIKU	**Vikbolandet**	**0.92**	**238**	*eP*	**Pg**	**12 13 58.8**	**+0.4**
VIKU	**Vikbolandet**	**0.92**	**238**	P	**Pg**	**12 13 58.8**	**+0.4**
UPP	**Uppsala**	**0.92**	**342**	P	**Pg**	**12 13 58.7**	**+0.3**
UPP	**Uppsala**	**0.92**	**342**	*eP*	**Pg**	**12 13 58.7**	**+0.3**
ESKU	**Eskilstuna**	**0.96**	**285**	P	**Pg**	**12 13 59.2**	**+0.1**
ESKU	**Eskilstuna**	**0.96**	**285**	*eP*	**Pg**	**12 13 59.2**	**+0.1**
ESKU	**Eskilstuna**	**0.96**	**285**	P	**Pg**	**12

BACU	**Backbrunna**	**1.03**	**328**	*e*P		**Pg**	**12 14 00.7**	**+0.1**
BACU	**Backbrunna**	**1.03**	**328**	P		**Pg**	**12 14 00.7**	**+0.1**
FLYU	**Flymyra**	**1.15**	**352**	P		**Pg**	**12 14 03.0**	**+0.1**
FLYU	**Flymyra**	**1.15**	**352**	*e*P		**Pg**	**12 14 03.0**	**+0.1**
FLYU	**Flymyra**	**1.15**	**352**	P		**Pg**	**12 14 03.0**	**+0.1**
GOTU	**Gotland**	**1.32**	**171**	P		**Pg**	**12 14 05.7**	**-0.5**
GOTU	**Gotland**	**1.32**	**171**	*e*P		**Pg**	**12 14 05.6**	**-0.5**
GOTU				*e*S		**Sg**	**12 14 23.2**	**-0.1**
GOTU	**Gotland**	**1.32**	**171**	P		**Pg**	**12 14 05.7**	**-0.5**
OSTU	**Oestervaala**	**1.35**	**337**	P		**Pg**	**12 14 06.6**	**-0.2**
OSTU	**Oestervaala**	**1.35**	**337**	*e*P		**Pg**	**12 14 06.6**	**-0.2**
OSTU	**Oestervaala**	**1.35**	**337**	P		**Pg**	**12 14 06.6**	**-0.2**
GRAU	**Graesoe**	**1.36**	**7**	P		**Pg**	**12 14 06.8**	**-0.2**
GRAU	**Graesoe**	**1.36**	**7**	*e*P		**Pg**	**12 14 06.8**	**-0.2**
GRAU	**Graesoe**	**1.36**	**7**	P		**Pg**	**12 14 06.8**	**-0.2**
FORU	**Forsmark**	**1.40**	**360**	P		**Pn**	**12 14 07.5**	**-0.1**
FORU	**Forsmark**	**1.40**	**360**	*e*P		**Pn**	**12 14 07.5**	**-0.1**
FORU	**Forsmark**	**1.40**	**360**	P		**Pn**	**12 14 07.5**	**-0.1**
AAL	**Aland**	**1.51**	**37**	P		**Pn**	**12 14 09.1**	**+0.1**
AAL	**Aland**	**1.51**	**37**	*e*P		**Pn**	**12 14 09.1**	**+0.1**
AAL				*e*S		**Sg**	**12 14 28.3**	**-0.9**
VSTU	**Vaestervik**	**1.59**	**214**	P		**Pb**	**12 14 10.9**	**-0.2**
VSTU	**Vaestervik**	**1.59**	**214**	*e*P		**Pb**	**12 14 10.9**	**-0.2**
VSTU	**Vaestervik**	**1.59**	**214**	P		**Pb**	**12 14 10.9**	**-0.2**
LNKU	**Linkoeping**	**1.60**	**242**	P		**Pb**	**12 14 10.8**	**-0.4**
LNKU	**Linkoeping**	**1.60**	**242**	*e*P		**Pb**	**12 14 10.8**	**-0.4**
LNKU	**Linkoeping**	**1.60**	**242**	P		**Pb**	**12 14 10.8**	**-0.4**
NRAU	**Nora**	**1.72**	**291**	P		**Pb**	**12 14 12.9**	**-0.3**
NRAU	**Nora**	**1.72**	**291**	*e*P		**Pb**	**12 14 12.9**	**-0.3**
NRAU	**Nora**	**1.72**	**291**	P		**Pb**	**12 14 12.9**	**-0.3**
HFC2	**Hagfors New Ar**	**2.56**	**299**	*e*P		**Pb**	**12 14 25.7**	**-1.9**
HFC2				*e*S		**Sn**	**12 14 55.7**	**+0.4**
HFC2				*e*SB		**Sb**	**12 14 58.8**	**-0.8**
HFS	**Hagfors**	**2.56**	**299**	Pn		**Pn**	**12 14 25.4**	**+1.9**
	0.9nm,0.3s,baz=118,slow=15,SNR=56							
HFS				Lg		Lg	12 14 57.5	
	5.5nm,0.3s,baz=117,slow=29,SNR=33							
HFS	**Hagfors**	**2.56**	**299**	Pn		**Pb**	**12 14 25.7**	**-1.9**
	baz=117,slow=16							
HFS				Lg		Lg	12 14 59.1	
	baz=121,slow=37							
HFS	**Hagfors**	**2.56**	**299**	Pn		**Pb**	**12 14 25.7**	**-1.9**
	baz=117,slow=16							
HFS				Sg		**Sb**	**12 14 59.1**	**-0.5**
	baz=121,slow=37							
RAF	**Rauma**	**2.72**	**40**	*e*P		**Pn**	**12 14 27.1**	**+1.4**
RAF				MSG			12 15 10.5	
	comp=Z,9.0nm,0.2s							
ARNU	**Arnoeviken**	**2.74**	**352**	*e*P		**Pn**	**12 14 26.5**	**+0.4**
ARNU				*e*S		**Sn**	**12 15 00.0**	**+0.2**
MTSE	**Matsula**	**2.94**	**93**	*e*P		**Pn**	**12 14 29.6**	**+0.9**
MTSE				*e*S		**Sn**	**12 15 04.9**	**+0.2**
MEF	**Metsahovi**	**3.39**	**66**	*e*P		**Pn**	**12 14 35.9**	**+1.0**
MEF				MSG			12 15 36.7	
	comp=Z,8.1nm,0.2s							
DEL	**Delary**	**3.43**	**224**	*i* P		**Pn**	**12 14 37.0**	**+1.5**
DEL				*i* S		**Sn**	**12 15 18.0**	**+1.4**
DEL				IAML			12 15 31.9	
	comp=Z,1.4nm,0.3s							
FABU	**Falkenberg**	**3.53**	**238**	*i* P		**Pn**	**12 14 38.5**	**+1.6**
TJOU	**Tjoern**	**3.57**	**257**	*e*P		**Pn**	**12 14 39.1**	**+1.7**
NUR	**Nurmijrvi**	**3.61**	**62**	*e*P		**Pn**	**12 14 39.0**	**+1.1**
NUR				*e*S		**Sn**	**12 15 21.6**	**+0.4**
NUR				MSG			12 15 42.3	
	comp=Z,3.2nm,0.2s							
STRU	**Stroemstad**	**3.62**	**274**	*e*P		**Pn**	**12 14 37.3**	**-0.8**
ONAU	**Onsala**	**3.68**	**247**	*i* P		**Pn**	**12 14 41.1**	**+2.1**
HEMU	**Hemsoen**	**3.70**	**359**	*e*P		**Pn**	**12 14 40.2**	**+1.0**
HEMU				*e*S		**Sn**	**12 15 23.4**	**0.0**
NRA0	**NORESS Array S**	**3.78**	**300**	Pn		**Pn**	**12 14 41.3**	**+0.9**
	baz=108,slow=11							
NRA0				Pg		**Pb**	**12 14 49.5**	**+1.1**
	baz=110,slow=18							
NRA0				Sn		**Sn**	**12 15 28.6**	**+3.1**
	baz=104,slow=18							
NRA0				Lg		Lg	12 15 39.6	
	baz=117,slow=37							
NRA0	**NORESS Array S**	**3.78**	**300**	Pn		**Pn**	**12 14 41.3**	**+0.9**
	baz=108,slow=11							
NRA0				Pg		**Pb**	**12 14 49.5**	**+1.1**
	baz=110,slow=18							
NRA0				Sn		**Sn**	**12 15 28.6**	**+3.1**
	baz=104,slow=18							
NRA0				Sg		**Sg**	**12 15 39.6**	**-2.6**
	baz=117,slow=37							
NB2	**NORSAR Subarra**	**4.06**	**303**	Pn		**Pn**	**12 14 45.4**	**+1.2**
	baz=127,slow=14							
NB2				Pg		**Pb**	**12 14 54.2**	**+1.0**
	baz=119,slow=16							
NB2				Sn		**Sn**	**12 15 33.7**	**+1.3**
NB2				Lg		Lg	12 15 48.7	
	baz=116,slow=28							
NB2	**NORSAR Subarra**	**4.06**	**303**	Pn		**Pn**	**12 14 45.4**	**+1.2**
	baz=127,slow=14							
NB2				Pg		**Pb**	**12 14 54.2**	**+1.0**
	baz=119,slow=16							
NB2				Sn		**Sn**	**12 15 33.7**	**+1.3**
NB2				Sg		**Sg**	**12 15 48.7**	**-2.4**
	baz=116,slow=28							
NOA	**NORSAR Array B**	**4.06**	**303**	Pn		**Pn**	**12 14 44.4**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=122,slow=12,SNR=12							
NOA				Pg		**Pb**	**12 14 53.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=114,slow=3.1,SNR=12							
NOA				Lg		Lg	12 15 44.8	
	comp=Z,0.1nm,0.3s,baz=256,slow=15,SNR=8.3							
PVF	**Pernaja**	**4.18**	**65**	MSG			12 15 58.5	
	comp=Z,3.9nm,0.2s							
BSD	**Bornholm Skovb**	**4.28**	**206**	*e*		**Pn**	**12 14 45.9**	**-1.2**
	baz=46,slow=11							
BSD				*i* P		**Pn**	**12 14 47.6**	**+0.5**
BSD				IAML			12 15 56.7	
	comp=Z,4.0nm,0.3s							
BSD	**Bornholm Skovb**	**4.28**	**206**	*e*		**Pn**	**12 14 45.9**	**-1.2**
	baz=46,slow=11							
BSD				*i* P		**Pn**	**12 14 47.6**	**+0.5**
BSD				IAML			12 15 56.7	
	comp=Z,4.0nm,0.3s							
FIA0	**FINESS Array S**	**4.64**	**55**	Pn		**Pn**	**12 14 53.9**	**+1.8**
	baz=247,slow=14							
FIA0				Pg		**Pb**	**12 15 04.5**	**+1.4**
	baz=249,slow=16							
FIA0				Sn		**Sn**	**12 15 47.2**	**+0.6**
	baz=246,slow=28							
FIA0				Lg		Lg	12 16 05.4	
	baz=248,slow=28							
FIA0	**FINESS Array S**	**4.64**	**55**	Pn		**Pn**	**12 14 53.9**	**+1.8**
	baz=247,slow=14							
FIA0				Pg		**Pb**	**12 15 04.5**	**+1.4**
	baz=249,slow=16							
FIA0				Sn		**Sn**	**12 15 47.2**	**+0.6**
	baz=246,slow=28							
FIA0				Sg		**Sg**	**12 16 05.4**	**-4.4**
	baz=248,slow=28							
FINES	**FINESS Array B**	**4.64**	**55**	Pn		**Pn**	**12 14 53.9**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=247,slow=13,SNR=23							
FINES				Pg		**Pb**	**12 15 04.3**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=240,slow=14,SNR=9.5							
FINES				Sn		**Sn**	**12 15 46.7**	**0.0**
	comp=Z,1.1nm,0.3s,baz=246,slow=22,SNR=10.0							
FINES				Lg		Lg	12 16 03.2	
	comp=Z,1.6nm,0.3s,baz=246,slow=24,SNR=11							
APA0	**Apatity Array**	**10.88**	**31**	Pn		**Pn**	**12 16 16.9**	**-0.6**
APA0	**Apatity Array**	**10.88**	**31**	Pn		**Pn**	**12 16 16.9**	**-0.6**
ARA0	**ARCESS Array S**	**11.04**	**14**	Pn		**Pn**	**12 16 17.8**	**-2.0**
	baz=193,slow=14							
ARA0	**ARCESS Array S**	**11.04**	**14**	Pn		**Pn**	**12 16 17.8**	**-2.0**
	baz=193,slow=14							
ARCES	**ARCESS Array B**	**11.04**	**14**	Pn		**Pn**	**12 16 17.8**	**-2.1**
	baz=195,slow=13,SNR=11							

*IDC **28** 12:21:00.8±3.9, 5°.36N×61°.22E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/45, mbtmp3.6/6, MS3.7/5, Ms1 3.7/5, ms1mx3.1/51, Error ellipse: s-maj=110.0km s-min=33.2km az=77.0*

ISC 28 12:21:02.8±3.7, 5°.4N±0°.3×61°.3E±0°.6, h10km, n11, σ1°.39/6, mb3.5/6, MS3.8/5, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**31.09**	**260**	LR	LR	12 40 45.8	
	comp=Z,35nm,18.5s,baz=80,slow=38						
LSZ	**Lusaka**	**38.71**	**237**	LR	LR	12 43 52.7	
	comp=Z,61nm,19.7s,baz=148,slow=36						
CMAR	**Chiang Mai Arr**	**38.95**	**67**	P	**P**	**12 28 30.1**	**+0.7**
	0.3nm,0.3s,baz=276,slow=9.0,SNR=1.5						
MATP	**Matopo**	**41.20**	**230**	LR	LR	12 45 21.5	
	comp=Z,121nm,18.1s,baz=100,slow=36						
MKAR	**Makanchi Array**	**45.03**	**20**	P	**P**	**12 29 17.7**	**-1.0**
	0.6nm,0.9s,baz=206,slow=9.5,SNR=3.1						
LBTB	**Lobatse**	**46.04**	**227**	LR	LR	12 45 45.4	
	comp=Z,114nm,20.1s,baz=129,slow=32						
ZALV	**Zalesovo Beam**	**52.03**	**17**	P	**P**	**12 30 14.2**	**+1.7**
	0.5nm,0.7s,baz=224,slow=6.0,SNR=2.1						
SONM	**Songino Array**	**57.13**	**35**	P	**P**	**12 30 48.9**	**-0.9**
	0.1nm,0.3s,baz=232,slow=7.1,SNR=2.4						
DBIC	**Dimbokro**	**65.75**	**275**	LR	LR	13 00 39.0	
	comp=Z,145nm,18.4s,baz=204,slow=36						
WRA	**Warramunga Arr**	**76.04**	**112**	P	**P**	**12 32 50.5**	**-0.6**
	1.1nm,0.9s,baz=288,slow=5.9,SNR=5.7						
ASAR	**Alice Springs**	**76.39**	**116**	P	**P**	**12 32 53.2**	**+0.2**
	0.9nm,0.8s,baz=271,slow=6.3,SNR=7.2						

IDC 28 12:21:04.4±1.8, 5°.21S×146°.04E, h0km, mb3.2/2, mb1 3.5/4, mb1mx3.3/34, mbtmp3.3/4, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/13, Error ellipse: s-maj=67.6km s-min=30.8km az=110.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.31**	**165**	Pn	Pn	12 22 11.4	0.0
	2.5nm,0.3s,baz=343,slow=11,SNR=6.3						
PMG				Sn	Sn	12 22 49.9	-12
	3.5nm,0.3s,baz=12,slow=22,SNR=6.8						
CTA	**Charters Tower**	**14.79**	**179**	LR	LR	12 30 00.2	
	comp=Z,256nm,21.7s,baz=166,slow=36						
WRA	**Warramunga Arr**	**18.55**	**217**	P	Pn	12 25 23.0	0.0
	0.1nm,0.3s,baz=37,slow=9.8,SNR=6.9						
ASAR	**Alice Springs**	**21.76**	**211**	P	P	12 25 57.6	-0.2
	0.2nm,0.3s,baz=46,slow=8.6,SNR=4.3						
ILAR	**Eielson Array**	**85.14**	**23**	P	P	12 33 42.5	+0.3
	0.2nm,0.6s,baz=251,slow=4.9,SNR=1.9						
TORD	**Torodi Ar. Bea**	**143.97**	**285**	PKP	PKPbc	12 40 41.6	+0.7
	0.5nm,0.8s,baz=70,slow=3.0,SNR=2.3						

*THE **28** 12:24:51.6, 39°.35N×18°.72E, h7km±3km, ML2.8/7, Error ellipse: s-maj=5.6km s-min=1.1km az=330.0*

ISC 28 12:24:51.2±2.5, 39°.32N±0°.08×18°.71E±0°.07, h7km±14km, n14, σ0°.88/24, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEK	**Kerkira**	**0.93**	**65**	P	**Pg**	**12 25 09.1**	**+0.1**
KEK				S	**Sb**	**12 25 22.0**	**-0.2**
	465nm,0.4s						
SRN	**Sarande**	**1.15**	**60**	P	**Pg**	**12 25 12.7**	**-0.4**
SRN				S	**Sb**	**12 25 28.2**	**-0.1**
	215nm,0.7s						
TSLK	**Tsoukalades, L**	**1.59**	**107**	P	**Pn**	**12 25 19.3**	**-0.5**
TSLK				S	**Sb**	**12 25 41.7**	**+0.4**
	242nm,0.5s						
NYDR	**Nydri-Lefkada**	**1.67**	**111**	P	**Pn**	**12 25 19.9**	**-0.8**
NYDR				S	**Sn**	**12 25 43.2**	**+0.9**
	265nm,0.6s						
FSK	**Fiskardo**	**1.68**	**120**	P	**Pn**	**12 25 20.0**	**-1.0**
FSK				S	**Sn**	**12 25 43.5**	**+0.8**
	240nm,0.6s						
PDO	**Prodromos**	**2.06**	**110**	P	**Pn**	**12 25 26.1**	**-0.1**
PDO				S	**Sn**	**12 25 52.7**	**+0.6**
	232nm,0.5s						
KPRO	**Kipourio**	**2.15**	**72**	P	**Pn**	**12 25 27.9**	**+0.5**
KPRO				S	**Sn**	**12 25 54.0**	**-0.3**
	138nm,0.8s						
STON	**Ston**	**3.63**	**348**	Sn	**Sn**	**12 26 30.8**	**+0.1**
LSTV	**Lastovo**	**3.71**	**339**	Sn	**Sn**	**12 26 31.7**	**-1.0**
RICI	**Ricice**	**4.33**	**345**	*e*Pn	**Pn**	**12 25 58.0**	**+0.5**
RICI				Sn	**Sn**	**12 26 47.3**	**-0.9**
ZIRJ	**Zirje**	**4.90**	**333**	Sn	**Sn**	**12 27 00.7**	**-1.5**
KIJV	**Kijevo**	**4.99**	**341**	*e*Pn	**Pn**	**12 26 07.9**	**+1.5**
KIJV				Sn	**Sn**	**12 27 03.9**	**-0.4**
MORI	**Morici**	**5.07**	**335**	*e*Pn	**Pn**	**12 26 09.0**	**+1.5**
MORI				Sn	**Sn**	**12 27 05.0**	**-1.2**
DUGI	**Dugi Otok**	**5.41**	**331**	Sn	**Sn**	**12 27 14.0**	**-0.6**

*DDA **28** 12:32:12.4, 39°.32N×29°.02E, h11km±2km, MW3.5*
*ISK **28** 12:32:12.4, 39°.33N×29°.04E, h5km, ML3.5/42*
*THE **28** 12:32:15.5, 39°.20N×29°.07E, h23km±3km, ML3.2/1, Error ellipse: s-maj=4.2km s-min=0.5km az=116.0*

ISC 28 12:32:13.3±0.9, 39°.32N±0°.02×29°.03E±0°.02, h11km±7km, n96, σ0°.82/119, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIMA	**Simav-Kutahya**	**0.24**	**189**	PG	**Pg**	**12 32 18.5**	**+0.1**
SIMA				SG	**Sb**	**12 32 22.7**	**+0.9**
SHAP	**Saphane-Kutahy**	**0.33**	**153**	PG	**Pg**	**12 32 19.9**	**-0.2**
TVSB	**Tavsanli**	**0.36**	**69**	PG	**Pg**	**12 32 19.8**	**-0.7**
GEDZ	**Gediz**	**0.41**	**133**	PG	**Pg**	**12 32 21.1**	**-0.3**
USAK	**Uak-Merkez**	**0.61**	**181**	*i* P	**Pg**	**12 32 25.0**	**-0.1**
USAK				IAML		12 32 33.0	
	comp=E,1μm,0.4s						
USAK				*i* S	**Sg**	**12 32 33.2**	**+0.1**
USAK				IAML		12 32 34.0	
	comp=N,896nm,0.2s						
ANDZ	**Kutahya, Merke**	**0.70**	**74**	*i* P	**Pg**	**12 32 25.8**	**-1.1**
ORLT	**Orhaneli**	**0.73**	**352**	PG	**Pg**	**12 32 27.5**	**0.0**
ULDT	**Uludag**	**0.82**	**6**	*i* P	**Pg**	**12 32 27.8**	**-1.5**
KULA	**Kula-Manisa**	**0.86**	**200**	PG	**Pg**	**12 32 29.4**	**-0.4**
KULA	**Kula-Manisa**	**0.86**	**200**	P	**Pg**	**12 32 29.4**	**-0.4**
KULA				S	**Sg**	**12 32 40.1**	**-0.9**
MANT	**Manisa**	**0.91**	**204**	*i* P	**Pb**	**12 32 30.4**	**-0.8**
MANT				IAML		12 32 42.0	
	comp=E,832nm,0.3s						
MANT				IAML		12 32 42.0	
	comp=N,698nm,0.2s						
MANT				*i* S	**Sg**	**12 32 42.4**	**-0.3**
BALB	**Balikesir**	**0.94**	**290**	PG	**Pb**	**12 32 31.7**	**0.0**
IGD	**Bursa**	**0.95**	**8**	*i* P	**Pb**	**12 32 30.3**	**-1.5**
IGD				*i* S	**Sb**	**12 32 44.0**	**-0.3**
IGD				IAML		12 32 46.0	
	comp=E,762nm,0.4s						
IGD				IAML		12 32 46.0	
	comp=N,1μm,0.4s						
AUBOZ	**BOZOYUK**	**0.97**	**52**	*i* P	**Pb**	**12 32 31.0**	**-1.2**
AUBOZ				*i* S	**Sb**	**12 32 45.2**	**+0.1**
AUBOZ				IAML		12 32 48.0	
	comp=N,2μm,0.4s						
AUBOZ				IAML		12 32 49.0	
	comp=E,1μm,0.4s						
STEP	**BALIKESIR_Sava**	**1.02**	**274**	*i* P	**Pb**	**12 32 32.4**	**-0.5**
STEP				*i* S	**Sb**	**12 32 46.7**	**+0.4**
STEP				IAML		12 32 49.0	
	comp=N,1μm,1.4s						
STEP				IAML		12 32 49.0	
	comp=E,1μm,0.2s						
AKHS	**Akhisar**	**1.04**	**245**	*i* P	**Pb**	**12 32 33.1**	**-0.3**
AKHS				*i* S	**Sb**	**12 32 46.8**	**-0.3**
AKHS				IAML		12 32 49.0	
	comp=E,553nm,0.4s						
AKS	**Akhisar**	**1.04**	**245**	PG	**Pb**	**12 32 32.9**	**-0.5**
GOMA	**Golmarmara-Man**	**1.06**	**235**	PG	**Pb**	**12 32 33.4**	**-0.2**
BILE	**Bilecik/Merkez**	**1.06**	**38**	*i* P	**Pb**	**12 32 32.6**	**-1.1**
BILE				*i* S	**Sb**	**12 32 47.4**	**-0.3**
KHL	**Karahalli**	**1.07**	**159**	PG	**Pn**	**12 32 34.2**	**-0.1**
CAVI	**Cavuskoy**	**1.08**	**35**	PG	**Pb**	**12 32 32.9**	**-1.1**
GEMT	**Gemlik**	**1.12**	**6**	PN	**Pn**	**12 32 34.4**	**-0.5**
AFYO	**Afyonkarahisar**	**1.12**	**118**	*i* P	**Pb**	**12 32 34.5**	**-0.3**
AFYO				*i* S	**Sn**	**12 32 52.7**	**+2.2**
AFYO				IAML		12 32 53.0	
	comp=E,2μm,0.5s						
AFYO				IAML		12 32 54.0	
	comp=N,743nm,0.5s						
AUKIR	**Kirka- Seyitga**	**1.17**	**92**	*i* P	**Pg**	**12 32 35.9**	**+0.2**
AUKIR				*i* S	**Sg**	**12 32 51.2**	**+0.3**
AUKIR				IAML		12 32 59.0	
	comp=N,512nm,0.4s						
BALY	**Balya**	**1.17**	**291**	*i* P	**Pn**	**12 32 35.1**	**-0.5**
BALY				*i* S	**Sb**	**12 32 50.4**	**-0.3**
BALY				IAML		12 32 53.0	
	comp=E,311nm,0.3s						
BALY				IAML		12 32 53.0	
	comp=N,395nm,0.4s						
BORA	**Eskisehir**	**1.23**	**63**	*i* P	**Pn**	**12 32 35.5**	**-1.1**
ADVT	**Abdulvahap**	**1.24**	**26**	PN	**Pn**	**12 32 36.4**	**-0.1**
GONE	**Gonen-Balikesi**	**1.27**	**305**	PN	**Pn**	**12 32 36.8**	**-0.1**
EDC	**Edincik**	**1.36**	**319**	PN	**Pn**	**12 32 38.6**	**+0.4**
KZIL	**AFYON_Kizioren**	**1.37**	**140**	*i* P	**Pb**	**12 32 38.9**	**-0.1**
GPA	**Golpazari**	**1.38**	**45**	PN	**Pb**	**12 32 39.2**	**+0.1**
SHUT	**Suhut-Afyon**	**1.41**	**122**	PN	**Pg**	**12 32 40.7**	**+0.2**
SGAZ	**Eskisehir, Sey**	**1.42**	**81**	*i* P	**Pn**	**12 32 39.1**	**+0.1**
SGAZ				*i* S	**Sb**	**12 32 58.1**	**+0.2**
SGAZ				IAML		12 33 01.0	
	comp=N,399nm,0.4s						
SGAZ				IAML		12 33 02.0	
	comp=E,573nm,0.3s						
SRCK	**Saricakaya, Es**	**1.43**	**59**	PN	**Pb**	**12 32 39.7**	**-0.2**
KNL	**Balıkesir**	**1.50**	**310**	*i* P	**Pn**	**12 32 39.7**	**-0.4**
KNL				*i* S	**Sn**	**12 32 58.8**	**-0.8**
GEYV	**SAKARYA_Geyve**	**1.52**	**40**	*i* P	**Pb**	**12 32 41.2**	**-0.2**
GEYV				*i* S	**Sg**	**12 33 02.5**	**+0.4**
GEYV				IAML		12 33 03.0	
	comp=N,614nm,0.4s						
GEYV				IAML		12 33 05.0	
	comp=E,622nm,0.4s						
ZEDA	**zmir-Bergama**	**1.56**	**257**	*i* P	**Pb**	**12 32 42.2**	**0.0**
ZEDA				*i* S	**Sg**	**12 33 03.9**	**+0.4**
ZEDA				IAML		12 33 05.0	
	comp=E,245nm,0.5s						
ZEDA				IAML		12 33 06.0	
	comp=N,237nm,1.1s						
CIFT	**Cifteler, Eski**	**1.58**	**88**	PN	**Pb**	**12 32 42.7**	**+0.2**
GULT	**Gulveren**	**1.59**	**45**	PN	**Pb**	**12 32 43.3**	**+0.5**
BASM	**Basmaki-Afyon**	**1.61**	**150**	PN	**Pb**	**12 32 42.7**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.64**	**213**	PN	**Pb**	**12 32 43.3**	**-0.3**
MAR9	**Marsite Statio**	**1.65**	**322**	PN	**Pb**	**12 32 44.2**	**+0.5**
DKL	**Dikili**	**1.67**	**262**	PN	**Pb**	**12 32 43.6**	**-0.4**
SPNC	**Sapanca-Adapaz**	**1.68**	**35**	PN	**Pb**	**12 32 44.1**	**-0.1**
MRMT	**Marmara Adasi**	**1.69**	**320**	PN	**Pn**	**12 32 44.1**	**+1.3**
SAUV	**Serdivan-Sakar**	**1.73**	**35**	PN	**Pb**	**12 32 44.9**	**-0.2**
KAVV	**Kandilli-Istan**	**1.74**	**1**	PN	**Pb**	**12 32 45.4**	**+0.2**
ISK	**Istanbul-Kandi**	**1.74**	**1**	PN	**Pn**	**12 32 44.7**	**+1.3**
ISK	**Istanbul-Kandi**	**1.74**	**1**	P	**Pn**	**12 32 44.8**	**+1.3**
ISK				S	**Sb**	**12 33 07.6**	**+0.5**
	comp=N,392nm,0.4s						
BRDR	**BURDUR-Merkez**	**1.81**	**153**	*i* P	**Pn**	**12 32 44.3**	**-0.2**
AYVA	**Ayvalik**	**1.81**	**270**	*i* P	**Pg**	**12 32 48.1**	**0.0**
AYVA				*i* S	**Sn**	**12 33 06.6**	**-0.8**
AYVA				IAML		12 33 13.0	
	comp=E,557nm,0.7s						
AYVA				IAML		12 33 13.0	
	comp=N,496nm,0.5s						
TAVA	**DENIZLI_Tavas**	**1.85**	**183**	*i* P	**Pn**	**12 32 44.3**	**-0.8**
BGKT	**Bogazkoy**	**1.87**	**354**	PN	**Pn**	**12 32 46.5**	**+1.3**
ELBA	**Catalca**	**1.88**	**346**	*i* P	**Pn**	**12 32 44.5**	**-0.9**
AYDN	**Tasoluk**	**1.89**	**209**	*i* P	**Pn**	**12 32 45.0**	**-0.5**
SILT	**Sile**	**1.89**	**14**	PN	**Pn**	**12 32 46.7**	**+1.2**
ISP	**Isparta**	**1.90**	**142**	PN	**Pb**	**12 32 46.9**	**-1.1**
BAGO	**Egridir - ISPA**	**1.91**	**133**	*i* P	**Pn**	**12 32 46.6**	**+0.7**
MAR2	**Marsite Statio**	**1.92**	**317**	PN	**Pn**	**12 32 47.7**	**+1.8**
KAYN	**Sakarya, Kayna**	**1.93**	**31**	*i* P	**Pn**	**12 32 45.5**	**-0.4**
KLYT	**Kilyos**	**1.93**	**0**	PN	**Pn**	**12 32 47.6**	**+1.6**
SVRH	**Sivrihisar-ESK**	**1.94**	**86**	PN	**Pb**	**12 32 47.5**	**-1.1**
AUSIV	**SIVRIHISAR**	**1.95**	**86**	*i* P	**Pb**	**12 32 49.5**	**+0.6**
CTKS	**Kestanelik-??a**	**1.95**	**348**	PN	**Pn**	**12 32 47.9**	**+1.5**
BAYC	**CANAKKALE_Bayr**	**1.96**	**283**	*i* P	**Pn**	**12 32 46.4**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.97**	**314**	PN	**Pn**	**12 32 48.4**	**+1.7**
SART	**Tekirdag**	**1.97**	**314**	*i* P	**Pb**	**12 32 49.0**	**-0.2**
AUMIH	**MIHALIČIK**	**1.97**	**73**	*i* P	**Pb**	**12 32 49.9**	**+0.6**
AUMIH				*i* S	**Sg**	**12 33 17.5**	**+0.7**
AUMIH				IAML		12 33 20.0	
	comp=E,266nm,0.7s						
AUMIH				IAML		12 33 23.0	
	comp=N,277nm,0.7s						
KAND	**Kocaeli-Kandir**	**1.98**	**26**	*i* P	**Pn**	**12 32 46.3**	**-0.4**
SLVT	**Silivri**	**2.01**	**342**	PN	**Pn**	**12 32 48.8**	**+1.7**
MDUB	**Mudurnu**	**2.02**	**55**	PN	**Pb**	**12 32 49.3**	**-0.9**
LPK	**Lapseki**	**2.04**	**302**	PN	**Pn**	**12 32 49.2**	**+1.7**
SAHE	**Sakarya_HENDEK**	**2.07**	**42

AKTO	**Aktyubinsk**	**44.65**	**357**	LR	LR	13 00 54.5	
	comp=Z,115nm,18.3s,baz=151,slow=38						
MKAR	**Makanchi Array**	**44.74**	**20**	P	**P**	**12 41 17.0**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=213,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**44.74**	**20**	P	**P**	**12 41 17.0**	**+0.1**
BOSA	**Boshof**	**48.69**	**224**	LR	LR	12 59 52.8	
	comp=Z,170nm,18.6s,baz=52,slow=33						
ZALV	**Zalesovo Beam**	**51.74**	**17**	P	**P**	**12 42 09.5**	**-1.3**
	comp=Z,0.4nm,0.4s,baz=226,slow=7.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**51.74**	**17**	P	**P**	**12 42 10.4**	**-0.4**
SONM	**Songino Array**	**56.87**	**35**	P	**P**	**12 42 46.5**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=235,slow=5.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**59.16**	**282**	P	**P**	**12 43 05.7**	**+0.7**
	comp=Z,1.9nm,1.1s,baz=97,slow=7.6,SNR=6.0						
TORD				PcP	**PcP**	**12 43 54.0**	**+0.5**
	comp=Z,0.9nm,1.1s,baz=69,slow=2.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**59.16**	**282**	P	**P**	**12 43 05.0**	**+0.1**
DAV	**Davao City (W)**	**63.84**	**85**	LR	LR	13 09 17.0	
	comp=Z,48nm,18.7s,baz=320,slow=34						
KSRS	**Korea Array**	**68.02**	**52**	P	**P**	**12 44 01.0**	**-2.1**
	comp=Z,2.2nm,1.0s,baz=267,slow=7.3,SNR=4.0						
WRA	**Warramunga Arr**	**76.13**	**112**	P	**P**	**12 44 52.8**	**+0.7**
	comp=Z,3.6nm,0.9s,baz=289,slow=5.1,SNR=18						
WRA	**Warramunga Arr**	**76.13**	**112**	P	**P**	**12 44 51.5**	**-0.6**
WB2	**Warramunga Arr**	**76.14**	**112**	P	**P**	**12 44 53.2**	**+1.1**
ASAR	**Alice Springs**	**76.50**	**116**	P	**P**	**12 44 54.7**	**+0.5**
	comp=Z,2.9nm,0.9s,baz=290,slow=5.7,SNR=22						
ASAR	**Alice Springs**	**76.50**	**116**	P	**P**	**12 44 54.6**	**+0.4**
AS31	**Alice Springs**	**76.50**	**116**	P	**P**	**12 44 54.6**	**+0.4**
SNAA	**Sanae**	**87.51**	**197**	LR	LR	13 17 52.3	
	comp=Z,75nm,18.9s,baz=22,slow=31						

*IDC **28** 12:35:57.0±22.0,51.57N×178.04E,h0km,mb3.2/4, mb1 3.7/4,mb1mx3.3/71,mbtmp3.2/4,MS3.3/1,Ms1 3.3/1, ms1mx2.4/26,Error ellipse: s-maj=438.7km s-min=79.9km az=87.0*

*NEIC **28** 12:36:14.6±1.5,51.42N±0.05×178.11W±0.05,h10km±7km, Error ellipse: s-maj=8.3km s-min=3.9km az=157.0*

*AEIC **28** 12:36:16±2.1,51.57N±0.07×178.13W±0.05,h12km±1km, ML3.5/29,mb3.9/13(NEIC),Error ellipse: s-maj=10.3km s-min=3.5km az=161.0*

ISC 28 12:36:14.9±1.7, 51.46N±0.09×177.98W±0.03, h15km±10km, n47, σ0 s93/43, mb3.4/3, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TASE	**Tanaga Southea**	**0.38**	**355**		**Pg**	**12 36 23.0**	**+0.4**
TAFP	**Tanaga Falls P**	**0.44**	**360**		**Pg**	**12 36 23.9**	**+0.2**
TAFP					**Sg**	**12 36 29.9**	**+0.3**
KIMD	**Kanaga Island**	**0.55**	**57**		**Pn**	**12 36 27.3**	**-1.0**
GALAA	**Gareloi Lava P**	**0.58**	**302**		**Pg**	**12 36 25.7**	**-0.5**
KIKV	**Kanaga Island**	**0.66**	**50**		**Pn**	**12 36 28.8**	**-0.9**
KICM	**Kanaga Island**	**0.67**	**47**		**Pn**	**12 36 29.3**	**-0.6**
KICM					**Sn**	**12 36 38.9**	**-1.2**
KIRH	**Kanaga Island**	**0.71**	**51**		**Pn**	**12 36 29.7**	**-0.7**
ADK	**Adak**	**0.91**	**62**		**Pn**	**12 36 33.0**	**-0.3**
ADAG	**Mount Adagdak**	**1.00**	**58**		**Pg**	**12 36 34.9**	**+0.6**
GSTD	**Great Sitkin T**	**1.29**	**62**		**Pg**	**12 36 39.4**	**-0.3**
GSTD					**Sg**	**12 36 58.3**	**+1.8**
GSMY	**Great Sitkin M**	**1.33**	**63**		**Pg**	**12 36 40.0**	**-0.6**
GSTR	**Great Sitkin T**	**1.35**	**61**		**Pg**	**12 36 40.7**	**-0.3**
CERAA	**Semis' Rag'd T**	**1.52**	**288**		**Pn**	**12 36 41.0**	**-0.6**
CESW	**Semis' Southwe**	**1.59**	**287**		**Pn**	**12 36 41.9**	**-0.7**
CESW					**Sn**	**12 37 02.0**	**-0.8**
CEAP	**Semis' Anvil P**	**1.61**	**291**		**Pn**	**12 36 42.7**	**-0.1**
AMKA	**Amchitka**	**1.70**	**268**		**Pn**	**12 36 43.6**	**-0.5**
AMKA					**Sn**	**12 37 04.3**	**-1.3**
LSPA	**Little Sitkin**	**2.20**	**284**		**Pn**	**12 36 51.5**	**+0.5**
LSNW	**Little Sitkin**	**2.24**	**285**		**Pn**	**12 36 51.1**	**-0.4**
ATKA	**Atka Island**	**2.46**	**71**		**Pb**	**12 36 57.1**	**-1.8**
ATKA					**Sb**	**12 37 28.6**	**-0.5**
KOWE	**Korovin West**	**2.48**	**67**		**Pb**	**12 36 57.5**	**-1.7**
KOFP	**Korovin Flat P**	**2.54**	**70**		**Pb**	**12 36 58.8**	**-1.5**
KOSE	**Korovin Southe**	**2.59**	**69**		**Pb**	**12 36 59.7**	**-1.4**
OHAK	**Old Harbor**	**15.46**	**58**	Pn	**Pn**	**12 39 53.1**	**+0.8**
KDAK	**Kodiak Island**	**15.95**	**57**	Pn	**Pn**	**12 39 59.3**	**+0.7**
KDAK				IAmb	IAmb	12 40 14.1	
	comp=Z,22nm,1.4s						
O22K	**Cooper Landing**	**18.07**	**49**		**P**	**12 40 25.8**	**+0.2**
SEW	**Seward**	**18.10**	**50**	Pn	**P**	**12 40 25.6**	**-0.3**
SEW				IAmb	IAmb	12 40 51.6	
	comp=Z,17nm,1.4s						
PMR	**Palmer**	**18.70**	**46**		**Pn**	**12 40 33.3**	**+0.4**
PMR				IAmb	IAmb	12 40 42.0	
	comp=Z,7.5nm,1.4s						
KTH	**Kantishna Hill**	**18.73**	**39**		**Pn**	**12 40 34.6**	**+1.3**
KTH				IAmb	IAmb	12 41 02.4	
	comp=Z,10nm,1.4s						
GHO	**Glory Hole Cre**	**18.86**	**46**		**Pn**	**12 40 35.7**	**+0.8**
GHO				IAmb	IAmb	12 40 53.6	
	comp=Z,4.9nm,0.6s						
IMAR	**Indian Mountai**	**19.04**	**31**	P	**P**	**12 40 36.0**	**-0.1**
RND	**Reindeer**	**19.50**	**41**	P	**Pn**	**12 40 42.8**	**+0.2**
SCM	**Sheep Creek Mo**	**19.59**	**46**	P	**Pn**	**12 40 42.8**	**-0.9**
SCM				IAmb	IAmb	12 40 59.7	
	comp=Z,16nm,1.4s						
FID	**Port Fidalgo**	**19.69**	**50**	P	**P**	**12 40 42.2**	**-1.1**
DHY	**Denali Highway**	**19.99**	**43**	P	Pn	12 40 48.0	-0.4
KLU	**Klutina**	**20.14**	**48**	P	**P**	**12 40 48.7**	**+0.4**
KLU				IAmb	IAmb	12 41 15.8	
	comp=Z,9.4nm,1.4s						
MDM	**Murphy Dome**	**20.43**	**37**	P	Pn	12 40 52.4	-1.1
ILAR	**Eielson Array**	**20.86**	**38**	P	**P**	**12 40 56.5**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=259,slow=11,SNR=1.9						
H11N2	**WAKE ISLAND Hy**	**33.83**	**206**	T	T	13 18 37.8	
	baz=16,slow=76,SNR=24						
H11N3	**WAKE ISLAND Hy**	**33.84**	**206**	T	T	13 18 39.0	
	baz=16,slow=76,SNR=23						
H11N1	**WAKE ISLAND Hy**	**33.84**	**206**	T	T	13 18 38.7	
	baz=16,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**35.05**	**206**	T	T	13 20 09.1	
	baz=16,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	**35.06**	**206**	T	T	13 20 11.1	
	baz=16,slow=76,SNR=29						
H11S3	**WAKE ISLAND Hy**	**35.06**	**206**	T	T	13 20 13.9	
	baz=16,slow=76,SNR=15						
YBH	**Yreka Blue Hor**	**38.36**	**82**	LR	LR	12 58 40.0	
	comp=Z,38nm,20.0s,baz=259,slow=33						
NVAR	**Mina Array Bea**	**43.03**	**83**	P	P	12 44 18.3	+4.3
	comp=Z,0.3nm,0.8s,baz=301,slow=9.1,SNR=2.6						
PDAR	**Pinedale Array**	**45.80**	**73**	P	**P**	**12 44 37.6**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=306,slow=4.9,SNR=3.8						
TXAR	**Lajitas Array**	**58.13**	**82**	P	**P**	**12 46 09.5**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=316,slow=6.3,SNR=2.9						

*GCMT **28** 12:42:05.9±0.3,2.40N±0.02×121.55E±0.02,h44km±1km, MW5.0/90,Moment Tensor Solution. s48,c59; s90,c126; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.80±.15; Mθθ-2.72±.11; Mφφ 1.93±.14; Mrθ 0.06±.11; Mθφ 2.05±.10; Mφr1.44±.15; Best double couple: M0 3.48500×10^16 NP1:φs332.00000°,δ75.00000°,λ155.00000°. NP2: φs332.00000°,δ75.00000°,λ155.00000°. Principal axes: T 3.4250, Plg28.0000°, Azm289.0000°; N 0.1250, Plg61.0000°, Azm124.0000°; P -3.5450, Plg6.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BJI **28** 12:42:06.4±0.0,2.08N×121.39E,h30km,mB5.1/37, mb4.9/51,Ms4.3/23,Ms7 4.0/24*

*DJA **28** 12:42:07.7±0.2,2.7N±2.2×12.1E±.7,h10km,M5.0/25, mB5.4/23,mb5.4/25,MLv5.5/22,Mw(mB)4.9/23,Mwp5.0/6*

*MOS **28** 12:42:07.5±0.8,2.25N×121.50E,h39km,mb5.1/40,Error ellipse: s-maj=9.4km s-min=4.9km az=115.8*

*MAN **28** 12:42:08.3,2.63N×121.85E,h1km,mb5.1,ML4.0,MS4.1*

*NEIC **28** 12:42:09.9±1.9,2.21N±0.04×121.37E±0.05,h44km±5km, mb5.0/67,Error ellipse: s-maj=7.5km s-min=6.2km az=106.0*

*IDC **28** 12:42:10.0±2.0,2.23N×121.47E,h44km±19km,mb4.3/34, mb1 4.4/37,mb1mx4.3/57,mbtmp4.6/37,ML4.8/4,MS3.9/10, Ms1 3.9/10,ms1mx3.5/49,Error ellipse: s-maj=14.5km s-min=9.2km az=75.0*

*KLM **28** 12:42:12.0,2.31N×121.58E,h49km,mb5.2*

ISC 28 12:42:09.3±0.3, 2.26N±0.03×121.47E±0.04, h35km, n362, σ1 s55/386, mb4.9/117, MS3.9/18, 13C-15D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOLI2	**Tolitoli**	**1.34**	**211**		**Pn**	**12 42 30.4**	**-1.1**
TOLI2					Sn	**12 42 46.1**	**-2.0**
MRSI	**Marisa**	**1.83**	**165**	P	**Pn**	**12 42 39.2**	**+0.8**
MRSI				S	**Sn**	**12 43 01.1**	**+0.7**
KMSI	**Cibinong**	**3.02**	**124**	P	**Pn**	**12 42 54.7**	**+0.1**
APSI	**Ampana**	**3.16**	**177**	P	**Pn**	**12 42 57.5**	**+0.9**
LUWI	**Luwuk**	**3.53**	**158**	P	**Pn**	**12 43 04.3**	**+2.6**
LUWI	**Luwuk**	**3.53**	**158**	Pn	**Pn**	**12 43 04.0**	**+2.3**
LUWI					Sn	**12 43 48.1**	**+5.8**
MYLDM	**Lahad Datu**	**4.15**	**314**	Pn	**Pn**	**12 43 11.9**	**+1.8**
MYLDM					Sn	**12 43 55.7**	**-1.8**
SGSI	**Sangihe**	**4.29**	**71**	P	**Pn**	**12 43 11.6**	**-0.5**
ZCP	**Zamboanga City**	**4.68**	**7**	P↓	**Pn**	**12 43 17.6**	**+0.1**
ZCP				S	Sn	**12 44 07.5**	**-3.1**
SKMP	**Bagumbayan, Su**	**5.22**	**36**	eP	**Pn**	**12 43 21.4**	**-3.6**
TTSI	**Tana Toraja**	**5.53**	**197**	P	**Pn**	**12 43 30.2**	**+1.0**
	2.8nm5μm8μm1μm,0.8s						
SPMM	**Sapulut**	**5.56**	**296**	P	**Pn**	**12 43 30.0**	**+0.4**
DDMP	**Don Marcelino,**	**5.69**	**48**	eP	**Pn**	**12 43 29.5**	**-1.9**
DDMP				eS	**Sn**	**12 44 34.7**	**-1.0**
BKB	**Balikpapan**	**5.76**	**233**	P	**Pn**	**12 43 29.8**	**-2.6**
	3.2nm4μm5μm451nm,0.6s						
BKB	**Balikpapan**	**5.76**	**233**	Pn	**Pn**	**12 43 31.1**	**-1.3**
BKB					Sn	**12 44 34.4**	**-2.9**
PAGZ	**Pagadian**	**5.87**	**19**	eP	**Pn**	**12 43 31.2**	**-2.6**
PAGZ				eS	**Sn**	**12 44 32.3**	**-7.6**
KCP	**Kidapawan**	**5.93**	**37**	P↓	**Pn**	**12 43 34.5**	**-0.3**
KCP				i S	**Sn**	**12 44 43.1**	**+1.4**
TNTI	**Ternate**	**6.07**	**104**	P	**Pn**	**12 43 39.8**	**+3.1**
	0.9nm3μm246nm,0.6s						
TNTI	**Ternate**	**6.07**	**104**	Pn	**Pn**	**12 43 39.6**	**+2.9**
KDI	**Kendari**	**6.28**	**169**	P	**Pn**	**12 43 41.6**	**+2.0**
	3.0nm9μm793nm,0.6s						
DAV	**Davao City (W)**	**6.29**	**40**		**Pn**	**12 43 40.9**	**+1.2**
DAV					Sn	**12 44 54.0**	**+3.6**
SPSI	**Sidrap Palu**	**6.42**	**195**	P	**Pn**	**12 43 42.4**	**+1.0**
	1.4nm3μm5μm413nm,0.6s						
KKM	**Kota Kinabalu**	**6.45**	**306**	Pn	**Pn**	**12 43 43.2**	**+1.2**
MATI	**Mati**	**6.66**	**46**	eP	**Pn**	**12 43 42.5**	**-2.3**
MATI				eS	**Sn**	**12 44 58.9**	**-0.6**
BNSI	**Bone**	**6.76**	**192**	P	**Pn**	**12 43 47.8**	**+1.7**
	1.3nm3μm345nm,0.8s						
MTKI	**Muara Teweh, K**	**7.31**	**244**	P	**Pn**	**12 43 53.7**	**+0.1**
	2.3nm5μm305nm,0.4s						
KAPI	**Kappang**	**7.43**	**193**	P	**Pn**	**12 43 55.5**	**+0.2**
	19nm,0.3s,baz=348,slow=5.9,SNR=36						
KAPI					**Sn**	**12 45 18.5**	**+0.1**
	4.3nm,0.3s,baz=4.6,slow=18,SNR=1.0						
KAPI				LR	LR	12 47 10.1	
	comp=Z,1μm,20.5s,baz=342,slow=41						
KAPI	**Kappang**	**7.43**	**193**	Pn	**Pn**	**12 43 55.2**	**-0.2**
CNOP	**Candoni, Negro**	**7.60**	**9**	eP	**Pn**	**12 43 57.0**	**-0.7**
BKSI	**Bulukumba**	**7.65**	**190**	P	**Pn**	**12 43 58.6**	**+0.2**
	0.6nm2μm2μm207nm,0.8s						
KBKI	**Kotabaru**	**7.66**	**224**	P	**Pn**	**12 43 56.7**	**-1.8**
	0.5nm2μm103nm,0.5s						
NLAI	**Namlea**	**7.84**	**134**	P	**Pn**	**12 44 01.9**	**+0.9**
BSSI	**Bau Bau, Buton**	**8.41**	**187**	P	**Pn**	**12 44 09.1**	**+0.3**
	970nm118nm,0.6s						
JAP	**San Jose, Anti**	**8.44**	**3**	eP↓	**Pn**	**12 44 10.0**	**+0.8**
BBKI	**Banjar Baru**	**8.73**	**229**	P	**Pn**	**12 44 12.6**	**-0.6**
	72nm,0.8s						
SBUM	**Sibu**	**9.25**	**271**	Pn	**Pn**	**12 44 19.3**	**-1.0**
SBUM	**Sibu**	**9.25**	**271**	P	**Pn**	**12 44 22.0**	**+1.7**
MSAI	**Masohi**	**9.30**	**127**	P	**Pn**	**12 44 23.0**	**+1.9**
	976nm137nm,0.9s						
SWI	**Sorong**	**10.27**	**108**	P	**Pn**	**12 44 36.6**	**+2.4**
	2μm145nm,0.8s						
BNDI	**Bandanaira**	**10.79**	**129**	P	**Pn**	**12 44 41.9**	**+0.5**
	7μm262nm,1.0s						
MMRI	**Maumere**	**10.85**	**176**	P	**Pn**	**12 44 44.0**	**+1.7**
	2μm94nm,0.9s						
MMRI	**Maumere**	**10.85**	**176**	Pn	**Pn**	**12 44 43.5**	**+1.2**
EDFI	**Ende, Flores**	**10.94**	**179**	P	**Pn**	**12 44 44.0**	**+0.4**
	702nm290nm20nm,0.6s						
KSM	**Kuching**	**11.19**	**266**	Pn	**Pn**	**12 44 46.9**	**+0.1**
KSM	**Kuching**	**11.19**	**266**	P	**Pn**	**12 44 48.0**	**+1.1**
TGY	**Tagaytay City**	**11.78**	**357**	P	**Pn**	**12 44 55.8**	**+0.9**
	64nm,0.3s,baz=211,slow=22,SNR=2.0						
TGY					**Sn**	**12 47 06.1**	**+0.8**
	19nm,0.3s,baz=143,slow=22,SNR=1.1						
TWSI	**Taliwang, Sumb**	**11.85**	**203**	P	**Pn**	**12 44 57.2**	**+1.3**
KMMI	**Kalianget**	**11.90**	**219**	P	Pn	12 45 05.0	+8.3
FAKI	**Fak Fak**	**11.94**	**115**	P	**Pn**	**12 44 56.6**	**-0.6**
FAKI	**Fak Fak**	**11.94**	**115**	Pn	**Pn**	**12 44 57.0**	**-0.2**
WBSI	**Waikabubak, Su**	**12.01**	**190**	P	**Pn**	**12 44 59.9**	**+1.8**
SRBI	**Singaraja**	**12.03**	**211**	P	**Pn**	**12 45 02.3**	**+3.9**
SOEI	**Soe**	**12.26**	**167**	P	P	12 45 08.5	-5.0
SOEI	**Soe**	**12.26**	**167**	Pn	**Pn**	**12 45 05.6**	**+3.9**
BASI	**Baing, Sumba**	**12.43**	**184**	P	**Pn**	**12 45 08.5**	**+4.6**
BATI	**Baumata**	**12.58**	**170**	P	**Pn**	**12 45 08.5**	**+2.6**
	2.8nm,0.3s,baz=282,slow=2.2,SNR=16						
BATI				LR	LR	12 51 24.4	
	comp=Z,1μm,18.7s,baz=344,slow=44						
BATI	**Baumata**	**12.58**	**170**	P	**Pn**	**12 45 10.2**	**+4.3**
JAGI	**Jajag, Banyuwa**	**12.92**	**214**	Pn	**Pn**	**12 45 11.3**	**+0.7**
GMJI	**Gumukmas**	**13.18**	**217**	P	**Pn**	**12 45 17.1**	**+3.0**
PWJI	**Pagerwojo**	**14.05**	**223**	P	**Pn**	**12 45 28.4**	**+2.4**
WOJI	**Wonogiri, Jawa**	**14.54**	**226**	P	**Pn**	**12 45 34.8**	**+2.1**
UGM	**Wanagama**	**14.88**	**227**	P	**P**	**12 45 45.9**	**+3.3**
UGM	**Wanagama**	**14.88**	**227**	Pn	**Pn**	**12 45 36.7**	**-0.6**
YOGI	**Yogyakarta**	**14.99**	**228**	P	**P**	**12 45 48.2**	**+4.4**
CVP	**Callao Caves**	**15.35**	**1**	P↓	**P**	**12 45 48.3**	**+0.5**
KPJI	**Karang Pucung**	**15.73**	**233**	P	**P**	**12 45 52.3**	**+0.3**
PPBI	**Pangkal Pinang**	**15.95**	**254**	P	**P**	**12 45 54.7**	**+0.2**
DLV	**T Lat**	**16.07**	**307**	Pn	**Pn**	**12 45 53.3**	**+0.4**
DLV				IAmb	IAmb	12 45 58.6	
	comp=Z,129nm,1.0s						
LEM	**Lembang**	**16.52**	**237**	P	**Pn**	**12 45 58.7**	**+0.1**
	comp=Z,2.6nm,0.3s,baz=299,slow=21,SNR=1.8						
LEM				LR	LR	12 53 34.9	
	comp=Z,822nm,19.7s,baz=56,slow=42						
CISI	**Cisompet, Garu**	**16.76**	**234**	P	**P**	**12 46 05.4**	**+1.9**
CISI	**Cisompet, Garu**	**16.76**	**234**	P	**Pn**	**12 46 01.1**	**-0.4**
CBJI	**Citeko**	**16.96**	**239**	P	**P**	**12 46 09.1**	**+3.5**
DBJI	**Dramaga**	**17.11**	**239**	P	P	12 46 16.2	+8.8
SKJI	**Sukabumi**	**17.50**	**238**	P	**P**	**12 46 18.4**	**+6.7**
MYKOM	**Kota Tinggi**	**17.62**	**269**		**Pn**	**12 46 11.3**	**-0.9**
MYKOM				IAmb	IAmb	12 46 15.5	
	comp=Z,71nm,0.8s						
MYKOM	**Kota Tinggi**	**17.62**	**269**	P	**P**	**12 46 14.0**	**+1.0**
MTN	**Manton Dam**	**17.81**	**148**	P	**P**	**12 46 15.6**	**+0.5**
	baz=18,SNR=49						
MTN	**Manton Dam**	**17.81**	**148**	P	**Pn**	**12 46 14.5**	**-0.1**
MTN				IAmb	IAmb	12 46 31.6	
	comp=Z,55nm,0.6s						
KLSI		**18.10**	**248**	P	**P**	**12 46 19.3**	**+1.0**
KDU	**Kakadu**	**18.44**	**144**	P	**P**	**12 46 22.0**	**+0.1**
	baz=18,SNR=28						
LWLI	**Liwa**	**18.84**	**247**	P	Pn	12 46 34.6	+7.3
KNRA	**Kununurra**	**19.23**	**158**	P	**P**	**12 46 30.5**	**-0.2**
	baz=19,SNR=63						
KNRA	**Kununurra**	**19.23**	**158**	P	**P**	**12 46 30.3**	**-0.3**
KNRA				IAmb	IAmb	12 46 49.9	
	comp=Z,63nm,0.7s						
MNAI	**Manna**	**19.64**	**250**	P	**P**	**12 46 33.2**	**-2.0**
KSI	**Kapahiang**	**19.76**	**253**	P	**Pn**	**12 46 38.6**	**+0.3**
JAY	**Jayapura**	**19.80**	**104**	P	**P**	**12 46 37.1**	**0.0**
	comp=Z,0.4nm,0.3s,baz=3.6,slow=22,SNR=2.3						
QIZ	**Qiongzhong**	**20.18**	**326**	P	**P**	**12 46 40.8**	**-0.3**
QIZ				S	Sn	12 50 28.0	-1.5
QIZ				pmax	pmax		
	comp=Z,16nm,1.2s						
QIZ				LR	LR		
	comp=Z,220nm,15.7s						
QIZ				LR	LR		
	comp=Z,320nm,13.5s						
QIZ				LR	LR		
	comp=Z,290nm,23.1s						
QIZ	**Qiongzhong**	**20.18**	**326**	P	**P**	**12 46 40.6**	**-0.5**
QIZ				IAmb	IAmb	12 46 43.4	
	comp=Z,100nm,1.4s						
XMIS	**Christmas Isla**	**20.21**	**231**		**P**	**12 46 40.4**	**-1.0**
XMIS				IAmb	IAmb	12 46 51.7	
	comp=Z,108nm,0.9s						
IPM	**Ipoh**	**20.53**	**277**	P	**P**	**12 46 44.5**	**-0.4**
IPM				IAmb	IAmb	12 46 46.3	
	comp=Z,50nm,0.8s						
IPM	**Ipoh**	**20.53**	**277**	P	**P**	**12 46 40.1**	**+1.1**
FITZ	**Fitzroy Crossi**	**20.64**	**169**	P	**P**	**12 46 45.5**	**-0.6**
	comp=Z,50nm,0.7s,baz=3.9,slow=7.2,SNR=196						
FITZ				S	**S**	**12 50 29.9**	**-5.1**
	comp=Z,3.3nm,0.8s,baz=0.0,slow=20,SNR=1.9						
FITZ	**Fitzroy Crossi**	**20.64**	**169**	P	**P**	**12 46 45.1**	**-1.0**
	baz=21,SNR=64						
FITZ	**Fitzroy Crossi**	**20.64**	**169**	P	**P**	**12 46 45.1**	**-1.0**
FITZ				IAmb	IAmb	12 46 46.2	
	comp=Z,46nm,0.7s						
TPUB	**Ta-pu**	**20.93**	**358**	P	**P**	**12 46 48.6**	**-0.6**
TPUB				IAmb	IAmb	12 47 01.0	
	comp=Z,108nm,0.9s						
KULM	**Kulim**	**20.99**	**279**	P	**P**	**12 46 48.6**	**-1.3**
KULM				IAmb	IAmb	12 46 51.2	
	comp=Z,50nm,0.8s						
KULM	**Kulim**	**20.99**	**279**	P	**P**	**12 46 51.0**	**+1.1**
YULB	**Yu-li**	**21.00**	**360**	P	**P**	**12 46 48.6**	**-1.3**
YULB				IAmb	IAmb	12 47 05.5	
	comp=Z,68nm,1.1s						
SSLB	**Suanglung**	**21.40**	**359**	P	**P**	**12 46 55.9**	**+1.6**
SSLB				IAmb	IAmb	12 47 06.1	
	comp=Z,52nm,0.9s						
TRTT	**Trang**	**22.39**	**285**	P	**P**	**12 47 05.0**	**+0.1**
	comp=Z,63nm,1.3s						
SRAK	**Srakaew**	**22.47**	**302**	P	**P**	**12 47 00.0**	**-5.8**
	comp=Z,3μmcomp=Z,287nm,0.8s						
RPSI	**Rantau Prapat**	**22.53**	**272**	P	**P**	**12 47 04.7**	**-1.8**
PSI	**Prapat**	**22.53**	**272**	P	**P**	**12 47 06.2**	**-0.4**
	comp=Z,20nm,1.0s,baz=3.1,slow=0.6,SNR=9.5						
PSI				LR	LR	12 56 47.5	
	comp=Z,352nm,20.0s,baz=90,slow=39						
CHAI	**Chaiyaphum**	**23.50**	**306**	P	**P**	**12 47 15.0**	**-1.2**
	comp=Z,1μmcomp=Z,49nm,1.0s						
PKDT	**Phuket**	**23.71**	**284**	P	**P**	**12 47 18.0**	**-0.3**
	comp=Z,2μmcomp=Z,105nm,1.2s						
PSA00	**Pilbara Seismi**	**23.74**	**184**	P	**P**	**12 47 17.3**	**-1.2**
PSA00				IAmb	IAmb	12 47 19.0	
	comp=Z,52nm,0.9s						
PSA00	**Pilbara Seismi**	**23.74**	**184**	P	**P**	**12 47 17.3**	**-1.2**
NONG	**Nongkai**	**23.87**	**312**	P	**P**	**12 47 18.7**	**-1.1**
	comp=Z,54nm,0.9s						
GSI	**Gunungsitoli**	**23.91**	**268**	P	**P**	**12 47 18.6**	**-1.6**
WB0	**Warramunga Arr**	**25.30**	**150**	P	**P**	**12 47 31.4**	**-1.4**
WB0				IAmb	IAmb	12 47 53.1	
	comp=Z,52nm,0.9s						
UTHA	**Uthaitani**	**25.41**	**303**	P	**P**	**12 47 34.2**	**+0.3**
	comp=Z,686nmcomp=Z,78nm,0.8s						
WRAB	**Tennant Creek**	**25.42**	**151**	d iP	**P**	**12 47 33.0**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,29nm,1.1s						
WRAB	**Tennant Creek**	**25.42**	**151**	P	**P**	**12 47 33.1**	**-0.8**
WRAB				IAmb	IAmb	12 47 50.3	
	comp=Z,67nm,1.1s						
WRA	**Warramunga Arr**	**25.43**	**151**	P	**P**	**12 47 33.1**	**-0.8**
	comp=Z,18nm,0.9s,baz=328,slow=10,SNR=69						
WRA				S	**S**	**12 51 54.9**	**-3.8**
	comp=Z,1.7nm,1.1s,baz=345,slow=13,SNR=2.0						
WRA				LR	LR	12 58 13.7	
	comp=Z,162nm,21.6s,baz=330,slow=38						
WRA	**Warramunga Arr**	**25.43**	**151**	P	**P**	**12 47 32.7**	**-1.2**
WB2	**Warramunga Arr**	**25.43**	**151**	P	**P**	**12 47 33.0**	**-1.0**
WB2				IAmb	IAmb	12 47 50.4	
	comp=Z,72nm,1.1s						
PHIT	**Phitsanulok**	**25.46**	**307**	P	**P**	**12 47 35.3**	**+1.0**
	comp=Z,98nm,0.9s						
SLVN	**Son La**	**25.54**	**319**	P	**P**	**12 47 35.2**	**+0.2**
SLVN				IAmb	IAmb	12 47 38.6	
	comp=Z,67nm,1.2s						
WR0	**Warramunga Arr**	**25.54**	**150**	P	**P**	**12 47 34.4**	**-0.6**
WR0				IAmb	IAmb	12 47 55.5	
	comp=Z,49nm,0.9s						
UTTA	**Uttaradit**	**25.66**	**308**	P	**P**	**12 47 36.6**	**+0.5**

comp=Z,180nm,10.3s
CD2 LR LR
comp=Z,270nm,17.7s
CD2 LR LR
comp=Z,250nm,20.6s
CD2 LR LR
comp=Z,240nm,11.8s
KMBL Kambalda 33.45 179 P **P** **12 48 44.5 -0.6**
baz=34,SNR=7.8
XAN Xi'an 33.72 341 P **P** **12 48 47.3 -0.2**
XAN pmax pmax
comp=Z,8.0nm,1.0s
XAN Xi'an 33.72 341 P **P** **12 48 47.3 -0.2**
KLBR Kellerberrin 33.85 186 P **P** **12 48 48.0 -0.6**
baz=34,SNR=15
JHS Saijyo 34.33 17 P **P** **12 48 52.9 +0.2**
NWAO Narrogin (SRO) 35.23 186 P **P** **12 49 00.5 0.0**
baz=35,SNR=10.0
NWAO Narrogin (SRO) 35.23 186 P **P** **12 49 00.2 -0.3**
NWAO pmax pmax
comp=Z,28nm,0.8s
NWAO Narrogin (SRO) 35.23 186 P **P** **12 49 00.2 -0.3**
KSRS Korea Array 35.52 9 P **P** **12 49 03.8 +0.9**
comp=Z,2.2nm,0.7s,baz=191,slow=9.8,SNR=7.1
SHL Shillong 36.71 312 P **P** **12 49 13.0 -0.6**
SHL pmax pmax
comp=Z,37nm,0.9s
SHL Shillong 36.71 312 P **P** **12 49 13.0 -0.6**
LZH Lanzhou 37.40 336 *e*P **P** **12 49 21.8 +2.5**
LZH pP sP 12 49 33.0 +1.7
LZH PP **PnPn** **12 50 51.0 +5.1**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,75nm,5.4s
LZH LR LR
comp=Z,340nm,13.3s
LZH LR LR
comp=Z,350nm,13.4s
LZH LR LR
comp=Z,460nm,16.6s
MAJO Matsushiro 37.45 22⇓ *e*P **P** **12 49 17.8 -1.7**
MAJO pmax pmax
comp=Z,15nm,0.9s
MAJO Matsushiro 37.45 22 P **P** **12 49 17.5 -1.9**
MJAR Matsushiro Arr 37.45 22 P **P** **12 49 18.2 -1.2**
comp=Z,6.4nm,0.7s,baz=195,slow=9.2,SNR=18
MJAR Matsushiro Arr 37.45 22 P **P** **12 49 17.2 -2.2**
BJI Beijing 37.91 353 P **P** **12 49 25.5 +2.3**
BJI pmax pmax
comp=Z,10.0nm,0.8s
BJI LR LR
comp=Z,120nm,8.8s
BJI LR LR
comp=Z,160nm,10.4s
STKA Stephens Creek 38.96 152 P **P** **12 49 32.5 +0.2**
comp=Z,10nm,0.8s,baz=321,slow=9.1,SNR=18
STKA Stephens Creek 38.96 152 P **P** **12 49 32.4 +0.2**
baz=39,SNR=6.7
STKA Stephens Creek 38.96 152 P **P** **12 49 31.9 -0.3**
HTT Hallett 39.14 157 P **P** **12 49 34.2 +0.5**
baz=39,SNR=12
HHC Hu-ho-hao-te 39.44 348 *e*P **P** **12 49 39.0 +2.7**
HHC pmax pmax
comp=Z,12nm,1.0s
HHC pmax pmax
comp=Z,140nm,4.6s
HHC LR LR
comp=Z,180nm,14.2s
HHC LR LR
comp=Z,200nm,14.5s
HHC LR LR
comp=Z,200nm,14.1s
JMM Marumori 39.62 24 P **P** **12 49 36.7 -1.0**
JMM IAmb IAmb 12 50 00.8
comp=Z,32nm,0.8s
LSA Lhasa 39.67 317 P **P** **12 49 40.0 +1.3**
LSA pmax pmax
comp=Z,88nm,0.8s
LSA Lhasa 39.67 317 P **P** **12 49 39.6 +0.9**
LSA pmax pmax
comp=Z,17nm,0.8s
LSA Lhasa 39.67 317 P **P** **12 49 39.6 +0.9**
LSA IAmb IAmb 12 49 41.1
comp=Z,17nm,0.8s
CMSA Cobar Meteorol 40.74 148 P **P** **12 49 48.0 +1.0**
baz=41,SNR=8.4
ODAN Odare 40.80 310 *e*P **P** **12 49 48.2 +0.3**
comp=Z,76nm,0.9s
TAPN Taplejung 40.82 311 *e*P **P** **12 49 48.4 +0.3**
comp=Z,36nm,0.7s
RAMN Ramite 41.46 310 *e*P **P** **12 49 53.8 +0.5**
comp=Z,44nm,0.8s
CN2 Changchun 41.51 4 *e*P **P** **12 49 52.0 -1.2**
GTA Gaotai 41.91 335 ⇑P **P** **12 49 57.5 +0.9**
GTA pP sP 12 50 08.8 0.0
GTA sP pwP 12 50 13.0 +0.7
GTA PcP **PcP** **12 51 52.8 +0.9**
GTA pmax pmax
comp=Z,16nm,1.0s
GTA pmax pmax
comp=Z,60nm,5.6s
GTA LR LR
comp=Z,130nm,16.4s
GTA LR LR
comp=Z,120nm,17.8s
GTA LR LR
comp=Z,170nm,17.4s
PKI Pulchoki 42.69 310 *e*P **P** **12 50 03.2 -0.2**
comp=Z,24nm,0.8s
PKIN Phulchoki 42.70 310 *e*P **P** **12 50 03.2 -0.3**
comp=Z,22nm,0.7s
MDJ Mudanjiang 42.78 9 P P 12 50 13.8 +10
MDJ pmax pmax
comp=Z,36nm,0.9s
MDJ pmax pmax
comp=Z,130nm,3.5s
USRK Ussuriysk Ar. 42.79 11 P **P** **12 50 04.0 +0.5**
comp=Z,3.2nm,0.7s,baz=198,slow=8.6,SNR=4.7
USRK Ussuriysk Ar. 42.79 11 P **P** **12 50 02.7 -0.8**
KKN Kakani 42.89 310 *e*P **P** **12 50 04.9 -0.1**
comp=Z,25nm,0.9s
DMN Daman 42.94 309 *e*P **P** **12 50 05.5 +0.1**
comp=Z,54nm,1.0s
ARMA Armidale 43.40 141 P **P** **12 50 09.5 +0.6**
baz=44,SNR=4.9
GKN Gorkha 43.49 310 *e*P **P** **12 50 09.8 0.0**
comp=Z,63nm,0.9s
KOLN Koldanda 44.18 309 *e*P **P** **12 50 15.8 +0.4**
comp=Z,101nm,0.8s
DANN Dangsing 44.34 310 *e*P **P** **12 50 16.7 0.0**
comp=Z,93nm,0.7s
TEY Ternei 44.63 15⇓ *e*P **P** **12 50 18.7 +0.3**
TEY pmax pmax
comp=Z,40nm,1.0s
TEY pmax pmax
comp=E,10.0nm,1.0s
TEY pmax pmax
comp=N,20nm,1.0s
HYB Hyderabad 44.74 293 *i* P **P** **12 50 18.0 -1.8**
HYB *es*P **pwP** **12 50 38.0 +3.0**
PYUN Piuthan 44.81 309 *e*P **P** **12 50 20.9 +0.5**
comp=N,110nm,0.7s
MGCD Mangrove Creek 45.03 144 P **P** **12 50 22.2 +0.4**
baz=45,SNR=4.6
ASAJ Asahikawa 45.69 21 P **P** **12 50 26.8 0.0**
comp=N,11nm,1.1s,baz=222,slow=9.3,SNR=5.4
JKA Kamikawa-asahi 45.69 21 P **P** **12 50 26.3 -0.5**
HIA Hailar 46.85 358⇓ *e*P **P** **12 50 35.7 -0.2**
HIA pmax pmax
comp=Z,11nm,1.4s
ULN Ulaanbaatar 47.11 347⇓ *e*P **P** **12 50 39.6 +1.5**
ULN pmax pmax
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 47.11 347 P **P** **12 50 36.7 -1.4**
SONM Songino Array 47.23 346 P **P** **12 50 39.2 +0.2**
comp=Z,3.9nm,1.0s,baz=161,slow=8.9,SNR=14
SONM LR LR 13 11 15.9
comp=Z,96nm,20.2s,baz=178,slow=37
SONM Songino Array 47.23 346 P **P** **12 50 38.8 -0.2**
KLR Kul'dur 47.61 9 P **P** **12 50 41.5 -0.3**
comp=Z,0.9nm,0.6s,baz=206,slow=2.1,SNR=5.0
KLR Kul'dur 47.61 9⇑ *e*P **P** **12 50 39.9 -1.9**
KLR pmax pmax
comp=Z,9.0nm,1.6s
ZAK Zakamensk 50.37 345 *e*P **P** **12 51 02.8 -0.2**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
WMQ Urumqi 51.08 329 *e*P **P** **12 51 10.8 +2.3**
WMQ pmax pmax
comp=Z,31nm,1.3s
WMQ pmax pmax
comp=Z,200nm,3.7s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,1μm,29.0s
WMQ LR LR
comp=Z,170nm,29.0s
TLY Talaya 51.47 346 P **P** **12 51 11.0 -0.2**
comp=Z,2.2nm,0.6s,baz=180,slow=4.3,SNR=3.3
TLY Talaya 51.47 346 *e*P **P** **12 51 12.7 +1.5**
TLY pmax pmax
comp=Z,14nm,1.0s
TLY MLR MLR
comp=Z,189nm,13.0s
TLY Talaya 51.47 346 P **P** **12 51 11.0 -0.2**
ZEA Zeya 51.53 4 *e*P **P** **12 51 15.7 +4.2**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
NIL Nilore 54.76 310 P **P** **12 51 35.2 -0.6**
NIL pmax pmax
comp=Z,28nm,1.0s
NIL Nilore 54.76 310 P **P** **12 51 35.2 -0.6**
SHLS Shalkode 55.25 323 *e*P **P** **12 51 37.9 -1.4**
comp=Z,7.7nm,1.1s,baz=324
SHLS Shalkode 55.25 323 *e*P **P** **12 51 37.8 -1.4**
SHLS pmax pmax
comp=Z,8.0nm,1.1s
KSH Kashi 55.49 318 P **P** **12 51 42.3 +1.3**
KSH pmax pmax
comp=Z,24nm,0.8s
KSH pmax pmax
comp=Z,190nm,4.6s
BOD Bodaibo 55.71 355 *e*P **P** **12 51 41.7 -0.4**
BOD pmax pmax
comp=Z,17nm,1.6s
SATY Saty 55.83 323 *e*P **P** **12 51 43.9 +0.5**
comp=Z,6.2nm,0.8s,baz=323
SATY Saty 55.83 323 *e*P **P** **12 51 43.9 +0.5**
SATY pmax pmax
comp=Z,6.0nm,0.8s
KPKS Kokpek 55.89 323 *e*P **P** **12 51 43.5 -0.3**
comp=Z,4.4nm,0.7s,baz=323
KPKS Kokpek 55.89 323 *e*P **P** **12 51 43.5 -0.3**
KPKS pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 55.90 328⇑ *e*P **P** **12 51 44.9 +1.2**
MKAR Makanchi Array 55.90 328 P **P** **12 51 44.5 +0.7**
comp=Z,4.7nm,0.5s,baz=136,slow=7.9,SNR=3.7
MKAR Makanchi Array 55.90 328 P **P** **12 51 43.9 +0.2**
TNSS Tian-Shan 56.70 322 *e*P **P** **12 51 50.8 +0.8**
baz=322
TNSS Tian-Shan 56.70 322 *e*P **P** **12 51 50.8 +0.8**
MDOK Medeo 56.71 322 *e*P **P** **12 51 50.1 +0.3**
baz=322
MDOK Medeo 56.71 322 *e*P **P** **12 51 50.1 +0.3**
AAA Alma-Ata 56.82 322 *e*P **P** **12 51 50.2 -0.2**
baz=322
AAA Alma-Ata 56.82 322 *e*P **P** **12 51 50.2 -0.2**
TDK Taldyqorghan 56.94 325 *e*P **P** **12 51 51.6 +0.3**
comp=Z,14nm,0.6s,baz=325
TDK *e*S **S** **12 59 46.3 +3.3**
baz=325
TDK Taldyqorghan 56.94 325 *e*P **P** **12 51 51.5 +0.3**
TDK *e*S **S** **12 59 46.2 +3.3**
TDK pmax pmax
comp=Z,14nm,0.6s
CHKK Chushkaly 57.13 323 *e*P **P** **12 51 52.1 -0.5**
baz=323
CHKK Chushkaly 57.13 323 *e*P **P** **12 51 52.0 -0.5**
KUU Kurty 57.54 323 *e*P **P** **12 51 55.7 +0.3**
comp=Z,21nm,0.9s,baz=322
KUU *e*S **S** **12 59 54.5 +3.6**
baz=322
KUU Kurty 57.54 323 *e*P **P** **12 51 55.7 +0.3**
KUU *e*S **S** **12 59 54.4 +3.6**
KUU pmax pmax
comp=Z,21nm,0.9s
AAK Ala-Archa 58.03 321 *ce*P **P** **12 51 59.8 +0.7**
AAK pmax pmax
comp=Z,34nm,1.1s
DRK Karamyk 58.31 316 P **P** **12 52 02.1 +0.8**
KBL Kabul 58.33 310 P **P** **12 52 01.2 -0.2**
KBL pmax pmax
comp=Z,36nm,1.1s
KBL Kabul 58.33 310 P **P** **12 52 01.2 -0.2**
SGDS Sogindy 58.36 321 *e*P **P** **12 52 01.0 -0.2**
baz=321
SGDS Sogindy 58.36 321 *e*P **P** **12 52 01.0 -0.2**
PETK Petropavlovsk- 58.85 25 P **P** **12 52 05.9 +1.4**
comp=Z,3.4nm,0.9s,baz=211,slow=9.9,SNR=1.8
BTK Batken 59.24 316 P **P** **12 52 07.3 -0.2**
BTK pmax pmax
comp=Z,29nm,1.5s
BTK Batken 59.24 316 P **P** **12 52 07.3 -0.2**
BTK IAmb IAmb 12 52 09.1
comp=Z,29nm,1.5s
SEM Semipalatinsk 59.27 331 *e*P **P** **12 52 06.9 -0.7**
comp=Z,4.1nm,0.7s,baz=330
SEM Semipalatinsk 59.27 331 *e*P **P** **12 52 06.9 -0.7**
SEM pmax pmax
comp=Z,4.0nm,0.7s
BTLS Baital 59.54 323 *e*P **P** **12 52 08.9 -0.5**
baz=323
BTLS Baital 59.54 323 *e*P **P** **12 52 08.8 -0.5**
ZALV Zalesovo Beam 59.64 336 P **P** **12 52 09.5 -0.3**
comp=Z,6.9nm,0.8s,baz=109,slow=9.0,SNR=1.8
ZALV Zalesovo Beam 59.64 336 P **P** **12 52 09.1 -0.7**
YAK Yakutsk 59.94 4 P **P** **12 52 12.5 +0.8**
comp=Z,2.9nm,0.3s,baz=128,slow=0.3,SNR=2.1
YAK Yakutsk 59.94 4 *e*P P 12 52 26.4 +15
YAK pmax pmax
comp=Z,26nm,1.0s
YAK pmax pmax
comp=N,12nm,1.2s
YAK Yakutsk 59.94 4 P **P** **12 52 12.7 +0.9**
DZA Taraz 60.18 319 *e*P **P** **12 52 13.8 0.0**
baz=319
DZA Taraz 60.18 319 *e*P **P** **12 52 13.8 0.0**
KURK Kurchatov 60.27 330⇑ *e*P **P** **12 52 14.3 +0.1**
KURK pmax pmax
comp=Z,38nm,0.9s
KURK Kurchatov 60.27 330 P **P** **12 52 13.8 -0.4**
IUG Iuzhnay 60.70 318 *e*P **P** **12 52 16.6 -0.9**
comp=Z,5.5nm,0.7s,baz=318
IUG Iuzhnay 60.70 318 *e*P **P** **12 52 16.6 -0.9**
IUG pmax pmax
comp=Z,6.0nm,0.7s
KKAR Karatay Array 60.81 319 P **P** **12 52 18.0 -0.1**
KKAR Karatay Array 60.81 319 P **P** **12 52 18.0 -0.1**
BRZS Berezniki 62.94 327 *e*P **P** **12 52 32.2 -0.1**
comp=Z,6.1nm,0.8s,baz=327
BRZS Berezniki 62.94 327 *e*P **P** **12 52 32.2 -0.1**
BRZS pmax pmax
comp=Z,6.0nm,0.8s
HRA Herat 63.59 307 P **P** **12 52 35.8 -1.4**
HRA IAmb IAmb 12 52 39.1
comp=Z,7.7nm,0.8s
WSAR Wadi Sarin 64.22 295 P **P** **12 52 40.5 -0.7**
comp=Z,10nm,0.9s,baz=106,slow=12,SNR=3.5
SEY Seymchan 64.72 15⇓ *e*P **P** **12 52 42.0 -1.7**
URZ Urewera 65.18 134 P **P** **12 52 45.7 -1.5**
comp=Z,6.9nm,0.8s,baz=177,slow=21,SNR=1.6
BRVK Borovoye 65.84 329 P **P** **12 52 50.9 -0.3**
BRVK pmax pmax
comp=Z,21nm,1.1s
BRVK Borovoye 65.84 329 P **P** **12 52 50.9 -0.3**
BRVK IAmb IAmb 12 52 52.3
comp=Z,21nm,1.1s
TIXI Tiksi 69.45 2⇓ *e*P **P** **12 53 12.7 -0.9**
TIXI Tiksi 69.45 2 P **P** **12 53 12.2 -1.4**
TIXI IAmb IAmb 12 53 23.4
comp=Z,18nm,1.1s
ABKAR Akbulak array 70.02 322 P **P** **12 53 16.8 -0.7**
ABKAR IAmb IAmb 12 53 18.5
comp=Z,10.0nm,0.8s
ABKAR Akbulak array 70.02 322 P **P** **12 53 17.0 -0.6**
NRIK Noril'sk 70.67 348 P **P** **12 53 20.8 -0.3**
comp=Z,6.8nm,0.6s,baz=128,slow=5.7,SNR=14
NRIK Noril'sk 70.67 348⇑ *e*P **P** **12 53 20.9 -0.3**
NRIK pmax pmax
comp=Z,11nm,0.8s
AKTO Aktyubinsk 71.60 323 P **P** **12 53 27.2 +0.1**
comp=Z,9.2nm,0.7s,baz=99,slow=7.3,SNR=28
BILL Bilibino 72.36 16⇑ *e*P **P** **12 53 33.9 +2.6**
BILL pmax pmax
comp=Z,39nm,3.9s
SVE Sverdlovsk 72.52 330 *e*P **P** **12 53 32.3 -0.2**
SVE pmax pmax
comp=Z,24nm,0.9s
ARU Arti 73.42 329 P **P** **12 53 37.6 -0.2**
comp=Z,5.6nm,0.8s,baz=134,slow=4.9,SNR=17
ARU Arti 73.42 329*c i*P **P** **12 53 37.2 -0.6**
ARU 12 56 22.8
ARU S **SKiKP** **13 03 08.7 +2.5**
ARU SS **SS** **13 07 46.9 -0.4**
ARU pmax pmax
comp=Z,26nm,1.0s
ARU Arti 73.42 329 P **P** **12 53 37.2 -0.6**
ARU IAmb IAmb 12 53 38.3
comp=Z,20nm,0.9s
RAYN Ar Rayn 76.24 294 P **P** **12 53 54.0 -0.9**
RAYN pmax pmax
comp=Z,26nm,0.9s
RAYN Ar Rayn 76.24 294 P **P** **12 53 54.0 -0.9**
RAYN IAmb IAmb 12 53 55.2
comp=Z,26nm,0.9s
BELG Belogornoye 78.39 323*c i*P **P** **12 54 05.6 -0.6**
BELG pmax pmax
comp=Z,10.0nm,1.0s
GNI Garni 78.41 310 P **P** **12 54 07.8 +1.0**
comp=Z,8.4nm,0.4s,baz=157,slow=10,SNR=4.4
GNI Garni 78.41 310*d i*P **P** **12 54 08.3 +1.4**
GNI pmax pmax
comp=Z,37nm,1.6s
GNI Garni 78.41 310 P **P** **12 54 08.1 +1.2**
GNI IAmb IAmb 12 54 32.4
comp=Z,20nm,0.9s
KIRV Kirov 78.78 329 P **P** **12 54 07.7 -0.6**
comp=Z,44nm,0.6s,baz=284,slow=1.1,SNR=12
AKH Akhalkalaki 79.49 312 P **P** **12 54 13.3 +0.4**
AKH pmax pmax
comp=Z,139nm,0.9s
AKH Akhalkalaki 79.49 312 P **P** **12 54 13.2 +0.4**
GEVA Gevas 79.51 308 P **P** **12 54 13.4 +0.4**
KBZ Khabaz 80.18 314 P **P** **12 54 16.3 0.0**
comp=Z,15nm,0.9s,baz=136,slow=3.3,SNR=24
KBZ Khabaz 80.18 314*c i*P **P** **12 54 15.9 -0.3**
KIV Kislovodsk 80.36 314 P **P** **12 54 18.5 +1.1**
KIV pmax pmax
comp=Z,9.0nm,0.7s
KIV Kislovodsk 80.36 314 P **P** **12 54 18.5 +1.1**
MAW Mawson 80.60 199 P **P** **12 54 16.8 -1.2**
comp=Z,2.4nm,1.0s,baz=284,slow=18,SNR=3.0
MARD Mardin 81.23 307 P **P** **12 54 22.4 +0.2**
MARD IAmb IAmb 12 54 23.3
comp=Z,22nm,0.7s
KOPT Kop Dagi 81.64 310 P **P** **12 54 24.4 -0.1**
KOPT IAmb IAmb 12 54 26.8
comp=Z,33nm,1.3s
VRH Novokhopyorsk 81.82 321 *e*P **P** **12 54 23.8 -1.0**
VRH pmax pmax
comp=Z,40nm,1.1s
VNDA Vanda 82.69 172 P **P** **12 54 28.2 -0.6**
VNDA pmax pmax
comp=Z,8.0nm,0.9s
VNDA Vanda 82.69 172 P **P** **12 54 28.2 -0.6**
VORD Divnogorie 83.32 321 *e*P **P** **12 54 31.2 -1.4**
VORD pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 83.42 321 *e*P **P** **12 54 31.9 -1.2**
VSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 83.68 323 *e*P **P** **12 54 33.7 -0.7**
LPSR pmax pmax
comp=Z,40nm,1.0s
KLMR Klimovskoe 84.11 331 *e*P **P** **12 54 34.5 -1.9**
KLMR pmax pmax
comp=Z,58nm,1.0s
KLMR Klimovskoe 84.11 331 *e*P **P** **12 54 34.5 -1.9**
KLMR AMP 12 54 36.6
comp=Z,58nm,1.0s
MOS Moscow 84.67 326 *e*P **P** **12 54 37.6 -1.8**
MOS pmax pmax
comp=Z,38nm,1.0s
OBN Obninsk 85.23 325 P **P** **12 54 41.6 -0.7**
comp=Z,7.2nm,0.4s,baz=186,slow=4.7,SNR=9.6
OBN Obninsk 85.23 325⇑ *e*P **P** **12 54 41.5 -0.7**
OBN *e*S **SKSac** **13 05 06.1 +1.7**
OBN pmax pmax
comp=Z,102nm,1.7s
OBN MLR MLR
comp=Z,57nm,15.0s
IMAR Indian Mountai 85.81 24 P **P** **12 54 46.2 +1.2**
BR131 Keskin Array S 86.90 309 P **P** **12 54 49.5 -1.6**
BR131 pmax pmax
comp=Z,16nm,0.9s
BR131 Keskin Array S 86.90 309 P **P** **12 54 49.5 -1.6**
BR131 IAmb IAmb 12 54 51.2
comp=Z,16nm,0.9s
BRTR Keskin Array B 86.90 309 P **P** **12 54 50.3 -0.8**
comp=Z,7.9nm,0.8s,baz=126,slow=6.3,SNR=21
BRTR Keskin Array B 86.90 309 P **P** **12 54 49.3 -1.7**
CSS Mathiatis 87.19 305 P **P** **12 54 51.4 -1.0**
COLA College 88.26 25⇓ *e*P **P** **12 54 57.7 +0.9**
COLA pmax pmax
comp=Z,18nm,3.9s
ILAR Eielson Array 88.67 25 P **P** **12 54 57.1 -1.7**
comp=Z,0.4nm,0.7s,baz=246,slow=5.1,SNR=3.8
ILAR PKKPbc **PKKPbc** **13 12 40.5 -1.7**
comp=Z,0.5nm,0.8s,baz=197,slow=12,SNR=6.8
SYO Syowa Base 89.18 201⇓ *e*PcP **PcP** **12 55 03.3 +0.9**
SYO Syowa Base 89.18 201⇓ *e*pP pP 12 55 15.4 +5.0
AKASG Malin Array Be 89.69 321 P **P** **12 55 02.2 -1.7**
comp=Z,4.4nm,0.9s,baz=71,slow=4.8,SNR=13
AKASG PKKPbc **PKKPbc** **13 12 37.8 -1.3**
comp=Z,0.6nm,0.4s,baz=210,slow=21,SNR=5.5
AKASG Malin Array Be 89.69 321 P **P** **12 55 02.5 -1.3**
AKASG pmax pmax
comp=Z,3.0nm,1.1s
AKASG Malin Array Be 89.69 321 P **P** **12 55 02.5 -1.3**
AKBB Malin Array Si 89.69 321⇓ *e*P **P** **12 55 02.4 -1.5**
AKBB pmax pmax
comp=Z,7.0nm,1.2s
ELL Elmali 89.92 307 P **P** **12 55 03.2 -2.2**
ELL pmax pmax
comp=Z,26nm,0.7s
ELL Elmali 89.92 307 P **P** **12 55 03.2 -2.2**
ARCES ARCESS Array B 89.99 340 P **P** **12 55 04.0 -0.9**
comp=Z,3.7nm,1.0s,baz=70,slow=7.8,SNR=1.4
ARCES ARCESS Array B 89.99 340 P **P** **12 55 04.0 -0.9**
ARCES ARCESS Array B 89.99 340 P **P** **12 55 04.0 -0.9**
FINES FINESS Array B 90.62 331 P **P** **12 55 06.3 -1.6**
comp=Z,1.4nm,0.7s,baz=146,slow=3.7,SNR=4.3
KARP Karpathos 92.21 306 P **P** **12 55 13.2 -2.8**
BURAR Bucovina Array 92.57 318 P **P** **12 55 15.7 -1.7**
BUR08 Bucovina Ar. S 92.58 318 P **P** **12 55 16.2 -1.3**
BUR08 IAmb IAmb 12 55 18.3
comp=Z,6.4nm,0.8s
INK Inuvik 93.42 21 P **P** **12 55 20.2 -0.5**
comp=Z,1.1nm,1.0s,baz=188,slow=1.3,SNR=2.4
INK Inuvik 93.42 21 P **P** **12 55 19.6 -1.2**
CRVS Cervenica-Dubn 94.89 319 *e*P **P** **12 55 27.9 -0.1**
CRVS pmax pmax
comp=Z,20nm,1.2s
CRVS Cervenica-Dubn 94.89 319 *e*P **P** **12 55 27.9 -0.1**
TORD Torodi Ar. Bea 118.33 286 PKP **PKPdf** **13 00 52.9 -1.3**
comp=Z,1.0nm,0.7s,baz=57,slow=2.2,SNR=6.5
TORD PP **PP** **13 02 07.0 -3.5**
comp=Z,1.2nm,0.9s,baz=59,slow=7.3,SNR=3.6
TORD Torodi Ar. Bea 118.33 286 **PKPdf** **13 00 52.5 -1.6**
TXAR Lajitas Array 126.61 50 PKP **PKPdf** **13 01 09.3 -0.5**
comp=Z,0.3nm,0.8s,baz=64,slow=1.0,SNR=2.4
BO02 Sierra Bellavi 145.68 162 **PKPdf** **13 01 44.2 -0.6**
CO01 Juntas del Tor 150.33 159 **PKPbc** **13 01 58.2 +0.2**
AC05 El Transito 151.30 158 **PKPab** **13 02 07.8 -0.3**
LPAZ La Paz 163.16 146 PKP **PKPdf** **13 02 10.3 +0.4**
comp=Z,0.4nm,0.4s,baz=274,slow=1.1,SNR=4.1
LPAZ La Paz 163.16 146 PKP2 **PKPab** **13 02 59.8 -0.1**
LPAZ La Paz 163.16 146 PKPdf **PKPdf** **13 02 10.1 +0.1**
LPAZ PKPab **PKPab** **13 02 59.8 -0.1**
SIV San Ignacio 166.13 170 PKP **PKPdf** **13 02 11.8 0.0**
comp=Z,2.0nm,0.9s,baz=242,slow=3.2,SNR=6.0
SIV PKPab **PKPab** **13 03 12.3 +0.2**
comp=Z,0.6nm,0.3s,baz=273,slow=9.8,SNR=1.7

*IDC **28** 12:45:22.1±5.2,22°.20S×179°.32W,h499km±61km, mb3.4/10,mb1 3.6/11,mb1mx3.3/48,mbtmp4.2/11,Error ellipse: s-maj=31.0km s-min=21.9km az=6.0*
*NEIC **28** 12:45:28.8±1.8,22°.2S±0°.1×179°.4W±0°.1,h583km±13km, mb4.5/27,Error ellipse: s-maj=22.8km s-min=8.2km az=224.0*
ISC 28 12:45:30.2±0.6,**22°.33S**±0°.09×**179°.47W**±0°.09,**h600**km, **n46**,σ1§**50**/49,**mb4.3**/21,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.13**	**332**	P	**P**	**12 47 02.2**	**-2.2**
NIUE	**Niue**	**9.49**	**72**	P	**P**	**12 47 42.0**	**-2.0**
AFI	**Afiamalu**	**11.11**	**42**	P	P	12 47 56.1	-4.2
DZM	**Mont Dzumac**	**13.06**	**268**	P	**P**	**12 48 19.9**	**+0.2**
URZ	**Urewera**	**16.15**	**190**	P	**P**	**12 48 44.1**	**-4.6**
	1.9nm,0.3s,baz=279,slow=3.0,SNR=13						
URZ				S	**S**	**12 51 25.8**	**-4.7**
	0.4nm,0.3s,baz=80,slow=18,SNR=2.0						
BKZ	**Black Stump Fm**	**17.14**	**191**	P	**P**	**12 48 56.8**	**-1.1**
BKZ				IAmb	IAmb	12 48 57.9	
	comp=Z,12nm,1.0s						
BFZ	**Birch Farm**	**18.66**	**190**	P	**P**	**12 49 09.5**	**-2.1**
QRZ	**Quartz Range**	**19.64**	**198**	P	**P**	**12 49 21.4**	**+0.9**
NNZ	**Nelson**	**19.78**	**196**	P	**P**	**12 49 22.0**	**+0.3**
LTZ	**Lake Taylor**	**21.53**	**197**	P	**P**	**12 49 36.9**	**-0.6**
LTZ				IAmb	IAmb	12 50 04.0	
	comp=Z,33nm,1.2s						
RPZ	**Rata Peaks**	**22.73**	**198**	P	**P**	**12 49 47.1**	**-1.1**
	comp=Z,13nm,1.0s,baz=175,slow=18,SNR=1.9						
RPZ	**Rata Peaks**	**22.73**	**198**	P	**P**	**12 49 47.2**	**-1.0**
RPZ				IAmb	IAmb	12 50 01.9	
	comp=Z,28nm,1.1s						
WKZ	**Wanaka**	**24.36**	**200**	P	**P**	**12 50 01.7**	**-0.9**
MLZ	**Mavora Lakes**	**25.13**	**201**	P	**P**	**12 50 10.2**	**+0.8**
MLZ				IAmb	IAmb	12 50 35.8	
	comp=Z,40nm,1.3s						
WHZ	**Wether Hill Ro**	**25.65**	**201**	P	**P**	**12 50 14.7**	**+0.8**
EIDS	**Eidsvold**	**27.08**	**258**	P	**P**	**12 50 27.2**	**+0.4**
EIDS				IAmb	IAmb	12 50 41.8	
	comp=Z,13nm,1.2s						
CTAO	**Charters Tower**	**32.00**	**268**	P	**P**	**12 51 09.6**	**+0.4**
CTAO				IAmb	IAmb	12 51 11.0	
	comp=Z,8.3nm,1.0s						
TOO	**Toolangi**	**33.73**	**235**	P	**P**	**12 51 24.4**	**+0.9**
TOO				IAmb	IAmb	12 51 25.4	
	comp=Z,13nm,0.7s						
STKA	**Stephens Creek**	**35.78**	**246**	P	**P**	**12 51 41.5**	**+0.8**
	comp=Z,10.0nm,0.6s,baz=94,slow=10.0,SNR=6.3						
STKA	**Stephens Creek**	**35.78**	**246**	P	**P**	**12 51 41.4**	**+0.7**
BBOO	**Buckleboo**	**40.53**	**245**	P	**P**	**12 52 18.9**	**-0.1**
BBOO				IAmb	IAmb	12 52 19.7	
	comp=Z,8.1nm,0.9s						
AS31	**Alice Springs**	**42.80**	**259**	P	**P**	**12 52 37.3**	**+0.4**
ASAR	**Alice Springs**	**42.80**	**259**	P	**P**	**12 52 36.8**	**-0.1**
	comp=Z,10nm,0.8s,baz=94,slow=7.9,SNR=26						
ASAR				PcP	**PcP**	**12 54 15.0**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=88,slow=4.8,SNR=4.0						
ASAR				S	**S**	**12 58 17.4**	**-1.6**
	comp=Z,0.5nm,0.9s,baz=97,slow=15,SNR=2.6						
ASAR	**Alice Springs**	**42.80**	**259**	P	**P**	**12 52 36.6**	**-0.3**
WR0	**Warramunga Arr**	**42.84**	**264**	P	**P**	**12 52 36.7**	**-0.5**
WB0	**Warramunga Arr**	**43.01**	**265**	P	**P**	**12 52 37.9**	**-0.7**
WB2	**Warramunga Arr**	**43.02**	**264**	P	**P**	**12 52 38.0**	**-0.7**
WB2				IAmb	IAmb	12 52 39.9	
	comp=Z,24nm,1.4s						
WRAB	**Tennant Creek**	**43.02**	**264**	P	**P**	**12 52 38.2**	**-0.4**
WRAB				IAmb	IAmb	12 52 38.6	
	comp=Z,7.3nm,0.9s						
WRA	**Warramunga Arr**	**43.03**	**264**	P	**P**	**12 52 37.9**	**-0.8**
	comp=Z,2.5nm,0.3s,baz=94,slow=7.9,SNR=63						
WRA				S	**S**	**12 58 19.1**	**-3.2**
	comp=Z,0.4nm,0.9s,baz=97,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**43.03**	**264**	P	**P**	**12 52 37.8**	**-1.0**
FORT	**Forrest**	**47.33**	**248**	P	**P**	**12 53 11.6**	**+0.3**
KNRA	**Kununurra**	**49.21**	**268**	P	**P**	**12 53 25.5**	**+0.1**
KNRA				IAmb	IAmb	12 53 26.9	
	comp=Z,12nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.46**	**264**	P	**P**	**12 53 41.8**	**+0.1**
	comp=Z,1.9nm,0.3s,baz=76,slow=5.5,SNR=16						
FITZ	**Fitzroy Crossi**	**51.46**	**264**	P	**P**	**12 53 42.3**	**+0.6**
SOEI	**Soe**	**55.22**	**274**	P	**P**	**12 54 09.1**	**+0.7**
SOEI				IAmb	IAmb	12 54 14.1	
	comp=Z,13nm,0.7s						
PSA00	**Pilbara Seismi**	**55.94**	**258**	P	**P**	**12 54 13.0**	**-0.2**
PSA00				IAmb	IAmb	12 54 24.5	
	comp=Z,18nm,1.3s						
VNDA	**Vanda**	**55.98**	**185**	P	**P**	**12 54 15.5**	**+3.0**
PETK	**Petropavlovsk-**	**77.69**	**346**	P	**P**	**12 56 26.0**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=123,slow=5.3,SNR=1.4						
BELA	**Belgrano 2**	**77.93**	**173**	P	**P**	**12 56 27.9**	**+1.1**
NVAR	**Mina Array Bea**	**83.28**	**44**	P	**P**	**12 56 56.5**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=230,slow=7.0,SNR=3.5						
TXAR	**Lajitas Array**	**89.18**	**58**	P	**P**	**12 57 24.1**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=212,slow=4.4,SNR=4.7						
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**12 57 27.0**	**+2.2**
	comp=Z,1.0nm,0.8s,baz=128,slow=3.6,SNR=5.9						
CMAR	**Chiang Mai Arr**	**89.45**	**290**	P	**P**	**12 57 25.5**	**+0.7**
ILAR	**Eielson Array**	**90.39**	**13**	P	**P**	**12 57 26.8**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=216,slow=4.0,SNR=1.5						
TORD	**Torodi Ar. Bea**	**170.80**	**187**	PKPab	**PKPab**	**13 05 55.0**	**+1.3**
	comp=Z,1.1nm,0.9s,baz=171,slow=4.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**170.80**	**187**		**PKPab**	**13 05 54.4**	**+0.7**

*IDC **28** 12:46:47.6±1.0,8°.89N×126°.54E,h0km,mb3.8/8, mb1 4.0/8,mb1mx3.7/54,mbtmp3.8/8,MS3.8/1,Ms1 3.8/1, ms1mx2.8/49,Error ellipse: s-maj=59.8km s-min=18.9km az=88.0*
*MAN **28** 12:46:53.1,9°.10N×126°.59E,h24km,mb4.8,ML3.7,MS3.6*
ISC 28 12:46:49.8±0.7,**8°.97N**±0°.04×**126°.56E**±0°.07,**h10**km,**n17**, σ1§**28**/22,**mb3.7**/8,**2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLSP	**General Luna,**	**0.92**	**332**	*eP*	**Pb**	**12 47 07.8**	**+0.1**
GLSP				*eS*	**Sn**	**12 47 22.3**	**+0.3**
CGP	**Cagayan de Oro**	**1.92**	**255**	⇓*eP*	**Pg**	**12 47 25.9**	**-0.7**
CGP				*eS*	**Sb**	**12 47 49.5**	**+0.7**
MATI	**Mati**	**2.03**	**189**	*eP*	**Pb**	**12 47 26.8**	**-0.1**
MATI				*eS*	**Sg**	**12 47 55.4**	**+0.1**
KCP	**Kidapawan**	**2.43**	**217**	⇓*eP*	**Pg**	**12 47 40.3**	**+3.8**
DDMP	**Don Marcelino,**	**2.97**	**197**	*eP*	**Pb**	**12 47 42.3**	**-0.5**
DDMP				*eS*	**Sb**	**12 48 18.4**	**-0.8**
PAGZ	**Pagadian**	**3.34**	**251**	*eP*	**Pb**	**12 47 48.6**	**-0.5**
PAGZ				*eS*	**Sn**	**12 48 21.2**	**-0.7**
CNP	**Catarman**	**3.98**	**332**	*eP*	**Pn**	**12 47 51.7**	**+0.8**
CNP				*eS*	**Sn**	**12 48 38.4**	**+0.7**
PVCP	**Virac**	**5.17**	**333**	*eP*	Pb	12 48 14.6	-5.7
FITZ	**Fitzroy Crossi**	**26.91**	**182**	P	**P**	**12 52 31.0**	**-0.3**
	1.2nm,0.5s,baz=20,slow=10,SNR=1.4						
JHJ	**Hachijo jima 2**	**26.96**	**25**	LR	LR	13 00 52.3	
	comp=Z,213nm,21.9s,baz=82,slow=31						
WRA	**Warramunga Arr**	**29.73**	**165**	P	**P**	**12 52 53.9**	**-2.6**
	0.3nm,0.5s,baz=348,slow=9.3,SNR=5.7						
WRA				PcP	**PcP**	**12 56 01.3**	**+0.8**
	0.3nm,0.7s,baz=337,slow=2.7,SNR=1.6						
ASAR	**Alice Springs**	**33.22**	**168**	P	**P**	**12 53 25.6**	**-1.6**
	0.2nm,0.3s,baz=347,slow=7.6,SNR=1.2						
KLR	**Kul'dur**	**40.36**	**5**	P	**P**	**12 54 27.7**	**0.0**
	1.0nm,0.6s,baz=175,slow=11,SNR=2.5						
PETK	**Petropavlovsk-**	**50.70**	**24**	P	**P**	**12 55 50.5**	**+1.0**
	2.3nm,0.8s,baz=242,slow=1.8,SNR=5.0						
MKAR	**Makanchi Array**	**53.23**	**323**	P	**P**	**12 56 07.4**	**-1.1**
	0.6nm,0.6s,baz=124,slow=8.0,SNR=2.7						
ILAR	**Eielson Array**	**80.48**	**26**	P	**P**	**12 59 01.5**	**-0.3**
	0.4nm,0.7s,baz=247,slow=6.5,SNR=4.9						
INK	**Inuvik**	**85.38**	**22**	P	**P**	**12 59 26.4**	**-0.6**
	1.6nm,0.9s,baz=268,slow=5.4,SNR=4.8						

*NNC **28** 12:47:04.9±0.6,47°.11N×80°.05E,h0km,mb4.3,mpv4.0, Error ellipse: s-maj=5.7km s-min=3.9km az=141.0*
*ASRS **28** 12:47:06.7±0.2,47°.N±2°×8°.0E±°,h10km,MLv4.3/11, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*SOME **28** 12:47:06.9,47°.10N×80°.07E,h25km*
ISC 28 12:47:05.7±0.7,**47°.05N**±0°.03×**80°.05E**±0°.03,**h10**km,**n93**, σ2§**22**/144,**15C-7D,Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAKZ	**Makanchi**	**1.34**	**100**	P	**Pn**	**12 47 29.5**	**-1.0**
MAKZ				S	**Sb**	**12 47 46.0**	**-2.3**
MAKZ	**Makanchi**	**1.34**	**100**	⇓P	**Pn**	**12 47 29.5**	**-1.0**
	10nm,0.2s						
MAKZ				⇓S	**Sb**	**12 47 46.2**	**-2.1**
	105nm,0.2s						
MK31	**Makanchi Array**	**1.56**	**99**	⇑P	**Pn**	**12 47 33.0**	**-0.5**
	32nm,0.3s						
MK31				⇑S	**Sn**	**12 47 53.3**	**-0.5**
	74nm,0.2s,baz=287,slow=26,SNR=5.4						
MKAR	**Makanchi Array**	**1.56**	**99**	P	**Pn**	**12 47 33.7**	**+0.2**
MKAR				S	**Sn**	**12 47 53.2**	**-0.6**
KAPS	**Kapalarasan**	**1.83**	**195**	⇓*eP*	**Pg**	**12 47 39.4**	**-1.4**
	15nm,0.3s						
KAPS				*eS*	**Sg**	**12 48 03.0**	**-1.6**
	437nm,0.3s						
KAPS	**Kapalarasan**	**1.83**	**195**	P	**Pg**	**12 47 39.6**	**-1.2**
	65nm,0.2s						
KAPS				S	**Sg**	**12 48 03.9**	**-0.6**
	715nm,0.3s						
TDK	**Taldyqorghan**	**2.35**	**210**	*eP*	**Pg**	**12 47 49.7**	**-1.0**
	12nm,0.2s						
TDK				*eS*	**Sg**	**12 48 20.4**	**-0.7**
	382nm,0.2s						
TDK	**Taldyqorghan**	**2.35**	**210**	Pg	**Pb**	**12 47 47.7**	**-0.4**
	13nm,0.2s						
TDK				Lg	Lg	12 48 16.8	
	182nm,0.3s						
DJR	**Jarkent**	**2.73**	**184**	*eP*	**Pg**	**12 47 55.5**	**-2.5**
	5.6nm,0.2s						
DJR				*eS*	**Sg**	**12 48 30.6**	**-2.7**
	55nm,0.3s						
DJR	**Jarkent**	**2.73**	**184**	Pg	**Pg**	**12 47 55.4**	**-2.5**
	6.4nm,0.2s						
DJR				Lg	Lg	12 48 30.8	
	55nm,0.3s						
MNBS	**Baschi**	**3.19**	**202**	*eP*	**Pg**	**12 48 05.2**	**-1.6**
	29nm,0.3s						
MNBS				*eS*	**Sg**	**12 48 47.3**	**-0.8**
	299nm,0.3s						
MNBS	**Baschi**	**3.19**	**202**	Pg	**Pg**	**12 48 06.0**	**-0.8**
	29nm,0.3s						
MNBS				Lg	Lg	12 48 48.2	
	299nm,0.3s						
ARXS	**Arharly**	**3.24**	**210**	*eP*	**Pg**	**12 48 07.0**	**-0.7**
	29nm,0.2s						
ARXS				*eS*	**Sg**	**12 48 50.1**	**+0.4**
	229nm,0.4s						
ARXS	**Arharly**	**3.24**	**210**	Pg	**Pg**	**12 48 06.6**	**-1.1**
	29nm,0.2s						
ARXS				Lg	Lg	12 48 49.3	
	229nm,0.4s						
ZSN	**Zaisan**	**3.31**	**81**	*eP*	**Pn**	**12 47 59.7**	**+2.2**
	17nm,0.3s						
ZSN				*eS*	**Sn**	**12 48 37.5**	**+0.6**
	51nm,0.4s						
ZSN	**Zaisan**	**3.31**	**81**	Pg	**Pb**	**12 48 05.7**	**+1.3**
	17nm,0.3s						
ZSN				Lg	Lg	12 48 48.4	
	51nm,0.4s						
SEM	**Semipalatinsk**	**3.36**	**2**	*eP*	**Pb**	**12 48 04.2**	**-1.2**
	18nm,0.2s						
SEM				*eS*	**Sb**	**12 48 45.7**	**-0.8**
	250nm,0.3s						
SEM	**Semipalatinsk**	**3.36**	**2**	Pg	**Pb**	**12 48 04.3**	**-1.2**
	18nm,0.2s						
SEM				Lg	Lg	12 48 44.8	
	250nm,0.3s						
KTMS	**Ketmen**	**3.61**	**176**	*eP*	**Pg**	**12 48 11.9**	**-3.0**
	28nm,0.3s						
KTMS				*eS*	**Sg**	**12 48 58.9**	**-2.8**
	45nm,0.3s						
KTMS	**Ketmen**	**3.61**	**176**	Pg	**Pg**	**12 48 12.3**	**-2.6**
	127nm,0.2s						
KTMS				Lg	Lg	12 48 58.7	
	45nm,0.3s						
KPKS	**Kokpek**	**3.71**	**196**	*eP*	**Pg**	**12 48 15.7**	**-1.1**
	57nm,0.3s						
KPKS				*eS*	**Sg**	**12 49 05.4**	**+0.5**
	288nm,0.5s						
PDGK	**Podgornoye**	**3.74**	**186**	⇑Pn	**Pn**	**12 48 05.6**	**+2.0**
	3.3nm,0.3s						
PDGK				⇑Pg	**Pg**	**12 48 14.5**	**-2.9**
	12nm,0.7s						
PDGK				⇑Lg	Lg	12 49 04.4	
	116nm,0.6s						
KURK	**Kurchatov**	**3.79**	**346**	P	**Pn**	**12 48 07.4**	**+3.4**
KURK				S	**Sn**	**12 48 54.2**	**+5.6**
KURK	**Kurchatov**	**3.79**	**346**	⇑Pn	**Pn**	**12 48 03.3**	**-0.8**
KURK				⇑Pg	**Pb**	**12 48 12.7**	**+0.1**
	14nm,0.5s						
KURK				⇓Lg	Lg	12 49 02.9	
	266nm,1.1s						
KURS	**Kuram**	**3.80**	**201**	*eP*	**Pg**	**12 48 17.7**	**-0.8**
	26nm,0.5s						
KURS				*eS*	**Sg**	**12 49 09.1**	**+1.3**
	83nm,0.5s						
KURS	**Kuram**	**3.80**	**201**	Pg	**Pg**	**12 48 17.8**	**-0.8**
	26nm,0.5s						
KURS				Lg	Lg	12 49 08.2	
	83nm,0.5s						
CHKK	**Chushkaly**	**3.86**	**215**	*eP*	**Pg**	**12 48 18.0**	**-1.5**
	9.5nm,0.3s						
CHKK				*eS*	**Sg**	**12 49 09.0**	**-0.4**
	218nm,0.3s						
CHKK	**Chushkaly**	**3.86**	**215**	Pg	**Pg**	**12 48 17.1**	**-2.4**
	9.5nm,0.3s						
CHKK				Lg	Lg	12 49 07.3	
	218nm,0.3s						
SHLS	**Shalkode**	**3.92**	**186**	*eP*	**Pg**	**12 48 17.6**	**-3.1**
	25nm,0.5s						
SHLS				*eS*	**Sg**	**12 49 08.6**	**-2.9**
	76nm,0.5s						
SHLS	**Shalkode**	**3.92**	**186**	Pg	**Pg**	**12 48 18.6**	**-2.1**
	25nm,0.5s						
SHLS				Lg	Lg	12 49 09.9	
	76nm,0.5s						
UZB	**Uzynbulak**	**3.97**	**191**	*eP*	**Pg**	**12 48 20.9**	**-0.9**
	16nm,0.2s						
UZB				*eS*	**Sg**	**12 49 14.2**	**+1.0**
	55nm,0.3s						
UZB	**Uzynbulak**	**3.97**	**191**	Pg	**Pg**	**12 48 19.5**	**-2.2**
	16nm,0.2s						
UZB				Lg	Lg	12 49 11.7	
	55nm,0.3s						
ZHN	**Zhinishke**	**4.05**	**197**	*eP*	**Pg**	**12 48 21.8**	**-1.4**
	9.5nm,0.3s						
ZHN				*eS*	**Sg**	**12 49 15.4**	**-0.2**
	44nm,0.2s						
ZHN	**Zhinishke**	**4.05**	**197**	Pg	**Pg**	**12 48 21.4**	**-1.9**
	29nm,0.3s						
ZHN				Lg	Lg	12 49 15.4	
	44nm,0.2s						
KUU	**Kurty**	**4.10**	**221**	*eP*	**Pg**	**12 48 21.8**	**-2.4**
	8.3nm,0.2s						
KUU				*eS*	**Sg**	**12 49 15.7**	**-1.5**
	125nm,0.3s						
KUU	**Kurty**	**4.10**	**221**	Pg	**Pg**	**12 48 20.9**	**-3.2**
	8.3nm,0.2s						
KUU				Lg	Lg	12 49 13.5	
	125nm,0.3s						
SATY	**Saty**	**4.16**	**197**	*eP*	**Pg**	**12 48 23.9**	**-1.5**
	8.2nm,0.2s						
SATY				*eS*	**Sg**	**12 49 19.3**	**+0.1**
	94nm,0.2s						
SATY	**Saty**	**4.16**	**197**	Pg	**Pg**	**12 48 23.1**	**-2.2**
	5.5nm,0.1s						
SATY				Lg	Lg	12 49 17.1	
	94nm,0.2s						
KOTS	**Kotyrbulak**	**4.35**	**210**	*eP*	**Pg**	**12 48 27.3**	**-1.6**
	18nm,0.2s						
KOTS				*eS*	**Sg**	**12 49 24.9**	**-0.3**
	141nm,0.4s						
KOTS	**Kotyrbulak**	**4.35**	**210**	Pg	**Pg**	**12 48 26.9**	**-2.0**
	18nm,0.2s						
KOTS				Lg	Lg	12 49 23.9	
	141nm,0.4s						
MDOK	**Medeo**	**4.43**	**210**	*eP*	**Pg**	**12 48 28.2**	**-2.4**
	5.7nm,0.2s						
MDOK				*eS*	**Sg**	**12 49 26.8**	**-1.2**
	45nm,0.4s						
MDOK	**Medeo**	**4.43**	**210**	Pg	**Pg**	**12 48 28.0**	**-2.6**
	5.7nm,0.2s						
MDOK				Lg	Lg	12 49 25.6	
	45nm,0.4s						
AAA	**Alma-Ata**	**4.44**	**211**	*eP*	**Pg**	**12 48 29.2**	**-1.4**
	16nm,0.1s						
AAA				*eS*	**Sg**	**12 49 28.2**	**+0.1**
	82nm,0.3s						
AAA	**Alma-Ata**	**4.44**	**211**	Pg	**Pg**	**12 48 28.1**	**-2.6**
	24nm,0.1s						
AAA				Lg	Lg	12 49 26.1	
	82nm,0.3s						
KRBS	**Karabastau**	**4.56**	**224**	*eP*	**Pg**	**12 48 29.1**	**-3.8**
	8.2nm,0.3s						
KRBS				*eS*	**Sg**	**12 49 28.4**	**-3.5**
	60nm,0.3s						
KRBS	**Karabastau**	**4.56**	**224**	Pg	**Pg**	**12 48 29.8**	**-3.1**
	8.2nm,0.3s						
KRBS				Lg	Lg	12 49 28.8	
	60nm,0.3s						
TNSS	**Tian-Shan**	**4.58**	**210**	*eP*	**Pg**	**12 48 31.0**	**-2.4**
	5.2nm,0.3s						
TNSS				*eS*	**Sg**	**12 49 31.1**	**-1.5**
	34nm,0.5s						
TNSS	**Tian-Shan**	**4.58**	**210**	Pg	**Pg**	**12 48 31.2**	**-2.1**
	5.2nm,0.3s						
TNSS				Lg	Lg	12 49 31.3	
	34nm,0.5s						
BTLS	**Baital**	**4.64**	**246**	*eP*	**Pb**	**12 48 29.9**	**+2.8**
	4.8nm,0.1s						
BTLS				*eS*	**Sg**	**12 49 29.9**	**-4.6**
	16nm,0.4s						
BTLS	**Baital**	**4.64**	**246**	Pg	**Pb**	**12 48 28.5**	**+1.4**
	6.3nm,0.1s						
BTLS				Lg	Lg	12 49 27.5	
	11nm,0.3s						
MTBS	**Maitube**	**4.69**	**214**	*eP*	**Pg**	**12 48 32.7**	**-2.7**
	8.4nm,0.2s						
MTBS				*eS*	**Sg**	**12 49 34.6**	**-1.4**
	42nm,0.4s						
MTBS	**Maitube**	**4.69**	**214**	Pg	**Pg**	**12 48 32.7**	**-2.7**
	8.4nm,0.2s						
MTBS				Lg	Lg	12 49 33.7	
	42nm,0.4s						
IZV	**Izvestkoviy**	**4.70**	**212**	*eP*	**Pg**	**12 48 33.5**	**-2.1**
	3.9nm,0.1s						
IZV				*eS*	**Sg**	**12 49 35.5**	**-0.9**
	44nm,0.5s						
IZV	**Izvestkoviy**	**4.70**	**212**	Pg	**Pg**	**12 48 33.7**	**-1.9**
	3.9nm,0.1s						
IZV				Lg	Lg	12 49 35.5	
	44nm,0.5s						
DGS	**Degeres**	**4.86**	**220**	*eP*	**Pg**	**12 48 35.2**	**-3.6**
	21nm,0.3s						
DGS				*eS*	**Sg**	**12 49 38.9**	**-2.9**
	76nm,0.5s						
DGS	**Degeres**	**4.86**	**220**	Pg	**Pg**	**12 48 35.5**	**-3.4**
	21nm,0.3s						
DGS				Lg	Lg	12 49 38.7	
	76nm,0.5s						
KST	**Kastek**	**4.94**	**217**	*eP*	**Pg**	**12 48 36.6**	**-3.8**
	6.6nm,0.2s						
KST				*eS*	**Sg**	**12 49 41.4**	**-3.0**
	35nm,0.5s						
KST	**Kastek**	**4.94**	**217**	Pg	**Pg**	**12 48 37.1**	**-3.2**
	6.6nm,0.2s						
KST				Lg	Lg	12 49 41.3	
	35nm,0.5s						
TKM2	**Tokmak 2**	**5.20**	**219**	P	**Pn**	**12 48 26.0**	**+2.3**
	SNR=10.0						
TKM2	**Tokmak 2**	**5.20**	**219**	⇑Pn	**Pn**	**12 48 25.5**	**+1.8**
	3.6nm,0.5s						
TKM2				⇑Pg	**Pg**	**12 48 41.3**	**-4.0**
	4.7nm,0.5s						
TKM2				⇑Sn	**Sn**	**12 49 24.1**	**+0.3**
	8.5nm,0.4s						
TKM2				⇑Lg	Lg	12 49 49.2	
	28nm,0.5s						
TUNR	**Tungur**	**5.20**	**51**	P	**Pn**	**12 48 25.6**	**+2.1**
TUNR				S	**Sn**	**12 49 24.7**	**+1.2**
SGDS	**Sogindy**	**5.25**	**229**	Pg	**Pg**	**12 48 41.9**	**-4.4**
SGDS				Lg	Lg	12 49 50.0	
	26nm,0.4s						
OTUK	**Ortayu**	**5.34**	**286**	⇑Pn	**Pn**	**12 48 25.7**	**+0.2**
	2.0nm,0.5s						
OTUK				⇓Pg	**Pb**	**12 48 41.9**	**+2.7**
	3.8nm,0.5s						
OTUK				⇑Lg	Lg	12 49 52.7	
	83nm,0.8s						
USP	**Ospenovka**	**5.45**	**228**	P	**Pn**	**12 48 29.1**	**+2.1**
	SNR=12						
DGZ	**Jazzator, Alta**	**5.59**	**59**	P	**Pn**	**12 48 31.5**	**+2.6**
DGZ				S	**Sn**	**12 49 35.0**	**+1.7**
KBK	**Karagaybulak**	**5.70**	**221**	P	**Pn**	**12 48 33.1**	**+2.6**
	SNR=5.4						
BRZS	**Berezniki**	**5.71**	**304**	*eP*	Pb	12 48 50.4	+5.1
	5.6nm,0.2s						
BRZS				*eS*	**Sg**	**12 50 05.3**	**-3.5**
	66nm,0.3s						
BRZS	**Berezniki**	**5.71**	**304**	Pg	**Pb**	**12 48 47.5**	**+2.2**
	3.1nm,0.1s						
BRZS				Lg	Lg	12 49 59.3	
	34nm,0.6s						
CHBI	**Chibit, Altay**	**5.92**	**54**	P	**Pn**	**12 48 35.8**	**+2.4**
CHBI				S	**Sn**	**12 49 43.2**	**+1.9**
AAK	**Ala-Archa**	**5.92**	**224**	P	**Pn**	**12 48 35.7**	**+2.1**
	SNR=5.2						
AAK	**Ala-Archa**	**5.92**	**224**	P	**Pn**	**12 48 35.4**	**+1.8**
AAK				S	**Sn**	**12 49 41.2**	**-0.3**
AAK	**Ala-Archa**	**5.92**	**224**	⇓Pn	**Pn**	**12 48 35.4**	**+1.8**
	2.2nm,0.5s						
AAK				⇑Pg	**Pg**	**12 48 55.0**	**-4.1**
	5.5nm,0.6s						
AAK				⇑Lg	Lg	12 50 11.8	
	25nm,0.6s						
AKAR	**Aktash**	**5.99**	**54**	P	**Pn**	**12 48 36.7**	**+2.3**
AKAR				S	**Sn**	**12 49 43.8**	**+0.7**
EKS2	**Erkin-Say**	**6.25**	**228**	P	**Pn**	**12 48 40.5**	**+2.4**
	SNR=6.2						
CUR	**Chagan-Uzun**	**6.30**	**58**	P	**Pn**	**12 48 40.1**	**+1.4**
CUR				S	**Sn**	**12 49 51.6**	**+0.9**
ULGR	**Ulagan, Altay**	**6.33**	**53**	P	**Pn**	**12 48 41.0**	**+1.9**
ULGR				S	**Sn**	**12

IVON				S	Sg	12 57 24.2	-0.2	
	baz=267							
IDJK	**Dyngjujokull**	**0.19**	**157**	P	**Pg**	**12 57 23.5**	**+0.3**	
	baz=151							
IHUS	**Husbondi**	**0.40**	**195**	P	**Pg**	**12 57 26.4**	**-0.7**	
	baz=192							
THOR	**Thorvaldshraun**	**0.41**	**51**	P	**Pg**	**12 57 26.8**	**-0.4**	
	baz=53							
THOR				S	Sg	12 57 33.5	+0.9	
	baz=53							
ISKR	**Skrokkalda**	**0.44**	**255**	P	**Pg**	**12 57 26.6**	**-1.2**	
	baz=254							
IKRE	**Kreppuhraun**	**0.45**	**76**	P	**Pg**	**12 57 27.4**	**-0.7**	
	baz=77							
IKRE				S	Sg	12 57 34.2	+0.2	
	baz=77							
IASK	**Askja**	**0.50**	**41**	P	**Pg**	**12 57 28.2**	**-0.8**	
	baz=43							
IJOK	**Jokulheimar**	**0.51**	**224**	P	**Pg**	**12 57 28.0**	**-1.1**	
	baz=222							
IMKO	**Mokollar**	**0.55**	**56**	P	**Pg**	**12 57 29.2**	**-0.7**	
	baz=58							
IMKO				S	Sb	12 57 37.8	-1.8	
	baz=58							
IKSK	**Karasker**	**0.66**	**142**	P	**Pg**	**12 57 30.2**	**-1.9**	
	baz=140							
ISVA	**Svartarkot**	**0.66**	**6**	P	**Pg**	**12 57 30.9**	**-1.2**	
	baz=7.6							
IVSH	**V-Sauoahnukur**	**0.73**	**79**	P	**Pg**	**12 57 32.0**	**-1.4**	
	baz=79							
IVSH				S	Sg	12 57 42.5	-0.5	
	baz=79							
IKAL	**Kalfafell**	**0.74**	**189**	P	**Pg**	**12 57 31.9**	**-1.7**	
	baz=188							
IVAT	**Vatnsfell**	**0.82**	**234**	P	**Pg**	**12 57 33.3**	**-1.8**	
	baz=232							
IADA	**Aoalbol**	**0.86**	**66**	P	**Pg**	**12 57 34.0**	**-1.7**	
	baz=66							
IMEL	**Melhnausar**	**0.95**	**19**	P	**Pg**	**12 57 35.7**	**-1.9**	
	baz=20							
IREN	**Reynihlio**	**0.99**	**12**	P	**Pg**	**12 57 36.4**	**-2.0**	
	baz=13							
IKVO	**Krokottuvotn**	**1.06**	**12**	P	**Pg**	**12 57 37.5**	**-2.3**	
	baz=13							
SCO	**Scoresbysund**	**6.08**	**345**	*i* P	**Pn**	**12 58 50.2**	**+0.5**	
SCO				eS	Sn	13 00 08.7	+9.3	
GERES	**GERESS Array B**	**22.93**	**119**	P	**P**	**13 02 25.4**	**+1.5**	
	0.2nm,0.4s,baz=308,slow=8.0,SNR=3.6							
ILAR	**Eielson Array**	**45.69**	**332**	P	**P**	**13 05 42.2**	**+1.8**	
	0.4nm,0.8s,baz=22,slow=5.1,SNR=4.5							
ZALV	**Zalesovo Beam**	**47.60**	**51**	P	**P**	**13 05 54.4**	**-1.0**	
	0.5nm,0.5s,baz=356,slow=4.3,SNR=2.0							
MKAR	**Makanchi Array**	**52.69**	**58**	P	**P**	**13 06 34.5**	**+0.4**	
	0.6nm,0.9s,baz=352,slow=5.8,SNR=3.5							
TORD	**Torodi Ar. Bea**	**53.14**	**157**	P	**P**	**13 06 37.3**	**-0.4**	
	0.6nm,0.7s,baz=331,slow=10,SNR=3.0							
PDAR	**Pinedale Array**	**53.21**	**293**	P	**P**	**13 06 38.8**	**+0.5**	
	0.6nm,0.8s,baz=50,slow=4.8,SNR=4.9							
CMAR	**Chiang Mai Arr**	**84.09**	**59**	P	**P**	**13 09 50.9**	**0.0**	
	0.4nm,0.3s,baz=317,slow=9.1,SNR=2.1							

IDC 28 12:57:19.2±1.9, 2°37'N×127°08'E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/42, mbtmp3.5/4, Error ellipse: s-maj=111.4km s-min=22.8km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.39**	**184**	P	P	13 01 57.5	-0.2
	0.9nm,0.8s,baz=15,slow=11,SNR=1.8						
WRA	**Warramunga Arr**	**23.29**	**162**	P	P	13 02 28.5	-0.3
	0.7nm,0.4s,baz=342,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.72**	**166**	P	P	13 03 00.6	+0.1
	0.2nm,0.4s,baz=348,slow=8.2,SNR=6.9						
MKAR	**Makanchi Array**	**58.87**	**326**	P	P	13 07 20.0	+0.1
	0.5nm,0.4s,baz=118,slow=7.8,SNR=11						

*NEIC **28** 13:03:38.7±2.5, 64°5'N×0°1'×17°2'W±0°1, h8km±3km, mb4.3/4, Error ellipse: s-maj=17.3km s-min=8.0km az=181.0*

*IDC **28** 13:03:39.1±0.8, 64°37'N×17°58'W, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.7/52, mbtmp3.8/11, ML4.3/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/67, Error ellipse: s-maj=24.6km s-min=10.9km az=21.0*

ISC 28 13:03:39.6±0.6, 64°50'N±0°09×17°27'W±0°06, h10km, n38, σ1§88/32, mb3.8/12, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.77**	**280**	P*g*	**Pn**	**13 04 07.7**	**-2.4**
	33nm,0.3s,baz=92,slow=7.9,SNR=22						
BORG				Lg	Lg	13 04 32.4	
	16nm,0.3s,baz=244,slow=23,SNR=9.2						
BORG				LR	LR	13 04 58.2	
	comp=Z,569nm,19.6s,baz=154,slow=48						
BORG	**Borgarnes**	**1.77**	**280**	P	**Pn**	**13 04 08.6**	**-1.6**
BORG				Sn	**Sn**	**13 04 33.2**	**+0.5**
SCO	**Scoresbysund**	**6.28**	**345**		**Pn**	**13 05 11.7**	**-0.3**
JMIC	**Jan Mayen**	**7.31**	**23**	LR	LR	13 07 44.1	
	comp=Z,135nm,19.9s,baz=262,slow=33						
ANGG	**Ammassalik, Gr**	**8.67**	**287**	Pn	**Pn**	**13 05 46.1**	**+1.2**
EKA	**Eskdalemuir Ar**	**11.57**	**136**	Pn	**Pn**	**13 06 27.0**	**+2.4**
	baz=322,slow=14,SNR=11						
ESK	**Eskdalemuir**	**11.57**	**136**	Pn	**Pn**	**13 06 23.8**	**-0.8**
NC204	**NORSAR Array S**	**13.13**	**91**	Pn	**Pn**	**13 06 44.3**	**-1.6**
NOA	**NORSAR Array B**	**13.43**	**92**	LR	LR	13 12 16.3	
	comp=Z,45nm,21.8s,baz=300,slow=38						
NB201	**NORSAR Array S**	**13.46**	**92**	Pn	**Pn**	**13 06 46.8**	**-3.6**
SFJD	**Kangerlussuaq**	**13.83**	**295**	LR	LR	13 11 43.7	
	comp=Z,255nm,20.6s,baz=102,slow=35						
ILULI	**Ilulissat**	**13.97**	**305**	Pn	**Pn**	**13 06 55.4**	**-1.9**
HFS	**Hagfors**	**14.94**	**93**	LR	LR	13 13 00.2	
	comp=Z,105nm,19.1s,baz=256,slow=37						
ARCES	**ARCESS Array B**	**17.14**	**54**	LR	LR	13 12 49.5	
	comp=Z,56nm,21.6s,baz=270,slow=32						
FIA1	**FINESS Array S**	**19.64**	**79**	P	**P**	**13 08 05.4**	**-2.6**
FIA1				IAmb	IAmb	13 08 11.4	
	comp=Z,18nm,1.4s						
FINES	**FINESS Array B**	**19.64**	**79**	LR	LR	13 15 08.1	
	comp=Z,118nm,21.1s,baz=258,slow=35						
FINES	**FINESS Array B**	**19.64**	**79**	P	**P**	**13 08 06.0**	**-2.0**
CLL	**Collm**	**20.54**	**116**	*eP*	**P**	**13 08 15.0**	**-2.9**
BRG	**Berggiesshubel**	**21.25**	**115**	*eP*	**P**	**13 08 28.0**	**+2.4**
	comp=Z,24nm,1.7s						
BRG				*e*		13 08 36.2	
	comp=Z,11nm,1.3s						
FRB	**Frobisher Bay**	**21.90**	**292**	LR	LR	13 16 33.9	
	comp=Z,118nm,18.2s,baz=64,slow=36						
GERES	**GERESS Array B**	**22.79**	**119**	P	**P**	**13 08 44.0**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=329,slow=6.9,SNR=1.8						
GERES	**GERESS Array B**	**22.79**	**119**	P	**P**	**13 08 39.9**	**-2.2**
ESDC	**Sonseca Array**	**26.06**	**156**	P	**P**	**13 09 13.8**	**+0.9**
	comp=Z,1.6nm,1.0s,baz=358,slow=9.1,SNR=4.1						
SCHQ	**Schefferville**	**26.14**	**272**	P	**P**	**13 09 13.5**	**0.0**
	comp=Z,4.2nm,0.8s,baz=56,slow=18,SNR=2.4						
BRTR	**Keskin Array B**	**38.34**	**105**	P	**P**	**13 11 03.7**	**+3.2**
	comp=Z,0.5nm,0.4s,baz=20,slow=4.6,SNR=2.2						
INK	**Inuvik**	**40.04**	**329**	P	**P**	**13 11 16.1**	**+2.0**
	comp=Z,2.0nm,1.0s,baz=37,slow=9.5,SNR=5.2						
INK	**Inuvik**	**40.04**	**329**	P	**P**	**13 11 14.1**	**0.0**
BMAR	**Burnt Mountain**	**43.09**	**333**	P	**P**	**13 11 40.9**	**+1.7**
ILAR	**Eielson Array**	**45.88**	**333**	P	**P**	**13 12 04.2**	**+2.8**
	comp=Z,1.8nm,1.1s,baz=23,slow=5.5,SNR=11						
ILAR	**Eielson Array**	**45.88**	**333**	P	**P**	**13 12 02.0**	**+0.5**
IMAR	**Indian Mountai**	**46.05**	**337**	P	**P**	**13 12 04.2**	**+1.3**
DHY	**Denali Highway**	**47.50**	**332**	P	**P**	**13 12 16.0**	**+1.7**
DHY				IAmb	IAmb	13 12 19.3	
	comp=Z,3.2nm,0.7s						
MCARA	**McCarthy VSAT**	**48.06**	**328**	P	**P**	**13 12 18.6**	**0.0**
MKAR	**Makanchi Array**	**52.73**	**58**	P	**P**	**13 12 54.8**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=356,slow=7.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**52.95**	**157**	P	**P**	**13 12 55.1**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=330,slow=11,SNR=3.1						
PDAR	**Pinedale Array**	**53.34**	**293**	P	**P**	**13 12 58.7**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=50,slow=5.6,SNR=10						
PDAR	**Pinedale Array**	**53.34**	**293**	P	**P**	**13 12 59.1**	**+0.3**
SONM	**Songino Array**	**59.71**	**40**	P	**P**	**13 13 45.3**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=348,slow=6.2,SNR=4.0						

IDC 28 13:05:19.3±3.9, 5°71'N×61°16'E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/37, mbtmp3.6/6, Error ellipse: s-maj=109.5km s-min=32.9km az=77.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**38.96**	**68**	P	P	13 12 47.4	-0.2
	0.2nm,0.4s,baz=243,slow=6.0,SNR=1.2						
MKAR	**Makanchi Array**	**44.80**	**21**	P	P	13 13 34.5	-0.5
	0.5nm,0.9s,baz=202,slow=7.3,SNR=1.9						
ZALV	**Zalesovo Beam**	**51.80**	**18**	P	P	13 14 28.8	0.0
	0.4nm,0.5s,baz=213,slow=10,SNR=1.7						
SONM	**Songino Array**	**56.97**	**35**	P	P	13 15 07.1	+0.3
	0.5nm,0.3s,baz=217,slow=6.9,SNR=2.2						
WRA	**Warramunga Arr**	**76.27**	**112**	P	P	13 17 10.9	+0.3
	1.1nm,0.9s,baz=285,slow=4.9,SNR=6.1						
ASAR	**Alice Springs**	**76.64**	**116**	P	P	13 17 12.4	-0.2
	0.9nm,0.8s,baz=287,slow=5.9,SNR=8.9						

*IDC **28** 13:11:53.1±0.9, 4°97'N×61°33'E, h0km, mb4.0/13, mb1 4.1/13, mb1mx3.9/45, mbtmp4.0/13, MS3.8/1, Ms1 3.8/1, ms1mx3.0/61, Error ellipse: s-maj=25.6km s-min=19.2km az=20.0*

ISC 28 13:11:54.6±0.9, 5°0N±0°2×61°3E±0°1, h10km, n15, σ0§97/13, mb4.0/13, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIL	**Elat**	**34.99**	**318**	LR	LR	13 31 43.2	
	comp=Z,153nm,19.1s,baz=103,slow=34						
CMAR	**Chiang Mai Arr**	**39.08**	**67**	P	**P**	**13 19 20.4**	**-1.9**
	0.8nm,0.5s,baz=263,slow=9.5,SNR=5.8						
BRTR	**Keskin Array B**	**42.67**	**328**	P	**P**	**13 19 52.3**	**+0.5**
	2.1nm,0.9s,baz=150,slow=8.5,SNR=7.6						
MKAR	**Makanchi Array**	**45.43**	**20**	P	**P**	**13 20 13.7**	**+0.1**
	1.2nm,0.9s,baz=195,slow=8.8,SNR=5.4						
TSUM	**Tsumeb**	**49.31**	**240**	P	**P**	**13 20 44.7**	**+0.4**
	1.9nm,0.7s,baz=243,slow=11,SNR=3.1						
MLR	**Muntele Rosu**	**50.76**	**328**	P	**P**	**13 20 55.7**	**+0.7**
	6.2nm,1.1s,baz=104,slow=23,SNR=4.3						
ZALV	**Zalesovo Beam**	**52.44**	**17**	P	**P**	**13 21 07.2**	**-0.1**
	1.3nm,0.7s,baz=242,slow=6.2,SNR=5.8						
AKASG	**Malin Array Be**	**52.90**	**335**	P	**P**	**13 21 10.4**	**-0.3**
	0.2nm,0.2s,baz=124,slow=6.5,SNR=9.6						
SONM	**Songino Array**	**57.47**	**34**	P	**P**	**13 21 44.5**	**+0.6**
	1.0nm,0.9s,baz=242,slow=6.0,SNR=3.8						
VRAC	**Vranov**	**58.11**	**327**	P	**P**	**13 21 48.9**	**+0.7**
	1.8nm,0.3s,baz=98,slow=7.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**59.33**	**282**	P	**P**	**13 21 55.8**	**-1.6**
	0.2nm,0.4s,baz=90,slow=15,SNR=3.9						
KSRS	**Korea Array**	**68.46**	**52**	P	**P**	**13 22 58.0**	**+0.9**
	2.3nm,0.9s,baz=255,slow=9.8,SNR=4.9						
WRA	**Warramunga Arr**	**75.84**	**112**	P	**P**	**13 23 42.1**	**+0.5**
	1.8nm,1.1s,baz=293,slow=5.1,SNR=5.8						
ASAR	**Alice Springs**	**76.16**	**116**	P	**P**	**13 23 44.3**	**+0.8**
	1.9nm,1.0s,baz=300,slow=4.4,SNR=6.5						
TXAR	**Lajitas Array**	**142.97**	**338**	PKhKP	PKPpre	13 31 23.5	
	0.0nm,0.3s,baz=198,slow=0.6,SNR=2.4						

*IDC **28** 13:15:33.0±1.3, 5°60'N×60°94'E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.6/52, mbtmp3.7/8, Error ellipse: s-maj=35.3km s-min=27.0km az=50.0*

ISC 28 13:15:34.5±1.3, 5°6N±0°2×61°0E±0°2, h10km, n8, σ1§21/8, mb3.7/8, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**39.20**	**68**	P	**P**	**13 23 03.0**	**-0.3**
	0.4nm,0.3s,baz=258,slow=8.9,SNR=5.1						
AKTO	**Aktyubinsk**	**44.77**	**357**	P	P	13 23 50.0	+1.7
	0.5nm,0.5s,baz=174,slow=9.2,SNR=1.6						
MKAR	**Makanchi Array**	**45.00**	**21**	P	**P**	**13 23 50.0**	**-0.3**
	0.3nm,0.6s,baz=220,slow=8.2,SNR=2.2						
ZALV	**Zalesovo Beam**	**51.98**	**18**	P	**P**	**13 24 41.9**	**-2.0**
	0.3nm,0.4s,baz=194,slow=8.9,SNR=1.8						
SONM	**Songino Array**	**57.19**	**35**	P	**P**	**13 25 22.1**	**0.0**
	0.7nm,1.0s,baz=241,slow=7.2,SNR=2.2						
TORD	**Torodi Ar. Bea**	**58.83**	**282**	P	**P**	**13 25 33.5**	**-0.4**
	0.5nm,0.7s,baz=93,slow=6.1,SNR=2.1						
WRA	**Warramunga Arr**	**76.42**	**112**	P	**P**	**13 27 25.2**	**+0.3**
	2.2nm,1.0s,baz=290,slow=5.0,SNR=8.0						
ASAR	**Alice Springs**	**76.77**	**116**	P	**P**	**13 27 27.4**	**+0.5**
	2.4nm,1.0s,baz=286,slow=4.8,SNR=12						

*BJI **28** 13:23:08.9±0.0, 5°11'N×60°93'E, h10km, mB5.3/39, mb4.8/52, Ms5.3/50, Ms7 5.1/48*

*IDC **28** 13:23:14.4±0.4, 5°83'N×61°31'E, h0km, mb4.4/37, mb1 4.5/40, mb1mx4.4/54, mbtmp4.4/40, ML3.8/3, MS4.8/38, Ms1 4.8/38, ms1mx4.7/48, Error ellipse: s-maj=10.6km s-min=8.4km az=16.0*

*MOS **28** 13:23:14.4±1.0, 5°78'N×61°20'E, h10km, mb5.1/62, MS4.6/14, Error ellipse: s-maj=8.1km s-min=4.5km az=91.4*

*NEIC **28** 13:23:15.8±1.6, 5°8'N±0°1×61°33'E±0°09, h10km±1km, mb5.0/71, Mwc5.4(GCMT), Error ellipse: s-maj=17.9km s-min=14.1km az=207.0*

*GCMT **28** 13:23:16.8±0.1, 5°73'N±0°01×61°25'E±0°01, h12km, MW5.4/151, Moment Tensor Solution. s101,c147; s151,c315; Duration: 1§3 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.55±.02; $M_{\theta\theta}$ 1.10±.01; $M_{\phi\phi}$ 0.45±.02; $M_{r\theta}$ 0.97±.04; $M_{\theta\phi}$-0.66±.01; $M_{\phi r}$-0.11±.04; Best double couple: $M_0$1.81500×10^{17} NP1:ϕ_s133.00000°, δ31.00000°, λ-69.00000°. NP2:ϕ_s289.00000°, δ61.00000°, λ-102.00000°. Principal axes: T 1.7570, Plg15.0000°, Azm28.0000°; N 0.1190, Plg11.0000°, Azm295.0000°; P -1.8740, Plg71.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 13:23:17, 5°72'N×61°23E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.65; $M_{\theta\theta}$ 1.17; $M_{\phi\phi}$ 0.47; $M_{r\theta}$ 0.85; $M_{\theta\phi}$-0.70; $M_{\phi r}$-0.08; Fault plane solution: $M_0$1.84000×10^{17} NP1:ϕ_s132.00000°, δ33.00000°, λ-72.00000°. NP2:ϕ_s290.00000°, δ59.00000°, λ-102.00000°. Principal axes: T 1.7822, Plg13.0000°, Azm29.0000°; N 0.1085, Plg10.0000°, Azm297.0000°; P -1.8907, Plg74.0000°, Azm170.0000°;*

ISC 28 13:23:17.1±0.6, 5°78N±0°04×61°23E±0°04, h17km±3km, h17km:pP-P, n459, σ1§59/512, mb4.9/162, MS4.8/72, 31C-20D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**9.58**	**312**	P	Pn	13 25 40.9	+6.5
SOCY	**Socotra**	**9.58**	**312**	Pn	Pn	13 25 40.4	+6.0
SHAO	**Shalim**	**13.35**	**336**	*i* P	**Pn**	**13 26 27.8**	**+1.8**
	SNR=6.7						
SHAO	**Shalim**	**13.35**	**336**	P	**Pn**	**13 26 29.2**	**+3.3**
	SNR=7.1						
SHAO				P	**Pn**	**13 26 29.2**	**+3.3**
	SNR=7.1						
SHAO				P	**Pn**	**13 26 29.2**	**+3.3**
	SNR=7.1						
DMTO	**DMTO**	**13.36**	**333**	P	**Pn**	**13 26 30.8**	**+4.7**
DMTO				P	**Pn**	**13 26 30.8**	**+4.7**
DMTO				P	**Pn**	**13 26 30.8**	**+4.7**
RBK	**Rabkut**	**13.53**	**330**	P	**P**	**13 26 33.7**	**-3.9**
	SNR=9.1						
RBK				P	**P**	**13 26 33.7**	**-3.9**
	SNR=9.1						
RBK				P	**P**	**13 26 33.7**	**-3.9**
	SNR=9.1						
ABTO	**Aybut**	**13.88**	**327**	P	**Pn**	**13 26 37.1**	**+3.9**
	SNR=21						
ABTO				P	**Pn**	**13 26 37.1**	**+3.9**
	SNR=21						
WHFO	**Wadi Hawf**	**14.10**	**330**	P	**Pn**	**13 26 39.9**	**+3.7**
DQM	**DQM**	**14.52**	**346**	P	**Pn**	**13 26 44.4**	**+2.4**
	SNR=21						
DQM				P	**Pn**	**13 26 44.4**	**+2.4**
	SNR=21						
DQM				P	**Pn**	**13 26 44.4**	**+2.4**
	SNR=21						
MHTO	**MHTO**	**15.45**	**348**	P	**Pn**	**13 26 55.8**	**+1.4**
	SNR=77						
MHTO				P	**Pn**	**13 26 55.8**	**+1.4**
	SNR=77						
MHTO				P	**Pn**	**13 26 55.8**	**+1.4**
	SNR=77						
GOA	**Goa**	**15.69**	**51**	*eP*	**Pn**	**13 26 58.0**	**+0.5**
TRD	**Trivandrum**	**15.84**	**79**	*eP*	**Pn**	**13 27 00.4**	**+0.9**
JLN	**Jalan Bani Buh**	**16.37**	**354**	P	**Pn**	**13 27 07.6**	**+1.3**
	SNR=20						
JLN				P	**Pn**	**13 27 07.6**	**+1.3**
	SNR=20						
JMDO	**Jabal Madar**	**16.77**	**350**	P	**P**	**13 27 14.0**	**+0.4**
	SNR=29						
SMDO	**Samad**	**17.45**	**350**	P	**P**	**13 27 22.1**	**+0.9**
	SNR=24						
SMDO				P	**P**	**13 27 22.1**	**+0.9**
	SNR=24						
SMDO				P	**P**	**13 27 22.1**	**+0.9**
	SNR=24						
WSAR	**Wadi Sarin**	**17.54**	**352**	P	**Pn**	**13 27 21.0**	**0.0**
	0.1nm,0.3s,baz=194,slow=12,SNR=9.6						
WSAR				S	**Sn**	**13 30 35.3**	**-0.8**
	0.3nm,0.3s,baz=137,slow=12,SNR=0.9						
WSAR				LR	LR	13 32 48.5	
	comp=Z,3μm,19.1s,baz=192,slow=33						
POO	**Poona**	**17.67**	**43**	*eP*	**P**	**13 27 23.3**	**-0.3**
BIDO	**Bidbid**	**17.89**	**351**	P	**P**	**13 27 28.0**	**+2.0**
	SNR=22						
ALNE	**Al Ain**	**18.92**	**344**	*i* P	**Pn**	**13 27 37.7**	**-0.2**
	SNR=14						
ATD	**Arta Tunnel**	**19.04**	**289**	P	**Pn**	**13 27 39.2**	**-0.3**
	0.6nm,0.3s,baz=237,slow=20,SNR=3.5						
ATD				S	**S**	**13 31 14.6**	**0.0**
	1.0nm,0.3s,baz=220,slow=22,SNR=1.3						
ATD				LR	LR	13 34 13.0	
	comp=Z,2μm,18.1s,baz=102,slow=34						
ATD	**Arta Tunnel**	**19.04**	**289**	P	**Pn**	**13 27 40.0**	**+0.5**
BHUJ	**Bhuj**	**19.18**	**24**	*eP*	**Pn**	**13 27 42.2**	**+1.2**
PALK	**Pallekele**	**19.41**	**85**	P	**P**	**13 27 43.1**	**+0.4**
	0.4nm,0.3s,baz=314,slow=18,SNR=1.3						
PALK				S	**Sn**	**13 31 19.9**	**-1.5**
	0.3nm,0.3s,baz=154,slow=15,SNR=2.3						
PALK				LR	LR	13 33 41.5	
	comp=Z,4μm,18.9s,baz=12,slow=32						
PALK	**Pallekele**	**19.41**	**85**	P	**Pn**	**13 27 44.8**	**+0.9**
PALK				P	**Pn**	**13 27 44.8**	**+0.9**
PALK				P	**Pn**	**13 27 44.8**	**+0.9**
PALK	**Pallekele**	**19.41**	**85**	P	**Pn**	**13 27 45.0**	**+1.1**
PALK				pmax	pmax		
	comp=Z,111nm,1.4s						
PALK	**Pallekele**	**19.41**	**85**	P	**Pn**	**13 27 45.0**	**+1.1**
PALK				IAmb	IAmb	13 27 53.3	
	comp=Z,111nm,1.4s						
HATD	**Hatta, Dubai**	**19.56**	**346**	*i* P	**P**	**13 27 44.5**	**+0.3**
	SNR=27						
HATD	**Hatta, Dubai**	**19.56**	**346**	P	**Pn**	**13 27 48.0**	**+2.4**
	SNR=20						
HATD				P	**Pn**	**13 27 48.0**	**+2.4**
	SNR=20						
HATD				P	**Pn**	**13 27 48.0**	**+2.4**
	SNR=20						
ASUD	**Al Ashush, Dub**	**19.58**	**344**	*i* P	**Pn**	**13 27 45.9**	**+0.1**
	SNR=6.6						
ASUD	**Al Ashush, Dub**	**19.58**	**344**	P	**Pn**	**13 27 49.0**	**+3.2**
	SNR=7.0						
ASUD				P	**Pn**	**13 27 49.0**	**+3.2**
	SNR=7.0						
ASUD				P	**Pn**	**13 27 49.0**	**+3.2**
	SNR=7.0						
AJN	**Ajban**	**19.62**	**343**	*i* P	**Pn**	**13 27 45.8**	**-0.5**
	SNR=7.2						
AJN	**Ajban**	**19.62**	**343**	P	**Pn**	**13 27 49.0**	**+2.8**
	SNR=5.4						
AJN				P	**Pn**	**13 27 49.0**	**+2.8**
	SNR=5.4						
AJN				P	**Pn**	**13 27 49.0**	**+2.8**
	SNR=5.4						
FAQ	**Al Faqa, Dubai**	**19.62**	**345**	*i* P	**P**	**13 27 44.7**	**-0.2**
	SNR=10						
FAQ	**Al Faqa, Dubai**	**19.62**	**345**	P	**Pn**	**13 27 49.0**	**+2.7**
	SNR=9.7						
FAQ				P	**Pn**	**13 27 49.0**	**+2.7**
	SNR=9.7						
FAQ				P	**Pn**	**13 27 49.0**	**+2.7**
	SNR=9.7						
UOSS	**Minazif**	**19.66**	**346**	*i* P	**P**	**13 27 45.2**	**-0.2**
	SNR=6.2						
UOSS	**Minazif**	**19.66**	**346**	P	**P**	**13 27 46.0**	**+0.7**
UOSS				IAmb	IAmb	13 27 50.9	
	comp=Z,151nm,1.5s						
NAZ	**Nazwa, Dubai**	**19.84**	**345**	*i* P	**P**	**13 27 47.9**	**+0.6**
	SNR=8.0						
NAZ	**Nazwa, Dubai**	**19.84**	**345**	P	**Pn**	**13 27 52.0**	**+3.2**
	SNR=11						
NAZ				P	**Pn**	**13 27 52.0**	**+3.2**
	SNR=11						
NAZ				P	**Pn**	**13 27 52.0**	**+3.2**
	SNR=11						
MSFE	**Esma-Masafi**	**20.07**	**347**	*i* P	**P**	**13 27 50.2**	**+0.3**
	SNR=12						
MDRS	**Chennai**	**20.10**	**68**	*eP*	Pn	13 27 53.2	+1.2
HYB	**Hyderabad**	**20.52**	**54**	*i* P	**P**	**13 27 55.0**	**+0.3**
HYB				*es*P	**pwP**	**13 28 04.0**	**+0.7**
HYB				*eS*	**S**	**13 31 44.0**	**+0.1**
BANOM	**Banah**	**20.58**	**347**	*i* P	**P**	**13 27 55.2**	**-0.2**
	SNR=7.4						
BANOM	**Banah**	**20.58**	**347**	P	Pn	13 28 01.0	+3.3
	SNR=6.8						
SHME	**Shamm**	**20.74**	**347**	P	**P**	**13 27 57.4**	**+0.3**
TEND	**Ethiopian Broa**	**20.85**	**288**	*eP*	Pn	13 28 02.2	+1.2
ANKE	**Ethiopia-Afar**	**21.63**	**281**	*eP*	**P**	**13 28 06.5**	**-0.7**
ANKE				*eS*	Sn	13 32 13.1	-2.4
RAYN	**Ar Rayn**	**23.25**	**321**	*i* P	**P**	**13 28 22.7**	**-1.2**
	SNR=31						
RAYN	**Ar Rayn**	**23.25**	**321**	P	**P**	**13 28 24

SHL Shillong 35.31 53 P **P** **13 30 11.9 +0.1**
SHL IAmb IAmb 13 30 15.0
comp=Z,23nm,1.1s

GUWA GUWAHATI 35.47 52⇑ *e*P **P** **13 30 14.8 +1.9**
GUWA IAmb IAmb 13 30 17.0
comp=Z,12nm,0.8s

KSH Kashi 36.13 20 P **P** **13 30 16.0 -2.6**
KSH sP sP 13 30 25.5 +0.8
KSH PP **PnPn** **13 31 33.0 -7.1**
KSH S **S** **13 35 56.5 -1.2**
KSH pmax pmax
comp=Z,12nm,0.6s
KSH pmax pmax
comp=Z,470nm,5.2s
KSH LR LR
comp=Z,2µm,14.3s
KSH LR LR
comp=Z,2µm,12.1s
KSH LR LR
comp=Z,5µm,20.8s

MMAI Mount Meron Ar 36.23 322 P **P** **13 30 17.7 -1.7**
comp=Z,0.4nm,0.5s,baz=38,slow=50,SNR=2.4

MARD Mardin 36.52 332 P **P** **13 30 23.6 +1.6**
MARD IAmb IAmb 13 30 27.0
comp=Z,42nm,1.2s

TEZP TEZPUR 36.54 52 *e*P **P** **13 30 22.5 +0.4**
TEZP IAmb IAmb 13 30 29.9
comp=Z,20nm,1.0s

LSA Lhasa 36.91 46 P **P** **13 30 27.0 +1.2**
LSA Lhasa 36.91 46 P **P** **13 30 26.7 +1.0**
IUG luzhnay 37.06 11 *e*P **P** **13 30 27.3 +0.9**
comp=Z,11nm,1.6s,baz=11
IUG *e*S **S** **13 36 13.7 +2.0**
baz=11
IUG LR LR 13 45 07.8
comp=Z,342nm,18.3s,baz=11

IUG luzhnay 37.06 11 *e*P **P** **13 30 27.3 +0.9**
IUG *e*S **S** **13 36 13.7 +2.0**
IUG pmax pmax
comp=Z,11nm,1.6s
IUG MLR MLR
comp=Z,342nm,18.0s

KOHI KOHIMA 37.16 54 *e*P **P** **13 30 29.4 +1.8**
GNI Garni 37.30 339 P **P** **13 30 27.4 -1.1**
comp=Z,2.9nm,0.4s,baz=234,slow=6.1,SNR=7.1

GNI Garni 37.30 339 P **P** **13 30 29.3 +0.7**
GNI Garni 37.30 339 *d i*P **P** **13 30 30.6 +2.0**
GNI pmax pmax
comp=Z,45nm,1.7s

GNI Garni 37.30 339 P **P** **13 30 28.8 +0.2**
GNI IAmb IAmb 13 30 41.3
comp=Z,73nm,1.4s

PSI Prapat 37.70 93 P **P** **13 30 33.7 +1.4**
PSI pmax pmax
comp=Z,25nm,1.3s

RPSI Rantau Prapat 37.71 93 P **P** **13 30 33.7 +1.5**
RPSI IAmb IAmb 13 30 56.4
comp=Z,24nm,1.3s

JORH JORHAT 37.74 53 *e*P **P** **13 30 33.6 +1.3**
MOKO MOKOCHONG 37.76 54 *e*P **P** **13 30 34.2 +1.5**
ZIRO ZIRO 37.80 51 *e*P **P** **13 30 34.1 +1.1**
MHMT Maesarieng 37.87 68 P **P** **13 30 36.1 +2.6**
comp=Z,829nmcomp=Z,19nm,1.3s

DZA Taraz 38.03 12 *e*P **P** **13 30 35.5 +0.9**
baz=12
DZA LR LR 13 46 20.2
comp=Z,496nm,17.9s,baz=12

DZA Taraz 38.03 12 *e*P **P** **13 30 35.4 +0.9**
DZA MLR MLR
comp=Z,496nm,18.0s

KK31 Karatay Array 38.07 11 P **P** **13 30 35.7 +0.8**
KK31 pmax pmax
comp=Z,27nm,1.5s

KK31 Karatay Array 38.07 11 P **P** **13 30 35.7 +0.8**
KKAR Karatay Array 38.07 11 P **P** **13 30 36.2 +1.3**
KKAR pmax pmax
comp=Z,27nm,1.5s

KKAR Karatay Array 38.07 11 P **P** **13 30 36.2 +1.3**
GAZ Gaziantep 38.18 328 P **P** **13 30 37.9 +1.9**
EKS2 Erkin-Say 38.38 15 P **P** **13 30 40.1 +2.4**
SNR=27

AAK Ala-Archa 38.55 16 P **P** **13 30 39.3 +0.2**
comp=Z,2.9nm,0.6s,baz=192,slow=5.2,SNR=2.3

AAK Ala-Archa 38.55 16 *i* P **P** **13 30 40.1 +1.0**
SNR=9.4

AAK Ala-Archa 38.55 16 *i* P **P** **13 30 40.1 +1.0**
SNR=11

AAK Ala-Archa 38.55 16 *de*P **P** **13 30 41.1 +2.0**
AAK pmax pmax
comp=Z,114nm,1.7s

KBK Karagaybulak 38.69 16 P **P** **13 30 42.9 +2.6**
SNR=11

UTHA Uthaitani 38.73 72 P **P** **13 30 42.8 +2.0**
comp=Z,270ncomp=Z,32nm,1.0s

FRU1 Bishkek 38.74 16 P **P** **13 30 42.3 +1.7**
FRU1 pmax pmax
comp=Z,36nm,1.1s

FRU1 Bishkek 38.74 16 P **P** **13 30 42.3 +1.7**
FRU1 IAmb IAmb 13 30 51.6
comp=Z,36nm,1.1s

CM13 Chiang Mai Arr 38.83 68 P **P** **13 30 43.0 +1.4**
comp=Z,108nmcomp=Z,7.3nm,1.1s

CM32 Chiang Mai Arr 38.83 67 P **P** **13 30 43.0 +1.4**
LSZ Lusaka 38.85 237 P **P** **13 30 43.1 +1.2**
comp=Z,6.5nm,0.9s,baz=65,slow=9.0,SNR=7.2
LSZ PcP **PcP** **13 32 54.0 +0.9**
comp=Z,2.7nm,0.5s,baz=70,slow=4.3,SNR=3.0

LSZ Lusaka 38.85 237 P **P** **13 30 42.6 +0.7**
LSZ pmax pmax
comp=Z,32nm,1.5s

LSZ Lusaka 38.85 237 P **P** **13 30 42.6 +0.7**
CM15 Chiang Mai Arr 38.85 68 P **P** **13 30 43.0 +1.2**
comp=Z,117nmcomp=Z,8.7nm,1.1s

CM05 Chiang Mai Arr 38.86 68 P **P** **13 30 43.0 +1.1**
comp=Z,118nmcomp=Z,9.9nm,1.0s

CM02 Chiang Mai Arr 38.87 68 P **P** **13 30 43.6 +1.7**
comp=Z,117nmcomp=Z,14nm,1.1s

CM31 Chiang Mai Arr 38.87 68 P **P** **13 30 44.9 +2.9**
comp=Z,290nm,0.4s

CM31 Chiang Mai Arr 38.87 68 P **P** **13 30 42.7 +0.8**
CM31 IAmb IAmb 13 30 55.2
comp=Z,31nm,1.4s

CMAR Chiang Mai Arr 38.87 68 P **P** **13 30 41.7 -0.3**
comp=Z,3.7nm,0.9s,baz=260,slow=8.1,SNR=32
CMAR PcP **PcP** **13 32 53.2 +0.3**
comp=Z,1.6nm,0.9s,baz=241,slow=4.4,SNR=4.9
CMAR LR LR 13 45 25.2
comp=Z,1µm,21.7s,baz=298,slow=34

CMAR Chiang Mai Arr 38.87 68 *i* P **P** **13 30 43.0 +1.0**
CMAR pmax pmax
comp=Z,4.0nm,1.0s

CM01 Chiang Mai Arr 38.88 68 P **P** **13 30 44.0 +2.0**
comp=Z,138nmcomp=Z,13nm,1.2s

CM04 Chiang Mai Arr 38.89 68 P **P** **13 30 43.8 +1.7**
comp=Z,137nmcomp=Z,13nm,1.0s

CM09 Chiang Mai Arr 38.91 68 P **P** **13 30 44.5 +2.1**
comp=Z,143nmcomp=Z,15nm,1.1s

CHTO Chiang Mai 38.96 67 P **P** **13 30 43.3 +0.6**
CHTO pmax pmax
comp=Z,19nm,1.1s

CHTO Chiang Mai 38.96 67 P **P** **13 30 43.3 +0.6**
CM33 Chiang Mai Arr 38.96 67 P **P** **13 30 43.0 +0.3**
MAK Makhachkala 38.97 344 *e*P **P** **13 30 38.7 -3.7**
MAK *e*S **S** **13 36 36.7 -3.7**
MAK *e*SS **SnSn** **13 39 27.2 -4.7**
MAK pmax pmax
comp=Z,190nm,1.0s
MAK MLR MLR
comp=Z,560nm,13.0s

CM36 Chiang Mai Arr 39.02 68 P **P** **13 30 44.0 +0.7**
CM35 Chiang Mai Arr 39.12 67 P **P** **13 30 45.0 +1.0**
TKM2 Tokmak 2 39.12 17 P **P** **13 30 45.1 +1.1**
SNR=5.8

USP Ospenovka 39.13 15 P **P** **13 30 44.9 +1.0**
SNR=8.2

CM34 Chiang Mai Arr 39.16 67 P **P** **13 30 45.0 +0.6**
LKP Lekhapani 39.28 53 *e*P **P** **13 30 47.2 +2.0**
SUKH Sukhothai 39.28 69 P **P** **13 30 48.0 +2.6**
comp=Z,16nm,1.1s

SGDS Sogindy 39.34 15 *e*P **P** **13 30 46.3 +0.7**
comp=Z,11nm,1.4s,baz=15

SGDS Sogindy 39.34 15 *e*P **P** **13 30 46.3 +0.7**
SGDS pmax pmax
comp=Z,11nm,1.4s

TNSS Tian-Shan 39.63 18 *e*P **P** **13 30 49.5 +1.1**
baz=18

TNSS Tian-Shan 39.63 18 *e*P **P** **13 30 49.5 +1.1**
GROC Groznyy 39.69 342 *e*P **P** **13 30 47.2 -1.2**
GROC *e* 13 32 54.1
GROC pmax pmax
comp=Z,22nm,0.5s

MDOK Medeo 39.77 18 *e*P **P** **13 30 49.2 -0.2**
baz=18
MDOK *e*PP **PP** **13 32 20.6 -0.2**
baz=18
MDOK LR LR 13 47 28.6
comp=Z,612nm,14.5s,baz=18

MDOK Medeo 39.77 18 *e*P **P** **13 30 49.1 -0.2**
MDOK *e* 13 32 20.5
MDOK MLR MLR
comp=Z,612nm,15.0s

AAA Alma-Ata 39.77 18 *e*P **P** **13 30 50.2 +0.9**
baz=18
AAA LR LR 13 47 37.7
comp=Z,626nm,16.5s,baz=18

AAA Alma-Ata 39.77 18 *e*P **P** **13 30 50.1 +0.9**
AAA MLR MLR
comp=Z,626nm,17.0s

PAYA Payao 39.94 67 P **P** **13 30 53.6 +2.6**
comp=Z,2µmcomp=Z,159nm,1.2s

PHIT Phitsanulok 39.96 70 P P 13 30 59.2 +8.2
PHRA Phrae 40.06 68 P **P** **13 30 53.8 +1.8**
comp=Z,141nm,1.5s

SATY Saty 40.12 20 *e*P **P** **13 30 52.6 +0.5**
comp=Z,9.1nm,1.6s,baz=20
SATY LR LR 13 46 59.4
comp=Z,334nm,17.3s,baz=20

SATY Saty 40.12 20 *e*P **P** **13 30 52.6 +0.5**
SATY pmax pmax
comp=Z,9.0nm,1.6s
SATY MLR MLR
comp=Z,334nm,17.0s

KUU Kurty 40.22 17 *e*P **P** **13 30 53.3 +0.3**
comp=Z,15nm,1.9s,baz=17

KUU Kurty 40.22 17 *e*P **P** **13 30 53.2 +0.3**
KUU pmax pmax
comp=Z,15nm,1.9s

CHKK Chushkaly 40.38 18 *e*P **P** **13 30 54.8 +0.5**
baz=18

CHKK Chushkaly 40.38 18 *e*P **P** **13 30 54.7 +0.5**
SHLS Shalkode 40.56 21 *e*P **P** **13 30 57.6 +1.7**
comp=Z,6.0nm,1.0s,baz=21

SHLS Shalkode 40.56 21 *e*P **P** **13 30 57.6 +1.7**
SHLS pmax pmax
comp=Z,6.0nm,1.0s

KPKS Kokpek 40.57 20 *e*P **P** **13 30 55.6 -0.3**
comp=Z,15nm,1.7s,baz=20

KPKS Kokpek 40.57 20 *e*P **P** **13 30 55.5 -0.3**
KPKS pmax pmax
comp=Z,15nm,1.7s

BTLS Baital 40.68 14 *e*P **P** **13 30 57.2 +0.6**
comp=Z,7.3nm,1.3s,baz=14

BTLS Baital 40.68 14 *e*P **P** **13 30 57.1 +0.5**
BTLS pmax pmax
comp=Z,7.0nm,1.3s

PDGK Podgornoye 40.73 21 P **P** **13 30 56.8 -0.4**
TOKA Tokat 40.95 331 P **P** **13 30 59.9 +0.9**
KBZ Khabaz 41.10 340 *d i*P **P** **13 31 01.1 +1.0**
comp=Z,4.2nm,0.9s,baz=167,slow=5.5,SNR=8.5
KBZ PP **PnPn** **13 32 39.8 +0.3**
comp=Z,7.9nm,1.2s,baz=146,slow=8.1,SNR=4.2
KBZ LR LR 13 49 08.3
comp=Z,756nm,19.5s,baz=146,slow=38

KBZ Khabaz 41.10 340 *d i*P **P** **13 31 01.7 +1.6**
KBZ pmax pmax
comp=Z,24nm,1.8s

CHAI Chaiyaphum 41.20 72 P **P** **13 31 03.0 +1.7**
comp=Z,333nmcomp=Z,36nm,1.0s

KVAR Kislovodsk Arr 41.37 340 LR LR 13 48 04.9
comp=Z,982nm,18.8s,baz=96,slow=36

KIV Kislovodsk 41.37 340 P **P** **13 31 03.9 +1.4**
KIV pmax pmax
comp=Z,20nm,1.2s

KIV Kislovodsk 41.37 340 P **P** **13 31 03.9 +1.4**
MATP Matopo 41.38 230 P **P** **13 31 02.8 -0.1**
comp=Z,7.7nm,1.1s,baz=37,slow=9.6,SNR=5.7

TDK Taldyqorghan 41.85 18 *e*P **P** **13 31 07.0 +0.7**
comp=Z,41nm,1.5s,baz=18
TDK *e*S **S** **13 37 25.7 +2.2**
baz=18
TDK LR LR 13 48 50.2
comp=Z,836nm,17.2s,baz=18

TDK Taldyqorghan 41.85 18 *e*P **P** **13 31 07.0 +0.7**
TDK *e*S **S** **13 37 25.6 +2.1**
TDK pmax pmax
comp=Z,41nm,1.5s
TDK MLR MLR
comp=Z,836nm,17.0s

BR131 Keskin Array S 41.95 328 P **P** **13 31 07.9 +0.6**
BR131 pmax pmax
comp=Z,30nm,1.3s

BR131 Keskin Array S 41.95 328 P **P** **13 31 07.9 +0.6**
BR131 IAmb IAmb 13 31 09.9
comp=Z,30nm,1.2s

BRTR Keskin Array B 41.95 328 P **P** **13 31 07.5 +0.1**
comp=Z,6.3nm,1.0s,baz=143,slow=9.3,SNR=20
BRTR LR LR 13 48 58.7
comp=Z,882nm,20.1s,baz=126,slow=37

BRTR Keskin Array B 41.95 328 P **P** **13 31 07.7 +0.4**
BRTR Keskin Array B 41.95 328 P **P** **13 31 07.7 +0.4**
KHON Khomkaen 42.06 72 P P 13 31 16.8 +8.4
comp=Z,20nm,0.4s

ELL Elmali 42.08 321 P **P** **13 31 09.6 +1.2**
ELL pmax pmax
comp=Z,104nm,1.4s

ELL Elmali 42.08 321 P **P** **13 31 09.6 +1.2**
ANTO Ankara 42.51 327 P **P** **13 31 12.9 +1.1**
ANTO Ankara 42.51 327 P **P** **13 31 12.9 +1.1**
NONG Nongkai 42.68 70 P **P** **13 31 14.5 +1.1**
comp=Z,8µmcomp=Z,37nm,2.3s

ILGA Ilgaz 42.88 329 P **P** **13 31 15.4 +0.4**
ILGA IAmb IAmb 13 31 22.6
comp=Z,48nm,1.4s

AB31 Akbulak array 43.34 359 *i* P **P** **13 31 18.5 +0.2**
ABKAR Akbulak array 43.34 359 P **P** **13 31 18.1 -0.2**
ABKAR IAmb IAmb 13 31 21.1
comp=Z,47nm,1.4s

ABKAR Akbulak array 43.34 359 P **P** **13 31 17.8 -0.5**
OTUK Ortayu 43.37 11 P **P** **13 31 19.3 +0.7**
MDUB Mudurnu 43.80 327 P **P** **13 31 21.8 -0.4**
BODT Bodrum 43.91 320 P **P** **13 31 24.3 +1.2**
MANT Manisa 44.01 322 P **P** **13 31 24.4 +0.3**
ANN Anapa 44.08 336 *e*P **P** **13 31 22.4 -1.9**
ANN *e**PP **pP** **13 31 26.6 -2.0**
ANN *e* 13 33 05.6
ANN *e*PPP PPP 13 33 40.9
ANN *e*S **S** **13 37 55.7 -0.4**
ANN pmax pmax
comp=Z,30nm,1.4s
ANN MLR MLR
comp=E,2µm,20.0s
ANN MLR MLR
comp=Z,726nm,17.0s
ANN MLR MLR
comp=N,984nm,18.0s

SLVN Son La 44.10 65 P **P** **13 31 23.2 -1.7**
SLVN IAmb IAmb 13 31 48.9
comp=Z,36nm,1.4s

KMI Kunming 44.14 60⇑ *i*P **P** **13 31 26.8 +1.4**
KMI pmax pmax
comp=Z,18nm,1.0s
KMI pmax pmax
comp=Z,280nm,6.1s
KMI LR LR
comp=Z,1µm,16.7s
KMI LR LR
comp=Z,1µm,17.6s
KMI LR LR
comp=Z,2µm,19.1s

WMQ Urumqi 44.46 27 *e*P **P** **13 31 28.5 +1.0**
WMQ sP pwP 13 31 38.0 +1.4
WMQ pmax pmax
comp=Z,30nm,1.3s
WMQ pmax pmax
comp=Z,400nm,5.3s
WMQ LR LR
comp=Z,650nm,18.3s
WMQ LR LR
comp=Z,2µm,18.7s
WMQ LR LR
comp=Z,3µm,25.1s

WMQ Urumqi 44.46 27 IAmb IAmb 13 31 30.2
comp=Z,37nm,1.4s

IDI Anoyia 44.51 316 P **P** **13 31 29.6 +1.6**
AKTO Aktyubinsk 44.59 357 P **P** **13 31 28.5 +0.2**
comp=Z,12nm,1.1s,baz=178,slow=7.9,SNR=24

SMG Samos 44.60 320 P **P** **13 31 29.7 +1.1**
MAKZ Makanchi 44.62 20 P **P** **13 31 27.7 -0.9**
MAKZ pmax pmax
comp=Z,12nm,1.2s

MAKZ Makanchi 44.62 20 P **P** **13 31 27.7 -0.9**
MK31 Makanchi Array 44.72 21 P **P** **13 31 28.8 -0.6**
MK31 pmax pmax
comp=Z,7.0nm,1.3s

MK31 Makanchi Array 44.72 21 P **P** **13 31 28.8 -0.6**
MKAR Makanchi Array 44.72 21 P **P** **13 31 29.8 +0.3**
comp=Z,2.1nm,1.0s,baz=211,slow=11,SNR=10
MKAR PcP **PcP** **13 33 10.1 -1.6**
comp=Z,2.3nm,1.1s,baz=276,slow=1.1,SNR=4.7
MKAR LR LR 13 52 32.9
comp=Z,918nm,18.3s,baz=214,slow=39

MKAR Makanchi Array 44.72 21 P **P** **13 31 29.1 -0.4**
MKAR Makanchi Array 44.72 21 P **P** **13 31 29.1 -0.4**
MKAR **PcP** **13 33 11.6 -0.1**
APE Apeiranthos 45.06 319 ⇓P **P** **13 31 33.9 +1.6**
APE Apeiranthos 45.06 319 P **P** **13 31 34.0 +1.6**
BRZS Berezniki 45.10 10 *e*P **P** **13 31 32.3 -0.1**
comp=Z,5.4nm,1.8s,baz=10

BRZS Berezniki 45.10 10 *e*P **P** **13 31 32.2 -0.1**
BRZS pmax pmax
comp=Z,5.0nm,1.8s

SIGR SIGRI 46.11 321 P **P** **13 31 42.3 +1.7**
LBTB Lobatse 46.24 227 P **P** **13 31 42.4 +0.5**
comp=Z,4.7nm,1.0s,baz=48,slow=7.6,SNR=4.0
LBTB LR LR 13 48 18.6
comp=Z,4µm,21.5s,baz=55,slow=32

ALN Alexandroupoli 47.03 323 P **P** **13 31 48.3 +0.6**
ALN pmax pmax
comp=Z,38nm,1.2s

ALN Alexandroupoli 47.03 323 P **P** **13 31 48.2 +0.6**
ALN Alexandroupoli 47.03 323 P **P** **13 31 48.7 +1.0**
DLV T Lat 47.05 79 P **P** **13 31 47.4 -1.1**
CD2 Chengdu 47.05 53 P **P** **13 31 46.3 -1.9**
CD2 PcP **PcP** **13 33 19.3 -0.9**
CD2 S **S** **13 38 39.0 -0.6**
CD2 ScS **ScS** **13 41 41.0 -1.4**
CD2 SS **SS** **13 42 07.5 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,320nm,14.5s
CD2 LR LR
comp=Z,2µm,21.0s
CD2 LR LR
comp=Z,2µm,16.5s
CD2 LR LR
comp=Z,2µm,17.8s

SMTH Samothraki Isl 47.07 323 P **P** **13 31 49.4 +1.3**
KURK Kurchatov 47.10 15 *d i*P **P** **13 31 48.5 +0.4**
KURK pmax pmax
comp=Z,27nm,2.5s

KURK Kurchatov 47.10 15 P **P** **13 31 47.9 -0.2**
KURK IAmb IAmb 13 31 55.7
comp=Z,13nm,1.4s

SEM Semipalatinsk 47.26 16 *e*P **P** **13 31 49.2 -0.4**
comp=Z,6.9nm,1.5s,baz=16

SEM Semipalatinsk 47.26 16 *e*P **P** **13 31 49.2 -0.4**
SEM pmax pmax
comp=Z,7.0nm,1.5s

LOUT Loutraki 47.26 318 P **P** **13 31 49.9 +0.3**
GUR Goura 47.66 318 P **P** **13 31 53.3 +0.5**
BRVK Borovoye 47.72 7 *d i*P **P** **13 31 53.6 +0.7**
BRVK pmax pmax
comp=Z,28nm,2.5s

BRVK Borovoye 47.72 7 P **P** **13 31 52.5 -0.4**
BRVK IAmb IAmb 13 32 02.0
comp=Z,16nm,1.5s

BELG Belogornoye 47.81 349 *d i*P **P** **13 31 53.8 +0.3**
BELG pmax pmax
comp=Z,7.0nm,1.5s

NEF NEVSHA 47.84 327 *e*P **P** **13 31 55.3 +1.3**
GYA Guiyang 47.92 59⇑P **P** **13 31 55.0 -0.1**
GYA pP sP 13 32 00.8 0.0
GYA S **S** **13 38 54.5 +2.3**
GYA pmax pmax
comp=Z,17nm,1.3s
GYA pmax pmax
comp=Z,230nm,4.1s
GYA LR LR
comp=Z,820nm,21.8s
GYA LR LR
comp=Z,990nm,21.4s
GYA LR LR
comp=Z,1µm,23.1s

LEM Lembang 47.96 105 P **P** **13 31 56.8 +1.3**
comp=Z,7.2nm,0.4s,baz=161,slow=16,SNR=1.4
LEM LR LR 13 48 32.3
comp=Z,647nm,21.7s,baz=302,slow=32

TRIZ Trizonia 48.06 318 P **P** **13 31 56.4 +0.6**
VRH Novokhopyorsk 48.11 344 *e*P **P** **13 31 54.8 -1.1**
VRH pmax pmax
comp=Z,10.0nm,0.8s

AGG Agios Georgios 48.25 319 P **P** **13 31 56.9 -0.4**
GTA Gaotai 48.26 40 P **P** **13 31 58.0 +0.5**
GTA pP sP 13 32 03.8 +0.6
GTA sP pwP 13 32 06.5 -0.3
GTA S **S** **13 39 01.5 +4.8**
GTA sS sS 13 39 09.5 +5.8
GTA pmax pmax
comp=Z,4.0nm,1.5s
GTA pmax pmax
comp=Z,240nm,5.3s
GTA LR LR
comp=Z,2µm,21.1s
GTA LR LR
comp=Z,2µm,20.7s
GTA LR LR
comp=Z,3µm,21.1s

RZN Rozhen 48.30 323 *e*P **P** **13 32 02.1 +4.3**
HARR Harsova 48.45 328⇑P **P** **13 31 59.7 +1.0**
RAZG Razgrad 48.46 326⇑P **P** **13 31 60.0 +1.1**
VORD Divnogorie 48.62 342 *e*P **P** **13 31 58.2 -1.7**
VORD pmax pmax
comp=Z,10.0nm,1.1s

SRS Serrai 48.64 322 P **P** **13 32 00.8 +0.6**
BOSA Boshof 48.67 223 LR LR 13 50 47.5
comp=Z,3µm,19.0s,baz=44,slow=34

CFR Carcaliu 48.68 329⇑P **P** **13 32 01.9 +1.5**
VSR Storozhevoye 48.88 342 *e*P **P** **13 32 00.5 -1.3**
VSR pmax pmax
comp=Z,10.0nm,1.1s

QIZ Qiongzhong 49.10 70 P **P** **13 32 01.0 -3.1**
QIZ S **S** **13 39 08.3 -0.6**
QIZ pmax pmax
comp=Z,4.0nm,1.1s
QIZ LR LR
comp=Z,500nm,16.1s
QIZ LR LR
comp=Z,500nm,14.9s
QIZ LR LR
comp=Z,650nm,33.8s

KSM Kuching 49.15 93 P **P** **13 32 04.0 -0.6**
KSM IAmb IAmb 13 32 06.2
comp=Z,20nm,1.3s

LZH Lanzhou 49.33 46 *e*P **P** **13 32 05.3 -0.5**
LZH pP pP 13 32 09.0 -1.0
LZH sP sP 13 32 10.3 -1.2
LZH PP **PP** **13 33 59.0 -0.9**
LZH *eS **S** **13 39 09.3 -2.6**
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,290nm,8.1s
LZH LR LR
comp=Z,890nm,14.1s
LZH LR LR
comp=Z,1µm,14.6s
LZH LR LR
comp=Z,2µm,17.0s

KKB Krupnik 49.39 323 *e*P **P** **13 32 06.6 +0.6**
ISR Istrita 49.47 328⇑P **P** **13 32 08.0 +1.4**
TSUM Tsumeb 49.63 239 LR LR 13 51 25.3
comp=Z,2µm,20.8s,baz=60,slow=34

TSUM Tsumeb 49.63 239 P **P** **13 32 09.4 +1.2**
TSUM IAmb IAmb 13 32 11.8
comp=Z,36nm,1.4s

BISRR Bisoca 49.67 329 ⇓P **P 13 32 09.9 +1.8**
VTS Vitosha 49.74 323 *e*P **P 13 32 10.3 +1.5**
NEHR Nehoiu 49.80 328 ⇓P **P 13 32 10.8 +1.7**
VRI Vrincioaia 49.87 329 ⇑P **P 13 32 10.5 +0.9**
PLOR Plostina 49.90 329 ⇓P **P 13 32 11.6 +1.7**
MLR Muntele Rosu 50.03 328 ⇑P **P 13 32 11.8 +0.8**
MLR Muntele Rosu 50.03 328 P **P 13 32 11.9 +1.0**
MLR Muntele Rosu 50.03 328 P **P 13 32 11.9 +1.0**
LPSR Galich'ya Gora 50.16 342 *e*P **P 13 32 09.8 -1.8**
LPSR pmax pmax
comp=Z,7.0nm,1.0s
TESR Tescani 50.35 329 ⇑P **P 13 32 14.3 +1.1**
VOIR 50.47 327 ⇑P **P 13 32 14.8 +0.6**
ARU Arti 50.56 358 P **P 13 32 14.7 +0.1**
comp=Z,0.8nm,0.4s,baz=177,slow=8.3,SNR=11
ARU Arti 50.56 358*d* *i*P **P 13 32 14.9 +0.3**
ARU 13 33 28.2
ARU PPP PPP 13 35 04.5
ARU S **S 13 39 31.7 +3.6**
ARU SS **SS 13 42 59.0 -3.3**
ARU pmax pmax
comp=Z,43nm,1.8s
ARU MLR MLR
comp=Z,1μm,19.0s
ARU Arti 50.56 358 P **P 13 32 14.2 -0.3**
ARU IAmb IAmb 13 32 23.4
comp=Z,16nm,1.0s
DOPR Dopca 50.64 328 ⇑P **P 13 32 16.9 +1.5**
ARR Arges 50.65 327 ⇑P **P 13 32 16.8 +1.2**
SORM Soroca 50.66 332 ⇑P **P 13 32 16.1 +0.7**
SVE Sverdlovsk 50.92 360 *e*P **P 13 32 17.5 +0.2**
SVE *e*S **S 13 39 33.9 +0.9**
SVE pmax pmax
comp=Z,26nm,1.5s
SVE MLR MLR
comp=Z,1μm,18.0s
SBUM Sibu 50.95 92 P **P 13 32 18.3 0.0**
SBUM IAmb IAmb 13 32 34.5
comp=Z,17nm,1.1s
LOT Lotru 51.17 327 ⇑P **P 13 32 20.3 +0.7**
HERR Herculane 51.58 325 ⇑P **P 13 32 23.5 +1.1**
GZR Gura Zlata 51.69 326 ⇑P **P 13 32 24.4 +1.1**
ZAA0 Zalesovo Array 51.71 18 P **P 13 32 22.6 -0.7**
ZALV Zalesovo Beam 51.71 18 P **P 13 32 22.6 -0.7**
comp=Z,2.3nm,0.8s,baz=220,slow=6.7,SNR=13
ZALV LR LR 13 56 24.3
comp=Z,973nm,18.4s,baz=216,slow=38
ZALV Zalesovo Beam 51.71 18 *i* P **P 13 32 23.3 0.0**
ZALV pmax pmax
comp=Z,3.0nm,0.8s
BURAR Bucovina Array 51.82 330 ⇑P **P 13 32 25.2 +0.9**
BURAR Bucovina Array 51.82 330 P **P 13 32 24.8 +0.5**
BUR08 Bucovina Ar. S 51.85 330 P **P 13 32 25.0 +0.5**
BUR08 IAmb IAmb 13 32 46.5
comp=Z,19nm,1.3s
AKASG Malin Array Be 52.14 335 P **P 13 32 26.3 -0.2**
AKASG PcP **PcP 13 33 36.4 -1.8**
comp=Z,1.2nm,0.6s,baz=131,slow=6.6,SNR=27
AKASG comp=Z,0.2nm,0.2s,baz=144,slow=5.6,SNR=5.4
LR LR 13 56 41.1
comp=Z,523nm,20.3s,baz=125,slow=38
AKASG Malin Array Be 52.14 335 *i* P **P 13 32 27.2 +0.7**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 52.14 335 P **P 13 32 26.3 -0.2**
AKBB Malin Array Si 52.14 335 P **P 13 32 26.6 +0.1**
AKBB IAmb IAmb 13 32 33.6
comp=Z,18nm,1.2s
XAN Xi'an 52.28 51 P **P 13 32 27.8 -0.1**
XAN pP sP 13 32 33.5 -0.2
XAN pmax pmax
comp=Z,24nm,0.8s
BZS Buzias 52.47 326 ⇓P **P 13 32 30.0 +0.9**
DRGR 52.59 327 ⇓P **P 13 32 31.3 +1.3**
SIRR Siria 52.84 326 ⇑P **P 13 32 32.7 +0.8**
OBN Obninsk 53.03 343 P **P 13 32 32.7 -0.4**
comp=Z,3.7nm,0.3s,baz=102,slow=16,SNR=3.5
OBN Obninsk 53.03 343⇑ *e*P **P 13 32 33.9 +0.9**
OBN *e* 13 33 43.6
OBN *e* 13 34 36.9
OBN *i* S S 13 40 14.2 +12
OBN *e*SS **SKiKP 13 43 47.4 -4.0**
OBN pmax pmax
comp=Z,39nm,1.7s
MOS Moscow 53.27 344 *e*P **P 13 32 34.5 -0.3**
MOS *e* 13 32 41.3
MOS pmax pmax
comp=Z,57nm,0.7s
KIRV Kirov 53.47 352 P **P 13 32 36.5 +0.3**
comp=Z,6.0nm,0.6s,baz=166,slow=11,SNR=7.8
KIRV LR LR 13 57 23.7
comp=Z,1μm,20.0s,baz=150,slow=38
KIRV Kirov 53.47 352⇑ *e*P **P 13 32 36.4 +0.3**
LVV L'vov 53.88 331 *e*P **P 13 32 40.0 +0.6**
LVV *e*S **S 13 40 13.3 -0.5**
LVV pmax pmax
comp=Z,90nm,1.8s
LVV MLR MLR
comp=E,100nm,19.0s
LVV MLR MLR
comp=N,200nm,18.0s
LVV MLR MLR
comp=Z,400nm,18.0s
UZH Uzhgorod 53.97 329⇑ *i*P **P 13 32 40.5 +0.5**
UZH *i* 13 32 42.9
UZH *i* 13 32 48.7
UZH *i* 13 34 50.3
UZH *e* 13 35 51.3
UZH *e*S **S 13 40 12.2 -2.8**
UZH *e* 13 40 21.9
UZH MLR MLR
comp=N,110nm,21.5s
UZH MLR MLR
comp=E,130nm,21.5s
UZH MLR MLR
comp=Z,70nm,21.5s
KOLS Kolonicke sedl 54.17 329 *e*P **P 13 32 43.3 +1.7**
KOLS pmax pmax
comp=Z,47nm,1.3s
KOLS Kolonicke sedl 54.17 329 *e*P **P 13 32 43.3 +1.7**
KWP Kalwaria Pacla 54.40 330 *e*P **P 13 32 44.4 +1.2**
KWP Kalwaria Pacla 54.40 330 P **P 13 32 43.6 +0.4**
KWP pmax pmax
comp=Z,63nm,1.4s
KWP Kalwaria Pacla 54.40 330 P **P 13 32 43.5 +0.4**
CRVS Cervenica-Dubn 54.57 329 *e*P **P 13 32 45.4 +1.0**
CRVS pmax pmax
comp=Z,90nm,1.5s
CRVS Cervenica-Dubn 54.57 329 *e*P **P 13 32 45.4 +1.0**
PSZ Piszkesteto 54.79 327 P **P 13 32 46.0 -0.2**
PSZ pmax pmax
comp=Z,14nm,1.1s
PSZ Piszkesteto 54.79 327 P **P 13 32 46.0 -0.2**
PSZ IAmb IAmb 13 32 54.8
comp=Z,14nm,1.1s
NIE Niedzica 55.48 329 *e*P **P 13 32 52.0 +0.9**
MICGM Minsk 55.53 337 *e* P 13 32 46.0 -5.3
MNK Minsk 55.53 337 *e*P P 13 32 46.0 -5.3
VYHS Vyhne 55.70 327 *e*P **P 13 32 53.2 +0.5**
VYHS pmax pmax
comp=Z,28nm,1.3s
VYHS Vyhne 55.70 327 *e*P **P 13 32 53.2 +0.5**
LANS Liptovska Anna 55.76 328 *e*P **P 13 32 54.4 +1.3**
LANS pmax pmax
comp=Z,15nm,1.3s
LANS Liptovska Anna 55.76 328 *e*P **P 13 32 54.4 +1.3**
KEST Kesra 56.09 310 LR LR 13 55 39.0
comp=Z,436nm,21.3s,baz=338,slow=35
OJC Ojcow 56.23 329 *e*P **P 13 32 56.6 +0.2**
OJC Ojcow 56.23 329 P **P 13 32 55.7 -0.7**
OJC pmax pmax
comp=Z,26nm,1.4s
OJC Ojcow 56.23 329 P **P 13 32 55.6 -0.7**
OJC IAmb IAmb 13 32 57.9
comp=Z,26nm,1.4s
NACGM Naroch 56.26 337 *e* **P 13 32 57.0 +0.5**
MODS Modra-Piesok 56.49 326 *e*P **P 13 32 57.6 -0.7**
MODS Modra-Piesok 56.49 326 *e*P **P 13 32 57.6 -0.7**
JAVC Velka Javorina 56.55 327 *e*P **P 13 33 00.3 +1.5**
HHC Hu-ho-hao-te 56.84 44 *e*P **P 13 33 01.8 +0.7**
HHC sP pwP 13 33 10.5 0.0
HHC S **S 13 40 57.0 +2.9**
HHC SS **SS 13 44 46.3 +3.9**
HHC pmax pmax
comp=Z,31nm,1.1s
HHC pmax pmax
comp=Z,280nm,5.3s
HHC LR LR
comp=Z,2μm,16.3s
HHC LR LR
comp=Z,1μm,17.3s
HHC LR LR
comp=Z,1μm,15.6s
OKC Ostrava-Krasne 56.86 328 AMS AMS 13 58 10.0
comp=Z,600nm,21.8s
SOKA Soboth 56.86 324 *e*P **P 13 33 02.0 +1.0**
comp=Z,15nm,1.2s
ARSA Arzberg 56.87 324 *i* P **P 13 33 02.2 +1.1**
comp=Z,17nm,1.3s,SNR=5.9
SONM Songino Array 56.87 35 P **P 13 33 01.1 -0.1**
comp=Z,3.0nm,1.0s,baz=229,slow=7.6,SNR=16
SONM LR LR 13 58 17.2
comp=Z,2μm,18.0s,baz=238,slow=37
SONM Songino Array 56.87 35 P **P 13 33 00.2 -1.0**
SONM pmax pmax
comp=Z,6.0nm,1.2s
SONM Songino Array 56.87 35 P **P 13 33 00.2 -1.0**
CONA Conrad Observa 57.04 325 *i* P **P 13 33 02.8 +0.5**
comp=Z,38nm,1.3s,SNR=14
OBKA Obir 57.06 323 *e*P **P 13 33 04.0 +1.5**
comp=Z,24nm,1.2s
MORC Moravsky Berou 57.14 328 *e*P **P 13 33 03.6 +0.7**
MORC Moravsky Berou 57.14 328 P **P 13 33 02.9 -0.1**
MORC pmax pmax
comp=Z,41nm,1.4s
MORC Moravsky Berou 57.14 328 P **P 13 33 02.9 -0.1**
MORC IAmb IAmb 13 33 04.9
comp=Z,41nm,1.4s
ULN Ulaanbaatar 57.26 35⇑ *e*P **P 13 33 04.4 +0.4**
ULN pmax pmax
comp=Z,16nm,2.0s
KLMR Klimovskoe 57.34 348 *e*P **P 13 33 01.8 -2.2**
KLMR *e* 13 33 56.2
KLMR *e*S **S 13 40 58.1 -1.5**
KLMR pmax pmax
comp=Z,42nm,1.4s
KLMR Klimovskoe 57.34 348 *e*P **P 13 33 01.9 -2.1**
KLMR AMP 13 33 05.8
comp=Z,42nm,1.4s
KLMR *e*PcP **PcP 13 33 56.3 -1.7**
KLMR *e*S **S 13 40 58.1 -1.5**
KLMR *e*S **S 13 40 58.1 -1.5**
KLMR LQ LQ 13 53 25.8
KLMR LQ LQ 13 53 25.8
KLMR LR LR 13 57 39.0
KRUC Moravsky 57.36 327 *e*P **P 13 33 04.9 +0.5**
VRAC Vranov 57.38 327 P **P 13 33 04.7 0.0**
comp=Z,12nm,1.0s,baz=116,slow=6.5,SNR=14
VRAC Vranov 57.38 327 *e*P **P 13 33 05.4 +0.8**
TLY Talaya 57.62 30 *e*P **P 13 33 07.3 +1.1**
TLY *e*S **S 13 41 08.3 +4.6**
TLY pmax pmax
comp=Z,24nm,1.6s
TLY MLR MLR
comp=Z,3μm,19.0s
LSR Lussari 57.66 323 *e*Pg **P 13 33 07.9 +1.1**
MYKA Terra Mystica 57.66 323 *i* P **P 13 33 06.9 +0.2**
comp=Z,25nm,1.2s,SNR=6.2
VINO Villanova 57.70 322 *e*Pg **P 13 33 10.3 +3.4**
ACOM Acomizza, Ital 57.70 323 *e*Pg **P 13 33 08.3 +1.2**
BAD Bernadia 57.71 322 *e*Pg **P 13 33 10.9 +3.9**
KRLC Kraliky 57.72 328 *e*P **P 13 33 07.0 0.0**
KRLC *e* 13 33 13.1
KRLC MLR MLR
comp=Z,600nm,21.7s
KRLC Kraliky 57.72 328 *e*P **P 13 33 07.0 0.0**
KRLC *e*pP **sP 13 33 13.1 -0.1**
KRLC AMS AMS 13 57 20.0
comp=Z,600nm,21.7s
MOA Molln 57.91 324 *i* P **P 13 33 08.7 +0.4**
comp=Z,33nm,1.2s,SNR=7.9
STAL STALIGIAL 58.05 322 P **P 13 33 09.4 0.0**
KBA Koelnbreinsper 58.06 323 *e*P **P 13 33 10.2 +0.6**
comp=Z,16nm,1.3s
DPC Dobruska-Polom 58.12 328 *e*P **P 13 33 10.0 +0.2**
DPC *e* 13 33 16.0
DPC MLR MLR
comp=Z,600nm,18.1s
DPC Dobruska-Polom 58.12 328 *e*P **P 13 33 10.0 +0.2**
DPC *e*pP **sP 13 33 16.0 0.0**
DPC AMS AMS 13 57 30.0
comp=Z,600nm,18.1s
CIMO Cimolais 58.23 322 P **P 13 33 10.4 -0.3**
CIMO IAmb IAmb 13 33 19.4
comp=Z,30nm,1.5s
OSTC Ostas 58.29 328 *e*P **P 13 33 11.7 +0.7**
OSTC *e*pP **sP 13 33 17.7 +0.6**
OSTC AMS AMS 13 58 20.0
comp=Z,700nm,21.8s
CHVC Chvalec 58.39 328 *e*P **P 13 33 12.1 +0.4**
CHVC *e*x x 13 33 17.6
CHVC AMS AMS 13 58 50.0
comp=Z,800nm,23.9s
ABTA Abfaltersbach 58.40 323 *i* P **P 13 33 11.8 -0.1**
comp=Z,20nm,1.2s,SNR=5.9
KSP Ksiaz 58.41 328 *e*P **P 13 33 13.0 +1.2**
CTI Castel Tesino 58.60 322 P **P 13 33 12.4 -0.9**
CTI pmax pmax
comp=Z,24nm,1.3s
CTI Castel Tesino 58.60 322 P **P 13 33 12.4 -0.9**
CTI IAmb IAmb 13 33 15.1
comp=Z,24nm,1.3s
GERES GERESS Array B 58.74 325 P **P 13 33 13.1 -1.1**
comp=Z,0.5nm,0.4s,baz=131,slow=6.1,SNR=7.4
GERES LR LR 13 59 57.6
comp=Z,356nm,21.6s,baz=118,slow=38
KHC Kasperske Hory 58.96 325⇑ *i*P **P 13 33 15.4 -0.3**
KHC pmax pmax
comp=Z,44nm,1.7s
KHC Kasperske Hory 58.96 325 *e*P **P 13 33 15.0 -0.7**
KHC *e*pP **pP 13 33 20.9 +0.7**
KHC AMS AMS 13 59 30.0
comp=Z,600nm,17.9s
KHC Kasperske Hory 58.96 325 P **P 13 33 14.9 -0.8**
KHC IAmb IAmb 13 33 22.5
comp=Z,15nm,1.2s
TORD Torodi Ar. Bea 59.07 282 P **P 13 33 17.8 +0.8**
comp=Z,7.8nm,1.1s,baz=85,slow=6.2,SNR=25
TORD LR LR 13 59 23.5
comp=Z,634nm,18.0s,baz=90,slow=37
TORD Torodi Ar. Bea 59.07 282 P **P 13 33 16.7 -0.2**
PVCC Panska Ves 59.15 327 AMS AMS 13 58 10.0
comp=Z,700nm,28.4s
WTTA Wattenberg 59.17 323 *i* P **P 13 33 17.0 -0.4**
comp=Z,21nm,1.1s,SNR=5.5
WATA Walderalm 59.24 323 *i* P **P 13 33 17.7 -0.1**
comp=Z,27nm,1.2s,SNR=5.9
KAPI Kappang 59.41 99 P **P 13 33 17.3 -2.1**
KAPI pmax pmax
comp=Z,18nm,1.1s
KAPI Kappang 59.41 99 P **P 13 33 17.2 -2.1**
KAPI IAmb IAmb 13 33 32.0
comp=Z,18nm,1.1s
SQTA Sankt Quirin 59.41 323 *e*P **P 13 33 19.1 +0.1**
comp=Z,22nm,1.4s
MOTA Moosalm 59.53 323 *e*P **P 13 33 20.0 +0.2**
comp=Z,26nm,1.2s
FETA Feichten 59.61 322 *e*P **P 13 33 20.7 +0.3**
comp=Z,8.5nm,1.2s
NJ2 Nanjing 59.66 56 *e*P **P 13 33 20.5 -0.2**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
BNSI Bone 59.66 98 P **P 13 33 21.8 +0.7**
RETA Reutte 59.80 323 *e*P **P 13 33 21.8 +0.2**
comp=Z,10nm,1.4s
BJI Beijing 59.82 47 P **P 13 33 21.8 +0.1**
BJI PP **PP 13 35 35.3 +1.5**
BJI S **S 13 41 28.8 -3.8**
BJI pmax pmax
comp=Z,10.0nm,1.4s
BJI LR LR
comp=Z,830nm,15.0s
BJI LR LR
comp=Z,460nm,17.3s
BJI LR LR
comp=Z,1μm,22.7s
DAVOX Davos/Dischmat 60.02 322 P **P 13 33 23.3 0.0**
comp=Z,8.5nm,1.0s,baz=141,slow=6.0,SNR=5.2
NKC Novy Kostel 60.15 326 *e*P **P 13 33 25.2 +1.3**
NKC Novy Kostel 60.15 326 *e*P **P 13 33 25.2 +1.3**
DAVA Damuels 60.24 322 *e*P **P 13 33 25.5 +0.7**
comp=Z,26nm,1.4s
CLL Collm 60.40 327 *i* P **P 13 33 26.0 +0.5**
comp=Z,37nm,1.5s
CLL *i* 13 33 32.0
CLL *e*PP **PP 13 35 38.0 -0.8**
CLL *e*S **S 13 41 41.0 +1.2**
CLL *e*SSS SSS 13 48 18.0
CLL Collm 60.40 327 *i* P **P 13 33 26.0 +0.5**
CLL *i* 13 33 32.0
CLL *e*S **S 13 41 41.0 +1.2**
CLL pmax pmax
comp=Z,37nm,1.5s
CLL Collm 60.40 327 P **P 13 33 25.5 0.0**
TMCR Tamitsa 60.62 349 *e*P **P 13 33 25.0 -1.7**
TMCR pmax pmax
comp=Z,45nm,1.3s
MRSI Marisa 60.82 93 P **P 13 33 28.7 -0.3**
BASI Baing, Sumba 61.20 105 P P 13 33 41.7 +10
FINES FINESS Array B 61.41 342 P **P 13 33 30.6 -1.5**
comp=Z,1.6nm,0.8s,baz=126,slow=9.1,SNR=1.7
FINES LR LR 14 03 49.2
comp=Z,454nm,18.8s,baz=142,slow=40
FINES FINESS Array B 61.41 342 P **P 13 33 30.6 -1.5**
BFO Black Forest 61.64 323 *i* P **P 13 33 34.3 +0.2**
BFO Black Forest 61.64 323 P **P 13 33 33.7 -0.4**
GTOI Gorontalo 61.87 92 P **P 13 33 35.3 -0.8**
EDFI Ende, Flores 61.98 103 P P 13 33 44.9 +7.9
DL2 Dalian 63.51 49 P P 13 33 52.0 +5.3
DL2 S **S 13 42 26.5 +7.0**
DL2 pmax pmax
comp=Z,54nm,1.5s
DL2 pmax pmax
comp=Z,310nm,7.3s
DL2 LR LR
comp=N,1μm,18.0s
DL2 LR LR
comp=E,1μm,17.5s
DL2 LR LR
comp=Z,2μm,19.0s
PSA00 Pilbara Seismi 63.53 117 P **P 13 33 46.0 -1.1**
BATI Baumata 64.17 104 LR LR 13 58 11.4
comp=Z,100nm,21.6s,baz=294,slow=33
SOEI Soe 64.67 104 P P 13 34 01.9 +7.0
SOEI Soe 64.67 104 P **P 13 33 53.3 -1.5**
HFS Hagfors 64.99 336 P **P 13 33 56.1 +0.1**
comp=Z,3.6nm,0.7s,baz=134,slow=8.5,SNR=8.1
HFS LR LR 14 04 29.6
comp=Z,449nm,20.5s,baz=139,slow=38
HIA Hailar 65.42 38⇓ *e*P **P 13 34 00.4 +1.4**
HIA pmax pmax
comp=Z,34nm,3.0s
NWAO Narrogin (SRO) 65.56 130 LR LR 13 57 20.5
comp=Z,528nm,20.1s,baz=294,slow=31
NWAO Narrogin (SRO) 65.56 130 P **P 13 33 58.7 -1.5**
NWAO pmax pmax
comp=Z,63nm,1.3s
NWAO Narrogin (SRO) 65.56 130 P **P 13 33 58.7 -1.5**
NWAO Narrogin (SRO) 65.56 130 P **P 13 33 58.7 -1.5**
NWAO IAmb IAmb 13 34 06.5
comp=Z,51nm,1.2s
KIC Kosan Boka 65.56 274 *e*P **P 13 34 02.4 +1.9**
comp=Z,78nm,1.3s
DBIC Dimbokro 65.66 275 P **P 13 34 02.4 +1.3**
comp=Z,9.3nm,1.0s,baz=106,slow=8.0,SNR=5.1
DBIC LR LR 14 01 47.3
comp=Z,1μm,21.6s,baz=68,slow=35
NRIK Noril'sk 65.80 10 P **P 13 34 01.4 +0.3**
comp=Z,0.8nm,0.2s,baz=164,slow=4.6,SNR=3.9
NRIK LR LR 14 05 07.0
comp=Z,2μm,20.9s,baz=201,slow=38
NRIK Noril'sk 65.80 10⇓ *e*P **P 13 34 01.6 +0.6**
NRIK pmax pmax
comp=Z,14nm,2.0s
TIC Toumodi 65.82 275 *e*P **P 13 34 04.1 +1.9**
LIC Lamto 65.85 274 *e*P **P 13 34 04.2 +1.8**
comp=Z,81nm,1.3s
TNTI Ternate 66.18 92 P **P 13 34 03.2 -1.3**
NB2 NORSAR Subarra 66.52 336 P **P 13 34 05.3 -0.6**
comp=Z,50nm,1.7s,baz=126,slow=6.9
NB2 NORSAR Subarra 66.52 336 P **P 13 34 05.3 -0.6**
baz=126,slow=6.9
NOA NORSAR Array B 66.52 336 P **P 13 34 05.6 -0.3**
comp=Z,14nm,1.4s,baz=118,slow=7.1,SNR=4.0
NOA LR LR 14 05 16.3
comp=Z,466nm,21.5s,baz=110,slow=38
NBO00 NORSAR Array S 66.69 336 P **P 13 34 06.8 -0.1**
ESDC Sonseca Array 67.31 311 P **P 13 34 12.3 +1.0**
comp=Z,6.7nm,1.1s,baz=83,slow=5.9,SNR=13
ESDC Sonseca Array 67.31 311 P **P 13 34 11.1 -0.3**
CN2 Changchun 67.53 45 *e*P **P 13 34 12.3 -0.3**
CN2 *e*S **S 13 43 08.8 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,900nm,16.0s
CN2 LR LR
comp=Z,1μm,16.0s
CN2 LR LR
comp=Z,1μm,17.0s
FITZ Fitzroy Crossi 67.80 112 LR LR 13 59 09.8
comp=Z,276nm,20.2s,baz=288,slow=32
FITZ Fitzroy Crossi 67.80 112 P **P 13 34 13.3 -1.4**
ARCES ARCESS Array B 67.81 347 P **P 13 34 13.3 -0.6**
comp=Z,1.5nm,0.6s,baz=139,slow=4.4,SNR=6.4
ARCES LR LR 14 07 37.2
comp=Z,321nm,18.7s,baz=135,slow=39
KSRS Korea Array 68.05 52 P **P 13 34 14.7 -1.3**
comp=Z,2.7nm,0.7s,baz=265,slow=6.5,SNR=6.9
KSRS LR LR 14 04 59.4
comp=Z,812nm,21.1s,baz=270,slow=37
FAKI Fak Fak 71.45 95 P **P 13 34 35.7 -1.7**
USRK Ussuriysk Ar. 72.23 45 LR LR 14 08 05.7
comp=Z,2μm,19.4s,baz=265,slow=37
KLR Kul'dur 72.96 40⇑ *e*P **P 13 34 44.9 -0.9**
KLR pmax pmax
comp=Z,20nm,1.8s
MAW Mawson 73.21 179 P **P 13 34 47.4 +0.6**
comp=Z,3.9nm,0.9s,baz=30,slow=5.3,SNR=10
MAW LR LR 13 59 16.4
comp=Z,897nm,21.4s,baz=8.5,slow=30
MAW Mawson 73.21 179 P **P 13 34 47.3 +0.6**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 73.21 179 P **P 13 34 47.3 +0.5**
YAK Yakutsk 74.90 27⇓ *e*P **P 13 34 56.3 -0.5**
YAK pmax pmax
comp=Z,24nm,1.3s
SYO Syowa Base 76.11 188⇑ *i*P **P 13 35 03.1 -0.4**
SYO Syowa Base 76.11 188⇓ *e*PcP **PcP 13 35 14.4 -1.2**
MJAR Matsushiro Arr 76.13 54 P **P 13 35 02.6 -1.9**
comp=Z,0.5nm,0.4s,baz=268,slow=9.5,SNR=4.7
MJAR LR LR 14 10 57.8
comp=Z,272nm,19.5s,baz=265,slow=38
WRA Warramunga Arr 76.23 112 P **P 13 35 04.0 -1.3**
comp=Z,21nm,1.2s,baz=290,slow=4.9,SNR=41
WRA LR LR 14 04 36.8
comp=Z,206nm,20.6s,baz=250,slow=33
WRAB Tennant Creek 76.24 112*d* *i*P **P 13 35 05.0 -0.3**
WRAB pmax pmax
comp=Z,46nm,1.3s
WRAB Tennant Creek 76.24 112 P **P 13 35 05.1 -0.3**
WR0 Warramunga Arr 76.42 112 P **P 13 35 05.4 -1.0**
ASAR Alice Springs 76.60 116 P **P 13 35 06.5 -0.9**
comp=Z,8.9nm,1.0s,baz=285,slow=5.3,SNR=44
ASAR LR LR 14 04 06.7
comp=Z,371nm,21.6s,baz=288,slow=32
ASAR Alice Springs 76.60 116 P **P 13 35 06.1 -1.3**
ASAR Alice Springs 76.60 116 P **P 13 35 06.1 -1.3**
AS31 Alice Springs 76.60 116 P **P 13 35 06.8 -0.6**
TIXI Tiksi 77.60 17⇓ *e*P **P 13 35 11.2 -0.8**
YSS Yuzh-Sakhalins 80.02 43⇓ *e*P **P 13 35 21.4 -4.4**
YSS pmax pmax
comp=Z,500nm,6.3s
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,600nm,21.0s
NVL N'lazarevskaya 83.09 195 *e*P **P 13 35 43.0 +1.5**
NVL pmax pmax
comp=Z,18nm,1.1s
STKA Stephens Creek 84.89 123 P **P 13 35 50.6 -0.9**
comp=Z,8.9nm,1.2s,baz=274,slow=9.7,SNR=6.4
STKA LR LR 14 09 09.4
comp=Z,836nm,20.7s,baz=255,slow=32

STKA	**Stephens Creek**	**84.89**	**123**	P	**P**	**13 35 51.0**	**-0.5**
STKA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
STKA	**Stephens Creek**	**84.89**	**123**	P	**P**	**13 35 51.0**	**-0.5**
SEY	**Seymchan**	**85.43**	**27**⇑	*eP*	**P**	**13 35 54.0**	**+0.4**
SNAA	**Sanae**	**87.54**	**197**	P	**P**	**13 36 05.0**	**+1.2**
SNAA	**Sanae**	**87.54**	**197**	*deP*	**P**	**13 36 05.1**	**+1.2**
SNAA				pmax	pmax		
	comp=Z,13nm,1.7s						
VNA2	**Neumayer--Watz**	**88.58**	**198**	P	**P**	**13 36 09.9**	**+1.2**
	baz=81,slow=4.3						
VNA1	**Neumayer--Stat**	**88.74**	**198**	P	**P**	**13 36 11.5**	**+2.1**
PETK	**Petropavlovsk-**	**89.30**	**37**	LR	LR	14 19 20.7	
	comp=Z,927nm,18.3s,baz=272,slow=38						
VNA3	**Neumayer Olymp**	**89.38**	**198**	P	**P**	**13 36 13.7**	**+1.2**
BILL	**Bilibino**	**90.26**	**21**⇓	*iP*	**P**	**13 36 17.7**	**+1.0**
BILL				*i* S	**SKKSac**	**13 46 59.7**	**-0.9**
BILL				*e*PS	**PS**	**13 48 16.7**	**-1.6**
BILL				pmax	pmax		
	comp=Z,12nm,1.4s						
BILL	**Bilibino**	**90.26**	**21**	P	**P**	**13 36 16.7**	**0.0**
BILL				IAmb	IAmb	13 36 18.7	
	comp=Z,17nm,1.5s						
VNDA	**Vanda**	**97.90**	**168**	LR	LR	14 15 28.0	
	comp=Z,759nm,19.9s,baz=264,slow=32						
DZM	**Mont Dzumac**	**106.23**	**111**	*e*LR	LR	14 12 30.9	
	comp=Z,319nm,29.2s						
PLCA	**Paso Flores**	**124.66**	**224**	PKP	**PKiKP**	**13 42 17.6**	**+1.0**
	comp=Z,3.3nm,1.1s,baz=331,slow=2.4,SNR=2.8						
LPAZ	**La Paz**	**129.34**	**254**	PKP	**PKiKP**	**13 42 27.3**	**0.0**
	comp=Z,0.7nm,0.4s,baz=58,slow=7.6,SNR=3.6						
PDAR	**Pinedale Array**	**130.97**	**351**	PKP	**PKPdf**	**13 42 28.4**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=5.7,slow=1.5,SNR=4.5						
NVAR	**Mina Array Bea**	**136.02**	**359**	PKP	**PKPdf**	**13 42 37.6**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=10,slow=1.1,SNR=4.7						
TXAR	**Lajitas Array**	**142.19**	**338**	PKhKP	PKPpre	13 42 44.8	
	comp=Z,0.5nm,0.8s,baz=64,slow=2.7,SNR=4.1						
TXAR				PKP	**PKPdf**	**13 42 50.2**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=59,slow=3.2,SNR=8.3						
TBI	**Tubuai**	**145.67**	**124**	*e*LR	LR	14 30 43.2	
	comp=Z,276nm,29.2s						
PPT2	**Papeete2**	**147.69**	**114**	*e*LR	LR	14 31 41.4	
	comp=Z,452nm,27.5s						
TAOE	**Nuku Hiva Isla**	**158.58**	**99**	*e*LR	LR	14 36 41.9	
	comp=Z,326nm,25.8s						

JMA 28 13:23:25.3, 36.78N×137.93E, h9km±1km, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.33**	**137**	S	Sg	13 23 35.7	-0.4
MAT	**Matsushiro**	**0.33**	**137**	P	Pg	13 23 31.3	-0.5
MAT				S	Sg	13 23 35.7	-0.4
MAT	**Matsushiro**	**0.33**	**137**	P	Pg	13 23 31.3	-0.5
JNG	**Nsakai**	**0.40**	**160**	P	Pg	13 23 32.7	-0.4
JNG				S	Sg	13 23 38.0	-0.3
JGK	**Kuni**	**0.61**	**111**	P	Pg	13 23 36.8	-0.3
JGK				S	Sg	13 23 45.3	+0.2
JGN	**Niukaw**	**0.74**	**222**	P	Pg	13 23 39.4	-0.3

IDC 28 13:25:13.0±2.0, 1.80N×126.17E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/31, mbtmp3.3/3, Error ellipse: s-maj=168.3km s-min=25.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.05**	**160**	P	P	13 30 19.2	-1.0
	0.6nm,0.4s,baz=339,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.41**	**168**	P	P	13 30 52.4	+0.9
	0.2nm,0.5s,baz=333,slow=6.4,SNR=6.3						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	13 35 13.3	-0.1
	0.2nm,0.5s,baz=114,slow=7.8,SNR=5.2						

IDC 28 13:27:08.1±2.8, 2.06N×126.72E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.3/31, mbtmp3.2/3, Error ellipse: s-maj=267.8km s-min=27.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.11**	**161**	P	P	13 32 14.6	-1.3
	0.5nm,0.6s,baz=339,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**26.51**	**165**	P	P	13 32 48.6	+1.1
	0.2nm,0.6s,baz=345,slow=6.9,SNR=1.5						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	13 37 09.1	0.0
	0.2nm,0.4s,baz=113,slow=8.2,SNR=4.7						

*IDC **28** 13:28:22.1±1.0, 5.62N×61.35E, h0km, mb3.9/13, mb1 4.1/13, mb1mx3.9/43, mbtmp3.9/13, Error ellipse: s-maj=28.8km s-min=19.6km az=35.0*
*NEIC **28** 13:28:23.1±1.2, 5.6N±0.1×61.3E±0.1, h10km±1km, mb4.5/12, Error ellipse: s-maj=33.9km s-min=7.2km az=226.0*
ISC 28 13:28:23.1±1.0, 5.6N±0.2×61.3E±0.1, h10km, n29, σ1§10/29, mb4.1/17, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UOSS	**Minazif**	**19.82**	**346**	P	**P**	**13 32 50.8**	**-3.2**
UOSS				IAmb	IAmb	13 33 04.0	
	comp=Z,38nm,1.2s						
RAYN	**Ar Rayn**	**23.40**	**321**	P	**P**	**13 33 32.6**	**+0.2**
RAYN				IAmb	IAmb	13 33 41.6	
	comp=Z,13nm,1.1s						
AAK	**Ala-Archa**	**38.68**	**16**	P	**P**	**13 35 48.6**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=166,slow=7.0,SNR=3.8						
CMAR	**Chiang Mai Arr**	**38.89**	**68**	P	**P**	**13 35 49.9**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=256,slow=7.3,SNR=1.9						
KBZ	**Khabaz**	**41.26**	**340**	P	**P**	**13 36 10.1**	**+1.7**
	comp=Z,1.6nm,0.8s,baz=238,slow=1.4,SNR=2.7						
BRTR	**Keskin Array B**	**42.10**	**328**	P	**P**	**13 36 16.5**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=146,slow=11,SNR=5.5						
BR131	**Keskin Array S**	**42.10**	**328**	P	**P**	**13 36 16.2**	**+0.6**
ABKAR	**Akbulak array**	**43.50**	**359**	P	**P**	**13 36 27.4**	**+0.8**
ABKAR				IAmb	IAmb	13 36 34.9	
	comp=Z,9.7nm,1.1s						
ABKAR	**Akbulak array**	**43.50**	**359**	P	**P**	**13 36 27.2**	**+0.6**
AKTO	**Aktyubinsk**	**44.74**	**357**	P	**P**	**13 36 37.2**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=168,slow=7.9,SNR=4.7						
MKAR	**Makanchi Array**	**44.84**	**20**	P	**P**	**13 36 37.7**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=199,slow=7.5,SNR=3.0						
MKAR	**Makanchi Array**	**44.84**	**20**	P	**P**	**13 36 37.5**	**0.0**
ALN	**Alexandroupoli**	**47.17**	**323**	P	**P**	**13 36 57.1**	**+1.1**
ZALV	**Zalesovo Beam**	**51.84**	**17**	P	**P**	**13 37 30.3**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=224,slow=7.4,SNR=2.5						
TAM	**Tamanrasset**	**56.33**	**294**	P	**P**	**13 38 04.9**	**0.0**
TAM				IAmb	IAmb	13 38 14.1	
	comp=Z,6.1nm,1.1s						
SONM	**Songino Array**	**56.97**	**35**	P	**P**	**13 38 09.3**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=230,slow=6.6,SNR=1.6						
KHC	**Kasperske Hory**	**59.11**	**326**	*e*P	**P**	**13 38 22.5**	**-1.4**
TORD	**Torodi Ar. Bea**	**59.14**	**282**	P	**P**	**13 38 25.8**	**+1.2**
	comp=Z,2.2nm,1.1s,baz=100,slow=5.3,SNR=6.6						
TORD	**Torodi Ar. Bea**	**59.14**	**282**	P	**P**	**13 38 23.2**	**-1.5**
ESDC	**Sonseca Array**	**67.44**	**311**	P	**P**	**13 39 19.7**	**+0.3**
	comp=Z,1.6nm,1.1s,baz=83,slow=7.0,SNR=2.9						
KSRS	**Korea Array**	**68.11**	**52**	P	**P**	**13 39 22.2**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=247,slow=8.7,SNR=2.9						
WRA	**Warramunga Arr**	**76.13**	**112**	P	**P**	**13 40 12.5**	**+0.6**
	comp=Z,3.0nm,1.0s,baz=289,slow=5.1,SNR=11						
WRA	**Warramunga Arr**	**76.13**	**112**	P	**P**	**13 40 11.8**	**-0.1**
WRAB	**Tennant Creek**	**76.14**	**112**	P	**P**	**13 40 10.8**	**-1.1**
WRAB				IAmb	IAmb	13 40 12.8	
	comp=Z,6.0nm,1.0s						
WB2	**Warramunga Arr**	**76.14**	**112**	P	**P**	**13 40 11.4**	**-0.5**
WB0	**Warramunga Arr**	**76.14**	**112**	P	**P**	**13 40 10.8**	**-1.2**
ASAR	**Alice Springs**	**76.49**	**116**	P	**P**	**13 40 14.1**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=288,slow=5.5,SNR=14						
ASAR	**Alice Springs**	**76.49**	**116**	P	**P**	**13 40 14.4**	**+0.5**
AS31	**Alice Springs**	**76.49**	**116**	P	**P**	**13 40 13.7**	**-0.2**

*VAO **28** 13:29:15.8±0.5, 21.22S×68.87W, h133km±5km, mb4.3*
*SJA **28** 13:29:15.1±0.6, 21.23S×68.90W, h127km±2km, ML4.3, MW4.0*
*IDC **28** 13:29:16.2±0.9, 21.31S×68.52W, h121km±11km, mb3.9/8, mb1 3.9/12, mb1mx3.7/26, mbtmp4.2/12, MS3.3/1, Ms1 3.3/1, ms1mx2.6/27, Error ellipse: s-maj=19.8km s-min=15.5km az=129.0*
*GUC **28** 13:29:16.4±0.7, 21.25S×68.81W, h120km±3km, ML4.3*
ISC 28 13:29:15.3±0.6, 21.24S±0.03×68.85W±0.04, h126km±5km, n95, σ1§32/133, mb4.0/8, 12C-7D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.63**	**288**⇑	*iP*	**Pn**	**13 29 34.8**	**0.0**
PB01				*i* S	**Sn**	**13 29 49.2**	**-0.4**
PB01				IAML		13 29 50.0	
	comp=E,9μm,0.5s						
PB01	**IPOC Station P**	**0.63**	**288**	*e*P	**Pn**	**13 29 34.9**	**+0.1**
PB01				*e*S	**Sn**	**13 29 49.4**	**-0.2**
PB01				IAML		13 29 50.5	
	comp=Z,4μm,0.2s						
PB09	**IPOC Station P**	**0.66**	**213**⇑	*iP*	**Pn**	**13 29 35.6**	**+0.4**
PB09				*i* S	**Sn**	**13 29 50.3**	**0.0**
PB09				IAML		13 29 51.2	
	comp=N,7μm,0.4s						
PB09	**IPOC Station P**	**0.66**	**213**	*e*P	**Pn**	**13 29 35.6**	**+0.4**
PB09				*e*S	**Sn**	**13 29 50.7**	**+0.4**
PB09				IAML		13 29 52.2	
	comp=Z,5μm,0.5s						
PB02	**IPOC Station P**	**0.98**	**265**⇑	*iP*	**Pn**	**13 29 38.3**	**+0.5**
PB02				*i* S	**Sn**	**13 29 54.8**	**0.0**
PB02	**IPOC Station P**	**0.98**	**265**	*e*P	**Pn**	**13 29 38.3**	**+0.5**
PB02				*e*S	**Sn**	**13 29 55.2**	**+0.4**
PB02				IAML		13 29 57.4	
	comp=Z,7μm,0.3s						
PB07	**IPOC Station P**	**1.08**	**243**⇑	*iP*	**Pn**	**13 29 39.2**	**+0.5**
PB07				*i* S	**Sn**	**13 29 56.8**	**+0.2**
PB07				IAML		13 29 59.1	
	comp=E,6μm,0.4s						
PB07	**IPOC Station P**	**1.08**	**243**	*e*P	**Pn**	**13 29 39.0**	**+0.3**
PB07				*e*S	**Sn**	**13 29 56.9**	**+0.2**
PB07				IAML		13 29 59.8	
	comp=Z,4μm,0.3s						
PB08	**IPOC Station P**	**1.13**	**345**⇓	*iP*	**Pn**	**13 29 40.2**	**+0.7**
PB08				*i* S	**Sn**	**13 29 58.3**	**+0.4**
PB08				IAML		13 29 59.5	
	comp=E,4μm,0.2s						
PB08	**IPOC Station P**	**1.13**	**345**	*e*P	**Pn**	**13 29 40.2**	**+0.7**
PB08				*e*S	**Sn**	**13 29 58.4**	**+0.5**
PB08				IAML		13 30 00.4	
	comp=Z,2μm,0.5s						
PB03	**IPOC Station P**	**1.16**	**226**⇑	*iP*	**Pn**	**13 29 40.1**	**+0.5**
PB03				*i* S	**Sn**	**13 29 58.0**	**-0.1**
PB03				IAML		13 29 58.5	
	comp=E,7μm,0.5s						
PB03	**IPOC Station P**	**1.16**	**226**	*e*P	**Pn**	**13 29 39.9**	**+0.3**
PB03				*e*S	**Sn**	**13 29 58.4**	**+0.2**
PB03				IAML		13 29 59.2	
	comp=Z,4μm,0.3s						
PATCX	**Punta Patache**	**1.29**	**289**⇑	*iP*	**Pn**	**13 29 41.6**	**+0.8**
PATCX				*i* S	**Sn**	**13 30 00.5**	**+0.2**
PATCX				IAML		13 30 01.9	
	comp=N,7μm,0.3s						
PATCX	**Punta Patache**	**1.29**	**289**	*e*P	**Pn**	**13 29 36.7**	**-4.2**
PATCX				*e*P	**Pn**	**13 29 41.6**	**+0.8**
HMBC	**Humberstone**	**1.36**	**314**⇑	*iP*	**Pn**	**13 29 41.9**	**+0.2**
HMBC				*i* S	**Sn**	**13 30 01.6**	**-0.2**
HMBC				IAML		13 30 02.8	
	comp=N,9μm,0.6s						
LVC	**Limon Verde**	**1.36**	**182**	P	**Pn**	**13 29 42.7**	**+0.7**
LVC				S	**Sn**	**13 30 01.9**	**-0.4**
	comp=N,226nm,0.3s,baz=243,slow=19,SNR=15						
LVC	**Limon Verde**	**1.36**	**182**⇑	*iP*	**Pn**	**13 29 42.8**	**+0.8**
LVC				*i* S	**Sn**	**13 30 02.6**	**+0.4**
LVC	**Limon Verde**	**1.36**	**182**	*e*P	**Pn**	**13 29 42.7**	**+0.7**
LVC				*e*S	**Sn**	**13 30 02.4**	**+0.1**
LVC	**Limon Verde**	**1.36**	**182**	*e*P	**Pn**	**13 29 42.8**	**+0.8**
TA01	**Diego Aracena**	**1.41**	**298**⇑	*iP*	**Pn**	**13 29 42.5**	**+0.3**
TA01				*i* S	**Sn**	**13 30 02.5**	**-0.1**
TA01				IAML		13 30 03.8	
	comp=N,7μm,0.4s						
TA02	**Huaiquique**	**1.54**	**309**⇓	*iP*	**Pn**	**13 29 43.8**	**+0.3**
TA02				*i* S	**Sn**	**13 30 04.5**	**-0.5**
TA02				IAML		13 30 06.5	
	comp=N,4μm,0.4s						
GO01	**Chusmiza**	**1.60**	**348**⇓	*iP*	**Pn**	**13 29 45.2**	**+0.5**
GO01				*i* S	**Sn**	**13 30 07.9**	**+0.8**
PB06	**IPOC Station P**	**1.61**	**205**⇑	*iP*	**Pn**	**13 29 45.2**	**+0.7**
PB06				*i* S	**Sn**	**13 30 07.0**	**+0.2**
PB06				IAML		13 30 08.2	
	comp=E,4μm,0.5s						
PB06	**IPOC Station P**	**1.61**	**205**	*e*P	**Pn**	**13 29 45.2**	**+0.7**
PB06				*e*S	**Sn**	**13 30 07.3**	**+0.5**
PB06				IAML		13 30 08.2	
	comp=Z,2μm,0.5s						
PB04	**IPOC Station P**	**1.63**	**228**⇑	*iP*	**Pn**	**13 29 45.3**	**+0.6**
PB04				*i* S	**Sn**	**13 30 07.2**	**0.0**
PB04				IAML		13 30 10.8	
	comp=E,3μm,0.1s						
PB04	**IPOC Station P**	**1.63**	**228**	*e*P	**Pn**	**13 29 45.2**	**+0.6**
PB04				*e*S	**Sn**	**13 30 07.4**	**+0.2**
PB04				IAML		13 30 09.7	
	comp=Z,2μm,0.2s						
PB11	**IPOC Station P**	**1.65**	**333**⇓	*iP*	**Pn**	**13 29 45.4**	**+0.3**
PB11				*i* S	**Sn**	**13 30 07.8**	**+0.1**
PB11	**IPOC Station P**	**1.65**	**333**	*e*P	**Pn**	**13 29 45.4**	**+0.3**
PB11				*e*S	**Sn**	**13 30 07.3**	**-0.5**
PB11				IAML		13 30 10.7	
	comp=Z,2μm,0.5s						
PSGC	**Pisagua**	**2.02**	**324**⇑	*iP*	**Pn**	**13 29 49.3**	**-0.1**
PSGC				*i* S	**Sn**	**13 30 15.0**	**-0.6**
PSGCX	**Pisagua**	**2.02**	**324**	*e*P	Pn	13 29 44.1	-5.4
PSGCX				*e*P	**Pn**	**13 29 49.4**	**-0.1**
PB05	**IPOC Station P**	**2.04**	**218**	*e*P	**Pn**	**13 29 50.0**	**+0.3**
PB05				*e*S	Sn	13 30 03.9	-12
PB15	**IPOC Station P**	**2.04**	**196**⇓	*iP*	**Pn**	**13 29 50.7**	**+0.9**
PB15				*i* S	**Sn**	**13 30 16.8**	**+0.6**
PB15	**IPOC Station P**	**2.04**	**196**	*e*P	**Pn**	**13 29 50.8**	**+0.9**
PB15				*e*S	**Sn**	**13 30 17.0**	**+0.8**
PB15				IAML		13 30 21.5	
	comp=Z,5μm,0.3s						
MNMC	**Minye Minye**	**2.21**	**341**⇓	*iP*	**Pn**	**13 29 52.5**	**+0.5**
MNMC				*i* S	**Sn**	**13 30 20.7**	**+0.7**
MNMC				IAML		13 30 25.1	
	comp=E,3μm,0.2s						
MNMCX	**Minye Minye**	**2.21**	**341**	*e*P	**Pn**	**13 29 49.5**	**-2.5**
MNMCX				*e*P	**Pn**	**13 29 52.8**	**+0.8**
PB10	**IPOC Station P**	**2.76**	**215**	*e*P	**Pn**	**13 29 58.7**	**0.0**
PB10	**IPOC Station P**	**2.76**	**215**	*e*P	**Pn**	**13 29 58.9**	**+0.3**
PB10				*e*S	**Sn**	**13 30 30.7**	**-1.3**
PB16	**IPOC Station P**	**2.96**	**348**	*i* P	**Pn**	**13 30 02.6**	**+0.9**
PB16	**IPOC Station P**	**2.96**	**348**	*e*P	**Pn**	**13 30 02.7**	**+0.9**
PB16				*e*S	**Sn**	**13 30 41.2**	**+3.7**
YJA	**Yavi**	**3.24**	**107**	*e*P	**Pn**	**13 30 07.1**	**+1.8**
YJA				*e*S	**Sn**	**13 30 46.5**	**+2.7**
PB14	**IPOC Station P**	**3.66**	**203**	*e*P	**Pn**	**13 30 10.6**	**-0.2**
PB14	**IPOC Station P**	**3.66**	**203**	*e*P	**Pn**	**13 30 10.3**	**-0.5**
PB14				*e*S	**Sn**	**13 30 53.0**	**-0.7**
HJA	**Humahuaca**	**3.74**	**122**	*e*P	**Pn**	**13 30 14.1**	**+2.3**
HJA				*e*S	**Sn**	**13 30 57.6**	**+2.0**
GO02	**Mina Guanaco**	**3.96**	**190**⇓	*iP*	**Pn**	**13 30 14.5**	**-0.3**
LPAZ	**La Paz**	**4.97**	**8**	P	**Pn**	**13 30 30.8**	**+2.2**
	comp=E,2.8nm,0.3s,baz=188,slow=7.5,SNR=40						
LPAZ				S	**Sn**	**13 31 18.1**	**-7.4**
	comp=E,1.2nm,0.3s,baz=202,slow=14,SNR=2.0						
LPAZ	**La Paz**	**4.97**	**8**	*e*P	**Pn**	**13 30 29.4**	**+0.8**
GO03	**Copiap**	**6.45**	**191**	*e*P	**Pn**	**13 30 46.0**	**-1.8**
GO03				*e*S	**Sn**	**13 31 57.6**	**-2.6**
AGUA	**GUANDACOL**	**8.22**	**178**	*e*P	**Pn**	**13 31 10.4**	**-1.3**
AGUA				*e*S	**Sn**	**13 32 39.6**	**-3.4**
AGUA				IAML		13 32 44.5	
	comp=Z,29nm,0.4s						
SIV	**San Ignacio**	**9.03**	**56**	P	**Pn**	**13 31 19.7**	**-3.0**
	comp=Z,21nm,0.3s,baz=259,slow=10,SNR=153						
VILB	**Vilhena**	**11.67**	**46**	*e*P	**Pn**	**13 31 56.7**	**-1.4**
CPUP	**Villa Florida**	**11.70**	**118**	P	**Pn**	**13 31 55.0**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=302,slow=10,SNR=5.3						
TRCB	**Terra Rica**	**15.12**	**99**	*e*P	**P**	**13 32 44.4**	**-0.2**
CLDB	**Colider**	**16.22**	**53**	*e*P	**Pn**	**13 32 55.8**	**-0.3**
ITAB	**Concordia**	**16.37**	**115**	*e*P	**P**	**13 32 59.3**	**+1.0**
PCMB	**Pacaembu**	**16.38**	**94**	*e*P	**P**	**13 32 58.3**	**-0.3**
CPSB	**Cacapava Do Su**	**16.59**	**126**	*e*P	**P**	**13 33 01.1**	**+0.3**
ARAG	**Araguaiana, MT**	**17.07**	**74**	*e*P	**P**	**13 33 05.9**	**-0.2**
PLTB	**Pedras Altas**	**17.19**	**131**	*e*P	**P**	**13 33 07.0**	**-0.3**
ITRB	**Iturama**	**17.39**	**88**	*e*P	**P**	**13 33 09.9**	**+0.1**
FRTB	**Fartura**	**17.97**	**100**	*e*P	**P**	**13 33 16.4**	**+0.3**
CNLB	**Canela**	**18.14**	**120**	*e*P	**Pn**	**13 33 18.6**	**-0.6**
BB19B	**Bebedouro**	**18.96**	**93**	*e*P	**P**	**13 33 26.7**	**-0.1**
SNDB	**Serra Nova Dou**	**19.16**	**64**	*e*P	**P**	**13 33 28.5**	**-0.6**
NPGB	**Novo Progresso**	**19.22**	**45**	*e*P	**P**	**13 33 28.4**	**-1.3**
PLCA	**Paso Flores**	**19.49**	**184**	P	**P**	**13 33 32.7**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=149,slow=22,SNR=1.6						
PLCA	**Paso Flores**	**19.49**	**184**	*e*P	**P**	**13 33 32.1**	**-0.3**
MACA	**Manacapuru-AM**	**19.65**	**25**	*e*P	**Pn**	**13 33 36.7**	**-0.2**
IPMB	**Ipameri, GO**	**19.71**	**84**	*e*P	**P**	**13 33 35.0**	**0.0**
SPB	**Sao Paulo**	**19.94**	**101**	*e*P	**P**	**13 33 37.0**	**-0.4**
PET01	**Itanhaem-SP**	**20.12**	**103**	*e*P	**P**	**13 33 39.9**	**+0.5**
VAO	**Valinhos**	**20.35**	**99**	*e*P	**P**	**13 33 40.9**	**-1.0**
BDFB	**Brasilia**	**20.53**	**78**	P	**P**	**13 33 43.9**	**0.0**
	comp=Z,14nm,0.5s,baz=250,slow=9.0,SNR=15						
ITTB	**Itatuba**	**21.06**	**39**	*e*P	**P**	**13 33 48.4**	**-1.1**
PARB	**Paraibuna**	**21.59**	**100**	*e*P	**P**	**13 33 56.2**	**+0.9**
PEXB	**Peixe**	**21.66**	**68**	*e*P	**P**	**13 33 56.3**	**+0.3**
BSCB	**Bom Sucesso**	**22.46**	**94**	*e*P	**P**	**13 34 03.6**	**-0.6**
OTAV	**Otavalo**	**23.32**	**335**	*e*P	**P**	**13 34 11.2**	**-1.6**
PRPB	**Parauapebas**	**23.75**	**54**	*e*P	**P**	**13 34 16.2**	**-0.1**
SMTB	**Santa Maria do**	**23.90**	**62**	*e*P	**P**	**13 34 18.9**	**+1.3**
MALB	**Monte Alegre**	**23.95**	**38**	*e*P	**P**	**13 34 18.4**	**+0.5**
JANB	**Januaria**	**24.10**	**79**	*e*P	**P**	**13 34 19.6**	**+0.1**
SDBA	**SAO DESIDERIO**	**24.52**	**73**	*e*P	**P**	**13 34 23.9**	**+0.7**
DUB01	**Friburgo-RJ**	**24.61**	**97**	*e*P	**P**	**13 34 23.8**	**-0.2**
ROSC	**El Rosal**	**26.47**	**348**	LR	LR	13 48 07.4	
	comp=Z,61nm,18.7s,baz=93,slow=42						
GDU01	**Guandu, BA**	**28.87**	**80**	*e*P	**P**	**13 35 02.1**	**-0.1**
SDV	**Santo Domingo**	**29.99**	**356**	P	P	13 35 22.1	+10
	comp=Z,3.8nm,0.3s,baz=50,slow=13,SNR=7.0						
RCBR	**Riachuelo**	**35.39**	**69**	P	**P**	**13 35 57.2**	**-2.1**
	comp=Z,16nm,0.9s,baz=1.3,slow=20,SNR=2.4						
TXAR	**Lajitas Array**	**60.45**	**325**	P	**P**	**13 39 13.8**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=132,slow=7.4,SNR=3.2						
DBIC	**Dimbokro**	**68.61**	**73**	P	**P**	**13 40 04.5**	**-0.7**
	comp=Z,3.4nm,0.8s,baz=184,slow=6.1,SNR=2.2						
NVAR	**Mina Array Bea**	**75.32**	**322**	P	**P**	**13 40 48.4**	**+3.4**
	comp=Z,0.7nm,0.7s,baz=135,slow=6.1,SNR=5.3						
TORD	**Torodi Ar. Bea**	**77.22**	**70**	P	**P**	**13 40 56.5**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=258,slow=4.9,SNR=8.9						
MDT	**Midelt**	**81.54**	**50**	P	**P**	**13 41 18.0**	**-1.1**
	comp=Z,3.7nm,0.7s,baz=224,slow=10,SNR=5.5						
YKA	**Yellowknife Ar**	**90.96**	**341**	P	**P**	**13 42 06.6**	**+2.1**
	comp=Z,0.3nm,0.8s,baz=129,slow=4.7,SNR=6.8						
WRA	**Warramunga Arr**	**133.21**	**211**	PKP	**PKiKP**	**13 48 19.3**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=161,slow=1.6,SNR=5.5						
MKAR	**Makanchi Array**	**145.39**	**36**	PKPbc	**PKiKP**	**13 48 40.7**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=325,slow=3.6,SNR=5.8						
MKAR				pPKPbc	pPKPab	13 49 12.4	-0.8
	comp=Z,0.9nm,0.8s,baz=328,slow=2.7,SNR=4.4						

IDC 28 13:29:36.8±47.0, 5.26N×61.90E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/43, mbtmp3.8/3, Error ellipse: s-maj=1209.0km s-min=76.0km az=114.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**38.45**	**67**	P	P	13 37 00.6	-0.2
	0.3nm,0.3s,baz=249,slow=7.6,SNR=1.3						
WRA	**Warramunga Arr**	**75.41**	**112**	P	P	13 41 23.2	0.0
	1.2nm,1.0s,baz=284,slow=5.0,SNR=2.5						
ASAR	**Alice Springs**	**75.77**	**116**	P	P	13 41 25.3	+0.1
	0.9nm,0.8s,baz=283,slow=5.4,SNR=4.3						

IDC 28 13:33:57.9±1.4, 4.67N×61.10E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/45, mbtmp3.6/5, Error ellipse: s-maj=51.5km s-min=33.3km az=7.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**39.42**	**67**	P

CHIC	**Chingaza**	**2.29 196**	*eP*	**Pn**	**13 41 55.1**	**+0.2**
CHIC			*eS*	**Sn**	**13 42 24.6**	**-0.9**
CHIC			*i*		13 42 30.6	
	comp=Z,286nm,0.3s					
ROSC	**El Rosal**	**2.34 211**	P	**Pn**	**13 41 56.8**	**+1.3**
	comp=Z,74nm,0.3s,baz=310,slow=19,SNR=38					
ROSC			S	**Sn**	**13 42 28.0**	**+1.6**
	comp=Z,83nm,0.3s,baz=148,slow=20,SNR=11					
ROSC	**El Rosal**	**2.34 211**	*eP*	**Pn**	**13 41 56.7**	**+1.3**
ROSC			*eS*	**Sn**	**13 42 26.2**	**-0.1**
ROSC			*i*		13 42 30.8	
	comp=Z,577nm,0.4s					
HELC	**Santa Helena**	**2.50 255**	*eP*	**Pn**	**13 41 58.1**	**+0.7**
HELC			*eS*	**Sn**	**13 42 29.0**	**-0.7**
HELC			*i*		13 42 35.7	
	comp=Z,235nm,0.3s					
UREC	**San Jos de Ur**	**2.58 291**	*eP*	**Pn**	**13 41 57.9**	**0.0**
UREC			*eS*	**Sn**	**13 42 28.1**	**-2.7**
UREC			*i*		13 42 42.4	
	comp=Z,311nm,0.2s					
GUY2C	**Guyana, Caldas**	**2.77 235**	*eP*	**Pn**	**13 42 01.2**	**+0.4**
GUY2C			*eS*	**Sn**	**13 42 38.4**	**+2.5**
GUY2C			*i*		13 42 44.0	
	comp=Z,326nm,0.8s					
VILC	**Villavicencio,**	**2.78 192**	*eP*	**Pn**	**13 42 00.3**	**-0.3**
VILC			*eS*	**Sn**	**13 42 34.8**	**-0.9**
VILC			*i*		13 42 41.6	
	comp=Z,309nm,0.4s					
PTGC	**Puerto Gaitan,**	**2.80 160⇓**	*iP*	**Pn**	**13 42 00.2**	**-0.5**
PTGC			*eS*	**Sn**	**13 42 33.3**	**-2.6**
PTGC			*i*		13 42 38.3	
	comp=Z,145nm,0.3s					
RREF	**El Recreo**	**2.96 229**	*eP*	**Pn**	**13 42 03.4**	**+0.2**
RREF			*eS*	**Sn**	**13 42 42.4**	**+2.2**
RREF			*i*		13 42 46.5	
	comp=Z,251nm,0.3s					
CBOC	**Ciudad Bolivar**	**3.06 251**	*eP*	**Pn**	**13 42 04.8**	**+0.8**
CBOC			*eS*	**Sn**	**13 42 40.8**	**-0.8**
CBOC			*i*		13 42 48.9	
	comp=Z,88nm,0.3s					
DBBC	**Dabeiba**	**3.09 273**	*eP*	**Pn**	**13 42 04.8**	**+0.4**
DBBC			*eS*	**Sn**	**13 42 41.9**	**-0.5**
TOLC	**Tolima**	**3.15 225**	*eP*	**Pn**	**13 42 06.3**	**+0.9**
TOLC			*eS*	**Sn**	**13 42 44.4**	**+0.3**
SDV	**Santo Domingo**	**3.17 50**	P	**Pn**	**13 42 06.6**	**+1.2**
	comp=Z,34nm,0.3s,baz=229,slow=4,3,SNR=84					
SDV			S	**Sn**	**13 42 43.8**	**-0.6**
	comp=Z,38nm,0.3s,baz=246,slow=21,SNR=23					
SDV	**Santo Domingo**	**3.17 50**	*eP*	**Pn**	**13 42 06.5**	**+1.0**
SDV			*eS*	**Sn**	**13 42 44.0**	**-0.4**
SDV			*i*		13 42 45.9	
	comp=Z,93nm,0.4s					
MOTC	**Monteria, Cord**	**3.18 307**	*eP*	**Pn**	**13 42 04.3**	**-1.1**
MOTC			*eS*	**Sn**	**13 42 42.6**	**-1.7**
MOTC			*i*		13 42 45.8	
	comp=Z,109nm,0.4s					
ANIL	**Santa Ana**	**3.28 225**	*eP*	**Pn**	**13 42 08.4**	**+1.5**
ANIL			*eS*	**Sn**	**13 42 47.6**	**+0.7**
ANIL			*i*		13 42 54.1	
	comp=Z,85nm,0.3s					
ORTC	**Ortega, Tolima**	**3.62 216**	*eP*	**Pn**	**13 42 11.2**	**+0.2**
ORTC			*eS*	**Sn**	**13 42 53.9**	**-0.5**
ORTC			*i*		13 42 58.8	
	comp=Z,115nm,0.7s					
SJCC	**San Jacinto, C**	**3.66 326**	*eP*	**Pn**	**13 42 10.9**	**-0.6**
SJCC			*eS*	**Sn**	**13 42 51.0**	**-4.3**
SJCC			*i*		13 42 57.0	
	comp=Z,66nm,0.5s					
PLMC	**San Jos del P**	**3.71 239⇑**	*eP*	**Pn**	**13 42 12.6**	**+0.4**
PLMC			*eS*	**Sn**	**13 42 55.3**	**-1.2**
PLMC			*i*		13 43 01.3	
	comp=Z,90nm,0.3s					
LCBC	**Los crdobas,**	**3.80 302**	*eP*	**Pn**	**13 42 15.2**	**+1.9**
LCBC			*eS*	**Sn**	**13 42 55.5**	**-3.0**
LCBC			*i*		13 43 02.9	
	comp=Z,90nm,0.6s					
GUVC	**San Jose del G**	**4.30 174**	*eP*	**Pn**	**13 42 19.7**	**-0.1**
GUVC			*eS*	**Sn**	**13 43 06.8**	**-3.4**
GUVC			*i*		13 43 14.2	
	comp=Z,182nm,0.2s					
YOTC	**Yotoco, Valle**	**4.31 229**	*eP*	**Pn**	**13 42 19.7**	**-0.3**
YOTC			*eS*	**Sn**	**13 43 06.8**	**-3.6**
SMRC	**Santa Marta, M**	**4.43 346**	*eP*	**Pn**	**13 42 22.4**	**+0.9**
SMRC			*eS*	**Sn**	**13 43 10.0**	**-3.2**
SMRC			*i*		13 43 14.7	
	comp=Z,55nm,0.3s					
PIZC	**Pizarro, Choco**	**4.63 246**	*eP*	**Pn**	**13 42 25.9**	**+1.8**
MACC	**Macarena, Meta**	**4.73 189**	*eP*	**Pn**	**13 42 24.1**	**-1.4**
MACC			*eS*	**Sn**	**13 43 15.6**	**-4.7**
MACC			*i*		13 43 24.3	
	comp=Z,39nm,0.3s					
BETC	**Betania**	**4.75 210**	*eP*	**Pn**	**13 42 22.7**	**-3.1**
BETC			*eS*	**Sn**	**13 43 14.4**	**-6.4**
MARP	**Paez Belalcaza**	**4.89 216**	*eP*	**Pn**	**13 42 27.4**	**-0.4**
MARP			*eS*	**Sn**	**13 43 22.2**	**-2.2**
URIC	**Uribia, Colomb**	**4.94 13**	*eP*	**Pn**	**13 42 27.0**	**-1.2**
URIC			*eS*	**Sn**	**13 43 21.4**	**-3.9**
URIC			*i*		13 43 28.8	
	comp=Z,16nm,0.5s					
MALC	**Bahia Malaga**	**5.07 236**	*eP*	**Pn**	**13 42 31.2**	**+1.3**
MALC			*eS*	**Sn**	**13 43 31.2**	**+3.0**
MALC			*i*		13 43 33.4	
	comp=Z,23nm,0.5s					
GARC	**Garzon, Huila**	**5.21 207**	*eP*	**Pn**	**13 42 31.1**	**-0.9**
GARC			*eS*	**Sn**	**13 43 29.9**	**-2.0**
GARC			*i*		13 43 35.1	
	comp=Z,68nm,0.2s					
PCON	**Cinco Dias**	**5.56 216**	*eP*	**Pn**	**13 42 38.2**	**+1.2**
PCON			*eS*	**Sn**	**13 43 41.1**	**+0.3**
PCON			*i*		13 44 02.0	
	comp=Z,13nm,0.5s					
FLOC	**Florencia**	**5.82 206**	*eP*	**Pn**	**13 42 39.0**	**-0.8**
FLOC			*eS*	**Sn**	**13 43 44.7**	**-1.3**
FLOC			*i*		13 44 11.5	
	comp=Z,14nm,0.4s					
LPAZ	**La Paz**	**23.51 168**	pP	pP	13 46 42.8	+0.3
	comp=Z,1.1nm,0.7s,baz=331,slow=11,SNR=3.0					
TXAR	**Lajitas Array**	**36.46 312**	P	**P**	**13 48 06.9**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=132,slow=9.9,SNR=6.7					
PDAR	**Pinedale Array**	**48.07 324**	P	**P**	**13 49 40.2**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=133,slow=10.0,SNR=3.0					
NVAR	**Mina Array Bea**	**51.48 315**	P	**P**	**13 50 06.5**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=112,slow=7.2,SNR=1.8					
YKA	**Yellowknife Ar**	**63.24 340**	P	**P**	**13 51 26.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=125,slow=6.5,SNR=6.6					
ASAR	**Alice Springs**	**149.14 234**	PKPbc	**PKPbc**	**14 00 44.9**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=117,slow=3.3,SNR=2.7					
WRA	**Warramunga Arr**	**150.37 241**	PKPbc	**PKiKP**	**14 00 48.4**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=106,slow=2.9,SNR=6.5					

*IDC **28** 13:44:47.1±1.1,5.°45N×61.°30E,h0km,mb3.7/9,mb1 3.9/9, mb1mx3.6/61,mbtmp3.7/9,MS4.0/11,Ms1 4.0/11, ms1mx3.7/42,Error ellipse: s-maj=35.0km s-min=22.9km az=38.0*

*GCMT **28** 13:44:49.6±0.3,5.°67N±0.°03×61.°28E±0.°04,h14km±1km, MW4.8/83,Moment Tensor Solution. s11,c13; s83,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.90±.15; $M_{\theta\theta}$1.23±.10; $M_{\phi\phi}$0.66±.09; $M_{r\theta}$0.65±.21; $M_{\theta\phi}$-0.53±.05; $M_{r\phi}$0.22±.28; Best double couple: $M_0$1.83600×10^{16} NP1:ϕ_s131.00000°,δ39.00000°,λ-71.00000°. NP2: ϕ_s288.00000°,δ54.00000°,λ-104.00000°. Principal axes: T 1.6060, Plg8.0000°, Azm28.0000°; N 0.4560, Plg12.0000°, Azm296.0000°; P -2.0660, Plg76.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 13:44:50.6±1.6,5.°6N±0.°2×61.°9E±0.°1,h10km±1km, mb4.3/15 Error ellipse: s-maj=30.1km s-min=13.5km az=203.0*

ISC 28 13:44:49.2±1.0,5.°5N±0.°2×61.°5E±0.°1,h10km,n38, σ1^{s}27/29,mb4.1/15,MS4.2/8,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**10.01**	**312**	Pn	Pn	13 47 20.9	+7.6
WSAR	**Wadi Sarin**	**17.89**	**351**	LR	LR	13 54 12.0	
	comp=Z,363nm,21.0s,baz=181,slow=32						
PALK	**Pallekele**	**19.13**	**84**	LR	LR	13 54 41.2	
	comp=Z,472nm,20.2s,baz=26,slow=31						
ATD	**Arta Tunnel**	**19.43**	**289**	LR	LR	13 55 19.0	
	comp=Z,145nm,21.7s,baz=60,slow=33						
UOSS	**Minazif**	**20.03**	**346**	P	**P**	**13 49 21.4**	**-1.1**
UOSS				IAmb	IAmb	13 49 34.3	
	comp=Z,15nm,1.1s						
RAYN	**Ar Rayn**	**23.68**	**321**	P	**P**	**13 50 02.5**	**+1.2**
RAYN				IAmb	IAmb	13 50 04.2	
	comp=Z,8.1nm,1.2s						
OPO	**Ambohidratompo**	**27.76**	**210**	LR	LR	13 58 47.0	
	comp=Z,276nm,20.7s,baz=186,slow=30						
LSA	**Lhasa**	**36.90**	**46**	P	**P**	**13 51 58.7**	**-0.2**
LSA				IAmb	IAmb	13 52 06.2	
	comp=Z,4.7nm,0.5s						
MARD	**Mardin**	**36.93**	**332**	P	**P**	**13 51 59.8**	**+1.1**
KK31	**Karatay Array**	**38.31**	**11**	P	**P**	**13 52 09.6**	**-0.6**
KK31				IAmb	IAmb	13 52 18.0	
	comp=Z,7.2nm,1.4s						
KKAR	**Karatay Array**	**38.31**	**11**	P	**P**	**13 52 09.7**	**-0.5**
KKAR	**Karatay Array**	**38.31**	**11**	P	**P**	**13 52 09.6**	**-0.6**
KKAR				IAmb	IAmb	13 52 18.0	
	comp=Z,7.2nm,1.4s						
CMAR	**Chiang Mai Arr**	**38.71**	**67**	P	**P**	**13 52 15.2**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=263,slow=8.9,SNR=6.0						
CMAR				PcP	**PcP**	**13 54 24.0**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=258,slow=4.5,SNR=1.4						
CMAR				LR	LR	14 06 55.5	
	comp=Z,146nm,21.2s,baz=279,slow=34						
AAK	**Ala-Archa**	**38.76**	**15**	P	**P**	**13 52 14.4**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=247,slow=5.2,SNR=1.8						
AAK	**Ala-Archa**	**38.76**	**15**	P	**P**	**13 52 14.1**	**0.0**
BRTR	**Keskin Array B**	**42.37**	**328**	P	**P**	**13 52 40.5**	**-3.5**
	comp=Z,0.6nm,0.4s,baz=130,slow=18,SNR=2.0						
BRTR				LR	LR	14 10 40.5	
	comp=Z,101nm,18.5s,baz=140,slow=37						
BRTR	**Keskin Array B**	**42.37**	**328**	P	**P**	**13 52 45.9**	**+1.9**
ILGA	**Ilgaz**	**43.30**	**329**	P	**P**	**13 52 52.2**	**+0.7**
ILGA				IAmb	IAmb	13 53 00.4	
	comp=Z,11nm,1.2s						
ABKAR	**Akbulak array**	**43.66**	**358**	P	**P**	**13 52 53.5**	**-0.5**
ABKAR				IAmb	IAmb	13 53 01.1	
	comp=Z,5.5nm,1.2s						
ABKAR	**Akbulak array**	**43.66**	**358**	P	**P**	**13 52 53.0**	**-1.0**
BRVK	**Borovoye**	**47.98**	**7**	P	**P**	**13 53 29.3**	**+1.1**
BOSA	**Boshof**	**49.66**	**224**	LR	LR	14 12 37.3	
	comp=Z,349nm,18.3s,baz=29,slow=34						
ZALV	**Zalesovo Beam**	**51.91**	**17**	P	**P**	**13 53 59.0**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=201,slow=7.7,SNR=4.0						
AKASG	**Malin Array Be**	**52.55**	**335**	P	**P**	**13 54 01.7**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=128,slow=6.0,SNR=1.0						
SONM	**Songino Array**	**56.95**	**35**	P	**P**	**13 54 35.1**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=224,slow=6.0,SNR=2.2						
TORD	**Torodi Ar. Bea**	**59.43**	**282**	P	**P**	**13 54 51.7**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=90,slow=7.2,SNR=2.6						
LUWI	**Luwuk**	**61.49**	**94**	P	**P**	**13 55 05.5**	**-1.4**
DBIC	**Dimbokro**	**65.99**	**275**	LR	LR	14 23 50.9	
	comp=Z,156nm,19.3s,baz=51,slow=36						
NRIK	**Noril'sk**	**66.05**	**10**	LR	LR	14 27 09.4	
	comp=Z,161nm,18.4s,baz=199,slow=38						
ESDC	**Sonseca Array**	**67.74**	**311**	P	**P**	**13 55 49.8**	**+2.4**
MAW	**Mawson**	**72.91**	**179**	LR	LR	14 23 38.4	
	comp=Z,104nm,19.1s,baz=52,slow=32						
WRA	**Warramunga Arr**	**75.83**	**112**	P	**P**	**13 56 37.4**	**+1.0**
	comp=Z,2.9nm,1.1s,baz=286,slow=4.7,SNR=8.4						
WRA	**Warramunga Arr**	**75.83**	**112**	P	**P**	**13 56 36.8**	**+0.5**
WRAB	**Tennant Creek**	**75.84**	**112**	P	**P**	**13 56 36.8**	**+0.4**
ASAR	**Alice Springs**	**76.19**	**116**	P	**P**	**13 56 38.9**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=290,slow=5.0,SNR=8.5						
ASAR	**Alice Springs**	**76.19**	**116**	P	**P**	**13 56 38.6**	**+0.3**
AS31	**Alice Springs**	**76.19**	**116**	P	**P**	**13 56 39.0**	**+0.7**
SFJD	**Kangerlussuaq**	**93.47**	**339**	LR	LR	14 41 07.9	
	comp=Z,137nm,18.7s,baz=13,slow=36						

*IDC **28** 13:46:37.9±0.9,55.°11N×35.°37W,h0km,mb3.7/12, mb1 4.0/14,mb1mx3.8/51,mbtmp3.7/14,ML3.5/2,MS3.4/4, Ms1 3.4/4,ms1mx3.1/41,Error ellipse: s-maj=32.4km s-min=15.4km az=14.0*

ISC 28 13:46:39.4±0.8,55.°1N±0.°2×35.°36W±0.°09,h10km,n19, σ0^{s}88/15,mb3.7/12,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**11.92**	**30**	LR	LR	13 52 40.1	
	comp=Z,114nm,21.7s,baz=269,slow=30						
SFJD	**Kangerlussuaq**	**13.97**	**335**	LR	LR	13 54 21.4	
	comp=Z,149nm,18.2s,baz=120,slow=33						
SCHQ	**Schefferville**	**18.00**	**282**	P	**P**	**13 50 50.6**	**+0.8**
	0.4nm,0.3s,baz=62,slow=10,SNR=2.0						
SCHQ				LR	LR	13 57 14.2	
	comp=Z,136nm,18.9s,baz=54,slow=35						
EKA	**Eskdalemuir Ar**	**18.29**	**76**	P	**P**	**13 50 53.3**	**+0.3**
	baz=275,slow=11,SNR=3.4						
FRB	**Frobisher Bay**	**18.75**	**311**	LR	LR	13 56 04.5	
	comp=Z,187nm,18.1s,baz=357,slow=30						
ESDC	**Sonseca Array**	**25.98**	**113**	P	**P**	**13 52 12.1**	**+0.1**
	1.4nm,0.8s,baz=317,slow=7.0,SNR=4.1						
ARCES	**ARCESS Array B**	**30.17**	**38**	P	**P**	**13 52 48.0**	**-1.1**
	2.8nm,0.9s,baz=252,slow=8.4,SNR=3.8						
GERES	**GERESS Array B**	**30.33**	**81**	P	**P**	**13 52 51.4**	**+0.6**
	0.2nm,0.3s,baz=311,slow=7.4,SNR=4.0						
AKASG	**Malin Array Be**	**37.96**	**69**	P	**P**	**13 53 56.1**	**-0.6**
	1.3nm,0.5s,baz=301,slow=8.4,SNR=2.1						
YKA	**Yellowknife Ar**	**39.23**	**314**	P	**P**	**13 54 08.5**	**+1.2**
	0.7nm,0.7s,baz=57,slow=9.0,SNR=4.9						
INK	**Inuvik**	**43.16**	**327**	P	**P**	**13 54 39.6**	**+0.1**
	1.9nm,1.0s,baz=41,slow=6.5,SNR=4.9						
BRTR	**Keskin Array B**	**47.17**	**79**	P	**P**	**13 55 12.9**	**+1.0**
	1.4nm,0.6s,baz=278,slow=3.6,SNR=6.6						
PDAR	**Pinedale Array**	**48.01**	**288**	P	**P**	**13 55 19.1**	**+0.5**
	0.2nm,0.5s,baz=42,slow=9.6,SNR=2.1						
ILAR	**Eielson Array**	**49.53**	**328**	P	**P**	**13 55 28.5**	**-1.1**
	0.1nm,0.6s,baz=43,slow=5.5,SNR=4.5						
TORD	**Torodi Ar. Bea**	**50.83**	**131**	P	**P**	**13 55 39.7**	**-0.3**
	0.8nm,0.9s,baz=321,slow=6.3,SNR=2.7						
TXAR	**Lajitas Array**	**54.24**	**271**	P	**P**	**13 56 03.8**	**-1.5**
	0.1nm,0.4s,baz=67,slow=6.9,SNR=2.0						
MKAR	**Makanchi Array**	**65.70**	**42**	P	**P**	**13 57 24.0**	**+0.3**
	0.3nm,0.5s,baz=322,slow=5.9,SNR=2.4						
WRA	**Warramunga Arr**	**144.03**	**17**	PKP	PKPbc	14 06 12.7	-0.2
	0.3nm,0.8s,baz=330,slow=2.0,SNR=1.9						
ASAR	**Alice Springs**	**147.60**	**19**	PKPbc	**PKPbc**	**14 06 23.6**	**-0.1**
	2.3nm,0.7s,baz=350,slow=2.5,SNR=30						

*MAN **28** 13:46:59.0,5.°10N×125.°62E,h156km,mb4.9,ML3.8, MS3.8*

*DJA **28** 13:47:00.6±1.4,5.°N±13.°×12.°6E±.°,h146km±5km,M4.3/8, mB5.1/1,mb4.4/3,MLv4.2/8,Mw(mB)4.4/1*

*IDC **28** 13:47:13.2±1.5,4.°76N×125.°40E,h303km±16km,mb3.3/11, mb1 3.4/12,mb1mx3.1/47,mbtmp4.0/12,Error ellipse: s-maj=34.4km s-min=10.2km az=87.0*

ISC 28 13:46:58.8±0.7,4.°89N±0.°05×125.°68E±0.°08,h150km,n23, σ1^{s}88/28,mb3.8/11,2C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SGSI	**Sangihe**	**1.20**	**187**	P	**Pn**	**13 47 24.9**	**-0.5**
SGSI				S	**Sn**	**13 47 44.6**	**-1.1**
DDMP	**Don Marcelino,**	**1.21**	**1**	*eP*	**Pn**	**13 47 23.9**	**-1.6**
SKMP	**Bagumbayan, Su**	**1.98**	**325**	*eP*	**Pn**	**13 47 32.3**	**-1.4**
SKMP				*eS*	**Sn**	**13 47 59.3**	**-1.2**
MATI	**Mati**	**2.13**	**16**	*eP*	**Pn**	**13 47 34.9**	**-0.5**
MATI				*eS*	**Sn**	**13 47 59.2**	**-4.4**
DAV	**Davao City (W)**	**2.17**	**357**	P	**Sn**	**13 48 03.1**	**-1.6**
	99nm,0.3s,baz=271,slow=22,SNR=12						
KCP	**Kidapawan**	**2.19**	**344⇑**	*eP*	**Pn**	**13 47 37.9**	**+1.6**
KCP				*i* S	**Sn**	**13 48 08.8**	**+3.7**
CGP	**Cagayan de Oro**	**3.68**	**345⇑**	*eP*	Pn	13 47 40.3	-15
CGP				*eS*	**Sn**	**13 48 39.8**	**+1.4**
PAGZ	**Pagadian**	**3.73**	**322**	*eP*	**Pn**	**13 47 53.8**	**-1.7**
PAGZ				*eS*	**Sn**	**13 48 35.5**	**-4.1**
TNTI	**Ternate**	**4.42**	**158**	P	**Pn**	**13 48 03.8**	**-0.8**
GTOI	**Gorontalo**	**4.99**	**212**	P	**Pn**	**13 48 12.5**	**+0.4**
MRSI	**Marisa**	**5.75**	**221**	P	**Pn**	**13 48 23.3**	**+1.0**
	0.1nm23nm,0.6s						
NLAI	**Namlea**	**8.19**	**170**	P	**Pn**	**13 48 53.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**22.84**	**180**	P	**P**	**13 51 49.5**	**+0.4**
	4.5nm,0.4s,baz=6.2,slow=11,SNR=24						
WRA	**Warramunga Arr**	**26.10**	**161**	P	**P**	**13 52 18.6**	**-0.2**
	0.6nm,0.5s,baz=341,slow=9.4,SNR=9.6						
ASAR	**Alice Springs**	**29.49**	**165**	P	**P**	**13 52 49.6**	**+0.6**
	0.9nm,0.4s,baz=338,slow=6.8,SNR=32						
NWAO	**Narrogin (SRO)**	**38.45**	**191**	P	**P**	**13 54 06.0**	**0.0**
	9.9nm,1.0s,baz=344,slow=6.8,SNR=1.8						
USRK	**Ussuriysk Ar.**	**39.55**	**7**	P	**P**	**13 54 16.9**	**+1.9**
	1.7nm,0.7s,baz=216,slow=5.4,SNR=2.3						
STKA	**Stephens Creek**	**39.58**	**159**	P	**P**	**13 54 16.4**	**+0.9**
	0.6nm,0.3s,baz=340,slow=8.4,SNR=4.4						
ASAJ	**Asahikawa**	**41.81**	**18**	P	**P**	**13 54 35.2**	**+1.5**
	1.3nm,0.3s,baz=250,slow=11,SNR=7.6						
PETK	**Petropavlovsk-**	**54.77**	**23**	P	**P**	**13 56 13.2**	**+0.4**
	7.3nm,1.1s,baz=136,slow=2.4,SNR=8.4						
MKAR	**Makanchi Array**	**56.02**	**325**	P	**P**	**13 56 21.2**	**-0.7**
	0.2nm,0.5s,baz=122,slow=6.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**59.09**	**333**	P	**P**	**13 56 40.2**	**-3.0**
	0.6nm,0.5s,baz=140,slow=9.1,SNR=2.1						
ILAR	**Eielson Array**	**84.52**	**25**	P	**P**	**13 59 15.2**	**+0.6**
	0.2nm,0.4s,baz=248,slow=4.4,SNR=6.9						

IDC 28 14:20:36.3±2.3,1.°81N×126.°56E,h0km,mb3.1/3, mb1 3.3/3,mb1mx3.2/43,mbtmp3.1/3,Error ellipse: s-maj=181.7km s-min=28.4km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.93**	**161**	P	P	14 25 41.9	-0.2
	0.3nm,0.5s,baz=340,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**26.31**	**165**	P	P	14 26 14.3	+0.3
	0.1nm,0.4s,baz=345,slow=12,SNR=5.1						
MKAR	**Makanchi Array**	**59.03**	**326**	P	P	14 30 38.0	-0.2
	0.2nm,0.6s,baz=121,slow=5.6,SNR=2.0						

TAP 28 14:33:09.3,23.°49N×120.°91E,h10km,ML1.2,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALS	**Alishan**	**0.10**	**283**	P	Pg	14 33 12.7	+0.6
	baz=282						
ALS				S	Sg	14 33 14.5	+0.3
	baz=282						
WHYT	**Xinyi Township**	**0.21**	**346**	*eP*	Pg	14 33 14.9	+1.1
	baz=346						
WHYT				*eS*	Sg	14 33 18.9	+2.1
	baz=346						
CHN5	**Tsauling**	**0.24**	**297**	*eP*	Pg	14 33 14.3	0.0
	baz=296						
CHN5				*eS*	Sg	14 33 19.4	+1.8
	baz=296						
SSLB	**Suanglung**	**0.30**	**8**	*eP*	Pb	14 33 16.3	-0.6
	baz=8.0						
SSLB				*eS*	Sb	14 33 20.8	-1.2
	baz=8.0						
ELDTW	**Lidau**	**0.32**	**161**	P	Pb	14 33 16.8	-0.4
	baz=160						
ELDTW				*eS*	Sg	14 33 20.8	+0.8
	baz=160						
TPUB	**Ta-pu**	**0.32**	**234**	*eP*	Pb	14 33 16.6	-0.6
	baz=233						
TPUB				S	Sb	14 33 21.6	-0.8
	baz=233						
CHN4	**Tsaushan**	**0.32**	**245**	P	Pb	14 33 17.2	0.0
	baz=244						
CHN4				S	Sb	14 33 22.1	-0.4
	baz=244						
STYT	**Tauyuan**	**0.35**	**203**	*eP*	Pb	14 33 17.2	-0.6
	baz=201						
STYT				*eS*	Sb	14 33 23.9	+0.4
	baz=201						
WTP	**Ta-pu**	**0.36**	**228**	*eP*	Pb	14 33 17.9	0.0
	baz=227						
WTP				*eS*	Sb	14 33 23.1	-0.6
	baz=227						
WJS	**Zhushan**	**0.37**	**334**	*eP*	Pg	14 33 17.0	+0.3
	baz=333						
WJS				*eS*	Sg	14 33 22.7	+1.1
	baz=333						
YULB	**Yu-li**	**0.37**	**105**	*eP*	Pb	14 33 17.9	-0.1
	baz=105						
YULB				*eS*	Sb	14 33 22.9	-1.0
	baz=105						
WGK	**Gukeng**	**0.37**	**302**	*eP*	Pg	14 33 17.2	+0.5
	baz=302						
WGK				*eS*	Sb	14 33 23.3	-0.7
	baz=302						
EHY	**Hungye**	**0.38**	**87**	*eP*	Pb	14 33 17.9	-0.4
	baz=87						
EHY				*eS*	Sb	14 33 23.5	-0.7
	baz=87						
TWF1	**Yuli**	**0.38**	**111**	*eP*	Pb	14 33 18.7	+0.4
	baz=110						
TWF1				*eS*	Sb	14 33 23.4	-0.8
	baz=110						
SMLT	**Sun Moon Lake**	**0.39**	**359**	*eP*	Pb	14 33 18.0	-0.5
SMLT				*eS*	Sb	14 33 24.0	-0.7
CHN2	**Minshiung**	**0.40**	**276**	*eP*	Pg	14 33 17.9	+0.7
	baz=276						
CHN2				*eS*	Sb	14 33 24.4	-0.3
	baz=276						
EYUL	**Yuli**	**0.40**	**110**	*eS*	Sb	14 33 24.2	-0.6
	baz=110						
TYC	**Yuchr**	**0.42**	**354**	*eP*	Pb	14 33

mb3.6/6, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**27.37**	**209**	LR	LR	14 48 16.0	
	comp=Z,78nm,19.0s,baz=162,slow=31						
AAK	**Ala-Archa**	**38.97**	**16**	P	**P**	**14 41 30.9**	**+0.7**
	1.1nm,0.8s,baz=207,slow=6.8,SNR=1.8						
CMAR	**Chiang Mai Arr**	**39.46**	**68**	P	**P**	**14 41 34.5**	**+0.1**
	0.3nm,0.3s,baz=246,slow=6.5,SNR=1.3						
MKAR	**Makanchi Array**	**45.17**	**21**	P	**P**	**14 42 20.3**	**-0.3**
	0.3nm,0.8s,baz=219,slow=8.7,SNR=1.9						
ZALV	**Zalesovo Beam**	**52.15**	**18**	P	**P**	**14 43 13.4**	**-0.7**
	0.4nm,0.5s,baz=199,slow=7.2,SNR=2.2						
WRA	**Warramunga Arr**	**76.60**	**112**	P	**P**	**14 45 54.6**	**-0.5**
	1.1nm,0.9s,baz=288,slow=4.8,SNR=6.2						
ASAR	**Alice Springs**	**76.94**	**116**	P	**P**	**14 45 57.5**	**+0.5**
	1.2nm,0.9s,baz=296,slow=5.1,SNR=8.1						
STKA	**Stephens Creek**	**85.17**	**123**	LR	LR	15 21 32.2	
	comp=Z,61nm,18.0s,baz=357,slow=34						

*VAO **28** 14:35:21.8±0.7, 24°.23S×67°.18W, h232km±10km, mb4.4*
*SJA **28** 14:35:21.7±0.6, 24°.06S×66°.91W, h214km±4km, ML4.4, MW4.0*
*NEIC **28** 14:35:22.3±2.7, 24°.02S±0°.07×66°.8W±0°.1, h195km±7km, mb4.3/18, Error ellipse: s-maj=13.4km s-min=9.7km az=91.0*
*IDC **28** 14:35:23.0±0.9, 23°.94S×66°.77W, h190km±7km, mb3.8/13, mb1 3.9/19, mb1mx3.9/30, mbtmp4.3/19, Error ellipse: s-maj=12.3km s-min=10.9km az=41.0*
*GUC **28** 14:35:23.8±0.5, 24°.055×67°.31W, h242km±9km, ML4.6*

ISC 28 14:35:22.2±0.6, 24°.04S±0°.04×66°.94W±0°.04, h197km±6km, n153, σ1°49/193, mb4.1/19, 19C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.48**	**118**	*e*P	**Pn**	**14 35 57.0**	**+1.4**
SLA				*e*S	**S**	**14 36 22.8**	**+1.2**
HJA	**Humahuaca**	**1.63**	**60**	*e*P	**Pn**	**14 35 58.6**	**+1.3**
FSA	**Cafayete**	**2.24**	**157**	*e*P	**Pn**	**14 36 04.3**	**+1.1**
YJA	**Yavi**	**2.27**	**36**	*e*P	**Pn**	**14 36 05.4**	**+1.5**
YJA				*e*S	**S**	**14 36 38.4**	**+2.2**
LVC	**Limon Verde**	**2.30**	**308**	P	**Pn**	**14 36 06.0**	**+1.9**
	188nm,0.3s,baz=117,slow=8.4,SNR=1153						
LVC				S	**S**	**14 36 38.0**	**+1.4**
	110nm,0.3s,baz=289,slow=20,SNR=37						
LVC	**Limon Verde**	**2.30**	**308**	Pn	**Pn**	**14 36 06.0**	**+1.9**
LVC	**Limon Verde**	**2.30**	**308**	*e*P	**Pn**	**14 36 06.0**	**+1.9**
LVC				*e*S	**S**	**14 36 38.2**	**+1.6**
LVC	**Limon Verde**	**2.30**	**308**	*e*P	**Pn**	**14 36 06.2**	**+2.1**
PB15	**IPOC Station P**	**2.46**	**289**	⇑*i*P	**Pn**	**14 36 07.5**	**+1.8**
PB15				*i* S	**S**	**14 36 40.4**	**+1.0**
PB15	**IPOC Station P**	**2.46**	**289**		**Pn**	**14 36 07.4**	**+1.8**
PB15	**IPOC Station P**	**2.46**	**289**	*e*P	**Pn**	**14 36 07.6**	**+1.8**
PB15				*e*S	**S**	**14 36 40.9**	**+1.4**
GO02	**Mina Guanaco**	**2.66**	**245**	⇑*i*P	**Pn**	**14 36 09.5**	**+1.5**
GO02				*i* S	**S**	**14 36 44.4**	**+0.8**
GO02	**Mina Guanaco**	**2.66**	**245**	Pn	**Pn**	**14 36 09.5**	**+1.5**
PB06	**IPOC Station P**	**2.75**	**298**	⇑*i*P	**Pn**	**14 36 10.7**	**+1.7**
PB06				*i* S	**S**	**14 36 46.0**	**+0.6**
PB06				IAML		14 36 51.3	
	comp=E,1μm,0.3s						
PB06	**IPOC Station P**	**2.75**	**298**		**Pn**	**14 36 10.7**	**+1.7**
PB06	**IPOC Station P**	**2.75**	**298**	*e*P	**Pn**	**14 36 10.8**	**+1.7**
PB06				*e*S	**S**	**14 36 46.4**	**+0.9**
PB06				IAML		14 36 52.1	
	comp=Z,794nm,0.3s						
PB09	**IPOC Station P**	**3.08**	**316**	⇑*i*P	**Pn**	**14 36 14.7**	**+1.9**
PB09				*i* S	**S**	**14 36 54.0**	**+1.7**
PB09				IAML		14 36 57.8	
	comp=E,650nm,0.4s						
PB09	**IPOC Station P**	**3.08**	**316**		**Pn**	**14 36 14.8**	**+1.9**
PB09	**IPOC Station P**	**3.08**	**316**	*e*P	**Pn**	**14 36 14.7**	**+1.9**
PB09				*e*S	**S**	**14 36 54.0**	**+1.7**
PB09				IAML		14 36 57.5	
	comp=Z,581nm,0.5s						
AHML	**Horco Molle**	**3.10**	**152**	*e*P	**Pn**	**14 36 13.4**	**+0.5**
AHML				*e*S	**S**	**14 36 51.8**	**-0.8**
PB14	**IPOC Station P**	**3.21**	**259**	⇑*i*P	**Pn**	**14 36 15.4**	**+1.0**
PB14				*i* S	**S**	**14 36 54.4**	**-0.9**
PB14				IAML		14 36 55.4	
	comp=E,742nm,0.4s						
PB14	**IPOC Station P**	**3.21**	**259**	Pn	**Pn**	**14 36 15.5**	**+1.0**
PB14	**IPOC Station P**	**3.21**	**259**	*e*P	**Pn**	**14 36 15.6**	**+1.1**
PB14				*e*S	**S**	**14 36 54.8**	**-0.4**
PB14				IAML		14 36 57.5	
	comp=Z,581nm,0.4s						
PB03	**IPOC Station P**	**3.26**	**307**	⇑*i*P	**Pn**	**14 36 16.2**	**+1.3**
PB03				*i* S	**S**	**14 36 55.5**	**-0.6**
PB03				IAML		14 37 02.1	
	comp=E,815nm,0.3s						
PB03	**IPOC Station P**	**3.26**	**307**	*e*P	**Pn**	**14 36 16.2**	**+1.3**
PB03				*e*S	**S**	**14 36 56.2**	**+0.1**
PB03				IAML		14 37 01.1	
	comp=Z,775nm,0.2s						
PB10	**IPOC Station P**	**3.35**	**278**	⇑*e*P	**Pn**	**14 36 16.1**	**+0.2**
PB10				*i* S	**S**	**14 36 56.4**	**-1.4**
PB10				IAML		14 37 01.5	
	comp=E,634nm,0.3s						
PB10	**IPOC Station P**	**3.35**	**278**	Pn	**Pn**	**14 36 17.2**	**+1.4**
PB10	**IPOC Station P**	**3.35**	**278**	*e*P	**Pn**	**14 36 17.2**	**+1.4**
PB10				*e*S	**S**	**14 36 58.3**	**+0.5**
PB10				IAML		14 36 59.7	
	comp=Z,686nm,0.6s						
PB04	**IPOC Station P**	**3.40**	**299**	⇑*i*P	**Pn**	**14 36 17.6**	**+1.0**
PB04				*i* S	**S**	**14 36 58.3**	**-1.0**
PB04	**IPOC Station P**	**3.40**	**299**		**Pn**	**14 36 17.9**	**+1.2**
PB04	**IPOC Station P**	**3.40**	**299**	*e*P	**Pn**	**14 36 17.9**	**+1.2**
PB04				*e*S	**S**	**14 36 59.7**	**+0.4**
PB04				IAML		14 37 02.1	
	comp=Z,612nm,0.2s						
AC02	**Maricunga**	**3.42**	**215**	⇑*i*P	**Pn**	**14 36 18.5**	**+1.5**
AC02				*i* S	**S**	**14 37 01.8**	**+1.7**
AC02	**Maricunga**	**3.42**	**215**		**Pn**	**14 36 18.6**	**+1.5**
PB07	**IPOC Station P**	**3.56**	**310**	⇑*i*P	**Pn**	**14 36 19.7**	**+1.1**
PB07				*i* S	**S**	**14 37 01.3**	**-1.4**
PB07	**IPOC Station P**	**3.56**	**310**		**Pn**	**14 36 19.5**	**+0.9**
PB07	**IPOC Station P**	**3.56**	**310**	*e*P	**Pn**	**14 36 19.6**	**+1.1**
PB07				*e*S	**S**	**14 37 02.9**	**+0.2**
PB07				IAML		14 37 06.6	
	comp=Z,570nm,0.4s						
PB01	**IPOC Station P**	**3.80**	**321**	⇑*i*P	**Pn**	**14 36 22.2**	**+0.8**
PB01				*i* S	**S**	**14 37 06.4**	**-1.5**
PB01	**IPOC Station P**	**3.80**	**321**		**Pn**	**14 36 22.2**	**+0.8**
PB02	**IPOC Station P**	**3.84**	**314**	⇑*i*P	**Pn**	**14 36 22.6**	**+0.6**
PB02				*i* S	**S**	**14 37 07.5**	**-1.4**
AC01	**Pan de Azucar**	**3.92**	**237**	⇑*i*P	**Pn**	**14 36 22.8**	**-0.1**
AC01				*i* S	**S**	**14 37 08.3**	**-2.2**
AC01	**Pan de Azucar**	**3.92**	**237**		**Pn**	**14 36 22.8**	**-0.1**
PATCX	**Punta Patache**	**4.37**	**317**	⇑*i*P	**Pn**	**14 36 28.5**	**-0.1**
PATCX				*i* S	**S**	**14 37 17.4**	**-3.3**
PATCX	**Punta Patache**	**4.37**	**317**		**Pn**	**14 36 28.5**	**-0.1**
PB08	**IPOC Station P**	**4.39**	**332**	⇑*i*P	**Pn**	**14 36 30.6**	**+1.5**
PB08				*i* S	**S**	**14 37 20.8**	**-0.8**
PB08	**IPOC Station P**	**4.39**	**332**		**Pn**	**14 36 30.6**	**+1.5**
CYA	**Choya**	**4.50**	**167**	*e*P	**Pn**	**14 36 31.2**	**+1.0**
TA01	**Diego Aracena**	**4.57**	**318**	*e*P	**Pn**	**14 36 30.6**	**-0.5**
TA01				*i* S	**S**	**14 37 22.6**	**-2.7**
TA01	**Diego Aracena**	**4.57**	**318**	Pn	**Pn**	**14 36 31.1**	**-0.1**
GO03	**Copiap**	**4.62**	**219**	*e*P	**Pn**	**14 36 31.2**	**-0.5**
GO03				*i* S	**S**	**14 37 24.2**	**-2.2**
GO03	**Copiap**	**4.62**	**219**	Pn	**Pn**	**14 36 31.3**	**-0.4**
GO03	**Copiap**	**4.62**	**219**	*e*P	**Pn**	**14 36 31.7**	**0.0**
GO03				*e*S	**S**	**14 37 24.8**	**-1.6**
HMBC	**Humberstone**	**4.63**	**323**	⇑*i*P	**Pn**	**14 36 31.4**	**-0.5**
HMBC				*i* S	**S**	**14 37 23.6**	**-3.2**
VCA	**Vinchina**	**4.81**	**193**	*e*P	**Pn**	**14 36 36.9**	**+2.6**
VCA				*e*S	**S**	**14 37 34.3**	**+3.2**
GO01	**Chusmiza**	**4.82**	**334**	*e*P	**Pn**	**14 36 35.5**	**+0.7**
GO01				*i* S	**S**	**14 37 31.1**	**-0.7**
GO01	**Chusmiza**	**4.82**	**334**		**Pn**	**14 36 35.5**	**+0.7**
PB11	**IPOC Station P**	**4.95**	**329**	⇑*i*P	**Pn**	**14 36 35.7**	**-0.3**
PB11				*i* S	**S**	**14 37 31.5**	**-2.6**
PB11	**IPOC Station P**	**4.95**	**329**	Pn	**Pn**	**14 36 35.8**	**-0.3**
PSGC	**Pisagua**	**5.32**	**326**	*e*P	**Pn**	**14 36 39.4**	**-1.3**
PSGC				*i* S	**S**	**14 37 38.2**	**-4.4**
PSGCX	**Pisagua**	**5.32**	**326**	Pn	**Pn**	**14 36 39.5**	**-1.2**
ACLC	**CERRO LA CRUZ**	**5.37**	**180**	*e*P	**Pn**	**14 36 41.6**	**+0.3**
ACLC				*e*S	**S**	**14 37 42.8**	**-1.1**
MNMC	**Minye Minye**	**5.47**	**333**	*e*P	**Pn**	**14 36 42.8**	**-0.1**
MNMC				*i* S	**S**	**14 37 43.8**	**-2.7**
MNMC	**Minye Minye**	**5.47**	**333**		**Pn**	**14 36 42.6**	**-0.3**
AC04	**Llanos de Chal**	**5.57**	**221**	*e*P	**Pn**	**14 36 42.6**	**-1.1**
AC04	**Llanos de Chal**	**5.57**	**221**	Pn	**Pn**	**14 36 42.7**	**-1.1**
AC05	**El Transito**	**5.63**	**211**	⇑*i*P	**Pn**	**14 36 44.6**	**-0.1**
AC05	**El Transito**	**5.63**	**211**	Pn	**Pn**	**14 36 44.6**	**-0.1**
LCO	**Las Campanas**	**5.99**	**213**	Pn	**Pn**	**14 36 48.5**	**-0.9**
PB16	**IPOC Station P**	**6.16**	**337**		**Pn**	**14 36 52.4**	**+0.4**
APLL	**PUNTA DE LOS L**	**6.34**	**177**	*e*P	**Pn**	**14 36 53.7**	**-0.1**
APLL				IAML		14 38 06.7	
	comp=Z,172nm,0.7s						
GO04	**Tololo Observa**	**7.01**	**208**	*e*P	**Pn**	**14 37 03.3**	**+0.6**
GO04				*e*S	**S**	**14 38 20.3**	**-2.1**
LPAZ	**La Paz**	**7.79**	**352**	P	**Pn**	**14 37 14.4**	**+1.1**
LPAZ				S	**S**	**14 38 40.1**	**-1.5**
	comp=Z,3.7nm,0.3s,baz=126,slow=4.9,SNR=49						
	comp=Z,1.0nm,0.3s,baz=42,slow=19,SNR=6.7						
LPAZ	**La Paz**	**7.79**	**352**		**Pn**	**14 37 14.3**	**+0.9**
LPAZ	**La Paz**	**7.79**	**352**	*e*P	**Pn**	**14 37 14.5**	**+1.1**
RTCV	**Cerro Valdivia**	**7.92**	**190**	*e*P	**Pn**	**14 37 14.9**	**+0.5**
RTCV				*e*S	**S**	**14 38 38.7**	**-5.0**
RTCV				IAML		14 38 41.1	
	comp=Z,22nm,0.2s						
CO02	**Combarbal**	**7.99**	**206**	Pn	**Pn**	**14 37 13.7**	**-1.7**
MRA	**San Martin**	**8.42**	**173**	*e*P	**Pn**	**14 37 19.5**	**-1.5**
MRA				*e*S	Sn	**14 38 48.0**	**-7.6**
MRA				IAML		14 39 05.5	
	comp=Z,13nm,0.4s						
AUSP	**Uspallata**	**8.43**	**194**	*e*P	**Pn**	**14 37 21.9**	**+0.5**
CPUP	**Villa Florida**	**9.00**	**107**	P	**Pn**	**14 37 27.3**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=296,slow=12,SNR=15						
CPUP	**Villa Florida**	**9.00**	**107**	Pn	**Pn**	**14 37 26.8**	**-1.7**
SIV	**San Ignacio**	**9.72**	**36**	P	**Pn**	**14 37 36.9**	**-1.1**
	comp=Z,2.6nm,0.3s,baz=244,slow=7.1,SNR=17						
SIV				S	Sn	14 39 11.6	-15
	comp=Z,0.3nm,0.3s,baz=270,slow=15,SNR=1.2						
ITQB	**Itaqui**	**10.79**	**124**	*e*P	**Pn**	**14 37 50.6**	**-1.0**
BI02	**San Fabin de**	**13.12**	**196**		**Pn**	**14 38 21.0**	**-0.3**
TRCB	**Terra Rica**	**13.20**	**87**	*e*P	**P**	**14 38 22.9**	**-2.5**
CPSB	**Cacapava Do Su**	**13.58**	**121**	*e*P	**Pn**	**14 38 25.7**	**-1.3**
PLTB	**Pedras Altas**	**14.07**	**126**	*e*P	**Pn**	**14 38 31.7**	**-1.5**
CNLB	**Canela**	**15.31**	**114**	*e*P	**P**	**14 38 47.1**	**-1.7**
SAML	**Samuel**	**15.43**	**14**		**P**	**14 38 47.0**	**-3.1**
SAML	**Samuel**	**15.43**	**14**	*e*P	**Pn**	**14 38 49.4**	**-0.5**
FRTB	**Fartura**	**15.94**	**91**	*e*P	**Pn**	**14 38 56.0**	**0.0**
ITRB	**Iturama**	**15.99**	**78**	*e*P	**Pn**	**14 38 56.1**	**-0.4**
ARAG	**Araguaiana, MT**	**16.46**	**63**	*e*P	**Pn**	**14 39 03.2**	**+1.0**
CLDB	**Colider**	**16.85**	**41**	*e*P	**P**	**14 39 04.7**	**-1.1**
PLCA	**Paso Flores**	**16.92**	**189**	P	**Pn**	**14 39 09.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=7.6,slow=12,SNR=8.9						
BB19B	**Bebedouro**	**17.27**	**84**	*e*P	**Pn**	**14 39 11.4**	**-0.5**
PET01	**Itanhaem-SP**	**17.95**	**95**	*e*P	**Pn**	**14 39 18.0**	**-1.9**
VAO	**Valinhos**	**18.35**	**91**	*e*P	**Pn**	**14 39 22.0**	**-2.6**
IPMB	**Ipameri, GO**	**18.49**	**75**	*e*P	**Pn**	**14 39 24.1**	**-2.2**
LL01	**San Ignacio de**	**18.85**	**193**	P	**Pn**	**14 39 29.2**	**-0.9**
LL01				IAmb	IAmb	14 39 31.7	
	comp=Z,19nm,0.6s						
SNDB	**Serra Nova Dou**	**19.09**	**54**	*e*P	**P**	**14 39 30.1**	**-0.1**
PARB	**Paraibuna**	**19.54**	**92**	*e*P	**Pn**	**14 39 35.3**	**-3.4**
BDFB	**Brasilia**	**19.65**	**68**	P	**P**	**14 39 36.4**	**+0.1**
	comp=Z,2.6nm,0.3s,baz=248,slow=11,SNR=21						
BDFB	**Brasilia**	**19.65**	**68**	P	**P**	**14 39 36.4**	**+0.1**
ESAR	**Angra dos Reis**	**20.66**	**92**	*e*P	**P**	**14 39 46.1**	**-0.7**
BSCB	**Bom Sucesso**	**20.70**	**86**	*e*P	**P**	**14 39 47.1**	**-0.3**
PEXB	**Peixe**	**21.39**	**59**	*e*P	**P**	**14 39 52.8**	**-0.9**
ITTB	**Itatuba**	**22.34**	**31**	*e*P	**P**	**14 40 02.6**	**-1.4**
JANB	**Januaria**	**23.10**	**71**	*e*P	**P**	**14 40 10.2**	**-0.6**
SMTB	**Santa Maria do**	**23.87**	**54**	*e*P	**P**	**14 40 18.3**	**+0.4**
SDBA	**SAO DESIDERIO**	**23.88**	**65**	*e*P	**P**	**14 40 17.3**	**-0.7**
GDU01	**Guandu, BA**	**27.80**	**73**	*e*P	**P**	**14 40 51.1**	**-2.1**
RCBR	**Riachuelo**	**34.90**	**64**	P	**P**	**14 41 54.8**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=225,slow=11,SNR=1.5						
TOSP	**Speyside**	**35.67**	**11**	P	**P**	**14 42 02.8**	**+1.1**
VNA3	**Neumayer Olymp**	**57.10**	**161**	P	**P**	**14 44 49.4**	**+1.8**
VNA2	**Neumayer--Watz**	**57.66**	**160**	P	**P**	**14 44 53.4**	**+1.9**
	baz=286,slow=8.0						
SNAA	**Sanae**	**59.30**	**161**	P	**P**	**14 45 04.5**	**+1.6**
833A	**Chaparral WMA,**	**60.73**	**327**	P	**P**	**14 45 13.3**	**+0.3**
WVT	**Waverly**	**63.02**	**341**	P	**P**	**14 45 27.1**	**-1.0**
TXAR	**Lajitas Array**	**63.74**	**324**	P	**P**	**14 45 35.1**	**+2.0**
	comp=Z,1.1nm,0.7s,baz=151,slow=8.1,SNR=14						
TXAR	**Lajitas Array**	**63.74**	**324**	P	**P**	**14 45 34.8**	**+1.6**
TX32	**Lajitas Array**	**63.74**	**324**	P	**P**	**14 45 34.5**	**+1.4**
CCM	**Cathedral Cave**	**65.85**	**339**	P	**P**	**14 45 45.7**	**-0.8**
CCM				IAmb	IAmb	14 45 48.2	
	comp=Z,9.5nm,0.7s						
QSPA	**South Pole Qui**	**66.17**	**180**	P	**P**	**14 45 50.6**	**+2.2**
	comp=Z,6.4nm,0.5s,baz=331,slow=1.2,SNR=170						
QSPA	**South Pole Qui**	**66.17**	**180**	P	**P**	**14 45 50.6**	**+2.2**
QSPA				IAmb	IAmb	14 45 51.3	
	comp=Z,7.2nm,0.6s						
S39A	**Bolivar**	**66.22**	**337**	P	**P**	**14 45 49.1**	**+0.2**
S39A				IAmb	IAmb	14 45 51.1	
	comp=Z,8.4nm,0.7s						
DBIC	**Dimbokro**	**67.77**	**71**	P	**P**	**14 45 59.0**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=217,slow=7.4,SNR=1.4						
P38A	**Dawn**	**68.03**	**338**	P	**P**	**14 46 00.5**	**+0.3**
T25A	**Trinidad**	**70.34**	**329**	P	**P**	**14 46 15.9**	**+1.2**
T25A				IAmb	IAmb	14 46 18.2	
	comp=Z,3.0nm,0.8s						
SDCO	**Great Sand Dun**	**71.35**	**329**	P	**P**	**14 46 22.1**	**+1.3**
SDCO				IAmb	IAmb	14 46 25.4	
	comp=Z,1.6nm,0.7s						
ECSD	**EROS Data Cent**	**72.73**	**338**	P	**P**	**14 46 30.2**	**+1.6**
ECSD				IAmb	IAmb	14 46 31.4	
	comp=Z,3.3nm,0.8s						
SYO	**Syowa Base**	**73.50**	**159**	⇑*e*P	**P**	**14 46 33.0**	**+0.2**
SYO	**Syowa Base**	**73.50**	**159**	‖*e*P	**P**	14 46 39.8	+7.0
VNDA	**Vanda**	**74.67**	**190**	P	**P**	14 46 42.0	+2.5
	comp=Z,0.9nm,0.8s,baz=94,slow=2.1,SNR=7.4						
VNDA	**Vanda**	**74.67**	**190**	P	**P**	**14 46 40.7**	**+1.3**
TORD	**Torodi Ar. Bea**	**76.53**	**69**	P	**P**	**14 46 51.3**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=270,slow=6.9,SNR=14						
TORD	**Torodi Ar. Bea**	**76.53**	**69**	P	**P**	**14 46 49.8**	**-1.3**
PDAR	**Pinedale Array**	**77.21**	**329**	P	**P**	**14 46 56.5**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=128,slow=8.3,SNR=9.0						
PDAR	**Pinedale Array**	**77.21**	**329**	P	**P**	**14 46 55.8**	**+1.3**
TSUM	**Tsumeb**	**77.59**	**106**	P	**P**	**14 46 57.6**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=245,slow=9.4,SNR=5.8						
TSUM	**Tsumeb**	**77.59**	**106**	P	**P**	**14 46 56.2**	**-1.0**
TSUM				IAmb	IAmb	14 47 12.2	
	comp=Z,2.6nm,1.0s						
ULM	**Lac du Bonnet**	**78.28**	**342**	P	**P**	**14 47 01.1**	**+1.2**
	comp=Z,4.8nm,0.6s,baz=154,slow=5.9,SNR=10						
NVAR	**Mina Array Bea**	**78.60**	**321**	P	**P**	**14 47 04.0**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=145,slow=5.4,SNR=4.2						
KVN	**Kaiserville**	**78.91**	**322**	P	**P**	**14 47 05.4**	**+1.5**
KVN				IAmb	IAmb	14 47 07.2	
	comp=Z,4.1nm,0.8s						
MAW	**Mawson**	**81.38**	**163**	P	**P**	**14 47 18.6**	**+2.1**
	comp=Z,4.4nm,0.7s,baz=214,slow=6.2,SNR=13						
MAW	**Mawson**	**81.38**	**163**	P	**P**	**14 47 18.3**	**+1.8**
ESDC	**Sonseca Array**	**86.39**	**44**	P	**P**	**14 47 43.7**	**+1.4**
	comp=Z,1.1nm,1.1s,baz=242,slow=5.5,SNR=2.3						
YKA	**Yellowknife Ar**	**94.18**	**340**	P	**P**	**14 48 19.5**	**+1.5**
	comp=Z,1.3nm,0.5s,baz=130,slow=5.6,SNR=20						
ASAR	**Alice Springs**	**128.44**	**205**	PKP	**PKiKP**	**14 54 07.2**	**+0.4**
	comp=Z,1.4nm,0.5s,baz=134,slow=1.9,SNR=26						
ASAR				SKPbc	SKPbc	14 57 09.2	
	comp=Z,0.1nm,0.5s,baz=131,slow=3.4,SNR=1.5						
WRA	**Warramunga Arr**	**131.62**	**207**	PKP	**PKiKP**	**14 54 13.7**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=158,slow=1.8,SNR=28						
WRA				SKPbc	**SKPab**	**14 57 20.6**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=150,slow=3.1,SNR=5.7						
PETK	**Petropavlovsk-**	**135.67**	**323**	PKP	**PKiKP**	**14 54 20.1**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=93,slow=2.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**143.40**	**28**	PKP	**PKPdf**	**14 54 31.8**	**-1.0**
	comp=Z,3.6nm,0.7s,baz=300,slow=4.5,SNR=15						
MKAR	**Makanchi Array**	**146.52**	**40**	PKPbc	**PKiKP**	**14 54 40.2**	**-2.6**
	comp=Z,5.2nm,0.7s,baz=332,slow=2.0,SNR=46						
LEM	**Lemband**	**148.87**	**170**	PKPbc	**PKPab**	**14 54 49.0**	**-2.9**
	comp=Z,5.7nm,0.3s,baz=163,slow=23,SNR=3.5						
SONM	**Songino Array**	**155.67**	**11**	PKPab	**PKPab**	**14 55 20.4**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=332,slow=6.6,SNR=3.6						

IDC 28 14:35:35.6±54.0, 3°.98N×64°.81E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.5/58, mbtmp3.9/3, Error ellipse: s-maj=1335.0km s-min=69.6km az=110.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**36.34**	**64**	P	P	14 42 41.6	-0.1
	0.4nm,0.4s,baz=250,slow=10,SNR=1.2						
WRA	**Warramunga Arr**	**72.25**	**112**	P	P	14 47 03.5	+0.1
	1.0nm,0.9s,baz=292,slow=5.0,SNR=4.6						
ASAR	**Alice Springs**	**72.61**	**116**	P	P	14 47 05.5	0.0
	1.1nm,0.8s,baz=288,slow=5.7,SNR=7.4						

IDC 28 14:42:06.4±8.5, 6°.59S×126°.05E, h464km±122km, mb3.0/2, mb1 2.6/5, mb1mx2.5/33, mbtmp3.5/5, Error ellipse: s-maj=124.7km s-min=44.7km az=50.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**4.30**	**213**	S	S	14 44 33.0	+3.9
	15nm,0.3s,baz=101,slow=21,SNR=14						
FITZ	**Fitzroy Crossi**	**11.45**	**182**	P	P	14 44 38.9	-0.4
	0.2nm,0.3s,baz=356,slow=11,SNR=6.1						
WRA	**Warramunga Arr**	**15.53**	**150**	P	P	14 45 23.9	+0.9
	0.1nm,0.3s,baz=330,slow=11,SNR=2.3						
ASAR	**Alice Springs**	**18.59**	**157**	P	P	14 45 53.9	-0.3
	0.1nm,0.3s,baz=328,slow=8.9,SNR=9.8						
MKAR	**Makanchi Array**	**65.78**	**329**	P	P	14 52 04.6	+0.1
	0.3nm,0.4s,baz=128,slow=7.4,SNR=6.7						
ZALV	**Zalesovo Beam**	**69.53**	**335**	P	P	14 52 27.3	0.0
	0.6nm,0.4s,baz=123,slow=5.3,SNR=3.4						

IDC 28 14:48:14.4±2.4, 2°.19N×126°.80E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/26, mbtmp3.1/3, Error ellipse: s-maj=186.9km s-min=28.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.21**	**162**	P	P	14 53 22.9	-0.3
	0.5nm,0.6s,baz=341,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**26.62**	**165**	P	P	14 53 55.3	+0.5
	0.3nm,0.8s,baz=345,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	14 58 14.8	-0.2
	0.1nm,0.5s,baz=125,slow=6.8,SNR=1.8						

IDC 28 14:53:14.7±50.0, 3°.99N×64°.09E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/35, mbtmp3.6/3, MS3.4/2, Ms1 3.4/2, ms1mx2.8/45, Error ellipse: s-maj=1243.0km s-min=70.8km az=110.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**36.99**	**64**	P	P	15 00 26.0	-0.2
	0.2nm,0.4s,baz=256,slow=11,SNR=1.1						
LSZ	**Lusaka**	**40.38**	**241**	LR	LR	15 17 18.9	
	comp=Z,45nm,18.2s,baz=168,slow=36						
LBTB	**Lobatse**	**47.20**	**230**	LR	LR	15 18 12.0	
	comp=Z,51nm,20.2

BJI ***28*** *15:03:52.8±0.0,4°.89S×151°.99E,h141km,mB5.2/49, mb5.2/72*

NEIC ***28*** *15:03:56.9±1.4,4°.88S±0°.05×151°.55E±0°.07,h145km±5km, mb5.0/106,Error ellipse: s-maj=10.8km s-min=6.5km az=108.0*

IDC ***28*** *15:03:56.8±0.3,4°.84S×151°.54E,h145km±2km,mb4.7/25, mb1 4.8/29,mb1mx4.7/36,mbtmp5.1/29,MS3.8/8, Ms1 3.8/8,ms1mx3.4/35,Error ellipse: s-maj=10.4km s-min=7.4km az=101.0*

MOS ***28*** *15:03:56.2±0.9,4°.77S×151°.47E,h147km,mb5.2/42,Error ellipse: s-maj=8.3km s-min=5.5km az=112.9*

DJA ***28*** *15:03:57.9±0.3,5°.5S×15°.1E±°,h144km±3km,M5.0/54, mb5.2/54,mB5.5/30,MLv5.3/3,Mw(mB)4.9/30,Mwp5.0/4*

GCMT ***28*** *15:03:58.9±0.1,4°.94S±0°.01×151°.49E±0°.01,h152km±1km, MW5.2/131,Moment Tensor Solution. s94,c130; s131,c224; Duration: 1ᵗ0 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.57±.01; Mθθ0.72±.01; Mϕϕ-0.15±.01; Mrθ-0.56±.01; Mθϕ0.02±.02; Mϕr-0.12±.01; Best double couple: M₀0.86600×10¹⁷ NP1:φ₀281.00000°,δ25.00000°, λ-71.00000°. NP2:φ₀80.00000°,δ66.00000°,λ-99.00000°. Principal axes: T 0.9340, Plg21.0000°, Azm177.0000°; N -0.1370, Plg8.0000°, Azm84.0000°; P -0.7970, Plg68.0000°, Azm334.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 15:03:57.3±0.3,4°.88S±0°.03×151°.51E±0°.04,h148km±2km, h148km:pP-P,n670,σ1ˢ17/716,mb5.1/158,**28C-30D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.77**	**42**	P	**Pn**	**15 04 19.5**	**-0.6**
	baz=275,slow=1.2						
KRVT				S	**Sn**	**15 04 36.0**	**-1.4**
	765nm,0.3s,baz=241,slow=22,SNR=6.2						
KRVT				LR	LR	15 04 43.0	
	comp=Z,5μm,21.1s,baz=234,slow=64						
RABL	**Rabaul**	**0.95**	**44**	Pn	**Pn**	**15 04 20.4**	**-1.0**
MANU	**Manus Island**	**5.00**	**304**		**Pn**	**15 05 11.8**	**+1.0**
PMG	**Port Moresby**	**6.23**	**224**	P	**Pn**	**15 05 27.6**	**+0.5**
	19nm,0.3s,baz=35,slow=6.6,SNR=69						
PMG				S	**Sn**	**15 06 35.6**	**-1.7**
	96nm,0.3s,baz=278,slow=21,SNR=13						
PMG	**Port Moresby**	**6.23**	**224**	*c iP*	**Pn**	**15 05 27.3**	**+0.2**
PMG	**Port Moresby**	**6.23**	**224**	Pn	**Pn**	**15 05 26.7**	**-0.4**
HNR	**Honiara**	**9.51**	**119**	P	**Pn**	**15 06 10.7**	**-0.2**
	4.2nm,0.3s,baz=144,slow=10,SNR=8.2						
HNR				S	**Sn**	**15 08 03.5**	**+7.1**
	1.7nm,0.3s,baz=284,slow=19,SNR=1.6						
HNR	**Honiara**	**9.51**	**119**		**Pn**	**15 06 09.0**	**-2.0**
JAY	**Jayapura**	**11.03**	**282**	P	**Pn**	**15 06 30.8**	**-0.4**
	0.7nm,0.3s,baz=258,slow=2.6,SNR=7.2						
JAY	**Jayapura**	**11.03**	**282**	P	**Pn**	**15 06 32.7**	**+1.6**
	460nm41nm,1.1s						
GENI	**Genyem**	**11.54**	**281**	P	**Pn**	**15 06 38.8**	**+1.1**
	2μm2μm211nm,1.2s						
COEN	**Coen**	**12.20**	**222**	P	**Pn**	**15 06 48.2**	**+2.0**
	baz=12,SNR=28						
COEN	**Coen**	**12.20**	**222**	Pn	**Pn**	**15 06 47.8**	**+1.5**
SMPI	**Sarmi**	**13.09**	**282**	P	**P**	**15 07 00.4**	**-2.2**
MTSU	**Mount Surprise**	**14.93**	**208**	P	**P**	**15 07 23.1**	**+0.1**
	baz=15,SNR=95						
BAKI	**Biak**	**15.81**	**283**	P	**P**	**15 07 38.3**	**+5.6**
CTA	**Charters Tower**	**15.96**	**198**	P	**P**	**15 07 35.0**	**+0.7**
	4.4nm,0.3s,baz=25,slow=15,SNR=67						
CTA				S	**Sn**	**15 10 29.7**	**-1.8**
	0.0nm,0.3s,baz=247,slow=12,SNR=1.1						
CTAO	**Charters Tower**	**15.96**	**198**	P	**P**	**15 07 35.3**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,184nm,0.8s						
CTAO	**Charters Tower**	**15.96**	**198**	P	**P**	**15 07 35.3**	**+1.0**
SANVU	**Saraoutou**	**18.66**	**125**	P	**P**	**15 08 04.6**	**+0.6**
FAKI	**Fak Fak**	**19.31**	**275**	P	**P**	**15 08 11.7**	**+0.6**
	comp=Z,4μmcomp=Z,303nm,1.2s						
FAKI	**Fak Fak**	**19.31**	**275**	P	**P**	**15 08 11.8**	**+0.6**
QIS	**Mount Isa**	**19.41**	**216**	P	**P**	**15 08 13.2**	**+1.0**
	baz=19,SNR=84						
GUMO	**Guam**	**19.50**	**340**	P	**P**	**15 08 12.4**	**-0.7**
	comp=Z,16nm,0.3s,baz=180,slow=8.4,SNR=29						
GUMO				LR	LR	15 15 39.4	
	comp=Z,117nm,18.4s,baz=260,slow=36						
GUMO	**Guam**	**19.50**	**340**	P	**P**	**15 08 14.6**	**+1.4**
GUMO				pmax	pmax		
	comp=Z,2μm,1.1s						
GUMO	**Guam**	**19.50**	**340**	P	**P**	**15 08 14.6**	**+1.4**
KDU	**Kakadu**	**20.33**	**246**	P	**P**	**15 08 22.0**	**-0.2**
	baz=20,SNR=54						
EIDS	**Eidsvold**	**20.37**	**181**	P	**P**	**15 08 23.4**	**+0.9**
	baz=20,SNR=15						
EIDS	**Eidsvold**	**20.37**	**181**	P	**P**	**15 08 23.4**	**+0.9**
SWI	**Sorong**	**20.61**	**281**	P	**P**	**15 08 25.9**	**+0.8**
	comp=Z,3μmcomp=Z,283nm,0.8s						
BNDI	**Bandanaira**	**21.53**	**270**	P	**P**	**15 08 36.1**	**+1.1**
	comp=Z,3μmcomp=Z,49nm,0.7s						
MTN	**Manton Dam**	**21.61**	**247**	P	**P**	**15 08 35.6**	**-0.2**
	baz=22,SNR=15						
MTN	**Manton Dam**	**21.61**	**247**	P	**P**	**15 08 35.3**	**-0.6**
RMQ	**Roma**	**21.64**	**187**	P	**P**	**15 08 36.8**	**+0.7**
	baz=22,SNR=194						
WB0	**Warramunga Arr**	**22.29**	**227**	P	**P**	**15 08 42.4**	**-0.3**
WB0				IAmb	IAmb	15 08 44.5	
	comp=Z,56nm,0.8s						
WR0	**Warramunga Arr**	**22.30**	**226**	P	**P**	**15 08 42.5**	**-0.3**
WR0				IAmb	IAmb	15 08 44.6	
	comp=Z,80nm,0.9s						
DZM	**Mont Dzumac**	**22.39**	**141**	P	**P**	**15 08 44.2**	**+0.5**
	comp=Z,62nm,0.8s,baz=288,slow=7.2,SNR=40						
DZM	**Mont Dzumac**	**22.39**	**141**	P	**P**	**15 08 44.0**	**+0.2**
DZM				IAmb	IAmb	15 08 45.8	
	comp=Z,123nm,1.0s						
WRAB	**Tennant Creek**	**22.42**	**227**	*d iP*	**P**	**15 08 43.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,49nm,0.6s						
WRAB	**Tennant Creek**	**22.42**	**227**	P	**P**	**15 08 43.6**	**-0.4**
WRAB				IAmb	IAmb	15 08 45.7	
	comp=Z,66nm,0.6s						
WB2	**Warramunga Arr**	**22.43**	**227**	P	**P**	**15 08 43.8**	**-0.3**
WRA	**Warramunga Arr**	**22.44**	**227**	P	**P**	**15 08 43.7**	**-0.4**
	comp=Z,49nm,0.5s,baz=51,slow=10.0,SNR=331						
WRA				pP	**pP**	**15 09 11.6**	**+0.3**
	comp=Z,30nm,0.8s,baz=53,slow=9.8,SNR=4.0						
WRA				S	**S**	**15 12 34.1**	**-5.7**
	comp=Z,11nm,1.1s,baz=48,slow=14,SNR=12						
WRA				ScP	**ScP**	**15 15 57.0**	**-0.4**
	comp=Z,13nm,0.9s,baz=49,slow=2.8,SNR=22						
WRA	**Warramunga Arr**	**22.44**	**227**	P	**P**	**15 08 42.8**	**-1.3**
QLP	**Quilpie**	**22.67**	**197**	P	**P**	**15 08 47.0**	**+0.7**
	baz=23,SNR=86						
NLAI	**Namlea**	**24.40**	**273**	P	**P**	**15 09 02.9**	**+0.7**
	comp=Z,41nm,0.5s						
TNTI	**Ternate**	**24.76**	**282**	P	**P**	**15 09 06.5**	**+1.0**
	comp=Z,998nmcomp=Z,55nm,1.0s						
KNRA	**Kununurra**	**24.79**	**243**	P	**P**	**15 09 05.4**	**-0.3**
	baz=25,SNR=30						
KNRA	**Kununurra**	**24.79**	**243**	P	**P**	**15 09 05.6**	**-0.1**
KNRA				IAmb	IAmb	15 09 08.8	
	comp=Z,67nm,0.8s						
AS31	**Alice Springs**	**25.23**	**221**	P	**P**	**15 09 10.3**	**+0.6**
AS31				IAmb	IAmb	15 09 14.0	
	comp=Z,14nm,0.5s						
ASAR	**Alice Springs**	**25.23**	**221**	P	**P**	**15 09 10.0**	**+0.3**
	comp=Z,30nm,0.6s,baz=53,slow=9.0,SNR=883						
ASAR				pP	**pP**	**15 09 40.5**	**-0.4**
	comp=Z,40nm,0.9s,baz=52,slow=9.5,SNR=5.4						
ASAR				PcP	**PcP**	**15 12 38.9**	**-0.6**
	comp=Z,11nm,0.8s,baz=56,slow=2.6,SNR=8.5						
ASAR				S	**S**	**15 13 22.8**	**-1.8**
	comp=Z,9.4nm,1.0s,baz=38,slow=17,SNR=6.7						
ASAR				ScP	**ScP**	**15 16 04.6**	**-0.5**
	comp=Z,7.9nm,0.8s,baz=46,slow=3.3,SNR=12						
ASAR				ScS	**ScS**	**15 19 54.0**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=51,slow=4.9,SNR=4.8						
ASAR	**Alice Springs**	**25.23**	**221**	P	**P**	**15 09 09.8**	**+0.1**
ASAR					**PcP**	**15 12 40.2**	**+0.8**
ARMA	**Armidale**	**25.40**	**180**	P	**P**	**15 09 12.2**	**+1.0**
	baz=26,SNR=17						
ARMA	**Armidale**	**25.40**	**180**	P	**P**	**15 09 12.1**	**+0.9**
ARMA				IAmb	IAmb	15 09 13.6	
	comp=Z,62nm,1.0s						
CMSA	**Cobar Meteorol**	**27.07**	**191**	P	**P**	**15 09 26.2**	**+0.1**
	baz=27,SNR=42						
LHI	**Lord Howe Isla**	**27.43**	**166**	P	**P**	**15 09 29.8**	**+0.5**
	baz=28,SNR=3.3						
KMSI	**Cibinong**	**28.03**	**280**	P	**P**	**15 09 35.2**	**+0.4**
	comp=Z,2μmcomp=Z,305nm,0.7s						
BATI	**Baumata**	**28.09**	**258**	P	**P**	**15 09 35.2**	**-0.3**
	comp=Z,19nm,0.4s,baz=275,slow=17,SNR=1.4						
MGCD	**Mangrove Creek**	**28.18**	**181**	P	**P**	**15 09 37.2**	**+1.2**
	baz=28,SNR=8.9						
STKA	**Stephens Creek**	**28.42**	**198**	P	**P**	**15 09 37.7**	**-0.4**
	comp=Z,5.0nm,0.4s,baz=45,slow=11,SNR=24						
STKA				pP	**pP**	**15 10 09.1**	**+0.5**
	comp=Z,20nm,1.0s,baz=44,slow=14,SNR=3.1						
STKA				ScP	**ScP**	**15 16 14.5**	**+0.2**
	comp=Z,16nm,1.1s,baz=12,slow=3.6,SNR=7.8						
STKA	**Stephens Creek**	**28.42**	**198**	P	**P**	**15 09 38.0**	**-0.1**
	baz=28,SNR=20						
STKA	**Stephens Creek**	**28.42**	**198**	P	**P**	**15 09 38.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**28.49**	**240**	P	**P**	**15 09 38.4**	**-0.5**
	comp=Z,25nm,0.8s,baz=60,slow=7.0,SNR=74						
FITZ				pP	**pP**	**15 10 09.6**	**-0.5**
	comp=Z,21nm,0.7s,baz=89,slow=6.8,SNR=5.7						
FITZ	**Fitzroy Crossi**	**28.49**	**240**	P	**P**	**15 09 38.2**	**-0.7**
	baz=28,SNR=30						
FITZ	**Fitzroy Crossi**	**28.49**	**240**	P	**P**	**15 09 38.3**	**-0.6**
FITZ				IAmb	IAmb	15 09 40.0	
	comp=Z,41nm,1.1s						
MSVF	**Nonsavu**	**28.93**	**118**	*de*P	**P**	**15 09 44.8**	**+1.9**
MSVF				pmax	pmax		
	comp=Z,26nm,0.9s						
MSVF	**Nonsavu**	**28.93**	**118**	P	**P**	**15 09 42.3**	**-0.6**
MSVF				IAmb	IAmb	15 09 45.4	
	comp=Z,21nm,0.8s						
LUWI	**Luwuk**	**28.94**	**277**	P	**P**	**15 09 43.6**	**+0.6**
	comp=Z,115nm,1.1s						
LUWI	**Luwuk**	**28.94**	**277**	P	**P**	**15 09 43.2**	**+0.2**
GTOI	**Gorontalo**	**28.99**	**280**	P	**P**	**15 09 44.6**	**+1.2**
	comp=Z,1μmcomp=Z,70nm,0.7s						
EDFI	**Ende, Flores**	**29.85**	**261**	P	**P**	**15 09 50.8**	**-0.3**
	comp=Z,9.5nm,0.9s						
WRKA	**Warakurna**	**29.97**	**226**	P	**P**	**15 09 51.6**	**-0.4**
	baz=30,SNR=34						
MRSI	**Marisa**	**30.01**	**279**	P	**P**	**15 09 52.0**	**-0.4**
	comp=Z,2μmcomp=Z,48nm,0.5s						
APSI	**Ampana**	**30.07**	**277**	P	**P**	**15 09 53.6**	**+0.6**
	comp=Z,714nmcomp=Z,78nm,1.1s						
CNB	**Canberra Magne**	**30.35**	**183**	P	**P**	**15 09 56.3**	**+1.1**
	baz=30,SNR=7.5						
HTT	**Hallett**	**30.73**	**201**	P	**P**	**15 09 58.8**	**+0.2**
	baz=31,SNR=11						
TOLI2	**Tolitoli**	**31.27**	**280**	P	**P**	**15 10 02.7**	**-0.8**
BBOO	**Buckleboo**	**31.31**	**206**	P	**P**	**15 10 03.3**	**-0.2**
	baz=31,SNR=16						
BBOO	**Buckleboo**	**31.31**	**206**	P	**P**	**15 10 03.4**	**-0.2**
BBOO				IAmb	IAmb	15 10 03.9	
	comp=Z,29nm,1.0s						
ARPS	**Mount Arapiles**	**32.95**	**194**	P	**P**	**15 10 19.6**	**+1.7**
	baz=33,SNR=9.4						
TOO	**Toolangi**	**33.00**	**189**	P	**P**	**15 10 19.1**	**+0.8**
	baz=33,SNR=6.0						
TOO	**Toolangi**	**33.00**	**189**	P	**P**	**15 10 19.1**	**+0.8**
TOO				pmax	pmax		
	comp=Z,25nm,1.1s						
TOO	**Toolangi**	**33.00**	**189**	P	**P**	**15 10 19.1**	**+0.8**
TOO				IAmb	IAmb	15 10 20.3	
	comp=Z,25nm,1.1s						
MYLDM	**Lahad Datu**	**34.45**	**286**	P	**P**	**15 10 31.3**	**+0.2**
PSA00	**Pilbara Seismi**	**34.88**	**239**	P	**P**	**15 10 33.6**	**-1.2**
PSA00				IAmb	IAmb	15 10 35.1	
	comp=Z,32nm,1.0s						
SPMM	**Sapulut**	**36.27**	**285**	P	**P**	**15 10 48.0**	**+1.2**
OUZ	**Omahuta**	**36.44**	**149**	P	**P**	**15 10 49.6**	**+1.8**
OUZ				IAmb	IAmb	15 10 50.4	
	comp=Z,24nm,0.7s						
KKM	**Kota Kinabalu**	**36.87**	**287**	P	**P**	**15 10 50.2**	**-1.8**
KKM				IAmb	IAmb	15 10 52.5	
	comp=Z,38nm,0.9s						
MOO	**Moorlands**	**37.60**	**185**	P	**P**	**15 10 59.5**	**+1.9**
	baz=38,SNR=3.8						
MEEK	**Meekatharra**	**38.13**	**232**	P	**P**	**15 11 02.1**	**-0.3**
	baz=38,SNR=22						
KMBL	**Kambalda**	**38.30**	**223**	P	**P**	**15 11 03.5**	**-0.2**
	baz=38,SNR=23						
SBUM	**Sibu**	**39.92**	**280**	P	**P**	**15 11 19.0**	**+1.6**
GIRL	**Giralia**	**40.10**	**240**	P	**P**	**15 11 19.5**	**+0.8**
	baz=40,SNR=3.5						
URZ	**Urewera**	**40.58**	**148**	P	**P**	**15 11 22.8**	**+0.4**
	comp=Z,12nm,0.5s,baz=291,slow=2.7,SNR=16						
URZ				LR	LR	15 25 49.9	
	comp=Z,243nm,18.5s,baz=26,slow=32						
YULB	**Yu-li**	**40.73**	**315**	P	**P**	**15 11 24.3**	**+0.5**
TPUB	**Ta-pu**	**41.15**	**314**	P	**P**	**15 11 27.1**	**-0.2**
SSLB	**Suanglung**	**41.23**	**315**	IAmb	IAmb	15 11 33.1	
	comp=Z,48nm,0.7s						
MORW	**Morawa**	**41.30**	**230**	P	**P**	**15 11 27.8**	**-0.6**
	baz=41,SNR=8.2						
MORW	**Morawa**	**41.30**	**230**	P	**P**	**15 11 28.0**	**-0.5**
MORW				IAmb	IAmb	15 11 28.4	
	comp=Z,22nm,0.7s						
KLBR	**Kellerberrin**	**41.32**	**226**	P	**P**	**15 11 27.6**	**-1.0**
	baz=41,SNR=20						
TUWZ	**Tuamarina**	**41.56**	**154**	P	**P**	**15 11 31.1**	**+0.8**
BLDU	**Ballidu**	**41.56**	**228**	P	**P**	**15 11 29.8**	**-0.8**
	baz=42,SNR=11						
KSM	**Kuching**	**41.64**	**278**	P	**P**	**15 11 33.0**	**+1.5**
BSWZ	**Blackbirch Sta**	**41.76**	**155**	P	**P**	**15 11 30.6**	**-1.4**
JMN	**Monobe**	**41.87**	**338**	P	**P**	**15 11 33.6**	**+0.6**
BFZ	**Birch Farm**	**42.00**	**152**	P	**P**	**15 11 34.3**	**+0.3**
BFZ				IAmb	IAmb	15 11 35.4	
	comp=Z,36nm,1.0s						
MSWZ	**Moikau Station**	**42.12**	**153**	P	**P**	**15 11 34.7**	**-0.2**
PLWZ	**Palliser**	**42.25**	**153**	P	**P**	**15 11 36.0**	**0.0**
INU	**Inuyama**	**42.27**	**342**	IAmb	IAmb	15 11 36.6	
	comp=Z,48nm,1.0s						
RPZ	**Rata Peaks**	**42.34**	**159**	LR	LR	15 29 08.9	
	comp=Z,296nm,18.0s,baz=322,slow=36						
RPZ	**Rata Peaks**	**42.34**	**159**	P	**P**	**15 11 37.8**	**+1.0**
RPZ				IAmb	IAmb	15 11 39.0	
	comp=Z,48nm,0.9s						
KPJI	**Karang Pucung**	**42.39**	**265**	P	P	15 11 49.2	+12
NWAO	**Narrogin (SRO)**	**42.42**	**225**	P	**P**	**15 11 36.9**	**-0.6**
	baz=42,SNR=7.1						
JNU	**Nakatsue**	**42.56**	**334**	P	**P**	**15 11 39.2**	**+0.6**
JNU				IAmb	IAmb	15 11 40.4	
	comp=Z,44nm,0.8s						
MUN	**Mundaring**	**42.64**	**226**	P	**P**	**15 11 38.9**	**-0.4**
	baz=43,SNR=4.6						
JWT	**Wachi**	**42.73**	**340**	IAmb	IAmb	15 11 40.8	
	comp=Z,47nm,1.0s						
MJAR	**Matsushiro Arr**	**43.05**	**344**	P	**P**	**15 11 41.3**	**-1.2**
	comp=Z,19nm,0.9s,baz=167,slow=8.9,SNR=5.1						
MJAR				PP	**PP**	**15 13 26.3**	**+0.8**
	comp=Z,8.0nm,1.1s,baz=176,slow=2,SNR=4.1						
MJAR				LR	LR	15 27 01.2	
	comp=Z,98nm,22.0s,baz=215,slow=32						
MAJO	**Matsushiro**	**43.05**	**344**	*de*P	**P**	**15 11 41.0**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,122nm,2.2s						
MAT	**Matsushiro**	**43.05**	**344**	P	**P**	**15 11 40.9**	**-1.6**
MAT				*eS*	**S**	**15 17 54.8**	**-2.4**
JHS	**Saijyo**	**43.28**	**338**	P	**P**	**15 11 45.2**	**+0.8**
CISI	**Cisompet, Garu**	**43.50**	**264**	P	**P**	**15 11 45.9**	**-0.7**
	comp=Z,70nm,0.9s						
RKGY	**Rocky Gully**	**43.54**	**223**	P	**P**	**15 11 46.8**	**+0.3**
	baz=44,SNR=12						
QZH	**Quanzhou**	**43.62**	**314**	*i*P	**P**	**15 11 48.5**	**+1.3**
QZH				*eS*	**S**	**15 18 08.3**	**+2.4**
QZH				pmax	pmax		
	comp=Z,130nm,0.8s						
LEM	**Lembang**	**43.69**	**265**	LR	LR	15 34 00.2	
	comp=Z,47nm,18.1s,baz=158,slow=41						
DLV	**T Lat**	**45.93**	**292**	P	**P**	**15 12 06.5**	**+0.6**
TJN	**Taejon**	**46.85**	**333**	*e*P	**P**	**15 12 13.9**	**+1.4**
QIZ	**Qiongzhong**	**47.41**	**301**	P	**P**	**15 12 16.5**	**-0.6**
QIZ				pP	**pP**	**15 12 48.8**	**-1.1**
QIZ				sP	**sP**	**15 13 04.3**	**-1.8**
QIZ				PP	**PP**	**15 14 10.0**	**+0.2**
QIZ				S	**S**	**15 19 04.5**	**+4.1**
QIZ				sS	**sS**	**15 19 58.0**	**-0.3**
QIZ				pmax	pmax		
	comp=Z,41nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,150nm,4.2s						
KSRS	**Korea Array**	**47.51**	**334**	P	**P**	**15 12 18.2**	**+0.7**
	comp=Z,12nm,0.9s,baz=148,slow=8.6,SNR=26						
KSRS				PcP	**PcP**	**15 13 45.0**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=164,slow=3.9,SNR=6.8						
MYKOM	**Kota Tinggi**	**48.07**	**277**	P	**P**	**15 12 23.0**	**+0.6**
NJ2	**Nanjing**	**48.11**	**322**	*i*P	**P**	**15 12 24.0**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ASAJ	**Asahikawa**	**49.43**	**352**	P	**P**	**15 12 32.3**	**+0.1**
ASAJ				pmax	pmax		
	comp=Z,20nm,0.9s						
JKA	**Kamikawa-asahi**	**49.43**	**352**	P	**P**	**15 12 32.3**	**+0.2**
JKA				IAmb	IAmb	15 12 34.5	
	comp=Z,20nm,0.9s						
WHN	**Wuhan**	**50.03**	**317**	*i*P	**P**	**15 12 39.0**	**+2.0**
WHN				pP	**pwP**	**15 13 14.8**	**+1.9**
WHN				pmax	pmax		
	comp=Z,110nm,1.0s						
SDSI	**Sungai Dareh**	**50.16**	**273**	P	**P**	**15 12 37.8**	**-0.4**
	comp=Z,541nmcomp=Z,44nm,0.9s						
IPM	**Ipoh**	**51.28**	**280**	P	**P**	**15 12 47.0**	**+0.4**
DL2	**Dalian**	**51.60**	**330**	P	**P**	**15 12 49.0**	**+0.5**
DL2				sP	**sP**	**15 13 38.3**	**+0.5**
DL2				*eS*	**S**	**15 19 59.3**	**+1.3**
DL2				pmax	pmax		
	comp=Z,56nm,1.1s						
DL2				pmax	pmax		
	comp=Z,140nm,7.2s						
KULM	**Kulim**	**51.79**	**281**	P	**P**	**15 12 50.0**	**-0.4**
USA0B	**Ussuriysk Arra**	**51.92**	**342**	P	**P**	**15 12 50.1**	**-0.8**
USA0B				pmax	pmax		
	comp=Z,21nm,1.0s						
USA0B	**Ussuriysk Arra**	**51.92**	**342**	P	**P**	**15 12 50.0**	**-0.8**
USA0B				IAmb	IAmb	15 12 53.1	
	comp=Z,21nm,0.9s						
USRK	**Ussuriysk Ar.**	**51.92**	**342**	P	**P**	**15 12 49.9**	**-0.9**
	comp=Z,16nm,0.9s,baz=167,slow=7.7,SNR=22						
USRK				pP	**pwP**	**15 13 28.4**	**+1.5**
	comp=Z,7.8nm,0.8s,baz=176,slow=6.5,SNR=3.5						
USRK	**Ussuriysk Ar.**	**51.92**	**342**	P	**P**	**15 12 50.2**	**-0.6**
USRK	**Ussuriysk Ar.**	**51.92**	**342**	P	**P**	**15 12 50.2**	**-0.6**
TIA	**Tai'an**	**52.03**	**325**	P	**P**	**15 12 52.5**	**+0.7**
TIA				pmax	pmax		
	comp=Z,27nm,0.9s						
MNSI	**Mandailing Nat**	**52.18**	**275**	P	**P**	**15 12 52.7**	**-0.6**
	comp=Z,54nm,1.1s						
YSS	**Yuzh-Sakhalins**	**52.19**	**352**	*ieP*	**P**	**15 12 52.3**	**-0.5**
YSS				*e*		15 13 27.9	
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
KHON	**Khomkaen**	**52.56**	**295**	P	**P**	**15 12 57.9**	**+1.9**
	comp=Z,2μmcomp=Z,67nm,0.8s						
NONG	**Nongkai**	**52.86**	**297**	P	**P**	**15 12 59.6**	**+1.4**
	comp=Z,17μmcomp=Z,82nm,0.8s						
MDJ	**Mudanjiang**	**53.06**	**341**	P	**P**	**15 12 59.5**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,33nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,160nm,4.7s						
MDJ	**Mudanjiang**	**53.06**	**341**	P	**P**	**15 12 59.3**	**+0.1**
MDJ				IAmb	IAmb	15 13 00.9	
	comp=Z,26nm,1.0s						
CHAI	**Chaiyaphum**	**53.17**	**294**	P	**P**	**15 13 01.5**	**+0.9**
	comp=Z,395nmcomp=Z,42nm,0.8s						
TRTT	**Trang**	**53.21**	**283**	P	**P**	**15 13 01.0**	**+0.1**
	comp=Z,34nm,1.6s						
PATY	**Pattaya**	**53.32**	**290**	P	**P**	**15 13 03.3**	**+1.6**
GYA	**Guiyang**	**53.43**	**308**	*i*P	**P**	**15 13 04.5**	**+2.1**
GYA				pP	pwP	15 13 41.0	+2.2
GYA				pmax	pmax		
	comp=Z,30nm,1.1s						
GYA				pmax	pmax		
	comp=Z,210nm,3.7s						
CN2	**Changchun**	**53.86**	**337**	*e*P	**P**	**15 13 05.3**	**+0.3**
CN2				*e*pP	pP	15 13 37.8	-0.7
CN2				PcP	**PcP**	**15 14 08.0**	**-0.8**
CN2				*e*S	**S**	**15 20 28.0**	**-0.6**
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
KCSI	**Kotacane, Aceh**	**54.33**	**278**	P	**P**	**15 13 07.6**	**-1.5**
PKDT	**Phuket**	**54.54**	**283**	P	**P**	**15 13 10.8**	**+0.3**
	comp=Z,46nm,0.8s						
PHIT	**Phitsanulok**	**55.01**	**295**	P	**P**	**15 13 15.0**	**+1.1**
	comp=Z,121nm,0.8s						
UTTA	**Uttaradit**	**55.07**	**295**	P	**P**	**15 13 15.6**	**+1.4**
	comp=Z,458nmcomp=Z,70nm,0.8s						
BJI	**Beijing**	**55.26**	**327**	P	**P**	**15 13 15.3**	**+0.1**
BJI				sP	**sP**	**15 14 05.0**	**+0.2**
BJI				PcP	**PcP**	**15 14 14.8**	**+0.6**
BJI				S	**S**	**15 20 52.3**	**+4.8**
BJI				sS	**sS**	**15 21 50.5**	**+3.1**
BJI				pmax	pmax		
	comp=Z,16nm,1.2s						
BJI				pmax	pmax		
	comp=Z,95nm,3.5s						
NANT	**Nan**	**55.29**	**297**	P	**P**	**15 13 17.0**	**+1.1**
	comp=Z,12μmcomp=Z,406nm,0.7s						
SRDT	**SRDT**	**55.35**	**291**	P	**P**	**15 13 18.8**	**

comp=N,110nm,16.0s
GRNR MLR MLR
comp=Z,130nm,19.0s
MHMT Maesarieng 57.57 295 P P 15 13 33.7 +1.7
CD2 Chengdu 57.82 311 P P 15 13 34.5 +0.9
CD2 pP pP 15 14 07.0 -0.5
CD2 PP **PP 15 15 43.8 +0.3**
CD2 S **S 15 21 21.5 -0.2**
CD2 sS sS 15 22 21.0 +0.2
CD2 SS **SS 15 25 16.8 +1.8**
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 pmax pmax
comp=Z,310nm,12.9s
PET Petropavlovsk 58.01 5⇓ *e*P **P 15 13 34.7 +0.4**
PET pmax pmax
comp=Z,104nm,1.0s
PETK Petropavlovsk- 58.01 4 P **P 15 13 34.2 -0.2**
comp=Z,12nm,0.8s,baz=154,slow=6.1,SNR=26
PETK pP **pP 15 14 09.5 +0.4**
comp=Z,14nm,0.9s,baz=179,slow=9.8,SNR=4.3
PETK LR LR 15 35 44.2
comp=Z,118nm,21.1s,baz=180,slow=33
HHC Hu-ho-hao-te 58.37 325 *e*P **P 15 13 38.3 +1.0**
HHC pP pwP 15 14 16.3 +2.1
HHC sS sS 15 22 29.8 +2.1
HHC pmax pmax
comp=Z,63nm,1.1s
HHC pmax pmax
comp=Z,260nm,6.0s
PPT Papeete 58.93 107 LR LR 15 34 02.3
comp=Z,44nm,21.9s,baz=294,slow=31
BTO Baotou 59.10 324 *e*P **P 15 13 42.8 +0.4**
LZH Lanzhou 60.40 316 ⇑P **P 15 13 53.0 +1.6**
LZH pP pwP 15 14 30.3 +1.9
LZH sP sP 15 14 46.0 +4.5
LZH S **S 15 21 58.5 +3.5**
LZH sS sS 15 22 56.3 +1.9
LZH pmax pmax
comp=Z,46nm,1.2s
LZH pmax pmax
comp=Z,250nm,6.0s
ZEA Zeya 61.86 344 *e*P **P 15 14 00.8 +0.1**
ZEA pmax pmax
comp=N,20nm,1.1s
ZEA pmax pmax
comp=Z,20nm,1.0s
GTA Gaotai 64.85 318 ⇓P **P 15 14 21.5 +0.7**
GTA pP PcP 15 14 54.0 +1.1
GTA sP sP 15 15 10.5 -0.7
GTA S **S 15 22 54.3 +3.9**
GTA sS sS 15 23 49.8 -0.5
GTA pmax pmax
comp=Z,18nm,1.5s
GTA pmax pmax
comp=Z,73nm,4.5s
GTA LR LR
comp=Z,88nm,17.4s
GTA LR LR
comp=Z,77nm,18.2s
GTA LR LR
comp=Z,82nm,18.9s
ULN Ulaanbaatar 65.39 329 *d i*P **P 15 14 25.5 +1.3**
ULN pmax pmax
comp=Z,52nm,1.0s
SONM Songino Array 65.71 328 P **P 15 14 27.4 +1.2**
comp=Z,32nm,0.9s,baz=137,slow=5.8,SNR=104
SONM pP **pwP 15 15 04.6 +0.8**
comp=Z,6.7nm,0.8s,baz=124,slow=4.1,SNR=3.8
SONM Songino Array 65.71 328 P **P 15 14 27.7 +1.5**
SONM pmax pmax
comp=Z,34nm,1.0s
SONM Songino Array 65.71 328 P **P 15 14 27.7 +1.5**
LSA Lhasa 67.23 305 P **P 15 14 37.3 +0.7**
SEY Seymchan 67.63 0⇑ *e*P **P 15 14 37.3 -0.6**
YAK Yakutsk 68.81 349 *e*P **P 15 14 43.2 -2.0**
YAK *e* 15 15 06.7
YAK *e**PP **pwP 15 15 21.8 -0.7**
YAK *e* 15 17 23.8
YAK *e*PPP PPP 15 18 58.5
YAK *e*S **S 15 23 35.1 -1.7**
YAK *e* 15 24 26.6
YAK *e*SS **SS 15 28 05.8 +0.9**
YAK pmax pmax
comp=Z,113nm,1.1s
YAK pmax pmax
comp=N,30nm,1.3s
YAK pmax pmax
comp=E,10.0nm,1.5s
YAK pmax pmax
comp=Z,125nm,3.1s
YAK pmax pmax
comp=N,419nm,3.1s
YAK pmax pmax
comp=E,165nm,3.2s
YAK smax smax
comp=N,422nm,3.2s
YAK smax smax
comp=E,66nm,3.0s
YAK Yakutsk 68.81 349 P **P 15 14 44.9 -0.3**
ZAK Zakamensk 68.90 329 *e*P **P 15 14 45.9 -0.3**
ZAK *e* 15 15 19.0
ZAK pmax pmax
comp=Z,75nm,1.1s
ZAK pmax pmax
comp=Z,20nm,1.3s
TAPN Taplejung 69.35 301 *e*P **P 15 14 49.6 -0.1**
comp=Z,108nm,1.1s
BOD Bodaibo 69.42 340 *e*P **P 15 14 49.0 0.0**
BOD pmax pmax
comp=Z,50nm,1.3s
ODAN Odare 69.48 301 *e*P **P 15 14 50.5 +0.1**
comp=Z,77nm,0.8s
TLY Talaya 69.51 330 *e*P **P 15 14 51.1 +1.3**
TLY *e*S **SPn 15 24 10.0 -0.7**
TLY pmax pmax
comp=Z,102nm,1.1s
RAMN Ramite 70.18 301 *e*P **P 15 14 54.9 +0.2**
MOY Mondy 70.83 329 *e*P **P 15 14 58.9 +1.0**
MOY pmax pmax
comp=Z,78nm,1.7s
PKI Pulchoki 71.37 301 *e*P **P 15 15 01.8 -0.2**
comp=Z,102nm,1.2s
PKIN Phulchoki 71.38 301 *e*P **P 15 15 01.5 -0.5**
comp=Z,79nm,1.1s
KKN Kakani 71.54 301 *e*P **P 15 15 02.8 -0.1**
comp=Z,45nm,0.7s
DMN Daman 71.64 301 *e*P **P 15 15 03.7 +0.2**
comp=Z,141nm,0.9s
PALK Pallekele 71.68 279 P **P 15 15 03.7 -0.1**
comp=Z,7.1nm,0.6s,baz=209,slow=6.2,SNR=4.7
PALK Pallekele 71.68 279 P **P 15 15 02.6 -1.1**
GKN Gorkha 72.15 301 *e*P **P 15 15 06.2 -0.2**
comp=Z,116nm,0.9s
VNDA Vanda 72.80 178 P **P 15 15 09.7 +0.5**
comp=Z,2.1nm,0.7s,baz=337,slow=6.4,SNR=13
VNDA pP **pP 15 15 44.5 -0.7**
comp=Z,15nm,1.0s,baz=336,slow=8.4,SNR=19
VNDA Vanda 72.80 178 P **P 15 15 09.8 +0.6**
KOLN Koldanda 72.97 301 *e*P **P 15 15 11.0 -0.4**
comp=Z,149nm,1.1s
DANN Dangsing 72.98 301 *e*P **P 15 15 11.1 -0.5**
comp=Z,49nm,0.8s
BILL Bilibino 73.50 6⇑ *e*P **P 15 15 13.1 -0.2**
BILL *e* 15 17 56.0
BILL pmax pmax
comp=Z,27nm,1.0s
BILL Bilibino 73.50 6 P **P 15 15 13.6 +0.2**
BILL IAmb IAmb 15 15 16.1
comp=Z,19nm,0.8s
PYUN Piuthan 73.58 301 *e*P **P 15 15 14.4 -0.5**
comp=Z,143nm,1.0s
WMQ Urumqi 74.93 318 *e*P **P 15 15 22.8 +0.5**
WMQ PcP **PcP 15 15 38.5 +3.1**
WMQ pP pwP 15 16 03.0 +2.7
WMQ pmax pmax
comp=Z,37nm,1.5s
WMQ pmax pmax
comp=Z,100nm,3.7s
WMQ LR LR
comp=Z,820nm,29.2s
WMQ LR LR
comp=Z,3μm,29.0s
WMQ LR LR
comp=Z,200nm,29.1s

HYB Hyderabad 75.30 289 *i*P **P 15 15 23.0 -1.9**
SVW2 Sparrevohn 77.41 23 P **P 15 15 35.7 -0.1**
SVW2 IAmb IAmb 15 15 38.8
comp=Z,18nm,0.8s
TIXI Tiksi 77.81 353⇓ *e*P **P 15 15 36.5 -1.3**
TIXI pmax pmax
comp=Z,126nm,1.0s
TIXI Tiksi 77.81 353 P **P 15 15 37.4 -0.4**
TIXI IAmb IAmb 15 15 39.7
comp=Z,29nm,1.0s
ZSN Zaisan 78.11 320 *e*P **P 15 15 39.9 -0.2**
comp=Z,27nm,1.3s,baz=320
ZSN Zaisan 78.11 320 *e*P **P 15 15 39.8 -0.2**
ZSN pmax pmax
comp=Z,27nm,1.3s
DGAR Diego Garcia 78.55 263⇑ *e*P **P 15 15 43.8 +0.7**
DGAR pmax pmax
comp=Z,253nm,2.8s
BRLK Bradley Lake 78.63 26 IAmb IAmb 15 15 43.9
comp=Z,13nm,0.8s
SEW Seward 79.42 26 P **P 15 15 47.0 +0.2**
SEW IAmb IAmb 15 15 47.7
comp=Z,17nm,1.0s
O22K Cooper Landing 79.49 26 P **P 15 15 46.8 -0.4**
baz=240
O22K Cooper Landing 79.49 26 P **P 15 15 46.8 -0.4**
O22K IAmb IAmb 15 15 54.4
comp=Z,41nm,1.1s
MK31 Makanchi Array 79.54 319 *i*P **P 15 15 47.4 -0.5**
MK31 pmax pmax
comp=Z,33nm,1.0s
MK31 Makanchi Array 79.54 319 IAmb IAmb 15 15 49.3
comp=Z,26nm,1.1s
MKAR Makanchi Array 79.54 319 P **P 15 15 47.9 +0.1**
comp=Z,17nm,0.9s,baz=109,slow=5.6,SNR=98
SUA Susitna One 79.56 24 P **P 15 15 47.1 -0.6**
PPLA Purkeypile 79.75 23 P **P 15 15 48.7 0.0**
MAKZ Makanchi 79.75 319 P **P 15 15 49.6 +0.6**
MAKZ pmax pmax
comp=Z,36nm,1.0s
MAKZ Makanchi 79.75 319 P **P 15 15 49.5 +0.6**
MAKZ IAmb IAmb 15 15 50.4
comp=Z,36nm,0.9s
RC01 Rabbit Creek A 79.79 25 P **P 15 15 48.5 -0.4**
baz=240
CUT Chulitna 80.24 24 P **P 15 15 51.0 -0.2**
baz=239
PMR Palmer 80.30 25 P **P 15 15 50.8 -0.7**
PMR pmax pmax
comp=Z,14nm,1.1s
PMR Palmer 80.30 25 P **P 15 15 50.8 -0.7**
SHLS Shalkode 80.38 315 *e*P **P 15 15 51.0 -1.6**
comp=Z,20nm,0.9s,baz=315
SHLS *i*S **S 15 25 41.8 -4.8**
baz=315
SHLS *e*S **S 15 25 44.0 -2.5**
baz=315
SHLS Shalkode 80.38 315 *e*P **P 15 15 50.9 -1.6**
SHLS *e*S **S 15 25 44.0 -2.5**
SHLS pmax pmax
comp=Z,20nm,0.9s
PDGK Podgornoye 80.41 315 P **P 15 15 52.3 -0.4**
ZAA0 Zalesovo Array 80.51 327 IAmb IAmb 15 15 53.1
comp=Z,27nm,0.8s
ZALV Zalesovo Beam 80.51 327 P **P 15 15 52.0 -0.8**
comp=Z,26nm,0.8s,baz=110,slow=5.3,SNR=112
ZALV pP **pP 15 16 29.7 +0.6**
comp=Z,4.8nm,0.8s,baz=123,slow=5.5,SNR=2.0
ZALV PP **PP 15 18 56.8 -1.5**
comp=Z,3.1nm,0.9s,baz=131,slow=8.2,SNR=3.6
ZALV Zalesovo Beam 80.51 327 P **P 15 15 52.2 -0.6**
ZALV Zalesovo Beam 80.51 327 P **P 15 15 52.2 -0.6**
IMAR Indian Mountai 80.89 20 P **P 15 15 54.7 +0.1**
KPKS Kokpek 81.01 315 *e*P **P 15 15 55.6 -0.3**
comp=Z,24nm,1.2s,baz=315
KPKS Kokpek 81.01 315 *e*P **P 15 15 55.5 -0.3**
KPKS pmax pmax
comp=Z,24nm,1.2s
SATY Saty 81.10 315 *e*P **P 15 15 56.6 +0.2**
comp=Z,8.8nm,1.2s,baz=315
SATY Saty 81.10 315 *e*P **P 15 15 56.6 +0.2**
SATY pmax pmax
comp=Z,9.0nm,1.2s
RND Reindeer 81.31 23 IAmb IAmb 15 15 58.1
comp=Z,20nm,0.9s
MLY Manley 81.42 21 P **P 15 15 57.2 -0.3**
baz=238
MCK McKinley 81.44 23 P **P 15 15 56.7 -0.9**
baz=240
TDK Taldyqorghan 81.61 317 *e*P **P 15 15 58.8 -0.1**
comp=Z,60nm,1.2s,baz=317
TDK Taldyqorghan 81.61 317 *e*P **P 15 15 58.8 -0.1**
TDK pmax pmax
comp=Z,60nm,1.2s
DHY Denali Highway 81.73 24 IAmb IAmb 15 16 01.1
comp=Z,16nm,0.9s
M24K Tolsona, Glenn 81.78 25 P **P 15 15 59.7 +0.3**
baz=243
NEA2 Nenana 81.81 22 P **P 15 15 58.5 -1.0**
baz=240
SEM Semipalatinsk 81.96 322 *e*P **P 15 15 59.2 -1.7**
comp=Z,6.8nm,1.0s,baz=322
SEM Semipalatinsk 81.96 322 *e*P **P 15 15 59.2 -1.7**
SEM pmax pmax
comp=Z,7.0nm,1.0s
I23K Minto, Yukon-K 81.99 21 P **P 15 15 59.8 -0.6**
baz=240
KSH Kashi 82.01 311 P **P 15 16 03.0 +1.7**
KSH PP **PP 15 19 14.3 +3.1**
KSH S **S 15 26 09.5 +5.9**
KSH pmax pmax
comp=Z,58nm,1.0s
KSH pmax pmax
comp=Z,340nm,4.5s
KSH LR LR
comp=Z,350nm,5.8s
KSH LR LR
comp=Z,240nm,5.9s
KSH LR LR
comp=Z,200nm,6.2s
MDOK Medeo 82.08 315 *e*P **P 15 16 01.3 -0.3**
baz=315
MDOK Medeo 82.08 315 *e*P **P 15 16 01.3 -0.3**
WRH Wood River Hil 82.12 22 IAmb IAmb 15 16 02.1
comp=Z,19nm,1.1s
TNSS Tian-Shan 82.13 314 *e*P **P 15 16 02.2 0.0**
baz=314
TNSS Tian-Shan 82.13 314 *e*P **P 15 16 02.1 0.0**
AAA Alma-Ata 82.19 315 *e*P **P 15 16 02.3 +0.3**
comp=Z,15nm,0.7s,baz=315
AAA Alma-Ata 82.19 315 *e*P **P 15 16 02.3 +0.3**
AAA pmax pmax
comp=Z,15nm,0.7s
N25K Chitina, Valde 82.22 26 P **P 15 16 01.9 0.0**
baz=244
CHKK Chushkaly 82.30 315 *e*P **P 15 16 02.1 -0.5**
baz=315
CHKK Chushkaly 82.30 315 *e*P **P 15 16 02.0 -0.5**
MDM Murphy Dome 82.31 22 P **P 15 16 00.7 -1.5**
TCOL CIGO, UAF Yank 82.41 22 P **P 15 16 01.6 -0.9**
baz=241
TCOL CIGO, UAF Yank 82.41 22 IAmb IAmb 15 16 03.3
comp=Z,21nm,0.8s
COLA College 82.41 22 *ce*P **P 15 16 01.7 -0.8**
COLA pmax pmax
comp=Z,22nm,0.9s
COLA College 82.41 22 P **P 15 16 01.8 -0.8**
COLA IAmb IAmb 15 16 03.3
comp=Z,24nm,0.9s
GLB Gilahina Butte 82.50 26 P **P 15 16 02.6 -0.6**
HDA Harding Lake 82.53 23 P **P 15 16 01.9 -1.3**
baz=242
POKR Poker Plat Res 82.68 22 P **P 15 16 03.0 -1.1**
baz=242
IL31 82.72 22 IAmb IAmb 15 16 04.3
comp=Z,10.0nm,0.7s
ILAR Eielson Array 82.72 22 P **P 15 16 02.5 -1.7**
comp=Z,9.5nm,0.7s,baz=248,slow=4.9,SNR=89
ILAR pP **pP 15 16 40.4 -1.0**
comp=Z,3.2nm,0.8s,baz=251,slow=5.0,SNR=2.8
ILAR sP **sP 15 16 56.2 -0.9**
comp=Z,3.6nm,0.9s,baz=251,slow=5.4,SNR=3.2
ILAR PKKP **PKKPdf 15 34 24.1 +2.8**
comp=Z,0.3nm,0.6s,baz=38,slow=0.7,SNR=3.3
COLD Coldfoot 82.76 20 P **P 15 16 04.7 +0.3**
baz=239

KUU Kurty 82.76 315 *e*P **P 15 16 04.3 -0.7**
comp=Z,73nm,1.0s,baz=315
KUU Kurty 82.76 315 *e*P **P 15 16 04.2 -0.7**
KUU pmax pmax
comp=Z,73nm,1.0s
MESA MESA 82.82 28 IAmb IAmb 15 16 20.0
comp=Z,28nm,0.7s
NIL Nilore 82.96 305 P **P 15 16 05.7 -0.5**
NIL pmax pmax
comp=Z,60nm,0.9s
NIL Nilore 82.96 305 P **P 15 16 05.7 -0.5**
KURK Kurchatov 83.04 322 *d i*P **P 15 16 05.7 -0.5**
KURK pmax pmax
comp=Z,84nm,1.3s
KURK Kurchatov 83.04 322 P **P 15 16 06.1 -0.1**
RIDG Independent Ri 83.05 24 IAmb IAmb 15 16 07.2
comp=Z,15nm,0.9s
TKM2 Tokmak 2 83.06 314 P **P 15 16 07.2 +0.5**
SNR=18
A21K Barrow 83.22 15 P **P 15 16 06.9 +0.3**
baz=232
BARN Barnard Glacie 83.29 27 P **P 15 16 06.8 -0.7**
DOT Dot Lake 83.32 24 IAmb IAmb 15 16 10.7
comp=Z,12nm,0.9s
KBK Karagaybulak 83.47 314 P **P 15 16 09.3 +0.5**
SNR=17
SCRK Sand Creek 83.50 24 P **P 15 16 07.6 -0.8**
baz=245
CHMS Chumysh 83.68 314 P **P 15 16 10.1 +0.4**
SNR=26
UCH Uchtor 83.69 313 P **P 15 16 11.9 +1.7**
SNR=14
TOLK Toolik Lake Re 83.70 18 P **P 15 16 09.2 0.0**
baz=239
TOLK Toolik Lake Re 83.70 18 IAmb IAmb 15 16 11.5
comp=Z,14nm,0.9s
AAK Ala-Archa 83.79 314 P **P 15 16 10.9 +0.5**
SNR=23
AAK Ala-Archa 83.79 314 *d i*P **P 15 16 10.9 +0.5**
AAK pmax pmax
comp=Z,111nm,0.8s
SGDS Sogindy 83.87 314 *e*P **P 15 16 10.3 -0.4**
comp=Z,19nm,1.1s,baz=314
SGDS Sogindy 83.87 314 *e*P **P 15 16 10.3 -0.4**
SGDS pmax pmax
comp=Z,19nm,1.1s
USP Ospenovka 83.92 314 P **P 15 16 11.6 +0.6**
SNR=55
BCAR Beaver Creek A 84.02 25 P **P 15 16 11.0 0.0**
AML Almayashu 84.26 313 P **P 15 16 13.8 +0.7**
SNR=134
K27K Chicken 84.28 24 P **P 15 16 12.8 +0.6**
baz=246
EKS2 Erkin-Say 84.31 314 P **P 15 16 13.9 +0.9**
SNR=47
BTLS Baital 84.62 316 *e*P **P 15 16 13.8 -0.6**
comp=Z,43nm,1.2s,baz=316
BTLS Baital 84.62 316 *e*P **P 15 16 13.7 -0.6**
BTLS pmax pmax
comp=Z,43nm,1.2s
BMAR Burnt Mountain 84.77 20 P **P 15 16 15.3 +0.6**
MAW Mawson 85.00 203 P **P 15 16 16.0 +0.3**
comp=Z,11nm,0.9s,baz=68,slow=6.0,SNR=16
MAW pP **pP 15 16 52.0 -1.4**
comp=Z,15nm,1.1s,baz=81,slow=7.2,SNR=5.7
MAW Mawson 85.00 203 P **P 15 16 16.0 +0.3**
baz=85,SNR=11
MAW Mawson 85.00 203 P **P 15 16 16.0 +0.3**
MAW pmax pmax
comp=Z,2.0nm,0.9s
MAW Mawson 85.00 203 P **P 15 16 16.0 +0.3**
QSPA South Pole Qui 85.08 180 P **P 15 16 16.7 +0.4**
HYT Haines Junctio 85.11 28 IAmb IAmb 15 16 19.0
comp=Z,16nm,0.8s
NRIK Noril'sk 85.63 341 P **P 15 16 18.2 -0.6**
comp=Z,31nm,0.9s,baz=114,slow=5.2,SNR=36
BTK Batken 86.01 311 P **P 15 16 21.0 -0.5**
BTK pmax pmax
comp=Z,22nm,1.1s
BTK Batken 86.01 311 P **P 15 16 21.0 -0.5**
BTK IAmb IAmb 15 16 22.1
comp=Z,22nm,1.1s
DZA Taraz 86.12 313 *e*P **P 15 16 21.6 -0.4**
comp=Z,30nm,0.9s,baz=313
DZA Taraz 86.12 313 *e*P **P 15 16 21.5 -0.4**
DZA pmax pmax
comp=Z,30nm,0.9s
OTUK Ortayu 86.43 319 P **P 15 16 22.5 -0.8**
BRZS Berezniki 86.56 321 *e*P **P 15 16 22.2 -1.7**
comp=Z,8.1nm,1.1s,baz=321
BRZS Berezniki 86.56 321 *e*P **P 15 16 22.1 -1.7**
BRZS pmax pmax
comp=Z,8.0nm,1.1s
KK31 Karatay Array 86.75 314 *i*P **P 15 16 24.6 -0.3**
KKAR Karatay Array 86.75 314 P **P 15 16 24.8 -0.1**
KKAR Karatay Array 86.75 314 P **P 15 16 24.8 -0.1**
IUG luzhnay 86.94 313 *e*P **P 15 16 25.6 -0.5**
comp=Z,31nm,1.3s,baz=312
IUG luzhnay 86.94 313 *e*P **P 15 16 25.5 -0.5**
IUG pmax pmax
comp=Z,31nm,1.3s
BRVK Borovoye 88.61 323 *d i*P **P 15 16 32.1 -1.4**
BRVK pmax pmax
comp=Z,26nm,0.8s
BRVK Borovoye 88.61 323 P **P 15 16 32.5 -1.0**
BRVK IAmb IAmb 15 16 33.5
comp=Z,28nm,1.0s
J01E Myrtle Point 89.34 47 P **P 15 16 37.2 +0.1**
baz=263
K02D Willamette Mer 89.48 47 P **P 15 16 38.7 +0.8**
baz=263
O02D Mt. Diablo Mer 89.84 50 P **P 15 16 40.8 +1.1**
baz=264,SNR=5.6
M02C Callahan 89.92 49 P **P 15 16 40.7 +0.6**
baz=263,SNR=5.3
HUMO Hull Mountain 89.99 47 P **P 15 16 40.4 +0.1**
HUMO IAmb IAmb 15 16 42.4
comp=Z,28nm,0.9s
N02D Trinity Center 89.99 49 P **P 15 16 41.0 +0.6**
baz=264
L04D Klamath Falls 90.42 48 P **P 15 16 42.8 +0.3**
baz=264,SNR=5.4
I04A Tendick Farm, 90.52 46 P **P 15 16 43.5 +0.8**
baz=264
O03E Paynes Creek 90.60 50 P **P 15 16 43.7 +0.5**
baz=264
M04C Macdoel 90.72 48 P **P 15 16 44.9 +1.0**
baz=264,SNR=5.1
K04D Chiloquin, OR 90.87 47 P **P 15 16 44.7 +0.2**
baz=264
J05D Fort Rock, OR 91.32 47 P **P 15 16 47.6 +1.0**
baz=264,SNR=6.2
K05A Summer Lake 91.51 47 P **P 15 16 47.5 0.0**
SMMC Simmler 91.56 55 P **P 15 16 49.3 +1.6**
baz=265
PKM Mcpherson Peak 91.68 55 P **P 15 16 49.6 +1.2**
baz=265
SCZ2 Santa Cruz Isl 91.75 56 P **P 15 16 50.2 +1.5**
baz=265
SNCC San Nicolas Is 91.78 57 P **P 15 16 50.9 +2.1**
baz=265
WAKR Walker 92.27 52 P **P 15 16 51.0 -0.2**
WAKR IAmb IAmb 15 16 53.3
comp=Z,18nm,1.1s
VES Vestal, Richgr 92.35 54 P **P 15 16 51.7 +0.4**
baz=266
C36M Paulatuk 92.56 21 P **P 15 16 50.8 -0.7**
baz=263
C36M Paulatuk 92.56 21 IAmb IAmb 15 16 51.1
comp=Z,7.4nm,0.8s
CIS Catalina Islan 92.72 57 P **P 15 16 54.5 +1.4**
baz=266,SNR=11
ISA Isabella, Lake 92.83 55 P **P 15 16 54.3 +0.7**
baz=266,SNR=11
DECC Green Verdugo 92.85 56 P **P 15 16 54.8 +1.1**
baz=266
TIN Tinemaha, Big 93.12 53 P **P 15 16 56.4 +1.4**
baz=266
NVAR Mina Array Bea 93.15 52 P **P 15 16 55.8 +0.6**
comp=Z,25nm,1.1s,baz=257,slow=5.8,SNR=71
NVAR pP **pP 15 17 31.9 -1.1**
comp=Z,2.9nm,1.0s,baz=260,slow=5.4,SNR=1.9
NVAR PKKPbc **PKKPbc 15 34 05.5 +0.9**
comp=Z,0.6nm,0.8s,baz=88,slow=2.1,SNR=4.2
NVAR Mina Array Bea 93.15 52 P **P 15 16 55.2 0.0**
SYO Syowa Base 93.16 200⇓ *e*X **P 15 16 51.4 -2.9**
SYO Syowa Base 93.16 200⇓ *e*PcP **PcP 15 16 55.2 +0.4**

SYO	Syowa Base	93.16	200	‖	*e*P		pP	15 17 29.0	-3.1
EDW2	Edwards Air Fo	93.17	55		P		P	15 16 56.4	+1.2
	baz=266,SNR=20								
CWC	Cottonwood Cre	93.20	54		P		P	15 16 56.2	+0.8
	baz=266								
KVN	Kaiserville	93.35	51		IAmb		IAmb	15 16 57.9	
	comp=Z,18nm,1.1s								
BFSC	Mount Baldy Ra	93.40	56		P		P	15 16 56.9	+0.5
	baz=266,SNR=12								
LRMC	Laurel Mtn Rad	93.46	55		P		P	15 16 57.7	+1.1
	baz=266,SNR=34								
MPMC	Manual Prospec	93.65	54		P		P	15 16 58.4	+0.9
	baz=267,SNR=28								
MURC	Murrieta	93.75	57		P		P	15 16 59.0	+1.1
	baz=267								
109C	Camp Elliot, M	93.78	57		P		P	15 17 00.1	+2.1
	baz=267								
GRAC	Grapevine Rang	93.81	53		P		P	15 16 59.5	+1.5
	baz=267								
GSC	Goldstone, Bar	94.17	55		P		P	15 17 00.9	+1.1
	baz=267,SNR=15								
FURC	Furnace Creek,	94.18	54		P		P	15 17 01.1	+1.4
	baz=267,SNR=12								
BMO	Blue Mountains	94.25	45		P		P	15 16 59.4	-0.6
BMO					pmax		pmax		
	comp=Z,8.0nm,1.2s								
BMO	Blue Mountains	94.25	45		P		P	15 16 59.4	-0.6
BMO					IAmb		IAmb	15 17 00.6	
	comp=Z,8.3nm,1.1s								
MONP2	Monument Peak	94.36	57		P		P	15 17 02.5	+1.6
	baz=267,SNR=33								
PFO	Pinyon Flats O	94.36	57	‖	*e*P		P	15 17 01.5	+0.7
PFO					pmax		pmax		
	comp=Z,33nm,1.0s								
PFO	Pinyon Flats O	94.36	57		P		P	15 17 02.2	+1.4
	baz=267,SNR=16								
NEW	Newport	94.52	42		P		P	15 17 01.3	+0.3
	baz=268								
HEC	Hector,Ludlow	94.53	56		P		P	15 17 02.7	+1.2
	baz=267,SNR=6.0								
SVE	Sverdlovsk	94.53	327		*e*P		P	15 16 59.1	-1.7
SVE					pmax		pmax		
	comp=Z,20nm,1.9s								
IKP	In-Ko-Pah, Jac	94.61	58		P		P	15 17 03.6	+1.7
	baz=267,SNR=14								
SHOC	Shoshone, Teco	94.63	54		P		P	15 17 02.9	+1.1
	baz=267,SNR=20								
AB31	Akbulak array	94.69	319		*i* P		P	15 16 59.3	-2.4
ABKAR	Akbulak array	94.69	319		P		P	15 16 59.3	-2.4
TPNV	Topopah Spring	94.69	53		P		P	15 17 03.3	+1.0
	baz=267,SNR=29								
BELC	Belle Mtn. Jos	94.77	56		P		P	15 17 04.0	+1.3
	baz=267,SNR=16								
SWSC	Sam W. Stewart	94.88	57		P		P	15 17 05.0	+1.9
	baz=267,SNR=7.5								
TUQ	Turquoise Moun	94.89	55		P		P	15 17 04.4	+1.2
	baz=268,SNR=5.6								
GMRC	Granite Mounta	95.08	56		P		P	15 17 05.3	+1.2
	baz=268,SNR=14								
BC3	Big Chuckawall	95.20	57		P		P	15 17 06.2	+1.6
	baz=268,SNR=16								
R11A	Troy Canyon, C	95.28	52		P		P	15 17 05.7	+0.8
	baz=268,SNR=17								
IRM	Iron Mountain	95.48	56		P		P	15 17 07.1	+1.4
	baz=268,SNR=21								
SHPR	Sheep Range	95.55	54		P		P	15 17 06.0	-0.2
GEYT	Allbeck	95.64	308		P		P	15 17 05.1	-1.4
	comp=Z,2.8nm,0.8s,baz=132,slow=5.8,SNR=3.9								
ARU	Arti	95.67	326	*d*	*i* P		P	15 17 03.8	-2.2
ARU								15 20 58.5	
ARU					S		SKSac	15 27 26.5	-1.6
ARU					SS		SS	15 34 35.7	-7.1
ARU					pmax		pmax		
	comp=Z,18nm,1.2s								
GLA	Glamis	95.70	57		P		P	15 17 08.9	+2.1
	baz=268								
NEE2	Needles Airpor	95.94	56		P		P	15 17 09.4	+1.6
	baz=268								
AKTO	Aktyubinsk	95.96	320		P		P	15 17 05.4	-2.1
	comp=Z,5.7nm,1.0s,baz=85,slow=3.8,SNR=8.9								
YKA	Yellowknife Ar	96.10	28		P		P	15 17 07.1	-0.8
	comp=Z,1.2nm,0.8s,baz=265,slow=4.9,SNR=7.6								
HLID	Hailey	96.29	47		P		P	15 17 10.0	+0.6
	baz=269								
PDMCI	Parker Dam,Lak	96.32	56		P		P	15 17 11.6	+2.1
	baz=268								
DUG	Dugway, Tooele	97.46	50		P		Pdif	15 17 16.4	+1.6
	baz=270								
WUAZ	Wupatki	98.61	55		Pdiff		Pdif	15 17 21.8	+1.8
	baz=270								
BW06	Boulder Array	99.86	48		Pdiff		Pdif	15 17 25.0	-0.5
	baz=272								
PDAR	Pinedale Array	99.86	48		P		Pdif	15 17 24.9	-0.6
	comp=Z,2.5nm,0.8s,baz=244,slow=2.6,SNR=19								
PDAR					PKKPbc		PKKPbc	15 33 44.9	-1.7
	comp=Z,0.5nm,0.5s,baz=116,slow=3.4,SNR=5.4								
PDAR					LR		LR	15 59 18.1	
	comp=Z,43nm,18.2s,baz=305,slow=33								
KIRV	Kirov	100.45	329	‖	*e*P		Pdif	15 17 26.4	-1.0
MVCO	Mesa Verde	100.89	53		Pdiff		Pdif	15 17 31.5	+1.3
	baz=272								
SNAA	Sanae	101.77	188		P		Pdif	15 17 33.1	-0.1
	comp=Z,1.0nm,1.1s,baz=150,slow=14,SNR=2.2								
S22A	4UR Ranch, Cre	102.19	53		Pdiff		Pdif	15 17 37.4	+1.3
	baz=273								
BELG	Belogornoye	102.32	322	⇑	*e*P		Pdif	15 17 35.3	-0.6
BELG					pmax		pmax		
	comp=Z,2.0nm,0.9s								
ANMO	Albuquerque	102.64	55	‖	*e*P		Pdif	15 17 39.8	+1.8
ANMO					pmax		pmax		
	comp=Z,17nm,2.8s								
ANMO	Albuquerque	102.64	55		Pdiff		Pdif	15 17 39.9	+1.8
	baz=273								
TXAR	Lajitas Array	105.30	61		Pdiff		Pdif	15 17 49.1	-0.7
	comp=Z,0.1nm,0.5s,baz=251,slow=2.8,SNR=1.7								
TXAR					PP		PP	15 22 10.6	-2.4
	comp=Z,0.5nm,0.8s,baz=255,slow=3.8,SNR=3.7								
TXAR					PKKPbc		PKKPbc	15 33 28.9	-1.0
	comp=Z,0.6nm,0.8s,baz=112,slow=5.9,SNR=6.1								
TXAR					PKKPab		PKKPab	15 33 47.6	+0.5
	comp=Z,1.7nm,1.0s,baz=116,slow=5.7,SNR=9.6								
ARCES	ARCESS Array B	106.57	343		PKiKP		PKiKP	15 22 03.8	-0.5
	comp=Z,3.0nm,0.8s,baz=82,slow=2.3,SNR=13								
ECSD	EROS Data Cent	109.11	45		PKiKP		PKiKP	15 22 09.3	-0.5
	baz=282								
FINES	FINESS Array B	110.59	335		PKiKP		PKiKP	15 22 11.9	-0.1
	comp=Z,1.5nm,0.5s,baz=88,slow=3.0,SNR=8.8								
U40A	Yellville	113.45	52		PKiKP		PKiKP	15 22 17.9	-0.4
	baz=282								
AKASG	Malin Array Be	113.81	324		PKiKP		PKiKP	15 22 17.5	-1.0
	comp=Z,1.0nm,0.3s,baz=56,slow=2.4,SNR=15								
AKASG					PP		PP	15 23 13.7	+0.3
	comp=Z,1.7nm,0.8s,baz=57,slow=6.6,SNR=6.4								
AKBB	Malin Array Si	113.81	324	‖	*i* PKiKP		PKiKP	15 22 17.2	-1.3
BRTR	Keskin Array B	114.40	312		PKP		PKPdf	15 22 19.1	-1.1
	comp=Z,2.4nm,0.8s,baz=191,slow=2.5,SNR=7.9								
MMAI	Mount Meron Ar	114.47	304		PKP		PKPdf	15 22 19.2	-1.2
	comp=Z,2.9nm,0.9s,baz=162,slow=0.5,SNR=5.0								
SORM	Soroca	115.33	322	⇑	P		PKiKP	15 22 20.7	-0.8
SORM	Soroca	115.33	322	⇑	PKiKP		PKiKP	15 22 20.7	-0.8
EIL	Elat	115.43	300		PKP		PKPdf	15 22 22.1	-0.1
	comp=Z,6.5nm,0.9s,baz=294,slow=7.7,SNR=3.9								
NB2	NORSAR Subarra	116.55	340		PKPdf		PKPdf	15 22 21.9	-1.6
	comp=Z,5.7nm,1.1s,baz=44,slow=1.9								
NB2	NORSAR Subarra	116.55	340		PKPdf		PKPdf	15 22 21.9	-1.6
	baz=44,slow=1.9								
NOA	NORSAR Array B	116.55	340		PKP		PKPdf	15 22 22.4	-1.1
	comp=Z,2.9nm,0.8s,baz=48,slow=1.8,SNR=9.7								
BIZ	Bicaz	117.20	321	⇑	P		PKiKP	15 22 25.3	+0.1
VRI	Vrincioaia	117.23	320	⇑	P		PKiKP	15 22 25.6	+0.3
VRI	Vrincioaia	117.23	320	⇑	PKiKP		PKiKP	15 22 25.6	+0.3
BURAR	Bucovina Array	117.47	322	⇑	P		PKPdf	15 22 25.2	-0.6
BURAR	Bucovina Array	117.47	322	⇑	PKiKP		PKPdf	15 22 25.2	-0.6
DOPR	Dopca	118.05	320	⇑	P		PKiKP	15 22 26.6	-0.2
VOIR		118.48	320	‖	P		PKiKP	15 22 28.5	+0.7
VOIR		118.48	320	‖	PKiKP		PKiKP	15 22 28.5	+0.7
KOLS	Kolonicke sedl	118.63	324	*e*	PKiKP		PKiKP	15 22 28.4	+0.5
KOLS	Kolonicke sedl	118.63	324	*e*	PKP		PKiKP	15 22 28.4	+0.5
MATP	Matopo	118.67	244		PKP		PKPdf	15 22 28.2	-0.7
	comp=Z,6.4nm,0.6s,baz=93,slow=1.3,SNR=18								
P49A	Miami Univ. Ec	118.82	47		P		PKPdf	15 22 28.5	0.0
	baz=289								
CRVS	Cervenica-Dubn	119.11	325	*e*	PKiKP		PKPdf	15 22 28.7	-0.1
CRVS	Cervenica-Dubn	119.11	325	*e*	PKP		PKPdf	15 22 28.7	-0.1
DRGR		119.37	322	⇑	P		PKPdf	15 22 28.9	-0.5
DRGR		119.37	322	⇑	PKiKP		PKPdf	15 22 28.9	-0.5
ACSO	Alum Creek Sta	119.83	46		P		PKPdf	15 22 30.1	-0.3
	baz=291								
LSQQ	Lebel-sur-Quev	119.88	35		P		PKPdf	15 22 29.2	-1.0
	baz=301								
GZR	Gura Zlata	119.95	321	‖	P		PKPdf	15 22 30.0	-0.6
GZR	Gura Zlata	119.95	321	‖	PKiKP		PKPdf	15 22 30.0	-0.6
LANS	Liptovska Anna	120.12	326	*e*	PKiKP		PKiKP	15 22 31.5	+0.6
LANS	Liptovska Anna	120.12	326	*e*	PKP		PKiKP	15 22 31.5	+0.6
SIRR	Siria	120.25	322	⇑	P		PKPdf	15 22 30.9	-0.2
SUR	Sutherland	120.31	228		PKP		PKiKP	15 22 32.1	+0.1
	comp=Z,3.3nm,0.7s,baz=310,slow=10,SNR=3.1								
LSZ	Lusaka	120.40	249		PKP		PKPdf	15 22 32.1	-0.2
	comp=Z,4.4nm,0.6s,baz=179,slow=5.3,SNR=8.0								
HERR	Herculane	120.41	320	‖	P		PKPdf	15 22 30.9	-0.5
BZS	Buzias	120.58	321	‖	P		PKPdf	15 22 31.6	-0.1
BZS	Buzias	120.58	321	‖	PKiKP		PKPdf	15 22 31.6	-0.1
MBAR	Mbarara	120.59	266	*c*	*i* PKiKP		PKiKP	15 22 32.3	-0.6
MBAR					pmax		pmax		
	comp=Z,9.0nm,1.7s								
Q52A	Bidwell	120.80	47		P		PKPdf	15 22 31.6	-0.7
	baz=291								
VYHS	Vyhne	120.82	325	*e*	PKiKP		PKPdf	15 22 31.5	-0.6
VYHS	Vyhne	120.82	325	*e*	PKP		PKPdf	15 22 31.5	-0.6
MORC	Moravsky Berou	120.85	327	*e*	PKP		PKiKP	15 22 32.3	0.0
G54A	Lake Saint Pet	121.00	39		P		PKPdf	15 22 31.7	-0.8
	baz=298								
KRLC	Kraliky	121.09	328	*e*	PKiKP		PKPdf	15 22 32.4	-0.2
KRLC	Kraliky	121.09	328	*e*	PKPDF		PKPdf	15 22 32.4	-0.2
OSTC	Ostas	121.12	328	*e*	PKPDF		PKiKP	15 22 33.0	+0.2
DPC	Dobruska-Polom	121.18	328	*e*	PKiKP		PKiKP	15 22 33.1	+0.2
DPC	Dobruska-Polom	121.18	328	*e*	PKPDF		PKiKP	15 22 33.1	+0.2
CHVC	Chvalec	121.19	328	*e*	PKPDF		PKPdf	15 22 32.7	-0.1
T53A	Wise	121.28	49		P		PKPdf	15 22 33.2	-0.2
	baz=289								
JAVC	Velka Javorina	121.28	326	*e*	PKP		PKiKP	15 22 34.2	+1.0
Q53A	Leroy	121.38	47		P		PKPdf	15 22 33.4	-0.1
	baz=291								
VRAC	Vranov	121.63	327	*e*	PKP		PKiKP	15 22 33.7	-0.1
M54A	Oil Creek Stat	121.67	43		P		PKPdf	15 22 32.8	-1.1
	baz=294								
D55A	Sainte-Anne-du	121.79	36		P		PKPdf	15 22 33.4	-0.6
	baz=301								
BSEG	Bad Segeberg	121.82	334	*e*	PKPdf		PKiKP	15 22 34.8	+0.9
	baz=50,slow=2.0								
Q54A	Coxs Mills	121.83	47		P		PKPdf	15 22 34.0	-0.3
	baz=292								
KRUC	Moravsky	121.87	327	*e*	PKP		PKPdf	15 22 34.1	0.0
T54A	Tazewell	121.97	49		P		PKiKP	15 22 34.9	0.0
	baz=290								
PVCC	Panska Ves	121.99	329	*e*	PKiKP		PKiKP	15 22 34.5	+0.1
PVCC	Panska Ves	121.99	329	*e*	PKPDF		PKiKP	15 22 34.5	+0.1
BRG	Berggiesshubel	122.10	330	*i*	PKP		PKPdf	15 22 34.4	0.0
	comp=Z,20nm,1.2s								
BRG	Berggiesshubel	122.10	330	*i*	PKiKP		PKPdf	15 22 34.4	0.0
BRG					pmax		pmax		
	comp=Z,20nm,1.2s								
BRG	Berggiesshubel	122.10	330	*e*	PKPdf		PKiKP	15 22 35.0	+0.4
	baz=50,slow=2.0								
V54A	Nebo	122.12	50		P		PKPdf	15 22 34.2	-0.8
	baz=289								
X54A	Belton	122.18	52		P		PKiKP	15 22 35.8	+0.6
	baz=288								
D56A	ZEC Mazanza, M	122.19	36		P		PKPdf	15 22 34.2	-0.5
	baz=302								
CLL	Collm	122.30	331	‖	*i* PKPdf		PKPdf	15 22 34.6	-0.2
	comp=Z,17nm,1.0s								
CLL					*e*pPKPdf		pPKPdf	15 23 12.0	-1.9
CLL					*e*PPS		PPS	15 35 30.0	
CLL					*e*SS		SS	15 40 48.0	+8.3
CLL					*es*SS			15 41 48.0	
CLL	Collm	122.30	331	‖	*i* PKiKP		PKPdf	15 22 34.6	-0.2
CLL					*e*			15 23 12.0	
CLL					pmax		pmax		
	comp=Z,17nm,1.0s								
CLL	Collm	122.30	331	*e*	PKPdf		PKiKP	15 22 35.2	+0.2
	baz=50,slow=2.0								
PRU	Pruhonice	122.32	329	*e*	PKiKP		PKPdf	15 22 34.7	-0.2
PRU	Pruhonice	122.32	329	*e*	PKPDF		PKPdf	15 22 34.7	-0.2
IDI	Anoyia	122.33	309	⇑	P		PKPdf	15 22 35.2	-0.2
FBE	Freiberg	122.36	330	*e*	PKPdf		PKiKP	15 22 35.8	+0.7
	baz=50,slow=2.0								
Q55A	Buckhannon	122.37	46		P		PKPdf	15 22 35.1	-0.3
	baz=292								
T55A	Pulaski	122.55	49		P		PKPdf	15 22 35.5	-0.3
	baz=291								
R55A	Marlinton	122.61	47		P		PKPdf	15 22 35.4	-0.5
	baz=292								
M56A	Emporium	122.69	43		P		PKPdf	15 22 35.6	-0.3
	baz=296								
Y55A	Saluda	122.77	53		P		PKiKP	15 22 36.8	+0.3
	baz=288								
X55A	Gracelyn & Ava	122.78	52		P		PKiKP	15 22 37.1	+0.6
	baz=288								
BLA	Blacksburg	122.78	48		P		PKPdf	15 22 36.0	-0.3
	baz=291								
KMSC	Kings Mountain	122.80	51		P		PKiKP	15 22 36.4	-0.1
	baz=289								
CONA	Conrad Observa	122.80	326	*e*	P		PKPdf	15 22 35.8	-0.2
	comp=Z,7.4nm,0.7s								
L56A	Greenwood	122.83	42		P		PKPdf	15 22 35.9	-0.3
	baz=296								
N56A	West Decatur	122.86	44		P		PKPdf	15 22 36.1	-0.2
	baz=295								
WIMM	Wimmelburg	122.88	331	*e*	PKPdf		PKiKP	15 22 36.5	+0.4
	baz=50,slow=2.0								
E57A	Chemin Saint G	122.89	36		P		PKPdf	15 22 35.8	-0.3
	baz=302								
NRDL	Niedersach Rie	122.89	333	*e*	PKPdf		PKiKP	15 22 36.9	+0.9
	baz=50,slow=2.0								
AGG	Agios Georgios	122.91	314		PKiKP		PKPdf	15 22 35.5	-0.9
AGG	Agios Georgios	122.91	314		PKPdf		PKPdf	15 22 35.5	-0.9
P56A	Dayton Farm, R	123.06	45		P		PKiKP	15 22 36.9	0.0
	baz=294								
R56A	Bull Pasture M	123.09	47		P		PKiKP	15 22 37.0	-0.1
	baz=293								
TANN	Tannenbergstha	123.12	330	*e*	PKPdf		PKiKP	15 22 37.1	+0.4
	baz=50,slow=2.0								
CHRS	Christianenhau	123.15	332	*e*	PKPdf		PKiKP	15 22 37.2	+0.5
	baz=50,slow=2.0								
WERD	Werda	123.18	330	*e*	PKPdf		PKiKP	15 22 37.1	+0.2
	baz=50,slow=2.0								
CLZ	Clausthal	123.21	332	*e*	PKPdf		PKiKP	15 22 37.6	+0.7
	baz=50,slow=2.0								
GUNZ	Gunzen	123.22	330	*e*	PKPdf		PKiKP	15 22 37.5	+0.6
	baz=50,slow=2.0								
PLN	Plauen	123.23	330	*e*	PKPdf		PKiKP	15 22 37.3	+0.4
	baz=50,slow=2.0								
NKC	Novy Kostel	123.24	330	*e*	PKiKP		PKPdf	15 22 36.5	-0.2
NKC	Novy Kostel	123.24	330	*e*	PKPDF		PKPdf	15 22 36.5	-0.2
WERN	Wernitzgruen	123.25	330	*e*	PKPdf		PKiKP	15 22 37.5	+0.5
	baz=50,slow=2.0								
D58A	Chemin du LacG	123.25	35		P		PKPdf	15 22 36.5	-0.3
	baz=304								
X56A	White Oak	123.25	52		P		PKiKP	15 22 37.7	+0.3
	baz=289								
SSPA	Standing Stone	123.26	44		P		PKPdf	15 22 36.4	-0.6
	baz=295								
J57A	Williamstown	123.26	40		P		PKPdf	15 22 36.8	-0.1
	baz=299								
POSS	Possen	123.31	332	*e*	PKPdf		PKiKP	15 22 37.5	+0.4
	baz=50,slow=2.0								
KHC	Kasperske Hory	123.34	328	*c*	*i* PKiKP		PKPdf	15 22 37.0	0.0
KHC					pmax		pmax		
	comp=Z,37nm,1.0s								
KHC	Kasperske Hory	123.34	328	*e*	PKPDF		PKPdf	15 22 36.9	0.0
KHC	Kasperske Hory	123.34	328		PKPdf		PKiKP	15 22 37.4	+0.2
L57A	Andrews Acres	123.36	42		P		PKPdf	15 22 36.6	-0.6
	baz=297								
ARSA	Arzberg	123.37	325	*e*	P		PKPdf	15 22 36.5	-0.6
	comp=Z,4.3nm,0.9s								
W56A	Indian Trail	123.38	51		P		PKiKP	15 22 37.8	+0.2
	baz=290								
GEC2	GERESS Array S	123.45	328	*e*	PKPdf		PKiKP	15 22 37.6	+0.1
	baz=50,slow=2.0								
GEC2	GERESS Array S	123.45	328		PKPdf		PKPdf	15 22 37.4	+0.1
GERES	GERESS Array B	123.45	328		PKP		PKPdf	15 22 37.0	-0.2
	comp=Z,6.3nm,0.5s,baz=71,slow=1.7,SNR=60								
GERES	GERESS Array B	123.45	328				PKPdf	15 22 37.3	+0.1
M57A	Sunshine Farm,	123.47	43		P		PKPdf	15 22 37.4	0.0
	baz=296								
LONY	Lake Ozonia	123.55	38		P		PKPdf	15 22 37.2	-0.2
	baz=301								
Q57A	Strasburg	123.55	46		P		PKPdf	15 22 37.3	-0.3
	baz=294								
MANZ	Manzenberg	123.57	330	*e*	PKPdf		PKiKP	15 22 38.0	+0.4
	baz=50,slow=2.0								
P57A	Homestead Farm	123.65	45		P		PKPdf	15 22 37.6	-0.2
	baz=294								
WET	Wettzell	123.70	329	*e*	PKPdf		PKiKP	15 22 38.4	+0.5
	baz=50,slow=2.0								
MOA	Molln	123.73	327	*e*	P		PKPdf	15 22 37.2	-0.6
	comp=Z,3.9nm,0.6s								
T57A	Hurt	123.73	48		P		PKPdf	15 22 38.0	0.0
	baz=292								
J58A	Remsen	123.74	40		P		PKPdf	15 22 37.6	-0.3
	baz=299								
V57A	Coltrane Farms	123.74	50		P		PKPdf	15 22 37.8	-0.2
	baz=291								
W57A	Gilead	123.83	51		P		PKiKP	15 22 38.7	+0.1
	baz=290								
H58A	Gabriels	123.90	38		P		PKPdf	15 22 37.9	-0.2
	baz=301								
N58A	Sunbury	123.97	43		P		PKPdf	15 22 38.1	-0.3
	baz=296								
SOKA	Soboth	123.97	325	*i*	P		PKPdf	15 22 37.7	-0.6
	comp=Z,17nm,1.2s,SNR=6.6								
L58A	Harry Jones Me	124.00	41		P		PKPdf	15 22 38.1	-0.3
	baz=298								
IBBN	Ibbenburen	124.06	334	*e*	PKPdf		PKiKP	15 22 38.9	+0.5
	baz=50,slow=2.0								
Q58A	Fox Den Farm,	124.11	45		P		PKPdf	15 22 37.8	-0.8
	baz=294								
O58A	Lewisberry	124.14	44		P		PKPdf	15 22 38.3	-0.4
	baz=296								
J59A	Piesco	124.18	39		P		PKPdf	15 22 38.3	-0.4
	baz=300								
GRF	Grafenberg Arr	124.20	330	*e*	PKPdf		PKiKP	15 22 39.1	+0.2
	baz=50,slow=2.0								
T58A	Grand View Acr	124.28	48		P		PKPdf	15 22 39.1	0.0
	baz=292								
K59A	Cooperstown	124.30	40		P		PKPdf	15 22 38.9	-0.1
	baz=299								
OBKA	Obir	124.34	325	*e*	P		PKPdf	15 22 37.8	-1.2
	comp=Z,6.1nm,1.0s								
R58B	Mineral	124.37	47		P		PKPdf	15 22 39.1	-0.1
	baz=294								
F60A	Warwick	124.41	36		P		PKPdf	15 22 38.2	-0.8
	baz=304								
I59A	Olmsteadville	124.41	39		P		PKPdf	15 22 38.5	-0.7
	baz=301								
L59A	Walton	124.46	41		P		PKPdf	15 22 38.4	-0.9
	baz=299								
W58A	Raeford	124.46	50		P		PKPdf	15 22 39.9	+0.2
	baz=291								
U58A	Oxford	124.48	49		P		PKiKP	15 22 39.6	-0.2
	baz=292								
M59A	Waymart	124.51	42		P		PKiKP	15 22 39.8	+0.1
	baz=298								
N59A	State Game Lan	124.58	43		P		PKiKP	15 22 39.7	-0.2
	baz=297								
KBA	Koelnbreinsper	124.69	326	*e*	P		PKPdf	15 22 37.2	-2.5
	comp=Z,15nm,1.2s								
I60A	Shoreham	124.75	38		P		PKiKP	15 22 39.9	-0.1
	baz=301								
MYKA	Terra Mystica	124.78	326	*e*	P		PKPdf	15 22 36.7	-3.1
	comp=Z,7.1nm,1.1s								
R59A	King George, V	124.82	46		P		PKiKP	15 22 41.0	+0.7
	baz=294								
BUG	Bochum--Univer	124.89	334	*e*	PKPdf		PKiKP	15 22 40.5	+0.4
	baz=50,slow=2.0								
F61A	St Evariste	124.95	35		P		PKiKP	15 22 40.5	0.0
	baz=305								
E61A	Lac Etchemin	124.98	34		P		PKPdf	15 22 39.9	-0.2
	baz=306								
T59A	Double "B" Far	125.00	48		P		PKPdf	15 22 40.3	-0.1
	baz=293								
N60A	Cedar Hill Far	125.05	42		P		PKPdf	15 22 39.8	-0.6
	baz=298								
O60A	Telford	125.10	43		P		PKiKP	15 22 40.7	-0.

ARAG	**Araguaiana, MT**	**149.15 132**	*e*P		**PKPdf**	**15 23 25.6**	**+0.7**
BSCB	**Bom Sucesso**	**149.72 149**	*e*P		**PKPdf**	**15 23 27.2**	**+1.3**
DUB01	**Friburgo-RJ**	**149.95 154**	*e*P		**PKPdf**	**15 23 25.8**	**-0.4**
NPGB	**Novo Progresso**	**150.69 114**	*e*P		**PKPdf**	**15 23 28.6**	**+1.1**
BDFB	**Brasilia**	**151.90 137**	PKP		**PKPdf**	**15 23 28.6**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=243,slow=2.3,SNR=2.1						
BDFB			PKPbc		**PKPbc**	**15 23 36.1**	**+0.1**
	comp=Z,7.6nm,0.8s,baz=188,slow=1.5,SNR=8.3						
BDFB			pPKPbc		**pPKPbc**	**15 24 13.8**	**-1.4**
	comp=Z,7.5nm,0.7s,baz=155,slow=3.3,SNR=3.6						
KOWA	**Kowa**	**154.08 293**	PKP		**PKPdf**	**15 23 31.7**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=219,slow=4.2,SNR=4.6						
KOWA			PKPbc		**PKPbc**	**15 23 39.6**	**-1.0**
	comp=Z,22nm,1.0s,baz=38,slow=0.7,SNR=28						
KOWA			PKPab		**PKPab**	**15 23 53.7**	**-1.0**
	comp=Z,7.9nm,0.6s,baz=92,slow=6.0,SNR=7.6						
KIC	**Kosan Boka**	**156.32 275**	*e*PKP1		**PKPab**	**15 24 03.8**	**-0.6**
	comp=Z,28nm,1.1s						
DBIC	**Dimbokro**	**156.42 275**	PKP		**PKPdf**	**15 23 34.6**	**-1.0**
	comp=Z,4.9nm,0.9s,baz=117,slow=3.3,SNR=3.2						
DBIC			PKPab		**PKPab**	**15 24 03.6**	**-1.2**
	comp=Z,5.7nm,0.7s,baz=84,slow=5.5,SNR=4.8						
TIC	**Toumodi**	**156.58 275**	*e*PKP1		**PKPab**	**15 24 04.8**	**-0.8**
LIC	**Lamto**	**156.61 274**	*e*PKP1		**PKPab**	**15 24 04.8**	**-0.9**
	comp=Z,49nm,1.1s						
ROSB	**Rosrio**	**162.57 116**	*e*P		**PKPdf**	**15 23 46.0**	**+3.3**
RCBR	**Riachuelo**	**167.04 145**	*e*P		**PKPdf**	**15 23 50.0**	**+3.4**

WEL 28 15:07:27.3, 43°S±4'×17°1E±1'2, h5km±7km, M2.3/8, mB5.1/1, ML2.1/6, MLv2.3/8, Mw(mB)4.4/1, Error ellipse: s-maj=0.0km s-min=0.0km az=82.2, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WVZ	**Waitaha Valley**	**0.14**	**315**	P	Pg	15 07 31.5	+1.4
GCSZ	**Gaunt Creek Bo**	**0.42**	**250**	P	Pb	15 07 37.0	-0.2
RPZ	**Rata Peaks**	**0.56**	**166**	P	Pn	15 07 41.4	-0.6
INZ	**Inchbonnie**	**0.62**	**44**	P	Pb	15 07 40.0	-0.5
MHCZ	**Mount Hutt**	**0.63**	**125**	P	Pb	15 07 41.3	+0.5
ARCZ	**Arundel**	**0.81**	**164**	P	Pn	15 07 45.0	-0.4
FOZ	**Fox Glacier**	**0.85**	**244**	P	Pb	15 07 45.0	+0.6
OXZ	**Oxford**	**0.87**	**101**	P	Pn	15 07 45.8	-0.4
RACZ	**Rakaia**	**1.08**	**121**	P	Pb	15 07 48.6	+0.2
LTZ	**Lake Taylor**	**1.10**	**70**	P	Pn	15 07 49.8	+0.3
LBZ	**Lake Benmore**	**1.31**	**202**	P	Pg	15 07 55.1	+2.6
DSZ	**Denniston Nort**	**1.58**	**26**	P	Pg	15 07 58.1	+0.5
WKZ	**Wanaka**	**2.13**	**218**	P	Pg	15 08 09.2	+1.1
TSZ	**Takapari Road**	**4.92**	**53**	P	Pn	15 08 42.9	+0.9
KRVZ	**Karewarewa**	**5.44**	**43**	P	Pn	15 08 51.3	+2.2

IDC 28 15:13:12.4±32.0, 6°41N×59°57E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.3/50, mbtmp3.7/3, Error ellipse: s-maj=851.0km s-min=73.4km az=117.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**40.17**	**69**	P	P	15 20 50.7	-0.1
	0.2nm,0.3s,baz=262,slow=9.9,SNR=4.5						
WRA	**Warramunga Arr**	**77.99**	**112**	P	P	15 25 13.0	-0.4
	0.9nm,1.0s,baz=285,slow=5.6,SNR=4.4						
ASAR	**Alice Springs**	**78.36**	**116**	P	P	15 25 15.7	+0.4
	1.0nm,0.9s,baz=282,slow=5.5,SNR=6.8						

EAF 28 15:13:19.7±1.9, 25°78S×29°57E, h10km, MD3.6, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
POGA	**Pongola**	**2.47**	**130**	*i* P	Pn	15 13 58.7	-1.3
POGA				*i* S	Sn	15 14 30.1	-0.2
POGA	**Pongola**	**2.47**	**130**	*i* P	Pn	15 13 58.7	-1.3
POGA				*i* S	Sn	15 14 30.1	-0.2
LBTB	**Lobatse**	**3.67**	**281**	*i* P	Pn	15 14 15.6	-1.2
LBTB				*i* S	Sn	15 14 59.0	-1.2
LBTB	**Lobatse**	**3.67**	**281**	*i* P	Pn	15 14 15.6	-1.2
LBTB				*i* S	Sn	15 14 59.0	-1.2
BOSA	**Boshof**	**4.77**	**233**	*i* P	Pn	15 14 29.7	-2.1
BOSA				*i* S	Sn	15 15 23.6	-3.5
BOSA	**Boshof**	**4.77**	**233**	*i* P	Pn	15 14 29.7	-2.1
BOSA				*i* S	Sn	15 15 23.6	-3.5
BLWY	**Bulawayo**	**5.68**	**351**	*i* P	Pn	15 14 44.0	-0.4
BLWY				*i* S	Sn	15 15 49.0	-0.7
BLWY	**Bulawayo**	**5.68**	**351**	*i* P	Pn	15 14 44.0	-0.4
BLWY				*i* S	Sn	15 15 49.0	-0.7

IDC 28 15:24:08.1±4.4, 5°19N×61°77E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.4/53, mbtmp3.8/4, MS3.1/1, Ms1 3.1/1, ms1mx2.6/48, Error ellipse: s-maj=118.7km s-min=41.6km az=81.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**18.19**	**351**	LR	LR	15 33 37.2	
	comp=Z,65nm,20.4s,baz=255,slow=31						
CMAR	**Chiang Mai Arr**	**38.60**	**67**	P	P	15 31 33.3	0.0
	0.2nm,0.3s,baz=253,slow=9.3,SNR=0.6						
MKAR	**Makanchi Array**	**45.07**	**20**	P	P	15 32 25.7	-0.2
	0.6nm,0.8s,baz=205,slow=6.4,SNR=3.8						
WRA	**Warramunga Arr**	**75.51**	**112**	P	P	15 35 54.8	-0.2
	1.6nm,1.0s,baz=288,slow=5.2,SNR=6.3						
ASAR	**Alice Springs**	**75.86**	**116**	P	P	15 35 57.3	+0.3
	1.5nm,0.9s,baz=286,slow=6.1,SNR=9.6						

IDC 28 15:32:37.0±1.7, 2°24N×126°84E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.2/58, mbtmp3.4/4, Error ellipse: s-maj=116.9km s-min=24.0km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.25**	**183**	P	P	15 37 14.3	+0.3
	0.8nm,0.5s,baz=5.3,slow=9.1,SNR=1.9						
WRA	**Warramunga Arr**	**23.24**	**162**	P	P	15 37 45.6	-0.5
	0.5nm,0.4s,baz=340,slow=11,SNR=9.5						
ASAR	**Alice Springs**	**26.65**	**165**	P	P	15 38 17.9	+0.2
	0.2nm,0.4s,baz=344,slow=8.8,SNR=10						
ASAR				PcP	PcP	15 41 41.9	-0.1
	0.4nm,1.1s,baz=356,slow=2.3,SNR=4.3						
MKAR	**Makanchi Array**	**58.84**	**326**	P	P	15 42 37.2	-0.3
	0.2nm,0.5s,baz=120,slow=7.9,SNR=6.4						

*NEIC **28** 15:38:04.9±1.9, 5°.2N±0°.2×60°.9E±0°.1, h10km±2km, mb4.2/10, Error ellipse: s-maj=32.9km s-min=12.6km az=223.0*

*IDC **28** 15:38:06.0±1.2, 5°.59N×61°.03E, h0km, mb3.7/11, mb1 3.8/11, mb1mx3.6/59, mbtmp3.7/11, MS3.9/6, Ms1 3.9/6, ms1mx3.6/21, Error ellipse: s-maj=33.1km s-min=22.1km az=43.0*

*GCMT **28** 15:38:09.9±0.3, 5°.69N±0°.02×61°.01E±0°.03, h18km±1km, MW4.9/88, Moment Tensor Solution. s16,c16; s88,c124; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.32±.17; Mθθ2.03±.12; Mθθ0.29±.10; Mrθ0.08±.23; Mθθ-0.49±.06; Mθr1.73±.31; Best double couple: M◎2.70100×10¹⁶ NP1:ϕs264.00000°, δ45.00000°, λ-129.00000°. NP2: ϕs132.00000°, δ57.00000°, λ-58.00000°. Principal axes: T 2.2040, Plg7.0000°, Azm200.0000°; N 1.0000, Plg26.0000°, Azm294.0000°; P -3.1980, Plg63.0000°, Azm97.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 15:38:06.8±1.2, 5°.4N±0°.2×61°.0E±0°.1, h10km, n28, σ1§26/23, mb3.8/16, MS3.8/3, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.85**	**353**	LR	LR	15 47 31.0	
	comp=Z,398nm,21.9s,baz=188,slow=32						
ATD	**Arta Tunnel**	**18.97**	**290**	LR	LR	15 49 13.6	
	comp=Z,126nm,18.2s,baz=63,slow=35						
PALK	**Pallekele**	**19.64**	**84**	LR	LR	15 48 34.3	
	comp=Z,369nm,18.8s,baz=16,slow=32						
RAYN	**Ar Rayn**	**23.39**	**322**	P	**P**	**15 43 15.3**	**-0.7**
OPO	**Ambohidratompo**	**27.49**	**209**	LR	LR	15 52 07.4	
	comp=Z,286nm,20.8s,baz=197,slow=30						
KBL	**Kabul**	**29.89**	**13**	P	**P**	**15 44 17.9**	**+2.8**
KBL					IAmb	IAmb	15 44 34.0
	comp=Z,3.8nm,0.9s						
BTK	**Batken**	**35.58**	**13**	P	**P**	**15 45 06.1**	**+1.6**
LSA	**Lhasa**	**37.28**	**46**	P	**P**	**15 45 18.8**	**-0.9**
LSA					IAmb	IAmb	15 45 34.9
	comp=Z,5.6nm,1.5s						
KKAR	**Karatay Array**	**38.44**	**11**	P	**P**	**15 45 28.4**	**-0.4**
AAK	**Ala-Archa**	**38.92**	**16**	P	**P**	**15 45 32.9**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=189,slow=13,SNR=1.9						
AAK	**Ala-Archa**	**38.92**	**16**	P	**P**	**15 45 33.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**39.18**	**67**	P	**P**	**15 45 35.5**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=256,slow=9.4,SNR=5.1						
CMAR					LR	LR	16 00 18.3
	comp=Z,97nm,21.3s,baz=330,slow=34						
CMAR	**Chiang Mai Arr**	**39.18**	**67**	P	**P**	**15 45 35.6**	**+0.3**
CHTO	**Chiang Mai**	**39.27**	**67**	P	**P**	**15 45 36.0**	**-0.1**
CHTO					IAmb	IAmb	15 45 55.7
	comp=Z,9.6nm,1.4s						
BRTR	**Keskin Array B**	**42.12**	**328**	P	**P**	**15 45 59.0**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=112,slow=10.0,SNR=2.7						
ABKAR	**Akbulak array**	**43.67**	**359**	P	**P**	**15 46 12.4**	**+0.6**
MAKZ	**Makanchi**	**45.00**	**20**	P	**P**	**15 46 23.1**	**+0.6**
MK31	**Makanchi Array**	**45.10**	**21**	P	**P**	**15 46 20.9**	**-2.4**
MK31					IAmb	IAmb	15 46 29.9
	comp=Z,2.8nm,1.1s						
MKAR	**Makanchi Array**	**45.10**	**21**	P	**P**	**15 46 21.7**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=215,slow=7.1,SNR=2.4						
ARU	**Arti**	**50.88**	**358**	P	**P**	**15 47 07.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=120,slow=8.1,SNR=1.2						
ZALV	**Zalesovo Beam**	**52.09**	**18**	P	**P**	**15 47 16.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=211,slow=5.0,SNR=2.4						
AKASG	**Akbulak Array Be**	**52.36**	**335**	P	**P**	**15 47 18.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=122,slow=6.9,SNR=2.0						
SONM	**Songino Array**	**57.26**	**35**	P	**P**	**15 47 55.1**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=249,slow=6.0,SNR=1.1						
TORD	**Torodi Ar. Bea**	**58.94**	**282**	P	**P**	**15 48 07.7**	**+0.8**
	comp=Z,0.6nm,0.8s,baz=119,slow=5.4,SNR=3.0						
WRA	**Warramunga Arr**	**76.29**	**112**	P	**P**	**15 49 57.3**	**+0.8**
	comp=Z,2.2nm,1.0s,baz=291,slow=5.4,SNR=7.7						
ASAR	**Alice Springs**	**76.63**	**116**	P	**P**	**15 49 59.9**	**+1.4**
	comp=Z,1.7nm,1.0s,baz=296,slow=4.3,SNR=10						
AS31	**Alice Springs**	**76.63**	**116**	P	**P**	**15 49 56.0**	**-2.5**
AS31					IAmb	IAmb	15 50 01.8
	comp=Z,1.9nm,1.3s						
VNDA	**Vanda**	**97.62**	**168**	LR	LR	16 31 45.9	
	comp=Z,108nm,18.4s,baz=323,slow=33						

IDC 28 15:39:26.2±4.5, 5°.69N×60°.75E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.4/61, mbtmp3.6/5, MS3.9/1, Ms1 3.9/1, ms1mx3.2/18, Error ellipse: s-maj=121.1km s-min=39.3km az=81.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**39.34**	**68**	P	P	15 46 57.5	-0.2
	0.5nm,0.3s,baz=266,slow=9.7,SNR=1.7						
AKTO	**Aktyubinsk**	**44.65**	**358**	LR	LR	16 05 17.3	
	comp=Z,141nm,21.9s,baz=142,slow=35						
MKAR	**Makanchi Array**	**44.96**	**21**	P	P	15 47 43.5	+0.3
	0.2nm,0.7s,baz=213,slow=7.7,SNR=1.3						
SONM	**Songino Array**	**57.21**	**35**	P	P	15 49 15.3	-0.1
	0.3nm,0.4s,baz=232,slow=7.1,SNR=1.7						
WRA	**Warramunga Arr**	**76.64**	**112**	P	P	15 51 19.1	-0.4
	1.2nm,0.9s,baz=290,slow=5.1,SNR=3.7						
ASAR	**Alice Springs**	**76.99**	**116**	P	P	15 51 21.8	+0.2
	1.0nm,0.8s,baz=289,slow=5.7,SNR=5.9						

IDC 28 15:48:02.7±2.2, 1°86N×126°26E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/44, mbtmp3.2/3, Error ellipse: s-maj=182.6km s-min=28.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.07**	**160**	P	P	15 53 10.0	-0.1
	0.2nm,0.4s,baz=339,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**26.44**	**164**	P	P	15 53 41.6	+0.2
	0.1nm,0.3s,baz=344,slow=12,SNR=7.9						
MKAR	**Makanchi Array**	**58.83**	**326**	P	P	15 58 03.0	-0.2
	0.5nm,0.9s,baz=120,slow=7.6,SNR=2.3						

*IDC **28** 15:51:23.9±0.5, 44°.43N×152°.49E, h0km, mb4.2/19, mb1 4.4/25, mb1mx4.2/53, mbtmp4.2/25, ML3.4/6, MS3.1/3, Ms1 3.1/3, ms1mx2.6/47, Error ellipse: s-maj=16.9km s-min=12.7km az=151.0*

*SKHL **28** 15:51:27.8±0.6, 44°.29N×152°.37E, h49km±8km, mb4.7/7*

*NEIC **28** 15:51:28.7±1.5, 44°.5N±0°.1×152°.5E±0°.1, h30km±5km, mb4.7/48, Error ellipse: s-maj=18.8km s-min=11.4km az=137.0*

*MOS **28** 15:51:28.2±1.3, 44°.39N×152°.32E, h47km, mb4.7/22, MS3.4/6, Error ellipse: s-maj=7.6km s-min=7.3km az=148.7*

*JMA **28** 15:51:28.1±0.6, 44°.79N×152°.21E, h30km, M4.5*

*NIED **28** 15:51:28.1, 44°.79N×152°.21E, h30km, MW4.4, Moment Tensor Solution. s3 Moment tensor: Scale 10¹⁵Nm; Mrr1.61; Mθθ-1.53; Mφφ-0.09; Mrθ3.95; Mθφ-0.24; Mφr0.32; Fault plane solution: M◎4.27000×10¹⁵ NP1:ϕs85.00000°, δ79.00000°, λ92.00000°. NP2:ϕs257.00000°, δ11.00000°, λ82.00000°.*

ISC 28 15:51:27.8±0.5, 44°39N±0°.06×152°43E±0°.05, h25km, n198, σ1§80/215, mb4.6/57, MS3.7/8, 9C-13D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.35**	**286**	*e*P	**Pn**	**15 52 17.4**	**-1.1**
KUR				AMB	AMB	15 52 19.0	
	70nm,0.3s						
KUR				*e*S	**Sn**	**15 52 54.6**	**-2.9**
KUR				A	A	15 52 57.7	
	246nm,0.2s						
KUR				A	A	15 52 57.7	
	341nm,0.2s						
KUR	**Kuril'sk**	**3.35**	**286**	*e*PN	**Pn**	**15 52 17.6**	**-0.9**
KUR				*i* S	**Sn**	**15 52 55.3**	**-2.2**
KUR				pmax	pmax		
	comp=Z,70nm,0.4s						
KUR				pmax	pmax		
	comp=N,16nm,0.3s						
KUR				pmax	pmax		
	comp=E,27nm,0.3s						
KUR				smax	smax		
	comp=N,155nm,0.2s						
KUR				smax	smax		
	comp=E,274nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.73**	**268**	*e*P	**Pn**	**15 52 37.4**	**-0.1**
YUK				AMB	AMB	15 52 40.0	
	comp=E,114nm,0.3s						
YUK				*e*S	**Sn**	**15 53 29.2**	**-2.3**
YUK				A	A	15 53 32.0	
	comp=E,80nm,0.3s						
YUK				A	A	15 53 32.0	
	comp=E,314nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.73**	**268**	PN	**Pn**	**15 52 38.7**	**+1.2**
YUK				pmax	pmax		
	comp=Z,114nm,0.2s						
YUK				pmax	pmax		
	comp=N,37nm,0.1s						
YUK				pmax	pmax		
	comp=E,43nm,0.1s						
GRPR	**Tuman**	**4.80**	**268**	*e*P	**Pn**	**15 52 37.5**	**-0.9**
GRPR				AMB	AMB	15 52 40.0	
	comp=E,85nm,0.3s						
GRPR				*e*S	**Sn**	**15 53 30.7**	**-2.5**
GRPR				A	A	15 53 33.0	
	comp=E,295nm,0.4s						
GRPR				A	A	15 53 33.0	
	comp=E,148nm,0.4s						
GRPR	**Tuman**	**4.80**	**268**	PN	**Pn**	**15 52 36.8**	**-1.6**
GRPR				pmax	pmax		
	comp=Z,85nm,0.3s						
NEM2	**Nemuro 2**	**4.94**	**260**	P	**Pn**	**15 52 38.4**	**-1.9**
NEM2				*e*S	**Sn**	**15 53 29.3**	**-7.3**
NMR	**Nemuro--Hokkai**	**4.95**	**260**	*e*P	**Pn**	**15 52 38.0**	**-2.4**
NMR	**Nemuro--Hokkai**	**4.95**	**260**	*e*PN	**Pn**	**15 52 38.6**	**-1.8**
GLVR	**Golovnino**	**5.02**	**265**	*e*P	**Pn**	**15 52 40.0**	**-1.4**
GLVR				*e*S	**Sn**	**15 53 33.0**	**-5.6**
GLVR				A	A	15 53 39.0	
	comp=Z,187nm,0.4s						
GLVR				A	A	15 53 39.0	
	comp=Z,407nm,0.4s						

GLVR	**Golovnino**	**5.02**	**265**	*e*PN	**Pn**	**15 52 40.5**	**-0.9**
RUSJ	**Misakicho**	**5.17**	**269**	*e*PN	**Pn**	**15 52 43.4**	**0.0**
JRA	**Rausu**	**5.27**	**268**	P	**Pn**	**15 52 44.9**	**0.0**
JRA				*e*S	**Sn**	**15 53 41.0**	**-3.8**
JNK	**Nakash**	**5.62**	**264**	P	**Pn**	**15 52 48.9**	**-0.8**
JNK				*e*S	**Sn**	**15 53 48.4**	**-5.0**
JAK	**Akkeshi**	**5.77**	**259**	P	**Pn**	**15 52 50.0**	**-1.8**
JAK				*e*S	**Sn**	**15 53 51.4**	**-5.8**
JTKR	**Abashiri--Toko**	**6.14**	**269**	P	**Pn**	**15 52 56.8**	**0.0**
JTKR				*e*S	**Sn**	**15 54 07.2**	**+1.0**
JAR	**Ashorobuto**	**6.35**	**263**	P	**Pn**	**15 52 59.2**	**-0.6**
JAR				*e*S	**Sn**	**15 54 06.5**	**-5.0**
JOB	**Onbets**	**6.41**	**260**	P	**Pn**	**15 52 59.2**	**-1.3**
JMP	**Maruseppu**	**6.53**	**270**	P	**Pn**	**15 53 02.3**	**+0.1**
SKR	**Severo-Kuril's**	**6.78**	**20**	*e*P	**Pn**	**15 53 07.8**	**+2.3**
SKR				AMB	AMB	15 53 08.6	
	comp=E,65nm,0.5s						
SKR				*e*S	**Sn**	**15 54 20.1**	**-1.7**
SKR				A	A	15 54 21.0	
	comp=Z,50nm,0.8s						
SKR				A	A	15 54 21.0	
	comp=E,86nm,0.8s						
SKR	**Severo-Kuril's**	**6.78**	**20**	*e*PN	**Pn**	**15 53 02.2**	**-3.3**
SKR				pmax	pmax		
	comp=E,65nm,0.5s						
JCH	**Churui**	**6.83**	**258**	P	**Pn**	**15 53 04.9**	**-1.3**
JCH				*e*S	**Sn**	**15 54 18.5**	**-4.6**
JKK2	**Kamakawa 2**	**6.98**	**269**	P	**Pn**	**15 53 09.9**	**+1.5**
JSE	**Soyaes**	**7.04**	**278**	P	**Pn**	**15 53 09.8**	**+0.6**
JKA	**Kamikawa-asahi**	**7.06**	**271**	*e*P	**Pn**	**15 53 10.3**	**+0.8**
JKA	**Kamikawa-asahi**	**7.06**	**271**	Pn	**Pn**	**15 53 09.9**	**+0.4**
ASAJ	**Asahikawa**	**7.06**	**271**	Pn	**Pn**	**15 53 10.3**	**+0.8**
	comp=Z,2.4nm,0.3s,baz=42,slow=12,SNR=39						
ASAJ				Sn	**Sn**	**15 54 35.1**	**+6.1**
	baz=204,slow=33,SNR=1.3						
JEM	**Erimo**	**7.17**	**254**	Pn	**Pn**	**15 53 11.4**	**+0.4**
ERM	**Erimo**	**7.18**	**254**	*e*PN	**Pn**	**15 53 11.3**	**+0.3**
ERM	**Erimo**	**7.18**	**254**	Pn	**Pn**	**15 53 11.7**	**+0.7**
JFR	**Furan**	**7.22**	**264**	P	**Pn**	**15 53 12.7**	**+1.0**
YSS	**Yuzh-Sakhalins**	**7.25**	**294**	*e*P	**Pn**	**15 53 13.5**	**+1.5**
YSS				AMB	AMB	15 53 16.7	
	comp=Z,10.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.25**	**294**	*e*PN	**Pn**	**15 53 14.6**	**+2.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,12.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
JNBK	**Urakawa-nobuka**	**7.36**	**257**	P	**Pn**	**15 53 12.6**	**-1.0**
JNBK				*e*S	**Sn**	**15 54 31.2**	**-5.0**
JBT2	**Biratori 2**	**7.48**	**261**	P	**Pn**	**15 53 14.3**	**-0.9**
JWK2	**Keihoku**	**7.54**	**281**	P	**Pn**	**15 53 18.5**	**+2.5**
PAU	**Pauzhetka**	**7.67**	**21**	*e*P	**Pn**	**15 53 19.0**	**+1.2**
PAU				AMB	AMB	15 53 19.5	
	comp=E,30nm,0.4s						
PAU				*e*S	**Sn**	**15 54 41.7**	**-2.1**
PAU				A	A	15 54 42.3	
	comp=E,130nm,0.3s						
PAU				A	A	15 54 42.3	
	comp=E,90nm,0.3s						
JNB	**Noboribetsu**	**8.51**	**261**	P	**Pn**	**15 53 28.2**	**-1.1**
JNB				*e*S	**Sn**	**15 54 59.1**	**-5.3**
JKB	**Kayabe**	**8.70**	**257**	P	**Pn**	**15 53 30.3**	**-1.6**
JKB				*e*S	Sn	15 54 59.1	-10
JTH	**Tanohata**	**9.01**	**244**	*e*S	Sn	15 55 05.8	-11
JANG	**Nango**	**9.01**	**247**	P	**Pn**	**15 53 33.3**	**-3.0**
JANG				*e*S	Sn	15 55 07.1	-10
JTM	**Tenmabayashi**	**9.12**	**251**	P	**Pn**	**15 53 35.4**	**-2.3**
TYV	**Tymovskoe**	**9.24**	**318**	*e*P	**Pn**	**15 53 40.6**	**+1.3**
TYV				AMB	AMB	15 54 01.8	
	comp=E,20nm,1.0s						
TYV	**Tymovskoe**	**9.24**	**318**	*e*PN	Pn	15 54 00.6	+21
TYV				pmax	pmax		
	comp=Z,20nm,1.4s						
TYV				pmax	pmax		
	comp=Z,400nm,4.3s						
PEA0B	**Petropavlovsk-**	**9.39**	**20**	PN	**Pn**	**15 53 39.0**	**-2.4**
PEA0B	**Petropavlovsk-**	**9.39**	**20**	Pn	**Pn**	**15 53 39.0**	**-2.4**
PETK	**Petropavlovsk-**	**9.39**	**20**	Pn	**Pn**	**15 53 38.7**	**-2.7**
	comp=Z,1.1nm,0.3s,baz=182,slow=12,SNR=38						
PETK				LR	LR	15 57 53.8	
	comp=Z,55nm,19.0s,baz=174,slow=42						
PETK	**Petropavlovsk-**	**9.39**	**20**	PN	**Pn**	**15 53 38.8**	**-2.6**
PETK	**Petropavlovsk-**	**9.39**	**20**		**Pn**	**15 53 38.8**	**-2.6**
PET	**Petropavlovsk**	**9.57**	**23**	*e*P	**Pn**	**15 53 43.8**	**0.0**
PET	**Petropavlovsk**	**9.57**	**23**	‖*e*PN	**Pn**	**15 53 43.8**	**0.0**
OKH	**Okha**	**11.08**	**329**	*e*P	**Pn**	**15 54 07.1**	**+2.6**
MJAR	**Matsushiro Arr**	**13.35**	**239**	Pn	**Pn**	**15 54 33.9**	**-1.7**
	comp=Z,0.0nm,0.3s,baz=66,slow=13,SNR=5.1						
MAJO	**Matsushiro**	**13.35**	**239**	‖*e*PN	**Pn**	**15 54 35.7**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
USRK	**Ussuriysk Ar.**	**14.64**	**276**	Pn	**Pn**	**15 54 51.9**	**-1.2**
	baz=81,slow=14,SNR=11						
KLR	**Kul'dur**	**14.95**	**296**	Pn	**Pn**	**15 54 58.3**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=316,slow=22,SNR=1.6						
KLR				LR	LR	16 01 28.7	
	comp=Z,47nm,19.7s,baz=84,slow=40						
KLR	**Kul'dur**	**14.95**	**296**	*e*P	**Pn**	**15 54 57.5**	**+0.2**
KLR

TIXI	**Tiksi**	**29.61**	**345**	⇓	*eP*		**P**		**15 57 32.4**	**+1.9**
TIXI					MLR		MLR			
	comp=Z,180nm,18.0s									
HHC	**Hu-ho-hao-te**	**30.05**	**278**		*eP*		**P**		**15 57 36.0**	**+1.1**
HHC					pmax		pmax			
	comp=Z,17nm,0.8s									
HHC					pmax		pmax			
	comp=Z,160nm,4.5s									
HHC					LR		LR			
	comp=N,310nm,13.2s									
HHC					LR		LR			
	comp=E,230nm,12.8s									
HHC					LR		LR			
	comp=Z,230nm,12.7s									
SONM	**Songino Array**	**31.73**	**293**		P		**P**		**15 57 49.7**	**0.0**
	comp=Z,1.0nm,0.7s,baz=72,slow=8.9,SNR=2.7									
TLY	**Talaya**	**32.90**	**300**		*eP*		**P**		**15 58 01.0**	**+1.3**
TLY	**Talaya**	**32.90**	**300**	⇓	*eP*		**P**		**15 58 01.0**	**+1.3**
TLY					pmax		pmax			
	comp=Z,2.0nm,0.8s									
TLY					MLR		MLR			
	comp=Z,157nm,20.0s									
ZAK	**Zakamensk**	**33.30**	**298**		*eP*		**P**		**15 58 03.0**	**-0.3**
ZAK	**Zakamensk**	**33.30**	**298**		*eP*		**P**		**15 58 03.0**	**-0.3**
ZAK					pmax		pmax			
	comp=Z,4.0nm,1.0s									
IMAR	**Indian Mountai**	**35.98**	**34**		P		**P**		**15 58 25.8**	**-0.3**
KDAK	**Kodiak Island**	**36.00**	**48**		P		**P**		**15 58 24.4**	**-2.0**
KDAK					pmax		pmax			
	comp=Z,49nm,1.7s									
KDAK	**Kodiak Island**	**36.00**	**48**		P		**P**		**15 58 24.4**	**-2.0**
A21K	**Barrow**	**36.35**	**25**		P		**P**		**15 58 28.8**	**-0.3**
A21K					IAmb		IAmb		15 58 55.0	
	comp=Z,12nm,1.0s									
KTH	**Kantishna Hill**	**36.89**	**39**		P		**P**		**15 58 34.9**	**+0.9**
KTH					IAmb		IAmb		15 58 35.6	
	comp=Z,14nm,0.9s									
BPAW	**Bear Paw Mtn.**	**36.90**	**38**		P		**P**		**15 58 33.4**	**-0.7**
LZH	**Lanzhou**	**37.53**	**274**		*eP*		**P**		**15 58 41.5**	**+1.6**
LZH					pP		pwP		15 58 51.3	-2.2
LZH					sP		sP		15 58 55.5	+7.6
LZH					*e*PP		**PnPn**		**16 00 11.3**	**+4.8**
LZH					pmax		pmax			
	comp=Z,24nm,1.3s									
LZH					pmax		pmax			
	comp=Z,110nm,5.5s									
LZH					LR		LR			
	comp=N,330nm,13.2s									
LZH					LR		LR			
	comp=E,350nm,13.4s									
LZH					LR		LR			
	comp=Z,460nm,16.5s									
COLD	**Coldfoot**	**37.57**	**33**		P		**P**		**15 58 38.9**	**-0.7**
BWN	**Browne**	**37.57**	**38**		P		**P**		**15 58 40.4**	**+0.7**
RND	**Reindeer**	**37.81**	**39**		P		**P**		**15 58 41.5**	**-0.3**
RND					pmax		pmax			
	comp=Z,9.0nm,0.9s									
RND	**Reindeer**	**37.81**	**39**		P		**P**		**15 58 41.5**	**-0.3**
RND					IAmb		IAmb		15 58 42.3	
	comp=Z,8.6nm,0.9s									
KNK	**Knik Glacier**	**37.98**	**42**		P		**P**		**15 58 42.5**	**-0.8**
KNK					IAmb		IAmb		15 58 43.9	
	comp=Z,11nm,0.8s									
TOLK	**Toolik Lake Re**	**38.02**	**30**		P		**P**		**15 58 44.2**	**+0.7**
SML	**Sawmill**	**38.04**	**41**		P		**P**		**15 58 44.0**	**+0.3**
MDM	**Murphy Dome**	**38.15**	**36**		P		**P**		**15 58 45.0**	**+0.4**
MDM					IAmb		IAmb		15 58 46.0	
	comp=Z,14nm,1.3s									
WRH	**Wood River Hil**	**38.19**	**37**		P		**P**		**15 58 44.8**	**-0.1**
COLA	**College**	**38.31**	**37**	⇑	*eP*		**P**		**15 58 46.6**	**+0.8**
COLA					pmax		pmax			
	comp=Z,6.0nm,0.9s									
CCB	**Clear Creek Bu**	**38.32**	**37**		P		**P**		**15 58 46.2**	**+0.2**
DHY	**Denali Highway**	**38.47**	**39**		P		**P**		**15 58 47.1**	**-0.4**
POKR	**Poker Plat Res**	**38.49**	**36**		P		**P**		**15 58 48.4**	**+0.9**
POKR					IAmb		IAmb		15 58 49.1	
	comp=Z,12nm,0.7s									
SCM	**Sheep Creek Mo**	**38.51**	**41**		P		**P**		**15 58 47.6**	**-0.2**
SCM					pmax		pmax			
	comp=Z,12nm,0.9s									
SCM	**Sheep Creek Mo**	**38.51**	**41**		P		**P**		**15 58 47.6**	**-0.2**
SCM					IAmb		IAmb		15 58 48.7	
	comp=Z,12nm,0.9s									
IL31		**38.72**	**37**		P		**P**		**15 58 48.3**	**-1.0**
IL31					IAmb		IAmb		15 58 54.0	
	comp=Z,27nm,2.0s									
ILAR	**Eielson Array**	**38.72**	**37**		P		**P**		**15 58 48.9**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=253,slow=8.5,SNR=35									
GTA	**Gaotai**	**38.92**	**282**	⇑	P		**P**		**15 58 52.8**	**+1.3**
GTA					pP		sP		15 59 00.0	+0.5
GTA					sP		pwP		15 59 04.5	-0.5
GTA					pmax		pmax			
	comp=Z,3.0nm,0.9s									
GTA					pmax		pmax			
	comp=Z,65nm,5.3s									
GTA					LR		LR			
	comp=N,110nm,14.9s									
GTA					LR		LR			
	comp=E,110nm,15.3s									
GTA					LR		LR			
	comp=Z,130nm,16.0s									
M24K	**Tolsona, Glenn**	**39.05**	**41**		P		**P**		**15 58 51.9**	**-0.3**
KLU	**Klutina**	**39.20**	**42**		P		**P**		**15 58 51.2**	**-2.3**
BMAR	**Burnt Mountain**	**39.76**	**33**		P		**P**		**15 58 59.0**	**+0.9**
N25K	**Chitina, Valde**	**39.82**	**42**		P		**P**		**15 58 58.4**	**-0.3**
N25K					IAmb		IAmb		15 59 19.9	
	comp=Z,21nm,1.9s									
VRDI	**Verde Repeater**	**40.41**	**42**		P		**P**		**15 59 03.9**	**+0.2**
NRIK	**Noril'sk**	**40.55**	**330**	⇑	*eP*		**P**		**15 59 07.5**	**+3.0**
NRIK					pmax		pmax			
	comp=Z,5.0nm,1.4s									
CRQM	**Cirque**	**40.61**	**43**		P		**P**		**15 59 04.8**	**-0.6**
CRQM					IAmb		IAmb		15 59 07.1	
	comp=Z,23nm,1.1s									
TGL	**Tana Glacier**	**40.76**	**43**		P		**P**		**15 59 06.9**	**+0.4**
K27K	**Chicken**	**40.82**	**38**		P		**P**		**15 59 07.5**	**+0.7**
K27K					IAmb		IAmb		15 59 08.6	
	comp=Z,13nm,0.9s									
BCAR	**Beaver Creek A**	**41.02**	**39**		P		**P**		**15 59 08.2**	**-0.3**
BARN	**Barnard Glacie**	**41.29**	**42**		P		**P**		**15 59 11.2**	**+0.3**
CTGM	**Chitina Glacie**	**41.46**	**42**		P		**P**		**15 59 12.9**	**+0.7**
CTGM					IAmb		IAmb		15 59 13.8	
	comp=Z,9.1nm,0.7s									
TABL	**Table Mountain**	**41.62**	**43**		P		**P**		**15 59 13.5**	**-0.2**
TABL					IAmb		IAmb		16 00 03.3	
	comp=Z,21nm,1.2s									
ZALV	**Zalesovo Beam**	**43.64**	**308**		P		**P**		**15 59 29.3**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=61,slow=8.1,SNR=5.8									
ZALV					PcP		**PcP**		**16 01 15.6**	**-1.2**
	comp=Z,1.4nm,0.7s,baz=92,slow=3.6,SNR=5.2									
INK	**Inuvik**	**43.91**	**31**		P		**P**		**15 59 32.5**	**+0.6**
	comp=Z,13nm,0.8s,baz=285,slow=6.5,SNR=30									
INK	**Inuvik**	**43.91**	**31**		P		**P**		**15 59 32.5**	**+0.6**
INK					pmax		pmax			
	comp=Z,11nm,0.8s									
INK	**Inuvik**	**43.91**	**31**		P		**P**		**15 59 32.5**	**+0.6**
INK					IAmb		IAmb		15 59 33.6	
	comp=Z,11nm,0.8s									
WMQ	**Urumqi**	**45.37**	**293**		*eP*		**P**		**15 59 46.5**	**+2.5**
C36M	**Paulatuk**	**47.12**	**29**		P		**P**		**15 59 57.5**	**+0.3**
MK31	**Makanchi Array**	**47.63**	**299**		*c iP*		**P**		**16 00 02.1**	**+0.5**
MK31	**Makanchi Array**	**47.63**	**299**		P		**P**		**16 00 00.9**	**-0.7**
MKAR	**Makanchi Array**	**47.63**	**299**		P		**P**		**16 00 02.4**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=77,slow=7.3,SNR=10									
MKAR					PcP		**PcP**		**16 01 30.7**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=53,slow=3.2,SNR=6.8									
MKAR	**Makanchi Array**	**47.63**	**299**		*eP*		**P**		**16 00 02.5**	**+0.9**
MKAR	**Makanchi Array**	**47.63**	**299**		P		**P**		**16 00 02.2**	**+0.6**
KURK	**Kurchatov**	**48.30**	**305**		*eP*		**P**		**16 00 07.0**	**+0.4**
KURK	**Kurchatov**	**48.30**	**305**		*de*P		**P**		**16 00 07.0**	**+0.4**
KURK					pmax		pmax			
	comp=Z,9.0nm,1.3s									
KURK	**Kurchatov**	**48.30**	**305**		P		**P**		**16 00 07.1**	**+0.4**
KURK					IAmb		IAmb		16 00 10.7	
	comp=Z,5.5nm,0.8s									
CMAR	**Chiang Mai Arr**	**51.37**	**258**		P		**P**		**16 00 31.7**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=39,slow=7.3,SNR=11									
CMAR	**Chiang Mai Arr**	**51.37**	**258**		*ce*P		**P**		**16 00 32.0**	**+1.6**
CMAR					pmax		pmax			
	comp=Z,1.0nm,0.8s									
BRVK	**Borovoye**	**52.05**	**311**		*eP*		**P**		**16 00 35.6**	**+0.6**
BRVK	**Borovoye**	**52.05**	**311**		*de*P		**P**		**16 00 35.6**	**+0.6**
BRVK					pmax		pmax			
	comp=Z,7.0nm,1.7s									
YKA	**Yellowknife Ar**	**53.12**	**35**		P		**P**		**16 00 42.9**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=298,slow=7.3,SNR=12									
KSH	**Kashi**	**55.13**	**294**		*eP*		**P**		**16 01 02.5**	**+4.5**
KSH					pmax		pmax			
	comp=Z,6.0nm,0.5s									
KSH					pmax		pmax			
	comp=Z,370nm,6.7s									
ARU	**Arti**	**56.44**	**318**		*eP*		**P**		**16 01 06.6**	**-0.3**
ARU	**Arti**	**56.44**	**318**		*d iP*		**P**		**16 01 06.7**	**-0.2**
ARU									16 03 14.5	
ARU					S		**S**		**16 08 56.4**	**+0.3**
ARU					SS		**SS**		**16 12 43.1**	**+0.4**
ARU					pmax		pmax			
	comp=Z,19nm,2.6s									
ABKAR	**Akbulak array**	**59.58**	**311**		P		**P**		**16 01 29.9**	**+0.8**
ABKAR					IAmb		IAmb		16 01 30.2	
	comp=Z,4.5nm,0.6s									
ABKAR	**Akbulak array**	**59.58**	**311**		P		**P**		**16 01 29.7**	**+0.6**
ARCES	**ARCESS Array B**	**59.93**	**341**		P		**P**		**16 01 30.7**	**-0.5**
	comp=Z,4.8nm,0.9s,baz=40,slow=7.1,SNR=1.9									
FFC	**Flin Flon**	**62.87**	**39**		P		**P**		**16 01 49.8**	**-1.4**
FFC					pmax		pmax			
	comp=Z,10.0nm,1.1s									
FFC	**Flin Flon**	**62.87**	**39**		P		**P**		**16 01 49.8**	**-1.4**
NVAR	**Mina Array Bea**	**63.98**	**61**		P		**P**		**16 01 58.9**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=293,slow=6.9,SNR=12									
NVAR	**Mina Array Bea**	**63.98**	**61**		P		**P**		**16 01 57.2**	**-1.9**
BELG	**Belogornoye**	**63.98**	**319**	⇑	*i*P		**P**		**16 01 59.2**	**+0.6**
BELG					pmax		pmax			
	comp=Z,2.0nm,0.9s									
TPAW	**Teton Pass**	**65.30**	**53**		P		**P**		**16 02 08.5**	**+0.8**
TPAW					IAmb		IAmb		16 02 09.9	
	comp=Z,7.1nm,0.8s									
R11A	**Troy Canyon, C**	**65.72**	**60**		P		**P**		**16 02 09.2**	**-1.2**
WB0	**Warramunga Arr**	**65.94**	**199**		P		**P**		**16 02 11.0**	**-0.6**
FINES	**FINESS Array B**	**65.97**	**335**		P		**P**		**16 02 10.8**	**-0.5**
	comp=Z,3.7nm,0.7s,baz=44,slow=5.8,SNR=11									
FINES	**FINESS Array B**	**65.97**	**335**		P		**P**		**16 02 11.0**	**-0.4**
WRA	**Warramunga Arr**	**66.12**	**199**		P		**P**		**16 02 12.9**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=16,slow=6.8,SNR=15									
WRA	**Warramunga Arr**	**66.12**	**199**		P		**P**		**16 02 12.2**	**-0.6**
TPNV	**Topopah Spring**	**66.17**	**61**		P		**P**		**16 02 11.4**	**-2.0**
TPNV					pmax		pmax			
	comp=Z,8.0nm,1.4s									
TPNV	**Topopah Spring**	**66.17**	**61**		P		**P**		**16 02 11.4**	**-2.0**
TPNV					IAmb		IAmb		16 02 14.7	
	comp=Z,8.4nm,1.4s									
DUG	**Dugway, Tooele**	**66.26**	**57**		P		**P**		**16 02 13.3**	**-0.5**
DUG					pmax		pmax			
	comp=Z,15nm,1.7s									
DUG	**Dugway, Tooele**	**66.26**	**57**		P		**P**		**16 02 13.3**	**-0.5**
DUG					IAmb		IAmb		16 02 16.0	
	comp=Z,15nm,1.7s									
BW06	**Boulder Array**	**66.55**	**53**		P		**P**		**16 02 14.7**	**-1.0**
BW06					IAmb		IAmb		16 02 16.7	
	comp=Z,5.8nm,1.1s									
PDAR	**Pinedale Array**	**66.55**	**53**		P		**P**		**16 02 15.1**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=279,slow=2.9,SNR=12									
PDAR	**Pinedale Array**	**66.55**	**53**		P		**P**		**16 02 14.1**	**-1.6**
OBN	**Obninsk**	**66.99**	**326**		*eP*		**P**		**16 02 18.6**	**+0.6**
OBN	**Obninsk**	**66.99**	**326**	⇓	*eP*		**P**		**16 02 18.6**	**+0.6**
OBN					*i*				16 04 44.3	
OBN					*e*S		**S**		**16 11 05.9**	**-3.6**
OBN					pmax		pmax			
	comp=Z,24nm,1.7s									
OBN					MLR		MLR			
	comp=Z,37nm,17.0s									
RDMU	**Red Mountain**	**67.94**	**54**		P		**P**		**16 02 24.9**	**+0.3**
LCMT	**Little Creek M**	**68.01**	**59**		P		**P**		**16 02 25.1**	**+0.1**
SRU	**San Rafael Swe**	**68.31**	**56**		P		**P**		**16 02 26.5**	**-0.4**
SRU					pmax		pmax			
	comp=Z,8.0nm,0.8s									
SRU	**San Rafael Swe**	**68.31**	**56**		P		**P**		**16 02 26.5**	**-0.4**
ULM	**Lac du Bonnet**	**68.64**	**40**		P		**P**		**16 02 27.8**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=318,slow=7.7,SNR=2.9									
ASAR	**Alice Springs**	**69.81**	**198**		P		**P**		**16 02 36.5**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=18,slow=6.5,SNR=10									
ASAR	**Alice Springs**	**69.81**	**198**		P		**P**		**16 02 37.2**	**+1.2**
NB2	**NORSAR Array B**	**70.31**	**341**		P		**P**		**16 02 38.5**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=26,slow=6.5									
NOA	**NORSAR Array B**	**70.31**	**341**		P		**P**		**16 02 38.2**	**-0.5**
	comp=Z,2.4nm,0.9s,baz=27,slow=6.2,SNR=6.1									
KBZ	**Khabaz**	**72.16**	**314**		P		**P**		**16 02 51.0**	**+1.0**
	comp=Z,5.3nm,0.8s,baz=72,slow=2.1,SNR=11									
KBZ	**Khabaz**	**72.16**	**314**		*de*P		**P**		**16 02 51.1**	**+1.0**
KBZ					pmax		pmax			
	comp=Z,7.0nm,0.9s									
AKASG	**Malin Array Be**	**73.24**	**326**		P		**P**		**16 02 56.0**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=34,slow=6.2,SNR=12									
AKASG					LR		LR		16 38 04.8	
	comp=Z,31nm,18.3s,baz=40,slow=38									
ANMO	**Albuquerque**	**73.50**	**57**	⇓	*eP*		**P**		**16 02 59.0**	**+0.5**
ANMO					pmax		pmax			
	comp=Z,6.0nm,1.4s									
GNI	**Garni**	**73.69**	**310**	⇓	*eP*		**P**		**16 03 02.2**	**+2.7**
GNI					pmax		pmax			
	comp=Z,29nm,4.6s									
MNTX	**Cornudas Mount**	**76.38**	**59**		P		**P**		**16 03 15.1**	**+0.1**
TX31	**Lajitas Ar. Si**	**79.09**	**60**		P		**P**		**16 03 30.6**	**+0.4**
TX32	**Lajitas Array**	**79.09**	**60**		P		**P**		**16 03 30.5**	**+0.3**
TX32					IAmb		IAmb		16 03 31.1	
	comp=Z,5.6nm,0.7s									
TXAR	**Lajitas Array**	**79.09**	**60**		P		**P**		**16 03 30.2**	**+0.1**
	comp=Z,5.1nm,0.6s,baz=303,slow=4.0,SNR=72									
TXAR	**Lajitas Array**	**79.09**	**60**		P		**P**		**16 03 30.4**	**+0.2**
GERES	**GERESS Array B**	**80.36**	**334**		P		**P**		**16 03 36.6**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=22,slow=7.4,SNR=4.0									
DGAR	**Diego Garcia**	**88.03**	**258**	⇓	*eP*		**P**		**16 04 18.3**	**+2.3**
VNDA	**Vanda**	**121.77**	**178**		PKP		**PKPdf**		**16 10 18.1**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=304,slow=3.9,SNR=3.8									
BDFB	**Brasilia**	**146.52**	**38**		PKPbc		**PKPbc**		**16 11 06.6**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=181,slow=1.8,SNR=3.9									
PLCA	**Paso Flores**	**148.40**	**99**		PKPbc		**PKPbc**		**16 11 11.5**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=261,slow=6.1,SNR=3.6									
CPUP	**Villa Florida**	**150.01**	**63**		PKPbc		**PKPbc**		**16 11 15.4**	**-0.6**
	comp=Z,1.6nm,0.7s,baz=355,slow=3.5,SNR=4.2									
SNAA	**Sanae**	**150.15**	**195**		PKiKP		**PKPbc**		**16 11 14.9**	**-0.1**
VNA2	**Neumayer--Watz**	**151.59**	**194**		PKiKP		**PKPbc**		**16 11 18.5**	**+0.2**
	baz=121,slow=1.6									
VNA3	**Neumayer Olymp**	**151.68**	**192**		PKiKP		**PKPbc**		**16 11 18.5**	**-0.1**
VNA1	**Neumayer--Stat**	**151.98**	**194**		PKiKP		**PKiKP**		**16 11 19.7**	**+0.1**

*IDC **28** 16:00:15.8±0.7, 9.85S×126.89E, h0km, mb4.1/10, mb1 4.2/14, mb1mx4.1/34, mbtmp4.1/14, ML4.2/4, MS3.2/5, Ms1 3.2/5, ms1mx2.8/43, Error ellipse: s-maj=21.4km s-min=15.1km az=66.0*

*DJA **28** 16:00:19.5±0.3, 10.3S×12.7E, h10km, M4.6/13, mB5.1/6, mb4.8/13, MLv4.5/12, Mw(mB)4.5/6*

ISC 28 16:00:20.3±0.5, 10.08S±0.06×126.92E±0.06, h35km, n45, σ1s69/47, mb4.0/10, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**2.63**	**277**	P	**Pn**	**16 01 00.4**	**0.0**
BATI	**Baumata**	**3.21**	**267**	Pn	**Pn**	**16 01 09.0**	**+0.7**
	38nm,0.3s,baz=152,slow=5.3,SNR=46						
BATI				Sn	**Sn**	**16 01 47.2**	**+1.9**
	100nm,0.3s,baz=118,slow=22,SNR=11						
BATI				LR	LR	16 02 48.0	
	comp=Z,271nm,19.4s,baz=186,slow=48						
BATI	**Baumata**	**3.21**	**267**	P	**Pn**	**16 01 08.9**	**+0.6**
BATI				S	**Sn**	**16 01 47.2**	**+1.9**
SAUI	**Saumlaki**	**4.80**	**65**	P	Pn	16 01 37.0	+6.7
MMRI	**Maumere**	**4.83**	**287**	P	**Pn**	**16 01 30.6**	**-0.1**
MMRI	**Maumere**	**4.83**	**287**	P	**Pn**	**16 01 30.2**	**-0.5**
EDFI	**Ende, Flores**	**5.32**	**284**	P	**Pn**	**16 01 36.9**	**-0.6**
	0.2nm592nm30nm,0.7s						
BASI	**Baing, Sumba**	**6.24**	**268**	P	**Pn**	**16 01 50.0**	**0.0**
	0.6nm877nm90nm,0.6s						
BNDI	**Bandanaira**	**6.26**	**28**	P	**Pn**	**16 01 51.7**	**+1.4**
	0.3nm2µm57nm,0.5s						
NLAI	**Namlea**	**6.80**	**2**	P	Pn	16 02 06.1	+8.4
WBSI	**Waikabubak, Su**	**7.43**	**273**	P	**Pn**	**16 02 06.3**	**-0.1**
	0.5nm969nm65nm,0.7s						
BSSI	**Bau Bau, Buton**	**7.47**	**301**	P	**Pn**	**16 02 09.9**	**+3.0**
	0.1nm15nm,0.6s						
FITZ	**Fitzroy Crossi**	**8.07**	**189**	Pn	**Pn**	**16 02 16.8**	**+1.7**
	0.9nm,0.3s,baz=8.3,slow=10,SNR=68						
FITZ				Sn	**Sn**	**16 03 43.3**	**-1.8**
	4.0nm,0.3s,baz=125,slow=6.2,SNR=8.5						
BKSI	**Bulukumba**	**8.22**	**305**	P	**Pn**	**16 02 18.6**	**+1.3**
	0.1nm12nm,0.6s						
KAPI	**Kappang**	**8.70**	**305**	LR	LR	16 05 37.4	
	comp=Z,105nm,20.5s,baz=152,slow=38						
BNSI	**Bone**	**8.80**	**309**	P	Pn	16 02 35.6	+10
FAKI	**Fak Fak**	**8.87**	**37**	P	**Pn**	**16 02 24.5**	**-1.6**
	51nm,0.7s						
PLAI	**Plampang**	**9.10**	**277**	P	**Pn**	**16 02 28.4**	**-0.9**
	930nm77nm,0.6s						
SWI	**Sorong**	**10.12**	**26**	P	**Pn**	**16 02 44.1**	**+0.8**
	43nm,0.7s						
WRA	**Warramunga Arr**	**12.14**	**145**	Pn	**Pn**	**16 03 10.2**	**-0.8**
	1.3nm,0.3s,baz=322,slow=14,SNR=81						
WRA				Sn	**Sn**	**16 05 21.2**	**-4.0**
	3.0nm,0.3s,baz=237,slow=30,SNR=8.1						
WRA				LR	LR	16 08 38.3	
	comp=Z,117nm,18.4s,baz=25,slow=41						
ASAR	**Alice Springs**	**15.07**	**155**	Pn	**Pn**	**16 03 51.0**	**+0.1**
	1.1nm,0.3s,baz=322,slow=10,SNR=131						
ASAR				Sn	**Sn**	**16 06 35.0**	**-1.7**
	0.8nm,0.3s,baz=332,slow=23,SNR=13						
ASAR				LR	LR	16 10 31.9	
	comp=Z,72nm,18.6s,baz=326,slow=40						
LEM	**Lembang**	**19.36**	**278**	P	**P**	**16 04 43.2**	**-0.1**
	2.1nm,0.3s,baz=102,slow=20,SNR=2.0						
PMG	**Port Moresby**	**19.96**	**90**	P	**Pn**	**16 04 55.3**	**+3.7**
	1.1nm,0.3s,baz=286,slow=9.7,SNR=4.7						
PMG				LR	LR	16 12 58.2	
	comp=Z,90nm,20.6s,baz=260,slow=38						
CTA	**Charters Tower**	**21.14**	**120**	P	**P**	**16 05 06.0**	**+3.5**
	7.2nm,0.8s,baz=298,slow=13,SNR=3.6						
STKA	**Stephens Creek**	**25.60**	**150**	P	**P**	**16 05 47.5**	**+1.1**
	2.8nm,0.6s,baz=320,slow=11,SNR=7.9						
CMAR	**Chiang Mai Arr**	**39.57**	**316**	P	**P**	**16 07 47.0**	**-1.5**
	2.6nm,0.8s,baz=143,slow=6.6,SNR=21						
CMAR				PcP	**PcP**	**16 09 56.9**	**+1.3**
	0.4nm,0.7s,baz=168,slow=2.6,SNR=4.1						
MJAR	**Matsushiro Arr**	**47.57**	**12**	P	**P**	**16 08 50.3**	**-2.4**
	1.7nm,0.4s,baz=186,slow=8.6,SNR=5.6						
ODAN	**Odare**	**53.10**	**315**	*eP*	**P**	**16 09 33.5**	**-1.5**
TAPN	**Taplejung**	**53.18**	**315**	*eP*	**P**	**16 09 33.5**	**-2.1**
	9.3nm,0.6s						
RAMN	**Ramite**	**53.71**	**314**	*eP*	**P**	**16 09 37.2**	**-2.3**
	17nm,0.6s						
USRK	**Ussuriysk Ar.**	**54.22**	**4**	P	**P**	**16 09 41.3**	**-1.1**
	2.5nm,0.7s,baz=182,slow=7.9,SNR=4.8						
JIRN	**Jiri**	**54.43**	**315**	*eP*	**P**	**16 09 43.3**	**-1.6**
PKI	**Pulchoki**	**54.93**	**314**	*eP*	**P**	**16 09 47.2**	**-1.2**
	8.7nm,0.5s						
PKIN	**Phulchoki**	**54.94**	**314**	*eP*	**P**	**16 09 46.9**	**-1.5**
	8.8nm,0.5s						
GKN	**Gorkha**	**55.73**	**314**	*eP*	**P**	**16 09 52.9**	**-1.1**
	7.0nm,0.4s						
KOLN	**Koldanda**	**56.34**	**313**	*eP*	**P**	**16 09 57.6**	**-0.8**
	21nm,0.8s						
DANN	**Dangsing**	**56.56**	**314**	*eP*	**P**	**16 09 59.2**	**-0.9**
	17nm,0.6s						
PYUN	**Piuthan**	**56.97**	**313**	*eP*	**P**	**16 10 02.1**	**-0.8**
	34nm,0.8s						
SONM	**Songino Array**	**60.47**	**344**	P	**P**	**16 10 25.8**	**-0.9**
	0.6nm0.5s,baz=170,slow=7.9,SNR=3.7						
PETK	**Petropavlovsk-**	**68.20**	**19**	P	**P**	**16 11 18.1**	**+1.0**
	3.1nm,0.6s,baz=178,slow=3.7,SNR=17						
MKAR	**Makanchi Array**	**69.19**	**329**	P	**P**	**16 11 22.6**	**-0.9**
	0.8nm,0.7s,baz=119,slow=8.5,SNR=9.2						
VNDA	**Vanda**	**69.

WB2	Warramunga Arr	22.74	226	P	P	16 32 08.6	+1.1
WRA	Warramunga Arr	22.75	226	P	P	16 32 08.5	+0.9
	comp=Z,17nm,0.4s,baz=47,slow=9.2,SNR=320						
WRA				PcP	PcP	16 35 50.7	-0.6
	comp=Z,0.1nm,0.4s,baz=46,slow=2.2,SNR=1.9						
WRA				ScP	ScP	16 39 03.5	-1.7
	comp=Z,0.2nm,0.6s,baz=54,slow=2.7,SNR=1.7						
WRA	Warramunga Arr	22.75	226	P	P	16 32 08.0	+0.4
KNRA	Kununurra	25.01	242	P	P	16 32 28.9	+0.7
KNRA				IAmb	IAmb	16 32 41.3	
	comp=Z,13nm,1.2s						
AS31	Alice Springs	25.57	220	P	P	16 32 34.0	+0.8
ASAR	Alice Springs	25.57	220	P	P	16 32 33.9	+0.7
	comp=Z,1.6nm,0.4s,baz=49,slow=8.3,SNR=67						
ASAR	Alice Springs	25.57	220	P	P	16 32 33.5	+0.3
SOEI	Soe	27.56	258	P	P	16 32 53.2	+2.0
SOEI				IAmb	IAmb	16 33 03.4	
	comp=Z,9.4nm,0.9s						
FITZ	Fitzroy Crossi	28.73	240	P	P	16 33 00.6	-0.7
	comp=Z,0.7nm,0.2s,baz=54,slow=6.4,SNR=43						
FITZ	Fitzroy Crossi	28.73	240	P	P	16 33 01.1	-0.2
STKA	Stephens Creek	28.82	198	P	P	16 32 59.0	-2.9
BBOO	Buckleboo	31.69	205	P	P	16 33 27.7	+0.5
BBOO				IAmb	IAmb	16 33 57.9	
	comp=Z,58nm,1.9s						
FORT	Forrest	34.27	218	P	P	16 33 49.8	+0.4
TPUB	Ta-pu	40.89	314	P	P	16 34 42.7	-2.3
MORW	Morawa	41.59	230	P	P	16 34 50.0	-0.5
MORW				IAmb	IAmb	16 36 28.2	
	comp=Z,66nm,1.8s						
CMAR	Chiang Mai Arr	56.61	295	P	P	16 36 45.6	+1.4
	comp=Z,0.7nm,0.5s,baz=118,slow=5.2,SNR=7.5						
SONM	Songino Array	65.39	328	P	P	16 37 44.3	+1.5
	comp=Z,0.6nm,0.6s,baz=142,slow=4.2,SNR=3.8						
SONM	Songino Array	65.39	328	P	P	16 37 42.6	-0.1
MKAR	Makanchi Array	79.26	319	P	P	16 39 05.0	+0.6
	comp=Z,0.4nm,0.6s,baz=98,slow=7.5,SNR=4.5						
MKAR	Makanchi Array	79.26	319	P	P	16 39 03.7	-0.8
ZALV	Zalesovo Beam	80.19	327	P	P	16 39 09.4	+0.2
	comp=Z,0.6nm,0.4s,baz=126,slow=6.1,SNR=3.0						
CLL	Collm	121.96	331	*e*PKPdf	PKiKP	16 45 51.0	-0.5
TORD	Torodi Ar. Bea	149.02	288	PKPbc	PKiKP	16 46 46.4	-1.0
	comp=Z,1.0nm,0.7s,baz=85,slow=2.4,SNR=6.9						

*IDC **28** 16:29:35.3±1.3,5°.63N×61°.03E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/37, mbtmp3.6/7, MS3.2/2, Ms1 3.2/2, ms1mx2.5/54, Error ellipse: s-maj=35.8km s-min=30.6km az=40.0*

ISC 28 16:29:37.0±1.3, 5°.7N±0°.3×61°.0E±0°.2, h10km, n9, σ0$45/7, mb3.5/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMAI	Mount Meron Ar	36.19	322	LR	LR	16 52 17.7	
	comp=Z,26nm,18.9s,baz=195,slow=38						
CMAR	Chiang Mai Arr	39.10	68	P	P	16 37 05.0	+0.2
	0.3nm,0.3s,baz=260,slow=8.2,SNR=4.4						
MKAR	Makanchi Array	44.89	21	P	P	16 37 51.0	-0.8
	0.4nm,0.8s,baz=202,slow=6.2,SNR=2.2						
ZALV	Zalesovo Beam	51.88	18	P	P	16 38 45.7	+0.2
	0.2nm,0.3s,baz=224,slow=8.1,SNR=1.4						
SONM	Songino Array	57.08	35	P	P	16 39 24.0	+0.3
	0.4nm,0.9s,baz=224,slow=5.6,SNR=2.0						
GERES	GERESS Array B	58.72	325	LR	LR	17 05 24.1	
	comp=Z,20nm,18.6s,baz=3.0,slow=37						
TORD	Torodi Ar. Bea	58.90	282	P	P	16 39 36.8	0.0
	0.3nm,0.4s,baz=90,slow=7.2,SNR=2.6						
WRA	Warramunga Arr	76.37	112	P	P	16 41 27.0	-0.1
	1.5nm,1.0s,baz=284,slow=4.8,SNR=6.3						
ASAR	Alice Springs	76.73	116	P	P	16 41 29.0	-0.1
	1.3nm,0.8s,baz=279,slow=5.9,SNR=11						

IDC 28 16:36:05.3±1.3, 5°.60N×61°.29E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/49, mbtmp3.8/6, MS3.2/10, Ms1 3.2/10, ms1mx2.9/59, Error ellipse: s-maj=36.3km s-min=29.9km az=35.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	Wadi Sarin	17.72	352	LR	LR	16 45 27.0	
	comp=Z,88nm,19.0s,baz=183,slow=32						
PALK	Pallekele	19.37	84	LR	LR	16 46 02.3	
	comp=Z,49nm,21.9s,baz=1,2,slow=31						
GNI	Garni	37.48	339	LR	LR	16 59 31.8	
	comp=Z,18nm,18.2s,baz=120,slow=38						
AAK	Ala-Archa	38.70	16	P	P	16 43 31.4	+0.2
	1.2nm,0.6s,baz=181,slow=9.3,SNR=2.0						
CMAR	Chiang Mai Arr	38.88	67	P	P	16 43 33.6	+0.7
	0.7nm,0.8s,baz=256,slow=8.6,SNR=7.4						
CMAR				LR	LR	16 57 52.5	
	comp=Z,16nm,21.7s,baz=326,slow=34						
AKTO	Aktyubinsk	44.77	357	LR	LR	17 03 26.3	
	comp=Z,26nm,20.7s,baz=198,slow=37						
MKAR	Makanchi Array	44.86	20	P	P	16 44 20.2	-1.2
	0.4nm,0.7s,baz=218,slow=9.1,SNR=2.7						
MKAR				LR	LR	17 03 11.4	
	comp=Z,46nm,21.7s,baz=245,slow=36						
BOSA	Boshof	48.59	224	LR	LR	17 04 04.8	
	comp=Z,41nm,18.1s,baz=56,slow=35						
ZALV	Zalesovo Beam	51.86	17	LR	LR	17 07 47.0	
	comp=Z,24nm,19.6s,baz=336,slow=37						
AKASG	Malin Array Be	52.32	335	LR	LR	17 10 54.3	
	comp=Z,10nm,18.6s,baz=160,slow=40						
KIRV	Kirov	53.65	352	LR	LR	17 10 52.3	
	comp=Z,44nm,18.4s,baz=218,slow=39						
TORD	Torodi Ar. Bea	59.16	282	P	P	16 46 08.8	+0.3
	0.6nm,0.8s,baz=75,slow=5.8,SNR=3.2						
WRA	Warramunga Arr	76.11	112	P	P	16 47 55.7	+0.1
	1.9nm,1.0s,baz=289,slow=5.2,SNR=7.6						
ASAR	Alice Springs	76.47	116	P	P	16 47 57.4	-0.2
	1.7nm,0.9s,baz=297,slow=5.7,SNR=12						

*ISK **28** 16:41:01.4, 37°.30N×42°.60E, h5km, ML2.5/16*
*DDA **28** 16:41:02.8, 37°.34N×42°.61E, h7km±2km, ML2.7*

ISC 28 16:41:02.8±1.0, 37°.39N±0°.04×42°.66E±0°.02, h14km±7km, n28, σ1$36/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIRT	Sirnak	0.21	303	PG	Pg	16 41 07.2	-0.3
SIRT				SG	Sg	16 41 17.9	+1.2
SIRN	Sırnak	0.22	299	*i* P	Pg	16 41 07.3	-0.5
SIRN				*i* S	Sg	16 41 11.2	+0.1
SIRN				IAML		16 41 19.0	
	comp=E,1μm,0.5s						
CUKT	Cukurca	0.77	100	PG	Pg	16 41 18.1	+0.3
CUKT	Cukurca	0.77	100	*i* P	Pg	16 41 18.4	+0.6
CUKT				*i* S	Sg	16 41 26.4	-1.6
SRTM	Siirt_Merkez	0.84	316	*i* P	Pg	16 41 19.5	+0.5
SRTM				*i* S	Sg	16 41 29.9	-0.2
HAKT	HAKKARI	0.85	78	*i* P	Pg	16 41 19.9	+0.6
HAKT				*i* S	Sn	16 41 32.8	-0.2
AKDM	Akdamar-Van	0.97	15	PG	Pn	16 41 22.8	+0.6
AKDM				SG	Sn	16 41 38.7	+2.9
GEVA	Gevas	0.97	19	*i* P	Pn	16 41 22.2	0.0
GEVA				*i* S	Sg	16 41 31.8	-2.6
BLIS	Bitlis-Merkez	1.11	337	*i* P	Pn	16 41 25.6	+1.6
BLIS				*i* S	Sn	16 41 40.7	+1.4
BTMN	Batman	1.21	295	*i* P	Pb	16 41 26.6	+1.1
BTMN				*i* S	Sb	16 41 37.8	-3.2
BTMN				IAML		16 41 47.0	
	comp=N,142nm,0.9s						
BTMN				IAML		16 41 48.0	
	comp=E,195nm,0.7s						
GURO	Guroymak-BITLI	1.26	337	PN	Pg	16 41 28.0	+1.0
YOVA	Hakkari_Yksek	1.31	81	*i* P	Pg	16 41 28.3	+0.2
YOVA				*i* S	Sn	16 41 45.0	+0.7
VANB	Van	1.33	25	PN	Pg	16 41 28.7	+0.2
SVAN	Silvan-Diyarba	1.38	304	PN	Pb	16 41 29.2	+0.8
SVAN	Silvan-Diyarba	1.38	304	*i* P	Pb	16 41 29.3	+0.9
SVAN				*i* S	Sb	16 41 44.5	-1.5
MARD	Mardin	1.50	268	*i* P	Pn	16 41 30.3	+1.0
MARD				*i* S	Sn	16 41 47.9	-0.9
MARD				IAML		16 41 54.0	
	comp=E,304nm,0.9s						
MARD				IAML		16 41 55.0	
	comp=N,294nm,0.5s						
MUSM	Mu-Merkez	1.61	326	*i* P	Pg	16 41 33.3	-0.4
MUSM				*i* S	Sn	16 41 52.0	+0.5
MLAZ	Malazgirt-MUS	1.75	357	PN	Pb	16 41 35.0	+0.2
MAZI	Mazidag	1.76	273	PN	Pn	16 41 33.9	+0.9
CLDR	Caldiran	2.01	29	PN	Pb	16 41 39.0	-0.3
HANI	Diyarbakir_Han	2.06	300	*i* P	Pn	16 41 38.1	+1.1
HANI				*i* S	Sn	16 41 58.7	-3.8
DYBB	Diyarbakir	2.08	286	PN	Pn	16 41 38.4	+1.2
AGRB	Hanur-Agry	2.20	7	PN	Pb	16 41 41.8	-0.6
BNGB	Bingl	2.23	316	PN	Pn	16 41 41.4	+2.0
SVRC	Sivrice-ELAZID	2.83	291	PN	Pn	16 41 48.7	+1.0
PTK	Pertek	2.98	301	PN	Pn	16 41 51.1	+1.3
URFA	Urfa	3.05	272	PN	Pn	16 41 51.5	+0.8
MALT	Malatya	3.47	287	PN	Pn	16 41 57.5	+1.0

*KRNET **28** 16:42:19.1±0.1, 40°.93N×68°.93E, mb3.1*
*ISU **28** 16:42:20.0, 40°.80N×68°.90E, h0km*
*SOME **28** 16:42:20.2, 40°.85N×69°.02E, h5km*

ISC 28 16:42:22.7±2.5, 40°.92N±0°.05×69°.08E±0°.09, h1km±13km, n21, σ1$38/41, 20C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	1.42	30	*e*P	Pn	16 42 48.5	-1.3
	23nm,0.2s						
IUG				*e*S	Sn	16 43 09.8	+0.6
	82nm,0.2s						
CHM	Chimkent	1.46	15	*e*P	Pn	16 42 49.0	-1.1
	29nm,0.1s						
CHM				*e*S	Sn	16 43 10.7	+0.8
	131nm,0.2s						
BTK	Batken	1.57	122	⇑*i*P	Pn	16 42 50.1	-1.7
	baz=21						
BTK				⇑*i*S	Sn	16 43 12.8	-0.1
	baz=21						
BTK	Batken	1.57	122	*i* P	Pn	16 42 49.7	-2.1
BTK				*i* S	Sb	16 43 13.1	0.0
TRKS	Terek-Say	1.67	68	⇓*i*P	Pn	16 42 52.0	-1.2
	baz=72						
TRKS				⇓*i*S	Sn	16 43 15.6	+0.3
	baz=72						
KK31	Karatay Array	2.43	25	⇑Pn	Pb	16 43 06.5	-0.7
	2.5nm,0.3s,baz=211,slow=16,SNR=12						
KK31				⇑Sn	Sb	16 43 39.0	+1.3
	6.1nm,0.4s,baz=216,slow=25,SNR=9.1						
DRK	Karamyk	2.53	124	⇑*i*P	Pn	16 43 04.2	-0.9
	baz=22						
DRK				⇑*i*S	Sn	16 43 37.2	+0.5
	baz=22						
OHH	Osh	2.84	97	⇑*i*P	Pn	16 43 08.8	-0.4
	baz=97						
OHH				⇑*i*S	Sn	16 43 44.7	+0.6
	baz=97						
ARSB	Arslanbob	2.97	81	⇓*e*P	Pn	16 43 10.5	-0.6
	baz=81						
ARSB				⇓*i*S	Sn	16 43 47.9	+0.4
	baz=81						
MNAS	Manas	3.00	57	⇑*i*P	Pn	16 43 10.7	-0.8
	baz=59						
MNAS				⇑*i*S	Sn	16 43 48.2	-0.1
	baz=59						
MRKS	Merke	3.59	58	*e*P	Pb	16 43 28.2	+1.1
	3.1nm,0.3s						
MRKS				*e*S	Sg	16 44 17.8	-0.3
	5.7nm,0.3s						
AML	Almayashu	3.67	69	⇑*e*P	Pn	16 43 20.2	-0.7
	baz=70						
AML				⇑*i*S	Sn	16 44 04.7	-0.3
	baz=70						
EKS2	Erkin-Say	3.92	62	⇓*i*P	Pn	16 43 23.4	-0.7
	baz=63						
EKS2				⇓*i*S	Sn	16 44 10.2	-0.6
	baz=63						
ARLS	Aral	4.05	75	⇑*e*P	Pn	16 43 25.5	-0.5
	baz=75						
ARLS				⇑*i*S	Sn	16 44 13.9	-0.3
	baz=75						
UCH	Uchtor	4.28	70	⇑*e*P	Pn	16 43 28.1	-1.2
	baz=71						
UCH				⇑*i*S	Sn	16 44 19.0	-1.1
	baz=71						
AAK	Ala-Archa	4.40	65	⇑*i*P	Pn	16 43 29.8	-0.9
	baz=66						
AAK				⇑*i*S	Sn	16 44 21.8	-0.8
	baz=66						
AAK	Ala-Archa	4.40	65	Pg	Pg	16 43 47.8	+0.9
	1.0nm,0.5s						
AAK				⇓Lg	Lg	16 44 41.0	
	4.0nm,0.7s						
USP	Ospenovka	4.67	58	⇓*i*P	Pn	16 43 33.8	-0.5
	baz=59						
USP				⇓*i*S	Sn	16 44 28.8	-0.3
	baz=59						
TKM2	Tokmak 2	5.26	65	⇑*i*P	Pn	16 43 41.6	-0.9
	baz=66						
TKM2				⇑*i*S	Sn	16 44 42.3	-1.6
	baz=66						
DGS	Degeres	5.49	63	*e*P	Pb	16 44 02.7	+3.2
	0.9nm,0.4s						
DGS				*e*S	Sg	16 45 16.1	-3.0
	2.9nm,0.5s						
KST	Kastek	5.55	65	*e*P	Pb	16 44 04.0	+3.5
	1.2nm,0.4s						
KST				*e*S	Sg	16 45 18.1	-2.9
	4.7nm,0.7s						

*IDC **28** 16:47:03.6±0.9, 52°.69N×163°.18W, h0km, mb3.9/15, mb1 4.1/17, mb1mx3.9/64, mbtmp3.9/17, ML3.5/2, Error ellipse: s-maj=22.3km s-min=16.4km az=179.0*
*NEIC **28** 16:47:06.4±1.4, 52°.45N±0°.08×163°.09W±0°.09, h26km±6km, Error ellipse: s-maj=11.8km s-min=7.4km az=167.0*
*AEIC **28** 16:47:07±1.7, 52°.34N±0°.08×163°.08W±0°.09, h4km±5km, ML4.1, mb4.2/9(NEIC), Error ellipse: s-maj=11.8km s-min=8.0km az=164.0*

ISC 28 16:47:04.0±4.2, 52°.47N±0°.08×163°.16W±0°.06, h5km±27km, n129, σ1$16/129, mb4.0/20, South of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WESE	West Dahl East	2.18	337		Pn	16 47 41.5	+0.5
WESP	Westdahl Peak	2.23	336		Pn	16 47 42.1	+0.5
WESP					Sn	16 48 09.1	-0.5
AKSA	Akutan Strait	2.26	319		Pn	16 47 42.5	+0.5
AKSA					Sn	16 48 10.1	-0.1
AKSA	Akutan Strait	2.26	319		Pn	16 47 42.5	+0.5
AKUT	Akutan	2.29	318		Pn	16 47 43.0	+0.7
AKUT	Akutan	2.29	318		Sn	16 48 10.6	-0.2
SSLS	Shishaldin Sou	2.30	348		Pn	16 47 43.1	+0.5
SSLS					Sn	16 48 11.8	+0.5
WEBT	Westdahl Beart	2.33	336		Pn	16 47 43.6	+0.7
AKBBA	Akutan Broad B	2.33	315		Pn	16 47 43.6	+0.7
AKBBA					Sn	16 48 11.8	-0.1
AKMO	Akutan Morgan	2.36	315		Pn	16 47 44.0	+0.7
SSLW	Shishaldin Wes	2.37	346		Pn	16 47 44.0	+0.4
SSBA	Shishaldin	2.37	346		Pn	16 47 44.0	+0.3
SSBA					Sn	16 48 14.3	+1.2
AKLV	Akutan Long Va	2.38	316		Pn	16 47 44.1	+0.3
AKLV					Sn	16 48 12.8	-0.6
FALS	False Pass	2.39	356		Pn	16 47 44.0	+0.2
SSLN	Shishaldin Nor	2.40	348		Pn	16 47 44.8	+0.9
AKRB	Akutan Reef Bi	2.41	315		Pn	16 47 44.8	+0.7
AKGG	Akutan Green G	2.42	317		Pn	16 47 45.0	+0.7
AKGG					Sn	16 48 13.7	-0.6
UNV	Unalaska Valle	2.44	306		Pn	16 47 44.7	+0.3
MREP	Makushin Rep't	2.54	303		Pn	16 47 46.4	+0.5
MNAT	Makushin Natee	2.55	305		Pn	16 47 46.6	+0.6
MNAT					Sn	16 48 16.1	-1.3
MGOD	Makushin Gods	2.60	302		Pn	16 47 47.1	+0.3
MSW	Makushin Switc	2.62	305		Pn	16 47 47.6	+0.7
MSW					Sn	16 48 17.8	-1.2
MAPS	Pakushin South	2.64	302		Pn	16 47 47.7	+0.4
MCIR	Makushin Cirqu	2.69	305		Pn	16 47 48.9	+1.0
BALA	Baldy Mountain	2.73	4		Pn	16 47 49.8	+1.3
OKFG	Magazine Ridge	3.03	290		Pn	16 47 52.7	+0.2
OKTU	Okmok Mt. Tuli	3.09	289		Pn	16 47 53.9	+0.4
CNBA	Chernabura Isl	3.17	41	Pn	Pn	16 47 53.9	-0.5
OKSP	Okmok Steeple	3.21	286		Pn	16 47 55.1	+0.1
SDPT	Sand Point	3.29	28		Pn	16 47 56.6	+0.5
SDPT	Sand Point	3.29	28		Lg	16 48 34.0	
NIKH	Nikolski High	3.50	280	Pn	Pn	16 47 58.8	-0.2
VNWF	Veniaminof 8	4.24	28		Pn	16 48 10.4	+1.1
VNFG	Fog Glacier, M	4.36	27		Pn	16 48 11.9	+1.0
VNHG	Veniaminof 1	4.42	30		Pn	16 48 12.6	+0.8
CHGN	Chignik	4.73	34		Pn	16 48 16.1	+0.2
CHIR	Chirikof Islan	5.55	50	Pn	Pn	16 48 26.0	-1.2
SPIA	Saint Paul Isl	6.24	322	Pn	Pn	16 48 38.8	+2.1
PLK1	Peulik 1	6.53	33		Pn	16 48 40.6	+0.1
SII	Sitkinak Islan	6.63	48	Pn	Pn	16 48 40.7	-1.4
KOFP	Korovin Flat P	6.70	273		Pn	16 48 44.2	+1.2
ATKA	Atka Island	6.77	272	Pn	Pn	16 48 44.3	+0.4
CAHL	Cahill	7.17	36		Pn	16 48 49.5	+0.2
ANCK	Angle Creek	7.21	34		Pn	16 48 50.4	+0.4
KABU	Katmai Buttres	7.34	35		Pn	16 48 51.8	0.0
KVTA	Katmai Vly 10	7.42	34		Pn	16 48 53.2	+0.4
OHAK	Old Harbor	7.42	46		Pn	16 48 51.6	-1.2
KAKN	Katmai Knife C	7.43	35		Pn	16 48 53.2	+0.1
GSMY	Great Sitkin M	7.93	272		Pn	16 48 59.8	-0.1
GSTD	Great Sitkin T	7.98	272		Pn	16 49 01.3	+0.6
KDAK	Kodiak Island	8.06	45	Pn	Pn	16 49 00.4	-1.2
ADAG	Mount Adagdak	8.27	272		Pn	16 49 05.8	+1.3
ADK	Adak	8.34	271		Pn	16 49 06.3	+0.9
TASE	Tanaga Southea	9.17	272		Pn	16 49 16.7	-0.2
SVW2	Sparrevohn	9.58	23		Pn	16 49 22.9	+0.4
CNPM	China Poot	9.71	39	Pn	Pn	16 49 23.5	-0.7
BRLK	Bradley Lake	10.00	38		Pn	16 49 26.6	-1.6
SEW	Seward	10.77	39	Pn	Pn	16 49 38.5	-0.2
AMKA	Amchitka	10.89	271	Pn	Pn	16 49 41.0	+0.7
O22K	Cooper Landing	10.91	37		Pn	16 49 41.3	+0.7
TTA	Tatalina	11.15	17	Pn	Pn	16 49 43.9	0.0
SUA	Susitna One	11.25	32		Pn	16 49 44.8	-0.6
SKT	Skwentna	11.40	29		Pn	16 49 47.6	+0.2
PMR	Palmer	11.88	34	Pn	Pn	16 49 51.4	-2.5
PPLA	Purkeypile	11.96	25		Pn	16 49 56.8	+1.7
KNK	Knik Glacier	12.00	36		Pn	16 49 54.4	-1.1
HIN	Hinchinbrook I	12.13	43		Pn	16 49 56.5	-0.8
FID	Port Fidalgo	12.34	41		Pn	16 49 58.4	-1.8
EYAK	Cordova Ski Ar	12.53	43		Pn	16 50 01.4	-1.3
SCM	Sheep Creek Mo	12.68	36		Pn	16 50 03.3	-1.6
RAGM	Ragged Mountai	12.90	45		Pn	16 50 07.6	-0.2
KLU	Klutina	12.99	39		Pn	16 50 08.3	-0.9
HMT	Hamilton	13.05	45		Pn	16 50 09.6	-0.4
BPAW	Bear Paw Mtn.	13.26	24		Pn	16 50 12.9	+0.1
DHY	Denali Highway	13.51	32		Pn	16 50 13.7	-2.5
N25K	Chitina, Valde	13.58	40		Pn	16 50 15.2	-1.9
CRQM	Cirque	13.74	45		Pn	16 50 18.2	-1.3
GLB	Gilahina Butte	13.80	42	Pn	Pn	16 50 18.6	-1.6
TGL	Tana Glacier	13.88	45		Pn	16 50 21.0	-0.2
ISLE	Juniper Island	14.02	46		Pn	16 50 23.1	-0.2
PAX	Paxson	14.08	35		Pn	16 50 22.5	-1.4
MCARA	McCarthy VSAT	14.10	43	Pn	Pn	16 50 25.5	+1.3
YAH	Yahtse	14.19	48		Pn	16 50 24.8	-0.7
BALM	Baldy	14.22	45		Pn	16 50 26.0	+0.1
WRH	Wood River Hil	14.32	27		Pn	16 50 23.5	-3.7
TABL	Table Mountain	14.49	48		Pn	16 50 30.2	+0.5
BARN	Barnard Glacie	14.53	45		Pn	16 50 29.8	-0.3
HDA	Harding Lake	14.60	29		Pn	16 50 27.6	-3.5
CTGM	Chitina Glacie	14.63	46		Pn	16 50 31.1	-0.4
RIDG	Independent Ri	14.80	33		Pn	16 50 31.6	-2.1
ILAR	Eielson Array	14.89	28	Pn	Pn	16 50 30.5	-4.4
	0.3nm,0.3s,baz=220,slow=13,SNR=25						
ILAR				Sn	Sn	16 53 08.6	-11
	0.3nm,0.3s,baz=195,slow=8.0,SNR=5.9						
ILAR	Eielson Array	14.89	28		Pn	16 50 31.9	-3.0
DAWY	Dawson	16.93	37		Pn	16 51 00.9	-0.4
DAWY				IAmb	IAmb	16 51 10.9	
	comp=Z,46nm,1.6s						
TOLK	Toolik Lake Re	17.46	17	P	P	16 51 08.4	-0.9
BMAR	Burnt Mountain	17.52	24	P	P	16 51 11.5	+1.5
DLBC	Dease Lake	19.57	59	P	P	16 51 31.3	-1.2
	comp=Z,0.1nm,0.3s,baz=173,slow=16,SNR=4.6						
DLBC	Dease Lake	19.57	59	IAmb	IAmb	16 51 36.1	
	comp=Z,5.7nm,0.9s						
INK	Inuvik	21.24	30	P	P	16 51 49.2	-1.3
	comp=Z,1.5nm,0.5s,baz=238,slow=11,SNR=13						
INK	Inuvik	21.24	30		P	16 51 51.1	+0.6
INK				IAmb	IAmb	16 51 55.5	
	comp=Z,5.9nm,0.8s						
BILL	Bilibino	21.39	328	P	P	16 51 53.2	+1.1
BILL				IAmb	IAmb	16 52 00.8	
	comp=Z,27nm,1.6s						
SEY	Seymchan	25.42	312	P	P	16 52 34.0	+1.9
	comp=Z,3.4nm,0.9s,baz=141,slow=22,SNR=2.7						
YKA	Yellowknife Ar	27.30	49	P	P	16 52 48.8	-0.2
	comp=Z,0.7nm,0.7s,baz=267,slow=8.9,SNR=5.9						
NEW	Newport	29.27	80	P	P	16 53 07.1	+0.2
	comp=Z,2.6nm,0.8s,baz=263,slow=8.1,SNR=4.8						
NEW	Newport	29.27	80	IAmb	IAmb	16 53 08.3	
	comp=Z,3.2nm,0.8s						
EGMT	Eagleton	33.78	76	P	P	16 53 47.7	+1.1
NVAR	Mina Array Bea	33.88	96	P	P	16 53 49.0	+1.3
	comp=Z,0.3nm,0.5s,baz=291,slow=8.4,SNR=2.2						
YHH	Holmes Hill	34.74	81	P	P	16 53 55.5	+0.3
PDAR	Pinedale Array	36.63	83	P	P	16 54 11.8	+0.5
	comp=Z,1.2nm,0.6s,baz=302,slow=4.7,SNR=13						
PDAR	Pinedale Array	36.63	83	P	P	16 54 10.2	-1.2
H11N2	WAKE ISLAND Hy	40.11	227	T	T	17 39 22.3	
	baz=25						
H11N3	WAKE ISLAND Hy	40.12	227	T	T	17 39 20.5	
	baz=25						
H11N1	WAKE ISLAND Hy	40.13	227	T	T	17 39 22.7

OHAK	**Old Harbor**	**20.64**	**63**	P		**P**	**16 54 49.3**	**-0.6**
OHAK				IAmb		IAmb	16 54 56.0	
	comp=Z,18nm,1.2s							
KDAK	**Kodiak Island**	**21.00**	**61**	P		**P**	**16 54 53.6**	**-0.3**
IMAR	**Indian Mountai**	**21.88**	**39**	P		**P**	**16 55 05.7**	**+2.5**
BPAW	**Bear Paw Mtn.**	**22.45**	**45**	P		**P**	**16 55 11.3**	**+2.0**
A21K	**Barrow**	**23.52**	**25**	P		**P**	**16 55 20.1**	**0.0**
A21K				IAmb		IAmb	16 55 22.0	
	comp=Z,5.5nm,0.7s							
WRH	**Wood River Hil**	**23.77**	**44**	P		**P**	**16 55 23.6**	**+1.0**
WRH				IAmb		IAmb	16 55 34.7	
	comp=Z,3.3nm,1.2s							
MDM	**Murphy Dome**	**23.80**	**43**	P		**P**	**16 55 23.6**	**+0.7**
MDM				IAmb		IAmb	16 55 41.8	
	comp=Z,8.0nm,1.5s							
DHY	**Denali Highway**	**23.86**	**48**	P		**P**	**16 55 25.0**	**+1.3**
DHY				IAmb		IAmb	16 55 30.0	
	comp=Z,6.1nm,1.4s							
CCB	**Clear Creek Bu**	**23.92**	**44**	P		**P**	**16 55 26.3**	**+2.3**
ILAR	**Eielson Array**	**24.33**	**44**	P		**P**	**16 55 28.7**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=251,slow=6.7,SNR=6.5							
TOLK	**Toolik Lake Re**	**24.36**	**34**	P		**P**	**16 55 29.6**	**+1.6**
TOLK				IAmb		IAmb	16 55 44.7	
	comp=Z,9.4nm,1.4s							
BMAR	**Burnt Mountain**	**25.79**	**38**	P		**P**	**16 55 41.9**	**+0.8**
DLBC	**Dease Lake**	**32.71**	**56**	P		**P**	**16 56 39.3**	**-3.4**
H11N2	**WAKE ISLAND Hy**	**32.98**	**188**	T		T	17 32 23.3	
	baz=5.7,slow=76,SNR=21							
H11N3	**WAKE ISLAND Hy**	**33.00**	**188**	T		T	17 32 24.8	
	baz=5.7,slow=76,SNR=28							
H11N1	**WAKE ISLAND Hy**	**33.00**	**188**	T		T	17 32 20.7	
	baz=5.7,slow=76,SNR=20							
H11S1	**WAKE ISLAND Hy**	**34.21**	**188**	T		T	17 33 49.2	
	baz=5.4,slow=76,SNR=20							
H11S3	**WAKE ISLAND Hy**	**34.23**	**188**	T		T	17 33 48.7	
	baz=5.4,slow=76,SNR=13							
H11S2	**WAKE ISLAND Hy**	**34.23**	**188**	T		T	17 33 51.5	
	baz=5.4,slow=76,SNR=16							
YKA	**Yellowknife Ar**	**38.73**	**45**	P		**P**	**16 57 35.0**	**+1.0**
	comp=Z,0.2nm,0.7s,baz=294,slow=7.4,SNR=1.7							
ULN	**Ulaanbaatar**	**40.24**	**290**	P		**P**	**16 57 45.4**	**-1.6**
SONM	**Songino Array**	**40.63**	**290**	P		**P**	**16 57 50.1**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=49,slow=6.6,SNR=2.6							
MKAR	**Makanchi Array**	**54.42**	**302**	P		**P**	**16 59 37.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=48,slow=6.7,SNR=2.0							
MKAR	**Makanchi Array**	**54.42**	**302**	P		**P**	**16 59 36.3**	**-0.8**
ARCES	**ARCESS Array B**	**55.67**	**346**	P		**P**	**16 59 44.4**	**-1.4**
	comp=Z,2.9nm,0.7s,baz=28,slow=8.2,SNR=1.6							
BVAR	**Borovoye Array**	**55.89**	**314**	P		**P**	**16 59 46.8**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=76,slow=7.6,SNR=3.1							
BRVK	**Borovoye**	**55.91**	**314**	P		**P**	**16 59 47.8**	**0.0**
BRVK				IAmb		IAmb	16 59 49.9	
	comp=Z,3.1nm,1.2s							
ARU	**Arti**	**58.20**	**323**	P		**P**	**17 00 04.1**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=33,slow=3.5,SNR=4.9							
FINES	**FINESS Array B**	**63.02**	**342**	P		**P**	**17 00 36.1**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=27,slow=2.1,SNR=4.1							
ABKAR	**Akbulak array**	**63.13**	**317**	P		**P**	**17 00 37.6**	**+0.1**
ABKAR				IAmb		IAmb	17 00 39.3	
	comp=Z,3.0nm,1.4s							
TXAR	**Lajitas Array**	**64.30**	**75**	P		**P**	**17 00 46.7**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=312,slow=3.1,SNR=4.4							
TXAR	**Lajitas Array**	**64.30**	**75**	P		**P**	**17 00 44.9**	**-0.8**
NB2	**NORSAR Subarra**	**65.62**	**350**	P		**P**	**17 00 54.3**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=12,slow=6.5							
NOA	**NORSAR Array B**	**65.62**	**350**	P		**P**	**17 00 53.8**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=13,slow=6.5,SNR=5.5							
AKASG	**Malin Array Be**	**72.25**	**336**	P		**P**	**17 01 34.9**	**0.0**
	comp=Z,0.2nm,0.3s,baz=29,slow=6.0,SNR=2.2							
GERES	**GERESS Array B**	**77.19**	**345**	P		**P**	**17 02 04.5**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=30,slow=6.2,SNR=4.0							
WRA	**Warramunga Ar**	**79.10**	**215**	P		**P**	**17 02 16.2**	**+1.8**
	comp=Z,0.5nm,0.8s,baz=27,slow=5.5,SNR=2.9							
FITZ	**Fitzroy Crossi**	**80.80**	**224**	P		**P**	**17 02 25.9**	**+2.3**
	comp=Z,0.5nm,0.5s,baz=16,slow=7.4,SNR=1.3							
ASAR	**Alice Springs**	**82.69**	**214**	P		**P**	**17 02 35.6**	**+2.1**
	comp=Z,0.5nm,0.9s,baz=14,slow=4.4,SNR=4.8							

*IDC **28** 17:00:18.5±2.1,49°.26N×92°.60E,h0km,mb1 2.5/1, mb1mx2.5/59,mbtmp2.5/1,ML2.6/1,Error ellipse: s-maj=48.7km s-min=18.1km az=171.0*
*ASRS **28** 17:00:22.6±0.3,50°.N±2°×9°.3E±°,h10km,MLh3.7/15, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **28** 17:01:15.8±5.6,49°.10N×89°.81E,h0km,mb3.6,mpv3.2, Error ellipse: s-maj=69.7km s-min=43.1km az=175.0*

ISC 28 17:00:20.0±1.0,49°.08N±0°.05×92°.74E±0°.03,h10km,n34, σ2s45/72,3C-2D,Mongolia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERNS	**Erzin**	**1.96**	**52**	Pg	**Pn**	**17 00 54.3**	**+0.8**
ERNS				Sg	**Sn**	**17 01 18.5**	**+0.3**
TEL	**Teeli**	**2.54**	**321**	Pg	**Pn**	**17 01 03.0**	**+1.6**
TEL				Sg	**Sn**	**17 01 33.5**	**+1.1**
KZLR	**Kyzyl**	**2.85**	**22**	Pg	**Pn**	**17 01 05.9**	**+0.3**
KZLR				Sg	**Sn**	**17 01 42.9**	**+3.0**
CUR	**Chagan-Uzun**	**3.04**	**291**	Pg	**Pb**	**17 01 13.1**	**-1.0**
CUR				Sg	**Sb**	**17 01 51.3**	**0.0**
KNGR	**Kungurtug, Tuv**	**3.45**	**62**	Pn	**Pn**	**17 01 15.8**	**+1.9**
KNGR				Pg	**Pb**	**17 01 22.2**	**+1.0**
KNGR				Sg	**Sb**	**17 02 06.8**	**+3.7**
ULGR	**Ulagan, Altay**	**3.46**	**298**	Pn	**Pn**	**17 01 14.2**	**+0.2**
ULGR				Pg	**Pb**	**17 01 20.7**	**-0.7**
ULGR				Sg	**Sb**	**17 02 04.0**	**+0.5**
DGZ	**Jazzator, Alta**	**3.52**	**282**	Pn	**Pn**	**17 01 15.8**	**+0.9**
DGZ				Pg	**Pb**	**17 01 21.2**	**-1.3**
DGZ				Sg	**Sb**	**17 02 06.8**	**+1.3**
ARDR	**Aradan**	**3.53**	**7**	Pn	**Pn**	**17 01 14.9**	**0.0**
ARDR				Pg	**Pb**	**17 01 23.7**	**+1.1**
ARDR				Sg	**Sn**	**17 02 01.0**	**+4.2**
AKAR	**Aktash**	**3.55**	**292**	Pn	**Pn**	**17 01 15.7**	**+0.5**
AKAR				Pg	**Pb**	**17 01 22.8**	**-0.1**
AKAR				Sg	**Sb**	**17 02 06.2**	**+0.1**
CHBI	**Chibit, Altay**	**3.62**	**292**	Pn	**Pn**	**17 01 16.6**	**+0.4**
CHBI				Pg	**Pb**	**17 01 23.5**	**-0.6**
CHBI				Sg	**Sb**	**17 02 10.0**	**+2.0**
DJOS	**Djoyskaya Sosn**	**3.81**	**348**	Pn	**Pn**	**17 01 17.3**	**-1.5**
DJOS				Pg	**Pb**	**17 01 28.3**	**+0.9**
DJOS				Sg	**Sn**	**17 02 08.0**	**+4.2**
CERR	**Cheremushki**	**3.87**	**348**	Pn	**Pn**	**17 01 16.1**	**-3.5**
CERR				Pg	**Pb**	**17 01 24.9**	**-3.4**
CERR				Sg	**Sn**	**17 02 10.2**	**+5.1**
TDJR	**Todzha**	**3.95**	**31**	Pn	**Pn**	**17 01 22.2**	**+1.5**
TDJR				Pg	**Pb**	**17 01 27.7**	**-2.0**
TDJR				Sg	**Sb**	**17 02 18.4**	**+0.8**
BLRR	**Bol'shaya Rech**	**3.97**	**357**	Pn	**Pn**	**17 01 19.9**	**-1.0**
BLRR				Pg	**Pb**	**17 01 28.5**	**-1.5**
BLRR				Sg	**Sb**	**17 02 14.6**	**-3.4**
TBTR	**Tabat**	**4.06**	**342**	Pn	**Pn**	**17 01 23.7**	**+1.5**
TBTR				Pg	**Pb**	**17 01 31.8**	**+0.2**
TBTR				Sg	**Sb**	**17 02 17.7**	**-3.0**
TUNR	**Tungur**	**4.31**	**287**	Pn	**Pn**	**17 01 27.1**	**+1.5**
TUNR				Pg	**Pb**	**17 01 36.9**	**+1.1**
TUNR				Sg	**Sb**	**17 02 31.7**	**+3.9**
ARTR	**Artybash**	**4.42**	**310**	Pn	**Pn**	**17 01 30.6**	**+3.4**
ARTR				Pg	**Pb**	**17 01 38.4**	**+0.6**
ARTR				Sg	**Sb**	**17 02 30.9**	**-0.3**
VEH	**Verkhnyaya Baz**	**4.45**	**341**	Pn	**Pn**	**17 01 27.2**	**-0.3**
VEH				Pg	**Pb**	**17 01 37.4**	**-0.8**
VEH				Sg	**Sb**	**17 02 30.9**	**-1.0**
ABNR	**Abakan**	**4.72**	**351**	Sg	**Sb**	**17 02 38.8**	**-0.9**
TASR	**Tashtagol**	**4.80**	**322**	Pg	**Pb**	**17 01 46.0**	**+1.8**
TASR				Sg	**Sb**	**17 02 42.5**	**+0.6**
GALT	**Gorno-Altaysk,**	**5.21**	**306**	Pg	**Pb**	**17 01 52.2**	**+1.1**
GALT				Sg	**Sb**	**17 02 59.7**	**+6.1**
SHRR	**Shira**	**5.65**	**345**	Pg	**Pb**	**17 01 58.9**	**+0.2**
SHRR				Sg	**Sb**	**17 03 07.4**	**+1.0**
ORL	**Orlik**	**5.66**	**50**	Pg	**Pb**	**17 01 59.0**	**+0.1**
ORL				Sg	**Sb**	**17 03 12.1**	**+5.2**
ELT	**Eltsovka**	**5.85**	**318**	Pn	**Pn**	**17 01 43.0**	**-3.7**
ELT				Pg	**Pb**	**17 02 02.6**	**+0.6**
ELT				Sg	**Sb**	**17 03 13.2**	**+1.0**
MOY	**Mondy**	**5.88**	**61**	Pg	**Pb**	**17 02 03.6**	**+1.0**
MOY				Sg	**Sg**	**17 03 22.8**	**-5.8**
ORY	**Orie**	**6.11**	**13**	Pg	**Pb**	**17 02 07.0**	**+0.5**
ORY				Sg	**Sb**	**17 03 21.9**	**+2.4**
SALR	**Pechorkino, Sa**	**6.90**	**323**	Sg	**Sb**	**17 03 50.0**	**+7.7**
ZALV	**Zalesovo Beam**	**6.94**	**318**	Pg	**Pb**	**17 02 21.3**	**+0.7**
	0.3nm,0.3s,baz=136,slow=16,SNR=4.9						
ZALV				Lg	Lg	17 03 45.0	
	0.8nm,0.3s,baz=114,slow=32,SNR=6.0						
MK31	**Makanchi Array**	**7.38**	**256**	⇓Pn	**Pg**	**17 02 37.5**	**-3.8**
	1.5nm,0.6s,baz=71,slow=15,SNR=3.8						
MK31				⇑Lg	Lg	17 04 13.0	
	4.1nm,0.5s,baz=72,slow=29,SNR=4.3						
MKAR	**Makanchi Array**	**7.38**	**256**	Pn	**Pn**	**17 02 08.2**	**+0.4**
	0.1nm,0.3s,baz=61,slow=13,SNR=2.1						
MKAR				Lg	Lg	17 04 09.6	
	1.1nm,0.3s,baz=67,slow=33,SNR=5.7						
TLY	**Talaya**	**7.44**	**65**	Pg	**Pb**	**17 02 26.0**	**-3.1**
	0.0nm,0.3s,baz=257,slow=14,SNR=2.0						
TLY				Lg	Lg	17 04 08.9	
	0.0nm,0.3s,baz=27,slow=17,SNR=2.6						
MAKZ	**Makanchi**	**7.58**	**257**	⇑Pn	**Pg**	**17 02 42.8**	**-2.2**
	1.9nm,0.8s						
MAKZ				⇑Lg	Lg	17 04 18.0	
	13nm,0.7s						
SONM	**Songino Array**	**9.16**	**93**	Pg	Pn	17 03 08.6	+36
	0.2nm,0.3s,baz=285,slow=18,SNR=2.5						
SONM				Lg	Lg	17 05 09.9	
	0.7nm,0.3s,baz=288,slow=29,SNR=10						
KURK	**Kurchatov**	**9.26**	**286**	⇓Lg	Lg	17 05 09.9	
	6.7nm,0.7s						

*UCR **28** 17:03:04.3±1.1, 10°.04N×86°.11W,h10km,MW4.4*
*IDC **28** 17:03:05.9±4.6, 11°.13N×84°.78W,h0km,mb3.5/4, mb1 4.0/4,mb1mx3.7/28,mbtmp3.5/4, Error ellipse: s-maj=224.3km s-min=63.0km az=37.0*

ISC 28 17:03:06.3±2.1,10°.11N±0°.06×86°.01W±0°.08,h15km±12km, n34,σ1s07/39,mb3.5/4,10C-2D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNO	**Dulce Nombre,**	**0.51**	**93**	*eP*	**Pg**	**17 03 16.1**	**-0.3**
DUNO				*eS*	**Sg**	**17 03 24.2**	**+1.1**
GUAI	**GUAI**	**0.51**	**72**	*i* ⇓*iP*	**Pg**	**17 03 16.2**	**-0.3**
ORTG	**Ortega, Santa**	**0.59**	**65**	*i* ⇓*iP*	**Pg**	**17 03 17.7**	**-0.3**
HZTE	**Horizontes, Gu**	**0.72**	**34**	*i P*	**Pg**	**17 03 20.7**	**+0.3**
GBS3	**Finca Las Img**	**0.86**	**39**	⇑*iP*	**Pg**	**17 03 22.3**	**-0.7**
LAPC	**Finca la Perla**	**0.86**	**41**	⇑*iP*	**Pg**	**17 03 22.3**	**-0.8**
BUEV	**Buena Vista**	**0.90**	**41**	*eP*	**Pg**	**17 03 23.1**	**-0.7**
BUEV				*eS*	**Sg**	**17 03 37.5**	**+1.7**
GPS2	**Hotel Rincn d**	**0.91**	**45**	*i P*	**Pg**	**17 03 23.2**	**-0.8**
GPS2				*eS*	**Sb**	**17 03 38.0**	**+2.3**
GB1A	**Borinquen Arri**	**0.93**	**40**	*i P*	**Pg**	**17 03 23.5**	**-0.8**
GPS1	**Guardaparques**	**0.93**	**44**	⇑*iP*	**Pg**	**17 03 23.3**	**-0.9**
LIM1	**Limonal**	**0.95**	**52**	⇑*iP*	**Pg**	**17 03 23.5**	**-1.2**
GUAB	**Guayabo de Bag**	**0.97**	**52**	*i P*	**Pg**	**17 03 23.7**	**-1.3**
CUI	**Cuipilapa**	**0.99**	**56**	⇑*iP*	**Pb**	**17 03 24.4**	**-0.8**
CUI				*i S*	**Sg**	**17 03 39.0**	**+0.5**
BUAI	**Buenos Aires**	**1.01**	**41**	⇑*iP*	**Pb**	**17 03 24.7**	**-0.9**
HORNC	**Hornillas**	**1.01**	**53**	⇑*iP*	**Pb**	**17 03 24.4**	**-1.2**
JTS	**Las Juntas de**	**1.05**	**80**	⇑*eP*	**Pb**	**17 03 24.8**	**-1.5**
ACAL	**Aguas Claras**	**1.09**	**61**	⇑*iP*	**Pb**	**17 03 25.7**	**-1.2**
PTEN	**Parque Tenorio**	**1.17**	**59**	*i P*	**Pn**	**17 03 27.2**	**-1.0**
CASO	**Castillo**	**1.29**	**75**	*i P*	**Pn**	**17 03 28.7**	**-1.2**
ARE1	**Arenal 1**	**1.31**	**74**	⇓*eP*	**Pn**	**17 03 29.6**	**-0.6**
CEDE	**Laguna Cedeo**	**1.34**	**73**	*i P*	**Pn**	**17 03 30.2**	**-0.3**
FORC	**Fortuna**	**1.36**	**75**	*i P*	**Pn**	**17 03 30.3**	**-0.5**
JACO	**JACO, Garabito**	**1.40**	**108**	*eP*	**Pn**	**17 03 31.0**	**-0.3**
COVE	**Coope Vega, Sa**	**1.69**	**69**	*eP*	**Pn**	**17 03 34.4**	**-0.9**
HDC	**Heredia**	**1.87**	**93**	*eP*	**Pb**	**17 03 39.6**	**-0.6**
HDC				*eS*	**Sb**	**17 04 04.9**	**+1.5**
LCR2	**La Lucha 2**	**2.01**	**100**	*eP*	**Pn**	**17 03 39.0**	**-0.8**
RIMA	**Rio Macho**	**2.14**	**99**	*eP*	**Pn**	**17 03 42.1**	**+0.4**
CVTR	**Volcan Turrial**	**2.21**	**92**	*eP*	**Pn**	**17 03 43.0**	**+0.1**
CDM	**Cerro de Muert**	**2.28**	**104**	*eP*	**Pn**	**17 03 43.1**	**-0.7**
TXAR	**Lajitas Array**	**25.28**	**322**	P	**P**	**17 08 33.8**	**+1.5**
	0.7nm,0.7s,baz=137,slow=11,SNR=8.2						
PDAR	**Pinedale Array**	**38.49**	**332**	P	**P**	**17 10 27.8**	**-0.5**
	0.5nm,0.9s,baz=121,slow=8.7,SNR=2.4						
NVAR	**Mina Array Bea**	**40.39**	**320**	P	**P**	**17 10 46.4**	**+2.2**
	1.0nm,0.6s,baz=129,slow=7.2,SNR=7.3						
ILAR	**Eielson Array**	**68.72**	**336**	P	**P**	**17 14 08.1**	**-1.1**
	0.3nm,0.6s,baz=112,slow=4.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**151.20**	**350**	PKPbc	**PKiKP**	**17 23 00.1**	**-0.6**
	0.4nm,0.8s,baz=328,slow=3.3,SNR=4.1						

*IDC **28** 17:05:19.7±1.1,2°.08N×126°.83E,h0km,mb3.6/7, mb1 3.8/7,mb1mx3.5/56,mbtmp3.6/7,Error ellipse: s-maj=99.5km s-min=17.8km az=70.0*
*DJA **28** 17:05:24.9±0.3,2°.N±3°×12°.7E±°,h10km,M4.0/10,mb4.2/2, MLv3.8/10*
*NEIC **28** 17:05:26.1±1.6,2°.06N±0°.10×126°.8E±0°.1,h51km±7km, mb4.0/10,Error ellipse: s-maj=19.3km s-min=9.8km az=51.0*

ISC 28 17:05:25.0±0.7,2°.10N±0°.07×126°.9E±0°.1,h35km,n30, σ1s37/32,mb3.9/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.41**	**160**	P	**Pn**	**17 05 50.8**	**+2.7**
TNTI	**Ternate**	**1.41**	**160**		**Pn**	**17 05 50.8**	**+2.7**
SGSI	**Sangihe**	**2.07**	**320**	P	**Pn**	**17 05 56.7**	**-0.6**
SGSI				S	**Sn**	**17 06 21.2**	**-0.7**
KMSI	**Cibinong**	**3.27**	**242**	P	**Pn**	**17 06 12.9**	**-0.8**
GTOI	**Gorontalo**	**4.13**	**249**	P	**Pn**	**17 06 25.1**	**-0.5**
LUWI	**Luwuk**	**5.15**	**233**	P	**Pn**	**17 06 39.2**	**-0.5**
LUWI	**Luwuk**	**5.15**	**233**		**Pn**	**17 06 40.4**	**+0.7**
MRSI	**Marisa**	**5.19**	**252**	P	**Pn**	**17 06 43.8**	**+3.6**
APSI	**Ampana**	**6.02**	**240**	P	**Pn**	**17 06 50.7**	**-0.9**
TOLI2	**Tolitoli**	**6.17**	**261**	Pn	**Pn**	**17 06 51.0**	**-2.7**
MYLDM	**Lahad Datu**	**8.90**	**290**	Pn	**Pn**	**17 07 33.8**	**+2.6**
SBUM	**Sibu**	**14.65**	**272**	Pn	**Pn**	**17 08 51.2**	**+1.4**
MTN	**Manton Dam**	**15.44**	**164**	Pn	**Pn**	**17 09 00.1**	**-0.1**
KNRA	**Kununurra**	**17.76**	**174**		**P**	**17 09 30.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**20.11**	**183**	P	**P**	**17 09 55.4**	**-0.4**
	1.0nm,0.8s,baz=8.7,slow=12,SNR=1.9						
FITZ	**Fitzroy Crossi**	**20.11**	**183**	P	**P**	**17 09 55.1**	**-0.7**
FITZ				IAmb	IAmb	17 10 05.6	
	comp=Z,8.8nm,1.6s						
TPUB	**Ta-pu**	**21.93**	**344**	P	**P**	**17 10 16.2**	**+0.7**
WB0	**Warramunga Arr**	**22.95**	**162**	P	**P**	**17 10 26.0**	**-0.4**
WB0				IAmb	IAmb	17 10 58.5	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	**23.10**	**162**	P	**P**	**17 10 26.8**	**-1.1**
	comp=Z,2.7nm,0.6s,baz=341,slow=11,SNR=28						
WRA				PcP	**PcP**	**17 14 15.9**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=337,slow=2.1,SNR=2.2						
WRA	**Warramunga Arr**	**23.10**	**162**	IAmb	IAmb	17 10 28.8	
	comp=Z,0.2nm,1.1s						
WB2	**Warramunga Arr**	**23.10**	**162**	P	**P**	**17 10 27.6**	**-0.3**
WB2				IAmb	IAmb	17 10 51.6	
	comp=Z,7.7nm,1.1s						
WR0	**Warramunga Arr**	**23.18**	**161**	P	**P**	**17 10 28.2**	**-0.5**
WR0				IAmb	IAmb	17 10 42.7	
	comp=Z,7.9nm,1.3s						
ASAR	**Alice Springs**	**26.51**	**165**	P	**P**	**17 10 59.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=344,slow=11,SNR=12						
ASAR				PcP	**PcP**	**17 14 24.2**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=342,slow=2.2,SNR=6.3						
SONM	**Songino Array**	**48.88**	**342**	P	**P**	**17 14 08.5**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=149,slow=6.1,SNR=2.9						
MK31	**Makanchi Array**	**58.97**	**326**	P	**P**	**17 15 19.7**	**-1.4**
MK31				IAmb	IAmb	17 15 38.7	
	comp=Z,3.3nm,1.4s						
MKAR	**Makanchi Array**	**58.97**	**326**	P	**P**	**17 15 20.6**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=120,slow=8.3,SNR=14						
MAKZ	**Makanchi**	**59.16**	**326**	P	**P**	**17 15 21.7**	**-0.7**
BVAR	**Borovoye Array**	**68.76**	**327**	P	**P**	**17 16 25.0**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=108,slow=4.7,SNR=1.9						
ABKAR	**Akbulak array**	**73.50**	**321**	P	**P**	**17 16 53.4**	**-0.7**
VNDA	**Vanda**	**81.80**	**173**	P	**P**	**17 17 39.9**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=323,slow=4.5,SNR=2.9						

*IDC **28** 17:09:39.9±1.9,2°.09N×126°.72E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.2/56,mbtmp3.4/4,Error ellipse: s-maj=118.3km s-min=24.0km az=69.0*
*DJA **28** 17:09:45.5±3.2,2°.N±7°×12°.6E±°,h16km±31km,M3.3/6, MLv3.3/6*

ISC 28 17:09:46.3±1.6,1°.9N±0°.2×126°.5E±0°.1,h47km,n6,σ0s56/6, mb3.2/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.44**	**144**	P	**Pn**	**17 10 10.2**	**+0.2**
GTOI	**Gorontalo**	**3.74**	**250**	P	**Pn**	**17 10 41.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.93**	**182**	P	**Pn**	**17 14 16.2**	**-0.3**
	1.7nm,1.0s,baz=2.5,slow=11,SNR=2.4						
WRA	**Warramunga Arr**	**23.07**	**161**	P	**P**	**17 14 47.5**	**-0.6**
	0.4nm,0.4s,baz=339,slow=11,SNR=15						
ASAR	**Alice Springs**	**26.45**	**165**	P	**P**	**17 15 19.9**	**+0.7**
	0.2nm,0.4s,baz=346,slow=11,SNR=9.2						
MKAR	**Makanchi Array**	**58.90**	**326**	P	**P**	**17 19 40.5**	**-0.1**
	0.3nm,0.5s,baz=119,slow=8.0,SNR=6.2						

*IDC **28** 17:12:16.8±1.3,5°.77N×61°.27E,h0km,mb3.7/6,mb1 4.0/6, mb1mx3.5/57,mbtmp3.7/6,MS3.1/8,Ms1 3.1/8, ms1mx2.9/37,Error ellipse: s-maj=37.9km s-min=30.6km az=33.0*
*NEIC **28** 17:12:18.3±0.9,5°.6N±0°.2×61°.3E±0°.1,h10km±2km, mb4.3/8,Error ellipse: s-maj=32.6km s-min=13.0km az=214.0*

ISC 28 17:12:18.4±1.2,5°.7N±0°.2×61°.3E±0°.2,h10km,n19, σ0s68/13,mb3.9/8,MS3.2/6,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.67**	**352**	LR	LR	17 21 49.0	
	comp=Z,59nm,21.0s,baz=203,slow=33						
PALK	**Pallekele**	**19.35**	**84**	LR	LR	17 22 14.0	
	comp=Z,48nm,21.7s,baz=9.2,slow=31						
UOSS	**Minazif**	**19.79**	**346**		**Pn**	**17 16 51.7**	**+1.2**
UOSS				IAmb	IAmb	17 16 53.8	
	comp=Z,35nm,1.4s						
RAYN	**Ar Rayn**	**23.39**	**321**	P	**P**	**17 17 27.4**	**-0.1**
RAYN				IAmb	IAmb	17 17 28.5	
	comp=Z,4.3nm,0.9s						
OPO	**Ambohidratompo**	**27.80**	**210**	LR	LR	17 26 49.9	
	comp=Z,44nm,21.4s,baz=173,slow=31						
CMAR	**Chiang Mai Arr**	**38.85**	**68**	P	**P**	**17 19 44.4**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=251,slow=8.6,SNR=5.3						
CMAR				LR	LR	17 33 41.3	
	comp=Z,13nm,20.3s,baz=206,slow=33						
ANTO	**Ankara**	**42.64**	**327**	P	**P**	**17 20 15.3**	**+0.1**
ABKAR	**Akbulak array**	**43.46**	**359**	P	**P**	**17 20 22.0**	**+0.5**
MKAR	**Makanchi Array**	**44.80**	**20**	P	**P**	**17 20 31.2**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=202,slow=7.0,SNR=2.1						
BOSA	**Boshof**	**48.63**	**224**	LR	LR	17 41 00.2	
	comp=Z,38nm,18.2s,baz=26,slow=35						
ZALV	**Zalesovo Beam**	**51.80**	**17**	P	**P**	**17 21 25.3**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=209,slow=8.3,SNR=2.4						
ZALV				LR	LR	17 42 53.5	
	comp=Z,27nm,21.9s,baz=264,slow=36						
SONM	**Songino Array**	**56.93**	**35**	LR	LR	17 48 11.1	
	comp=Z,18nm,18.1s,baz=334,slow=38						
TORD	**Torodi Ar. Bea**	**59.16**	**282**	P	**P**	**17 22 19.8**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=92,slow=6.5,SNR=2.5						
SENIN	**Lac Senin/Sane**	**61.59**	**320**	P	**P**	**17 22 36.1**	**-0.3**
KSRS	**Korea Array**	**68.07**	**52**	LR	LR	17 53 17.0	
	comp=Z,12nm,20.2s,baz=30,slow=36						
WRA	**Warramunga Arr**	**76.12**	**112**	P	**P**	**17 24 07.4**	**+0.3

PETK S Sb 17 54 14.9 -1.1
0.2nm,0.3s,baz=223,slow=23,SNR=1.3
PET Petropavlovsk 4.87 16 eP Pb 17 53 17.9 -1.0
PET eS Sb 17 54 14.3 -3.1
DALK Dalny 4.89 16 eP Pb 17 53 19.7 +0.4
DALK eS Sb 17 54 17.8 -0.4
AVH Avacha 5.12 15 eP Pb 17 53 24.3 +1.2
KOK Koryaka 5.12 15 eP Pb 17 53 24.5 +1.2
SMAR Somma 5.12 16 eP Pb 17 53 22.4 -1.0
KRER Koryakskii 5.15 15 eP Pb 17 53 24.9 +1.0
SDLR Sedlovina 5.15 16 eP Pb 17 53 24.8 +1.0
KRX Arik 5.19 14 eP Pb 17 53 23.9 -0.6
SPN Mys Shipunski 5.25 24 eP Pb 17 53 24.9 -0.4
SPN eS Sb 17 54 26.3 -2.0
GNL Ganaly 5.42 9 eP Pb 17 53 28.8 +0.4
MKZ Mys Kozlova 7.01 26 eP Pb 17 53 48.9 -6.5
KBTR Krutoberegovo 8.76 24 eP Pn 17 54 13.5 +13
ASAJ Asahikawa 10.52 251 P Pn 17 54 21.5 -2.8
0.4nm,0.3s,baz=85,slow=19,SNR=10
MA2 Magadan 11.73 346 LR LR 17 58 56.9
comp=Z,33nm,18.4s,baz=60,slow=36
USRK Ussuriysk Ar. 17.42 265 P Pn 17 55 53.9 -2.6
baz=76,slow=13,SNR=3.1
KSRS Korea Array 23.46 253 P P 17 57 03.0 0.0
1.0nm,0.5s,baz=49,slow=10.0,SNR=5.2
H11S1 WAKE ISLAND Hy 30.91 161 T T 18 31 18.5
baz=345,slow=76,SNR=24
H11S3 WAKE ISLAND Hy 30.92 161 T T 18 31 22.2
baz=345,slow=76,SNR=18
H11S2 WAKE ISLAND Hy 30.93 161 T T 18 31 17.7
baz=345,slow=76,SNR=29
CMAR Chiang Mai Arr 54.96 258 P P 18 01 23.8 -1.1
0.2nm,0.6s,baz=34,slow=6.2,SNR=2.7
WRA Warramunga Arr 70.82 202 P P 18 03 12.6 +2.4
0.4nm,0.9s,baz=15,slow=6.6,SNR=2.5
ASAR Alice Springs 74.50 201 P P 18 03 35.3 +3.2
0.1nm,0.5s,baz=13,slow=5.2,SNR=1.4

WEL 28 18:11:19.7±0.9, 38°S±8°×18°0E±°, h33km, M3.5/23, ML3.8/23, MLv3.5/23, Error ellipse: s-maj=0.0km s-min=0.0km az=149.4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WMGZ	**Waiomatatini S**	**1.10**	**256**	P	Pn		18 11 38.8	0.0
WMGZ				S	Sb		18 11 54.2	-0.1
MXZ	**Matakaoa Point**	**1.16**	**269**	P	Pn		18 11 39.3	-0.3
MXZ				S	Sn		18 11 54.5	+0.3
PUZ	**Puketiti**	**1.30**	**246**	P	Pn		18 11 41.4	-0.1
PUZ				S	Sn		18 11 58.1	+0.4
PKGZ	**Pakihiroa**	**1.38**	**256**	P	Pn		18 11 42.3	-0.4
CNGZ	**Carnagh Station**	**1.54**	**233**	P	Pn		18 11 43.5	+0.5
TWGZ	**Tauwhareparae**	**1.54**	**246**	P	Pn		18 11 45.0	+0.1
TWGZ				S	Sn		18 12 05.2	+1.4
HAZ	**Te Kaha**	**1.58**	**262**	P	Pn		18 11 46.0	+0.6
RUGZ	**Raukumara Rang**	**1.70**	**256**	P	Pn		18 11 47.0	-0.2
TKGZ	**Te Karaka**	**1.75**	**239**	P	Pn		18 11 47.9	+0.2
MWZ	**Matawai**	**1.93**	**246**	P	Pn		18 11 49.7	-0.6
MWZ				S	Sn		18 12 12.9	-0.5
RIGZ	**Rimuhau**	**1.95**	**233**	P	Pn		18 11 50.6	+0.1
RIGZ				S	Sn		18 12 14.9	+1.1
PRGZ	**Paritu Road**	**2.01**	**227**	P	Pn		18 11 51.0	-0.3
RAGZ	**Rawiri**	**2.08**	**243**	P	Pn		18 11 53.0	+0.7
RAGZ				S	Sn		18 12 17.8	+0.7
MHGZ	**Mahia Peninsul**	**2.16**	**222**	P	Pn		18 11 53.0	-0.4
KNZ	**Kokohu**	**2.20**	**228**	P	Pn		18 11 53.2	-0.7
WHRZ	**Whale Island**	**2.23**	**262**	P	Pn		18 11 55.0	+0.6
SNGZ	**Shannon Statio**	**2.27**	**237**	P	Pn		18 11 54.8	-0.1
RTZ	**Ruatahuna**	**2.43**	**243**	P	Pn		18 11 57.7	+0.5
EDRZ	**Edgecumbe**	**2.45**	**256**	P	Pn		18 11 57.8	+0.3
MARZ	**Manawahe**	**2.48**	**259**	P	Pn		18 11 58.1	+0.3
WHHZ	**Waihua**	**2.50**	**232**	P	Pn		18 11 57.9	-0.2
WHHZ				S	Sn		18 12 28.1	+0.7
RAHZ	**Arahi**	**2.50**	**236**	P	Pn		18 11 58.2	0.0
MUGZ	**Murupara**	**2.53**	**248**	P	Pn		18 11 58.8	+0.3
MUGZ				S	Sn		18 12 27.7	-0.5
OPRZ	**Ohinepanea**	**2.56**	**263**	P	Pn		18 11 58.7	-0.1
MTHZ	**Maungataniwha**	**2.64**	**240**	P	Pn		18 11 59.9	-0.1
MTHZ				S	Sn		18 12 31.6	+0.7
TARZ	**Mount Tarawera**	**2.66**	**254**	P	Pn		18 12 00.8	+0.4
ARHZ	**Aropaoanui**	**2.76**	**231**	P	Pn		18 12 01.6	0.0
ARHZ				S	Sn		18 12 35.1	+1.3
NMHZ	**Naumai**	**2.79**	**236**	P	Pn		18 12 02.0	-0.1
KARZ	**Kaharoa**	**2.82**	**260**	P	Pn		18 12 02.6	+0.1
MRHZ	**Matea Rd**	**2.93**	**243**	P	Pn		18 12 03.7	-0.2
CKHZ	**Cape Kidnapper**	**2.97**	**224**	P	Pn		18 12 03.3	-1.2
BKZ	**Black Stump Fm**	**3.03**	**237**	P	Pn		18 12 05.1	-0.3
MCHZ	**McNeill Hill**	**3.05**	**231**	P	Pn		18 12 05.1	-0.5
KAHZ	**Kahuranaki**	**3.17**	**224**	P	Pn		18 12 06.3	-1.1
KWHZ	**Kaweka Forest**	**3.21**	**234**	P	Pn		18 12 07.6	-0.4
PXZ	**Pawanui**	**3.35**	**222**	P	Pn		18 12 08.0	-1.7
KRHZ	**Kereru**	**3.38**	**231**	P	Pn		18 12 08.9	-1.2
TOZ	**Tahuroa Road**	**3.38**	**266**	P	Pn		18 12 10.0	-0.2
BHHZ	**Black Hill Sta**	**3.48**	**235**	P	Pn		18 12 10.8	-0.8
TMVZ	**Te Maari**	**3.55**	**243**	P	Pn		18 12 11.9	-0.6
ETVZ	**East Tongariro**	**3.55**	**242**	P	Pn		18 12 11.8	-0.8
KRVZ	**Karewarewa**	**3.58**	**243**	P	Pn		18 12 12.5	-0.5
WPHZ	**Waipukurau**	**3.60**	**225**	P	Pn		18 12 11.6	-1.7
WTVZ	**West Tongariro**	**3.63**	**243**	P	Pn		18 12 13.8	+0.1
PRHZ	**Porangahau**	**3.64**	**221**	P	Pn		18 12 11.3	-2.5
PNHZ	**Pukenui**	**3.64**	**229**	P	Pn		18 12 12.4	-1.4
MOVZ	**Moawhango**	**3.65**	**238**	P	Pn		18 12 13.0	-0.9
NGZ	**Ngauruhoe**	**3.65**	**242**	P	Pn		18 12 13.3	-0.7
TUVZ	**Tukino**	**3.65**	**241**	P	Pn		18 12 14.1	+0.1
FWVZ	**Far West T-bar**	**3.71**	**242**	P	Pn		18 12 14.5	-0.5
WNVZ	**Wahianoa**	**3.71**	**240**	P	Pn		18 12 14.2	-0.7
TSZ	**Takapari Road**	**3.88**	**229**	P	Pn		18 12 15.2	-1.9
DVHZ	**Dannevirke**	**3.92**	**225**	P	Pn		18 12 15.3	-2.3
HIZ	**Hauiti**	**3.99**	**251**	P	Pn		18 12 19.2	+0.7
BFZ	**Birch Farm**	**4.15**	**220**	P	Pn		18 12 17.7	-3.0
PRWZ	**Pori Road**	**4.20**	**223**	P	Pn		18 12 19.6	-1.9
POWZ	**Post Office Ro**	**4.21**	**226**	P	Pn		18 12 19.9	-1.6
MRZ	**Mangatainoka R**	**4.49**	**225**	P	Pn		18 12 23.1	-2.3
WCZ	**Waipu Caves**	**4.64**	**289**	P	Pn		18 12 28.8	+1.3
HOWZ	**Holdsworth Sta**	**4.69**	**223**	P	Pn		18 12 25.2	-3.0
NEZ	**North Egmont**	**4.77**	**247**	P	Pn		18 12 31.5	+2.2
OGWZ	**Otaki Gorge**	**4.83**	**226**	P	Pn		18 12 27.2	-2.8
KHEZ	**Kahui Hut**	**4.83**	**247**	P	Pn		18 12 32.1	+1.9
MTW	**Mount Morrison**	**4.88**	**221**	P	Pn		18 12 27.4	-3.4
KIW	**Kapiti Island**	**5.01**	**227**	P	Pn		18 12 29.6	-2.9
CAW	**Cannon Point**	**5.08**	**224**	P	Pn		18 12 30.4	-3.1
OUZ	**Omahuta**	**5.49**	**293**	P	Pn		18 12 40.9	+1.7
NNZ	**Nelson**	**6.15**	**232**	P	Pn		18 12 45.6	-2.5
CTZ	**Chatham Island**	**6.76**	**157**	P	Pn		18 12 57.7	+1.2

*IDC **28** 18:12:41.5±2.6, 46°.85N×152°.54E, h89km±22km, mb3.3/10, mb1 3.5/13, mb1mx3.3/49, mbtmp3.7/13, MS2.4/2, Ms1 2.4/2, ms1mx2.2/17, Error ellipse: s-maj=26.3km s-min=15.3km az=124.0*

ISC 28 18:12:41.7±1.0, 46°.3N±0°.1×152°.6E±0°.1, h100km, n33, σ1s87/27, mb3.7/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
NEM2	**Nemuro 2**	**5.67**	**241**	P	**Pn**		**18 14 02.5**	**-0.9**
NEM2				*eS*	**Sn**		**18 15 06.5**	**-0.6**
JRA	**Rausu**	**5.77**	**248**	P	**Pn**		**18 14 06.7**	**+2.0**
JAK	**Akkeshi**	**6.51**	**242**	P	**Pn**		**18 14 14.3**	**-0.5**
JTKR	**Abashiri--Toko**	**6.55**	**252**	P	**Pn**		**18 14 16.4**	**+1.1**
JMP	**Maruseppu**	**6.90**	**254**	P	**Pn**		**18 14 21.7**	**+1.6**
JAR	**Ashorobuto**	**6.94**	**247**	P	**Pn**		**18 14 21.0**	**+0.4**
JKK2	**Kamakawa 2**	**7.36**	**254**	P	**Pn**		**18 14 27.9**	**+1.6**
ASAJ	**Asahikawa**	**7.37**	**256**	P	**Pn**		**18 14 28.7**	**+2.3**
	0.8nm,0.3s,baz=82,slow=20,SNR=9.4							
ASAJ				LR	LR		18 16 51.0	
	comp=Z,31nm,19.0s,baz=328,slow=33							
JCH	**Churui**	**7.54**	**244**	P	**Pn**		**18 14 28.6**	**-0.3**
JCH				*eS*	**Sn**		**18 15 52.2**	**-0.5**
PETK	**Petropavlovsk-**	**7.57**	**24**	P	Pn		18 14 20.6	-8.5
	0.1nm,0.3s,baz=175,slow=9.9,SNR=6.4							
PETK				S	Sn		18 15 43.4	-10
	baz=204,slow=24,SNR=1.0							
JRBN	**Rebuntou**	**8.07**	**268**	P	**Pn**		**18 14 37.6**	**+1.6**
JNBK	**Urakawa-nobuka**	**8.11**	**244**	P	**Pn**		**18 14 36.2**	**-0.3**
JNBK				*eS*	**Sn**		**18 16 05.5**	**-0.9**
JYM2	**Yakumo 2**	**9.70**	**249**	P	**Pn**		**18 14 57.7**	**-0.5**
JANG	**Nango**	**9.99**	**237**	P	**Pn**		**18 14 59.2**	**-3.0**
JRG	**Rokugo**	**11.15**	**236**	P	**Pn**		**18 15 16.0**	**-1.8**
MA2	**Magadan**	**13.32**	**356**	LR	LR		18 19 43.9	
	comp=Z,18nm,20.8s,baz=72,slow=33							
USRK	**Ussuriysk Ar.**	**14.64**	**269**	P	**Pn**		**18 16 05.3**	**+1.7**
	baz=71,slow=12,SNR=1.6							
KSRS	**Korea Array**	**20.30**	**253**	P	Pn		18 17 13.2	+0.9
	1.0nm,0.7s,baz=62,slow=9.0,SNR=2.0							
H11N2	**WAKE ISLAND Hy 29.02 151**			T	T		18 49 55.8	
	baz=340,slow=76,SNR=66							
H11N1	**WAKE ISLAND Hy 29.04 151**			T	T		18 50 03.4	
	baz=340,slow=76,SNR=50							
H11N3	**WAKE ISLAND Hy 29.04 151**			T	T		18 49 59.9	
	baz=340,slow=76,SNR=19							
H11S1	**WAKE ISLAND Hy 30.10 152**			T	T		18 51 20.5	
	baz=340,slow=76,SNR=67							
H11S3	**WAKE ISLAND Hy 30.11 152**			T	T		18 51 19.6	
	baz=340,slow=76,SNR=37							
H11S2	**WAKE ISLAND Hy 30.12 152**			T	T		18 51 21.2	
	baz=340,slow=76,SNR=66							
MKAR	**Makanchi Array 46.80 297**			P	**P**		**18 20 59.8**	**-1.1**
	0.1nm,0.4s,baz=69,slow=6.3,SNR=5.2							
CMAR	**Chiang Mai Arr 51.89 256**			P	**P**		**18 21 40.4**	**+0.3**
	0.3nm,0.3s,baz=36,slow=7.6,SNR=1.5							
FINES	**FINESS Array B 64.26 335**			P	**P**		**18 23 03.8**	**-1.9**
	0.9nm,0.4s,baz=46,slow=8.3,SNR=9.7							
WRA	**Warramunga Arr 67.98 198**			P	**P**		**18 23 33.3**	**+3.4**
	0.4nm,0.9s,baz=19,slow=7.0,SNR=1.5							
NOA	**NORSAR Array B 68.51 341**			P	**P**		**18 23 30.5**	**-2.3**
	0.8nm,0.7s,baz=27,slow=6.6,SNR=3.3							
ASAR	**Alice Springs 71.68 198**			P	**P**		**18 23 56.9**	**+4.4**
	0.4nm,0.7s,baz=11,slow=5.6,SNR=8.8							
AKASG	**Malin Array Be 71.69 326**			P	**P**		**18 23 50.0**	**-2.3**
	0.9nm,0.3s,baz=37,slow=6.2,SNR=7.4							
TXAR	**Lajitas Array 78.04 60**			P	**P**		**18 24 29.8**	**+0.4**
	0.1nm,0.5s,baz=302,slow=5.2,SNR=1.6							
MMAI	**Mount Meron Ar 82.81 311**			P	**P**		**18 24 55.5**	**+0.7**
	1.1nm,0.6s,baz=42,slow=6.7,SNR=3.4							

*IDC **28** 18:18:37.3±1.1, 5°.75N×61°.32E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/42, mbtmp3.7/9, MS3.3/22, Ms1 3.3/22, ms1mx3.2/43, Error ellipse: s-maj=34.4km s-min=22.6km az=35.0*

*NEIC **28** 18:18:38.7±1.7, 5°.7N±0°.2×61°.22E±0°.05, h10km±2km, mb4.5/6, Error ellipse: s-maj=30.0km s-min=9.0km az=181.0*

ISC 28 18:18:39.0±1.2, 5°.8N±0°.2×61°.3E±0°.2, h10km, n34, σ0s87/18, mb3.8/12, MS3.3/20, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WSAR	**Wadi Sarin**	**17.56**	**352**	LR	LR		18 28 00.8	
	comp=Z,135nm,21.5s,baz=201,slow=32							
PALK	**Pallekele**	**19.35**	**85**	LR	LR		18 29 05.8	
	comp=Z,72nm,18.2s,baz=87,slow=32							
RAYN	**Ar Rayn**	**23.29**	**321**	P	**P**		**18 23 46.5**	**-0.8**
OPO	**Ambohidratompo**	**27.89**	**210**	LR	LR		18 32 37.1	
	comp=Z,86nm,20.9s,baz=187,slow=30							
MBAR	**Mbarara**	**31.15**	**259**	LR	LR		18 37 15.0	
	comp=Z,29nm,19.7s,baz=54,slow=36							
GEYT	**Alibeck**	**32.14**	**355**	LR	LR		18 38 11.2	
	comp=Z,21nm,20.4s,baz=15,slow=36							
CMAR	**Chiang Mai Arr**	**38.82**	**68**	P	**P**		**18 26 04.8**	**+0.3**
	0.6nm,0.3s,baz=254,slow=8.2,SNR=7.1							
CMAR				LR	LR		18 40 26.1	
	comp=Z,25nm,20.2s,baz=336,slow=34							
KBZ	**Khabaz**	**41.13**	**340**	LR	LR		18 44 39.4	
	comp=Z,41nm,18.7s,baz=154,slow=38							
BRTR	**Keskin Array B**	**41.99**	**328**	P	**P**		**18 26 31.3**	**+0.6**
	0.6nm,0.5s,baz=151,slow=6.5,SNR=1.9							
BRTR				LR	LR		18 44 19.9	
	comp=Z,32nm,21.2s,baz=135,slow=37							
ABKAR	**Akbulak array**	**43.35**	**359**	P	**P**		**18 26 40.7**	**-0.7**
ABKAR				IAmb	IAmb		18 26 50.2	
	comp=Z,6.5nm,1.2s							
ABKAR	**Akbulak array**	**43.35**	**359**	P	**P**		**18 26 41.6**	**+0.2**
MKAR	**Makanchi Array**	**44.71**	**20**	P	**P**		**18 26 51.8**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=202,slow=8.5,SNR=2.2							
MKAR				LR	LR		18 46 17.9	
	comp=Z,38nm,21.7s,baz=222,slow=37							
BOSA	**Boshof**	**48.70**	**223**	LR	LR		18 43 44.9	
	comp=Z,116nm,21.0s,baz=244,slow=31							
ZALV	**Zalesovo Beam**	**51.70**	**18**	P	**P**		**18 27 45.5**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=224,slow=8.1,SNR=1.8							
ZALV				LR	LR		18 50 20.0	
	comp=Z,37nm,20.2s,baz=232,slow=37							
AKASG	**Malin Array Be**	**52.17**	**335**	P	**P**		**18 27 49.2**	**-0.6**
	comp=Z,0.2nm,0.4s,baz=127,slow=6.2,SNR=1.7							
AKASG				LR	LR		18 52 02.6	
	comp=Z,19nm,19.4s,baz=270,slow=38							
SONM	**Songino Array**	**56.85**	**35**	P	**P**		**18 28 23.8**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=219,slow=6.7,SNR=2.3							
SONM				LR	LR		18 53 38.9	
	comp=Z,49nm,18.5s,baz=352,slow=37							
TLY	**Talaya**	**57.60**	**30**	P	**P**		**18 28 31.4**	**+2.3**
TLY				IAmb	IAmb		18 28 33.5	
	comp=Z,7.3nm,1.3s							
GERES	**GERESS Array B**	**58.78**	**325**	LR	LR		18 55 23.9	
	comp=Z,24nm,19.5s,baz=140,slow=38							
TORD	**Torodi Ar. Bea**	**59.12**	**282**	P	**P**		**18 28 40.7**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=95,slow=5.2,SNR=3.5							
FINES	**FINESS Array B**	**61.43**	**342**	LR	LR		18 57 01.8	
	comp=Z,53nm,18.4s,baz=170,slow=38							
NRIK	**Noril'sk**	**65.80**	**10**	LR	LR		19 00 38.6	
	comp=Z,56nm,19.2s,baz=198,slow=38							
NOA	**NORSAR Array B**	**66.55**	**336**	LR	LR		19 00 15.0	
	comp=Z,23nm,19.9s,baz=245,slow=38							
ARCES	**ARCESS Array B**	**67.83**	**347**	LR	LR		19 03 46.4	
	comp=Z,14nm,18.3s,baz=165,slow=40							
KSRS	**Korea Array**	**68.01**	**52**	LR	LR		19 01 53.0	
	comp=Z,19nm,18.5s,baz=240,slow=38							
MJAR	**Matsushiro Arr**	**76.09**	**54**	LR	LR		19 07 05.4	
	comp=Z,10.0nm,18.1s,baz=235,slow=38							
WRA	**Warramunga Arr**	**76.17**	**112**	P	**P**		**18 30 27.6**	**-0.4**
	comp=Z,2.2nm,1.0s,baz=287,slow=5.0,SNR=8.4							
WRA	**Warramunga Arr**	**76.17**	**112**	P	**P**		**18 30 27.9**	**-0.1**
WRAB	**Tennant Creek**	**76.18**	**112**	P	**P**		**18 30 28.1**	**0.0**
WRAB				IAmb	IAmb		18 30 35.8	
	comp=Z,6.6nm,1.1s							
WB2	**Warramunga Arr**	**76.19**	**112**	P	**P**		**18 30 27.9**	**-0.3**
ASAR	**Alice Springs**	**76.55**	**116**	P	**P**		**18 30 29.6**	**-0.5**
	comp=Z,3.3nm,1.1s,baz=279,slow=5.6,SNR=13							
ASAR	**Alice Springs**	**76.55**	**116**	P	**P**		**18 30 28.9**	**-1.3**
PETK	**Petropavlovsk-**	**89.28**	**37**	LR	LR		19 14 33.0	
	comp=Z,22nm,19.1s,baz=286,slow=38							
RES	**Resolute Bay**	**98.38**	**354**	LR	LR		19 20 57.7	
	comp=Z,23nm,19.8s,baz=197,slow=38							
TXAR	**Lajitas Array**	**142.22**	**338**	PKP	**PKPdf**		**18 38 13.7**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=66,slow=2.2,SNR=2.8							

IDC 28 18:21:31.5±2.3, 1°.92N×126°.58E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/32, mbtmp3.2/3, Error ellipse: s-maj=186.4km s-min=28.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
WRA	**Warramunga Arr**	**23.02**	**161**	P	P		18 26 37.5	-0.8
	0.5nm,0.5s,baz=340,slow=11,SNR=9.7							
ASAR	**Alice Springs**	**26.41**	**165**	P	P		18 27 10.7	+0.7
	0.3nm,0.9s,baz=343,slow=9.0,SNR=6.2							
MKAR	**Makanchi Array**	**58.96**	**326**	P	P		18 31 32.8	0.0
	0.2nm,0.5s,baz=123,slow=8.5,SNR=1.4							

*DJA **28** 18:47:04.7±0.4, 6°.5S±2°×13°.0E±°, h142km±7km, M4.3/11, mB4.9/4, mb4.1/6, MLv4.4/11, Mw(mB)4.2/4, Mwp5.3/1*

*NEIC **28** 18:47:05.3±1.8, 6°.18S±0°.06×130°.26E±0°.09, h122km±8km, mb4.6/13, Error ellipse: s-maj=13.2km s-min=8.0km az=98.0*

*IDC **28** 18:47:06.3±4.5, 6°.25S×130°.20E, h125km±39km, mb3.6/7, mb1 3.7/9, mb1mx3.5/25, mbtmp4.1/9, Error ellipse: s-maj=34.4km s-min=18.7km az=51.0*

ISC 28 18:47:05.1±0.6, 6°.20S±0°.05×130°.34E±0°.06, h124km, n45, σ1s86/48, mb4.3/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BNDI	**Bandanaira**	**1.72**	**345**	P	**Pn**		**18 47 36.0**	**+0.6**
BNDI				S	**Sn**		**18 48 00.9**	**+2.4**
SAUI	**Saumlaki**	**2.01**	**152**	P	**Pn**		**18 47 40.3**	**+1.3**
SAUI				S	**Sn**		**18 48 05.8**	**+0.9**
SAUI	**Saumlaki**	**2.01**	**152**		**Pn**		**18 47 40.3**	**+1.3**
SAUI				*Sn*	**Sn**		**18 48 07.0**	**+2.2**
FAKI	**Fak Fak**	**3.77**	**30**	P	**Pn**		**18 48 01.1**	**-0.7**
FAKI	**Fak Fak**	**3.77**	**30**		**Pn**		**18 48 00.8**	**-1.0**
FAKI						**Sn**	**18 48 40.9**	**-4.8**
NLAI	**Namlea**	**4.37**	**312**	P		**Pn**	**18 48 12.2**	**+2.5**
SWI	**Sorong**	**5.38**	**10**	P		**Pn**	**18 48 22.5**	**-0.8**
	0.6nm2µm20nm,0.5s							
MTN	**Manton Dam**	**6.65**	**173**			**Pn**	**18 48 38.8**	**-1.6**
SOEI	**Soe**	**6.97**	**239**	P		**Pn**	**18 48 44.7**	**-0.2**
	0.2nm701nm47nm,0.9s							
SOEI	**Soe**	**6.97**	**239**			**Pn**	**18 48 44.9**	**0.0**
TNTI	**Ternate**	**7.53**	**337**	P		**Pn**	**18 48 52.2**	**-0.2**
	0.1nm9.5nm,1.0s							
TNTI	**Ternate**	**7.53**	**337**	Pn		**Pn**	**18 48 51.5**	**-0.9**
BATI	**Baumata**	**7.71**	**238**	P		**Pn**	**18 48 54.2**	**-0.5**
	7.1nm,0.3s,baz=94,slow=4.9,SNR=19							
BATI				S		**Sn**	**18 50 18.9**	**-1.8**
	4.3nm,0.3s,baz=49,slow=20,SNR=8.3							
BATI	**Baumata**	**7.71**	**238**	P		**Pn**	**18 48 53.7**	**-1.1**
MMRI	**Maumere**	**8.39**	**253**	Pn		**Pn**	**18 49 04.8**	**+0.9**
KNRA	**Kununurra**	**9.54**	**189**			**Pn**	**18 49 16.4**	**-3.0**
FITZ	**Fitzroy Crossi**	**12.68**	**201**	P		Pn	18 49 56.5	-4.6
	1.1nm,0.3s,baz=20,slow=7.8,SNR=26							
FITZ				S		Sn	18 52 04.1	-17
	0.6nm,0.3s,baz=48,slow=16,SNR=3.5							
WB0	**Warramunga Arr**	**14.05**	**164**	P		**Pn**	**18 50 15.5**	**-3.4**
WRAB	**Tennant Creek**	**14.20**	**164**	Pn		**Pn**	**18 50 17.1**	**-3.6**
WRA	**Warramunga Arr**	**14.20**	**164**	P		**Pn**	**18 50 16.7**	**-4.1**
	1.1nm,0.3s,baz=337,slow=13,SNR=41							
WRA				S		Sn	18 52 43.5	-14
	3.0nm,0.3s,baz=343,slow=23,SNR=13							
WRA	**Warramunga Arr**	**14.20**	**164**	P		**Pn**	**18 50 17.4**	**-3.4**
WB2	**Warramunga Arr**	**14.21**	**164**	P		**Pn**	**18 50 18.1**	**-2.7**
WR0	**Warramunga Arr**	**14.28**	**164**	Pn		**Pn**	**18 50 17.7**	**-4.0**
COEN	**Coen**	**14.80**	**122**	Pn		**Pn**	**18 50 29.2**	**+0.8**
AS31	**Alice Springs**	**17.70**	**169**	P		**P**	**18 51 03.1**	**-0.1**
ASAR	**Alice Springs**	**17.70**	**169**	P		**P**	**18 51 02.8**	**-0.4**
	1.0nm,0.3s,baz=346,slow=10,SNR=46							
ASAR				S		S	18 54 07.4	-13
	0.7nm,0.3s,baz=348,slow=26,SNR=7.3							
ASAR	**Alice Springs**	**17.70**	**169**	P		**Pn**	**18 51 03.3**	**-0.7**
PSA00	**Pilbara Seismi**	**18.35**	**213**			**Pn**	**18 51 10.4**	**-1.3**
PSA00				IAmb		IAmb	18 51 10.7	
	comp=Z,9.3nm,0.7s							
CTA	**Charters Tower**	**20.73**	**133**	P		Pn	18 51 38.8	-0.8
	comp=Z,7.4nm,1.1s,baz=312,slow=14,SNR=1.8							
FORT	**Forrest**	**24.55**	**185**	P		**P**	**18 52 14.6**	**+1.2**
FORT				IAmb		IAmb	18 52 58.6	
	comp=Z,42nm,1.1s							
MORW	**Morawa**	**26.46**	**209**	P		**P**	**18 52 31.4**	**+0.7**
MORW				IAmb		IAmb	18 53 15.5	
	comp=Z,53nm,1.7s							
BBOO	**Buckleboo**	**27.01**	**169**	P		**P**	**18 52 34.7**	**-0.9**
BBOO				IAmb		IAmb	18 52 35.5	
	comp=Z,70nm,1.8s							
STKA	**Stephens Creek**	**27.63**	**159**	P		**P**	**18 52 41.7**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=328,slow=13,SNR=1.8							
STKA	**Stephens Creek**	**27.63**	**159**	P		**P**	**18 52 42.0**	**+0.8**
NWAO	**Narrogin (SRO)**	**29.26**	**203**	P		**P**	**18 52 55.8**	**+0.2**
	comp=Z,15nm,1.2s,baz=60,slow=11,SNR=1.9							
NWAO	**Narrogin (SRO)**	**29.26**	**203**	P		**P**	**18 52 55.6**	**0.0**
NWAO	**Narrogin (SRO)**	**29.26**	**203**	P		**P**	**18 52 55.6**	**0.0**
NWAO				IAmb		IAmb	18 53 34.7	
	comp=Z,53nm,1.6s							
CMAR	**Chiang Mai Arr**	**39.48**	**309**

SHLS					Lg	Lg	18 55 09.8		
	25nm,0.5s								
KPKS	**Kokpek**	**3.91**	**17**	*eP*	**Pb**		**18 54 12.4**	**+1.4**	
	4.7nm,0.5s								
KPKS					*eS*	**Sg**	**18 55 07.1**	**-0.2**	
	15nm,0.4s								
PDGK	**Podgornoye**	**4.01**	**26**	⇑Pg	**Pb**		**18 54 13.6**	**+0.9**	
	4.6nm,0.7s								
PDGK				⇑	Lg	Lg	18 55 11.8		
	22nm,0.6s								
KRBS	**Karabastau**	**4.10**	**345**	*eP*	**Pb**		**18 54 16.4**	**+2.2**	
	6.8nm,0.7s								
KRBS					*eS*	**Sg**	**18 55 13.7**	**+0.2**	
	9.3nm,0.4s								
KRBS	**Karabastau**	**4.10**	**345**	Pg	**Pb**		**18 54 16.4**	**+2.2**	
	6.8nm,0.7s								
KRBS					Lg	Lg	18 55 13.7		
	9.3nm,0.4s								
KUU	**Kurty**	**4.19**	**352**	*eP*	**Pb**		**18 54 18.2**	**+2.4**	
	2.4nm,0.5s								
KUU					*eS*	**Sg**	**18 55 16.9**	**+0.4**	
	4.7nm,0.6s								
KUU	**Kurty**	**4.19**	**352**	Pg	**Pb**		**18 54 18.1**	**+2.4**	
	2.8nm,0.6s								
KUU					Lg	Lg	18 55 17.5		
	7.1nm,0.6s								
KTMS	**Ketmen**	**4.43**	**32**	*eP*	**Pb**		**18 54 22.3**	**+2.4**	
KTMS					*eS*	**Sg**	**18 55 23.7**	**-0.5**	
KTMS	**Ketmen**	**4.43**	**32**	Pg	**Pb**		**18 54 22.3**	**+2.4**	
	0.3nm,0.6s								
KTMS					Lg	Lg	18 55 23.6		
	13nm,0.5s								
MNBS	**Baschi**	**4.44**	**12**	*eP*	**Pb**		**18 54 22.2**	**+2.1**	
	3.8nm,0.7s								
MNBS					*eS*	**Sg**	**18 55 24.2**	**-0.4**	
	13nm,0.4s								
MNBS	**Baschi**	**4.44**	**12**	Pg	**Pb**		**18 54 22.2**	**+2.1**	
	3.8nm,0.7s								
MNBS					Lg	Lg	18 55 24.2		
	13nm,0.4s								
DJR	**Jarkent**	**5.01**	**23**	*eP*	**Pb**		**18 54 32.3**	**+2.6**	
	4.4nm,1.5s								
DJR					*eS*	**Sg**	**18 55 41.0**	**-1.6**	
	6.3nm,0.5s								
DJR	**Jarkent**	**5.01**	**23**	Pg	**Pb**		**18 54 32.3**	**+2.6**	
	2.5nm,0.7s								
DJR					Lg	Lg	18 55 41.0		
	6.0nm,0.6s								
TDK	**Taldygorghan**	**5.35**	**10**	Pg	**Pg**		**18 54 40.5**	**-3.8**	
	9.7nm,0.4s								
TDK					Lg	Lg	18 55 55.0		
	24nm,0.6s								
KAPS	**Kapalarasan**	**5.79**	**16**	Pg	**Pg**		**18 54 48.0**	**-4.7**	
	1.1nm,0.7s								
KAPS					Lg	Lg	18 56 09.4		
	3.6nm,0.8s								
KK31	**Karatay Array**	**5.99**	**306**	⇓Lg	**Pg**		**18 54 55.2**	**-1.5**	
	0.7nm,0.6s,baz=123,slow=16								
KK31				⇓	Lg	Lg	18 56 12.2		
	1.6nm,0.6s,baz=122,slow=29,SNR=3.2								

JMA ***28*** *19:02:16.4±0.1,36.˚12N×139.˚98E,h67km±1km,M2.8*
IDC ***28*** *19:02:19.7±3.1,35.˚72N×139.˚23E,h90km±21km,mb3.2/2, mb1 3.5/2,mb1mx2.9/50,mbtmp3.6/2,Error ellipse: s-maj=82.7km s-min=30.9km az=61.0*

ISC 28 19:02:15.5±1.1,36.˚09N±0.˚06×139.˚99E±0.˚07,h75km±8km, n12,σ0s91/19,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.21**	**51**	P	**Pn**	**19 02 26.8**	**+0.1**
JYT				S	**Sn**	**19 02 34.5**	**-0.5**
JAG	**Ashikaga**	**0.55**	**307**	P	**Pn**	**19 02 29.3**	**+0.1**
JRY	**Ryogami san**	**0.89**	**265**	P	**Pn**	**19 02 33.5**	**+0.6**
JRY				S	**Sn**	**19 02 46.5**	**+0.6**
JKT	**Katashina**	**0.90**	**319**	P	**Pn**	**19 02 33.2**	**+0.1**
JKT				S	**Sn**	**19 02 46.4**	**+0.1**
JOD2	**Odawara 2**	**1.11**	**222**	P	**Pn**	**19 02 36.2**	**+0.6**
JOD2				S	**Sn**	**19 02 50.7**	**+0.1**
JYN	**Shimob**	**1.32**	**244**	P	**Pn**	**19 02 39.3**	**+1.0**
JFY	**Yanaizu**	**1.33**	**350**	P	**Pn**	**19 02 39.4**	**+0.9**
JFY				S	**Sn**	**19 02 56.5**	**+0.8**
JHK	**Hiroka**	**1.39**	**326**	P	**Pn**	**19 02 39.6**	**+0.4**
MJAR	**Matsushiro Arr**	**1.51**	**288**	P	**Pn**	**19 02 41.0**	**+0.3**
	2.0nm,0.3s,baz=127,slow=7.6,SNR=102						
MJAR				S	**Sn**	**19 02 57.1**	**-2.7**
	0.7nm,0.3s,baz=119,slow=14,SNR=6.0						
MAT	**Matsushiro**	**1.51**	**288**	P	**Pn**	**19 02 41.5**	**+0.7**
MAT				S	**Sn**	**19 02 59.9**	**+0.1**
MKAR	**Makanchi Array**	**43.66**	**303**	P	**P**	**19 10 12.7**	**+0.1**
	0.7nm,0.8s,baz=94,slow=9.3,SNR=4.9						
WRA	**Warramunga Arr**	**55.99**	**186**	P	**P**	**19 11 45.6**	**-0.7**
	0.4nm,0.6s,baz=2.2,slow=7.7,SNR=14						

IDC ***28*** *19:06:23.4±0.4,30.˚74S×76.˚22E,h0km,mb4.3/25, mb1 4.4/25,mb1mx4.3/34,mbtmp4.3/25,MS4.3/11, Ms1 4.3/11,ms1mx3.9/41,Error ellipse: s-maj=14.4km s-min=13.1km az=153.0*
MOS ***28*** *19:06:23.2±0.9,30.˚73S×76.˚21E,h10km,mb5.1/13,Error ellipse: s-maj=13.8km s-min=8.4km az=92.7*
GCMT ***28*** *19:06:25.7±0.2,30.˚73S±0.˚01×76.˚04E±0.˚01,h14km±1km, MW5.0/110,Moment Tensor Solution. s45,c56; s110,c164; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.80±.12; Mθθ-3.55±.12; Mϕϕ4.35±.14; Mrθ0.68±.24; Mθϕ-0.84±.10; Mϕr0.74±.22; Best double couple: Mo4.17700×10¹⁶ NP1:ϕs309.00000°,δ75.00000°, λ-175.00000°. NP2:ϕs218.00000°,δ85.00000°, λ-15.00000°. Principal axes: T 4.5230, Plg7.0000°, Azm265.0000°; N -0.6910, Plg74.0000°, Azm21.0000°; P -3.8310, Plg14.0000°, Azm173.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***28*** *19:06:25.7±1.3,30.˚7S±0.˚1×76.˚2E±0.˚1,h15km±3km, mb5.0/64 Error ellipse: s-maj=15.1km s-min=14.6km az=149.0*

ISC 28 19:06:24.9±0.3,30.˚73S±0.˚07×76.˚21E±0.˚08,h10km,n178, σ0s78/169,mb4.9/67,MS4.3/12,6C-9D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**23.23**	**351**	T	T	19 35 23.7	
	baz=172,slow=76,SNR=189						
H08S1	**Diego Carcia H**	**23.23**	**351**	T	T	19 35 33.2	
	baz=172,slow=76,SNR=39						
H08S3	**Diego Garcia H**	**23.25**	**351**	T	T	19 35 24.6	
	baz=172,slow=76,SNR=604						
FOMA	**Nahampoana Res**	**26.43**	**275**	P	**P**	**19 12 00.5**	**-1.4**
ABPO	**Ambohimpanom**	**28.68**	**287**	P	**P**	**19 12 21.7**	**-0.7**
ABPO				pmax	pmax		
	comp=Z,17nm,1.4s						
ABPO	**Ambohimpanom**	**28.68**	**287**	P	**P**	**19 12 21.7**	**-0.7**
OPO	**Ambohidratompo**	**28.93**	**288**	P	**P**	**19 12 23.8**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=159,slow=14,SNR=2.6						
OPO				LR	LR	19 21 38.6	
	comp=Z,152nm,19.8s,baz=16,slow=32						
H01W2	**Cape Leeuwin H**	**32.01**	**108**	T	T	19 46 34.6	
	baz=266,slow=74,SNR=9.4						
H01W3	**Cape Leeuwin H**	**32.02**	**108**	T	T	19 46 41.5	
	baz=266,slow=74,SNR=12						
H01W1	**Cape Leeuwin H**	**32.03**	**108**	T	T	19 46 40.9	
	baz=266,slow=74,SNR=12						
MAW	**Mawson**	**37.75**	**188**	P	**P**	**19 13 40.8**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=11,slow=13,SNR=4.6						
MAW				LR	LR	19 25 33.1	
	comp=Z,245nm,20.4s,baz=49,slow=30						
MAW	**Mawson**	**37.75**	**188**	P	**P**	**19 13 40.1**	**-0.4**
MAW				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MAW	**Mawson**	**37.75**	**188**	P	**P**	**19 13 40.1**	**-0.4**
PALK	**Pallekele**	**38.03**	**7**	P	**P**	**19 13 44.6**	**+1.0**
	comp=Z,8.3nm,0.9s,baz=176,slow=19,SNR=2.2						
PALK	**Pallekele**	**38.03**	**7**	P	**P**	**19 13 42.7**	**-0.8**
PALK				pmax	pmax		
	comp=Z,36nm,1.3s						
PALK	**Pallekele**	**38.03**	**7**	P	**P**	**19 13 42.7**	**-0.8**
PALK				IAmb	IAmb	19 14 12.6	
	comp=Z,36nm,1.2s						
UGM	**Wanagama**	**39.28**	**62**	P	**P**	**19 13 51.1**	**-3.0**
KULM	**Kulim**	**42.77**	**37**	P	**P**	**19 14 23.4**	**+0.6**
SYO	**Syowa Base**	**43.67**	**198**	⇓*e*P	**P**	**19 14 28.4**	**-1.0**
SYO	**Syowa Base**	**43.67**	**198**	⇓*e*pP	pP	19 14 34.5	+2.9
SYO	**Syowa Base**	**43.67**	**198**	⇑*e*sP	sP	19 14 36.4	+4.0
MATP	**Matopo**	**43.96**	**272**	P	**P**	**19 14 33.2**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=105,slow=7.8,SNR=4.7						
BOSA	**Boshof**	**44.02**	**259**	P	**P**	**19 14 32.6**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=102,slow=6.5,SNR=5.8						
BOSA				LR	LR	19 29 47.5	
	comp=Z,519nm,18.8s,baz=103,slow=32						
BOSA	**Boshof**	**44.02**	**259**	P	**P**	**19 14 32.7**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,47nm,1.8s						
BOSA	**Boshof**	**44.02**	**259**	IAmb	IAmb	19 14 33.9	
	comp=Z,47nm,1.8s						
LBTB	**Lobatse**	**44.80**	**264**	P	**P**	**19 14 38.7**	**-0.6**
	comp=Z,3.1nm,1.0s,baz=129,slow=6.0,SNR=2.4						
LBTB	**Lobatse**	**44.80**	**264**	P	**P**	**19 14 38.3**	**-1.0**
LBTB				pmax	pmax		
	comp=Z,26nm,1.9s						
LBTB	**Lobatse**	**44.80**	**264**	P	**P**	**19 14 38.3**	**-1.0**
LBTB				IAmb	IAmb	19 14 40.9	
	comp=Z,26nm,1.9s						
KSM	**Kuching**	**45.59**	**52**	P	**P**	**19 14 45.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**46.40**	**86**	LR	LR	19 32 14.9	
	comp=Z,326nm,20.3s,baz=280,slow=33						
FITZ	**Fitzroy Crossi**	**46.40**	**86**	P	**P**	**19 14 52.3**	**+0.5**
LSZ	**Lusaka**	**46.45**	**278**	P	**P**	**19 14 52.0**	**-0.5**
	comp=Z,6.0nm,0.7s,baz=121,slow=8.1,SNR=15						
LSZ	**Lusaka**	**46.45**	**278**	P	**P**	**19 14 51.9**	**-0.5**
LSZ				pmax	pmax		
	comp=Z,56nm,2.0s						
LSZ	**Lusaka**	**46.45**	**278**	P	**P**	**19 14 51.9**	**-0.5**
SUR	**Sutherland**	**46.79**	**253**	P	**P**	**19 14 55.9**	**+0.9**
	comp=Z,6.6nm,0.7s,baz=92,slow=9.7,SNR=6.2						
SUR	**Sutherland**	**46.79**	**253**	P	**P**	**19 14 55.9**	**+0.9**
SBUM	**Sibu**	**47.60**	**53**	P	**P**	**19 15 01.4**	**+0.2**
SBUM				IAmb	IAmb	19 15 16.3	
	comp=Z,16nm,1.1s						
KNRA	**Kununurra**	**50.14**	**85**	P	**P**	**19 15 20.6**	**-0.1**
KNRA				IAmb	IAmb	19 15 23.6	
	comp=Z,16nm,0.9s						
ASAR	**Alice Springs**	**51.32**	**97**	P	**P**	**19 15 29.9**	**+0.2**
	comp=Z,5.8nm,0.8s,baz=247,slow=6.4,SNR=30						
ASAR				PcP	**PcP**	**19 16 43.7**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=239,slow=3.0,SNR=4.3						
ASAR				LR	LR	19 35 48.1	
	comp=Z,356nm,18.6s,baz=283,slow=34						
AS31	**Alice Springs**	**51.32**	**97**	P	**P**	**19 15 29.5**	**-0.2**
TOLI2	**Tolitoli**	**52.88**	**62**	P	**P**	**19 15 41.5**	**+0.2**
WRA	**Warramunga Arr**	**53.12**	**93**	P	**P**	**19 15 43.0**	**0.0**
	comp=Z,10.0nm,1.0s,baz=248,slow=7.4,SNR=28						
WRA				PcP	**PcP**	**19 16 49.7**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=244,slow=2.6,SNR=5.0						
WRA				LR	LR	19 36 09.0	
	comp=Z,1μm,19.5s,baz=250,slow=34						
WRA	**Warramunga Arr**	**53.12**	**93**	*e*P	**P**	**19 15 43.2**	**+0.2**
WRA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WRA	**Warramunga Arr**	**53.12**	**93**	P	**P**	**19 15 43.0**	**0.0**
WB2	**Warramunga Arr**	**53.13**	**93**	P	**P**	**19 15 43.1**	**0.0**
WB2				IAmb	IAmb	19 15 45.8	
	comp=Z,16nm,1.1s						
WRAB	**Tennant Creek**	**53.13**	**93**	⇓*i*P	**P**	**19 15 43.5**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,35nm,2.5s						
WRAB	**Tennant Creek**	**53.13**	**93**	P	**P**	**19 15 42.9**	**-0.2**
WRAB				IAmb	IAmb	19 15 45.9	
	comp=Z,14nm,1.1s						
WB0	**Warramunga Arr**	**53.24**	**93**	P	**P**	**19 15 43.6**	**-0.3**
WB0				IAmb	IAmb	19 15 51.4	
	comp=Z,9.3nm,0.8s						
WR0	**Warramunga Arr**	**53.28**	**93**	P	**P**	**19 15 44.2**	**0.0**
WR0				IAmb	IAmb	19 15 46.9	
	comp=Z,14nm,1.0s						
MTN	**Manton Dam**	**53.49**	**83**	P	**P**	**19 15 45.0**	**-0.8**
MTN				IAmb	IAmb	19 15 53.3	
	comp=Z,13nm,1.1s						
CM31	**Chiang Mai Arr**	**53.57**	**27**	P	**P**	**19 15 46.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**53.57**	**27**	P	**P**	**19 15 47.0**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=209,slow=6.8,SNR=18						
CMAR	**Chiang Mai Arr**	**53.57**	**27**	*e*P	**P**	**19 15 47.4**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**53.57**	**27**	P	**P**	**19 15 44.9**	**-1.3**
CHTO	**Chiang Mai**	**53.89**	**27**	P	**P**	**19 15 49.1**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,13nm,1.5s						
CHTO	**Chiang Mai**	**53.89**	**27**	P	**P**	**19 15 49.1**	**+0.5**
STKA	**Stephens Creek**	**55.08**	**109**	P	**P**	**19 15 57.1**	**-0.1**
	comp=Z,3.7nm,1.0s,baz=213,slow=3.7,SNR=4.0						
STKA				LR	LR	19 37 34.6	
	comp=Z,320nm,18.0s,baz=294,slow=34						
STKA	**Stephens Creek**	**55.08**	**109**	P	**P**	**19 15 57.1**	**-0.1**
STKA				pmax	pmax		
	comp=Z,7.0nm,2.0s						
TOO	**Toolangi**	**56.58**	**117**	P	**P**	**19 16 09.3**	**+1.4**
TOO				pmax	pmax		
	comp=Z,13nm,1.3s						
TOO	**Toolangi**	**56.58**	**117**	P	**P**	**19 16 09.3**	**+1.4**
SNAA	**Sanae**	**57.72**	**202**	P	**P**	**19 16 10.0**	**+0.5**
SNAA	**Sanae**	**57.72**	**202**	P	**P**	**19 16 15.7**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=137,slow=8.6,SNR=11						
SNAA	**Sanae**	**57.72**	**202**	⇓*e*P	**P**	**19 16 16.6**	**+1.1**
SNAA				pmax	pmax		
	comp=Z,17nm,2.5s						
SNAA	**Sanae**	**57.72**	**202**	P	**P**	**19 16 15.9**	**+0.4**
SNAA				IAmb	IAmb	19 16 23.9	
	comp=Z,16nm,1.5s						
SHL	**Shillong**	**57.96**	**17**	P	**P**	**19 16 17.8**	**+0.1**
SHL				pmax	pmax		
	comp=Z,23nm,0.9s						
SHL	**Shillong**	**57.96**	**17**	P	**P**	**19 16 17.8**	**+0.1**
KOLN	**Koldanda**	**58.60**	**8**	*e*P	**P**	**19 16 22.1**	**-0.2**
	comp=Z,61nm,1.3s						
DMN	**Daman**	**58.63**	**9**	*e*P	**P**	**19 16 22.5**	**0.0**
	comp=Z,51nm,1.1s						
PKI	**Pulchoki**	**58.64**	**10**	*e*P	**P**	**19 16 22.2**	**-0.5**
	comp=Z,42nm,1.3s						
PKIN	**Phulchoki**	**58.64**	**10**	*e*P	**P**	**19 16 22.2**	**-0.4**
	comp=Z,28nm,1.3s						
KKN	**Kakani**	**58.84**	**9**	*e*P	**P**	**19 16 24.0**	**+0.1**
	comp=Z,38nm,1.1s						
PYUN	**Piuthan**	**58.86**	**7**	*e*P	**P**	**19 16 24.0**	**-0.1**
	comp=Z,103nm,1.3s						
GKN	**Gorkha**	**58.96**	**9**	*e*P	**P**	**19 16 24.5**	**-0.2**
	comp=Z,68nm,1.3s						
DANN	**Dangsing**	**59.19**	**8**	*e*P	**P**	**19 16 25.6**	**-0.9**
	comp=Z,24nm,0.9s						
VNA2	**Neumayer--Watz**	**59.22**	**202**	P	**P**	**19 16 26.6**	**+0.7**
	baz=91,slow=7.7						
VNDA	**Vanda**	**59.30**	**165**	P	**P**	**19 16 26.4**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=271,slow=7.9,SNR=13						
VNDA				LR	LR	19 39 16.8	
	comp=Z,686nm,19.2s,baz=275,slow=33						
VNDA	**Vanda**	**59.30**	**165**	P	**P**	**19 16 26.4**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VNDA	**Vanda**	**59.30**	**165**	P	**P**	**19 16 26.4**	**+0.1**
QSPA	**South Pole Qui**	**59.41**	**180**	P	**P**	**19 16 27.2**	**-0.2**
	comp=Z,4.6nm,0.9s,baz=288,slow=2.0,SNR=17						
QSPA	**South Pole Qui**	**59.41**	**180**	P	**P**	**19 16 27.3**	**-0.2**
VNA1	**Neumayer--Stat**	**59.53**	**203**	P	**P**	**19 16 28.7**	**+0.7**
VNA3	**Neumayer Olymp**	**59.92**	**202**	P	**P**	**19 16 30.7**	**0.0**
RAYN	**Ar Rayn**	**61.46**	**328**	P	**P**	**19 16 41.6**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RAYN	**Ar Rayn**	**61.46**	**328**	P	**P**	**19 16 41.5**	**-0.2**
RAYN				IAmb	IAmb	19 16 54.2	
	comp=Z,8.3nm,1.1s						
LSA	**Lhasa**	**61.76**	**15**	P	**P**	**19 16 45.5**	**+1.3**
LSA				pmax	pmax		
	comp=Z,23nm,1.1s						
LSA	**Lhasa**	**61.76**	**15**	P	**P**	**19 16 44.4**	**+0.2**
LSA				pmax	pmax		
	comp=Z,13nm,1.0s						
LSA	**Lhasa**	**61.76**	**15**	P	**P**	**19 16 44.4**	**+0.2**
LSA				IAmb	IAmb	19 16 52.1	
	comp=Z,13nm,1.0s						
NIL	**Nilore**	**64.10**	**357**	P	**P**	**19 16 58.8**	**-0.3**
NIL				pmax	pmax		
	comp=Z,41nm,1.7s						
NIL	**Nilore**	**64.10**	**357**	P	**P**	**19 16 58.8**	**-0.3**
BELA	**Belgrano 2**	**64.39**	**193**	P	**P**	**19 17 00.5**	**-0.1**
EIDS	**Eidsvold**	**65.17**	**106**	P	**P**	**19 17 06.9**	**+0.4**
KBL	**Kabul**	**65.28**	**353**	P	**P**	**19 17 06.4**	**-0.6**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBL	**Kabul**	**65.28**	**353**	P	**P**	**19 17 06.4**	**-0.6**
KBL				IAmb	IAmb	19 17 13.9	
	comp=Z,8.3nm,0.8s						
HRA	**Herat**	**66.10**	**347**	P	**P**	**19 17 11.7**	**-0.7**
BTK	**Batken**	**70.61**	**356**	P	**P**	**19 17 40.8**	**+0.5**
BTK				pmax	pmax		
	comp=Z,20nm,1.3s						
BTK	**Batken**	**70.61**	**356**	P	**P**	**19 17 40.8**	**+0.5**
BTK				IAmb	IAmb	19 17 47.5	
	comp=Z,20nm,1.2s						
XAN	**Xi'an**	**71.44**	**28**	P	**P**	**19 17 45.4**	**-0.1**
XAN				pmax	pmax		
	comp=Z,19nm,1.4s						
XAN	**Xi'an**	**71.44**	**28**	P	**P**	**19 17 45.4**	**-0.1**
XAN				IAmb	IAmb	19 17 58.0	
	comp=Z,19nm,1.4s						
ARSB	**Arslanbob**	**71.76**	**357**	P	**P**	**19 17 47.8**	**+0.4**
ARSB	**Arslanbob**	**71.76**	**357**	P	**P**	**19 17 47.8**	**+0.4**
AAK	**Ala-Archa**	**73.03**	**359**	⇓*e*P	**P**	**19 17 56.5**	**+1.6**
AAK				pmax	pmax		
	comp=Z,47nm,1.4s						
AAK	**Ala-Archa**	**73.03**	**359**	P	**P**	**19 17 55.7**	**+0.8**
AAK				IAmb	IAmb	19 18 03.2	
	comp=Z,15nm,1.3s						
GTA	**Gaotai**	**73.16**	**19**	P	**P**	**19 17 57.0**	**+1.3**
GTA				pP	pwP	19 18 02.0	-0.2
GTA				sP	sP	19 18 04.3	+5.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,54nm,4.5s						
GTA				LR	LR		
	comp=N,82nm,16.7s						
GTA				LR	LR		
	comp=E,78nm,16.4s						
GTA				LR	LR		
	comp=Z,100nm,16.4s						
KK31	**Karatay Array**	**73.66**	**356**	*i* P	**P**	**19 17 58.8**	**+0.3**
KK31	**Karatay Array**	**73.66**	**356**	P	**P**	**19 17 58.6**	**+0.2**
KK31				IAmb	IAmb	19 18 06.0	
	comp=Z,23nm,1.0s						
KKAR	**Karatay Array**	**73.66**	**356**	P	**P**	**19 17 58.1**	**-0.4**
KKAR						19 17 58.8	
KKAR				pmax	pmax		
	comp=Z,23nm,1.0s						
KKAR	**Karatay Array**	**73.66**	**356**	P	**P**	**19 17 58.8**	**+0.3**
KKAR	**Karatay Array**	**73.66**	**356**	P	**P**	**19 17 58.1**	**-0.4**
WMQ	**Urumqi**	**74.93**	**9**	P	**P**	**19 18 06.0**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,30nm,1.2s						
WMQ	**Urumqi**	**74.93**	**9**	P	**P**	**19 18 06.0**	**+0.1**
WMQ				IAmb	IAmb	19 18 22.1	
	comp=Z,30nm,1.2s						
MARD	**Mardin**	**75.38**	**331**	P	**P**	**19 18 09.0**	**+0.3**
MARD				IAmb	IAmb	19 18 16.4	
	comp=Z,37nm,1.9s						
CMWZ	**Cape Campbell**	**75.66**	**130**	P	**P**	**19 18 09.6**	**-0.8**
GNI	**Garni**	**76.33**	**336**	⇑*e*P	**P**	**19 18 15.6**	**+1.5**
GNI				pmax	pmax		
	comp=Z,21nm,1.3s						
GNI	**Garni**	**76.33**	**336**	P	**P**	**19 18 14.7**	**+0.5**
GNI				IAmb	IAmb	19 18 22.6	
	comp=Z,20nm,1.2s						
GAZ	**Gaziantep**	**76.79**	**329**	P	**P**	**19 18 16.7**	**0.0**
GAZ				IAmb	IAmb	19 18 34.8	
	comp=Z,21nm,1.5s						
MAKZ	**Makanchi**	**77.36**	**4**	P	**P**	**19 18 19.6**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,11nm,1.2s						
MAKZ	**Makanchi**	**77.36**	**4**	P	**P**	**19 18 19.6**	**0.0**
MK31	**Makanchi Array**	**77.36**	**4**	*c i*P	**P**	**19 18 19.1**	**-0.6**
MK31	**Makanchi Array**	**77.36**	**4**	P	**P**	**19 18 19.0**	**-0.6**
MK31				IAmb	IAmb	19 18 26.1	
	comp=Z,12nm,1.1s						
MKAR	**Makanchi Array**	**77.36**	**4**	P	**P**	**19 18 18.1**	**-1.5**
	comp=Z,12nm,1.2s,baz=180,slow=6.1,SNR=22						
MKAR	**Makanchi Array**	**77.36**	**4**	P	**P**	**19 18 18.8**	**-0.8**
MKAR	**Makanchi Array**	**77.36**	**4**	P	**P**	**19 18 18.8**	**-0.8**
BFZ	**Birch Farm**	**77.52**	**130**	P	**P**	**19 18 21.1**	**+0.2**
KOPT	**Kop Dagi**	**77.81**	**333**	P	**P**	**19 18 22.4**	**-0.2**
AKH	**Akhalkalaki**	**77.89**	**335**	P	**P**	**19 18 21.1**	**-1.8**
AKH				pmax	pmax		
	comp=Z,42nm,1.5s						
AKH	**Akhalkalaki**	**77.89**	**335**	P	**P**	**19 18 21.1**	**-1.8**
KBZ	**Khabaz**	**80.13**	**336**	P	**P**	**19 18 36.8**	**+1.9**
	comp=Z,3.0nm,1.0s,baz=135,slow=6.4,SNR=3.7						
KBZ	**Khabaz**	**80.13**	**336**	⇓*e*P	**P**	**19 18 36.6**	**+1.7**
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KIV	**Kislovodsk**	**80.40**	**336**	P	**P**	**19 18 37.5**	**+1.0**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KIV	**Kislovodsk**	**80.40**	**336**	P	**P**	**19 18 37.5**	**+1.0**
BRTR	**Keskin Array B**	**80.48**	**328**	P	**P**	**19 18 37.5**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=167,slow=7.2,SNR=3.4						
BRTR	**Keskin Array B**	**80.48**	**328**	P	**P**	**19 18 37.1**	**0.0**
BRTR	**Keskin Array B**	**80.48**	**328**	P	**P**	**19 18 37.1**	**0.0**
AB31	**Akbulak array**	**80.94**	**349**	*i* P	**P**	**19 18 39.2**	**+0.1**
ABKAR	**Akbulak array**	**80.94**	**349**	P	**P**	**19 18 38.3**	**-0.8**
ABKAR				IAmb	IAmb	19 18 45.8	
	comp=Z,27nm,1.7s						
KURK	**K

MLR	**Muntele Rosu**	**88.53**	**327**		P	**P**	**19 19 18.1**	**+0.5**
MLR					pmax	pmax		
	comp=Z,11nm,1.0s							
MLR	**Muntele Rosu**	**88.53**	**327**		P	**P**	**19 19 18.1**	**+0.5**
MLR					IAmb	IAmb	19 19 36.0	
	comp=Z,11nm,1.0s							
MJAR	**Matsushiro Arr**	**88.62**	**45**	P		**P**	**19 19 18.5**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=219,slow=4.4,SNR=3.5							
AKASG	**Malin Array Be**	**91.08**	**332**		P	**P**	**19 19 30.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=131,slow=5.2,SNR=4.3							
AKASG	**Malin Array Be**	**91.08**	**332**	*eP*		**P**	**19 19 30.8**	**+1.5**
KLR	**Kul'dur**	**93.70**	**33**⇑	*eP*		**P**	**19 19 40.6**	**-0.8**
KLR					pmax	pmax		
	comp=Z,11nm,1.3s							
KLMR	**Klimovskoe**	**96.05**	**343**	*eP*		**P**	**19 19 51.3**	**-0.6**
KLMR					pmax	pmax		
	comp=Z,17nm,1.4s							
KLMR	**Klimovskoe**	**96.05**	**343**	*eP*		**P**	**19 19 51.4**	**-0.5**
KLMR					AMP		19 19 58.7	
	comp=Z,17nm,1.4s							
MDT	**Midelt**	**99.12**	**303**		LR	LR	20 02 10.5	
	comp=Z,68nm,19.4s,baz=129,slow=34							
IMAR	**Indian Mountai**	**133.68**	**26**				**PKPdf**	**19 25 40.5**	**-0.5**
ILAR	**Eielson Array**	**136.79**	**25**	PKP			**PKPdf**	**19 25 47.5**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=277,slow=3.2,SNR=3.3								
INK	**Inuvik**	**138.59**	**16**	PKP			**PKPdf**	**19 25 50.8**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=242,slow=2.2,SNR=2.1								
DLBC	**Dease Lake**	**147.00**	**25**	PKPbc			**PKPbc**	**19 26 07.9**	**+0.6**
	comp=Z,10nm,1.0s,baz=276,slow=10,SNR=3.5								
YKA	**Yellowknife Ar**	**147.46**	**9**	PKPbc			**PKPbc**	**19 26 07.6**	**-0.7**
	comp=Z,2.7nm,0.7s,baz=335,slow=3.1,SNR=23								
NVAR	**Mina Array Bea**	**165.80**	**53**	PKP			**PKPdf**	**19 26 32.1**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=274,slow=4.2,SNR=1.7								
NVAR				PKPab			**PKPab**	**19 27 28.4**	**-1.4**
	comp=Z,0.9nm,0.7s,baz=258,slow=4.4,SNR=4.9								
PDAR	**Pinedale Array**	**167.13**	**19**	PKP			**PKPdf**	**19 26 32.2**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=72,slow=2.9,SNR=2.0								
PDAR				PKPab			**PKPab**	**19 27 36.5**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=9.2,slow=2.8,SNR=2.9								
TXAR	**Lajitas Array**	**178.60**	**184**	PKP			**PKPdf**	**19 26 36.3**	**+0.1**
	comp=Z,0.6nm,1.1s,baz=170,slow=2.5,SNR=2.4								

*REY **28** 19:13:36.7, 64°.67N×17°.44W, h8km*
*IDC **28** 19:13:37.2±1.0, 64°.53N×17°.77W, h0km, mb3.5/6, mb1 3.9/7, mb1mx3.5/45, mbtmp3.6/7, ML3.5/1, MS3.4/2, Ms1 3.4/2, ms1mx2.5/39, Error ellipse: s-maj=34.2km s-min=16.6km az=21.0*
*NEIC **28** 19:13:38.0±2.1, 64°.5N±0°.1×17°.9W±0°.1, h8km±5km, mb4.5/5, Error ellipse: s-maj=14.9km s-min=7.9km az=169.0*

ISC 28 19:13:37.9±0.6, **64°.67N**±0°.04×**17°.44W**±0°.04, **h10**km, **n32**, σ1§**99**/35, **mb3.7**/8, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**16**	P		**Pg**	**19 13 39.6**	**-1.3**
	baz=15							
IDYN				S		**Sg**	**19 13 41.9**	**-1.2**
	baz=15							
IVON	**Vonarskard**	**0.13**	**271**	P		**Pg**	**19 13 39.7**	**-1.3**
	baz=272							
IURH	**Urdarhals**	**0.20**	**40**	P		**Pg**	**19 13 40.8**	**-1.3**
	baz=40							
IVOT	**Vottur**	**0.42**	**164**	P		**Pg**	**19 13 44.5**	**-1.6**
	baz=164							
THOR	**Thorvaldshraun**	**0.42**	**51**	P		**Pg**	**19 13 44.8**	**-1.4**
	baz=51							
THOR				S		**Sb**	**19 13 51.2**	**-2.6**
	baz=51							
IKRE	**Kreppuhraun**	**0.47**	**76**	P		**Pg**	**19 13 45.3**	**-1.8**
	baz=75							
IASK	**Askja**	**0.51**	**41**	P		**Pg**	**19 13 46.0**	**-1.8**
	baz=41							
IMKO	**Mokollar**	**0.56**	**56**	P		**Pg**	**19 13 47.0**	**-1.9**
	baz=56							
ISVA	**Svartarkot**	**0.67**	**7**	P		**Pg**	**19 13 48.7**	**-2.2**
	baz=6.6							
IVSH	**V-Sauoahnukur**	**0.75**	**79**	S		**Sg**	**19 14 00.5**	**-1.6**
	baz=78							
IVSH				P		**Pg**	**19 13 49.9**	**-2.4**
	baz=78							
BORG	**Borgarnes**	**1.67**	**274**	Pn		**Pn**	**19 14 04.7**	**-2.4**
	14nm,0.3s,baz=100,slow=9.8,SNR=26							
BORG				Sn		**Sn**	**19 14 28.3**	**-0.3**
	12nm,0.3s,baz=41,slow=20,SNR=11							
BORG	**Borgarnes**	**1.67**	**274**			**Pn**	**19 14 05.1**	**-2.0**
SCO	**Scoresbysund**	**6.08**	**346**			**Pn**	**19 15 08.6**	**+0.9**
SCO	**Scoresbysund**	**6.08**	**346**	*e*		**Pn**	**19 15 03.3**	**-4.4**
	baz=166,slow=10							
SCO				*i*	P	**Pn**	**19 15 08.6**	**+0.9**
SCO				*e*	S	**Sn**	**19 16 21.5**	**+4.2**
SCO				IAML			19 16 30.1	
	comp=Z,0.9nm,0.5s							
EKA	**Eskdalemuir Ar**	**11.75**	**136**	Pn		**Pn**	**19 16 25.6**	**+0.4**
	baz=326,slow=13,SNR=3.5							
SFJD	**Kangerlussuaq**	**13.69**	**295**	Pn		**Pn**	**19 16 49.0**	**-2.6**
ILULI	**Ilulissat**	**13.81**	**304**	Pn		**Pn**	**19 16 50.7**	**-2.6**
CLL	**Collm**	**20.69**	**116**	*eP*		Pn	19 18 20.0	0.0
GERES	**GERESS Array B**	**22.94**	**119**	P		**P**	**19 18 44.0**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=317,slow=8.5,SNR=3.9							
OBN	**Obninsk**	**27.86**	**84**	LR		LR	19 30 38.0	
	comp=Z,17nm,19.4s,baz=44,slow=36							
PAL	**Palisades**	**39.65**	**261**	P		**P**	**19 21 09.8**	**+0.3**
PAL				IAmb		IAmb	19 21 37.8	
	comp=Z,16nm,0.8s							
ILAR	**Eielson Array**	**45.69**	**332**	P		**P**	**19 22 00.6**	**+2.3**
	comp=Z,1.1nm,1.1s,baz=24,slow=9.2,SNR=6.5							
IMAR	**Indian Mountai**	**45.86**	**337**	P		**P**	**19 22 02.5**	**+3.0**
MKAR	**Makanchi Array**	**52.70**	**58**	P		**P**	**19 22 53.8**	**+1.7**
	comp=Z,0.7nm,0.9s,baz=351,slow=8.0,SNR=3.0							
TORD	**Torodi Ar. Bea**	**53.14**	**156**	P		**P**	**19 22 56.0**	**+0.4**
	comp=Z,0.9nm,1.0s,baz=350,slow=7.3,SNR=3.5							
PDAR	**Pinedale Array**	**53.20**	**293**	P		**P**	**19 22 56.6**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=60,slow=5.8,SNR=5.8							
PDAR	**Pinedale Array**	**53.20**	**293**	P		**P**	**19 22 56.1**	**+0.1**
BTK	**Batken**	**53.94**	**72**	P		**P**	**19 23 02.1**	**+0.8**
BTK				IAmb		IAmb	19 23 04.5	
	comp=Z,5.0nm,1.1s							
PV14	**Lion Creek, Pa**	**56.72**	**290**	P		**P**	**19 23 20.9**	**-0.7**
PV13	**Radium Mtn., P**	**56.82**	**290**	P		**P**	**19 23 22.6**	**+0.3**
USRK	**Ussuriysk Ar.**	**68.85**	**23**	LR		LR	19 55 34.5	
	comp=Z,125nm,21.0s,baz=205,slow=36							
CMAR	**Chiang Mai Arr**	**84.11**	**59**	P		**P**	**19 26 09.6**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=330,slow=6.8,SNR=2.6							

*IDC **28** 19:29:27.0±0.4, 1°.96N×126°.39E, h0km, mb4.9/28, mb1 5.0/29, mb1mx4.9/32, mbtmp4.9/29, ML4.8/1, MS3.9/10, Ms1 3.9/10, ms1mx3.6/32, Error ellipse: s-maj=15.5km s-min=9.8km az=70.0*
*MOS **28** 19:29:30.8±1.0, 1°.98N×126°.29E, h35km, mb5.5/35, MS4.4/4, Error ellipse: s-maj=8.0km s-min=4.2km az=114.3*
*KLM **28** 19:29:30.0, 2°.13N×126°.61E, h18km, mb5.2*
*BJI **28** 19:29:30.3±0.0, 1°.82N×126°.41E, h47km, mB5.0/53, mb5.2/72, Ms4.6/42, Ms7 4.3/40*
*DJA **28** 19:29:31.8±0.3, 2°.N±3°×12°.7E±°, h10km, M4.9/18, mB5.3/12, mb5.2/13, MLv5.1/18, Mw(mB)4.7/12, Mwp5.0/5*
*GCMT **28** 19:29:33.7±0.3, 2°.02N±0°.02×126°.55E±0°.02, h32km±1km, MW5.0/63, Moment Tensor Solution. s42,c48; s63,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.36±.15; $M_{\theta\theta}$-1.04±.11; $M_{\phi\phi}$-0.31±.12; $M_{r\theta}$0.58±.15; $M_{r\phi}$-2.02±.08; $M_{\theta\phi}$2.40±.21; Best double couple: M_o3.40200×10^{16} NP1:ϕs18.00000°, δ75.00000°, λ.57.00000°. NP2: ϕs267.00000°, δ35.00000°, λ.154.00000°. Principal axes: T 3.2020, Plg49.0000°, Azm253.0000°; N 0.4030, Plg31.0000°, Azm27.0000°; P -3.6020, Plg24.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **28** 19:29:33.7±2.1, 1°.91N±0°.06×126°.44E±0°.06, h47km±4km, mb5.2/142 Error ellipse: s-maj=9.6km s-min=8.2km az=51.0*

ISC 28 19:29:33.9±0.5, **1°.95N**±0°.03×**126°.41E**±0°.04, **h49**km±4km, **h49**km:**pP-P, n541**, σ1§**42**/562, **mb5.2**/173, **MS4.2**/28, **35C-20D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.51**	**141**	P		**Pn**	**19 29 57.3**	**-1.2**
TNTI	**Ternate**	**1.51**	**141**			**Pn**	**19 29 57.1**	**-1.4**
SGSI	**Sangihe**	**1.94**	**333**	P		**Pn**	**19 30 04.3**	**-0.1**
KMSI	**Cibinong**	**2.78**	**241**	P		**Pn**	**19 30 19.1**	**+3.2**
GTOI	**Gorontalo**	**3.64**	**249**	P		**Pn**	**19 30 30.5**	**+2.8**
LUWI	**Luwuk**	**4.69**	**231**	P		**Pn**	**19 30 45.2**	**+3.0**
LUWI	**Luwuk**	**4.69**	**231**	Pn		**Pn**	**19 30 45.1**	**+2.9**
MRSI	**Marisa**	**4.70**	**252**	P		**Pn**	**19 30 45.0**	**+2.8**
DAV	**Davao City (W)**	**5.16**	**351**	LR		LR	19 33 06.3	
	comp=Z,2μm,19.6s,baz=201,slow=43							
DAV	**Davao City (W)**	**5.16**	**351**	Pn		**Pn**	**19 30 52.6**	**+4.0**
NLAI	**Namlea**	**5.20**	**172**	P		**Pn**	**19 30 50.2**	**+1.1**
	0.6nm2μm160nm,0.7s							
KCP	**Kidapawan**	**5.20**	**345**⇑	*eP*		**Pn**	**19 30 53.1**	**+3.9**
KCP				*i*	S	**Sn**	**19 31 55.1**	**+7.2**
APSI	**Ampana**	**5.54**	**239**	P		Pn	19 30 58.8	+5.0
	4.0nm2μm7μm867nm,0.8s							
SWI	**Sorong**	**5.60**	**120**	P		**Pn**	**19 30 54.0**	**-0.6**
	0.4nm3μm1μm88nm,0.8s							
TOLI2	**Tolitoli**	**5.68**	**262**	Pn		**Pn**	**19 30 56.6**	**+0.8**
MSAI	**Masohi**	**5.83**	**154**	P		**Pn**	**19 31 00.6**	**+2.8**
	0.3nm935nm67nm,0.8s							
ZCP	**Zamboanga City**	**6.57**	**319**⇓	*iP*		**Pn**	**19 31 08.4**	**+0.4**
ZCP				*i*	S	**Sn**	**19 32 17.2**	**-4.5**
CGP	**Cagayan de Oro**	**6.69**	**345**⇑	*eP*		**Pn**	**19 31 11.6**	**+2.0**
KDI	**Kendari**	**6.98**	**213**	P		**Pn**	**19 31 14.9**	**+1.3**
	0.8nm2μm205nm,0.7s							
BNDI	**Bandanaira**	**7.31**	**151**	P		**Pn**	**19 31 19.5**	**+1.3**
	0.9nm2μm4μm199nm,1.5s							
FAKI	**Fak Fak**	**7.58**	**130**	P		**Pn**	**19 31 21.5**	**-0.3**
	0.6nm2μm2μm133nm,1.6s							
FAKI	**Fak Fak**	**7.58**	**130**	Pn		**Pn**	**19 31 21.5**	**-0.3**
TTSI	**Tana Toraja**	**8.24**	**233**	P		**Pn**	**19 31 33.2**	**+2.3**
	2μm209nm,0.7s							
MYLDM	**Lahad Datu**	**8.52**	**292**			**Pn**	**19 31 37.7**	**+3.0**
SPSI	**Sidrap Palu**	**8.86**	**228**	P		**Pn**	**19 31 42.6**	**+3.2**
	2μm113nm,0.4s							
BNSI	**Bone**	**8.91**	**225**	P		**Pn**	**19 31 42.7**	**+2.7**
	1μm92nm,0.8s							
BKSI	**Bulukumba**	**9.57**	**221**	P		**Pn**	**19 31 51.8**	**+2.7**
	1μm96nm,0.6s							
KAPI	**Kappang**	**9.59**	**224**	Pn		**Pn**	**19 31 50.0**	**+0.6**
	8.5nm,0.3s,baz=55,slow=5.4,SNR=22							
KAPI	**Kappang**	**9.59**	**224**	P		**Pn**	**19 31 52.3**	**+2.9**
KAPI	**Kappang**	**9.59**	**224**	Pn		**Pn**	**19 31 52.3**	**+2.9**
BKB	**Balikpapan**	**10.03**	**252**			**Pn**	**19 31 57.2**	**+1.8**
SPMM	**Sapulut**	**10.30**	**286**	P		**Pn**	**19 32 02.0**	**+2.9**
KKM	**Kota Kinabalu**	**10.95**	**292**	Pn		**Pn**	**19 32 11.1**	**+3.0**
MMRI	**Maumere**	**11.30**	**202**			**Pn**	**19 32 16.5**	**+3.7**
SOEI	**Soe**	**11.82**	**190**	Pn		Pn	19 32 24.2	+4.2
SBUM	**Sibu**	**14.19**	**272**			**Pn**	**19 32 55.5**	**+3.3**
SBUM	**Sibu**	**14.19**	**272**	P		**P**	**19 32 57.0**	**-1.4**
JAY	**Jayapura**	**14.96**	**107**	Pn		**Pn**	**19 33 03.2**	**+0.7**
	3.8nm,0.3s,baz=254,slow=5.7,SNR=21							
JAY					LR	LR	19 38 01.9	
	comp=Z,668nm,20.8s,baz=310,slow=34							
MTN	**Manton Dam**	**15.42**	**162**	P		**Pn**	**19 33 06.5**	**-1.9**
	baz=16,SNR=32							
MTN	**Manton Dam**	**15.42**	**162**	Pn		**Pn**	**19 33 05.6**	**-2.8**
KDU	**Kakadu**	**15.74**	**158**	P		**Pn**	**19 33 09.9**	**-2.4**
	baz=16,SNR=84							
JAGI	**Jajag, Banyuwa**	**16.01**	**230**			**P**	**19 33 20.8**	**+2.1**
JAGI					IAmb	IAmb	19 33 24.2	
	comp=Z,183nm,1.1s							
KSM	**Kuching**	**16.10**	**269**	P		**P**	**19 33 20.1**	**+0.4**
KSM	**Kuching**	**16.10**	**269**	P		**P**	**19 33 23.0**	**+3.3**
CVP	**Callao Caves**	**16.29**	**344**⇑	*iP*		**Pn**	**19 33 19.5**	**+0.1**
KNRA	**Kununurra**	**17.66**	**173**	P		**Pn**	**19 33 35.9**	**-0.7**
	baz=18,SNR=90							
KNRA	**Kununurra**	**17.66**	**173**	P		**Pn**	**19 33 35.8**	**-0.7**
KNRA					IAmb	IAmb	19 33 43.8	
	comp=Z,119nm,0.9s							
SMRI	**Semarang**	**18.27**	**241**	P		**P**	**19 33 43.7**	**0.0**
UGM	**Wanagama**	**18.63**	**238**	P		**P**	**19 33 46.8**	**-0.9**
UGM					IAmb	IAmb	19 33 58.7	
	comp=Z,342nm,1.7s							
FITZ	**Fitzroy Crossi**	**19.93**	**182**	P		**P**	**19 34 00.7**	**-1.0**
	comp=Z,2.0nm,0.3s,baz=13,slow=9.7,SNR=59							
FITZ					LR	LR	19 42 32.2	
	comp=Z,225nm,21.9s,baz=11,slow=39							
FITZ	**Fitzroy Crossi**	**19.93**	**182**	P		**P**	**19 34 00.8**	**-1.0**
	baz=20,SNR=21							
FITZ	**Fitzroy Crossi**	**19.93**	**182**	P		**P**	**19 34 01.0**	**-0.8**
DLV	**T Lat**	**20.35**	**300**	P		**P**	**19 34 05.6**	**-1.1**
LEM	**Lembang**	**20.68**	**245**	P		**P**	**19 34 09.7**	**-0.4**
	comp=Z,22nm,0.7s,baz=46,slow=9.9,SNR=6.6							
LEM					LR	LR	19 43 53.6	
	comp=Z,387nm,20.6s,baz=22,slow=42							
CISI	**Cisompet, Garu**	**20.81**	**243**	P		**P**	**19 34 10.2**	**-1.2**
TWG	**Pinlang**	**21.39**	**346**	P		**P**	**19 34 14.1**	**-3.4**
TWG					IAmb	IAmb	19 34 19.1	
	comp=Z,63nm,0.6s							
YULB	**Yu-li**	**21.89**	**347**	P		**P**	**19 34 19.1**	**-3.7**
YULB					IAmb	IAmb	19 34 23.0	
	comp=Z,36nm,0.6s							
TPUB	**Ta-pu**	**21.95**	**346**	P		**P**	**19 34 20.8**	**-2.8**
PMBI	**Palembang**	**22.16**	**257**	P		**P**	**19 34 27.1**	**+1.2**
SSLB	**Suanglung**	**22.35**	**347**	P		**P**	**19 34 25.6**	**-2.2**
SSLB					IAmb	IAmb	19 34 31.8	
	comp=Z,92nm,0.8s							
MYKOM	**Kota Tinggi**	**22.55**	**270**	P		**P**	**19 34 30.4**	**+0.3**
MYKOM					IAmb	IAmb	19 34 33.4	
	comp=Z,138nm,1.2s							
MYKOM	**Kota Tinggi**	**22.55**	**270**	P		**P**	**19 34 32.0**	**+1.9**
NACB	**Ninganchiao**	**22.58**	**348**	P		**P**	**19 34 28.5**	**-1.8**
YOJ	**Yonaguni jima**	**22.62**	**352**	P		**P**	**19 34 30.6**	**-0.1**
YOJ					pmax	pmax		
	comp=Z,561nm,1.8s							
YOJ	**Yonaguni jima**	**22.62**	**352**	P		**P**	**19 34 30.6**	**-0.1**
COEN	**Coen**	**22.93**	**134**	P		**P**	**19 34 34.6**	**+0.5**
	baz=23,SNR=9.4							
COEN	**Coen**	**22.93**	**134**	P		**P**	**19 34 32.5**	**-1.6**
WB0	**Warramunga Arr**	**22.96**	**160**	P		**P**	**19 34 32.3**	**-2.0**
WB0					IAmb	IAmb	19 34 39.1	
	comp=Z,92nm,0.8s							
WRAB	**Tennant Creek**	**23.10**	**161**	*d*	*iP*	**P**	**19 34 34.1**	**-1.6**
WRAB					pmax	pmax		
	comp=Z,170nm,1.3s							
WRAB	**Tennant Creek**	**23.10**	**161**	P		**P**	**19 34 33.7**	**-2.0**
WRAB					IAmb	IAmb	19 34 40.7	
	comp=Z,106nm,0.8s							
WRA	**Warramunga Arr**	**23.10**	**161**	P		**P**	**19 34 34.1**	**-1.6**
	comp=Z,62nm,0.6s,baz=339,slow=11,SNR=231							
WRA					PcP	**PcP**	**19 38 24.0**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=346,slow=2.6,SNR=5.8							
WRA					S	**S**	**19 38 41.8**	**-1.7**
	comp=Z,6.1nm,0.9s,baz=340,slow=17,SNR=8.6							
WRA	**Warramunga Arr**	**23.10**	**161**	P		**P**	**19 34 33.4**	**-2.4**
WRA							19 38 24.0	
WRA					pmax	pmax		
	comp=Z,3.0nm,0.9s							
WRA	**Warramunga Arr**	**23.10**	**161**	P		**P**	**19 34 33.4**	**-2.4**
WB2	**Warramunga Arr**	**23.11**	**161**	P		**P**	**19 34 33.9**	**-1.9**
WB2					IAmb	IAmb	19 34 40.8	
	comp=Z,112nm,0.8s							
YHNB	**Yeheng**	**23.11**	**348**	P		**P**	**19 34 34.1**	**-1.7**
YHNB					IAmb	IAmb	19 34 38.1	
	comp=Z,65nm,0.7s							
WC3	**Warramunga Arr**	**23.13**	**161**	P		**P**	**19 34 34.4**	**-1.6**
	baz=23							
WC3	**Warramunga Arr**	**23.13**	**161**	P		**P**	**19 34 34.1**	**-1.9**
WC3					IAmb	IAmb	19 34 36.9	
	comp=Z,109nm,0.7s							
WR0	**Warramunga Arr**	**23.19**	**160**	P		**P**	**19 34 34.5**	**-2.1**
TATO	**Taipei**	**23.38**	**349**	P		**P**	**19 34 36.6**	**-1.7**
TATO					IAmb	IAmb	19 34 38.0	
	comp=Z,63nm,0.9s							
QIZ	**Qiongzhong**	**23.48**	**317**	P		**P**	**19 34 38.5**	**-0.9**
QIZ				pP		**pP**	**19 34 52.0**	**+0.9**
QIZ				S		**S**	**19 38 53.0**	**+3.3**
QIZ					pmax	pmax		
	comp=Z,39nm,1.1s							
QIZ					LR	LR		
	comp=Z,450nm,14.7s							
QIZ					LR	LR		
	comp=Z,350nm,15.1s							
QIZ					LR	LR		
	comp=Z,560nm,21.4s							
QIZ	**Qiongzhong**	**23.48**	**317**	P		**P**	**19 34 38.4**	**-1.1**
PMG	**Port Moresby**	**23.55**	**119**	P		**P**	**19 34 39.1**	**-1.0**
	comp=Z,12nm,0.7s,baz=325,slow=9.7,SNR=6.2							
PMG					LR	LR	19 45 41.0	
	comp=Z,1μm,21.2s,baz=277,slow=41							
PMG	**Port Moresby**	**23.55**	**119**⇓	*eP*		**P**	**19 34 38.9**	**-1.2**
PMG					pmax	pmax		
	comp=Z,37nm,1.4s							
PMG	**Port Moresby**	**23.55**	**119**			**P**	**19 34 37.7**	**-2.4**
XMIS	**Christmas Isla**	**24.07**	**239**	P		**P**	**19 34 44.5**	**-0.4**
XMIS					IAmb	IAmb	19 34 45.6	
	comp=Z,75nm,0.8s							
QZH	**Quanzhou**	**24.08**	**342**	P		**P**	**19 34 45.0**	**+0.2**
QZH				*e*	S	**S**	**19 39 00.0**	**+0.9**
QZH					LR	LR		
	comp=Z,620nm,21.0s							
PSAD1	**Pilbara Seismi**	**24.13**	**195**	P		**P**	**19 34 45.3**	**-0.1**
JMZ	**Minamidaito 2**	**24.18**	**11**	P		**P**	**19 34 46.2**	**+0.4**
JMZ					IAmb	IAmb	19 34 47.5	
	comp=Z,64nm,0.9s							
PSAC1	**Pilbara Seismi**	**24.21**	**195**	P		**P**	**19 34 46.4**	**+0.3**
PSA00	**Pilbara Seismi**	**24.24**	**195**	P		**P**	**19 34 45.6**	**-0.7**
UBPT	**Khong Chiam**	**24.54**	**304**	P		**P**	**19 34 50.4**	**+1.2**
	comp=Z,17nm,1.1s							
UBPT	**Khong Chiam**	**24.54**	**304**	P		**P**	**19 34 49.6**	**+0.4**
BKNI	**Bangkinang**	**25.41**	**267**	P		**P**	**19 34 56.6**	**-0.5**
IPM	**Ipoh**	**25.46**	**276**	P		**P**	**19 34 58.3**	**+0.7**
IPM					IAmb	IAmb	19 35 02.0	
	comp=Z,88nm,1.6s							
IPM	**Ipoh**	**25.46**	**276**	P		**P**	**19 34 58.0**	**+0.3**
QIS	**Mount Isa**	**25.84**	**151**	P		**P**	**19 35 00.6**	**-0.4**
	baz=26,SNR=36							
KULM	**Kulim**	**25.92**	**278**	P		**P**	**19 35 01.5**	**-0.2**
KULM	**Kulim**	**25.92**	**278**	P		**P**	**19 35 02.0**	**+0.3**
KRVT	**Keravat (AS076**	**26.34**	**104**	P		**P**	**19 35 05.2**	**-0.5**
	comp=Z,19nm,0.6s,baz=338,slow=6.3,SNR=4.6							
KRVT					LR	LR	19 44 26.0	
	comp=Z,239nm,19.9s,baz=259,slow=34							
RABL	**Rabaul**	**26.45**	**103**	P		**P**	**19 35 05.0**	**-1.7**
RABL					IAmb	IAmb	19 35 10.6	
	comp=Z,37nm,0.6s							
AS31	**Alice Springs**	**26.48**	**164**	P		**P**	**19 35 06.0**	**-0.8**
ASAR	**Alice Springs**	**26.48**	**164**	P		**P**	**19 35 05.3**	**-1.4**
	comp=Z,9.2nm,0.4s,baz=344,slow=7.4,SNR=130							
ASAR					PcP	**PcP**	**19 38 31.6**	**+0.7**
	comp=Z,5.7nm,0.5s,baz=352,slow=2.3,SNR=8.5							
ASAR					S	**S**	**19 39 38.0**	**+0.5**
	comp=Z,3.9nm,1.0s,baz=344,slow=16,SNR=5.4							
ASAR	**Alice Springs**	**26.48**	**164**	P		**P**	**19 35 05.8**	**-1.0**
MTSU	**Mount Surprise**	**26.63**	**139**	P		**P**	**19 35 08.4**	**+0.2**
	baz=27,SNR=18							
WRKA	**Warakurna**	**26.89**	**176**	P		**P**	**19 35 10.4**	**+0.1**
	baz=27,SNR=112							
SRAK	**Srakaew**	**26.90**	**298**	P		**P**	**19 35 06.0**	**-4.6**
	comp=Z,2μmcomp=Z,167nm,1.0s							
GIRL	**Giralia**	**27.17**	**205**	P		**P**	**19 35 15.0**	**+2.1**
	baz=27,SNR=4.6							
GIRL	**Giralia**	**27.17**	**205**	P		**P**	**19 35 15.0**	**+2.1**
GIRL					IAmb	IAmb	19 35 20.3	
	comp=Z,113nm,1.1s							
RPSI	**Rantau Prapat**	**27.47**	**272**			**PcP**	**19 38 34.2**	**+0.8**
RPSI	**Rantau Prapat**	**27.47**	**272**	P		**P**	**19 35 14.9**	**-0.8**
RPSI					IAmb	IAmb	19 35 17.2	
	comp=Z,64nm,1.3s							
PSI	**Prapat**	**27.47**	**272**	P		**P**	**19 35 15.2**	**-0.7**
	comp=Z,12nm,0.7s,baz=179,slow=2.7,SNR=11							
PSI					PcP	**PcP**	**19 38 34.2**	**+0.6**
	comp=Z,3.7nm,0.4s,baz=2.6,slow=1.8,SNR=3.8							
PSI	**Prapat**	**27.47**	**272**	P		**P**	**19 35 14.9**	**-1.0**
PSI					pmax	pmax		
	comp=Z,64nm,1.3s							
CHAI	**Chaiyaphum**	**27.77**	**301**	P		**P**	**19 35 18.0**	**-0.4**
	comp=Z,24nm,0.7s							
NONG	**Nongkai**	**27.89**	**307**	P		**P**	**19 35 19.1**	**-0.2**
	comp=Z,56nm,0.9s							
GSI	**Gunungsitoli**	**28.83**	**269**	P		**P**	**19 35 27.1**	**-0.7**
GSI					IAmb	IAmb	19 35 28.0	
	comp=Z,78nm,1.0s							
SLVN	**Son La**	**29.19**	**313**	P		**P**	**19 35 32.0**	**+1

KMI LR LR
comp=Z,280nm,20.5s
KMI LR LR
comp=Z,590nm,26.9s
KMI Kunming 32.43 317 P **P** **19 36 00.2 +0.4**
KMI pmax pmax
comp=Z,18nm,0.7s
KMI Kunming 32.43 317 P **P** **19 36 00.2 +0.4**
KMI lAmb lAmb 19 36 03.5
comp=Z,18nm,0.7s
JTU Tsushima 32.53 5 P **P** **19 36 02.8 +2.6**
COCO West Island 32.56 244 P **P** **19 36 00.8 +0.1**
COCO pmax pmax
comp=Z,109nm,1.1s
COCO West Island 32.56 244 P **P** **19 36 00.8 +0.1**
FORT Forrest 32.58 177 P **P** **19 36 00.9 +0.2**
baz=33,SNR=19
FORT Forrest 32.58 177 P **P** **19 36 00.8 +0.1**
KMBL Kambalda 33.41 187 P **P** **19 36 08.2 +0.3**
baz=34,SNR=12
JHS Saijyo 33.47 10 P **P** **19 36 10.4 +1.9**
BLDU Ballidu 33.67 195 P **P** **19 36 10.4 +0.2**
baz=34,SNR=41
JWT Wachi 34.21 13 P **P** **19 36 15.4 +0.6**
TJN Taejon 34.27 1⇓*eP* **P** **19 36 15.6 +0.2**
KLBR Kellerberrin 34.35 193 P **P** **19 36 16.6 +0.4**
baz=35,SNR=86
JSG Sagara 34.36 17 P **P** **19 36 15.4 -0.8**
INU Inuyama 34.67 15 P **P** **19 36 18.9 0.0**
JGF Kuroka 35.00 16 P **P** **19 36 21.9 +0.2**
JGF lAmb lAmb 19 36 25.2
comp=Z,23nm,0.7s
MUN Mundaring 35.10 195 P **P** **19 36 23.1 +0.5**
baz=35,SNR=19
TIA Tai'an 35.16 347 P **P** **19 36 22.5 -0.6**
TIA pmax pmax
comp=Z,16nm,0.7s
TIA LR LR
comp=Z,270nm,21.4s
TIA LR LR
comp=Z,330nm,21.0s
KSAR Wonju Array Be 35.35 2 P **P** **19 36 25.4 +0.7**
KSAR Wonju Array Be 35.35 2 P **P** **19 36 25.4 +0.7**
KSRS Korea Array 35.36 2 P **P** **19 36 25.7 +0.9**
comp=Z,6.7nm,0.6s,baz=179,slow=9.8,SNR=26
INCN Inchon 35.37 0 P **P** **19 36 25.5 +0.6**
INCN pmax pmax
comp=Z,184nm,2.0s
INCN Inchon 35.37 0 P **P** **19 36 25.5 +0.6**
KS19 Wonju Array Si 35.41 2 P **P** **19 36 25.2 0.0**
BBOO Buckleboo 35.75 166 P **P** **19 36 27.9 -0.3**
baz=36,SNR=54
BBOO Buckleboo 35.75 166 P **P** **19 36 28.0 -0.3**
BBOO lAmb lAmb 19 36 31.4
comp=Z,32nm,0.8s
NWAO Narrogin (SRO) 35.75 193 P **P** **19 36 29.1 +0.9**
baz=36,SNR=21
NWAO Narrogin (SRO) 35.75 193 P **P** **19 36 28.8 +0.6**
NWAO pmax pmax
comp=Z,116nm,2.0s
NWAO Narrogin (SRO) 35.75 193 P **P** **19 36 28.8 +0.6**
NWAO lAmb lAmb 19 36 30.2
comp=Z,116nm,2.0s
NWAO Narrogin (SRO) 35.75 193 P **P** **19 36 28.9 +0.6**
NWAO lAmb lAmb 19 37 14.5
comp=Z,86nm,1.8s
XAN Xi'an 35.87 335 P **P** **19 36 28.3 -0.9**
XAN pmax pmax
comp=Z,57nm,0.9s
XAN Xi'an 35.87 335 P **P** **19 36 28.5 -0.8**
XAN pmax pmax
comp=Z,35nm,0.8s
XAN Xi'an 35.87 335 P **P** **19 36 28.5 -0.8**
XAN lAmb lAmb 19 36 29.6
comp=Z,35nm,0.8s
CD2 Chengdu 35.90 326⇓*iP* **P** **19 36 28.8 -0.8**
CD2 S **S** **19 42 08.8 +4.3**
CD2 pmax pmax
comp=Z,50nm,1.0s
CD2 pmax pmax
comp=Z,180nm,8.8s
CD2 LR LR
comp=Z,360nm,33.0s
CD2 LR LR
comp=Z,480nm,24.0s
CD2 LR LR
comp=Z,450nm,21.1s
MAT Matsushiro 36.11 16 P **P** **19 36 30.5 -0.8**
MAT *eS* **S** **19 42 04.0 -3.5**
MJAR Matsushiro Arr 36.11 16 P **P** **19 36 30.3 -1.0**
comp=Z,23nm,0.9s,baz=190,slow=9.1,SNR=36
MJAR LR LR 19 53 56.0
comp=Z,49nm,18.7s,baz=190,slow=41
MJAR Matsushiro Arr 36.11 16 P **P** **19 36 31.1 -0.2**
MAJO Matsushiro 36.11 16*deP* **P** **19 36 30.6 -0.7**
MAJO pmax pmax
comp=Z,23nm,0.8s
MAJO Matsushiro 36.11 16 P **P** **19 36 30.3 -0.9**
MAJO lAmb lAmb 19 36 32.3
comp=Z,25nm,0.9s
EIDS Eidsvold 36.17 140 P **P** **19 36 32.1 +0.2**
baz=36,SNR=6.5
EIDS Eidsvold 36.17 140 P **P** **19 36 31.2 -0.7**
EIDS lAmb lAmb 19 36 34.4
comp=Z,45nm,1.2s
JYT Yasato 36.42 19 P **P** **19 36 32.9 -0.9**
STKA Stephens Creek 36.60 158 P **P** **19 36 34.9 -0.5**
comp=Z,18nm,0.9s,baz=328,slow=9.0,SNR=48
STKA LR LR 19 53 43.6
comp=Z,222nm,20.9s,baz=345,slow=40
STKA Stephens Creek 36.60 158 P **P** **19 36 35.2 -0.3**
baz=37,SNR=44
STKA Stephens Creek 36.60 158 P **P** **19 36 35.1 -0.3**
STKA pmax pmax
comp=Z,6.0nm,1.2s
STKA Stephens Creek 36.60 158 P **P** **19 36 35.1 -0.3**
DL2 Dalian 37.04 354 P **P** **19 36 39.8 +0.7**
DL2 *eS* **S** **19 42 27.8 +6.3**
DL2 pmax pmax
comp=Z,180nm,0.8s
DL2 pmax pmax
comp=Z,140nm,5.2s
DL2 LR LR
comp=Z,290nm,16.7s
DL2 LR LR
comp=Z,260nm,18.1s
DL2 LR LR
comp=Z,220nm,12.6s
HTT Hallett 37.12 163 P **P** **19 36 41.3 +1.4**
baz=37,SNR=12
RKGY Rocky Gully 37.43 193 P **P** **19 36 44.1 +1.7**
baz=38,SNR=23
JSD Sado 37.53 15 P **P** **19 36 42.0 -1.3**
JSD lAmb lAmb 19 36 44.4
comp=Z,67nm,1.2s
TIY Taiyuan 37.84 342 *eP* **P** **19 36 46.5 +0.5**
TIY pmax pmax
comp=Z,37nm,0.8s
CMSA Cobar Meteorol 38.01 153 P **P** **19 36 47.4 0.0**
baz=38,SNR=9.8
JMM Marumori 38.11 19 P **P** **19 36 48.7 +0.5**
JMM lAmb lAmb 19 36 51.7
comp=Z,51nm,0.8s
BJT Baijiatuau 39.02 347 P **P** **19 36 55.5 -0.3**
BJT pmax pmax
comp=Z,43nm,1.1s
BJT Baijiatuau 39.02 347 P **P** **19 36 55.5 -0.3**
BJT lAmb lAmb 19 36 58.5
comp=Z,43nm,1.1s
BJI Beijing 39.04 347 P **P** **19 36 55.3 -0.6**
BJI pmax pmax
comp=Z,31nm,0.8s
BJI pmax pmax
comp=Z,66nm,4.3s
BJI LR LR
comp=Z,120nm,13.7s
BJI LR LR
comp=Z,140nm,13.1s
LZH Lanzhou 39.88 331⇓P **P** **19 37 03.8 +0.6**
LZH pP pP 19 37 17.0 +1.2
LZH sP sP 19 37 22.3 +1.0
LZH PP **PnPn** **19 38 40.0 +0.7**
LZH sS sS 19 43 27.5 +1.7
LZH pmax pmax
comp=Z,84nm,1.3s
LZH pmax pmax
comp=Z,210nm,5.7s
LZH LR LR
comp=Z,410nm,14.1s
LZH LR LR
comp=Z,330nm,14.6s
LZH LR LR
comp=Z,400nm,14.6s
ARMA Armidale 40.18 145 P **P** **19 37 06.1 +0.4**
baz=40,SNR=23
ARMA Armidale 40.18 145 P **P** **19 37 05.9 +0.2**
ARMA lAmb lAmb 19 37 11.8
comp=Z,32nm,0.9s
SHL Shillong 40.70 308 P **P** **19 37 09.1 -1.0**
SHL pmax pmax
comp=Z,101nm,1.2s
SHL Shillong 40.70 308 P **P** **19 37 09.1 -1.0**
SHL lAmb lAmb 19 37 13.4
comp=Z,101nm,1.2s
JTM Tenmabayashi 40.88 17 P **P** **19 37 11.7 +0.6**
JTM lAmb lAmb 19 37 31.6
comp=Z,42nm,0.9s
HHC Hu-ho-hao-te 40.99 343 *eP* **P** **19 37 12.3 +0.1**
HHC sP sP 19 37 30.3 -0.1
HHC S **S** **19 43 15.0 -6.1**
HHC pmax pmax
comp=Z,26nm,1.0s
HHC pmax pmax
comp=Z,130nm,4.4s
HHC LR LR
comp=Z,330nm,14.8s
HHC LR LR
comp=Z,300nm,15.0s
HHC LR LR
comp=Z,510nm,14.9s
ARPS Mount Arapiles 41.11 161 P **P** **19 37 13.7 +0.6**
baz=41,SNR=16
VLA Vladivostok 41.29 6⇑*eP* **P** **19 37 14.4 -0.1**
VLA pmax pmax
comp=Z,190nm,2.3s
YNG Young 41.56 152 P **P** **19 37 17.6 +0.7**
baz=42,SNR=6.7
CN2 Changchun 41.69 359 *eP* **P** **19 37 17.3 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
USA0B Ussuriysk Arra 42.37 6 P **P** **19 37 24.1 +0.8**
USA0B pmax pmax
comp=Z,41nm,1.0s
USA0B Ussuriysk Arra 42.37 6 P **P** **19 37 24.1 +0.8**
USA0B lAmb lAmb 19 37 25.0
comp=Z,41nm,0.9s
USRK Ussuriysk Ar. 42.37 6 P **P** **19 37 23.8 +0.5**
comp=Z,34nm,0.9s,baz=189,slow=7.1,SNR=30
USRK Ussuriysk Ar. 42.37 6 P **P** **19 37 23.7 +0.4**
MDJ Mudanjiang 42.58 3 P **P** **19 37 26.0 +0.9**
MDJ pmax pmax
comp=Z,31nm,0.9s
MDJ pmax pmax
comp=Z,150nm,3.5s
MDJ Mudanjiang 42.58 3 P **P** **19 37 25.6 +0.6**
ERM Erimo 42.64 18 P **P** **19 37 26.1 +0.6**
ERM pmax pmax
comp=Z,62nm,1.1s
ERM Erimo 42.64 18 P **P** **19 37 26.1 +0.6**
ERM lAmb lAmb 19 37 53.4
comp=Z,62nm,1.1s
JEM Erimo 42.64 18 P P 19 37 40.7 +15
JEM lAmb lAmb 19 37 53.4
comp=Z,62nm,1.1s
CAN Canberra 42.68 152 P **P** **19 37 27.5 +1.4**
baz=43
H11S3 WAKE ISLAND Hy 42.76 65 T T 20 23 07.1
baz=252,slow=75,SNR=29
H11S2 WAKE ISLAND Hy 42.77 65 T T 20 23 08.3
baz=252,slow=75,SNR=25
H11S1 WAKE ISLAND Hy 42.78 65 T T 20 23 08.9
baz=252,slow=75,SNR=9.9
TOO Toolangi 43.11 158 P **P** **19 37 30.9 +1.3**
baz=43,SNR=4.5
TOO Toolangi 43.11 158 P **P** **19 37 30.7 +1.2**
TOO pmax pmax
comp=Z,16nm,1.0s
TOO Toolangi 43.11 158 P **P** **19 37 30.7 +1.2**
LSA Lhasa 43.39 313 P **P** **19 37 32.8 +0.3**
LSA pmax pmax
comp=Z,110nm,1.0s
LSA Lhasa 43.39 313 P **P** **19 37 32.7 +0.3**
LSA pmax pmax
comp=Z,28nm,1.0s
LSA Lhasa 43.39 313 P **P** **19 37 32.7 +0.3**
TEY Ternei 43.84 10⇑*iP* **P** **19 37 35.9 +0.7**
TEY pmax pmax
comp=Z,140nm,0.7s
TEY pmax pmax
comp=N,80nm,0.7s
SANVU Saraoutou 43.89 115 P **P** **19 37 35.9 -0.1**
SANVU lAmb lAmb 19 37 40.3
comp=Z,30nm,0.7s
ASAJ Asahikawa 44.38 17 P **P** **19 37 40.2 +0.7**
ASAJ pmax pmax
comp=Z,21nm,0.9s
JKA Kamikawa-asahi 44.38 17 P **P** **19 37 40.2 +0.6**
GTA Gaotai 44.47 330⇑P **P** **19 37 40.0 -0.5**
GTA pP pP 19 37 48.5 -4.7
GTA sP sP 19 37 52.3 -6.4
GTA PcP **PP** **19 39 25.3 +0.3**
GTA SS SS 19 47 26.0 -7.2
GTA pmax pmax
comp=Z,17nm,1.1s
GTA pmax pmax
comp=Z,100nm,5.6s
GTA LR LR
comp=Z,170nm,17.4s
GTA LR LR
comp=Z,180nm,18.5s
GTA LR LR
comp=Z,490nm,18.9s
TAPN Taplejung 44.83 308 *eP* **P** **19 37 43.5 -0.3**
comp=Z,130nm,1.1s
ODAN Odare 44.86 307 *eP* **P** **19 37 43.4 -0.6**
comp=Z,130nm,0.9s
LHI Lord Howe Isla 45.49 140 P **P** **19 37 48.7 +0.2**
RAMN Ramite 45.53 307 *eP* **P** **19 37 49.1 -0.2**
comp=Z,115nm,1.0s
DZM Mont Dzumac 45.80 124 *eP* **P** **19 37 49.6 -1.7**
comp=Z,65nm,1.6s
DZM Mont Dzumac 45.80 124 *e*LR LR 19 50 47.2
comp=Z,538nm,24.9s
DZM Mont Dzumac 45.80 124 P **P** **19 37 51.3 0.0**
DZM lAmb lAmb 19 37 54.3
comp=Z,20nm,1.0s
PALK Pallekele 45.84 278 PcP **PcP** **19 39 30.2 +1.6**
comp=Z,5.4nm,0.6s,baz=147,slow=5.1,SNR=4.2
PKI Pulchoki 46.75 307 *eP* **P** **19 37 57.8 -1.2**
PKIN Phulchoki 46.77 307 *eP* **P** **19 37 57.8 -1.2**
KKN Kakani 46.95 307 *eP* **P** **19 37 59.4 -1.0**
comp=Z,88nm,1.1s
DMN Daman 47.01 307 *eP* **P** **19 38 00.0 -1.0**
comp=Z,114nm,1.1s
YSS Yuzh-Sakhalins 47.04 15⇓*eP* **P** **19 38 01.1 +0.7**
YSS *e* 19 38 10.0
YSS *e* 19 38 20.6
YSS pmax pmax
comp=Z,20nm,1.0s
YSS MLR MLR
comp=Z,300nm,20.0s
YSS Yuzh-Sakhalins 47.04 15 P **P** **19 38 00.5 +0.1**
YSS lAmb lAmb 19 38 03.5
comp=Z,35nm,1.2s
KLR Kul'dur 47.33 5*ceP* **P** **19 38 02.7 0.0**
KLR pmax pmax
comp=Z,26nm,1.0s
HIA Hailar 47.49 354 P **P** **19 38 04.9 +0.9**
HIA pmax pmax
comp=Z,53nm,1.3s
HIA Hailar 47.49 354 P **P** **19 38 04.9 +0.9**
HIA lAmb lAmb 19 38 06.5
comp=Z,53nm,1.3s
DANN Dangsing 48.41 307 *eP* **P** **19 38 10.9 -0.9**
comp=Z,106nm,0.8s
ULN Ulaanbaatar 48.71 343*c iP* **P** **19 38 13.6 0.0**
ULN pmax pmax
comp=Z,19nm,0.7s
ULN Ulaanbaatar 48.71 343 P **P** **19 38 13.8 +0.2**
ULN lAmb lAmb 19 38 14.6
comp=Z,19nm,0.8s
SONM Songino Array 48.88 342 P **P** **19 38 14.7 -0.2**
comp=Z,12nm,0.6s,baz=154,slow=9.3,SNR=104
SONM PcP **PcP** **19 39 39.7 +1.0**
comp=Z,6.7nm,0.8s,baz=155,slow=4.3,SNR=6.3
SONM Songino Array 48.88 342 P **P** **19 38 14.4 -0.5**
GRNR Gornyy 49.38 8⇑*iP* **P** **19 38 19.3 +0.8**
GRNR pmax pmax
comp=N,7.0nm,0.8s
GRNR pmax pmax
comp=Z,20nm,1.0s
GRNR MLR MLR
comp=E,390nm,14.0s
HYB Hyderabad 49.44 291 *i*P **P** **19 38 18.0 -1.5**
ZEA Zeya 51.63 1 *eP* **P** **19 38 35.4 0.0**
ZEA pmax pmax
comp=E,10.0nm,0.6s
ZEA pmax pmax
comp=Z,10.0nm,1.0s
TLY Talaya 53.12 342 *eP* **P** **19 38 47.5 +1.0**
TLY pmax pmax
comp=Z,68nm,1.3s
TLY Talaya 53.12 342 P **P** **19 38 47.0 +0.5**
TLY lAmb lAmb 19 38 48.2
comp=Z,16nm,0.8s
MOY Mondy 53.94 341 *eP* **P** **19 38 53.3 +0.6**
MOY pmax pmax
comp=Z,21nm,1.3s
WMQ Urumqi 54.00 326 *eP* **P** **19 38 53.3 +0.1**
WMQ PcP **PcP** **19 39 58.5 +0.6**
WMQ pmax pmax
comp=Z,48nm,1.3s
WMQ pmax pmax
comp=Z,180nm,3.8s
WMQ LR LR
comp=Z,1μm,29.1s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ LR LR
comp=Z,400nm,27.7s
WMQ Urumqi 54.00 326 P **P** **19 38 53.5 +0.3**
WMQ pmax pmax
comp=Z,27nm,1.0s
WMQ Urumqi 54.00 326 P **P** **19 38 53.5 +0.3**
WMQ lAmb lAmb 19 38 55.5
comp=Z,27nm,1.0s
MSVF Nonsavu 54.49 113 P **P** **19 38 56.8 -0.4**
MSVF pmax pmax
comp=Z,76nm,1.9s
MSVF Nonsavu 54.49 113 P **P** **19 38 56.8 -0.4**
MSVF lAmb lAmb 19 39 04.8
comp=Z,76nm,1.9s
DGAR Diego Garcia 54.63 260 P **P** **19 38 58.6 +0.4**
DGAR pmax pmax
comp=Z,327nm,2.0s
DGAR Diego Garcia 54.63 260 P **P** **19 38 58.6 +0.4**
BOD Bodaibo 56.57 352 *eP* **P** **19 39 11.8 +0.5**
BOD pmax pmax
comp=Z,23nm,1.5s
PEA0B Petropavlovsk- 57.19 22 P **P** **19 39 17.2 +1.4**
PEA0B pmax pmax
comp=Z,107nm,1.7s
PEA0B Petropavlovsk- 57.19 22 P **P** **19 39 17.2 +1.4**
PETK Petropavlovsk- 57.19 22 P **P** **19 39 16.4 +0.5**
comp=Z,5.2nm,0.6s,baz=179,slow=3.8,SNR=26
ZSN Zaisan 57.83 328 *eP* **P** **19 39 19.6 -0.9**
comp=Z,9.6nm,1.5s,baz=328
ZSN Zaisan 57.83 328 *eP* **P** **19 39 19.5 -0.9**
ZSN pmax pmax
comp=Z,10.0nm,1.5s
SHLS Shalkode 58.52 321 *eP* **P** **19 39 23.4 -2.2**
comp=Z,14nm,0.8s,baz=321
SHLS Shalkode 58.52 321 *eP* **P** **19 39 23.3 -2.2**
SHLS pmax pmax
comp=Z,14nm,0.8s
PDGK Podgornoye 58.59 321 P **P** **19 39 25.3 -0.7**
NIL Nilore 58.77 309 P **P** **19 39 26.9 -0.4**
NIL pmax pmax
comp=Z,20nm,1.0s
NIL Nilore 58.77 309 P **P** **19 39 26.9 -0.4**
NIL lAmb lAmb 19 39 31.4
comp=Z,20nm,1.0s
MK31 Makanchi Array 58.84 326*c iP* **P** **19 39 26.9 -0.6**
MK31 Makanchi Array 58.84 326 P **P** **19 39 27.4 -0.1**
MK31 lAmb lAmb 19 39 32.0
comp=Z,16nm,1.0s
MKAR Makanchi Array 58.84 326 P **P** **19 39 26.9 -0.6**
comp=Z,7.9nm,0.3s,baz=120,slow=7.6,SNR=286
MKAR PcP **PcP** **19 40 16.6 0.0**
comp=Z,9.7nm,0.8s,baz=129,slow=4.7,SNR=5.5
MKAR PKP2bc 20 09 18.6
comp=Z,0.6nm,1.0s,baz=318,slow=1.9,SNR=3.8
MKAR Makanchi Array 58.84 326*ceP* **P** **19 39 26.8 -0.7**
MKAR pmax pmax
comp=Z,8.0nm,0.3s
MKAR Makanchi Array 58.84 326 P **P** **19 39 26.7 -0.8**
MKAR PcP **PcP** **19 40 17.0 +0.4**
MAKZ Makanchi 59.02 326 P **P** **19 39 28.4 -0.4**
MAKZ pmax pmax
comp=Z,34nm,1.2s
MAKZ Makanchi 59.02 326 P **P** **19 39 28.4 -0.4**
MAKZ lAmb lAmb 19 39 34.3
comp=Z,34nm,1.2s
KSH Kashi 59.08 316 P **P** **19 39 30.3 +0.8**
KSH S **S** **19 47 34.3 +1.0**
KSH pmax pmax
comp=Z,12nm,0.7s
KSH pmax pmax
comp=Z,240nm,5.0s
KSH LR LR
comp=Z,400nm,6.1s
KSH LR LR
comp=Z,480nm,7.5s
SATY Saty 59.13 321 *eP* **P** **19 39 29.4 -0.4**
comp=Z,20nm,0.8s,baz=321
SATY Saty 59.13 321 *eP* **P** **19 39 29.4 -0.4**
SATY pmax pmax
comp=Z,20nm,0.8s
KPKS Kokpek 59.16 321 *eP* **P** **19 39 29.3 -0.7**
comp=Z,15nm,0.8s,baz=321
KPKS Kokpek 59.16 321 *eP* **P** **19 39 29.2 -0.7**
KPKS pmax pmax
comp=Z,15nm,0.8s
KDJ Kajisay 59.47 319 P **P** **19 39 33.2 +1.0**
KDJ pmax pmax
comp=Z,66nm,1.4s
KDJ Kajisay 59.47 319 P **P** **19 39 33.2 +1.0**
YAK Yakutsk 59.99 2 *eP* **P** **19 39 34.9 -0.2**
YAK *e**PP **pP** **19 39 41.0 -7.2**
YAK *e* 19 40 21.6
YAK *e* 19 41 49.3
YAK *e*PPP PPP 19 43 18.6
YAK *eS* **S** **19 47 44.1 +0.3**
YAK *e**SS **sS** **19 48 03.6 -2.2**
YAK *e* 19 49 20.7
YAK *eSS **SS** **19 51 45.8 +4.7**
YAK pmax pmax
comp=Z,67nm,0.9s
YAK pmax pmax
comp=N,20nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK pmax pmax
comp=Z,232nm,2.8s
YAK pmax pmax
comp=N,413nm,2.6s
YAK pmax pmax
comp=E,337nm,3.0s
YAK smax smax
comp=E,306nm,2.9s
YAK smax smax
comp=N,214nm,3.2s
YAK Yakutsk 59.99 2 P **P** **19 39 35.2 +0.1**
MDOK Medeo 60.05 320 *eP* **P** **19 39 35.8 -0.4**
baz=320
MDOK Medeo 60.05 320 *eP* **P** **19 39 35.7 -0.4**
TNSS Tian-Shan 60.05 320 *eP* **P** **19 39 36.6 +0.2**
baz=320
TNSS Tian-Shan 60.05 320 *eP* **P** **19 39 36.6 +0.2**
TDK Taldyqorghan 60.12 323 *eP* **P** **19 39 36.2 -0.3**
comp=N,22nm,0.6s,baz=323
TDK Taldyqorghan 60.12 323 *eP* **P** **19 39 36.1 -0.3**
TDK pmax pmax
comp=Z,22nm,0.6s
AAA Alma-Ata 60.16 320 *eP* **P** **19 39 36.6 -0.1**
baz=320
AAA Alma-Ata 60.16 320 *eP* **P** **19 39 36.6 -0.1**
LBZ Lake Benmore 60.40 145 P **P** **19 39 37.9 -0.4**

LBZ IAmb IAmb 19 39 41.3
comp=Z,29nm,0.8s
CHKK Chushkaly 60.42 321 eP **P** **19 39 37.6 -1.0**
baz=321
CHKK Chushkaly 60.42 321 eP **P** **19 39 37.5 -1.0**
MA2 Magadan 60.50 14⇑ eP **P** **19 39 40.6 +1.9**
MA2 pmax pmax
comp=Z,56nm,1.4s
MA2 Magadan 60.50 14 P **P** **19 39 40.2 +1.5**
NNZ Nelson 60.51 141 P **P** **19 39 38.0 -1.1**
KUU Kurty 60.85 321 eP **P** **19 39 40.9 -0.5**
comp=Z,55nm,0.8s,baz=321
KUU Kurty 60.85 321 eP **P** **19 39 40.9 -0.5**
KUU pmax pmax
comp=Z,55nm,0.8s
TKM2 Tokmak 2 60.87 319 P **P** **19 39 41.5 -0.3**
SNR=19
KBK Karagaybulak 61.17 319 P **P** **19 39 44.3 +0.4**
SNR=12
UCH Uchtor 61.27 318 P **P** **19 39 45.5 +0.7**
SNR=10
CHMS Chumysh 61.46 319 P **P** **19 39 45.3 -0.3**
SNR=7.0
AAK Ala-Archa 61.47 319 P **P** **19 39 45.6 -0.1**
SNR=6.0
AAK Ala-Archa 61.47 319 d iP **P** **19 39 47.0 +1.2**
AAK pmax pmax
comp=Z,35nm,0.8s
SGDS Sogindy 61.74 319 eP **P** **19 39 46.6 -1.0**
baz=320
SGDS Sogindy 61.74 319 eP **P** **19 39 46.5 -1.0**
USP Ospenovka 61.74 319 P **P** **19 39 47.3 -0.2**
SNR=21
AML Almayashu 61.78 318 P **P** **19 39 48.6 +0.4**
SNR=20
EKS2 Erkin-Say 61.95 318 P **P** **19 39 49.0 0.0**
SNR=14
DRK Karamyk 62.01 314 P **P** **19 39 49.1 -0.6**
ZAA0 Zalesovo Array 62.03 334 P **P** **19 39 48.0 -1.1**
ZALV Zalesovo Beam 62.03 334 P **P** **19 39 47.9 -1.2**
comp=Z,6.3nm,0.6s,baz=129,slow=6.5,SNR=26
ZALV PKP2bc 20 09 04.7
comp=Z,0.3nm,0.3s,baz=332,slow=2.5,SNR=4.4
ZALV Zalesovo Beam 62.03 334 P **P** **19 39 47.4 -1.7**
ZALV Zalesovo Beam 62.03 334 P **P** **19 39 47.4 -1.7**
ZALV **P'P'bc** **20 09 02.2 -3.6**
SEM Semipalatinsk 62.04 329 eP **P** **19 39 48.0 -1.5**
baz=328
SEM Semipalatinsk 62.04 329 eP **P** **19 39 48.0 -1.5**
KBL Kabul 62.36 308 P **P** **19 39 51.1 -0.9**
KBL pmax pmax
comp=Z,20nm,0.8s
KBL Kabul 62.36 308 P **P** **19 39 51.0 -0.9**
KBL IAmb IAmb 19 39 52.8
comp=Z,20nm,0.8s
BTLS Baital 62.84 321 eP **P** **19 39 53.9 -0.9**
comp=Z,6.8nm,0.9s,baz=321
BTLS Baital 62.84 321 eP **P** **19 39 53.8 -0.9**
BTLS pmax pmax
comp=Z,7.0nm,0.9s
BTK Batken 62.93 315 P **P** **19 39 54.9 -0.6**
BTK pmax pmax
comp=Z,19nm,1.1s
BTK Batken 62.93 315 P **P** **19 39 54.9 -0.6**
BTK IAmb IAmb 19 39 58.2
comp=Z,19nm,1.1s
KURK Kurchatov 63.07 328 P **P** **19 39 55.6 -0.5**
KURK pmax pmax
comp=Z,60nm,0.9s
KURK Kurchatov 63.07 328 P **P** **19 39 55.6 -0.5**
SEY Seymchan 63.83 13⇓ iP **P** **19 40 02.9 +2.0**
IUG Iuzhnay 64.27 317 eP **P** **19 40 03.8 -0.7**
comp=Z,12nm,0.7s,baz=317
IUG Iuzhnay 64.27 317 eP **P** **19 40 03.7 -0.7**
IUG pmax pmax
comp=Z,12nm,0.7s
KK31 Karatay Array 64.32 318 i P **P** **19 40 03.6 -1.0**
KK31 Karatay Array 64.32 318 IAmb IAmb 19 40 06.2
comp=Z,14nm,0.8s
KKAR Karatay Array 64.32 318 P **P** **19 40 03.5 -1.0**
KKAR pmax pmax
comp=Z,14nm,0.8s
KKAR Karatay Array 64.32 318 P **P** **19 40 03.9 -0.6**
KKAR IAmb IAmb 19 40 06.2
comp=Z,14nm,0.8s
KKAR Karatay Array 64.32 318 P **P** **19 40 03.5 -1.0**
OTUK Ortayu 65.35 323 P **P** **19 40 10.2 -1.0**
BRZS Berezniki 65.95 325 eP **P** **19 40 14.4 -0.6**
comp=Z,9.6nm,1.0s,baz=325
BRZS Berezniki 65.95 325 eP **P** **19 40 14.4 -0.6**
BRZS pmax pmax
comp=Z,10.0nm,1.0s
BRVK Borovoye 68.71 327 P **P** **19 40 32.0 -0.3**
BRVK pmax pmax
comp=Z,40nm,1.1s
BRVK Borovoye 68.71 327 P **P** **19 40 32.0 -0.3**
BRVK IAmb IAmb 19 40 35.0
comp=Z,40nm,1.1s
TIXI Tiksi 69.62 1⇓ eP **P** **19 40 37.2 -0.4**
TIXI pmax pmax
comp=Z,88nm,1.0s
TIXI Tiksi 69.62 1 P **P** **19 40 37.1 -0.5**
TIXI IAmb IAmb 19 40 38.7
comp=Z,16nm,0.8s
BILL Bilibino 71.35 15⇓ eP **P** **19 40 46.9 -1.4**
BILL pmax pmax
comp=Z,16nm,1.8s
GEYT Alibeck 71.76 309 P **P** **19 40 50.4 -1.1**
comp=Z,17nm,0.6s,baz=130,slow=6.4,SNR=3.9
NRIK Noril'sk 72.08 346 P **P** **19 40 52.8 +0.2**
comp=Z,27nm,0.8s,baz=124,slow=6.5,SNR=40
NRIK Noril'sk 72.08 346 c iP **P** **19 40 52.7 +0.1**
NRIK pmax pmax
comp=Z,37nm,0.9s
AB31 Akbulak array 73.32 321 i P **P** **19 40 59.5 -0.9**
ABKAR Akbulak array 73.32 321 P **P** **19 40 59.8 -0.7**
ABKAR Akbulak array 73.32 321 IAmb IAmb 19 41 01.7
comp=Z,8.9nm,0.7s
SVE Sverdlovsk 75.31 329 de P **P** **19 41 11.9 +0.1**
SVE pmax pmax
comp=Z,106nm,1.1s
ARU Arti 76.27 328 c iP **P** **19 41 16.7 -0.6**
ARU *PP **pP** **19 41 31.8 +0.9**
ARU **19 44 06.5**
ARU S **S** **19 50 57.4 -0.7**
ARU SS **SS** **19 55 52.0 -0.7**
ARU pmax pmax
comp=Z,70nm,1.0s
ARU MLR MLR
comp=Z,293nm,19.0s
ARU Arti 76.27 328 P **P** **19 41 16.7 -0.6**
OPO Ambohidratompo 80.41 251 P **P** **19 41 41.4 +0.2**
comp=Z,9.5nm,0.6s,baz=80,slow=3.4,SNR=16
ABPO Ambohimpanom 80.41 250 P **P** **19 41 41.1 -0.1**
ABPO pmax pmax
comp=Z,13nm,0.8s
ABPO Ambohimpanom 80.41 250 P **P** **19 41 41.1 -0.1**
MAK Makhachkala 80.55 313 eP **P** **19 41 40.8 -0.4**
MAK e*PP **pP** **19 41 55.0 +0.1**
MAK e **19 44 42.7**
MAK ePPP PPP **19 46 35.3**
MAK eS **S** **19 51 44.9 +0.3**
MAK eSS **SS** **19 57 00.0 +2.3**
MAK eSSS SSS 20 00 23.6
MAK pmax pmax
comp=Z,220nm,1.2s
MAK MLR MLR
comp=Z,92nm,17.0s
RAYN Ar Rayn 80.89 293 P **P** **19 41 43.0 -0.5**
RAYN pmax pmax
comp=Z,14nm,0.8s
RAYN Ar Rayn 80.89 293 P **P** **19 41 43.0 -0.5**
RAYN IAmb IAmb 19 41 44.8
comp=Z,14nm,0.8s
KIRV Kirov 81.57 329 c iP **P** **19 41 46.1 -0.2**
BELG Belogornoye 81.62 323 c iP **P** **19 41 46.3 -0.3**
BELG pmax pmax
comp=Z,20nm,0.9s
VNDA Vanda 81.71 173 P **P** **19 41 47.0 +0.3**
comp=Z,9.3nm,0.8s,baz=315,slow=6.3,SNR=50
VNDA Vanda 81.71 173 P **P** **19 41 47.0 +0.3**
VNDA Vanda 81.71 173 P **P** **19 41 47.0 +0.3**
MAW Mawson 81.98 200 P **P** **19 41 48.6 +0.4**
comp=Z,7.3nm,0.6s,baz=74,slow=4.2,SNR=27
MAW Mawson 81.98 200 P **P** **19 41 50.0 +1.8**
baz=82,SNR=20
MAW Mawson 81.98 200 P **P** **19 41 49.1 +0.9**
GNI Garni 82.37 310⇓ iP **P** **19 41 52.1 +0.9**
GNI pmax pmax
comp=Z,27nm,1.7s
GNI Garni 82.37 310 P **P** **19 41 51.5 +0.4**
GNI IAmb IAmb 19 42 01.7
comp=Z,19nm,1.0s
TTA Tatalina 82.63 27 P **P** **19 41 52.7 +0.8**
TTA pmax pmax
comp=Z,36nm,1.8s
TTA Tatalina 82.63 27 P **P** **19 41 52.7 +0.8**
TTA IAmb IAmb 19 42 00.5
comp=Z,36nm,1.8s
ZEI Tsey 83.18 313 eP **P** **19 41 55.3 0.0**
ZEI pmax pmax
comp=Z,71nm,1.4s
ATD Arta Tunnel 83.31 281 P **P** **19 41 56.8 +0.5**
comp=Z,9.4nm,0.6s,baz=82,slow=4.6,SNR=6.3
ATD Arta Tunnel 83.31 281 IAmb IAmb 19 42 00.1
comp=Z,12nm,0.8s
AKH Akhalkalaki 83.40 311⇑ P **P** **19 41 57.8 +1.3**
AKH Akhalkalaki 83.40 311 P **P** **19 41 57.9 +1.4**
AKH pmax pmax
comp=Z,117nm,0.9s
AKH Akhalkalaki 83.40 311 P **P** **19 41 57.9 +1.4**
GOF Gofitskoye 83.94 315⇑ eP **P** **19 41 59.3 +0.4**
GOF pmax pmax
comp=Z,19nm,0.8s
KBZ Khabaz 83.97 314 P **P** **19 41 59.0 0.0**
comp=Z,14nm,1.0s,baz=127,slow=6.5,SNR=15
KBZ Khabaz 83.97 314 c iP **P** **19 41 59.0 0.0**
KBZ pmax pmax
comp=Z,23nm,1.2s
A21K Barrow 84.00 18 P **P** **19 42 00.8 +2.1**
baz=258
A21K Barrow 84.00 18 IAmb IAmb 19 42 01.9
comp=Z,34nm,1.0s
KIV Kislovodsk 84.13 314⇑ P **P** **19 42 00.8 +0.7**
KIV Kislovodsk 84.13 314 P **P** **19 42 00.3 +0.2**
KIV pmax pmax
comp=Z,15nm,0.8s
KIV Kislovodsk 84.13 314 P **P** **19 42 00.2 +0.2**
KIV IAmb IAmb 19 42 02.2
comp=Z,15nm,0.8s
PPT Papeete 84.88 108 LR LR 20 16 21.3
comp=Z,37nm,21.1s,baz=242,slow=33
PPT2 Papeete2 84.88 108 eLR LR 20 08 57.0
comp=Z,224nm,29.0s
VRH Novokhopyorsk 85.16 321 eP **P** **19 42 04.3 -0.6**
VRH pmax pmax
comp=Z,120nm,0.8s
MARD Mardin 85.35 307 P **P** **19 42 07.0 +0.6**
TBI Tubuai 85.38 113 eLR LR 20 09 07.0
comp=Z,158nm,35.5s
COLD Coldfoot 85.65 23 P **P** **19 42 08.8 +1.7**
baz=265
I23K Minto, Yukon-K 85.81 25 P **P** **19 42 09.3 +1.5**
baz=266
TOLK Toolik Lake Re 86.01 21 P **P** **19 42 10.3 +1.4**
baz=265
KTUT Trabzon 86.19 311⇓ P **P** **19 42 11.5 +1.2**
SOC Sochi 86.27 313 eP **P** **19 42 09.3 -1.3**
SOC eS **SKSac** **19 52 30.3 -2.7**
SOC eSS **SS** **19 58 18.5 -3.8**
SOC pmax pmax
comp=Z,52nm,0.7s
SOC MLR MLR
comp=Z,84nm,14.0s
ANKE Ethiopia-Afar 86.40 279 eP **P** **19 42 11.6 -0.7**
VORD Divnogorie 86.68 321 eP **P** **19 42 11.9 -0.5**
VORD pmax pmax
comp=Z,80nm,1.0s
VSR Storozhevoye 86.76 321 eP **P** **19 42 12.6 -0.2**
VSR pmax pmax
comp=Z,90nm,1.0s
KLMR Klimovskoe 86.79 331 eP **P** **19 42 10.6 -2.2**
KLMR pmax pmax
comp=Z,54nm,1.3s
KLMR Klimovskoe 86.79 331 eP **P** **19 42 10.6 -2.2**
KLMR AMP 19 42 15.0
comp=Z,54nm,1.3s
ILAR Eielson Array 86.84 25 P **P** **19 42 11.4 -1.5**
comp=Z,0.6nm,0.7s,baz=249,slow=3.6,SNR=9.5
LPSR Galich'ya Gora 86.93 322 eP **P** **19 42 13.9 +0.3**
LPSR pmax pmax
comp=Z,110nm,1.0s
TMCR Tamitsa 87.55 334 eP **P** **19 42 15.1 -1.2**
TMCR pmax pmax
comp=Z,34nm,1.1s
MOS Moscow 87.72 326 eP **P** **19 42 16.4 -0.9**
MOS pmax pmax
comp=Z,91nm,1.0s
ANN Anapa 87.91 315 eP P 19 42 13.6 -4.9
ANN e*PP pP 19 42 29.5 -2.9
ANN ePPP PPP 19 47 40.0
ANN eS **SKSac** **19 52 36.1 -6.9**
ANN pmax pmax
comp=Z,36nm,1.1s
GAZ Gaziantep 88.19 307 P **P** **19 42 20.9 +0.7**
OBN Obninsk 88.33 325 de P **P** **19 42 20.1 -0.1**
OBN e **19 45 47.2**
OBN eSS SS 19 58 53.4 +1.7
OBN pmax pmax
comp=Z,78nm,1.3s
OBN MLR MLR
comp=Z,242nm,20.0s
LVZ Lovozero 88.88 338⇑ eP **P** **19 42 22.3 -0.3**
LVZ pmax pmax
comp=Z,51nm,1.3s
K27K Chicken 88.93 26 P **P** **19 42 24.7 +1.7**
baz=272
SYO Syowa Base 90.66 201⇓ eP **P** **19 42 30.5 -0.3**
SYO Syowa Base 90.66 201⇑ ePcP **PcP** **19 42 33.3 +1.4**
ILGA Ilgaz 90.77 311 IAmb IAmb 19 42 33.4
comp=Z,17nm,1.0s
BR131 Keskin Array S 90.90 310 IAmb IAmb 19 42 33.1
comp=Z,5.9nm,0.9s
BRTR Keskin Array B 90.90 310 P **P** **19 42 32.1 -0.8**
comp=Z,7.7nm,1.0s,baz=123,slow=4.6,SNR=17
BRTR Keskin Array B 90.90 310 P **P** **19 42 31.9 -1.0**
BRTR Keskin Array B 90.90 310 P **P** **19 42 31.9 -1.0**
INK Inuvik 91.93 21 P **P** **19 42 36.8 0.0**
INK pmax pmax
comp=Z,16nm,1.7s
INK Inuvik 91.93 21 P **P** **19 42 36.8 0.0**
INK IAmb IAmb 19 42 53.6
comp=Z,16nm,1.6s
ARCES ARCESS Array B 92.00 340 P **P** **19 42 36.4 -0.8**
comp=Z,16nm,1.0s,baz=35,slow=4.4,SNR=7.9
AKASG Malin Array Be 93.06 321 P **P** **19 42 40.9 -1.5**
comp=Z,0.8nm,0.5s,baz=67,slow=5.0,SNR=10
AKASG Malin Array Be 93.06 321 P **P** **19 42 41.7 -0.7**
FINES FINESS Array B 93.24 332 P **P** **19 42 41.6 -1.4**
comp=Z,1.7nm,0.5s,baz=64,slow=3.8,SNR=12
C36M Paulatuk 94.99 20 P **P** **19 42 51.0 +0.1**
baz=289
TESR Tescani 95.31 317⇑ P **P** **19 42 53.3 +0.4**
VRI Vrincioaia 95.35 316⇑ P **P** **19 42 53.4 +0.3**
PLOR Plostina 95.41 316⇓ P **P** **19 42 53.7 +0.4**
BIZ Bicaz 95.62 317⇓ P **P** **19 42 54.3 0.0**
NEHR Nehoiu 95.72 316⇑ P **P** **19 42 54.8 0.0**
MLR Muntele Rosu 95.95 316⇑ P **P** **19 42 56.5 +0.6**
BURAR Bucovina Array 96.11 318⇑ P **P** **19 42 56.7 +0.1**
BURAR Bucovina Array 96.11 318 P **P** **19 42 56.5 -0.1**
BUR08 Bucovina Ar. S 96.11 318 IAmb IAmb 19 43 06.2
comp=Z,5.1nm,0.8s
DOPR Dopca 96.26 316⇑ P **P** **19 42 57.0 -0.2**
KOLS Kolonicke sedl 97.79 320 eP Pdif 19 43 04.7 +0.6
KOLS Kolonicke sedl 97.79 320 ePDIFF Pdif 19 43 04.7 +0.6
DRGR 97.94 318⇑ P **P** **19 43 04.8 -0.1**
GZR Gura Zlata 98.17 316⇑ P **P** **19 43 05.7 -0.1**
CRVS Cervenica-Dubn 98.32 320 eP Pdif 19 43 06.8 +0.3
CRVS Cervenica-Dubn 98.32 320 ePDIFF Pdif 19 43 06.8 +0.3
LSZ Lusaka 98.44 255 P Pdif 19 43 08.0 +0.2
LSZ pmax pmax
comp=Z,31nm,1.7s
LSZ Lusaka 98.44 255 P Pdif 19 43 08.0 +0.2
HERR Herculane 98.52 316⇑ P **P** **19 43 07.5 +0.2**
SIRR Siria 98.75 317⇓ P **P** **19 43 08.6 +0.1**
DAG Danmarks Havn 98.97 352 i P **Pdif** **19 43 08.0 -0.7**
DAG pmax pmax
comp=Z,4.0nm,0.7s
DAG Danmarks Havn 98.97 352 i P **Pdif** **19 43 08.1 -0.7**
comp=Z,4.1nm,0.7s
DAG IAmb IAmb 19 43 08.9
comp=Z,4.1nm,0.7s
NB2 NORSAR Subarra100.23 333 P **Pdif** **19 43 12.8 -1.9**
comp=Z,0.7nm,0.7s,baz=67,slow=4.6
NOA NORSAR Array B100.23 333 P **Pdif** **19 43 13.5 -1.2**
comp=Z,2.9nm,1.0s,baz=67,slow=4.6,SNR=4.7
DBG Daneborg 101.23 351 i P **Pdif** **19 43 18.5 -0.4**
DBG IAmb IAmb 19 43 19.2
comp=Z,2.9nm,0.9s
YKA Yellowknife Ar 101.25 24 P **Pdif** **19 43 17.5 -1.6**
comp=Z,0.3nm,0.8s,baz=307,slow=6.1,SNR=1.4
YKA PKiKP **PKiKP** **19 47 44.4 +0.9**
comp=Z,0.4nm,0.8s,baz=309,slow=1.2,SNR=6.1
BRG Berggiesshubel 102.47 323 eP **Pdif** **19 43 24.9 +0.1**
BRG pmax pmax
comp=Z,17nm,1.7s
BRG Berggiesshubel 102.47 323 ePDIFF **Pdif** **19 43 24.9 +0.1**
comp=Z,16nm,1.7s
GERES GERESS Array B 103.27 321 Pdiff **Pdif** **19 43 27.0 -1.6**
comp=Z,0.3nm,0.4s,baz=56,slow=3.4,SNR=4.5
PDAR Pinedale Array 112.90 41 PKiKP **PKiKP** **19 48 06.8 +0.6**
comp=Z,0.5nm,0.6s,baz=159,slow=2.4,SNR=6.2
PDAR PKKPbc **PKKPbc** **19 58 54.0 -0.8**
comp=Z,0.3nm,0.5s,baz=97,slow=6.0,SNR=3.9
PDAR PKKPab **PKKPab** **19 59 02.5 +0.3**
comp=Z,1.2nm,0.9s,baz=126,slow=6.4,SNR=5.8
O20A White River Ci 114.94 44 P PKPdf 19 48 11.0 +1.0
baz=296
RSSD Black Hills 115.78 38 PKiKP **PKiKP** **19 48 11.3 -0.3**
RSSD Black Hills 115.78 38 **PKiKP** **19 48 11.3 -0.3**
ULM Lac du Bonnet 116.67 29 PKP **PKPdf** **19 48 12.7 -0.1**
comp=Z,2.3nm,0.6s,baz=286,slow=1.5,SNR=5.3
ANMO Albuquerque 118.45 48⇑ iPKiKP **PKiKP** **19 48 18.2 +1.2**
ANMO pmax pmax
comp=Z,8.0nm,2.5s
ANMO Albuquerque 118.45 48 P **PKiKP** **19 48 17.4 +0.4**
baz=295
T25A Trinidad 118.97 45 P **PKPdf** **19 48 17.9 0.0**
baz=298
ECSD EROS Data Cent 120.43 35 P **PKiKP** **19 48 20.6 +0.2**
baz=308
ECSD EROS Data Cent 120.43 35 PKPdf **PKPdf** **19 48 20.3 0.0**
MNTX Cornudas Mount 120.62 51 P **PKiKP** **19 48 22.2 +1.1**
baz=294
MNTX Cornudas Mount 120.62 51 **PKiKP** **19 48 21.8 +0.7**
F36A Milaca 120.76 31 PKPdf **PKiKP** **19 48 20.9 0.0**
TXAR Lajitas Array 122.93 53 PKP **PKiKP** **19 48 25.9 +0.1**
comp=Z,0.9nm,0.7s,baz=235,slow=0.8,SNR=14
TXAR PKKPbc **PKKPab** **19 58 17.8 -0.4**
comp=Z,0.9nm,0.9s,baz=132,slow=5.0,SNR=5.9
TXAR Lajitas Array 122.93 53 PKIKP **PKPdf** **19 48 25.6 0.0**
TXAR Lajitas Array 122.93 53 PKPdf **PKPdf** **19 48 25.6 0.0**
TORD Torodi Ar. Bea 123.15 287 PKP **PKiKP** **19 48 26.4 0.0**
comp=Z,5.2nm,0.8s,baz=50,slow=1.9,SNR=26
TORD PKKPbc **PKKPab** **19 58 17.7 +0.5**
comp=Z,0.7nm,0.6s,baz=275,slow=2.8,SNR=8.7
TORD Torodi Ar. Bea 123.15 287 PKPdf **PKPdf** **19 48 26.3 +0.1**
KSU1 Kansas State U 123.19 39 P **PKiKP** **19 48 26.7 +0.8**
baz=306
WMOK Wichita Mounta 124.12 45 P **PKiKP** **19 48 28.3 +0.4**
baz=301
JFWS Jewell Farm 124.48 32 P **PKPdf** **19 48 28.2 +0.1**
baz=314
JCT Junction City 125.45 50 PKIKP **PKiKP** **19 48 30.7 0.0**
JCT Junction City 125.45 50 P **PKiKP** **19 48 31.1 +0.3**
baz=298
JCT Junction City 125.45 50 PKPdf **PKiKP** **19 48 30.7 0.0**
CCM Cathedral Cave 127.15 37 PKIKP **PKiKP** **19 48 33.8 0.0**
CCM Cathedral Cave 127.15 37 P **PKiKP** **19 48 34.3 +0.5**
baz=310
CCM Cathedral Cave 127.15 37 PKPdf **PKiKP** **19 48 33.8 0.0**
U40A Yellville 127.21 40 P **PKiKP** **19 48 34.2 +0.2**
baz=307
MIAR Mount Ida 127.81 42 P **PKiKP** **19 48 36.7 +1.5**
baz=306
WCI Wyandotte Cave 129.91 34 P **PKiKP** **19 48 39.4 +0.1**
baz=315
WVT Waverly 130.47 37 PKIKP **PKPdf** **19 48 39.8 +0.1**
WVT Waverly 130.47 37 P **PKiKP** **19 48 40.5 0.0**
baz=312
WVT Waverly 130.47 37 **PKPdf** **19 48 39.8 +0.1**
KIC Kosan Boka 130.54 280 ePKIKP **PKiKP** **19 48 42.1 +0.8**
comp=Z,18nm,0.9s
DBIC Dimbokro 130.61 280 PKP **PKiKP** **19 48 42.3 +0.9**
comp=Z,7.2nm,0.8s,baz=58,slow=2.6,SNR=7.1
TIC Toumodi 130.77 280 ePKIKP **PKiKP** **19 48 42.6 +0.8**
LIC Lamto 130.84 280 ePKIKP **PKiKP** **19 48 42.7 +0.8**
comp=Z,30nm,0.9s
R53A Hurricane 132.13 30 P **PKiKP** **19 48 44.3 +0.4**
baz=320
Q55A Buckhannon 132.53 28 P **PKiKP** **19 48 45.0 +0.3**
baz=323
S53A Williamson 132.54 31 P **PKiKP** **19 48 45.2 +0.5**
baz=320
TZTN Tazewell 132.63 33 P **PKiKP** **19 48 45.6 +0.7**
baz=317
P56A Dayton Farm, R 132.69 27 P **PKiKP** **19 48 45.8 +0.9**
baz=324
T54A Tazewell 133.30 31 P **PKiKP** **19 48 46.8 +0.5**
baz=320
KMSC Kings Mountain 134.88 33 P **PKiKP** **19 48 49.5 0.0**
baz=319
X55A Gracelyn & Ava 135.22 33 P **PKiKP** **19 48 51.4 +1.2**
baz=318
X56A White Oak 135.53 33 P **PKiKP** **19 48 51.3 +0.5**
baz=319
V59A Middlesex 135.98 29 P **PKiKP** **19 48 52.3 +0.7**
baz=323
V60A Jim Taylor Roa 136.45 28 P **PKiKP** **19 48 53.5 +0.9**
baz=324
PLCA Paso Flores 138.45 160 PKP **PKiKP** **19 48 56.0 -0.7**
comp=Z,3.8nm,0.7s,baz=190,slow=4.7,SNR=6.7
BO02 Sierra Bellavi 143.61 156 **PKPdf** **19 49 03.1 -0.9**
PEL Peldehue 145.07 154 PKIKP **PKPdf** **19 49 06.5 -0.1**
PEL Peldehue 145.07 154 **PKPdf** **19 49 06.5 -0.1**
CO02 Combarbal 146.57 152 **PKPbc** **19 49 10.4 -0.4**
LCO Las Campanas 148.53 150 PKIKP **PKPdf** **19 49 13.4 +0.6**
LCO 19 49 17.3
LCO Las Campanas 148.53 150 PKPdf **PKPdf** **19 49 13.4 +0.6**
LCO **PKiKP** **19 49 17.3 -0.7**
AC05 El Transito 148.89 151 **PKiKP** **19 49 17.9 -0.6**
PLTB Pedras Altas 150.34 180 eP **PKPbc** **19 49 18.6 -2.0**
PB14 IPOC Station P 152.21 146 **PKiKP** **19 49 26.1 +0.3**
ITQB Itaqui 152.28 174 eP **PKPdf** **19 49 21.5 +3.3**
CPUP Villa Florida 155.49 172 PKPbc PKPbc 19 49 33.0
comp=Z,4.4nm,0.8s,baz=161,slow=1.5,SNR=9.6
CPUP PKPab **PKPab** **19 49 49.3 +0.8**
comp=Z,6.4nm,0.9s,baz=198,slow=6.9,SNR=8.7
CPUP Villa Florida 155.49 172 PKIKP **PKPdf** **19 49 22.4 -0.5**
CPUP Villa Florida 155.49 172 PKPdf **PKPdf** **19 49 22.4 -0.5**
CPUP PKPab **PKPab** **19 49 49.3 +0.8**
LPAZ La Paz 159.80 136 PKP **PKPdf** **19 49 30.4 +1.2**
comp=Z,2.2nm,0.7s,baz=233,slow=1.7,SNR=9.0
LPAZ PKPab **PKPab** **19 50 07.7 -0.5**
comp=Z,3.2nm,1.0s,baz=233,slow=5.1,SNR=1.8
LPAZ La Paz 159.80 136 eP **PKPdf** **19 49 30.6 +1.4**

PRU 28 19:33:15.9±0.0, 51.43N×16.20E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHVC	**Chvalec**	**0.85**	**186**	ePG	Pg	19 33 32.4	+0.3
CHVC				eSG	Sg	19 33 43.3	+0.2
OSTC	**Ostas**	**0.88**	**179**	ePG	Pg	19 33 32.5	-0.1
OSTC				eSG	Sg	19 33 44.2	+0.2
UPC	**Upice**	**0.93**	**187**	ePG	Pg	19 33 33.0	-0.7
UPC				eSG	Sg	19 33 46.2	+0.4
DPC	**Dobruska-Polom**	**1.08**	**176**	eSG	Sg	19 33 49.9	-0.8
PVCC	**Panska Ves**	**1.37**	**229**	ePG	Pg	19 33 41.4	-0.7
PVCC				eSG	Sg	19 33 59.5	-0.4
	comp=Z,7.4nm,0.2s						
KRLC	**Kraliky**	**1.41**	**165**	ePG	Pn	19 33 42.0	-0.8
KRLC				eSG	Sg	19 34 00.2	-0.8
BRG	**Berggiesshubel**	**1.53**	**249**	SG	Sg	19 34 03.0	-1.9
	2.8nm,0.3s						

NDI 28 19:33:33.3±2.7, 27.23N×90.30E, h8km±17km, ML3.0, 2C, Bhutan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTK	**Tadong**	**1.52**	**274**	eP	Pn	19 34 01.1	+0.2
GTK	**Tadong**	**1.52**	**274**	eS	Sg	19 34 21.8	-0.2

GUWA	**GUWAHATI**	**1.62**	**129**⇑	*e*P	Pn	19 34 01.3	-0.8
GUWA	**GUWAHATI**	**1.62**	**129**	*e*S	Sn	19 34 21.9	-1.3
SHL	**Shillong**	**2.18**	**139**	*e*P	Pn	19 34 10.0	-0.1
SHL	**Shillong**	**2.18**	**139**	*e*S	Sn	19 34 37.8	+0.4
TEZP	**TEZPUR**	**2.31**	**105**	*e*P	Pn	19 34 12.3	+0.6
TEZP	**TEZPUR**	**2.31**	**105**	*e*S	Sn	19 34 41.9	+1.5
KOHI	**KOHIMA**	**3.73**	**113**	*e*S	Sn	19 35 15.6	+0.1
KOHI	**KOHIMA**	**3.73**	**113**⇑	*e*P	Pn	19 34 31.3	-0.1
MOKO	**MOKOCHONG**	**3.88**	**103**	*e*P	Pn	19 34 33.3	-0.1
SAIH	**SAIHA**	**5.32**	**152**	*e*P	Pn	19 34 53.0	-0.2
SAIH	**SAIHA**	**5.32**	**152**	*e*S	Sn	19 35 52.2	-2.4

IDC 28 19:37:27.9±6.6, 28°.94S×177°.75W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/31, mbtmp3.4/2, Error ellipse: s-maj=389.6km s-min=90.6km az=165.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.42**	**265**	P	P	19 45 31.7	-1.0
	0.2nm,0.6s,baz=99,slow=8.2,SNR=2.0						
WRA	**Warramunga Arr**	**44.28**	**271**	P	P	19 45 40.3	+0.7
	0.4nm,0.4s,baz=109,slow=8.0,SNR=3.2						
FINES	**FINESS Array B**	**143.85**	**341**	PKP	PKPdf	19 57 03.9	-0.6
	1.6nm,0.8s,baz=60,slow=4.6,SNR=4.0						

*IDC **28** 19:39:34.3±3.6, 5°.66N×61°.06E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.4/61, mbtmp3.6/6, Error ellipse: s-maj=99.1km s-min=33.2km az=77.0*
*NEIC **28** 19:39:36.5±1.0, 5°.6N±0°.2×61°.1E±0°.1, h10km±2km, mb4.2/5, Error ellipse: s-maj=32.2km s-min=15.4km az=207.0*
ISC 28 19:39:36.4±1.8, 5°.6N±0°.3×61°.2E±0°.2, h10km, n14, σ0°.58/13, mb3.6/7, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAYN	**Ar Rayn**	**23.31**	**321**	P	**P**	**19 44 45.4**	**+0.6**
RAYN				IAmb	IAmb	19 44 52.7	
	comp=Z,4.1nm,0.8s						
BTK	**Batken**	**35.37**	**13**	P	**P**	**19 46 33.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**39.00**	**68**	P	**P**	**19 47 03.4**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=264,slow=9.0,SNR=6.0						
CMAR	**Chiang Mai Arr**	**39.00**	**68**	P	**P**	**19 47 03.1**	**-0.4**
KARP	**Karpathos**	**43.17**	**318**		**S**	**19 54 03.6**	**-0.7**
ABKAR	**Akbulak array**	**43.48**	**359**	P	**P**	**19 47 39.9**	**+0.1**
ABKAR	**Akbulak array**	**43.48**	**359**	P	**P**	**19 47 40.1**	**+0.2**
ABKAR				IAmb	IAmb	19 47 47.9	
	comp=Z,2.7nm,1.0s						
MKAR	**Makanchi Array**	**44.88**	**21**	P	**P**	**19 47 50.3**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=201,slow=8.7,SNR=1.7						
ZALV	**Zalesovo Beam**	**51.87**	**18**	P	**P**	**19 48 44.3**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=224,slow=8.1,SNR=2.7						
BURAR	**Bucovina Array**	**51.90**	**330**	P	**P**	**19 48 45.2**	**-0.2**
SONM	**Songino Array**	**57.04**	**35**	P	**P**	**19 49 22.7**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=232,slow=7.1,SNR=2.5						
WRA	**Warramunga Arr**	**76.25**	**112**	P	**P**	**19 51 26.1**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=283,slow=5.1,SNR=5.8						
WRA	**Warramunga Arr**	**76.25**	**112**	IAmb	IAmb	19 51 33.7	
	comp=Z,0.2nm,1.0s						
ASAR	**Alice Springs**	**76.61**	**116**	P	**P**	**19 51 28.0**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=292,slow=5.5,SNR=8.0						

IDC 28 19:40:03.1±2.5, 2°.05N×126°.52E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/47, mbtmp3.3/3, Error ellipse: s-maj=223.8km s-min=28.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.16**	**161**	P	P	19 45 10.6	-0.8
	0.8nm,0.8s,baz=340,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**26.55**	**165**	P	P	19 45 43.6	+0.8
	0.4nm,0.7s,baz=344,slow=11,SNR=5.3						
MKAR	**Makanchi Array**	**58.81**	**326**	P	P	19 50 03.3	-0.2
	0.2nm,0.7s,baz=114,slow=6.2,SNR=1.5						

*IDC **28** 19:43:00.4±1.8, 1°.80N×127°.10E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/44, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=113.4km s-min=25.3km az=69.0*
*NEIC **28** 19:43:06.9±1.9, 1°.78N±0°.09×126°.98E±0°.09, h53km±9km, mb4.0/8, Error ellipse: s-maj=15.7km s-min=10.9km az=47.0*
ISC 28 19:43:05.9±1.0, 1°.83N±0°.10×127°.0E±0°.1, h35km, n13, σ1§46/15, mb3.9/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.13**	**159**		**Pn**	**19 43 27.2**	**+2.0**
TNTI				Sn	**Sn**	**19 43 40.7**	**+1.2**
LUWI	**Luwuk**	**5.07**	**236**	Pn	**Pn**	**19 44 21.0**	**+1.4**
KNRA	**Kununurra**	**17.49**	**174**	Pn	**Pn**	**19 47 05.4**	**-1.8**
KNRA				IAmb	IAmb	19 47 19.5	
	comp=Z,14nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.85**	**184**	P	**P**	**19 47 32.3**	**-1.7**
	comp=Z,0.0nm,0.3s,baz=17,slow=14,SNR=1.9						
WB0	**Warramunga Arr**	**22.67**	**162**	P	**P**	**19 48 03.1**	**-1.4**
WB0				IAmb	IAmb	19 48 04.8	
	comp=Z,3.2nm,0.5s						
WRAB	**Tennant Creek**	**22.81**	**162**	P	**P**	**19 48 04.7**	**-1.2**
WRAB				IAmb	IAmb	19 48 06.7	
	comp=Z,9.3nm,1.4s						
WRA	**Warramunga Arr**	**22.82**	**162**	P	**P**	**19 48 04.3**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=342,slow=11,SNR=17						
WB2	**Warramunga Arr**	**22.82**	**162**	P	**P**	**19 48 05.0**	**-1.1**
WR0	**Warramunga Arr**	**22.90**	**161**	P	**P**	**19 48 05.2**	**-1.7**
WR0				IAmb	IAmb	19 48 23.5	
	comp=Z,8.2nm,1.5s						
AS31	**Alice Springs**	**26.23**	**165**	P	**P**	**19 48 37.1**	**-0.8**
ASAR	**Alice Springs**	**26.23**	**165**	P	**P**	**19 48 36.7**	**-1.1**
	comp=Z,1.2nm,0.4s,baz=343,slow=11,SNR=23						
ASAR				PcP	**PcP**	**19 52 04.3**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=345,slow=2.6,SNR=1.4						
JCJ	**Chichijima**	**29.05**	**29**	P	**P**	**19 49 03.1**	**+0.1**
MKAR	**Makanchi Array**	**59.24**	**326**	P	**P**	**19 53 04.3**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=124,slow=6.8,SNR=4.0						

*STR **28** 19:43:52.8±0.7, 46°N±2°×±°, h0km±4km, MLv3.2/6, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*ROM **28** 19:43:52.2±0.1, 45°.527N±0°.004×7°.63E±0°.01, h12km, ML3.0/24, Error ellipse: s-maj=0.7km s-min=0.4km az=293.0*
*GEN **28** 19:43:52.7, 45°.55N×7°.63E, h9km±1km, MI3.0*
*LDG **28** 19:43:53.0±0.1, 45°.55N×7°.66E, h9km, Md3.2/2, MI3.3/43, Error ellipse: s-maj=1.6km s-min=1.1km az=92.0*
*PRU **28** 19:43:53.6±0.0, 45°.47N×7°.04E, h0km*
*BGR **28** 19:43:57.4±0.6, 45°.64N×7°.79E, h10km, ML3.1/8, Error ellipse: s-maj=10.0km s-min=5.6km az=101.0*
ISC 28 19:43:52.5±0.7, 45°.53N±0°.01×7°.61E±0°.01, h13km±4km, n164, σ1§93/265, 7C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CIRO	**Champorcher**	**0.08**	**336**	P	**Pg**	**19 43 55.4**	**-0.2**
CIRO				S	**Sg**	**19 43 56.8**	**-1.0**
CIRO	**Champorcher**	**0.08**	**336**	⇑P	**Pg**	**19 43 55.4**	**-0.2**
CIRO				S	**Sg**	**19 43 56.8**	**-1.0**
CIRO				AML	AML		
	comp=E,63050μm,0.3s						
CIRO				AML	AML		
	comp=N,50700μm,0.4s						
CIRO				AML	AML		
	comp=N,50700μm,0.4s						
CIRO				AML	AML		
	comp=E,63050μm,0.3s						
TRAV	**Traversella**	**0.10**	**100**	P	**Pg**	**19 43 55.4**	**-0.1**
TRAV				S	**Sg**	**19 43 56.9**	**-0.8**
TRAV	**Traversella**	**0.10**	**100**	⇓P	**Pg**	**19 43 55.4**	**-0.1**
TRAV				S	**Sg**	**19 43 56.9**	**-0.8**
TRAV				AML	AML		
	comp=N,59250μm,0.3s						
TRAV				AML	AML		
	comp=E,40700μm,0.2s						
TRAV				AML	AML		
	comp=E,40700μm,0.2s						
TRAV				AML	AML		
	comp=N,59250μm,0.3s						
LSD	**Lago del Serru**	**0.34**	**259**	P	**Pg**	**19 44 00.0**	**+0.5**
LSD				S	**Sg**	**19 44 04.6**	**+0.2**
LSD	**Lago del Serru**	**0.34**	**259**	⇓P	**Pg**	**19 44 00.0**	**+0.5**
LSD				S	**Sg**	**19 44 04.5**	**+0.2**
LSD				AML	AML		
	comp=N,8570μm,0.1s						
LSD				AML	AML		
	comp=E,5145μm,0.3s						
SATI	**Passo dei Sala**	**0.39**	**27**	P	**Pg**	**19 44 00.1**	**-0.3**
SATI				S	**Sg**	**19 44 05.8**	**0.0**
SATI	**Passo dei Sala**	**0.39**	**27**	⇑P	**Pg**	**19 44 00.1**	**-0.3**
SATI				S	**Sg**	**19 44 05.8**	**0.0**
SATI				AML	AML		
	comp=N,1445μm,0.2s						
SATI				AML	AML		
	comp=E,1995μm,0.3s						
RSP	**Reno Superiore**	**0.45**	**213**	P	**Pg**	**19 44 01.6**	**+0.1**
RSP				S	**Sg**	**19 44 08.1**	**+0.5**
RSP	**Reno Superiore**	**0.45**	**213**	⇑P	**Pg**	**19 44 01.6**	**+0.1**
RSP				S	**Sg**	**19 44 08.1**	**+0.5**
RSP				AML	AML		
	comp=N,3785μm,0.9s						
RSP				AML	AML		
	comp=N,4085μm,0.9s						
RSP				AML	AML		
	comp=E,4325μm,0.2s						
RSP				AML	AML		
	comp=E,4115μm,0.2s						
MRGE	**Morge**	**0.46**	**302**	⇓P	**Pg**	**19 44 01.9**	**+0.4**
MRGE				S	**Sg**	**19 44 07.5**	**-0.2**
MRGE				AML	AML		
	comp=E,2300μm,0.6s						
MRGE				AML	AML		
	comp=N,2360μm,1.2s						
MONC	**Moncucco Torin**	**0.51**	**154**	P	**Pn**	**19 44 04.4**	**-1.0**
MONC				AML	AML		
	comp=E,4995μm,0.8s						
MONC				AML	AML		
	comp=N,4195μm,1.0s						
DIX	**Grande Dixence**	**0.57**	**345**	⇑P	**Pg**	**19 44 03.4**	**-0.3**
DIX				S	**Sg**	**19 44 10.4**	**-0.9**
DIX				AML	AML		
	comp=N,1575μm,0.3s						
DIX				AML	AML		
	comp=E,1325μm,0.7s						
MMK	**Mattmark**	**0.58**	**25**	⇑P	**Pg**	**19 44 03.5**	**-0.3**
MMK				S	**Sg**	**19 44 10.5**	**-1.0**
MMK				AML	AML		
	comp=E,1020μm,0.3s						
MMK				AML	AML		
	comp=E,1020μm,0.3s						
MMK				AML	AML		
	comp=N,1230μm,0.3s						
MMK				AML	AML		
	comp=N,1230μm,0.3s						
LPG	**La Plagne**	**0.61**	**267**	*e*Pg	**Pb**	**19 44 04.8**	**-0.3**
LPG				*e*Sg	**Sg**	**19 44 12.9**	**+0.4**
	comp=N,796nm,0.3s						
LPL	**La Plagne**	**0.62**	**269**	*e*Pg	**Pg**	**19 44 04.9**	**+0.3**
LPL				*e*Sg	**Sg**	**19 44 13.1**	**+0.2**
	comp=N,688nm,0.4s						
RSL	**Roselend**	**0.71**	**283**	Pg	**Pb**	**19 44 06.7**	**-0.1**
RSL				Sg	**Sb**	**19 44 16.7**	**+0.1**
OGMO	**Fort Saint-Gob**	**0.73**	**244**	Pg	**Pb**	**19 44 06.9**	**-0.2**
OGMO				Sg	**Sg**	**19 44 16.6**	**+0.4**
BNI	**Bardonecchia**	**0.81**	**235**	P	**Pb**	**19 44 08.6**	**0.0**
BNI				S	**Sg**	**19 44 18.5**	**-0.4**
BNI				AML	AML		
	comp=E,885μm,1.0s						
BNI				AML	AML		
	comp=N,2130μm,0.6s						
BNI				AML	AML		
	comp=N,1715μm,0.6s						
BNI				AML	AML		
	comp=E,886μm,1.0s						
BNI				AML	AML		
	comp=E,1070μm,1.0s						
VARE	**Varese**	**0.88**	**67**	P	**Pg**	**19 44 09.1**	**-0.4**
VARE				S	**Sg**	**19 44 20.7**	**-0.3**
VARE				AML	AML		
	comp=E,628μm,0.4s						
VARE				AML	AML		
	comp=N,902μm,0.4s						
MBDF	**Montbardon**	**1.00**	**217**	*e*Pg	**Pb**	**19 44 11.7**	**0.0**
MBDF				*e*Sg	**Sb**	**19 44 25.3**	**+0.5**
	comp=N,274nm,0.2s						
MBDF				*e*Sn	**Sn**	**19 44 27.4**	**+1.1**
	comp=N,260nm,0.2s						
MUGIO	**Muggio**	**1.07**	**68**	P	**Pg**	**19 44 12.4**	**-0.8**
MUGIO				AML	AML		
	comp=N,666μm,1.2s						
MUGIO				AML	AML		
	comp=E,488μm,0.2s						
PZZ	**Stroppo**	**1.08**	**199**	⇑P	**Pg**	**19 44 11.2**	**-2.1**
PZZ				AML	AML		
	comp=N,828μm,0.3s						
PZZ				AML	AML		
	comp=E,910μm,0.6s						
GDM	**Grand'Maison**	**1.10**	**253**	Pg	**Pn**	**19 44 14.2**	**+0.4**
GDM				Sg	**Sb**	**19 44 28.4**	**+0.6**
FUSIO	**Fusio**	**1.18**	**38**	P	**Pb**	**19 44 13.6**	**-1.2**
FUSIO				AML	AML		
	comp=N,284μm,1.1s						
FUSIO				AML	AML		
	comp=N,284μm,1.1s						
FUSIO				AML	AML		
	comp=E,356μm,0.4s						
SURF	**Saint Ours**	**1.19**	**209**	P	**Pb**	**19 44 14.1**	**-0.9**
SURF				Pg	**Pg**	**19 44 15.4**	**0.0**
SURF				Sg	**Sn**	**19 44 31.2**	**0.0**
GBOS	**Grotte di Boss**	**1.30**	**173**	⇑P	**Pn**	**19 44 15.7**	**-0.6**
GBOS				S	**Sb**	**19 44 31.8**	**-1.5**
GBOS				AML	AML		
	comp=E,202μm,1.5s						
GBOS				AML	AML		
	comp=N,195μm,0.8s						
STV	**Sant Anna di V**	**1.30**	**189**	P	**Pn**	**19 44 14.4**	**-2.0**
QLNO	**Quiliano**	**1.31**	**156**	P	**Pn**	**19 44 16.6**	**+0.1**
QLNO				AML	AML		
	comp=E,426μm,1.4s						
QLNO				AML	AML		
	comp=E,426μm,1.4s						
QLNO				AML	AML		
	comp=N,225μm,0.5s						
OGAG	**Argentiere**	**1.32**	**216**	Pg	**Pn**	**19 44 13.2**	**-3.4**
OGAG				Sg	**Sb**	**19 44 27.5**	**-6.4**
GRN	**Grenoble**	**1.35**	**258**	Pg	**Pg**	**19 44 19.1**	**+0.7**
GRN				Sg	**Sg**	**19 44 36.8**	**+0.9**
OGSM	**Saint Maurice**	**1.35**	**274**	Pg	**Pg**	**19 44 18.8**	**+0.4**
OGSM				Sg	**Sg**	**19 44 36.9**	**+1.0**
ORIF	**Oris-en-Rattie**	**1.37**	**244**	Pg	**Pg**	**19 44 19.3**	**+0.5**
ORIF				Sg	**Sg**	**19 44 36.5**	**-0.1**
ORIF	**Oris-en-Rattie**	**1.37**	**244**	*e*Pg	**Pg**	**19 44 19.2**	**+0.5**
ORIF				*e*Sn	**Sb**	**19 44 35.0**	**-0.4**
	comp=N,268nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.37**	**244**	P	**Pg**	**19 44 19.0**	**+0.2**
ORIF				AML	AML		
	comp=N,725μm,0.4s						
ORIF				AML	AML		
	comp=E,500μm,0.5s						
FINB	**Finale Ligure**	**1.44**	**159**	P	**Pn**	**19 44 18.1**	**-0.1**
FINB				AML	AML		
	comp=E,268μm,0.3s						
FINB				AML	AML		
	comp=N,258μm,0.4s						
RORO	**Rocca Rossa**	**1.45**	**167**	P	**Pn**	**19 44 18.1**	**-0.2**
RORO				AML	AML		
	comp=N,158μm,1.3s						
RORO				AML	AML		
	comp=N,157μm,1.3s						
RORO				AML	AML		
	comp=E,176μm,1.0s						
BNALP	**Bannalp**	**1.46**	**22**	P	**Pb**	**19 44 19.7**	**+0.2**
BNALP				AML	AML		
	comp=N,275μm,1.4s						
BNALP				AML	AML		
	comp=N,276μm,1.4s						
BNALP				AML	AML		
	comp=E,258μm,1.4s						
MDI	**Monti di Nese**	**1.49**	**80**	P	**Pn**	**19 44 19.5**	**+0.4**
MDI				AML	AML		
	comp=E,678μm,0.8s						
MDI				AML	AML		
	comp=E,688μm,1.2s						
MDI				AML	AML		
	comp=N,892μm,0.7s						
MDI				AML	AML		
	comp=N,872μm,0.7s						
MGRO	**Montegrosso**	**1.49**	**175**	P	**Pn**	**19 44 18.5**	**-0.6**
GORR	**Gorreto**	**1.50**	**127**	P	**Pg**	**19 44 20.9**	**-0.5**
GORR				AML	AML		
	comp=E,644μm,1.1s						
GORR				AML	AML		
	comp=E,643μm,1.1s						
GORR				AML	AML		
	comp=N,1315μm,0.4s						
CABF	**La Chapelle**	**1.52**	**316**	*e*P	**Pg**	**19 44 21.7**	**+0.1**
CABF				*e*Sn	**Sn**	**19 44 38.9**	**-0.1**
CABF				*e*Sg	**Sg**	**19 44 41.4**	**+0.1**
	comp=N,146nm,0.5s						
OG35	**Corcelles**	**1.52**	**291**	Pn	**Pg**	**19 44 22.3**	**+0.6**
OG35				Sn	**Sg**	**19 44 42.0**	**+0.7**
TUE	**Stuetta**	**1.53**	**51**	P	**Pn**	**19 44 19.2**	**-0.5**
TUE				AML	AML		
	comp=N,227μm,1.5s						
TUE				AML	AML		
	comp=E,245μm,0.3s						
TUE				AML	AML		
	comp=E,199μm,0.3s						
TUE				AML	AML		
	comp=N,314μm,1.5s						
SAOF	**Saorge**	**1.54**	**182**	P	**Pn**	**19 44 18.7**	**-1.0**
SAOF	**Saorge**	**1.54**	**182**	AML	AML		
	comp=N,183μm,1.3s						
SAOF				AML	AML		
	comp=E,193μm,0.8s						
SBF	**Sospel**	**1.67**	**184**	*e*Pn	**Pn**	**19 44 20.6**	**-0.9**
SBF	**Sospel**	**1.67**	**184**	*e*Pg	**Pg**	**19 44 24.1**	**-0.4**
SBF				*e*Sn	**Sn**	**19 44 42.8**	**0.0**
	comp=E,64nm,0.3s						
SBF				*e*Sg	**Sg**	**19 44 46.7**	**+0.5**
	comp=E,67nm,0.2s						
OGDI	**Digne**	**1.70**	**214**	Pn	**Pg**	**19 44 25.0**	**-0.1**
BALST	**Balsthal**	**1.81**	**2**	*e*Pn	**Pb**	**19 44 26.1**	**+0.6**
BALST				*e*Sg	**Sg**	**19 44 50.9**	**+0.2**
CHMF	**Charmoille**	**1.84**	**339**	Pn	**Pb**	**19 44 26.2**	**+0.1**
PLONS	**Plons/SG**	**1.95**	**38**	*e*Pn	**Pn**	**19 44 26.7**	**+1.3**
PLONS				*e*Sg	**Sg**	**19 44 54.0**	**-1.3**
SULZ	**Cheisacher**	**2.03**	**10**	*e*Pn	**Pb**	**19 44 28.9**	**-0.3**
SULZ				*e*Sg	**Sg**	**19 44 58.4**	**+0.8**
FRF	**La Foret Royal**	**2.09**	**200**	*e*Pn	**Pn**	**19 44 28.2**	**+1.1**
FRF	**La Foret Royal**	**2.09**	**200**	*e*Pg	**Pg**	**19 44 32.5**	**0.0**
FRF				*e*Sn	**Sn**	**19 44 52.8**	**-0.1**
	comp=E,79nm,0.3s						
FRF				*e*Sg	**Sg**	**19 44 59.7**	**+0.2**
	comp=E,128nm,0.4s						
WILA	**Wila**	**2.09**	**25**	*e*Pn	**Pb**	**19 44 31.1**	**+0.9**
WILA				*e*Sg	**Sg**	**19 45 00.0**	**+0.4**
MABI	**Malga Bissina**	**2.10**	**74**	P	**Pn**	**19 44 27.4**	**-0.1**
MABI				AML	AML		
	comp=N,148μm,1.2s						
MABI				AML	AML		
	comp=E,154μm,0.4s						
SMRF	**Simiane la Rot**	**2.13**	**224**	*e*Pn	**Pn**	**19 44 29.0**	**+1.3**
SMRF	**Simiane la Rot**	**2.13**	**224**	*e*Pg	**Pg**	**19 44 33.9**	**+0.7**
SMRF				*e*Sg	**Sg**	**19 45 01.5**	**+0.7**
	comp=E,37nm,0.3s						
MAGA	**Magasa**	**2.13**	**82**	P	**Pn**	**19 44 27.6**	**-0.2**
VIVF	**Saint-Julien-l**	**2.19**	**253**	*e*P	**Pb**	**19 44 31.4**	**-0.5**
VIVF	**Saint-Julien-l**	**2.19**	**253**	*e*Pg	**Pg**	**19 44 35.0**	**+0.6**
VIVF				*e*Sn	**Sn**	**19 44 54.2**	**-1.2**
VIVF				*e*Sg	**Sg**	**19 45 03.2**	**+0.5**
	comp=E,75nm,0.4s						
METMA	**Mettma DE**	**2.23**	**11**	*e*Pn	**Pb**	**19 44 31.1**	**-1.5**
METMA				*e*Sg	**Sg**	**19 45 03.5**	**-0.6**
SLE	**Schleitheim**	**2.32**	**15**	*e*Pn	**Pb**	**19 44 32.8**	**-1.3**
SLE				*e*Sg	**Sg**	**19 45 06.0**	**-0.9**
LMR	**La Mourre**	**2.33**	**200**	*e*Pn	**Pn**	**19 44 31.0**	**+0.5**
LMR	**La Mourre**	**2.33**	**200**	*e*P	**Pb**	**19 44 33.2**	**-1.1**
LMR	**La Mourre**	**2.33**	**200**	*e*Pg	**Pg**	**19 44 36.7**	**-0.5**
LMR				*e*Sn	**Sn**	**19 44 58.8**	**-0.2**
	comp=E,10nm,0.2s						
LMR				*e*Sg	**Sg**	**19 45 07.6**	**+0.2**
	comp=E,36nm,0.3s						
HINF	**Hinteralfeld**	**2.35**	**347**	*e*P	**Pb**	**19 44 32.9**	**-1.7**
HINF	**Hinteralfeld**	**2.35**	**347**	*e*Pg	**Pb**	**19 44 35.4**	**+0.8**
HINF				*e*Sn	**Sn**	**19 44 58.4**	**-1.1**
HINF				*e*Sg	**Sg**	**19 45 06.4**	**-1.5**
	comp=E,46nm,0.3s						
DAVA	**Damuels**	**2.36**	**41**	*e*Pn	**Pb**	**19 44 33.7**	**-1.1**
	comp=E,4.3nm,0.2s,SNR=10						
DAVA				*e*Sn	**Sb**	**19 45 05.1**	**+1.3**
	comp=E,19nm,0.3s						
BERGE	**Lenzkirch (DE)**	**2.38**	**9**	*e*Pn	**Pn**	**19 44 33.2**	**+2.0**
BERGE				*e*Sg	**Sg**	**19 45 07.7**	**-1.1**
KIZ	**Kirchzarten**	**2.44**	**5**	Pn	**Pn**	**19 44 33.8**	**+1.8**
FETA	**Feichten**	**2.63**	**54**	*e*Pn	**Pb**	**19 44 38.2**	**-1.2**
	comp=E,1.2nm,0.2s						
FETA				*e*Sn	**Sn**	**19 45 08.6**	**+2.1**
	comp=E,2.3nm,0.3s						
HAU	**Haudompre**	**2.63**	**341**	*e*P	**Pn**	**19 44 36.9**	**+2.3**
HAU	**Haudompre**	**2.63**	**341**	*e*Pg	**Pb**	**19 44 40.9**	**+1.5**
HAU				*e*Sn	**Sn**	**19 45 05.6**	**-0.7**
HAU				*e*Sg	**Sg**	**19 45 15.2**	**-1.6**
	comp=E,58nm,0.3s						
ECH	**Echery**	**2.71**	**354**	Pn	**Pn**	**19 44 37.7**	**+2.0**
ECH	**Echery**	**2.71**	**354**	*e*Pn	**Pn**	**19 44 37.7**	**+2.0**
ECH				*e*Sn	**Sn**	**19 45 08.3**	**+0.1**
UBR	**Ueberruh**	**2.75**	**38**	*e*Pn	**Pn**	**19 44 38.0**	**+1.6**
BFO	**Black Forest**	**2.84**	**10**	*e*Pn	**Pn**	**19 44 39.2**	**+1.7**
BFO				*e*Sn	**Sn**	**19 45 12.5**	**+0.8**
SMF	**Signal de Mont**	**2.85**	**294**	*e*P	**Pn**	**19 44 40.6**	**+2.9**
SMF	**Signal de Mont**	**2.85**	**294**	*e*Pg	**Pg**	**19 44 46.5**	**-0.6**
SMF				*e*Sn	**Sn**	**19 45 11.0**	**-0.9**
SMF				*e*Sg	**Sg**	**19 45 22.8**	**-1.3**
	comp=E,31nm,0.2s						
WLS	**Welschbruch**	**2.89**	**357**	Pn	**Pn**	**19 44 40.4**	**+2.2**
CDF	**Champ du Feu**	**2.89**	**356**	*e*P	**Pn**	**19 44 40.2**	**+1.9**
CDF	**Champ du Feu**	**2.89**	**356**	*e*Pg	**Pg**	**19 44 46.7**	**-1.2**
CDF				*e*Sn	**Sn**	**19 45 10.3**	**-2.7**
CDF				*e*Sg	**Sg**	**19 45 22.6**	**-2.8**
	comp=E,19nm,0.3s						
ASEAF	**Site Antares,**	**2.93**	**201**	Pn	**Pn**	**19 44 40.2**	**+1.9**
RETA	**Reutte**	**2.93**	**47**	*e*Pn	**Pn**	**19 44 39.7**	**+0.9**
	comp=E,0.4nm,0.2s						
OPP	**Oppenau**	**3.00**	**7**	Pn	**Pn**	**19 44 41.4**	**+1.7**
SQTA	**Sankt Quirin**	**3.01**	**55**	*e*Pn	**Pn**	**19 44 42.4**	**+2.5**
	comp=E,1.1nm,0.3s						
SQTA				*e*Sn	**Sb**	**19 45 24.6**	**+1.9**
	comp=E,13nm,0.5s						
MOTA	**Moosalm**	**3.02**	**52**	*e*Pn	**Pn**	**19 44 41.9**	**+1.8**
	comp=E,0.5nm,0.2s						
MOTA				*e*Sn	**Sn**	**19 45 17.7**	**+1.5**
	comp=E,1.9nm,0.2s						
LASF	**Ste Croix**	**3.04**	**243**	*e*Pn	**Pn**	**19

PYM	Petit Puy Mans	3.24	276	Pn		Pn	19 44 45.9	+2.9
WTTA	Wattenberg	3.28	57	ePn		Pn	19 44 45.9	+2.2
	comp=E,0.8nm,0.3s							
WTTA				eSn		Sn	19 45 21.8	-0.8
	comp=E,1.6nm,0.2s							
WATA	Walderalm	3.28	55	ePn		Pn	19 44 45.6	+1.9
	comp=E,0.5nm,0.1s							
WATA				eSn		Sn	19 45 24.1	+1.5
	comp=E,0.6nm,0.1s							
PAGF	Fort de Pagny	3.29	338	eP		Pn	19 44 46.4	+2.7
	baz=159							
PAGF	Fort de Pagny	3.29	338	ePg		Pg	19 44 53.2	-2.3
	baz=162							
PAGF				eSn		Sn	19 45 21.1	-1.6
	baz=152							
PAGF				eSg		Sg	19 45 35.9	-2.2
	comp=E,19nm,0.4s,baz=151							
MEZF	Maizieres J'vi	3.45	330	eP		Pn	19 44 48.1	+2.2
	baz=150							
MEZF	Maizieres J'vi	3.45	330	ePg		Pg	19 44 56.2	-2.4
	baz=150							
MEZF				eSn		Sn	19 45 25.0	-1.6
	baz=148							
MEZF				eSg		Sg	19 45 41.4	-1.9
	baz=151							
BGF	Bois d'Agland	3.48	289	eP		Pn	19 44 48.6	+2.4
BGF	Bois d'Agland	3.48	289	ePg		Pg	19 44 57.5	-1.5
BGF				eSn		Sn	19 45 26.2	-1.0
	comp=E,36nm,0.3s							
BGF				eSg		Sg	19 45 43.0	-1.0
	comp=E,45nm,0.4s							
ABTA	Abfaltersbach	3.62	69	ePn		Pn	19 44 48.1	-0.2
	comp=E,0.4nm,0.2s							
ABTA				eSn		Sn	19 45 31.8	+1.0
	comp=E,2.0nm,0.4s							
TCF	Toulx Ste Croi	3.85	283	ePn		Pn	19 44 52.9	+1.5
TCF	Toulx Ste Croi	3.85	283	eP		Pn	19 44 54.0	+2.6
TCF	Toulx Ste Croi	3.85	283	ePg		Pg	19 45 05.0	-1.1
TCF				eSn		Sn	19 45 35.2	-1.2
	comp=E,28nm,0.4s							
TCF				eSg		Sg	19 45 54.2	-1.8
	comp=E,16nm,0.4s							
HYF	Humbligny	3.86	299	eP		Pn	19 44 54.9	+3.5
HYF	Humbligny	3.86	299	ePg		Pg	19 45 04.5	-1.8
HYF				eSg		Sg	19 45 54.2	-2.0
CAF	Calviac	3.97	263	eP		Pn	19 44 56.2	+3.2
CAF				eSn		Sn	19 45 39.2	-0.2
CAF				eSg		Sg	19 45 58.3	-1.5
	comp=E,14nm,0.4s							
RIVT	Riveris	4.22	352	ePn		Pn	19 44 59.6	+3.2
RIVT				eSn		Sn	19 45 44.4	-1.1
KBA	Koelnbreinsper	4.26	67	ePn		Pb	19 45 06.4	-0.9
	comp=E,0.5nm,0.2s							
RJF	Les Rejaudoux	4.30	269	eP		Pn	19 45 02.7	+5.2
RJF	Les Rejaudoux	4.30	269	ePg		Pg	19 45 13.7	-1.1
MTLF	Montolieu	4.44	242	ePn		Pn	19 45 00.7	+1.2
MTLF				eSn		Sn	19 45 48.2	-2.8
	comp=E,8.2nm,0.6s							
FNEB	Nbias	4.75	238	Pn		Pn	19 45 06.7	+2.9
LFF	La Frestale	4.89	266	ePn		Pn	19 45 06.7	+1.1
LFF	La Frestale	4.89	266	eP		Pn	19 45 10.0	+4.4
LFF	La Frestale	4.89	266	ePg		Pg	19 45 23.4	-2.7
LFF				eSg		Sg	19 46 27.4	-2.0
	comp=E,11nm,0.5s							
OBKA	Obir	4.93	76	ePn		Pn	19 45 11.2	+5.0
	comp=E,0.3nm,0.2s							
GIVF	Givet	4.95	339	eP		Pn	19 45 10.9	+4.5
GIVF	Givet	4.95	339	ePg		Pb	19 45 23.0	+4.1
GIVF				eSg		Sg	19 46 27.4	-3.8
	comp=E,8.4nm,0.4s							
BAIF	Baives	5.08	334	eP		Pn	19 45 11.5	+3.3
BAIF				eSn		Sn	19 46 04.4	-2.3
BAIF				eSg		Sg	19 46 31.8	-3.7
	comp=E,6.2nm,0.4s							
MOA	Molln	5.13	61	eSn		Sn	19 46 07.8	-0.3
	comp=E,0.8nm,0.2s							
NVLJ	Novalja	5.23	98	ePn		Pn	19 45 10.7	+0.4
NVLJ				Sn		Sn	19 46 06.2	-4.3
KHC	Kasperske Hory	5.42	46	ePN		Pn	19 45 14.9	+1.9
KHC				ePG		Pb	19 45 31.0	+4.0
KHC				eSN		Sn	19 46 13.4	-1.9
KHC				ex		x	19 46 43.0	
MFF	Saint Martin d	5.51	284	Pn		Pn	19 45 17.1	+3.0
MFF	Saint Martin d	5.51	284	ePn		Pn	19 45 15.6	+1.5
MFF	Saint Martin d	5.51	284	eP		Pn	19 45 17.1	+3.0
MFF	Saint Martin d	5.51	284	ePg		Pg	19 45 35.4	-2.4
MFF				eSn		Sn	19 46 14.6	-2.6
MFF				eSg		Sg	19 46 46.1	-3.0
	comp=E,5.9nm,0.4s							
DUGI	Dugi Otok	5.52	104	Sn		Sn	19 46 14.2	-3.3
EPF	Esparros	5.79	247	eP		Pn	19 45 22.3	+4.3
MORI	Morici	6.00	103	ePn		Pn	19 45 22.4	+1.5
MORI				Sn		Sn	19 46 24.7	-4.8
ZIRJ	Zirje	6.03	105	Sn		Sn	19 46 25.6	-4.6
LDF	La Druitiere	6.11	303	ePn		Pn	19 45 23.2	+0.8
LDF	La Druitiere	6.11	303	eP		Pn	19 45 26.3	+3.9
LDF	La Druitiere	6.11	303	ePg		Pg	19 45 46.1	-3.3
LDF				eSn		Sn	19 46 29.1	-3.0
LDF				eSg		Sg	19 47 04.0	-4.4
	comp=E,5.4nm,0.5s							
FLN	La Foliniere	6.40	303	ePn		Pn	19 45 27.2	+0.9
FLN	La Foliniere	6.40	303	eP		Pn	19 45 29.5	+3.2
	baz=128							
FLN	La Foliniere	6.40	303	ePg		Pg	19 45 51.1	-3.8
FLN				eSn		Sn	19 46 35.8	-3.4
FLN				eSg		Sg	19 47 13.5	-4.2
	comp=E,5.4nm,0.4s,baz=127							
ETSF	Etsaut	6.43	249	eP		Pn	19 45 31.7	+4.8
KIJV	Kijevo	6.44	101	Sn		Sn	19 46 36.2	-4.1
GRR	Gorron	6.46	299	ePn		Pn	19 45 28.0	+0.8
GRR	Gorron	6.46	299	eP		Pn	19 45 31.3	+4.1
GRR	Gorron	6.46	299	ePg		Pg	19 45 52.7	-3.5
GRR				eSn		Sn	19 46 38.0	-2.8
GRR				eSg		Sg	19 47 16.0	-3.8
	comp=E,2.0nm,0.4s							
SJPF	Ste Jean	6.78	252	ePn		Pn	19 45 32.7	+1.0
CLL	Collm	6.80	30	ePg		Pg	19 46 03.0	+0.4
CLL				eSg		Sg	19 47 30.0	-0.6
BRG	Berggiesshubel	6.82	36	SG		Sg	19 47 33.2	+2.1
	comp=E,1.6nm,0.8s							
RICI	Ricice	7.10	103	Sn		Sn	19 46 52.5	-4.0
SGMF	Saint Gilles	7.48	295	ePn		Pn	19 45 40.7	-0.5
SGMF	Saint Gilles	7.48	295	eP		Pn	19 45 46.3	+5.1
SGMF	Saint Gilles	7.48	295	ePg		Pg	19 46 11.1	-4.5
QUIF	Quistinic	7.78	292	ePn		Pn	19 45 46.0	+0.7
QUIF				eSn		Sn	19 47 09.2	-4.0
QUIF				eSg		Sg	19 47 57.1	-5.0
	comp=E,2.3nm,0.4s							
ROSF	Rostrenen	7.96	295	ePn		Pn	19 45 47.7	-0.1
ROSF	Rostrenen	7.96	295	eP		Pn	19 45 52.8	+5.0
ROSF				eSn		Sn	19 47 13.5	-4.2
	comp=E,3.3nm,0.6s							

IDC ***28*** *19:44:10.1±0.6,5.74N×61.39E, h0km, mb4.1/21, mb1 4.2/21, mb1mx4.0/59, mbtmp4.1/21, MS4.2/27, Ms1 4.2/27, ms1mx4.1/38, Error ellipse: s-maj=16.2km s-min=14.2km az=115.0*

NEIC ***28*** *19:44:12.0±2.0,5.7N±0.1×61.4E±0.1, h10km±1km, mb4.6/21, Error ellipse: s-maj=19.6km s-min=16.2km az=215.0*

GCMT ***28*** *19:44:13.0±0.2,5.78N±0.01×61.23E±0.01, h12km, MW5.1/136, Moment Tensor Solution. s53,c60; s136,c229; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=4.67±.09; Mθθ3.11±.08; Mϕϕ1.56±.09; Mrθ3.60±.28; Mθϕ-2.14±.07; Mϕr-0.10±.31; Best double couple: M=5.85200×10^16 NP1:ϕs140.00000°, δ30.00000°, λ-60.00000°. NP2:ϕs287.00000°, δ64.00000°, λ-106.00000°. Principal axes: T 5.5590, Plg17.0000°, Azm29.0000°; N 0.5860, Plg15.0000°, Azm294.0000°; P -6.1450, Plg67.0000°, Azm166.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 19:44:12.1±0.5, 5.75N±0.09×61.31E±0.09, h10km, n97, σ1s24/69, mb4.2/40, MS4.4/24, 8C-1D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	9.65	312	Pn	Pn	19 46 39.2	+8.0
WSAR	Wadi Sarin	17.58	352	LR	LR	19 53 43.2	
	comp=Z,915nm,19.1s,baz=193,slow=33						

ATD	Arta Tunnel	19.13	289		LR	LR	19 54 58.4	
	comp=Z,388nm,18.6s,baz=82,slow=34							
ATD	Arta Tunnel	19.13	289			Pn	19 48 37.2	+0.6
PALK	Pallekele	19.32	84		LR	LR	19 54 26.8	
	comp=Z,1000nm,20.0s,baz=11,slow=32							
UOSS	Minazif	19.70	346		P	Pn	19 48 44.2	+1.0
UOSS					IAmb	IAmb	19 49 07.3	
	comp=Z,28nm,1.1s							
HYB	Hyderabad	20.46	54	*i*	P	Pn	19 48 55.0	+2.7
RAYN	Ar Rayn	23.32	321			P	19 49 19.5	-1.1
OPO	Ambohidratompo	27.90	210		LR	LR	19 58 09.3	
	comp=Z,777nm,20.9s,baz=183,slow=30							
BTK	Batken	35.21	13		P	P	19 51 07.7	+1.0
LSA	Lhasa	36.86	46		P	P	19 51 21.9	+0.4
MHMT	Maesarieng	37.80	68		P	P	19 51 36.0	+7.0
	comp=Z,10nm,1.2s							
KKAR	Karatay Array	38.08	11		P	P	19 51 32.5	+1.5
AAK	Ala-Archa	38.55	16		P	P	19 51 35.7	+0.5
	comp=Z,1.3nm,0.4s,baz=200,slow=13,SNR=5.8							
UTHA	Uthaitani	38.66	72		P	P	19 51 44.2	+8.0
	comp=Z,15nm,1.1s							
CM13	Chiang Mai Arr	38.76	68		P	P	19 51 40.6	+3.5
	comp=Z,40nmcomp=Z,3.7nm,1.2s							
CM32	Chiang Mai Arr	38.76	67		P	P	19 51 40.7	+3.6
CM15	Chiang Mai Arr	38.78	68		P	P	19 51 45.0	+7.7
	comp=Z,1.9nm,0.4s							
CM05	Chiang Mai Arr	38.79	68		P	P	19 51 44.7	+7.3
	comp=Z,48nmcomp=Z,4.5nm,1.3s							
CM02	Chiang Mai Arr	38.80	68		P	P	19 51 44.9	+7.4
	comp=Z,5.4nm,1.2s							
CM31	Chiang Mai Arr	38.80	68		P	P	19 51 45.6	+8.1
	comp=Z,106nm,1.3s							
CMAR	Chiang Mai Arr	38.80	68		P	P	19 51 38.1	+0.7
	comp=Z,1.7nm,1.0s,baz=264,slow=8.7,SNR=11							
CMAR					PcP	PcP	19 53 49.0	+0.1
	comp=Z,1.0nm,1.0s,baz=258,slow=4.5,SNR=2.2							
CMAR					LR	LR	20 06 09.2	
	comp=Z,278nm,21.6s,baz=307,slow=34							
CMAR	Chiang Mai Arr	38.80	68		P	P	19 51 37.5	0.0
CM01	Chiang Mai Arr	38.81	68		P	P	19 51 45.0	+7.5
	comp=Z,5.1nm,1.2s							
CM04	Chiang Mai Arr	38.82	68		P	P	19 51 41.5	+3.9
	comp=Z,56nmcomp=Z,6.6nm,1.2s							
CM09	Chiang Mai Arr	38.84	68		P	P	19 51 44.8	+6.9
	comp=Z,66nmcomp=Z,6.0nm,1.2s							
CHTO	Chiang Mai	38.89	67			P	19 51 38.3	+0.1
CHTO					IAmb	IAmb	19 51 45.9	
	comp=Z,11nm,1.1s							
CM33	Chiang Mai Arr	38.89	67		P	P	19 51 40.0	+1.8
CMMT	Chiang Mai	38.89	67		P	P	19 51 40.0	+1.7
	comp=Z,5.2nm,1.2s							
LSZ	Lusaka	38.91	237		P	P	19 51 39.1	+0.7
	comp=Z,4.3nm,1.1s,baz=45,slow=9.8,SNR=5.4							
LSZ	Lusaka	38.91	237		P	P	19 51 38.7	+0.2
CM36	Chiang Mai Arr	38.95	68		P	P	19 51 41.0	+2.2
CM35	Chiang Mai Arr	39.05	67		P	P	19 51 41.0	+1.5
CM34	Chiang Mai Arr	39.09	67		P	P	19 51 42.0	+2.1
KULM	Kulim	39.15	89		P	P	19 51 40.4	-0.1
PAYA	Payao	39.87	67		P	P	19 51 55.0	+8.5
	comp=Z,64nm,1.3s							
CHAI	Chaiyaphum	41.13	72		P	P	19 52 04.0	+7.2
	comp=Z,13nm,1.2s							
KBZ	Khabaz	41.15	340		P	P	19 51 56.6	+0.1
	comp=Z,2.5nm,0.8s,baz=99,slow=1.0,SNR=4.8							
KBZ					LR	LR	20 10 12.7	
	comp=Z,186nm,20.6s,baz=143,slow=38							
MATP	Matopo	41.43	230		P	P	19 51 59.1	-0.2
	comp=Z,2.4nm,0.9s,baz=56,slow=6.2,SNR=3.8							
BRTR	Keskin Array B	42.01	328		P	P	19 52 03.1	-0.8
	comp=Z,2.6nm,0.8s,baz=158,slow=8.0,SNR=7.8							
BRTR					LR	LR	20 09 53.2	
	comp=Z,233nm,19.8s,baz=130,slow=37							
BRTR	Keskin Array B	42.01	328		P	P	19 52 04.0	+0.1
NONG	Nongkai	42.61	70		P	P	19 52 15.8	+6.9
	comp=Z,16nm,1.4s							
ABKAR	Akbulak array	43.37	359		P	P	19 52 14.8	+0.2
ABKAR					IAmb	IAmb	19 52 28.7	
	comp=Z,12nm,1.1s							
ABKAR	Akbulak array	43.37	359		P	P	19 52 14.5	0.0
SLVN	Son La	44.03	65		P	P	19 52 21.0	+0.5
SLVN					IAmb	IAmb	19 52 27.7	
	comp=Z,23nm,1.5s							
UBPT	Khong Chiam	44.35	74		P	P	19 52 30.4	+7.4
AKTO	Aktyubinsk	44.62	357		P	P	19 52 24.6	-0.1
	comp=Z,2.7nm,0.8s,baz=163,slow=6.2,SNR=6.6							
MKAR	Makanchi Array	44.71	20		P	P	19 52 24.7	-0.7
	comp=Z,1.0nm,0.9s,baz=199,slow=9.9,SNR=5.1							
MKAR					LR	LR	20 13 27.2	
	comp=Z,266nm,18.1s,baz=170,slow=39							
ALN	Alexandroupoli	47.09	323		P	P	19 52 44.7	+0.3
ALN					IAmb	IAmb	19 52 46.0	
	comp=Z,8.1nm,1.0s							
BOSA	Boshof	48.72	224		P	P	19 52 57.2	0.0
	comp=Z,2.0nm,0.9s,baz=39,slow=13,SNR=1.8							
BOSA					LR	LR	20 11 41.8	
	comp=Z,822nm,18.9s,baz=40,slow=34							
TSUM	Tsumeb	49.69	239		P	P	19 53 05.5	+0.6
	comp=Z,5.7nm,0.9s,baz=0.4,slow=5.5,SNR=5.1							
TSUM	Tsumeb	49.69	239		P	P	19 53 05.5	+0.6
TSUM					IAmb	IAmb	19 53 12.3	
	comp=Z,9.8nm,1.1s							
VRI	Vrincioaia	49.94	329	↑	P	P	19 53 08.0	+1.8
PLOR	Plostina	49.97	329	↑	P	P	19 53 07.5	+1.0
MLR	Muntele Rosu	50.09	328		P	P	19 53 07.2	-0.4
	comp=Z,1.8nm,0.6s,baz=153,slow=9.0,SNR=3.0							
MLR	Muntele Rosu	50.09	328	↑	P	P	19 53 07.4	-0.2
MLR	Muntele Rosu	50.09	328		P	P	19 53 08.8	+1.2
MLR					IAmb	IAmb	19 53 17.2	
	comp=Z,8.7nm,1.1s							
TESR	Tescani	50.41	329	↑	P	P	19 53 09.8	0.0
VOIR		50.54	327	↑	P	P	19 53 10.8	-0.1
ARU	Arti	50.58	358		P	P	19 53 09.6	-1.3
	comp=Z,0.7nm,0.6s,baz=120,slow=6.1,SNR=5.1							
ARU	Arti	50.58	358		P	P	19 53 09.8	-1.1
ARU					IAmb	IAmb	19 53 18.1	
	comp=Z,5.8nm,0.8s							
HERR	Herculane	51.64	325	↑	P	P	19 53 19.1	+0.1
ZALV	Zalesovo Beam	51.71	17		P	P	19 53 17.9	-1.4
	comp=Z,0.8nm,0.7s,baz=199,slow=7.8,SNR=4.7							
ZALV					LR	LR	20 17 36.5	
	comp=Z,251nm,18.3s,baz=214,slow=39							
ZALV	Zalesovo Beam	51.71	17		P	P	19 53 18.0	-1.4
AKASG	Malin Array Be	52.20	335		P	P	19 53 22.6	-0.4
	comp=Z,0.1nm,0.2s,baz=139,slow=7.4,SNR=5.5							
AKASG					LR	LR	20 17 25.9	
	comp=Z,141nm,19.6s,baz=115,slow=38							
AKASG	Malin Array Be	52.20	335		P	P	19 53 22.3	-0.8
BZS	Buzias	52.53	326	↑	P	P	19 53 24.5	-1.2
DRGR		52.65	327	↓	P	P	19 53 27.4	+0.7
SIRR	Siria	52.90	326	↑	P	P	19 53 27.1	-1.4
KEST	Kesra	56.17	310		LR	LR	20 16 33.2	
	comp=Z,96nm,20.6s,baz=309,slow=35							
TAM	Tamanrasset	56.31	293		P	P	19 53 54.7	+0.9
TAM					IAmb	IAmb	19 53 56.6	
	comp=Z,9.1nm,1.3s							
SONM	Songino Array	56.84	35		P	P	19 53 56.5	-0.6
	comp=Z,0.8nm,0.9s,baz=234,slow=6.4,SNR=4.2							
SONM					LR	LR	20 19 11.4	
	comp=Z,491nm,18.2s,baz=214,slow=37							
TORD	Torodi Ar. Bea	59.15	282		P	P	19 54 13.4	-0.3
	comp=Z,2.3nm,0.9s,baz=92,slow=6.4,SNR=8.7							
TORD					PcP	PcP	19 55 02.7	+0.3
	comp=Z,0.6nm,0.7s,baz=87,slow=5.2,SNR=2.2							
TORD					LR	LR	20 20 00.2	
	comp=Z,78nm,18.2s,baz=65,slow=36							
CLL	Collm	60.47	327		eP	P	19 54 22.0	-0.1
CLL					LmV		20 20 00.0	
	comp=Z,200nm,21.0s							
DAV	Davao City (W)	63.83	85		LR	LR	20 21 25.1	
	comp=Z,75nm,18.7s,baz=278,slow=35							
BATI	Baumata	64.09	104		LR	LR	20 21 30.2	
	comp=Z,97nm,19.0s,baz=285,slow=35							
HFS	Hagfors	65.05	336		P	P	19 54 51.7	-0.8
	comp=Z,1.9nm,0.5s,baz=111,slow=6.3,SNR=2.8							
DBIC	Dimbokro	65.74	275		LR	LR	20 22 42.0	
	comp=Z,248nm,21.1s,baz=72,slow=35							
NRIK	Noril'sk	65.81	10		LR	LR	20 25 51.2	
	comp=Z,470nm,20.4s,baz=199,slow=38							
ESDC	Sonseca Array	67.39	311		P	P	19 55 07.5	-0.5
	comp=Z,1.9nm,1.0s,baz=69,slow=4.9,SNR=4.6							
FITZ	Fitzroy Crossi	67.71	112		LR	LR	20 20 03.5	
	comp=Z,88nm,18.2s,baz=298,slow=32							
KSRS	Korea Array	68.00	52		LR	LR	20 25 42.8	
	comp=Z,197nm,20.6s,baz=262,slow=37							
USRK	Ussuriysk Ar.	72.18	45		LR	LR	20 29 00.0	
	comp=Z,424nm,19.2s,baz=252,slow=37							

MAW	Mawson	73.19	179		P	P	19 55 42.5	-0.3
	comp=Z,1.9nm,0.9s,baz=358,slow=11,SNR=5.1							
MAW					LR	LR	20 20 00.5	
	comp=Z,234nm,21.9s,baz=47,slow=29							
MAW	Mawson	73.19	179		IAmb	IAmb	19 55 43.1	
	comp=Z,2.0nm,1.4s							
WRA	Warramunga Arr	76.14	112		P	P	19 55 59.3	-1.7
	comp=Z,6.3nm,1.1s,baz=289,slow=5.0,SNR=18							
WRA					LR	LR	20 25 01.0	
	comp=Z,58nm,20.7s,baz=265,slow=32							
WRAB	Tennant Creek	76.15	112		P	P	19 56 00.2	-0.8
WB0	Warramunga Arr	76.16	112		P	P	19 55 59.1	-1.9
ASAR	Alice Springs	76.51	116		P	P	19 56 01.4	-1.7
	comp=Z,4.4nm,1.0s,baz=290,slow=5.1,SNR=18							
ASAR					LR	LR	20 24 50.9	
	comp=Z,95nm,21.7s,baz=292,slow=32							
ASAR	Alice Springs	76.51	116		P	P	19 56 02.0	-1.1
AS31	Alice Springs	76.52	116		P	P	19 56 02.0	-1.1
STKA	Stephens Creek	84.80	123		LR	LR	20 30 23.9	
	comp=Z,195nm,20.4s,baz=216,slow=33							
VNA2	Neumayer--Watz	88.58	198		P	P	19 57 05.3	+0.4
	baz=40,slow=6.3							
PETK	Petropavlovsk-	89.27	37		LR	LR	20 40 15.0	
	comp=Z,251nm,18.3s,baz=272,slow=38							
VNA3	Neumayer Olymp	89.39	198		P	P	19 57 09.4	+0.7
VNDA	Vanda	97.86	168		LR	LR	20 37 21.5	
	comp=Z,162nm,19.6s,baz=302,slow=33							
TXAR	Lajitas Array	142.24	338		PKhKP	PKPpre	20 03 34.8	
	comp=Z,0.3nm,0.6s,baz=90,slow=2.7,SNR=1.9							
TXAR					PKP	PKPdf	20 03 45.4	-0.4
	comp=Z,0.3nm,0.7s,baz=90,slow=1.8,SNR=3.8							

IDC ***28*** *19:48:23.6±1.2,67.85N×10.32E, h0km, mb3.4/1, mb1 3.5/7, mb1mx3.3/46, mbtmp3.5/7, ML2.7/6, Error ellipse: s-maj=15.5km s-min=12.3km az=105.0*

UPP ***28*** *19:48:26.3±2.7,67.80N×10.51E, h0km, ML2.4, Suspected explosion*

BER ***28*** *19:48:26.0±3.5,67.83N×10.00E, h15km±17km, ML2.6, ML2.9(NAO), Confirmed Earthquake*

NAO ***28*** *19:48:26.6±2.2,67.85N×10.46E, h20km±15km, ML2.9*

HEL ***28*** *19:48:27.4±0.4,67.87N×10.67E, h10km, ML3.3, ML2.4(UPP), Confirmed Earthquake*

ISC 28 19:48:25.6±0.9, 67.79N±0.04×10.28E±0.06, h21km±5km, n110, σ2s08/148, 2D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID	ISC	Time	Res
				Op	ISC	h m s	ISC
N2RO	R st	0.75	110	eP	Pn	19 48 42.0	+1.1
N2RO				*e*		19 48 42.7	
N2RO				eS	Sn	19 48 52.8	+1.2
N2RO				IAML		19 48 54.7	
	comp=Z,566nm,0.3s						
N2VA	Vr,y	0.93	96	eP	Pn	19 48 43.9	+0.6
N2VA				*e*		19 48 45.4	
N2VA				eS	Sn	19 48 56.5	+0.6
N2VA				IAML		19 49 00.5	
	comp=Z,766nm,0.2s						
N2SV	S,rv¥gen	1.04	83	eP	Pn	19 48 44.9	+0.1
N2SV				*e*		19 48 46.9	
N2SV				IAML		19 49 02.9	
	comp=Z,642nm,0.2s						
LOF	Lofoten	1.28	73	Pg	Pn	19 48 47.7	-0.4
LOF				Lg	Lg	19 49 05.0	
LOF	Lofoten	1.28	73	eP	Pn	19 48 47.8	-0.4
LOF				*e*		19 48 50.0	
LOF				eS	Sb	19 49 04.9	+0.1
LOF				*e*		19 49 08.4	
LOF				IAML		19 49 10.7	
	comp=Z,216nm,0.3s						
NBB30	Finnes	1.56	120	eP	Pn	19 48 53.0	+0.9
NBB30				*e*		19 48 57.1	
NBB30				eS	Sb	19 49 12.9	-0.2
NBB30				IAML		19 49 15.3	
	comp=Z,90nm,0.9s						
N2VI	Vinje	1.57	68	eP	Pn	19 48 51.9	-0.2
N2VI				*e*		19 48 56.0	
N2VI				eS	Sn	19 49 11.2	-0.5
N2VI				*e*		19 49 17.0	
N2VI				IAML		19 49 21.2	
	comp=Z,97nm,0.3s						
NBB05	Inndyr	1.63	116	eP	Pb	19 48 54.5	-0.4
NBB05	Inndyr	1.63	116	ePg	Pb	19 48 57.2	+2.3
NBB05	Inndyr	1.63	116	IAML		19 49 23.2	
	comp=Z,129nm,0.3s						
NBB13	Alf Garage	1.66	133	eP	Pn	19 48 54.6	+1.3
NBB13	Alf Garage	1.66	133	IAML		19 49 24.8	
	comp=Z,63nm,0.4s						
NBB40	Tonnes	1.66	139	eP	Pn	19 48 54.1	+0.7
NBB40				eS	Sn	19 49 15.0	+0.9
NBB40				IAML		19 49 24.4	
	comp=Z,41nm,0.3s						
KONS	Konsvik	1.70	138	↓	iP	Pn	19 48 55.0	+1.1
KONS				eS	Sn	19 49 15.6	+0.6
KONS				IAML		19 49 26.0	
	comp=Z,56nm,0.3s				

TRO				Sn	Sn	19 50 01.9	-1.3	
TRO				Lg	Lg	19 50 20.9		
TRO	**Tromso**	**3.66**	**56**	*eP*	**Pn**	**19 49 21.3**	**+0.5**	
TRO	**Tromso**	**3.66**	**56**	*eP*	**Pn**	**19 49 21.5**	**+0.7**	
TRO				IAML		19 50 25.3		
	comp=Z,11nm,0.5s							
KUA	**Kurravaara**	**3.81**	**83**	P	**Pn**	**19 49 24.9**	**+2.0**	
KUA	**Kurravaara**	**3.81**	**83**	*eP*	**Pn**	**19 49 24.9**	**+2.0**	
DUNU	**Dundret**	**4.02**	**95**	P	**Pn**	**19 49 27.5**	**+1.7**	
DUNU	**Dundret**	**4.02**	**95**	*eP*	**Pn**	**19 49 27.5**	**+1.7**	
KIF	**Kilpisjarvi**	**4.08**	**68**	Pn	**Pn**	**19 49 27.8**	**+1.2**	
KIF				Sn	**Sn**	**19 50 12.7**	**-0.8**	
KIF	**Kilpisjarvi**	**4.08**	**68**	*eP*	**Pn**	**19 49 27.8**	**+1.2**	
KIF				*eS*	**Sn**	**19 50 12.6**	**-1.0**	
KIF	**Kilpisjarvi**	**4.08**	**68**	*eP*	**Pn**	**19 49 27.7**	**+1.2**	
KIF				*eS*	**Sn**	**19 50 12.1**	**-1.5**	
LANU	**Lannavaara**	**4.43**	**81**	P	**Pn**	**19 49 32.9**	**+1.4**	
LANU	**Lannavaara**	**4.43**	**81**	*eP*	**Pn**	**19 49 32.6**	**+1.2**	
LANU				*eS*	**Sn**	**19 50 20.4**	**-1.8**	
LANU	**Lannavaara**	**4.43**	**81**	*eP*	**Pn**	**19 49 32.6**	**+1.2**	
LANU				*eS*	**Sn**	**19 50 20.4**	**-1.8**	
MASU	**Masugnsbyn**	**4.49**	**89**	P	**Pn**	**19 49 34.3**	**+2.0**	
MASU	**Masugnsbyn**	**4.49**	**89**	*eP*	**Pn**	**19 49 34.3**	**+2.0**	
HARU	**Harads**	**4.50**	**106**	P	**Pn**	**19 49 33.9**	**+1.5**	
HARU	**Harads**	**4.50**	**106**	*eP*	**Pn**	**19 49 33.9**	**+1.5**	
NOD	**Norderasen**	**4.75**	**154**	*eP*	**Pn**	**19 49 37.8**	**+1.9**	
ERTU	**Ertsjaerv**	**4.80**	**99**	P	**Pn**	**19 49 37.9**	**+1.4**	
ERTU	**Ertsjaerv**	**4.80**	**99**	*eP*	**Pn**	**19 49 37.9**	**+1.4**	
KTK1	**Kautokeino**	**4.94**	**70**	*eP*	**Pn**	**19 49 39.0**	**+0.5**	
KTK1				IAML		19 51 10.1		
	comp=Z,7.4nm,0.6s							
PAJU	**Pajala**	**5.01**	**93**	P	**Pn**	**19 49 40.5**	**+1.1**	
PAJU	**Pajala**	**5.01**	**93**	*eP*	**Pn**	**19 49 40.5**	**+1.1**	
MOL	**Molde**	**5.36**	**194**	*eP*	**Pn**	**19 49 43.6**	**-0.6**	
MOL				*eS*	**Sn**	**19 50 41.8**	**-3.4**	
MOL				IAML		19 50 54.8		
	comp=Z,8.7nm,0.4s							
BURU	**Burvik**	**5.52**	**120**	*eP*	**Pn**	**19 49 48.0**	**+1.6**	
BURU				*eS*	**Sn**	**19 50 49.2**	**0.0**	
BURU	**Burvik**	**5.52**	**120**	*eP*	**Pn**	**19 49 48.0**	**+1.6**	
BURU				*eS*	**Sn**	**19 50 49.2**	**0.0**	
TOF	**Tornio**	**5.78**	**101**	*eP*	**Pn**	**19 49 51.7**	**+1.8**	
TOF				*eS*	**Sn**	**19 50 53.6**	**-1.8**	
TOF	**Tornio**	**5.78**	**101**	*eP*	**Pn**	**19 49 51.7**	**+1.8**	
TOF				*eS*	**Sn**	**19 50 53.6**	**-1.8**	
AKN	**Aaknes**	**5.80**	**195**	Pn	**Pn**	**19 49 49.5**	**-0.7**	
AKN				Sn	**Sn**	**19 50 50.0**	**-6.0**	
AKN	**Aaknes**	**5.80**	**195**	Pn	**Pn**	**19 49 49.5**	**-0.7**	
AKN				Sn	**Sn**	**19 50 50.0**	**-6.0**	
ARA0	**ARCESS Array S**	**5.83**	**65**	Pn	**Pn**	**19 49 50.5**	**0.0**	
	baz=246,slow=14							
ARA0				Sn	**Sn**	**19 50 53.0**	**-3.5**	
	baz=251,slow=22							
ARA0				Lg	Lg	19 51 26.8		
	baz=258,slow=28							
ARA0	**ARCESS Array S**	**5.83**	**65**	Pn	**Pn**	**19 49 50.5**	**0.0**	
	baz=246,slow=14							
ARA0				Sn	**Sn**	**19 50 53.0**	**-3.5**	
	baz=251,slow=22							
ARA0				Sg	Sb	19 51 26.8	+11	
	baz=258,slow=28							
ARA0				IAML		19 51 40.0		
	comp=Z,6.4nm,0.8s							
ARCES	**ARCESS Array B**	**5.83**	**65**	Pn	**Pn**	**19 49 50.4**	**-0.2**	
	baz=256,slow=14,SNR=16							
ARCES				Sn	**Sn**	**19 50 53.1**	**-3.5**	
	baz=256,slow=24,SNR=1.9							
ARCES				Lg	Lg	19 51 26.6		
	baz=256,slow=25,SNR=2.5							
NB2	**NORSAR Subarra**	**6.79**	**176**	Pn	**Pn**	**19 50 05.0**	**+1.2**	
	baz=354,slow=16							
NB2	**NORSAR Subarra**	**6.79**	**176**	Pn	**Pn**	**19 50 05.0**	**+1.2**	
	baz=354,slow=16							
NOA	**NORSAR Array B**	**6.79**	**176**	Pn	**Pn**	**19 50 04.8**	**+1.0**	
	comp=Z,0.0nm,0.3s,baz=356,slow=12,SNR=1.6							
NOA				Sn	**Sn**	**19 51 13.2**	**-7.1**	
	comp=Z,0.0nm,0.3s,baz=12,slow=16,SNR=1.6							
NRA0	**NORESS Array S**	**7.10**	**175**	Pn	**Pn**	**19 50 10.1**	**+2.0**	
	baz=350,slow=14							
NRA0				Sn	**Sn**	**19 51 24.4**	**-3.6**	
	baz=1.6,slow=22							
NRA0	**NORESS Array S**	**7.10**	**175**	Pn	**Pn**	**19 50 10.1**	**+2.0**	
	baz=350,slow=14							
NRA0				Sn	**Sn**	**19 51 24.4**	**-3.6**	
	baz=1.6,slow=22							
JNE	**Jan Mayen East**	**7.29**	**305**	*eP*	**Pn**	**19 50 08.6**	**-2.0**	
JNW	**Jan Mayen West**	**7.34**	**305**	*eP*	**Pn**	**19 50 09.4**	**-1.9**	
JMIC	**Jan Mayen**	**7.35**	**304**	Pn	**Pn**	**19 50 09.7**	**-1.7**	
	baz=108,slow=20,SNR=6.0							
JMIC	**Jan Mayen**	**7.35**	**304**	Pn	**Pn**	**19 50 09.7**	**-1.7**	
JMIC	**Jan Mayen**	**7.35**	**304**	*eP*	**Pn**	**19 50 09.5**	**-1.9**	
HFS	**Hagfors**	**7.83**	**167**	Pn	**Pn**	**19 50 19.3**	**+1.3**	
	comp=Z,0.2nm,0.3s,baz=355,slow=8.7,SNR=1.7							
HFS				Sn	**Sn**	**19 51 41.2**	**-4.6**	
	comp=Z,0.3nm,0.3s,baz=345,slow=22,SNR=1.9							
HFS	**Hagfors**	**7.83**	**167**	Pn	**Pn**	**19 50 19.0**	**+1.0**	
	baz=358,slow=14							
HFS				Sn	**Sn**	**19 51 41.4**	**-4.4**	
	slow=28							
HFS	**Hagfors**	**7.83**	**167**	Pn	**Pn**	**19 50 19.0**	**+1.0**	
	baz=358,slow=14							
HFS				Sn	**Sn**	**19 51 41.4**	**-4.4**	
	slow=28							
KU6	**Riekki**	**7.90**	**94**	*eP*	**Pn**	**19 50 18.7**	**-0.2**	
KU6				MPN		19 50 28.3		
	comp=Z,2.3nm,0.4s							
KU6	**Riekki**	**7.90**	**94**	*eP*	**Pn**	**19 50 18.7**	**-0.2**	
KU6				MPN		19 50 28.3		
	comp=Z,2.3nm,0.4s							
APA0	**Apatity Array**	**8.62**	**81**	Pn	**Pn**	**19 50 27.8**	**-1.1**	
	baz=287,slow=12							
APA0				Sn	**Sn**	**19 51 59.3**	**-6.0**	
	baz=275,slow=28							
APA0	**Apatity Array**	**8.62**	**81**	Pn	**Pn**	**19 50 27.8**	**-1.1**	
	baz=287,slow=12							
APA0				Sn	**Sn**	**19 51 59.3**	**-6.0**	
	baz=275,slow=28							
FIA0	**FINESS Array S**	**9.27**	**126**	Pn	**Pn**	**19 50 38.3**	**+0.5**	
FIA0				Sn	**Sn**	**19 52 16.2**	**-5.1**	
	baz=323,slow=28							
FIA0	**FINESS Array S**	**9.27**	**126**	Pn	**Pn**	**19 50 38.3**	**+0.5**	
FIA0				Sn	**Sn**	**19 52 16.2**	**-5.1**	
	baz=323,slow=28							
FINES	**FINESS Array B**	**9.27**	**126**	Pn	**Pn**	**19 50 38.2**	**+0.4**	
	comp=Z,0.1nm,0.3s,baz=323,slow=13,SNR=3.8							
FINES				Sn	**Sn**	**19 52 16.0**	**-5.3**	
	comp=Z,0.4nm,0.3s,baz=320,slow=23,SNR=6.4							
FINES				Lg	Lg	19 53 10.1		
	comp=Z,0.2nm,0.3s,baz=320,slow=30,SNR=2.7							
MEF	**Metsahovi**	**9.77**	**134**	MPN		19 50 50.9		
	comp=Z,1.1nm,0.4s							
MEF	**Metsahovi**	**9.77**	**134**	MPN		19 50 50.9		
	comp=Z,1.1nm,0.4s							
PVF	**Pernaja**	**9.92**	**130**	MPN		19 50 51.9		
	comp=Z,1.5nm,0.3s							
PVF	**Pernaja**	**9.92**	**130**	MPN		19 50 51.9		
	comp=Z,1.5nm,0.3s							
JOF	**Joensuu**	**10.01**	**109**	MPN		19 50 49.0		
	comp=Z,0.9nm,0.3s							
JOF	**Joensuu**	**10.01**	**109**	MPN		19 50 49.0		
	comp=Z,0.9nm,0.3s							
SPA0	**Spitsbergen Ar**	**10.59**	**7**	Pn	**Pn**	**19 50 54.8**	**-0.9**	
	baz=176,slow=16							
SPA0	**Spitsbergen Ar**	**10.59**	**7**	Pn	**Pn**	**19 50 54.8**	**-0.9**	
	baz=176,slow=16							
SPITS	**Spitsbergen Ar**	**10.59**	**7**	Pn	**Pn**	**19 50 53.5**	**-2.2**	
	baz=188,slow=15,SNR=1.3							
SPITS				Sn	Sn	19 52 43.3	-10	
	baz=186,slow=26,SNR=1.1							
EKA	**Eskdalemuir Ar**	**13.99**	**213**	Pn	**Pn**	**19 51 44.1**	**+1.9**	
	baz=20,slow=12,SNR=1.5							
TORD	**Torodi Ar. Bea**	**54.88**	**190**	P	**P**	**19 57 55.6**	**+1.4**	
	comp=Z,0.2nm,0.5s,baz=5.4,slow=8.1,SNR=4.0							

KRSC 28 19:48:37.6±1.6, 49.46N×156.99E, h51km±32km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.35**	**336**	*eP*	Pn	19 49 00.8	+0.8
SKR				*eS*	Sn	19 49 17.0	+0.3
PAU	**Pauzhetka**	**2.01**	**357**	*eP*	Pn	19 49 11.3	+2.2
PAU				*eS*	Sn	19 49 35.4	+2.4
KDTR	**Khodutka, Kamc**	**2.45**	**16**	*eP*	Pn	19 49 18.9	+3.8
KDTR				*eS*	Sn	19 49 48.9	+5.1
ASAK	**Asacha**	**2.98**	**11**	*eP*	Pn	19 49 25.7	+3.3
MTVR	**Mutnovka**	**3.12**	**14**	*eP*	Pn	19 49 28.4	+4.0
MTVR				*eS*	Sn	19 50 04.8	+4.4
RUS	**Russkaya**	**3.13**	**17**	*eP*	Pn	19 49 27.7	+3.4
RUS				*eS*	Sn	19 50 04.4	+4.0
GRL	**Gorelyy**	**3.17**	**12**	*eP*	Pn	19 49 28.7	+3.6
GRL				*eS*	Sn	19 50 05.9	+4.2
PET	**Petropavlovsk**	**3.72**	**16**	*eS*	Sn	19 50 19.1	+4.2
AVH	**Avacha**	**3.97**	**15**	*eP*	Pn	19 49 40.7	+4.8
KOK	**Koryaka**	**3.97**	**14**	*eP*	Pn	19 49 40.3	+4.3
SMAR	**Somma**	**3.98**	**16**	*eP*	Pn	19 49 39.5	+3.4
KRX	**Arik**	**4.04**	**14**	*eP*	Pn	19 49 40.9	+3.9
SPN	**Mys Shipunski**	**4.11**	**26**	*eP*	Pn	19 49 41.4	+3.6
SPN				*eS*	Sn	19 50 28.6	+4.0
MKZ	**Mys Kozlova**	**5.88**	**28**	*eP*	Pn	19 50 05.1	+3.1
KZV	**Kizimen**	**6.01**	**18**	*eP*	Pn	19 50 08.8	+4.8
KBTR	**Krutoberegovo**	**7.62**	**25**	*eP*	Pn	19 50 29.5	+3.6

TRN 28 19:53:58.8, 10.78N×62.22W, h89km, MD3.7, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.81**	**99**	*iP*	Pn	19 54 16.4	+0.1
TRN				*eS*	Sn	19 54 28.4	-1.1
TPP	**Pointe-a-Pierr**	**0.88**	**121**	*eP*	Pn	19 54 17.6	+0.4
TPP				*eS*	Sn	19 54 31.7	+0.8
TBH	**Brigand Hill**	**1.17**	**104**	*eP*	Pn	19 54 21.3	+0.9
TBH				*eS*	Sn	19 54 37.3	+0.5
GRGR	**Grenville**	**1.45**	**22**	*eP*	Pn	19 54 23.2	-0.8
GRGR				*eS*	Sn	19 54 41.9	-1.1
GRHS	**Sauteurs**	**1.54**	**21**	*eP*	Pn	19 54 24.8	-0.3
GRHS				*eS*	Sn	19 54 44.9	0.0
GRSS	**Sisters**	**1.62**	**21**	*eP*	Pn	19 54 26.8	+0.7
GRSS				*eS*	Sn	19 54 47.0	+0.2
TOSP	**Speyside**	**1.73**	**73**	*eP*	Pn	19 54 27.1	-0.4
TOSP				*eS*	Sn	19 54 48.1	-1.1
GCMP	**Grenada, Carri**	**1.86**	**25**	*eP*	Pn	19 54 28.5	-0.7
SVOC	**Richmond Hill,**	**2.55**	**22**	*eS*	Sn	19 55 08.2	-0.4
SVB	**Belmont**	**2.65**	**21**	*eP*	Pn	19 54 39.5	-0.2
SVB				*eS*	Sn	19 55 11.0	-0.1
SVCV	**St. Vincent, C**	**2.69**	**23**	*eP*	Pn	19 54 40.0	-0.2
SVCV				*eS*	Sn	19 55 11.3	-0.7
SVV	**Soufriere Volc**	**2.71**	**21**	*eP*	Pn	19 54 40.9	+0.5
SVV				*eS*	Sn	19 55 11.8	-0.6
SLB	**Belfond**	**3.24**	**21**	*eP*	Pn	19 54 48.1	+0.5
SLB				*eS*	Sn	19 55 24.2	-1.1
SLAC	**Saint Lucia, A**	**3.36**	**22**	*eP*	Pn	19 54 49.0	-0.2
SLAC				*eS*	Sn	19 55 26.1	-2.0
SLBI	**Saint Lucia, B**	**3.44**	**21**	*eP*	Pn	19 54 50.9	+0.6
SLBI				*eS*	Sn	19 55 27.8	-2.4
MPOM	**Morne Pois Mar**	**3.88**	**20**	*eP*	Pn	19 54 57.2	+1.0
MPOM				*eS*	Sn	19 55 38.3	-2.3
BIM	**Bigot**	**3.88**	**17**	*eP*	Pn	19 54 55.9	-0.4
BIM				*eS*	Sn	19 55 40.0	-0.8
CBE	**Ff, Capester**	**5.29**	**6**	*eP*	Pn	19 55 16.2	+0.7
MLYT	**Lee's Yard**	**5.91**	**0**	*eP*	Pn	19 55 23.7	-0.1
ANBD	**Bethesda, Anti**	**6.25**	**4**	*eP*	Pn	19 55 28.3	-0.1

*IDC **28** 20:16:23.7±2.1, 1.99N×126.49E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/31, mbtmp3.2/3, Error ellipse: s-maj=185.0km s-min=25.8km az=66.0*
*DJA **28** 20:16:30.3±2.0, 2.1N±6×12.7E±, h26km±20km, M3.5/7, MLv3.5/7*

ISC 28 20:16:30.1±1.6, 2.0N±0.2×126.6E±0.1, h47km, n6, σ1§14/6, mb2.8/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.45**	**147**	P	**Pn**	**20 16 54.2**	**+0.4**
KMSI	**Cibinong**	**2.94**	**242**	P	**Pn**	**20 17 13.7**	**-0.7**
GTOI	**Gorontalo**	**3.80**	**249**	P	**Pn**	**20 17 27.3**	**+1.1**
WRA	**Warramunga Arr**	**23.09**	**161**	P	**P**	**20 21 30.9**	**-1.1**
	0.2nm,0.6s,baz=339,slow=11,SNR=10						
ASAR	**Alice Springs**	**26.48**	**165**	P	**P**	**20 22 04.0**	**+0.9**
	0.2nm,0.7s,baz=346,slow=13,SNR=2.7						
MKAR	**Makanchi Array**	**58.89**	**326**	P	**P**	**20 26 24.1**	**-0.3**
	0.3nm,0.4s,baz=116,slow=8.3,SNR=6.5						

IDC 28 20:17:00.6±2.2, 2.17N×126.76E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/33, mbtmp3.5/3, Error ellipse: s-maj=184.2km s-min=25.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.20**	**162**	P	P	20 22 09.1	-0.2
	0.3nm,0.3s,baz=340,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.61**	**165**	P	P	20 22 41.3	+0.4
	0.2nm,0.4s,baz=346,slow=12,SNR=7.4						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	20 27 01.0	-0.2
	0.5nm,0.6s,baz=120,slow=7.5,SNR=5.8						

IDC 28 20:25:05.1±3.0, 4.51N×94.49E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.2/45, mbtmp3.3/4, ML3.7/1, Error ellipse: s-maj=113.1km s-min=27.9km az=62.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.53**	**17**	Pn	Pn	20 28 33.5	+1.3
	0.1nm,0.3s,baz=208,slow=12,SNR=7.2						
H08S2	**Diego Garcia H**	**25.05**	**241**	T	T	20 57 36.5	
	baz=57						
H08S3	**Diego Garcia H**	**25.05**	**241**	T	T	20 57 39.7	
	baz=57						
H08S1	**Diego Carcia H**	**25.07**	**241**	T	T	20 57 36.5	
	baz=57						
MKAR	**Makanchi Array**	**43.43**	**348**	P	P	20 33 09.4	-0.4
	0.3nm,0.4s,baz=158,slow=8.4,SNR=8.5						
WRA	**Warramunga Arr**	**46.08**	**123**	P	P	20 33 30.6	-0.7
	0.4nm,1.0s,baz=303,slow=9.8,SNR=2.5						
ASAR	**Alice Springs**	**47.54**	**128**	P	P	20 33 43.2	+0.5
	0.3nm,1.0s,baz=302,slow=7.5,SNR=2.2						

*JMA **28** 20:29:51.6±0.3, 43.86N×148.04E, h0km, M3.6*
*SKHL **28** 20:29:51.7±0.2, 44.10N×148.40E, h52km±8km, mb4.5/4*

ISC 28 20:29:50.8±2.8, 44.16N±0.09×148.0E±0.1, h1km±15km, n15, σ1§67/24, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.07**	**357**	*i* P	**Pb**	**20 30 11.0**	**-1.1**
KUR				AMB	AMB	20 30 11.0	
	130nm,0.2s						
KUR				*i* S	**Sb**	**20 30 25.5**	**-1.0**
KUR				A	A	20 30 26.0	
	226nm,0.2s						
KUR				A	A	20 30 26.0	
	456nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.51**	**266**	*eP*	**Pg**	**20 30 20.0**	**+0.2**
YUK				AMB	AMB	20 30 22.0	
	120nm,0.3s						
YUK				*eS*	**Sg**	**20 30 41.0**	**+1.6**
YUK				A	A	20 30 45.0	
	255nm,0.4s						
YUK				A	A	20 30 45.0	
	465nm,0.4s						
GRPR	**Tuman**	**1.58**	**265**	*eP*	**Pg**	**20 30 21.0**	**-0.1**
GRPR				AMB	AMB	20 30 24.0	
	99nm,0.3s						
GRPR				*eS*	**Sg**	**20 30 43.1**	**+1.5**
GRPR				A	A	20 30 44.0	
	186nm,0.4s						
GRPR				A	A	20 30 44.0	
	210nm,0.4s						
NEM2	**Nemuro 2**	**1.79**	**244**	P	**Pb**	**20 30 23.4**	**-0.9**
NEM2				*eS*	**Sb**	**20 30 47.1**	**-0.1**
NMR	**Nemuro--Hokkai**	**1.80**	**245**	*eP*	**Pb**	**20 30 23.9**	**-0.5**
NMR				*eS*	**Sg**	**20 30 48.0**	**-0.5**
GLVR	**Golovnino**	**1.81**	**257**	*eP*	**Pb**	**20 30 24.0**	**-0.6**
GLVR				AMB	AMB	20 30 25.0	
	96nm,0.4s						
GLVR				*eS*	**Sb**	**20 30 48.0**	**+0.2**
GLVR				A	A	20 30 51.0	
	459nm,0.4s						
GLVR				A	A	20 30 51.0	
	283nm,0.4s						
JRA	**Rausu**	**2.06**	**265**	P	**Pb**	**20 30 28.8**	**0.0**
JNSB	**Nemuroshibetsu**	**2.17**	**261**	P	**Pb**	**20 30 30.2**	**-0.5**
JKHN	**Kushirohamanak**	**2.30**	**243**	P	**Pb**	**20 30 30.9**	**-2.1**
JNK	**Nakash**	**2.41**	**257**	P	**Pb**	**20 30 33.2**	**-1.7**
JNK				*eS*	**Sb**	**20 31 04.0**	**-1.1**
JAK	**Akkeshi**	**2.64**	**245**	P	**Pn**	**20 30 35.4**	**+1.0**
JAK				*eS*	**Sn**	**20 31 07.7**	**+0.7**
JTKR	**Abashiri--Toko**	**2.92**	**268**	P	**Pb**	**20 30 41.1**	**-2.5**
JAR	**Ashorobuto**	**3.15**	**255**	P	**Pb**	**20 30 44.2**	**-3.4**
JAR				*eS*	**Sb**	**20 31 23.4**	**-3.1**
JCH	**Churui**	**3.69**	**247**	P	**Pn**	**20 30 51.4**	**+2.6**
JNBK	**Urakawa-nobuka**	**4.24**	**245**	P	**Pn**	**20 30 58.1**	**+1.6**

WEL 28 20:34:58.0, 41.0S±0.6×175.4E±0.7, h28km±1km, M3.0/19, ML3.2/19, MLv3.0/19, Error ellipse: s-maj=0.0km s-min=0.0km az=75.8, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOWZ	**Holdsworth Sta**	**0.14**	**32**	P	Pb	20 35 03.7	+0.3
HOWZ				S	Sb	20 35 07.7	+0.7
MTW	**Mount Morrison**	**0.16**	**157**	P	Pb	20 35 03.9	+0.4
MTW				S	Sb	20 35 08.5	+1.2
OGWZ	**Otaki Gorge**	**0.27**	**316**	P	Pb	20 35 05.4	+0.5
OGWZ				S	Sb	20 35 10.3	+0.8
CAW	**Cannon Point**	**0.28**	**251**	P	Pb	20 35 05.6	+0.6
PAWZ	**Paruwai Farm**	**0.37**	**179**	P	Pb	20 35 06.8	+0.5
PAWZ				S	Sn	20 35 13.4	-0.5
TMWZ	**Te Maipa**	**0.37**	**105**	P	Pb	20 35 06.7	+0.5
TMWZ				S	Sn	20 35 13.4	-0.5
MRZ	**Mangatainoka R**	**0.37**	**19**	P	Pb	20 35 06.7	+0.3
MRZ				S	Sb	20 35 12.7	+0.7
KIW	**Kapiti Island**	**0.41**	**291**	P	Pn	20 35 07.7	-0.5
KIW				S	Sn	20 35 14.6	-0.4
MSWZ	**Moikau Station**	**0.42**	**198**	P	Pb	20 35 07.6	+0.5
MSWZ				S	Sn	20 35 14.3	-0.9
TIWZ	**Tintock**	**0.43**	**56**	P	Pb	20 35 07.6	+0.4
TIWZ				S	Sn	20 35 14.7	-0.6
TRWZ	**Traveller**	**0.43**	**152**	P	Pb	20 35 07.7	+0.4
WEL	**Wellington**	**0.56**	**241**	P	Pn	20 35 09.8	-0.3
PLWZ	**Palliser**	**0.57**	**193**	P	Pb	20 35 09.5	-0.1
BHW	**Baring Head**	**0.57**	**226**	P	Pb	20 35 09.8	+0.3
BHW				S	Sb	20 35 18.1	+0.7
CPWZ	**Castlepoint**	**0.60**	**80**	P	Pn	20 35 10.9	+0.2
PRWZ	**Pori Road**	**0.62**	**43**	P	Pn	20 35 10.9	-0.1
PRWZ				S	Sn	20 35 20.7	+0.7
POWZ	**Post Office Ro**	**0.68**	**23**	P	Pb	20 35 11.5	+0.2
POWZ				S	Sn	20 35 21.2	-0.2
BFZ	**Birch Farm**	**0.71**	**62**	P	Pb	20 35 11.7	-0.2
OHWZ	**Ohakea**	**0.81**	**354**	P	Pn	20 35 14.7	+1.1
OHWZ				S	Sn	20 35 26.4	+1.7
TCW	**Tory Channel**	**0.89**	**257**	P	Pn	20 35 14.7	0.0
TCW				S	Sn	20 35 26.6	0.0
DVHZ	**Dannevirke**	**0.91**	**39**	P	Pn	20 35 14.6	-0.5
DVHZ				S	Sn	20 35 28.1	+0.8
TSZ	**Takapari Road**	**1.04**	**24**	P	Pn	20 35 16.7	-0.1
DUWZ	**D'Urville Isla**	**1.16**	**280**	P	Pb	20 35 19.2	-0.2
CMWZ	**Cape Campbell**	**1.17**	**231**	P	Pn	20 35 18.7	+0.1
TUWZ	**Tuamarina**	**1.19**	**249**	P	Pn	20 35 18.4	-0.4
WPHZ	**Waipukurau**	**1.23**	**40**	P	Pn	20 35 19.4	0.0
PNHZ	**Pukenui**	**1.25**	**29**	P	Pn	20 35 19.4	-0.3
WAZ	**Wanganui**	**1.30**	**345**	P	Pb	20 35 22.8	+1.0
BSWZ	**Blackbirch Sta**	**1.36**	**238**	P	Pn	20 35 20.7	-0.4
PXZ	**Pawanui**	**1.47**	**49**	P	Pn	20 35 22.1	-0.6
KRHZ	**Kereru**	**1.55**	**28**	P	Pn	20 35 23.3	-0.5
NNZ	**Nelson**	**1.56**	**262**	P	Pn	20 35 24.9	+1.0
BHHZ	**Black Hill Sta**	**1.60**	**18**	P	Pn	20 35 24.6	+0.1
MOVZ	**Moawhango**	**1.62**	**9**	P	Pn	20 35 25.4	+0.5
WNVZ	**Wahianoa**	**1.69**	**5**	P	Pn	20 35 26.8	+0.9
PKVZ	**Pokaka**	**1.72**	**358**	P	Pb	20 35 29.1	+0.1
WHVZ	**Whangaehu Hut**	**1.73**	**4**	P	Pb	20 35 28.0	-1.3
TUVZ	**Tukino**	**1.75**	**6**	P	Pn	20 35 28.0	+1.3
FWVZ	**Far West T-bar**	**1.76**	**3**	P	Pn	20 35 27.9	+1.0
NGZ	**Ngauruhoe**	**1.84**	**4**	P	Pn	20 35 29.2	+1.2
MCHZ	**McNeill Hill**	**1.85**	**32**	P	Pb	20 35 31.0	-0.1
OTVZ	**Oturere**	**1.86**	**6**	P	Pn	20 35 28.9	+0.7
ETVZ	**East Tongariro**	**1.89**	**7**	P	Pn	20 35 30.1	+1.5
WTVZ	**West Tongariro**	**1.90**	**4**	P	Pn	20 35 30.0	+1.3
TMVZ	**Te Maari**	**1.91**	**7**	P	Pn	20 35 29.9	+1.1

ROC1					eS		Sn	20 56 35.4	-1.5
RTLS	**Leoncito**	**2.32**	**114**		eP		Pn	20 56 14.4	+2.2
RTLS					IAML			20 56 44.2	
	comp=Z,693nm,0.7s								
ACCO	**Cerro Coronel**	**2.36**	**84**		eP		Pn	20 56 14.6	+1.8
ACCO					eS		Sn	20 56 43.2	+2.3
ACCO					IAML			20 56 46.3	
	comp=Z,1μm,0.6s								
ACDV	**Cuesta del Vie**	**2.40**	**74**		eP		Pn	20 56 15.9	+2.6
AC05	**El Transito**	**2.41**	**33**	Pn			Pn	20 56 15.1	+1.7
MT02	**Curacav**	**2.44**	**167**				Pn	20 56 14.0	+0.3
AUSP	**Uspallata**	**2.45**	**124**		eP		Pn	20 56 16.1	+2.1
AUSP					eS		Sn	20 56 44.4	+1.4
PEL	**Peldehue**	**2.45**	**158**	⇑	eP		Pn	20 56 13.8	0.0
PEL					*i* S		Sn	20 56 41.9	-0.9
PEL					IAML			20 56 43.3	
	comp=E,2μm,0.2s								
PEL	**Peldehue**	**2.45**	**158**				Pn	20 56 14.3	+0.4
PEL	**Peldehue**	**2.45**	**158**		eP		Pn	20 56 14.6	+0.8
PEL					eS		Sn	20 56 42.7	0.0
MT05	**Renca**	**2.67**	**161**		Pn		Pn	20 56 17.5	+0.7
AC04	**Llanos de Chal**	**2.73**	**13**		Pn		Pn	20 56 19.2	+1.6
ZON	**Zonda**	**2.74**	**105**		Pn		Pn	20 56 19.1	+1.3
ZON	**Zonda**	**2.74**	**105**		eP		Pn	20 56 20.1	+2.3
ZON					eS		Sn	20 56 50.5	+0.6
ZON					IAML			20 56 52.6	
	comp=Z,806nm,0.5s								
RTLL	**Cerro Villicun**	**2.87**	**100**		eP		Pn	20 56 20.3	+0.7
RTLL					eS		Sn	20 56 52.5	-0.6
RTLL					IAML			20 56 53.5	
	comp=Z,560nm,0.4s								
RTCV	**Cerro Valdivia**	**2.94**	**110**		eP		Pn	20 56 22.3	+1.8
RTCV					IAML			20 56 59.5	
	comp=Z,404nm,0.8s								
MT09	**Talagante**	**2.98**	**167**	⇓	*i* P		Pn	20 56 21.9	+0.8
MT09					*i* S		Sn	20 56 55.1	-0.5
MT09					IAML			20 56 56.3	
	comp=E,877nm,0.6s								
ASAL	**Salagasta**	**3.04**	**125**		eP		Pn	20 56 24.3	+2.4
ASAL					eS		Sn	20 56 59.1	+1.9
ASAL					IAML			20 57 02.0	
	comp=Z,562nm,0.5s								
ARCO	**CERRO ARCO**	**3.12**	**130**		eP		Pn	20 56 25.9	+2.9
ARCO					eS		Sn	20 57 03.0	+3.7
ARCO					IAML			20 57 04.8	
	comp=Z,781nm,0.7s								
AGUA	**GUANDACOL**	**3.17**	**65**		eP		Pn	20 56 26.8	+3.2
AGUA					eS		Sn	20 57 03.9	+3.6
AGUA					IAML			20 57 04.1	
	comp=Z,606nm,0.7s								
AAGR	**Agrelo**	**3.34**	**132**		eP		Pn	20 56 29.0	+3.0
AAGR					eS		Sn	20 57 08.3	+3.7
AAGR					IAML			20 57 09.9	
	comp=Z,557nm,0.3s								
GO03	**Copiap**	**3.53**	**23**				Pn	20 56 29.8	+1.1
GO03	**Copiap**	**3.53**	**23**		eP		Pn	20 56 30.4	+1.8
GO03					eS		Sn	20 57 10.9	+1.6
VCA	**Vinchina**	**3.77**	**57**		eP		Pn	20 56 34.4	+2.5
VCA					eS		Sn	20 57 18.7	+3.6
VCA					IAML			20 57 22.7	
	comp=Z,537nm,0.6s								
BO02	**Sierra Bellavi**	**4.00**	**168**				Pn	20 56 35.5	+0.4
ACLC	**CERRO LA CRUZ**	**4.42**	**72**		eP		Pn	20 56 41.5	+0.5
ACLC					eS		Sn	20 57 29.7	-1.5
ACLC					IAML			20 57 31.6	
	comp=Z,582nm,0.3s								
APLL	**PUNTA DE LOS L**	**4.55**	**85**		eP		Pn	20 56 42.7	+0.1
APLL					IAML			20 57 55.4	
	comp=Z,214nm,0.7s								
AC02	**Maricunga**	**4.64**	**31**				Pn	20 56 43.7	-0.5
RFA	**San Rafael**	**4.79**	**145**		eP		Pn	20 56 46.5	+0.7
RFA					IAML			20 58 09.3	
	comp=Z,115nm,1.1s								
AC01	**Pan de Azucar**	**4.82**	**13**				Pn	20 56 45.7	-0.5
MRA	**San Martin**	**5.40**	**108**		eP		Pn	20 56 54.1	0.0
MRA					eS		Sn	20 57 52.8	-2.2
MRA					IAML			20 58 22.5	
	comp=Z,224nm,0.7s								
CYA	**Choya**	**5.74**	**67**		eP		Pn	20 56 59.3	+0.6
CYA					eS		Sn	20 57 59.5	-3.8
CYA					IAML			20 58 01.4	
	comp=Z,110nm,1.0s								
BI02	**San Fabin de**	**5.79**	**176**				Pn	20 57 00.1	+0.5
GO02	**Mina Guanaco**	**6.01**	**19**				Pn	20 57 02.1	-0.6
BI03	**Tigo**	**6.05**	**190**	Pn			Pn	20 57 03.2	+0.2
TCA	**Tanti**	**6.18**	**96**		eP		Pn	20 57 04.6	-0.2
TCA					eS		Sn	20 58 09.6	-4.6
TCA					IAML			20 58 46.1	
	comp=Z,136nm,0.6s								
PB14	**IPOC Station P**	**6.34**	**11**	Pn			Pn	20 57 05.1	-2.2
H03N1	**Juan Fernandez**	**6.57**	**245**		T		T	21 04 09.3	
	baz=76,slow=72,SNR=343								
VA04	**Juan Fernndez**	**6.58**	**243**				Pn	20 57 13.2	+3.0
H03N3	**Juan Fernandez**	**6.58**	**245**		T		T	21 04 09.6	
	baz=76,slow=72,SNR=294								
H03N2	**Juan Fernandez**	**6.58**	**245**		T		T	21 04 10.5	
	baz=76,slow=72,SNR=343								
H03S3	**Juan Fernandez**	**6.71**	**242**		T		T	21 04 10.1	
	baz=83,slow=75,SNR=3.1								
H03S1	**Juan Fernandez**	**6.72**	**242**		T		T	21 04 10.1	
	baz=83,slow=75,SNR=3.5								
H03S2	**Juan Fernandez**	**6.73**	**242**		T		T	21 04 18.0	
	baz=83,slow=75,SNR=7.8								
AHML	**Horco Molle**	**6.97**	**56**		eP		Pn	20 57 16.3	+0.7
AHML					eS		Sn	20 58 32.4	-1.0
AHML					IAML			20 59 22.8	
	comp=Z,22nm,0.7s								
PB10	**IPOC Station P**	**7.41**	**9**	Pn			Pn	20 57 22.0	+0.4
PB15	**IPOC Station P**	**7.90**	**16**	Pn			Pn	20 57 29.6	+1.0
LC01	**Cunco**	**8.01**	**181**				Pn	20 57 29.4	-0.4
PB06	**IPOC Station P**	**8.37**	**14**	Pn			Pn	20 57 34.5	-0.4
LVC	**Limon Verde**	**8.62**	**18**	P			Pn	20 57 36.4	-2.0
	comp=Z,0.9nm,0.3s,baz=144,slow=8.3,SNR=3.0								
LVC					S		Sn	20 59 09.8	-4.6
	comp=Z,1.0nm,0.3s,baz=354,slow=24,SNR=1.6								
LVC	**Limon Verde**	**8.62**	**18**	Pn			Pn	20 57 36.2	-2.3
PB07	**IPOC Station P**	**9.26**	**11**	Pn			Pn	20 57 45.6	-1.6
PB09	**IPOC Station P**	**9.32**	**15**	Pn			Pn	20 57 46.4	-1.5
PLCA	**Paso Flores**	**9.89**	**175**	P			Pn	20 57 54.4	-1.2
	comp=Z,0.7nm,0.3s,baz=341,slow=11,SNR=18								
PLCA	**Paso Flores**	**9.89**	**175**	Pn			Pn	20 57 55.3	-0.3
PB01	**IPOC Station P**	**10.00**	**12**	Pn			Pn	20 57 55.6	-1.5
PB16	**IPOC Station P**	**12.65**	**10**	Pn			Pn	20 58 31.6	-2.2
CPUP	**Villa Florida**	**13.48**	**74**	P			Pn	20 58 42.5	-1.9
	comp=Z,0.3nm,0.3s,baz=242,slow=15,SNR=2.9								
CPUP					S		Sn	21 01 01.6	-11
	comp=Z,0.3nm,0.3s,baz=256,slow=12,SNR=2.2								
CPUP					LR		LR	21 04 14.1	
	comp=Z,79nm,21.5s,baz=216,slow=39								
CPUP	**Villa Florida**	**13.48**	**74**	Pn			Pn	20 58 43.8	-0.6
LPAZ	**La Paz**	**14.89**	**14**	P			Pn	20 59 04.0	+0.3
	comp=Z,0.2nm,0.3s,baz=171,slow=8.9,SNR=7.5								
LPAZ	**La Paz**	**14.89**	**14**				P	20 59 07.1	-0.8
CPSB	**Cacapava Do Su**	**15.80**	**93**	eP			P	20 59 15.7	-1.5
ITAB	**Concordia**	**17.56**	**83**	eP			Pn	20 59 34.7	-1.7
SIV	**San Ignacio**	**17.75**	**36**	P			P	20 59 38.3	-0.7
	comp=Z,1.1nm,0.3s,baz=226,slow=10.0,SNR=32								
PTGB	**Pitanga**	**18.48**	**75**	eP			P	20 59 46.3	-0.6
TRCB	**Terra Rica**	**18.87**	**69**	eP			Pn	20 59 52.0	-0.4
PP1B	**Ponte de Pedra**	**20.26**	**53**	eP			P	21 00 06.1	-0.3
PCMB	**Pacaembu**	**20.56**	**68**	eP			P	21 00 08.0	-1.6
VILB	**Vilhena**	**20.79**	**33**	eP			P	21 00 12.4	+0.3
FRTB	**Fartura**	**21.13**	**75**	eP			P	21 00 14.1	-1.6
ETMB	**Extrema**	**21.58**	**15**	eP			P	21 00 24.4	+3.9
ITRB	**Iturama**	**22.29**	**65**	eP			P	21 00 26.2	-1.9
PET01	**Itanhaem-SP**	**22.66**	**79**	eP			P	21 00 31.5	-0.6
SPB	**Sao Paulo**	**22.80**	**77**	eP			P	21 00 31.9	-1.6
RCLB	**Rio Claro- Sao**	**23.22**	**75**	eP			P	21 00 35.9	-1.8
SAML	**Samuel**	**23.24**	**22**	P			P	21 00 38.8	+0.9
SAML	**Samuel**	**23.24**	**22**	eP			P	21 00 38.9	+1.0
VAO	**Valinhos**	**23.44**	**76**	eP			P	21 00 37.8	-2.1
ARAG	**Araguaiana, MT**	**23.69**	**55**	eP			P	21 00 41.1	-1.0
CLDB	**Colider**	**24.82**	**40**	eP			P	21 00 51.1	-1.2
IPMB	**Ipameri, GO**	**24.94**	**64**	eP			P	21 00 52.4	-1.1
BSCB	**Bom Sucesso**	**26.14**	**74**	eP			P	21 01 03.1	-1.3
BDFB	**Brasilia**	**26.50**	**60**	P			P	21 01 07.2	-0.4
	comp=Z,28nm,0.9s,baz=230,slow=8.5,SNR=29								
BDFB	**Brasilia**	**26.50**	**60**	P			P	21 01 07.3	-0.4
BDFB					IAmb		IAmb	21 01 07.7	
	comp=Z,21nm,0.8s								
VAS01	**Vassouras-RJ**	**26.69**	**78**	eP			P	21 01 08.4	-0.9
SNDB	**Serra Nova Dou**	**26.70**	**50**	eP			P	21 01 08.2	-1.1
PEXB	**Peixe**	**28.63**	**54**	eP			P	21 01 25.9	-0.7
JANB	**Januaria**	**29.68**	**64**	eP			P	21 01 35.2	-0.8
SDBA	**SAO DESIDERIO**	**30.88**	**59**	eP			P	21 01 45.2	-1.4
VNA3	**Neumayer Olymp**	**52.18**	**159**	P			P	21 04 40.0	+0.3
VNA2	**Neumayer--Watz**	**52.82**	**158**	P			P	21 04 44.8	+0.4
	baz=287,slow=7.9								
SNAA	**Sanae**	**54.40**	**159**	P			P	21 04 56.2	+0.1
SNAA	**Sanae**	**54.40**	**159**	P			P	21 04 56.3	+0.1
SNAA					IAmb		IAmb	21 04 58.6	
	comp=Z,4.2nm,1.2s								
TXAR	**Lajitas Array**	**67.13**	**330**	P			P	21 06 23.8	+0.8
	comp=Z,0.4nm,0.7s,baz=153,slow=8.4,SNR=5.1								
DBIC	**Dimbokro**	**73.99**	**72**	P			P	21 07 05.2	+0.1
	comp=Z,2.1nm,0.5s,baz=190,slow=4.8,SNR=5.8								
DBIC	**Dimbokro**	**73.99**	**72**	IAmb			IAmb	21 07 08.3	
	comp=Z,18nm,1.4s								
MAW	**Mawson**	**76.11**	**164**	P			P	21 07 16.9	+0.5
	comp=Z,1.1nm,0.5s,baz=102,slow=10.0,SNR=2.9								
PDAR	**Pinedale Array**	**81.08**	**333**	LR			LR	21 41 29.0	
	comp=Z,38nm,19.4s,baz=180,slow=34								
TORD	**Torodi Ar. Bea**	**82.94**	**70**	P			P	21 07 53.5	-0.8
	comp=Z,1.1nm,0.6s,baz=274,slow=5.0,SNR=8.2								
TORD					pP		pP	21 08 14.2	+1.7
	comp=Z,0.6nm,0.6s,baz=250,slow=8.6,SNR=2.6								
TORD	**Torodi Ar. Bea**	**82.94**	**70**	P			P	21 07 53.3	-1.0
LBTB	**Lobatse**	**83.42**	**115**	P			P	21 07 56.9	-0.1
LSZ	**Lusaka**	**90.57**	**108**	P			P	21 08 32.7	+0.9
	comp=Z,1.0nm,0.5s,baz=287,slow=3.1,SNR=4.5								
LSZ	**Lusaka**	**90.57**	**108**	IAmb			IAmb	21 08 53.4	
	comp=Z,2.8nm,1.1s								
YKA	**Yellowknife Ar**	**99.17**	**341**	LR			LR	21 54 48.0	
	comp=Z,27nm,18.8s,baz=0.0,slow=36								
WRA	**Warramunga Arr**	**123.59**	**210**	PKP			**PKPdf**	21 14 26.4	-0.4
	comp=Z,0.1nm,0.5s,baz=158,slow=1.6,SNR=1.2								
WRA					pPKP		**pPKPdf**	21 14 46.6	+1.1
	comp=Z,0.2nm,0.8s,baz=148,slow=1.4,SNR=1.2								
H11S2	**WAKE ISLAND Hyl**	**25.98**	**271**	T			T	23 33 33.4	
	baz=115,slow=75,SNR=30								
H11S1	**WAKE ISLAND Hyl**	**25.99**	**271**	T			T	23 33 33.3	
	baz=115,slow=75,SNR=28								
H11S3	**WAKE ISLAND Hyl**	**26.00**	**271**	T			T	23 33 34.8	
	baz=115,slow=75,SNR=31								
H11N3	**WAKE ISLAND Hyl**	**26.31**	**273**	T			T	23 34 00.1	
	baz=154,slow=74,SNR=7.2								
H11N1	**WAKE ISLAND Hyl**	**26.33**	**273**	T			T	23 33 59.5	
H11N2	**WAKE ISLAND Hyl**	**26.33**	**273**	T			T	23 34 01.1	
	baz=120,slow=74,SNR=12								
BVAR	**Borovoye Array**	**144.80**	**40**	PKP		PKPbc		21 15 04.5	+0.3
	comp=Z,0.5nm,0.6s,baz=357,slow=9.2,SNR=5.0								
ZALV	**Zalesovo Beam**	**151.43**	**29**	PKPbc			**PKiKP**	21 15 22.4	0.0
	comp=Z,0.4nm,0.3s,baz=308,slow=2.0,SNR=4.2								
ZALV					pPKPbc		**pPKPbc**	21 15 43.3	+2.4
	comp=Z,0.9nm,0.5s,baz=305,slow=4.1,SNR=4.1								
MKAR	**Makanchi Array**	**154.46**	**44**	PKPbc			**PKiKP**	21 15 31.4	+2.4
	comp=Z,0.3nm,0.8s,baz=24,slow=2.1,SNR=2.1								

*NEIC **28** 21:06:01.4±1.4, 7.3S±0.2×107.5E±0.1, h1$^{km}_{\pm}$5km, mb4.1/8, Error ellipse: s-maj=31.5km s-min=5.0km az=216.0*

*IDC **28** 21:06:02.5±3.7, 7.28S×107.60E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.5/41, mbtmp3.8/4, MS3.3/4, Ms1 3.3/4, ms1mx2.8/46, Error ellipse: s-maj=89.4km s-min=8.0km az=79.0*

*DJA **28** 21:06:02.5±0.3, 7.3°S±3.1°×10.8°E±0.7°, h10^{km}, M3.8/10, mb4.2/1, MLv3.5/10*

ISC 28 21:06:03.1±0.7, 7.26S±0.04×107.67E±0.04, h10^{km}, n33, σ1$08/32, **mb4.1/7, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.33**	**153**	P	**Pg**	**21 06 09.0**	**-0.8**
CISI				S	**Sg**	**21 06 13.9**	**-0.3**
CISI	**Cisompet, Garu**	**0.33**	**153**	Pg	**Pg**	**21 06 09.2**	**-0.6**
CISI				Sg	**Sg**	**21 06 14.3**	**+0.1**
LEM	**Lembang**	**0.43**	**354**	Pg	**Pg**	**21 06 10.7**	**-0.9**
	124nm,0.3s,baz=301,slow=3.5,SNR=74						
LEM				Lg	Lg	21 06 17.6	
	628nm,0.3s,baz=69,slow=23,SNR=21						
LEM	**Lembang**	**0.43**	**354**	P	**Pg**	**21 06 10.8**	**-0.9**
LEM				S	**Sg**	**21 06 17.5**	**+0.1**
SKJI	**Sukabumi**	**1.13**	**283**	P	**Pn**	**21 06 25.1**	**+0.1**
DBJI	**Dramaga**	**1.15**	**308**	P	**Pn**	**21 06 24.8**	**-0.5**
KPJI	**Karang Pucung**	**1.26**	**93**	P	**Pn**	**21 06 24.5**	**-2.3**
SBJI	**Serang**	**1.90**	**306**	P	**Pg**	**21 06 40.4**	**+0.8**
SMRI	**Semarang**	**2.76**	**86**	P	**Pn**	**21 06 58.5**	**+2.4**
SMRI	**Semarang**	**2.76**	**86**	Pn	**Pn**	**21 06 47.1**	**-0.5**
UGM	**Wanagama**	**2.91**	**103**	P	**Pn**	**21 06 48.9**	**-0.6**
UGM	**Wanagama**	**2.91**	**103**		**Pn**	**21 06 50.8**	**+1.3**
KASI	**Kota Agung**	**3.59**	**299**	P	**Pb**	**21 07 07.2**	**+0.5**
KLSI		**3.88**	**311**	P	**Pn**	**21 07 03.3**	**+0.5**
PWJI	**Pagerwojo**	**4.17**	**101**	P	**Pn**	**21 07 06.1**	**-0.8**
PPBI	**Pangkal Pinang**	**5.29**	**343**	P	**Pn**	**21 07 22.1**	**-0.1**
PSI	**Prapat**	**13.26**	**319**	LR	LR	21 15 05.2	
	comp=Z,313nm,18.5s,baz=97,slow=41						
BATI	**Baumata**	**16.08**	**102**	LR	LR	21 17 00.6	
	comp=Z,102nm,18.6s,baz=346,slow=41						
FITZ	**Fitzroy Crossi**	**20.56**	**123**	P	Pn	21 10 44.3	-0.1
	2.9nm,0.8s,baz=325,slow=13,SNR=4.7						
FITZ	**Fitzroy Crossi**	**20.56**	**123**	P	**P**	**21 10 42.5**	**+0.4**
FITZ				IAmb	IAmb	21 10 45.3	
	comp=Z,3.8nm,1.0s						
FAKI	**Fak Fak**	**24.86**	**81**	P	**P**	**21 11 27.1**	**+0.9**
FAKI				IAmb	IAmb	21 11 38.2	
	comp=Z,6.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**26.96**	**341**	LR	LR	21 24 31.9	
	comp=Z,29nm,18.4s,baz=193,slow=41						
WB0	**Warramunga Arr**	**28.75**	**118**	P	**P**	**21 12 00.6**	**-0.7**
WB0				IAmb	IAmb	21 12 14.0	
	comp=Z,2.9nm,1.1s						
WRA	**Warramunga Arr**	**28.77**	**119**	P	**P**	**21 12 01.9**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=292,slow=11,SNR=6.6						
WRA	**Warramunga Arr**	**28.77**	**119**	P	**P**	**21 12 02.4**	**+1.0**
WB2	**Warramunga Arr**	**28.78**	**119**	P	**P**	**21 12 01.9**	**+0.4**
WB2				IAmb	IAmb	21 12 15.2	
	comp=Z,3.6nm,1.0s						
WR0	**Warramunga Arr**	**28.95**	**119**	P	**P**	**21 12 03.9**	**+0.9**
WR0				IAmb	IAmb	21 12 13.4	
	comp=Z,4.7nm,1.1s						
ASAR	**Alice Springs**	**30.00**	**126**	P	**P**	**21 12 13.6**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=316,slow=8.2,SNR=6.5						
ASAR				LR	LR	21 26 10.8	
	comp=Z,33nm,18.2s,baz=68,slow=40						
STKA	**Stephens Creek**	**39.98**	**132**	P	**P**	**21 13 39.5**	**+1.4**
	comp=Z,2.4nm,0.6s,baz=310,slow=8.8,SNR=6.2						
STKA	**Stephens Creek**	**39.98**	**132**	P	**P**	**21 13 38.5**	**+0.3**
TOO	**Toolangi**	**45.66**	**137**	P	**P**	**21 14 23.6**	**-0.6**
WMQ	**Urumqi**	**53.96**	**342**	eP	**P**	**21 15 24.5**	**-2.8**
PRZ	**Przheval'sk**	**56.24**	**334**	P	**P**	**21 15 42.9**	**-1.0**

*NEIC **28** 21:06:27.8±2.3, 16.0S±0.1×174.1W±0.1, h17^{km}±6km, mb4.3/8, Error ellipse: s-maj=21.3km s-min=13.5km az=113.0*

*IDC **28** 21:06:28.0±48.0, 16.38S×174.25W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.6/38, mbtmp3.8/3, MS3.5/1, Ms1 3.4/1, ms1mx2.5/36, Error ellipse: s-maj=907.8km s-min=185.5km az=79.0*

ISC 28 21:06:26.3±0.9, 16.5S±0.1×173.7W±0.1, h10^{km}, n14, σ2$00/13, **mb4.2/8, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.14**	**36**	Pn	**Pn**	**21 07 15.2**	**-0.6**
NIUE	**Niue**	**4.41**	**126**	Pn	**Pb**	**21 07 42.8**	**-1.1**
BFZ	**Birch Farm**	**25.66**	**198**	P	**P**	**21 11 56.6**	**+0.4**
MSWZ	**Moikau Station**	**26.63**	**199**	P	**P**	**21 12 06.5**	**+1.5**
CMWZ	**Cape Campbell**	**27.26**	**200**	P	**P**	**21 12 13.8**	**+3.1**
STKA	**Stephens Creek**	**43.28**	**241**	P	**P**	**21 14 28.2**	**-0.1**
	0.9nm,0.5s,baz=80,slow=12,SNR=1.5						
STKA				LR	LR	21 30 16.7	
	comp=Z,57nm,18.9s,baz=200,slow=33						
WB0	**Warramunga Arr**	**49.31**	**258**	P	**P**	**21 15 14.2**	**-1.8**
WB0				IAmb	IAmb	21 15 28.5	
	comp=Z,1.8nm,0.9s						
WRAB	**Tennant Creek**	**49.34**	**258**	P	**P**	**21 15 12.4**	**-3.8**
WRAB				IAmb	IAmb	21 15 18.7	
	comp=Z,3.5nm,1.1s						
WRA	**Warramunga Arr**	**49.35**	**258**	P	**P**	**21 15 15.1**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=95,slow=7.1,SNR=10						
WRA	**Warramunga Arr**	**49.35**	**258**	IAmb	IAmb	21 15 19.5	
	comp=Z,0.1nm,1.1s						
AS31	**Alice Springs**	**49.53**	**253**	P	**P**	**21 15 17.0**	**-0.6**
AS31				IAmb	IAmb	21 15 18.2	
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**49.53**	**253**	P	**P**	**21 15 17.2**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=88,slow=8.4,SNR=34						
PNTR	**Pine Nut**	**74.86**	**41**	P	**P**	**21 18 09.9**	**+2.4**
PNTR				IAmb	IAmb	21 18 21.7	
	comp=Z,8.7nm,0.9s						
G08A	**Pilot Rock**	**78.95**	**36**	P	**P**	**21 18 31.1**	**+0.8**
G08A				IAmb	IAmb	21 18 31.8	
	comp=Z,7.0nm,1.0s						

*IDC **28** 21:13:05.2±2.1, 2.17N×126.49E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.4/34, mbtmp3.6/3, Error ellipse: s-maj=169.6km s-min=25.5km az=66.0*

*NEIC **28** 21:13:07.7±1.7, 2.39N±0.09×126.63E±0.09, h35^{km}±2km, mb4.1/21, Error ellipse: s-maj=16.9km s-min=12.3km az=228.0*

ISC 28 21:13:07.6±0.6, 2.37N±0.08×126.64E±0.08, h35^{km}, n31, σ1$30/31, **mb3.9/12, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.74**	**155**	Pn	**Pn**	**21 13 37.5**	**+2.0**
LUWI	**Luwuk**	**5.14**	**229**	Pn	**Pn**	**21 14 22.1**	**-0.1**
TOLI2	**Tolitoli**	**5.99**	**258**	Pn	**Pn**	**21 14 36.2**	**+2.4**
KSM	**Kuching**	**16.35**	**267**	Pn	**Pn**	**21 16 53.5**	**-1.2**
JAGI	**Jajag, Banyuwa**	**16.46**	**229**	Pn	**Pn**	**21 16 56.5**	**+0.4**
JAGI				IAmb	IAmb	21 17 01.8	
	comp=Z,26nm,0.8s						
KNRA	**Kununurra**	**18.05**	**173**		**Pn**	**21 17 15.3**	**-0.5**
FITZ	**Fitzroy Crossi**	**20.36**	**183**	P	**P**	**21 17 41.5**	**+0.3**
WB0	**Warramunga Arr**	**23.27**	**161**	P	**P**	**21 18 12.8**	**+0.5**
WB0				IAmb	IAmb	21 18 14.9	
	comp=Z,4.9nm,1.1s						
WRAB	**Tennant Creek**	**23.42**	**161**		**P**	**21 18 14.7**	**+0.9**
WRAB				IAmb	IAmb	21 18 19.9	
	comp=Z,4.7nm,1.1s						
WRA	**Warramunga Arr**	**23.42**	**162**	P	**P**	**21 18 13.9**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=340,slow=11,SNR=17						
WRA	**Warramunga Arr**	**23.42**	**162**	P	**P**	**21 18 13.7**	**-0.1**
WB2	**Warramunga Arr**	**23.43**	**161**	P	**P**	**21 18 14.4**	**+0.6**
WB2				IAmb	IAmb	21 18 16.6	
	comp=Z,3.6nm,0.8s						
WC3	**Warramunga Arr**	**23.45**	**161**	P	**P**	**21 18 14.4**	**+0.4**
WC3				IAmb	IAmb	21 18 16.2	
	comp=Z,4.1nm,0.9s						
WR0	**Warramunga Arr**	**23.50**	**161**	P	**P**	**21 18 15.1**	**+0.5**
JMZ	**Minamidaito 2**	**23.73**	**10**	P	**P**	**21 18 18.4**	**+1.7**
MBWA	**Marble Bar**	**24.34**	**196**	P	**P**	**21 18 23.0**	**+0.6**
PSAC2	**Pilbara Seismi**	**24.68**	**195**	P	**P**	**21 18 24.7**	**-0.8**
PSAC2				IAmb	IAmb	21 18 30.5	
	comp=Z,3.7nm,0.8s						
IPM	**Ipoh**	**25.65**	**275**	P	**P**	**21 18 35.0**	**+0.5**
IPM				IAmb	IAmb	21 18 36.9	
	comp=Z,6.9nm,0.9s						
ASAR	**Alice Springs**	**26.82**	**165**	P	**P**	**21 18 47.1**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=340,slow=7.6,SNR=8.6						
ASAR	**Alice Springs**	**26.82**	**165**	P	**P**	**21 18 44.6**	**-0.3**
FORT	**Forrest**	**32.99**	**178**	P	**P**	**21 19 39.8**	**+0.4**
BBOO	**Buckleboo**	**36.10**	**166**	P	**P**	**21 20 04.7**	**-1.6**

ABKAR	**Akbulak array**	**43.56**	**359**	P	**P**	**21 45 54.7**	**+0.6**
ABKAR				IAmb	IAmb	21 46 02.5	
	comp=Z,18nm,1.8s						
ABKAR	**Akbulak array**	**43.56**	**359**	P	**P**	**21 45 54.5**	**+0.3**
AB04	**Akbulak array**	**43.56**	**359**	P	**P**	**21 45 53.9**	**-0.2**
AB02	**Akbulak array**	**43.56**	**359**	P	**P**	**21 45 54.1**	**-0.1**
AB06	**Akbulak array**	**43.56**	**359**	P	**P**	**21 45 54.0**	**-0.2**
AB09	**Akbulak array**	**43.56**	**359**	P	**P**	**21 45 53.8**	**-0.4**
AB05	**Akbulak array**	**43.58**	**359**	P	**P**	**21 45 54.3**	**+0.1**
WMQ	**Urumqi**	**44.67**	**27**	P	**P**	**21 46 04.1**	**+0.8**
MK31	**Makanchi Array**	**44.93**	**20**	P	**P**	**21 46 04.1**	**-1.2**
MKAR	**Makanchi Array**	**44.93**	**20**	P	**P**	**21 46 05.0**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=201,slow=7.9,SNR=5.8						
MKAR				LR	LR	22 06 34.7	
	comp=Z,51nm,18.8s,baz=220,slow=38						
XMIS	**Christmas Isla**	**47.05**	**110**	P	**P**	**21 46 21.0**	**-1.5**
ALN	**Alexandroupoli**	**47.18**	**323**	P	**P**	**21 46 21.8**	**-1.2**
ALN				IAmb	IAmb	21 46 30.4	
	comp=Z,5.8nm,1.1s						
KURK	**Kurchatov**	**47.31**	**15**	P	**P**	**21 46 24.6**	**+0.7**
KURK				IAmb	IAmb	21 48 10.2	
	comp=Z,8.3nm,1.4s						
CISI	**Cisompet, Garu**	**48.30**	**105**	P	**P**	**21 46 31.1**	**-1.2**
AGG	**Agios Georgios**	**48.39**	**319**	P	**P**	**21 46 31.4**	**-1.1**
BOSA	**Boshof**	**48.49**	**224**	LR	LR	22 05 32.3	
	comp=Z,137nm,18.6s,baz=21,slow=34						
MLR	**Muntele Rosu**	**50.19**	**328**	P	**P**	**21 46 46.6**	**+0.2**
MLR				IAmb	IAmb	21 46 51.1	
	comp=Z,6.7nm,1.1s						
ARU	**Arti**	**50.77**	**358**	P	**P**	**21 46 50.1**	**-0.3**
ARU				IAmb	IAmb	21 46 51.1	
	comp=Z,4.3nm,0.8s						
ZAA0	**Zalesovo Array**	**51.93**	**18**	P	**P**	**21 46 57.9**	**-1.1**
ZALV	**Zalesovo Beam**	**51.93**	**18**	P	**P**	**21 46 57.8**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=205,slow=9.2,SNR=5.1						
ZALV				LR	LR	22 09 20.7	
	comp=Z,68nm,21.0s,baz=236,slow=36						
ZALV	**Zalesovo Beam**	**51.93**	**18**	P	**P**	**21 46 58.0**	**-1.0**
BURAR	**Bucovina Array**	**51.99**	**330**	P	**P**	**21 46 58.8**	**-0.9**
BUR08	**Bucovina Ar. S**	**52.01**	**330**	P	**P**	**21 46 59.4**	**-0.5**
BUR08				IAmb	IAmb	21 48 07.0	
	comp=Z,20nm,1.9s						
AKASG	**Malin Array Be**	**52.32**	**335**	P	**P**	**21 47 01.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=144,slow=6.8,SNR=1.9						
AKASG				LR	LR	22 11 12.6	
	comp=Z,51nm,19.4s,baz=140,slow=38						
XAN	**Xi'an**	**52.44**	**51**	P	**P**	**21 47 02.6**	**-0.7**
XAN				IAmb	IAmb	21 47 09.8	
	comp=Z,8.0nm,1.3s						
MURB	**Monte Urbino**	**56.91**	**319**	P	**P**	**21 47 32.8**	**-2.9**
SONM	**Songino Array**	**57.07**	**35**	P	**P**	**21 47 36.1**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=229,slow=6.8,SNR=6.1						
SONM				LR	LR	22 12 51.4	
	comp=Z,104nm,18.2s,baz=204,slow=37						
SONM	**Songino Array**	**57.07**	**35**	IAmb	IAmb	21 47 41.0	
	comp=Z,3.1nm,1.5s						
SUW	**Suwalki**	**57.28**	**334**	P	**P**	**21 47 35.5**	**-2.4**
SUW				IAmb	IAmb	21 47 38.8	
	comp=Z,14nm,0.9s						
MORC	**Moravsky Berou**	**57.30**	**328**	P	**P**	**21 47 37.2**	**-1.0**
MORC				IAmb	IAmb	21 48 03.7	
	comp=Z,12nm,1.5s						
TLY	**Talaya**	**57.82**	**30**	P	**P**	**21 47 41.9**	**0.0**
TLY				IAmb	IAmb	21 48 39.8	
	comp=Z,5.3nm,1.1s						
KNMB	**Chin-men Tao**	**57.93**	**65**	P	**P**	**21 47 41.6**	**-1.4**
GERES	**GERESS Array B**	**58.90**	**325**	LR	LR	22 13 28.8	
	comp=Z,49nm,18.2s,baz=124,slow=36						
TORD	**Torodi Ar. Bea**	**59.08**	**282**	P	**P**	**21 47 52.5**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=90,slow=4.0,SNR=5.9						
TORD				LR	LR	22 14 13.6	
	comp=Z,25nm,18.0s,baz=70,slow=37						
SQTA	**Sankt Quirin**	**59.56**	**323**	*eP*	**P**	**21 47 53.9**	**-0.3**
	comp=Z,3.0nm,0.7s						
MOTA	**Moosalm**	**59.68**	**323**	*eP*	**P**	**21 47 54.5**	**-0.5**
	comp=Z,3.7nm,0.9s						
SENIN	**Lac Senin/Sane**	**61.60**	**321**	P	**P**	**21 48 07.1**	**-1.1**
SENIN				IAmb	IAmb	21 48 09.8	
	comp=Z,8.9nm,0.8s						
FINES	**FINESS Array B**	**61.60**	**342**	P	**P**	**21 48 05.9**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=112,slow=15,SNR=2.2						
FINES				LR	LR	22 16 38.0	
	comp=Z,71nm,19.9s,baz=156,slow=38						
YOJ	**Yonaguni jima**	**62.10**	**65**	P	**P**	**21 48 10.1**	**-1.6**
DBIC	**Dimbokro**	**65.64**	**275**	P	**P**	**21 48 37.9**	**+2.7**
	comp=Z,2.6nm,0.8s,baz=18,slow=10,SNR=3.1						
DBIC				LR	LR	22 17 02.0	
	comp=Z,43nm,18.3s,baz=80,slow=36						
NRIK	**Noril'sk**	**66.02**	**10**	LR	LR	22 19 51.2	
	comp=Z,113nm,20.8s,baz=200,slow=38						
NOA	**NORSAR Array B**	**66.70**	**336**	LR	LR	22 19 38.6	
	comp=Z,32nm,21.8s,baz=270,slow=38						
ESDC	**Sonseca Array**	**67.42**	**311**	P	**P**	**21 48 46.6**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=80,slow=4.0,SNR=4.7						
ARCES	**ARCESS Array B**	**68.01**	**347**	LR	LR	22 19 56.0	
	comp=Z,39nm,20.4s,baz=5.0,slow=37						
ARD8	**ARCESS Array S**	**68.02**	**347**	P	**P**	**21 48 49.9**	**+0.5**
KSRS	**Korea Array**	**68.21**	**52**	LR	LR	22 19 34.5	
	comp=Z,34nm,21.4s,baz=155,slow=37						
DSB	**Dublin**	**72.23**	**324**	P	**P**	**21 49 15.4**	**-0.1**
USRK	**Ussuriysk Ar.**	**72.40**	**45**	LR	LR	22 22 40.6	
	comp=Z,83nm,18.6s,baz=215,slow=37						
MAW	**Mawson**	**73.00**	**179**	LR	LR	22 15 39.3	
	comp=Z,55nm,20.4s,baz=57,slow=31						
KLR	**Kul'dur**	**73.15**	**40**	LR	LR	22 21 57.5	
	comp=Z,98nm,21.6s,baz=286,slow=36						
WRA	**Warramunga Arr**	**76.18**	**112**	P	**P**	**21 49 40.1**	**+0.9**
	comp=Z,3.1nm,1.0s,baz=290,slow=5.1,SNR=14						
WRA	**Warramunga Arr**	**76.18**	**112**	P	**P**	**21 49 40.1**	**+0.9**
WB2	**Warramunga Arr**	**76.19**	**112**	P	**P**	**21 49 39.1**	**-0.2**
WB2				IAmb	IAmb	21 49 48.0	
	comp=Z,5.0nm,0.8s						
ASAR	**Alice Springs**	**76.54**	**116**	P	**P**	**21 49 42.0**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=290,slow=5.7,SNR=24						
ASAR				LR	LR	22 18 22.8	
	comp=Z,236nm,21.9s,baz=22,slow=32						
ASAR	**Alice Springs**	**76.54**	**116**	P	**P**	**21 49 42.2**	**+1.0**
STKA	**Stephens Creek**	**84.80**	**123**	P	**P**	**21 50 26.4**	**+1.2**
	comp=Z,2.6nm,0.9s,baz=224,slow=9.7,SNR=3.7						
STKA	**Stephens Creek**	**84.80**	**123**	P	**P**	**21 50 25.5**	**+0.2**
STKA				IAmb	IAmb	21 51 11.1	
	comp=Z,7.2nm,1.9s						
PETK	**Petropavlovsk-**	**89.50**	**37**	LR	LR	22 33 46.4	
	comp=Z,71nm,19.0s,baz=253,slow=38						
PDAR	**Pinedale Array**	**131.17**	**351**	PKP	**PKiKP**	**21 57 04.2**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=40,slow=4.7,SNR=2.9						

*BJI **28** 22:03:44.9±0.0, 3.°61S×144.°69E, h18km, mB5.1/12, mb4.8/10, Ms4.8/7, Ms7 4.6/3*
*IDC **28** 22:03:49.3±0.8, 3.°46S×144.°95E, h0km, mb4.1/12, mb1 4.3/16, mb1mx4.1/35, mbtmp4.2/16, ML2.3/2, MS3.5/11, Ms1 3.6/11, ms1mx3.3/34, Error ellipse: s-maj=23.1km s-min=13.1km az=98.0*
*DJA **28** 22:03:51.4±0.5, 4.°S±11.°×14.°5E±.°, h10km, M4.5/6, mb4.8/6, ML4.4/1*
*NEIC **28** 22:03:53.0±1.8, 3.°36S±0.°07×145.°04E±0.°06, h45km±6km, mb4.5/28, Error ellipse: s-maj=11.3km s-min=8.6km az=154.0*

ISC 28 22:03:51.2±0.5, **3.°41S**±0.°06×**145.°04E**±0.°06, **h22**km, **n67,** σ1**§50**/63, **mb4.5**/25, **MS3.9**/12, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**2.69**	**60**	Pn	**Pn**	**22 04 34.1**	**+0.9**
JAY	**Jayapura**	**4.42**	**281**	Pn	**Pn**	**22 04 56.6**	**-0.5**
	0.7nm,0.3s,baz=360,slow=21,SNR=1.9						
JAY				LR	LR	22 06 39.6	
	comp=Z,977nm,18.6s,baz=60,slow=39						
PMG	**Port Moresby**	**6.32**	**161**	Pn	**Pn**	**22 05 23.4**	**+0.2**
	1.8nm,0.3s,baz=222,slow=8.2,SNR=4.2						
PMG				Sn	**Sn**	**22 06 34.0**	**-0.7**
	2.0nm,0.3s,baz=351,slow=14,SNR=3.7						
PMG				LR	LR	22 08 03.1	
	comp=Z,917nm,19.1s,baz=338,slow=40						
PMG	**Port Moresby**	**6.32**	**161**	Pn	**Pn**	**22 05 24.0**	**+0.8**
SMPI	**Sarmi**	**6.48**	**282**	P	**Pb**	**22 05 45.9**	**+2.6**
KRVT	**Keravat (AS076**	**7.03**	**98**	LR	LR	22 07 41.2	
	comp=Z,424nm,19.3s,baz=279,slow=33						
RABL	**Rabaul**	**7.15**	**96**	Pn	**Pn**	**22 05 35.2**	**+0.6**
COEN	**Coen**	**10.64**	**190**	Pn	**Pn**	**22 06 24.9**	**+2.3**
HNR	**Honiara**	**15.97**	**113**	Pn	**P**	**22 07 37.5**	**-0.7**
	5.8nm,0.3s,baz=152,slow=14,SNR=3.6						
HNR				LR	LR	22 12 48.7	
	comp=Z,125nm,20.2s,baz=277,slow=34						
HNR	**Honiara**	**15.97**	**113**		**Pn**	**22 07 36.4**	**+1.7**
MTN	**Manton Dam**	**16.64**	**235**	Pn	**Pn**	**22 07 43.5**	**+0.2**
TNTI	**Ternate**	**18.15**	**283**	P	**Pn**	**22 08 01.6**	**-0.5**
WB0	**Warramunga Arr**	**19.30**	**212**	P	**P**	**22 08 15.1**	**+0.2**
WR0	**Warramunga Arr**	**19.38**	**211**	P	**P**	**22 08 16.1**	**+0.3**
WR0				IAmb	IAmb	22 08 17.2	
	comp=Z,19nm,1.1s						
WRAB	**Tennant Creek**	**19.46**	**212**	P	**P**	**22 08 16.8**	**+0.2**
WRAB				IAmb	IAmb	22 08 18.5	
	comp=Z,31nm,1.0s						
WB2	**Warramunga Arr**	**19.46**	**212**	P	**P**	**22 08 17.1**	**+0.3**
WB2				IAmb	IAmb	22 08 19.3	
	comp=Z,26nm,0.8s						
WC3	**Warramunga Arr**	**19.47**	**212**	P	**P**	**22 08 17.4**	**+0.6**
WC3				IAmb	IAmb	22 08 19.4	
	comp=Z,15nm,0.8s						
WRA	**Warramunga Arr**	**19.47**	**212**	P	**Pn**	**22 08 17.5**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=38,slow=11,SNR=133						
WRA				Sn	**S**	**22 11 53.1**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=29,slow=21,SNR=7.4						
WRA	**Warramunga Arr**	**19.47**	**212**	P	**P**	**22 08 16.1**	**-0.7**
KNRA	**Kununurra**	**20.13**	**232**	P	**P**	**22 08 24.5**	**+0.5**
KNRA				IAmb	IAmb	22 08 25.1	
	comp=Z,17nm,0.6s						
SOEI	**Soe**	**21.57**	**252**	P	**P**	**22 08 41.0**	**+1.3**
	comp=Z,39nm,0.7s						
SOEI	**Soe**	**21.57**	**252**	P	**P**	**22 08 40.3**	**+0.6**
DAV	**Davao City (W)**	**22.04**	**298**	LR	LR	22 17 10.1	
	comp=Z,77nm,19.0s,baz=84,slow=36						
BATI	**Baumata**	**22.26**	**251**	P	**P**	**22 08 48.0**	**+0.9**
	comp=Z,29nm,0.7s,baz=169,slow=1.0,SNR=9.6						
BATI	**Baumata**	**22.26**	**251**	P	**P**	**22 08 48.6**	**+1.5**
	comp=Z,36nm,0.9s						
LUWI	**Luwuk**	**22.38**	**276**	P	**P**	**22 08 47.9**	**-0.4**
LUWI				IAmb	IAmb	22 08 58.2	
	comp=Z,17nm,1.0s						
EIDS	**Eidsvold**	**22.59**	**166**	P	**P**	**22 08 50.3**	**-0.2**
AS31	**Alice Springs**	**22.84**	**207**	P	**P**	**22 08 53.3**	**+0.2**
ASAR	**Alice Springs**	**22.84**	**207**	P	**P**	**22 08 53.8**	**+0.7**
	comp=Z,10nm,0.9s,baz=37,slow=8.5,SNR=78						
ASAR				S	**S**	**22 13 02.4**	**+0.9**
	comp=Z,1.3nm,1.0s,baz=24,slow=18,SNR=4.3						
ASAR	**Alice Springs**	**22.84**	**207**	P	**P**	**22 08 53.0**	**-0.1**
MMRI	**Maumere**	**23.26**	**256**	P	**P**	**22 08 55.7**	**-1.7**
MMRI				IAmb	IAmb	22 08 59.3	
	comp=Z,19nm,0.8s						
APSI	**Ampana**	**23.50**	**276**	P	**P**	22 09 08.8	+8.9
FITZ	**Fitzroy Crossi**	**23.96**	**231**	P	**P**	**22 09 04.0**	**-0.2**
	comp=Z,15nm,0.7s,baz=46,slow=8.7,SNR=61						
FITZ				LR	LR	22 18 25.0	
	comp=Z,137nm,19.6s,baz=53,slow=37						
FITZ	**Fitzroy Crossi**	**23.96**	**231**	P	**P**	**22 09 04.8**	**+0.5**
FITZ				IAmb	IAmb	22 09 12.2	
	comp=Z,16nm,0.7s						
TOLI2	**Tolitoli**	**24.66**	**280**	P	**P**	**22 09 10.5**	**-0.2**
TOLI2				IAmb	IAmb	22 09 16.3	
	comp=Z,17nm,0.8s						
BASI	**Baing, Sumba**	**25.20**	**253**	P	**P**	**22 09 17.7**	**+2.1**
KAPI	**Kappang**	**25.27**	**266**	LR	LR	22 22 12.1	
	comp=Z,45nm,18.2s,baz=78,slow=44						
STKA	**Stephens Creek**	**28.50**	**186**	P	**P**	**22 09 45.4**	**+0.2**
	comp=Z,3.1nm,0.6s,baz=3.4,slow=9.0,SNR=9.6						
STKA	**Stephens Creek**	**28.50**	**186**	P	**P**	**22 09 44.4**	**-0.8**
KKM	**Kota Kinabalu**	**30.28**	**288**	P	**P**	**22 09 58.5**	**-2.7**
MBWA	**Marble Bar**	**30.29**	**232**	P	**P**	**22 09 59.4**	**-1.7**
PSAD2	**Pilbara Seismi**	**30.35**	**231**	P	**P**	**22 10 00.2**	**-1.5**
PSAD2				IAmb	IAmb	22 10 07.3	
	comp=Z,12nm,1.1s						
PSA00	**Pilbara Seismi**	**30.42**	**232**	P	**P**	**22 10 01.9**	**-0.3**
BBOO	**Buckleboo**	**30.44**	**195**	P	**P**	**22 10 02.8**	**+0.5**
BBOO				IAmb	IAmb	22 10 11.7	
	comp=Z,18nm,1.1s						
FORT	**Forrest**	**31.60**	**209**	P	**P**	**22 10 12.7**	**+0.2**
MORW	**Morawa**	**37.55**	**224**	P	**P**	**22 11 03.4**	**-0.6**
HIZ	**Hauiti**	**44.27**	**146**	P	**P**	**22 11 56.3**	**-3.0**
IPM	**Ipoh**	**44.67**	**280**	P	**P**	**22 11 59.6**	**-3.4**
IPM				IAmb	IAmb	22 12 16.2	
	comp=Z,4.5nm,0.8s						
TUWZ	**Tuamarina**	**45.89**	**150**	P	**P**	**22 12 11.3**	**-0.8**
USRK	**Ussuriysk Ar.**	**48.82**	**348**	P	**P**	**22 12 36.5**	**+1.7**
	comp=Z,2.2nm,0.7s,baz=151,slow=6.3,SNR=1.9						
KMI	**Kunming**	**49.88**	**307**	*eP*	P	22 12 39.0	-4.6
KMI				pP	pP	22 12 43.8	-6.2
KMI				sP	pwP	22 12 50.5	-1.6
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,86nm,3.8s						
KMI				LR	LR		
	comp=Z,99nm,4.5s						
KMI				LR	LR		
	comp=Z,100nm,4.2s						
KMI				LR	LR		
	comp=Z,78nm,4.8s						
CMAR	**Chiang Mai Arr**	**50.32**	**297**	P	**P**	**22 12 49.2**	**+2.4**
	comp=Z,0.4nm,0.4s,baz=22,slow=20,SNR=2.1						
CMAR				LR	LR	22 37 02.2	
	comp=Z,16nm,18.1s,baz=186,slow=40						
CMAR	**Chiang Mai Arr**	**50.32**	**297**	P	**P**	**22 12 45.5**	**-1.3**
CD2	**Chengdu**	**52.08**	**314**	P	P	22 12 54.3	-5.6
CD2				LR	LR		
	comp=Z,320nm,13.9s						
CD2				LR	LR		
	comp=Z,390nm,14.5s						
CD2				LR	LR		
	comp=Z,380nm,10.6s						
HHC	**Hu-ho-hao-te**	**53.62**	**329**	*eP*	P	22 13 07.0	-4.1
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,190nm,5.5s						
HHC				LR	LR		
	comp=Z,150nm,15.6s						
HHC				LR	LR		
	comp=Z,140nm,15.1s						
LZH	**Lanzhou**	**54.98**	**319**	*eP*	**P**	**22 13 18.5**	**-2.7**
LZH				pP	pP	22 13 24.3	-3.4
LZH				sP	pwP	22 13 26.8	-3.0
LZH				PP	**PP**	**22 15 23.0**	**-1.6**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,82nm,7.5s						
LZH				LR	LR		
	comp=Z,370nm,14.8s						
LZH				LR	LR		
	comp=Z,370nm,15.0s						
LZH				LR	LR		
	comp=Z,460nm,17.2s						
GTA	**Gaotai**	**59.51**	**320**	*eP*	**P**	**22 13 54.8**	**+1.6**
GTA				pP	pP	22 14 00.0	+0.3
GTA				sP	sP	22 14 02.8	+0.7
GTA				pmax	pmax		
	comp=Z,47nm,5.1s						
GTA				LR	LR		
	comp=Z,56nm,18.2s						
GTA				LR	LR		
	comp=Z,100nm,18.2s						
SONM	**Songino Array**	**61.21**	**331**	P	**P**	**22 14 07.2**	**+2.6**
	comp=Z,0.6nm,0.9s,baz=132,slow=8.0,SNR=3.6						
SONM				LR	LR	22 40 13.4	
	comp=Z,51nm,19.2s,baz=186,slow=36						
TLY	**Talaya**	**65.16**	**333**	LR	LR	22 40 26.0	
	comp=Z,76nm,21.6s,baz=205,slow=34						
WMQ	**Urumqi**	**69.57**	**319**	*eP*	**P**	**22 14 56.3**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,13nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.1s						
WMQ				LR	LR		
	comp=Z,600nm,29.2s						
MKAR	**Makanchi Array**	**74.27**	**321**	P	**P**	**22 15 27.9**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=32,slow=5.1,SNR=2.1						
VNDA	**Vanda**	**74.60**	**176**	P	**P**	**22 15 31.4**	**+3.3**
	comp=Z,0.9nm,0.6s,baz=331,slow=6.0,SNR=14						
ZALV	**Zalesovo Beam**	**75.79**	**328**	P	**P**	**22 15 36.4**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=80,slow=16,SNR=1.6						
ZALV				LR	LR	22 48 10.4	
	comp=Z,63nm,20.9s,baz=92,slow=35						
NRIK	**Noril'sk**	**82.23**	**342**	P	**P**	**22 16 11.2**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=157,slow=4.6,SNR=2.1						
RND	**Reindeer**	**82.57**	**25**	P	**P**	**22 16 09.8**	**-2.6**
RND				IAmb	IAmb	22 16 18.8	
	comp=Z,4.2nm,1.0s						
EYAK	**Cordova Ski Ar**	**82.89**	**28**	P	**P**	**22 16 13.0**	**-1.0**
EYAK				IAmb	IAmb	22 16 26.9	
	comp=Z,8.5nm,1.2s						
ILAR	**Eielson Array**	**83.89**	**24**	P	**P**	**22 16 19.2**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=255,slow=5.5,SNR=7.8						

*NEIC **28** 22:33:37.0±1.6, 20.°3S±0.°1×177.°66W±0.°06, h385km±8km, mb4.0/25, Error ellipse: s-maj=17.5km s-min=7.4km az=166.0*
*IDC **28** 22:33:40.2±5.0, 20.°24S×177.°75W, h418km±53km, mb3.3/8, mb1 3.5/9, mb1mx3.2/40, mbtmp4.1/9, Error ellipse: s-maj=27.6km s-min=15.9km az=83.0*

ISC 28 22:33:38.0±0.6, **20.°17S**±0.°09×**177.°58W**±0.°07, **h400**km, **n45,** σ1**§29**/44, **mb3.8**/17, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.79**	**300**	Pn	**Pn**	**22 34 56.3**	**-1.7**
NIUE	**Niue**	**7.30**	**83**	Pn	**Pn**	**22 35 24.5**	**-0.5**
NIUE				S	**S**	**22 36 49.4**	**-3.1**
DZM	**Mont Dzumac**	**15.03**	**260**	P	**P**	**22 36 51.6**	**+0.8**
OUZ	**Omahuta**	**16.89**	**206**	P	**P**	**22 37 08.4**	**-2.2**
OUZ				IAmb	IAmb	22 37 13.8	
	comp=Z,7.0nm,1.0s						
MXZ	**Matakaoa Point**	**17.70**	**191**	P	**P**	**22 37 19.1**	**0.0**
URZ	**Urewera**	**18.61**	**193**	P	**P**	**22 37 27.1**	**-1.7**
	comp=Z,1.7nm,0.3s,baz=35,slow=1.1,SNR=7.4						
URZ				S	**S**	**22 40 36.5**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=165,slow=23,SNR=1.7						
BKZ	**Black Stump Fm**	**19.61**	**194**	P	**P**	**22 37 37.9**	**-0.8**
BKZ				IAmb	IAmb	22 37 38.3	
	comp=Z,6.6nm,1.1s						
BFZ	**Birch Farm**	**21.12**	**193**	P	**P**	**22 37 51.7**	**-0.8**
BFZ				IAmb	IAmb	22 37 54.0	
	comp=Z,18nm,1.1s						
SNZO	**South Karori**	**22.07**	**196**	P	**P**	**22 38 00.2**	**-0.9**
BHW	**Baring Head**	**22.12**	**195**	P	**P**	**22 37 59.8**	**-1.8**
PLWZ	**Palliser**	**22.18**	**194**	P	**P**	**22 37 59.5**	**-2.7**
QRZ	**Quartz Range**	**22.25**	**200**	P	**P**	**22 38 04.2**	**+1.4**
ARMA	**Armidale**	**29.56**	**244**	P	**P**	**22 39 08.8**	**+0.7**
ARMA				IAmb	IAmb	22 39 12.4	
	comp=Z,5.5nm,1.1s						
CTA	**Charters Tower**	**33.91**	**264**	P	**P**	**22 39 45.5**	**-0.2**
	comp=Z,4.2nm,0.7s,baz=107,slow=11,SNR=5.3						
CTAO	**Charters Tower**	**33.91**	**264**	P	**P**	**22 39 45.5**	**-0.2**
CTAO				IAmb	IAmb	22 39 47.9	
	comp=Z,11nm,1.1s						
TOO	**Toolangi**	**36.41**	**234**	P	**P**	**22 40 06.1**	**-0.4**
TOO				IAmb	IAmb	22 40 10.2	
	comp=Z,3.5nm,0.8s						
COEN	**Coen**	**37.95**	**273**	P	**P**	**22 40 18.9**	**-0.6**
COEN				IAmb	IAmb	22 40 21.6	
	comp=Z,4.9nm,1.0s						
STKA	**Stephens Creek**	**38.28**	**244**	P	**P**	**22 40 22.3**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=104,slow=12,SNR=4.6						
STKA	**Stephens Creek**	**38.28**	**244**	IAmb	IAmb	22 40 22.6	
	comp=Z,0.4nm,0.7s						
BBOO	**Buckleboo**	**43.05**	**243**	P	**P**	**22 41 00.1**	**-0.3**
WR0	**Warramunga Arr**	**44.84**	**262**	P	**P**	**22 41 14.3**	**-0.4**
AS31	**Alice Springs**	**44.98**	**256**	P	**P**	**22 41 15.5**	**-0.3**
ASAR	**Alice Springs**	**44.98**	**256**	P	**P**	**22 41 15.2**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=96,slow=8.0,SNR=18						
WB0	**Warramunga Arr**	**45.01**	**262**	P	**P**	**22 41 15.1**	**-0.9**
WB2	**Warramunga Arr**	**45.02**	**262**	P	**P**	**22 41 15.2**	**-0.9**
WB2				IAmb	IAmb	22 41 16.2	
	comp=Z,4.4nm,1.1s						
WRA	**Warramunga Arr**	**45.03**	**262**	P	**P**	**22 41 14.8**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=97,slow=7.4,SNR=9.3						
WRA	**Warramunga Arr**	**45.03**	**262**	P	**P**	**22 41 15.1**	**-1.2**
MTN	**Manton Dam**	**49.55**	**270**	P	**P**	**22 41 49.0**	**-1.6**
FORT	**Forrest**	**49.78**	**246**	P	**P**	**22 41 51.9**	**-0.2**
KNRA	**Kununurra**	**51.07**	**266**	P	**P**	**22 42 00.9**	**-0.9**
KNRA				IAmb	IAmb	22 42 08.1	
	comp=Z,7.8nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.46**	**262**	P	**P**	**22 42 18.9**	**-0.2**
	comp=Z,1.5nm,0.9s,baz=140,slow=16,SNR=2.2						
FITZ	**Fitzroy Crossi**	**53.46**	**262**	P	**P**	**22 42 18.9**	**-0.2**
VNDA	**Vanda**	**58.27**	**185**	P	**P**	**22 42 53.4**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=355,slow=7.0,SNR=9.2						
VNDA	**Vanda**	**58.27**	**185**	P	**P**	**22 42 53.8**	**+1.9**
QSPA	**South Pole Qui**	**69.90**	**180**	P	**P**	**22 44 08.7**	**+1.8**
QSPA				IAmb	IAmb	22 44 10.3	
	comp=Z,1.9nm,0.7s						
MJAR	**Matsushiro Arr**	**70.18**	**323**	P	**P**	**22 44 08.4**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=158,slow=5.7,SNR=4.3						
ADK	**Adak**	**71.75**	**1**	P	**P**	**22 44 18.7**	**+1.0**
N25K	**Chitina, Valde**	**85.66**	**15**	P	**P**	**22 45 33.8**	**+1.4**
N25K				IAmb	IAmb	22 45 34.5	
	comp=Z,3.4nm,1.0s						
ILAR	**Eielson Array**	**87.91**	**13**	P	**P**	**22 45 43.1**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=213,slow=5.8,SNR=8.5						
VNA3	**Neumayer Olymp**	**88.44**	**176**	P

JAM	**Amami Oshima**	**1.09**	**35**	P		**Pb**	**22 38 14.2**	**-0.6**	
JAM				eS		**Sb**	**22 38 28.7**	**-0.2**	
JZK	**Kikaishima**	**1.25**	**50**	P		**Pg**	**22 38 18.8**	**+0.6**	
JNTH	**Nagotoyohara**	**1.26**	**218**	P		**Pb**	**22 38 17.7**	**+0.1**	
JNTH				eS		**Sn**	**22 38 34.3**	**+0.5**	
JTAJ	**Takarajima**	**1.65**	**10**	P		**Pn**	**22 38 22.1**	**-0.5**	
JTAJ				eS		**Sn**	**22 38 41.7**	**-1.9**	
JAGN	**Aguni-jima**	**1.73**	**238**	P		**Pn**	**22 38 23.9**	**+0.2**	
JAGN				eS		**Sn**	**22 38 45.5**	**0.0**	
JKE	**Kume jima 2**	**2.22**	**238**	P		**Pn**	**22 38 30.8**	**+0.4**	
JKE				eS		**Sn**	**22 38 58.6**	**+1.1**	
JNN	**Nakanoshima**	**2.47**	**20**	P		**Pn**	**22 38 34.0**	**+0.1**	
JNN				eS		**Sn**	**22 39 03.6**	**-0.2**	
JKDJ	**Kitadaitoujima**	**2.66**	**125**	P		**Pn**	**22 38 36.5**	**0.0**	
JKDJ				eS		**Sn**	**22 39 06.8**	**-1.7**	
JMZ	**Minamidaito 2**	**2.69**	**128**	P		**Pn**	**22 38 36.8**	**-0.1**	
JMZ				eS		**Sn**	**22 39 07.9**	**-1.2**	
JMZ	**Minamidaito 2**	**2.69**	**128**			**Pb**	**22 38 40.7**	**-1.3**	
JMZ				Sn		**Sn**	**22 39 09.9**	**+0.8**	
JYAK	**Yakushimahirau**	**3.06**	**27**	P		**Pn**	**22 38 42.5**	**+0.5**	
JYAK				eS		**Sn**	**22 39 17.9**	**-0.4**	
JKC	**Kuchinoerabu**	**3.15**	**21**	P		**Pn**	**22 38 43.7**	**+0.5**	
JMTN	**Minamitane**	**3.37**	**31**	P		**Pn**	**22 38 47.7**	**+1.5**	
JSU	**Suzuyama**	**4.20**	**19**	Pn		**Pn**	**22 38 59.4**	**+1.7**	
JNU	**Nakatsue**	**5.84**	**17**	P		**Pn**	**22 39 23.8**	**+3.4**	
	3.6nm,0.3s,baz=185,slow=3.9,SNR=14								
JNU	**Nakatsue**	**5.84**	**17**	Pn		**Pn**	**22 39 22.3**	**+2.0**	
YOJ	**Yonaguni jima**	**6.10**	**241**	Pn		**Pn**	**22 39 25.0**	**+1.3**	
JTU	**Tsushima**	**7.00**	**3**	Pn		**Pn**	**22 39 38.2**	**+2.2**	
YHNB	**Yeheng**	**7.32**	**249**	Pn		**Pn**	**22 39 41.0**	**+0.3**	
NACB	**Ninganchiao**	**7.36**	**245**	Pn		**Pn**	**22 39 41.3**	**+0.2**	
JMN	**Monobe**	**7.54**	**34**	Pn		**Pn**	**22 39 46.0**	**+2.5**	
YULB	**Yu-li**	**7.99**	**241**	Pn		**Pn**	**22 39 49.0**	**-0.9**	
SSLB	**Suanglung**	**8.06**	**244**			**Pn**	**22 39 50.9**	**+0.1**	
JHS	**Saijyo**	**8.29**	**25**	Pn		**Pn**	**22 39 55.6**	**+1.8**	
TPUB	**Ta-pu**	**8.56**	**242**	Pn		**Pn**	**22 39 58.3**	**+0.6**	
JWT	**Wachi**	**9.53**	**34**	Pn		**Pn**	**22 40 14.9**	**+4.1**	
NJ2	**Nanjing**	**9.82**	**300**	eP		**Pn**	**22 40 14.5**	**-0.3**	
NJ2				pmax	pmax				
	comp=Z,9.0nm,0.5s								
KSRS	**Korea Array**	**9.94**	**356**	P		**Pn**	**22 40 19.2**	**+2.8**	
	0.2nm,0.3s,baz=216,slow=20,SNR=3.5								
KSRS				LR		LR	22 44 28.4		
	comp=Z,246nm,19.4s,baz=174,slow=39								
MJAR	**Matsushiro Arr**	**11.97**	**39**	P		Pn	22 40 51.0	+6.7	
	0.1nm,0.3s,baz=231,slow=14,SNR=2.6								
MJAR				LR		LR	22 45 51.6		
	comp=Z,114nm,18.4s,baz=230,slow=39								
BJT	**Baijiatuau**	**16.33**	**323**			**Pn**	**22 41 42.7**	**-0.1**	
BJI	**Beijing**	**16.34**	**323**	P		**Pn**	**22 41 41.5**	**-1.4**	
BJI				pmax	pmax				
	comp=Z,6.0nm,1.0s								
BJI				LR	LR				
	comp=N,170nm,14.4s								
BJI				LR	LR				
	comp=E,220nm,16.1s								
ENH	**Enshi**	**17.21**	**284**	Pn		**Pn**	**22 41 52.7**	**-1.4**	
XAN	**Xi'an**	**18.33**	**296**	P		**Pn**	**22 42 06.3**	**-1.6**	
JEW	**Eniwo**	**18.38**	**30**	P		**Pn**	**22 42 11.0**	**+2.5**	
HHC	**Hu-ho-hao-te**	**19.50**	**317**	eP		**Pn**	**22 42 21.8**	**-0.3**	
HHC				pmax	pmax				
	comp=Z,9.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,110nm,4.0s								
HHC				LR	LR				
	comp=N,320nm,10.3s								
HHC				LR	LR				
	comp=E,270nm,9.6s								
HHC				LR	LR				
	comp=Z,370nm,11.0s								
BTO	**Baotou**	**20.31**	**315**	eP		Pn	22 42 32.3	+0.6	
GUMO	**Guam**	**20.36**	**130**	LR		LR	22 48 53.3		
	comp=Z,120nm,19.1s,baz=59,slow=32								
DAV	**Davao City (W)**	**20.58**	**189**	LR		LR	22 50 34.3		
	comp=Z,38nm,18.5s,baz=314,slow=37								
CD2	**Chengdu**	**22.18**	**285**	P		**P**	**22 42 49.5**	**-0.3**	
CD2				pmax	pmax				
	comp=Z,30nm,1.2s								
YSS	**Yuzh-Sakhalins**	**22.26**	**26**	P		**P**	**22 42 50.5**	**0.0**	
YSS				IAmb	IAmb		22 42 52.7		
	comp=Z,10nm,0.8s								
HIA	**Hailar**	**22.83**	**344**	P		**P**	**22 42 56.6**	**0.0**	
LZH	**Lanzhou**	**22.89**	**298**	eP		**P**	**22 42 56.5**	**-0.9**	
LZH				pP		sP	22 43 07.3	+3.8	
LZH				sP		pP	22 43 13.5	+12	
LZH				PP		**PnPn**	**22 43 26.0**	**+4.1**	
LZH				pmax	pmax				
	comp=Z,22nm,1.1s								
LZH				pmax	pmax				
	comp=Z,130nm,5.0s								
LZH				LR	LR				
	comp=Z,230nm,10.3s								
LZH				LR	LR				
	comp=Z,240nm,11.9s								
LZH				LR	LR				
	comp=Z,260nm,12.5s								
SLVN	**Son La**	**23.54**	**260**	P		**P**	**22 43 02.2**	**-1.9**	
KMI	**Kunming**	**23.54**	**270**	P		**P**	**22 43 03.4**	**-0.9**	
KMI				IAmb	IAmb		22 43 12.4		
	comp=Z,9.3nm,0.8s								
MYLDM	**Lahad Datu**	**24.32**	**206**	P		**P**	**22 43 10.4**	**-0.9**	
MYLDM				IAmb	IAmb		22 43 21.2		
	comp=Z,11nm,0.8s								
KKM	**Kota Kinabalu**	**24.52**	**212**	P		**P**	**22 43 11.5**	**-1.7**	
UBPT	**Khong Chiam**	**24.92**	**246**	P		**P**	**22 43 17.6**	**+0.8**	
ULN	**Ulaanbaatar**	**26.50**	**326**	P		**P**	**22 43 31.8**	**+0.7**	
SONM	**Songino Array**	**26.81**	**325**	P		**P**	**22 43 35.1**	**+1.3**	
	comp=Z,2.2nm,1.1s,baz=124,slow=8.4,SNR=6.1								
SONM	**Songino Array**	**26.81**	**325**	IAmb		IAmb	22 43 42.4		
	comp=Z,2.2nm,1.2s								
GTA	**Gaotai**	**26.88**	**304**	⇑P		**P**	**22 43 35.0**	**+0.5**	
GTA				pP		sP	22 43 43.3	+2.5	
GTA				sP		pP	22 43 47.3	+8.3	
GTA				pmax	pmax				
	comp=Z,7.0nm,1.1s								
GTA				pmax	pmax				
	comp=Z,91nm,4.9s								
GTA				LR	LR				
	comp=Z,140nm,14.2s								
GTA				LR	LR				
	comp=Z,230nm,15.3s								
GTA				LR	LR				
	comp=Z,260nm,14.5s								
CHAI	**Chaiyaphum**	**27.47**	**251**	P		P	22 43 47.6	+7.7	
	comp=Z,8.2nm,0.7s								
LAMP	**Lampang**	**28.32**	**258**	P		**P**	**22 43 49.0**	**+1.6**	
	comp=Z,15nm,0.7s								
CM34	**Chiang Mai Arr**	**28.61**	**259**	P		**P**	**22 43 51.0**	**+1.0**	
CM35	**Chiang Mai Arr**	**28.67**	**259**	P		**P**	**22 43 51.0**	**+0.4**	
CM36	**Chiang Mai Arr**	**28.79**	**258**	P		**P**	**22 43 53.0**	**+1.4**	
CM33	**Chiang Mai Arr**	**28.80**	**259**	P		**P**	**22 43 52.0**	**+0.3**	
CHTO	**Chiang Mai**	**28.80**	**259**	P		**P**	**22 43 51.5**	**-0.2**	
CMAR	**Chiang Mai Arr**	**28.94**	**258**	P		**P**	**22 43 50.6**	**-2.5**	
	comp=Z,0.8nm,0.3s,baz=51,slow=7.1,SNR=8.9								
CMAR				LR		LR	22 57 02.1		
	comp=Z,108nm,18.5s,baz=98,slow=40								
CMAR	**Chiang Mai Arr**	**28.94**	**258**	P		**P**	**22 43 53.3**	**+0.3**	
FAKI	**Fak Fak**	**30.43**	**173**	P		**P**	**22 44 06.5**	**+0.3**	
KSM	**Kuching**	**31.43**	**218**	P		**P**	**22 44 12.3**	**-2.6**	
KSM				IAmb		IAmb	22 44 31.0		
	comp=Z,3.4nm,0.5s								
JAY	**Jayapura**	**31.96**	**157**	LR		LR	22 54 43.0		
	comp=Z,66nm,21.5s,baz=310,slow=31								
PETK	**Petropavlovsk-**	**33.30**	**32**	LR		LR	22 59 59.0		
	comp=Z,34nm,18.1s,baz=257,slow=39								
SURT	**Suratani**	**33.87**	**243**	P		P	22 44 46.0	+10	
KULM	**Kulim**	**34.79**	**236**	P		**P**	**22 44 45.3**	**+1.0**	
KULM				IAmb		IAmb	22 44 47.0		
	comp=Z,8.1nm,1.1s								
H11N2	**WAKE ISLAND Hy**	**35.57**	**94**	T		T	23 22 22.2		
	baz=290,slow=75,SNR=46								
H11N1	**WAKE ISLAND Hy**	**35.57**	**94**	T		T	23 22 22.2		
	baz=290,slow=75,SNR=28								
H11N3	**WAKE ISLAND Hy**	**35.59**	**94**	T		T	23 22 23.4		
	baz=290,slow=75,SNR=40								
H11S3	**WAKE ISLAND Hy**	**35.82**	**96**	T		T	23 22 49.9		
	baz=292,slow=75,SNR=6.6								
H11S1	**WAKE ISLAND Hy**	**35.83**	**96**	T		T	23 22 52.2		
	baz=292,slow=75,SNR=11								
H11S2	**WAKE ISLAND Hy**	**35.84**	**96**	T		T	23 22 45.4		
	baz=292,slow=75,SNR=11								
WMQ	**Urumqi**	**36.79**	**307**	eP		**P**	**22 45 02.0**	**+0.7**	
WMQ				pmax	pmax				
	comp=Z,9.0nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,150nm,4.7s								
WMQ				LR	LR				
	comp=Z,190nm,5.1s								
WMQ				LR	LR				
	comp=Z,130nm,5.1s								
WMQ				LR	LR				
	comp=Z,250nm,29.2s								
MTN	**Manton Dam**	**40.18**	**177**	P		**P**	**22 45 30.5**	**+0.6**	
MTN				IAmb		IAmb	22 45 45.6		
	comp=Z,11nm,1.1s								
MKAR	**Makanchi Array**	**41.13**	**311**	P		**P**	**22 45 36.5**	**-1.1**	
	comp=Z,1.4nm,0.8s,baz=101,slow=11,SNR=11								
MKAR				PcP		**PcP**	**22 47 35.2**	**-1.7**	
	comp=Z,0.6nm,1.0s,baz=67,slow=4.8,SNR=3.6								
MKAR	**Makanchi Array**	**41.13**	**311**	P		**P**	**22 45 36.4**	**-1.2**	
ZAA0	**Zalesovo Array**	**41.59**	**322**	P		**P**	**22 45 40.0**	**-1.2**	
ZALV	**Zalesovo Beam**	**41.59**	**322**	P		**P**	**22 45 40.8**	**-0.5**	
	comp=Z,1.5nm,0.6s,baz=111,slow=7.5,SNR=8.9								
ZALV				PcP		**PcP**	**22 47 37.0**	**-1.2**	
	comp=Z,0.6nm,0.6s,baz=141,slow=5.0,SNR=4.1								
ZALV	**Zalesovo Beam**	**41.59**	**322**	P		**P**	**22 45 41.1**	**-0.1**	
KURK	**Kurchatov**	**44.30**	**316**	P		**P**	**22 46 03.1**	**-0.1**	
KSH	**Kashi**	**45.13**	**299**	eP		**P**	**22 46 14.0**	**+3.8**	
KSH				pmax	pmax				
	comp=Z,12nm,0.8s								
KSH				pmax	pmax				
	comp=Z,160nm,5.0s								
WRA	**Warramunga Arr**	**47.47**	**173**	P		**P**	**22 46 28.8**	**+0.3**	
	comp=Z,2.4nm,1.0s,baz=349,slow=8.3,SNR=7.3								
WRA	**Warramunga Arr**	**47.47**	**173**	IAmb		IAmb	22 46 36.6		
	comp=Z,0.2nm,0.9s								
WR0	**Warramunga Arr**	**47.51**	**173**	P		**P**	**22 46 31.1**	**+2.3**	
WR0				IAmb		IAmb	22 46 33.7		
	comp=Z,7.8nm,1.1s								
NIL	**Nilore**	**47.80**	**292**	P		**P**	**22 46 30.7**	**-0.5**	
NIL				IAmb		IAmb	22 46 32.9		
	comp=Z,4.7nm,0.9s								
BTK	**Batken**	**49.07**	**300**	P		**P**	**22 46 39.2**	**-1.7**	
BTK				IAmb		IAmb	22 46 42.0		
	comp=Z,3.8nm,1.0s								
KK31	**Karatay Array**	**49.16**	**304**	P		**P**	**22 46 40.9**	**-0.5**	
KKAR	**Karatay Array**	**49.16**	**304**	P		**P**	**22 46 41.3**	**-0.1**	
KKAR	**Karatay Array**	**49.16**	**304**	P		**P**	**22 46 41.0**	**-0.5**	
BRVK	**Borovoye**	**49.78**	**318**	P		**P**	**22 46 46.0**	**-0.1**	
BRVK				IAmb		IAmb	22 46 47.0		
	comp=Z,5.3nm,0.8s								
ASAR	**Alice Springs**	**51.12**	**174**	P		**P**	**22 46 57.5**	**+1.1**	
	comp=Z,1.6nm,0.9s,baz=12,slow=13,SNR=7.5								
ASAR	**Alice Springs**	**51.12**	**174**	P		**P**	**22 46 57.0**	**+0.7**	
KBL	**Kabul**	**51.12**	**294**	P		**P**	**22 46 56.3**	**-0.4**	
KBL				IAmb		IAmb	22 46 58.1		
	comp=Z,5.2nm,0.9s								
ABKAR	**Akbulak array**	**56.20**	**313**	P		**P**	**22 47 33.2**	**-0.2**	
ABKAR				IAmb		IAmb	22 47 34.5		
	comp=Z,5.1nm,0.9s								
ABKAR	**Akbulak array**	**56.20**	**313**	P		**P**	**22 47 33.0**	**-0.4**	
HRA	**Herat**	**56.66**	**295**	P		**P**	**22 47 36.4**	**-0.9**	
ARU	**Arti**	**56.75**	**321**	P		**P**	**22 47 36.2**	**-1.1**	
ARU				IAmb		IAmb	22 47 37.2		
	comp=Z,4.8nm,0.9s								
KTH	**Kantishna Hill**	**61.40**	**30**	P		**P**	**22 48 09.6**	**+0.1**	
KTH				IAmb		IAmb	22 48 21.8		
	comp=Z,5.3nm,1.2s								
COLD	**Coldfoot**	**61.45**	**26**	P		**P**	**22 48 10.6**	**+0.9**	
TOLK	**Toolik Lake Re**	**61.61**	**24**	P		**P**	**22 48 11.8**	**+1.0**	
TOLK				IAmb		IAmb	22 48 13.3		
	comp=Z,5.8nm,0.9s								
BWN	**Browne**	**61.99**	**29**	P		**P**	**22 48 13.1**	**-0.2**	
RND	**Reindeer**	**62.34**	**30**	P		**P**	**22 48 17.0**	**+1.2**	
MDM	**Murphy Dome**	**62.44**	**28**	P		**P**	**22 48 17.4**	**+1.1**	
POKR	**Poker Plat Res**	**62.76**	**28**	P		**P**	**22 48 19.7**	**+1.3**	
ILAR	**Eielson Array**	**63.03**	**29**	P		**P**	**22 48 21.3**	**+1.0**	
	comp=Z,0.7nm,0.8s,baz=284,slow=6.1,SNR=7.6								
ILAR	**Eielson Array**	**63.03**	**29**	P		**P**	**22 48 20.3**	**0.0**	
HDA	**Harding Lake**	**63.05**	**29**	IAmb		IAmb	22 48 25.3		
	comp=Z,6.1nm,0.9s								
BMAR	**Burnt Mountain**	**63.60**	**25**	P		**P**	**22 48 22.3**	**-1.7**	
DOT	**Dot Lake**	**64.43**	**30**	P		**P**	**22 48 30.2**	**+0.6**	
DOT				IAmb		IAmb	22 48 34.6		
	comp=Z,3.9nm,0.8s								
BCAR	**Beaver Creek A**	**65.55**	**30**	P		**P**	**22 48 37.8**	**+0.9**	
KBZ	**Khabaz**	**68.80**	**309**	P		**P**	**22 48 57.4**	**-0.3**	
	comp=Z,5.6nm,1.0s,baz=127,slow=4.4,SNR=8.1								
KBZ				LR		LR	23 22 29.1		
	comp=Z,40nm,18.8s,baz=99,slow=39								
KIV	**Kislovodsk**	**68.88**	**309**	P		**P**	**22 48 58.1**	**-0.2**	
KIV				IAmb		IAmb	22 49 10.4		
	comp=Z,5.7nm,1.0s								
C36M	**Paulatuk**	**70.29**	**21**	P		**P**	**22 49 07.0**	**+0.6**	
C36M				IAmb		IAmb	22 49 11.9		
	comp=Z,8.4nm,1.1s								
FIA1	**FINESS Array S**	**72.03**	**330**	P		**P**	**22 49 16.9**	**-0.3**	
FIA1				IAmb		IAmb	22 49 17.7		
	comp=Z,4.6nm,0.8s								
FINES	**FINESS Array B**	**72.03**	**330**	P		**P**	**22 49 16.7**	**-0.5**	
	comp=Z,3.5nm,0.7s,baz=45,slow=4.8,SNR=12								
WRAK	**Wrangell Islan**	**72.13**	**35**	P		**P**	**22 49 17.1**	**-0.8**	
RAYN	**Ar Rayn**	**73.96**	**288**	P		**P**	**22 49 28.4**	**-0.9**	
RAYN				IAmb		IAmb	22 49 31.2		
	comp=Z,8.4nm,1.1s								
RES	**Resolute Bay**	**74.18**	**11**	P		**P**	**22 49 29.8**	**+0.1**	
RES				IAmb		IAmb	22 49 31.0		
	comp=Z,4.6nm,0.8s								
AKASG	**Malin Array Be**	**74.94**	**320**	P		**P**	**22 49 33.5**	**-1.0**	
	comp=Z,0.5nm,0.4s,baz=228,slow=28,SNR=2.0								
GAZ	**Gaziantep**	**75.18**	**304**	P		**P**	**22 49 35.5**	**-0.7**	
GAZ				IAmb		IAmb	22 49 38.2		
	comp=Z,6.9nm,1.0s								
BR131	**Keskin Array S**	**76.71**	**308**	P		**P**	**22 49 43.7**	**-1.3**	
BR131				IAmb		IAmb	22 49 45.8		
	comp=Z,4.0nm,1.0s								
BRTR	**Keskin Array B**	**76.71**	**308**	P		**P**	**22 49 43.5**	**-1.5**	
	comp=Z,2.3nm,0.9s,baz=132,slow=3.7,SNR=7.2								
BRTR	**Keskin Array B**	**76.71**	**308**	P		**P**	**22 49 44.8**	**-0.2**	
SUW	**Suwalki**	**76.75**	**324**	P		**P**	**22 49 44.0**	**-0.8**	
YKA	**Yellowknife Ar**	**77.11**	**25**	P		**P**	**22 49 48.8**	**+2.1**	
	comp=Z,1.2nm,0.8s,baz=301,slow=5.4,SNR=7.3								
NB2	**NORSAR Subarra**	**78.42**	**334**	P		**P**	**22 49 53.1**	**-0.9**	
	comp=Z,4.7nm,1.1s,baz=52,slow=5.9								
NOA	**NORSAR Array B**	**78.42**	**334**	P		**P**	**22 49 53.4**	**-0.6**	
	comp=Z,1.5nm,0.8s,baz=51,slow=5.8,SNR=5.0								
NBO00	**NORSAR Array S**	**78.60**	**334**	P		**P**	**22 49 53.3**	**-1.7**	
BURAR	**Bucovina Array**	**78.67**	**318**	P		**P**	**22 49 55.2**	**-0.6**	
CSS	**Mathiatis**	**78.96**	**304**	P		**P**	**22 49 55.8**	**-1.7**	
OJC	**Ojcow**	**80.47**	**322**	P		**P**	**22 50 05.0**	**-0.4**	
OJC				IAmb		IAmb	22 50 07.4		
	comp=Z,8.9nm,1.0s								
ELL	**Elmali**	**80.65**	**306**	P		**P**	**22 50 05.4**	**-1.3**	
BHW	**Baring Head**	**80.71**	**147**	P		**P**	**22 50 07.0**	**+0.5**	
ATD	**Arta Tunnel**	**81.29**	**278**	P		**P**	**22 50 09.8**	**-0.7**	
ATD				IAmb		IAmb	22 50 13.8		
	comp=Z,10nm,1.1s								
VYHS	**Vyhne**	**81.92**	**321**	eP		**P**	**22 50 13.5**	**+0.4**	
MORC	**Moravsky Berou**	**81.93**	**322**	P		**P**	**22 50 12.8**	**-0.4**	
MORC				IAmb		IAmb	22 50 14.7		
	comp=Z,5.6nm,1.0s								
KRLC	**Kraliky**	**82.18**	**323**	eP		**P**	**22 50 14.8**	**+0.3**	
OSTC	**Ostas**	**82.21**	**324**	eP		**P**	**22 50 16.9**	**+2.3**	
DPC	**Dobruska-Polom**	**82.27**	**323**	eP		**P**	**22 50 16.2**	**+1.2**	
PRU	**Pruhonice**	**83.41**	**324**	eP		**P**	**22 50 21.8**	**+0.9**	
CLL	**Collm**	**83.43**	**325**	⇑iP		**P**	**22 50 21.5**	**+0.6**	
	comp=Z,12nm,1.0s								
CLL	**Collm**	**83.43**	**325**	P		**P**	**22 50 20.6**	**-0.3**	
CONA	**Conrad Observa**	**83.89**	**322**	eP		**P**	**22 50 22.4**	**-1.0**	
	comp=Z,6.9nm,1.4s								
F07A	**Phinny Hill Vi**	**83.99**	**41**	P		**P**	**22 50 24.4**	**+0.6**	
E08A	**Dider Farm, El**	**84.15**	**40**	P		**P**	**22 50 24.1**	**-0.6**	
NKC	**Novy Kostel**	**84.36**	**325**	eP		**P**	**22 50 26.7**	**+1.0**	
KHC	**Kasperske Hory**	**84.42**	**323**	eP		**P**	**22 50 26.5**	**+0.4**	
GEC2	**GERESS Array S**	**84.53**	**323**	P		**P**	**22 50 25.9**	**-0.8**	
GEC2				IAmb		IAmb	22 50 28.0		
	comp=Z,3.7nm,1.0s								
GERES	**GERESS Array B**	**84.53**	**323**	P		**P**	**22 50 26.3**	**-0.4**	
	comp=Z,3.6nm,1.1s,baz=46,slow=3.9,SNR=13								
MOA	**Molln**	**84.81**	**322**	eP		**P**	**22 50 29.0**	**+1.0**	
	comp=Z,8.1nm,1.3s								
GRA1	**Grafenberg Arr**	**85.31**	**325**	P		**P**	**22 50 31.0**	**+0.4**	
KBA	**Koelnbreinsper**	**85.77**	**322**	eP		**P**	**22 50 33.1**	**+0.1**	
	comp=Z,6.7nm,1.1s								
WTTA	**Wattenberg**	**86.59**	**323**	eP		**P**	**22 50 37.2**	**+0.1**	
	comp=Z,17nm,1.5s								
DAVA	**Damuels**	**87.51**	**323**	eP		**P**	**22 50 41.8**	**+0.3**	
	comp=Z,11nm,1.3s								
TEOL	**Teolo**	**87.73**	**321**	P		**P**	**22 50 39.5**	**-3.0**	
HLID	**Hailey**	**88.54**	**41**	P		**P**	**22 50 47.3**	**+0.8**	
HLID				IAmb		IAmb	22 50 54.4		
	comp=Z,2.5nm,1.1s								
KVN	**Kaiserville**	**88.97**	**46**	P		**P**	**22 50 49.1**	**+0.4**	
KVN				IAmb		IAmb	22 50 56.0		
	comp=Z,2.2nm,1.1s								
PDAR	**Pinedale Array**	**91.80**	**39**	P		**P**	**22 51 03.2**	**+1.4**	
	comp=Z,0.7nm,0.8s,baz=11,slow=1.5,SNR=4.7								

REY ***28*** *22:52:42.7, 64.67N× 17.50W, h7km*
IDC ***28*** *22:52:42.9±0.9, 64.65N× 17.59W, h0km, mb3.7/8, mb1 4.0/10, mb1mx3.7/38, mbtmp3.7/10, ML3.4/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/47, Error ellipse: s-maj=33.6km s-min=11.1km az=7.0*
NEIC ***28*** *22:52:44.5±1.8, 64.52N±0.09× 17.8W±0.1, h8km±4km, mb4.5/50, Error ellipse: s-maj=12.6km s-min=8.6km az=190.0*

ISC 28 22:52:44.6±0.4, 64.60N±0.03× 17.61W±0.03, h10km, n111, σ1s70/112, mb4.5/33, MS3.3/3, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVON	**Vonarskard**	**0.10**	**318**	P	**Pg**	**22 52 45.3**	**-2.0**
	baz=270						
IVON				S	**Sg**	**22 52 47.4**	**-1.8**
	baz=270						
IHAM	**Hamarinn**	**0.15**	**217**	P	**Pg**	**22 52 47.3**	**-0.8**
	baz=216						
IDJK	**Dyngjujokull**	**0.19**	**121**	P	**Pg**	**22 52 47.1**	**-1.6**
	baz=146						
IDYN	**Dyngjuhals**	**0.22**	**29**	P	Pg	22 52 45.7	-3.5
	baz=26						
IDYN				S	**Sg**	**22 52 48.2**	**-4.0**
	baz=26						
IGRF	**Grimsfjall**	**0.24**	**143**	P	**Pg**	**22 52 48.4**	**-1.3**
	baz=159						
IGRF				S	**Sg**	**22 52 52.6**	**-0.5**
	baz=159						
IURH	**Urdarhals**	**0.29**	**42**	P	Pg	22 52 47.1	-3.5
	baz=46						
IHUS	**Husbondi**	**0.31**	**184**	P	**Pg**	**22 52 50.0**	**-0.8**
	baz=190						
ISKR	**Skrokkalda**	**0.34**	**263**	P	**Pg**	**22 52 50.1**	**-1.2**
	baz=254						
IVOT	**Vottur**	**0.38**	**151**	P	**Pg**	**22 52 50.8**	**-1.3**
	baz=161						
IJOK	**Jokulheimar**	**0.39**	**223**	P	**Pb**	**22 52 51.9**	**-1.8**
	baz=221						
IJOK				S	**Sb**	**22 52 58.2**	**-1.5**
	baz=221						
THOR	**Thorvaldshraun**	**0.52**	**50**	P	Pg	22 52 50.9	-3.8
	baz=53						
THOR				S	**Sg**	**22 52 58.0**	**-3.6**
	baz=53						
IKRE	**Kreppuhraun**	**0.56**	**70**	P	Pg	22 52 51.5	-3.9
	baz=77						
IKRE				S	**Sg**	**22 52 59.2**	**-3.6**
	baz=77						
IASK	**Askja**	**0.61**	**42**	P	Pg	22 52 52.4	-4.1
	baz=44						
IASK				S	**Sg**	**22 53 00.2**	**-4.2**
	baz=44						
IKAL	**Kalfafell**	**0.66**	**183**	P	**Pg**	**22 52 55.6**	**-1.7**
	baz=186						
IKAL				S	**Sb**	**22 53 06.8**	**-0.6**
	baz=186						
IMKO	**Mokollar**	**0.66**	**55**	P	Pg	22 52 53.3	-4.1
	baz=58						
IMKO				S	**Sg**	**22 53 02.4**	**-3.7**
	baz=58						
IKSK	**Karasker**	**0.66**	**131**	P	**Pg**	**22 52 54.5**	**-2.9**
	baz=139						
IVAT	**Vatnsfell**	**0.71**	**234**	P	**Pg**	**22 52 57.0**	**-1.2**
	baz=232						
ISVA	**Svartarkot**

	comp=Z,0.6nm,0.9s,baz=22,slow=2.5,SNR=4.7						
ILAR	**Eielson Array**	**45.72**	**332**	P	**P**	**23 01 06.7**	**+1.5**
MDM	**Murphy Dome**	**45.82**	**333**	P	**P**	**23 01 06.4**	**+0.4**
MDM				IAmb	IAmb	23 01 08.7	
	comp=Z,9.0nm,1.3s						
HDIL	**Hopedale**	**46.56**	**275**	P	**P**	**23 01 13.3**	**+1.2**
HDIL				IAmb	IAmb	23 01 16.0	
	comp=Z,7.2nm,0.8s						
MENT	**Mentasta**	**46.68**	**329**	P	**P**	**23 01 12.7**	**-0.1**
MENT				IAmb	IAmb	23 01 15.0	
	comp=Z,8.2nm,1.2s						
DHY	**Denali Highway**	**47.33**	**332**	P	**P**	**23 01 18.1**	**+0.1**
DHY				IAmb	IAmb	23 01 32.9	
	comp=Z,6.0nm,1.4s						
ZALV	**Zalesovo Beam**	**47.71**	**51**	P	**P**	**23 01 20.3**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=107,slow=5.0,SNR=1.2						
USIN	**University of**	**48.01**	**272**	P	**P**		
EGMT	**Eagleton**	**48.86**	**297**	P	**P**	**23 01 31.1**	**+1.1**
CSU	**Charleston Sou**	**48.97**	**261**	P	**P**	**23 01 31.0**	**+0.2**
ANM	**Nome**	**48.99**	**342**	P	**P**	**23 01 31.5**	**+0.9**
Z56A	**Williston**	**49.23**	**263**	P	**P**	**23 01 30.4**	**-2.5**
KOWA	**Kowa**	**50.92**	**163**	P	**P**	**23 01 45.4**	**-0.4**
KOWA				IAmb	IAmb	23 01 46.3	
	comp=Z,11nm,1.0s						
KK31	**Karatay Array**	**51.34**	**70**	P	**P**	**23 01 49.3**	**+0.5**
KK31				IAmb	IAmb	23 01 56.2	
	comp=Z,7.5nm,1.5s						
KKAR	**Karatay Array**	**51.34**	**70**	P	**P**	**23 01 49.7**	**+0.9**
KKAR				IAmb	IAmb	23 01 56.2	
	comp=Z,7.5nm,1.5s						
KKAR	**Karatay Array**	**51.34**	**70**	P	**P**	**23 01 49.2**	**+0.4**
CBKS	**Cedar Bluff**	**52.46**	**283**	P	**P**	**23 01 57.5**	**+0.4**
CBKS				IAmb	IAmb	23 02 03.6	
	comp=Z,13nm,1.4s						
MKAR	**Makanchi Array**	**52.80**	**58**	P	**P**	**23 01 57.6**	**-2.0**
	comp=Z,1.8nm,1.1s,baz=251,slow=2.2,SNR=4.7						
MKAR	**Makanchi Array**	**52.80**	**58**	P	**P**	**23 01 59.2**	**-0.4**
KS20	**Mayfield South**	**52.87**	**280**	P	**P**	**23 01 57.6**	**-2.6**
BW06	**Boulder Array**	**53.16**	**293**	P	**P**	**23 02 03.0**	**+0.5**
BW06				IAmb	IAmb	23 02 06.3	
	comp=Z,8.8nm,1.4s						
PD31	**Pinedale Array**	**53.16**	**293**	P	**P**	**23 02 01.7**	**-0.9**
PDAR	**Pinedale Array**	**53.16**	**293**	P	**P**	**23 02 01.1**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=60,slow=7.0,SNR=8.5						
PDAR				LR	LR	23 26 06.9	
	comp=Z,26nm,19.6s,baz=1.5,slow=38						
F10A	**Beach Ranch, E**	**53.39**	**301**	P	**P**	**23 02 02.2**	**-1.9**
F10A				IAmb	IAmb	23 02 03.3	
	comp=Z,11nm,1.4s						
HAWA	**Hanford**	**53.88**	**303**	P	**P**	**23 02 08.3**	**+0.9**
BTK	**Batken**	**54.02**	**71**	P	**P**	**23 02 09.9**	**+1.2**
BTK				IAmb	IAmb	23 02 12.7	
	comp=Z,5.4nm,1.0s						
DRK	**Karamyk**	**54.91**	**71**	P	**P**	**23 02 16.5**	**+1.0**
HWUT	**Hardware Ranch**	**54.93**	**294**	P	**P**	**23 02 16.3**	**+0.9**
MTP	**Monte Pirata**	**56.41**	**238**	P	**P**	**23 02 24.0**	**-2.0**
PV11	**David Mesa, Pa**	**56.68**	**290**	P	**P**	**23 02 27.0**	**-1.0**
PV11				IAmb	IAmb	23 02 27.2	
	comp=Z,5.6nm,1.2s						
PV02	**Paradox Valley**	**56.70**	**290**	P	**P**	**23 02 28.0**	**-0.2**
PV02				IAmb	IAmb	23 02 30.5	
	comp=Z,3.9nm,1.0s						
PV17	**East Wray Mesa**	**56.73**	**290**	P	**P**	**23 02 28.9**	**+0.5**
PV17				IAmb	IAmb	23 02 40.1	
	comp=Z,3.5nm,0.6s						
PV18	**Skein Mesa, Pa**	**56.74**	**290**	P	**P**	**23 02 26.8**	**-1.6**
PV18				IAmb	IAmb	23 02 30.2	
	comp=Z,4.9nm,1.0s						
PV13	**Radium Mtn., P**	**56.77**	**290**	P	**P**	**23 02 25.8**	**-2.9**
PV13				IAmb	IAmb	23 02 43.0	
	comp=Z,6.4nm,0.9s						
CRPR	**Cabo Rojo, PR**	**57.06**	**240**	P	**P**	**23 02 30.4**	**-0.3**
WMQ	**Urumqi**	**57.31**	**56**	*e*P	**P**	**23 02 36.3**	**+4.1**
MSU	**Marysvale**	**57.82**	**292**	P	**P**	**23 02 36.4**	**+0.3**
KBL	**Kabul**	**57.99**	**76**	P	**P**	**23 02 36.8**	**-0.5**
NVAR	**Mina Array Bea**	**60.29**	**297**	P	**P**	**23 02 53.3**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=6.7,slow=14,SNR=6.1						
NIL	**Nilore**	**60.51**	**73**	P	**P**		
NIL				IAmb	IAmb	23 02 57.3	
	comp=Z,6.6nm,1.1s						
TPNV	**Topopah Spring**	**60.78**	**295**	P	**P**	**23 02 56.1**	**-0.5**
X16A	**Lo Mia Camp, P**	**61.07**	**290**	P	**P**	**23 02 58.4**	**-0.1**
TXAR	**Lajitas Array**	**62.25**	**280**	P	**P**	**23 03 07.0**	**+0.6**
	comp=Z,0.7nm,1.0s,baz=52,slow=2.2,SNR=3.9						
TXAR	**Lajitas Array**	**62.25**	**280**	P	**P**	**23 03 06.1**	**-0.4**
GTA	**Gaotai**	**65.38**	**49**	*e*P	**P**	**23 03 28.0**	**+1.0**
GTA				pP	sP	23 03 32.5	+0.3
GTA				sP	pP	23 03 35.3	+4.5
GTA				pmax	pmax		
	comp=Z,1.0nm,1.5s						
HHC	**Hu-ho-hao-te**	**67.59**	**40**	*e*P	**P**	**23 03 42.8**	**+1.7**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH	**Lanzhou**	**69.71**	**47**	*e*P	**P**	**23 03 55.3**	**+0.9**
LZH				pP	pP	23 03 58.0	-0.2
LZH				sP	sP	23 03 59.3	-0.3
LZH				*e*PP	**PP**	**23 06 31.5**	**+3.6**
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,67nm,8.2s						
LZH				LR	LR		
	comp=N,130nm,16.5s						
LZH				LR	LR		
	comp=E,130nm,16.3s						
LZH				LR	LR		
	comp=Z,200nm,18.6s						
NJ2	**Nanjing**	**77.82**	**37**	*e*P	**P**	**23 04 43.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						

*IDC **28** 23:07:50.2±1.4, 1°.45N×126°.61E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.6/37, mbtmp3.7/5, ML3.2/1, MS3.3/2, Ms1 3.3/2, ms1mx2.5/41, Error ellipse: s-maj=108.3km s-min=20.3km az=71.0*

*NEIC **28** 23:07:54.5±1.6, 1°.59N±0°.10×126°.56E±0°.08, h48km±5km, mb4.1/14, Error ellipse: s-maj=15.7km s-min=8.9km az=212.0*

*DJA **28** 23:07:54.4±1.0, 1°N±3°×12°7E±°, h19km±9km, M4.2/7, mB4.6/1, mb4.6/1, MLv4.0/7, Mw(mB)3.8/1*

ISC 28 23:07:55.4±0.6, **1°.51N**±0°.07×**126°.66E**±0°.08, **h47**km, **n37,** σ1§**77**/36, **mb4.1**/10, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.02**	**136**	P	**Pn**	**23 08 12.5**	**-0.8**
TNTI				S	**Sn**	**23 08 26.9**	**+0.4**
TNTI	**Ternate**	**1.02**	**136**		**Pn**	**23 08 12.4**	**-0.9**
LBMI	**Labuha**	**2.29**	**159**	P	**Pn**	**23 08 29.1**	**-1.7**
LBMI				S	**Sn**	**23 08 59.1**	**+1.2**
SGSI	**Sangihe**	**2.44**	**332**	S	**Sn**	**23 09 05.0**	**+3.7**
KMSI	**Cibinong**	**2.84**	**251**	P	**Pn**	**23 08 38.2**	**0.0**
GTOI	**Gorontalo**	**3.75**	**257**	P	**Pn**	**23 08 52.7**	**+1.9**
LUWI	**Luwuk**	**4.64**	**237**	P	**Pn**	**23 09 07.2**	**+4.2**
LUWI	**Luwuk**	**4.64**	**237**	Pn	**Pn**	**23 09 03.1**	**+0.1**
MRSI	**Marisa**	**4.83**	**258**	P	Pn	23 09 13.5	+7.9
APSI	**Ampana**	**5.56**	**244**	P	**Pn**	**23 09 16.0**	**+0.4**
TOLI2	**Tolitoli**	**5.89**	**266**	Pn	**Pn**	**23 09 15.6**	**-4.6**
FAKI	**Fak Fak**	**7.11**	**128**	Pn	**Pn**	**23 09 38.4**	**+1.5**
MYLDM	**Lahad Datu**	**8.92**	**294**	Pn	**Pn**	**23 09 59.9**	**-1.9**
KKM	**Kota Kinabalu**	**11.35**	**294**	Pn	**Pn**	**23 10 32.0**	**-3.2**
KNRA	**Kununurra**	**17.21**	**173**	Pn	**Pn**	**23 11 51.5**	**-1.0**
KNRA				IAmb	IAmb	23 11 59.8	
	comp=Z,11nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.51**	**183**	P	**P**	**23 12 19.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=23,slow=7.7,SNR=2.0						
FITZ	**Fitzroy Crossi**	**19.51**	**183**	P	**P**	**23 12 17.7**	**-1.2**
COEN	**Coen**	**22.45**	**134**	P	**P**	**23 12 51.6**	**+0.9**
COEN				IAmb	IAmb	23 13 03.9	
	comp=Z,5.4nm,1.0s						
WB0	**Warramunga Arr**	**22.47**	**161**	P	**P**	**23 12 51.0**	**+0.2**
WB0				IAmb	IAmb	23 12 56.6	
	comp=Z,9.8nm,1.0s						
WRAB	**Tennant Creek**	**22.61**	**161**	P	**P**	**23 12 52.5**	**+0.2**
WRAB				IAmb	IAmb	23 12 58.0	
	comp=Z,10.0nm,1.1s						
WRA	**Warramunga Arr**	**22.61**	**161**	P	**P**	**23 12 52.5**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=339,slow=11,SNR=30						
WRA	**Warramunga Arr**	**22.61**	**161**	P	**P**	**23 12 52.6**	**+0.2**
WB2	**Warramunga Arr**	**22.62**	**161**	P	**P**	**23 12 52.5**	**+0.1**
WB2				IAmb	IAmb	23 12 57.1	
	comp=Z,8.4nm,0.9s						
WR0	**Warramunga Arr**	**22.70**	**160**	P	**P**	**23 12 53.4**	**+0.2**
KRVT	**Keravat (AS076**	**26.00**	**103**	LR	LR	23 22 57.5	
	comp=Z,49nm,18.5s,baz=286,slow=35						
AS31	**Alice Springs**	**26.00**	**165**	P	**P**	**23 13 24.0**	**-0.1**
ASAR	**Alice Springs**	**26.00**	**165**	P	**P**	**23 13 24.2**	**+0.1**
	comp=Z,1.5nm,0.6s,baz=350,slow=15,SNR=19						
ASAR	**Alice Springs**	**26.00**	**165**	P	**P**	**23 13 24.4**	**+0.4**
BBOO	**Buckleboo**	**35.27**	**166**	P	**P**	**23 14 45.8**	**0.0**
JGF	**Kuroka**	**35.34**	**15**	P	**P**	**23 14 44.5**	**-1.9**
JGF				IAmb	IAmb	23 15 03.9	
	comp=Z,5.5nm,0.9s						
NWAO	**Narrogin (SRO)**	**35.39**	**194**	P	**P**	**23 14 47.9**	**+1.1**
SONM	**Songino Array**	**49.37**	**342**	P	**P**	**23 16 42.8**	**+2.5**
	comp=Z,0.2nm,0.4s,baz=144,slow=11,SNR=1.9						
OUZ	**Omahuta**	**57.05**	**135**	P	**P**	**23 17 35.6**	**-1.3**
MK31	**Makanchi Array**	**59.34**	**326**	P	**P**	**23 17 49.9**	**-2.8**
MK31				IAmb	IAmb	23 17 56.6	
	comp=Z,1.5nm,0.9s						
MKAR	**Makanchi Array**	**59.34**	**326**	P	**P**	**23 17 53.7**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=114,slow=7.9,SNR=6.2						
MKAR	**Makanchi Array**	**59.34**	**326**	P	**P**	**23 17 51.8**	**-0.9**
RAO	**Raoul Island**	**61.12**	**125**	LR	LR	23 42 51.5	
	comp=Z,33nm,20.9s,baz=164,slow=34						

KRSC 28 23:09:23.6±1.8, **48°.35N**×**156°.44E, h16**km±21km, **ML4.2, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.34**	**355**	*e*P	Pn	23 10 01.5	+0.1
SKR				*e*S	Sn	23 10 31.0	+1.1
PAU	**Pauzhetka**	**3.13**	**4**	*e*P	Pn	23 10 13.7	+1.5
PAU				*e*S	Sn	23 10 52.6	+3.4
KDTR	**Khodutka, Kamc**	**3.62**	**16**	*e*P	Pn	23 10 22.5	+3.6
KDTR				*e*S	Sb	23 11 06.7	-4.0
ASAK	**Asacha**	**4.14**	**12**	*e*P	Pn	23 10 30.6	+4.4
MTVR	**Mutnovka**	**4.28**	**14**	*e*P	Pn	23 10 32.4	+4.2
MTVR				*e*S	Sn	23 11 23.4	+5.5
RUS	**Russkaya**	**4.29**	**17**	*e*P	Pn	23 10 31.9	+3.7
RUS				*e*S	Sn	23 11 23.6	+5.6
GRL	**Gorelyy**	**4.33**	**13**	*e*P	Pn	23 10 33.3	+4.4
GRL				*e*S	Sn	23 11 25.2	+6.1
KRMR	**Karymshinskiy**	**4.61**	**13**	*e*P	Pb	23 10 38.4	-5.6
KRMR				*e*S	Sn	23 11 30.7	+4.9
DALK	**Dalny**	**4.91**	**17**	*e*P	Pn	23 10 40.4	+3.7
DALK				*e*S	Sn	23 11 38.8	+5.7
AVH	**Avacha**	**5.13**	**16**	*e*P	Pn	23 10 45.6	+5.8
KOK	**Koryaka**	**5.14**	**15**	*e*P	Pn	23 10 45.0	+5.1
SMAR	**Somma**	**5.14**	**16**	*e*P	Pn	23 10 44.9	+4.8
KRER	**Koryakskii**	**5.17**	**16**	*e*P	Pn	23 10 44.5	+4.0
SDLR	**Sedlovina**	**5.17**	**16**	*e*P	Pn	23 10 44.7	+4.3
KRX	**Arik**	**5.21**	**15**	*e*P	Pn	23 10 46.0	+5.1
SPN	**Mys Shipunski**	**5.27**	**24**	*e*P	Pn	23 10 46.5	+4.9
SPN				*e*S	Sn	23 11 47.9	+6.0
GNL	**Ganaly**	**5.43**	**9**	*e*P	Pn	23 10 49.6	+5.6
MKZ	**Mys Kozlova**	**7.03**	**26**	*e*P	Pn	23 11 09.9	+4.1
TUMR	**Tumrok**	**7.31**	**17**	*e*P	Pn	23 11 14.2	+4.5
KMNR	**Kamenistaya**	**7.77**	**16**	*e*P	Pn	23 11 21.4	+5.3
KBTR	**Krutoberegovo**	**8.78**	**24**	*e*P	Pn	23 11 34.8	+5.0

IDC 28 23:14:53.8±2.3, **1°.74N**×**127°.23E, h0**km, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.4**/44, **mbtmp3.5**/3, **Error ellipse: s-maj=169.7km s-min=28.2km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.65**	**162**	P	P	23 19 56.9	+0.1
	0.8nm,0.5s,baz=342,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.08**	**166**	P	P	23 20 29.3	0.0
	0.3nm,0.5s,baz=343,slow=8.0,SNR=5.0						
MKAR	**Makanchi Array**	**59.47**	**326**	P	P	23 24 58.6	-0.1
	1.0nm,1.1s,baz=123,slow=7.4,SNR=2.4						

*IDC **28** 23:25:37.7±0.7, 64°.55N×17°.47W, h0km, mb3.7/12, mb1 3.9/14, mb1mx3.8/47, mbtmp3.7/14, ML3.4/2, MS3.2/4, Ms1 3.2/4, ms1mx2.7/55, Error ellipse: s-maj=23.5km s-min=9.9km az=15.0*

*NEIC **28** 23:25:38.7±2.3, 64°.43N±0°.08×17°.6W±0°.1, h9km±4km, mb4.6/76, Error ellipse: s-maj=12.0km s-min=9.0km az=190.0*

ISC 28 23:25:38.5±0.4, **64°.48N**±0°.06×**17°.56W**±0°.05, **h10**km, **n116,** σ1§**39**/115, **mb4.5**/43, **Iceland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**1.65**	**281**	Pg	**Pn**	**23 26 06.4**	**-1.1**
	14nm,0.3s,baz=87,slow=8.3,SNR=34						
BORG				Lg	Lg	23 26 30.9	
	9.7nm,0.3s,baz=234,slow=21,SNR=7.4						
BORG	**Borgarnes**	**1.65**	**281**		**Pn**	**23 26 06.1**	**-1.4**
SCO	**Scoresbysund**	**6.26**	**346**		**Pn**	**23 27 10.1**	**-0.7**
SCO	**Scoresbysund**	**6.26**	**346**	*e*	Pn	23 27 04.6	-6.2
	baz=166,slow=7.9						
SCO				*e*P	**Pn**	**23 27 08.2**	**-2.6**
SCO				*i* S	**Sn**	**23 28 23.6**	**+1.3**
SCO				IAML		23 28 25.2	
	comp=Z,1.0nm,0.6s						
ANGG	**Ammassalik, Gr**	**8.56**	**287**	Pn	**Pn**	**23 27 41.3**	**-0.9**
EKA	**Eskdalemuir Ar**	**11.64**	**135**	Pn	**Pn**	**23 28 23.8**	**-0.6**
	baz=324,slow=14,SNR=11						
ESK	**Eskdalemuir**	**11.64**	**135**		**Pn**	**23 28 24.8**	**+0.3**
NRS	**Narsarsuaq**	**13.11**	**268**		**Pn**	**23 28 43.2**	**-1.2**
NC204	**NORSAR Array S**	**13.25**	**91**	Pn	**Pn**	**23 28 45.8**	**-0.6**
NC303	**NORSAR Array S**	**13.53**	**91**	Pn	**Pn**	**23 28 49.7**	**-0.6**
KONO	**Kongsberg**	**13.55**	**98**	Pn	**Pn**	**23 28 48.0**	**-2.5**
NOA	**NORSAR Array B**	**13.55**	**91**	Pn	**Pn**	**23 28 46.9**	**-3.6**
	comp=Z,0.0nm,0.3s,baz=14,slow=8.2,SNR=3.0						
NOA				LR	LR	23 33 59.9	
	comp=Z,52nm,20.7s,baz=305,slow=37						
NB201	**NORSAR Array S**	**13.58**	**91**	Pn	**Pn**	**23 28 51.5**	**+0.5**
SFJD	**Kangerlussuaq**	**13.72**	**295**	LR	LR	23 33 41.3	
	comp=Z,156nm,19.5s,baz=130,slow=35						
HFS	**Hagfors**	**15.06**	**92**	Pn	**P**	**23 29 17.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=345,slow=4.6,SNR=5.5						
SPB3	**Spitsbergen Ar**	**17.05**	**23**	Pn	**Pn**	**23 29 37.3**	**+0.8**
SPB3				IAmb	IAmb	23 29 51.5	
	comp=Z,54nm,1.2s						
SPB4	**Spitsbergen Ar**	**17.05**	**23**	Pn	**P**	**23 29 37.9**	**-0.5**
SPB4				IAmb	IAmb	23 29 50.9	
	comp=Z,131nm,1.5s						
SPA0	**Spitsbergen Ar**	**17.05**	**23**		**P**	**23 29 38.1**	**-0.2**
SPA0				IAmb	IAmb	23 29 43.6	
	comp=Z,99nm,1.5s						
ARC7	**ARCESS Array S**	**17.24**	**54**	Pn	**Pn**	**23 29 37.9**	**-1.1**
ARB5	**ARCESS Array S**	**17.25**	**54**	Pn	**Pn**	**23 29 37.5**	**-1.6**
ARCES	**ARCESS Array B**	**17.25**	**54**	LR	LR	23 35 08.6	
	comp=Z,79nm,19.5s,baz=255,slow=33						
ARB3	**ARCESS Array S**	**17.25**	**54**	Pn	**Pn**	**23 29 37.8**	**-1.3**
ARC4	**ARCESS Array S**	**17.25**	**54**	Pn	**Pn**	**23 29 37.5**	**-1.6**
ARC4				IAmb	IAmb	23 29 39.8	
	comp=Z,50nm,1.5s						
ARD4	**ARCESS Array S**	**17.26**	**54**	Pn	**Pn**	**23 29 38.3**	**-0.9**
ARD4				IAmb	IAmb	23 29 39.6	
	comp=Z,36nm,1.3s						
FIA1	**FINESS Array S**	**19.77**	**79**	P	**Pn**	**23 30 09.7**	**0.0**
FIA1				IAmb	IAmb	23 30 14.3	
	comp=Z,34nm,1.4s						
FINES	**FINESS Array B**	**19.77**	**79**	P	**P**	**23 30 07.3**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=155,slow=14,SNR=2.4						
TULEG	**Thule**	**20.00**	**328**	P	**Pn**	**23 30 12.1**	**-0.3**
CLL	**Collm**	**20.64**	**115**	P	**P**	**23 30 17.9**	**0.0**
ECH	**Echery**	**21.05**	**129**	P	**P**	**23 30 23.8**	**+1.5**
ECH				IAmb	IAmb	23 30 42.3	
	comp=Z,23nm,1.5s						
GRA1	**Grafenberg Arr**	**21.26**	**120**	P	**P**	**23 30 24.8**	**+0.3**
GRA1				IAmb	IAmb	23 30 32.3	
	comp=Z,16nm,1.1s						
NKC	**Novy Kostel**	**21.28**	**118**	*e*P	**P**	**23 30 31.1**	**+6.3**
STU	**Stuttgart**	**21.28**	**125**	P	**P**	**23 30 24.9**	**+0.1**
STU				IAmb	IAmb	23 30 28.4	
	comp=Z,11nm,0.8s						
BFO	**Black Forest**	**21.35**	**127**	P	**P**	**23 30 26.2**	**+0.6**
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P	**P**	**23 30 25.8**	**+0.3**
	comp=Z,12nm,1.4s						
BRG				*e*		23 30 35.8	
	comp=Z,22nm,1.6s						
PBCC	**Pribram**	**22.32**	**116**	*e*P	**P**	**23 30 39.5**	**+3.6**
KHC	**Kasperske Hory**	**22.61**	**118**	*e*P	**P**	**23 30 42.1**	**+3.1**
KHC	**Kasperske Hory**	**22.61**	**118**	P	**P**	**23 30 39.9**	**+0.9**
DPC	**Dobruska-Polom**	**22.71**	**112**	*e*P	**P**	**23 30 40.4**	**+0.3**
SENIN	**Lac Senin/Sane**	**22.72**	**131**	P	**P**	**23 30 41.1**	**+0.7**
GEC2	**GERESS Array S**	**22.89**	**118**	P	**P**	**23 30 43.1**	**+1.0**
GERES	**GERESS Array B**	**22.89**	**118**	P	**P**	**23 30 42.9**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=324,slow=6.6,SNR=6.1						
GERES	**GERESS Array B**	**22.89**	**118**	P	**P**	**23 30 43.4**	**+1.3**
DAVOX	**Davos/Dischmat**	**23.22**	**127**	P	**P**	**23 30 45.9**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=331,slow=8.4,SNR=4.3						
MORC	**Moravsky Berou**	**23.65**	**112**	P	**P**	**23 30 49.7**	**0.0**
TRI	**Trieste**	**25.53**	**122**	P	**P**	**23 31 07.8**	**+1.0**
KWP	**Kalwaria Pacla**	**25.88**	**106**	P	**P**	**23 31 12.2**	**+2.1**
PSZ	**Piszkesteto**	**26.07**	**111**	P	**P**	**23 31 11.8**	**0.0**
ESDC	**Sonseca Array**	**26.09**	**156**	P	**P**	**23 31 13.1**	**+1.0**
	comp=Z,1.3nm,0.9s,baz=350,slow=11,SNR=5.3						
ROSA	**Rosais**	**26.56**	**199**	P	**P**	**23 31 12.6**	**-3.7**
CMLA	**Cha da Macela**	**27.17**	**194**	P	**P**	**23 31 20.0**	**-1.8**
AKASG	**Malin Array Be**	**27.84**	**97**	P	**P**	**23 31 27.3**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=56,slow=24,SNR=1.5						
SFS	**San Fernando**	**28.87**	**161**	P	**P**	**23 31 36.5**	**-0.4**
AGG	**Agios Georgios**	**34.50**	**118**	P	**P**	**23 32 26.5**	**0.0**
MACI	**Morro de la Ar**	**36.24**	**178**	P	**P**	**23 32 41.8**	**+0.1**
C36M	**Paulatuk**	**36.97**	**326**	P	**P**	**23 32 48.2**	**+1.0**
C36M				IAmb	IAmb	23 33 01.9	
	comp=Z,13nm,1.3s						
BRTR	**Keskin Array B**	**38.45**	**105**	P	**P**	**23 33 00.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=260,slow=28,SNR=3.1						
KBZ	**Khabaz**	**39.13**	**92**	P	**P**	**23 33 07.9**	**+2.2**
	comp=Z,2.7nm,0.9s,baz=201,slow=9.4,SNR=5.6						
YKA	**Yellowknife Ar**	**39.33**	**313**	LR	LR	23 48 53.2	
	comp=Z,33nm,20.1s,baz=0.0,slow=36						
E46A	**Sault Ste Mari**	**39.77**	**276**	P	**P**	**23 33 10.9**	**-0.1**
E46A				IAmb	IAmb	23 33 13.7	
	comp=Z,28nm,1.3s						
E43A	**Lone Tree Farm**	**40.92**	**278**	P	**P**	**23 33 21.6**	**+1.1**
E43A				IAmb	IAmb	23 33 37.9	
	comp=Z,16nm,1.2s						
KOPT	**Kop Dagi**	**41.12**	**98**	P	**P**	**23 33 23.4**	**+0.8**
AKH	**Akhalkalaki**	**41.27**	**94**	P	**P**	**23 33 23.1**	**-0.6**
AKH				IAmb	IAmb	23 33 27.5	
	comp=Z,17nm,1.1s						
SSPA	**Standing Stone**	**41.59**	**265**	P	**P**	**23 33 27.3**	**+1.2**
SSPA				IAmb	IAmb	23 33 33.5	
	comp=Z,14nm,1.3s						
EYMN	**Ely**	**41.60**	**283**	P	**P**	**23 33 27.4**	**+1.3**
EYMN				IAmb	IAmb	23 33 34.1	
	comp=Z,23nm,1.4s						
K50A	**Casco**	**41.90**	**271**	P	**P**	**23 33 28.7**	**+0.1**
K50A				IAmb	IAmb	23 33 40.9	
	comp=Z,16nm,1.0s						
J47A	**Sunmer**	**42.48**	**273**	P	**P**	**23 33 33.6**	**+0.3**
TOLK	**Toolik Lake Re**	**42.91**	**336**	P	**P**	**23 33 38.0**	**+1.4**
BMAR	**Burnt Mountain**	**43.05**	**333**	P	**P**	**23 33 39.5**	**+1.7**
T60A	**Surry**	**44.01**	**261**	P	**P**	**23 33 45.4**	**-0.4**
ACSO	**Alum Creek Sta**	**44.13**	**269**	P	**P**	**23 33 44.7**	**-2.0**
ACSO				IAmb	IAmb	23 33 48.5	
	comp=Z,11nm,1.1s						
R53A	**Hurricane**	**45.26**	**267**	P	**P**	**23 33 56.3**	**+0.6**
R53A				IAmb	IAmb	23 33 57.6	
	comp=Z,13nm,1.1s						
V60A	**Jim Taylor Roa**	**45.40**	**260**	P	**P**	**23 33 56.9**	**0.0**
IL31		**45.84**	**332**	P	**P**	**23 34 00.6**	**+0.6**
IL31				IAmb	IAmb	23 34 03.1	
	comp=Z,5.0nm,1.3s						
ILAR	**Eielson Array**	**45.84**	**332**	P	**P**	**23 34 00.8**	**+0.7**
	comp=Z,1.6nm,1.1s,baz=28,slow=5.6,SNR=9.7						
ILAR				PcP	**PcP**	**23 35 38.1**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=341,slow=2.2,SNR=5.0						
ILAR	**Eielson Array**	**45.84**	**332**	P	**P**	**23 34 01.4**	**+1.4**
MDM	**Murphy Dome**	**45.94**	**333**	P	**P**	**23 34 02.6**	**+1.7**
MDM				IAmb	IAmb	23 34 04.9	
	comp=Z,9.9nm,1.4s			

WSAR	**Wadi Sarin**	**18.06**	**352**	LR	LR	23 35 18.4		
	comp=Z,93nm,19.0s,baz=175,slow=31							
PALK	**Pallekele**	**19.51**	**83**	LR	LR	23 36 49.7		
	comp=Z,45nm,18.2s,baz=348,slow=34							
UOSS	**Minazif**	**20.16**	**347**	P	**P**	**23 30 19.2**	**-1.2**	
RAYN	**Ar Rayn**	**23.63**	**322**	P	**P**	**23 30 55.6**	**-1.8**	
RER	**Riviere de l'E**	**26.78**	**191**	P	**P**	**23 31 26.0**	**-0.1**	
RER				IAmb	IAmb	23 31 26.9		
	comp=Z,51nm,1.0s							
OPO	**Ambohidratompo**	**27.39**	**210**	LR	LR	23 40 40.6		
	comp=Z,80nm,18.1s,baz=176,slow=33							
MBAR	**Mbarara**	**30.95**	**260**	LR	LR	23 45 20.5		
	comp=Z,34nm,18.9s,baz=55,slow=38							
GEYT	**Alibeck**	**32.65**	**356**	LR	LR	23 46 15.5		
	comp=Z,43nm,18.3s,baz=355,slow=38							
GEYT	**Alibeck**	**32.65**	**356**	P	**P**	**23 32 18.3**	**+0.2**	
CMAR	**Chiang Mai Arr**	**39.12**	**67**	LR	LR	23 49 11.3		
	comp=Z,9.1nm,19.7s,baz=275,slow=36							
CHTO	**Chiang Mai**	**39.21**	**67**	P	**P**	**23 33 14.8**	**+0.3**	
FRU1	**Bishkek**	**39.27**	**16**	P	**P**	**23 33 13.7**	**-1.0**	
FRU1				IAmb	IAmb	23 33 23.3		
	comp=Z,3.6nm,0.6s							
IPM	**Ipoh**	**39.71**	**89**	P	**P**	**23 33 17.9**	**-0.8**	
IPM				IAmb	IAmb	23 33 33.3		
	comp=Z,5.6nm,0.7s							
BRTR	**Keskin Array B**	**42.37**	**328**	LR	LR	23 51 27.4		
	comp=Z,41nm,19.2s,baz=140,slow=36							
ABKAR	**Akbulak array**	**43.87**	**359**	P	**P**	**23 33 50.5**	**-1.7**	
ABKAR				IAmb	IAmb	23 33 56.8		
	comp=Z,4.0nm,1.1s							
ABKAR	**Akbulak array**	**43.87**	**359**	P	**P**	**23 33 50.8**	**-1.4**	
WMQ	**Urumqi**	**44.95**	**27**	P	**P**	**23 34 02.2**	**+1.0**	
WMQ				IAmb	IAmb	23 34 05.8		
	comp=Z,5.1nm,1.1s							
MAKZ	**Makanchi**	**45.13**	**20**	P	**P**	**23 34 03.7**	**+1.2**	
MAKZ				IAmb	IAmb	23 34 06.3		
	comp=Z,4.1nm,1.1s							
MKAR	**Makanchi Array**	**45.23**	**20**	P	**P**	**23 34 05.1**	**+1.9**	
	comp=Z,1.3nm,1.0s,baz=208,slow=12,SNR=5.1							
MKAR				LR	LR	23 53 25.3		
	comp=Z,45nm,21.3s,baz=244,slow=36							
BOSA	**Boshof**	**48.26**	**224**	LR	LR	23 53 25.5		
	comp=Z,65nm,18.2s,baz=32,slow=34							
CRZF	**Crozet Islands**	**52.11**	**188**	P	**P**	**23 34 56.1**	**+0.1**	
ZALV	**Zalesovo Beam**	**52.23**	**17**	P	**P**	**23 34 59.2**	**+2.3**	
	comp=Z,1.1nm,0.8s,baz=218,slow=9.4,SNR=6.2							
ZALV	**Zalesovo Beam**	**52.23**	**17**	P	**P**	**23 34 57.6**	**+0.7**	
BURAR	**Bucovina Array**	**52.25**	**330**	P	**P**	**23 34 57.7**	**+0.4**	
CEL	**Celeste**	**52.58**	**315**	P	**P**	**23 34 59.4**	**-0.5**	
AKASG	**Malin Array Be**	**52.60**	**335**	LR	LR	00 00 07.9		
	comp=Z,18nm,20.0s,baz=295,slow=39							
SONM	**Songino Array**	**57.33**	**35**	P	**P**	**23 35 36.7**	**+2.5**	
	comp=Z,0.3nm,0.7s,baz=276,slow=5.7,SNR=3.0							
TORD	**Torodi Ar. Bea**	**59.13**	**282**	P	**P**	**23 35 48.0**	**+0.9**	
	comp=Z,1.2nm,1.0s,baz=97,slow=5.4,SNR=4.2							
TORD	**Torodi Ar. Bea**	**59.13**	**282**	P	**P**	**23 35 46.7**	**-0.4**	
FINES	**FINESS Array B**	**61.89**	**342**	LR	LR	00 03 55.9		
	comp=Z,48nm,19.5s,baz=197,slow=37							
UCC	**Uccle**	**65.42**	**324**	P	**P**	**23 36 25.4**	**-3.2**	
UCC				IAmb	IAmb	23 36 41.2		
	comp=Z,7.4nm,0.6s							
NOA	**NORSAR Array B**	**66.98**	**336**	LR	LR	00 07 55.4		
	comp=Z,18nm,18.4s,baz=250,slow=38							
ARC6	**ARCESS Array S**	**68.32**	**347**	P	**P**	**23 36 46.8**	**0.0**	
ARC6				IAmb	IAmb	23 36 47.1		
	comp=Z,8.2nm,0.9s							
ARC7	**ARCESS Array S**	**68.32**	**347**	P	**P**	**23 36 48.0**	**+1.1**	
ARC7				IAmb	IAmb	23 36 59.5		
	comp=Z,6.7nm,1.0s							
WRA	**Warramunga Arr**	**76.08**	**112**	P	**P**	**23 37 34.7**	**+0.5**	
	comp=Z,1.7nm,1.1s,baz=292,slow=4.9,SNR=5.8							
WRA	**Warramunga Arr**	**76.08**	**112**	IAmb	IAmb	23 37 43.1		
	comp=Z,0.3nm,1.1s							
WRAB	**Tennant Creek**	**76.08**	**112**	P	**P**	**23 37 35.1**	**+0.8**	
WRAB				IAmb	IAmb	23 37 37.9		
	comp=Z,5.1nm,0.6s							
WB2	**Warramunga Arr**	**76.09**	**112**	P	**P**	**23 37 33.6**	**-0.7**	
WB2				IAmb	IAmb	23 37 42.5		
	comp=Z,4.9nm,0.9s							
ASAR	**Alice Springs**	**76.41**	**116**	P	**P**	**23 37 36.8**	**+0.6**	
	comp=Z,0.9nm,0.9s,baz=279,slow=5.6,SNR=7.2							
ASAR	**Alice Springs**	**76.41**	**116**	P	**P**	**23 37 37.2**	**+1.1**	
MJAR	**Matsushiro Arr**	**76.48**	**54**	P	**P**	**23 37 33.0**	**-3.2**	
JTM	**Tenmabayashi**	**78.94**	**50**	P	**P**	**23 37 49.3**	**-0.5**	
CASY	**Casey**	**79.67**	**162**	P	**P**	**23 37 53.4**	**+0.2**	
TXAR	**Lajitas Array**	**142.66**	**338**	PKP	**PKPdf**	**23 45 21.7**	**+1.6**	
	comp=Z,0.1nm,0.7s,baz=91,slow=3.6,SNR=1.9							

IDC 28 23:33:11.7±2.2,1°.83N×126°.36E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/31,mbtmp3.3/3,Error ellipse: s-maj=176.1km s-min=27.4km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.01**	**160**	P	P	23 38 18.2	-0.2
	0.6nm,0.5s,baz=339,slow=11,SNR=9.0						
ASAR	**Alice Springs**	**26.38**	**164**	P	P	23 38 50.3	+0.3
	0.1nm,0.3s,baz=348,slow=13,SNR=2.2						
MKAR	**Makanchi Array**	**58.91**	**326**	P	P	23 43 12.6	-0.1
	0.2nm,0.6s,baz=123,slow=7.3,SNR=4.0						

*NEIC **28** 23:34:39.6±0.9,37°.27N±0°.09×71°.8E±0°.1,h161km±10km, mb4.0/5,Error ellipse: s-maj=15.9km s-min=11.0km az=121.0*

*NNC **28** 23:34:42.5±6.2,37°.81N×71°.70E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=49.8km s-min=37.3km az=162.0*

*IDC **28** 23:34:45.3±5.4,37°.90N×71°.41E,h194km±43km,mb3.1/3, mb1 3.1/6,mb1mx2.9/36,mbtmp3.6/6,MS3.3/2,Ms1 3.2/2, ms1mx2.7/16,Error ellipse: s-maj=56.3km s-min=28.7km az=169.0*

ISC 28 23:34:38.3±0.6,37°.20N±0°.05×71°.94E±0°.06,h150km,n57, σ2s36/76,mb3.4/3,3C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRK	**Karamyk**	**2.28**	**357**		**Pn**	**23 35 18.4**	**+1.5**
DRK				Sn	**Sn**	**23 35 47.3**	**+0.5**
BTK	**Batken**	**2.98**	**343**	Pn	**Pn**	**23 35 27.2**	**+1.7**
BTK				Sn	**Sn**	**23 36 02.0**	**-0.1**
KBL	**Kabul**	**3.55**	**222**		**Pn**	**23 35 35.0**	**+2.2**
KBL				Sn	**Sn**	**23 36 15.7**	**+0.5**
NIL	**Nilore**	**3.70**	**163**	Pn	**Pn**	**23 35 37.1**	**+2.5**
NIL				Sn	**Sn**	**23 36 16.5**	**-1.9**
JMU	**Jammu**	**5.09**	**151**	*eS*	**Sn**	**23 36 45.4**	**-5.7**
AAK	**Ala-Archa**	**5.77**	**19**	P	**Pn**	**23 36 03.3**	**+1.3**
	2.2nm,0.3s,baz=182,slow=6.1,SNR=31						
AAK				S	**Sn**	**23 37 05.5**	**-2.0**
	1.5nm,0.3s,baz=324,slow=19,SNR=17						
AAK	**Ala-Archa**	**5.77**	**19**	⇑P	**Pn**	**23 36 03.1**	**+1.1**
	3.5nm,0.5s						
AAK				⇓S	**Sn**	**23 37 06.3**	**-1.2**
	28nm,0.9s						
KK07	**Karatay Array**	**5.98**	**350**	Pn	**Pn**	**23 36 05.2**	**+0.5**
KK07				Sn	**Sn**	**23 37 06.7**	**-5.6**
KK06	**Karatay Array**	**5.99**	**350**	Pn	**Pn**	**23 36 05.2**	**+0.5**
KK06				Sn	**Sn**	**23 37 08.1**	**-4.3**
KK02	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.5**	**+0.6**
KK02				Sn	**Sn**	**23 37 08.8**	**-3.8**
KK03	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.5**	**+0.6**
KK03				Sn	**Sn**	**23 37 08.9**	**-3.7**
KK31	**Karatay Array**	**6.00**	**350**	⇑P	**Pn**	**23 36 05.3**	**+0.5**
	4.0nm,0.5s,baz=176,slow=12,SNR=47						
KK31				S	**Sn**	**23 37 07.8**	**-4.8**
	26nm,0.6s,baz=171,slow=22,SNR=30						
KK31	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.3**	**+0.5**
KK31				Sn	**Sn**	**23 37 08.1**	**-4.5**
KKAR	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.3**	**+0.5**
KKAR				Sn	**Sn**	**23 37 08.1**	**-4.5**
KKAR	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.5**	**+0.7**
KKAR				Sn	**Sn**	**23 37 08.7**	**-3.9**
KK01	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.7**	**+0.8**
KK01				Sn	**Sn**	**23 37 08.2**	**-4.5**
KK08	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.5**	**+0.6**
KK08				Sn	**Sn**	**23 37 07.6**	**-5.1**
KK04	**Karatay Array**	**6.00**	**350**	Pn	**Pn**	**23 36 05.5**	**+0.6**
KK04				Sn	**Sn**	**23 37 08.6**	**-4.2**
KK05	**Karatay Array**	**6.01**	**350**	Pn	**Pn**	**23 36 05.6**	**+0.6**
KK05				Sn	**Sn**	**23 37 08.5**	**-4.4**
KK09	**Karatay Array**	**6.02**	**350**	Pn	**Pn**	**23 36 05.5**	**+0.4**
KK09				Sn	**Sn**	**23 37 09.0**	**-4.1**
DHRM	**DHARAMSHALA**	**6.10**	**143**	*eP*	**Pn**	**23 36 07.8**	**+1.2**
DHRM				*eS*	**Sn**	**23 37 12.9**	**-2.7**
DHRM				IAML		23 37 15.2	
	comp=N,119nm,0.4s						
DHRM				IAML		23 37 17.1	
	comp=E,133nm,0.6s						
TKM2	**Tokmak 2**	**6.36**	**25**	⇑P	**Pn**	**23 36 11.4**	**+1.5**
	comp=E,2.7nm,0.7s						
TKM2				⇓S	**Sn**	**23 37 18.8**	**-2.9**
	comp=E,8.7nm,1.0s						
SMLA	**Simla**	**7.44**	**143**	*eP*	**Pn**	**23 36 24.6**	**+0.3**
SMLA				*eS*	**Sn**	**23 37 42.1**	**-5.3**
SMLA				*eS*		23 37 42.3	
SMLA				IAML		23 37 46.3	
	comp=N,44nm,0.4s						
SMLA				IAML		23 37 47.4	
	comp=E,72nm,0.3s						
HRA	**Herat**	**8.37**	**253**	Pn	**Pn**	**23 36 36.2**	**-0.5**
GYB1	**ALIBECK ARRAY**	**10.99**	**278**	Pn	**Pn**	**23 37 10.5**	**-0.8**
GYA0B	**ALIBECK ARRAY**	**11.00**	**278**	Pn	**Pn**	**23 37 10.3**	**-1.1**
GYA1	**ALIBECK ARRAY**	**11.00**	**278**	Pn	**Pn**	**23 37 10.4**	**-1.0**
MAKZ	**Makanchi**	**12.15**	**35**	Pn	**Pn**	**23 37 25.9**	**-0.4**
MK31	**Makanchi Array**	**12.28**	**35**	P	**P**	**23 37 34.9**	**+0.7**
MKAR	**Makanchi Array**	**12.28**	**35**	P	**Pn**	**23 37 29.9**	**+1.9**
	comp=E,0.0nm,0.3s,baz=216,slow=12,SNR=2.0						
MKAR	**Makanchi Array**	**12.28**	**35**	Pn	**Pn**	**23 37 28.6**	**+0.6**
WMQ	**Urumqi**	**13.68**	**56**	P	**P**	**23 37 51.1**	**+1.3**
AB07	**Akbulak array**	**14.85**	**328**		**Pn**	**23 38 00.8**	**+0.3**
AB06	**Akbulak array**	**14.86**	**328**		**Pn**	**23 38 01.2**	**+0.5**
AB08	**Akbulak array**	**14.86**	**328**		**Pn**	**23 38 01.9**	**+1.2**
AB03	**Akbulak array**	**14.86**	**328**		**Pn**	**23 38 02.0**	**+1.3**
AB01	**Akbulak array**	**14.86**	**328**		**Pn**	**23 38 02.0**	**+1.2**
AB31	**Akbulak array**	**14.86**	**328**	⇓P	**Pn**	**23 38 02.0**	**+1.3**
	comp=E,0.7nm,0.4s,baz=130,slow=15,SNR=38						
AB31	**Akbulak array**	**14.86**	**328**		**Pn**	**23 38 01.9**	**+1.1**
ABKAR	**Akbulak array**	**14.86**	**328**		**Pn**	**23 38 01.3**	**+0.6**
ABKAR	**Akbulak array**	**14.86**	**328**		**Pn**	**23 38 01.8**	**+1.0**
AB02	**Akbulak array**	**14.87**	**328**		**Pn**	**23 38 01.7**	**+0.9**
AB04	**Akbulak array**	**14.87**	**328**		**Pn**	**23 38 01.9**	**+1.1**
AB05	**Akbulak array**	**14.88**	**328**		**Pn**	**23 38 01.9**	**+0.9**
AB09	**Akbulak array**	**14.88**	**328**		**Pn**	**23 38 01.9**	**+1.0**
BRVK	**Borovoye**	**15.90**	**356**		**P**	**23 38 14.8**	**+0.6**
UOSS	**Minazif**	**18.16**	**232**	P	**P**	**23 38 38.9**	**-0.5**
UOSS				IAmb	IAmb	23 39 19.5	
	comp=Z,16nm,1.1s						
ZAA0	**Zalesovo Array**	**18.97**	**24**	P	**P**	**23 38 49.2**	**+1.4**
ZAA0				IAmb	IAmb	23 38 49.7	
	comp=Z,4.3nm,1.1s						
ZALV	**Zalesovo Beam**	**18.97**	**24**	P	**P**	**23 38 48.7**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=209,slow=9.5,SNR=15						
ZALV	**Zalesovo Beam**	**18.97**	**24**	P	**P**	**23 38 49.3**	**+1.6**
SHL	**Shillong**	**20.55**	**119**	P	**P**	**23 39 06.7**	**+1.4**
SHL				IAmb	IAmb	23 39 13.8	
	comp=Z,10nm,1.6s						
KBZ	**Khabaz**	**22.97**	**296**	LR	LR	23 49 53.4	
	comp=Z,45nm,20.9s,baz=116,slow=41						
SONM	**Songino Array**	**27.32**	**56**	P	**P**	**23 40 11.0**	**+2.0**
	comp=Z,0.4nm,0.5s,baz=261,slow=8.4,SNR=4.1						
FINES	**FINESS Array B**	**37.33**	**325**	P	P	23 41 29.9	-5.8
	comp=Z,2.0nm,0.9s,baz=150,slow=5.8,SNR=1.5						
PSZ	**Piszkesteto**	**39.12**	**303**	P	**P**	**23 41 50.7**	**-0.3**
GERES	**GERESS Array B**	**43.15**	**305**	LR	LR	00 02 32.8	
	comp=Z,69nm,18.4s,baz=283,slow=39						
TORD	**Torodi Ar. Bea**	**66.49**	**269**	P	**P**	**23 45 12.9**	**+0.8**
	comp=Z,0.3nm,0.9s,baz=55,slow=5.4,SNR=1.8						

*NEIC **28** 23:39:10.8±2.1,30°.77S±0°.08×176°.8W±0°.1,h49km±5km, mb4.3/25,Error ellipse: s-maj=13.9km s-min=10.9km az=102.0*

*IDC **28** 23:39:12.1±1.4,30°.82S×177°.80W,h0km,mb4.2/3, mb1 4.3/4,mb1mx3.9/32,mbtmp4.1/4,ML3.6/1,Error ellipse: s-maj=38.0km s-min=25.0km az=114.0*

ISC 28 23:39:09.7±0.8,30°.81S±0°.07×176°.8W±0°.1,h35km,n52, σ2s03/47,mb4.4/12,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.81**	**329**	Pn	Pn	23 39 42.7	+4.3
	207nm,0.3s,baz=67,slow=14,SNR=5.7						
RAO				Sn	**Sn**	**23 39 58.5**	**-1.7**
	894nm,0.3s,baz=198,slow=23,SNR=12						
RAO	**Raoul Island**	**1.81**	**329**		**Pn**	**23 39 41.9**	**+3.4**
RAO				Sn	**Sn**	**23 39 59.0**	**-1.2**
MXZ	**Matakaoa Point**	**7.84**	**210**	Pn	**Pn**	**23 41 02.4**	**+1.2**
URZ	**Urewera**	**8.95**	**212**	Pn	**Pn**	**23 41 16.6**	**+0.2**
	0.7nm,0.3s,baz=272,slow=4.4,SNR=7.3						
URZ				Sn	**Sn**	**23 42 50.3**	**-5.6**
	2.1nm,0.3s,baz=214,slow=21,SNR=9.9						
OUZ	**Omahuta**	**9.15**	**239**	Pn	**Pn**	**23 41 22.0**	**+2.8**
BKZ	**Black Stump Fm**	**9.96**	**211**	Pn	**Pn**	**23 41 31.1**	**+0.6**
NNZ	**Nelson**	**13.05**	**215**	Pn	**Pn**	**23 42 15.2**	**+2.7**
QRZ	**Quartz Range**	**13.19**	**218**	Pn	**Pn**	**23 42 15.9**	**+1.5**
BSWZ	**Blackbirch Sta**	**13.20**	**212**	Pn	**Pn**	**23 42 16.9**	**+2.3**
NIUE	**Niue**	**13.25**	**30**	Pn	**Pn**	**23 42 14.9**	**-0.6**
THZ	**Tophouse**	**13.69**	**214**	Pn	**Pn**	**23 42 25.4**	**+4.1**
KHZ	**Kahutara**	**13.91**	**211**	Pn	**Pn**	**23 42 24.9**	**+0.7**
LTZ	**Lake Taylor**	**14.78**	**213**	Pn	**Pn**	**23 42 38.0**	**+1.9**
OXZ	**Oxford**	**15.30**	**212**	Pn	**Pn**	**23 42 44.9**	**+1.8**
OXZ				IAmb	IAmb	23 42 46.1	
	comp=Z,27nm,1.2s						
RPZ	**Rata Peaks**	**16.06**	**213**	Pn	**Pn**	**23 42 51.9**	**-0.9**
RPZ				IAmb	IAmb	23 43 01.0	
	comp=Z,20nm,1.1s						
FOZ	**Fox Glacier**	**16.53**	**216**	Pn	**Pn**	**23 43 00.0**	**+1.2**
FOZ				IAmb	IAmb	23 43 01.2	
	comp=Z,20nm,1.0s						
ODZ	**Otahua Downs**	**17.27**	**211**	Pn	**Pn**	**23 43 06.2**	**-1.8**
DZM	**Mont Dzumac**	**17.30**	**296**	Pn	**Pn**	**23 43 08.7**	**+0.1**
TOO	**Toolangi**	**31.72**	**247**	P	**P**	**23 45 29.8**	**-0.6**
TOO				IAmb	IAmb	23 45 30.9	
	comp=Z,3.2nm,0.9s						
TARA	**Tarawa**	**33.44**	**341**	P	**P**	**23 45 44.2**	**-1.1**
STKA	**Stephens Creek**	**35.36**	**257**	P	**P**	**23 46 03.7**	**+1.7**
	comp=Z,5.2nm,0.8s,baz=97,slow=9.0,SNR=8.6						
STKA	**Stephens Creek**	**35.36**	**257**	P	**P**	**23 46 03.0**	**+1.0**
BBOO	**Buckleboo**	**39.82**	**254**	P	**P**	**23 46 40.6**	**+0.9**
BBOO				IAmb	IAmb	23 46 44.2	
	comp=Z,9.9nm,1.1s						
COEN	**Coen**	**40.34**	**285**	P	**P**	**23 46 45.0**	**+0.9**
COEN				IAmb	IAmb	23 46 51.9	
	comp=Z,5.3nm,1.1s						
AS31	**Alice Springs**	**44.08**	**267**	P	**P**	**23 47 14.8**	**+0.1**
ASAR	**Alice Springs**	**44.08**	**267**	P	**P**	**23 47 15.3**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=108,slow=7.9,SNR=16						
ASAR	**Alice Springs**	**44.08**	**267**	P	**P**	**23 47 14.4**	**-0.3**
WR0	**Warramunga Arr**	**44.93**	**272**	P	**P**	**23 47 21.6**	**+0.1**
WC3	**Warramunga Arr**	**45.08**	**272**	P	**P**	**23 47 22.9**	**+0.3**
WC3				IAmb	IAmb	23 47 24.2	
	comp=Z,6.0nm,0.9s						
WB2	**Warramunga Arr**	**45.10**	**272**	P	**P**	**23 47 23.0**	**+0.2**
WB2				IAmb	IAmb	23 47 24.4	
	comp=Z,4.4nm,0.8s						
WRA	**Warramunga Arr**	**45.11**	**272**	P	**P**	**23 47 22.9**	**0.0**
	comp=Z,1.2nm,0.3s,baz=111,slow=8.1,SNR=21						
WRA	**Warramunga Arr**	**45.11**	**272**	P	**P**	**23 47 23.1**	**+0.2**
WB0	**Warramunga Arr**	**45.13**	**272**	P	**P**	**23 47 23.0**	**-0.1**
WB0				IAmb	IAmb	23 47 24.7	
	comp=Z,5.0nm,0.9s						
FORT	**Forrest**	**46.91**	**255**	P	**P**	**23 47 37.2**	**+0.3**
JOHN	**Johnston Islan**	**47.79**	**9**	P	**P**	**23 47 42.1**	**-1.5**
KNRA	**Kununurra**	**51.73**	**274**	P	**P**	**23 48 14.1**	**+0.2**
KNRA				IAmb	IAmb	23 48 16.2	
	comp=Z,6.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.36**	**270**	P	**P**	**23 48 27.0**	**+1.1**
GIRL	**Giralia**	**61.26**	**259**	P	**P**	**23 49 21.6**	**0.0**
TOLI2	**Tolitoli**	**67.11**	**286**	P	**P**	**23 49 59.1**	**-1.0**
TOLI2				IAmb	IAmb	23 50 09.1	
	comp=Z,8.0nm,0.7s						
H03S2	**Juan Fernandez**	**79.40**	**123**	T	T	01 20 29.3	
	baz=237,slow=74,SNR=144						
H03S1	**Juan Fernandez**	**79.42**	**123**	T	T	01 20 32.4	
	baz=237,slow=74,SNR=146						
H03S3	**Juan Fernandez**	**79.42**	**123**	T	T	01 20 29.4	
	baz=237,slow=74,SNR=151						
H03N3	**Juan Fernandez**	**79.60**	**123**	T	T	01 20 37.3	
	baz=242,slow=72,SNR=27						
H03N2	**Juan Fernandez**	**79.60**	**123**	T	T	01 20 43.1	
	baz=242,slow=72,SNR=28						
H03N1	**Juan Fernandez**	**79.61**	**123**	T	T	01 20 44.6	
	baz=242,slow=72,SNR=33						
ADK	**Adak**	**82.34**	**0**	P	**P**	**23 51 28.0**	**+0.6**
SLBS	**Sierra La Lagu**	**83.92**	**58**	P	**P**	**23 51 36.4**	**0.0**
SLBS				IAmb	IAmb	23 51 40.4	
	comp=Z,2.0nm,1.1s						
UNV	**Unalaska Valle**	**84.78**	**6**	P	**P**	**23 51 38.0**	**-1.8**
ZALV	**Zalesovo Beam**	**119.00**	**318**	PKP	**PKiKP**	**23 58 00.6**	**+6.4**
	comp=Z,2.5nm,0.7s,baz=94,slow=3.1,SNR=4.2						
FINES	**FINESS Array B**	**145.87**	**341**	PKPbc	**PKiKP**	**23 58 50.1**	**+2.1**
	comp=Z,3.4nm,0.5s,baz=60,slow=3.7,SNR=51						
AKASG	**Malin Array Be**	**152.23**	**323**	PKPbc	**PKPab**	**23 59 06.8**	**-4.3**
	comp=Z,0.5nm,0.4s,baz=301,slow=30,SNR=2.0						
TORD	**Torodi Ar. Bea**	**162.37**	**175**	PKPab	PKPab	00 00 04.4	+8.8
	comp=Z,0.4nm,0.6s,baz=174,slow=4.2,SNR=6.9						

*NIED **28** 23:48:14.1,39°.57N×143°.73E,h27km,MW4.4,Moment Tensor Solution. s3 Moment tensor: Scale 10^15Nm; Mrr3.70; Mθθ0.22; Mφφ-3.92; Mrθ1.28; Mθφ-0.89; Mφr1.66; Fault plane solution: M0 4.44000×10^15 NP1:ϕs24.00000°, δ59.00000°, λ104.00000°. NP2:ϕs178.00000°, δ34.00000°, λ68.00000°.*

*JMA **28** 23:48:14.0±0.2,39°.57N×143°.73E,h27km,M4.6*

JMA Felt I J1.

*BJI **28** 23:48:17.4±0.0,39°.51N×143°.28E,h30km,mB4.9/42, mb4.8/60,Ms4.3/38,Ms7 4.1/39*

*MOS **28** 23:48:19.0±1.0,39°.65N×143°.32E,h37km,mb4.9/20, MS4.3/4,Error ellipse: s-maj=7.2km s-min=4.8km az=102.3*

*IDC **28** 23:48:20.5±2.0,39°.55N×143°.47E,h42km±18km,mb3.9/21, mb1 4.2/27,mb1mx4.1/55,mbtmp4.2/27,ML3.5/6,MS3.5/13, Ms1 3.6/13,ms1mx3.2/47,Error ellipse: s-maj=17.2km s-min=10.9km az=107.0*

*NEIC **28** 23:48:21.0±1.8,39°.61N±0°.05×143°.21E±0°.09,h37km±6km, mb4.7/73,Error ellipse: s-maj=10.1km s-min=7.2km az=115.0*

ISC 28 23:48:19.9±0.8,39°.65N±0°.03×143°.45E±0°.04,h34km±2km, n250,σ1s57/263,mb4.6/87,MS4.1/19,12C-8D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.25**	**284**	P	**Pn**	**23 48 39.7**	**-1.3**
MIYJ	**Miyakonagasawa**	**1.26**	**267**	P	**Pn**	**23 48 39.6**	**-1.5**
MIYJ				*eS*	**Sn**	**23 48 57.8**	**+0.9**
JKEN	**Kujiedanarisaw**	**1.45**	**293**	P	**Pn**	**23 48 42.3**	**-1.3**
OFUJ	**Ofunato**	**1.49**	**248**	P	**Pn**	**23 48 42.4**	**-1.9**
OFUJ				*eS*	**Sn**	**23 49 03.4**	**+0.8**
JANG	**Nango**	**1.65**	**297**	P	**Pn**	**23 48 45.1**	**-1.4**
JOM	**Ohasama**	**1.68**	**265**	P	**Pn**	**23 48 45.7**	**-1.1**
JMK	**Ichinoseki**	**1.86**	**249**	P	**Pn**	**23 48 47.8**	**-1.6**
JIO	**Ouri**	**2.02**	**234**	P	**Pn**	**23 48 49.0**	**-2.6**
JTM	**Tenmabayashi**	**2.15**	**303**	Pn	**Pn**	**23 48 53.3**	**+0.1**
JTM				Sn	**Sb**	**23 49 24.9**	**+0.6**
ERM	**Erimo**	**2.37**	**355**	P	**Pn**	**23 48 57.3**	**+1.0**
ERM						23 49 24.5	
ERM	**Erimo**	**2.37**	**355**	Pn	**Pn**	**23 48 57.3**	**+1.0**
ERM				Sn	**Sn**	**23 49 24.5**	**+0.3**
JEM	**Erimo**	**2.37**	**355**	Pn	**Sn**	**23 49 24.7**	**+0.5**
JYK	**Kaneyama**	**2.51**	**254**	P	**Pn**	**23 48 56.9**	**-1.3**
JOT	**Ohata**	**2.52**	**314**	P	**Pn**	**23 48 58.4**	**+0.1**
JNBK	**Urakawa-nobuka**	**2.68**	**349**	P	**Pn**	**23 49 01.0**	**+0.4**
JNBK				*eS*	**Sb**	**23 49 36.6**	**-2.9**
JMM	**Marumori**	**2.74**	**230**	Pn	**Pn**	**23 48 58.4**	**-3.0**
JCH	**Churui**	**2.96**	**359**	P	**Pn**	**23 49 03.8**	**-0.7**
JCH				*eS*	**Sn**	**23 49 38.3**	**-0.5**
JFT	**Otama**	**3.24**	**230**	P	**Pn**	**23 49 06.2**	**-2.1**
JFT				*eS*	**Sn**	**23 49 45.8**	**+0.1**
**

MDJ pmax pmax
comp=E,250nm,3.8s
MDJ LR LR
comp=E,750nm,11.2s
MDJ LR LR
comp=E,790nm,13.1s
MDJ LR LR
comp=E,790nm,14.1s
MDJ Mudanjiang 11.42 300 Pn **Pn 23 51 01.1 +0.6**
KSRS Korea Array 12.35 265 P **Pn 23 51 15.4 +2.2**
comp=E,0.3nm,0.3s,baz=87,slow=13,SNR=12
KSRS LR LR 23 55 39.7
comp=E,359nm,18.4s,baz=78,slow=35
KSAR Wonju Array Be 12.39 265 P **Pn 23 51 11.8 -1.9**
KSAR Wonju Array Be 12.39 265 Pn **Pn 23 51 11.8 -1.9**
KLR Kul'dur 12.70 323 P **Pn 23 51 20.1 +2.3**
comp=E,0.1nm,0.3s,baz=133,slow=10,SNR=8.5
KLR LR LR 23 55 50.3
comp=E,118nm,20.8s,baz=138,slow=35
KLR Kul'dur 12.70 323⇑ *e*P **Pn 23 51 19.5 +1.6**
CN2 Changchun 14.06 293 *e*P **Pn 23 51 38.3 +1.7**
CN2 pmax pmax
comp=E,10.0nm,0.7s
CN2 LR LR
comp=E,300nm,12.0s
CN2 LR LR
comp=E,600nm,12.0s
CN2 LR LR
comp=E,500nm,15.0s
PETK Petropavlovsk- 16.62 31 LR LR 23 59 47.6
comp=E,74nm,18.5s,baz=219,slow=41
DL2 Dalian 16.91 274 P **Pn 23 52 14.5 +0.7**
DL2 S **Sn 23 55 21.5 +0.9**
DL2 pmax pmax
comp=E,38nm,0.9s
DL2 pmax pmax
comp=E,110nm,6.8s
DL2 LR LR
comp=E,390nm,10.3s
DL2 LR LR
comp=E,260nm,14.6s
DL2 LR LR
comp=E,390nm,14.8s
PET Petropavlovsk 16.95 33 P **P 23 52 17.3 +1.4**
PET pmax pmax
comp=Z,68nm,1.5s
PET Petropavlovsk 16.95 33 P **P 23 52 17.3 +1.4**
PET IAmb IAmb 23 52 19.4
comp=Z,68nm,1.5s
ZEA Zeya 17.88 327 *e*P **Pn 23 52 24.3 -1.4**
ZEA pmax pmax
comp=E,10.0nm,0.8s
ZEA pmax pmax
comp=Z,20nm,0.7s
HIA Hailar 19.39 308 P **P 23 52 41.4 -1.4**
HIA pmax pmax
comp=Z,12nm,0.7s
HIA Hailar 19.39 308 P **P 23 52 41.4 -1.4**
MA2 Magadan 20.48 11 LR LR 00 01 38.4
comp=Z,119nm,19.0s,baz=236,slow=39
BJI Beijing 20.92 280 P **P 23 52 56.8 -2.6**
BJI pmax pmax
comp=Z,11nm,1.0s
BJI LR LR
comp=Z,210nm,11.8s
BJI LR LR
comp=Z,400nm,12.9s
BJI LR LR
comp=Z,180nm,15.7s
BJT Baijiatuau 20.93 280 P **P 23 52 56.6 -2.9**
BJT pmax pmax
comp=Z,10.0nm,0.8s
BJT Baijiatuau 20.93 280 P **P 23 52 56.6 -2.9**
TIA Tai'an 21.02 269 P **P 23 52 58.0 -2.6**
TIA pmax pmax
comp=Z,21nm,0.8s
SEY Seymchan 23.93 10 P **P 23 53 31.6 +1.2**
comp=Z,8.0nm,0.8s,baz=176,slow=20,SNR=10
SEY LR LR 00 04 24.1
comp=Z,124nm,18.2s,baz=170,slow=40
SEY Seymchan 23.93 10⇓ *e*P **P 23 53 32.4 +2.0**
YAK Yakutsk 23.93 344 LR LR 00 03 03.3
comp=Z,66nm,18.5s,baz=178,slow=37
YAK Yakutsk 23.93 344 *e*P **P 23 53 29.1 -1.3**
YAK *e**PP **pP 23 53 38.2 -1.2**
YAK *e* 23 57 10.1
YAK *e*S **S 23 57 44.0 -0.5**
YAK *e**SS **sS 23 58 01.6 +2.1**
YAK *e*SS **SnSn 23 58 25.6 -0.1**
YAK *e* 00 04 32.8
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=N,17nm,1.2s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=Z,722nm,4.1s
YAK pmax pmax
comp=N,676nm,3.3s
YAK smax smax
comp=N,584nm,3.7s
YAK MLR MLR
comp=Z,116nm,14.0s
YAK Yakutsk 23.93 344 P **P 23 53 29.9 -0.6**
YAK IAmb IAmb 23 53 48.3
comp=Z,30nm,0.8s
NACB Ninganchiao 24.04 237 P **P 23 53 29.2 -2.6**
NACB IAmb IAmb 23 53 30.0
comp=Z,22nm,1.0s
HHC Hu-ho-hao-te 24.30 283 *e*P **P 23 53 29.0 -5.2**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,110nm,4.0s
HHC LR LR
comp=Z,230nm,11.4s
HHC LR LR
comp=Z,530nm,12.1s
HHC LR LR
comp=Z,590nm,11.9s
SSLB Suanglung 24.73 237 P **P 23 53 35.8 -2.3**
SSLB IAmb IAmb 23 53 36.6
comp=Z,25nm,0.8s
TWG Pinlang 25.34 235 P **P 23 53 41.8 -1.8**
TWG IAmb IAmb 23 53 46.8
comp=Z,27nm,1.0s
WHN Wuhan 25.39 258 ⇓P **P 23 53 43.8 -0.3**
WHN pmax pmax
comp=Z,98nm,0.9s
GUMO Guam 25.99 177 P **P 23 53 51.5 +1.9**
GUMO pmax pmax
comp=Z,208nm,1.2s
GUMO Guam 25.99 177 P **P 23 53 51.5 +1.9**
BOD Bodaibo 26.27 324 *e*P **P 23 53 51.8 0.0**
BOD pmax pmax
comp=Z,21nm,0.9s
ULN Ulaanbaatar 27.33 300⇑ *i*P **P 23 54 02.0 +0.3**
ULN pmax pmax
comp=Z,19nm,1.3s
ULN Ulaanbaatar 27.33 300 P **P 23 54 01.9 +0.2**
ULN IAmb IAmb 23 54 03.3
comp=Z,18nm,1.2s
SONM Songino Array 27.77 299 P **P 23 54 06.1 +0.5**
comp=Z,5.8nm,0.9s,baz=98,slow=8.8,SNR=27
SONM Songino Array 27.77 299 P **P 23 54 05.0 -0.6**
XAN Xi'an 28.08 269 P **P 23 54 07.5 -0.8**
XAN pmax pmax
comp=Z,8.0nm,0.5s
XAN Xi'an 28.08 269 P **P 23 54 07.5 -0.8**
XAN IAmb IAmb 23 54 11.0
comp=Z,7.6nm,0.5s
H11N2 WAKE ISLAND Hy 28.30 128 T T 00 23 37.7
baz=318,slow=75,SNR=96
H11N1 WAKE ISLAND Hy 28.31 128 T T 00 23 37.7
baz=318,slow=75,SNR=88
H11N3 WAKE ISLAND Hy 28.32 128 T T 00 23 37.7
baz=318,slow=75,SNR=130
H11S1 WAKE ISLAND Hy 29.12 130 T T 00 24 40.5
baz=323,slow=75,SNR=27
H11S3 WAKE ISLAND Hy 29.12 130 T T 00 24 40.5
baz=323,slow=75,SNR=19
H11S2 WAKE ISLAND Hy 29.13 130 T T 00 24 40.5
baz=323,slow=75,SNR=18
ENH Enshi 29.22 262 P **P 23 54 15.9 -2.6**
ENH IAmb IAmb 23 54 18.5
comp=Z,18nm,0.9s
TLY Talaya 29.93 307 *e*P **P 23 54 26.0 +1.4**
TLY pmax pmax
comp=Z,19nm,1.2s
TLY MLR MLR
comp=Z,566nm,16.0s
TLY Talaya 29.93 307 P **P 23 54 24.7 +0.1**
ZAK Zakamensk 30.01 304 *e*P **P 23 54 24.4 -1.0**
ZAK pmax pmax
comp=Z,7.0nm,1.3s
BILL Bilibino 31.07 16⇑ *e*P **P 23 54 34.7 +0.3**
BILL pmax pmax
comp=Z,12nm,1.6s
LZH Lanzhou 31.29 276 *e*P **P 23 54 36.5 -0.4**
LZH pP pP 23 54 45.8 -0.1
LZH sP sP 23 54 49.8 +0.4
LZH PP **PnPn 23 55 38.5 -1.1**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,100nm,5.2s
LZH LR LR
comp=Z,350nm,13.0s
LZH LR LR
comp=Z,370nm,12.9s
LZH LR LR
comp=Z,470nm,16.3s
GYA Guiyang 33.28 258 ⇓P **P 23 54 53.5 -0.9**
GYA pP pwP 23 55 05.5 -0.9
GYA pmax pmax
comp=Z,19nm,0.8s
GYA LR LR
comp=Z,180nm,19.7s
CD2 Chengdu 33.33 267 P **P 23 54 53.5 -1.2**
CD2 pmax pmax
comp=Z,20nm,0.8s
GTA Gaotai 33.41 284 P **P 23 54 55.0 -0.4**
GTA pP pP 23 55 03.0 -1.5
GTA sP sP 23 55 08.3 +0.4
GTA PcP **PcP 23 57 37.3 +1.0**
GTA pmax pmax
comp=Z,17nm,1.0s
GTA pmax pmax
comp=Z,92nm,5.5s
GTA LR LR
comp=Z,120nm,17.8s
GTA LR LR
comp=Z,410nm,16.7s
GTA LR LR
comp=Z,490nm,17.1s
QIZ Qiongzhong 35.48 244 P **P 23 55 12.5 -0.8**
QIZ LR LR
comp=Z,120nm,13.0s
QIZ LR LR
comp=Z,190nm,14.0s
QIZ LR LR
comp=Z,180nm,14.5s
KMI Kunming 36.98 259⇓ *e*P **P 23 55 26.0 -0.4**
KMI pmax pmax
comp=Z,13nm,0.9s
KMI pmax pmax
comp=Z,120nm,4.6s
KMI LR LR
comp=Z,130nm,4.0s
KMI LR LR
comp=Z,100nm,5.3s
KMI LR LR
comp=Z,78nm,4.8s
KMI Kunming 36.98 259 P **P 23 55 24.6 -1.8**
KMI pmax pmax
comp=Z,23nm,1.3s
KMI Kunming 36.98 259 P **P 23 55 24.6 -1.8**
KMI IAmb IAmb 23 55 26.8
comp=Z,23nm,1.3s
SLVN Son La 38.29 253 P **P 23 55 36.6 -0.7**
MYLDM Lahad Datu 41.05 220 P **P 23 55 59.2 -1.0**
MYLDM IAmb IAmb 23 56 14.2
comp=Z,26nm,1.3s
WMQ Urumqi 41.15 295 *e*P **P 23 56 01.5 +0.7**
WMQ pP pP 23 56 05.5 -4.6
WMQ sP pwP 23 56 09.0 -3.9
WMQ pmax pmax
comp=Z,31nm,1.5s
WMQ pmax pmax
comp=Z,200nm,3.7s
WMQ LR LR
comp=Z,2μm,29.2s
WMQ LR LR
comp=Z,3μm,29.2s
WMQ LR LR
comp=Z,350nm,28.9s
WMQ Urumqi 41.15 295 P **P 23 56 01.0 +0.2**
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ Urumqi 41.15 295 P **P 23 56 01.0 +0.2**
WMQ IAmb IAmb 23 56 03.5
comp=Z,19nm,0.9s
ZAA0 Zalesovo Array 41.39 310 P **P 23 56 02.7 +0.1**
ZAA0 IAmb IAmb 23 56 03.7
comp=Z,6.8nm,0.7s
ZALV Zalesovo Beam 41.39 310 P **P 23 56 03.0 +0.5**
comp=Z,9.5nm,0.8s,baz=89,slow=7.7,SNR=29
ZALV Zalesovo Beam 41.39 310 P **P 23 56 02.5 -0.1**
NRIK Noril'sk 41.60 334 P **P 23 56 04.6 +0.5**
comp=Z,1.1nm,0.5s,baz=99,slow=19,SNR=3.7
NRIK LR LR 00 14 32.4
comp=Z,148nm,18.6s,baz=191,slow=38
CHTO Chiang Mai 43.51 255 P **P 23 56 19.3 -0.9**
CHTO pmax pmax
comp=Z,4.0nm,0.8s
CHTO Chiang Mai 43.51 255 P **P 23 56 19.3 -0.9**
IMAR Indian Mountai 43.59 32 P **P 23 56 22.9 +2.6**
LSA Lhasa 43.61 274 P **P 23 56 21.6 +0.1**
LSA pmax pmax
comp=Z,6.0nm,0.9s
LSA Lhasa 43.61 274 P **P 23 56 21.6 +0.1**
CMAR Chiang Mai Arr 43.73 254 P **P 23 56 21.2 -0.8**
comp=Z,1.7nm,0.5s,baz=43,slow=7.0,SNR=11
CMAR Chiang Mai Arr 43.73 254 *i*P **P 23 56 22.2 +0.2**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR Chiang Mai Arr 43.73 254 P **P 23 56 21.4 -0.6**
MK31 Makanchi Array 44.14 300 IAmb IAmb 23 56 26.2
comp=Z,9.2nm,0.9s
MKAR Makanchi Array 44.14 300 P **P 23 56 24.9 -0.1**
comp=Z,6.5nm,0.7s,baz=82,slow=9.4,SNR=47
MKAR Makanchi Array 44.14 300 P **P 23 56 25.1 +0.1**
MKAR Makanchi Array 44.14 300 P **P 23 56 25.1 +0.1**
MAKZ Makanchi 44.34 300 P **P 23 56 26.1 -0.6**
MAKZ pmax pmax
comp=Z,13nm,1.1s
MAKZ Makanchi 44.34 300 P **P 23 56 26.1 -0.6**
MAKZ IAmb IAmb 23 56 27.9
comp=Z,13nm,1.1s
SHL Shillong 45.07 268 P **P 23 56 31.9 -1.0**
SHL pmax pmax
comp=Z,13nm,0.3s
SHL Shillong 45.07 268 P **P 23 56 31.9 -1.0**
KURK Kurchatov 45.62 306*c* *i*P **P 23 56 36.7 0.0**
KURK pmax pmax
comp=Z,16nm,0.7s
KURK Kurchatov 45.62 306 P **P 23 56 36.9 +0.1**
MDM Murphy Dome 45.85 33 P **P 23 56 40.7 +2.3**
POKR Poker Plat Res 46.19 33 P **P 23 56 42.4 +1.4**
POKR IAmb IAmb 23 56 58.0
comp=Z,11nm,1.4s
IL31 46.43 34 P **P 23 56 43.9 +1.0**
ILAR Eielson Array 46.43 34 P **P 23 56 43.5 +0.6**
comp=Z,1.2nm,0.9s,baz=264,slow=6.5,SNR=13
ILAR Eielson Array 46.43 34 P **P 23 56 44.3 +1.4**
ILAR Eielson Array 46.43 34 P **P 23 56 44.3 +1.4**
EYAK Cordova Ski Ar 47.31 39 P **P 23 56 52.3 +2.5**
EYAK IAmb IAmb 23 57 02.7
comp=Z,15nm,1.4s
RIDG Independent Ri 47.39 35 P **P 23 56 54.8 +4.3**
RIDG IAmb IAmb 23 57 05.5
comp=Z,14nm,1.5s
DOT Dot Lake 47.74 35 P **P 23 56 56.4 +3.2**
DOT IAmb IAmb 23 57 05.8
comp=Z,7.9nm,1.3s
BCAR Beaver Creek A 48.84 36 P **P 23 57 03.9 +2.2**
PMG Port Moresby 48.93 175*c* *i*P **P 23 57 03.0 +0.3**
PMG pmax pmax
comp=Z,36nm,0.8s
PMG Port Moresby 48.93 175 P **P 23 57 03.3 +0.6**
SRIT Nakonsritamara 49.84 244 P **P 23 57 08.1 -1.6**
BRVK Borovoye 50.08 311*c* *i*P **P 23 57 11.7 +0.5**
BRVK pmax pmax
comp=Z,12nm,1.0s
BRVK Borovoye 50.08 311 P **P 23 57 11.9 +0.7**
BRVK IAmb IAmb 23 57 12.8
comp=Z,10nm,0.9s
PCA Pinnacle 50.08 39 P **P 23 57 14.7 +3.5**
BCPM Bancas Point 50.42 39 P **P 23 57 16.3 +2.6**
AAK Ala-Archa 50.69 297⇓ *e*P **P 23 57 16.8 +0.6**
AAK pmax pmax
comp=Z,13nm,1.7s
KSH Kashi 50.83 293 P **P 23 57 21.5 +4.2**
KSH pmax pmax
comp=Z,9.0nm,0.6s
KSH pmax pmax
comp=Z,240nm,4.3s
HYT Haines Junctio 51.25 38 P **P 23 57 22.8 +2.8**
HYT IAmb IAmb 23 57 25.4
comp=Z,8.6nm,1.0s
KK31 Karatay Array 53.23 299 P **P 23 57 34.3 -0.6**
KK31 pmax pmax
comp=Z,4.0nm,1.0s
KK31 Karatay Array 53.23 299 P **P 23 57 34.3 -0.6**
KKAR Karatay Array 53.23 299 P **P 23 57 34.4 -0.5**
KKAR pmax pmax
comp=Z,4.0nm,1.0s
KKAR Karatay Array 53.23 299 P **P 23 57 34.6 -0.3**
KKAR Karatay Array 53.23 299 P **P 23 57 34.4 -0.5**
MTN Manton Dam 53.47 195 P **P 23 57 37.6 +0.9**
MTN IAmb IAmb 23 57 45.9
comp=Z,11nm,1.2s
DRK Karamyk 53.80 294 P **P 23 57 38.3 -1.2**
SVE Sverdlovsk 54.27 318 *e*P **P 23 57 43.2 +1.0**
SVE pmax pmax
comp=Z,20nm,1.0s
SVE MLR MLR
comp=Z,412nm,14.0s
NIL Nilore 55.34 287 P **P 23 57 50.8 +0.4**
NIL pmax pmax
comp=Z,15nm,0.9s
NIL Nilore 55.34 287 P **P 23 57 50.8 +0.4**
ARU Arti 55.48 318*c* *i*P **P 23 57 51.4 +0.4**
ARU 23 58 50.6
ARU S **S 00 05 37.3 +3.8**
ARU SS **SS 00 09 15.7 -2.3**
ARU pmax pmax
comp=Z,23nm,1.0s
ARU MLR MLR
comp=Z,310nm,16.0s
ARU Arti 55.48 318 P **P 23 57 51.6 +0.5**
MLH Mauna Loa 55.80 92 P **P 23 57 55.7 +1.5**
UWE Uwekahuna 55.91 92 P **P 23 57 56.9 +2.1**
UGM Wanagama 56.29 220 P **P 23 57 55.1 -2.2**
ABKAR Akbulak array 57.50 309 P **P 23 58 05.5 0.0**
ABKAR Akbulak array 57.50 309 IAmb IAmb 23 58 06.6
comp=Z,5.5nm,0.8s
KBL Kabul 57.99 290 P **P 23 58 08.8 -0.7**
KBL pmax pmax
comp=Z,7.0nm,0.9s
KBL Kabul 57.99 290 P **P 23 58 08.8 -0.7**
KBL IAmb IAmb 23 58 09.9
comp=Z,6.5nm,0.8s
KIRV Kirov 59.14 323*ce*P **P 23 58 17.0 +0.3**
RES Resolute Bay 59.66 15 P **P 23 58 19.8 -0.4**
comp=Z,2.3nm,0.9s,baz=317,slow=8.3,SNR=4.7
RES Resolute Bay 59.66 15 P **P 23 58 20.5 +0.3**
RES pmax pmax
comp=Z,5.0nm,0.9s
RES Resolute Bay 59.66 15 P **P 23 58 20.5 +0.3**
RES IAmb IAmb 23 58 32.2
comp=Z,4.7nm,0.9s
FITZ Fitzroy Crossi 59.81 200 P **P 23 58 19.4 -2.4**
comp=Z,1.7nm,0.8s,baz=289,slow=20,SNR=3.0
WB2 Warramunga Arr 59.89 190 P **P 23 58 22.9 +0.6**
WRA Warramunga Arr 59.89 190 P **P 23 58 19.7 -2.7**
comp=Z,1.0nm,0.6s,baz=8.6,slow=6.9,SNR=15
WRA Warramunga Arr 59.89 190 P **P 23 58 24.5 +2.1**
WRA Warramunga Arr 59.89 190 P **P 23 58 24.5 +2.1**
YKA Yellowknife Ar 60.74 31 P **P 23 58 27.5 -0.2**
comp=Z,1.0nm,0.8s,baz=296,slow=6.9,SNR=3.9
YKA Yellowknife Ar 60.74 31 *i*P **P 23 58 28.3 +0.6**
YKA pmax pmax
comp=Z,1.0nm,0.8s
KLMR Klimovskoe 62.40 328 *e*P **P 23 58 36.8 -2.1**
KLMR *e* 00 00 53.4
KLMR pmax pmax
comp=Z,11nm,1.3s
KLMR Klimovskoe 62.40 328 *e*P **P 23 58 36.9 -2.0**
KLMR AMP 23 58 40.3
comp=Z,11nm,1.3s
KLMR *e*PP **PP 00 00 53.4 -2.6**
HRA Herat 62.94 293 P **P 23 58 42.7 -0.6**
BELG Belogornoye 62.98 317*ce*P **P 23 58 43.4 +0.5**
BELG pmax pmax
comp=Z,3.0nm,0.8s
ASAR Alice Springs 63.62 190 P **P 23 58 47.0 -0.4**
comp=Z,0.9nm,0.9s,baz=0.0,slow=6.5,SNR=4.5
ASAR Alice Springs 63.62 190 P **P 23 58 47.0 -0.4**
OBN Obninsk 66.96 323⇓ *e*P **P 23 59 08.5 -0.2**
OBN *e* 00 01 36.5
OBN pmax pmax
comp=Z,9.0nm,0.9s
OBN MLR MLR
comp=Z,160nm,15.0s
MAK Makhachkala 68.11 308 *e*P **P 23 59 15.1 -1.1**
MAK *e*S **S 00 08 15.1 +1.6**
MAK pmax pmax
comp=Z,162nm,1.0s
MAK MLR MLR
comp=Z,76nm,14.0s
VSU Vasula 69.00 330⇑ *e*P **P 23 59 22.3 +0.8**
VSU pmax pmax
comp=Z,61nm,1.2s
GOF Gofitskoye 69.54 312⇑ *e*P **P 23 59 26.2 +1.1**
GOF pmax pmax
comp=Z,16nm,0.8s
BEKR Beckworth 70.02 55 P **P 23 59 29.5 +1.1**
BEKR IAmb IAmb 23 59 33.6
comp=Z,5.1nm,1.1s
KIV Kislovodsk 70.40 311 P **P 23 59 31.9 +1.4**
KIV pmax pmax
comp=Z,18nm,1.0s
KIV Kislovodsk 70.40 311 P **P 23 59 31.9 +1.4**
KBZ Khabaz 70.41 311 P **P 23 59 31.8 +1.3**
comp=Z,6.8nm,0.9s,baz=47,slow=1.9,SNR=14
LRM Limekiln Ridge 71.17 46 P **P 23 59 36.8 +1.4**
KVN Kaiserville 71.91 54 P **P 23 59 41.7 +1.8**
KVN pmax pmax
comp=Z,5.0nm,1.1s
KVN Kaiserville 71.91 54 P **P 23 59 41.7 +1.8**
LHV Little Huntoon 72.14 55 P **P 23 59 42.6 +1.6**
NVAR Mina Array Bea 72.16 55 P **P 23 59 42.7 +1.3**
comp=Z,1.7nm,0.9s,baz=279,slow=5.4,SNR=7.7
NVAR Mina Array Bea 72.16 55 P **P 23 59 43.1 +1.7**
NC204 NORSAR Array S 72.32 338 P **P 23 59 42.4 +0.6**
NB2 NORSAR Subarra 72.38 338 P **P 23 59 42.6 +0.5**
comp=Z,1.4nm,0.7s,baz=38,slow=6.2
NOA NORSAR Array B 72.38 338 P **P 23 59 42.4 +0.2**
comp=Z,4.1nm,0.9s,baz=37,slow=5.9,SNR=8.6
NBO00 NORSAR Array S 72.52 338 P **P 23 59 42.6 -0.3**
TPH Tonopah 73.05 55 P **P 23 59 48.7 +2.0**
TPH pmax pmax
comp=Z,29nm,1.5s
TPH Tonopah 73.05 55 P **P 23 59 48.7 +2.0**
AKASG Malin Array Be 73.20 323 P **P 23 59 47.1 +0.1**
comp=Z,3.0nm,0.6s,baz=42,slow=5.9,SNR=4.5
AKASG LR LR 00 36 01.4
comp=Z,92nm,18.8s,baz=245,slow=39
AKBB Malin Array Si 73.20 323⇓ *e*P **P 23 59 47.3 +0.2**
AKBB pmax pmax
comp=Z,9.0nm,1.2s
AKBB Malin Array Si 73.20 323 P **P 23 59 46.8 -0.2**
AKBB IAmb IAmb 23 59 48.0
comp=Z,5.0nm,0.8s
PDAR Pinedale Array 74.70 47 P **P 23 59 56.5 +0.1**
comp=Z,0.4nm,0.7s,baz=211,slow=0.9,SNR=4.0
SHPR Sheep Range 75.31 55 P **P 00 00 02.0 +2.1**
MARD Mardin 75.60 307 P **P 00 00 01.5 0.0**
NWAO Narrogin (SRO) 76.19 202 P **P 00 00 05.1 +0.6**
comp=Z,6.3nm,0.8s,baz=354,slow=14,SNR=2.0
BUR08 Bucovina Ar. S 77.22 322 P **P 00 00 11.5 +1.0**
BUR08 IAmb IAmb 00 00 20.4
comp=Z,9.1nm,1.4s
BURAR Bucovina Array 77.24 322 P **P 00 00 11.1 +0.5**

GAZ	**Gaziantep**	**77.88**	**308**	P	**P**	**00 00 14.0**	**-0.3**
GAZ				IAmb	IAmb	00 00 16.6	
	comp=Z,7.2nm,1.1s						
PV20	**West Nyswonger**	**77.92**	**50**	P	**P**	**00 00 14.7**	**0.0**
PV20				IAmb	IAmb	00 00 20.5	
	comp=Z,4.0nm,0.8s						
PV17	**East Wray Mesa**	**77.97**	**50**	P	**P**	**00 00 16.7**	**+1.8**
PV17				IAmb	IAmb	00 00 23.7	
	comp=Z,7.9nm,1.0s						
PV11	**David Mesa, Pa**	**78.01**	**50**	P	**P**	**00 00 17.4**	**+2.3**
PV11				IAmb	IAmb	00 00 28.1	
	comp=Z,4.7nm,0.8s						
BRTR	**Keskin Array B**	**78.30**	**312**	P	**P**	**00 00 15.9**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=340,slow=36,SNR=2.6						
BRTR	**Keskin Array B**	**78.30**	**312**	P	**P**	**00 00 16.4**	**-0.3**
BRTR	**Keskin Array B**	**78.30**	**312**	P	**P**	**00 00 16.4**	**-0.3**
CHVC	**Chvalec**	**79.00**	**329**	*e*P	**P**	**00 00 21.1**	**+1.0**
MORC	**Moravsky Berou**	**79.02**	**328**	P	**P**	**00 00 21.2**	**+0.9**
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MORC	**Moravsky Berou**	**79.02**	**328**	P	**P**	**00 00 21.2**	**+0.9**
DPC	**Dobruska-Polom**	**79.08**	**329**	*e*P	**P**	**00 00 20.0**	**-0.6**
DPC	**Dobruska-Polom**	**79.08**	**329**	*e*P	**P**	**00 00 20.0**	**-0.6**
KRLC	**Kraliky**	**79.11**	**328**	*e*P	**P**	**00 00 22.0**	**+1.2**
KRLC	**Kraliky**	**79.11**	**328**	*e*P	**P**	**00 00 22.0**	**+1.2**
CLL	**Collm**	**79.61**	**331**	*i* P	**P**	**00 00 23.9**	**+0.5**
	comp=Z,7.0nm,1.0s						
CLL	**Collm**	**79.61**	**331**	P	**P**	**00 00 24.1**	**+0.7**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**79.61**	**331**	P	**P**	**00 00 24.1**	**+0.7**
CLL				IAmb	IAmb	00 00 24.7	
	comp=Z,5.3nm,0.9s						
Q24A	**Divide**	**79.72**	**48**	P	**P**	**00 00 23.8**	**-0.9**
Q24A				IAmb	IAmb	00 00 30.1	
	comp=Z,3.9nm,0.8s						
PRU	**Pruhonice**	**80.07**	**329**	*e*P	**P**	**00 00 27.1**	**+1.2**
PRU	**Pruhonice**	**80.07**	**329**	*e*P	**P**	**00 00 27.1**	**+1.2**
RAYN	**Ar Rayn**	**81.12**	**293**	P	**P**	**00 00 31.6**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAYN	**Ar Rayn**	**81.12**	**293**	P	**P**	**00 00 31.6**	**-0.5**
KHC	**Kasperske Hory**	**81.13**	**329**	*e*P	**P**	**00 00 32.7**	**+1.0**
KHC	**Kasperske Hory**	**81.13**	**329**	*e*P	**P**	**00 00 32.7**	**+1.0**
KHC	**Kasperske Hory**	**81.13**	**329**	P	**P**	**00 00 32.5**	**+0.8**
KHC				IAmb	IAmb	00 00 33.5	
	comp=Z,10nm,1.3s						
GERES	**GERESS Array B**	**81.31**	**329**	P	**P**	**00 00 32.8**	**0.0**
	comp=Z,0.5nm,0.7s,baz=336,slow=6.2,SNR=3.6						
PPT	**Papeete**	**84.41**	**118**	LR	LR	00 31 37.3	
	comp=Z,28nm,19.6s,baz=338,slow=31						
TXAR	**Lajitas Array**	**87.27**	**54**	P	**P**	**00 01 03.4**	**0.0**
	comp=Z,2.3nm,1.3s,baz=319,slow=2.6,SNR=3.0						
ESDC	**Sonseca Array**	**95.62**	**335**	LR	LR	00 51 55.9	
	comp=Z,59nm,19.4s,baz=275,slow=40						
SNAA	**Sanae**	**143.72**	**197**	PKP	PKPab	00 07 46.5	-0.5
	comp=Z,2.2nm,1.0s,baz=170,slow=6.5,SNR=11						
SIV	**San Ignacio**	**148.17**	**49**	PKPbc	**PKPdf**	**00 07 59.9**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=72,slow=10,SNR=3.7						

*MOS **28** 23:51:41.7±0.0,42°.36N×44°.81E,h16km,MPVA3.6*
*NORS **28** 23:51:42.6±0.0,42°.38N×44°.71E,h8km,MPVA3.6*
*TIF **28** 23:51:43.2,42°.44N×44°.81E,h12km±1km*

ISC 28 23:51:42.9±1.0,**42°.36N**±0°.02×**44°.84E**±0°.03,**h15**km±8km,
n30,σ0°**80**/**56**,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
GUDG	**Gudauri**	**0.29**	**291**	P		**Pg**	**23 51 48.6**	**-0.5**
GUDG				S		**Sb**	**23 51 53.0**	**-1.6**
GUDG	**Gudauri**	**0.29**	**291**	*i* Pg		**Pg**	**23 51 48.6**	**-0.5**
GUDG				*e*Sg		**Sb**	**23 51 53.0**	**-1.6**
SEAG	**Tbilisi Sea**	**0.60**	**183**	P		**Pn**	**23 51 57.0**	**+0.2**
SEAG				S		**Sn**	**23 52 06.0**	**-0.2**
LACR	**Lac**	**0.61**	**320**	*i* Pg		**Pg**	**23 51 54.3**	**-0.7**
BTNK	**Botanikuri**	**0.68**	**183**	P		**Pn**	**23 51 58.1**	**+0.2**
BTNK				S		**Sn**	**23 52 09.4**	**+1.2**
VLKR	**Vladikavkaz**	**0.70**	**350**	*e*Pg		**Pn**	**23 51 57.5**	**-0.7**
VLKR				*e*Pg		**Pn**	**23 51 57.5**	**-0.7**
VLKR				*e*Sg		**Sn**	**23 52 08.2**	**-0.5**
VLKR				*e*Sg		**Sn**	**23 52 08.3**	**-0.5**
KMGR	**Komgaron**	**0.70**	**2**	*e*Pg		**Pb**	**23 51 57.0**	**+0.2**
KMGR				*e*Sg		**Sn**	**23 52 08.3**	**-0.5**
ZEI	**Tsey**	**0.81**	**302**	*e*Pg		**Pg**	**23 51 58.0**	**-0.7**
KORR	**Kora**	**0.92**	**322**	*e*Pg		**Pn**	**23 52 01.2**	**-0.1**
KORR				*e*Sg		**Sn**	**23 52 14.1**	**-0.2**
BTKR	**Batakoyurt**	**1.03**	**348**	*i* Pg		**Pn**	**23 52 04.2**	**+1.4**
ONI	**Oni**	**1.05**	**283**	P		**Pn**	**23 52 02.8**	**-0.3**
ONI				S		**Sn**	**23 52 17.7**	**+0.2**
ONI	**Oni**	**1.05**	**283**	*i* Pg		**Pn**	**23 52 02.8**	**-0.3**
ONI				*e*Sg		**Sn**	**23 52 17.8**	**+0.2**
BTLR	**Botlikh**	**1.07**	**73**	*e*Pg		**Pb**	**23 52 02.5**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.07**	**301**	*e*Pg		**Pg**	**23 52 02.6**	**-1.0**
DIGR				*e*Sg		**Sn**	**23 52 17.6**	**-0.7**
DMNI	**Dmanisi**	**1.14**	**205**	P		**Pb**	**23 52 04.3**	**0.0**
DMNI				S		**Sn**	**23 52 20.3**	**+0.5**
DMNI	**Dmanisi**	**1.14**	**205**	*e*Pg		**Pb**	**23 52 04.3**	**0.0**
DMNI				*e*Sg		**Sn**	**23 52 20.3**	**+0.5**
BKRG	**Bakuriani**	**1.15**	**239**	P		**Pn**	**23 52 05.0**	**+0.4**
BKRG				S		**Sn**	**23 52 21.3**	**+1.2**
BKRG	**Bakuriani**	**1.15**	**239**	*e*Pg		**Pn**	**23 52 05.0**	**+0.4**
BKRG				*e*Sg		**Sn**	**23 52 21.3**	**+1.2**
STDR	**Stavd-Durt**	**1.16**	**331**	*e*Pg		**Pg**	**23 52 06.3**	**+1.0**
LSNR	**Lesken**	**1.18**	**321**	*e*Pg		**Pg**	**23 52 05.8**	**+0.1**
LSNR				*e*Sg		**Sn**	**23 52 22.6**	**+1.8**
TKB	**Tkibuli**	**1.37**	**270**	P		**Pg**	**23 52 08.9**	**-0.3**
TKB				S		**Sg**	**23 52 28.4**	**+1.4**
TKB	**Tkibuli**	**1.37**	**270**	*e*Pg		**Pg**	**23 52 08.9**	**-0.3**
TKB				*e*Sg		**Sg**	**23 52 28.4**	**+1.4**
AKH	**Akhalkalaki**	**1.38**	**227**	P		**Pg**	**23 52 08.8**	**-0.7**
AKH				S		**Sg**	**23 52 27.4**	**-0.1**
AKH	**Akhalkalaki**	**1.38**	**227**	*e*Pg		**Pg**	**23 52 08.8**	**-0.7**
AKH				*e*Sg		**Sg**	**23 52 27.4**	**-0.1**
BGD	**Bogdanovka**	**1.44**	**221**	P		**Pb**	**23 52 09.7**	**+0.3**
BGD				S		**Sg**	**23 52 29.5**	**+0.3**
BGD	**Bogdanovka**	**1.44**	**221**	*e*Pg		**Pb**	**23 52 09.7**	**+0.3**
BGD				*e*Sg		**Sg**	**23 52 29.5**	**+0.3**
PRTR	**Priterechnaya**	**1.45**	**344**	*e*Pg		**Pg**	**23 52 10.6**	**-0.1**
PRTR				*e*Sg		**Sg**	**23 52 31.8**	**+2.2**
DLMR	**Dylym**	**1.50**	**61**	*e*Pg		**Pb**	**23 52 10.7**	**+0.3**
DLMR				*e*Sg		**Sg**	**23 52 31.3**	**+0.1**
KRNR	**Karanay**	**1.60**	**72**	*e*Pg		**Pb**	**23 52 12.1**	**-0.1**
ARKR	**Arakani**	**1.61**	**81**	*e*Pg		**Pb**	**23 52 13.2**	**+0.9**
ARKR				*e*Sg		**Sg**	**23 52 35.1**	**+0.3**

*NEIC **28** 23:54:29.5±1.1,5°.39S±0°.09×151°.5E±0°.1,h60km±6km,*
mb4.5/17, Error ellipse: s-maj=17.7km s-min=7.3km
az=128.0
*IDC **28** 23:54:31.0±2.6,5°.51S×151°.54E,h75km±17km,mb3.5/4,*
mb1 3.7/5,mb1mx3.4/36,mbtmp3.8/5,Error ellipse:
s-maj=90.4km s-min=10.9km az=126.0

ISC 28 23:54:29.2±0.7,**5°.42S**±0°.08×**151°.47E**±0°.10,**h57**km,**n28,**
σ1ŝ**46**/31,**mb4.2**/12,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KRVT	**Keravat (AS076**	**1.24**	**27**	P		**Pn**	**23 54 52.1**	**+1.7**
	17nm,0.3s,baz=180,slow=9.1,SNR=9.8							
KRVT				S		**Sn**	**23 55 10.6**	**+4.5**
	92nm,0.3s,baz=236,slow=24,SNR=7.7							
RABL	**Rabaul**	**1.40**	**30**			**Pn**	**23 54 52.4**	**-0.2**
RABL				Sn		**Sn**	**23 55 07.1**	**-3.0**
MANU	**Manus Island**	**5.29**	**309**	Pn		**Pn**	**23 55 45.8**	**0.0**
PMG	**Port Moresby**	**5.83**	**227**	P		**Pn**	**23 55 53.8**	**+0.7**
	3.6nm,0.3s,baz=36,slow=8.7,SNR=5.6							
PMG				S		**Sn**	**23 57 00.4**	**+1.7**
	7.8nm,0.3s,baz=148,slow=21,SNR=11							
PMG	**Port Moresby**	**5.83**	**227**	Pn		**Pn**	**23 55 53.6**	**+0.5**
PMG						**Sn**	**23 57 01.0**	**+2.4**
COEN	**Coen**	**11.78**	**223**			**Pn**	**23 57 12.8**	**-1.9**
MTN	**Manton Dam**	**21.38**	**248**	P		**P**	**23 59 13.1**	**+0.8**
WB0	**Warramunga Arr**	**21.90**	**228**	P		**P**	**23 59 18.6**	**+0.8**
WB0				IAmb		IAmb	23 59 26.5	
	comp=Z,14nm,1.6s							
WR0	**Warramunga Arr**	**21.91**	**227**	P		**P**	**23 59 18.0**	**+0.1**
WR0				IAmb		IAmb	23 59 55.2	
	comp=Z,20nm,1.9s							
DZM	**Mont Dzumac**	**22.00**	**140**	P		**P**	**23 59 19.2**	**+0.3**
DZM				IAmb		IAmb	23 59 22.8	
	comp=Z,28nm,1.4s							
WC3	**Warramunga Arr**	**22.03**	**227**	P		**P**	**23 59 19.9**	**+0.7**
WRAB	**Tennant Creek**	**22.03**	**228**	P		**P**	**23 59 19.7**	**+0.4**
WRAB				IAmb		IAmb	23 59 52.8	
	comp=Z,16nm,1.6s							
WB2	**Warramunga Arr**	**22.04**	**228**	P		**P**	**23 59 19.8**	**+0.5**
WB2				IAmb		IAmb	23 59 56.6	
	comp=Z,17nm,1.8s							
WRA	**Warramunga Arr**	**22.05**	**228**	P		**P**	**23 59 19.6**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=53,slow=9.7,SNR=6.4							
KNRA	**Kununurra**	**24.51**	**244**	P		**P**	**23 59 43.7**	**+0.2**
KNRA				IAmb		IAmb	00 00 42.0	
	comp=Z,44nm,1.8s							
AS31	**Alice Springs**	**24.81**	**221**	P		**P**	**23 59 46.0**	**-0.2**
ASAR	**Alice Springs**	**24.81**	**221**	P		**P**	**23 59 47.3**	**+1.1**
	comp=Z,2.8nm,0.8s,baz=53,slow=9.0,SNR=18							
ASAR	**Alice Springs**	**24.81**	**221**	P		**P**	**23 59 44.4**	**-1.8**
FITZ	**Fitzroy Crossi**	**28.20**	**241**	P		**P**	**00 00 16.9**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=67,slow=8.3,SNR=8.8							
FITZ	**Fitzroy Crossi**	**28.20**	**241**	IAmb		IAmb	00 00 47.3	
	comp=Z,21nm,1.9s							
BBOO	**Buckleboo**	**30.81**	**206**	P		**P**	**00 00 39.5**	**-0.3**
BBOO				IAmb		IAmb	00 01 29.5	
	comp=Z,60nm,1.8s							
PSA00	**Pilbara Seismi**	**34.58**	**239**	P		**P**	**00 01 12.3**	**-0.5**
PSA00	**Pilbara Seismi**	**34.58**	**239**	P		**P**	**00 01 12.9**	**+0.1**
PSA00				IAmb		IAmb	00 01 26.9	
	comp=Z,32nm,1.6s							
KNMB	**Chin-men Tao**	**43.82**	**314**	P		**P**	**00 02 28.1**	**-1.8**
PEA0B	**Petropavlovsk-**	**58.55**	**4**	P		**P**	**00 04 21.1**	**+1.4**
SII	**Sitkinak Islan**	**75.93**	**28**	P		**P**	**00 06 09.9**	**+0.1**
ILAR	**Eielson Array**	**83.23**	**22**	P		**P**	**00 06 47.9**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=240,slow=7.2,SNR=1.4							
TORD	**Torodi Ar. Bea**	**149.23**	**287**	PKPbc		**PKPbc**	**00 14 11.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=77,slow=2.3,SNR=4.9							

*IDC **28** 23:59:49.2±0.5,5°.69N×61°.61E,h0km,mb4.1/21,*
mb1 4.2/23,mb1mx4.1/43,mbtmp4.1/23,ML3.6/2,MS3.9/34,
Ms1 3.9/34,ms1mx3.8/49,Error ellipse: s-maj=14.6km
s-min=13.8km az=162.0
*NEIC **28** 23:59:50.8±1.7,5°.71N±0°.08×61°.66E±0°.08,h10km±1km,*
mb4.8/88,Error ellipse: s-maj=14.3km s-min=12.5km
az=233.0
*GCMT **28** 23:59:51.8±0.3,5°.59N±0°.02×61°.46E±0°.03,h12km,*
MW4.8/97,Moment Tensor Solution. s14,c17; s97,c131;
Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.74±.05;
Mθθ1.07±.05; Mϕϕ0.66±.05; Mrθ-0.07±.20; Mrϕ-0.66±.04;
Mθϕ-0.10±.26; Best double couple: Mo1.65400×10¹⁶
NP1:ϕs123.00000°,δ45.00000°,λ-95.00000°. NP2:
ϕs310.00000°,δ45.00000°,λ-85.00000°. Principal axes:
T 1.5600, Plg0.0000°, Azm37.0000°; N 0.1840,
Plg4.0000°, Azm127.0000°; P -1.7480, Plg86.0000°,
Azm305.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function

ISC 28 23:59:50.8±0.3,**5°.69N**±0°.06×**61°.65E**±0°.05,**h10**km,**n192,**
σ1ŝ**19**/175,**mb4.7**/70,**MS4.0**/36,**10C-3D,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SOCY	**Socotra**	**9.94**	**311**	P		Pn	00 02 18.6	+4.7
SOCY	**Socotra**	**9.94**	**311**	Pn		**Pn**	**00 02 16.7**	**+2.8**
DMTO	**DMTO**	**13.62**	**332**	P		**Pn**	**00 03 06.2**	**+2.0**
ABTO	**Aybut**	**14.18**	**326**	P		**Pn**	**00 03 13.2**	**+1.4**
	SNR=5.4							
WHFO	**Wadi Hawf**	**14.38**	**328**	P		**Pn**	**00 03 16.8**	**+2.2**
	SNR=7.2							
DQM	**DQM**	**14.70**	**345**	P		**Pn**	**00 03 20.8**	**+1.9**
MHTO	**MHTO**	**15.62**	**347**	P		**Pn**	**00 03 31.6**	**+0.5**
	SNR=14							
DGAR	**Diego Garcia**	**16.90**	**140**	Pn		**Pn**	**00 03 47.8**	**+0.2**
DGAR				IAmb		IAmb	00 04 01.1	
	comp=Z,110nm,1.4s							
JMDO	**Jabal Madar**	**16.93**	**349**	P		**P**	**00 03 51.3**	**+1.4**
	SNR=9.1							
WBK	**Wadi Bani Khal**	**17.02**	**352**	P		**P**	**00 03 52.3**	**+1.5**
SMDO	**Samad**	**17.61**	**349**	P		**P**	**00 03 57.5**	**0.0**
	SNR=11							
WSAR	**Wadi Sarin**	**17.68**	**351**	P		**Pn**	**00 03 57.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=246,slow=20,SNR=3.5							
WSAR				LR		LR	00 09 14.3	
	comp=Z,378nm,20.8s,baz=189,slow=32							
BIDO	**Bidbid**	**18.05**	**350**	P		**P**	**00 04 04.2**	**+2.0**
	SNR=7.8							
ARQ	**Araqi**	**18.22**	**345**	P		**P**	**00 04 04.8**	**+0.6**
	SNR=9.9							
PALK	**Pallekele**	**19.00**	**84**	LR		LR	00 10 08.6	
	comp=Z,486nm,18.9s,baz=13,slow=32							
PALK	**Pallekele**	**19.00**	**84**	P		**P**	**00 04 12.5**	**-0.4**
ATD	**Arta Tunnel**	**19.46**	**289**	P		**P**	**00 04 18.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=98,slow=4.9,SNR=10							
ATD				LR		LR	00 10 36.6	
	comp=Z,174nm,20.8s,baz=132,slow=33							
ATD	**Arta Tunnel**	**19.46**	**289**			**P**	**00 04 18.0**	**0.0**
ATD				IAmb		IAmb	00 04 26.0	
	comp=Z,69nm,1.5s							
ASHO	**Ashiyiah**	**19.63**	**345**	P		**P**	**00 04 17.9**	**-1.7**
HATD	**Hatta, Dubai**	**19.75**	**345**	P		**Pn**	**00 04 22.3**	**-0.1**
ASUD	**Al Ashush, Dub**	**19.78**	**343**	P		**P**	**00 04 19.4**	**-1.8**
AJN	**Ajban**	**19.82**	**342**	P		**P**	**00 04 22.2**	**+0.5**
UOSS	**Minazif**	**19.84**	**345**	P		**P**	**00 04 21.6**	**-0.4**
UOSS				IAmb		IAmb	00 04 25.5	
	comp=Z,46nm,1.2s							
NAZ	**Nazwa, Dubai**	**20.03**	**344**	P		**P**	**00 04 24.3**	**+0.4**
HYB	**Hyderabad**	**20.23**	**53**	*i* P		Pn	00 04 32.0	+3.8
TEND	**Ethiopian Broa**	**21.27**	**288**	*e*P		**P**	**00 04 38.5**	**+0.9**
FURI	**Furi**	**23.00**	**279**	P		**P**	**00 04 58.3**	**+1.9**
FURI				IAmb		IAmb	00 05 10.9	
	comp=Z,68nm,1.2s							
RAYN	**Ar Rayn**	**23.58**	**320**	P		**P**	**00 05 00.1**	**-1.8**
KIBK	**Kibwezi**	**24.89**	**252**	P		**P**	**00 05 20.0**	**+5.8**
	SNR=5.4							
LODK	**Lodwar**	**26.30**	**266**	P		**P**	**00 05 29.1**	**+2.1**
	SNR=26							
RER	**Riviere de l'E**	**27.31**	**192**	P		**P**	**00 05 35.5**	**-0.4**
OPO	**Ambohidratompo**	**28.01**	**210**	LR		LR	00 13 59.3	
	comp=Z,229nm,19.1s,baz=186,slow=30							
ABPO	**Ambohimpanom**	**28.37**	**210**	P		**P**	**00 05 45.7**	**+0.2**
ABPO				IAmb		IAmb	00 06 01.4	
	comp=Z,13nm,1.4s							
HRA	**Herat**	**28.56**	**1**	P		**P**	**00 05 47.2**	**+0.1**
KBL	**Kabul**	**29.51**	**12**	P		**P**	**00 05 58.8**	**+3.2**
KBL	**Kabul**	**29.51**	**12**	P		**P**	**00 05 56.8**	**+1.2**
KBL				IAmb		IAmb	00 06 06.0	
	comp=Z,21nm,1.5s							
NIL	**Nilore**	**29.83**	**20**	P		**P**	**00 06 01.1**	**+2.8**
NIL	**Nilore**	**29.83**	**20**	P		**P**	**00 05 58.6**	**+0.4**
NIL				IAmb		IAmb	00 06 07.6	
	comp=Z,33nm,1.5s							
MBAR	**Mbarara**	**31.49**	**260**	P		**P**	**00 06 16.7**	**+3.3**
	comp=Z,3.4nm,0.3s,baz=52,slow=11,SNR=4.6							
MBAR	**Mbarara**	**31.49**	**260**	P		**P**	**00 06 12.6**	**-0.8**
MBAR				IAmb		IAmb	00 06 21.1	
	comp=Z,8.7nm,1.3s							
GEYT	**Ailbeck**	**32.25**	**355**	LR		LR	00 20 19.5	
	comp=Z,66nm,18.6s,baz=85,slow=38							
GYA0B	**ALIBECK ARRAY**	**32.25**	**355**	P		**P**	**00 06 20.0**	**+0.4**
GYA0B				IAmb		IAmb	00 06 28.3	
	comp=Z,8.2nm,1.0s							
DRK	**Karamyk**	**34.86**	**14**	P		**P**	**00 06 43.4**	**+0.7**
SHL	**Shillong**	**35.03**	**52**	P		**P**	**00 06 44.6**	**+0.4**
SHL				IAmb		IAmb	00 06 53.1	
	comp=Z,31nm,1.4s							
BTK	**Batken**	**35.20**	**12**	P		**P**	**00 06 46.8**	**+1.6**
BTK				IAmb		IAmb	00 06 55.5	
	comp=Z,27nm,1.3s							
KSH	**Kashi**	**36.07**	**19**	P		**P**	**00 06 50.3**	**-2.5**
KSH				sP		sP	00 06 57.0	+1.7
KSH				S		**ScP**	**00 13 03.5**	**-2.1**
KSH				pmax		pmax		
	comp=Z,22nm,1.2s							
KSH				pmax		pmax		
	comp=Z,190nm,4.0s							
KSH				LR		LR		
	comp=N,280nm,5.0s							
KSH				LR		LR		
	comp=E,250nm,4.8s							
KSH				LR		LR		
	comp=Z,1μm,17.8s							
LSA	**Lhasa**	**36.67**	**46**	P		**P**	**00 06 58.0**	**-0.4**
LSA				IAmb		IAmb	00 07 07.0	
	comp=Z,16nm,1.2s							
MARD	**Mardin**	**36.79**	**332**	P		**P**	**00 06 59.5**	**+0.5**
MARD				IAmb		IAmb	00 07 01.2	
	comp=Z,24nm,1.3s							
RPSI	**Rantau Prapat**	**37.29**	**93**	P		**P**	**00 07 04.8**	**+1.4**
RPSI				IAmb		IAmb	00 07 13.8	
	comp=Z,22nm,1.4s							
GNI	**Garni**	**37.52**	**339**	P		**P**	**00 07 06.4**	**+1.2**
GNI				IAmb		IAmb	00 07 24.7	
	comp=Z,15nm,1.1s							
KK31	**Karatay Array**	**38.07**	**11**	P		**P**	**00 07 10.5**	**+0.9**
KKAR	**Karatay Array**	**38.07**	**11**	P		**P**	**00 07 10.5**	**+0.8**
KKAR	**Karatay Array**	**38.07**	**11**	P		**P**	**00 07 10.4**	**+0.8**
GAZ	**Gaziantep**	**38.47**	**328**	P		**P**	**00 07 13.5**	**+0.4**
AAK	**Ala-Archa**	**38.51**	**15**	P		**P**	**00 07 14.8**	**+1.2**
	comp=Z,3.7nm,0.7s,baz=182,slow=5.3,SNR=11							
AAK	**Ala-Archa**	**38.51**	**15**	P		**P**	**00 07 15.6**	**+2.0**
AAK	**Ala-Archa**	**38.51**	**15**	P		**P**	**00 07 14.0**	**+0.5**
CMAR	**Chiang Mai Arr**	**38.52**	**67**	P		**P**	**00 07 15.7**	**+1.9**
	comp=Z,0.7nm,0.3s,baz=251,slow=8.5,SNR=10							
CMAR				PcP		**PcP**	**00 09 26.3**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=270,slow=3.4,SNR=1.1							
CMAR				LR		LR	00 21 54.4	
	comp=Z,95nm,22.0s,baz=312,slow=34							
CMAR	**Chiang Mai Arr**	**38.52**	**67**	P		**P**	**00 07 15.1**	**+1.4**
CHTO	**Chiang Mai**	**38.61**	**67**	P		**P**	**00 07 15.8**	**+1.4**
FRU1	**Bishkek**	**38.71**	**15**	P		**P**	**00 07 15.1**	**0.0**
FRU1				IAmb		IAmb	00 07 24.4	
	comp=Z,20nm,0.9s							
AKH	**Akhalkalaki**	**39.09**	**338**	P		**P**	**00 07 18.3**	**0.0**
AKH				IAmb		IAmb	00 07 20.2	
	comp=Z,30nm,1.3s							
KOPT	**Kop Dagi**	**39.12**	**334**	P		**P**	**00 07 19.7**	**+0.9**
LSZ	**Lusaka**	**39.15**	**237**	P		**P**	**00 07 20.5**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=96,slow=3.9,SNR=4.6							
LSZ	**Lusaka**	**39.15**	**237**	P		**P**	**00 07 20.6**	**+1.3**
LSZ				IAmb		IAmb	00 07 26.5	
	comp=Z,15nm,1.1s							
TOKA	**Tokat**	**41.23**	**330**	P		**P**	**00 07 36.5**	**+0.5**
TOKA				IAmb		IAmb	00 07 37.5	
	comp=Z,11nm,1.1s							
KBZ	**Khabaz**	**41.32**	**339**	P		**P**	**00 07 36.9**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=164,slow=5.4,SNR=7.2							
KBZ				LR		LR	00 25 53.3	
	comp=Z,73nm,19.1s,baz=148,slow=38							
KIV	**Kislovodsk**	**41.59**	**339**	P		**P**	**00 07 38.7**	**-0.3**
MATP	**Matopo**	**41.65**	**231**	P		**P**	**00 07 39.9**	**0.0**
	comp=Z,2.2nm,0.9s,baz=57,slow=5.3,SNR=5.3							
BR131	**Keskin Array S**	**42.24**	**327**	P		**P**	**00 07 43.9**	**-0.5**
BRTR	**Keskin Array B**	**42.24**	**327**	P		**P**	**00 07 44.3**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=143,slow=11,SNR=8.5							
BRTR				LR		LR	00 25 35.2	
	comp=Z,85nm,19.8s,baz=122,slow=37							
BRTR	**Keskin Array B**	**42.24**	**327**	P		**P**	**00 07 43.9**	**-0.5**
AKAS	**Kas**	**42.27**	**320**	P		**P**	**00 07 44.1**	**-0.6**
ELL	**Elmali**	**42.40**	**321**	P		**P**	**00 07 45.7**	**0.0**
ELL				IAmb		IAmb	00 07 47.7	
	comp=Z,46nm,1.4s							
ILGA	**Ilgaz**	**43.16**	**329**	P		**P**	**00 07 52.3**	**+0.3**
ABKAR	**Akbulak array**	**43.43**	**358**	P		**P**	**00 07 53.8**	**+0.1**
ABKAR				IAmb		IAmb	00 07 55.5	
	comp=Z,15nm,1.2s							
ABKAR	**Akbulak array**	**43.43**	**358**	P		**P**	**00 07 54.0**	**+0.2**
KARP	**Karpathos**	**43.45**	**318**	P		**P**	**00 07 54.3**	**+0.1**
SLVN	**Son La**	**43.76**	**65**	P		**P**	**00 07 57.0**	**+0.1**
SLVN				IAmb		IAmb	00 08 05.7	
	comp=Z,22nm,1.5s							

XAN	**Xi'an**	**52.01**	**51**	P	**P**	**00 09 01.0**	**+0.3**
XAN				pP	pwP	00 09 12.5	+4.7
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN	**Xi'an**	**52.01**	**51**	P	**P**	**00 08 59.5**	**-1.2**
XAN				IAmb	IAmb	00 09 07.3	
	comp=Z,14nm,1.0s						
BURAR	**Bucovina Array**	**52.10**	**329**	P	**P**	**00 09 00.0**	**-1.2**
BUR08	**Bucovina Ar. S**	**52.13**	**329**	P	**P**	**00 09 00.9**	**-0.5**
CEL	**Celeste**	**52.60**	**315**	P	**P**	**00 09 04.4**	**-0.6**
BZS	**Buzias**	**52.77**	**325**	⇑P	**P**	**00 09 05.3**	**-0.7**
DIVS	**Divibare**	**52.84**	**323**	P	**P**	**00 09 05.4**	**-1.4**
DIVS				IAmb	IAmb	00 09 22.3	
	comp=Z,8.8nm,1.2s						
KIRV	**Kirov**	**53.60**	**352**	LR	LR	00 34 08.7	
	comp=Z,128nm,18.8s,baz=155,slow=38						
CLTB	**Caltabellotta**	**54.24**	**313**	P	**P**	**00 09 15.5**	**-1.6**
KKM	**Kota Kinabalu**	**54.26**	**87**	P	**P**	**00 09 15.4**	**-2.3**
WHN	**Wuhan**	**55.25**	**57**	*eP*	**P**	**00 09 25.5**	**+1.1**
KEST	**Kesra**	**56.47**	**309**	LR	LR	00 32 60.0	
	comp=Z,54nm,18.3s,baz=230,slow=35						
HHC	**Hu-ho-hao-te**	**56.61**	**44**	*eP*	**P**	**00 09 35.5**	**+1.3**
HHC				PP	PP	00 11 55.3	+15
HHC				S	**S**	**00 17 27.3**	**+0.8**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,200nm,5.3s						
HHC				LR	LR		
	comp=N,280nm,15.2s						
HHC				LR	LR		
	comp=E,220nm,15.6s						
HHC				LR	LR		
	comp=Z,190nm,15.8s						
TAM	**Tamanrasset**	**56.64**	**293**	P	**P**	**00 09 34.3**	**-0.5**
TAM				IAmb	IAmb	00 09 36.7	
	comp=Z,7.1nm,1.4s						
SONM	**Songino Array**	**56.70**	**35**	P	**P**	**00 09 35.0**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=232,slow=6.7,SNR=14						
SONM				LR	LR	00 34 22.1	
	comp=Z,198nm,18.7s,baz=232,slow=36						
SONM	**Songino Array**	**56.70**	**35**	P	**P**	**00 09 35.1**	**+0.3**
SOKA	**Soboth**	**57.17**	**323**	*eP*	**P**	**00 09 37.6**	**-0.4**
	comp=Z,13nm,1.6s						
ARSA	**Arzberg**	**57.18**	**324**	*eP*	**P**	**00 09 38.5**	**+0.5**
	comp=Z,3.9nm,1.2s						
CONA	**Conrad Observa**	**57.34**	**325**	*eP*	**P**	**00 09 38.3**	**-0.9**
	comp=Z,9.8nm,1.4s						
SUW	**Suwalki**	**57.36**	**334**	P	**P**	**00 09 37.0**	**-2.0**
SUW				IAmb	IAmb	00 09 52.3	
	comp=Z,12nm,1.0s						
MORC	**Moravsky Berou**	**57.43**	**328**	P	**P**	**00 09 39.0**	**-0.8**
TLY	**Talaya**	**57.48**	**30**	LR	LR	00 34 22.6	
	comp=Z,150nm,21.2s,baz=222,slow=36						
KLMR	**Klimovskoe**	**57.51**	**347**	*eP*	**P**	**00 09 37.4**	**-2.6**
KLMR				AMP		00 09 54.0	
	comp=Z,34nm,1.5s						
MYKA	**Terra Mystica**	**57.98**	**323**	*eP*	**P**	**00 09 44.0**	**+0.3**
	comp=Z,9.0nm,1.1s						
MOA	**Molln**	**58.22**	**324**	*i P*	**P**	**00 09 44.3**	**-1.0**
	comp=Z,11nm,1.3s						
KAPI	**Kappang**	**58.99**	**99**	LR	LR	00 31 46.6	
	comp=Z,50nm,21.9s,baz=258,slow=32						
KAPI	**Kappang**	**58.99**	**99**	P	**P**	**00 09 50.2**	**-1.0**
KAPI				IAmb	IAmb	00 09 51.9	
	comp=Z,19nm,1.4s						
GEC2	**GERESS Array S**	**59.05**	**325**	P	**P**	**00 09 50.5**	**-0.6**
GERES	**GERESS Array B**	**59.05**	**325**	P	**P**	**00 09 51.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=353,slow=9.4,SNR=3.5						
GERES	**GERESS Array B**	**59.05**	**325**	P	**P**	**00 09 51.1**	**0.0**
TOLI2	**Tolitoli**	**59.18**	**92**	P	**P**	**00 09 51.5**	**-1.1**
TOLI2				IAmb	IAmb	00 10 08.1	
	comp=Z,8.8nm,1.1s						
WTTA	**Wattenberg**	**59.49**	**323**	*i P*	**P**	**00 09 52.5**	**-1.8**
	comp=Z,6.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**59.49**	**282**	P	**P**	**00 09 53.4**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=103,slow=5.1,SNR=5.0						
TORD				PcP	**PcP**	**00 10 41.3**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=111,slow=4.4,SNR=2.2						
TORD				LR	LR	00 36 40.2	
	comp=Z,69nm,18.4s,baz=355,slow=37						
TORD	**Torodi Ar. Bea**	**59.49**	**282**	IAmb	IAmb	00 10 00.9	
	comp=Z,3.6nm,1.2s						
BJT	**Baijiatuau**	**59.56**	**46**	P	**P**	**00 09 54.9**	**+0.2**
BJT				IAmb	IAmb	00 10 02.8	
	comp=Z,8.5nm,1.1s						
WATA	**Walderalm**	**59.56**	**323**	*eP*	**P**	**00 09 52.4**	**-2.3**
	comp=Z,12nm,1.4s						
SQTA	**Sankt Quirin**	**59.73**	**323**	*eP*	**P**	**00 09 53.5**	**-2.4**
	comp=Z,8.5nm,1.3s						
MORW	**Morawa**	**62.64**	**127**	P	**P**	**00 10 15.4**	**-0.4**
BATI	**Baumata**	**63.75**	**104**	LR	LR	00 35 18.9	
	comp=Z,53nm,19.7s,baz=258,slow=33						
SOEI	**Soe**	**64.25**	**106**	P	**P**	**00 10 26.1**	**-0.8**
CART	**Cartagena**	**64.97**	**309**	P	**P**	**00 10 30.9**	**-0.2**
NRIK	**Noril'sk**	**65.81**	**10**	P	**P**	**00 10 35.2**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=173,slow=10.0,SNR=3.8						
NRIK				LR	LR	00 41 30.0	
	comp=Z,164nm,20.0s,baz=199,slow=38						
DBIC	**Dimbokro**	**66.08**	**275**	P	**P**	**00 10 39.0**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=357,slow=2.6,SNR=2.9						
DBIC				LR	LR	00 39 09.0	
	comp=Z,91nm,19.4s,baz=81,slow=36						
NC602	**NORSAR Array S**	**66.46**	**336**	P	**P**	**00 10 39.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**67.38**	**112**	P	**P**	**00 10 46.9**	**0.0**
	comp=Z,2.1nm,0.8s,baz=132,slow=5.4,SNR=4.7						
FITZ				LR	LR	00 38 35.2	
	comp=Z,41nm,18.7s,baz=339,slow=34						
FITZ	**Fitzroy Crossi**	**67.38**	**112**	P	**P**	**00 10 46.5**	**-0.4**
FITZ				IAmb	IAmb	00 10 55.0	
	comp=Z,12nm,1.2s						
ESDC	**Sonseca Array**	**67.68**	**311**	P	**P**	**00 10 47.4**	**-1.1**
	comp=Z,2.9nm,0.8s,baz=90,slow=5.8,SNR=13						
KSRS	**Korea Array**	**67.77**	**52**	P	**P**	**00 10 49.5**	**+0.5**
	comp=Z,3.9nm,1.0s,baz=260,slow=7.6,SNR=4.3						
KSRS				LR	LR	00 43 25.9	
	comp=Z,86nm,18.5s,baz=251,slow=39						
ARB2	**ARCESS Array S**	**67.98**	**347**	P	**P**	**00 10 50.2**	**+0.5**
ARA3	**ARCESS Array S**	**67.98**	**347**	P	**P**	**00 10 50.6**	**+0.9**
ARD2	**ARCESS Array S**	**67.98**	**347**	P	**P**	**00 10 49.0**	**-0.8**
ARC6	**ARCESS Array S**	**67.98**	**347**	P	**P**	**00 10 50.1**	**+0.3**
ARD1	**ARCESS Array S**	**67.99**	**347**	P	**P**	**00 10 48.9**	**-0.9**
USRK	**Ussuriysk Ar.**	**71.99**	**45**	LR	LR	00 44 36.3	
	comp=Z,189nm,19.3s,baz=245,slow=37						
KLR	**Kul'dur**	**72.76**	**40**	LR	LR	00 44 49.2	
	comp=Z,150nm,18.4s,baz=258,slow=37						
MAW	**Mawson**	**73.13**	**180**	P	**P**	**00 11 21.5**	**+0.4**
	comp=Z,5.2nm,0.9s,baz=321,slow=5.4,SNR=4.6						
MAW				LR	LR	00 39 30.6	
	comp=Z,108nm,18.5s,baz=68,slow=33						
MAW	**Mawson**	**73.13**	**180**	P	**P**	**00 11 22.1**	**+1.0**
WRA	**Warramunga Arr**	**75.81**	**112**	P	**P**	**00 11 38.0**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=289,slow=5.1,SNR=28						
WRA				LR	LR	00 40 51.4	
	comp=Z,24nm,21.2s,baz=280,slow=32						
WRA	**Warramunga Arr**	**75.81**	**112**	P	**P**	**00 11 37.7**	**0.0**
WRAB	**Tennant Creek**	**75.82**	**112**	P	**P**	**00 11 38.2**	**+0.4**
WRAB				IAmb	IAmb	00 11 45.3	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**75.83**	**112**	P	**P**	**00 11 37.9**	**+0.1**
WB0				IAmb	IAmb	00 11 45.1	
	comp=Z,12nm,1.0s						
MJAR	**Matsushiro Arr**	**75.84**	**54**	LR	LR	00 47 46.5	
	comp=Z,44nm,18.8s,baz=305,slow=38						
WR0	**Warramunga Arr**	**76.00**	**112**	P	**P**	**00 11 38.9**	**+0.1**
WR0				IAmb	IAmb	00 11 46.1	
	comp=Z,11nm,1.1s						
SYO	**Syowa Base**	**76.09**	**188**	⇑*e*pP	pP	00 11 43.2	+3.0
SYO	**Syowa Base**	**76.09**	**188**	‖*e*PcP	**PcP**	**00 11 50.0**	**-0.4**
SYO	**Syowa Base**	**76.09**	**188**	‖*e*PP	PP	00 14 31.4	+2.3
ASAR	**Alice Springs**	**76.19**	**116**	P	**P**	**00 11 40.0**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=289,slow=5.6,SNR=20						
ASAR				LR	LR	00 39 22.1	
	comp=Z,33nm,21.2s,baz=258,slow=31						
AS31	**Alice Springs**	**76.19**	**116**	P	**P**	**00 11 39.2**	**-0.6**
TIXI	**Tiksi**	**77.55**	**17**	P	**P**	**00 11 45.3**	**-1.2**
TIXI				IAmb	IAmb	00 11 52.3	
	comp=Z,18nm,1.4s						
MBO	**M'Bour**	**77.59**	**283**	P	**P**	**00 11 46.1**	**-1.7**
JEW	**Eniwo**	**78.68**	**48**	P	**P**	**00 11 52.9**	**-0.5**
STKA	**Stephens Creek**	**84.49**	**123**	P	**P**	**00 12 23.6**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=262,slow=8.2,SNR=3.1						
STKA				LR	LR	00 46 07.0	
	comp=Z,74nm,20.3s,baz=209,slow=33						
PMG	**Port Moresby**	**86.51**	**100**	P	**P**	**00 12 34.0**	**-0.8**
PMG				IAmb	IAmb	00 12 42.1	
	comp=Z,11nm,0.9s						
SNAA	**Sanae**	**87.59**	**197**	LR	LR	00 44 00.1	
	comp=Z,112nm,21.9s,baz=22,slow=30						
VNA2	**Neumayer--Watz**	**88.63**	**198**	P	P	00 12 50.7	+6.9
	baz=65,slow=4.2						
PETK	**Petropavlovsk-**	**89.12**	**37**	LR	LR	00 55 41.9	
	comp=Z,93nm,18.4s,baz=272,slow=38						
VNA3	**Neumayer Olymp**	**89.43**	**198**	P	**P**	**00 12 47.7**	**+0.2**
VNDA	**Vanda**	**97.73**	**168**	LR	LR	00 52 43.8	
	comp=Z,62nm,18.9s,baz=340,slow=32						
NVAR	**Mina Array Bea**	**136.10**	**360**	PKP	**PKPdf**	**00 19 12.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=70,slow=1.1,SNR=1.8						
TXAR	**Lajitas Array**	**142.42**	**339**	PKhKP	PKPpre	00 19 21.6	
	comp=Z,0.1nm,0.5s,baz=130,slow=29,SNR=4.1						

IDC ***29*** *00:22:46.4±1.6,34.0°N×25.1°E,h0km,mb3.6/5, mb1 3.7/7,mb1mx3.4/50,mbtmp3.6/7,ML3.8/2,Error ellipse: s-maj=39.0km s-min=27.8km az=133.0*
ISK ***29*** *00:22:47.2,33.8°N×25.2°E,h29km, ML2.9/14*
ATH ***29*** *00:22:50.0,34.0°1N×25.2°10E,h37km±5km,ML2.5/6,Error ellipse: s-maj=6.7km s-min=3.1km az=324.0*
HLW ***29*** *00:22:50.0,33.8°89N×25.2°51E,h10km±10km,Md3.3,Ml3.2*
THE ***29*** *00:22:52.1,34.0°3N×25.0°7E,h16km±5km,ML2.4/4,Error ellipse: s-maj=6.9km s-min=1.4km az=191.0*
GII ***29*** *00:22:57.6±0.3,33.8°0N×25.2°8E,h60km*
DDA ***29*** *00:23:12.3,35.2°6N×26.2°85E,h11km±3km,ML2.5*

ISC 29 00:22:49.8±1.3,**33.9°4N**±0.0°4×**25.2°2E**±0.0°4,**h31**km±11km, **n109**,σ1°**36**/128,**mb3.6**/5,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**1.12**	**342**	P	**Pb**	**00 23 09.8**	**-0.9**
SIVA				S	**Sn**	**00 23 24.2**	**+0.3**
SIVA				AML	AML	00 23 36.5	
	comp=E,2160μm,0.5s						
SIVA				AML	AML	00 23 44.2	
	comp=N,980μm,0.7s						
SIVA	**Sivas**	**1.12**	**342**	P	**Pb**	**00 23 09.8**	**-0.9**
SIVA				S	**Sn**	**00 23 24.2**	**+0.3**
TMBK	**Timbaki Herakl**	**1.19**	**342**	P	**Pb**	**00 23 11.2**	**-0.6**
TMBK				S	**Sn**	**00 23 26.4**	**+1.0**
	comp=N,202nm,0.8s						
LAST	**Lasithi**	**1.23**	**10**	P	**Pb**	**00 23 11.9**	**-0.7**
LAST				S	**Sn**	**00 23 28.1**	**+1.4**
LAST				AML	AML	00 23 38.2	
	comp=E,274μm,0.7s						
LAST				AML	AML	00 23 51.2	
	comp=N,229μm,0.8s						
LAST	**Lasithi**	**1.23**	**10**	P	**Pb**	**00 23 12.6**	**0.0**
GVD	**Gavdhos**	**1.30**	**314**	P	**Pb**	**00 23 11.9**	**-1.8**
GVD				AML	AML	00 23 50.9	
	comp=E,498μm,0.6s						
GVD				AML	AML	00 23 52.5	
	comp=N,537μm,0.5s						
GVD	**Gavdhos**	**1.30**	**314**	PN	**Pn**	**00 23 11.4**	**-0.4**
GVD				SN	**Sn**	**00 23 28.9**	**+0.8**
GVD	**Gavdhos**	**1.30**	**314**	P	**Pb**	**00 23 11.8**	**-1.8**
GVDS	**Gavdos**	**1.30**	**314**	PN	**Pn**	**00 23 11.5**	**-0.3**
NPS	**Neapolis**	**1.35**	**14**	P	**Pb**	**00 23 13.9**	**-0.7**
NPS				AML	AML	00 23 39.4	
	comp=E,214μm,0.7s						
NPS				AML	AML	00 23 39.7	
	comp=N,190μm,0.5s						
NPS	**Neapolis**	**1.35**	**14**	P	**Pb**	**00 23 14.4**	**-0.2**
KSTL	**Kastelli Herak**	**1.36**	**355**	P	**Pn**	**00 23 12.6**	**-0.1**
KSTL				S	**Sn**	**00 23 28.7**	**-1.1**
HRKL	**Herakleio**	**1.37**	**356**	PN	**Pn**	**00 23 13.2**	**+0.4**
HRKL				SN	**Sb**	**00 23 31.6**	**-0.3**
HRKL	**Herakleio**	**1.37**	**356**	P	**Pb**	**00 23 15.0**	**+0.2**
IDI	**Anoyia**	**1.37**	**348**	P	**Pb**	**00 23 13.7**	**-1.1**
IDI				AML	AML	00 23 42.6	
	comp=E,333μm,0.6s						
IDI				AML	AML	00 23 55.5	
	comp=N,215μm,0.8s						
IDI	**Anoyia**	**1.37**	**348**	PN	**Pn**	**00 23 12.9**	**0.0**
IDI				SN	**Sb**	**00 23 31.8**	**-0.2**
IDI	**Anoyia**	**1.37**	**348**	P	**Pb**	**00 23 13.8**	**-1.1**
ZKR	**Zakros**	**1.43**	**35**	P	**Pb**	**00 23 16.2**	**+0.4**
ZKR				AML	AML	00 23 54.8	
	comp=E,214μm,0.8s						
ZKR				AML	AML	00 24 00.1	
	comp=N,99μm,0.7s						
ZKR	**Zakros**	**1.43**	**35**	PN	**Pn**	**00 23 13.7**	**+0.1**
ZKR	**Zakros**	**1.43**	**35**	P	**Pb**	**00 23 16.5**	**+0.7**
ZKR				S	**Sb**	**00 23 35.1**	**+1.5**
	comp=N,78nm,0.7s						
STIA	**Sitia Lasithi**	**1.45**	**29**	P	**Pb**	**00 23 16.2**	**+0.1**
PRNS	**Prines Rethymn**	**1.54**	**337**	P	**Pb**	**00 23 15.9**	**-1.8**
VAM	**Vamos**	**1.69**	**330**	P	**Pn**	**00 23 17.7**	**+0.5**
VAM	**Vamos**	**1.69**	**330**	P	**Pb**	**00 23 18.1**	**-2.1**
IMMV	**Iera Moni Meta**	**1.83**	**326**	P	**Pn**	**00 23 19.8**	**+0.7**
IMMV	**Iera Moni Meta**	**1.83**	**326**	PN	**Pn**	**00 23 19.2**	**+0.1**
IMMV	**Iera Moni Meta**	**1.83**	**326**	P	**Pn**	**00 23 19.7**	**+0.6**
RODP	**Rodopos**	**2.02**	**324**	PN	**Pn**	**00 23 21.8**	**+0.1**
RODP	**Rodopos**	**2.02**	**324**	P	**Pn**	**00 23 22.0**	**+0.3**
KARP	**Karpathos**	**2.26**	**44**	P	**Pb**	**00 23 28.6**	**-1.4**
THR9	**Santorini-Faro**	**2.41**	**3**	P	**Pn**	**00 23 27.8**	**+0.6**
THR9	**Santorini-Faro**	**2.41**	**3**	P	**Pn**	**00 23 29.1**	**+2.0**
THR6	**Thira Island,**	**2.41**	**3**	P	**Pn**	**00 23 27.4**	**+0.2**
THR6	**Thira Island,**	**2.41**	**3**	P	**Pn**	**00 23 28.4**	**+1.2**
SLUM	**Salum**	**2.44**	**180**	P	**Pn**	**00 23 30.0**	**+2.4**
	baz=187						
SLUM				AMP		00 23 00.0	
	baz=187						
SLUM				S	**Sn**	**00 23 58.4**	**+1.9**
	baz=187						
ANAF	**Anafi Island**	**2.45**	**10**	P	**Pn**	**00 23 28.8**	**+1.1**
ANAF	**Anafi Island**	**2.45**	**10**	P	**Pn**	**00 23 28.9**	**+1.2**
ANAF				S	**Sn**	**00 23 56.5**	**-0.1**
SNT5	**Nea Kammeni, S**	**2.46**	**3**	P	**Pn**	**00 23 28.4**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.46**	**3**	P	**Pn**	**00 23 28.4**	**+0.6**
THR3	**Thira Island,**	**2.46**	**3**	P	**Pn**	**00 23 28.6**	**+0.7**
THR5	**Thira Island,**	**2.47**	**2**	P	**Pn**	**00 23 29.0**	**+1.0**
SNT1	**Gialos, Santor**	**2.47**	**4**	P	**Pn**	**00 23 28.5**	**+0.5**
SNT1	**Gialos, Santor**	**2.47**	**4**	P	**Pn**	**00 23 28.5**	**+0.5**
SAP3	**Santorini-Thir**	**2.49**	**2**	P	**Pn**	**00 23 29.1**	**+0.8**
THT2	**Imerovigli**	**2.49**	**4**	PN	**Pn**	**00 23 28.8**	**+0.5**
CMBO	**Columbo, Santo**	**2.53**	**3**	P	**Pn**	**00 23 29.9**	**+1.2**
CMBO				S	**Sn**	**00 23 59.2**	**+0.7**
MHLA	**Plaka, Milos I**	**2.87**	**347**	P	**Pn**	**00 23 33.4**	**0.0**
KTHA	**Kythira Island**	**2.91**	**323**	P	**Pn**	**00 23 34.5**	**+0.5**
KTHA	**Kythira Island**	**2.91**	**323**	PN	**Pn**	**00 23 34.3**	**+0.3**
AMGA	**Amorgos Island**	**2.93**	**11**	P	**Pn**	**00 23 35.1**	**+0.7**
AMGA	**Amorgos Island**	**2.93**	**11**	P	**Pn**	**00 23 35.1**	**+0.7**
AMGA				S	**Sn**	**00 24 07.0**	**-1.5**
	comp=N,40nm,0.3s						
APE	**Apeiranthos**	**3.13**	**4**	P	**Pn**	**00 23 37.4**	**+0.3**
APE	**Apeiranthos**	**3.13**	**4**	PN	**Pn**	**00 23 37.4**	**+0.3**
APE	**Apeiranthos**	**3.13**	**4**	P	**Pn**	**00 23 37.3**	**+0.3**
APE				S	**Sn**	**00 24 11.1**	**-2.3**
	comp=N,18nm,0.3s						
KOSK	**Kos Island**	**3.15**	**27**	PN	**Pn**	**00 23 38.5**	**+1.2**
ARG	**Arkhangelos**	**3.29**	**46**	P	**Pn**	**00 23 42.5**	**+3.3**
ARG	**Arkhangelos**	**3.29**	**46**	PN	**Pn**	**00 23 39.8**	**+0.6**
VLI	**Veliai**	**3.34**	**327**	P	**Pn**	**00 23 39.8**	**-0.2**
TURN	**Turunc**	**3.75**	**40**	PN	**Pn**	**00 23 46.3**	**+0.7**
TURN	**Turunc**	**3.75**	**40**	*i* P	**Pn**	**00 23 47.1**	**+1.6**
TURN				*i* S	Sn	00 24 13.1	-16
DALY	**Dalyan (Mula)**	**4.01**	**43**	PN	**Pn**	**00 23 50.3**	**+1.2**
DALY	**Dalyan (Mula)**	**4.01**	**43**	*i* P	**Pn**	**00 23 51.4**	**+2.3**
DALY				*i* S	Sn	00 24 19.3	-16
DALY				IAML		00 24 20.0	
	comp=E,82nm,0.9s						
YER	**Yerkesik**	**4.04**	**37**	PN	**Pn**	**00 23 50.7**	**+1.0**
FETY	**Fethiye**	**4.14**	**49**	PN	**Pn**	**00 23 52.1**	**+1.1**
FETY	**Fethiye**	**4.14**	**49**	*i* P	**Pn**	**00 23 52.8**	**+1.8**
FETY				*i* S	Sn	00 24 22.5	-16
ITM	**Ithomi**	**4.20**	**321**	PN	**Pn**	**00 23 52.8**	**+1.0**
AKAS	**Kas**	**4.26**	**56**	PN	**Pn**	**00 23 53.5**	**+0.9**
AKAS	**Kas**	**4.26**	**56**	*i* P	**Pn**	**00 23 54.7**	**+2.1**
AKAS				*i* S	Sn	00 24 23.8	-16
AYDN	**Tasoluk**	**4.29**	**29**	*i* P	**Pn**	**00 23 55.4**	**+2.4**
AYDN				*i* S	Sn	00 24 27.0	-15
CAME	**Cameli-Denizli**	**4.48**	**47**	PN	**Pn**	**00 23 57.2**	**+1.5**
AYDB	**Zeytinkoy-Aydi**	**4.54**	**28**	PN	**Pn**	**00 23 57.5**	**+0.9**
URLA	**Izmir**	**4.54**	**14**	PN	**Pn**	**00 23 56.7**	**+0.2**
TAVA	**DENIZLI_Tavas**	**4.62**	**39**	*i* P	**Pn**	**00 24 00.5**	**+2.8**
TAVA				*i* S	Sn	00 24 35.3	-15
SWA2		**4.69**	**178**	P	**Pn**	**00 24 00.5**	**+2.0**
	baz=181						
SWA2				AMP		00 24 00.0	
	baz=181						
SWA2				S	**Sn**	**00 24 52.2**	**+0.3**
	baz=181						
ELL	**Elmali**	**4.74**	**53**	PN	**Pn**	**00 23 59.1**	**-0.2**
AKUM	**Antalya-Kumluc**	**4.82**	**59**	*i* P	**Pn**	**00 24 02.2**	**+1.9**
AKUM				*i* S	Sn	00 24 34.2	-21
AKUM				IAML		00 25 00.0	
	comp=E,6.0nm,1.1s						
GOLH	**Golhisar**	**4.83**	**46**	*i* P	**Pn**	**00 24 02.8**	**+2.3**
GOLH				*i* S	Sn	00 24 40.0	-15
GOLH				IAML		00 25 02.0	
	comp=N,8.1nm,0.9s						
GOLH				IAML		00 25 49.0	
	comp=E,48nm,3.7s						
KORT	**Korkueli**	**5.18**	**52**	PN	**Pn**	**00 24 06.0**	**+0.7**
GAZI	**Gazipasa**	**6.25**	**67**	PN	**Pn**	**00 24 20.1**	**+0.2**
SEYD	**Seydisehir-KON**	**6.39**	**55**	PN	**Pn**	**00 24 23.5**	**+1.5**
RYAN	**Fayoum**	**6.49**	**137**	P	**Pn**	**00 24 24.2**	**+1.1**
	baz=138						
CSS	**Mathiatis**	**6.77**	**79**	PN	**Pn**	**00 24 27.9**	**+0.8**
TEKE	**Tekeli-Mersin**	**6.83**	**69**	PN	**Pn**	**00 24 28.6**	**+0.7**
AKKU	**Akkuyu-Mersin**	**7.18**	**70**	PN	**Pn**	**00 24 33.7**	**+1.1**
HFRF	**Wahat Farafira**	**7.28**	**158**	P	**Pn**	**00 24 35.4**	**+1.4**
	baz=159						
IKL	**Isikli**	**7.30**	**69**	PN	**Pn**	**00 24 35.3**	**+0.9**
KZIT	**Kziot**	**8.32**	**109**	Pn	**Pn**	**00 24 48.4**	**0.0**
SLTI	**Sal'it**	**8.41**	**99**	Pn	**Pn**	**00 24 50.2**	**+0.6**
SLTI				Sn	**Sn**	**00 26 18.9**	**-4.6**
AMAZ	**Amatzia**	**8.51**	**104**	Pn	**Pn**	**00 24 52.1**	**+1.1**
AMAZ				Sn	**Sn**	**00 26 21.5**	**-4.5**
MMA0B	**Mount Meron ar**	**8.55**	**93**	Pn	**Pn**	**00 24 52.4**	**+0.8**
YTIR	**Yattir**	**8.73**	**104**	Pn	**Pn**	**00 24 54.9**	**+0.9**
YTIR				Sn	**Sn**	**00 26 26.7**	**-4.7**
GEM	**Giv'at Ha'Em**	**8.74**	**92**	Pn	**Pn**	**00 24 54.7**	**+0.6**
NATI	**Neve Ativ**	**8.80**	**92**	Pn	**Pn**	**00 24 56.1**	**+1.3**
NATI				Sn	**Sn**	**00 26 30.0**	**-2.9**
HMDT	**Nahal Hemdat**	**8.81**	**98**	Pn	**Pn**	**00 24 56.1**	**+1.1**
DSI	**Dead Sea**	**8.87**	**103**	Pn	**Pn**	**00 24 56.5**	**+0.6**
KRMI	**Paran Flat**	**8.92**	**113**	Pn	**Pn**	**00 24 57.5**	**+0.9**
PRNI	**Paran**	**9.03**	**111**	Pn	**Pn**	**00 24 59.3**	**+1.2**
ZFRI	**Zfri**	**9.08**	**109**	Pn	**Pn**	**00 24 59.2**	**+0.5**
GHAJ	**Ghor Haditha**	**9.11**	**104**	Pn	**Pn**	**00 25 00.6**	**+1.4**
HRFI	**Mount Harif**	**9.20**	**112**	Pn	**Pn**	**00 25 02.1**	**+1.7**
MBRI	**Mt Berech**	**9.22**	**114**	Pn	**Pn**	**00 25 01.3**	**+0.6**
EIL	**Elat**	**9.31**	**115**	Pn	**Pn**	**00 25 02.6**	**+0.7**
AKASG	**Malin Array Be**	**17.00**	**9**	Pn	**Pn**	**00 26 46.4**	**+1.2**
	comp=E,0.9nm,0.3s,baz=202,slow=10,SNR=3.6						
GERES	**GERESS Array B**	**17.18**	**333**	P	**P**	**00 26 48.6**	**-0.4**
	comp=E,0.1nm,0.3s,baz=145,slow=11,SNR=7.0						
FINES	**FINESS Array B**	**27.52**	**1**	P	**P**	**00 28 32.5**	**-0.9**
	comp=E,1.3nm,0.7s,baz=156,slow=19,SNR=2.0						
NOA	**NORSAR Array B**	**28.59**	**346**	P	**P**	**00 28 42.6**	**-0.4**
	comp=E,0.2nm,0.5s,baz=155,slow=9.3,SNR=1.3						
TORD	**Torodi Ar. Bea**	**29.76**	**232**	P	**P**	**00 28 55.0**	**+1.3**
	comp=E,0.1nm,0.4s,baz=32,slow=8.4,SNR=1.3						
MKAR	**Makanchi Array**	**44.41**	**55**	P	**P**	**00 30 59.1**	**+1.5**
	comp=E,0.5nm,0.6s,baz=270,slow=9.0,SNR=7.0						
ZALV	**Zalesovo Beam**	**45.81**	**45**	P	**P**	**00 31 09.4**	**+0.8**
	comp=E,1.1nm,0.4s,baz=267,slow=8.9,SNR=

CHGN					IAmb	IAmb	00 42 55.4	
	comp=Z,31nm,1.1s							
RAYN	**Ar Rayn**	**81.93**	**293**		P	**P**	**00 43 05.4**	**-1.4**
RAYN					IAmb	IAmb	00 43 20.4	
	comp=Z,2.0nm,1.0s							
ATD	**Arta Tunnel**	**84.49**	**281**		P	**P**	**00 43 17.7**	**-2.5**
ATD					IAmb	IAmb	00 43 20.0	
	comp=Z,5.9nm,1.0s							
GHO	**Glory Hole Cre**	**84.88**	**28**		P	**P**	**00 43 18.3**	**-2.9**
GHO					IAmb	IAmb	00 43 22.9	
	comp=Z,5.2nm,1.1s							
ISLE	**Juniper Island**	**88.03**	**30**		P	**P**	**00 43 36.6**	**-0.2**
ISLE					IAmb	IAmb	00 43 45.6	
	comp=Z,9.2nm,0.9s							
GAZ	**Gaziantep**	**89.02**	**307**		P	**P**	**00 43 40.9**	**-1.0**
GAZ					IAmb	IAmb	00 43 48.6	
	comp=Z,5.5nm,1.2s							
SKAG	**Skagway**	**91.62**	**30**		P	**P**	**00 43 53.5**	**+0.1**
SKAG					IAmb	IAmb	00 43 56.5	
	comp=Z,3.3nm,0.8s							
ARB5	**ARCESS Array S**	**92.14**	**340**		P	**P**	**00 43 55.4**	**-0.2**
ARD9	**ARCESS Array S**	**92.14**	**340**		P	**P**	**00 43 55.5**	**-0.1**
ARD9					IAmb	IAmb	00 44 01.7	
	comp=Z,10nm,1.1s							
TAOE	**Nuku Hiva Isla**	**92.49**	**99**		P	**P**	**00 43 56.4**	**-2.1**
AKASG	**Malin Array Be**	**93.62**	**321**		P	**P**	**00 44 00.2**	**-2.5**

IDC 29 00:32:05.6±1.2, 31°61N×104°23E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.3/58, mbtmp3.5/5, ML3.3/1, Error ellipse: s-maj=94.1km s-min=21.1km az=60.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.29**	**5**	Pn	P	00 35 57.8	-1.2
	0.1nm,0.3s,baz=184,slow=13,SNR=3.4						
MKAR	**Makanchi Array**	**22.67**	**318**	P	P	00 37 09.2	+0.6
	0.3nm,0.6s,baz=121,slow=14,SNR=4.8						
ZALV	**Zalesovo Beam**	**26.32**	**334**	P	P	00 37 41.8	-1.1
	0.6nm,0.4s,baz=141,slow=9.3,SNR=4.4						
WRA	**Warramunga Arr**	**58.83**	**147**	P	P	00 42 06.3	+0.2
	0.6nm,0.6s,baz=340,slow=8.0,SNR=14						
ASAR	**Alice Springs**	**61.87**	**149**	P	P	00 42 26.6	-0.3
	0.3nm,0.5s,baz=336,slow=6.6,SNR=5.3						

WEL 29 00:38:52.2±1.0, 35°S±10°×177°E±15, h281km±12km, M3.6/14, MLv3.6/14, Error ellipse: s-maj=0.0km s-min=0.0km az=119.8, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.20**	**187**	P	Pn	00 39 38.2	-0.7
MXZ				S	S	00 40 15.0	-1.1
WMGZ	**Waiomatatini S**	**2.44**	**185**	P	Pn	00 39 41.2	0.0
WMGZ				S	S	00 40 21.9	+1.8
HAZ	**Te Kaha**	**2.48**	**196**	P	Pn	00 39 40.9	-0.5
HAZ				S	S	00 40 19.3	-1.4
PKGZ	**Pakihiroa**	**2.55**	**190**	P	Pn	00 39 41.9	-0.3
PKGZ				S	S	00 40 20.9	-1.2
RUGZ	**Raukumara Rang**	**2.70**	**197**	P	Pn	00 39 42.9	-0.9
PUZ	**Puketiti**	**2.71**	**187**	P	Pn	00 39 43.3	-0.4
PUZ				S	S	00 40 24.5	-0.3
TWGZ	**Tauwhareparae**	**2.84**	**191**	P	Pn	00 39 45.4	+0.2
TWGZ				S	S	00 40 28.7	+1.5
OPRZ	**Ohinepanea**	**2.99**	**214**	P	Pn	00 39 47.1	+0.6
MWZ	**Matawai**	**3.09**	**197**	P	Pn	00 39 47.6	0.0
MWZ				S	S	00 40 32.1	+0.4
CNGZ	**Carnagh Statio**	**3.12**	**187**	P	Pn	00 39 48.3	+0.5
TKGZ	**Te Karaka**	**3.12**	**192**	P	Pn	00 39 47.8	-0.1
TKGZ				S	S	00 40 33.3	+1.1
RAGZ	**Rawiri**	**3.27**	**197**	P	Pn	00 39 49.3	-0.1
RAGZ				S	S	00 40 33.1	-2.0
RIGZ	**Rimuhau**	**3.40**	**192**	P	Pn	00 39 50.6	-0.2
RIGZ				S	S	00 40 38.2	+0.6
MUGZ	**Murupara**	**3.44**	**206**	P	Pn	00 39 51.4	+0.1
MUGZ				S	S	00 40 40.7	+2.3
TOZ	**Tahuroa Road**	**3.46**	**226**	P	Pn	00 39 52.5	+1.0
SNGZ	**Shannon Statio**	**3.56**	**197**	P	Pn	00 39 53.2	+0.6
SNGZ				S	S	00 40 41.8	+1.1
PRGZ	**Paritu Road**	**3.59**	**190**	P	Pn	00 39 52.8	0.0
PRGZ				S	S	00 40 43.7	+2.3
KNZ	**Kokohu**	**3.72**	**192**	P	Pn	00 39 53.9	-0.3
RAHZ	**Arahi**	**3.75**	**199**	P	Pn	00 39 54.7	+0.1
RAHZ				S	S	00 40 46.6	+2.1
MHGZ	**Mahia Peninsul**	**3.81**	**189**	P	Pn	00 39 55.7	+0.4
MHGZ				S	S	00 40 46.3	+0.6
WHHZ	**Waihua**	**3.86**	**197**	P	Pn	00 39 56.0	+0.1
WHHZ				S	S	00 40 48.6	+1.8
NMHZ	**Naumai**	**4.00**	**201**	P	Pn	00 39 58.0	+0.6
NMHZ				S	S	00 40 51.5	+1.9
ARHZ	**Aropaoanui**	**4.10**	**198**	S	S	00 40 52.9	+1.4
BKZ	**Black Stump Fm**	**4.16**	**204**	P	Pn	00 39 58.9	-0.3
BKZ				S	S	00 40 52.6	-0.2
BHHZ	**Black Hill Sta**	**4.59**	**206**	P	Pn	00 40 03.8	-0.5
MOVZ	**Moawhango**	**4.64**	**209**	P	Pn	00 40 04.3	-0.5
MOVZ				S	S	00 41 01.5	-1.5
PXZ	**Pawanui**	**4.86**	**197**	P	Pn	00 40 06.6	-0.6
PXZ				S	S	00 41 05.8	-1.6
PNHZ	**Pukenui**	**4.93**	**203**	P	Pn	00 40 07.6	-0.6
PNHZ				S	S	00 41 07.8	-1.2
DVHZ	**Dannevirke**	**5.29**	**201**	P	Pn	00 40 11.9	-0.5
BFZ	**Birch Farm**	**5.63**	**199**	P	Pn	00 40 15.9	-0.5
BFZ				S	S	00 41 22.9	-1.1
CPWZ	**Castlepoint**	**5.85**	**199**	P	Pn	00 40 19.6	+0.5
HOWZ	**Holdsworth Sta**	**6.04**	**203**	P	Pn	00 40 20.3	-1.1
TMWZ	**Te Maipa**	**6.12**	**200**	P	Pn	00 40 21.6	-0.8

*IDC **29** 00:44:22.2±0.9, 27°51S×70°68W, h0km, mb4.0/5, mb1 4.1/7, mb1mx3.9/26, mbtmp4.0/7, ML3.9/2, MS3.3/3, Ms1 3.3/3, ms1mx3.0/21, Error ellipse: s-maj=32.2km s-min=28.3km az=144.0*
*GUC **29** 00:44:27.0±0.9, 27°35S×70°98W, h25km±9km, ML4.1*
*NEIC **29** 00:44:27.3±2.7, 27°34S±0°05-70°89W±0°07, h41km±7km, Error ellipse: s-maj=9.0km s-min=6.7km az=100.0*
*SJA **29** 00:44:28.2±0.7, 27°18S×70°58W, h46km±7km, ML4.2, MW4.3*

ISC 29 00:44:25.8±1.4, 27°29S±0°03×71°01W±0°05, h23km±10km, n100, σ2°25/110, mb4.4/11, 2C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.76**	**114**	*eP*	**Pb**	**00 44 40.1**	**-0.2**
GO03				*i* S	**Sb**	**00 44 48.9**	**-1.3**
GO03				IAML		00 44 49.4	
	comp=N,16μm,0.5s						
GO03	**Copiap**	**0.76**	**114**		**Pb**	**00 44 40.2**	**-0.2**
GO03				Sn	**Sb**	**00 44 47.8**	**-2.5**
GO03	**Copiap**	**0.76**	**114**	*eP*	**Pb**	**00 44 40.3**	**0.0**
GO03				*eS*	**Sb**	**00 44 49.0**	**-1.3**
AC04	**Llanos de Chal**	**0.92**	**183**	*i* P	**Pn**	**00 44 43.9**	**+0.7**
AC04				*i* S	**Sb**	**00 44 56.0**	**+1.2**
AC04	**Llanos de Chal**	**0.92**	**183**	Pn	**Pn**	**00 44 44.0**	**+0.7**
AC01	**Pan de Azucar**	**1.19**	**18**	*i* P	**Pn**	**00 44 48.8**	**+1.7**
AC01				*i* S	**Sb**	**00 45 05.2**	**+2.5**
AC01				IAML		00 45 07.8	
	comp=N,4μm,0.4s						
AC01	**Pan de Azucar**	**1.19**	**18**		**Pn**	**00 44 49.0**	**+2.0**
AC05	**El Transito**	**1.68**	**157**	*eP*	**Pn**	**00 44 55.4**	**+1.6**
AC05				*i* S	**Sn**	**00 45 15.8**	**+1.1**
AC05				IAML		00 45 23.1	
	comp=N,3μm,0.8s						
AC05	**El Transito**	**1.68**	**157**	Pn	**Pn**	**00 44 55.5**	**+1.6**
AC02	**Maricunga**	**1.74**	**75**	*i* P	**Pn**	**00 44 56.4**	**+1.4**
AC02				*i* S	**Sn**	**00 45 16.7**	**0.0**
AC02				IAML		00 45 19.6	
	comp=E,8μm,0.3s						
AC02	**Maricunga**	**1.74**	**75**		**Pn**	**00 44 55.6**	**+0.6**
LCO	**Las Campanas**	**1.74**	**171**	Pn	**Pn**	**00 44 56.2**	**+1.4**
GO02	**Mina Guanaco**	**2.47**	**31**	*i* P	**Pn**	**00 45 06.8**	**+1.9**
GO02				*eS*	**Sn**	**00 45 39.1**	**+4.6**
GO02				IAML		00 45 55.6	
	comp=N,2μm,0.4s						
GO02	**Mina Guanaco**	**2.47**	**31**	Pn	**Pn**	**00 45 06.9**	**+1.9**
PB14	**IPOC Station P**	**2.71**	**12**	*eP*	**Pn**	**00 45 09.3**	**+1.1**
PB14	**IPOC Station P**	**2.71**	**12**	Pn	**Pn**	**00 45 08.2**	**+0.1**
PB14	**IPOC Station P**	**2.71**	**12**	*eP*	**Pn**	**00 45 09.2**	**+1.1**
PB14				IAML		00 45 56.7	
	comp=Z,722nm,0.4s						
CO01	**Juntas del Tor**	**2.80**	**163**	*eP*	**Pn**	**00 45 12.3**	**+2.9**
CO01	**Juntas del Tor**	**2.80**	**163**		**Pn**	**00 45 11.8**	**+2.4**
VCA	**Vinchina**	**2.87**	**121**	*eP*	**Pn**	**00 45 13.9**	**+3.6**
VCA				IAML		00 46 05.2	
	comp=Z,804nm,0.9s						
GO04	**Tololo Observa**	**2.88**	**176**	*i* P	**Pn**	**00 45 12.2**	**+1.7**
GO04	**Tololo Observa**	**2.88**	**176**		**Pn**	**00 45 12.4**	**+1.9**
GO04	**Tololo Observa**	**2.88**	**176**	*eP*	**Pn**	**00 45 13.0**	**+2.5**
GO04				*eS*	**Sb**	**00 45 58.7**	**+7.1**
AGUA	**GUANDACOL**	**3.12**	**135**	*eP*	**Pn**	**00 45 17.8**	**+4.1**
AGUA				IAML		00 46 11.6	
	comp=Z,552nm,1.1s						
AROD	**Rodeo**	**3.17**	**155**	*eP*	**Pn**	**00 45 18.6**	**+4.1**
CO03	**El Pedregal**	**3.55**	**176**		**Pn**	**00 45 21.3**	**+1.7**
ACCO	**Cerro Coronel**	**3.71**	**153**	*eP*	**Pn**	**00 45 25.9**	**+4.0**
ACCO				*eS*	**Sb**	**00 46 16.9**	**+1.5**
ACCO				IAML		00 46 26.3	
	comp=Z,329nm,1.2s						
PB10	**IPOC Station P**	**3.78**	**6**	Pn	**Pn**	**00 45 23.4**	**+0.8**
PB10	**IPOC Station P**	**3.78**	**6**	*eP*	**Pn**	**00 45 22.9**	**+0.3**
PB10				IAML		00 46 30.5	
	comp=Z,211nm,0.7s						
CO02	**Combarbal**	**3.90**	**180**	Pn	**Pn**	**00 45 26.8**	**+2.3**
ACLC	**CERRO LA CRUZ**	**4.17**	**122**	*eP*	**Pn**	**00 45 30.3**	**+2.2**
PB15	**IPOC Station P**	**4.29**	**19**		**Pn**	**00 45 31.6**	**+1.7**
RTLL	**Cerro Villicun**	**4.60**	**152**	*eP*	**Pn**	**00 45 37.1**	**+3.2**
RTLL				IAML		00 46 40.4	
	comp=Z,277nm,0.5s						
ZON	**Zonda**	**4.71**	**155**		**Pn**	**00 45 35.0**	**-0.5**
RTLS	**Leoncito**	**4.74**	**162**	*eP*	**Pn**	**00 45 39.9**	**+3.8**
RTLS				IAML		00 47 04.0	
	comp=Z,186nm,1.1s						
PB06	**IPOC Station P**	**4.74**	**16**		**Pn**	**00 45 36.6**	**+0.5**
CYA	**Choya**	**4.75**	**105**	*eP*	**Pn**	**00 45 38.0**	**+1.9**
CYA				*eS*	**Sn**	**00 46 34.9**	**+4.4**
CYA				IAML		00 46 37.1	
	comp=Z,166nm,0.8s						
PB04	**IPOC Station P**	**4.99**	**9**		**Pn**	**00 45 39.0**	**-0.5**
APLL	**PUNTA DE LOS L**	**5.01**	**129**	*eP*	**Pn**	**00 45 41.1**	**+1.6**
LVC	**Limon Verde**	**5.03**	**23**	Pn	**Pn**	**00 45 41.4**	**+1.2**
	comp=Z,3.4nm,0.3s,baz=170,slow=8.5,SNR=96						
LVC				Lg	Lg	00 46 54.3	
	comp=Z,25nm,0.3s,baz=36,slow=19,SNR=7.0						
LVC				LR	LR	00 47 40.6	
	comp=Z,241nm,18.5s,baz=194,slow=39						
LVC	**Limon Verde**	**5.03**	**23**	Pn	**Pn**	**00 45 40.8**	**+0.6**
RTCV	**Cerro Valdivia**	**5.04**	**155**	*eP*	**Pn**	**00 45 43.2**	**+3.1**
RTCV				IAML		00 47 04.1	
	comp=Z,118nm,0.9s						
AHML	**Horco Molle**	**5.09**	**86**	*eP*	**Pn**	**00 45 43.8**	**+3.1**
AUSP	**Uspallata**	**5.12**	**164**	*eP*	**Pn**	**00 45 45.1**	**+3.8**
VA03	**San Esteban**	**5.47**	**176**		**Pn**	**00 45 46.0**	**0.0**
ASAL	**Salagasta**	**5.61**	**161**	*eP*	**Pn**	**00 45 51.6**	**+3.7**
ASAL				*eS*	**Sb**	**00 47 04.2**	**-5.8**
ASAL				IAML		00 47 34.1	
	comp=Z,125nm,1.0s						
ROC1	**El Roble**	**5.67**	**180**		**Pn**	**00 45 50.2**	**+1.4**
PB09	**IPOC Station P**	**5.70**	**17**	*eP*	**Pn**	**00 45 50.5**	**+1.3**
PB09				IAML		00 47 36.3	
	comp=Z,377nm,0.7s						
VA01	**Torpederas**	**5.74**	**185**	Pn	**Pn**	**00 45 50.2**	**+0.6**
ARCO	**CERRO ARCO**	**5.82**	**162**	*eP*	**Pn**	**00 45 54.9**	**+4.0**
ARCO				*eS*	**Sn**	**00 47 05.1**	**+8.1**
ARCO				IAML		00 47 15.1	
	comp=Z,136nm,0.5s						
PEL	**Peldehue**	**5.84**	**177**	Pn	**Pn**	**00 45 53.8**	**+2.8**
MT02	**Curacav**	**5.95**	**181**		**Pn**	**00 45 53.7**	**+1.2**
MT05	**Renca**	**6.09**	**178**	Pn	**Pn**	**00 45 53.8**	**-0.6**
PATCX	**Punta Patache**	**6.48**	**7**	Pn	**Pn**	**00 46 04.0**	**+4.2**
TA01	**Diego Aracena**	**6.73**	**7**	Pn	**Pn**	**00 46 03.1**	**-0.1**
PB08	**IPOC Station P**	**7.31**	**14**	Pn	**Pn**	**00 46 11.8**	**+0.2**
BO02	**Sierra Bellavi**	**7.49**	**179**		**Pn**	**00 46 13.0**	**-0.6**
PB11	**IPOC Station P**	**7.59**	**10**	Pn	**Pn**	**00 46 16.1**	**+0.9**
PSGCX	**Pisagua**	**7.70**	**6**		**Pn**	**00 46 16.0**	**-0.6**
MNMC	**Minye Minye**	**8.22**	**9**	Pn	**Pn**	**00 46 25.2**	**+1.2**
PB16	**IPOC Station P**	**9.02**	**9**	Pn	**Pn**	**00 46 35.5**	**+0.4**
H03N1	**Juan Fernandez**	**9.17**	**226**	T	T	00 56 10.8	
	baz=52,slow=72,SNR=1322						
H03N2	**Juan Fernandez**	**9.19**	**226**	T	T	00 56 07.9	
	baz=52,slow=72,SNR=1199						
H03N3	**Juan Fernandez**	**9.19**	**226**	T	T	00 56 02.7	
	baz=52,slow=72,SNR=1020						
VA04	**Juan Fernndez**	**9.25**	**225**	Pn	**Pn**	**00 46 38.2**	**+0.5**
BI02	**San Fabin de**	**9.35**	**181**	Pn	**Pn**	**00 46 37.4**	**-1.8**
LPAZ	**La Paz**	**11.27**	**14**	Pn	**Pn**	**00 47 05.9**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=195,slow=6.4,SNR=7.4						
LPAZ				LR	LR	00 52 03.6	
	comp=Z,75nm,18.8s,baz=218,slow=40						
LPAZ	**La Paz**	**11.27**	**14**	Pn	**Pn**	**00 47 05.4**	**-0.5**
CPUP	**Villa Florida**	**12.26**	**89**	Pn	**Pn**	**00 47 17.5**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=38,slow=19,SNR=2.2						
CPUP				Lg	Lg	00 50 30.6	
	comp=Z,0.1nm,0.3s,baz=164,slow=20,SNR=1.7						
SIV	**San Ignacio**	**14.54**	**41**	Pn	Pn	00 47 45.3	-4.9
	comp=Z,0.3nm,0.3s,baz=284,slow=8.4,SNR=3.8						
SIV				Sn	**Sn**	**00 50 33.2**	**+2.4**
	baz=242,slow=15,SNR=1.7						
SAML	**Samuel**	**19.68**	**24**	P	**P**	**00 48 52.4**	**-1.0**
GO09	**Cerro Castillo**	**23.97**	**182**	P	**P**	**00 49 36.6**	**-1.7**
GO09				IAmb	IAmb	00 49 44.8	
	comp=Z,13nm,1.1s						
BDFB	**Brasilia**	**24.29**	**66**	P	**P**	**00 49 39.5**	**-2.2**
	comp=Z,3.4nm,0.5s,baz=234,slow=9.9,SNR=6.6						
BDFB				LR	LR	01 00 22.7	
	comp=Z,136nm,19.3s,baz=132,slow=40						
BDFB	**Brasilia**	**24.29**	**66**	P	**P**	**00 49 40.0**	**-1.7**
BDFB				IAmb	IAmb	00 49 56.1	
	comp=Z,6.8nm,0.7s						
PMSA	**Palmer Station**	**37.76**	**175**	P	**P**	**00 51 37.7**	**-1.9**
VNA3	**Neumayer Olymp**	**55.28**	**160**	P	**P**	**00 53 57.0**	**+0.1**
VNA2	**Neumayer--Watz**	**55.90**	**159**	P	**P**	**00 54 01.3**	**0.0**
	baz=289,slow=8.0						
SNAA	**Sanae**	**57.50**	**160**	P	**P**	**00 54 12.7**	**-0.1**
SLBS	**Sierra La Lagu**	**63.09**	**320**	P	**P**	**00 54 50.4**	**-1.3**
SLBS				IAmb	IAmb	00 54 55.3	
	comp=Z,2.7nm,0.8s						
TXAR	**Lajitas Array**	**64.40**	**329**	P	**P**	**00 55 02.3**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=152,slow=8.2,SNR=4.1						
R40A	**Maddies Statio**	**68.21**	**342**	P	**P**	**00 55 24.9**	**+0.6**
R40A				IAmb	IAmb	00 55 26.2	
	comp=Z,4.5nm,0.7s						
DELO	**Deloro Mine**	**71.71**	**355**	P	**P**	**00 55 45.8**	**+0.2**
DELO				IAmb	IAmb	00 55 59.0	
	comp=Z,10.0nm,1.0s						
DBIC	**Dimbokro**	**72.26**	**73**	P	**P**	**00 55 48.9**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=198,slow=8.5,SNR=5.7						
PV02	**Paradox Valley**	**74.12**	**330**	P	**P**	**00 55 59.1**	**-1.2**
PV02				IAmb	IAmb	00 56 07.2	
	comp=Z,3.9nm,1.0s						
RSSD	**Black Hills**	**77.23**	**336**	P	**P**	**00 56 18.5**	**+0.4**
PDAR	**Pinedale Array**	**78.22**	**332**	P	**P**	**00 56 26.7**	**+3.0**
	comp=Z,0.2nm,0.6s,baz=141,slow=4.6,SNR=2.5						
YPP	**Pitchstone Pla**	**79.98**	**332**	P	**P**	**00 56 32.0**	**-1.2**
H17A	**Grant Village**	**79.98**	**332**	P	**P**	**00 56 33.1**	**-0.2**
H17A				IAmb	IAmb	00 56 50.0	
	comp=Z,9.8nm,1.1s						
YHL	**Hebgen Lake**	**80.61**	**332**	P	**P**	**00 56 36.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**81.10**	**70**	P	**P**	**00 56 39.0**	**-0.6**
	comp=Z,3.1nm,0.6s,baz=266,slow=5.0,SNR=25						
TORD	**Torodi Ar. Bea**	**81.10**	**70**	P	**P**	**00 56 39.2**	**-0.4**
KCPM	**Cahto Peak**	**82.68**	**322**	P	**P**	**00 56 46.4**	**-1.1**
BHW	**Baring Head**	**88.46**	**223**	P	**P**	**00 57 15.2**	**-1.1**
CMWZ	**Cape Campbell**	**88.66**	**223**	P	**P**	**00 57 15.8**	**-1.4**
ASAR	**Alice Springs**	**123.92**	**208**	PKP	**PKPdf**	**01 03 22.6**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=135,slow=1.8,SNR=5.6						
WRA	**Warramunga Arr**	**127.01**	**210**	PKP	**PKPdf**	**01 03 28.3**	**-0.3**
	comp=Z,0.9nm,1.2s,baz=164,slow=1.7,SNR=14						
FITZ	**Fitzroy Crossi**	**132.08**	**202**	PKP	**PKPdf**	**01 03 38.7**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=180,slow=8.1,SNR=2.1						
ZALV	**Zalesovo Beam**	**147.97**	**27**	PKPbc	**PKPdf**	**01 04 07.2**	**+1.5**
	comp=Z,3.4nm,0.8s,baz=302,slow=3.4,SNR=15						
ZALV	**Zalesovo Beam**	**147.97**	**27**		**PKPdf**	**01 04 06.7**	**+1.0**
MKAR	**Makanchi Array**	**151.36**	**40**	PKPbc	**PKPbc**	**01 04 17.9**	**+0.5**
	comp=Z,3.6nm,0.7s,baz=319,slow=2.3,SNR=28						

*IDC **29** 01:02:04.9±2.0, 4°76S×154°03E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/33, mbtmp3.9/5, ML4.1/1, Error ellipse: s-maj=48.9km s-min=32.3km az=111.0*
*NEIC **29** 01:02:22.5±1.4, 4°6S±0°1×152°9E±0°1, h105km±7km, mb4.2/5, Error ellipse: s-maj=20.1km s-min=13.1km az=56.0*

ISC 29 01:02:19.1±1.3, 4°66S±0°10×153°3E±0°1, h85km, n13, σ1°65/15, mb4.0/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.23**	**292**	Pn	**Pn**	**01 02 41.2**	**0.0**
RABL				Sn	**Sn**	**01 02 55.5**	**-2.4**
KRVT	**Keravat (AS076**	**1.32**	**285**	Pn	**Pn**	**01 02 42.3**	**0.0**
	69nm,0.3s,baz=116,slow=1.0,SNR=48						
KRVT				Sn	**Sn**	**01 03 02.8**	**+2.9**
	135nm,0.3s,baz=178,slow=23,SNR=16						
PMG	**Port Moresby**	**7.71**	**232**	Sn	**Sn**	**01 05 37.1**	**+2.6**
	3.0nm,0.3s,baz=165,slow=20,SNR=4.7						
PMG	**Port Moresby**	**7.71**	**232**	Pn	**Pn**	**01 04 07.2**	**-1.5**
WRAB	**Tennant Creek**	**23.90**	**229**	P	**P**	**01 07 25.6**	**+0.4**
WRAB				IAmb	IAmb	01 07 26.8	
	comp=Z,5.9nm,0.7s						
WB2	**Warramunga Arr**	**23.91**	**229**	P	**P**	**01 07 25.7**	**+0.5**
WRA	**Warramunga Arr**	**23.92**	**229**	P	**P**	**01 07 25.8**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=53,slow=9.7,SNR=65						
ASAR	**Alice Springs**	**26.60**	**223**	P	**P**	**01 07 49.6**	**0.0**
	comp=Z,0.5nm,0.6s,baz=56,slow=8.8,SNR=11						
FITZ	**Fitzroy Crossi**	**30.17**	**241**	P	**P**	**01 08 20.4**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=67,slow=10.0,SNR=11						
MK31	**Makanchi Array**	**80.55**	**319**	P	**P**	**01 14 21.1**	**-1.1**
MK31				IAmb	IAmb	01 16 07.9	
	comp=Z,6.2nm,1.7s						
MKAR	**Makanchi Array**	**80.55**	**319**	P	**P**	**01 14 22.0**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=94,slow=7.1,SNR=7.1						
DOT	**Dot Lake**	**82.39**	**24**	P	**P**	**01 14 33.7**	**+2.2**
DOT				IAmb	IAmb	01 14 36.3	
	comp=Z,6.3nm,1.2s						
TORD	**Torodi Ar. Bea**	**150.74**	**289**	PKPbc	**PKiKP**	**01 22 01.9**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=76,slow=2.1,SNR=12						

*JMA **29** 01:03:49.5±0.1, 23°76N×122°05E, h28km±4km, M3.1*
*TAP **29** 01:03:50.3, 23°79N×122°06E, h39km, ML3.6, B*

ISC 29 01:03:49.4±1.0, 23°76N±0°02×122°07E±0°02, h28km±10km, n120, σ0°56/172, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.48**	**297**	*eP*	**Pn**	**01 04 00.1**	**-0.4**
	baz=288						
TWD	**Chiawan**	**0.54**	**306**	P	**Pb**	**01 04 00.6**	**+0.1**
	baz=296						
TWD				*eS*	**Sb**	**01 04 08.1**	**+0.2**
	baz=296						
ESL	**Shilin**	**0.59**	**276**	P	**Pb**	**01 04 01.3**	**0.0**
	baz=264						
ESL				*eS*	**Sb**	**01 04 09.9**	**+0.6**
	baz=264						
EGFH	**Guangfu**	**0.60**	**262**	*eP*	**Pb**	**01 04 01.7**	**+0.3**
	baz=251						
EGFH				S	**Sn**	**01 04 10.7**	**-0.3**
	baz=251						
NACB	**Ninganchiao**	**0.60**	**313**	*eP*	**Pb**	**01 04 01.3**	**-0.2**
	baz=306						
NACB				*eS*	**Sb**	**01 04 09.2**	**-0.4**
	baz=306						
HGSD	**Ruisui**	**0.65**	**246**	*eP*	**Pb**	**01 04 02.4**	**+0.1**
	baz=243						
HGSD				*eS*	**Sb**	**01 04 11.6**	**+0.5**
	baz=243						
ETLH	**Xiulin Townshi**	**0.70**	**310**	*eP*	**Pb**	**01 04 02.9**	**-0.3**
	baz=308						
ETLH				*eS*	**Sb**	**01 04 12.1**	**-0.5**
	baz=308						
ENAH	**Nanao**	**0.73**	**341**	P	**Pn**	**01 04 03.8**	**-0.1**
	baz=332						
ENA	**Nanau**	**0.73**	**336**	*eP*	**Pb**	**01 04 03.6**	**-0.1**
	baz=324						
ENA				*eS*	**Sb**	**01 04 13.7**	**+0.3**
	baz=324						
EHY	**Hungye**	**0.73**	**250**	P	**Pb**	**01 04 03.8**	**+0.1**
	baz=259						
EHY				S	**Sb**	**01 04 13.9**	**+0.5**
	baz=259						
YULB	**Yu-li**	**0.80**	**243**	P	**Pb**	**01 04 04.9**	**+0.1**
	baz=253						
YULB				*eS*	**Sb**	**01 04 15.4**	**+0.1**
	baz=253						
EYUL	**Yuli**	**0.80**	**240**	*eP*	**Pn**	**01 04 05.2**

WHYT	**Xinyi Township**	**1.12 267**	*eP*	**Pb**	**01 04 10.1**	**-0.1**
	baz=256					
WHYT			*eS*	**Sn**	**01 04 24.1**	**+0.2**
	baz=256					
ELDTW	**Lidau**	**1.12 240**	P	**Pn**	**01 04 09.5**	**0.0**
	baz=237					
ELDTW			*eS*	**Sn**	**01 04 23.1**	**-1.0**
	baz=237					
NSK	**Sanguang**	**1.12 325**	*eP*	**Pn**	**01 04 09.5**	**+0.1**
	baz=313					
NSK			S	**Sn**	**01 04 23.3**	**-0.8**
	baz=313					
TYC	**Yuchr**	**1.12 278**	*eP*	**Pn**	**01 04 09.8**	**+0.4**
	baz=276					
NWLT	**Wulai**	**1.14 333**	*eP*	**Pn**	**01 04 09.8**	**+0.2**
	baz=321					
NWLT			S	**Sn**	**01 04 24.0**	**-0.4**
	baz=321					
WHP	**Taichung City**	**1.15 297**	*eP*	**Pb**	**01 04 10.7**	**-0.1**
	baz=295					
ALS	**Alishan**	**1.19 258**	*eP*	**Pb**	**01 04 11.5**	**-0.1**
	baz=264					
ALS			*eS*	**Sn**	**01 04 26.1**	**+0.2**
	baz=264					
LONT	**Longtian**	**1.21 226**	*eP*	**Pn**	**01 04 10.6**	**0.0**
	baz=235					
LONT			*eS*	**Sn**	**01 04 25.7**	**-0.4**
	baz=235					
LDUT	**Ludao**	**1.21 207**	*eP*	**Pn**	**01 04 10.0**	**-0.6**
	baz=206					
TIPB	**Shuangxi**	**1.23 349**	*eP*	**Pb**	**01 04 11.6**	**-0.5**
	baz=1.0					
TIPB			*eS*	**Sn**	**01 04 26.6**	**0.0**
	baz=1.0					
WJS	**Zhushan**	**1.23 273**	*eP*	**Pb**	**01 04 11.8**	**-0.3**
	baz=272					
TWB1	**Santiao Chiao**	**1.25 356**	P	**Pn**	**01 04 11.3**	**+0.3**
	baz=357					
WNT	**Mingjian**	**1.28 276**	*eP*	**Pb**	**01 04 13.0**	**+0.2**
	baz=274					
CHN5	**Tsauling**	**1.29 263**	*eP*	**Pn**	**01 04 13.2**	**+0.1**
	baz=261					
TWA	**Mucha**	**1.30 340**	*eP*	**Pb**	**01 04 12.9**	**-0.3**
	baz=340					
NHDH	**Xindian Distri**	**1.30 337**	*eS*	**Sn**	**01 04 28.5**	**+0.2**
	baz=325					
TWGBT	**Beinan**	**1.31 225**	*eP*	**Pn**	**01 04 11.7**	**-0.2**
	baz=233					
NSTT	**Nanjuang**	**1.31 312**	*eP*	**Pb**	**01 04 13.3**	**-0.1**
	baz=310					
NSTT			*eS*	**Sn**	**01 04 29.0**	**+0.5**
	baz=310					
TWG	**Pinlang**	**1.31 225**	*eP*	**Pn**	**01 04 12.1**	**+0.1**
	baz=233					
TTN	**Taitung**	**1.31 221**	*eS*	**Sn**	**01 04 29.2**	**+0.6**
	baz=211					
TATO	**Taipei**	**1.32 336**	*eP*	**Pb**	**01 04 13.1**	**-0.6**
	baz=336					
TATO			S	**Sn**	**01 04 28.5**	**-0.4**
	baz=336					
TWQ1	**Liyutan**	**1.33 297**	*eP*	**Pb**	**01 04 13.7**	**0.0**
	baz=296					
NWF	**Wu-fen Shan**	**1.33 349**	*eP*	**Pb**	**01 04 13.2**	**-0.7**
	baz=4.0					
WFSB	**Wu-fen Shan**	**1.33 349**	*eP*	**Pn**	**01 04 13.1**	**+0.8**
	baz=4.0					
TCU	**Taichung**	**1.34 287**	*eP*	**Pb**	**01 04 14.3**	**+0.4**
	baz=286					
STYT	**Tauyuan**	**1.35 244**	*eP*	**Pn**	**01 04 13.4**	**+0.9**
	baz=235					
STYT			*eS*	**Sn**	**01 04 30.1**	**+0.6**
	baz=235					
NSY	**Sanyi**	**1.37 299**	*eP*	**Pb**	**01 04 14.4**	**0.0**
	baz=298					
WGK	**Gukeng**	**1.39 267**	*eP*	**Pb**	**01 04 14.5**	**-0.2**
	baz=266					
TPUB	**Ta-pu**	**1.40 251**	*eP*	**Pb**	**01 04 14.9**	**-0.1**
	baz=250					
NMLH	**Miaoli**	**1.41 304**	*eP*	**Pb**	**01 04 15.7**	**+0.7**
	baz=303					
WDLH	**Douliu**	**1.41 268**	*eP*	**Pb**	**01 04 14.8**	**-0.3**
	baz=266					
WCHH	**Zhanghua**	**1.42 283**	*eP*	**Pb**	**01 04 15.3**	**0.0**
	baz=282					
WTP	**Ta-pu**	**1.43 249**	*eP*	**Pb**	**01 04 15.4**	**-0.1**
	baz=247					
WDJ	**Dajia District**	**1.44 294**	*eP*	**Pn**	**01 04 14.5**	**+0.9**
	baz=293					
NCUH	**Zhongli**	**1.45 326**	*eP*	**Pb**	**01 04 15.0**	**-0.9**
	baz=326					
NCU	**National Centr**	**1.45 326**	*eS*	**Sb**	**01 04 33.0**	**-0.9**
	baz=325					
YM01	**YM01**	**1.46 342**	*eP*	**Pb**	**01 04 15.2**	**-0.8**
	baz=342					
YM10	**YM10**	**1.47 342**	*eP*	**Pn**	**01 04 14.4**	**+0.3**
	baz=327					
YM04	**YM04**	**1.47 341**	*eP*	**Pn**	**01 04 15.0**	**+0.8**
	baz=341					
YM11	**YM11**	**1.47 342**	*eP*	**Pn**	**01 04 14.8**	**+0.6**
	baz=342					
YM05	**YM05**	**1.48 342**	*eP*	**Pn**	**01 04 14.9**	**+0.7**
	baz=327					
YM08	**YM08**	**1.49 343**	*eP*	**Pn**	**01 04 14.7**	**+0.3**
	baz=356					
YM08			*eS*	**Sn**	**01 04 32.7**	**-0.3**
	baz=356					
SLGT	**Liugui**	**1.52 240**	*eP*	**Pb**	**01 04 16.4**	**-0.5**
	baz=238					
SGST	**Jiashian**	**1.53 244**	*eP*	**Pb**	**01 04 16.8**	**-0.3**
	baz=234					
CHN1	**Nanshi**	**1.53 248**	*eP*	**Pb**	**01 04 17.0**	**-0.1**
	baz=247					
CHY	**Chiayi**	**1.54 261**	*eP*	**Pb**	**01 04 16.6**	**-0.6**
	baz=259					
TWK	**Hsinying**	**1.54 252**	*eP*	**Pb**	**01 04 17.1**	**-0.2**
	baz=250					
SNST	**Tainan City**	**1.54 250**	*eP*	**Pb**	**01 04 17.6**	**+0.2**
	baz=248					
WTK	**Tuku**	**1.55 268**	*eP*	**Pb**	**01 04 17.1**	**-0.3**
	baz=266					
ECL	**Taimali**	**1.55 222**	*eP*	**Pn**	**01 04 14.7**	**-0.5**
	baz=229					
HATJ	**Hateruma jima**	**1.61 79**	P	**Pn**	**01 04 16.8**	**+0.7**
HATJ			S	**Sn**	**01 04 36.2**	**+0.3**
IRIF	**Iriomote-Funau**	**1.62 69**	P	**Pn**	**01 04 17.1**	**+0.9**
IRIF			S	**Sn**	**01 04 37.0**	**+0.9**
SSD	**Sandimen**	**1.67 233**	*eP*	**Pb**	**01 04 19.0**	**-0.5**
	baz=224					
TSMG	**Majia**	**1.68 232**	*eP*	**Pb**	**01 04 19.5**	**-0.2**
	baz=223					
MASBT	**Mashibuluo**	**1.75 230**	*eP*	**Pn**	**01 04 18.8**	**+0.9**
	baz=221					
CHN8	**Yiju**	**1.76 257**	*eP*	**Pn**	**01 04 19.0**	**+0.9**
	baz=255					
EAST	**Anshuo**	**1.77 220**	*eP*	**Pn**	**01 04 18.3**	**0.0**
	baz=218					
LAY	**Lan-yu**	**1.78 196**	*eP*	**Pn**	**01 04 18.1**	**-0.3**
	baz=186					
JKRS	**Kuro-shima**	**1.83 75**	P	**Pn**	**01 04 20.2**	**+1.1**
JKRS			S	**Sn**	**01 04 42.4**	**+1.0**
PCYT	**Pengchaiyu**	**1.86 360**	*eP*	**Pn**	**01 04 19.8**	**+0.3**
	baz=1.0					
SSPT	**Xinbi**	**1.88 228**	*eP*	**Pb**	**01 04 22.2**	**-0.9**
	baz=222					
SCZT	**Fangliau**	**1.92 224**	*eP*	**Pn**	**01 04 21.7**	**+1.4**
	baz=220					
SLIU	**Shizi**	**1.93 218**	*eP*	**Pn**	**01 04 20.2**	**-0.3**
	baz=216					
JIJ	**Ishigaki jima**	**1.98 72**	P	**Pn**	**01 04 21.6**	**+0.4**
JIJ			S	**Sn**	**01 04 44.6**	**-0.6**
JISG	**Ishigakijimahi**	**2.20 68**	P	**Pn**	**01 04 23.9**	**-0.3**
JISG			S	**Sn**	**01 04 49.5**	**-1.1**
WDGT	**Dungji**	**2.27 258**	*eP*	**Pn**	**01 04 26.4**	**+1.2**
	baz=256					
WDGT			*eS*	**Sn**	**01 04 52.3**	**+0.1**
	baz=256					
PHUB	**P'eng-hu**	**2.31 264**	*eP*	**Pn**	**01 04 26.6**	**+0.9**
	baz=250					
PHUB			*eS*	**Sn**	**01 04 53.5**	**+0.4**
	baz=250					
PNG	**Penghu**	**2.32 266**	*eP*	**Pn**	**01 04 26.8**	**+1.0**
	baz=264					
PNG			*eS*	**Sn**	**01 04 53.9**	**+0.5**
	baz=264					
VCHM	**Qimei**	**2.49 258**	*eP*	**Pn**	**01 04 29.1**	**+1.0**
	baz=256					
VCHM			*eS*	**Sn**	**01 04 57.5**	**-0.1**
	baz=256					
JTJ	**Tarama**	**2.56 69**	P	**Pn**	**01 04 29.6**	**+0.6**
JTJ			S	**Sn**	**01 04 59.4**	**+0.1**
VWUC	**VWUC**	**2.69 298**	*eP*	**Pn**	**01 04 30.9**	**0.0**
	baz=297					
PTTC	**Pingtan**	**2.72 310**	*eP*	**Pn**	**01 04 31.8**	**+0.5**
	baz=310					
PTMZ	**Houxiangcun**	**2.98 296**	*eP*	**Pn**	**01 04 34.8**	**-0.1**
	baz=295					
JIRB	**Irabujima**	**3.02 69**	P	**Pn**	**01 04 35.9**	**+0.4**
JIRB			S	**Sn**	**01 05 10.7**	**-0.1**
MATB	**Ma-tsu**	**3.07 321**	*eP*	**Pn**	**01 04 36.7**	**+0.6**
	baz=321					
JIKM	**Ikemajima**	**3.12 68**	P	**Pn**	**01 04 37.6**	**+0.8**
JIKM			S	**Sn**	**01 05 12.6**	**-0.6**
KNM	**Kinmen**	**3.39 282**	*eP*	**Pn**	**01 04 43.0**	**+2.4**
	baz=280					
KNMB	**Chin-men Tao**	**3.44 283**	*eP*	**Pn**	**01 04 41.3**	**+0.1**
	baz=282					
LYJJ	**Jianjiangzhen**	**3.48 323**	*eP*	**Pn**	**01 04 43.1**	**+1.3**
	baz=323					
XPSS	**Dashiqiu**	**3.59 332**	*eP*	**Pn**	**01 04 42.8**	**-0.4**
	baz=332					
MHZQ	**Yeshan**	**3.62 311**	*eP*	**Pn**	**01 04 44.9**	**+1.2**
	baz=311					
AXDP	**Jialang**	**3.91 288**	*eP*	**Pn**	**01 04 48.1**	**+0.4**
	baz=287					
ZPLA	**Ao Xicun**	**3.96 273**	*eP*	**Pn**	**01 04 48.9**	**+0.5**
	baz=283					

IDC ***29*** *01:22:21.9±1.0, 5°.71N×61°.27E, h0km, mb3.9/15, mb1 4.0/15, mb1mx3.8/46, mbtmp3.9/15, MS3.5/24, Ms1 3.5/24, ms1mx3.4/41, Error ellipse: s-maj=28.7km s-min=18.2km az=48.0*

NEIC ***29*** *01:22:23.0±1.1, 5°.68N±0°.05×61°.2E±0°.1, h10km±1km, mb4.2/14, Error ellipse: s-maj=22.0km s-min=9.4km az=97.0*

ISC 29 01:22:23.2±0.8, 5°.7N±0°.1×61°.2E±0°.1, h10km, n44, σ0°73/30, mb4.0/20, MS3.5/21, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**17.60**	**352**	LR	LR		01 31 45.1	
	comp=Z,187nm,21.1s,baz=186,slow=32							
ATD	**Arta Tunnel**	**19.07**	**289**	LR	LR		01 33 18.7	
	comp=Z,60nm,19.2s,baz=3.5,slow=34							
PALK	**Pallekele**	**19.40**	**84**	LR	LR		01 32 49.0	
	comp=Z,168nm,18.6s,baz=14,slow=32							
FURI	**Furi**	**22.60**	**279**	P	**P**		**01 27 24.2**	**-0.5**
RAYN	**Ar Rayn**	**23.30**	**321**	P	**P**		**01 27 32.0**	**+0.4**
RAYN				IAmb	IAmb		01 27 39.7	
	comp=Z,4.9nm,0.8s							
OPO	**Ambohidratompo**	**27.83**	**210**	LR	LR		01 36 21.1	
	comp=Z,139nm,20.6s,baz=180,slow=30							
KBL	**Kabul**	**29.57**	**13**	P	**P**		**01 28 28.3**	**-0.3**
KBL				IAmb	IAmb		01 29 02.8	
	comp=Z,8.3nm,1.6s							
MBAR	**Mbarara**	**31.10**	**259**	P	**P**		**01 28 41.7**	**-0.7**
MBAR				IAmb	IAmb		01 29 01.8	
	comp=Z,2.3nm,0.8s							
GEYT	**Alibeck**	**32.19**	**355**	LR	LR		01 41 56.5	
	comp=Z,47nm,20.7s,baz=285,slow=36							
DRK	**Karamyk**	**34.93**	**14**	P	**P**		**01 29 15.0**	**-0.7**
AAK	**Ala-Archa**	**38.59**	**16**	P	**P**		**01 29 48.0**	**+1.3**
	comp=Z,2.4nm,0.7s,baz=167,slow=5.3,SNR=5.6							
CMAR	**Chiang Mai Arr**	**38.88**	**68**	P	**P**		**01 29 50.6**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=256,slow=8.6,SNR=6.8							
CMAR				LR	LR		01 43 58.6	
	comp=Z,45nm,20.8s,baz=324,slow=33							
CHTO	**Chiang Mai**	**38.97**	**67**	P	**P**		**01 29 50.3**	**+0.3**
CHTO				IAmb	IAmb		01 29 59.0	
	comp=Z,13nm,1.6s							
KBZ	**Khabaz**	**41.16**	**340**	P	**P**		**01 30 09.1**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=169,slow=9.6,SNR=4.3							
KBZ				LR	LR		01 48 13.3	
	comp=Z,55nm,18.3s,baz=172,slow=38							
BRTR	**Keskin Array B**	**42.00**	**328**	P	**P**		**01 30 16.1**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=270,slow=33,SNR=3.7							
BRTR				LR	LR		01 48 05.0	
	comp=Z,45nm,19.8s,baz=132,slow=37							
ABKAR	**Akbulak array**	**43.40**	**359**	P	**P**		**01 30 26.3**	**+0.4**
AKTO	**Aktyubinsk**	**44.65**	**357**	P	**P**		**01 30 35.4**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=172,slow=6.2,SNR=4.0							
MK31	**Makanchi Array**	**44.76**	**21**	P	**P**		**01 30 36.8**	**-0.2**
MK31				IAmb	IAmb		01 30 49.8	
	comp=Z,2.0nm,1.1s							
MKAR	**Makanchi Array**	**44.76**	**21**	P	**P**		**01 30 36.8**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=205,slow=9.4,SNR=2.2							
MKAR				LR	LR		01 50 13.9	
	comp=Z,56nm,20.9s,baz=218,slow=37							
BOSA	**Boshof**	**48.64**	**223**	LR	LR		01 49 43.5	
	comp=Z,134nm,19.0s,baz=21,slow=34							
ARU	**Arti**	**50.61**	**358**	P	**P**		**01 31 22.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=264,slow=18,SNR=3.7							
ZAA0	**Zalesovo Array**	**51.76**	**18**	P	**P**		**01 31 30.5**	**-0.4**
ZALV	**Zalesovo Beam**	**51.76**	**18**	P	**P**		**01 31 30.2**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=188,slow=9.0,SNR=4.2							
ZALV				LR	LR		01 54 50.9	
	comp=Z,59nm,18.5s,baz=228,slow=38							
AKASG	**Malin Array Be**	**52.20**	**335**	LR	LR		01 55 38.3	
	comp=Z,27nm,21.0s,baz=295,slow=38							
SONM	**Songino Array**	**56.91**	**35**	P	**P**		**01 32 08.5**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=223,slow=5.9,SNR=4.4							
SONM				LR	LR		01 57 23.9	
	comp=Z,89nm,18.2s,baz=83,slow=37							
TORD	**Torodi Ar. Bea**	**59.09**	**282**	P	**P**		**01 32 25.0**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=105,slow=5.4,SNR=4.5							
TORD				LR	LR		01 56 48.9	
	comp=Z,26nm,19.9s,baz=335,slow=35							
DAVOX	**Davos/Dischmat**	**60.07**	**322**	LR	LR		01 58 44.7	
	comp=Z,50nm,18.8s,baz=86,slow=36							
FINES	**FINESS Array B**	**61.46**	**342**	P	**P**		**01 32 38.7**	**-1.1**
	comp=Z,1.4nm,0.8s,baz=117,slow=4.8,SNR=1.8							
HFS	**Hagfors**	**65.05**	**336**	LR	LR		02 03 07.5	
	comp=Z,35nm,18.1s,baz=252,slow=38							
DBIC	**Dimbokro**	**65.68**	**275**	LR	LR		02 00 43.2	
	comp=Z,44nm,20.6s,baz=76,slow=35							
ARCES	**ARCESS Array B**	**67.87**	**347**	LR	LR		02 03 49.7	
	comp=Z,26nm,20.0s,baz=270,slow=37							
KSRS	**Korea Array**	**68.07**	**52**	P	**P**		**01 33 22.0**	**-1.4**
	comp=Z,0.9nm,0.4s,baz=258,slow=4.6,SNR=2.4							
KSRS				LR	LR		02 03 32.3	
	comp=Z,33nm,20.6s,baz=270,slow=36							
MAW	**Mawson**	**73.16**	**179**	LR	LR		01 58 01.4	
	comp=Z,72nm,20.2s,baz=60,slow=29							
MJAR	**Matsushiro Arr**	**76.15**	**54**	LR	LR		02 07 45.7	
	comp=Z,7.7nm,20.5s,baz=55,slow=36							
WRA	**Warramunga Arr**	**76.19**	**112**	P	**P**		**01 34 12.3**	**-0.1**
	comp=Z,2.9nm,0.9s,baz=288,slow=5.1,SNR=16							
WB2	**Warramunga Arr**	**76.21**	**112**	P	**P**		**01 34 12.6**	**+0.1**
WB0	**Warramunga Arr**	**76.21**	**112**	P	**P**		**01 34 12.6**	**+0.1**
ASAR	**Alice Springs**	**76.56**	**116**	P	**P**		**01 34 14.6**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=284,slow=5.5,SNR=20							
ASAR				LR	LR		02 07 22.1	
	comp=Z,36nm,18.5s,baz=162,slow=35							
ASAR	**Alice Springs**	**76.56**	**116**	P	**P**		**01 34 14.2**	**-0.3**
AS31	**Alice Springs**	**76.56**	**116**	P	**P**		**01 34 14.1**	**-0.3**
STKA	**Stephens Creek**	**84.85**	**123**	P	**P**		**01 34 59.0**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=326,slow=12,SNR=3.0							
STKA				LR	LR		02 08 16.8	
	comp=Z,52nm,20.2s,baz=206,slow=32							
PETK	**Petropavlovsk-**	**89.34**	**37**	LR	LR		02 18 17.8	
	comp=Z,47nm,18.5s,baz=332,slow=38							
PDAR	**Pinedale Array**	**131.02**	**351**	PKP		**PKPdf**	**01 41 35.8**	**-0.2**
	comp=Z,0.1nm,0.5s,baz=20,slow=2.9,SNR=1.9							
TXAR	**Tajitas Array**	**142.25**	**338**	PKhKP		PKPpre	01 41 52.5	
	comp=Z,0.3nm,0.9s,baz=98,slow=3.8,SNR=3.5							
TXAR				PKP		**PKPdf**	**01 41 58.0**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=45,slow=2.5,SNR=4.5							

NEIC ***29*** *01:51:53.9±1.7, 64°.42N±0°.03×17°.3W±0°.1, h8km±4km, mb4.5/36, Error ellipse: s-maj=8.7km s-min=3.7km az=77.0*

REY ***29*** *01:51:55.0, 64°.69N×17°.46W, h7km*

MOS ***29*** *01:51:55.2±2.3, 64°.64N×17°.48W, h10km, mb4.5/14, Error ellipse: s-maj=13.9km s-min=8.5km az=103.4*

IDC ***29*** *01:51:56.1±0.6, 64°.63N×17°.62W, h0km, mb3.8/14, mb1 4.1/17, mb1mx3.9/39, mbtmp3.9/17, ML3.3/3, MS3.2/7, Ms1 3.2/7, ms1mx2.8/49, Error ellipse: s-maj=21.1km s-min=9.4km az=12.0*

ISC 29 01:51:55.2±1.0, 64°.68N±0°.02×17°.42W±0°.02, h5km±6km, n169, σ2°24/168, mb4.3/51, MS3.2/6, 4C-8D, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.12**	**12**	P		**Pg**	**01 51 57.6**	**-0.1**
	baz=20							
IVON	**Vonarskard**	**0.14**	**269**	P		**Pg**	**01 51 57.6**	**-0.5**
	baz=264							
IURH	**Urdarhals**	**0.19**	**39**	P		**Pg**	**01 51 58.9**	**-0.1**
	baz=44							
IHAM	**Hamarinn**	**0.26**	**221**	P		**Pg**	**01 52 00.0**	**-0.3**
	baz=218							
IHAM				S		**Sg**	**01 52 03.8**	**+0.1**
	baz=218							
IGRF	**Grimsfjall**	**0.28**	**166**	P		**Pg**	**01 52 01.1**	**+0.5**
	baz=164							
IGRF				S		**Sg**	**01 52 05.0**	**+0.6**
	baz=164							
IHUS	**Husbondi**	**0.40**	**195**	P		**Pg**	**01 52 02.2**	**-0.6**
	baz=193							
THOR	**Thorvaldshraun**	**0.41**	**51**	P		**Pg**	**01 52 02.6**	**-0.6**
	baz=53							
THOR				S		**Sg**	**01 52 08.8**	**+0.3**
	baz=53							
IVOT	**Vottur**	**0.42**	**166**	P		**Pg**	**01 52 03.0**	**-0.3**
	baz=164							
ISKR	**Skrokkalda**	**0.43**	**255**	P		**Pg**	**01 52 02.5**	**-1.0**
	baz=253							
IKRE	**Kreppuhraun**	**0.46**	**76**	P		**Pg**	**01 52 03.2**	**-0.8**
	baz=78							
IKRE				S		**Sg**	**01 52 10.3**	**+0.2**
	baz=78							
IASK	**Askja**	**0.50**	**41**	P		**Pg**	**01 52 04.0**	**-0.9**
	baz=43							
IJOK	**Jokulheimar**	**0.50**	**224**	P		**Pg**	**01 52 04.3**	**-0.6**
	baz=222							
IJOK				S		**Sg**	**01 52 11.5**	**+0.1**
	baz=222							
IMKO	**Mokollar**	**0.55**	**56**	P		**Pg**	**01 52 05.0**	**-0.8**
	baz=58							
IKSK	**Karasker**	**0.66**	**141**	P		**Pg**	**01 52 06.0**	**-1.9**
	baz=141							
ISVA	**Svartarkot**	**0.67**	**6**	P		**Pg**	**01 52 06.8**	**-1.2**
	baz=7.3							
IVSH	**V-Sauoahnukur**	**0.74**	**79**	P		**Pg**	**01 52 07.9**	**-1.5**
	baz=80							
IKAL	**Kalfafell**	**0.74**	**189**	P		**Pg**	**01 52 07.9**	**-1.5**
	baz=188							
IVAT	**Vatnsfell**	**0.81**	**234**	P		**Pg**	**01 52 09.6**	**-1.2**
	baz=232							
IADA	**Aoalbol**	**0.86**	**66**	P		**Pg**	**01 52 09.9**	**-1.8**
	baz=67							
IFAG	**Fagurholsmyri**	**0.87**	**157**	P		**Pg**	**01 52 10.3**	**-1.5**
	baz=156							
IMEL	**Melhnausar**	**0.95**	**19**	P		**Pg**	**01 52 11.5**	**-2.0**
	baz=20							
IREN	**Reynihlio**	**1.00**	**12**	P		**Pg**	**01 52 12.3**	**-2.1**
	baz=13							
IKVO	**Krokottuvotn**	**1.07**	**12**	P		**Pg**	**01 52 13.3**	**-2.3**
	baz=13							
ISNB	**Snabyli**	**1.08**	**210**	P		**Pg**	**01 52 13.9**	**-2.0**
	baz=209							
IGRS	**Grimsstaoir**	**1.11**	**29**	P		**Pg**	**01 52 14.2**	**-2.2**
	baz=30							
IRJU	**Rjupnafell**	**1.20**	**208**	P		**Pg**	**01 52 15.8**	**-2.3**
	baz=207							
ISKI	**Skildingahlsh**	**1.21**	**8**	P		**Pg**	**01 52 15.8**	**-2.6**
	baz=8.4							
IGHA	**Grjothals**	**1.22**	**15**	P		**Pg**	**01 52 15.6**	**-2.8**
	baz=16							
IGRA	**Granastaoir**	**1.25**	**357**	P		**Pn**	**01 52 16.1**	**-3.1**
	baz=358							
IGYG	**Gygjarholskot**	**1.27**	**253**	P		**Pn**	**01 52 17.1**	**-2.5**
	baz=252							
IDIM	**Dimmadalss**	**1.31**	**9**	P		**Pn**	**01 52 17.2**	**-2.9**
	baz=9.5							
IHLA	**Hella**	**1.34**	**343**	P		**Pn**	**01 52 17.9**	**-2.5**
	baz=343							
BORG	**Borgarnes**	**1.68**	**274**	Pg		**Pn**	**01 52 23.4**	**-1.7**
	22nm,0.3s,baz=98,slow=10,SNR=54							
BORG				Lg		Lg	01 52 48.3	
	23nm,0.3s,baz=224,slow=22,SNR=14							
BORG	**Borgarnes**	**1.68**	**274**	P		**Pn**	**01 52 23.9**	**-1.2**
BORG							01 52 45.9	
BORG	**Borgarnes**	**1.68**	**274**	Pn		**Pn**	**01 52 23.9**	**-1.2**
BORG				Sn		**Sn**	**01 52 45.9**	**-1.0**
SCO	**Scoresbysund**	**6.08**	**346**	*e*		**Pn**	**01 53 23.6**	**-2.0**
	baz=156,slow=11							
SCO				*i* P		**Pn**	**01 53 27.0**	**+1.4**
SCO				IAML			01 54 10.8	
	comp=Z,1.1nm,0.5s							
SCO				*i* S		**Sn**	**01 54 38.3**	**+2.9**
JMIC	**Jan Mayen**	**7.17**	**24**	LR		LR	01 55 50.7	
	comp=Z,147nm,19.7s,baz=34,slow=32							
ANGG	**Ammassalik, Gr**	**8.56**	**285**	Pn		**Pn**	**01 54 00.1**	**+0.7**
ICESG	**Greenland Ices**	**9.76**	**307**	*i* P		Pn	01 54 22.0	+5.8
SUMG	**Summit**	**10.95**	**325**	P		**Pn**	**01 54 32.6**	**0.0**
SUMG	**Summit**	**10.95**	**325**	Pn		**Pn**	**01 54 32.6**	**0.0**
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn		**Pn**	**01 54 44.5**	**+1.3**
	baz=322,slow=13,SNR=10.0							
DAG	**Danmarks Havn**	**12.16**	**359**	*i* P		Pn	01 54 53.6	+4.8
DAG	**Danmarks Havn**	**12.16**	**359**	*i* P		Pn	01 54 53.6	+4.8
DAG	**Danmarks Havn**	**12.16**	**359**	*i* P		Pn	01 54 53.6	+4.9
DSB	**Dublin**	**12.77**	**149**	Pn		Pn	01 54 51.4	-5.8
NC204	**NORSAR Array S**	**13.20**	**92**	Pn		**Pn**	**01 54 59.8**	**-3.2**
NBO00	**NORSAR Array S**	**13.32**	**93**	Pn		**Pn**	**01 55 00.5**	**-4.1**
NC303	**NORSAR Array S**	**13.48**	**92**	Pn		**Pn**	**01 55 03.4**	**-3.5**
NOA	**NORSAR Array B**	**13.50**	**92**	LR		LR	01 59 44.8	
	comp=Z,49nm,18.5s,baz=285,slow=34							
SFJD	**Kangerlussuaq**	**13.69**	**295**	LR		LR	02 00 10.3	
	comp=Z,92nm,21.0s,baz=84,slow=36							
HFS	**Hagfors**	**15.01**	**93**	Pn		**Pn**	**01 55

PSZ	Piszkesteto	26.09	112	P		P	01 57 26.6	-2.9
PSZ	Piszkesteto	26.09	112	P		P	01 57 26.6	-2.9
ESDC	Sonseca Array	26.25	156	P		P	01 57 33.0	+2.0
	comp=Z,2.0nm,0.9s,baz=343,slow=9.2,SNR=7.9							
UZH	Uzhgorod	26.49	108	*eP*		P	01 57 30.9	-2.1
AKASG	Malin Array Be	27.81	98	P		P	01 57 47.2	+2.4
	comp=Z,0.3nm,0.4s,baz=315,slow=9.4,SNR=1.4							
AKBB	Malin Array Si	27.81	98⇑	*eP*		P	01 57 44.6	-0.2
AKBB				pmax	pmax			
	comp=Z,11nm,2.2s							
OBN	Obninsk	27.85	84⇓	*eP*		P	01 57 44.5	-0.6
OBN				*e*			01 58 32.0	
OBN				pmax	pmax			
	comp=Z,14nm,1.2s							
OBN				MLR	MLR			
	comp=Z,53nm,16.0s							
MOQ	Mont Orford	35.46	264	P		P	01 58 50.5	-1.6
ARU	Arti	36.05	66⇓	*eP*		P	01 58 55.8	-1.1
ARU				pmax	pmax			
	comp=Z,16nm,2.9s							
NRIK	Noril'sk	36.43	35⇓	*eP*		P	01 59 03.3	+3.2
NRIK				pmax	pmax			
	comp=Z,6.0nm,1.4s							
ANTO	Ankara	37.98	106	P		P	01 59 09.2	-4.4
ANTO	Ankara	37.98	106	P		P	01 59 09.2	-4.4
GOF	Gofitskoye	38.08	91⇑	*eP*		P	01 59 18.6	+4.3
BRTR	Keskin Array B	38.45	105	P		P	01 59 20.0	+2.3
	comp=Z,1.4nm,0.9s,baz=305,slow=37,SNR=4.5							
BRTR	Keskin Array B	38.45	105	P		P	01 59 20.0	+2.3
KIV	Kislovodsk	38.81	93	P		P	01 59 17.9	-2.7
KIV				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KIV	Kislovodsk	38.81	93	P		P	01 59 17.9	-2.7
KBZ	Khabaz	39.08	93	P		P	01 59 26.1	+3.4
	comp=Z,3.0nm,1.0s,baz=333,slow=6.3,SNR=4.6							
TOKA	Tokat	39.14	102	P		P	01 59 20.3	-3.0
TOKA				IAmb	IAmb		02 00 49.1	
	comp=Z,27nm,2.0s							
YKA	Yellowknife Ar	39.23	313	*ce*	P	P	01 59 28.2	+4.4
YKA				pmax	pmax			
	comp=Z,1.0nm,1.0s							
K50A	Casco	41.95	271	P		P	01 59 46.2	-0.3
ABKAR	Akbulak array	41.96	73	P		P	01 59 44.2	-2.3
TIXI	Tiksi	42.01	15⇑	*eP*		P	01 59 49.3	+2.7
TIXI	Tiksi	42.01	15	P		P	01 59 46.4	-0.3
TIXI				IAmb	IAmb		01 59 51.5	
	comp=Z,14nm,1.2s							
TOLK	Toolik Lake Re	42.75	336	P		P	01 59 52.6	-0.2
TOLK				IAmb	IAmb		01 59 57.6	
	comp=Z,12nm,1.1s							
GNI	Garni	42.80	94	LR		LR	02 17 33.3	
	comp=Z,29nm,21.0s,baz=3.5,slow=36							
BMAR	Burnt Mountain	42.90	333	P		P	01 59 54.6	+0.6
BRVK	Borovoye	43.10	62⇓	*eP*		P	01 59 58.0	+2.3
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.9s							
MCWV	Mont Chateau	43.32	266	P		P	01 59 56.2	-1.4
MCWV				IAmb	IAmb		01 59 58.5	
	comp=Z,20nm,1.6s							
IL18	Eielson Array	45.68	332	P		P	02 00 16.6	+0.4
IL31		45.69	332	P		P	02 00 16.6	+0.3
IL31				IAmb	IAmb		02 00 21.8	
	comp=Z,8.2nm,1.3s							
ILAR	Eielson Array	45.69	332	P		P	02 00 18.6	+2.3
	comp=Z,3.6nm,1.1s,baz=27,slow=5.9,SNR=16							
ILAR				PcP		PcP	02 01 55.5	+1.5
	comp=Z,0.2nm,0.9s,baz=12,slow=3.9,SNR=4.1							
ILAR	Eielson Array	45.69	332	P		P	02 00 15.8	-0.5
ILAR						PcP	02 01 55.2	+1.2
COLA	College	45.79	333⇓	*eP*		P	02 00 20.1	+3.1
COLA				pmax	pmax			
	comp=Z,7.0nm,1.2s							
COLA	College	45.79	333	P		P	02 00 18.6	+1.6
TCOL	CIGO, UAF Yank	45.79	333	P		P	02 00 18.4	+1.4
IMAR	Indian Mountai	45.86	337	P		P	02 00 21.0	+3.4
BCAR	Beaver Creek A	46.12	329	P		P	02 00 23.0	+3.3
ZALV	Zalesovo Beam	47.60	51	P		P	02 00 33.6	+2.2
	comp=Z,0.9nm,0.6s,baz=331,slow=8.5,SNR=5.2							
ZALV	Zalesovo Beam	47.60	51	*i* P		P	02 00 34.2	+2.8
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.6s							
ZALV	Zalesovo Beam	47.60	51	P		P	02 00 34.4	+3.0
KURK	Kurchatov	48.08	58⇓	*eP*		P	02 00 36.7	+1.6
KURK				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KURK	Kurchatov	48.08	58	P		P	02 00 33.5	-1.6
KURK				IAmb	IAmb		02 00 43.5	
	comp=Z,5.4nm,1.2s							
EGMT	Eagleton	48.90	297	P		P	02 00 41.2	-0.3
KK31	Karatay Array	51.24	70	P		P	02 00 58.1	-1.3
KK31				pmax	pmax			
	comp=Z,5.0nm,1.3s							
KK31	Karatay Array	51.24	70	P		P	02 00 58.0	-1.3
KK07	Karatay Array	51.25	70	P		P	02 00 58.4	-1.0
OXF	Oxford	51.76	271	P		P	02 01 02.2	-1.0
OXF				pmax	pmax			
	comp=Z,28nm,1.2s							
OXF	Oxford	51.76	271	P		P	02 01 02.2	-1.0
YUF	Upper Falls	51.94	295	P		P	02 01 03.5	-1.4
YHL	Hebgen Lake	52.09	296	P		P	02 01 03.5	-2.5
MK31	Makanchi Array	52.69	58	P		P	02 01 08.9	-1.2
MK31				pmax	pmax			
	comp=Z,6.0nm,1.6s							
MK31	Makanchi Array	52.69	58	P		P	02 01 08.9	-1.2
MKAR	Makanchi Array	52.69	58	P		P	02 01 12.1	+2.0
	comp=Z,1.3nm,0.9s,baz=335,slow=5.4,SNR=5.6							
MKAR	Makanchi Array	52.69	58	P		P	02 01 09.1	-1.0
TORD	Torodi Ar. Bea	53.14	156	P		P	02 01 14.3	+0.7
	comp=Z,1.9nm,0.9s,baz=346,slow=8.7,SNR=6.7							
TORD	Torodi Ar. Bea	53.14	156	P		P	02 01 10.7	-2.9
BW06	Boulder Array	53.20	293	P		P	02 01 13.5	-0.7
BW06				IAmb	IAmb		02 01 17.4	
	comp=Z,6.0nm,1.1s							
PD31	Pinedale Array	53.20	293	P		P	02 01 13.0	-1.1
PDAR	Pinedale Array	53.20	293	P		P	02 01 14.3	+0.2
	comp=Z,3.3nm,1.0s,baz=56,slow=6.3,SNR=16							
PDAR	Pinedale Array	53.20	293	P		P	02 01 12.4	-1.7
N23A	Red Feather La	53.33	289	P		P	02 01 14.7	-0.5
BTK	Batken	53.92	72	P		P	02 01 17.9	-1.4
BTK				pmax	pmax			
	comp=Z,12nm,1.2s							
BTK	Batken	53.92	72	P		P	02 01 17.9	-1.4
HWUT	Hardware Ranch	54.98	294	IAmb	IAmb		02 01 31.0	
	comp=Z,6.0nm,1.1s							
KSH	Kashi	56.47	68	*eP*		P	02 01 43.3	+5.6
KSH				pmax	pmax			
	comp=Z,10.0nm,0.6s							
KSH				pmax	pmax			
	comp=Z,410nm,5.1s							
P17A	Butcher Ranch,	56.47	292	P		P	02 01 37.8	0.0
MTP	Monte Pirata	56.51	238	P		P	02 01 35.6	-2.5
PV04	Paradox Valley	56.66	290	P		P	02 01 38.6	-0.6
PV04				IAmb	IAmb		02 01 42.2	
	comp=Z,5.9nm,1.0s							
WMQ	Urumqi	57.20	56	*eP*		P	02 01 43.0	+0.2
PSUT	Pine Spring	58.51	294	P		P	02 01 52.0	-0.2
TIC	Toumodi	58.60	166	*eP*		P	02 01 53.4	+0.6
KIC	Kosan Boka	58.91	165	*eP*		P	02 01 55.5	+0.6
	comp=Z,21nm,1.1s							
LIC	Lamto	59.01	166	*eP*		P	02 01 51.2	-4.4
	comp=Z,3.3nm,0.4s							
LCMT	Little Creek M	59.59	293	P		P	02 01 59.1	-0.5
SONM	Songino Array	59.61	40	P		P	02 02 01.2	+1.6
	comp=Z,0.5nm,0.8s,baz=308,slow=4.7,SNR=3.0							
ULN	Ulaanbaatar	59.77	40⇓	*eP*		P	02 02 03.8	+3.1
ULN				pmax	pmax			
	comp=Z,7.0nm,1.5s							
NVAR	Mina Array Bea	60.33	297	P		P	02 02 07.0	+2.2
	comp=Z,0.5nm,0.7s,baz=357,slow=4.9,SNR=2.7							
NIL	Nilore	60.42	74	P		P	02 02 03.8	-1.4
NIL				pmax	pmax			
	comp=Z,12nm,0.4s							
NIL	Nilore	60.42	74	P		P	02 02 03.8	-1.4
TX31	Lajitas Ar. Si	62.31	280	P		P	02 02 17.6	-0.6
TX32	Lajitas Array	62.31	280	P		P	02 02 17.3	-0.9
TXAR	Lajitas Array	62.31	280	P		P	02 02 19.6	+1.4
	comp=Z,1.1nm,0.9s,baz=55,slow=3.8,SNR=9.2							
TXAR				PcP		PcP	02 03 00.5	+2.6
	comp=Z,1.0nm,1.1s,baz=101,slow=3.9,SNR=4.1							
GTA	Gaotai	65.27	49	*eP*		P	02 02 40.5	+2.9
GTA				pP		sP	02 02 49.5	+8.9
GTA				sP		pP	02 02 53.5	+14
GTA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
HHC	Hu-ho-hao-te	67.48	40	*eP*		P	02 02 51.5	-0.2
HHC				pmax	pmax			
	comp=Z,10.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,130nm,7.8s							
LZH	Lanzhou	69.60	48	*eP*		P	02 03 02.0	-3.1
LZH				pP	pP		02 03 05.0	-2.3
LZH				sP	sP		02 03 06.0	-2.1
LZH				*ePP*		PP	02 05 38.5	+0.2
LZH				pmax	pmax			
	comp=Z,18nm,1.3s							
LZH				pmax	pmax			
	comp=Z,77nm,8.0s							
LZH				LR	LR			
	comp=N,98nm,16.5s							
LZH				LR	LR			
	comp=E,100nm,16.4s							
LZH				LR	LR			
	comp=Z,170nm,18.5s							
TLIG	Tlapa	70.49	270	P		P	02 03 08.2	-2.5
NJ2	Nanjing	77.71	37	*eP*		P	02 03 50.8	-1.7
NJ2				pmax	pmax			
	comp=Z,11nm,0.5s							
JMZ	Minamidaito 2	86.56	28	P		P	02 04 37.4	-1.6

INET ***29*** *02:31:18.9, 12°.11N×87°.47W, h14km, ML4.1*
UCR ***29*** *02:31:19.8±1.7, 12°.26N×87°.48W, h38km±347km, ML3.5, MW3.3*
SNET ***29*** *02:31:21.0±0.7, 12°.28N×87°.71W, h20km±4km, ML3.4*

ISC 29 02:31:18.7±3.1, 12°.2N±0°.1×87°.5W±0°.1, h23km±27km, n27, σ0§61/41, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LCND	La Caada	1.15	342	*eP*		Pn	02 31 39.6	+0.2
LCND				IAML			02 32 00.2	
	comp=Z,1μm,0.3s							
LCND	La Caada	1.15	342	*eP*		Pn	02 31 39.6	+0.2
LCND				*eS*		Sb	02 31 54.1	-0.3
LCND				IAML			02 32 00.2	
	comp=Z,1μm,0.3s							
JUCU	Jucuarįn	1.25	326	*eP*		Pn	02 31 40.8	-0.1
JUCU				*eS*		Sn	02 31 56.6	-0.5
JUCU	Jucuarįn	1.25	326	*eP*		Pn	02 31 40.8	-0.1
JUCU				*eS*		Sn	02 31 56.6	-0.5
LCY	Lacayo	1.42	328	*eP*		Pn	02 31 43.8	+0.6
LCY	Lacayo	1.42	328	*eP*		Pn	02 31 43.8	+0.6
PACA	Pacayal	1.47	328	*eP*		Pn	02 31 45.0	+1.0
PACA				*eS*		Sn	02 32 02.6	0.0
PACA	Pacayal	1.47	328	*eP*		Pn	02 31 45.0	+1.0
PACA				*eS*		Sn	02 32 02.6	0.0
ALJI	Alcalda de J	1.50	318	*eP*		Pn	02 31 44.4	+0.1
ALJI				*eS*		Sn	02 32 02.5	-0.8
ALJI	Alcalda de J	1.50	318	*eP*		Pn	02 31 44.4	+0.1
ALJI				*eS*		Sn	02 32 02.5	-0.8
COEB	Comit de Eme	1.61	323	*eP*		Pn	02 31 46.3	+0.4
COEB				*eS*		Sn	02 32 07.0	+0.9
COEB				IAML			02 32 13.3	
	comp=Z,407nm,0.3s							
COEB	Comit de Eme	1.61	323	*eP*		Pn	02 31 46.3	+0.4
COEB				*eS*		Sn	02 32 07.0	+0.9
COEB				IAML			02 32 13.3	
	comp=Z,407nm,0.3s							
COEG	Centro de Oper	1.92	317	*eP*		Pn	02 31 50.5	+0.4
COEG				*eS*		Sn	02 32 13.4	-0.3
COEG	Centro de Oper	1.92	317	*eP*		Pn	02 31 50.5	+0.4
COEG				*eS*		Sn	02 32 13.4	-0.3
LFRS	El Faro	2.05	313	*eP*		Pn	02 31 52.1	+0.2
LFRS				*eS*		Sn	02 32 16.4	-0.5
LFRS	El Faro	2.05	313	*eP*		Pn	02 31 52.1	+0.2
LFRS				*eS*		Sn	02 32 16.4	-0.5
HZTE	Horizontes, Gu	2.41	128	*eP*		Pn	02 31 57.7	+0.9
GBS3	Finca Las Img	2.48	125	*eP*		Pn	02 31 59.1	+1.3
GBS3				*eS*		Sn	02 32 26.6	-0.7
LAPC	Finca la Perla	2.51	125	*i* P		Pn	02 31 58.6	+0.5
BUEV	Buena Vista	2.51	124	*eP*		Pn	02 31 58.6	+0.4
ORTG	Ortega, Santa	2.74	132	*eP*		Pn	02 32 01.9	+0.5
HORNC	Hornillas	2.74	123	*i* P		Pn	02 32 01.6	+0.2
COLC	Colonia	2.75	124	*i* P		Pn	02 32 00.2	-1.3
GUAI	GUAI	2.76	134	*i* P		Pn	02 32 02.2	+0.6
CUI	Cuipilapa	2.79	123	*i* P		Pn	02 32 02.1	+0.1
ACAL	Aguas Claras	2.90	122	*eP*		Pn	02 32 03.6	-0.1
DUNO	Dulce Nombre,	2.91	136	*eP*		Pn	02 32 04.0	+0.3

IDC ***29*** *02:52:39.3±0.9, 39°.47N×143°.51E, h0km, mb3.8/14, mb1 3.9/17, mb1mx3.7/68, mbtmp3.8/17, ML3.4/2, MS2.4/2, Ms1 2.4/2, ms1mx2.2/43, Error ellipse: s-maj=22.2km s-min=18.0km az=117.0*
JMA ***29*** *02:52:40.4±0.2, 39°.54N×143°.63E, h30km, M3.9*
NIED ***29*** *02:52:40.5, 39°.54N×143°.63E, h30km, MW3.9, Moment Tensor Solution. s3 Moment tensor: Scale 10^14 Nm; Mrr6.16; Mθθ0.21; Mφφ-6.36; Mrθ0.48; Mrφ-1.46; Mθφ3.05; Fault plane solution: M0 7.12000×10^14 NP1:φs11.00000°, δ58.00000°, λ88.00000°. NP2:φs194.00000°, δ32.00000°, λ93.00000°.*
NEIC ***29*** *02:52:44.2±2.5, 39°.53N±0°.07×143°.3E±0°.1, h31km±2km, mb4.2/10 Error ellipse: s-maj=14.4km s-min=8.5km az=112.0*

ISC 29 02:52:40.3±2.2, 39°.60N±0°.05×143°.47E±0°.07, h3km±12km, n57, σ1§02/57, mb3.9/18, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MIYJ	Miyakonagasawa	1.27	270	P		Pg	02 53 04.6	-0.1
MIYJ				*eS*		Sg	02 53 21.8	+0.6
JTH	Tanohata	1.28	286	P		Pg	02 53 04.8	-0.1
JKEN	Kujiedanarisaw	1.48	295	P		Pn	02 53 07.4	-0.5
JKEN				*eS*		Sb	02 53 27.6	-0.1
OFUJ	Ofunato	1.49	250	P		Pn	02 53 07.3	-0.6
JOM	Ohasama	1.69	266	P		Pn	02 53 11.0	+0.3
JOM				*eS*		Sn	02 53 32.9	+1.0
JANG	Nango	1.69	298	P		Pn	02 53 10.5	-0.2
JMK	Ichinoseki	1.86	250	P		Pn	02 53 12.8	-0.2
JIO	Ouri	2.01	236	P		Pn	02 53 14.0	-1.1
JTM	Tenmabayashi	2.19	304			Pn	02 53 18.1	+0.5
JRG	Rokugo	2.20	266	P		Pn	02 53 18.3	+0.5
ERM	Erimo	2.42	355	Pn		Pn	02 53 20.9	0.0
JYK	Kaneyama	2.51	255	P		Pn	02 53 22.4	+0.4
JOT	Ohata	2.56	315	P		Pn	02 53 23.8	+1.1
JMM	Marumori	2.71	231			Pn	02 53 23.1	-1.7
JNBK	Urakawa-nobuka	2.73	349	P		Pn	02 53 26.1	+1.0
JNBK				*eS*		Sn	02 53 58.8	+0.2
JCH	Churui	3.01	359	P		Pn	02 53 28.7	-0.2
JCH				*eS*		Sn	02 54 03.9	-1.6
JFT	Otama	3.21	231	P		Pn	02 53 31.1	-0.6
JFT				*eS*		Sn	02 54 09.6	-0.9
JKA	Kamikawa-asahi	4.56	352			Pn	02 53 50.8	+0.6
ASAJ	Asahikawa	4.56	352	Pn		Pn	02 53 50.8	+0.6
	1.8nm,0.3s,baz=199,slow=17,SNR=12							
ASAJ						Sn	02 54 41.4	-2.3
	1.9nm,0.3s,baz=142,slow=11,SNR=3.5							
MJAR	Matsushiro Arr	5.15	235	Pn		Pn	02 53 59.0	+0.7
	0.9nm,0.3s,baz=36,slow=13,SNR=70							
MJAR				LR		LR	02 55 38.5	
	comp=Z,23nm,20.0s,baz=40,slow=35							
MJAR	Matsushiro Arr	5.15	235			Pn	02 53 59.1	+0.8
MAJO	Matsushiro	5.15	235			Pn	02 53 59.1	+0.8
MAT	Matsushiro	5.15	235	P		Pn	02 53 59.1	+0.8
MAT				*eS*		Sn	02 55 00.7	+2.4
MJB9	Matsu-Tunnel	5.15	235	Pn		Pn	02 53 59.4	+1.1
JGF	Kuroka	6.28	232			Pn	02 54 14.2	+0.4
USRK	Ussuriysk Ar.	9.71	302	Pn		Pn	02 54 59.6	-1.3
	baz=142,slow=42,SNR=3.3							
KSRS	Korea Array	12.36	265	LR		LR	02 59 44.2	
	comp=Z,29nm,20.5s,baz=105,slow=34							
JOW	Kunigami	17.96	229	Pn		Pn	02 56 48.6	-2.4
SEY	Seymchan	23.98	10	P		P	02 57 56.0	+0.4
	2.4nm,0.9s,baz=180,slow=20,SNR=2.1							
SONM	Songino Array	27.81	299	P		P	02 58 30.9	+0.2
	1.1nm,0.6s,baz=94,slow=8.4,SNR=4.9							
SONM	Songino Array	27.81	299	IAmb		IAmb	02 58 31.7	
	comp=Z,1.2nm,0.9s							
H11N2	WAKE ISLAND Hy	28.25	128	T		T	03 29 33.0	
	baz=318,slow=75,SNR=34							
H11N1	WAKE ISLAND Hy	28.26	128	T		T	03 29 32.9	
	baz=318,slow=75,SNR=30							
H11N3	WAKE ISLAND Hy	28.27	128	T		T	03 29 33.1	
	baz=318,slow=75,SNR=31							
H11S1	WAKE ISLAND Hy	29.07	130	T		T	03 30 43.9	
	baz=325,slow=74							
H11S3	WAKE ISLAND Hy	29.07	130	T		T	03 30 30.4	
	baz=325							
H11S2	WAKE ISLAND Hy	29.09	130	T		T	03 30 44.0	
	baz=325,slow=74							
ZAA0	Zalesovo Array	41.44	310	P		P	03 00 27.8	-0.2
ZAA0				IAmb		IAmb	03 00 38.9	
	comp=Z,9.7nm,1.8s							
ZALV	Zalesovo Beam	41.44	310	P		P	03 00 28.2	+0.3
	comp=Z,1.6nm,0.5s,baz=97,slow=8.0,SNR=8.5							
CMAR	Chiang Mai Arr	43.73	254	P		P	03 00 46.9	0.0
	comp=Z,0.8nm,0.3s,baz=46,slow=7.7,SNR=1.5							
MK31	Makanchi Array	44.17	300	P		P	03 00 50.1	-0.2
MK31				IAmb		IAmb	03 00 59.4	
	comp=Z,1.7nm,0.8s							
MKAR	Makanchi Array	44.17	300	P		P	03 00 50.5	+0.2
	comp=Z,1.8nm,0.7s,baz=87,slow=8.6,SNR=11							
MKAR	Makanchi Array	44.17	300	P		P	03 00 50.1	-0.2
KURK	Kurchatov	45.67	306	P		P	03 01 01.4	-0.7
KURK				IAmb		IAmb	03 01 23.3	
	comp=Z,4.2nm,0.9s							
IL31		46.47	34	P		P	03 01 08.7	+0.6
ILAR	Eielson Array	46.47	34	P		P	03 01 08.7	+0.5
	comp=Z,0.3nm,0.7s,baz=269,slow=6.5,SNR=4.4							
DOT	Dot Lake	47.78	35	P		P	03 01 19.2	+0.7
AAK	Ala-Archa	50.73	297	P		P	03 01 41.8	+0.3
	comp=Z,1.2nm,0.7s,baz=140,slow=7.9,SNR=1.9							
INK	Inuvik	51.37	28	P		P	03 01 46.8	+1.1
	comp=Z,0.6nm,0.6s,baz=284,slow=7.0,SNR=1.7							
ABKAR	Akbulak array	57.54	310	P		P	03 02 30.8	-0.1
WRA	Warramunga Arr	59.84	190	P		P	03 02 44.7	-2.4
	comp=Z,0.6nm,0.9s,baz=8.1,slow=7.1,SNR=4.6							
ASAR	Alice Springs	63.57	190	P		P	03 03 10.7	-1.5
	comp=Z,0.1nm,0.4s,baz=2.9,slow=5.5,SNR=1.8							
FINES	FINESS Array B	67.30	332	P		P	03 03 36.1	+0.2
	comp=Z,0.8nm,0.5s,baz=66,slow=9.4,SNR=6.1							
NVAR	Mina Array Bea	72.17	55	P		P	03 04 06.7	0.0
	comp=Z,0.2nm,0.6s,baz=307,slow=3.3,SNR=1.6							
HFS	Hagfors	72.41	336	P		P	03 04 07.2	-0.2
	comp=Z,3.5nm,1.1s,baz=44,slow=11,SNR=4.3							
NOA	NORSAR Array B	72.44	338	P		P	03 04 07.7	0.0
	comp=Z,0.4nm,0.8s,baz=39,slow=5.8,SNR=1.1							
TXAR	Lajitas Array	87.29	54	P		P	03 05 31.7	+3.0
	comp=Z,0.3nm,0.9s,baz=328,slow=3.2,SNR=2.3							

IDC ***29*** *02:55:42.8±0.6, 5°.74N×61°.24E, h0km, mb4.2/26, mb1 4.3/26, mb1mx4.1/70, mbtmp4.2/26, MS3.6/22, Ms1 3.6/22, ms1mx3.4/52, Error ellipse: s-maj=18.0km s-min=13.3km az=37.0*
NEIC ***29*** *02:55:44.5±1.5, 5°.8N±0°.1×61°.3E±0°.1, h10km±1km, mb4.6/39, Error ellipse: s-maj=21.1km s-min=18.0km az=169.0*

ISC 29 02:55:45.0±0.6, 5°.75N±0°.10×61°.27E±0°.08, h14km, n108, σ0§70/93, mb4.5/44, MS3.5/21, 11C-3D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WSAR	Wadi Sarin	17.57	352	LR		LR	03 05 15.6	
	comp=Z,200nm,19.4s,baz=192,slow=33							
ATD	Arta Tunnel	19.09	289	P		P	03 00 07.1	-0.5
UOSS	Minazif	19.70	346	P		P	03 00 14.0	0.0
UOSS				IAmb		IAmb	03 00 24.1	
	comp=Z,40nm,1.2s							
FURI	Furi	22.62	279	P		P	03 00 47.1	+1.0
RAYN	Ar Rayn	23.30	321	P		P	03 00 52.3	-0.4
RAYN				IAmb		IAmb	03 01 10.9	
	comp=Z,29nm,1.4s							
HRA	Herat	28.51	2	P		P	03 01 40.3	-0.1
HRA				IAmb		IAmb	03 02 11.8	
	comp=Z,23nm,1.9s							
KBL	Kabul	29.54	13	P		P	03 01 49.8	+0.3
NIL	Nilore	29.91	20	P		P	03 01 52.8	+0.2
NIL				IAmb		IAmb	03 02 02.8	
	comp=Z,12nm,1.2s							
MBAR	Mbarara	31.13	259	LR		LR	03 14 51.5	
	comp=Z,84nm,18.8s,baz=62,slow=37							
MBAR	Mbarara	31.13	259	P		P	03 02 03.8	0.0
MBAR				IAmb		IAmb	03 02 19.1	
	comp=Z,12nm,1.6s							
GEYT	Alibeck	32.16	355	LR		LR	03 16 11.1	
	comp=Z,59nm,18.3s,baz=350,slow=38							
GYA0B	ALIBECK ARRAY	32.16	355	P		P	03 02 12.7	+0.3
GYA0B				IAmb		IAmb	03 02 32.6	
	comp=Z,4.5nm,0.8s							
EIL	Elat	34.39	317	LR		LR	03 15 56.8	
	comp=Z,116nm,18.8s,baz=102,slow=35							
BTK	Batken	35.22	13	P		P	03 02 39.5	+0.4
SHL	Shillong	35.30	53	P		P	03 02 40.4	+0.3
SHL				IAmb		IAmb	03 02 48.0	
	comp=Z,12nm,1.2s							
MMAI	Mount Meron Ar	36.27	322	LR		LR	03 16 42.9	
	comp=Z,94nm,20.9s,baz=285,slow=35							
MARD	Mardin	36.56	332	P		P	03 02 51.0	+0.3
LSA	Lhasa	36.90	46	P		P	03 02 54.0	0.0
LSA				IAmb		IAmb	03 03 04.4	
	comp=Z,9.8nm,1.

HERR	**Herculane**	**51.62**	**325**	⇑P		**P**	**03 04 51.4**	**+0.2**
ZALV	**Zalesovo Beam**	**51.72**	**18**	P		**P**	**03 04 51.2**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=224,slow=6.2,SNR=6.6							
ZALV				LR		LR	03 29 09.7	
	comp=Z,39nm,18.2s,baz=232,slow=39							
BURAR	**Bucovina Array**	**51.86**	**330**	P		**P**	**03 04 53.0**	**-0.1**
AKASG	**Malin Array Be**	**52.18**	**335**	P		**P**	**03 04 54.4**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=140,slow=6.6,SNR=5.3							
AKASG				LR		LR	03 29 07.8	
	comp=Z,30nm,19.6s,baz=295,slow=38							
AKASG	**Malin Array Be**	**52.18**	**335**	IAmb		IAmb	03 05 01.7	
	comp=Z,1.2nm,0.7s							
XAN	**Xi'an**	**52.26**	**51**	P		**P**	**03 04 55.8**	**-0.4**
BZS	**Buzias**	**52.52**	**326**	⇑P		**P**	**03 04 57.7**	**-0.1**
DRGR		**52.63**	**327**	⇑P		**P**	**03 04 59.3**	**+0.5**
SIRR	**Siria**	**52.88**	**326**	⇑P		**P**	**03 05 01.2**	**+0.7**
OJC	**Ojcow**	**56.28**	**329**	P		**P**	**03 05 24.5**	**-0.5**
OJC				IAmb		IAmb	03 05 25.1	
	comp=Z,6.1nm,1.1s							
TAM	**Tamanrasset**	**56.28**	**293**	P		**P**	**03 05 25.5**	**-0.3**
TAM				IAmb		IAmb	03 05 35.1	
	comp=Z,14nm,1.6s							
SONM	**Songino Array**	**56.87**	**35**	P		**P**	**03 05 30.0**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=237,slow=7.6,SNR=7.0							
CONA	**Conrad Observa**	**57.08**	**325**	*e*P		**P**	**03 05 30.9**	**-0.1**
	comp=Z,11nm,1.3s							
MORC	**Moravsky Berou**	**57.19**	**328**	*e*P		**P**	**03 05 31.3**	**-0.3**
KRUC	**Moravsky**	**57.40**	**327**	*e*P		**P**	**03 05 32.8**	**-0.3**
VRAC	**Vranov**	**57.43**	**327**	*e*P		**P**	**03 05 33.2**	**-0.1**
MOA	**Molln**	**57.95**	**324**	*i* P		**P**	**03 05 36.9**	**-0.1**
	comp=Z,10nm,1.1s							
TREC	**Trest**	**58.03**	**326**	*e*P		**P**	**03 05 37.1**	**-0.4**
DPC	**Dobruska-Polom**	**58.16**	**328**	*e*P		**P**	**03 05 38.4**	**-0.1**
OSTC	**Ostas**	**58.33**	**328**	*e*P		**P**	**03 05 38.1**	**-1.5**
OSTC				*ex*		x	03 05 45.9	
ABTA	**Abfaltersbach**	**58.45**	**323**	*i* P		**P**	**03 05 40.4**	**-0.2**
	comp=Z,7.3nm,1.1s							
GERES	**GERESS Array B**	**58.79**	**325**	P		**P**	**03 05 41.4**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=148,slow=9.3,SNR=4.1							
KHC	**Kasperske Hory**	**59.01**	**325**	*e*P		**P**	**03 05 42.8**	**-1.6**
KHC				*ex*		x	03 05 49.7	
TORD	**Torodi Ar. Bea**	**59.11**	**282**	P		**P**	**03 05 45.6**	**0.0**
	comp=Z,1.9nm,1.0s,baz=98,slow=4.7,SNR=7.8							
TORD				PcP		**PcP**	**03 06 35.3**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=86,slow=3.0,SNR=3.6							
TORD				LR		LR	03 30 42.0	
	comp=Z,33nm,18.5s,baz=75,slow=36							
TORD	**Torodi Ar. Bea**	**59.11**	**282**	P		**P**	**03 05 46.1**	**+0.4**
PVCC	**Panska Ves**	**59.19**	**327**	*e*P		**P**	**03 05 45.2**	**-0.4**
WATA	**Walderalm**	**59.29**	**323**	*i* P		**P**	**03 05 45.5**	**-1.0**
	comp=Z,5.3nm,0.6s							
BJT	**Baijiatuau**	**59.79**	**47**	P		**P**	**03 05 50.9**	**+0.9**
HFS	**Hagfors**	**65.03**	**336**	P		**P**	**03 06 24.2**	**-0.4**
	comp=Z,6.2nm,1.0s,baz=160,slow=8.9,SNR=3.9							
DBIC	**Dimbokro**	**65.70**	**275**	P		**P**	**03 06 30.1**	**+0.3**
	comp=Z,3.6nm,0.9s,baz=185,slow=8.4,SNR=4.1							
DBIC				LR		LR	03 33 05.5	
	comp=Z,40nm,21.7s,baz=66,slow=34							
NRIK	**Noril'sk**	**65.82**	**10**	LR		LR	03 38 04.6	
	comp=Z,87nm,19.0s,baz=201,slow=39							
NOA	**NORSAR Array B**	**66.56**	**336**	P		**P**	**03 06 33.7**	**-0.7**
	comp=Z,2.1nm,1.2s,baz=114,slow=7.9,SNR=3.0							
NOA				LR		LR	03 37 52.6	
	comp=Z,31nm,19.0s,baz=265,slow=38							
ESDC	**Sonseca Array**	**67.36**	**311**	P		**P**	**03 06 39.5**	**-0.5**
	comp=Z,1.3nm,1.1s,baz=96,slow=9.3,SNR=4.4							
FITZ	**Fitzroy Crossi**	**67.75**	**112**	P		**P**	**03 06 43.2**	**+0.4**
	comp=Z,3.7nm,0.9s,baz=283,slow=6.4,SNR=7.7							
ARCES	**ARCESS Array B**	**67.84**	**347**	P		**P**	**03 06 42.2**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=108,slow=8.6,SNR=2.4							
ARCES				LR		LR	03 38 54.4	
	comp=Z,53nm,18.6s,baz=205,slow=38							
KSRS	**Korea Array**	**68.03**	**52**	P		**P**	**03 06 43.3**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=252,slow=8.7,SNR=4.4							
KLR	**Kul'dur**	**72.96**	**40**	LR		LR	03 39 00.7	
	comp=Z,114nm,21.5s,baz=205,slow=36							
MAW	**Mawson**	**73.19**	**179**	LR		LR	03 31 32.2	
	comp=Z,73nm,19.0s,baz=60,slow=29							
YAK	**Yakutsk**	**74.91**	**27**	LR		LR	03 43 39.7	
	comp=Z,57nm,18.4s,baz=265,slow=38							
WRA	**Warramunga Arr**	**76.18**	**112**	P		**P**	**03 07 33.5**	**0.0**
	comp=Z,6.7nm,0.9s,baz=288,slow=5.0,SNR=34							
WRAB	**Tennant Creek**	**76.19**	**112**	P		**P**	**03 07 33.6**	**+0.2**
WB2	**Warramunga Arr**	**76.19**	**112**	P		**P**	**03 07 32.4**	**-1.1**
ASAR	**Alice Springs**	**76.55**	**116**	P		**P**	**03 07 35.6**	**+0.1**
	comp=Z,5.7nm,0.9s,baz=287,slow=5.6,SNR=38							
ASAR	**Alice Springs**	**76.55**	**116**	P		**P**	**03 07 35.1**	**-0.4**
DAG	**Danmarks Havn**	**82.13**	**347**	*i* P		**P**	**03 08 04.2**	**-0.6**
	comp=Z,5.3nm,1.1s							
DAG	**Danmarks Havn**	**82.13**	**347**	*i* P		**P**	**03 08 04.3**	**-0.6**
DAG				IAmb		IAmb	03 08 05.6	
	comp=Z,5.3nm,1.1s							
STKA	**Stephens Creek**	**84.84**	**123**	P		**P**	**03 08 19.6**	**0.0**
	comp=Z,2.5nm,0.8s,baz=304,slow=6.0,SNR=5.4							
STKA	**Stephens Creek**	**84.84**	**123**	IAmb		IAmb	03 08 20.1	
	comp=Z,1.1nm,1.0s							
CTA	**Charters Tower**	**87.26**	**110**	P		**P**	**03 08 31.2**	**-0.7**
	comp=Z,3.3nm,0.9s,baz=270,slow=2.0,SNR=1.7							
LPAZ	**La Paz**	**129.37**	**254**	PKP		**PKPdf**	**03 14 54.5**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=90,slow=6.1,SNR=2.4							
NVAR	**Mina Array Bea**	**136.04**	**360**	PKP		**PKiKP**	**03 15 07.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=33,slow=3.7,SNR=1.9							
TXAR	**Lajitas Array**	**142.23**	**338**	PKhKP		PKPpre	03 15 13.0	
	comp=Z,0.3nm,0.8s,baz=72,slow=4.1,SNR=3.6							
CSGN	**Cosiguina Volc**	**143.87**	**301**	PKPdf		PKPbc	03 15 19.3	**+0.5**
ZAIG	**Zacatecas**	**147.55**	**331**			**PKPdf**	**03 15 27.0**	**-0.5**

*IPEC **29** 02:57:47.3±0.3,51.56N×16.08E,h0km,ML1.9/4, Error ellipse: s-maj=1.9km s-min=1.8km az=24.0*
*PRU **29** 02:57:50.6±0.0,51.42N×16.16E,h0km*
*VIE **29** 02:57:50.6±1.0,51.35N×16.21E,h0km,mb2.3/1,ml2.7/4, Error ellipse: s-maj=8.2km s-min=7.2km az=124.0 63 km WNW of Wroclaw Suspected Mining induced.*

ISC 29 02:57:48.2±0.9,51.51N±0.03×16.21E±0.03,h0km,n29, σ0.77/60,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**176**	*e*Pg		**Pg**	**Sg**	**02 58 01.4**	**+0.5**
KSP				*i* Sg		**Sg**	**Sg**	**02 58 09.3**	**-0.3**
CHVC	**Chvalec**	**0.93**	**186**	*e*PG		**Pg**	**Sg**	**02 58 06.4**	**+0.5**
CHVC				*e*SG		**Sg**	**Sg**	**02 58 18.1**	**+0.2**
OSTC	**Ostas**	**0.95**	**180**	*e*PG		**Pg**	**Sg**	**02 58 06.9**	**+0.5**
OSTC				*e*SG		**Sg**	**Sg**	**02 58 18.9**	**+0.1**
	comp=Z,27nm,0.3s								
UPC	**Upice**	**1.01**	**187**	*e*PG		**Pg**	**Sg**	**02 58 07.7**	**+0.2**
UPC				*e*SG		**Sg**	**Sg**	**02 58 20.3**	**-0.3**
	comp=Z,77nm,0.6s								
DPC	**Dobruska-Polom**	**1.16**	**177**	*e*PG		**Pg**	**Sg**	**02 58 10.3**	**-0.1**
DPC				*e*SG		**Sg**	**Sg**	**02 58 24.7**	**-0.8**
	comp=Z,19nm,0.3s								
PVCC	**Panska Ves**	**1.43**	**227**	*e*PG		**Pb**	**Sg**	**02 58 16.0**	**+0.3**
PVCC				*e*SG		**Sb**	**Sb**	**02 58 34.3**	**-0.1**
	comp=Z,108nm,0.3s								
KRLC	**Kraliky**	**1.48**	**166**	*e*PG		**Pn**	**Pg**	**02 58 15.8**	**-0.3**
KRLC				*e*SG		**Sg**	**Sg**	**02 58 35.2**	**-0.5**
	comp=Z,25nm,0.4s								
PRU	**Pruhonice**	**1.86**	**216**	*e*PG		**Pb**	**Pb**	**02 58 22.8**	**-0.1**
PRU				*e*SG		**Sb**	**Sb**	**02 58 46.3**	**-0.4**
	comp=Z,35nm,0.3s								
MORC	**Moravsky Berou**	**1.93**	**153**	*e*PN		**Pn**	**Pg**	**02 58 22.2**	**-0.1**
MORC				*e*SG		**Sg**	**Sg**	**02 58 50.3**	**+0.1**
MORC	**Moravsky Berou**	**1.93**	**153**	*e*Pn		**Pn**	**Pg**	**02 58 22.2**	**-0.1**
	baz=333								
MORC				*e*Sg		**Sg**	**Sg**	**02 58 50.2**	**+0.1**
	9.6nm,0.3s,baz=333								
CLL	**Collm**	**2.02**	**266**	*e*Pg		**Pg**	**Sg**	**02 58 28.0**	**+1.1**
CLL				*e*Sg		**Sg**	**Sg**	**02 58 53.0**	**0.0**
	comp=Z,21nm,0.6s								
OKC	**Ostrava-Krasne**	**2.08**	**143**	*e*PG		**Pg**	**Pg**	**02 58 27.8**	**-0.2**
OKC				*e*SG		**Sg**	**Sb**	**02 58 52.8**	**-0.3**
	comp=Z,18nm,0.5s								
VRAC	**Vranov**	**2.22**	**174**	*e*PN		**Pn**	**Pg**	**02 58 26.5**	**+0.3**
VRAC				*e*SG		**Sg**	**Sg**	**02 58 58.8**	**-0.5**
VRAC	**Vranov**	**2.22**	**174**	*e*Pn		**Pn**	**Pg**	**02 58 26.5**	**+0.3**
	baz=352								
VRAC				*e*Sg		**Sg**	**Sg**	**02 58 58.8**	**-0.5**
	comp=Z,6.8nm,0.2s,baz=352								
PBCC	**Pribram**	**2.31**	**219**	*e*PG		**Pb**	**Pg**	**02 58 30.9**	**+0.2**
PBCC				*e*SG		**Sb**	**Sg**	**02 58 59.7**	**0.0**
KRUC	**Moravsky**	**2.45**	**177**	*e*PN		**Pn**	**Pg**	**02 58 29.5**	**0.0**
KRUC				*e*SG		**Sg**	**Sg**	**02 59 06.0**	**-1.0**
KRUC	**Moravsky**	**2.45**	**177**	*e*Pn		**Pn**	**Pg**	**02 58 29.4**	**0.0**
	baz=356								
KRUC				*e*Sg		**Sg**	**Sg**	**02 59 05.9**	**-1.0**
	comp=Z,4.1nm,0.2s,baz=356								
OJC	**Ojcow**	**2.61**	**118**	*e*Pg		**Pg**	**Pg**	**02 58 38.1**	**-0.1**
OJC				*e*Sg		**Sg**	**Sg**	**02 59 13.4**	**+1.3**
NKC	**Novy Kostel**	**2.71**	**243**	*e*PN		**Pn**	**Pg**	**02 58 34.0**	**+1.1**
NKC				*e*PG		**Pg**	**Pg**	**02 58 39.8**	**-0.2**
NKC				*e*SG		**Sg**	**Sg**	**02 59 14.4**	**-0.6**
	comp=Z,40nm,0.3s								
JAVC	**Velka Javorina**	**2.81**	**160**	*e*PN		**Pn**	**Pg**	**02 58 35.1**	**+0.6**
JAVC				*e*SG		**Sg**	**Sg**	**02 59 18.1**	**-0.4**
JAVC	**Velka Javorina**	**2.81**	**160**	*e*Pn		**Pn**	**Pg**	**02 58 35.0**	**+0.6**
	baz=340								
JAVC				*e*Sg		**Sg**	**Sg**	**02 59 18.1**	**-0.4**
	comp=Z,5.0nm,0.5s,baz=340								
KHC	**Kasperske Hory**	**2.92**	**216**	*e*PN		**Pn**	**Pg**	**02 58 36.3**	**+0.4**
KHC				*e*PG		**Pb**	**Pg**	**02 58 42.0**	**+0.9**
KHC				*e*SN		**Sn**	**Sg**	**02 59 10.7**	**-0.9**
KHC				*e*SG		**Sb**	**Sg**	**02 59 19.0**	**+1.7**
	comp=Z,12nm,0.5s								
SMOL	**Smolenice**	**3.10**	**165**	*e*PG		**Pg**	**Pg**	**02 58 47.3**	**-0.2**
SMOL				*e*SG		**Sg**	**Sg**	**02 59 27.1**	**-0.6**
MODS	**Modra-Piesok**	**3.21**	**167**	*e*PG		**Pg**	**Pg**	**02 58 49.0**	**-0.7**
MODS				*e*SG		**Sg**	**Sg**	**02 59 30.1**	**-1.3**
VYHS	**Vyhne**	**3.46**	**150**	*e*PG		**Pg**	**Pg**	**02 58 56.9**	**+2.4**
CONA	**Conrad Observa**	**3.59**	**184**	*i* Pn		**Pn**	**Pg**	**02 58 45.6**	**+0.5**
	comp=Z,0.3nm,0.2s								
CONA				Sg		**Sg**	**Sg**	**02 59 42.1**	**-1.4**
	comp=Z,7.8nm,0.3s								
BSD	**Bornholm Skovb**	**3.69**	**348**	*e*		**Pn**	**Pg**	**02 58 45.3**	**-1.2**
	baz=194,slow=12								
BSD				*i* P		**Pn**	**Pg**	**02 58 46.4**	**0.0**
BSD				IAML				02 59 22.8	
	comp=Z,2.0nm,0.4s								
BSD				*i* S		**Sn**	**Sg**	**02 59 29.7**	**-1.0**
MOA	**Molln**	**3.88**	**200**	*i* Pn		**Pn**	**Pg**	**02 58 49.9**	**+0.8**
	comp=Z,0.6nm,0.2s								
MOA				Sg		**Sg**	**Sg**	**02 59 51.1**	**-1.5**
	comp=Z,12nm,0.6s								
ARSA	**Arzberg**	**4.29**	**186**	*e*Sg		**Sg**	**Sg**	**03 00 04.3**	**-1.5**
	comp=Z,3.1nm,0.4s								

*NEIC **29** 03:01:44.6±2.1,7.70N±0.1×126.76E±0.1,h88km±6km, mb4.2/12, Error ellipse: s-maj=20.9km s-min=12.6km az=52.0*
*IDC **29** 03:01:44.8±3.6,7.10N×126.82E,h86km±31km,mb3.7/7, mb1 3.9/8,mb1mx3.5/48,mbtmp4.1/8,MS3.1/2,Ms1 3.1/2, ms1mx2.5/50,Error ellipse: s-maj=49.1km s-min=15.0km az=67.0*

ISC 29 03:01:42.5±1.3,7.06N±0.05×126.9E±0.1,h67km±12km, n35,σ1.935/39,mb4.1/8,2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.64**	**259**	*e*P		**Pn**		**03 01 56.7**	**+0.1**
MATI				*e*S		**Sn**		**03 02 05.2**	**-1.6**
DAV	**Davao City (W)**	**1.30**	**270**	P		**Pn**		**03 02 06.6**	**+1.8**
	342nm,0.3s,baz=72,slow=3.1,SNR=20								
DAV				S		**Sn**		**03 02 23.7**	**+2.3**
	454nm,0.3s,baz=81,slow=21,SNR=12								
DAV	**Davao City (W)**	**1.30**	**270**	Pn		**Pn**		**03 02 05.8**	**+1.1**
DDMP	**Don Marcelino,**	**1.51**	**231**	*e*P		**Pn**		**03 02 07.8**	**+0.3**
DDMP				*e*S		**Sn**		**03 02 25.0**	**-1.4**
KCP	**Kidapawan**	**1.79**	**268**	⇑P		**Pn**		**03 02 11.7**	**+0.3**
KCP				*i* S		**Sn**		**03 02 33.5**	**+0.4**
CGP	**Cagayan de Oro**	**2.58**	**303**	⇑*e*P		**Pn**		**03 02 23.6**	**+1.7**
CGP				*i* S		**Sn**		**03 02 52.4**	**+0.2**
GLSP	**General Luna,**	**2.81**	**344**	*e*P		**Pn**		**03 02 28.9**	**+3.8**
GLSP				*e*S		**Sn**		**03 02 57.0**	**-0.9**
SGSI	**Sangihe**	**3.62**	**202**	S		**Sn**		**03 03 20.4**	**+2.7**
TNTI	**Ternate**	**6.27**	**176**	Pn		**Pn**		**03 03 13.8**	**+1.3**
TOLI2	**Tolitoli**	**8.49**	**226**	Pn		**Pn**		**03 03 41.6**	**-1.2**
LUWI	**Luwuk**	**9.04**	**207**	Pn		**Pn**		**03 03 49.9**	**-0.4**
KAPI	**Kappang**	**13.95**	**211**	Pn		**Pn**		**03 04 57.1**	**0.0**
SBUM	**Sibu**	**15.32**	**253**	Pn		**Pn**		**03 05 13.8**	**-1.1**
MMRI	**Maumere**	**16.27**	**197**	Pn		**Pn**		**03 05 25.5**	**-1.4**
JAY	**Jayapura**	**16.75**	**124**	LR		LR		03 12 09.8	
	comp=Z,30nm,19.0s,baz=218,slow=37								
SOEI	**Soe**	**16.91**	**189**			**P**		**03 05 36.8**	**+0.8**
SOEI				IAmb		IAmb		03 06 08.9	
	comp=Z,15nm,0.9s								
KSM	**Kuching**	**17.44**	**252**			**Pn**		**03 05 39.0**	**-2.4**
KSM				IAmb		IAmb		03 06 26.3	
	comp=Z,17nm,1.2s								
BATI	**Baumata**	**17.45**	**191**	P		**P**		**03 05 43.6**	**+1.6**
	comp=Z,5.6nm,0.3s,baz=80,slow=4.8,SNR=5.3								
SSLB	**Suanglung**	**17.58**	**342**	P		**Pn**		**03 05 42.5**	**-0.6**
MTN	**Manton Dam**	**20.22**	**168**	P		**P**		**03 06 11.3**	**-0.9**
KNRA	**Kununurra**	**22.67**	**175**	P		**P**		**03 06 38.7**	**+0.2**
KNRA				IAmb		IAmb		03 06 41.8	
	comp=Z,16nm,1.1s								
FITZ	**Fitzroy Crossi**	**25.03**	**183**	P		**P**		**03 07 01.4**	**+0.9**
	comp=Z,2.8nm,0.3s,baz=359,slow=8.4,SNR=29								
FITZ	**Fitzroy Crossi**	**25.03**	**183**	P		**P**		**03 07 01.5**	**+0.9**
FITZ				IAmb		IAmb		03 07 05.1	
	comp=Z,7.0nm,0.8s								
WB0	**Warramunga Arr**	**27.67**	**165**	P		**P**		**03 07 23.4**	**-0.9**
WRA	**Warramunga Arr**	**27.82**	**165**	P		**P**		**03 07 26.2**	**+0.6**
	comp=Z,4.6nm,0.9s,baz=340,slow=11,SNR=23								
WRA	**Warramunga Arr**	**27.82**	**165**	P		**P**		**03 07 24.9**	**-0.8**
ASAR	**Alice Springs**	**31.30**	**168**	P		**P**		**03 07 57.3**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=336,slow=7.2,SNR=4.3								
NWAO	**Narrogin (SRO)**	**40.82**	**192**	LR		LR		03 28 54.0	
	comp=Z,49nm,18.6s,baz=140,slow=40								
STKA	**Stephens Creek**	**41.19**	**161**	P		**P**		**03 09 22.0**	**+1.3**
	comp=Z,2.4nm,0.7s,baz=15,slow=7.2,SNR=4.7								
MKAR	**Makanchi Array**	**54.95**	**324**	P		**P**		**03 11 06.7**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=115,slow=6.8,SNR=17								
MKAR	**Makanchi Array**	**54.95**	**324**	P		**P**		**03 11 06.3**	**-0.4**
MAKZ	**Makanchi**	**55.14**	**324**	P		**P**		**03 11 08.1**	**0.0**
ILAR	**Eielson Array**	**82.05**	**26**	P		**P**		**03 13 55.4**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=242,slow=5.7,SNR=2.4								
FINES	**FINESS Array B**	**88.99**	**332**	P		**P**		**03 14 29.2**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=147,slow=4.5,SNR=4.9								
TORD	**Torodi Ar. Bea**	**121.98**	**290**	PKP		**PKPdf**		**03 20 29.5**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=47,slow=1.8,SNR=7.2								

*IDC **29** 03:20:22.6±3.2,27.07N×58.10E,h0km,mb3.8/4, mb1 3.9/4,mb1mx3.4/51,mbtmp3.9/4,MS3.0/1,Ms1 3.0/1, ms1mx2.4/41,Error ellipse: s-maj=92.8km s-min=26.1km az=153.0*
*THR **29** 03:20:33.5±0.3,28.87N×57.14E,h14km±5km,ML3.8*
*TEH **29** 03:20:34.7,28.95N×57.10E,h19km,ML3.8*
*OMAN **29** 03:20:39.3±1.4,28.77N×57.28E,h72km,mb4.4/5,ml4.2/7, Error ellipse: s-maj=43.4km s-min=9.0km az=278.0*

ISC 29 03:20:33.1±0.7,28.91N±0.03×57.17E±0.04,h10km,n49, σ1.994/61,mb3.8/4,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NGRK	**Negar Kerman**	**0.83**	**333**	*e*Pg		**Pg**		**03 20 49.0**	**-0.2**
NGRK				*e*Sg		**Sg**		**03 20 59.4**	**-0.6**
CHMN	**Cheshme madani**	**1.00**	**19**	*e*Pg		**Pb**		**03 20 53.6**	**+0.8**
CHMN				*e*Sg		**Sb**		**03 21 06.7**	**+0.4**
CHMN				*e*				03 21 11.2	
KHNJ	**Kahnooj**	**1.07**	**153**	*e*Pg		**Pn**		**03 20 55.0**	**+0.8**
TVBK	**TV Kerman**	**1.13**	**342**	*e*Pg		**Pg**		**03 20 54.6**	**-0.3**
TVBK				*e*				03 21 14.6	
KBAM	**BAM**	**1.15**	**78**	*e*Pg		**Pn**		**03 20 57.0**	**+1.7**
KBAM				*e*				03 21 13.9	
IBND	**Bandar-abas**	**1.56**	**201**	*e*Pg		**Pg**		**03 21 03.4**	**+0.5**
IBND				*e*				03 21 44.6	
KHGB	**Koh Gabri**	**1.58**	**338**	*e*Pg		**Pn**		**03 21 02.0**	**+0.5**
GENO	**Geno**	**1.74**	**211**	*e*				03 21 31.0	
GENO				*e*Pg		**Pb**		**03 21 05.6**	**+0.3**
BNDS	**Bandar-Abbas**	**1.74**	**211**	*e*Pg		**Pn**		**03 21 04.6**	**+1.0**
BNDS				*e*Sg		**Sb**		**03 21 27.3**	**0.0**
BNDS				IAML				03 21 30.0	
	comp=N,935nm,0.4s								
BNDS	**Bandar-Abbas**	**1.74**	**211**	*e*Pn		**Pn**		**03 21 04.6**	**+1.0**
IBAF	**Bafgh**	**3.01**	**333**	*e*Pn		**Pn**		**03 21 23.2**	**+2.2**
BANOM	**Banah**	**3.07**	**195**	P		**Pn**		**03 21 23.7**	**+1.9**
	SNR=27								
BANOM				S		**Sn**		**03 21 59.6**	**+1.0**
	SNR=8.9								
BANOM	**Banah**	**3.07**	**195**	*e*Pn		**Pn**		**03 21 24.1**	**+2.4**
ZHSF	**Zahedan**	**3.23**	**77**	*e*Pn		**Pn**		**03 21 26.5**	**+2.5**
ZHSF				*e*Sg		**Sg**		**03 22 15.1**	**-1.8**
ZHSF	**Zahedan**	**3.23**	**77**	*e*Pn		**Pn**		**03 21 26.5**	**+2.5**
IMEH	**Mehriz**	**3.32**	**319**	*e*Pn		**Pn**		**03 21 27.4**	**+2.0**
BSRN	**Basiran**	**3.49**	**29**	*e*Pn		**Pn**		**03 21 30.2**	**+2.6**
BSRN	**Basiran**	**3.49**	**29**	*e*Pn		**Pn**		**03 21 30.2**	**+2.6**
NHDN	**Nehbandan**	**3.52**	**45**	*e*Pn		**Pn**		**03 21 30.0**	**+2.0**
IKOO	**Kooshah**	**3.85**	**24**	*e*Pn		**Pn**		**03 21 34.3**	**+1.7**
YZKH	**Yazd**	**4.12**	**328**	*e*Pn		**Pn**		**03 21 38.5**	**+2.3**
YZKH	**Yazd**	**4.12**	**328**	*e*Pn		**Pn**		**03 21 38.5**	**+2.3**
NAZ	**Nazwa, Dubai**	**4.13**	**199**	P		**Pn**		**03 21 38.4**	**+2.1**
NAZ				S		**Sn**		**03 22 25.1**	**+0.5**
NAZ	**Nazwa, Dubai**	**4.13**	**199**	*e*Pn		**Pn**		**03 21 37.8**	**+1.6**
TPRV	**Parvadeh(Tabas**	**4.13**	**354**	*e*Pn		**Pn**		**03 21 38.3**	**+2.0**
ITEG	**Tejag**	**4.20**	**18**	*e*Pn		**Pn**		**03 21 38.5**	**+1.1**
FAQ	**Al Faqa, Dubai**	**4.38**	**199**	P		**Pn**		**03 21 41.6**	**+1.9**
	SNR=8.6								
FAQ				S		**Sn**		**03 22 30.3**	**-0.4**
	SNR=9.4								
FAQ				S		**Sn**		**03 22 31.0**	**+0.3**
FAQ	**Al Faqa, Dubai**	**4.38**	**199**	*e*Pn		**Pn**		**03 21 41.0**	**+1.3**
IDAH	**Dahanechah**	**4.47**	**31**	*e*Pn		**Pn**		**03 21 44.6**	**+3.4**
ASUD	**Al Ashush, Dub**	**4.57**	**201**	P		**Pn**		**03 21 45.1**	**+2.8**
	SNR=12								
ASUD				S		**Sn**		**03 22 36.8**	**+1.3**
	SNR=8.6								
ASUD	**Al Ashush, Dub**	**4.57**	**201**	*e*Pn		**Pn**		**03 21 44.0**	**+1.7**
TKDS	**Koohdasht(Taba**	**4.69**	**360**	*e*Pn		**Pn**		**03 21 46.1**	**+2.0**
TABS	**Tabas**	**4.73**	**360**	*e*Pn		**Pn**		**03 21 46.9**	**+2.3**
TABS	**Tabas**	**4.73**	**360**	*e*Pn		**Pn**		**03 21 46.9**	**+2.3**
IMON	**Monand**	**4.78**	**26**	*e*Pn		**Pn**		**03 21 48.0**	**+2.6**
TNSJ	**Nastanj**	**5.06**	**355**	*e*Pn		**Pn**		**03 21 52.4**	**+3.2**
ANAR	**Anarak**	**5.19**	**326**	*e*Pn		**Pn**		**03 21 53.7**	**+2.7**
KLNJ	**Kolanjah**	**5.27**	**295**	*e*Pn		**Pn**		**03 21 54.2**	**+1.9**
HOQ	**Hoqain**	**5.30**	**179**	P		**Pn**		**03 21 54.3**	**+1.9**
HOQ				S		**Sn**		**03 22 52.7**	**-1.0**
ARQ	**Araqi**	**5.58**	**186**	P		**Pn**		**03 21 59.3**	**+3.1**
ARQ				S		**Sn**		**03 23 01.5**	**+1.0**
SMDO

WB0				IAmb	IAmb	03 33 24.1	
	comp=Z,7.9nm,0.9s						
WRAB	**Tennant Creek**	**22.51 161**	P	**P**		**03 33 19.0**	**+0.7**
WRAB				IAmb	IAmb	03 33 24.6	
	comp=Z,8.5nm,0.9s						
WRA	**Warramunga Arr**	**22.52 161**	P	**P**		**03 33 17.8**	**-0.6**
	comp=Z,4.5nm,0.7s,baz=338,slow=11,SNR=50						
WB2	**Warramunga Arr**	**22.52 161**	P	**P**		**03 33 18.6**	**+0.2**
WB2				IAmb	IAmb	03 33 25.7	
	comp=Z,7.8nm,0.7s						
AS31	**Alice Springs**	**25.90 165**	P	**P**		**03 33 51.0**	**+0.8**
ASAR	**Alice Springs**	**25.90 165**	P	**P**		**03 33 50.8**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=345,slow=7.5,SNR=27						
SONM	**Songino Array**	**49.47 342**	LR	LR		04 01 02.4	
	comp=Z,134nm,18.1s,baz=191,slow=40						
MK31	**Makanchi Array**	**59.43 326**	P	**P**		**03 38 19.6**	**-0.8**
MKAR	**Makanchi Array**	**59.43 326**	P	**P**		**03 38 20.9**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=115,slow=7.3,SNR=8.6						
MAKZ	**Makanchi**	**59.61 326**	P	**P**		**03 38 21.3**	**-0.3**
MAKZ				IAmb	IAmb	03 40 04.7	
	comp=Z,2.4nm,0.9s						
KURK	**Kurchatov**	**63.66 328**	P	**P**		**03 38 48.3**	**-0.5**
KKAR	**Karatay Array**	**64.89 318**	P	**P**		**03 38 54.7**	**-2.4**

*IDC **29** 03:28:44.3±0.9,21°.65S×169°.85E,h0km,mb4.2/14, mb1 4.4/15,mb1mx4.2/43,mbtmp4.2/15,ML4.1/1,MS4.0/13, Ms1 4.0/13,ms1mx3.8/30,Error ellipse: s-maj=28.7km s-min=18.7km az=141.0*

*NEIC **29** 03:28:50.5±1.3,21°.7S±0°.1×169°.7E±0°.1,h43km±7km, mb4.4/12,Error ellipse: s-maj=19.4km s-min=14.8km az=107.0*

*GCMT **29** 03:28:53.5±0.3,21°.52S±0°.03×169°.50E±0°.02,h30km, MW5.0/68,Moment Tensor Solution. s60,c75; s68,c87; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.96±.16; Mθθ-1.18±.15; Mϕϕ-2.78±.13; Mrθ-0.15±.22; Mθϕ2.07±.09; Mϕr-1.98±.18; Best double couple: M₀4.54100×10¹⁶ NP1:ϕs310.00000°,δ37.00000°,λ64.00000°. NP2: ϕs161.00000°,δ57.00000°,λ108.00000°. Principal axes: T 4.5890, Plg71.0000°, Azm114.0000°; N -0.0960, Plg15.0000°, Azm331.0000°; P -4.4930, Plg11.0000°, Azm238.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 03:28:48.8±0.5,21°.68S±0°.09×169°.55E±0°.07,h21km,n60, σ1s60/54,mb4.2/16,MS4.0/16,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.91**	**262**	Pn	**Pn**	**03 29 34.7**	**+0.8**
	22nm,0.3s,baz=270,slow=21,SNR=406						
DZM				Sn	**Sn**	**03 30 10.1**	**+1.8**
	36nm,0.3s,baz=79,slow=19,SNR=8.1						
DZM	**Mont Dzumac**	**2.91**	**262**	*e*Pn	**Pn**	**03 29 34.7**	**+0.8**
	86nm,0.2s						
DZM				*e*Sn	**Sn**	**03 30 08.7**	**+0.4**
	274nm,0.3s						
DZM				eLR	LR	03 30 12.8	
	comp=Z,5μm,23.4s						
DZM	**Mont Dzumac**	**2.91**	**262**		**Pn**	**03 29 34.5**	**+0.6**
SANVU	**Saraoutou**	**6.59**	**340**		**Pn**	**03 30 25.6**	**+1.1**
CTA	**Charters Tower**	**21.82**	**270**	P	**P**	**03 33 42.8**	**+3.0**
	11nm,1.1s,baz=89,slow=3.3,SNR=3.3						
PMG	**Port Moresby**	**24.74**	**296**	LR	LR	03 42 03.5	
	comp=Z,403nm,20.5s,baz=120,slow=32						
STKA	**Stephens Creek**	**26.87**	**242**	P	**P**	**03 34 30.0**	**+1.8**
	2.9nm,0.7s,baz=90,slow=12,SNR=7.6						
RAR	**Rarotonga**	**28.54**	**95**	LR	LR	03 45 09.1	
	comp=Z,71nm,18.4s,baz=260,slow=35						
AS31	**Alice Springs**	**32.90**	**260**	P	**P**	**03 35 21.8**	**0.0**
AS31				IAmb	IAmb	03 35 28.5	
	comp=Z,2.2nm,0.7s						
ASAR	**Alice Springs**	**32.90**	**260**	P	**P**	**03 35 22.2**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=85,slow=9.1,SNR=18						
ASAR				LR	LR	03 49 24.9	
	comp=Z,507nm,18.1s,baz=96,slow=37						
ASAR	**Alice Springs**	**32.90**	**260**	P	**P**	**03 35 23.0**	**+1.3**
WRA	**Warramunga Arr**	**32.91**	**267**	P	**P**	**03 35 21.8**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=96,slow=8.5,SNR=7.5						
WRA				LR	LR	03 49 08.5	
	comp=Z,1μm,18.5s,baz=100,slow=37						
WRA	**Warramunga Arr**	**32.91**	**267**	P	**P**	**03 35 23.1**	**+1.2**
MTN	**Manton Dam**	**37.64**	**277**	P	**P**	**03 36 03.0**	**+0.5**
TBI	**Tubuai**	**37.82**	**100**	*e*LQ	LQ	03 44 35.0	
	comp=Z,315nm,30.5s						
TBI				eLR	LR	03 46 11.8	
	comp=Z,204nm,30.0s,baz=273						
PPT2	**Papeete2**	**38.64**	**91**	*e*S	**S**	**03 42 11.7**	**+5.0**
	comp=Z,89nm,25.0s						
PPT2				eLQ	LQ	03 45 05.0	
	comp=Z,479nm,30.5s						
PPT2				eLR	LR	03 46 38.6	
	comp=Z,177nm,23.0s,baz=256						
PPT	**Papeete**	**38.64**	**91**	LR	LR	03 48 09.6	
	comp=Z,116nm,19.2s,baz=253,slow=30						
KNRA	**Kununurra**	**39.01**	**272**	P	**P**	**03 36 14.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**41.34**	**267**	P	**P**	**03 36 34.3**	**+0.9**
	comp=Z,5.2nm,0.8s,baz=100,slow=7.2,SNR=11						
FITZ	**Fitzroy Crossi**	**41.34**	**267**	P	**P**	**03 36 34.9**	**+1.4**
FITZ				IAmb	IAmb	03 36 51.5	
	comp=Z,7.5nm,0.7s						
TAOE	**Nuku Hiva Isla**	**49.97**	**83**	*e*S	**S**	**03 44 57.3**	**+5.6**
	comp=Z,144nm,27.0s						
TAOE				eLR	LR	03 51 57.9	
	comp=Z,216nm,28.2s						
KAPI	**Kappang**	**50.95**	**282**	LR	LR	04 01 53.1	
	comp=Z,128nm,18.3s,baz=131,slow=39						
VNDA	**Vanda**	**56.01**	**182**	P	**P**	**03 38 24.8**	**-0.6**
	comp=Z,1.2nm,1.1s,baz=318,slow=5.8,SNR=2.6						
VNDA				LR	LR	03 59 49.2	
	comp=Z,161nm,18.1s,baz=1.5,slow=33						
LEM	**Lembang**	**61.45**	**274**	LR	LR	04 07 13.2	
	comp=Z,131nm,18.8s,baz=220,slow=37						
JNU	**Nakatsue**	**65.82**	**325**	LR	LR	04 04 22.3	
	comp=Z,81nm,21.8s,baz=154,slow=32						
QSPA	**South Pole Qui**	**68.38**	**180**	P	**P**	**03 39 48.4**	**-0.3**
ASAJ	**Asahikawa**	**69.98**	**340**	P	**P**	**03 39 57.9**	**-0.7**
	comp=Z,4.4nm,1.1s,baz=256,slow=17,SNR=1.3						
PSI	**Prapat**	**73.12**	**280**	LR	LR	04 17 07.6	
	comp=Z,125nm,18.7s,baz=91,slow=40						
PETK	**Petropavlovsk-**	**75.18**	**353**	P	**P**	**03 40 28.3**	**-1.0**
	comp=Z,9.3nm,1.1s,baz=338,slow=11,SNR=6.0						
MAW	**Mawson**	**76.29**	**202**	P	**P**	**03 40 35.2**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=121,slow=17,SNR=3.3						
MAW				LR	LR	04 11 13.6	
	comp=Z,102nm,18.7s,baz=64,slow=33						
KLR	**Kul'dur**	**78.21**	**336**	P	**P**	**03 40 46.1**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=162,slow=5.0,SNR=4.2						
BELA	**Belgrano 2**	**79.65**	**175**	P	**P**	**03 40 53.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**79.77**	**295**	P	**P**	**03 40 57.3**	**+1.5**
	comp=Z,1.1nm,0.3s,baz=131,slow=4.9,SNR=7.2						
CMAR				LR	LR	04 17 46.8	
	comp=Z,21nm,20.2s,baz=35,slow=37						
CMAR	**Chiang Mai Arr**	**79.77**	**295**	P	**P**	**03 40 56.1**	**+0.3**
CHTO	**Chiang Mai**	**79.93**	**295**	P	**P**	**03 40 56.9**	**+0.3**
CHTO				IAmb	IAmb	03 41 05.9	
	comp=Z,6.2nm,1.1s						
PMSA	**Palmer Station**	**84.53**	**160**	LR	LR	04 13 18.1	
	comp=Z,74nm,19.8s,baz=258,slow=32						
SNAA	**Sanae**	**86.74**	**182**	P	**P**	**03 41 29.8**	**-1.2**
SNAA	**Sanae**	**86.74**	**182**	P	**P**	**03 41 29.6**	**-1.4**
VNA3	**Neumayer Olymp**	**87.32**	**180**	P	**P**	**03 41 31.9**	**-1.8**
VNA2	**Neumayer--Watz**	**87.62**	**181**	P	**P**	**03 41 33.5**	**-1.6**
	baz=171,slow=4.7						
VNA1	**Neumayer--Stat**	**87.91**	**181**	P	**P**	**03 41 34.9**	**-1.6**
SONM	**Songino Array**	**89.34**	**323**	P	**P**	**03 41 43.1**	**-0.5**
	comp=Z,1.5nm,0.9s,baz=145,slow=5.4,SNR=6.5						
NVAR	**Mina Array Bea**	**90.20**	**48**	P	**P**	**03 41 46.0**	**-2.1**
	comp=Z,0.3nm,0.5s,baz=224,slow=5.0,SNR=1.9						
IL31		**92.47**	**17**	P	**P**	**03 41 56.5**	**-1.1**
ILAR	**Eielson Array**	**92.47**	**17**	P	**P**	**03 41 56.8**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=238,slow=5.9,SNR=6.3						
ARCES	**ARCESS Array B**	**127.49**	**345**	PKP	**PKPdf**	**03 47 48.8**	**-2.7**
	comp=Z,3.7nm,0.8s,baz=60,slow=2.2,SNR=17						
FINES	**FINESS Array B**	**132.94**	**337**	PKP	**PKPdf**	**03 48 00.9**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=96,slow=1.4,SNR=10						
NOA	**NORSAR Array B**	**137.87**	**344**	PKP	**PKPdf**	**03 48 09.6**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=38,slow=2.7,SNR=1.8						
OSTC	**Ostas**	**144.40**	**331**	*e*PKP	**PKPab**	**03 48 22.0**	**+0.6**
KARP	**Karpathos**	**144.43**	**301**	PKPdf	**PKPab**	**03 48 21.8**	**-0.2**
DPC	**Dobruska-Polom**	**144.49**	**330**	*e*PKP	**PKPab**	**03 48 21.1**	**-0.7**
PVCC	**Panska Ves**	**145.16**	**332**	*e*PKP	**PKPbc**	**03 48 24.6**	**+0.5**
CLL	**Collm**	**145.24**	**334**	*e*PKPbc	**PKPbc**	**03 48 22.0**	**-2.3**
	comp=Z,9.0nm,0.6s						
CLL				*ep*PKPbc	**sPKPdf**	**03 48 35.0**	**+2.2**
CLL				*e*		03 49 03.0	
CLL	**Collm**	**145.24**	**334**	PKPbc	**PKPbc**	**03 48 23.1**	**-1.2**
PBCC	**Pribram**	**146.02**	**331**	*e*PKP	**PKPdf**	**03 48 25.8**	**-0.3**
KHC	**Kasperske Hory**	**146.61**	**331**	*e*PKP	**PKPdf**	**03 48 27.8**	**+0.6**
KHC	**Kasperske Hory**	**146.61**	**331**	PKPbc	**PKPdf**	**03 48 27.6**	**+0.5**
GEC2	**GERESS Array S**	**146.76**	**330**	PKPbc	**PKPdf**	**03 48 27.8**	**+0.2**
GERES	**GERESS Array B**	**146.76**	**330**	PKPbc	**PKPdf**	**03 48 28.2**	**+0.7**
	comp=Z,2.9nm,0.6s,baz=28,slow=3.0,SNR=20						
GERES	**GERESS Array B**	**146.76**	**330**		**PKPdf**	**03 48 27.6**	**+0.1**

*NEIC **29** 03:29:04.8±1.6,21°.4S±0°.2×175°.90W±0°.10,h150km±8km, mb4.2/4,Error ellipse: s-maj=26.4km s-min=12.9km az=171.0*

*IDC **29** 03:29:10.2±10.0,21°.05S×176°.18W,h186km±95km, mb3.6/8,mb1 3.9/8,mb1mx3.6/44,mbtmp4.2/8,Error ellipse: s-maj=63.5km s-min=25.2km az=151.0*

ISC 29 03:29:10.2±0.8,21°.1S±0°.2×176°.1W±0°.1,h196km,n27, σ2s56/28,mb3.9/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.13**	**72**	Pn	Pn	03 30 32.5	-6.7
MSVF	**Nonsavu**	**6.45**	**300**		**Pn**	**03 30 43.0**	**-0.5**
CTA	**Charters Tower**	**35.21**	**265**	P	**P**	**03 35 46.6**	**+0.5**
	4.1nm,0.7s,baz=90,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**39.15**	**245**	P	**P**	**03 36 19.7**	**+0.7**
	2.6nm,0.8s,baz=92,slow=11,SNR=3.0						
JAY	**Jayapura**	**45.92**	**288**	P	**P**	**03 37 14.6**	**+0.8**
	10nm,0.7s,baz=196,slow=15,SNR=4.8						
AS31	**Alice Springs**	**46.12**	**257**	P	**P**	**03 37 15.5**	**+0.2**
AS31				IAmb	IAmb	03 37 17.0	
	comp=Z,1.7nm,1.0s						
ASAR	**Alice Springs**	**46.12**	**257**	P	**P**	**03 37 15.7**	**+0.4**
	comp=Z,4.1nm,0.8s,baz=87,slow=8.5,SNR=6.3						
ASAR				PcP	**PcP**	**03 38 49.3**	**+1.2**
	comp=Z,0.8nm,0.5s,baz=103,slow=4.0,SNR=3.4						
WB2	**Warramunga Arr**	**46.27**	**262**	P	**P**	**03 37 16.5**	**0.0**
WB2				IAmb	IAmb	03 37 17.5	
	comp=Z,8.2nm,1.1s						
WRAB	**Tennant Creek**	**46.28**	**262**	P	**P**	**03 37 16.1**	**-0.4**
WRAB				IAmb	IAmb	03 38 49.4	
	comp=Z,22nm,1.8s						
WRA	**Warramunga Arr**	**46.29**	**262**	P	**P**	**03 37 15.9**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=97,slow=7.3,SNR=11						
WRA				PcP	**PcP**	**03 38 49.8**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=97,slow=3.2,SNR=2.1						
VNDA	**Vanda**	**57.49**	**186**	P	**P**	**03 38 38.3**	**-0.1**
NVAR	**Mina Array Bea**	**80.24**	**42**	P	**P**	**03 41 01.3**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=221,slow=6.6,SNR=5.7						
TXAR	**Lajitas Array**	**85.88**	**57**	P	**P**	**03 41 29.4**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=218,slow=7.3,SNR=6.0						
ILAR	**Eielson Array**	**88.50**	**12**	P	**P**	**03 41 40.1**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=210,slow=5.1,SNR=7.0						
AKASG	**Malin Array Be**	**144.37**	**332**	PKP	**PKPab**	**03 48 21.6**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=41,slow=5.1,SNR=12						
AKASG	**Malin Array Be**	**144.37**	**332**		**PKPab**	**03 48 22.1**	**+0.6**
AKBB	**Malin Array Si**	**144.37**	**332**		**PKPab**	**03 48 22.0**	**+0.6**
BRTR	**Keskin Array B**	**148.55**	**313**	PKPbc	**PKPbc**	**03 48 34.8**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=127,slow=8.2,SNR=8.3						
BRTR	**Keskin Array B**	**148.55**	**313**	PKPbc	**PKPbc**	**03 48 34.1**	**-0.1**
CONA	**Conrad Observa**	**151.54**	**343**	*e*P	**PKPdf**	**03 48 28.2**	**-6.5**
	comp=Z,4.4nm,1.0s						
MOA	**Molln**	**152.02**	**345**	*e*P	**PKPdf**	**03 48 29.8**	**-5.6**
	comp=Z,8.5nm,1.4s						
KBA	**Koelnbreinsper**	**152.96**	**346**	*e*P	**PKPdf**	**03 48 32.1**	**-4.9**
	comp=Z,6.9nm,1.2s						
WATA	**Walderalm**	**153.08**	**348**	*e*P	**PKPdf**	**03 48 32.6**	**-4.5**
	comp=Z,3.2nm,0.6s						
WTTA	**Wattenberg**	**153.14**	**348**	*e*P	**PKPdf**	**03 48 33.1**	**-4.1**
	comp=Z,8.7nm,1.1s						
MOTA	**Moosalm**	**153.16**	**349**	*e*P	**PKPdf**	**03 48 34.5**	**-2.8**
	comp=Z,14nm,1.2s						
SQTA	**Sankt Quirin**	**153.26**	**349**	*e*P	**PKPdf**	**03 48 34.8**	**-2.5**
	comp=Z,7.9nm,0.7s						
FETA	**Feichten**	**153.54**	**349**	*e*P	**PKPdf**	**03 48 36.0**	**-1.8**
	comp=Z,10nm,0.9s						

*IDC **29** 03:36:30.7±0.6,21°.63S×169°.85E,h0km,mb4.5/19, mb1 4.6/21,mb1mx4.5/35,mbtmp4.5/21,ML3.8/2,MS3.7/2, Ms1 3.7/2,ms1mx3.2/36,Error ellipse: s-maj=18.9km s-min=15.9km az=129.0*

*BJI **29** 03:36:35.0±0.0,21°.70S×169°.70E,h37km,mB5.2/17, mb4.9/29,Ms5.0/6,Ms7 4.6/4*

*NEIC **29** 03:36:36.7±1.5,21°.64S±0°.08×169°.69E±0°.07,h40km±4km, mb4.7/55,Error ellipse: s-maj=12.0km s-min=9.7km az=163.0*

*GCMT **29** 03:36:37.7±0.3,21°.78S±0°.04×169°.59E±0°.02,h32km, MW5.0/57,Moment Tensor Solution. s33,c36; s57,c69; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.84±.23; Mθθ-1.07±.17; Mϕϕ-2.77±.15; Mrθ-0.24±.18; Mθϕ1.04±.08; Mϕr-1.64±.15; Best double couple: M₀3.89900×10¹⁶ NP1:ϕs326.00000°,δ35.00000°,λ73.00000°. NP2: ϕs166.00000°,δ57.00000°,λ102.00000°. Principal axes: T 4.2670, Plg75.0000°, Azm111.0000°; N -0.7350, Plg10.0000°, Azm340.0000°; P -3.5320, Plg11.0000°, Azm248.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 03:36:33.3±0.6,21°.70S±0°.06×169°.69E±0°.05,h15km±3km, h15km:pP-P,n216,σ1s11/226,mb4.6/47,MS3.8/5,11C-2D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.04**	**262**	Pn	**Pn**	**03 37 21.1**	**+0.1**
	16nm,0.3s,baz=76,slow=16,SNR=59						
DZM				Sn	**Sn**	**03 37 56.6**	**-0.4**
	57nm,0.3s,baz=50,slow=19,SNR=9.8						
DZM	**Mont Dzumac**	**3.04**	**262**	*e*Pn	**Pn**	**03 37 21.2**	**+0.3**
	80nm,0.2s						
DZM				*e*Sn	**Sn**	**03 37 55.7**	**-1.4**
	160nm,0.3s						
SANVU	**Saraoutou**	**6.65**	**339**	Pn	**Pn**	**03 38 10.9**	**+0.3**
MSVF	**Nonsavu**	**8.81**	**65**		**Pn**	**03 38 43.9**	**+3.6**
RAO	**Raoul Island**	**13.47**	**126**	LR	LR	03 43 59.6	
	comp=Z,787nm,18.4s,baz=324,slow=34						
RAO	**Raoul Island**	**13.47**	**126**	Pn	**Pn**	**03 39 43.5**	**-0.5**
HNR	**Honiara**	**15.38**	**321**	Pn	**Pn**	**03 40 09.1**	**-0.9**
FUNA	**Funafuti**	**15.98**	**36**	Pn	**Pn**	**03 40 18.7**	**+0.9**
FUNA				IAmb	IAmb	03 40 24.8	
	comp=Z,117nm,1.3s						
EIDS	**Eidsvold**	**17.45**	**254**		**P**	**03 40 37.8**	**+0.4**
URZ	**Urewera**	**17.70**	**160**	P	**Pn**	**03 40 39.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=332,slow=5.7,SNR=4.0						
BKZ	**Black Stump Fm**	**18.36**	**163**	P	**P**	**03 40 48.1**	**+0.7**
BKZ				IAmb	IAmb	03 40 53.1	
	comp=Z,51nm,1.2s						
AFI	**Afiamalu**	**19.26**	**69**	P	**P**	**03 40 57.8**	**+0.2**
AFI				IAmb	IAmb	03 41 06.0	
	comp=Z,65nm,0.9s						
NIUE	**Niue**	**19.29**	**86**	P	**Pn**	**03 40 58.2**	**-0.5**
CTA	**Charters Tower**	**21.95**	**270**	P	**P**	**03 41 28.4**	**+1.8**
	comp=Z,4.0nm,0.9s,baz=34,slow=11,SNR=2.3						
CTAO	**Charters Tower**	**21.95**	**270**	P	**P**	**03 41 28.2**	**+1.6**
CTAO				IAmb	IAmb	03 41 35.0	
	comp=Z,28nm,1.1s						
KRVT	**Keravat (AS076**	**24.35**	**313**	P	**P**	**03 41 50.9**	**+0.1**
	comp=Z,26nm,0.5s,baz=105,slow=7.4,SNR=5.8						
PMG	**Port Moresby**	**24.87**	**296**	P	**P**	**03 41 57.4**	**+1.8**
	comp=Z,15nm,0.7s,baz=229,slow=4.7,SNR=1.9						
PMG	**Port Moresby**	**24.87**	**296**	P	**P**	**03 41 54.4**	**-1.1**
PMG				IAmb	IAmb	03 42 14.7	
	comp=Z,17nm,0.7s						
TOO	**Toolangi**	**26.20**	**228**	P	**P**	**03 42 09.2**	**+1.6**
STKA	**Stephens Creek**	**26.98**	**242**	P	**P**	**03 42 16.5**	**+1.9**
	comp=Z,6.2nm,0.7s,baz=87,slow=9.6,SNR=6.7						
STKA	**Stephens Creek**	**26.98**	**242**	P	**P**	**03 42 15.6**	**+1.0**
WR0	**Warramunga Arr**	**32.86**	**267**	P	**P**	**03 43 07.1**	**+0.3**
WR0				IAmb	IAmb	03 43 19.6	
	comp=Z,10nm,1.2s						
AS31	**Alice Springs**	**33.02**	**260**	P	**P**	**03 43 08.4**	**+0.1**
ASAR	**Alice Springs**	**33.02**	**260**	P	**P**	**03 43 08.7**	**+0.4**
	comp=Z,2.5nm,0.6s,baz=85,slow=9.1,SNR=24						
ASAR				PcP	**PcP**	**03 45 51.1**	**-0.8**
	comp=Z,2.1nm,1.0s,baz=102,slow=4.0,SNR=4.6						
ASAR				ScP	**ScP**	**03 49 37.4**	**+1.6**
	comp=Z,0.8nm,0.9s,baz=99,slow=4.2,SNR=4.6						
ASAR	**Alice Springs**	**33.02**	**260**	P	**P**	**03 43 10.1**	**+1.9**
ASAR					**PcP**	**03 45 51.3**	**-0.7**
WB0	**Warramunga Arr**	**33.02**	**267**	P	**P**	**03 43 08.5**	**+0.3**
WB2	**Warramunga Arr**	**33.03**	**267**	P	**P**	**03 43 08.9**	**+0.6**
WB2				IAmb	IAmb	03 43 26.1	
	comp=Z,10nm,1.2s						
WRAB	**Tennant Creek**	**33.04**	**267**	P	**P**	**03 43 09.5**	**+1.1**
WRA	**Warramunga Arr**	**33.05**	**267**	P	**P**	**03 43 07.6**	**-0.9**
	comp=Z,2.4nm,0.8s,baz=98,slow=8.1,SNR=15						
TBI	**Tubuai**	**37.68**	**100**	*e*LQ	LQ	03 52 22.0	
	comp=Z,384nm,32.2s						
TBI				eLR	LR	03 53 58.8	
	comp=Z,187nm,26.2s						
MTN	**Manton Dam**	**37.77**	**277**	P	**P**	**03 43 47.7**	**-1.4**
MTN				IAmb	IAmb	03 43 51.5	
	comp=Z,7.4nm,0.7s						
PPT2	**Papeete2**	**38.50**	**91**	*e*LQ	LQ	03 52 55.6	
	comp=Z,392nm,29.0s						
PPT2				eLR	LR	03 54 23.6	
	comp=Z,127nm,22.8s						
PPT	**Papeete**	**38.51**	**91**	LR	LR	03 57 49.8	
	comp=Z,35nm,19.7s,baz=262,slow=33						
KNRA	**Kununurra**	**39.15**	**272**	P	**P**	**03 44 00.7**	**0.0**
KNRA				IAmb	IAmb	03 44 17.8	
	comp=Z,12nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.47**	**267**	P	**P**	**03 44 21.0**	**+1.0**
	comp=Z,3.1nm,0.6s,baz=134,slow=7.4,SNR=20						
FITZ	**Fitzroy Crossi**	**41.47**	**267**	P	**P**	**03 44 20.6**	**+0.6**
MSAI	**Masohi**	**43.57**	**289**	P	P	03 44 43.9	+6.8
TAOE	**Nuku Hiva Isla**	**49.84**	**83**	eLR	LR	03 59 41.7	
	comp=Z,194nm,23.8s						
KAPI	**Kappang**	**51.08**	**281**	P	**P**	**03 45 36.0**	**+0.4**
KAPI				IAmb	IAmb	03 45 57.4	
	comp=Z,10nm,0.9s						
TOLI2	**Tolitoli**	**52.84**	**289**	P	**P**	**03 45 48.0**	**-0.7**
VNDA	**Vanda**	**55.99**	**182**	P	**P**	**03 46 11.2**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=29,slow=6.3,SNR=6.4						
KSM	**Kuching**	**62.35**	**284**	P	**P**	**03 46 56.1**	**+0.3**
JOW	**Kunigami**	**62.73**	**318**	P	**P**	**03 46 56.3**	**-1.7**
MJAR	**Matsushiro Arr**	**65.12**	**332**	P	**P**	**03 47 12.3**	**-1.2**
	comp=Z,7.9nm,0.8s,baz=168,slow=7.1,SNR=13						
MJAR	**Matsushiro Arr**	**65.12**	**332**	IAmb	IAmb	03 47 19.1	
	comp=Z,5.2nm,1.1s						
MAJO	**Matsushiro**	**65.12**	**332**	P	**P**	**03 47 13.0**	**-0.5**
MAT	**Matsushiro**	**65.12**	**332**	P	**P**	**03 47 12.8**	**-0.7**
QSPA	**South Pole Qui**	**68.36**	**180**	P	**P**	**03 47 34.4**	**+0.3**
JKA	**Kamikawa-asahi**	**70.05**	**340**	P	**P**	**03 47 44.6**	**+0.1**
KSRS	**Korea Array**	**70.77**	**326**	P	**P**	**03 47 49.0**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=139,slow=6.5,SNR=7.6						
NJ2	**Nanjing**	**72.27**	**316**	*e*P	**P**	**03 48 00.8**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**72.54**	**341**	P	**P**	**03 47 59.5**	**0.0**
USA0B	**Ussuriysk Arra**	**74.11**	**333**	P	**P**	**03 48 08.9**	**+0.1**
USA0B				IAmb	IAmb	03 48 10.0	
	comp=Z,16nm,1.2s						
USRK	**Ussuriysk Ar.**	**74.11**	**333**	P	**P**	**03 48 09.2**	**+0.4**
	comp=Z,6.0nm,0.9s,baz=133,slow=3.9,SNR=6.6						
USRK	**Ussuriysk Ar.**	**74.11**	**333**	P	**P**	**03 48 08.7**	**-0.1**
PETK	**Petropavlovsk-**	**75.22**	**353**	P	**P**	**03 48 15.1**	**0.0**
	comp=Z,5.5nm,0.6s,baz=126,slow=6.8,SNR=12						
PETK	**Petropavlovsk-**	**75.22**	**353**	P	**P**	**03 48 15.5**	**+0.4**
MDJ	**Mudanjiang**	**75.48**	**332**	P	**P**	**03 48 16.4**	**-0.4**
NONG	**Nongkai**	**76.18**	**296**	P	**P**	**03 48 23.2**	**+1.9**
	comp=Z,12μmcomp=Z,10nm,1.3s						
MAW	**Mawson**	**76.32**	**202**	P	**P**	**03 48 22.1**	**+0.9**
	comp=Z,4.1nm,0.8s,baz=92,slow=7.5,SNR=8.4						
MAW	**Mawson**	**76.32**	**202**	P	**P**	**03 48 22.2**	**+0.9**
CN2	**Changchun**	**76.77**	**329**	*e*P	**P**	**03 48 23.3**

MKAR				PKKPbc	**PKKPbc**	**04 06 24.6**	**-2.5**
	comp=Z,0.4nm,0.6s,baz=337,slow=3.3,SNR=3.6							
ARCES	**ARCESS Array B**	**127.55**	**345**	PKP	**PKPdf**	**03 55 36.1**	**-0.9**
	comp=Z,3.4nm,0.5s,baz=69,slow=1.8,SNR=38							
KLMR	**Klimovskoe**	**127.90**	**332**	*e*PKPdf	**PKPdf**	**03 55 35.8**	**-2.1**
KLMR				AMP		03 55 41.0		
	comp=Z,8.0nm,1.1s							
KBZ	**Khabaz**	**131.07**	**310**	PKP	**PKiKP**	**03 55 45.5**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=245,slow=23,SNR=2.0							
FINES	**FINESS Array B**	**133.01**	**337**	PKP	**PKPdf**	**03 55 46.7**	**-1.0**
	comp=Z,6.4nm,1.0s,baz=40,slow=2.2,SNR=18							
AKASG	**Malin Array Be**	**137.72**	**323**	PKP	**PKPdf**	**03 55 55.6**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=63,slow=2.1,SNR=7.7							
AKASG	**Malin Array Be**	**137.72**	**323**		**PKPdf**	**03 55 56.1**	**-0.7**
NB2	**NORSAR Subarra**	**137.92**	**345**	PKP	**PKPdf**	**03 55 57.1**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=40,slow=2.7							
NOA	**NORSAR Array B**	**137.92**	**345**	PKP	**PKPdf**	**03 55 57.1**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=66,slow=1.9,SNR=4.0							
BURAR	**Bucovina Array**	**141.52**	**321**	PKPdf	**PKPdf**	**03 56 03.5**	**-0.5**
DRGR		**143.41**	**321**	↑P	PKPbc	03 56 04.4	0.0
GZR	**Gura Zlata**	**144.09**	**319**	↑P	**PKPab**	**03 56 05.7**	**-0.3**
SIRR	**Siria**	**144.30**	**321**	↑P	PKPbc	03 56 07.0	-0.1
PSZ	**Piszkesteto**	**144.36**	**324**	↑P	**PKPab**	**03 56 06.7**	**-0.3**
PSZ	**Piszkesteto**	**144.36**	**324**	PKPdf	**PKPab**	**03 56 06.7**	**-0.3**
MORC	**Moravsky Berou**	**144.39**	**329**	↑P	**PKPdf**	**03 56 09.9**	**+1.0**
MORC	**Moravsky Berou**	**144.39**	**329**	*e*PKP	**PKPdf**	**03 56 08.8**	**-0.1**
OSTC	**Ostas**	**144.48**	**331**	*e*PKP	PKPbc	03 56 07.4	-0.1
CHVC	**Chvalec**	**144.53**	**331**	*e*PKP	**PKPab**	**03 56 07.3**	**-0.2**
KRLC	**Kraliky**	**144.55**	**330**	*e*PKP	**PKPab**	**03 56 07.2**	**-0.4**
KARP	**Karpathos**	**144.56**	**301**	PKPdf	**PKPab**	**03 56 07.9**	**-0.1**
HERR	**Herculane**	**144.56**	**318**	↑P	**PKPab**	**03 56 07.3**	**-0.4**
DPC	**Dobruska-Polom**	**144.57**	**330**	*e*PKP	**PKPab**	**03 56 07.5**	**-0.2**
DPC				*ex*	x	03 56 13.3		
UPC	**Upice**	**144.61**	**331**	*e*PKP	**PKPab**	**03 56 07.5**	**-0.2**
BZS	**Buzias**	**144.67**	**320**	↑P	**PKPab**	**03 56 07.8**	**-0.4**
JAVC	**Velka Javorina**	**144.93**	**327**	*e*PKP	**PKPdf**	**03 56 10.4**	**+0.5**
VRAC	**Vranov**	**145.16**	**329**	↑P	**PKPbc**	**03 56 09.5**	**-0.2**
VRAC	**Vranov**	**145.16**	**329**	*e*PKP	**PKPbc**	**03 56 09.2**	**-0.5**
PVCC	**Panska Ves**	**145.24**	**332**	*e*PKP	**PKPbc**	**03 56 09.7**	**-0.2**
PVCC				*ex*	x	03 56 14.1		
BRG	**Berggiesshubel**	**145.25**	**333**	*i* PKP	**PKPbc**	**03 56 09.3**	**-0.6**
	comp=Z,24nm,0.7s							
BRG	**Berggiesshubel**	**145.25**	**333**	*e*PKPbc	**PKPbc**	**03 56 09.7**	**-0.2**
	baz=39,slow=2.8							
CLL	**Collm**	**145.31**	**334**	*i* PKPbc	**PKPbc**	**03 56 09.2**	**-0.9**
	comp=Z,40nm,1.2s							
CLL				*eP*	**PP**	**03 59 28.0**	**-1.4**
CLL	**Collm**	**145.31**	**334**	*e*PKPbc	**PKPbc**	**04 06 09.7**	**-0.4**
	baz=39,slow=2.8							
CLL	**Collm**	**145.31**	**334**	PKPbc	**PKPbc**	**03 56 09.0**	**-1.1**
KRUC	**Moravsky**	**145.42**	**329**	*e*PKP	**PKPbc**	**03 56 10.0**	**-0.6**
APE	**Apeiranthos**	**145.45**	**304**	↓P	**PKPdf**	**03 56 09.8**	**-1.3**
FBE	**Freiberg**	**145.46**	**333**	*e*PKPbc	**PKPdf**	**03 56 10.6**	**0.0**
	baz=39,slow=2.8							
NRDL	**Niedersach Rie**	**145.47**	**338**	*e*PKPbc	**PKPdf**	**03 56 10.4**	**-0.1**
	baz=39,slow=2.8							
ASSE	**Asse, Remlinge**	**145.56**	**337**	*e*PKPbc	**PKPbc**	**03 56 10.7**	**-0.1**
	baz=39,slow=2.8							
PRU	**Pruhonice**	**145.64**	**331**	*e*PKP	**PKPdf**	**03 56 10.8**	**-0.1**
PRU				*ex*	x	03 56 16.8		
NEUB	**Neuenburg**	**145.88**	**335**	*e*PKPbc	**PKPbc**	**03 56 11.8**	**-0.1**
	baz=39,slow=2.8							
CLZ	**Clausthal**	**145.91**	**337**	*e*PKPbc	**PKPbc**	**03 56 12.0**	**0.0**
	baz=39,slow=2.8							
ESK	**Eskdalemuir**	**146.01**	**353**		**PKPdf**	**03 56 11.3**	**-0.1**
PBCC	**Pribram**	**146.10**	**331**	*e*PKP	**PKPbc**	**03 56 12.3**	**-0.4**
TANN	**Tannenbergstha**	**146.22**	**334**	*e*PKPbc	**PKPbc**	**03 56 12.9**	**-0.1**
	baz=39,slow=2.8							
WERD	**Werda**	**146.26**	**334**	*e*PKPbc	**PKPbc**	**03 56 13.1**	**-0.1**
	baz=39,slow=2.8							
PLN	**Plauen**	**146.29**	**334**	*e*PKPbc	**PKPbc**	**03 56 13.1**	**-0.1**
	baz=39,slow=2.8							
GUNZ	**Gunzen**	**146.31**	**334**	*e*PKPbc	**PKPbc**	**03 56 13.4**	**0.0**
	baz=39,slow=2.8							
WERN	**Wernitzgruen**	**146.35**	**333**	*e*PKPbc	**PKPbc**	**03 56 13.6**	**+0.1**
	baz=39,slow=2.8							
NKC	**Novy Kostel**	**146.36**	**333**	*e*PKP	**PKPbc**	**03 56 13.1**	**-0.4**
MOX	**Moxa**	**146.38**	**335**	*e*PKPbc	**PKPbc**	**03 56 13.1**	**-0.4**
	baz=39,slow=2.8							
IBBN	**Ibbenburen**	**146.41**	**340**	*e*PKPbc	**PKPbc**	**03 56 13.2**	**-0.3**
	baz=39,slow=2.8							
IDI	**Anoyia**	**146.42**	**302**	↑P	**PKPbc**	**03 56 13.9**	**-0.2**
IDI	**Anoyia**	**146.42**	**302**	PKPbc	**PKPdf**	**03 56 13.4**	**+0.6**
CONA	**Conrad Observa**	**146.45**	**328**	*e*P	**PKPbc**	**03 56 13.7**	**-0.2**
	comp=Z,21nm,1.5s,SNR=5.3							
DIVS	**Divibare**	**146.45**	**319**	*e*P	**PKPdf**	**03 56 13.0**	**+0.3**
MANZ	**Manzenberg**	**146.69**	**333**	*e*PKPbc	**PKPbc**	**03 56 14.2**	**-0.2**
	baz=39,slow=2.8							
KHC	**Kasperske Hory**	**146.69**	**331**	*e*PKP	**PKPbc**	**03 56 14.0**	**-0.5**
KHC				*ex*	x	03 56 20.0		
KHC	**Kasperske Hory**	**146.69**	**331**	PKPbc	**PKPbc**	**03 56 14.2**	**-0.3**
ROTZ	**Rotzenmuhle**	**146.82**	**333**	*e*PKPbc	**PKPbc**	**03 56 14.8**	**0.0**
	baz=39,slow=2.8							
GEC2	**GERESS Array S**	**146.84**	**331**	*e*PKPbc	**PKPbc**	**03 56 14.9**	**-0.1**
	baz=39,slow=2.8							
GEC2	**GERESS Array S**	**146.84**	**331**	PKPbc	**PKPbc**	**03 56 14.1**	**-0.9**
GEC2B	**GERESS ARRAY S**	**146.84**	**331**	PKPbc	**PKPbc**	**03 56 14.1**	**-0.9**
GERES	**GERESS Array B**	**146.84**	**331**	PKPbc	**PKPbc**	**03 56 14.5**	**-0.5**
	comp=Z,10nm,0.8s,baz=29,slow=3.0,SNR=59							
GERES	**GERESS Array B**	**146.84**	**331**		**PKPdf**	**03 56 12.2**	**-0.9**
BBLS	**Lazići**	**146.94**	**319**	*e*P	**PKPbc**	**03 56 14.7**	**-0.7**
WET	**Wettzell**	**147.00**	**332**	*e*PKPbc	**PKPbc**	**03 56 15.4**	**+0.1**
	baz=39,slow=2.8							
ARSA	**Arzberg**	**147.07**	**327**	*i* P	**PKPab**	**03 56 16.4**	**-0.7**
	comp=Z,5.6nm,1.1s							
HAPS	**Han Pijesak,BI**	**147.09**	**320**	*e*P	**PKPbc**	**03 56 16.0**	**+0.1**
MOA	**Molln**	**147.29**	**329**	*e*P	**PKPbc**	**03 56 16.2**	**0.0**
	comp=Z,10nm,1.1s							
SOKA	**Soboth**	**147.71**	**327**	*e*P	**PKPbc**	**03 56 16.4**	**-1.0**
	comp=Z,9.2nm,0.8s							
BLY	**Banja Luka**	**147.75**	**322**	*e*P	**PKPbc**	**03 56 16.7**	**-0.8**
PDG	**Podgorica**	**147.78**	**317**	*e*P	**PKPbc**	**03 56 16.5**	**-1.1**
TNS	**Taunus Mts**	**147.93**	**337**	*e*PKPbc	**PKPbc**	**03 56 17.7**	**-0.2**
	baz=39,slow=2.8							
DRME	**Dracevica, Mon**	**147.95**	**316**	*e*P	**PKPab**	**03 56 21.8**	**+1.1**
BRY	**Bratogost**	**147.99**	**318**	*e*P	**PKPbc**	**03 56 17.6**	**-0.8**
CRES	**Cresnjev**	**148.04**	**325**	*e*P	**PKPdf**	**03 56 16.6**	**+1.5**
OBKA	**Obir**	**148.07**	**327**	*e*P	**PKPbc**	**03 56 18.0**	**-0.5**
	comp=Z,10nm,1.4s							
KBA	**Koelnbreinsper**	**148.27**	**329**	*i* P	**PKPbc**	**03 56 18.5**	**-0.6**
	comp=Z,12nm,0.7s							
LJU	**Ljubljana**	**148.39**	**326**	*e*P	**PKPbc**	**03 56 18.3**	**-0.9**
BTNL	**Ternell**	**148.41**	**340**	PKPbc	**PKPbc**	**03 56 18.2**	**-0.9**
BTNL				PKPab	**PKiKP**	**03 56 21.3**	**+0.6**
BTNL				pPKP	**sPKPab**	**03 56 27.2**	**-0.3**
BTNL				pPKPbc	**sPKPab**	**03 56 29.8**	**+3.6**
MEM	**Membach**	**148.43**	**340**	PKPbc	**PKPbc**	**03 56 18.4**	**-0.7**
MEM				PKPab	**PKiKP**	**03 56 21.1**	**+0.4**
MYKA	**Terra Mystica**	**148.44**	**328**	*e*P	**PKPbc**	**03 56 17.7**	**-1.7**
	comp=Z,6.2nm,0.5s							
BSTI	**Sart Tilman**	**148.59**	**340**	PKPbc	**PKPbc**	**03 56 18.8**	**-0.8**
PRED	**Cave del Predi**	**148.61**	**327**	PKPbc	**PKPbc**	**03 56 18.3**	**-1.6**
CEY	**Cerknica**	**148.65**	**326**	↑*i*P	**PKPbc**	**03 56 18.6**	**-1.3**
BCLA	**Clavier**	**148.82**	**341**	PKPbc	**PKPbc**	**03 56 18.7**	**-1.4**
BCLA				PKiKP	**pPKPdf**	**03 56 20.5**	**+0.4**
BCLA				PKPab	**PKiKP**	**03 56 22.4**	**+0.9**
BCLA				pPKP	**pPKPab**	**03 56 27.0**	**-0.8**
BCLA				pPKPbc	**sPKPab**	**03 56 30.7**	**+1.7**
STU	**Stuttgart**	**148.83**	**335**	*e*PKPbc	**PKPbc**	**03 56 20.2**	**0.0**
	baz=39,slow=2.8							
ABTA	**Abfaltersbach**	**148.91**	**329**	*e*P	**PKPbc**	**03 56 19.4**	**-1.2**
	comp=Z,13nm,1.1s							
BGES	**Gesves**	**148.92**	**341**	PKPdf	**PKPdf**	**03 56 15.4**	**-1.0**
BGES				PKPbc	**pPKPdf**	**03 56 18.9**	**-1.4**
BGES				pPKP	**pPKPab**	**03 56 27.0**	**-1.1**
BGES				pPKPbc	**sPKPab**	**03 56 30.2**	**+0.7**
WATA	**Walderalm**	**148.92**	**331**	*e*P	**PKPbc**	**03 56 19.9**	**-0.8**
	comp=Z,18nm,1.3s							
WTTA	**Wattenberg**	**148.95**	**330**	*e*P	**PKPbc**	**03 56 20.0**	**-0.8**
	comp=Z,28nm,1.2s,SNR=5.0							
BMRD	**Maredsous**	**149.09**	**341**	PKPbc	**PKPbc**	**03 56 20.2**	**-0.6**
MOTA	**Moosalm**	**149.13**	**331**	*e*P	**PKPbc**	**03 56 20.4**	**-0.8**
	comp=Z,25nm,1.0s,SNR=5.8							
STAL	**STALIGIAL**	**149.16**	**328**	PKPbc	**PKPbc**	**03 56 20.5**	**-0.7**
RETA	**Reutte**	**149.17**	**332**	*e*P	**PKPbc**	**03 56 20.3**	**-0.9**
	comp=Z,4.8nm,0.6s							
SQTA	**Sankt Quirin**	**149.17**	**331**	*e*P	**PKPbc**	**03 56 20.6**	**-0.7**
	comp=Z,16nm,0.6s,SNR=6.2							
WLF	**Walferdange**	**149.20**	**339**	PKiKP	**PKPbc**	**03 56 21.2**	**+0.1**
WLF	**Walferdange**	**149.20**	**339**	*e*PKPbc	**PKPbc**	**03 56 21.5**	**+0.4**
	baz=39,slow=2.8							
WLF	**Walferdange**	**149.20**	**339**	PKPbc	**PKPbc**	**03 56 21.1**	**-0.1**
CIMO	**Cimolais**	**149.26**	**328**	PKPbc	**PKPbc**	**03 56 20.4**	**-1.0**
UBR	**Ueberruh**	**149.31**	**332**	*e*PKPbc	**PKPbc**	**03 56 21.0**	**-0.5**
	baz=39,slow=2.8							
DOU	**Dourbes**	**149.32**	**341**	PKiKP	**PKPbc**	**03 56 20.8**	**-0.6**
BFO	**Black Forest**	**149.53**	**335**	*e*PKPbc	**PKPbc**	**03 56 21.4**	**-0.6**
	baz=39,slow=2.8							
BFO	**Black Forest**	**149.53**	**335**	PKPbc	**PKPbc**	**03 56 21.1**	**-0.9**
FETA	**Feichten**	**149.54**	**331**	*eP*	**PKPbc**	**03 56 21.5**	**-0.8**
	comp=Z,26nm,1.0s,SNR=6.5							
DAVA	**Damuels**	**149.71**	**332**	*eP*	**PKPbc**	**03 56 22.7**	**0.0**
	comp=Z,21nm,1.1s							
CTI	**Castel Tesino**	**149.83**	**329**	PKPbc	**PKPbc**	**03 56 22.4**	**-0.6**
ESDC	**Sonseca Array**	**161.28**	**345**	PKPab	**PKPab**	**03 57 17.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=25,slow=2.6,SNR=4.3							
TORD	**Torodi Ar. Bea**	**165.74**	**235**	PKP	**PKPdf**	**03 56 37.5**	**-0.8**
	comp=Z,1.6nm,1.1s,baz=335,slow=2.2,SNR=4.2							
TORD				PKPab	**PKPab**	**03 57 37.6**	**+0.1**
	comp=Z,1.1nm,1.1s,baz=121,slow=2.8,SNR=2.8							

*IDC **29** 03:42:07.4±2.8, 27°.78N×56°.26E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/34, mbtmp3.6/4, Error ellipse: s-maj=80.5km s-min=27.8km az=154.0*
*TEH **29** 03:42:10.2, 28°.30N×56°.49E, h8km, ML3.2*
*THR **29** 03:42:11.1±0.3, 28°.25N×56°.33E, h14km±5km, ML3.0*

ISC 29 03:42:10.8±0.8, 28°.25N±0°.06×56°.44E±0°.06, h10km, n22, σ1§83/23, mb3.5/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IBND	**Bandar-abas**	**0.81**	**173**		*e*Pg	**Pb**		**03 42 27.2**	**+0.3**
IBND					*e*			03 42 48.4	
GENO	**Geno**	**0.88**	**196**		*e*Pg	**Pg**		**03 42 28.0**	**+0.2**
GENO					*e*			03 42 51.3	
BNDS	**Bandar-Abbas**	**0.88**	**196**		*e*Pg	**Pg**		**03 42 27.4**	**-0.4**
BNDS					IAML			03 42 50.5	
	comp=N,521nm,0.3s								
BNDS	**Bandar-Abbas**	**0.88**	**196**		*e*Pg	**Pg**		**03 42 27.4**	**-0.4**
NGRK	**Negar Kerman**	**1.41**	**10**		*e*Pg	**Pn**		**03 42 36.6**	**-0.4**
NGRK					*e*			03 43 03.5	
CHMN	**Cheshme madani**	**1.87**	**31**		*e*Pn	**Pn**		**03 42 43.0**	**-0.3**
KBAM	**BAM**	**1.98**	**63**		*e*Pn	**Pn**		**03 42 45.2**	**+0.7**
KBAM					*e*			03 43 21.9	
KHGB	**Koh Gabri**	**2.12**	**1**		*e*Pn	**Pn**		**03 42 47.4**	**+0.8**
KHGB					*e*			03 42 55.9	
IBAF	**Bafgh**	**3.41**	**347**		*e*Pn	**Pn**		**03 43 05.6**	**+1.3**
IMEH	**Mehriz**	**3.51**	**334**		*e*Pn	**Pn**		**03 43 07.3**	**+1.6**
ISAD	**Sadrabad**	**4.36**	**328**		*e*Pn	**Pn**		**03 43 19.4**	**+2.0**
BSRN	**Basiran**	**4.37**	**32**		*e*Pn	**Pn**		**03 43 20.1**	**+2.6**
BSRN					*e*Sg	**Sg**		**03 44 28.3**	**-3.0**
BSRN	**Basiran**	**4.37**	**32**		*e*Pn	**Pn**		**03 43 20.1**	**+2.6**
YZKH	**Yazd**	**4.42**	**339**		*e*Pn	**Pn**		**03 43 19.7**	**+1.6**
YZKH	**Yazd**	**4.42**	**339**		*e*Pn	**Pn**		**03 43 19.7**	**+1.6**
NHDN	**Nehbandan**	**4.43**	**44**		*e*Pn	**Pn**		**03 43 20.3**	**+2.0**
IRAM	**Ramesheh**	**4.99**	**316**		*e*Pn	**Pn**		**03 43 27.1**	**+1.0**
KLNJ	**Kolanjah**	**5.03**	**304**		*e*Pn	**Pn**		**03 43 28.4**	**+1.6**
BRTR	**Keskin Array B**	**22.03**	**307**		P	**P**		**03 47 05.7**	**-0.1**
	comp=N,0.6nm,0.5s,baz=112,slow=11,SNR=1.9								
MKAR	**Makanchi Array**	**27.43**	**41**		P	**P**		**03 47 59.4**	**+2.6**
	comp=N,0.4nm,0.8s,baz=243,slow=9.1,SNR=2.2								
ZALV	**Zalesovo Beam**	**33.01**	**31**		P	**P**		**03 48 47.7**	**+1.8**
	comp=N,0.4nm,0.4s,baz=233,slow=9.4,SNR=2.5								
TORD	**Torodi Ar. Bea**	**52.95**	**265**		P	**P**		**03 51 24.4**	**-3.4**
	comp=N,0.7nm,0.5s,baz=61,slow=7.4,SNR=17								

*IDC **29** 03:54:12.7±1.2, 64°.48N×17°.65W, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.5/37, mbtmp3.4/5, MS4.0/1, Ms1 4.0/1, ms1mx2.7/38, Error ellipse: s-maj=46.1km s-min=24.8km az=39.0*

ISC 29 03:54:13.8±1.1, 64°.6N±0°.1×17°.6W±0°.2, h9km, n7, σ1§68/7, mb3.5/5, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCO	**Scoresbysund**	**6.18**	**346**		*e*		Pn	03 55 40.0	-5.1
	baz=171,slow=7.9								
SCO					*i* P		**Pn**	**03 55 43.0**	**-2.1**
SCO					*e*S		**Sn**	**03 56 57.4**	**+1.5**
SCO					IAML			03 57 08.5	
	comp=Z,0.7nm,0.4s								
GERES	**GERESS Array B**	**22.94**	**118**		P		**P**	**03 59 19.2**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=305,slow=7.0,SNR=2.7								
ILAR	**Eielson Array**	**45.76**	**332**		P		**P**	**04 02 36.5**	**+1.6**
	comp=Z,0.6nm,1.0s,baz=20,slow=8.0,SNR=5.5								
YAK	**Yakutsk**	**51.40**	**19**		LR		LR	04 23 59.2	
	comp=Z,163nm,19.9s,baz=88,slow=35								
MKAR	**Makanchi Array**	**52.83**	**58**		P		**P**	**04 03 28.7**	**-0.5**
	comp=Z,0.6nm,0.9s,baz=330,slow=4.0,SNR=2.8								
TORD	**Torodi Ar. Bea**	**53.06**	**156**		P		**P**	**04 03 30.5**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=339,slow=6.2,SNR=2.3								
PDAR	**Pinedale Array**	**53.18**	**293**		P		**P**	**04 03 31.9**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=62,slow=7.7,SNR=5.2								

*SJA **29** 04:05:50.6±0.4, 35°.61S×74°.63W, h118km±12km, ML3.9, MW4.3*
*IDC **29** 04:05:55.0±1.5, 35°.87S×73°.51W, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.7/25, mbtmp3.6/5, ML3.6/1, MS3.6/3, Ms1 3.6/3, ms1mx3.0/21, Error ellipse: s-maj=46.0km s-min=21.0km az=74.0*
*GUC **29** 04:05:55.5±0.6, 35°.80S×73°.52W, h10km±6km, ML3.9*

ISC 29 04:05:54.2±2.3, 35°.81S±0°.03×73°.55W±0°.05, h2km±15km, n33, σ2§06/43, mb3.7/3, MS3.4/3, 2C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BI03	**Tigo**	**1.11**	**158**		*eP*	**Pb**		**04 06 15.1**	**-1.0**
BI03					*i* S	**Sb**		**04 06 29.4**	**-1.6**
BI03					IAML			04 06 34.8	
	comp=N,12μm,0.4s								
BO03	**Pichilemu**	**1.85**	**45**	↑	*i*P		**Pn**	**04 06 26.0**	**-0.9**
BO03					*i* S		**Sn**	**04 06 49.5**	**-1.4**
BI02	**San Fabin de**	**2.03**	**115**	↑	*e*P		**Pn**	**04 06 29.4**	**0.0**
BI02					*i* S		**Sn**	**04 06 54.6**	**-0.7**
BI02					IAML			04 07 02.7	
	comp=E,840nm,0.4s								
BO02	**Sierra Bellavi**	**2.48**	**67**		*e*P		**Pn**	**04 06 36.0**	**+0.3**
BO02					*e*S		**Sn**	**04 07 07.4**	**+0.8**
VA05	**Santo Domingo**	**2.68**	**37**		*e*P		**Pn**	**04 06 37.8**	**-0.4**
MT09	**Talagante**	**2.93**	**47**		*e*P		**Pn**	**04 06 42.1**	**+0.3**
MT09					*i* S		**Sn**	**04 07 16.5**	**-1.2**
MT09					IAML			04 07 47.2	
	comp=E,338nm,0.6s								
MT05	**Renca**	**3.35**	**45**		*e*P		**Pn**	**04 06 48.2**	**+0.7**
MT05					*e*S		**Sn**	**04 07 26.4**	**-1.6**
MT05					IAML			04 08 04.1	
	comp=E,243nm,0.5s								
LC01	**Cunco**	**3.36**	**157**		*e*P		**Pn**	**04 06 47.7**	**+0.1**
LC01					*i* S		**Sn**	**04 07 24.4**	**-3.6**
LC01					IAML			04 07 45.9	
	comp=N,134nm,0.5s								
EDS3	**Malargue**	**3.38**	**90**		*e*P		**Pb**	**04 06 54.9**	**+0.1**
EDS3					*e*S		**Sg**	**04 07 45.4**	**+2.7**
LMEL	**Las Melosas**	**3.38**	**56**		*e*P		**Pn**	**04 06 49.8**	**+1.7**
LMEL					IAML			04 07 51.8	
	comp=N,156nm,0.6s								
MT03	**Universidad Ad**	**3.41**	**48**		*e*P		**Pn**	**04 06 48.8**	**+0.3**
MT03					*i* S		**Sn**	**04 07 29.3**	**-0.2**
MT03					IAML			04 07 59.1	
	comp=N,279nm,0.5s								
ROC1	**El Roble**	**3.52**	**37**		*e*P		**Pn**	**04 06 51.2**	**+1.1**
ROC1					*e*S		**Sn**	**04 07 32.8**	**+0.3**
PEL	**Peldehue**	**3.56**	**42**		*e*P		**Pn**	**04 06 50.9**	**+0.4**
PEL					*i* S		**Sn**	**04 07 33.1**	**-0.1**
PEL					IAML			04 08 03.9	
	comp=N,185nm,0.6s								
PEL	**Peldehue**	**3.56**	**42**		*e*P		**Pn**	**04 06 52.4**	**+1.9**
PEL					*e*P		**Pb**	**04 06 55.6**	**-2.3**
PEL					*e*S		**Sb**	**04 07 38.5**	**-3.2**
LAMA	**Las Malvinas**	**3.65**	**77**		*e*P		**Pn**	**04 06 55.6**	**+3.9**
LAMA					*e*S		**Sg**	**04 07 51.5**	**-0.1**
AAGR	**Agrelo**	**4.76**	**56**		*e*P		**Pn**	**04 07 10.2**	**+3.2**
H03S1	**Juan Fernandez**	**4.82**	**293**		T	T		04 12 02.7	
	baz=115,slow=74,SNR=778								
H03S3	**Juan Fernandez**	**4.83**	**293**		T	T		04 12 02.1	
	baz=115,slow=74,SNR=709								
ARCO	**CERRO ARCO**	**4.84**	**54**		*e*P		**Pn**	**04 07 10.9**	**+2.8**
ARCO					IAML			04 08 40.9	
	comp=Z,64nm,0.9s								
H03S2	**Juan Fernandez**	**4.84**	**292**		T	T		04 12 04.1	
	baz=115,slow=74,SNR=788								
AUSP	**Uspallata**	**4.98**	**45**		*e*P		**Pn**	**04 07 12.4**	**+2.2**
H03N1	**Juan Fernandez**	**5.01**	**297**		Pn		**Pn**	**04 07 10.7**	**+0.6**
	baz=86,slow=74,SNR=9.1								
H03N1					T	T		04 12 26.1	
	baz=111,slow=76,SNR=12								
H03N3	**Juan Fernandez**	**5.01**	**296**		Pn		**Pn**	**04 07 10.7**	**+0.5**
	baz=86,slow=74,SNR=5.1								
H03N3					T	T		04 12 24.1	
	baz=111,slow=76,SNR=20								
H03N2	**Juan Fernandez**	**5.03**	**297**		Pn		**Pn**	**04 07 10.8**	**+0.6**
	baz=86,slow=74,SNR=5.2								
H03N2					T	T		04 12 25.8	
	baz=111,slow=76,SNR=15								
ASAL	**Salagasta**	**5.06**	**52**		*e*P		**Pn**	**04 07 14.1**	**+3.0**
ASAL					*e*S		**Sb**	**04 08 18.0**	**-6.8**
ASAL					IAML			04 08 50.5	
	comp=Z,33nm,1.1s								
PLCA	**Paso Flores**	**5.45**	**155**		Pn		**Pn**	**04 07 17.4**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=325,slow=13,SNR=9.6								
PLCA					Lg		Lg	04 08 45.7	
	comp=Z,0.8nm,0.3s,baz=269,slow=14,SNR=3.4								
RTCV	**Cerro Valdivia**	**5.74**	**48**		*e*P		**Pn**	**04 07 21.9**	**+1.5**
RTCV					*e*S		**Sn**	**04 08 29.6**	**+2.8**
RTCV					IAML			04 09 08.2	
	comp=Z,32nm,1.4s								
LPAZ	**La Paz**	**20.04**	**15**		P		Pn	04 10 32.3	+1.5
	comp=Z,1.4nm,0.7s,baz=202,slow=5.4,SNR=7.6								
SIV	**San Ignacio**	**22.67**	**33**		P		**P**	**04 10 57.4**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=222,slow=16,SNR=10								
SIV					LR		LR	04 21 36.5	
	comp=Z,108nm,18.1s,baz=180,slow=42								
ATAH	**Atahualpa**	**28.89**	**350**		LR		LR	04 22 27.7	
	comp=Z,76nm,18.0s,baz=221,slow=34								
RCBR	**Riachuelo**	**45.65**	**58**		LR		LR	04 35 38.5	
	comp=Z,81nm,18.4s,baz=196,slow=39								
TXAR	**Lajitas Array**	**70.73**	**332**		P		**P**	**04 17 13.2**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=156,slow=8.7,SNR=6.2								
NVAR	**Mina Array Bea**

CAPN S Sn 04 15 16.7 +2.0
baz=8.9
M24K Tolsona, Glenn 2.17 106 P Pn 04 14 50.7 -0.5
baz=289,SNR=603
M24K S Sn 04 15 17.9 -0.1
baz=289
M24K Tolsona, Glenn 2.17 106 Pn 04 14 50.6 -0.5
PWL Port Wells 2.21 150 Pn 04 14 50.1 -1.6
PWL Sn 04 15 14.9 -3.9
CCB Clear Creek Bu 2.25 32 Pn 04 14 52.1 0.0
MLY Manley 2.26 359 P Pn 04 14 53.0 +0.7
baz=177,SNR=1000
MLY S Sn 04 15 19.4 -0.7
baz=177
MLY Manley 2.26 359 Pn 04 14 53.0 +0.7
SLKM Skilak Lake 2.29 175 Pn 04 14 51.5 -1.2
HDA Harding Lake 2.31 43 P Pn 04 14 52.9 0.0
baz=225,SNR=1000
HDA S Sn 04 15 19.9 -1.2
baz=225
HDA S Sn 04 15 19.9 -1.2
baz=225
HDA Harding Lake 2.31 43 Pn 04 14 52.9 0.0
HDA Harding Lake 2.31 43 Sn 04 15 19.9 -1.2
O22K Cooper Landing 2.35 169 P Pn 04 14 52.1 -1.3
baz=351,SNR=134
O22K S Sn 04 15 19.2 -2.7
baz=351
O22K Cooper Landing 2.35 169 Pn 04 14 52.1 -1.3
PAX Paxson 2.36 83 P Pn 04 14 53.4 -0.3
PAX Paxson 2.36 83 Sn 04 15 19.4 -0.3
DFR Drift River 2.41 205 Pn 04 14 53.5 -0.9
MDM Murphy Dome 2.43 25 Pn 04 14 54.7 +0.3
TCOL CIGO, UAF Yank 2.43 29 P Pn 04 14 54.7 +0.3
baz=210,SNR=1000
TCOL S Sn 04 15 23.3 -0.5
baz=210
TCOL CIGO, UAF Yank 2.43 29 Pn 04 14 54.7 +0.3
I53US FAIRBANKS INFR 2.43 29 P Pn 04 14 55.0 +0.6
baz=204,slow=17,SNR=3.3
I53US *i* 04 30 20.0
baz=213,slow=324,SNR=7.4
COLA College 2.43 29 *c i* P Pn 04 14 54.2 -0.2
COLA College 2.43 29 Pn 04 14 54.7 +0.3
I23K Minto, Yukon-K 2.44 12 P Pn 04 14 55.0 +0.4
baz=192,SNR=1000
I23K S Sn 04 15 23.8 -0.2
baz=192
I23K Minto, Yukon-K 2.44 12 Pn 04 14 55.0 +0.4
PS08 TAPS Pump Stn8 2.44 42 Pn 04 14 54.6 -0.1
TTA Tatalina 2.48 276 P Pn 04 14 55.2 0.0
TTA Tatalina 2.48 276 Pn Pn 04 14 55.2 0.0
TT01 Tatalina 2.49 275 Pn 04 14 55.5 +0.2
NCT North Crescent 2.49 207 Pn 04 14 54.7 -0.6
PS11 TAPS Pump St11 2.49 104 Pn 04 14 55.0 -0.3
GLI Glacier Island 2.53 137 Pn 04 14 54.0 -1.8
RDWB Redoubt West 2.54 206 Pn 04 14 55.3 -0.8
RSO Redoubt South 2.54 205 Pn 04 14 55.5 -0.7
KLU Klutina 2.55 118 Pn 04 14 54.3 -1.9
RED Redoubt Volcan 2.59 205 Pn 04 14 55.9 -0.8
IL31 2.59 38 Pn 04 14 56.5 0.0
ILAR Eielson Array 2.59 38 P Pn 04 14 56.8 +0.2
550nm,0.3s,baz=220,slow=14
ILAR S Sn 04 15 20.7 -7.0
123nm,0.3s,baz=233,slow=17,SNR=4.2
ILAR Eielson Array 2.59 38 P Pn 04 14 55.9 -0.7
ILAR 04 15 20.7
ILAR Eielson Array 2.59 38 Pn 04 14 55.9 -0.7
VMT TAPS TI Valdez 2.63 128 Pn 04 14 54.9 -2.2
POKR Poker Plat Res 2.73 29 P Pn 04 14 58.8 +0.4
baz=211,SNR=1000
POKR Poker Plat Res 2.73 29 Pn 04 14 58.9 +0.4
SEW Seward 2.74 168 Pn 04 14 56.9 -1.7
RIDG Independent Ri 2.78 67 Pn 04 14 59.2 +0.1
DIV Divide 2.82 124 Pn 04 14 57.4 -2.3
FID Port Fidalgo 2.83 134 Pn 04 14 57.7 -2.1
PS12 TAPS Pump St12 2.88 115 Pn 04 14 58.6 -1.8
SVW2 Sparrevohn 2.90 237 Pn 04 15 00.3 -0.3
BRLK Bradley Lake 3.03 183 Pn Pn 04 15 01.6 -0.8
BRSE Bradley Lake S 3.05 181 Pn 04 15 01.5 -1.2
N25K Chitina, Valde 3.05 110 P Pn 04 15 01.3 -1.5
baz=295,SNR=418
N25K S Sn 04 15 35.6 -3.1
baz=295
N25K Chitina, Valde 3.05 110 Pn 04 15 01.4 -1.5
ILS Iliamna Low So 3.07 204 Pn 04 15 02.5 -0.6
DOT Dot Lake 3.09 71 Pn Pn 04 15 02.4 -0.8
HIN Hinchinbrook I 3.09 139 Pn 04 15 01.3 -2.0
PS06 TAPS Pump Stn6 3.11 7 Pn 04 15 04.2 +0.7
MENT Mentasta 3.16 84 Pn 04 15 04.0 -0.1
HOM Homer 3.17 190 P Pn 04 15 03.9 -0.4
baz=9.9,SNR=87
HOM S Sn 04 15 40.9 -0.5
baz=9.9
SCRK Sand Creek 3.21 65 P Pn 04 15 04.3 -0.6
baz=250,SNR=1000
SCRK S Sn 04 15 39.7 -2.8
baz=250
SCRK Sand Creek 3.21 65 Pn 04 15 04.3 -0.6
EYAK Cordova Ski Ar 3.22 132 Pn 04 15 03.4 -1.5
CNPM China Poot 3.28 186 Pn 04 15 04.6 -1.2
L26K Log Cabin Wild 3.33 83 P Pn 04 15 06.3 -0.1
baz=268
L26K S Sn 04 15 44.9 -0.4
baz=268
BMRM Bremner River 3.38 120 Pn 04 15 04.5 -2.6
OPT Oil Point 3.39 203 Pn 04 15 06.7 -0.5
GLB Gilahina Butte 3.46 110 Pn 04 15 06.5 -1.7
IM03 3.49 338 Pn 04 15 09.4 +0.9
IMAR Indian Mountai 3.49 338 Pn 04 15 08.7 +0.2
AU22 Augustine Moun 3.67 203 Pn 04 15 10.7 -0.3
AUL Augustine Lava 3.68 203 Pn 04 15 10.9 -0.1
AUCH Augustine Cone 3.70 203 Pn 04 15 11.0 -0.4
RAGM Ragged Mountai 3.72 128 Pn 04 15 09.4 -2.2
VRDI Verde Repeater 3.72 112 Pn 04 15 09.7 -2.0
MCARA McCarthy VSAT 3.83 108 Pn 04 15 11.9 -1.2
HMT Hamilton 3.90 126 Pn 04 15 11.7 -2.3
Q23K Middleton Isla 3.95 147 P Pn 04 15 12.6 -2.0
baz=331,SNR=30
Q23K S Sn 04 15 56.6 -3.3
baz=331
Q23K Middleton Isla 3.95 147 Pn 04 15 12.7 -2.0
MID Middleton Isla 3.95 146 P Pn 04 15 13.0 -1.7
MID Middleton Isla 3.95 146 Pn Pn 04 15 13.0 -1.7
K27K Chicken 4.04 68 P Pn 04 15 15.3 -0.6
baz=255
K27K S Sn 04 16 00.1 -2.0
baz=255
K27K Chicken 4.04 68 Pn 04 15 15.2 -0.6
BC03 4.04 82 Pn 04 15 15.1 -0.8
BCAR Beaver Creek A 4.04 82 Pn 04 15 13.6 -2.4
PS05 TAPS Pump Stn5 4.05 360 Pn 04 15 17.2 +1.3
BEKG Berg Lake 4.08 123 Pn 04 15 14.2 -2.2
NICHA Nichawak Mount 4.08 126 Pn 04 15 14.5 -1.9
CRQM Cirque 4.09 116 Pn 04 15 14.9 -1.8
KAIM Kayak Island 4.13 131 Pn Pn 04 15 15.0 -2.2
PTPK Patty Peak 4.16 109 Pn 04 15 16.2 -1.5
TGL Tana Glacier 4.22 115 Pn 04 15 16.0 -2.3
KHIT Khitrov Hills 4.22 120 Pn 04 15 16.5 -2.0
SUCK Suckling Hills 4.26 127 Pn 04 15 16.9 -2.0
BALM Baldy 4.28 110 Pn 04 15 17.3 -1.9
GRIN Grindle Hills 4.30 122 Pn 04 15 17.4 -2.0
KIAG Kiagna River 4.33 112 Pn 04 15 17.7 -2.3
COLD Coldfoot 4.47 2 P Pn 04 15 22.6 +1.0
baz=182,SNR=760
COLD S Sn 04 16 11.7 -0.8
baz=182
COLD Coldfoot 4.47 2 Pn Pn 04 15 22.7 +1.0
ISLE Juniper Island 4.50 115 Pn 04 15 19.8 -2.4
BVCY Beaver Creek 4.52 90 Pn 04 15 22.1 -0.3
KULT Kultieth River 4.55 120 Pn 04 15 20.6 -2.3
BARN Barnard Glacie 4.57 108 Pn 04 15 21.9 -1.3
EGAK Eagle 4.64 60 Pn 04 15 23.5 -0.5
YUK2 White River 4.67 98 Pn 04 15 23.6 -0.8
GRNC Granite Creek 4.68 112 Pn 04 15 22.5 -2.2
CYK Cape Yakataga 4.75 121 Pn 04 15 24.0 -1.4
CTGM Chitina Glacie 4.75 108 Pn 04 15 24.3 -1.3
YUK3 Moose Creek 4.85 97 Pn 04 15 26.2 -0.7
YAH Yahtse 4.88 116 Pn 04 15 25.2 -2.3
MESA MESA 4.90 118 Pn 04 15 25.9 -1.8
LOGN Logan Glacier 4.96 109 Pn 04 15 26.8 -1.6
KAKN Katmai Knife C 5.01 208 Pn 04 15 28.0 -1.0
KABU Katmai Buttres 5.08 209 Pn 04 15 29.4 -0.6

RKAV Rock Avalanche 5.08 115 Pn 04 15 28.2 -1.9
TABL Table Mountain 5.09 113 Pn 04 15 28.2 -2.1
KDAK Kodiak Island 5.11 192 P Pn 04 15 28.1 -2.2
KDAK Kodiak Island 5.11 192 Pn 04 15 28.1 -2.2
ANCK Angle Creek 5.19 210 Pn 04 15 31.1 -0.4
DAWY Dawson 5.20 71 Pn 04 15 31.0 -0.6
BM03 Burnt Mountain 5.30 26 Pn 04 15 33.0 +0.1
CHX Chaix Hills 5.31 117 Pn 04 15 31.5 -1.6
BMAR Burnt Mountain 5.31 26 Pn 04 15 35.5 +2.4
KJL Kejulik 5.34 210 Pn 04 15 34.1 +0.6
SAMH Samovar Hills 5.41 115 Pn 04 15 33.2 -1.3
PCA Pinnacle 5.65 114 Pn 04 15 35.8 -1.9
OHAK Old Harbor 5.74 195 Pn 04 15 35.6 -3.1
YUK4 Talbot Arm 5.80 99 Pn 04 15 38.9 -1.0
PLK1 Peulik 1 5.82 214 Pn 04 15 40.7 +0.8
TOLK Toolik Lake Re 5.90 4 P Pn 04 15 42.8 +1.8
baz=184,SNR=146
TOLK S Sn 04 16 48.0 +0.8
baz=184
TOLK Toolik Lake Re 5.90 4 Pn 04 15 42.8 +1.8
BCPM Bancas Point 5.99 113 Pn 04 15 40.3 -1.9
YUK6 Outpost Mounta 6.08 102 Pn 04 15 42.0 -1.6
PNL Peninsula 6.25 115 Pn 04 15 43.8 -2.0
SII Sitkinak Islan 6.50 198 Pn 04 15 46.4 -2.8
HYT Haines Junctio 6.51 102 Pn 04 15 47.8 -1.6
ANM Nome 6.81 292 P Pn 04 15 54.5 +1.3
ANM Nome 6.81 292 Pn 04 15 54.5 +1.3
RDOG Red Dog Mine 7.36 321 Pn 04 16 02.4 +1.7
CHIR Chirikof Islan 7.43 202 Pn 04 15 58.6 -3.2
PS01 TAPS Pump Stn 7.55 5 Pn 04 16 05.1 +1.8
CHGN Chignik 7.61 215 Pn 04 16 02.6 -1.6
PLBC Pleasant Camp 7.66 109 Pn 04 16 03.5 -1.3
WHY Whitehorse 7.76 99 Pn 04 16 04.5 -1.9
VNHG Veniaminof 1 7.88 217 Pn 04 16 07.7 -0.3
VNFG Fog Glacier, M 7.94 219 Pn 04 16 08.1 -0.7
TNA Tin City 8.05 298 P Pn 04 16 12.0 +1.9
baz=102,SNR=7.8
TNA S Sn 04 17 37.9 -1.3
baz=102
TNA Tin City 8.05 298 Pn 04 16 11.2 +1.1
VNWF Veniaminof 8 8.05 218 Pn 04 16 10.1 -0.3
SKAG Skagway 8.11 107 Pn 04 16 09.4 -1.5
BESE Bessie Mountai 8.79 112 Pn 04 16 18.1 -2.2
A21K Barrow 8.89 347 P Pn 04 16 21.0 -0.3
baz=162,SNR=52
A21K S Sn 04 17 57.3 -2.2
baz=162
A21K Barrow 8.89 347 Pn 04 16 21.5 +0.1
INK Inuvik 8.97 44 P Pn 04 16 21.7 -0.8
23nm,0.3s,baz=230,slow=13,SNR=512
INK LR LR 04 20 01.5
comp=Z,910nm,19.0s,baz=210,slow=39
INK Inuvik 8.97 44 P Pn 04 16 20.3 -2.2
INK Inuvik 8.97 44 Pn Pn 04 16 20.3 -2.2
SDPT Sand Point 9.01 219 Pn 04 16 21.2 -2.0
JIS Juneau Island 9.17 112 Pn 04 16 23.2 -2.1
CNBA Chernabura Isl 9.23 214 Pn Pn 04 16 23.9 -2.3
GAMB Gambell 9.54 285 Pn Pn 04 16 32.7 +2.4
SIT Sitka 9.57 120 P Pn 04 16 28.6 -2.1
SIT Sitka 9.57 120 Pn Pn 04 16 28.6 -2.1
FALS False Pass 10.34 226 Pn 04 16 41.0 -0.2
DLBC Dease Lake 10.99 104 P Pn 04 16 48.4 -1.6
1.6nm,0.3s,baz=307,slow=9.0,SNR=19
DLBC Dease Lake 10.99 104 Pn 04 16 48.1 -1.9
WRAK Wrangell Islan 11.21 116 Pn 04 16 51.9 -1.0
AKUT Akutan 11.72 229 Pn 04 16 59.9 +0.2
UNV Unalaska Valle 12.21 230 Pn 04 17 05.4 -0.9
C36M Paulatuk 12.53 47 P Pn 04 17 06.7 -3.6
baz=251,SNR=230
C36M Paulatuk 12.53 47 Pn 04 17 07.2 -3.0
DIB Dawson Inlet, 13.53 127 Pn 04 17 23.5 0.0
NIKH Nikolski High 13.76 233 Pn Pn 04 17 27.6 +1.2
BBB Bella Bella 15.99 121 P P 04 17 56.8 +0.8
0.8nm,0.3s,baz=294,slow=10,SNR=5.5
BBB LR LR 04 24 51.1
comp=Z,174nm,18.5s,baz=270,slow=39
BBB Bella Bella 15.99 121 IAmb IAmb 04 18 18.5
comp=Z,74nm,1.1s
ATKA Atka Island 16.41 241 Pn 04 18 00.2 +0.3
YKA Yellowknife Ar 16.42 75 P Pn 04 17 58.8 -1.1
comp=Z,2.5nm,0.3s,baz=283,slow=11,SNR=60
YKA PcP PcP 04 22 45.6 +0.5
comp=Z,0.9nm,0.3s,baz=356,slow=0.4,SNR=12
YKA LR LR 04 24 30.2
comp=Z,313nm,20.4s,baz=0.0,slow=37
YKA ScP ScP 04 26 10.9 +1.4
comp=Z,0.2nm,0.3s,baz=302,slow=2.1,SNR=20
YKA Yellowknife Ar 16.42 75 P Pn 04 17 58.8 -1.1
GSTR Great Sitkin T 17.25 243 P Pn 04 18 10.5 +0.4
ADK Adak 17.66 244 P Pn 04 18 15.1 0.0
ADK pmax pmax
comp=Z,131nm,0.6s
ADK Adak 17.66 244 P Pn 04 18 15.1 0.0
BILL Bilibino 18.37 305 *d i* P P 04 18 23.0 +0.8
BILL pmax pmax
comp=Z,35nm,1.1s
BILL Bilibino 18.37 305 P P 04 18 22.1 0.0
AMKA Amchitka 19.73 249 Pn 04 18 38.6 -0.9
B05A Bryant 21.46 119 P P 04 18 58.3 +2.6
baz=323
RES Resolute Bay 22.34 35 P P 04 19 04.0 -0.7
comp=Z,5.2nm,0.3s,baz=252,slow=9.9,SNR=40
RES Resolute Bay 22.34 35 P P 04 19 04.3 -0.4
RES pmax pmax
comp=Z,25nm,0.9s
RES Resolute Bay 22.34 35 P P 04 19 04.3 -0.4
B08A Colville Reser 22.52 115 P P 04 19 08.7 +1.9
LTY Liberty 22.84 119 P P 04 19 11.8 +1.7
C09A Chrisman Ranch 23.39 115 P P 04 19 17.0 +1.8
NEW Newport 23.52 113 P P 04 19 18.1 +1.8
comp=Z,5.7nm,0.6s,baz=330,slow=8.6,SNR=14
NEW pP pP 04 19 39.7 +1.3
comp=Z,23nm,1.1s,baz=311,slow=9.3,SNR=11
NEW LR LR 04 27 58.3
comp=Z,176nm,20.2s,baz=319,slow=35
NEW Newport 23.52 113 P P 04 19 18.2 +1.8
NEW pmax pmax
comp=Z,60nm,1.5s
NEW Newport 23.52 113 P P 04 19 18.0 +1.6
baz=320,SNR=5.8
NEW Newport 23.52 113 P P 04 19 18.1 +1.8
D08A Wollman Farm, 23.72 117 P P 04 19 19.7 +1.6
D08A IAmb IAmb 04 19 42.9
comp=Z,74nm,1.4s
E07A Sunnyside 23.74 119 P P 04 19 20.4 +2.1
E07A IAmb IAmb 04 19 43.4
comp=Z,47nm,1.1s
F07A Phinny Hill Vi 24.25 120 P P 04 19 25.6 +2.7
F07A IAmb IAmb 04 19 48.4
comp=Z,36nm,0.9s
WALA Waterton Lakes 24.30 107 P P 04 19 25.5 +2.0
WALA IAmb IAmb 04 19 28.0
comp=Z,42nm,1.1s
EUNU Eureka 24.59 22 P P 04 19 27.4 +1.6
JTMT Jette 25.14 110 P P 04 19 33.3 +2.2
SEY Seymchan 25.29 296 *i* P P 04 19 32.2 0.0
comp=Z,83nm,0.9s,baz=87,slow=7.7,SNR=44
SEY Seymchan 25.29 296 *i e* P P 04 19 32.4 +0.3
FFC Flin Flon 25.89 86 P P 04 19 38.1 +0.4
FFC pmax pmax
comp=Z,22nm,1.2s
FFC Flin Flon 25.89 86 P P 04 19 38.1 +0.4
MSO Missoula 25.99 111 P P 04 19 40.1 +1.3
baz=321,SNR=9.0
MSO Missoula 25.99 111 P P 04 19 40.2 +1.3
BMO Blue Mountains 26.16 118 P P 04 19 41.8 +1.4
BMO pmax pmax
comp=Z,35nm,1.2s
BMO Blue Mountains 26.16 118 P P 04 19 41.8 +1.4
BMO IAmb IAmb 04 20 07.6
comp=Z,35nm,1.1s
YBH Yreka Blue Hor 26.74 129 P P 04 19 47.8 +2.3
comp=Z,2.4nm,0.8s,baz=320,slow=8.5,SNR=4.5
YBH LR LR 04 29 05.9
comp=Z,95nm,19.3s,baz=320,slow=33
YBH Yreka Blue Hor 26.74 129 P P 04 19 45.7 +0.1
YBH pmax pmax
comp=Z,38nm,1.3s
YBH Yreka Blue Hor 26.74 129 P P 04 19 45.7 +0.1
EGMT Eagleton 26.92 104 P P 04 19 48.4 +1.3
baz=318,SNR=12
EGMT Eagleton 26.92 104 P P 04 19 47.2 +0.1
FCC Fort Churchill 27.12 72 P P 04 19 49.5 +0.9
FCC pmax pmax
comp=Z,17nm,0.6s
FCC Fort Churchill 27.12 72 P P 04 19 49.5 +0.9
N02D Trinity Center 27.41 130 P P 04 19 54.3 +2.7
baz=332
LRM Limekiln Ridge 27.42 110 P P 04 19 53.0 +1.2
MA2 Magadan 27.59 290 P P 04 19 53.5 +0.6
comp=Z,11nm,0.6s,baz=67,slow=14,SNR=4.3
MA2 LR LR 04 32 17.1
comp=Z,83nm,18.1s,baz=87,slow=39
MA2 Magadan 27.59 290 *i e* P P 04 19 52.3 -0.6
MA2 pmax pmax
comp=Z,120nm,1.8s
MFID Camas Ranch 27.95 118 P P 04 19 57.1 +0.7
MFID IAmb IAmb 04 20 21.7
comp=Z,32nm,1.1s
BOZ Bozeman (W) 27.96 110 P P 04 19 58.5 +2.0
BOZ pmax pmax
comp=Z,22nm,1.5s
BOZ Bozeman (W) 27.96 110 P P 04 19 57.9 +1.5
baz=322
BOZ Bozeman (W) 27.96 110 P P 04 19 58.5 +2.0
PEA0B Petropavlovsk- 28.32 274 *i e* P P 04 19 59.5 +0.1
PETK Petropavlovsk- 28.32 274 P P 04 19 59.2 -0.2
comp=Z,17nm,0.8s,baz=70,slow=13,SNR=34
PETK PcP PcP 04 23 10.1 +0.8
comp=Z,3.4nm,0.7s,baz=82,slow=7.8,SNR=6.1
PETK LR LR 04 31 35.1
comp=Z,62nm,18.1s,baz=51,slow=37
PETK Petropavlovsk- 28.32 274 P P 04 19 58.9 -0.5
PETK Petropavlovsk- 28.32 274 P P 04 19 58.9 -0.5
O03E Paynes Creek 28.33 129 P P 04 20 01.5 +1.7
baz=332
HLID Hailey 28.41 116 P P 04 20 01.8 +1.3
baz=325,SNR=6.7
HLID Hailey 28.41 116 P P 04 20 02.2 +1.7
YHH Holmes Hill 28.93 110 P P 04 20 07.8 +2.6
DGMT Dagmar 29.10 98 P P 04 20 07.8 +1.4
baz=317
DGMT Dagmar 29.10 98 P P 04 20 08.0 +1.6
BEKR Beckworth 29.23 127 P P 04 20 07.9 +0.1
IMW Indian Meadow 29.61 111 P P 04 20 14.3 +3.1
IMW IAmb IAmb 04 20 38.1
comp=Z,35nm,1.3s
TIXI Tiksi 29.97 321 *i* P P 04 20 13.6 -0.2
TIXI pmax pmax
comp=Z,166nm,2.5s
TIXI Tiksi 29.97 321 P P 04 20 13.7 -0.1
TIXI PcP 04 23 12.9 -0.3
ELK Elko 30.43 120 P P 04 20 20.6 +2.2
comp=Z,4.5nm,0.9s,baz=320,slow=8.7,SNR=20
ELK pP pP 04 20 43.6 +1.3
comp=Z,14nm,0.9s,baz=322,slow=8.2,SNR=18
ELK LR LR 04 32 37.4
comp=Z,97nm,19.8s,baz=334,slow=36
ELK Elko 30.43 120 P P 04 20 21.1 +2.6
ELK pmax pmax
comp=Z,20nm,1.0s
ELK Elko 30.43 120 P P 04 20 21.1 +2.6
ELK IAmb IAmb 04 20 44.8
comp=Z,20nm,1.0s
HVU Hansel Valley 30.56 116 P P 04 20 22.1 +2.6
HVU pmax pmax
comp=Z,10.0nm,0.9s
HVU Hansel Valley 30.56 116 P P 04 20 22.1 +2.6
KVN Kaiserville 30.78 125 P P 04 20 23.2 +1.7
KVN pmax pmax
comp=Z,15nm,1.1s
KVN Kaiserville 30.78 125 P P 04 20 23.2 +1.7
SPUT South Promonto 31.09 116 P P 04 20 26.7 +2.5
BW06 Boulder Array 31.11 111 P P 04 20 26.4 +2.0
baz=324,SNR=8.9
BW06 Boulder Array 31.11 111 P P 04 20 26.5 +2.0
BW06 IAmb IAmb 04 20 50.5
comp=Z,26nm,1.3s
PD31 Pinedale Array 31.11 111 P P 04 20 26.4 +2.0
PDAR Pinedale Array 31.11 111 P P 04 20 26.4 +1.9
comp=Z,2.5nm,0.5s,baz=305,slow=4.2,SNR=34
PDAR pP pP 04 20 49.1 +0.8
comp=Z,2.3nm,0.5s,baz=16,slow=1.2,SNR=6.2
PDAR PcP PcP 04 23 17.2 +0.2
comp=Z,0.9nm,0.5s,baz=139,slow=0.9,SNR=4.9
PDAR LR LR 04 33 29.1
comp=Z,124nm,21.2s,baz=346,slow=37
PDAR Pinedale Array 31.11 111 P P 04 20 25.9 +1.5
HWUT Hardware Ranch 31.21 114 P P 04 20 28.3 +3.0
NVAR Mina Array Bea 31.25 126 P P 04 20 27.8 +2.1
comp=Z,3.3nm,0.7s,baz=320,slow=9.2,SNR=23
NVAR pP pP 04 20 50.9 +1.4
comp=Z,10nm,0.8s,baz=310,slow=8.4,SNR=17
NVAR PcP PcP 04 23 19.0 +1.5
comp=Z,2.4nm,0.6s,baz=286,slow=2.1,SNR=7.5
NVAR ScP ScP 04 26 52.3 +2.0
comp=Z,0.9nm,0.8s,baz=298,slow=1.9,SNR=3.8
NVAR Mina Array Bea 31.25 126 P P 04 20 27.6 +1.9
NVAR PcP 04 23 18.7 +1.2
NV11 Mina Array Sit 31.30 126 P P 04 20 28.3 +2.3
NV11 IAmb IAmb 04 20 52.2
comp=Z,24nm,1.1s
ULM Lac du Bonnet 31.65 87 P P 04 20 30.1 +1.3
comp=Z,13nm,0.6s,baz=306,slow=7.5,SNR=30
ULM PcP PcP 04 23 18.0 0.0
comp=Z,4.3nm,0.5s,baz=325,slow=4.7,SNR=4.3
ULM ScP ScP 04 26 53.3 +2.2
comp=Z,6.2nm,1.1s,baz=358,slow=3.5,SNR=3.6
ULM LR LR 04 33 55.7
comp=Z,118nm,20.9s,baz=330,slow=37
ULM Lac du Bonnet 31.65 87 P P 04 20 29.3 +0.5
ULM 04 23 18.0
ULM pmax pmax
comp=Z,15nm,0.7s
ULM Lac du Bonnet 31.65 87 P P 04 20 29.3 +0.5
ULM IAmb IAmb 04 20 30.9
comp=Z,15nm,0.7s
MDND Maddock 31.65 94 P P 04 20 31.1 +2.2
baz=317
DUG Dugway, Tooele 31.88 117 P P 04 20 33.3 +2.2
DUG pmax pmax
comp=Z,12nm,1.0s
DUG Dugway, Tooele 31.88 117 P P 04 20 33.1 +2.1
baz=328,SNR=6.2
DUG Dugway, Tooele 31.88 117 P P 04 20 33.2 +2.2
CTU Camp Tracy 31.89 115 P P 04 20 33.7 +2.4
TPH Tonopah 31.96 125 P P 04 20 34.2 +2.3
TPH pmax pmax
comp=Z,80nm,0.9s
TPH Tonopah 31.96 125 P P 04 20 34.2 +2.3
E28A Huff 32.10 97 P P 04 20 35.4 +2.5
E28A IAmb IAmb 04 20 35.8
comp=Z,35nm,0.8s
R11A Troy Canyon, C 32.35 123 P P 04 20 37.0 +1.7
baz=330,SNR=7.5
R11A Troy Canyon, C 32.35 123 P P 04 20 37.0 +1.7
RSSD Black Hills 32.46 103 P P 04 20 38.1 +1.8
RSSD pmax pmax
comp=Z,23nm,0.7s
RSSD Black Hills 32.46 103 P P 04 20 38.1 +1.8
baz=322
RSSD Black Hills 32.46 103 P P 04 20 38.1 +1.8
RSSD IAmb IAmb 04 20 38.9
comp=Z,23nm,0.7s
PSUT Pine Spring 32.87 120 P P 04 20 42.7 +2.8
RDMU Red Mountain 32.91 113 P P 04 20 42.4 +2.2
AGMN Agassiz Nation 33.04 90 P P 04 20 41.8 +0.8
baz=316,SNR=6.9
AGMN Agassiz Nation 33.04 90 P P 04 20 42.1 +1.1
CWC Cottonwood Cre 33.09 127 P P 04 20 44.1 +2.4
baz=333
TMUT Trail Mountain 33.29 116 P P 04 20 45.9 +2.2
Q16A Castle Valley 33.63 117 P P 04 20 48.1 +1.7
MPMC Manual Prospec 33.65 127 P P 04 20 48.8 +2.2
baz=333,SNR=7.5
SRU San Rafael Swe 33.73 116 P P 04 20 49.8 +2.5
SRU pmax pmax
comp=Z,27nm,1.0s
SRU San Rafael Swe 33.73 116 P P 04 20 49.8 +2.5
O20A White River Ci 33.84 112 P P 04 20 49.7 +1.5
baz=326,SNR=5.3
O20A White River Ci 33.84 112 P P 04 20 49.9 +1.6
PKM Mcpherson Peak 33.87 131 P P 04 20 50.9 +2.5
baz=335
CCUT Cedar City 33.92 120 P P 04 20 51.4 +2.4
MTPU Mount Pierson 33.97 119 P P 04 20 52.8 +3.3
B35A Bob, Littlefor 33.98 88 P P 04 20 50.1 +0.9
B35A IAmb IAmb 04 20 51.0
comp=Z,16nm,0.6s

LRMC **Laurel Mtn Rad** 34.09 128 P P 04 20 52.6 +2.2
baz=334,SNR=5.5
SHPR **Sheep Range** 34.13 124 P P 04 20 52.3 +1.6
N23A **Red Feather La** 34.20 109 P P 04 20 54.2 +2.7
baz=325
LCMT **Little Creek M** 34.43 121 P P 04 20 55.8 +2.5
GSC **Goldstone, Bar** 34.57 127 P P 04 20 56.6 +2.2
GSC pmax pmax
comp=Z,27nm,1.1s
GSC **Goldstone, Bar** 34.57 127 P P 04 20 56.7 +2.3
baz=333,SNR=5.5
GSC **Goldstone, Bar** 34.57 127 P P 04 20 56.6 +2.2
GSC IAmb IAmb 04 21 20.8
comp=Z,27nm,1.1s
KNB **Kanab** 34.59 120 P P 04 20 57.4 +2.7
KNB pmax pmax
comp=Z,20nm,0.9s
KNB **Kanab** 34.59 120 P P 04 20 57.4 +2.7
F33A **5 Mile Ranch,** 34.66 93 P P 04 20 57.0 +1.9
F33A pP 04 21 19.6 +0.4
F33A IAmb IAmb 04 21 20.2
comp=Z,40nm,1.6s
YAK **Yakutsk** 34.73 305 P P 04 20 54.6 -0.7
comp=Z,53nm,0.6s,baz=314,slow=1.6,SNR=4.8
YAK **Yakutsk** 34.73 305 eP P 04 20 54.7 -0.7
YAK e*PP pP 04 21 15.6 -3.8
YAK e 04 22 15.1
YAK e 04 23 25.9
YAK eS S 04 26 18.2 +1.0
YAK e*SS sS 04 26 57.9 -1.2
YAK e 04 31 05.9
YAK pmax pmax
comp=Z,81nm,0.8s
YAK pmax pmax
comp=E,36nm,1.3s
YAK pmax pmax
comp=N,16nm,1.0s
YAK pmax pmax
comp=Z,635nm,4.1s
YAK pmax pmax
comp=N,273nm,3.7s
YAK pmax pmax
comp=E,555nm,3.8s
YAK smax smax
comp=E,631nm,3.5s
YAK smax smax
comp=N,624nm,3.6s
YAK **Yakutsk** 34.73 305 IAmb IAmb 04 20 56.4
comp=Z,121nm,0.8s
PV23 **Carpenter Ridg** 34.92 114 P P 04 20 58.7 +1.0
PV23 IAmb IAmb 04 21 23.5
comp=Z,27nm,1.3s
BFSC **Mount Baldy Ra** 35.21 129 P P 04 21 02.1 +2.0
baz=334,SNR=6.8
EYMN **Ely** 35.31 87 P P 04 21 01.8 +1.3
baz=317,SNR=6.4
EYMN **Ely** 35.31 87 P P 04 21 01.8 +1.3
GMRC **Granite Mounta** 35.46 126 P P 04 21 04.4 +2.3
baz=333,SNR=6.4
W13A **Hualapai Mount** 35.85 123 P P 04 21 08.1 +2.5
W13A IAmb IAmb 04 21 32.0
comp=Z,16nm,1.2s
OGNE **Ogallala** 35.89 104 P P 04 21 06.7 +1.0
F36A **Milaca** 35.92 91 P P 04 21 07.1 +1.3
F36A IAmb IAmb 04 21 08.6
comp=Z,16nm,0.7s
ECSD **EROS Data Cent** 36.13 96 P P 04 21 08.9 +1.3
baz=321,SNR=16
ECSD **EROS Data Cent** 36.13 96 P P 04 21 08.4 +0.8
ECSD IAmb IAmb 04 21 09.3
comp=Z,13nm,0.5s
MVCO **Mesa Verde** 36.19 115 P P 04 21 10.1 +1.6
baz=329,SNR=6.7
MVCO **Mesa Verde** 36.19 115 P P 04 21 10.1 +1.6
IRM **Iron Mountain** 36.21 125 P P 04 21 10.4 +2.0
baz=333
PFO **Pinyon Flats O** 36.21 128‖ eP P 04 21 09.7 +1.2
PFO pmax pmax
comp=Z,28nm,4.3s
PFO **Pinyon Flats O** 36.21 128 P P 04 21 10.2 +1.7
baz=334
E38A **The Farm, Brul** 36.27 88 P P 04 21 10.3 +1.6
E38A IAmb IAmb 04 21 10.9
comp=Z,13nm,0.8s
S22A **4UR Ranch, Cre** 36.44 113 P P 04 21 13.1 +2.5
baz=328,SNR=8.8
S22A **4UR Ranch, Cre** 36.44 113 P P 04 21 13.2 +2.5
WUAZ **Wupatki** 36.47 120 P P 04 21 13.0 +2.2
baz=331,SNR=9.3
WUAZ **Wupatki** 36.47 120 P P 04 21 13.3 +2.5
BC3 **Big Chuckawall** 36.54 126 P P 04 21 13.2 +1.9
baz=334
TYV **Tymovskoe** 36.68 283 eP P 04 21 12.8 +0.7
TYV eS S 04 26 49.4 +2.2
TYV pmax pmax
comp=Z,46nm,0.6s
TYV pmax pmax
comp=Z,500nm,4.2s
TYV smax smax
comp=E,12nm,1.4s
TYV smax smax
comp=E,700nm,4.7s
SPMN **Marine on St.** 36.73 91 P P 04 21 14.1 +1.4
baz=319,SNR=10
SPMN **Marine on St.** 36.73 91 P P 04 21 14.2 +1.5
SPMN IAmb IAmb 04 21 15.1
comp=Z,27nm,0.9s
MONP2 **Monument Peak** 36.87 128 P P 04 21 16.5 +2.3
baz=335,SNR=7.0
SDCO **Great Sand Dun** 37.00 111 P P 04 21 17.6 +2.1
baz=327,SNR=7.8
SDCO **Great Sand Dun** 37.00 111 P P 04 21 17.5 +2.1
SDCO IAmb IAmb 04 21 42.1
comp=Z,30nm,1.5s
KSCO **Kaye Shedlock'** 37.20 107 P P 04 21 18.9 +2.0
baz=326
KSCO **Kaye Shedlock'** 37.20 107 P P 04 21 17.6 +0.7
IKP **In-Ko-Pah, Jac** 37.20 128 P P 04 21 18.8 +1.9
baz=335,SNR=6.2
Y14A **Wickenburg** 37.22 123 P P 04 21 19.3 +2.3
BGNE **Belgrade** 37.26 100 P P 04 21 18.5 +1.2
baz=323
CBX **Cerro Bola** 37.31 129 P P 04 21 20.6 +2.8
I37A **Lemond, Waseca** 37.39 93 P P 04 21 20.0 +1.7
SUMG **Summit** 37.39 27 P P 04 21 19.0 +0.6
SUMG **Summit** 37.39 27 P P 04 21 19.0 +0.6
SUMG **Summit** 37.39 27 iP P 04 21 19.0 +0.6
comp=Z,12nm,0.6s
SUMG **Summit** 37.39 27 iP P 04 21 19.0 +0.6
SUMG IAmb IAmb 04 21 21.5
comp=Z,12nm,0.6s
X16A **Lo Mia Camp, P** 37.41 121 P P 04 21 20.9 +2.2
DAG **Danmarks Havn** 37.50 16 iP P 04 21 19.0 +0.2
DAG pmax pmax
comp=Z,10.0nm,0.6s
DAG **Danmarks Havn** 37.50 16 iP P 04 21 19.0 +0.2
comp=Z,10nm,0.6s
DAG **Danmarks Havn** 37.50 16 iP P 04 21 19.0 +0.2
DAG IAmb IAmb 04 21 21.5
comp=Z,10nm,0.6s
L34A **Svendsen Farm,** 37.62 98 P P 04 21 21.4 +1.2
ESJX **Sierra Juarez** 37.84 128 P P 04 21 24.8 +2.4
G40A **Rib Lake** 37.90 89 P P 04 21 23.8 +1.2
G40A IAmb IAmb 04 21 24.6
comp=Z,19nm,0.7s
X18A **Snowflake** 37.90 119 P P 04 21 25.6 +2.7
X18A IAmb IAmb 04 21 49.6
comp=Z,22nm,1.0s
CBKS **Cedar Bluff** 38.65 104 P P 04 21 30.8 +1.9
CBKS pmax pmax
comp=Z,27nm,0.8s
CBKS **Cedar Bluff** 38.65 104 P P 04 21 30.7 +1.9
baz=325,SNR=10
CBKS **Cedar Bluff** 38.65 104 P P 04 21 30.8 +1.9
K38A **Parkersburg** 38.74 94 P P 04 21 31.7 +2.1
N35A **Tabor** 38.84 98 P P 04 21 32.3 +1.9
ANMO **Albuquerque** 38.98 115‖ eP P 04 21 34.4 +2.5
ANMO pmax pmax
comp=Z,8.0nm,1.7s
ANMO **Albuquerque** 38.98 115 P P 04 21 34.0 +2.1
baz=330
ANMO **Albuquerque** 38.98 115 P P 04 21 33.6 +1.7
214A **Organ Pipe Nat** 39.05 124 P P 04 21 34.5 +2.2
baz=334
SPITS **Spitsbergen Ar** 39.05 4 P P 04 21 31.5 -0.4
comp=Z,5.3nm,0.5s,baz=28,slow=5.7,SNR=26

PIX **Pinacate** 39.16 125 P P 04 21 34.7 +1.5
DBG **Daneborg** 39.34 19 iP P 04 21 34.2 0.0
DBG IAmb IAmb 04 21 43.7
comp=Z,9.3nm,0.7s
R32A **Long Quarter,** 39.42 103 P P 04 21 37.0 +1.6
YSS **Yuzh-Sakhalins** 39.48 278 eP P 04 21 36.1 +0.4
YSS pmax pmax
comp=Z,60nm,0.9s
YSS MLR MLR
comp=Z,300nm,18.0s
YSS **Yuzh-Sakhalins** 39.48 278 P P 04 21 36.2 +0.5
GRNR **Gornyy** 39.51 287↑ iP P 04 21 36.6 +0.7
GRNR eS S 04 27 31.8 +1.8
GRNR pmax pmax
comp=E,30nm,0.8s
GRNR pmax pmax
comp=N,30nm,0.9s
GRNR pmax pmax
comp=Z,90nm,0.8s
GRNR smax smax
comp=N,8.0nm,0.8s
GRNR MLR MLR
comp=E,240nm,15.0s
GRNR MLR MLR
comp=N,170nm,12.0s
GRNR MLR MLR
comp=Z,120nm,18.0s
TUC **Tucson** 39.52 122 P P 04 21 38.0 +1.7
TUC pmax pmax
comp=Z,21nm,1.6s
TUC **Tucson** 39.52 122 P P 04 21 38.8 +2.5
baz=332
TUC **Tucson** 39.52 122 P P 04 21 38.0 +1.7
BNM **Barren Site** 39.59 115 P P 04 21 37.8 +0.7
ICESG **Greenland Ices** 39.67 32 iP P 04 21 39.9 +2.5
ICESG IAmb IAmb 04 21 42.5
comp=Z,13nm,0.7s
JFWS **Jewell Farm** 39.69 91 P P 04 21 38.0 +0.5
JFWS pmax pmax
comp=Z,21nm,0.7s
JFWS **Jewell Farm** 39.69 91 P P 04 21 37.8 +0.3
baz=321
JFWS **Jewell Farm** 39.69 91 P P 04 21 38.0 +0.5
JFWS IAmb IAmb 04 21 39.1
comp=Z,21nm,0.7s
E46A **Sault Ste Mari** 39.77 82 P P 04 21 39.1 +1.0
KSU1 **Kansas State U** 39.82 101 P P 04 21 39.5 +0.9
baz=324,SNR=20
KSU1 **Kansas State U** 39.82 101 P P 04 21 39.8 +1.2
L40A **Anamosa** 39.91 93 P P 04 21 40.1 +0.8
MATQ **Matagami** 40.24 74 P P 04 21 41.9 -0.1
baz=317
121A **Cookes Peak, D** 40.52 118 P P 04 21 46.9 +2.2
baz=331
121A **Cookes Peak, D** 40.52 118 P P 04 21 47.5 +2.8
121A IAmb IAmb 04 22 11.8
comp=Z,37nm,1.6s
P38A **Dawn** 40.79 97 P P 04 21 47.6 +1.0
P38A IAmb IAmb 04 21 48.3
comp=Z,14nm,0.8s
GLMI **Grayling** 40.80 84 P P 04 21 48.5 +1.9
baz=320
GLMI **Grayling** 40.80 84 P P 04 21 48.6 +2.0
KAN01 **Argonia South** 40.90 103 P P 04 21 49.0 +1.5
319A **Douglas** 40.94 120 P P 04 21 48.3 +0.2
319A IAmb IAmb 04 22 14.3
comp=Z,21nm,1.3s
LSQQ **Lebel-sur-Quev** 41.05 74 P P 04 21 49.0 +0.3
baz=318
N41A **Harden Midland** 41.15 94 P P 04 21 50.0 +0.5
N41A IAmb IAmb 04 21 50.9
comp=Z,36nm,1.4s
ZEA **Zeya** 41.26 297‖ eP P 04 21 50.5 +0.2
ZEA pmax pmax
comp=Z,40nm,1.1s
CROK **Carrier** 41.33 104 P P 04 21 52.4 +1.3
MSTX **Muleshoe** 41.37 111 P P 04 21 53.3 +1.7
baz=329,SNR=11
MSTX **Muleshoe** 41.37 111 P P 04 21 53.3 +1.7
P40A **Paris** 41.54 96 P P 04 21 53.4 +0.6
P40A IAmb IAmb 04 21 54.2
comp=Z,22nm,0.6s
VLDQ **Val d'Or** 41.55 75 P P 04 21 51.7 -1.0
VLDQ IAmb IAmb 04 21 53.0
comp=Z,16nm,0.9s
CHGQ **Chibougamau** 41.56 71 P P 04 21 53.1 +0.3
baz=318
T35A **Sooner Cattle** 41.65 102 P P 04 21 54.7 +1.0
T35A IAmb IAmb 04 21 55.3
comp=Z,25nm,0.8s
ASAJ **Asahikawa** 41.71 276 P P 04 21 53.4 -0.7
comp=Z,5.7nm,0.6s,baz=82,slow=2.7,SNR=6.9
NRIK **Noril'sk** 41.92 333 P P 04 21 56.2 +0.8
comp=Z,38nm,0.5s,baz=54,slow=6.7,SNR=59
NRIK **Noril'sk** 41.92 333 iP P 04 21 56.1 +0.7
NRIK pmax pmax
comp=Z,86nm,1.1s
HDIL **Hopedale** 41.99 92 P P 04 21 57.2 +0.9
baz=323
HDIL **Hopedale** 41.99 92 P P 04 21 57.6 +1.2
OK029 **Liberty Lake** 42.16 104 P P 04 21 59.1 +1.3
OK029 IAmb IAmb 04 21 59.5
comp=Z,24nm,0.8s
QUOK **Quay** 42.18 103 P P 04 21 59.0 +1.0
QUOK IAmb IAmb 04 21 59.4
comp=Z,14nm,0.6s
BCOK **Bluff Creek, N** 42.21 105 P P 04 21 59.6 +1.3
MNTX **Cornudas Mount** 42.23 116 P P 04 22 00.7 +2.1
baz=331,SNR=6.7
MNTX **Cornudas Mount** 42.23 116 P P 04 22 00.6 +2.1
OK030 **Cody Creek RV** 42.35 103 P P 04 21 59.4 0.0
OK030 IAmb IAmb 04 22 00.9
comp=Z,21nm,0.7s
OK025 **Westminster Rd** 42.39 104 P P 04 22 00.9 +1.1
OK025 IAmb IAmb 04 22 01.4
comp=Z,25nm,0.8s
R40A **Maddies Statio** 42.45 97 P P 04 22 00.7 +0.6
R40A IAmb IAmb 04 22 01.1
comp=Z,38nm,1.4s
S39A **Bolivar** 42.46 99 P P 04 22 00.2 0.0
S39A IAmb IAmb 04 22 00.8
comp=Z,10nm,0.7s
WMOK **Wichita Mounta** 42.46 106 P P 04 22 01.6 +1.3
WMOK pmax pmax
comp=Z,14nm,0.9s
WMOK **Wichita Mounta** 42.46 106 P P 04 22 01.6 +1.3
baz=328,SNR=15
WMOK **Wichita Mounta** 42.46 106 P P 04 22 01.6 +1.3
WMOK IAmb IAmb 04 22 02.4
comp=Z,14nm,0.8s
FNO **Franklin** 42.63 105 P P 04 22 03.1 +1.4
KLR **Kul'dur** 42.68 289 P P 04 22 01.8 -0.1
comp=Z,9.3nm,0.4s,baz=53,slow=7.1,SNR=41
KLR **Kul'dur** 42.68 289 P P 04 22 01.8 -0.1
TUL1 **Leonard** 42.81 102 P P 04 22 04.0 +1.0
baz=326,SNR=5.3
TUL1 **Leonard** 42.81 102 P P 04 22 04.1 +1.0
TUL1 IAmb IAmb 04 22 04.6
comp=Z,17nm,0.9s
ALGO **Algonquin Park** 42.91 78 P P 04 22 04.3 +0.5
baz=320
W35A **Tecumseh** 42.96 104 P P 04 22 05.4 +1.1
U38A **Gravette** 43.00 101 P P 04 22 04.9 +0.3
U38A IAmb IAmb 04 22 05.5
comp=Z,25nm,0.7s
ERM **Erimo** 43.09 273↑ iP P 04 22 06.5 +1.2
ERM pmax pmax
comp=Z,89nm,1.3s
CCM **Cathedral Cave** 43.11 96 P P 04 22 05.2 -0.2
CCM pmax pmax
comp=Z,8.0nm,0.8s
CCM **Cathedral Cave** 43.11 96 P P 04 22 05.7 +0.3
baz=325
CCM **Cathedral Cave** 43.11 96 P P 04 22 05.2 -0.2
L48A **N Adams** 43.12 87 P P 04 22 06.8 +1.2
L48A IAmb IAmb 04 22 07.7
comp=Z,25nm,0.7s
SFIN **Lafayette** 43.14 90 P P 04 22 06.5 +0.8
baz=323
I51A **Listowel** 43.23 82 P P 04 22 08.2 +1.9
baz=321
JEW **Eniwo** 43.23 276 P P 04 22 06.3 -0.1
D55A **Sainte-Anne-du** 43.25 75 P P 04 22 07.2 +0.7
baz=320
G54A **Lake Saint Pet** 43.32 78 P P 04 22 07.5 +0.3
baz=320

HHAR **Hobbs** 43.34 100 P P 04 22 07.3 -0.1
BOD **Bodaibo** 43.36 309 eP P 04 22 06.2 -1.0
BOD pmax pmax
comp=Z,68nm,1.0s
MGMO **Mountain Grove** 43.38 98 P P 04 22 08.0 +0.4
N47A **Urbana** 43.38 89 P P 04 22 08.4 +0.7
E55A **Montcerf-Lytto** 43.42 76 P P 04 22 08.7 +0.8
baz=320
Q44A **Meyer Farm, Va** 43.44 94 P P 04 22 09.1 +1.0
Q44A IAmb IAmb 04 22 09.6
comp=Z,22nm,1.1s
FVM **French Village** 43.54 96 P P 04 22 09.6 +0.7
FVM pmax pmax
comp=Z,50nm,1.5s
FVM **French Village** 43.54 96 P P 04 22 09.6 +0.7
FVM IAmb IAmb 04 22 10.3
comp=Z,50nm,1.5s
D56A **ZEC Mazanza, M** 43.55 74 P P 04 22 09.4 +0.5
baz=320,SNR=8.5
P46A **Rosedale** 43.70 91 P P 04 22 11.2 +1.0
P46A IAmb IAmb 04 22 12.0
comp=Z,24nm,0.9s
U40A **Yellville** 43.77 99 P P 04 22 10.8 0.0
baz=326,SNR=7.3
U40A **Yellville** 43.77 99 P P 04 22 10.8 0.0
E56A **St. Veronique** 43.81 75 P P 04 22 11.6 +0.6
baz=320
ABTX **Abilene, Hawle** 43.88 109 P P 04 22 12.2 +0.5
baz=329
T42A **Van Buren** 44.01 97 P P 04 22 12.6 -0.2
T42A IAmb IAmb 04 22 13.4
comp=Z,14nm,0.7s
X37A **Clayton** 44.10 103 P P 04 22 14.8 +1.4
E57A **Chemin Saint G** 44.30 74 P P 04 22 15.3 +0.3
baz=320
W39A **Magazine** 44.31 101 P P 04 22 15.5 +0.5
baz=327
S44A **Carbondale** 44.31 95 P P 04 22 16.0 +0.9
S44A IAmb IAmb 04 22 16.7
comp=Z,22nm,0.8s
SIUC **Southern Illin** 44.31 95 P P 04 22 16.1 +1.1
SIUC IAmb IAmb 04 22 16.7
comp=Z,23nm,0.7s
D58A **Chemin du LacG** 44.34 73 P P 04 22 15.5 +0.2
baz=320,SNR=5.1
FCAR **Ozark Folk Cen** 44.48 99 P P 04 22 16.4 0.0
PBMO **Poplar Bluff** 44.52 97 P P 04 22 17.2 +0.4
O49A **Covington** 44.56 88 P P 04 22 17.4 +0.4
O49A IAmb IAmb 04 22 18.4
comp=Z,29nm,1.1s
LCAR **Lake Charles** 44.77 98 P P 04 22 18.8 0.0
LCAR PcP PcP 04 23 59.3 +0.3
USIN **University of** 44.82 93 P P 04 22 20.4 +1.2
USIN IAmb IAmb 04 22 20.8
comp=Z,31nm,0.9s
G57A **Newington** 44.94 76 P P 04 22 20.7 +0.7
baz=321
MIAR **Mount Ida** 44.94 101 P P 04 22 21.0 +0.9
MIAR pmax pmax
comp=Z,14nm,1.0s
MIAR **Mount Ida** 44.94 101 P P 04 22 20.9 +0.9
baz=327,SNR=8.9
MIAR **Mount Ida** 44.94 101 P P 04 22 21.0 +0.9
MIAR IAmb IAmb 04 22 21.7
comp=Z,14nm,0.9s
TX31 **Lajitas Ar. Si** 45.01 116 P P 04 22 22.1 +1.2
TX31 IAmb IAmb 04 22 23.8
comp=Z,22nm,0.8s
TX32 **Lajitas Array** 45.01 116 P P 04 22 22.8 +1.9
TXAR **Lajitas Array** 45.01 116 P P 04 22 22.6 +1.8
comp=Z,6.4nm,0.7s,baz=330,slow=6.2,SNR=88
TXAR ScP ScP 04 27 43.4 +1.1
comp=Z,0.9nm,1.0s,baz=283,slow=2.7,SNR=4.1
TXAR PKiKP PKiKP 04 30 57.6 -0.5
comp=Z,0.1nm,0.4s,baz=118,slow=0.6,SNR=6.1
TXAR **Lajitas Array** 45.01 116 P P 04 22 22.1 +1.2
TXAR **Lajitas Array** 45.01 116 P P 04 22 22.1 +1.2
ERPA **Erie** 45.02 83 P P 04 22 22.1 +1.4
baz=322
L53A **Girard** 45.02 83 P P 04 22 21.9 +1.2
baz=322
ACSO **Alum Creek Sta** 45.15 87 P P 04 22 22.7 +1.0
baz=323,SNR=6.9
ACSO **Alum Creek Sta** 45.15 87 P P 04 22 23.0 +1.3
ACSO IAmb IAmb 04 22 23.5
comp=Z,23nm,0.8s
WCI **Wyandotte Cave** 45.23 92 P P 04 22 23.4 +1.0
baz=324
M53A **WI Miller and** 45.24 84 P P 04 22 23.6 +1.2
baz=323
G58A **Ormstown** 45.32 75 P P 04 22 23.2 +0.3
baz=321
X40A **Basin Creek Fa** 45.33 101 P P 04 22 23.6 +0.5
baz=327
X40A **Basin Creek Fa** 45.33 101 P P 04 22 23.6 +0.5
WHTX **Lake Whitney,** 45.37 107 P P 04 22 24.3 +0.8
baz=329
LONY **Lake Ozonia** 45.50 76 P P 04 22 24.6 +0.2
baz=321
E60A **Ste Agathe de** 45.53 72 P P 04 22 25.0 +0.4
baz=321
F60A **Warwick** 45.62 73 P P 04 22 25.6 +0.3
baz=321
JCT **Junction City** 45.65 111 P P 04 22 27.1 +1.3
JCT pmax pmax
comp=Z,28nm,0.9s
JCT **Junction City** 45.65 111 P P 04 22 27.4 +1.6
baz=330,SNR=22
JCT **Junction City** 45.65 111 P P 04 22 27.1 +1.3
JCT IAmb IAmb 04 22 29.0
comp=Z,28nm,0.8s
M54A **Oil Creek Stat** 45.65 83 P P 04 22 26.7 +1.0
baz=323,SNR=5.5
M54A **Oil Creek Stat** 45.65 83 P P 04 22 26.7 +1.0
N53A **Lisbon** 45.67 85 P P 04 22 26.9 +1.1
G59A **Clarenceville** 45.76 75 P P 04 22 26.9 +0.5
baz=321
O52A **Adamsville** 45.76 86 P P 04 22 27.6 +1.0
baz=323
K56A **Middlesex** 45.77 80 P P 04 22 27.6 +1.0
baz=322
H58A **Gabriels** 45.84 76 P P 04 22 27.5 +0.4
baz=322
T47A **Sharon Grove** 45.87 93 P P 04 22 28.6 +1.1
T47A IAmb IAmb 04 22 29.2
comp=Z,33nm,1.5s
H59A **Cadyville** 45.88 76 P P 04 22 27.6 +0.2
baz=321
N54A **Moraine State** 45.94 84 P P 04 22 29.2 +1.3
baz=323
N54A **Moraine State** 45.94 84 P P 04 22 29.5 +1.6
O53A **New Philadelph** 45.94 85 P P 04 22 28.9 +0.9
baz=323
Q51A **Peebles** 45.95 88 P P 04 22 29.1 +1.1
Q51A IAmb IAmb 04 22 29.5
comp=Z,25nm,0.9s
P52A **Corning** 46.02 87 P P 04 22 28.9 +0.4
baz=324
P52A **Corning** 46.02 87 P P 04 22 29.7 +1.1
D62A **Allapoint, All** 46.02 70 P P 04 22 29.8 +1.3
baz=321
F61A **St Evariste** 46.03 72 P P 04 22 29.7 +1.0
baz=321
I58A **Old Forge** 46.05 77 P P 04 22 29.2 +0.4
baz=322
M55A **Ridgway** 46.09 82 P P 04 22 30.1 +1.0
M55A pP 04 22 54.3 0.0
L56A **Greenwood** 46.11 81 P P 04 22 30.0 +0.6
baz=322
K57A **Scipio Center** 46.11 79 P P 04 22 29.6 +0.3
baz=322
G60A **Masonville** 46.13 74 P P 04 22 29.7 +0.3
baz=321
J58A **Remsen** 46.17 78 P P 04 22 30.3 +0.5
baz=322
E62A **Clayton Lake** 46.17 71 P P 04 22 30.5 +0.8
baz=321
X43A **Marvell** 46.19 99 P P 04 22 30.9 +1.0
baz=327
X43A **Marvell** 46.19 99 P P 04 22 31.1 +1.1
WVT **Waverly** 46.24 95 P P 04 22 31.6 +1.2
WVT pmax pmax
comp=Z,8.0nm,0.8s
WVT **Waverly** 46.24 95 P P 04 22 31.6 +1.2
baz=322
WVT **Waverly** 46.24 95 P P 04 22 31.6 +1.2
baz=326

M56A Emporium 46.34 82 P P 04 22 32.0 +0.9
baz=323,SNR=7.2
M56A Emporium 46.34 82 P P 04 22 32.0 +0.9
M56A pP 04 22 56.0 -0.2
H60A Morristown 46.38 75 P P 04 22 31.5 +0.1
baz=322
W45A Hickory Valley 46.43 97 P P 04 22 33.8 +2.0
USA0B Ussuriysk Arra 46.44 284 P P 04 22 31.7 -0.1
USA0B pmax pmax
comp=Z,46nm,1.5s
USA0B Ussuriysk Arra 46.44 284 P P 04 22 31.7 -0.1
USA0B IAmb IAmb 04 22 33.2
comp=Z,46nm,1.5s
USRK Ussuriysk Ar. 46.44 284 P P 04 22 31.3 -0.5
comp=Z,3.6nm,0.4s,baz=52,slow=7.7,SNR=17
USRK Ussuriysk Ar. 46.44 284 P P 04 22 31.3 -0.5
I59A Olmsteadville 46.46 76 P P 04 22 32.7 +0.7
baz=322
Q52A Bidwell 46.49 87 P P 04 22 32.5 +0.2
baz=324,SNR=7.6
N56A West Decatur 46.74 82 P P 04 22 35.9 +1.6
baz=323
H61A Lyndonville 46.75 74 P P 04 22 34.7 +0.4
baz=322
BINY Binghamton 46.77 80 P P 04 22 35.0 +0.5
baz=322,SNR=5.9
BINY Binghamton 46.77 80 P P 04 22 35.4 +0.9
BINY IAmb IAmb 04 22 36.0
comp=Z,16nm,0.6s
E63A Oxbow 46.80 70 P P 04 22 34.7 +0.1
baz=321
G62A West of Eustis 46.83 73 P P 04 22 35.9 +1.1
baz=322
OXF Oxford 46.86 97 P P 04 22 36.8 +1.6
OXF pmax pmax
comp=Z,68nm,0.9s
OXF Oxford 46.86 97 P P 04 22 36.6 +1.4
baz=326,SNR=12
OXF Oxford 46.86 97 P P 04 22 36.8 +1.6
U49A Red Boiling Sp 46.87 93 P P 04 22 36.3 +1.1
U49A IAmb IAmb 04 22 37.2
comp=Z,29nm,0.8s
T50A Nancy 46.89 91 P P 04 22 36.6 +1.2
Q53A Leroy 46.92 87 P P 04 22 36.4 +0.8
baz=324,SNR=5.9
M57A Sunshine Farm, 46.94 81 P P 04 22 36.3 +0.6
baz=323
M57A Sunshine Farm, 46.94 81 P P 04 22 36.5 +0.8
M57A IAmb IAmb 04 23 01.4
comp=Z,28nm,1.1s
L58A Harry Jones Me 46.96 80 P P 04 22 36.6 +0.8
baz=323
S51A Beattyville 46.96 90 P P 04 22 36.8 +0.9
S51A IAmb IAmb 04 22 37.8
comp=Z,15nm,0.8s
CLTN Cedars of Leba 46.96 93 P P 04 22 37.5 +1.5
CLTN IAmb IAmb 04 22 38.3
comp=Z,26nm,1.0s
V48A Smith Brothers 47.03 94 P P 04 22 37.8 +1.3
V48A IAmb IAmb 04 22 38.5
comp=Z,17nm,0.9s
MCWV Mont Chateau 47.04 85 P P 04 22 37.7 +1.1
baz=324,SNR=5.4
MCWV Mont Chateau 47.04 85 P P 04 22 37.8 +1.3
E64A Bridgewater 47.06 70 P P 04 22 37.0 +0.4
baz=321
F63A Nahmakanta, Br 47.07 71 P P 04 22 37.6 +0.9
baz=322
PLAL Pickwick Lake 47.08 96 P P 04 22 38.0 +1.1
PLAL IAmb IAmb 04 22 38.8
comp=Z,18nm,0.9s
Q54A Coxs Mills 47.13 86 P P 04 22 37.9 +0.6
baz=324
Q54A Coxs Mills 47.13 86 P P 04 22 38.4 +1.1
Q54A IAmb IAmb 04 22 38.9
comp=Z,16nm,0.8s
O56A Blue Knob Stat 47.14 83 P P 04 22 38.2 +0.8
baz=323,SNR=8.1
O56A Blue Knob Stat 47.14 83 P P 04 22 38.4 +1.1
O56A IAmb IAmb 04 22 39.1
comp=Z,23nm,0.8s
R53A Hurricane 47.15 88 P P 04 22 37.8 +0.4
baz=324
R53A Hurricane 47.15 88 P P 04 22 38.1 +0.7
R53A IAmb IAmb 04 22 39.0
comp=Z,27nm,1.0s
SSPA Standing Stone 47.15 82 P P 04 22 38.2 +0.8
baz=323
SSPA Standing Stone 47.15 82 P P 04 22 38.0 +0.6
SSPA IAmb IAmb 04 23 03.2
comp=Z,55nm,1.6s
MDJ Mudanjiang 47.18 287 P P 04 22 37.5 0.0
MDJ IAmb IAmb 04 22 38.8
comp=Z,30nm,1.0s
N57A Milroy 47.21 82 P P 04 22 38.4 +0.6
baz=323
M58A Price's Panora 47.22 81 P P 04 22 38.4 +0.5
baz=323
F64A Sherman 47.27 70 P P 04 22 38.7 +0.5
baz=322
PKME Peaks-Kenny Pk 47.33 72 P P 04 22 39.7 +1.0
baz=322
Y45A Yeager Farm, C 47.34 98 P P 04 22 40.7 +1.8
143A Socs Landing, 47.47 101 P P 04 22 42.0 +2.1
Q55A Buckhannon 47.47 86 P P 04 22 40.6 +0.7
baz=324
JMM Marumori 47.50 272 P P 04 22 40.4 +0.3
N58A Sunbury 47.52 81 P P 04 22 41.0 +0.7
baz=323
N58A Sunbury 47.52 81 P P 04 22 41.2 +0.9
N58A IAmb IAmb 04 23 05.8
comp=Z,34nm,1.1s
M59A Waymart 47.55 80 P P 04 22 41.1 +0.6
baz=323
G64A Maxfield 47.58 71 P P 04 22 41.6 +1.0
baz=322
S53A Williamson 47.60 88 P P 04 22 41.4 +0.5
baz=325,SNR=6.5
O57A Amberson 47.61 82 P P 04 22 41.9 +1.0
baz=324,SNR=5.9
P56A Dayton Farm, R 47.63 84 P P 04 22 42.3 +1.2
baz=324
R54A Victor 47.71 87 P P 04 22 42.5 +0.7
baz=324,SNR=5.9
HIA Hailar 47.72 298 P P 04 22 42.3 +0.6
HIA pmax pmax
comp=Z,92nm,1.4s
HIA Hailar 47.72 298 P P 04 22 42.3 +0.6
HKT Hockley 47.83 107 *e*P P 04 22 44.1 +1.4
HKT pmax pmax
comp=Z,16nm,1.5s
HKT Hockley 47.83 107 P P 04 22 42.5 -0.2
HKT IAmb IAmb 04 22 45.7
comp=Z,32nm,1.7s
Q56A Snyder Ridge, 47.84 85 P P 04 22 43.8 +1.1
baz=324
Q56A Snyder Ridge, 47.84 85 P P 04 22 44.1 +1.3
Q56A IAmb IAmb 04 22 44.8
comp=Z,19nm,0.7s
SWET Sewanee 47.87 94 P P 04 22 43.9 +0.9
SWET IAmb IAmb 04 22 44.6
comp=Z,35nm,1.4s
TZTN Tazewell 47.87 90 P P 04 22 44.3 +1.3
baz=325
TZTN Tazewell 47.87 90 P P 04 22 44.5 +1.5
TZTN IAmb IAmb 04 22 45.0
comp=Z,14nm,0.8s
L61A Hillsdale 1, H 47.87 78 P P 04 22 44.1 +1.1
baz=323
S54A Dingess, Beckl 47.87 88 P P 04 22 43.8 +0.7
baz=325
S54A Dingess, Beckl 47.87 88 P P 04 22 43.9 +0.8
S54A IAmb IAmb 04 22 44.7
comp=Z,14nm,0.7s
N59A State Game Lan 47.89 80 P P 04 22 43.8 +0.6
baz=323
ARCES ARCESS Array B 47.94 2 P P 04 22 42.7 -0.4
comp=Z,2.7nm,0.5s,baz=350,slow=6.2,SNR=28
ARCES PcP PcP 04 24 09.3 -0.3
comp=Z,2.7nm,0.5s,baz=3.7,slow=3.8,SNR=5.1
T53A Wise 47.98 89 P P 04 22 44.9 +1.0
baz=325,SNR=8.9
X48A Hartselle 47.99 95 P P 04 22 44.8 +0.9
O58A Lewisberry 48.01 82 P P 04 22 45.1 +1.1
baz=324
P57A Homestead Farm 48.02 83 P P 04 22 45.4 +1.4
baz=324,SNR=8.1
P57A Homestead Farm 48.02 83 P P 04 22 45.5 +1.4
P57A IAmb IAmb 04 22 46.2
comp=Z,32nm,0.9s
R55A Marlinton 48.03 86 P P 04 22 45.6 +1.3
baz=324
M60A Port Jervis 48.08 79 P P 04 22 45.1 +0.5
baz=323
V51A Loudon 48.11 92 P P 04 22 46.0 +1.2
V51A IAmb IAmb 04 22 46.6
comp=Z,23nm,1.1s
G65A Princeton 48.13 70 P P 04 22 45.6 +0.7
baz=322
O59A Robesonia 48.19 81 P P 04 22 46.2 +0.8
baz=324
Q57A Strasburg 48.20 84 P P 04 22 46.8 +1.3
baz=324,SNR=8.7
N60A Cedar Hill Far 48.23 80 P P 04 22 46.3 +0.6
baz=323
R56A Bull Pasture M 48.26 85 P P 04 22 46.8 +0.8
baz=324
S55A Lewisburg 48.27 87 P P 04 22 47.0 +0.9
baz=325,SNR=5.3
VBMS Vicksburg 48.28 100 P P 04 22 48.2 +2.0
CPCT Cooper Cave 48.32 92 P P 04 22 47.2 +0.7
CPCT IAmb IAmb 04 22 48.1
comp=Z,18nm,1.2s
P58A Pank, Wackersv 48.34 83 P P 04 22 47.7 +1.1
baz=324
T54A Tazewell 48.35 88 P P 04 22 47.7 +0.9
baz=325
V52A Sevierville 48.43 91 P P 04 22 48.6 +1.3
V52A IAmb IAmb 04 22 49.6
comp=Z,66nm,2.0s
TKL Tuckaleechee C 48.49 91 P P 04 22 49.1 +1.3
TKL pmax pmax
comp=Z,14nm,0.8s
TKL Tuckaleechee C 48.49 91 P P 04 22 49.1 +1.3
TKL IAmb IAmb 04 22 49.6
comp=Z,14nm,0.8s
O60A Telford 48.54 81 P P 04 22 48.9 +0.9
baz=324
Z47A Carrollton 48.57 97 P P 04 22 49.8 +1.4
FPAL Fort Paine 48.58 94 P P 04 22 49.7 +1.2
Q58A Fox Den Farm, 48.61 84 P P 04 22 49.9 +1.2
baz=324,SNR=12
P59A Jarrettsville 48.64 82 P P 04 22 49.6 +0.8
baz=324
T55A Pulaski 48.67 88 P P 04 22 50.2 +1.0
baz=325
U54A Nelsons Funny 48.68 89 P P 04 22 50.7 +1.4
baz=325,SNR=10
U54A Nelsons Funny 48.68 89 P P 04 22 50.7 +1.4
R57A Stanardsville 48.75 85 P P 04 22 50.8 +1.0
baz=324,SNR=10
BLA Blacksburg 48.76 87 P P 04 22 51.1 +1.2
BLA pmax pmax
comp=Z,21nm,0.7s
BLA Blacksburg 48.76 87 P P 04 22 50.7 +0.8
baz=325
BLA Blacksburg 48.76 87 P P 04 22 51.0 +1.2
S56A Natural Bridge 48.77 86 P P 04 22 51.3 +1.4
baz=325
Y49A Blount Mountai 48.77 95 P P 04 22 51.1 +1.1
Y49A IAmb IAmb 04 22 51.8
comp=Z,22nm,1.1s
344A Westbrook Farm 48.83 101 P P 04 22 52.9 +2.5
W52A Murphy 48.89 92 P P 04 22 52.2 +1.3
W52A IAmb IAmb 04 22 52.8
comp=Z,20nm,1.0s
X51A Calhoun 48.90 93 P P 04 22 52.1 +1.2
X51A IAmb IAmb 04 22 52.7
comp=Z,18nm,0.8s
V53A Saluda 48.93 90 P P 04 22 52.5 +1.3
V53A IAmb IAmb 04 22 53.2
comp=Z,14nm,0.7s
R58A Rapidan 48.99 84 P P 04 22 52.3 +0.8
baz=324
U55A TA2, Sparta 49.05 88 P P 04 22 53.3 +1.1
baz=325,SNR=13
T56A Rocky Mt 49.09 87 P P 04 22 53.8 +1.4
baz=325
O61A Allentown 49.10 80 P P 04 22 53.4 +1.1
baz=324
Q59A Harwood 49.14 83 P P 04 22 53.9 +1.3
baz=324
LRAL Lakeview Retre 49.19 96 P P 04 22 53.4 +0.2
baz=327
LRAL Lakeview Retre 49.19 96 P P 04 22 53.4 +0.2
LRAL IAmb IAmb 04 23 15.9
comp=Z,49nm,2.0s
V54A Nebo 49.24 90 P P 04 22 55.0 +1.5
baz=326,SNR=8.4
R58B Mineral 49.31 84 P P 04 22 56.0 +2.0
baz=325
R58B Mineral 49.31 84 P P 04 22 56.2 +2.2
R58B IAmb IAmb 04 22 56.4
comp=Z,28nm,1.1s
CBN Corbin Frederi 49.35 84 P P 04 22 55.7 +1.5
baz=325,SNR=7.3
CBN Corbin Frederi 49.35 84 P P 04 22 56.0 +1.7
BG3 Lake Jocassee 49.43 91 P P 04 22 56.4 +1.4
R59A King George, V 49.47 84 P P 04 22 56.9 +1.7
baz=325,SNR=6.1
T57A Hurt 49.47 86 P P 04 22 56.1 +0.9
baz=325
U56A King 49.49 88 P P 04 22 56.6 +1.2
baz=325,SNR=5.3
U56A King 49.49 88 P P 04 22 56.8 +1.4
U56A IAmb IAmb 04 22 57.3
comp=Z,18nm,0.8s
V55A Taylorsville 49.51 89 P P 04 22 56.8 +1.2
baz=326
V55A Taylorsville 49.51 89 P P 04 22 57.0 +1.5
V55A IAmb IAmb 04 22 57.5
comp=Z,15nm,0.8s
S58A Poland Farm, P 49.52 85 P P 04 22 57.0 +1.4
baz=325
S58A Poland Farm, P 49.52 85 P P 04 22 57.0 +1.4
S58A IAmb IAmb 04 22 57.9
comp=Z,17nm,1.0s
CN2 Changchun 49.64 289 *e*P P 04 22 56.0 -0.4
CN2 sP sP 04 23 30.8 -3.4
CN2 S S 04 29 48.0 -8.4
CN2 pmax pmax
comp=Z,100nm,1.2s
CN2 pmax pmax
comp=Z,350nm,4.0s
R60A Leonardtown, M 49.66 83 P P 04 22 58.6 +2.0
baz=325
W54A Cherokee Point 49.70 90 P P 04 22 58.1 +1.2
baz=326
S59A Mechanicsville 49.75 84 P P 04 22 58.5 +1.3
baz=325,SNR=5.1
MJB9 Matsu-Tunnel 49.77 273 P P 04 22 58.5 +1.0
MAJO Matsushiro 49.77 273 *c* iP P 04 22 57.9 +0.4
MAJO pmax pmax
comp=Z,42nm,0.8s
MAJO Matsushiro 49.77 273 P P 04 22 58.1 +0.6
MAT Matsushiro 49.77 273 P P 04 22 57.8 +0.3
MJAR Matsushiro Arr 49.77 273 P P 04 22 58.0 +0.5
comp=Z,19nm,0.9s,baz=9.5,slow=7.6,SNR=23
MJAR Matsushiro Arr 49.77 273 P P 04 22 58.3 +0.8
MJAR pmax pmax
comp=Z,18nm,1.4s
MJAR Matsushiro Arr 49.77 273 P P 04 22 58.3 +0.8
Z51A Franklin 49.79 94 P P 04 22 58.8 +1.0
Z51A IAmb IAmb 04 22 59.4
comp=Z,26nm,1.1s
T58A Grand View Acr 49.85 86 P P 04 22 58.9 +0.8
baz=325
Y52A Lilburn 49.85 93 P P 04 22 59.5 +1.3
V56A Mocksville 49.88 88 P P 04 22 59.4 +1.1
baz=326,SNR=5.1
U57A Blanch 49.90 87 P P 04 22 59.5 +1.1
baz=325,SNR=5.4
KMSC Kings Mountain 50.04 90 P P 04 23 00.5 +0.9
baz=326
KMSC Kings Mountain 50.04 90 P P 04 23 00.7 +1.1
KMSC IAmb IAmb 04 23 01.2
comp=Z,12nm,0.9s
X54A Belton 50.06 91 P P 04 23 00.9 +1.3
baz=326,SNR=8.0
PAULI Pauline 50.09 90 P P 04 23 01.1 +1.2
V57A Coltrane Farms 50.14 88 P P 04 23 00.7 +0.4
baz=326
T59A Double "B" Far 50.27 85 P P 04 23 02.4 +1.1
baz=325
T59A Double "B" Far 50.27 85 P P 04 23 02.7 +1.4
T59A IAmb IAmb 04 23 03.4
comp=Z,15nm,0.8s
HODGE Hodges 50.37 91 P P 04 23 03.4 +1.3
W56A Indian Trail 50.39 89 P P 04 23 03.1 +0.9
baz=326,SNR=5.1
250A Grady 50.41 96 P P 04 23 03.2 +0.8
X55A Gracelyn & Ava 50.46 90 P P 04 23 04.0 +1.2
baz=326,SNR=6.1
GOGA Godfrey 50.50 93 P P 04 23 03.8 +0.8
baz=327
T60A Surry 50.51 84 P P 04 23 04.6 +1.5
baz=325
T60A Surry 50.51 84 P P 04 23 04.9 +1.8
V58A Windy Hill, Pi 50.52 87 P P 04 23 04.2 +1.0
baz=326
152A Waverly Hall 50.54 94 P P 04 23 03.8 +0.4
152A IAmb IAmb 04 23 04.8
comp=Z,16nm,1.0s
W57A Gilead 50.65 88 P P 04 23 05.0 +0.8
baz=326
W57A Gilead 50.65 88 P P 04 23 05.2 +1.1
W57A IAmb IAmb 04 24 20.2
comp=Z,14nm,0.8s
U59A Littleton 50.67 86 P P 04 23 05.9 +1.7
baz=325,SNR=5.5
U59A Littleton 50.67 86 P P 04 23 06.0 +1.7
U59A IAmb IAmb 04 23 06.5
comp=Z,15nm,0.7s
X56A White Oak 50.72 90 P P 04 23 05.5 +0.8
baz=326
JSC Jenkinsville 50.79 90 P P 04 23 06.5 +1.3
JSC pmax pmax
comp=Z,11nm,0.7s
JSC Jenkinsville 50.79 90 P P 04 23 06.5 +1.3
JSC IAmb IAmb 04 23 07.0
comp=Z,11nm,0.7s
Y55A Saluda 50.80 91 P P 04 23 06.1 +0.8
baz=326,SNR=6.2
BIRD Birdtown, Kers 50.85 89 P P 04 23 06.9 +1.3
BIRD IAmb IAmb 04 23 07.5
comp=Z,18nm,0.8s
U60A Pendleton 50.86 85 P P 04 23 07.0 +1.3
baz=325
JGF Kuroka 50.93 273 P P 04 23 07.2 +0.9
V59A Middlesex 50.95 86 P P 04 23 07.5 +1.1
baz=326
W58A Raeford 51.11 88 P P 04 23 08.8 +1.2
baz=326,SNR=5.2
X57A Johnson Farm, 51.17 89 P P 04 23 09.5 +1.5
baz=326
Y56A Pelion 51.17 91 P P 04 23 09.2 +1.1
baz=326
U61A Possum Corner 51.31 84 P P 04 23 10.6 +1.6
baz=326
154A Montrose 51.33 93 P P 04 23 09.9 +0.7
V60A Jim Taylor Roa 51.40 86 P P 04 23 11.3 +1.6
baz=326
X58A Rowland 51.45 88 P P 04 23 11.4 +1.4
baz=326
Z56A Williston 51.53 91 P P 04 23 11.6 +0.9
baz=327
Z56A Williston 51.53 91 P P 04 23 12.1 +1.3
V61A Roper 51.69 85 P P 04 23 13.6 +1.8
baz=326
X59A McDuffie Farm, 51.77 88 P P 04 23 13.5 +1.1
baz=326
W60A Pink Hill 51.78 86 P P 04 23 14.3 +1.7
baz=326
Y58A Scranton 51.83 89 P P 04 23 14.3 +1.3
baz=326
Z57A Bowman 51.86 90 P P 04 23 14.1 +0.9
baz=327
TLY Talaya 51.89 310 *c* iP P 04 23 14.3 +1.1
TLY pmax pmax
comp=Z,40nm,1.6s
TLY Talaya 51.89 310 P P 04 23 13.8 +0.5
X60A Albert Glenn T 52.05 87 P P 04 23 16.1 +1.5
baz=326
TIGA Tifton 52.09 94 P P 04 23 15.3 +0.4
baz=328
Y59A Loris 52.13 88 P P 04 23 16.2 +1.1
baz=326
Y59A Loris 52.13 88 P P 04 23 16.5 +1.4
ZAK Zakamensk 53.10 310 *e*P P 04 23 22.2 0.0
ZAK pmax pmax
comp=Z,11nm,1.0s
TMCR Tamitsa 53.20 355 *e*P P 04 23 22.0 -0.6
JHS Saijyo 53.37 276 P P 04 23 25.0 +0.6
KS19 Wonju Array Si 53.69 283 P P 04 23 27.6 +1.0
KSRS Korea Array 53.70 282 P P 04 23 27.8 +1.2
comp=Z,27nm,0.6s,baz=29,slow=6.9,SNR=52
KSRS LR LR 04 46 43.4
comp=Z,20nm,19.8s,baz=25,slow=36
ULN Ulaanbaatar 53.82 305 *c* iP P 04 23 28.8 +1.2
ULN pmax pmax
comp=Z,45nm,1.0s
ULN Ulaanbaatar 53.82 305 P P 04 23 28.5 +0.9
SONM Songino Array 54.09 306 P P 04 23 31.1 +1.6
comp=Z,33nm,0.9s,baz=20,slow=6.1,SNR=96
SONM Songino Array 54.09 306 P P 04 23 30.5 +1.0
SONM Songino Array 54.09 306 P P 04 23 30.5 +1.0
INCN Inchon 54.25 284 P P 04 23 31.0 +0.3
INCN pmax pmax
comp=Z,39nm,0.9s
INCN Inchon 54.25 284 P P 04 23 31.0 +0.3
TJN Taejon 54.84 282 *c* iP P 04 23 35.6 +0.7
DL2 Dalian 55.29 288 P P 04 23 38.8 +0.7
DL2 pmax pmax
comp=Z,100nm,0.8s
NB2 NORSAR Subarra 55.73 11 P P 04 23 40.2 -0.8
comp=Z,1.1nm,0.5s,baz=351,slow=7.4
NOA NORSAR Array B 55.73 11 P P 04 23 40.2 -0.8
comp=Z,1.4nm,0.5s,baz=350,slow=7.2,SNR=9.2
ZAA0 Zalesovo Array 55.80 324 P P 04 23 41.4 -0.2
ZALV Zalesovo Beam 55.80 324 P P 04 23 41.4 -0.2
comp=Z,13nm,0.4s,baz=21,slow=7.3,SNR=85
ZALV ScP ScP 04 28 27.9 -0.1
comp=Z,1.2nm,0.6s,baz=26,slow=7.1,SNR=4.4
ZALV LR LR 04 51 43.7
comp=Z,48nm,18.3s,baz=64,slow=40
ZALV Zalesovo Beam 55.80 324 *i* P P 04 23 41.4 -0.2
ZALV pmax pmax
comp=Z,13nm,0.4s
ZALV Zalesovo Beam 55.80 324 P P 04 23 40.8 -0.8
JNU Nakatsue 55.96 277 P P 04 23 43.5 +0.4
comp=Z,14nm,0.8s,baz=148,slow=2.3,SNR=6.3
FINES FINESS Array B 56.07 2 P P 04 23 42.8 -0.6
comp=Z,1.6nm,0.4s,baz=0.5,slow=5.9,SNR=19
FINES FINESS Array B 56.07 2 P P 04 23 43.6 +0.2
FINES FINESS Array B 56.07 2 P P 04 23 43.6 +0.2
KLMR Klimovskoe 56.45 354 *e*P P 04 23 45.3 -0.7
KLMR *e* 04 24 41.3
KLMR pmax pmax
comp=Z,21nm,0.7s
KLMR Klimovskoe 56.45 354 *e*P P 04 23 45.4 -0.6
KLMR AMP 04 23 46.8
comp=Z,21nm,0.7s
KLMR *e*PcP PcP 04 24 41.4 -0.2
BJI Beijing 56.69 293 P P 04 23 48.5 +0.4
BJI pmax pmax
comp=Z,30nm,1.0s
BJT Baijiatuau 56.71 293 P P 04 23 48.7 +0.5
BJT pmax pmax
comp=Z,22nm,0.6s
BJT Baijiatuau 56.71 293 P P 04 23 48.7 +0.5
HHC Hu-ho-hao-te 57.92 298 *e*P P 04 23 57.8 +0.9
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,170nm,7.8s
KIRV Kirov 57.98 348 *c* iP P 04 23 57.1 +0.2
SNART Snartemo 58.00 14 *i* P P 04 23 57.5 +0.5
SVE Sverdlovsk 58.29 340 *de*P P 04 23 59.5 +0.5
SVE pmax pmax
comp=Z,41nm,1.4s
ARU Arti 58.98 342 *c* iP P 04 24 03.8 -0.1
ARU *PP pP 04 24 32.1 +2.1
ARU 04 24 51.1
ARU 04 26 13.5
ARU S S 04 32 01.0 -0.4
ARU SS SS 04 35 50.8 -4.9
ARU pmax pmax
comp=Z,55nm,1.3s

ARU Arti 58.98 342 P **P** **04 24 03.6 -0.3**
VSU Vasula 59.07 2⇓*e*P **P** **04 24 04.6 +0.2**
VSU pmax pmax
comp=Z,61nm,1.0s
BRVK Borovoye 60.12 333 P **P** **04 24 10.2 -1.5**
BRVK Borovoye 60.12 333 P **P** **04 24 11.2 -0.5**
SEM Semipalatinsk 60.22 325 *e*P **P** **04 24 11.3 -1.5**
comp=Z,4.2nm,0.7s,baz=325
SEM *e*PP **PP** **04 26 25.2 -0.8**
baz=325
SEM Semipalatinsk 60.22 325 *e*P **P** **04 24 11.2 -1.5**
SEM *e* 04 26 25.2
SEM pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 60.36 326*c i*P **P** **04 24 12.9 -0.5**
KURK pmax pmax
comp=Z,46nm,1.7s
KURK Kurchatov 60.36 326 P **P** **04 24 13.1 -0.3**
MOS Moscow 61.64 355 *e*P **P** **04 24 21.6 -0.3**
MOS pmax pmax
comp=Z,41nm,1.2s
NJ2 Nanjing 62.27 286 *e*P **P** **04 24 26.8 +0.3**
NJ2 pmax pmax
comp=Z,60nm,0.9s
OBN Obninsk 62.31 355*c i*P **P** **04 24 26.5 +0.1**
OBN *e**PP **pP** **04 24 50.6 -2.3**
OBN *e* 04 26 43.8
OBN *e*S **S** **04 32 37.7 -6.0**
OBN pmax pmax
comp=Z,29nm,0.6s
OBN Obninsk 62.31 355 P **P** **04 24 26.4 0.0**
BRZS Berezniki 62.48 330 *e*P **P** **04 24 26.5 -1.2**
comp=Z,9.3nm,1.4s,baz=330
BRZS *e*S **S** **04 32 44.7 -1.4**
baz=330
BRZS Berezniki 62.48 330 *e*P **P** **04 24 26.5 -1.2**
BRZS *e*S **S** **04 32 44.7 -1.4**
BRZS pmax pmax
comp=Z,9.0nm,1.4s
MK31 Makanchi Array 62.96 322*c i*P **P** **04 24 30.1 -0.8**
MK31 Makanchi Array 62.96 322 P **P** **04 24 30.1 -0.8**
MK31 IAmb IAmb 04 24 31.2
comp=Z,23nm,1.5s
MKAR Makanchi Array 62.96 322 P **P** **04 24 30.2 -0.7**
comp=Z,8.3nm,0.6s,baz=34,slow=6.7,SNR=93
MKAR PP PP 04 26 39.1 -11
comp=Z,0.9nm,0.5s,baz=45,slow=9.0,SNR=2.4
MKAR LR LR 04 53 00.1
comp=Z,53nm,19.3s,baz=24,slow=37
MKAR Makanchi Array 62.96 322 P **P** **04 24 30.2 -0.7**
MAKZ Makanchi 63.03 322 P **P** **04 24 30.9 -0.5**
MAKZ pmax pmax
comp=Z,18nm,0.9s
MAKZ Makanchi 63.03 322 P **P** **04 24 30.9 -0.5**
MAKZ IAmb IAmb 04 24 31.4
comp=Z,18nm,0.9s
GTA Gaotai 63.76 306 ⇑P **P** **04 24 37.3 +0.8**
GTA pP pP 04 24 58.3 -5.2
GTA sP PcP 04 25 07.0 -4.5
GTA pmax pmax
comp=Z,60nm,0.8s
GTA pmax pmax
comp=Z,110nm,6.0s
GTA LR LR
comp=Z,110nm,17.4s
GTA LR LR
comp=Z,110nm,18.5s
GTA LR LR
comp=Z,100nm,18.0s
WMQ Urumqi 64.03 317 *e*P **P** **04 24 41.8 +3.7**
WMQ Urumqi 64.03 317 P **P** **04 24 39.4 +1.3**
WMQ pmax pmax
comp=Z,24nm,1.2s
WMQ Urumqi 64.03 317 P **P** **04 24 39.4 +1.3**
WMQ IAmb IAmb 04 24 40.1
comp=Z,24nm,1.2s
BELG Belogornoye 64.27 348*c i*P **P** **04 24 39.2 -0.2**
BELG pmax pmax
comp=Z,18nm,0.8s
LPSR Galich'ya Gora 64.72 354 *e*P **P** **04 24 42.1 -0.2**
LPSR pmax pmax
comp=Z,40nm,1.0s
XAN Xi'an 64.83 296 P **P** **04 24 42.5 -0.9**
XAN pmax pmax
comp=Z,18nm,1.0s
XAN Xi'an 64.83 296 P **P** **04 24 43.2 -0.2**
XAN pmax pmax
comp=Z,11nm,0.7s
XAN Xi'an 64.83 296 P **P** **04 24 43.2 -0.2**
XAN IAmb IAmb 04 24 43.3
comp=Z,11nm,0.7s
AKTO Aktyubinsk 64.88 340 P **P** **04 24 42.9 -0.5**
LZH Lanzhou 65.11 301 ⇑P **P** **04 24 45.8 +0.5**
LZH pP pP 04 25 12.0 -0.1
LZH sP sP 04 25 22.8 -1.1
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,110nm,7.9s
CLL Collm 65.52 11 *e*P **P** **04 24 47.0 -0.5**
comp=Z,23nm,1.7s
CLL *e*(PcP) **PcP** **04 25 18.0 -0.4**
CLL Collm 65.52 11 *e*P **P** **04 24 47.0 -0.5**
CLL pmax pmax
comp=Z,23nm,1.7s
WHN Wuhan 65.53 289 ⇑P **P** **04 24 47.5 -0.4**
WHN pmax pmax
comp=Z,44nm,0.7s
TDK Taldyqorghan 65.68 324 *e*P **P** **04 24 48.5 -0.2**
comp=Z,26nm,1.0s,baz=324
TDK Taldyqorghan 65.68 324 *e*P **P** **04 24 48.4 -0.2**
TDK pmax pmax
comp=Z,26nm,1.0s
AB31 Akbulak array 65.71 339 *i* P **P** **04 24 48.4 -0.4**
ABKAR Akbulak array 65.71 339 P **P** **04 24 48.4 -0.4**
VRH Novokhopyorsk 65.94 352 *e*P **P** **04 24 48.9 -1.3**
VRH pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 66.08 353 *e*P **P** **04 24 50.2 -0.9**
VSR pmax pmax
comp=Z,60nm,1.8s
VORD Divnogorie 66.33 353 *e*P **P** **04 24 52.1 -0.6**
VORD pmax pmax
comp=Z,20nm,0.6s
CHVC Chvalec 66.48 9 *e*P **P** **04 24 54.3 +0.6**
DPC Dobruska-Polom 66.74 9 *e*P **P** **04 24 55.9 +0.5**
DPC Dobruska-Polom 66.74 9 *e*P **P** **04 24 55.9 +0.5**
BTLS Baital 66.78 327 *e*P **P** **04 24 55.0 -0.7**
comp=Z,7.5nm,1.1s,baz=327
BTLS Baital 66.78 327 *e*P **P** **04 24 55.0 -0.7**
BTLS pmax pmax
comp=Z,8.0nm,1.1s
AKASG Malin Array Be 66.86 0 P **P** **04 24 55.5 -0.6**
comp=Z,12nm,0.4s,baz=3.3,slow=6.4,SNR=66
AKASG Malin Array Be 66.86 0 P **P** **04 24 55.5 -0.6**
AKBB Malin Array Si 66.86 0*c i*P **P** **04 24 55.6 -0.5**
AKBB pmax pmax
comp=Z,13nm,0.6s
AKBB Malin Array Si 66.86 0 P **P** **04 24 55.7 -0.4**
PRU Pruhonice 66.96 10 *e*P **P** **04 24 55.8 -0.9**
PRU Pruhonice 66.96 10 *e*P **P** **04 24 55.8 -0.9**
KPKS Kokpek 67.02 323 *e*P **P** **04 24 57.1 -0.3**
comp=Z,11nm,0.7s,baz=323
KPKS Kokpek 67.02 323 *e*P **P** **04 24 57.0 -0.3**
KPKS pmax pmax
comp=Z,11nm,0.7s
KRLC Kraliky 67.05 9 *e*P **P** **04 24 57.6 +0.2**
KRLC Kraliky 67.05 9 *e*P **P** **04 24 57.6 +0.2**
SHLS Shalkode 67.09 322 *e*P **P** **04 24 57.1 -0.8**
comp=Z,29nm,1.0s,baz=322
SHLS Shalkode 67.09 322 *e*P **P** **04 24 57.1 -0.8**
SHLS pmax pmax
comp=Z,29nm,1.0s
MATN Matagalpa 67.10 107 P **P** **04 24 58.9 +0.8**
CHKK Chushkaly 67.12 325 *e*P **P** **04 24 57.0 -1.0**
baz=325
CHKK Chushkaly 67.12 325 *e*P **P** **04 24 56.9 -1.0**
PBCC Pribram 67.22 11 *e*P **P** **04 24 57.6 -0.8**
KUU Kurty 67.26 325 *e*P **P** **04 24 57.5 -1.2**
comp=Z,5.3nm,0.9s,baz=325
KUU Kurty 67.26 325 *e*P **P** **04 24 57.5 -1.2**
KUU pmax pmax
comp=Z,5.0nm,0.9s
MORC Moravsky Berou 67.39 8 ⇑P **P** **04 24 59.0 -0.5**
MORC Moravsky Berou 67.39 8 *e*P **P** **04 24 59.5 -0.1**
MORC Moravsky Berou 67.39 8 P **P** **04 24 59.7 +0.1**
MORC pmax pmax
comp=Z,11nm,1.5s
MORC Moravsky Berou 67.39 8 P **P** **04 24 59.7 +0.1**
SATY Saty 67.48 323 *e*P **P** **04 25 00.1 -0.2**
comp=Z,4.1nm,0.8s,baz=324
SATY *e*PcP **PcP** **04 25 26.6 -0.2**
baz=324
SATY Saty 67.48 323 *e*P **P** **04 25 00.1 -0.2**
SATY *e* 04 25 26.6
SATY pmax pmax
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 67.73 11 P **P** **04 25 02.5 +0.8**
KHC Kasperske Hory 67.73 11 *e*P **P** **04 25 02.2 +0.5**
KHC Kasperske Hory 67.73 11 P **P** **04 25 02.5 +0.8**
AAA Alma-Ata 67.74 324 *e*P **P** **04 25 01.8 -0.1**
baz=325
AAA Alma-Ata 67.74 324 *e*P **P** **04 25 01.8 -0.1**
MDOK Medeo 67.75 324 *e*P **P** **04 25 01.5 -0.5**
baz=324
MDOK Medeo 67.75 324 *e*P **P** **04 25 01.5 -0.5**
VRAC Vranov 67.80 9 ⇑P **P** **04 25 02.4 +0.4**
VRAC Vranov 67.80 9 *e*P **P** **04 25 02.0 0.0**
KWP Kalwaria Pacla 67.81 5 P **P** **04 25 02.6 +0.5**
KWP Kalwaria Pacla 67.81 5 P **P** **04 25 02.6 +0.5**
ENH Enshi 67.85 293 P **P** **04 25 02.5 -0.2**
GEC2 GERESS Array S 68.02 11 P **P** **04 25 04.2 +0.6**
GERES GERESS Array B 68.02 11 P **P** **04 25 04.0 +0.4**
comp=Z,1.3nm,0.7s,baz=353,slow=4.2,SNR=10
GERES GERESS Array B 68.02 11 P **P** **04 25 03.6 0.0**
GERES GERESS Array B 68.02 11 P **P** **04 25 03.5 0.0**
KRUC Moravsky 68.03 9 *e*P **P** **04 25 03.0 -0.5**
SGDS Sogindy 68.11 326 *e*P **P** **04 25 03.8 -0.5**
comp=Z,12nm,1.1s,baz=326
SGDS Sogindy 68.11 326 *e*P **P** **04 25 03.7 -0.5**
SGDS pmax pmax
comp=Z,12nm,1.1s
LANS Liptovska Anna 68.14 7 *e*P **P** **04 25 05.0 +0.8**
LANS pmax pmax
comp=Z,4.0nm,0.7s
LANS Liptovska Anna 68.14 7 *e*P **P** **04 25 05.0 +0.8**
JAVC Velka Javorina 68.32 8 *e*P **P** **04 25 06.6 +1.2**
USP Ospenovka 68.32 326 P **P** **04 25 05.6 +0.1**
SNR=8.0
TKM2 Tokmak 2 68.36 325 P **P** **04 25 06.3 +0.4**
SNR=11
KOLS Kolonicke sedl 68.49 5 *e*P **P** **04 25 06.6 +0.2**
KOLS Kolonicke sedl 68.49 5 *e*P **P** **04 25 06.6 +0.2**
CHMS Chumysh 68.51 326 P **P** **04 25 07.2 +0.6**
SNR=14
FRU1 Bishkek 68.72 326 P **P** **04 25 08.3 +0.3**
FRU1 pmax pmax
comp=Z,38nm,0.6s
FRU1 Bishkek 68.72 326 P **P** **04 25 08.3 +0.3**
VYHS Vyhne 68.75 8 *e*P **P** **04 25 08.5 +0.4**
VYHS Vyhne 68.75 8 *e*P **P** **04 25 08.4 +0.4**
MODS Modra-Piesok 68.77 9 *e*P **P** **04 25 07.9 -0.3**
MODS Modra-Piesok 68.77 9 *e*P **P** **04 25 07.9 -0.3**
KBK Karagaybulak 68.78 326 P **P** **04 25 09.0 +0.5**
SNR=13
UZH Uzhgorod 68.79 5 *e*P **P** **04 25 07.9 -0.3**
UZH *e* 04 25 30.9
UZH *e* 04 25 40.7
AAK Ala-Archa 68.91 326 P **P** **04 25 09.8 +0.5**
SNR=12
AAK Ala-Archa 68.91 326*c i*P **P** **04 25 09.4 +0.1**
AAK pmax pmax
comp=Z,138nm,1.7s
MOA Moiln 69.06 11 *e*P **P** **04 25 10.6 +0.7**
comp=Z,11nm,1.6s
EKS2 Erkin-Say 69.07 326 P **P** **04 25 10.8 +0.5**
SNR=26
RETA Reutte 69.08 13 *e*P **P** **04 25 11.2 +1.1**
comp=Z,11nm,1.5s
CONA Conrad Observa 69.11 10 *e*P **P** **04 25 10.2 -0.1**
comp=Z,7.0nm,0.9s
MOTA Moosalm 69.26 13 *e*P **P** **04 25 12.2 +0.9**
comp=Z,6.2nm,0.8s
WATA Walderalm 69.32 13 *i* P **P** **04 25 11.8 +0.1**
comp=Z,11nm,1.3s
SQTA Sankt Quirin 69.39 13 *e*P **P** **04 25 13.4 +1.2**
comp=Z,20nm,1.4s
WTTA Wattenberg 69.39 13 *i* P **P** **04 25 13.5 +1.3**
comp=Z,16nm,1.3s
SORM Soroca 69.43 1 ⇑P **P** **04 25 11.6 -0.6**
KK31 Karatay Array 69.46 329 P **P** **04 25 12.3 -0.2**
KK31 pmax pmax
comp=Z,17nm,1.0s
KK31 Karatay Array 69.46 329 P **P** **04 25 12.3 -0.2**
KK31 IAmb IAmb 04 25 13.3
comp=Z,17nm,1.0s
KKAR Karatay Array 69.46 329 P **P** **04 25 12.1 -0.4**
KKAR pmax pmax
comp=Z,17nm,1.0s
KKAR Karatay Array 69.46 329 P **P** **04 25 12.3 -0.1**
KKAR IAmb IAmb 04 25 13.3
comp=Z,17nm,1.0s
KKAR Karatay Array 69.46 329 P **P** **04 25 12.1 -0.4**
FETA Feichten 69.54 14 *e*P **P** **04 25 13.5 +0.4**
comp=Z,4.7nm,1.1s
AML Almayashu 69.59 326 P **P** **04 25 14.6 +0.8**
SNR=16
CD2 Chengdu 69.67 298 P **P** **04 25 13.8 -0.2**
CD2 S **S** **04 34 13.3 -0.6**
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 pmax pmax
comp=Z,260nm,11.4s
CD2 LR LR
comp=Z,310nm,12.0s
KBA Koelnbreinsper 69.74 12 *e*P **P** **04 25 15.1 +0.8**
comp=Z,14nm,0.8s
BUR08 Bucovina Ar. S 69.87 3 P **P** **04 25 15.2 +0.1**
BURAR Bucovina Array 69.90 3 ⇑P **P** **04 25 14.3 -1.0**
TUE Stuetta 69.93 15 P **P** **04 25 16.9 +1.4**
OBKA Obir 70.42 11 *i* P **P** **04 25 18.5 +0.2**
comp=Z,11nm,0.8s
IUG Iuzhnay 70.48 329 *e*P **P** **04 25 18.9 0.0**
comp=Z,9.6nm,0.7s,baz=329
IUG Iuzhnay 70.48 329 *e*P **P** **04 25 18.8 0.0**
IUG pmax pmax
comp=Z,10.0nm,0.7s
BIZ Bicaz 70.60 2 ⇑P **P** **04 25 19.8 +0.4**
DRGR 70.65 5 ⇑P **P** **04 25 19.6 -0.1**
MILM Milestii Mici 70.65 0 ⇑P **P** **04 25 18.3 -1.3**
KSH Kashi 71.44 324 P **P** **04 25 27.8 +3.1**
KSH pP pP 04 25 52.0 -0.2
KSH S **S** **04 34 32.5 -1.8**
KSH pmax pmax
comp=Z,87nm,1.1s
KSH pmax pmax
comp=Z,290nm,5.2s
KSH LR LR
comp=Z,250nm,6.3s
KSH LR LR
comp=Z,250nm,4.8s
KSH LR LR
comp=Z,250nm,5.0s
DOPR Dopca 71.55 3 ⇑P **P** **04 25 25.5 +0.3**
ICMP Isla Caja de M 71.56 87 P **P** **04 25 26.0 +0.5**
VRI Vrincioaia 71.68 2 ⇑P **P** **04 25 26.0 +0.1**
PLOR Plostina 71.69 2 ⇑P **P** **04 25 26.0 -0.1**
BZS Buzias 71.77 6 ⇑P **P** **04 25 26.2 -0.2**
GOF Gofitskoye 71.96 350⇓*e*P **P** **04 25 27.8 +0.3**
GOF pmax pmax
comp=Z,51nm,0.6s
MLR Muntele Rosu 72.04 3 ⇑P **P** **04 25 28.3 +0.1**
MLR Muntele Rosu 72.04 3 P **P** **04 25 29.1 +0.9**
MLR Muntele Rosu 72.04 3 P **P** **04 25 29.1 +0.9**
GZR Gura Zlata 72.05 5 ⇑P **P** **04 25 28.3 +0.2**
VOIR 72.08 3 ⇑P **P** **04 25 29.0 +0.7**
BTK Batken 72.27 328 P **P** **04 25 29.8 +0.2**
BTK pmax pmax
comp=Z,44nm,1.2s
BTK Batken 72.27 328 P **P** **04 25 29.8 +0.2**
GYA Guiyang 72.38 293 ⇑P **P** **04 25 30.5 0.0**
GYA pP PcP 04 25 52.5 +4.7
GYA pmax pmax
comp=Z,18nm,0.8s
ANN Anapa 72.58 354 *e*P **P** **04 25 29.3 -1.9**
ANN *e**PP **pP** **04 25 59.7 +1.1**
ANN *e*S **S** **04 34 43.9 -2.9**
ANN pmax pmax
comp=Z,18nm,0.6s
HARR Harsova 72.87 1 ⇑P **P** **04 25 32.3 -0.7**
KIV Kislovodsk 73.08 350 ⇑P **P** **04 25 34.5 +0.1**
KIV Kislovodsk 73.08 350 P **P** **04 25 34.4 +0.1**
KIV pmax pmax
comp=Z,16nm,0.7s
KIV Kislovodsk 73.08 350 P **P** **04 25 34.4 0.0**
KIV IAmb IAmb 04 25 36.8
comp=Z,16nm,0.7s
KBZ Khabaz 73.29 350 P **P** **04 25 35.9 +0.5**
comp=Z,10nm,0.9s,baz=342,slow=4.4,SNR=20
KBZ Khabaz 73.29 350*c i*P **P** **04 25 35.5 +0.1**
KBZ pmax pmax
comp=Z,17nm,1.0s
ICOR Ion Corvin 73.44 1 ⇑P **P** **04 25 36.5 +0.2**
ZEI Tsey 74.14 349 *e*P **P** **04 25 40.2 -0.5**
ZEI pmax pmax
comp=Z,8.0nm,1.1s
ESDC Sonseca Array 74.44 26 P **P** **04 25 42.8 +0.4**
comp=Z,4.1nm,0.7s,baz=340,slow=5.8,SNR=28
ESDC Sonseca Array 74.44 26 P **P** **04 25 42.7 +0.4**
KMI Kunming 75.20 296 *e*P **P** **04 25 48.8 +1.7**
KMI sP sP 04 26 25.5 -1.2
KMI pmax pmax
comp=Z,15nm,0.5s
KMI pmax pmax
comp=Z,190nm,5.1s
AKH Akhalkalaki 75.54 349 P **P** **04 25 49.4 +0.6**
AKH pmax pmax
comp=Z,52nm,1.6s
AKH Akhalkalaki 75.54 349 P **P** **04 25 49.4 +0.6**
AKH IAmb IAmb 04 25 50.3
comp=Z,52nm,1.6s
LSA Lhasa 75.62 308 P **P** **04 25 51.0 +1.3**
LSA pmax pmax
comp=Z,83nm,1.6s
LSA Lhasa 75.62 308 P **P** **04 25 51.0 +1.3**
DIKM Dikmen 75.81 355 ⇑P **P** **04 25 49.2 -0.9**
GNI Garni 76.68 348⇓*i*P **P** **04 25 56.5 +1.3**
GNI pmax pmax
comp=Z,20nm,1.7s
GNI Garni 76.68 348 P **P** **04 25 56.0 +0.8**
GEYT Alibeck 77.02 337 P **P** **04 25 57.2 +0.2**
comp=Z,6.5nm,0.6s,baz=334,slow=5.4,SNR=8.2
GEYT Alibeck 77.02 337 P **P** **04 25 57.7 +0.7**
LIT Litokhoron 77.31 5 P **P** **04 25 59.0 +0.4**
LIT Litokhoron 77.31 5 P **P** **04 25 59.0 +0.4**
SDV Santo Domingo 77.56 95 P **P** **04 26 01.0 +0.5**
comp=Z,3.1nm,0.6s,baz=28,slow=7.3,SNR=4.6
SDV pP **pP** **04 26 27.2 -0.6**
comp=Z,16nm,0.8s,baz=14,slow=3.1,SNR=7.3
SDV Santo Domingo 77.56 95 P **P** **04 26 00.6 +0.1**
SDV IAmb IAmb 04 26 27.8
comp=Z,20nm,0.8s
BR231 Keskin MP Arra 77.69 357 P **P** **04 26 01.1 +0.4**
NIL Nilore 77.69 324 P **P** **04 26 00.9 +0.1**
NIL pmax pmax
comp=Z,37nm,0.6s
NIL Nilore 77.69 324 P **P** **04 26 00.9 +0.1**
BR131 Keskin Array S 77.78 357 P **P** **04 26 01.7 +0.3**
BR131 pmax pmax
comp=Z,4.0nm,0.7s
BR131 Keskin Array S 77.78 357 P **P** **04 26 01.7 +0.3**
BRTR Keskin Array B 77.78 357 P **P** **04 26 01.6 +0.3**
comp=Z,2.5nm,0.6s,baz=15,slow=2.8,SNR=12
BRTR LR LR 05 04 32.5
comp=Z,26nm,18.6s,baz=21,slow=39
BRTR Keskin Array B 77.78 357*i* P **P** **04 26 01.6 +0.3**
BRTR pmax pmax
comp=Z,3.0nm,0.6s
BRTR Keskin Array B 77.78 357 P **P** **04 26 01.2 -0.1**
KBL Kabul 77.94 327 P **P** **04 26 01.2 -1.2**
KBL pmax pmax
comp=Z,14nm,0.9s
KBL Kabul 77.94 327 P **P** **04 26 01.2 -1.2**
KBL IAmb IAmb 04 26 02.1
comp=Z,14nm,0.8s
SLVN Son La 78.07 293 P **P** **04 26 03.5 +0.4**
SLVN IAmb IAmb 04 26 04.6
comp=Z,16nm,1.0s
GEVA Gevas 78.65 349 P **P** **04 26 07.5 +1.3**
TAPN Taplejung 78.99 310 *e*P **P** **04 26 08.9 +0.5**
comp=Z,125nm,0.4s
MANT Manisa 79.07 1 P **P** **04 26 08.3 -0.3**
MANT IAmb IAmb 04 26 08.6
comp=Z,30nm,0.9s
GUN Gumba 79.12 311 *e*P **P** **04 26 09.7 +0.6**
comp=Z,34nm,0.5s
DANN Dangsing 79.43 313 *e*P **P** **04 26 11.4 +0.6**
comp=Z,155nm,0.7s
KKN Kakani 79.43 312 *e*P **P** **04 26 11.2 +0.5**
comp=Z,39nm,0.5s
ROSC El Rosal 79.45 100 LR LR 05 03 21.9
comp=Z,28nm,18.7s,baz=220,slow=37
GKN Gorkha 79.46 312 *e*P **P** **04 26 11.2 +0.5**
comp=Z,66nm,0.4s
ODAN Odare 79.55 310 *e*P **P** **04 26 11.7 +0.4**
comp=Z,44nm,0.8s
PKIN Phulchoki 79.59 312 *e*P **P** **04 26 11.7 +0.1**
comp=Z,38nm,0.5s
PKI Pulchoki 79.59 312 *e*P **P** **04 26 11.8 +0.1**
comp=Z,37nm,0.5s
HRA Herat 79.64 333 P **P** **04 26 12.3 +0.6**
DMN Daman 79.66 312 *e*P **P** **04 26 12.5 +0.5**
comp=Z,53nm,0.5s
RAMN Ramite 79.75 310 *e*P **P** **04 26 12.7 +0.3**
comp=Z,66nm,0.5s
MARD Mardin 79.83 351 P **P** **04 26 13.5 +1.0**
PYUN Piuthan 79.92 314 *e*P **P** **04 26 13.5 +0.2**
KOLN Koldanda 80.02 313 *e*P **P** **04 26 14.1 +0.3**
comp=Z,28nm,0.6s
PPT Papeete 80.09 179 LR LR 04 57 50.4
comp=Z,42nm,19.0s,baz=358,slow=33
GAZ Gaziantep 80.19 354 P **P** **04 26 15.0 +0.5**
KEST Kesra 80.51 16 P **P** **04 26 15.9 -0.3**
comp=Z,4.4nm,0.8s,baz=322,slow=7.2,SNR=5.4
KEST Kesra 80.51 16 IAmb IAmb 04 29 09.2
comp=Z,42nm,1.8s
KARP Karpathos 81.99 2 P **P** **04 26 22.5 -1.5**
CHTO Chiang Mai 82.39 296 P **P** **04 26 25.9 -0.3**
CHTO pmax pmax
comp=Z,10.0nm,1.4s
CHTO Chiang Mai 82.39 296 P **P** **04 26 25.9 -0.3**
CM31 Chiang Mai Arr 82.71 296 P **P** **04 26 28.1 +0.2**
CM31 IAmb IAmb 04 27 49.6
comp=Z,28nm,1.2s
CMAR Chiang Mai Arr 82.71 296 P **P** **04 26 28.1 +0.2**
comp=Z,3.2nm,0.5s,baz=1.5,slow=6.3,SNR=21
CMAR LR LR 05 06 31.0
comp=Z,15nm,18.5s,baz=15,slow=38
CMAR Chiang Mai Arr 82.71 296 P **P** **04 26 28.1 +0.2**
TNTI Ternate 85.66 263 P **P** **04 26 41.6 -1.2**
PMG Port Moresby 86.15 241*de*P **P** **04 26 44.9 -0.2**
PMG pmax pmax
comp=Z,18nm,1.1s
PMG Port Moresby 86.15 241 P **P** **04 26 45.3 +0.2**
PMG IAmb IAmb 04 26 46.1
comp=Z,16nm,1.1s
FAKI Fak Fak 86.72 257 P **P** **04 26 48.3 +0.3**
FAKI Fak Fak 86.72 257 P **P** **04 26 46.8 -1.2**
MSAI Masohi 88.59 260 P P 04 27 08.5 +12
RAYN Ar Rayn 93.04 345 P **P** **04 27 17.8 +0.2**
RAYN pmax pmax
comp=Z,9.0nm,1.3s
RAYN Ar Rayn 93.04 345 P **P** **04 27 17.8 +0.2**
RAYN IAmb IAmb 04 27 18.8
comp=Z,9.4nm,1.3s
MTN Manton Dam 96.02 254 P **P** **04 27 30.2 -0.9**
SAML Samuel 96.71 96 P **P** **04 27 32.5 -1.8**
SAML Samuel 96.71 96 P **P** **04 27 32.5 -1.8**
WRA Warramunga Arr 100.92 248 P **Pdif** **04 27 51.7 -1.3**
comp=Z,1.3nm,0.8s,baz=36,slow=5.2,SNR=12
WRA PKiKP **PKiKP** **04 32 16.9 -1.0**
comp=Z,0.4nm,0.8s,baz=0.6,slow=1.6,SNR=2.4
WRA Warramunga Arr 100.92 248 *i* P **Pdif** **04 27 51.7 -1.3**
WRA pmax pmax
comp=Z,1.0nm,0.8s
TORD Torodi Ar. Bea 101.30 27 P **Pdif** **04 27 53.3 -1.6**
comp=Z,0.3nm,0.4s,baz=343,slow=5.6,SNR=10
TORD PKiKP **PKiKP** **04 32 19.4 +0.6**
comp=Z,0.2nm,0.5s,baz=341,slow=2.4,SNR=4.4
TORD PKKPbc **PKKPbc** **04 44 01.4 +0.9**
comp=Z,0.4nm,0.4s,baz=200,slow=0.5,SNR=9.6
ASAR Alice Springs 104.41 246 Pdiff **Pdif** **04 28 07.0 -1.4**
comp=Z,0.5nm,0.8s,baz=17,slow=3.7,SNR=5.2
ASAR PP **PKiKP** **04 32 20.3 -3.9**

comp=Z,0.5nm,0.7s,baz=46,slow=4.5,SNR=4.9
PLCA Paso Flores 121.12 119 PKP **PKPdf 04 32 54.7 -0.7**
comp=Z,2.5nm,1.0s,baz=214,slow=5.3,SNR=3.4
PLCA Paso Flores 121.12 119 PKIKP **PKPdf 04 32 54.7 -0.7**
VNDA Vanda 143.06 195 PKhKP PKPpre 04 33 32.9
comp=Z,1.9nm,0.7s,baz=290,slow=0.7,SNR=15
BOSA Boshof 145.72 6 PKPbc **PKPbc 04 33 42.3 +0.1**
comp=Z,11nm,0.8s,baz=12,slow=4.4,SNR=17
BOSA Boshof 145.72 6 PKP2 **PKPbc 04 33 42.2 +0.1**
VNA3 Neumayer Olymp 162.89 136 PKPab **PKPab 04 34 53.9 0.0**
VNA1 Neumayer--Stat 163.45 134 PKPab **PKPab 04 34 56.5 +0.2**
SNAA Sanae 164.90 140 PKPab **PKPab 04 35 02.0 -0.7**

*IDC **29** 04:45:17.8±2.8, 6°.24S×131°.06E, h0km, mb4.0/2, mb1 4.4/4, mb1mx3.9/18, mbtmp4.2/4, ML4.4/2, Error ellipse: s-maj=138.4km s-min=28.6km az=68.0*
*NEIC **29** 04:45:27.8±2.2, 6°.52S±0°.08×130°.6E±0°.2, h129km±16km, mb4.0/3, Error ellipse: s-maj=24.6km s-min=10.7km az=83.0*
*DJA **29** 04:45:28.3±0.3, 7°.S±3°×13°.1E±°, h119km±9km, M4.5/10, mB4.9/4, mb4.6/9, MLv4.5/10, Mw(mB)4.2/4*
ISC 29 04:45:27.7±0.8, 6°.59S±0°.06×130°.92E±0°.09, h150km, n32, σ2§41/33, mb4.0/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.43**	**165**	P	**Pn**	**04 45 56.5**	**0.0**
SAUI				S	**Sn**	**04 46 16.9**	**-1.8**
SAUI	**Saumlaki**	**1.43**	**165**	P	**Pn**	**04 45 57.6**	**+1.1**
BNDI	**Bandanaira**	**2.29**	**334**	P	**Pn**	**04 46 03.5**	**-2.8**
MSAI	**Masohi**	**3.79**	**328**	P	**Pn**	**04 46 24.6**	**-0.6**
FAKI	**Fak Fak**	**3.88**	**20**	P	**Pn**	**04 46 25.6**	**-0.8**
FAKI	**Fak Fak**	**3.88**	**20**	Pn	**Pn**	**04 46 26.3**	**-0.1**
NLAI	**Namlea**	**5.06**	**311**	P	**Pn**	**04 46 41.7**	**-0.2**
SWI	**Sorong**	**5.70**	**3**	P	**Pn**	**04 46 49.9**	**-0.6**
0.4nm1µm38nm,0.5s							
RKPI	**Ransiki, Papua**	**6.00**	**33**	P	**Pn**	**04 46 54.4**	**-0.1**
181nm,0.8s							
MTN	**Manton Dam**	**6.21**	**178**	Pn	**Pn**	**04 46 59.6**	**+2.3**
LBMI	**Labuha**	**6.83**	**330**	P	**Pn**	**04 47 04.9**	**-0.6**
0.4nm43nm,0.6s							
SOEI	**Soe**	**7.30**	**244**	P	**Pn**	**04 47 12.8**	**+0.9**
0.2nm774nm30nm,0.7s							
SOEI	**Soe**	**7.30**	**244**	Pn	**Pn**	**04 47 11.1**	**-0.8**
BAKI	**Biak**	**7.45**	**44**	P	**Pn**	**04 47 14.5**	**+0.7**
0.4nm71nm,1.2s							
BATI	**Baumata**	**8.03**	**243**	P	**Pn**	**04 47 23.3**	**+1.8**
20nm,0.5s							
KNRA	**Kununurra**	**9.27**	**193**	Pn	**Pn**	**04 47 37.8**	**-0.2**
GENI	**Genyem**	**10.03**	**67**	P	**Pn**	**04 47 48.2**	**0.0**
FITZ	**Fitzroy Crossi**	**12.54**	**204**	Pn	**Pn**	**04 48 21.2**	**+0.2**
WB0	**Warramunga Arr**	**13.52**	**166**	Pn	**Pn**	**04 48 35.6**	**+2.0**
WRAB	**Tennant Creek**	**13.67**	**166**		**Pn**	**04 48 36.8**	**+1.3**
WRA	**Warramunga Arr**	**13.68**	**166**	Pn	**Pn**	**04 48 36.9**	**+1.3**
1.6nm,0.3s,baz=352,slow=13,SNR=62							
WRA				Sn	**Sn**	**04 51 02.5**	**-4.6**
2.2nm,0.3s,baz=342,slow=23,SNR=13							
WRA	**Warramunga Arr**	**13.68**	**166**		**Pn**	**04 48 37.8**	**+2.2**
WB2	**Warramunga Arr**	**13.68**	**166**	Pn	**Pn**	**04 48 38.5**	**+2.9**
WR0	**Warramunga Arr**	**13.74**	**166**	Pn	**Pn**	**04 48 38.9**	**+2.5**
MYLDM	**Lahad Datu**	**17.05**	**313**	P	**P**	**04 49 16.2**	**-0.4**
AS31	**Alice Springs**	**17.21**	**171**	P	**Pn**	**04 49 23.8**	**+4.5**
AS31				IAmb	IAmb	04 49 26.1	
comp=Z,1.7nm,0.5s							
ASAR	**Alice Springs**	**17.22**	**171**	P	**Pn**	**04 49 24.2**	**+5.0**
comp=Z,1.4nm,0.3s,baz=350,slow=11,SNR=75							
ASAR				S	**S**	**04 52 25.7**	**-4.6**
comp=Z,0.6nm,0.3s,baz=352,slow=27,SNR=6.4							
ASAR	**Alice Springs**	**17.22**	**171**	P	**Pn**	**04 49 25.0**	**+5.8**
CMAR	**Chiang Mai Arr**	**40.18**	**309**	P	P	04 52 54.6	+5.0
comp=Z,0.9nm,0.3s,baz=142,slow=9.2,SNR=7.4							
CMAR	**Chiang Mai Arr**	**40.18**	**309**	P	**P**	**04 52 50.2**	**+0.6**
CHTO	**Chiang Mai**	**40.39**	**309**	P	**P**	**04 52 50.8**	**-0.5**
CHTO				IAmb	IAmb	04 54 25.0	
comp=Z,8.2nm,1.4s							
MKAR	**Makanchi Array**	**68.39**	**326**	P	P	04 56 20.4	+7.3
comp=Z,0.6nm,0.4s,baz=112,slow=7.7,SNR=11							

IDC 29 05:15:00.8±3.4, 30°.35S×138°.34E, h0km, mb1 2.7/3, mb1mx2.7/37, mbtmp2.5/3, ML2.4/2, Error ellipse: s-maj=80.2km s-min=16.5km az=42.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.18**	**119**	Pn	Pn	05 15 52.4	+0.3
0.2nm,0.3s,baz=304,slow=18,SNR=3.1							
STKA				Pg	Pg	05 16 00.1	-1.7
0.5nm,0.3s,baz=297,slow=16,SNR=5.7							
STKA				Sn	Sn	05 16 30.1	-0.7
0.5nm,0.3s,baz=292,slow=17,SNR=2.6							
STKA				Lg	Lg	05 16 41.1	
1.3nm,0.3s,baz=328,slow=13,SNR=5.3							
ASAR	**Alice Springs**	**7.74**	**328**	Pn	Pn	05 16 54.6	-0.2
baz=152,slow=13,SNR=1.5							
ASAR				Sn	Sn	05 18 26.1	+2.9
0.1nm,0.3s,baz=152,slow=21,SNR=2.0							
WRA	**Warramunga Arr**	**10.97**	**340**	Pn	Pn	05 17 38.1	-1.0
0.0nm,0.3s,baz=158,slow=13,SNR=1.1							

*IDC **29** 05:17:31.1±1.2, 4°.77S×122°.84E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.6/42, mbtmp3.7/7, ML3.3/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/40, Error ellipse: s-maj=30.9km s-min=22.6km az=50.0*
*NEIC **29** 05:17:32.4±1.9, 4°.85S±0°.03×122°.84E±0°.09, h10km±1km, mb4.3/5, Error ellipse: s-maj=15.6km s-min=5.1km az=91.0*
*DJA **29** 05:17:35.8±0.4, 5°.S±3°×12°.3E±°, h10km, M4.5/14, mB5.2/5, mb4.9/7, MLv4.2/14, Mw(mB)4.5/5*
ISC 29 05:17:32.3±0.7, 4°.86S±0°.05×122°.89E±0°.07, h10km, n35, σ1§16/33, mb4.0/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**0.94**	**343**	P	**Pb**	**05 17 50.6**	**-0.1**
BSSI	**Bau Bau, Buton**	**2.71**	**242**	P	**Pn**	**05 18 17.0**	**+1.1**
BKSI	**Bulukumba**	**2.80**	**260**	P	**Pn**	**05 18 18.2**	**+1.1**
BNSI	**Bone**	**2.81**	**279**	P	**Pn**	**05 18 17.0**	**-0.4**
KAPI	**Kappang**	**3.13**	**267**	Pn	**Pn**	**05 18 21.2**	**-0.5**
32nm,0.3s,baz=87,slow=6.8,SNR=48							
KAPI				Sn	**Sn**	**05 18 59.3**	**+0.1**
22nm,0.3s,baz=72,slow=20,SNR=8.4							
KAPI				LR	LR	05 19 29.9	
comp=Z,79nm,21.0s,baz=12,slow=38							
KAPI	**Kappang**	**3.13**	**267**		**Pn**	**05 18 21.5**	**-0.2**
SPSI	**Sidrap Palu**	**3.24**	**286**	P	**Pn**	**05 18 24.4**	**+1.2**
TTSI	**Tana Toraja**	**3.56**	**300**	P	**Pn**	**05 18 28.5**	**+0.9**
LUWI	**Luwuk**	**3.80**	**358**	P	**Pn**	**05 18 31.8**	**+0.9**
LUWI	**Luwuk**	**3.80**	**358**	Pn	**Pn**	**05 18 30.9**	**0.0**
MMRI	**Maumere**	**3.81**	**190**	Pn	**Pn**	**05 18 32.2**	**+1.2**
APSI	**Ampana**	**4.12**	**342**	P	**Pn**	**05 18 35.0**	**-0.3**
SOEI	**Soe**	**5.05**	**164**	Pn	**Pn**	**05 18 48.1**	**-0.2**
BATI	**Baumata**	**5.37**	**172**	LR	LR	05 21 10.7	
comp=Z,181nm,20.5s,baz=264,slow=40							
MRSI	**Marisa**	**5.39**	**350**	P	**Pn**	**05 18 53.7**	**+0.9**
902nm0.2nm56nm,0.8s							
GTOI	**Gorontalo**	**5.46**	**1**	P	**Pn**	**05 18 56.7**	**+2.9**
0.2nm652nm28nm,0.6s							
TOLI2	**Tolitoli**	**6.30**	**340**		**Pn**	**05 19 07.3**	**+2.0**
TOLI2				Sn	**Sn**	**05 20 16.1**	**-1.2**
TNTI	**Ternate**	**7.16**	**39**	Pn	**Pn**	**05 19 17.9**	**+0.8**
MTKI	**Muara Teweh, K**	**8.88**	**296**	P	**Pn**	**05 19 44.1**	**+3.2**
SBUM	**Sibu**	**12.90**	**304**	Pn	**Pn**	**05 20 35.9**	**0.0**
FITZ	**Fitzroy Crossi**	**13.43**	**169**	LR	LR	05 27 05.6	
comp=Z,44nm,18.2s,baz=349,slow=42							
FITZ	**Fitzroy Crossi**	**13.43**	**169**	Pn	**Pn**	**05 20 42.5**	**-0.6**
WB0	**Warramunga Arr**	**18.57**	**144**	P	**P**	**05 21 49.5**	**-0.2**
WB0				IAmb	IAmb	05 21 59.2	
comp=Z,7.4nm,1.5s							
WRA	**Warramunga Arr**	**18.68**	**144**	P	**Pn**	**05 21 52.1**	**+0.9**
comp=Z,0.0nm,0.3s,baz=317,slow=12,SNR=7.2							
WB2	**Warramunga Arr**	**18.69**	**144**	P	**Pn**	**05 21 52.0**	**+0.8**
ASAR	**Alice Springs**	**21.50**	**151**	P	**P**	**05 22 22.9**	**+1.4**
comp=Z,1.5nm,0.8s,baz=334,slow=13,SNR=4.6							
RPSI	**Rantau Prapat**	**25.09**	**287**	P	**P**	**05 22 56.2**	**-1.3**
RPSI				IAmb	IAmb	05 23 09.0	
comp=Z,9.6nm,1.0s							
CTAO	**Charters Tower**	**27.31**	**126**	P	**P**	**05 23 17.9**	**+0.4**
CTAO				IAmb	IAmb	05 23 46.0	
comp=Z,18nm,1.4s							
NWAO	**Narrogin (SRO)**	**28.42**	**190**	P	**P**	**05 23 26.5**	**-0.7**
CMAR	**Chiang Mai Arr**	**33.08**	**315**	LR	LR	05 39 20.6	
comp=Z,25nm,18.7s,baz=200,slow=40							
SONM	**Songino Array**	**54.44**	**346**	P	**P**	**05 27 00.0**	**+0.1**
comp=Z,0.9nm,0.7s,baz=152,slow=7.5,SNR=4.7							
MKAR	**Makanchi Array**	**62.70**	**330**	P	**P**	**05 27 57.6**	**+0.2**
comp=Z,0.5nm,0.8s,baz=140,slow=7.0,SNR=2.7							
PETK	**Petropavlovsk-**	**64.78**	**22**	P	**P**	**05 28 10.8**	**-0.2**
comp=Z,6.9nm,1.1s,baz=234,slow=9.1,SNR=1.6							
ZALV	**Zalesovo Beam**	**66.69**	**337**	P	**P**	**05 28 22.3**	**-1.0**
comp=Z,0.5nm,0.5s,baz=126,slow=4.0,SNR=3.8							
AKASG	**Malin Array Be**	**96.06**	**320**	LR	LR	06 18 24.1	
comp=Z,18nm,21.0s,baz=265,slow=38							

IDC 29 05:17:50.4±5.5, 46°.29N×151°.93E, h42km±48km, mb3.4/5, mb1 3.7/6, mb1mx3.3/50, mbtmp3.6/6, ML2.5/1, Error ellipse: s-maj=56.3km s-min=31.4km az=120.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**7.78**	**27**	P	Pn	05 19 41.8	+0.8
0.3nm,0.3s,baz=175,slow=11,SNR=7.3							
H11N2	**WAKE ISLAND Hy**	**29.21**	**150**	T	T	05 54 16.3	
baz=338,slow=75,SNR=31							
H11N1	**WAKE ISLAND Hy**	**29.22**	**150**	T	T	05 54 28.0	
baz=338,slow=75,SNR=18							
H11N3	**WAKE ISLAND Hy**	**29.22**	**150**	T	T	05 54 22.4	
baz=338,slow=75,SNR=25							
H11S1	**WAKE ISLAND Hy**	**30.28**	**151**	T	T	05 55 42.3	
baz=341,slow=76							
H11S3	**WAKE ISLAND Hy**	**30.28**	**151**	T	T	05 55 40.2	
baz=341							
H11S2	**WAKE ISLAND Hy**	**30.29**	**151**	T	T	05 55 42.8	
baz=341,slow=76							
ILAR	**Eielson Array**	**37.42**	**38**	P	P	05 24 57.6	-1.3
0.3nm,0.5s,baz=258,slow=8.1,SNR=8.7							
INK	**Inuvik**	**42.48**	**32**	P	P	05 25 40.4	-0.5
0.4nm,0.4s,baz=289,slow=6.0,SNR=4.5							
WRA	**Warramunga Arr**	**67.82**	**198**	P	P	05 28 43.5	-0.4
0.7nm,1.1s,baz=14,slow=5.9,SNR=2.4							
NOA	**NORSAR Array B**	**68.39**	**341**	P	P	05 28 47.3	+0.1
0.3nm,0.7s,baz=30,slow=6.6,SNR=1.7							
TXAR	**Lajitas Array**	**78.43**	**60**	P	P	05 29 47.9	+1.0
0.3nm,0.5s,baz=294,slow=4.2,SNR=12							

*NIC **29** 05:26:39.6±0.0, 36°.07N×27°.24E, h14km±2km, Ml3.8/3*
*ATH **29** 05:26:39.4, 36°.08N×27°.20E, h29km±1km, ML3.2/16, Error ellipse: s-maj=1.8km s-min=0.9km az=92.0*
*ISK **29** 05:26:39.4, 36°.07N×27°.23E, h15km, ML3.1/23*
*THE **29** 05:26:40.4, 36°.05N×27°.23E, h8km±1km, ML3.2/10, Error ellipse: s-maj=1.6km s-min=0.6km az=71.0*
*HLW **29** 05:26:43.1, 35°.71N×27°.59E, h13km±15km, Md4.0*
*DDA **29** 05:26:46.6, 36°.37N×27°.60E, h26km±1km, MW3.3*
ISC 29 05:26:40.4±0.9, 36°.05N±0°.02×27°.26E±0°.02, h27km±9km, n119, σ1§13/161, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.51**	**189**	P	**Pb**	**05 26 50.6**	**-0.2**
KARP				S	**Sb**	**05 26 58.1**	**+0.2**
KARP				AML	AML	05 26 58.6	
comp=E,8387µm,0.2s							
KARP				AML	AML	05 26 59.3	
comp=N,7541µm,0.2s							
KARP	**Karpathos**	**0.51**	**189**	PG	**Pb**	**05 26 50.5**	**-0.4**
KARP				SG	**Sb**	**05 26 57.8**	**-0.1**
KARP	**Karpathos**	**0.51**	**189**	P	**Pb**	**05 26 50.6**	**-0.2**
KARP				S	**Sb**	**05 26 57.9**	**-0.1**
KARP				AML	AML	05 26 58.8	
comp=N,7.4nm,0.2s							
KARP				AML	AML	05 26 58.8	
comp=N,7.4nm,0.2s							
KARP				AML	AML	05 27 01.2	
comp=N,9.3nm,0.7s							
KARP				AML	AML	05 27 01.2	
comp=N,9.3nm,0.7s							
KARP	**Karpathos**	**0.51**	**189**	P	**Pb**	**05 26 50.5**	**-0.4**
KARP				S	**Sb**	**05 26 57.6**	**-0.3**
NIS1	**Nisyros Isl.**	**0.55**	**353**	P	**Pb**	**05 26 50.8**	**-0.9**
NIS1				S	**Sb**	**05 26 58.5**	**-0.8**
NIS1				AML	AML	05 27 04.7	
comp=E,10401µm,0.7s							
NIS1				AML	AML	05 27 12.0	
comp=N,10473µm,0.4s							
NIS1	**Nisyros Isl.**	**0.55**	**353**	PG	**Pb**	**05 26 51.1**	**-0.5**
NIS1	**Nisyros Isl.**	**0.55**	**353**	P	**Pb**	**05 26 51.4**	**-0.2**
NIS1				S	**Sb**	**05 26 59.9**	**+0.7**
comp=N,5µm,0.5s							
NISR	**Nisiros**	**0.57**	**350**	P	**Pb**	**05 26 50.7**	**-1.1**
NISR				S	**Sb**	**05 26 59.1**	**-0.6**
NISR				AML	AML	05 27 03.0	
comp=E,7411µm,0.6s							
NISR				AML	AML	05 27 05.7	
comp=N,3820µm,0.3s							
NISR	**Nisiros**	**0.57**	**350**	P	**Pb**	**05 26 52.0**	**+0.1**
NISR				S	**Sb**	**05 27 00.0**	**+0.4**
comp=N,3µm,0.6s							
ARG	**Arkhangelos**	**0.72**	**77**	P	**Pb**	**05 26 54.5**	**+0.1**
ARG				AML	AML	05 27 04.4	
comp=N,4728µm,0.2s							
ARG				S	**Sb**	**05 27 04.5**	**+0.6**
ARG				AML	AML	05 27 06.8	
comp=E,7979µm,0.4s							
ARG	**Arkhangelos**	**0.72**	**77**	PG	**Pb**	**05 26 54.5**	**+0.1**
ARG				SG	**Sb**	**05 27 04.1**	**+0.1**
ARG	**Arkhangelos**	**0.72**	**77**	P	**Pb**	**05 26 54.5**	**+0.1**
ARG				S	**Sb**	**05 27 04.0**	**0.0**
ARG	**Arkhangelos**	**0.72**	**77**	P	**Pb**	**05 26 54.5**	**+0.1**
ARG				S	**Sb**	**05 27 04.6**	**+0.6**
comp=E,3µm,0.3s							
KOSK	**Kos Island**	**0.73**	**342**	PG	**Pb**	**05 26 54.7**	**+0.1**
KOSK	**Kos Island**	**0.73**	**342**	P	**Pb**	**05 26 54.0**	**-0.6**
KOSK				S	**Sn**	**05 27 06.0**	**+0.6**
comp=E,1µm,0.4s							
MRSB	**Marmaris-Mugla**	**1.01**	**49**	PG	**Pb**	**05 26 59.1**	**-0.1**
BODT	**Bodrum**	**1.01**	**2**	PG	**Pn**	**05 26 58.7**	**-0.2**
BODT	**Bodrum**	**1.01**	**2**	P	**Pn**	**05 26 58.6**	**-0.3**
BODT				S	**Sb**	**05 27 12.1**	**-0.1**
BDRM	**Kayabasi**	**1.02**	**8**	*i* P	**Pb**	**05 27 00.2**	**+0.7**
BDRM				*i* S	**Sb**	**05 27 10.3**	**-2.3**
BDRM				IAML		05 27 18.0	
comp=E,278nm,0.6s							
YKAV	**Yalikavak-Bodr**	**1.07**	**1**	PG	**Pn**	**05 26 59.7**	**0.0**
TURN	**Turunc**	**1.08**	**47**	PG	**Pb**	**05 27 00.2**	**-0.2**
TURN	**Turunc**	**1.08**	**47**	P	**Pb**	**05 27 00.1**	**-0.3**
TURN				*i* S	**Sn**	**05 27 13.6**	**-0.2**
TURN				IAML		05 27 19.0	
comp=N,282nm,0.3s							
TURN				IAML		05 27 20.0	
comp=E,371nm,0.6s							
ANAF	**Anafi Island**	**1.24**	**285**	P	**Pn**	**05 27 01.6**	**-0.4**
ANAF				AML	AML	05 27 22.2	
comp=N,18022µm,0.4s							
ANAF				AML	AML	05 27 23.2	
comp=E,12101µm,0.5s							
ANAF	**Anafi Island**	**1.24**	**285**	P	**Pn**	**05 27 01.8**	**-0.2**
ANAF				S	**Sn**	**05 27 18.1**	**+0.2**
ZKR	**Zakros**	**1.26**	**223**	P	**Pb**	**05 27 03.2**	**-0.2**
ZKR				AML	AML	05 27 23.6	
comp=N,914µm,0.4s							
ZKR				AML	AML	05 27 28.5	
comp=E,1686µm,0.4s							
ZKR	**Zakros**	**1.26**	**223**	PN	**Pb**	**05 27 03.3**	**-0.2**
ZKR	**Zakros**	**1.26**	**223**	P	**Pb**	**05 27 03.3**	**-0.2**
ZKR				S	**Sb**	**05 27 19.9**	**+0.6**
comp=E,655nm,0.4s							
STIA	**Sitia Lasithi**	**1.27**	**229**	P	**Pb**	**05 27 03.1**	**-0.6**
STIA				S	**Sb**	**05 27 20.0**	**+0.4**
MLSB	**Milas**	**1.31**	**18**	PN	**Pb**	**05 27 03.7**	**-0.7**
AMGA	**Amorgos Island**	**1.35**	**306**	P	**Pn**	**05 27 03.1**	**-0.3**
AMGA				AML	AML	05 27 27.2	
comp=N,2322µm,0.5s							
AMGA				AML	AML	05 27 29.1	
comp=E,3598µm,0.4s							
AMGA	**Amorgos Island**	**1.35**	**306**	P	**Pn**	**05 27 03.2**	**-0.3**
AMGA				S	**Sb**	**05 27 23.2**	**+1.4**
comp=E,2µm,0.5s							
YER	**Yerkesik**	**1.36**	**37**	PN	**Pb**	**05 27 04.7**	**-0.6**
YER	**Yerkesik**	**1.36**	**37**	P	**Pb**	**05 27 04.6**	**-0.7**
YER				S	**Sb**	**05 27 22.7**	**+0.4**
DALY	**Dalyan (Mula)**	**1.36**	**55**	PN	**Pb**	**05 27 04.8**	**-0.4**
DALY	**Dalyan (Mula)**	**1.36**	**55**	*i* P	**Pb**	**05 27 05.5**	**+0.3**
DALY				*i* S	**Sn**	**05 27 18.5**	**-2.3**
DALY				IAML		05 27 32.0	
comp=N,167nm,0.4s							
DALY				IAML		05 27 49.0	
comp=E,235nm,1.3s							
THR8	**Santorini-Mono**	**1.48**	**284**	P	**Pn**	**05 27 05.4**	**+0.1**
THR8	**Santorini-Mono**	**1.48**	**284**	P	**Pn**	**05 27 05.4**	**+0.1**
SNT1	**Gialos, Santor**	**1.52**	**284**	P	**Pn**	**05 27 05.7**	**-0.2**
SNT1	**Gialos, Santor**	**1.52**	**284**	P	**Pn**	**05 27 05.9**	**0.0**
THR7	**Fira-Santorini**	**1.52**	**285**	P	**Pn**	**05 27 06.3**	**+0.4**
THR7	**Fira-Santorini**	**1.52**	**285**	P	**Pn**	**05 27 06.3**	**+0.4**
THT2	**Imerovigli**	**1.53**	**285**	PN	**Pn**	**05 27 06.5**	**+0.5**
THT2	**Imerovigli**	**1.53**	**285**	P	**Pn**	**05 27 06.3**	**+0.2**
THR6	**Thira Island,**	**1.53**	**282**	P	**Pn**	**05 27 06.6**	**+0.5**
THR6	**Thira Island,**	**1.53**	**282**	P	**Pn**	**05 27 06.0**	**-0.1**
THR3	**Thira Island,**	**1.54**	**284**	P	**Pn**	**05 27 06.4**	**+0.2**
THR3	**Thira Island,**	**1.54**	**284**	P	**Pn**	**05 27 06.2**	**0.0**
SNT5	**Nea Kammeni, S**	**1.55**	**284**	P	**Pn**	**05 27 06.4**	**+0.2**
SNT5	**Nea Kammeni, S**	**1.55**	**284**	P	**Pn**	**05 27 06.3**	**+0.1**
NPS	**Neapolis**	**1.55**	**240**	P	**Pn**	**05 27 06.7**	**+0.3**
NPS				AML	AML	05 27 27.0	
comp=N,1956µm,0.3s							
NPS				AML	AML	05 27 27.1	
comp=E,2055µm,0.3s							
NPS	**Neapolis**	**1.55**	**240**	P	**Pn**	**05 27 06.7**	**+0.3**
NPS				S	**Sn**	**05 27 26.3**	**+0.7**
comp=E,1µm,0.3s							
CMBO	**Columbo, Santo**	**1.55**	**286**	P	**Pn**	**05 27 06.3**	**0.0**
CMBO				AML	AML	05 27 33.6	
comp=N,7645µm,0.4s							
CMBO				AML	AML	05 27 33.6	
comp=E,3885µm,0.7s							
CMBO	**Columbo, Santo**	**1.55**	**286**	P	**Pn**	**05 27 06.3**	**0.0**
THR9	**Santorini-Faro**	**1.57**	**282**	P	**Pn**	**05 27 06.6**	**+0.1**
THR9	**Santorini-Faro**	**1.57**	**282**	P	**Pn**	**05 27 06.9**	**+0.4**
FETY	**Fethiye**	**1.59**	**68**	PN	**Pb**	**05 27 08.8**	**-0.3**
FETY	**Fethiye**	**1.59**	**68**	*i* P	**Pb**	**05 27 09.0**	**-0.1**
FETY				*i* S	**Sn**	**05 27 26.6**	**+0.1**
FETY				IAML		05 27 33.0	
comp=N,100nm,0.3s							
FETY				IAML		05 27 34.0	
comp=E,89nm,0.6s							
FETY	**Fethiye**	**1.59**	**68**	P	**Pb**	**05 27 08.9**	**-0.1**
FETY				S	**Sb**	**05 27 29.3**	**+0.6**
THR5	**Thira Island,**	**1.59**	**284**	P	**Pn**	**05 27 07.1**	**+0.3**
THR5	**Thira Island,**	**1.59**	**284**	P	**Pn**	**05 27 07.1**	**+0.3**
GCAM	**G?zelcaml?**	**1.65**	**359**	PN	**Pn**	**05 27 07.7**	**+0.1**
GCAM	**G?zelcaml?**	**1.65**	**359**	*i* P	**Pb**	**05 27 11.8**	**+1.7**
GCAM				*i* S	**Sb**	**05 27 31.3**	**+0.9**
GCAM				IAML		05 27 39.0	
comp=E,57nm,0.3s							
GCAM				IAML		05 27 43.0	
comp=N,77nm,0.4s							
AYDN	**Tasoluk**	**1.68**	**17**	*i* P	**Pb**	**05 27 12.1**	**+1.3**
AYDN				*i* S	**Sn**	**05 27 29.2**	**+0.3**
AYDN				IAML		05 27 39.0	
comp=E,147nm,0.4s							
AYDN				IAML		05 27 41.0	
comp=N,147nm,0.5s							
SMG	**Samos**	**1.69**	**349**	P	**Pn**	**05 27 08.1**	**-0.1**
SMG				AML	AML	05 27 41.5	
comp=N,489µm,0.4s							
SMG				AML	AML	05 27 42.6	
comp=E,519µm,0.5s							
SMG	**Samos**	**1.69**	**349**	P	**Pn**	**05 27 08.1**	**-0.1**
LAST	**Lasithi**	**1.70**	**239**	P	**Pn**	**05 27 09.0**	**+0.5**
LAST				AML	AML	05 27 36.1	
comp=E,423µm,0.5s							
LAST				AML	AML	05 27 40.4	
comp=N,765µm,0.5s							
LAST	**Lasithi**	**1.70**	**239**	P	**Pn**	**05 27 08.9**	**+0.5**
LAST				S	**Sn**	**05 27 30.1**	**+0.8**
comp=N,295nm,0.5s							
APE	**Apeiranthos**	**1.72**	**307**	P	**Pn**	**05 27 08.5**	**-0.2**
APE				AML	AML	05 27 41.3	
comp=N,450µm,0.2s							
APE				AML	AML	05 27 41.8	
comp=E,448µm,0.4s							
APE	**Apeiranthos**	**1.72**	**307**	PN	**Pn**	**05 27 08.6**	**-0.1**
APE	**Apeiranthos**	**1.72**	**307**	P	**Pn**	**05 27 08.5**	**-0.1**
APE	**Apeiranthos**	**1.72**	**307**	P	**Pn**	**05 27 08.6**	**-0.1**
CAME	**Cameli-Denizli**	**1.87**	**61**	PN	**Pn**	**05 27 12.1**	**+1.2**
KSL	**Kastellorizon**	**1.89**	**86**	P	**Pn**	**05 27 12.9**	**-1.3**
KSL				AML	AML	05 27 47.3	
comp=E,365µm,0.8s							
KSL				AML	AML	05 27 51.6	
comp=N,251µm,0.5s							
KSL	**Kastellorizon**	**1.89**	**86**	P	**Pn**	**05 27 12.3**	**+1.4**
KSL				S	**Sb**	**05 27 37.1**	**-0.2**
KSL	**Kastellorizon**	**1.89**	**86**	P	**Pb**	**05 27 12.9**	**-1.3**
HRKL	**Herakleio**	**1.90**	**248**	PN	**P

RODP Rodopos 2.89 261 P Pn 05 27 25.9 +1.2
BASM Basmaki-Afyon 2.91 49 PN Pn 05 27 26.7 +1.6
USAK Uak-Merkez 3.01 27 *i* P Pn 05 27 27.9 +1.5
USAK *i* S Sn 05 28 04.5 +3.0
USAK IAML 05 28 57.0
comp=N,24nm,3.5s
USAK IAML 05 28 57.0
comp=E,24nm,2.8s
BCK Bucak 3.02 61 PN Pn 05 27 27.8 +1.2
KTHA Kythira Island 3.40 275 PN Pn 05 27 33.3 +1.6
VLI Veliai 3.55 282 P Pn 05 27 34.8 +1.1
KEPZ Antalya-Kepez 3.60 75 *i* P Pn 05 27 37.9 +3.3
KEPZ *i* S Sn 05 28 12.0 -4.3
KEPZ IAML 05 28 32.0
comp=E,14nm,0.7s
KEPZ IAML 05 28 42.0
comp=N,11nm,0.6s
OSC1 CSNet OBS 1 4.17 126 P Pn 05 27 44.0 +1.7
AKMS Akamas 4.27 102 P Pn 05 27 44.3 +0.7
AKMS AML AML 05 28 33.5
comp=N,0.3nm,0.7s
AKMS AML AML 05 28 36.3
comp=N,0.5nm,0.6s
ALFC Alefka 4.44 100 P Pn 05 27 47.0 +0.9
ALFC AML 05 28 39.3
comp=N,0.3nm,0.4s
ALFC AML AML 05 28 43.3
comp=N,0.3nm,0.5s
NATA Nata 4.52 105 P Pn 05 27 48.5 +1.3
SZAC Souni 4.77 104 P Pn 05 27 51.5 +0.9
SLUM Salum 4.86 201 P Pn 05 27 53.8 +2.0
baz=206
SLUM S Sn 05 28 45.0 -2.1
baz=206
ASGA Asgata 5.05 103 P Pn 05 27 55.3 +0.9
SWA2 6.96 193 P Pn 05 28 21.7 +1.1
baz=197
GLL Jalalah 7.46 149 P Pn 05 28 27.8 +0.2
baz=149
HFRF Wahat Farafira 8.92 174 P Pn 05 28 48.3 +0.8
baz=175
HFRF S Sn 05 30 21.9 -5.2
baz=175

*IDC **29** 05:35:06.0±0.8,21˚.75S×169˚.87E,h0km,mb4.1/14, mb1 4.3/15,mb1mx4.2/30,mbtmp4.1/15,ML4.7/2,MS3.6/14, Ms1 3.6/14,ms1mx3.4/28,Error ellipse: s-maj=23.6km s-min=19.1km az=140.0*
*NEIC **29** 05:35:09.2±1.3,21˚.75±0˚.1×169˚.63E±0˚.08,h10km±1km, mb4.6/14,Error ellipse: s-maj=17.7km s-min=12.0km az=159.0*

ISC 29 05:35:08.0±0.4,21˚.63S±0˚.08×169˚.76E±0˚.06,h10km,n77, σ0s84/70,mb4.2/20,MS3.7/12,1C,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.11**	**261**	Pn	**Pn**	**05 35 57.3**	**0.0**
	8.5nm,0.3s,baz=137,slow=8.9,SNR=146						
DZM				Sn	**Sn**	**05 36 32.1**	**-2.5**
	34nm,0.3s,baz=32,slow=23,SNR=11						
DZM				LR	LR	05 36 38.8	
	comp=Z,475nm,21.0s,baz=87,slow=29						
DZM	**Mont Dzumac**	**3.11**	**261**	*e*Pn	**Pn**	**05 35 57.6**	**+0.3**
	49nm,0.2s						
DZM				*e*Sn	**Sn**	**05 36 33.9**	**-0.7**
	133nm,0.3s						
DZM				*e*LR	LR	05 36 40.9	
	comp=Z,1μm,24.8s						
DZM	**Mont Dzumac**	**3.11**	**261**		**Pn**	**05 35 57.4**	**+0.1**
SANVU	**Saraoutou**	**6.61**	**338**	Pn	**Pn**	**05 36 46.2**	**+1.0**
MSVF	**Nonsavu**	**8.72**	**65**	Pn	Pn	05 37 21.6	+7.3
RAO	**Raoul Island**	**13.47**	**127**	Pn	**Pn**	**05 38 19.4**	**+0.2**
	38nm,0.3s,baz=319,slow=19,SNR=1.5						
RAO				LR	LR	05 42 14.2	
	comp=Z,250nm,21.8s,baz=230,slow=32						
HNR	**Honiara**	**15.36**	**321**	LR	LR	05 44 12.2	
	comp=Z,120nm,18.1s,baz=151,slow=36						
URZ	**Urewera**	**17.75**	**161**	LR	LR	05 45 13.2	
	comp=Z,183nm,19.4s,baz=31,slow=34						
NIUE	**Niue**	**19.21**	**86**	P	**Pn**	**05 39 34.4**	**+1.1**
CTA	**Charters Tower**	**22.02**	**270**	P	**P**	**05 40 05.0**	**+2.3**
	3.4nm,0.8s,baz=83,slow=16,SNR=1.5						
PMG	**Port Moresby**	**24.89**	**296**	LR	LR	05 48 14.8	
	comp=Z,117nm,19.1s,baz=138,slow=32						
STKA	**Stephens Creek**	**27.07**	**242**	P	**P**	**05 40 51.0**	**+0.1**
	1.5nm,0.6s,baz=94,slow=9.7,SNR=3.5						
STKA				LR	LR	05 50 41.1	
	comp=Z,222nm,20.6s,baz=33,slow=34						
STKA	**Stephens Creek**	**27.07**	**242**	P	**P**	**05 40 50.7**	**-0.2**
RAR	**Rarotonga**	**28.35**	**95**	LR	LR	05 51 31.0	
	comp=Z,37nm,18.2s,baz=249,slow=35						
BBOO	**Buckleboo**	**31.84**	**242**	P	**P**	**05 41 34.2**	**+0.9**
BBOO				IAmb	IAmb	05 42 02.7	
	comp=Z,18nm,1.4s						
WB0	**Warramunga Arr**	**33.09**	**267**	P	**P**	**05 41 44.1**	**-0.2**
WB0				IAmb	IAmb	05 41 44.7	
	comp=Z,5.8nm,1.1s						
AS31	**Alice Springs**	**33.10**	**260**	P	**P**	**05 41 45.6**	**+1.2**
ASAR	**Alice Springs**	**33.10**	**260**	P	**P**	**05 41 44.5**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=73,slow=8.2,SNR=13						
ASAR				LR	LR	05 55 56.0	
	comp=Z,158nm,18.1s,baz=96,slow=38						
ASAR	**Alice Springs**	**33.10**	**260**	P	**P**	**05 41 46.1**	**+1.7**
WB2	**Warramunga Arr**	**33.10**	**266**	P	**P**	**05 41 43.9**	**-0.5**
WB2				IAmb	IAmb	05 41 50.1	
	comp=Z,8.9nm,1.2s						
WRA	**Warramunga Arr**	**33.12**	**266**	P	**P**	**05 41 43.8**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=97,slow=8.4,SNR=10.0						
WRA				LR	LR	05 55 30.9	
	comp=Z,277nm,18.2s,baz=95,slow=37						
FORT	**Forrest**	**38.33**	**247**	P	**P**	**05 42 29.5**	**+0.3**
PPT2	**Papeete2**	**38.44**	**91**	*e*LR	LR	05 52 59.7	
	comp=Z,49nm,23.2s						
KNRA	**Kununurra**	**39.21**	**271**	P	**P**	**05 42 36.7**	**0.0**
KNRA				IAmb	IAmb	05 42 57.0	
	comp=Z,6.5nm,0.8s						
FAKI	**Fak Fak**	**40.92**	**292**	P	**P**	**05 42 51.3**	**+0.3**
FAKI				IAmb	IAmb	05 42 52.1	
	comp=Z,20nm,1.2s						
FITZ	**Fitzroy Crossi**	**41.54**	**267**	P	**P**	**05 42 56.1**	**+0.1**
TAOE	**Nuku Hiva Isla**	**49.76**	**83**	*e*S	**S**	**05 51 10.8**	**-0.2**
	comp=Z,38nm,25.2s						
TAOE				*e*LR	LR	05 58 09.3	
	comp=Z,83nm,24.2s						
VNDA	**Vanda**	**56.08**	**182**	P	**P**	**05 44 47.3**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=318,slow=10.0,SNR=2.4						
VNDA				LR	LR	06 05 02.3	
	comp=Z,92nm,18.1s,baz=339,slow=32						
VNDA	**Vanda**	**56.08**	**182**	P	**P**	**05 44 47.4**	**+0.5**
VNDA				IAmb	IAmb	05 45 03.8	
	comp=Z,3.8nm,1.1s						
LEM	**Lembang**	**61.64**	**274**	LR	LR	06 12 05.4	
	comp=Z,62nm,20.1s,baz=186,slow=36						
MJAR	**Matsushiro Arr**	**65.08**	**332**	P	**P**	**05 45 47.9**	**-0.9**
	comp=Z,4.6nm,0.9s,baz=163,slow=8.2,SNR=6.0						
QSPA	**South Pole Qui**	**68.44**	**180**	P	**P**	**05 46 10.5**	**+0.4**
KSRS	**Korea Array**	**70.74**	**326**	P	**P**	**05 46 25.8**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=145,slow=6.7,SNR=3.6						
PSI	**Prapat**	**73.30**	**280**	LR	LR	06 23 09.7	
	comp=Z,38nm,18.9s,baz=88,slow=39						
USRK	**Uusuriysk Ar.**	**74.07**	**333**	P	**P**	**05 46 44.9**	**+0.8**
	comp=Z,2.9nm,1.0s,baz=76,slow=6.1,SNR=2.9						
PETK	**Petropavlovsk-**	**75.15**	**353**	P	**P**	**05 46 49.9**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=130,slow=4.6,SNR=6.2						
PETK				LR	LR	06 14 23.5	
	comp=Z,33nm,21.1s,baz=152,slow=31						
PETK	**Petropavlovsk-**	**75.15**	**353**	P	**P**	**05 46 51.4**	**+1.1**
MAW	**Mawson**	**76.42**	**202**	P	**P**	**05 46 58.1**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=123,slow=11,SNR=4.8						
MAW	**Mawson**	**76.42**	**202**	P	**P**	**05 46 58.4**	**+1.0**
BELA	**Belgrano 2**	**79.69**	**175**	P	**P**	**05 47 15.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**79.93**	**294**	P	**P**	**05 47 18.3**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=133,slow=4.2,SNR=9.8						
CMAR	**Chiang Mai Arr**	**79.93**	**294**	P	**P**	**05 47 18.7**	**+1.0**
SNAA	**Sanae**	**86.81**	**182**	P	**P**	**05 47 51.7**	**-0.7**
SNAA	**Sanae**	**86.81**	**182**	P	**P**	**05 47 52.0**	**-0.4**
SNAA				IAmb	IAmb	05 47 52.8	
	comp=Z,5.4nm,1.0s						
VNA3	**Neumayer Olymp**	**87.38**	**180**	P	**P**	**05 47 54.2**	**-0.9**
VNA2	**Neumayer--Watz**	**87.68**	**181**	P	**P**	**05 47 56.0**	**-0.5**
	baz=166,slow=5.4						
VNA1	**Neumayer--Stat**	**87.97**	**181**	P	**P**	**05 47 57.4**	**-0.5**
SONM	**Songino Array**	**89.41**	**323**	P	**P**	**05 48 05.2**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=140,slow=5.4,SNR=8.3						
NVAR	**Mina Array Bea**	**90.01**	**48**	P	**P**	**05 48 07.0**	**-1.3**
	comp=Z,1.1nm,0.7s,baz=234,slow=8.2,SNR=5.5						
ILAR	**Eielson Array**	**92.36**	**17**	P	**P**	**05 48 15.7**	**-2.5**
	comp=Z,0.3nm,0.5s,baz=233,slow=5.1,SNR=11						
TXAR	**Lajitas Array**	**97.47**	**62**	LR	LR	06 26 28.3	
	comp=Z,38nm,18.1s,baz=0.0,slow=32						
ARCES	**ARCESS Array B**	**127.49**	**345**	PKP	**PKPdf**	**05 54 11.4**	**-1.2**
	comp=Z,3.1nm,0.5s,baz=65,slow=2.1,SNR=18						
FINES	**FINESS Array B**	**132.97**	**337**	PKP	**PKPdf**	**05 54 22.5**	**-0.7**
	comp=Z,3.8nm,0.9s,baz=39,slow=3.1,SNR=11						
AKASG	**Malin Array Be**	**137.69**	**323**	PKP	**PKPdf**	**05 54 30.9**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=59,slow=2.4,SNR=4.7						
NOA	**NORSAR Array B**	**137.86**	**345**	PKP	**PKPdf**	**05 54 31.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=59,slow=1.5,SNR=1.8						
KRLC	**Kraliky**	**144.51**	**330**	*e*P	**PKPab**	**05 54 43.0**	**0.0**
DPC	**Dobruska-Polom**	**144.54**	**330**	*e*P	**PKPab**	**05 54 43.5**	**+0.4**
UPC	**Upice**	**144.57**	**331**	*e*P	**PKPab**	**05 54 43.4**	**+0.2**
PVCC	**Panska Ves**	**145.20**	**332**	*e*P	**PKPbc**	**05 54 45.6**	**+0.2**
BRG	**Berggiesshubel**	**145.21**	**333**	*i* PKP	**PKPbc**	**05 54 45.4**	**-0.1**
	comp=Z,11nm,0.6s						
CLL	**Collm**	**145.27**	**334**	⇑*i* PKPbc	**PKPbc**	**05 54 45.2**	**-0.4**
	comp=Z,14nm,0.6s						
CLL				*e*		05 54 57.0	
PRU	**Pruhonice**	**145.60**	**331**	*e*P	**PKPdf**	**05 54 46.7**	**+0.2**
PBCC	**Pribram**	**146.06**	**331**	*e*P	**PKPbc**	**05 54 48.2**	**0.0**
NKC	**Novy Kostel**	**146.32**	**333**	*e*P	**PKPbc**	**05 54 49.1**	**+0.2**
CONA	**Conrad Observa**	**146.42**	**328**	*i* P	**PKPbc**	**05 54 49.5**	**+0.1**
	comp=Z,8.6nm,1.5s						
KHC	**Kasperske Hory**	**146.66**	**331**	*e*P	**PKPbc**	**05 54 50.0**	**0.0**
GERES	**GERESS Array B**	**146.81**	**331**	PKPbc	**PKPdf**	**05 54 49.4**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=35,slow=3.1,SNR=36						
MOA	**Molln**	**147.25**	**329**	*e*P	**PKPdf**	**05 54 50.5**	**+1.1**
	comp=Z,6.1nm,1.4s						
SOKA	**Soboth**	**147.68**	**327**	*e*P	**PKPbc**	**05 54 52.9**	**0.0**
	comp=Z,5.5nm,1.1s						
KBA	**Koelnbreinsper**	**148.24**	**329**	*i* P	**PKPbc**	**05 54 54.4**	**-0.2**
	comp=Z,11nm,1.1s						
WATA	**Walderalm**	**148.88**	**331**	*i* P	**PKPbc**	**05 54 56.4**	**+0.2**
	comp=Z,5.3nm,0.7s						
WTTA	**Wattenberg**	**148.91**	**331**	*i* P	**PKPbc**	**05 54 56.7**	**+0.4**
	comp=Z,14nm,1.1s						
MOTA	**Moosalm**	**149.09**	**331**	*e*P	**PKPbc**	**05 54 56.9**	**+0.1**
	comp=Z,15nm,1.0s,SNR=8.5						
RETA	**Reutte**	**149.13**	**332**	*e*P	**PKPbc**	**05 54 57.1**	**+0.3**
	comp=Z,2.3nm,0.6s						
SQTA	**Sankt Quirin**	**149.14**	**331**	*e*P	**PKPbc**	**05 54 56.4**	**-0.4**
	comp=Z,8.6nm,0.6s,SNR=6.0						
FETA	**Feichten**	**149.50**	**331**	*e*P	**PKPbc**	**05 54 57.8**	**0.0**
	comp=Z,14nm,1.0s						
DAVA	**Damuels**	**149.67**	**332**	*e*P	**PKPbc**	**05 54 57.2**	**-1.0**
	comp=Z,11nm,1.0s						

*IDC **29** 05:45:56.8±1.1,5˚.68N×61˚.11E,h0km,mb3.7/10, mb1 3.9/10,mb1mx3.7/44,mbtmp3.7/10,MS3.4/16, Ms1 3.4/16,ms1mx3.3/39,Error ellipse: s-maj=32.3km s-min=22.0km az=40.0*
*NEIC **29** 05:45:57.4±1.6,5˚.5N±0˚.1×61˚.05E±0˚.05,h10km±1km, mb4.5/22,Error ellipse: s-maj=21.8km s-min=7.5km az=186.0*

ISC 29 05:45:57.6±0.8,5˚.6N±0˚.1×61˚.0E±0˚.1,h10km,n47, σ1s18/36,mb4.3/20,MS3.5/13,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.70**	**353**	LR	LR	05 55 19.7	
	comp=Z,114nm,20.8s,baz=197,slow=32						
ATD	**Arta Tunnel**	**18.93**	**289**	LR	LR	05 56 45.6	
	comp=Z,40nm,19.7s,baz=354,slow=34						
PALK	**Pallekele**	**19.61**	**84**	LR	LR	05 56 24.8	
	comp=Z,85nm,18.1s,baz=5.2,slow=32						
RAYN	**Ar Rayn**	**23.28**	**322**	P	**P**	**05 51 06.7**	**+0.9**
RAYN				IAmb	IAmb	05 51 15.2	
	comp=Z,12nm,1.1s						
RER	**Riviere de l'E**	**27.08**	**191**	P	**P**	**05 51 42.2**	**+1.5**
OPO	**Ambidratompo**	**27.62**	**209**	LR	LR	06 00 06.6	
	comp=Z,79nm,18.1s,baz=184,slow=31						
KBL	**Kabul**	**29.75**	**13**	P	**P**	**05 52 05.6**	**+1.0**
KBL				IAmb	IAmb	05 52 08.5	
	comp=Z,3.7nm,0.5s						
NIL	**Nilore**	**30.14**	**21**	P	**P**	**05 52 10.5**	**+2.6**
NIL				IAmb	IAmb	05 52 23.0	
	comp=Z,4.3nm,0.6s						
GEYT	**Alibeck**	**32.30**	**356**	LR	LR	06 05 41.9	
	comp=Z,36nm,20.2s,baz=185,slow=37						
GEYT	**Alibeck**	**32.30**	**356**	P	**P**	**05 52 26.1**	**-0.8**
DRK	**Karamyk**	**35.11**	**15**	P	**P**	**05 52 52.4**	**+0.7**
BTK	**Batken**	**35.43**	**13**	P	**P**	**05 52 54.2**	**+0.1**
BTK				IAmb	IAmb	05 52 56.6	
	comp=Z,11nm,1.5s						
MARD	**Mardin**	**36.60**	**332**	P	**P**	**05 53 05.5**	**+1.2**
MARD				IAmb	IAmb	05 53 14.7	
	comp=Z,5.6nm,0.7s						
GAZ	**Gaziantep**	**38.24**	**329**	P	**P**	**05 53 18.5**	**+0.4**
GAZ				IAmb	IAmb	05 53 45.5	
	comp=Z,6.8nm,0.5s						
KK31	**Karatay Array**	**38.29**	**11**	P	**P**	**05 53 19.0**	**+0.6**
KKAR	**Karatay Array**	**38.29**	**11**	P	**P**	**05 53 18.8**	**+0.4**
AAK	**Ala-Archa**	**38.78**	**16**	P	**P**	**05 53 22.7**	**+0.1**
	comp=Z,0.6nm,0.4s,baz=203,slow=13,SNR=1.4						
AAK	**Ala-Archa**	**38.78**	**16**	P	**P**	**05 53 23.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**39.11**	**68**	P	**P**	**05 53 26.4**	**+0.7**
	comp=Z,1.1nm,0.3s,baz=265,slow=8.9,SNR=4.8						
CMAR				LR	LR	06 07 58.0	
	comp=Z,22nm,20.0s,baz=5.0,slow=34						
CMAR	**Chiang Mai Arr**	**39.11**	**68**	P	**P**	**05 53 24.6**	**-1.0**
BR131	**Keskin Array S**	**42.01**	**328**	P	**P**	**05 53 50.7**	**+1.3**
BRTR	**Keskin Array B**	**42.01**	**328**	P	**P**	**05 53 50.9**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=162,slow=8.6,SNR=4.1						
BRTR				LR	LR	06 12 00.8	
	comp=Z,31nm,18.9s,baz=128,slow=37						
BRTR	**Keskin Array B**	**42.01**	**328**	P	**P**	**05 53 50.0**	**+0.6**
ABKAR	**Akbulak array**	**43.52**	**359**	P	**P**	**05 54 02.3**	**+0.9**
ABKAR				IAmb	IAmb	05 54 09.9	
	comp=Z,5.7nm,1.0s						
MKAR	**Makanchi Array**	**44.96**	**21**	P	**P**	**05 54 10.8**	**-2.2**
	comp=Z,0.7nm,1.0s,baz=170,slow=8.6,SNR=2.5						
MKAR				LR	LR	06 13 26.3	
	comp=Z,52nm,20.6s,baz=230,slow=37						
BOSA	**Boshof**	**48.41**	**223**	LR	LR	06 12 58.6	
	comp=Z,74nm,19.8s,baz=20,slow=33						
ZALV	**Zalesovo Beam**	**51.95**	**18**	P	**P**	**05 55 06.2**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=251,slow=4.4,SNR=1.5						
ZALV				LR	LR	06 18 03.5	
	comp=Z,36nm,18.2s,baz=214,slow=37						
ZALV	**Zalesovo Beam**	**51.95**	**18**	P	**P**	**05 55 05.4**	**-1.3**
AKASG	**Malin Array Be**	**52.23**	**335**	P	**P**	**05 55 09.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=127,slow=6.2,SNR=1.4						
TAM	**Tamanrasset**	**56.13**	**294**	P	**P**	**05 55 38.2**	**+0.2**
TAM				IAmb	IAmb	05 55 42.8	
	comp=Z,9.9nm,1.4s						
LATE	**Laterza**	**56.98**	**318**	P	**P**	**05 55 43.1**	**-0.4**
SONM	**Songino Array**	**57.13**	**35**	P	**P**	**05 55 44.6**	**0.0**
	comp=Z,0.3nm,0.6s,baz=180,slow=5.5,SNR=4.1						
SONM				LR	LR	06 20 16.8	
	comp=Z,76nm,18.3s,baz=118,slow=36						
SONM	**Songino Array**	**57.13**	**35**	P	**P**	**05 55 44.4**	**-0.3**
MORC	**Moravsky Berou**	**57.20**	**328**	P	**P**	**05 55 45.1**	**+0.1**
MORC				IAmb	IAmb	05 55 47.1	
	comp=Z,8.3nm,1.4s						
TORD	**Torodi Ar. Bea**	**58.92**	**282**	P	**P**	**05 55 58.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=31,slow=3.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**58.92**	**282**	P	**P**	**05 55 57.2**	**-0.4**
KOWA	**Kowa**	**64.50**	**283**	P	**P**	**05 56 31.5**	**-3.7**
KOWA				IAmb	IAmb	05 56 54.5	
	comp=Z,7.0nm,1.4s						
NRIK	**Noril'sk**	**66.01**	**10**	LR	LR	06 28 08.8	
	comp=Z,48nm,20.2s,baz=201,slow=38						
NOA	**NORSAR Array B**	**66.61**	**336**	LR	LR	06 27 58.0	
	comp=Z,44nm,18.2s,baz=270,slow=38						
ARCES	**ARCESS Array B**	**67.95**	**347**	LR	LR	06 29 07.9	
	comp=Z,33nm,18.1s,baz=265,slow=38						
MAW	**Mawson**	**73.03**	**179**	LR	LR	06 21 35.1	
	comp=Z,46nm,19.5s,baz=59,slow=29						
WRA	**Warramunga Arr**	**76.33**	**112**	P	**P**	**05 57 48.1**	**+0.5**
	comp=Z,2.8nm,1.0s,baz=284,slow=5.5,SNR=12						
WRA	**Warramunga Arr**	**76.33**	**112**	P	**P**	**05 57 46.4**	**-1.1**
ASAR	**Alice Springs**	**76.69**	**116**	P	**P**	**05 57 50.4**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=292,slow=6.2,SNR=12						
ASAR	**Alice Springs**	**76.69**	**116**	P	**P**	**05 57 49.4**	**-0.2**
SCO	**Scoresbysund**	**82.42**	**340**	P	**P**	**05 58 18.6**	**-1.1**
PETK	**Petropavlovsk-**	**89.56**	**37**	LR	LR	06 42 13.7	
	comp=Z,28nm,18.2s,baz=314,slow=38						

*IDC **29** 06:03:36.7±0.8,1˚.19S×126˚.56E,h0km,mb4.0/8, mb1 4.2/10,mb1mx4.0/30,mbtmp4.0/10,ML3.8/2,MS2.9/2, Ms1 2.9/2,ms1mx2.5/37,Error ellipse: s-maj=36.3km s-min=16.7km az=76.0*
*DJA **29** 06:03:41.8±2.4,1˚.5±3˚.12˚6E±˚,h13km±20km,M4.4/18, mB5.1/5,mb4.6/9,MLv4.3/18,Mw(mB)4.5/5*
*NEIC **29** 06:03:43.2±1.0,1˚.40S±0˚.07×126˚.26E±0˚.07,h46km±5km, mb4.4/9,Error ellipse: s-maj=10.8km s-min=9.7km az=222.0*

ISC 29 06:03:42.3±0.5,1˚.27S±0˚.05×126˚.26E±0˚.05,h35km,n50, σ1s73/51,mb4.3/11,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBMI	**Labuha**	**1.39**	**63**	P	**Pn**	**06 04 06.2**	**+1.0**
LBMI				S	**Sn**	**06 04 24.6**	**+2.2**
NLAI	**Namlea**	**2.13**	**157**	P	**Pn**	**06 04 18.0**	**+2.5**
NLAI				S	**Sn**	**06 04 39.6**	**-1.1**
TNTI	**Ternate**	**2.31**	**29**	Pn	**Pn**	**06 04 20.5**	**+2.6**
KMSI	**Cibinong**	**2.92**	**309**	P	**Pn**	**06 04 28.2**	**+1.8**
AAI	**Ambon**	**3.08**	**141**	P	**Pn**	**06 04 32.0**	**+3.4**
MSAI	**Masohi**	**3.37**	**128**	P	**Pn**	**06 04 35.3**	**+2.8**
LUWI	**Luwuk**	**3.50**	**274**	P	**Pn**	**06 04 35.1**	**+0.9**
LUWI	**Luwuk**	**3.50**	**274**	Pn	**Pn**	**06 04 34.2**	**0.0**
GTOI	**Gorontalo**	**3.76**	**300**	P	**Pn**	**06 04 41.7**	**+3.8**
APSI	**Ampana**	**4.62**	**274**	P	**Pn**	**06 04 51.0**	**+1.2**
MRSI	**Marisa**	**4.65**	**292**	P	**Pn**	**06 04 51.3**	**+1.1**
BNDI	**Bandanaira**	**4.87**	**132**	P	**Pn**	**06 04 55.4**	**+2.3**
SWI	**Sorong**	**5.01**	**85**	P	**Pn**	**06 04 56.5**	**+1.4**
	0.2nm45nm,0.6s						
TOLI2	**Tolitoli**	**5.97**	**293**	Pn	**Pn**	**06 05 08.6**	**+0.4**
FAKI	**Fak Fak**	**6.21**	**105**	P	**Pn**	**06 05 13.3**	**+1.8**
	0.1nm25nm,0.8s						
FAKI	**Fak Fak**	**6.21**	**105**		**Pn**	**06 05 10.2**	**-1.3**
MPSI	**Mapaga**	**6.56**	**284**	P	**Pn**	**06 05 17.4**	**+1.0**
	0.1nm1μm12nm,0.5s						
TTSI	**Tana Toraja**	**6.67**	**255**	P	**Pn**	**06 05 19.4**	**+1.4**
	0.2nm2μm40nm,0.5s						
BNSI	**Bone**	**6.89**	**243**	P	**Pn**	**06 05 23.2**	**+2.3**
	0.1nm15nm,0.5s						
SPSI	**Sidrap Palu**	**7.02**	**247**	P	**Pn**	**06 05 24.9**	**+2.3**
	0.8nm3μm170nm,0.5s						
BKSI	**Bulukumba**	**7.33**	**237**	P	**Pn**	**06 05 30.0**	**+3.0**
	0.1nm1μm30nm,0.7s						
KAPI	**Kappang**	**7.49**	**240**	Pn	**Pn**	**06 05 31.0**	**+1.9**
	4.3nm,0.3s,baz=52,slow=11,SNR=12						
KAPI				Sn	**Sn**	**06 06 51.5**	**-1.4**
	2.4nm,0.3s,baz=132,slow=23,SNR=2.1						
KAPI				LR	LR	06 08 40.0	
	comp=Z,81nm,20.3s,baz=51,slow=39						
KAPI	**Kappang**	**7.49**	**240**	Pn	**Pn**	**06 05 29.7**	**+0.6**
BSSI	**Bau Bau, Buton**	**7.52**	**230**	P	**Pn**	**06 05 32.6**	**+3.0**
	0.1nm308nm25nm,0.7s						
MTN	**Manton Dam**	**12.47**	**157**	Pn	**Pn**	**06 06 38.1**	**+0.7**
JAY	**Jayapura**	**14.49**	**95**	LR	LR	06 14 37.3	
	comp=Z,58nm,18.1s,baz=204,slow=46						
KNRA	**Kununurra**	**14.53**	**170**	Pn	**Pn**	**06 07 04.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**16.74**	**182**	Pn	**Pn**	**06 07 35.2**	**+1.0**
	0.1nm,0.3s,baz=5.2,slow=11,SNR=2.3						
FITZ	**Fitzroy Crossi**	**16.74**	**182**	P	**Pn**	**06 07 34.4**	**+0.2**
WB0	**Warramunga Arr**	**20.04**	**157**	P	**P**	**06 08 11.0**	**-1.5**
WRA	**Warramunga Arr**	**20.17**	**157**	P	**P**	**06 08 12.3**	**-1.6**
	4.1nm,0.8s,baz=339,slow=12,SNR=44						
WRA	**Warramunga Arr**	**20.17**	**157**	P	**P**	**06 08 12.4**	**-1.6**
PMBI	**Palembang**	**21.54**	**265**	P	**P**	**06 08 32.3**	**+3.5**
AS31	**Alice Springs**	**23.47**	**162**	P	**P**	**06 08 47.9**	**-1.0**
ASAR	**Alice Springs**	**23.47**	**162**	P	**P**	**06 08 48.0**	**-1.0**
	3.6nm,0.6s,baz=341,slow=12,SNR=57						
ASAR	**Alice Springs**	**23.47**	**162**	P	**P**	**06 08 47.6**	**-1.3**
STKA	**Stephens Creek**	**33.71**	**156**	P	**P**	**06 10 19.7**	**-0.7**
	2.0nm,0.7s,baz=340,slow=9.9,SNR=3.9						
PBA	**Port Blair**	**35.70**	**292**	P	P	06 10 38.4	+0.6
SONM	**Songino Array**	**51.88**	**343**	P	**P**	**06 12 47.9**	**+0.5**
	0.9nm,0.6s,baz=158,slow=8.3,SNR=4.4						
PETK	**Petropavlovsk-**	**60.22**	**21**	P	**P**	**06 13 45.8**	**-1.0**
	1.8nm,0.8s,baz=193,slow=4.4,SNR=1.4						
MK31	**Makanchi Array**	**61.42**	**327**	P	**P**	**06 13 55.8**	**+0.6**

KDTR	**Khodutka, Kamc**	**4.00**	**21**	*e*P	Pn	06 22 54.1	+2.6
KDTR				*e*S	Sn	06 23 39.9	+1.8
MTVR	**Mutnovka**	**4.66**	**18**	*e*S	Sn	06 23 55.5	+1.7
RUS	**Russkaya**	**4.68**	**21**	*e*P	Pn	06 23 02.6	+2.2
RUS				*e*S	Sn	06 23 55.2	+1.0
GRL	**Gorelyy**	**4.70**	**17**	*e*P	Pn	06 23 03.1	+2.3
AVH	**Avacha**	**5.51**	**19**	*e*P	Pn	06 23 15.1	+3.6
KOK	**Koryaka**	**5.51**	**18**	*e*P	Pn	06 23 14.4	+2.9
SMAR	**Somma**	**5.52**	**19**	*e*P	Pn	06 23 14.5	+2.7
KRER	**Koryakskii**	**5.55**	**19**	P	Pn	06 23 14.6	+2.5
SDLR	**Sedlovina**	**5.55**	**19**	*e*P	Pn	06 23 14.2	+2.1
KRX	**Arik**	**5.58**	**18**	*e*P	Pn	06 23 12.9	+0.4
SPN	**Mys Shipunski**	**5.69**	**27**	*e*P	Pn	06 23 16.4	+2.6
SPN				*e*S	Sn	06 24 19.6	+1.5
MKZ	**Mys Kozlova**	**7.46**	**28**	*e*P	Pn	06 23 39.2	+1.7
KZV	**Kizimen**	**7.57**	**20**	*e*P	Pn	06 23 41.5	+2.4
KBTR	**Krutoberegovo**	**9.20**	**25**	*e*P	Pn	06 24 02.1	+1.4

ISU ***29*** *06:22:08.0,41.00N×69.50E,h0km*
SOME ***29*** *06:22:08.6,41.00N×69.72E,h0km*
KRNET ***29*** *06:22:10.9±0.1,41.06N×69.81E,mb2.7*
NNC ***29*** *06:22:13.9±3.4,41.03N×69.96E,h0km,mb3.6,mpv3.3,*
Error ellipse: s-maj=24.7km s-min=13.5km az=45.0
ISC 29 06:22:12.5±1.5,41.01N±0.04×69.76E±0.07,h10km,n26,
σ1§90/46,18C-7D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**1.16**	**10**	*e*P	**Pb**	**06 22 34.1**	**-0.6**
	74nm,0.2s						
IUG				*e*S	**Sn**	**06 22 52.3**	**+1.5**
	142nm,0.6s						
IUG	**Iuzhnay**	**1.16**	**10**	P	**Pb**	**06 22 34.6**	**-0.1**
	74nm,0.2s						
IUG				S	**Sg**	**06 22 48.6**	**-1.2**
	142nm,0.6s						
TRKS	**Terek-Say**	**1.17**	**63**	⇑*i*P	**Pg**	**06 22 31.8**	**-3.1**
	baz=68						
TRKS				⇑*i*S	**Sg**	**06 22 47.7**	**-2.4**
	baz=68						
BTK	**Batken**	**1.25**	**139**	⇑*i*P	**Pn**	**06 22 35.0**	**-1.0**
	baz=42						
BTK				⇑*i*S	**Sb**	**06 22 52.6**	**+0.3**
	baz=42						
BTK	**Batken**	**1.25**	**139**	*i* P	**Pn**	**06 22 35.1**	**-1.0**
BTK				*i* S	**Sn**	**06 22 55.1**	**+2.2**
KK31	**Karatay Array**	**2.17**	**15**	⇓Pn	**Pn**	**06 22 49.9**	**+1.2**
	6.0nm,0.5s,baz=205,slow=16,SNR=40						
KK31				Sn	**Sb**	**06 23 20.4**	**+1.6**
	33nm,0.7s,baz=208,slow=24,SNR=18						
ARSB	**Arslanbob**	**2.46**	**82**	⇑*i*P	**Pn**	**06 22 53.9**	**+1.2**
	baz=83						
ARSB				⇑*i*S	**Sn**	**06 23 24.7**	**+1.8**
	baz=83						
ARSB	**Arslanbob**	**2.46**	**82**	*i* P	**Pn**	**06 22 54.5**	**+1.8**
ARSB				*i* S	**Sg**	**06 23 30.2**	**-1.2**
MNAS	**Manas**	**2.53**	**53**	⇑*i*P	**Pn**	**06 22 55.0**	**+1.2**
	baz=54						
MNAS				⇑*i*S	**Sn**	**06 23 26.8**	**+2.0**
	baz=54						
SFK	**Sufi-Kurgan**	**3.02**	**108**	⇓*i*P	**Pn**	**06 23 01.8**	**+1.2**
	baz=9.0						
SFK				⇓*i*S	**Sn**	**06 23 39.3**	**+2.3**
	baz=9.0						
SFK	**Sufi-Kurgan**	**3.02**	**108**	*i* P	**Pn**	**06 23 02.4**	**+1.8**
SFK				*i* S	**Sb**	**06 23 42.0**	**-1.6**
MRKS	**Merke**	**3.12**	**55**	*e*P	**Pb**	**06 23 07.6**	**-0.4**
	5.9nm,0.5s						
MRKS				*e*S	**Sg**	**06 23 50.0**	**-2.7**
	12nm,0.6s						
MRKS	**Merke**	**3.12**	**55**	Pg	**Pb**	**06 23 07.6**	**-0.4**
	5.9nm,0.5s						
MRKS				Lg	Lg	06 23 45.1	
	12nm,0.6s						
AML	**Almayashu**	**3.16**	**68**	⇑*i*P	**Pn**	**06 23 03.5**	**+0.8**
	baz=68						
AML				⇑*i*S	**Sn**	**06 23 42.0**	**+1.4**
	baz=68						
EKS2	**Erkin-Say**	**3.43**	**60**	⇑*i*P	**Pn**	**06 23 07.1**	**+1.0**
	baz=60						
EKS2				⇑*i*S	**Sn**	**06 23 48.1**	**+1.2**
	baz=60						
ARLS	**Aral**	**3.54**	**75**	⇑*i*P	**Pn**	**06 23 08.8**	**+1.2**
	baz=75						
ARLS				⇑*i*S	**Sn**	**06 23 51.0**	**+1.4**
	baz=75						
UCH	**Uchtor**	**3.77**	**70**	⇓*i*P	**Pn**	**06 23 11.9**	**+0.8**
	baz=70						
UCH				⇓*i*S	**Sn**	**06 23 56.5**	**+0.8**
	baz=70						
AAK	**Ala-Archa**	**3.90**	**64**	⇑*i*P	**Pn**	**06 23 13.6**	**+1.0**
	baz=64						
AAK				⇑*i*S	**Sn**	**06 23 59.3**	**+0.8**
	baz=64						
AAK	**Ala-Archa**	**3.90**	**64**	⇓Pg	**Pb**	**06 23 22.2**	**+0.8**
	2.9nm,0.8s						
AAK				⇓Lg	Lg	06 24 14.2	
	4.9nm,0.8s						
TKM2	**Tokmak 2**	**4.75**	**64**	⇑Pg	**Pb**	**06 23 37.4**	**+1.4**
	3.1nm,0.8s						
TKM2				⇑Lg	Lg	06 24 41.1	
	2.6nm,0.6s						
DGS	**Degeres**	**5.00**	**61**	*e*P	**Pb**	**06 23 43.5**	**+3.3**
	2.9nm,0.8s						
DGS				*e*S	**Sg**	**06 24 51.5**	**-1.4**
	4.4nm,0.6s						
DGS	**Degeres**	**5.00**	**61**	Pg	**Pb**	**06 23 43.5**	**+3.3**
	2.9nm,0.8s						
DGS				Lg	Lg	06 24 46.3	
	4.4nm,0.6s						
KST	**Kastek**	**5.05**	**64**	*e*P	**Pb**	**06 23 43.3**	**+2.3**
	3.4nm,1.0s						
KST				*e*S	**Sg**	**06 24 51.6**	**-2.9**
	4.5nm,0.5s						
KST	**Kastek**	**5.05**	**64**	Pg	**Pb**	**06 23 43.8**	**+2.8**
	3.4nm,1.0s						
KST				Lg	Lg	06 24 47.8	
	4.5nm,0.5s						
BTLS	**Baital**	**5.11**	**37**	*e*P	**Pb**	**06 23 44.0**	**+2.0**
	0.5nm,0.3s						
BTLS				*e*S	**Sg**	**06 24 52.7**	**-3.9**
	2.8nm,0.4s						
KUU	**Kurty**	**5.66**	**57**	Pg	**Pb**	**06 23 54.7**	**+3.4**
	2.2nm,0.6s						
KUU				Lg	Lg	06 25 05.6	
	4.7nm,1.1s						

BJI ***29*** *06:40:20.0±0.0,5.70N×61.20E,h5km,mB5.0/29,*
mb4.8/46,Ms4.8/18,Ms7.4/18
IDC ***29*** *06:40:21.4±0.5,5.73N×61.20E,h0km,mb4.4/24,*
mb1 4.5/26,mb1mx4.5/35,mbtmp4.4/26,ML3.8/2,MS3.9/24,
Ms1 3.9/24,ms1mx3.8/39,Error ellipse: s-maj=13.9km
s-min=12.7km az=146.0
NEIC ***29*** *06:40:22.5±1.7,5.7N±0.1×61.26E±0.09,h10km±1km,*
mb4.9/62,Error ellipse: s-maj=17.7km s-min=14.7km
az=206.0
GCMT ***29*** *06:40:22.5±0.3,5.61N±0.02×61.00E±0.03,h12km,*
MW4.8/97,Moment Tensor Solution. s17,c18; s97,c122;
Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr1.62±.05;
Mθθ-1.54±.05; Mφφ-0.08±.06; Mrθ-0.60±.21; Mθφ0.34±.04;
Mφr-0.98±.26; Best double couple: Mo1.93100×10¹⁶
NP1:φs124.00000°,δ43.00000°,λ129.00000°. NP2:
φs256.00000°,δ58.00000°,λ60.00000°. Principal axes: T
2.1950, Plg63.0000°, Azm114.0000°; N -0.5290,
Plg25.0000°, Azm273.0000°; P -1.6680, Plg8.0000°,
Azm7.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
ISC 29 06:40:23.2±0.3,5.77N±0.06×61.19E±0.05,h10km,n258,
σ1§29/254,mb4.8/103,MS3.9/27,29C-7D,Carlsberg
Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**9.55**	**312**	P	Pn	06 42 46.5	+5.6
SOCY	**Socotra**	**9.55**	**312**	Pn	Pn	06 42 46.6	+5.6
SHAO	**Shalim**	**13.34**	**336**	P	**Pn**	**06 43 35.9**	**+3.2**
ABTO	**Aybut**	**13.86**	**327**	P	**Pn**	**06 43 42.8**	**+2.9**
	SNR=12						
WHFO	**Wadi Hawf**	**14.08**	**330**	P	**P**	**06 43 47.0**	**-3.7**
	SNR=9.2						
WHFO				P	**P**	**06 43 47.0**	**-3.7**
	SNR=9.2						
DQM	**DQM**	**14.52**	**346**	P	**Pn**	**06 43 50.6**	**+1.7**
MHTO	**MHTO**	**15.45**	**349**	P	**Pn**	**06 44 01.9**	**+0.6**
JLN	**Jalan Bani Buh**	**16.38**	**354**	P	**Pn**	**06 44 14.2**	**+0.9**
	SNR=6.5						
JMDO	**Jabal Madar**	**16.77**	**350**	P	**P**	**06 44 19.7**	**-0.8**
	SNR=5.1						
SMDO	**Samad**	**17.45**	**350**	P	**P**	**06 44 28.0**	**-0.3**
WSAR	**Wadi Sarin**	**17.54**	**352**	P	**Pn**	**06 44 27.1**	**-0.9**
	0.2nm,0.3s,baz=204,slow=18,SNR=1.9						
BIDO	**Bidbid**	**17.89**	**351**	P	**P**	**06 44 33.7**	**+0.8**
HOQ	**Hoqain**	**18.10**	**348**	P	**P**	**06 44 36.1**	**+0.9**
MZR	**Muzera**	**18.68**	**337**	P	**Pn**	**06 44 44.4**	**+2.4**
SOHO	**SOHO**	**18.80**	**347**	P	**Pn**	**06 44 44.3**	**+0.9**
ATD	**Arta Tunnel**	**19.01**	**289**	P	**P**	**06 44 44.6**	**-0.7**
	0.6nm,0.3s,baz=108,slow=13,SNR=1.8						
ATD	**Arta Tunnel**	**19.01**	**289**	P	**P**	**06 44 44.8**	**-0.7**
UOSS	**Minazif**	**19.66**	**346**	P	**Pn**	**06 44 53.7**	**0.0**
UOSS				IAmb	IAmb	06 45 17.1	
	comp=Z,71nm,1.4s						
HYB	**Hyderabad**	**20.55**	**54**	*i* P	**P**	**06 45 03.0**	**+0.8**
FURI	**Furi**	**22.54**	**279**	P	**P**	**06 45 23.5**	**-0.5**
RAYN	**Ar Rayn**	**23.23**	**321**	P	**P**	**06 45 30.1**	**-0.7**
RAYN				IAmb	IAmb	06 45 36.0	
	comp=Z,40nm,1.1s						
NDI	**New Delhi**	**27.39**	**32**	*e*P	**P**	**06 46 12.0**	**+3.1**
OPO	**Ambohidratompo**	**27.85**	**209**	P	**P**	**06 46 11.9**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=12,slow=5.7,SNR=1.8						
HRA	**Herat**	**28.49**	**2**	P	**P**	**06 46 20.6**	**+1.6**
KBL	**Kabul**	**29.54**	**13**	P	**P**	**06 46 27.4**	**-0.8**
GEYT	**Alibeck**	**32.13**	**355**	LR	LR	07 01 02.1	
	comp=Z,127nm,18.3s,baz=175,slow=39						
DRK	**Karamyk**	**34.90**	**14**	P	**P**	**06 47 16.6**	**+1.3**
BTK	**Batken**	**35.22**	**13**	P	**P**	**06 47 18.7**	**+0.9**
BTK				IAmb	IAmb	06 47 21.2	
	comp=Z,17nm,1.2s						
SHL	**Shillong**	**35.35**	**53**	P	**P**	**06 47 20.0**	**+0.7**
SHL				IAmb	IAmb	06 47 21.4	
	comp=Z,16nm,1.0s						
KSH	**Kashi**	**36.15**	**20**	*e*P	**P**	**06 47 23.5**	**-2.4**
KSH				S	**S**	**06 53 00.8**	**-5.0**
KSH				pmax	pmax		
	comp=Z,14nm,0.8s						
KSH				pmax	pmax		
	comp=Z,190nm,3.7s						
KSH				LR	LR		
	comp=Z,230nm,6.4s						
KSH				LR	LR		
	comp=Z,320nm,4.9s						
KSH				LR	LR		
	comp=Z,480nm,7.6s						
MARD	**Mardin**	**36.51**	**332**	P	**P**	**06 47 30.5**	**+1.5**
IUG	**Iuzhnay**	**37.07**	**11**	*e*P	**P**	**06 47 33.0**	**-0.7**
	comp=Z,3.5nm,1.2s,baz=11						
GNI	**Garni**	**37.29**	**339**	P	**P**	**06 47 37.5**	**+1.9**
GNI				IAmb	IAmb	06 47 43.1	
	comp=Z,18nm,0.8s						
MHMT	**Maesarieng**	**37.91**	**68**	P	**P**	**06 47 43.0**	**+2.0**
KK31	**Karatay Array**	**38.08**	**11**	P	**P**	**06 47 43.2**	**+1.0**
KKAR	**Karatay Array**	**38.08**	**11**	P	**P**	**06 47 42.9**	**+0.8**
KKAR	**Karatay Array**	**38.08**	**11**	P	**P**	**06 47 42.5**	**+0.3**
TRTT	**Trang**	**38.28**	**85**	P	**P**	**06 47 47.0**	**+2.9**
	comp=Z,9.6nm,1.4s						
FRU1	**Bishkek**	**38.76**	**16**	P	**P**	**06 47 49.0**	**+1.1**
FRU1				IAmb	IAmb	06 47 51.7	
	comp=Z,24nm,0.9s						
LSZ	**Lusaka**	**38.81**	**237**	P	**P**	**06 47 49.1**	**+0.4**
	comp=Z,5.6nm,0.9s,baz=47,slow=9.3,SNR=5.9						
LSZ	**Lusaka**	**38.81**	**237**	P	**P**	**06 47 48.6**	**-0.1**
BOOM	**Boomskoye usch**	**38.84**	**17**	P	**P**	**06 47 49.7**	**+1.0**
AKH	**Akhalkalaki**	**38.85**	**339**	⇑P	**P**	**06 47 51.0**	**+2.3**
AKH	**Akhalkalaki**	**38.85**	**339**	P	**P**	**06 47 49.5**	**+0.7**
AKH				IAmb	IAmb	06 47 51.5	
	comp=Z,38nm,1.0s						
KOPT	**Kop Dagi**	**38.85**	**334**	P	**P**	**06 47 49.6**	**+0.6**
CM13	**Chiang Mai Arr**	**38.87**	**68**	P	**P**	**06 47 51.2**	**+2.1**
	comp=Z,7.6nm,1.3s						
CM32	**Chiang Mai Arr**	**38.87**	**67**	P	**P**	**06 47 51.0**	**+1.9**
CM15	**Chiang Mai Arr**	**38.89**	**68**	P	**P**	**06 47 52.0**	**+2.7**
	comp=Z,8.0nm,1.1s						
CM05	**Chiang Mai Arr**	**38.90**	**68**	P	**P**	**06 47 51.2**	**+1.9**
	comp=Z,75nmcomp=Z,8.2nm,1.1s						
CM02	**Chiang Mai Arr**	**38.91**	**68**	P	**P**	**06 47 51.5**	**+2.1**
	comp=Z,99nmcomp=Z,13nm,1.1s						
CM31	**Chiang Mai Arr**	**38.91**	**68**	P	**P**	**06 47 50.1**	**+0.6**
CM31				IAmb	IAmb	06 47 51.8	
	comp=Z,22nm,1.1s						
CMAR	**Chiang Mai Arr**	**38.91**	**68**	P	**P**	**06 47 50.7**	**+1.3**
	comp=Z,6.6nm,0.9s,baz=261,slow=9.1,SNR=36						
CMAR				PcP	**PcP**	**06 50 00.1**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=261,slow=4.2,SNR=7.9						
CMAR				LR	LR	07 02 35.5	
	comp=Z,85nm,21.1s,baz=312,slow=34						
CMAR	**Chiang Mai Arr**	**38.91**	**68**	P	**P**	**06 47 49.4**	**-0.1**
CM01	**Chiang Mai Arr**	**38.91**	**68**	P	**P**	**06 47 51.9**	**+2.4**
	comp=Z,161nmcomp=Z,11nm,1.1s						
CM04	**Chiang Mai Arr**	**38.93**	**68**	P	**P**	**06 47 51.6**	**+2.0**
	comp=Z,12nm,1.1s						
CM09	**Chiang Mai Arr**	**38.95**	**68**	P	**P**	**06 47 52.0**	**+2.2**
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**39.00**	**67**	P	**P**	**06 47 50.4**	**+0.2**
CHTO				IAmb	IAmb	06 47 52.4	
	comp=Z,25nm,1.3s						
CM33	**Chiang Mai Arr**	**39.00**	**67**	P	**P**	**06 47 51.0**	**+0.8**
CMMT	**Chiang Mai**	**39.00**	**67**	P	**P**	**06 47 51.0**	**+0.8**
	comp=Z,7.6nm,1.4s						
CM36	**Chiang Mai Arr**	**39.06**	**68**	P	**P**	**06 47 52.0**	**+1.3**
CM35	**Chiang Mai Arr**	**39.16**	**67**	P	**P**	**06 47 52.0**	**+0.5**
CM34	**Chiang Mai Arr**	**39.20**	**67**	P	**P**	**06 47 53.0**	**+1.2**
KULM	**Kulim**	**39.28**	**89**	P	**P**	**06 47 52.3**	**-0.3**
KULM				IAmb	IAmb	06 47 58.1	
	comp=Z,24nm,1.2s						
SUKH	**Sukhothai**	**39.32**	**69**	P	**P**	**06 47 55.4**	**+2.6**
	comp=Z,11nm,1.2s						
SGDS	**Sogindy**	**39.36**	**15**	*e*P	**P**	**06 47 53.5**	**+0.6**
	comp=Z,4.7nm,1.2s,baz=16						
MDOK	**Medeo**	**39.79**	**18**	*e*P	**P**	**06 47 56.8**	**+0.1**
	baz=18						
KTUT	**Trezzon**	**39.96**	**335**	⇓P	**P**	**06 47 59.9**	**+2.0**
PAYA	**Payao**	**39.98**	**67**	P	**P**	**06 48 00.7**	**+2.3**
	comp=Z,49μmcomp=Z,169nm,1.2s						
SATY	**Saty**	**40.14**	**20**	*e*P	**P**	**06 47 58.8**	**-0.7**
	comp=Z,6.0nm,1.2s,baz=20						
KUU	**Kurty**	**40.24**	**17**	*e*P	**P**	**06 48 01.0**	**+0.8**
	comp=Z,4.4nm,1.2s,baz=17						
SHLS	**Shalkode**	**40.58**	**21**	*e*P	**P**	**06 48 04.1**	**+0.9**
	comp=Z,6.7nm,1.2s,baz=21						
KPKS	**Kokpek**	**40.59**	**20**	*e*P	**P**	**06 48 02.5**	**-0.6**
	comp=Z,7.5nm,1.0s,baz=20						
BTLS	**Baital**	**40.70**	**14**	*e*P	**P**	**06 48 03.7**	**-0.2**
	comp=Z,4.3nm,1.3s,baz=14						
TOKA	**Tokat**	**40.94**	**331**	P	**P**	**06 48 06.7**	**+0.6**
TOKA				IAmb	IAmb	06 48 09.2	
	comp=Z,21nm,1.0s						
KBZ	**Khabaz**	**41.09**	**340**	P	**P**	**06 48 08.3**	**+1.2**
	comp=Z,11nm,1.0s,baz=170,slow=7.5,SNR=17						
KBZ				LR	LR	07 07 37.9	
	comp=Z,167nm,18.1s,baz=152,slow=40						
CHAI	**Chaiyaphum**	**41.24**	**73**	P	**P**	**06 48 10.8**	**+2.0**
	comp=Z,24nm,1.1s						
MATP	**Matopo**	**41.34**	**230**	P	**P**	**06 48 09.7**	**-0.1**
	comp=Z,8.7nm,1.1s,baz=67,slow=8.2,SNR=8.1						
KIV	**Kislovodsk**	**41.36**	**340**	⇑P	**P**	**06 48 10.3**	**+0.7**
KIV	**Kislovodsk**	**41.36**	**340**	P	**P**	**06 48 09.7**	**+0.1**
KIV				IAmb	IAmb	06 48 12.5	
	comp=Z,16nm,0.9s						
TDK	**Taldyqorghan**	**41.87**	**18**	*e*P	**P**	**06 48 14.4**	**+0.8**
	comp=Z,22nm,1.4s,baz=18						
BRTR	**Keskin Array B**	**41.93**	**328**	P	**P**	**06 48 15.2**	**+0.8**
	comp=Z,2.8nm,0.8s,baz=144,slow=9.1,SNR=11						
BRTR				PcP	**PcP**	**06 50 09.7**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=162,slow=5.1,SNR=5.8						
BRTR				LR	LR	07 06 05.1	
	comp=Z,151nm,20.1s,baz=130,slow=37						
BRTR	**Keskin Array B**	**41.93**	**328**	P	**P**	**06 48 14.2**	**-0.2**
BR131	**Keskin Array S**	**41.93**	**328**	P	**P**	**06 48 13.5**	**-0.9**
ELL	**Elmali**	**42.05**	**321**	P	**P**	**06 48 15.4**	**0.0**
ELL				IAmb	IAmb	06 48 26.0	
	comp=Z,38nm,1.3s						
NONG	**Nongkai**	**42.72**	**70**	P	**P**	**06 48 22.0**	**+1.1**
ILGA	**Ilgaz**	**42.86**	**329**	P	**P**	**06 48 22.6**	**+0.6**
ABKAR	**Akbulak array**	**43.35**	**359**	P	**P**	**06 48 26.0**	**+0.5**
ABKAR				IAmb	IAmb	06 48 27.8	
	comp=Z,23nm,1.1s						
MDUB	**Mudurnu**	**43.78**	**327**	P	**P**	**06 48 29.3**	**+0.1**
MANT	**Manisa**	**43.99**	**322**	P	**P**	**06 48 30.8**	**-0.3**
MANT				IAmb	IAmb	06 48 58.1	
	comp=Z,20nm,0.9s						
SLVN	**Son La**	**44.14**	**65**	P	**P**	**06 48 32.0**	**-0.4**
SLVN				IAmb	IAmb	06 48 34.8	
	comp=Z,21nm,1.3s						
KMI	**Kunming**	**44.18**	**60**	⇓*e*P	**P**	**06 48 34.0**	**+1.1**
KMI				pP	pwP	06 48 38.0	-1.2
KMI				pmax	pmax		
	comp=Z,20nm,0.5s						
KMI				pmax	pmax		
	comp=Z,190nm,4.4s						
IDI	**Anoyia**	**44.48**	**316**	⇑P	**P**	**06 48 36.5**	**+1.5**
IDI	**Anoyia**	**44.48**	**316**	P	**P**	**06 48 36.1**	**+1.2**
WMQ	**Urumqi**	**44.49**	**27**	*e*P	**P**	**06 48 36.3**	**+1.4**
WMQ				pP	pwP	06 48 40.8	-0.4
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,70nm,3.7s						
WMQ				LR	LR		
	comp=Z,670nm,28.9s						
WMQ				LR	LR		
	comp=Z,2μm,28.9s						
WMQ				LR	LR		
	comp=Z,490nm,19.9s						
MAKZ	**Makanchi**	**44.64**	**20**	P	**P**	**06 48 35.7**	**-0.2**
MAKZ				IAmb	IAmb	06 48 37.6	
	comp=Z,12nm,1.2s						
KLSI		**44.70**	**103**	P	**P**	**06 48 39.6**	**+2.7**
MK31	**Makanchi Array**	**44.74**	**21**	P	**P**	**06 48 36.7**	**0.0**
MKAR	**Makanchi Array**	**44.74**	**21**	P	**P**	**06 48 37.2**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=205,slow=8.0,SNR=15						
MKAR				PcP	**PcP**	**06 50 18.6**	**-0.4**
	comp=Z,2.4nm,1.1s,baz=220,slow=3.0,SNR=4.0						
MKAR				LR	LR	07 09 49.9	
	comp=Z,96nm,18.1s,baz=216,slow=40						
MKAR	**Makanchi Array**	**44.74**	**21**	P	**P**	**06 48 36.3**	**-0.5**
APE	**Apeiranthos**	**45.04**	**319**	⇓P	**P**	**06 48 40.2**	**+0.8**
BRZS	**Berezniki**	**45.11**	**10**	*e*P	**P**	**06 48 40.1**	**+0.4**
	baz=11						
LBTB	**Lobatse**	**46.20**	**227**	P	**P**	**06 48 48.8**	**0.0**
	comp=Z,4.5nm,0.9s,baz=60,slow=9.9,SNR=4.5						
LBTB	**Lobatse**	**46.20**	**227**	P	**P**	**06 48 48.1**	**-0.6**
LBTB				IAmb	IAmb	06 48 58.3	
	comp=Z,24nm,1.4s						
KURK	**Kurchatov**	**47.11**	**15**	P	**P**	**06 48 55.5**	**+0.1**
KURK				IAmb	IAmb	06 48 56.9	
	comp=Z,9.0nm,1.2s						
SEM	**Semipalatinsk**	**47.27**	**17**	*e*P	**P**	**06 48 56.2**	**-0.7**
	baz=17						
BRVK	**Borovoye**	**47.73**	**7**	P	**P**	**06 49 00.8**	**+0.7**
BRVK				IAmb	IAmb	06 49 06.6	
	comp=Z,8.2nm,1.2s						
GTA	**Gaotai**	**48.29**	**40**	*e*P	**P**	**06 49 05.3**	**+0.4**
GTA				pP	pwP	06 49 15.3	+4.0
GTA				sP	sP	06 49 18.5	+11
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
CISI	**Cisompet, Garu**	**48.36**	**105**	P	P	06 49 14.5	+8.8
CISI	**Cisompet, Garu**	**48.36**	**105**	P	**P**	**06 49 05.0**	**-0.8**
BOSA	**Boshof**	**48.64**	**223**	P	**P**	**06 49 07.3**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=53,slow=3.5,SNR=3.8						
BOSA				LR	LR	07 07 48.5	
	comp=Z,312nm,18.9s,baz=56,slow=34						
BOSA	**Boshof**	**48.64**	**223**	P	**P**	**06 49 06.6**	**-1.1**
LIT	**Litokhoron**	**48.72**	**320**	P	**P**	**06 49 08.2**	**+0.1**
KSM	**Kuching**	**49.19**	**93**	P	**P**	**06 49 11.2**	**-0.9**
KSM				IAmb	IAmb	06 49 13.2	
	comp=Z,20nm,1.3s						
LZH	**Lanzhou**	**49.36**	**46**	*e*P	**P**	**06 49 13.3**	**+0.1**
LZH				PP	**PP**	**06 51 08.5**	**+1.2**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,7.4s						
LZH				LR	LR		
	comp=Z,350nm,14.6s						
LZH				LR	LR		
	comp=Z,360nm,14.7s						
LZH				LR	LR		
	comp=Z,530nm,17.0s						
TSUM	**Tsumeb**	**49.59**	**239**	P	**P**	**06 49 14.9**	**-0.3**
TSUM				IAmb	IAmb	06 49 17.2	
	comp=Z,22nm,1.2s						
BISRR	**Bisoca**	**49.65**	**329**	⇓P	**P**	**06 49 15.8**	**+0.6**
NEHR	**Nehoiu**	**49.79**	**328**	⇑P	**P**	**06 49 17.0**	**+0.8**
VRI	**Vrincioaia**	**49.86**	**329**	⇑P	**P**	**06 49 17.8**	**+1.2**
PLOR	**Plostina**	**49.89**	**329**	⇑P	**P**	**06 49 17.9**	**+1.0**
HUMR	**Humele**	**49.91**	**326**	⇑P	**P**	**06 49 17.8**	**+0.7**
MLR	**Muntele Rosu**	**50.01**	**328**	⇑P	**P**	**06 49 18.8**	**+0.8**
MLR	**Muntele Rosu**	**50.01**	**328**	P	**P**	**06 49 18.5**	**+0.5**
TESR	**Tescani**	**50.34**	**329**	⇑P	**P**	**06 49 21.0**	**+0.7**
VOIR		**50.45**	**327**	⇑P	**P**	**06 49 21.8**	**+0.5**
OZUR		**50.50**	**329**	⇑P	**P**	**06 49 22.0**	**+0.4**
ARU	**Arti**	**50.56**	**358**	P	**P**	**06 49 22.5**	**+0.7**
ARU				IAmb	IAmb	06 49 23.1	
	comp=Z,19nm,1.1s						
DOPR	**Aopca**	**50.62**	**328**	⇑P	**P**	**06 49 22.8**	**+0

comp=Z,180nm,15.3s
HHC LR LR
comp=Z,220nm,15.3s
HHC LR LR
comp=Z,200nm,15.3s
SONM Songino Array 56.90 35 P **P 06 50 09.1 +0.6**
comp=Z,4.3nm,0.9s,baz=227,slow=7.5,SNR=20
SONM LR LR 07 15 27.1
comp=Z,222nm,18.1s,baz=178,slow=37
SONM Songino Array 56.90 35 P **P 06 50 07.9 -0.7**
CONA Conrad Observa 57.02 325 *eP* **P 06 50 08.9 -0.5**
comp=Z,19nm,1.4s
OBKA Obir 57.04 323 *i* P **P 06 50 09.4 -0.1**
comp=Z,22nm,1.4s
MORC Moravsky Berou 57.12 328 ⇓P **P 06 50 09.3 -0.7**
MORC Moravsky Berou 57.12 328 *eP* **P 06 50 09.9 -0.1**
MORC Moravsky Berou 57.12 328 P **P 06 50 09.3 -0.7**
MORC IAmb IAmb 06 50 10.9
comp=Z,18nm,1.1s
KLMR Klimovskoe 57.33 348 *eP* **P 06 50 09.4 -1.8**
KLMR AMP 06 50 16.9
comp=Z,21nm,1.3s
KLMR *e*PcP **PcP 06 51 03.6 -1.6**
KRUC Moravsky 57.34 327 *eP* **P 06 50 11.5 0.0**
VRAC Vranov 57.37 327 ⇑P **P 06 50 11.6 -0.2**
VRAC Vranov 57.37 327 *eP* **P 06 50 11.5 -0.2**
MYKA Terra Mystica 57.64 323 *i* P **P 06 50 13.2 -0.5**
comp=Z,9.8nm,1.1s
KRLC Kraliky 57.70 328 *eP* **P 06 50 13.5 -0.6**
PABE Paberze 57.80 336 *eP* **P 06 50 14.8 +0.3**
MOA Molln 57.89 324 *eP* **P 06 50 14.9 -0.5**
comp=Z,22nm,1.2s
KBA Koelnbreinsper 58.04 323 *i* P **P 06 50 16.8 +0.1**
comp=Z,12nm,1.2s
DPC Dobruska-Polom 58.10 328 *eP* **P 06 50 17.1 +0.2**
OSTC Ostas 58.27 328 *eP* **P 06 50 16.9 -1.1**
CHVC Chvalec 58.37 328 *eP* **P 06 50 18.6 -0.2**
ABTA Abfaltersbach 58.38 323 *eP* **P 06 50 19.6 +0.6**
comp=Z,16nm,1.3s
CTI Castel Tesino 58.58 322 P **P 06 50 19.9 -0.4**
CTI IAmb IAmb 06 50 21.1
comp=Z,17nm,1.2s
GERES GERESS Array B 58.73 325 P **P 06 50 20.1 -1.2**
comp=Z,1.4nm,1.0s,baz=116,slow=6.1,SNR=7.2
GERES LR LR 07 16 29.7
comp=Z,77nm,18.8s,baz=109,slow=37
GERES GERESS Array B 58.73 325 P **P 06 50 19.6 -1.7**
VSU Vasula 58.92 340 *eP* **P 06 50 22.5 +0.2**
KHC Kasperske Hory 58.94 326 *eP* **P 06 50 21.6 -1.2**
KHC Kasperske Hory 58.94 326 P **P 06 50 21.8 -0.9**
KHC IAmb IAmb 06 50 22.7
comp=Z,14nm,1.3s
TOA0 Torodi Ar. Sit 59.03 282 P **P 06 50 22.6 -1.3**
TOA0 IAmb IAmb 06 50 25.3
comp=Z,13nm,1.3s
TORD Torodi Ar. Bea 59.03 282 P **P 06 50 24.2 +0.3**
comp=Z,4.4nm,1.0s,baz=83,slow=6.4,SNR=15
TORD PcP **PcP 06 51 13.1 +0.2**
comp=Z,2.0nm,1.1s,baz=110,slow=3.5,SNR=4.5
TORD LR LR 07 14 33.3
comp=Z,70nm,21.1s,baz=15,slow=35
TORD Torodi Ar. Bea 59.03 282 P **P 06 50 22.7 -1.2**
WTTA Wattenberg 59.15 323 *i* P **P 06 50 24.4 0.0**
comp=Z,14nm,1.0s
WATA Walderalm 59.22 323 *eP* **P 06 50 24.5 -0.3**
comp=Z,15nm,1.0s
SQTA Sankt Quirin 59.39 323 *i* P **P 06 50 25.9 -0.1**
comp=Z,8.3nm,1.0s
MOTA Moosalm 59.51 323 *eP* **P 06 50 26.5 -0.4**
comp=Z,17nm,1.1s
FETA Feichten 59.59 322 *eP* **P 06 50 27.6 +0.2**
comp=Z,9.5nm,1.3s
NJ2 Nanjing 59.69 56 *eP* **P 06 50 27.0 -1.2**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
BNSI Bone 59.70 98 P **P 06 50 28.8 +0.3**
comp=Z,50nm,1.4s
RETA Reutte 59.78 323 *eP* **P 06 50 28.2 -0.4**
comp=Z,12nm,1.6s
BJI Beijing 59.85 47 P **P 06 50 29.0 -0.1**
BJI pmax pmax
comp=Z,9.0nm,1.5s
BJI LR LR
comp=Z,160nm,3.8s
BJI LR LR
comp=Z,150nm,4.8s
BKSI Bulukumba 59.86 100 P **P 06 50 30.6 +0.9**
comp=Z,8.9nm,0.6s
NKC Novy Kostel 60.14 326 *eP* **P 06 50 31.5 +0.5**
DAVA Damuels 60.22 322 *eP* **P 06 50 31.9 +0.1**
comp=Z,16nm,1.4s
CLL Collm 60.39 327 *i* P **P 06 50 33.2 +0.6**
comp=Z,53nm,2.1s
MRSI Marisa 60.86 93 P **P 06 50 36.3 -0.2**
comp=Z,28nm,1.4s
FINES FINESS Array B 61.40 342 P **P 06 50 39.0 -0.3**
comp=Z,3.9nm,0.9s,baz=121,slow=7.4,SNR=5.6
FINES LR LR 07 19 35.4
comp=Z,172nm,20.3s,baz=148,slow=38
SENIN Lac Senin/Sane 61.44 320 P **P 06 50 38.6 -1.5**
BFO Black Forest 61.62 323 P **P 06 50 40.8 -0.3**
SOEI Soe 64.71 104 P P 06 51 08.2 +5.9
SOEI Soe 64.71 104 P **P 06 51 00.4 -1.9**
KIC Kosan Boka 65.52 274 *e*PKP1 **P 06 51 08.5 +1.0**
comp=Z,27nm,1.3s
DBIC Dimbokro 65.62 275 P **P 06 51 08.1 0.0**
comp=Z,5.7nm,1.0s,baz=78,slow=6.7,SNR=4.3
DBIC LR LR 07 18 37.9
comp=Z,86nm,20.0s,baz=61,slow=35
TIC Toumodi 65.78 275 *e*PKP1 **P 06 51 09.9 +0.7**
NRIK Noril'sk 65.81 10 LR LR 07 22 05.1
comp=Z,232nm,20.7s,baz=200,slow=38
LIC Lamto 65.81 274 *e*PKP1 **P 06 51 09.1 -0.3**
comp=Z,43nm,1.2s
KONO Kongsberg 66.42 334 P **P 06 51 12.2 -0.2**
NB2 NORSAR Subarra 66.50 336 P **P 06 51 12.2 -0.8**
comp=Z,24nm,1.4s,baz=126,slow=6.9
NOA NORSAR Array B 66.50 336 P **P 06 51 12.6 -0.4**
comp=Z,6.1nm,1.0s,baz=121,slow=7.0,SNR=8.5
NOA LR LR 07 22 12.8
comp=Z,74nm,20.2s,baz=120,slow=38
ESDC Sonseca Array 67.28 311 P **P 06 51 18.1 -0.3**
comp=Z,4.1nm,1.0s,baz=86,slow=5.9,SNR=9.7
ESDC Sonseca Array 67.28 311 P **P 06 51 17.4 -1.0**
ARCES ARCESS Array B 67.81 347 P **P 06 51 20.8 -0.3**
comp=Z,7.4nm,0.9s,baz=180,slow=0.2,SNR=6.2
ARCES LR LR 07 22 17.1
comp=Z,62nm,21.0s,baz=195,slow=37
FITZ Fitzroy Crossi 67.83 112 P **P 06 51 20.0 -2.2**
KSAR Wonju Array Be 68.05 52 P **P 06 51 21.9 -1.3**
KSRS Korea Array 68.08 52 P **P 06 51 22.3 -1.1**
comp=Z,8.8nm,1.0s,baz=256,slow=7.7,SNR=13
KSRS LR LR 07 23 56.8
comp=Z,64nm,18.2s,baz=242,slow=38
KNRA Kununurra 70.20 109 P **P 06 51 35.1 -1.7**
MDJ Mudanjiang 70.64 45 P **P 06 51 39.8 +0.7**
MDJ pmax pmax
comp=Z,15nm,1.4s
MDJ pmax pmax
comp=Z,190nm,4.0s
FAKI Fak Fak 71.49 95 P **P 06 51 43.2 -1.6**
comp=Z,22nm,1.0s
FAKI Fak Fak 71.49 95 P **P 06 51 44.0 -0.8**
MAW Mawson 73.21 179 LR LR 07 16 48.4
comp=Z,100nm,18.1s,baz=50,slow=30
SPITS Spitsbergen Ar 75.92 351 LR LR 07 30 09.6
comp=Z,112nm,18.1s,baz=100,slow=39
SYO Syowa Base 76.10 188⇑*ep*P **P 06 52 14.8 +4.1**
SYO Syowa Base 76.10 188⇑*e*PcP **PcP 06 52 24.2 +1.4**
MJAR Matsushiro Arr 76.16 54 LR LR 07 28 26.1
comp=Z,30nm,18.5s,baz=65,slow=38
WRA Warramunga Arr 76.26 112 P **P 06 52 12.3 -0.4**
comp=Z,19nm,1.0s,baz=289,slow=4.9,SNR=71
WRA LR LR 07 23 49.5
comp=Z,36nm,19.2s,baz=175,slow=34
WRA Warramunga Ar 76.26 112 P **P 06 52 11.9 -0.9**
WRAB Tennant Creek 76.27 112 P **P 06 52 11.4 -1.4**
ASAR Alice Springs 76.63 116 P **P 06 52 14.2 -0.6**
comp=Z,8.0nm,1.0s,baz=284,slow=5.5,SNR=48
ASAR Alice Springs 76.63 116 P **P 06 52 13.5 -1.3**
AS31 Alice Springs 76.63 116 P **P 06 52 12.9 -1.9**
JMIC Jan Mayen 78.02 342 LR LR 07 28 32.3
comp=Z,61nm,18.3s,baz=57,slow=37
DAG Danmarks Havn 82.09 347⇑*iP* **P 06 52 43.1 -0.3**
comp=Z,16nm,1.2s
DAG Danmarks Havn 82.09 347⇑*iP* **P 06 52 43.2 -0.3**
DAG IAmb IAmb 06 52 44.1
comp=Z,16nm,1.2s
STKA Stephens Creek 84.92 123 P **P 06 52 58.0 -0.9**
comp=Z,1.8nm,0.6s,baz=306,slow=10,SNR=3.9
SNAA Sanae 87.53 197 P **P 06 53 11.8 +0.8**
SNAA Sanae 87.53 197 P **P 06 53 11.1 +0.1**
VNA2 Neumayer--Watz 88.56 198 P **P 06 53 16.3 +0.5**
baz=63,slow=3.2
VNA1 Neumayer--Stat 88.72 198 P **P 06 53 17.4 +0.8**
PETK Petropavlovsk- 89.33 37 LR LR 07 36 29.9
comp=Z,100nm,18.2s,baz=273,slow=38
VNA3 Neumayer Olymp 89.37 198 P **P 06 53 19.9 +0.3**
VNDA Vanda 97.91 168 LR LR 07 32 40.7
comp=Z,157nm,18.4s,baz=292,slow=32
PDAR Pinedale Array 130.97 351 PKP **PKPdf 06 59 35.6 -0.2**
comp=Z,2.3nm,1.1s,baz=90,slow=3.0,SNR=9.8
NVAR Mina Array Bea 136.02 359 PKP **PKPdf 06 59 46.2 +0.8**
comp=Z,1.8nm,0.8s,baz=95,slow=1.1,SNR=6.2
TXAR Lajitas Array 142.18 338 PKhKP PKPpre 06 59 51.8
comp=Z,1.3nm,0.9s,baz=76,slow=2.8,SNR=10

TUN 29 06:42:06.5, 36.53N×9.13E, h10km, MD2.2, Tunisia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRIT	**Krib**	**0.20**	**194**	*i* P		06 42 12.8	+2.1
KRIT	**Krib**	**0.20**	**194**	*i* P		06 42 12.8	+2.1
KRIT	**Krib**	**0.20**	**194**	*i* P		06 42 12.8	+2.1
BLIT	**Baltah**	**0.23**	**322**	*i* P		06 42 13.0	+1.7
BLIT	**Baltah**	**0.23**	**322**	*i* P		06 42 13.0	+1.7
BLIT	**Baltah**	**0.23**	**322**	*i* P		06 42 13.0	+1.7
GHAT	**Ghardimaou**	**0.67**	**267**	*i* P		06 42 23.4	+1.3
GHAT	**Ghardimaou**	**0.67**	**267**	*i* P		06 42 23.4	+1.3
GHAT	**Ghardimaou**	**0.67**	**267**	*i* P		06 42 23.4	+1.3

*MOS **29** 06:48:08.3±1.9, 46.94N×142.00E, h11km, mb4.0/3, Error ellipse: s-maj=23.3km s-min=15.1km az=120.3*
MOS Felt (III) at Kholmsk.
*JMA **29** 06:48:09.9±0.4, 47.13N×141.92E, h36km, M3.3*
*SKHL **29** 06:48:10.8±0.6, 46.82N×142.06E, h10km, mb4.7/5*
SKHL Felt (III) at Kholmsk.
ISC 29 06:48:10.4±0.8, 46.88N±0.04×142.07E±0.05, h12km, n14, σ1s95/17, mb4.1/3, 2C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**0.47**	**81**	*i* Pg	**Pb**	**06 48 20.8**	**+0.1**
YSS				AMB	AMB	06 48 21.2	
	190nm,0.8s						
YSS				*e*Sg	**Sg**	**06 48 27.6**	**+1.6**
YSS				A	A	06 48 28.7	
	2μm,0.7s						
YSS				A	A	06 48 28.7	
	2μm,0.7s						
YSS	**Yuzh-Sakhalins**	**0.47**	**81**	⇑*i*PN	**Pb**	**06 48 20.8**	**+0.1**
YSS				*e*		06 48 27.6	
YSS				pmax	pmax		
	comp=Z,190nm,0.8s						
YSS				smax	smax		
	comp=N,2μm,0.7s						
YSS				smax	smax		
	comp=E,2μm,1.1s						
JWK2	**Keihoku**	**1.57**	**184**	P	**Pb**	**06 48 39.8**	**+0.5**
JWK2				*e*S	**Sg**	**06 49 01.6**	**+0.7**
JRBN	**Rebuntou**	**1.62**	**206**	P	**Pn**	**06 48 39.6**	**+0.9**
JRBN				*e*S	**Sb**	**06 49 01.2**	**+0.7**
JSE	**Soyaes**	**1.96**	**169**	*e*S	**Sb**	**06 49 11.9**	**+1.7**
UGL	**Uglegorsk**	**2.20**	**360**	*e*Sg	**Sg**	**06 49 26.0**	**+5.0**
UGL				A	A	06 49 26.6	
	comp=E,140nm,0.5s						
UGL				A	A	06 49 26.6	
	comp=E,380nm,0.5s						
KUR	**Kuril'sk**	**4.36**	**110**	*i* PN	**Pn**	**06 49 15.9**	**-0.5**
ERM	**Erimo**	**4.93**	**171**	*i* PN	**Pn**	**06 49 24.7**	**+0.5**
KLR	**Kul'dur**	**7.30**	**293**	*i* PN	**Pn**	**06 49 56.8**	**0.0**
YAK	**Yakutsk**	**16.75**	**339**	*eP*	**Pn**	**06 52 01.7**	**-2.9**
YAK				pmax	pmax		
	comp=Z,17nm,1.0s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.3s						
ULN	**Ulaanbaatar**	**23.62**	**285**	*i* P	**P**	**06 53 22.5**	**+1.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**24.56**	**22**	*ce*P	**P**	**06 53 28.9**	**-0.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	**Talaya**	**25.31**	**295**	*i* P	**P**	**06 53 33.5**	**-3.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TIXI	**Tiksi**	**25.62**	**350**	*i* P	**P**	**06 53 39.0**	**-0.2**

*IDC **29** 06:55:03.9±0.8, 21.61N×143.31E, h0km, mb3.9/15, mb1 4.1/16, mb1mx3.9/46, mbtmp3.9/16, ML3.3/1, MS3.3/13, Ms1 3.3/13, ms1mx3.1/45, Error ellipse: s-maj=30.2km s-min=17.0km az=85.0*
ISC 29 06:55:09.1±0.9, 21.61N±0.1×143.32E±0.2, h35km, n33, σ1s12/17, mb3.8/14, MS3.3/10, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**8.13**	**169**	LR	LR	06 59 45.9	
	comp=Z,129nm,18.4s,baz=102,slow=35						
MJAR	**Matsushiro Arr**	**15.51**	**345**	Pn	**Pn**	**06 58 45.2**	**0.0**
	0.1nm,0.3s,baz=155,slow=9.3,SNR=4.4						
MJAR				LR	LR	07 04 12.1	
	comp=Z,153nm,19.5s,baz=165,slow=35						
JNU	**Nakatsue**	**15.86**	**319**	LR	LR	07 03 18.6	
	comp=Z,72nm,19.5s,baz=135,slow=31						
KSRS	**Korea Array**	**20.61**	**323**	P	**P**	**06 59 46.1**	**+0.8**
	1.4nm,0.7s,baz=141,slow=9.6,SNR=2.2						
KSRS				LR	LR	07 07 09.8	
	comp=Z,113nm,18.1s,baz=140,slow=35						
H11N1	**WAKE ISLAND Hy**	**22.21**	**91**	T	T	07 22 34.7	
	baz=279,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**22.21**	**91**	T	T	07 22 38.1	
	baz=279,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**22.23**	**91**	T	T	07 22 36.9	
	baz=279,slow=75,SNR=20						
H11S3	**WAKE ISLAND Hy**	**22.24**	**94**	T	T	07 22 33.5	
	baz=282,slow=75,SNR=94						
H11S1	**WAKE ISLAND Hy**	**22.25**	**94**	T	T	07 22 33.4	
	baz=282,slow=75,SNR=93						
H11S2	**WAKE ISLAND Hy**	**22.26**	**94**	T	T	07 22 34.8	
	baz=282,slow=75,SNR=51						
DAV	**Davao City (W)**	**22.36**	**232**	LR	LR	07 07 40.0	
	comp=Z,81nm,19.4s,baz=136,slow=34						
ASAJ	**Asahikawa**	**22.45**	**359**	LR	LR	07 08 18.3	
	comp=Z,50nm,20.5s,baz=309,slow=35						
JAY	**Jayapura**	**24.10**	**186**	LR	LR	07 07 45.9	
	comp=Z,53nm,21.9s,baz=345,slow=32						
USRK	**Ussuriysk Ar.**	**24.38**	**340**	P	**P**	**07 00 25.6**	**+1.6**
	1.1nm,0.7s,baz=134,slow=8.3,SNR=2.0						
KLR	**Kul'dur**	**29.04**	**344**	P	**P**	**07 01 06.0**	**+0.2**
	8.0nm,0.7s,baz=148,slow=9.5,SNR=3.7						
KLR				LR	LR	07 11 07.6	
	comp=Z,69nm,18.2s,baz=152,slow=33						
PETK	**Petropavlovsk-**	**33.35**	**16**	LR	LR	07 13 27.6	
	comp=Z,35nm,20.0s,baz=212,slow=33						
SONM	**Songino Array**	**39.44**	**321**	P	**P**	**07 02 34.9**	**-1.0**
	0.3nm,0.4s,baz=104,slow=4.6,SNR=3.2						
WRA	**Warramunga Arr**	**42.20**	**193**	P	**P**	**07 02 58.9**	**+0.1**
	1.4nm,0.7s,baz=14,slow=9.0,SNR=11						
ASAR	**Alice Springs**	**45.91**	**192**	P	**P**	**07 03 28.9**	**+0.4**
	0.7nm,0.6s,baz=15,slow=8.9,SNR=14						
ZALV	**Zalesovo Beam**	**54.31**	**322**	P	**P**	**07 04 30.9**	**-1.0**
	0.6nm,0.6s,baz=105,slow=3.4,SNR=2.4						
MKAR	**Makanchi Array**	**54.79**	**313**	P	**P**	**07 04 35.0**	**-0.6**
	0.3nm,0.6s,baz=96,slow=8.9,SNR=2.4						
NRIK	**Noril'sk**	**58.10**	**340**	P	**P**	**07 04 59.0**	**+0.4**
	1.7nm,0.5s,baz=135,slow=11,SNR=2.2						
ILAR	**Eielson Array**	**62.10**	**27**	P	**P**	**07 05 24.1**	**-2.0**
	0.4nm,0.9s,baz=262,slow=6.1,SNR=2.8						
INK	**Inuvik**	**67.63**	**24**	P	**P**	**07 06 03.0**	**+1.0**
	1.6nm,0.8s,baz=249,slow=9.7,SNR=4.9						
AKTO	**Aktyubinsk**	**70.67**	**318**	LR	LR	07 38 44.1	
	comp=Z,26nm,18.2s,baz=65,slow=37						
PPT	**Papeete**	**76.45**	**115**	LR	LR	07 33 17.7	
	comp=Z,33nm,19.4s,baz=294,slow=30						
YKA	**Yellowknife Ar**	**76.51**	**28**	P	**P**	**07 06 55.3**	**0.0**
	1.0nm,0.8s,baz=296,slow=4.8,SNR=2.9						
ARCES	**ARCESS Array B**	**79.02**	**342**	P	**P**	**07 07 11.5**	**+2.3**
	1.8nm,0.6s,baz=47,slow=9.0,SNR=6.3						
NVAR	**Mina Array Bea**	**83.16**	**51**	P	**P**	**07 07 32.5**	**+0.4**
	0.2nm,0.3s,baz=284,slow=3.6,SNR=1.8						
FINES	**FINESS Array B**	**83.28**	**335**	P	**P**	**07 07 31.4**	**-0.5**
	3.8nm,1.0s,baz=64,slow=6.3,SNR=3.7						
NOA	**NORSAR Array B**	**89.05**	**339**	LR	LR	07 50 46.3	
	comp=Z,32nm,18.5s,baz=105,slow=38						
BRTR	**Keskin Array B**	**90.44**	**313**	LR	LR	07 52 35.1	
	comp=Z,13nm,18.2s,baz=326,slow=38						
LPAZ	**La Paz**	**149.90**	**85**	PKPbc	**PKPbc**	**07 14 56.2**	**-1.0**
	0.6nm,0.5s,baz=259,slow=5.2,SNR=2.7						

TUN 29 06:59:58.3, 36.55N×9.25E, h22km, MD2.8, Tunisia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRIT	**Krib**	**0.26**	**213**	*i* P	Pn	07 00 07.0	+0.2
KRIT	**Krib**	**0.26**	**213**	*i* P	Pn	07 00 06.9	+0.1
BLIT	**Baltah**	**0.29**	**304**	*i* P	Pn	07 00 07.3	+0.2
BLIT	**Baltah**	**0.29**	**304**	*i* P	Pn	07 00 07.4	+0.2
TAMR	**Tamra**	**0.51**	**347**	*i* P	Pn	07 00 12.3	+2.1
GHAT	**Ghardimaou**	**0.76**	**266**	*i* P	Pn	07 00 15.4	+1.7
GHAT	**Ghardimaou**	**0.76**	**266**	*i* P	Pn	07 00 15.4	+1.7

*IDC **29** 07:02:44.6±10.0, 19.12N×145.53E, h220km±103km, mb3.3/9, mb1 3.6/9, mb1mx3.3/48, mbtmp3.9/9, Error ellipse: s-maj=39.4km s-min=15.5km az=94.0*
ISC 29 07:02:44.1±0.9, 19.1N±0.2×145.5E±0.3, h214km, n9, σ0s71/9, mb3.6/9, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLR	**Kul'dur**	**32.01**	**343**	P	**P**	**07 08 50.8**	**+0.6**
	3.3nm,0.7s,baz=159,slow=8.6,SNR=10.0						
WRA	**Warramunga Arr**	**40.32**	**196**	P	**P**	**07 10 00.6**	**-0.2**
	0.8nm,0.6s,baz=14,slow=8.3,SNR=11						
ASAR	**Alice Springs**	**43.99**	**195**	P	**P**	**07 10 30.6**	**+0.2**
	0.3nm,0.5s,baz=16,slow=8.1,SNR=7.4						
ZALV	**Zalesovo Beam**	**57.55**	**322**	P	**P**	**07 12 11.0**	**-0.1**
	0.4nm,0.4s,baz=116,slow=6.6,SNR=2.7						
ILAR	**Eielson Array**	**63.37**	**26**	P	**P**	**07 12 49.0**	**-1.3**
	0.3nm,0.5s,baz=252,slow=6.0,SNR=8.0						
INK	**Inuvik**	**69.08**	**23**	P	**P**	**07 13 26.2**	**-0.3**
	1.6nm,0.8s,baz=270,slow=3.5,SNR=6.6						
YKA	**Yellowknife Ar**	**77.73**	**28**	P	**P**	**07 14 17.1**	**+0.1**
	1.1nm,0.6s,baz=290,slow=4.7,SNR=6.0						
NVAR	**Mina Array Bea**	**83.06**	**52**	P	**P**	**07 14 47.0**	**+0.8**
	0.6nm,0.5s,baz=268,slow=6.0,SNR=3.7						
FINES	**FINESS Array B**	**86.42**	**335**	P	**P**	**07 15 01.8**	**-0.3**
	0.9nm,0.5s,baz=69,slow=5.5,SNR=12						

*NNC **29** 07:35:27.8±1.5, 50.03N×78.75E, h2km±31km, mb3.2, mpv2.8, Error ellipse: s-maj=16.4km s-min=12.2km az=1.0, Suspected Mining explosion.*
*IDC **29** 07:35:32.0±4.0, 50.03N×79.27E, h0km, mb1 2.8/2, mb1mx2.7/44, mbtmp2.8/2, ML2.3/2, Error ellipse: s-maj=51.6km s-min=17.7km az=94.0*
ISC 29 07:35:26.9±1.0, 49.93N±0.04×78.61E±0.04, h0km, n10, σ1s94/13, 5C-4D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**0.79**	**1**	⇑P	**Pg**	**07 35 40.8**	**-1.1**
	14nm,0.5s						
KURK				⇓S	**Sg**	**07 35 51.4**	**-0.8**
	29nm,0.5s						
SEM	**Semipalatinsk**	**1.16**	**65**	P	**Pg**	**07 35 48.0**	**-1.2**
	3.1nm,0.1s						
SEM				S	**Sg**	**07 36 03.1**	**-1.0**
	77nm,0.4s						
BRZS	**Berezniki**	**3.83**	**273**	Pg	**Pg**	**07 36 39.7**	**-0.5**
	2.0nm,0.5s						
BRZS				Lg	Lg	07 37 32.5	
	5.9nm,0.7s						
MAKZ	**Makanchi**	**3.85**	**143**	⇓Pg	**Pg**	**07 36 37.9**	**-2.8**
	3.0nm,0.7s						
MAKZ				⇓Lg	Lg	07 37 28.1	
	9.3nm,0.5s						
MK31	**Makanchi Array**	**3.98**	**141**	⇓Pn	**Pn**	**07 36 31.7**	**+2.5**
	0.2nm,0.3s,baz=335,slow=11,SNR=6.3						
MK31				⇑Pg	**Pg**	**07 36 41.0**	**-2.2**
	0.7nm,0.3s,baz=334,slow=16,SNR=7.7						
MK31				⇑Lg	Lg	07 37 34.6	
	6.4nm,0.5s,baz=334,slow=28,SNR=24						
MKAR	**Makanchi Array**	**3.98**	**141**	Pn	**Pn**	**07 36 31.9**	**+2.7**
	0.2nm,0.3s,baz=322,slow=10.0,SNR=8.4						
MKAR				Pg	**Pb**	**07 36 39.1**	**+1.1**
	0.6nm,0.3s,baz=332,slow=15,SNR=11						
MKAR				Lg	Lg	07 37 32.8	
	2.8nm,0.3s,baz=331,slow=25,SNR=20						
OTUK	**Ortayu**	**4.45**	**250**	Pg	**Pg**	**07 36 50.3**	**-1.9**
	0.4nm,0.4s						
OTUK				Lg	Lg	07 37 50.3	
	3.4nm,0.5s						
OTUK	**Ortayu**	**4.45**	**250**	⇑Pn	**Pn**	**07 36 36.5**	**+0.8**
	0.7nm,0.3s						
OTUK				⇑Lg	Lg	07 37 57.6	
	4.7nm,0.8s						
ZALV	**Zalesovo Beam**	**5.56**	**41**	Pn	**Pn**	**07 36 52.1**	**+1.3**
	0.7nm,0.3s,baz=233,slow=14,SNR=7.9						
ZALV				Lg	Lg	07 38 17.1	
	0.8nm,0.3s,baz=206,slow=19,SNR=8.5						
I46RU	**ZALESOVO INFRA**	**5.56**	**41**	*i*		08 06 30.0	
	baz=225,slow=342,SNR=3.2						

*NNC **29** 07:48:01.0±0.6, 50.01N×78.68E, h0km, mb3.0, mpv2.6, Error ellipse: s-maj=10.7km s-min=2.8km az=80.0, Suspected Mining explosion.*
*IDC **29** 07:48:04.5±4.1, 49.99N×78.96E, h0km, mb1 2.7/2, mb1mx2.6/37, mbtmp2.7/2, ML2.2/2, Error ellipse: s-maj=50.3km s-min=18.6km az=93.0*
ISC 29 07:48:01.9±1.1, 50.41N±0.07×79.62E±0.07, h0km, n7, σ0s65/9, 6C-3D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**0.71**	**296**	⇑P	**Pg**	**07 48 14.9**	**-0.6**
	5.5nm,0.7s						
KURK				⇑S	**Sg**	**07 48 24.7**	**0.0**
	9.8nm,0.5s						
MAKZ	**Makanchi**	**3.93**	**156**	⇑Pg	**Pb**	**07 49 11.2**	**-0.8**
	1.9nm,0.9s						
MAKZ				⇓Lg	Lg	07 50 02.2	
	4.6nm,0.6s						
MK31	**Makanchi Array**	**4.03**	**153**	⇓Pn	**Pn**	**07 49 05.1**	**+0.2**
	0.3nm,0.3s,baz=328,slow=10,SNR=7.5						
MK31				⇑Pg	**Pb**	**07 49 14.3**	**+0.6**
	0.5nm,0.5s,baz=329,slow=14,SNR=9.1						
MK31				⇑Lg	Lg	07 50 07.5	
	2.8nm,0.5s,baz=327,slow=25,SNR=6.3						
MKAR	**Makanchi Array**	**4.03**	**153**	Pn	**Pn**	**07 49 05.3**	**+0.5**
	0.2nm,0.3s,baz=318,slow=12,SNR=8.1						
MKAR				Pg	**Pb**	**07 49 13.3**	**-0.4**
	0.4nm,0.3s,baz=323,slow=15,SNR=9.6						
MKAR				Lg	Lg	07 50 07.1	
	1.3nm,0.3s,baz=331,slow=26,SNR=15						
I46RU	**ZALESOVO INFRA**	**4.77**	**40**	*i*		08 19 10.0	
	baz=225,slow=338,SNR=1.0						
ZALV	**Zalesovo Beam**	**4.77**	**40**	Pn	**Pb**	**07 49 26.4**	**0.0**
	0.3nm,0.3s,baz=232,slow=15,SNR=5.2						
ZALV				Lg	Lg	07 50 55.2	
	0.1nm,0.3s,baz=223,slow=25,SNR=3.2						
OTUK	**Ortayu**	**5.23**	**248**	⇓Pg	**Pn**	**07 49 22.2**	**+0.9**
	2.

*IDC **29** 07:50:49.5±2.4,31°.31S×68°.24W,h76$^{km}_{\pm}$23^{km},mb3.4/4, mb1 3.6/9,mb1mx3.4/26,mbtmp3.7/9,Error ellipse: s-maj=35.1km s-min=15.8km az=89.0*

ISC 29 07:50:51.3±0.8,31°.28S±0°.07×68°.2W±0°.2,h100^{km},n14, σ1^{s}33/15,mb3.6/4,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**8.66**	**356**	P	**Pn**	**07 52 53.9**	**-0.2**
	3.4nm,0.3s,baz=188,slow=11,SNR=24						
LVC				S	**Sn**	**07 54 27.8**	**-2.4**
	1.2nm,0.3s,baz=277,slow=2.2,SNR=2.2						
PLCA	**Paso Flores**	**9.62**	**191**	P	**Pn**	**07 53 04.4**	**-2.5**
	0.3nm,0.3s,baz=7.3,slow=15,SNR=3.3						
CPUP	**Villa Florida**	**10.73**	**65**	P	**Pn**	**07 53 20.5**	**-1.4**
	0.1nm,0.3s,baz=283,slow=18,SNR=1.1						
LPAZ	**La Paz**	**14.92**	**0**	P	**Pn**	**07 54 18.3**	**+0.6**
	0.1nm,0.3s,baz=266,slow=9.8,SNR=3.7						
SIV	**San Ignacio**	**16.55**	**25**	P	**Pn**	**07 54 38.1**	**+0.6**
	0.2nm,0.3s,baz=200,slow=9.5,SNR=6.0						
VNA3	**Neumayer Olymp**	**50.69**	**159**	P	**P**	**07 59 41.1**	**+0.9**
VNA2	**Neumayer--Watz**	**51.30**	**158**	P	**P**	**07 59 45.1**	**+0.4**
	baz=280,slow=8.0						
SNAA	**Sanae**	**52.91**	**159**	P	**P**	**07 59 57.4**	**+0.7**
SNAA	**Sanae**	**52.91**	**159**	P	**P**	**07 59 57.2**	**+0.5**
	0.4nm,0.3s,baz=290,slow=11,SNR=26						
QSPA	**South Pole Qui**	**58.95**	**180**	P	**P**	**08 00 40.5**	**+0.6**
	1.3nm,0.6s,baz=177,slow=0.9,SNR=15						
TXAR	**Lajitas Array**	**69.08**	**327**	P	**P**	**08 01 47.6**	**+1.0**
	0.3nm,0.7s,baz=150,slow=7.8,SNR=4.5						
TORD	**Torodi Ar. Bea**	**80.22**	**68**	P	**P**	**08 02 52.4**	**+1.2**
	0.4nm,0.6s,baz=262,slow=5.7,SNR=2.2						
ZALV	**Zalesovo Beam**	**150.20**	**33**	PKPbc	**PKiKP**	**08 10 30.8**	**0.0**
	0.7nm,0.3s,baz=318,slow=3.9,SNR=5.3						
MKAR	**Makanchi Array**	**152.54**	**47**	PKPab	**PKPab**	**08 10 47.7**	**+1.2**
	0.3nm,0.5s,baz=295,slow=5.7,SNR=2.3						

*KRNET **29** 08:13:43.2±0.1,41°.22N×69°.50E,mb2.4*
*SOME **29** 08:13:45.0,40°.90N×69°.77E,h5^{km}*
*NNC **29** 08:13:46.2±1.2,40°.95N×69°.76E,h15$^{km}_{\pm}$8^{km}, mb3.2, mpv3.2,Error ellipse: s-maj=9.1km s-min=7.3km az=47.0*

ISC 29 08:13:47.6±1.9,41°.11N±0°.04×69°.83E±0°.07,h6^{km}±12^{km}, n15,σ1^{s}70/25,10C-5D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**1.04**	**8**	*eP*	**Pn**	**08 14 08.5**	**-0.5**
	68nm,0.2s						
IUG				*eS*	**Sn**	**08 14 25.0**	**+1.0**
	46nm,0.3s						
IUG	**luzhnay**	**1.04**	**8**	P	**Pn**	**08 14 08.5**	**-0.5**
	68nm,0.2s						
IUG				S	**Sn**	**08 14 25.0**	**+1.0**
	46nm,0.3s						
TRKS	**Terek-Say**	**1.07**	**67**	⇑*iP*	**Pg**	**08 14 07.0**	**-1.2**
	baz=78						
TRKS				⇑*iS*	**Sn**	**08 14 24.2**	**-0.5**
	baz=78						
BTK	**Batken**	**1.29**	**144**	⇑*iP*	**Pn**	**08 14 11.1**	**-1.3**
	baz=39						
BTK				⇑*iS*	**Sg**	**08 14 31.7**	**+2.5**
	baz=39						
KK31	**Karatay Array**	**2.05**	**14**	⇓Pg	**Pg**	**08 14 26.7**	**-0.3**
	2.2nm,0.4s,baz=202,slow=15,SNR=11						
KK31				⇓Lg	Lg	08 14 57.3	
	9.8nm,0.6s,baz=195,slow=25,SNR=15						
DRK	**Karamyk**	**2.22**	**137**	⇓*iP*	**Pn**	**08 14 24.9**	**-0.4**
	baz=34						
DRK				⇓*iS*	**Sb**	**08 14 55.6**	**-0.6**
	baz=34						
ARSB	**Arslanbob**	**2.39**	**84**	⇑*iP*	**Pn**	**08 14 27.2**	**-0.3**
	baz=86						
ARSB				⇑*iS*	**Sb**	**08 14 59.0**	**-1.9**
	baz=86						
SFK	**Sufi-Kurgan**	**3.01**	**110**	⇑*iP*	**Pn**	**08 14 35.8**	**-0.3**
	baz=10.0						
SFK				⇑*iS*	**Sn**	**08 15 14.7**	**+2.2**
	baz=10.0						
MRKS	**Merke**	**3.01**	**56**	*eP*	**Pg**	**08 14 43.9**	**-1.5**
	3.0nm,0.3s						
MRKS				*eS*	**Sg**	**08 15 25.5**	**+1.1**
	4.0nm,0.4s						
MRKS	**Merke**	**3.01**	**56**	Pg	**Pg**	**08 14 43.9**	**-1.5**
	3.0nm,0.3s						
MRKS				Lg	Lg	08 15 25.5	
	4.0nm,0.4s						
AAK	**Ala-Archa**	**3.80**	**65**	⇑Pg	**Pg**	**08 14 58.7**	**-1.8**
	2.0nm,1.1s						
AAK				Lg	Lg	08 15 50.8	
	2.5nm,0.7s						
SGDS	**Sogindy**	**4.26**	**55**	Pg	**Pb**	**08 15 01.5**	**-1.5**
	3.0nm,0.4s						
SGDS				Lg	Lg	08 15 55.6	
	1.8nm,0.5s						
TKM2	**Tokmak 2**	**4.66**	**65**	⇓Pg	**Pb**	**08 15 12.6**	**+2.6**
	1.5nm,0.8s						
TKM2				⇑Lg	Lg	08 16 18.7	
	1.8nm,0.8s						
DGS	**Degeres**	**4.90**	**62**	*eP*	**Pg**	**08 15 20.2**	**-1.3**
	1.5nm,0.5s						
DGS				*eS*	**Sg**	**08 16 28.4**	**+3.4**
	2.9nm,0.5s						
KST	**Kastek**	**4.96**	**65**	*eP*	**Pg**	**08 15 20.3**	**-2.3**
	2.9nm,0.6s						
KST				*eS*	**Sg**	**08 16 28.4**	**+1.6**
	2.4nm,0.5s						

*IDC **29** 08:16:46.8±3.7,4°.56S×103°.75E,h0^{km},mb3.6/5, mb1 3.9/6,mb1mx3.6/31,mbtmp3.7/6,ML4.1/1,Error ellipse: s-maj=149.6km s-min=21.7km az=54.0*

ISC 29 08:16:50.6±2.8,4.7S±0°.5×103.6E±0°.5,h35^{km},n13, σ1^{s}29/7,mb3.7/5,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	**Lembang**	**4.48**	**118**	Pn	**Pn**	**08 17 55.1**	**-1.0**
	10nm,0.3s,baz=311,slow=18,SNR=6.1						
CMAR	**Chiang Mai Arr**	**23.50**	**349**	P	**P**	**08 21 56.5**	**-1.0**
	2.3nm,0.3s,baz=173,slow=10.0,SNR=2.0						
H08S2	**Diego Garcia H**	**31.09**	**263**	T	T	08 53 56.1	
	baz=89,slow=74						
H08S3	**Diego Garcia H**	**31.09**	**263**	T	T	08 53 52.5	
	baz=89,slow=74						
H08S1	**Diego Garcia H**	**31.11**	**263**	T	T	08 53 54.5	
	baz=89,slow=74						
H01W3	**Cape Leeuwin H**	**31.54**	**163**	T	T	08 54 50.1	
	baz=338,slow=76,SNR=4.8						
H01W2	**Cape Leeuwin H**	**31.55**	**163**	T	T	08 54 57.9	
	baz=338,slow=76,SNR=5.9						
H01W1	**Cape Leeuwin H**	**31.55**	**163**	T	T	08 54 54.6	
	baz=338,slow=76,SNR=5.1						
WRA	**Warramunga Arr**	**33.49**	**119**	P	**P**	**08 23 28.7**	**+1.7**
	0.3nm,0.5s,baz=293,slow=9.2,SNR=2.6						
ASAR	**Alice Springs**	**34.72**	**126**	P	**P**	**08 23 37.8**	**+0.1**
	0.1nm,0.3s,baz=300,slow=8.0,SNR=1.5						
SONM	**Songino Array**	**52.40**	**2**	P	**P**	**08 26 00.7**	**+1.1**
	0.4nm,0.4s,baz=176,slow=5.8,SNR=2.8						
MKAR	**Makanchi Array**	**54.67**	**342**	P	**P**	**08 26 15.7**	**-0.5**
	0.7nm,0.8s,baz=144,slow=6.9,SNR=4.2						
TXAR	**Lajitas Array**	**144.42**	**43**	PKP	**PKiKP**	**08 36 27.4**	**-0.3**
	0.8nm,1.0s,baz=268,slow=2.6,SNR=5.1						

*VAO **29** 08:56:48.1±1.7,33°.40S×69°.39W,h10^{km},mb4.4*
*NEIC **29** 08:57:11.7±2.8,32°.03S±0°.06×68°.4W±0°.1,h131$^{km}_{\pm}$6^{km}, mb4.1/4,Md3.8(SJA),Error ellipse: s-maj=14.2km s-min=8.7km az=86.0*
*IDC **29** 08:57:11.3±2.5,31°.96S×68°.21W,h96$^{km}_{\pm}$23^{km},mb3.7/3, mb1 3.7/8,mb1mx3.5/42,mbtmp4.0/8,MS3.2/1,Ms1 3.2/1, ms1mx2.4/26,Error ellipse: s-maj=43.7km s-min=23.3km az=102.0*

ISC 29 08:57:12.0±0.8,31°.91S±0°.05×68°.41W±0°.07,h116^{km}±9^{km}, n57,σ1^{s}62/66,mb3.9/5,San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.43**	**328**		**Pn**	**08 57 30.2**	**+1.0**
VA03	**San Esteban**	**2.00**	**244**		**Pn**	**08 57 46.4**	**+1.1**
VA03				Sn	**Sn**	**08 58 12.0**	**+1.2**
CO03	**El Pedregal**	**2.22**	**298**		**Pn**	**08 57 50.1**	**+1.9**
CO03				Sn	**Sn**	**08 58 18.3**	**+2.6**
PEL	**Peldehue**	**2.28**	**237**		**Pn**	**08 57 49.3**	**+0.5**
PEL				Sn	**Sn**	**08 58 16.9**	**-0.1**
CO02	**Combarbal**	**2.32**	**287**	Pn	**Pn**	**08 57 50.7**	**+1.3**
CO02				Sn	**Sn**	**08 58 19.2**	**+1.2**
CO01	**Juntas del Tor**	**2.41**	**323**		**Pn**	**08 57 53.7**	**+3.0**
CO01				Sn	**Sn**	**08 58 23.1**	**+2.7**
ROC1	**El Roble**	**2.44**	**244**		**Pn**	**08 57 51.2**	**+0.1**
ROC1				Sn	**Sn**	**08 58 20.1**	**-1.0**
MT05	**Renca**	**2.46**	**232**	Pn	**Pn**	**08 57 51.6**	**+0.5**
MT05				Sn	**Sn**	**08 58 22.2**	**+1.1**
MT02	**Curacav**	**2.66**	**239**		**Pn**	**08 57 53.4**	**-0.4**
MT02				Sn	**Sn**	**08 58 23.8**	**-2.1**
GO04	**Tololo Observa**	**2.68**	**310**		**Pn**	**08 57 55.5**	**+1.2**
GO04				Sn	**Sn**	**08 58 28.6**	**+1.9**
VA01	**Torpederas**	**2.95**	**247**		**Pn**	**08 57 57.5**	**0.0**
VA01				Sn	**Sn**	**08 58 30.6**	**-1.9**
AC05	**El Transito**	**3.46**	**332**	Pn	**Pn**	**08 58 06.8**	**+2.4**
BO02	**Sierra Bellavi**	**3.49**	**214**		**Pn**	**08 58 05.2**	**+0.5**
LCO	**Las Campanas**	**3.50**	**325**	Pn	**Pn**	**08 58 06.2**	**+1.1**
AC04	**Llanos de Chal**	**4.36**	**327**	Pn	**Pn**	**08 58 16.6**	**+0.4**
GO03	**Copiap**	**4.58**	**339**	Pn	**Pn**	**08 58 20.5**	**+1.2**
AC02	**Maricunga**	**5.10**	**353**		**Pn**	**08 58 29.1**	**+2.4**
BI02	**San Fabin de**	**5.30**	**206**	Pn	**Pn**	**08 58 27.5**	**-1.4**
AC01	**Pan de Azucar**	**6.05**	**341**	Pn	**Pn**	**08 58 39.5**	**+0.3**
GO02	**Mina Guanaco**	**6.80**	**351**		**Pn**	**08 58 50.0**	**+0.5**
LC01	**Cunco**	**7.52**	**201**	Pn	Pn	08 58 55.7	-3.2
PB15	**IPOC Station P**	**8.72**	**354**		**Pn**	**08 59 15.4**	**0.0**
PLCA	**Paso Flores**	**8.97**	**190**	P	**Pn**	**08 59 17.7**	**-0.9**
	0.2nm,0.3s,baz=14,slow=12,SNR=9.5						
PB06	**IPOC Station P**	**9.23**	**353**	Pn	**Pn**	**08 59 21.7**	**-0.5**
LVC	**Limon Verde**	**9.28**	**357**	P	**Pn**	**08 59 22.5**	**-0.6**
	2.0nm,0.3s,baz=171,slow=6.9,SNR=17						
LVC				S	**Sn**	**09 00 58.5**	**-7.3**
	1.2nm,0.3s,baz=253,slow=19,SNR=2.3						
PB09	**IPOC Station P**	**10.10**	**356**	Pn	**Pn**	**08 59 33.4**	**-0.7**
PB01	**IPOC Station P**	**10.87**	**355**	Pn	**Pn**	**08 59 43.0**	**-1.3**
CPUP	**Villa Florida**	**11.17**	**63**	P	**Pn**	**08 59 46.4**	**-1.9**
	0.3nm,0.3s,baz=239,slow=14,SNR=2.9						
CPUP	**Villa Florida**	**11.17**	**63**	Pn	**Pn**	**08 59 47.5**	**-0.7**
PB08	**IPOC Station P**	**11.74**	**357**	Pn	**Pn**	**08 59 54.6**	**-1.6**
MNMC	**Minye Minye**	**12.77**	**355**	Pn	**Pn**	**09 00 08.9**	**-0.8**
PB16	**IPOC Station P**	**13.55**	**356**	Pn	**Pn**	**09 00 19.9**	**-0.2**
LPAZ	**La Paz**	**15.56**	**1**	P	**P**	**09 00 47.4**	**-0.1**
	0.5nm,0.3s,baz=151,slow=7.9,SNR=16						
LPAZ	**La Paz**	**15.56**	**1**	P	**P**	**09 00 46.9**	**-0.5**
LPAZ	**La Paz**	**15.56**	**1**	*eP*	**P**	**09 00 48.2**	**+0.7**
PTGB	**Pitanga**	**16.07**	**68**	*eP*	**P**	**09 00 53.2**	**+0.6**
AQDB	**Aquidauana**	**16.10**	**48**	*eP*	**P**	**09 00 53.7**	**+0.8**
SIV	**San Ignacio**	**17.20**	**25**	P	**Pn**	**09 01 06.3**	**+1.0**
	1.4nm,0.3s,baz=214,slow=9.4,SNR=52						
PCMB	**Pacaembu**	**18.41**	**60**	*eP*	**Pn**	**09 01 19.7**	**-0.1**
ITRB	**Iturama**	**20.26**	**57**	*eP*	**P**	**09 01 39.7**	**+1.3**
EFI	**East Falkland**	**21.16**	**162**	P	**P**	**09 01 45.4**	**-2.3**
ETMB	**Extrema**	**22.08**	**6**	*eP*	**P**	**09 01 59.4**	**+1.6**
SAML	**Samuel**	**23.36**	**13**	P	**P**	**09 02 10.8**	**+0.6**
SAML				IAmb	IAmb	09 02 12.8	
	comp=Z,4.7nm,1.1s						
BDFB	**Brasilia**	**24.64**	**54**	P	**P**	**09 02 21.3**	**-0.8**
	comp=Z,2.6nm,0.6s,baz=209,slow=10,SNR=4.2						
SNDB	**Serra Nova Dou**	**25.34**	**42**	*eP*	**P**	**09 02 28.9**	**+0.6**
BSFB	**Barra de Sao F**	**28.01**	**69**	*eP*	**P**	**09 02 51.8**	**-0.4**
SDBA	**SAO DESIDERIO**	**29.05**	**53**	*eP*	**P**	**09 03 02.2**	**+0.7**
OTAV	**Otavalo**	**33.36**	**342**	P	**P**	**09 03 38.9**	**-0.8**
OTAV				IAmb	IAmb	09 03 46.1	
	comp=Z,6.4nm,0.9s						
OTAV	**Otavalo**	**33.36**	**342**	*eP*	**P**	**09 03 36.6**	**-3.2**
JTS	**Las Juntas de**	**44.85**	**337**	LR	LR	09 24 06.3	
	comp=Z,33nm,21.0s,baz=8.5,slow=36						
VNA3	**Neumayer Olymp**	**50.17**	**159**	P	**P**	**09 05 56.2**	**+0.9**
VNA2	**Neumayer--Watz**	**50.78**	**158**	P	**P**	**09 06 00.8**	**+0.9**
	baz=287,slow=8.3						
SNAA	**Sanae**	**52.39**	**159**	P	**P**	**09 06 12.5**	**+0.6**
TORD	**Torodi Ar. Bea**	**80.62**	**68**	P	**P**	**09 09 13.1**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=268,slow=5.0,SNR=3.5						
MATP	**Matopo**	**85.04**	**111**	P	**P**	**09 09 36.5**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=287,slow=2.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**150.83**	**33**	PKPbc	**PKiKP**	**09 16 51.5**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=294,slow=2.7,SNR=6.3						
MKAR	**Makanchi Array**	**153.10**	**48**	PKPab	**PKPab**	**09 17 08.3**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=270,slow=4.6,SNR=2.4						

*MEX **29** 09:04:49.0±0.7,27°.62N×111°.71W,h16$^{km}_{\pm}$16^{km},MD4.4*
*IDC **29** 09:04:53.1±1.9,28°.12N×111°.23W,h0^{km},mb3.6/1, mb1 3.6/8,mb1mx3.5/40,mbtmp3.3/8,ML3.3/6,MS3.2/9, Ms1 3.2/9,ms1mx3.0/31,Error ellipse: s-maj=27.9km s-min=12.9km az=25.0*

ISC 29 09:04:48.5±1.2,27°.51N±0°.08×111°.45W±0°.10,h10^{km},n18, σ1^{s}73/11,MS3.1/3,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUYB	**Guaymas**	**0.64**	**52**	*iP*	**Pb**	**09 05 01.4**	**-0.4**
GUYB				*eS*	**Sb**	**09 05 11.1**	**+0.2**
LPIG	**La Paz**	**3.54**	**163**	Pn	**Pg**	**09 05 56.1**	**-0.2**
	2.0nm,0.3s,baz=297,slow=3.1,SNR=4.4						
TUC	**Tucson**	**4.82**	**7**	*iP*	**Pn**	**09 05 58.4**	**-2.8**
TXAR	**Lajitas Array**	**7.09**	**73**	Pn	**Pn**	**09 06 34.2**	**+1.7**
	0.6nm,0.3s,baz=259,slow=12,SNR=38						
TXAR				Lg	Lg	09 08 28.0	
	0.4nm,0.3s,baz=271,slow=19,SNR=2.5						
TXAR				LR	LR	09 09 31.8	
	comp=Z,294nm,19.7s,baz=0.0,slow=41						
PFO	**Pinyon Flats O**	**7.46**	**326**	Pn	**Pn**	**09 06 40.4**	**+2.8**
	0.1nm,0.3s,baz=164,slow=12,SNR=4.3						
PFO				Lg	Lg	09 08 45.5	
	0.1nm,0.3s,baz=137,slow=0.9,SNR=8.3						
PFO				LR	LR	09 09 20.5	
	comp=Z,179nm,19.0s,baz=144,slow=38						
ANMO	**Albuquerque**	**8.56**	**29**	Pn	**Pn**	**09 06 51.2**	**-1.4**
	0.1nm,0.3s,baz=152,slow=18,SNR=1.6						
ANMO				Lg	Lg	09 09 13.2	
	1.3nm,0.3s,baz=18,slow=12,SNR=15						
NVAR	**Mina Array Bea**	**12.31**	**334**	Pn	**Pn**	**09 07 44.3**	**+0.2**
	0.3nm,0.3s,baz=150,slow=7.3,SNR=1.9						
ELK	**Elko**	**13.57**	**348**	Pn	**Pn**	**09 08 02.0**	**+0.7**
	0.1nm,0.3s,baz=164,slow=7.7,SNR=1.9						
ELK				Lg	Lg	09 11 51.2	
	0.1nm,0.3s,baz=223,slow=6.8,SNR=1.2						
ELK				LR	LR	09 12 07.5	
	comp=Z,74nm,22.0s,baz=150,slow=33						
PDAR	**Pinedale Array**	**15.30**	**5**	Pn	**Pn**	**09 08 25.5**	**+0.7**
	baz=175,slow=11,SNR=1.9						
PDAR				Lg	Lg	09 12 42.4	
	0.0nm,0.3s,baz=158,slow=25,SNR=2.0						
PDAR				LR	LR	09 14 32.5	
	comp=Z,151nm,19.2s,baz=207,slow=40						
YBH	**Yreka Blue Hor**	**16.93**	**330**	LR	LR	09 15 05.3	
	comp=Z,70nm,18.0s,baz=178,slow=37						
CMIG	**Matias Romero**	**18.48**	**121**	LR	LR	09 15 37.8	
	comp=Z,73nm,18.1s,baz=278,slow=35						
NEW	**Newport**	**21.19**	**349**	P	**P**	**09 09 32.9**	**-1.3**
	2.9nm,0.9s,baz=154,slow=11,SNR=3.8						
TKL	**Tuckaleechee C**	**24.88**	**64**	LR	LR	09 21 07.9	
	comp=Z,48nm,21.4s,baz=258,slow=40						
BBB	**Bella Bella**	**27.64**	**338**	LR	LR	09 22 03.8	
	comp=Z,83nm,18.1s,baz=238,slow=38						
YKA	**Yellowknife Ar**	**35.05**	**357**	LR	LR	09 26 04.2	
	comp=Z,37nm,19.5s,baz=0.0,slow=37						
H03N2	**Juan Fernandez**	**68.02**	**151**	T	T	10 30 25.9	
	baz=331,slow=78,SNR=6.0						
H03N1	**Juan Fernandez**	**68.03**	**151**	T	T	10 30 20.3	
	baz=331,slow=78,SNR=8.6						
H03N3	**Juan Fernandez**	**68.03**	**151**	T	T	10 30 21.5	
	baz=331,slow=78,SNR=11						

*IDC **29** 09:04:52.3±1.2,5°.07N×61°.31E,h0^{km},mb3.7/7,mb1 3.9/7, mb1mx3.6/40,mbtmp3.7/7,MS3.3/14,Ms1 3.3/14, ms1mx3.2/31,Error ellipse: s-maj=41.7km s-min=25.2km az=36.0*

ISC 29 09:04:53.9±1.3,5.1N±0°.3×61.3E±0°.2,h10^{km},n18,σ1^{s}00/7, mb3.7/7,MS3.4/12,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**18.24**	**352**	LR	LR	09 14 24.4	
	comp=Z,69nm,19.3s,baz=180,slow=31						
PALK	**Pallekele**	**19.42**	**83**	LR	LR	09 15 18.7	
	comp=Z,59nm,19.0s,baz=18,slow=32						
CMAR	**Chiang Mai Arr**	**39.08**	**67**	LR	LR	09 27 11.1	
	comp=Z,23nm,18.1s,baz=283,slow=34						
KBZ	**Khabaz**	**41.78**	**340**	LR	LR	09 31 35.8	
	comp=Z,35nm,18.0s,baz=168,slow=38						
BRTR	**Keskin Array B**	**42.58**	**328**	P	**P**	**09 12 50.2**	**-0.1**
	1.1nm,0.8s,baz=148,slow=8.5,SNR=2.6						
BRTR				LR	LR	09 30 34.0	
	comp=Z,13nm,19.5s,baz=113,slow=36						
MKAR	**Makanchi Array**	**45.35**	**20**	P	**P**	**09 13 12.4**	**+0.1**
	0.6nm,0.8s,baz=190,slow=7.2,SNR=2.3						
MKAR				LR	LR	09 32 08.1	
	comp=Z,50nm,20.6s,baz=228,slow=36						
BOSA	**Boshof**	**48.21**	**224**	LR	LR	09 32 50.4	
	comp=Z,50nm,18.7s,baz=360,slow=35						
ZALV	**Zalesovo Beam**	**52.36**	**17**	P	**P**	**09 14 05.2**	**-0.8**
	0.4nm,0.4s,baz=205,slow=6.4,SNR=4.1						
ZALV				LR	LR	09 36 20.5	
	comp=Z,31nm,19.8s,baz=248,slow=36						
AKASG	**Malin Array Be**	**52.80**	**335**	LR	LR	09 38 25.1	
	comp=Z,21nm,18.7s,baz=265,slow=38						
TORD	**Torodi Ar. Bea**	**59.28**	**282**	P	**P**	**09 14 55.3**	**-1.0**
	0.4nm,0.7s,baz=104,slow=5.7,SNR=2.8						
GERES	**GERESS Array B**	**59.35**	**325**	LR	LR	09 43 51.5	
	comp=Z,48nm,18.6s,baz=268,slow=39						
NRIK	**Noril'sk**	**66.47**	**10**	LR	LR	09 46 21.2	
	comp=Z,48nm,21.6s,baz=196,slow=37						
ESDC	**Sonseca Array**	**67.81**	**311**	P	**P**	**09 15 53.9**	**+1.5**
	0.8nm,0.8s,baz=88,slow=9.1,SNR=3.1						
KSRS	**Korea Array**	**68.43**	**52**	LR	LR	09 46 55.2	
	comp=Z,20nm,19.2s,baz=231,slow=37						
MAW	**Mawson**	**72.52**	**179**	LR	LR	09 41 23.5	
	comp=Z,29nm,20.6s,baz=62,slow=30						
WRA	**Warramunga Arr**	**75.91**	**112**	P	**P**	**09 16 41.2**	**-0.1**
	1.7nm,1.1s,baz=296,slow=5.8,SNR=4.5						
ASAR	**Alice Springs**	**76.23**	**116**	P	**P**	**09 16 43.5**	**+0.3**
	0.9nm,0.9s,baz=291,slow=5.7,SNR=7.2						
SFJD	**Kangerlussuaq**	**93.75**	**339**	LR	LR	10 06 11.0	
	comp=Z,11nm,20.1s,baz=116,slow=39						

*IDC **29** 09:07:15.4±11.0,0°.36N×97°.15E,h0^{km},mb3.6/3, mb1 3.5/4,mb1mx3.3/36,mbtmp3.5/4,ML2.9/1,MS2.7/2, Ms1 2.7/2,ms1mx2.4/30,Error ellipse: s-maj=237.3km s-min=44.5km az=151.0*
*DJA **29** 09:07:22.9±0.6,1°.N±4°.×97°.E±°,h10^{km},M3.4/8,MLv3.4/8*

ISC 29 09:07:23.4±1.3,1.05N±0°.08×96°.97E±0°.08,h25^{km},n17, σ1^{s}94/15,mb3.6/3,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.66**	**67**	P	**Pb**	**09 07 35.9**	**-0.4**
GSI				S	**Sb**	**09 07 44.7**	**-0.3**
SNSI	**Sinabang, Aceh**	**1.50**	**335**	P	**Pn**	**09 07 47.6**	**-1.0**
PBSI	**Pulau Batu**	**1.71**	**130**	P	**Pb**	**09 07 54.3**	**+0.2**
TPTI		**2.21**	**6**	P	**Pn**	**09 07 57.4**	**-1.0**
TPTI				S	**Sn**	**09 08 24.8**	**-0.1**
KCSI	**Kotacane, Aceh**	**2.58**	**18**	P	**Pn**	**09 08 03.1**	**-0.6**
KCSI				S	**Sn**	**09 08 34.3**	**0.0**
PSI	**Prapat**	**2.62**	**48**	Pn	**Pn**	**09 08 03.6**	**-0.6**
	1.5nm,0.3s,baz=180,slow=12,SNR=5.0						
PSI				Sn	**Sn**	**09 08 40.0**	**+4.7**
	0.9nm,0.3s,baz=180,slow=20,SNR=1.7						
PSI				LR	LR	09 08 51.6	
	comp=Z,36nm,18.6s,baz=268,slow=33						
MNSI	**Mandailing Nat**	**2.62**	**95**	P	**Pb**	**09 08 05.7**	**-4.0**
MLSI	**Meulaboh, Aceh**	**3.25**	**350**	P	**Pn**	**09 08 11.8**	**-0.9**
H08S2	**Diego Garcia H**	**25.89**	**250**	T	T	09 39 57.1	
	baz=71,slow=75,SNR=467						
H08S3	**Diego Garcia H**	**25.90**	**250**	T	T	09 39 51.5	
	baz=71,slow=75,SNR=556						
H08S1	**Diego Garcia H**	**25.91**	**250**	T	T	09 39 52.7	
	baz=71,slow=75,SNR=469						
H01W3	**Cape Leeuwin H**	**39.19**	**157**	T	T	09 56 27.2	
	baz=333,slow=76,SNR=5.0						
H01W2	**Cape Leeuwin H**	**39.21**	**157**	T	T	09 56 21.8	
	baz=333,slow=76,SNR=6.2						
H01W1	**Cape Leeuwin H**	**39.21**	**157**	T	T	09 56 28.3	
	baz=333,slow=76,SNR=4.9						
SONM	**Songino Array**	**47.31**	**9**	P	**P**	**09 15 55.4**	**+0.3**
	0.2nm,0.4s,baz=180,slow=9.8,SNR=2.1						
SONM				LR	LR	09 40 22.4	
	comp=Z,26nm,18.2s,baz=202,slow=41						
MKAR	**Makanchi Array**	**47.33**	**346**	P	**P**	**09 15 56.2**	**+1.1**
	0.5nm

MRKS				*e*S		**Sb**	**10 30 33.3**	**-0.7**
	17nm,0.4s							
MRKS	**Merke**	**2.30**	**32**	Pg		**Pn**	**10 30 03.3**	**+1.5**
	5.7nm,0.3s							
MRKS				Lg		Lg	10 30 33.3	
	17nm,0.4s							
ARLS	**Aral**	**2.33**	**62**	⇑*i*P		**Pb**	**10 30 04.3**	**-1.6**
	baz=62							
ARLS				⇑*i*S		**Sn**	**10 30 32.5**	**+1.4**
	baz=62							
KK31	**Karatay Array**	**2.42**	**342**	⇑Pg		**Pn**	**10 30 04.3**	**+1.0**
	2.7nm,0.4s,baz=155,slow=12,SNR=26							
KK31				⇑Lg		Lg	10 30 37.5	
	3.8nm,0.3s,baz=156,slow=30,SNR=10							
EKS2	**Erkin-Say**	**2.49**	**41**	⇓*i*P		**Pn**	**10 30 06.2**	**+1.8**
	baz=42							
EKS2				⇓*i*S		**Sn**	**10 30 35.7**	**+0.8**
	baz=42							
UCH	**Uchtor**	**2.64**	**56**	⇑*i*P		**Pn**	**10 30 08.6**	**+1.9**
	baz=57							
UCH				⇑*i*S		**Sn**	**10 30 39.9**	**+0.9**
	baz=57							
AAK	**Ala-Archa**	**2.86**	**49**	⇓*i*P		**Pn**	**10 30 11.7**	**+2.2**
	baz=50							
AAK				⇓*i*S		**Sn**	**10 30 45.1**	**+1.0**
	baz=50							
AAK	**Ala-Archa**	**2.86**	**49**	⇑Pg		**Pb**	**10 30 16.3**	**+1.4**
	1.6nm,0.5s							
AAK				⇓Lg		Lg	10 30 52.2	
	17nm,1.2s							
KBK	**Karagaybulak**	**3.14**	**53**	⇓*i*P		**Pn**	**10 30 15.6**	**+2.2**
	baz=53							
KBK				⇓*i*S		**Sn**	**10 30 51.8**	**+0.8**
	baz=53							
SGDS	**Sogindy**	**3.49**	**40**	Pg		**Pb**	**10 30 25.1**	**-0.5**
	2.1nm,0.4s							
SGDS				Lg		Lg	10 31 11.8	
	3.0nm,0.3s							
TKM2	**Tokmak 2**	**3.68**	**54**	⇑Pg		**Pb**	**10 30 26.1**	**-2.8**
	1.0nm,0.8s							
TKM2				⇑Lg		Lg	10 31 18.0	
	3.6nm,0.7s							
DGS	**Degeres**	**3.97**	**51**	*e*P		**Pg**	**10 30 37.1**	**-2.6**
	1.9nm,0.6s							
DGS				*e*S		**Sg**	**10 31 29.9**	**-1.2**
	2.9nm,0.4s							

IDC ***29*** *10:33:55.2±1.2,37°.41S×179°.61E,h0km,mb4.0/4, mb1 4.2/5,mb1mx3.9/27,mbtmp4.0/5,ML3.6/1,MS3.1/2, Ms1 3.1/2,ms1mx2.7/23,Error ellipse: s-maj=40.4km s-min=28.8km az=22.0*

WEL ***29*** *10:33:57.4±0.8,38°.S±.5×18°.0E±°.,h33km,M4.0/19, ML4.4/19,MLv4.0/19,Error ellipse: s-maj=0.0km s-min=0.0km az=18.0*

ISC 29 10:33:55.8±3.7,37.81S±0.06×179.76E±0.07,h4km±22km, n106,σ1♀01/121,mb3.9/4,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.06**	**269**	P	**Pb**	**10 34 16.9**	**+0.2**
WMGZ				S	**Sb**	**10 34 31.7**	**+0.7**
MXZ	**Matakaoa Point**	**1.18**	**282**	P	**Pn**	**10 34 18.1**	**-0.9**
MXZ				S	**Sb**	**10 34 34.4**	**+0.1**
PUZ	**Puketiti**	**1.21**	**257**	P	**Pn**	**10 34 19.1**	**-0.5**
PUZ				S	**Sb**	**10 34 35.8**	**+0.4**
PKGZ	**Pakihiroa**	**1.33**	**266**	P	**Pn**	**10 34 20.6**	**-0.7**
CNGZ	**Carnagh Statio**	**1.39**	**241**	P	**Pn**	**10 34 22.8**	**+0.7**
TWGZ	**Tauwhareparae**	**1.45**	**255**	P	**Pn**	**10 34 23.0**	**+0.1**
TWGZ				S	**Sn**	**10 34 42.3**	**-0.1**
HAZ	**Te Kaha**	**1.56**	**271**	P	**Pn**	**10 34 23.9**	**-0.5**
HAZ				S	**Sn**	**10 34 45.1**	**0.0**
TKGZ	**Te Karaka**	**1.63**	**247**	P	**Pn**	**10 34 25.3**	**0.0**
TKGZ				S	**Sn**	**10 34 47.2**	**+0.4**
RUGZ	**Raukumara Rang**	**1.65**	**264**	P	**Pn**	**10 34 25.3**	**-0.4**
RUGZ				S	**Sn**	**10 34 46.5**	**-1.0**
RIGZ	**Rimuhau**	**1.81**	**240**	P	**Pn**	**10 34 28.0**	**+0.3**
RIGZ				S	**Sn**	**10 34 51.2**	**+0.1**
MWZ	**Matawai**	**1.83**	**253**	P	**Pn**	**10 34 27.7**	**-0.5**
MWZ				S	**Sn**	**10 34 50.7**	**-1.2**
PRGZ	**Paritu Road**	**1.84**	**232**	P	**Pn**	**10 34 28.5**	**+0.3**
RAGZ	**Rawiri**	**1.97**	**249**	P	**Pn**	**10 34 30.3**	**+0.3**
RAGZ				S	**Sn**	**10 34 55.1**	**-0.1**
MHGZ	**Mahia Peninsul**	**1.98**	**227**	P	**Pn**	**10 34 30.3**	**+0.3**
MHGZ				S	**Sn**	**10 34 56.3**	**+1.0**
KNZ	**Kokohu**	**2.03**	**233**	P	**Pn**	**10 34 30.6**	**-0.2**
KNZ				S	**Sb**	**10 34 58.4**	**-0.5**
SNGZ	**Shannon Statio**	**2.13**	**242**	P	**Pn**	**10 34 32.5**	**+0.3**
SNGZ				S	**Sn**	**10 34 59.0**	**-0.2**
URZ	**Urewera**	**2.14**	**257**	Pn	**Pn**	**10 34 32.7**	**+0.4**
	20nm,0.3s,baz=252,slow=1.2,SNR=111							
URZ				Sn	**Sn**	**10 34 58.0**	**-1.2**
	96nm,0.3s,baz=291,slow=22,SNR=7.4							
WHRZ	**Whale Island**	**2.20**	**268**	P	**Pn**	**10 34 34.0**	**+0.8**
RTZ	**Ruatahuna**	**2.33**	**249**	P	**Pn**	**10 34 35.5**	**+0.5**
RTZ				S	**Sn**	**10 35 04.5**	**+0.3**
WHHZ	**Waihua**	**2.35**	**237**	P	**Pn**	**10 34 35.7**	**+0.5**
WHHZ				S	**Sn**	**10 35 04.4**	**-0.1**
RAHZ	**Arahi**	**2.37**	**241**	P	**Pn**	**10 34 35.8**	**+0.3**
RAHZ				S	**Sn**	**10 35 05.0**	**-0.1**
EDRZ	**Edgecumbe**	**2.40**	**262**	P	**Pn**	**10 34 36.1**	**+0.1**
MARZ	**Manawahe**	**2.44**	**265**	P	**Pn**	**10 34 37.6**	**+1.1**
MARZ				S	**Sn**	**10 35 05.6**	**-1.2**
MUGZ	**Murupara**	**2.45**	**253**	P	**Pn**	**10 34 36.6**	**+0.1**
MUGZ				S	**Sn**	**10 35 06.5**	**-0.4**
MTHZ	**Maungataniwha**	**2.52**	**245**	P	**Pn**	**10 34 37.7**	**+0.2**
MTHZ				S	**Sn**	**10 35 08.5**	**-0.2**
TARZ	**Mount Tarawera**	**2.60**	**260**	P	**Pn**	**10 34 39.5**	**+0.8**
TARZ				S	**Sn**	**10 35 09.9**	**-1.0**
ARHZ	**Aropaoanui**	**2.60**	**235**	P	**Pn**	**10 34 39.0**	**+0.3**
RRRZ	**Republican Roa**	**2.61**	**257**	P	**Pn**	**10 34 40.1**	**+1.3**
NMHZ	**Naumai**	**2.65**	**240**	P	**Pn**	**10 34 39.8**	**+0.4**
OMRZ	**Omania**	**2.69**	**263**	P	**Pn**	**10 34 39.6**	**-0.3**
HLRZ	**Highlands Stat**	**2.72**	**260**	P	**Pn**	**10 34 40.8**	**+0.4**
PRRZ	**Plateau Road**	**2.74**	**254**	P	**Pn**	**10 34 40.4**	**-0.2**
TGRZ	**Tauranga**	**2.77**	**271**	P	**Pn**	**10 34 40.4**	**-0.5**
KARZ	**Kaharoa**	**2.79**	**265**	P	**Pn**	**10 34 40.9**	**-0.3**
CKHZ	**Cape Kidnapper**	**2.79**	**228**	P	**Pn**	**10 34 40.9**	**-0.3**
HRRZ	**Handcock Road**	**2.80**	**257**	P	**Pn**	**10 34 41.4**	**0.0**
HSRZ	**Hossack Road**	**2.82**	**259**	P	**Pn**	**10 34 42.6**	**+1.0**
MRHZ	**Matea Rd**	**2.82**	**248**	P	**Pn**	**10 34 41.7**	**+0.1**
UTU	**Utuhina**	**2.84**	**262**	P	**Pn**	**10 34 44.2**	**+2.2**
BKZ	**Black Stump Fm**	**2.90**	**241**	P	**Pn**	**10 34 42.7**	**-0.1**
MCHZ	**McNeill Hill**	**2.90**	**235**	P	**Pn**	**10 34 42.7**	**-0.1**
KAHZ	**Kahuranaki**	**3.00**	**228**	P	**Pn**	**10 34 43.7**	**-0.4**
KWHZ	**Kaweka Forest**	**3.07**	**237**	P	**Pn**	**10 34 44.6**	**-0.5**
PXZ	**Pawanui**	**3.16**	**225**	P	**Pn**	**10 34 45.3**	**-1.1**
KUTZ	**Kaahu Road**	**3.17**	**256**	P	**Pn**	**10 34 46.3**	**-0.2**
KRHZ	**Kereru**	**3.22**	**234**	P	**Pn**	**10 34 46.4**	**-0.7**
RATZ	**Rangitukua**	**3.31**	**250**	P	**Pn**	**10 34 48.8**	**+0.4**
BHHZ	**Black Hill Sta**	**3.34**	**239**	P	**Pn**	**10 34 48.6**	**-0.3**
TLZ	**Tolley Road**	**3.37**	**260**	P	**Pn**	**10 34 48.7**	**-0.5**
TOZ	**Tahuroa Road**	**3.37**	**270**	P	**Pn**	**10 34 48.7**	**-0.6**
KUZ	**Kuaotunu**	**3.39**	**287**	P	**Pn**	**10 34 48.3**	**-1.2**
WPHZ	**Waipukurau**	**3.43**	**228**	P	**Pn**	**10 34 49.1**	**-0.9**
TMVZ	**Te Maari**	**3.44**	**247**	P	**Pn**	**10 34 50.1**	**-0.1**
ETVZ	**East Tongariro**	**3.44**	**246**	P	**Pn**	**10 34 50.3**	**0.0**
KRVZ	**Karewarewa**	**3.48**	**247**	P	**Pn**	**10 34 52.5**	**+1.7**
PNHZ	**Pukenui**	**3.48**	**232**	P	**Pn**	**10 34 49.7**	**-1.1**
MOVZ	**Moawhango**	**3.52**	**242**	P	**Pn**	**10 34 52.0**	**+0.7**
WTVZ	**West Tongariro**	**3.52**	**247**	P	**Pn**	**10 34 54.2**	**+2.8**
TUVZ	**Tukino**	**3.53**	**244**	P	**Pn**	**10 34 52.0**	**+0.5**
NGZ	**Ngauruhoe**	**3.53**	**246**	P	**Pn**	**10 34 51.2**	**-0.4**
WHVZ	**Whangaehu Hut**	**3.58**	**245**	P	**Pn**	**10 34 54.7**	**+2.3**
WNVZ	**Wahianoa**	**3.59**	**244**	P	**Pn**	**10 34 52.9**	**+0.5**
FWVZ	**Far West T-bar**	**3.60**	**245**	P	**Pn**	**10 34 53.8**	**+1.2**
ANWZ	**Angora Road**	**3.67**	**223**	P	**Pn**	**10 34 52.7**	**-0.7**
TSZ	**Takapari Road**	**3.71**	**232**	P	**Pn**	**10 34 52.6**	**-1.4**
MKAZ	**Moumakai**	**3.72**	**280**	P	**Pn**	**10 34 53.6**	**-0.5**
DVHZ	**Dannevirke**	**3.74**	**227**	P	**Pn**	**10 34 53.5**	**-0.8**
GRZ	**Great Barrier**	**3.78**	**293**	P	**Pn**	**10 34 54.1**	**-0.7**
WIAZ	**Waiheke Island**	**3.82**	**284**	P	**Pn**	**10 34 55.2**	**-0.2**
HIZ	**Hauiti**	**3.93**	**258**	P	**Pn**	**10 34 57.3**	**+0.4**
ETAZ	**East Tamaki Re**	**3.94**	**281**	P	**Pn**	**10 34 57.2**	**+0.1**
MBAZ	**Motutapu North**	**4.01**	**284**	P	**Pn**	**10 34 58.1**	**+0.1**
PRWZ	**Pori Road**	**4.02**	**226**	P	**Pn**	**10 34 57.3**	**-0.9**
POWZ	**Post Office Ro**	**4.03**	**229**	P	**Pn**	**10 34 57.5**	**-0.8**
EPAZ	**Eden Park BICE**	**4.10**	**282**	P	**Pn**	**10 34 59.9**	**+0.6**
ABAZ	**Army Bay**	**4.11**	**286**	P	**Pn**	**10 34 59.7**	**+0.3**
HBAZ	**Herne Bay Bore**	**4.12**	**282**	P	**Pn**	**10 35 00.2**	**+0.7**
AWAZ	**Awhitu Peninsu**	**4.14**	**279**	P	**Pn**	**10 35 00.5**	**+0.7**
WTAZ	**Waiatarua**	**4.22**	**280**	P	**Pn**	**10 35 02.3**	**+1.3**
RVAZ	**Riverhead Bore**	**4.26**	**283**	P	**Pn**	**10 35 01.6**	**+0.2**
MRZ	**Mangatainoka R**	**4.32**	**227**	P	**Pn**	**10 35 00.7**	**-1.5**
HOWZ	**Holdsworth Sta**	**4.51**	**226**	P	**Pn**	**10 35 02.9**	**-1.9**
OGWZ	**Otaki Gorge**	**4.65**	**228**	P	**Pn**	**10 35 05.0**	**-1.9**
WCZ	**Waipu Caves**	**4.72**	**292**	P	**Pn**	**10 35 07.8**	**-0.1**
PKE	**Pukeiti**	**4.73**	**251**	P	**Pn**	**10 35 11.3**	**+3.3**
KHEZ	**Kahui Hut**	**4.74**	**250**	P	**Pn**	**10 35 10.9**	**+2.8**
OUZ	**Omahuta**	**5.59**	**296**	P	**Pn**	**10 35 19.9**	**+0.2**
QRZ	**Quartz Range**	**6.36**	**240**	P	**Pn**	**10 35 28.9**	**-1.4**
CTZ	**Chatham Island**	**6.53**	**156**	P	**Pn**	**10 35 33.4**	**+0.9**
CTZ				S	Sn	10 36 40.1	-7.2
LTZ	**Lake Taylor**	**7.57**	**227**	P	**Pn**	**10 35 45.1**	**-1.9**
WVZ	**Waitaha Valley**	**8.65**	**230**	P	**Pn**	**10 36 00.2**	**-1.6**
DZM	**Mont Dzumac**	**19.44**	**320**	LR	LR	10 44 45.8	
	comp=Z,57nm,19.8s,baz=210,slow=34						
ASAR	**Alice Springs**	**41.45**	**276**	P	**P**	**10 41 42.3**	**-1.6**
	1.4nm,0.7s,baz=119,slow=8.3,SNR=26						
ASAR				LR	LR	11 00 42.8	
	comp=Z,27nm,19.8s,baz=156,slow=39						
WRA	**Warramunga Arr**	**43.11**	**281**	P	**P**	**10 41 55.5**	**-1.9**
	1.8nm,0.6s,baz=121,slow=7.7,SNR=19						
QSPA	**South Pole Qui**	**52.31**	**180**	P	**P**	**10 43 11.5**	**+3.1**
	0.8nm,0.6s,baz=51,slow=5.3,SNR=2.4						
H03S2	**Juan Fernandez**	**77.94**	**123**	T	T	12 11 46.0	
	baz=230,slow=74,SNR=19						
H03S1	**Juan Fernandez**	**77.94**	**123**	T	T	12 11 47.4	
	baz=230,slow=74,SNR=18						
H03S3	**Juan Fernandez**	**77.95**	**123**	T	T	12 11 47.0	
	baz=230,slow=74,SNR=17						
H03N3	**Juan Fernandez**	**78.17**	**123**	T	T	12 11 59.0	
	baz=234,slow=72,SNR=9.3						
H03N2	**Juan Fernandez**	**78.17**	**123**	T	T	12 11 57.3	
	baz=234,slow=72,SNR=29						
H03N1	**Juan Fernandez**	**78.19**	**123**	T	T	12 11 54.1	
	baz=234,slow=72,SNR=73						
CMAR	**Chiang Mai Arr**	**94.14**	**290**	P	**P**	**10 47 15.7**	**-0.3**
	0.4nm,0.4s,baz=141,slow=4.5,SNR=1.4						
ARCES	**ARCESS Array B**	**145.32**	**344**	PKP	**PKPbc**	**10 53 31.7**	**-1.9**
	1.5nm,0.5s,baz=45,slow=3.7,SNR=12						
DBIC	**Dimbokro**	**148.72**	**171**	PKPbc	**PKPbc**	**10 53 45.1**	**+0.2**
	1.3nm,0.5s,baz=196,slow=2.3,SNR=3.6						
FINES	**FINESS Array B**	**151.22**	**334**	PKPbc	**PKPbc**	**10 53 48.4**	**-1.2**
	2.7nm,1.0s,baz=36,slow=5.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**155.38**	**185**	PKP	**PKPdf**	**10 53 53.0**	**+2.0**
	0.4nm,0.9s,baz=267,slow=2.4,SNR=2.0						
TORD				PKPab	**PKPab**	**10 54 16.7**	**+0.5**
	0.4nm,0.7s,baz=190,slow=4.3,SNR=3.5						

JMA 29 10:45:17.6,36.77N×137.89E,h5km±1km,M1.2,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.34**	**132**	P	Pg	10 45 23.9	-0.3
MAT				S	Sg	10 45 28.6	-0.1
MAT	**Matsushiro**	**0.34**	**132**	P	Pb	10 45 26.1	-0.1
MAT	**Matsushiro**	**0.34**	**132**	P	Pg	10 45 23.9	-0.3
MAT				S	Sg	10 45 28.6	-0.1
JNG	**Nsakai**	**0.40**	**155**	P	Pg	10 45 25.1	-0.2
JNG				S	Sg	10 45 30.6	0.0

JMA 29 10:45:19.9,36.78N×137.90E,h6km±1km,M1.5,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	**Matsushiro**	**0.34**	**134**	S	Sg	10 45 31.0	-0.1
MAT	**Matsushiro**	**0.34**	**134**	S	Sg	10 45 31.0	-0.1
JNG	**Nsakai**	**0.41**	**157**	S	Sg	10 45 32.8	-0.3

CNRM ***29*** *10:56:14.3±0.8,36°.80N×6°.93W,h75km±16km,Error ellipse: s-maj=5.4km s-min=4.9km az=50.0*
IGIL ***29*** *10:56:16.9,36°.72N×6°.90W,h32km,ML2.6*
INMG ***29*** *10:56:17.7±1.3,36°.76N×6°.93W,h31km,ML2.4,Error ellipse: s-maj=3.3km s-min=1.9km az=25.0*
SFS ***29*** *10:56:17.0,36°.80N×6°.90W,ML2.6,GOLFO DE CADIZ*
MDD ***29*** *10:56:17.3±0.9,36°.80N×6°.91W,h29km±12km,mbLg2.5/17, Error ellipse: s-maj=6.8km s-min=3.0km az=18.0,PRXIMO*

ISC 29 10:56:15.4±1.2,36.78N±0.03×6.90W±0.02,h66km±11km, n72,σ1♀18/134,1C-8D,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPR	**Espera**	**0.85**	**84**	⇑P	**Pn**	**10 56 32.2**	**+0.5**
	40nm,0.1s,SNR=18						
ESPR				S	**Sn**	**10 56 43.5**	**-0.4**
	240nm,0.2s,SNR=19						
EGRO	**El Granado**	**0.88**	**329**	⇓P	**Pn**	**10 56 32.9**	**+0.6**
	43nm,0.0s,SNR=18						
EGRO				S	**Sn**	**10 56 44.2**	**-0.5**
	64nm,0.1s,SNR=22						
PVAQ	**Vaqueiros**	**0.90**	**314**	P	**Pn**	**10 56 32.9**	**+0.5**
PVAQ				S	**Sn**	**10 56 44.5**	**-0.6**
	156nm,0.1s						
PVAQ	**Vaqueiros**	**0.90**	**314**	P	**Pn**	**10 56 32.7**	**+0.2**
PVAQ				S	**Sn**	**10 56 44.5**	**-0.6**
PVAQ	**Vaqueiros**	**0.90**	**314**	⇓*i*P	**Pn**	**10 56 32.9**	**+0.5**
PVAQ				*e*S	**Sn**	**10 56 44.5**	**-0.6**
PVAQ				A	A	10 56 45.0	
	156nm,0.1s						
PBDV	**Barranco-do-Ve**	**0.94**	**300**	P	**Pn**	**10 56 33.5**	**+0.5**
PBDV				S	**Sn**	**10 56 45.4**	**-0.7**
	54nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.94**	**300**	*e*P	**Pn**	**10 56 33.5**	**+0.5**
PBDV				*e*S	**Sn**	**10 56 45.4**	**-0.7**
PBDV				A	A	10 56 45.7	
	54nm,0.3s						
EMIN	**Mina Concepcio**	**1.00**	**11**	⇓P	**Pn**	**10 56 34.3**	**+0.6**
	2.5nm,0.1s,SNR=18						
EMIN				S	**Sn**	**10 56 46.7**	**-0.7**
	42nm,0.1s,SNR=45						
EJIF	**Jimena Fronter**	**1.20**	**105**	P	**Pn**	**10 56 37.8**	**+1.5**
	SNR=4.0						
EJIF				S	**Sn**	**10 56 48.9**	**-3.0**
	SNR=4.0						
PCVE	**Castro Verde**	**1.24**	**314**	P	**Pn**	**10 56 37.5**	**+0.7**
PCVE				S	**Sn**	**10 56 52.4**	**-0.5**
	39nm,0.2s						
PCVE	**Castro Verde**	**1.24**	**314**	⇓*i*P	**Pn**	**10 56 37.5**	**+0.7**
PCVE				*e*S	**Sn**	**10 56 52.4**	**-0.5**
PCVE				A	A	10 56 53.3	
	39nm,0.2s						
PBEJ	**Beja**	**1.46**	**329**	P	**Pn**	**10 56 40.6**	**+0.9**
PBEJ				S	**Sn**	**10 56 58.0**	**0.0**
	4.5nm,0.1s						
PBEJ	**Beja**	**1.46**	**329**	*e*P	**Pn**	**10 56 40.6**	**+0.9**
PBEJ				*e*S	**Sn**	**10 56 58.0**	**0.0**
PBEJ				A	A	10 56 58.5	
	9.0nm,0.1s						
MORF	**Marmelete**	**1.49**	**291**	*e*P	**Pn**	**10 56 40.6**	**+0.4**
MORF				*e*S	**Sn**	**10 56 58.0**	**-0.9**
MORF				AML	AML	10 57 00.2	
	comp=N,62nm,0.4s						
MORF	**Marmelete**	**1.49**	**291**	P	**Pn**	**10 56 40.6**	**+0.4**
MORF				S	**Sn**	**10 56 58.0**	**-0.9**
	comp=N,62nm,0.4s						
MORF	**Marmelete**	**1.49**	**291**	*e*P	**Pn**	**10 56 40.9**	**+0.7**
MORF				*e*S	**Sn**	**10 56 58.1**	**-0.8**
MORF				A	A	10 56 58.7	
	comp=N,37nm,0.1s						
ECEU	**Ceuta**	**1.52**	**125**	P	**Pn**	**10 56 41.4**	**+0.9**
	comp=N,4.0nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**10 57 00.6**	**+1.3**
	comp=N,5.3nm,0.3s,SNR=7.9						
PFVI	**Vila Bisbo**	**1.58**	**283**	P	**Pn**	**10 56 41.8**	**+0.6**
	comp=N,1.4nm,0.0s,SNR=15						
PFVI				S	**Sn**	**10 56 59.8**	**-1.1**
	comp=N,48nm,0.1s,SNR=6.2						
PFVI	**Vila Bisbo**	**1.58**	**283**	*e*P	**Pn**	**10 56 41.6**	**+0.3**
PFVI				*e*S	**Sn**	**10 56 59.8**	**-1.1**
PFVI				A	A	10 57 00.9	
	comp=N,33nm,0.5s						
PTEO	**Sao Teotonio**	**1.64**	**298**	P	**Pn**	**10 56 43.1**	**+1.0**
PTEO				S	**Sn**	**10 57 02.0**	**-0.3**
	comp=N,8.9nm,0.1s						
PTEO	**Sao Teotonio**	**1.64**	**298**	*e*Pn	**Pn**	**10 56 43.1**	**+1.0**
PTEO				*e*Sn	**Sn**	**10 57 02.0**	**-0.3**
PTEO				A	A	10 57 03.7	
	comp=N,18nm,0.1s						
SMIR	**Smir Dam**	**1.65**	**131**	P	**Pn**	**10 56 42.6**	**+0.4**
SMIR				S	**Sn**	**10 57 03.3**	**+0.9**
HORN	**Hornachuelos**	**1.69**	**50**	P	**Pn**	**10 56 42.3**	**-0.5**
HORN				S	**Sn**	**10 57 02.6**	**-0.9**
ECAB	**El Cabril**	**1.75**	**42**	P	**Pn**	**10 56 44.2**	**+0.6**
	comp=N,0.4nm,0.0s,SNR=15						
ECAB				S	**Sn**	**10 57 03.8**	**-1.3**
	comp=N,3.4nm,0.2s,SNR=16						
PNCL	**Nicolau / Gran**	**1.85**	**316**	P	**Pn**	**10 56 45.9**	**+0.9**
PNCL				S	**Sn**	**10 57 07.0**	**-0.4**
	comp=N,11nm,0.2s						
PNCL	**Nicolau / Gran**	**1.85**	**316**	⇓*e*Pn	**Pn**	**10 56 45.9**	**+0.9**
PNCL				*e*Sn	**Sn**	**10 57 07.0**	**-0.4**
PNCL				A	A	10 57 09.0	
	comp=N,11nm,0.2s						
EVO	**Evora**	**1.96**	**334**	P	**Pn**	**10 56 47.6**	**+1.2**
EVO				S	**Sn**	**10 57 09.8**	**-0.2**
	comp=N,28nm,0.1s						
EVO	**Evora**	**1.96**	**334**	*e*P	**Pn**	**10 56 47.5**	**+1.2**
EVO				*e*S	**Sn**	**10 57 10.6**	**+0.6**
EVO	**Evora**	**1.96**	**334**	⇓*e*Pn	**Pn**	**10 56 47.6**	**+1.2**
EVO				*e*Sn	**Sn**	**10 57 09.8**	**-0.2**
EVO				A	A	10 57 10.8	
	comp=N,28nm,0.1s						
PESTR	**Estremoz**	**2.15**	**346**	P	**Pn**	**10 56 49.1**	**+0.1**
PESTR				S	**Sn**	**10 57 14.0**	**-0.7**
PESTR	**Estremoz**	**2.15**	**346**	*e*Pn	**Pn**	**10 56 50.1**	**+1.1**
PESTR				*e*Sn	**Sn**	**10 57 14.2**	**-0.5**
PESTR				A	A	10 57 26.7	
	comp=N,5.5nm,0.3s						
EGOR	**Sierra Gorda,**	**2.26**	**81**	P	**Pn**	**10 56 52.1**	**+1.5**
	comp=N,0.4nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**10 57 17.6**	**+0.1**
	comp=N,6.2nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**2.31**	**52**	⇓P	**Pn**	**10 56 52.2**	**+1.0**
	comp=N,4.1nm,0.1s,SNR=18						
EADA				S	**Sn**	**10 57 17.1**	**-1.5**
	comp=N,20nm,0.1s						
PMTG	**Montargil**	**2.51**	**336**	P	**Pn**	**10 56 55.0**	**+1.1**
PMTG				S	**Sn**	**10 57 22.5**	**-0.9**
	comp=N,6.7nm,0.8s						
PMTG	**Montargil**	**2.51**	**336**	*e*Pn	**Pn**	**10 56 55.0**	**+1.1**
PMTG				*e*Sn	**Sn**	**10 57 22.5**	**-0.9**
PMTG				A	A	10 57 37.2	
	comp=N,6.7nm,0.8s						
ELGU	**Los Guajares,**	**2.63**	**87**	P	**Pn**	**10 56 57.1**	**+1.5**
	comp=N,0.6nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**10 57 27.3**	**+0.9**
	comp=N,2.8nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**2.67**	**352**	P	**Pn**	**10 56 57.4**	**+1.3**
PMRV				S	**Sn**	**10 57 27.8**	**+0.4**
	comp=N,16nm,0.2s						
PMRV	**Marv??o**	**2.67**	**352**	⇓*e*Pn	**Pn**	**10 56 57.4**	**+1.3**
PMRV				*e*Sn	**Sn**	**10 57 27.8**	**+0.4**
PMRV				A	A	10 57 28.6	
	comp=N,16nm,0.2s						
EQUE	**Quentar**	**2.81**	**80**	P	**Pn**	**10 56 59.5**	**+1.5**
	comp=N,0.3nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**10 57 30.7**	**0.0**
	comp=N,1.0nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**3.09**	**352**	P	**Pn**	**10 57 03.2**	**+1.5**
PCBR				S	**Sn**	**10 57 37.4**	**-0.1**
	comp=N,4.8nm,0.2s						
PCBR	**Castelo Branco**	**3.09**	**352**	*e*Pn	**Pn**	**10 57 03.2**	**+1.5**
PCBR				*e*Sn	**Sn**	**10 57 37.4**	**-0.1**
PCBR				A	A	10 57 38.6	
	comp=N,9.7nm,0.2s						
PSBE	**So Bento**	**3.11**	**332**	*e*Pn	**Pn**	**10 57 03.7**	**+1.6**
PSBE				*e*Sn	**Sn**	**10 57 36.9**	**-1.2**
EBER	**Berja**	**3.22**	**87**	S	**Sn**	**10 57 40.6**	**-0.5**
	comp=N,1.0nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.22**	**70**	P	**Pn**	**10 57 04.4**	**+0.7**
	comp=N,0.6nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**10 57 41.0**	**+0.1**
	comp=N,0.5nm,0.2s,SNR=7.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALIK	**Aliki, Aigiali**	**0.01**	**121**	P	**Pg**	**11 02 54.1**	**-0.5**
ALIK				S	**Sg**	**11 02 55.0**	**-0.8**
LAKA	**Lakka**	**0.10**	**254**	P	**Pg**	**11 02 55.4**	**-0.1**
LAKA				S	**Sg**	**11 02 57.0**	**-0.3**
TRIZ	**Trizonia**	**0.10**	**349**	P	**Pg**	**11 02 55.3**	**-0.2**
TRIZ				S	**Sg**	**11 02 57.5**	**+0.2**
TRIZ	**Trizonia**	**0.10**	**349**	P	**Pg**	**11 02 55.3**	**-0.2**
TRIZ				S	**Sg**	**11 02 57.1**	**-0.2**
KALE	**Kalithea**	**0.13**	**15**	P	**Pg**	**11 02 56.0**	**0.0**
KALE				S	**Sg**	**11 02 58.6**	**+0.5**
KALE				AML	AML	11 02 58.7	
KALE				AML	AML	11 02 59.5	
	comp=E,40634μm,0.2s						
KALE	**Kalithea**	**0.13**	**15**	P	**Pg**	**11 02 55.9**	**0.0**
KALE				S	**Sg**	**11 02 57.7**	**-0.4**
SERG	**Sergoula**	**0.15**	**348**	P	**Pg**	**11 02 56.2**	**0.0**
SERG				AML	AML	11 02 59.4	
	comp=N,49585μm,0.2s						
SERG				AML	AML	11 03 03.5	
	comp=E,47255μm,0.6s						
SERG	**Sergoula**	**0.15**	**348**	P	**Pg**	**11 02 56.3**	**0.0**
SERG				S	**Sg**	**11 02 58.5**	**-0.1**
EFP	**Efpalio**	**0.22**	**317**	P	**Pg**	**11 02 57.5**	**0.0**
EFP				AML	AML	11 03 03.2	
	comp=N,14758μm,0.5s						
EFP				AML	AML	11 03 07.4	
	comp=E,12229μm,0.5s						
EFP	**Efpalio**	**0.22**	**317**	P	**Pg**	**11 02 57.4**	**0.0**
EFP				S	**Sg**	**11 03 01.1**	**+0.6**
	comp=E,7μm,0.5s						
KLV	**Kalavryta, Ach**	**0.23**	**169**	P	**Pg**	**11 02 57.6**	**0.0**
KLV				S	**Sg**	**11 03 00.8**	**0.0**
KLV				AML	AML	11 03 03.7	
	comp=E,5212μm,0.5s						
KLV				AML	AML	11 03 05.2	
	comp=N,4550μm,0.3s						
KLV	**Kalavryta, Ach**	**0.23**	**169**	P	**Pg**	**11 02 57.6**	**0.0**
KLV				S	**Sg**	**11 03 00.9**	**+0.1**
ANX	**Ano Chora**	**0.35**	**337**	P	**Pg**	**11 02 59.9**	**-0.1**
ANX				S	**Sg**	**11 03 04.3**	**-0.4**
ANX				AML	AML	11 03 06.0	
	comp=N,33147μm,0.3s						
ANX				AML	AML	11 03 06.3	
	comp=E,37833μm,0.3s						
ANX	**Ano Chora**	**0.35**	**337**	P	**Pg**	**11 03 00.0**	**0.0**
ANX				S	**Sb**	**11 03 05.9**	**-1.2**
DSF	**Desfina**	**0.37**	**67**	P	**Pg**	**11 02 59.9**	**-0.4**
DSF				S	**Sb**	**11 03 05.9**	**-1.6**
DSF				AML	AML	11 03 06.7	
	comp=E,5727μm,0.2s						
DSF				AML	AML	11 03 07.1	
	comp=N,9038μm,0.3s						
DSF	**Desfina**	**0.37**	**67**	P	**Pg**	**11 03 00.0**	**-0.2**
DSF				S	**Sb**	**11 03 05.9**	**-1.6**
	comp=N,4μm,0.2s						
GUR	**Goura**	**0.38**	**150**	P	**Pg**	**11 03 00.1**	**-0.4**
GUR				S	**Sg**	**11 03 06.0**	**+0.4**
GUR				AML	AML	11 03 07.0	
	comp=N,10683μm,0.3s						
GUR				AML	AML	11 03 08.7	
	comp=E,13847μm,0.3s						
GUR	**Goura**	**0.38**	**150**	P	**Pg**	**11 03 00.1**	**-0.4**
GUR				S	**Sb**	**11 03 06.2**	**-1.7**
	comp=E,6μm,0.3s						
THAL	**Thalero**	**0.50**	**117**	P	**Pb**	**11 03 03.0**	**-0.8**
THAL				AML	AML	11 03 17.8	
	comp=N,6326μm,0.5s						
THAL				AML	AML	11 03 20.0	
	comp=E,6217μm,0.5s						
THAL	**Thalero**	**0.50**	**117**	P	**Pb**	**11 03 03.0**	**-0.8**
THAL				S	**Sg**	**11 03 09.4**	**+0.1**
RLS	**Riolos of Patr**	**0.54**	**247**	P	**Pg**	**11 03 02.9**	**-0.5**
RLS				AML	AML	11 03 14.5	
	comp=E,3041μm,0.3s						
RLS				AML	AML	11 03 15.6	
	comp=N,2293μm,0.2s						
RLS	**Riolos of Patr**	**0.54**	**247**	P	**Pg**	**11 03 03.4**	**0.0**
RLS				S	**Sb**	**11 03 11.5**	**-0.8**
	comp=N,1μm,0.2s						
AXAR	**Agios Charalam**	**0.67**	**41**	P	**Pg**	**11 03 05.7**	**-0.1**
AXAR				S	**Sb**	**11 03 15.5**	**-0.5**
AXAR				AML	AML	11 03 21.3	
	comp=N,15425μm,0.4s						
AXAR				AML	AML	11 03 22.2	
	comp=E,15129μm,0.4s						
AXAR	**Agios Charalam**	**0.67**	**41**	P	**Pg**	**11 03 05.4**	**-0.4**
AXAR				S	**Sb**	**11 03 15.7**	**-0.3**
EVR	**Evrytania**	**0.69**	**341**	P	**Pg**	**11 03 05.7**	**-0.6**
EVR				S	**Sg**	**11 03 14.9**	**-0.4**
EVR				AML	AML	11 03 19.2	
	comp=N,5976μm,0.3s						
EVR				AML	AML	11 03 21.1	
	comp=E,6076μm,0.6s						
EVR	**Evrytania**	**0.69**	**341**	P	**Pg**	**11 03 06.0**	**-0.2**
EVR				S	**Sb**	**11 03 16.6**	**-0.1**
MAKR	**Makrakomi, Fth**	**0.74**	**2**	P	**Pg**	**11 03 07.1**	**-0.2**
MAKR				AML	AML	11 03 23.8	
	comp=E,6544μm,0.4s						
MAKR				AML	AML	11 03 24.6	
	comp=N,5841μm,0.5s						
MAKR	**Makrakomi, Fth**	**0.74**	**2**	P	**Pb**	**11 03 07.6**	**-0.5**
MAKR				S	**Sb**	**11 03 19.3**	**+1.0**
	comp=N,3μm,0.5s						
LOUT	**Loutraki**	**0.75**	**112**	P	**Pb**	**11 03 07.4**	**-0.6**
LOUT				AML	AML	11 03 28.6	
	comp=N,233μm,0.5s						
LOUT				AML	AML	11 03 34.0	
	comp=E,178μm,0.3s						
LOUT	**Loutraki**	**0.75**	**112**	P	**Pb**	**11 03 07.4**	**-0.6**
LOUT				S	**Sb**	**11 03 18.4**	**+0.1**
TRIP	**Tripoli**	**0.75**	**169**	P	**Pg**	**11 03 07.0**	**-0.4**
TRIP				AML	AML	11 03 21.2	
	comp=N,2606μm,0.6s						
TRIP				AML	AML	11 03 24.9	
	comp=E,2557μm,0.6s						
TRIP	**Tripoli**	**0.75**	**169**	P	**Pg**	**11 03 07.0**	**-0.4**
TRIP				S	**Sb**	**11 03 18.8**	**+0.3**
AGG	**Agios Georgios**	**0.78**	**14**	P	**Pg**	**11 03 06.9**	**-0.9**
AGG				S	**Sg**	**11 03 17.8**	**-0.3**
AGG				AML	AML	11 03 24.3	
	comp=N,3112μm,0.6s						
AGG				AML	AML	11 03 26.9	
	comp=E,2167μm,0.8s						
AGG	**Agios Georgios**	**0.78**	**14**	P	**Pg**	**11 03 07.0**	**-0.9**
AGG				S	**Sb**	**11 03 19.6**	**+0.4**
	comp=E,1μm,0.4s						
PDO	**Prodromos**	**0.79**	**295**	P	**Pg**	**11 03 07.6**	**-0.5**
PDO				AML	AML	11 03 24.6	
	comp=N,3871μm,0.3s						
PDO				AML	AML	11 03 25.8	
	comp=E,3294μm,0.4s						
PDO	**Prodromos**	**0.79**	**295**	P	**Pg**	**11 03 07.7**	**-0.5**
PDO				S	**Sn**	**11 03 21.6**	**-0.5**
	comp=E,3μm,0.3s						
AMT	**Artemida-Makis**	**0.80**	**203**	P	**Pg**	**11 03 07.7**	**-0.5**
AMT				AML	AML	11 03 24.8	
	comp=E,6004μm,0.4s						
AMT				AML	AML	11 03 27.9	
	comp=N,8473μm,0.4s						
AMT	**Artemida-Makis**	**0.80**	**203**	P	**Pb**	**11 03 08.4**	**-0.5**
AMT				S	**Sb**	**11 03 21.0**	**+1.3**
LKR	**Lokris**	**0.81**	**61**	P	**Pg**	**11 03 07.7**	**-0.7**
LKR				AML	AML	11 03 24.7	
	comp=N,2489μm,0.5s						
LKR				AML	AML	11 03 25.0	
	comp=E,1879μm,0.5s						
LKR	**Lokris**	**0.81**	**61**	P	**Pg**	**11 03 07.8**	**-0.7**
LKR				S	**Sb**	**11 03 20.1**	**+0.1**
	comp=E,1μm,0.5s						
ATAL	**Atalanti**	**0.84**	**59**	P	**Pg**	**11 03 08.4**	**-0.7**
ATAL				AML	AML	11 03 24.9	
	comp=N,1806μm,0.7s						
ATAL				AML	AML	11 03 29.6	
	comp=E,1573μm,0.6s						
ATAL	**Atalanti**	**0.84**	**59**	P	**Pg**	**11 03 08.5**	**-0.6**
ATAL				S	**Sb**	**11 03 21.7**	**+0.7**
VIL2	**Platees**	**0.92**	**93**	P	**Pb**	**11 03 11.1**	**+0.1**
VIL2				AML	AML	11 03 28.8	
	comp=E,4532μm,0.7s						
VIL2				AML	AML	11 03 33.5	
	comp=N,2423μm,0.6s						
VLX	**Vlachokerasia**	**0.92**	**166**	P	**Pg**	**11 03 09.7**	**-0.9**
VLX				S	**Sg**	**11 03 22.6**	**-0.1**
VLX				AML	AML	11 03 31.2	
	comp=E,3892μm,0.5s						
VLX				AML	AML	11 03 32.0	
	comp=N,3756μm,0.5s						
VLX	**Vlachokerasia**	**0.92**	**166**	P	**Pg**	**11 03 10.0**	**-0.7**
VLX				S	**Sb**	**11 03 23.7**	**+0.2**
VILL	**Villia**	**0.96**	**96**	P	**Pb**	**11 03 11.3**	**-0.5**
VILL				S	**Sb**	**11 03 25.4**	**+0.8**
EPID	**Epidavros**	**1.04**	**129**	P	**Pg**	**11 03 12.4**	**-0.5**
EPID	**Epidavros**	**1.04**	**129**	P	**Pb**	**11 03 12.5**	**-0.5**
EPID				S	**Sn**	**11 03 27.6**	**-0.6**
ITM	**Ithomi**	**1.09**	**187**	P	**Pg**	**11 03 13.1**	**-0.9**
ITM				AML	AML	11 03 33.7	
	comp=E,1674μm,0.5s						
ITM				AML	AML	11 03 34.9	
	comp=N,1136μm,0.4s						
ITM	**Ithomi**	**1.09**	**187**	P	**Pg**	**11 03 13.0**	**-0.9**
ITM				S	**Sn**	**11 03 30.3**	**+0.7**
NYDR	**Nydri-Lefkada**	**1.19**	**293**	P	**Pg**	**11 03 14.1**	**-1.6**
NYDR	**Nydri-Lefkada**	**1.19**	**293**	P	**Pg**	**11 03 14.6**	**-1.1**
EVGI	**Lefkada island**	**1.19**	**288**	P	**Pg**	**11 03 14.0**	**-1.7**
EVGI	**Lefkada island**	**1.19**	**288**	P	**Pg**	**11 03 14.5**	**-1.2**
EVGI				S	**Sn**	**11 03 33.8**	**+2.0**
VLS	**Valsamata**	**1.19**	**266**	P	**Pg**	**11 03 14.5**	**-1.2**
VLS				AML	AML	11 03 36.9	
	comp=E,1016μm,0.4s						
VLS				AML	AML	11 03 40.1	
	comp=N,1068μm,0.4s						
VLS	**Valsamata**	**1.19**	**266**	P	**Pg**	**11 03 14.6**	**-1.2**
VLS				S	**Sn**	**11 03 33.9**	**+1.9**
VLMS	**Volimes, Zakyn**	**1.20**	**251**	P	**Pg**	**11 03 14.9**	**-1.0**
VLMS				AML	AML	11 03 37.0	
	comp=E,1703μm,0.2s						
VLMS				AML	AML	11 03 38.6	
	comp=N,2321μm,0.2s						
VLMS	**Volimes, Zakyn**	**1.20**	**251**	P	**Pg**	**11 03 15.1**	**-0.8**
VLMS				S	**Sn**	**11 03 33.4**	**+1.2**
KRND	**KRANIDI**	**1.21**	**136**	P	**Pg**	**11 03 15.3**	**-0.9**
KRND				AML	AML	11 03 36.7	
	comp=E,1912μm,0.5s						
KRND				AML	AML	11 03 40.7	
	comp=N,1782μm,0.6s						
KRND	**KRANIDI**	**1.21**	**136**	P	**Pg**	**11 03 15.5**	**-0.7**
KRND				S	**Sn**	**11 03 34.1**	**+1.6**
FSK	**Fiskardo**	**1.22**	**280**	P	**Pg**	**11 03 14.8**	**-1.6**
FSK				AML	AML	11 03 42.4	
	comp=N,1056μm,0.6s						
FSK				AML	AML	11 03 44.6	
	comp=E,1248μm,0.9s						
LKD2	**Lefkada island**	**1.24**	**295**	P	**Pg**	**11 03 15.8**	**-1.0**
KEF5	**Kardakata, Kep**	**1.28**	**271**	P	**Pn**	**11 03 15.7**	**-1.2**
KEF5	**Kardakata, Kep**	**1.28**	**271**	P	**Pn**	**11 03 15.8**	**-1.2**
KEF5				S	**Sn**	**11 03 35.1**	**+0.9**
THL	**Klokotos Trika**	**1.30**	**357**	P	**Pn**	**11 03 17.2**	**0.0**
THL				AML	AML	11 03 39.6	
	comp=E,1484μm,0.6s						
THL				AML	AML	11 03 44.3	
	comp=N,788μm,0.7s						
THL	**Klokotos Trika**	**1.30**	**357**	P	**Pb**	**11 03 17.4**	**0.0**
THL				S	**Sn**	**11 03 34.7**	**+0.1**
KEF4	**Livadi, Kephal**	**1.32**	**270**	P	**Pn**	**11 03 16.8**	**-0.7**
KEF4	**Livadi, Kephal**	**1.32**	**270**	P	**Pn**	**11 03 16.7**	**-0.7**
KEF4				S	**Sn**	**11 03 36.8**	**+1.8**
DMLN	**Damoulianata-K**	**1.36**	**269**	P	**Pn**	**11 03 17.0**	**-1.0**
DMLN	**Damoulianata-K**	**1.36**	**269**	P	**Pn**	**11 03 17.6**	**-0.4**
DMLN				S	**Sn**	**11 03 39.3**	**+3.2**
NEO	**Neokhori**	**1.36**	**40**	P	**Pg**	**11 03 18.4**	**-0.7**
NEO				S	**Sn**	**11 03 36.8**	**+0.6**
KEF3	**Kipouria, Keph**	**1.38**	**268**	P	**Pn**	**11 03 17.4**	**-0.9**
KEF3	**Kipouria, Keph**	**1.38**	**268**	P	**Pn**	**11 03 17.3**	**-0.9**
KEF3				S	**Sn**	**11 03 38.1**	**+1.5**
XOR	**Xorichti**	**1.39**	**38**	P	**Pn**	**11 03 18.5**	**0.0**
XOR				AML	AML	11 03 46.6	
	comp=N,1450μm,0.7s						
XOR				AML	AML	11 03 49.1	
	comp=E,586μm,0.6s						
XOR	**Xorichti**	**1.39**	**38**	P	**Pb**	**11 03 18.7**	**-0.4**
XOR				S	**Sn**	**11 03 37.9**	**+0.9**
PYL	**PYLOS**	**1.40**	**192**	P	**Pn**	**11 03 18.4**	**-0.2**
PYL				AML	AML	11 03 46.8	
	comp=N,922μm,0.4s						
PYL				AML	AML	11 03 51.9	
	comp=E,745μm,1.0s						
PYL	**PYLOS**	**1.40**	**192**	P	**Pn**	**11 03 18.7**	**+0.2**
PYL				S	**Sn**	**11 03 39.1**	**+2.0**
VLY	**Voula,Athens**	**1.40**	**107**	P	**Pb**	**11 03 18.7**	**-0.5**
VLY				AML	AML	11 03 44.0	
	comp=E,729μm,0.4s						
VLY				AML	AML	11 03 46.1	
	comp=N,576μm,0.5s						
VLY	**Voula,Athens**	**1.40**	**107**	P	**Pb**	**11 03 18.9**	**-0.3**
VLY				S	**Sn**	**11 03 38.5**	**+1.3**
	comp=N,325nm,0.5s						
PTL	**Penteli**	**1.41**	**98**	P	**Pg**	**11 03 19.2**	**-0.8**
PTL				AML	AML	11 03 43.9	
	comp=E,491μm,0.5s						
PTL				AML	AML	11 03 53.8	
	comp=N,472μm,0.8s						
DION	**Dionisos Attik**	**1.46**	**97**	P	**Pb**	**11 03 20.0**	**-0.3**
DION				AML	AML	11 03 53.3	
	comp=E,1389μm,0.5s						
DION				AML	AML	11 03 55.1	
	comp=N,1111μm,0.5s						
DION	**Dionisos Attik**	**1.46**	**97**	P	**Pb**	**11 03 19.9**	**-0.3**
DION				S	**Sg**	**11 03 39.7**	**-0.2**
	comp=N,640nm,0.4s						
AOS	**Alonnisos**	**1.66**	**57**	P	**Pn**	**11 03 22.3**	**+0.2**
AOS				S	**Sn**	**11 03 43.1**	**-0.5**
VLI	**Veliai**	**1.68**	**156**	P	**Pn**	**11 03 23.0**	**+0.5**
VLI				AML	AML	11 03 54.5	
	comp=N,1642μm,1.0s						
VLI				AML	AML	11 03 55.7	
	comp=E,1277μm,0.7s						
VLI	**Veliai**	**1.68**	**156**	P	**Pn**	**11 03 22.9**	**+0.4**
VLI				S	**Sg**	**11 03 45.8**	**-1.3**
	comp=E,460nm,0.8s						
KPRO	**Kipourio**	**1.78**	**342**	P	**Pn**	**11 03 24.5**	**+0.6**
KPRO				AML	AML	11 03 58.6	
	comp=N,778μm,0.6s						
KPRO				AML	AML	11 04 04.0	
	comp=E,647μm,0.6s						
KPRO	**Kipourio**	**1.78**	**342**	P	**Pb**	**11 03 24.8**	**-0.9**
LIT	**Litokhoron**	**1.86**	**9**	P	**Pn**	**11 03 24.6**	**-0.3**
RICI	**Ricice**	**6.43**	**326**	*e*Pn	**Pn**	**11 04 28.7**	**+0.9**
RICI				Sn	**Sn**	**11 05 43.1**	**+1.9**
KIJV	**Kijevo**	**7.16**	**325**	*e*Pn	**Pn**	**11 04 38.0**	**+0.3**
KIJV				Sn	**Sn**	**11 06 00.2**	**+1.0**
ZIRJ	**Zirje**	**7.26**	**320**	*e*Pn	**Pn**	**11 04 39.8**	**+0.7**
ZIRJ				Sn	**Sn**	**11 06 00.3**	**-1.4**
MORI	**Morici**	**7.39**	**321**	*e*Pn	**Pn**	**11 04 41.0**	**+0.2**
MORI				Sn	**Sn**	**11 06 04.1**	**-0.6**
ESDC	**Sonseca Array**	**20.29**	**282**	P	Pn	11 07 30.5	-0.4
	comp=E,1.3nm,0.8s,baz=73,slow=10,SNR=5.7						
TORD	**Torodi Ar. Bea**	**30.90**	**221**	P	**P**	**11 09 10.9**	**+1.0**
	comp=E,0.8nm,1.0s,baz=35,slow=8.6,SNR=2.9						
MKAR	**Makanchi Array**	**44.20**	**59**	P	**P**	**11 11 02.2**	**+0.1**
	comp=E,0.5nm,0.4s,baz=270,slow=6.0,SNR=4.7						
MKAR				LR	LR	11 33 25.9	
	comp=E,28nm,18.8s,baz=252,slow=42						
ZALV	**Zalesovo Beam**	**44.71**	**48**	P	**P**	**11 11 05.8**	**-0.2**
	comp=E,1.0nm,0.4s,baz=274,slow=8.1,SNR=4.4						
ULM	**Lac du Bonnet**	**76.36**	**324**	LR	LR	11 51 56.2	
	comp=E,30nm,18.8s,baz=306,slow=38						

*IDC **29** 11:02:51.2±0.8,5.°65N×61.°28E,h0km,mb4.0/10, mb1 4.2/10,mb1mx3.8/47,mbtmp4.0/10,MS3.3/9, Ms1 3.3/9,ms1mx3.0/46,Error ellipse: s-maj=23.7km s-min=20.6km az=174.0*

*NEIC **29** 11:02:52.3±1.3,5.°7N±0.°1×61.°4E±0.°2,h10km±1km, mb4.5/11,Error ellipse: s-maj=27.5km s-min=20.3km az=93.0*

ISC 29 11:02:53.2±0.7,**5.°7N**±0.°1×**61.°3E**±0.°1,**h14**km,**n35**, σ0**99**/29,**mb4.0**/13,**MS3.4**/7,**Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**17.59**	**352**	LR	LR	11 12 13.5	
	comp=Z,93nm,21.1s,baz=174,slow=32						
PALK	**Pallekele**	**19.37**	**84**	LR	LR	11 12 58.1	
	comp=Z,65nm,21.1s,baz=8.2,slow=31						
RAYN	**Ar Rayn**	**23.31**	**321**	P	**P**	**11 08 01.2**	**+0.2**
RER	**Riviere de l'E**	**27.27**	**191**	P	**P**	**11 08 36.7**	**-0.7**
GEYT	**Alibeck**	**32.18**	**355**	P	**P**	**11 09 19.6**	**-1.2**
BTK	**Batken**	**35.24**	**13**	P	**P**	**11 09 49.7**	**+2.3**
BTK				IAmb	IAmb	11 10 01.5	
	comp=Z,4.4nm,0.9s						
PSI	**Prapat**	**37.66**	**93**	LR	LR	11 23 10.9	
	comp=Z,28nm,21.1s,baz=271,slow=32						
KK08	**Karatay Array**	**38.10**	**11**	P	**P**	**11 10 11.3**	**-0.4**
KKAR	**Karatay Array**	**38.11**	**11**	P	**P**	**11 10 11.8**	**0.0**
AAK	**Ala-Archa**	**38.58**	**16**	P	**P**	**11 10 17.1**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=227,slow=5.0,SNR=4.8						
CMAR	**Chiang Mai Arr**	**38.85**	**68**	P	**P**	**11 10 19.8**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=260,slow=9.8,SNR=7.2						
CMAR				LR	LR	11 25 00.6	
	comp=Z,22nm,20.6s,baz=226,slow=34						
LSZ	**Lusaka**	**38.85**	**237**	P	**P**	**11 10 18.3**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=53,slow=10,SNR=3.0						
KBZ	**Khabaz**	**41.16**	**340**	P	**P**	**11 10 38.0**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=183,slow=8.9,SNR=3.7						
BRTR	**Keskin Array B**	**42.01**	**328**	P	**P**	**11 10 44.6**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=152,slow=6.5,SNR=3.1						
BRTR				LR	LR	11 28 33.7	
	comp=Z,20nm,18.9s,baz=74,slow=37						
ILGA	**Ilgaz**	**42.94**	**329**	P	**P**	**11 10 50.9**	**-1.1**
ILGA				IAmb	IAmb	11 11 19.1	
	comp=Z,22nm,1.2s						
AB08	**Akbulak array**	**43.37**	**359**	P	**P**	**11 10 54.2**	**-0.9**
AB07	**Akbulak array**	**43.37**	**359**	P	**P**	**11 10 55.1**	**+0.1**
ABKAR	**Akbulak array**	**43.39**	**359**	P	**P**	**11 10 54.3**	**-0.9**
BOSA	**Boshof**	**48.66**	**224**	LR	LR	11 30 50.3	
	comp=Z,39nm,18.1s,baz=17,slow=34						
TSUM	**Tsumeb**	**49.63**	**239**	P	**P**	**11 11 45.5**	**+0.6**
	comp=Z,2.8nm,0.9s,baz=25,slow=1.0,SNR=3.8						
TSUM	**Tsumeb**	**49.63**	**239**	P	**P**	**11 11 46.5**	**+1.6**
TSUM				IAmb	IAmb	11 11 47.3	
	comp=Z,8.1nm,1.1s						
ZALV	**Zalesovo Beam**	**51.74**	**18**	P	**P**	**11 11 59.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=218,slow=9.0,SNR=1.1						
ZALV				LR	LR	11 34 10.9	
	comp=Z,32nm,19.4s,baz=266,slow=36						
ZALV	**Zalesovo Beam**	**51.74**	**18**	P	**P**	**11 11 59.5**	**-0.6**
BURAR	**Bucovina Array**	**51.88**	**330**	P	**P**	**11 12 01.4**	**+0.1**
SONM	**Songino Array**	**56.89**	**35**	LR	LR	11 37 52.1	
	comp=Z,43nm,18.7s,baz=242,slow=37						
TORD	**Torodi Ar. Bea**	**59.11**	**282**	P	**P**	**11 12 54.1**	**+0.2**
	comp=Z,1.2nm,1.1s,baz=92,slow=4.6,SNR=3.6						
KLR	**Kul'dur**	**72.97**	**40**	LR	LR	11 46 57.9	
	comp=Z,36nm,21.0s,baz=276,slow=36						
WRA	**Warramunga Arr**	**76.18**	**112**	P	**P**	**11 14 41.1**	**-0.5**
	comp=Z,2.7nm,1.0s,baz=267,slow=5.1,SNR=7.6						
WRA	**Warramunga Arr**	**76.18**	**112**	P	**P**	**11 14 40.2**	**-1.4**
WRAB	**Tennant Creek**	**76.19**	**112**	P	**P**	**11 14 40.4**	**-1.2**
WB2	**Warramunga Arr**	**76.19**	**112**	P	**P**	**11 14 40.1**	**-1.6**
WB0	**Warramunga Arr**	**76.19**	**112**	P	**P**	**11 14 40.8**	**-0.9**
WB0				IAmb	IAmb	11 14 48.2	
	comp=Z,7.1nm,1.1s						
ASAR	**Alice Springs**	**76.55**	**116**	P	**P**	**11 14 43.5**	**-0.2**
	comp=Z,3.0nm,1.0s,baz=293,slow=5.6,SNR=11						
ASAR	**Alice Springs**	**76.55**	**116**	P	**P**	**11 14 42.9**	**-0.8**
TXAR	**Lajitas Array**	**142.25**	**338**	PKP	**PKPdf**	**11 22 26.6**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=84,slow=2.0,SNR=4.0						

*IDC **29** 11:05:53.2±4.2,9.°10S×124.°33E,h110km±45km,mb3.4/2, mb1 3.6/5,mb1mx3.3/31,mbtmp3.9/5,MS3.7/1,Ms1 3.7/1, ms1mx2.4/21,Error ellipse: s-maj=74.6km s-min=25.1km az=49.0*

ISC 29 11:05:53.0±1.4,**9.°2S**±0.°1×**124.°5E**±0.°1,**h100**km,**n7**, σ2**9**10/10,**Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	**Baumata**	**1.34**	**219**	P	**Pn**	**11 06 18.0**	**+0.6**
	29nm,0.3s,baz=25,slow=3.5,SNR=16						
BATI				S	**Sn**	**11 06 35.7**	**0.0**
	237nm,0.3s,baz=18,slow=3.4,SNR=21						
BATI				LR	LR	11 06 52.6	
	comp=Z,78nm,18.2s,baz=98,slow=46						
FITZ	**Fitzroy Crossi**	**8.95**	**173**	P	**Pn**	**11 07 59.7**	**+0.2**
	1.0nm,0.3s,baz=9.5,slow=9.7,SNR=31						
FITZ				S	**Sn**	**11 09 36.1**	**-2.5**
	1.7nm,0.3s,baz=224,slow=2.0,SNR=9.7						
WRA	**Warramunga Arr**	**14.32**	**140**	P	**Pn**	**11 09 12.7**	**+1.5**
	0.8nm,0.3s,baz=315,slow=15,SNR=23						
WRA				S	**Sn**	**11 11 46.4**	**-2.6**
	0.6nm,0.3s,baz=316,slow=24,SNR=8.5						
ASAR	**Alice Springs**	**16.99**	**149**	P	**P**	**11 09 47.8**	**+2.9**
	0.5nm,0.3s,baz=320,slow=12,SNR=22						
ASAR				S	**Sn**	**11 12 52.4**	**-1.2**
	0.2nm,0.3s,baz=307,slow=20,SNR=3.7						
STKA	**Stephens Creek**	**27.61**	**147**	P	**P**	**11 11 31.6**	**+0.5**
	1.4nm,0.8s,baz=315,slow=13,SNR=2.8						
MKAR	**Makanchi Array**	**67.20**	**330**	P	**P**	**11 16 34.3**	**-2.2**
	0.4nm,0.6s,baz=133,slow=6.5,SNR=2.4						
AAK	**Ala-Archa**	**68.81**	**323**	LR	LR	11 50 48.8	
	comp=Z,50nm,19.1s,baz=342,slow=39						

*IDC **29** 11:13:07.2±3.7,26.°24S×29.°07E,h0km,mb1 2.8/3, mb1mx2.8/33,mbtmp2.8/3,ML2.4/3,Error ellipse: s-maj=32.1km s-min=23.2km az=113.0*

ISC 29 11:13:06.3±1.2,**26.°18S**±0.°05×**29.°13E**±0.°08,**h10**km,**n14**, σ1**8**73/18,**2C-1D,South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.39**	**289**	Pn	**Pn**	**11 14 01.6**	**+2.1**
	0.1nm,0.3s,baz=124,slow=7.3,SNR=1.4						
LBTB				Pg	**Pg**	**11 14 10.5**	**-0.9**
	1.7nm,0.3s,baz

IVOT S **Sg** **11 19 39.2 +1.9**
baz=166
IVON **Vonarskard** **0.27 333** P Pg 11 19 29.0 -6.7
baz=274
IVON S Sg 11 19 31.7 -7.7
baz=274
IJOK **Jokulheimar** **0.35 251** P **Pg** **11 19 35.0 -2.1**
baz=226
IDYN **Dyngjuhals** **0.36 7** P Pg 11 19 28.7 -8.7
baz=6.4
IDYN S Sg 11 19 31.4 -11
baz=6.4
ISKR **Skrokkalda** **0.42 289** P **Pg** **11 19 34.0 -4.3**
baz=257
IURH **Urdarhals** **0.42 20** P Pg 11 19 29.9 -8.4
baz=34
IKAL **Kalfafell** **0.49 191** P **Pb** **11 19 38.8 -2.0**
baz=190
IKAL S **Sb** **11 19 49.1 +1.0**
baz=190
IKSK **Karasker** **0.51 121** P **Pg** **11 19 37.0 -3.1**
baz=141
IKSK S **Sg** **11 19 46.1 -0.8**
baz=141
THOR **Thorvaldshraun** **0.61 34** P Pg 11 19 33.6 -8.4
baz=48
THOR S Sg 11 19 40.0 -10
baz=48
IFAG **Fagurholsmyri** **0.66 147** P **Pg** **11 19 40.8 -2.1**
baz=157
IFAG S **Sn** **11 19 52.9 -3.1**
baz=157
IVAT **Vatnsfell** **0.68 249** P **Pg** **11 19 40.7 -2.5**
baz=235
IASK **Askja** **0.72 29** P Pg 11 19 35.0 -9.0
baz=39
IMKO **Mokollar** **0.73 41** P Pg 11 19 36.0 -8.3
baz=55
IMKO S Sg 11 19 43.9 -10
baz=55
IVSH **V-Sauoahnukur** **0.84 62** P Pg 11 19 38.9 -7.5
baz=78
ISNB **Snabyli** **0.86 217** P **Pb** **11 19 45.0 -2.1**
baz=211
ISVA **Svartarkot** **0.92 6** P Pg 11 19 38.0 -10
baz=5.1
IRJU **Rjupnafell** **0.97 213** P **Pb** **11 19 47.1 -1.9**
baz=208
IADA **Aoalbol** **1.01 53** P Pb 11 19 40.8 -8.8
baz=65
IADA S Sg 11 19 52.0 -11
baz=65
IMJO **Mjoaskard** **1.08 244** P **Pg** **11 19 47.7 -3.2**
baz=234
IMEL **Melhnausar** **1.20 16** P Pn 11 19 42.6 -10
baz=19
IREN **Reynihlio** **1.25 11** P Pn 11 19 43.5 -10
baz=12
IKVO **Krokottuvotn** **1.31 11** P Pn 11 19 44.6 -10
baz=12
IGRS **Grimsstaoir** **1.34 25** P Pn 11 19 45.3 -10
baz=28
ISKI **Skildingahlsh** **1.46 7** P Pn 11 19 47.0 -10
baz=7.2
IGHA **Grjothals** **1.46 13** P Pn 11 19 47.1 -9.5
baz=14
BORG **Borgarnes** **1.69 283** Pg Pn 11 19 54.6 -5.1
30nm,0.3s,baz=87,slow=7.2,SNR=41
BORG Lg Lg 11 20 20.1
30nm,0.3s,baz=42,slow=17,SNR=8.3
SCO **Scoresbysund** **6.32 346** *e* Pn 11 20 52.7 -10
baz=161,slow=7.9
SCO *i* P Pn 11 20 58.0 -5.1
SCO *i* S **Sn** **11 22 13.9 -1.3**
SCO IAML 11 22 30.5
comp=Z,1.7nm,0.4s
EKA **Eskdalemuir Ar** **11.58 135** Pn **Pn** **11 22 13.4 -1.9**
baz=323,slow=13,SNR=11
ESK **Eskdalemuir** **11.58 135** P **Pn** **11 22 15.2 -0.1**
ESK **Eskdalemuir** **11.58 135** Pn **Pn** **11 22 15.2 -0.1**
DAG **Danmarks Havn** **12.41 359** *eP* **Pn** **11 22 29.5 +3.0**
DAG **Danmarks Havn** **12.41 359** *iP* **Pn** **11 22 29.5 +3.0**
DAG **Danmarks Havn** **12.41 359** *eP* **Pn** **11 22 29.5 +3.0**
NC204 **NORSAR Array S** **13.21 91** Pn Pn 11 22 32.7 -4.9
NAO01 **NORSAR Array S** **13.46 92** Pn **Pn** **11 22 39.3 -1.6**
NOA **NORSAR Array B** **13.52 91** Pn Pn 11 22 36.3 -5.4
comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.2
SFJD **Kangerlussuaq** **13.78 296** LR LR 11 27 41.9
comp=Z,225nm,18.3s,baz=96,slow=36
HFS **Hagfors** **15.02 92** LR LR 11 28 48.1
comp=Z,84nm,21.8s,baz=260,slow=37
ARCES **ARCESS Array B** **17.25 54** LR LR 11 28 24.3
comp=Z,60nm,19.2s,baz=195,slow=31
FINES **FINESS Array B** **19.74 79** P **P** **11 23 58.5 -1.1**
comp=Z,0.1nm,0.3s,baz=302,slow=8.0,SNR=3.0
FINES LR LR 11 31 23.3
comp=Z,77nm,19.4s,baz=314,slow=36
CLL **Collm** **20.59 115** *eP* **P** **11 24 08.0 -0.9**
comp=Z,13nm,1.6s
CLL **Collm** **20.59 115** *eP* **P** **11 24 08.0 -0.9**
CLL pmax pmax
comp=Z,13nm,1.6s
NKC **Novy Kostel** **21.23 118** *eP* **P** **11 24 19.9 +4.0**
NKC **Novy Kostel** **21.23 118** *eP* **P** **11 24 19.9 +4.0**
BFO **Black Forest** **21.30 127** P **P** **11 24 15.9 -0.7**
BFO pmax pmax
comp=Z,18nm,1.3s
BFO **Black Forest** **21.30 127** P **P** **11 24 15.9 -0.7**
BRG **Berggiesshubel** **21.30 115** *eP* **P** **11 24 15.9 -0.7**
comp=Z,13nm,1.4s
BRG **Berggiesshubel** **21.30 115** *eP* **P** **11 24 15.9 -0.7**
BRG pmax pmax
comp=Z,13nm,1.5s
VSU **Vasula** **21.57 85** *i* P **P** **11 24 21.1 +1.7**
VSU pmax pmax
comp=Z,33nm,0.8s
FRB **Frobisher Bay** **21.84 292** LR LR 11 32 02.9
comp=Z,90nm,20.1s,baz=64,slow=35
CHVC **Chvalec** **22.37 112** *eP* **P** **11 24 25.3 -2.8**
KHC **Kasperske Hory** **22.55 118** *ceP* **P** **11 24 30.9 +0.8**
KHC pmax pmax
comp=Z,6.0nm,0.9s
KHC **Kasperske Hory** **22.55 118** *eP* **P** **11 24 30.3 +0.2**
KHC **Kasperske Hory** **22.55 118** P **P** **11 24 30.6 +0.5**
DPC **Dobruska-Polom** **22.66 112** *eP* **P** **11 24 29.8 -1.4**
DPC **Dobruska-Polom** **22.66 112** *eP* **P** **11 24 29.8 -1.4**
SENIN **Lac Senin/Sane** **22.66 131** P **P** **11 24 32.3 +0.9**
GERES **GERESS Array B** **22.83 118** P **P** **11 24 32.6 -0.5**
comp=Z,1.1nm,0.8s,baz=309,slow=8.4,SNR=5.8
GERES **GERESS Array B** **22.83 118** P **P** **11 24 32.8 -0.3**
SUW **Suwalki** **22.84 98** P **P** **11 24 32.4 -0.6**
SUW **Suwalki** **22.84 98** P **P** **11 24 32.4 -0.6**
KRLC **Kraliky** **23.06 112** *eP* **P** **11 24 37.0 +1.6**
KRLC **Kraliky** **23.06 112** *eP* **P** **11 24 37.0 +1.6**
DAVOX **Davos/Dischmat** **23.17 127** P **P** **11 24 37.3 +0.7**
comp=Z,3.1nm,1.0s,baz=287,slow=9.6,SNR=3.7
TUE **Stuetta** **23.25 128** P **P** **11 24 37.4 -0.2**
MORC **Moravsky Berou** **23.60 112** P **P** **11 24 39.8 -1.0**
MORC **Moravsky Berou** **23.60 112** P **P** **11 24 39.8 -1.0**
EUNU **Eureka** **23.89 336** P **P** **11 24 42.5 -0.9**
MODS **Modra-Piesok** **24.61 114** *eP* **P** **11 24 51.9 +1.7**
MODS **Modra-Piesok** **24.61 114** *eP* **P** **11 24 51.9 +1.7**
KLMR **Klimovskoe** **25.67 71** *eP* **P** **11 24 54.3 -5.3**
KLMR pmax pmax
comp=Z,11nm,1.4s
KLMR **Klimovskoe** **25.67 71** *eP* **P** **11 24 54.3 -5.3**
KLMR AMP 11 25 08.9
comp=Z,11nm,1.4s
KWP **Kalwaria Pacla** **25.83 106** P **P** **11 25 01.6 +0.3**
KWP pmax pmax
comp=Z,20nm,1.1s
KWP **Kalwaria Pacla** **25.83 106** P **P** **11 25 01.6 +0.3**
KWP IAmb IAmb 11 25 20.1
comp=Z,20nm,1.1s
ESDC **Sonseca Array** **26.03 156** P **P** **11 25 02.8 -0.5**
comp=Z,1.1nm,0.8s,baz=358,slow=9.2,SNR=5.4
ESDC **Sonseca Array** **26.03 156** P **P** **11 25 05.2 +2.0**
KOLS **Kolonicke sedl** **26.19 107** *eP* **P** **11 25 03.5 -1.0**
KOLS **Kolonicke sedl** **26.19 107** *eP* **P** **11 25 03.5 -1.0**
UZH **Uzhgorod** **26.44 108** *eP* **P** **11 25 08.0 +1.3**
UZH *e* 11 25 10.4
UZH *e* 11 25 14.6
AKASG **Malin Array Be** **27.80 97** LR LR 11 36 24.7
comp=Z,64nm,19.4s,baz=270,slow=36
OBN **Obninsk** **27.90 84**‖ *eP* **P** **11 25 21.8 +2.1**
OBN *e* 11 26 06.6
OBN pmax pmax
comp=Z,8.0nm,1.3s
OBN MLR MLR
comp=Z,56nm,15.0s
PQI **Presque Isle** **32.52 261** P **P** **11 26 03.6 +2.9**
I63A **Otisfield** **35.70 261** P **P** **11 26 30.5 +2.2**
NRIK **Noril'sk** **36.65 35** *ceP* **P** **11 26 37.8 +1.7**
NRIK pmax pmax
comp=Z,7.0nm,1.4s
KBZ **Khabaz** **39.09 92** P **P** **11 26 57.8 +0.8**
comp=Z,2.2nm,0.8s,baz=325,slow=11,SNR=5.5
KBZ **Khabaz** **39.09 92** *ceP* **P** **11 26 58.6 +1.6**
KBZ pmax pmax
comp=Z,2.0nm,0.9s
YKA **Yellowknife Ar** **39.38 313** P **P** **11 26 58.6 -0.7**
comp=Z,1.8nm,1.0s,baz=38,slow=9.6,SNR=4.6
YKA LR LR 11 42 33.9
comp=Z,56nm,18.6s,baz=0.0,slow=35
INK **Inuvik** **40.05 329** P **P** **11 27 04.4 -0.3**
INK pmax pmax
comp=Z,6.0nm,1.3s
INK **Inuvik** **40.05 329** P **P** **11 27 04.3 -0.3**
AKTO **Aktyubinsk** **40.34 73** LR LR 11 43 17.5
comp=Z,60nm,21.6s,baz=335,slow=35
N59A **State Game Lan** **40.48 263** P **P** **11 27 09.7 +1.1**
EYMN **Ely** **41.65 283** P **P** **11 27 20.5 +2.3**
EYMN IAmb IAmb 11 27 34.6
comp=Z,14nm,1.1s
A21K **Barrow** **41.66 342** P **P** **11 27 17.8 -0.1**
TIXI **Tiksi** **42.26 15** P **P** **11 27 22.3 -0.5**
TIXI pmax pmax
comp=Z,14nm,1.4s
TIXI **Tiksi** **42.26 15** P **P** **11 27 22.3 -0.5**
TIXI IAmb IAmb 11 27 27.2
comp=Z,14nm,1.4s
GNI **Garni** **42.80 94** LR LR 11 46 16.1
comp=Z,31nm,21.1s,baz=312,slow=38
GNI **Garni** **42.80 94** P **P** **11 27 28.1 +0.2**
GNI pmax pmax
comp=Z,12nm,0.5s
GNI **Garni** **42.80 94** P **P** **11 27 28.1 +0.2**
TOLK **Toolik Lake Re** **42.97 336** P **P** **11 27 28.9 +0.2**
TOLK IAmb IAmb 11 27 31.9
comp=Z,14nm,1.2s
BMAR **Burnt Mountain** **43.11 333** P **P** **11 27 30.3 +0.4**
BRVK **Borovoye** **43.23 62** *i* P **P** **11 27 28.5 -2.5**
BRVK pmax pmax
comp=Z,2.0nm,1.0s
DAWY **Dawson** **44.91 328** P **P** **11 27 44.6 +0.3**
DAWY IAmb IAmb 11 27 46.9
comp=Z,10nm,1.4s
K27K **Chicken** **45.54 329** P **P** **11 27 49.9 +0.6**
K27K IAmb IAmb 11 27 50.9
comp=Z,6.9nm,1.4s
IL31 **45.90 333** P **P** **11 27 52.6 +0.6**
IL31 IAmb IAmb 11 27 56.3
comp=Z,13nm,1.5s
ILAR **Eielson Array** **45.90 333** P **P** **11 27 51.7 -0.4**
comp=Z,3.8nm,1.1s,baz=24,slow=5.8,SNR=15
ILAR **Eielson Array** **45.90 333** P **P** **11 27 51.8 -0.3**
MDM **Murphy Dome** **46.00 333** P **P** **11 27 53.2 +0.3**
MDM IAmb IAmb 11 27 57.2
comp=Z,11nm,1.3s
COLA **College** **46.00 333** P **P** **11 27 53.0 +0.1**
COLA pmax pmax
comp=Z,8.0nm,1.2s
COLA **College** **46.00 333** P **P** **11 27 53.0 +0.1**
COLA IAmb IAmb 11 27 55.8
comp=Z,8.2nm,1.1s
TCOL **CIGO, UAF Yank** **46.00 333** P **P** **11 27 53.0 +0.1**
TCOL IAmb IAmb 11 27 55.8
comp=Z,6.4nm,1.0s
I23K **Minto, Yukon-K** **46.05 334** P **P** **11 27 53.8 +0.5**
I23K IAmb IAmb 11 27 57.3
comp=Z,12nm,1.4s
IMAR **Indian Mountai** **46.08 337** P P 11 27 49.0 -4.5
PAX **Paxson** **47.21 331** P **P** **11 28 02.8 +0.3**
PAX pmax pmax
comp=Z,11nm,1.4s
PAX **Paxson** **47.21 331** P **P** **11 28 02.8 +0.3**
PAX IAmb IAmb 11 28 03.7
comp=Z,11nm,1.4s
ZALV **Zalesovo Beam** **47.77 51** P **P** **11 28 05.0 -1.8**
comp=Z,0.3nm,0.3s,baz=1.4,slow=5.9,SNR=3.9
BILL **Bilibino** **47.79 358** *i* P **P** **11 28 08.3 +1.5**
BILL pmax pmax
comp=Z,3.0nm,1.1s
M24K **Tolsona, Glenn** **48.13 330** P **P** **11 28 10.1 +0.5**
KURK **Kurchatov** **48.23 58** *ceP* **P** **11 28 10.3 -0.1**
KURK pmax pmax
comp=Z,4.0nm,0.8s
KURK **Kurchatov** **48.23 58** P **P** **11 28 09.5 -0.9**
KURK IAmb IAmb 11 28 11.8
comp=Z,4.3nm,1.0s
T47A **Sharon Grove** **48.65 271** P **P** **11 28 15.0 +1.1**
T47A IAmb IAmb 11 28 17.5
comp=Z,7.0nm,0.9s
K31A **O'Neill** **48.97 285** P **P** **11 28 18.4 +2.1**
EGMT **Eagleton** **48.99 297** P **P** **11 28 17.6 +1.1**
EYAK **Cordova Ski Ar** **49.43 329** P **P** **11 28 20.2 +0.6**
Y52A **Lilburn** **49.97 266** P **P** **11 28 25.3 +1.3**
GCMT **Greycliff** **50.80 296** P **P** **11 28 31.7 +1.4**
MCMT **McKenzie Canyo** **52.84 297** P **P** **11 28 46.9 +1.2**
MKAR **Makanchi Array** **52.84 58** P **P** **11 28 43.9 -1.5**
comp=Z,1.5nm,0.9s,baz=323,slow=5.2,SNR=5.3
TORD **Torodi Ar. Bea** **52.92 156** P **P** **11 28 44.8 -1.5**
comp=Z,1.2nm,0.8s,baz=332,slow=9.9,SNR=5.4
TORD **Torodi Ar. Bea** **52.92 156** P **P** **11 28 46.6 +0.3**
TPAW **Teton Pass** **53.22 295** P **P** **11 28 50.1 +1.5**
PD31 **Pinedale Array** **53.28 293** P **P** **11 28 49.0 +0.1**
PD31 IAmb IAmb 11 28 51.8
comp=Z,7.5nm,1.2s
PDAR **Pinedale Array** **53.28 293** P **P** **11 28 47.0 -2.0**
comp=Z,2.5nm,0.9s,baz=56,slow=6.1,SNR=13
PDAR LR LR 11 50 37.4
comp=Z,63nm,18.3s,baz=26,slow=35
PDAR **Pinedale Array** **53.28 293** P **P** **11 28 48.5 -0.5**
BW06 **Boulder Array** **53.28 293** P **P** **11 28 49.0 +0.1**
BW06 IAmb IAmb 11 28 51.8
comp=Z,8.1nm,1.2s
AAK **Ala-Archa** **53.34 67** *ceP* **P** **11 28 51.3 +2.0**
AAK pmax pmax
comp=Z,13nm,1.5s
KAN14 **Manchester OK** **53.36 280** P **P** **11 28 51.3 +2.0**
N23A **Red Feather La** **53.39 289** P **P** **11 28 50.4 +0.5**
N23A IAmb IAmb 11 28 53.2
comp=Z,8.5nm,1.1s
HWUT **Hardware Ranch** **55.06 294** P **P** **11 29 02.6 +0.8**
HWUT IAmb IAmb 11 29 03.5
comp=Z,7.9nm,1.3s
RDMU **Red Mountain** **55.14 292** P **P** **11 29 03.4 +0.9**
PV01 **Paradox Valley** **56.81 290** P **P** **11 29 14.6 +0.1**
PV01 IAmb IAmb 11 29 17.5
comp=Z,8.6nm,1.3s
PV03 **Paradox Valley** **56.82 290** P **P** **11 29 14.8 +0.3**
PV03 IAmb IAmb 11 29 17.4
comp=Z,11nm,1.4s
WMQ **Urumqi** **57.35 56** *eP* **P** **11 29 20.8 +2.7**
BANI **BANI** **57.91 243** P **P** **11 29 19.9 -2.4**
JCT **Junction City** **59.69 278** P **P** **11 29 34.9 +0.4**
JCT pmax pmax
comp=Z,9.0nm,1.2s
JCT **Junction City** **59.69 278** P **P** **11 29 34.9 +0.4**
WUAZ **Wupatki** **60.20 290** P **P** **11 29 38.5 +0.4**
WUAZ IAmb IAmb 11 29 40.7
comp=Z,4.6nm,0.9s
X16A **Lo Mia Camp, P** **61.18 290** P **P** **11 29 45.7 +0.9**
TXAR **Lajitas Array** **62.34 280** P **P** **11 29 49.8 -2.7**
comp=Z,0.3nm,0.9s,baz=112,slow=4.0,SNR=2.7
TUC **Tucson** **62.74 288** P **P** **11 29 56.3 +1.1**
TUC pmax pmax
comp=Z,3.0nm,1.1s
TUC **Tucson** **62.74 288** P **P** **11 29 56.3 +1.1**
KLR **Kul'dur** **64.16 22** *i* P **P** **11 30 06.5 +2.3**
KLR pmax pmax
comp=Z,2.0nm,1.2s
HHC **Hu-ho-hao-te** **67.69 40** *eP* **P** **11 30 27.3 +0.1**
HHC pmax pmax
comp=Z,27nm,1.0s
HHC pmax pmax
comp=Z,140nm,7.0s
LZH **Lanzhou** **69.78 48** *eP* **P** **11 30 40.0 -0.4**
LZH pP pP 11 30 43.3 -0.8
LZH sP sP 11 30 45.0 -0.5
LZH *e*PP **PP** **11 33 16.3 +2.2**
LZH pmax pmax
comp=Z,19nm,1.3s
LZH pmax pmax
comp=Z,65nm,7.1s
LZH LR LR
comp=N,110nm,16.5s
LZH LR LR
comp=E,110nm,16.7s
LZH LR LR
comp=Z,180nm,18.5s
CD2 **Chengdu** **74.51 50** P **P** **11 31 06.0 -2.6**
CD2 S **SKiKP** **11 40 38.5 +4.2**
CD2 pmax pmax
comp=Z,180nm,4.5s
CD2 LR LR
comp=N,300nm,16.3s
CD2 LR LR
comp=E,230nm,22.0s
CD2 LR LR
comp=Z,290nm,12.2s
NJ2 **Nanjing** **77.92 37** *eP* **P** **11 31 26.3 -1.6**
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
CMAR **Chiang Mai Arr** **84.25 59** P **P** **11 32 00.8 -0.9**
comp=Z,0.4nm,0.4s,baz=322,slow=6.8,SNR=4.0
CMAR **Chiang Mai Arr** **84.25 59** *i* P **P** **11 32 02.2 +0.4**
QIZ **Qiongzhong** **87.53 49** P **P** **11 32 16.3 -1.7**
QIZ **Qiongzhong** **87.53 49** S **S** **11 42 55.5 -3.6**
QIZ LR LR
comp=N,210nm,17.5s
QIZ LR LR
comp=E,150nm,14.4s
QIZ LR LR
comp=Z,190nm,17.2s

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*MEX **29** 11:28:51.8±0.8, 15°.30N×91°.99W, h182km±5km, MD4.1*
*NEIC **29** 11:28:51.5±2.0, 15°.31N±0°.06×91°.97W±0°.06, h177km±5km, Error ellipse: s-maj=9.0km s-min=7.7km az=211.0*
ISC 29 11:28:52.1±0.9, 15°.37N±0°.07×92°.02W±0°.05, h172km±7km, n35, σ0s95/45, mb4.3/5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HUEH	**Huehuetenango**	**0.50**	**96**			**Pn**	**11 29 15.5**	**-0.7**
HUEH				Sn		**Sn**	**11 29 34.3**	**-0.3**
THIG		**0.52**	**208**	*i* P		**Pn**	**11 29 15.6**	**-0.4**
THIG				*i* S		**Sn**	**11 29 33.3**	**-1.1**
THIG		**0.52**	**208**			**Pn**	**11 29 15.6**	**-0.4**
THIG						**Sn**	**11 29 34.5**	**+0.2**
RTAL	**Retalhuleu**	**0.90**	**160**			**Pn**	**11 29 17.2**	**-1.0**
RTAL				Sn		**Sn**	**11 29 37.4**	**-1.0**
CCIG	**Comitan**	**0.91**	**353**	*i* P		**Pn**	**11 29 18.8**	**+0.3**
CCIG				*i* S		**Sn**	**11 29 38.6**	**-0.4**
CCIG	**Comitan**	**0.91**	**353**			**Pn**	**11 29 19.0**	**+0.5**
CCIG						**Sn**	**11 29 39.7**	**+0.7**
PCIG		**1.21**	**286**	*i* P		**Pn**	**11 29 20.5**	**-0.1**
PCIG				*i* S		**Sn**	**11 29 42.3**	**-0.2**
PCIG		**1.21**	**286**			**Pn**	**11 29 20.5**	**-0.1**
PCIG						**Sn**	**11 29 42.3**	**-0.2**
FUG	**Fuego 3**	**1.46**	**129**	*eP*		Pn	11 29 36.8	+14
FUG				*eS*		**Sn**	**11 29 51.0**	**+3.9**
TGIG		**1.76**	**323**	*i* P		**Pn**	**11 29 26.4**	**+0.4**
TGIG				*i* S		**Sn**	**11 29 52.1**	**-0.2**
TGIG		**1.76**	**323**			**Pn**	**11 29 26.4**	**+0.4**
NBG	**Las Nubes**	**1.79**	**116**	*eP*		**Pn**	**11 29 26.6**	**0.0**
NBG				*eS*		Sn	11 29 38.9	-14
MRL	**Marmol**	**2.27**	**97**	*eP*		**Pn**	**11 29 31.0**	**-0.9**
PETF	**Flores**	**2.57**	**53**			**Pn**	**11 29 34.2**	**-1.0**
ESQI	**Esquipulas**	**2.71**	**107**			**Pn**	**11 29 36.0**	**-0.9**
MTO3	**Montecristo**	**2.74**	**110**			**Pn**	**11 29 36.6**	**-0.8**
CMIG	**Matias Romero**	**3.24**	**302**	*i* P		**Pn**	**11 29 43.4**	**+0.1**
CMIG				*i* S		**Sn**	**11 30 22.6**	**-0.7**
CMIG	**Matias Romero**	**3.24**	**302**			**Pn**	**11 29 43.4**	**+0.1**
TEIG	**Tepich**	**6.00**	**36**			**Pn**	**11 30 17.6**	**-1.4**
TLIG	**Tlapa**	**6.65**	**290**			**Pn**	**11 30 29.5**	**+1.7**
JTS	**Las Juntas de**	**8.54**	**125**	Pn		**Pn**	**11 30 50.8**	**-1.9**
Z47A	**Carrollton**	**18.11**	**11**	P		**Pn**	**11 32 54.0**	**+1.2**
Z47A				IAmb	IAmb	11 32 54.5		
comp=Z,13nm,0.8s								
SWET	**Sewanee**	**20.50**	**14**	P		**P**	**11 33 18.0**	**+1.2**
SWET				IAmb	IAmb	11 33 19.0		
comp=Z,5.0nm,0.9s								
V48A	**Smith Brothers**	**20.81**	**12**	P		**P**	**11 33 20.8**	**+0.7**
V48A				IAmb	IAmb	11 33 22.6		
comp=Z,4.5nm,0.8s								
WVT	**Waverly**	**21.01**	**9**	P		**P**	**11 33 23.0**	**+0.8**
CLTN	**Cedars of Leba**	**21.25**	**13**	P		**P**	**11 33 25.1**	**+0.4**
T42A	**Van Buren**	**21.59**	**2**	P		**P**	**11 33 28.1**	**-0.2**
U49A	**Red Boiling Sp**	**21.78**	**14**	P		**P**	**11 33 30.2**	**-0.1**
U49A				IAmb	IAmb	11 33 31.1		
comp=Z,6.6nm,0.9s								
S44A	**Carbondale**	**22.37**	**6**	P		**P**	**11 33 36.2**	**+0.1**
SIUC	**Southern Illin**	**22.39**	**6**	P		**P**	**11 33 36.6**	**+0.3**
WCI	**Wyandotte Cave**	**23.32**	**11**	P		**P**	**11 33 44.7**	**0.0**
WCI				IAmb	IAmb	11 33 46.6		
comp=Z,7.9nm,0.8s								
V58A	**Windy Hill, Pi**	**23.39**	**27**	P		**P**	**11 33 45.4**	**0.0**
V58A				IAmb	IAmb	11 33 57.5		
comp=Z,14nm,1.4s								
S54A	**Dingess, Beckl**	**24.27**	**21**	P		**P**	**11 33 53.6**	**+0.1**
S54A				IAmb	IAmb	11 34 05.9		
comp=Z,16nm,1.4s								
T57A	**Hurt**	**24.34**	**25**	P		**P**	**11 33 54.5**	**+0.4**
T57A				IAmb	IAmb	11 33 58.0		
comp=Z,9.6nm,1.4s								
TJX	**Tijuana**	**28.43**	**311**	P		**P**	**11 34 30.4**	**-0.5**

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*MAN **29** 11:39:09.5, 11°.39N×124°.60E, h5km, MS3.8*
MAN Intensity IV - Capoocan, Carigara and Leyte, Leyte; Intensity III - Jaro, Alang-alang and San Miguel, Leyte.
*IDC **29** 11:39:10.2±0.6, 11°.37N×124°.93E, h0km, mb4.1/21, mb1 4.2/24, mb1mx4.1/58, mbtmp4.2/24, ML4.7/2, MS3.5/23, Ms1 3.6/23, ms1mx3.5/36, Error ellipse: s-maj=24.5km s-min=11.4km az=77.0*
*NEIC **29** 11:39:15.8±1.9, 11°.30N±0°.06×124°.9E±0°.1, h34km±6km, mb4.5/32, Error ellipse: s-maj=15.7km s-min=7.0km az=63.0*
*DJA **29** 11:39:25.0±1.1, 11°.N±7°.×12°.5E±°, h69km±11km, M5.2/12, mb4.5/12, mB4.9/2, MLv5.6/2, Mw(mB)4.2/2*
ISC 29 11:39:12.7±0.4, 11°.31N±0°.03×124°.61E±0°.04, h10km, n111, σ1s82/93, mb4.4/32, MS3.5/21, 2C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**1.17**	**213**	⇑*iP*		**Pb**	**11 39 31.8**	**-3.2**
LLP				*i* S		**Sb**	**11 39 49.0**	**-1.2**
MSLP	**Maasin**	**1.19**	**168**	*eP*		**Pb**	**11 39 33.5**	**-1.9**
MSLP				*eS*		**Sn**	**11 39 52.7**	**+1.0**
CNP	**Catarman**	**1.20**	**3**	*eP*		**Pn**	**11 39 34.3**	**-1.2**
CNP				*eS*		**Sb**	**11 39 51.7**	**+0.7**
GUIM	**Jordan**	**2.09**	**251**	*eP*		**Pn**	**11 39 46.0**	**-1.9**
GUIM				*eS*		**Sn**	**11 40 13.9**	**-0.1**
GLSP	**General Luna,**	**2.13**	**135**	*eP*		**Pn**	**11 39 47.5**	**-0.8**
GLSP				*eS*		**Sg**	**11 40 19.4**	**-1.7**
PVCP	**Virac**	**2.32**	**349**	*eP*		**Pn**	**11 39 49.8**	**-1.1**
PVCP				*eS*		**Sb**	**11 40 25.7**	**+2.4**
PVCP	**Virac**	**2.32**	**349**	*eP*		**Pn**	**11 39 51.0**	**+0.1**
CNOP	**Candoni, Negro**	**2.43**	**233**	*eP*		**Pn**	**11 39 49.9**	**-2.5**
CNOP				*eS*		**Sn**	**11 40 19.3**	**-3.0**
JAP	**San Jose, Anti**	**2.67**	**258**⇑	*eP*		**Pn**	**11 39 56.9**	**+1.1**
CGP	**Cagayan de Oro**	**2.83**	**178**‖	*eP*		**Pn**	**11 39 59.0**	**+0.9**
BUKP	**Musuan**	**3.44**	**172**	*eP*		**Pn**	**11 40 06.5**	**+0.1**
CUYO	**Cuyo Island**	**3.55**	**263**	*eP*		**Pn**	**11 40 07.1**	**-0.8**
SJMP	**San Jose**	**3.60**	**289**	*eP*		**Pn**	**11 40 07.9**	**-0.7**
PAGZ	**Pagadian**	**3.64**	**199**	*eP*		**Pn**	**11 40 07.9**	**-1.3**
LQP	**Lukban**	**4.09**	**313**	*eP*		**Pn**	**11 40 19.7**	**+4.2**
KCP	**Kidapawan**	**4.30**	**174**‖	*eP*		**Pb**	**11 40 27.6**	**-0.8**
DAV	**Davao City (W)**	**4.32**	**167**	Pn		**Pn**	**11 40 18.9**	**+0.4**
30nm,0.3s,baz=30,slow=9.8,SNR=1.2								
TGY	**Tagaytay City**	**4.53**	**308**	Pn		**Pn**	**11 40 24.5**	**+3.0**
43nm,0.3s,baz=114,slow=7.1,SNR=1.6								
MATI	**Mati**	**4.63**	**159**	*eP*		**Pn**	**11 40 24.1**	**+1.3**
ENPP	**El Nido**	**5.08**	**269**	*eP*		**Pn**	**11 40 27.5**	**-1.5**
ENPP				*eS*		Sn	11 41 19.4	-8.4
SGSI	**Sangihe**	**7.63**	**173**	P		Pn	11 41 12.2	+8.2
2.2nm236nm,0.6s								
MYLDM	**Lahad Datu**	**8.58**	**225**			**Pn**	**11 41 20.8**	**+3.8**
I39PW	**PALAU INFRASON**	**10.50**	**110**	*i*			12 46 30.0	

baz=292,slow=314,SNR=2.0
TTSI Tana Toraja 15.03 199 P P 11 42 59.5 +8.7
SBUM Sibu 15.11 235 **P** **P** **11 42 55.9 +4.3**
MSAI Masohi 15.18 163 P **P** **11 42 57.9 +5.5**
8.6nm,1.1s
MTKI Muara Teweh, K 15.53 219 P **P** **11 42 59.2 +2.9**
SPSI Sidrap Palu 15.92 198 P P 11 43 12.6 +12
FAKI Fak Fak 16.05 151 Pn **Pn** **11 42 57.6 -1.0**
BNSI Bone 16.23 196 P P 11 43 20.9 +17
KAPI Kappang 16.92 197 P **P** **11 43 11.7 0.0**
baz=152,slow=16,SNR=1.0
KAPI LR LR 11 51 03.5
comp=Z,129nm,18.5s,baz=50,slow=42
KAPI Kappang 16.92 197 P **P** **11 43 11.7 0.0**
SMPI Sarmi 19.27 132 P **Pn** **11 43 44.0 +5.4**
27nm,1.3s
GUMO Guam 19.91 81 LR LR 11 49 39.2
comp=Z,156nm,21.1s,baz=234,slow=32
MMRI Maumere 19.95 187 P **P** **11 43 44.2 -0.9**
MMRI IAmb IAmb 11 43 51.7
comp=Z,24nm,1.0s
SOEI Soe 20.93 181 P Pn 11 44 04.6 +6.2
comp=Z,26nm,1.0s
JAY Jayapura 21.09 130 LR LR 11 50 21.0
comp=Z,220nm,22.0s,baz=346,slow=32
BATI Baumata 21.39 183 P **P** **11 43 58.7 -2.1**
comp=Z,13nm,0.4s,baz=300,slow=5.1,SNR=2.3
BATI LR LR 11 55 12.5
comp=Z,109nm,18.3s,baz=356,slow=45
JNU Nakatsue 22.46 14 LR LR 11 52 11.3
comp=Z,133nm,20.2s,baz=217,slow=35
ENH Enshi 23.53 326 P **P** **11 44 24.4 +1.2**
ENH IAmb IAmb 11 44 40.1
comp=Z,14nm,1.2s
IPM Ipoh 24.31 256 P **P** **11 44 29.7 -1.0**
LEM Lembang 24.70 224 LR LR 11 55 27.2
comp=Z,196nm,18.6s,baz=30,slow=39
MTN Manton Dam 24.85 165 P **P** **11 44 35.2 -0.4**
MTN IAmb IAmb 11 44 57.2
comp=Z,13nm,1.1s
TNG Tangerang 24.92 227 P P 11 44 26.2 -10
CMAR Chiang Mai Arr 25.78 289 P **P** **11 44 45.0 +1.0**
comp=Z,0.7nm,0.3s,baz=100,slow=8.5,SNR=6.1
CMAR LR LR 11 55 30.5
comp=Z,51nm,19.1s,baz=166,slow=38
CMAR Chiang Mai Arr 25.78 289 P **P** **11 44 45.5 +1.5**
INCN Inchon 26.13 4 P **P** **11 44 46.4 -0.6**
KSRS Korea Array 26.21 6 P **P** **11 44 47.4 -0.3**
comp=Z,1.7nm,0.8s,baz=190,slow=12,SNR=4.5
KSRS LR LR 11 54 40.2
comp=Z,128nm,20.8s,baz=196,slow=36
XAN Xi'an 26.79 330 P **P** **11 44 53.2 +0.2**
XAN IAmb IAmb 11 44 57.4
comp=Z,7.4nm,0.8s
PSI Prapat 26.83 254 P **P** **11 44 56.8 +3.0**
comp=Z,6.8nm,0.9s,baz=182,slow=1.7,SNR=4.4
RPSI Rantau Prapat 26.86 253 P **P** **11 44 54.5 +0.6**
RPSI Rantau Prapat 26.86 253 P **P** **11 44 56.8 +2.9**
MJAR Matsushiro Arr 27.97 24 LR LR 11 54 36.1
comp=Z,120nm,20.7s,baz=210,slow=33
FITZ Fitzroy Crossi 29.23 178 P **P** **11 45 15.9 +0.9**
comp=Z,1.9nm,0.7s,baz=12,slow=8.6,SNR=6.9
FITZ LR LR 11 58 01.3
comp=Z,41nm,20.6s,baz=358,slow=39
FITZ Fitzroy Crossi 29.23 178 P **P** **11 45 13.5 -1.4**
COEN Coen 31.13 143 P P 11 45 25.3 -6.5
COEN IAmb IAmb 11 45 42.1
comp=Z,14nm,1.4s
KRVT Keravat (AS076 31.38 118 LR LR 11 58 40.1
comp=Z,82nm,18.1s,baz=300,slow=38
WB0 Warramunga Arr 32.35 163 P **P** **11 45 41.4 -1.0**
WRAB Tennant Creek 32.49 163 P **P** **11 45 41.7 -2.0**
WRAB IAmb IAmb 11 45 45.7
comp=Z,7.0nm,1.2s
WRA Warramunga Arr 32.50 163 P **P** **11 45 41.4 -2.3**
comp=Z,1.8nm,0.9s,baz=344,slow=9.5,SNR=11
WRA Warramunga Arr 32.50 163 P **P** **11 45 41.9 -1.9**
WB2 Warramunga Arr 32.50 163 P **P** **11 45 43.8 +0.1**
WB2 IAmb IAmb 11 45 45.6
comp=Z,8.9nm,1.1s
WC3 Warramunga Arr 32.52 163 P **P** **11 45 43.3 -0.6**
WC3 IAmb IAmb 11 45 45.8
comp=Z,8.7nm,1.1s
WR0 Warramunga Arr 32.57 162 P **P** **11 45 43.8 -0.6**
WR0 IAmb IAmb 11 45 50.5
comp=Z,10nm,1.4s
USRK Ussuriysk Ar. 33.39 10 P **P** **11 45 51.0 -0.3**
comp=Z,2.9nm,0.8s,baz=186,slow=9.8,SNR=4.7
AS31 Alice Springs 35.93 165 P **P** **11 46 15.2 +1.7**
ASAR Alice Springs 35.93 165 P **P** **11 46 12.9 -0.6**
comp=Z,2.9nm,0.7s,baz=346,slow=7.9,SNR=22
ASAR LR LR 12 03 24.1
comp=Z,53nm,18.9s,baz=352,slow=40
ASAR Alice Springs 35.93 165 P **P** **11 46 12.3 -1.2**
SONM Songino Array 39.49 341 P **P** **11 46 43.4 -0.2**
comp=Z,1.3nm,0.8s,baz=148,slow=8.7,SNR=7.1
SONM LR LR 12 03 32.4
comp=Z,61nm,21.2s,baz=196,slow=37
H11S3 WAKE ISLAND Hy 41.21 75 T T 12 30 24.6
baz=277
H11S1 WAKE ISLAND Hy 41.23 75 T T 12 30 12.3
baz=277
H11S2 WAKE ISLAND Hy 41.23 75 T T 12 30 20.1
baz=277
H11N1 WAKE ISLAND Hy 41.50 73 T T 12 30 25.7
baz=265,slow=74,SNR=14
H11N2 WAKE ISLAND Hy 41.51 73 T T 12 30 20.9
baz=265,slow=74,SNR=8.6
H11N3 WAKE ISLAND Hy 41.52 73 T T 12 30 20.0
baz=265,slow=74,SNR=14
FORT Forrest 41.97 176 P **P** **11 47 05.6 +1.6**
BBOO Buckleboo 45.21 166 P **P** **11 47 28.8 -1.3**
STKA Stephens Creek 45.92 160 P **P** **11 47 35.4 -0.4**
comp=Z,2.3nm,0.7s,baz=342,slow=9.6,SNR=6.6
STKA LR LR 12 09 03.8
comp=Z,52nm,19.4s,baz=18,slow=39
PETK Petropavlovsk- 49.40 26 LR LR 12 06 37.2
comp=Z,53nm,21.5s,baz=224,slow=34
MKAR Makanchi Array 50.22 323 P **P** **11 48 10.4 +1.4**
comp=Z,1.6nm,0.8s,baz=126,slow=8.7,SNR=9.6
MKAR Makanchi Array 50.22 323 P **P** **11 48 09.3 +0.4**
NIL Nilore 51.80 304 P **P** **11 48 22.4 +1.3**
ZAAQ Zalesovo Array 52.94 332 P **P** **11 48 29.7 +0.6**
ZALV Zalesovo Beam 52.94 332 P **P** **11 48 29.6 +0.5**
comp=Z,1.5nm,0.8s,baz=103,slow=6.5,SNR=6.8
ZALV LR LR 12 13 14.3
comp=Z,76nm,18.3s,baz=64,slow=38
ZALV Zalesovo Beam 52.94 332 P **P** **11 48 29.3 +0.2**
KURK Kurchatov 54.30 326 P **P** **11 48 38.0 -1.0**
KK06 Karatay Array 56.35 315 P **P** **11 48 55.2 +1.1**
KK31 Karatay Array 56.36 315 P **P** **11 48 55.5 +1.2**
KK31 IAmb IAmb 11 49 03.0
comp=Z,3.7nm,0.8s
KKAR Karatay Array 56.36 315 P **P** **11 48 55.2 +1.0**
KKAR IAmb IAmb 11 49 03.0
comp=Z,3.7nm,0.8s
KKAR Karatay Array 56.36 315 P **P** **11 48 55.5 +1.2**
NRIK Noril'sk 62.62 346 P **P** **11 49 35.0 -1.9**
comp=Z,1.8nm,0.5s,baz=56,slow=7.3,SNR=2.4
NRIK LR LR 12 18 03.9
comp=Z,50nm,21.7s,baz=200,slow=37
GEYT Alibeck 64.62 307 LR LR 12 21 03.6
comp=Z,38nm,19.9s,baz=15,slow=39
ABKAR Akbulak array 65.03 319 P **P** **11 49 53.8 +0.6**
ARU Arti 67.47 327 P **P** **11 50 08.1 -0.6**
comp=Z,0.8nm,0.5s,baz=2.4,slow=2.6,SNR=3.5
BPAW Bear Paw Mtn. 77.47 27 P **P** **11 51 08.3 +0.1**
BPAW IAmb IAmb 11 51 13.1
comp=Z,5.5nm,1.2s
ILAR Eielson Array 79.22 26 P **P** **11 51 15.6 -2.3**
comp=Z,0.3nm,0.6s,baz=245,slow=4.4,SNR=5.8
ARCES ARCESS Array B 82.66 340 P **P** **11 51 36.1 0.0**
comp=Z,5.8nm,1.0s,baz=66,slow=9.7,SNR=6.8
ARCES LR LR 12 32 26.4
comp=Z,38nm,18.2s,baz=260,slow=39
BRTR Keskin Array B 83.61 309 LR LR 12 33 17.5
comp=Z,15nm,18.7s,baz=75,slow=39
FINES FINESS Array B 84.21 331 P **P** **11 51 43.2 -1.0**
comp=Z,1.8nm,0.5s,baz=95,slow=4.8,SNR=9.8
AKASG Malin Array Be 84.73 321 P **P** **11 51 45.2 -1.9**
comp=Z,3.4nm,0.9s,baz=66,slow=4.5,SNR=10
AKASG Malin Array Be 84.73 321 P **P** **11 51 47.4 +0.3**
AKBB Malin Array Si 84.73 321 P **P** **11 51 50.1 +3.0**
C36M Paulatuk 86.81 19 P **P** **11 51 56.4 -0.6**
EUNU Eureka 87.38 5 P **P** **11 51 59.2 -0.5**
BURAR Bucovina Array 87.98 318 P **P** **11 52 06.1 +2.8**

PPT Papeete 89.44 108 LR LR 12 29 05.4
comp=Z,19nm,18.3s,baz=287,slow=34
NOA NORSAR Array B 91.11 333 LR LR 12 35 52.1
comp=Z,52nm,18.2s,baz=220,slow=37
VNDA Vanda 91.16 172 P **P** **11 52 15.4 -1.9**
comp=Z,0.8nm,0.8s,baz=15,slow=5.9,SNR=1.8
YKA Yellowknife Ar 93.47 24 P **P** **11 52 26.0 -2.4**
comp=Z,0.4nm,0.7s,baz=312,slow=3.7,SNR=4.9
GERES GERESS Array B 94.87 322 P **P** **11 52 33.8 -1.5**
comp=Z,0.4nm,0.7s,baz=72,slow=3.2,SNR=2.4
GERES LR LR 12 36 57.9
comp=Z,55nm,18.3s,baz=300,slow=36
TXAR Lajitas Array 118.36 48 PKP **PKPdf** **11 57 59.3 -2.0**
comp=Z,0.2nm,0.8s,baz=352,slow=5.5,SNR=2.1

IDC 29 11:43:22.6±2.0, 2.02N×126.08E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/44, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=122.3km s-min=26.7km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.00**	**181**	P	P	11 47 56.9	0.0
	0.1nm,0.3s,baz=24,slow=13,SNR=2.8						
WRA	**Warramunga Arr**	**23.29**	**160**	P	P	11 48 30.9	-1.2
	1.3nm,0.3s,baz=338,slow=10,SNR=32						
ASAR	**Alice Springs**	**26.65**	**164**	P	P	11 49 04.4	+1.1
	0.6nm,0.4s,baz=345,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**58.59**	**326**	P	P	11 53 21.3	-0.1
	0.2nm,0.4s,baz=119,slow=7.0,SNR=2.5						

WEL 29 11:50:32.6, 42.5S±1.1°×17.3E±1.1°, h55km±5km, M2.5/10, ML2.5/10, MLv2.5/10, Error ellipse: s-maj=0.0km s-min=0.0km az=87.8, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHZ	**Kahutara**	**0.54**	**92**	P	Pn	11 50 45.8	+1.2
KHZ				S	Sn	11 50 53.8	+0.5
LTZ	**Lake Taylor**	**0.55**	**226**	P	Pn	11 50 46.0	+1.2
LTZ				S	Sn	11 50 54.7	+0.9
THZ	**Tophouse**	**0.64**	**6**	P	Pn	11 50 46.3	+0.4
DSZ	**Denniston Nort**	**0.99**	**311**	P	Pn	11 50 51.1	+0.8
DSZ				S	Sn	11 51 04.0	+0.5
BSWZ	**Blackbirch Sta**	**1.04**	**50**	P	Pn	11 50 52.6	+1.5
BSWZ				S	Sn	11 51 06.6	+1.9
INZ	**Inchbonnie**	**1.06**	**252**	P	Pn	11 50 52.6	+1.4
INZ				S	Sn	11 51 06.6	+1.5
OXZ	**Oxford**	**1.09**	**211**	P	Pn	11 50 52.1	+0.5
OXZ				S	Sn	11 51 06.2	+0.4
NNZ	**Nelson**	**1.25**	**20**	P	Pn	11 50 55.0	+1.2
NNZ				S	Sn	11 51 11.3	+1.6
TUWZ	**Tuamarina**	**1.28**	**42**	P	Pn	11 50 55.4	+1.1
MQZ	**McQueen's Vall**	**1.31**	**185**	P	Pn	11 50 54.8	+0.2
MQZ				S	Sn	11 51 10.8	-0.3
RACZ	**Rakaia**	**1.42**	**200**	P	Pn	11 50 56.4	+0.3
QRZ	**Quartz Range**	**1.58**	**352**	P	Pn	11 51 00.3	+2.0
QRZ				S	Sn	11 51 18.1	+0.4

IDC 29 12:18:29.6±1.6, 1.97N×126.54E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/34, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=111.6km s-min=23.4km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.96**	**183**	P	P	12 23 03.7	+0.2
	0.1nm,0.3s,baz=20,slow=12,SNR=1.6						
WRA	**Warramunga Arr**	**23.08**	**161**	P	P	12 23 37.2	+0.1
	1.3nm,0.5s,baz=340,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.47**	**165**	P	P	12 24 08.5	-0.2
	0.4nm,0.5s,baz=346,slow=13,SNR=11						
ASAR				PcP	PcP	12 27 33.8	-0.3
	0.1nm,0.4s,baz=340,slow=2.4,SNR=4.7						
MKAR	**Makanchi Array**	**58.89**	**326**	P	P	12 28 30.3	-0.1
	0.3nm,0.4s,baz=122,slow=7.2,SNR=7.3						

*NEIC **29** 12:27:09.7±1.0, 18.05S±0.2×178.1W±0.2, h553km±8km, mb4.1/18, Error ellipse: s-maj=30.5km s-min=13.6km az=144.0*
*IDC **29** 12:27:12.9±7.9, 17.79S×178.31W, h578km±100km, mb3.1/8, mb1 3.3/9, mb1mx3.1/43, mbtmp4.1/9, Error ellipse: s-maj=86.1km s-min=32.8km az=155.0*
ISC 29 12:27:13.1±0.7, 18.1S±0.2×178.2W±0.1, h590km, n31, σ0968/31, mb4.0/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.98**	**252**	P	**P**	**12 30 21.8**	**+0.3**
	0.4nm,0.3s,baz=110,slow=23,SNR=1.0						
ARMA	**Armidale**	**30.05**	**240**	P	**P**	**12 32 35.9**	**0.0**
ARMA				IAmb	IAmb	12 33 03.7	
	comp=Z,10nm,1.1s						
CTA	**Charters Tower**	**33.63**	**261**	P	**P**	**12 33 06.0**	**-0.3**
	comp=Z,5.7nm,0.8s,baz=73,slow=10,SNR=2.9						
CTAO	**Charters Tower**	**33.63**	**261**	P	**P**	**12 33 06.0**	**-0.3**
TOO	**Toolangi**	**37.25**	**231**	P	**P**	**12 33 35.8**	**-0.2**
TOO				IAmb	IAmb	12 33 38.6	
	comp=Z,13nm,1.3s						
COEN	**Coen**	**37.32**	**271**	P	**P**	**12 33 37.3**	**+0.5**
COEN				IAmb	IAmb	12 33 38.2	
	comp=Z,3.6nm,0.8s						
STKA	**Stephens Creek**	**38.75**	**241**	P	**P**	**12 33 48.2**	**0.0**
	comp=Z,1.6nm,0.5s,baz=83,slow=10,SNR=6.1						
STKA	**Stephens Creek**	**38.75**	**241**	P	**P**	**12 33 48.3**	**+0.2**
BBOO	**Buckleboo**	**43.52**	**241**	P	**P**	**12 34 25.9**	**0.0**
WR0	**Warramunga Arr**	**44.62**	**260**	P	**P**	**12 34 34.6**	**+0.2**
WR0				IAmb	IAmb	12 34 58.9	
	comp=Z,6.8nm,1.4s						
WB0	**Warramunga Arr**	**44.78**	**260**	P	**P**	**12 34 35.6**	**-0.1**
WB2	**Warramunga Arr**	**44.80**	**260**	P	**P**	**12 34 35.5**	**-0.4**
WB2				IAmb	IAmb	12 34 36.2	
	comp=Z,9.4nm,1.4s						
WRAB	**Tennant Creek**	**44.80**	**260**	P	**P**	**12 34 35.3**	**-0.6**
WRAB				IAmb	IAmb	12 34 36.2	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**44.81**	**260**	P	**P**	**12 34 36.0**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=96,slow=6.7,SNR=43						
WRA	**Warramunga Arr**	**44.81**	**260**	P	**P**	**12 34 35.0**	**-1.0**
AS31	**Alice Springs**	**44.95**	**254**	P	**P**	**12 34 37.2**	**+0.2**
AS31				IAmb	IAmb	12 34 37.7	
	comp=Z,2.5nm,0.7s						
ASAR	**Alice Springs**	**44.96**	**254**	P	**P**	**12 34 37.2**	**+0.2**
	comp=Z,8.6nm,0.5s,baz=90,slow=8.5,SNR=228						
ASAR	**Alice Springs**	**44.96**	**254**	P	**P**	**12 34 36.8**	**-0.3**
KNRA	**Kununurra**	**50.68**	**264**	P	**P**	**12 35 19.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**53.21**	**261**	P	**P**	**12 35 38.4**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=77,slow=5.9,SNR=1.1						
FITZ	**Fitzroy Crossi**	**53.21**	**261**	P	**P**	**12 35 38.5**	**+0.7**
VNDA	**Vanda**	**60.33**	**185**	P	**P**	**12 36 25.8**	**+0.4**
QSPA	**South Pole Qui**	**72.01**	**180**	P	**P**	**12 37 38.0**	**0.0**
QSPA				IAmb	IAmb	12 37 38.2	
	comp=Z,2.1nm,0.5s						
NVAR	**Mina Array Bea**	**79.38**	**44**	P	**P**	**12 38 19.3**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=244,slow=5.6,SNR=2.5						
PV10	**Paradox Valley**	**85.65**	**47**	P	**P**	**12 38 52.4**	**+1.7**
TXAR	**Lajitas Array**	**85.89**	**58**	P	**P**	**12 38 53.0**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=237,slow=3.9,SNR=5.3						
ILAR	**Eielson Array**	**85.97**	**13**	P	**P**	**12 38 50.5**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=217,slow=5.1,SNR=4.9						
SNAA	**Sanae**	**90.45**	**179**	P	**P**	**12 39 11.3**	**-1.1**
VNA3	**Neumayer Olymp**	**90.59**	**176**	P	**P**	**12 39 12.5**	**-0.3**
VNA2	**Neumayer--Watz**	**91.03**	**177**	P	**P**	**12 39 14.5**	**-0.4**
	baz=179,slow=4.4						
Z35A	**Perchaven, San**	**92.46**	**56**	P	**P**	**12 39 20.4**	**-1.8**

IDC 29 12:31:12.6±2.0, 1.51N×126.49E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/44, mbtmp3.8/3, MS2.7/2, Ms1 2.7/2, ms1mx2.3/45, Error ellipse: s-maj=168.9km s-min=24.2km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.34**	**226**	LR	LR	12 37 16.2	
	comp=Z,38nm,18.6s,baz=60,slow=39						
WRA	**Warramunga Arr**	**22.67**	**161**	P	P	12 36 14.8	-0.9
	3.8nm,0.8s,baz=339,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.05**	**164**	P	P	12 36 48.5	+0.7
	1.6nm,0.8s,baz=348,slow=14,SNR=17						
PSI	**Prapat**	**27.57**	**273**	LR	LR	12 48 30.3	

comp=Z,20nm,18.1s,baz=101,slow=38
MKAR Makanchi Array 59.24 326 P **P** 12 41 15.8 -0.1
0.4nm,0.5s,baz=120,slow=8.3,SNR=7.9

*IDC **29** 12:40:14.2±1.2, 5.67N×61.23E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.6/39, mbtmp3.8/8, MS2.6/1, Ms1 2.6/1, ms1mx2.4/44, Error ellipse: s-maj=34.3km s-min=24.1km az=38.0*
*NEIC **29** 12:40:15.3±1.5, 5.67N±0.08×61.1E±0.2, h10km±2km, mb4.1/6, Error ellipse: s-maj=33.4km s-min=9.7km az=253.0*
ISC 29 12:40:15.4±1.1, 5.7N±0.2×61.2E±0.1, h10km, n18, σ0992/17, mb3.8/10, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**19.45**	**84**	LR	LR	12 49 32.7	
	comp=Z,16nm,19.6s,baz=17,slow=29						
RAYN	**Ar Rayn**	**23.31**	**321**	P	**P**	**12 45 21.9**	**-1.9**
RAYN				IAmb	IAmb	12 45 25.3	
	comp=Z,6.6nm,0.9s						
RPSI	**Rantau Prapat**	**37.74**	**93**	P	**P**	**12 47 30.8**	**-1.0**
KKAR	**Karatay Array**	**38.17**	**11**	P	**P**	**12 47 35.3**	**+0.2**
AAK	**Ala-Archa**	**38.65**	**16**	P	**P**	**12 47 40.0**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=212,slow=13,SNR=2.2						
AAK	**Ala-Archa**	**38.65**	**16**	P	**P**	**12 47 39.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**38.94**	**68**	P	**P**	**12 47 43.5**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=252,slow=8.9,SNR=4.3						
BRTR	**Keskin Array B**	**42.01**	**328**	P	**P**	**12 48 07.6**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=153,slow=11,SNR=4.9						
BRTR	**Keskin Array B**	**42.01**	**328**	P	**P**	**12 48 08.2**	**+1.0**
ABKAR	**Akbulak array**	**43.44**	**359**	P	**P**	**12 48 18.8**	**+0.3**
ABKAR				IAmb	IAmb	12 48 19.8	
	comp=Z,2.7nm,0.8s						
MKAR	**Makanchi Array**	**44.82**	**21**	P	**P**	**12 48 29.0**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=208,slow=12,SNR=1.6						
ZALV	**Zalesovo Beam**	**51.81**	**18**	P	**P**	**12 49 22.8**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=204,slow=13,SNR=2.1						
BURAR	**Bucovina Array**	**51.88**	**330**	P	**P**	**12 49 24.5**	**+0.2**
SONM	**Songino Array**	**56.97**	**35**	P	**P**	**12 50 00.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**59.05**	**282**	P	**P**	**12 50 17.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=90,slow=6.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**59.05**	**282**	P	**P**	**12 50 15.8**	**-0.5**
WRA	**Warramunga Arr**	**76.22**	**112**	P	**P**	**12 52 04.6**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=287,slow=5.5,SNR=7.1						
ASAR	**Alice Springs**	**76.59**	**116**	P	**P**	**12 52 06.7**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=289,slow=5.8,SNR=8.5						

JMA 29 12:51:14.1±0.2, 24.96N×123.53E, h29km, M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.65**	**164**	P	Pb	12 51 26.6	-0.3
IRIF				eS	Sb	12 51 35.6	-0.1
YOJ	**Yonaguni jima**	**0.69**	**224**	P	Pb	12 51 27.2	-0.3
YOJ				eS	Sb	12 51 35.8	-0.9
JISG	**Ishigakijimahi**	**0.80**	**117**	P	Pn	12 51 28.9	-0.5
JISG				S	Sb	12 51 39.6	-0.4
JIJ	**Ishigaki jima**	**0.81**	**137**	P	Pn	12 51 28.9	-0.7
JIJ				S	Sb	12 51 39.3	-1.1
JKRS	**Kuro-shima**	**0.84**	**149**	P	Pn	12 51 29.9	-0.1
JKRS				S	Sb	12 51 41.0	-0.1

TAP 29 12:52:11.1, 24.31N×121.72E, h19km±1km, ML1.7, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.12**	**11**	*i* P	Pg	12 52 15.7	+0.6
	baz=14						
ENA				*i* S	Sg	12 52 18.8	+1.0
	baz=14						
ENAH	**Nanao**	**0.16**	**32**	P	Pg	12 52 15.2	-0.4
	baz=31						
ENAH				S	Sg	12 52 19.7	+1.1
	baz=31						
NACB	**Ninganchiao**	**0.17**	**219**	P	Pg	12 52 16.0	+0.3
	baz=219						
NACB				*e*S	Sg	12 52 19.9	+1.0
	baz=219						
ETLH	**Xiulin Townshi**	**0.24**	**245**	P	Pg	12 52 17.2	+0.5
	baz=244						
ETLH				*e*S	Sg	12 52 21.3	+0.8
	baz=244						
TWD	**Chiawan**	**0.25**	**206**	*i* P	Pb	12 52 17.3	+0.4
	baz=204						
TWD				S	Sg	12 52 21.9	+1.1
	baz=204						
TWC	**Suao**	**0.32**	**22**	*e*P	Pb	12 52 18.4	0.0
	baz=23						
TWC				*e*S	Sb	12 52 23.9	+0.7
	baz=23						
NNSB	**Datong**	**0.33**	**291**	*e*P	Pb	12 52 19.0	+0.6
	baz=291						
NNSB				*e*S	Sb	12 52 24.2	+0.8
	baz=291						
NNSH	**Datong**	**0.33**	**291**	P	Pb	12 52 18.9	+0.5
	baz=291						
NNSH				S	Sb	12 52 24.1	+0.7
	baz=291						
NNS	**Nan Shan**	**0.34**	**293**	P	Pb	12 52 19.3	+0.6
	baz=292						
NNS				S	Sb	12 52 24.5	+0.7
	baz=292						
NDT	**Datong Townshi**	**0.35**	**328**	*e*P	Pb	12 52 18.8	0.0
	baz=327						
NDT				S	Sb	12 52 24.4	+0.5
	baz=327						
ENTT	**Nioudou**	**0.36**	**338**	P	Pb	12 52 19.4	+0.4
	baz=338						
ENTT				*e*S	Sb	12 52 25.1	+0.8
	baz=338						
TWE	**Neicheng**	**0.41**	**354**	*e*P	Pg	12 52 19.5	-0.1
	baz=355						
TWE				*e*S	Sb	12 52 27.5	+1.7
	baz=355						
FUSS	**Fushou**	**0.43**	**262**	P	Pb	12 52 20.8	+0.4
	baz=261						
FUSS				*e*S	Sb	12 52 27.4	+0.7
	baz=261						
WHF	**Hehuan Shan**	**0.44**	**248**	P	Pb	12 52 21.0	+0.3
	baz=247						
WHF				S	Sb	12 52 27.7	+0.6
	baz=247						
YHNB	**Yeheng**	**0.47**	**319**	P	Pb	12 52 21.5	+0.5
	baz=319						
YHNB				*e*S	Sb	12 52 28.6	+0.9
	baz=319						
NSK	**Sanguang**	**0.49**	**318**	*e*P	Pb	12 52 21.7	+0.5
	baz=318						
NSK				*e*S	Sb	12 52 29.0	+1.0
	baz=318						
NWLT	**Wulai**	**0.51**	**337**	*e*P	Pb	12 52 21.5	+0.1
	baz=337						
NWLT				S	Sb	12 52 28.4	0.0
	baz=337						
TDCB	**Techi**	**0.51**	**264**	*e*P	Pb	12 52 22.4	+0.8
	baz=263						
TDCB				*e*S	Sb	12 52 29.1	+0.4
	baz=263						
CHGB	**Renai**	**0.55**	**244**	P	Pg	12 52 23.2	+0.9
	baz=243						
CHGB				*e*S	Sb	12 52 31.4	+1.5
	baz=243						
ESL	**Shilin**	**0.56**	**208**	*e*P	Pb	12 52 22.0	-0.2
	baz=206						
ESL				S	Sn	12 52 31.4	-1.4
	baz=206						
OWD	**Renai**	**0.61**	**235**	P	Pb	12 52 22.9	-0.2
	baz=234						
OWD				S	Sg	12 52 32.3	+0.9
	baz=234						
WHP	**Taichung City**	**0.70**	**268**	P	Pn	12 52 26.0	-0.2
	baz=267						
WHP				S	Sg	12 52 34.9	+0.5
	baz=267						
NSTT	**Nanjuang**	**0.73**	**296**	*e*P	Pn	12 52 26.5	+0.1
	baz=296						
NSTT	

baz=233

IDC 29 12:57:44.7±8.0,7.°13S×130.°12E,h170km±83km,mb3.4/1, mb1 3.6/5,mb1mx3.2/37,mbtmp4.1/5,Error ellipse: s-maj=73.7km s-min=25.5km az=39.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
BATI	**Baumata**	**7.08**	**244**	P		Pn	12 59 26.3	+0.3
	10nm,0.3s,baz=128,slow=3.6,SNR=8.3							
BATI				S		Sn	13 00 47.0	+1.3
	3.8nm,0.3s,baz=96,slow=22,SNR=2.4							
FITZ	**Fitzroy Crossi**	**11.75**	**201**	P		Pn	13 00 26.6	-0.6
	1.7nm,0.3s,baz=27,slow=10,SNR=51							
FITZ				S		Sn	13 02 34.7	-2.9
	0.9nm,0.3s,baz=52,slow=23,SNR=7.1							
WRA	**Warramunga Arr**	**13.38**	**163**	P		Pn	13 00 46.9	-1.2
	0.7nm,0.3s,baz=339,slow=13,SNR=35							
WRA				S		Sn	13 03 09.7	-7.2
	1.0nm,0.3s,baz=346,slow=22,SNR=10.0							
ASAR	**Alice Springs**	**16.84**	**168**	P		Pn	13 01 31.3	+0.5
	0.3nm,0.3s,baz=347,slow=12,SNR=18							
ASAR				S		S	13 04 34.6	-2.4
	0.3nm,0.3s,baz=350,slow=25,SNR=6.4							
MKAR	**Makanchi Array**	**68.39**	**327**	P		P	13 08 28.0	0.0
	0.5nm,0.4s,baz=117,slow=7.7,SNR=9.0							

BJI ***29*** *13:05:06.0±0.0,5.°70N×61.°30E,h5km,mB5.4/61, mb4.8/72,Ms5.4/67,Ms7 5.2/65*

MOS ***29*** *13:05:06.1±1.1,5.°75N×61.°21E,h5km,mb5.2/73, MS4.8/33,Error ellipse: s-maj=7.3km s-min=4.2km az=95.5*

IDC ***29*** *13:05:07.1±0.4,5.°80N×61.°30E,h0km,mb4.5/34, mb1 4.6/37,mb1mx4.5/48,mbtmp4.5/37,ML3.8/3,MS4.8/19, Ms1 4.8/19,ms1mx4.6/30,Error ellipse: s-maj=11.0km s-min=10.5km az=161.0*

NEIC ***29*** *13:05:08.5±2.5,5.°73N±0.°09×61.°38E±0.°06,h10km±1km, mb5.1/88,Ms_20 5.2/370,Mwb5.3/36,Mww5.6, Mwc5.6(GCMT),Error ellipse: s-maj=14.8km s-min=10.2km az=161.0*

NEIC ***29*** *13:05:08.9,5.°72N×61.°36E,h4km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.85; Mθθ0.82; Mϕϕ0.03; Mrθ0.37; Mθϕ-0.64; Mϕr-0.26; Fault plane solution: M₀1.15000×10¹⁷ NP1:ϕs302.82000°, δ56.98000°,λ-85.32000°. NP2:ϕs114.28000°,δ33.32000°, λ-97.16000°. Principal axes: T 1.2742, Plg12.0000°, Azm29.0000°; N -0.3301, Plg4.0000°; Azm120.0000°; P -0.9441, Plg77.0000°, Azm228.0000°;*

GCMT ***29*** *13:05:12.5±0.1,5.°69N±0.°01×61.°28E±0.°01,h12km, MW5.5/154,Moment Tensor Solution. s94,c139; s154,c324; Duration: 1ŧ5 Moment tensor: Scale 10¹⁷ Nm; Mrr-2.43±.02; Mθθ1.74±.02; Mϕϕ0.68±.02; Mrθ1.08±.08; Mθϕ-1.09±.02; Mϕr-0.30±.08; Best double couple: M₀2.67300×10¹⁷ NP1:ϕs129.00000°,δ33.00000°, λ-79.00000°. NP2:ϕs295.00000°,δ57.00000°, λ-97.00000°. Principal axes: T 2.6520, Plg12.0000°, Azm31.0000°; N 0.0380, Plg6.0000°, Azm299.0000°; P -2.6930, Plg76.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *13:05:13,5.°67N×61.°28E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-2.55; Mθθ1.90; Mϕϕ0.64; Mrθ0.73; Mθϕ-1.14; Mϕr-0.47; Fault plane solution: M₀2.71000×10¹⁷ NP1:ϕs120.00000°, δ36.00000°,λ-91.00000°. NP2:ϕs301.00000°,δ54.00000°, λ-89.00000°. Principal axes: T 2.7196, Plg9.0000°, Azm31.0000°; N -0.0280, Plg1.0000°, Azm121.0000°; P -2.6917, Plg81.0000°, Azm215.0000°;*

NEIC ***29*** *13:05:17,5.°30N×61.°32E,h12km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-1.85; Mθθ1.09; Mϕϕ0.77; Mrθ2.35; Mθϕ-0.96; Mϕr-0.68; Fault plane solution: M₀3.08000×10¹⁷ NP1:ϕs146.00000°, δ21.00000°,λ-58.00000°. NP2:ϕs292.00000°,δ72.00000°, λ-101.00000°. Principal axes: T 3.0007, Plg26.0000°, Azm31.0000°; N 0.1620, Plg11.0000°, Azm295.0000°; P -3.1627, Plg61.0000°, Azm184.0000°;*

ISC 29 13:05:07.6±0.7,5.°80N±0.°04×61.°28E±0.°04,h2km±3km, n670,σ1ŧ84/583,mb5.1/191,MS5.2/251,48C-16D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
SOCY	**Socotra**	**9.59**	**312**	P		Pn	13 07 33.4	+6.5
SOCY	**Socotra**	**9.59**	**312**	Pn		Pn	13 07 33.2	+6.4
SHAO	**Shalim**	**13.34**	**336**	*i* P		**Pn**	**13 08 21.0**	**+2.9**
	SNR=9.6							
SHAO	**Shalim**	**13.34**	**336**	P		**Pn**	**13 08 22.4**	**+4.3**
	SNR=12							
SHAO				P		**Pn**	**13 08 22.4**	**+4.3**
	SNR=12							
SHAO				P		**Pn**	**13 08 22.4**	**+4.3**
	SNR=12							
DMTO	**DMTO**	**13.36**	**333**	P		**Pn**	**13 08 22.7**	**+4.4**
	SNR=8.0							
DMTO				P		**Pn**	**13 08 22.7**	**+4.4**
	SNR=8.0							
DMTO				P		**Pn**	**13 08 22.7**	**+4.4**
	SNR=8.0							
RBK	**Rabkut**	**13.53**	**330**	P		**P**	**13 08 25.9**	**-4.2**
	SNR=6.7							
RBK				P		**P**	**13 08 25.9**	**-4.2**
	SNR=6.7							
RBK				P		**P**	**13 08 25.9**	**-4.2**
	SNR=6.7							
ABTO	**Aybut**	**13.88**	**326**	P		**Pn**	**13 08 29.6**	**+4.0**
	SNR=15							
ABTO				P		**Pn**	**13 08 29.6**	**+4.0**
	SNR=15							
WHFO	**Wadi Hawf**	**14.10**	**329**	P		**P**	**13 08 32.9**	**-3.5**
	SNR=20							
WHFO				P		**P**	**13 08 32.9**	**-3.5**
	SNR=20							
WHFO				P		**P**	**13 08 32.9**	**-3.5**
	SNR=20							
DQM	**DQM**	**14.51**	**346**	P		**Pn**	**13 08 36.3**	**+2.3**
	SNR=15							
DQM				P		**Pn**	**13 08 36.3**	**+2.3**
	SNR=15							
DQM				P		**Pn**	**13 08 36.3**	**+2.3**
	SNR=15							
MHTO	**MHTO**	**15.43**	**348**	P		**Pn**	**13 08 47.7**	**+1.2**
	SNR=55							
MHTO				P		**Pn**	**13 08 47.7**	**+1.2**
	SNR=55							
MHTO				P		**Pn**	**13 08 47.7**	**+1.2**
	SNR=55							
GOA	**Goa**	**15.64**	**51**	*e*P		**Pn**	**13 08 47.8**	**-1.4**
TRD	**Trivandrum**	**15.79**	**79**	*e*P		**Pn**	**13 08 52.6**	**+1.4**
JLN	**Jalan Bani Buh**	**16.35**	**354**	P		**Pn**	**13 08 59.0**	**+0.6**
	SNR=11							
JLN				P		**Pn**	**13 08 59.0**	**+0.6**
	SNR=11							
JLN				P		**Pn**	**13 08 59.0**	**+0.6**
	SNR=11							
WSAR	**Wadi Sarin**	**17.52**	**352**	P		**P**	**13 09 14.1**	**-0.3**
	0.3nm,0.3s,baz=201,slow=14,SNR=2.0							
WSAR				LR		LR	13 14 42.0	
	comp=Z,5μm,19.5s,baz=194,slow=33							
POO	**Poona**	**17.62**	**43**	*e*P		**Pn**	**13 09 13.8**	**-0.6**
POO				IAmb		IAmb	13 09 25.3	
	comp=Z,163nm,1.8s							
ALNE	**Al Ain**	**18.91**	**344**	*i* P		**Pn**	**13 09 30.3**	**0.0**
	SNR=15							
ATD	**Arta Tunnel**	**19.08**	**289**	P		**Pn**	**13 09 32.9**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=90,slow=20,SNR=1.7							
ATD	**Arta Tunnel**	**19.08**	**289**	P		**P**	**13 09 29.7**	**-1.9**
BHUJ	**Bhuj**	**19.14**	**24**	*e*P		**Pn**	**13 09 34.3**	**+1.4**
PALK	**Pallekele**	**19.36**	**85**	P		**Pn**	**13 09 35.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=0.6,slow=12,SNR=3.6							
PALK				LR		LR	13 15 33.9	
	comp=Z,6μm,19.1s,baz=15,slow=32							
PALK	**Pallekele**	**19.36**	**85**	P		**P**	**13 09 32.1**	**-2.6**
PALK				pmax		pmax		
	comp=Z,87nm,1.4s							
PALK	**Pallekele**	**19.36**	**85**	P		**P**	**13 09 32.1**	**-2.6**
ASHO	**Ashiyiah**	**19.43**	**346**	*i* P		**P**	**13 09 35.8**	**+0.4**
	SNR=16							
HATD	**Hatta, Dubai**	**19.55**	**346**	*i* P		**Pn**	**13 09 38.0**	**+0.1**
	SNR=18							
ASUD	**Al Ashush, Dub**	**19.57**	**344**	*i* P		**Pn**	**13 09 38.5**	**+0.3**
	SNR=7.4							
AJN	**Ajban**	**19.61**	**343**	P		**Pn**	**13 09 38.2**	**-0.4**
FAQ	**Al Faqa, Dubai**	**19.61**	**344**	*i* P		**Pn**	**13 09 38.5**	**-0.1**
	SNR=10							
UOSS	**Minazif**	**19.65**	**346**	*i* P		**P**	**13 09 38.4**	**+0.7**
	SNR=9.8							
UOSS	**Minazif**	**19.65**	**346**			**Pn**	**13 09 39.1**	**0.0**
UOSS					IAmb	IAmb	13 09 52.7	
	comp=Z,172nm,1.5s							
NAZ	**Nazwa, Dubai**	**19.82**	**345**	P		**P**	**13 09 40.3**	**+0.6**
MDH	**Madha**	**19.96**	**347**	P		**Pn**	**13 09 42.1**	**-0.7**
MDRS	**Chennai**	**20.05**	**68**	*e*P		Pn	13 09 45.2	+1.3
MSFE	**Esma-Masafi**	**20.05**	**346**	P		Pn	13 09 43.6	-0.4
HYB	**Hyderabad**	**20.46**	**54**	*i* P		Pn	13 09 48.0	-0.8
HYB					*e*S	Sn	13 13 48.0	+7.9
BANOM	**Banah**	**20.57**	**347**	P		Pn	13 09 49.0	-0.9
SHME	**Shamm**	**20.72**	**347**	P		Pn	13 09 51.9	+0.2
SBV	**Sambava**	**22.21**	**210**	P		**P**	**13 10 08.5**	**+3.0**
RAYN	**Ar Rayn**	**23.26**	**321**	*i* P		**P**	**13 10 15.0**	**-1.7**
	SNR=14							
RAYN	**Ar Rayn**	**23.26**	**321**	P		**P**	**13 10 16.3**	**-0.4**
RAYN				pmax		pmax		
	comp=Z,47nm,1.1s							
RAYN				MLR		MLR		
	comp=Z,3μm,22.0s							
RAYN	**Ar Rayn**	**23.26**	**321**			**P**	**13 10 16.2**	**-0.4**
RAYN					IAmb	IAmb	13 10 31.6	
	comp=Z,47nm,1.1s							
BHPL	**Bhopal**	**23.30**	**40**	*e*P		**P**	**13 10 20.2**	**+3.2**
BHPL					IAmb	IAmb	13 10 27.3	
	comp=Z,268nm,1.7s							
KIBK	**Kibwezi**	**24.57**	**251**	P		**P**	**13 10 29.8**	**+0.5**
	SNR=15							
LODK	**Lodwar**	**25.94**	**266**	P		**P**	**13 10 44.2**	**+2.6**
	SNR=41							
NDI	**New Delhi**	**27.31**	**32**	*e*P		**P**	**13 10 57.0**	**+3.2**
NDI					*e*S	**S**	**13 15 42.0**	**+7.7**
OPO	**Ambohidratompo**	**27.92**	**210**	P		**P**	**13 11 00.8**	**+1.2**
	comp=Z,5.7nm,1.0s,baz=26,slow=5.9,SNR=4.9							
OPO				LR		LR	13 19 17.4	
	comp=Z,3μm,20.2s,baz=190,slow=30							
ABPO	**Ambohimpanom**	**28.28**	**209**	P		**P**	**13 11 00.9**	**-1.9**
ABPO				pmax		pmax		
	comp=Z,19nm,1.4s							
ABPO				MLR		MLR		
	comp=Z,7μm,18.0s							
ABPO	**Ambohimpanom**	**28.28**	**209**	P		**P**	**13 11 00.9**	**-1.9**
ABPO	**Ambohimpanom**	**28.28**	**209**	IAMs_20		IAMs_20	13 20 31.8	
	comp=Z,7μm,18.0s							
HRA	**Herat**	**28.46**	**2**	P		**P**	**13 11 05.8**	**+1.6**
HRA				IAMs_20		IAMs_20	13 21 59.3	
	comp=Z,5μm,20.0s							
DDI	**Dehra Dun**	**29.06**	**31**	*e*P		**P**	**13 11 12.6**	**+3.1**
DDI					IAmb	IAmb	13 11 27.8	
	comp=Z,158nm,2.1s							
SMLA	**Simla**	**29.28**	**29**	*e*P		**P**	**13 11 13.9**	**+2.5**
SMLA					IAmb	IAmb	13 11 16.0	
	comp=Z,137nm,2.3s							
KBL	**Kabul**	**29.49**	**13**	P		**P**	**13 11 16.7**	**+3.3**
	SNR=17							
KBL				P		**P**	**13 11 16.7**	**+3.3**
	SNR=17							
KBL	**Kabul**	**29.49**	**13**	P		**P**	**13 11 16.4**	**+3.0**
KBL				pmax		pmax		
	comp=Z,28nm,1.5s							
KBL				MLR		MLR		
	comp=Z,3μm,22.0s							
KBL	**Kabul**	**29.49**	**13**	P		**P**	**13 11 16.4**	**+3.0**
BOK	**Bokaro**	**29.67**	**50**	*e*P		**P**	**13 11 15.7**	**+0.8**
DHRM	**DHARAMSHALA**	**29.82**	**26**	*e*P		**P**	**13 11 19.5**	**+3.0**
DHRM					IAmb	IAmb	13 11 29.3	
	comp=Z,49nm,1.2s							
NIL	**Nilore**	**29.86**	**20**	P		**P**	**13 11 19.7**	**+3.2**
NIL	**Nilore**	**29.86**	**20**	P		**P**	**13 11 16.4**	**-0.1**
NIL				pmax		pmax		
	comp=Z,46nm,1.5s							
NIL				MLR		MLR		
	comp=Z,4μm,22.0s							
NIL	**Nilore**	**29.86**	**20**	P		**P**	**13 11 16.4**	**-0.1**
NIL					IAmb	IAmb	13 11 37.3	
	comp=Z,46nm,1.4s							
MBAR	**Mbarara**	**31.15**	**259**	LR		LR	13 24 46.6	
	comp=Z,2μm,18.4s,baz=67,slow=38							
MBAR	**Mbarara**	**31.15**	**259**	P		**P**	**13 11 29.1**	**+0.8**
MBAR				pmax		pmax		
	comp=Z,12nm,1.3s							
MBAR				MLR		MLR		
	comp=Z,2μm,18.0s							
MBAR	**Mbarara**	**31.15**	**259**	P		**P**	**13 11 29.1**	**+0.8**
GEYT	**Alibeck**	**32.11**	**355**	P		**P**	**13 11 36.3**	**0.0**
	comp=Z,9.8nm,1.2s,baz=196,slow=10,SNR=4.8							
GEYT				LR		LR	13 24 55.3	
	comp=Z,970nm,21.3s,baz=175,slow=37							
GYA0B	**ALIBECK ARRAY**	**32.11**	**355**	P		**P**	**13 11 34.7**	**-1.7**
BELO	**BELONIA**	**33.84**	**56**	*e*P		**P**	**13 11 55.2**	**+3.6**
AGT	**Agartala**	**33.97**	**55**	*e*P		**P**	**13 11 56.4**	**+3.7**
SAIH	**SAIHA**	**34.82**	**58**	*e*P		**P**	**13 12 03.2**	**+2.9**
SAIH					IAmb	IAmb	13 12 10.5	
	comp=Z,161nm,1.9s							
DRK	**Karamyk**	**34.85**	**14**	P		**P**	**13 12 00.3**	**-0.2**
BTK	**Batken**	**35.17**	**13**	P		**P**	**13 12 04.8**	**+1.8**
BTK				pmax		pmax		
	comp=Z,49nm,1.4s							
BTK				MLR		MLR		
	comp=Z,6μm,21.0s							
BTK	**Batken**	**35.17**	**13**	P		**P**	**13 12 04.8**	**+1.8**
BTK					IAmb	IAmb	13 12 07.6	
	comp=Z,49nm,1.4s							
BTK					IAMs_20	IAMs_20	13 27 10.4	
	comp=Z,6μm,21.0s							
SHL	**Shillong**	**35.26**	**53**	*e*P		**P**	**13 12 04.6**	**+0.5**
SHL	**Shillong**	**35.26**	**53**	P		**P**	**13 12 06.0**	**+1.9**
	SNR=14							
SHL	**Shillong**	**35.26**	**53**	P		**P**	**13 12 02.5**	**-1.6**
SHL				pmax		pmax		
	comp=Z,35nm,1.2s							
SHL				MLR		MLR		
	comp=Z,5μm,19.0s							
SHL	**Shillong**	**35.26**	**53**	P		**P**	**13 12 02.5**	**-1.6**
SHL					IAmb	IAmb	13 12 06.5	
	comp=Z,35nm,1.2s							
SHL					IAMs_20	IAMs_20	13 25 16.2	
	comp=Z,5μm,19.0s							
GUWA	**GUWAHATI**	**35.41**	**52**	*e*P		**P**	**13 12 06.9**	**+1.7**
SILR	**SILCHAR**	**35.63**	**55**	*e*P		**P**	**13 12 10.3**	**+3.2**
KSH	**Kashi**	**36.09**	**19**	P		**P**	**13 12 08.8**	**-2.2**
KSH				S		**S**	**13 17 46.3**	**-5.0**
KSH				pmax		pmax		
	comp=Z,74nm,1.6s							
KSH				pmax		pmax		
	comp=Z,890nm,5.9s							
KSH				LR		LR		
	comp=Z,4μm,16.8s							
KSH				LR		LR		
	comp=Z,2μm,13.3s							
KSH				LR		LR		
	comp=Z,3μm,15.1s							
KCSI	**Kotacane, Aceh**	**36.44**	**92**	P		**P**	**13 12 17.9**	**+3.7**
	comp=Z,869nmcomp=Z,27nm,1.3s							
TEZP	**TEZPUR**	**36.49**	**52**	*e*P		**P**	**13 12 15.4**	**+1.0**
TEZP					IAmb	IAmb	13 12 30.2	
	comp=Z,105nm,1.9s							
GSI	**Gunungsitoli**	**36.49**	**96**		IAMs_20	IAMs_20	13 24 25.8	
	comp=Z,3μm,20.0s							
MARD	**Mardin**	**36.52**	**332**	P		**P**	**13 12 16.1**	**+1.4**
MARD					IAmb	IAmb	13 12 18.7	
	comp=Z,41nm,1.2s							
LSA	**Lhasa**	**36.86**	**46**	P		**P**	**13 12 19.8**	**+1.7**
LSA				pmax		pmax		
	comp=Z,75nm,1.5s							
LSA	**Lhasa**	**36.86**	**46**	*i* P		**P**	**13 12 19.4**	**+1.3**
	SNR=11							
LSA	**Lhasa**	**36.86**	**46**		IAMs_20	IAMs_20	13 26 26.0	
	comp=Z,4μm,19.0s							
ARSB	**Arslanbob**	**36.88**	**15**	P		**P**	**13 12 18.0**	**+0.2**
ARSB				pmax		pmax		
	comp=Z,24nm,1.4s							
ARSB	**Arslanbob**	**36.88**	**15**	P		**P**	**13 12 18.0**	**+0.2**
IUG	**Iuzhnay**	**37.02**	**11**	*e*P		**P**	**13 12 20.6**	**+1.7**
	comp=Z,44nm,2.1s,baz=11							
IUG					*e*S	**S**	**13 18 07.0**	**+1.6**
	baz=11							
IUG	**Iuzhnay**	**37.02**	**11**	*e*P		**P**	**13 12 20.6**	**+1.7**
IUG					*e*S	**S**	**13 18 06.9**	**+1.6**
IUG				pmax		pmax		
	comp=Z,44nm,2.1s							
KOHI	**KOHIMA**	**37.11**	**54**	*e*P		**P**	**13 12 22.5**	**+2.6**
GNI	**Garni**	**37.29**	**339**	P		**P**	**13 12 22.0**	**+0.8**
	comp=Z,9.1nm,0.3s,baz=302,slow=0.9,SNR=10							
GNI	**Garni**	**37.29**	**339**	P		**P**	**13 12 22.6**	**+1.4**
GNI	**Garni**	**37.29**	**339**	P		**P**	**13 12 22.5**	**+1.2**
GNI				S		**S**	**13 18 11.8**	**+2.2**
GNI	**Garni**	**37.29**	**339**	*ce*P		**P**	**13 12 23.8**	**+2.5**
GNI				pmax		pmax		
	comp=Z,50nm,1.6s							
GNI	**Garni**	**37.29**	**339**	P		**P**	**13 12 21.0**	**-0.2**
GNI				IAmb		IAmb	13 12 34.5	
	comp=Z,41nm,1.3s							
PSI	**Prapat**	**37.65**	**93**	P		**P**	**13 12 25.6**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=181,slow=1.1,SNR=5.8							
PSI	**Prapat**	**37.65**	**93**	P		**P**	**13 12 23.7**	**-1.0**
PSI				pmax		pmax		
	comp=Z,32nm,1.3s							
RPSI	**Rantau Prapat**	**37.66**	**93**	P		**P**	**13 12 23.7**	**-0.9**
JORH	**JORHAT**	**37.69**	**53**	*e*P		**P**	**13 12 26.6**	**+1.9**
MHMT	**Maesarieng**	**37.82**	**68**	P		**P**	**13 12 28.4**	**+2.6**
	comp=Z,24nm,1.6s							
KK31	**Karatay Array**	**38.03**	**11**	P		**P**	**13 12 29.7**	**+2.3**
KK31				pmax		pmax		
	comp=Z,28nm,1.5s							
KK31	**Karatay Array**	**38.03**	**11**	P		**P**	**13 12 29.7**	**+2.3**
KKAR	**Karatay Array**	**38.03**	**11**	P		**P**	**13 12 29.4**	**+2.0**
KKAR				pmax		pmax		
	comp=Z,28nm,1.5s							
KKAR	**Karatay Array**	**38.03**	**11**	P		**P**	**13 12 29.4**	**+2.0**
GAZ	**Gaziantep**	**38.18**	**328**	P		**P**	**13 12 29.9**	**+1.2**
EKS2	**Erkin-Say**	**38.34**	**15**	P		**P**	**13 12 33.1**	**+3.0**
	SNR=44							
AAK	**Ala-Archa**	**38.51**	**16**	P		**P**	**13 12 32.6**	**+1.1**
	comp=Z,4.6nm,0.7s,baz=211,slow=9.9,SNR=23							
AAK	**Ala-Archa**	**38.51**	**16**	P		**P**	**13 12 34.1**	**+2.6**
	SNR=12							
AAK	**Ala-Archa**	**38.51**	**16**	*i* P		**P**	**13 12 33.0**	**+1.5**
	SNR=16							
AAK	**Ala-Archa**	**38.51**	**16**	P		**P**	**13 12 33.8**	**+2.3**
AAK				P		**P**	**13 12 33.8**	**+2.3**
AAK	**Ala-Archa**	**38.51**	**16**	*ce*P		**P**	**13 12 33.1**	**+1.6**
AAK				pmax		pmax		
	comp=Z,158nm,2.5s							
AAK	**Ala-Archa**	**38.51**	**16**	IAMs_20		IAMs_20	13 29 32.6	
	comp=Z,3μm,21.0s							
KBK	**Karagaybulak**	**38.65**	**16**	P		**P**	**13 12 35.3**	**+2.6**
	SNR=15							
ULHL	**Ulahol**	**38.65**	**18**	P		**P**	**13 12 34.6**	**+1.8**
	SNR=8.3							
UTHA	**Uthaitani**	**38.68**	**72**	P		**P**	**13 12 35.4**	**+2.3**
	comp=Z,395nmcomp=Z,28nm,1.0s							
FRU1	**Bishkek**	**38.71**	**16**	P		**P**	**13 12 34.1**	**+1.0**
FRU1				pmax		pmax		
	comp=Z,39nm,1.2s							
FRU1				MLR		MLR		
	comp=Z,4μm,21.0s							
FRU1	**Bishkek**	**38.71**	**16**	P		**P**	**13 12 34.1**	**+1.0**
FRU1					IAmb	IAmb	13 12 37.4	
	comp=Z,39nm,1.1s							
FRU1					IAMs_20	IAMs_20	13 29 30.8	
	comp=Z,3μm,21.0s							
CM13	**Chiang Mai Arr**	**38.77**	**68**	P		**P**	**13 12 36.1**	**+2.2**
	comp=Z,139nmcomp=Z,9.6nm,1.2s							
CM32	**Chiang Mai Arr**	**38.78**	**67**	P		**P**	**13 12 36.0**	**+2.1**
BOOM	**Boomskoye usch**	**38.78**	**17**	P		**P**	**13 12 35.5**	**+1.6**
BOOM				pmax		pmax		
	comp=Z,37nm,1.5s							
BOOM				MLR		MLR		
	comp=Z,2μm,20.0s							
BOOM	**Boomskoye usch**	**38.78**	**17**	P		**P**	**13 12 35.5**	**+1.6**
CM15	**Chiang Mai Arr**	**38.80**	**68**	P		**P**	**13 12 36.5**	**+2.3**
	comp=Z,154nmcomp=Z,6.8nm,1.3s							
CM05	**Chiang Mai Arr**	**38.80**	**68**	P		**P**	**13 12 36.4**	**+2.2**
	comp=Z,141nmcomp=Z,8.7nm,1.8s							
CM02	**Chiang Mai Arr**	**38.81**	**68**	P		**P**	**13 12 36.6**	**+2.3**
	comp=Z,156nmcomp=Z,13nm,1.2s							
CM31	**Chiang Mai Arr**	**38.82**	**68**	P		**P**	**13 12 36.8**	**+2.6**
	comp=Z,7μmcomp=Z,315nm,1.3s							
CM31	**Chiang Mai Arr**	**38.82**	**68**	P		**P**	**13 12 33.7**	**-0.6**
CM31					IAmb	IAmb	13 12 37.1	
	comp=Z,65nm,1.5s							
CMAR	**Chiang Mai Arr**	**38.82**	**68**	P		**P**	**13 12 35.4**	**+1.1**
	comp=Z,6.7nm,1.0s,baz=260,slow=9.0,SNR=54							
CMAR				LR		LR	13 28 41.5	
	comp=Z,1μm,20.1s,baz=298,slow=36							
CMAR	**Chiang Mai Arr**	**38.82**	**68**	*ce*P		**P**	**13 12 36.0**	**+1.7**
CMAR				pmax		pmax		
	comp=Z,7.0nm,1.0s							
CM01	**Chiang Mai Arr**	**38.82**	**68**	P		**P**	**13 12 36.7**	**+2.4**
	comp=Z,187nmcomp=Z,14nm,1.5s							
CM04	**Chiang Mai Arr**	**38.84**	**68**	P		**P**	**13 12 36.0**	**+1.6**
	comp=Z,185nmcomp=Z,14nm,1.8s							
KDJ	**Kajisay**	**38.84**	**19**	P		**P**	**13 12 36.0**	**+1.7**
KDJ				pmax		pmax		
	comp=Z,28nm,1.5s							
KDJ				MLR		MLR		
	comp=Z,4μm,21.0s							
KDJ	**Kajisay**	**38.84**	**19**	P		**P**	**13 12 36.0**	**+1.7**
KDJ					IAMs_20	IAMs_20	13 28 42.0	
	comp=Z,4μm,21.0s							
AKH	**Akhalkalaki**	**38.85**	**339**	⇑P		**P**	**13 12 36.5**	**+2.1**
AKH	**Akhalkalaki**	**38.85**	**339**	P		**P**	**13 12 36.1**	**+1.7**
AKH				pmax		pmax		
	comp=Z,51nm,1.2s							
AKH				MLR		MLR		
	comp=Z,7μm,21.0s							
AKH	**Akhalkalaki**	**38.85**	**339**	P		**P**	**13 12 36.1**	**+1.7**
AKH					IAmb	IAmb	13 12 50.6	
	comp=Z,51nm,1.2s							
CM09	**Chiang Mai Arr**	**38.86**	**68**	P		**P**	**13 12 36.9**	**+2.3**
	comp=Z,202nmcomp=Z,13nm,1.4s							
KOPT	**Kop Dagi**	**38.86**	**334**	P		**P**	**13 12 33.2**	**-1.5**
LSZ	**Lusaka**	**38.90**	**237**	P		**P**	**13 12 35.8**	**+0.7**
	comp=Z,6.5nm,0.8s,baz=57,slow=8.9,SNR=9.4							
LSZ	**Lusaka**	**38.90**	**237**	IAMs_20		IAMs_20	13 26 37.9

PRZ Przheval'sk 39.56 20 IAMs_20 IAMs_20 13 28 46.9
comp=Z,4μm,22.0s
TNSS Tian-Shan 39.59 18 *e*P **P** **13 12 42.2 +1.3**
baz=18
TNSS Tian-Shan 39.59 18 *e*P **P** **13 12 42.1 +1.3**
IPM Ipoh 39.61 90 P **P** **13 12 40.0 -1.0**
GROC Groznyy 39.68 342 *e*P **P** **13 12 40.2 -0.9**
GROC *e* 13 14 13.0
GROC *e* 13 14 46.0
GROC *e*S **S** **13 18 41.2 -4.1**
GROC pmax pmax
comp=Z,25nm,0.5s
MDOK Medeo 39.73 18 *e*P **P** **13 12 42.8 +1.0**
baz=18
MDOK *e*S **S** **13 18 47.2 +0.8**
baz=18
MDOK LR LR 13 29 35.4
comp=Z,802nm,15.6s,baz=18
MDOK Medeo 39.73 18 *e*P **P** **13 12 42.8 +1.0**
MDOK *e*S **S** **13 18 47.2 +0.8**
MDOK MLR MLR
comp=Z,802nm,16.0s
AAA Alma-Ata 39.73 18 *e*P **P** **13 12 42.2 +0.5**
baz=18
AAA *e*S **S** **13 18 46.6 +0.3**
baz=18
AAA *e*LR LR 13 29 38.6
comp=Z,651nm,15.7s,baz=18
AAA Alma-Ata 39.73 18 *e*P **P** **13 12 42.1 +0.5**
AAA *e*S **S** **13 18 46.6 +0.3**
AAA MLR MLR
comp=Z,651nm,16.0s
PAYA Payao 39.89 67 P **P** **13 12 45.9 +2.7**
comp=Z,2μmcomp=Z,153nm,1.7s
ZEI Tsey 39.92 340 *e*P **P** **13 12 42.0 -1.4**
ZEI *e* 13 14 16.7
ZEI pmax pmax
comp=Z,13nm,1.8s
PHRA Phrae 40.01 68 P **P** **13 12 46.1 +1.9**
comp=Z,229nm,1.8s
SATY Saty 40.08 20 *e*P **P** **13 12 45.5 +0.9**
comp=Z,39nm,2.6s,baz=20
SATY LR LR 13 29 02.9
comp=Z,512nm,17.8s,baz=20
SATY Saty 40.08 20 *e*P **P** **13 12 45.5 +0.9**
SATY pmax pmax
comp=Z,39nm,2.6s
SATY MLR MLR
comp=Z,512nm,18.0s
KUU Kurty 40.19 17 *e*P **P** **13 12 46.0 +0.7**
comp=Z,75nm,2.1s,baz=17
KUU LR LR 13 29 05.2
comp=Z,582nm,14.8s,baz=17
KUU Kurty 40.19 17 *e*P **P** **13 12 46.0 +0.7**
KUU pmax pmax
comp=Z,75nm,2.1s
KUU MLR MLR
comp=Z,583nm,15.0s
CHKK Chushkaly 40.34 18 *e*P **P** **13 12 47.2 +0.6**
baz=18
CHKK Chushkaly 40.34 18 *e*P **P** **13 12 47.2 +0.6**
SHLS Shalkode 40.52 21 *e*P **P** **13 12 50.9 +2.6**
comp=Z,56nm,2.8s,baz=21
SHLS Shalkode 40.52 21 *e*P **P** **13 12 50.8 +2.6**
SHLS pmax pmax
comp=Z,56nm,2.8s
KPKS Kokpek 40.53 20 *e*P **P** **13 12 49.2 +0.9**
comp=Z,72nm,2.4s,baz=20
KPKS LR LR 13 29 05.4
comp=Z,460nm,15.2s,baz=20
KPKS Kokpek 40.53 20 *e*P **P** **13 12 49.1 +0.8**
KPKS pmax pmax
comp=Z,72nm,2.4s
KPKS MLR MLR
comp=Z,460nm,15.0s
BTLS Baital 40.65 14 *i* P **P** **13 12 50.3 +1.2**
comp=Z,22nm,1.9s,baz=14
BTLS *e*S **S** **13 19 00.9 +1.1**
baz=14
BTLS Baital 40.65 14 *i* P **P** **13 12 50.3 +1.2**
BTLS *e*S **S** **13 19 00.8 +1.1**
BTLS pmax pmax
comp=Z,22nm,1.9s
SDSI Sungai Dareh 40.65 98 P **P** **13 12 50.1 +0.5**
comp=Z,4μmcomp=Z,26nm,1.3s
KBZ Khabaz 41.09 340 P **P** **13 12 53.2 +0.5**
comp=Z,4.1nm,0.8s,baz=172,slow=6.0,SNR=9.6
KBZ LR LR 13 31 01.4
comp=Z,1μm,21.7s,baz=145,slow=38
KBZ Khabaz 41.09 340*ce*P **P** **13 12 54.3 +1.5**
KBZ pmax pmax
comp=Z,19nm,1.3s
CHAI Chaiyaphum 41.15 73 P **P** **13 12 55.8 +2.1**
comp=Z,25nm,1.2s
KVAR Kislovodsk Arr 41.36 340 LR LR 13 29 57.7
comp=Z,1μm,20.6s,baz=75,slow=36
KIV Kislovodsk 41.36 340 ⇑P **P** **13 12 57.2 +2.1**
KIV Kislovodsk 41.36 340 *i* P **P** **13 12 56.8 +1.6**
SNR=5.0
KIV **Kislovodsk 41.36 340** P **P** **13 12 56.8 +1.6**
KIV P **P** **13 12 56.8 +1.6**
KIV S **S** **13 19 16.6 +5.9**
KIV S **S** **13 19 16.6 +5.9**
MATP Matopo 41.43 230 P **P** **13 12 57.0 +0.9**
comp=Z,9.6nm,1.2s,baz=40,slow=9.4,SNR=7.0
TDK Taldyqorghan 41.81 18 *e*P **P** **13 12 59.8 +1.0**
comp=Z,165nm,2.2s,baz=18
TDK *e*PP **PP** **13 14 37.2 +1.8**
baz=18
TDK *e*S **S** **13 19 18.1 +0.9**
baz=18
TDK LR LR 13 30 50.6
comp=Z,1μm,16.9s,baz=18
TDK Taldyqorghan 41.81 18 *e*P **P** **13 12 59.7 +1.0**
TDK *e* 13 14 37.1
TDK *e*S **S** **13 19 18.0 +0.9**
TDK pmax pmax
comp=Z,165nm,2.2s
TDK MLR MLR
comp=Z,1μm,17.0s
BRTR Keskin Array B 41.95 328 P **P** **13 13 00.7 +0.6**
comp=Z,7.7nm,1.1s,baz=148,slow=9.5,SNR=15
BRTR LR LR 13 30 51.9
comp=Z,951nm,19.9s,baz=128,slow=37
BRTR Keskin Array B 41.95 328 *i* P **P** **13 13 01.2 +1.1**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 41.95 328 P **P** **13 12 59.6 -0.5**
ELL Elmali 42.08 321 P **P** **13 13 01.9 +0.7**
ELL pmax pmax
comp=Z,88nm,1.4s
ELL Elmali 42.08 321 P **P** **13 13 01.9 +0.7**
SOC Sochi 42.15 337 *e*P **P** **13 12 59.4 -2.1**
SOC *e* 13 14 37.2
SOC *e*S **S** **13 19 21.1 -1.0**
SOC *e*SS **SS** **13 22 27.1 -2.6**
SOC *e*SSS SSS 13 23 02.1
SOC pmax pmax
comp=Z,13nm,0.5s
SOC MLR MLR
comp=Z,963nm,18.0s
GOF Gofitskoye 42.22 341⇑ *e*P **P** **13 13 00.9 -1.1**
NONG Nongkai 42.63 70 P **P** **13 13 07.3 +1.5**
MYKOM Kota Tinggi 42.66 94 P **P** **13 13 07.0 +1.0**
LHSI Lahat 43.26 102 P **P** **13 13 12.5 +1.5**
comp=Z,47nm,1.5s
ABKAR Akbulak array 43.32 359 P **P** **13 13 11.3 +0.5**
ABKAR Akbulak array 43.32 359 P **P** **13 13 11.6 +0.7**
ABKAR IAmb IAmb 13 13 13.6
comp=Z,55nm,1.4s
SLVN Son La 44.05 65 P **P** **13 13 16.8 -0.4**
SLVN IAmb IAmb 13 13 41.3
comp=Z,61nm,1.5s
ANN Anapa 44.08 336 *i* P **P** **13 13 16.8 -0.2**
ANN *e**PP **pwP** **13 13 19.8 -1.9**
ANN *e*S **S** **13 19 50.7 +0.4**
ANN pmax pmax
comp=Z,88nm,1.3s
ANN MLR MLR
comp=Z,470nm,12.0s
ANN MLR MLR
comp=E,737nm,11.0s
KMI Kunming 44.09 60 *e*P **P** **13 13 19.3 +1.5**
KMI S **S** **13 19 50.5 -1.1**
KMI sS pS 13 19 56.5 +5.4
KMI pmax pmax
comp=E,23nm,1.8s
KMI pmax pmax
comp=E,330nm,4.6s
KMI LR LR
comp=E,1μm,17.7s
KMI LR LR
comp=E,2μm,19.6s
KMI LR LR
comp=E,2μm,19.2s
KMI Kunming 44.09 60 IAMs_20 IAMs_20 13 32 31.3
comp=Z,2μm,19.0s
WMQ Urumqi 44.42 27 *e*P **P** **13 13 21.8 +1.9**
WMQ pP pwP 13 13 28.3 +3.7
WMQ PcP **PcP** **13 15 06.5 +2.8**
WMQ S **S** **13 19 58.8 +3.2**
WMQ sS pS 13 20 05.3 +10
WMQ pmax pmax
comp=Z,31nm,1.9s
WMQ pmax pmax
comp=Z,620nm,5.7s
WMQ LR LR
comp=Z,2μm,18.3s
WMQ LR LR
comp=Z,3μm,23.5s
WMQ LR LR
comp=Z,4μm,19.3s
IDI Anoyia 44.52 316 ⇓P **P** **13 13 22.2 +1.3**
IDI Anoyia 44.52 316 P **P** **13 13 22.2 +1.3**
IDI IAmb IAmb 13 13 24.1
comp=Z,53nm,1.5s
AKTO Aktyubinsk 44.57 357 LR LR 13 32 41.0
comp=Z,2μm,21.6s,baz=167,slow=37
KASI Kota Agung 44.59 104 P **P** **13 13 22.1 +0.4**
comp=Z,29nm,1.1s
KLSI 44.63 103 P **P** **13 13 21.9 0.0**
comp=Z,14nm,2.6s
MKAR Makanchi Array 44.68 21 P **P** **13 13 22.0 +0.1**
comp=Z,3.3nm,0.9s,baz=215,slow=9.7,SNR=8.6
MKAR Makanchi Array 44.68 21*ce*P **P** **13 13 23.2 +1.3**
MKAR pmax pmax
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 44.68 21 P **P** **13 13 22.2 +0.3**
BRZS Berezniki 45.06 10 *e*P **P** **13 13 25.8 +0.8**
comp=Z,37nm,2.5s,baz=10
BRZS *e*S **S** **13 20 05.5 +0.8**
baz=10
BRZS Berezniki 45.06 10 *e*P **P** **13 13 25.7 +0.8**
BRZS *e*S **S** **13 20 05.4 +0.8**
BRZS pmax pmax
comp=Z,37nm,2.5s
APE Apeiranthos 45.08 319 ⇑P **P** **13 13 26.8 +1.6**
ZSN Zaisan 46.16 22 *e*P **P** **13 13 35.5 +1.8**
baz=22
ZSN *e*S **S** **13 20 22.0 +1.4**
baz=22
ZSN Zaisan 46.16 22 *e*P **P** **13 13 35.5 +1.8**
ZSN *e*S **S** **13 20 22.0 +1.4**
LBTB Lobatse 46.29 227 P **P** **13 13 35.5 +0.4**
comp=Z,2.0nm,0.6s,baz=50,slow=14,SNR=4.4
LBTB LR LR 13 30 32.6
comp=Z,4μm,21.8s,baz=58,slow=33
LBTB Lobatse 46.29 227 P **P** **13 13 35.7 +0.6**
LBTB pmax pmax
comp=Z,28nm,1.4s
LBTB Lobatse 46.29 227 P **P** **13 13 35.7 +0.6**
LBTB IAmb IAmb 13 13 42.8
comp=Z,28nm,1.4s
CD2 Chengdu 47.00 53 P **P** **13 13 39.5 -1.1**
CD2 PP **PP** **13 15 28.5 -2.5**
CD2 S **S** **13 20 33.3 +0.1**
CD2 sS pS 13 20 36.8 +4.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,320nm,7.1s
CD2 LR LR
comp=Z,2μm,20.8s
CD2 LR LR
comp=Z,2μm,17.7s
CD2 LR LR
comp=Z,3μm,16.9s
ALN Alexandroupoli 47.03 323 P **P** **13 13 42.4 +1.8**
ALN pmax pmax
comp=Z,34nm,1.2s
ALN Alexandroupoli 47.03 323 P **P** **13 13 42.4 +1.8**
KURK Kurchatov 47.06 15 P **P** **13 13 40.2 -0.4**
KURK P **P** **13 13 40.2 -0.4**
KURK S **S** **13 20 36.2 +3.0**
KURK S **S** **13 20 36.2 +3.0**
KURK Kurchatov 47.06 15*ce*P **P** **13 13 42.1 +1.5**
KURK pmax pmax
comp=Z,19nm,2.5s
KURK Kurchatov 47.06 15 P **P** **13 13 41.6 +1.0**
KURK IAmb IAmb 13 13 42.6
comp=Z,18nm,1.3s
KURK Kurchatov 47.06 15 IAMs_20 IAMs_20 13 34 12.8
comp=Z,2μm,21.0s
CBJI Citeko 47.08 104 P **P** **13 13 44.9 +3.6**
comp=Z,63nm,0.6s
SEM Semipalatinsk 47.22 16 *e*P **P** **13 13 41.8 -0.3**
comp=Z,5.8nm,1.4s,baz=16
SEM *i* LR LR 13 34 12.2
comp=Z,445nm,17.8s,baz=16
SEM Semipalatinsk 47.22 16 *e*P **P** **13 13 41.8 -0.3**
SEM pmax pmax
comp=Z,6.0nm,1.4s
SEM MLR MLR
comp=Z,445nm,18.0s
BRVK Borovoye 47.69 7*ce*P **P** **13 13 46.5 +1.1**
BRVK pmax pmax
comp=Z,34nm,2.5s
BRVK Borovoye 47.69 7 P **P** **13 13 46.0 +0.5**
BRVK Borovoye 47.69 7 IAMs_20 IAMs_20 13 35 37.8
comp=Z,3μm,20.0s
BELG Belogornoye 47.79 349 *i* P **P** **13 13 46.6 +0.4**
BELG pmax pmax
comp=Z,8.0nm,1.4s
GYA Guiyang 47.86 59 ⇑P **P** **13 13 47.8 +0.4**
GYA sP pwP 13 13 53.5 +1.4
GYA PP **PP** **13 15 42.5 +3.2**
GYA S **S** **13 20 46.3 +0.6**
GYA SS **SS** **13 24 11.3 -3.1**
GYA pmax pmax
comp=Z,16nm,1.0s
GYA pmax pmax
comp=Z,320nm,4.1s
GYA LR LR
comp=Z,1μm,14.6s
GYA LR LR
comp=Z,2μm,18.5s
GYA LR LR
comp=Z,2μm,18.7s
LEM Lembang 47.92 105 P **P** **13 13 48.5 +0.4**
comp=Z,11nm,0.4s,baz=349,slow=3.3,SNR=7.2
TIRR Tirgusor 48.04 328 P **P** **13 13 49.0 +0.6**
TIRR pmax pmax
comp=Z,134nm,1.5s
TIRR MLR MLR
comp=Z,2μm,21.0s
TIRR Tirgusor 48.04 328 P **P** **13 13 49.0 +0.6**
TIRR IAMs_20 IAMs_20 13 34 43.1
comp=Z,2μm,21.0s
VRH Novokhopyorsk 48.09 344 *e*P **P** **13 13 48.1 -0.5**
VRH pmax pmax
comp=Z,30nm,1.3s
GTA Gaotai 48.21 40 ⇑P **P** **13 13 50.5 +0.6**
GTA pP pwP 13 13 56.3 +1.7
GTA sP pP 13 13 59.0 +10
GTA PcP **PcP** **13 15 18.0 +0.8**
GTA PP **PP** **13 15 45.3 +3.0**
GTA S **S** **13 20 50.5 +0.2**
GTA sS pS 13 20 57.3 +7.5
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,290nm,5.3s
GTA LR LR
comp=Z,3μm,22.2s
GTA LR LR
comp=Z,3μm,20.4s
GTA LR LR
comp=Z,4μm,20.4s
VORD Divnogorie 48.61 342 *e*P **P** **13 13 52.1 -0.5**
VORD pmax pmax
comp=Z,20nm,1.4s
CFR Carcaliu 48.68 329 ⇓P **P** **13 13 54.6 +1.4**
BOSA Boshof 48.72 223 P **P** **13 13 54.2 +0.2**
comp=Z,3.5nm,1.0s,baz=30,slow=12,SNR=3.1
BOSA LR LR 13 32 31.1
comp=Z,4μm,19.9s,baz=46,slow=34
LIT Litokhoron 48.75 320 P **P** **13 13 52.8 -1.1**
LIT pmax pmax
comp=Z,26nm,1.4s
LIT Litokhoron 48.75 320 P **P** **13 13 52.8 -1.1**
LIT IAmb IAmb 13 14 08.0
comp=Z,26nm,1.4s
VSR Storozhevoye 48.87 342 *e*P **P** **13 13 52.7 -1.9**
VSR pmax pmax
comp=Z,30nm,1.5s
QIZ Qiongzhong 49.05 70 P **P** **13 13 55.3 -1.2**
QIZ S **S** **13 21 01.5 -0.9**
QIZ pmax pmax
comp=Z,220nm,4.5s
QIZ LR LR
comp=Z,640nm,16.2s
QIZ LR LR
comp=Z,760nm,16.6s
QIZ LR LR
comp=Z,770nm,14.9s
SCHL Schela 49.06 329 ⇓P **P** **13 13 58.3 +2.2**
KSM Kuching 49.11 93 P **P** **13 13 56.0 -1.0**
LZH Lanzhou 49.28 46 ⇑P **P** **13 13 59.0 +0.8**
LZH pP pwP 13 14 02.5 -0.3
LZH sP pP 13 14 04.5 +6.7
LZH PP **PP** **13 15 54.5 +2.4**
LZH S **S** **13 21 05.0 -0.5**
LZH sS pS 13 21 12.8 +7.8
LZH SS **SS** **13 24 30.8 -6.2**
LZH pmax pmax
comp=Z,25nm,1.2s
LZH pmax pmax
comp=Z,320nm,6.8s
LZH LR LR
comp=Z,1μm,14.1s
LZH LR LR
comp=Z,2μm,13.0s
LZH LR LR
comp=Z,2μm,15.2s
ISR Istrita 49.47 328 ⇑P **P** **13 14 00.0 +0.6**
COPA Copaceanca 49.55 326 ⇑P **P** **13 14 01.4 +1.4**
MILM Milestii Mici 49.57 331 ⇑P **P** **13 14 01.5 +1.5**
BISRR Bisoca 49.67 328 ⇑P **P** **13 14 03.2 +2.2**
TSUM Tsumeb 49.68 239 P **P** **13 14 01.8 +0.3**
comp=Z,7.8nm,1.0s,baz=65,slow=4.6,SNR=8.0
TSUM Tsumeb 49.68 239 P **P** **13 14 01.6 +0.1**
TSUM IAmb IAmb 13 14 22.7
comp=Z,27nm,1.4s
TSUM Tsumeb 49.68 239 IAMs_20 IAMs_20 13 33 06.6
comp=Z,3μm,21.0s
NEHR Nehoiu 49.81 328 ⇑P **P** **13 14 03.1 +1.2**
VRI Vrincioaia 49.88 329 ⇓P **P** **13 14 03.7 +1.3**
PLOR Plostina 49.91 329 ⇑P **P** **13 14 04.4 +1.7**
LPSR Galich'ya Gora 50.15 342 *e*P **P** **13 14 03.6 -0.7**
LPSR pmax pmax
comp=Z,20nm,1.4s
STFAR Stefanesti-Arg 50.15 327 ⇓P **P** **13 14 05.0 +0.4**
TESR Tescani 50.35 329 ⇓P **P** **13 14 07.4 +1.4**
VOIR 50.48 327 ⇑P **P** **13 14 08.0 +0.9**
ARU Arti 50.53 358*c i*P **P** **13 14 08.3 +1.1**
ARU 13 15 18.9
ARU 13 16 05.4
ARU S **S** **13 21 23.7 +1.7**
ARU 13 23 50.9
ARU SS **SS** **13 24 57.8 +1.7**
ARU pmax pmax
comp=Z,32nm,1.3s
ARU MLR MLR
comp=Z,1μm,18.0s
ARU Arti 50.53 358 P **P** **13 14 07.1 -0.1**
ARU IAmb IAmb 13 14 09.0
comp=Z,27nm,1.2s
DOPR Dopca 50.64 328 ⇑P **P** **13 14 09.0 +0.8**
ARR Arges 50.65 327 ⇓P **P** **13 14 08.6 +0.2**
SORM Soroca 50.65 332 ⇓P **P** **13 14 08.9 +0.7**
GIRR Girov 50.73 330 ⇓P **P** **13 14 10.0 +1.2**
SVE Sverdlovsk 50.89 360 *e*P **P** **13 14 10.9 +1.0**
SVE *e*S **S** **13 21 27.4 +0.5**
SVE pmax pmax
comp=Z,28nm,1.6s
SVE MLR MLR
comp=Z,2μm,22.0s
SBUM Sibu 50.91 92 P **P** **13 14 08.1 -2.6**
SBUM IAmb IAmb 13 14 13.0
comp=Z,37nm,1.2s
SBUM Sibu 50.91 92 P **P** **13 14 13.0 +2.3**
BIZ Bicaz 50.92 329 ⇑P **P** **13 14 11.7 +1.4**
LOT Lotru 51.18 327 ⇑P **P** **13 14 13.6 +1.2**
HERR Herculane 51.58 325 ⇓P **P** **13 14 15.2 -0.1**
ZAAO Zalesovo Array 51.67 18 P **P** **13 14 15.8 0.0**
ZALV Zalesovo Beam 51.67 18 P **P** **13 14 15.5 -0.3**
comp=Z,6.1nm,1.0s,baz=217,slow=7.1,SNR=22
ZALV LR LR 13 36 49.6
comp=Z,1μm,19.6s,baz=214,slow=37
ZALV Zalesovo Beam 51.67 18 *i* P **P** **13 14 15.8 0.0**
ZALV pmax pmax
comp=Z,6.0nm,1.0s
ZALV Zalesovo Beam 51.67 18 P **P** **13 14 15.3 -0.5**
GZR Gura Zlata 51.69 326 ⇑P **P** **13 14 16.7 +0.5**
BURAR Bucovina Array 51.82 330 ⇑P **P** **13 14 18.6 +1.4**
BURAR Bucovina Array 51.82 330 P **P** **13 14 17.5 +0.3**
BUR08 Bucovina Ar. S 51.85 330 P **P** **13 14 18.7 +1.3**
BUR08 IAmb IAmb 13 14 31.9
comp=Z,25nm,1.4s
ARCR ARCALIA 51.91 329 ⇑P **P** **13 14 19.4 +1.6**
CJR Cluj-Napoca 52.07 328 ⇑P **P** **13 14 19.7 +0.7**
AKASG Malin Array Be 52.14 335 P **P** **13 14 18.4 -1.0**
comp=Z,4.7nm,1.0s,baz=133,slow=6.5,SNR=24
AKASG LR LR 13 40 45.9
comp=Z,610nm,18.1s,baz=130,slow=41
AKASG Malin Array Be 52.14 335*ce*P **P** **13 14 19.7 +0.4**
AKASG pmax pmax
comp=Z,5.0nm,1.0s
AKBB Malin Array Si 52.14 335*ce*P **P** **13 14 20.2 +0.9**
AKBB Malin Array Si 52.14 335 P **P** **13 14 18.6 -0.7**
AKBB IAmb IAmb 13 14 20.8
comp=Z,30nm,1.4s
XAN Xi'an 52.22 51 P **P** **13 14 20.0 -0.4**
XAN pP pwP 13 14 27.3 +2.3
XAN pmax pmax
comp=Z,29nm,1.5s
XAN Xi'an 52.22 51 P **P** **13 14 19.0 -1.4**
XAN pmax pmax
comp=Z,52nm,1.4s
XAN MLR MLR
comp=Z,2μm,20.0s
XAN Xi'an 52.22 51 P **P** **13 14 18.9 -1.4**
XAN IAmb IAmb 13 14 21.3
comp=Z,52nm,1.4s
XAN Xi'an 52.22 51 IAMs_20 IAMs_20 13 36 52.1
comp=Z,2μm,20.0s
BZS Buzias 52.47 326 ⇑P **P** **13 14 22.7 +0.7**
DIVS Divibare 52.53 323 P **P** **13 14 20.3 -2.3**
DIVS IAmb IAmb 13 14 25.4
comp=Z,28nm,1.4s
DRGR 52.59 327 ⇑P **P** **13 14 24.0 +1.1**
SIRR Siria 52.84 326 ⇑P **P** **13 14 25.7 +1.1**
OBN Obninsk 53.02 343⇑ *e*P **P** **13 14 26.6 +0.8**
OBN *e* 13 15 33.6
OBN *e*S **S** **13 21 55.8 -0.5**
OBN *e*SS **SS** **13 25 33.4 -2.1**
OBN pmax pmax
comp=Z,10.0nm,0.4s
OBN MLR MLR
comp=Z,540nm,21.0s
MOS Moscow 53.26 344 *e*P **P** **13 14 25.8 -1.7**
MOS pmax pmax
comp=Z,56nm,1.3s
KIRV Kirov 53.45 352*ce*P **P** **13 14 29.4 +0.6**
LVV L'vov 53.88 331 *e*P **P** **13 14 33.1 +0.9**
LVV *e*PPP PPP 13 17 47.3
LVV *e*S **S** **13 22 06.4 -1.7**
LVV *e*SSS SSS 13 27 36.7
LVV MLR MLR
comp=N,500nm,17.0s
LVV MLR MLR
comp=E,400nm,17.0s
LVV MLR MLR
comp=Z,300nm,17.0s
UZH Uzhgorod 53.97 329 *e*P **P** **13 14 33.2 +0.3**
SUR Sutherland 54.06 223 IAMs_20 IAMs_20 13 35 57.4

KOLS **Kolonicke sedl** **54.17 329** *e*P **P** **13 14 35.2 +0.8**
KOLS pmax pmax
comp=Z,41nm,1.3s
KOLS **Kolonicke sedl** **54.17 329** *e*P **P** **13 14 35.2 +0.8**
KOLS *e*PP **PP** **13 16 37.5 +1.4**
KWP **Kalwaria Pacla** **54.40 330** P **P** **13 14 35.6 -0.5**
KWP pmax pmax
comp=Z,68nm,1.5s
KWP **Kalwaria Pacla** **54.40 330** P **P** **13 14 35.6 -0.5**
CRVS **Cervenica-Dubn** **54.57 329** *e*P **P** **13 14 38.1 +0.8**
CRVS pmax pmax
comp=Z,92nm,1.6s
CRVS **Cervenica-Dubn** **54.57 329** *e*P **P** **13 14 38.1 +0.8**
KKM **Kota Kinabalu** **54.63 87** IAMs_20 IAMs_20 13 37 54.7
comp=Z,2µm,20.0s
PSZ **Piszkesteto** **54.80 327** ⇑P **P** **13 14 39.4 +0.3**
PSZ **Piszkesteto** **54.80 327** P **P** **13 14 36.7 -2.4**
PSZ pmax pmax
comp=Z,18nm,1.2s
PSZ MLR MLR
comp=Z,800nm,21.0s
PSZ **Piszkesteto** **54.80 327** P **P** **13 14 36.7 -2.4**
PSZ IAmb IAmb 13 14 49.9
comp=Z,18nm,1.2s
SPMM **Sapulut** **54.95 88** P **P** **13 14 42.0 +1.3**
WHN **Wuhan** **55.50 57** P **P** **13 14 44.0 -0.3**
WHN S **S** **13 22 32.0 +1.5**
WHN ScS **ScS** **13 24 35.8 +0.8**
WHN pmax pmax
comp=Z,99nm,1.5s
WHN pmax pmax
comp=Z,480nm,6.3s
WHN LR LR
comp=Z,1µm,16.9s
WHN LR LR
comp=Z,3µm,15.1s
WHN LR LR
comp=Z,4µm,18.6s
BTO **Baotou** **55.62 44** *e*P P 13 14 40.0 -5.2
BTO S S 13 22 18.3 -14
VYHS **Vyhne** **55.71 327** *e*P **P** **13 14 45.4 -0.1**
VYHS pmax pmax
comp=Z,35nm,1.4s
VYHS **Vyhne** **55.71 327** *e*P **P** **13 14 45.4 -0.1**
LANS **Liptovska Anna** **55.76 328** *e*P **P** **13 14 47.1 +1.2**
LANS pmax pmax
comp=Z,18nm,1.3s
LANS **Liptovska Anna** **55.76 328** *e*P **P** **13 14 47.1 +1.2**
LANS *e*PP **PP** **13 16 53.3 +3.0**
TIY **Taiyuan** **56.22 48** *e*P **P** **13 14 50.0 +0.5**
TIY S **S** **13 22 39.8 -0.3**
TIY pmax pmax
comp=Z,18nm,0.6s
TIY LR LR
comp=Z,740nm,14.4s
TIY LR LR
comp=Z,540nm,14.9s
TIY LR LR
comp=Z,2µm,21.2s
OJC **Ojcow** **56.23 329** P **P** **13 14 46.7 -2.5**
OJC pmax pmax
comp=Z,18nm,1.3s
OJC **Ojcow** **56.23 329** P **P** **13 14 46.7 -2.5**
OJC IAmb IAmb 13 14 50.4
comp=Z,18nm,1.3s
TAM **Tamanrasset** **56.26 293** P **P** **13 14 49.8 -0.3**
TAM pmax pmax
comp=Z,27nm,1.3s
TAM **Tamanrasset** **56.26 293** P **P** **13 14 49.8 -0.3**
TAM IAmb IAmb 13 14 53.1
comp=Z,27nm,1.3s
SMOL **Smolenice** **56.49 326** *e*P **P** **13 14 52.1 +1.0**
SMOL **Smolenice** **56.49 326** *e*P **P** **13 14 52.1 +1.0**
ZST **Bratislava** **56.49 326** *e*P **P** **13 14 52.0 +0.9**
ZST **Bratislava** **56.49 326** *e*P **P** **13 14 52.0 +0.9**
MODS **Modra-Piesok** **56.49 326** *e*P **P** **13 14 50.0 -1.2**
MODS pmax pmax
comp=Z,32nm,1.3s
MODS **Modra-Piesok** **56.49 326** *e*P **P** **13 14 50.0 -1.2**
JAVC **Velka Javorina** **56.55 327** *e*P **P** **13 14 52.3 +0.7**
HHC **Hu-ho-hao-te** **56.79 44** *e*P **P** **13 14 54.5 +0.9**
HHC S **S** **13 22 44.8 -2.9**
HHC sS pS 13 22 57.5 +10
HHC ScS **ScS** **13 24 39.5 -4.8**
HHC pmax pmax
comp=Z,25nm,0.9s
HHC pmax pmax
comp=Z,250nm,6.0s
HHC LR LR
comp=Z,2µm,14.5s
HHC LR LR
comp=Z,1µm,16.2s
HHC LR LR
comp=Z,2µm,16.2s
SONM **Songino Array** **56.82 35** P **P** **13 14 53.9 +0.2**
comp=Z,4.0nm,0.9s,baz=223,slow=7.9,SNR=16
SONM PP **PP** **13 17 00.3 +0.3**
comp=Z,3.1nm,0.9s,baz=238,slow=7.9,SNR=4.1
SONM **Songino Array** **56.82 35** P **P** **13 14 53.2 -0.5**
SONM pmax pmax
comp=Z,8.0nm,1.2s
SONM **Songino Array** **56.82 35** P **P** **13 14 53.1 -0.5**
OKC **Ostrava-Krasne** **56.86 328** AMS AMS 13 40 00.0
comp=Z,1µm,23.0s
SOKA **Soboth** **56.87 324** *e*P **P** **13 14 54.5 +0.6**
comp=Z,17nm,1.4s
ARSA **Arzberg** **56.88 324** *e*P **P** **13 14 54.7 +0.8**
comp=Z,20nm,1.3s,SNR=5.9
ARSA *e*P **PP** **13 16 56.7 -3.7**
comp=Z,9.4nm,1.6s
MYLDM **Lahad Datu** **56.95 88** IAMs_20 IAMs_20 13 41 46.0
comp=Z,1µm,19.0s
CONA **Conrad Observa** **57.04 325** *e*P **P** **13 14 55.7 +0.5**
comp=Z,41nm,1.3s,SNR=18
OBKA **Obir** **57.07 323** *e*P **P** **13 14 56.1 +0.7**
comp=Z,26nm,1.4s
MORC **Moravsky Berou** **57.14 328** ⇑P **P** **13 14 56.1 +0.3**
MORC **Moravsky Berou** **57.14 328** *e*P **P** **13 14 55.3 -0.5**
MORC *e*PP **PP** **13 16 58.0 -4.7**
MORC **Moravsky Berou** **57.14 328** P **P** **13 14 55.3 -0.5**
MORC MLR MLR
comp=Z,600nm,22.0s
MORC **Moravsky Berou** **57.14 328** P **P** **13 14 55.3 -0.5**
ULN **Ulaanbaatar** **57.21 35***ce*P **P** **13 14 58.2 +1.7**
ULN pmax pmax
comp=Z,6.0nm,1.3s
ULN **Ulaanbaatar** **57.21 35** IAMs_20 IAMs_20 13 40 28.7
comp=Z,2µm,19.0s
KLMR **Klimovskoe** **57.32 348** *e*P **P** **13 14 55.8 -0.9**
KLMR *e* 13 15 50.4
KLMR *e*S **S** **13 22 53.0 -0.7**
KLMR pmax pmax
comp=Z,38nm,1.4s
KLMR **Klimovskoe** **57.32 348** *e*P **P** **13 14 55.8 -0.9**
KLMR AMP 13 14 57.7
comp=Z,38nm,1.4s
KLMR *e*PcP **PcP** **13 15 50.4 -0.5**
KLMR *e*S **S** **13 22 53.0 -0.7**
KLMR *e*S **S** **13 22 53.0 -0.7**
KLMR LQ LQ 13 35 46.8
KLMR LQ LQ 13 35 46.8
KLMR LR LR 13 40 05.8
KRUC **Moravsky** **57.36 327** *e*P **P** **13 14 56.7 -0.6**
KRUC *e*PP **PP** **13 16 59.5 -5.1**
VRAC **Vranov** **57.39 327** ⇑P **P** **13 14 58.1 +0.6**
VRAC **Vranov** **57.39 327** *e*P **P** **13 14 57.4 -0.1**
VRAC *e*PP **PP** **13 16 59.8 -5.0**
TLY **Talaya** **57.57 30** *e*P **P** **13 15 00.1 +1.3**
TLY *e*PPP PPP 13 18 30.1
TLY *e*S **S** **13 23 01.0 +3.6**
TLY *e*SSS SSS 13 29 08.4
TLY pmax pmax
comp=Z,45nm,1.8s
TLY MLR MLR
comp=Z,2µm,17.0s
TLY **Talaya** **57.57 30** IAMs_20 IAMs_20 13 39 41.3
comp=Z,2µm,21.0s
MYKA **Terra Mystica** **57.67 323** *e*P **P** **13 15 00.0 +0.4**
comp=Z,38nm,1.6s,SNR=7.1
KRLC **Kraliky** **57.72 328** *e*P **P** **13 15 00.4 +0.5**
KRLC MLR MLR
comp=Z,700nm,20.9s
KRLC **Kraliky** **57.72 328** *e*P **P** **13 15 00.4 +0.5**
KRLC AMS AMS 13 39 40.0
comp=Z,700nm,20.9s
MOA **Molln** **57.91 324** *e*P **P** **13 15 01.7 +0.5**
comp=Z,42nm,1.3s,SNR=11
ZOU **Zoufplan** **58.03 323** P **P** **13 15 02.3 0.0**
ZOU IAmb IAmb 13 15 27.9
comp=Z,17nm,1.3s
STAL **STALIGIAL** **58.05 322** P **P** **13 15 02.2 -0.1**
KBA **Koelnbreinsper** **58.07 323** *e*P **P** **13 15 02.6 0.0**
comp=Z,22nm,1.4s,SNR=5.5
DPC **Dobruska-Polom** **58.12 328** *e*P **P** **13 15 03.3 +0.7**
DPC MLR MLR
comp=Z,700nm,18.5s
DPC **Dobruska-Polom** **58.12 328** *e*P **P** **13 15 03.3 +0.7**
DPC AMS AMS 13 40 20.0
comp=Z,700nm,18.5s
ZCCA **Zocca** **58.27 320** P **P** **13 15 04.2 +0.3**
TEOL **Teolo** **58.28 321** P **P** **13 15 02.9 -0.9**
TEOL IAmb IAmb 13 15 05.5
comp=Z,27nm,1.0s
OSTC **Ostas** **58.29 328** *e*P **P** **13 15 03.9 +0.1**
OSTC AMS AMS 13 40 20.0
comp=Z,1µm,22.4s
UPC **Upice** **58.37 328** *e*P **P** **13 15 05.3 +0.9**
UPC MLR MLR
comp=Z,900nm,22.2s
UPC **Upice** **58.37 328** *e*P **P** **13 15 05.3 +0.9**
UPC AMS AMS 13 40 10.0
comp=Z,900nm,22.2s
CHVC **Chvalec** **58.39 328** *e*P **P** **13 15 05.1 +0.6**
CHVC AMS AMS 13 40 40.0
comp=Z,800nm,19.9s
ABTA **Abfaltersbach** **58.41 323** *e*P **P** **13 15 05.1 +0.3**
comp=Z,23nm,1.3s,SNR=5.1
CTI **Castel Tesino** **58.60 322** P **P** **13 15 05.2 -1.0**
CTI pmax pmax
comp=Z,21nm,1.4s
CTI **Castel Tesino** **58.60 322** P **P** **13 15 05.2 -1.0**
CTI IAmb IAmb 13 15 12.8
comp=Z,21nm,1.4s
GERES **GERESS Array B** **58.75 325** P **P** **13 15 06.5 -0.7**
comp=Z,0.6nm,0.7,baz=126,slow=9.0,SNR=9.4
GERES **GERESS Array B** **58.75 325** P **P** **13 15 06.4 -0.8**
MPSI **Mapaga** **58.76 93** P **P** **13 15 04.8 -2.9**
comp=Z,2µmcomp=Z,19nm,0.7s
PRU **Pruhonice** **58.88 327** *e*P **P** **13 15 08.3 +0.4**
PRU MLR MLR
comp=Z,800nm,24.4s
PRU **Pruhonice** **58.88 327** *e*P **P** **13 15 08.3 +0.4**
PRU AMS AMS 13 38 40.0
comp=Z,800nm,24.4s
KHC **Kasperske Hory** **58.96 325***ce*P **P** **13 15 08.5 -0.1**
KHC pmax pmax
comp=Z,34nm,1.3s
KHC **Kasperske Hory** **58.96 325** *e*P **P** **13 15 07.8 -0.8**
KHC *e*pP **pwP** **13 15 13.5 +0.2**
KHC AMS AMS 13 41 20.0
comp=Z,800nm,21.9s
KHC **Kasperske Hory** **58.96 325** P **P** **13 15 08.0 -0.6**
TOC2 **Torodi Ar. Sit** **59.08 282** IAMs_20 IAMs_20 13 41 40.4
comp=Z,1µm,18.0s
TOC3 **Torodi Ar. Sit** **59.08 282** IAMs_20 IAMs_20 13 41 40.4
comp=Z,1µm,18.0s
TOB3 **Torodi Ar. Sit** **59.10 282** IAMs_20 IAMs_20 13 41 41.9
comp=Z,1µm,18.0s
TOA2 **Torodi Ar. Sit** **59.10 282** IAMs_20 IAMs_20 13 41 42.0
comp=Z,1µm,18.0s
TOC1 **Torodi Ar. Sit** **59.10 282** IAMs_20 IAMs_20 13 41 41.9
comp=Z,2µm,18.0s
TOC4 **Torodi Ar. Sit** **59.10 282** IAMs_20 IAMs_20 13 41 42.0
comp=Z,1µm,18.0s
TOA0 **Torodi Ar. Sit** **59.11 282** P **P** **13 15 09.8 -0.3**
TOA0 IAmb IAmb 13 15 13.2
comp=Z,24nm,1.4s
TOA0 IAMs_20 IAMs_20 13 41 42.1
comp=Z,1µm,18.0s
TORD **Torodi Ar. Bea** **59.11 282** P **P** **13 15 10.3 +0.2**
comp=Z,5.5nm,1.0s,baz=89,slow=6.1,SNR=23
TORD **Torodi Ar. Bea** **59.11 282** P **P** **13 15 09.8 -0.3**
TOB1 **Torodi Ar. Sit** **59.11 282** IAMs_20 IAMs_20 13 41 42.1
comp=Z,1µm,18.0s
TOB4 **Torodi Ar. Sit** **59.12 282** IAMs_20 IAMs_20 13 41 42.4
comp=Z,1µm,18.0s
TOB5 **Torodi Ar. Sit** **59.12 282** IAMs_20 IAMs_20 13 41 42.5
comp=Z,1µm,18.0s
TOC5 **Torodi Ar. Sit** **59.13 282** IAMs_20 IAMs_20 13 41 42.6
comp=Z,2µm,18.0s
WTTA **Wattenberg** **59.18 323** *e*P **P** **13 15 10.1 -0.1**
comp=Z,27nm,1.4s,SNR=5.9
WATA **Walderalm** **59.25 323** *e*P **P** **13 15 10.1 -0.6**
comp=Z,33nm,1.4s,SNR=5.6
KAPI **Kappang** **59.37 99** P **P** **13 15 10.5 -1.4**
SQTA **Sankt Quirin** **59.42 323** *e*P **P** **13 15 11.5 -0.4**
comp=Z,19nm,1.3s
MOTA **Moosalm** **59.54 323** *e*P **P** **13 15 12.0 -0.7**
comp=Z,22nm,1.2s
NJ2 **Nanjing** **59.60 56** *e*P **P** **13 15 13.5 +0.3**
NJ2 S **S** **13 23 20.5 -4.0**
NJ2 SS **SS** **13 27 21.3 +1.3**
NJ2 pmax pmax
comp=Z,13nm,0.9s
NJ2 pmax pmax
comp=Z,320nm,5.0s
NJ2 LR LR
comp=Z,920nm,18.5s
NJ2 LR LR
comp=Z,1µm,17.0s
NJ2 LR LR
comp=Z,2µm,17.1s
FETA **Feichten** **59.62 322** *e*P **P** **13 15 13.3 +0.1**
comp=Z,13nm,1.2s
BNSI **Bone** **59.62 99** P **P** **13 15 14.6 +1.0**
comp=Z,1µmcomp=Z,46nm,1.8s
BRG **Berggiesshubel** **59.67 327** *e*P **P** **13 15 13.5 +0.1**
comp=Z,31nm,1.7s
BRG **Berggiesshubel** **59.67 327** *e*P **P** **13 15 13.5 +0.1**
BRG pmax pmax
comp=Z,31nm,1.7s
BJT **Baijiatuao** **59.75 47** IAMs_20 IAMs_20 13 40 53.5
comp=Z,2µm,22.0s
BJI **Beijing** **59.76 47** P **P** **13 15 14.8 +0.6**
BJI PP **PP** **13 17 30.8 +4.7**
BJI S **S** **13 23 27.0 +0.7**
BJI pmax pmax
comp=Z,17nm,1.3s
BJI pmax pmax
comp=Z,210nm,3.7s
BJI LR LR
comp=Z,930nm,18.3s
BJI LR LR
comp=Z,950nm,17.4s
BJI LR LR
comp=Z,1µm,20.6s
BKSI **Bulukumba** **59.78 100** P **P** **13 15 10.6 -4.2**
comp=Z,19nm,2.2s
RETA **Reutte** **59.81 323** *i* P **P** **13 15 14.3 -0.2**
comp=Z,11nm,1.3s
SSLB **Suanglung** **59.97 66** IAMs_20 IAMs_20 13 43 13.9
comp=Z,1µm,18.0s
DAVOX **Davos/Dischmat** **60.03 322** LR LR 13 41 31.6
comp=Z,320nm,21.3s,baz=86,slow=36
NKC **Novy Kostel** **60.16 326** *e*P **P** **13 15 17.5 +0.7**
NKC *e* 13 15 22.6
NKC **Novy Kostel** **60.16 326** *e*P **P** **13 15 17.5 +0.7**
NKC *ex* x 13 15 22.6
DAVA **Damuels** **60.25 322** *e*P **P** **13 15 17.8 +0.2**
comp=Z,20nm,1.1s
CLL **Collm** **60.41 327**⇓ *i*P **P** **13 15 18.7 +0.3**
comp=Z,36nm,1.6s
CLL *i* 13 15 30.7
CLL *e*S **S** **13 23 36.0 +1.8**
CLL *e*SSS SSS 13 30 06.0
CLL **Collm** **60.41 327**⇓ *i*P **P** **13 15 18.7 +0.3**
CLL pmax pmax
comp=Z,36nm,1.6s
CLL **Collm** **60.41 327** P **P** **13 15 18.5 +0.1**
CLL IAmb IAmb 13 15 20.9
comp=Z,30nm,1.5s
GRA1 **Grafenberg Arr** **60.58 325** P **P** **13 15 18.7 -1.0**
GRF **Grafenberg Arr** **60.58 325** P **P** **13 15 18.7 -1.0**
GRF pmax pmax
comp=Z,41nm,1.4s
NACB **Ninganchiao** **60.60 66** IAMs_20 IAMs_20 13 43 35.6
comp=Z,1µm,18.0s
TMCR **Tamitsa** **60.60 349** *e*P **P** **13 15 19.8 +0.3**
TMCR pmax pmax
comp=Z,15nm,0.4s
MRSI **Marisa** **60.77 93** P **P** **13 15 21.6 0.0**
comp=Z,652nmcomp=Z,25nm,1.5s
SSE **Sheshan** **61.35 58** P **P** **13 15 24.0 -1.2**
SSE S **S** **13 23 47.8 +0.9**
SSE pmax pmax
comp=Z,12nm,0.6s
SSE pmax pmax
comp=Z,130nm,3.4s
SSE LR LR
comp=Z,470nm,19.4s
SSE LR LR
comp=Z,580nm,21.2s
SSE **Sheshan** **61.35 58** IAMs_20 IAMs_20 13 42 36.5
comp=Z,2µm,20.0s
SENIN **Lac Senin/Sane** **61.47 320** P **P** **13 15 26.5 +0.5**
BFO **Black Forest** **61.65 323** P **P** **13 15 26.8 -0.2**
BFO pmax pmax
comp=Z,30nm,1.3s
BFO **Black Forest** **61.65 323** P **P** **13 15 26.8 -0.2**
ECH **Echery** **62.31 322** P **P** **13 15 32.1 +0.7**
ECH pmax pmax
comp=Z,30nm,1.4s
ECH **Echery** **62.31 322** P **P** **13 15 32.0 +0.7**
ECH IAmb IAmb 13 15 32.8
comp=Z,30nm,1.4s
MORW **Morawa** **63.00 127** P **P** **13 15 35.4 -1.0**
DL2 **Dalian** **63.46 49** *e*P **P** **13 15 42.0 +2.8**
DL2 S **S** **13 24 15.5 +2.3**
DL2 pmax pmax
comp=Z,17nm,0.8s
DL2 pmax pmax
comp=Z,320nm,4.4s
DL2 LR LR
comp=Z,2µm,19.8s
DL2 LR LR
comp=Z,1µm,18.4s
DL2 LR LR
comp=Z,2µm,19.4s
PSA00 **Pilbara Seismi** **63.50 117** P **P** **13 15 37.3 -2.5**
PSA00 **Pilbara Seismi** **63.50 117** P **P** **13 15 37.2 -2.5**
PSA00 IAmb IAmb 13 16 05.5
comp=Z,12nm,0.7s
DAV **Davao City (W)** **63.87 85** LR LR 13 43 05.2
comp=Z,179nm,21.8s,baz=211,slow=36
H01W3 **Cape Leeuwin H** **64.11 133** T T 14 25 21.8
baz=298,slow=75
H01W2 **Cape Leeuwin H** **64.11 133** T T 14 25 20.3
baz=298
H01W1 **Cape Leeuwin H** **64.13 133** T T 14 25 16.0
baz=298,slow=75
BATI **Baumata** **64.13 104** P **P** **13 15 43.9 -0.2**
comp=Z,582nmcomp=Z,14nm,1.1s
SOEI **Soe** **64.63 104** P **P** **13 15 44.8 -2.7**
comp=Z,48nm,1.4s
SOEI **Soe** **64.63 104** P **P** **13 15 44.6 -2.9**
KOWA **Kowa** **64.67 283** P **P** **13 15 46.6 -1.0**
comp=Z,6.1nm,1.1s,baz=70,slow=6.4,SNR=4.8
KOWA LR LR 13 44 14.3
comp=Z,655nm,19.2s,baz=91,slow=36
HFS **Hagfors** **64.99 336** P **P** **13 15 47.8 -1.0**
comp=Z,3.4nm,0.7s,baz=157,slow=4.8,SNR=6.4
NWAO **Narrogin (SRO)** **65.54 130** P **P** **13 15 52.2 -0.7**
comp=Z,16nm,0.9s,baz=304,slow=9.8,SNR=5.1
KIC **Kosan Boka** **65.61 274** *e*P **P** **13 15 53.7 0.0**
comp=Z,102nm,1.6s
DBIC **Dimbokro** **65.70 275** P **P** **13 15 53.6 -0.7**
comp=Z,17nm,1.2s,baz=83,slow=10,SNR=6.3
DBIC **Dimbokro** **65.70 275** P **P** **13 15 55.4 +1.1**
DBIC pmax pmax
comp=Z,37nm,1.4s
DBIC **Dimbokro** **65.70 275** P **P** **13 15 55.4 +1.1**
NRIK **Noril'sk** **65.76 10** P **P** **13 15 53.3 -0.4**
comp=Z,2.2nm,0.7s,baz=222,slow=6.2,SNR=5.9
NRIK **Noril'sk** **65.76 10***ce*P **P** **13 15 53.9 +0.2**
NRIK pmax pmax
comp=Z,17nm,1.8s
TIC **Toumodi** **65.87 275** *e*P **P** **13 15 55.5 +0.1**
LIC **Lamto** **65.90 274** *e*P **P** **13 15 57.1 +1.5**
comp=Z,2.1nm,0.2s
KONO **Kongsberg** **66.43 334***ce*P **P** **13 15 59.7 +1.6**
KONO pmax pmax
comp=Z,32nm,1.3s
NB2 **NORSAR Subarra** **66.51 336** P **P** **13 15 57.5 -1.2**
comp=Z,54nm,2.0s,baz=126,slow=6.9
NB2 **NORSAR Subarra** **66.51 336** P **P** **13 15 57.5 -1.2**
baz=126,slow=6.9
NOA **NORSAR Array B** **66.51 336** P **P** **13 15 57.7 -1.0**
comp=Z,10nm,1.3s,baz=120,slow=6.9,SNR=3.5
NOA LR LR 13 47 10.2
comp=Z,545nm,21.9s,baz=110,slow=38
NBO00 **NORSAR Array S** **66.68 336** P **P** **13 15 58.3 -1.5**
ESBB **Sonseca Array** **67.33 311** P **P** **13 16 04.1 -0.3**
ESBB IAmb IAmb 13 16 15.9
comp=Z,31nm,1.5s
ESDC **Sonseca Array** **67.33 311** P **P** **13 16 03.5 -0.8**
comp=Z,8.7nm,1.2s,baz=84,slow=5.4,SNR=16
CN2 **Changchun** **67.47 45** *e*P **P** **13 16 04.0 -1.1**
CN2 PcP **PcP** **13 16 31.0 -1.5**
CN2 S **S** **13 24 59.0 -3.3**
CN2 sS pS 13 25 06.8 +5.1
CN2 pmax pmax
comp=Z,20nm,1.5s
CN2 pmax pmax
comp=Z,250nm,4.0s
CN2 LR LR
comp=Z,460nm,18.0s
CN2 LR LR
comp=Z,1µm,18.0s
CN2 LR LR
comp=Z,2µm,18.0s
PAB **San Pablo** **67.59 310** P **P** **13 16 04.5 -1.6**
PAB pmax pmax
comp=Z,29nm,1.5s
PAB **San Pablo** **67.59 310** P **P** **13 16 04.5 -1.6**
PAB IAmb IAmb 13 16 08.4
comp=Z,29nm,1.5s
FITZ **Fitzroy Crossi** **67.76 112** P **P** **13 16 07.6 +0.2**
KSAR **Wonju Array Be** **67.96 52** P **P** **13 16 07.6 -0.7**
KSAR **Wonju Array Be** **67.96 52** P **P** **13 16 07.6 -0.7**
KSRS **Korea Array** **67.96 52** P **P** **13 16 07.1 -1.4**
comp=Z,5.7nm,0.9s,baz=257,slow=7.1,SNR=14
JTU **Tsushima** **68.73 55** IAMs_20 IAMs_20 13 49 55.0
comp=Z,1µm,19.0s
KNRA **Kununurra** **70.12 109** P **P** **13 16 22.1 +0.1**
MDJ **Mudanjiang** **70.56 45** P **P** **13 16 24.3 0.0**
MDJ sP PcP 13 16 37.8 -7.7
MDJ S **S** **13 25 41.8 +3.0**
MDJ ScS **SKSac** **13 26 24.3 -3.1**
MDJ pmax pmax
comp=Z,20nm,1.6s
MDJ pmax pmax
comp=Z,280nm,4.8s
MDJ LR LR
comp=Z,1µm,22.2s
MDJ LR LR
comp=Z,730nm,24.3s
MDJ LR LR
comp=Z,1µm,26.2s
MDJ **Mudanjiang** **70.56 45** P **P** **13 16 24.2 -0.1**
MDJ IAmb IAmb 13 16 25.3
comp=Z,32nm,1.5s
FAKI **Fak Fak** **71.41 95** P **P** **13 16 30.6 +0.6**
comp=Z,739nmcomp=Z,30nm,1.4s
FAKI **Fak Fak** **71.41 95** P **P** **13 16 28.0 -2.1**
USRK **Ussuriysk Ar.** **72.17 45** P **P** **13 16 33.2 -0.8**
comp=Z,1.2nm,0.6s,baz=250,slow=2.9,SNR=2.5
KLR **Kul'dur** **72.91 40***ce*P **P** **13 16 37.6 -0.8**
KLR pmax pmax
comp=Z,16nm,1.4s
MAW **Mawson** **73.24 179** P **P** **13 16 38.6 -1.2**
comp=Z,7.3nm,1.0s,baz=11,slow=8.8,SNR=11
MAW LR LR 13 40 57.9
comp=Z,1µm,21.3s,baz=5.0,slow=29
MAW **Mawson** **73.24 179** P **P** **13 16 40.7 +0.9**
MAW pmax pmax
comp=Z,3.0nm,1.1s
MAW **Mawson** **73.24 179** P **P** **13 16 40.7 +0.9**
FORT **Forrest** **73.36 124** IAMs_20 IAMs_20 13 44 56.9
comp=Z,1µm,20.0s
YAK **Yakutsk** **74.86 27** *e*P **P** **13 16 46.8 -2.7**
YAK pmax pmax
comp=Z,21nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.3s

YAK	Yakutsk	74.86	27		IAMs_20	IAMs_20	13 52 23.5			
	comp=Z,1µm,20.0s									
INU	Inuyama	75.04	55		IAMs_20	IAMs_20	13 51 50.3			
	comp=Z,1µm,19.0s									
MAT	Matsushiro	76.07	54		P	P	13 16 56.1	-0.9		
MAT					S	S	13 26 35.6	-6.1		
MJAR	Matsushiro Arr	76.07	54		P	P	13 16 56.3	-0.7		
	comp=Z,3.0nm,1.0s,baz=281,slow=6.9,SNR=7.7									
SYO	Syowa Base	76.14	188	‖	eP	P	13 16 56.2	-0.4		
SYO	Syowa Base	76.14	188	‖	ePcP	PcP	13 17 08.0	-0.7		
WRA	Warramunga Arr	76.19	112		P	P	13 16 57.1	-0.9		
	comp=Z,25nm,1.1s,baz=288,slow=5.1,SNR=63									
WRA	Warramunga Arr	76.19	112		P	P	13 16 57.6	-0.4		
WRA					pmax	pmax				
	comp=Z,4.0nm,1.2s									
WRA	Warramunga Arr	76.19	112		P	P	13 16 57.6	-0.4		
WRAB	Tennant Creek	76.20	112	*ce*	P	P	13 16 58.1	0.0		
WRAB					pmax	pmax				
	comp=Z,58nm,1.3s									
WRAB	Tennant Creek	76.20	112		P	P	13 16 57.1	-0.9		
WB2	Warramunga Arr	76.21	112		P	P	13 16 57.5	-0.6		
WR0	Warramunga Arr	76.38	112		P	P	13 16 58.3	-0.8		
ASAR	Alice Springs	76.57	116		P	P	13 16 59.4	-0.8		
	comp=Z,19nm,1.0s,baz=287,slow=5.5,SNR=86									
ASAR	Alice Springs	76.57	116		P	P	13 16 58.8	-1.3		
ASAR	Alice Springs	76.57	116		P	P	13 16 58.8	-1.3		
AS31	Alice Springs	76.57	116		P	P	13 16 59.1	-1.1		
MBO	M'Bour	77.20	283		P	P	13 17 05.5	+1.7		
TIXI	Tiksi	77.56	17	*d*	iP	P	13 17 04.0	-0.7		
TIXI	Tiksi	77.56	17		P	P	13 17 03.9	-0.8		
TIXI					IAmb	IAmb	13 17 05.2			
	comp=Z,18nm,1.2s									
TIXI					IAMs_20	IAMs_20	13 52 37.0			
	comp=Z,1µm,20.0s									
JKA	Kamikawa-asahi	79.76	46		IAMs_20	IAMs_20	13 53 22.9			
	comp=Z,1µm,20.0s									
YSS	Yuzh-Sakhalins	79.97	43		eP	P	13 17 17.8	-0.6		
YSS					*e**PP	pwP	13 17 23.2	+0.1		
YSS					*e*		13 20 26.1			
YSS					*e*S	S	13 27 19.9	-3.4		
YSS					*e*PS	PnS	13 28 03.9	-2.5		
YSS					*e*SS	SS	13 32 35.1	+2.3		
YSS					MLR	MLR				
	comp=Z,2µm,17.0s									
YSS					MLR	MLR				
	comp=E,2µm,20.0s									
DAG	Danmarks Havn	82.08	347	*i*	P	P	13 17 28.0	-1.1		
DAG					pmax	pmax				
	comp=Z,11nm,1.2s									
DAG	Danmarks Havn	82.08	347	*i*	P	P	13 17 28.0	-1.1		
	comp=Z,11nm,1.2s									
DAG	Danmarks Havn	82.08	347	*i*	P	P	13 17 28.0	-1.1		
DAG					IAmb	IAmb	13 17 30.7			
	comp=Z,11nm,1.2s									
YUK	Yuzh-Kuril'sk	82.11	46		eP	P	13 17 27.9	-2.0		
YUK					S	S	13 27 45.2	-0.5		
YUK					MLR	MLR				
	comp=Z,996nm,18.0s									
NVL	N'lazarevskaya	83.13	195		eP	P	13 17 34.3	-0.3		
NVL					eS	S	13 28 01.3	+6.3		
NVL					pmax	pmax				
	comp=Z,19nm,1.1s									
STKA	Stephens Creek	84.86	123		P	P	13 17 43.5	-0.8		
	comp=Z,9.4nm,1.0s,baz=298,slow=9.0,SNR=13									
STKA	Stephens Creek	84.86	123		P	P	13 17 43.9	-0.4		
STKA					pmax	pmax				
	comp=Z,4.0nm,1.1s									
STKA	Stephens Creek	84.86	123		P	P	13 17 43.9	-0.4		
PMG	Port Moresby	86.89	100	*de*	P	P	13 17 54.7	0.0		
PMG					pmax	pmax				
	comp=Z,22nm,1.3s									
SNAA	Sanae	87.58	197		P	P	13 17 57.7	+0.8		
SNAA	Sanae	87.58	197	*ce*	P	P	13 17 58.3	+1.3		
SNAA					pmax	pmax				
	comp=Z,15nm,1.7s									
SNAA	Sanae	87.58	197		P	P	13 17 57.1	+0.1		
SNAA					IAmb	IAmb	13 17 59.3			
	comp=Z,18nm,1.5s									
SNAA					IAMs_20	IAMs_20	13 49 25.9			
	comp=Z,1µm,20.0s									
VNA2	Neumayer--Watz	88.62	198		P	P	13 18 02.7	+0.9		
	baz=85,slow=5.7									
SKR	Severo-Kuril's	88.62	39		eP	P	13 18 15.5	+13		
SKR					MLR	MLR				
	comp=Z,700nm,18.0s									
SKR					MLR	MLR				
	comp=Z,1µm,16.0s									
VNA1	Neumayer--Stat	88.78	198		P	P	13 18 03.9	+1.3		
VNA3	Neumayer Olymp	89.42	198		P	P	13 18 06.5	+0.9		
BILL	Bilibino	90.22	21	*ce*	P	P	13 18 09.2	-0.2		
BILL					pmax	pmax				
	comp=Z,6.0nm,1.2s									
BILL	Bilibino	90.22	21		P	P	13 18 10.8	+1.4		
BILL					IAmb	IAmb	13 18 11.9			
	comp=Z,24nm,1.4s									
EUNU	Eureka	92.71	355		P	P	13 18 18.8	-2.1		
EUNU					IAmb	IAmb	13 18 23.2			
	comp=Z,11nm,1.2s									
EUNU					IAMs_20	IAMs_20	13 57 57.2			
	comp=Z,718nm,22.0s									
ARMA	Armidale	93.20	120		IAMs_20	IAMs_20	13 57 42.7			
	comp=Z,1µm,18.0s									
RES	Resolute Bay	98.34	354		IAMs_20	IAMs_20	14 07 19.0			
	comp=Z,784nm,20.0s									
A21K	Barrow	99.08	12		IAMs_20	IAMs_20	14 10 08.9			
	comp=Z,580nm,19.0s									
RDOG	Red Dog Mine	100.09	15		IAMs_20	IAMs_20	14 08 04.4			
	comp=Z,982nm,22.0s									
TNA	Tin City	100.32	19		IAMs_20	IAMs_20	14 08 50.5			
	comp=Z,696nm,22.0s									
ANM	Nome	101.79	19		IAMs_20	IAMs_20	14 09 58.4			
	comp=Z,674nm,19.0s									
TOLK	Toolik Lake Re	102.68	11		IAMs_20	IAMs_20	14 07 33.9			
	comp=Z,697nm,22.0s									
COLD	Coldfoot	103.76	12		IAMs_20	IAMs_20	14 14 48.4			
	comp=Z,706nm,20.0s									
C36M	Paulatuk	104.92	2		IAMs_20	IAMs_20	14 09 33.6			
	comp=Z,1µm,22.0s									
INK	Inuvik	105.33	6		IAMs_20	IAMs_20	14 12 31.2			
	comp=Z,824nm,22.0s									
I23K	Minto, Yukon-K	105.71	13		IAMs_20	IAMs_20	14 16 12.0			
	comp=Z,961nm,20.0s									
MDM	Murphy Dome	106.12	13		IAMs_20	IAMs_20	14 12 40.8			
	comp=Z,668nm,20.0s									
POKR	Poker Plat Res	106.15	12		IAMs_20	IAMs_20	14 15 49.7			
	comp=Z,685nm,20.0s									
DZM	Mont Dzumac	106.20	111	*e*	PS	PS	13 33 04.6	-0.6		
	comp=Z,80nm,25.1s									
DZM					eSS	SS	13 38 52.0	+1.8		
	comp=Z,127nm,27.9s									
DZM	Mont Dzumac	106.20	111	*e*	LR	LR	13 54 23.8			
	comp=Z,449nm,28.6s									
TCOL	CIGO, UAF Yank	106.27	13		IAMs_20	IAMs_20	14 16 01.9			
	comp=Z,892nm,20.0s									
COLA	College	106.28	13		IAMs_20	IAMs_20	14 16 01.9			
	comp=Z,839nm,20.0s									
CCB	Clear Creek Bu	106.48	13		IAMs_20	IAMs_20	14 09 49.5			
	comp=Z,725nm,21.0s									
BWN	Browne	106.52	14		IAMs_20	IAMs_20	14 14 11.4			
	comp=Z,661nm,21.0s									
WRH	Wood River Hil	106.57	13		IAMs_20	IAMs_20	14 14 26.8			
	comp=Z,811nm,19.0s									
KTH	Kantishna Hill	106.69	14		IAMs_20	IAMs_20	14 13 50.9			
	comp=Z,586nm,20.0s									
HDA	Harding Lake	106.88	12		IAMs_20	IAMs_20	14 15 50.8			
	comp=Z,763nm,20.0s									
TRF	Thorofare Moun	106.93	14		IAMs_20	IAMs_20	14 13 48.3			
	comp=Z,955nm,19.0s									
RND	Reindeer	107.31	14		IAMs_20	IAMs_20	14 14 24.4			
	comp=Z,818nm,20.0s									
EGAK	Eagle	107.66	10		IAMs_20	IAMs_20	14 14 21.5			
	comp=Z,765nm,21.0s									
SKT	Skwentna	107.84	16		IAMs_20	IAMs_20	14 13 35.3			
	comp=Z,760nm,22.0s									
PAX	Paxson	108.46	13		IAMs_20	IAMs_20	14 16 08.7			
	comp=Z,684nm,20.0s									
SUA	Susitna One	108.48	16		IAMs_20	IAMs_20	14 16 57.2			
	comp=Z,599nm,20.0s									
DAWY	Dawson	108.61	9		IAMs_20	IAMs_20	14 17 22.8			
	comp=Z,668nm,19.0s									
GHO	Glory Hole Cre	108.69	15		IAMs_20	IAMs_20	14 11 35.9			
	comp=Z,804nm,20.0s									
PMR	Palmer	108.79	15		IAMs_20	IAMs_20	14 15 12.5			
	comp=Z,736nm,20.0s									
SML	Sawmill	108.81	14		IAMs_20	IAMs_20	14 16 10.0			
	comp=Z,570nm,22.0s									
SCM	Sheep Creek Mo	109.03	14		IAMs_20	IAMs_20	14 17 49.8			
	comp=Z,724nm,19.0s									
SPB	Sao Paulo	109.43	247		IAMs_20	IAMs_20	14 04 26.1			
	comp=Z,721nm,20.0s									
O22K	Cooper Landing	109.58	16		IAMs_20	IAMs_20	14 13 33.2			
	comp=Z,971nm,21.0s									
KLU	Klutina	109.66	13		IAMs_20	IAMs_20	14 09 38.4			
	comp=Z,700nm,20.0s									
QRZ	Quartz Range	109.82	131		IAMs_20	IAMs_20	13 58 04.8			
	comp=Z,698nm,21.0s									
N25K	Chitina, Valde	109.86	13		IAMs_20	IAMs_20	14 15 47.7			
	comp=Z,707nm,20.0s									
GLI	Glacier Island	109.92	14		IAMs_20	IAMs_20	14 18 12.2			
	comp=Z,854nm,19.0s									
BDFB	Brasilia	110.09	256		IAMs_20	IAMs_20	14 09 27.5			
	comp=Z,623nm,19.0s									
GLB	Gilahina Butte	110.18	13		IAMs_20	IAMs_20	14 17 03.1			
	comp=Z,870nm,20.0s									
MCARA	McCarthy VSAT	110.40	12		IAMs_20	IAMs_20	14 16 33.9			
	comp=Z,965nm,22.0s									
HIN	Hinchinbrook I	110.48	14		IAMs_20	IAMs_20	14 12 15.1			
	comp=Z,934nm,22.0s									
BALM	Baldy	110.85	12		IAMs_20	IAMs_20	14 17 07.0			
	comp=Z,747nm,20.0s									
CRQM	Cirque	110.94	13		IAMs_20	IAMs_20	14 11 44.6			
	comp=Z,648nm,20.0s									
TGL	Tana Glacier	111.01	12		IAMs_20	IAMs_20	14 17 19.1			
	comp=Z,720nm,20.0s									
CTGM	Chitina Glacie	111.12	12		IAMs_20	IAMs_20	14 16 38.1			
	comp=Z,1µm,22.0s									
BFZ	Birch Farm	112.62	132		IAMs_20	IAMs_20	13 59 28.9			
	comp=Z,708nm,21.0s									
PAGS	Pennsylvania G	120.10	324		IAMs_20	IAMs_20	14 17 12.3			
	comp=Z,454nm,18.0s									
SKI	Saint Kitts	120.12	294		IAMs_20	IAMs_20	14 12 00.4			
	comp=Z,533nm,21.0s									
SEUS	St. Eustatius	120.30	294		IAMs_20	IAMs_20	14 27 18.0			
	comp=Z,764nm,21.0s									
EYMN	Ely	121.36	339		IAMs_20	IAMs_20	14 23 23.9			
	comp=Z,774nm,20.0s									
M53A	WI Miller and	121.53	327		IAMs_20	IAMs_20	14 16 17.7			
	comp=Z,463nm,20.0s									
B35A	Bob, Littlefor	121.77	341		IAMs_20	IAMs_20	14 25 55.6			
	comp=Z,566nm,18.0s									
M52A	Chesterland	121.82	328		IAMs_20	IAMs_20	14 18 42.4			
	comp=Z,509nm,21.0s									
T60A	Surry	122.05	321		IAMs_20	IAMs_20	14 23 27.2			
	comp=Z,453nm,21.0s									
AGMN	Agassiz Nation	122.51	342		IAMs_20	IAMs_20	14 21 10.9			
	comp=Z,640nm,21.0s									
O52A	Adamsville	123.08	327		IAMs_20	IAMs_20	14 26 48.9			
	comp=Z,505nm,22.0s									
T57A	Hurt	123.69	322		IAMs_20	IAMs_20	14 21 01.6			
	comp=Z,508nm,22.0s									
D32A	Dogwood Acres,	123.90	342		IAMs_20	IAMs_20	14 22 10.6			
	comp=Z,840nm,22.0s									
SPMN	Marine on St.	124.15	338		IAMs_20	IAMs_20	14 24 12.8			
	comp=Z,484nm,20.0s									
Q51A	Peebles	124.67	327		IAMs_20	IAMs_20	14 20 36.1			
	comp=Z,520nm,20.0s									
U56A	King	124.80	322		IAMs_20	IAMs_20	14 23 45.1			
	comp=Z,586nm,20.0s									
F33A	5 Mile Ranch,	124.83	341		IAMs_20	IAMs_20	14 22 35.4			
	comp=Z,571nm,20.0s									
JFWS	Jewell Farm	125.06	335		IAMs_20	IAMs_20	14 24 31.1			
	comp=Z,557nm,22.0s									
W57A	Gilead	125.34	321		IAMs_20	IAMs_20	14 20 46.5			
	comp=Z,523nm,21.0s									
P48A	Milroy	125.47	329		IAMs_20	IAMs_20	14 28 49.8			
	comp=Z,416nm,20.0s									
L42A	Oliver, Polo	125.54	334		IAMs_20	IAMs_20	14 24 33.1			
	comp=Z,522nm,21.0s									
SFIN	Lafayette	125.62	330		IAMs_20	IAMs_20	14 29 32.5			
	comp=Z,599nm,18.0s									
L40A	Anamosa	126.17	335		IAMs_20	IAMs_20	14 25 34.5			
	comp=Z,516nm,21.0s									
R49A	Shelbyville	126.19	327		IAMs_20	IAMs_20	14 25 41.1			
	comp=Z,395nm,18.0s									
ECSD	EROS Data Cent	126.80	340		IAMs_20	IAMs_20	14 24 12.6			
	comp=Z,600nm,21.0s									
SUSD	Miller	126.91	342		IAMs_20	IAMs_20	14 24 29.4			
	comp=Z,738nm,22.0s									
T50A	Nancy	126.93	326		IAMs_20	IAMs_20	14 27 37.9			
	comp=Z,461nm,21.0s									
SCIA	State Center	127.12	336		IAMs_20	IAMs_20	14 29 08.5			
	comp=Z,615nm,20.0s									
TKL	Tuckaleechee C	127.29	324		IAMs_20	IAMs_20	14 26 04.6			
	comp=Z,522nm,20.0s									
Q44A	Meyer Farm, Va	127.70	331		IAMs_20	IAMs_20	14 31 42.5			
	comp=Z,572nm,19.0s									
U49A	Rolling Sq	127.82	326		IAMs_20	IAMs_20	14 23 18.4			
	comp=Z,603nm,22.0s									
N38A	Joes South For	128.06	335		IAMs_20	IAMs_20	14 26 30.6			
	comp=Z,586nm,19.0s									
T47A	Sharon Grove	128.19	328		IAMs_20	IAMs_20	14 17 40.9			
	comp=Z,396nm,20.0s									
BOZ	Bozeman (W)	128.44	354		IAMs_20	IAMs_20	14 22 57.8			
	comp=Z,740nm,22.0s									
SLM	Saint Louis	128.49	331		IAMs_20	IAMs_20	14 32 04.5			
	comp=Z,509nm,18.0s									
K31A	O'Neill	128.50	341		IAMs_20	IAMs_20	14 25 34.4			
	comp=Z,640nm,20.0s									
RSSD	Black Hills	128.57	346		IAMs_20	IAMs_20	14 23 47.9			
	comp=Z,501nm,21.0s									
P40A	Paris	128.60	334		IAMs_20	IAMs_20	14 31 15.1			
	comp=Z,673nm,21.0s									
DLMT	Dillon	128.77	354		IAMs_20	IAMs_20	14 22 41.5			
	comp=Z,572nm,20.0s									
SWET	Sewanee	128.84	325		IAMs_20	IAMs_20	14 30 41.6			
	comp=Z,434nm,20.0s									
154A	Montrose	128.96	321		IAMs_20	IAMs_20	14 31 13.3			
	comp=Z,571nm,20.0s									
T45A	Paducah	128.97	329		IAMs_20	IAMs_20	14 33 30.5			
	comp=Z,648nm,21.0s									
LVC	Limon Verde	129.17	246		IAMs_20	IAMs_20	14 17 18.8			
	comp=Z,719nm,20.0s									
BGNE	Belgrade	129.38	340		IAMs_20	IAMs_20	14 25 26.0			
	comp=Z,641nm,22.0s									
CCM	Cathedral Cave	129.43	332		IAMs_20	IAMs_20	14 29 19.3			
	comp=Z,583nm,20.0s									
N33A	J Bar K, Exete	129.73	339		IAMs_20	IAMs_20	14 26 55.5			
	comp=Z,509nm,21.0s									
SDV	Santo Domingo	129.89	287		IAMs_20	IAMs_20	14 24 27.7			
	comp=Z,471nm,22.0s									
152A	Waverly Hall	129.92	322		IAMs_20	IAMs_20	14 25 58.6			
	comp=Z,420nm,19.0s									
GO01	Chusmiza	129.95	249		IAMs_20	IAMs_20	14 16 27.0			
	comp=Z,536nm,21.0s									
X48A	Hartselle	130.03	325		IAMs_20	IAMs_20	14 23 53.9			
	comp=Z,564nm,22.0s									
LNXT	Lenox	130.11	329		IAMs_20	IAMs_20	14 33 58.6			
	comp=Z,489nm,19.0s									
T42A	Van Buren	130.18	331		IAMs_20	IAMs_20	14 27 29.2			
	comp=Z,786nm,22.0s									
LOHW	Long Hollow	130.27	352		IAMs_20	IAMs_20	14 27 04.3			
	comp=Z,568nm,20.0s									
K22A	Caspar	130.52	348		IAMs_20	IAMs_20	14 24 52.2			
	comp=Z,562nm,21.0s									
MGMO	Mountain Grove	130.64	332		IAMs_20	IAMs_20	14 28 28.2			
	comp=Z,645nm,21.0s									
S39A	Bolivar	130.68	333		IAMs_20	IAMs_20	14 28 38.2			
	comp=Z,755nm,21.0s									
TA01	Diego Aracena	130.72	248		IAMs_20	IAMs_20	14 16 39.0			
	comp=Z,518nm,20.0s									
PSGCX	Pisagua	130.83	249		IAMs_20	IAMs_20	14 18 02.2			
	comp=Z,372nm,20.0s									
KSU1	Kansas State U	130.85	337		IAMs_20	IAMs_20	14 26 47.3			
	comp=Z,612nm,22.0s									
MFID	Camas Ranch	130.94	357		IAMs_20	IAMs_20	14 24 44.8			
	comp=Z,544nm,18.0s									
PDAR	Pinedale Array	130.95	351		PKP	PKPdf	13 24 21.1	-0.4		
	comp=Z,1.0nm,1.0s,baz=48,slow=2.2,SNR=6.5									
LCAR	Lake Charles	130.97	330		IAMs_20	IAMs_20	14 29 42.3			
	comp=Z,636nm,22.0s									
AP01	Chacalluta	131.22	251		IAMs_20	IAMs_20	14 18 18.9			
	comp=Z,571nm,21.0s									
Z47A	Carrollton	131.52	325		IAMs_20	IAMs_20	14 31 22.6			
	comp=Z,655nm,21.0s									
U40A	Yellville	131.56	332		IAMs_20	IAMs_20	14 30 02.6			
	comp=Z,520nm,20.0s									
HHAR	Hobbs	132.12	333		IAMs_20	IAMs_20	14 32 28.4			
	comp=Z,474nm,20.0s									
WHAR	Wooly Hollow	132.15	331		IAMs_20	IAMs_20	14 30 22.4			
	comp=Z,621nm,20.0s									
W41B	Gary Mavity, V	132.22	330		IAMs_20	IAMs_20	14 30 23.4			
	comp=Z,640nm,22.0s									
R32A	Long Quarter,	132.23	339		IAMs_20	IAMs_20	14 29 52.7			
	comp=Z,621nm,20.0s									
146A	Union	132.50	326		IAMs_20	IAMs_20	14 32 47.3			
	comp=Z,628nm,21.0s									
X40A	Basin Creek Fa	133.06	330		IAMs_20	IAMs_20	14 29 47.6			
	comp=Z,642nm,22.0s									
O20A	White River Ci	133.28	349		IAMs_20	IAMs_20	14 27 46.3			
	comp=Z,670nm,20.0s									
MIAR	Mount Ida	133.37	331		IAMs_20	IAMs_20	14 30 22.8			
	comp=Z,587nm,20.0s									
OK030	Cody Creek RV	133.66	335		IAMs_20	IAMs_20	14 30 44.8			
	comp=Z,669nm,20.0s									
143A	Socs Landing,	133.73	328		IAMs_20	IAMs_20	14 31 08.7			
	comp=Z,503nm,20.0s									
X37A	Clayton	134.18	333		IAMs_20	IAMs_20	14 28 35.8			
	comp=Z,629nm,21.0s									
BEKR	Beckworth	134.53	2		IAMs_20	IAMs_20	14 27 14.6			
	comp=Z,523nm,20.0s									
ORV	Oroville	134.80	3		IAMs_20	IAMs_20	14 26 51.6			
	comp=Z,377nm,19.0s									
SDCO	Great Sand Dun	134.96	345		IAMs_20	IAMs_20	14 34 43.0			
	comp=Z,387nm,20.0s									
PV18	Skein Mesa, Pa	135.24	349		IAMs_20	IAMs_20	14 33 33.1			
	comp=Z,406nm,20.0s									
PV01	Paradox Valley	135.28	349		IAMs_20	IAMs_20	14 18 00.2			
	comp=Z,483nm,22.0s									
S22A	4UR Ranch, Cre	135.28	347		IAMs_20	IAMs_20	14 29 30.4			
	comp=Z,682nm,22.0s									
AFDM	Forest Hills D	135.43	2		IAMs_20	IAMs_20	14 27 41.3			
	comp=Z,486nm,21.0s									
WMOK	Wichita Mounta	135.50	336		IAMs_20	IAMs_20	14 32 17.5			
	comp=Z,457nm,21.0s									
NVAR	Mina Array Bea	135.99	360		PKP	PKPdf	13 24 31.1	0.0		
	comp=Z,0.3nm,0.5s,baz=225,slow=2.0,SNR=4.1									
Z35A	Perchaven, San	136.07	334		IAMs_20	IAMs_20	14 30 28.9			
	comp=Z,718nm,22.0s									
WHTX	Lake Whitney,	137.30	333		IAMs_20	IAMs_20	14 31 32.5			
	comp=Z,592nm,21.0s									
MSTX	Muleshoe	137.66	340		IAMs_20	IAMs_20	14 31 13.1			
	comp=Z,422nm,19.0s									
ABTX	Abilene, Hawle	137.70	336		IAMs_20	IAMs_20	14 31 46.6			
	comp=Z,511nm,22.0s									
ANMO	Albuquerque	137.85	345	*c*	iPKIKP	PKPdf	13 24 34.8	+0.2		
ANMO					pmax	pmax				
	comp=Z,1.0nm,1.3s									
WUAZ	Wupatki	138.32	351		IAMs_20	IAMs_20	14 30 39.6			
	comp=Z,606nm,19.0s									
GSC	Goldstone, Bar	139.08	358		IAMs_20	IAMs_20	14 32 15.1			
	comp=Z,607nm,19.0s									
JCT	Junction City	139.63	334		IAMs_20	IAMs_20	14 34 35.9			
	comp=Z,449nm,21.0s									
PASC	Pasadena Art C	140.24	359		IAMs_20	IAMs_20	14 35 40.8			
	comp=Z,390nm,20.0s									
121A	Cookes Peak, D	140.48	345		IAMs_20	IAMs_20	14 31 00.3			
	comp=Z,654nm,22.0s									
TXAR	Lajitas Array	142.19	338		PKhKP	PKPpre	13 24 36.9			
	comp=Z,1.2nm,1.0s,baz=99,slow=2.2,SNR=7.9									
SFX	San Felipe	143.18	354		IAMs_20	IAMs_20	14 34 46.0			
	comp=Z,384nm,22.0s									
TBI	Tubuai	145.64	124	*e*	LR	LR	14 12 39.8			
	comp=Z,456nm,28.2s									
PPT2	Papeete2	147.66	114	*e*	LR	LR	14 13 24.4			
	comp=Z,540nm,26.0s									
TAOE	Nuku Hiva Isla	158.54	99	*e*	LR	LR	14 18 38.2			
	comp=Z,415nm,26.2s									

IDC ***29*** *13:07:05.6±0.7, 5°.71N×61°.32E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.1/50, mbtmp4.3/16, MS4.5/2, Ms1 4.6/2, ms1mx3.8/34, Error ellipse: s-maj=23.0km s-min=17.6km az=29.0*
NEIC ***29*** *13:07:06.2±2.7, 5°.7N

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TEKS				*e*Sg		**Sn**	13 18 31.3	-0.2
HAPS	**Han Pijesak,BI**	**1.30**	**296**	*e*Pg		**Pg**	13 18 13.2	-1.6
HAPS				*e*Sg		**Sg**	13 18 31.2	-0.4
PDG	**Podgorica**	**1.46**	**222**	⇑P		**Pn**	13 18 17.1	+0.3
PDG				⇑S		**Sg**	13 18 38.0	+1.1
MDVR	**Moldovita**	**1.50**	**33**	⇓P		**Pb**	13 18 17.9	-0.3
MDVR				⇑S		**Sb**	13 18 37.1	-0.4
PRVS	**Prvonek**	**1.50**	**132**	*e*Pg		**Pn**	13 18 17.6	+0.2
PRVS				*e*Sg		**Sn**	13 18 37.2	-0.2
ZAPS	**Zavoj**	**1.53**	**99**	*e*Pg		**Pb**	13 18 18.7	+0.1
ZAPS				*e*Sg		**Sg**	13 18 39.0	+0.1
FRGS	**Fruska Gora**	**1.72**	**342**	*e*Pg		**Pn**	13 18 20.4	0.0
FRGS				*e*Sg		**Sg**	13 18 47.3	+2.2
BOSS	**Bosilegrad**	**1.74**	**126**	*e*Pg		**Pn**	13 18 21.4	+0.7
BOSS				*e*Sg		**Sb**	13 18 45.3	+0.9
DJES	**Djerdap**	**1.81**	**50**	*e*Pg		**Pg**	13 18 24.3	-0.2
DJES				*e*Sg		**Sg**	13 18 49.4	+1.4
TREB	**Trebinje**	**1.82**	**244**	*e*Pn		**Pn**	13 18 22.0	+0.3
TREB				*e*Sn		**Sn**	13 18 44.4	-0.6
PUNG	**Punghina**	**1.86**	**66**	⇓S		**Sg**	13 18 49.0	-0.9
HERR	**Herculane**	**1.89**	**44**	⇑P		**Pn**	13 18 23.3	+0.5
HERR				⇓S		**Sn**	13 18 47.6	+0.7
VTS	**Vitosha**	**2.15**	**114**	P		**Pn**	13 18 27.0	+0.5
STIP	**Stip**	**2.19**	**146**	*i* Pn		**Pb**	13 18 28.8	-1.1
STON	**Ston**	**2.20**	**254**	*e*Pn		**Pn**	13 18 27.3	+0.4
STON				*e*Sn		**Sn**	13 18 53.4	-1.0
STON	**Ston**	**2.20**	**254**	*e*Pn		**Pb**	13 18 28.9	-1.2
STON				Sn		**Sb**	13 18 58.1	+0.6
SRE	**Strehaia**	**2.21**	**58**	⇑P		**Pn**	13 18 28.0	+0.9
BZS	**Buzias**	**2.22**	**19**	⇓P		**Pn**	13 18 27.2	0.0
BZS				⇑S		**Sn**	13 18 53.9	-1.0
GZR	**Gura Zlata**	**2.44**	**40**	⇑P		**Pn**	13 18 30.3	0.0
GZR				⇓S		**Sn**	13 19 01.4	+0.8
KKB	**Krupnik**	**2.49**	**131**	P		**Pn**	13 18 31.8	+0.8
RICI	**Ricice**	**2.50**	**270**	*e*Pn		**Pn**	13 18 32.6	+1.5
RICI				Sn		**Sb**	13 19 05.5	-0.8
MAKA	**Makarska**	**2.60**	**266**	*e*Pn		**Pn**	13 18 34.5	+2.0
MAKA				Sn		**Sb**	13 19 07.8	-1.2
BLY	**Banja Luka**	**2.73**	**298**	*e*Pn		**Pn**	13 18 35.0	+0.8
BLY				*e*Sn		**Sn**	13 19 08.8	+1.4
LSTV	**Lastovo**	**2.80**	**255**	Sn		**Sn**	13 19 11.5	+2.4
SIRR	**Siria**	**2.84**	**15**	⇑P		**Pn**	13 18 35.8	-0.1
DEV	**Deva**	**2.88**	**34**	⇑P		**Pn**	13 18 36.2	-0.2
DEV				⇑S		**Sn**	13 19 11.3	0.0
LOT	**Lotru**	**2.99**	**49**	⇑P		**Pn**	13 18 38.8	+0.9
MMB	**Musomiste**	**3.03**	**129**	P		**Pn**	13 18 40.0	+1.5
KIJV	**Kijevo**	**3.05**	**280**	*e*Pn		**Pn**	13 18 40.5	+1.8
MOSL	**Moslavina**	**3.43**	**309**	*e*Pn		**Pn**	13 18 44.4	+0.5
MORI	**Morici**	**3.54**	**277**	*e*Pn		**Pn**	13 18 47.8	+2.4
MORI				Sn		**Sn**	13 19 29.5	+1.9
ZIRJ	**Zirje**	**3.58**	**274**	*e*Pn		**Pn**	13 18 48.6	+2.7
ZIRJ				Sn		**Sn**	13 19 30.8	+2.3
DRGR		**3.60**	**24**	⇑P		**Pn**	13 18 46.0	-0.2
UDBI	**Udbina**	**3.61**	**288**	*e*Pn		**Pn**	13 18 48.0	+1.7
VOIR		**3.73**	**58**	⇓P		**Pn**	13 18 48.6	+0.5
KALN	**Kalnik**	**3.92**	**313**	*e*Pn		**Pn**	13 18 50.6	0.0
DUGI	**Dugi Otok**	**4.02**	**278**	*e*Pn		**Pn**	13 18 54.6	+2.7
PTJ	**Puntijarka**	**4.05**	**308**	*e*Pn		**Pn**	13 18 53.6	+1.2
CRES	**Cresnjev**	**4.31**	**304**	*e*Pn		**Pn**	13 18 56.2	+0.2
CRES				*e*Sn		**Sn**	13 19 45.7	-0.8
PSZ	**Piszkesteto**	**4.42**	**354**	⇑P		**Pn**	13 18 56.9	-0.6
RIY	**Rijeka**	**4.71**	**294**	*e*Pn		**Pn**	13 19 02.2	+0.7
RIY				*e*Sn		**Sn**	13 19 55.1	-1.4
CEY	**Cerknica**	**4.91**	**299**	*e*Pn		**Pn**	13 19 04.2	0.0
CEY				*e*Sn		**Sn**	13 20 00.1	-1.2
SOKA	**Soboth** 0.8nm,0.3s	**5.03**	**311**	*i* Pn		**Pn**	13 19 06.1	+0.2
SOKA				*e*Sn		**Sn**	13 20 01.5	-2.8
	1.4nm,0.3s							
VYHS	**Vyhne**	**5.11**	**347**	*e*PN		**Pn**	13 19 07.3	+0.3
VYHS				*e*SN		**Sn**	13 20 06.7	+0.5
ARSA	**Arzberg** 3.0nm,0.2s,SNR=8.7	**5.14**	**318**	*i* Pn		**Pn**	13 19 07.9	+0.4
ARSA				*i* Sn		**Sn**	13 20 04.3	-2.8
	3.6nm,0.4s							
OBKA	**Obir** 3.4nm,0.5s	**5.21**	**307**	*i* Pn		**Pn**	13 19 10.2	+1.9
OBKA				*i* Sn		**Sn**	13 20 07.4	-1.3
	3.7nm,0.5s							
BURAR	**Bucovina Array**	**5.23**	**37**	⇓P		**Pn**	13 19 09.0	+0.3
MODS	**Modra-Piesok**	**5.36**	**336**	*e*PN		**Pn**	13 19 10.1	-0.3
MODS				*e*SN		**Sn**	13 20 06.5	-5.9
CONA	**Conrad Observa** 1.5nm,0.3s,SNR=4.4	**5.50**	**325**	*i* Pn		**Pn**	13 19 12.6	+0.3
CONA				*e*Sn		**Sn**	13 20 16.8	+1.0
	0.9nm,0.2s							
ABTA	**Abfaltersbach** 1.4nm,0.4s	**6.54**	**302**	*e*Pn		**Pn**	13 19 28.7	+2.0
WTTA	**Wattenberg** 3.6nm,0.3s,SNR=5.8	**7.31**	**304**	*e*Pn		**Pn**	13 19 40.3	+3.0
FETA	**Feichten** 1.3nm,0.4s	**7.77**	**300**	*i* Pn		**Pn**	13 19 47.2	+3.5

***IDC* 29 13:22:44.9±12.0, 0°.39S×13°.02W, h0km, mb4.1/4, mb1 4.2/5, mb1mx3.7/61, mbtmp4.1/5, ML3.5/1, Error ellipse: s-maj=275.2km s-min=87.1km az=175.0, North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**19.85**	**47**	P	P	13 27 17.2	-0.4
	0.2nm,0.3s,baz=231,slow=10,SNR=20						
IDI	**Anoyia**	**50.09**	**41**	P	P	13 31 42.3	+0.3
	4.0nm,0.9s,baz=292,slow=9.1,SNR=4.5						
DAVOX	**Davos/Dischmat**	**51.09**	**20**	P	P	13 31 49.5	0.0
	1.5nm,0.5s,baz=215,slow=16,SNR=2.9						
GERES	**GERESS Array B**	**54.20**	**21**	P	P	13 32 12.6	+0.2
	1.1nm,0.7s,baz=199,slow=4.9,SNR=9.1						
FINES	**FINESS Array B**	**68.47**	**19**	P	P	13 33 48.1	-0.6
	2.3nm,0.8s,baz=205,slow=6.2,SNR=3.7						

IDC ***29*** *13:26:31.2±0.9, 5°.63N×61°.43E, h0km, mb4.0/15, mb1 4.2/15, mb1mx3.9/62, mbtmp4.0/15, MS4.0/4, Ms1 4.0/4, ms1mx3.4/50, Error ellipse: s-maj=27.5km s-min=16.1km az=39.0*

NEIC ***29*** *13:26:32.1±1.1, 5°.4N±0°.2×61°.41E±0°.0, h10km±1km, mb4.3/8, Error ellipse: s-maj=31.1km s-min=12.3km az=189.0*

ISC 29 13:26:32.8±1.0, 5°.5N±0°.2×61°.4E±0°.1, h14km, n32, σ1°00/28, mb4.1/17, MS4.2/3, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**17.85**	**352**	LR	LR	13 35 59.5	
	comp=Z,272nm,22.0s,baz=146,slow=32						
RAYN	**Ar Rayn**	**23.58**	**321**	P	**P**	**13 31 43.9**	**+0.5**
RAYN				IAmb	IAmb	13 31 44.7	
	comp=Z,8.0nm,1.1s						
NIL	**Nilore**	**30.11**	**20**	P	**P**	**13 32 43.6**	**+1.5**
PSI	**Prapat**	**37.51**	**93**	LR	LR	13 47 50.4	
	comp=Z,345nm,18.8s,baz=271,slow=34						
KKAR	**Karatay Array**	**38.31**	**11**	P	**P**	**13 33 53.2**	**+0.1**
AAK	**Ala-Archa**	**38.77**	**15**	P	**P**	**13 33 57.5**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=186,slow=19,SNR=8.2						
AAK	**Ala-Archa**	**38.77**	**15**	P	**P**	**13 33 57.6**	**+0.5**
AAK				IAmb	IAmb	13 34 12.2	
	comp=Z,5.2nm,1.2s						
CMAR	**Chiang Mai Arr**	**38.82**	**67**	P	**P**	**13 33 58.5**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=264,slow=8.1,SNR=7.1						
CMAR	**Chiang Mai Arr**	**38.82**	**67**	P	**P**	**13 33 58.0**	**+0.3**
LSZ	**Lusaka**	**38.84**	**237**	LR	LR	13 48 12.2	
	comp=Z,303nm,18.6s,baz=30,slow=33						
KBZ	**Khabaz**	**41.43**	**340**	P	**P**	**13 34 18.4**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=208,slow=7.1,SNR=4.5						
BRTR	**Keskin Array B**	**42.28**	**328**	P	**P**	**13 34 26.1**	**0.0**
	comp=Z,1.7nm,0.8s,baz=148,slow=12,SNR=4.8						
BRTR	**Keskin Array B**	**42.28**	**328**	P	**P**	**13 34 25.7**	**-0.5**
ABKAR	**Akbulak array**	**43.63**	**359**		**P**	**13 34 36.9**	**+0.1**
ABKAR				IAmb	IAmb	13 34 44.8	
	comp=Z,9.1nm,1.1s						
ABKAR	**Akbulak array**	**43.63**	**359**		**P**	**13 34 36.8**	**+0.1**
AKTO	**Aktyubinsk**	**44.88**	**357**	P	**P**	**13 34 46.0**	**-0.8**
	comp=Z,4.1nm,1.0s,baz=187,slow=6.4,SNR=7.1						
MKAR	**Makanchi Array**	**44.92**	**20**	P	**P**	**13 34 45.1**	**-2.1**
	comp=Z,0.9nm,0.9s,baz=204,slow=9.0,SNR=2.3						
LBTB	**Lobatse**	**46.17**	**227**	LR	LR	13 50 19.1	
	comp=Z,133nm,21.5s,baz=54,slow=31						
MLR	**Muntele Rosu**	**50.36**	**328**	P	**P**	**13 35 29.8**	**+0.1**
	comp=Z,3.2nm,0.5s,baz=158,slow=19,SNR=5.3						
ZALV	**Zalesovo Beam**	**51.93**	**17**	P	**P**	**13 35 40.1**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=207,slow=9.3,SNR=4.1						
SONM	**Songino Array**	**57.00**	**35**	P	**P**	**13 36 18.0**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=235,slow=5.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**59.30**	**282**	P	**P**	**13 36 35.8**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=78,slow=5.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**59.30**	**282**	P	**P**	**13 36 34.8**	**0.0**
HFS	**Hagfors**	**65.32**	**336**	P	**P**	**13 37 13.7**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=134,slow=4.2,SNR=3.4						
FITZ	**Fitzroy Crossi**	**67.53**	**112**	P	**P**	**13 37 30.2**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=249,slow=10						
ESDC	**Sonseca Array**	**67.62**	**311**	P	**P**	**13 37 29.8**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=79,slow=4.7,SNR=6.5						
WRA	**Warramunga Arr**	**75.96**	**112**	P	**P**	**13 38 20.8**	**+0.8**
	comp=Z,3.5nm,0.8s,baz=291,slow=4.7,SNR=22						
WRA	**Warramunga Arr**	**75.96**	**112**	P	**P**	**13 38 16.9**	**-3.0**
ASAR	**Alice Springs**	**76.32**	**116**	P	**P**	**13 38 22.9**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=291,slow=5.9,SNR=23						
ASAR	**Alice Springs**	**76.32**	**116**	P	**P**	**13 38 22.3**	**+0.3**
AS31	**Alice Springs**	**76.32**	**116**	P	**P**	**13 38 22.7**	**+0.7**
PDAR	**Pinedale Array**	**131.27**	**351**	PKP	**PKPdf**	**13 45 44.3**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=111,slow=2.0,SNR=2.4						

JMA ***29*** *13:28:37.9±0.5, 34°.51N×137°.18E, h352km±5km, M2.9*

IDC ***29*** *13:28:39.0±0.9, 34°.47N×137°.22E, h332km±15km, mb3.1/6, mb1 3.2/9, mb1mx2.9/57, mbtmp3.7/9, Error ellipse: s-maj=33.4km s-min=14.2km az=65.0*

ISC 29 13:28:39.2±0.9, 34°.49N±0°.09×137°.19E±0°.07, h335km±7km, n25, σ0°69/31, mb3.2/6, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.15**	**346**	P	**Pn**	**13 29 22.4**	**+1.2**
JIE	**Ise**	**0.41**	**257**	P	**Pn**	**13 29 22.6**	**+1.0**
JYTA	**Yamagatataniai**	**1.17**	**342**	P	**Pn**	**13 29 24.7**	**+0.7**
JWY	**Kouya**	**1.35**	**259**	P	**Pn**	**13 29 25.8**	**+0.7**
JWY				*e*S	**S**	**13 30 01.0**	**-0.8**
JTNC	**Tanabenakahech**	**1.47**	**243**	P	**Pn**	**13 29 26.4**	**+0.7**
JTNC				*e*S	**S**	**13 30 02.5**	**-0.4**
JWT	**Wachi**	**1.67**	**299**	P	**Pn**	**13 29 27.3**	**+0.5**
JOD2	**Odawara 2**	**1.74**	**63**	P	**Pn**	**13 29 28.6**	**+1.2**
JKG	**Kaga**	**1.92**	**339**	P	**Pn**	**13 29 28.7**	**+0.3**
JRY	**Ryogami san**	**2.07**	**42**	P	**Pn**	**13 29 30.9**	**+1.3**
MAT	**Matsushiro**	**2.21**	**22**	P	**Pn**	**13 29 31.2**	**+0.6**
MAT				S	**S**	**13 30 11.3**	**-0.7**
MAT	**Matsushiro**	**2.21**	**22**	P	**Pn**	**13 29 31.3**	**+0.6**
MAT				*e*S	**S**	**13 30 11.5**	**-0.5**
MJAR	**Matsushiro Arr** 0.5nm,0.3s,baz=203,slow=8.4,SNR=44	**2.21**	**22**	P	**Pn**	**13 29 30.8**	**+0.1**
MJAR				S	**S**	**13 30 11.1**	**-0.9**
	0.0nm,0.3s,baz=331,slow=17,SNR=2.0						
JAI	**Aioi**	**2.37**	**254**	P	**Pn**	**13 29 32.2**	**+0.2**
JAG	**Ashikaga**	**2.68**	**43**	P	**Pn**	**13 29 34.1**	**-0.4**
JMN	**Monobe**	**2.85**	**256**	P	**Pn**	**13 29 36.4**	**+0.3**
BSO1	**Boso 1**	**3.13**	**86**	P	**Pn**	**13 29 37.9**	**-0.1**
BSO1				S	**S**	**13 30 24.3**	**-1.1**
JHS	**Saijyo**	**3.39**	**280**	P	**Pn**	**13 29 41.6**	**+0.4**
KSRS	**Korea Array** 0.2nm,0.3s,baz=103,slow=12,SNR=6.2	**8.07**	**294**	P	**Pn**	**13 30 34.8**	**+0.8**
ASAJ	**Asahikawa** 0.6nm,0.3s,baz=226,slow=12,SNR=8.1	**10.49**	**22**	P	**Pn**	**13 31 03.2**	**+0.4**
SONM	**Songino Array** 0.5nm,0.5s,baz=110,slow=8.8,SNR=2.2	**26.55**	**309**	P	**P**	**13 33 47.2**	**-0.2**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=104,slow=6.5,SNR=2.7	**41.17**	**315**	P	**P**	**13 35 51.7**	**0.0**
MKAR	**Makanchi Array** 0.8nm,0.5s,baz=85,slow=9.8,SNR=10	**42.62**	**304**	P	**P**	**13 36 03.8**	**+0.4**
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=360,slow=7.7,SNR=29	**54.19**	**183**	P	**P**	**13 37 30.9**	**-0.3**
ASAR	**Alice Springs** 0.2nm,0.3s,baz=356,slow=5.4,SNR=23	**57.92**	**184**	P	**P**	**13 37 57.2**	**0.0**
FINES	**FINESS Array B** 1.5nm,0.9s,baz=46,slow=8.0,SNR=4.0	**69.45**	**331**	P	**P**	**13 39 11.4**	**+0.1**

IDC ***29*** *13:30:09.8±0.7, 29°.81S×71°.35W, h0km, mb4.2/9, mb1 4.3/14, mb1mx4.1/33, mbtmp4.1/14, ML3.8/5, Error ellipse: s-maj=25.4km s-min=19.0km az=70.0*

NEIC ***29*** *13:30:16.9±2.6, 29°.69S±0°.04×71°.58W±0°.07, h52km±8km, mb4.5/13, ML4.8(GUC), Error ellipse: s-maj=9.3km s-min=5.3km az=88.0*

GUC ***29*** *13:30:17.8±0.6, 29°.74S×71°.39W, h57km±6km, ML4.8*

ISC 29 13:30:15.7±1.0, 29°.70S±0°.03×71°.54W±0°.06, h40km±9km, n86, σ1°69/99, mb4.2/13, 6C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO04	**Tololo Observa**	**0.80**	**127**	*e*P	**Pn**	**13 30 31.8**	**+1.1**
GO04				*e*S	**Sn**	**13 30 42.4**	**+0.8**
GO04	**Tololo Observa**	**0.80**	**127**	P	**Pn**	**13 30 32.0**	**+1.2**
GO04				*i* S	**Sn**	**13 30 42.7**	**+1.1**
LCO	**Las Campanas**	**1.00**	**47**	⇓*i*P	**Pn**	**13 30 35.7**	**+2.2**
LCO				*i* S	**Sn**	**13 30 48.3**	**+1.7**
LCO	**Las Campanas**	**1.00**	**47**	Pn	**Pn**	**13 30 35.2**	**+1.7**
LCO				Sn	**Sn**	**13 30 48.3**	**+1.7**
CO01	**Juntas del Tor**	**1.29**	**103**	*e*P	**Pn**	**13 30 38.6**	**+1.2**
CO01				*e*S	**Sn**	**13 30 53.6**	**0.0**
CO01	**Juntas del Tor**	**1.29**	**103**		**Pn**	**13 30 38.7**	**+1.2**
CO01				Sn	**Sn**	**13 30 53.6**	**0.0**
CO03	**El Pedregal**	**1.35**	**147**	⇑*i*P	**Pn**	**13 30 39.7**	**+1.4**
CO03				*e*S	**Sn**	**13 30 55.9**	**+0.8**
CO03				IAML		13 30 56.2	
	comp=E,35μm,0.1s						
CO03	**El Pedregal**	**1.35**	**147**	Pn	**Pn**	**13 30 39.5**	**+1.3**
AC05	**El Transito**	**1.40**	**52**	⇓*i*P	**Pn**	**13 30 40.7**	**+1.8**
AC05				*i* S	**Sn**	**13 30 58.3**	**+2.1**
AC05	**El Transito**	**1.40**	**52**	Pn	**Pn**	**13 30 41.0**	**+2.2**
AC04	**Llanos de Chal**	**1.54**	**15**	⇑*i*P	**Pn**	**13 30 43.3**	**+2.6**
AC04				*e*S	**Sn**	**13 31 03.1**	**+3.6**
AC04	**Llanos de Chal**	**1.54**	**15**		**Pn**	**13 30 43.2**	**+2.4**
CO02	**Combarbal**	**1.57**	**163**	⇑*i*P	**Pn**	**13 30 43.2**	**+2.0**
CO02				*e*S	**Sn**	**13 31 02.2**	**+1.8**
CO02				IAML		13 31 03.4	
	comp=E,30μm,0.2s						
CO02	**Combarbal**	**1.57**	**163**	Pn	**Pn**	**13 30 43.0**	**+1.8**
GO03	**Copiap**	**2.39**	**29**	*e*P	**Pn**	**13 30 54.0**	**+1.6**
GO03				IAML		13 31 43.1	
	comp=N,2μm,0.3s						
GO03	**Copiap**	**2.39**	**29**	Pn	**Pn**	**13 30 54.4**	**+1.9**
VCA	**Vinchina**	**3.07**	**73**	⇑*i*P	**Pn**	**13 31 05.9**	**+4.1**
VCA				*i* S	**Sn**	**13 31 40.5**	**+3.1**
ZON	**Zonda**	**3.08**	**127**	Pn	**Pn**	**13 31 04.5**	**+2.6**
VA03	**San Esteban**	**3.17**	**165**	*e*P	**Pn**	**13 31 05.4**	**+2.2**
VA03	**San Esteban**	**3.17**	**165**		**Pn**	**13 31 05.8**	**+2.6**
ROCH	**El Roble**	**3.29**	**172**	⇑*i*P	**Pn**	**13 31 06.8**	**+1.8**
ROCH				IAML		13 31 59.3	
	comp=N,2μm,0.6s						
ROC1	**El Roble**	**3.30**	**172**		**Pn**	**13 31 07.2**	**+2.1**
VA01	**Torpederas**	**3.32**	**182**	Pn	**Pn**	**13 31 06.3**	**+1.3**
PEL	**Peldehue**	**3.51**	**168**	*e*P	**Pn**	**13 31 09.9**	**+2.0**
PEL				*e*S	**Sn**	**13 31 49.4**	**+1.2**
PEL				IAML		13 32 04.6	
	comp=E,2μm,0.8s						
PEL	**Peldehue**	**3.51**	**168**		**Pn**	**13 31 09.8**	**+2.0**
AC02	**Maricunga**	**3.56**	**37**	Pn	**Pn**	**13 31 11.1**	**+2.2**
MT02	**Curacav**	**3.57**	**175**	⇓*i*P	**Pn**	**13 31 10.2**	**+1.7**
MT02				IAML		13 32 06.2	
	comp=E,822nm,0.4s						
MT02	**Curacav**	**3.57**	**175**	Pn	**Pn**	**13 31 10.0**	**+1.4**
AC01	**Pan de Azucar**	**3.63**	**13**	Pn	**Pn**	**13 31 09.9**	**+0.4**
MT05	**Renca**	**3.75**	**170**	⇓*i*P	**Pn**	**13 31 13.3**	**+2.2**
MT05				*e*S	**Sn**	**13 31 54.9**	**+0.9**
MT05	**Renca**	**3.75**	**170**	Pn	**Pn**	**13 31 13.3**	**+2.2**
MT03	**Universidad Ad**	**3.88**	**167**	⇑*i*P	**Pn**	**13 31 15.3**	**+2.3**
MT09	**Talagante**	**4.09**	**174**	*e*P	**Pn**	**13 31 17.9**	**+2.0**
MT09				*e*S	**Sn**	**13 32 03.1**	**+0.5**
GO02	**Mina Guanaco**	**4.84**	**21**	Pn	**Pn**	**13 31 26.7**	**+0.4**
BO02	**Sierra Bellavi**	**5.12**	**173**		**Pn**	**13 31 31.4**	**+1.5**
PB14	**IPOC Station P**	**5.15**	**12**		**Pn**	**13 31 30.0**	**-0.7**
PB10	**IPOC Station P**	**6.22**	**8**		**Pn**	**13 31 43.5**	**-1.6**
BI02	**San Fabin de**	**6.95**	**178**	Pn	**Pn**	**13 31 55.9**	**+0.8**
BI03	**Tigo**	**7.23**	**190**	Pn	**Pn**	**13 31 59.0**	**+0.1**
H03N1	**Juan Fernandez** baz=65,slow=72	**7.31**	**237**	T	T	13 39 50.0	
H03N2	**Juan Fernandez** baz=65,slow=72	**7.33**	**238**	T	T	13 39 47.3	
H03N3	**Juan Fernandez** baz=65,slow=72	**7.33**	**237**	T	T	13 39 47.4	
VA04	**Juan Fernndez**	**7.35**	**236**	Pn	**Pn**	**13 32 02.0**	**+1.4**
LVC	**Limon Verde** comp=E,0.9nm,0.3s,baz=150,slow=5.2,SNR=13	**7.44**	**19**	Pn	**Pn**	**13 32 01.0**	**-1.1**
LVC				Sn	**Sn**	**13 33 22.4**	**-3.1**
	comp=E,4.1nm,0.3s,baz=221,slow=20,SNR=1.4						
LVC	**Limon Verde**	**7.44**	**19**		**Pn**	**13 32 01.0**	**-1.1**
PB01	**IPOC Station P**	**8.81**	**13**		**Pn**	**13 32 18.1**	**-2.6**
LC01	**Cunco**	**9.18**	**182**	Pn	**Pn**	**13 32 25.0**	**-0.6**
PSGCX	**Pisagua**	**10.14**	**8**	Pn	**Pn**	**13 32 36.3**	**-2.5**
MNMC	**Minye Minye**	**10.67**	**10**	Pn	**Pn**	**13 32 45.1**	**-1.1**
PLCA	**Paso Flores**	**11.04**	**176**	Pn	Pn	13 32 47.8	-3.3
	comp=E,0.1nm,0.3s,baz=180,slow=20,SNR=2.1						
PLCA	**Paso Flores**	**11.04**	**176**	Pn	**Pn**	**13 32 52.0**	**+0.9**
CPUP	**Villa Florida**	**12.99**	**78**	Pn	**Pn**	**13 33 14.9**	**-2.9**
	comp=E,0.4nm,0.3s,baz=245,slow=15,SNR=3.0						
CPUP	**Villa Florida**	**12.99**	**78**		**Pn**	**13 33 16.9**	**-0.9**
LPAZ	**La Paz**	**13.71**	**14**	Pn	**Pn**	**13 33 28.0**	**-0.2**
	comp=E,0.2nm,0.3s,baz=180,slow=10,SNR=4.3						
SIV	**San Ignacio**	**16.69**	**37**	Pn	**Pn**	**13 34 06.2**	**-0.5**
	comp=E,0.3nm,0.3s,baz=227,slow=11,SNR=12						
EFI	**East Falkland**	**24.14**	**159**	P	**P**	**13 35 28.9**	**+1.2**
BDFB	**Brasilia**	**25.75**	**62**	P	**P**	**13 35 40.9**	**-2.0**
	comp=E,2.2nm,0.4s,baz=232,slow=7.8,SNR=4.1						
BANI	**BANI**	**47.82**	**2**	P	**P**	**13 38 49.1**	**-0.5**
BELA	**Belgrano 2**	**51.03**	**171**	P	**P**	**13 39 13.9**	**+0.6**
VNA3	**Neumayer Olymp**	**53.19**	**159**	P	**P**	**13 39 29.3**	**-0.2**
VNA2	**Neumayer--Watz** baz=285,slow=8.3	**53.83**	**158**	P	**P**	**13 39 33.9**	**-0.2**
SNAA	**Sanae**	**55.42**	**159**	P	**P**	**13 39 45.5**	**-0.2**
SNAA	**Sanae**	**55.42**	**159**	P	**P**	**13 39 45.7**	**0.0**
SNAA				IAmb	IAmb	13 39 49.5	
	comp=Z,3.8nm,0.6s						
QSPA	**South Pole Qui**	**60.53**	**180**	P	**P**	**13 40 22.4**	**+0.7**
QSPA				IAmb	IAmb	13 40 46.9	
	comp=Z,2.4nm,0.8s						
JCT	**Junction City**	**65.62**	**333**	P	**P**	**13 40 56.3**	**+0.6**
TXAR	**Lajitas Array**	**66.22**	**330**	P	**P**	**13 41 01.7**	**+2.0**
	comp=Z,1.5nm,0.6s,baz=152,slow=8.3,SNR=16						
MNTX	**Cornudas Mount**	**69.01**	**329**	P	**P**	**13 41 17.8**	**+0.7**
MNTX				IAmb	IAmb	13 41 18.8	
	comp=Z,2.0nm,0.8s						
R40A	**Maddies Statio**	**70.36**	**343**	P	**P**	**13 41 25.6**	**+0.4**
R40A				IAmb	IAmb	13 41 26.9	
	comp=Z,7.9nm,0.8s						
MAW	**Mawson**	**77.17**	**164**	P	**P**	**13 42 04.7**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=218,slow=8.1,SNR=13						
MAW	**Mawson**	**77.17**	**164**	P	**P**	**13 42 03.8**	**-1.1**
SRU	**San Rafael Swe**	**77.50**	**330**	P	**P**	**13 42 08.0**	**+0.8**
R11A	**Troy Canyon, C**	**79.21**	**326**	P	**P**	**13 42 15.1**	**-1.6**
TSUM	**Tsumeb**	**80.00**	**106**	P	**P**	**13 42 21.5**	**0.0**
	comp=Z,1.7nm,0.7s,baz=254,slow=5.7,SNR=3.9						
PDAR	**Pinedale Array**	**80.14**	**333**	P	**P**	**13 42 22.8**	**+1.1**
	comp=Z,0.9nm,

LSA	**Lhasa**	**36.94**	**46**	P	**P**	**13 43 42.6**	**+1.2**
LSA				IAmb	IAmb	13 43 52.0	
	comp=Z,25nm,1.8s						
GNI	**Garni**	**37.34**	**339**	LR	LR	13 59 51.4	
	comp=Z,190nm,18.8s,baz=140,slow=38						
KKAR	**Karatay Array**	**38.12**	**11**	P	**P**	**13 43 51.8**	**+1.1**
AAK	**Ala-Archa**	**38.59**	**16**	P	**P**	**13 43 56.4**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=189,slow=5.3,SNR=4.5						
AAK				LR	LR	14 01 07.4	
	comp=Z,300nm,20.0s,baz=172,slow=38						
AAK	**Ala-Archa**	**38.59**	**16**	P	**P**	**13 43 53.4**	**-1.5**
CMAR	**Chiang Mai Arr**	**38.89**	**68**	P	**P**	**13 43 58.8**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=256,slow=9.2,SNR=9.6						
CMAR				LR	LR	13 58 30.2	
	comp=Z,154nm,21.6s,baz=306,slow=34						
KDJ	**Kajisay**	**38.93**	**19**	P	**P**	**13 43 56.5**	**-1.2**
KDJ				IAmb	IAmb	13 44 09.9	
	comp=Z,33nm,1.9s						
CHTO	**Chiang Mai**	**38.98**	**67**	P	**P**	**13 43 58.9**	**+0.7**
CHTO				IAmb	IAmb	13 44 07.7	
	comp=Z,19nm,1.5s						
KVAR	**Kislovodsk Arr**	**41.41**	**340**	LR	LR	14 01 29.8	
	comp=Z,341nm,19.4s,baz=62,slow=36						
BRTR	**Keskin Array B**	**41.99**	**328**	P	**P**	**13 44 22.3**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=135,slow=5.1,SNR=4.8						
BRTR				LR	LR	14 02 14.5	
	comp=Z,126nm,20.8s,baz=112,slow=37						
ABKAR	**Akbulak array**	**43.39**	**359**	P	**P**	**13 44 33.6**	**-0.5**
ABKAR				IAmb	IAmb	13 44 44.8	
	comp=Z,7.0nm,1.1s						
ABKAR	**Akbulak array**	**43.39**	**359**	P	**P**	**13 44 34.2**	**+0.1**
AKTO	**Aktyubinsk**	**44.64**	**357**	LR	LR	14 04 03.6	
	comp=Z,267nm,19.9s,baz=170,slow=37						
MKAR	**Makanchi Array**	**44.76**	**21**	P	**P**	**13 44 45.7**	**+0.5**
	comp=Z,1.2nm,0.9s,baz=188,slow=9.7,SNR=2.9						
MKAR				LR	LR	14 05 49.5	
	comp=Z,127nm,18.2s,baz=240,slow=39						
MKAR	**Makanchi Array**	**44.76**	**21**	P	**P**	**13 44 46.9**	**+1.6**
GTA	**Gaotai**	**48.30**	**40**	P	**P**	**13 45 16.8**	**-2.4**
GTA				pP	pwP	13 45 21.5	+0.8
GTA				sP	sP	13 45 25.0	+9.3
BOSA	**Boshof**	**48.64**	**223**	LR	LR	14 04 13.7	
	comp=Z,451nm,18.7s,baz=27,slow=34						
TSUM	**Tsumeb**	**49.60**	**239**	P	**P**	**13 45 24.0**	**+0.5**
	comp=Z,4.6nm,0.8s,baz=69,slow=6.1,SNR=8.3						
TSUM	**Tsumeb**	**49.60**	**239**	P	**P**	**13 45 23.9**	**+0.4**
TSUM				IAmb	IAmb	13 45 28.0	
	comp=Z,5.4nm,0.8s						
ARU	**Arti**	**50.61**	**358**	LR	LR	14 08 35.7	
	comp=Z,160nm,18.4s,baz=155,slow=38						
ZALV	**Zalesovo Beam**	**51.76**	**18**	P	**P**	**13 45 40.5**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=284,slow=5.8,SNR=2.6						
ZALV				LR	LR	14 08 02.3	
	comp=Z,219nm,20.6s,baz=216,slow=36						
ZALV	**Zalesovo Beam**	**51.76**	**18**	P	**P**	**13 45 37.3**	**-1.8**
KEST	**Kesra**	**56.12**	**310**	LR	LR	14 09 20.0	
	comp=Z,99nm,18.1s,baz=336,slow=35						
SONM	**Songino Array**	**56.91**	**35**	P	**P**	**13 46 17.8**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=258,slow=6.8,SNR=3.2						
SONM				LR	LR	14 11 06.8	
	comp=Z,254nm,18.3s,baz=208,slow=36						
SONM	**Songino Array**	**56.91**	**35**	P	**P**	**13 46 16.4**	**-0.5**
TLY	**Talaya**	**57.66**	**30**	LR	LR	14 11 06.1	
	comp=Z,258nm,20.5s,baz=224,slow=36						
TORD	**Torodi Ar. Bea**	**59.08**	**282**	P	**P**	**13 46 33.6**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=86,slow=3.3,SNR=3.8						
NRIK	**Noril'sk**	**65.84**	**10**	LR	LR	14 18 23.2	
	comp=Z,269nm,20.6s,baz=200,slow=38						
ESDC	**Sonseca Array**	**67.34**	**311**	P	**P**	**13 47 27.5**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=97,slow=5.2,SNR=4.6						
ESDC				LR	LR	14 16 42.1	
	comp=Z,108nm,18.2s,baz=335,slow=36						
FITZ	**Fitzroy Crossi**	**67.78**	**112**	P	**P**	**13 47 30.1**	**0.0**
	comp=Z,3.7nm,0.8s,baz=238,slow=13,SNR=3.7						
FITZ	**Fitzroy Crossi**	**67.78**	**112**	P	**P**	**13 47 30.4**	**+0.4**
FITZ				IAmb	IAmb	13 47 39.4	
	comp=Z,4.8nm,0.9s						
ARCES	**ARCESS Array B**	**67.86**	**347**	P	**P**	**13 47 30.0**	**+0.3**
	comp=Z,4.7nm,1.0s,baz=113,slow=6.9,SNR=3.8						
KSRS	**Korea Array**	**68.08**	**52**	P	**P**	**13 47 29.7**	**-1.9**
	comp=Z,0.9nm,0.8s,baz=253,slow=8.5,SNR=3.3						
KSRS				LR	LR	14 18 14.5	
	comp=Z,130nm,18.1s,baz=302,slow=37						
USRK	**Ussuriysk Ar.**	**72.26**	**45**	LR	LR	14 21 21.3	
	comp=Z,207nm,18.9s,baz=269,slow=37						
MJAR	**Matsushiro Arr**	**76.16**	**54**	LR	LR	14 24 22.3	
	comp=Z,75nm,19.4s,baz=0.0,slow=38						
WRA	**Warramunga Arr**	**76.21**	**112**	P	**P**	**13 48 20.7**	**0.0**
	comp=Z,4.0nm,0.9s,baz=288,slow=5.2,SNR=11						
WRA	**Warramunga Arr**	**76.21**	**112**	P	**P**	**13 48 21.4**	**+0.7**
WRAB	**Tennant Creek**	**76.22**	**112**	P	**P**	**13 48 19.6**	**-1.2**
WB2	**Warramunga Arr**	**76.22**	**112**	P	**P**	**13 48 20.5**	**-0.2**
ASAR	**Alice Springs**	**76.58**	**116**	P	**P**	**13 48 22.6**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=288,slow=5.6,SNR=17						
ASAR	**Alice Springs**	**76.58**	**116**	P	**P**	**13 48 21.4**	**-1.3**
AS31	**Alice Springs**	**76.58**	**116**	P	**P**	**13 48 23.2**	**+0.4**

*NEIC **29** 13:37:35.9±2.2,6.°99N×0.°10×125.°17E±0.°06,h35km±2km, mb4.7/17, Error ellipse: s-maj=16.9km s-min=9.4km az=338.0*

*MAN **29** 13:37:45.2,5.°43N×125.°30E,h45km,MS4.8*

MAN Intensity III - General Santos City.

*IDC **29** 13:37:51.9±0.9,5.°76N×125.°38E,h88km±8km, mb3.9/17, mb1 4.1/18,mb1mx3.9/39,mbtmp4.3/18,MS3.8/3, Ms1 3.8/3,ms1mx3.3/45,Error ellipse: s-maj=20.1km s-min=9.7km az=88.0*

*DJA **29** 13:37:52.5±0.6,6.°N±4.°×12.°5E±.°,h74km±6km,M5.0/22, mb4.9/22,mB5.5/11,MLv5.2/13,Mw(mB)4.9/11*

ISC 29 13:37:50.4±0.7,5.°71N±0.°04×125.°35E±0.°05,h71km±7km, n76,σ1§57/88,mb4.5/22,1C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.53**	**42**	*e*P	**Pn**	**13 38 02.1**	**-1.5**
DDMP				*e*S	**Sn**	**13 38 12.3**	**-1.0**
SKMP	**Bagumbayan, Su**	**1.14**	**315**	*e*P	**Pn**	**13 38 08.1**	**-2.6**
SKMP				*e*S	**Sn**	**13 38 24.8**	**-1.1**
KCP	**Kidapawan**	**1.32**	**349**	↑*i*P	**Pn**	**13 38 12.3**	**-0.8**
KCP				*i* S	**Sn**	**13 38 28.9**	**-1.2**
DAV	**Davao City (W)**	**1.37**	**10**	P	**Pn**	**13 38 13.6**	**-0.1**
	703nm,0.3s,baz=163,slow=1.7,SNR=38						
DAV				S	**Sn**	**13 38 33.2**	**+2.0**
	2µm,0.3s,baz=198,slow=20,SNR=9.0						
DAV	**Davao City (W)**	**1.37**	**10**	‖*e*P	**Pn**	**13 38 12.2**	**-1.5**
MATI	**Mati**	**1.52**	**36**	*e*P	**Pn**	**13 38 13.2**	**-2.5**
MATI				*e*S	**Sn**	**13 38 32.6**	**-2.2**
SGSI	**Sangihe**	**2.02**	**175**	P	**Pn**	**13 38 22.4**	**+0.1**
SGSI				S	**Sn**	**13 38 46.8**	**+0.2**
BUKP	**Musuan**	**2.17**	**352**	*e*P	**Pn**	**13 38 24.5**	**+0.1**
BUKP				*e*S	**Sn**	**13 38 53.2**	**+2.7**
CGP	**Cagayan de Oro**	**2.80**	**347**	‖*e*P	**Pn**	**13 38 33.4**	**+0.5**
CGP				*e*S	**Sn**	**13 39 11.5**	**+5.8**
PAGZ	**Pagadian**	**2.89**	**317**	*e*P	**Pn**	**13 38 31.9**	**-2.2**
PAGZ				*e*S	**Sn**	**13 39 08.4**	**+0.7**
ZCP	**Zamboanga City**	**3.48**	**291**	‖*i*P	**Pn**	**13 38 41.6**	**-0.5**
ZCP				*i* S	**Sn**	**13 39 20.5**	**-1.5**
GLSP	**General Luna,**	**4.12**	**11**	*e*P	**Pn**	**13 38 49.0**	**-1.9**
GLSP				*e*S	**Sn**	**13 39 36.3**	**-1.6**
MSLP	**Maasin**	**4.42**	**354**	*e*P	**Pn**	**13 38 56.8**	**+1.8**
CNOP	**Candoni, Negro**	**4.89**	**327**	*e*P	**Pn**	**13 39 00.8**	**-0.7**
KMSI	**Cibinong**	**5.28**	**195**	P	**Pn**	**13 39 07.7**	**+0.9**
	2.1nm4µm270nm,0.7s						
TNTI	**Ternate**	**5.30**	**158**	P	**Pn**	**13 39 07.5**	**+0.5**
	0.5nm2µm88nm,0.6s						
TNTI	**Ternate**	**5.30**	**158**	Pn	**Pn**	**13 39 08.1**	**+1.0**
GTOI	**Gorontalo**	**5.55**	**205**	P	**Pn**	**13 39 10.5**	**0.0**
	1.5nm7µm286nm,0.6s						
GTOI				S	**Sn**	**13 40 07.5**	**-5.5**
	1.5nm7µm286nm,0.6s						
MRSI	**Marisa**	**6.21**	**213**	P	**Pn**	**13 39 19.8**	**+0.3**
	3.9nm4µm290nm,0.7s						
TOLI2	**Tolitoli**	**6.45**	**225**	Pn	**Pn**	**13 39 20.5**	**-2.3**
LUWI	**Luwuk**	**7.18**	**201**	P	**Pn**	**13 39 34.9**	**+2.1**
	4µm2.3nm296nm,0.5s						
LUWI	**Luwuk**	**7.18**	**201**	Pn	**Pn**	**13 39 35.6**	**+2.9**
APSI	**Ampana**	**7.54**	**209**	P	**Pn**	**13 39 38.5**	**+0.8**
	0.5nm924nm61nm,0.5s						
MPSI	**Mapaga**	**7.62**	**226**	P	**Pn**	**13 39 36.5**	**-2.3**
SANI	**Sanana**	**7.73**	**175**	P	**Pn**	**13 39 38.4**	**-1.9**
	0.6nm2µm134nm,0.7s						
SWI	**Sorong**	**8.80**	**138**	P	**Pn**	**13 39 56.5**	**+1.6**
	26nm,0.4s						
NLAI	**Namlea**	**9.06**	**169**	P	**Pn**	**13 39 58.3**	**-0.1**
MSAI	**Masohi**	**9.68**	**158**	P	**Pn**	**13 40 08.3**	**+1.4**
	12nm,0.6s						
TTSI	**Tana Toraja**	**10.30**	**213**	P	**Pn**	**13 40 17.6**	**+2.2**
	63nm,1.0s						
FAKI	**Fak Fak**	**11.00**	**141**	P	**Pn**	**13 40 26.3**	**+1.4**
	37nm,1.1s						
FAKI	**Fak Fak**	**11.00**	**141**	Pn	**Pn**	**13 40 26.5**	**+1.6**
SPSI	**Sidrap Palu**	**11.11**	**210**	P	**Pn**	**13 40 27.6**	**+1.2**
	20nm,0.6s						
BNDI	**Bandanaira**	**11.13**	**156**	P	**Pn**	**13 40 28.1**	**+1.3**
	8µm45nm,0.9s						
BNSI	**Bone**	**11.33**	**208**	P	**Pn**	**13 40 33.2**	**+3.8**
	15nm,1.4s						
KAPI	**Kappang**	**12.03**	**208**	P	**Pn**	**13 40 40.8**	**+1.8**
	1.4nm,0.3s,baz=37,slow=6.4,SNR=5.8						
KAPI				LR	LR	13 45 31.3	
	comp=Z,230nm,20.3s,baz=320,slow=38						
BKSI	**Bulukumba**	**12.14**	**206**	P	**Pn**	**13 40 39.6**	**-0.9**
	12nm,1.1s						
SOEI	**Soe**	**15.40**	**184**	P	**Pn**	**13 41 25.1**	**+1.4**
	47nm,1.0s						
SOEI	**Soe**	**15.40**	**184**	P	**P**	**13 41 26.7**	**-0.1**
BATI	**Baumata**	**15.90**	**186**	P	**P**	**13 41 32.2**	**0.0**
	13nm,0.3s,baz=89,slow=0.3,SNR=23						
BATI	**Baumata**	**15.90**	**186**	P	**P**	**13 41 32.3**	**0.0**
	95nm,0.8s						
MTN	**Manton Dam**	**19.31**	**163**	P	**P**	**13 42 10.1**	**+0.3**
MTN				IAmb	IAmb	13 42 11.7	
	comp=Z,38nm,1.2s						
KNRA	**Kununurra**	**21.52**	**171**	P	**P**	**13 42 33.8**	**+0.1**
LEM	**Lembang**	**21.64**	**235**	P	**P**	**13 42 37.2**	**+2.0**
	comp=Z,8.8nm,0.4s,baz=354,slow=19,SNR=2.0						
FITZ	**Fitzroy Crossi**	**23.66**	**179**	P	**P**	**13 42 55.1**	**-0.4**
	comp=Z,6.8nm,0.3s,baz=18,slow=9.8,SNR=80						
FITZ	**Fitzroy Crossi**	**23.66**	**179**	P	**P**	**13 42 55.6**	**+0.1**
FITZ				IAmb	IAmb	13 42 57.2	
	comp=Z,24nm,1.1s						
COEN	**Coen**	**26.36**	**138**	P	**P**	**13 43 20.5**	**+0.5**
PMG	**Port Moresby**	**26.42**	**125**	P	**P**	**13 43 21.4**	**+0.8**
	comp=Z,12nm,0.9s,baz=325,slow=5.2,SNR=5.1						
WB0	**Warramunga Arr**	**26.84**	**161**	P	**P**	**13 43 24.3**	**0.0**
WRAB	**Tennant Creek**	**26.98**	**161**	P	**P**	**13 43 25.6**	**0.0**
WRA	**Warramunga Arr**	**26.98**	**161**	P	**P**	**13 43 25.5**	**-0.1**
	comp=Z,5.8nm,0.4s,baz=337,slow=11,SNR=64						
WRA				PcP	**PcP**	**13 46 45.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=357,slow=7.1,SNR=2.1						
WRA	**Warramunga Arr**	**26.98**	**161**	P	**P**	**13 43 25.7**	**+0.1**
WB2	**Warramunga Arr**	**26.98**	**161**	P	**P**	**13 43 25.9**	**+0.2**
WB2				IAmb	IAmb	13 43 29.8	
	comp=Z,20nm,1.1s						
WR0	**Warramunga Arr**	**27.06**	**161**	P	**P**	**13 43 26.5**	**+0.2**
JNU	**Nakatsue**	**27.76**	**10**	IAmb	IAmb	13 43 28.2	
	comp=Z,37nm,1.5s						
CMAR	**Chiang Mai Arr**	**28.71**	**298**	P	**P**	**13 43 41.0**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=119,slow=7.9,SNR=6.5						
AS31	**Alice Springs**	**30.37**	**164**	P	**P**	**13 43 56.6**	**+0.9**
ASAR	**Alice Springs**	**30.37**	**164**	P	**P**	**13 43 55.9**	**+0.1**
	comp=Z,2.7nm,0.3s,baz=342,slow=6.9,SNR=166						
ASAR				PcP	**PcP**	**13 46 54.0**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=338,slow=2.4,SNR=6.3						
ASAR				ScP	**ScP**	**13 50 29.1**	**-1.6**
	comp=Z,0.6nm,0.7s,baz=338,slow=3.0,SNR=5.1						
ASAR	**Alice Springs**	**30.37**	**164**	P	**P**	**13 43 55.6**	**-0.1**
KSRS	**Korea Array**	**31.68**	**4**	P	**P**	**13 44 06.6**	**-0.5**
	comp=Z,1.4nm,0.7s,baz=188,slow=11,SNR=6.1						
MJAR	**Matsushiro Arr**	**32.87**	**19**	P	**P**	**13 44 16.0**	**-1.6**
	comp=Z,2.7nm,0.8s,baz=183,slow=10,SNR=4.9						
FORT	**Forrest**	**36.37**	**176**	P	**P**	**13 44 48.7**	**+0.9**
FORT				IAmb	IAmb	13 44 49.7	
	comp=Z,22nm,0.8s						
USRK	**Ussuriysk Ar.**	**38.78**	**8**	P	**P**	**13 45 07.2**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=217,slow=8.3,SNR=2.9						
NWAO	**Narrogin (SRO)**	**39.19**	**191**	P	**P**	**13 45 12.1**	**+0.6**
NWAO				IAmb	IAmb	13 45 24.0	
	comp=Z,23nm,1.2s						
BBOO	**Buckleboo**	**39.64**	**166**	P	**P**	**13 45 16.5**	**+1.2**
EIDS	**Eidsvold**	**39.75**	**142**	P	**P**	**13 45 15.2**	**-1.1**
EIDS				IAmb	IAmb	13 45 23.1	
	comp=Z,28nm,1.5s						
STKA	**Stephens Creek**	**40.46**	**158**	P	**P**	**13 45 22.1**	**+0.1**
	comp=Z,5.1nm,0.5s,baz=345,slow=7.0,SNR=4.2						
ARMA	**Armidale**	**43.87**	**147**	P	**P**	**13 45 50.5**	**+0.5**
ARMA				IAmb	IAmb	13 46 08.2	
	comp=Z,14nm,1.2s						
PETK	**Petropavlovsk-**	**54.15**	**23**	P	**P**	**13 47 07.4**	**-0.7**
	comp=Z,4.1nm,0.8s,baz=162,slow=2.2,SNR=9.3						
MKAR	**Makanchi Array**	**55.16**	**325**	P	**P**	**13 47 15.1**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=134,slow=6.3,SNR=7.2						
ZALV	**Zalesovo Beam**	**58.21**	**333**	P	**P**	**13 47 36.6**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=151,slow=6.5,SNR=1.6						
GNI	**Garni**	**79.17**	**310**	LR	LR	14 28 34.1	
	comp=Z,118nm,21.3s,baz=31,slow=38						
ILAR	**Eielson Array**	**83.92**	**26**	P	**P**	**13 50 11.3**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=240,slow=4.9,SNR=14						
MAW	**Mawson**	**85.13**	**200**	P	**P**	**13 50 18.0**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=52,slow=17,SNR=2.3						
VNDA	**Vanda**	**85.55**	**173**	P	**P**	**13 50 20.4**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=308,slow=4.5,SNR=7.9						
FINES	**FINESS Array B**	**89.45**	**332**	P	**P**	**13 50 38.3**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=94,slow=2.0,SNR=3.7						
IDI	**Anoyia**	**95.22**	**306**	LR	LR	14 39 59.5	
	comp=Z,56nm,19.0s,baz=108,slow=39						

TAP 29 13:41:34.9,24.°90N×121.°41E,h7km,ML1.6,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATO	**Taipei**	**0.10**	**46**	P	Pg	13 41 37.8	+0.5
	baz=49						
TATO				S	Sg	13 41 40.0	+1.1
	baz=49						
NHDH	**Xindian Distri**	**0.12**	**61**	*i* P	Pg	13 41 38.2	+0.6
	baz=60						
NHDH				S	Sg	13 41 40.9	+1.5
	baz=60						
NWLT	**Wulai**	**0.15**	**145**	P	Pg	13 41 39.1	+1.1
	baz=144						
NWLT				*e*S	Sg	13 41 41.9	+1.7
	baz=144						
TAP	**Taipei**	**0.16**	**34**	*e*P	Pg	13 41 39.6	+1.3
	baz=35						
TWA	**Mucha**	**0.18**	**64**	*e*P	Pg	13 41 39.0	+0.5
	baz=65						
TWA				S	Sg	13 41 43.7	+2.6
	baz=65						
TWS1	**Kuangyinshan**	**0.20**	**3**	P	Pg	13 41 40.0	+1.1
	baz=4.0						
TWS1				*e*S	Sg	13 41 44.0	+2.4
	baz=4.0						
NCUH	**Zhongli**	**0.21**	**288**	*e*P	Pg	13 41 40.3	+1.2
	baz=288						
NSK	**Sanguang**	**0.23**	**191**	P	Pg	13 41 40.5	+1.0
	baz=189						
NSK				*e*S	Sg	13 41 44.7	+2.1
	baz=189						
YHNB	**Yeheng**	**0.23**	**187**	*e*P	Pg	13 41 40.6	+1.0
	baz=186						
YHNB				S	Sg	13 41 44.5	+1.7
	baz=186						
YHNB	**Yeheng**	**0.23**	**187**	IAmb	IAmb	13 41 57.6	
	comp=Z,84nm,1.5s						
YHNB	**Yeheng**	**0.23**	**187**		Pg	13 41 40.8	+1.2
YM04	**YM04**	**0.28**	**25**	*e*S	Sb	13 41 45.9	-1.2
	baz=25						
TWE	**Neicheng**	**0.30**	**127**	*e*P	Pb	13 41 42.0	-0.6
	baz=126						
TWE				*e*S	Sb	13 41 47.5	-0.2
	baz=126						
YM05	**YM05**	**0.30**	**29**	*e*P	Pb	13 41 41.9	-0.7
	baz=28						
YM05				*e*S	Sb	13 41 46.7	-1.1
	baz=28						
ENTT	**Nioudou**	**0.30**	**151**	P	Pb	13 41 42.6	0.0
	baz=149						
ENTT				S	Sb	13 41 47.2	-0.5
	baz=149						
ANP	**Anpu**	**0.30**	**20**	*e*P	Pb	13 41 42.1	-0.6
	baz=21						
ANP				*e*S	Sb	13 41 47.3	-0.6
	baz=21						
YM11	**YM11**	**0.30**	**30**	*e*P	Pb	13 41 42.4	-0.4
	baz=30						
YM11				S	Sb	13 41 47.1	-0.9
	baz=30						
NDT	**Datong Townshi**	**0.31**	**162**	*e*P	Pb	13 41 42.6	-0.3
	baz=161						
NDT				*e*S	Sb	13 41 47.3	-0.8
	baz=161						
TIPB	**Shuangxi**	**0.39**	**80**	*e*P	Pb	13 41 43.5	-0.6
	baz=79						
TIPB				S	Sb	13 41 49.9	-0.4
	baz=79						

*IDC **29** 14:03:48.0±0.5,5.°77N×61.°30E,h0km,mb4.1/30, mb1 4.2/32,mb1mx4.1/57,mbtmp4.1/32,ML4.0/2,MS4.1/24, Ms1 4.1/24,ms1mx3.9/51,Error ellipse: s-maj=13.9km s-min=12.2km az=59.0*

*NEIC **29** 14:03:49.7±2.5,5.°7N±0.°1×61.°4E±0.°1,h10km±1km, mb4.7/36, Error ellipse: s-maj=18.4km s-min=16.8km az=216.0*

*GCMT **29** 14:03:49.7±0.2,5.°73N±0.°01×61.°27E±0.°02,h12km, MW5.0/110,Moment Tensor Solution. s31,c36; s110,c168; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-3.26±.08; Mθθ2.96±.07; Mϕϕ0.29±.08; Mrθ1.03±.26; Mrϕ-1.08±.07; Mθϕ-1.19±.35; Best double couple: M◎3.65800×10^16 NP1:ϕ◎98.00000°,δ35.00000°, λ-110.00000°. NP2:ϕ◎302.00000°,δ57.00000°, λ-77.00000°. Principal axes: T 3.6220, Plg12.0000°, Azm22.0000°; N 0.0700, Plg11.0000°, Azm114.0000°; P -3.6940, Plg74.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 14:03:50.5±0.5,5.°69N±0.°07×61.°34E±0.°07,h14km,n181, σ1§54/171,mb4.5/74,MS4.2/24,20C-5D,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.71**	**312**	P	Pn	14 06 16.3	+6.3
SOCY	**Socotra**	**9.71**	**312**	Pn	**Pn**	**14 06 13.6**	**+3.6**
SHAO	**Shalim**	**13.46**	**336**	P	**Pn**	**14 07 05.5**	**+4.2**
	SNR=8.5						
DMTO	**DMTO**	**13.48**	**333**	P	**Pn**	**14 07 05.5**	**+4.0**
RBK	**Rabkut**	**13.65**	**330**	P	**Pn**	**14 07 07.8**	**+3.9**
RBK				P	**Pn**	**14 07 07.8**	**+3.9**
ABTO	**Aybut**	**14.01**	**326**	P	**P**	**14 07 12.5**	**-4.1**
	SNR=11						
WHFO	**Wadi Hawf**	**14.22**	**329**	P	**Pn**	**14 07 14.6**	**+3.0**
	SNR=13						
WHFO				P	**Pn**	**14 07 14.6**	**+3.0**
	SNR=13						
DQM	**DQM**	**14.62**	**346**	P	**P**	**14 07 20.5**	**-3.0**
	SNR=11						
DQM				P	**P**	**14 07 20.5**	**-3.0**
	SNR=11						
MHTO	**MHTO**	**15.55**	**348**	P	**Pn**	**14 07 30.6**	**+1.2**
	SNR=41						
MHTO				P	**Pn**	**14 07 30.6**	**+1.2**
	SNR=41						
JLN	**Jalan Bani Buh**	**16.47**	**354**	P	**P**	**14 07 45.6**	**+1.8**
	SNR=7.7						
JLN				P	**P**	**14 07 45.6**	**+1.8**
	SNR=7.7						
JMDO	**Jabal Madar**	**16.87**	**350**	P	**P**	**14 07 51.0**	**+2.6**
	SNR=12						
JMDO				P	**P**	**14 07 51.0**	**+2.6**
	SNR=12						
WSAR	**Wadi Sarin**	**17.64**	**352**	P	**Pn**	**14 07 55.1**	**-0.8**
	0.3nm,0.3s,baz=187,slow=8.1,SNR=2.1						
WSAR				LR	LR	14 13 20.4	
	comp=Z,624nm,19.4s,baz=192,slow=33						
BIDO	**Bidbid**	**17.99**	**350**	P	**P**	**14 08 04.0**	**+3.2**
	SNR=7.5						
ARQ	**Araqi**	**18.14**	**346**	P	**P**	**14 08 05.0**	**+2.5**
	SNR=11						
HOQ	**Hoqain**	**18.20**	**348**	P	**P**	**14 08 05.0**	**+1.8**
	SNR=9.8						
HOQ				P	**P**	**14 08 05.0**	**+1.8**
	SNR=9.8						
ATD	**Arta Tunnel**	**19.17**	**289**	P	**P**	**14 08 13.8**	**-0.1**
	0.7nm,0.3s,baz=264,slow=23,SNR=4.9						
ATD				LR	LR	14 14 26.0	
	comp=Z,100nm,18.6s,baz=18,slow=33						
ATD	**Arta Tunnel**	**19.17**	**289**		**Pn**	**14 08 14.4**	**-0.4**
PALK	**Pallekele**	**19.30**	**84**	LR	LR	14 14 15.2	
	comp=Z,291nm,18.8s,baz=8.7,slow=32						
HATD	**Hatta, Dubai**	**19.67**	**346**	P	**Pn**	**14 08 22.7**	**+2.1**
HATD				P	**Pn**	**14 08 22.7**	**+2.1**
ASUD	**Al Ashush, Dub**	**19.69**	**344**	P	**Pn**	**14 08 22.5**	**+1.7**
ASUD				P	**Pn**	**14 08 22.5**	**+1.7**
FAQ	**Al Faqa, Dubai**	**19.73**	**344**	P	**Pn**	**14 08 22.7**	**+1.3**
FAQ				P	**Pn**	**14 08 22.7**	**+1.3**
UOSS	**Minazif**	**19.77**	**346**	P	**Pn**	**14 08 21.5**	**-0.2**
UOSS				P	**Pn**	**14 08 21.5**	**-0.2**
UOSS	**Minazif**	**

comp=Z,2.3nm,0.7s,baz=151,slow=7.4,SNR=6.8
MATP Matopo 41.41 230 P **P** 14 11 37.1 +0.2
comp=Z,2.4nm,0.8s,baz=52,slow=8.7,SNR=5.2
KIV Kislovodsk 41.49 340 ⇓P **P** 14 11 37.5 +0.3
BR131 Keskin Array S 42.08 328 P **P** 14 11 39.6 -2.6
BRTR Keskin Array B 42.08 328 P **P** 14 11 41.5 -0.7
comp=Z,3.4nm,0.8s,baz=146,slow=9.6,SNR=12
BRTR LR LR 14 29 29.4
comp=Z,182nm,19.4s,baz=140,slow=37
BRTR Keskin Array B 42.08 328 P **P** 14 11 41.2 -1.0
ELL Elmali 42.21 321 P **P** 14 11 42.1 -1.2
KARP Karpathos 43.25 318 P **P** 14 11 50.8 -0.8
ABKAR Akbulak array 43.42 359 P **P** 14 11 52.8 0.0
ABKAR IAmb IAmb 14 12 00.5
comp=Z,15nm,0.9s
ABKAR Akbulak array 43.42 359 P **P** 14 11 52.9 +0.1
WMQ Urumqi 44.48 27 *e*P **P** 14 12 02.5 +1.0
WMQ sP pwP 14 12 08.8 -0.8
WMQ pmax pmax
comp=Z,12nm,1.3s
WMQ pmax pmax
comp=Z,250nm,5.9s
WMQ LR LR
comp=N,560nm,17.5s
WMQ LR LR
comp=E,430nm,23.7s
WMQ LR LR
comp=Z,720nm,22.7s
IDI Anoyia 44.64 316 ⇑P **P** 14 12 04.0 +1.1
AKTO Aktyubinsk 44.68 357 P **P** 14 12 02.7 -0.1
comp=Z,3.2nm,0.8s,baz=173,slow=9.1,SNR=8.6
AKTO LR LR 14 31 39.3
comp=Z,197nm,19.3s,baz=163,slow=38
MKAR Makanchi Array 44.75 20 P **P** 14 12 02.8 -0.7
comp=Z,1.2nm,0.7s,baz=211,slow=9.4,SNR=6.8
MKAR LR LR 14 31 27.3
comp=Z,212nm,21.8s,baz=216,slow=37
APE Apeiranthos 45.20 319 ⇓P **P** 14 12 07.5 +0.2
LBTB Lobatse 46.26 227 P **P** 14 12 16.2 +0.3
comp=Z,1.6nm,0.6s,baz=35,slow=12,SNR=2.2
LBTB Lobatse 46.26 227 P **P** 14 12 15.6 -0.3
LBTB IAmb IAmb 14 12 30.8
comp=Z,12nm,1.2s
KURK Kurchatov 47.15 15 P **P** 14 12 22.2 0.0
KURK IAmb IAmb 14 12 29.4
comp=Z,6.7nm,1.0s
BVAR Borovoye Array 47.77 7 P **P** 14 12 26.7 -0.4
comp=Z,0.7nm,0.7s,baz=53,slow=5.7,SNR=3.7
BRVK Borovoye 47.78 7 P **P** 14 12 27.0 -0.2
BRVK IAmb IAmb 14 12 29.2
comp=Z,5.0nm,1.2s
GTA Gaotai 48.25 40 *e*P P 14 12 20.3 -11
GTA pP pP 14 12 31.3 -3.2
GTA sP sP 14 12 38.0 +2.3
GTA pmax pmax
comp=Z,2.0nm,1.1s
BOSA Boshof 48.69 224 P **P** 14 12 35.4 +0.6
comp=Z,1.5nm,0.8s,baz=37,slow=8.2,SNR=4.2
BOSA LR LR 14 31 21.9
comp=Z,447nm,19.0s,baz=20,slow=34
LZH Lanzhou 49.30 46 *e*P **P** 14 12 39.0 -0.5
LZH pP pP 14 12 42.5 -0.2
LZH sP sP 14 12 43.8 -0.1
LZH *e*PP **PP** 14 14 33.3 -0.2
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,100nm,6.8s
LZH LR LR
comp=N,250nm,14.3s
LZH LR LR
comp=E,260nm,14.2s
LZH LR LR
comp=Z,460nm,16.7s
TSUM Tsumeb 49.68 239 P **P** 14 12 44.2 +1.7
BISRR Bisoca 49.80 328 ⇑P **P** 14 12 43.1 +0.2
NEHR Nehoiu 49.93 328 ⇑P **P** 14 12 44.5 +0.6
VRI Vrincioaia 50.00 329 ⇑P **P** 14 12 45.2 +0.8
PLOR Plostina 50.03 329 ⇑P **P** 14 12 44.8 +0.1
MLR Muntele Rosu 50.16 328 P **P** 14 12 45.9 +0.1
comp=Z,5.0nm,0.8s,baz=165,slow=4.8,SNR=5.0
TESR Tescani 50.48 329 ⇓P **P** 14 12 47.8 -0.2
VOIR 50.60 327 ⇑P **P** 14 12 48.5 -0.6
ARU Arti 50.64 358 P **P** 14 12 48.8 -0.3
comp=Z,1.1nm,0.5s,baz=114,slow=7.1,SNR=6.8
ARU Arti 50.64 358 P **P** 14 12 47.7 -1.3
DOPR Dopca 50.77 328 ⇑P **P** 14 12 50.0 -0.2
ARR Arges 50.78 327 ⇑P **P** 14 12 49.7 -0.6
SORM Soroca 50.78 332 ⇓P **P** 14 12 49.5 -0.7
BIZ Bicaz 51.04 329 ⇑P **P** 14 12 52.1 -0.1
HERR Herculane 51.70 325 ⇑P **P** 14 12 57.1 -0.1
ZAA0 Zalesovo Array 51.76 17 P **P** 14 12 56.8 -0.7
ZAA0 IAmb IAmb 14 13 03.8
comp=Z,5.6nm,0.9s
ZALV Zalesovo Beam 51.76 17 P **P** 14 12 56.8 -0.7
comp=Z,5.0nm,0.9s,baz=184,slow=8.6,SNR=6.0
ZALV LR LR 14 35 29.3
comp=Z,178nm,20.8s,baz=222,slow=37
GZR Gura Zlata 51.81 326 ⇑P **P** 14 12 58.4 +0.3
BURAR Bucovina Array 51.94 330 ⇑P **P** 14 12 59.4 +0.3
BURAR Bucovina Array 51.94 330 P **P** 14 12 59.1 -0.1
ARCR ARCALIA 52.04 329 ⇑P **P** 14 12 59.2 -0.5
MDVR Moldovita 52.05 325 ⇓P **P** 14 12 60.0 +0.1
CJR Cluj-Napoca 52.19 328 ⇑P **P** 14 13 01.2 +0.3
XAN Xi'an 52.24 51 P **P** 14 13 01.3 -0.2
XAN pP pwP 14 13 13.3 +3.5
XAN pmax pmax
comp=Z,6.0nm,1.1s
XAN Xi'an 52.24 51 P **P** 14 13 01.0 -0.5
XAN IAmb IAmb 14 13 10.2
comp=Z,6.9nm,0.8s
AKASG Malin Array Be 52.26 335 P **P** 14 12 59.8 -1.5
comp=Z,0.2nm,0.3s,baz=132,slow=6.5,SNR=6.6
AKASG LR LR 14 39 57.6
comp=Z,97nm,18.5s,baz=235,slow=42
BZS Buzias 52.60 326 ⇑P **P** 14 13 03.6 -0.2
DRGR 52.72 327 ⇑P **P** 14 13 05.1 +0.2
SIRR Siria 52.97 326 ⇑P **P** 14 13 07.0 +0.3
OBN Obninsk 53.14 342 LR LR 14 38 32.2
comp=Z,40nm,18.1s,baz=176,slow=39
KOLS Kolonicke sedl 54.30 329 *e*P **P** 14 13 16.9 +0.6
CRVS Cervenica-Dubn 54.69 329 *e*P **P** 14 13 19.5 +0.3
PSZ Piszkesteto 54.92 327 P **P** 14 13 19.3 -1.7
VYHS Vyhne 55.83 327 *e*P **P** 14 13 26.5 -0.9
LANS Liptovska Anna 55.88 328 *e*P **P** 14 13 27.9 +0.1
TAM Tamanrasset 56.36 294 P **P** 14 13 32.2 +0.3
TAM IAmb IAmb 14 13 33.7
comp=Z,12nm,1.3s
MODS Modra-Piesok 56.62 326 *e*P **P** 14 13 31.4 -1.6
JAVC Velka Javorina 56.67 327 *e*P **P** 14 13 33.8 +0.3
HHC Hu-ho-hao-te 56.83 44 *e*P **P** 14 13 36.8 +2.0
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,180nm,6.6s
HHC LR LR
comp=N,230nm,16.2s
HHC LR LR
comp=E,300nm,15.3s
HHC LR LR
comp=Z,280nm,14.5s
SONM Songino Array 56.88 35 P **P** 14 13 34.6 -0.4
comp=Z,1.1nm,0.8s,baz=212,slow=9.7,SNR=2.7
SONM LR LR 14 38 50.5
comp=Z,250nm,18.4s,baz=226,slow=37
SONM Songino Array 56.88 35 P **P** 14 13 35.6 +0.6
SOKA Soboth 56.99 324 *i* P **P** 14 13 35.4 -0.4
comp=Z,7.3nm,1.2s
ARSA Arzberg 57.00 324 *i* P **P** 14 13 35.6 -0.2
comp=Z,9.7nm,1.1s
CONA Conrad Observa 57.16 325 *e*P **P** 14 13 36.6 -0.4
comp=Z,16nm,1.3s
OBKA Obir 57.19 323 *e*P **P** 14 13 37.1 -0.2
comp=Z,10nm,1.3s
MORC Moravsky Berou 57.27 328 ⇑P **P** 14 13 37.1 -0.5
MORC Moravsky Berou 57.27 328 *e*P **P** 14 13 37.0 -0.7
MORC Moravsky Berou 57.27 328 P **P** 14 13 36.9 -0.8
MORC IAmb IAmb 14 13 37.8
comp=Z,9.1nm,1.0s
KLMR Klimovskoe 57.44 348 *e*P **P** 14 13 34.3 -4.3
KLMR AMP 14 13 38.1
comp=Z,19nm,1.5s
KRUC Moravsky 57.48 327 *e*P **P** 14 13 38.4 -0.8
VRAC Vranov 57.51 327 ⇑P **P** 14 13 38.6 -0.8
VRAC Vranov 57.51 327 *e*P **P** 14 13 38.6 -0.8

TLY Talaya 57.63 30 LR LR 14 38 34.9
comp=Z,250nm,19.9s,baz=236,slow=36
MYKA Terra Mystica 57.79 323 *e*P **P** 14 13 40.6 -0.9
comp=Z,13nm,1.3s
KRLC Kraliky 57.84 328 *e*P **P** 14 13 40.9 -0.8
MOA Molln 58.04 324 *e*P **P** 14 13 42.7 -0.4
comp=Z,18nm,1.2s
KBA Koelnbreinsper 58.19 323 *i* P **P** 14 13 44.5 +0.2
comp=Z,8.4nm,1.0s
ABTA Abfaltersbach 58.53 323 *e*P **P** 14 13 46.1 -0.5
comp=Z,14nm,1.7s
GERES GERESS Array B 58.87 325 P **P** 14 13 46.9 -2.1
comp=Z,0.6nm,0.8s,baz=130,slow=7.5,SNR=5.9
KHC Kasperske Hory 59.09 325 *e*P **P** 14 13 48.8 -1.6
TOA0 Torodi Ar. Sit 59.19 282 P **P** 14 13 51.5 -0.2
TORD Torodi Ar. Bea 59.19 282 P **P** 14 13 50.2 -1.5
comp=Z,4.4nm,1.1s,baz=93,slow=5.5,SNR=12
WTTA Wattenberg 59.30 323 *e*P **P** 14 13 50.9 -1.2
comp=Z,11nm,1.2s
WATA Walderalm 59.37 323 *i* P **P** 14 13 50.1 -2.5
comp=Z,7.2nm,0.9s
SQTA Sankt Quirin 59.54 323 *e*P **P** 14 13 52.3 -1.3
comp=Z,5.4nm,0.7s
NJ2 Nanjing 59.61 56 *e*P **P** 14 13 54.0 -0.3
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
MOTA Moosalm 59.66 323 *i* P **P** 14 13 53.0 -1.6
comp=Z,14nm,1.2s
RETA Reutte 59.93 323 *e*P **P** 14 13 54.8 -1.5
comp=Z,5.8nm,1.1s
DAVA Damuels 60.38 322 *e*P **P** 14 13 58.5 -1.0
comp=Z,17nm,1.7s
CLL Collm 60.53 327 *e*P **P** 14 14 00.0 -0.2
FINES FINESS Array B 61.52 342 P **P** 14 14 04.3 -2.4
comp=Z,0.7nm,0.5s,baz=134,slow=9.9,SNR=6.0
FINES LR LR 14 43 01.0
comp=Z,174nm,21.6s,baz=126,slow=38
SENIN Lac Senin/Sane 61.59 320 P **P** 14 14 07.1 -0.8
KIC Kosan Boka 65.68 274 *e*PKP2 **P** 14 14 35.8 +0.7
comp=Z,24nm,1.1s
DBIC Dimbokro 65.77 275 P **P** 14 14 35.1 -0.6
comp=Z,2.9nm,0.7s,baz=73,slow=8.3,SNR=5.1
NRIK Noril'sk 65.86 10 LR LR 14 45 28.5
comp=Z,282nm,20.8s,baz=202,slow=38
TIC Toumodi 65.94 275 *e*PKP2 **P** 14 14 36.8 0.0
LIC Lamto 65.97 274 *e*PKP2 **P** 14 14 37.0 0.0
comp=Z,17nm,0.7s
NB2 NORSAR Subarra 66.63 336 P **P** 14 14 38.7 -1.8
comp=Z,5.0nm,1.2s,baz=90,slow=8.6
NOA NORSAR Array B 66.63 336 P **P** 14 14 38.6 -1.9
comp=Z,1.0nm,0.7s,baz=115,slow=6.8,SNR=3.4
NOA LR LR 14 45 37.0
comp=Z,93nm,20.5s,baz=245,slow=38
MDT Midelt 66.75 303 LR LR 14 42 24.6
comp=Z,338nm,18.9s,baz=134,slow=35
ESDC Sonseca Array 67.44 311 P **P** 14 14 45.1 -0.9
comp=Z,2.8nm,1.0s,baz=88,slow=5.3,SNR=7.9
ESDC Sonseca Array 67.44 311 P **P** 14 14 44.0 -2.1
FITZ Fitzroy Crossi 67.67 112 P **P** 14 14 47.6 -0.1
comp=Z,2.0nm,0.8s,baz=276,slow=5.6
ARCES ARCESS Array B 67.91 347 P **P** 14 14 46.7 -1.7
comp=Z,3.8nm,0.8s,baz=134,slow=6.9,SNR=12
ARCES LR LR 14 49 03.5
comp=Z,78nm,18.2s,baz=30,slow=40
KSRS Korea Array 68.01 52 P **P** 14 14 47.9 -1.7
comp=Z,2.1nm,0.8s,baz=259,slow=6.5,SNR=8.7
USRK Ussurijsk Ar. 72.20 45 LR LR 14 48 38.3
comp=Z,185nm,19.5s,baz=250,slow=37
KLR Kul'dur 72.95 40 LR LR 14 48 58.8
comp=Z,154nm,18.9s,baz=258,slow=37
MAW Mawson 73.13 179 P **P** 14 15 21.7 +1.6
comp=Z,1.5nm,0.7s,baz=15,slow=7.9,SNR=6.5
YAK Yakutsk 74.93 27 LR LR 14 49 37.7
comp=Z,129nm,20.4s,baz=266,slow=37
WRA Warramunga Arr 76.09 112 P **P** 14 15 38.1 -0.3
comp=Z,3.4nm,1.0s,baz=289,slow=4.8,SNR=16
WRA Warramunga Arr 76.09 112 P **P** 14 15 37.8 -0.6
WB2 Warramunga Arr 76.11 112 P **P** 14 15 38.8 +0.4
WB0 Warramunga Arr 76.11 112 P **P** 14 15 37.1 -1.4
ASAR Alice Springs 76.46 116 P **P** 14 15 40.8 +0.3
comp=Z,2.5nm,0.8s,baz=288,slow=5.2,SNR=26
STKA Stephens Creek 84.75 123 P **P** 14 16 24.5 -0.2
comp=Z,2.0nm,0.7s,baz=266,slow=6.0,SNR=3.5
PDAR Pinedale Array 131.06 351 PKP **PKPdf** 14 23 01.7 -0.9
comp=Z,0.2nm,0.4s,baz=22,slow=1.0,SNR=1.9
TXAR Lajitas Array 142.31 338 PKhKP PKPpre 14 23 17.6
comp=Z,0.3nm,0.7s,baz=42,slow=4.1,SNR=5.7
TXAR PKP **PKPdf** 14 23 23.8 +0.2
comp=Z,0.4nm,0.7s,baz=46,slow=3.9,SNR=5.7

IDC 29 14:11:25.3±27.0, 21°31S×173°48W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.8/42, mbtmp4.2/4, Error ellipse: s-maj=504.6km s-min=156.9km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.62**	**264**	P	P	P	14 18 43.0	+0.8
	4.5nm,0.5s,baz=94,slow=12,SNR=7.3							
STKA	**Stephens Creek**	**41.27**	**246**	P	P	P	14 19 11.4	-1.1
	0.6nm,0.3s,baz=128,slow=12,SNR=4.4							
ASAR	**Alice Springs**	**48.45**	**257**	P	P	P	14 20 09.7	-0.2
	0.9nm,0.4s,baz=94,slow=7.3,SNR=21							
WRA	**Warramunga Arr**	**48.67**	**262**	P	P	P	14 20 11.5	-0.1
	1.3nm,0.3s,baz=96,slow=8.5,SNR=48							

*SJA **29** 14:18:06.0±0.6, 19°.98S×71°.22W, h22km±2km, ML5.1, MW5.5*
*NEIC **29** 14:18:07.9±1.6, 20°.00S±0°.05×71°.07W±0°.06, h6km±3km, mb5.2/38, Mwb5.5/19, Mwr5.4/33, Mww5.3, ML5.1(GUC), Error ellipse: s-maj=8.5km s-min=6.2km az=121.0*
*IDC **29** 14:18:08.7±0.5, 19°.77S×70°.74W, h0km, mb4.6/23, mb1 4.6/27, mb1mx4.5/45, mbtmp4.6/27, ML4.2/4, MS4.9/17, Ms1 4.9/17, ms1mx4.7/24, Error ellipse: s-maj=16.7km s-min=10.7km az=63.0*
*NEIC **29** 14:18:08.5, 19°.98S×70°.97W, h8km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.19; $M_{\theta\theta}$0.07; $M_{\phi\phi}$-0.26; $M_{r\theta}$0.49; $M_{\theta\phi}$0.17; $M_{\phi r}$-1.46; Fault plane solution: $M_0$1.57000×10^{17} NP1:ϕ_s324.49000°, δ4.98000°, λ73.06000°. NP2:ϕ_s161.50000°, δ85.24000°, λ91.45000°. Principal axes: T 1.4935, Plg50.0000°, Azm73.0000°; N 0.1387, Plg1.0000°, Azm341.0000°; P -1.6321, Plg40.0000°, Azm250.0000°;*
*MOS **29** 14:18:08.9±1.2, 19°.76S×70°.83W, h12km, mb5.1/18, MS4.9/5 Error ellipse: s-maj=16.3km s-min=10.2km az=98.5*
*NEIC **29** 14:18:09.2, 19°.97S×70°.98W, h7km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.44; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-1.40; $M_{r\theta}$0.49; $M_{\theta\phi}$0.81; $M_{\phi r}$-1.93; Fault plane solution: $M_0$2.58000×10^{17} NP1:ϕ_s164.16000°, δ70.81000°, λ97.40000°. NP2:ϕ_s322.61000°, δ20.52000°, λ69.70000°. Principal axes: T 2.4216, Plg63.0000°, Azm86.0000°; N 0.2913, Plg7.0000°, Azm342.0000°; P -2.7129, Plg25.0000°, Azm248.0000°;*
*GUC **29** 14:18:10.2±0.8, 19°.95S×71°.13W, h30km±3km, ML5.1*
*VAO **29** 14:18:11.7±0.3, 19°.88S×70°.70W, h10km, mb5.0*
*BJI **29** 14:18:12.3±0.0, 20°.00S×71°.00W, h15km, mB5.5/11, Ms5.5/9, Ms7 5.4/10*
*NEIC **29** 14:18:14, 19°.99S×70°.97W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.92; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-0.91; $M_{r\theta}$0.02; $M_{\theta\phi}$0.36; $M_{\phi r}$-0.34; Fluid plane solution: $M_0$1.04000×10^{17} NP1:ϕ_s334.00000°, δ36.00000°, λ80.00000°. NP2:ϕ_s166.00000°, δ55.00000°, λ97.00000°. Principal axes: T 0.9858, Plg79.0000°, Azm104.0000°; N 0.1044, Plg6.0000°, Azm342.0000°; P -1.0902, Plg9.0000°, Azm251.0000°;*
*GCMT **29** 14:18:14.9±0.1, 19°.89S±0°.01×71°.26W±0°.01, h13km, MW5.4/137, Moment Tensor Solution. s101,c164; s137,c233; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.96±.02; $M_{\theta\theta}$0.04±.01; $M_{\phi\phi}$-0.99±.02; $M_{r\theta}$0.12±.03; $M_{\theta\phi}$0.28±.01; $M_{\phi r}$-1.09±.05; Best double couple: $M_0$1.49100×10^{17} NP1:ϕ_s339.00000°, δ22.00000°, λ78.00000°. NP2:ϕ_s172.00000°, δ69.00000°, λ95.00000°. Principal axes: T 1.4430, Plg66.0000°, Azm90.0000°; N 0.0950, Plg4.0000°, Azm350.0000°; P -1.5390, Plg24.0000°, Azm258.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

Triangular moment-rate function
ISC 29 14:18:09.9±1.0, 19°.98S±0°.02×70°.98W±0°.04, h15km±5km, n439,σ1°54/452, mb5.1/44, MS5.1/25, 17C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TA02	**Huaiquique**	**0.85**	**110**	⇑*i*P		**Pn**	**14 18 27.0**	**-0.4**
TA02				*e*S		**Sn**	**14 18 40.1**	**+0.5**
PSGC	**Pisagua**	**0.89**	**65**	⇑*i*P		**Pg**	**14 18 27.1**	**-0.2**
PSGC				*i* S		**Sn**	**14 18 39.9**	**-0.8**
PSGCX	**Pisagua**	**0.89**	**65**			**Pb**	**14 18 26.4**	**-0.7**
PSGCX	**Pisagua**	**0.89**	**65**	*e*P		**Pg**	**14 18 27.0**	**-0.3**
PSGCX				*e*P		**Pg**	**14 18 27.0**	**-0.3**
PSGCX				IAML			14 18 45.2	
	comp=Z,25μm,1.0s							
TA01	**Diego Aracena**	**0.96**	**128**	⇑*i*P		**Pn**	**14 18 28.4**	**-0.3**
TA01				*i* S		**Sn**	**14 18 42.5**	**+0.4**
TA01	**Diego Aracena**	**0.96**	**128**			**Pn**	**14 18 28.5**	**-0.3**
HMBC	**Humberstone**	**1.07**	**106**	⇑*i*P		**Pn**	**14 18 30.4**	**-0.1**
HMBC				*e*S		**Sn**	**14 18 46.4**	**+1.2**
HMBC				IAML			14 18 53.9	
	comp=N,46μm,0.4s							
PATCX	**Punta Patache**	**1.15**	**137**	⇑*i*P		**Pg**	**14 18 31.2**	**-0.9**
PATCX				*i* S		**Sn**	**14 18 47.2**	**+0.2**
PATCX	**Punta Patache**	**1.15**	**137**	Pn		**Pg**	**14 18 31.3**	**-0.9**
PATCX	**Punta Patache**	**1.15**	**137**	*e*P		**Pn**	**14 18 31.0**	**-0.5**
PATCX				*e*P		**Pn**	**14 18 31.0**	**-0.5**
PATCX				IAML			14 18 58.1	
	comp=Z,37μm,1.1s							
PB11	**IPOC Station P**	**1.27**	**81**	⇑*i*P		**Pb**	**14 18 33.3**	**-0.3**
PB11				*i* S		**Sg**	**14 18 51.5**	**+0.5**
PB11				IAML			14 18 55.1	
	comp=E,82μm,0.7s							
PB11	**IPOC Station P**	**1.27**	**81**			**Pb**	**14 18 33.0**	**-0.6**
PB11	**IPOC Station P**	**1.27**	**81**	*e*P		**Pb**	**14 18 33.4**	**-0.3**
PB11				*e*S		**Sg**	**14 18 52.0**	**+1.0**
PB11				IAML			14 18 53.6	
	comp=Z,39μm,0.6s							
MNMC	**Minye Minye**	**1.56**	**58**	⇑*i*P		**Pn**	**14 18 37.6**	**+0.3**
MNMC				*e*S		**Sg**	**14 18 59.7**	**-0.5**
MNMC				IAML			14 19 09.3	
	comp=E,44μm,0.4s							
MNMC	**Minye Minye**	**1.56**	**58**			**Pn**	**14 18 37.7**	**+0.4**
MNMCX	**Minye Minye**	**1.56**	**58**	*e*P		**Pn**	**14 18 37.4**	**+0.1**
MNMCX				*e*P		**Pn**	**14 18 37.4**	**+0.1**
MNMCX				IAML			14 19 06.4	
	comp=Z,40μm,0.6s							
PB02	**IPOC Station P**	**1.68**	**143**	⇑*i*P		**Pn**	**14 18 38.8**	**-0.1**
PB02				*e*S		**Sb**	**14 19 00.6**	**-1.1**
PB02				IAML			14 19 12.8	
	comp=E,28μm,0.2s							
PB02	**IPOC Station P**	**1.68**	**143**	*e*P		**Pn**	**14 18 38.6**	**-0.3**
PB02				*e*S		**Sg**	**14 19 02.0**	**-2.2**
PB02				IAML			14 19 16.6	
	comp=Z,35μm,1.6s							
AP01	**Chacalluta**	**1.71**	**21**	*e*P		**Pn**	**14 18 38.8**	**-0.3**
AP01				*e*S		**Sn**	**14 19 00.3**	**-0.3**
AP01				IAML			14 19 18.3	
	comp=E,31μm,0.4s							
GO01	**Chusmiza**	**1.71**	**80**	⇑*i*P		**Pb**	**14 18 40.2**	**-1.2**
GO01				*i* S		**Sg**	**14 19 04.2**	**-1.1**
GO01				IAML			14 19 09.6	
	comp=N,37μm,0.3s							
GO01	**Chusmiza**	**1.71**	**80**			**Pb**	**14 18 40.2**	**-1.2**
PB08	**IPOC Station P**	**1.73**	**96**	⇑*i*P		**Pb**	**14 18 40.2**	**-1.4**
PB08				*i* S		**Sg**	**14 19 05.3**	**-0.4**
PB08				IAML			14 19 13.5	
	comp=N,19μm,0.5s							
PB08	**IPOC Station P**	**1.73**	**96**			**Pb**	**14 18 40.4**	**-1.2**
PB08	**IPOC Station P**	**1.73**	**96**	*e*P		**Pb**	**14 18 40.5**	**-1.1**
PB08				*e*S		**Sg**	**14 19 05.8**	**+0.1**
PB08				IAML			14 19 09.4	
	comp=Z,14μm,0.9s							
PB01	**IPOC Station P**	**1.76**	**127**	⇑*i*P		**Pb**	**14 18 40.4**	**-1.5**
PB01				*i* S		**Sg**	**14 19 04.2**	**-2.5**
PB01	**IPOC Station P**	**1.76**	**127**			**Pb**	**14 18 40.5**	**-1.5**
PB01	**IPOC Station P**	**1.76**	**127**	*e*P		**Pb**	**14 18 40.4**	**-1.5**
PB01				*e*S		**Sg**	**14 19 05.8**	**-0.9**
PB01				IAML			14 19 19.8	
	comp=Z,11μm,1.3s							
PB07	**IPOC Station P**	**2.02**	**150**	⇑*i*P		**Pn**	**14 18 43.3**	**-0.4**
PB07				IAML			14 19 29.7	
	comp=E,11μm,0.6s							
PB07	**IPOC Station P**	**2.02**	**150**			**Pn**	**14 18 43.3**	**-0.4**
PB07	**IPOC Station P**	**2.02**	**150**	*e*P		**Pn**	**14 18 43.2**	**-0.4**
PB07				*e*S		**Sg**	**14 19 15.9**	**+0.8**
PB07				IAML			14 19 32.2	
	comp=Z,13μm,1.3s							
PB16	**IPOC Station P**	**2.15**	**41**	⇓*i*P		**Pn**	**14 18 46.8**	**+1.1**
PB16				*e*S		**Sb**	**14 19 15.2**	**-0.3**
PB16				IAML			14 19 22.0	
	comp=N,12μm,0.6s							
PB16	**IPOC Station P**	**2.15**	**41**			**Pn**	**14 18 46.0**	**+0.3**
PB16	**IPOC Station P**	**2.15**	**41**	*e*P		**Pn**	**14 18 45.8**	**+0.1**
PB16				*e*P		**Pn**	**14 18 46.1**	**+0.3**
PB16				*e*S		**Sg**	**14 19 17.4**	**-1.7**
PB16				IAML			14 19 30.8	
	comp=Z,15μm,0.8s							
PB03	**IPOC Station P**	**2.36**	**151**	*e*P		**Pn**	**14 18 47.8**	**-0.5**
PB03				*e*S		Sn	14 19 06.8	-10
PB03				IAML			14 19 42.9	
	comp=Z,6μm,0.9s							
PB09	**IPOC Station P**	**2.44**	**138**	⇑*i*P		**Pn**	**14 18 50.5**	**+1.2**
PB09				IAML			14 19 35.9	
	comp=E,11μm,0.4s							
PB09	**IPOC Station P**	**2.44**	**138**			**Pn**	**14 18 50.5**	**+1.2**
PB09	**IPOC Station P**	**2.44**	**138**	*e*P		**Pn**	**14 18 50.4**	**+1.1**
PB09				*e*S		**Sg**	**14 19 32.3**	**+3.9**
PB09				IAML			14 19 37.2	
	comp=Z,16μm,1.0s							
PB04	**IPOC Station P**	**2.47**	**162**	⇑*i*P		**Pn**	**14 18 48.9**	**-0.9**
PB04	**IPOC Station P**	**2.47**	**162**			**Pn**	**14 18 48.9**	**-0.9**
PB04	**IPOC Station P**	**2.47**	**162**	*e*P		**Pn**	**14 18 48.8**	**-1.0**
PB04				*e*S		**Sn**	**14 19 19.1**	**-0.7**
PB04				IAML			14 19 42.3	
	comp=Z,8μm,1.1s							
PB05	**IPOC Station P**	**2.96**	**166**	*e*P		**Pn**	**14 18 55.2**	**-1.2**
PB05				*e*S		**Sg**	**14 19 46.6**	**+1.7**
PB05				IAML			14 19 55.9	
	comp=Z,3μm,1.2s							
PB06	**IPOC Station P**	**3.02**	**154**			**Pn**	**14 18 56.6**	**-0.7**
PB06	**IPOC Station P**	**3.02**	**154**	*e*P		**Pn**	**14 18 56.6**	**-0.7**
PB06				*e*S		**Sg**	**14 19 49.4**	**+2.4**
PB06				IAML			14 19 56.0	
	comp=Z,6μm,1.1s							
LVC	**Limon Verde**	**3.26**	**144**	Pn		**Pn**	**14 19 02.1**	**+1.3**
	comp=Z,38nm,0.3s,baz=307,slow=9.6,SNR=190							
LVC					Sn	**Sn**	**14 19 41.5**	**+2.0**
	comp=Z,331nm,0.3s,baz=219,slow=20,SNR=7.5							
LVC					Lg	Lg	14 19 53.9	
	comp=Z,452nm,0.3s,baz=227,slow=14,SNR=8.7							
LVC	**Limon Verde**	**3.26**	**144**	*e*P		**Pn**	**14 19 02.1**	**+1.3**
LVC				*i* S		**Sn**	**14 19 41.1**	**+1.6**
LVC	**Limon Verde**	**3.26**	**144**	*e*P		**Pn**	**14 19 02.1**	**+1.3**
LVC				*e*S		**Sg**	**14 19 58.0**	**+3.3**
LVC				IAML			14 20 08.3	
	comp=Z,2μm,2.2s							
LVC	**Limon Verde**	**3.26**	**144**	*e*P		**Pn**	**14 19 02.1**	**+1.3**
PB15	**IPOC Station P**	**3.51**	**157**			**Pn**	**14 19 03.4**	**-0.8**
PB15	**IPOC Station P**	**3.51**	**157**	*e*P		**Pn**	**14 19 03.6**	**-0.6**
PB15				IAML			14 20 06.4	
	comp=Z,5μm,1.8s							
PB10	**IPOC Station P**	**3.54**	**174**	Pn		**Pn**	**14 19 03.0**	**-1.4**
PB10	**IPOC Station P**	**3.54**	**174**	*e*P		**Pn**	**14 19 03.2**	**-1.2**
PB10				*e*S		**Sn**	**14 19 45.8**	**-0.2**
PB10				IAML			14 20 34.2	
	comp=Z,1μm,1.6s							
LPAZ	**La Paz**	**4.56**	**37**	Pn		**Pn**	**14 19 22.1**	**+3.1**
	comp=Z,1.7nm,0.3s,baz=167,slow=5.3,SNR=38							
PB14	**IPOC Station P**	**4.66**	**173**	Pn		**Pn**	**14 19 18.2**	**-1.8**
PB14	**IPOC Station P**	**4.66**

NNA Sn **Sn** **14 22 12.6 -6.1**
comp=Z,2.4nm,0.3s,baz=210,slow=8.1,SNR=2.2
NNA LR LR 14 24 02.9
comp=Z,3µm,18.6s,baz=158,slow=36
GO04 Tololo Observa 10.15 179 Pn Pn 14 20 34.5 -0.9
SIV San Ignacio 10.23 69 Pn **Pn 14 20 34.6 -1.7**
comp=Z,5.5nm,0.3s,baz=266,slow=9.9,SNR=66
ETMB Extrema 11.10 25 *eP* **Pn 14 20 47.8 -0.4**
PTLB Pontes e Lacer 12.15 70 eP **Pn 14 21 01.9 -0.6**
CZSB Cruzeiro do Su 12.29 352 eP **Pn 14 21 05.4 +0.9**
ROC1 El Roble 12.95 180 Pn 14 21 10.7 -2.9
SAML Samuel 13.31 36 P **Pn 14 21 17.0 -1.4**
SAML Samuel 13.31 36 Pn 14 21 17.0 -1.4
SAML Samuel 13.31 36 eP **Pn 14 21 17.5 -0.9**
CPUP Villa Florida 14.06 119 Pn **Pn 14 21 29.2 +0.7**
comp=Z,0.2nm,0.3s,baz=301,slow=14,SNR=13
CPUP LR LR 14 27 32.8
comp=Z,5µm,18.2s,baz=298,slow=40
CPUP Villa Florida 14.06 119 *eP* **Pn 14 21 29.7 +1.1**
AQDB Aquidauana 14.36 95 eP **Pn 14 21 32.5 -0.2**
ATAH Atahualpa 14.65 330 Pn **Pn 14 21 36.5 -0.6**
comp=Z,0.5nm,0.3s,baz=157,slow=13,SNR=1.5
ATAH LR LR 14 26 55.5
comp=Z,2µm,20.5s,baz=158,slow=36
H03N1 Juan Fernandez 15.16 206 T T 14 37 31.8
baz=32,slow=72
H03N2 Juan Fernandez 15.16 206 T T 14 37 29.8
baz=32,slow=72
H03N3 Juan Fernandez 15.18 206 T T 14 37 23.2
baz=32,slow=72
PP1B Ponte de Pedra 15.43 84 eP **Pn 14 21 46.6 -0.6**
ITQB Itaqui 16.21 129 eP **P 14 21 59.7 -0.5**
CLDB Colider 17.20 60 eP **Pn 14 22 08.4 -1.4**
TRCB Terra Rica 17.32 103 eP **Pn 14 22 10.9 -0.4**
PTGB Pitanga 18.12 109 eP **P 14 22 21.4 -0.1**
PCMB Pacaembu 18.51 98 eP **P 14 22 24.5 -1.3**
ITAB Concordia 18.71 116 eP **Pn 14 22 28.3 -0.1**
ARAG Araguaiana, MT 18.74 80 eP **P 14 22 27.1 -1.2**
LPA La Plata 18.82 145 *d iP* **P 14 22 26.4 -2.7**
LPA PPP PPP 14 23 34.0
LPA S **S** **14 26 03.1 +0.3**
LPA SSS SSS 14 28 37.9
CPSB Cacapava Do Su 18.95 127 eP **Pn 14 22 31.1 -0.1**
ITRB Iturama 19.41 93 eP **P 14 22 35.4 -0.3**
MACA Manacapuru-AM 19.50 32 eP **P 14 22 35.9 -0.7**
PLTB Pedras Altas 19.52 130 eP **Pn 14 22 38.1 0.0**
NPGB Novo Progresso 19.88 52 eP **P 14 22 39.6 -1.2**
FRTB Fartura 20.19 103 eP **P 14 22 44.5 +0.3**
CNLB Canela 20.50 121 eP **P 14 22 47.6 +0.1**
SNDB Serra Nova Dou 20.52 70 eP **P 14 22 46.7 -1.1**
SNDB eS **S** **14 26 35.6 -1.5**
PLCA Paso Flores 20.69 179 P Pn 14 22 52.5 +0.6
comp=Z,47nm,1.0s,baz=356,slow=12,SNR=17
PLCA Paso Flores 20.69 179 P Pn 14 22 51.0 -0.9
PLCA pmax pmax
comp=Z,49nm,0.9s
PLCA Paso Flores 20.69 179 Pn Pn 14 22 51.0 -0.9
PLCA Paso Flores 20.69 179 eP Pn 14 22 52.9 +1.0
TIJ01 Guaruva-PR 20.96 109 eP **P 14 22 52.8 +0.1**
BB19B Bebedouro 21.06 97 eP **P 14 22 52.3 -1.4**
OTAV Otavalo 21.38 339 eP **P 14 23 00.2 +2.7**
ITTB Itaituba 21.48 46 eP **P 14 22 56.2 -1.9**
IPMB Ipameri, GO 21.62 89 eP **P 14 22 59.2 -0.6**
SPB Sao Paulo 22.16 104 eP **P 14 23 05.8 +0.4**
BDFB Brasilia 22.28 83 P **P 14 23 05.2 -1.6**
comp=Z,8.3nm,0.4s,baz=252,slow=12,SNR=11
BDFB LR LR 14 32 19.9
comp=Z,4µm,20.6s,baz=266,slow=39
BDFB Brasilia 22.28 83 P **P 14 23 05.3 -1.6**
BDFB pmax pmax
comp=Z,34nm,0.9s
BDFB Brasilia 22.28 83 P **P 14 23 05.2 -1.6**
PET01 Itanhaem-SP 22.37 105 eP **P 14 23 08.0 +0.3**
VAO Valinhos 22.55 102 eP **P 14 23 08.8 -0.8**
PEXB Peixe 23.14 74 eP **P 14 23 14.0 -1.8**
PARB Paraibuna 23.80 103 eP **P 14 23 21.3 -1.0**
MALB Monte Alegre 24.32 44 eP **P 14 23 27.7 +0.6**
BSCB Bom Sucesso 24.57 97 eP **P 14 23 30.0 +0.5**
PRPB Parauapebas 24.72 59 eP **P 14 23 31.2 +0.3**
ROSC El Rosal 24.88 352 P **P 14 23 33.6 +1.0**
comp=Z,10.0nm,0.5s,baz=96,slow=19,SNR=1.3
ROSC LR LR 14 33 38.2
comp=Z,5µm,19.2s,baz=202,slow=38
SMTB Santa Maria do 25.17 67 eP **P 14 23 34.6 -0.3**
VAS01 Vassouras-RJ 25.78 100 eP **P 14 23 40.5 +0.1**
JANB Januaria 25.89 83 eP **P 14 23 40.6 -0.9**
SDBA SAO DESIDERIO 26.13 77 eP **P 14 23 43.8 +0.1**
DUB01 Friburgo-RJ 26.77 100 eP **P 14 23 50.1 +0.6**
MCPB Macapa, AP 26.90 46 eP **P 14 23 50.8 +0.1**
TMAB Tom-Au,PA,Br 28.39 55 eP **P 14 24 05.0 +1.1**
SDV Santo Domingo 28.68 1 P **P 14 24 06.3 -0.4**
comp=Z,2.0nm,0.3s,baz=192,slow=5.8,SNR=4.0
SDV LR LR 14 34 53.7
comp=Z,4µm,18.6s,baz=191,slow=35
SDV Santo Domingo 28.68 1 eP **P 14 24 09.3 +2.7**
MDP Montagnes des 30.76 38 P **P 14 24 23.9 -1.0**
comp=Z,32nm,1.3s,baz=266,slow=17,SNR=2.2
ROSB Rosrio 31.23 60 eP **P 14 24 28.4 -0.6**
BBGH Gun Hill 34.78 20 eP **P 14 25 04.6 +4.6**
MPOM Morne Pois Mar 35.62 17 eP P 14 25 02.0 -5.3
RPN Rapa Nui 35.77 251 LR LR 14 36 22.5
comp=Z,4µm,18.7s,baz=114,slow=30
RCBR Riachuelo 36.87 72 P **P 14 25 17.7 -0.4**
comp=Z,33nm,0.7s,baz=241,slow=11,SNR=20
RCBR Riachuelo 36.87 72 P **P 14 25 16.3 -1.8**
RCBR pmax pmax
comp=Z,40nm,0.8s
RCBR Riachuelo 36.87 72 P **P 14 25 16.3 -1.8**
RCBR IAmb IAmb 14 25 19.3
comp=Z,40nm,0.8s
RCBR Riachuelo 36.87 72 eP **P 14 25 18.1 0.0**
CBE Ff, Capester 36.99 15 eP **P 14 25 19.9 +1.0**
MLPR Magueyes Islan 37.91 6 P **P 14 25 24.6 -2.0**
MLPR IAmb IAmb 14 25 37.1
comp=Z,44nm,0.9s
CRPR Cabo Rojo, PR 37.94 6 P **P 14 25 24.0 -2.9**
CRPR IAmb IAmb 14 25 36.7
comp=Z,51nm,1.1s
PDPR Patillas Dam, 38.07 8 P **P 14 25 25.9 -2.1**
SJG San Juan 38.15 7 P **P 14 25 27.3 -1.4**
comp=Z,13nm,0.8s,baz=205,slow=5.9,SNR=7.7
AOPR Arecibo Observ 38.31 6 P **P 14 25 28.5 -1.6**
CBYP Canovanas 38.34 8 P **P 14 25 28.5 -1.9**
Z58A St. Stephen 53.68 351 P **P 14 27 32.1 +1.1**
baz=170
Z57A Bowman 53.78 350 P **P 14 27 32.8 +1.1**
baz=169
Y60A Bolivia 54.12 353 P **P 14 27 35.7 +1.5**
baz=172
Y58A Scranton 54.22 351 P **P 14 27 36.6 +1.7**
baz=170
Y57A Sumter 54.43 350 P **P 14 27 37.8 +1.2**
baz=169
Y55A Saluda 54.60 349 P **P 14 27 38.6 +0.8**
baz=168
X60A Albert Glenn T 54.66 353 P **P 14 27 39.4 +1.3**
baz=172
X59A McDuffie Farm, 54.73 352 P **P 14 27 39.8 +1.1**
baz=171
JSC Jenkinsville 54.84 350 P **P 14 27 38.9 -0.5**
JSC pmax pmax
comp=Z,7.0nm,0.7s
JSC Jenkinsville 54.84 350 P **P 14 27 38.9 -0.5**
X56A White Oak 55.00 350 P **P 14 27 41.5 +0.9**
baz=168
BIRD Birdtown, Kers 55.06 350 P **P 14 27 41.5 +0.4**
X55A Gracelyn & Ava 55.08 349 P **P 14 27 42.3 +1.0**
baz=168
HKT Hockley 55.11 334 *i P* **P 14 27 41.0 -0.4**
HKT pmax pmax
comp=Z,8.0nm,2.1s
W58A Raeford 55.25 352 P **P 14 27 43.6 +1.2**
baz=171,SNR=8.1
X54A Belton 55.29 349 P **P 14 27 43.5 +0.7**
baz=167
PAULI Pauline 55.46 349 P **P 14 27 42.6 -1.3**
W57A Gilead 55.49 351 P **P 14 27 44.7 +0.6**
baz=170
W57A Gilead 55.49 351 P **P 14 27 44.1 0.0**
W57A IAmb IAmb 14 27 55.2
comp=Z,16nm,0.8s
W56A Indian Trail 55.56 350 P **P 14 27 45.3 +0.7**
baz=169
KMSC Kings Mountain 55.69 350 P **P 14 27 46.6 +1.0**
baz=168
W54A Cherokee Point 55.78 349 P **P 14 27 47.4 +1.1**
baz=167
V59A Middlesex 55.86 353 P **P 14 27 48.1 +1.3**
baz=172,SNR=6.3
V58A Windy Hill, Pi 56.00 352 P **P 14 27 48.7 +1.0**
baz=171
V58A Windy Hill, Pi 56.00 352 P **P 14 27 47.5 -0.3**
V58A IAmb IAmb 14 27 58.1
comp=Z,12nm,0.7s
V57A Coltrane Farms 56.18 351 P **P 14 27 49.8 +0.7**
baz=170
U59A Littleton 56.39 353 P **P 14 27 51.8 +1.2**
baz=172
V54A Nebo 56.41 349 P **P 14 27 51.8 +1.0**
baz=168,SNR=6.2
U58A Oxford 56.52 353 P **P 14 27 53.7 +2.2**
baz=172
TKL Tuckaleechee C 56.64 348 P **P 14 27 51.6 -0.8**
TKL pmax pmax
comp=Z,16nm,0.9s
TKL Tuckaleechee C 56.64 348 P **P 14 27 51.6 -0.8**
TKL IAmb IAmb 14 28 02.9
comp=Z,16nm,0.8s
U57A Blanch 56.65 352 P **P 14 27 53.6 +1.2**
baz=171
U56A King 56.72 351 P **P 14 27 54.4 +1.5**
baz=169
V52A Sevierville 56.78 348 P **P 14 27 53.3 -0.1**
V52A IAmb IAmb 14 28 03.9
comp=Z,26nm,0.8s
OXF Oxford 56.95 342 P **P 14 27 54.8 +0.2**
baz=159
T59A Double "B" Far 56.98 354 P **P 14 27 55.7 +1.0**
baz=173,SNR=7.3
T59A Double "B" Far 56.98 354 P **P 14 27 55.4 +0.6**
T59A IAmb IAmb 14 27 56.9
comp=Z,18nm,0.9s
T58A Grand View Acr 57.06 353 P **P 14 27 56.6 +1.3**
baz=172,SNR=8.0
U54A Nelsons Funny 57.12 350 P **P 14 27 56.6 +0.7**
baz=168
T57A Hurt 57.20 352 P **P 14 27 57.5 +1.1**
baz=171
T56A Rocky Mt 57.34 351 P **P 14 27 57.9 +0.6**
baz=170
T55A Pulaski 57.53 351 P **P 14 27 60.0 +1.2**
baz=169
BLA Blacksburg 57.57 351 P **P 14 27 58.4 -0.6**
BLA pmax pmax
comp=Z,26nm,1.2s
BLA Blacksburg 57.57 351 P **P 14 27 60.0 +1.0**
baz=170
BLA Blacksburg 57.57 351 P **P 14 27 58.4 -0.6**
BLA IAmb IAmb 14 28 10.8
comp=Z,26nm,1.1s
T54A Tazewell 57.60 350 P **P 14 28 00.0 +0.8**
baz=168
S58A Poland Farm, P 57.66 353 P **P 14 28 00.7 +1.2**
baz=172
SLBS Sierra La Lagu 57.67 317 P **P 14 27 59.0 -1.1**
T53A Wise 57.69 349 P **P 14 28 00.2 +0.4**
baz=167
S56A Natural Bridge 57.91 352 P **P 14 28 02.5 +1.2**
baz=170
S57A Dark Hollow, R 57.91 353 P **P 14 28 02.6 +1.3**
baz=171
R58B Mineral 57.99 354 P **P 14 28 03.3 +1.4**
baz=172
WVT Waverly 58.03 344 P **P 14 28 01.7 -0.5**
WVT pmax pmax
comp=Z,23nm,0.8s
WVT Waverly 58.03 344 P **P 14 28 02.0 -0.2**
baz=161
WVT Waverly 58.03 344 P **P 14 28 01.7 -0.5**
WVT IAmb IAmb 14 28 11.6
comp=Z,23nm,0.8s
S55A Lewisburg 58.13 351 P **P 14 28 04.2 +1.3**
baz=170,SNR=6.5
S54A Dingess, Beckl 58.28 350 P **P 14 28 04.7 +0.7**
baz=169
S54A Dingess, Beckl 58.28 350 P **P 14 28 04.1 +0.1**
S54A IAmb IAmb 14 28 14.1
comp=Z,18nm,0.7s
TXAR Lajitas Array 58.28 326 P **P 14 28 04.7 +0.5**
comp=Z,2.5nm,1.0s,baz=141,slow=8.9,SNR=11
TXAR LR LR 14 52 06.6
comp=Z,467nm,19.7s,baz=0.0,slow=35
MIAR Mount Ida 58.32 338 P **P 14 28 04.3 0.0**
MIAR pmax pmax
comp=Z,21nm,0.8s
MIAR Mount Ida 58.32 338 P **P 14 28 05.2 +0.9**
baz=155
MIAR Mount Ida 58.32 338 P **P 14 28 04.3 0.0**
MIAR IAmb IAmb 14 28 15.2
comp=Z,20nm,0.8s
R58A Rapidan 58.34 354 P **P 14 28 05.8 +1.5**
baz=172
R57A Stanardsville 58.39 353 P **P 14 28 06.3 +1.7**
baz=172
W41B Gary Mavity, V 58.44 340 P **P 14 28 06.2 +1.1**
baz=156
R55A Marlinton 58.58 352 P **P 14 28 07.6 +1.5**
baz=170
R54A Victor 58.61 351 P **P 14 28 07.0 +0.7**
baz=169
R56A Bull Pasture M 58.61 352 P **P 14 28 08.0 +1.7**
baz=171
T47A Sharon Grove 58.66 345 P **P 14 28 05.8 -0.8**
T47A IAmb IAmb 14 28 16.6
comp=Z,20nm,0.8s
LCAR Lake Charles 58.92 341 P **P 14 28 04.3 -4.0**
LCAR IAmb IAmb 14 28 18.4
comp=Z,12nm,0.8s
Q58A Fox Den Farm, 58.94 354 P **P 14 28 09.9 +1.4**
baz=173
W39A Magazine 58.98 338 P **P 14 28 10.4 +1.5**
baz=155
Q57A Strasburg 59.11 353 P **P 14 28 11.5 +1.8**
baz=172,SNR=12
Q56A Snyder Ridge, 59.21 353 P **P 14 28 12.1 +1.7**
baz=171
Q55A Buckhannon 59.28 352 P **P 14 28 12.4 +1.6**
baz=170
Q53A Leroy 59.35 350 P **P 14 28 12.2 +0.9**
baz=168
Q54A Coxs Mills 59.37 351 P **P 14 28 12.2 +0.7**
baz=169
P57A Homestead Farm 59.51 354 P **P 14 28 14.1 +1.7**
baz=172
P56A Dayton Farm, R 59.62 353 P **P 14 28 15.0 +1.8**
baz=171
U40A Yellville 59.72 340 P **P 14 28 14.8 +0.8**
baz=156
SIUC Southern Illin 59.89 343 P **P 14 28 14.0 -1.1**
O57A Amberson 60.19 354 P **P 14 28 18.8 +1.6**
baz=173
O56A Blue Knob Stat 60.35 353 P **P 14 28 19.9 +1.7**
baz=172,SNR=5.5
SSPA Standing Stone 60.64 354 P **P 14 28 21.5 +1.3**
baz=173
SSPA Standing Stone 60.64 354 P **P 14 28 20.1 -0.1**
SSPA IAmb IAmb 14 28 34.3
comp=Z,31nm,1.4s
N57A Milroy 60.73 354 P **P 14 28 22.2 +1.5**
baz=173
N58A Sunbury 60.74 355 P **P 14 28 21.5 +0.7**
baz=174
CCM Cathedral Cave 60.78 342 P **P 14 28 21.4 +0.2**
baz=158
ACSO Alum Creek Sta 60.93 350 P **P 14 28 22.3 +0.2**
baz=167
N56A West Decatur 60.96 354 P **P 14 28 23.5 +1.2**
baz=172
MNTX Cornudas Mount 61.05 327 P **P 14 28 24.2 +1.0**
baz=143
S39A Bolivar 61.09 340 P **P 14 28 22.9 -0.4**
N54A Moraine State 61.20 352 P **P 14 28 25.0 +1.1**
baz=170
M58A Price's Panora 61.24 355 P **P 14 28 26.0 +1.7**
baz=174,SNR=6.0
M57A Sunshine Farm, 61.27 355 P **P 14 28 26.0 +1.6**
baz=173
M59A Waymart 61.34 356 P **P 14 28 26.5 +1.6**
baz=175
M56A Emporium 61.51 354 P **P 14 28 27.3 +1.2**
baz=172,SNR=7.9
L63A North Scituate 61.53 359 P **P 14 28 27.4 +1.3**
baz=179
M55A Ridgway 61.55 353 P **P 14 28 26.5 +0.1**
M54A Oil Creek Stat 61.70 353 P **P 14 28 28.5 +1.1**
baz=171
L58A Harry Jones Me 61.87 356 P **P 14 28 30.0 +1.6**
baz=175,SNR=5.6
L57A Andrews Acres 61.90 355 P **P 14 28 30.2 +1.5**
baz=174
L59A Walton 61.97 357 P **P 14 28 30.0 +0.8**
baz=176
BINY Binghamton 62.03 356 P **P 14 28 31.2 +1.6**
baz=175
L56A Greenwood 62.10 354 P **P 14 28 31.2 +1.2**
baz=173
L61B Northampton 62.13 359 P **P 14 28 31.2 +1.0**
baz=178
VNA3 Neumayer Olymp 62.14 161 P **P 14 28 32.4 +2.4**
HRV Adam Dziewonsk 62.17 360 P **P 14 28 31.8 +1.4**
baz=179
VNA1 Neumayer--Stat 62.36 160 P **P 14 28 35.3 +3.8**
K59A Cooperstown 62.54 357 P **P 14 28 33.8 +0.9**
baz=176,SNR=6.1
K58A Earlville 62.57 356 P **P 14 28 34.7 +1.5**
baz=175
K58A Earlville 62.57 356 P **P 14 28 32.7 -0.5**
K56A Middlesex 62.63 355 P **P 14 28 34.0 +0.4**
baz=173
VNA2 Neumayer--Watz 62.73 161 P **P 14 28 36.2 +2.2**
baz=278,slow=7.4
121A Cookes Peak, D 62.97 325 P **P 14 28 39.5 +3.3**
baz=141
J58A Remsen 63.14 356 P **P 14 28 38.2 +1.2**
baz=176
J56A Wolcott 63.17 355 P **P 14 28 37.3 +0.2**
baz=174
J59A Piesco 63.21 357 P **P 14 28 38.9 +1.5**
baz=176,SNR=5.9
J57A Williamstown 63.24 356 P **P 14 28 38.6 +1.0**
baz=175
I58A Old Forge 63.46 357 P **P 14 28 40.3 +1.2**
baz=176
I59A Olmsteadville 63.51 358 P **P 14 28 40.8 +1.4**
baz=177
I60A Shoreham 63.54 358 P **P 14 28 40.5 +1.0**
baz=178
I61A Oroboro, Fairl 63.60 359 P **P 14 28 41.7 +1.7**
baz=179
LBNH Lisbon 63.91 359 P **P 14 28 43.9 +1.9**
baz=179
H58A Gabriels 64.14 357 P **P 14 28 44.7 +1.1**
baz=177
ANMO Albuquerque 64.17 328 *i P* **P 14 28 45.7 +1.5**
ANMO pmax pmax
comp=Z,9.0nm,1.5s
ANMO Albuquerque 64.17 328 P **P 14 28 45.9 +1.7**
baz=143
H61A Lyndonville 64.20 359 P **P 14 28 45.8 +1.9**
baz=179
H62A Milan 64.23 360 P **P 14 28 45.8 +1.7**
baz=180
H57A Richville 64.25 356 P **P 14 28 45.3 +1.1**
baz=175,SNR=6.5
H64A Troy 64.32 1 P **P 14 28 45.5 +0.8**
baz=182
H63A New Sharon 64.33 1 P **P 14 28 46.9 +2.2**
baz=181
SNAA Sanae 64.35 161 P **P 14 28 46.7 +2.0**
SNAA Sanae 64.35 161 *i P* **P 14 28 46.5 +1.8**
SNAA pmax pmax
comp=Z,8.0nm,1.1s
H59A Cadyville 64.35 358 P **P 14 28 46.2 +1.3**
baz=177
LONY Lake Ozonia 64.36 357 P **P 14 28 46.4 +1.4**
baz=176
H53A Bobcaygeon 64.61 354 P **P 14 28 47.6 +1.0**
baz=172
G60A Masonville 64.77 359 P **P 14 28 50.1 +2.5**
baz=179
G57A Newington 64.87 357 P **P 14 28 49.4 +1.1**
baz=176
G62A West of Eustis 64.88 0 P **P 14 28 50.4 +2.0**
baz=180,SNR=7.1
G65A Princeton 64.94 3 P **P 14 28 50.3 +1.7**
baz=184
PKME Peaks-Kenny Pk 64.94 1 P **P 14 28 49.8 +1.0**
baz=182
PKME Peaks-Kenny Pk 64.94 1 P **P 14 28 49.0 +0.3**
G61A St-Isidore-de- 64.94 360 P **P 14 28 50.7 +1.9**
baz=179
G64A Maxfield 64.94 2 P **P 14 28 51.6 +2.9**
baz=182
F64A Sherman 65.57 2 P **P 14 28 54.2 +1.5**
baz=183
F60A Warwick 65.63 359 P **P 14 28 54.4 +1.2**
baz=179
L34A Svendsen Farm, 65.96 340 P **P 14 28 55.3 -0.1**
SDCO Great Sand Dun 65.96 331 P **P 14 28 57.7 +1.8**
baz=144
BGNE Belgrade 66.06 338 P **P 14 28 57.4 +1.3**
baz=152
E58A La Victoria 66.06 358 P **P 14 28 57.4 +1.5**
baz=178
E57A Chemin Saint G 66.13 358 P **P 14 28 57.4 +1.0**
baz=177
E62A Clayton Lake 66.29 1 P **P 14 28 59.4 +1.9**
baz=182
E62A Clayton Lake 66.29 1 P **P 14 28 57.4 -0.1**
E62A IAmb IAmb 14 29 09.2
comp=Z,17nm,0.8s
E56A St. Veronique 66.31 357 P **P 14 28 58.5 +1.0**
baz=176
D58A Chemin du LacG 66.78 359 P **P 14 29 01.8 +1.3**
baz=178
D56A ZEC Mazanza, M 66.80 357 P **P 14 29 01.4 +0.8**
baz=176
D55A Sainte-Anne-du 66.80 357 P **P 14 29 01.2 +0.5**
baz=175
MVCO Mesa Verde 66.97 328 P **P 14 29 04.1 +1.7**
baz=142
WUAZ Wupatki 67.17 325 P **P 14 29 05.8 +2.3**
baz=139
ECSD EROS Data Cent 67.62 340 P **P 14 29 06.6 +0.6**
baz=154
IKP In-Ko-Pah, Jac 67.82 320 P **P 14 29 12.0 +4.5**
baz=134
BC3 Big Chuckawall 68.13 321 P **P 14 29 12.3 +2.7**
baz=135
MONP2 Monument Peak 68.18 320 P **P 14 29 12.2 +2.2**
baz=134
IRM Iron Mountain 68.30 322 P **P 14 29 13.8 +3.3**
baz=135
F36A Milaca 68.64 343 P **P 14 29 11.6 -0.7**
F36A IAmb IAmb 14 29 22.5
comp=Z,13nm,0.8s
TPFO Pinon Flats 68.69 320 P **P 14 29 15.9 +2.8**
baz=134
BELC Belle Mtn. Jos 68.69 321 P **P 14 29 16.2 +3.1**
baz=135
PFO Pinyon Flats O 68.70 320 *i P* **P 14 29 13.9 +0.8**
PFO pmax pmax
comp=Z,23nm,1.4s
PFO Pinyon Flats O 68.70 320 P **P 14 29 16.8 +3.7**
baz=134
N23A Red Feather La 68.72 332 P **P 14 29 15.1 +1.8**
baz=145
LSQQ Lebel-sur-Quev 68.93 356 P **P 14 29 14.4 +0.4**
baz=174
NVL N'lazarevskaya 68.94 159 *eP* P 14 29 20.6 +6.7
NVL pmax pmax
comp=Z,6.0nm,0.7s
GMRC Granite Mounta 69.04 322 P **P 14 29 19.1 +3.9**
baz=135
O20A White River Ci 69.15 330 P **P 14 29 18.7 +2.8**
baz=143
HEC Hector,Ludlow 69.47 321 P **P 14 29 20.9 +3.0**
baz=134
CHGQ Chibougamau 69.64 358 P **P 14 29 18.8 +0.3**
baz=177
MATQ Matagami 69.67 355 P **P 14 29 18.9 +0.3**
baz=173
BFSC Mount Baldy Ra 69.85 320 P **P 14 29 23.8 +3.5**
baz=133
LIC Lamto 69.85 75 *eP* **P 14 29 19.3 -1.3**
comp=Z,7.8nm,0.4s
TIC Toumodi 70.03 75 *eP* **P 14 29 20.4 -1.3**
GSC Goldstone, Bar 70.08 321 P **P 14 29 24.9 +3.3**
baz=134

KIC	**Kosan Boka**	**70.17**	**75**	*e*P		**P**	**14 29 21.6**	**-0.9**
	comp=Z,17nm,0.7s							
DBIC	**Dimbokro**	**70.19**	**75**	P		**P**	**14 29 20.6**	**-2.0**
	comp=Z,9.4nm,0.7s,baz=221,slow=6.4,SNR=13							
DBIC				LR		LR	14 58 47.0	
	comp=Z,1µm,19.6s,baz=222,slow=35							
DBIC	**Dimbokro**	**70.19**	**75**	P		**P**	**14 29 21.6**	**-1.0**
DBIC				pmax		pmax		
	comp=Z,15nm,0.7s							
DBIC	**Dimbokro**	**70.19**	**75**	P		**P**	**14 29 21.6**	**-1.0**
DBIC				IAmb		IAmb	14 29 31.9	
	comp=Z,16nm,0.7s							
QSPA	**South Pole Qui**	**70.21**	**180**	P		**P**	**14 29 24.5**	**+2.4**
	comp=Z,6.8nm,0.8s,baz=207,slow=0.6,SNR=66							
EDW2	**Edwards Air Fo**	**70.49**	**320**	P		**P**	**14 29 26.7**	**+2.6**
	baz=133							
RSSD	**Black Hills**	**70.60**	**335**	P		**P**	**14 29 26.6**	**+1.8**
	baz=147							
TPNV	**Topopah Spring**	**70.91**	**323**	P		**P**	**14 29 30.5**	**+3.8**
	baz=135							
FURC	**Furnace Creek,**	**70.92**	**322**	P		**P**	**14 29 30.4**	**+3.9**
	baz=134							
MPMC	**Manual Prospec**	**71.00**	**322**	P		**P**	**14 29 30.3**	**+3.0**
	baz=134							
DUG	**Dugway, Tooele**	**71.43**	**327**	P		**P**	**14 29 32.6**	**+2.8**
	baz=139							
AGMN	**Agassiz Nation**	**71.52**	**343**	P		**P**	**14 29 30.6**	**+0.6**
	baz=155							
R11A	**Troy Canyon, C**	**71.53**	**324**	P		**P**	**14 29 33.8**	**+3.3**
	baz=136							
PKM	**Mcpherson Peak**	**71.60**	**319**	P		**P**	**14 29 34.4**	**+3.4**
	baz=132							
CWC	**Cottonwood Cre**	**71.61**	**322**	P		**P**	**14 29 34.1**	**+3.2**
	baz=134							
VES	**Vestal, Richgr**	**71.80**	**320**	P		**P**	**14 29 35.2**	**+3.4**
	baz=133							
BW06	**Boulder Array**	**71.83**	**331**	P		**P**	**14 29 34.0**	**+1.7**
	baz=142							
PDAR	**Pinedale Array**	**71.83**	**331**	P		**P**	**14 29 33.0**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=183,slow=5.6,SNR=5.6							
PDAR				LR		LR	15 02 32.2	
	comp=Z,242nm,20.8s,baz=136,slow=37							
SMMC	**Simmler**	**71.99**	**320**	P		**P**	**14 29 37.5**	**+4.3**
	baz=132							
TBI	**Tubuai**	**72.15**	**251**	*e*S		**S**	**14 38 50.8**	**-5.8**
	comp=Z,1µm,26.5s							
TBI	**Tubuai**	**72.15**	**251**	*e*LR		LR	14 51 35.9	
	comp=Z,2µm,28.0s,baz=103							
NVAR	**Mina Array Bea**	**73.11**	**323**	P		**P**	**14 29 42.2**	**+2.3**
	comp=Z,2.1nm,0.8s,baz=148,slow=6.8,SNR=8.0							
ULM	**Lac du Bonnet**	**73.30**	**344**	P		**P**	**14 29 39.5**	**-1.0**
	comp=Z,6.8nm,0.3s,baz=52,slow=2.6,SNR=11							
PPT2	**Papeete2**	**73.77**	**257**	*e*S		**SKiKP**	**14 39 10.1**	**-3.4**
	comp=Z,2µm,25.2s							
PPT2	**Papeete2**	**73.77**	**257**	*e*LR		LR	14 52 20.0	
	comp=Z,1µm,24.5s,baz=111							
PPT	**Papeete**	**73.78**	**257**	LR		LR	14 54 01.0	
	comp=Z,510nm,19.8s,baz=86,slow=29							
DGMT	**Dagmar**	**74.32**	**338**	P		**P**	**14 29 48.0**	**+1.4**
	baz=148							
HLID	**Hailey**	**74.73**	**329**	P		**P**	**14 29 52.0**	**+2.7**
	baz=138							
EGMT	**Eagleton**	**76.08**	**334**	P		**P**	**14 29 59.0**	**+2.2**
	baz=143							
O03E	**Paynes Creek**	**76.36**	**322**	P		**P**	**14 30 00.1**	**+1.5**
	baz=132							
VNDA	**Vanda**	**78.00**	**190**	P		**P**	**14 30 10.9**	**+3.7**
	comp=Z,1.1nm,0.9s,baz=148,slow=4.9,SNR=4.1							
VNDA	**Vanda**	**78.00**	**190**	P		**P**	**14 30 04.7**	**-2.5**
VNDA				pmax		pmax		
	comp=Z,6.0nm,1.2s							
VNDA	**Vanda**	**78.00**	**190**	P		**P**	**14 30 04.7**	**-2.5**
SYO	**Syowa Base**	**78.60**	**160**	⇑*i* PcP		**PcP**	**14 30 16.6**	**-3.0**
TOA0	**Torodi Ar. Sit**	**78.69**	**72**	P		**P**	**14 30 10.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**78.69**	**72**	P		**P**	**14 30 11.0**	**-1.1**
	comp=Z,25nm,0.7s,baz=255,slow=5.3,SNR=109							
TORD				LR		LR	15 03 12.4	
	comp=Z,1µm,21.0s,baz=245,slow=34							
TORD	**Torodi Ar. Bea**	**78.69**	**72**	P		**P**	**14 30 11.2**	**-0.8**
MDT	**Midelt**	**82.29**	**51**	P		**P**	**14 30 29.7**	**-1.5**
	comp=Z,5.5nm,1.0s,baz=326,slow=3.9,SNR=3.7							
TSUM	**Tsumeb**	**82.34**	**108**	P		**P**	**14 30 32.6**	**+0.8**
	comp=Z,5.5nm,0.7s,baz=265,slow=6.1,SNR=9.4							
BOSA	**Boshof**	**85.88**	**119**	P		**P**	**14 30 50.1**	**+0.4**
	comp=Z,2.8nm,1.0s,baz=306,slow=1.1,SNR=4.7							
BOSA				LR		LR	15 06 09.4	
	comp=Z,805nm,19.0s,baz=252,slow=34							
ESDC	**Sonseca Array**	**86.13**	**45**	P		**P**	**14 30 50.7**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=245,slow=5.5,SNR=7.4							
ESDC				LR		LR	15 09 03.9	
	comp=Z,652nm,18.1s,baz=205,slow=36							
MAW	**Mawson**	**86.33**	**164**	P		**P**	**14 30 53.1**	**+2.1**
	comp=Z,2.0nm,0.5s,baz=226,slow=7.2,SNR=23							
MAW				LR		LR	15 12 11.7	
	comp=Z,447nm,18.4s,baz=241,slow=38							
LBTB	**Lobatse**	**87.42**	**116**	P		**P**	**14 30 58.2**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=235,slow=9.2,SNR=3.0							
YKA	**Yellowknife Ar**	**89.12**	**341**	P		**P**	**14 31 05.0**	**+0.8**
	comp=Z,1.7nm,0.5s,baz=132,slow=5.2,SNR=20							
YKA				LR		LR	15 13 37.3	
	comp=Z,574nm,21.8s,baz=0.0,slow=37							
MATP	**Matopo**	**91.58**	**112**	P		**P**	**14 31 18.0**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=219,slow=2.6,SNR=5.0							
KEST	**Kesra**	**93.95**	**54**	LR		LR	15 14 48.4	
	comp=Z,832nm,19.7s,baz=196,slow=36							
SUMG	**Summit**	**94.87**	**9**	P		**P**	**14 31 31.1**	**0.0**
SUMG				pmax		pmax		
	comp=Z,300nm,0.8s							
SUMG	**Summit**	**94.87**	**9**	P		**P**	**14 31 31.1**	**0.0**
CLL	**Collm**	**101.68**	**40**	*e*PS		PS	14 45 20.0	+3.2
CLL				Lm		MLR	15 14 00.0	
	comp=Z,700nm,20.6s							
DZM	**Mont Dzumac**	**110.05**	**236**	*e*SS		SS	14 52 36.4	-3.4
	comp=Z,662nm,27.1s							
DZM	**Mont Dzumac**	**110.05**	**236**	*e*LR		LR	15 09 08.8	
	comp=Z,804nm,22.7s							
OBN	**Obninsk**	**116.16**	**38**	⇑*e*PKIKP		**PKPdf**	**14 36 51.5**	**-0.7**
OBN				*e*			14 37 56.6	
OBN				*e*PPP		PPP	14 40 21.3	
OBN				*e*SS		SS	14 54 04.2	+4.2
OBN				pmax		pmax		
	comp=Z,4.0nm,1.0s							
OBN				MLR		MLR		
	comp=Z,453nm,19.0s							
BILL	**Bilibino**	**120.40**	**338**	*i* PKIKP		**PKPdf**	**14 36 58.8**	**-1.2**
BILL				pmax		pmax		
	comp=Z,3.0nm,1.1s							
KBZ	**Khabaz**	**120.66**	**50**	PKP		**PKiKP**	**14 37 02.9**	**+1.6**
	comp=Z,2.9nm,0.9s,baz=69,slow=1.4,SNR=5.1							
KBZ	**Khabaz**	**120.66**	**50**	*i* PKIKP		**PKPdf**	**14 37 00.8**	**-0.4**
KBZ				pmax		pmax		
	comp=Z,4.0nm,1.0s							
TIXI	**Tiksi**	**127.04**	**352**	*i* PKIKP		**PKPdf**	**14 37 13.0**	**+0.4**
SEY	**Seymchan**	**127.94**	**337**	PKP		**PKiKP**	**14 37 15.8**	**+0.7**
	comp=Z,4.2nm,0.9s,baz=82,slow=14,SNR=3.1							
ARU	**Arti**	**127.96**	**33**	PKP		**PKiKP**	**14 37 16.0**	**+0.6**
	comp=Z,1.2nm,0.6s,baz=323,slow=6.0,SNR=7.4							
ARU	**Arti**	**127.96**	**33**	*i* PKIKP		**PKiKP**	**14 37 16.4**	**+1.0**
ARU							14 39 19.0	
ARU							14 44 27.3	
ARU				SS		SS	14 56 27.7	-2.3
ARU				MLR		MLR		
	comp=Z,452nm,18.0s							
NRIK	**Noril'sk**	**128.91**	**10**	*i* PKIKP		**PKPdf**	**14 37 16.2**	**-0.1**
NRIK				pmax		pmax		
	comp=Z,1.0nm,1.0s							
ASAR	**Alice Springs**	**130.30**	**210**	PKP		**PKiKP**	**14 37 21.4**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=131,slow=2.0,SNR=9.1							
WRA	**Warramunga Arr**	**133.21**	**214**	PKP		**PKPdf**	**14 37 25.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=153,slow=1.9,SNR=9.4							
BRVK	**Borovoye**	**135.53**	**33**	*i* PKIKP		**PKPdf**	**14 37 29.3**	**+0.1**
YAK	**Yakutsk**	**135.59**	**346**	*i* PKIKP		**PKPdf**	**14 37 28.6**	**-0.5**
KURK	**Kurchatov**	**141.07**	**31**	*i* PKIKP		**PKPdf**	**14 37 39.0**	**-0.5**
ZALV	**Zalesovo Beam**	**141.36**	**23**	PKP		**PKPdf**	**14 37 40.7**	**+0.8**
	comp=Z,4.2nm,0.6s,baz=297,slow=2.1,SNR=23							
SGDS	**Sogindy**	**142.94**	**43**	*e*PKP		**PKPdf**	**14 37 42.3**	**-0.9**
	baz=43							
SGDS	**Sogindy**	**142.94**	**43**	*e*PKIKP		**PKPdf**	**14 37 42.2**	**-0.9**
AAK	**Ala-Archa**	**143.23**	**44**	PKP		**PKPdf**	**14 37 44.7**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=201,slow=3.6,SNR=9.3							
AAK	**Ala-Archa**	**143.23**	**44**	*i* PKIKP		**PKPdf**	**14 37 42.8**	**-1.0**
KUU	**Kurty**	**143.80**	**41**	*e*PKP		PKPbc	14 37 43.2	+0.9
	baz=42							
KUU	**Kurty**	**143.80**	**41**	*e*PKIKP		PKPbc	14 37 43.1	+0.9
TDK	**Taldyqorghan**	**144.45**	**38**	*e*PKP		**PKPdf**	**14 37 45.5**	**-0.3**
	baz=38							
TDK				LR		LR	15 40 40.5	
	comp=Z,248nm,18.2s,baz=38							
TDK	**Taldyqorghan**	**144.45**	**38**	*e*PKIKP		**PKPdf**	**14 37 45.4**	**-0.3**
TDK				MLR		MLR		
	comp=Z,248nm,18.0s							
AAA	**Alma-Ata**	**144.51**	**42**	*e*PKP		PKPbc	14 37 45.1	+0.6
	baz=42							
AAA				LR		LR	15 41 03.3	
	comp=Z,204nm,18.8s,baz=42							
AAA	**Alma-Ata**	**144.51**	**42**	*e*PKIKP		PKPbc	14 37 45.0	+0.5
AAA				MLR		MLR		
	comp=Z,204nm,19.0s							
MDOK	**Medeo**	**144.62**	**42**	*e*PKP		PKPbc	14 37 45.4	+0.4
	baz=42							
MDOK				LR		LR	15 39 40.9	
	comp=Z,162nm,15.8s,baz=42							
MDOK	**Medeo**	**144.62**	**42**	*e*PKIKP		PKPbc	14 37 45.4	+0.4
MDOK				MLR		MLR		
	comp=Z,162nm,16.0s							
TNSS	**Tian-Shan**	**144.62**	**42**	*e*PKP		PKPbc	14 37 45.5	+0.2
	baz=42							
TNSS	**Tian-Shan**	**144.62**	**42**	*e*PKIKP		PKPbc	14 37 45.4	+0.1
KDJ	**Kajisay**	**145.22**	**43**	PKIKP		**PKiKP**	**14 37 49.5**	**-1.7**
KDJ	**Kajisay**	**145.22**	**43**			**PKiKP**	**14 37 49.5**	**-1.7**
KPKS	**Kokpek**	**145.47**	**40**	*e*PKP		**PKPab**	**14 37 48.2**	**+0.3**
	baz=41							
KPKS	**Kokpek**	**145.47**	**40**	*e*PKIKP		**PKPab**	**14 37 48.2**	**+0.3**
NIL	**Nilore**	**145.48**	**59**	PKIKP		**PKPab**	**14 37 48.3**	**+0.2**
NIL	**Nilore**	**145.48**	**59**			**PKPab**	**14 37 48.3**	**+0.2**
MKAR	**Makanchi Array**	**145.48**	**33**	PKPbc		**PKPab**	**14 37 48.1**	**+0.5**
	comp=Z,8.3nm,0.8s,baz=323,slow=4.6,SNR=22							
MKAR	**Makanchi Array**	**145.48**	**33**	PKIKP		**PKPab**	**14 37 48.5**	**+0.8**
MKAR	**Makanchi Array**	**145.48**	**33**			**PKPab**	**14 37 48.5**	**+0.8**
SATY	**Saty**	**145.52**	**41**	*e*PKP		**PKPdf**	**14 37 47.9**	**+0.1**
	baz=41							
SATY	**Saty**	**145.52**	**41**	*e*PKIKP		**PKPdf**	**14 37 47.8**	**+0.1**
KSH	**Kashi**	**145.60**	**48**	⇑*i* PKPbc		**PKPab**	**14 37 48.5**	**0.0**
KSH				PP		**PP**	**14 41 11.0**	**+2.3**
KSH				AMB		AMB		
	comp=Z,410nm,8.6s							
KLR	**Kul'dur**	**145.60**	**333**	PKPbc		**PKPab**	**14 37 48.3**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=109,slow=2.1,SNR=6.6							
KLR	**Kul'dur**	**145.60**	**333**	*i* PKIKP		**PKPdf**	**14 37 46.9**	**-0.6**
KLR				pmax		pmax		
	comp=Z,7.0nm,1.1s							
SHLS	**Shalkode**	**146.12**	**40**	*e*PKP		**PKPab**	**14 37 50.8**	**+0.5**
	baz=40							
SHLS	**Shalkode**	**146.12**	**40**	*e*PKP2		**PKPab**	**14 37 50.8**	**+0.5**
TEY	**Ternei**	**146.16**	**324**	*e*PKP2		**PKiKP**	**14 37 53.1**	**+0.3**
ZSN	**Zaisan**	**146.29**	**30**	*e*PKP		**PKPbc**	**14 37 50.2**	**+0.2**
	baz=30							
ZSN	**Zaisan**	**146.29**	**30**	*e*PKP2		**PKPbc**	**14 37 50.2**	**+0.2**
TLY	**Talaya**	**148.08**	**6**	*e*PKHKP		PKPpre	14 37 33.4	
TLY				*e*SS		SS	15 00 25.8	-1.2
TLY				pmax		pmax		
	comp=Z,53nm,2.0s							
USRK	**Ussuriysk Ar.**	**149.18**	**327**	PKPbc		**PKPbc**	**14 37 58.2**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=0.0,slow=3.8,SNR=5.1							
ZAK	**Zakamensk**	**149.32**	**7**	*e*PKP2		**PKiKP**	**14 37 59.1**	**-0.2**
ZAK				pmax		pmax		
	comp=Z,9.0nm,1.1s							
MJAR	**Matsushiro Arr**	**149.61**	**309**	PKPbc		**PKiKP**	**14 38 00.1**	**-0.1**
	comp=Z,7.3nm,1.0s,baz=94,slow=1.4,SNR=12							
MAT	**Matsushiro**	**149.61**	**309**	PKP		**PKiKP**	**14 38 00.6**	**+0.4**
NDI	**New Delhi**	**149.83**	**67**	*e*P		**PKPab**	**14 38 05.0**	**-0.4**
WMQ	**Urumqi**	**150.29**	**32**	*e*PKPbc		**PKPdf**	**14 37 55.0**	**-0.5**
WMQ				pPKP		PKiKP	14 38 02.3	+0.8
WMQ				LR		LR		
	comp=Z,530nm,17.3s							
WMQ				LR		LR		
	comp=Z,340nm,17.3s							
WMQ				LR		LR		
	comp=Z,770nm,21.3s							
SONM	**Songino Array**	**152.13**	**4**	PKPbc		**PKiKP**	**14 38 05.6**	**+0.3**
	comp=Z,4.7nm,0.6s,baz=327,slow=1.6,SNR=18							
SONM				PKPab		**PKPab**	**14 38 15.2**	**+0.8**
	comp=Z,6.1nm,0.7s,baz=347,slow=1.3,SNR=13							
SONM	**Songino Array**	**152.13**	**4**	PKIKP		**PKiKP**	**14 38 06.8**	**+1.6**
SONM	**Songino Array**	**152.13**	**4**			**PKiKP**	**14 38 06.8**	**+1.6**
GTA	**Gaotai**	**159.07**	**20**	PKP		**PKPdf**	**14 38 09.5**	**+1.6**
GTA				pPKP		sPKPdf	14 38 16.5	+2.8
GTA				sPKP			14 38 20.3	
GTA				LR		LR		
	comp=Z,320nm,18.5s							
GTA				LR		LR		
	comp=Z,350nm,19.6s							
GTA				LR		LR		
	comp=Z,470nm,19.3s							
HHC	**Hu-ho-hao-te**	**159.08**	**355**	*e*PKP		**PKPdf**	**14 38 04.0**	**-3.8**
LZH	**Lanzhou**	**163.32**	**15**	*e*PKP		**PKPdf**	**14 38 12.0**	**-0.5**
LZH				pPKP		pPKPdf	14 38 15.3	-1.6
LZH				sPKP			14 38 16.8	
LZH				PKPab		**pPKPab**	**14 39 05.3**	**-1.9**
LZH				LR		LR		
	comp=Z,130nm,18.3s							
LZH				LR		LR		
	comp=Z,150nm,18.0s							
LZH				LR		LR		
	comp=Z,200nm,20.2s							
NJ2	**Nanjing**	**165.08**	**326**	*e*PKP		**PKPdf**	**14 38 14.0**	**0.0**
CD2	**Chengdu**	**168.12**	**23**	PKP		**PKPdf**	**14 38 15.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**170.36**	**97**	PKPab		**PKPab**	**14 39 35.0**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=244,slow=5.8,SNR=5.3							
KMI	**Kunming**	**172.26**	**47**	⇓*e*PKP		**PKPdf**	**14 38 15.5**	**-3.7**
KMI				pPKP		pPKPdf	14 38 24.0	+0.5
QIZ	**Qiongzhong**	**178.78**	**220**	PKP		**PKPdf**	**14 38 19.8**	**-0.9**
QIZ				PP		**PP**	**14 44 04.8**	**+0.3**
QIZ				SS		SS	15 05 46.8	+1.4
QIZ				AMB		AMB		
	comp=Z,170nm,6.6s							
QIZ				LR		LR		
	comp=Z,390nm,18.4s							
QIZ				LR		LR		
	comp=Z,660nm,20.8s							
QIZ				LR		LR		
	comp=Z,430nm,24.6s							

IDC ***29*** *14:18:23.3±1.3, 10°.37S×124°.74E, h0km, mb3.9/3, mb1 4.2/6, mb1mx3.8/47, mbtmp4.0/6, ML3.8/3, MS3.7/2, Ms1 3.8/2, ms1mx3.0/38, Error ellipse: s-maj=28.5km s-min=13.9km az=15.0*
DJA ***29*** *14:18:27.5±0.4, 10°.5±.5′×12°.5E±.′, h10km, M4.1/11, mB4.8/1, mb4.3/6, MLv4.0/11, Mw(mB)4.0/1*
ISC 29 14:18:24.1±0.9, 10°.50S±0°.09×124°.8E±0°.1, h10km, n17, σ1§63/18, mb4.0/3, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**0.88**	**328**	P		P	**Pn**	**14 18 42.5**	**-0.2**
BATI	**Baumata**	**1.10**	**285**	Pg		Pg	**Pb**	**14 18 44.2**	**-1.1**
	44nm,0.3s,baz=142,slow=3.2,SNR=70								
BATI				Lg		Lg		14 18 58.3	
	78nm,0.3s,baz=131,slow=20,SNR=5.0								
BATI	**Baumata**	**1.10**	**285**	P		P	**Pb**	**14 18 44.0**	**-1.4**
MMRI	**Maumere**	**3.09**	**307**	P		P	**Pn**	**14 19 13.5**	**+0.5**
EDFI	**Ende, Flores**	**3.48**	**300**	P		P	**Pn**	**14 19 18.3**	**-0.2**
BSSI	**Bau Bau, Buton**	**6.04**	**315**	P		P	**Pn**	**14 19 53.3**	**-0.3**
	0.0nm15nm,0.9s								
BKSI	**Bulukumba**	**6.89**	**318**	P		P	**Pn**	**14 20 06.6**	**+1.4**
	0.1nm26nm,0.9s								
PLAI	**Plampang**	**7.07**	**283**	P		P	**Pn**	**14 20 08.3**	**+0.5**
	0.1nm42nm,0.9s								
KAPI	**Kappang**	**7.36**	**317**	LR		LR		14 23 24.5	
	comp=Z,121nm,18.5s,baz=179,slow=42								
FITZ	**Fitzroy Crossi**	**7.60**	**174**	Pn		P	**Pn**	**14 20 17.4**	**+2.4**
	0.6nm,0.3s,baz=360,slow=9.5,SNR=109								
FITZ				Sn		Sn	**Sn**	**14 21 41.4**	**+0.1**
	1.5nm,0.3s,baz=129,slow=13,SNR=7.5								
TWSI	**Taliwang, Sumb**	**7.95**	**282**	P		P	**Pn**	**14 20 20.9**	**+1.1**
WRA	**Warramunga Arr**	**13.18**	**137**	Pn		P	**Pn**	**14 21 33.2**	**+1.7**
	0.5nm,0.3s,baz=313,slow=13,SNR=17								
WRA				Sn		Sn	**Sn**	**14 23 55.4**	**-2.8**
	0.4nm,0.3s,baz=309,slow=23,SNR=9.8								
ASAR	**Alice Springs**	**15.74**	**147**	Pn		P	**Pn**	**14 22 07.7**	**+1.6**
	0.9nm,0.3s,baz=320,slow=11,SNR=120								
ASAR				Sn		Sn	**Sn**	**14 24 57.0**	**-3.7**
	0.2nm,0.3s,baz=317,slow=21,SNR=11								
CMAR	**Chiang Mai Arr**	**38.42**	**318**	P		P	**P**	**14 25 46.1**	**-0.1**
	0.6nm,0.5s,baz=146,slow=7.7,SNR=7.1								
MKAR	**Makanchi Array**	**68.47**	**330**	P		P	**P**	**14 29 26.8**	**+0.3**
	1.4nm,0.7s,baz=145,slow=7.2,SNR=5.9								
VNDA	**Vanda**	**69.67**	**172**	LR		LR		14 58 38.8	
	comp=Z,235nm,19.8s,baz=154,slow=35								
ZALV	**Zalesovo Beam**	**72.56**	**337**	P		P	**P**	**14 29 51.1**	**-0.2**
	0.8nm,0.6s,baz=142,slow=7.3,SNR=3.3								

IDC ***29*** *14:23:07.1±3.0, 30°.66S×177°.51W, h0km, mb4.3/4, mb1 4.4/5, mb1mx3.9/37, mbtmp4.2/5, ML3.0/1, Error ellipse: s-maj=62.2km s-min=27.1km az=110.0*
ISC 29 14:23:12.6±3.3, 30°.4S±0°.1×177°.6W±0°.4, h33km, n7, σ1§01/7, mb4.3/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.19**	**346**	Pn		P	**Pb**	**14 23 35.0**	**+0.5**
	77nm,0.3s,baz=277,slow=23,SNR=6.8								
RAO				Sn		Sn	**Sn**	**14 23 47.3**	**-0.6**
	708nm,0.3s,baz=173,slow=22,SNR=15								
URZ	**Urewera**	**8.98**	**208**	Pn		Pn		14 25 15.3	-4.6
	0.2nm,0.3s,baz=8.5,slow=18,SNR=2.3								
CTA	**Charters Tower**	**34.16**	**279**	P		P	**P**	**14 29 55.5**	**+0.7**
	3.1nm,0.9s,baz=99,slow=9.5,SNR=5.4								
STKA	**Stephens Creek**	**34.83**	**257**	P		P	**P**	**14 30 01.2**	**+0.7**
	4.4nm,0.7s,baz=90,slow=8.5,SNR=7.9								
ASAR	**Alice Springs**	**43.47**	**267**	P		P	**P**	**14 31 11.9**	**-0.9**
	0.9nm,0.5s,baz=104,slow=7.4,SNR=16								
WRA	**Warramunga Arr**	**44.46**	**272**	P		P	**P**	**14 31 19.6**	**-1.3**
	1.7nm,0.3s,baz=110,slow=8.1,SNR=43								
FINES	**FINESS Array B**	**145.27**	**340**	PKPbc		**PKPbc**		**14 42 45.8**	**-0.2**
	1.5nm,0.6s,baz=32,slow=2.6,SNR=7.4								

IDC ***29*** *14:39:28.9±0.7, 21°.76N×143°.53E, h0km, mb4.3/18, mb1 4.4/19, mb1mx4.2/44, mbtmp4.3/19, ML3.1/1, MS3.6/2, Ms1 3.6/2, ms1mx3.0/47, Error ellipse: s-maj=24.0km s-min=15.8km az=91.0*
NEIC ***29*** *14:39:29.3±2.2, 21°.73N±0°.10×143°.5E±0°.2, h10km±1km, mb4.7/23, Error ellipse: s-maj=26.5km s-min=16.9km az=91.0*
ISC 29 14:39:29.7±0.7, 21°.70N±0°.08×143°.5E±0°.1, h10km, n74, σ1§81/69, mb4.5/35, MS3.8/5, 1C, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.51**	**347**	Pn		P	**Pn**	**14 40 52.3**	**+0.4**
INU	**Inuyama**	**14.75**	**339**	Pn		P	**Pn**	**14 42 55.3**	**-3.1**
JYT	**Yasato**	**14.77**	**349**	Pn		P	**Pn**	**14 42 56.7**	**-1.9**
JGF	**Kuroka**	**14.87**	**340**	Pn		P	**Pn**	**14 42 58.5**	**-1.6**
JWT	**Wachi**	**15.29**	**334**	Pn		P	**Pn**	**14 43 02.0**	**-3.7**
JWT				IAmb		IAmb	IAmb	14 43 02.3	
	comp=Z,134nm,1.9s								
MJAR	**Matsushiro Arr**	**15.50**	**344**	Pn		P	**Pn**	**14 43 05.7**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=172,slow=17,SNR=6.8								
MAJO	**Matsushiro**	**15.50**	**344**	Pn		P	**Pn**	**14 43 06.1**	**-2.4**
MAT	**Matsushiro**	**15.50**	**344**	P		P	**Pn**	**14 43 05.9**	**-2.6**
MAT				S		S	**Sn**	**14 45 58.5**	**-1.8**
JMM	**Marumori**	**16.29**	**352**	Pn		P	**Pn**	**14 43 17.3**	**-1.2**
JMM				IAmb		IAmb	IAmb	14 43 31.4	
	comp=Z,66nm,1.1s								
JTM	**Tenmabayashi**	**19.14**	**354**	Pn		P	**Pn**	**14 43 54.0**	**0.0**
NACB	**Ninganchiao**	**20.35**	**281**	P		P	**P**	**14 44 02.7**	**-3.7**
NACB				IAmb		IAmb	IAmb	14 44 30.3	
	comp=Z,115nm,1.9s								
KSRS	**Korea Array**	**20.71**	**323**	P		P	Pn	14 44 16.0	+3.5
	comp=Z,6.0nm,0.6s,baz=146,slow=8.7,SNR=36								
H11N1	**WAKE ISLAND Hy**	**21.94**	**91**	T		T		15 06 57.2	
	baz=278,slow=75								
H11N2	**WAKE ISLAND Hy**	**21.94**	**91**	T		T		15 06 58.6	
	baz=278,slow=75								
H11N3	**WAKE

WRA	**Warramunga Arr**	**42.35**	**193**	P		**P**	**14 47 25.4**	**+1.2**
	comp=Z,2.9nm,0.7s,baz=16,slow=8.8,SNR=15							
WRA	**Warramunga Arr**	**42.35**	**193**	P		**P**	**14 47 24.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**43.26**	**205**	P		**P**	**14 47 31.9**	**+0.3**
ASAR	**Alice Springs**	**46.05**	**192**	P		**P**	**14 47 55.0**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=15,slow=9.2,SNR=32							
ASAR	**Alice Springs**	**46.05**	**192**	P		**P**	**14 47 53.6**	**-0.3**
WMQ	**Urumqi**	**50.83**	**309**	*eP*		**P**	**14 48 30.8**	**+0.2**
ZAA0	**Zalesovo Array**	**54.41**	**322**	P		**P**	**14 48 56.0**	**-0.8**
ZAA0				IAmb		IAmb	14 49 04.3	
	comp=Z,9.9nm,1.4s							
ZALV	**Zalesovo Beam**	**54.41**	**322**	P		**P**	**14 48 56.9**	**+0.1**
	comp=Z,3.5nm,0.7s,baz=101,slow=7.2,SNR=15							
ZALV	**Zalesovo Beam**	**54.41**	**322**	P		**P**	**14 48 56.1**	**-0.8**
MKAR	**Makanchi Array**	**54.93**	**313**	P		**P**	**14 49 01.9**	**+1.0**
	comp=Z,1.1nm,0.7s,baz=94,slow=7.3,SNR=5.8							
MKAR	**Makanchi Array**	**54.93**	**313**	P		**P**	**14 49 01.1**	**+0.2**
KURK	**Kurchatov**	**57.69**	**317**	P		**P**	**14 49 20.1**	**-0.3**
KURK				IAmb		IAmb	14 49 29.0	
	comp=Z,21nm,1.8s							
NRIK	**Noril'sk**	**58.11**	**340**	P		**P**	**14 49 23.0**	**0.0**
	comp=Z,3.7nm,0.7s,baz=98,slow=6.6,SNR=6.1							
BPAW	**Bear Paw Mtn.**	**60.02**	**27**	P		**P**	**14 49 35.2**	**-1.2**
A21K	**Barrow**	**60.10**	**19**	P		**P**	**14 49 37.0**	**+0.2**
TRF	**Thorofare Moun**	**60.19**	**28**	P		**P**	**14 49 36.5**	**-1.3**
TRF				IAmb		IAmb	14 49 45.5	
	comp=Z,7.2nm,1.0s							
WRH	**Wood River Hil**	**61.33**	**27**	P		**P**	**14 49 45.4**	**0.0**
WRH				IAmb		IAmb	14 51 53.5	
	comp=Z,9.2nm,1.5s							
EYAK	**Cordova Ski Ar**	**61.88**	**32**	P		**P**	**14 49 48.1**	**-1.0**
IL31		**61.89**	**27**	P		**P**	**14 49 47.1**	**-1.9**
IL31				IAmb		IAmb	14 49 56.0	
	comp=Z,5.3nm,1.1s							
ILAR	**Eielson Array**	**61.89**	**27**	P		**P**	**14 49 48.4**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=261,slow=5.6,SNR=9.9							
ILAR	**Eielson Array**	**61.89**	**27**			**P**	**14 49 47.5**	**-1.6**
RIDG	**Independent Ri**	**62.64**	**28**	P		**P**	**14 49 53.8**	**-0.4**
RIDG				IAmb		IAmb	14 50 05.5	
	comp=Z,9.1nm,1.2s							
KKAR	**Karatay Array**	**63.31**	**308**	P		**P**	**14 49 58.7**	**-0.3**
INK	**Inuvik**	**67.44**	**24**	P		**P**	**14 50 25.9**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=306,slow=5.3,SNR=7.5							
ABKAR	**Akbulak array**	**69.77**	**316**	P		**P**	**14 50 40.3**	**+0.1**
ABKAR	**Akbulak array**	**69.77**	**316**	P		**P**	**14 50 40.4**	**+0.3**
YKA	**Yellowknife Ar**	**76.31**	**28**	P		**P**	**14 51 19.3**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=297,slow=4.8,SNR=7.1							
RES	**Resolute Bay**	**77.00**	**13**	P		**P**	**14 51 22.9**	**+0.7**
RES				IAmb		IAmb	14 51 23.8	
	comp=Z,4.2nm,0.9s							
ARCES	**ARCESS Array B**	**79.02**	**342**	P		**P**	**14 51 33.3**	**-0.4**
	comp=Z,7.7nm,1.0s,baz=72,slow=8.6,SNR=3.0							
KBZ	**Khabaz**	**82.60**	**314**	P		**P**	**14 51 52.7**	**-0.5**
	comp=Z,3.5nm,0.9s,baz=183,slow=0.3,SNR=5.3							
NVAR	**Mina Array Bea**	**82.89**	**52**	P		**P**	**14 51 56.0**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=292,slow=5.7,SNR=2.8							
FINES	**FINESS Array B**	**83.32**	**335**	P		**P**	**14 51 56.9**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=62,slow=5.6,SNR=9.3							
LPAZ	**La Paz**	**149.62**	**85**	PKPbc		**PKiKP**	**14 59 22.0**	**-0.2**
	comp=Z,3.7nm,0.8s,baz=338,slow=4.5,SNR=13							

KRSC 29 14:42:12.9±1.7, 54°.35N×167°.95E, h15km±22km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BKI	**Bering**	**1.43**	**307**	*eP*		Pn	14 42 36.7	-1.5
BKI				*eS*		Sb	14 42 57.0	-0.2
KBTR	**Krutoberegovo**	**3.48**	**304**	*eP*		Pn	14 43 07.3	+0.9
KBTR				*eS*		Sn	14 43 49.7	+2.5
KBG	**Krutoberegovo**	**3.55**	**305**	*eP*		Pn	14 43 09.5	+2.1
MKZ	**Mys Kozlova**	**3.64**	**276**	*eP*		Pn	14 43 11.9	+3.3
MKZ				*eS*		Sn	14 43 55.3	+4.1
SMKR	**Semkarok**	**4.31**	**304**	*eP*		Pn	14 43 22.9	+4.9
ZLN	**Zelenaya**	**4.42**	**295**	*eP*		Pn	14 43 23.8	+4.3
ZLN				*eS*		Sn	14 44 16.3	+5.6
BZGR	**Bezymyannyi-Gr**	**4.46**	**294**	*eP*		Pn	14 43 24.3	+4.3
TUMD	**Tumrok D**	**4.46**	**284**	*eP*		Pn	14 43 23.4	+3.5
TUMD				*eS*		Sn	14 44 16.6	+5.2
CIRR	**Tsirk**	**4.49**	**296**	*eP*		Pn	14 43 24.5	+4.1
SRKR	**Sorokina**	**4.49**	**304**	*eP*		Pn	14 43 24.5	+4.1
KZV	**Kizimen**	**4.50**	**283**	*eP*		Pn	14 43 24.3	+3.6
KZV				*eS*		Sn	14 44 16.8	+4.0
BZWR	**Bezymyannyi-We**	**4.57**	**294**	*eP*		Pn	14 43 26.8	+5.2
KLY	**Klyuchi**	**4.61**	**298**	*eS*		Sn	14 44 18.7	+3.6
TUMR	**Tumrok**	**4.61**	**285**	*eP*		Pn	14 43 26.7	+4.6
TUMR				*eS*		Sn	14 44 20.9	+5.5
KRSR	**Krestovskiy**	**4.62**	**297**	*eP*		Pn	14 43 26.9	+4.7
KIRR	**Kirishev**	**4.65**	**293**	*eP*		Pn	14 43 27.3	+4.6
KMNR	**Kamenistaya**	**4.65**	**291**	*eP*		Pn	14 43 25.6	+2.9
SPN	**Mys Shipunski**	**4.88**	**258**	*eP*		Pn	14 43 29.4	+3.8
SPN				*eS*		Sn	14 44 25.9	+4.2
KII	**Karymskiy**	**5.00**	**270**	*eP*		Pn	14 43 32.0	+4.5
KII				*eS*		Sn	14 44 29.9	+4.9
SRDR	**Sredinnyy**	**5.10**	**296**	*eP*		Pn	14 43 34.1	+5.4
NLC	**Nalytchevo**	**5.24**	**260**	*eP*		Pn	14 43 34.7	+4.1
NLC				*eS*		Sn	14 44 35.4	+4.7
SDLR	**Sedlovina**	**5.48**	**262**	*eP*		Pn	14 43 37.7	+3.7
SDLR				*eS*		Sn	14 44 40.6	+3.8
SMAR	**Somma**	**5.53**	**262**	*eP*		Pn	14 43 39.1	+4.3
UGLR	**Uglovaya**	**5.53**	**262**	*eP*		Pn	14 43 39.6	+4.8
KRER	**Koryakskii**	**5.55**	**263**	*eP*		Pn	14 43 39.0	+3.9
AVH	**Avacha**	**5.57**	**262**	*eP*		Pn	14 43 39.4	+4.2
KRX	**Arik**	**5.60**	**264**	*eP*		Pn	14 43 39.8	+4.1
KRX				*eS*		Sn	14 44 44.0	+4.3
KOK	**Koryaka**	**5.62**	**263**	*eP*		Pn	14 43 40.2	+4.3
DALK	**Dalny**	**5.62**	**260**	*eP*		Pn	14 43 41.1	+5.2
DALK				*eS*		Sn	14 44 45.6	+5.5
PET	**Petropavlovsk**	**5.69**	**260**	*eP*		Pn	14 43 42.2	+5.5
PET				*eS*		Sn	14 44 47.3	+5.7
GNL	**Ganaly**	**5.94**	**268**	*eP*		Pn	14 43 45.0	+4.7
RUS	**Russkaya**	**5.97**	**255**	*eP*		Pn	14 43 45.1	+4.5
RUS				*eS*		Sn	14 44 52.7	+4.1
KRMR	**Karymshinskiy**	**6.05**	**259**	*eP*		Pn	14 43 47.2	+5.5
KRMR				*eS*		Sn	14 44 55.6	+5.1
MTVR	**Mutnovka**	**6.14**	**256**	*eP*		Pn	14 43 47.7	+4.7
MTVR				*eS*		Sn	14 44 57.8	+4.8
GRL	**Gorelyy**	**6.17**	**257**	*eP*		Pn	14 43 48.5	+5.0
ASAK	**Asacha**	**6.33**	**256**	*eP*		Pn	14 43 50.9	+5.2
KDTR	**Khodutka, Kamc**	**6.47**	**251**	*eP*		Pn	14 43 51.1	+3.6
KDTR				*eS*		Sn	14 45 03.5	+2.5

*IDC **29** 14:53:13.0±1.6, 12°.90N×90°.25W, h0km, mb3.7/3, mb1 4.2/4, mb1mx3.6/35, mbtmp3.9/4, ML2.7/1, Error ellipse: s-maj=58.9km s-min=17.6km az=33.0*
*SNET **29** 14:53:17.5±1.8, 13°.21N×90°.41W, h14km±10km, ML4.0*
*NEIC **29** 14:53:17.1±2.2, 12°.9N±0°.1×90°.49W±0°.09, h43km±24km, mb3.7/2, Md4.0(SNET), Error ellipse: s-maj=17.9km s-min=10.6km az=211.0*
*INET **29** 14:53:17.7, 13°.14N×90°.32W, h15km, ML3.6, MW3.4*
*UCR **29** 14:53:17.9±1.6, 13°.21N×90°.38W, h16km±5km, ML3.9, mb3.7(NEIC)*
*GCG **29** 14:53:31.4±0.3, 14°.33N×90°.58W, h40km±6km, MD4.0*
ISC 29 14:53:15.7±1.9, 13°.13N±0°.05×90°.42W±0°.04, h14km±11km, n59, σ1°.46/89, mb3.9/3, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
NUBE	**Las Nubes**	**0.99**	**39**	*eP*		**Pb**	**14 53 34.3**	**-0.4**
NUBE				*eS*		**Sg**	**14 53 47.2**	**-0.7**
NUBE				IAML			14 53 49.8	
	comp=Z,2μm,0.3s							
NUBE	**Las Nubes**	**0.99**	**39**	*eP*		**Pb**	**14 53 34.3**	**-0.4**
NUBE				*eS*		**Sg**	**14 53 47.2**	**-0.7**
NUBE				IAML			14 53 49.8	
	comp=Z,2μm,0.3s							
CEVE	**Cerro Verde**	**1.04**	**48**	*eP*		**Pb**	**14 53 35.6**	**0.0**
CEVE				*eS*		**Sg**	**14 53 49.4**	**-0.1**
CEVE				IAML			14 53 51.4	
	comp=Z,16μm,0.5s							
CEVE	**Cerro Verde**	**1.04**	**48**	*eP*		**Pb**	**14 53 35.6**	**0.0**
CEVE				*eS*		**Sg**	**14 53 49.4**	**-0.1**
CEVE				IAML			14 53 51.4	
	comp=Z,16μm,0.5s							
SBLS	**San Blas**	**1.05**	**48**	*i* P		**Pb**	**14 53 35.6**	**-0.2**
SBLS	**San Blas**	**1.05**	**48**	*i* P		**Pb**	**14 53 35.6**	**-0.2**
SNJE	**San Jose**	**1.08**	**47**	*eP*		**Pb**	**14 53 36.0**	**-0.3**
SNJE	**San Jose**	**1.08**	**47**	*eP*		**Pb**	**14 53 36.0**	**-0.3**
CEDA	**San Andres**	**1.20**	**56**	*eP*		**Pb**	**14 53 37.9**	**-0.4**
CEDA				*eS*		**Sn**	**14 53 53.8**	**-0.5**
CEDA				IAML			14 54 02.5	
	comp=Z,9μm,0.4s							
CEDA	**San Andres**	**1.20**	**56**	*eP*		**Pb**	**14 53 37.9**	**-0.4**
CEDA				*eS*		**Sn**	**14 53 53.8**	**-0.5**
CEDA				IAML			14 54 02.5	
	comp=Z,9μm,0.4s							
BOQS	**Boqueron**	**1.27**	**61**	*eP*		**Pn**	**14 53 39.0**	**-0.1**
BOQS	**Boqueron**	**1.27**	**61**	*eP*		**Pn**	**14 53 39.0**	**-0.1**
PCG	**Pacaya**	**1.27**	**352**	*eP*		**Pn**	**14 53 38.9**	**-0.3**
SNET	**Serv Nac Est T**	**1.28**	**64**	*eP*		**Pn**	**14 53 40.0**	**+0.7**
SNET				*eS*		**Sb**	**14 53 55.8**	**-0.4**
SNET				IAML			14 54 03.6	
	comp=Z,3μm,0.4s							
SNET	**Serv Nac Est T**	**1.28**	**64**	*eP*		**Pn**	**14 53 40.0**	**+0.7**
SNET				*eS*		**Sb**	**14 53 55.8**	**-0.4**
SNET				IAML			14 54 03.6	
	comp=Z,3μm,0.4s							
SNET	**Serv Nac Est T**	**1.28**	**64**			**Pn**	**14 53 39.0**	**-0.4**
OPAM	**Oficina de Pla**	**1.33**	**64**	*eP*		**Pn**	**14 53 40.7**	**+0.9**
OPAM				*eS*		**Sg**	**14 53 58.8**	**+0.3**
OPAM	**Oficina de Pla**	**1.33**	**64**	*eP*		**Pn**	**14 53 40.7**	**+0.9**
OPAM				*eS*		**Sg**	**14 53 58.8**	**+0.3**
TACO	**Tacachico**	**1.33**	**51**	*eP*		**Pn**	**14 53 39.6**	**-0.3**
TACO				*eS*		**Sn**	**14 53 57.3**	**-0.3**
TACO				IAML			14 54 07.6	
	comp=Z,927nm,0.4s							
TACO	**Tacachico**	**1.33**	**51**	*eP*		**Pn**	**14 53 39.6**	**-0.3**
TACO				*eS*		**Sn**	**14 53 57.3**	**-0.3**
TACO				IAML			14 54 07.6	
	comp=Z,927nm,0.4s							
FUG	**Fuego 3**	**1.37**	**343**	*eP*		**Pn**	**14 53 40.1**	**-0.5**
LFRS	**El Faro**	**1.41**	**70**	*eP*		**Pn**	**14 53 41.4**	**+0.3**
LFRS	**El Faro**	**1.41**	**70**	*eP*		**Pn**	**14 53 41.4**	**+0.3**
NBG	**Las Nubes**	**1.45**	**3**	*eP*		**Pb**	**14 53 42.8**	**+0.2**
LBRS	**Las Brisas**	**1.47**	**66**	*eP*		**Pn**	**14 53 42.6**	**+0.7**
LBRS	**Las Brisas**	**1.47**	**66**	*eP*		**Pn**	**14 53 42.6**	**+0.7**
PAVA	**La Pavas**	**1.56**	**68**	*eP*		**Pb**	**14 53 44.9**	**+0.5**
PAVA				*eS*		**Sg**	**14 54 05.5**	**-0.4**
PAVA				IAML			14 54 11.4	
	comp=N,6μm,0.5s							
PAVA	**La Pavas**	**1.56**	**68**	*eP*		**Pb**	**14 53 44.9**	**+0.5**
PAVA				*eS*		**Sg**	**14 54 05.5**	**-0.4**
PAVA				*eS*		**Sb**	**14 54 06.0**	**+1.9**
PAVA				IAML			14 54 11.4	
	comp=N,6μm,0.5s							
COEG	**Centro de Oper**	**1.58**	**72**	*eP*		**Pn**	**14 53 43.5**	**+0.1**
COEG				*eS*		**Sb**	**14 54 05.0**	**+0.4**
COEG				IAML			14 54 13.4	
	comp=Z,4μm,0.4s							
COEG	**Centro de Oper**	**1.58**	**72**	*eP*		**Pn**	**14 53 43.5**	**+0.1**
COEG				*eS*		**Sb**	**14 54 05.0**	**+0.4**
COEG				IAML			14 54 13.4	
	comp=Z,4μm,0.4s							
MTO3	**Montecristo**	**1.63**	**39**	*eP*		**Pn**	**14 53 44.4**	**+0.2**
MTO3				*eS*		**Sb**	**14 54 05.6**	**-0.7**
MTO3				IAML			14 54 09.7	
	comp=Z,1μm,0.4s							
MTO3	**Montecristo**	**1.63**	**39**	*eP*		**Pn**	**14 53 44.4**	**+0.2**
MTO3				*eS*		**Sb**	**14 54 05.6**	**-0.7**
MTO3				IAML			14 54 09.7	
	comp=Z,1μm,0.4s							
MTO3	**Montecristo**	**1.63**	**39**			**Pn**	**14 53 44.4**	**+0.2**
ESQI	**Esquipulas**	**1.77**	**36**	*eP*		**Pn**	**14 53 46.5**	**+0.5**
ESQI				*eS*		**Sb**	**14 54 09.9**	**-0.2**
ESQI				IAML			14 54 10.8	
	comp=Z,1μm,0.5s							
ESQI	**Esquipulas**	**1.77**	**36**			**Pn**	**14 53 46.5**	**+0.5**
COEB	**Comit de Eme**	**1.88**	**79**	*eP*		**Pn**	**14 53 48.1**	**+0.6**
COEB				*eS*		**Sn**	**14 54 11.8**	**+0.6**
COEB				IAML			14 54 17.5	
	comp=Z,2μm,0.3s							
COEB	**Comit de Eme**	**1.88**	**79**	*eP*		**Pn**	**14 53 48.1**	**+0.6**
COEB				*eS*		**Sn**	**14 54 11.8**	**+0.6**
COEB				IAML			14 54 17.5	
	comp=Z,2μm,0.3s							
TECA	**Tecapa**	**1.91**	**79**	*eP*		**Pn**	**14 53 48.9**	**+0.9**
TECA	**Tecapa**	**1.91**	**79**	*eP*		**Pn**	**14 53 48.9**	**+0.9**
MRL	**Marmol**	**2.07**	**20**	*eP*		**Pn**	**14 53 51.7**	**+1.5**
MRL				*eS*		**Sn**	**14 54 07.5**	**-8.4**
PACA	**Pacayal**	**2.07**	**80**	*eP*		**Pn**	**14 53 52.4**	**+2.2**
PACA				IAML			14 54 27.0	
	comp=N,338nm,0.3s							
PACA	**Pacayal**	**2.07**	**80**	*eP*		**Pn**	**14 53 52.4**	**+2.2**
PACA				IAML			14 54 27.0	
	comp=N,338nm,0.3s							
HUEH	**Huehuetenango**	**2.41**	**334**	*eP*		**Pn**	**14 53 57.1**	**+2.1**
HUEH	**Huehuetenango**	**2.41**	**334**			**Pn**	**14 53 56.8**	**+1.8**
LCND	**La Caada**	**2.47**	**86**	*eP*		**Pn**	**14 53 56.9**	**+1.3**
LCND				*eS*		**Sb**	**14 54 28.8**	**-1.5**
LCND				IAML			14 54 36.8	
	comp=Z,1μm,0.4s							
LCND	**La Caada**	**2.47**	**86**	*eP*		**Pn**	**14 53 56.9**	**+1.3**
LCND				*eS*		**Sb**	**14 54 28.8**	**-1.5**
LCND				IAML			14 54 36.8	
	comp=Z,1μm,0.4s							
TGUH	**Tegucigalpa,Un**	**3.20**	**73**			**Pn**	**14 54 06.9**	**+1.2**
MATN	**Matagalpa**	**4.39**	**92**			**Pn**	**14 54 22.1**	**0.0**
CMIG	**Matias Romero**	**5.84**	**313**	Pn		**Pn**	**14 54 41.4**	**-0.4**
	comp=Z,1.8nm,0.3s,baz=140,slow=9.3,SNR=15							
CMIG				Sn		**Sn**	**14 55 45.7**	**-3.0**
	comp=Z,2.6nm,0.3s,baz=80,slow=18,SNR=1.8							
JTS	**Las Juntas de**	**6.06**	**117**	Pn		**Pn**	**14 54 46.8**	**+1.9**
	comp=Z,1.6nm,0.3s,baz=9.4,slow=21,SNR=4.0							
JTS				Pg		**Pb**	**14 54 58.7**	**-2.4**
	comp=Z,5.6nm,0.3s,baz=340,slow=7.6,SNR=16							
JTS				Sn		**Sn**	**14 55 49.8**	**-4.3**
	comp=Z,1.1nm,0.3s,baz=360,slow=19,SNR=1.4							
JTS				Lg		Lg	14 56 16.8	
	comp=Z,0.7nm,0.3s,baz=210,slow=20,SNR=1.5							
TEIG	**Tepich**	**7.35**	**16**			**Pn**	**14 55 05.4**	**+2.8**
SDV	**Santo Domingo**	**19.88**	**100**	P		**P**	**14 57 44.3**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=268,slow=3.9,SNR=3.8							
TXAR	**Lajitas Array**	**20.27**	**325**	P		**P**	**14 57 52.6**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=145,slow=13,SNR=23							
TXAR				PcP		**PcP**	**15 02 05.7**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=184,slow=4.1,SNR=2.4							
TXAR	**Lajitas Array**	**20.27**	**325**	P		**P**	**14 57 51.4**	**+0.3**
TX32	**Lajitas Array**	**20.28**	**325**	P		**P**	**14 57 51.0**	**-0.1**
TX32				IAmb		IAmb	14 58 16.1	
	comp=Z,3.4nm,1.1s							
MNTX	**Cornudas Mount**	**23.03**	**326**	P		**P**	**14 58 20.4**	**-0.2**
MNTX				IAmb		IAmb	14 58 30.6	
	comp=Z,2.5nm,0.8s							
TKL	**Tuckaleechee C**	**23.22**	**14**	P		**P**	**14 58 23.9**	**+1.5**
	comp=Z,4.4nm,1.0s,baz=222,slow=16,SNR=2.6							
NVAR	**Mina Array Bea**	**35.31**	**321**	P		**P**	**15 00 13.1**	**+2.4**
	comp=Z,1.4nm,0.7s,baz=127,slow=8.0,SNR=7.8							
NVAR				PcP		**PcP**	**15 02 41.7**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=156,slow=2.5,SNR=4.2							
CMAR	**Chiang Mai Arr**	**147.28**	**343**	PKPbc		**PKPdf**	**15 12 58.3**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=348,slow=2.8,SNR=10.0							

*DJA **29** 14:56:58.5±0.4, 8°.5S±4°.1×12°.7E±°, h130km±18km, M4.4/12, mB5.2/2, mb4.3/5, MLv4.4/12, Mw(mB)4.5/2*
*IDC **29** 14:57:03.9±1.9, 8°.28S×126°.96E, h220km±25km, mb3.1/2, mb1 3.6/7, mb1mx3.3/40, mbtmp4.2/7, MS3.4/1, Ms1 3.4/1, ms1mx2.6/17, Error ellipse: s-maj=25.9km s-min=15.2km az=31.0*
ISC 29 14:56:57.4±0.8, 8°.01S±0°.07×127°.40E±0°.06, h150km, n17, σ2°.00/22, Timor region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SOEI	**Soe**	**3.55**	**240**	P		**Pn**	**14 57 53.2**	**+1.3**
SOEI				S		**Sn**	**14 58 34.1**	**-0.1**
SAUI	**Saumlaki**	**3.86**	**90**	P		**Pn**	**14 57 58.3**	**+2.4**
BNDI	**Bandanaira**	**4.26**	**36**	P		**Pn**	**14 58 00.8**	**-0.3**
BATI	**Baumata**	**4.29**	**239**	P		**Pn**	**14 58 03.4**	**+1.9**
	29nm,0.3s,baz=99,slow=2.9,SNR=58							
BATI				S		**Sn**	**14 58 51.6**	**+0.3**
	48nm,0.3s,baz=273,slow=23,SNR=17							
BATI	**Baumata**	**4.29**	**239**	P		**Pn**	**14 58 03.0**	**+1.5**
BATI				S		**Sn**	**14 58 51.5**	**+0.2**
MSAI	**Masohi**	**4.87**	**18**	P		**Pn**	**14 58 08.9**	**-0.3**
MMRI	**Maumere**	**5.15**	**263**	P		**Pn**	**14 58 12.7**	**-0.1**
	0.2nm48nm,0.8s							
EDFI	**Ende, Flores**	**5.70**	**262**	P		**Pn**	**14 58 20.4**	**+0.2**
	0.0nm14nm,0.9s							
FAKI	**Fak Fak**	**6.99**	**44**	P		**Pn**	**14 58 36.2**	**-1.1**
	0.1nm12nm,0.7s							
SWI	**Sorong**	**8.07**	**29**	P		**Pn**	**14 58 50.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**10.18**	**190**	P		**Pn**	**14 59 20.3**	**+0.5**
	1.1nm,0.3s,baz=21,slow=11,SNR=41							
FITZ				S		**Sn**	**15 01 08.9**	**-3.6**
	2.6nm,0.3s,baz=42,slow=10.0,SNR=5.4							
WRA	**Warramunga Arr**	**13.64**	**151**	P		**Pn**	**15 00 06.8**	**+2.0**
	1.7nm,0.3s,baz=320,slow=13,SNR=55							
WRA				S		**Sn**	**15 02 31.5**	**-4.4**
	1.7nm,0.3s,baz=333,slow=21,SNR=9.5							
ASAR	**Alice Springs**	**16.77**	**159**	P		**Pn**	**15 00 46.1**	**+2.5**
	0.7nm,0.3s,baz=338,slow=11,SNR=60							
ASAR				S		**S**	**15 03 47.8**	**-2.4**
	0.4nm,0.3s,baz=315,slow=19,SNR=6.2							
PMG	**Port Moresby**	**19.58**	**96**	P		**Pn**	**15 01 20.1**	**+3.2**
	3.4nm,0.3s,baz=255,slow=18,SNR=14							
LEM	**Lembang**	**19.65**	**272**	LR		LR	15 11 06.2	
	comp=Z,98nm,19.0s,baz=344,slow=44							
STKA	**Stephens Creek**	**27.18**	**153**	P		**P**	**15 02 26.7**	**-0.3**
	0.7nm,0.4s,baz=323,slow=20,SNR=4.0							
CMAR	**Chiang Mai Arr**	**38.47**	**313**	P		**P**	**15 04 03.7**	**-1.3**
	0.6nm,0.6s,baz=141,slow=7.7,SNR=7.2							

*IDC **29** 15:00:05.6±0.9, 5°.63N×61°.29E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.8/41, mbtmp3.9/11, MS3.8/3, Ms1 3.8/3, ms1mx3.3/60, Error ellipse: s-maj=28.3km s-min=18.4km az=32.0*
ISC 29 15:00:08.0±1.1, 5°.7N±0°.2×61°.3E±0°.2, h14km, n14, σ0°.44/13, mb3.9/11, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.66**	**352**	LR		LR	15 09 49.0	
	comp=Z,169nm,19.6s,baz=172,slow=33							
PALK	**Pallekele**	**19.36**	**84**	LR		LR	15 10 21.6	
	comp=Z,158nm,19.9s,baz=38,slow=32							
AAK	**Ala-Archa**	**38.64**	**16**	P		**P**	**15 07 31.2**	**0.0**
	1.2nm,0.6s,baz=201,slow=7.0,SNR=7.6							
CMAR	**Chiang Mai Arr**	**38.86**	**68**	P		**P**	**15 07 33.8**	**+0.6**
	0.7nm,0.8s,baz=263,slow=9.5,SNR=8.7							
CMAR				PcP		**PcP**	**15 09 44.3**	**0.0**
	0.5nm,0.9s,baz=268,slow=3.2,SNR=4.1							
KBZ	**Khabaz**	**41.23**	**340**	P		**P**	**15 07 52.7**	**+0.3**
	1.2nm,0.8s,baz=143,slow=10,SNR=4.1							
MATP	**Matopo**	**41.35**	**230**	LR		LR	15 22 30.2	
	comp=Z,403nm,18.6s,baz=344,slow=32							
BRTR	**Keskin Array B**	**42.08**	**328**	P		**P**	**15 07 60.0**	**+0.3**
	2.0nm,0.7s,baz=135,slow=9.6,SNR=6.3							
MKAR	**Makanchi Array**	**44.80**	**20**	P		**P**	**15 08 21.5**	**0.0**
	5.6nm,1.2s,baz=213,slow=7.7,SNR=3.6							
ZALV	**Zalesovo Beam**	**51.80**	**17**	P		**P**	**15 09 14.3**	**-1.0**
	0.7nm,0.7s,baz=212,slow=5.1,SNR=4.1							
AKASG	**Malin Array Be**	**52.27**	**335**	P		**P**	**15 09 18.3**	**-0.5**
	0.2nm,0.3s,baz=134,slow=6.1,SNR=4.1							
TORD	**Torodi Ar. Bea**	**59.15**	**282**	P		**P**	**15 10 09.0**	**+0.1**
	1.3nm,0.8s,baz=88,slow=6.9,SNR=5.9							
TORD				PcP		**PcP**	**15 10 57.6**	**+0.1**
	1

IDI	Anoyia	44.63	316	⇑P		P		15 23 16.3	+1.2
MKAR	Makanchi Array	44.74	20	P		P		15 23 15.6	-0.1
	comp=Z,0.8nm,0.8s,baz=231,slow=8.3,SNR=2.0								
BOSA	Boshof	48.70	224	LR		LR	15 42 42.2		
	comp=Z,384nm,18.6s,baz=18,slow=34								
VRI	Vrincioaia	49.98	329	⇓P		P		15 23 57.2	+0.5
PLOR	Plostina	50.02	329	⇑P		P		15 23 57.6	+0.7
TESR	Tescani	50.46	329	⇑P		P		15 24 00.1	-0.1
VOIR		50.58	327	⇓P		P		15 24 01.0	-0.2
ARU	Arti	50.63	358	P		P		15 23 59.5	-1.8
ARU				IAmb		IAmb	15 24 08.2		
	comp=Z,7.9nm,0.9s								
DOPR	Dopca	50.75	328	⇑P		P		15 24 02.1	-0.4
ARR	Arges	50.76	327	⇓P		P		15 24 02.0	-0.6
BIZ	Bicaz	51.03	329	⇓P		P		15 24 03.7	-0.8
HERR	Herculane	51.69	325	⇓P		P		15 24 09.0	-0.4
ZALV	Zalesovo Beam	51.74	17	P		P		15 24 09.1	-0.6
	comp=Z,1.3nm,0.8s,baz=201,slow=7.9,SNR=6.6								
ZALV	Zalesovo Beam	51.74	17	P		P		15 24 08.1	-1.5
GZR	Gura Zlata	51.80	326	⇓P		P		15 24 09.9	-0.5
BURAR	Bucovina Array	51.93	330	⇓P		P		15 24 11.1	-0.2
BURAR	Bucovina Array	51.93	330	P		P		15 24 11.1	-0.2
ARCR	ARCALIA	52.02	329	⇓P		P		15 24 11.4	-0.5
AKASG	Malin Array Be	52.25	335	P		P		15 24 12.8	-0.6
	comp=Z,0.6nm,0.6s,baz=130,slow=6.6,SNR=6.1								
BZS	Buzias	52.58	326	⇓P		P		15 24 15.6	-0.5
DRGR		52.70	327	⇑P		P		15 24 16.4	-0.6
SIRR	Siria	52.95	326	⇑P		P		15 24 18.7	-0.2
OBN	Obninsk	53.13	342	LR		LR	15 47 12.1		
	comp=Z,40nm,19.2s,baz=150,slow=36								
KIRV	Kirov	53.55	352	LR		LR	15 48 46.8		
	comp=Z,210nm,18.6s,baz=162,slow=38								
KOLS	Kolonicke sedl	54.28	329	*eP*		P		15 24 29.4	+0.9
CRVS	Cervenica-Dubn	54.68	329	*eP*		P		15 24 32.1	+0.7
VYHS	Vyhne	55.82	327	*eP*		P		15 24 41.0	+1.3
LANS	Liptovska Anna	55.87	328	*eP*		P		15 24 40.1	0.0
JAVC	Velka Javorina	56.66	327	*eP*		P		15 24 45.2	-0.5
ARSA	Arzberg	56.98	324	*eP*		P		15 24 47.7	-0.4
	comp=Z,6.3nm,0.9s								
CONA	Conrad Observa	57.15	325	*eP*		P		15 24 48.8	-0.5
	comp=Z,20nm,1.8s								
OBKA	Obir	57.18	323	*eP*		P		15 24 49.5	0.0
	comp=Z,17nm,1.5s								
MORC	Moravsky Berou	57.25	328	⇓P		P		15 24 48.4	-1.5
MORC	Moravsky Berou	57.25	328	*eP*		P		15 24 48.1	-1.8
MORC	Moravsky Berou	57.25	328	P		P		15 24 48.7	-1.2
MORC				IAmb		IAmb	15 24 49.5		
	comp=Z,12nm,1.3s								
KRUC	Moravsky	57.47	327	*eP*		P		15 24 49.5	-1.9
VRAC	Vranov	57.50	327	⇑P		P		15 24 50.9	-0.7
VRAC	Vranov	57.50	327	*eP*		P		15 24 49.9	-1.7
MYKA	Terra Mystica	57.78	323	*i* P		P		15 24 53.2	-0.5
	comp=Z,11nm,1.1s								
KRLC	Kraliky	57.83	328	*eP*		P		15 24 51.7	-2.3
KRLC				*ex*		x	15 24 59.8		
MOA	Molln	58.02	324	*eP*		P		15 24 54.8	-0.5
	comp=Z,9.4nm,0.9s								
KBA	Koelnbreinsper	58.18	323	*eP*		P		15 24 55.3	-1.3
	comp=Z,7.8nm,1.2s								
DPC	Dobruska-Polom	58.23	328	*eP*		P	15 25 02.8	+6.0	
CHVC	Chvalec	58.50	328	*eP*		P		15 24 57.7	-0.9
ABTA	Abfaltersbach	58.52	323	*eP*		P		15 24 58.3	-0.6
	comp=Z,4.5nm,1.0s								
GERES	GERESS Array B	58.86	325	P		P		15 25 00.0	-1.2
	comp=Z,0.5nm,0.7s,baz=119,slow=8.0,SNR=2.3								
KHC	Kasperske Hory	59.07	325	*eP*		P		15 25 00.9	-1.8
KHC				*ex*		x	15 25 07.7		
TORD	Torodi Ar. Bea	59.19	282	P		P		15 25 03.4	-0.6
	comp=Z,2.7nm,1.0s,baz=101,slow=5.3,SNR=12								
TORD				PcP		PcP		15 25 52.3	-0.2
	comp=Z,0.9nm,0.8s,baz=62,slow=3.6,SNR=4.6								
TORD	Torodi Ar. Bea	59.19	282	P		P		15 25 02.5	-1.5
WTTA	Wattenberg	59.29	323	*eP*		P		15 25 03.2	-1.2
	comp=Z,7.0nm,1.1s								
KAPI	Kappang	59.29	99	P		P	15 24 55.4	-9.4	
KAPI				P		P	15 24 55.4	-9.4	
WATA	Walderalm	59.36	323	*i* P		P		15 25 03.4	-1.4
	comp=Z,11nm,1.4s								
MOTA	Moosalm	59.65	323	*eP*		P		15 25 05.3	-1.5
	comp=Z,9.2nm,1.0s								
RETA	Reutte	59.92	323	*eP*		P		15 25 07.2	-1.4
	comp=Z,9.1nm,1.7s								
NKC	Novy Kostel	60.27	326	*eP*		P		15 25 10.2	-0.7
DAVA	Damuels	60.36	322	*eP*		P		15 25 10.8	-0.9
	comp=Z,12nm,1.6s								
CLL	Collm	60.52	327	*eP*		P		15 25 12.0	-0.5
FINES	FINESS Array B	61.50	342	LR		LR	15 54 01.3		
	comp=Z,185nm,20.2s,baz=165,slow=38								
BFO	Black Forest	61.76	323	P		P		15 25 19.2	-1.8
HFS	Hagfors	65.09	336	LR		LR	15 55 15.7		
	comp=Z,121nm,20.2s,baz=152,slow=37								
NWAO	Narrogin (SRO)	65.43	130	P		P		15 25 45.4	-0.2
	comp=Z,5.5nm,0.7s,baz=293,slow=8.6,SNR=2.2								
NWAO	Narrogin (SRO)	65.43	130	P		P		15 25 45.0	-0.6
NWAO				IAmb		IAmb	15 25 48.0		
	comp=Z,10.0nm,0.9s								
KIC	Kosan Boka	65.67	274	*eP*		P		15 25 47.9	+0.4
	comp=Z,25nm,1.1s								
DBIC	Dimbokro	65.77	275	P		P		15 25 48.2	+0.1
	comp=Z,4.2nm,0.9s,baz=97,slow=15,SNR=4.7								
DBIC				LR		LR	15 53 31.3		
	comp=Z,105nm,20.1s,baz=82,slow=35								
TIC	Toumodi	65.94	275	*eP*		P		15 25 49.6	+0.4
LIC	Lamto	65.97	274	*eP*		P		15 25 47.4	-2.0
	comp=Z,1.0nm,0.2s								
NOA	NORSAR Array B	66.62	336	P		P		15 25 52.7	0.0
	comp=Z,3.2nm,1.1s,baz=120,slow=6.9,SNR=4.7								
ESDC	Sonseca Array	67.43	311	P		P		15 25 57.7	-0.7
	comp=Z,2.8nm,1.1s,baz=85,slow=5.3,SNR=7.3								
ESDC	Sonseca Array	67.43	311	P		P		15 25 55.5	-2.9
FITZ	Fitzroy Crossi	67.67	112	P		P		15 26 00.3	+0.2
	comp=Z,3.3nm,0.8s,baz=243,slow=5.5,SNR=5.3								
KSRS	Korea Array	68.00	52	P		P		15 26 00.8	-1.1
	comp=Z,1.8nm,0.9s,baz=249,slow=6.6,SNR=5.6								
MAW	Mawson	73.15	179	P		P		15 26 33.2	+0.6
	comp=Z,1.4nm,0.6s,baz=30,slow=4.2,SNR=7.8								
MAW				LR		LR	15 51 03.1		
	comp=Z,164nm,21.4s,baz=329,slow=30								
SPITS	Spitsbergen Ar	76.00	351	LR		LR	16 04 46.4		
	comp=Z,113nm,18.1s,baz=15,slow=39								
SYO	Syowa Base	76.06	188	⇓*i*P		P		15 26 49.8	+0.3
WRA	Warramunga Arr	76.10	112	P		P		15 26 50.8	0.0
	comp=Z,5.9nm,1.0s,baz=290,slow=5.0,SNR=23								
WRA	Warramunga Arr	76.10	112	P		P		15 26 50.1	-0.7
WRAB	Tennant Creek	76.11	112	P		P		15 26 50.7	-0.1
WB2	Warramunga Arr	76.11	112	P		P		15 26 50.3	-0.6
WB0	Warramunga Arr	76.12	112	P		P		15 26 50.4	-0.5
WB0				IAmb		IAmb	15 26 59.7		
	comp=Z,14nm,1.3s								
WR0	Warramunga Arr	76.29	112	P		P		15 26 51.3	-0.6
WR0				IAmb		IAmb	15 26 54.0		
	comp=Z,12nm,1.2s								
ASAR	Alice Springs	76.47	116	P		P		15 26 52.8	-0.1
	comp=Z,4.1nm,0.9s,baz=287,slow=5.3,SNR=34								
ASAR	Alice Springs	76.47	116	P		P		15 26 52.6	-0.3
AS31	Alice Springs	76.47	116	P		P		15 26 52.4	-0.4
STKA	Stephens Creek	84.76	123	P		P		15 27 36.7	-0.4
	comp=Z,2.3nm,0.9s,baz=294,slow=11,SNR=4.2								
SNAA	Sanae	87.51	197	LR		LR	15 59 32.7		
	comp=Z,166nm,20.8s,baz=28,slow=30								
TXAR	Lajitas Array	142.29	338	PKhKP		PKPpre	15 34 30.4		
	comp=Z,0.3nm,0.7s,baz=25,slow=3.1,SNR=5.4								
TXAR				PKP		**PKPdf**		15 34 36.2	+0.3
	comp=Z,0.3nm,0.7s,baz=72,slow=2.6,SNR=3.9								

*SOME **29** 15:16:01.0, 39.43°N×75.48°E, h10km*
*NNC **29** 15:16:08.9±3.1, 39.79°N×75.43°E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=23.6km s-min=16.0km az=159.0
*KRNET **29** 15:16:10.5±0.1, 39.73°N×75.26°E, mb3.1*
ISC 29 15:16:08.1±1.3, 39.76°N±0.05°×75.34°E±0.03, h10km, n61, σ1°23/94, 26C-14D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SFK	Sufi-Kurgan	1.44	281	⇓*i*P		Pg	15 16 37.2	+1.4
	baz=83							
SFK				⇓*i*S		Sg	15 16 56.0	+1.6
	baz=83							
OHH	Osh	2.10	292	⇓*i*P		Pg	15 16 48.8	+0.3
	baz=94							
OHH				⇓*i*S		Sg	15 17 16.4	+0.6
	baz=94							
ARLS	Aral	2.24	340	⇑*e*P		Pg	15 16 50.8	-0.2
	baz=42							
ARLS				⇑*i*S		Sg	15 17 20.6	+0.6
	baz=42							
ARSB	Arslanbob	2.38	312	⇓*i*P		Pg	15 16 53.0	-0.8
	baz=13							
ARSB				⇓*i*S		Sg	15 17 23.8	-0.9
	baz=13							
UCH	Uchtor	2.54	346	⇑*e*P		Pb	15 16 55.3	+1.2
	baz=48							
UCH				⇑*i*S		Sg	15 17 28.6	-1.3
	baz=48							
UCH	Uchtor	2.54	346	P		Pg	15 16 55.7	-1.2
	SNR=11							
ULHL	Ulahol	2.57	15	⇑*e*P		Pg	15 16 56.5	-1.0
	baz=16							
ULHL				⇑*i*S		Sg	15 17 30.5	-0.3
	baz=16							
ULHL	Ulahol	2.57	15	P		Pg	15 16 57.9	+0.5
	SNR=6.8							
AML	Almayashu	2.68	333	⇑*e*P		Pb	15 16 57.3	+0.9
	baz=34							
AML				⇑*i*S		Sg	15 17 32.2	-2.0
	baz=34							
AML	Almayashu	2.68	333	P		Pb	15 16 57.5	+1.2
	SNR=13							
KDJ	Kajisay	2.75	30	⇑*i*P		Pb	15 16 59.0	+1.6
	baz=31							
KDJ				⇑*i*S		Sg	15 17 34.7	-1.6
	baz=31							
DRK	Karamyk	2.75	265	⇓*i*P		Pb	15 16 57.2	-0.4
	baz=66							
DRK				⇓*i*S		Sb	15 17 32.0	+0.5
	baz=66							
BOOM	Boomskoye usch	2.76	9	⇑*i*P		Pb	15 16 58.9	+1.2
	baz=10.0							
BOOM				⇑*i*S		Sg	15 17 35.1	-1.8
	baz=10.0							
KBK	Karagaybulak	2.91	354	⇓*i*P		Pb	15 17 00.6	+0.4
	baz=56							
KBK				⇓*i*S		Sb	15 17 37.7	+1.8
	baz=56							
KBK	Karagaybulak	2.91	354	P		Pb	15 17 01.2	+1.0
	SNR=32							
AAK	Ala-Archa	2.94	348	⇓*i*P		Pb	15 17 00.8	0.0
	baz=49							
AAK				⇓*i*S		Sb	15 17 38.3	+1.4
	baz=49							
AAK	Ala-Archa	2.94	348	P		Pb	15 17 02.2	+1.4
	SNR=24							
AAK	Ala-Archa	2.94	348	⇑Pn		Pb	15 17 01.4	+0.6
	16nm,0.8s							
AAK				⇑Lg		Lg	15 17 42.5	
	14nm,0.6s							
FRU1	Bishkek	3.09	350	⇑*i*P		Pb	15 17 03.9	+0.6
	baz=51							
FRU1				⇑*i*S		Sb	15 17 42.1	+1.0
	baz=51							
EKS2	Erkin-Say	3.13	338	⇑*i*P		Pb	15 17 02.7	-1.2
	baz=40							
EKS2				⇑*i*S		Sb	15 17 41.9	-0.3
	baz=40							
EKS2	Erkin-Say	3.13	338	P		Pb	15 17 03.7	-0.2
	SNR=9.2							
TKM2	Tokmak 2	3.16	3	P		Pb	15 17 04.8	+0.2
	SNR=18							
TKM2	Tokmak 2	3.16	3	⇓Pn		Pb	15 17 04.6	0.0
	10.0nm,0.5s							
TKM2				⇑Lg		Lg	15 17 49.7	
	11nm,0.6s							
CHMS	Chumysh	3.27	352	P		Pb	15 17 06.0	-0.2
	SNR=22							
KST	Kastek	3.31	8	*eP*		Pb	15 17 06.7	-0.4
	8.5nm,0.5s							
KST				*eS*		Sg	15 17 54.8	+0.3
	24nm,0.7s							
KST	Kastek	3.31	8	Pg		Pb	15 17 06.7	-0.4
	8.5nm,0.5s							
KST				Lg		Lg	15 17 54.8	
	24nm,0.7s							
MRKS	Merke	3.38	333	*eP*		Pb	15 17 07.6	-0.6
	9.4nm,0.6s							
MRKS				*eS*		Sg	15 17 56.5	-0.3
	6.2nm,0.7s							
MRKS	Merke	3.38	333	Pg		Pb	15 17 07.6	-0.6
	9.4nm,0.6s							
MRKS				Lg		Lg	15 17 56.5	
	6.2nm,0.7s							
IZV	Izvestkoviy	3.41	16	*eP*		Pb	15 17 08.6	-0.2
	2.4nm,0.6s							
IZV				*eS*		Sg	15 17 58.1	+0.5
	17nm,0.6s							
IZV	Izvestkoviy	3.41	16	Pg		Pb	15 17 08.6	-0.2
	2.4nm,0.6s							
IZV				Lg		Lg	15 17 58.4	
	17nm,0.6s							
TNSS	Tian-Shan	3.49	20	*eP*		Pb	15 17 09.1	-1.1
	7.6nm,0.5s							
TNSS				*eS*		Sg	15 17 59.0	-1.2
	6.9nm,0.6s							
TNSS	Tian-Shan	3.49	20	Pg		Pb	15 17 09.1	-1.1
	7.6nm,0.5s							
TNSS				Lg		Lg	15 17 59.4	
	6.9nm,0.6s							
BTK	Batken	3.49	276	⇑*i*P		Pb	15 17 08.0	-2.1
	baz=77							
BTK				⇑*i*S		Sb	15 17 49.2	-3.4
	baz=77							
DGS	Degeres	3.49	5	*eP*		Pb	15 17 09.3	-0.8
	15nm,0.4s							
DGS				*eS*		Sg	15 17 59.4	-0.9
	12nm,0.7s							
DGS	Degeres	3.49	5	Pg		Pb	15 17 09.3	-0.8
	15nm,0.4s							
DGS				Lg		Lg	15 17 59.7	
	12nm,0.7s							
USP	Ospenovka	3.56	350	P		Pb	15 17 10.1	-1.2
	SNR=9.5							
MDOK	Medeo	3.63	20	*eP*		Pb	15 17 11.1	-1.5
	3.7nm,0.5s							
MDOK				*eS*		Sg	15 18 02.2	-2.6
	10.0nm,0.7s							
MDOK	Medeo	3.63	20	Pg		Pb	15 17 11.1	-1.5
	3.7nm,0.5s							
MDOK				Lg		Lg	15 18 02.2	
	10.0nm,0.7s							
TRKS	Terek-Say	3.65	300	⇑*i*P		Pb	15 17 09.6	-3.3
	baz=0.0							
TRKS				⇑*i*S		Sn	15 17 52.4	+4.3
	baz=0.0							
KOTS	Kotyrbulak	3.72	20	*eP*		Pb	15 17 14.0	+0.1
	3.6nm,0.5s							
KOTS				*eS*		Sg	15 18 07.4	0.0
	60nm,0.8s							
KOTS	Kotyrbulak	3.72	20	Pg		Pb	15 17 14.0	+0.1
	3.6nm,0.5s							
KOTS				Lg		Lg	15 18 07.6	
	60nm,0.8s							
SGDS	Sogindy	3.73	352	Pg		Pb	15 17 13.8	-0.3
	2.1nm,0.3s							
SGDS				Lg		Lg	15 18 06.8	
	8.6nm,0.7s							
KRBS	Karabastau	3.94	4	*eP*		Pb	15 17 18.1	+0.4
	3.0nm,0.4s							
KRBS				*eS*		Sg	15 18 14.2	-0.4
	3.7nm,0.3s							
SATY	Saty	4.02	34	*eP*		Pb	15 17 19.8	+0.7
	3.2nm,1.3s							
SATY				*eS*		Sg	15 18 17.3	+0.1
	6.4nm,0.7s							
SATY	Saty	4.02	34	Pg		Pb	15 17 19.8	+0.7
	3.2nm,1.3s							
SATY				Lg		Lg	15 18 17.3	
	6.4nm,0.7s							
KTBS	Karatobe	4.07	14	*eP*		Pb	15 17 19.9	-0.1
	1.2nm,0.6s							
KTBS				*eS*		Sg	15 18 17.6	-1.3
	22nm,0.6s							
KTBS	Karatobe	4.07	14	Pg		Pb	15 17 19.9	-0.1
	1.2nm,0.6s							
KTBS				Lg		Lg	15 18 17.6	
	22nm,0.6s							
KUU	Kurty	4.20	10	*eP*		Pb	15 17 21.9	-0.2
	0.8nm,0.1s							
KUU				*eS*		Sg	15 18 20.9	-1.9
	13nm,0.6s							
KUU	Kurty	4.20	10	Pg		Pb	15 17 21.9	-0.2
	0.8nm,0.1s							
KUU				Lg		Lg	15 18 20.9	
	13nm,0.6s							
CHKK	Chushkaly	4.27	16	*eP*		Pb	15 17 23.8	+0.5
	0.6nm,0.1s							
CHKK				*eS*		Sg	15 18 24.0	-1.3
	11nm,0.6s							
CHKK	Chushkaly	4.27	16	Pg		Pb	15 17 23.8	+0.5
	0.6nm,0.1s							
CHKK				Lg		Lg	15 18 24.0	
	11nm,0.6s							
UZB	Uzynbulak	4.37	38	*eP*		Pb	15 17 25.7	+0.6
	2.6nm,0.9s							
UZB				*eS*		Sg	15 18 27.4	-1.0
	5.2nm,0.9s							
UZB	Uzynbulak	4.37	38	Pg		Pb	15 17 25.7	+0.6
	2.6nm,0.9s							
UZB				Lg		Lg	15 18 27.4	
	5.2nm,0.9s							
KPKS	Kokpek	4.47	33	*eP*		Pb	15 17 27.4	+0.7
	4.5nm,1.6s							
KPKS				*eS*		Sg	15 18 30.1	-1.5
	11nm,0.6s							
IUG	Iuzhnay	4.68	302	*eP*		Pb	15 17 30.9	+0.6
	2.2nm,0.2s							
IUG				*eS*		Sg	15 18 36.1	-2.1
	10nm,0.5s							
IUG	Iuzhnay	4.68	302	Pg		Pb	15 17 31.0	+0.7
	1.8nm,0.1s							
IUG				Lg		Lg	15 18 36.1	
	10nm,0.5s							
PDGK	Podgornoye	4.73	40	Pg		Pb	15 17 32.0	+0.8
	1.1nm,1.2s							
PDGK				Lg		Lg	15 18 38.3	
	2.8nm,0.8s							
PDGK	Podgornoye	4.73	40	⇑Pg		Pg	15 17 37.1	-1.6
	2.2nm,0.7s							
PDGK				⇑Lg		Lg	15 18 38.1	
	5.1nm,0.8s							
ARXS	Arharly	4.82	22	*eP*		Pb	15 17 33.6	+1.0
	3.1nm,1.0s							
ARXS				*eS*		Sg	15 18 40.9	-1.9
	4.3nm,0.5s							
MNBS	Baschi	4.88	27	*eP*		Pb	15 17 35.2	+1.4
	0.5nm,0.1s							
MNBS				*eS*		Sg	15 18 43.8	-1.0
	3.1nm,0.4s							
KK31	Karatay Array	4.93	314	⇑Pg		Pg	15 17 41.2	-1.4
	0.4nm,0.4s,baz=139,slow=15,SNR=2.5							
KK31				⇓Lg		Lg	15 18 46.7	
	1.1nm,0.4s,baz=130,slow=30,SNR=4.1							

IDC 29 15:17:43.5±3.7, 26°18S×29°22E, h0km, mb1 2.8/3, mb1mx2.8/38, mbtmp2.8/3, ML2.3/3, Error ellipse: s-maj=33.0km s-min=18.0km az=112.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LBTB	Lobatse	3.47	289	P		Pn	15 18 40.1	+1.3
	0.3nm,0.3s,baz=101,slow=8.3,SNR=1.6							
LBTB				Pg		Pg	15 18 48.0	-2.0
	0.8nm,0.3s,baz=105,slow=17,SNR=13							
LBTB				Lg		Lg	15 19 33.6	
	2.3nm,0.3s,baz=200,slow=23,SNR=15							
BOSA	Boshof	4.28	235	Pn		Pn	15 18 48.2	-1.7
	0.1nm,0.3s,baz=70,slow=15,SNR=2.9							
BOSA				Pg		Pb	15 19 02.5	+2.8
	0.5nm,0.3s,baz=62,slow=14,SNR=8.7							
BOSA				Lg		Lg	15 19 57.5	
	1.0nm,0.3s,baz=343,slow=19,SNR=9.2							
I47ZA	BOSHOF INFRASO	4.30	235	*i*			15 45 00.0	
	baz=57,slow=320,SNR=1.0							
MATP	Matopo	5.76	353	Pn		Pn	15 19 11.8	+1.4
	0.3nm,0.3s,baz=169,slow=13,SNR=2.3							
MATP				Sn		Sn	15 20 15.6	-1.7
	0.6nm,0.3s,baz=293,slow=15,SNR=4.5							
MATP				Lg		Lg	15 20 43.9	
	0.9nm,0.3s,baz=89,slow=16,SNR=3.5							
I35NA	TSUMEB INFRASO	12.79	301	*i*			16 31 30.0	
	baz=130,slow=304,SNR=0.7							

DJA 29 15:23:59.2±0.3, 3°S±2°×12°3E±°, h10km, M4.1/12, mb4.4/2, MLv4.0/12, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KDI	Kendari	1.09	180	P		Pb	15 24 18.9	-1.3
LUWI	Luwuk	1.81	5	P		Pn	15 24 30.2	-0.3
LUWI				S		Sn	15 24 53.7	+0.1
APSI	Ampana	2.16	334	P		Pn	15 24 35.5	+0.2
TTSI	Tana Toraja	2.79	266	P		Pn	15 24 44.9	+0.9
TTSI				S		Sn	15 25 17.3	-0.5
BNSI	Bone	2.93	238	P		Pn	15 24 45.6	-0.3
BNSI				S		Sn	15 25 21.4	+0.2
SPSI	Sidrap Palu	3.04	249	P		Pn	15 24 48.3	+0.9
SPSI				S		Sn	15 25 24.8	+0.9
MRSI	Marisa	3.38	349	P		Pn	15 24 52.4	+0.3
MRSI				S		Sn	15 25 32.1	-0.2
BKSI	Bulukumba	3.48	225	P		Pn	15 24 54.1	+0.6
GTOI	Gorontalo	3.50	7	P		Pn	15 24 55.9	+2.2
GTOI				S		Sn	15 25 37.3	+2.2
BSSI	Bau Bau, Buton	3.89	213	P		Pn	15 24 59.1	+0.1
MPSI	Mapaga	4.18	319	P		Pn	15 25 04.0	+1.0
MMRI	Maumere	5.75	184	P		Pn	15 25 24.8	+0.1

IDC 29 15:28:41.0±8.3, 26°09S×28°82E, h0km, mb1 2.6/1, mb1mx2.6/36, mbtmp2.6/1, ML2.2/1, Error ellipse: s-maj=86.2km s-min=57.2km az=141.0, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BOSA	Boshof	4.05	231	Pn		Pn	15 29 43.7	-0.6
	0.1nm,0.3s,baz=49,slow=14,SNR=1.5							
BOSA				Pg		Pb	15 29 55.7	+2.5
	0.5nm,0.3s,baz=48,slow=15,SNR=9.2							
BOSA				Lg		Lg	15 30 49.4	
	0.8

	baz=232							
ENA				S		Sg	15 30 11.2	+0.6
	baz=232							
TWA	**Mucha**	**0.79**	**279**	*e*P		**Pb**	**15 30 00.1**	**-0.2**
	baz=273							
TWA				*e*S		**Sg**	**15 30 11.2**	**+0.1**
	baz=273							
ENTT	**Nioudou**	**0.82**	**255**	*e*P		**Pb**	**15 30 01.1**	**+0.1**
	baz=249							
ENTT				*e*S		**Sg**	**15 30 12.6**	**+0.3**
	baz=249							
PCYT	**Pengchaiyu**	**0.83**	**336**	*e*P		**Pb**	**15 30 01.0**	**-0.2**
	baz=334							
NHDH	**Xindian Distri**	**0.84**	**277**	*e*S		**Sb**	**15 30 12.1**	**+0.1**
	baz=272							
YM08	**YM08**	**0.84**	**293**	*e*P		**Pb**	**15 30 01.2**	**0.0**
	baz=272							
YM08				*e*S		**Sb**	**15 30 12.1**	**0.0**
	baz=272							
YM01	**YM01**	**0.84**	**290**	*e*P		**Pg**	**15 30 01.9**	**+0.3**
	baz=284							
YM01				S		**Sg**	**15 30 12.7**	**-0.1**
	baz=284							
YM11	**YM11**	**0.84**	**291**	*e*P		**Pb**	**15 30 01.1**	**-0.2**
	baz=270							
YM11				*e*S		**Sb**	**15 30 12.1**	**-0.2**
	baz=270							
YM05	**YM05**	**0.85**	**291**	*e*P		**Pb**	**15 30 01.0**	**-0.5**
	baz=270							
YM05				S		**Sb**	**15 30 12.1**	**-0.3**
	baz=270							
YM10	**YM10**	**0.85**	**290**	*e*P		**Pb**	**15 30 01.1**	**-0.3**
	baz=270							
YM10				*e*S		**Sb**	**15 30 11.9**	**-0.6**
	baz=270							
NWLT	**Wulai**	**0.86**	**265**	*e*P		**Pb**	**15 30 00.5**	**-1.0**
	baz=259							
NWLT				*e*S		**Sg**	**15 30 13.3**	**-0.1**
	baz=259							
TWY	**Chenhua**	**0.87**	**299**	*e*P		**Pb**	**15 30 01.7**	**0.0**
	baz=293							
TWY				S		**Sb**	**15 30 13.1**	**+0.2**
	baz=293							
YM04	**YM04**	**0.87**	**290**	*e*P		**Pg**	**15 30 02.5**	**+0.3**
	baz=271							
YM04				*e*S		**Sb**	**15 30 13.4**	**+0.4**
	baz=271							
TATO	**Taipei**	**0.87**	**278**	*e*P		**Pb**	**15 30 01.8**	**0.0**
	baz=272							
TATO				*e*S		**Sb**	**15 30 13.5**	**+0.5**
	baz=272							
NDT	**Datong Townshi**	**0.88**	**253**	*e*P		**Pb**	**15 30 01.9**	**0.0**
	baz=230							
NDT				S		**Sg**	**15 30 14.4**	**+0.2**
	baz=230							
ANP	**Anpu**	**0.89**	**291**	*e*P		**Pb**	**15 30 01.9**	**-0.3**
	baz=273							
ANP				*e*S		**Sb**	**15 30 13.8**	**0.0**
	baz=273							
YHNB	**Yeheng**	**0.99**	**259**	*e*P		**Pb**	**15 30 03.5**	**-0.3**
	baz=255							
YHNB				S		**Sb**	**15 30 16.9**	**+0.4**
	baz=255							
NSK	**Sanguang**	**1.00**	**260**	P		**Pb**	**15 30 03.5**	**-0.6**
	baz=269							
NSK				S		**Sg**	**15 30 17.5**	**-0.5**
	baz=269							
NACB	**Ninganchiao**	**1.03**	**228**	*e*P		**Pb**	**15 30 04.2**	**-0.3**
	baz=237							
NACB				*e*S		**Sn**	**15 30 18.2**	**-0.4**
	baz=237							
NNSB	**Datong**	**1.05**	**246**	*e*P		**Pb**	**15 30 04.3**	**-0.7**
	baz=230							
NNSB				S		**Sn**	**15 30 19.1**	**-0.3**
	baz=230							
NNSH	**Datong**	**1.05**	**246**	*e*P		**Pb**	**15 30 04.7**	**-0.2**
	baz=242							
NNSH				*e*S		**Sb**	**15 30 18.3**	**-0.2**
	baz=242							
NNS	**Nan Shan**	**1.06**	**247**	*e*P		**Pn**	**15 30 05.6**	**+0.4**
	baz=243							
NNS				S		**Sb**	**15 30 18.6**	**0.0**
	baz=243							
ETLH	**Xiulin Townshi**	**1.09**	**233**	P		**Pn**	**15 30 05.9**	**+0.2**
	baz=230							
ETLH				*e*S		**Sg**	**15 30 21.3**	**+0.5**
	baz=230							
FUSS	**Fushou**	**1.25**	**241**	*e*P		**Pb**	**15 30 08.7**	**+0.3**
	baz=238							
FUSS				*e*S		**Sg**	**15 30 26.1**	**+0.3**
	baz=238							
WHF	**Hehuan Shan**	**1.29**	**237**	P		**Pb**	**15 30 09.4**	**+0.3**
	baz=233							
WHF				*e*S		**Sg**	**15 30 27.0**	**-0.1**
	baz=233							
IRIF	**Iriomote-Funau**	**1.29**	**114**	P		**Pn**	**15 30 08.6**	**+0.4**
TWT	**Tachien**	**1.30**	**242**	*e*P		**Pb**	**15 30 09.1**	**-0.2**
	baz=239							
TWT				*e*S		**Sg**	**15 30 27.1**	**-0.4**
	baz=239							
TDCB	**Techi**	**1.31**	**243**	P		**Pb**	**15 30 09.7**	**+0.2**
	baz=239							
TDCB				S		**Sb**	**15 30 26.6**	**+0.5**
	baz=239							
NSTT	**Nanjuang**	**1.33**	**260**	*e*P		**Pn**	**15 30 09.2**	**+0.4**
	baz=256							
NSTT				*e*S		**Sb**	**15 30 27.0**	**+0.7**
	baz=256							
ESL	**Shilin**	**1.39**	**222**	*e*P		**Pn**	**15 30 10.1**	**+0.4**
	baz=218							
ESL				S		**Sg**	**15 30 29.3**	**-0.9**
	baz=218							
CHGB	**Renai**	**1.40**	**236**	*e*P		**Pb**	**15 30 10.6**	**-0.4**
	baz=233							
CHGB				*e*S		**Sg**	**15 30 29.9**	**-0.8**
	baz=233							
OWD	**Renai**	**1.46**	**232**	*e*P		**Pb**	**15 30 12.0**	**0.0**
	baz=242							
OWD				*e*S		**Sg**	**15 30 31.3**	**-1.4**
	baz=242							
WHP	**Taichung City**	**1.48**	**247**	*e*P		**Pb**	**15 30 13.0**	**+0.8**
	baz=244							
WHP				*e*S		**Sg**	**15 30 32.0**	**-1.1**
	baz=244							
HATJ	**Hateruma jima**	**1.48**	**123**	S		**Sb**	**15 30 31.7**	**+1.1**
EGFH	**Guangfu**	**1.50**	**218**	*e*P		**Pn**	**15 30 11.0**	**-0.2**
	baz=199							
EGFH				*e*S		**Sb**	**15 30 31.9**	**+0.5**
	baz=199							
JIJ	**Ishigaki jima**	**1.63**	**107**	P		**Pb**	**15 30 14.7**	**0.0**
JIJ				*e*S		**Sb**	**15 30 35.7**	**+0.8**
HGSD	**Ruisui**	**1.65**	**214**	*e*P		**Pn**	**15 30 13.3**	**0.0**
	baz=198							
SMLT	**Sun Moon Lake**	**1.71**	**236**	*e*P		**Pb**	**15 30 15.9**	**-0.2**
	baz=233							
JISG	**Ishigakijimahi**	**1.72**	**99**	P		**Pb**	**15 30 16.2**	**-0.1**
SSLB	**Suanglung**	**1.73**	**232**	*e*P		**Pn**	**15 30 15.2**	**+0.9**
	baz=240							
SSLB				*e*S		**Sb**	**15 30 37.7**	**0.0**
	baz=240							
YULB	**Yu-li**	**1.80**	**216**	*e*P		**Pn**	**15 30 14.8**	**-0.5**
	baz=214							

IDC 29 15:36:05.5±2.2, 1.97N×126.61E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/51, mbtmp3.6/3, Error ellipse: s-maj=176.8km s-min=27.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
WRA	**Warramunga Arr**	**23.06**	**161**	P		P	15 41 12.3	-0.4
	0.6nm,0.4s,baz=340,slow=11,SNR=13							
ASAR	**Alice Springs**	**26.45**	**165**	P		P	15 41 44.8	+0.4
	0.2nm,0.3s,baz=345,slow=12,SNR=9.5							
MKAR	**Makanchi Array**	**58.93**	**326**	P		P	15 46 06.4	-0.2
	2.0nm,0.8s,baz=116,slow=7.5,SNR=1.2							

*MOS **29** 15:36:15.7±0.9, 19.84N×121.49E, h33km, mb5.5/60, MS4.6/16, Error ellipse: s-maj=7.9km s-min=4.2km az=109.6*

*BGR **29** 15:36:15.2±0.0, 18.98N×121.46E, h34km±2km, mb5.4, Ms4.9*

*BJI **29** 15:36:15.5±0.0, 19.93N×121.47E, h30km, mB5.0/59, mb4.9/71, Ms4.9/78, Ms7 4.8/74*

*NIED **29** 15:36:15.4, 20.16N×121.38E, h0km, MW5.1, Moment Tensor Solution. s3 Moment tensor: Scale 10^16 Nm; Mrr-2.31; Mθθ 1.03; Mϕϕ 1.28; Mrθ 3.20; Mrϕ-4.03; Mθr-1.03; Fault plane solution: Mo 5.62000×10^16 NP1: ϕs 261.00000°, δ 71.00000°, λ -42.00000°. NP2: ϕs 8.00000°, δ 51.00000°, λ -155.00000°.*

*MAN **29** 15:36:16.1, 20.08N×121.21E, h31km, MS5.5*

*GCMT **29** 15:36:16.8±0.2, 19.92N±0.01×121.16E±0.01, h35km, MW5.3/116, Moment Tensor Solution. s105, c158; s116, c179; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr 0.80±.02; Mθθ -0.04±.01; Mϕϕ -0.76±.01; Mrθ 0.27±.02; Mθϕ 0.30±.01; Mϕr-0.46±.02; Best double couple: Mo 0.99300×10^17 NP1: ϕs 347.00000°, δ 29.00000°, λ 101.00000°. NP2: ϕs 154.00000°, δ 61.00000°, λ 84.00000°. Principal axes: T 0.9610, Plg 73.0000°, Azm 50.0000°; N 0.0640, Plg 5.0000°, Azm 157.0000°; P -1.0250, Plg 16.0000°, Azm 249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **29** 15:36:17.8±2.0, 19.85N±0.03×121.37E±0.09, h35km±1km, mb5.2/102 Error ellipse: s-maj=13.7km s-min=4.9km az=93.0*

*IDC **29** 15:36:18.8±1.6, 19.91N×121.47E, h39km±13km, mb4.8/46, mb1 4.8/48, mb1mx4.7/58, mbtmp5.0/48, ML4.4/2, MS4.5/36, Ms1 4.5/36, ms1mx4.5/47, Error ellipse: s-maj=11.3km s-min=7.0km az=75.0*

*KLM **29** 15:36:19.0, 19.86N×121.68E, h50km, mb5.2*

ISC 29 15:36:17.9±0.4, 19.89N±0.02×121.44E±0.03, h34km±1km, h34km:pP-P, n704, σ1§45/772, mb5.2/222, MS4.6/63, 66C-30D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
BBP	**Basco**	**0.74**	**42**	*e*P		**Pn**	**15 36 31.6**	**-0.3**
BBP				*e*S		**Sb**	**15 36 43.4**	**+1.1**
SGCP	**Mt. Cagua**	**1.74**	**161**	*e*P		**Pb**	**15 36 47.8**	**-1.4**
SGCP				*e*S		**Sb**	**15 37 12.3**	**+1.5**
APYP	**Conner**	**2.03**	**185**	*e*P		**Pn**	**15 36 51.0**	**+1.3**
APYP				*e*S		**Sb**	**15 37 18.6**	**-0.4**
SIPP	**Brgy, Tapao**	**2.17**	**205**	⇓*e*P		**Pn**	**15 36 51.5**	**-0.1**
SIPP				*e*S		**Sb**	**15 37 27.5**	**+4.5**
CVP	**Callao Caves**	**2.21**	**170**	⇓*e*P		**Pb**	**15 36 55.0**	**-2.2**
CVP				*i* S		**Sb**	**15 37 23.4**	**-0.8**
TWG	**Pinlang**	**2.93**	**353**			**Pn**	**15 37 00.5**	**-1.7**
TPUB	**Ta-pu**	**3.47**	**348**	Pn		**Pn**	**15 37 08.8**	**-0.8**
YULB	**Yu-li**	**3.48**	**358**			**Pn**	**15 37 10.2**	**+0.4**
BCP	**Baguio City**	**3.54**	**193**	⇑*i*P		**Pn**	**15 37 14.0**	**+3.3**
BCP				*i* S		**Sn**	**15 37 54.3**	**+2.7**
BOLP	**Bolinao**	**3.78**	**203**	*e*P		**Pn**	**15 37 15.1**	**+1.2**
BOLP				*e*S		**Sb**	**15 38 05.1**	**-4.2**
SMPP	**San Manuel, Pa**	**3.79**	**191**	*e*P		**Pn**	**15 37 13.8**	**-0.1**
SMPP				*e*S		**Sn**	**15 37 58.8**	**+1.3**
SMPP	**San Manuel, Pa**	**3.79**	**191**	*e*P		**Pn**	**15 37 15.0**	**+1.0**
SMPP				*e*S		**Sn**	**15 37 58.7**	**+1.3**
SSLB	**Suanglung**	**3.90**	**353**			**Pn**	**15 37 14.9**	**-0.6**
BALP	**Baler**	**4.13**	**178**	*e*P		**Pn**	**15 37 21.1**	**+2.5**
BALP				*e*S		**Sn**	**15 38 09.1**	**+3.3**
NACB	**Ninganchiao**	**4.26**	**2**			**Pn**	**15 37 19.9**	**-0.5**
HATJ	**Hateruma jima**	**4.69**	**28**	P		**Pn**	**15 37 27.0**	**+0.7**
HATJ				S		**Sn**	**15 38 18.6**	**-1.0**
JYNG	**Yonagunijimaku**	**4.75**	**17**	P		**Pn**	**15 37 27.5**	**+0.4**
JYNG				S		**Sn**	**15 38 21.8**	**+0.8**
YHNB	**Yeheng**	**4.75**	**359**			**Pn**	**15 37 29.4**	**+2.1**
YOJ	**Yonaguni jima**	**4.78**	**18**	P		**Pn**	**15 37 29.3**	**+1.8**
YOJ				S		**Sn**	**15 38 22.6**	**+0.9**
YOJ	**Yonaguni jima**	**4.78**	**18**	P		**Pn**	**15 37 28.8**	**+1.3**
YOJ	**Yonaguni jima**	**4.78**	**18**	Pn		**Pn**	**15 37 28.8**	**+1.3**
IRIF	**Iriomote-Funau**	**4.91**	**25**	P		**Pn**	**15 37 29.8**	**+0.5**
IRIF				*e*S		**Sn**	**15 38 24.4**	**-0.5**
JKRS	**Kuro-shima**	**4.94**	**28**	P		**Pn**	**15 37 30.1**	**+0.4**
JKRS				*e*S		**Sn**	**15 38 25.9**	**+0.2**
TATO	**Taipei**	**5.06**	**1**			**Pn**	**15 37 33.2**	**+1.9**
JIJ	**Ishigaki jima**	**5.11**	**29**	P		**Pn**	**15 37 32.1**	**+0.1**
JIJ				S		**Sn**	**15 38 27.9**	**-2.0**
POLP	**Polilio Island**	**5.16**	**175**	*e*P		**Pn**	**15 37 35.5**	**+2.8**
POLP				*e*S		**Sn**	**15 38 35.1**	**+4.0**
KNMB	**Chin-men Tao**	**5.36**	**329**	Pn		**Pn**	**15 37 34.3**	**-1.1**
JISG	**Ishigakijimahi**	**5.38**	**29**	P		**Pn**	**15 37 35.0**	**-0.7**
JISG				S		**Sn**	**15 38 35.0**	**-1.5**
JTJ	**Tarama**	**5.61**	**32**	P		**Pn**	**15 37 40.3**	**+1.4**
JTJ				S		**Sn**	**15 38 41.2**	**-1.0**
QZH	**Quanzhou**	**5.67**	**333**	Pn		**Pn**	**15 37 37.5**	**-2.3**
QZH				Sn		**Sn**	**15 38 35.8**	**-8.0**
QZH				LR		LR		
	comp=N,5μm,16.1s							
QZH				LR		LR		
	comp=E,2μm,15.2s							
QZH				LR		LR		
	comp=Z,5μm,16.1s							
JCNP	**Jose Panganiba**	**5.70**	**168**	*e*P		**Pn**	**15 37 41.3**	**+1.1**
JCNP				*e*S		**Sn**	**15 38 42.2**	**-2.3**
LQP	**Lukban**	**5.75**	**179**	*e*P		**Pn**	**15 37 43.1**	**+2.0**
LQP				*i* S		**Sb**	**15 39 11.2**	**+5.1**
TGY	**Tagaytay City**	**5.78**	**185**	Pn		Pn	15 37 47.9	+6.5
	92nm,0.3s,baz=270,slow=1.2,SNR=5.3							
TGY				Sn		**Sn**	**15 38 48.4**	**+1.8**
	140nm,0.3s,baz=202,slow=16,SNR=3.2							
TGY				LR		LR	15 40 16.1	
	comp=Z,6μm,21.9s,baz=42,slow=41							
JIRB	**Irabujima**	**6.01**	**34**	P		**Pn**	**15 37 45.2**	**+0.8**
JIRB				S		**Sn**	**15 38 51.4**	**-0.6**
GQP	**Guinayangan**	**6.03**	**171**	⇑*e*P		**Pn**	**15 37 49.5**	**+4.7**
GQP				*e*S		**Sn**	**15 38 54.4**	**+1.7**
JOGS	**Gusukube**	**6.08**	**36**	P		**Pn**	**15 37 47.0**	**+1.6**
LUBP	**Lubang**	**6.23**	**191**	*e*P		**Pn**	**15 37 50.2**	**+2.8**
PGP	**Puerto Galera**	**6.37**	**184**	⇓*e*P		**Pn**	**15 37 51.4**	**+1.9**
PVCP	**Virac**	**6.78**	**157**	*e*P		**Pn**	**15 37 56.5**	**+1.5**
PVCP				*e*S		**Sn**	**15 39 09.3**	**-1.8**
HKPS	**Hong Kong Po S**	**7.21**	**290**			**Pn**	**15 37 58.0**	**-3.0**
SJMP	**San Jose**	**7.40**	**182**	*e*P		**Pn**	**15 38 05.3**	**+1.8**
MCO	**Taipa Grande**	**7.69**	**288**	P		**Pn**	**15 38 04.0**	**-3.5**
CNP	**Catarman**	**7.97**	**157**	*e*P		**Pn**	**15 38 15.6**	**+4.3**
JKE	**Kume jima 2**	**8.08**	**37**	P		**Pn**	**15 38 14.2**	**+1.4**
JAGN	**Aguni-jima**	**8.54**	**38**	P		**Pn**	**15 38 20.5**	**+1.4**
ENPP	**El Nido**	**8.85**	**193**	*e*P		**Pn**	**15 38 23.8**	**+0.3**
JIH	**Iheya**	**9.30**	**39**	P		**Pn**	**15 38 29.2**	**-0.4**
JOW	**Kunigami**	**9.33**	**41**	P		**Pn**	**15 38 31.4**	**+1.3**
CNOP	**Candoni, Negro**	**10.07**	**173**	*e*P		**Pn**	**15 38 44.0**	**+3.8**
MSLP	**Maasin**	**10.25**	**161**	*e*P		Pn	15 38 53.6	+11
JTK	**Tokunoshima**	**10.44**	**40**	P		**Pn**	**15 38 45.4**	**+0.2**
JMZ	**Minamidaito 2**	**10.78**	**55**	P		**Pn**	**15 38 49.3**	**-0.5**
JMZ	**Minamidaito 2**	**10.78**	**55**	Pn		**Pn**	**15 38 50.0**	**+0.2**
QIZ	**Qiongzhong**	**10.97**	**267**	P		**Pn**	**15 38 50.0**	**-2.6**
QIZ				S		**Sn**	**15 40 52.5**	**-1.7**
QIZ				pmax		pmax		
	comp=Z,26nm,0.7s							
QIZ				LR		LR		
	comp=N,2μm,12.4s							
QIZ				LR		LR		
	comp=E,5μm,15.7s							
QIZ				LR		LR		
	comp=Z,5μm,16.7s							
QIZ	**Qiongzhong**	**10.97**	**267**	Pn		**Pn**	**15 38 51.2**	**-1.4**
SSE	**Sheshan**	**11.16**	**359**	P		**Pn**	**15 38 55.8**	**+0.8**
SSE				S		**Sn**	**15 40 57.0**	**-1.6**
SSE				pmax		pmax		
	comp=Z,8.0nm,0.6s							
SSE				pmax		pmax		
	comp=Z,100nm,4.7s							
SSE				LR		LR		
	comp=N,1μm,23.5s							
SSE				LR		LR		
	comp=E,810nm,24.7s							
NJ2	**Nanjing**	**12.33**	**350**	⇓P		**Pn**	**15 39 11.0**	**0.0**
NJ2				S		**Sn**	**15 41 29.5**	**+2.2**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
NJ2				LR		LR		
	comp=N,4μm,22.3s							
NJ2				LR		LR		
	comp=E,2μm,14.2s							
NJ2				LR		LR		
	comp=Z,5μm,20.4s							
WHN	**Wuhan**	**12.39**	**330**	⇓*i*P		**Pn**	**15 39 14.5**	**+2.6**
WHN				sP		**P**	**15 39 26.0**	**+2.6**
WHN				S		**Sn**	**15 41 37.3**	**+8.6**
WHN				pmax		pmax		
	comp=Z,82nm,1.3s							
WHN				LR		LR		
	comp=N,3μm,10.2s							
WHN				LR		LR		
	comp=E,4μm,12.6s							
WHN				LR		LR		
	comp=Z,9μm,16.2s							
DAV	**Davao City (W)**	**13.37**	**162**	Pn		**P**	**15 39 33.4**	**-1.0**
	23nm,0.3s,baz=354,slow=9.4,SNR=4.0							
DAV				LR		LR	15 45 10.8	
	comp=Z,4μm,20.0s,baz=346,slow=40							
MYLDM	**Lahad Datu**	**14.90**	**191**	P		**P**	**15 39 49.6**	**-1.9**
GYA	**Guiyang**	**15.07**	**298**	⇑P		**Pn**	**15 39 48.5**	**0.0**
GYA				pP		P	15 39 56.0	+2.6
GYA				S		**Sn**	**15 42 38.0**	**+3.6**
GYA				SS		**S**	**15 42 50.0**	**-1.0**
GYA				pmax		pmax		
	comp=Z,170nm,6.6s							
GYA				LR		LR		
	comp=N,2μm,17.8s							
GYA				LR		LR		
	comp=E,2μm,15.7s							
GYA				LR		LR		
	comp=Z,3μm,15.8s							
JNU	**Nakatsue**	**15.64**	**31**	Pn		**Pn**	**15 39 57.1**	**+1.3**
	0.8nm,0.3s,baz=156,slow=4.6,SNR=5.1							
JNU				LR		LR	15 46 04.1	
	comp=Z,3μm,21.1s,baz=198,slow=38							
JNU	**Nakatsue**	**15.64**	**31**	P		**Pn**	**15 39 57.1**	**+1.3**
JNU	**Nakatsue**	**15.64**	**31**	P		**P**	**15 39 59.6**	**-0.1**
UBPT	**Khong Chiam**	**15.90**	**256**	P		**P**	**15 40 04.0**	**+1.5**
	24nm,2.1s							
TIA	**Tai'an**	**16.69**	**348**	P		**Pn**	**15 40 10.0**	**+0.8**
TIA				pmax		pmax		
	comp=Z,39nm,1.7s							
TIA				pmax		pmax		
	comp=Z,480nm,6.7s							
TIA				LR		LR		
	comp=N,2μm,18.2s							
TIA				LR		LR		
	comp=E,2μm,17.0s							
TIA				LR		LR		
	comp=Z,4μm,18.2s							
NONG	**Nongkai**	**17.40**	**267**	P		**P**	**15 40 20.0**	**+0.8**
	8μm66nm,1.5s							
JMN	**Monobe**	**17.68**	**36**	P		**P**	**15 40 23.2**	**+1.0**
XAN	**Xi'an**	**17.95**	**324**	P		**P**	**15 40 25.0**	**-0.2**
XAN				pP		pwP	15 40 36.5	-1.3
XAN				pmax		pmax		
	comp=Z,25nm,1.0s							
XAN	**Xi'an**	**17.95**	**324**	P		**P**	**15 40 25.1**	**-0.2**
XAN				pmax		pmax		
	comp=Z,93nm,1.3s							
XAN	**Xi'an**	**17.95**	**324**			**P**	**15 40 25.1**	**-0.1**
KMI	**Kunming**	**18.04**	**290**	⇓*e*P		**P**	**15 40 28.8**	**+2.4**
KMI				S		**S**	**15 43 49.3**	**-2.5**
KMI				sS		sS	15 43 57.0	-7.1
KMI				pmax		pmax		
	comp=Z,12nm,0.9s							
KMI				pmax		pmax		
	comp=Z,280nm,5.1s							
KMI				LR		LR		
	comp=Z,2μm,18.4s							
KMI				LR		LR		
	comp=Z,3μm,17.6s							
KMI				LR		LR		
	comp=Z,3μm,16.3s							
JHS	**Saijyo**	**18.25**	**32**	P		**Pn**	**15 40 29.7**	**+1.2**
KSAR	**Wonju Array Be**	**18.37**	**16**	P		**P**	**15 40 29.7**	**0.0**
KSAR	**Wonju Array Be**	**18.37**	**16**	P		**P**	**15 40 29.7**	**0.0**
KSRS	**Korea Array**	**18.39**	**17**	P		**Pn**	**15 40 30.4**	**+0.2**
	comp=Z,2.8nm,0.3s,baz=200,slow=12,SNR=109							
KSRS				PcP		**PcP**	**15 44 59.9**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=197,slow=2.9,SNR=8.2							
KSRS				LR		LR	15 48 23.8	
	comp=Z,2μm,19.0s,baz=184,slow=40							
KS19	**Wonju Array Si**	**18.42**	**16**	P		**P**	**15 40 30.0**	**-0.3**
TOLI2	**Tolitoli**	**18.68**	**182**	P		**Pn**	**15 40 34.0**	**+0.2**
CHAI	**Chaiyaphum**	**18.93**	**261**	P		**Pn**	**15 40 37.0**	**+0.1**
	comp=Z,832nmcomp=Z,52nm,1.0s							
DL2	**Dalian**	**18.95**	**0**	⇓*i*P		**Pn**	**15 40 37.5**	**+0.6**
DL2				S		**S**	**15 44 09.8**	**+0.3**
DL2				pmax		pmax		
	comp=Z,38nm,0.8s							
DL2				pmax		pmax		
	comp=Z,440nm,10.9s							
DL2				LR		LR		
	comp=Z,1μm,14.9s							
DL2				LR		LR		
	comp=Z,1μm,15.7s							
DL2				LR		LR		
	comp=Z,2μm,16.5s							
GTOI	**Gorontalo**	**19.20**	**175**	P		**P**	**15 40 37.1**	**-1.9**
	comp=Z,496nmcomp=Z,41nm,0.8s							
MRSI	**Marisa**	**19.30**	**178**	P		**Pn**	**15 40 41.0**	**-0.3**
	comp=Z,811nmcomp=Z,72nm,0.9s							
CD2	**Chengdu**	**19.35**	**308**	⇓*i*P		**Pn**	**15 40 41.8**	**-0.1**
CD2				pP		pP	15 40 49.8	+1.3
CD2				sP		sP	15 40 54.8	+1.6
CD2				S		**S**	**15 44 13.0**	**-4.8**
CD2				sS		sS	15 44 26.0	-4.5
CD2				SS		**SnSn**	**15 44 40.3**	**+8.0**
CD2				pmax		pmax		
	comp=Z,60nm,0.9s							
CD2				pmax		pmax		
	comp=Z,590nm,8.3s							
CD2				LR		LR		
	comp=Z,4μm,23.0s							
CD2				LR		LR		
	comp=Z,4μm,16.7s							
CD2				LR		LR		
	comp=Z,6μm,16.2s							
KMSI	**Cibinong**	**19.36**	**172**	P		**P**	**15 40 41.1**	**+0.3**
	comp=Z,1μmcomp=Z,160nm,0.8s							
TIY	**Taiyuan**	**19.41**	**338**	*e*P		**Pn**	**15 40 43.0**	**+0.4**
TIY				pP		**pP**	**15 40 51.0**	**+1.7**
TIY				sP		**sP**	**15 40 56.3**	**+2.0**
TIY				S		**S**	**15 44 14.5**	**-4.5**
TIY				sS		**sS**	**15 44 28.3**	**-4.6**
TIY				LR		LR		
	comp=Z,2μm,14.5s							
TIY				LR		LR		
	comp=Z,1μm,13.1s							
TIY				LR		LR		
	comp=Z,2μm,17.3s							
SRAK	**Srakaew**	**19.44**	**256**	P		**P**	**15 40 37.8**	**-3.9**
	comp=Z,5μmcomp=Z,342nm,1.1s							
MPSI	**Mapaga**	**19.49**	**185**	P		**P**	**15 40 42.0**	**-0.2**
	comp=Z,524nmcomp=Z,26nm,0.8s							
SBUM	**Sibu**	**19.54**	**209**	P		**Pn**	**15 40 44.1**	**0.0**
SBUM	**Sibu**	**19.54**	**209**	P		**Pn**	**15 40 44.0**	**-0.1**
JWT	**Wachi**	**19.67**	**36**	P		**Pn**	**15 40 46.4**	**+0.8**
JWT	**Wachi**	**19.67**	**36**	P		**Pn**	**15 40 47.1**	**+1.5**
JWT				IAmb		IAmb	15 40 48.2	
	comp=Z,96nm,1.0s							
JIE	**Ise**	**19.79**	**40**	P		**

comp=Z,164nm,0.9s
PATY Pattaya 20.90 254 P Pn 15 41 02.0 +1.8
comp=Z,41nm,1.1s
JGF Kuroka 21.01 39 P **P** **15 41 00.5 +1.9**
JGF Kuroka 21.01 39 P **P** **15 41 00.6 +2.0**
JGF IAmb IAmb 15 41 02.0
comp=Z,177nm,1.0s
CM34 Chiang Mai Arr 21.05 271 P **P** **15 40 59.0 -0.2**
CM35 Chiang Mai Arr 21.07 270 P **P** **15 40 59.0 -0.4**
CM36 Chiang Mai Arr 21.14 270 P **P** **15 41 01.0 +0.8**
CMMT Chiang Mai 21.25 271 P **P** **15 41 01.9 +0.6**
comp=Z,16nm,1.0s
CM33 Chiang Mai Arr 21.25 271 P **P** **15 41 01.0 -0.3**
CM09 Chiang Mai Arr 21.25 270 P **P** **15 41 02.5 +1.2**
comp=Z,20nm,0.8s
CM04 Chiang Mai Arr 21.27 270 P **P** **15 41 02.7 +1.2**
comp=Z,181nmcomp=Z,20nm,1.1s
CM01 Chiang Mai Arr 21.28 270 P **P** **15 41 02.0 +0.3**
comp=Z,191nmcomp=Z,18nm,0.9s
CM02 Chiang Mai Arr 21.29 270 P **P** **15 41 03.0 +1.3**
comp=Z,164nmcomp=Z,22nm,1.0s
CM31 Chiang Mai Arr 21.29 270 P **P** **15 41 03.3 +1.5**
comp=Z,4µmcomp=Z,438nm,0.9s
CMAR Chiang Mai Arr 21.29 270 P **P** **15 41 02.8 +1.0**
comp=Z,11nm,0.9s,baz=71,slow=9.3,SNR=52
CMAR PcP **PcP** **15 45 07.0 +1.2**
comp=Z,6.2nm,0.8s,baz=42,slow=0.4,SNR=27
CMAR ScP **ScP** **15 48 39.5 -0.9**
comp=Z,2.2nm,0.9s,baz=26,slow=0.5,SNR=11
CMAR LR LR 15 49 31.6
comp=Z,1µm,19.2s,baz=132,slow=37
CMAR Chiang Mai Arr 21.29 270*ce*P **P** **15 41 02.4 +0.6**
CMAR pmax pmax
comp=Z,11nm,0.9s
KSM Kuching 21.30 212 P **P** **15 41 03.2 +1.4**
KSM IAmb IAmb 15 41 14.0
comp=Z,76nm,1.1s
CM05 Chiang Mai Arr 21.30 270 P **P** **15 41 03.0 +1.1**
comp=Z,191nmcomp=Z,18nm,1.1s
CM15 Chiang Mai Arr 21.31 270 P **P** **15 41 03.0 +1.1**
comp=Z,173nmcomp=Z,20nm,1.0s
CM13 Chiang Mai Arr 21.33 270 P **P** **15 41 03.3 +1.1**
comp=Z,130nmcomp=Z,17nm,1.0s
CM32 Chiang Mai Arr 21.36 270 P **P** **15 41 03.0 +0.5**
UTHA Uthaitani 21.38 262 P **P** **15 41 04.1 +1.4**
comp=Z,395nmcomp=Z,46nm,0.9s
JGN Niukaw 21.42 37 P **P** **15 41 04.7 +1.6**
BKB Balikpapan 21.49 192 P **P** **15 41 03.9 +0.1**
comp=Z,2µmcomp=Z,164nm,1.1s
MTKI Muara Teweh, K 21.68 198 P **P** **15 41 07.2 +1.3**
comp=Z,157nm,0.7s
JOD2 Odawara 2 21.84 42 P **P** **15 41 08.8 +1.3**
PHET Kaeng Krachan 22.03 255 P **P** **15 41 11.0 +1.3**
comp=Z,416nmcomp=Z,36nm,1.0s
MAJO Matsushiro 22.16 38 *i* P **P** **15 41 11.3 +0.4**
MAJO pmax pmax
comp=Z,63nm,1.2s
MAJO Matsushiro 22.16 38 P **P** **15 41 11.0 +0.1**
MAJO IAmb IAmb 15 41 22.8
comp=Z,70nm,1.1s
MAT Matsushiro 22.16 38 P **P** **15 41 11.6 +0.7**
MAT S **S** **15 45 16.0 +2.8**
MAT Matsushiro 22.16 38 P **P** **15 41 11.9 +1.0**
MJAR Matsushiro Arr 22.16 38 P **P** **15 41 11.3 +0.3**
comp=Z,36nm,1.0s,baz=224,slow=7.5,SNR=52
MJAR Matsushiro Arr 22.16 38 P **P** **15 41 11.0 +0.1**
MJAR pmax pmax
comp=Z,41nm,1.1s
MJAR Matsushiro Arr 22.16 38 P **P** **15 41 11.0 +0.1**
JRY Ryogami san 22.21 40 P **P** **15 41 11.9 +0.4**
MHMT Maesarieng 22.28 270 P **P** **15 41 14.8 +2.3**
comp=Z,839nmcomp=Z,26nm,0.9s
LZH Lanzhou 22.34 320 ⇑P **P** **15 41 14.0 +1.0**
LZH pP pwP 15 41 25.0 -0.7
LZH sP sP 15 41 29.3 +3.6
LZH PP **PnPn** **15 41 38.5 +2.1**
LZH S **S** **15 45 12.3 -4.5**
LZH sS pS 15 45 25.0 -1.8
LZH SS **SnSn** **15 45 56.0 +10**
LZH pmax pmax
comp=Z,77nm,1.2s
LZH pmax pmax
comp=Z,570nm,5.4s
LZH LR LR
comp=Z,2µm,11.4s
LZH LR LR
comp=Z,2µm,11.0s
LZH LR LR
comp=Z,3µm,13.2s
HHC Hu-ho-hao-te 22.53 340 *e*P **P** **15 41 15.5 +0.6**
HHC S **S** **15 45 15.5 -4.5**
HHC sS sS 15 45 32.5 -1.6
HHC pmax pmax
comp=Z,110nm,1.1s
HHC pmax pmax
comp=Z,780nm,8.3s
HHC LR LR
comp=Z,2µm,16.2s
HHC LR LR
comp=Z,1µm,15.3s
HHC LR LR
comp=Z,3µm,14.5s
SWI Sorong 22.77 154 P **P** **15 41 18.3 +0.8**
comp=Z,701nmcomp=Z,67nm,0.9s
BTO Baotou 22.84 337 *e*P **P** **15 41 18.3 +0.1**
BTO S **S** **15 45 25.5 +0.1**
TTSI Tana Toraja 22.85 184 P **P** **15 41 21.6 +3.2**
comp=Z,703nmcomp=Z,55nm,0.8s
JYT Yasato 23.14 41 P **P** **15 41 18.9 -2.4**
JYT IAmb IAmb 15 41 20.8
comp=Z,81nm,1.1s
JSD Sado 23.25 35 P **P** **15 41 21.8 -0.5**
GUMO Guam 23.28 102 P **P** **15 41 23.5 +0.7**
comp=Z,127nm,1.0s,baz=238,slow=11,SNR=4.0
GUMO LR LR 15 50 27.6
comp=Z,1µm,19.1s,baz=286,slow=36
KBKI Kotabaru 23.62 193 P **P** **15 41 26.7 +0.6**
comp=Z,1µmcomp=Z,37nm,0.9s
NLAI Namlea 23.65 166 P **P** **15 41 28.7 +2.4**
comp=Z,1µmcomp=Z,117nm,0.9s
CN2 Changchun 24.07 7 *e*P **P** **15 41 27.5 -2.6**
CN2 pP pP 15 41 39.0 0.0
CN2 sP sP 15 41 44.5 +1.5
CN2 PP **PnPn** **15 42 02.8 +2.9**
CN2 S **S** **15 45 38.3 -7.0**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,250nm,4.0s
CN2 LR LR
comp=Z,2µm,17.0s
CN2 LR LR
comp=Z,1µm,17.0s
CN2 LR LR
comp=Z,3µm,18.0s
BBKI Banjar Baru 24.10 196 P **P** **15 41 32.0 +1.5**
comp=Z,1µmcomp=Z,98nm,1.0s
BNSI Bone 24.18 183 P **P** **15 41 30.2 -1.1**
comp=Z,53nm,1.6s
MSAI Masohi 24.24 162 P **P** **15 41 31.2 -0.6**
comp=Z,554nmcomp=Z,36nm,0.9s
TRTT Trang 24.24 243 P **P** **15 41 33.3 +1.5**
SURT Suratani 24.44 247 P P 15 41 41.5 +7.8
JYA Atsumi 24.44 36 P **P** **15 41 33.6 0.0**
JMM Marumori 24.57 39 P **P** **15 41 33.8 -0.9**
JMM Marumori 24.57 39 P **P** **15 41 34.1 -0.6**
VLA Vladivostok 24.77 18 *i* P **P** **15 41 36.2 -0.2**
VLA pmax pmax
comp=Z,85nm,1.0s
KAPI Kappang 24.81 184 P **P** **15 41 37.7 +0.7**
comp=Z,26nm,0.8s,baz=357,slow=11,SNR=11
KAPI LR LR 15 51 42.1
comp=Z,1µm,21.5s,baz=356,slow=37
KAPI Kappang 24.81 184 P **P** **15 41 34.1 -2.9**
KAPI pmax pmax
comp=Z,38nm,1.1s
KAPI Kappang 24.81 184 P **P** **15 41 34.1 -2.9**
MYKOM Kota Tinggi 24.89 226 P **P** **15 41 34.6 -3.1**
MYKOM Kota Tinggi 24.89 226 P **P** **15 41 39.0 +1.2**
KULM Kulim 24.89 237 P **P** **15 41 38.0 +0.1**
FAKI Fak Fak 25.03 154 P **P** **15 41 39.5 +0.4**
comp=Z,585nmcomp=Z,45nm,1.0s
FAKI Fak Fak 25.03 154 P **P** **15 41 37.4 -1.7**
FAKI IAmb IAmb 15 41 41.0
comp=Z,94nm,1.4s
IPM Ipoh 25.10 235 P **P** **15 41 40.0 +0.2**

MDJ Mudanjiang 25.57 14 P **P** **15 41 43.3 -0.4**
MDJ pP pP 15 41 52.8 +0.3
MDJ S **S** **15 46 11.8 +2.5**
MDJ sS sS 15 46 25.3 +1.2
MDJ PcS **PcS** **15 48 51.3 -3.4**
MDJ pmax pmax
comp=Z,110nm,1.1s
MDJ LR LR
comp=Z,2µm,18.4s
MDJ LR LR
comp=Z,900nm,18.8s
MDJ LR LR
comp=Z,3µm,19.2s
BNDI Bandanaira 25.65 160 P **P** **15 41 44.4 -0.3**
comp=Z,2µmcomp=Z,103nm,0.9s
USA0B Ussuriysk Arra 25.79 18 *i* P **P** **15 41 45.4 -0.3**
USRK Ussuriysk Ar. 25.79 18 P **P** **15 41 45.9 +0.2**
comp=Z,38nm,0.9s,baz=207,slow=8.5,SNR=44
USRK LR LR 15 52 06.7
comp=Z,817nm,19.5s,baz=169,slow=37
USRK Ussuriysk Ar. 25.79 18 P **P** **15 41 45.8 +0.1**
BSSI Bau Bau, Buton 25.89 182 P **P** **15 41 45.6 -1.2**
comp=Z,22nm,0.8s
JOM Ohasama 25.94 37 P **P** **15 41 46.6 -0.5**
PPBI Pangkal Pinang 26.57 216 P **P** **15 41 55.5 +2.5**
comp=Z,1µmcomp=Z,37nm,1.2s
JTM Tenmabayashi 26.73 35 P **P** **15 41 54.0 -0.2**
GTA Gaotai 26.92 321 ⇑P **P** **15 41 56.5 +0.3**
GTA pP pP 15 42 04.3 -0.7
GTA sP sP 15 42 08.0 -1.3
GTA PcP **PcP** **15 45 18.8 +1.1**
GTA S **S** **15 46 33.3 +2.2**
GTA sS sS 15 46 46.3 +0.4
GTA ScP **ScP** **15 48 56.3 +0.8**
GTA PcS **PcS** **15 48 58.5 -0.7**
GTA ScS **ScS** **15 52 44.5 -2.0**
GTA pmax pmax
comp=Z,13nm,1.5s
GTA pmax pmax
comp=Z,140nm,5.5s
GTA LR LR
comp=Z,1µm,18.2s
GTA LR LR
comp=Z,1µm,20.0s
GTA LR LR
comp=Z,1µm,17.8s
JOT Ohata 27.15 34 P **P** **15 41 57.9 -0.1**
JSH Shimam 27.58 31 P **P** **15 42 01.6 -0.2**
PSI Prapat 27.78 235 P **P** **15 42 05.2 +1.1**
comp=Z,3.6nm,0.4s,baz=360,slow=3.9,SNR=7.6
PSI PcP **PcP** **15 45 20.2 0.0**
comp=Z,11nm,0.8s,baz=2.7,slow=1.1,SNR=6.3
PSI ScP **ScP** **15 48 57.5 -1.0**
comp=Z,12nm,1.1s,baz=177,slow=2.1,SNR=6.6
PSI LR LR 15 52 38.5
comp=Z,1µm,20.4s,baz=90,slow=35
TEY Ternei 28.05 23⇑ *e*P **P** **15 42 05.2 -0.8**
TEY pmax pmax
comp=Z,10.0nm,2.4s
MMRI Maumere 28.36 178 P **P** **15 42 08.7 -0.3**
comp=Z,925nmcomp=Z,85nm,0.8s
JEW Eniwo 28.41 32 P **P** **15 42 09.5 +0.2**
JEW Eniwo 28.41 32 P **P** **15 42 10.1 +0.8**
PLAI Plampang 28.77 188 P **P** **15 42 12.9 +0.3**
comp=Z,40nm,1.2s
TWSI Taliwang, Sumb 28.80 189 P **P** **15 42 14.0 +1.1**
comp=Z,361nmcomp=Z,26nm,1.1s
LSA Lhasa 29.10 296 P **P** **15 42 17.8 +1.7**
LSA pmax pmax
comp=Z,37nm,1.0s
JAY Jayapura 29.22 138 LR LR 15 51 44.1
comp=Z,999nm,21.2s,baz=336,slow=32
PWJI Pagerwojo 29.32 200 P **P** **15 42 18.0 +0.5**
comp=Z,41nm,1.0s
WOJI Wonogiri, Jawa 29.43 202 P **P** **15 42 18.9 +0.3**
comp=Z,51nm,1.0s
WOJI pP **pP** **15 42 28.4 +0.6**
comp=Z,51nm,1.0s
KLSI 29.44 216 P **P** **15 42 22.2 +3.6**
comp=Z,11nm,1.1s
SOEI Soe 29.59 174 P **P** **15 42 21.1 +1.0**
comp=Z,41nm,0.8s
SOEI Soe 29.59 174 P **P** **15 42 21.1 +1.0**
LEM Lembang 29.83 208 P **P** **15 42 23.4 +1.1**
comp=Z,13nm,0.5s,baz=299,slow=19,SNR=1.5
LEM LR LR 15 54 14.9
comp=Z,1µm,21.5s,baz=54,slow=36
ASAJ Asahikawa 29.92 31 P **P** **15 42 22.9 +0.3**
comp=Z,30nm,1.0s,baz=230,slow=10,SNR=30
ASAJ Asahikawa 29.92 31 P **P** **15 42 23.2 +0.6**
ASAJ Asahikawa 29.92 31 P **P** **15 42 23.7 +1.1**
ASAJ pmax pmax
comp=Z,53nm,1.1s
JKA Kamikawa-asahi 29.92 31 P **P** **15 42 23.7 +1.1**
JKA IAmb IAmb 15 42 29.0
comp=Z,53nm,1.1s
BATI Baumata 29.99 176 P **P** **15 42 23.0 -0.5**
comp=Z,40nm,0.7s,baz=335,slow=1.9,SNR=12
BATI PcP **PcP** **15 45 25.6 +0.1**
comp=Z,27nm,0.9s,baz=196,slow=3.7,SNR=3.9
BATI LR LR 15 57 15.3
comp=Z,292nm,18.6s,baz=348,slow=42
BATI Baumata 29.99 176 P **P** **15 42 22.4 -1.1**
comp=Z,38nm,0.8s
LWLI Liwa 30.08 216 P **P** **15 42 25.9 +1.4**
comp=Z,43nm,0.7s
JMP Maruseppu 30.22 32 P **P** **15 42 26.5 +1.2**
ULN Ulaanbaatar 30.25 341*ce*P **P** **15 42 23.6 -2.1**
ULN pmax pmax
comp=Z,80nm,1.7s
ULN Ulaanbaatar 30.25 341 P **P** **15 42 22.1 -3.5**
ULN IAmb IAmb 15 42 28.4
comp=Z,62nm,1.3s
KASI Kota Agung 30.26 215 P **P** **15 42 26.9 +1.0**
KLR Kul'dur 30.42 13 P **P** **15 42 27.0 +0.1**
comp=Z,20nm,0.8s,baz=220,slow=8.2,SNR=33
KLR ScP **ScP** **15 49 05.2 -0.8**
comp=Z,1.7nm,0.7s,baz=252,slow=1.9,SNR=4.8
KLR LR LR 15 55 40.8
comp=Z,2µm,20.4s,baz=197,slow=38
KLR Kul'dur 30.42 13*ce*P **P** **15 42 24.2 -2.8**
KLR pmax pmax
comp=Z,41nm,1.3s
SONM Songino Array 30.43 340 P **P** **15 42 27.5 +0.3**
comp=Z,17nm,0.8s,baz=159,slow=9.3,SNR=28
SONM PcP **PcP** **15 45 24.2 -2.1**
comp=Z,4.4nm,1.1s,baz=169,slow=1.5,SNR=3.2
SONM LR LR 15 56 07.5
comp=Z,2µm,18.6s,baz=158,slow=39
SONM Songino Array 30.43 340 P **P** **15 42 27.6 +0.3**
SONM pmax pmax
comp=Z,19nm,0.9s
SONM Songino Array 30.43 340 P **P** **15 42 27.6 +0.3**
JWK2 Keihoku 30.48 29 P **P** **15 42 27.9 +0.3**
YSS Yuzh-Sakhalins 32.12 28 *e*P **P** **15 42 41.9 -0.1**
YSS *e* 15 42 48.8
YSS *e**SP **sP** **15 42 56.8 +2.2**
YSS *e*S **S** **15 47 51.1 -1.0**
YSS pmax pmax
comp=Z,110nm,1.1s
YSS MLR MLR
comp=N,500nm,19.0s
YSS MLR MLR
comp=Z,1µm,19.0s
YSS MLR MLR
comp=E,800nm,14.0s
RAMN Ramite 32.65 289 *e*P **P** **15 42 47.8 +0.6**
GRNR Gornyy 33.01 18⇑ *i*P **P** **15 42 49.0 -0.8**
GRNR pmax pmax
comp=N,3.0nm,1.2s
GRNR pmax pmax
comp=E,6.0nm,1.2s
GRNR pmax pmax
comp=Z,5.0nm,1.1s
GRNR MLR MLR
comp=E,210nm,19.0s
GRNR MLR MLR
comp=N,350nm,20.0s
GRNR MLR MLR
comp=Z,590nm,19.0s
GUN Gumba 33.38 291 *e*P **P** **15 42 54.2 +0.5**
comp=Z,50nm,0.8s
KUR Kuril'sk 33.41 35*d* *i*P **P** **15 42 54.2 +1.0**
KUR SSS SSS 15 50 41.2
KUR pmax pmax
comp=Z,278nm,1.2s

KUR MLR MLR
comp=Z,899nm,17.0s
KUR MLR MLR
comp=N,1µm,21.0s
ZAK Zakamensk 33.66 339 *e*P **P** **15 42 55.0 -0.6**
ZAK pmax pmax
comp=Z,21nm,1.2s
PKI Pulchoki 33.76 290 *e*P **P** **15 42 56.9 -0.1**
comp=Z,26nm,1.0s
PKIN Phulchoki 33.78 290 *e*P **P** **15 42 57.2 +0.1**
MTN Manton Dam 33.90 163 P **P** **15 42 55.5 -2.3**
DMN Daman 34.03 290 *e*P **P** **15 42 58.8 -0.5**
ZEA Zeya 34.08 6 *e*P **P** **15 42 58.6 -0.4**
ZEA pmax pmax
comp=E,20nm,1.0s
ZEA pmax pmax
comp=N,40nm,1.1s
ZEA pmax pmax
comp=Z,70nm,1.0s
ZEA MLR MLR
comp=N,1µm,13.0s
ZEA MLR MLR
comp=Z,1µm,19.0s
GKN Gorkha 34.48 291 *e*P **P** **15 43 03.1 0.0**
TLY Talaya 34.66 340 P **P** **15 43 04.3 +0.3**
comp=Z,14nm,0.8s,baz=198,slow=3.3,SNR=13
TLY LR LR 15 58 43.5
comp=Z,1µm,18.6s,baz=136,slow=39
TLY Talaya 34.66 340*c* *i*P **P** **15 43 03.4 -0.7**
TLY *e*PPP PPP 15 44 25.4
TLY *e*S **S** **15 48 30.8 -0.7**
TLY pmax pmax
comp=Z,126nm,1.5s
TLY MLR MLR
comp=Z,2µm,13.0s
TYV Tymovskoe 35.16 23 *e*P **P** **15 43 09.1 +0.8**
TYV *e*S **S** **15 48 42.7 +3.6**
TYV pmax pmax
comp=Z,23nm,1.1s
TYV pmax pmax
comp=Z,400nm,3.5s
TYV smax smax
comp=N,400nm,5.0s
TYV MLR MLR
comp=Z,900nm,20.0s
DANN Dangsing 35.29 291 *e*P **P** **15 43 10.0 -0.2**
KOLN Koldanda 35.38 290 *e*P **P** **15 43 10.9 0.0**
comp=Z,60nm,1.3s
MOY Mondy 35.53 338 *e*P **P** **15 43 12.2 +0.5**
MOY pmax pmax
comp=Z,109nm,2.4s
PYUN Piuthan 35.94 291 *e*P **P** **15 43 15.9 +0.2**
comp=Z,42nm,0.9s
KNRA Kununurra 36.07 168 P **P** **15 43 14.9 -1.6**
KNRA IAmb IAmb 15 43 18.8
comp=Z,21nm,0.7s
WMQ Urumqi 36.89 318 *e*P **P** **15 43 24.0 +0.6**
WMQ pP pP 15 43 32.5 +0.1
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ pmax pmax
comp=Z,330nm,8.1s
WMQ LR LR
comp=Z,1µm,17.7s
WMQ LR LR
comp=Z,2µm,12.7s
WMQ LR LR
comp=Z,1µm,20.5s
FITZ Fitzroy Crossi 37.98 173 P **P** **15 43 32.2 -0.5**
comp=Z,9.2nm,1.0s,baz=4.7,slow=12,SNR=11
FITZ Fitzroy Crossi 37.98 173 P **P** **15 43 31.3 -1.4**
BOD Bodaibo 38.27 354 *e*P **P** **15 43 33.3 -1.5**
BOD pmax pmax
comp=Z,20nm,2.5s
KRVT Keravat (AS076 38.50 125 P **P** **15 43 38.2 +1.0**
comp=Z,28nm,0.9s,baz=315,slow=1.4,SNR=3.9
KRVT LR LR 15 56 29.6
comp=Z,1µm,21.9s,baz=314,slow=32
PMG Port Moresby 38.59 137 P **P** **15 43 38.2 +0.3**
comp=Z,16nm,0.9s,baz=328,slow=4.2,SNR=5.2
PMG LR LR 15 58 40.8
comp=Z,307nm,20.5s,baz=268,slow=35
ZSN Zaisan 40.42 321 *e*P **P** **15 43 53.3 +0.4**
comp=Z,31nm,2.7s,baz=321
ZSN Zaisan 40.42 321 *e*P **P** **15 43 53.3 +0.4**
ZSN pmax pmax
comp=Z,31nm,2.7s
PSA00 Pilbara Seismi 41.24 182 P **P** **15 43 58.9 -0.9**
PSA00 IAmb IAmb 15 44 00.1
comp=Z,49nm,0.8s
PSA00 Pilbara Seismi 41.24 182 P **P** **15 43 58.7 -1.1**
PSA00 IAmb IAmb 15 44 03.2
comp=Z,23nm,0.8s
WB0 Warramunga Arr 41.41 161 P **P** **15 44 00.1 -1.2**
WB0 IAmb IAmb 15 44 01.5
comp=Z,59nm,0.9s
PALK Pallekele 41.41 258 LR LR 16 01 15.1
comp=Z,650nm,19.6s,baz=138,slow=36
WRAB Tennant Creek 41.55 162*ce*P **P** **15 44 00.8 -1.7**
WRAB pmax pmax
comp=Z,106nm,1.3s
WRAB Tennant Creek 41.55 162 P **P** **15 44 01.2 -1.3**
WRAB IAmb IAmb 15 44 02.8
comp=Z,74nm,0.9s
WRA Warramunga Arr 41.56 162 P **P** **15 44 01.6 -0.9**
comp=Z,76nm,1.0s,baz=344,slow=9.0,SNR=232
WRA PcP **PcP** **15 45 59.5 0.0**
comp=Z,6.9nm,0.8s,baz=339,slow=3.3,SNR=6.6
WRA S **S** **15 50 11.1 -5.2**
comp=Z,9.8nm,1.0s,baz=343,slow=15,SNR=14
WRA LR LR 16 01 37.1
comp=Z,232nm,20.7s,baz=25,slow=36
WRA Warramunga Arr 41.56 162 P **P** **15 44 00.7 -1.8**
WRA pmax pmax
comp=Z,5.0nm,1.0s
WRA Warramunga Arr 41.56 162 P **P** **15 44 00.7 -1.8**
WB2 Warramunga Arr 41.56 162 P **P** **15 44 01.3 -1.2**
WB2 IAmb IAmb 15 44 02.8
comp=Z,81nm,0.9s
WR0 Warramunga Arr 41.63 161 P **P** **15 44 02.0 -1.2**
MK31 Makanchi Array 41.65 319*ce*P **P** **15 44 04.2 +1.1**
MK31 Makanchi Array 41.65 319 P **P** **15 44 03.5 +0.4**
MKAR Makanchi Array 41.65 319 P **P** **15 44 03.7 +0.6**
comp=Z,22nm,0.9s,baz=108,slow=10,SNR=52
MKAR PcP **PcP** **15 45 59.5 0.0**
comp=Z,7.1nm,0.8s,baz=104,slow=5.1,SNR=4.3
MKAR LR LR 16 04 28.1
comp=Z,581nm,18.2s,baz=116,slow=41
MKAR Makanchi Array 41.65 319 P **P** **15 44 03.2 +0.1**
MKAR 15 45 59.8
MKAR Makanchi Array 41.65 319 P **P** **15 44 03.2 +0.1**
MKAR **PcP** **15 45 59.8 +0.3**
BHK Bhakra 41.91 295 *ex* x 15 44 07.3
SHLS Shalkode 42.06 313 *e*P **P** **15 44 05.1 -1.5**
comp=Z,37nm,1.5s,baz=313
SHLS *e*S **S** **15 50 21.2 -2.6**
baz=313
SHLS Shalkode 42.06 313 *e*P **P** **15 44 05.0 -1.5**
SHLS *e*S **S** **15 50 21.1 -2.6**
SHLS pmax pmax
comp=Z,37nm,1.5s
YAK Yakutsk 42.49 6 P **P** **15 44 09.0 -0.7**
comp=Z,37nm,0.7s,baz=162,slow=2.9,SNR=8.8
YAK Yakutsk 42.49 6 *e*P **P** **15 44 08.0 -1.6**
YAK *e**PP **pP** **15 44 15.9 -2.9**
YAK *e* 15 46 00.9
YAK *e*S **S** **15 50 28.9 -0.4**
YAK *e**SS **sS** **15 50 46.8 +2.4**
YAK *e*SS **SS** **15 53 33.6 -5.7**
YAK *e* 15 54 07.8
YAK pmax pmax
comp=Z,73nm,0.9s
YAK pmax pmax
comp=E,14nm,1.3s
YAK pmax pmax
comp=N,32nm,1.1s
YAK pmax pmax
comp=Z,312nm,3.5s
YAK pmax pmax
comp=N,177nm,3.3s
YAK pmax pmax
comp=E,225nm,3.5s
YAK smax smax
comp=E,227nm,2.9s
YAK smax smax
comp=N,133nm,3.0s

YAK MLR MLR
comp=Z,1µm,20.0s
YAK MLR MLR
comp=N,702nm,20.0s
YAK MLR MLR
comp=E,472nm,19.0s
YAK Yakutsk 42.49 6 P **P** **15 44 08.0 -1.6**
H11S3 WAKE ISLAND Hy 42.66 84 T T 16 29 49.4
baz=280,slow=74,SNR=60
H11N1 WAKE ISLAND Hy 42.66 82 T T 16 29 54.6
baz=278,slow=75,SNR=100
H11N2 WAKE ISLAND Hy 42.67 82 T T 16 29 55.4
baz=278,slow=75,SNR=72
H11S1 WAKE ISLAND Hy 42.67 84 T T 16 29 55.6
baz=280,slow=74,SNR=72
H11S2 WAKE ISLAND Hy 42.68 84 T T 16 29 56.0
baz=280,slow=74,SNR=72
H11N3 WAKE ISLAND Hy 42.68 82 T T 16 30 03.4
baz=278,slow=75,SNR=61
KPKS Kokpek 42.70 313⇑ *i*P **P** **15 44 12.4 +0.6**
comp=E,33nm,1.4s,baz=313
KPKS Kokpek 42.70 313*c i*P **P** **15 44 12.3 +0.6**
KPKS pmax pmax
comp=Z,33nm,1.4s
SATY Saty 42.75 313⇑ *i*P **P** **15 44 13.2 +1.0**
comp=Z,48nm,2.6s,baz=312
SATY Saty 42.75 313*c i*P **P** **15 44 13.2 +1.0**
SATY pmax pmax
comp=Z,48nm,2.6s
PEA0B Petropavlovsk- 43.34 31*ce*P **P** **15 44 17.6 +1.0**
PEA0B Petropavlovsk- 43.34 31 P **P** **15 44 16.5 -0.2**
PEA0B IAmb IAmb 15 44 19.4
comp=Z,65nm,0.9s
PETK Petropavlovsk- 43.34 31 P **P** **15 44 16.9 +0.2**
comp=Z,45nm,0.9s,baz=205,slow=3.5,SNR=24
PETK LR LR 16 02 30.9
comp=Z,772nm,20.6s,baz=221,slow=36
PETK Petropavlovsk- 43.34 31 P **P** **15 44 17.2 +0.5**
PETK Petropavlovsk- 43.34 31 P **P** **15 44 17.1 +0.5**
TDK Taldyqorghan 43.41 315 *e*P **P** **15 44 18.4 +0.9**
comp=Z,78nm,1.2s,baz=315
TDK *e*S **S** **15 50 45.2 +1.8**
baz=315
TDK LR LR 16 02 33.0
comp=Z,491nm,16.5s,baz=315
TDK Taldyqorghan 43.41 315 *e*P **P** **15 44 18.3 +0.9**
TDK *e*S **S** **15 50 45.2 +1.8**
TDK pmax pmax
comp=Z,78nm,1.2s
TDK MLR MLR
comp=Z,491nm,16.0s
KSH Kashi 43.54 307 P **P** **15 44 22.0 +3.4**
KSH pP pwP 15 44 34.8 +2.7
KSH S S 15 50 54.5 +8.9
KSH ScS **ScS** **15 54 14.5 -1.5**
KSH pmax pmax
comp=Z,19nm,1.0s
KSH pmax pmax
comp=Z,350nm,4.9s
KSH LR LR
comp=Z,1µm,13.3s
KSH LR LR
comp=Z,640nm,9.0s
KSH LR LR
comp=Z,840nm,11.3s
MDOK Medeo 43.73 312 *e*P **P** **15 44 20.9 +0.7**
baz=312
MDOK *e*S **S** **15 50 50.0 +1.6**
baz=312
MDOK Medeo 43.73 312 *e*P **P** **15 44 20.8 +0.7**
MDOK *e*S **S** **15 50 49.9 +1.6**
PET Petropavlovsk 43.76 32 *e*P **P** **15 44 19.7 -0.3**
PET *e*S **S** **15 50 47.4 -0.7**
PET pmax pmax
comp=Z,197nm,1.1s
PET MLR MLR
comp=Z,500nm,21.0s
PET MLR MLR
comp=Z,1µm,21.0s
PET Petropavlovsk 43.76 32 P **P** **15 44 20.5 +0.5**
TNSS Tian-Shan 43.76 312 *e*P **P** **15 44 22.2 +1.4**
baz=312
TNSS Tian-Shan 43.76 312 *e*P **P** **15 44 22.1 +1.4**
AAA Alma-Ata 43.84 312 *e*P **P** **15 44 22.8 +1.8**
baz=312
AAA LR LR 16 02 19.1
comp=Z,544nm,19.7s,baz=312
AAA Alma-Ata 43.84 312 *e*P **P** **15 44 22.7 +1.8**
AAA MLR MLR
comp=Z,544nm,20.0s
CHKK Chushkaly 43.98 313 *e*P **P** **15 44 22.6 +0.6**
baz=313
CHKK Chushkaly 43.98 313 *e*P **P** **15 44 22.6 +0.6**
ZAA0 Zalesovo Array 44.00 330 P **P** **15 44 22.0 0.0**
ZAA0 IAmb IAmb 15 44 23.3
comp=Z,44nm,1.0s
ZALV Zalesovo Beam 44.00 330 P **P** **15 44 22.3 +0.4**
comp=Z,27nm,0.8s,baz=115,slow=7.4,SNR=112
ZALV LR LR 16 03 56.4
comp=Z,870nm,18.4s,baz=133,slow=38
ZALV Zalesovo Beam 44.00 330 P **P** **15 44 22.4 +0.5**
KUU Kurty 44.44 313 *e*P **P** **15 44 26.7 +0.9**
comp=Z,130nm,1.9s,baz=313
KUU Kurty 44.44 313 *e*P **P** **15 44 26.6 +0.9**
KUU pmax pmax
comp=Z,130nm,1.9s
SEM Semipalatinsk 44.51 323 *e*P **P** **15 44 26.3 -0.2**
comp=Z,39nm,2.0s,baz=323
SEM LR LR 16 03 26.5
comp=Z,142nm,14.4s,baz=323
SEM Semipalatinsk 44.51 323 *e*P **P** **15 44 26.2 -0.2**
SEM pmax pmax
comp=Z,39nm,2.0s
SEM MLR MLR
comp=Z,143nm,14.0s
TKM2 Tokmak 2 44.68 311 P **P** **15 44 29.2 +1.4**
SNR=19
MA2 Magadan 44.87 21 P **P** **15 44 28.8 0.0**
baz=286,slow=3.9
AS31 Alice Springs 44.97 164 P **P** **15 44 29.9 -0.2**
ASAR Alice Springs 44.97 164 P **P** **15 44 30.1 +0.1**
comp=Z,36nm,0.8s,baz=339,slow=6.9,SNR=222
ASAR PcP **PcP** **15 46 11.5 +0.6**
comp=Z,4.6nm,0.9s,baz=349,slow=4.1,SNR=2.9
ASAR ScP **ScP** **15 50 00.7 -0.2**
comp=Z,1.1nm,0.9s,baz=341,slow=3.6,SNR=4.7
ASAR S **S** **15 51 02.3 -4.1**
comp=Z,8.2nm,1.0s,baz=356,slow=19,SNR=18
ASAR LR LR 16 05 51.6
comp=Z,258nm,18.8s,baz=338,slow=39
ASAR Alice Springs 44.97 164 P **P** **15 44 30.3 +0.2**
ASAR Alice Springs 44.97 164 P **P** **15 44 30.3 +0.2**
KBK Karagaybulak 45.06 311 P **P** **15 44 32.6 +1.7**
SNR=16
UCH Uchtor 45.26 310 P **P** **15 44 35.1 +2.3**
SNR=10
CHMS Chumysh 45.29 311 P **P** **15 44 33.6 +1.1**
SNR=16
AAK Ala-Archa 45.38 311 P **P** **15 44 34.5 +1.1**
comp=Z,6.0nm,0.9s,baz=118,slow=3.4,SNR=22
AAK PcP **PcP** **15 46 12.2 -0.2**
comp=Z,3.8nm,0.7s,baz=149,slow=4.2,SNR=4.8
AAK LR LR 16 06 14.4
comp=Z,2µm,19.9s,baz=102,slow=40
AAK Ala-Archa 45.38 311 P **P** **15 44 35.2 +1.9**
SNR=8.9
AAK Ala-Archa 45.38 311*ce*P **P** **15 44 34.3 +0.9**
AAK pmax pmax
comp=Z,26nm,0.8s
SGDS Sogindy 45.50 312 *i* P **P** **15 44 34.6 +0.4**
baz=312
SGDS Sogindy 45.50 312 *i* P **P** **15 44 34.6 +0.4**
USP Ospenovka 45.54 312 P **P** **15 44 36.0 +1.5**
SNR=10
KURK Kurchatov 45.58 323*ce*P **P** **15 44 33.5 -1.1**
KURK pmax pmax
comp=Z,62nm,1.7s
KURK Kurchatov 45.58 323 P **P** **15 44 34.9 +0.4**
KURK IAmb IAmb 15 44 48.0
comp=Z,85nm,1.4s
AML Almayashu 45.83 310 P **P** **15 44 39.4 +2.2**
SNR=32
BTLS Baital 46.35 314 *i* P **P** **15 44 41.1 +0.3**
comp=Z,12nm,1.1s,baz=314
BTLS Baital 46.35 314 *i* P **P** **15 44 41.1 +0.3**
BTLS pmax pmax
comp=Z,12nm,1.1s

CTA Charters Tower 46.58 147 P **P** **15 44 43.1 +0.3**
comp=Z,20nm,0.8s,baz=332,slow=12,SNR=13
CTA PcP **PcP** **15 46 17.5 +0.9**
comp=Z,16nm,0.9s,baz=309,slow=5.0,SNR=6.7
CTAO Charters Tower 46.58 147 P **P** **15 44 42.3 -0.5**
CTAO pmax pmax
comp=Z,28nm,0.9s
CTAO Charters Tower 46.58 147 P **P** **15 44 42.3 -0.5**
CTAO IAmb IAmb 15 44 46.1
comp=Z,28nm,0.9s
HNR Honiara 47.82 124 LR LR 16 04 38.0
comp=Z,405nm,19.2s,baz=294,slow=36
SEY Seymchan 47.93 18 P **P** **15 44 52.9 +0.1**
comp=Z,6.9nm,0.8s,baz=214,slow=19,SNR=3.4
SEY Seymchan 47.93 18 *i* P **P** **15 44 52.6 -0.2**
KK31 Karatay Array 48.34 310 *i* P **P** **15 44 56.8 +0.5**
KKAR Karatay Array 48.34 310 P **P** **15 44 57.2 +0.9**
KKAR Karatay Array 48.34 310 P **P** **15 44 57.2 +0.9**
IUG Iuzhnay 48.49 309 *e*P **P** **15 44 58.8 +1.2**
comp=Z,29nm,1.3s,baz=309
IUG Iuzhnay 48.49 309 *e*P **P** **15 44 58.8 +1.2**
IUG pmax pmax
comp=Z,29nm,1.3s
BRZS Berezniki 48.79 320 *i* P **P** **15 45 00.2 +0.5**
comp=Z,15nm,1.3s,baz=320
BRZS Berezniki 48.79 320 *i* P **P** **15 45 00.1 +0.5**
BRZS pmax pmax
comp=Z,15nm,1.3s
MORW Morawa 48.95 186 P **P** **15 45 00.1 -0.9**
FORT Forrest 50.78 173 P **P** **15 45 15.1 +0.2**
BVAR Borovoye Array 51.18 323 P **P** **15 45 17.8 +0.1**
comp=Z,2.1nm,0.8s,baz=143,slow=45,SNR=14
BVAR PcP **PcP** **15 46 32.2 -0.6**
comp=Z,2.9nm,0.7s,baz=72,slow=4.7,SNR=3.8
BRVK Borovoye 51.25 323*ce*P **P** **15 45 18.1 -0.1**
BRVK pmax pmax
comp=Z,50nm,1.7s
BRVK Borovoye 51.25 323 P **P** **15 45 18.7 +0.5**
BRVK IAmb IAmb 15 45 32.5
comp=Z,48nm,1.2s
TIXI Tiksi 51.95 3⇓ *i*P **P** **15 45 21.4 -1.7**
TIXI Tiksi 51.95 3 P **P** **15 45 22.3 -0.9**
TIXI IAmb IAmb 15 45 25.0
comp=Z,34nm,0.9s
NWAO Narrogin (SRO) 52.67 184 P **P** **15 45 28.9 0.0**
comp=Z,24nm,0.7s,baz=33,slow=5.1,SNR=12
NWAO LR LR 16 10 20.9
comp=Z,222nm,20.1s,baz=50,slow=39
NWAO Narrogin (SRO) 52.67 184 P **P** **15 45 27.7 -1.3**
NWAO pmax pmax
comp=Z,28nm,0.8s
NWAO Narrogin (SRO) 52.67 184 P **P** **15 45 27.6 -1.3**
NWAO IAmb IAmb 15 45 33.0
comp=Z,28nm,0.8s
NRIK Noril'sk 53.59 346 P **P** **15 45 35.4 0.0**
comp=Z,85nm,0.9s,baz=134,slow=7.4,SNR=141
NRIK LR LR 16 10 18.6
comp=Z,533nm,20.2s,baz=178,slow=38
NRIK Noril'sk 53.59 346*ce*P **P** **15 45 35.2 -0.1**
NRIK pmax pmax
comp=Z,139nm,1.0s
BBOO Buckleboo 54.24 165 P **P** **15 45 40.4 -0.1**
BBOO IAmb IAmb 15 45 41.4
comp=Z,30nm,0.8s
STKA Stephens Creek 54.98 159 P **P** **15 45 45.8 -0.1**
comp=Z,13nm,0.8s,baz=345,slow=8.0,SNR=22
STKA PcP **PcP** **15 46 47.5 +0.1**
comp=Z,3.3nm,0.7s,baz=290,slow=7.9,SNR=2.8
STKA LR LR 16 10 57.8
comp=Z,207nm,18.1s,baz=353,slow=38
STKA Stephens Creek 54.98 159 P **P** **15 45 45.8 -0.1**
STKA pmax pmax
comp=Z,4.0nm,1.0s
STKA Stephens Creek 54.98 159 P **P** **15 45 45.8 -0.1**
BILL Bilibino 55.64 19⇑ *i*P **P** **15 45 50.0 -0.2**
BILL *e* 15 46 50.3
BILL pmax pmax
comp=Z,64nm,2.5s
BILL MLR MLR
comp=Z,696nm,17.0s
AB31 Akbulak array 56.65 316 P **P** **15 45 56.7 -1.0**
ABKAR Akbulak array 56.65 316 P **P** **15 45 57.7 -0.1**
GEYT Alibeck 57.24 303 P **P** **15 46 03.3 +1.2**
comp=Z,68nm,0.9s,baz=116,slow=3.4,SNR=46
GEYT LR LR 16 14 54.4
comp=Z,497nm,19.6s,baz=105,slow=40
SVE Sverdlovsk 57.66 325⇑ *e*P **P** **15 46 05.8 +1.1**
SVE pmax pmax
comp=Z,69nm,1.2s
ARMA Armidale 57.84 149 P **P** **15 46 07.4 +0.9**
ARMA IAmb IAmb 15 46 11.3
comp=Z,11nm,0.8s
AKTO Aktyubinsk 58.04 318 P **P** **15 46 07.8 +0.3**
comp=Z,6.0nm,0.9s,baz=93,slow=6.3,SNR=17
AKTO Aktyubinsk 58.04 318 P **P** **15 46 07.1 -0.4**
ARU Arti 58.69 325 P **P** **15 46 12.2 +0.3**
comp=Z,2.9nm,0.6s,baz=127,slow=2.1,SNR=12
ARU Arti 58.69 325*c i*P **P** **15 46 11.8 -0.2**
ARU 15 48 18.3
ARU S **S** **15 54 15.8 +1.5**
ARU SS **SS** **15 58 08.1 +0.8**
ARU pmax pmax
comp=Z,42nm,1.6s
ARU MLR MLR
comp=Z,944nm,17.0s
ARU Arti 58.69 325 P **P** **15 46 12.4 +0.4**
ARU IAmb IAmb 15 46 26.2
comp=Z,22nm,0.9s
DZM Mont Dzumac 60.61 131 *e*LR LR 16 04 31.4
comp=Z,515nm,22.4s
TOO Toolangi 61.48 158 P **P** **15 46 31.0 -0.3**
TOO pmax pmax
comp=Z,44nm,1.1s
TOO Toolangi 61.48 158 P **P** **15 46 31.0 -0.3**
KIRV Kirov 63.88 326 P **P** **15 46 47.0 0.0**
comp=Z,22nm,0.7s,baz=96,slow=5.8,SNR=12
BELG Belogornoye 64.66 319 *i* P **P** **15 46 51.5 -0.7**
BELG pmax pmax
comp=Z,10.0nm,1.6s
MAK Makhachkala 65.11 309 *e*P **P** **15 46 54.9 -0.4**
MAK *e* 15 49 16.4
MAK *e*S **S** **15 55 36.0 +0.3**
MAK pmax pmax
comp=Z,102nm,0.9s
MAK MLR MLR
comp=Z,470nm,16.0s
GROC Groznyy 66.33 309 *e*P **P** **15 47 02.5 -0.8**
GROC *e* 15 47 31.5
GROC pmax pmax
comp=Z,69nm,1.2s
GNI Garni 67.47 306*ce*P **P** **15 47 10.6 -0.1**
GNI pmax pmax
comp=Z,36nm,1.1s
ZEI Tsey 67.76 309 *e*P **P** **15 47 11.1 -1.5**
ZEI pmax pmax
comp=Z,29nm,1.0s
GOF Gofitskoye 68.11 312⇑ *e*P **P** **15 47 14.8 +0.3**
GOF pmax pmax
comp=Z,53nm,1.5s
AKH Akhalkalaki 68.24 308 ⇑P **P** **15 47 17.4 +1.8**
VRH Novokhopyorsk 68.37 318 *e*P **P** **15 47 15.4 -0.6**
VRH pmax pmax
comp=Z,40nm,0.9s
KBZ Khabaz 68.37 310 P **P** **15 47 16.7 +0.6**
comp=Z,22nm,1.0s,baz=70,slow=5.6,SNR=34
KBZ Khabaz 68.37 310*ce*P **P** **15 47 16.4 +0.3**
KBZ pmax pmax
comp=Z,42nm,1.1s
A21K Barrow 68.73 20 P **P** **15 47 18.4 +0.5**
baz=269,SNR=20
A21K Barrow 68.73 20 P **P** **15 47 19.1 +1.2**
KLMR Klimovskoe 68.92 329 *e*P **P** **15 47 16.4 -2.8**
KLMR pmax pmax
comp=Z,63nm,1.2s
KLMR Klimovskoe 68.92 329 *e*P **P** **15 47 16.5 -2.8**
KLMR AMP 15 47 20.1
comp=Z,63nm,1.2s
KLMR LQ LQ 16 11 16.3
KLMR LQ LQ 16 11 16.3
KLMR LR LR 16 16 09.8
TTA Tatalina 69.11 29 P **P** **15 47 21.2 +0.7**
TTA pmax pmax
comp=Z,25nm,1.0s
TTA Tatalina 69.11 29 P **P** **15 47 21.2 +0.7**
TTA IAmb IAmb 15 47 22.2
comp=Z,25nm,1.0s

TMCR Tamitsa 69.42 332 *e*P **P** **15 47 19.7 -2.6**
TMCR pmax pmax
comp=Z,60nm,1.3s
VORR Voronezh 69.89 319 *e*P **P** **15 47 24.0 -1.4**
VORR pmax pmax
comp=Z,250nm,1.6s
IMAR Indian Mountai 69.91 26 P **P** **15 47 26.1 +0.8**
LPSR Galich'ya Gora 69.95 320 *e*P **P** **15 47 25.0 -0.7**
LPSR pmax pmax
comp=Z,40nm,1.1s
VSR Storozhevoye 69.97 318 *e*P **P** **15 47 25.2 -0.7**
VSR pmax pmax
comp=Z,40nm,1.3s
MOS Moscow 70.35 323 *e*P **P** **15 47 26.6 -1.5**
MOS *e* 15 47 37.6
MOS pmax pmax
comp=Z,58nm,1.0s
SOC Sochi 70.68 310 *e*P **P** **15 47 28.8 -1.6**
SOC *e* 15 50 09.1
SOC *e*PPP PPP 15 51 43.2
SOC *e*S **S** **15 56 41.7 -0.7**
SOC *e*SS **SS** **16 01 15.2 +0.9**
SOC *e*SSS SSS 16 04 23.4
SOC pmax pmax
comp=Z,20nm,0.9s
SOC MLR MLR
comp=Z,375nm,18.0s
PPLA Purkeypile 70.86 29 P **P** **15 47 31.6 +0.3**
PPLA IAmb IAmb 15 47 33.0
comp=Z,29nm,1.0s
OHAK Old Harbor 70.97 35 P **P** **15 47 31.6 -0.3**
OBN Obninsk 71.02 323 P **P** **15 47 32.0 -0.2**
comp=Z,1nm,0.5s,baz=80,slow=7.3,SNR=12
OBN Obninsk 71.02 323⇑ *e*P **P** **15 47 31.5 -0.7**
OBN *e* 15 47 53.2
OBN *e* 15 50 08.6
OBN *e*S **S** **15 56 40.9 -5.0**
OBN pmax pmax
comp=Z,76nm,1.7s
OBN MLR MLR
comp=Z,331nm,18.0s
APA Apatity 71.05 336⇓ *i*P **P** **15 47 32.0 -0.2**
APA pmax pmax
comp=Z,31nm,0.9s
APA MLR MLR
comp=Z,900nm,18.0s
COLD Coldfoot 71.21 24 P **P** **15 47 33.7 +0.5**
baz=277,SNR=8.9
MLY Manley 71.25 27 P **P** **15 47 34.0 +0.5**
baz=277,SNR=63
BPAW Bear Paw Mtn. 71.25 28 IAmb IAmb 15 47 35.3
comp=Z,42nm,1.1s
SKT Skwentna 71.27 30 IAmb IAmb 15 47 34.3
comp=Z,22nm,1.0s
KDAK Kodiak Island 71.28 34 P **P** **15 47 33.3 -0.4**
KDAK pmax pmax
comp=Z,74nm,1.2s
KDAK Kodiak Island 71.28 34 P **P** **15 47 33.3 -0.4**
TOLK Toolik Lake Re 71.29 23 P **P** **15 47 34.2 +0.5**
baz=277,SNR=22
TOLK Toolik Lake Re 71.29 23 IAmb IAmb 15 47 36.7
comp=Z,25nm,0.9s
KTH Kantishna Hill 71.35 28 IAmb IAmb 15 47 36.9
comp=Z,26nm,1.0s
TRF Thorofare Moun 71.64 28 IAmb IAmb 15 47 46.2
comp=Z,26nm,1.2s
CUT Chulitna 71.80 29 P **P** **15 47 37.3 +0.5**
baz=278
I23K Minto, Yukon-K 71.81 26 P **P** **15 47 37.2 +0.4**
baz=278,SNR=15
NEA2 Nenana 72.02 27 P **P** **15 47 38.3 +0.2**
baz=278,SNR=38
MCK McKinley 72.20 28 P **P** **15 47 39.5 +0.2**
baz=279,SNR=24
RC01 Rabbit Creek A 72.24 31 P **P** **15 47 38.8 -0.7**
baz=279
PMR Palmer 72.45 30 IAmb IAmb 15 47 42.5
comp=Z,32nm,1.1s
WRH Wood River Hil 72.45 27 IAmb IAmb 15 47 42.6
comp=Z,21nm,0.9s
TCOL CIGO, UAF Yank 72.49 27 P **P** **15 47 41.2 +0.3**
baz=279,SNR=6.8
GHO Glory Hole Cre 72.52 30 P **P** **15 47 41.4 +0.1**
GHO IAmb IAmb 15 47 56.6
comp=Z,26nm,0.9s
SEW Seward 72.54 32 IAmb IAmb 15 47 41.7
comp=Z,30nm,1.0s
POKR Poker Flat Res 72.62 26 P **P** **15 47 42.8 +1.1**
baz=280,SNR=7.8
POKR Poker Flat Res 72.62 26 P **P** **15 47 41.6 -0.1**
POKR IAmb IAmb 15 47 44.0
comp=Z,21nm,0.9s
SML Sawmill 72.79 30 IAmb IAmb 15 47 57.8
comp=Z,39nm,1.0s
KNK Knik Glacier 72.80 30 IAmb IAmb 15 47 44.2
comp=Z,30nm,0.8s
ILAR Eielson Array 72.91 27 P **P** **15 47 42.5 -0.9**
comp=Z,6.5nm,0.8s,baz=269,slow=4.8,SNR=33
ILAR PP **PP** **15 50 24.3 -1.3**
comp=Z,0.9nm,0.9s,baz=281,slow=9.1,SNR=2.9
ILAR LR LR 16 20 26.5
comp=Z,246nm,21.8s,baz=292,slow=36
ILAR Eielson Array 72.91 27 P **P** **15 47 42.6 -0.8**
HDA Harding Lake 72.95 27 P **P** **15 47 42.4 -1.3**
baz=280,SNR=16
HDA Harding Lake 72.95 27 P **P** **15 47 42.9 -0.8**
KEV Kevo 73.03 339 P **P** **15 47 44.6 +0.6**
KEV pmax pmax
comp=Z,79nm,1.0s
KEV Kevo 73.03 339 P **P** **15 47 44.6 +0.6**
SCM Sheep Creek Mo 73.25 30 P **P** **15 47 45.7 +0.1**
SCM pmax pmax
comp=Z,53nm,0.9s
SCM Sheep Creek Mo 73.25 30 P **P** **15 47 45.7 +0.1**
BMAR Burnt Mountain 73.33 24 P **P** **15 47 46.8 +0.9**
ARD4 ARCESS Array S 73.59 339 P **P** **15 47 46.6 -0.7**
ARA0 ARCESS Array S 73.59 339 *e*P **P** **15 47 47.5 +0.2**
ARCES ARCESS Array B 73.59 339 P **P** **15 47 47.8 +0.4**
comp=Z,36nm,0.9s,baz=78,slow=6.7,SNR=23
ARCES LR LR 16 24 15.7
comp=Z,217nm,19.1s,baz=90,slow=39
SPA0 Spitsbergen Ar 73.71 348 P **P** **15 47 48.2 +0.3**
SPA0 Spitsbergen Ar 73.71 348 *e*P **P** **15 47 48.7 +0.7**
SPITS Spitsbergen Ar 73.71 348 P **P** **15 47 48.2 +0.3**
comp=Z,51nm,0.8s,baz=106,slow=11,SNR=18
M24K Tolsona, Glenn 73.74 29 P **P** **15 47 48.9 +0.5**
baz=282,SNR=14
M24K Tolsona, Glenn 73.74 29 P **P** **15 47 48.6 +0.1**
FID Port Fidalgo 73.87 31 P **P** **15 47 47.9 -1.2**
FID IAmb IAmb 15 47 50.1
comp=Z,40nm,1.2s
HAMF Hammerfest 73.94 340 *e*P **P** **15 47 50.1 +0.7**
RIDG Independent Ri 73.99 28 IAmb IAmb 15 47 51.9
comp=Z,27nm,1.0s
KBS Kingsbay 74.27 349 *e*P **P** **15 47 52.0 +0.8**
HSPB Hornsund (broa 74.27 347 *e*P **P** **15 47 52.2 +1.0**
HSPB Hornsund (broa 74.27 347 *e*P **P** **15 47 52.0 +0.8**
SCRK Sand Creek 74.31 27 P **P** **15 47 51.7 -0.1**
baz=283,SNR=18
DOT Dot Lake 74.35 28 P **P** **15 47 51.7 -0.2**
SIM Simferopol' 74.37 313*d i*P **P** **15 47 52.0 -0.4**
SIM *e*PPP PPP 15 52 21.3
SIM pmax pmax
comp=Z,59nm,0.9s
SIM MLR MLR
comp=Z,6µm,26.0s
KTK1 Kautokeino 74.50 338 *e*P **P** **15 47 53.3 +0.6**
N25K Chitina, Valde 74.57 30 P **P** **15 47 53.5 +0.2**
baz=283,SNR=10
MENT Mentasta 74.67 28 IAmb IAmb 15 47 59.5
comp=Z,18nm,0.9s
L26K Log Cabin Wild 74.81 28 P **P** **15 47 54.9 +0.3**
baz=284,SNR=12
GLB Gilahina Butte 74.98 30 IAmb IAmb 15 48 11.8
comp=Z,39nm,1.0s
K27K Chicken 75.11 27 P **P** **15 47 56.7 +0.4**
baz=285
K27K Chicken 75.11 27 IAmb IAmb 15 47 58.2
comp=Z,21nm,0.9s
VRDI Verde Repeater 75.20 30 P **P** **15 47 56.5 -0.6**
FINES FINESS Array B 75.26 330 P **P** **15 47 57.2 +0.1**
comp=Z,31nm,0.9s,baz=87,slow=7.8,SNR=51
MCARA McCarthy VSAT 75.36 30 IAmb IAmb 15 48 07.2
comp=Z,39nm,1.0s
BCAR Beaver Creek A 75.49 28 P **P** **15 47 59.3 +0.7**

VSU	Vasula	75.69	327	eP	P	15 48 00.0	+0.4		
TRO	Tromso	75.79	339	eP	P	15 47 60.0	0.0		
BRTR	Keskin Array B	75.92	307	P	P	15 48 01.8	+0.1		
	comp=Z,4.6nm,1.0s,baz=123,slow=4.6,SNR=12								
MICGM	Minsk	76.07	323⇓	eP	P	15 48 02.0	+0.1		
MICGM				PM		15 48 03.0			
	comp=Z,0.4nm,0.8s								
MICGM				eLR	LR	16 21 36.0			
MNK	Minsk	76.07	323⇓	eP	P	15 48 02.0	+0.1		
MNK				pmax	pmax				
	comp=Z,380nm,0.8s								
BARN	Barnard Glacie	76.08	30	IAmb	IAmb	15 48 05.0			
	comp=Z,31nm,1.2s								
AKASG	Malin Array Be	76.23	319	P	P	15 48 02.5	-0.5		
	comp=Z,23nm,0.9s,baz=60,slow=5.8,SNR=46								
AKASG				LR	LR	16 24 26.5			
	comp=Z,465nm,20.9s,baz=65,slow=38								
AKBB	Malin Array Si	76.23	319	ceP	P	15 48 02.4	-0.5		
DAWY	Dawson	76.24	27	IAmb	IAmb	15 48 04.6			
	comp=Z,20nm,0.8s								
CTGM	Chitina Glacie	76.26	30	IAmb	IAmb	15 48 06.7			
	comp=Z,34nm,0.9s								
IDID	Didziasalis	76.50	324	eP	P	15 48 04.8	+0.5		
NACGM	Naroch	76.58	324	eP	P	15 48 04.0	-0.8		
NACGM				PM		15 48 06.0			
	comp=Z,0.4nm,1.0s								
ISAL	Salakas	76.77	324	eP	P	15 48 06.5	+0.6		
IIGN	Ignalina	76.77	324	eP	P	15 48 06.4	+0.5		
INK	Inuvik	77.10	22	P	P	15 48 06.7	-0.8		
	comp=Z,6.1nm,0.6s,baz=299,slow=5.7,SNR=22								
SORM	Soroca	77.45	317	⇑P	P	15 48 09.1	-0.7		
STEI	Steigen	77.64	338	eP	P	15 48 10.5	0.0		
FAUS	Fauske	77.84	338	eP	P	15 48 11.9	+0.2		
TLCR		77.95	314	⇑P	P	15 48 13.3	+0.6		
PABE	Paberze	77.96	325	eP	P	15 48 12.8	+0.3		
HYT	Haines Junctio	78.09	29	P	P	15 48 14.3	+0.9		
HYT				IAmb	IAmb	15 48 16.7			
	comp=Z,20nm,1.0s								
LOF	Lofoten	78.15	339	eP	P	15 48 13.4	+0.1		
SLIT	Slitere, Latvi	78.19	327	eP	P	15 48 13.2	-0.6		
TPGR	Topolog	78.31	314	⇓P	P	15 48 14.6	-0.2		
CFR	Carcaliu	78.42	314	⇑P	P	15 48 15.2	-0.1		
SCHL	Schela	78.53	314	⇑P	P	15 48 17.1	+1.2		
MOR8	Moi Rana	78.62	337	eP	P	15 48 15.3	-0.7		
TLBR	Topalu	78.66	313	⇑P	P	15 48 16.3	-0.3		
HARR	Harsova	78.70	313	⇑P	P	15 48 17.5	+0.7		
SUW	Suwalki	78.86	323	eP	P	15 48 17.2	-0.3		
PBUR	Paburge	78.89	326	eP	P	15 48 17.3	-0.3		
ODBI	Odobesti	78.98	315	⇑P	P	15 48 19.5	+1.1		
TESR	Tescani	79.03	315	⇓P	P	15 48 18.8	+0.1		
PRAR	RASCA	79.05	316	⇓P	P	15 48 18.7	0.0		
VRI	Vrincioaia	79.17	315	⇓P	P	15 48 20.1	+0.7		
PLOR	Plostina	79.22	315	⇓P	P	15 48 20.0	+0.2		
BIZ	Bicaz	79.26	316	⇓P	P	15 48 20.0	+0.1		
BISRR	Bisoca	79.27	315	⇓P	P	15 48 21.0	+1.0		
WHY	Whitehorse	79.35	29	IAmb	IAmb	15 48 22.1			
	comp=Z,19nm,0.9s								
ISR	Istrita	79.51	314	⇑P	P	15 48 21.0	-0.3		
NEHR	Nehoiu	79.59	315	⇑P	P	15 48 21.9	+0.2		
BURAR	Bucovina Array	79.62	317	⇓P	P	15 48 22.5	+0.5		
BURAR	Bucovina Array	79.62	317	P	P	15 48 21.8	-0.2		
LVV	L'vov	79.68	319	eP	P	15 48 21.7	-0.4		
C36M	Paulatuk	79.76	19	P	P	15 48 20.2	-1.9		
	baz=300								
C36M	Paulatuk	79.76	19	P	P	15 48 21.5	-0.6		
SULR		79.84	314	⇑P	P	15 48 23.9	+0.8		
SECR		79.86	314	⇓P	P	15 48 24.3	+1.1		
RAZG	Razgrad	80.01	313	⇑P	P	15 48 24.5	+0.4		
DOPR	Dopca	80.02	315	⇑P	P	15 48 24.3	+0.2		
NSS	Namsos	80.25	336	eP	P	15 48 24.6	-0.3		
ARCR	ARCALIA	80.35	317	⇑P	P	15 48 26.9	+1.0		
VOIR		80.42	315	⇓P	P	15 48 27.2	+0.9		
DAG	Danmarks Havn	80.62	351	⇑iP	P	15 48 26.0	-0.7		
DAG				pmax	pmax				
	comp=Z,69nm,1.0s								
DAG	Danmarks Havn	80.62	351	⇑iP	P	15 48 26.0	-0.7		
	comp=Z,69nm,1.0s								
DAG	Danmarks Havn	80.62	351	⇑iP	P	15 48 26.0	-0.7		
DAG				IAmb	IAmb	15 48 27.1			
	comp=Z,69nm,1.0s								
ARR	Arges	80.72	315	⇑P	P	15 48 28.5	+0.6		
COPA	Copaceanca	80.72	314	⇑P	P	15 48 27.9	+0.1		
HUMR	Humele	80.75	314	⇑P	P	15 48 27.8	-0.2		
BEL	Belsk	80.95	322	eP	P	15 48 29.8	+1.0		
CJR	Cluj-Napoca	80.96	316	⇓P	P	15 48 30.0	+0.8		
KOLS	Kolonicke sedl	81.06	319	eP	P	15 48 30.2	+0.6		
KOLS				pmax	pmax				
	comp=Z,13nm,1.3s								
KOLS	Kolonicke sedl	81.06	319	eP	P	15 48 30.2	+0.6		
UZH	Uzhgorod	81.15	318	eP	P	15 48 29.8	-0.2		
UZH				e		15 48 37.2			
UZH				e		15 48 42.4			
LOT	Lotru	81.27	315	⇓P	P	15 48 31.2	+0.3		
VLAD	Vladila	81.32	314	⇑P	P	15 48 31.0	0.0		
HFS	Hagfors	81.41	331	P	P	15 48 31.0	-0.2		
	comp=Z,18nm,0.8s,baz=74,slow=5.3,SNR=24								
TBLU	Trondheim	81.50	335	eP	P	15 48 31.1	-0.5		
DRGR		81.51	317	⇑P	P	15 48 32.1	+0.1		
CRVS	Cervenica-Dubn	81.57	319	eP	P	15 48 32.8	+0.5		
CRVS				e		15 48 42.6			
CRVS				pmax	pmax				
	comp=Z,77nm,1.4s								
CRVS	Cervenica-Dubn	81.57	319	eP	P	15 48 32.8	+0.5		
CRVS				e		15 48 42.6			
DEV	Deva	81.69	316	⇑P	P	15 48 33.2	+0.3		
NC405	NORSAR Array S	81.87	332	P	P	15 48 33.8	+0.2		
SRE	Strehaia	81.91	314	⇑P	P	15 48 34.7	+0.6		
GZR	Gura Zlata	81.94	315	⇑P	P	15 48 34.3	-0.1		
NIE	Niedzica	82.10	320	eP	P	15 48 35.8	+0.7		
OJC	Ojcow	82.11	321	eP	P	15 48 35.2	+0.1		
NC602	NORSAR Array S	82.11	332	eP	P	15 48 34.6	-0.3		
NB2	NORSAR Subarra	82.12	333	P	P	15 48 34.1	-0.9		
	comp=Z,142nm,2.5s,baz=62,slow=5.3								
NB2	NORSAR Subarra	82.12	333	P	P	15 48 34.1	-0.9		
	baz=62,slow=5.3								
NOA	NORSAR Array B	82.12	333	P	P	15 48 34.4	-0.6		
	comp=Z,8.9nm,0.8s,baz=62,slow=5.2,SNR=32								
NOA				LR	LR	16 28 45.0			
	comp=Z,1μm,18.1s,baz=65,slow=38								
NC204	NORSAR Array S	82.20	333	P	P	15 48 34.7	-0.8		
PUNG	Punghina	82.22	314	⇓P	P	15 48 36.8	+1.0		
KECS	Kecovo	82.32	319	eP	P	15 48 37.0	+0.8		
KECS				pmax	pmax				
	comp=Z,9.0nm,1.0s								
KECS	Kecovo	82.32	319	eP	P	15 48 37.0	+0.8		
SIRR	Siria	82.37	316	⇑P	P	15 48 36.6	0.0		
DOMB	Dombas	82.56	334	eP	P	15 48 37.2	0.0		
BZS	Buzias	82.63	316	⇑P	P	15 48 37.5	-0.4		
LANS	Liptovska Anna	82.70	320	eP	P	15 48 39.1	+0.8		
LANS				pmax	pmax				
	comp=Z,5.0nm,1.0s								
LANS	Liptovska Anna	82.70	320	eP	P	15 48 39.1	+0.8		
RES	Resolute Bay	82.84	9	P	P	15 48 38.2	-0.2		
RES				pmax	pmax				
	comp=Z,10.0nm,1.0s								
RES	Resolute Bay	82.84	9	P	P	15 48 38.2	-0.2		
DBG	Daneborg	82.84	350	iP	P	15 48 38.0	-0.5		
DBG				IAmb	IAmb	15 48 39.0			
	comp=Z,46nm,0.9s								
PSZ	Piszkesteto	82.90	318	⇓P	P	15 48 39.8	+0.5		
MOL	Molde	82.92	335	eP	P	15 48 39.4	+0.3		
OKC	Ostrava-Krasne	83.24	321	eP	P	15 48 41.9	+0.9		
OKC	Ostrava-Krasne	83.24	321	eP	P	15 48 41.9	+0.9		
AKN	Aaknes	83.34	335	eP	P	15 48 41.6	+0.3		
VYHS	Vyhne	83.34	319	eP	P	15 48 41.5	0.0		
VYHS				pmax	pmax				
	comp=Z,41nm,1.3s								
VYHS	Vyhne	83.34	319	eP	P	15 48 41.5	0.0		
KONO	Kongsberg	83.48	332	ceP	P	15 48 43.2	+1.2		
KONO				pmax	pmax				
	comp=Z,70nm,2.5s								
SKAR	Skarslia	83.54	333	eP	P	15 48 42.8	+0.4		
MORC	Moravsky Berou	83.62	321	⇑P	P	15 48 43.2	+0.2		
MORC	Moravsky Berou	83.62	321	eP	P	15 48 43.0	0.0		
MORC				esP	pwP	15 48 55.4	-1.2		
IDI	Anoyia	83.87	305	⇑P	P	15 48 44.9	+0.3		
JAVC	Velka Javorina	83.91	320	eP	P	15 48 45.7	+1.2		
JAVC				esP	sP	15 48 58.4	+0.1		
KSP	Ksiaz	83.93	322	eP	P	15 48 44.9	+0.4		
KRLC	Kraliky	83.96	321	eP	P	15 48 45.2	+0.5		
KRLC	Kraliky	83.96	321	eP	P	15 48 45.2	+0.5		
OSTC	Ostas	84.09	322	eP	P	15 48 45.9	+0.5		
OSTC				ex	x	15 48 58.2			
DPC	Dobruska-Polom	84.12	322	eP	P	15 48 46.2	+0.7		
DPC				e		15 48 58.8			
DPC				MLR	MLR				
	comp=Z,400nm,15.5s								
DPC	Dobruska-Polom	84.12	322	eP	P	15 48 46.2	+0.7		
DPC				epP	pwP	15 48 58.8	-0.3		
DPC				AMS	AMS	16 33 10.0			
	comp=Z,400nm,15.5s								
CHVC	Chvalec	84.17	322	eP	P	15 48 46.4	+0.6		
SMOL	Smolenice	84.19	320	eP	P	15 48 46.7	+0.8		
SMOL				e		15 48 59.0			
SMOL				pmax	pmax				
	comp=Z,14nm,1.2s								
SMOL	Smolenice	84.19	320	eP	P	15 48 46.7	+0.8		
SMOL				e		15 48 59.0			
UPC	Upice	84.23	322	eP	P	15 48 46.8	+0.7		
UPC	Upice	84.23	322	eP	P	15 48 46.8	+0.7		
MODS	Modra-Piesok	84.34	319	eP	P	15 48 46.3	-0.4		
MODS				pmax	pmax				
	comp=Z,24nm,1.3s								
MODS	Modra-Piesok	84.34	319	eP	P	15 48 46.3	-0.4		
VRAC	Vranov	84.38	321	⇑P	P	15 48 47.3	+0.5		
VRAC	Vranov	84.38	321	eP	P	15 48 47.1	+0.3		
VRAC				esP	pwP	15 48 59.8	-0.6		
ZST	Bratislava	84.52	319	eP	P	15 48 48.5	+1.0		
ZST	Bratislava	84.52	319	eP	P	15 48 48.5	+1.0		
KRUC	Moravsky	84.60	320	eP	P	15 48 48.1	+0.2		
KRUC				esP	pwP	15 49 00.6	-0.9		
RUE	Ruedersdorf	84.66	324	eP	P	15 48 48.0	-0.2		
RUE	Ruedersdorf	84.66	324	eP	P	15 48 48.9	+0.8		
	comp=Z,69nm,1.2s,baz=63,slow=4.8								
BLS5	Blasjo	84.98	332	eP	P	15 48 50.1	+0.5		
PVCC	Panska Ves	85.06	322	eP	P	15 48 50.8	+0.6		
PVCC	Panska Ves	85.06	322	eP	P	15 48 50.8	+0.6		
MUD	Monsted U'grnd	85.22	329	iP	P	15 48 51.1	+0.3		
MUD				pmax	pmax				
	comp=Z,30nm,1.1s								
MUD	Monsted U'grnd	85.22	329	iP	P	15 48 51.1	+0.3		
	comp=Z,30nm,1.1s								
MUD	Monsted U'grnd	85.22	329	iP	P	15 48 51.1	+0.3		
MUD				IAmb	IAmb	15 48 52.3			
	comp=Z,30nm,1.1s								
BRG	Berggiesshubel	85.27	323⇓	iP	P	15 48 51.1	-0.2		
	comp=Z,32nm,1.4s								
BRG				i		15 49 04.6			
	comp=Z,39nm,1.6s								
BRG	Berggiesshubel	85.27	323⇓	iP	P	15 48 51.1	-0.2		
BRG				i		15 49 04.6			
BRG				pmax	pmax				
	comp=Z,32nm,1.4s								
BRG				pmax	pmax				
	comp=Z,39nm,1.6s								
BRG	Berggiesshubel	85.27	323	eP	P	15 48 51.7	+0.5		
	comp=Z,32nm,1.2s,baz=63,slow=4.8								
PRU	Pruhonice	85.31	322	eP	P	15 48 51.9	+0.4		
PRU				e		15 49 04.8			
PRU				MLR	MLR				
	comp=Z,500nm,22.4s								
PRU	Pruhonice	85.31	322	eP	P	15 48 51.9	+0.4		
PRU				epP	pwP	15 49 04.8	-0.3		
PRU				AMS	AMS	16 30 20.0			
	comp=Z,500nm,22.4s								
CONA	Conrad Observa	85.39	319	iP	P	15 48 52.5	+0.4		
	comp=Z,31nm,1.4s,SNR=11								
FBE	Freiberg	85.58	323	eP	P	15 48 53.6	+0.8		
	comp=Z,105nm,1.9s,baz=63,slow=4.8								
CLL	Collm	85.61	323⇑	iP	P	15 48 52.4	-0.5		
	comp=Z,30nm,1.3s								
CLL				iP	pwP	15 49 04.6	-2.0		
CLL				Lm	MLR	16 32 00.0			
	comp=Z,500nm,20.3s								
CLL	Collm	85.61	323⇑	iP	P	15 48 52.4	-0.5		
CLL				i		15 49 04.6			
CLL				pmax	pmax				
	comp=Z,30nm,1.3s								
CLL				MLR	MLR				
	comp=Z,500nm,20.3s								
CLL	Collm	85.61	323	eP	P	15 48 53.1	+0.1		
	comp=Z,30nm,1.3s,baz=63,slow=4.8								
PBCC	Pribram	85.76	322	eP	P	15 48 54.4	+0.7		
KOGS	Kog	85.76	318	iP	P	15 48 53.4	-0.4		
BSEG	Bad Segeberg	85.86	326	eP	P	15 48 54.8	+0.8		
	comp=Z,48nm,1.3s,baz=63,slow=4.8								
ARSA	Arzberg	85.88	319	iP	P	15 48 54.4	-0.1		
	comp=Z,13nm,1.4s,SNR=5.5								
SKMB	Sankelmark Bun	85.93	327	eP	P	15 48 55.5	+1.1		
	comp=Z,114nm,0.9s,baz=63,slow=4.8								
KHC	Kasperske Hory	86.25	321	ceP	P	15 48 57.0	+0.8		
KHC				pmax	pmax				
	comp=Z,26nm,1.7s								
KHC	Kasperske Hory	86.25	321	eP	P	15 48 56.2	0.0		
KHC				epP	pwP	15 49 08.7	-1.1		
GEC2	GERESS Array S	86.30	321	eP	P	15 48 56.7	+0.2		
	comp=Z,31nm,1.6s,baz=63,slow=4.8								
GERES	GERESS Array B	86.30	321	P	P	15 48 56.2	-0.3		
	comp=Z,2.3nm,0.7s,baz=55,slow=5.1,SNR=19								
GERES				LR	LR	16 31 58.6			
	comp=Z,339nm,18.6s,baz=66,slow=39								
TANN	Tannenbergstha	86.32	323	eP	P	15 48 56.7	+0.2		
	comp=Z,53nm,1.7s,baz=63,slow=4.8								
NEUB	Neuenburg	86.34	324	eP	P	15 48 57.0	+0.4		
	comp=Z,26nm,1.0s,baz=63,slow=4.8								
PERS	Pernice	86.39	318	eP	P	15 48 56.5	-0.5		
MOA	Molln	86.39	320	iP	P	15 48 57.0	+0.1		
	comp=Z,29nm,1.8s,SNR=7.4								
GUNZ	Gunzen	86.42	323	eP	P	15 48 57.3	+0.3		
	comp=Z,17nm,1.3s,baz=63,slow=4.8								
WERN	Wernitzgruen	86.43	323	eP	P	15 48 57.3	+0.2		
	comp=Z,22nm,1.4s,baz=63,slow=4.8								
SOKA	Soboth	86.43	319	eP	P	15 48 56.8	-0.4		
	comp=Z,17nm,1.7s								
PLN	Plauen	86.46	323	eP	P	15 48 57.5	+0.3		
	comp=Z,6.4nm,1.0s,baz=63,slow=4.8								
PLN				epP	pP	15 49 07.4	+0.5		
ASSE	Asse, Remlinge	86.52	325	eP	P	15 48 58.0	+0.7		
	comp=Z,50nm,1.6s,baz=63,slow=4.8								
WET	Wettzell	86.65	321	eP	P	15 48 58.7	+0.5		
	comp=Z,46nm,2.2s,baz=63,slow=4.8								
WET				epP	pP	15 49 08.5	+0.6		
NRDL	Niedersach Rie	86.65	325	eP	P	15 48 58.8	+0.9		
	comp=Z,47nm,1.7s,baz=63,slow=4.8								
NRDL				epP	pP	15 49 08.1	+0.4		
MOX	Moxa	86.69	323	eP	P	15 48 58.6	+0.2		
	comp=Z,12nm,1.2s,baz=63,slow=4.8								
MOX				epP	pP	15 49 08.7	+0.6		
MOX				eL	L	16 32 16.1			
	comp=Z,442nm,19.5s								
MANZ	Manzenberg	86.72	322	eP	P	15 48 58.9	+0.4		
	comp=Z,57nm,2.1s,baz=63,slow=4.8								
ROTZ	Rotzenmuhle	86.76	322	eP	P	15 48 59.0	+0.4		
	comp=Z,69nm,2.2s,baz=63,slow=4.8								
ROTZ				epP	pP	15 49 09.5	+1.1		
SUMG	Summit	86.77	354	iP	P	15 48 58.5	-0.3		
SUMG	Summit	86.77	354	P	P	15 48 58.0	-0.8		
SUMG	Summit	86.77	354	iP	P	15 48 58.5	-0.3		
SUMG	Summit	86.77	354	iP	P	15 48 58.5	-0.3		
OBKA	Obir	86.80	319	eP	P	15 48 59.6	+0.5		
	comp=Z,13nm,1.3s								
YKA	Yellowknife Ar	86.82	23	P	P	15 48 58.4	-0.2		
	comp=Z,11nm,0.7s,baz=313,slow=4.4,SNR=41								
CLZ	Clausthal	86.82	325	eP	P	15 48 59.5	+0.5		
	comp=Z,32nm,1.8s,baz=63,slow=4.8								
RAR	Rarotonga	87.19	114	LR	LR	16 21 48.4			
	comp=Z,92nm,21.2s,baz=294,slow=31								
KBA	Koelnbreinsper	87.30	319	eP	P	15 48 59.9	-1.6		
	comp=Z,7.2nm,1.1s								
GRF	Grafenberg Arr	87.36	322	eL	L	16 33 43.8			
	comp=Z,434nm,19.2s								
UBBA	Unterbreizbach	87.52	324	eP	P	15 49 02.3	+0.2		
	comp=Z,44nm,1.9s,baz=63,slow=4.8								
ABTA	Abfaltersbach	87.95	319	eP	P	15 49 03.2	-1.4		
	comp=Z,7.5nm,0.9s								
IBBN	Ibbenburen	88.00	326	eP	P	15 49 04.8	+0.3		
	comp=Z,109nm,2.2s,baz=63,slow=4.8								
WTTA	Wattenberg	88.25	320	iP	P	15 49 04.9	-1.2		
	comp=Z,15nm,0.9s								
WATA	Walderalm	88.25	320	iP	P	15 49 05.1	-1.0		
	comp=Z,5.0nm,0.9s								
SQTA	Sankt Quirin	88.53	320	iP	P	15 49 06.6	-0.8		
	comp=Z,12nm,1.0s								
MOTA	Moosalm	88.53	320	eP	P	15 49 06.3	-1.1		
	comp=Z,8.1nm,1.0s								
RETA	Reutte	88.67	321	eP	P	15 49 06.5	-1.5		
	comp=Z,4.7nm,1.1s								
BUG	Bochum--Univer	88.70	325	eP	P	15 49 07.9	+0.1		
	comp=Z,22nm,1.2s,baz=63,slow=4.8								
FETA	Feichten	88.91	320	iP	P	15 49 08.2	-1.0		
	comp=Z,9.3nm,0.9s								
DAVA	Damuels	89.29	321	iP	P	15 49 10.7	-0.3		
	comp=Z,6.5nm,0.9s								
ICESG	Greenland Ices	90.22	353	iP	P	15 49 14.3	-0.9		
ICESG				IAmb	IAmb	15 49 15.6			
	comp=Z,21nm,1.0s								
WLF	Walferdange	90.23	324	PcP	P	15 49 14.9	-0.2		
WLF	Walferdange	90.23	324	pP	pP	15 49 24.4	-0.5		
WLF	Walferdange	90.23	324	sP	sP	15 49 28.1	-1.4		
WLF	Walferdange	90.23	324	eP	P	15 49 15.7	+0.6		
	comp=Z,22nm,1.0s,baz=63,slow=4.8								
BCLA	Clavier	90.30	325	PcP	P	15 49 15.6	+0.2		
BCLA				sP	pwP	15 49 28.5	-0.6		
BMRD	Maredsous	90.65	325	PcP	P	15 49 16.5	-0.5		
NEW	Newport	94.38	35	P	P	15 49 35.1	+0.7		
	baz=306								
L04D	Klamath Falls	94.75	42	P	P	15 49 37.1	+0.7		
	baz=302								
PPT	Papeete	94.91	107	LR	LR	16 23 16.3			
	comp=Z,124nm,20.2s,baz=280,slow=30								
PPT2	Papeete2	94.92	107	eS	S	16 00 48.7	-1.0		
	comp=Z,195nm,28.0s								
PPT2	Papeete2	94.92	107	eLR	LR	16 20 22.3			
	comp=Z,449nm,25.2s,baz=290								
M04C	Macdoel	95.28	42	P	P	15 49 40.0	+1.2		
	baz=303								
TBI	Tubuai	96.88	112	eLR	LR	16 21 13.3			
	comp=Z,267nm,29.0s								
HLID	Hailey	98.73	37	P	Pdif	15 49 55.9	+1.5		
	baz=308								
NVAR	Mina Array Bea	99.39	43	P	Pdif	15 49 57.4	-0.1		
	comp=Z,2.4nm,1.0s,baz=287,slow=5.5,SNR=8.6								
VNDA	Vanda	100.04	172	PKKPbc	PKKPbc	16 06 19.0	-1.7		
	comp=Z,1.3nm,0.8s,baz=172,slow=3.4,SNR=5.2								
PDAR	Pinedale Array	101.97	36	PP	PP	15 54 17.9	-1.8		
	comp=Z,0.2nm,0.4s,baz=303,slow=8.4,SNR=4.0								
SYO	Syowa Base	105.51	202	ieX	Pdif	15 50 27.8	+4.3		
SYO	Syowa Base	105.51	202	ieX	PKiKP	15 54 42.4	+5.7		
TORD	Torodi Ar. Bea	112.23	294	PKiKP	PKiKP	15 54 50.5	-0.5		
	comp=Z,2.0nm,0.9s,baz=34,slow=1.7,SNR=9.5								
TORD				PP	PP	15 55 34.3	-1.5		
	comp=Z,1.7nm,1.0s,baz=70,slow=5.6,SNR=5.0								
TORD				PKKPbc	PKKPbc	16 05 40.0	-1.2		
	comp=Z,0.6nm,0.9s,baz=276,slow=3.7,SNR=4.0								
TXAR	Lajitas Array	114.53	43	PKP	PKPdf	15 54 55.5	+0.3		
	comp=Z,1.8nm,0.8s,baz=236,slow=0.9,SNR=19								
JCT	Junction City	116.12	39	P	PKPdf	15 54 58.2	0.0		
	baz=316								
WVT	Waverly	117.78	27	P	PKPdf	15 55 00.4	-0.7		
	baz=329								
833A	Chaparral WMA,	117.91	41	P	PKiKP	15 55 01.9	+0.2		
	baz=316								
P56A	Dayton Farm, R	117.95	18	P	PKPdf	15 55 00.9	-0.5		
	baz=338								
OXF	Oxford	118.45	29	P	PKPdf	15 55 01.0	-1.4		
	baz=327								
Q57A	Strasburg	118.50	18	P	PKPdf	15 55 01.5	-1.0		
	baz=339								
S54A	Dingess, Beckl	118.75	20	P	PKPdf	15 55 02.2	-0.9		
	baz=336								
Q58A	Fox Den Farm,	118.80	17	P	PKPdf	15 55 02.2	-0.8		
	baz=340								
R56A	Bull Pasture M	118.80	19	P	PKPdf	15 55 02.5	-0.7		
	baz=338								
R57A	Stanardsville	119.16	18	P	PKPdf	15 55 03.7	0.0		
	baz=339								
SNAA	Sanae	119.25	197	PKPdf	PKPdf	15 55 02.3	-0.6		
SNAA	Sanae	119.25	197	PKP	PKPdf	15 55 02.0	-0.8		
	comp=Z,2.2nm,1.2s,baz=112,slow=5.4,SNR=3.1								
R58A	Rapidan	119.31	17	P	PKPdf	15 55 04.0	0.0		
	baz=339								
TKL	Tuckaleechee C	119.81	24	PKP	PKPdf	15 55 04.7	-0.4		
	comp=Z,2.0nm,0.6s,baz=155,slow=1.6,SNR=5.9								
T56A	Rocky Mt	119.87	20	P	PKPd

LPAZ	La Paz	13.96	125	Pn		Pn	15 51 45.9	+0.8
	0.1nm,0.3s,baz=297,slow=9.0,SNR=2.5							
LPAZ				LR		LR	15 57 35.6	
	comp=Z,341nm,19.3s,baz=296,slow=39							
LPAZ	La Paz	13.96	125	P		P	15 51 55.0	+2.4
LPAZ	La Paz	13.96	125	*e*P		Pn	15 51 43.4	-1.7
PB16	IPOC Station P	14.14	135	Pn		Pn	15 51 46.1	-1.4
PB11	IPOC Station P	15.04	139			P	15 52 02.9	-1.1
PB11				IAmb		IAmb	15 52 57.5	
	comp=Z,14nm,0.6s							
GO01	Chusmiza	15.27	138	P		P	15 52 06.3	-0.6
SAML	Samuel	16.68	93	Pn		Pn	15 52 18.3	-1.8
SAML	Samuel	16.68	93	*e*P		Pn	15 52 18.8	-1.3
PB09	IPOC Station P	16.81	143	P		Pn	15 52 22.8	+0.9
PB09				IAmb		IAmb	15 52 39.4	
	comp=Z,46nm,1.6s							
LVC	Limon Verde	17.63	144	P		P	15 52 34.4	+1.5
	comp=Z,0.4nm,0.3s,baz=289,slow=7.3,SNR=7.0							
LVC	Limon Verde	17.63	144	P		Pn	15 52 31.5	-0.7
PB14	IPOC Station P	18.47	151	P		P	15 52 37.0	-5.2
GO02	Mina Guanaco	19.32	150	P		P	15 52 48.7	-2.7
GO02				IAmb		IAmb	15 53 12.1	
	comp=Z,14nm,0.9s							
JTS	Las Juntas de	19.32	345	LR		LR	15 58 36.7	
	comp=Z,216nm,19.8s,baz=231,slow=32							
SDV	Santo Domingo	19.68	29	P		P	15 52 55.3	0.0
	comp=Z,0.4nm,0.3s,baz=213,slow=9.2,SNR=4.9							
SDV				LR		LR	16 02 08.2	
	comp=Z,342nm,18.2s,baz=245,slow=42							
SDV	Santo Domingo	19.68	29	P		P	15 52 50.5	-4.8
SDV	Santo Domingo	19.68	29	*e*P		P	15 52 55.6	+0.3
SIV	San Ignacio	19.96	114	P		P	15 52 59.0	+0.7
	comp=Z,1.9nm,0.7s,baz=301,slow=11,SNR=11							
SIV				LR		LR	16 01 02.9	
	comp=Z,411nm,20.1s,baz=292,slow=38							
MACA	Manacapuru-AM	19.98	76	*e*P		P	15 52 57.1	-1.4
VILB	Vilhena	19.99	104	*e*P		P	15 52 57.8	-0.8
PTLB	Pontes e Lacer	21.57	111	*e*P		P	15 53 14.7	-1.0
CLDB	Colider	24.02	98	*e*P		P	15 53 39.4	-1.3
PCRV	Puerto La Cruz	24.10	40	P		P	15 53 41.0	-0.4
	comp=Z,5.1nm,0.6s,baz=315,slow=4.3,SNR=1.9							
ITTB	Itaituba	24.51	82	*e*P		P	15 53 44.8	-0.4
NPGB	Novo Progresso	24.51	88	*e*P		P	15 53 44.4	-0.8
H03N2	Juan Fernandez	24.82	178	T		T	16 19 36.2	
	baz=357,slow=75,SNR=255							
H03N1	Juan Fernandez	24.82	178	T		T	16 19 42.4	
	baz=357,slow=75,SNR=431							
H03N3	Juan Fernandez	24.83	178	T		T	16 19 38.3	
	baz=357,slow=75,SNR=260							
VA03	San Esteban	25.68	161	P		P	15 53 56.6	+0.9
MT02	Curacav	25.96	163	P		P	15 53 54.0	-4.2
MT02				IAmb		IAmb	15 54 22.6	
	comp=Z,19nm,0.8s							
PP1B	Ponte de Pedra	26.10	113	*e*P		P	15 53 59.2	-0.4
AQDB	Aquidauana	26.35	119	*e*P		P	15 53 58.9	-3.0
MALB	Monte Alegre	26.51	77	*e*P		P	15 54 03.5	+0.2
CPUP	Villa Florida	27.91	132	LR		LR	16 07 29.5	
	comp=Z,185nm,21.4s,baz=328,slow=41							
CMIG	Matias Romero	29.38	330	LR		LR	16 03 38.3	
	comp=Z,102nm,20.3s,baz=148,slow=31							
MDP	Montagnes des	30.50	65	LR		LR	16 07 03.0	
	comp=Z,128nm,21.2s,baz=293,slow=37							
BDFB	Brasilia	32.09	106	LR		LR	16 08 39.7	
	comp=Z,502nm,18.6s,baz=296,slow=38							
IPMB	Ipameri, GO	32.34	110	*e*P		P	15 54 54.6	-0.5
SDBA	SAO DESIDERIO	34.76	99	*e*P		P	15 55 16.2	0.0
VAO	Valinhos	34.83	118	*e*P		P	15 55 15.0	-1.8
ANMO	Albuquerque	49.93	331	P		P	15 57 19.5	+0.1
	comp=Z,0.7nm,0.8s,baz=128,slow=12,SNR=1.9							
NVAR	Mina Array Bea	58.74	325	P		P	15 58 23.0	-0.6
	comp=Z,0.2nm,0.3s,baz=102,slow=8.4,SNR=2.6							
LIC	Lamto	76.22	81	*e*P		P	16 00 15.5	+1.2
	comp=Z,1.0nm,0.2s							
TIC	Toumodi	76.30	81	*e*P		P	16 00 15.2	+0.4
DBIC	Dimbokro	76.46	81	P		P	16 00 16.8	+1.1
	comp=Z,4.5nm,0.7s,baz=273,slow=5.8,SNR=5.5							
DBIC	Dimbokro	76.46	81	P		P	16 00 14.6	-1.1
KIC	Kosan Boka	76.52	81	*e*P		P	16 00 16.7	+0.7
	comp=Z,12nm,0.7s							
SNAA	Sanae	77.94	162	P		P	16 00 24.2	+1.3
	comp=Z,1.5nm,0.7s,baz=276,slow=6.0,SNR=12							
SNAA	Sanae	77.94	162	P		P	16 00 24.4	+1.5
SNAA				IAmb		IAmb	16 00 36.7	
	comp=Z,4.3nm,1.0s							
KOWA	Kowa	78.78	73	P		P	16 00 28.7	+0.2
KOWA				IAmb		IAmb	16 00 30.3	
	comp=Z,11nm,0.7s							
QSPA	South Pole Qui	81.58	180	P		P	16 00 44.8	+1.9
QSPA				IAmb		IAmb	16 00 57.5	
	comp=Z,29nm,1.8s							
TORD	Torodi Ar. Bea	83.97	76	P		P	16 00 56.5	+0.5
	comp=Z,3.7nm,0.9s,baz=267,slow=4.0,SNR=14							
TORD	Torodi Ar. Bea	83.97	76	P		P	16 00 55.6	-0.5
ESDC	Sonseca Array	84.84	49	P		P	16 01 00.6	+0.6
	comp=Z,1.0nm,0.8s,baz=254,slow=6.7,SNR=5.1							
INK	Inuvik	85.29	343	P		P	16 01 01.7	+0.1
	comp=Z,1.5nm,0.9s,baz=129,slow=6.5,SNR=4.4							
ILAR	Eielson Array	88.07	337	P		P	16 01 15.1	-0.2
	comp=Z,0.6nm,0.8s,baz=139,slow=2.5,SNR=10							
ILAR	Eielson Array	88.07	337	P		P	16 01 15.3	+0.1
DAVOX	Davos/Dischmat	96.09	44	LR		LR	16 42 38.7	
	comp=Z,130nm,20.8s,baz=48,slow=34							
H11N3	WAKE ISLAND Hyl	14.46	288	T		T	18 11 43.4	
	baz=91,slow=75,SNR=14							
H11N2	WAKE ISLAND Hyl	14.47	288	T		T	18 11 44.4	
	baz=91,slow=75,SNR=15							
H11N1	WAKE ISLAND Hyl	14.48	288	T		T	18 11 43.0	
	baz=91,slow=75,SNR=16							
H11S2	WAKE ISLAND Hyl	14.64	286	T		T	18 11 54.9	
	baz=92,slow=75,SNR=17							
H11S1	WAKE ISLAND Hyl	14.64	286	T		T	18 11 56.7	
	baz=92,slow=75,SNR=12							
H11S3	WAKE ISLAND Hyl	14.65	286	T		T	18 11 57.0	
	baz=92,slow=75,SNR=16							
ZALV	Zalesovo Beam	133.09	12	PKP		PKPdf	16 07 40.8	+0.3
	comp=Z,1.6nm,1.1s,baz=220,slow=3.9,SNR=3.7							
ASAR	Alice Springs	133.90	225	PKP		PKPdf	16 07 43.3	+0.2
	comp=Z,0.3nm,0.6s,baz=115,slow=2.3,SNR=5.1							
WRA	Warramunga Arr	135.88	230	PKP		PKPdf	16 07 47.1	+0.3
	comp=Z,0.5nm,0.6s,baz=130,slow=1.8,SNR=8.4							
CMAR	Chiang Mai Arr	170.08	6	PKPab		PKPab	16 09 48.4	-0.4
	comp=Z,0.8nm,0.6s,baz=325,slow=5.3,SNR=6.0							

*NEIC **29** 16:00:10.7±2.3,5.5°N±0.2°×61.09°E±0.1°,h10 km±2km, mb4.6/6, Error ellipse: s-maj=31.1km s-min=10.2km az=205.0*

*IDC **29** 16:00:10.7±0.7,5.60°N×61.26°E, h0 km, mb4.0/15, mb1 4.2/15, mb1mx3.9/59, mbtmp4.0/15, MS4.1/15, Ms1 4.1/15, ms1mx3.7/48, Error ellipse: s-maj=22.5km s-min=16.3km az=32.0*

*GCMT **29** 16:00:13.7±0.3,5.69°N±0.02°×61.28°E±0.03, h13 km±1km, MW4.9/93, Moment Tensor Solution. s19,c22; s93,c130; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr~2.61±.18; Mθθ 2.09±.12; Mφφ 0.52±.10; Mrθ~0.23±.25; Mφθ~0.62±.07; Mrφ~0.26±.38; Best double couple: Mo 2.48000×10^16 NP1: ϕ1=295.00000°, δ44.00000°, λ~81.00000°. NP2: ϕ2=103.00000°, δ47.00000°, λ~99.00000°. Principal axes: T 2.3110, Plg2.0000°, Azm199.0000°; N 0.3420, Plg6.0000°, Azm109.0000°; P -2.6490, Plg84.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 16:00:12.1±0.7, 5.7°N±0.1°×61.2°E±0.1°, 1 h10 km, n78, σ0 s 78/66, mb4.4/27, MS4.2/15, 13C-5D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	Socotra	9.66	313	Pn	Pn	16 02 31.2	-0.2
WSAR	Wadi Sarin	17.66	352	LR	LR	16 10 02.4	
	comp=Z,596nm,19.4s,baz=118,slow=33						
PALK	Pallekele	19.41	84	LR	LR	16 10 05.1	
	comp=Z,527nm,20.6s,baz=51,slow=31						
UOSS	Minazif	19.77	346		Pn	16 04 45.0	+0.9
RAYN	Ar Rayn	23.35	321	P	P	16 05 19.0	-1.9
RAYN				IAmb	IAmb	16 05 42.6	
	comp=Z,16nm,1.1s						
OPO	Ambohidratompo	27.78	210	LR	LR	16 14 11.1	
	comp=Z,293nm,20.5s,baz=208,slow=30						
BTK	Batken	35.31	13	P	P	16 07 07.9	+0.3
BTK				IAmb	IAmb	16 07 18.2	
	comp=Z,13nm,1.2s						
KKAR	Karatay Array	38.18	11	P	P	16 07 31.0	-0.8
AAK	Ala-Archa	38.65	16	P	P	16 07 37.4	+1.4
	comp=Z,1.1nm,0.6s,baz=225,slow=9.3,SNR=4.2						
AAK	Ala-Archa	38.65	16	P	P	16 07 37.2	+1.1
CMAR	Chiang Mai Arr	38.90	68	P	P	16 07 39.2	+0.9
	comp=Z,0.8nm,0.8s,baz=256,slow=8.5,SNR=7.7						
CMAR				LR	LR	16 22 32.9	
	comp=Z,64nm,21.6s,baz=255,slow=34						
CMAR	Chiang Mai Arr	38.90	68	P	P	16 07 37.2	-1.1
AKH	Akhalkalaki	38.97	339	⇑P	P	16 07 40.2	+1.5
KIV	Kivodsk	41.48	340	⇓P	P	16 07 59.0	-0.4
BRTR	Keskin Array B	42.05	328	P	P	16 08 04.6	+0.4
	comp=Z,2.1nm,0.8s,baz=132,slow=7.4,SNR=6.7						
BRTR	Keskin Array B	42.05	328	P	P	16 08 02.5	-1.7
ABKAR	Akbulak array	43.45	359	P	P	16 08 15.7	+0.4
ABKAR				IAmb	IAmb	16 08 23.2	
	comp=Z,18nm,1.2s						
ABKAR	Akbulak array	43.45	359	P	P	16 08 14.6	-0.7
AKTO	Aktyubinsk	44.70	357	P	P	16 08 25.9	+0.6
	comp=Z,2.5nm,0.9s,baz=194,slow=9.5,SNR=5.0						
MKAR	Makanchi Array	44.82	20	P	P	16 08 26.8	+0.5
	comp=Z,1.3nm,0.9s,baz=231,slow=9.1,SNR=2.9						
MKAR				LR	LR	16 27 39.7	
	comp=Z,256nm,21.8s,baz=196,slow=37						
BOSA	Boshof	48.60	224	LR	LR	16 27 52.9	
	comp=Z,259nm,18.9s,baz=57,slow=34						
TSUM	Tsumeb	49.58	239	P	P	16 09 04.2	+0.2
	comp=Z,3.1nm,0.9s,baz=56,slow=7.3,SNR=3.4						
NEHR	Nehoiu	49.91	328	⇑P	P	16 09 06.7	+0.8
VRI	Vrincioaia	49.98	329	⇑P	P	16 09 07.4	+0.9
PLOR	Plostina	50.01	329	⇑P	P	16 09 07.9	+1.1
TESR	Tescani	50.43	329	⇑P	P	16 09 10.8	+0.8
VOIR		50.57	327	⇑P	P	16 09 11.7	+0.6
DOPR	Dopca	50.74	328	⇓P	P	16 09 12.2	-0.1
ARR	Arges	50.75	327	⇑P	P	16 09 12.7	+0.3
LOT	Lotru	51.27	327	⇑P	P	16 09 16.0	-0.3
GZR	Gura Zlata	51.78	326	⇑P	P	16 09 20.9	+0.8
ZALV	Zalesovo Beam	51.82	18	P	P	16 09 19.7	-0.4
	comp=Z,3.0nm,0.9s,baz=245,slow=5.7,SNR=4.3						
ZALV				LR	LR	16 33 27.0	
	comp=Z,130nm,18.1s,baz=218,slow=38						
ZALV	Zalesovo Beam	51.82	18	P	P	16 09 18.7	-1.4
ARCR	ARCALIA	52.01	329	⇑P	P	16 09 21.6	-0.2
CJR	Cluj-Napoca	52.17	328	⇑P	P	16 09 23.8	+0.8
AKASG	Malin Array Be	52.25	335	P	P	16 09 23.1	-0.3
	comp=Z,0.2nm,0.3s,baz=126,slow=6.4,SNR=5.8						
BZS	Buzias	52.57	326	⇑P	P	16 09 26.3	+0.4
DRGR		52.69	327	⇑P	P	16 09 27.8	+0.9
SIRR	Siria	52.94	326	⇑P	P	16 09 28.5	-0.1
KOLS	Kolonicke sedl	54.27	329	*e*P	P	16 09 39.7	+1.3
VYHS	Vyhne	55.80	327	*e*P	P	16 09 49.5	0.0
LANS	Liptovska Anna	55.86	328	*e*P	P	16 09 50.9	+1.0
JAVC	Velka Javorina	56.65	327	*e*P	P	16 09 56.0	+0.4
SOKA	Soboth	56.96	324	*e*P	P	16 09 57.9	+0.1
	comp=Z,5.6nm,1.2s						
SONM	Songino Array	56.96	35	LR	LR	16 35 12.5	
	comp=Z,228nm,18.2s,baz=256,slow=37						
ARSA	Arzberg	56.97	324	*i* P	P	16 09 58.1	+0.2
	comp=Z,2.2nm,1.1s						
CONA	Conrad Observa	57.13	325	*e*P	P	16 09 59.0	-0.1
	comp=Z,12nm,1.3s						
MORC	Moravsky Berou	57.24	328	⇓P	P	16 09 59.3	-0.5
MORC	Moravsky Berou	57.24	328	*e*P	P	16 09 59.3	-0.5
KRUC	Moravsky	57.46	327	*e*P	P	16 10 00.9	-0.3
VRAC	Vranov	57.48	327	⇓P	P	16 10 00.4	-1.0
VRAC	Vranov	57.48	327	*e*P	P	16 10 01.3	-0.1
MYKA	Terra Mystica	57.76	323	*e*P	P	16 10 03.5	0.0
	comp=Z,9.3nm,1.4s						
KRLC	Kraliky	57.82	328	AMS	AMS	16 31 00.0	
	comp=Z,500nm,21.1s						
KRLC	Kraliky	57.82	328	*e*P	P	16 10 03.7	-0.1
MOA	Molln	58.01	325	*i* P	P	16 10 05.1	-0.1
	comp=Z,9.5nm,1.1s						
KBA	Koelnbreinsper	58.16	323	*i* P	P	16 10 05.9	-0.5
	comp=Z,8.7nm,1.2s						
ABTA	Abfaltersbach	58.49	323	*e*P	P	16 10 08.5	-0.2
	comp=Z,8.3nm,1.2s						
GERES	GERESS Array B	58.84	325	P	P	16 10 11.7	+0.6
	comp=Z,0.2nm,0.2s,baz=88,slow=7.4,SNR=1.6						
KHC	Kasperske Hory	59.06	326	AMS	AMS	16 32 30.0	
	comp=Z,700nm,14.3s						
KHC	Kasperske Hory	59.06	326	*e*P	P	16 10 10.8	-1.7
TORD	Torodi Ar. Bea	59.10	282	P	P	16 10 14.0	+0.7
	comp=Z,2.8nm,1.0s,baz=89,slow=5.3,SNR=11						
TORD				PcP	PcP	16 11 02.2	+0.2
	comp=Z,1.8nm,0.9s,baz=38,slow=2.5,SNR=5.0						
WATA	Walderalm	59.34	323	*e*P	P	16 10 13.0	-1.6
	comp=Z,13nm,1.2s						
DAVA	Damuels	60.34	322	*e*P	P	16 10 20.8	-0.7
	comp=Z,16nm,1.7s						
CLL	Collm	60.50	327	*e*P	P	16 10 22.0	-0.3
NRIK	Noril'sk	65.91	10	LR	LR	16 42 22.4	
	comp=Z,201nm,19.7s,baz=200,slow=38						
ESDC	Sonseca Array	67.39	311	P	P	16 11 08.5	+0.6
	comp=Z,1.9nm,1.0s,baz=86,slow=4.6,SNR=5.2						
ESDC				LR	LR	16 40 53.1	
	comp=Z,199nm,18.3s,baz=65,slow=36						
FITZ	Fitzroy Crossi	67.75	112	P	P	16 11 10.4	-0.1
	comp=Z,2.5nm,0.9s,baz=315,slow=4.3,SNR=3.1						
KSRS	Kores Array	68.11	52	LR	LR	16 43 32.1	
	comp=Z,88nm,18.3s,baz=267,slow=38						
WRA	Warramunga Arr	76.18	112	P	P	16 12 01.1	0.0
	comp=Z,3.8nm,1.0s,baz=287,slow=4.9,SNR=14						
WRA	Warramunga Arr	76.18	112	P	P	16 12 00.8	-0.3
ASAR	Alice Springs	76.54	116	P	P	16 12 02.8	-0.4
	comp=Z,2.3nm,0.8s,baz=288,slow=5.4,SNR=21						
ASAR	Alice Springs	76.54	116	P	P	16 12 02.6	-0.6
JHJ	Hachijo jima 2	77.34	57	LR	LR	16 47 44.7	
	comp=Z,42nm,19.8s,baz=291,slow=37						
STKA	Stephens Creek	84.82	123	P	P	16 12 47.5	+0.2
	comp=Z,0.4nm,0.3s,baz=315,slow=7.9,SNR=3.0						
STKA				LR	LR	16 48 56.5	
	comp=Z,75nm,18.0s,baz=227,slow=34						
PETK	Petropavlovsk-	89.39	37	LR	LR	16 56 06.4	
	comp=Z,121nm,18.2s,baz=286,slow=38						
VNDA	Vanda	97.79	168	LR	LR	16 51 53.1	
	comp=Z,128nm,18.9s,baz=294,slow=32						
TXAR	Lajitas Array	142.30	338	PKhKP	PKPpre	16 19 41.3	
	comp=Z,0.2nm,0.5s,baz=85,slow=2.6,SNR=3.6						

*IDC **29** 16:04:46.1±1.3,5.71°N×126.52°E, h0 km, mb3.4/5, mb1 3.7/5, mb1mx3.5/40, mbtmp3.5/5, Error ellipse: s-maj=70.7km s-min=23.7km az=79.0*

ISC 29 16:04:54.1±1.0, 5.74°N±0.09×126.65°E±0.10, h66 km, n8, σ1 s 21/11, mb3.4/5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.00	291	*e*P	Pn	16 05 11.9	-0.6
DDMP				*e*S	Sn	16 05 25.6	-0.4
MATI	Mati	1.26	342	*e*P	Pn	16 05 13.6	-2.3
MATI				*e*S	Sn	16 05 33.6	+1.6
SKMP	Bagumbayan, Su	2.23	290	*e*P	Pn	16 05 28.6	-0.3
SKMP				*e*S	Sn	16 05 55.4	0.0
FITZ	Fitzroy Crossi	23.71	182	P	P	16 09 59.0	-1.2
	1.0nm,0.7s,baz=351,slow=13,SNR=1.5						
WRA	Warramunga Arr	26.62	164	P	P	16 10 27.1	+0.5
	0.5nm,0.4s,baz=343,slow=10,SNR=5.4						
ASAR	Alice Springs	30.07	167	P	P	16 10 57.5	+0.1
	0.2nm,0.4s,baz=339,slow=7.0,SNR=11						
MKAR	Makanchi Array	55.88	325	P	P	16 14 25.7	+0.6
	0.6nm,0.6s,baz=129,slow=8.7,SNR=2.0						
ILAR	Eielson Array	83.34	26	P	P	16 17 14.8	+1.1
	0.2nm,0.5s,baz=264,slow=5.6,SNR=4.8						

IDC 29 16:25:51.5±1.7, 9.35°S×155.31°E, h0 km, mb3.9/5, mb1 4.2/5, mb1mx3.8/28, mbtmp4.0/5, MS3.2/5, Ms1 3.2/5, ms1mx2.9/31, Error ellipse: s-maj=69.2km s-min=25.4km az=121.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.57	91	LR	LR	16 28 47.4	
	comp=Z,263nm,19.4s,baz=310,slow=38						
KRVT	Keravat (AS076	5.98	327	LR	LR	16 30 14.7	
	comp=Z,67nm,18.1s,baz=85,slow=44						
PMG	Port Moresby	8.05	269	LR	LR	16 30 56.2	
	comp=Z,423nm,19.4s,baz=100,slow=38						
DZM	Mont Dzumac	16.56	141	LR	LR	16 34 33.3	
	comp=Z,72nm,21.3s,baz=234,slow=32						
WRA	Warramunga Arr	22.83	240	P	P	16 30 56.0	-0.5
	1.2nm,0.7s,baz=67,slow=10.0,SNR=8.4						
ASAR	Alice Springs	24.93	233	P	P	16 31 16.2	-0.5
	3.8nm,1.0s,baz=65,slow=9.6,SNR=23						
STKA	Stephens Creek	25.78	208	P	P	16 31 24.8	+0.5
	11nm,0.9s,baz=31,slow=14,SNR=20						
BATI	Baumata	31.20	266	LR	LR	16 45 27.1	
	comp=Z,85nm,19.1s,baz=80,slow=38						
ILAR	Eielson Array	85.44	21	P	P	16 38 30.8	+0.1
	0.8nm,1.1s,baz=254,slow=3.4,SNR=5.6						
ZALV	Zalesovo Beam	86.30	326	P	P	16 38 35.3	+0.1
	0.6nm,0.6s,baz=93,slow=7.2,SNR=5.0						

IDC 29 16:26:14.6±1.9, 2.00°N×126.63°E, h0 km, mb3.6/3, mb1 3.7/4, mb1mx3.5/40, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=117.9km s-min=23.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.99	183	P	P	16 30 49.0	+0.2
	0.1nm,0.3s,baz=8.7,slow=9.9,SNR=1.7						
WRA	Warramunga Arr	23.08	161	P	P	16 31 22.0	0.0
	1.1nm,0.5s,baz=340,slow=11,SNR=20						
ASAR	Alice Springs	26.47	165	P	P	16 31 53.7	+0.1
	0.4nm,0.3s,baz=346,slow=12,SNR=12						
MKAR	Makanchi Array	58.92	326	P	P	16 36 15.5	-0.1
	0.4nm,0.5s,baz=123,slow=7.3,SNR=8.1						

*IDC **29** 16:37:25.7±1.4, 12.79°N×123.83°E, h0 km, mb3.6/5, mb1 3.8/6, mb1mx3.5/55, mbtmp3.7/6, ML4.2/1, Error ellipse: s-maj=56.7km s-min=18.0km az=53.0*

*NEIC **29** 16:37:32.7±0.8, 11.86°N±0.09°×122.1°E±0.2°, h31 km±7km, mb4.5/12, Error ellipse: s-maj=23.7km s-min=12.7km az=89.0*

ISC 29 16:37:26.7±0.7, 12.76°N±0.04°×123.48°E±0.04°, h10 km, n27, σ1 s 33/29, mb4.4/11, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCSP	San Jose Seism	0.89	3	*e*P	Pb	16 37 44.0	-0.3
PVCP	Virac	1.06	38	*e*P	Pg	16 37 46.1	-1.0
PVCP				*e*S	Sn	16 38 01.8	-0.7
CNP	Catarman	1.18	102	*e*P	Pb	16 37 48.6	-0.6
CNP				*e*S	Sn	16 38 05.5	+0.1
JCNP	Jose Panganiba	1.70	334	*e*P	Pb	16 37 57.1	-0.9
GUIM	Jordan	2.29	202	*e*P	Pb	16 38 06.6	-1.5
GUIM				*e*S	Sb	16 38 38.1	+1.6
SJMP	San Jose	2.32	263	*e*P	Pb	16 38 07.5	-1.1
SJMP				*e*S	Sb	16 38 37.5	+0.2
LLP	Lapu-Lapu	2.47	169	⇑*i*P	Pn	16 38 08.4	+1.4
LLP				*e*S	Sg	16 38 45.6	-0.6
TGY	Tagaytay City	2.81	299	Pn	Pb	16 38 17.1	+0.1
	29nm,0.3s,baz=139,slow=11,SNR=5.6						
TGY				Sn	Sg	16 38 54.6	-2.4
	17nm,0.3s,baz=74,slow=9.3,SNR=3.5						
ENPP	El Nido	4.25	249	*e*P	Pn	16 38 32.4	+0.9
DLV	T Lat	14.67	268	Pn	Pn	16 40 39.8	-15
JSU	Suzuyama	19.74	18	P	Pn	16 42 13.6	+15
JSU				IAmb	IAmb	16 42 15.8	
	comp=Z,37nm,1.3s						
JCJ	Chichijima	22.60	48	P	P	16 42 46.0	+18
JMN	Monobe	22.93	23	P	P	16 42 47.4	+16
CMAR	Chiang Mai Arr	24.29	287	P	P	16 42 46.4	+2.0
	comp=Z,0.3nm,0.3s,baz=98,slow=10,SNR=1.8						
WB0	Warramunga Arr	34.06	161	P	P	16 44 11.1	-0.3
WB0				IAmb	IAmb	16 44 21.6	
	comp=Z,8.4nm,1.1s						
WRAB	Tennant Creek	34.20	162	P	P	16 44 12.4	-0.2
WRAB				IAmb	IAmb	16 44 30.4	
	comp=Z,11nm,1.5s						
WRA	Warramunga Arr	34.21	162	P	P	16 44 12.5	-0.2
	comp=Z,0.6nm,0.7s,baz=345,slow=8.9,SNR=8.8						
WB2	Warramunga Arr	34.21	162	P	P	16 44 12.4	-0.2
WB2				IAmb	IAmb	16 44 30.4	
	comp=Z,4.9nm,0.8s						
WR0	Warramunga Arr	34.29	161	P	P	16 44 12.8	-0.6
AS31	Alice Springs	37.61	164	P	P	16 44 42.5	+0.7
ASAR	Alice Springs	37.61	164	P	P	16 44 42.2	+0.4
	comp=Z,0.4nm,0.5s,baz=346,slow=7.2,SNR=23						
ASAR				PcP	PcP	16 46 59.3	-0.3
	comp=Z,0.2nm,0.7s,baz=343,slow=2.9,SNR=1.2						
ASAR	Alice Springs	37.61	164	P	P	16 44 43.1	+1.3
MOR

0.1nm,0.3s,baz=20,slow=11,SNR=2.6
WRA Warramunga Arr 18.66 161 P **P** **16 44 20.1 -1.7**
0.3nm,0.3s,baz=343,slow=12,SNR=18
WRA LR LR 16 52 49.6
comp=Z,53nm,19.3s,baz=290,slow=41
ASAR Alice Springs 22.07 166 P **P** **16 44 57.2 -1.7**
4.8nm,0.6s,baz=349,slow=11,SNR=40
ASAR S **S** **16 48 55.6 -6.9**
0.8nm,0.9s,baz=351,slow=22,SNR=4.9
ASAR LR LR 16 54 43.0
comp=Z,60nm,18.3s,baz=344,slow=40
CMAR Chiang Mai Arr 35.30 307 P **P** **16 47 01.8 +2.7**
0.2nm,0.5s,baz=134,slow=7.7,SNR=1.2
MKAR Makanchi Array 63.21 326 P **P** **16 50 32.0 -0.1**
0.3nm,0.4s,baz=119,slow=7.2,SNR=2.2
MMAI Mount Meron Ar 93.47 303 LR LR 17 39 37.3
comp=Z,12nm,21.9s,baz=135,slow=38

WEL 29 16:42:53.3,37°S±4′×17°7E±′, h208km±6km, M2.9/37, MLv2.9/37, Error ellipse: s-maj=0.0km s-min=0.0km az=3.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.46**	**187**	P	Pn	16 43 21.5	+0.4
TOZ	**Tahuroa Road**	**0.96**	**249**	P	Pn	16 43 24.0	+0.5
KUZ	**Kuaotunu**	**0.97**	**311**	P	Pn	16 43 23.5	-0.2
HAZ	**Te Kaha**	**0.99**	**112**	P	Pn	16 43 23.1	-0.6
HAZ				S	S	16 43 46.0	-1.4
RUGZ	**Raukumara Rang**	**1.01**	**125**	P	Pn	16 43 22.9	-1.1
RUGZ				S	S	16 43 44.9	-3.1
MUGZ	**Murupara**	**1.09**	**174**	P	Pn	16 43 24.6	+0.1
MUGZ				S	S	16 43 47.0	-1.8
MWZ	**Matawai**	**1.18**	**143**	P	Pn	16 43 24.8	-0.4
MWZ				S	S	16 43 49.0	-0.9
MKAZ	**Moumakai**	**1.21**	**283**	P	Pn	16 43 25.7	+0.4
RTZ	**Ruatahuna**	**1.25**	**167**	P	Pn	16 43 25.8	0.0
RTZ				S	S	16 43 50.5	-0.6
RAGZ	**Rawiri**	**1.27**	**151**	P	Pn	16 43 26.2	+0.4
TLZ	**Tolley Road**	**1.27**	**222**	P	Pn	16 43 26.6	+0.7
MXZ	**Matakaoa Point**	**1.34**	**98**	P	Pn	16 43 26.3	-0.1
TKGZ	**Te Karaka**	**1.42**	**138**	P	Pn	16 43 27.2	+0.2
ETAZ	**East Tamaki Re**	**1.43**	**287**	P	Pn	16 43 27.4	+0.4
MRHZ	**Matea Rd**	**1.45**	**187**	P	Pn	16 43 26.9	-0.4
PUZ	**Puketiti**	**1.46**	**118**	P	Pn	16 43 27.2	-0.2
WMGZ	**Waiomatatini S**	**1.48**	**107**	P	Pn	16 43 27.7	+0.2
SNGZ	**Shannon Statio**	**1.50**	**158**	P	Pn	16 43 27.9	+0.2
MBAZ	**Motutapu North**	**1.52**	**294**	P	Pn	16 43 28.2	+0.4
HATZ	**Hinemaiaia**	**1.56**	**196**	P	Pn	16 43 28.3	+0.1
RAHZ	**Arahi**	**1.57**	**167**	P	Pn	16 43 28.9	+0.6
RIGZ	**Rimuhau**	**1.59**	**146**	P	Pn	16 43 29.0	+0.5
AWAZ	**Awhitu Peninsu**	**1.62**	**281**	P	Pn	16 43 29.0	+0.2
ABAZ	**Army Bay**	**1.64**	**298**	P	Pn	16 43 29.4	+0.5
CNGZ	**Carnagh Statio**	**1.66**	**132**	P	Pn	16 43 29.9	+0.8
WTAZ	**Waiatarua**	**1.71**	**285**	P	Pn	16 43 29.9	+0.4
NMHZ	**Naumai**	**1.71**	**175**	P	Pn	16 43 30.3	+0.7
WHHZ	**Waihua**	**1.75**	**164**	P	Pn	16 43 30.2	+0.3
BKZ	**Black Stump Fm**	**1.78**	**183**	P	Pn	16 43 29.9	-0.3
HIZ	**Hauiti**	**1.80**	**231**	P	Pn	16 43 31.2	+0.8
PRGZ	**Paritu Road**	**1.82**	**148**	P	Pn	16 43 30.6	0.0
KNZ	**Kokohu**	**1.82**	**154**	P	Pn	16 43 30.7	+0.1
ARHZ	**Aropaoanui**	**1.89**	**171**	P	Pn	16 43 31.6	+0.3
WTVZ	**West Tongariro**	**1.91**	**205**	P	Pn	16 43 32.0	+0.4
TWVZ	**Taurewa**	**1.92**	**209**	P	Pn	16 43 32.3	+0.6
MHGZ	**Mahia Peninsul**	**2.03**	**151**	P	Pn	16 43 32.8	+0.1
KWHZ	**Kaweka Forest**	**2.04**	**185**	P	Pn	16 43 33.1	+0.3
FWVZ	**Far West T-bar**	**2.05**	**204**	P	Pn	16 43 33.5	+0.4
MCHZ	**McNeill Hill**	**2.05**	**179**	P	Pn	16 43 33.2	+0.4
WNVZ	**Wahianoa**	**2.10**	**202**	P	Pn	16 43 33.4	-0.1
MOVZ	**Moawhango**	**2.13**	**199**	P	Pn	16 43 33.3	-0.5
BHHZ	**Black Hill Sta**	**2.14**	**192**	P	Pn	16 43 33.5	-0.3
KRHZ	**Kereru**	**2.26**	**185**	P	Pn	16 43 34.7	-0.3
VRZ	**Vera Road**	**2.27**	**220**	P	Pn	16 43 36.2	+1.0
CKHZ	**Cape Kidnapper**	**2.29**	**171**	P	Pn	16 43 35.3	0.0
WCZ	**Waipu Caves**	**2.34**	**308**	P	Pn	16 43 36.0	+0.1
KAHZ	**Kahuranaki**	**2.41**	**175**	P	Pn	16 43 36.6	-0.1
PNHZ	**Pukenui**	**2.54**	**187**	P	Pn	16 43 37.5	-0.6
PXZ	**Pawanui**	**2.64**	**176**	P	Pn	16 43 38.5	-0.7
WPHZ	**Waipukurau**	**2.67**	**183**	P	Pn	16 43 38.8	-0.8
TSZ	**Takapari Road**	**2.72**	**191**	P	Pn	16 43 39.2	-0.8
PRHZ	**Porangahau**	**2.87**	**180**	P	Pn	16 43 40.8	-1.0
DVHZ	**Dannevirke**	**2.93**	**187**	P	Pn	16 43 41.2	-1.2
PRWZ	**Pori Road**	**3.20**	**189**	P	Pn	16 43 44.9	-0.7
BFZ	**Birch Farm**	**3.30**	**185**	P	Pn	16 43 44.7	-2.1
MRZ	**Mangatainoka R**	**3.37**	**194**	P	Pn	16 43 45.8	-1.8
OGWZ	**Otaki Gorge**	**3.61**	**198**	P	Pn	16 43 48.2	-2.3
KIW	**Kapiti Island**	**3.71**	**201**	P	Pn	16 43 49.9	-1.9
CAW	**Cannon Point**	**3.91**	**198**	P	Pn	16 43 51.7	-2.4
TRWZ	**Traveller**	**4.07**	**190**	P	Pn	16 43 53.9	-2.2
WEL	**Wellington**	**4.15**	**200**	P	Pn	16 43 54.9	-2.2
MSWZ	**Moikau Station**	**4.16**	**194**	P	Pn	16 43 54.4	-2.8
TCW	**Tory Channel**	**4.23**	**205**	P	Pn	16 43 55.9	-2.2
BHW	**Baring Head**	**4.24**	**198**	P	Pn	16 43 55.5	-2.7
PLWZ	**Palliser**	**4.31**	**194**	P	Pn	16 43 56.3	-2.9
TUMZ	**Tuamarina**	**4.54**	**206**	P	Pn	16 43 59.5	-2.5
NNZ	**Nelson**	**4.58**	**212**	P	Pn	16 43 59.8	-2.7
QRZ	**Quartz Range**	**4.68**	**222**	P	Pn	16 44 01.3	-2.5
BSWZ	**Blackbirch Sta**	**4.81**	**205**	P	Pn	16 44 03.0	-2.5
THZ	**Tophouse**	**5.23**	**212**	P	Pn	16 44 09.0	-1.8
KHZ	**Kahutara**	**5.55**	**204**	P	Pn	16 44 12.1	-2.7
DSZ	**Denniston Nort**	**5.73**	**219**	P	Pn	16 44 15.0	-2.1
GVZ	**Greta Valley S**	**6.21**	**205**	P	Pn	16 44 20.3	-3.0
LTZ	**Lake Taylor**	**6.34**	**210**	P	Pn	16 44 21.9	-3.0
INZ	**Inchbonnie**	**6.65**	**215**	P	Pn	16 44 26.2	-2.7
OKCZ	**Okains Bay**	**6.88**	**202**	P	Pn	16 44 29.2	-2.7
MQZ	**McQueen's Vall**	**7.00**	**204**	P	Pn	16 44 29.1	-4.3
RACZ	**Rakaia**	**7.19**	**207**	P	Pn	16 44 32.4	-3.5
ARCZ	**Arundel**	**7.75**	**211**	P	Pn	16 44 39.5	-3.6

*IDC **29** 17:29:37.2±2.6, 18°.50N×145°.50E, h202km±25km, mb3.4/16, mb1 3.5/18, mb1mx3.3/65, mbtmp3.9/18, MS1.9/1, Ms1 1.9/1, ms1mx1.8/33, Error ellipse: s-maj=20.2km s-min=10.1km az=88.0*
*NEIC **29** 17:29:44.3±1.8, 18°.40N±0°.08×145°.55E±0°.08, h265km±6km, mb4.3/61, Error ellipse: s-maj=14.8km s-min=5.7km az=220.0*
ISC 29 17:29:38.5±0.6, 18°.41N±0°.10×145°.6E±0°.1, h200km, n89, σ0s83/48, mb4.3/46, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.84**	**188**	P	Pn	17 30 49.8	-1.2
	3.6nm,0.3s,baz=259,slow=13,SNR=2.2						
GUMO				LR	LR	17 31 41.3	
	comp=Z,13nm,18.7s,baz=40,slow=25						
GUMO				S	Sn	17 31 43.8	-4.4
	8.3nm,0.3s,baz=74,slow=19,SNR=1.5						
MJAR	**Matsushiro Arr**	**19.20**	**342**	P	**P**	**17 33 44.5**	**-2.7**
	0.0nm,0.3s,baz=168,slow=11,SNR=4.2						
MJAR	**Matsushiro Arr**	**19.20**	**342**	P	**P**	**17 33 48.5**	**+1.3**
YHNB	**Yeheng**	**23.35**	**290**	P	**P**	**17 34 28.9**	**-0.2**
KRVT	**Keravat (AS076**	**23.45**	**164**	P	**P**	**17 34 30.9**	**+0.8**
	8.0nm,0.6s,baz=196,slow=21,SNR=4.3						
SSLB	**Suanglung**	**23.58**	**287**	P	**P**	**17 34 31.1**	**-0.2**
SSLB				IAmb	IAmb	17 34 60.0	
	comp=Z,17nm,1.2s						
FAKI	**Fak Fak**	**24.94**	**213**	P	**P**	**17 34 42.1**	**-1.5**
FAKI				IAmb	IAmb	17 35 07.4	
	comp=Z,6.4nm,0.8s						
KKM	**Kota Kinabalu**	**31.16**	**250**	P	**P**	**17 35 38.9**	**-0.2**
COEN	**Coen**	**32.25**	**184**	P	P	17 35 47.1	-1.2
COEN				IAmb	IAmb	17 35 56.4	
	comp=Z,20nm,1.4s						
KLR	**Kul'dur**	**32.71**	**343**	P	P	17 35 50.5	-1.5
	comp=Z,0.4nm,0.4s,baz=336,slow=12,SNR=1.8						
SBUM	**Sibu**	**36.34**	**248**	P	**P**	**17 36 23.0**	**-0.5**
SBUM				IAmb	IAmb	17 36 24.8	
	comp=Z,5.1nm,0.5s						
KNRA	**Kununurra**	**37.71**	**207**	P	**P**	**17 36 34.7**	**-0.3**
KNRA				IAmb	IAmb	17 36 52.0	
	comp=Z,18nm,1.4s						
WB0	**Warramunga Arr**	**39.50**	**197**	P	P	17 36 49.0	-0.8
WR0	**Warramunga Arr**	**39.64**	**196**	P	P	17 36 50.2	-0.9
WRAB	**Tennant Creek**	**39.67**	**197**	P	P	17 36 50.4	-0.9
WRAB				IAmb	IAmb	17 36 51.7	
	comp=Z,13nm,1.2s						
WB2	**Warramunga Arr**	**39.68**	**197**	P	P	17 36 50.5	-0.9
WB2				IAmb	IAmb	17 36 51.8	
	comp=Z,10nm,1.2s						
WRA	**Warramunga Arr**	**39.68**	**197**	P	P	17 36 50.3	-1.1
	comp=Z,3.7nm,0.8s,baz=6.9,slow=8.5,SNR=58						
WRA				PcP	**PcP**	**17 38 52.2**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=16,slow=3.1,SNR=2.9						
WRA	**Warramunga Arr**	**39.68**	**197**	P	P	17 36 50.2	-1.2
SANVU	**Saraoutou**	**39.82**	**146**	P	P	17 36 51.1	-1.4
SANVU				IAmb	IAmb	17 36 52.1	
	comp=Z,11nm,0.8s						
SMY	**Shemya**	**40.84**	**26**	P	**P**	**17 37 01.1**	**+0.7**
FITZ	**Fitzroy Crossi**	**41.24**	**209**	P	**P**	**17 37 04.1**	**-0.1**
SONM	**Songinо Array**	**43.30**	**322**	P	P	17 37 18.2	-2.5
	comp=Z,0.3nm,0.4s,baz=133,slow=6.3,SNR=2.0						
AS31	**Alice Springs**	**43.35**	**196**	P	P	17 37 20.3	-0.8
ASAR	**Alice Springs**	**43.35**	**196**	P	P	17 37 20.2	-0.9
	comp=Z,1.0nm,0.5s,baz=20,slow=9.9,SNR=29						
ASAR	**Alice Springs**	**43.35**	**196**	P	P	17 37 19.7	-1.4
UGM	**Wanagama**	**43.37**	**236**	P	**P**	**17 37 20.9**	**-0.7**
CMAR	**Chiang Mai Arr**	**44.15**	**278**	P	P	17 37 26.1	-1.6
	comp=Z,0.5nm,0.6s,baz=68,slow=7.5,SNR=7.2						
CMAR	**Chiang Mai Arr**	**44.15**	**278**	P	**P**	**17 37 29.3**	**+1.6**
SEY	**Seymchan**	**44.73**	**4**	P	P	17 37 29.2	-2.3
	comp=Z,2.4nm,0.9s,baz=217,slow=18,SNR=1.9						
KULM	**Kulim**	**45.73**	**259**	P	**P**	**17 37 41.7**	**+1.5**
KULM				IAmb	IAmb	17 37 42.4	
	comp=Z,7.4nm,0.6s						
PSA00	**Pilbara Seismi**	**47.06**	**214**	P	**P**	**17 37 50.2**	**-0.1**
PSA00				IAmb	IAmb	17 38 37.2	
	comp=Z,21nm,1.4s						
GSI	**Gunungsitoli**	**50.05**	**256**	P	**P**	**17 38 13.6**	**+0.2**
STKA	**Stephens Creek**	**50.15**	**184**	P	P	17 38 12.0	-1.6
	comp=Z,1.1nm,0.5s,baz=345,slow=13,SNR=6.0						
STKA	**Stephens Creek**	**50.15**	**184**	P	P	17 38 12.3	-1.3
GIRL	**Giralia**	**51.03**	**218**	P	**P**	**17 38 21.1**	**+0.7**
FORT	**Forrest**	**51.73**	**199**	P	P	17 38 24.7	-0.7
BBOO	**Buckleboo**	**51.74**	**190**	P	P	17 38 24.0	-1.5
BBOO				IAmb	IAmb	17 38 38.5	
	comp=Z,39nm,1.6s						
SDPT	**Sand Point**	**54.77**	**34**	P	**P**	**17 38 47.0**	**-0.3**
MORW	**Morawa**	**55.16**	**212**	P	P	17 38 49.7	-0.7
MORW				IAmb	IAmb	17 39 33.4	
	comp=Z,32nm,1.6s						
NWAO	**Narrogin (SRO)**	**57.80**	**208**	P	**P**	**17 39 08.7**	**-0.4**
NWAO	**Narrogin (SRO)**	**57.80**	**208**	P	**P**	**17 39 08.6**	**-0.4**
NWAO				IAmb	IAmb	17 39 33.0	
	comp=Z,38nm,1.5s						
MKAR	**Makanchi Array**	**58.59**	**314**	P	P	17 39 12.4	-1.9
	comp=Z,0.5nm,0.8s,baz=86,slow=11,SNR=1.5						
TTA	**Tatalina**	**59.55**	**27**	P	**P**	**17 39 20.2**	**-0.5**
TTA				IAmb	IAmb	17 39 44.9	
	comp=Z,17nm,1.7s						
BRLK	**Bradley Lake**	**60.99**	**31**	P	P	17 39 29.4	-1.1
PPLA	**Purkeypile**	**61.20**	**28**	P	**P**	**17 39 32.0**	**-0.1**
PPLA				IAmb	IAmb	17 39 35.1	
	comp=Z,20nm,1.4s						
KURK	**Kurchatov**	**61.41**	**318**	P	P	17 39 30.8	-2.7
IMAR	**Indian Mountai**	**61.52**	**24**	P	**P**	**17 39 33.9**	**0.0**
O22K	**Cooper Landing**	**61.72**	**31**	P	**P**	**17 39 34.4**	**-1.0**
SEW	**Seward**	**61.77**	**31**	P	**P**	**17 39 34.9**	**-0.8**
NRIK	**Noril'sk**	**61.84**	**340**	P	P	17 39 33.6	-2.4
	comp=Z,1.0nm,0.4s,baz=166,slow=12,SNR=3.5						
KTH	**Kantishna Hill**	**61.94**	**27**	P	P	17 39 35.3	-1.5
KTH				IAmb	IAmb	17 39 37.7	
	comp=Z,7.1nm,1.2s						
BPAW	**Bear Paw Mtn.**	**62.06**	**26**	P	**P**	**17 39 37.2**	**-0.4**
TRF	**Thorofare Moun**	**62.18**	**27**	P	P	17 39 37.3	-1.3
TRF				IAmb	IAmb	17 39 47.5	
	comp=Z,17nm,1.7s						
PMR	**Palmer**	**62.25**	**29**	P	**P**	**17 39 38.7**	**-0.1**
PMR				IAmb	IAmb	17 39 42.2	
	comp=Z,15nm,1.7s						
RND	**Reindeer**	**62.80**	**27**	P	P	17 39 40.7	-1.9
RND				IAmb	IAmb	17 39 57.6	
	comp=Z,6.2nm,1.3s						
I23K	**Minto, Yukon-K**	**63.01**	**25**	P	**P**	**17 39 43.6**	**-0.2**
I23K				IAmb	IAmb	17 39 45.5	
	comp=Z,6.9nm,1.6s						
FID	**Port Fidalgo**	**63.34**	**31**	P	**P**	**17 39 45.5**	**-0.6**
FID				IAmb	IAmb	17 40 22.0	
	comp=Z,16nm,1.2s						
DHY	**Denali Highway**	**63.37**	**28**	P	**P**	**17 39 45.7**	**-0.8**
DHY				IAmb	IAmb	17 40 15.2	
	comp=Z,12nm,1.6s						
WRH	**Wood River Hil**	**63.37**	**26**	P	P	17 39 44.7	-1.5
WRH				IAmb	IAmb	17 40 00.4	
	comp=Z,7.0nm,1.5s						
MDM	**Murphy Dome**	**63.43**	**26**	P	**P**	**17 39 46.8**	**+0.2**
CCB	**Clear Creek Bu**	**63.53**	**26**	P	P	17 39 45.5	-1.7
KLU	**Klutina**	**63.74**	**30**	P	**P**	**17 39 48.0**	**-0.7**
KLU				IAmb	IAmb	17 40 11.3	
	comp=Z,12nm,1.6s						
HDA	**Harding Lake**	**63.84**	**27**	P	P	17 39 47.8	-1.5
TOLK	**Toolik Lake Re**	**63.90**	**22**	P	**P**	**17 39 49.5**	**-0.1**
IL31		**63.95**	**26**	P	P	17 39 47.9	-2.1
ILAR	**Eielson Array**	**63.95**	**26**	P	P	17 39 48.0	-2.0
	comp=Z,0.8nm,0.7s,baz=246,slow=5.0,SNR=12						
ILAR	**Eielson Array**	**63.95**	**26**	P	P	17 39 48.2	-1.8
PAX	**Paxson**	**64.21**	**28**	P	**P**	**17 39 51.0**	**-0.8**
PAX				IAmb	IAmb	17 40 26.8	
	comp=Z,9.1nm,1.6s						
SUCK	**Suckling Hills**	**64.56**	**32**	P	**P**	**17 39 54.3**	**+0.2**
RIDG	**Independent Ri**	**64.62**	**27**	P	**P**	**17 39 54.1**	**-0.3**
RIDG				IAmb	IAmb	17 40 25.1	
	comp=Z,6.7nm,1.3s						
NNZ	**Nelson**	**64.69**	**157**	P	**P**	**17 39 55.7**	**+0.7**
DOT	**Dot Lake**	**64.95**	**28**	P	**P**	**17 39 55.7**	**-0.8**
DOT				IAmb	IAmb	17 40 26.9	
	comp=Z,11nm,1.2s						
CRQM	**Cirque**	**64.97**	**31**	P	P	17 39 55.6	-1.2
CRQM				IAmb	IAmb	17 40 04.1	
	comp=Z,9.1nm,1.1s						
ISLE	**Juniper Island**	**65.34**	**31**	P	**P**	**17 39 58.9**	**-0.3**
ISLE				IAmb	IAmb	17 40 27.5	
	comp=Z,13nm,1.2s						
BMAR	**Burnt Mountain**	**65.42**	**23**	P	**P**	**17 39 59.5**	**0.0**
BCAR	**Beaver Creek A**	**65.88**	**28**	P	**P**	**17 40 02.0**	**-0.5**
TABL	**Table Mountain**	**65.91**	**31**	P	**P**	**17 40 02.9**	**-0.1**
TABL				IAmb	IAmb	17 40 03.0	
	comp=Z,15nm,1.3s						
BVAR	**Borovoye Array**	**66.63**	**320**	P	P	17 40 04.8	-2.6
	comp=Z,6.0nm,0.6s,baz=42,slow=18,SNR=5.2						
KKAR	**Karatay Array**	**66.87**	**310**	P	P	17 40 07.6	-1.5
DAWY	**Dawson**	**67.05**	**27**	P	**P**	**17 40 09.4**	**-0.6**
HYT	**Haines Junctio**	**67.72**	**31**	P	**P**	**17 40 14.4**	**+0.1**
HYT				IAmb	IAmb	17 40 20.7	
	comp=Z,7.4nm,1.3s						
INK	**Inuvik**	**69.67**	**23**	P	P	17 40 23.9	-2.1
	comp=Z,1.0nm,0.7s,baz=283,slow=12,SNR=3.7						
INK	**Inuvik**	**69.67**	**23**	P	**P**	**17 40 25.1**	**-0.9**
ABKAR	**Akbulak array**	**73.48**	**317**	P	P	17 40 46.5	-2.6
ABKAR	**Akbulak array**	**73.48**	**317**	P	P	17 40 45.8	-3.3
YKA	**Yellowknife Ar**	**78.29**	**28**	P	P	17 41 14.6	-1.4
	comp=Z,0.6nm,0.6s,baz=292,slow=4.3,SNR=2.0						
NVAR	**Mina Array Bea**	**83.40**	**52**	P	**P**	**17 41 43.8**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=284,slow=4.8,SNR=4.0						
FINES	**FINESS Array B**	**87.10**	**335**	P	P	17 41 57.4	-4.0
	comp=Z,1.8nm,0.8s,baz=64,slow=4.4,SNR=4.8						
LPAZ	**La Paz**	**147.77**	**91**	PKPbc	**PKPdf**	**17 48 59.6**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=320,slow=2.3,SNR=4.6						

*IDC **29** 17:31:17.5±0.7, 32°.42N×48°.03E, h0km, mb3.9/18, mb1 4.0/23, mb1mx3.8/61, mbtmp4.0/23, ML3.9/5, MS3.2/11, Ms1 3.2/11, ms1mx2.9/59, Error ellipse: s-maj=15.9km s-min=13.0km az=167.0*
*NEIC **29** 17:31:19.9±2.5, 32°.33N±0°.06×47°.86E±0°.03, h12km±4km, mb4.6/68, mb_Lg4.2(TEH), Error ellipse: s-maj=9.3km s-min=3.2km az=175.0*
*TEH **29** 17:31:20.7, 32°.54N×47°.98E, h14km, ML4.2*
*ISN **29** 17:31:20.1±0.8, 32°.55N×47°.93E, h14km±6km, ML3.9*
*MOS **29** 17:31:21.7±1.2, 32°.60N×47°.90E, h30km, mb4.5/7, Error ellipse: s-maj=7.8km s-min=5.3km az=102.4*
*THR **29** 17:31:22.0±0.4, 32°.44N×48°.06E, h14km±5km, ML4.5*
*OMAN **29** 17:31:27.1±1.8, 32°.17N×48°.21E, h108km, mb4.7/15, Error ellipse: s-maj=18.4km s-min=5.2km az=2.0*
ISC 29 17:31:20.1±1.2, 32°.49N±0°.03×47°.97E±0°.03, h15km±8km, n300, σ1s64/292, mb4.4/62, MS3.4/7, 16C-15D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.04**	**354**	*e*Pg	**Pb**	**17 31 39.1**	**-0.9**
IKFM				*e*		17 32 01.4	
IKMR	**Kamar-syah**	**1.08**	**18**	*e*Pg	**Pb**	**17 31 40.0**	**-0.8**
IKMR				*e*		17 32 03.0	
AHWZ	**Ahwaz**	**1.29**	**153**	*e*Pg	**Pb**	**17 31 45.5**	**+1.2**
AHWZ				*e*Sg	**Sg**	**17 32 05.4**	**+3.4**
IKOM	**Komasi**	**1.73**	**347**	*e*Pg	**Pg**	**17 31 52.4**	**-1.1**
IKOM				*e*		17 32 21.8	
HSAM	**Samen**	**1.80**	**17**	*e*Pg	**Pg**	**17 31 53.9**	**-1.0**
HSAM				*e*		17 32 29.7	
IBDR	**Badra**	**1.83**	**290**	*e*Pg	**Pn**	**17 31 52.0**	**+0.8**
IBDR				*e*Sg	**Sb**	**17 32 16.0**	**-0.1**
IBDR				AML	AML	17 32 23.2	
	comp=N,1μm,0.8s						
IBDR				AML	AML	17 32 38.6	
	comp=E,913nm,0.3s						
KCHF	**Cheshme Sefid,**	**1.94**	**337**	*e*Pn	**Pb**	**17 31 55.3**	**-0.3**
KCHF				*e*		17 32 34.1	
IBZA	**Bozab**	**1.98**	**357**	*e*Pg	**Pb**	**17 31 56.7**	**+0.5**
IBZA				*e*		17 32 32.8	
KER	**Kermanshah**	**2.02**	**340**	*e*Pn	**Pb**	**17 31 56.9**	**+0.1**
KHMZ	**Khomeyn**	**2.08**	**53**	*e*Pg	**Pg**	**17 31 59.4**	**-0.9**
KHMZ				*e*Sg	**Sg**	**17 32 27.0**	**-0.4**
KHMZ	**Khomeyn**	**2.08**	**53**	*e*Pg	**Pg**	**17 31 59.4**	**-0.9**
NSR	**Nassriya**	**2.14**	**227**	*e*Pn	**Pn**	**17 31 57.0**	**+1.5**
NSR				*e*Sn	**Sn**	**17 32 23.0**	**+1.1**
NSR				AML	AML	17 32 29.4	
	comp=E,2μm,0.9s						
IGHG	**Ghaleghazi**	**2.18**	**328**	*e*Pn	**Pb**	**17 31 58.1**	**-1.5**
IGHG				*e*		17 32 42.4	
IVIS	**Veis**	**2.24**	**336**	*e*Pn	**Pb**	**17 31 58.9**	**-1.6**
IVIS				*e*		17 32 37.1	
IVIS	**Veis**	**2.24**	**336**	Pn	**Pb**	**17 31 58.9**	**-1.6**
IALM	**Almabolaq**	**2.37**	**4**	*e*Pn	**Pb**	**17 32 03.3**	**-0.6**
ILIN	**Lien**	**2.57**	**341**	*e*Pn	**Pn**	**17 32 02.9**	**+1.3**
ILIN				*e*		17 32 53.3	
IDHR	**Dehrash**	**2.57**	**330**	*e*Pn	**Pn**	**17 32 03.4**	**+1.8**
IDHR				*e*		17 32 45.6	
SNGE	**Sanandaj**	**2.65**	**349**	*e*Pn	**Pb**	**17 32 07.3**	**-0.3**
ASAO	**Ashtian**	**2.68**	**39**	*e*Pn	**Pb**	**17 32 07.0**	**-1.1**
ASAO				*e*Sg	**Sg**	**17 32 45.6**	**-0.9**
ASAO	**Ashtian**	**2.68**	**39**	*e*Pn	**Pb**	**17 32 07.0**	**-1.1**
HSRG	**Sareghieh**	**2.76**	**5**	*e*Pn	**Pb**	**17 32 06.9**	**-2.6**
BHD	**Baghdad**	**3.12**	**285**	*e*Pn	**Pn**	**17 32 10.0**	**+1.1**
BHD				*e*Sn	**Sn**	**17 32 47.0**	**+1.1**
BHD				AML	AML	17 33 12.4	
	comp=E,857nm,0.6s						
IKLH	**Kolahrood**	**3.15**	**74**	*e*Pn	**Pn**	**17 32 12.8**	**+3.2**
IKLH				*e*		17 33 05.8	
IRAZ	**Razeghan**	**3.33**	**29**	*e*Pn	**Pb**	**17 32 15.9**	**-3.4**
GHVR	**GHOM**	**3.42**	**54**	*e*Pn	**Pn**	**17 32 16.0**	**+2.9**
GHVR	**GHOM**	**3.42**	**54**	*e*Pn	**Pn**	**17 32 16.0**	**+2.9**
KLNJ	**Kolanjah**	**3.42**	**115**	*e*Pn	**Pn**	**17 32 15.3**	**+1.9**
KLNJ				*e*		17 33 42.7	
IGAR	**Gharneh**	**3.44**	**90**	*e*Pn	**Pn**	**17 32 16.0**	**+2.3**
IGAR				*e*		17 33 29.5	
IGAR	**Gharneh**	**3.44**	**90**	Pn	**Pn**	**17 32 15.9**	**+2.3**
QABG	**Abgarm-Qazvin**	**3.48**	**22**	*e*Pn	**Pn**	**17 32 16.5**	**+2.3**
IQOM	**Qom**	**3.49**	**47**	*e*Pn	**Pn**	**17 32 16.6**	**+2.2**
IQOM				*e*		17 32 34.3	
IQOM	**Qom**	**3.49**	**47**	Pn	**Pn**	**17 32 16.6**	**+2.2**
IZEF	**Zefreh**	**3.70**	**83**	*e*Pn	**Pn**	**17 32 20.3**	**+3.1**
IZEF	**Zefreh**	**3.70**	**83**	Pn	**Pn**	**17 32 44.2**	**+3.1**
IRAM	**Ramesheh**	**3.80**	**99**	*e*Pn	**Pn**	**17 32 20.3**	**+1.7**
IMHD	**Mahdasht**	**3.90**	**34**	*e*Pn	**Pn**	**17 32

comp=Z,142nm,1.5s
DQM DQM 15.16 143 P **Pn** 17 34 51.2 -2.8
WHFO Wadi Hawf 15.42 159 P **Pn** 17 34 53.8 -3.7
SNR=16
AKAS Kas 15.62 289 Pn **Pn** 17 35 01.5 +1.5
ABTO Aybut 15.82 161 P **Pn** 17 34 59.7 -3.0
RBK Rabkut 15.95 158 P **Pn** 17 35 03.0 -1.3
SHAO Shalim 15.97 153 P **Pn** 17 35 03.0 -1.6
SNR=8.5
DMTO DMTO 16.00 155 P **Pn** 17 35 02.1 -2.8
SNR=9.1
MANT Manisa 16.89 296 P **Pn** 17 35 16.8 +0.4
MANT IAmb IAmb 17 35 20.6
comp=Z,47nm,0.8s
KARP Karpathos 17.52 286 P **P** 17 35 25.6 +0.5
KARP IAmb IAmb 17 35 31.1
comp=Z,28nm,0.9s
KBL Kabul 17.69 78 P **P** 17 35 28.8 +1.5
KBL pmax pmax
comp=Z,5.0nm,1.0s
KBL Kabul 17.69 78 P **P** 17 35 28.8 +1.5
APE Apeiranthos 18.98 290 *i* P **P** 17 35 41.0 -0.2
APE pmax pmax
comp=Z,2.0nm,0.6s
ABKAR Akbulak array 19.00 25 P **Pn** 17 35 43.6 +1.5
ABKAR Akbulak array 19.00 25 P **Pn** 17 35 43.5 +1.5
VRH Novokhopyorsk 19.26 348 *e*P **P** 17 35 44.1 0.0
VRH pmax pmax
comp=Z,10.0nm,0.5s
IDI Anoyia 19.36 285 P **P** 17 35 45.9 +0.5
comp=Z,1.0nm,0.3s,baz=80,slow=12,SNR=27
IDI Anoyia 19.36 285 ⇑P **Pn** 17 35 46.7 +0.2
IDI Anoyia 19.36 285 **Pn** 17 35 46.5 0.0
IDI IAmb IAmb 17 35 48.5
comp=Z,12nm,0.6s
TIRR Tirgusor 19.37 314 P **Pn** 17 35 47.1 +0.6
TIRR pmax pmax
comp=Z,43nm,1.1s
TIRR Tirgusor 19.37 314 P **Pn** 17 35 47.1 +0.6
TIRR IAmb IAmb 17 36 12.0
comp=Z,43nm,1.1s
AKTO Aktyubinsk 19.41 20 P **Pn** 17 35 46.8 -0.2
comp=Z,0.2nm,0.3s,baz=211,slow=14,SNR=3.3
ALN Alexandroupoli 19.45 302 P **Pn** 17 35 47.2 -0.2
ALN pmax pmax
comp=Z,24nm,1.5s
ALN Alexandroupoli 19.45 302 P **Pn** 17 35 47.2 -0.2
ALN IAmb IAmb 17 35 48.1
comp=Z,24nm,1.5s
TLCR 19.52 316 ⇑P **Pn** 17 35 47.9 -0.4
TPGR Topolog 19.57 315 ⇓P **Pn** 17 35 49.1 +0.1
VSR Storozhevoye 19.80 343 *e*P **P** 17 35 49.1 -0.9
VSR pmax pmax
comp=Z,10.0nm,0.5s
BTK Batken 19.88 61 P **Pn** 17 35 54.7 +2.0
BTK pmax pmax
comp=Z,11nm,1.3s
BTK Batken 19.88 61 **Pn** 17 35 54.7 +2.0
BELG Belogornoye 19.89 359 *i* P **P** 17 35 51.6 +0.6
BELG pmax pmax
comp=Z,4.0nm,0.7s
CFR Carcaliu 19.92 315 ⇓P **P** 17 35 51.6 +0.3
RAZG Razgrad 20.14 309 ⇑P Pn 17 35 55.4 -0.3
DRK Karamyk 20.48 63 P Pn 17 35 59.3 -0.7
KK31 Karatay Array 20.67 53 P Pn 17 36 01.9 0.0
KK31 pmax pmax
comp=Z,15nm,1.4s
KK31 Karatay Array 20.67 53 **Pn** 17 36 01.9 0.0
KKAR Karatay Array 20.67 53 P Pn 17 36 01.9 0.0
KKAR pmax pmax
comp=Z,15nm,1.4s
KKAR Karatay Array 20.67 53 **Pn** 17 36 01.9 0.0
KKAR Karatay Array 20.67 53 P Pn 17 36 02.0 +0.1
SGRR Singureni 20.78 311 ⇓P **P** 17 36 02.0 +1.3
SULR 20.81 312 ⇓P Pn 17 36 02.9 -0.6
SOCY Socotra 20.95 163 P **P** 17 35 59.7 -3.1
SOCY IAmb IAmb 17 36 02.8
comp=Z,19nm,1.1s
VRI Vrincioaia 21.12 315 ⇑P **P** 17 36 05.9 +1.5
LPSR Galich'ya Gora 21.14 345 *e*P **P** 17 36 03.9 -0.7
LPSR pmax pmax
comp=Z,30nm,0.8s
NEHR Nehoiu 21.16 314 ⇓P **P** 17 36 06.6 +1.8
PLOR Plostina 21.16 315 ⇑P **P** 17 36 06.4 +1.6
NIL Nilore 21.21 80 P **P** 17 36 06.4 +0.9
NIL pmax pmax
comp=Z,12nm,1.0s
NIL Nilore 21.21 80 P **P** 17 36 06.4 +0.9
MLR Muntele Rosu 21.40 314 P **P** 17 36 09.5 +1.9
comp=Z,12nm,0.7s,baz=187,slow=5.1,SNR=12
MLR Muntele Rosu 21.40 314 P **P** 17 36 09.9 +2.3
MLR IAmb IAmb 17 36 14.5
comp=Z,13nm,0.8s
TESR Tescani 21.51 317 ⇓P **P** 17 36 09.2 +0.6
SORM Soroca 21.54 322 ⇓P **P** 17 36 08.0 -0.8
HUMR Humele 21.56 311 ⇑P **P** 17 36 10.4 +1.3
AGG Agios Georgios 21.77 295 P **P** 17 36 11.4 -0.1
AGG pmax pmax
comp=Z,12nm,0.9s
AGG Agios Georgios 21.77 295 P **P** 17 36 11.4 -0.1
AGG IAmb IAmb 17 36 16.3
comp=Z,12nm,0.9s
ARSB Arslanbob 21.80 59 P **P** 17 36 14.8 +2.8
ARSB pmax pmax
comp=Z,10.0nm,1.2s
ARSB Arslanbob 21.80 59 P **P** 17 36 14.8 +2.8
LIT Litokhoron 21.85 298 P **P** 17 36 13.2 +0.9
LIT pmax pmax
comp=Z,6.0nm,0.7s
LIT Litokhoron 21.85 298 P **P** 17 36 13.2 +0.9
ITM Ithomi 21.85 290 P **P** 17 36 13.1 +0.7
ITM IAmb IAmb 17 36 17.1
comp=Z,64nm,1.5s
VOIR 21.93 313 ⇑P **P** 17 36 14.6 +1.5
DOPR Dopca 21.98 314 ⇓P **P** 17 36 15.5 +1.8
BIZ Bicaz 22.06 317 ⇑P **P** 17 36 14.2 +0.6
LOT Lotru 22.73 312 ⇑P **P** 17 36 21.9 0.0
AKASG Malin Array Be 22.86 328 P **P** 17 36 21.4 -1.5
comp=Z,3.2nm,0.6s,baz=139,slow=9.1,SNR=16
AKASG Malin Array Be 22.86 328 P **P** 17 36 21.1 -1.8
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 22.86 328 P **P** 17 36 21.1 -1.8
AKBB Malin Array Si 22.86 328 P **P** 17 36 21.3 -1.6
AKBB pmax pmax
comp=Z,7.0nm,1.1s
AKBB Malin Array Si 22.86 328 P **P** 17 36 21.3 -1.6
BURAR Bucovina Array 22.94 318 ⇓P **P** 17 36 24.4 +0.5
BURAR Bucovina Array 22.94 318 P **P** 17 36 23.0 -0.9
BUR08 Bucovina Ar. S 22.96 318 P **P** 17 36 24.4 +0.2
AAK Ala-Archa 23.25 57 LR LR 17 46 16.8
comp=Z,47nm,18.8s,baz=259,slow=39
GZR Gura Zlata 23.34 311 ⇓P **P** 17 36 27.7 -0.3
CJR Cluj-Napoca 23.42 314 ⇓P **P** 17 36 30.0 +1.2
DRGR 24.00 314 ⇑P **P** 17 36 35.3 +0.9
OBN Obninsk 24.01 344 ⇑*e*P **P** 17 36 35.6 +1.4
OBN *e* 17 37 02.7
OBN pmax pmax
comp=Z,8.0nm,1.0s
OBN MLR MLR
comp=Z,48nm,13.0s
OBN Obninsk 24.01 344 P **P** 17 36 36.8 +2.6
OBN IAmb IAmb 17 36 40.8
comp=Z,12nm,0.5s
BZS Buzias 24.18 310 ⇑P **P** 17 36 36.0 0.0
BOOM Boomskoye usch 24.24 58 P **P** 17 36 36.6 -0.2
BOOM pmax pmax
comp=Z,6.0nm,1.1s
BOOM Boomskoye usch 24.24 58 P **P** 17 36 36.6 -0.2
SIRR Siria 24.42 312 ⇓P **P** 17 36 39.7 +1.5
DIVS Divibare 24.71 306 P **P** 17 36 41.5 +0.6
DIVS IAmb IAmb 17 36 55.2
comp=Z,18nm,1.4s
PDG Podgorica 24.76 302 P **P** 17 36 40.6 -0.6
ARU Arti 25.04 14 P **P** 17 36 43.3 -0.4
comp=Z,1.3nm,0.7s,baz=190,slow=9.4,SNR=3.5
ARU Arti 25.04 14 *d* *i*P **P** 17 36 46.6 +2.9
ARU 17 37 20.7
ARU SS S 17 42 03.2 +56
ARU pmax pmax
comp=Z,15nm,1.2s
ARU Arti 25.04 14 P **P** 17 36 45.5 +1.8
ARU IAmb IAmb 17 36 50.9
comp=Z,15nm,1.2s

KOLS Kolonicke sedl 25.30 318 *e*P **P** 17 36 48.2 +2.0
KOLS Kolonicke sedl 25.30 318 *e*P **P** 17 36 48.2 +2.0
CRVS Cervenica-Dubn 25.75 317 *e*P **P** 17 36 51.0 +0.8
CRVS Cervenica-Dubn 25.75 317 *e*P **P** 17 36 51.0 +0.8
TIP Timpagrande 26.08 294 P **P** 17 36 54.4 +0.9
TIP IAmb IAmb 17 37 15.0
comp=Z,20nm,1.1s
BRVK Borovoye 26.09 31 *ce*P **P** 17 36 53.6 +0.4
BRVK pmax pmax
comp=Z,5.0nm,1.3s
BRVK Borovoye 26.09 31 P **P** 17 36 55.6 +2.4
BVAR Borovoye Array 26.11 32 P **P** 17 36 53.1 -0.4
comp=Z,0.6nm,0.6s,baz=252,slow=8.7,SNR=7.5
KECS Kecovo 26.12 316 *e*P **P** 17 36 55.7 +2.2
KECS Kecovo 26.12 316 *e*P **P** 17 36 55.7 +2.2
KIRV Kirov 26.12 2 *ce*P **P** 17 36 54.7 +1.3
PSZ Piszkesteto 26.21 314 ⇑P **P** 17 36 56.5 +1.9
PSZ Piszkesteto 26.21 314 P **P** 17 36 57.0 +2.4
PSZ pmax pmax
comp=Z,12nm,0.8s
PSZ Piszkesteto 26.21 314 P **P** 17 36 57.0 +2.4
PSZ IAmb IAmb 17 36 58.1
comp=Z,12nm,0.8s
LANS Liptovska Anna 27.02 316 *e*P **P** 17 37 03.0 +1.2
LANS Liptovska Anna 27.02 316 *e*P **P** 17 37 03.0 +1.2
SGRT San Giovanni R 27.18 299 P **P** 17 37 02.7 -0.6
OJC Ojcow 27.34 319 P **P** 17 37 04.4 -0.2
OJC pmax pmax
comp=Z,8.0nm,0.8s
OJC Ojcow 27.34 319 P **P** 17 37 04.4 -0.2
OJC IAmb IAmb 17 37 09.4
comp=Z,7.8nm,0.8s
KURK Kurchatov 28.97 42 *ce*P **P** 17 37 19.7 +0.6
KURK pmax pmax
comp=Z,5.0nm,1.7s
KURK Kurchatov 28.97 42 P **P** 17 37 20.1 +1.0
KURK IAmb IAmb 17 37 25.6
comp=Z,8.4nm,1.4s
NRCA Norcia 29.28 301 P **P** 17 37 22.8 +0.8
NRCA IAmb IAmb 17 37 37.5
comp=Z,35nm,1.5s
VSU Vasula 29.68 337 *i* P **P** 17 37 24.9 -0.3
VSU pmax pmax
comp=Z,19nm,1.1s
PRED Cave del Predi 29.73 308 P **P** 17 37 27.4 +1.4
PRED IAmb IAmb 17 37 35.5
comp=Z,5.9nm,1.2s
MURB Monte Urbino 29.77 301 P **P** 17 37 27.7 +1.3
MK31 Makanchi Array 29.78 51 P **P** 17 37 27.4 +1.1
MK31 pmax pmax
comp=Z,5.0nm,1.1s
MK31 Makanchi Array 29.78 51 P **P** 17 37 27.4 +1.1
MK31 IAmb IAmb 17 37 41.0
comp=Z,4.6nm,1.1s
MKAR Makanchi Array 29.78 51 P **P** 17 37 26.5 +0.1
comp=Z,1.9nm,0.7s,baz=244,slow=7.9,SNR=10
MKAR PcP **PcP** 17 40 28.8 -1.0
comp=Z,1.1nm,1.0s,baz=270,slow=3.6,SNR=2.2
MKAR Makanchi Array 29.78 51 P **P** 17 37 26.9 +0.6
GEC2 GERESS Array S 30.38 313 P **P** 17 37 33.3 +1.6
GERES GERESS Array B 30.38 313 P **P** 17 37 32.4 +0.7
comp=Z,0.5nm,0.6s,baz=86,slow=8.2,SNR=6.1
GERES PcP **PcP** 17 40 30.5 -0.8
comp=Z,0.2nm,0.3s,baz=119,slow=1.2,SNR=4.2
GERES GERESS Array B 30.38 313 P **P** 17 37 30.7 -1.0
GERES GERESS Array B 30.38 313 P **P** 17 37 30.7 -1.0
CIMO Cimolais 30.45 307 P **P** 17 37 31.8 -0.5
CIMO IAmb IAmb 17 37 44.9
comp=Z,5.8nm,1.1s
WTTA Wattenberg 31.23 309 *e*P **P** 17 37 39.8 +0.5
comp=Z,7.0nm,1.2s
SQTA Sankt Quirin 31.50 309 *e*P **P** 17 37 42.0 +0.3
comp=Z,4.5nm,0.6s
MOTA Moosalm 31.60 309 *e*P **P** 17 37 42.7 +0.1
comp=Z,4.3nm,0.7s
CLL Collm 31.70 317 *e*P **P** 17 37 43.0 -0.1
FETA Feichten 31.77 308 *e*P **P** 17 37 44.7 +0.7
comp=Z,16nm,1.7s
RETA Reutte 31.86 309 *i* P **P** 17 37 44.8 +0.1
comp=Z,2.0nm,0.8s
MSSA Maissana 32.08 303 P **P** 17 37 48.0 +1.2
FIA1 FINESS Array S 32.26 340 P **P** 17 37 47.8 -0.2
FIA1 IAmb IAmb 17 38 23.1
comp=Z,25nm,1.6s
FINES FINESS Array B 32.26 340 P **P** 17 37 47.9 -0.1
comp=Z,1.7nm,0.5s,baz=149,slow=9.0,SNR=21
FINES LR LR 17 52 50.2
comp=Z,92nm,18.2s,baz=146,slow=40
FINES FINESS Array B 32.26 340 P **P** 17 37 47.6 -0.4
FINES FINESS Array B 32.26 340 P **P** 17 37 47.6 -0.4
DAVA Damuels 32.39 308 *i* P **P** 17 37 49.2 -0.3
comp=Z,4.1nm,0.5s
ZAA0 Zalesovo Array 33.81 40 P **P** 17 38 02.4 +0.8
ZALV Zalesovo Beam 33.81 40 P **P** 17 38 01.9 +0.3
comp=Z,1.6nm,0.5s,baz=249,slow=8.0,SNR=10
ZALV Zalesovo Beam 33.81 40 P **P** 17 38 01.7 +0.1
ZALV Zalesovo Beam 33.81 40 P **P** 17 38 01.7 +0.1
SENIN Lac Senin/Sane 33.95 306 P **P** 17 38 01.6 -1.6
SENIN IAmb IAmb 17 38 23.1
comp=Z,20nm,1.6s
BNI Bardonecchia 34.19 304 P **P** 17 38 04.6 -0.6
BNI pmax pmax
comp=Z,18nm,1.2s
BNI Bardonecchia 34.19 304 P **P** 17 38 04.6 -0.6
BNI IAmb IAmb 17 38 18.9
comp=Z,18nm,1.2s
HFS Hagfors 35.68 331 LR LR 17 56 33.4
comp=Z,52nm,18.9s,baz=258,slow=42
LVZ Lovozero 36.29 352 *i* P **P** 17 38 23.1 +0.2
LVZ pmax pmax
comp=Z,41nm,1.1s
NC602 NORSAR Array S 36.90 331 P **P** 17 38 29.1 +1.0
NC405 NORSAR Array S 37.04 332 P **P** 17 38 28.5 -0.8
NB2 NORSAR Subarra 37.20 331 P **P** 17 38 29.6 -1.1
comp=Z,0.6nm,0.6s,baz=122,slow=8.6
NOA NORSAR Array B 37.20 331 P **P** 17 38 30.1 -0.7
comp=Z,0.7nm,0.7s,baz=122,slow=8.2,SNR=4.0
ARCES ARCESS Array B 39.19 348 P **P** 17 38 47.6 +0.3
comp=Z,2.9nm,0.9s,baz=83,slow=3.8,SNR=5.4
ARC1 ARCESS Array S 39.19 348 P **P** 17 38 47.9 +0.6
GTA Gaotai 42.06 65 ⇓P **P** 17 39 13.0 +1.4
GTA pP pP 17 39 16.3 -0.1
GTA sP sP 17 39 19.3 +1.0
GTA pmax pmax
comp=Z,3.0nm,0.9s
ESBB Sonseca Array 42.09 295 P **P** 17 39 11.6 -0.2
ESBB IAmb IAmb 17 39 26.2
comp=Z,16nm,1.5s
ESDC Sonseca Array 42.09 295 P **P** 17 39 11.8 +0.1
comp=Z,1.4nm,0.7s,baz=78,slow=8.2,SNR=13
ESDC Sonseca Array 42.09 295 P **P** 17 39 11.1 -0.6
ESK Eskdalemuir 42.14 318 P **P** 17 39 11.4 -0.4
ESK pmax pmax
comp=Z,32nm,1.4s
ESK Eskdalemuir 42.14 318 P **P** 17 39 11.4 -0.4
ESK IAmb IAmb 17 39 15.4
comp=Z,32nm,1.4s
PAB San Pablo 42.40 295 P **P** 17 39 14.8 +0.5
PAB pmax pmax
comp=Z,19nm,1.5s
PAB San Pablo 42.40 295 P **P** 17 39 14.8 +0.5
PAB IAmb IAmb 17 39 34.9
comp=Z,19nm,1.4s
NRIK Noril'sk 43.04 19 P **P** 17 39 19.1 +0.1
comp=Z,0.8nm,0.5s,baz=63,slow=4.5,SNR=2.0
NRIK Noril'sk 43.04 19 *i* P **P** 17 39 18.9 -0.1
NRIK pmax pmax
comp=Z,14nm,3.0s
DSB Dublin 43.67 315 P **P** 17 39 24.1 -0.2
TOA0 Torodi Ar. Sit 46.38 257 P **P** 17 39 45.8 -0.5
TOA0 IAmb IAmb 17 40 03.5
comp=Z,3.5nm,1.2s
TORD Torodi Ar. Bea 46.38 257 P **P** 17 39 45.5 -0.7
comp=Z,2.0nm,0.7s,baz=59,slow=8.1,SNR=6.3
TORD Torodi Ar. Bea 46.38 257 P **P** 17 39 45.6 -0.7
ULN Ulaanbaatar 46.56 53 *i* P **P** 17 39 48.1 +0.5
ULN pmax pmax
comp=Z,2.0nm,1.0s
CMAR Chiang Mai Arr 47.67 94 P **P** 17 39 55.6 -0.8
comp=Z,0.4nm,0.6s,baz=288,slow=7.5,SNR=3.6
CMAR PcP **PcP** 17 41 25.2 -0.6
comp=Z,0.5nm,0.6s,baz=284,slow=4.5,SNR=4.5
CMAR Chiang Mai Arr 47.67 94 P **P** 17 39 56.5 +0.1
SPA0 Spitsbergen Ar 47.82 352 P **P** 17 39 57.6 +0.9
MATP Matopo 55.81 202 P **P** 17 40 55.8 -1.4

comp=Z,2.0nm,0.8s,baz=33,slow=4.1,SNR=4.1
GSI Gunungsitoli 55.97 113 P **P** 17 40 59.1 +0.8
KULM Kulim 56.00 107 P **P** 17 40 58.0 -0.6
TIXI Tiksi 56.68 22 *e*P **P** 17 41 03.0 +0.4
IPM Ipoh 56.78 108 P **P** 17 41 03.2 -0.9
IPM IAmb IAmb 17 41 03.4
comp=Z,8.4nm,0.7s
YAK Yakutsk 58.07 33 LR LR 18 08 36.8
comp=Z,28nm,18.6s,baz=256,slow=38
SUMG Summit 58.29 339 P **P** 17 41 15.2 +0.7
SUMG pmax pmax
comp=Z,14nm,1.4s
SUMG Summit 58.29 339 P **P** 17 41 15.2 +0.7
SUMG IAmb IAmb 17 41 30.5
comp=Z,14nm,1.4s
KSRS Korea Array 63.83 61 P **P** 17 41 49.8 -2.3
comp=Z,0.8nm,0.7s,baz=286,slow=7.5,SNR=3.4
BOSA Boshof 64.48 202 P **P** 17 41 56.7 +0.2
comp=Z,2.5nm,0.8s,baz=38,slow=7.7,SNR=5.4
BOSA Boshof 64.48 202 P **P** 17 41 57.0 +0.5
SEY Seymchan 67.72 29 P **P** 17 42 17.6 +0.8
comp=Z,7.5nm,0.9s,baz=306,slow=4.4,SNR=7.5
SEY Seymchan 67.72 29 *i* P **P** 17 42 17.8 +1.0
JNU Nakatsue 67.77 64 LR LR 18 15 35.2
comp=Z,81nm,19.5s,baz=108,slow=39
KKM Kota Kinabalu 68.44 97 P **P** 17 42 22.7 +0.5
MA2 Magadan 68.60 32 *ce*P **P** 17 42 23.6 +1.2
MA2 pmax pmax
comp=Z,60nm,1.7s
BILL Bilibino 69.84 21 *i* P **P** 17 42 32.1 +2.2
BILL pmax pmax
comp=Z,5.0nm,1.2s
ASAJ Asahikawa 71.23 49 LR LR 18 17 36.6
comp=Z,37nm,19.3s,baz=192,slow=39
TOLK Toolik Lake Re 78.33 6 P **P** 17 43 20.1 +0.5
TOLK IAmb IAmb 17 43 57.8
comp=Z,4.8nm,1.2s
COLD Coldfoot 79.64 7 P **P** 17 43 27.1 +0.3
COLD IAmb IAmb 17 43 39.8
comp=Z,5.0nm,1.2s
BATG Bathurst New B 80.96 321 P **P** 17 43 34.4 +0.2
BATG IAmb IAmb 17 44 11.4
comp=Z,18nm,1.2s
LMN Caledonia Moun 81.16 319 P **P** 17 43 35.3 0.0
E62A Clayton Lake 83.20 322 P **P** 17 43 45.9 -0.1
DOT Dot Lake 83.71 5 P **P** 17 43 50.0 +1.7
DOT IAmb IAmb 17 44 04.1
comp=Z,9.8nm,1.4s
BCAR Beaver Creek A 84.46 4 P **P** 17 43 52.1 0.0

*IDC **29** 17:31:11.6±6.1, 23.°49S×178.°03W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.5/40, mbtmp3.7/2, Error ellipse: s-maj=273.7km s-min=57.9km az=151.0*
*NEIC **29** 17:32:16.5±1.1, 23.°8S±0.°1×180.°0E±0.°1, h546km±12km, mb4.1/16, Error ellipse: s-maj=21.7km s-min=15.6km az=166.0*
ISC 29 17:32:15.5±0.7, **23.°8S**±0.°1×**179.°9E**±0.°1, **h526**km, **n28**, σ1§**35**/**28**, **mb4.0**/10, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.79**	**160**	P	**P**	**17 33 52.7**	**+1.8**
MSVF	**Nonsavu**	**6.26**	**344**	P	**P**	**17 33 57.9**	**+2.2**
NIUE	**Niue**	**10.60**	**66**		**P**	**17 34 40.0**	**+0.5**
MSWZ	**Moikau Station**	**18.00**	**191**	P	**P**	**17 35 55.4**	**+1.0**
QRZ	**Quartz Range**	**18.07**	**198**	P	**P**	**17 35 55.6**	**+0.6**
CTAO	**Charters Tower**	**31.35**	**270**	P	**P**	**17 37 54.5**	**+1.4**
TOO	**Toolangi**	**32.41**	**237**		**P**	**17 38 02.1**	**+0.2**
TOO				IAmb	IAmb	17 38 31.1	
comp=Z,13nm,1.2s							
BBOO	**Buckleboo**	**39.38**	**247**	P	**P**	**17 38 59.0**	**-0.7**
BBOO				IAmb	IAmb	17 39 13.6	
comp=Z,12nm,1.4s							
AS31	**Alice Springs**	**41.93**	**261**	P	**P**	**17 39 20.7**	**+0.4**
ASAR	**Alice Springs**	**41.93**	**261**	P	**P**	**17 39 20.2**	**0.0**
comp=Z,0.3nm,0.3s,baz=98,slow=7.4,SNR=9.0							
ASAR	**Alice Springs**	**41.93**	**261**	P	**P**	**17 39 20.2**	**0.0**
WR0	**Warramunga Arr**	**42.10**	**266**	P	**P**	**17 39 21.2**	**-0.4**
WR0				IAmb	IAmb	17 39 22.0	
comp=Z,7.8nm,1.6s							
WB2	**Warramunga Arr**	**42.28**	**266**	P	**P**	**17 39 23.1**	**+0.1**
WB2				IAmb	IAmb	17 39 43.6	
comp=Z,4.5nm,1.2s							
WB0	**Warramunga Arr**	**42.28**	**266**	P	**P**	**17 39 23.1**	**0.0**
WRAB	**Tennant Creek**	**42.28**	**266**	P	**P**	**17 39 22.9**	**-0.2**
WRAB				IAmb	IAmb	17 39 38.6	
comp=Z,7.1nm,1.4s							
WRA	**Warramunga Arr**	**42.29**	**266**	P	**P**	**17 39 22.7**	**-0.4**
comp=Z,0.7nm,0.3s,baz=103,slow=8.3,SNR=14							
WRA	**Warramunga Arr**	**42.29**	**266**	P	**P**	**17 39 22.7**	**-0.4**
FORT	**Forrest**	**46.24**	**249**	P	**P**	**17 39 52.3**	**-1.2**
MTN	**Manton Dam**	**47.33**	**274**	P	**P**	**17 40 01.7**	**-0.2**
MTN				IAmb	IAmb	17 40 33.4	
comp=Z,7.6nm,1.1s							
KNRA	**Kununurra**	**48.57**	**270**	P	**P**	**17 40 11.6**	**+0.5**
KNRA				IAmb	IAmb	17 40 45.7	
comp=Z,12nm,1.2s							
FITZ	**Fitzroy Crossi**	**50.72**	**266**	P	**P**	**17 40 27.7**	**+0.8**
FITZ				IAmb	IAmb	17 40 39.7	
comp=Z,7.4nm,1.6s							
QSPA	**South Pole Qui**	**66.29**	**180**	P	**P**	**17 42 10.2**	**-1.2**
POKR	**Poker Plat Res**	**92.14**	**13**	P	**P**	**17 44 28.0**	**-0.1**
HFS	**Hagfors**	**142.41**	**349**	PKP	**PKPdf**	**17 50 44.1**	**-3.6**
comp=Z,1.3nm,0.5s,baz=48,slow=2.1,SNR=8.8							
HFS	**Hagfors**	**142.41**	**349**		**PKPdf**	**17 50 44.1**	**-3.6**
AKASG	**Malin Array Be**	**144.81**	**327**	PKPbc	**PKPdf**	**17 50 51.3**	**-0.8**
comp=Z,0.4nm,0.3s,baz=46,slow=4.6,SNR=2.7							
AKASG	**Malin Array Be**	**144.81**	**327**		**PKPdf**	**17 50 51.4**	**-0.8**
CLL	**Collm**	**150.71**	**343**	*e*PKPbc	**PKPbc**	**17 51 07.0**	**-0.9**

IDC 29 17:33:48.5±7.2, **20.°69S**×**179.°28W**, **h0**km, **mb3.5**/2, **mb1 3.8**/2, **mb1mx3.5**/36, **mbtmp3.5**/2, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.4**/25, **Error ellipse: s-maj=301.9km s-min=112.6km az=156.0**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.31**	**257**	P	P	17 41 51.4	-1.1
0.2nm,0.4s,baz=97,slow=7.6,SNR=4.7							
WRA	**Warramunga Arr**	**43.39**	**263**	P	P	17 41 53.8	+0.7
0.5nm,0.4s,baz=96,slow=8.3,SNR=9.1							
BATI	**Baumata**	**55.73**	**272**	LR	LR	18 07 47.3	
comp=Z,39nm,19.1s,baz=76,slow=37							
AKASG	**Malin Array Be**	**142.59**	**330**	PKP	PKPdf	17 53 23.0	-0.4
0.3nm,0.4s,baz=45,slow=3.7,SNR=2.6							

*NEIC **29** 17:34:51.9±1.1, 23.°5S±0.°1×179.°8E±0.°1, h492km±10km, mb4.4/29, Error ellipse: s-maj=19.4km s-min=17.2km az=135.0*
*IDC **29** 17:34:52.7±2.2, 23.°46S×179.°71E, h494km±22km, mb3.5/8, mb1 3.6/9, mb1mx3.3/36, mbtmp4.3/9, Error ellipse: s-maj=30.6km s-min=20.5km az=164.0*
ISC 29 17:34:52.5±0.6, **23.°54S**±0.°1×**179.°82E**±0.°1, **h500**km, **n43**, σ1§**03**/**45**, **mb4.4**/21, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.01**	**344**	P	**P**	**17 36 28.0**	**-1.1**
DZM	**Mont Dzumac**	**12.42**	**274**	P	**P**	**17 37 34.6**	**-1.0**
0.6nm,0.3s,baz=80,slow=17,SNR=7.4							
AFI	**Afiamalu**	**12.45**	**41**	P	**P**	**17 37 35.0**	**-1.0**
OUZ	**Omahuta**	**12.84**	**204**	P	**P**	**17 37 39.0**	**-0.7**
HIZ	**Hauiti**	**15.52**	**195**	P	**P**	**17 38 07.4**	**-0.5**
RPZ	**Rata Peaks**	**21.38**	**198**	P	**P**	**17 39 04.6**	**+1.2**
28nm,1.2s,baz=230,slow=3.4,SNR=1.7							
RPZ	**Rata Peaks**	**21.38**	**198**	P	**P**	**17 39 04.7**	**+1.2**
ARMA	**Armidale**	**26.00**	**249**	P	**P**	**17 39 46.2**	**+1.3**
ARMA				IAmb	IAmb	17 40 35.1	
comp=Z,36nm,1.8s							
EIDS	**Eidsvold**	**26.20**	**260**	P	**P**	**17 39 47.6**	**+0.9**
EIDS				IAmb	IAmb	17 40 23.5	
comp=Z,43nm,1.7s							
CTAO	**Charters Tower**	**31.31**	**270**	P	**P**	**17 40 32.9**	**+1.6**
CTAO				IAmb	IAmb	17 40 33.2	
comp=Z,13nm,0.6s							
TOO	**Toolangi**	**32.51**	**236**	P	**P**	**17 40 40.7**	**-0.6**
TOO				IAmb	IAmb	17 40 56.8	
comp=Z,22nm,1.6s							
PMG	**Port Moresby**	**34.22**	**289**	P	**P**	**17 40 55.4**	**-0.6**
comp=Z,10.0nm,0.7s,baz=93,slow=11,SNR=6.7							
PMG	**Port Moresby**	**34.22**	**289**	P	**P**	**17 40 55.5**	**-0.6**

PMG					IAmb	IAmb	17 40 58.9	
	comp=Z,13nm,0.8s							
MCQ	**Macquarie Isla**	**34.63**	**201**	P	**P**		**17 41 01.2**	**+2.3**
STKA	**Stephens Creek**	**34.70**	**248**	P	**P**		**17 40 59.6**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=103,slow=1.8,SNR=1.9							
STKA	**Stephens Creek**	**34.70**	**248**	P	**P**		**17 40 59.7**	**-0.3**
COEN	**Coen**	**35.90**	**279**	P	**P**		**17 41 11.5**	**+1.4**
COEN					IAmb	IAmb	17 42 20.5	
	comp=Z,20nm,1.6s							
BBOO	**Buckleboo**	**39.43**	**246**	P	**P**		**17 41 37.4**	**-1.5**
AS31	**Alice Springs**	**41.93**	**260**	P	**P**		**17 41 59.0**	**0.0**
ASAR	**Alice Springs**	**41.93**	**260**	P	**P**		**17 41 58.9**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=98,slow=7.2,SNR=41							
ASAR					ScP	**ScP**	**17 46 45.6**	**0.0**
	comp=Z,1.2nm,0.8s,baz=107,slow=4.2,SNR=13							
WR0	**Warramunga Arr**	**42.08**	**266**	P	**P**		**17 41 60.0**	**-0.2**
WB2	**Warramunga Arr**	**42.26**	**266**	P	**P**		**17 42 01.2**	**-0.3**
WB2					IAmb	IAmb	17 42 02.0	
	comp=Z,8.6nm,0.7s							
WB0	**Warramunga Arr**	**42.26**	**266**	P	**P**		**17 42 01.2**	**-0.3**
WB0					IAmb	IAmb	17 42 02.0	
	comp=Z,9.1nm,0.7s							
WRAB	**Tennant Creek**	**42.26**	**266**	P	**P**		**17 42 01.2**	**-0.4**
WRA	**Warramunga Arr**	**42.27**	**266**	P	**P**		**17 42 01.3**	**-0.3**
	comp=Z,7.2nm,0.6s,baz=103,slow=8.2,SNR=64							
WRA					ScP	**ScP**	**17 46 47.5**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=96,slow=3.8,SNR=11							
WRA	**Warramunga Arr**	**42.27**	**266**	P	**P**		**17 42 01.1**	**-0.5**
FORT	**Forrest**	**46.28**	**249**	P	**P**		**17 42 31.0**	**-1.6**
MTN	**Manton Dam**	**47.26**	**274**	P	**P**		**17 42 40.1**	**-0.2**
MTN					IAmb	IAmb	17 43 46.9	
	comp=Z,13nm,1.2s							
KNRA	**Kununurra**	**48.52**	**270**	P	**P**		**17 42 50.1**	**+0.5**
KNRA					IAmb	IAmb	17 42 50.7	
	comp=Z,13nm,0.8s							
FITZ	**Fitzroy Crossi**	**50.69**	**265**	P	**P**		**17 43 05.9**	**+0.2**
SOEI	**Soe**	**54.65**	**275**	P	**P**		**17 43 35.9**	**+1.6**
SOEI					IAmb	IAmb	17 43 51.3	
	comp=Z,13nm,0.9s							
VNDA	**Vanda**	**54.72**	**185**	P	**P**		**17 43 33.6**	**0.0**
MORW	**Morawa**	**56.84**	**250**	P	**P**		**17 43 47.9**	**-1.2**
MORW					IAmb	IAmb	17 44 28.8	
	comp=Z,24nm,1.4s							
QSPA	**South Pole Qui**	**66.54**	**180**	P	**P**		**17 44 49.3**	**-2.7**
KKM	**Kota Kinabalu**	**68.64**	**287**	P	**P**		**17 45 06.5**	**+0.7**
SLBS	**Sierra La Lagu**	**82.77**	**60**	P	**P**		**17 46 24.4**	**+0.3**
SLBS					IAmb	IAmb	17 47 32.0	
	comp=Z,23nm,1.8s							
NVAR	**Mina Array Bea**	**84.61**	**44**	P	**P**		**17 46 33.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=214,slow=6.2,SNR=2.0							
CMAR	**Chiang Mai Arr**	**89.25**	**290**	P	**P**		**17 46 56.6**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=90,slow=4.5,SNR=5.0							
TX31	**Lajitas Ar. Si**	**90.38**	**58**	P	**P**		**17 47 01.3**	**+0.9**
TX32	**Lajitas Array**	**90.38**	**58**	P	**P**		**17 47 01.1**	**+0.7**
TX32					IAmb	IAmb	17 48 58.2	
	comp=Z,8.9nm,1.8s							
TXAR	**Lajitas Array**	**90.38**	**58**	P	**P**		**17 47 01.1**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=213,slow=6.7,SNR=13							
TXAR	**Lajitas Array**	**90.38**	**58**	P	**P**		**17 47 00.9**	**+0.6**
CLL	**Collm**	**150.46**	**343**	*e*PKPbc	**PKiKP**		**17 53 48.0**	**+0.6**

IDC 29 17:37:28.1±1.2,5.74N×61.35E,h0km,mb3.7/5,mb1 3.8/5, mb1mx3.3/65,mbtmp3.7/5,MS3.3/11,Ms1 3.3/11, ms1mx3.0/45,Error ellipse: s-maj=52.4km s-min=26.7km az=35.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**19.29**	**84**	LR	LR	17 47 45.3	
	comp=Z,40nm,19.6s,baz=12,slow=32						
GEYT	**Alibeck**	**32.17**	**355**	LR	LR	17 57 25.1	
	comp=Z,20nm,20.7s,baz=145,slow=37						
CMAR	**Chiang Mai Arr**	**38.77**	**68**	LR	LR	17 59 39.7	
	comp=Z,15nm,18.6s,baz=297,slow=34						
BRTR	**Keskin Array B**	**42.04**	**328**	P	P	17 45 21.2	-0.6
	1.2nm,0.8s,baz=139,slow=9.2,SNR=2.1						
BRTR				LR	LR	18 03 11.4	
	comp=Z,24nm,19.1s,baz=162,slow=37						
MKAR	**Makanchi Array**	**44.70**	**20**	LR	LR	18 05 19.7	
	comp=Z,25nm,19.1s,baz=212,slow=37						
BOSA	**Boshof**	**48.73**	**224**	LR	LR	18 04 41.8	
	comp=Z,44nm,18.2s,baz=22,slow=34						
ZALV	**Zalesovo Beam**	**51.71**	**17**	P	P	17 46 37.3	+0.4
	0.2nm,0.3s,baz=207,slow=8.6,SNR=1.8						
ZALV				LR	LR	18 08 59.4	
	comp=Z,22nm,21.9s,baz=332,slow=37						
TORD	**Torodi Ar. Bea**	**59.19**	**282**	P	P	17 47 31.7	+0.1
	0.6nm,0.8s,baz=71,slow=6.9,SNR=3.8						
FINES	**FINESS Array B**	**61.48**	**342**	LR	LR	18 17 40.1	
	comp=Z,59nm,18.1s,baz=236,slow=39						
NRIK	**Noril'sk**	**65.81**	**10**	LR	LR	18 19 09.5	
	comp=Z,51nm,18.8s,baz=201,slow=38						
MAW	**Mawson**	**73.18**	**179**	LR	LR	18 12 33.1	
	comp=Z,23nm,19.6s,baz=238,slow=29						
WRA	**Warramunga Arr**	**76.11**	**112**	P	P	17 49 18.3	-0.1
	0.7nm,0.9s,baz=293,slow=4.5,SNR=6.9						
ASAR	**Alice Springs**	**76.48**	**116**	P	P	17 49 20.6	+0.1
	0.4nm,0.7s,baz=292,slow=6.5,SNR=8.4						
PETK	**Petropavlovsk-**	**89.26**	**37**	LR	LR	18 31 51.4	
	comp=Z,25nm,18.4s,baz=311,slow=37						

*IDC **29** 17:39:57.7±1.1,28.21N×55.28E,h0km,mb3.6/7, mb1 3.8/8,mb1mx3.4/58,mbtmp3.7/8,ML3.6/1,Error ellipse: s-maj=32.6km s-min=21.6km az=51.0*
*TEH **29** 17:40:00.3,28.34N×55.36E,h8km,ML3.6*
*THR **29** 17:40:01.2±0.3,28.26N×55.35E,h17km±4km,ML3.6*
ISC 29 17:39:60.0±0.7,28.20N±0.05×55.30E±0.03,h10km,n39, σ1§34/41,mb3.5/7,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.97**	**237**	*e*Pg	**Pn**	**17 40 22.2**	**+2.4**
LAR1				*e*		17 40 53.1	
BNDS	**Bandar-Abbas**	**1.11**	**136**	*e*Pg	**Pn**	**17 40 22.3**	**+0.6**
BNDS				*e*Sg	**Sn**	**17 40 37.6**	**+0.5**
BNDS	**Bandar-Abbas**	**1.11**	**136**	*e*Pg	**Pn**	**17 40 22.3**	**+0.6**
GENO	**Geno**	**1.11**	**136**	*e*Pg	**Pn**	**17 40 22.8**	**+1.1**
GENO				*e*		17 40 44.3	
IBND	**Bandar-abas**	**1.33**	**124**	*e*Pg	**Pg**	**17 40 26.7**	**+1.3**
IBND				*e*		17 41 03.1	
JHRM	**Jahrom**	**1.55**	**282**	*e*Pg	**Pg**	**17 40 30.2**	**+0.5**
JHRM				*e*		17 41 05.4	
NGRK	**Negar Kerman**	**1.91**	**41**	*e*Pn	**Pn**	**17 40 32.6**	**-0.3**
NGRK				*e*		17 41 07.0	
QIR1	**Qir**	**2.01**	**278**	*e*Pn	**Pb**	**17 40 37.7**	**+1.1**
QIR1				*e*		17 41 13.0	
GHIR	**Ghir-Karzin**	**2.04**	**273**	*e*Pn	**Pb**	**17 40 37.5**	**+0.2**
GHIR				*e*Sg	**Sg**	**17 41 06.8**	**+1.1**
GHIR				IAML		17 41 20.7	
	comp=E,163nm,0.6s						
GHIR	**Ghir-Karzin**	**2.04**	**273**	*e*Pn	**Pb**	**17 40 37.5**	**+0.2**
LMD1	**Lamerd**	**2.08**	**246**	*e*Pn	**Pg**	**17 40 39.5**	**-0.3**
KHNJ	**Kahnooj**	**2.14**	**96**	*e*Pn	**Pn**	**17 40 37.4**	**+1.6**
TVBK	**TV Kerman**	**2.19**	**35**	*e*Pn	**Pn**	**17 40 38.0**	**+1.2**
TVBK				*e*		17 41 13.7	
KHGB	**Koh Gabri**	**2.40**	**25**	*e*Pn	**Pn**	**17 40 41.1**	**+1.6**
KHGB				*e*		17 40 47.9	
CHMN	**Cheshme madani**	**2.57**	**49**	*e*Pn	**Pn**	**17 40 43.9**	**+2.0**
KBAM	**BAM**	**2.92**	**71**	*e*Pn	**Pn**	**17 40 48.4**	**+1.8**
KBAM				*e*		17 40 55.4	
IMEH	**Mehriz**	**3.24**	**350**	*e*Pn	**Pn**	**17 40 52.1**	**+1.0**
IBAF	**Bafgh**	**3.39**	**4**	*e*Pn	**Pn**	**17 40 54.3**	**+1.2**
ISAD	**Sadrabad**	**3.96**	**340**	*e*Pn	**Pn**	**17 41 03.3**	**+2.3**
YZKH	**Yazd**	**4.22**	**352**	*e*Pn	**Pn**	**17 41 06.5**	**+2.0**
YZKH	**Yazd**	**4.22**	**352**	*e*Pn	**Pn**	**17 41 06.5**	**+2.0**
KLNJ	**Kolanjah**	**4.28**	**312**	*e*Pn	**Pn**	**17 41 06.9**	**+1.5**
IRAM	**Ramesheh**	**4.40**	**326**	*e*Pn	**Pn**	**17 41 08.3**	**+1.3**
TPRV	**Parvadeh(Tabas**	**4.96**	**14**	*e*Pn	**Pn**	**17 41 16.4**	**+1.8**
ANAR	**Anarak**	**5.16**	**345**	*e*Pn	**Pn**	**17 41 18.7**	**+1.4**
NHDN	**Nehbandan**	**5.21**	**51**	*e*Pn	**Pn**	**17 41 19.0**	**+0.9**
IKOO	**Kooshah**	**5.29**	**36**	*e*Pn	**Pn**	**17 41 21.4**	**+2.1**
WSAR	**Wadi Sarin**	**5.78**	**148**	Pn	**Pn**	**17 41 26.9**	**+1.1**
	comp=E,1.6nm,0.3s,baz=346,slow=9.3,SNR=27						
WSAR				Sn	**Sn**	**17 42 31.2**	**-1.0**
	comp=E,0.7nm,0.3s,baz=136,slow=12,SNR=1.5						
IPIR	**Pirpir**	**5.87**	**321**	*e*Pn	**Pn**	**17 41 28.5**	**+1.2**
IMON	**Monand**	**6.24**	**36**	*e*Pn	**Pn**	**17 41 33.9**	**+1.6**
SNGE	**Sanandaj**	**9.65**	**317**	IAML		17 42 29.0	
	comp=N,2.1nm,0.5s						
AAK	**Ala-Archa**	**21.20**	**42**	P	**P**	**17 44 45.1**	**-0.7**
	comp=N,0.6nm,0.5s,baz=227,slow=12,SNR=1.7						
BRTR	**Keskin Array B**	**21.27**	**308**	P	**P**	**17 44 45.8**	**-0.9**
	comp=N,0.6nm,0.7s,baz=132,slow=12,SNR=2.9						
FINES	**FINESS Array B**	**38.52**	**338**	P	**P**	**17 47 21.3**	**-0.9**
	comp=N,4.3nm,1.1s,baz=133,slow=7.8,SNR=2.4						
HFS	**Hagfors**	**42.50**	**331**	P	**P**	**17 47 54.2**	**-1.0**
	comp=N,2.0nm,0.9s,baz=128,slow=9.5,SNR=2.0						
NB2	**NORSAR Subarra**	**44.01**	**331**	P	**P**	**17 48 06.8**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=114,slow=7.9						
NOA	**NORSAR Array B**	**44.01**	**331**	P	**P**	**17 48 06.9**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=115,slow=7.8,SNR=2.1						
TORD	**Torodi Ar. Bea**	**51.95**	**265**	P	**P**	**17 49 08.4**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=63,slow=7.9,SNR=10						
ASAR	**Alice Springs**	**91.59**	**116**	P	**P**	**17 53 06.4**	**-1.1**
	comp=Z,0.2nm,0.8s,baz=309,slow=4.6,SNR=1.9						

*IDC **29** 17:57:40.3±21.0,51.99N×175.84W,h0km,mb3.5/2, mb1 4.0/3,mb1mx3.4/64,mbtmp3.5/3,ML4.0/1,Error ellipse: s-maj=414.9km s-min=72.6km az=86.0*
*NEIC **29** 17:58:02.5±2.6,52.1N±0.2×173.1W±0.1,h92km±9km, Error ellipse: s-maj=24.1km s-min=7.4km az=166.0*
*AEIC **29** 17:58:03±4.6,52.1N±0.2×173.07W±0.08,h71km±7km, ML3.6/9,mb3.7/22(NEIC),Error ellipse: s-maj=22.3km s-min=6.7km az=170.0*
ISC 29 17:58:03.3±1.1,52.2N±0.2×173.18W±0.07,h100km,n56, σ1§28/51,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.57**	**279**		**Pn**	**17 58 18.8**	**-0.9**
ATKA	**Atka Island**	**0.63**	**271**		**Pn**	**17 58 18.8**	**-1.2**
ATKA					**Sn**	**17 58 30.0**	**-2.6**
GSTR	**Great Sitkin T**	**1.78**	**268**	Pn	**Pn**	**17 58 33.8**	**+0.8**
GSMY	**Great Sitkin M**	**1.78**	**266**		**Pn**	**17 58 33.8**	**+0.7**
ADK	**Adak**	**2.19**	**263**		**Pn**	**17 58 39.2**	**+0.9**
ADK	**Adak**	**2.19**	**263**	Sn	**Sn**	**17 59 06.6**	**+1.6**
NIKH	**Nikolski High**	**2.75**	**72**		**Pn**	**17 58 45.1**	**-0.5**
OKSP	**Okmok Steeple**	**3.15**	**68**		**Pn**	**17 58 51.8**	**+0.7**
UNV	**Unalaska Valle**	**4.36**	**65**	Pn	**Pn**	**17 59 05.6**	**-1.6**
AMKA	**Amchitka**	**4.74**	**263**	Pn	**Pn**	**17 59 11.2**	**-1.2**
AKUT	**Akutan**	**4.86**	**63**	Pn	**Pn**	**17 59 14.7**	**+0.7**
FALS	**False Pass**	**6.40**	**62**	Pn	**Pn**	**17 59 35.1**	**+0.3**
SDPT	**Sand Point**	**8.16**	**62**	Pn	**Pn**	**17 59 57.2**	**-1.5**
CNBA	**Chernabura Isl**	**8.52**	**67**	Pn	**Pn**	**18 00 02.5**	**-1.1**
CHGN	**Chignik**	**9.57**	**59**	Pn	**Pn**	**18 00 16.7**	**-1.1**
GAMB	**Gambell**	**11.64**	**3**	Pn	**Pn**	**18 00 46.6**	**+0.7**
OHAK	**Old Harbor**	**12.54**	**58**	Pn	**Pn**	**18 00 54.1**	**-3.7**
KDAK	**Kodiak Island**	**13.06**	**57**	Pn	**Pn**	**18 01 02.3**	**-2.3**
SVW2	**Sparrevohn**	**13.12**	**40**	Pn	**Pn**	**18 01 05.9**	**+0.4**
CNPM	**China Poot**	**14.29**	**50**	Pn	**Pn**	**18 01 19.1**	**-1.6**
BRLK	**Bradley Lake**	**14.54**	**50**	Pn	**Pn**	**18 01 21.3**	**-2.7**
SEW	**Seward**	**15.34**	**50**	Pn	**Pn**	**18 01 31.4**	**-2.6**
GHO	**Glory Hole Cre**	**16.23**	**44**	Pn	**Pn**	**18 01 44.3**	**-0.9**
GHO				IAmb	IAmb	18 02 12.8	
	comp=Z,12nm,1.4s						
KTH	**Kantishna Hill**	**16.31**	**37**	Pn	**P**	**18 01 47.8**	**+0.6**
KTH				IAmb	IAmb	18 01 48.4	
	comp=Z,8.5nm,1.2s						
TRF	**Thorofare Moun**	**16.49**	**38**	Pn	**P**	**18 01 49.3**	**-0.1**
BPAW	**Bear Paw Mtn.**	**16.60**	**35**	Pn	**P**	**18 01 51.0**	**+0.6**
BPAW				IAmb	IAmb	18 02 03.0	
	comp=Z,8.0nm,1.5s						
HIN	**Hinchinbrook I**	**16.83**	**50**	Pn	**Pn**	**18 01 51.1**	**-1.4**
IMAR	**Indian Mountai**	**16.93**	**28**	Pn	**P**	**18 01 55.0**	**+1.0**
FID	**Port Fidalgo**	**16.95**	**49**	Pn	**Pn**	**18 01 52.7**	**-1.2**
FID				IAmb	IAmb	18 02 21.4	
	comp=Z,8.1nm,1.0s						
SCM	**Sheep Creek Mo**	**16.95**	**45**	Pn	**Pn**	**18 01 53.2**	**-0.7**
KLU	**Klutina**	**17.45**	**47**	Pn	**Pn**	**18 02 00.3**	**+0.2**
KLU				IAmb	IAmb	18 02 01.3	
	comp=Z,8.5nm,1.4s						
DHY	**Denali Highway**	**17.45**	**41**	Pn	**Pn**	**18 02 00.3**	**+0.2**
WRH	**Wood River Hil**	**17.86**	**37**	P	**P**	**18 02 03.0**	**-1.2**
WRH				IAmb	IAmb	18 02 17.1	
	comp=Z,7.5nm,1.4s						
CCB	**Clear Creek Bu**	**18.05**	**37**	P	**P**	**18 02 04.9**	**-1.4**
SUCK	**Suckling Hills**	**18.05**	**53**	P	**Pn**	**18 02 07.7**	**+0.3**
MDM	**Murphy Dome**	**18.07**	**35**	P	**P**	**18 02 05.6**	**-1.0**
N25K	**Chitina, Valde**	**18.08**	**47**	P	**P**	**18 02 06.8**	**0.0**
N25K				IAmb	IAmb	18 02 30.3	
	comp=Z,5.1nm,1.4s						
HDA	**Harding Lake**	**18.25**	**38**	P	**Pn**	**18 02 09.4**	**-0.2**
IL31		**18.46**	**37**	P	**P**	**18 02 10.4**	**-0.3**
IL31				IAmb	IAmb	18 02 26.2	
	comp=Z,6.1nm,1.4s						
ILAR	**Eielson Array**	**18.46**	**37**	P	**P**	**18 02 10.2**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=238,slow=8.8,SNR=42						
ILAR	**Eielson Array**	**18.46**	**37**	P	**P**	**18 02 10.0**	**-0.8**
RIDG	**Independent Ri**	**18.77**	**41**	P	**P**	**18 02 14.3**	**+0.1**
RIDG				IAmb	IAmb	18 02 17.8	
	comp=Z,11nm,1.3s						
BALM	**Baldy**	**18.97**	**50**	P	**P**	**18 02 14.8**	**-1.7**
BALM				IAmb	IAmb	18 02 25.4	
	comp=Z,8.6nm,1.3s						
BCAR	**Beaver Creek A**	**19.80**	**44**	P	**Pn**	**18 02 27.4**	**-0.5**
TOLK	**Toolik Lake Re**	**19.96**	**25**	P	**Pn**	**18 02 29.2**	**-0.6**
TOLK				IAmb	IAmb	18 02 29.4	
	comp=Z,4.3nm,1.4s						
K27K	**Chicken**	**20.01**	**42**	P	**P**	**18 02 27.4**	**-0.3**
K27K				IAmb	IAmb	18 02 32.5	
	comp=Z,2.7nm,1.0s						
EGAK	**Eagle**	**20.66**	**40**	P	**P**	**18 02 35.3**	**+0.6**
BMAR	**Burnt Mountain**	**20.67**	**32**	P	**P**	**18 02 35.9**	**+1.1**
H11N2	**WAKE ISLAND Hy**	**35.94**	**213**	T	T	18 42 55.8	
	baz=21						
H11N3	**WAKE ISLAND Hy**	**35.95**	**213**	T	T	18 42 56.9	
	baz=21						
H11N1	**WAKE ISLAND Hy**	**35.96**	**213**	T	T	18 42 55.4	
	baz=21						
H11S1	**WAKE ISLAND Hy**	**37.14**	**213**	T	T	18 44 22.3	
	baz=19						
H11S2	**WAKE ISLAND Hy**	**37.16**	**213**	T	T	18 44 23.5	
	baz=19						
H11S3	**WAKE ISLAND Hy**	**37.16**	**213**	T	T	18 44 24.4	
	baz=19						
PDAR	**Pinedale Array**	**42.73**	**76**	P	**P**	**18 05 51.6**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=302,slow=5.1,SNR=4.1						
TXAR	**Lajitas Array**	**55.09**	**86**	P	**P**	**18 07 26.3**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=302,slow=5.2,SNR=7.6						

*NDI **29** 18:00:58.4±2.1,11.24N×94.10E,h10km,mb4.8,ML3.9, mb4.6(NEIC)*
*DJA **29** 18:01:01.9±0.5,11°N±5°×9°3E±°,h132km±6km,M4.3/6, mb4.6/6,mB5.0/3,MLv4.1/1,Mw(mB)4.4/3*
*NEIC **29** 18:01:01.6±1.6,11.11N±0.09×93.61E±0.09,h129km±6km, mb4.6/56,Error ellipse: s-maj=14.9km s-min=10.2km az=222.0*
*IDC **29** 18:01:03.9±1.7,11.13N×93.70E,h153km±15km,mb3.8/16, mb1 3.9/19,mb1mx3.7/52,mbtmp4.2/19,MS3.6/1, Ms1 3.6/1,ms1mx2.5/39,Error ellipse: s-maj=17.5km s-min=9.8km az=53.0*
ISC 29 18:01:01.5±0.4,11.18N±0.05×93.59E±0.06,h123km,n157, σ1§35/156,mb4.5/46,4C,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.96**	**300**	*e*P	Pn	18 01 24.6	+1.3
PBA				*e*S	Sn	18 01 43.3	+3.4
PBA				IAML		18 01 45.5	
	comp=N,2μm,0.2s						
PBA				IAML		18 01 46.5	
	comp=E,2μm,0.3s						
PBA	**Port Blair**	**0.96**	**300**	Pn	Pn	18 01 24.5	+1.2
DGPR	**DIGLIPUR**	**2.09**	**342**	*e*P	**Pn**	**18 01 36.5**	**+0.4**
DGPR				*e*S	**Sn**	**18 02 03.0**	**+0.3**
DGPR				*e*S	**Sn**	**18 02 03.1**	**+0.3**
DGPR				IAML		18 02 04.1	
	comp=N,822nm,0.3s						
DGPR				IAML		18 02 04.3	
	comp=E,662nm,0.4s						
DGPR				IAML		18 02 05.8	
	comp=E,791nm,0.3s						
DGPR				IAML		18 02 06.0	
	comp=N,902nm,0.4s						
SURT	**Suratani**	**5.58**	**113**	P	Pn	18 02 30.0	+7.7
	comp=N,0.7nm,1.3s						
PKDT	**Phuket**	**5.71**	**125**	P	**Pn**	**18 02 25.0**	**+1.0**
	comp=N,18nm,0.8s						
MHMT	**Maesariang**	**8.12**	**31**	P	**Pn**	**18 02 58.0**	**+1.4**
	comp=N,9.2nm,0.8s						
CM13	**Chiang Mai Arr**	**8.84**	**35**	P	**Pn**	**18 03 07.5**	**+1.1**
	comp=N,53nmcomp=N,6.2nm,0.9s						
CM05	**Chiang Mai Arr**	**8.85**	**35**	P	**Pn**	**18 03 07.0**	**+0.5**
	comp=N,81nmcomp=N,9.7nm,0.9s						
CM04	**Chiang Mai Arr**	**8.87**	**35**	P	**Pn**	**18 03 07.9**	**+1.2**
	comp=N,101nmcomp=N,12nm,0.9s						
CM01	**Chiang Mai Arr**	**8.87**	**35**	P	**Pn**	**18 03 08.0**	**+1.2**
	comp=N,100nmcomp=N,11nm,1.0s						
CM02	**Chiang Mai Arr**	**8.88**	**35**	P	**Pn**	**18 03 08.0**	**+1.2**
	comp=N,91nmcomp=N,10nm,0.9s						
CM15	**Chiang Mai Arr**	**8.88**	**35**	P	**Pn**	**18 03 07.0**	**+0.1**
	comp=N,71nmcomp=N,6.7nm,0.8s						
CM31	**Chiang Mai Arr**	**8.89**	**35**	P	**Pn**	**18 03 08.2**	**+1.1**
	comp=N,256nm,0.9s						
CM31	**Chiang Mai Arr**	**8.89**	**35**	Pn	**Pn**	**18 03 07.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**8.89**	**35**	P	**Pn**	**18 03 08.0**	**+0.9**
	comp=N,0.4nm,0.3s,baz=223,slow=14,SNR=58						
CMAR				S	**Sn**	**18 04 46.8**	**+1.2**
	comp=N,0.1nm,0.3s,baz=221,slow=28,SNR=1.3						
CMAR	**Chiang Mai Arr**	**8.89**	**35**		**Pn**	**18 03 06.5**	**-0.5**
CM09	**Chiang Mai Arr**	**8.91**	**35**	P	**Pn**	**18 03 08.0**	**+0.7**
	comp=N,107nmcomp=N,12nm,0.9s						
KULM	**Kulim**	**9.11**	**129**	Pn	**Pn**	**18 03 10.3**	**+0.2**
CHTO	**Chiang Mai**	**9.18**	**34**	Pn	**Pn**	**18 03 11.5**	**+0.5**
CMMT	**Chiang Mai**	**9.18**	**34**	P	**Pn**	**18 03 11.8**	**+0.8**
	comp=N,5.6nm,1.0s						
CM34	**Chiang Mai Arr**	**9.32**	**34**	P	**Pn**	**18 03 13.0**	**+0.1**
LAMP	**Lampang**	**9.35**	**38**	P	Pn	18 03 17.9	+4.7
	comp=N,13nm,0.7s						
PSI	**Prapat**	**9.86**	**147**	P	**Pn**	**18 03 21.8**	**+1.6**
	baz=0.1,slow=17,SNR=4.2						
RPSI	**Rantau Prapat**	**9.95**	**148**		**Pn**	**18 03 21.8**	**+0.5**
PAYA	**Payao**	**10.14**	**36**	P	**Pn**	**18 03 27.0**	**+3.2**
	comp=N,126nm,0.7s						
SAIH	**SAIHA**	**11.26**	**357**	*e*P	**Pn**	**18 03 37.9**	**-1.1**
SAIH				IAmb	IAmb	18 03 43.0	
	comp=Z,20nm,0.5s						
SAIH				*e*S	**Sn**	**18 05 35.7**	**-7.4**
SAIH				IAML		18 05 41.4	
	comp=E,60nm,0.4s						
SAIH				IAML		18 05 41.6	
	comp=N,32nm,0.4s						
PALK	**Pallekele**	**13.30**	**254**	P	**Pn**	**18 04 08.0**	**+2.3**
	comp=N,0.3nm,0.3s,baz=148,slow=13,SNR=1.9						
PALK				S	Sn	18 06 22.9	-10
	comp=N,2.4nm,0.3s,baz=90,slow=19,SNR=14						
MYKOM	**Kota Tinggi**	**13.81**	**132**		**P**	**18 04 16.1**	**-0.3**
SLVN	**Son La**	**14.13**	**43**		**P**	**18 04 20.8**	**+0.7**
SHL	**Shillong**	**14.40**	**354⇑**	*e*P	**P**	**18 04 22.0**	**-1.1**
SHL	**Shillong**	**14.40**	**354**		**P**	**18 04 22.2**	**-1.0**
BOK	**Bokaro**	**14.53**	**331**	*e*P	**P**	**18 04 26.9**	**+2.4**
BOK				IAmb	IAmb	18 04 30.6	
	comp=Z,19nm,0.4s						
TEZP	**TEZPUR**	**15.37**	**357**	*e*P	**Pn**	**18 04 31.3**	**-0.6**
TEZP				IAmb	IAmb	18 04 35.3	
	comp=Z,13nm,0.6s						
ZIRO	**ZIRO**	**16.26**	**1**	*e*P	**Pn**	**18 04 40.5**	**-2.6**
ZIRO				IAmb	IAmb	18 04 44.0	
	comp=Z,56nm,0.4s						
ZIRO				*e*S	Sn	18 07 31.9	-12
KMI	**Kunming**	**16.36**	**31⇑**	*e*P	**P**	**18 04 47.0**	**+2.1**
KMI				pP	Pn	18 04 53.0	+8.8
KMI				sP	pP	18 05 02.0	-4.6
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
KMI				pmax	pmax		
	comp=Z,110nm,4.8s						
KMI				LR	LR		
	comp=N,130nm,5.6s						
KMI				LR	LR		
	comp=E,110nm,5.4s						
KMI				LR	LR		
	comp=Z,130nm,5.3s						
ODAN	**Odare**	**16.66**	**340**	*e*P	**P**	**18

KDJ	**Kajisay**	**34.01 338**	P	**P**	**18 07 35.0**	**+1.3**
KDJ			IAmb	IAmb	18 07 35.7	
	comp=Z,7.0nm,0.9s					
DRK	**Karamyk**	**34.19 329**	P	**P**	**18 07 36.7**	**+1.2**
BJI	**Beijing**	**35.01 31**	P	**P**	**18 07 44.0**	**+1.8**
BJI			pmax	pmax		
	comp=Z,5.0nm,0.6s					
ARSB	**Arslanbob**	**35.07 333**	P	**P**	**18 07 43.8**	**+1.0**
ARSB			IAmb	IAmb	18 07 44.6	
	comp=Z,10nm,0.8s					
BTK	**Batken**	**35.12 329**	P	**P**	**18 07 44.8**	**+1.5**
BTK			IAmb	IAmb	18 07 46.6	
	comp=Z,26nm,1.6s					
TKM2	**Tokmak 2**	**35.29 337**	P	**P**	**18 07 45.4**	**+0.6**
	SNR=5.1					
KBK	**Karagaybulak**	**35.32 336**	P	**P**	**18 07 46.3**	**+1.3**
	SNR=7.2					
AML	**Almayashu**	**35.40 334**	P	**P**	**18 07 47.1**	**+1.1**
	SNR=8.9					
AAK	**Ala-Archa**	**35.49 335**	P	**P**	**18 07 47.2**	**+0.7**
	SNR=5.3					
EKS2	**Erkin-Say**	**35.80 335**	P	**P**	**18 07 50.6**	**+1.5**
	SNR=10					
USP	**Ospenovka**	**36.01 336**	P	**P**	**18 07 51.5**	**+0.8**
	SNR=8.5					
MK31	**Makanchi Array**	**36.77 347**	P	**P**	**18 07 57.3**	**+0.2**
MK31			IAmb	IAmb	18 08 08.2	
	comp=Z,7.3nm,1.2s					
MKAR	**Makanchi Array**	**36.77 347**	P	**P**	**18 07 57.2**	**+0.1**
	comp=Z,5.0nm,0.8s,baz=171,slow=8.6,SNR=27					
MKAR			PcP	**PcP**	**18 10 15.9**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=174,slow=2.1,SNR=4.1					
MKAR	**Makanchi Array**	**36.77 347**	P	**P**	**18 07 56.9**	**-0.2**
MAKZ	**Makanchi**	**36.85 347**	P	**P**	**18 07 57.9**	**+0.1**
MAKZ			IAmb	IAmb	18 07 58.4	
	comp=Z,19nm,1.6s					
KK31	**Karatay Array**	**37.60 332**	P	**P**	**18 08 04.4**	**+0.3**
KKAR	**Karatay Array**	**37.60 332**	P	**P**	**18 08 04.4**	**+0.2**
SONM	**Songino Array**	**38.09 14**	P	**P**	**18 08 08.2**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=203,slow=8.2,SNR=6.2					
SONM	**Songino Array**	**38.09 14**	P	**P**	**18 08 07.9**	**-0.5**
KSRS	**Korea Array**	**40.40 44**	P	**P**	**18 08 26.6**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=239,slow=8.3,SNR=14					
KURK	**Kurchatov**	**41.29 346**	P	**P**	**18 08 34.9**	**+0.2**
GEYT	**Alibeck**	**41.42 316**	P	**P**	**18 08 37.9**	**+1.9**
	comp=Z,15nm,0.5s,baz=147,slow=8.5,SNR=33					
GEYT	**Alibeck**	**41.42 316**	P	**P**	**18 08 35.7**	**-0.4**
GYA0B	**ALIBECK ARRAY**	**41.42 316**	P	**P**	**18 08 38.2**	**+2.2**
FITZ	**Fitzroy Crossi**	**42.98 132**	P	**P**	**18 08 47.2**	**-1.5**
	comp=Z,2.5nm,0.7s,baz=331,slow=7.8,SNR=15					
ZAA0	**Zalesovo Array**	**43.23 352**	P	**P**	**18 08 50.6**	**+0.3**
ZAA0			IAmb	IAmb	18 08 51.3	
	comp=Z,9.7nm,0.6s					
ZALV	**Zalesovo Beam**	**43.23 352**	P	**P**	**18 08 50.4**	**+0.1**
	comp=Z,9.5nm,0.4s,baz=178,slow=8.2,SNR=67					
ZALV	**Zalesovo Beam**	**43.23 352**	P	**P**	**18 08 50.1**	**-0.2**
KNRA	**Kununurra**	**43.87 127**	P	**P**	**18 08 54.4**	**-1.6**
KNRA			IAmb	IAmb	18 08 57.9	
	comp=Z,11nm,1.1s					
MTN	**Manton Dam**	**44.25 122**	P	**P**	**18 08 57.0**	**-2.1**
MTN			IAmb	IAmb	18 09 00.3	
	comp=Z,13nm,1.2s					
BRVK	**Borovoye**	**45.77 341**	P	**P**	**18 09 10.3**	**-0.2**
BRVK			IAmb	IAmb	18 09 11.0	
	comp=Z,6.6nm,0.5s					
ABKAR	**Akbulak array**	**47.10 330**	P	**P**	**18 09 21.5**	**+0.5**
ABKAR			IAmb	IAmb	18 09 22.2	
	comp=Z,13nm,1.2s					
ABKAR	**Akbulak array**	**47.10 330**	P	**P**	**18 09 21.4**	**+0.4**
RAYN	**Ar Rayn**	**47.31 292**	P	**P**	**18 09 24.0**	**+1.0**
NWAO	**Narrogin (SRO)**	**49.32 154**	P	**P**	**18 09 36.2**	**-2.1**
NWAO			IAmb	IAmb	18 09 38.9	
	comp=Z,11nm,1.1s					
GUMO	**Guam**	**50.07 82**	LR	LR	18 30 11.1	
	comp=Z,70nm,21.8s,baz=246,slow=35					
WB0	**Warramunga Arr**	**50.59 127**	P	**P**	**18 09 46.3**	**-1.8**
WB0			IAmb	IAmb	18 09 47.8	
	comp=Z,7.2nm,0.5s					
WRA	**Warramunga Arr**	**50.65 127**	P	**P**	**18 09 46.9**	**-1.7**
	comp=Z,5.1nm,0.5s,baz=301,slow=10,SNR=141					
WRA	**Warramunga Arr**	**50.65 127**	P	**P**	**18 09 47.2**	**-1.3**
WRAB	**Tennant Creek**	**50.65 127**	P	**P**	**18 09 47.1**	**-1.5**
WB2	**Warramunga Arr**	**50.66 127**	P	**P**	**18 09 46.9**	**-1.7**
WR0	**Warramunga Arr**	**50.82 127**	P	**P**	**18 09 48.1**	**-1.6**
WR0			IAmb	IAmb	18 09 49.6	
	comp=Z,6.1nm,0.6s					
AS31	**Alice Springs**	**52.47 132**	P	**P**	**18 10 01.1**	**-1.0**
ASAR	**Alice Springs**	**52.47 132**	P	**P**	**18 10 00.2**	**-1.9**
	comp=Z,1.1nm,0.4s,baz=309,slow=7.1,SNR=64					
ARU	**Arti**	**52.66 336**	P	**P**	**18 10 02.4**	**-0.5**
ARU			IAmb	IAmb	18 10 03.4	
	comp=Z,3.8nm,0.5s					
FORT	**Forrest**	**53.26 143**	P	**P**	**18 10 06.8**	**-0.9**
BBOO	**Buckleboo**	**59.62 139**	P	**P**	**18 10 51.8**	**-1.0**
BR131	**Keskin Array S**	**59.90 309**	P	**P**	**18 10 53.9**	**-0.9**
BRTR	**Keskin Array B**	**59.90 309**	P	**P**	**18 10 53.9**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=137,slow=11,SNR=7.0					
STKA	**Stephens Creek**	**62.78 135**	P	**P**	**18 11 12.9**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=340,slow=6.9,SNR=4.0					
STKA	**Stephens Creek**	**62.78 135**	P	**P**	**18 11 13.8**	**-0.3**
TIXI	**Tiksi**	**64.12 12**	P	**P**	**18 11 20.9**	**-1.3**
TIXI			IAmb	IAmb	18 11 21.9	
	comp=Z,6.2nm,1.4s					
KARP	**Karpathos**	**64.44 304**	P	**P**	**18 11 24.1**	**-0.9**
TIRR	**Tirgusor**	**64.57 314**	P	**P**	**18 11 26.9**	**+1.2**
AKASG	**Malin Array Be**	**65.25 321**	P	**P**	**18 11 28.2**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=87,slow=5.7,SNR=4.5					
AKASG	**Malin Array Be**	**65.25 321**	IAmb	IAmb	18 11 30.8	
	comp=Z,0.7nm,0.8s					
IDI	**Anoyia**	**66.27 304**	P	**P**	**18 11 36.6**	**-0.3**
BURAR	**Bucovina Array**	**67.26 317**	P	**P**	**18 11 42.9**	**-0.1**
FIA1	**FINESS Array S**	**69.56 332**	P	**P**	**18 11 56.3**	**-0.5**
FINES	**FINESS Array B**	**69.56 332**	P	**P**	**18 11 56.2**	**-0.6**
	comp=Z,2.4nm,0.5s,baz=110,slow=6.9,SNR=26					
KEV	**Kevo**	**71.56 340**	P	**P**	**18 12 08.9**	**+0.1**
ARD3	**ARCESS Array S**	**71.98 340**	P	**P**	**18 12 11.6**	**+0.2**
ARD4	**ARCESS Array S**	**71.98 340**	P	**P**	**18 12 11.6**	**+0.2**
ARD4			IAmb	IAmb	18 12 20.5	
	comp=Z,16nm,1.0s					
ARC3	**ARCESS Array S**	**71.99 340**	P	**P**	**18 12 11.6**	**+0.2**
ARC4	**ARCESS Array S**	**71.99 340**	P	**P**	**18 12 11.6**	**+0.2**
ARA0	**ARCESS Array S**	**71.99 340**	*eP*	**P**	**18 12 11.7**	**+0.2**
ARCES	**ARCESS Array B**	**71.99 340**	P	**P**	**18 12 11.4**	**-0.1**
	comp=Z,1.5nm,0.4s,baz=92,slow=6.3,SNR=27					
KTK1	**Kautokeino**	**72.63 339**	*eP*	**P**	**18 12 15.2**	**0.0**
HAMF	**Hammerfest**	**72.90 341**	*eP*	**P**	**18 12 17.0**	**+0.2**
TRO	**Tromso**	**74.26 339**	*eP*	**P**	**18 12 24.2**	**-0.5**
GERES	**GERESS Array B**	**75.02 318**	P	**P**	**18 12 29.2**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=87,slow=5.9,SNR=11					
PRED	**Cave del Predi**	**75.13 315**	P	**P**	**18 12 29.9**	**-0.5**
PRED			IAmb	IAmb	18 12 44.7	
	comp=Z,12nm,1.7s					
FAUS	**Fauske**	**75.25 337**	*eP*	**P**	**18 12 30.3**	**-0.2**
STEI	**Steigen**	**75.33 338**	*eP*	**P**	**18 12 30.2**	**-0.8**
MOR8	**Moi Rana**	**75.46 336**	*eP*	**P**	**18 12 31.4**	**-0.4**
CIMO	**Cimolais**	**75.91 315**	P	**P**	**18 12 34.2**	**-0.5**
CIMO			IAmb	IAmb	18 12 34.4	
	comp=Z,12nm,1.5s					
LOF	**Lofoten**	**75.99 338**	*eP*	**P**	**18 12 33.8**	**-0.8**
NC405	**NORSAR Array S**	**76.36 330**	P	**P**	**18 12 36.0**	**-1.0**
NSS	**Namsos**	**76.38 334**	*eP*	**P**	**18 12 36.2**	**-0.8**
NC602	**NORSAR Array S**	**76.44 330**	P	**P**	**18 12 37.2**	**-0.2**
NC602	**NORSAR Array S**	**76.44 330**	*eP*	**P**	**18 12 37.3**	**-0.2**
CTI	**Castel Tesino**	**76.47 315**	P	**P**	**18 12 38.1**	**+0.1**
SPA0	**Spitsbergen Ar**	**76.51 348**	P	**P**	**18 12 37.5**	**0.0**
SPA0	**Spitsbergen Ar**	**76.51 348**	*eP*	**P**	**18 12 37.7**	**+0.2**
NC303	**NORSAR Array S**	**76.54 330**	P	**P**	**18 12 37.0**	**-0.9**
NC303			IAmb	IAmb	18 12 53.5	
	comp=Z,22nm,1.2s					
NOA	**NORSAR Array B**	**76.61 330**	P	**P**	**18 12 37.1**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=91,slow=5.7,SNR=2.1					
KONO	**Kongsberg**	**77.40 329**	*eP*	**P**	**18 12 42.5**	**-0.3**
KEST	**Kesra**	**78.93 304**	P	**P**	**18 12 51.3**	**-0.6**
	comp=Z,2.2nm,0.7s,baz=90,slow=4.0,SNR=1.6					
KEST	**Kesra**	**78.93 304**	P	**P**	**18 12 51.9**	**0.0**
KEST			IAmb	IAmb	18 13 06.2	
	comp=Z,20nm,1.6s					
SENIN	**Lac Senin/Sane**	**79.46 315**	P	**P**	**18 12 54.6**	**-0.1**
TXAR	**Lajitas Array**	**136.41 22**	PKP	**PKPdf**	**18 20 08.8**	**-0.9**
	comp=Z,0.1nm,0.6s,baz=250,slow=1.8,SNR=1.8					
TXAR			SKP	**SKPbc**	**18 23 28.0**	**-2.8**
	comp=Z,0.3nm,0.7s,baz=135,slow=0.4,SNR=4.4					

IDC 29 18:04:11.0±2.3, 1.76N×126.15E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/37, mbtmp3.1/3, Error ellipse: s-maj=188.2km s-min=28.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.01**	**160**	P	P	18 09 16.8	-0.9
	0.3nm,0.5s,baz=338,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**26.37**	**164**	P	P	18 09 49.9	+0.8
	0.1nm,0.4s,baz=344,slow=9.2,SNR=6.8						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	18 14 11.3	-0.3
	0.2nm,0.6s,baz=120,slow=5.8,SNR=1.6						

IDC 29 18:16:31.2±5.2, 26.67N×143.90E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/41, mbtmp3.5/5, ML2.9/1, Error ellipse: s-maj=181.2km s-min=29.8km az=73.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**10.97**	**335**	Pn	Pn	18 19 07.4	-2.1
	0.1nm,0.3s,baz=155,slow=12,SNR=6.9						
KSRS	**Korea Array**	**17.27**	**312**	P	P	18 20 35.7	+0.4
	baz=120,slow=10.0,SNR=2.4						
SONM	**Songino Array**	**36.09**	**316**	P	P	18 23 35.4	+0.6
	0.7nm,0.8s,baz=114,slow=6.8,SNR=4.5						
WRA	**Warramunga Arr**	**47.25**	**192**	P	P	18 25 06.1	-0.2
	0.6nm,1.1s,baz=11,slow=8.6,SNR=2.6						
MKAR	**Makanchi Array**	**51.93**	**310**	P	P	18 25 41.0	-0.8
	0.7nm,0.8s,baz=99,slow=9.1,SNR=1.8						

IDC 29 18:16:53.5±3.8, 13.56S×167.52E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/30, mbtmp3.5/2, Error ellipse: s-maj=206.4km s-min=53.6km az=148.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.36**	**254**	P	P	18 23 25.1	+0.2
	0.4nm,0.6s,baz=86,slow=9.5,SNR=5.9						
ASAR	**Alice Springs**	**33.33**	**247**	P	P	18 23 33.4	-0.1
	0.2nm,0.4s,baz=75,slow=9.7,SNR=12						
ARCES	**ARCESS Array B**	**119.18**	**346**	PKP	PKPdf	18 35 43.7	-0.3
	3.5nm,0.9s,baz=50,slow=2.8,SNR=1.5						

*IDC **29** 18:28:07.7±1.8, 15.77N×92.11W, h229km±18km, mb3.3/3, mb1 3.8/6, mb1mx3.3/39, mbtmp4.1/6, Error ellipse: s-maj=53.7km s-min=20.2km az=47.0*

*NEIC **29** 18:28:08.1±2.3, 15.82N±0.08×92.20W±0.06, h233km±7km, mb4.1/6, Md4.2/14(MEX), Error ellipse: s-maj=13.0km s-min=6.9km az=203.0*

*MEX **29** 18:28:08.1±0.7, 15.74N×92.29W, h251km±5km, MD4.2*

ISC 29 18:28:08.2±0.7, 15.79N±0.07×92.19W±0.06, h234km±6km, n35, σ1s31/46, mb3.9/5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**0.50**	**6**	*i* P	**Pn**	**18 28 39.7**	**+0.2**
CCIG				*i* S	**S**	**18 29 04.5**	**+0.3**
CCIG	**Comitan**	**0.50**	**6**		**Pn**	**18 28 39.7**	**+0.2**
HUEH	**Huehuetenango**	**0.81**	**125**		**Pn**	**18 28 40.7**	**-0.2**
HUEH				S	**S**	**18 29 05.7**	**-0.7**
THIG		**0.88**	**185**	*i* P	**Pn**	**18 28 41.0**	**0.0**
THIG				*i* S	**S**	**18 29 06.8**	**+0.2**
THIG		**0.88**	**185**		**Pn**	**18 28 39.8**	**-1.1**
THIG					**S**	**18 29 07.3**	**+0.8**
PCIG		**0.99**	**266**	*i* P	**Pn**	**18 28 40.9**	**-0.7**
PCIG				*i* S	**S**	**18 29 06.4**	**-1.1**
PCIG		**0.99**	**266**		**Pn**	**18 28 40.9**	**-0.7**
PCIG					**S**	**18 29 06.4**	**-1.1**
TGIG		**1.33**	**318**	*i* P	**Pn**	**18 28 44.4**	**+0.6**
TGIG				*eS*	**S**	**18 29 11.6**	**-0.2**
TGIG		**1.33**	**318**		**Pn**	**18 28 44.3**	**+0.5**
RTAL	**Retalhuleu**	**1.34**	**159**		**Pn**	**18 28 44.3**	**+0.4**
RTAL				S	**S**	**18 29 12.6**	**+0.7**
PETF	**Flores**	**2.50**	**63**		**Pn**	**18 28 53.9**	**-0.4**
PETF				S	**S**	**18 29 28.5**	**-2.0**
CMIG	**Matias Romero**	**2.89**	**297**	P	**Pn**	**18 28 57.2**	**-1.3**
	79nm,0.3s,baz=116,slow=7.1,SNR=334						
CMIG				S	**S**	**18 29 34.0**	**-4.1**
	26nm,0.3s,baz=24,slow=20,SNR=19						
CMIG	**Matias Romero**	**2.89**	**297**	*i* P	**Pn**	**18 28 57.5**	**-1.1**
CMIG				*i* S	**S**	**18 29 36.0**	**-2.1**
CMIG	**Matias Romero**	**2.89**	**297**		**Pn**	**18 28 57.5**	**-1.1**
ESQI	**Esquipulas**	**3.01**	**114**		**Pn**	**18 29 00.3**	**+0.4**
MTO3	**Montecristo**	**3.06**	**116**		**Pn**	**18 29 00.8**	**+0.1**
TEIG	**Tepich**	**5.78**	**40**	Pn	**Pn**	**18 29 32.1**	**-1.1**
TLIG	**Tlapa**	**6.36**	**287**		**Pn**	**18 29 41.8**	**+1.0**
UNM	**Universidad Na**	**7.54**	**299**	Pn	**Pn**	**18 29 55.2**	**-0.6**
JTS	**Las Juntas de**	**8.92**	**127**	P	**Pn**	**18 30 13.1**	**-0.2**
	4.6nm,0.3s,baz=351,slow=17,SNR=11						
JTS				S	**S**	**18 31 50.0**	**-4.1**
	2.7nm,0.3s,baz=6.7,slow=21,SNR=5.1						
JTS	**Las Juntas de**	**8.92**	**127**		**Pn**	**18 30 13.3**	**0.0**
146A	**Union**	**17.02**	**9**	Pn	**Pn**	**18 31 54.7**	**+1.7**
TXAR	**Lajitas Array**	**17.13**	**324**	P	**Pn**	**18 31 54.2**	**-0.3**
	0.2nm,0.3s,baz=152,slow=12,SNR=31						
TXAR	**Lajitas Array**	**17.13**	**324**	P	**Pn**	**18 31 54.6**	**+0.2**
TX31	**Lajitas Ar. Si**	**17.13**	**324**	P	**Pn**	**18 31 54.8**	**+0.4**
TX31				IAmb	IAmb	18 31 55.9	
	comp=Z,7.1nm,0.7s						
TX32	**Lajitas Array**	**17.13**	**324**		**Pn**	**18 31 55.1**	**+0.6**
MNTX	**Cornudas Mount**	**19.89**	**325**	P	**P**	**18 32 22.6**	**+0.5**
MNTX				IAmb	IAmb	18 32 23.4	
	comp=Z,3.2nm,0.8s						
T25A	**Trinidad**	**23.87**	**335**	P	**P**	**18 33 03.0**	**+2.3**
T25A				IAmb	IAmb	18 33 08.9	
	comp=Z,5.5nm,1.4s						
MTP	**Monte Pirata**	**25.58**	**81**	P	**P**	**18 33 15.4**	**-0.7**
MTP				IAmb	IAmb	18 33 34.0	
	comp=Z,9.1nm,1.1s						
PDAR	**Pinedale Array**	**30.73**	**335**	P	**P**	**18 34 01.7**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=134,slow=8.5,SNR=3.6						
NVAR	**Mina Array Bea**	**32.19**	**320**	P	**P**	**18 34 16.7**	**+2.1**
	comp=Z,1.9nm,0.6s,baz=135,slow=7.9,SNR=6.9						
YKA	**Yellowknife Ar**	**49.26**	**346**	P	**P**	**18 36 32.0**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=143,slow=8.2,SNR=7.0						
WRA	**Warramunga Arr**	**135.63**	**257**	PKP	**PKPdf**	**18 47 00.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=88,slow=2.6,SNR=5.9						
ASAR	**Alice Springs**	**136.06**	**252**	PKP	**PKPdf**	**18 47 02.3**	**+0.1**
	comp=Z,0.2nm,0.8s,baz=79,slow=1.7,SNR=2.1						
FITZ	**Fitzroy Crossi**	**143.78**	**261**	PKP	PKPbc	18 47 14.5	0.0
	comp=Z,0.8nm,0.6s,baz=96,slow=0.9,SNR=5.6						

*IDC **29** 18:30:07.5±1.3, 1.56S×77.63W, h178km±11km, mb3.9/21, mb1 4.1/27, mb1mx4.0/36, mbtmp4.4/27, MS3.0/1, Ms1 3.0/1, ms1mx2.4/25, Error ellipse: s-maj=13.6km s-min=9.1km az=61.0*

*VAO **29** 18:30:08.1±0.3, 1.49S×77.32W, h159km, mb4.9*

*IGQ **29** 18:30:08.2±0.6, 2.5S±2.2×7.8W±1.1, h176km, M4.3*

*NEIC **29** 18:30:08.4±1.9, 1.56S±0.07×77.7W±0.1, h185km±7km, mb4.6/132, Error ellipse: s-maj=17.8km s-min=10.2km az=77.0*

ISC 29 18:30:07.0±0.6, 1.68S±0.03×77.73W±0.05, h177km±5km, n408, σ1s00/399, mb4.6/89, 1C, Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKYU	**Pakayacu**	**0.14**	**76**	P	**Pn**	**18 30 31.5**	**+1.1**
PUYO	**Puyo, Santa Ro**	**0.35**	**302**	P	**Pn**	**18 30 31.8**	**+0.8**
ARDO	**Archidona, Ten**	**0.69**	**354**	P	**Pn**	**18 30 32.7**	**+0.2**
ARDO				S	**Sn**	**18 30 51.7**	**-0.4**
BULB	**Ulba Tungurahu**	**0.72**	**290**	P	**Pn**	**18 30 33.8**	**+0.8**
BRUN	**Tungurahua Vol**	**0.73**	**291**	P	**Pn**	**18 30 34.0**	**+1.0**
SANGA	**Volcan Sangay**	**0.74**	**240**	P	**Pn**	**18 30 34.3**	**+1.1**
RUN5	**Runtun**	**0.74**	**291**	P	**Pn**	**18 30 33.9**	**+0.9**
RETU	**Refugio**	**0.75**	**288**	P	**Pn**	**18 30 33.9**	**+0.6**
BMAS	**Trigal station**	**0.77**	**283**	P	**Pn**	**18 30 34.1**	**+0.8**
BBIL	**Ulba Tungurahu**	**0.79**	**287**	P	**Pn**	**18 30 34.3**	**+0.9**
PIAT	**Ana Tenorio**	**0.86**	**322**	P	**Pn**	**18 30 34.6**	**+0.7**
PIAT				S	**Sn**	**18 30 55.5**	**+0.9**
PIS1	**Pisayambo**	**0.90**	**313**	P	**Pn**	**18 30 35.4**	**+1.1**
IGUA	**Igualata**	**0.93**	**282**	P	**Pn**	**18 30 35.4**	**+0.9**
SAGO	**Sagoatoa**	**1.07**	**299**	P	**Pn**	**18 30 36.6**	**+1.0**
VCES	**Cotopaxi**	**1.10**	**323**	P	**Pn**	**18 30 37.7**	**+1.9**
TAMB	**Tambo**	**1.17**	**327**	P	**Pn**	**18 30 37.1**	**+0.8**
BMOR	**Cotopaxi Volca**	**1.19**	**322**	P	**Pn**	**18 30 37.6**	**+1.0**
BTAM	**Cotopaxi Volca**	**1.20**	**326**	P	**Pn**	**18 30 37.4**	**+0.8**
BREF	**Cotopaxi Volca**	**1.23**	**325**	P	**Pn**	**18 30 38.0**	**+1.0**
VC1	**Cotopaxi 1**	**1.23**	**327**	P	**Pn**	**18 30 37.8**	**+0.9**
ANTM	**Antisana-La Mi**	**1.24**	**336**	P	**Pn**	**18 30 37.7**	**+0.7**
BNAS	**Cotopaxi Volca**	**1.25**	**323**	P	**Pn**	**18 30 38.1**	**+1.1**
ANTS	**Antisana-Sarah**	**1.26**	**339**	P	**Pn**	**18 30 37.6**	**+0.5**
CAMI	**Rancho Maria**	**1.26**	**322**	P	**Pn**	**18 30 38.3**	**+1.2**
ANTG	**Antisana-Guama**	**1.28**	**336**	P	**Pn**	**18 30 38.2**	**+0.9**
ANTI	**Antisana**	**1.30**	**340**	P	**Pn**	**18 30 38.2**	**+0.7**
ILLI	**Illinizas Sur**	**1.39**	**314**	P	**Pn**	**18 30 38.9**	**+0.7**
BOSC	**San Juan Bosco**	**1.65**	**208**	P	**Pn**	**18 30 41.5**	**+1.1**
BOSC				S	**Sn**	**18 31 07.9**	**+1.6**
COHC	**Cochancay**	**1.71**	**243**	P	**Pn**	**18 30 41.0**	**+0.2**
GGPC	**Guagua Pichinc**	**1.73**	**330**	P	**Pn**	**18 30 42.1**	**+0.5**
PULU	**Pululahua**	**1.86**	**335**	P	**Pn**	**18 30 43.6**	**+0.8**
IMBA	**Imbabura, San**	**2.00**	**346**	P	**Pn**	**18 30 45.9**	**+1.5**
OTAV	**Otavalo**	**2.04**	**339**	Pn	**Pn**	**18 30 44.9**	**+0.1**
OTAV	**Otavalo**	**2.04**	**339**	P	**Pn**	**18 30 45.0**	**+0.2**
OTAV	**Otavalo**	**2.04**	**339**	*eP*	**Pn**	**18 30 45.0**	**+0.2**
OTAV				*eS*	**Sn**	**18 31 13.9**	**-0.1**
CUSW	**Cuicocha Oeste**	**2.05**	**342**	P	**Pn**	**18 30 45.9**	**+1.1**
YAHU	**Yahuarcocha**	**2.07**	**350**	P	**Pn**	**18 30 46.0**	**+1.0**
CUIC	**Cuicocha-Domo**	**2.07**	**342**	P	**Pn**	**18 30 45.8**	**+0.7**
CUSE	**Cuicocha Este**	**2.08**	**341**	P	**Pn**	**18 30 45.7**	**+0.4**
URCU	**Urcuqui**	**2.17**	**346**	P	**Pn**	**18 30 46.9**	**+0.7**
PAC1	**Pacto, Paraso**	**2.21**	**331**	P	**Pn**	**18 30 46.6**	**+0.3**
GYE3	**Ecuador-Guayaq**	**2.22**	**258**	P	**Pn**	**18 30 45.2**	**-1.1**
AGUAY	**Guayaquil**	**2.25**	**260**	P	**Pn**	**18 30 45.2**	**-1.5**
BV15	**Puerto Quito-O**	**2.36**	**321**	P	**Pn**	**18 30 47.8**	**-0.2**
LNGL	**El Angel-Carch**	**2.42**	**353**	P	**Pn**	**18 30 49.0**	**-0.2**
CHL1	**Volc;n Chiles**	**2.47**	**355**	P	**Pn**	**18 30 50.0**	**+1.1**
CHL2	**Volc;n Chiles**	**2.47**	**356**	P	**Pn**	**18 30 51.2**	**+1.4**
FLF1	**Flavio Alfaro-**	**2.49**	**302**	P	**Pn**	**18 30 49.1**	**-0.3**
FLFR	**Flavio Alfaro**	**2.49**	**302**	P	**Pn**	**18 30 49.0**	**-0.4**
CHMA	**Chilma**	**2.55**	**352**	P	**Pn**	**18 30 51.2**	**+0.8**
ACH2	**Ecuador-Machal**	**2.61**	**233**	P	**Pn**	**18 30 49.5**	**-1.3**
ISPG	**Isla Puna-Puer**	**2.75**	**242**	P	**Pn**	**18 30 52.5**	**-0.1**
MORR	**Playas El Morr**	**2.78**	**250**	P	**Pn**	**18 30 51.9**	**-0.9**
JAMA	**Jama**	**2.85**	**300**	P	**Pn**	**18 30 54.1**	**+0.3**
ARNL	**Arenillas**	**2.98**	**232**	P	**Pn**	**18 30 53.7**	**-1.6**
CAB1	**Cabo Pasado-Ma**	**2.99**	**295**	P	**Pn**	**18 30 56.4**	**+1.0**
CABP	**Cabo Pasado**	**2.99**	**295**	P	**Pn**	**18 30 55.3**	**-0.1**
GONZ	**Gonzanam**	**3.04**	**213**	P	**Pn**	**18 30 56.6**	**+0.2**
PPLP	**Puerto Lpez**	**3.05**	**272**	P	**Pn**	**18 30 54.5**	**-1.7**
SALI	**Salinas**	**3.30**	**261**	P	**Pn**	**18 30 57.7**	**-1.5**
MCRA	**Macar, Loja**	**3.48**	**220**	P	**Pn**	**18 31 00.1**	**-1.3**
MCRA				S	**Sn**	**18 31 42.1**	**-1.9**
ATAH	**Atahualpa**	**5.46**	**187**	P	**Pn**	**18 31 29.1**	**+1.7**
	14nm,0.3s,baz=22,slow=9.5,SNR=62						
ATAH				S	**Sn**	**18 32 29.8**	**-0.6**
	20nm,0.3s,baz=128,slow=19,SNR=34						
ROSC	**El Rosal**	**7.32**	**28**	P	**Pn**	**18 31 51.7**	**0.0**
	3.4nm,0.3s,baz=236,slow=21,SNR=1.6						
ROSC				S	Sn	18 32 56.8	-18
	3.2nm,0.3s,baz=189,slow=14,SNR=4.0						
ROSC	**El Rosal**	**7.32**	**28**	Pn	**Pn**	**18 31 51.3**	**-0.5**
CZSB	**Cruzeiro do Su

Y58A	Scranton	35.44	357	P		P	18 36 47.0	+0.6	
	baz=176								
Y58A	Scranton	35.44	357	P		P	18 36 46.3	-0.1	
Y59A	Loris	35.50	358	P		P	18 36 47.7	+0.9	
	baz=178								
JANB	Januaria	35.55	114	*e*P		P	18 36 47.3	-0.3	
Y57A	Sumter	35.60	356	P		P	18 36 48.4	+0.7	
	baz=175								
LRAL	Lakeview Retre	35.62	347	P		P	18 36 47.8	-0.1	
	baz=164								
LRAL	Lakeview Retre	35.62	347	P		P	18 36 47.6	-0.3	
LRAL				IAmb		IAmb	18 36 48.1		
	comp=Z,5.6nm,0.7s								
Y55A	Saluda	35.64	354	P		P	18 36 48.7	+0.6	
	baz=173,SNR=6.9								
HODGE	Hodges	35.98	354	P		P	18 36 50.6	-0.3	
X56A	White Oak	36.12	355	P		P	18 36 52.5	+0.4	
	baz=174								
X55A	Gracelyn & Ava	36.15	355	P		P	18 36 52.9	+0.6	
	baz=173,SNR=7.3								
BIRD	Birdtown, Kers	36.23	356	P		P	18 36 53.3	+0.2	
BIRD				IAmb		IAmb	18 36 55.3		
	comp=Z,11nm,0.9s								
Y49A	Blount Mountai	36.28	348	P		P	18 36 53.3	-0.3	
Y49A				IAmb		IAmb	18 37 00.0		
	comp=Z,26nm,1.9s								
X54A	Belton	36.30	354	P		P	18 36 54.4	+0.7	
	baz=172								
PAULI	Pauline	36.51	354	P		P	18 36 55.8	+0.4	
PAULI				IAmb		IAmb	18 36 57.2		
	comp=Z,16nm,0.9s								
W58A	Raeford	36.54	358	P		P	18 36 55.8	+0.2	
	baz=177,SNR=5.5								
W61A	Ground Anchor	36.67	1	P		P	18 36 58.5	+1.7	
	baz=181								
W57A	Gilead	36.70	357	P		P	18 36 57.1	+0.1	
	baz=176,SNR=5.9								
W57A	Gilead	36.70	357	P		P	18 36 56.7	-0.3	
W57A				IAmb		IAmb	18 36 58.0		
	comp=Z,14nm,0.8s								
W56A	Indian Trail	36.72	356	P		P	18 36 57.5	+0.3	
	baz=175,SNR=5.4								
FPAL	Fort Paine	36.78	349	P		P	18 36 57.0	-0.8	
KMSC	Kings Mountain	36.79	355	P		P	18 36 58.2	+0.4	
	baz=174,SNR=6.9								
KMSC	Kings Mountain	36.79	355	P		P	18 36 57.8	0.0	
KMSC				IAmb		IAmb	18 36 58.9		
	comp=Z,16nm,1.0s								
W54A	Cherokee Point	36.81	354	P		P	18 36 58.5	+0.5	
	baz=172								
V59A	Middlesex	37.26	359	P		P	18 37 02.1	+0.4	
	baz=179								
V60A	Jim Taylor Roa	37.26	1	P		P	18 37 02.6	+0.9	
	baz=181								
V58A	Windy Hill, Pi	37.30	358	P		P	18 37 02.4	+0.3	
	baz=178								
V58A	Windy Hill, Pi	37.30	358	P		P	18 37 01.5	-0.6	
V58A				IAmb		IAmb	18 37 03.1		
	comp=Z,12nm,0.8s								
W50A	Signal Mountai	37.37	350	P		P	18 37 01.6	-1.2	
W50A				IAmb		IAmb	18 37 03.2		
	comp=Z,33nm,1.8s								
V56A	Mocksville	37.39	356	P		P	18 37 03.3	+0.5	
	baz=175,SNR=5.0								
V57A	Coltrane Farms	37.42	357	P		P	18 37 03.3	+0.2	
	baz=176								
V53A	Saluda	37.46	353	P		P	18 37 02.8	-0.7	
V54A	Nebo	37.47	354	P		P	18 37 04.1	+0.5	
	baz=173,SNR=6.9								
V55A	Taylorsville	37.48	355	P		P	18 37 03.8	+0.2	
	baz=174								
V55A	Taylorsville	37.48	355	P		P	18 37 03.8	+0.2	
CPCT	Cooper Cave	37.48	351	P		P	18 37 03.3	-0.3	
SWET	Sewanee	37.50	349	P		P	18 37 03.5	-0.4	
TKL	Tuckaleechee C	37.57	352	P		P	18 37 03.5	-0.9	
	comp=Z,2.5nm,0.8s,baz=180,slow=4.0,SNR=3.2								
TKL	Tuckaleechee C	37.57	352	P		P	18 37 03.8	-0.6	
V52A	Sevierville	37.73	352	P		P	18 37 05.8	+0.1	
V52A				IAmb		IAmb	18 38 02.3		
	comp=Z,25nm,1.7s								
PLAL	Pickwick Lake	37.74	346	P		P	18 37 04.8	-1.0	
V51A	Loudon	37.80	351	P		P	18 37 06.2	-0.1	
U56A	King	37.91	357	P		P	18 37 08.2	+0.9	
	baz=176,SNR=9.4								
U56A	King	37.91	357	P		P	18 37 08.0	+0.8	
U57A	Blanch	37.95	358	P		P	18 37 07.7	+0.2	
	baz=177,SNR=5.8								
U55A	TA2, Sparta	38.11	356	P		P	18 37 09.5	+0.5	
	baz=174,SNR=6.2								
V48A	Smith Brothers	38.19	348	P		P	18 37 08.4	-1.2	
U54A	Nelsons Funny	38.20	355	P		P	18 37 10.0	+0.3	
	baz=173,SNR=6.8								
U54A	Nelsons Funny	38.20	355	P		P	18 37 09.6	-0.1	
TZTN	Tazewell	38.41	352	P		P	18 37 11.2	-0.2	
	baz=170								
TZTN	Tazewell	38.41	352	P		P	18 37 11.1	-0.3	
TZTN				IAmb		IAmb	18 37 12.6		
	comp=Z,8.5nm,0.7s								
T58A	Grand View Acr	38.44	359	P		P	18 37 11.7	+0.1	
	baz=178								
T59A	Double "B" Far	38.46	0	P		P	18 37 12.1	+0.4	
	baz=180,SNR=5.7								
T59A	Double "B" Far	38.46	0	P		P	18 37 10.8	-1.0	
T59A				IAmb		IAmb	18 37 13.5		
	comp=Z,21nm,1.2s								
T57A	Hurt	38.51	358	P		P	18 37 12.5	+0.4	
	baz=177,SNR=8.0								
T57A	Hurt	38.51	358	P		P	18 37 11.9	-0.3	
T56A	Rocky Mt	38.57	357	P		P	18 37 13.2	+0.4	
	baz=176								
T55A	Pulaski	38.71	356	P		P	18 37 14.6	+0.7	
	baz=175,SNR=5.7								
T54A	Tazewell	38.71	355	P		P	18 37 14.2	+0.3	
	baz=174,SNR=7.5								
T53A	Wise	38.73	354	P		P	18 37 13.9	-0.2	
	baz=172								
BLA	Blacksburg	38.78	357	P		P	18 37 15.2	+0.7	
	baz=176,SNR=5.1								
BLA	Blacksburg	38.78	357	P		P	18 37 14.7	+0.2	
WVT	Waverly	38.78	347	P		P	18 37 12.7	-1.7	
	baz=164								
WVT	Waverly	38.78	347	P		P	18 37 12.4	-2.0	
WVT				IAmb		IAmb	18 37 13.6		
	comp=Z,4.8nm,0.6s								
RCRC	Randolf Colleg	38.94	358	P		P	18 37 16.7	+0.9	
W41B	Gary Mavity, V	39.10	341	P		P	18 37 16.6	-0.5	
	baz=156								
W41B	Gary Mavity, V	39.10	341	P		P	18 37 16.2	-1.0	
W41B				IAmb		IAmb	18 37 17.3		
	comp=Z,8.7nm,0.9s								
S56A	Natural Bridge	39.20	358	P		P	18 37 18.4	+0.4	
	baz=177								
WHAR	Wooly Hollow	39.22	341	P		P	18 37 17.2	-1.0	
WHAR				IAmb		IAmb	18 37 18.2		
	comp=Z,9.7nm,0.9s								
S57A	Dark Hollow, R	39.26	358	P		P	18 37 18.9	+0.5	
	baz=178								
S57A	Dark Hollow, R	39.26	358	P		P	18 37 18.4	-0.1	
S57A				IAmb		IAmb	18 37 19.6		
	comp=Z,12nm,1.1s								
S55A	Lewisburg	39.34	357	P		P	18 37 19.6	+0.4	
	baz=176,SNR=9.7								
S53A	Williamson	39.38	354	P		P	18 37 19.2	-0.2	
	baz=173,SNR=5.2								
PLCA	Paso Flores	39.41	171	P		P	18 37 20.6	+0.8	
	comp=Z,2.1nm,0.7s,baz=323,slow=5.1,SNR=1.9								
S54A	Dingess, Beckl	39.42	356	P		P	18 37 20.1	+0.2	
	baz=174,SNR=5.3								
S54A	Dingess, Beckl	39.42	356	P		P	18 37 19.5	-0.4	
S54A				IAmb		IAmb	18 37 20.7		
	comp=Z,14nm,0.8s								
T47A	Sharon Grove	39.45	348	P		P	18 37 18.6	-1.4	
T47A				IAmb		IAmb	18 37 19.5		
	comp=Z,7.9nm,0.8s								
S51A	Beattyville	39.50	353	P		P	18 37 19.6	-0.8	
S51A				IAmb		IAmb	18 37 20.8		
	comp=Z,11nm,0.9s								
GDU01	Guandu, BA	39.58	110	*e*P		P	18 37 21.7	+0.3	
TX32	Lajitas Array	39.59	323	P		P	18 37 22.5	+1.1	
TXAR	Lajitas Array	39.59	323	P		P	18 37 21.9	+0.5	
	comp=Z,0.7nm,0.6s,baz=144,slow=7.6,SNR=9.2								
TXAR				PcP		PcP	18 39 26.4	+1.3	
	comp=Z,1.0nm,0.9s,baz=156,slow=6.8,SNR=7.0								
TX31	Lajitas Ar. Si	39.59	323	P		P	18 37 22.8	+1.4	
TX31				IAmb		IAmb	18 38 09.0		
	comp=Z,30nm,1.8s								

LCAR	Lake Charles	39.59	343	P		P	18 37 20.1	-1.1	
LCAR				IAmb		IAmb	18 37 21.0		
	comp=Z,15nm,0.8s								
W39A	Magazine	39.65	339	P		P	18 37 21.9	+0.3	
	baz=154								
R54A	Victor	39.78	356	P		P	18 37 23.1	+0.4	
	baz=175,SNR=7.1								
R58A	Rapidan	39.78	360	P		P	18 37 23.5	+0.7	
	baz=179,SNR=5.5								
R55A	Marlinton	39.83	357	P		P	18 37 24.0	+0.8	
	baz=176,SNR=5.2								
R55A	Marlinton	39.83	357	P		P	18 37 23.3	+0.1	
R55A				IAmb		IAmb	18 37 24.7		
	comp=Z,14nm,0.7s								
ABTX	Abilene, Hawle	39.92	331	P		P	18 37 25.2	+1.2	
	baz=144								
ABTX	Abilene, Hawle	39.92	331	P		P	18 37 24.7	+0.7	
ABTX				IAmb		IAmb	18 37 26.0		
	comp=Z,8.9nm,0.8s								
R53A	Hurricane	40.00	355	P		P	18 37 24.5	-0.1	
	baz=173								
R53A	Hurricane	40.00	355	P		P	18 37 24.3	-0.2	
R53A				IAmb		IAmb	18 37 25.1		
	comp=Z,13nm,0.8s								
PBMO	Poplar Bluff	40.05	344	P		P	18 37 22.7	-2.2	
PBMO				IAmb		IAmb	18 38 19.0		
	comp=Z,19nm,0.9s								
R50A	Paris	40.23	352	P		P	18 37 25.5	-0.9	
U40A	Yellville	40.38	341	P		P	18 37 27.3	-0.4	
	baz=156,SNR=5.9								
U40A	Yellville	40.38	341	P		P	18 37 26.8	-1.0	
U40A				IAmb		IAmb	18 37 27.9		
	comp=Z,14nm,0.8s								
Q58A	Fox Den Farm,	40.42	0	P		P	18 37 28.4	+0.5	
	baz=180								
T42A	Van Buren	40.47	343	P		P	18 37 27.1	-1.3	
T42A				IAmb		IAmb	18 37 27.8		
	comp=Z,13nm,0.7s								
Q53A	Leroy	40.49	355	P		P	18 37 28.6	0.0	
	baz=174,SNR=8.8								
USIN	University of	40.51	348	P		P	18 37 27.5	-1.2	
RIB01	Linhares ES	40.52	118	*e*P		P	18 37 29.0	-0.1	
Q57A	Strasburg	40.52	359	P		P	18 37 29.0	+0.2	
	baz=179								
Q55A	Buckhannon	40.53	357	P		P	18 37 29.5	+0.5	
	baz=176								
Q56A	Snyder Ridge,	40.55	358	P		P	18 37 29.8	+0.8	
	baz=178								
Q54A	Coxs Mills	40.57	356	P		P	18 37 29.2	0.0	
	baz=175								
Q54A	Coxs Mills	40.57	356	P		P	18 37 28.9	-0.3	
Q54A				IAmb		IAmb	18 37 29.6		
	comp=Z,11nm,0.7s								
S44A	Carbondale	40.61	346	P		P	18 37 27.6	-1.9	
S44A				IAmb		IAmb	18 37 29.1		
	comp=Z,18nm,1.1s								
SIUC	Southern Illin	40.62	346	IAmb		IAmb	18 37 29.7		
	comp=Z,22nm,1.0s								
HHAR	Hobbs	40.68	340	P		P	18 37 28.9	-1.3	
HHAR				IAmb		IAmb	18 37 30.4		
	comp=Z,18nm,1.1s								
Q51A	Peebles	40.84	353	P		P	18 37 30.3	-1.1	
MGMO	Mountain Grove	40.93	342	IAmb		IAmb	18 37 32.2		
	comp=Z,18nm,0.8s								
P58A	Pank, Wackersv	40.97	1	P		P	18 37 32.7	+0.2	
	baz=180								
U38A	Gravette	40.98	339	P		P	18 37 31.0	-1.6	
P56A	Dayton Farm, R	41.00	359	P		P	18 37 33.6	+0.9	
	baz=178								
FVM	French Village	41.18	345	P		P	18 37 33.3	-0.9	
FVM				IAmb		IAmb	18 37 34.0		
	comp=Z,15nm,0.8s								
WMOK	Wichita Mounta	41.26	333	P		P	18 37 35.2	+0.3	
	baz=147,SNR=5.8								
WMOK	Wichita Mounta	41.26	333	P		P	18 37 34.7	-0.3	
P52A	Corning	41.31	355	P		P	18 37 34.9	-0.4	
	baz=173,SNR=5.4								
P52A	Corning	41.31	355	P		P	18 37 34.4	-0.8	
P52A				IAmb		IAmb	18 37 35.5		
	comp=Z,17nm,0.8s								
CCM	Cathedral Cave	41.47	344	P		P	18 37 35.1	-1.4	
	baz=159								
CCM	Cathedral Cave	41.47	344	P		P	18 37 34.4	-2.2	
CCM				IAmb		IAmb	18 37 36.8		
	comp=Z,36nm,1.8s								
MVL	Millersville	41.50	2	P		P	18 37 35.8	-0.9	
OK029	Liberty Lake	41.59	336	P		P	18 37 37.0	-0.6	
OK029				IAmb		IAmb	18 37 38.2		
	comp=Z,12nm,0.7s								
O58A	Lewisberry	41.61	1	P		P	18 37 38.5	+0.8	
	baz=181								
S39A	Bolivar	41.75	341	P		P	18 37 37.7	-1.2	
O56A	Blue Knob Stat	41.76	359	P		P	18 37 39.1	+0.2	
	baz=179								
O56A	Blue Knob Stat	41.76	359	P		P	18 37 38.8	-0.1	
O56A				IAmb		IAmb	18 37 41.1		
	comp=Z,22nm,1.2s								
O52A	Adamsville	41.77	355	P		P	18 37 38.4	-0.6	
	baz=174								
O59A	Robesonia	41.81	2	P		P	18 37 40.2	+0.9	
	baz=182								
ACSO	Blum Creek Sta	41.99	354	P		P	18 37 40.2	-0.6	
	baz=172								
SSPA	Standing Stone	42.12	360	P		P	18 37 42.1	+0.3	
	baz=180								
SSPA	Standing Stone	42.12	360	P		P	18 37 42.0	+0.3	
MNTX	Cornudas Mount	42.31	324	P		P	18 37 44.8	+1.2	
	baz=136								
MNTX	Cornudas Mount	42.31	324	P		P	18 37 44.5	+0.9	
N59A	State Game Lan	42.43	2	P		P	18 37 45.4	+1.0	
	baz=183								
N54A	Moraine State	42.49	357	P		P	18 37 44.9	+0.1	
	baz=176								
N54A	Moraine State	42.49	357	IAmb		IAmb	18 37 45.8		
	comp=Z,19nm,0.9s								
MSTX	Muleshoe	42.57	329	P		P	18 37 46.6	+0.9	
	baz=141								
M57A	Sunshine Farm,	42.82	1	P		P	18 37 47.9	+0.5	
	baz=181								
M56A	Emporium	42.96	359	P		P	18 37 49.0	+0.4	
	baz=179,SNR=6.5								
M56A	Emporium	42.96	359	IAmb		IAmb	18 37 49.7		
	comp=Z,14nm,0.8s								
N47A	Urbana	42.98	351	P		P	18 37 46.5	-2.3	
N47A				IAmb		IAmb	18 37 48.0		
	comp=Z,20nm,1.1s								
M54A	Oil Creek Stat	43.02	358	P		P	18 37 49.2	+0.2	
	baz=177,SNR=5.0								
L57A	Andrews Acres	43.49	1	P		P	18 37 53.3	+0.5	
	baz=181								
BINY	Binghamton	43.71	2	P		P	18 37 54.9	+0.4	
	baz=182								
KSU1	Kansas State U	44.14	339	P		P	18 37 57.6	-0.4	
	baz=152								
K58A	Earlville	44.28	2	P		P	18 37 59.2	+0.1	
	baz=183								
319A	Douglas	44.48	320	P		P	18 38 03.1	+2.0	
N38A	Joes South For	44.58	343	IAmb		IAmb	18 38 00.9		
	comp=Z,16nm,0.9s								
J56A	Wolcott	44.76	1	P		P	18 38 02.9	0.0	
	baz=181								
J58A	Remsen	44.89	3	P		P	18 38 04.2	+0.3	
	baz=183								
J59A	Piesco	45.03	3	P		P	18 38 04.9	-0.1	
	baz=184								
CBKS	Cedar Bluff	45.10	336	P		P	18 38 06.7	+1.0	
	baz=148,SNR=6.1								
CBKS	Cedar Bluff	45.10	336	P		P	18 38 06.5	+0.8	
I58A	Old Forge	45.23	3	P		P	18 38 06.5	-0.1	
	baz=184								
ANMO	Albuquerque	45.30	326	P		P	18 38 09.1	+1.6	
	baz=137								
ANMO	Albuquerque	45.30	326	P		P	18 38 08.9	+1.4	
I51A	Listowel	45.38	357	P		P	18 38 06.9	-0.8	
	baz=175								
I59A	Olmsteadville	45.41	4	P		P	18 38 07.9	0.0	
	baz=185								
JFWS	Jewell Farm	45.80	347	P		P	18 38 09.6	-1.5	
	baz=162								
T25A	Trinidad	45.88	330	P		P	18 38 13.9	+1.8	
	baz=141								
H57A	Richville	45.99	2	P		P	18 38 12.6	+0.2	
	baz=183								
H58A	Gabriels	46.00	4	P		P	18 38 12.7	+0.1	
	baz=185								
H53A	Bobcaygeon	46.06	359	P		P	18 38 12.6	-0.5	
	baz=179								

TUC	Tucson	46.06	320	P		P	18 38 14.9	+1.5	
	baz=131								
TUC	Tucson	46.06	320	P		P	18 38 14.8	+1.4	
H59A	Cadyville	46.26	4	P		P	18 38 13.6	-1.1	
	baz=185								
G57A	Newington	46.64	3	P		P	18 38 17.6	+0.1	
	baz=184								
G59A	Clarenceville	46.73	4	P		P	18 38 23.7	+5.4	
	baz=186,SNR=15								
G58A	Ormstown	46.74	4	P		P	18 38 18.4	+0.1	
	baz=185								
SDCO	Great Sand Dun	46.90	330	P		P	18 38 21.7	+1.6	
	baz=140,SNR=7.6								
214A	Organ Pipe Nat	47.16	318	P		P	18 38 23.8	+1.9	
	baz=128								
W18A	Petrified Fore	47.30	324	P		P	18 38 24.9	+1.8	
	baz=134								
E57A	Chemin Saint G	47.99	3	P		P	18 38 28.1	+0.1	
	baz=185								
E58A	La Victoria	48.01	4	P		P	18 38 28.3	+0.2	
	baz=186								
E56A	St. Veronique	48.08	2	P		P	18 38 28.6	-0.1	
	baz=184								
D55A	Sainte-Anne-du	48.54	2	P		P	18 38 31.8	-0.4	
	baz=183								
WUAZ	Wupatki	48.55	323	P		P	18 38 34.9	+2.2	
	baz=132								
D56A	ZEC Mazanza, M	48.60	3	P		P	18 38 32.0	-0.6	
	baz=184								
D58A	Chemin du LacG	48.76	4	P		P	18 38 33.6	-0.3	
	baz=186								
PV18	Skein Mesa, Pa	49.05	327	P		P	18 38 37.6	+1.1	
LATQ	La Tuque	49.05	4	P		P	18 38 36.3	+0.2	
	baz=186								
GMRC	Granite Mounta	50.77	319	P		P	18 38 51.3	+1.9	
	baz=127								
EYMN	Ely	50.87	348	P		P	18 38 48.3	-1.4	
	baz=162								
MATQ	Matagami	51.24	0	P		P	18 38 51.3	-1.1	
	baz=180								
CHGQ	Chibougamau	51.47	3	P		P	18 38 53.7	-0.5	
	baz=184								
GSC	Goldstone, Bar	51.84	319	P		P	18 38 59.2	+1.9	
	baz=127								
AGMN	Agassiz Nation	52.22	345	P		P	18 38 58.9	-0.9	
	baz=157								
AGMN	Agassiz Nation	52.22	345	IAmb		IAmb	18 38 59.3		
	comp=Z,6.6nm,0.8s								
EDW2	Edwards Air Fo	52.38	318	P		P	18 39 02.7	+1.4	
	baz=125								
DUG	Dugway, Tooele	52.57	326	P		P	18 39 04.3	+1.6	
	baz=134								
PDAR	Pinedale Array	52.72	331	P		P	18 39 03.9	0.0	
	comp=Z,1.2nm,0.8s,baz=130,slow=8.4,SNR=8.3								
PDAR				PcP		PcP	18 40 11.0	-0.1	
	comp=Z,0.6nm,0.6s,baz=140,slow=6.0,SNR=4.1								
PDAR	Pinedale Array	52.72	331	P		P	18 39 03.0	-0.9	
R11A	Troy Canyon, C	52.95	323	P		P	18 39 06.9	+1.4	
	baz=130								
ULM	Lac du Bonnet	54.02	346	P		P	18 39 11.3	-1.6	
	comp=Z,6.2nm,0.6s,baz=147,slow=8.2,SNR=11								
ULM	Lac du Bonnet	54.02	346	IAmb		IAmb	18 39 12.4		
	comp=Z,12nm,0.9s								
RLMT	Red Lodge	54.37	333	P		P	18 39 15.9	+0.1	
	baz=140								
NVAR	Mina Array Bea	54.67	321	P		P	18 39 18.2	+0.1	
	comp=Z,0.3nm,0.3s,baz=142,slow=8.3,SNR=3.6								
HLID	Hailey	55.76	328	P		P	18 39 26.4	+0.6	
	baz=134								
BOZ	Bozeman (W)	55.82	332	P		P	18 39 27.0	+0.9	
	baz=138								
MFID	Camas Ranch	56.41	327	P		P	18 39 31.5	+1.2	
MFID				IAmb		IAmb	18 39 33.0		
	comp=Z,8.0nm,1.1s								
MSO	Missoula	57.82	331	P		P	18 39 40.6	+0.6	
	baz=136								
G08A	Pilot Rock	59.34	327	IAmb		IAmb	18 39 52.5		
	comp=Z,7.2nm,1.0s								
NEW	Newport	60.37	331	P		P	18 39 57.9	+0.5	
	baz=133								
FCC	Fort Churchill	61.64	350	P		P	18 40 04.0	-1.7	
FCC				IAmb		IAmb	18 40 05.9		
	comp=Z,11nm,1.0s								
YKA	Yellowknife Ar	69.79	343	P		P	18 40 57.2	-0.7	
	comp=Z,3.1nm,0.7s,baz=140,slow=6.7,SNR=13								
LIC	Lamto	73.00	83	*e*P		P	18 41 17.0	-1.1	
	comp=Z,22nm,0.4s								
TIC	Toumodi	73.03	83	*e*P		P	18 41 17.4	-0.9	
DBIC	Dimbokro	73.20	83	P		P	18 41 18.6	-0.6	
	comp=Z,21nm,0.8s,baz=254,slow=3.6,SNR=43								
DBIC	Dimbokro	73.20	83	IAmb		IAmb	18 41 19.6		
	comp=Z,21nm,0.9s								
KIC	Kosan Boka	73.29	83	*e*P		P	18 41 19.0	-0.8	
	comp=Z,70nm,0.8s								
KOWA	Kowa	74.67	75	P		P	18 41 27.1	-0.7	
ICESG	Greenland Ices	75.21	13	*i* P		P	18 41 28.9	-1.3	
ICESG				IAmb		IAmb	18 41 30.0		
	comp=Z,22nm,0.8s								
SUMG	Summit	78.15	11	P		P	18 41 46.2	-0.5	
SUMG	Summit	78.15	11	*i* P		P	18 41 46.6	-0.1	
	comp=Z,35nm,0.7s								
SUMG	Summit	78.15	11	*i* P		P	18 41 46.6	-0.1	
SUMG				IAmb		IAmb	18 41 47.6		
	comp=Z,35nm,0.7s								
ESDC	Sonseca Array	78.63	49	P		P	18 41 50.8	+1.2	
	comp=Z,0.8nm,0.8s,baz=270,slow=4.4,SNR=4.7								
INK	Inuvik	79.52	342	P		P	18 41 53.8	+0.1	
INK				IAmb		IAmb	18 41 55.3		
	comp=Z,12nm,0.9s								
TOA0	Torodi Ar. Sit	80.09	76	IAmb		IAmb	18 41 57.8		
	comp=Z,12nm,1.2s								
TORD	Torodi Ar. Bea	80.09	76	P		P	18 41 56.7	-1.2	
	comp=Z,3.7nm,0.5s,baz=282,slow=6.0,SNR=68								
TORD	Torodi Ar. Bea	80.09	76	P		P	18 41 56.3	-1.6	
K27K	Chicken	80.54	336	P		P	18 42 00.9	+1.7	
	baz=114								
L26K	Log Cabin Wild	80.66	335	P		P	18 42 01.1	+1.1	
	baz=112

comp=Z,6.3nm,0.8s
A21K Barrow 88.02 342 P **P** **18 42 37.9 +1.2**
baz=101
FETA Feichten 90.16 43 *e*P **P** **18 42 48.1 +0.6**
comp=Z,6.8nm,1.1s
MOTA Moosalm 90.43 43 *e*P **P** **18 42 48.9 +0.2**
comp=Z,7.2nm,1.1s
SQTA Sankt Quirin 90.50 43 *e*P **P** **18 42 49.5 +0.4**
comp=Z,4.2nm,0.7s
CTI Castel Tesino 90.76 44 P **P** **18 42 49.9 -0.4**
CTI IAmb IAmb 18 42 50.6
comp=Z,7.4nm,0.9s
WTTA Wattenberg 90.79 43 *e*P **P** **18 42 50.9 +0.4**
comp=Z,8.7nm,1.1s
NOA NORSAR Array B 90.94 29 P **P** **18 42 50.1 -0.5**
comp=Z,1.8nm,1.0s,baz=269,slow=4.8,SNR=2.8
GERES GERESS Array B 92.20 41 P **P** **18 42 56.3 -0.5**
comp=Z,0.6nm,0.7s,baz=259,slow=3.5,SNR=4.0
CONA Conrad Observa 93.65 42 *e*P **P** **18 43 04.1 +0.6**
comp=Z,4.5nm,1.5s
VNDA Vanda 94.68 191 P **P** **18 43 09.3 +1.8**
comp=Z,0.6nm,0.7s,baz=87,slow=10,SNR=2.8
VNDA Vanda 94.68 191 IAmb IAmb 18 45 12.1
comp=Z,5.5nm,1.4s
ARCES ARCESS Array B 96.19 20 P **P** **18 43 13.7 -0.8**
comp=Z,2.4nm,0.9s,baz=270,slow=5.4,SNR=1.2
ZALV Zalesovo Beam 125.95 13 PKP **PKPdf** **18 48 47.9 0.0**
comp=Z,1.9nm,0.7s,baz=270,slow=3.0,SNR=13
ZALV Zalesovo Beam 125.95 13 PKP **PKPdf** **18 48 47.1 -0.8**
KLR Kul'dur 126.33 336 PKP **PKPdf** **18 48 48.4 -0.4**
comp=Z,0.6nm,0.5s,baz=135,slow=2.9,SNR=4.1
MKAR Makanchi Array 131.81 18 PKP **PKPdf** **18 48 59.1 -0.3**
comp=Z,1.1nm,0.7s,baz=301,slow=2.7,SNR=8.7
MJAR Matsushiro Arr 131.99 321 PKP **PKPdf** **18 48 59.0 -1.0**
comp=Z,0.9nm,0.8s,baz=117,slow=1.2,SNR=2.1
SONM Songino Array 133.89 356 PKP **PKPdf** **18 49 03.3 -0.1**
comp=Z,1.1nm,0.8s,baz=14,slow=1.5,SNR=5.3
SONM SKPbc **SKPbc** **18 52 16.5 +0.5**
comp=Z,0.9nm,0.9s,baz=27,slow=4.7,SNR=3.9
KSRS Korea Array 137.28 329 PKP **PKPdf** **18 49 09.8 0.0**
comp=Z,1.8nm,0.8s,baz=32,slow=2.7,SNR=5.6
ASAR Alice Springs 140.24 229 PKhKP PKPpre 18 49 07.7
comp=Z,0.3nm,0.5s,baz=131,slow=3.7,SNR=11
ASAR PKP **PKPdf** **18 49 15.2 -0.6**
comp=Z,0.7nm,0.6s,baz=111,slow=2.0,SNR=9.4
ASAR SKPbc **SKPbc** **18 52 34.5 -1.0**
comp=Z,0.7nm,1.0s,baz=150,slow=2.5,SNR=4.1
WRA Warramunga Arr 141.91 234 PKhKP PKPpre 18 49 13.3
comp=Z,0.8nm,0.6s,baz=117,slow=3.1,SNR=18
WRA SKPbc **SKPbc** **18 52 39.6 -0.2**
comp=Z,0.8nm,1.0s,baz=114,slow=2.5,SNR=3.8
LZH Lanzhou 145.74 358 PKPbc **PKPab** **18 49 26.8 +0.3**
LZH PKPbc **PKiKP** **18 49 30.0 +0.6**
LZH pPKP pPKPbc 18 50 14.3 +2.6
LZH sPKP 18 50 33.5
WHN Wuhan 149.09 339 PKPbc **PKPab** **18 49 42.5 +2.8**
FITZ Fitzroy Crossi 149.74 228 PKPbc **PKPbc** **18 49 37.3 +0.4**
comp=Z,3.4nm,0.8s,baz=202,slow=1.3,SNR=6.6
FITZ PKPab **PKPab** **18 49 44.1 +1.4**
comp=Z,2.4nm,0.5s,baz=148,slow=3.8,SNR=11
CMAR Chiang Mai Arr 163.01 11 PKP **PKPdf** **18 49 49.4 +0.2**
comp=Z,0.8nm,0.9s,baz=309,slow=1.4,SNR=6.8
CMAR PKPab **PKPab** **18 50 38.6 -0.8**
comp=Z,2.4nm,0.8s,baz=330,slow=5.3,SNR=24

*IDC **29** 18:56:07.5±0.7, 6.93S×150.96E, h0km, mb4.2/17, mb1 4.4/19, mb1mx4.3/35, mbtmp4.2/19, ML2.1/1, MS3.2/9, Ms1 3.2/9, ms1mx2.9/34, Error ellipse: s-maj=22.7km s-min=13.1km az=116.0*
*BJI **29** 18:56:07.9±0.0, 7.30S×151.10E, h25km, mB5.1/12, mb4.6/11, Ms4.9/3, Ms7 4.7/3*
*NEIC **29** 18:56:12.8±1.9, 6.93S±0.06×150.97E±0.07, h34km±4km, mb4.8/68, Error ellipse: s-maj=9.8km s-min=8.4km az=113.0*
*DJA **29** 18:56:13.0±0.5, 7.5±4.1×15.1E±.1, h40km±5km, M4.8/10, mb4.4/10, mB5.4/2, MLv4.9/2, Mw(mB)4.9/2*
ISC 29 18:56:13.3±0.4, 6.97S±0.06×151.00E±0.06, h40km, n106, σ1s20/105, mb4.8/50, MS3.4/7, 1C, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.83**	**21**	Pn	**Pn**	**18 56 54.8**	**-1.2**
	26nm,0.3s,baz=197,slow=0.5,SNR=48						
KRVT				Sn	**Sn**	**18 57 29.0**	**0.0**
	152nm,0.3s,baz=143,slow=20,SNR=34						
KRVT				LR	LR	18 57 37.9	
	comp=Z,119nm,18.6s,baz=160,slow=32						
RABL	**Rabaul**	**2.99**	**23**		**Pn**	**18 56 56.4**	**-1.8**
RABL				Sn	**Sn**	**18 57 31.8**	**-1.2**
PMG	**Port Moresby**	**4.51**	**237**	Pn	**Pn**	**18 57 19.1**	**0.0**
	7.3nm,0.3s,baz=68,slow=7.6,SNR=32						
PMG				Sn	**Sn**	**18 58 11.5**	**+1.2**
	28nm,0.3s,baz=349,slow=19,SNR=4.9						
PMG				LR	LR	18 59 09.7	
	comp=Z,357nm,20.7s,baz=18,slow=40						
PMG	**Port Moresby**	**4.51**	**237**		**Pn**	**18 57 18.7**	**-0.5**
HNR	**Honiara**	**9.19**	**106**	Pn	**Pn**	**18 58 24.9**	**+1.5**
COEN	**Coen**	**10.37**	**227**	Pn	**Pn**	**18 58 38.8**	**-0.7**
JAY	**Jayapura**	**11.17**	**293**	LR	LR	19 03 47.3	
	comp=Z,95nm,18.5s,baz=12,slow=41						
SANVU	**Saraoutou**	**17.98**	**119**	P	**Pn**	**19 00 20.8**	**+0.4**
FAKI	**Fak Fak**	**19.11**	**281**		**P**	**19 00 31.6**	**-1.4**
SAUI	**Saumlaki**	**19.56**	**266**	P	**Pn**	**19 00 37.4**	**-2.1**
MTN	**Manton Dam**	**20.42**	**252**	P	**P**	**19 00 46.0**	**-1.2**
WB0	**Warramunga Arr**	**20.54**	**230**	P	**P**	**19 00 47.5**	**-1.0**
WR0	**Warramunga Arr**	**20.54**	**229**	P	**P**	**19 00 47.7**	**-0.8**
WC3	**Warramunga Arr**	**20.67**	**230**	P	**P**	**19 00 48.6**	**-1.3**
WRAB	**Tennant Creek**	**20.67**	**230**	P	**P**	**19 00 49.1**	**-0.8**
WB2	**Warramunga Arr**	**20.67**	**230**	P	**P**	**19 00 49.2**	**-0.8**
WRA	**Warramunga Arr**	**20.68**	**230**	P	**P**	**19 00 49.2**	**-0.9**
	8.6nm,0.8s,baz=56,slow=11,SNR=36						
WRA	**Warramunga Arr**	**20.68**	**230**	P	**P**	**19 00 48.5**	**-1.6**
BNDI	**Bandanaira**	**21.13**	**275**	P	**P**	**19 00 57.3**	**+2.4**
	47nm,0.9s						
DZM	**Mont Dzumac**	**21.16**	**137**	P	**P**	**19 00 55.5**	**+0.3**
	4.0nm,0.6s,baz=314,slow=19,SNR=6.1						
DZM				LR	LR	19 07 54.4	
	comp=Z,138nm,18.1s,baz=328,slow=33						
DZM	**Mont Dzumac**	**21.16**	**137**	P	**P**	**19 00 56.0**	**+0.8**
DZM				IAmb	IAmb	19 00 58.4	
	comp=Z,55nm,1.7s						
GUMO	**Guam**	**21.31**	**343**	LR	LR	19 07 26.1	
	comp=Z,47nm,21.6s,baz=94,slow=32						
ARMA	**Armidale**	**23.34**	**179**	P	**P**	**19 01 18.3**	**+0.1**
AS31	**Alice Springs**	**23.35**	**223**	P	**P**	**19 01 18.0**	**-0.4**
ASAR	**Alice Springs**	**23.35**	**223**	P	**P**	**19 01 17.8**	**-0.6**
	comp=Z,9.6nm,0.9s,baz=56,slow=8.7,SNR=72						
ASAR				S	**S**	**19 05 29.8**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=47,slow=18,SNR=4.6						
ASAR				LR	LR	19 09 54.1	
	comp=Z,65nm,19.5s,baz=22,slow=35						
TARA	**Tarawa**	**23.39**	**70**	P	**P**	**19 01 17.2**	**-1.5**
KNRA	**Kununurra**	**23.44**	**246**	P	**P**	**19 01 18.5**	**-0.8**
STKA	**Stephens Creek**	**26.29**	**198**	P	**P**	**19 01 44.5**	**-0.6**
	comp=Z,14nm,0.9s,baz=4.4,slow=8.8,SNR=22						
STKA				LR	LR	19 12 45.4	
	comp=Z,94nm,18.4s,baz=25,slow=38						
STKA	**Stephens Creek**	**26.29**	**198**	P	**P**	**19 01 43.5**	**-1.7**
SOEI	**Soe**	**26.59**	**262**	P	**P**	19 01 56.6	+8.4
FITZ	**Fitzroy Crossi**	**27.07**	**244**	P	**P**	**19 01 51.9**	**-0.5**
	comp=Z,2.3nm,0.3s,baz=53,slow=9.1,SNR=32						
FITZ	**Fitzroy Crossi**	**27.07**	**244**	P	**P**	**19 01 52.0**	**-0.4**
MMRI	**Maumere**	**28.54**	**265**	P	**P**	**19 02 06.8**	**+1.2**
MMRI				IAmb	IAmb	19 02 15.1	
	comp=Z,25nm,0.8s						
LUWI	**Luwuk**	**28.75**	**281**	P	**P**	**19 02 06.9**	**-0.5**
LUWI				IAmb	IAmb	19 02 20.8	
	comp=Z,12nm,0.8s						
FORT	**Forrest**	**31.99**	**219**	P	**P**	**19 02 35.1**	**-0.7**
FORT				IAmb	IAmb	19 02 35.5	
	comp=Z,19nm,0.9s						
NWAO	**Narrogin (SRO)**	**40.60**	**226**	LR	LR	19 21 06.9	
	comp=Z,81nm,19.6s,baz=274,slow=37						
JNU	**Nakatsue**	**44.22**	**336**	P	**P**	**19 04 17.0**	**-1.7**
JWT	**Wachi**	**44.52**	**342**	P	**P**	**19 04 21.3**	**+0.2**
JOHN	**Johnston Islan**	**45.59**	**59**	P	**P**	**19 04 28.4**	**-1.4**
KSRS	**Korea Array**	**49.17**	**336**	P	**P**	**19 04 57.0**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=155,slow=8.0,SNR=5.8						
KSRS				LR	LR	19 25 41.6	
	comp=Z,12nm,18.0s,baz=174,slow=36						
NJ2	**Nanjing**	**49.45**	**324**	*e*P	**P**	**19 05 01.5**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**57.22**	**297**	P	**P**	**19 05 56.8**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=127,slow=3.6,SNR=4.9						
PET	**Petropavlovsk**	**60.11**	**5**	P	**P**	**19 06 16.1**	**-0.3**
PETK	**Petropavlovsk-**	**60.11**	**5**	P	**P**	**19 06 15.7**	**-0.8**
	comp=Z,3.5nm,0.7s,baz=188,slow=10,SNR=4.6						
LZH	**Lanzhou**	**61.57**	**318**	*e*P	**P**	**19 06 29.3**	**+2.4**
LZH				pP	sP	19 06 37.5	-3.3
LZH				sP	pwP	19 06 40.3	-4.1
LZH				PP	**PP**	**19 08 47.5**	**+4.6**
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,92nm,7.8s						
LZH				LR	LR		
	comp=Z,350nm,15.8s						
LZH				LR	LR		
	comp=Z,350nm,16.0s						
LZH				LR	LR		
	comp=Z,510nm,18.1s						
SONM	**Songino Array**	**67.22**	**329**	P	**P**	**19 07 03.4**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=126,slow=4.9,SNR=4.5						
SONM	**Songino Array**	**67.22**	**329**	IAmb	IAmb	19 07 04.9	
	comp=Z,2.9nm,1.3s						
VNDA	**Vanda**	**70.75**	**178**	P	**P**	**19 07 24.8**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=353,slow=5.5,SNR=2.2						
WMQ	**Urumqi**	**76.13**	**318**	*e*P	**P**	**19 07 58.8**	**+1.5**
OHAK	**Old Harbor**	**78.28**	**27**	P	**P**	**19 08 10.5**	**+1.7**
SVW2	**Sparrevohn**	**79.51**	**23**	P	**P**	**19 08 15.9**	**+0.4**
SVW2				IAmb	IAmb	19 08 19.3	
	comp=Z,8.4nm,0.8s						
RSO	**Redoubt South**	**80.29**	**25**	P	**P**	**19 08 20.6**	**+0.6**
CNPM	**China Poot**	**80.43**	**26**	P	**P**	**19 08 21.6**	**+1.0**
BRLK	**Bradley Lake**	**80.71**	**26**	P	**P**	**19 08 22.5**	**+0.4**
MKAR	**Makanchi Array**	**80.79**	**320**	P	**P**	**19 08 22.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=113,slow=7.0,SNR=2.0						
SEW	**Seward**	**81.50**	**26**	P	**P**	**19 08 26.9**	**+0.7**
SEW				IAmb	IAmb	19 08 32.4	
	comp=Z,19nm,1.2s						
SUA	**Susitna One**	**81.65**	**24**	P	**P**	**19 08 27.8**	**+0.5**
PPLA	**Purkeypile**	**81.85**	**23**	P	**P**	**19 08 29.9**	**+1.7**
PPLA				IAmb	IAmb	19 09 05.9	
	comp=Z,18nm,1.4s						
ZALV	**Zalesovo Beam**	**81.96**	**327**	P	**P**	**19 08 28.1**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=110,slow=6.6,SNR=2.6						
GHO	**Glory Hole Cre**	**82.56**	**25**	P	**P**	**19 08 32.3**	**+0.4**
KNK	**Knik Glacier**	**82.58**	**25**	P	**P**	**19 08 32.6**	**+0.7**
KNK				IAmb	IAmb	19 08 40.0	
	comp=Z,10nm,1.2s						
KTH	**Kantishna Hill**	**82.69**	**23**	P	**P**	**19 08 32.8**	**+0.3**
KTH				IAmb	IAmb	19 08 34.0	
	comp=Z,7.0nm,0.8s						
SML	**Sawmill**	**82.82**	**25**	P	**P**	**19 08 34.4**	**+1.2**
TRF	**Thorofare Moun**	**82.87**	**23**	P	**P**	**19 08 33.6**	**0.0**
TRF				IAmb	IAmb	19 08 37.7	
	comp=Z,9.1nm,1.1s						
GLI	**Glacier Island**	**82.90**	**26**	P	**P**	**19 08 35.2**	**+1.6**
HIN	**Hinchinbrook I**	**82.93**	**26**	P	**P**	**19 08 35.0**	**+1.1**
BPAW	**Bear Paw Mtn.**	**82.95**	**22**	P	**P**	**19 08 33.3**	**-0.6**
SCM	**Sheep Creek Mo**	**83.25**	**25**	P	**P**	**19 08 36.7**	**+1.2**
SCM				IAmb	IAmb	19 08 38.7	
	comp=Z,9.8nm,1.0s						
RND	**Reindeer**	**83.41**	**23**	P	**P**	**19 08 36.8**	**+0.5**
RND				IAmb	IAmb	19 08 38.3	
	comp=Z,11nm,0.9s						
BWN	**Browne**	**83.56**	**22**	P	**P**	**19 08 37.9**	**+0.9**
BWN				IAmb	IAmb	19 08 39.5	
	comp=Z,8.1nm,0.8s						
KLU	**Klutina**	**83.69**	**25**	P	**P**	**19 08 39.0**	**+1.3**
KLU				IAmb	IAmb	19 08 40.7	
	comp=Z,13nm,1.1s						
BOOM	**Boomskoye usch**	**83.79**	**314**		**P**	**19 08 40.8**	**+2.0**
BOOM				IAmb	IAmb	19 08 44.2	
	comp=Z,3.6nm,0.8s						
DHY	**Denali Highway**	**83.83**	**24**	P	**P**	**19 08 40.4**	**+1.9**
DHY				IAmb	IAmb	19 08 40.8	
	comp=Z,4.8nm,0.8s						
M24K	**Tolsona, Glenn**	**83.86**	**25**	P	**P**	**19 08 40.7**	**+2.1**
M24K				IAmb	IAmb	19 08 40.7	
	comp=Z,9.8nm,0.8s						
HMT	**Hamilton**	**83.90**	**27**	P	**P**	**19 08 40.5**	**+1.7**
I23K	**Minto, Yukon-K**	**84.10**	**22**	P	**P**	**19 08 39.9**	**+0.3**
I23K				IAmb	IAmb	19 08 41.9	
	comp=Z,11nm,1.6s						
WRH	**Wood River Hil**	**84.23**	**22**	P	**P**	**19 08 40.6**	**+0.3**
WRH				IAmb	IAmb	19 08 42.8	
	comp=Z,11nm,1.0s						
N25K	**Chitina, Valde**	**84.31**	**26**	P	**P**	**19 08 42.2**	**+1.3**
N25K				IAmb	IAmb	19 08 45.7	
	comp=Z,11nm,1.6s						
KURK	**Kurchatov**	**84.37**	**322**	P	**P**	**19 08 40.8**	**-0.6**
CCB	**Clear Creek Bu**	**84.42**	**22**	P	**P**	**19 08 40.4**	**-0.9**
CCB				IAmb	IAmb	19 08 43.0	
	comp=Z,4.6nm,0.8s						
TCOL	**CIGO, UAF Yank**	**84.51**	**22**	P	**P**	**19 08 41.6**	**-0.2**
COLA	**College**	**84.52**	**22**	P	**P**	**19 08 41.6**	**-0.1**
GLB	**Gilahina Butte**	**84.58**	**26**	P	**P**	**19 08 42.3**	**+0.1**
GLB				IAmb	IAmb	19 08 45.6	
	comp=Z,7.6nm,0.9s						
CRQM	**Cirque**	**84.58**	**27**	P	**P**	**19 08 45.1**	**+2.7**
CRQM				IAmb	IAmb	19 08 46.4	
	comp=Z,9.0nm,1.0s						
IL31		**84.83**	**22**	P	**P**	**19 08 42.8**	**-0.5**
IL31				IAmb	IAmb	19 08 44.9	
	comp=Z,6.9nm,0.9s						
ILAR	**Eielson Array**	**84.83**	**22**	P	**P**	**19 08 43.0**	**-0.4**
	comp=Z,6.4nm,0.9s,baz=252,slow=4.9,SNR=42						
ILAR	**Eielson Array**	**84.83**	**22**	P	**P**	**19 08 43.1**	**-0.2**
COLD	**Coldfoot**	**84.88**	**20**	P	**P**	**19 08 44.0**	**+0.4**
COLD				IAmb	IAmb	19 08 46.1	
	comp=Z,6.8nm,1.2s						
MENT	**Mentasta**	**85.25**	**25**	P	**P**	**19 08 46.2**	**+0.6**
BARN	**Barnard Glacie**	**85.37**	**27**	P	**P**	**19 08 46.7**	**+0.3**
BARN				IAmb	IAmb	19 08 50.6	
	comp=Z,6.4nm,0.7s						
DOT	**Dot Lake**	**85.42**	**24**	P	**P**	**19 08 46.4**	**0.0**
DOT				IAmb	IAmb	19 08 48.4	
	comp=Z,6.1nm,0.8s						
TOLK	**Toolik Lake Re**	**85.82**	**18**	P	**P**	**19 08 48.9**	**+0.6**
TOLK				IAmb	IAmb	19 08 50.7	
	comp=Z,6.1nm,0.8s						
EGAK	**Eagle**	**87.04**	**23**	P	**P**	**19 08 55.5**	**+1.2**
EGAK				IAmb	IAmb	19 08 58.3	
	comp=Z,8.4nm,0.9s						
HYT	**Haines Junctio**	**87.17**	**28**	P	**P**	**19 08 56.8**	**+1.6**
HYT				IAmb	IAmb	19 08 58.7	
	comp=Z,9.2nm,1.0s						
NRIK	**Noril'sk**	**87.43**	**341**	P	**P**	**19 08 56.4**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=106,slow=7.4,SNR=2.5						
DAWY	**Dawson**	**87.48**	**24**	P	**P**	**19 08 58.1**	**+1.5**
DAWY				IAmb	IAmb	19 09 00.6	
	comp=Z,5.6nm,0.9s						
KK31	**Karatay Array**	**87.81**	**314**	P	**P**	**19 08 58.0**	**-0.5**
KK31				IAmb	IAmb	19 08 60.0	
	comp=Z,4.8nm,1.2s						
KKAR	**Karatay Array**	**87.81**	**314**	P	**P**	**19 08 58.9**	**+0.3**
KKAR				IAmb	IAmb	19 08 60.0	
	comp=Z,4.8nm,1.2s						
SYO	**Syowa Base**	**91.04**	**200**	*e*P	**P**	**19 09 11.3**	**-1.8**
INK	**Inuvik**	**91.10**	**21**	P	**P**	**19 09 13.6**	**+0.2**
	comp=Z,4.6nm,1.1s,baz=240,slow=4.9,SNR=8.1						
INK	**Inuvik**	**91.10**	**21**	P	**P**	**19 09 14.1**	**+0.8**
INK				IAmb	IAmb	19 09 16.0	
	comp=Z,6.5nm,1.1s						
NVAR	**Mina Array Bea**	**94.82**	**52**	P	**P**	**19 09 33.6**	**+2.1**
	comp=Z,0.4nm,0.4s,baz=270,slow=4.5,SNR=2.2						
YKA	**Yellowknife Ar**	**98.17**	**28**	P	Pdif	19 09 46.4	+0.6
	comp=Z,1.0nm,0.7s,baz=269,slow=4.9,SNR=3.0						
GERES	**GERESS Array B**	**124.92**	**327**	PKP	**PKiKP**	**19 15 09.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=20,slow=3.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**149.18**	**284**	PKPbc	**PKiKP**	**19 15 58.7**	**-1.1**
	comp=Z,3.1nm,0.7s,baz=61,slow=2.9,SNR=19						
TORD	**Torodi Ar. Bea**	**149.18**	**284**		**PKiKP**	**19 15 58.4**	**-1.4**

IDC 29 19:08:02.4±1.4, 5.66N×61.27E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.4/48, mbtmp3.5/4, MS2.7/3, Ms1 2.7/3, ms1mx2.5/35, Error ellipse: s-maj=78.9km s-min=33.2km az=7.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.67**	**352**	LR	LR	19 17 52.8	
	comp=Z,40nm,21.1s,baz=162,slow=33						
PALK	**Pallekele**	**19.38**	**84**	LR	LR	19 17 17.4	
	comp=Z,20nm,21.3s,baz=5.7,slow=29						
CMAR	**Chiang Mai Arr**	**38.88**	**68**	P	P	19 15 29.7	-0.2
	0.3nm,0.8s,baz=250,slow=8.0,SNR=2.4						
CMAR				LR	LR	19 29 50.1	
	comp=Z,7.0nm,21.6s,baz=105,slow=34						
TORD	**Torodi Ar. Bea**	**59.13**	**282**	P	P	19 18 05.3	-0.1
	0.4nm,0.9s,baz=76,slow=6.1,SNR=2.3						
WRA	**Warramunga Arr**	**76.14**	**112**	P	P	19 19 53.0	+0.1
	0.8nm,0.9s,baz=287,slow=5.0,SNR=4.0						
ASAR	**Alice Springs**	**76.51**	**116**	P	P	19 19 55.0	+0.1
	0.6nm,0.8s,baz=289,slow=5.8,SNR=5.7						

*TEH **29** 19:14:22.5, 34.22N×45.26E, h17km, ML2.6*
*ISN **29** 19:14:22.2±1.1, 34.10N×45.40E, h0km±5km, ML2.2*
ISC 29 19:14:23.3±1.4, 34.19N±0.07×45.34E±0.07, h10km, n10, σ0s83/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**1.01**	**59**	*e*Pg	**Pg**	**19 14 42.3**	**-0.5**
IDHR				*e*		19 14 44.0	
IGHG	**Ghaleghazi**	**1.03**	**82**	*e*Pg	**Pb**	**19 14 43.1**	**-0.3**
IGHG				*e*		19 14 46.2	
IGHG				*e*Sg	**Sn**	**19 14 59.2**	**+0.5**
IBDR	**Badra**	**1.19**	**155**	*e*Pg	**Pg**	**19 14 46.0**	**-0.1**
IBDR				*e*Sg	**Sn**	**19 15 03.0**	**+0.9**
IBDR				AML	AML	19 15 06.6	
	comp=E,64nm,0.6s						
IBDR				AML	AML	19 15 07.8	
	comp=N,46nm,0.6s						
BHD	**Baghdad**	**1.21**	**221**	*e*Pn	**Pg**	**19 14 46.0**	**-0.7**
BHD				*e*Sn	**Sn**	**19 15 04.0**	**+1.2**
IVIS	**Veis**	**1.30**	**75**	*e*Pg	**Pg**	**19 14 48.1**	**-0.2**
IVIS				*e*		19 14 51.0	
KCHF	**Cheshme Sefid,**	**1.42**	**86**	*e*Pg	**Pg**	**19 14 50.3**	**-0.2**
KCHF				*e*		19 14 51.8	
ILIN	**Lien**	**1.53**	**61**	*e*Pg	**Pg**	**19 14 52.4**	**-0.3**
IKOM	**Komasi**	**1.80**	**90**	*e*Pn	**Pb**	**19 14 56.3**	**-0.3**
IKOM				*e*		19 15 27.4	
IBZA	**Bozab**	**2.11**	**82**	*e*Pn	**Pn**	**19 14 59.3**	**+0.4**
IBZA				*e*		19 15 35.9	
NSR	**Nassriya**	**3.24**	**168**	*e*Pn	**Pn**	**19 15 15.0**	**+0.7**
NSR				*e*Sn	**Sn**	**19 15 51.0**	**-1.9**

*ATH **29** 19:23:51.8, 38.31N×22.10E, h14km±1km, ML2.9/25, Error ellipse: s-maj=1.1km s-min=0.5km az=324.0*
*THE **29** 19:23:52.5, 38.31N×22.11E, h7km±1km, ML2.7/19, Error ellipse: s-maj=1.2km s-min=0.3km az=326.0*
*IDC **29** 19:23:52.2±1.7, 38.46N×22.31E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.3/37, mbtmp3.3/4, ML2.5/1, Error ellipse: s-maj=40.7km s-min=30.8km az=167.0*
ISC 29 19:23:52.5±0.7, 38.31N±0.01×22.10E±0.01, h9km±4km, n111, σ0s91/172, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALIK	**Aliki, Aigiali**	**0.05**	**173**	P	**Pg**	**19 23 54.1**	**-0.2**
TRIZ	**Trizonia**	**0.06**	**337**	P	**Pg**	**19 23 54.1**	**-0.3**
TRIZ				S	**Sg**	**19 23 55.4**	**-0.4**
TRIZ	**Trizonia**	**0.06**	**337**	P	**Pg**	**19 23 54.0**	**-0.4**
TRIZ				S	**Sg**	**19 23 55.5**	**-0.4**
KALE	**Kalithea**	**0.09**	**19**	P	**Pg**	**19 23 54.8**	**-0.1**
KALE				S	**Sg**	**19 23 56.4**	**-0.1**
KALE				AML	AML	19 23 56.7	
	comp=E,48832μm,0.3s						
KALE				AML	AML	19 23 57.4	
KALE	**Kalithea**	**0.09**	**19**	P	**Pg**	**19 23 54.7**	**-0.1**
KALE				S	**Sg**	**19 23 56.6**	**+0.1**
SERG	**Sergoula**	**0.11**	**340**	P	**Pg**	**19 23 55.0**	**-0.2**
SERG				S	**Sg**	**19 23 56.8**	**-0.2**
SERG				AML	AML	19 23 57.5	
	comp=E,59953μm,0.2s						
SERG				AML	AML	19 23 57.8	
	comp=N,62354μm,0.2s						
SERG	**Sergoula**	**0.11**	**340**	P	**Pg**	**19 23 54.9**	**-0.2**
SERG				S	**Sg**	**19 23 57.1**	**+0.1**
LAKA	**Lakka**	**0.12**	**235**	P	**Pg**	**19 23 55.0**	**-0.2**
EFP	**Efpalio**	**0.20**	**307**	P	**Pg**	**19 23 56.3**	**-0.2**
EFP				S	**Sg**	**19 23 59.9**	**+0.6**
EFP				AML	AML	19 24 00.1	
	comp=N,12719μm,0.2s						
EFP				AML	AML	19 24 00.7	
	comp=E,13057μm,0.3s						
EFP	**Efpalio**	**0.20**	**307**	P	**Pg**	**19 23 56.3**	**-0.2**
EFP				S	**Sg**	**19 23 59.6**	**+0.3**
KLV	**Kalavryta, Ach**	**0.27**	**172**	P	**Pg**	**19 23 57.4**	**-0.4**
KLV				AML	AML	19 24 02.4	
	comp=N,1619μm,0.4s						
KLV				S	**Sg**	**19 24 02.5**	**+1.0**
KLV				AML	AML	19 24 02.8	
	comp=E,2364μm,0.3s						
KLV	**Kalavryta, Ach**	**0.27**	**172**	P	**Pg**	**19 23 57.4**	**-0.4**
KLV				S	**Sg**	**19 24 01.6**	**+0.2**
	comp=E,995nm,0.3s						
ANX	**Ano Chora**	**0.32**	**333**	P	**Pg**	**19 23 58.6**	**-0.3**
ANX				S	**Sg**	**19 24 03.0**	**-0.1**
ANX				AML

MAKR					AML	AML	19 24 18.9		
	comp=E,2148µm,0.2s								
MAKR					AML	AML	19 24 19.8		
	comp=N,1480µm,0.4s								
MAKR	**Makrakomi, Fth**	**0.70**	**2**	P	**Pg**		**19 24 05.8**	**-0.3**	
MAKR				S	**Sb**		**19 24 17.4**	**+0.6**	
AGG	**Agios Georgios**	**0.73**	**14**	P	**Pg**		**19 24 05.5**	**-1.1**	
AGG				S	**Sg**		**19 24 16.7**	**+0.4**	
AGG				AML	AML		19 24 19.6		
	comp=E,1613µm,0.2s								
AGG				AML	AML		19 24 20.0		
	comp=N,2010µm,0.2s								
AGG	**Agios Georgios**	**0.73**	**14**	P	**Pg**		**19 24 05.4**	**-1.2**	
AGG				S	**Sg**		**19 24 16.7**	**+0.4**	
	comp=N,912nm,0.2s								
LOUT	**Loutraki**	**0.76**	**115**	P	**Pg**		**19 24 05.9**	**-1.2**	
LOUT	**Loutraki**	**0.76**	**115**	P	**Pb**		**19 24 07.5**	**-0.3**	
LOUT				S	**Sb**		**19 24 18.6**	**+0.3**	
PDO	**Prodromos**	**0.78**	**292**	P	**Pg**		**19 24 05.6**	**-1.9**	
PDO				AML	AML		19 24 20.9		
	comp=N,2899µm,0.3s								
PDO				AML	AML		19 24 22.6		
	comp=E,2030µm,0.3s								
PDO	**Prodromos**	**0.78**	**292**	P	**Pg**		**19 24 07.5**	**0.0**	
PDO				S	**Sb**		**19 24 20.0**	**+1.1**	
LKR	**Lokris**	**0.78**	**64**	P	**Pg**		**19 24 06.5**	**-1.0**	
LKR				S	**Sg**		**19 24 17.8**	**0.0**	
LKR				AML	AML		19 24 21.1		
	comp=E,1312µm,0.2s								
LKR				AML	AML		19 24 23.4		
	comp=N,1652µm,0.2s								
LKR	**Lokris**	**0.78**	**64**	P	**Pg**		**19 24 06.8**	**-0.7**	
LKR				S	**Sb**		**19 24 18.2**	**-0.8**	
	comp=N,778nm,0.3s								
TRIP	**Tripoli**	**0.79**	**170**	P	**Pg**		**19 24 06.8**	**-1.0**	
TRIP				S	**Sb**		**19 24 18.8**	**-0.5**	
TRIP				AML	AML		19 24 24.1		
	comp=N,1721µm,0.6s								
TRIP				AML	AML		19 24 26.5		
	comp=E,1206µm,0.6s								
TRIP	**Tripoli**	**0.79**	**170**	P	**Pg**		**19 24 06.7**	**-1.0**	
TRIP				S	**Sb**		**19 24 18.8**	**-0.5**	
ATAL	**Atalanti**	**0.82**	**62**	P	**Pg**		**19 24 06.9**	**-1.3**	
ATAL				S	**Sg**		**19 24 18.8**	**0.0**	
ATAL				AML	AML		19 24 23.3		
	comp=N,932µm,0.3s								
ATAL				AML	AML		19 24 26.1		
	comp=E,566µm,0.4s								
ATAL	**Atalanti**	**0.82**	**62**	P	**Pg**		**19 24 07.4**	**-0.8**	
ATAL				S	**Sb**		**19 24 19.0**	**-1.0**	
	comp=E,432nm,0.7s								
AMT	**Artemida-Makis**	**0.83**	**202**	P	**Pg**		**19 24 07.7**	**-0.8**	
AMT				S	**Sb**		**19 24 20.0**	**-0.5**	
AMT				AML	AML		19 24 23.8		
	comp=E,1944µm,0.3s								
AMT				AML	AML		19 24 24.9		
	comp=N,3678µm,0.5s								
AMT	**Artemida-Makis**	**0.83**	**202**	P	**Pg**		**19 24 07.8**	**-0.8**	
AMT				S	**Sb**		**19 24 21.6**	**+1.1**	
	comp=N,1µm,0.6s								
VIL2	**Platees**	**0.92**	**96**	P	**Pb**		**19 24 10.2**	**-0.5**	
VIL2				AML	AML		19 24 28.0		
	comp=E,1229µm,0.8s								
VIL2				AML	AML		19 24 32.6		
	comp=N,865µm,0.4s								
VILL	**Villia**	**0.96**	**98**	P	**Pg**		**19 24 10.5**	**-0.5**	
VILL				S	**Sn**		**19 24 25.9**	**-0.2**	
	comp=N,600nm,0.8s								
VLX	**Vlachokerasia**	**0.96**	**167**	P	**Pg**		**19 24 09.5**	**-1.4**	
VLX				S	**Sg**		**19 24 22.9**	**-0.6**	
VLX				AML	AML		19 24 29.9		
	comp=N,1270µm,0.9s								
VLX				AML	AML		19 24 32.9		
	comp=E,1705µm,0.6s								
VLX	**Vlachokerasia**	**0.96**	**167**	P	**Pg**		**19 24 09.6**	**-1.4**	
VLX				S	**Sb**		**19 24 24.7**	**+0.5**	
SMIA	**Simia**	**1.04**	**56**	P	**Pg**		**19 24 11.6**	**-0.8**	
SMIA				S	**Sb**		**19 24 26.8**	**+0.4**	
SMIA				AML	AML		19 24 32.6		
	comp=N,2015µm,0.6s								
SMIA				AML	AML		19 24 34.2		
	comp=E,2572µm,0.5s								
SMIA	**Simia**	**1.04**	**56**	P	**Pg**		**19 24 11.8**	**-0.6**	
SMIA				S	**Sn**		**19 24 27.6**	**-0.3**	
	comp=E,1µm,0.5s								
EPID	**Epidavros**	**1.06**	**131**	P	**Pg**		**19 24 12.2**	**-0.7**	
ITM	**Ithomi**	**1.14**	**187**	P	**Pg**		**19 24 12.8**	**-1.4**	
ITM	**Ithomi**	**1.14**	**187**	P	**Pg**		**19 24 12.9**	**-1.4**	
ITM				S	**Sn**		**19 24 31.3**	**+1.0**	
	comp=E,230nm,0.4s								
NYDR	**Nydri-Lefkada**	**1.18**	**291**	P	**Pg**		**19 24 13.9**	**-1.2**	
NYDR	**Nydri-Lefkada**	**1.18**	**291**	P	**Pg**		**19 24 13.8**	**-1.2**	
NYDR				S	**Sn**		**19 24 31.0**	**-0.2**	
	comp=E,200nm,0.6s								
EVGI	**Lefkada island**	**1.18**	**286**	P	**Pg**		**19 24 14.0**	**-1.2**	
EVGI	**Lefkada island**	**1.18**	**286**	P	**Pg**		**19 24 13.9**	**-1.2**	
VLS	**Valsamata**	**1.20**	**264**	P	**Pg**		**19 24 13.9**	**-1.6**	
VLS	**Valsamata**	**1.20**	**264**	P	**Pg**		**19 24 13.9**	**-1.6**	
VLS				S	**Sn**		**19 24 33.2**	**+1.3**	
PSDA	**Pessada-Kefalo**	**1.21**	**261**	P	**Pb**		**19 24 13.8**	**-1.8**	
VLMS	**Volimes, Zakyn**	**1.22**	**250**	P	**Pb**		**19 24 14.2**	**-1.5**	
VLMS	**Volimes, Zakyn**	**1.22**	**250**	P	**Pb**		**19 24 14.0**	**-1.7**	
VLMS				S	**Sn**		**19 24 34.0**	**+1.7**	
	comp=E,828nm,0.2s								
FSK	**Fiskardo**	**1.22**	**278**	P	**Pb**		**19 24 14.4**	**-1.3**	
FSK	**Fiskardo**	**1.22**	**278**	P	**Pb**		**19 24 14.4**	**-1.3**	
LKD2	**Lefkada island**	**1.23**	**293**	P	**Pb**		**19 24 14.9**	**-1.0**	
KRND	**KRANIDI**	**1.24**	**138**	P	**Pb**		**19 24 15.4**	**-0.7**	
KRND	**KRANIDI**	**1.24**	**138**	P	**Pb**		**19 24 15.2**	**-0.9**	
KRND				S	**Sn**		**19 24 33.6**	**+0.7**	
	comp=E,328nm,0.8s								
TSLK	**Tsoukalades, L**	**1.25**	**295**	P	**Pn**		**19 24 15.9**	**-0.2**	
THL	**Klokotos Trika**	**1.26**	**357**	P	**Pn**		**19 24 15.8**	**-0.5**	
THL				S	**Sg**		**19 24 32.8**	**-0.1**	
THL				AML	AML		19 24 37.5		
	comp=E,840µm,0.4s								
THL				AML	AML		19 24 37.9		
	comp=N,307µm,0.4s								
THL	**Klokotos Trika**	**1.26**	**357**	P	**Pn**		**19 24 15.9**	**-0.3**	
THL				S	**Sn**		**19 24 34.5**	**+1.2**	
	comp=N,282nm,0.5s								
KEF5	**Kardakata, Kep**	**1.29**	**269**	P	**Pn**		**19 24 15.4**	**-1.3**	
KEF5	**Kardakata, Kep**	**1.29**	**269**	P	**Pn**		**19 24 15.3**	**-1.3**	
KEF5				S	**Sn**		**19 24 36.2**	**+2.2**	
ATH	**Athens Observa**	**1.31**	**104**	P	**Pg**		**19 24 17.3**	**-0.4**	
ATH				AML	AML		19 24 39.6		
	comp=E,430µm,0.3s								
ATH				AML	AML		19 24 41.0		
	comp=N,412µm,0.5s								
KEF4	**Livadi, Kephal**	**1.32**	**268**	P	**Pn**		**19 24 15.7**	**-1.4**	
KEF4	**Livadi, Kephal**	**1.32**	**268**	P	**Pn**		**19 24 15.7**	**-1.4**	
KEF4				S	**Sn**		**19 24 36.2**	**+1.3**	
NEO	**Neokhori**	**1.33**	**41**	P	**Pn**		**19 24 16.2**	**-1.0**	
NEO				S	**Sb**		**19 24 33.5**	**-1.2**	
NEO				AML	AML		19 24 40.6		
	comp=N,606µm,0.3s								
NEO				AML	AML		19 24 42.3		
	comp=E,610µm,0.4s								
NEO	**Neokhori**	**1.33**	**41**	P	**Pn**		**19 24 16.9**	**-0.3**	
NEO				S	**Sn**		**19 24 35.1**	**0.0**	
	comp=E,302nm,0.3s								
XOR	**Xorichti**	**1.35**	**38**	P	**Pn**		**19 24 16.9**	**-0.7**	
XOR	**Xorichti**	**1.35**	**38**	P	**Pn**		**19 24 17.3**	**-0.3**	
XOR				S	**Sn**		**19 24 36.8**	**+1.0**	
	comp=E,210nm,0.4s								
DMLN	**Damoulianata-K**	**1.36**	**268**	P	**Pn**		**19 24 16.7**	**-1.1**	
ATHU	**Athens Univers**	**1.37**	**104**	P	**Pg**		**19 24 18.2**	**-0.5**	
KEF3	**Kipouria, Keph**	**1.39**	**266**	P	**Pn**		**19 24 16.9**	**-1.1**	
KEF3	**Kipouria, Keph**	**1.39**	**266**	P	**Pn**		**19 24 16.6**	**-1.4**	
KEF3				S	**Sg**		**19 24 37.5**	**+0.4**	
VLY	**Voula,Athens**	**1.41**	**108**	P	**Pn**		**19 24 18.2**	**-0.1**	
VLY	**Voula,Athens**	**1.41**	**108**	P	**Pn**		**19 24 18.2**	**-0.1**	
VLY				S	**Sg**		**19 24 37.4**	**-0.4**	
	comp=E,118nm,0.5s								
PTL	**Penteli**	**1.41**	**100**	P	**Pb**		**19 24 18.6**	**-0.5**	
PTL	**Penteli**	**1.41**	**100**	P	**Pn**		**19 24 18.3**	**-0.1**	
PTL				S	**Sb**		**19 24 36.6**	**-0.5**	
	comp=E,100nm,0.5s								
PYL	**PYLOS**	**1.44**	**192**	P	**Pn**		**19 24 18.1**	**-0.6**	
PYL	**PYLOS**	**1.44**	**192**	P	**Pn**		**19 24 18.4**	**-0.3**	
DION	**Dionisos Attik**	**1.46**	**99**	P	**Pb**		**19 24 19.2**	**-0.6**	
DION	**Dionisos Attik**	**1.46**	**99**	P	**Pn**		**19 24 19.1**	**0.0**	
DION				S	**Sn**		**19 24 37.8**	**-0.5**	
	comp=E,352nm,0.5s								
KYMI	**Kymi, Euboea I**	**1.60**	**78**	P	**Pn**		**19 24 21.1**	**+0.1**	
KYMI	**Kymi, Euboea I**	**1.60**	**78**	P	**Pn**		**19 24 21.0**	**+0.1**	
AOS	**Alonnisos**	**1.63**	**58**	P	**Pn**		**19 24 20.9**	**-0.5**	
AOS	**Alonnisos**	**1.63**	**58**	P	**Pn**		**19 24 20.9**	**-0.5**	
VLI	**Veliai**	**1.72**	**157**	P	**Pn**		**19 24 22.8**	**+0.2**	
VLI	**Veliai**	**1.72**	**157**	P	**Pn**		**19 24 22.6**	**0.0**	
KPRO	**Kipourio**	**1.74**	**341**	P	**Pb**		**19 24 24.6**	**-0.1**	
LIT	**Litokhoron**	**1.81**	**9**	P	**Pn**		**19 24 23.6**	**-0.3**	
LIT	**Litokhoron**	**1.81**	**9**	P	**Pn**		**19 24 23.4**	**-0.6**	
IGT	**Igoumenitsa**	**1.84**	**312**	P	**Pb**		**19 24 25.4**	**-1.0**	
KARY	**Karystos**	**1.86**	**98**	P	**Pn**		**19 24 24.9**	**+0.3**	
PAIG	**Paliouri**	**2.03**	**37**	P	**Pn**		**19 24 26.2**	**-0.6**	
KTHA	**Kythira Island**	**2.19**	**159**	P	**Pn**		**19 24 29.9**	**+0.9**	
KEK	**Kerkira**	**2.28**	**309**	P	**Pn**		**19 24 32.2**	**-1.5**	
STIP	**Stip**	**3.38**	**1**	*i* Pn	**Pn**		**19 24 48.0**	**+2.6**	
IDI	**Anoyia**	**3.75**	**143**	Pn	**Pn**		**19 24 50.9**	**+0.2**	
	comp=E,0.4nm,0.3s,baz=316,slow=18,SNR=1.9								
IDI				Sn	**Sn**		**19 25 32.1**	**-2.9**	
	comp=E,0.4nm,0.3s,baz=96,slow=14,SNR=1.7								
ESDC	**Sonseca Array**	**20.29**	**282**	P	Pn		19 28 30.1	-0.4	
	comp=E,0.8nm,0.9s,baz=79,slow=12,SNR=2.4								
TORD	**Torodi Ar. Bea**	**30.93**	**221**	P	**P**		**19 30 13.4**	**+3.6**	
	comp=E,0.5nm,0.6s,baz=33,slow=8.9,SNR=3.4								
MKAR	**Makanchi Array**	**44.17**	**59**	P	**P**		**19 32 01.0**	**-0.5**	
	comp=E,0.7nm,1.0s,baz=272,slow=7.5,SNR=1.4								

IDC ***29*** *19:40:04.9±0.3,2˚.35N×126˚.85E, h0km, mb5.0/33, mb1 5.0/35, mb1mx5.0/38, mbtmp4.9/35, ML4.9/1, MS5.0/20, Ms1 5.0/20, ms1mx4.8/33, Error ellipse: s-maj=14.4km s-min=9.2km az=73.0*

MOS ***29*** *19:40:08.6±1.0,2˚.36N×126˚.88E, h36km, mb5.6/44, MS5.1/55, Error ellipse: s-maj=8.0km s-min=4.1km az=111.5*

NEIC ***29*** *19:40:08.4,2˚.32N×126˚.98E, h36km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr5.08; Mθθ-0.42; Mϕϕ-4.66; Mrθ 0.01; Mθϕ 0.40; Mϕr-1.74; Fault plane solution: M₀5.20000×10¹⁷ NP1:ϕs176.25000°, δ54.80000°, λ,91.76000°. NP2:ϕs353.19000°, δ35.24000°, λ87.50000°. Principal axes: T 5.3852, Plg80.0000°, Azm94.0000°; N -0.3852, Plg1.0000°, Azm355.0000°; P -5.0000, Plg10.0000°, Azm265.0000°;*

BJI ***29*** *19:40:10.0±0.0,2˚.50N×127˚.20E, h40km, mB5.2/65, mb5.1/77, Ms5.4/89, Ms7 5.4/82*

NEIC ***29*** *19:40:10.6±1.6,2˚.38N±0˚.05×127˚.01E±0˚.07, h37km±1km, mb5.5/179, Ms_20 5.5/798, Mwb5.7/52, Mww5.8, Mwc5.8(GCMT), Error ellipse: s-maj=11.8km s-min=8.6km az=244.0*

KLM ***29*** *19:40:12.0,2˚.62N×127˚.16E, h10km, mb5.6*

DJA ***29*** *19:40:13.8±0.2,2˚N±2˚×12˚7E±˚, h47km±2km, M5.4/124, mB5.8/97, mb5.5/124, MLv5.6/17, Mw(mB)5.3/97, Mwp5.6/71*

GCMT ***29*** *19:40:14.6±0.1,2˚.51N±0˚.01×126˚.99E±0˚.01, h27km, MW5.8/147, Moment Tensor Solution. s147,c265; s145,c410; Duration: 1s9 Moment tensor: Scale 10¹⁷ Nm; Mrr4.94±.06; Mθθ 0.73±.04; Mϕϕ-5.68±.04; Mrθ-0.21±.11; Mθϕ 0.40±.04; Mϕr-1.79±.09; Best double couple: M₀5.62200×10¹⁷ NP1:ϕs352.00000°, δ36.00000°, λ83.00000°. NP2:ϕs180.00000°, δ54.00000°, λ95.00000°. Principal axes: T 5.2500, Plg80.0000°, Azm110.0000°; N 0.7360, Plg4.0000°, Azm358.0000°; P -5.9930, Plg9.0000°, Azm267.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***29*** *19:40:15,2˚.50N×127˚.01E, h28km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr5.05; Mθθ 1.00; Mϕϕ-6.06; Mrθ-0.15; Mθϕ 0.57; Mϕr-1.48; Fault plane solution: M₀5.84000×10¹⁷ NP1:ϕs352.00000°, δ38.00000°, λ84.00000°. NP2:ϕs179.00000°, δ52.00000°, λ94.00000°. Principal axes: T 5.2587, Plg82.0000°, Azm112.0000°; N 1.0326, Plg4.0000°, Azm356.0000°; P -6.2913, Plg7.0000°, Azm266.0000°;*

NEIC ***29*** *19:40:18,2˚.52N×126˚.96E, h26km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr5.59; Mθθ 0.38; Mϕϕ-5.97; Mrθ-1.61; Mθϕ 0.90; Mϕr 3.89; Fault plane solution: M₀7.21000×10¹⁷ NP1:ϕs182.00000°, δ28.00000°, λ106.00000°. NP2:ϕs343.00000°, δ63.00000°, λ81.00000°. Principal axes: T 7.0273, Plg71.0000°, Azm234.0000°; N 0.3593, Plg8.0000°, Azm347.0000°; P -7.3866, Plg18.0000°, Azm80.0000°;*

ISC 29 19:40:11.8±0.3,2˚.39N±0˚.03×127˚.00E±0˚.04, h43km±2km, h42km:pP-P,n1276,σ1ᵃ85/994,mb5.4/230,MS5.5/489, 38C-23D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.65**	**167**	P	**Pn**	**19 40 36.7**	**-1.7**
TNTI	**Ternate**	**1.65**	**167**	Pn	**Pn**	**19 40 36.0**	**-2.4**
TNTI				Sn	**Sn**	**19 40 57.6**	**-0.8**
SGSI	**Sangihe**	**1.95**	**311**	P	**Pn**	**19 40 43.3**	**+0.9**
SGSI				S	**Sn**	**19 41 08.7**	**+3.0**
KMSI	**Cibinong**	**3.52**	**239**	P	**Pn**	**19 41 06.5**	**+2.6**
GTOI	**Gorontalo**	**4.35**	**246**	P	**Pn**	**19 41 17.6**	**+2.2**
DAV	**Davao City (W)**	**4.86**	**343**	Pn	**Pn**	**19 41 21.2**	**-1.2**
	54nm,0.3s,baz=78,slow=2.6,SNR=6.1						
DAV				Lg	Lg	19 42 30.5	
	63nm,0.3s,baz=131,slow=19,SNR=5.1						
DAV	**Davao City (W)**	**4.86**	**343**		**Pn**	**19 41 22.3**	**-0.1**
DAV	**Davao City (W)**	**4.86**	**343**	*ie*	**Pn**	**19 41 22.2**	**-0.2**
KCP	**Kidapawan**	**4.96**	**338**	*ie*	**Pn**	**19 41 25.2**	**+1.3**
SWI	**Sorong**	**5.35**	**127**	P	**Pn**	**19 41 30.4**	**+1.2**
	2.4nm71µm10µm615nm,0.9s						
MRSI	**Marisa**	**5.40**	**249**	P	**Pn**	**19 41 32.2**	**+2.3**
	7.4nm47µm24µm2µm,0.9s						
LUWI	**Luwuk**	**5.43**	**231**	P	Pn	19 41 34.7	+4.4
	9.1nm37µm26µm3µm,1.0s						
LUWI	**Luwuk**	**5.43**	**231**	Pn	**Pn**	**19 41 30.6**	**+0.3**
NLAI	**Namlea**	**5.60**	**179**	P	**Pn**	**19 41 32.9**	**+0.3**
	2.0nm529µm9µm313nm,0.7s						
MSAI	**Masohi**	**6.02**	**161**	P	**Pn**	**19 41 40.9**	**+2.5**
	0.9nm2µm234nm,1.2s						
APSI	**Ampana**	**6.27**	**239**	P	**Pn**	**19 41 45.1**	**+3.2**
	5.5nm22µm18µm1µm,1.1s						
TOLI2	**Tolitoli**	**6.34**	**259**	Pn	**Pn**	**19 41 42.5**	**-0.3**
CGP	**Cagayan de Oro**	**6.44**	**339**	*ie*	Pn	19 41 47.2	+3.0
MPSI	**Mapaga**	**7.38**	**254**	P	**Pn**	**19 42 00.4**	**+3.3**
	1.1nm45nm5µm289nm,0.6s						
FAKI	**Fak Fak**	**7.45**	**135**	P	**Pn**	**19 41 59.8**	**+1.8**
	1.0nm49µm5µm272nm,0.7s						
FAKI	**Fak Fak**	**7.45**	**135**	Pn	**Pn**	**19 41 59.0**	**+1.0**
BNDI	**Bandanaira**	**7.46**	**157**	P	**Pn**	**19 42 01.1**	**+3.0**
	4.4nm28µm17µm840nm,1.3s						
KDI	**Kendari**	**7.68**	**215**	P	**Pn**	**19 42 03.7**	**+2.6**
	1.3nm5µm324nm,0.9s						
LLP	**Lapu-Lapu**	**8.43**	**339**	*ie*	**Pn**	**19 42 10.4**	**-1.0**
LLP				*es*	Sn	19 43 59.0	+14
MYLDM	**Lahad Datu**	**8.92**	**288**	Pn	**Pn**	**19 42 19.8**	**+1.7**
TTSI	**Tana Toraja**	**8.98**	**233**	P	**Pn**	**19 42 19.3**	**+0.3**
	24µm6µm419nm,0.8s						
SPSI	**Sidrap Palu**	**9.60**	**229**	P	**Pn**	**19 42 30.9**	**+3.5**
	21µm3µm154nm,0.8s						
BNSI	**Bone**	**9.64**	**226**	P	**Pn**	**19 42 28.7**	**+0.6**
	3µm294nm,0.9s						
BAKI	**Biak**	**9.78**	**111**	P	Pn	19 42 38.4	+8.4
SRPI	**Serui, Papua**	**10.17**	**115**	P	**Pn**	**19 42 36.4**	**+1.1**
	6µm431nm,1.0s						
SMKI	**Samarinda**	**10.18**	**254**	P	Pn	19 42 40.4	+4.9
	25µm5µm236nm,1.2s						
BKSI	**Bulukumba**	**10.29**	**222**	P	**Pn**	**19 42 37.4**	**+0.4**
	17µm3µm140nm,0.8s						
KAPI	**Kappang**	**10.32**	**225**	Pn	**Pn**	**19 42 34.1**	**-3.3**
	baz=49,slow=9.3,SNR=1.0						
KAPI				Sn	**Sn**	**19 44 31.8**	**-0.1**
	baz=66,slow=20,SNR=1.3						
KAPI	**Kappang**	**10.32**	**225**	Pn	**Pn**	**19 42 38.6**	**+1.2**
BSSI	**Bau Bau, Buton**	**10.68**	**217**	P	**Pn**	**19 42 43.1**	**+0.8**
	6µm2µm140nm,0.7s						
BKB	**Balikpapan**	**10.73**	**250**	P	**Pn**	**19 42 44.9**	**+1.9**
	28µm4µm156nm,1.2s						
BKB	**Balikpapan**	**10.73**	**250**		**Pn**	**19 42 44.0**	**+1.0**
SPMM	**Sapulut**	**10.76**	**283**	P	Pn	19 42 52.0	+8.6
SAUI	**Saumlaki**	**11.17**	**157**	P	**Pn**	**19 42 50.8**	**+1.8**
	10µm6µm463nm,1.2s						
SAUI	**Saumlaki**	**11.17**	**157**	Pn	**Pn**	**19 42 48.7**	**-0.2**
KKM	**Kota Kinabalu**	**11.35**	**289**		**Pn**	**19 42 51.3**	**-0.3**
MMRI	**Maumere**	**11.94**	**203**	P	**Pn**	**19 43 01.9**	**+2.3**
	5µm4µm162nm,0.8s						
MMRI	**Maumere**	**11.94**	**203**	Pn	**Pn**	**19 42 58.4**	**-1.1**
KBKI	**Kotabaru**	**12.21**	**242**	P	Pn	19 43 07.8	+4.5
	693nm79nm,0.8s						
SOEI	**Soe**	**12.37**	**193**	P	**Pn**	**19 43 04.8**	**-0.8**
	7µm7µm244nm,1.3s						
SOEI	**Soe**	**12.37**	**193**	Pn	**Pn**	**19 43 06.2**	**+0.7**
SMPI	**Sarmi**	**12.49**	**110**	P	**Pn**	**19 43 09.7**	**+2.6**
	19µm5µm116nm,1.3s						
MTKI	**Muara Teweh, K**	**12.54**	**255**	P	**Pn**	**19 43 08.9**	**+1.1**
	12µm2µm74nm,1.1s						
PGP	**Puerto Galera**	**12.55**	**332**	*ie*	P	Pn	19 43 12.9	+5.0
BATI	**Baumata**	**12.95**	**195**	P	Pn	19 43 18.2	+4.8
	3µm3µm148nm,1.0s						
BBKI	**Banjar Baru**	**13.47**	**244**	P	**Pn**	**19 43 23.1**	**+2.6**
	10µm2µm72nm,1.3s						
WSI	**Waingapu**	**13.72**	**209**	P	**Pn**	**19 43 25.4**	**+1.6**
	8µm508nm,0.7s						
GENI	**Genyem**	**14.07**	**111**	P	**P**	**19 43 32.7**	**-2.8**
	29µm15µm821nm,1.0s						
WBSI	**Waikabubak, Su**	**14.15**	**212**	P	**Pn**	**19 43 30.3**	**+0.5**
	3µm332nm,0.7s						
PLAI	**Plampang**	**14.45**	**219**	P	**Pn**	**19 43 36.5**	**+2.8**
	9µm8µm723nm,1.5s						
JAY	**Jayapura**	**14.55**	**109**	LR	LR	19 48 15.9	
	comp=Z,17µm,21.7s,baz=277,slow=34						
JAY	**Jayapura**	**14.55**	**109**	P	**P**	**19 43 38.8**	**-2.0**
	12µm2µm194nm,0.8s						
SBUM	**Sibu**	**14.76**	**271**	P	**Pn**	**19 43 40.5**	**+2.5**
SBUM	**Sibu**	**14.76**	**271**	P	**P**	**19 43 45.0**	**+1.8**
TWSI	**Taliwang, Sumb**	**14.97**	**222**	P	**Pn**	**19 43 41.6**	**+1.0**
	5µm3µm346nm,0.9s						
MTN	**Manton Dam**	**15.69**	**165**	P	**Pn**	**19 43 48.2**	**-1.8**
	baz=16,SNR=128						
MTN	**Manton Dam**	**15.69**	**165**		**Pn**	**19 43 49.0**	**-1.0**
MTN				IAmb	IAmb	19 44 08.9	
	comp=Z,165nm,0.6s						
STKI	**Sintang**	**15.69**	**262**	P	**Pn**	**19 43 51.0**	**+1.0**
	comp=Z,7µmcomp=Z,68nm,1.3s						
SRBI	**Singaraja**	**15.70**	**228**	P	**P**	**19 43 55.0**	**+1.4**
	comp=Z,3µmcomp=Z,4µmcomp=Z,455nm,1.1s						
KDU	**Kakadu**	**15.94**	**160**	P	**Pn**	**19 43 52.1**	**-1.1**
	baz=16,SNR=11						
KMMI	**Kalianget**	**16.04**	**234**	P	**P**	**19 44 00.5**	**+3.2**
	comp=Z,9µmcomp=Z,7µmcomp=Z,751nm,1.0s						
CVP	**Callao Caves**	**16.04**	**342**	*ie*	**P**	**19 43 54.0**	**-0.4**
DNP	**Denpasar**	**16.09**	**227**	P	**P**	**19 43 58.8**	**+0.8**
	comp=Z,11µmcomp=Z,15µmcomp=Z,1µm,0.9s						
PBKI	**Pangkalan Bun**	**16.14**	**252**	P	**P**	**19 44 01.5**	**+3.0**
	comp=Z,234nm,0.9s						
ABJI	**Asem Bagus**	**16.27**	**231**	P	**P**	**19 44 01.0**	**+1.1**
	comp=Z,9µmcomp=Z,6µmcomp=Z,281nm,1.1s						
KSM	**Kuching**	**16.70**	**267**	P	**P**	**19 44 04.3**	**-0.5**
KSM	**Kuching**	**16.70**	**267**	P	**P**	**19 44 09.0**	**+4.2**
BLJI	**Banyuglugur**	**16.74**	**233**	P	**P**	**19 44 08.3**	**+3.2**
	comp=Z,5µmcomp=Z,357nm,0.8s						
JAGI	**Jajag, Banyuwa**	**16.75**	**230**	P	**P**	**19 44 05.9**	**+0.6**
	comp=Z,8µmcomp=Z,7µmcomp=Z,610nm,1.2s						
GMJI	**Gumukmas**	**17.17**	**232**	P	**P**	**19 44 11.1**	**+1.1**
	comp=Z,8µmcomp=Z,4µmcomp=Z,335nm,1.1s						
GRJI	**Gresik**	**17.19**	**237**	P	**P**	**19 44 10.6**	**+0.5**
	comp=Z,1µmcomp=Z,85nm,0.7s						
KNRA	**Kununurra**	**18.04**	**174**	P	**Pn**	**19 44 17.8**	**-1.6**
	baz=18,SNR=226						
KNRA	**Kununurra**	**18.04**	**174**	P	**Pn**	**19 44 17.6**	**-1.8**
KNRA				IAmb	IAmb	19 44 22.4	
	comp=Z,244nm,0.7s						
PWJI	**Pagerwojo**	**18.35**	**236**	P	**Pn**	**19 44 27.1**	**+3.9**
	comp=Z,8µmcomp=Z,2µmcomp=Z,216nm,0.8s						
WOJI	**Wonogiri, Jawa**	**18.98**	**237**	P	**P**	**19 44 28.6**	**-1.3**
	comp=Z,2µmcomp=Z,129nm,0.9s						
SMRI	**Semarang**	**19.00**	**240**	P	**Pn**	**19 44 34.1**	**+3.0**
	comp=Z,8µmcomp=Z,200nm,0.9s						
SMRI	**Semarang**	**19.00**	**

WB2	**Warramunga Arr**	**23.34**	**162**	P	**P**	**19 45 14.3**	**-2.2**
WB2				IAmb	IAmb	19 45 21.2	
	comp=Z,232nm,0.8s						
HKPS	**Hong Kong Po S**	**23.38**	**329**	P	**P**	**19 45 17.2**	**+0.3**
KNMB	**Chin-men Tao**	**23.46**	**340**	P	**P**	**19 45 16.2**	**-1.4**
QIZ	**Qiongzhong**	**23.56**	**316**	P	**P**	**19 45 17.5**	**-1.2**
QIZ				sP	**pwP**	**19 45 31.8**	**0.0**
QIZ				S	**S**	**19 49 28.5**	**-1.5**
QIZ				pmax	pmax		
	comp=Z,17nm,1.1s						
QIZ				pmax	pmax		
	comp=Z,300nm,5.7s						
QIZ				LR	LR		
	comp=Z,5μm,22.0s						
QIZ				LR	LR		
	comp=Z,3μm,21.4s						
QIZ				LR	LR		
	comp=Z,8μm,20.0s						
QIZ	**Qiongzhong**	**23.56**	**316**	P	**P**	**19 45 18.3**	**-0.4**
JMZ	**Minamidaito 2**	**23.64**	**10**	P	**P**	**19 45 17.3**	**-2.0**
JMZ				IAmb	IAmb	19 45 30.1	
	comp=Z,121nm,0.8s						
KASI	**Kota Agung**	**23.81**	**251**	P	**P**	**19 45 22.3**	**+1.3**
	comp=Z,6μmcomp=Z,3μmcomp=Z,421nm,0.9s						
QZH	**Quanzhou**	**23.84**	**341** ⇑*i*	P	**P**	**19 45 18.5**	**-2.6**
QZH				S	**S**	**19 49 31.0**	**-3.3**
QZH				LR	LR		
	comp=Z,8μm,28.4s						
QZH				LR	LR		
	comp=Z,2μm,28.9s						
QZH				LR	LR		
	comp=Z,16μm,27.0s						
LWLI	**Liwa**	**24.07**	**252**	P	**P**	**19 45 21.7**	**-1.9**
	comp=Z,3μmcomp=Z,210nm,0.6s						
LHSI	**Lahat**	**24.26**	**255**	P	**P**	**19 45 25.3**	**+0.1**
	comp=Z,6μmcomp=Z,99nm,1.3s						
GZH	**Guangzhou**	**24.46**	**328**	P	**P**	**19 45 32.0**	**+5.1**
GZH				S	**S**	**19 49 49.3**	**+5.0**
GZH				LR	LR		
	comp=Z,6μm,24.9s						
GZH				LR	LR		
	comp=Z,5μm,25.4s						
UBPT	**Khong Chiam**	**24.79**	**302**	P	**P**	**19 45 31.5**	**+1.6**
	comp=Z,71nm,1.9s						
UBPT	**Khong Chiam**	**24.79**	**302**	P	**P**	**19 45 29.3**	**-0.6**
XMIS	**Christmas Isla**	**24.80**	**239**	P	**P**	**19 45 28.6**	**-1.5**
XMIS				IAmb	IAmb	19 45 44.9	
	comp=Z,112nm,0.9s						
PSA00	**Pilbara Seismi**	**24.83**	**196**	P	**P**	**19 45 28.9**	**-1.3**
PSA00				IAmb	IAmb	19 45 38.3	
	comp=Z,86nm,0.8s						
KSI	**Kapahiang**	**25.12**	**256**	P	**P**	**19 45 38.1**	**+5.0**
	comp=Z,4μmcomp=Z,161nm,0.9s						
SDSI	**Sungai Dareh**	**25.78**	**263**	P	**P**	**19 45 43.1**	**+4.1**
	comp=Z,1μmcomp=Z,37nm,0.7s						
KRVT	**Keravat (AS076**	**25.88**	**105**	P	**P**	**19 45 39.5**	**-0.5**
	comp=Z,68nm,0.8s,baz=273,slow=1.6,SNR=11						
KRVT				LR	LR	19 54 31.8	
	comp=Z,6μm,21.2s,baz=281,slow=33						
KRJI	**Kerinci**	**25.91**	**260**	P	**P**	**19 45 40.5**	**+0.2**
	comp=Z,6μmcomp=Z,8μmcomp=Z,310nm,2.1s						
RABL	**Rabaul**	**25.99**	**105**	P	**P**	**19 45 40.7**	**-0.2**
IPM	**Ipoh**	**26.00**	**275**	P	**P**	**19 45 39.5**	**-1.6**
IPM	**Ipoh**	**26.00**	**275**	P	**P**	**19 45 43.0**	**+1.9**
BKNI	**Bangkinang**	**26.03**	**266**	P	**P**	**19 45 40.9**	**-0.4**
	comp=Z,5μmcomp=Z,1μmcomp=Z,103nm,0.8s						
BKNI	**Bangkinang**	**26.03**	**266**	P	**P**	**19 45 40.3**	**-1.0**
BKNI				IAmb	IAmb	19 45 49.9	
	comp=Z,74nm,0.8s						
KULM	**Kulim**	**26.44**	**277**	P	**P**	**19 45 44.2**	**-0.8**
MTSU	**Mount Surprise**	**26.59**	**141**	P	**P**	**19 45 46.4**	**+0.1**
	baz=26,SNR=30						
AS31	**Alice Springs**	**26.76**	**166**	P	**P**	**19 45 46.7**	**-1.1**
ASAR	**Alice Springs**	**26.76**	**166**	P	**P**	**19 45 45.6**	**-2.2**
	comp=Z,6.7nm,0.3s,baz=343,slow=7.3,SNR=62						
ASAR				PcP	**PcP**	**19 49 09.2**	**-1.1**
	comp=Z,23nm,0.6s,baz=353,slow=2.2,SNR=16						
ASAR				S	**S**	**19 50 22.5**	**+1.5**
	comp=Z,5.2nm,0.9s,baz=346,slow=19,SNR=3.5						
ASAR				ScP	**ScP**	**19 52 51.6**	**+4.3**
	comp=Z,3.6nm,0.7s,baz=344,slow=2.5,SNR=4.4						
ASAR				P3KPbc		20 18 24.3	
	comp=Z,0.2nm,0.8s,baz=149,slow=4.3,SNR=1.5						
ASAR	**Alice Springs**	**26.76**	**166**	P	**P**	**19 45 44.7**	**-3.1**
ASAR	**Alice Springs**	**26.76**	**166**	P	**P**	**19 45 44.7**	**-3.1**
SRAK	**Srakaew**	**27.22**	**296**	P	**P**	**19 45 46.0**	**-6.0**
	comp=Z,5μmcomp=Z,840nm,0.8s						
WRKA	**Warakurna**	**27.30**	**177**	P	**P**	**19 45 51.2**	**-1.4**
	baz=27,SNR=136						
MNSI	**Mandailing Nat**	**27.45**	**267**	P	**P**	**19 45 53.2**	**-0.9**
	comp=Z,1μmcomp=Z,54nm,0.8s						
TRTT	**Trang**	**27.72**	**282**	P	**P**	**19 45 58.0**	**+1.5**
	comp=Z,23nm,1.0s						
GIRL	**Giralia**	**27.83**	**206**	P	**P**	**19 45 58.3**	**+1.0**
	baz=28,SNR=10						
GIRL	**Giralia**	**27.83**	**206**	P	**P**	**19 45 57.6**	**+0.3**
PATY	**Pattaya**	**27.89**	**293**	P	**P**	**19 46 01.0**	**+3.0**
	comp=Z,2μmcomp=Z,18nm,0.8s						
PSI	**Prapat**	**28.05**	**271**	P	**P**	**19 45 58.0**	**-1.6**
	comp=Z,13nm,0.7s,baz=180,slow=2.6,SNR=9.6						
PSI	**Prapat**	**28.05**	**271**	P	**P**	**19 45 58.0**	**-1.6**
RPSI	**Rantau Prapat**	**28.05**	**271**	P	**P**	**19 45 58.7**	**-0.7**
CHAI	**Chaiyaphum**	**28.05**	**300**	P	**P**	**19 45 58.4**	**-1.0**
	comp=Z,853nmcomp=Z,92nm,0.7s						
NONG	**Nongkai**	**28.10**	**305**	P	**P**	**19 45 59.9**	**+0.1**
	comp=Z,8μmcomp=Z,95nm,0.8s						
SISI	**Saibi**	**28.14**	**263**	P	**P**	**19 46 04.1**	**+3.8**
	comp=Z,40nm,0.8s						
JCJ	**Chichijima**	**28.55**	**29**	P	**P**	**19 46 03.8**	**+0.1**
SURT	**Suratani**	**28.80**	**284**	P	P	19 46 12.0	+5.9
	comp=Z,0.8nm,1.1s						
PHET	**Kaeng Krachan**	**29.03**	**293**	P	**P**	**19 46 10.7**	**+2.6**
	comp=Z,416nmcomp=Z,34nm,0.8s						
PKDT	**Phuket**	**29.05**	**282**	P	**P**	**19 46 10.4**	**+2.1**
	comp=Z,39nm,0.8s						
SSE	**Sheshan**	**29.07**	**350**	P	**P**	**19 46 08.0**	**-0.3**
SSE				S	**S**	**19 51 00.0**	**+2.9**
SSE				pmax	pmax		
	comp=Z,15nm,0.6s						
SSE				pmax	pmax		
	comp=Z,170nm,3.1s						
SSE				LR	LR		
	comp=Z,1μm,20.7s						
SSE				LR	LR		
	comp=Z,1μm,24.7s						
JSU	**Suzuyama**	**29.14**	**6**	P	**P**	**19 46 08.7**	**-0.2**
CTA	**Charters Tower**	**29.26**	**141**	P	**P**	**19 46 09.8**	**-0.3**
	comp=Z,9.6nm,0.7s,baz=320,slow=11,SNR=16						
CTAO	**Charters Tower**	**29.26**	**141**	P	**P**	**19 46 09.6**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,28nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,13μm,21.0s						
CTAO	**Charters Tower**	**29.26**	**141**	P	**P**	**19 46 09.6**	**-0.6**
CTAO	**Charters Tower**	**29.26**	**141**	IAMs_20	IAMs_20	19 59 15.9	
	comp=Z,13μm,21.0s						
SLVN	**Son La**	**29.32**	**312**	P	**P**	**19 46 10.2**	**-0.6**
GSI	**Gunungsitoli**	**29.43**	**268**	P	**P**	**19 46 14.0**	**+2.3**
	comp=Z,4μmcomp=Z,86nm,0.8s						
GSI	**Gunungsitoli**	**29.43**	**268**	P	**P**	**19 46 10.4**	**-1.3**
GSI				IAmb	IAmb	19 46 17.6	
	comp=Z,60nm,0.6s						
TPTI		**29.79**	**272**	P	**P**	**19 46 18.9**	**+4.0**
	comp=Z,294nmcomp=Z,24nm,0.7s						
PHIT	**Phitsanulok**	**29.97**	**301**	P	**P**	**19 46 16.4**	**0.0**
	comp=Z,3μmcomp=Z,347nm,0.8s						
MEEK	**Meekatharra**	**29.98**	**195**	P	**P**	**19 46 14.9**	**-1.5**
	baz=30,SNR=56						
SRDT	**SRDT**	**29.98**	**295**	P	P	19 46 22.6	+6.1
UTTA	**Uttaradit**	**30.10**	**302**	P	**P**	**19 46 17.4**	**-0.2**
	comp=Z,520nmcomp=Z,57nm,0.8s						
UTHA	**Uthaitani**	**30.14**	**297**	P	**P**	**19 46 17.4**	**-0.5**
	comp=Z,478nmcomp=Z,63nm,0.9s						
WHN	**Wuhan**	**30.45**	**338**	P	P	19 46 26.5	+6.0
WHN				sP	sP	19 46 40.3	+4.1
WHN				PP	**PP**	**19 47 30.0**	**+0.1**
WHN				S	S	19 51 29.8	+11
WHN				LR	LR		
	comp=N,15μm,21.6s						
WHN				LR	LR		
	comp=E,8μm,22.3s						
WHN				LR	LR		
	comp=Z,38μm,26.3s						
NANT	**Nan**	**30.48**	**304**	P	**P**	**19 46 22.4**	**+1.5**
	comp=Z,12μmcomp=Z,780nm,0.6s						
NJ2	**Nanjing**	**30.48**	**346** *eP*		**P**	**19 46 22.3**	**+1.6**
NJ2				S	**S**	**19 51 25.0**	**+5.8**
NJ2				sS	**sS**	**19 51 37.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,780nm,10.9s						
NJ2				LR	LR		
	comp=Z,6μm,23.7s						
NJ2				LR	LR		
	comp=Z,3μm,24.2s						
NJ2				LR	LR		
	comp=Z,9μm,22.7s						
SUKH	**Sukhothai**	**30.77**	**301**	P	**P**	**19 46 23.0**	**-0.5**
	comp=Z,114nm,0.6s						
JNU	**Nakatsue**	**30.78**	**6**	LR	LR	19 57 17.9	
	comp=Z,2μm,21.2s,baz=178,slow=34						
JNU	**Nakatsue**	**30.78**	**6**	P	**P**	**19 46 22.9**	**-0.6**
JNU				IAmb	IAmb	19 46 32.4	
	comp=Z,73nm,0.9s						
GYA	**Guiyang**	**30.88**	**323** ⇑	P	**P**	**19 46 24.0**	**-0.5**
GYA				pP	pP	19 46 34.3	-1.0
GYA				PP	**PP**	**19 47 30.5**	**-4.3**
GYA				PcP	**PcP**	**19 49 20.3**	**-0.4**
GYA				S	**S**	**19 51 25.5**	**-0.4**
GYA				sS	sS	19 51 43.5	-0.4
GYA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GYA				LR	LR		
	comp=Z,3μm,21.8s						
GYA				LR	LR		
	comp=Z,2μm,19.4s						
GYA				LR	LR		
	comp=Z,6μm,22.4s						
LAMP	**Lampang**	**31.24**	**303**	P	**P**	**19 46 28.1**	**+0.5**
	comp=Z,499nmcomp=Z,58nm,0.7s						
PAYA	**Payao**	**31.43**	**304**	P	**P**	**19 46 30.1**	**+0.7**
	comp=Z,4μmcomp=Z,259nm,0.8s						
CM36	**Chiang Mai Arr**	**31.69**	**302**	P	**P**	**19 46 31.0**	**-0.6**
CM35	**Chiang Mai Arr**	**31.71**	**303**	P	**P**	**19 46 30.0**	**-1.8**
CM04	**Chiang Mai Arr**	**31.73**	**302**	P	**P**	**19 46 31.8**	**-0.3**
	comp=Z,194nmcomp=Z,30nm,0.9s						
CM09	**Chiang Mai Arr**	**31.74**	**302**	P	**P**	**19 46 31.8**	**-0.3**
	comp=Z,272nmcomp=Z,41nm,0.9s						
CM01	**Chiang Mai Arr**	**31.76**	**302**	P	**P**	**19 46 32.0**	**-0.2**
	comp=Z,234nmcomp=Z,28nm,0.8s						
CM05	**Chiang Mai Arr**	**31.76**	**302**	P	**P**	**19 46 31.9**	**-0.4**
	comp=Z,160nmcomp=Z,20nm,0.9s						
CM02	**Chiang Mai Arr**	**31.77**	**302**	P	**P**	**19 46 32.1**	**-0.2**
	comp=Z,220nmcomp=Z,30nm,0.8s						
CM31	**Chiang Mai Arr**	**31.79**	**302**	P	**P**	**19 46 32.2**	**-0.3**
	comp=Z,8μmcomp=Z,814nm,0.8s						
CM31	**Chiang Mai Arr**	**31.79**	**302**	P	**P**	**19 46 31.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**31.79**	**302**	P	**P**	**19 46 30.7**	**-1.8**
	comp=Z,11nm,0.8s,baz=125,slow=7.5,SNR=60						
CMAR				ScP	**ScP**	**19 53 07.2**	**+3.9**
	comp=Z,2.1nm,0.9s,baz=153,slow=2.2,SNR=5.7						
CMAR				PKiKP	**PKiKP**	**19 56 52.0**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=228,slow=1.2,SNR=4.4						
CMAR				LR	LR	20 01 22.2	
	comp=Z,2μm,19.8s,baz=146,slow=40						
CMAR	**Chiang Mai Arr**	**31.79**	**302** *ceP*		**P**	**19 46 31.2**	**-1.3**
CMAR				pmax	pmax		
	comp=Z,11nm,0.8s						
CMAR	**Chiang Mai Arr**	**31.79**	**302**	P	**P**	**19 46 30.9**	**-1.6**
CM34	**Chiang Mai Arr**	**31.79**	**303**	P	**P**	**19 46 31.0**	**-1.5**
CM15	**Chiang Mai Arr**	**31.80**	**302**	P	**P**	**19 46 32.2**	**-0.4**
	comp=Z,284nmcomp=Z,37nm,0.8s						
CM13	**Chiang Mai Arr**	**31.80**	**302**	P	**P**	**19 46 31.9**	**-0.8**
	comp=Z,245nmcomp=Z,36nm,0.8s						
JMN	**Monobe**	**31.83**	**11**	P	**P**	**19 46 32.0**	**-0.6**
JMN				IAMs_20	IAMs_20	19 57 30.7	
	comp=Z,8μm,21.0s						
CMMT	**Chiang Mai**	**31.94**	**303**	P	**P**	**19 46 32.5**	**-1.4**
	comp=Z,385nmcomp=Z,33nm,0.8s						
CHTO	**Chiang Mai**	**31.95**	**303**	P	**P**	**19 46 32.2**	**-1.7**
CHTO	**Chiang Mai**	**31.95**	**303**	P	**P**	**19 46 32.6**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,51nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,3μm,21.0s						
CHTO	**Chiang Mai**	**31.95**	**303**	P	**P**	**19 46 32.6**	**-1.3**
CHTO				IAmb	IAmb	19 46 38.5	
	comp=Z,51nm,0.8s						
CM33	**Chiang Mai Arr**	**31.95**	**303**	P	**P**	**19 46 32.0**	**-1.9**
ENH	**Enshi**	**32.31**	**331**	P	**P**	**19 46 35.3**	**-1.7**
ENH				IAmb	IAmb	19 46 49.8	
	comp=Z,54nm,1.0s						
KMI	**Kunming**	**32.51**	**316** ⇓*eP*		**P**	**19 46 38.5**	**-0.6**
KMI				S	**S**	**19 51 45.3**	**-6.3**
KMI				sS	sS	19 52 08.5	-1.2
KMI				pmax	pmax		
	comp=Z,36nm,1.6s						
KMI				pmax	pmax		
	comp=Z,120nm,5.2s						
KMI				LR	LR		
	comp=Z,4μm,22.6s						
KMI				LR	LR		
	comp=Z,5μm,23.2s						
KMI				LR	LR		
	comp=Z,10μm,23.4s						
KMI	**Kunming**	**32.51**	**316**	P	**P**	**19 46 38.4**	**-0.6**
KMI				pmax	pmax		
	comp=Z,46nm,1.1s						
KMI				MLR	MLR		
	comp=Z,4μm,22.0s						
KMI	**Kunming**	**32.51**	**316**	P	**P**	**19 46 38.4**	**-0.6**
MHMT	**Maesarieng**	**32.53**	**301**	P	**P**	**19 46 38.4**	**-0.6**
JHS	**Saijyo**	**32.94**	**9**	P	**P**	**19 46 43.5**	**+1.2**
MORW	**Morawa**	**33.00**	**198**	P	**P**	**19 46 42.5**	**-0.4**
	baz=33,SNR=50						
MORW	**Morawa**	**33.00**	**198**	P	**P**	**19 46 42.8**	**-0.2**
MORW				IAmb	IAmb	19 46 48.4	
	comp=Z,72nm,0.9s						
FORT	**Forrest**	**33.00**	**178**	P	**P**	**19 46 43.5**	**+0.6**
	baz=33,SNR=12						
FORT	**Forrest**	**33.00**	**178**	P	**P**	**19 46 42.3**	**-0.6**
QLP	**Quilpie**	**33.27**	**151**	P	**P**	**19 46 46.8**	**+1.4**
	baz=33,SNR=3.9						
JWT	**Wachi**	**33.64**	**12**	P	**P**	**19 46 48.1**	**-0.3**
TJN	**Taejon**	**33.82**	**1** *ceP*		**P**	**19 46 51.2**	**+1.2**
KMBL	**Kambalda**	**33.92**	**188**	P	**P**	**19 46 49.8**	**-1.2**
	baz=34,SNR=41						
INU	**Inuyama**	**34.09**	**15**	P	**P**	**19 46 51.9**	**-0.4**
BLDU	**Ballidu**	**34.26**	**196**	P	**P**	**19 46 53.2**	**-0.7**
	baz=34,SNR=26						
JGF	**Kuroka**	**34.41**	**15**	P	**P**	**19 46 54.4**	**-0.8**
JGF				IAmb	IAmb	19 47 00.0	
	comp=Z,40nm,0.7s						
JGF				IAMs_20	IAMs_20	19 59 09.9	
	comp=Z,7μm,22.0s						
HNR	**Honiara**	**34.87**	**110**	LR	LR	20 00 37.4	
	comp=Z,4μm,21.7s,baz=278,slow=35						
TIA	**Tai'an**	**34.87**	**346**	P	**P**	**19 46 59.5**	**+0.4**
TIA				S	**S**	**19 52 29.5**	**+2.1**
TIA				pmax	pmax		
	comp=Z,17nm,1.2s						
TIA				pmax	pmax		
	comp=Z,320nm,3.7s						
TIA				LR	LR		
	comp=Z,3μm,23.6s						
TIA				LR	LR		
	comp=Z,930nm,17.9s						
TIA				LR	LR		
	comp=Z,6μm,23.5s						
KSAR	**Wonju Array Be**	**34.89**	**1**	P	**P**	**19 46 59.3**	**+0.1**
KSAR	**Wonju Array Be**	**34.89**	**1**	P	**P**	**19 46 59.3**	**+0.1**
KSRS	**Korea Array**	**34.90**	**1**	P	**P**	**19 46 59.5**	**+0.2**
	comp=Z,22nm,0.9s,baz=180,slow=9.7,SNR=49						
KSRS				PcP	**PcP**	**19 49 30.9**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=185,slow=2.5,SNR=2.2						
KSRS				LR	LR	20 00 11.4	
	comp=Z,2μm,21.6s,baz=185,slow=34						
INCN	**Inchon**	**34.92**	**359**	P	**P**	**19 46 58.5**	**-1.1**
INCN				pmax	pmax		
	comp=Z,41nm,0.7s						
INCN				MLR	MLR		
	comp=Z,3μm,22.0s						
INCN	**Inchon**	**34.92**	**359**	P	**P**	**19 46 58.5**	**-1.1**
INCN				IAmb	IAmb	19 47 05.4	
	comp=Z,41nm,0.7s						
KLBR	**Kellerberrin**	**34.92**	**194**	P	**P**	**19 46 58.2**	**-1.4**
	baz=35,SNR=77						
KS19	**Wonju Array Si**	**34.95**	**1**	P	**P**	**19 46 59.6**	**-0.2**
KS19				IAmb	IAmb	19 47 14.0	
	comp=Z,45nm,0.9s						
MAT	**Matsushiro**	**35.52**	**16**	P	**P**	**19 47 02.3**	**-2.5**
MAT				S	S	19 52 29.2	-8.3
MJAR	**Matsushiro Arr**	**35.52**	**16**	P	**P**	**19 47 03.0**	**-1.7**
	comp=Z,18nm,0.7s,baz=195,slow=8.6,SNR=32						
MJAR				LR	LR	20 00 16.5	
	comp=Z,4μm,21.8s,baz=205,slow=34						
MJAR	**Matsushiro Arr**	**35.52**	**16**	P	**P**	**19 47 03.1**	**-1.7**
MAJO	**Matsushiro**	**35.52**	**16**	P	**P**	**19 47 03.2**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,76nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,6μm,21.0s						
MAJO	**Matsushiro**	**35.52**	**16**	P	**P**	**19 47 03.2**	**-1.6**
MAJO				IAmb	IAmb	19 47 11.9	
	comp=Z,76nm,1.1s						
MAJO	**Matsushiro**	**35.52**	**16**	IAMs_20	IAMs_20	20 03 20.3	
	comp=Z,6μm,21.0s						
RMQ	**Roma**	**35.59**	**145**	P	**P**	**19 47 05.8**	**+0.4**
	baz=36,SNR=10						
MUN	**Mundaring**	**35.69**	**196**	P	**P**	**19 47 05.4**	**-0.8**
	baz=36,SNR=46						
XAN	**Xi'an**	**35.72**	**334**	P	**P**	**19 47 04.5**	**-2.0**
XAN				S	**S**	**19 52 48.5**	**+7.8**
XAN				pmax	pmax		
	comp=Z,29nm,1.1s						
XAN				pmax	pmax		
	comp=Z,280nm,4.0s						
XAN				LR	LR		
	comp=Z,3μm,20.5s						
XAN				LR	LR		
	comp=Z,4μm,20.9s						
XAN				LR	LR		
	comp=Z,4μm,18.8s						
XAN	**Xi'an**	**35.72**	**334**	P	**P**	**19 47 04.3**	**-2.3**
XAN				pmax	pmax		
	comp=Z,57nm,0.8s						
XAN				MLR	MLR		
	comp=Z,4μm,21.0s						
XAN	**Xi'an**	**35.72**	**334**	P	**P**	**19 47 04.3**	**-2.3**
XAN				IAmb	IAmb	19 47 13.5	
	comp=Z,57nm,0.8s						
CD2	**Chengdu**	**35.88**	**325**	P	**P**	**19 47 06.0**	**-1.9**
CD2				S	**S**	**19 52 42.3**	**-0.8**
CD2				sS	sS	19 52 58.5	-2.8
CD2				pmax	pmax		
	comp=Z,30nm,1.0s						
CD2				pmax	pmax		
	comp=Z,200nm,6.9s						
CD2				LR	LR		
	comp=Z,5μm,25.5s						
CD2				LR	LR		
	comp=Z,9μm,22.1s						
CD2				LR	LR		
	comp=Z,9μm,24.0s						
BBOO	**Buckleboo**	**36.05**	**167**	P	**P**	**19 47 07.5**	**-1.8**
	baz=36,SNR=24						
BBOO	**Buckleboo**	**36.05**	**167**	P	**P**	**19 47 07.4**	**-1.8**
BBOO				IAmb	IAmb	19 47 23.6	
	comp=Z,138nm,1.5s						
EIDS	**Eidsvold**	**36.15**	**141**	P	**P**	**19 47 08.8**	**-1.4**
	baz=36,SNR=15						
EIDS	**Eidsvold**	**36.15**	**141**	P	**P**	**19 47 08.7**	**-1.6**
EIDS				IAmb	IAmb	19 47 15.0	
	comp=Z,69nm,0.9s						
EIDS				IAMs_20	IAMs_20	20 02 58.3	
	comp=Z,7μm,21.0s						
NWAO	**Narrogin (SRO)**	**36.32**	**194**	P	**P**	**19 47 10.4**	**-1.1**
	baz=36,SNR=37						
NWAO	**Narrogin (SRO)**	**36.32**	**194**	P	**P**	**19 47 10.5**	**-1.1**
NWAO				pmax	pmax		
	comp=Z,137nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,1μm,22.0s						
NWAO	**Narrogin (SRO)**	**36.32**	**194**	P	**P**	**19 47 10.6**	**-1.0**
NWAO	**Narrogin (SRO)**	**36.32**	**194**	P	**P**	**19 47 10.5**	**-1.1**
NWAO				IAmb	IAmb	19 47 15.8	
	comp=Z,137nm,1.4s						
NWAO				IAMs_20	IAMs_20	20 03 15.7	
	comp=Z,1μm,22.0s						
PYAG	**Pyongyang**	**36.50**	**358**	P	**P**	**19 47 13.7**	**+0.7**
PYAG				S	**S**	**19 53 00.2**	**+7.9**
DL2	**Dalian**	**36.67**	**353** ⇑*iP*		**P**	**19 47 14.5**	**0.0**
DL2				S	**S**	**19 52 59.0**	**+4.2**
DL2				pmax	pmax		
	comp=Z,130nm,0.7s						
DL2				pmax	pmax		
	comp=Z,860nm,6.4s						
DL2				LR	LR		
	comp=Z,3μm,23.7s						
DL2				LR	LR		
	comp=Z,2μm,18.8s						
DL2				LR	LR		
	comp=Z,5μm,22.8s						
PYS	**Pyongsong**	**36.70**	**359**	P	**P**	**19 47 15.4**	**+0.7**
STKA	**Stephens Creek**	**36.80**	**159**	P	**P**	**19 47 13.9**	**-1.7**
	comp=Z,127nm,0.8s,baz=343,slow=7.5,SNR=59						
STKA				PcP	**PcP**	**19 49 36.9**	**-0.4**
	comp=Z,23nm,0.7s,baz=312,slow=5.1,SNR=3.6						
STKA	**Stephens Creek**	**36.80**	**159**	P	**P**	**19 47 13.9**	**-1.7**
	baz=37,SNR=180						
STKA	**Stephens Creek**	**36.80**	**159**	P	**P**	**19 47 14.0**	**-1.6**
JSD	**Sado**	**36.95**	**15**	P	**P**	**19 47 15.9**	**-0.9**
HHU	**Hamhung**	**37.36**	**1**	P	**P**	**19 47 20.5**	**+0.2**
HHU				pP	**pP**	**19 47 32.0**	**+0.7**
HHU				S	**S**	**19 53 09.4**	**+4.0**
HTT	**Hallett**	**37.37**	**163**	P	**P**	**19 47 20.2**	**-0.4**
	baz=37,SNR=21						
JMM	**Marumori**	**37.50**	**18**	P	**P**	**19 47 21.5**	**0.0**
SUJ	**Sinuiju**	**37.60**	**357**	P	**P**	**19 47 22.7**	**+0.3**
SUJ				sP	**sP**	**19 47 37.8**	**-0.3**
SUJ				S	**S**	**19 53 09.2**	**+0.2**
TIY	**Taiyuan**	**37.61**	**341** *eP*		**P**	**19 47 24.0**	**+1.4**
TIY				pP	**pP**	**19 47 33.0**	**-0.5**
TIY				S	**S**	**19 53 11.5**	**+2.1**
TIY				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIY				LR	LR		
	comp=Z,4μm,20.2s						
TIY				LR	LR		
	comp=Z,860nm,17.0s						
TIY				LR	LR		
	comp=Z,9μm,25.4s						
RKGY	**Rocky Gully**	**37.99**	**193**	P	**P**	**19 47 25.9**	**+0.1**
	baz=38,SNR=66						
CMSA	**Cobar Meteorol**	**38.14**	**154**	P	**P**	**19 47 25.7**	**-1.3**
	baz=38,SNR=30						
SAIH	**SAIHA**	**38.58**	**304** *eP*		**P**	**19 47 28.8**	**-2.2**

SNY					LR	LR			
	comp=Z,2µm,21.8s								
SILR	**SILCHAR**	**39.78**	**307**	*e*P	**P**	**19 47 40.1**	**-0.8**		
LZH	**Lanzhou**	**39.78**	**330**	⇑P	**P**	**19 47 40.8**	**-0.2**		
LZH				pP	pP	19 47 50.5	-1.5		
LZH				sP	sP	19 47 56.0	-0.8		
LZH				PP	**PnPn**	**19 49 21.0**	**+4.6**		
LZH				S	**S**	**19 53 43.3**	**+0.9**		
LZH				sS	sS	19 53 56.5	-4.3		
LZH				pmax	pmax				
	comp=Z,72nm,1.2s								
LZH				pmax	pmax				
	comp=Z,590nm,5.2s								
LZH				LR	LR				
	comp=Z,8µm,15.0s								
LZH				LR	LR				
	comp=Z,8µm,15.3s								
LZH				LR	LR				
	comp=Z,11µm,17.0s								
BELO	**BELONIA**	**40.18**	**304**	*e*P	**P**	**19 47 43.9**	**-0.4**		
ARMA	**Armidale**	**40.21**	**146**	P	**P**	**19 47 44.4**	**-0.2**		
	baz=40,SNR=26								
ARMA	**Armidale**	**40.21**	**146**	P	P	**19 47 44.3**	**-0.2**		
ARMA				IAmb	IAmb	19 48 02.7			
	comp=Z,63nm,0.9s								
JTM	**Tenmabayashi**	**40.28**	**17**	P	**P**	**19 47 44.5**	**-0.3**		
TEZP	**TEZPUR**	**40.69**	**309**	*e*P	**P**	**19 47 46.4**	**-2.0**		
HHC	**Hu-ho-hao-te**	**40.74**	**342**	*e*P	**P**	**19 47 49.8**	**+1.0**		
HHC				sP	sP	19 48 05.0	+0.5		
HHC				S	**S**	**19 53 55.0**	**-1.5**		
HHC				pmax	pmax				
	comp=Z,35nm,0.9s								
HHC				pmax	pmax				
	comp=Z,260nm,5.4s								
HHC				LR	LR				
	comp=Z,5µm,19.6s								
HHC				LR	LR				
	comp=Z,3µm,20.4s								
HHC				LR	LR				
	comp=Z,9µm,18.7s								
VLA	**Vladivostok**	**40.78**	**5**	*i* P	**P**	**19 47 48.5**	**-0.4**		
VLA				pmax	pmax				
	comp=Z,43nm,0.8s								
SHL	**Shillong**	**40.89**	**307**	*e*P	**P**	**19 47 48.0**	**-2.3**		
SHL				IAmb	IAmb	19 47 54.9			
	comp=Z,61nm,1.4s								
SHL	**Shillong**	**40.89**	**307**	P	**P**	**19 47 48.7**	**-1.5**		
	SNR=22								
SHL	**Shillong**	**40.89**	**307**	P	**P**	**19 47 48.4**	**-1.9**		
SHL				pmax	pmax				
	comp=Z,81nm,0.7s								
SHL	**Shillong**	**40.89**	**307**	P	**P**	**19 47 48.4**	**-1.9**		
SHL				IAmb	IAmb	19 47 59.9			
	comp=Z,81nm,0.7s								
KWAJ	**Kwajalein Atol**	**40.89**	**79**	IAMs_20	IAMs_20	20 02 16.9			
	comp=Z,6µm,20.0s								
BTO	**Baotou**	**41.02**	**340**	*e*P	**P**	**19 47 51.5**	**+0.4**		
BTO				S	**S**	**19 54 02.0**	**+1.4**		
CN2	**Changchun**	**41.25**	**358**	*e*P	**P**	**19 47 55.5**	**+2.7**		
CN2				*es*P	sP	19 48 13.5	+4.9		
CN2				*e*PP	**PnPn**	**19 49 35.3**	**+1.9**		
CN2				*e*S	**S**	**19 54 05.0**	**+1.2**		
CN2				*e*SS	**SS**	**19 57 05.5**	**-2.9**		
CN2				pmax	pmax				
	comp=Z,10.0nm,1.0s								
CN2				pmax	pmax				
	comp=Z,270nm,4.5s								
CN2				LR	LR				
	comp=Z,2µm,22.0s								
CN2				LR	LR				
	comp=Z,2µm,22.0s								
CN2				LR	LR				
	comp=Z,3µm,23.0s								
GUWA	**GUWAHATI**	**41.34**	**308**	*e*P	**P**	**19 47 52.6**	**-1.1**		
GUWA				IAmb	IAmb	19 48 02.8			
	comp=Z,22nm,0.6s								
ARPS	**Mount Arapiles**	**41.34**	**162**	P	**P**	**19 47 52.9**	**-0.7**		
	baz=41,SNR=25								
YNG	**Young**	**41.68**	**153**	P	**P**	**19 47 57.5**	**+1.0**		
	baz=42,SNR=13								
USA0B	**Ussuriysk Arra**	**41.86**	**5**	*c i* P	**P**	**19 47 57.4**	**-0.4**		
USA0B	**Ussuriysk Arra**	**41.86**	**5**	P	**P**	**19 47 57.7**	**-0.1**		
USA0B				IAmb	IAmb	19 48 04.3			
	comp=Z,170nm,1.3s								
USRK	**Ussuriysk Ar.**	**41.86**	**5**	P	**P**	**19 47 57.5**	**-0.2**		
	comp=Z,37nm,0.9s,baz=191,slow=7.4,SNR=39								
USRK				LR	LR	20 04 28.3			
	comp=Z,2µm,21.8s,baz=174,slow=35								
ERM	**Erimo**	**42.03**	**18**	P	**P**	**19 47 58.4**	**-0.7**		
ERM				pmax	pmax				
	comp=Z,64nm,1.0s								
ERM				MLR	MLR				
	comp=Z,3µm,20.0s								
ERM	**Erimo**	**42.03**	**18**	P	**P**	**19 47 58.4**	**-0.7**		
ERM				IAmb	IAmb	19 48 13.4			
	comp=Z,64nm,1.0s								
H11S3	**WAKE ISLAND Hy**	**42.04**	**65**	T	T	20 33 07.7			
	baz=252,slow=74,SNR=91								
H11S1	**WAKE ISLAND Hy**	**42.05**	**65**	T	T	20 33 09.2			
	baz=252,slow=74,SNR=45								
H11S2	**WAKE ISLAND Hy**	**42.05**	**65**	T	T	20 33 09.0			
	baz=252,slow=74,SNR=60								
MDJ	**Mudanjiang**	**42.11**	**3**	P	**P**	**19 47 59.5**	**-0.3**		
MDJ				pP	pP	19 48 09.0	-1.8		
MDJ				PcS	**PcS**	**19 53 43.5**	**-1.9**		
MDJ				S	**S**	**19 54 19.8**	**+3.4**		
MDJ				sS	sS	19 54 35.5	+0.7		
MDJ				pmax	pmax				
	comp=Z,54nm,1.3s								
MDJ				LR	LR				
	comp=Z,1µm,19.9s								
MDJ				LR	LR				
	comp=Z,860nm,23.2s								
MDJ				LR	LR				
	comp=Z,3µm,28.5s								
MDJ	**Mudanjiang**	**42.11**	**3**	P	**P**	**19 47 59.4**	**-0.4**		
MDJ				IAmb	IAmb	19 48 05.9			
	comp=Z,180nm,1.2s								
CNB	**Canberra Magne**	**42.97**	**153**	P	**P**	**19 48 07.2**	**+0.2**		
	baz=43,SNR=8.9								
TEY	**Ternei**	**43.30**	**10**	⇑*e*P	**P**	**19 48 08.5**	**-0.9**		
TEY				pmax	pmax				
	comp=E,10.0nm,1.5s								
TEY				pmax	pmax				
	comp=Z,20nm,1.0s								
TOO	**Toolangi**	**43.31**	**158**	P	**P**	**19 48 10.0**	**+0.4**		
	baz=43,SNR=18								
TOO	**Toolangi**	**43.31**	**158**	P	**P**	**19 48 08.6**	**-1.0**		
TOO				pmax	pmax				
	comp=Z,106nm,1.5s								
TOO				MLR	MLR				
	comp=Z,5µm,22.0s								
TOO	**Toolangi**	**43.31**	**158**	P	**P**	**19 48 08.6**	**-1.0**		
TOO				IAmb	IAmb	19 48 25.9			
	comp=Z,106nm,1.5s								
TOO				IAMs_20	IAMs_20	20 08 21.9			
	comp=Z,5µm,22.0s								
LSA	**Lhasa**	**43.52**	**312**	P	**P**	**19 48 11.0**	**-1.0**		
LSA				pmax	pmax				
	comp=Z,30nm,1.1s								
LSA	**Lhasa**	**43.52**	**312**	P	**P**	**19 48 11.4**	**-0.6**		
LSA	**Lhasa**	**43.52**	**312**	P	**P**	**19 48 11.1**	**-1.0**		
LSA				pmax	pmax				
	comp=Z,31nm,0.9s								
LSA				MLR	MLR				
	comp=Z,2µm,20.0s								
LSA	**Lhasa**	**43.52**	**312**	P	**P**	**19 48 11.1**	**-1.0**		
SANVU	**Saraoutou**	**43.54**	**115**	P	**P**	**19 48 10.8**	**-1.0**		
SANVU				IAmb	IAmb	19 48 16.2			
	comp=Z,53nm,0.8s								
SANVU				IAMs_20	IAMs_20	20 06 36.3			
	comp=Z,5µm,22.0s								
ASAJ	**Asahikawa**	**43.79**	**16**	P	**P**	**19 48 13.3**	**-0.1**		
ASAJ				pmax	pmax				
	comp=Z,49nm,0.8s								
ASAJ				MLR	MLR				
	comp=Z,4µm,22.0s								
JKA	**Kamikawa-asahi**	**43.79**	**16**	P	**P**	**19 48 13.2**	**-0.1**		
JKA				IAmb	IAmb	19 48 29.6			
	comp=Z,49nm,0.8s								
JKA				IAMs_20	IAMs_20	20 04 23.0			
	comp=Z,5µm,22.0s								
GTA	**Gaotai**	**44.37**	**330**	P	**P**	**19 48 16.5**	**-1.8**		
GTA				pP	pP	19 48 24.8	-4.7		
GTA				PP	**PP**	**19 50 06.0**	**+3.6**		
GTA				S	**S**	**19 54 47.5**	**-2.6**		
GTA				pmax	pmax				
	comp=Z,99nm,4.9s								
GTA				LR	LR				
	comp=Z,4µm,23.6s								
GTA				LR	LR				
	comp=Z,5µm,24.0s								
GTA				LR	LR				
	comp=Z,9µm,24.7s								
YUK	**Yuzh-Kuril'sk**	**44.71**	**19**	*d i* P	**P**	**19 48 20.0**	**-0.7**		
YUK				*i* S	**S**	**19 54 53.4**	**-1.1**		
YUK				pmax	pmax				
	comp=N,138nm,1.1s								
YUK				pmax	pmax				
	comp=Z,381nm,1.1s								
YUK				MLR	MLR				
	comp=Z,4µm,23.0s								
CHLP	**Challavanipeta**	**44.99**	**294**	*e*P	**P**	**19 48 24.0**	**+0.6**		
CHLP				IVmB_BB		19 48 52.8			
	comp=Z,255nm,2.4s								
CHLP				IVMs_BB	IVMs_BB	20 07 04.9			
	comp=Z,574nm,23.9s								
TAPN	**Taplejung**	**45.02**	**307**	*e*P	**P**	**19 48 21.5**	**-2.4**		
	comp=Z,120nm,0.9s								
ODAN	**Odare**	**45.06**	**306**	*e*P	**P**	**19 48 22.5**	**-1.7**		
BOK	**Bokaro**	**45.07**	**302**	*e*P	**P**	**19 48 22.9**	**-1.1**		
DZM	**Mont Dzumac**	**45.56**	**124**	LR	LR	20 07 51.7			
	comp=Z,4µm,21.4s,baz=298,slow=36								
DZM	**Mont Dzumac**	**45.56**	**124**	*e*P	**P**	**19 48 31.0**	**+3.0**		
	comp=Z,94nm,0.7s								
DZM				*e*S	**S**	**19 55 13.0**	**+5.4**		
	comp=Z,3µm,26.8s								
DZM				*e*LR	LR	20 01 15.8			
	comp=Z,11µm,29.4s								
DZM	**Mont Dzumac**	**45.56**	**124**	IAMs_20	IAMs_20	20 08 25.6			
	comp=Z,3µm,19.0s								
RAMN	**Ramite**	**45.74**	**306**	*e*P	**P**	**19 48 27.6**	**-1.9**		
	comp=Z,85nm,0.6s								
PALK	**Pallekele**	**46.36**	**278**	LR	LR	20 10 25.7			
	comp=Z,2µm,20.4s,baz=211,slow=39								
YSS	**Yuzh-Sakhalins**	**46.45**	**15**	*e*P	**P**	**19 48 33.4**	**-1.1**		
YSS				*e**SP	**sP**	**19 48 51.7**	**+1.4**		
YSS				*e*		19 50 30.8			
YSS				*e*S	**S**	**19 55 14.2**	**-5.3**		
YSS				*e*SS	**ScS**	**19 58 29.0**	**+3.0**		
YSS				pmax	pmax				
	comp=Z,20nm,1.1s								
YSS	**Yuzh-Sakhalins**	**46.45**	**15**	P	**P**	**19 48 33.7**	**-0.8**		
YSS				IAmb	IAmb	19 48 52.9			
	comp=Z,34nm,0.7s								
GUN	**Gumba**	**46.73**	**307**	*e*P	**P**	**19 48 35.6**	**-1.8**		
	comp=Z,80nm,0.5s								
KLR	**Kul'dur**	**46.84**	**4**	*ce*P	**P**	**19 48 36.9**	**-0.6**		
KLR				pmax	pmax				
	comp=Z,72nm,1.1s								
PVM	**Polavaram**	**46.93**	**291**	*e*P	**P**	**19 48 38.5**	**-0.2**		
PVM				IVmB_BB		19 48 43.1			
	comp=Z,265nm,1.8s								
PVM				IVMs_BB	IVMs_BB	20 06 27.6			
	comp=Z,696nm,28.6s								
PKI	**Pulchoki**	**46.96**	**306**	*e*P	**P**	**19 48 37.1**	**-2.1**		
	comp=Z,66nm,0.9s								
PKIN	**Phulchoki**	**46.97**	**306**	*e*P	**P**	**19 48 36.9**	**-2.3**		
	comp=Z,38nm,0.6s								
HIA	**Hailar**	**47.11**	**354**	P	**P**	**19 48 39.3**	**-0.3**		
HIA				pmax	pmax				
	comp=Z,58nm,1.1s								
HIA				MLR	MLR				
	comp=Z,2µm,20.0s								
HIA	**Hailar**	**47.11**	**354**	P	**P**	**19 48 39.3**	**-0.3**		
HIA				IAmb	IAmb	19 48 45.5			
	comp=Z,58nm,1.1s								
KKN	**Kakani**	**47.16**	**306**	*e*P	**P**	**19 48 38.0**	**-2.6**		
	comp=Z,57nm,0.9s								
DMN	**Daman**	**47.22**	**306**	*e*P	**P**	**19 48 39.5**	**-1.7**		
	comp=Z,97nm,1.0s								
MYLAV	**Mylavaram**	**47.74**	**290**	*e*P	**P**	**19 48 44.2**	**-0.8**		
MYLAV				IVmB_BB		19 48 48.6			
	comp=Z,229nm,1.9s								
MYLAV				IVMs_BB	IVMs_BB	20 06 39.3			
	comp=Z,640nm,25.1s								
GKN	**Gorkha**	**47.76**	**306**	*e*P	**P**	**19 48 43.3**	**-1.9**		
ADKI	**Addanki**	**48.18**	**289**	*e*P	**P**	**19 48 48.6**	**+0.2**		
ADKI				IVmB_BB		19 48 52.8			
	comp=Z,191nm,3.0s								
ADKI				IVMs_BB	IVMs_BB	20 05 55.5			
	comp=Z,558nm,17.3s								
GGR	**Gangavaram**	**48.38**	**292**	*e*P	**P**	**19 48 49.2**	**-0.7**		
ULN	**Ulaanbaatar**	**48.46**	**342**	P	**P**	**19 48 49.8**	**-0.5**		
ULN	**Ulaanbaatar**	**48.46**	**342**	*ce*P	**P**	**19 48 49.3**	**-1.0**		
ULN				pmax	pmax				
	comp=Z,93nm,1.7s								
ULN	**Ulaanbaatar**	**48.46**	**342**	P	**P**	**19 48 50.5**	**+0.2**		
ULN				IAmb	IAmb	19 49 07.7			
	comp=Z,87nm,1.1s								
ULN	**Ulaanbaatar**	**48.46**	**342**	IAMs_20	IAMs_20	20 11 14.4			
	comp=Z,4µm,22.0s								
KOLN	**Koldanda**	**48.51**	**306**	*e*P	**P**	**19 48 48.8**	**-2.2**		
	comp=Z,55nm,0.7s								
DANN	**Dangsing**	**48.61**	**306**	*e*P	**P**	**19 48 50.0**	**-1.9**		
SONM	**Songino Array**	**48.64**	**342**	P	**P**	**19 48 51.1**	**-0.6**		
	comp=Z,16nm,0.7s,baz=155,slow=8.8,SNR=21								
SONM				LR	LR	20 13 46.3			
	comp=Z,935nm,18.3s,baz=160,slow=42								
SONM	**Songino Array**	**48.64**	**342**	P	**P**	**19 48 50.7**	**-0.9**		
SONM				pmax	pmax				
	comp=Z,25nm,0.8s								
SONM	**Songino Array**	**48.64**	**342**	P	**P**	**19 48 50.7**	**-0.9**		
GRNR	**Gornyy**	**48.86**	**8**	*i* P	**P**	**19 48 53.5**	**+0.4**		
GRNR				*e*S	**S**	**19 55 58.0**	**+4.4**		
GRNR				pmax	pmax				
	comp=E,2.0nm,1.0s								
GRNR				pmax	pmax				
	comp=N,6.0nm,0.9s								
GRNR				pmax	pmax				
	comp=Z,10.0nm,0.9s								
GRNR				smax	smax				
	comp=N,2.0nm,1.0s								
GRNR				MLR	MLR				
	comp=E,470nm,18.0s								
NJS	**Nagarjunasagar**	**48.95**	**290**	*e*P	**P**	**19 48 52.3**	**-2.0**		
NJS				IVmBBB		19 49 27.4			
	comp=Z,209nm,2.5s								
NJS				IVMsBB		20 06 28.0			
	comp=Z,425nm,19.6s								
PYUN	**Piuthan**	**49.13**	**306**	*e*P	**P**	**19 48 53.7**	**-2.2**		
RPR	**Rampur**	**49.45**	**293**	*e*P	**P**	**19 48 57.6**	**-0.6**		
RPR				IVmBBB		19 49 02.3			
	comp=Z,182nm,1.1s								
RPR				IVMs_BB	IVMs_BB	20 06 44.8			
	comp=Z,466nm,20.9s								
CUPL	**Choutuppal**	**49.46**	**291**	*e*P	**P**	**19 48 57.6**	**-0.6**		
CUPL				IVmB_BB		19 49 02.0			
	comp=Z,241nm,1.9s								
CUPL				IVMs_BB	IVMs_BB	20 07 41.0			
	comp=Z,574nm,24.7s								
HYB	**Hyderabad**	**49.83**	**291**	*i* P	**P**	**19 48 58.0**	**-3.1**		
HYB				*e*S	**S**	**19 56 08.0**	**-0.2**		
HYBB	**Hyderabad (bro**	**49.83**	**291**	*e*P	**P**	**19 49 00.6**	**-0.5**		
HYBB				IVmBBB		19 49 04.9			
	comp=Z,345nm,1.3s								
HYBB				IVMs_BB	IVMs_BB	20 09 55.7			
	comp=Z,587nm,18.9s								
TYV	**Tymovskoe**	**50.08**	**13**	*e*P	P	19 49 11.9	+10		
TYV				*e*S	S	19 56 31.5	+21		
TYV				pmax	pmax				
	comp=Z,17nm,0.8s								
TYV				pmax	pmax				
	comp=Z,300nm,5.3s								
TYV				smax	smax				
	comp=E,600nm,5.5s								
TYV				MLR	MLR				
	comp=Z,2µm,22.0s								
URV	**Uravakonda**	**50.59**	**287**	*e*P	**P**	**19 49 04.5**	**-2.5**		
URV				IVmBBB		19 49 10.3			
	comp=Z,247nm,2.2s								
URV				IVMs_BB	IVMs_BB	20 10 42.7			
	comp=Z,394nm,24.5s								
CIT	**Chita**	**50.72**	**349**	*e*P	**P**	**19 49 08.3**	**+1.0**		
CIT				*e*		19 49 20.0			
CIT				*e*		19 49 28.2			
CIT				*e*		19 50 17.0			
CIT				pmax	pmax				
	comp=Z,187nm,2.4s								
ZEA	**Zeya**	**51.18**	**0**	*e*P	**P**	**19 49 13.7**	**+3.1**		
ZEA				*e*S	**S**	**19 56 32.1**	**+6.3**		
ZEA				*e*SS	**SS**	**19 59 52.9**	**-8.7**		
ZEA				pmax	pmax				
	comp=N,10.0nm,1.1s								
ZEA				pmax	pmax				
	comp=Z,20nm,0.9s								
ZEA				pmax	pmax				
	comp=E,100nm,3.3s								
ZEA				pmax	pmax				
	comp=N,200nm,5.2s								
ZEA				pmax	pmax				
	comp=Z,200nm,4.6s								
ZEA				smax	smax				
	comp=E,100nm,9.9s								
ZEA				smax	smax				
	comp=N,200nm,12.6s								
ZEA				MLR	MLR				
	comp=N,1µm,19.0s								
ZEA				MLR	MLR				
	comp=E,700nm,19.0s								
ZEA				MLR	MLR				
	comp=Z,2µm,18.0s								
KLRI	**Killari**	**51.78**	**291**	*e*P	**P**	**19 49 14.1**	**-1.8**		
KLRI				IVmB_BB		19 49 19.4			
	comp=Z,366nm,0.9s								
KLRI				IVMs_BB	IVMs_BB	20 09 11.4			
	comp=Z,786nm,25.4s								
ZAK	**Zakamensk**	**51.87**	**341**	*e*P	**P**	**19 49 18.7**	**+2.7**		
ZAK				pmax	pmax				
	comp=Z,25nm,1.3s								
BHPL	**Bhopal**	**52.25**	**298**	*e*P	**P**	**19 49 20.2**	**+1.0**		
BHPL				IAmb	IAmb	19 49 28.1			
	comp=Z,33nm,0.9s								
TLY	**Talaya**	**52.87**	**342**	P	**P**	**19 49 23.4**	**+0.1**		
TLY	**Talaya**	**52.87**	**342**	*ce*P	**P**	**19 49 25.0**	**+1.7**		
TLY				pmax	pmax				
	comp=Z,72nm,1.3s								
TLY	**Talaya**	**52.87**	**342**	P	**P**	**19 49 23.2**	**-0.1**		
TLY				IAmb	IAmb	19 49 41.1			
	comp=Z,48nm,1.0s								
TLY				IAMs_20	IAMs_20	20 13 55.0			
	comp=Z,3µm,22.0s								
IRK	**Irkutsk**	**53.17**	**343**	*e*P	**P**	**19 49 28.6**	**+3.1**		
IRK				pmax	pmax				
	comp=Z,210nm,1.9s								
MOY	**Mondy**	**53.72**	**340**	*e*P	**P**	**19 49 33.0**	**+3.3**		
MOY				pmax	pmax				
	comp=Z,186nm,1.8s								
WMQ	**Urumqi**	**53.97**	**325**	*e*P	**P**	**19 49 32.5**	**+0.9**		
WMQ				pP	pP	19 49 43.3	+0.3		
WMQ				sP	sP	19 49 50.3	+2.6		
WMQ				PcP	**PcP**	**19 50 36.3**	**-0.1**		
WMQ				PP	**PP**	**19 51 39.3**	**+6.0**		
WMQ				S	**S**	**19 57 04.5**	**+0.1**		
WMQ				sS	sS	19 57 21.5	-2.2		
WMQ				pmax	pmax				
	comp=Z,29nm,1.5s								
WMQ				pmax	pmax				
	comp=Z,64nm,4.3s								
WMQ				LR	LR				
	comp=Z,5µm,22.3s								
WMQ				LR	LR				
	comp=Z,4µm,25.7s								
WMQ				LR	LR				
	comp=Z,12µm,29.0s								
WMQ	**Urumqi**	**53.97**	**325**	P	**P**	**19 49 31.0**	**-0.6**		
WMQ				pmax	pmax				
	comp=Z,34nm,1.0s								
WMQ				MLR	MLR				
	comp=Z,1µm,21.0s								
WMQ	**Urumqi**	**53.97**	**325**	P	**P**	**19 49 31.0**	**-0.6**		
WMQ				IAmb	IAmb	19 49 45.0			
	comp=Z,34nm,1.0s								
SKR	**Severo-Kuril's**	**54.03**	**22**	*e*P	P	19 49 48.5	+17		
SKR				pmax	pmax				
	comp=Z,200nm,2.9s								
SKR				pmax	pmax				
	comp=Z,58nm,1.0s								
SKR				MLR	MLR				
	comp=Z,600nm,16.0s								
SKR				MLR	MLR				
	comp=Z,400nm,16.0s								
NDI	**New Delhi**	**54.08**	**304**	*e*P	P	19 49 24.0	-8.6		
MSVF	**Nonsavu**	**54.12**	**114**	P	**P**	**19 49 32.2**	**-0.9**		
MSVF				pmax	pmax				
	comp=Z,78nm,1.1s								
MSVF				MLR	MLR				
	comp=Z,4µm,22.0s								
MSVF	**Nonsavu**	**54.12**	**114**	P	**P**	**19 49 32.2**	**-0.9**		
MSVF				IAmb	IAmb	19 49 51.4			
	comp=Z,78nm,1.1s								
MSVF	**Nonsavu**	**54.12**	**114**	IAMs_20	IAMs_20	20 11 10.8			
	comp=Z,4µm,22.0s								
DHRM	**DHARAMSHALA**	**56.06**	**308**	*e*P	**P**	**19 49 48.2**	**+1.1**		
DHRM				IAmb	IAmb	19 49 52.2			
	comp=Z,71nm,0.9s								
BOD	**Bodaibo**	**56.22**	**352**	*e*P	**P**	**19 49 46.7**	**-0.7**		
BOD				pmax	pmax				
	comp=Z,99nm,1.3s								
PEA0B	**Petropavlovsk-**	**56.56**	**22**	P	**P**	**19 49 49.4**	**-0.6**		
PEA0B				pmax	pmax				
	comp=Z,82nm,1.2s								
PEA0B				MLR	MLR				
	comp=Z,2µm,22.0s								
PEA0B	**Petropavlovsk-**	**56.56**	**22**	P	**P**	**19 49 49.4**	**-0.6**		
PEA0B				IAmb	IAmb	19 50 02.3			
	comp=Z,82nm,1.1s								
PETK	**Petropavlovsk-**	**56.56**	**22**	P	**P**	**19 49 49.8**	**-0.2**		
	comp=Z,11nm,0.6s,baz=187,slow=3.9,SNR=24								
PETK				LR	LR	20 13 17.5			
	comp=Z,671nm,21.2s,baz=212,slow=35								
PETK	**Petropavlovsk-**	**56.56**	**22**	P	**P**	**19 49 50.1**	**+0.1**		
PET	**Petropavlovsk**	**56.85**	**22**	*e*P	**P**	**19 49 52.9**	**+0.9**		
PET				*e*S	**S**	**19 57 44.0**	**+1.6**		
PET				pmax	pmax				
	comp=Z,58nm,1.4s								
PET				pmax	pmax				
	comp=Z,900nm,13.8s								
PET				MLR	MLR				
	comp=Z,2µm,20.0s								
PET				MLR	MLR				
	comp=Z,2µm,21.0s								
OUZ	**Omahuta**	**57.44**	**135**	IAMs_20	IAMs_20	20 13 24.0			
	comp=Z,5µm,22.0s								
ZSN	**Zaisan**	**57.77**	**327**	*e*P	**P**	**19 49 58.0**	**-0.6**		
	baz=327								
ZSN				*e*S	**S**	**19 57 55.2**	**+0.4**		
	baz=327								
ZSN	**Zaisan**	**57.77**	**327**	*e*P	**P**	**19 49 58.0**	**-0.6**		
ZSN				*e*S	**S**	**19 57 55.1**	**+0.4**		
SHLS	**Shalkode**	**58.54**	**321**	*e*P	**P**	**19 50 01.8**	**-2.5**		
	baz=321								
SHLS				*e*S	**S**	**19 58 01.9**	**-3.3**		
	baz=321								
SHLS				LR	LR	20 16 10.1			
	comp=Z,203nm,14.8s,baz=321								
SHLS	**Shalkode**	**58.54**	**321**	*e*P	**P**	**19 50 01.8**	**-2.5**		
SHLS				*e*S	**S**	**19 58 01.9**	**-3.3**		
SHLS				MLR	MLR				
	comp=Z,203nm,15.0s								
MK31	**Makanchi Array**	**58.80**	**326**	*ce*P	**P**	**19 50 06.1**	**+0.2**		
MK31	**Makanchi Array**	**58.80**	**326**	P	**P**	**19 50 04

comp=Z,66nm,1.2s
SATY Saty 59.16 320 *e*P **P** 19 50 08.0 -0.6
baz=320
SATY *e*S **S** 19 58 13.5 +0.1
baz=320
SATY LR LR 20 15 53.5
comp=Z,538nm,19.8s,baz=320
SATY Saty 59.16 320 *e*P **P** 19 50 08.0 -0.6
SATY *e*S **S** 19 58 13.4 +0.1
SATY MLR MLR
comp=Z,538nm,20.0s
KSH Kashi 59.17 316 P **P** 19 50 09.8 +1.1
KSH pP pP 19 50 21.0 +0.7
KSH S **S** 19 58 15.8 +2.2
KSH ScS **ScS** 19 59 54.0 -1.7
KSH pmax pmax
comp=Z,8.0nm,0.5s
KSH pmax pmax
comp=Z,710nm,5.1s
KSH LR LR
comp=Z,1μm,12.6s
KSH LR LR
comp=Z,1μm,14.2s
KSH LR LR
comp=Z,4μm,25.4s
KPKS Kokpek 59.19 321 *e*P **P** 19 50 08.0 -0.8
baz=321
KPKS Kokpek 59.19 321 *e*P **P** 19 50 07.9 -0.8
BHUJ Bhuj 59.19 296 *e*P **P** 19 50 10.5 +1.6
BHUJ IAmb IAmb 19 50 13.8
comp=Z,30nm,0.8s
DCZ Deep Cove 59.48 148 P **P** 19 50 09.9 -0.6
DCZ IAmb IAmb 19 50 22.2
comp=Z,58nm,1.1s
KDJ Kajisay 59.52 319 P **P** 19 50 10.7 -0.4
KDJ pmax pmax
comp=Z,24nm,0.9s
KDJ MLR MLR
comp=Z,300nm,22.0s
KDJ Kajisay 59.52 319 P **P** 19 50 10.7 -0.4
KDJ IAmb IAmb 19 50 20.3
comp=Z,24nm,0.8s
YAK Yakutsk 59.53 1 P **P** 19 50 10.2 -0.3
comp=Z,23nm,0.8s,baz=173,slow=4.3,SNR=1.1
YAK Yakutsk 59.53 1 *e*P **P** 19 50 10.2 -0.3
YAK *e**PP **pP** 19 50 22.6 +0.6
YAK *e* 19 50 56.8
YAK *e* 19 52 29.3
YAK *e*S **S** 19 58 18.6 +1.6
YAK *e**SS **sS** 19 58 38.7 +2.4
YAK *e* 20 00 01.9
YAK pmax pmax
comp=Z,194nm,0.9s
YAK pmax pmax
comp=N,74nm,1.0s
YAK pmax pmax
comp=E,27nm,1.3s
YAK pmax pmax
comp=Z,358nm,3.9s
YAK pmax pmax
comp=N,312nm,2.9s
YAK pmax pmax
comp=E,297nm,3.4s
YAK smax smax
comp=E,267nm,2.8s
YAK smax smax
comp=N,197nm,2.7s
YAK MLR MLR
comp=Z,2μm,21.0s
YAK MLR MLR
comp=N,2μm,23.0s
YAK MLR MLR
comp=E,561nm,20.0s
YAK Yakutsk 59.53 1 P **P** 19 50 10.3 -0.3
FOZ Fox Glacier 59.70 145 IAMs_20 IAMs_20 20 18 55.8
comp=Z,3μm,21.0s
QRZ Quartz Range 59.73 141 P **P** 19 50 11.9 -0.5
QRZ IAMs_20 IAMs_20 20 19 15.7
comp=Z,4μm,20.0s
MA2 Magadan 59.93 14 P **P** 19 50 13.8 +0.4
comp=Z,26nm,0.8s,baz=246,slow=17,SNR=2.8
MA2 Magadan 59.93 14 *i* P **P** 19 50 13.3 -0.1
MA2 pmax pmax
comp=Z,45nm,1.1s
MA2 Magadan 59.93 14 P **P** 19 50 13.6 +0.3
MA2 IAMs_20 IAMs_20 20 13 24.1
comp=Z,3μm,22.0s
HIZ Hauiti 59.99 138 IAMs_20 IAMs_20 20 15 59.8
comp=Z,3μm,22.0s
TOZ Tahuroa Road 60.03 137 P **P** 19 50 16.9 +2.5
WKZ Wanaka 60.06 147 IAMs_20 IAMs_20 20 17 46.6
comp=Z,4μm,20.0s
MDOK Medeo 60.09 320 *e*P **P** 19 50 14.5 -0.6
baz=320
MDOK *e*S **S** 19 58 25.9 +0.6
baz=320
MDOK LR LR 20 16 25.9
comp=Z,893nm,20.6s,baz=320
MDOK Medeo 60.09 320 *e*P **P** 19 50 14.4 -0.6
MDOK *e*S **S** 19 58 25.8 +0.6
MDOK MLR MLR
comp=Z,893nm,21.0s
TNSS Tian-Shan 60.09 320 *e*P **P** 19 50 14.9 -0.4
baz=320
TNSS Tian-Shan 60.09 320 *e*P **P** 19 50 14.9 -0.4
AAA Alma-Ata 60.19 320 *e*P **P** 19 50 14.9 -0.7
baz=320
AAA LR LR 20 16 32.9
comp=Z,878nm,19.0s,baz=320
AAA Alma-Ata 60.19 320 *e*P **P** 19 50 14.8 -0.8
AAA MLR MLR
comp=Z,878nm,19.0s
LBZ Lake Benmore 60.44 146 P **P** 19 50 15.8 -1.4
LBZ IAMs_20 IAMs_20 20 19 30.5
comp=Z,4μm,19.0s
CHKK Chushkaly 60.45 320 *e*P **P** 19 50 16.3 -1.0
baz=320
CHKK Chushkaly 60.45 320 *e*P **P** 19 50 16.3 -1.0
NNZ Nelson 60.48 141 IAMs_20 IAMs_20 20 18 07.6
comp=Z,4μm,20.0s
THZ Tophouse 60.49 142 P **P** 19 50 16.2 -1.5
THZ IAMs_20 IAMs_20 20 18 42.8
comp=Z,3μm,20.0s
RPZ Rata Peaks 60.52 145 P **P** 19 50 17.1 -0.7
RPZ IAMs_20 IAMs_20 20 15 42.7
comp=Z,4μm,22.0s
KUU Kurty 60.88 320 *e*P **P** 19 50 18.4 -1.8
baz=320
KUU LR LR 20 16 36.4
comp=Z,637nm,17.4s,baz=320
KUU Kurty 60.88 320 *e*P **P** 19 50 18.4 -1.8
KUU MLR MLR
comp=Z,637nm,17.0s
TKM2 Tokmak 2 60.92 319 *i* P **P** 19 50 18.7 -2.1
TKM2 pmax pmax
comp=Z,14nm,0.6s
MOVZ Moawhango 61.05 138 P **P** 19 50 22.8 +1.3
ODZ Otahua Downs 61.10 146 IAMs_20 IAMs_20 20 16 45.9
comp=Z,3μm,21.0s
SNZO South Karori 61.37 141 P **P** 19 50 21.2 -2.3
SNZO South Karori 61.37 141 IAMs_20 IAMs_20 20 18 36.0
comp=Z,3μm,21.0s
BKZ Black Stump Fm 61.42 138 P **P** 19 50 22.2 -1.8
BKZ IAmb IAmb 19 50 34.0
comp=Z,37nm,0.8s
BKZ IAMs_20 IAMs_20 20 16 53.5
comp=Z,4μm,21.0s
MQZ McQueen's Vall 61.45 144 IAMs_20 IAMs_20 20 16 12.3
comp=Z,4μm,22.0s
KNTN Kanton 61.48 94 IAMs_20 IAMs_20 20 11 21.1
comp=Z,4μm,21.0s
MTHZ Maungataniwha 61.50 137 P **P** 19 50 25.9 +1.4
FRU1 Bishkek 61.51 318 P **P** 19 50 23.6 -1.0
FRU1 pmax pmax
comp=Z,9.0nm,0.7s
FRU1 MLR MLR
comp=Z,1μm,20.0s
FRU1 Bishkek 61.51 318 P **P** 19 50 23.6 -1.0
AAK Ala-Archa 61.52 318 P **P** 19 50 24.2 -0.6
AAK P **P** 19 50 24.2 -0.6
AAK Ala-Archa 61.52 318 P **P** 19 50 23.6 -1.2
AAK pmax pmax
comp=Z,17nm,1.1s
AAK MLR MLR
comp=Z,800nm,19.0s
AAK Ala-Archa 61.52 318 P **P** 19 50 23.6 -1.2

KRHZ Kereru 61.58 138 P **P** 19 50 26.5 +1.4
NMHZ Naumai 61.60 137 P **P** 19 50 27.5 +2.3
HAZ Te Kaha 61.62 136 P **P** 19 50 26.8 +1.6
RUGZ Raukumara Rang 61.64 136 P **P** 19 50 21.8 -3.8
MCHZ McNeill Hill 61.70 138 P **P** 19 50 26.2 +0.5
MWZ Matawai 61.72 136 P **P** 19 50 26.0 0.0
SGDS Sogindy 61.79 319 *e*P **P** 19 50 24.4 -2.1
baz=319
SGDS Sogindy 61.79 319 *e*P **P** 19 50 24.3 -2.1
ARHZ Aropaoanui 61.81 138 P **P** 19 50 25.2 -1.3
MXZ Matakaoa Point 61.89 135 P **P** 19 50 23.4 -3.7
MXZ Matakaoa Point 61.89 135 IAMs_20 IAMs_20 20 16 15.0
comp=Z,4μm,20.0s
ZAA0 Zalesovo Array 61.89 333 P **P** 19 50 25.3 -1.5
ZAA0 IAmb IAmb 19 50 42.7
comp=Z,23nm,0.8s
ZALV Zalesovo Beam 61.89 333 P **P** 19 50 25.0 -1.8
comp=Z,5.4nm,0.5s,baz=122,slow=5.9,SNR=18
ZALV S **S** 19 58 51.3 +3.8
comp=Z,1.6nm,0.9s,baz=128,slow=16,SNR=4.8
ZALV PKP2bc 20 19 44.2
comp=Z,5.0nm,0.8s,baz=304,slow=3.9,SNR=12
ZALV Zalesovo Beam 61.89 333 P **P** 19 50 24.8 -2.0
ZALV Zalesovo Beam 61.89 333 P **P** 19 50 24.8 -2.0
SEM Semipalatinsk 61.97 328 *e*P **P** 19 50 27.8 0.0
baz=328
SEM Semipalatinsk 61.97 328 *e*P **P** 19 50 27.7 0.0
KAHZ Kahuranaki 61.99 138 P **P** 19 50 27.7 -0.1
ARSB Arslanbob 62.00 316 P **P** 19 50 26.8 -1.2
ARSB pmax pmax
comp=Z,49nm,1.4s
ARSB MLR MLR
comp=Z,2μm,21.0s
ARSB Arslanbob 62.00 316 P **P** 19 50 26.8 -1.2
ARSB IAmb IAmb 19 50 34.7
comp=Z,50nm,1.4s
BFZ Birch Farm 62.03 139 IAMs_20 IAMs_20 20 18 59.5
comp=Z,4μm,21.0s
PXZ Pawanui 62.10 138 P **P** 19 50 26.0 -2.5
DRK Karamyk 62.12 314 P **P** 19 50 27.5 -1.5
KNZ Kokohu 62.15 137 P **P** 19 50 28.5 -0.2
MHGZ Mahia Peninsul 62.37 137 P **P** 19 50 28.5 -1.8
KBL Kabul 62.54 308 P **P** 19 50 31.0 -0.8
SNR=16
KBL Kabul 62.54 308 P **P** 19 50 30.4 -1.5
KBL pmax pmax
comp=Z,21nm,0.6s
KBL MLR MLR
comp=Z,300nm,20.0s
KBL Kabul 62.54 308 P **P** 19 50 30.4 -1.5
KBL IAmb IAmb 19 50 42.0
comp=Z,22nm,0.6s
BTLS Baital 62.87 321 *e*P **P** 19 50 32.7 -0.9
baz=320
BTLS Baital 62.87 321 *e*P **P** 19 50 32.6 -0.9
KURK Kurchatov 63.00 328 P **P** 19 50 33.2 -1.1
KURK Kurchatov 63.00 328 *ce*P **P** 19 50 32.9 -1.4
KURK pmax pmax
comp=Z,22nm,0.6s
KURK Kurchatov 63.00 328 P **P** 19 50 33.8 -0.5
BTK Batken 63.04 314 P **P** 19 50 33.5 -1.4
BTK pmax pmax
comp=Z,20nm,0.8s
BTK MLR MLR
comp=Z,1μm,22.0s
BTK Batken 63.04 314 P **P** 19 50 33.5 -1.4
SEY Seymchan 63.27 13 P **P** 19 50 35.5 -0.3
comp=Z,13nm,1.0s,baz=205,slow=7.5,SNR=6.9
SEY Seymchan 63.27 13 *i* P **P** 19 50 35.8 0.0
DZA Taraz 63.75 317 *e*P **P** 19 50 38.7 -0.8
baz=317
DZA LR LR 20 19 09.7
comp=Z,313nm,17.4s,baz=317
DZA Taraz 63.75 317 *e*P **P** 19 50 38.6 -0.8
DZA MLR MLR
comp=Z,313nm,17.0s
IUG luzhnay 64.36 316 *e*P **P** 19 50 43.0 -0.6
baz=316
IUG LR LR 20 20 07.6
comp=Z,436nm,17.6s,baz=316
IUG luzhnay 64.36 316 *e*P **P** 19 50 42.9 -0.6
IUG MLR MLR
comp=Z,436nm,18.0s
KK31 Karatay Array 64.39 317 P **P** 19 50 42.1 -1.6
KK31 pmax pmax
comp=Z,20nm,0.9s
KK31 Karatay Array 64.39 317 P **P** 19 50 42.0 -1.6
KKAR Karatay Array 64.39 317 P **P** 19 50 42.1 -1.5
KKAR Karatay Array 64.39 317 P **P** 19 50 42.1 -1.5
TAS Tashkent 64.57 315 P **P** 19 50 44.2 -0.7
TAS pmax pmax
comp=Z,47nm,0.7s
TAS Tashkent 64.57 315 P **P** 19 50 44.2 -0.7
TAS IAmb IAmb 19 50 57.1
comp=Z,47nm,0.7s
BRZS Berezniki 65.93 325 *e*P **P** 19 50 53.0 -0.5
baz=325
BRZS *e*S **S** 19 59 38.5 +0.6
baz=325
BRZS Berezniki 65.93 325 *e*P **P** 19 50 53.0 -0.5
BRZS *e*S **S** 19 59 38.4 +0.6
HRA Herat 67.93 306 P **P** 19 51 05.3 -1.5
JLN Jalan Bani Buh 68.36 293 P **P** 19 51 09.0 -0.5
BRVK Borovoye 68.65 327 P **P** 19 51 09.4 -1.2
BRVK P **P** 19 51 09.4 -1.2
BRVK Borovoye 68.65 327 *ce*P **P** 19 51 09.9 -0.7
BRVK pmax pmax
comp=Z,32nm,1.3s
BRVK Borovoye 68.65 327 P **P** 19 51 09.6 -1.0
WBK Wadi Bani Khal 68.82 293 P **P** 19 51 12.9 +0.5
TIXI Tiksi 69.17 1 *c* *i* P **P** 19 51 12.0 -1.5
TIXI Tiksi 69.17 1 P **P** 19 51 12.6 -0.9
TIXI IAmb IAmb 19 51 23.1
comp=Z,58nm,0.9s
TIXI IAMs_20 IAMs_20 20 20 01.9
comp=Z,3μm,22.0s
ATKA Atka Island 69.44 34 P **P** 19 51 15.1 -0.4
MHTO MHTO 69.58 291 P **P** 19 51 18.1 +1.1
SMDO Samad 69.71 294 P **P** 19 51 17.9 0.0
HOQ Hoqain 70.44 294 P **P** 19 51 23.8 +1.5
BILL Bilibino 70.77 15 *i* P **P** 19 51 23.9 +0.6
BILL pmax pmax
comp=Z,13nm,1.0s
BILL MLR MLR
comp=Z,2μm,21.0s
BILL Bilibino 70.77 15 P **P** 19 51 24.0 +0.6
BILL IAMs_20 IAMs_20 20 19 47.2
comp=Z,3μm,22.0s
SHAO Shalim 71.55 288 P **P** 19 51 29.7 +0.6
SHAO P **P** 19 51 29.7 +0.6
UOSS Minazif 71.59 295 P **P** 19 51 28.9 -0.4
ASHO Ashiyiah 71.69 295 P **P** 19 51 33.0 +3.1
ASHO P **P** 19 51 33.0 +3.1
NRIK Noril'sk 71.78 346 P **P** 19 51 28.7 -0.7
comp=Z,29nm,0.6s,baz=131,slow=6.1,SNR=26
NRIK LR LR 20 26 39.6
comp=Z,1μm,21.5s,baz=142,slow=39
NRIK Noril'sk 71.78 346 *ce*P **P** 19 51 28.2 -1.3
NRIK pmax pmax
comp=Z,59nm,0.9s
NRIK MLR MLR
comp=Z,4μm,26.0s
GEYT Alibeck 71.94 309 P **P** 19 51 28.5 -2.6
comp=Z,6.6nm,0.7s,baz=163,slow=5.7,SNR=13
GEYT Alibeck 71.94 309 P **P** 19 51 30.4 -0.8
GYA0B ALIBECK ARRAY 71.94 309 P **P** 19 51 30.9 -0.2
DMTO DMTO 72.18 288 P **P** 19 51 35.0 +2.1
DMTO P **P** 19 51 35.0 +2.1
ASUD Al Ashush, Dub 72.35 295 P **P** 19 51 35.0 +1.2
SOCY Socotra 72.89 282 P **P** 19 51 35.4 -1.9
SOCY IAmb IAmb 19 51 41.7
comp=Z,62nm,0.8s
WHFO Wadi Hawf 73.31 288 P **P** 19 51 44.0 +4.3
SNR=6.3
WHFO P **P** 19 51 44.0 +4.3
SNR=6.3
AB31 Akbulak array 73.35 321 *i* P **P** 19 51 37.5 -1.7
ABKAR Akbulak array 73.35 321 P **P** 19 51 38.5 -0.7
ABKAR IAmb IAmb 19 51 44.6
comp=Z,34nm,0.8s
ABKAR Akbulak array 73.35 321 P **P** 19 51 38.0 -1.1
UNV Unalaska Valle 74.36 34 P **P** 19 51 45.7 +0.7
UNV IAmb IAmb 19 51 53.5
comp=Z,47nm,0.8s

AKUT Akutan 74.86 34 P **P** 19 51 47.7 -0.2
SVE Sverdlovsk 75.23 329 *de*P **P** 19 51 49.2 -0.8
SVE *e*S **S** 20 01 29.7 +3.9
SVE pmax pmax
comp=Z,133nm,1.0s
RAR Rarotonga 75.28 113 LR LR 20 23 41.4
comp=Z,457nm,20.4s,baz=288,slow=35
XMAS Kiritimati 75.49 89 P **P** 19 51 51.8 -0.5
XMAS IAmb IAmb 19 51 58.3
comp=Z,73nm,0.9s
ARU Arti 76.20 328 *c* *i* P **P** 19 51 53.9 -1.6
ARU 19 54 45.1
ARU PPP PPP 19 56 33.4
ARU S **S** 20 01 37.6 +1.0
ARU SS **SS** 20 06 29.5 -1.2
ARU pmax pmax
comp=Z,40nm,1.0s
ARU Arti 76.20 328 P **P** 19 51 54.6 -0.9
ARU IAmb IAmb 19 52 03.8
comp=Z,67nm,0.8s
FALS False Pass 76.39 34 P **P** 19 51 56.0 -0.6
SDPT Sand Point 78.15 34 P **P** 19 52 06.2 -0.3
SDPT IAMs_20 IAMs_20 20 23 02.0
comp=Z,2μm,22.0s
ANM Nome 78.37 24 P **P** 19 52 07.5 -0.1
ANM pmax pmax
comp=Z,64nm,1.4s
ANM MLR MLR
comp=Z,1μm,20.0s
ANM Nome 78.37 24 P **P** 19 52 07.5 -0.1
ANM IAmb IAmb 19 52 13.7
comp=Z,64nm,1.4s
MAK Makhachkala 80.68 313 *e*P **P** 19 52 16.7 -3.8
MAK *e* 19 55 17.5
MAK *e*PPP PPP 19 57 14.1
MAK *e*S **S** 20 02 18.1 -7.0
MAK *e*SS **SS** 20 07 34.5 -4.2
MAK *e*SSS SSS 20 11 03.2
MAK pmax pmax
comp=Z,267nm,1.5s
MAK MLR MLR
comp=Z,734nm,20.0s
ABPO Ambohimpanom 81.11 250 P **P** 19 52 24.2 +0.6
ABPO pmax pmax
comp=Z,22nm,0.8s
ABPO MLR MLR
comp=Z,1μm,21.0s
ABPO Ambohimpanom 81.11 250 P **P** 19 52 24.2 +0.6
RAYN Ar Rayn 81.25 293 P **P** 19 52 22.8 -1.3
RAYN pmax pmax
comp=Z,42nm,1.0s
RAYN MLR MLR
comp=Z,900nm,21.0s
RAYN Ar Rayn 81.25 293 P **P** 19 52 22.8 -1.3
RAYN IAmb IAmb 19 52 31.4
comp=Z,42nm,1.0s
KIRV Kirov 81.50 329 *ce*P **P** 19 52 24.4 -0.1
BELG Belogornoye 81.62 322 *i* P **P** 19 52 24.8 -0.5
BELG pmax pmax
comp=Z,26nm,1.0s
GROC Groznyy 81.95 313 *e*P **P** 19 52 25.9 -1.4
GROC *e**PP **pP** 19 52 38.4 -0.9
GROC *e**SP **sP** 19 52 42.8 -1.0
GROC *e*S **S** 20 02 37.2 -1.1
GROC pmax pmax
comp=Z,24nm,0.6s
TTA Tatalina 81.96 27 P **P** 19 52 27.3 +0.2
TTA pmax pmax
comp=Z,25nm,0.8s
TTA MLR MLR
comp=Z,2μm,22.0s
TTA Tatalina 81.96 27 P **P** 19 52 27.3 +0.2
TTA IAMs_20 IAMs_20 20 23 58.8
comp=Z,2μm,22.0s
VNDA Vanda 82.08 173 P **P** 19 52 25.6 -1.6
comp=Z,8.3nm,0.7s,baz=320,slow=6.7,SNR=29
VNDA LR LR 20 30 33.8
comp=Z,899nm,18.9s,baz=332,slow=37
VNDA Vanda 82.08 173 P **P** 19 52 26.2 -1.0
DAMY Dhamar 82.25 284 P **P** 19 52 30.7 +0.9
DAMY IAmb IAmb 19 52 38.1
comp=Z,34nm,0.9s
OHAK Old Harbor 82.42 33 IAMs_20 IAMs_20 20 20 10.0
comp=Z,1μm,21.0s
GNI Garni 82.54 310 ⇓ *e*P **P** 19 52 29.5 -1.2
GNI pmax pmax
comp=Z,22nm,0.7s
GNI Garni 82.54 310 P **P** 19 52 31.5 +0.8
GNI IAmb IAmb 19 52 50.9
comp=Z,62nm,1.1s
MAW Mawson 82.60 200 P **P** 19 52 29.4 -0.7
comp=Z,3.3nm,0.5s,baz=60,slow=5.8,SNR=20
MAW Mawson 82.60 200 P **P** 19 52 30.0 -0.1
baz=83,SNR=18
MAW Mawson 82.60 200 P **P** 19 52 29.7 -0.4
KDAK Kodiak Island 82.87 32 P **P** 19 52 31.9 +0.1
KDAK pmax pmax
comp=Z,51nm,0.8s
KDAK MLR MLR
comp=Z,2μm,20.0s
KDAK Kodiak Island 82.87 32 P **P** 19 52 31.9 +0.1
KDAK IAmb IAmb 19 52 37.3
comp=Z,51nm,0.8s
KDAK IAMs_20 IAMs_20 20 26 23.8
comp=Z,2μm,20.0s
A21K Barrow 83.39 18 P **P** 19 52 35.4 +1.2
baz=258,SNR=23
A21K Barrow 83.39 18 P **P** 19 52 34.9 +0.7
IMAR Indian Mountai 83.45 24 P **P** 19 52 34.8 +0.2
AKH Akhalkalaki 83.55 311 ⇓ P **P** 19 52 36.7 +0.8
AKH Akhalkalaki 83.55 311 IAMs_20 IAMs_20 20 36 31.7
comp=Z,3μm,22.0s
PPLA Purkeypile 83.69 27 P **P** 19 52 36.1 0.0
PPLA IAmb IAmb 19 52 41.5
comp=Z,39nm,0.8s
PPLA IAMs_20 IAMs_20 20 25 23.4
comp=Z,2μm,22.0s
CNPM China Poot 83.76 30 IAMs_20 IAMs_20 20 25 13.4
comp=Z,2μm,21.0s
GEVA Gevas 83.76 308 P **P** 19 52 36.4 -0.7
ATD Arta Tunnel 83.80 281 P **P** 19 52 39.4 +1.9
comp=Z,30nm,0.8s,baz=100,slow=7.8
ATD Arta Tunnel 83.80 281 P **P** 19 52 38.3 +0.8
ATD IAmb IAmb 19 52 46.6
comp=Z,43nm,0.9s
SKT Skwentna 83.88 28 IAMs_20 IAMs_20 20 26 32.5
comp=Z,2μm,22.0s
BRLK Bradley Lake 83.97 30 P **P** 19 52 36.9 -0.5
BRLK IAMs_20 IAMs_20 20 24 46.5
comp=Z,2μm,22.0s
GOF Gofitskoye 84.04 315 ⇑ *e*P **P** 19 52 38.9 +0.8
GOF pmax pmax
comp=Z,49nm,1.0s
KBZ Khabaz 84.08 314 P **P** 19 52 37.3 -1.0
comp=Z,14nm,1.0s,baz=120,slow=2.2,SNR=12
KBZ Khabaz 84.08 314 *ce*P **P** 19 52 38.7 +0.4
KBZ pmax pmax
comp=Z,24nm,1.1s
SUA Susitna One 84.20 29 P **P** 19 52 38.5 -0.1
KIV Kislovodsk 84.25 314 ⇓ P **P** 19 52 39.7 +0.4
KIV Kislovodsk 84.25 314 P **P** 19 52 38.9 -0.4
KIV pmax pmax
comp=Z,76nm,1.5s
KIV MLR MLR
comp=Z,800nm,22.0s
KIV Kislovodsk 84.25 314 P **P** 19 52 38.9 -0.4
KIV IAmb IAmb 19 52 56.1
comp=Z,76nm,1.5s
KTH Kantishna Hill 84.33 26 P **P** 19 52 39.0 -0.2
KTH IAmb IAmb 19 52 56.4
comp=Z,33nm,1.0s
KTH IAMs_20 IAMs_20 20 25 23.4
comp=Z,2μm,22.0s
BPAW Bear Paw Mtn. 84.36 26 P **P** 19 52 39.5 +0.2
PPT Papeete 84.45 108 LR LR 20 26 47.3
comp=Z,1μm,20.2s,baz=272,slow=33
CUT Chulitna 84.52 28 P **P** 19 52 40.1 0.0
baz=265
MLY Manley 84.57 25 P **P** 19 52 41.0 +0.6
baz=264,SNR=35
TRF Thorofare Moun 84.61 27 P **P** 19 52 39.7 -1.1
TRF IAmb IAmb 19 52 56.4
comp=Z,36nm,1.1s
TRF IAMs_20 IAMs_20 20 25 30.6
comp=Z,2μm,22.0s

O22K **Cooper Landing** 84.61 30 P P 19 52 41.2 +0.6
baz=265,SNR=11
O22K **Cooper Landing** 84.61 30 P P 19 52 40.4 -0.2
O22K IAMs_20 IAMs_20 20 25 34.7
comp=Z,2µm,22.0s
RC01 **Rabbit Creek A** 84.65 29 P P 19 52 41.1 +0.3
baz=265,SNR=14
SEW **Seward** 84.71 30 P P 19 52 40.3 -0.8
SEW IAMs_20 IAMs_20 20 25 21.5
comp=Z,2µm,21.0s
PMR **Palmer** 84.98 29 P P 19 52 41.7 -0.7
PMR pmax pmax
comp=Z,51nm,0.8s
PMR MLR MLR
comp=Z,1µm,22.0s
PMR **Palmer** 84.98 29 P P 19 52 41.7 -0.7
COLD **Coldfoot** 85.01 23 P P 19 52 43.6 +1.0
baz=264,SNR=47
COLD **Coldfoot** 85.01 23 P P 19 52 43.0 +0.5
COLD IAmb IAmb 19 52 49.7
comp=Z,33nm,1.0s
TBI **Tubuai** 85.01 114 eS S 20 03 13.5 +3.6
comp=Z,1µm,34.8s
TBI **Tubuai** 85.01 114 eLQ LQ 20 15 56.4
comp=Z,1µm,39.0s
TBI eLR LR 20 19 33.4
comp=Z,4µm,25.5s
GHO **Glory Hole Cre** 85.09 28 P P 19 52 42.8 -0.3
GHO IAmb IAmb 19 52 58.8
comp=Z,35nm,0.8s
I23K **Minto, Yukon-K** 85.16 25 P P 19 52 44.1 +0.8
baz=265,SNR=12
VRH **Novokhopyorsk** 85.18 321 eP P 19 52 42.9 -0.8
VRH eS S 20 03 07.7 -2.8
VRH pmax pmax
comp=Z,70nm,0.8s
VRH smax smax
comp=N,360nm,3.8s
MCK **McKinley** 85.23 26 P P 19 52 44.3 +0.6
baz=266,SNR=8.4
NEA2 **Nenana** 85.24 25 P P 19 52 45.7 +2.0
baz=266,SNR=7.5
RND **Reindeer** 85.25 27 P P 19 52 43.0 -0.9
RND **Reindeer** 85.25 27 P P 19 52 43.0 -0.9
RND IAmb IAmb 19 52 48.7
comp=Z,23nm,0.6s
RND IAMs_20 IAMs_20 20 26 02.4
comp=Z,2µm,22.0s
KNK **Knik Glacier** 85.29 29 P P 19 52 43.5 -0.6
SML **Sawmill** 85.38 28 IAMs_20 IAMs_20 20 27 29.5
comp=Z,2µm,22.0s
TOLK **Toolik Lake Re** 85.38 21 P P 19 52 45.4 +1.0
baz=265,SNR=24
MARD **Mardin** 85.55 307 P P 19 52 45.4 -0.7
MARD IAmb IAmb 19 52 51.2
comp=Z,38nm,0.8s
MDM **Murphy Dome** 85.62 25 P P 19 52 45.9 +0.2
TCOL **CIGÖ, UAF Yank** 85.78 25 P P 19 52 46.0 -0.3
baz=267
COLA **College** 85.78 25 i P P 19 52 45.3 -1.1
COLA pmax pmax
comp=Z,8.0nm,0.8s
COLA **College** 85.78 25 P P 19 52 46.3 -0.1
KOPT **Kop Dagi** 85.79 310 P P 19 52 46.8 -0.6
SCM **Sheep Creek Mo** 85.86 28 P P 19 52 47.4 +0.4
SCM pmax pmax
comp=Z,102nm,1.1s
SCM MLR MLR
comp=Z,1µm,22.0s
SCM **Sheep Creek Mo** 85.86 28 P P 19 52 47.4 +0.4
DHY **Denali Highway** 85.89 27 IAMs_20 IAMs_20 20 26 11.0
comp=Z,2µm,22.0s
GLI **Glacier Island** 85.92 29 P P 19 52 47.5 +0.3
GLI IAMs_20 IAMs_20 20 26 22.5
comp=Z,1µm,21.0s
POKR **Poker Plat Res** 85.97 25 P P 19 52 49.2 +1.8
baz=267
HDA **Harding Lake** 86.14 26 P P 19 52 49.8 +1.5
baz=268,SNR=9.0
IL31 86.19 25 P P 19 52 47.1 -1.3
ILAR **Eielson Array** 86.19 25 P P 19 52 46.7 -1.7
comp=Z,2.0nm,0.6s,baz=256,slow=5.1,SNR=25
ILAR PP PP 19 56 09.8 +0.6
comp=Z,2.1nm,1.1s,baz=243,slow=7.4,SNR=4.5
ILAR PKKPbc PKKPbc 20 10 50.0 +0.2
comp=Z,0.6nm,0.8s,baz=31,slow=2.1,SNR=4.8
ILAR LR LR 20 29 27.0
comp=Z,435nm,21.8s,baz=266,slow=34
ILAR **Eielson Array** 86.19 25 P P 19 52 47.0 -1.4
HIN **Hinchinbrook I** 86.20 30 IAMs_20 IAMs_20 20 27 36.7
comp=Z,2µm,22.0s
KTUT **Trabzon** 86.35 311 ⇓P P 19 52 50.6 +0.9
SOC **Sochi** 86.39 313 eP P 19 52 46.6 -3.3
SOC ePPP PPP 19 58 01.3
SOC eS SKSac 20 03 09.8 -3.3
SOC pmax pmax
comp=Z,29nm,0.7s
SOC MLR MLR
comp=Z,1µm,21.0s
M24K **Tolsona, Glenn** 86.41 28 P P 19 52 50.5 +0.8
baz=268
M24K **Tolsona, Glenn** 86.41 28 P P 19 52 50.2 +0.6
M24K IAMs_20 IAMs_20 20 27 07.2
comp=Z,2µm,22.0s
KLU **Klutina** 86.51 29 IAMs_20 IAMs_20 20 28 52.0
comp=Z,2µm,22.0s
EYAK **Cordova Ski Ar** 86.58 30 IAMs_20 IAMs_20 20 25 59.7
comp=Z,2µm,22.0s
KLMR **Klimovskoe** 86.69 331 eP P 19 52 48.9 -2.0
KLMR e 19 56 10.3
KLMR eS SKSac 20 03 12.3 -1.9
KLMR pmax pmax
comp=Z,43nm,1.1s
KLMR **Klimovskoe** 86.69 331 eP P 19 52 48.9 -2.0
KLMR AMP 19 52 59.0
comp=Z,43nm,1.1s
KLMR ePP PP 19 56 10.4 -3.0
KLMR eS SKSac 20 03 12.3 -1.9
KLMR eS SKSac 20 03 12.3 -1.9
KLMR LQ LQ 20 24 53.5
KLMR LQ LQ 20 24 53.5
KLMR LR LR 20 29 58.6
VORD **Divnogorie** 86.71 321 eP P 19 52 51.3 +0.1
VORD pmax pmax
comp=Z,10.0nm,0.4s
PAX **Paxson** 86.76 27 IAMs_20 IAMs_20 20 27 17.5
comp=Z,2µm,22.0s
VORR **Voronezh** 86.76 321 eP P 19 52 49.0 -2.5
VORR pmax pmax
comp=Z,250nm,1.6s
VSR **Storozhevoye** 86.79 321 eP P 19 52 51.7 +0.1
VSR eS S 20 03 23.9 -2.3
VSR pmax pmax
comp=Z,40nm,1.2s
VSR smax smax
comp=N,430nm,5.0s
LPSR **Galich'ya Gora** 86.94 322 eP P 19 52 51.3 -1.0
LPSR pmax pmax
comp=Z,50nm,0.8s
RIDG **Independent Ri** 87.05 26 P P 19 52 52.0 -0.7
RIDG IAmb IAmb 19 52 57.5
comp=Z,18nm,0.9s
RIDG IAMs_20 IAMs_20 20 27 10.3
comp=Z,2µm,22.0s
RAGM **Ragged Mountai** 87.11 30 IAMs_20 IAMs_20 20 27 01.7
comp=Z,2µm,19.0s
N25K **Chitina, Valde** 87.15 29 P P 19 52 54.1 +0.8
baz=270
N25K **Chitina, Valde** 87.15 29 P P 19 52 53.4 +0.1
N25K IAMs_20 IAMs_20 20 29 10.8
comp=Z,1µm,22.0s
BMAR **Burnt Mountain** 87.20 23 P P 19 52 53.8 +0.4
HMT **Hamilton** 87.31 30 IAMs_20 IAMs_20 20 28 34.1
comp=Z,2µm,21.0s
TMCR **Tamitsa** 87.41 334 eP P 19 52 52.4 -1.9
TMCR pmax pmax
comp=Z,19nm,0.6s
SCRK **Sand Creek** 87.43 26 P P 19 52 55.1 +0.4
baz=270,SNR=8.3
GLB **Gilahina Butte** 87.53 29 P P 19 52 56.0 +0.9
GLB IAmb IAmb 19 53 03.0
comp=Z,30nm,1.2s
MENT **Mentasta** 87.56 27 P P 19 52 55.0 -0.2
MENT IAmb IAmb 19 53 00.5
comp=Z,13nm,0.6s
MENT IAMs_20 IAMs_20 20 27 23.7
comp=Z,2µm,22.0s
MOS **Moscow** 87.68 326 eP P 19 52 56.2 +0.4
MOS eS S 20 03 36.4 +1.7
MOS pmax pmax
comp=Z,63nm,1.3s
MOS MLR MLR
comp=Z,1µm,23.0s
MOS MLR MLR
comp=E,800nm,22.0s
L26K **Log Cabin Wild** 87.73 27 P P 19 52 56.6 +0.6
baz=271,SNR=8.0
FURI **Furi** 87.97 279 IAMs_20 IAMs_20 20 33 36.8
comp=Z,2µm,22.0s
TGL **Tana Glacier** 88.01 29 IAMs_20 IAMs_20 20 27 33.7
comp=Z,2µm,22.0s
ANN **Anapa** 88.02 315 eP P 19 53 04.9 +7.2
ANN pmax pmax
comp=Z,134nm,1.4s
ISLE **Juniper Island** 88.26 30 IAMs_20 IAMs_20 20 27 40.2
comp=Z,2µm,21.0s
K27K **Chicken** 88.27 26 P P 19 52 59.4 +0.9
baz=272
K27K **Chicken** 88.27 26 IAMs_20 IAMs_20 20 27 46.1
comp=Z,2µm,22.0s
OBN **Obninsk** 88.30 325 ⇓P P 19 52 59.9 +1.1
OBN **Obninsk** 88.30 325⇓eP P 19 52 59.2 +0.4
OBN i S S 20 03 38.0 -2.5
OBN pmax pmax
comp=Z,34nm,1.1s
OBN MLR MLR
comp=Z,2µm,24.0s
OBN **Obninsk** 88.30 325 P P 19 52 59.4 +0.6
OBN IAmb IAmb 19 53 09.3
comp=Z,32nm,0.7s
OBN **Obninsk** 88.30 325 IAMs_20 IAMs_20 20 38 42.3
comp=Z,1µm,22.0s
GAZ **Gaziantep** 88.40 307 P P 19 52 59.9 +0.1
GAZ IAmb IAmb 19 53 18.8
comp=Z,58nm,1.3s
BCAR **Beaver Creek A** 88.44 27 P P 19 52 59.3 -0.1
MESA **MESA** 88.47 30 IAMs_20 IAMs_20 20 29 09.9
comp=Z,2µm,22.0s
YAH **Yahtse** 88.56 30 IAMs_20 IAMs_20 20 29 14.1
comp=Z,2µm,21.0s
BARN **Barnard Glacie** 88.58 29 P P 19 53 00.9 +0.6
BARN IAmb IAmb 19 53 18.1
comp=Z,37nm,1.2s
EGAK **Eagle** 88.64 25 P P 19 53 00.6 +0.3
EGAK IAmb IAmb 19 53 05.2
comp=Z,12nm,0.7s
LVZ **Lovozero** 88.69 338 i P P 19 53 01.2 +0.8
LVZ pmax pmax
comp=Z,62nm,1.2s
LVZ **Lovozero** 88.69 338 IAMs_20 IAMs_20 20 37 46.9
comp=Z,2µm,19.0s
CTGM **Chitina Glacie** 88.74 29 P P 19 53 01.7 +0.7
CTGM IAmb IAmb 19 53 15.8
comp=Z,24nm,1.0s
CTGM IAMs_20 IAMs_20 20 27 57.8
comp=Z,2µm,22.0s
TABL **Table Mountain** 88.86 30 IAMs_20 IAMs_20 20 29 23.5
comp=Z,2µm,22.0s
TOKA **Tokat** 88.86 310 P P 19 53 02.0 +0.1
KIBK **Kibwezi** 89.05 268 P P 19 53 04.0 +0.7
SNR=11
APA **Apatity** 89.18 337⇓i P P 19 53 08.2 +5.5
APA pmax pmax
comp=Z,11nm,1.1s
APA MLR MLR
comp=Z,6µm,28.0s
PCA **Pinnacle** 89.32 30 IAMs_20 IAMs_20 20 29 46.2
comp=Z,2µm,21.0s
DAWY **Dawson** 89.45 26 P P 19 53 04.3 +0.2
DAWY IAmb IAmb 19 53 09.5
comp=Z,16nm,0.8s
DAWY IAMs_20 IAMs_20 20 29 42.7
comp=Z,2µm,22.0s
BRTR **Keskin Array B** 91.07 310 P P 19 53 11.6 -0.7
comp=Z,2.1nm,0.8s,baz=105,slow=3.3,SNR=8.9
BRTR LR LR 20 40 24.9
comp=Z,177nm,21.8s,baz=87,slow=40
KEV **Kevo** 91.23 340 IAMs_20 IAMs_20 20 40 56.0
comp=Z,2µm,21.0s
SYO **Syowa Base** 91.28 201⇑i P P 19 53 13.0 +0.6
SYO **Syowa Base** 91.28 201⇑i pP pP 19 53 23.9 -0.7
INK **Inuvik** 91.30 22 P P 19 53 10.8 -1.7
comp=Z,2.3nm,0.7s,baz=297,slow=6.5,SNR=18
INK **Inuvik** 91.30 22 IAMs_20 IAMs_20 20 35 47.2
comp=Z,2µm,22.0s
CSS **Maiatis** 91.65 305 P P 19 53 14.2 -0.8
ARA0 **ARCESS Array S** 91.78 340 P P 19 53 13.4 -1.4
ARA0 **ARCESS Array S** 91.78 340 eP P 19 53 16.4 +1.6
ARCES **ARCESS Array B** 91.78 340 P P 19 53 13.0 -1.8
comp=Z,18nm,0.7s,baz=78,slow=5.5,SNR=20
ARCES PKKP PKKPdf 20 10 33.9 +1.2
comp=Z,4.2nm,0.9s,baz=243,slow=2.2,SNR=7.7
SPA0 **Spitsbergen Ar** 91.83 349 eP P 19 53 12.5 -2.4
SKAG **Skagway** 91.86 30 IAMs_20 IAMs_20 20 30 37.4
comp=Z,2µm,21.0s
WHY **Whitehorse** 91.92 29 P P 19 53 15.5 -0.2
WHY IAmb IAmb 19 53 21.7
comp=Z,48nm,1.5s
WHY IAMs_20 IAMs_20 20 30 59.3
comp=Z,2µm,22.0s
HAMF **Hammerfest** 92.15 341 eP P 19 53 17.6 +1.2
SIT **Sitka** 92.19 33 IAMs_20 IAMs_20 20 28 32.3
comp=Z,2µm,22.0s
BESE **Bessie Mountai** 92.23 31 IAMs_20 IAMs_20 20 31 36.1
comp=Z,2µm,22.0s
QSPA **South Pole Qui** 92.31 180 P P 19 53 16.9 -0.5
QSPA IAmb IAmb 19 53 33.9
comp=Z,26nm,0.9s
KBS **Kingsbay** 92.36 350 IAMs_20 IAMs_20 20 38 40.4
comp=Z,1µm,22.0s
KTK1 **Kautokeino** 92.69 339 eP P 19 53 20.1 +1.1
MDUB **Mudurnu** 92.88 311 IAMs_20 IAMs_20 20 43 04.2
comp=Z,2µm,22.0s
AKASG **Malin Array Be** 93.09 321 P P 19 53 19.6 -1.6
comp=Z,0.7nm,0.5s,baz=61,slow=26,SNR=2.7
AKASG LR LR 20 39 24.9
comp=Z,691nm,21.0s,baz=60,slow=38
AKASG **Malin Array Be** 93.09 321 i P P 19 53 24.2 +3.0
AKASG pmax pmax
comp=Z,4.0nm,0.7s
FINES **FINESS Array B** 93.13 332 P P 19 53 19.6 -1.5
comp=Z,2.5nm,0.6s,baz=50,slow=5.3,SNR=10
FINES PKKP PKKPbc 20 10 33.0 +0.8
comp=Z,1.9nm,0.9s,baz=299,slow=2.9,SNR=3.8
TAOE **Nuku Hiva Isla** 93.18 99 eS S 20 04 29.8 +2.7
comp=Z,3µm,28.3s
TAOE **Nuku Hiva Isla** 93.18 99 eLR LR 20 23 20.5
comp=Z,5µm,24.2s
KIS **Kishinev** 93.84 317 eP P 19 53 32.0 +7.2
comp=Z,170nm,4.7s
KIS **Kishinev** 93.84 317 eP P 19 53 32.0 +7.2
KIS e 20 04 00.0
KIS eS S 20 04 35.0 +3.6
KIS pmax pmax
comp=Z,170nm,4.7s
MILM **Milestii Mici** 93.86 317 ⇓P P 19 53 25.7 +0.9
TRO **Tromso** 93.99 341 eP P 19 53 26.0 +1.1
SORM **Soroca** 94.00 318 ⇑P P 19 53 25.5 +0.1
TLCR 94.08 315 ⇓P P 19 53 26.2 +0.3
C36M **Paulatuk** 94.37 20 P P 19 53 26.4 -0.3
baz=289
DIB **Dawson Inlet,** 94.40 36 IAMs_20 IAMs_20 20 27 04.3
comp=Z,2µm,22.0s
CFR **Carcaliu** 94.56 315 ⇓P P 19 53 28.0 -0.1
DLBC **Dease Lake** 94.75 31 P P 19 53 29.2 +0.4
comp=Z,5.7nm,0.8s,baz=223,slow=4.0,SNR=10
DLBC **Dease Lake** 94.75 31 IAMs_20 IAMs_20 20 32 55.2
comp=Z,1µm,22.0s
ICOR **Ion Corvin** 94.95 314 ⇓P P 19 53 29.5 -0.3
MANT **Manisa** 95.13 309 IAMs_20 IAMs_20 20 44 55.9
comp=Z,2µm,22.0s
TESR **Tescani** 95.39 317 ⇓P P 19 53 31.9 0.0
VRI **Vrincioaia** 95.44 316 ⇑P P 19 53 32.1 0.0
PLOR **Plostina** 95.49 316 ⇓P P 19 53 33.1 +0.7
BIZ **Bicaz** 95.69 317 ⇑P P 19 53 33.7 +0.4
NEHR **Nehoiu** 95.81 316 ⇓P P 19 53 34.3 +0.4
STEI **Steigen** 95.83 339 eP P 19 53 33.8 +0.5
EUNU **Eureka** 95.98 6 P P 19 53 34.1 +0.2
EUNU IAMs_20 IAMs_20 20 36 40.0
comp=Z,1µm,20.0s
FAUS **Fauske** 96.01 339 eP P 19 53 36.1 +1.9
MLR **Muntele Rosu** 96.04 316 P P 19 53 34.7 -0.4
MLR **Muntele Rosu** 96.04 316 P P 19 53 34.6 -0.4
BURAR **Bucovina Array** 96.17 318 ⇓P P 19 53 35.5 0.0
BURAR **Bucovina Array** 96.17 318 P P 19 53 35.0 -0.5
BUR08 **Bucovina Ar. S** 96.17 318 P P 19 53 35.2 -0.3
BUR08 IAmb IAmb 19 53 45.3
comp=Z,14nm,1.1s
MBAR **Mbarara** 96.28 270 i P P 19 53 34.6 -2.2
MBAR pmax pmax
comp=Z,2.0nm,0.9s
MBAR **Mbarara** 96.28 270 P P 19 53 36.7 -0.2
KARP **Karpathos** 96.61 306 P P 19 53 37.5 -0.2
VOIR 96.67 316 ⇑P P 19 53 38.3 +0.5
MOR8 **Moi Rana** 96.76 338 eP P 19 53 38.3 +0.6
ARR **Arges** 96.97 316 ⇓P P 19 53 38.1 -1.1
KOLS **Kolonicke sedl** 97.83 320 eP Pdif 19 53 46.6 +3.6
KOLS **Kolonicke sedl** 97.83 320 ePDIFF Pdif 19 53 46.6 +3.6
UZH **Uzhgorod** 97.89 320 eP Pdif 19 53 45.4 +2.2
UZH e 19 53 59.0
DRGR 98.00 318 ⇑P Pdif 19 53 44.1 +0.3
GZR **Gura Zlata** 98.25 316 ⇑P P 19 53 44.3 -0.6
NSS **Namsos** 98.36 337 eP Pdif 19 53 45.7 +0.8
CRVS **Cervenica-Dubn** 98.36 320 eP Pdif 19 53 46.6 +1.3
CRVS **Cervenica-Dubn** 98.36 320 ePDIFF Pdif 19 53 46.6 +1.3
IDI **Anoyia** 98.49 306 ⇓P P 19 53 45.6 -0.6
DAG **Danmarks Havn** 98.60 352 i P P 19 53 44.0 -1.8
DAG pmax pmax
comp=Z,8.0nm,0.7s
DAG **Danmarks Havn** 98.60 352 i P P 19 53 44.0 -1.8
comp=Z,8.0nm,0.7s
DAG **Danmarks Havn** 98.60 352 i P P 19 53 44.0 -1.8
DAG IAmb IAmb 19 53 49.2
comp=Z,8.0nm,0.7s
SIRR **Siria** 98.83 317 ⇓P P 19 53 47.2 -0.2
BZS **Buzias** 99.00 317 ⇓P P 19 53 47.2 -0.9
RES **Resolute Bay** 99.07 10 P Pdif 19 53 47.9 0.0
comp=Z,8.0nm,0.9s,baz=287,slow=6.7,SNR=10.0
RES **Resolute Bay** 99.07 10 P Pdif 19 53 47.5 -0.4
RES pmax pmax
comp=Z,12nm,1.0s
RES MLR MLR
comp=Z,1µm,22.0s
RES **Resolute Bay** 99.07 10 Pdif 19 53 47.5 -0.4
RES IAmb IAmb 19 54 03.0
comp=Z,12nm,0.9s
LIT **Litokhoron** 99.52 311 P Pdif 19 53 49.8 -0.9
LIT pmax pmax
comp=Z,12nm,1.0s
LIT **Litokhoron** 99.52 311 Pdif 19 53 49.8 -0.9
LIT IAmb IAmb 19 53 55.7
comp=Z,12nm,1.0s
NC602 **NORSAR Array S** 100.07 333 ePdif Pdif 19 53 53.9 +1.3
NB2 **NORSAR Subarra** 100.09 334 P Pdif 19 53 50.7 -2.1
comp=Z,11nm,1.1s,baz=67,slow=4.6
NB2 **NORSAR Subarra** 100.09 334 P Pdif 19 53 50.7 -2.1
baz=67,slow=4.6
NOA **NORSAR Array B** 100.09 334 P Pdif 19 53 50.9 -1.9
comp=Z,2.1nm,0.7s,baz=66,slow=4.5,SNR=7.4
NOA PP PP 19 57 56.4 -1.8
comp=Z,1.1nm,0.9s,baz=70,slow=7.9,SNR=3.3
NOA PKKPbc PKKPbc 20 10 12.7 -0.7
comp=Z,0.6nm,0.7s,baz=219,slow=4.1,SNR=2.5
OKC **Ostrava-Krasne** 100.22 321 AMS AMS 20 37 10.0
comp=Z,1µm,23.7s
NVL **N'lazarevskaya** 100.37 198 eP Pdif 19 53 59.3 +5.6
NVL eS SKSac 20 04 32.5 +3.6
NVL eSSS SSS 20 16 11.8
NVL pmax pmax
comp=Z,7.0nm,0.7s
YKA **Yellowknife Ar** 100.59 25 P Pdif 19 53 54.6 -0.3
comp=Z,1.9nm,0.8s,baz=289,slow=3.9,SNR=4.9
DBG **Daneborg** 100.88 351 i P Pdif 19 53 59.1 +3.2
DBG IAmb IAmb 19 54 02.5
comp=Z,6.0nm,0.9s
KRLC **Kraliky** 100.99 322 AMS AMS 20 41 40.0
comp=Z,1µm,22.4s
NLWA **Neilton Lookou** 101.07 41 IAMs_20 IAMs_20 20 32 20.8
comp=Z,2µm,22.0s
DPC **Dobruska-Polom** 101.19 322 AMS AMS 20 41 40.0
comp=Z,2µm,24.1s
OSTC **Ostas** 101.19 323 AMS AMS 20 41 50.0
comp=Z,2µm,25.0s
UPC **Upice** 101.33 323 AMS AMS 20 41 40.0
comp=Z,3µm,27.5s
VRAC **Vranov** 101.34 321 ⇑P Pdif 19 53 58.1 -0.4
PDG **Podgorica** 101.39 314 IAMs_20 IAMs_20 20 46 58.2
comp=Z,1µm,22.0s
KONO **Kongsberg** 101.41 333 IAMs_20 IAMs_20 20 48 44.4
comp=Z,1µm,19.0s
BOSA **Boshof** 101.45 241 PKiKP PKiKP 19 58 24.4 +0.6
comp=Z,2.7nm,1.0s,baz=135,slow=1.4,SNR=4.1
RGN **Rugen** 101.54 327 IAMs_20 IAMs_20 20 43 15.1
comp=Z,1µm,22.0s
PVCC **Panska Ves** 102.20 323 AMS AMS 20 42 30.0
comp=Z,2µm,22.6s
B06A **Marblemount** 102.28 39 IAMs_20 IAMs_20 20 32 54.0
comp=Z,2µm,21.0s
PRU **Pruhonice** 102.39 322 AMS AMS 20 42 30.0
comp=Z,2µm,25.4s
PRA **Prague** 102.43 322 AMS AMS 20 42 40.0
comp=Z,1µm,22.6s
F04A **Amboy** 102.44 42 IAMs_20 IAMs_20 20 32 59.5
comp=Z,2µm,21.0s
BRG **Berggiesshubel** 102.46 323 eP Pdif 19 54 05.2 +1.7
comp=Z,2.4nm,0.9s
BRG **Berggiesshubel** 102.46 323 eP Pdif 19 54 05.2 +1.7
BRG pmax pmax
comp=Z,2.0nm,0.9s
CLL **Collm** 102.87 324 eSKSac SKSac 20 04 42.0 +0.3
CLL eSdif Sdif 20 05 46.0 -2.0
CLL ePS PS 20 07 22.0 -6.1
CLL eSS SS 20 12 54.0 -2.9
CLL eSSSS 20 20 06.0
CLL **Collm** 102.87 324 IAMs_20 IAMs_20 20 45 48.7
comp=Z,1µm,22.0s
H04A **Detroit Lake** 102.96 43 IAMs_20 IAMs_20 20 29 35.2
comp=Z,2µm,19.0s
HUMO **Hull Mountain** 103.00 45 IAMs_20 IAMs_20 20 40 27.3
comp=Z,1µm,22.0s
KHC **Kasperske Hory** 103.27 322 eP Pdif 19 54 10.7 +3.5
KHC MLR MLR
comp=Z,2µm,26.0s
KHC **Kasperske Hory** 103.27 322 eP Pdif 19 54 10.7 +3.5
KHC ex x 19 57 34.5
KHC AMS AMS 20 42 50.0
comp=Z,2µm,26.0s
GEC2 **GERESS Array S** 103.29 321 IAMs_20 IAMs_20 20 47 44.0
comp=Z,2µm,22.0s
GERES **GERESS Array B** 103.29 321 Pdiff Pdif 19 54 06.8 -0.6
comp=Z,1.1nm,1.1s,baz=60,slow=5.8,SNR=2.1
GERES PKiKP PKiKP 19 58 26.8 +0.3
comp=Z,0.4nm,0.6s,baz=54,slow=1.7,SNR=1.7
GERES PKKP PKKPdf 20 10 09.1 -2.5
comp=Z,0.5nm,0.7s,baz=288,slow=0.6,SNR=3.9
YBH **Yreka Blue Hor** 103.41 46 Pdiff Pdif 19 54 10.4 +2.4
comp=Z,1.4nm,0.6s,baz=235,slow=6.5,SNR=2.4
YBH **Yreka Blue Hor** 103.41 46 IAMs_20 IAMs_20 20 42 01.3
comp=Z,1µm,19.0s
NKC **Novy Kostel** 103.58 323 AMS AMS 20 43 40.0
comp=Z,3µm,24.1s
B08A **Colville Reser** 103.69 39 IAMs_20 IAMs_20 20 33 25.3
comp=Z,2µm,22.0s
HOPS **Hopland Field** 103.85 49 IAMs_20 IAMs_20 20 31 27.5
comp=Z,2µm,22.0s
E07A **Sunnyside** 103.94 41 IAMs_20 IAMs_20 20 33 54.2
comp=Z,2µm,21.0s
SNAA **Sanae** 104.00 194 PKKPbc PKKPbc 20 10 01.7 -0.6
comp=Z,1.4nm,0.7s,baz=16,slow=1.9,SNR=7.0
SNAA **Sanae** 104.00 194 i P Pdif 19 54 11.3 +1.4
SNAA MLR MLR
comp=Z,1µm,22.0s
SNAA **Sanae** 104.00 194 Pdif Pdif 19 54 11.3 +1.4
SNAA IAMs_20 IAMs_20 20 42 32.9
comp=Z,1µm,22.0s
GDXM **Geysers** 104.11 49 IAMs_20 IAMs_20 20 31 57.1
comp=Z,2µm,22.0s
MCCM **Marconi Confer** 104.21 50 IAMs_20 IAMs_20 20 30 33.8
comp=Z,2µm,22.0s
D08A **Wollman Farm,** 104.39 40 IAMs_20 IAMs_20 20 34 28.8
comp=Z,2µm,22.0s
K05A **Summer Lake** 104.42 45 IAMs_20 IAMs_20 20 33 29.1
comp=Z,2µm,22.0s
GRA1 **Grafenberg Arr** 104.51 323 IAMs_20 IAMs_20 20 49 05.2
comp=Z,1µm,21.0s
C09A **Chrisman Ranch** 104.55 39 IAMs_20 IAMs_20 20 34 23.9
comp=Z,2µm,22.0s
ORV **Oroville** 104.88 48 IAMs_20 IAMs_20 20 32 06.5

comp=Z,1µm,22.0s
G08A Pilot Rock 104.95 42 IAMs_20 IAMs_20 20 33 08.8
comp=Z,2µm,22.0s
E09A Wood Farm, Sta 105.07 40 IAMs_20 IAMs_20 20 34 39.0
comp=Z,2µm,21.0s
MOD Modoc Plateau 105.08 46 IAMs_20 IAMs_20 20 32 50.6
comp=Z,2µm,22.0s
NEW Newport 105.10 39 IAMs_20 IAMs_20 20 33 06.7
comp=Z,2µm,22.0s
PAOL Paolisi 105.14 314 IAMs_20 IAMs_20 20 47 37.7
comp=Z,1µm,21.0s
AFDM Forest Hills D 105.44 49 IAMs_20 IAMs_20 20 42 11.4
comp=Z,1µm,21.0s
MURB Monte Urbino 105.90 316 IAMs_20 IAMs_20 20 49 53.5
comp=Z,1µm,21.0s
J08A Circle Bar Ran 105.91 44 IAMs_20 IAMs_20 20 34 07.4
comp=Z,1µm,20.0s
RUBR Rubicon Trail 106.02 48 IAMs_20 IAMs_20 20 42 30.9
comp=Z,959nm,20.0s
CMB Columbia Colle 106.14 49 IAMs_20 IAMs_20 20 32 32.8
comp=Z,1µm,22.0s
BMO Blue Mountains 106.20 42 IAMs_20 IAMs_20 20 35 38.9
comp=Z,1µm,22.0s
PMPB Monarch Peak 106.31 51 IAMs_20 IAMs_20 20 42 26.7
comp=Z,2µm,21.0s
VCNR Virginia City 106.33 48 IAMs_20 IAMs_20 20 33 25.8
comp=Z,1µm,22.0s
PAHR Pah Rah Range 106.40 47 IAMs_20 IAMs_20 20 34 56.9
comp=Z,2µm,22.0s
PNTR Pine Nut 106.43 48 IAMs_20 IAMs_20 20 33 16.6
comp=Z,1µm,22.0s
WALA Waterton Lakes 106.76 37 IAMs_20 IAMs_20 20 35 31.2
comp=Z,1µm,21.0s
BFO Black Forest 106.80 322 IAMs_20 IAMs_20 20 46 16.7
comp=Z,1µm,22.0s
JTMT Jette 107.06 38 IAMs_20 IAMs_20 20 35 43.4
comp=Z,1µm,21.0s
MDPB Devils Postpil 107.24 49 IAMs_20 IAMs_20 20 34 03.1
comp=Z,1µm,22.0s
OMMB Old Mammoth Mi 107.31 49 IAMs_20 IAMs_20 20 32 57.1
comp=Z,1µm,22.0s
LHV Little Huntoon 107.50 49 IAMs_20 IAMs_20 20 33 53.7
comp=Z,2µm,21.0s
KVN Kaiserville 107.55 48 IAMs_20 IAMs_20 20 35 39.1
comp=Z,868nm,20.0s
NVAR Mina Array Bea 107.59 48 Pdiff **Pdif 19 54 25.3 -1.6**
comp=Z,0.2nm,0.4s,baz=269,slow=8.0,SNR=2.0
NVAR PKiKP **PKiKP 19 58 35.1 +0.2**
comp=Z,0.3nm,0.3s,baz=296,slow=2.9,SNR=2.7
NVAR PP **PP 19 58 56.3 +1.3**
comp=Z,1.1nm,0.6s,baz=264,slow=5.3,SNR=4.8
NVAR PKKP **PKKPab 20 10 05.4 +1.0**
comp=Z,1.3nm,0.9s,baz=93,slow=3.6,SNR=3.5
MSO Missoula 107.64 39 IAMs_20 IAMs_20 20 36 29.9
comp=Z,2µm,22.0s
NV11 Mina Array Sit 107.70 48 IAMs_20 IAMs_20 20 33 50.3
comp=Z,1µm,22.0s
MFID Camas Ranch 107.70 43 IAMs_20 IAMs_20 20 35 05.8
comp=Z,2µm,22.0s
SENIN Lac Senin/Sane 108.23 321 IAMs_20 IAMs_20 20 50 56.8
comp=Z,2µm,22.0s
HLID Hailey 108.61 42 IAMs_20 IAMs_20 20 37 02.6
comp=Z,1µm,22.0s
ELK Elko 109.07 45 IAMs_20 IAMs_20 20 51 54.0
comp=Z,925nm,22.0s
DLMT Dillon 109.09 40 IAMs_20 IAMs_20 20 35 09.5
comp=Z,2µm,22.0s
VSL Villasalto 109.40 313 IAMs_20 IAMs_20 20 51 10.2
comp=Z,922nm,22.0s
TPNV Topopah Spring 109.60 49 IAMs_20 IAMs_20 20 35 29.5
comp=Z,1µm,22.0s
BOZ Bozeman (W) 109.61 40 IAMs_20 IAMs_20 20 39 32.0
comp=Z,1µm,22.0s
R11A Troy Canyon, C 109.64 48 IAMs_20 IAMs_20 20 40 53.6
comp=Z,923nm,21.0s
GSC Goldstone, Bar 109.69 51 IAMs_20 IAMs_20 20 36 27.9
comp=Z,2µm,22.0s
SPR3 Spring Creek 3 110.34 47 IAMs_20 IAMs_20 20 36 53.0
comp=Z,2µm,22.0s
PRN Pahroc Range 110.36 49 IAMs_20 IAMs_20 20 35 33.6
comp=Z,1µm,21.0s
SHPR Sheep Range 110.57 50 IAMs_20 IAMs_20 20 46 31.4
comp=Z,1µm,18.0s
DUG Dugway, Tooele 110.99 45 IAMs_20 IAMs_20 20 36 52.9
comp=Z,971nm,22.0s
REDW Red Top Meadow 111.06 41 IAMs_20 IAMs_20 20 38 31.5
comp=Z,1µm,22.0s
SNOW Snow King Moun 111.08 41 IAMs_20 IAMs_20 20 38 09.2
comp=Z,2µm,22.0s
AHID Auburn Hatcher 111.15 42 IAMs_20 IAMs_20 20 36 31.8
comp=Z,2µm,22.0s
RLMT Red Lodge 111.32 39 IAMs_20 IAMs_20 20 40 56.3
comp=Z,1µm,22.0s
ESJX Sierra Juarez 111.36 54 IAMs_20 IAMs_20 20 37 05.6
comp=Z,1µm,21.0s
SPX San Pedro Mart 112.04 55 IAMs_20 IAMs_20 20 41 02.4
comp=Z,1µm,21.0s
PDAR Pinedale Array 112.17 42 PKiKP **PKiKP 19 58 45.8 +2.3**
comp=Z,0.5nm,0.5s,baz=180,slow=0.9,SNR=4.4
PDAR PKKPbc **PKKPbc 20 09 34.4 -1.5**
comp=Z,0.6nm,0.6s,baz=128,slow=5.9,SNR=4.8
LAO LASA Array 112.44 37 IAMs_20 IAMs_20 20 38 08.6
comp=Z,2µm,21.0s
U15A North Rim 112.77 49 IAMs_20 IAMs_20 20 38 47.3
comp=Z,1µm,22.0s
Y14A Wickenburg 113.09 52 IAMs_20 IAMs_20 20 39 32.1
comp=Z,2µm,22.0s
PIX Pinacate 113.51 54 IAMs_20 IAMs_20 20 38 05.6
comp=Z,824nm,21.0s
WUAZ Wupatki 113.79 49 IAMs_20 IAMs_20 20 49 17.5
comp=Z,1µm,20.0s
214A Organ Pipe Nat 113.91 53 IAMs_20 IAMs_20 20 39 54.8
comp=Z,1µm,22.0s
X16A Lo Mia Camp, P 114.14 51 IAMs_20 IAMs_20 20 49 28.8
comp=Z,1µm,19.0s
O20A White River Ci 114.21 44 IAMs_20 IAMs_20 20 40 10.3
comp=Z,1µm,21.0s
PV04 Paradox Valley 114.49 46 IAMs_20 IAMs_20 20 40 15.8
comp=Z,1µm,20.0s
PV16 Nyswonger Mesa 114.51 46 IAMs_20 IAMs_20 20 49 41.4
comp=Z,1µm,19.0s
PV18 Skein Mesa, Pa 114.55 46 IAMs_20 IAMs_20 20 37 52.3
comp=Z,2µm,22.0s
PV03 Paradox Valley 114.58 46 IAMs_20 IAMs_20 20 38 07.4
comp=Z,1µm,22.0s
PV13 Radium Mtn., P 114.64 46 IAMs_20 IAMs_20 20 38 30.7
comp=Z,1µm,21.0s
PV15 Paradox Valley 114.81 46 IAMs_20 IAMs_20 20 39 42.3
comp=Z,1µm,22.0s
RSSD Black Hills 115.07 38 IAMs_20 IAMs_20 20 41 00.3
comp=Z,1µm,22.0s
W18A Petrified Fore 115.19 49 IAMs_20 IAMs_20 20 39 51.3
comp=Z,2µm,22.0s
X18A Snowflake 115.25 50 IAMs_20 IAMs_20 20 39 59.0
comp=Z,1µm,21.0s
MDND Maddock 115.58 33 IAMs_20 IAMs_20 20 43 33.3
comp=Z,1µm,22.0s
E28A Huff 115.72 34 IAMs_20 IAMs_20 20 41 47.1
comp=Z,869nm,22.0s
ULM Lac du Bonnet 115.99 29 PKP **PKiKP 19 58 49.2 -1.0**
comp=Z,1.3nm,0.3s,baz=354,slow=2.9,SNR=2.2
ULM Lac du Bonnet 115.99 29 IAMs_20 IAMs_20 20 56 16.0
comp=Z,847nm,22.0s
S22A 4UR Ranch, Cre 116.24 46 IAMs_20 IAMs_20 20 40 17.2
comp=Z,2µm,22.0s
Q24A Divide 116.87 44 IAMs_20 IAMs_20 20 45 16.6
comp=Z,811nm,21.0s
319A Douglas 116.93 53 IAMs_20 IAMs_20 20 41 40.9
comp=Z,1µm,22.0s
SDCO Great Sand Dun 117.19 45 IAMs_20 IAMs_20 20 54 04.9
comp=Z,937nm,19.0s
AGMN Agassiz Nation 117.27 31 IAMs_20 IAMs_20 20 45 17.9
comp=Z,928nm,20.0s
D32A Dogwood Acres, 117.40 32 IAMs_20 IAMs_20 20 42 27.6
comp=Z,1µm,21.0s
ANMO Albuquerque 117.72 48 PKP **PKiKP 19 58 54.6 +0.4**
comp=Z,1.3nm,0.7s,baz=252,slow=3.0,SNR=6.6
ANMO Albuquerque 117.72 48 PKiKP **PKPdf 19 58 54.2 0.0**
ANMO MLR MLR
comp=Z,1µm,21.0s
ANMO Albuquerque 117.72 48 P **PKiKP 19 58 54.7 +0.4**
baz=295
ANMO Albuquerque 117.72 48 **PKPdf 19 58 54.2 0.0**
ANMO Albuquerque 117.72 48 IAMs_20 IAMs_20 20 52 01.2
comp=Z,1µm,21.0s
TAM Tamanrasset 117.74 297 IAMs_20 IAMs_20 20 49 24.6
comp=Z,869nm,19.0s
SUSD Miller 117.94 36 IAMs_20 IAMs_20 20 44 00.2
comp=Z,1µm,22.0s
T25A Trinidad 118.23 45 P **PKiKP 19 58 57.4 +2.1**
baz=298
T25A Trinidad 118.23 45 IAMs_20 IAMs_20 20 41 45.7
comp=Z,1µm,22.0s
B35A Bob, Littlefor 118.30 30 IAMs_20 IAMs_20 20 54 30.1
comp=Z,852nm,21.0s
KSCO Kaye Shedlock' 118.57 43 IAMs_20 IAMs_20 20 43 18.3
comp=Z,1µm,22.0s
F33A 5 Mile Ranch, 118.60 33 IAMs_20 IAMs_20 20 49 24.4
comp=Z,886nm,22.0s
ESDC Sonseca Array 118.63 318 PKP **PKiKP 19 58 57.0 +1.3**
comp=Z,0.6nm,0.9s,baz=12,slow=1.7,SNR=2.2
EPT El Paso 118.97 52 IAMs_20 IAMs_20 20 42 40.8
comp=Z,1µm,21.0s
K31A O'Neill 119.12 37 IAMs_20 IAMs_20 20 43 42.3
comp=Z,1µm,22.0s
ECSD EROS Data Cent 119.72 35 P **PKPdf 19 58 57.7 0.0**
baz=308
ECSD EROS Data Cent 119.72 35 PKPdf **PKiKP 19 58 58.4 +0.7**
ECSD EROS Data Cent 119.72 35 IAMs_20 IAMs_20 20 52 15.2
comp=Z,953nm,22.0s
MNTX Cornudas Mount 119.88 51 P **PKiKP 19 58 58.8 +0.4**
baz=294
MNTX Cornudas Mount 119.88 51 PKPdf **PKPdf 19 58 58.5 +0.2**
F36A Milaca 120.07 32 IAMs_20 IAMs_20 20 45 44.1
comp=Z,1µm,22.0s
BGNE Belgrade 120.18 38 IAMs_20 IAMs_20 20 48 19.6
comp=Z,749nm,21.0s
E38A The Farm, Brul 120.58 30 IAMs_20 IAMs_20 20 47 29.3
comp=Z,915nm,21.0s
SPMN Marine on St. 120.87 32 P **PKiKP 19 59 01.5 +1.7**
baz=312
SPMN Marine on St. 120.87 32 IAMs_20 IAMs_20 20 48 37.5
comp=Z,1µm,22.0s
MSTX Muleshoe 120.88 48 P **PKiKP 19 59 01.5 +1.1**
baz=297
MSTX Muleshoe 120.88 48 IAMs_20 IAMs_20 20 53 18.9
comp=Z,1µm,22.0s
N33A J Bar K, Exete 121.00 38 IAMs_20 IAMs_20 20 56 03.2
comp=Z,888nm,21.0s
AMTX Amarillo 121.25 46 IAMs_20 IAMs_20 20 44 04.6
comp=Z,879nm,21.0s
I37A Lemond, Waseca 121.35 33 IAMs_20 IAMs_20 20 57 53.1
comp=Z,830nm,20.0s
D41A Chassel 121.69 28 IAMs_20 IAMs_20 21 00 42.8
comp=Z,897nm,22.0s
N35A Tabor 122.03 37 IAMs_20 IAMs_20 20 44 42.8
comp=Z,1µm,22.0s
COWI Conover 122.12 29 IAMs_20 IAMs_20 20 52 26.1
comp=Z,1µm,22.0s
G40A Rib Lake 122.18 30 IAMs_20 IAMs_20 20 44 32.9
comp=Z,1µm,22.0s
TX31 Lajitas Ar. Si 122.19 53 **PKPdf 19 59 02.3 -0.6**
TXAR Lajitas Array 122.19 53 PKP **PKPdf 19 59 02.7 -0.2**
comp=Z,3.2nm,0.7s,baz=294,slow=1.1,SNR=19
TXAR PKKPab **PKKPab 20 09 00.6 +0.6**
comp=Z,0.9nm,0.9s,baz=127,slow=5.5,SNR=6.8
TXAR Lajitas Array 122.19 53 PKiKP **PKPdf 19 59 02.1 -0.8**
TXAR Lajitas Array 122.19 53 **PKPdf 19 59 02.1 -0.8**
KSU1 Kansas State U 122.47 40 P **PKiKP 19 59 03.5 +0.3**
baz=305
KSU1 Kansas State U 122.47 40 IAMs_20 IAMs_20 20 46 08.3
comp=Z,1µm,22.0s
SCIA State Center 122.81 35 IAMs_20 IAMs_20 20 46 14.0
comp=Z,1µm,22.0s
F42A Maple Grove Fa 122.85 29 IAMs_20 IAMs_20 21 02 05.4
comp=Z,921nm,20.0s
KS20 Mayfield South 122.91 42 IAMs_20 IAMs_20 20 56 45.1
comp=Z,959nm,20.0s
I40A Norwalk 122.92 32 IAMs_20 IAMs_20 20 54 00.6
comp=Z,888nm,21.0s
E43A Lone Tree Farm 122.93 27 IAMs_20 IAMs_20 21 00 21.4
comp=Z,1µm,21.0s
WMOK Wichita Mounta 123.39 45 P **PKiKP 19 59 07.0 +1.8**
baz=301
WMOK Wichita Mounta 123.39 45 IAMs_20 IAMs_20 20 46 53.2
comp=Z,1µm,22.0s
TOA0 Torodi Ar. Sit 123.58 287 PKPdf **PKPdf 19 59 05.1 -0.7**
TORD Torodi Ar. Bea 123.58 287 PKP **PKPdf 19 59 05.3 -0.5**
comp=Z,10nm,0.7s,baz=41,slow=1.9,SNR=23
TORD PKKPab **PKKPab 20 08 55.6 +1.6**
comp=Z,2.2nm,0.7s,baz=283,slow=3.6,SNR=10
TORD SKKPbc SKKPbc 20 12 38.8 -1.5
comp=Z,1.2nm,1.1s,baz=255,slow=2.8,SNR=3.7
TORD Torodi Ar. Bea 123.58 287 PKPdf **PKPdf 19 59 04.7 -1.1**
JFWS Jewell Farm 123.79 32 P **PKPdf 19 59 05.3 -0.1**
baz=313
JFWS Jewell Farm 123.79 32 IAMs_20 IAMs_20 20 45 13.6
comp=Z,1µm,22.0s
I42A Draeger Farm, 123.81 31 IAMs_20 IAMs_20 21 01 42.9
comp=Z,922nm,21.0s
L40A Anamosa 123.84 34 **PKPdf 19 59 04.7 -0.8**
L40A IAMs_20 IAMs_20 20 49 56.9
comp=Z,852nm,21.0s
H43A Windswept, Lux 123.96 29 IAMs_20 IAMs_20 20 45 39.9
comp=Z,808nm,21.0s
P38A Dawn 124.07 37 PKPdf **PKPdf 19 59 05.5 -0.5**
P38A IAMs_20 IAMs_20 20 45 06.4
comp=Z,997nm,22.0s
E46A Sault Ste Mari 124.14 26 IAMs_20 IAMs_20 20 50 39.3
comp=Z,968nm,21.0s
OK030 Cody Creek RV 124.14 43 IAMs_20 IAMs_20 20 44 47.8
comp=Z,1µm,22.0s
G45A Suttons Bay 124.55 28 IAMs_20 IAMs_20 20 58 57.3
comp=Z,1µm,22.0s
LSQQ Lebel-sur-Quev 124.70 19 P **PKiKP 19 59 09.5 +2.2**
baz=330
JCT Junction City 124.72 50 PKIKP **PKPdf 19 59 07.3 -0.3**
JCT MLR MLR
comp=Z,2µm,22.0s
JCT Junction City 124.72 50 P **PKiKP 19 59 08.2 +0.2**
baz=298
JCT Junction City 124.72 50 PKPdf **PKPdf 19 59 07.3 -0.3**
L42A Oliver, Polo 124.73 33 IAMs_20 IAMs_20 20 47 39.4
comp=Z,1µm,22.0s
CHGQ Chibougamau 124.74 17 P **PKiKP 19 59 08.7 +1.3**
baz=334
TUL1 Leonard 124.82 42 P **PKiKP 19 59 08.4 +0.4**
baz=304
TUL1 Leonard 124.82 42 IAMs_20 IAMs_20 20 56 29.8
comp=Z,1µm,22.0s
N41A Harden Midland 124.94 35 IAMs_20 IAMs_20 20 44 44.3
comp=Z,1µm,22.0s
K43A Burlington 124.95 31 IAMs_20 IAMs_20 21 00 15.1
comp=Z,1µm,22.0s
P40A Paris 125.02 37 IAMs_20 IAMs_20 20 46 23.4
comp=Z,1µm,22.0s
I45A Fountain 125.03 29 IAMs_20 IAMs_20 20 46 17.1
comp=Z,1µm,21.0s
GLMI Grayling 125.19 27 IAMs_20 IAMs_20 21 03 32.3
comp=Z,928nm,20.0s
VLDQ Val d'Or 125.36 20 IAMs_20 IAMs_20 20 51 29.7
comp=Z,1µm,22.0s
S39A Bolivar 125.39 39 IAMs_20 IAMs_20 20 57 23.4
comp=Z,1µm,22.0s
L44A Lake County Fo 125.54 32 IAMs_20 IAMs_20 20 47 05.8
comp=Z,1µm,22.0s
R40A Maddies Statio 125.67 38 PKPdf **PKPdf 19 59 08.6 -0.6**
R40A IAMs_20 IAMs_20 20 47 12.8
comp=Z,1µm,22.0s
WHTX Lake Whitney, 125.74 47 IAMs_20 IAMs_20 20 48 23.7
comp=Z,1µm,21.0s
HQIL Hanson Quary C 125.84 32 IAMs_20 IAMs_20 20 47 15.7
comp=Z,1µm,22.0s
HDIL Hopedale 125.92 34 P **PKiKP 19 59 10.2 +0.2**
baz=313
HDIL Hopedale 125.92 34 IAMs_20 IAMs_20 20 53 09.2
comp=Z,1µm,22.0s
833A Chaparral WMA, 126.01 52 P **PKiKP 19 59 11.5 +1.0**
baz=297
M44A Midewin, Midew 126.03 32 IAMs_20 IAMs_20 20 47 19.8
comp=Z,1µm,22.0s
USHA Ushuaia 126.23 169 PKKP 20 09 25.7
comp=Z,32nm,0.5s,baz=66,slow=3.1,SNR=4.7
J47A Sunmer 126.31 29 IAMs_20 IAMs_20 21 00 40.9
comp=Z,1µm,22.0s
MGMO Mountain Grove 126.38 39 IAMs_20 IAMs_20 20 49 39.6
comp=Z,1µm,22.0s
CCM Cathedral Cave 126.44 37 PKIKP **PKPdf 19 59 10.2 -0.4**
CCM MLR MLR
comp=Z,900nm,21.0s
CCM Cathedral Cave 126.44 37 P **PKiKP 19 59 12.3 +1.2**
baz=310
CCM Cathedral Cave 126.44 37 PKPdf **PKPdf 19 59 10.2 -0.4**
CCM Cathedral Cave 126.44 37 IAMs_20 IAMs_20 20 50 26.2
comp=Z,854nm,21.0s
L46A Eue Claire 126.49 31 IAMs_20 IAMs_20 20 59 21.9
comp=Z,1µm,22.0s
U40A Yellville 126.49 40 P **PKPdf 19 59 10.6 -0.2**
baz=307
U40A Yellville 126.49 40 PKPdf **PKPdf 19 59 08.2 -2.7**
U40A IAMs_20 IAMs_20 20 48 00.8
comp=Z,1µm,21.0s
W39A Magazine 126.57 42 P **PKiKP 19 59 11.8 +0.3**
baz=306
O44A Mansfield 126.66 34 IAMs_20 IAMs_20 20 53 05.7
comp=Z,920nm,21.0s
SLM Saint Louis 126.67 36 IAMs_20 IAMs_20 20 49 40.1
comp=Z,1µm,22.0s
I49A Point Hope 126.69 27 IAMs_20 IAMs_20 20 51 30.8
comp=Z,1µm,22.0s
FVM French Village 126.98 37 IAMs_20 IAMs_20 21 00 23.5
comp=Z,800nm,21.0s
MIAR Mount Ida 127.09 42 PKIKP **PKPdf 19 59 11.6 -0.4**
MIAR MLR MLR
comp=Z,2µm,22.0s
MIAR Mount Ida 127.09 42 P **PKPdf 19 59 11.9 -0.1**
baz=306
MIAR Mount Ida 127.09 42 PKPdf **PKPdf 19 59 11.6 -0.4**
T42A Van Buren 127.19 38 PKPdf **PKPdf 19 59 11.4 -0.7**
T42A IAMs_20 IAMs_20 20 57 10.0
comp=Z,1µm,20.0s
FCAR Ozark Folk Cen 127.24 40 IAMs_20 IAMs_20 20 48 23.9
comp=Z,1µm,22.0s
SFIN Lafayette 127.25 33 IAMs_20 IAMs_20 20 47 32.2
comp=Z,1µm,21.0s
L48A N Adams 127.47 29 **PKiKP 19 59 13.5 +0.4**
L48A IAMs_20 IAMs_20 21 00 56.8
comp=Z,992nm,22.0s
SADO Sadowa 127.57 23 IAMs_20 IAMs_20 20 53 04.0
comp=Z,1µm,22.0s
AAM Ann Arbor 127.58 29 IAMs_20 IAMs_20 20 59 19.4
comp=Z,996nm,21.0s
X40A Basin Creek Fa 127.62 42 IAMs_20 IAMs_20 20 50 56.8
comp=Z,911nm,22.0s
K50A Casco 127.69 27 IAMs_20 IAMs_20 20 48 54.5
comp=Z,853nm,21.0s
P46A Rosedale 127.73 33 IAMs_20 IAMs_20 20 47 09.9
comp=Z,1µm,22.0s
LCAR Lake Charles 127.75 39 IAMs_20 IAMs_20 21 00 07.1
comp=Z,1µm,21.0s
PBMO Poplar Bluff 127.76 38 IAMs_20 IAMs_20 21 01 22.1
comp=Z,1µm,21.0s
S44A Carbondale 127.87 36 IAMs_20 IAMs_20 20 52 46.2
comp=Z,1µm,22.0s
SIUC Southern Illin 127.88 36 IAMs_20 IAMs_20 20 52 45.0
comp=Z,1µm,21.0s
NATX Nacogdoches 127.89 46 IAMs_20 IAMs_20 20 57 46.4
comp=Z,1µm,20.0s
E57A Chemin Saint G 127.94 18 P **PKiKP 19 59 15.1 +1.2**
baz=333
PARMO Parma 128.25 38 IAMs_20 IAMs_20 21 01 47.0
comp=Z,841nm,20.0s
DELO Deloro Mine 128.38 22 IAMs_20 IAMs_20 20 50 01.1
comp=Z,1µm,22.0s
HBAR Harrisburg 128.39 39 IAMs_20 IAMs_20 20 50 52.9
comp=Z,1µm,21.0s
BLO Bloomington 128.42 33 IAMs_20 IAMs_20 21 02 19.1
comp=Z,1µm,22.0s
GNAR Gosnell 128.53 39 IAMs_20 IAMs_20 21 00 47.6
comp=Z,1µm,21.0s
M50A Fremont 128.56 29 IAMs_20 IAMs_20 20 59 46.5
comp=Z,897nm,22.0s
CCAR Cane Creek 128.66 42 IAMs_20 IAMs_20 20 48 19.5
comp=Z,1µm,21.0s
T45A Paducah 128.68 37 IAMs_20 IAMs_20 21 00 30.5
comp=Z,1µm,21.0s
D62A Allapoint, All 128.75 14 IAMs_20 IAMs_20 21 02 57.1
comp=Z,1µm,22.0s
GLAT Glass 128.79 38 IAMs_20 IAMs_20 21 00 58.3
comp=Z,1µm,21.0s
P48A Milroy 128.80 32 IAMs_20 IAMs_20 21 05 24.2
comp=Z,747nm,20.0s
J54A Appleton 129.02 24 IAMs_20 IAMs_20 20 48 59.3
comp=Z,1µm,22.0s
E62A Clayton Lake 129.06 15 IAMs_20 IAMs_20 20 56 36.8
comp=Z,1µm,21.0s
PECO Prince Edward 129.11 22 IAMs_20 IAMs_20 20 54 16.0
comp=Z,1µm,22.0s
P49A Miami Univ. Ec 129.12 32 IAMs_20 IAMs_20 20 50 47.7
comp=Z,1µm,22.0s
MEDO Medina 129.18 24 IAMs_20 IAMs_20 21 00 11.6
comp=Z,813nm,21.0s
WCI Wyandotte Cave 129.21 34 P **PKPdf 19 59 15.9 0.0**
baz=315
WCI Wyandotte Cave 129.21 34 IAMs_20 IAMs_20 20 53 55.2
comp=Z,1µm,22.0s
BATG Bathurst New B 129.22 11 IAMs_20 IAMs_20 20 58 16.9
comp=Z,1µm,22.0s
M52A Chesterland 129.25 27 IAMs_20 IAMs_20 20 52 35.5
comp=Z,1µm,21.0s
N51A Ashland 129.25 29 IAMs_20 IAMs_20 21 05 19.9
comp=Z,1µm,22.0s
J55A Hilton 129.35 23 IAMs_20 IAMs_20 20 54 09.1
comp=Z,947nm,22.0s
PQI Presque Isle 129.38 13 IAMs_20 IAMs_20 20 53 05.1
comp=Z,1µm,22.0s
ERPA Erie 129.40 26 IAMs_20 IAMs_20 20 56 41.4
comp=Z,874nm,22.0s
ACSO Alum Creek Sta 129.49 30 P **PKiKP 19 59 18.2 +1.1**
baz=320
ACSO Alum Creek Sta 129.49 30 IAMs_20 IAMs_20 20 59 13.1
comp=Z,1µm,21.0s
E63A Oxbow 129.52 14 IAMs_20 IAMs_20 20 54 23.9
comp=Z,877nm,21.0s
FRNY Flat Rock 129.52 19 IAMs_20 IAMs_20 21 03 48.2
comp=Z,1µm,22.0s
W45A Hickory Valley 129.57 39 IAMs_20 IAMs_20 21 01 10.1
comp=Z,1µm,22.0s
M53A WI Miller and 129.64 27 IAMs_20 IAMs_20 20 52 48.9
comp=Z,1µm,22.0s
J56A Wolcott 129.72 23 IAMs_20 IAMs_20 21 06 41.7
comp=Z,810nm,20.0s
342A Flagon Creek P 129.76 45 IAMs_20 IAMs_20 20 50 13.9
comp=Z,1µm,22.0s
WVT Waverly 129.76 37 P **PKPdf 19 59 17.1 0.0**
baz=312
WVT Waverly 129.76 37 IAMs_20 IAMs_20 21 02 24.7
comp=Z,1µm,20.0s
MMNY Mt. Morris Dam 129.77 24 IAMs_20 IAMs_20 21 00 02.3
comp=Z,1µm,22.0s
R49A Shelbyville 129.78 33 IAMs_20 IAMs_20 21 01 46.5
comp=Z,1µm,20.0s
J57A Williamstown 129.93 22 IAMs_20 IAMs_20 20 51 24.2
comp=Z,833nm,20.0s
P51A Williamsport 130.01 30 P **PKiKP 19 59 18.5 +0.3**
baz=319
F63A Nahmakanta, Br 130.02 15 IAMs_20 IAMs_20 20 56 56.3
comp=Z,1µm,22.0s
M54A Oil Creek Stat 130.03 26 P **PKiKP 19 59 19.1 +0.9**
baz=324
M54A Oil Creek Stat 130.03 26 IAMs_20 IAMs_20 20 53 37.3
comp=Z,872nm,22.0s
F64A Sherman 130.06 14 IAMs_20 IAMs_20 21 07 34.2
comp=Z,872nm,21.0s
N53A Lisbon 130.07 28 IAMs_20 IAMs_20 20 57 52.2
comp=Z,979nm,21.0s
NCB Newcomb 130.07 20 IAMs_20 IAMs_20 20 53 49.8
comp=Z,1µm,22.0s
G62A West of Eustis 130.09 16 IAMs_20 IAMs_20 20 54 09.2
comp=Z,1µm,22.0s
O52A Adamsville 130.13 29 IAMs_20 IAMs_20 21 03 33.2
comp=Z,1µm,22.0s
J58A Remsen 130.23 21 P **PKiKP 19 59 19.9 +1.4**
baz=330
VT1 Waterbury 130.24 19 IAMs_20 IAMs_20 21 08 18.4
comp=Z,920nm,22.0s
R50A Paris 130.25 32 IAMs_20 IAMs_20 21 00 44.5
comp=Z,1µm,22.0s
K57A Scipio Center 130.31 23 P **PKiKP 19 59 20.4 +1.7**
baz=329
N54A Moraine State 130.33 27 IAMs_20 IAMs_20 20 53 21.2
comp=Z,1µm,22.0s
O53A New Philadelph 130.33 28 IAMs_20 IAMs_20 21 04 48.3
comp=Z,861nm,21.0s
P52A Corning 130.36 30 P **PKiKP 19 59 20.2 +1.2**
baz=320
P52A Corning 130.36 30 IAMs_20 IAMs_20 20 50 33.3
comp=Z,1µm,22.0s
PLAL Pickwick Lake 130.37 38 **PKiKP 19 59 19.0 -0.1**
PLAL IAMs_20 IAMs_20 20 52 50.4
comp=Z,1µm,22.0s
PKME Peaks-Kenny Pk 130.38 15 IAMs_20 IAMs_20 20 56 14.8
comp=Z,1µm,22.0s
L56A Greenwood 130.41 24 P **PKiKP 19 59 21.6 +2.6**

	baz=327							
J59A	**Piesco**	130.42	21	P		PKiKP	19 59 20.8	+1.8
	baz=331							
I60A	**Shoreham**	130.50	19	P		PKiKP	19 59 22.0	+3.0
	baz=333							
H62A	**Milan**	130.50	17	IAms_20	IAms_20		20 55 28.1	
	comp=Z,1μm,22.0s							
K58A	**Earlville**	130.62	22	IAms_20	IAms_20		20 52 42.4	
	comp=Z,1μm,22.0s							
V48A	**Smith Brothers**	130.63	37	IAms_20	IAms_20		21 03 10.0	
	comp=Z,851nm,21.0s							
CLTN	**Cedars of Leba**	130.68	36	IAms_20	IAms_20		21 07 24.3	
	comp=Z,842nm,22.0s							
M56A	**Emporium**	130.69	25	P		PKiKP	19 59 22.0	+2.4
	baz=326							
U49A	**Red Boiling Sp**	130.71	35	IAms_20	IAms_20		20 52 56.9	
	comp=Z,1μm,22.0s							
LMN	**Caledonia Moun**	130.83	11	IAms_20	IAms_20		20 56 27.5	
	comp=Z,1μm,20.0s							
G65A	**Princeton**	130.87	14	IAms_20	IAms_20		21 01 01.6	
	comp=Z,893nm,22.0s							
WVL	**Waterville**	130.94	16	IAms_20	IAms_20		20 56 21.4	
	comp=Z,1μm,22.0s							
BINY	**Binghamton**	130.97	23	IAms_20	IAms_20		21 06 52.9	
	comp=Z,918nm,22.0s							
KIC	**Kosan Boka**	131.04	280	*eP*		PKPdf	19 59 20.6	+0.5
	comp=Z,15nm,0.8s							
DBIC	**Dimbokro**	131.10	281	PKP		PKPdf	19 59 20.1	-0.1
	comp=Z,3.5nm,0.6s,baz=74,slow=1.9,SNR=9.0							
N56A	**West Decatur**	131.11	25	P		PKiKP	19 59 22.7	+2.2
	baz=326							
GGN	**Saint George**	131.12	13	IAMs_20	IAMs_20		20 51 53.2	
	comp=Z,851nm,22.0s							
I63A	**Otisfield**	131.15	17	IAMs_20	IAMs_20		20 59 46.2	
	comp=Z,1μm,22.0s							
146A	**Union**	131.25	41	IAMs_20	IAMs_20		20 51 45.8	
	comp=Z,1μm,22.0s							
M57A	**Sunshine Farm,**	131.25	24	P		PKiKP	19 59 23.3	+2.6
	baz=327							
M57A	**Sunshine Farm,**	131.25	24	IAMs_20	IAMs_20		21 03 33.3	
	comp=Z,988nm,20.0s							
TIC	**Toumodi**	131.27	281	*eP*		PKiKP	19 59 22.4	+0.9
L59A	**Walton**	131.34	22	IAMs_20	IAMs_20		20 53 15.5	
	comp=Z,1μm,22.0s							
LIC	**Lamto**	131.34	280	*eP*		PKPdf	19 59 20.6	0.0
	comp=Z,3.9nm,0.4s							
EMMW	**East Machias**	131.36	14	IAMs_20	IAMs_20		21 03 15.6	
	comp=Z,893nm,21.0s							
X48A	**Hartselle**	131.36	38	IAMs_20	IAMs_20		20 58 27.5	
	comp=Z,1μm,20.0s							
MCWV	**Mont Chateau**	131.44	28	IAMs_20	IAMs_20		20 55 16.6	
	comp=Z,693nm,22.0s							
R53A	**Hurricane**	131.45	31	P		PKiKP	19 59 24.7	+3.5
	baz=320							
R53A	**Hurricane**	131.45	31	IAMs_20	IAMs_20		20 49 30.2	
	comp=Z,1μm,21.0s							
Q54A	**Coxs Mills**	131.50	29	P		PKPdf	19 59 20.8	+0.6
	baz=322							
Q54A	**Coxs Mills**	131.50	29	IAMs_20	IAMs_20		21 04 35.4	
	comp=Z,1μm,22.0s							
SWET	**Sewanee**	131.52	36	IAMs_20	IAMs_20		21 08 03.5	
	comp=Z,816nm,22.0s							
SSPA	**Standing Stone**	131.52	25	P		PKiKP	19 59 21.0	-0.2
	baz=326							
SSPA	**Standing Stone**	131.52	25	IAMs_20	IAMs_20		21 01 40.7	
	comp=Z,894nm,21.0s							
O56A	**Blue Knob Stat**	131.53	26	IAMs_20	IAMs_20		20 54 44.8	
	comp=Z,1μm,21.0s							
N57A	**Milroy**	131.56	25	P		PKPdf	19 59 20.9	+0.6
	baz=326							
KSPA	**Keystone Colle**	131.61	23	IAMs_20	IAMs_20		20 50 56.7	
	comp=Z,1μm,22.0s							
N58A	**Sunbury**	131.84	24	P		PKiKP	19 59 23.1	+1.3
	baz=328							
N58A	**Sunbury**	131.84	24	IAMs_20	IAMs_20		21 04 25.9	
	comp=Z,872nm,22.0s							
Q55A	**Buckhannon**	131.85	28	P		PKiKP	19 59 22.6	+0.6
	baz=322							
S53A	**Williamson**	131.85	31	P		PKiKP	19 59 24.3	+2.2
	baz=319							
W50A	**Signal Mountai**	131.89	36	IAMs_20	IAMs_20		20 53 20.4	
	comp=Z,788nm,22.0s							
TZTN	**Tazewell**	131.94	33	P		PKiKP	19 59 24.6	+2.4
	baz=317							
O57A	**Amberson**	131.98	25	P		PKiKP	19 59 24.9	+2.7
	baz=326							
P56A	**Dayton Farm, R**	132.02	27	P		PKiKP	19 59 24.2	+1.9
	baz=324							
R54A	**Victor**	132.05	30	P		PKiKP	19 59 24.3	+1.9
	baz=321							
Y49A	**Blount Mountai**	132.15	38	IAMs_20	IAMs_20		20 53 52.3	
	comp=Z,1μm,22.0s							
FPAL	**Fort Paine**	132.17	37	IAMs_20	IAMs_20		20 59 13.9	
	comp=Z,766nm,21.0s							
CPCT	**Cooper Cave**	132.18	35	IAMs_20	IAMs_20		21 04 54.4	
	comp=Z,961nm,21.0s							
S54A	**Dingess, Beckl**	132.18	30	P		PKiKP	19 59 24.4	+1.7
	baz=320							
HAL	**Halifax**	132.23	10	IAMs_20	IAMs_20		21 01 09.4	
	comp=Z,1μm,21.0s							
Q56A	**Snyder Ridge,**	132.24	28	P		PKiKP	19 59 23.6	+0.8
	baz=324							
Q56A	**Snyder Ridge,**	132.24	28	IAMs_20	IAMs_20		21 01 54.2	
	comp=Z,997nm,22.0s							
LRAL	**Lakeview Retre**	132.32	39	P		PKiKP	19 59 23.4	+0.3
	baz=311							
PAGS	**Pennsylvania G**	132.35	25	IAMs_20	IAMs_20		21 04 07.4	
	comp=Z,912nm,21.0s							
R55A	**Marlinton**	132.40	29	IAMs_20	IAMs_20		20 50 53.1	
	comp=Z,983nm,22.0s							
P57A	**Homestead Farm**	132.41	26	P		PKiKP	19 59 25.4	+2.4
	baz=325							
P57A	**Homestead Farm**	132.41	26	IAMs_20	IAMs_20		21 03 28.2	
	comp=Z,1μm,21.0s							
V52A	**Sevierville**	132.42	34	IAMs_20	IAMs_20		21 04 32.8	
	comp=Z,1μm,20.0s							
ODNJ	**Ogdensburg**	132.46	22	IAMs_20	IAMs_20		21 06 42.2	
	comp=Z,948nm,22.0s							
M61A	**Granite Spring**	132.57	21	P		PKiKP	19 59 26.0	+2.6
	baz=331							
LUPA	**Lehigh Univers**	132.58	23	IAMs_20	IAMs_20		20 56 49.5	
	comp=Z,796nm,21.0s							
X51A	**Calhoun**	132.60	36	IAMs_20	IAMs_20		20 54 53.2	
	comp=Z,1μm,21.0s							
R56A	**Bull Pasture M**	132.64	28	P		PKiKP	19 59 27.9	+4.2
	baz=323							
W52A	**Murphy**	132.77	35	IAMs_20	IAMs_20		21 05 43.6	
	comp=Z,1μm,22.0s							
BRNJ	**Basking Ridge**	132.82	22	IAMs_20	IAMs_20		21 02 13.8	
	comp=Z,864nm,22.0s							
YLE	**Yale**	132.86	21	IAMs_20	IAMs_20		20 55 33.7	
	comp=Z,1μm,22.0s							
T55A	**Pulaski**	132.97	31	P		PKiKP	19 59 28.6	+4.3
	baz=321							
SDMD	**Soldier's Deli**	132.98	25	IAMs_20	IAMs_20		20 54 59.3	
	comp=Z,689nm,22.0s							
V53A	**Saluda**	132.99	34	IAMs_20	IAMs_20		20 52 20.1	
	comp=Z,1μm,22.0s							
Q58A	**Fox Den Farm,**	133.00	26	P		PKiKP	19 59 24.9	+0.6
	baz=325							
WUPA	**West Chester U**	133.06	24	IAMs_20	IAMs_20		20 56 22.1	
	comp=Z,676nm,21.0s							
BLA	**Blacksburg**	133.09	30	P		PKiKP	19 59 24.4	-0.2
	baz=321							
PSUB	**Penn St. - Bra**	133.12	24	IAMs_20	IAMs_20		20 56 46.8	
	comp=Z,1μm,21.0s							
P60A	**Greenville**	133.15	24	IAMs_20	IAMs_20		21 02 28.5	
	comp=Z,1μm,22.0s							
U55A	**TA2, Sparta**	133.31	31	P		PKiKP	19 59 26.4	+1.3
	baz=320							
S57A	**Dark Hollow, R**	133.37	28	IAMs_20	IAMs_20		20 51 36.8	
	comp=Z,1μm,22.0s							
V54A	**Nebo**	133.38	33	P		PKiKP	19 59 26.2	+1.0
	baz=318							
BG3	**Lake Jocassee**	133.41	34	IAMs_20	IAMs_20		21 00 03.4	
	comp=Z,752nm,22.0s							
Y52A	**Lilburn**	133.56	36	IAMs_20	IAMs_20		21 09 19.7	
	comp=Z,925nm,20.0s							
P61A	**Hammonton**	133.60	23	IAMs_20	IAMs_20		21 10 50.5	
	comp=Z,914nm,22.0s							
R58B	**Mineral**	133.71	27	P		PKiKP	19 59 26.7	+1.0
	baz=325							
R58B	**Mineral**	133.71	27	IAMs_20	IAMs_20		21 03 22.7	
	comp=Z,1μm,22.0s							
V55A	**Taylorsville**	133.72	32	P		PKiKP	19 59 27.6	+1.8
	baz=319							
CBN	**Corbin Frederi**	133.75	27	IAMs_20	IAMs_20		21 05 28.6	
	comp=Z,1μm,21.0s							
Q60A	**Greensboro**	133.75	25	IAMs_20	IAMs_20		20 56 30.4	
	comp=Z,1μm,21.0s							
W54A	**Cherokee Point**	133.76	34	P		PKiKP	19 59 29.3	+3.4
	baz=318							
U56A	**King**	133.77	31	IAMs_20	IAMs_20		21 05 43.6	
	comp=Z,1μm,22.0s							
T57A	**Hurt**	133.83	29	P		PKiKP	19 59 29.9	+3.9
	baz=322							
S58A	**Poland Farm, P**	133.92	28	IAMs_20	IAMs_20		21 02 55.2	
	comp=Z,1μm,22.0s							
152A	**Waverly Hall**	133.99	38	IAMs_20	IAMs_20		21 00 14.2	
	comp=Z,1μm,22.0s							
X54A	**Belton**	134.05	34	P		PKiKP	19 59 28.6	+2.1
	baz=317							
KMSC	**Kings Mountain**	134.19	33	P		PKiKP	19 59 29.2	+2.4
	baz=319							
T58A	**Grand View Acr**	134.22	29	P		PKiKP	19 59 26.4	-0.4
	baz=323							
GOGA	**Godfrey**	134.24	36	P		PKiKP	19 59 27.4	+0.5
	baz=315							
GOGA	**Godfrey**	134.24	36	IAMs_20	IAMs_20		20 54 57.4	
	comp=Z,1μm,22.0s							
U57A	**Blanch**	134.24	30	P		PKiKP	19 59 28.0	+1.1
	baz=322							
HODGE	**Hodges**	134.35	34	IAMs_20	IAMs_20		20 56 21.2	
	comp=Z,993nm,21.0s							
CMIG	**Matias Romero**	134.37	63	PKP		PKiKP	19 59 27.4	-0.2
	comp=Z,4.7nm,0.7s,baz=329,slow=3.3,SNR=7.1							
X55A	**Gracelyn & Ava**	134.52	34	P		PKiKP	19 59 28.5	+1.0
	baz=318							
W56A	**Indian Trail**	134.59	32	P		PKiKP	19 59 28.4	+0.8
	baz=320							
U58A	**Oxford**	134.65	29	P		PKiKP	19 59 28.3	+0.6
	baz=323							
352A	**Blakely**	134.67	39	IAMs_20	IAMs_20		20 54 35.2	
	comp=Z,1μm,21.0s							
T59A	**Double "B" Far**	134.67	28	P		PKiKP	19 59 29.1	+1.4
	baz=324							
451A	**Vernon**	134.71	41	IAMs_20	IAMs_20		21 09 40.3	
	comp=Z,940nm,19.0s							
Y55A	**Saluda**	134.79	34	P		PKPdf	19 59 22.5	-4.1
	baz=317							
V58A	**Windy Hill, Pi**	134.85	30	IAMs_20	IAMs_20		21 06 54.0	
	comp=Z,1μm,19.0s							
W57A	**Enid**	134.89	32	IAMs_20	IAMs_20		20 52 11.4	
	comp=Z,1μm,21.0s							
154A	**Montrose**	135.01	37	IAMs_20	IAMs_20		20 53 29.0	
	comp=Z,1μm,22.0s							
Z56A	**Williston**	135.51	35	IAMs_20	IAMs_20		21 10 14.1	
	comp=Z,1μm,20.0s							
U61A	**Possum Corner**	135.70	27	IAMs_20	IAMs_20		21 07 01.4	
	comp=Z,1μm,21.0s							
255A	**Hazlehurst**	135.87	37	IAMs_20	IAMs_20		21 04 44.9	
	comp=Z,1μm,21.0s							
CNNC	**Cliffs of the**	135.90	30	IAMs_20	IAMs_20		20 59 55.8	
	comp=Z,1μm,22.0s							
Z57A	**Bowman**	135.91	34	P		PKiKP	19 59 32.0	+1.7
	baz=318							
NHSC	**New Hope**	136.34	34	IAMs_20	IAMs_20		20 57 02.0	
	comp=Z,1μm,22.0s							
Z58A	**St. Stephen**	136.37	33	P		PKiKP	19 59 34.0	+2.8
	baz=319							
257A	**Skidaway Islan**	136.70	36	IAMs_20	IAMs_20		20 59 20.5	
	comp=Z,1μm,21.0s							
CCIG	**Comitan**	137.12	63	IAMs_20	IAMs_20		20 51 49.5	
	comp=Z,841nm,21.0s							
PLCA	**Paso Flores**	138.67	160	PKhKP	PKPpre		19 59 23.1	
	comp=Z,2.1nm,0.8s,baz=164,slow=7.4,SNR=8.0							
PLCA				PKP		PKPdf	19 59 34.6	+0.9
	comp=Z,5.4nm,0.7s,baz=229,slow=7.9,SNR=6.6							
PLCA	**Paso Flores**	138.67	160	PKiKP		PKPdf	19 59 34.3	+0.6
PLCA	**Paso Flores**	138.67	160	PKPdf		PKPdf	19 59 34.3	+0.6
LC01	**Lunco**	139.79	157	IAMs_20	IAMs_20		20 58 11.4	
	comp=Z,788nm,21.0s							
MTO3	**Montecristo**	140.30	64	IAMs_20	IAMs_20		20 49 60.0	
	comp=Z,1μm,22.0s							
BI02	**San Fabin de**	141.96	156	PKPdf		PKPdf	19 59 38.6	-1.2
BI02				IAMs_20	IAMs_20		20 56 08.8	
	comp=Z,804nm,22.0s							
TGUH	**Tegucigalpa,Un**	142.30	63	IAMs_20	IAMs_20		20 51 06.9	
	comp=Z,1μm,22.0s							
BO02	**Sierra Bellavi**	143.77	155	PKPdf		PKPdf	19 59 42.6	-0.5
BO02				IAMs_20	IAMs_20		20 56 14.8	
	comp=Z,753nm,20.0s							
MATN	**Matagalpa**	143.95	64			PKPbc	19 59 42.1	+0.4
MATN				IAMs_20	IAMs_20		21 02 42.5	
	comp=Z,690nm,22.0s							
VA01	**Torpederas**	144.87	152	IAMs_20	IAMs_20		20 57 27.4	
	comp=Z,991nm,21.0s							
MT02	**Curacav**	144.91	153	PKPdf		PKPab	19 59 43.7	-0.4
MT05	**Renca**	144.97	154	IAMs_20	IAMs_20		21 00 10.9	
	comp=Z,575nm,20.0s							
ACON	**Acoyapa**	144.99	65			PKPbc	19 59 44.5	-0.4
ROC1	**El Roble**	145.20	153			PKPbc	19 59 44.7	-0.7
VA03	**San Esteban**	145.59	153			PKPdf	19 59 45.5	-0.7
ESPN	**Las Esperanzas**	145.69	64			PKPdf	19 59 46.4	-0.3
JTS	**Las Juntas de**	145.79	68	PKPbc		PKPab	19 59 48.1	+0.2
	comp=Z,23nm,0.7s,baz=328,slow=3.1,SNR=8.9							
JTS	**Las Juntas de**	145.79	68	*eP*		PKPdf	19 59 46.4	-0.6
JTS	**Las Juntas de**	145.79	68	PKP2		PKPdf	19 59 46.2	-0.8
JTS				MLR		MLR		
	comp=Z,1μm,20.0s							
JTS	**Las Juntas de**	145.79	68			PKPdf	19 59 46.2	-0.8
CO02	**Combarbal**	146.68	151			PKPdf	19 59 48.7	+0.5
CO02				IAMs_20	IAMs_20		20 57 08.4	
	comp=Z,1μm,20.0s							
CO03	**El Pedregal**	147.13	151			PKPdf	19 59 50.0	+1.1
CO03				IAMs_20	IAMs_20		20 56 49.3	
	comp=Z,1μm,22.0s							
GO04	**Tololo Observa**	147.63	150	IAMs_20	IAMs_20		21 00 19.5	
	comp=Z,851nm,22.0s							
PRVC	**Isla de Provid**	147.79	60	*eP*		PKPdf	19 59 42.6	-7.6
CO01	**Juntas del Tor**	148.13	151			PKPbc	19 59 53.2	-0.8
CO01				IAMs_20	IAMs_20		20 59 23.8	
	comp=Z,661nm,22.0s							
MTDJ	**Mount Denham**	148.32	49	*eP*		PKPab	19 59 58.0	+0.2
LCO	**Las Campanas**	148.62	149	PKP2		PKPbc	19 59 54.8	-0.6
LCO				MLR		MLR		
	comp=Z,800nm,22.0s							
LCO	**Las Campanas**	148.62	149			PKPbc	19 59 54.8	-0.6
LCO				IAMs_20	IAMs_20		20 59 41.0	
	comp=Z,797nm,22.0s							
AC05	**El Transito**	148.98	150			PKPbc	19 59 55.4	-0.8
AC05				IAMs_20	IAMs_20		21 00 04.4	
	comp=Z,814nm,21.0s							
AC04	**Llanos de Chal**	149.07	148	IAMs_20	IAMs_20		20 58 16.3	
	comp=Z,1μm,21.0s							
GO03	**Copiap**	150.01	148			PKPbc	19 59 58.0	-0.6
GO03				IAMs_20	IAMs_20		20 59 18.7	
	comp=Z,770nm,20.0s							
AZU	**Azuero**	150.97	69	*eP*		PKiKP	20 00 01.7	0.0
AC02	**Maricunga**	151.19	149	IAMs_20	IAMs_20		21 03 47.1	
	comp=Z,893nm,20.0s							
UPA	**Univ. de Panam**	151.24	67	*eP*		PKPbc	19 59 59.7	-2.1
CPSB	**Cacapava Do Su**	152.14	179	*eP*		PKPbc	20 00 03.1	-0.3
GO02	**Mina Guanaco**	152.29	146	IAMs_20	IAMs_20		21 01 34.4	
	comp=Z,872nm,22.0s							
PB06	**IPOC Station P**	154.19	143	IAMs_20	IAMs_20		21 02 22.2	
	comp=Z,982nm,21.0s							
ATAH	**Atahualpa**	154.27	101	PKPbc		PKPbc	20 00 07.4	-1.6
	comp=Z,11nm,0.9s,baz=326,slow=3.6,SNR=9.9							
OTAV	**Otavalo**	154.43	84	*eP*		PKPdf	20 00 03.7	+2.6
OTAV	**Otavalo**	154.43	84	*eP*		PKPbc	20 00 06.1	-3.4
NNA	**Nana**	154.53	113	PKPbc		PKiKP	20 00 10.5	+1.3
	comp=Z,25nm,0.7s,baz=286,slow=5.9,SNR=9.9							
NNA	**Nana**	154.53	113	*c iPKIKP*		PKPbc	20 00 06.6	-2.5
NNA				pmax		pmax		
	comp=Z,31nm,1.3s							
LVC	**Limon Verde**	154.66	144	PKPbc		PKiKP	20 00 10.1	+0.5
	comp=Z,12nm,0.6s,baz=265,slow=2.4,SNR=15							
LVC	**Limon Verde**	154.66	144	PKIKP		PKPbc	20 00 09.4	-0.2
LVC				MLR		MLR		
	comp=Z,700nm,21.0s							
LVC	**Limon Verde**	154.66	144			PKPbc	20 00 09.4	-0.2
LVC	**Limon Verde**	154.66	144	IAMs_20	IAMs_20		21 06 14.4	
	comp=Z,732nm,21.0s							
SJCC	**San Jacinto, C**	154.76	61	*eP*		PKPdf	20 00 02.4	+1.3
MOTC	**Monteria, Cord**	154.83	64	*eP*		PKPdf	20 00 00.8	-0.2
SMRC	**Santa Marta, M**	154.96	57	*eP*		PKiKP	20 00 12.6	+2.6
DBBC	**Dabeiba**	155.02	68	*eP*		PKPdf	20 00 05.6	+4.2
BBAC	**Balboa, Cauca**	155.37	80	*eP*		PKPdf	20 00 08.5	+6.4
GCUF	**Volcan Galeras**	155.40	82	*eP*		PKPdf	20 00 11.3	+8.8
PB01	**IPOC Station P**	155.47	140	IAMs_20	IAMs_20		21 01 14.5	
	comp=Z,1μm,22.0s							
CBOC	**Ciudad Bolivar**	155.60	70	*eP*		PKPdf	20 00 04.6	+2.3
PLMC	**San Jos del P**	155.64	73	*eP*		PKPdf	20 00 03.7	+1.4
YOTC	**Yotoco, Valle**	155.83	75	*eP*		PKPdf	20 00 06.4	+3.8
POPC	**Popayan, Colom**	155.83	78	*eP*		PKPdf	19 59 52.6	-10
CPUP	**Villa Florida**	155.84	170	PKP		PKPdf	20 00 02.7	+0.6
	comp=Z,1.7nm,0.8s,baz=259,slow=5.5,SNR=3.1							
CPUP	**Villa Florida**	155.84	170	*eP*		PKPdf	20 00 08.4	+6.4
SJG	**San Juan**	155.86	32	PKPab		PKPab	20 00 28.5	-0.5
	comp=Z,6.8nm,0.3s,baz=315,slow=19,SNR=2.1							
SJG	**San Juan**	155.86	32	IAMs_20	IAMs_20		21 14 19.7	
	comp=Z,619nm,22.0s							
PSGCX	**Pisagua**	156.07	137	IAMs_20	IAMs_20		21 00 55.1	
	comp=Z,1μm,22.0s							
ZARC	**Zaragoza, Cauc**	156.08	66	*eP*		PKPdf	20 00 04.9	+2.1
PCON	**Cinco Dias**	156.15	79	*eP*		PKPdf	20 00 05.5	+1.9
CRJC	**Cerrejon, Guaj**	156.15	56	*eP*		PKPdf	20 00 05.6	+2.7
PB11	**IPOC Station P**	156.28	138	IAMs_20	IAMs_20		21 04 44.1	
	comp=Z,690nm,20.0s							
PB08	**IPOC Station P**	156.34	139	IAMs_20	IAMs_20		20 59 45.6	
	comp=Z,905nm,22.0s							
GUY2C	**Guyana, Caldas**	156.41	71	*eP*		PKPdf	20 00 04.6	+0.8
URIC	**Uribia, Colomb**	156.49	53	*eP*		PKPdf	20 00 14.8	+12
RREF	**El Recreo**	156.53	72	*eP*		PKPdf	20 00 09.4	+5.3
ANIL	**Santa Ana**	156.60	73	*eP*		PKPdf	20 00 00.8	-3.0
TOLC	**Tolima**	156.65	73	*eP*		PKPdf	20 00 02.8	-1.1
GO01	**Chusmiza**	156.65	138	IAMs_20	IAMs_20		21 04 23.9	
	comp=Z,834nm,22.0s							
AP01	**Chacalluta**	156.74	134	IAMs_20	IAMs_20		21 03 24.1	
	comp=Z,808nm,21.0s							
MNMC	**Minye Minye**	156.75	137			PKPdf	20 00 03.6	-0.2
MNMC				IAMs_20	IAMs_20		21 09 05.1	
	comp=Z,710nm,21.0s							
PTBC	**PUERTO BERRIO**	156.82	67	*eP*		PKPdf	19 59 57.0	-6.7
TIJ01	**Guaruva-PR**	156.88	189	*eP*		PKPdf	20 00 08.7	+5.1
ORTC	**Ortega, Tolima**	156.91	74	*eP*		PKPdf	20 00 00.8	-3.1
BETC	**Betania**	157.01	77	*eP*		PKPdf	20 00 08.5	+4.4
FLOC	**Florencia**	157.01	80	*eP*		PKPdf	20 00 06.6	+2.5
OCAC	**Ocana**	157.15	62	*eP*		PKPdf	19 59 57.9	-6.4
BRRC	**Barranca, Sant**	157.28	65	*eP*		PKPdf	20 00 07.5	+3.2
PB16	**IPOC Station P**	157.36	136	IAMs_20	IAMs_20		20 59 46.2	
	comp=Z,975nm,22.0s							
SPBC	**San Pablo de B**	157.49	69	*eP*		PKPdf	20 00 04.6	-0.1
ROSC	**El Rosal**	157.52	71	PKPab		PKPab	20 00 38.5	+1.6
	comp=Z,7.1nm,0.4s,baz=346,slow=12,SNR=1.3							
ROSC	**El Rosal**	157.52	71	PKIKP		PKPdf	20 00 01.6	-3.5
ROSC	**El Rosal**	157.52	71			PKPdf	20 00 01.6	-3.5
BARC	**Barichara**	157.97	66	*eP*		PKPdf	20 00 06.6	+1.1
PAMC	**Pamplona, Colo**	158.10	64	*eP*		PKPdf	20 00 06.8	+0.9
CHIC	**Chingaza**	158.15	71	*eP*		PKPdf	20 00 05.6	-0.3
RUSC	**La Rusia**	158.32	68	*eP*		PKPdf	20 00 04.6	-1.6
VILC	**Villavicencio,**	158.34	73	*eP*		PKPdf	20 00 06.4	+0.6
MACC	**Macarena, Meta**	158.68	78	*eP*		PKPdf	20 00 01.8	-4.3
SDV	**Santo Domingo**	159.16	57	PKP		PKPdf	20 00 06.6	-0.2
	comp=Z,5.9nm,0.6s,baz=277,slow=6.7,SNR=2.6							
SDV				PKPab		PKPab	20 00 43.9	+0.2
	comp=Z,32nm,0.7s,baz=228,slow=1.3,SNR=6.7							
SDV	**Santo Domingo**	159.16	57	*eP*		PKPdf	20 00 09.4	+2.6
SDV	**Santo Domingo**	159.16	57	*eP*		PKPdf	20 00 11.1	+4.3
TAMC	**Tame, Arauca**	159.29	65	*eP*		PKPdf	20 00 05.5	-1.3
LPAZ	**La Paz**	159.69	134	PKP		PKPdf	20 00 07.0	-0.8
	comp=Z,3.0nm,0.9s,baz=306,slow=2.0,SNR=13							
LPAZ	**La Paz**	159.69	134	*eP*		PKPdf	20 00 08.3	+0.4
LPAZ	**La Paz**	159.69	134	PKIKP		PKPdf	20 00 06.7	-1.2

DAMY Dhamar 18.80 299 P P 19 58 46.9 +0.3
SOHO SOHO 18.86 346 P Pn 19 58 47.5 0.0
SOHO P Pn 19 58 47.5 0.0
ATD Arta Tunnel 19.12 289 P Pn 19 58 51.7 +1.0
0.8nm,0.3s,baz=89,slow=12,SNR=5.7
ATD LR LR 20 05 10.4
comp=Z,177nm,21.9s,baz=210,slow=34
ATD Arta Tunnel 19.12 289 P Pn 19 58 51.0 +0.3
ASHO Ashiyiah 19.50 346 P Pn 19 58 58.0 +2.7
ASHO P Pn 19 58 58.0 +2.7
AJN Ajban 19.68 343 P Pn 19 58 57.6 +0.3
AJN P Pn 19 58 57.6 +0.3
FAQ Al Faqa, Dubai 19.68 344 P P 19 58 54.8 -1.2
FAQ P P 19 58 54.8 -1.2
UOSS Minazif 19.72 346 P Pn 19 58 57.6 -0.2
UOSS P Pn 19 58 57.6 -0.2
UOSS Minazif 19.72 346 P P 19 58 56.7 +0.3
UOSS IAmb IAmb 19 59 08.1
comp=Z,45nm,1.3s
NAZ Nazwa, Dubai 19.90 345 P Pn 19 59 02.0 +2.1
FURI Furi 22.65 279 P P 19 59 29.2 +0.8
RAYN Ar Rayn 23.33 321 P P 19 59 33.4 -1.7
LODK Lodwar 25.95 266 P P 19 59 53.8 -5.7
SNR=10.0
OPO Ambohidratompo 27.86 210 LR LR 20 09 14.4
comp=Z,571nm,19.0s,baz=182,slow=32
HRA Herat 28.53 2 P P 20 00 23.1 +0.4
KBL Kabul 29.55 13 P P 20 00 30.1 -1.7
KBL IAmb IAmb 20 00 47.9
comp=Z,15nm,1.5s
GEYT Alibeck 32.18 355 P P 20 00 54.9 +0.2
comp=Z,1.2nm,0.6s,baz=233,slow=8.3,SNR=3.5
DRK Karamyk 34.91 14 P P 20 01 18.2 -0.6
BTK Batken 35.24 13 P P 20 01 21.2 -0.1
BTK IAmb IAmb 20 01 37.2
comp=Z,14nm,1.2s
MARD Mardin 36.59 332 P P 20 01 33.8 +0.8
MARD IAmb IAmb 20 01 35.9
comp=Z,21nm,1.3s
LSA Lhasa 36.90 46 P P 20 01 36.1 0.0
GNI Garni 37.36 339 P P 20 01 38.5 -1.1
GNI IAmb IAmb 20 01 43.6
comp=Z,17nm,1.4s
PSI Prapat 37.63 93 P P 20 01 43.0 +0.8
comp=Z,1.8nm,0.4s,baz=180,slow=11,SNR=3.8
RPSI Rantau Prapat 37.65 93 P P 20 01 41.3 -0.8
RPSI IAmb IAmb 20 01 51.5
comp=Z,31nm,1.6s
MHMT Maesariang 37.83 68 P P 20 01 47.3 +3.6
KK31 Karatay Array 38.10 11 P P 20 01 45.8 +0.2
KKAR Karatay Array 38.10 11 P P 20 01 45.8 +0.2
KKAR Karatay Array 38.10 11 P P 20 01 45.4 -0.2
GAZ Gaziantep 38.25 328 P P 20 01 47.5 +0.5
GAZ IAmb IAmb 20 01 58.5
comp=Z,16nm,1.4s
AAK Ala-Archa 38.58 16 P P 20 01 50.8 +1.1
comp=Z,2.2nm,0.7s,baz=175,slow=6.0,SNR=9.1
AAK PcP PcP 20 04 02.3 0.0
comp=Z,1.7nm,0.7s,baz=159,slow=4.6,SNR=3.6
AAK Ala-Archa 38.58 16 P P 20 01 49.0 -0.8
AAK IAmb IAmb 20 02 05.7
comp=Z,24nm,1.8s
UTHA Uthaitani 38.68 72 P P 20 01 53.3 +2.5
comp=Z,17nm,1.0s
FRU1 Bishkek 38.77 16 P P 20 01 51.6 +0.3
CM13 Chiang Mai Arr 38.79 68 P P 20 01 54.4 +2.6
comp=Z,74nmcomp=Z,6.2nm,1.3s
CM32 Chiang Mai Arr 38.79 67 P P 20 01 54.0 +2.3
CM15 Chiang Mai Arr 38.81 68 P P 20 01 54.0 +2.1
comp=Z,76nmcomp=Z,5.7nm,1.3s
CM05 Chiang Mai Arr 38.82 68 P P 20 01 54.3 +2.3
comp=Z,74nmcomp=Z,5.8nm,1.5s
CM02 Chiang Mai Arr 38.83 68 P P 20 01 54.1 +2.0
comp=Z,82nmcomp=Z,7.7nm,1.2s
CM31 Chiang Mai Arr 38.83 68 P P 20 01 54.5 +2.5
comp=Z,185nm,1.1s
CM31 Chiang Mai Arr 38.83 68 P P 20 01 52.6 +0.5
CM31 IAmb IAmb 20 02 02.1
comp=Z,16nm,1.2s
CMAR Chiang Mai Arr 38.83 68 P P 20 01 53.2 +1.1
comp=Z,3.0nm,1.0s,baz=258,slow=9.1,SNR=18
CMAR PcP PcP 20 04 03.4 0.0
comp=Z,1.7nm,1.0s,baz=263,slow=4.4,SNR=7.0
CMAR Chiang Mai Arr 38.83 68 P P 20 01 52.9 +0.8
CM01 Chiang Mai Arr 38.84 68 P P 20 01 54.2 +2.1
comp=Z,63nmcomp=Z,5.1nm,1.5s
BOOM Boomskoye usch 38.85 17 P P 20 01 52.5 +0.4
CM04 Chiang Mai Arr 38.85 68 P P 20 01 54.0 +1.8
comp=Z,90nmcomp=Z,8.7nm,1.1s
CM09 Chiang Mai Arr 38.87 68 P P 20 01 54.5 +2.1
comp=Z,104nmcomp=Z,9.3nm,1.2s
LSZ Lusaka 38.88 237 P P 20 01 53.1 +0.5
comp=Z,2.2nm,0.7s,baz=41,slow=10,SNR=4.5
LSZ Lusaka 38.88 237 P P 20 01 53.8 +1.2
KDJ Kajisay 38.91 19 P P 20 01 52.2 -0.4
KDJ IAmb IAmb 20 02 03.5
comp=Z,22nm,1.4s
CHTO Chiang Mai 38.92 67 P P 20 01 53.6 +0.7
CHTO IAmb IAmb 20 02 02.6
comp=Z,27nm,1.4s
CM33 Chiang Mai Arr 38.92 67 P P 20 01 54.0 +1.1
CMMT Chiang Mai 38.92 67 P P 20 01 54.2 +1.3
comp=Z,8.7nm,2.1s
CM36 Chiang Mai Arr 38.98 68 P P 20 01 54.0 +0.6
CM35 Chiang Mai Arr 39.08 67 P P 20 01 55.0 +0.8
CM34 Chiang Mai Arr 39.12 67 P P 20 01 56.0 +1.5
PAYA Payao 39.90 67 P P 20 02 11.7 +11
comp=Z,91nm,1.2s
PHRA Phrae 40.02 68 P P 20 02 04.5 +2.5
comp=Z,127µmcomp=Z,84nm,0.5s
TOKA Tokat 41.02 331 P P 20 02 10.2 +0.2
TOKA IAmb IAmb 20 02 12.1
comp=Z,15nm,1.0s
CHAI Chaiyaphum 41.15 72 P P 20 02 21.0 +10
KBZ Khabaz 41.16 340 P P 20 02 11.7 +0.6
comp=Z,3.5nm,0.8s,baz=156,slow=8.5,SNR=6.6
MATP Matopo 41.40 230 P P 20 02 13.8 +0.3
comp=Z,2.8nm,1.0s,baz=49,slow=9.8,SNR=3.3
BR131 Keskin Array S 42.02 328 P P 20 02 18.4 0.0
BRTR Keskin Array B 42.02 328 P P 20 02 18.4 0.0
comp=Z,3.8nm,0.8s,baz=149,slow=9.8,SNR=12
ELL Elmali 42.15 321 P P 20 02 19.0 -0.5
BR231 Keskin MP Arra 42.57 327 P P 20 02 22.4 -0.4
ABKAR Akbulak array 43.39 359 P P 20 02 29.4 +0.3
ABKAR IAmb IAmb 20 02 37.2
comp=Z,14nm,1.1s
ABKAR Akbulak array 43.39 359 P P 20 02 29.4 +0.3
SLVN Son La 44.06 65 P P 20 02 35.8 +0.7
SLVN IAmb IAmb 20 02 49.6
comp=Z,12nm,1.3s
WMQ Urumqi 44.48 27 P P 20 02 38.1 0.0
WMQ IAmb IAmb 20 02 53.0
comp=Z,17nm,1.2s
IDI Anoyia 44.58 316 P P 20 02 39.5 +0.4
comp=Z,5.0nm,0.9s,baz=116,slow=8.6,SNR=5.5
IDI Anoyia 44.58 316 ⇑P P 20 02 39.4 +0.4
AKTO Aktyubinsk 44.64 357 P P 20 02 39.0 -0.2
comp=Z,3.3nm,0.8s,baz=206,slow=7.9,SNR=7.1
MKAR Makanchi Array 44.74 20 P P 20 02 39.5 -0.6
comp=Z,1.9nm,0.9s,baz=206,slow=8.0,SNR=6.4
MKAR PcP PcP 20 04 21.8 -0.5
comp=Z,2.1nm,1.1s,baz=207,slow=4.3,SNR=3.3
MKAR Makanchi Array 44.74 20 P P 20 02 39.9 -0.1
LBTB Lobatse 46.25 227 P P 20 02 54.0 +1.5
comp=Z,2.8nm,0.9s,baz=52,slow=5.5,SNR=2.7
ALN Alexandroupoli 47.10 323 P P 20 02 58.7 0.0
KURK Kurchatov 47.12 15 P P 20 02 58.2 -0.6
KURK IAmb IAmb 20 03 06.1
comp=Z,5.7nm,0.9s
BVAR Borovoye Array 47.74 7 P P 20 03 03.7 +0.2
comp=Z,0.3nm,0.5s,baz=212,slow=15,SNR=3.9
BRVK Borovoye 47.76 7 P P 20 03 03.3 -0.3
BRVK IAmb IAmb 20 03 09.1
comp=Z,13nm,1.7s
LEM Lembang 47.88 104 P P 20 03 04.8 -0.7
comp=Z,3.3nm,0.3s,baz=320,slow=19,SNR=1.5
GTA Gaotai 48.26 40 eP P 20 03 14.5 +6.5
GTA pP pwP 20 03 20.0 +5.1
GTA sP sP 20 03 23.3 +13
GTA pmax pmax
comp=Z,3.0nm,1.2s
BOSA Boshof 48.68 224 P P 20 03 10.4 -0.9
comp=Z,4.6nm,1.0s,baz=63,slow=3.7,SNR=4.3
CFR Carcaliu 48.75 329 ⇓P P 20 03 11.4 -0.1
TSUM Tsumeb 49.66 239 P P 20 03 20.1 +1.2
TSUM IAmb IAmb 20 03 22.9
comp=Z,9.7nm,1.1s
NEHR Nehoiu 49.88 328 ⇑P P 20 03 20.4 +0.2
VRI Vrincioaia 49.95 329 ⇓P P 20 03 20.9 +0.2
PLOR Plostina 49.98 329 ⇑P P 20 03 21.1 +0.2
MLR Muntele Rosu 50.10 328 P P 20 03 21.4 -0.6
MLR IAmb IAmb 20 03 24.3
comp=Z,10nm,1.0s
TESR Tescani 50.42 329 ⇑P P 20 03 24.3 +0.1
VOIR 50.54 327 ⇑P P 20 03 25.6 +0.3
ARU Arti 50.61 358 P P 20 03 25.1 -0.3
ARU IAmb IAmb 20 03 32.7
comp=Z,12nm,1.0s
ARR Arges 50.72 327 ⇓P P 20 03 26.4 -0.2
SORM Soroca 50.73 332 ⇑P P 20 03 25.8 -0.7
SBUM Sibu 50.89 91 P P 20 03 28.5 +0.2
SBUM IAmb IAmb 20 03 38.1
comp=Z,11nm,1.0s
BIZ Bicaz 50.99 329 ⇓P P 20 03 28.7 +0.2
LOT Lotru 51.24 327 ⇑P P 20 03 30.1 -0.5
ZAA0 Zalesovo Array 51.74 17 P P 20 03 33.1 -0.9
ZALV Zalesovo Beam 51.74 17 P P 20 03 32.6 -1.4
comp=Z,1.8nm,0.8s,baz=221,slow=7.9,SNR=8.5
ZALV PcP PcP 20 04 45.8 -1.4
comp=Z,0.8nm,0.7s,baz=241,slow=4.8,SNR=2.2
ZALV Zalesovo Beam 51.74 17 P P 20 03 32.9 -1.0
GZR Gura Zlata 51.76 326 ⇑P P 20 03 34.0 -0.4
BURAR Bucovina Array 51.89 330 ⇑P P 20 03 35.7 +0.3
BURAR Bucovina Array 51.89 330 P P 20 03 35.4 0.0
BUR08 Bucovina Ar. S 51.92 330 P P 20 03 35.1 -0.4
BUR08 IAmb IAmb 20 03 36.0
comp=Z,11nm,1.4s
MDVR Moldovita 51.99 325 ⇑P P 20 03 36.2 +0.1
AKASG Malin Array Be 52.21 335 P P 20 03 36.9 -0.6
comp=Z,0.4nm,0.4s,baz=138,slow=6.7,SNR=7.2
XAN Xi'an 52.26 51 P P 20 03 37.2 -1.1
XAN IAmb IAmb 20 03 45.1
comp=Z,12nm,1.1s
BZS Buzias 52.54 326 ⇑P P 20 03 40.2 +0.1
DRGR 52.66 327 ⇑P P 20 03 41.5 +0.4
SIRR Siria 52.91 326 ⇑P P 20 03 43.4 +0.5
KOLS Kolonicke sedl 54.24 329 eP P 20 03 53.7 +1.1
KOLS e 20 04 05.8
CRVS Cervenica-Dubn 54.64 329 eP P 20 03 56.5 +1.0
PSZ Piszkesteto 54.87 327 P P 20 03 56.9 -0.3
PSZ IAmb IAmb 20 03 57.6
comp=Z,9.1nm,1.1s
WHN Wuhan 55.52 57 P P 20 04 03.3 +1.1
WHN pP pwP 20 04 13.0 +4.3
VYHS Vyhne 55.78 327 eP P 20 04 03.1 -0.6
LANS Liptovska Anna 55.83 328 eP P 20 04 04.5 +0.4
OJC Ojcow 56.30 329 P P 20 04 07.0 -0.4
OJC IAmb IAmb 20 04 09.8
comp=Z,13nm,1.4s
TAM Tamanrasset 56.30 294 P P 20 04 08.8 +0.6
TAM IAmb IAmb 20 04 10.3
comp=Z,10nm,1.2s
SMOL Smolenice 56.56 326 eP P 20 04 08.9 -0.4
MODS Modra-Piesok 56.56 326 eP P 20 04 07.8 -1.5
JAVC Velka Javorina 56.62 327 eP P 20 04 10.4 +0.6
SONM Songino Array 56.87 35 P P 20 04 11.9 +0.2
comp=Z,1.0nm,0.6s,baz=251,slow=4.5,SNR=3.9
SOKA Soboth 56.93 324 eP P 20 04 11.9 -0.2
comp=Z,8.5nm,1.2s
ARSA Arzberg 56.94 324 eP P 20 04 12.2 +0.1
comp=Z,7.1nm,1.0s,SNR=4.7
CONA Conrad Observa 57.11 325 eP P 20 04 13.2 -0.1
comp=Z,14nm,1.2s
OBKA Obir 57.13 323 eP P 20 04 13.6 +0.1
comp=Z,14nm,1.6s
MORC Moravsky Berou 57.21 328 ⇓P P 20 04 13.4 -0.6
MORC Moravsky Berou 57.21 328 eP P 20 04 13.6 -0.4
MORC Moravsky Berou 57.21 328 P P 20 04 13.3 -0.6
MORC IAmb IAmb 20 04 14.6
comp=Z,9.4nm,1.0s
KRUC Moravsky 57.43 327 eP P 20 04 15.2 -0.2
VRAC Vranov 57.46 327 ⇓P P 20 04 15.4 -0.2
VRAC Vranov 57.46 327 eP P 20 04 15.5 -0.2
MYKA Terra Mystica 57.74 323 eP P 20 04 17.8 0.0
comp=Z,24nm,1.6s
KRLC Kraliky 57.79 328 eP P 20 04 17.4 -0.6
MOA Molln 57.98 324 eP P 20 04 19.3 -0.1
comp=Z,17nm,1.1s
KBA Kbnbreinsper 58.13 323 eP P 20 04 20.0 -0.7
comp=Z,7.0nm,1.2s
OSTC Ostas 58.36 328 eP P 20 04 20.8 -1.2
CHVC Chvalec 58.46 328 eP P 20 04 22.4 -0.3
ABTA Abfaltersbach 58.47 323 eP P 20 04 22.6 -0.3
comp=Z,7.4nm,1.0s,SNR=5.0
GERES GERESS Array B 58.82 325 P P 20 04 23.6 -1.6
comp=Z,0.8nm,0.8s,baz=104,slow=5.6,SNR=5.7
PRU Pruhonice 58.95 327 eP P 20 04 25.7 -0.3
KHC Kasperske Hory 59.03 325 eP P 20 04 25.2 -1.5
TOA0 Torodi Ar. Sit 59.14 282 P P 20 04 28.2 +0.2
TORD Torodi Ar. Bea 59.14 282 P P 20 04 27.8 -0.2
comp=Z,2.3nm,0.8s,baz=92,slow=5.1,SNR=6.9
TORD PcP PcP 20 05 16.8 +0.2
comp=Z,1.9nm,0.8s,baz=73,slow=4.1,SNR=4.1
WTTA Wattenberg 59.25 323 eP P 20 04 27.6 -0.8
comp=Z,8.5nm,0.9s,SNR=5.2
WATA Walderalm 59.32 323 eP P 20 04 27.7 -1.1
comp=Z,12nm,1.1s
SQTA Sankt Quirin 59.48 323 iP P 20 04 29.0 -0.9
comp=Z,6.1nm,0.8s
MOTA Moosalm 59.60 323 eP P 20 04 29.7 -1.1
comp=Z,9.4nm,0.9s,SNR=7.1
BJT Baijiatuau 59.79 47 P P 20 04 31.4 -0.7
BJT IAmb IAmb 20 04 34.3
comp=Z,10nm,1.3s
RETA Reutte 59.88 323 eP P 20 04 31.5 -1.1
comp=Z,6.8nm,1.3s
DAVA Damuels 60.32 322 iP P 20 04 35.1 -0.6
comp=Z,11nm,1.7s
CLL Collm 60.48 327 eP P 20 04 36.0 -0.5
CLL Collm 60.48 327 P P 20 04 36.1 -0.5
CLL IAmb IAmb 20 04 49.9
comp=Z,4.6nm,1.0s
FINES FINESS Array B 61.47 342 P P 20 04 41.9 -1.2
comp=Z,2.0nm,1.0s,baz=114,slow=9.3,SNR=1.4
FINES FINESS Array B 61.47 342 P P 20 04 42.1 -1.0
SENIN Lac Senin/Sane 61.53 320 P P 20 04 43.4 -0.7
BFO Black Forest 61.72 323 P P 20 04 44.5 -0.6
MORW Morawa 62.95 127 P P 20 04 54.0 +0.4
NWAO Narrogin (SRO) 65.48 130 P P 20 05 10.2 +0.1
KIC Kosan Boka 65.63 274 eP P 20 05 12.0 +0.5
comp=Z,25nm,1.1s
DBIC Dimbokro 65.72 275 P P 20 05 12.0 -0.1
comp=Z,4.0nm,0.8s,baz=67,slow=5.8,SNR=4.0
DBIC Dimbokro 65.72 275 P P 20 05 12.8 +0.7
TIC Toumodi 65.89 275 eP P 20 05 13.5 +0.3
LIC Lamto 65.92 274 eP P 20 05 13.8 +0.4
comp=Z,21nm,0.8s
ESDC Sonseca Array 67.39 311 P P 20 05 21.5 -0.9
comp=Z,1.8nm,0.8s,baz=89,slow=5.9,SNR=8.2
ESDC Sonseca Array 67.39 311 P P 20 05 21.6 -0.8
FITZ Fitzroy Crossi 67.72 112 P P 20 05 25.0 +0.2
ARCES ARCESS Array B 67.87 347 P P 20 05 24.5 -0.3
comp=Z,2.1nm,0.8s,baz=131,slow=7.6,SNR=3.6
KSAR Wonju Array Be 68.00 52 P P 20 05 24.9 -1.3
KSRS Korea Array 68.03 52 P P 20 05 24.9 -1.4
comp=Z,2.1nm,0.7s,baz=258,slow=6.4,SNR=7.9
MAW Mawson 73.17 179 P P 20 05 57.9 +0.9
comp=Z,2.2nm,0.7s,baz=336,slow=7.2,SNR=6.6
MAW Mawson 73.17 179 P P 20 05 58.4 +1.3
SYO Syowa Base 76.08 188 eP P 20 06 13.8 -0.1
MJAR Matsushiro Arr 76.10 54 P P 20 06 14.1 -0.8
comp=Z,1.0nm,0.7s,baz=267,slow=8.4,SNR=3.1
WRA Warramunga Arr 76.15 112 P P 20 06 15.1 -0.3
comp=Z,9.6nm,1.0s,baz=288,slow=5.0,SNR=27
WRA Warramunga Arr 76.15 112 P P 20 06 14.5 -0.9
WB2 Warramunga Arr 76.16 112 P P 20 06 15.0 -0.5
WB0 Warramunga Arr 76.17 112 P P 20 06 14.7 -0.8
AS31 Alice Springs 76.52 116 P P 20 06 17.2 -0.2
ASAR Alice Springs 76.52 116 P P 20 06 17.2 -0.3
comp=Z,6.7nm,0.9s,baz=285,slow=5.5,SNR=35
ASAR Alice Springs 76.52 116 P P 20 06 16.9 -0.6
TIXI Tiksi 77.63 17 P P 20 06 21.4 -1.3
BBOO Buckleboo 80.41 125 P P 20 06 38.4 -0.3
STKA Stephens Creek 84.81 123 P P 20 07 01.4 -0.3
comp=Z,3.4nm,0.8s,baz=304,slow=7.3,SNR=8.3
STKA Stephens Creek 84.81 123 P P 20 07 01.3 -0.3
VNA2 Neumayer--Watz 88.55 198 P P 20 07 20.9 +1.8
PDAR Pinedale Array 131.02 351 PKP PKPdf 20 13 38.8 -0.5
comp=Z,0.5nm,0.7s,baz=33,slow=2.2,SNR=1.9
NVAR Mina Array Bea 136.06 360 PKP PKPdf 20 13 47.3 -1.5
comp=Z,0.6nm,0.6s,baz=29,slow=2.2,SNR=2.0
TXAR Lajitas Array 142.26 338 PKhKP PKPpre 20 13 54.6
comp=Z,0.4nm,0.7s,baz=40,slow=1.4,SNR=4.8

TAP 29 19:55:26.5, 22.70N×121.12E, h1km, ML1.8, 2C, B,
Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTN	**Taitung**	**0.06**	**23**	P	Pg	19 55 28.1	+0.5
	baz=29						
TTN				S	Sg	19 55 29.8	+1.5
	baz=29						
TWGBT	**Beinan**	**0.12**	**340**	⇑P	Pg	19 55 29.9	+1.1
	baz=340						
TWGBT				eS	Sg	19 55 32.8	+2.3
	baz=340						
TWG	**Pinlang**	**0.13**	**338**	⇑*i*P	Pg	19 55 29.9	+1.0
	baz=340						
TWG				*i* S	Sg	19 55 32.5	+1.9
	baz=340						
ECL	**Taimali**	**0.19**	**236**	*i* P	Pg	19 55 31.6	+1.5
	baz=234						
LONT	**Longtian**	**0.20**	**2**	*e*P	Pg	19 55 31.6	+1.2
	baz=1.0						
LONT				S	Sg	19 55 35.6	+2.6
	baz=1.0						
EDH	**Donghe**	**0.32**	**32**	*e*P	Pb	19 55 34.3	-0.6
	baz=31						
EDH				eS	Sb	19 55 39.8	-0.8
	baz=31						
LDUT	**Ludao**	**0.32**	**95**	*e*P	Pb	19 55 34.4	-0.5
	baz=95						
LDUT				eS	Sb	19 55 40.0	-0.7
	baz=95						
TAW	**Tawu**	**0.40**	**212**	eS	Sb	19 55 43.0	0.0
	baz=210						
EAST	**Anshuo**	**0.41**	**219**	*e*P	Pb	19 55 36.1	-0.4
	baz=217						
EAST				eS	Sb	19 55 43.0	-0.2
	baz=217						
TSMG	**Majia**	**0.44**	**270**	S	Sb	19 55 44.3	+0.1
	baz=270						
ELDTW	**Lidau**	**0.49**	**348**	*e*P	Pb	19 55 37.4	-0.6
	baz=349						
ELDTW				eS	Sb	19 55 45.7	-0.1
	baz=349						
SLGT	**Liugui**	**0.53**	**303**	eS	Sb	19 55 47.6	+0.9
	baz=303						
SSPT	**Xinbi**	**0.56**	**247**	*e*P	Pb	19 55 38.6	-0.4
	baz=246						
SSPT				S	Sb	19 55 48.4	+0.9
	baz=246						
STYT	**Tauyuan**	**0.57**	**324**	P	Pb	19 55 38.8	-0.5
	baz=323						
STYT				eS	Sb	19 55 47.6	-0.3
	baz=323						
SCZT	**Fangliau**	**0.57**	**235**	*e*P	Pb	19 55 39.3	+0.1
	baz=234						

TAP 29 19:55:37.1, 22.69N×121.04E, h7km, ML1.4, 2C, B,
Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ECL	**Taimali**	**0.12**	**221**	*i* P	Pg	19 55 40.3	+0.6
	baz=217						
ECL				*i* S	Sg	19 55 42.7	+1.3
	baz=217						
TTN	**Taitung**	**0.12**	**56**	eS	Sg	19 55 43.1	+1.6
	baz=58						
TWGBT	**Beinan**	**0.14**	**16**	⇑P	Pg	19 55 41.0	+0.9
	baz=16						
TWGBT				S	Sg	19 55 43.5	+1.5
	baz=16						
TWG	**Pinlang**	**0.14**	**13**	⇑*i*P	Pg	19 55 41.0	+0.9
	baz=16						
TWG				*i* S	Sg	19 55 43.5	+1.5
	baz=16						
LONT	**Longtian**	**0.23**	**21**	P	Pg	19 55 42.5	+0.7
	baz=21						
LONT				S	Sg	19 55 46.3	+1.3
	baz=21						
EAST	**Anshuo**	**0.35**	**210**	P	Pb	19 55 45.1	-0.6
	baz=208						
EAST				eS	Sb	19 55 51.1	-0.4
	baz=208						
TAW	**Tawu**	**0.35**	**202**	*e*P	Pg	19 55 44.9	+0.9
	baz=200						
TAW				S	Sb	19 55 51.0	-0.5
	baz=200						
TSMG	**Majia**	**0.36**	**273**	*e*P	Pb	19 55 45.4	-0.5
	baz=273						
TSMG				eS	Sb	19 55 51.5	-0.4
	baz=273						
EDH	**Donghe**	**0.38**	**41**	*e*P	Pb	19 55 45.5	-0.7
	baz=40						
EDH				eS	Sb	19 55 51.9	-0.4
	baz=40						
SSD	**Sandimen**	**0.38**	**279**	*e*P	Pg	19 55 45.0	+0.5
	baz=278						
SSD				S	Sb	19 55 51.4	-1.0
	baz=278						
MASBT	**Mashibuluo**	**0.38**	**259**	S	Sb	19 55 52.2	-0.2
	baz=258						
LDUT	**Ludao**	**0.40**	**92**	*e*P	Pb	19 55 46.2	-0.3
	baz=91						
LDUT				eS	Sb	19 55 52.6	-0.3
	baz=91						
SLGT	**Liugui**	**0.47**	**310**	S	Sb	19 55 55.3	+0.2
	baz=310						
SSPT	**Xinbi**	**0.48**	**245**	eS	Sb	19 55 55.3	+0.1
	baz=245						
SCZT	**Fangliau**	**0.50**	**231**	P	Pb	19 55 47.8	-0.4
	baz=230						
ELDTW	**Lidau**	**0.50**	**358**	P	Pb	19 55 48.1	-0.3
	baz=358						
ELDTW				eS	Sb	19 55 56.0	0.0
	baz=358						
CHKT	**Chengkung**	**0.51**	**36**	*e*P	Pb	19 55 48.6	+0.2
	baz=37						
CHKT				eS	Sb	19 55 55.8	-0.3
	baz=37						
SCST	**Cishan**	**0.54**	**292**	*e*P	Pb	19 55 49.0	+0.1
	baz=291						
SCST				eS	Sb	19 55 57.2	+0.2
	baz=291						
STYT	**Tauyuan**	**0.54**	**331**	eS	Sb	19 55 57.2	+0.1
	baz=332						
FULB	**Fuli**	**0.56**	**25**	P	Pb	19 55 49.0	-0.3
	baz=24						
WTP	**Ta-pu**	**0.68**	**325**	P	Pb	19 55 51.2	-0.2
	baz=325						
WTP				eS	Sb	19 56 00.8	-0.2
	baz=325						

*IDC **29** 19:55:40.0±5.4, 21.11S×179.10W, h586km±62km, mb3.1/8, mb1 3.3/9, mb1mx3.1/39, mbtmp4.1/9, Error ellipse: s-maj=32.4km s-min=18.3km az=65.0*

ISC 29 19:55:41.1±0.9, 21.2S±0.1×179.2W±0.2, h600km, n13, σ1.9 33/15, mb3.5/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**17.32**	**190**	P	**P**	**19 59 09.2**	**-1.0**
	1.9nm,0.3s,baz=343,slow=11,SNR=14						
URZ				S	S	20 01 51.4	-9.0
	0.4nm,0.3s,baz=108,slow=19,SNR=1.6						
STKA	**Stephens Creek**	**36.47**	**245**	P	**P**	**20 01 58.3**	**+1.3**
	1.1nm,0.4s,baz=83,slow=11,SNR=7.4						
ASAR	**Alice Springs**	**43.25**	**258**	P	**P**	**20 02 51.9**	**+0.6**
	0.5nm,0.3s,baz=92,slow=8.3,SNR=24						
ASAR				PcP	**PcP**	**20 04 26.8**	**+0.2**
	0.4nm,0.6s,baz=105,slow=4.3,SNR=4.8						
ASAR				S	**S**	**20 08 33.8**	**-2.5**
	0.8nm,0.7s,baz=92,slow=17,SNR=5.2						
WRA	**Warramunga Arr**	**43.38**	**263**	P	**P**	**20 02 52.3**	**0.0**
	0.4nm,0.3s,baz=97,slow=7.7,SNR=16						
VNDA	**Vanda**	**57.15**	**185**	P	**P**	**20 04 32.5**	**+1.2**
	1.0nm,0.5s,baz=358,slow=7.1,SNR=12						
MJAR	**Matsushiro Arr**	**70.08**	**325**	P	**P**	**20 05 54.3**	**+0.2**
	0.7nm,0.5s,baz=163,slow=5.3,SNR=9.7						
PETK	**Petropavlovsk-**	**76.63**	**346**	P	**P**	**20 06 31.3**	**+0.4**
	4.8nm,0.9s,baz=115,slow=5.7,SNR=4.5						

ILAR	**Eielson Array**	**89.22**	**13**	P		**P**	**20 07 33.1**	**-0.4**
	0.3nm,0.4s,baz=213,slow=5.1,SNR=6.3							
CMAR	**Chiang Mai Arr**	**89.26**	**290**	P		**P**	**20 07 36.2**	**+1.4**
	0.3nm,0.7s,baz=140,slow=3.4,SNR=3.8							
ARCES	**ARCESS Array B**	**129.36**	**349**	PKP		**PKPdf**	**20 13 41.3**	**-0.3**
	0.5nm,0.6s,baz=56,slow=2.6,SNR=0.6							
FINES	**FINESS Array B**	**136.08**	**343**	SKPbc		**SKPbc**	**20 16 30.8**	**0.0**
	1.0nm,0.6s,baz=38,slow=2.5,SNR=4.7							
AKASG	**Malin Array Be**	**143.03**	**330**	PKP		**PKPdf**	**20 14 04.6**	**-2.7**
	0.9nm,0.4s,baz=48,slow=4.5,SNR=2.8							
TORD	**Torodi Ar. Bea**	**171.97**	**186**	PKPab		**PKPab**	**20 16 08.7**	**-1.0**
	0.4nm,0.7s,baz=159,slow=4.3,SNR=2.7							

IDC 29 20:06:51.0± 1.7, 2°34.N × 127°.05E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/35, mbtmp3.5/5, Error ellipse: s-maj=103.5km s-min=20.7km az=59.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.27**	**162**	P		P	20 11 59.9	-0.6
	0.7nm,0.4s,baz=341,slow=11,SNR=9.5							
ASAR	**Alice Springs**	**26.69**	**166**	P		P	20 12 32.3	+0.1
	0.1nm,0.4s,baz=347,slow=9.0,SNR=2.2							
ASAR				PcP		PcP	20 15 55.9	-0.2
	0.2nm,0.6s,baz=343,slow=2.4,SNR=1.7							
CMAR	**Chiang Mai Arr**	**31.86**	**302**	P		P	20 13 18.6	+0.4
	0.4nm,0.8s,baz=137,slow=8.8,SNR=4.9							
STKA	**Stephens Creek**	**36.72**	**159**	P		P	20 14 00.6	+0.4
	1.1nm,0.6s,baz=340,slow=12,SNR=4.3							
MKAR	**Makanchi Array**	**58.88**	**326**	P		P	20 16 51.2	-0.6
	0.3nm,0.5s,baz=129,slow=6.9,SNR=5.0							

*IDC **29** 20:08:29.9± 1.5, 2°.48N × 127°.16E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/37, mbtmp3.8/7, Error ellipse: s-maj=84.6km s-min=18.8km az=62.0*
*NEIC **29** 20:08:35.9± 2.0, 2°.33N ± 0°.09 × 127°.03E ± 0°.10, h37km ± 8km, mb4.2/15, Error ellipse: s-maj=16.6km s-min=9.8km az=51.0*
*DJA **29** 20:08:45.0± 0.4, 1°N ± 9' × 12°7'E ± ', h68km ± 8km, M3.9/7, mb4.1/5, MLv3.8/7*

ISC 29 20:08:35.5± 0.7, 2°39N ± 0°.07 × 127°.19E ± 0°.09, h35km, n40, σ1 s39/40, mb4.1/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.62**	**174**	P		**Pn**	**20 09 01.1**	**-0.5**
TNTI	**Ternate**	**1.62**	**174**			**Pn**	**20 09 02.0**	**+0.4**
TNTI				Sn		**Sn**	**20 09 19.0**	**-2.3**
KMSI	**Cibinong**	**3.68**	**241**	P		**Pn**	**20 09 32.6**	**+2.6**
GTOI	**Gorontalo**	**4.53**	**247**	P		**Pn**	**20 09 43.7**	**+2.1**
LUWI	**Luwuk**	**5.58**	**232**	Pn		**Pn**	**20 09 55.8**	**-0.4**
MRSI	**Marisa**	**5.58**	**250**	P		**Pn**	**20 09 56.0**	**-0.1**
APSI	**Ampana**	**6.44**	**239**	P		Pn	20 10 20.6	+13
TOLI2	**Tolitoli**	**6.53**	**259**	Pn		**Pn**	**20 10 07.2**	**-2.0**
FAKI	**Fak Fak**	**7.31**	**136**	Pn		**Pn**	**20 10 21.8**	**+1.9**
MPSI	**Mapaga**	**7.57**	**254**	P		**Pn**	**20 10 26.0**	**+2.5**
	0.0nm7.9nm,0.8s							
SBUM	**Sibu**	**14.96**	**271**	Pn		**Pn**	**20 12 04.4**	**-0.1**
TWSI	**Taliwang, Sumb**	**15.10**	**223**	P		**P**	**20 12 12.7**	**+1.5**
MTN	**Manton Dam**	**15.63**	**166**			**P**	**20 12 17.9**	**+0.7**
JAGI	**Jajag, Banyuwa**	**16.90**	**230**	P		Pn	20 12 22.2	-7.3
	71nm,0.9s							
JAGI	**Jajag, Banyuwa**	**16.90**	**230**	Pn		**Pn**	**20 12 27.0**	**-2.4**
KNRA	**Kununurra**	**18.02**	**175**			**Pn**	**20 12 43.1**	**-0.2**
KNRA				IAmb		IAmb	20 12 55.9	
	comp=Z,22nm,1.3s							
FITZ	**Fitzroy Crossi**	**20.42**	**184**	P		**P**	**20 13 10.8**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=5.4,slow=8.6,SNR=5.7							
FITZ	**Fitzroy Crossi**	**20.42**	**184**	P		**P**	**20 13 08.6**	**-1.3**
TPUB	**Ta-pu**	**21.73**	**344**	P		**P**	**20 13 22.1**	**-1.9**
WRA	**Warramunga Arr**	**23.28**	**163**	P		**P**	**20 13 39.3**	**-1.0**
	comp=Z,2.5nm,0.7s,baz=340,slow=10,SNR=11							
WRA	**Warramunga Arr**	**23.28**	**163**	P		**P**	**20 13 38.0**	**-2.3**
WB2	**Warramunga Arr**	**23.28**	**163**	P		**P**	**20 13 38.7**	**-1.6**
WB2				IAmb		IAmb	20 14 02.1	
	comp=Z,6.9nm,1.1s							
AS31	**Alice Springs**	**26.71**	**166**	P		**P**	**20 14 12.7**	**+0.9**
ASAR	**Alice Springs**	**26.71**	**166**	P		**P**	**20 14 12.0**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=349,slow=8.2,SNR=9.0							
ASAR				PcP		**PcP**	**20 17 35.4**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=341,slow=2.5,SNR=8.2							
ASAR	**Alice Springs**	**26.71**	**166**	P		**P**	**20 14 12.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**31.95**	**302**	P		**P**	**20 14 56.5**	**-1.9**
	comp=Z,0.4nm,0.6s,baz=129,slow=7.5,SNR=5.6							
CMAR	**Chiang Mai Arr**	**31.95**	**302**	P		**P**	**20 14 56.8**	**-1.6**
CHTO	**Chiang Mai**	**32.11**	**303**	P		**P**	**20 14 58.1**	**-1.7**
CHTO				IAmb		IAmb	20 15 12.8	
	comp=Z,3.1nm,1.4s							
STKA	**Stephens Creek**	**36.72**	**159**	P		**P**	**20 15 39.5**	**0.0**
	comp=Z,5.0nm,0.7s,baz=334,slow=10,SNR=14							
STKA	**Stephens Creek**	**36.72**	**159**	P		**P**	**20 15 39.7**	**+0.2**
STKA				IAmb		IAmb	20 15 41.3	
	comp=Z,1.4nm,0.8s							
ARMA	**Armidale**	**40.10**	**146**	P		**P**	**20 16 08.8**	**+0.7**
ARMA				IAmb		IAmb	20 16 30.8	
	comp=Z,12nm,1.3s							
MK31	**Makanchi Array**	**58.91**	**326**	P		**P**	**20 18 30.9**	**-0.3**
MKAR	**Makanchi Array**	**58.91**	**326**	P		**P**	**20 18 30.4**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=118,slow=7.5,SNR=6.8							
MKAR	**Makanchi Array**	**58.91**	**326**	P		**P**	**20 18 30.7**	**-0.5**
KURK	**Kurchatov**	**63.11**	**328**	P		**P**	**20 18 59.2**	**-0.3**
KURK				IAmb		IAmb	20 19 01.4	
	comp=Z,2.2nm,0.7s							
ABKAR	**Akbulak array**	**73.47**	**321**	P		**P**	**20 20 04.3**	**-0.2**
ABKAR	**Akbulak array**	**73.47**	**321**	P		**P**	**20 20 04.6**	**+0.1**
ABKAR				IAmb		IAmb	20 20 26.9	
	comp=Z,3.8nm,1.5s							
VNDA	**Vanda**	**82.05**	**173**	P		**P**	**20 20 52.2**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=298,slow=5.4,SNR=4.7							
VNDA	**Vanda**	**82.05**	**173**	P		**P**	**20 20 52.0**	**+0.3**
VNDA				IAmb		IAmb	20 21 05.7	
	comp=Z,3.9nm,1.5s							
IMAR	**Indian Mountai**	**83.37**	**24**	P		**P**	**20 21 00.8**	**+2.0**

*SJA **29** 20:19:40.8± 1.3, 19°.88S × 71°.16W, h71km ± 24km, ML4.1, MW4.0*
*IDC **29** 20:19:41.5± 0.7, 19°.79S × 70°.76W, h0km, mb4.1/13, mb1 4.3/17, mb1mx4.2/31, mbtmp4.1/17, ML4.1/4, MS3.7/1, Ms1 3.7/1, ms1mx3.1/35, Error ellipse: s-maj=24.2km s-min=16.3km az=49.0*
*NEIC **29** 20:19:43.6, 19°.98S × 70°.97W, h16km, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr 3.83; Mθθ-0.19; Mφφ-3.64; Mrθ 0.86; Mrφ 1.74; Mθφ-2.86; Fault plane solution: M0 5.09000×10^15 NP1: φs 161.20000°, δ 63.07000°, λ 93.85000°. NP2: φs 332.74000°, δ 27.19000°, λ 82.47000°. Principal axes: T 4.8164, Plg72.0000°, Azm80.0000°; N 0.5169, Plg3.0000°, Azm339.0000°; P -5.3333, Plg18.0000°, Azm248.0000°;*
*NEIC **29** 20:19:43.4± 1.7, 19°.97S ± 0°.03 × 70°.95W ± 0°.05, h14km ± 3km, mb4.8/35, Mwr4.4/36, ML4.3(GUC) Error ellipse: s-maj=7.3km s-min=4.3km az=94.0*
*GUC **29** 20:19:44.4± 0.8, 19°.93S × 71°.04W, h33km ± 3km, ML4.4*
*VAO **29** 20:19:51.3± 0.5, 19°.64S × 70°.73W, h76km, mb4.5*

ISC 29 20:19:44.5± 0.9, 19°.92S ± 0°.03 × 70°.99W ± 0°.04, h25km ± 6km, n184, σ1 s50/191, mb4.7/27, 11C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSGC	**Pisagua**	**0.88**	**69**	⇓*iP*		**Pn**	**20 20 00.0**	**-1.3**
PSGC				*i* S		**Sn**	**20 20 12.3**	**-1.0**
PSGC				IAML			20 20 15.0	
	comp=N,12μm,0.7s							
PSGCX	**Pisagua**	**0.88**	**69**	Pg		**Pn**	**20 19 59.7**	**-1.6**
PSGCX				Sg		**Sn**	**20 20 12.7**	**-0.6**
PSGCX	**Pisagua**	**0.88**	**69**	*i* P		**Pn**	**20 20 00.1**	**-1.2**
TA02	**Huaiquique**	**0.88**	**114**	*eP*		**Pn**	**20 20 00.1**	**-1.2**
TA02				*i* S		**Sn**	**20 20 12.4**	**-0.9**
TA02				IAML			20 20 14.5	
	comp=N,19μm,0.4s							
TA01	**Diego Aracena**	**1.00**	**130**	⇑*iP*		**Pn**	**20 20 01.9**	**-1.0**
TA01				*i* S		**Sn**	**20 20 14.8**	**-1.3**
TA01				IAML			20 20 17.4	
	comp=N,6μm,0.3s							
TA01	**Diego Aracena**	**1.00**	**130**	Pg		**Pn**	**20 20 01.9**	**-1.0**
TA01						**Sn**	**20 20 15.1**	**-1.1**
HMBC	**Humberstone**	**1.10**	**109**	⇑*iP*		**Pn**	**20 20 03.8**	**-0.6**
HMBC				*i* S		**Sn**	**20 20 18.9**	**+0.1**
HMBC				IAML			20 20 22.1	
	comp=N,28μm,0.4s							
PATCX	**Punta Patache**	**1.20**	**139**	⇑*iP*		**Pn**	**20 20 04.7**	**-1.0**
PATCX				*i* S		**Sn**	**20 20 19.6**	**-1.5**
PATCX				IAML			20 20 33.3	
	comp=E,6μm,0.4s							
PATCX	**Punta Patache**	**1.20**	**139**			**Pn**	**20 20 04.6**	**-1.0**
PATCX						**Sn**	**20 20 19.6**	**-1.5**
PATCX	**Punta Patache**	**1.20**	**139**	*i* P		**Pn**	**20 20 04.8**	**-1.0**
PATCX				*eS*		**Sn**	**20 20 19.2**	**-1.9**
PB11	**IPOC Station P**	**1.27**	**83**	⇑*iP*		**Pn**	**20 20 06.5**	**-0.2**
PB11				*i* S		**Sn**	**20 20 23.2**	**+0.1**
PB11				IAML			20 20 25.0	
	comp=E,18μm,0.7s							
PB11	**IPOC Station P**	**1.27**	**83**			**Pn**	**20 20 06.5**	**-0.2**
PB11					Sn	**Sn**	**20 20 23.6**	**+0.5**
PB11	**IPOC Station P**	**1.27**	**83**	*i* P		**Pn**	**20 20 06.6**	**-0.1**
MNMC	**Minye Minye**	**1.53**	**60**	⇑*iP*		**Pn**	**20 20 10.8**	**+0.3**
MNMC				*i* S		**Sn**	**20 20 31.2**	**+1.5**
MNMC				IAML			20 20 38.5	
	comp=N,16μm,0.5s							
MNMC	**Minye Minye**	**1.53**	**60**			**Pn**	**20 20 10.7**	**+0.3**
MNMCX	**Minye Minye**	**1.53**	**60**	*i* P		**Pn**	**20 20 10.9**	**+0.4**
MNMCX				*eS*		**Sb**	**20 20 32.6**	**+1.2**
AP01	**Chacalluta**	**1.66**	**22**	⇑*iP*		**Pn**	**20 20 11.8**	**-0.1**
AP01	**Chacalluta**	**1.66**	**22**			**Pn**	**20 20 11.9**	**-0.1**
GO01	**Chusmiza**	**1.71**	**82**	⇑*iP*		**Pn**	**20 20 13.4**	**+0.3**
GO01				*i* S		**Sb**	**20 20 37.0**	**+0.2**
GO01				IAML			20 20 38.6	
	comp=N,13μm,0.2s							
GO01	**Chusmiza**	**1.71**	**82**			**Pn**	**20 20 13.4**	**+0.3**
PB02	**IPOC Station P**	**1.73**	**144**	⇓*iP*		**Pn**	**20 20 12.4**	**-0.7**
PB02				IAML			20 20 44.9	
	comp=E,8μm,0.3s							
PB02	**IPOC Station P**	**1.73**	**144**	*i* P		**Pn**	**20 20 12.4**	**-0.7**
PB02				*eS*		**Sb**	**20 20 36.5**	**-0.6**
PB02	**IPOC Station P**	**1.74**	**98**	⇑*iP*		**Pn**	**20 20 13.5**	**0.0**
PB08				*i* S		**Sn**	**20 20 37.0**	**+1.9**
PB08				IAML			20 20 41.6	
	comp=N,5μm,0.4s							
PB08	**IPOC Station P**	**1.74**	**98**			**Pn**	**20 20 13.4**	**0.0**
PB08	**IPOC Station P**	**1.74**	**98**	*i* P		**Pn**	**20 20 13.7**	**+0.2**
PB01	**IPOC Station P**	**1.80**	**129**	⇑*iP*		**Pn**	**20 20 13.8**	**-0.2**
PB01				*i* S		**Sn**	**20 20 36.6**	**+0.5**
PB01				IAML			20 20 47.1	
	comp=N,4μm,0.6s							
PB01	**IPOC Station P**	**1.80**	**129**			**Pn**	**20 20 13.6**	**-0.4**
PB01	**IPOC Station P**	**1.80**	**129**	*i* P		**Pn**	**20 20 13.8**	**-0.2**
PB01				*eS*		**Sn**	**20 20 36.8**	**+0.7**
PB07	**IPOC Station P**	**2.08**	**150**	*eP*		**Pn**	**20 20 16.7**	**-1.2**
PB07				IAML			20 21 02.4	
	comp=E,3μm,0.4s							
PB07	**IPOC Station P**	**2.08**	**150**			**Pn**	**20 20 16.7**	**-1.2**
PB07	**IPOC Station P**	**2.08**	**150**	*i* P		**Pn**	**20 20 16.9**	**-0.9**
PB16	**IPOC Station P**	**2.11**	**42**	⇑*iP*		**Pn**	**20 20 19.1**	**+0.5**
PB16				IAML			20 20 51.6	
	comp=N,7μm,0.4s							
PB16	**IPOC Station P**	**2.11**	**42**	Pn		**Pn**	**20 20 19.0**	**+0.4**
PB03	**IPOC Station P**	**2.42**	**152**	IAML			20 21 08.9	
	comp=E,2μm,0.7s							
PB03	**IPOC Station P**	**2.42**	**152**	*i* P		**Pn**	**20 20 21.8**	**-0.7**
PB03				*eS*		**Sb**	**20 21 01.8**	**+5.0**
PB09	**IPOC Station P**	**2.48**	**139**	*eP*		**Pn**	**20 20 58.8**	**+0.3**
PB09				*eS*		**Sn**	**20 20 55.1**	**+2.0**
PB09				IAML			20 21 10.3	
	comp=E,3μm,0.6s							
PB09	**IPOC Station P**	**2.48**	**139**	Pn		**Pn**	**20 20 23.6**	**+0.1**
PB09	**IPOC Station P**	**2.48**	**139**	*i* P		**Pn**	**20 20 23.9**	**+0.4**
PB04	**IPOC Station P**	**2.53**	**162**	*i* P		**Pn**	**20 20 22.6**	**-1.5**
PB04				*eS*		**Sb**	**20 21 03.0**	**+2.9**
PB04				IAML			20 21 17.4	
	comp=Z,1μm,0.6s							
PB05	**IPOC Station P**	**3.01**	**166**	*eP*		Pn	20 20 24.7	-6.1
PB05				IAML			20 21 24.1	
	comp=Z,467nm,0.8s							
PB06	**IPOC Station P**	**3.08**	**155**	Pn		**Pn**	**20 20 30.4**	**-1.3**
PB06	**IPOC Station P**	**3.08**	**155**	*eP*		**Pb**	**20 20 38.3**	**-0.3**
LVC	**Limon Verde**	**3.31**	**144**	Pn		**Pn**	**20 20 35.7**	**+0.7**
	comp=Z,22nm,0.3s,baz=302,slow=11,SNR=7.0							
LVC				Sn		**Sn**	**20 21 13.1**	**-0.7**
	comp=Z,55nm,0.3s,baz=259,slow=19,SNR=1.9							
LVC				Lg		Lg	20 21 23.1	
	comp=Z,62nm,0.3s,baz=331,slow=20,SNR=6.5							
LVC	**Limon Verde**	**3.31**	**144**	⇓*iP*		**Pn**	**20 20 35.5**	**+0.5**
LVC	**Limon Verde**	**3.31**	**144**			**Pn**	**20 20 35.3**	**+0.3**
LVC	**Limon Verde**	**3.31**	**144**	*eP*		**Pb**	**20 20 41.3**	**-1.4**
PB15	**IPOC Station P**	**3.57**	**157**	Pn		**Pn**	**20 20 37.2**	**-1.2**
PB15	**IPOC Station P**	**3.57**	**157**	*eP*		**Pn**	**20 20 37.5**	**-1.0**
PB15				IAML			20 21 05.4	
	comp=Z,357nm,0.4s							
PB10	**IPOC Station P**	**3.60**	**174**	Pn		**Pn**	**20 20 37.4**	**-1.3**
PB10	**IPOC Station P**	**3.60**	**174**	*i* P		**Pn**	**20 20 36.6**	**-2.1**
PB10				IAML			20 21 20.0	
	comp=Z,215nm,0.7s							
LPAZ	**La Paz**	**4.52**	**37**	Pn		**Pn**	**20 20 55.4**	**+3.5**
	comp=Z,6.5nm,0.3s,baz=216,slow=4.1,SNR=31							
LPAZ	**La Paz**	**4.52**	**37**	*eP*		**Pn**	**20 20 54.6**	**+2.7**
LPAZ	**La Paz**	**4.52**	**37**	⇓*iP*		**Pn**	**20 20 53.4**	**+1.5**
LPAZ	**La Paz**	**4.52**	**37**	Pn		**Pn**	**20 20 54.4**	**+2.5**
LPAZ	**La Paz**	**4.52**	**37**	*eP*		**Pn**	**20 20 53.4**	**+1.7**
LPAZ				*eS*		Sb	20 22 08.4	+11
PB14	**IPOC Station P**	**4.72**	**173**	Pn		**Pn**	**20 20 51.5**	**-2.9**
GO02	**Mina Guanaco**	**5.38**	**166**	Pn		**Pn**	**20 21 02.5**	**-0.9**
HJA	**Humahuaca**	**6.14**	**123**	*eS*		Pn	20 21 19.5	+5.5
HJA				IAML			20 21 25.6	
	comp=Z,55nm,0.5s							
AC01	**Pan de Azucar**	**6.21**	**177**	Pn		**Pn**	**20 21 13.3**	**-1.3**
AC02	**Maricunga**	**7.10**	**166**	Pn		**Pn**	**20 21 26.4**	**-0.7**
LCO	**Las Campanas**	**9.06**	**178**	Pn		**Pn**	**20 21 54.5**	**+0.6**
NNA	**Nana**	**9.68**	**324**	Pn		**Pn**	**20 22 01.6**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=159,slow=17,SNR=1.6							
NNA				Sn		**Sn**	**20 23 44.8**	**-5.6**
	comp=Z,2.4nm,0.3s,baz=137,slow=16,SNR=3.0							
SIV	**San Ignacio**	**10.21**	**69**	Pn		**Pn**	**20 22 08.0**	**-1.6**
	comp=Z,5.8nm,0.3s,baz=264,slow=12,SNR=33							
SIV				LR		LR	20 26 32.5	
	comp=Z,433nm,20.2s,baz=306,slow=41							
ETMB	**Extrema**	**11.05**	**25**	*eP*		**Pn**	**20 22 20.4**	**-0.6**
PTLB	**Pontes e Lacer**	**12.14**	**70**	*eP*		**Pn**	**20 22 35.5**	**-0.3**
VILB	**Vilhena**	**12.45**	**58**	*eP*		**Pn**	**20 22 41.5**	**+1.3**
SAML	**Samuel**	**13.26**	**36**			**Pn**	**20 22 49.8**	**-1.5**
SAML	**Samuel**	**13.26**	**36**	*eP*		**Pn**	**20 22 51.1**	**-0.2**
MT02	**Curacav**	**13.29**	**181**	Pn		**Pn**	**20 22 51.4**	**-0.2**
CPUP	**Villa Florida**	**14.09**	**119**	Pn		**Pn**	**20 23 02.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=315,slow=14,SNR=2.3							
CPUP	**Villa Florida**	**14.09**	**119**			**Pn**	**20 23 03.0**	**+0.5**
CPUP	**Villa Florida**	**14.09**	**119**	*eP*		**P**	**20 23 07.4**	**-2.6**
AQDB	**Aquidauana**	**14.37**	**95**	*eP*		**Pn**	**20 23 09.0**	**+2.6**
BO02	**Sierra Bellavi**	**14.82**	**179**			**Pn**	**20 23 13.6**	**+1.1**
H03N1	**Juan Fernandez**	**15.21**	**206**	T		T	20 39 40.6	
	baz=33,slow=72,SNR=190							
H03N2	**Juan Fernandez**	**15.21**	**206**	T		T	20 39 42.2	
	baz=33,slow=72,SNR=135							
H03N3	**Juan Fernandez**	**15.22**	**206**	T		T	20 39 39.4	
	baz=33,slow=72,SNR=82							
BI02	**San Fabin de**	**16.69**	**181**			**P**	**20 23 36.8**	**-2.1**
CLDB	**Colider**	**17.18**	**61**	*eP*		**Pn**	**20 23 40.8**	**-2.1**
TRCB	**Terra Rica**	**17.34**	**103**	*eP*		**P**	**20 23 46.7**	**+0.6**
PCMB	**Pacaembu**	**18.53**	**99**	*eP*		**Pn**	**20 24 00.4**	**+0.9**
ARAG	**Araguaiana, MT**	**18.73**	**80**	*eP*		**Pn**	**20 24 02.2**	**+0.2**
ITAB	**Concordia**	**18.75**	**116**	*eP*		**Pn**	**20 24 01.8**	**-0.3**
CPSB	**Cacapava Do Su**	**18.99**	**127**	*eP*		**Pn**	**20 24 05.8**	**+0.8**
MACA	**Manacapuru-AM**	**19.46**	**32**	*eP*		**P**	**20 24 08.0**	**-1.4**
NPGB	**Novo Progresso**	**19.84**	**52**	*eP*		**P**	**20 24 13.2**	**-0.5**
FRTB	**Fartura**	**20.21**	**104**	*eP*		**P**	**20 24 17.8**	**+0.1**
SNDB	**Serra Nova Dou**	**20.50**	**70**	*eP*		**P**	**20 24 19.6**	**-1.3**
PLCA	**Paso Flores**	**20.75**	**179**	P		Pn	20 24 25.1	-0.7
	comp=Z,4.8nm,0.8s,baz=356,slow=9.9,SNR=6.5							
PLCA	**Paso Flores**	**20.75**	**179**			Pn	20 24 24.5	-1.4
PLCA	**Paso Flores**	**20.75**	**179**	*eP*		Pn	20 24 28.5	+2.6
OTAV	**Otavalo**	**21.32**	**339**	*eP*		P	20 24 38.1	+8.0
OTAV	**Otavalo**	**21.32**	**339**	P		**P**	**20 24 31.8**	**+1.7**
OTAV	**Otavalo**	**21.32**	**339**	*eP*		**P**	**20 24 31.5**	**+1.4**
ITTB	**Itaituba**	**21.45**	**46**	*eP*		**P**	**20 24 29.5**	**-1.5**
IPMB	**Ipameri, GO**	**21.63**	**89**	*eP*		**P**	**20 24 31.9**	**-1.1**
FLOC	**Florencia**	**21.85**	**347**	*eP*		**P**	**20 24 36.8**	**+1.5**
RCLB	**Rio Claro- Sao**	**22.02**	**101**	*eP*		**P**	**20 24 38.7**	**+1.5**
CRUC	**La Cruz**	**22.14**	**344**	*eP*		P	20 24 46.2	+7.5
BDFB	**Brasilia**	**22.28**	**83**	P		**P**	**20 24 37.0**	**-3.2**
	comp=Z,3.5nm,0.5s,baz=287,slow=13,SNR=4.0							
BDFB	**Brasilia**	**22.28**	**83**	P		**P**	**20 24 36.9**	**-3.2**
GARC	**Garzon, Huila**	**22.41**	**348**	*eP*		**P**	**20 24 43.4**	**+1.9**
BBAC	**Balboa, Cauca**	**22.65**	**344**	*eP*		**P**	**20 24 48.3**	**+4.2**
PCON	**Cinco Dias**	**22.73**	**346**	*eP*		**P**	**20 24 48.8**	**+3.4**
BETC	**Betania**	**22.88**	**349**	*eP*		**P**	**20 24 48.3**	**+2.0**
POPC	**Popayan, Colom**	**23.00**	**345**	*eP*		**P**	**20 24 50.9**	**+3.1**
PEXB	**Peixe**	**23.13**	**74**	*eP*		**P**	**20 24 48.8**	**-0.2**
MARP	**Paez Belalcaza**	**23.14**	**347**	*eP*		**P**	**20 24 49.9**	**+0.7**
ORTC	**Ortega, Tolima**	**24.04**	**350**	*eP*		**P**	**20 24 58.6**	**+0.8**
YOTC	**Yotoco, Valle**	**24.33**	**347**	*eP*		**P**	**20 24 57.7**	**-2.8**
CHIC	**Chingaza**	**24.54**	**353**	*eP*		**P**	**20 25 04.3**	**+1.6**
PRPB	**Parauapebas**	**24.70**	**59**	*eP*		**P**	**20 25 02.8**	**-1.0**
TOLC	**Tolima**	**24.72**	**350**	*eP*		**P**	**20 25 05.3**	**+1.1**
PLMC	**San Jos del P**	**25.21**	**348**	*eP*		**P**	**20 25 10.5**	**+2.1**
GUY2C	**Guyana, Caldas**	**25.35**	**350**	*eP*		**P**	**20 25 12.0**	**+1.9**
SPBC	**San Pablo de B**	**25.59**	**353**	*eP*		**P**	**20 25 10.8**	**-1.0**
RUSC	**La Rusia**	**25.73**	**355**	*eP*		**P**	**20 25 14.0**	**+0.4**
CBOC	**Ciudad Bolivar**	**26.09**	**349**	*eP*		**P**	**20 25 20.7**	**+4.2**
BARC	**Barichara**	**26.43**	**355**	*eP*		**P**	**20 25 20.7**	**+1.0**
PTBC	**PUERTO BERRIO,**	**26.51**	**352**	*eP*		**P**	**20 25 18.8**	**-1.4**
MCPB	**Macapa, AP**	**26.86**	**46**	*eP*		**P**	**20 25 21.7**	**-1.7**
ZARC	**Zaragoza, Cauc**	**27.50**	**352**	*eP*		**P**	**20 25 23.6**	**-5.5**
SDV	**Santo Domingo**	**28.62**	**1**	P		**P**	**20 25 38.8**	**-0.5**
	comp=Z,1.9nm,0.4s,baz=263,slow=8.1,SNR=1.4							
SDV	**Santo Domingo**	**28.62**	**1**	P		**P**	**20 25 39.1**	**-0.2**
SDV				IAmb		IAmb	20 25 45.0	
	comp=Z,12nm,1.2s							
SJCC	**San Jacinto, C**	**29.91**	**352**	*eP*		**P**	**20 25 51.5**	**+0.9**
TOSP	**Speyside**	**32.68**	**19**	P		**P**	**20 26 14.0**	**-0.8**
FDF	**Fort de France**	**35.77**	**16**	P		**P**	**20 26 42.8**	**+1.1**
RCBR	**Riachuelo**	**36.86**	**72**	P		**P**	**20 26 50.8**	**-0.3**
RCBR				IAmb		IAmb	20 26 51.2	
	comp=Z,23nm,1.1s							
SWET	**Sewanee**	**56.63**	**345**	P		**P**	**20 29 25.4**	**-0.1**
SWET				IAmb		IAmb	20 29 35.6	
	comp=Z,7.1nm,1.1s							
V52A	**Sevierville**	**56.73**	**348**	P		**P**	**20 29 26.3**	**+0.3**
V52A				IAmb		IAmb	20 29 36.1	
	comp=Z,6.8nm,0.8s							
WLAR	**White Oak Lake**	**57.33**	**338**	P		**P**	**20 29 31.7**	**+1.4**
S57A	**Dark Hollow, R**	**57.86**	**353**	P		**P**	**20 29 34.9**	**+0.9**
S57A				IAmb		IAmb	20 29 35.7	
	comp=Z,5.8nm,

CMAR **Chiang Mai Arr 145.00 319** PKPbc PKPab 20 49 10.5 -0.2
0.2nm,0.6s,baz=40,slow=2.2,SNR=3.0

IDC 29 20:32:01.9±2.3, 2°09.09'N×126°51.61'E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/27, mbtmp3.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.9/17, Error ellipse: s-maj=180.6km s-min=28.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.77 224**		LR	LR	20 37 42.4	
	comp=Z,179nm,22.0s,baz=340,slow=35						
WRA	**Warramunga Arr**	**23.21 161**		P	P	20 37 09.9	-0.7
	0.2nm,0.3s,baz=340,slow=11,SNR=6.3						
ASAR	**Alice Springs**	**26.60 165**		P	P	20 37 43.0	+0.9
	0.2nm,0.9s,baz=346,slow=12,SNR=1.6						
MKAR	**Makanchi Array**	**58.77 326**		P	P	20 42 01.7	-0.2
	0.2nm,0.6s,baz=116,slow=8.2,SNR=1.0						

*IDC **29** 20:39:32.2±1.5, 2°57.76'N×127°46.46'E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/36, mbtmp3.7/7, Error ellipse: s-maj=86.9km s-min=18.8km az=63.0*
*NEIC **29** 20:39:37.6±1.5, 2°40.40'N±0°.08'×127°.36'E±0°.1, h35km±2km, mb4.0/12, Error ellipse: s-maj=24.0km s-min=10.8km az=66.0*

ISC 29 20:39:38.0±0.8, 2°39.09'N±0°.09'×127°.36'E±0°.1, h35km, n25, σ0.972/27, mb3.9/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.61 176**			**Pn**	**20 40 04.3**	**+0.3**
TNTI				Sn	**Sn**	**20 40 22.6**	**-1.0**
LUWI	**Luwuk**	**5.64 233**		Pn	**Pn**	**20 40 59.0**	**-0.5**
TOLI2	**Tolitoli**	**6.60 259**		Pn	**Pn**	**20 41 13.3**	**+0.6**
MYLDM	**Lahad Datu**	**9.17 288**		Pn	**Pn**	**20 41 48.4**	**+0.4**
MTN	**Manton Dam**	**15.61 166**		P	**P**	**20 43 18.1**	**-1.3**
MTN				IAmb	IAmb	20 43 34.0	
	comp=Z,7.1nm,1.2s						
KNRA	**Kununurra**	**18.01 175**		P	**Pn**	**20 43 45.6**	**-0.1**
KNRA				IAmb	IAmb	20 43 51.9	
	comp=Z,11nm,1.2s						
FITZ	**Fitzroy Crossi**	**20.42 184**		P	**P**	**20 44 13.3**	**+0.9**
	comp=Z,0.4nm,0.4s,baz=13,slow=11,SNR=1.5						
FITZ	**Fitzroy Crossi**	**20.42 184**		P	**P**	**20 44 12.5**	**+0.1**
WB0	**Warramunga Arr**	**23.11 163**		P	**P**	**20 44 40.5**	**-0.6**
WB0				IAmb	IAmb	20 44 48.5	
	comp=Z,4.7nm,0.9s						
WRA	**Warramunga Arr**	**23.25 163**		P	**P**	**20 44 41.8**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=339,slow=11,SNR=23						
WRA	**Warramunga Arr**	**23.25 163**		P	**P**	**20 44 41.8**	**-0.8**
WB2	**Warramunga Arr**	**23.26 163**		P	**P**	**20 44 41.9**	**-0.7**
WB2				IAmb	IAmb	20 44 57.0	
	comp=Z,4.1nm,1.1s						
WR0	**Warramunga Arr**	**23.33 162**		P	**P**	**20 44 42.6**	**-0.7**
WR0				IAmb	IAmb	20 44 52.1	
	comp=Z,5.3nm,1.2s						
ASAR	**Alice Springs**	**26.69 166**		P	**P**	**20 45 14.7**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=346,slow=7.2,SNR=10						
ASAR				PcP	**PcP**	**20 48 37.9**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=357,slow=2.1,SNR=7.7						
ASAR	**Alice Springs**	**26.69 166**		P	**P**	**20 45 14.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**32.02 302**		P	**P**	**20 46 01.4**	**0.0**
	comp=Z,0.4nm,0.8s,baz=122,slow=8.6,SNR=4.1						
STKA	**Stephens Creek**	**36.70 159**		P	**P**	**20 46 41.9**	**+0.1**
	comp=Z,3.4nm,0.6s,baz=331,slow=8.3,SNR=14						
STKA	**Stephens Creek**	**36.70 159**		P	**P**	**20 46 41.6**	**-0.2**
ARMA	**Armidale**	**40.06 146**		P	**P**	**20 47 11.3**	**+1.1**
MK31	**Makanchi Array**	**58.95 325**		P	**P**	**20 49 32.9**	**-1.1**
MKAR	**Makanchi Array**	**58.95 325**		P	**P**	**20 49 32.9**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=116,slow=7.9,SNR=8.8						
KURK	**Kurchatov**	**63.15 328**		P	**P**	**20 50 01.8**	**-0.5**
KURK				IAmb	IAmb	20 50 12.4	
	comp=Z,4.2nm,1.2s						
ABKAR	**Akbulak array**	**73.52 321**		P	**P**	**20 51 07.0**	**-0.3**
VNDA	**Vanda**	**82.04 173**		P	**P**	**20 51 54.6**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=311,slow=5.1,SNR=1.8						
VNDA	**Vanda**	**82.04 173**		P	**P**	**20 51 54.2**	**0.0**
VNDA				IAmb	IAmb	20 51 57.0	
	comp=Z,4.8nm,1.5s						

*IDC **29** 20:45:16.6±0.9, 44°.20'N×105°.60'W, h0km, mb4.0/1, mb1 3.8/6, mb1mx3.5/44, mbtmp3.5/6, ML3.4/5, Error ellipse: s-maj=22.7km s-min=8.1km az=149.0*
*NEIC **29** 20:45:18.1±1.6, 44°.03'N±0°.06'×105°.30'W±0°.04, h0km±1km, ML3.5/53, Error ellipse: s-maj=9.6km s-min=5.7km az=167.0*

ISC 29 20:45:17.5±0.9, 44°07'N±0°.06'×105°29'W±0°.05, h0km, n46, σ1.906/45, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.90 86**			**Pb**	**20 45 35.5**	**-0.7**
K22A	**Casper**	**1.68 213**			**Pn**	**20 45 46.5**	**-1.8**
K22A				IAML		20 46 10.2	
	comp=N,359nm,0.9s						
K22A				IAML		20 46 13.5	
	comp=E,462nm,0.9s						
LAO	**LASA Array**	**2.70 346**			**Pn**	**20 46 05.1**	**+2.8**
LAO				IAML		20 46 48.3	
	comp=E,248nm,0.9s						
LAO				IAML		20 46 57.0	
	comp=E,218nm,0.5s						
PHWY	**Pilot Hill**	**2.77 183**			**Pn**	**20 46 02.7**	**-0.6**
RLMT	**Red Lodge**	**3.03 292**			**Pn**	**20 46 07.2**	**+0.3**
RLMT				IAML		20 46 59.7	
	comp=E,85nm,0.7s						
N23A	**Red Feather La**	**3.21 189**		Pn	**Pn**	**20 46 09.5**	**+0.1**
N23A				IAML		20 46 56.4	
	comp=N,108nm,0.7s						
N23A				IAML		20 47 01.9	
	comp=E,92nm,0.7s						
BW06	**Boulder Array**	**3.37 249**			**Pn**	**20 46 10.6**	**-1.0**
BW06				IAML		20 47 03.5	
	comp=E,83nm,0.9s						
PD31	**Pinedale Array**	**3.37 249**			**Pn**	**20 46 11.4**	**-0.2**
PDAR	**Pinedale Array**	**3.37 249**		Pn	**Pn**	**20 46 11.0**	**-0.6**
	comp=E,3.3nm,0.3s,baz=68,slow=16,SNR=33						
PDAR				Pg	**Pb**	**20 46 17.9**	**-0.3**
	comp=E,11nm,0.3s,baz=68,slow=17,SNR=27						
PDAR				Lg	Lg	20 46 57.4	
	comp=E,13nm,0.3s,baz=64,slow=32,SNR=18						
PDAR	**Pinedale Array**	**3.37 249**		Pn	**Pn**	**20 46 11.6**	**0.0**
YNE	**Yellowstone No**	**3.50 287**			**Pn**	**20 46 12.4**	**-1.1**
GCMT	**Greycliff**	**3.56 301**			**Pn**	**20 46 14.5**	**+0.4**
YUF	**Upper Falls**	**3.80 282**			**Pn**	**20 46 16.8**	**-0.7**
H17A	**Grant Village**	**3.81 277**			**Pn**	**20 46 19.2**	**+1.5**
H17A				IAML		20 47 20.2	
	comp=N,45nm,1.2s						
LOHW	**Long Hollow**	**3.87 265**			**Pn**	**20 46 19.9**	**+1.5**
LOHW				IAML		20 47 26.9	
	comp=N,44nm,0.9s						
FLWY	**Flagg Ranch**	**3.90 272**			**Pn**	**20 46 20.2**	**+1.4**
FLWY				IAML		20 47 25.0	
	comp=N,85nm,2.0s						
OGNE	**Ogallala**	**3.94 141**		Pn	**Pn**	**20 46 19.6**	**+0.3**
SNOW	**Snow King Moun**	**4.01 263**			**Pn**	**20 46 21.6**	**+1.2**
SNOW				IAML		20 47 26.3	
	comp=N,65nm,1.3s						
SNOW				IAML		20 47 35.9	
	comp=N,86nm,1.8s						
YHH	**Holmes Hill**	**4.05 282**			**Pn**	**20 46 21.8**	**+0.8**
REDW	**Red Top Meadow**	**4.09 262**		Pn	**Pn**	**20 46 21.9**	**+0.4**
REDW				IAML		20 47 49.4	
	comp=N,66nm,0.9s						
E28A	**Huff**	**4.10 51**		Pn	**Pn**	**20 46 23.1**	**+1.7**
YHL	**Hebgen Lake**	**4.29 283**		Pn	**Pn**	**20 46 25.2**	**+0.9**
AHID	**Auburn Hatcher**	**4.43 255**			**Pn**	**20 46 27.1**	**+1.0**
AHID				IAML		20 47 58.6	
	comp=E,53nm,1.0s						
DGMT	**Dagmar**	**4.47 9**		Pn	**Pn**	**20 46 28.6**	**+2.1**
O20A	**White River Ci**	**4.50 210**			**Pn**	**20 46 28.2**	**+1.1**
O20A				IAML		20 48 01.5	
	comp=N,53nm,2.4s						
BOZ	**Bozeman (W)**	**4.76 291**			**Pn**	**20 46 30.4**	**-0.2**
BOZ				IAML		20 47 55.1	
	comp=N,22nm,2.4s						
EGMT	**Eagleton**	**5.03 323**			**Pn**	**20 46 35.1**	**+0.8**
HWUT	**Hardware Ranch**	**5.23 244**		Pn	**Pn**	**20 46 36.9**	**-0.2**
LRM	**Limekiln Ridge**	**5.38 292**			**Pn**	**20 46 38.6**	**-0.6**
TCUT	**Toone Canyon**	**5.39 239**			**Pn**	**20 46 40.2**	**+0.8**
KSCO	**Kaye Shedlock'**	**5.43 158**		Pn	**Pn**	**20 46 39.5**	**-0.3**
PV22	**Blue Mesa, Par**	**6.12 207**			**Pn**	**20 46 49.5**	**+0.1**
P17A	**Butcher Ranch,**	**6.14 223**			**Pn**	**20 46 49.6**	**0.0**
ECSD	**EROS Data Cent**	**6.28 90**			**Pn**	**20 46 52.0**	**+0.7**
SDCO	**Great Sand Dun**	**6.32 182**		Pn	**Pn**	**20 46 52.0**	**-0.1**
DUG	**Dugway, Tooele**	**6.80 238**		Pn	**Pn**	**20 46 58.2**	**-0.4**
T25A	**Trinidad**	**6.95 174**			**Pn**	**20 47 00.7**	**-0.1**
WALA	**Waterton Lakes**	**7.76 313**		Pn	**Pn**	**20 47 11.8**	**0.0**
AGMN	**Agassiz Nation**	**7.79 54**		Pn	**Pn**	**20 47 11.9**	**-0.1**
ELK	**Elko**	**8.08 249**		Pn	**Pn**	**20 47 16.5**	**+0.3**
	comp=N,0.1nm,0.3s,baz=54,slow=14,SNR=5.3						
ELK				Lg	Lg	20 49 24.8	
	baz=202,slow=18,SNR=1.3						
ULM	**Lac du Bonnet**	**8.91 43**		Pn	**Pn**	**20 47 25.3**	**-2.0**
	comp=N,1.9nm,0.3s,baz=227,slow=12,SNR=10						
ULM				Lg	Lg	20 49 49.9	
	comp=N,0.7nm,0.3s,baz=125,slow=13,SNR=2.0						
ANMO	**Albuquerque**	**9.15 186**		Lg	Lg	20 50 05.2	
	comp=N,0.1nm,0.3s,baz=280,slow=16,SNR=1.7						
NEW	**Newport**	**9.22 301**		Lg	Lg	20 49 51.7	
	comp=N,0.1nm,0.3s,baz=87,slow=19,SNR=1.6						
NVAR	**Mina Array Bea**	**11.30 245**		Pn	**Pn**	**20 48 00.1**	**-0.2**
	comp=N,0.3nm,0.3s,baz=56,slow=16,SNR=8.0						
TXAR	**Lajitas Array**	**14.76 174**		Pn	**Pn**	**20 48 49.7**	**+2.1**
	comp=N,0.0nm,0.3s,baz=353,slow=13,SNR=7.6						
TXAR				Pg	P	20 49 48.2	+54
	comp=N,0.0nm,0.3s,baz=0.7,slow=14,SNR=5.0						
TXAR				Lg	Lg	20 52 55.7	
	comp=N,0.0nm,0.3s,baz=11,slow=25,SNR=3.0						
MKAR	**Makanchi Array**	**89.28 355**		P	**P**	**20 58 14.0**	**-1.3**
	comp=N,0.5nm,0.6s,baz=12,slow=3.8,SNR=2.5						

IDC 29 20:54:22.0±2.7, 1°.83'N×126°.98'E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/25, mbtmp3.2/3, Error ellipse: s-maj=234.1km s-min=29.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.81 162**		P	P	20 59 25.5	-1.1
	0.3nm,0.5s,baz=340,slow=11,SNR=5.7						
ASAR	**Alice Springs**	**26.23 166**		P	P	21 00 00.0	+1.2
	0.2nm,0.4s,baz=344,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	**59.25 326**		P	P	21 04 25.2	-0.1
	0.3nm,0.7s,baz=111,slow=6.7,SNR=1.1						

*MOS **29** 21:06:47.2±1.0, 62°.57'N×148°.24'W, h69km, mb4.7/18, Error ellipse: s-maj=11.8km s-min=5.1km az=98.1*
*NEIC **29** 21:06:48.6±1.6, 62°.57'N±0°.03'×148°.13'W±0°.07, h66km±3km, Error ellipse: s-maj=4.5km s-min=3.7km az=74.0*
*NEIC **29** 21:06:48.9, 62°.56'N×148°.16'W, h70km, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=0.45; $M_{\theta\theta}$=1.13; $M_{\phi\phi}$=0.69; $M_{r\theta}$=0.11; $M_{r\phi}$=0.32; $M_{\theta\phi}$=0.60; Fault plane solution: M_0=1.20000×10^{16} NP1:ϕ_s221.96000°, δ70.30000°, λ-145.34000°. NP2:ϕ_s118.83000°, δ57.63000°, λ-23.53000°. Principal axes: T 1.2159, Plg8.0000°, Azm348.0000°; N -0.0293, Plg51.0000°, Azm248.0000°; P -1.1866, Plg38.0000°, Azm84.0000°;*
*AEIC **29** 21:06:48±1.6, 62°.54N±0°.03'×148°.06W±0°.05, h62km±3km, ML4.6, mb4.8/130(NEIC), Mwr4.7/105(NEIC), Mww4.6(NEIC) Error ellipse: s-maj=3.9km s-min=3.4km az=50.0*
*ANF **29** 21:06:49.0±0.9, 62°.59N×148°.09W, h29km±9km, ML5.1/19, Error ellipse: s-maj=3.1km s-min=2.6km az=87.0*
*NEIC **29** 21:06:50, 62°.56N×148°.16W, h60km, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=2.67; $M_{\theta\theta}$=7.96; $M_{\phi\phi}$=-5.29; $M_{r\theta}$=1.05; $M_{r\phi}$=3.97; $M_{\theta\phi}$=5.62; Fault plane solution: $M_0$9.89000×10^{15} NP1:ϕ_s114.00000°, δ55.00000°, λ-17.00000°. NP2:ϕ_s214.00000°, δ75.00000°, λ-143.00000°. Principal axes: T 9.6545, Plg13.0000°, Azm340.0000°; N 0.4497, Plg51.0000°, Azm233.0000°; P -10.1042, Plg36.0000°, Azm80.0000°;*
*IDC **29** 21:06:50.1±1.8, 62°.71N×148°.03W, h79km±15km, mb4.1/32, mb1 4.2/36, mb1mx4.1/59, mbtmp4.4/36, MS3.7/6, Ms1 3.6/6, ms1mx3.2/64 Error ellipse: s-maj=15.4km s-min=7.8km az=49.0*

ISC 29 21:06:48.4±0.4, 62°59'N±0°.03'×148°12'W±0°.03, h65km±3km, h65km:pP-P, n664, σ1.909/716, mb4.6/130, 8C-13D, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WAT6	**Susitna Watana**	**0.17 94**			**Pn**	**21 06 58.7**	**+0.2**
WAT6					**Sn**	**21 07 06.1**	**+0.1**
WAT1	**Susitna Watana**	**0.31 320**			**Pn**	**21 06 59.6**	**+0.4**
WAT1					**Sn**	**21 07 07.8**	**+0.7**
WAT7	**Susitna Watana**	**0.41 306**			**Pn**	**21 07 00.6**	**+0.5**
WAT2	**Susitna Watana**	**0.43 330**			**Pn**	**21 07 00.9**	**+0.6**
WAT2					**Sn**	**21 07 10.0**	**+1.1**
DHY	**Denali Highway**	**0.59 35**			**Pn**	**21 07 02.5**	**+0.6**
DHY				Sn	**Sn**	**21 07 12.9**	**+1.1**
SML	**Sawmill**	**0.80 187**			**Pn**	**21 07 04.1**	**0.0**
SML				Sn	**Sn**	**21 07 15.9**	**+0.1**
HUR	**Hurricane**	**0.80 300**			**Pn**	**21 07 04.9**	**+0.8**
SCM	**Sheep Creek Mo**	**0.85 154**		P	**Pn**	**21 07 04.6**	**-0.2**
SCM						21 07 17.9	
SCM	**Sheep Creek Mo**	**0.85 154**			**Pn**	**21 07 04.6**	**-0.2**
SCM					**Sn**	**21 07 17.9**	**+1.0**
RND	**Reindeer**	**0.88 338**			**Pn**	**21 07 06.2**	**+0.9**
RND				Sn	**Sn**	**21 07 19.4**	**+1.8**
GHO	**Glory Hole Cre**	**0.91 205**			**Pn**	**21 07 05.6**	**0.0**
GHO				Sn	**Sn**	**21 07 18.5**	**+0.3**
CUT	**Chulitna**	**1.02 260**		P	**Pn**	**21 07 07.4**	**+0.7**
	baz=80,SNR=1000						
CUT				S	**Sn**	**21 07 22.3**	**+1.8**
	baz=80						
CUT	**Chulitna**	**1.02 260**			**Pn**	**21 07 07.5**	**+0.7**
M24K	**Tolsona, Glenn**	**1.03 117**		P	**Pn**	**21 07 07.4**	**+0.3**
	baz=298,SNR=1000						
M24K				S	**Sn**	**21 07 22.9**	**+2.0**
	baz=298						
M24K	**Tolsona, Glenn**	**1.03 117**		Pn	**Pn**	**21 07 07.5**	**+0.5**
M24K				Sn	**Sn**	**21 07 22.9**	**+2.0**
PMR	**Palmer**	**1.11 206**			**Pn**	**21 07 08.1**	**0.0**
PMR				Sn	**Sn**	**21 07 22.6**	**-0.1**
KNK	**Knik Glacier**	**1.20 188**			**Pn**	**21 07 09.5**	**+0.3**
KNK				Sn	**Sn**	**21 07 25.8**	**+1.1**
MCK	**McKinley**	**1.20 342**		P	**Pn**	**21 07 10.8**	**+1.5**
MCK	**McKinley**	**1.20 342**		P	**Pn**	**21 07 10.8**	**+1.5**
	baz=162,SNR=1000						
MCK				S	**Sn**	**21 07 27.6**	**+2.7**
	baz=162						
MCK	**McKinley**	**1.20 342**			**Pn**	**21 07 10.8**	**+1.5**
PAX	**Paxson**	**1.27 72**		P	**Pn**	**21 07 10.8**	**+0.5**
PAX	**Paxson**	**1.27 72**			**Pn**	**21 07 10.8**	**+0.5**
TRF	**Thorofare Moun**	**1.31 312**		Pn	**Pn**	**21 07 11.9**	**+1.1**
TRF				Sn	**Sn**	**21 07 29.2**	**+1.5**
PS11	**TAPS Pump St11**	**1.34 111**			**Pn**	**21 07 12.2**	**+1.2**
KLU	**Klutina**	**1.51 136**			**Pn**	**21 07 13.1**	**-0.3**
KTH	**Kantishna Hill**	**1.60 308**			**Pn**	**21 07 16.1**	**+1.5**
SUA	**Susitna One**	**1.68 229**			**Pn**	**21 07 16.7**	**+1.0**
RC01	**Rabbit Creek A**	**1.69 208**		P	**Pn**	**21 07 16.1**	**+0.3**
	baz=27,SNR=1000						
RC01				S	**Sn**	**21 07 37.7**	**+1.2**
	baz=27						
RC01	**Rabbit Creek A**	**1.69 208**			**Pn**	**21 07 16.1**	**+0.3**
BWN	**Browne**	**1.70 340**		Pn	**Pn**	**21 07 16.9**	**+1.1**
SKT	**Skwentna**	**1.71 250**			**Pn**	**21 07 16.9**	**+0.9**
PS09	**TAPS Pump Stn9**	**1.71 37**			**Pn**	**21 07 18.6**	**+2.5**
PS09					**Sn**	**21 07 40.1**	**+3.1**
VMT	**TAPS TI Valdez**	**1.73 151**			**Pn**	**21 07 15.6**	**-0.6**
PWL	**Port Wells**	**1.74 184**			**Pn**	**21 07 16.5**	**0.0**
FIS	**Fire Island**	**1.76 215**			**Pn**	**21 07 19.1**	**+2.4**
GLI	**Glacier Island**	**1.79 164**			**Pn**	**21 07 16.5**	**-0.6**
DIV	**Divide**	**1.84 142**			**Pn**	**21 07 16.9**	**-0.9**
DIV					**Sn**	**21 07 39.3**	**-0.9**
RIDG	**Independent Ri**	**1.88 51**			**Pn**	**21 07 19.8**	**+1.5**
RIDG	**Independent Ri**	**1.88 51**			**Sn**	**21 07 42.7**	**+1.7**
WRH	**Wood River Hil**	**1.89 0**			**Pn**	**21 07 19.2**	**+0.9**
HDA	**Harding Lake**	**1.90 16**		P	**Pn**	**21 07 19.9**	**+1.4**
	baz=196,SNR=1000						
HDA				S	**Sn**	**21 07 42.8**	**+1.4**
	baz=196						
HDA				S	**Sn**	**21 07 42.8**	**+1.4**
	baz=196						
HDA	**Harding Lake**	**1.90 16**			**Pn**	**21 07 19.9**	**+1.4**
PPLA	**Purkeypile**	**1.90 281**			**Pn**	**21 07 19.6**	**+0.9**
N25K	**Chitina, Valde**	**1.93 119**		P	**Pn**	**21 07 19.1**	**+0.1**
	baz=302,SNR=648						
N25K				S	**Sn**	**21 07 43.5**	**+1.2**
	baz=302						
N25K	**Chitina, Valde**	**1.93 119**			**Pn**	**21 07 19.2**	**+0.1**
BPAW	**Bear Paw Mtn.**	**1.99 321**		Pn	**Pn**	**21 07 20.6**	**+0.9**
CAST	**Castle Rocks**	**1.99 296**			**Pn**	**21 07 21.4**	**+1.6**
FID	**Port Fidalgo**	**2.01 156**			**Pn**	**21 07 19.7**	**-0.3**
PS08	**TAPS Pump Stn8**	**2.04 16**			**Pn**	**21 07 21.6**	**+1.1**
MENT	**Mentasta**	**2.05 78**			**Pn**	**21 07 21.1**	**+0.5**
NEA2	**Nenana**	**2.05 348**		P	**Pn**	**21 07 21.1**	**+0.5**
	baz=168,SNR=1000						
NEA2				S	**Sn**	**21 07 45.6**	**+0.4**
	baz=168						
NEA2	**Nenana**	**2.05 348**			**Pn**	**21 07 21.2**	**+0.6**
STLK	**Strandline Lak**	**2.07 240**			**Pn**	**21 07 21.6**	**+0.8**
CCB	**Clear Creek Bu**	**2.07 4**			**Pn**	**21 07 21.6**	**+0.9**
DOT	**Dot Lake**	**2.13 58**			**Pn**	**21 07 22.2**	**+0.6**
L26K	**Log Cabin Wild**	**2.23 77**		P	**Pn**	**21 07 24.0**	**+0.9**
	baz=260,SNR=1000						
L26K				S	**Sn**	**21 07 51.7**	**+2.1**
	baz=260						
L26K	**Log Cabin Wild**	**2.23 77**			**Pn**	**21 07 23.9**	**+0.9**
O22K	**Cooper Landing**	**2.25 201**		P	**Pn**	**21 07 23.6**	**+0.3**
	baz=20,SNR=133						
O22K	**Cooper Landing**	**2.25 201**			**Pn**	**21 07 23.4**	**+0.1**
IL31		**2.25 14**			**Pn**	**21 07 24.4**	**+1.1**
ILAR	**Eielson Array**	**2.25 14**		P	**Pn**	**21 07 24.4**	**+1.1**
	295nm,0.3s,baz=194,slow=14						
ILAR				S	**Sn**	**21 07 50.6**	**+0.6**
	312nm,0.3s,baz=190,slow=23,SNR=3.1						
ILAR	**Eielson Array**	**2.25 14**		P	**Pn**	**21 07 24.4**	**+1.1**
ILAR	**Eielson Array**	**2.25 14**			**Pn**	**21 07 24.4**	**+1.1**
SPCG	**Spurr Capps Gl**	**2.26 236**			**Pn**	**21 07 24.6**	**+1.1**
COLA	**College**	**2.29**	**3**	c	**iP**	**21 07 24.8**	**+1.0**
COLA	**College**	**2.29**	**3**	Pn	**Pn**	**21 07 25.0**	**+1.1**
TCOL	**CIGO, UAF Yank**	**2.29**	**3**	P	**Pn**	**21 07 25.0**	**+1.1**
	baz=183,SNR=1000						
TCOL				S	**Sn**	**21 07 51.5**	**+0.6**
	baz=183						
TCOL	**CIGO, UAF Yank**	**2.29**	**3**		**Pn**	**21 07 24.9**	**+1.1**
I53US	**FAIRBANKS INFR**	**2.29**	**3**	P	**Pn**	**21 07 24.8**	**+0.9**
I53US				S	**Sn**	**21 07 46.0**	**-4.9**
	baz=199,slow=32						
SLKM	**Skilak Lake**	**2.32 207**			**Pn**	**21 07 24.5**	**+0.2**
SCRK	**Sand Creek**	**2.33 52**		P	**Pn**	**21 07 25.0**	**+0.6**
	baz=234,SNR=1000						
SCRK				S	**Sn**	**21 07 52.7**	**+0.7**
	baz=234						
SCRK	**Sand Creek**	**2.33 52**			**Pn**	**21 07 25.0**	**+0.6**
SPCP	**Crater Peak Br**	**2.33 237**			**Pn**	**21 07 25.5**	**+1.1**
BMRM	**Bremner River**	**2.33 133**			**Pn**	**21 07 23.5**	**-1.0**
CAPN	**Captain Cook N**	**2.33 220**		P	**Pn**	**21 07 27.1**	**+2.8**
	baz=38,SNR=12						
CAPN				S	Sn	21 08 01.0	+9.1
	baz=38						
HIN	**Hinchinbrook I**	**2.34 160**			**Pn**	**21 07 23.9**	**-0.6**
GLB	**Gilahina Butte**	**2.34 118**			**Pn**	**21 07 24.6**	**+0.1**
EYAK	**Cordova Ski Ar**	**2.34 150**			**Pn**	**21 07 24.1**	**-0.4**
MDM	**Murphy Dome**	**2.38 359**			**Pn**	**21 07 26.0**	**+1.0**
SPCR	**Spurr Chakacha**	**2.39 236**			**Pn**	**21 07 26.4**	**+1.2**
SPBG	**Spurr Blockage**	**2.42 238**			**Pn**	**21 07 27.3**	**+1.7**
POKR	**Poker Plat Res**	**2.55 7**		P	**Pn**	**21 07 28.6**	**+1.3**
	baz=187,SNR=971						
POKR				S	**Sn**	**21 07 58.2**	**+0.9**
	baz=187						
POKR	**Poker Plat Res**	**2.55 7**			**Pn**	**21 07 28.7**	**+1.3**
SEW	**Seward**	**2.58 195**			**Pn**	**21 07 27.3**	**-0.4**
VRDI	**Verde Repeater**	**2.60 120**			**Pn**	**21 07 27.9**	**-0.3**
I23K	**Minto, Yukon-K**	**2.62 348**		P	**Pn**	**21 07 29.5**	**+1.2**
	baz=167,SNR=1000						
I23K				S	**Sn**	**21 08 00.3**	**+1.4**
	baz=167						
I23K	**Minto, Yukon-K**	**2.62 348**			**Pn**	**21 07 29.4**	**+1.2**
MCARA	**McCarthy VSAT**	**2.69 115**		Pn	**Pn**	**21 07 29.8**	**+0.5**
MLY	**Manley**	**2.71 336**		P	**Pn**	**21 07 30.7**	**+1.2**
	baz=154,SNR=1000						
MLY				S	**Sn**	**21 08 01.3**	**+0.1**
	baz=154						
MLY	**Manley**	**2.71 336**			**Pn**	**21 07 30.9**	**+1.3**
PS07	**TAPS Pump Stn7**	**2.73 359**			**Pn**	**21 07 31.4**	**+1.6**
RAGM	**Ragged Mountai**	**2.76 142**			**Pn**	**21 07 29.6**	**-0.7**
HMT	**Hamilton**	**2.92 139**		Pn	**Pn**	**21 07 31.5**	**-1.0**
BC03		**2.94 78**			**Pn**	**21 07 33.0**	**+0.3**
BCAR	**Beaver Creek A**	**2.94 78**			**Pn**	**21 07 32.2**	**-0.5**
DFR	**Drift River**	**2.97 229**			**Pn**	**21 07 34.1**	**+1.0**
CRQM	**Cirque**	**3.00 126**	

KAKN Katmai Knife C 5.51 222 Pn 21 08 07.7 -0.2
KABU Katmai Buttres 5.60 222 Pn 21 08 09.6 +0.5
ANCK Angle Creek 5.72 223 Pn 21 08 11.4 +0.7
CAHL Cahill 5.78 221 Pn 21 08 12.5 +1.0
KJL Kejulik 5.87 222 Pn 21 08 13.6 +0.9
OHAK Old Harbor 5.98 208 Pn Pn 21 08 12.2 -1.9
TOLK Toolik Lake Re 6.10 355 P Pn 21 08 18.2 +2.3
baz=174,SNR=317
TOLK S **Sn 21 09 27.6 +3.3**
baz=174
TOLK Toolik Lake Re 6.10 355 Pn Pn 21 08 18.1 +2.2
PLBC Pleasant Camp 6.52 114 Pn 21 08 20.8 -0.7
WHY Whitehorse 6.60 101 Pn 21 08 21.9 -0.9
SKAG Skagway 6.96 111 Pn Pn 21 08 26.6 -0.9
BESE Bessie Mountai 7.67 116 Pn Pn 21 08 35.8 -1.5
ANM Nome 7.94 292 P Pn 21 08 42.8 +1.9
ANM Nome 7.94 292 Pn Pn 21 08 42.8 +1.9
JIS Juneau Island 8.05 116 Pn 21 08 40.7 -1.6
CHGN Chignik 8.20 224 Pn 21 08 43.8 -0.7
RDOG Red Dog Mine 8.25 318 Pn Pn 21 08 47.0 +1.9
INK Inuvik 8.34 40 P Pn 21 08 46.0 -0.2
12nm,0.3s,baz=228,slow=16,SNR=246
INK S **Sn 21 10 17.0 -1.6**
7.4nm,0.3s,baz=327,slow=22,SNR=5.9
INK Inuvik 8.34 40 P Pn 21 08 46.4 +0.2
INK Inuvik 8.34 40 Pn Pn 21 08 46.4 +0.2
SIT Sitka 8.49 125 P Pn 21 08 47.7 -0.8
SIT Sitka 8.49 125 Pn Pn 21 08 47.7 -0.8
TNA Tin City 9.16 298 P Pn 21 08 59.9 +2.4
baz=100
TNA S **Sn 21 10 37.6 -1.1**
baz=100
TNA Tin City 9.16 298 Pn Pn 21 08 59.3 +1.9
A21K Barrow 9.37 343 P Pn 21 09 00.3 0.0
baz=155,SNR=22
A21K S **Sn 21 10 42.1 -1.7**
baz=155
A21K Barrow 9.37 343 Pn Pn 21 09 00.5 +0.2
SDPT Sand Point 9.65 227 Pn 21 09 03.6 -0.7
CNBA Chernabura Isl 9.80 223 Pn Pn 21 09 05.7 -0.6
DLBC Dease Lake 9.83 107 P Pn 21 09 06.5 -0.3
4.6nm,0.3s,baz=340,slow=15,SNR=29
DLBC LR LR 21 13 09.7
comp=Z,386nm,19.9s,baz=308,slow=39
DLBC Dease Lake 9.83 107 Pn 21 09 06.4 -0.4
WRAK Wrangell Islan 10.11 121 Pn 21 09 09.9 -0.6
GAMB Gambell 10.70 287 Pn Pn 21 09 20.6 +2.1
C36M Paulatuk 11.83 45 P Pn 21 09 31.2 -2.7
baz=247,SNR=73
C36M S **Sn 21 11 38.4 -5.6**
baz=247
C36M Paulatuk 11.83 45 Pn Pn 21 09 31.5 -2.4
DIB Dawson Inlet, 12.52 132 Pn Pn 21 09 42.5 -0.9
BBB Bella Bella 14.93 125 P P 21 10 17.5 -2.0
0.9nm,0.3s,baz=322,slow=13,SNR=6.2
BBB LR LR 21 15 30.9
comp=Z,283nm,18.7s,baz=311,slow=35
BBB Bella Bella 14.93 125 P Pn 21 10 17.0 +1.7
YKA Yellowknife Ar 15.36 75 P Pn 21 10 19.5 -1.3
0.5nm,0.3s,baz=74,slow=12,SNR=10
YKA LR LR 21 16 51.7
comp=Z,210nm,18.5s,baz=0.0,slow=39
YKA Yellowknife Ar 15.36 75 *i* P **P 21 10 24.0 -0.2**
YKA pmax pmax
comp=Z,9.0nm,0.6s
YKA Yellowknife Ar 15.36 75 Pn 21 10 19.5 -1.3
BILL Bilibino 19.41 306 *i* P **P 21 11 08.8 0.0**
BILL pmax pmax
comp=Z,10.0nm,1.0s
BILL Bilibino 19.41 306 P P 21 11 08.5 -0.3
B08A Colville Reser 21.41 118 P P 21 11 30.7 +0.2
E04D Cinebar 21.61 126 P P 21 11 35.2 +2.6
baz=327
RES Resolute Bay 21.84 35 P P 21 11 34.0 -0.8
comp=Z,6.2nm,0.6s,baz=262,slow=11,SNR=17
RES Resolute Bay 21.84 35 P P 21 11 34.2 -0.6
RES pmax pmax
comp=Z,12nm,0.9s
RES Resolute Bay 21.84 35 P P 21 11 34.2 -0.6
NEW Newport 22.39 115 P P 21 11 41.0 -0.1
comp=Z,19nm,1.1s,baz=327,slow=7.7,SNR=14
NEW LR LR 21 19 59.0
comp=Z,230nm,20.0s,baz=342,slow=35
NEW Newport 22.39 115 P P 21 11 42.1 +1.0
NEW pmax pmax
comp=Z,28nm,1.1s
NEW Newport 22.39 115 P P 21 11 42.1 +1.0
baz=321
NEW Newport 22.39 115 P P 21 11 42.1 +1.0
NEW IAmb IAmb 21 12 07.3
comp=Z,28nm,1.1s
D08A Wollman Farm, 22.61 120 P P 21 11 44.3 +0.9
D08A IAmb IAmb 21 11 45.8
comp=Z,29nm,0.9s
WALA Waterton Lakes 23.16 110 P P 21 11 48.5 -0.6
I05D Terrebonne, OR 23.95 127 P P 21 11 58.0 +1.7
baz=329
JTMT Jette 24.00 112 P P 21 11 57.4 +0.7
JTMT IAmb IAmb 21 11 58.7
comp=Z,31nm,0.9s
EUNU Eureka 24.34 22 P P 21 12 01.1 +1.6
FFC Flin Flon 24.76 87 P P 21 12 03.3 -0.2
FFC pmax pmax
comp=Z,17nm,1.0s
FFC Flin Flon 24.76 87 P P 21 12 03.3 -0.2
MSO Missoula 24.86 113 P P 21 12 05.2 +0.6
baz=322
I07A Izee 24.86 125 P P 21 12 05.7 +1.0
BMO Blue Mountains 25.07 121 P P 21 12 06.9 +0.4
BMO pmax pmax
comp=Z,18nm,1.3s
BMO Blue Mountains 25.07 121 P P 21 12 06.9 +0.4
L04D Klamath Falls 25.45 131 P P 21 12 11.7 +1.7
baz=332
YBH Yreka Blue Hor 25.74 132 P P 21 12 12.7 +0.1
comp=Z,2.4nm,0.5s,baz=251,slow=12,SNR=3.9
EGMT Eagleton 25.76 107 P P 21 12 13.1 +0.4
baz=319
EGMT Eagleton 25.76 107 P P 21 12 12.8 +0.1
EGMT IAmb IAmb 21 12 14.0
comp=Z,26nm,1.1s
HRY Holter Researc 25.85 111 P P 21 12 14.0 +0.4
FCC Fort Churchill 26.07 74 P P 21 12 15.4 +0.1
FCC pmax pmax
comp=Z,34nm,0.9s
FCC Fort Churchill 26.07 74 P P 21 12 15.4 +0.1
FCC IAmb IAmb 21 12 16.7
comp=Z,34nm,0.8s
SEY Seymchan 26.40 298 P P 21 12 17.8 -0.5
comp=Z,5.0nm,0.6s,baz=73,slow=7.2,SNR=15
SEY PcP **PcP 21 15 43.3 +1.5**
comp=Z,3.4nm,0.3s,baz=2.7,slow=3.0,SNR=13
SEY Seymchan 26.40 298 *i* P **P 21 12 17.9 -0.3**
SEY Seymchan 26.40 298 P P 21 12 17.8 -0.5
N02D Trinity Center 26.42 133 P P 21 12 21.1 +2.3
baz=334
BOZ Bozeman (W) 26.82 112 P P 21 12 22.2 -0.1
BOZ pmax pmax
comp=Z,4.0nm,0.9s
BOZ Bozeman (W) 26.82 112 P P 21 12 23.4 +1.0
baz=322
BOZ Bozeman (W) 26.82 112 P P 21 12 22.2 -0.1
WDC Whiskeytown Da 26.83 133 P P 21 12 23.3 +1.0
WDC pmax pmax
comp=Z,14nm,1.2s
WDC Whiskeytown Da 26.83 133 P P 21 12 23.3 +1.0
MFID Camas Ranch 26.85 120 P P 21 12 23.5 +0.9
MFID IAmb IAmb 21 12 24.7
comp=Z,19nm,1.1s
HLID Hailey 27.30 118 P P 21 12 27.7 +1.0
baz=326,SNR=11
HLID Hailey 27.30 118 P P 21 12 27.2 +0.4
O03E Paynes Creek 27.34 132 P P 21 12 28.1 +1.2
baz=334
YNR Norris Junctio 27.92 112 P P 21 12 33.9 +1.5
RLMT Red Lodge 28.21 110 P P 21 12 36.6 +1.7
baz=322,SNR=15
RLMT Red Lodge 28.21 110 P P 21 12 35.5 +0.6
RLMT IAmb IAmb 21 12 37.4
comp=Z,21nm,1.1s
MA2 Magadan 28.73 292 P P 21 12 40.6 +1.5
MA2 pmax pmax
comp=Z,88nm,1.5s
MA2 Magadan 28.73 292 P P 21 12 40.6 +1.5
REDW Red Top Meadow 28.94 114 P P 21 12 43.3 +1.9
REDW IAmb IAmb 21 12 45.5
comp=Z,33nm,1.4s
ELK Elko 29.35 123 P P 21 12 46.4 +1.4
comp=Z,7.4nm,0.9s,baz=322,slow=9.7,SNR=24
BW06 Boulder Array 29.98 113 P P 21 12 52.3 +1.8
baz=325
PD31 Pinedale Array 29.98 113 P P 21 12 51.3 +0.7
PD31 IAmb IAmb 21 12 53.2
comp=Z,18nm,1.1s
PDAR Pinedale Array 29.98 113 P P 21 12 51.7 +1.1
comp=Z,6.6nm,0.8s,baz=320,slow=6.7,SNR=40
PDAR LR LR 21 27 06.7
comp=Z,150nm,19.3s,baz=12,slow=41
PDAR Pinedale Array 29.98 113 P P 21 12 51.2 +0.6
HWUT Hardware Ranch 30.09 117 P P 21 12 51.6 +0.1
NVAR Mina Array Bea 30.22 129 P P 21 12 54.1 +1.4
comp=Z,5.3nm,0.8s,baz=313,slow=8.5,SNR=19
NVAR Mina Array Bea 30.22 129 P P 21 12 54.0 +1.2
ULM Lac du Bonnet 30.50 89 P P 21 12 54.6 -0.2
comp=Z,16nm,0.9s,baz=311,slow=7.3,SNR=16
ULM Lac du Bonnet 30.50 89 P P 21 12 55.4 +0.5
ULM pmax pmax
comp=Z,23nm,1.0s
ULM Lac du Bonnet 30.50 89 P P 21 12 55.4 +0.5
ULM IAmb IAmb 21 12 56.0
comp=Z,23nm,1.0s
DUG Dugway, Tooele 30.78 120 P P 21 12 58.7 +1.1
DUG pmax pmax
comp=Z,7.0nm,0.9s
DUG Dugway, Tooele 30.78 120 P P 21 12 59.2 +1.6
baz=326,SNR=6.6
DUG Dugway, Tooele 30.78 120 P P 21 12 58.7 +1.1
TIXI Tiksi 30.83 322 *i* P **P 21 12 57.1 -0.4**
TIXI Tiksi 30.83 322 P P 21 12 56.6 -0.9
E28A Huff 30.93 99 P P 21 12 59.4 +0.7
SPR3 Spring Creek 3 31.21 123 P P 21 13 03.0 +1.4
R11A Troy Canyon, C 31.30 126 P P 21 13 03.7 +1.5
baz=331,SNR=27
RSSD Black Hills 31.30 105 P P 21 13 02.8 +0.6
RSSD pmax pmax
comp=Z,21nm,0.8s
RSSD Black Hills 31.30 105 P P 21 13 03.2 +1.0
baz=322
RSSD Black Hills 31.30 105 P P 21 13 02.8 +0.6
RSSD IAmb IAmb 21 13 04.3
comp=Z,21nm,0.8s
MPU Maple Canyon 31.41 119 P P 21 13 04.1 +1.0
PSUT Pine Spring 31.80 123 P P 21 13 07.7 +1.1
AGMN Agassiz Nation 31.89 92 P P 21 13 07.5 +0.4
baz=316,SNR=5.9
AGMN Agassiz Nation 31.89 92 P P 21 13 07.1 +0.1
AGMN IAmb IAmb 21 13 08.4
comp=Z,14nm,1.0s
TCRU Three Creeks R 32.28 121 P P 21 13 12.4 +1.5
TPNV Topopah Spring 32.28 128 P P 21 13 12.3 +1.5
baz=333
SRU San Rafael Swe 32.62 118 P P 21 13 15.3 +1.5
SRU pmax pmax
comp=Z,27nm,1.0s
SRU San Rafael Swe 32.62 118 P P 21 13 15.3 +1.5
MPMC Manual Prospec 32.63 130 P P 21 13 15.9 +2.0
baz=334,SNR=5.6
O20A White River Ci 32.71 115 P P 21 13 15.4 +0.9
baz=327
B35A Bob, Littlefor 32.84 90 P P 21 13 15.3 -0.1
B35A IAmb IAmb 21 13 16.3
comp=Z,14nm,0.9s
PKM Mcpherson Peak 32.89 134 P P 21 13 18.5 +2.3
baz=336
N23A Red Feather La 33.06 111 P P 21 13 19.9 +2.2
baz=325
N23A Red Feather La 33.06 111 P P 21 13 18.0 +0.4
N23A **pP 21 13 35.8 +2.0**
N23A **sP 21 13 42.3 +0.8**
N23A IAmb IAmb 21 13 43.6
comp=Z,21nm,0.8s
SUSD Miller 33.35 100 P P 21 13 21.2 +1.3
baz=320
SUSD Miller 33.35 100 P P 21 13 20.5 +0.6
GSC Goldstone, Bar 33.55 130 P P 21 13 22.7 +0.9
GSC pmax pmax
comp=Z,8.0nm,1.0s
GSC Goldstone, Bar 33.55 130 P P 21 13 23.7 +1.9
baz=334,SNR=5.2
GSC Goldstone, Bar 33.55 130 P P 21 13 22.7 +0.9
GSC IAmb IAmb 21 13 24.7
comp=Z,8.3nm,0.9s
PV15 Paradox Valley 34.12 117 P P 21 13 27.2 +0.3
PV15 IAmb IAmb 21 13 28.8
comp=Z,15nm,0.9s
EYMN Ely 34.17 89 P P 21 13 27.4 +0.5
baz=316,SNR=13
EYMN Ely 34.17 89 P P 21 13 27.1 +0.1
BFSC Mount Baldy Ra 34.21 132 P P 21 13 29.9 +2.3
baz=335
GMRC Granite Mounta 34.43 129 P P 21 13 31.1 +1.6
baz=334
OGNE Ogallala 34.73 107 P P 21 13 32.9 +1.0
F36A Milaca 34.77 93 P P 21 13 32.5 +0.4
ECSD EROS Data Cent 34.97 98 P P 21 13 34.0 +0.2
baz=321,SNR=32
ECSD EROS Data Cent 34.97 98 P P 21 13 33.8 -0.1
Q24A Divide 35.00 112 P P 21 13 35.9 +1.4
baz=327
BELC Belle Mtn. Jos 35.01 130 P P 21 13 36.0 +1.5
baz=335
MVCO Mesa Verde 35.08 118 P P 21 13 36.3 +1.1
baz=329
IRM Iron Mountain 35.18 128 P P 21 13 37.8 +2.0
baz=334,SNR=7.0
PFO Pinyon Flats O 35.20 131 P P 21 13 36.5 +0.4
comp=Z,4.9nm,1.0s,baz=290,slow=7.1,SNR=3.6
S22A 4UR Ranch, Cre 35.31 115 P P 21 13 38.9 +1.7
baz=328,SNR=8.5
WUAZ Wupatki 35.39 123 P P 21 13 39.6 +1.8
baz=332,SNR=13
BC3 Big Chuckawall 35.52 129 P P 21 13 40.1 +1.3
baz=335
SPMN Marine on St. 35.58 93 P P 21 13 40.1 +1.0
baz=319,SNR=5.8
SPMN Marine on St. 35.58 93 P P 21 13 39.5 +0.4
YAK Yakutsk 35.77 307 *eP* **P 21 13 39.5 -1.0**
YAK *e**PP **pP 21 13 54.8 -1.9**
YAK *e* 21 14 59.1
YAK *e* 21 16 06.4
YAK *eS* **S 21 19 10.4 -2.1**
YAK *e**SS **sS 21 19 40.0 -0.3**
YAK *eSS* **SnSn 21 21 35.5 -4.5**
YAK *e* 21 23 53.4
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,224nm,2.8s
YAK pmax pmax
comp=N,145nm,3.1s
YAK pmax pmax
comp=E,211nm,3.3s
YAK smax smax
comp=N,253nm,3.1s
YAK smax smax
comp=E,180nm,3.1s
YAK Yakutsk 35.77 307 P P 21 13 39.6 -0.8
MONP2 Monument Peak 35.87 131 P P 21 13 43.8 +1.9
baz=336
SDCO Great Sand Dun 35.87 114 P P 21 13 43.4 +1.4
baz=328,SNR=7.3
SDCO Great Sand Dun 35.87 114 P P 21 13 42.5 +0.5
SDCO IAmb IAmb 21 13 45.6
comp=Z,13nm,1.1s
KSCO Kaye Shedlock' 36.05 109 P P 21 13 45.0 +1.6
baz=326,SNR=6.9
KSCO Kaye Shedlock' 36.05 109 P P 21 13 44.6 +1.2
BGNE Belgrade 36.10 102 P P 21 13 44.3 +0.7
baz=323
BGNE Belgrade 36.10 102 P P 21 13 44.1 +0.5
IKP In-Ko-Pah, Jac 36.19 131 P P 21 13 46.2 +1.7
baz=336
I37A Lemond, Waseca 36.23 95 P P 21 13 45.5 +0.8
X16A Lo Mia Camp, P 36.33 124 P P 21 13 47.6 +1.7
X16A IAmb IAmb 21 13 48.8
comp=Z,14nm,0.8s
W18A Petrified Fore 36.38 121 P P 21 13 48.3 +2.0
baz=331,SNR=5.4
L34A Svendsen Farm, 36.46 100 P P 21 13 46.8 +0.1
COWI Conover 36.62 89 P P 21 13 48.2 +0.2
T25A Trinidad 36.85 113 P P 21 13 51.8 +1.6
baz=328
N33A J Bar K, Exete 36.95 102 P P 21 13 51.4 +0.5
SUMG Summit 37.02 28 *i* P **P 21 13 53.1 +1.6**
SUMG Summit 37.02 28 P P 21 13 52.7 +1.2
SUMG IAmb IAmb 21 14 18.6
comp=Z,7.1nm,0.7s
SUMG Summit 37.02 28 *i* P **P 21 13 53.1 +1.6**
SUMG Summit 37.02 28 *i* P **P 21 13 53.2 +1.6**
DAG Danmarks Havn 37.35 17 *i* P **P 21 13 53.4 -0.4**
DAG *i* 21 14 18.5
DAG pmax pmax
comp=Z,6.0nm,0.8s
DAG Danmarks Havn 37.35 17 *i* P **P 21 13 53.4 -0.4**
comp=Z,6.1nm,0.8s
DAG *i* 21 14 18.5
DAG Danmarks Havn 37.35 17 *i* P **P 21 13 53.5 -0.4**
DAG IAmb IAmb 21 13 54.6
comp=Z,6.1nm,0.8s
DAG *i* 21 14 18.5
CBKS Cedar Bluff 37.49 106 P P 21 13 56.6 +1.2
CBKS pmax pmax
comp=Z,44nm,0.9s
CBKS Cedar Bluff 37.49 106 P P 21 13 56.6 +1.2
baz=325,SNR=12
CBKS Cedar Bluff 37.49 106 P P 21 13 56.6 +1.2
ANMO Albuquerque 37.86 117 P P 21 13 59.9 +1.1
comp=Z,5.2nm,0.8s,baz=326,slow=11,SNR=14
ANMO Albuquerque 37.86 117 P P 21 13 59.7 +0.9
ANMO pmax pmax
comp=Z,8.0nm,1.0s
ANMO Albuquerque 37.86 117 P P 21 14 00.3 +1.5
baz=330
ANMO Albuquerque 37.86 117 P P 21 13 59.7 +0.9
ANMO IAmb IAmb 21 14 01.6
comp=Z,8.0nm,0.9s
SCIA State Center 37.95 97 P P 21 14 00.5 +1.2
baz=322
R32A Long Quarter, 38.27 106 P P 21 14 02.7 +0.7
JFWS Jewell Farm 38.53 93 P P 21 14 03.9 -0.2
baz=321,SNR=6.1
KSU1 Kansas State U 38.65 103 P P 21 14 05.7 +0.5
baz=325,SNR=12
DBG Daneborg 39.13 20 *i* P **P 21 14 09.2 +0.4**
DBG IAmb IAmb 21 14 12.2
comp=Z,7.4nm,0.8s
SPA0 Spitsbergen Ar 39.15 5 P P 21 14 08.9 0.0
SPA0 IAmb IAmb 21 14 11.9
comp=Z,28nm,1.1s
MATQ Matagami 39.19 75 P P 21 14 09.2 -0.3
baz=316
ICESG Greenland Ices 39.22 33 *eP* **P 21 14 06.1 -3.8**
P38A Dawn 39.63 99 P P 21 14 13.6 +0.3
LSQQ Lebel-sur-Quev 39.99 76 P P 21 14 15.7 -0.5
baz=317
MSTX Muleshoe 40.24 114 P P 21 14 19.5 +1.0
baz=329,SNR=13
VLDQ Val d'Or 40.48 77 P P 21 14 18.4 -1.8
T35A Sooner Cattle 40.49 105 P P 21 14 20.5 +0.1
CHGQ Chibougamau 40.53 73 P P 21 14 19.9 -0.8
baz=317
YSS Yuzh-Sakhalins 40.65 281 *i* P **P 21 14 21.2 -0.4**
YSS pmax pmax
comp=Z,8.0nm,1.0s
HDIL Hopedale 40.83 94 P P 21 14 23.4 +0.2
baz=323,SNR=6.9
HDIL Hopedale 40.83 94 P P 21 14 22.6 -0.6
MNTX Cornudas Mount 41.13 118 P P 21 14 27.4 +1.6
baz=332,SNR=6.3
WMOK Wichita Mounta 41.31 109 P P 21 14 27.8 +0.6
WMOK pmax pmax
comp=Z,23nm,1.0s
WMOK Wichita Mounta 41.31 109 P P 21 14 27.9 +0.7
baz=328,SNR=17
WMOK Wichita Mounta 41.31 109 P P 21 14 27.8 +0.6
WMOK IAmb IAmb 21 14 28.9
comp=Z,22nm,1.0s
TUL1 Leonard 41.65 105 P P 21 14 30.1 +0.2
baz=327
U38A Gravette 41.84 103 P P 21 14 30.8 -0.8
CCM Cathedral Cave 41.94 98 P P 21 14 31.5 -0.9
baz=325
L48A N Adams 41.98 89 P P 21 14 33.0 +0.4
SFIN Lafayette 41.98 93 P P 21 14 32.8 +0.1
baz=323
HHAR Hobbs 42.17 103 P P 21 14 33.3 -1.0
HHAR IAmb IAmb 21 14 33.7
comp=Z,8.9nm,0.7s
D55A Sainte-Anne-du 42.19 77 P P 21 14 34.1 -0.1
baz=319,SNR=6.9
ZEA Zeya 42.37 299 *eP* **P 21 14 35.0 -0.6**
ZEA pmax pmax
comp=Z,10.0nm,1.2s
FVM French Village 42.38 98 P P 21 14 35.7 -0.2
FVM pmax pmax
comp=Z,18nm,1.2s
FVM French Village 42.38 98 P P 21 14 35.7 -0.2
FVM IAmb IAmb 21 14 36.7
comp=Z,18nm,1.2s
D56A ZEC Mazanza, M 42.49 76 P P 21 14 36.4 -0.3
baz=319
P46A Rosedale 42.54 93 P P 21 14 37.2 0.0
P46A IAmb IAmb 21 14 38.2
comp=Z,28nm,0.8s
NRIK Noril'sk 42.59 334 P P 21 14 37.4 +0.1
comp=Z,1.7nm,0.3s,baz=64,slow=4.4,SNR=4.6
NRIK Noril'sk 42.59 334 *eP* **P 21 14 37.3 +0.1**
NRIK pmax pmax
comp=Z,2.0nm,0.3s
U40A Yellville 42.60 101 P P 21 14 36.8 -0.9
baz=326,SNR=5.0
E56A St. Veronique 42.74 77 P P 21 14 38.7 0.0
baz=319
W39A Magazine 43.14 103 P P 21 14 41.8 -0.3
baz=327,SNR=5.8
E57A Chemin Saint G 43.24 76 P P 21 14 42.7 -0.2
baz=320
D58A Chemin du LacG 43.29 74 P P 21 14 42.7 -0.5
baz=319
LCAR Lake Charles 43.61 100 P P 21 14 44.8 -1.0
LCAR IAmb IAmb 21 14 45.9
comp=Z,18nm,1.4s
MIAR Mount Ida 43.78 104 P P 21 14 46.8 -0.4
MIAR pmax pmax
comp=Z,20nm,1.0s
MIAR Mount Ida 43.78 104 P P 21 14 46.9 -0.4
baz=327,SNR=14
MIAR Mount Ida 43.78 104 P P 21 14 46.8 -0.4
MIAR IAmb IAmb 21 14 48.1
comp=Z,20nm,0.9s
KLR Kul'dur 43.83 291 *i* P **P 21 14 46.2 -1.3**
KLR pmax pmax
comp=Z,5.0nm,0.9s
TXAR Lajitas Array 43.90 118 P P 21 14 49.4 +0.9
comp=Z,2.7nm,0.6s,baz=339,slow=6.7,SNR=11
TXAR Lajitas Array 43.90 118 P P 21 14 49.2 +0.8
TXAR Lajitas Array 43.90 118 P P 21 14 49.2 +0.8
ACSO Alum Creek Sta 44.01 89 P P 21 14 49.0 0.0
baz=323
WCI Wyandotte Cave 44.08 94 P P 21 14 49.3 -0.3
baz=324
M53A WI Miller and 44.11 86 P P 21 14 50.5 +0.6
baz=322
X40A Basin Creek Fa 44.16 103 P P 21 14 51.5 +1.2
baz=327
G58A Ormstown 44.25 77 P P 21 14 49.8 -1.1
baz=320
WVNY West Valley, N 44.31 83 P P 21 14 51.6 +0.2
WVNY IAmb IAmb 21 14 52.5
comp=Z,22nm,0.8s
LONY Lake Ozonia 44.42 78 P P 21 14 51.8 -0.4
baz=321
JCT Junction City 44.51 113 P P 21 14 53.3 +0.1
JCT pmax pmax
comp=Z,28nm,1.4s
JCT Junction City 44.51 113 P P 21 14 54.1 +0.9
baz=330
JCT Junction City 44.51 113 P P 21 14 53.3 +0.1
JCT IAmb IAmb 21 14 56.1
comp=Z,28nm,1.4s
M54A Oil Creek Stat 44.53 85 P P 21 14 53.3 +0.1
baz=322
F60A Warwick 44.56 75 P P 21 14 52.8 -0.5

baz=320
O52A Adamsville 44.63 88 P P 21 14 53.2 -0.7
baz=323
K56A Middlesex 44.67 82 P P 21 14 54.2 -0.1
baz=322
FRNY Flat Rock 44.70 77 P P 21 14 54.3 -0.2
FRNY IAmb IAmb 21 14 54.6
comp=Z,8,7nm,0.8s
H59A Cadyville 44.80 77 P P 21 14 54.7 -0.6
baz=321,SNR=5.5
N54A Moraine State 44.81 86 P P 21 14 55.6 +0.2
baz=322
O53A New Philadelph 44.81 87 P P 21 14 55.4 0.0
baz=323
M55A Ridgway 44.97 84 P P 21 14 56.6 -0.1
M55A IAmb IAmb 21 14 57.9
comp=Z,26nm,0.9s
L56A Greenwood 45.00 83 P P 21 14 57.0 0.0
baz=322
G60A Masonville 45.07 76 P P 21 14 57.3 -0.1
baz=321
WVT Waverly 45.08 97 P P 21 14 57.8 +0.2
baz=326
E62A Clayton Lake 45.14 72 P P 21 14 57.8 -0.2
baz=320
E62A Clayton Lake 45.14 72 P P 21 14 58.0 0.0
E62A IAmb IAmb 21 14 58.7
comp=Z,18nm,1.1s
M56A Emporium 45.23 84 P P 21 14 58.8 +0.1
baz=322,SNR=8.5
M56A Emporium 45.23 84 P P 21 14 58.8 +0.1
H60A Morristown 45.32 77 P P 21 14 58.6 -0.9
baz=321
I59A Olmsteadville 45.38 78 P P 21 14 59.6 -0.3
baz=321
L57A Andrews Acres 45.43 82 P P 21 14 59.9 -0.4
baz=322
N56A West Decatur 45.62 84 P P 21 15 01.8 -0.1
baz=323
BINY Binghamton 45.67 81 P P 21 15 01.6 -0.7
baz=322
BINY Binghamton 45.67 81 P P 21 15 02.5 +0.2
BINY IAmb IAmb 21 15 02.6
comp=Z,23nm,1.1s
H61A Lyndonville 45.69 76 P P 21 15 02.2 -0.1
baz=321
Q53A Leroy 45.78 89 P P 21 15 02.8 -0.3
baz=324,SNR=5.3
G62A West of Eustis 45.78 74 P P 21 15 03.6 +0.6
G62A IAmb IAmb 21 15 27.1
comp=Z,12nm,1.1s
M57A Sunshine Farm, 45.83 83 P P 21 15 02.8 -0.6
baz=322,SNR=5.3
L58A Harry Jones Me 45.85 81 P P 21 15 03.6 0.0
baz=322
MCWV Mont Chateau 45.91 87 P P 21 15 03.9 -0.3
baz=323
LBNH Lisbon 45.91 76 P P 21 15 03.3 -0.8
baz=321
Q54A Coxs Mills 46.00 88 P P 21 15 04.3 -0.5
baz=324
Q54A Coxs Mills 46.00 88 P P 21 15 04.5 -0.3
R53A Hurricane 46.01 90 P P 21 15 04.4 -0.5
baz=324
R53A Hurricane 46.01 90 P P 21 15 04.6 -0.2
R53A IAmb IAmb 21 15 05.6
comp=Z,18nm,1.1s
O56A Blue Knob Stat 46.02 85 P P 21 15 04.8 -0.2
baz=323,SNR=7.0
SSPA Standing Stone 46.04 84 P P 21 15 04.8 -0.3
baz=323
SSPA Standing Stone 46.04 84 P P 21 15 05.0 0.0
SSPA IAmb IAmb 21 15 07.6
comp=Z,20nm,1.1s
N57A Milroy 46.10 84 P P 21 15 05.5 -0.1
baz=323
M58A Price's Panora 46.11 82 P P 21 15 05.3 -0.4
baz=322
BATG Bathurst New B 46.15 69 P P 21 15 06.0 +0.1
BATG IAmb IAmb 21 15 29.8
comp=Z,23nm,1.3s
F64A Sherman 46.24 72 P P 21 15 06.6 0.0
baz=321
F64A Sherman 46.24 72 P P 21 15 06.0 -0.6
F64A IAmb IAmb 21 15 07.2
comp=Z,13nm,0.9s
PKME Peaks-Kenny Pk 46.29 73 P P 21 15 07.2 +0.1
PKME IAmb IAmb 21 15 09.1
comp=Z,18nm,1.1s
N58A Sunbury 46.41 83 P P 21 15 07.5 -0.5
baz=323,SNR=7.3
N58A Sunbury 46.41 83 P P 21 15 08.1 0.0
N58A IAmb IAmb 21 15 08.8
comp=Z,20nm,0.9s
M59A Waymart 46.45 81 P P 21 15 08.2 -0.1
baz=322
O57A Amberson 46.49 84 P P 21 15 08.8 +0.1
baz=323,SNR=8.2
P56A Dayton Farm, R 46.50 86 P P 21 15 08.5 -0.2
baz=323
G64A Maxfield 46.54 73 P P 21 15 09.0 0.0
baz=321
R54A Victor 46.57 89 P P 21 15 08.9 -0.5
baz=324,SNR=5.2
I63A Otisfield 46.67 75 P P 21 15 10.2 +0.3
I63A IAmb IAmb 21 15 12.0
comp=Z,19nm,1.1s
HKT Hockley 46.68 109 *i* P P 21 15 11.2 +1.0
HKT pmax pmax
comp=Z,9.0nm,1.2s
SWET Sewanee 46.71 96 P P 21 15 10.0 -0.4
SWET IAmb IAmb 21 15 10.4
comp=Z,7.9nm,1.0s
Q56A Snyder Ridge, 46.71 87 P P 21 15 10.2 -0.2
baz=324
Q56A Snyder Ridge, 46.71 87 P P 21 15 10.6 +0.1
Q56A IAmb IAmb 21 15 36.5
comp=Z,11nm,1.1s
TZTN Tazewell 46.72 93 P P 21 15 10.2 -0.3
baz=325,SNR=5.3
S54A Dingess, Beckl 46.73 90 P P 21 15 09.7 -0.9
baz=324
N59A State Game Lan 46.78 82 P P 21 15 09.9 -1.1
baz=323
L61A Hillsdale 1, H 46.79 79 P P 21 15 11.2 +0.3
baz=322
T53A Wise 46.83 91 P P 21 15 10.9 -0.5
baz=325
O58A Lewisberry 46.89 84 P P 21 15 11.7 -0.1
baz=323,SNR=7.7
R55A Marlinton 46.89 88 P P 21 15 11.8 -0.1
baz=324
P57A Homestead Farm 46.90 85 P P 21 15 11.8 -0.1
baz=324,SNR=8.7
P57A Homestead Farm 46.90 85 P P 21 15 11.9 0.0
P57A IAmb IAmb 21 15 12.4
comp=Z,18nm,0.8s
M60A Port Jervis 46.98 81 P P 21 15 11.8 -0.7
baz=323
K62A Royalston 47.01 78 P P 21 15 12.2 -0.5
baz=322
Q57A Strasburg 47.08 86 P P 21 15 13.2 0.0
baz=324,SNR=6.0
O59A Robesonia 47.08 83 P P 21 15 12.9 -0.3
baz=323
R56A Bull Pasture M 47.12 87 P P 21 15 13.6 -0.1
baz=324
S55A Lewisburg 47.13 89 P P 21 15 13.2 -0.5
baz=324
N60A Cedar Hill Far 47.13 82 P P 21 15 13.1 -0.5
baz=323,SNR=5.8
ODNJ Ogdensburg 47.19 81 P P 21 15 13.7 -0.3
ODNJ IAmb IAmb 21 15 14.4
comp=Z,16nm,1.0s
T54A Tazewell 47.21 90 P P 21 15 13.9 -0.4
baz=325
P58A Pank, Wackersv 47.22 85 P P 21 15 13.7 -0.6
baz=324
MVL Millersville 47.25 83 P P 21 15 14.8 +0.2
MVL IAmb IAmb 21 15 15.7
comp=Z,23nm,1.4s
K63A Dunstable 47.31 77 P P 21 15 15.5 +0.5
baz=322
TKL Tuckaleechee C 47.34 93 P P 21 15 14.8 -0.5
comp=Z,4.3nm,0.8s,baz=124,slow=3.6,SNR=9.4
TKL Tuckaleechee C 47.34 93 P P 21 15 15.2 -0.1
TKL pmax pmax
comp=Z,5.0nm,0.7s
TKL Tuckaleechee C 47.34 93 P P 21 15 15.2 -0.1
O60A Telford 47.43 82 P P 21 15 15.7 -0.2
baz=323,SNR=5.1
Q58A Fox Den Farm, 47.49 85 P P 21 15 16.1 -0.3
baz=324,SNR=7.6
GGN Saint George 47.49 72 P P 21 15 16.1 -0.2
GGN IAmb IAmb 21 15 16.4
comp=Z,18nm,1.1s
P59A Jarrettsville 47.52 84 P P 21 15 16.2 -0.5
baz=324
U54A Nelsons Funny 47.54 91 P P 21 15 17.0 +0.1
baz=325
R57A Stanardsville 47.62 87 P P 21 15 17.4 -0.1
baz=324,SNR=6.1
BLA Blacksburg 47.62 89 P P 21 15 17.1 -0.5
baz=325
V53A Saluda 47.77 93 P P 21 15 18.8 0.0
V53A IAmb IAmb 21 15 19.9
comp=Z,24nm,1.5s
LMN Caledonia Moun 47.80 70 P P 21 15 18.6 -0.2
LMN IAmb IAmb 21 15 18.8
comp=Z,12nm,1.0s
S57A Dark Hollow, R 47.85 88 P P 21 15 20.1 +0.8
baz=324
R58A Rapidan 47.86 86 P P 21 15 19.4 +0.1
baz=324
KEV Kevo 47.89 2 P P 21 15 18.7 -0.4
KEV pmax pmax
comp=Z,43nm,1.4s
KEV Kevo 47.89 2 P P 21 15 18.7 -0.4
U55A TA2, Sparta 47.91 90 P P 21 15 19.6 -0.2
baz=325,SNR=7.3
T56A Rocky Mt 47.95 89 P P 21 15 19.1 -0.9
baz=325
LRAL Lakeview Retre 48.03 98 P P 21 15 19.7 -1.0
baz=327
ARA0 ARCESS Array S 48.08 3 P P 21 15 20.3 -0.3
ARA0 IAmb IAmb 21 15 54.0
comp=Z,30nm,1.4s
ARCES ARCESS Array B 48.08 3 P P 21 15 19.9 -0.8
comp=Z,6.1nm,0.6s,baz=1.0,slow=7.0,SNR=20
ARCES ARCESS Array B 48.08 3 *eP* P 21 15 18.9 -1.7
ARCES pmax pmax
comp=Z,6.0nm,0.6s
V54A Nebo 48.09 92 P P 21 15 21.0 -0.1
baz=325,SNR=5.2
M63A Gales Ferry 48.10 79 P P 21 15 20.7 -0.4
baz=323
R58B Mineral 48.19 86 P P 21 15 22.5 +0.6
baz=324,SNR=5.2
MDJ Mudanjiang 48.33 289 P P 21 15 23.2 +0.3
MDJ IAmb IAmb 21 15 24.2
comp=Z,10.0nm,1.0s
T57A Hurt 48.33 88 P P 21 15 22.8 -0.2
baz=325
U56A King 48.34 90 P P 21 15 23.1 0.0
baz=325
R59A King George, V 48.35 86 P P 21 15 23.4 +0.4
baz=324
V55A Taylorsville 48.36 91 P P 21 15 23.3 0.0
baz=325,SNR=5.1
JSRW J. Sargeant Re 48.41 87 P P 21 15 23.6 +0.1
W54A Cherokee Point 48.55 92 P P 21 15 25.2 +0.5
baz=326
Y52A Lilburn 48.69 95 P P 21 15 25.9 +0.1
T58A Grand View Acr 48.71 88 P P 21 15 25.2 -0.7
baz=325
V56A Mocksville 48.73 90 P P 21 15 25.7 -0.4
baz=325
U57A Blanch 48.76 89 P P 21 15 25.9 -0.4
baz=325
HIA Hailar 48.81 300 P P 21 15 26.7 +0.1
HIA pmax pmax
comp=Z,10.0nm,0.9s
HIA Hailar 48.81 300 P P 21 15 26.7 +0.1
HIA IAmb IAmb 21 15 28.1
comp=Z,9.9nm,0.9s
KMSC Kings Mountain 48.89 92 P P 21 15 27.5 +0.2
baz=326
X54A Belton 48.90 93 P P 21 15 27.3 0.0
baz=326,SNR=5.7
V57A Coltrane Farms 49.00 90 P P 21 15 27.5 -0.6
baz=325
T59A Double "B" Far 49.14 87 P P 21 15 29.1 0.0
baz=325
W56A Indian Trail 49.25 91 P P 21 15 30.2 +0.2
baz=326
HAL Halifax 49.29 70 P P 21 15 30.4 +0.2
HAL pmax pmax
comp=Z,37nm,1.4s
HAL Halifax 49.29 70 P P 21 15 30.4 +0.2
X55A Gracelyn & Ava 49.31 92 P P 21 15 30.4 -0.1
baz=326
W57A Gilead 49.50 90 P P 21 15 31.6 -0.4
baz=326
X56A White Oak 49.57 92 P P 21 15 32.3 -0.1
baz=326,SNR=5.9
Y55A Saluda 49.65 93 P P 21 15 32.8 -0.2
baz=326
V59A Middlesex 49.81 88 P P 21 15 34.1 -0.2
baz=325
W58A Raeford 49.96 90 P P 21 15 35.3 -0.1
baz=326
CN2 Changchun 50.78 291 *eP* P 21 15 40.5 -1.0
CN2 *ePP* pP 21 15 59.5 +1.0
CN2 *ePP* **PP** 21 17 38.5 +0.7
CN2 *eS* **S** 21 22 47.3 -4.7
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,90nm,6.5s
MJAR Matsushiro Arr 50.93 275 P P 21 15 44.2 +1.4
comp=Z,1.0nm,0.8s,baz=86,slow=13,SNR=2.0
NHSC New Hope 51.11 92 P P 21 15 44.5 +0.5
baz=327
TLY Talaya 52.88 312 *i* P P 21 15 56.5 -0.5
TLY pmax pmax
comp=Z,4.0nm,1.2s
ULN Ulaanbaatar 54.85 307 P P 21 16 12.3 +0.6
ULN pmax pmax
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 54.85 307 P P 21 16 12.3 +0.6
KSRS Korea Array 54.86 285 P P 21 16 13.1 +1.4
comp=Z,1.4nm,0.8s,baz=34,slow=6.6,SNR=3.6
KSRS LR LR 21 41 33.6
comp=Z,36nm,19.6s,baz=175,slow=38
KSAR Wonju Array Be 54.89 285 P P 21 16 12.4 +0.6
KSAR Wonju Array Be 54.89 285 P P 21 16 12.4 +0.6
SONM Songino Array 55.12 308 P P 21 16 14.1 +0.5
comp=Z,4.3nm,0.8s,baz=46,slow=6.4,SNR=4.3
SONM Songino Array 55.12 308 *eP* P 21 16 15.0 +1.4
SONM pmax pmax
comp=Z,4.0nm,0.8s
SONM Songino Array 55.12 308 P P 21 16 14.4 +0.8
NB2 NORSAR Subarra 55.69 12 P P 21 16 17.1 -0.2
comp=Z,4.1nm,1.0s,baz=349,slow=7.4
NOA NORSAR Array B 55.69 12 P P 21 16 15.6 -1.7
comp=Z,1.4nm,0.8s,baz=350,slow=7.2,SNR=5.1
NOA NORSAR Array B 55.69 12 *eP* P 21 16 18.8 +1.5
NOA pmax pmax
comp=Z,1.0nm,0.8s
NOA NORSAR Array B 55.69 12 P P 21 16 15.6 -1.7
FIA1 FINESS Array S 56.20 3 P P 21 16 20.1 -0.9
FIA1 IAmb IAmb 21 16 23.2
comp=Z,20nm,1.1s
FINES FINESS Array B 56.20 3 P P 21 16 20.2 -0.6
comp=Z,4.1nm,0.6s,baz=5.1,slow=8.1,SNR=15
FINES FINESS Array B 56.20 3 P P 21 16 20.3 -0.6
FINES FINESS Array B 56.20 3 P P 21 16 20.3 -0.6
ZAA0 Zalesovo Array 56.62 326 P P 21 16 23.0 -1.0
ZALV Zalesovo Beam 56.62 326 P P 21 16 22.2 -1.8
comp=Z,1.2nm,0.3s,baz=14,slow=6.7,SNR=12
ZALV Zalesovo Beam 56.62 326 *i* P P 21 16 23.0 -1.0
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 56.62 326 P P 21 16 22.9 -1.1
KLMR Klimovskoe 56.74 356 *eP* P 21 16 24.3 -0.4
KLMR pmax pmax
comp=Z,14nm,1.0s
KLMR Klimovskoe 56.74 356 *eP* P 21 16 24.4 -0.3
KLMR AMP 21 16 27.1
comp=Z,14nm,1.0s
HFS Hagfors 56.81 11 P P 21 16 24.4 -0.8
comp=Z,3.7nm,0.9s,baz=33,slow=6.2,SNR=7.5
CMIG Matias Romero 58.41 116 P P 21 16 36.6 -0.4
comp=Z,4.9nm,0.9s,baz=21,slow=8.9,SNR=2.9
CMIG Matias Romero 58.41 116 P P 21 16 36.6 -0.4
HHC Hu-ho-hao-te 59.02 299 *eP* P 21 16 42.8 +1.6
HHC pmax pmax
comp=Z,13nm,0.8s
HHC pmax pmax
comp=Z,120nm,5.5s
VSU Vasula 59.21 3 *i* P P 21 16 38.5 -3.5
VSU pmax pmax
comp=Z,21nm,1.0s
EKB6 Eskdalemuir Ar 59.26 22 P P 21 16 43.0 +0.6
EKA Eskdalemuir Ar 59.27 22 P P 21 16 42.1 -0.4
comp=Z,3.3nm,0.6s,baz=340,slow=5.0,SNR=11
EKA Eskdalemuir Ar 59.27 22 P P 21 16 42.1 -0.4
EKA Eskdalemuir Ar 59.27 22 P P 21 16 42.1 -0.4
ARU Arti 59.51 343 *d* iP P 21 16 43.7 -0.4
ARU *PP pP 21 17 00.3 -1.2
ARU S S 21 24 48.6 +0.3
ARU pmax pmax
comp=Z,4.0nm,0.8s
ARU Arti 59.51 343 P P 21 16 43.8 -0.4
ARU IAmb IAmb 21 17 01.3
comp=Z,5.1nm,0.6s
BRVK Borovoye 60.80 335 P P 21 16 52.5 -0.5
BRVK pmax pmax
comp=Z,8.0nm,0.9s
BRVK Borovoye 60.80 335 P P 21 16 52.5 -0.5
BRVK IAmb IAmb 21 17 19.0
comp=Z,8.1nm,0.9s
KURK Kurchatov 61.14 328 P P 21 16 54.6 -0.7
KURK pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 61.14 328 P P 21 16 54.6 -0.7
OBN Obninsk 62.57 357⇑ *eP* P 21 17 04.0 -0.8
OBN *e* 21 17 38.6
OBN *e* 21 19 29.5
OBN *eS* **S** 21 25 27.8 +0.7
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,75nm,16.0s
NJ2 Nanjing 63.42 289 *eP* P 21 17 11.3 +0.5
NJ2 pmax pmax
comp=Z,9.0nm,0.9s
MK31 Makanchi Array 63.80 324 P P 21 17 12.1 -1.1
MK31 pmax pmax
comp=Z,12nm,1.5s
MK31 Makanchi Array 63.80 324 P P 21 17 12.1 -1.1
MK31 IAmb IAmb 21 17 37.1
comp=Z,12nm,1.4s
MKAR Makanchi Array 63.80 324 P P 21 17 11.5 -1.7
comp=Z,1.4nm,0.4s,baz=35,slow=6.5,SNR=12
MKAR Makanchi Array 63.80 324 P P 21 17 11.9 -1.3
MKAR Makanchi Array 63.80 324 P P 21 17 11.9 -1.3
GTA Gaotai 64.80 307 P P 21 17 21.0 +1.1
GTA pP pP 21 17 36.8 -0.7
GTA sP sP 21 17 43.5 -1.3
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,48nm,4.9s
GTA LR LR
comp=N,59nm,17.8s
GTA LR LR
comp=E,86nm,17.1s
GTA LR LR
comp=Z,88nm,18.9s
WMQ Urumqi 64.95 319 *eP* P 21 17 25.0 +4.2
LZH Lanzhou 66.19 303 *eP* P 21 17 31.5 +2.5
LZH pP pP 21 17 48.0 +1.3
LZH sP sP 21 17 55.0 +0.9
LZH *ePP* **PP** 21 19 59.5 +4.7
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,140nm,7.5s
LZH LR LR
comp=N,140nm,16.3s
LZH LR LR
comp=E,140nm,16.5s
LZH LR LR
comp=Z,240nm,18.4s
ABKAR Akbulak array 66.29 340 P P 21 17 29.1 -0.1
ABKAR Akbulak array 66.29 340 P P 21 17 28.9 -0.3
DPC Dobruska-Polom 66.73 11 *eP* P 21 17 32.9 +0.8
DPC Dobruska-Polom 66.73 11 *eP* P 21 17 32.9 +0.8
DPC *ex* x 21 17 39.6
PRU Pruhonice 66.92 12 *eP* P 21 17 32.5 -0.8
PRU Pruhonice 66.92 12 *eP* P 21 17 32.5 -0.8
PRU *ex* x 21 17 40.6
AKASG Malin Array Be 67.03 2 P P 21 17 32.9 -1.0
comp=Z,2.3nm,0.6s,baz=2.9,slow=6.3,SNR=8.0
AKASG Malin Array Be 67.03 2 *i* P P 21 17 33.2 -0.7
AKASG pmax pmax
comp=Z,2.0nm,0.6s
KRLC Kraliky 67.04 11 *eP* P 21 17 34.3 +0.2
KRLC Kraliky 67.04 11 *eP* P 21 17 34.3 +0.2
MORC Moravsky Berou 67.40 10 ⇑P P 21 17 36.6 +0.2
MORC Moravsky Berou 67.40 10 *eP* P 21 17 36.6 +0.2
MORC Moravsky Berou 67.40 10 P P 21 17 36.8 +0.4
MORC pmax pmax
comp=Z,3.0nm,0.7s
MORC Moravsky Berou 67.40 10 P P 21 17 36.8 +0.4
KHC Kasperske Hory 67.67 13 *eP* P 21 17 38.8 +0.7
KHC Kasperske Hory 67.67 13 *eP* P 21 17 38.8 +0.7
KHC *ex* x 21 17 45.5
VRAC Vranov 67.78 11 ⇓P P 21 17 41.5 +2.8
VRAC Vranov 67.78 11 *eP* P 21 17 39.1 +0.4
VRAC *ePCP* **PcP** 21 18 04.9 -0.1
VRAC Vranov 67.78 11 ⇓P P 21 17 41.5 +2.8
GERES GERESS Array B 67.97 13 P P 21 17 40.1 +0.1
comp=Z,1.0nm,0.8s,baz=356,slow=5.4,SNR=7.5
GERES GERESS Array B 67.97 13 P P 21 17 41.1 +1.1
GERES GERESS Array B 67.97 13 P P 21 17 41.0 +1.1
KRUC Moravsky 68.01 11 *eP* P 21 17 40.6 +0.5
KRUC *ePCP* **PcP** 21 18 06.2 +0.3
JAVC Velka Javorina 68.32 10 *eP* P 21 17 42.6 +0.4
KOLS Kolonicke sedl 68.56 7 *eP* P 21 17 45.1 +1.5
KOLS Kolonicke sedl 68.56 7 *eP* P 21 17 45.1 +1.5
MOA Molln 69.01 13 *eP* P 21 17 48.1 +1.7
comp=Z,0.3nm,0.3s
CONA Conrad Observa 69.09 11 *eP* P 21 17 49.5 +2.5
comp=Z,5.1nm,1.1s
MOTA Moosalm 69.16 15 *eP* P 21 17 48.2 +0.7
comp=Z,6.8nm,1.6s
WATA Walderalm 69.23 15 *eP* P 21 17 49.7 +1.8
comp=Z,2.3nm,0.6s
WTTA Wattenberg 69.31 15 *eP* P 21 17 48.7 +0.3
comp=Z,4.5nm,0.8s
BOOM Boomskoye usch 69.47 327 P P 21 17 49.1 -0.5
BOOM pmax pmax
comp=Z,4.0nm,1.0s
BOOM Boomskoye usch 69.47 327 P P 21 17 49.1 -0.5
SORM Soroca 69.58 3 ⇑P P 21 17 49.0 -0.9
SORM Soroca 69.58 3 ⇑P P 21 17 49.0 -0.9
KBA Koelnbreinsper 69.68 13 *eP* P 21 17 52.0 +1.3
comp=Z,3.1nm,0.6s
AAK Ala-Archa 69.70 328 P P 21 17 50.6 -0.3
AAK pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 69.70 328 P P 21 17 50.6 -0.3
BUR08 Bucovina Ar. S 69.98 5 P P 21 17 52.4 -0.1
BURAR Bucovina Array 70.01 5 ⇓P P 21 17 52.8 +0.1
BURAR Bucovina Array 70.01 5 ⇓P P 21 17 52.8 +0.1
BURAR Bucovina Array 70.01 5 P P 21 17 52.5 -0.2
ZOU Zoufplan 70.15 14 P P 21 17 54.5 +0.8
ZOU IAmb IAmb 21 18 06.9
comp=Z,13nm,1.3s
KK31 Karatay Array 70.19 331 P P 21 17 53.2 -0.6
KK31 pmax pmax
comp=Z,3.0nm,1.0s
KK31 Karatay Array 70.19 331 P P 21 17 53.2 -0.6
KKAR Karatay Array 70.19 331 P P 21 17 53.2 -0.6
KKAR Karatay Array 70.19 331 P P 21 17 53.1 -0.6
KKAR Karatay Array 70.19 331 P P 21 17 53.1 -0.6
OBKA Obir 70.37 13 *eP* P 21 17 55.8 +0.9
comp=Z,4.7nm,0.8s
DRGR 70.72 7 ⇓P P 21 17 59.3 +2.3
DRGR 70.72 7 ⇓P P 21 17 59.3 +2.3
VRI Vrincioaia 71.81 4 ⇓P P 21 18 03.0 -0.5
VRI Vrincioaia 71.81 4 ⇓P P 21 18 03.0 -0.5
PLOR Plostina 71.83 4 ⇓P P 21 18 06.1 +2.5
PLOR Plostina 71.83 4 ⇓P P 21 18 06.1 +2.5
BZS Buzias 71.83 8 ⇓P P 21 18 03.2 -0.4

BZS	**Buzias**	71.83	8	⇓P		**P**	**21 18 03.2**	**-0.4**
GZR	**Gura Zlata**	72.12	7	⇑⇑P		**P**	**21 18 05.4**	**0.0**
GZR	**Gura Zlata**	72.12	7	⇑⇑P		**P**	**21 18 05.4**	**0.0**
ARR	**Arges**	72.23	5	⇑⇑P		**P**	**21 18 10.2**	**+4.1**
BTK	**Batken**	73.02	330	P		**P**	**21 18 11.0**	**+0.1**
BTK				pmax	pmax			
	comp=Z,4.0nm,1.0s							
BTK	**Batken**	73.02	330	P		**P**	**21 18 11.0**	**+0.1**
DRK	**Karamyk**	73.34	329	P		**P**	**21 18 13.1**	**+0.1**
KBZ	**Khabaz**	73.66	352	*i* P		**P**	**21 18 14.0**	**-0.4**
KBZ				pmax	pmax			
	comp=Z,3.0nm,1.1s							
ESBB	**Sonseca Array**	74.08	28	P		**P**	**21 18 17.7**	**+0.6**
ESBB				IAmb	IAmb		21 18 18.7	
	comp=Z,6.5nm,0.8s							
ESDC	**Sonseca Array**	74.09	28	P		**P**	**21 18 17.4**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=341,slow=5.5,SNR=27							
ESDC	**Sonseca Array**	74.09	28	P		**P**	**21 18 17.7**	**+0.6**
PAB	**San Pablo**	74.12	28	P		**P**	**21 18 17.4**	**0.0**
PAB				pmax	pmax			
	comp=Z,7.0nm,1.1s							
PAB	**San Pablo**	74.12	28	P		**P**	**21 18 17.4**	**0.0**
SDV	**Santo Domingo**	76.40	97	P		**P**	**21 18 30.0**	**-0.8**
	comp=Z,4.4nm,0.5s,baz=15,slow=4.9,SNR=7.7							
SDV	**Santo Domingo**	76.40	97	P		**P**	**21 18 30.1**	**-0.8**
SDV				IAmb	IAmb		21 18 31.5	
	comp=Z,6.9nm,0.8s							
GNI	**Garni**	77.08	350	*i* P		**P**	**21 18 35.2**	**+0.8**
GNI				pmax	pmax			
	comp=Z,3.0nm,0.7s							
LIT	**Litokhoron**	77.37	7	P		**P**	**21 18 35.6**	**-0.2**
LIT				pmax	pmax			
	comp=Z,10.0nm,1.1s							
LIT	**Litokhoron**	77.37	7	P		**P**	**21 18 35.6**	**-0.2**
LIT				IAmb	IAmb		21 19 12.3	
	comp=Z,10.0nm,1.1s							
GEYT	**Alibeck**	77.62	339	P		**P**	**21 18 37.2**	**0.0**
	comp=Z,1.9nm,0.8s,baz=64,slow=43,SNR=2.6							
NIL	**Nilore**	78.51	326	P		**P**	**21 18 42.1**	**-0.1**
NIL				pmax	pmax			
	comp=Z,6.0nm,1.0s							
NIL	**Nilore**	78.51	326	P		**P**	**21 18 42.1**	**-0.1**
KEST	**Kesra**	80.35	18	P		**P**	**21 18 52.4**	**+0.2**
	comp=Z,6.4nm,0.9s,baz=10,slow=2.9,SNR=4.3							
CMAR	**Chiang Mai Arr**	83.81	298	P		**P**	**21 19 10.0**	**-0.5**
	comp=Z,2.0nm,1.0s,baz=9.0,slow=5.7,SNR=9.0							
CMAR	**Chiang Mai Arr**	83.81	298	*e*P		**P**	**21 19 10.9**	**+0.4**
CMAR				pmax	pmax			
	comp=Z,2.0nm,1.0s							
ATAH	**Atahualpa**	87.15	111	P		**P**	**21 19 27.3**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=246,slow=6.5,SNR=3.6							
BKZ	**Black Stump Fm**	105.33	208	P		**Pdif**	**21 20 48.3**	**-0.9**
ASAR	**Alice Springs**	105.39	248	Pdiff		**Pdif**	**21 20 49.8**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=2.9,slow=3.7,SNR=6.3							
KRHZ	**Kereru**	105.81	208	P		**Pdif**	**21 20 51.1**	**-0.2**
BOSA	**Boshof**	145.74	10	PKPbc		**PKPdf**	**21 26 18.6**	**-0.4**
	comp=Z,6.0nm,0.7s,baz=1.8,slow=2.8,SNR=17							
BOSA	**Boshof**	145.74	10	PKP2		**PKPbc**	**21 26 19.2**	**-0.2**
BOSA	**Boshof**	145.74	10			**PKPbc**	**21 26 19.2**	**-0.2**

*REY **29** 21:16:27.8, 64°.67N × 17°.40W, h9km*
*NEIC **29** 21:16:29.4±1.7, 64°.6N±0°.1 × 17°.6W±0°.1, h6km±5km, mb4.2/9, Error ellipse: s-maj=15.9km s-min=8.7km az=191.0*
*IDC **29** 21:16:29.3±0.7, 64°.40N × 17°.69W, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.6/60, mbtmp3.7/12, ML3.4/2, MS4.1/1, Ms1 4.1/1, ms1mx2.8/47, Error ellipse: s-maj=24.2km s-min=10.6km az=16.0*

ISC 29 21:16:29.9±0.5, 64°.55N±0°.04 × 17°.52W±0°.04, h10km, n61, σ1s69/55, mb3.9/14, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
IHAM	**Hamarinn**	**0.15**	**241**	P	**Pg**	**21 16 32.9**		**-0.5**
	baz=224							
IVON	**Vonarskard**	**0.16**	**320**	P	**Pg**	**21 16 31.0**		**-2.5**
	baz=273							
IDYN	**Dyngjuhals**	**0.25**	**15**	P	Pg	21 16 30.7		-4.4
	baz=7.1							
IDYN				S	Sg	21 16 33.3		-5.2
	baz=7.1							
IHUS	**Husbondi**	**0.27**	**193**	P	**Pg**	**21 16 35.2**		**-0.1**
	baz=197							
IURH	**Urdarhals**	**0.31**	**30**	P	Pg	21 16 31.8		-4.4
	baz=35							
IVOT	**Vottur**	**0.32**	**153**	P	**Pg**	**21 16 35.6**		**-0.7**
	baz=166							
ISKR	**Skrokkalda**	**0.38**	**272**	P	**Pg**	**21 16 35.9**		**-1.4**
	baz=256							
IJOK	**Jokulheimar**	**0.39**	**233**	P	**Pg**	**21 16 36.9**		**-0.7**
	baz=226							
THOR	**Thorvaldshraun**	**0.53**	**43**	P	Pg	21 16 35.5		-4.7
	baz=49							
THOR				S	Sg	21 16 41.9		-5.2
	baz=49							
IIEY	**Innrieyrar**	**0.53**	**210**	P	**Pb**	**21 16 39.5**		**-1.8**
	baz=209							
IKRE	**Kreppuhraun**	**0.54**	**64**	P	Pg	21 16 36.1		-4.3
	baz=74							
IKRE				S	Sg	21 16 42.7		-4.8
	baz=74							
IKSK	**Karasker**	**0.60**	**130**	P	**Pg**	**21 16 38.8**		**-2.7**
	baz=141							
IKSK				S	**Sg**	**21 16 48.4**		**-1.1**
	baz=141							
IKAL	**Kalfafell**	**0.61**	**187**	P	**Pb**	**21 16 40.7**		**-1.9**
	baz=190							
IASK	**Askja**	**0.62**	**36**	P	Pg	21 16 36.9		-5.1
	baz=39							
IASK				S	Sg	21 16 44.4		-5.9
	baz=39							
IMKO	**Mokollar**	**0.66**	**49**	P	Pg	21 16 37.9		-4.8
	baz=55							
IMKO				S	Sg	21 16 46.0		-5.3
	baz=55							
IVAT	**Vatnsfell**	**0.71**	**240**	P	**Pb**	**21 16 42.6**		**-1.8**
	baz=234							
IFAG	**Fagurholsmyri**	**0.78**	**151**	P	**Pg**	**21 16 43.0**		**-1.9**
	baz=157							
IFAG				S	**Sb**	**21 16 54.9**		**-1.2**
	baz=157							
ISVA	**Svartarkot**	**0.80**	**8**	P	Pg	21 16 39.9		-5.4
	baz=5.3							
ISVA				S	Sg	21 16 49.0		-6.6
	baz=5.3							
IVSH	**V-Sauoahnukur**	**0.81**	**71**	P	Pg	21 16 40.8		-4.8
	baz=78							
IVSH				S	Sg	21 16 51.2		-4.9
	baz=78							
IADA	**Aoalbol**	**0.95**	**60**	P	Pb	21 16 42.8		-5.8
	baz=65							
IMEL	**Melhnausar**	**1.08**	**19**	P	Pn	21 16 44.5		-6.6
	baz=19							
BORG	**Borgarnes**	**1.65**	**279**	Pg	**Pn**	**21 16 57.1**		**-1.8**
	17nm,0.3s,baz=99,slow=7.3,SNR=55							
BORG				Lg	Lg	21 17 21.2		
	12nm,0.3s,baz=253,slow=21,SNR=7.8							
BORG	**Borgarnes**	**1.65**	**279**		**Pn**	**21 16 56.8**		**-2.1**
BORG				Sn	**Sb**	**21 17 19.4**		**-1.8**
SCO	**Scoresbysund**	**6.19**	**346**	Pn	**Pn**	**21 17 59.3**		**-1.9**
EKA	**Eskdalemuir Ar**	**11.68**	**136**	Pn	**Pn**	**21 19 15.7**		**-0.7**
	baz=322,slow=14,SNR=11							
ESK	**Eskdalemuir**	**11.68**	**136**	Pn	**Pn**	**21 19 16.1**		**-0.3**
NOA	**NORSAR Array B**	**13.54**	**92**	Pn	**Pn**	**21 19 38.9**		**-2.9**
	0.0nm,0.3s,baz=299,slow=13,SNR=2.3							
HFS	**Hagfors**	**15.05**	**93**	Pn	**P**	**21 20 07.8**		**+0.1**
	0.1nm,0.3s,baz=312,slow=16,SNR=4.8							
FINES	**FINESS Array B**	**19.73**	**79**	P	**Pn**	**21 21 01.9**		**+1.1**
	0.1nm,0.3s,baz=209,slow=30,SNR=2.6							
CLL	**Collm**	**20.66**	**115**	*i* P	**P**	**21 21 10.0**		**+0.5**
	comp=Z,10.0nm,1.2s							
CLL				*i*		21 21 22.7		
NKC	**Novy Kostel**	**21.30**	**118**	*e*P	**P**	**21 21 22.5**		**+6.1**
STU	**Stuttgart**	**21.31**	**125**	P	**P**	**21 21 17.3**		**+0.8**
STU				IAmb	IAmb	21 21 20.3		
	comp=Z,9.7nm,0.9s							
BRG	**Berggiesshubel**	**21.37**	**115**	*e*P	**P**	**21 21 17.5**		**+0.3**
	comp=Z,12nm,1.6s							
CHVC	**Chvalec**	**22.43**	**113**	*e*P	**P**	**21 21 29.0**		**+0.5**
KHC	**Kasperske Hory**	**22.63**	**118**	*e*P	**P**	**21 21 33.7**		**+3.0**
DPC	**Dobruska-Polom**	**22.72**	**113**	*e*P	**P**	**21 21 32.3**		**+0.6**
GERES	**GERESS Array B**	**22.91**	**118**	P	**P**	**21 21 34.4**		**+0.8**
	comp=Z,1.3nm,1.0s,baz=316,slow=9.3,SNR=4.9							
GERES	**GERESS Array B**	**22.91**	**118**	P	**P**	**21 21 34.2**		**+0.5**
MORC	**Moravsky Berou**	**23.66**	**112**	P	**P**	**21 21 42.4**		**+1.1**
EUNU	**Eureka**	**23.77**	**336**	P	**P**	**21 21 41.8**		**-0.3**
EUNU				IAmb	IAmb	21 21 53.7		
	comp=Z,7.7nm,1.2s							
PSZ	**Piszkesteto**	**26.08**	**112**	P	**P**	**21 22 03.8**		**+0.4**
ESDC	**Sonseca Array**	**26.15**	**156**	P	**P**	**21 22 05.2**		**+1.1**
	comp=Z,1.8nm,1.2s,baz=250,slow=27,SNR=4.2							
ELL	**Elmali**	**39.46**	**111**	P	**P**	**21 24 01.5**		**+1.3**
BMAR	**Burnt Mountain**	**42.99**	**333**	P	**P**	**21 24 29.8**		**+1.1**
ILAR	**Eielson Array**	**45.78**	**332**	P	**P**	**21 24 52.7**		**+1.7**
	comp=Z,1.7nm,1.1s,baz=21,slow=6.2,SNR=11							
ILAR				PcP	**PcP**	**21 26 30.1**		**+1.8**
	comp=Z,0.9nm,1.0s,baz=343,slow=1.2,SNR=5.7							
ILAR	**Eielson Array**	**45.78**	**332**	P	**P**	**21 24 53.5**		**+2.5**
IMAR	**Indian Mountai**	**45.96**	**337**	P	**P**	**21 24 53.7**		**+1.3**
BCAR	**Beaver Creek A**	**46.20**	**329**	P	**P**	**21 24 56.7**		**+2.3**
ZALV	**Zalesovo Beam**	**47.71**	**51**	P	**P**	**21 25 08.4**		**+2.3**
	comp=Z,0.4nm,0.4s,baz=224,slow=6.2,SNR=3.8							
ZALV	**Zalesovo Beam**	**47.71**	**51**	P	**P**	**21 25 06.4**		**+0.2**
GEYT	**Alibeck**	**50.45**	**83**	P	**P**	**21 25 27.8**		**+0.3**
	comp=Z,1.6nm,0.8s,baz=339,slow=16,SNR=4.0							
KKAR	**Karatay Array**	**51.32**	**70**	P	**P**	**21 25 34.0**		**0.0**
MKAR	**Makanchi Array**	**52.79**	**58**	P	**P**	**21 25 47.2**		**+2.4**
	comp=Z,1.1nm,1.0s,baz=46,slow=6.9,SNR=3.6							
TORD	**Torodi Ar. Bea**	**53.04**	**156**	P	**P**	**21 25 46.5**		**-0.4**
	comp=Z,1.0nm,0.9s,baz=344,slow=9.9,SNR=4.3							
PD31	**Pinedale Array**	**53.22**	**293**	P	**P**	**21 25 48.5**		**+0.3**
PD31				IAmb	IAmb	21 25 53.7		
	comp=Z,3.6nm,1.1s							
PDAR	**Pinedale Array**	**53.22**	**293**	P	**P**	**21 25 49.2**		**+1.0**
	comp=Z,1.2nm,0.7s,baz=53,slow=7.6,SNR=8.6							
PDAR				LR	LR	21 48 41.1		
	comp=Z,178nm,21.4s,baz=104,slow=36							
PDAR	**Pinedale Array**	**53.22**	**293**	P	**P**	**21 25 48.6**		**+0.3**
AAK	**Ala-Archa**	**53.31**	**67**	P	**P**	**21 25 50.4**		**+1.6**
	comp=Z,0.9nm,0.6s,baz=316,slow=1.5,SNR=4.9							
AAK	**Ala-Archa**	**53.31**	**67**	P	**P**	**21 25 50.0**		**+1.1**
BTK	**Batken**	**54.00**	**71**	P	**P**	**21 25 53.7**		**-0.1**
BTK				IAmb	IAmb	21 26 00.0		
	comp=Z,5.5nm,1.1s							
TXAR	**Lajitas Array**	**62.30**	**280**	P	**P**	**21 26 52.4**		**+0.4**
	comp=Z,0.3nm,0.8s,baz=46,slow=7.9,SNR=3.1							

*NEIC **29** 21:17:29.8±1.9, 25°.4S±0°.1 × 177°.2W±0°.2, h138km±7km, mb4.5/22, Error ellipse: s-maj=23.1km s-min=13.5km az=106.0*
*IDC **29** 21:17:32.0±2.4, 25°.56S × 177°.39W, h142km±20km, mb4.0/12, mb1 4.2/14, mb1mx3.9/46, mbtmp4.5/14, MS3.5/2, Ms1 3.5/2, ms1mx3.0/32, Error ellipse: s-maj=19.7km s-min=16.1km az=36.0*

ISC 29 21:17:33.1±0.5, 25°.61S±0°.06 × 177°.26W±0°.10, h160km, n90, σ1s34/86, mb4.4/20, 1C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
RIZ	**Raoul Island**	**3.67**	**189**	P	**Pn**	**21 18 28.4**		**-1.0**
RIZ				S	**Sn**	**21 19 13.3**		**+0.1**
RAO	**Raoul Island**	**3.68**	**189**	P	**Pn**	**21 18 28.8**		**-0.5**
	206nm,0.3s,baz=358,slow=22,SNR=8.4							
RAO				S	**Sn**	**21 19 11.8**		**-1.4**
	815nm,0.3s,baz=88,slow=23,SNR=18							
RAO				LR	LR	21 19 33.9		
	comp=Z,277nm,19.7s,baz=24,slow=33							
RAO	**Raoul Island**	**3.68**	**189**		**Pn**	**21 18 28.7**		**-0.7**
GLKZ	**Green Lake**	**3.69**	**189**	P	**Pn**	**21 18 28.4**		**-1.1**
GLKZ				S	**Sn**	**21 19 12.4**		**-1.1**
NIUE	**Niue**	**9.39**	**48**	Pn	**Pn**	**21 19 40.6**		**-4.4**
WMGZ	**Waiomatatini S**	**12.72**	**196**	P	Pn	21 20 20.3		-7.9
WMGZ				S	Sn	21 22 30.7		-18
AFI	**Afiamalu**	**12.73**	**25**	Pn	Pn	21 20 22.3		-6.2
PKGZ	**Pakihiroa**	**12.87**	**197**	P	Pn	21 20 21.5		-8.7
PKGZ				S	Sn	21 22 37.1		-16
PUZ	**Puketiti**	**12.99**	**196**	P	**Pn**	**21 20 33.1**		**+1.3**
PUZ				S	Sn	21 22 38.8		-17
RUGZ	**Raukumara Rang**	**13.05**	**198**	P	Pn	21 20 23.2		-9.4
RUGZ				S	Sn	21 22 37.0		-20
MWZ	**Matawai**	**13.43**	**198**	P	Pn	21 20 31.3		-6.1
MWZ				S	Sn	21 22 50.8		-16
URZ	**Urewera**	**13.48**	**199**	P	**Pn**	**21 20 37.5**		**-0.5**
	2.9nm,0.3s,baz=268,slow=2.5,SNR=17							
URZ				S	Sn	21 22 52.2		-15
	3.6nm,0.3s,baz=70,slow=23,SNR=11							
RIGZ	**Rimuhau**	**13.72**	**197**	P	**Pn**	**21 20 41.2**		**+0.2**
RIGZ				S	Sn	21 22 58.9		-14
PRGZ	**Paritu Road**	**13.89**	**196**	P	**Pn**	**21 20 41.0**		**-2.2**
PRGZ				S	Sn	21 23 01.7		-16
KNZ	**Kokohu**	**14.04**	**196**	P	**Pn**	**21 20 45.4**		**+0.4**
KNZ				S	Sn	21 22 02.2		-19
NMHZ	**Naumai**	**14.35**	**199**	P	**Pn**	**21 20 47.5**		**-1.4**
NMHZ				S	Sn	21 23 10.4		-18
HIZ	**Hauiti**	**14.49**	**205**	P	**P**	**21 20 54.1**		**+1.3**
BKZ	**Black Stump Fm**	**14.51**	**200**	Pn	**Pn**	**21 20 49.7**		**-1.1**
MCHZ	**McNeill Hill**	**14.70**	**199**	P	**Pn**	**21 20 52.1**		**-1.1**
MCHZ				S	Sn	21 23 19.8		-17
CKHZ	**Cape Kidnapper**	**14.79**	**197**	P	**Pn**	**21 20 53.6**		**-0.8**
CKHZ				S	Sn	21 23 20.4		-19
FWVZ	**Far West T-bar**	**14.89**	**202**	P	**Pn**	**21 20 52.7**		**-3.2**
MOVZ	**Moawhango**	**14.96**	**201**	P	**Pn**	**21 20 54.6**		**-2.0**
MOVZ				S	Sn	21 23 24.4		-19
KAHZ	**Kahuranaki**	**14.98**	**198**	P	**Pn**	**21 20 54.3**		**-2.4**
PKVZ	**Pokaka**	**14.99**	**203**	P	**Pn**	**21 20 56.0**		**-1.0**
VRZ	**Vera Road**	**15.06**	**205**	P	**Pn**	**21 20 58.2**		**+0.5**
PXZ	**Pawanui**	**15.20**	**197**	P	**Pn**	**21 20 57.8**		**-1.6**
BFZ	**Birch Farm**	**15.98**	**198**	P	**Pn**	**21 21 06.1**		**-2.8**
BFZ	**Birch Farm**	**15.98**	**198**	Pn	**Pn**	**21 21 06.8**		**-2.2**
MRZ	**Mangatainoka R**	**16.16**	**200**	P	**Pn**	**21 21 07.7**		**-3.4**
ARMA	**Armidale**	**27.83**	**253**	P	**P**	**21 23 08.0**		**+0.3**
ARMA				IAmb	IAmb	21 23 26.0		
	comp=Z,8.1nm,1.1s							
EIDS	**Eidsvold**	**28.55**	**264**	P	**P**	**21 23 14.8**		**+0.9**
TOO	**Toolangi**	**33.69**	**240**	P	**P**	**21 23 59.1**		**+0.1**
TOO				IAmb	IAmb	21 24 05.3		
	comp=Z,8.4nm,0.9s							
CTAO	**Charters Tower**	**34.00**	**272**	P	**P**	**21 24 01.9**		**+0.2**
CTAO				IAmb	IAmb	21 24 03.4		
	comp=Z,11nm,0.8s							
STKA	**Stephens Creek**	**36.45**	**250**	P	**P**	**21 24 23.2**		**+0.6**
	comp=Z,3.6nm,0.5s,baz=100,slow=13,SNR=13							
STKA				PcP	**PcP**	**21 26 44.0**		**+0.8**
	comp=Z,1.1nm,0.5s,baz=318,slow=13,SNR=3.3							
STKA	**Stephens Creek**	**36.45**	**250**	P	**P**	**21 24 22.9**		**+0.2**
PMG	**Port Moresby**	**37.41**	**289**	P	**P**	**21 24 30.4**		**-0.4**
	comp=Z,7.9nm,0.7s,baz=140,slow=5.7,SNR=4.7							
COEN	**Coen**	**38.85**	**280**	P	**P**	**21 24 42.4**		**-0.6**
COEN				IAmb	IAmb	21 24 43.2		
	comp=Z,8.8nm,1.1s							
BBOO	**Buckleboo**	**41.11**	**249**	P	**P**	**21 24 59.6**		**-1.8**
BBOO				IAmb	IAmb	21 25 02.7		
	comp=Z,9.6nm,0.7s							
AS31	**Alice Springs**	**44.24**	**262**	P	**P**	**21 25 26.3**		**-0.5**
ASAR	**Alice Springs**	**44.24**	**262**	P	**P**	**21 25 26.4**		**-0.4**
	comp=Z,7.1nm,0.5s,baz=90,slow=6.7,SNR=132							
ASAR				PcP	**PcP**	**21 27 08.5**		**0.0**
	comp=Z,1.5nm,0.8s,baz=115,slow=4.4,SNR=4.5							
ASAR	**Alice Springs**	**44.24**	**262**	P	**P**	**21 25 25.2**		**-1.6**
WR0	**Warramunga Arr**	**44.61**	**267**	P	**P**	**21 25 28.1**		**-1.6**
WB2	**Warramunga Arr**	**44.78**	**267**	P	**P**	**21 25 29.8**		**-1.3**
WRA	**Warramunga Arr**	**44.79**	**267**	P	**P**	**21 25 29.6**		**-1.5**
	comp=Z,3.0nm,0.5s,baz=104,slow=8.0,SNR=47							
WRA				PcP	**PcP**	**21 27 10.8**		**+0.3**
	comp=Z,1.8nm,0.8s,baz=105,slow=3.7,SNR=8.0							
WRA	**Warramunga Arr**	**44.79**	**267**	P	**P**	**21 25 29.8**		**-1.4**
FORT	**Forrest**	**48.08**	**251**	P	**P**	**21 25 54.9**		**-1.7**
KNRA	**Kununurra**	**51.18**	**270**	P	**P**	**21 26 19.2**		**-1.0**
VNDA	**Vanda**	**52.91**	**186**	P	**P**	**21 26 34.4**		**+2.2**
	comp=Z,1.8nm,0.6s,baz=12,slow=6.6,SNR=10							
VNDA	**Vanda**	**52.91**	**186**	P	**P**	**21 26 32.9**		**+0.8**
VNDA				IAmb	IAmb	21 26 36.8		
	comp=Z,3.3nm,0.9s							
FITZ	**Fitzroy Crossi**	**53.19**	**266**	P	**P**	**21 26 34.8**		**-0.2**
	comp=Z,5.8nm,0.9s,baz=121,slow=5.9,SNR=12							
FITZ	**Fitzroy Crossi**	**53.19**	**266**	P	**P**	**21 26 34.6**		**-0.4**
FITZ				IAmb	IAmb	21 26 37.4		
	comp=Z,5.7nm,0.9s							
PSA00	**Pilbara Seismi**	**57.31**	**260**	P	**P**	**21 27 03.3**		**-1.3**
PSA00				IAmb	IAmb	21 27 06.1		
	comp=Z,7.5nm,0.8s							
BATI	**Baumata**	**57.83**	**274**	LR	LR	21 49 45.6		
	comp=Z,116nm,21.9s,baz=316,slow=34							
MORW	**Morawa**	**58.64**	**250**	P	**P**	**21 27 12.1**		**-1.6**
MORW				IAmb	IAmb	21 27 18.1		
	comp=Z,9.9nm,1.1s							
QSPA	**South Pole Qui**	**64.48**	**180**	P	**P**	**21 27 53.5**		**+1.1**
BELA	**Belgrano 2**	**74.43**	**172**	P	**P**	**21 28 53.1**		**+0.1**
MAW	**Mawson**	**77.01**	**200**	P	**P**	**21 29 09.3**		**+1.5**
	comp=Z,9.2nm,0.6s,baz=136,slow=6.7,SNR=25							
MAW	**Mawson**	**77.01**	**200**	P	**P**	**21 29 09.1**		**+1.3**
ASAJ	**Asahikawa**	**78.53**	**332**	P	**P**	**21 29 18.2**		**+1.8**
	comp=Z,3.5nm,0.7s,baz=162,slow=33,SNR=1.8							
KSRS	**Korea Array**	**81.16**	**319**	P	**P**	**21 29 32.1**		**+1.4**
	comp=Z,1.0nm,0.6s,baz=126,slow=6.0,SNR=5.4							
SYO	**Syowa Base**	**81.92**	**193**	‖ *e*P	**P**	**21 29 32.4**		**-1.9**
SYO	**Syowa Base**	**81.92**	**193**	‖ *e*P	**P**	**21 29 36.4**		**+2.1**
H03S2	**Juan Fernandez**	**82.57**	**124**	T	T	23 00 40.4		
	baz=242,slow=74,SNR=7.8							
H03S1	**Juan Fernandez**	**82.58**	**124**	T	T	23 00 49.4		
	baz=242,slow=74,SNR=9.6							
H03S3	**Juan Fernandez**	**82.59**	**124**	T	T	23 00 48.7		
	baz=242,slow=74,SNR=9.6							
SNAA	**Sanae**	**82.91**	**178**	P	**P**	**21 29 39.7**		**+0.2**
SNAA	**Sanae**	**82.91**	**178**	P	**P**	**21 29 39.8**		**+0.3**
SNAA				IAmb	IAmb	21 29 40.8		
	comp=Z,9.4nm,0.9s							
VNA3	**Neumayer Olymp**	**83.02**	**176**	P	**P**	**21 29 40.1**		**0.0**
VNA2	**Neumayer--Watz**	**83.47**	**177**	P	**P**	**21 29 42.8**		**+0.5**
	baz=179,slow=4.3							
VNA1	**Neumayer--Stat**	**83.69**	**176**	P	**P**	**21 29 43.8**		**+0.4**
NVAR	**Mina Array Bea**	**84.28**	**43**	P	**P**	**21 29 48.7**		**+1.6**
	comp=Z,0.7nm,0.5s,baz=235,slow=5.2,SNR=4.5							
TXAR	**Lajitas Array**	**89.24**	**57**	P	**P**	**21 30 13.2**		**+2.0**
	comp=Z,0.4nm,0.9s,baz=182,slow=7.5,SNR=4.8							
ILAR	**Eielson Array**	**93.12**	**13**	P	**P**	**21 30 28.4**		**+0.1**
	comp=Z,0.5nm,0.8s,baz=220,slow=4.9,SNR=5.0							
MKAR	**Makanchi Array**	**115.14**	**312**	PKP	**PKPdf**	**21 35 54.6**		**-0.5**
	comp=Z,1.0nm,0.7s,baz=139,slow=1.4,SNR=1.9							
BOSA	**Boshof**	**121.91**	**203**	PKP	**PKiKP**	**21 36 09.8**		**+0.7**
	comp=Z,1.7nm,0.7s,baz=158,slow=5.6,SNR=4.1							
ARCES	**ARCESS Array B**	**134.04**	**349**	PKP	**PKPdf**	**21 36 29.8**		**-0.8**
	comp=Z,3.3nm,0.8s,baz=48,slow=1.8,SNR=6.8							
FINES	**FINESS Array B**	**140.84**	**342**	PKP	**PKPdf**	**21 36 44.0**		**+0.7**
	comp=Z,1.0nm,0.7s,baz=350,slow=4.3,SNR=4.6							
NB2	**NRSAR Subarra**	**144.11**	**353**	PKP	PKPbc	21 36 47.6		0.0
	comp=Z,1.4nm,0.7s,baz=9.3,slow=3.3							
NOA	**NORSAR Array B**	**144.11**	**353**	PKP	PKPbc	21 36 47.7		+0.1
	comp=Z,0.7nm,0.6s,baz=12,slow=2.3,SNR=8.2							
IZAR	**Zarasai**	**145.35**	**337**	*e*P	**PKiKP**	**21 36 56.1**		**+0.7**
IDID	**Didziasalis**	**145.51**	**336**	*e*P	**PKPab**	**21 36 52.4**		**-0.1**
ISAL	**Salakas**	**145.54**	**337**	*e*P	**PKPab**	**21 36 52.8**		**+0.2**
IIGN	**Ignalina**	**145.67**	**336**	*e*P	**PKPab**	**21 36 53.6**		**+0.5**
PABE	**Paberze**	**146.34**	**338**	*e*P	**PKPbc**	**21 36 54.5**		**-0.1**
AKASG	**Malin Array Be**	**147.74**	**328**	PKPbc	**PKPbc**	**21 36 57.8**		**-0.8**
	comp=Z,1.6nm,0.5s,baz=41,slow=3.4,SNR=8.4							
AKASG	**Malin Array Be**	**147.74**	**328**		**PKPbc**	**21 36 57.4**		**-1.2**
CLL	**Collm**	**153.16**	**346**	*i* PKPbc	**PKiKP**	**21 37 12.2**		**+0.6**
	comp=Z,10.0nm,1.0s							
DBIC	**Dimbokro**	**159.82**	**158**	PKPab	**PKPab**	**21 37 53.4**		**+0.1**
	comp=Z,3.5nm,0.8s,baz=220,slow=9.3,SNR=4.

BBKI Banjar Baru 12.95 245 P Pn 21 27 03.4 +2.6
27nm,1.4s
PLAI Plampang 13.88 219 P Pn 21 27 13.0 -0.5
64nm,1.0s
GENI Genyem 14.28 108 P P 21 27 26.2 +1.2
90nm,1.2s
TWSI Taliwang, Sumb 14.39 222 P Pn 21 27 24.4 +4.0
607nm79nm,1.0s
SBUM Sibu 14.40 272 Pn Pn 21 27 18.8 -1.7
JAY Jayapura 14.77 107 Pn Pn 21 27 27.8 +2.3
0.4nm,0.3s,baz=36,slow=18,SNR=1.7
JAY LR LR 21 32 46.0
comp=Z,299nm,21.8s,baz=307,slow=36
MTN Manton Dam 15.38 163 P Pn 21 27 33.8 +0.5
baz=16,SNR=15
MTN Manton Dam 15.38 163 Pn 21 27 31.9 -1.4
KMMI Kalianget 15.48 235 P P 21 27 39.9 +1.5
82nm,0.8s
KDU Kakadu 15.67 158 P Pn 21 27 38.1 +1.0
baz=16,SNR=14
KSM Kuching 16.31 269 P Pn 21 27 45.9 +0.6
KSM Kuching 16.31 269 P P 21 27 49.0 +1.4
GMJI Gumukmas 16.61 232 P P 21 27 53.6 +2.7
49nm,0.9s
KNRA Kununurra 17.65 173 P Pn 21 28 01.5 -0.5
baz=18,SNR=15
KNRA Kununurra 17.65 173 Pn 21 28 00.8 -1.2
KNRA IAmb IAmb 21 28 11.7
comp=Z,38nm,0.8s
KPJI Karang Pucung 19.92 242 P P 21 28 25.9 -1.4
comp=Z,56nm,0.8s
FITZ Fitzroy Crossi 19.95 183 P P 21 28 26.2 -1.5
comp=Z,1.0nm,0.3s,baz=18,slow=10,SNR=11
FITZ LR LR 21 37 32.2
comp=Z,109nm,21.3s,baz=14,slow=41
FITZ Fitzroy Crossi 19.95 183 P P 21 28 26.5 -1.2
baz=20,SNR=7.1
FITZ Fitzroy Crossi 19.95 183 P P 21 28 26.5 -1.2
DLV T Lat 20.53 300 P P 21 28 33.1 -1.1
DLV IAmb IAmb 21 28 41.9
comp=Z,56nm,1.5s
LEM Lembang 20.88 245 P P 21 28 37.7 -0.3
comp=Z,8.1nm,0.4s,baz=247,slow=20,SNR=1.8
LEM LR LR 21 38 38.8
comp=Z,148nm,19.5s,baz=116,slow=42
TWG Pinlang 21.42 346 P P 21 28 41.0 -2.6
TWG IAmb IAmb 21 28 59.5
comp=Z,45nm,1.2s
TPUB Ta-pu 22.00 345 P P 21 28 46.5 -3.2
MYKOM Kota Tinggi 22.76 270 P P 21 28 56.7 -1.2
MYKOM Kota Tinggi 22.76 270 P P 21 28 59.0 +1.1
COEN Coen 22.79 134 P P 21 28 58.8 +0.5
baz=23,SNR=9.9
KLSI 22.85 253 P P 21 29 00.1 +1.3
comp=Z,13nm,1.0s
WRAB Tennant Creek 23.04 161 P P 21 28 58.2 -2.6
WRAB IAmb IAmb 21 29 02.4
comp=Z,48nm,1.0s
WRA Warramunga Arr 23.05 161 P P 21 28 59.4 -1.5
comp=Z,36nm,0.8s,baz=340,slow=11,SNR=75
WRA PcP PcP 21 32 49.0 -0.2
comp=Z,1.0nm,0.5s,baz=330,slow=2.1,SNR=4.7
WRA S S 21 33 11.6 +3.3
comp=Z,1.8nm,0.9s,baz=329,slow=20,SNR=3.7
WRA Warramunga Arr 23.05 161 P P 21 28 58.2 -2.6
WB2 Warramunga Arr 23.05 161 P P 21 28 59.0 -1.9
WB2 IAmb IAmb 21 29 06.8
comp=Z,44nm,0.7s
WC3 Warramunga Arr 23.07 161 P P 21 29 00.4 -0.7
baz=23
YHNB Yeheng 23.14 348 P P 21 29 00.2 -1.5
YHNB IAmb IAmb 21 29 05.5
comp=Z,22nm,0.8s
PMG Port Moresby 23.37 119 LR LR 21 40 26.3
comp=Z,145nm,18.1s,baz=314,slow=42
LWLI Liwa 23.58 253 P P 21 29 04.8 -1.4
comp=Z,702µmcomp=Z,7µmcomp=Z,51nm,0.8s
QIZ Qiongzhong 23.62 317 P P 21 29 04.3 -2.0
XMIS Christmas Isla 24.25 239 P P 21 29 10.3 -2.0
PSA00 Pilbara Seismi 24.31 195 P P 21 29 11.1 -1.6
UBPT Khong Chiam 24.71 304 P P 21 29 14.4 -1.9
SDSI Sungai Dareh 25.35 264 P P 21 29 22.7 +0.5
comp=Z,457nmcomp=Z,13nm,0.7s
IPM Ipoh 25.67 276 P P 21 29 23.2 -2.0
IPM Ipoh 25.67 276 P P 21 29 25.0 -0.2
QIS Mount Isa 25.74 151 P P 21 29 26.5 +0.7
baz=26,SNR=8.2
KULM Kulim 26.12 278 P P 21 29 27.1 -2.1
KULM Kulim 26.12 278 P P 21 29 29.0 -0.3
AS31 Alice Springs 26.44 165 P P 21 29 31.3 -0.7
ASAR Alice Springs 26.44 165 P P 21 29 31.4 -0.6
comp=Z,3.2nm,0.5s,baz=344,slow=7.9,SNR=25
ASAR PcP PcP 21 32 56.6 +0.1
comp=Z,1.9nm,0.6s,baz=349,slow=2.5,SNR=5.7
ASAR S S 21 34 11.7 +9.0
comp=Z,3.2nm,0.8s,baz=340,slow=18,SNR=2.1
ASAR LR LR 21 42 16.9
comp=Z,92nm,19.7s,baz=279,slow=42
ASAR Alice Springs 26.44 165 P P 21 29 30.9 -1.1
MTSU Mount Surprise 26.50 140 P P 21 29 33.0 +0.4
baz=27,SNR=13
WRKA Warakurna 26.89 177 P P 21 29 36.0 0.0
baz=27,SNR=30
RPSI Rantau Prapat 27.68 272 P P 21 29 40.8 -2.5
PSI Prapat 27.68 272 P P 21 29 42.1 -1.4
comp=Z,2.9nm,0.4s,baz=360,slow=9.1,SNR=4.4
GSI Gunungsitoli 29.04 269 P P 21 29 52.4 -3.0
GSI IAmb IAmb 21 30 01.2
comp=Z,54nm,1.3s
CTA Charters Tower 29.17 140 P P 21 29 56.2 -0.2
comp=Z,6.3nm,1.0s,baz=312,slow=11,SNR=3.2
CTAO Charters Tower 29.17 140 P P 21 29 57.2 +0.7
CTAO IAmb IAmb 21 30 12.9
comp=Z,34nm,1.5s
SLVN Son La 29.33 313 P P 21 29 55.8 -2.2
MEEK Meekatharra 29.46 195 P P 21 30 02.0 +3.0
baz=30,SNR=6.6
WHN Wuhan 30.71 339 P P 21 30 11.5 +1.5
NJ2 Nanjing 30.81 347 eP P 21 30 12.5 +1.7
NJ2 pmax pmax
comp=Z,9.0nm,0.8s
JNU Nakatsue 31.25 7 P P 21 30 14.3 -0.4
comp=Z,8.7nm,0.7s,baz=212,slow=4.3,SNR=5.6
JNU LR LR 21 42 28.4
comp=Z,76nm,21.5s,baz=179,slow=36
JNU Nakatsue 31.25 7 P P 21 30 14.2 -0.6
JNU IAmb IAmb 21 30 22.9
comp=Z,32nm,1.2s
PAYA Payao 31.37 305 P P 21 30 18.1 +2.1
CM36 Chiang Mai Arr 31.60 303 P P 21 30 19.0 +1.0
CM35 Chiang Mai Arr 31.63 304 P P 21 30 17.0 -1.2
CM04 Chiang Mai Arr 31.64 303 P P 21 30 19.9 +1.5
CM09 Chiang Mai Arr 31.66 303 P P 21 30 21.1 +2.7
CM01 Chiang Mai Arr 31.67 303 P P 21 30 21.4 +2.9
CM05 Chiang Mai Arr 31.67 303 P P 21 30 21.8 +3.1
CM02 Chiang Mai Arr 31.69 303 P P 21 30 21.5 +2.8
CM31 Chiang Mai Arr 31.70 303 P P 21 30 18.1 -0.7
CMAR Chiang Mai Arr 31.70 303 P P 21 30 18.1 -0.7
comp=Z,2.9nm,0.8s,baz=120,slow=7.4,SNR=19
CMAR LR LR 21 42 56.1
comp=Z,88nm,21.7s,baz=178,slow=36
CMAR Chiang Mai Arr 31.70 303 P P 21 30 17.0 -1.9
CM13 Chiang Mai Arr 31.71 303 P P 21 30 21.6 +2.6
CM15 Chiang Mai Arr 31.71 303 P P 21 30 22.0 +3.0
CM34 Chiang Mai Arr 31.71 304 P P 21 30 18.0 -1.0
CMMT Chiang Mai 31.86 304 P P 21 30 19.0 -1.3
CM33 Chiang Mai Arr 31.87 304 P P 21 30 19.0 -1.3
CHTO Chiang Mai 31.87 304 P P 21 30 19.1 -1.2
CM32 Chiang Mai Arr 31.87 303 P P 21 30 21.0 +0.6
MHMT Maesarieng 32.43 302 P P 21 30 31.4 +6.2
MORW Morawa 32.48 197 P P 21 30 27.6 +2.1
baz=33,SNR=5.7
MORW Morawa 32.48 197 P P 21 30 25.2 -0.3
MORW IAmb IAmb 21 30 43.0
comp=Z,12nm,1.0s
ENH Enshi 32.51 332 P P 21 30 24.3 -1.5
ENH IAmb IAmb 21 30 25.7
comp=Z,19nm,0.8s
KMI Kunming 32.57 317 eP P 21 30 29.5 +2.9
KMI pP pwP 21 30 42.0 +1.1
KMI pmax pmax
comp=Z,11nm,0.7s
KMI pmax pmax
comp=Z,120nm,5.2s
FORT Forrest 32.59 178 P P 21 30 26.6 +0.2
baz=33,SNR=14
FORT Forrest 32.59 178 P P 21 30 25.1 -1.3
KMBL Kambalda 33.45 187 P P 21 30 36.5 +2.5
baz=34,SNR=6.7
BLDU Ballidu 33.74 195 P P 21 30 38.2 +1.7
baz=34,SNR=7.4
JWT Wachi 34.15 13 P P 21 30 40.0 +0.1
KLBR Kellerberrin 34.41 193 P P 21 30 43.4 +1.1
baz=35,SNR=11
INU Inuyama 34.60 15 P P 21 30 43.1 -0.7
INU IAmb IAmb 21 30 45.8
comp=Z,18nm,0.8s
JGF Kuroka 34.92 15 P P 21 30 46.1 -0.6
JGF IAmb IAmb 21 30 47.7
comp=Z,9.6nm,0.7s
MUN Mundaring 35.17 195 P P 21 30 50.2 +1.4
baz=35,SNR=4.7
KSAR Wonju Array Be 35.33 2 P P 21 30 50.9 +0.7
KSRS Korea Array 35.34 2 P P 21 30 50.6 +0.4
comp=Z,4.9nm,0.6s,baz=181,slow=9.5,SNR=21
KS19 Wonju Array Si 35.39 2 P P 21 30 50.9 +0.2
KS19 IAmb IAmb 21 31 00.7
comp=Z,8.9nm,0.8s
BBOO Buckleboo 35.72 166 P P 21 30 53.3 -0.3
baz=36,SNR=13
BBOO Buckleboo 35.72 166 P P 21 30 52.8 -0.8
BBOO IAmb IAmb 21 31 08.3
comp=Z,11nm,0.8s
NWAO Narrogin (SRO) 35.82 194 P P 21 30 54.5 +0.1
NWAO IAmb IAmb 21 31 00.5
comp=Z,32nm,1.4s
XAN Xi'an 35.95 335 P P 21 30 54.0 -1.6
XAN IAmb IAmb 21 30 59.3
comp=Z,9.4nm,0.9s
CD2 Chengdu 36.01 325 P P 21 30 55.0 -1.2
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 LR LR
comp=Z,170nm,12.3s
CD2 LR LR
comp=Z,310nm,26.5s
CD2 LR LR
comp=Z,240nm,19.6s
MAJO Matsushiro 36.04 16 P P 21 30 55.4 -0.9
MAJO IAmb IAmb 21 30 57.2
comp=Z,12nm,0.9s
MAT Matsushiro 36.04 16 P P 21 30 55.0 -1.3
MJAR Matsushiro Arr 36.04 16 P P 21 30 55.2 -1.1
comp=Z,9.1nm,0.7s,baz=187,slow=9.5,SNR=31
MJAR Matsushiro Arr 36.04 16 P P 21 30 55.0 -1.3
EIDS Eidsvold 36.05 140 P P 21 30 55.3 -1.2
EIDS IAmb IAmb 21 31 12.3
comp=Z,18nm,1.4s
STKA Stephens Creek 36.53 158 P P 21 30 59.8 -0.7
comp=Z,3.9nm,0.5s,baz=331,slow=9.7,SNR=7.7
STKA Stephens Creek 36.53 158 P P 21 31 00.4 -0.1
baz=37,SNR=9.1
STKA Stephens Creek 36.53 158 P P 21 30 59.5 -1.0
DL2 Dalian 37.05 354 P P 21 31 06.0 +1.2
DL2 pmax pmax
comp=Z,34nm,0.9s
HTT Hallett 37.07 163 P P 21 31 06.7 +1.6
baz=37,SNR=4.2
RKGY Rocky Gully 37.49 193 P P 21 31 11.1 +2.5
baz=38,SNR=8.1
JMM Marumori 38.03 18 P P 21 31 12.3 -0.8
BJT Baijiatuan 39.05 347 P P 21 31 20.9 -0.8
BJT IAmb IAmb 21 31 23.9
comp=Z,11nm,0.7s
BJI Beijing 39.07 347 P P 21 31 21.8 -0.1
BJI pmax pmax
comp=Z,15nm,0.8s
LZH Lanzhou 39.97 331 eP P 21 31 29.0 -0.7
LZH pP pP 21 31 41.5 -0.2
LZH sP pwP 21 31 47.0 +2.8
LZH ePP PnPn 21 33 06.5 +0.5
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,92nm,5.6s
LZH LR LR
comp=Z,390nm,13.5s
LZH LR LR
comp=Z,400nm,13.3s
LZH LR LR
comp=Z,520nm,16.7s
ARMA Armidale 40.07 145 P P 21 31 31.2 +0.7
baz=40,SNR=5.3
ARMA Armidale 40.07 145 P P 21 31 30.5 +0.1
ARMA IAmb IAmb 21 31 38.6
comp=Z,27nm,1.5s
SHL Shillong 40.85 308 P P 21 31 35.0 -2.1
SHL IAmb IAmb 21 31 39.5
comp=Z,24nm,0.8s
HHC Hu-ho-hao-te 41.04 343 eP P 21 31 37.8 -0.5
HHC pmax pmax
comp=Z,11nm,0.7s
HHC pmax pmax
comp=Z,98nm,5.0s
USA0B Ussuriysk Arra 42.33 6 P P 21 31 47.9 -0.8
USA0B IAmb IAmb 21 31 53.1
comp=Z,16nm,1.1s
USRK Ussuriysk Ar. 42.33 6 P P 21 31 48.9 +0.3
comp=Z,13nm,1.0s,baz=194,slow=6.9,SNR=10
USRK Ussuriysk Ar. 42.33 6 P P 21 31 48.1 -0.5
MDJ Mudanjiang 42.56 3 P P 21 31 51.5 +1.0
MDJ pP pP 21 32 01.3 -1.3
MDJ S S 21 38 12.8 +3.0
MDJ pmax pmax
comp=Z,13nm,0.9s
MDJ pmax pmax
comp=Z,140nm,3.3s
MDJ LR LR
comp=Z,190nm,4.0s
MDJ LR LR
comp=Z,250nm,4.7s
MDJ LR LR
comp=Z,200nm,5.8s
MDJ Mudanjiang 42.56 3 P P 21 31 50.0 -0.5
TOO Toolangi 43.05 158 P P 21 31 54.1 -0.6
TOO IAmb IAmb 21 32 12.8
comp=Z,17nm,1.5s
LSA Lhasa 43.54 313 P P 21 31 59.0 -0.3
LSA pmax pmax
comp=Z,31nm,1.0s
LSA Lhasa 43.54 313 P P 21 31 58.0 -1.2
LSA IAmb IAmb 21 32 08.6
comp=Z,11nm,0.6s
ASAJ Asahikawa 44.31 16 P P 21 32 04.5 -0.1
comp=Z,8.4nm,0.5s,baz=230,slow=8.3,SNR=19
JKA Kamikawa-asahi 44.31 16 P P 21 32 04.9 +0.3
JKA IAmb IAmb 21 32 07.8
comp=Z,18nm,1.0s
GTA Gaotai 44.56 330 ⇑P P 21 32 06.0 -0.9
GTA PP PP 21 33 53.0 +1.4
GTA pmax pmax
comp=Z,6.0nm,0.9s
GTA pmax pmax
comp=Z,67nm,6.0s
GTA LR LR
comp=Z,59nm,17.5s
GTA LR LR
comp=Z,87nm,17.1s
GTA LR LR
comp=Z,100nm,17.4s
TAPN Taplejung 44.99 308 eP P 21 32 09.1 -1.6
ODAN Odare 45.02 307 eP P 21 32 09.5 -1.4
comp=Z,48nm,0.9s
RAMN Ramite 45.69 307 eP P 21 32 15.0 -1.2
GUN Gumba 46.69 307 eP P 21 32 22.7 -1.5
comp=Z,43nm,0.9s
PKI Pulchoki 46.92 307 eP P 21 32 24.0 -1.9
comp=Z,25nm,1.0s
PKIN Phulchoki 46.93 307 eP P 21 32 23.9 -2.1
comp=Z,17nm,0.9s
YSS Yuzh-Sakhalins 46.97 15 P P 21 32 24.8 -0.7
KKN Kakani 47.11 307 eP P 21 32 25.6 -1.8
comp=Z,29nm,0.9s
DMN Daman 47.17 307 eP P 21 32 26.3 -1.6
HIA Hailar 47.50 354 P P 21 32 29.7 -0.1
HIA IAmb IAmb 21 32 40.4
comp=Z,21nm,1.4s
DANN Dangsing 48.57 307 eP P 21 32 36.9 -1.8
comp=Z,64nm,0.9s
ULN Ulaanbaatar 48.76 343 P P 21 32 39.3 -0.3
ULN IAmb IAmb 21 32 46.1
comp=Z,5.9nm,0.7s
SONM Songino Array 48.93 342 P P 21 32 41.1 +0.2
comp=Z,6.3nm,0.8s,baz=158,slow=10,SNR=6.2
SONM Songino Array 48.93 342 P P 21 32 40.0 -0.9
WMQ Urumqi 54.11 326 eP P 21 33 20.5 +0.8
WMQ Urumqi 54.11 326 P P 21 33 18.9 -0.8
WMQ IAmb IAmb 21 33 22.7
comp=Z,9.3nm,0.9s
PEA0B Petropavlovsk- 57.10 22 P P 21 33 40.5 -0.4
PETK Petropavlovsk- 57.10 22 P P 21 33 41.1 +0.2
comp=Z,4.2nm,0.5s,baz=183,slow=5.8,SNR=4.1
PETK Petropavlovsk- 57.10 22 P P 21 33 40.5 -0.4
NIL Nilore 58.92 309 P P 21 33 52.8 -1.3
NIL IAmb IAmb 21 34 02.0
comp=Z,11nm,0.9s
MK31 Makanchi Array 58.94 326 P P 21 33 52.7 -1.3
MK31 IAmb IAmb 21 34 00.0
comp=Z,6.8nm,0.8s
MKAR Makanchi Array 58.94 326 P P 21 33 52.9 -1.0
comp=Z,6.4nm,0.5s,baz=120,slow=8.0,SNR=95
MKAR Makanchi Array 58.94 326 P P 21 33 52.8 -1.2
PRZ Przheval'sk 58.97 320 P P 21 33 53.5 -0.9
KSH Kashi 59.22 316 P P 21 33 56.8 +0.7
KSH pmax pmax
comp=Z,15nm,0.6s
KSH pmax pmax
comp=Z,360nm,4.6s
KDJ Kajisay 59.59 319 P P 21 33 58.0 -0.7
YAK Yakutsk 59.97 2 P P 21 34 00.6 -0.1
LBZ Lake Benmore 60.29 145 P P 21 34 01.5 -1.8
MA2 Magadan 60.44 14 P P 21 34 04.5 +0.6
BKZ Black Stump Fm 61.36 137 P P 21 34 09.0 -1.6
AAK Ala-Archa 61.59 319 P P 21 34 11.1 -1.2
comp=Z,3.4nm,0.8s,baz=140,slow=6.3,SNR=12
AAK Ala-Archa 61.59 319 P P 21 34 11.5 -0.8
AAK IAmb IAmb 21 34 15.9
comp=Z,4.1nm,0.8s
ARSB Arslanbob 62.05 317 P P 21 34 14.6 -0.8
ARSB IAmb IAmb 21 34 18.5
comp=Z,9.9nm,1.1s
ZAA0 Zalesovo Array 62.11 334 P P 21 34 13.6 -1.7
ZALV Zalesovo Beam 62.11 334 P P 21 34 14.0 -1.3
comp=Z,2.0nm,0.6s,baz=123,slow=6.1,SNR=9.3
ZALV Zalesovo Beam 62.11 334 P P 21 34 13.9 -1.4
DRK Karamyk 62.15 314 P P 21 34 14.8 -1.5
KBL Kabul 62.52 308 P P 21 34 17.0 -1.7
KBL IAmb IAmb 21 34 18.8
comp=Z,9.4nm,0.7s
BTK Batken 63.07 315 P P 21 34 20.4 -1.7
BTK IAmb IAmb 21 34 29.3
comp=Z,5.3nm,0.8s
KURK Kurchatov 63.17 328 P P 21 34 21.4 -1.1
KK31 Karatay Array 64.45 318 P P 21 34 29.7 -1.4
KK31 IAmb IAmb 21 34 33.9
comp=Z,6.5nm,0.8s
KKAR Karatay Array 64.45 318 P P 21 34 29.7 -1.4
KKAR IAmb IAmb 21 34 33.9
comp=Z,6.5nm,0.8s
KKAR Karatay Array 64.45 318 P P 21 34 30.0 -1.1
HRA Herat 67.88 306 P P 21 34 51.7 -1.9
BRVK Borovoye 68.81 327 P P 21 34 57.8 -0.8
BRVK IAmb IAmb 21 35 06.9
comp=Z,7.6nm,1.1s
TIXI Tiksi 69.60 1 P P 21 35 02.6 -0.6
TIXI IAmb IAmb 21 35 07.0
comp=Z,15nm,1.4s
GEYT Alibeck 71.92 309 P P 21 35 18.2 +0.1
comp=Z,40nm,0.8s,baz=107,slow=5.1,SNR=7.5
GYA0B ALIBECK ARRAY 71.92 309 P P 21 35 16.8 -1.2
NRIK Noril'sk 72.11 346 P P 21 35 19.2 +0.8
comp=Z,8.2nm,0.8s,baz=128,slow=6.5,SNR=14
SOCY Socotra 72.61 282 P P 21 35 19.6 -3.1
SOCY IAmb IAmb 21 35 24.5
comp=Z,12nm,0.9s
ABKAR Akbulak array 73.45 321 P P 21 35 25.8 -1.1
ABKAR Akbulak array 73.45 321 P P 21 35 25.6 -1.2
ARU Arti 76.37 328 P P 21 35 42.4 -1.1
ARU IAmb IAmb 21 35 45.6
comp=Z,10.0nm,0.8s
SDPT Sand Point 78.71 34 P P 21 35 56.5 -0.1
RAYN Ar Rayn 81.08 293 P P 21 36 08.9 -1.3
VNDA Vanda 81.70 173 P P 21 36 11.5 -0.8
comp=Z,2.3nm,0.5s,baz=317,slow=6.7,SNR=23
VNDA LR LR 22 12 45.5
comp=Z,76nm,19.8s,baz=163,slow=36
VNDA Vanda 81.70 173 P P 21 36 11.9 -0.4
VNDA IAmb IAmb 21 36 26.6
comp=Z,5.5nm,0.8s
MAW Mawson 82.07 200 P P 21 36 15.1 +0.8
comp=Z,2.3nm,0.7s,baz=104,slow=2.6,SNR=6.9
MAW Mawson 82.07 200 P P 21 36 14.5 +0.2
TTA Tatalina 82.52 27 P P 21 36 18.0 +1.0
TTA IAmb IAmb 21 36 18.7
comp=Z,4.7nm,0.8s
AKH Akhalkalaki 83.55 311 P P 21 36 22.0 -0.9
IMAR Indian Mountai 83.99 24 P P 21 36 24.8 +0.4
KBZ Khabaz 84.11 314 P P 21 36 25.4 0.0
comp=Z,4.4nm,1.0s,baz=350,slow=0.8,SNR=4.8
BRLK Bradley Lake 84.53 30 P P 21 36 27.1 -0.1
SUA Susitna One 84.76 29 P P 21 36 28.6 0.0
SUA IAmb IAmb 21 36 30.9
comp=Z,13nm,0.9s
RND Reindeer 85.80 27 P P 21 36 33.2 -0.4
RND IAmb IAmb 21 36 38.2
comp=Z,6.6nm,1.2s
TOLK Toolik Lake Re 85.92 21 P P 21 36 35.0 +0.9
SCM Sheep Creek Mo 86.41 28 P P 21 36 37.2 +0.5
ILAR Eielson Array 86.74 25 P P 21 36 36.8 -1.4
comp=Z,0.4nm,0.7s,baz=257,slow=4.5,SNR=6.4
KLMR Klimovskoe 86.88 331 eP P 21 36 38.9 0.0
KLMR AMP 21 36 40.2
comp=Z,15nm,1.0s
BMAR Burnt Mountain 87.74 23 P P 21 36 43.7 +0.7
GAZ Gaziantep 88.36 307 P P 21 36 45.6 -1.0
BCAR Beaver Creek A 88.99 27 P P 21 36 49.4 +0.3
SYO Syowa Base 90.75 201⇑eP P 21 36 56.0 -0.9
SYO Syowa Base 90.75 201⇑ePcP P 21 36 57.7 +0.8
BRTR Keskin Array B 91.06 310 P P 21 36 58.4 -0.9
comp=Z,1.6nm,0.9s,baz=142,slow=6.3,SNR=4.8
BRTR Keskin Array B 91.06 310 P P 21 36 57.8 -1.5
CSS Mathiatis 91.59 305 P P 21 37 00.5 -1.3
INK Inuvik 91.84 21 P P 21 37 02.0 0.0
comp=Z,0.5nm,0.6s,baz=233,slow=8.6,SNR=3.5
ARCES ARCESS Array B 92.06 340 P P 21 37 04.0 +0.9
comp=Z,3.2nm,0.9s,baz=97,slow=8.8,SNR=1.7
FINES FINESS Array B 93.33 332 P P 21 37 08.2 -0.9
comp=Z,2.4nm,0.7s,baz=71,slow=4.5,SNR=8.2
CRVS Cervenica-Dubn 98.45 320 ePDIFF Pdif 21 37 35.3 +2.6
TORD Torodi Ar. Bea 123.35 287 PKP **PKPdf** 21 42 51.9 -0.4
comp=Z,0.8nm,0.7s,baz=354,slow=1.8,SNR=3.9
PLCA Paso Flores 138.39 160 PKP **PKPdf** 21 43 21.6 +1.4
comp=Z,2.0nm,0.9s,baz=194,slow=7.5,SNR=3.0
CPUP Villa Florida 155.47 171 PKP **PKPdf** 21 43 50.8 +2.2
comp=Z,0.6nm,0.5s,baz=13,slow=18,SNR=1.4
CPUP PKPab **PKPab** 21 44 14.7 +0.6
comp=Z,2.9nm,0.9s,baz=188,slow=5.5,SNR=4.6

IDC ***29*** *21:35:27.1±1.4,35.67N×136.83E,h0km,mb3.3/1, mb1 3.5/3,mb1mx3.2/47,mbtmp3.4/3,ML3.0/2,Error ellipse: s-maj=41.9km s-min=12.8km az=145.0*
JMA ***29*** *21:35:28.5,35.87N×136.77E,h12km±1km,M3.3 Broadband fault plane solution: P waves. NP1: ϕs42.00000°,δ38.00000°,λ123.00000°. NP2: ϕs183.00000°,δ59.00000°,λ67.00000°. Principal axes: T Plg67.0000°, Azm47.0000°; N Plg20.0000°, Azm195.0000°; P Plg11.0000°, Azm289.0000°;*
JMA Felt II J1.
ISC 29 21:35:28.5±1.0,35.85N±0.04×136.79E±0.04,h14km±8km, n10,σ0.97/15,2C-2D,Western Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYTA	**Yamagatataniai**	**0.25**	**189**	⇑P		**Pg**		**21 35 34.3**	**+0.3**
JYTA				S		**Sg**		**21 35 38.2**	**+0.6**
JICN	**Ichinomiyachia**	**0.54**	**175**	P		**Pn**		**21 35 40.0**	**-1.9**
JICN				eS		**Sb**		**21 35 47.6**	**+0.1**
JKG	**Kaga**	**0.57**	**320**	⇓P		**Pg**		**21 35 39.1**	**-0.6**
JKG				S		**Sg**		**21 35 46.5**	**-0.7**
JGN	**Niukaw**	**0.57**	**49**	⇓P		**Pg**		**21 35 39.4**	**-0.4**
JGN				S		**Sg**		**21 35 47.0**	**-0.4**
JTT	**Ttatey**	**0.88**	**30**	⇑P		**Pg**		**21 35 45.2**	**-0.4**
MAT	**Matsushiro**	**1.34**	**58**	P		**Pn**		**21 35 53.4**	**+0.5**

MAT S Sn 21 36 12.3 +1.7
MJAR Matsushiro Arr 1.34 58 Pg Pb 21 35 54.0 +0.4
7.0nm,0.3s,baz=245,slow=16,SNR=433
MJAR Lg Lg 21 36 12.7
4.6nm,0.3s,baz=240,slow=29,SNR=15
MJAR LR LR 21 36 19.8
comp=Z,54nm,19.1s,baz=60,slow=37
JNU Nakatsue 5.58 243 Pn Pn 21 36 52.2 +1.0
0.4nm,0.3s,baz=128,slow=6.5,SNR=7.1
JNU Lg Lg 21 38 24.1
0.2nm,0.3s,baz=205,slow=20,SNR=1.8
KSRS Korea Array 7.30 285 Pn Pn 21 37 15.3 +0.6
0.3nm,0.3s,baz=103,slow=14,SNR=4.2
WRA Warramunga Arr 55.53 183 P P 21 45 02.5 -0.9
0.3nm,0.8s,baz=356,slow=7.9,SNR=5.1

*IDC **29** 21:50:10.3±1.5, 2°.35N×126°.99E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/46, mbtmp3.7/7, Error ellipse: s-maj=84.4km s-min=17.6km az=64.0*
*DJA **29** 21:50:22.2±1.9, 2°.1N±12°×12°.7E±1°.9, h28km±7km, M3.9/4, mb4.3/4, MLv3.7/4*
ISC 29 21:50:14.9±1.2, 2°.4N±0°.1×127°.2E±0°.1, h35km, n10, σ1§32/11, mb3.8/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
MRSI	**Marisa**	**5.63**	**250**	P		**Pn**	**21 51 37.7**	**+1.4**
	0.1nm30nm,0.5s							
APSI	**Ampana**	**6.50**	**239**	P		**Pn**	**21 51 49.6**	**+1.5**
	0.1nm18nm,0.9s							
TWSI	**Taliwang, Sumb**	**15.15**	**223**	P		**Pn**	**21 53 44.1**	**-2.4**
	11nm,0.8s							
TWSI				pP		**P**	**21 53 51.3**	**+0.1**
	11nm,0.8s							
FITZ	**Fitzroy Crossi**	**20.46**	**184**	P		**P**	**21 54 49.5**	**-0.1**
	1.2nm,0.7s,baz=123,slow=20,SNR=1.8							
WRA	**Warramunga Arr**	**23.30**	**163**	P		**P**	**21 55 19.6**	**-0.4**
	2.0nm,0.7s,baz=342,slow=11,SNR=18							
ASAR	**Alice Springs**	**26.74**	**166**	P		**P**	**21 55 50.9**	**-0.6**
	0.3nm,0.5s,baz=348,slow=7.7,SNR=5.7							
CMAR	**Chiang Mai Arr**	**31.97**	**302**	P		**P**	**21 56 36.6**	**-1.3**
	0.4nm,0.8s,baz=117,slow=5.6,SNR=6.3							
STKA	**Stephens Creek**	**36.75**	**159**	P		**P**	**21 57 20.1**	**+1.0**
	2.4nm,0.8s,baz=322,slow=6.7,SNR=5.4							
MKAR	**Makanchi Array**	**58.90**	**325**	P		**P**	**22 00 10.6**	**0.0**
	0.5nm,0.6s,baz=124,slow=7.6,SNR=6.0							
ZALV	**Zalesovo Beam**	**61.96**	**333**	P		**P**	**22 00 32.1**	**+0.9**
	0.3nm,0.3s,baz=127,slow=7.2,SNR=1.8							

*IDC **29** 22:14:41.7±1.8, 0°.52S×96°.87E, h0km, mb4.0/6, mb1 4.1/8, mb1mx3.7/42, mbtmp4.0/8, ML3.9/2, MS2.5/1, Ms1 2.5/1, ms1mx2.2/45, Error ellipse: s-maj=55.7km s-min=20.7km az=63.0*
*DJA **29** 22:14:41.8±0.9, 0°.5S±4°×9°.7E±°, h10km, M4.4/9, mb4.9/1, MLv4.1/9*
*NEIC **29** 22:14:46.3±0.8, 0°.38S±0°.07×97°.0E±0°.1, h29km±6km, mb4.4/12, Error ellipse: s-maj=18.7km s-min=8.7km az=70.0*
ISC 29 22:14:43.6±0.9, 0°.43S±0°.07×96°.9E±0°.1, h10km, n64, σ1§23/59, mb4.4/11, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
GSI	**Gunungsitoli**	**1.84**	**21**	P		**Pn**	**22 15 14.5**	**-0.8**
GSI				S		**Sn**	**22 15 36.3**	**-2.3**
GSI	**Gunungsitoli**	**1.84**	**21**			**Pn**	**22 15 14.8**	**-0.5**
GSI				Sn		**Sn**	**22 15 36.2**	**-2.3**
SISI	**Saibi**	**2.35**	**112**	P		**Pn**	**22 15 20.9**	**-1.3**
SNSI	**Sinabang, Aceh**	**2.88**	**348**	P		**Pn**	**22 15 27.8**	**-1.7**
MNSI	**Mandailing Nat**	**2.92**	**65**	P		**Pn**	**22 15 29.8**	**-0.4**
TPTI		**3.67**	**4**	P		**Pn**	**22 15 36.7**	**-3.7**
RPSI	**Rantau Prapat**	**3.69**	**33**			**Pn**	**22 15 40.3**	**-0.4**
PSI	**Prapat**	**3.78**	**32**	Pn		**Pn**	**22 15 40.5**	**-1.5**
	2.7nm,0.3s,baz=181,slow=3.5,SNR=11							
PSI				LR		LR	22 17 07.7	
	comp=Z,58nm,18.8s,baz=92,slow=38							
TSI	**Tuntungan**	**4.23**	**23**	P		**Pn**	**22 15 48.0**	**-0.2**
KRJI	**Kerinci**	**4.83**	**110**	P		**Pn**	**22 15 56.2**	**-0.3**
LHMI	**Lhok Sumawe**	**5.62**	**0**	Pn		**Pn**	**22 16 06.0**	**-1.2**
IPM	**Ipoh**	**6.37**	**40**	Pn		**Pn**	**22 16 17.8**	**+0.2**
KSI	**Kapahiang**	**6.51**	**120**	P		**Pn**	**22 16 17.1**	**-2.5**
KULM	**Kulim**	**6.79**	**33**			**Pn**	**22 16 22.9**	**-0.5**
MNAI	**Manna**	**7.19**	**123**	Pn		**Pn**	**22 16 27.6**	**-1.2**
SRAK	**Srakaew**	**15.22**	**19**	P		**P**	**22 18 27.0**	**+3.3**
	113nm,0.9s							
UTHA	**Uthaitani**	**16.08**	**9**	P		**P**	**22 18 34.9**	**+1.6**
	208nm20nm,0.8s							
SUKH	**Sukhothai**	**18.00**	**8**	P		**P**	**22 18 57.0**	**+2.5**
	16nm,1.0s							
CM05	**Chiang Mai Arr**	**18.82**	**6**	P		**Pn**	**22 19 04.0**	**-0.1**
	51nm7.1nm,0.9s							
CM04	**Chiang Mai Arr**	**18.82**	**6**	P		**Pn**	**22 19 04.7**	**+0.6**
	71nm11nm,0.8s							
CM13	**Chiang Mai Arr**	**18.83**	**6**	P		**Pn**	**22 19 04.7**	**+0.4**
	76nm9.6nm,0.9s							
CM01	**Chiang Mai Arr**	**18.84**	**6**	P		**Pn**	**22 19 05.0**	**+0.8**
	75nm10nm,0.8s							
CM02	**Chiang Mai Arr**	**18.85**	**6**	P		**Pn**	**22 19 05.0**	**+0.5**
	56nm8.5nm,0.9s							
CM09	**Chiang Mai Arr**	**18.86**	**6**	P		**Pn**	**22 19 05.2**	**+0.6**
	68nm9.9nm,0.8s							
CM15	**Chiang Mai Arr**	**18.86**	**6**	P		**Pn**	**22 19 05.0**	**+0.4**
	68nm8.8nm,0.8s							
CM31	**Chiang Mai Arr**	**18.87**	**6**	P		**Pn**	**22 19 05.2**	**+0.5**
	235nm,0.8s							
CM31	**Chiang Mai Arr**	**18.87**	**6**			**P**	**22 19 04.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**18.87**	**6**	P		**Pn**	**22 19 05.0**	**+0.3**
	0.3nm,0.3s,baz=196,slow=11,SNR=66							
CMAR	**Chiang Mai Arr**	**18.87**	**6**	P		**P**	**22 19 04.1**	**-0.1**
CM36	**Chiang Mai Arr**	**18.95**	**6**	P		**Pn**	**22 19 06.0**	**+0.4**
PHRA	**Phrae**	**19.09**	**10**	P		**Pn**	**22 19 09.7**	**+2.4**
	34nm,0.9s							
CM35	**Chiang Mai Arr**	**19.11**	**6**	P		**Pn**	**22 19 09.0**	**+1.4**
CHTO	**Chiang Mai**	**19.22**	**6**			**P**	**22 19 08.2**	**+0.1**
CMMT	**Chiang Mai**	**19.22**	**6**	P		**Pn**	**22 19 08.9**	**0.0**
	1.9nm,0.9s							
CM33	**Chiang Mai Arr**	**19.23**	**6**	P		**Pn**	**22 19 09.0**	**0.0**
CM34	**Chiang Mai Arr**	**19.28**	**6**	P		**Pn**	**22 19 12.0**	**+2.3**
PAYA	**Payao**	**19.88**	**8**	P		**Pn**	**22 19 18.2**	**+1.4**
	114nm,1.0s							
KKM	**Kota Kinabalu**	**20.31**	**71**	P		Pn	22 19 20.8	-1.2
KKM				IAmb		IAmb	22 19 34.5	
	comp=Z,14nm,1.0s							
H08S2	**Diego Garcia H**	**25.38**	**253**	T		T	22 46 24.7	
	baz=73,slow=74,SNR=23							
H08S3	**Diego Garcia H**	**25.39**	**253**	T		T	22 46 23.0	
	baz=73,slow=74,SNR=24							
H08S1	**Diego Garcia H**	**25.40**	**253**	T		T	22 46 23.7	
	baz=73,slow=74,SNR=14							
SHL	**Shillong**	**26.30**	**350**	P		**P**	**22 20 19.2**	**-0.5**
SHL				IAmb		IAmb	22 20 22.2	
	comp=Z,7.5nm,0.8s							
XAN	**Xi'an**	**36.09**	**17**	P		**P**	**22 21 45.3**	**-0.4**
H01W3	**Cape Leeuwin H**	**37.87**	**157**	T		T	23 02 39.3	
	baz=334,slow=76,SNR=12							
H01W2	**Cape Leeuwin H**	**37.88**	**157**	T		T	23 02 41.7	
	baz=334,slow=76,SNR=10							
H01W1	**Cape Leeuwin H**	**37.88**	**157**	T		T	23 02 41.2	
	baz=334,slow=76,SNR=9.2							
WB0	**Warramunga Arr**	**41.42**	**120**	P		**P**	**22 22 30.4**	**-0.3**
WB0				IAmb		IAmb	22 22 47.8	
	comp=Z,7.5nm,1.4s							
WRA	**Warramunga Arr**	**41.44**	**120**	P		**P**	**22 22 30.8**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=289,slow=9.2,SNR=3.2							
AS31	**Alice Springs**	**42.66**	**126**	P		**P**	**22 22 40.4**	**-0.5**
ASAR	**Alice Springs**	**42.66**	**126**	P		**P**	**22 22 39.9**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=299,slow=7.7,SNR=18							
ASAR	**Alice Springs**	**42.66**	**126**	P		**P**	**22 22 40.3**	**-0.5**
WMQ	**Urumqi**	**44.82**	**351**	P		**P**	**22 22 58.4**	**+0.5**
WMQ				IAmb		IAmb	22 23 14.3	
	comp=Z,7.4nm,1.3s							
MK31	**Makanchi Array**	**48.75**	**347**	P		**P**	**22 23 28.4**	**-0.1**
MK31				IAmb		IAmb	22 23 31.4	
	comp=Z,5.1nm,1.1s							
MKAR	**Makanchi Array**	**48.75**	**347**	P		**P**	**22 23 28.7**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=163,slow=8.4,SNR=24							
MKAR	**Makanchi Array**	**48.75**	**347**	P		**P**	**22 23 28.2**	**-0.3**
SONM	**Songino Array**	**48.77**	**8**	P		**P**	**22 23 30.0**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=187,slow=10,SNR=2.0							
MAKZ	**Makanchi**	**48.83**	**346**	P		**P**	**22 23 29.3**	**+0.2**
KKAR	**Karatay Array**	**49.39**	**335**	P		**P**	**22 23 33.3**	**-0.2**
USRK	**Ussuriysk Ar.**	**54.30**	**31**	P		**P**	**22 24 11.0**	**+0.9**
	comp=Z,3.3nm,0.9s,baz=244,slow=6.2,SNR=9.5							
USRK	**Ussuriysk Ar.**	**54.30**	**31**	P		**P**	**22 24 10.2**	**+0.1**
ZAA0	**Zalesovo Array**	**55.11**	**351**	P		**P**	**22 24 15.5**	**-0.3**
ZAA0				IAmb		IAmb	22 24 19.7	
	comp=Z,3.2nm,0.6s							
ZALV	**Zalesovo Beam**	**55.11**	**351**	P		**P**	**22 24 15.4**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=181,slow=6.5,SNR=11							
EIDS	**Eidsvold**	**57.80**	**120**	P		**P**	**22 24 35.7**	**+0.2**
TXAR	**Lajitas Array**	**145.19**	**33**	PKPbc		**PKPbc**	**22 34 21.9**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=148,slow=0.1,SNR=5.5							

*IDC **29** 22:37:22.5±0.8, 2°.42N×127°.15E, h0km, mb3.8/10, mb1 4.0/10, mb1mx3.7/35, mbtmp3.8/10, Error ellipse: s-maj=43.5km s-min=14.9km az=74.0*
*NEIC **29** 22:37:27.9±1.6, 2°.38N±0°.08×127°.2E±0°.1, h37km±8km, mb4.2/14, Error ellipse: s-maj=18.8km s-min=9.7km az=65.0*
ISC 29 22:37:27.8±0.6, 2°.43N±0°.06×127°.2E±0°.1, h35km, n32, σ0§93/33, mb4.0/14, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
TNTI	**Ternate**	**1.65**	**175**			**Pn**	**22 37 53.8**	**-0.5**
TNTI					Sn	**Sn**	**22 38 15.2**	**+0.9**
TOLI2	**Tolitoli**	**6.58**	**259**			**Pn**	**22 39 02.0**	**-0.1**
MYLDM	**Lahad Datu**	**9.13**	**288**	Pn		**Pn**	**22 39 38.7**	**+1.5**
KNRA	**Kununurra**	**18.05**	**175**	P		**Pn**	**22 41 36.0**	**0.0**
KNRA				IAmb		IAmb	22 41 39.2	
	comp=Z,6.3nm,0.7s							
FITZ	**Fitzroy Crossi**	**20.46**	**184**	P		**P**	**22 42 02.7**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=127,slow=12,SNR=1.7							
FITZ	**Fitzroy Crossi**	**20.46**	**184**	P		**P**	**22 42 02.3**	**-0.2**
TPUB	**Ta-pu**	**21.71**	**343**	P		**P**	**22 42 14.2**	**-1.8**
TPUB				IAmb		IAmb	22 42 22.5	
	comp=Z,31nm,1.2s							
WB0	**Warramunga Arr**	**23.15**	**163**	P		**P**	**22 42 30.3**	**-1.0**
WB0				IAmb		IAmb	22 42 33.1	
	comp=Z,11nm,1.3s							
WRA	**Warramunga Arr**	**23.30**	**163**	P		**P**	**22 42 31.3**	**-1.4**
	comp=Z,1.8nm,0.6s,baz=340,slow=11,SNR=25							
WRA	**Warramunga Arr**	**23.30**	**163**	P		**P**	**22 42 31.5**	**-1.3**
WR0	**Warramunga Arr**	**23.38**	**162**	P		**P**	**22 42 32.5**	**-1.0**
WR0				IAmb		IAmb	22 42 44.1	
	comp=Z,5.9nm,1.2s							
AS31	**Alice Springs**	**26.74**	**166**	P		**P**	**22 43 03.7**	**-0.6**
ASAR	**Alice Springs**	**26.74**	**166**	P		**P**	**22 43 04.0**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=347,slow=7.6,SNR=12							
ASAR	**Alice Springs**	**26.74**	**166**	P		**P**	**22 43 03.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**31.97**	**302**	P		**P**	**22 43 50.1**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=114,slow=7.5,SNR=4.5							
MJAR	**Matsushiro Arr**	**35.43**	**15**	P		**P**	**22 44 20.0**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=200,slow=8.1,SNR=1.7							
BBOO	**Buckleboo**	**36.03**	**167**	P		**P**	**22 44 25.5**	**-0.3**
NWAO	**Narrogin (SRO)**	**36.41**	**194**	P		**P**	**22 44 29.5**	**+0.3**
STKA	**Stephens Creek**	**36.74**	**159**	P		**P**	**22 44 32.1**	**+0.1**
	comp=Z,5.0nm,0.7s,baz=343,slow=7.6,SNR=10							
STKA	**Stephens Creek**	**36.74**	**159**	P		**P**	**22 44 32.0**	**+0.1**
USRK	**Ussuriysk Ar.**	**41.81**	**5**	P		**P**	**22 45 14.9**	**+0.9**
	comp=Z,2.1nm,0.8s,baz=193,slow=7.8,SNR=5.6							
USRK	**Ussuriysk Ar.**	**41.81**	**5**	P		**P**	**22 45 14.4**	**+0.4**
MK31	**Makanchi Array**	**58.91**	**325**	P		**P**	**22 47 22.3**	**-1.2**
MK31				IAmb		IAmb	22 47 30.1	
	comp=Z,5.7nm,1.2s							
MKAR	**Makanchi Array**	**58.91**	**325**	P		**P**	**22 47 22.7**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=121,slow=8.1,SNR=15							
MKAR	**Makanchi Array**	**58.91**	**325**	P		**P**	**22 47 22.5**	**-0.9**
MAKZ	**Makanchi**	**59.09**	**325**	P		**P**	**22 47 23.7**	**-1.0**
ZALV	**Zalesovo Beam**	**61.97**	**333**	P		**P**	**22 47 44.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=137,slow=8.0,SNR=2.1							
KURK	**Kurchatov**	**63.10**	**328**	P		**P**	**22 47 51.5**	**-0.3**
KURK				IAmb		IAmb	22 47 51.9	
	comp=Z,5.1nm,1.4s							
ABKAR	**Akbulak array**	**73.47**	**321**	P		**P**	**22 48 56.5**	**-0.3**
VNDA	**Vanda**	**82.08**	**173**	P		**P**	**22 49 44.7**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=86,slow=21,SNR=2.9							
VNDA	**Vanda**	**82.08**	**173**	P		**P**	**22 49 43.7**	**-0.5**
VNDA				IAmb		IAmb	22 49 49.2	
	comp=Z,2.7nm,1.3s							
IMAR	**Indian Mountai**	**83.32**	**24**	P		**P**	**22 49 53.3**	**+2.5**

IDC 29 22:45:02.6±1.7, 2°.53N×127°.18E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/28, mbtmp3.5/6, Error ellipse: s-maj=81.2km s-min=19.7km az=63.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
FITZ	**Fitzroy Crossi**	**20.56**	**184**	P		P	22 49 43.1	+0.1
	1.1nm,0.8s,baz=346,slow=12,SNR=2.2							
WRA	**Warramunga Arr**	**23.42**	**163**	P		P	22 50 13.1	-0.5
	0.6nm,0.4s,baz=342,slow=11,SNR=12							
ASAR	**Alice Springs**	**26.85**	**166**	P		P	22 50 45.1	-0.1
	0.1nm,0.4s,baz=348,slow=7.6,SNR=2.0							
CMAR	**Chiang Mai Arr**	**31.87**	**302**	P		P	22 51 29.9	+0.1
	0.4nm,0.7s,baz=128,slow=5.8,SNR=2.1							
STKA	**Stephens Creek**	**36.86**	**159**	P		P	22 52 13.1	+0.2
	0.6nm,0.3s,baz=342,slow=10,SNR=3.0							
MKAR	**Makanchi Array**	**58.79**	**325**	P		P	22 55 02.8	0.0
	0.4nm,0.5s,baz=125,slow=7.1,SNR=9.3							

IDC 29 22:53:11.2±2.0, 2°.41N×126°.21E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/42, mbtmp3.4/4, Error ellipse: s-maj=128.1km s-min=24.1km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
FITZ	**Fitzroy Crossi**	**20.38**	**182**	P		P	22 57 48.5	-1.2
	0.9nm,0.6s,baz=31,slow=7.6,SNR=2.0							
WRA	**Warramunga Arr**	**23.60**	**161**	P		P	22 58 24.2	+0.3
	0.2nm,0.3s,baz=341,slow=10,SNR=5.4							
ASAR	**Alice Springs**	**26.98**	**164**	P		P	22 58 55.1	+0.3
	0.1nm,0.3s,baz=339,slow=6.5,SNR=2.1							
MKAR	**Makanchi Array**	**58.34**	**326**	P		P	23 03 08.2	0.0
	0.3nm,0.3s,baz=118,slow=6.8,SNR=8.2							

*IDC **29** 23:00:16.7±0.6, 32°.95N×137°.02E, h0km, mb4.1/20, mb1 4.3/27, mb1mx4.2/51, mbtmp4.1/27, ML3.8/6, MS3.4/10, Ms1 3.4/10, ms1mx3.0/49, Error ellipse: s-maj=15.8km s-min=13.4km az=83.0*
*NIED **29** 23:00:18.7, 32°.88N×137°.00E, h34km, MW4.2, Moment Tensor Solution. s3 Moment tensor: Scale 10^15^Nm; Mrr1.88; Mϑϑ-2.01; Mϕϕ0.14; Mrϑ0.98; Mrϕ-0.10; Mϑϕ-0.05; Fault plane solution: Mo2.18000×10^15^ NP1:ϕs90.00000°, δ58.00000°, λ93.00000°. NP2:ϕs264.00000°, δ32.00000°, λ85.00000°.*
*JMA **29** 23:00:18.7±0.3, 32°.88N×137°.00E, h34km±1km, M4.2*
JMA Felt I J1.
*NEIC **29** 23:00:18.8±1.4, 32°.98N±0°.05×136°.98E±0°.05, h12km±4km, mb4.6/39, Error ellipse: s-maj=8.0km s-min=6.6km az=175.0*
*MOS **29** 23:00:20.1±1.0, 33°.06N×136°.96E, h30km, mb4.6/16, Error ellipse: s-maj=9.6km s-min=5.8km az=107.7*
ISC 29 23:00:20.9±0.9, 33°.04N±0°.04×136°.97E±0°.04, h25km±6km, n183, σ1§26/188, mb4.4/53, MS3.8/9, 12C-8D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
TTO1	**TONANKAI O.B.S**	**0.60**	**345**			P	**Pb**	**23 00 33.1**	**+0.5**
TTO1				eX			23 00 43.5	
TTO2	**TONANKAI O.B.S**	**0.69**	**4**			P	**Pb**	**23 00 34.6**	**+0.4**
TTO2				X			23 00 45.8	
TK01	**Tokai 1**	**0.89**	**36**	P		**Pb**	**23 00 36.0**	**-1.2**
TK01				X			23 00 48.7	
TTO3	**TONANKAI O.B.S**	**0.89**	**24**			P	**Pb**	**23 00 37.2**	**-0.5**
TTO3				X			23 00 50.4	
TTO4	**TONANKAI O.B.S**	**1.07**	**26**			P	**Pn**	**23 00 39.4**	**-0.7**
TTO4				X			23 00 53.4	
JWKM	**Wakayamakushim**	**1.09**	**292**			P	**Pn**	**23 00 39.0**	**-1.6**
JWKM				S		**Sb**	**23 00 52.3**	**-2.6**
JMMH	**Miemihama**	**1.10**	**315**			P	**Pn**	**23 00 39.8**	**-0.9**
JMMH				S		**Sb**	**23 00 53.5**	**-1.8**
TK02	**Tokai 2**	**1.12**	**36**			P	**Pn**	**23 00 39.7**	**-1.0**
TK02				X			23 00 54.9	
JSG	**Sagara**	**1.92**	**32**			**Pn**	**23 00 51.4**	**-0.6**
JSG					Sn	**Sn**	**23 01 14.0**	**-1.3**
INU	**Inuyama**	**2.30**	**1**			**Pn**	**23 00 57.0**	**-0.2**
INU						Sn	**Sn**	**23 01 23.9**	**-0.8**
JHJ	**Hachijo jima 2**	**2.37**	**87**	Pn		**Pn**	**23 00 57.5**	**-0.6**
	61nm,0.3s,baz=67,slow=23,SNR=12							
JHJ						Sn	**Sn**	**23 01 23.4**	**-2.9**
	122nm,0.3s,baz=152,slow=22,SNR=11							
JHJ						LR	LR	23 01 45.5	
	comp=Z,160nm,20.9s,baz=274,slow=38							
JHJ2	**Mitsune**	**2.39**	**88**	Pn		**Pn**	**23 00 57.1**	**-1.3**
JGF	**Kuroka**	**2.57**	**7**			**Pn**	**23 01 00.6**	**-0.4**
JGF						Sn	**Sn**	**23 01 30.5**	**-0.9**
JWT	**Wachi**	**2.58**	**330**			**Pn**	**23 01 01.3**	**+0.2**
JWT						Sn	**Sn**	**23 01 30.8**	**-0.9**
JMN	**Monobe**	**2.67**	**286**			**Pn**	**23 01 01.7**	**-0.7**
MJAR	**Matsushiro Arr**	**3.64**	**16**	Pn		**Pn**	**23 01 16.4**	**+0.8**
	8.4nm,0.3s,baz=189,slow=15,SNR=408							
MJAR						Sn	**Sn**	**23 01 58.0**	**+0.3**
	12nm,0.3s,baz=164,slow=22,SNR=3.8							
MJAR	**Matsushiro Arr**	**3.64**	**16**	P		**Pn**	**23 01 15.7**	**+0.1**
MJAR	**Matsushiro Arr**	**3.64**	**16**			**Pn**	**23 01 15.7**	**+0.1**
MAJO	**Matsushiro**	**3.64**	**16**	*d*	*i* P	**Pn**	**23 01 16.2**	**+0.6**
MAJO	**Matsushiro**	**3.64**	**16**	Pn		**Pn**	**23 01 16.1**	**+0.5**
MAT	**Matsushiro**	**3.64**	**16**	P		**Pn**	**23 01 16.2**	**+0.6**
MAT				S		**Sn**	**23 01 57.5**	**-0.2**
MJB9	**Matsu-Tunnel**	**3.64**	**16**			**Pn**	**23 01 16.6**	**+1.0**
JHS	**Saijyo**	**3.75**	**302**			**Pn**	**23 01 16.6**	**-0.5**
JYT	**Yasato**	**4.14**	**39**			**Pn**	**23 01 23.2**	**+0.7**
JSD	**Sado**	**5.09**	**12**	Pn		**Pn**	**23 01 35.1**	**-0.5**
JNU	**Nakatsue**	**5.11**	**273**	Pn		**Pn**	**23 01 35.2**	**-0.7**
	2.4nm,0.3s,baz=146,slow=6.3,SNR=34							
JNU						LR	LR	23 03 33.3	
	comp=Z,251nm,20.7s,baz=96,slow=38							
JNU	**Nakatsue**	**5.11**	**273**	Pn		**Pn**	**23 01 35.4**	**-0.5**
JSU	**Suzuyama**	**5.72**	**256**	Pn		**Pn**	**23 01 44.4**	**+0.1**
JMM	**Marumori**	**5.74**	**32**	Pn		**Pn**	**23 01 46.0**	**+1.6**
JTU	**Tsushima**	**6.47**	**285**	Pn		**Pn**	**23 01 53.1**	**-1.5**
JCJ	**Chichijima**	**7.46**	**141**	Pn		**Pn**	**23 02 06.3**	**-1.8**
KSRS	**Korea Array**	**8.61**	**303**	Pn		**Pn**	**23 02 23.9**	**+0.1**
	0.6nm,0.3s,baz=119,slow=14,SNR=7.2							
KSRS						Sn	**Sn**	**23 03 59.8**	**-0.2**
	0.3nm,0.3s,baz=120,slow=24,SNR=6.2							
KSRS						LR	LR	23 05 54.1	
	comp=Z,109nm,18.4s,baz=125,slow=39							
KSAR	**Wonju Array Be**	**8.63**	**303**	P		**Pn**	**23 02 24.6**	**+0.5**
KSAR	**Wonju Array Be**	**8.63**	**303**	Pn		**Pn**	**23 02 24.6**	**+0.5**
KS19	**Wonju Array Si**	**8.67**	**303**	Pn		**Pn**	**23 02 25.8**	**+1.1**
ERM	**Erimo**	**10.21**	**27**	*i* P		**Pn**	**23 02 45.7**	**-0.1**
ERM	**Erimo**	**10.21**	**27**	Pn		**Pn**	**23 02 45.4**	**-0.4**
USA08	**Ussuriysk Arra**	**11.80**	**342**	*i* P		**Pn**	**23 03 07.2**	**-0.3**
USRK	**Ussuriysk Ar.**	**11.80**	**342**	Pn		**Pn**	**23 03 05.5**	**-2.0**
	baz=233,slow=44,SNR=2.1							
ASAJ	**Asahikawa**	**11.90**	**20**	Pn		**Pn**	**23 03 08.4**	**-0.5**
	1.6nm,0.3s,baz=208,slow=9.9,SNR=15							
ASAJ						LR	LR	23 08 16.5	
	comp=Z,115nm,19.3s,baz=192,slow=40							
JKA	**Kamikawa-asahi**	**11.90**	**20**	Pn		**Pn**	**23 03 08.1**	**-0.8**
MDJ	**Mudanjiang**	**12.90**	**336**	P		**Pn**	**23 03 23.0**	**+0.5**
MDJ				pP		P	23 03 29.0	-4.0
MDJ				sP			23 03 33.5	
MDJ				S		**Sn**	**23 05 40.5**	**-4.7**
MDJ				sS			23 05 52.5	
MDJ				pmax		pmax		
	comp=Z,5.0nm,1.7s							
MDJ				pmax		pmax		
	comp=Z,70nm,2.6s							
MDJ				LR		LR		
	comp=N,240nm,10.1s							
MDJ				LR		LR		
	comp=E,240nm,6.7s							
MDJ				LR		LR		
	comp=Z,220nm,12.7s							
CN2	**Changchun**	**14.02**	**323**	*e*P		P	23 03 51.8	+6.4
CN2				*e*pP		Pn	23 03 57.5	+20
CN2				*e*S		**S**	**23 06 27.5**	**-6.0**
CN2				*e*sS		Sn	23 06 36.3	+24
CN2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
CN2				LR		LR		
	comp=N,230nm,16.0s							
CN2				LR		LR		

YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.3s
H11N2 WAKE ISLAND Hy 29.79 109 T T 23 37 50.9
baz=303,slow=75,SNR=5.8
H11N1 WAKE ISLAND Hy 29.80 109 T T 23 37 51.2
baz=303,slow=75,SNR=5.0
H11N3 WAKE ISLAND Hy 29.81 109 T T 23 37 52.1
baz=303,slow=75,SNR=5.2
H11S3 WAKE ISLAND Hy 30.31 111 T T 23 38 39.4
baz=304,slow=75,SNR=4.4
H11S1 WAKE ISLAND Hy 30.31 111 T T 23 38 43.0
baz=304,slow=75,SNR=5.1
H11S2 WAKE ISLAND Hy 30.32 111 T T 23 38 37.0
baz=304,slow=75,SNR=5.2
GTA Gaotai 30.48 293 P **P** **23 06 32.0 +0.1**
GTA pP pP 23 06 39.0 +0.6
GTA sP pwP 23 06 42.8 +0.1
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA pmax pmax
comp=Z,22nm,3.8s
GTA LR LR
comp=N,82nm,16.0s
GTA LR LR
comp=E,150nm,14.2s
GTA LR LR
comp=Z,140nm,15.3s
CMAR Chiang Mai Arr 36.98 256 P **P** **23 07 28.7 +0.3**
comp=Z,1.1nm,0.5s,baz=48,slow=7.0,SNR=11
CMAR Chiang Mai Arr 36.98 256 P **P** **23 07 28.3 -0.1**
TIXI Tiksi 38.91 356 *i* P **P** **23 07 45.4 +1.4**
TIXI Tiksi 38.91 356 P **P** **23 07 44.5 +0.5**
LSA Lhasa 39.03 278 P **P** **23 07 46.1 0.0**
LSA pmax pmax
comp=Z,15nm,1.5s
LSA Lhasa 39.03 278 P **P** **23 07 46.1 0.0**
LSA IAmb IAmb 23 08 00.5
comp=Z,15nm,1.5s
WMQ Urumqi 39.54 301 *e*P **P** **23 07 51.3 +1.5**
WMQ Urumqi 39.54 301 P **P** **23 07 50.6 +0.8**
WMQ pmax pmax
comp=Z,19nm,1.5s
WMQ Urumqi 39.54 301 P **P** **23 07 50.6 +0.8**
WMQ IAmb IAmb 23 07 53.2
comp=Z,19nm,1.5s
ZALV Zalesovo Beam 42.06 316 P **P** **23 08 11.6 +1.3**
comp=Z,0.4nm,0.3s,baz=92,slow=7.4,SNR=6.1
ZALV PcP **PcP** **23 10 04.7 -0.1**
comp=Z,3.8nm,0.6s,baz=105,slow=3.4,SNR=18
MK31 Makanchi Array 43.28 305*ce*P **P** **23 08 21.6 +1.2**
MK31 Makanchi Array 43.28 305 P **P** **23 08 21.2 +0.8**
MK31 IAmb IAmb 23 08 32.4
comp=Z,8.9nm,1.2s
MKAR Makanchi Array 43.28 305 P **P** **23 08 21.6 +1.2**
comp=Z,4.7nm,0.7s,baz=86,slow=11,SNR=47
MKAR Makanchi Array 43.28 305 P **P** **23 08 21.0 +0.6**
MAKZ Makanchi 43.50 305 P **P** **23 08 22.7 +0.6**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
MAKZ Makanchi 43.50 305 P **P** **23 08 22.7 +0.6**
NRIK Noril'sk 45.47 338 LR LR 23 28 35.3
comp=Z,67nm,18.8s,baz=202,slow=37
NRIK Noril'sk 45.47 338 *i* P **P** **23 08 38.3 +0.8**
NRIK pmax pmax
comp=Z,4.0nm,1.1s
KURK Kurchatov 45.64 311*ce*P **P** **23 08 38.2 -0.9**
KURK pmax pmax
comp=Z,10.0nm,1.3s
KURK Kurchatov 45.64 311 P **P** **23 08 39.6 +0.5**
KURK IAmb IAmb 23 08 40.6
comp=Z,8.1nm,0.9s
KNRA Kununurra 49.08 190 P **P** **23 09 04.8 -1.4**
KNRA IAmb IAmb 23 09 05.7
comp=Z,5.1nm,0.8s
AAK Ala-Archa 49.25 300*ce*P **P** **23 09 07.5 -0.1**
AAK pmax pmax
comp=Z,4.0nm,0.7s
AAK Ala-Archa 49.25 300 P **P** **23 09 08.2 +0.6**
BRVK Borovoye 50.70 314*ce*P **P** **23 09 17.3 -0.9**
BRVK pmax pmax
comp=Z,4.0nm,1.3s
BRVK Borovoye 50.70 314 P **P** **23 09 17.9 -0.3**
IMAR Indian Mountai 51.92 29 P **P** **23 09 28.3 +1.2**
FITZ Fitzroy Crossi 51.99 194 P **P** **23 09 27.6 -0.6**
comp=Z,2.2nm,0.7s,baz=25,slow=9.1,SNR=7.2
FITZ Fitzroy Crossi 51.99 194 P **P** **23 09 27.1 -1.0**
FITZ IAmb IAmb 23 09 39.1
comp=Z,7.7nm,1.3s
KK31 Karatay Array 52.03 302 P **P** **23 09 28.7 +0.4**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KK31 Karatay Array 52.03 302 P **P** **23 09 28.7 +0.4**
KK31 IAmb IAmb 23 09 29.8
comp=Z,4.8nm,0.9s
KKAR Karatay Array 52.03 302 P **P** **23 09 28.6 +0.3**
KKAR pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 52.03 302 P **P** **23 09 29.0 +0.7**
KKAR IAmb IAmb 23 09 29.8
comp=Z,4.8nm,0.9s
KKAR Karatay Array 52.03 302 P **P** **23 09 28.6 +0.3**
KDAK Kodiak Island 52.49 40 P **P** **23 09 32.0 +0.5**
KDAK pmax pmax
comp=Z,12nm,1.0s
KDAK Kodiak Island 52.49 40 P **P** **23 09 31.9 +0.5**
PPLA Purkeypile 52.51 33 P **P** **23 09 33.1 +1.4**
PPLA IAmb IAmb 23 09 41.9
comp=Z,13nm,1.4s
WRAB Tennant Creek 52.74 183*ce*P **P** **23 09 35.5 +1.8**
WRAB pmax pmax
comp=Z,9.0nm,2.5s
WRA Warramunga Arr 52.75 183 P **P** **23 09 31.6 -2.2**
comp=Z,1.1nm,0.7s,baz=2.3,slow=8.1,SNR=11
RND Reindeer 54.01 32 P **P** **23 09 43.4 +0.8**
RND pmax pmax
comp=Z,10.0nm,1.4s
RND Reindeer 54.01 32 P **P** **23 09 43.4 +0.8**
RND IAmb IAmb 23 09 58.1
comp=Z,9.9nm,1.4s
MDM Murphy Dome 54.21 30 P **P** **23 09 45.3 +1.2**
MDM IAmb IAmb 23 09 46.3
comp=Z,3.4nm,0.8s
ILAR Eielson Array 54.79 31 P **P** **23 09 48.6 +0.3**
comp=Z,0.7nm,0.8s,baz=257,slow=5.1,SNR=8.8
ASAR Alice Springs 56.47 183 P **P** **23 10 00.1 -0.7**
comp=Z,0.8nm,0.8s,baz=11,slow=9.5,SNR=7.0
ASAR Alice Springs 56.47 183 P **P** **23 10 00.3 -0.5**
ARU Arti 56.97 320*c* *i* P **P** **23 10 03.8 -0.2**
ARU S **S** **23 17 58.4 +1.9**
ARU SS **SS** **23 21 44.3 -0.3**
ARU pmax pmax
comp=Z,7.0nm,1.0s
ARU Arti 56.97 320 P **P** **23 10 04.0 0.0**
ARU IAmb IAmb 23 10 10.2
comp=Z,5.8nm,0.9s
BCAR Beaver Creek A 57.22 32 P **P** **23 10 07.3 +1.6**
ABKAR Akbulak array 57.75 311 P **P** **23 10 09.7 +0.1**
ABKAR IAmb IAmb 23 10 23.3
comp=Z,4.4nm,0.7s
INK Inuvik 59.57 26 P **P** **23 10 22.9 +1.0**
INK pmax pmax
comp=Z,3.0nm,0.7s
INK Inuvik 59.57 26 P **P** **23 10 22.9 +1.0**
INK IAmb IAmb 23 10 24.0
comp=Z,2.7nm,0.7s
HRA Herat 60.78 294 P **P** **23 10 31.5 +0.4**
KIRV Kirov 61.24 323*ce*P **P** **23 10 35.3 +1.8**
STKA Stephens Creek 64.72 176 P **P** **23 10 56.1 -0.7**
comp=Z,1.8nm,0.7s,baz=324,slow=5.6,SNR=3.9
STKA Stephens Creek 64.72 176 P **P** **23 10 56.5 -0.3**
BBOO Buckleboo 65.51 181 P **P** **23 11 00.8 -1.1**
ARCES ARCESS Array B 66.42 339 P **P** **23 11 08.0 +0.5**
comp=Z,2.0nm,0.5s,baz=59,slow=8.3,SNR=17
ARCES LR LR 23 44 28.6
comp=Z,65nm,18.8s,baz=230,slow=40
NWAO Narrogin (SRO) 68.20 198 P **P** **23 11 18.0 -1.1**
NWAO pmax pmax
comp=Z,29nm,1.3s
NWAO Narrogin (SRO) 68.20 198 P **P** **23 11 18.0 -1.1**
YKA Yellowknife Ar 69.06 28 P **P** **23 11 25.0 +0.8**
comp=Z,0.7nm,0.5s,baz=290,slow=4.6,SNR=2.9
YKA Yellowknife Ar 69.06 28 P **P** **23 11 25.0 +0.8**
OBN Obninsk 69.08 323⇑ *e*P **P** **23 11 25.8 +1.4**
OBN *e* 23 11 50.8
OBN *e* 23 13 58.6
OBN *e*S **S** **23 20 23.1 -4.8**
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,96nm,18.0s
FIA1 FINESS Array S 70.61 332 P **P** **23 11 33.7 0.0**
FINES FINESS Array B 70.61 332 P **P** **23 11 33.7 0.0**
comp=Z,2.8nm,0.6s,baz=94,slow=5.4,SNR=14
FINES FINESS Array B 70.61 332 P **P** **23 11 33.8 +0.2**
KBZ Khabaz 70.69 310 P **P** **23 11 34.3 -0.2**
comp=Z,2.8nm,0.8s,baz=156,slow=2.2,SNR=6.5
KBZ Khabaz 70.69 310*ce*P **P** **23 11 35.6 +1.1**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KIV Kislovodsk 70.72 310 *i* P **P** **23 11 35.1 +0.2**
KIV pmax pmax
comp=Z,8.0nm,1.8s
AKASG Malin Array Be 75.16 321 P **P** **23 12 01.1 +0.2**
comp=Z,3.3nm,0.6s,baz=52,slow=6.3,SNR=16
AKASG LR LR 23 47 06.7
comp=Z,42nm,18.5s,baz=285,slow=37
AKBB Malin Array Si 75.16 321*ce*P **P** **23 12 01.4 +0.5**
AKBB Malin Array Si 75.16 321 P **P** **23 12 00.5 -0.4**
AKBB IAmb IAmb 23 12 01.8
comp=Z,5.0nm,0.8s
MARD Mardin 75.20 305 P **P** **23 12 01.9 +0.3**
MARD IAmb IAmb 23 12 03.0
comp=Z,5.8nm,0.7s
NC405 NORSAR Array S 76.17 336 P **P** **23 12 06.8 +0.3**
NB2 NORSAR Subarra 76.39 336 P **P** **23 12 07.2 -0.6**
comp=Z,2.9nm,0.8s,baz=45,slow=5.9
NOA NORSAR Array B 76.39 336 P **P** **23 12 07.8 0.0**
comp=Z,2.5nm,0.8s,baz=44,slow=5.6,SNR=7.9
NOA LR LR 23 47 34.9
comp=Z,11nm,19.7s,baz=350,slow=37
BRTR Keskin Array B 78.69 310 P **P** **23 12 21.6 +0.5**
comp=Z,3.5nm,1.0s,baz=69,slow=6.8,SNR=8.6
BRTR Keskin Array B 78.69 310 P **P** **23 12 21.3 +0.1**
BRTR Keskin Array B 78.69 310 P **P** **23 12 21.3 +0.1**
RAYN Ar Rayn 78.72 291 P **P** **23 12 21.2 -0.3**
RAYN pmax pmax
comp=Z,6.0nm,0.9s
RAYN Ar Rayn 78.72 291 P **P** **23 12 21.2 -0.3**
RAYN IAmb IAmb 23 12 22.4
comp=Z,5.8nm,0.8s
BUR08 Bucovina Ar. S 79.09 320 P **P** **23 12 23.4 +0.2**
BURAR Bucovina Array 79.10 320 P **P** **23 12 23.6 +0.3**
NVAR Mina Array Bea 80.32 50 P **P** **23 12 30.4 +0.2**
comp=Z,0.9nm,0.6s,baz=304,slow=5.1,SNR=4.8
NVAR Mina Array Bea 80.32 50 P **P** **23 12 31.2 +1.0**
LANS Liptovska Anna 81.10 324 *e*P **P** **23 12 35.2 +1.3**
LANS Liptovska Anna 81.10 324 *e*P **P** **23 12 35.2 +1.3**
CHVC Chvalec 81.77 326 *e*P **P** **23 12 38.3 +0.9**
KRLC Kraliky 81.78 326 *e*P **P** **23 12 38.3 +0.8**
KRLC Kraliky 81.78 326 *e*P **P** **23 12 38.3 +0.8**
HVU Hansel Valley 81.80 45 P **P** **23 12 38.9 +1.0**
HVU pmax pmax
comp=Z,7.0nm,0.9s
HVU Hansel Valley 81.80 45 P **P** **23 12 38.9 +1.0**
DPC Dobruska-Polom 81.81 326 *e*P **P** **23 12 38.8 +1.1**
DPC Dobruska-Polom 81.81 326 *e*P **P** **23 12 38.8 +1.1**
CLL Collm 82.65 328 *e*P **P** **23 12 42.0 0.0**
comp=Z,8.0nm,1.2s
CLL Collm 82.65 328 *e*P **P** **23 12 42.0 0.0**
CLL pmax pmax
comp=Z,8.0nm,1.2s
PRU Pruhonice 82.89 327 *e*P **P** **23 12 43.7 +0.5**
PRU Pruhonice 82.89 327 *e*P **P** **23 12 43.7 +0.5**
PDAR Pinedale Array 83.06 43 P **P** **23 12 44.3 -0.3**
comp=Z,0.4nm,0.6s,baz=349,slow=1.5,SNR=2.2
KHC Kasperske Hory 83.94 327 *e*P **P** **23 12 49.1 +0.4**
KHC *e* 23 12 55.3
KHC *e* 23 13 00.6
KHC Kasperske Hory 83.94 327 *e*P **P** **23 12 49.1 +0.4**
KHC *e*pP **pP** **23 12 55.3 -0.5**
KHC *ex* x 23 13 00.6
KHC Kasperske Hory 83.94 327 P **P** **23 12 49.2 +0.5**
GERES GERESS Array B 84.08 326 P **P** **23 12 49.3 -0.2**
comp=Z,1.4nm,0.7s,baz=43,slow=6.0,SNR=11
P17A Butcher Ranch, 84.43 46 P **P** **23 12 52.8 +1.2**
IDI Anoyia 86.91 311 P **P** **23 13 03.0 -0.8**
TUE Stuetta 87.83 327 P **P** **23 13 08.3 +0.1**
TXAR Lajitas Array 95.46 50 P **P** **23 13 43.7 -0.1**
comp=Z,1.0nm,0.7s,baz=298,slow=3.5,SNR=10
TXAR Lajitas Array 95.46 50 P **P** **23 13 44.3 +0.5**
TORD Torodi Ar. Bea 117.30 310 PKP **PKPdf** **23 19 04.2 -0.5**
comp=Z,0.4nm,0.7s,baz=40,slow=1.0,SNR=2.0
VNA3 Neumayer Olymp 137.77 195 PKPdf **PKPdf** **23 19 41.3 -0.6**
H03N2 Juan Fernandez 150.06 101 T T 02 07 36.4
baz=277,slow=74,SNR=17
H03N3 Juan Fernandez 150.07 101 T T 02 07 37.9
baz=277,slow=74,SNR=13
H03N1 Juan Fernandez 150.08 101 T T 02 07 38.4
baz=277,slow=74,SNR=17

IDC 29 23:00:36.6±30.0, 16.15S×174.53W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/37, mbtmp4.1/4, Error ellipse: s-maj=589.7km s-min=164.2km az=84.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.72**	**240**	P	P	23 08 35.7	0.0
	1.2nm,0.6s,baz=105,slow=12,SNR=1.9						
WRA	**Warramunga Arr**	**48.62**	**257**	P	P	23 09 21.9	-0.6
	0.8nm,0.5s,baz=93,slow=6.9,SNR=40						
ASAR	**Alice Springs**	**48.85**	**253**	P	P	23 09 24.0	-0.3
	7.5nm,0.5s,baz=88,slow=8.2,SNR=152						
FITZ	**Fitzroy Crossi**	**56.99**	**259**	P	P	23 10 25.4	+0.8
	0.5nm,0.3s,baz=79,slow=6.8,SNR=1.6						

*JMA **29** 23:30:55.0±0.1, 24.24N×121.68E, h57km±1km, M3.2*
*TAP **29** 23:30:56.0, 24.30N×121.72E, h50km, ML3.9, B*
ISC 29 23:30:56.9±1.2, 24.32N±0.02×121.75E±0.02, h45km±5km, n136, σ1§10/230, 1C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.11**	**356**	P	**Pn**	**23 31 04.3**	**+0.1**
	baz=3.0						
ENA				S	**Sn**	**23 31 10.4**	**+1.1**
	baz=3.0						
ENAH	**Nanao**	**0.14**	**23**	P	**Pn**	**23 31 04.4**	**+0.1**
	baz=19						
ENAH				S	**Sn**	**23 31 10.7**	**+1.2**
	baz=19						
NACB	**Ninganchiao**	**0.20**	**224**	P	Pn	23 31 04.1	-0.7
	baz=224						
NACB				S	**Sn**	**23 31 10.4**	**+0.2**
	baz=224						
ETLH	**Xiulin Townshi**	**0.27**	**245**	*i* P	**Pn**	**23 31 05.0**	**-0.4**
	baz=242						
ETLH				*i* S	**Sn**	**23 31 11.6**	**+0.2**
	baz=242						
TWD	**Chiawan**	**0.28**	**210**	*i* P	**Pn**	**23 31 04.8**	**-0.6**
	baz=219						
TWD				*e*S	**Sn**	**23 31 11.0**	**-0.3**
	baz=219						
TWC	**Suao**	**0.30**	**17**	P	**Pn**	**23 31 05.7**	**+0.1**
	baz=17						
TWC				*e*S	**Sn**	**23 31 13.3**	**+1.5**
	baz=17						
NNSB	**Datong**	**0.35**	**288**	P	**Pn**	**23 31 05.9**	**-0.4**
	baz=293						
NNSB				S	**Sn**	**23 31 12.7**	**-0.2**
	baz=293						
NNSH	**Datong**	**0.35**	**288**	*e*P	**Pn**	**23 31 05.9**	**-0.4**
	baz=292						
NNSH				*e*S	**Sn**	**23 31 12.6**	**-0.3**
	baz=292						
NDT	**Datong Townshi**	**0.35**	**322**	P	**Pn**	**23 31 06.1**	**0.0**
	baz=327						
NDT				S	**Sn**	**23 31 13.1**	**+0.3**
	baz=327						
ENTT	**Nioudou**	**0.36**	**332**	*e*P	**Pn**	**23 31 06.1**	**-0.1**
	baz=342						
ENTT				*e*S	**Sn**	**23 31 13.7**	**+0.9**
	baz=342						
NNS	**Nan Shan**	**0.36**	**289**	P	**Pn**	**23 31 06.1**	**-0.3**
	baz=294						
NNS				S	**Sn**	**23 31 13.1**	**0.0**
	baz=294						
HWA	**Hwalien**	**0.37**	**201**	*e*P	**Pn**	**23 31 06.1**	**-0.2**
	baz=209						
HWA				*e*S	**Sn**	**23 31 14.2**	**+1.3**
	baz=209						
TWE	**Neicheng**	**0.41**	**349**	*e*P	**Pn**	**23 31 06.9**	**+0.2**
	baz=351						
ILA	**Ilan**	**0.44**	**360**	P	**Pn**	**23 31 07.9**	**+0.8**
	baz=359						
ILA				*e*S	**Sn**	**23 31 16.1**	**+1.7**
	baz=359						
FUSS	**Fushou**	**0.47**	**261**	P	**Pn**	**23 31 07.5**	**-0.2**
	baz=263						
FUSS				S	**Sn**	**23 31 14.9**	**-0.5**
	baz=263						
WHF	**Hehuan Shan**	**0.48**	**249**	P	**Pn**	**23 31 07.5**	**-0.5**
	baz=246						
WHF				S	**Sn**	**23 31 14.6**	**-1.2**
	baz=246						
YHNB	**Yeheng**	**0.49**	**316**	P	**Pn**	**23 31 07.6**	**-0.2**
	baz=319						
YHNB				S	**Sn**	**23 31 15.6**	**+0.1**
	baz=319						
NSK	**Sanguang**	**0.50**	**315**	P	**Pn**	**23 31 07.6**	**-0.4**
	baz=313						
NSK				S	**Sn**	**23 31 15.6**	**-0.3**
	baz=313						
NWLT	**Wulai**	**0.51**	**334**	P	**Pn**	**23 31 08.0**	**0.0**
	baz=337						
NWLT				S	**Sn**	**23 31 16.1**	**+0.2**
	baz=337						
TWT	**Tachien**	**0.53**	**263**	*i* P	**Pn**	**23 31 08.5**	**+0.1**
	baz=259						
TWT				*i* S	**Sn**	**23 31 16.7**	**+0.1**
	baz=259						
NTC	**Toucheng**	**0.54**	**8**	P	**Pn**	**23 31 08.7**	**+0.4**
	baz=360						
NTC				*e*S	**Sn**	**23 31 17.9**	**+1.5**
	baz=360						
TDCB	**Techi**	**0.54**	**263**	P	**Pn**	**23 31 08.5**	**-0.1**
	baz=259						
TDCB				S	**Sn**	**23 31 16.6**	**-0.3**
	baz=259						
ESL	**Shilin**	**0.58**	**210**	*e*P	**Pn**	**23 31 07.4**	**-1.5**
	baz=213						
ESL				*e*S	**Sn**	**23 31 16.2**	**-1.3**
	baz=213						
CHGB	**Renai**	**0.59**	**244**	P	**Pn**	**23 31 08.9**	**-0.3**
	baz=240						
CHGB				S	**Sn**	**23 31 17.3**	**-0.6**
	baz=240						
OWD	**Renai**	**0.64**	**235**	*e*P	**Pn**	**23 31 09.1**	**-0.6**
	baz=232						
OWD				*e*S	**Sn**	**23 31 18.3**	**-0.7**
	baz=232						
TIPB	**Shuangxi**	**0.65**	**6**	P	**Pn**	**23 31 10.3**	**+0.5**
TIPB				S	**Sn**	**23 31 20.5**	**+1.3**
NHDH	**Xindian Distri**	**0.67**	**342**	P	**Pn**	**23 31 10.0**	**0.0**
	baz=336						
NHDH				S	**Sn**	**23 31 20.2**	**+0.6**
	baz=336						
TWA	**Mucha**	**0.67**	**347**	P	**Pn**	**23 31 10.0**	**-0.2**
	baz=339						
TWA				*e*S	**Sn**	**23 31 19.8**	**+0.1**
	baz=339						
TATO	**Taipei**	**0.69**	**340**	P	**Pn**	**23 31 10.1**	**-0.3**
	baz=341						
TATO				S	**Sn**	**23 31 20.4**	**+0.3**
	baz=341						
EGFH	**Guangfu**	**0.71**	**204**	*e*P	**Pn**	**23 31 08.9**	**-1.7**
	baz=211						
TWB1	**Santiao Chiao**	**0.72**	**18**	⇑P	**Pn**	**23 31 11.3**	**+0.6**
	baz=23						
TWB1				*e*S	**Sn**	**23 31 22.3**	**+1.6**
	baz=23						
WHP	**Taichung City**	**0.73**	**267**	P	**Pn**	**23 31 11.5**	**+0.5**
	baz=269						
WHP				S	**Sn**	**23 31 21.7**	**+0.5**
	baz=269						
NWF	**Wu-fen Shan**	**0.75**	**2**	P	**Pn**	**23 31 11.3**	**+0.1**
	baz=353						
NWF				*e*S	**Sn**	**23 31 22.1**	**+0.6**
	baz=353						
WFSB	**Wu-fen Shan**	**0.75**	**2**	P	**Pn**	**23 31 11.5**	**+0.4**
	baz=353						
WFSB				*e*S	**Sn**	**23 31 22.4**	**+1.0**
	baz=353						
NSTT	**Nanjuang**	**0.75**	**294**	*e*P	**Pn**	**23 31 11.0**	**-0.1**
	baz=296						
NSTT				*e*S	**Sn**	**23 31 21.8**	**+0.4**
	baz=296						
TAP	**Taipei**	**0.75**	**343**	*e*P	**Pn**	**23 31 10.7**	**-0.4**
	baz=344						
TAP				*e*S	**Sn**	**23 31 21.8**	**+0.4**
	baz=344						
DPDB	**Guoxing**	**0.81**	**249**	*e*P	**Pn**	**23 31 12.1**	**+0.2**
	baz=251						
DPDB				*e*S	**Sn**	**23 31 24.1**	**+1.3**
	baz=251						
NCUH	**Zhongli**	**0.82**	**322**	*e*P	**Pn**	**23 31 11.8**	**-0.3**
	baz=322						
NCUH				*e*S	**Sn**	**23 31 24.2**	**+1.0**
	baz=322						
NCU	**National Centr**	**0.82**	**322**	*e*P	**Pn**	**23 31 12.1**	**0.0**
	baz=323						
NCU				*e*S	**Sn**	**23 31 24.3**	**+1.1**
	baz=323						
TWS1	**Kuangyinshan**	**0.83**	**339**	*e*P	**Pn**	**23 31 12.2**	**-0.1**
	baz=339						
TWS1				*e*S	**Sn**	**23 31 23.8**	**+0.4**
	baz=339						
YM01	**YM01**	**0.84**	**349**	*e*P	**Pn**	**23 31 11.9**	**-0.5**
	baz=338						
YM01				*e*S	**Sn**	**23 31 23.3**	**-0.3**
	baz=338						
SBCB	**Hsinchu**	**0.84**	**304**	*e*P	**Pn**	**23 31 12.3**	**0.0**
	baz=305						
SBCB				*e*S	**Sn**	**23 31 24.4**	**+0.9**
	baz=305						
YM10	**YM10**	**0.85**	**348**	P	**Pn**	**23 31 12.2**	**-0.4**
	baz=338						
YM10				*e*S	**Sn**	**23 31 23.6**	**-0.2**
	baz=338						
YM04	**YM04**	**0.85**	**347**	*e*P	**Pn**	**23 31 12.0**	**-0.5**
	baz=347						
YM04				*e*S	**Sn**	**23 31 23.6**	**-0.3**
	baz=347						
YM05	**YM05**	**0.86**	**349**	P	**Pn**	**23 31 12.0**	**-0.6**
	baz=338						
YM05				*e*S	**Sn**	**23 31 24.2**	**+0.1**
	baz=338						
YM11	**YM11**	**0.86**	**349**	*e*P	**Pn**	**23 31 12.3**	**-0.3**
	baz=339						
YM11				*e*S	**Sn**	**23 31 23.6**	**-0.5**
	baz=339						
HSN	**Hsinchu**	**0.86**	**304**	P	**Pn**	**23 31 12.3**	**-0.2**
	baz=308						
HSN				*e*S	**Sn**	**23 31 24.6**	**+0.6**
	baz=308						
YM08	**YM08**	**0.88**	**350**	*e*P	**Pn**	**23 31 12.1**	**-0.8**
	baz=340						
YM08				*e*S	**Sn**	**23 31 23.5**	**-1.0**
	baz=340						
HGSD	**Ruisui**	**0.88**	**200**	*e*P	**Pn**	**23 31 12.1**	**-0.7**
	baz=211						
HGSD				*e*S	**Sn**	**23 31 24.8**	**+0.3**
	baz=211						
NWRT	**Kuosheng**	**0.88**	**355**	*e*S	**Sn**	**23 31 25.6**	**+1.0**
	baz=354						
NTST	**Danshui**	**0.88**	**342**	*e*P	**Pn**	**23 31 12.7**	**-0.3**
	baz=342						
NTST				*e*S	**Sn**	**23 31 25.3**	**+0.7**
	baz=342						
SMLT	**Sun Moon Lake**	**0.89**	**241**	*e*P	**Pn**	**23 31 13.0**	**-0.1**
	baz=236						
SMLT				*e*S	**Sn**	**23 31 25.0**	**0.0**
	baz=236						
TWQ1	**Liyutan**	**0.89**	**272**	*e*P	**Pn**	**23 31 13.2**	**+0.2**
	baz=273						
TWQ1				*e*S	**Sn**	**23 31 26.0**	**+1.1**
	baz=273						
NMLH	**Miaoli**	**0.90**	**284**	*e*P	**Pn**	**23 31 13.4**	**+0.2**
	baz=285						
NMLH				*e*S	**Sn**	**23 31 25.5**	**+0.5**
	baz=285						
EHY	**Hungye**	**0.90**	**206**	*e*P	**Pn**	**23 31 11.1**	**-2.1**
	baz=206						
EHY				*e*S	**Sn**	**23 31 23.0**	**-2.1**
	baz=206						
SSLB	**Suanglung**	**0.90**	**234**	*e*P	**Pn**	**23 31 12.4**	**-0.7**

	baz=235								
NSY	**Sanyi**		**0.91**	**276**	*eP*	**Pn**	**23 31 13.5**	**+0.2**
	baz=277								
NSY					*eS*	**Sn**	**23 31 26.9**	**+1.6**
	baz=277								
TYC	**Yuchr**		**0.92**	**243**	*eP*	**Pn**	**23 31 13.0**	**-0.3**
	baz=240								
TYC					*eS*	**Sn**	**23 31 26.2**	**+0.8**
	baz=240								
TWY	**Chenhua**		**0.96**	**352**	*eP*	**Pn**	**23 31 13.8**	**-0.2**
	baz=341								
TCU	**Taichung**		**0.99**	**260**	*eP*	**Pn**	**23 31 14.7**	**+0.3**
	baz=273								
TCU					*eS*	**Sn**	**23 31 28.5**	**+1.2**
	baz=273								
WDJ	**Dajia District**		**1.01**	**272**	*eP*	**Pn**	**23 31 13.8**	**-0.8**
	baz=273								
WDJ					*eS*	**Sn**	**23 31 28.1**	**+0.4**
	baz=273								
YULB	**Yu-li**		**1.01**	**204**	*eP*	**Pn**	**23 31 12.4**	**-2.3**
	baz=205								
WHYT	**Xinyi Township**		**1.03**	**233**	P	**Pn**	**23 31 16.2**	**+1.3**
	baz=234								
WHYT					*eS*	**Sn**	**23 31 30.1**	**+1.9**
	baz=234								
EYUL	**Yuli**		**1.05**	**202**	*eP*	**Pn**	**23 31 14.2**	**-0.9**
	baz=211								
TWF1	**Yuli**		**1.05**	**203**	*eP*	**Pn**	**23 31 13.4**	**-1.8**
	baz=210								
WJS	**Zhushan**		**1.06**	**242**	*eP*	**Pn**	**23 31 16.1**	**+0.8**
	baz=244								
WJS					*eS*	**Sn**	**23 31 30.7**	**+1.9**
	baz=244								
WNT	**Mingjian**		**1.07**	**246**	*eP*	**Pn**	**23 31 16.5**	**+1.1**
	baz=247								
WNT					*eS*	**Sn**	**23 31 31.3**	**+2.2**
	baz=247								
JYNG	**Yonagunijimaku**		**1.10**	**83**	P	**Pn**	**23 31 15.8**	**0.0**
JYNG					S	**Sn**	**23 31 30.0**	**+0.2**
WCHH	**Zhanghua**		**1.11**	**258**	*eP*	**Pn**	**23 31 16.7**	**+0.7**
	baz=259								
WCHH					*eS*	**Sn**	**23 31 31.0**	**+0.8**
	baz=259								
YOJ	**Yonaguni jima**		**1.16**	**83**	*eP*	**Pn**	**23 31 16.9**	**+0.3**
	baz=71								
YOJ					*eS*	**Sn**	**23 31 31.8**	**+0.4**
	baz=71								
YOJ	**Yonaguni jima**		**1.16**	**83**	P	**Pn**	**23 31 16.7**	**+0.1**
YOJ					*eS*	**Sn**	**23 31 31.7**	**+0.4**
ALS	**Alishan**		**1.18**	**227**	*eP*	**Pn**	**23 31 17.9**	**+0.6**
	baz=221								
FULB	**Fuli**		**1.19**	**201**	*eP*	**Pn**	**23 31 15.7**	**-1.4**
	baz=210								
CHN5	**Tsauling**		**1.22**	**234**	*eP*	**Pn**	**23 31 18.2**	**+0.7**
	baz=236								
CHN5					*eS*	**Sn**	**23 31 35.1**	**+2.2**
	baz=236								
WGK	**Gukeng**		**1.26**	**240**	*eP*	**Pn**	**23 31 18.2**	**+0.3**
	baz=241								
WGK					*eS*	**Sn**	**23 31 36.5**	**+2.7**
	baz=241								
CHKT	**Chengkung**		**1.27**	**196**	*eP*	**Pn**	**23 31 16.9**	**-1.2**
	baz=205								
CHKT					*eS*	**Sn**	**23 31 33.9**	**0.0**
	baz=205								
WDLH	**Douliu**		**1.27**	**241**	*eP*	**Pn**	**23 31 18.6**	**+0.4**
	baz=242								
WDLH					*eS*	**Sn**	**23 31 35.5**	**+1.3**
	baz=242								
ELDTW	**Lidau**		**1.31**	**211**	*eP*	**Pn**	**23 31 17.9**	**-1.0**
	baz=206								
PCYT	**Pengchaiyu**		**1.33**	**13**	*eP*	**Pn**	**23 31 19.2**	**+0.1**
	baz=10.0								
PCYT					*eS*	**Sn**	**23 31 37.4**	**+1.7**
	baz=10.0								
RLNB	**Erlin**		**1.34**	**252**	*eP*	**Pn**	**23 31 18.6**	**-0.5**
	baz=264								
RLNB					*eS*	**Sn**	**23 31 36.1**	**+0.3**
	baz=264								
WTK	**Tuku**		**1.40**	**243**	*eP*	**Pn**	**23 31 20.2**	**+0.3**
	baz=258								
WTK					*eS*	**Sn**	**23 31 39.1**	**+2.0**
	baz=258								
EDH	**Donghe**		**1.40**	**197**	*eP*	**Pn**	**23 31 18.4**	**-1.6**
	baz=199								
EDH					*eS*	**Sn**	**23 31 37.4**	**+0.1**
	baz=199								
CHN2	**Minshiung**		**1.41**	**236**	*eP*	**Pn**	**23 31 21.6**	**+1.5**
	baz=238								
CHN2					*eS*	**Sn**	**23 31 40.1**	**+2.7**
	baz=238								
CHN4	**Tsaushan**		**1.43**	**228**	*eP*	**Pn**	**23 31 21.7**	**+1.3**
	baz=230								
CHN4					*eS*	**Sn**	**23 31 41.1**	**+3.0**
	baz=230								
TPUB	**Ta-pu**		**1.44**	**226**	*eP*	**Pn**	**23 31 21.3**	**+0.7**
	baz=216								
TPUB					*eS*	**Sn**	**23 31 40.4**	**+2.1**
	baz=216								
CHY	**Chiayi**		**1.46**	**236**	*eP*	**Pn**	**23 31 21.9**	**+1.1**
	baz=238								
CHY					*eS*	**Sn**	**23 31 40.7**	**+1.9**
	baz=238								
STYT	**Tauyuan**		**1.47**	**218**	*eP*	**Pn**	**23 31 21.2**	**+0.2**
	baz=220								
STYT					*eS*	**Sn**	**23 31 41.7**	**+2.6**
	baz=220								
WTP	**Ta-pu**		**1.49**	**224**	*eP*	**Pn**	**23 31 21.9**	**+0.7**
	baz=219								
WTP					*eS*	**Sn**	**23 31 42.2**	**+2.7**
	baz=219								
LONT	**Longtian**		**1.52**	**202**	*eP*	**Pn**	**23 31 20.4**	**-1.2**
	baz=196								
WSF	**Szhu**		**1.55**	**244**	*eP*	**Pn**	**23 31 21.6**	**-0.5**
	baz=256								
WSF					*eS*	**Sn**	**23 31 41.7**	**+0.7**
	baz=256								
TWK	**Hsinying**		**1.56**	**228**	*eP*	**Pn**	**23 31 22.7**	**+0.5**
	baz=230								
TWK					*eS*	**Sn**	**23 31 43.4**	**+2.1**
	baz=230								
WLGB	**Puzi**		**1.57**	**238**	*eP*	**Pn**	**23 31 22.3**	**+0.1**
	baz=240								
WLGB					*eS*	**Sn**	**23 31 43.0**	**+1.6**
	baz=240								
SNST	**Tainan City**		**1.59**	**227**	*eP*	**Pn**	**23 31 23.3**	**+0.8**
	baz=229								
SNST					*eS*	**Sn**	**23 31 44.2**	**+2.3**
	baz=229								
CHN1	**Nanshi**		**1.59**	**225**	*eP*	**Pn**	**23 31 23.5**	**+0.9**
	baz=227								
CHN1					*eS*	**Sn**	**23 31 44.0**	**+2.0**
	baz=227								
TWG	**Pinlang**		**1.62**	**203**	*eP*	**Pn**	**23 31 22.1**	**-0.8**
	baz=197								
TWGBT	**Beinan**		**1.62**	**202**	*eP*	**Pn**	**23 31 21.6**	**-1.4**
	baz=197								
SGST	**Jiashian**		**1.63**	**221**	*eP*	**Pn**	**23 31 22.9**	**-0.3**
	baz=224								
SGST					*eS*	**Sn**	**23 31 44.2**	**+1.2**
	baz=224								
ICHU	**Yijhu**		**1.65**	**235**	*eP*	**Pn**	**23 31 24.1**	**+0.7**
	baz=227								
ICHU					*eS*	**Sn**	**23 31 44.6**	**+1.2**
	baz=227								
LDUT	**Ludao**		**1.66**	**189**	*eP*	**Pn**	**23 31 23.5**	**0.0**
	baz=183								
SLGT	**Liugui**		**1.66**	**218**	P	**Pn**	**23 31 24.8**	**+1.2**
	baz=212								
SLGT					*eS*	**Sn**	**23 31 46.9**	**+3.1**
	baz=212								
CHN8	**Yiju**		**1.71**	**236**	*eP*	**Pn**	**23 31 26.0**	**+1.8**
	baz=238								
CHN8					*eS*	**Sn**	**23 31 46.3**	**+1.4**
	baz=238								
ECL	**Taimali**		**1.86**	**203**	*eP*	**Pn**	**23 31 26.0**	**-0.3**
	baz=200								
SSD	**Sandimen**		**1.87**	**213**	*eP*	**Pn**	**23 31 27.8**	**+1.3**
	baz=218								
HATJ	**Hateruma jima**		**1.90**	**98**	*eS*	**Sn**	**23 31 50.1**	**+0.7**
TSMG	**Majia**		**1.90**	**212**	*eP*	**Pn**	**23 31 27.7**	**+0.9**
	baz=227								
TSMG					*eS*	**Sn**	**23 31 50.4**	**+0.8**
	baz=227								
MASBT	**Mashibuluo**		**1.99**	**211**	*eP*	**Pn**	**23 31 29.0**	**+1.0**
	baz=226								
MASBT					*eS*	**Sn**	**23 31 54.2**	**+2.6**
	baz=226								
JKRS	**Kuro-shima**		**2.06**	**92**	P	**Pn**	**23 31 29.3**	**+0.3**
JKRS					S	**Sn**	**23 31 53.8**	**+0.3**
EAST	**Anshuo**		**2.10**	**203**	*eP*	**Pn**	**23 31 30.6**	**+1.0**
	baz=200								
SSPT	**Xinbi**		**2.13**	**211**	*eP*	**Pn**	**23 31 31.4**	**+1.5**
	baz=217								
PNG	**Penghu**		**2.14**	**250**	*eP*	**Pn**	**23 31 29.1**	**-1.0**
	baz=251								
PNG					*eS*	**Sn**	**23 31 53.5**	**-2.0**
	baz=251								
PTTC	**Pingtan**		**2.15**	**304**	*eP*	**Pn**	**23 31 28.5**	**-1.7**
	baz=302								
PHUB	**P'eng-hu**		**2.15**	**248**	*eP*	**Pn**	**23 31 29.3**	**-0.9**
	baz=250								
PHUB					*eS*	**Sn**	**23 31 53.3**	**-2.4**
	baz=250								
JIJ	**Ishigaki jima**		**2.18**	**88**	P	**Pn**	**23 31 29.9**	**-0.8**
JIJ					S	**Sn**	**23 31 55.3**	**-1.2**
WDGT	**Dungji**		**2.19**	**242**	*eP*	**Pn**	**23 31 30.1**	**-0.7**
	baz=243								
VWUC	**VWUC**		**2.20**	**288**	*eP*	**Pn**	**23 31 29.3**	**-1.6**
	baz=287								
SCZT	**Fangliau**		**2.20**	**208**	*eP*	**Pn**	**23 31 32.0**	**+1.1**
	baz=203								
SLIU	**Shizi**		**2.27**	**203**	*eP*	**Pn**	**23 31 31.8**	**-0.1**
	baz=200								
LAY	**Lan-yu**		**2.28**	**185**	*eP*	**Pn**	**23 31 30.8**	**-1.2**
	baz=180								
LAY					*eS*	**Sn**	**23 31 58.1**	**-0.8**
	baz=180								
WLCH	**Liuqiu**		**2.33**	**213**	*eP*	**Pn**	**23 31 34.5**	**+1.8**
	baz=230								
JISG	**Ishigakijimahi**		**2.35**	**83**	P	**Pn**	**23 31 32.3**	**-0.6**
JISG					S	**Sn**	**23 31 59.6**	**-1.0**
VCHM	**Qimei**		**2.40**	**243**	*eP*	**Pn**	**23 31 33.1**	**-0.5**
	baz=244								
MATB	**Ma-tsu**		**2.45**	**319**	*eP*	**Pn**	**23 31 32.6**	**-1.7**
	baz=316								
PTMZ	**Houxiangcun**		**2.50**	**287**	*eP*	**Pn**	**23 31 33.4**	**-1.6**
	baz=286								
TWK1	**Hengchun**		**2.52**	**200**	*eP*	**Pn**	**23 31 35.9**	**+0.5**
	baz=198								
TWKBT	**Hengchun**		**2.52**	**200**	*eP*	**Pn**	**23 31 35.1**	**-0.3**
	baz=198								
JTJ	**Tarama**		**2.71**	**83**	*eS*	**Sn**	**23 32 09.0**	**-0.4**
LYJJ	**Jianjiangzhen**		**2.86**	**321**	*eP*	**Pn**	**23 31 38.2**	**-1.7**
	baz=318								
XPSS	**Dashiqiu**		**2.96**	**332**	*eP*	**Pn**	**23 31 39.4**	**-1.9**
	baz=328								
KNM	**Kinmen**		**3.03**	**272**	*eP*	**Pn**	**23 31 42.5**	**+0.2**
	baz=272								
MHZQ	**Yeshan**		**3.03**	**306**	*eP*	**Pn**	**23 31 40.1**	**-2.2**
	baz=305								
KNMB	**Chin-men Tao**		**3.07**	**273**	*eP*	**Pn**	**23 31 40.9**	**-1.9**
	baz=273								
JIRB	**Irabujima**		**3.16**	**80**	P	**Pn**	**23 31 44.3**	**+0.2**
JIRB					S	**Sn**	**23 32 21.0**	**+0.5**
JIKM	**Ikemajima**		**3.24**	**79**	*eS*	**Sn**	**23 32 23.3**	**+0.8**
JIMJ2	**Miyako jima3**		**3.29**	**82**	*eS*	**Sn**	**23 32 24.4**	**+0.7**
AXDP	**Jialang**		**3.49**	**280**	*eP*	**Pn**	**23 31 47.3**	**-1.3**
	baz=280								
ZPLA	**Ao Xicun**		**3.67**	**265**	*eP*	**Pn**	**23 31 49.8**	**-1.4**
	baz=265								

NAO ***29*** *23:31:32.3±2.0, 73.81N×8.06E, ML3.3*
BER ***29*** *23:31:38.9±1.0, 73.98N×9.75E, h10km, ML2.0, ML3.3(NAO), Confirmed Earthquake*
IDC ***29*** *23:31:40.1±5.5, 72.34N×8.26E, h0km, mb1 3.4/3, mb1mx3.1/39, mbtmp3.3/3, ML2.3/3, Error ellipse: s-maj=62.6km s-min=29.5km az=154.0*
ISC 29 23:31:30.7±0.9, 74.31N±0.04×9.90E±0.05, h10km, n27, σ2s57/39, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.46**	**81**	Pn		**Pg**	**23 32 19.6**	**+1.7**
BJO1				Sn		**Sg**	**23 32 49.0**	**-0.7**
BJO1	**Bjornoya**	**2.46**	**81**	*eP*		**Pg**	**23 32 19.4**	**+1.5**
BJO1				*eS*		**Sg**	**23 32 47.5**	**-2.3**
BJO1				IAML			23 32 50.2	
	comp=Z,13nm,0.5s							
HSPB	**Hornsund (broa**	**3.04**	**25**	Pn		**Pg**	**23 32 29.4**	**+0.5**
HSPB	**Hornsund (broa**	**3.04**	**25**	*eP*		**Pg**	**23 32 29.6**	**+0.6**
HSPB				*eS*		**Sg**	**23 33 05.5**	**-2.9**
BRBB	**Barentsburg B**	**3.94**	**13**	Pn		**Pb**	**23 32 41.9**	**+1.8**
BRBB	**Barentsburg B**	**3.94**	**13**	*eP*		**Pb**	**23 32 42.1**	**+2.0**
BRBB				*eS*		**Sb**	**23 33 27.9**	**+0.2**
SPA0	**Spitsbergen Ar**	**4.18**	**19**	Pn		**Pb**	**23 32 45.9**	**+1.7**
	baz=202,slow=12							
SPA0	**Spitsbergen Ar**	**4.18**	**19**	Pn		**Pb**	**23 32 45.9**	**+1.7**
	baz=202,slow=12							
SPA0				*eS*		**Sb**	**23 33 32.8**	**-1.8**
SPA0				IAML			23 33 37.1	
	comp=Z,4.3nm,0.9s							
HOPEN	**Hopen**	**4.40**	**53**	Pn		**Pb**	**23 32 47.7**	**-0.3**
HOPEN				Sn		**Sb**	**23 33 40.3**	**-0.8**
HOPEN	**Hopen**	**4.40**	**53**	*eP*		**Pb**	**23 32 48.0**	**0.0**
HOPEN				*eS*		**Sb**	**23 33 36.9**	**-4.1**
HOPEN				IAML			23 33 43.0	
	comp=Z,6.1nm,0.4s							
KBS	**Kingsbay**	**4.66**	**5**	Pn		**Pb**	**23 32 51.2**	**-1.2**
KBS	**Kingsbay**	**4.66**	**5**	*eP*		**Pb**	**23 32 51.4**	**-1.0**
KBS				*eS*		**Sb**	**23 33 45.1**	**-3.4**
KBS				IAML			23 33 52.5	
	comp=Z,3.8nm,1.1s							
TRO	**Tromso**	**5.47**	**145**	*eP*		**Pn**	**23 32 55.5**	**+3.5**
TRO				IAML			23 33 54.7	
	comp=Z,4.6nm,0.8s							
HAMF	**Hammerfest**	**5.55**	**125**	*eP*		**Pn**	**23 32 56.6**	**+3.4**
HAMF				IAML			23 33 55.7	
	comp=Z,5.3nm,0.6s							
LOF	**Lofoten**	**6.32**	**168**	*eP*		**Pn**	**23 33 04.4**	**+0.7**
LOF				IAML			23 34 09.5	
	comp=Z,5.6nm,0.8s							
KIF	**Kilpisjarvi**	**6.33**	**142**	Pn		**Pn**	**23 33 07.1**	**+3.2**
KIF				Sn		**Sn**	**23 34 12.1**	**-4.1**
KIF	**Kilpisjarvi**	**6.33**	**142**	*eP*		**Pn**	**23 33 07.2**	**+3.2**
STEI	**Steigen**	**6.64**	**162**	*eP*		**Pn**	**23 33 09.8**	**+1.7**
STEI				IAML			23 34 07.2	
	comp=Z,2.2nm,0.8s							
ARA0	**ARCESS Array S**	**6.80**	**127**	Pn		**Pn**	**23 33 14.9**	**+4.5**
	baz=319,slow=12							
ARA0				Sn		**Sn**	**23 34 25.2**	**-2.5**
	baz=317,slow=22							
ARA0	**ARCESS Array S**	**6.80**	**127**	Pn		**Pn**	**23 33 14.9**	**+4.5**
	baz=319,slow=12							
ARA0				Sn		**Sn**	**23 34 25.2**	**-2.5**
	baz=317,slow=22							
ARA0				IAML			23 34 37.5	
	comp=Z,2.1nm,1.0s							
ARCES	**ARCESS Array B**	**6.80**	**127**	Pn		**Pn**	**23 33 14.3**	**+3.9**
	baz=320,slow=11,SNR=29							
ARCES				Sn		**Sn**	**23 34 24.7**	**-3.0**
	baz=304,slow=19,SNR=7.0							
DAG	**Danmarks Havn**	**7.50**	**302**	*eP*		**Pn**	**23 33 23.6**	**+3.7**
DBG	**Daneborg**	**8.11**	**284**	Pn		**Pn**	**23 33 26.1**	**-2.2**
DBG	**Daneborg**	**8.11**	**284**	*eP*		**Pn**	**23 33 29.8**	**+1.5**
SCO	**Scoresbysund**	**10.27**	**264**	*e*		**Pn**	**23 33 55.9**	**-1.9**
	baz=44,slow=16							
SCO				*i* P		**Pn**	**23 33 56.4**	**-1.4**
SCO				*i* S		**Pn**	**23 33 57.5**	**-0.3**
SCO				IAML			23 33 58.1	
	comp=Z,3.3nm,0.3s							
NOA	**NORSAR Array B**	**13.34**	**177**	Pn		Pn	23 34 26.2	-14
	comp=Z,0.0nm,0.3s,baz=291,slow=13,SNR=1.4							
FINES	**FINESS Array B**	**14.20**	**147**	Pn		Pn	23 34 44.1	-7.4
	comp=Z,0.1nm,0.3s,baz=339,slow=15,SNR=2.1							

SJA ***29*** *23:41:37.1±0.5, 20.52S×70.40W, h50km±11km, ML4.0, MW3.9*
NEIC ***29*** *23:41:38.5±0.9, 20.55S±0.03×70.40W±0.04, h44km±4km, Error ellipse: s-maj=6.7km s-min=1.6km az=47.0*
GUC ***29*** *23:41:40.0±0.6, 20.52S×70.32W, h44km±1km, ML3.9*
IDC ***29*** *23:41:44.2±3.9, 20.77S×69.67W, h77km±39km, mb3.4/1, mb1 3.5/3, mb1mx3.3/21, mbtmp3.7/3, ML3.8/2, MS2.6/1, Ms1 2.7/1, ms1mx2.5/10, Error ellipse: s-maj=131.5km s-min=31.2km az=105.0*
ISC 29 23:41:37.6±1.2, 20.52S±0.03×70.53W±0.05, h37km±1km, n69, σ1s61/94, mb4.1/3, 8C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.33**	**97**	⇑*iP*		**Pn**	**23 41 46.5**	**+0.6**
TA01				*i* S		**Sn**	**23 41 51.5**	**-1.3**
TA01				IAML			23 41 51.9	
	comp=N,17μm,0.3s							
TA01	**Diego Aracena**	**0.33**	**97**			**Pn**	**23 41 46.1**	**+0.2**
TA01					Sn	**Sn**	**23 41 51.7**	**-1.1**
TA02	**Huaiquique**	**0.45**	**56**	⇓*iP*		**Pn**	**23 41 47.9**	**+0.5**
TA02				*i* S		**Sn**	**23 41 54.1**	**-0.4**
TA02				IAML			23 41 54.5	
	comp=N,37μm,0.2s							
PATCX	**Punta Patache**	**0.46**	**130**	⇑*iP*		**Pn**	**23 41 48.1**	**+0.4**
PATCX				*i* S		**Sn**	**23 41 54.8**	**-0.2**
PATCX				IAML			23 41 55.0	
	comp=E,10μm,0.1s							
PATCX	**Punta Patache**	**0.46**	**130**			**Pn**	**23 41 47.5**	**-0.2**
PATCX					Sn	**Sn**	**23 41 54.7**	**-0.2**
HMBC	**Humberstone**	**0.65**	**68**	⇑*iP*		**Pn**	**23 41 50.0**	**-0.5**
PB02	**IPOC Station P**	**0.99**	**143**	⇓*iP*		**Pn**	**23 41 55.6**	**+0.5**
PB02				*i* S		**Sn**	**23 42 07.8**	**-0.1**
PB02				IAML			23 42 08.6	
	comp=E,9μm,0.2s							
PB02	**IPOC Station P**	**0.99**	**143**	*eP*		**Pn**	**23 41 55.2**	**+0.2**
PB02				*eS*		**Sn**	**23 42 08.3**	**+0.4**
PB02				IAML			23 42 10.1	
	comp=Z,7μm,0.3s							
PSGC	**Pisagua**	**1.00**	**23**	⇑*iP*		**Pn**	**23 41 56.1**	**+0.9**
PSGC				*i* S		**Sn**	**23 42 08.7**	**+0.6**
PSGC				IAML			23 42 10.1	
	comp=N,8μm,0.4s							
PSGCX	**Pisagua**	**1.00**	**23**			**Pn**	**23 41 55.8**	**+0.6**
PSGCX						**Sn**	**23 42 08.7**	**+0.6**
PSGCX	**Pisagua**	**1.00**	**23**	*eP*		**Pn**	**23 41 55.6**	**+0.5**
PSGCX				*eS*		**Sn**	**23 42 09.2**	**+1.1**
PB01	**IPOC Station P**	**1.11**	**118**	⇓*iP*		**Pn**	**23 41 56.4**	**-0.3**
PB01				*i* S		**Sn**	**23 42 08.9**	**-1.8**
PB01				IAML			23 42 11.5	
	comp=N,7μm,0.1s							
PB01	**IPOC Station P**	**1.11**	**118**			**Pn**	**23 41 56.2**	**-0.5**
PB01						**Sn**	**23 42 09.0**	**-1.8**
PB01	**IPOC Station P**	**1.11**	**118**	*eP*		**Pn**	**23 41 56.1**	**-0.5**
PB01				*eS*		**Sn**	**23 42 10.1**	**-0.7**
PB01				IAML			23 42 11.7	
	comp=Z,4μm,0.1s							
PB11	**IPOC Station P**	**1.12**	**48**	⇑*iP*		**Pn**	**23 41 56.9**	**-0.1**
PB11				*i* S		**Sn**	**23 42 10.5**	**-0.6**
PB11				IAML			23 42 11.7	
	comp=N,11μm,0.5s							
PB11	**IPOC Station P**	**1.12**	**48**			**Pn**	**23 41 56.3**	**-0.6**
PB11					Sn	**Sn**	**23 42 10.4**	**-0.6**
PB11	**IPOC Station P**	**1.12**	**48**	*eP*		**Pn**	**23 41 56.8**	**-0.1**
PB11				*eS*		**Sn**	**23 42 10.5**	**-0.6**
PB11				IAML			23 42 11.8	
	comp=Z,3μm,0.4s							
PB07	**IPOC Station P**	**1.34**	**153**	⇓*iP*		**Pn**	**23 42 00.8**	**+0.9**
PB07				*i* S		**Sn**	**23 42 17.4**	**+0.8**
PB07	**IPOC Station P**	**1.34**	**153**			**Pn**	**23 42 00.5**	**+0.5**
PB07	**IPOC Station P**	**1.34**	**153**	*eP*		**Pn**	**23 42 00.3**	**+0.3**
PB07				*eS*		**Sn**	**23 42 17.6**	**+0.9**
PB07				IAML			23 42 19.3	
	comp=Z,2μm,0.3s							
PB08	**IPOC Station P**	**1.35**	**74**	⇑*iP*		**Pn**	**23 41 59.9**	**-0.4**
PB08				*i* S		**Sn**	**23 42 15.8**	**-1.4**
PB08	**IPOC Station P**	**1.35**	**74**			**Pn**	**23 41 59.7**	**-0.6**
PB08	**IPOC Station P**	**1.35**	**74**	*eP*		**Pn**	**23 41 59.7**	**-0.6**
PB08				*eS*		**Sn**	**23 42 16.3**	**-0.8**
GO01	**Chusmiza**	**1.52**	**56**	⇑*iP*		**Pn**	**23 42 02.9**	**+0.2**
GO01				*eS*		**Sn**	**23 42 20.3**	**-1.1**
GO01				IAML			23 42 22.7	
	comp=E,5μm,0.1s							
GO01	**Chusmiza**	**1.52**	**56**			**Pn**	**23 42 02.7**	**+0.1**
MNMC	**Minye Minye**	**1.64**	**33**	*eP*		**Pn**	**23 42 05.1**	**+1.0**
MNMC				*i* S		**Sn**	**23 42 25.1**	**+0.9**
MNMC				IAML			23 42 30.5	
	comp=E,2μm,0.2s							
MNMC	**Minye Minye**	**1.64**	**33**			**Pn**	**23 42 04.9**	**+0.7**
MNMCX	**Minye Minye**	**1.64**	**33**	*eP*		**Pn**	**23 42 02.2**	**-2.0**
MNMCX				*eS*		**Sn**	**23 42 27.4**	**+3.2**
PB03	**IPOC Station P**	**1.68**	**154**	⇓*iP*		**Pn**	**23 42 05.6**	**+1.0**
PB03				*i* S		**Sn**	**23 42 26.3**	**+1.2**
PB03	**IPOC Station P**	**1.68**	**154**	*eP*		**Pn**	**23 42 05.2**	**+0.5**
PB03				*eS*		**Sn**	**23 42 28.2**	**+3.2**
PB03				IAML			23 42 32.6	
	comp=Z,913nm,0.2s							
PB09	**IPOC Station P**	**1.75**	**137**	⇓*iP*		**Pn**	**23 42 07.2**	**+1.6**
PB09				*i* S		**Sn**	**23 42 27.4**	**+0.7**
PB09				IAML			23 42 30.7	
	comp=E,2μm,0.6s							
PB09	**IPOC Station P**	**1.75**	**137**			**Pn**	**23 42 06.6**	**+1.1**
PB09	**IPOC Station P**	**1.75**	**137**	*eP*		**Pn**	**23 42 05.7**	**+0.1**
PB09				*eS*		**Sn**	**23 42 29.2**	**+2.5**
PB09				IAML			23 42 31.5	
	comp=Z,2μm,0.9s							
PB04	**IPOC Station P**	**1.84**	**169**	IAML			23 42 40.9	
	comp=N,1μm,0.3s							
PB04	**IPOC Station P**	**1.84**	**169**			**Pn**	**23 42 07.1**	**+0.4**
PB04	**IPOC Station P**	**1.84**	**169**	*eP*		**Pn**	**23 42 07.3**	**+0.6**
PB04				*eS*		**Sn**	**23 42 34.8**	**+6.0**
PB04				IAML			23 42 37.9	
	comp=Z,948nm,0.4s							
AP01	**Chacalluta**	**2.15**	**5**	Pn		**Pn**	**23 42 12.8**	**+1.9**
PB05	**IPOC Station P**	**2.34**	**172**	IAML			23 42 59.5	
	comp=N,622nm,0.8s							
PB05	**IPOC Station P**	**2.34**	**172**	*eP*		**Pn**	**23 42 14.3**	**+0.7**
PB05				*eS*		Sn	23 42 56.2	+15

s-maj=1127.0km s-min=168.8km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.62**	**243**	P	P	00 06 28.9	-0.4
	1.2nm,0.5s,baz=110,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**43.98**	**261**	P	P	00 07 21.9	0.0
	0.1nm,0.3s,baz=96,slow=7.6,SNR=6.6						
ASAR	**Alice Springs**	**44.03**	**256**	P	P	00 07 22.1	-0.1
	0.4nm,0.6s,baz=92,slow=8.3,SNR=9.7						

*IDC **30** 00:32:53.0±0.6,3˚34S×145˚08E,h0km,mb4.4/17, mb1 4.6/21,mb1mx4.4/40,mbtmp4.5/21,ML2.9/3,MS4.6/3, Ms1 4.6/3,ms1mx3.8/34,Error ellipse: s-maj=20.0km s-min=12.5km az=94.0*

*NEIC **30** 00:32:54.2±2.3,3˚35S±0˚05×145˚18E±0˚08,h10km±1km, mb4.7/50,Error ellipse: s-maj=15.0km s-min=6.3km az=113.0*

*GCMT **30** 00:32:58.2±0.2,3˚37S±0˚01×145˚14E±0˚01,h14km±1km, MW5.1/133,Moment Tension Solution. s65,c82; s133,c202; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.26±.13; Mθθ-0.79±.14; Mϕϕ0.52±.14; Mrθ-0.66±.28; Mθϕ5.28±.14; Mϕr0.99±.28; Best double couple: M~o~5.44200×10^16^ NP1:ϕs86.00000°,δ80.00000°, λ-5.00000° NP2:ϕs177.00000°,δ85.00000°, λ-170.00000°. Principal axes: T 5.2100, Plg4.0000°, Azm311.0000°; N 0.4630, Plg78.0000°, Azm203.0000°; P -5.6740, Plg11.0000°, Azm42.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **30** 00:32:59.9±0.4,3˚S±4˚×14˚5E±˚,h59km±5km,M4.6/25, mb4.7/25,mB5.1/12,MLv4.7/5,Mw(mB)4.5/12,Mwp5.1/5*

ISC 30 00:32:55.9±0.4,3˚42S±0˚05×145˚20E±0˚06,h22km,n131, σ1°37/127,mb4.7/55,MS4.5/9,2C,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**2.56**	**58**	Pn	**Pn**	**00 33 35.1**	**-1.0**
JAY	**Jayapura**	**4.58**	**281**	Pn	**Pn**	**00 34 00.9**	**-3.0**
	1.3nm,0.3s,baz=17,slow=19,SNR=1.8						
JAY				LR	LR	00 35 44.4	
	comp=Z,8μm,18.4s,baz=10.0,slow=38						
JAY	**Jayapura**	**4.58**	**281**	P	Pb	00 34 09.2	-6.4
GENI	**Genyem**	**5.09**	**279**	P	Pn	00 34 15.1	+4.1
	0.9nm4μm2μm146nm,1.2s						
PMG	**Port Moresby**	**6.26**	**162**	Pn	**Pn**	**00 34 26.8**	**-0.2**
	2.3nm,0.3s,baz=347,slow=8.1,SNR=8.0						
PMG				Sn	**Sn**	**00 35 36.2**	**-1.7**
	0.1nm,0.3s,baz=6.7,slow=15,SNR=4.9						
PMG				LR	LR	00 37 07.3	
	comp=Z,8μm,18.7s,baz=336,slow=40						
PMG	**Port Moresby**	**6.26**	**162**	Pn	**Pn**	**00 34 26.2**	**-0.8**
SMPI	**Sarmi**	**6.64**	**282**	P	Pn	00 34 37.0	+4.8
	0.3nm2μm943nm41nm,0.9s						
KRVT	**Keravat (AS076**	**6.87**	**98**	Pn	**Pn**	**00 34 35.2**	**-0.1**
	2.1nm,0.3s,baz=18,slow=19,SNR=7.6						
COEN	**Coen**	**10.66**	**191**	P	**Pn**	**00 35 31.3**	**+3.9**
	baz=9.5,SNR=8.2						
COEN	**Coen**	**10.66**	**191**	Pn	**Pn**	**00 35 30.2**	**+2.8**
FAKI	**Fak Fak**	**12.94**	**272**	Pn	**Pn**	**00 35 58.8**	**+0.1**
SWI	**Sorong**	**14.16**	**280**	P	**P**	**00 36 21.4**	**-1.3**
	3μm26nm,1.4s						
SAUI	**Saumlaki**	**14.55**	**251**	Pn	**Pn**	**00 36 21.1**	**+0.4**
KDU	**Kakadu**	**15.60**	**233**	P	**Pn**	**00 36 32.5**	**-2.1**
	baz=14,SNR=11						
MTN	**Manton Dam**	**16.77**	**235**	P	**Pn**	**00 36 48.9**	**-0.7**
	baz=16,SNR=5.1						
MTN	**Manton Dam**	**16.77**	**235**		**Pn**	**00 36 49.2**	**-0.4**
WB0	**Warramunga Arr**	**19.37**	**212**	P	**P**	**00 37 19.2**	**-1.2**
WB2	**Warramunga Arr**	**19.54**	**212**	P	**P**	**00 37 21.1**	**-1.1**
WB2				IAmb	IAmb	00 37 23.5	
	comp=Z,42nm,0.9s						
WRA	**Warramunga Arr**	**19.55**	**212**	P	**P**	**00 37 21.1**	**-1.2**
	comp=Z,2.2nm,0.3s,baz=15,slow=11,SNR=113						
WRA	**Warramunga Arr**	**19.55**	**212**	P	**P**	**00 37 20.3**	**-2.0**
KNRA	**Kununurra**	**20.25**	**232**	P	**P**	**00 37 28.7**	**-1.2**
	baz=19,SNR=22						
KNRA	**Kununurra**	**20.25**	**232**	P	**P**	**00 37 28.3**	**-1.6**
KNRA				IAmb	IAmb	00 37 35.0	
	comp=Z,30nm,0.8s						
SOEI	**Soe**	**21.72**	**252**	P	**P**	**00 37 44.2**	**-1.8**
	comp=Z,2μmcomp=Z,80nm,1.2s						
SOEI	**Soe**	**21.72**	**252**	P	**P**	**00 37 44.7**	**-1.2**
BATI	**Baumata**	**22.41**	**251**	P	**P**	**00 37 52.6**	**-0.8**
	comp=Z,62nm,0.6s,baz=119,slow=1.3,SNR=19						
BATI	**Baumata**	**22.41**	**251**	P	**P**	**00 37 52.5**	**-0.8**
	comp=Z,616nmcomp=Z,57nm,0.8s						
LUWI	**Luwuk**	**22.54**	**275**	P	**P**	**00 37 55.8**	**+1.2**
	comp=Z,2μmcomp=Z,58nm,1.2s						
LUWI	**Luwuk**	**22.54**	**275**	P	**P**	**00 37 53.3**	**-1.4**
AS31	**Alice Springs**	**22.90**	**207**	P	**P**	**00 37 57.6**	**-0.9**
ASAR	**Alice Springs**	**22.90**	**207**	P	**P**	**00 37 57.9**	**-0.6**
	comp=Z,16nm,0.8s,baz=36,slow=8.9,SNR=125						
ASAR				PcP	**PcP**	**00 41 51.0**	**+2.1**
	comp=Z,0.5nm,0.8s,baz=21,slow=3.1,SNR=2.0						
ASAR				S	**S**	**00 42 03.8**	**-3.5**
	comp=Z,1.1nm,0.9s,baz=25,slow=18,SNR=3.7						
ASAR	**Alice Springs**	**22.90**	**207**	P	**P**	**00 37 57.7**	**-0.7**
QLP	**Quilpie**	**23.05**	**182**	P	**P**	**00 38 00.8**	**+0.9**
	baz=22,SNR=5.9						
RMQ	**Roma**	**23.19**	**172**	P	**P**	**00 38 02.5**	**+1.2**
	baz=22,SNR=8.7						
APSI	**Ampana**	**23.67**	**276**	P	**P**	**00 38 07.7**	**+1.6**
	comp=Z,765nmcomp=Z,44nm,1.2s						
FITZ	**Fitzroy Crossi**	**24.08**	**231**	P	**P**	**00 38 08.5**	**-1.5**
	comp=Z,24nm,0.7s,baz=50,slow=8.7,SNR=101						
FITZ	**Fitzroy Crossi**	**24.08**	**231**	P	**P**	**00 38 08.1**	**-2.0**
	baz=23,SNR=39						
FITZ	**Fitzroy Crossi**	**24.08**	**231**	P	**P**	**00 38 08.0**	**-2.0**
BSSI	**Bau Bau, Buton**	**24.77**	**263**	P	**P**	**00 38 16.5**	**+0.1**
	comp=Z,29nm,1.1s						
TOLI2	**Tolitoli**	**24.82**	**280**	P	**P**	**00 38 16.5**	**-0.3**
TOLI2				IAmb	IAmb	00 38 23.1	
	comp=Z,16nm,0.8s						
BNSI	**Bone**	**25.05**	**267**	P	**P**	**00 38 20.0**	**+1.1**
	comp=Z,665nmcomp=Z,24nm,1.7s						
TTSI	**Tana Toraja**	**25.34**	**270**	P	**P**	**00 38 22.3**	**+0.7**
	comp=Z,807nmcomp=Z,32nm,1.3s						
MPSI	**Mapaga**	**25.56**	**278**	P	**P**	**00 38 23.3**	**-0.3**
	comp=Z,11nm,1.6s						
WRKA	**Warakurna**	**26.96**	**216**	P	**P**	**00 38 35.4**	**-0.7**
	baz=26,SNR=72						
DZM	**Mont Dzumac**	**27.73**	**134**	*e*S	**S**	**00 43 24.7**	**+0.1**
	comp=Z,427nm,26.6s						
DZM				*e*LR	LR	00 45 42.9	
	comp=Z,2μm,25.9s						
CMSA	**Cobar Meteorol**	**27.98**	**179**	P	**P**	**00 38 47.4**	**+2.3**
	baz=27,SNR=5.8						
STKA	**Stephens Creek**	**28.51**	**186**	P	**P**	**00 38 51.0**	**+1.1**
	comp=Z,5.6nm,0.7s,baz=354,slow=8.5,SNR=14						
STKA	**Stephens Creek**	**28.51**	**186**	P	**P**	**00 38 51.1**	**+1.3**
	baz=28,SNR=9.1						
STKA	**Stephens Creek**	**28.51**	**186**	P	**P**	**00 38 50.3**	**+0.4**
TGY	**Tagaytay City**	**29.70**	**306**	LR	LR	00 51 09.0	
	comp=Z,425nm,18.4s,baz=104,slow=37						
HTT	**Hallett**	**30.43**	**190**	P	**P**	**00 39 08.3**	**+1.3**
	baz=29,SNR=5.1						
BBOO	**Buckleboo**	**30.47**	**195**	P	**P**	**00 39 07.9**	**+0.6**
	baz=29,SNR=7.1						
BBOO	**Buckleboo**	**30.47**	**195**	P	**P**	**00 39 06.5**	**-0.7**
BBOO				IAmb	IAmb	00 39 08.7	
	comp=Z,6.4nm,0.7s						
PSA00	**Pilbara Seismi**	**30.54**	**232**	P	**P**	**00 39 07.7**	**-0.3**
PSA00				IAmb	IAmb	00 39 12.4	
	comp=Z,13nm,1.1s						
LHI	**Lord Howe Isla**	**30.85**	**156**	P	P	00 39 18.7	+8.1
	baz=30,SNR=3.2						
FORT	**Forrest**	**31.66**	**209**	P	**P**	**00 39 17.6**	**-0.1**
	baz=30,SNR=17						
FORT	**Forrest**	**31.66**	**209**	P	**P**	**00 39 17.5**	**-0.3**
MEEK	**Meekatharra**	**34.37**	**225**	P	**P**	**00 39 38.7**	**-2.9**
	baz=33,SNR=4.3						
MORW	**Morawa**	**37.65**	**224**	P	**P**	**00 40 08.8**	**-0.8**
MORW				IAmb	IAmb	00 40 09.0	
	comp=Z,13nm,1.1s						
NWAO	**Narrogin (SRO)**	**39.33**	**218**	P	**P**	**00 40 23.4**	**-0.2**
NWAO				IAmb	IAmb	00 40 31.5	
	comp=Z,21nm,1.4s						
MJAR	**Matsushiro Arr**	**40.29**	**351**	P	**P**	**00 40 30.4**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=174,slow=9.0,SNR=2.5						
QIZ	**Qiongzhong**	**41.33**	**304**	P	**P**	**00 40 38.5**	**-1.9**
QIZ				S	**S**	**00 46 54.8**	**+0.9**
QIZ				LR	LR		
	comp=N,310nm,18.9s						
QIZ				LR	LR		
	comp=E,480nm,21.2s						
QIZ				LR	LR		
	comp=Z,720nm,19.3s						
NJ2	**Nanjing**	**43.25**	**327**	*e*P	**P**	**00 40 55.8**	**0.0**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NJ2				LR	LR		
	comp=N,610nm,20.4s						
NJ2				LR	LR		
	comp=E,670nm,15.6s						
NJ2				LR	LR		
	comp=Z,1μm,18.7s						
KSRS	**Korea Array**	**43.72**	**340**	P	**P**	**00 40 57.9**	**-1.7**
	comp=Z,3.7nm,0.9s,baz=159,slow=8.8,SNR=9.5						
SDSI	**Sungai Dareh**	**43.81**	**272**	P	**P**	**00 40 59.5**	**-1.1**
	comp=Z,15nm,1.2s						
RPSI	**Rantau Prapat**	**46.65**	**277**	P	**P**	**00 41 22.8**	**-0.5**
PSI	**Prapat**	**46.66**	**277**	P	**P**	**00 41 23.4**	**-0.2**
	comp=Z,5.8nm,0.9s,baz=180,slow=23,SNR=4.0						
GYA	**Guiyang**	**47.65**	**311**	*e*P	P	00 41 36.5	+5.6
GYA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
ENH	**Enshi**	**47.82**	**317**	P	**P**	**00 41 31.6**	**-0.5**
USA0B	**Ussuriysk Arra**	**48.87**	**347**	P	**P**	**00 41 38.3**	**-1.6**
USA0B				IAmb	IAmb	00 41 46.9	
	comp=Z,9.3nm,1.0s						
USRK	**Ussuriysk Ar.**	**48.87**	**347**	P	**P**	**00 41 40.8**	**+0.9**
	comp=Z,5.6nm,0.8s,baz=175,slow=7.5,SNR=9.3						
USRK	**Ussuriysk Ar.**	**48.87**	**347**	P	**P**	**00 41 39.3**	**-0.6**
CMAR	**Chiang Mai Arr**	**50.47**	**297**	P	**P**	**00 41 52.6**	**+0.1**
	comp=Z,2.8nm,0.4s,baz=117,slow=6.0,SNR=14						
XAN	**Xi'an**	**50.56**	**320**	P	**P**	**00 41 54.0**	**+0.9**
XAN				pP	sP	00 42 00.0	-1.8
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN	**Xi'an**	**50.56**	**320**	P	**P**	**00 41 53.3**	**+0.2**
XAN				IAmb	IAmb	00 41 58.7	
	comp=Z,9.9nm,1.0s						
CHTO	**Chiang Mai**	**50.59**	**298**	P	**P**	**00 41 53.5**	**-0.1**
CD2	**Chengdu**	**52.20**	**314**	*e*P	**P**	**00 42 07.5**	**+2.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	**Hu-ho-hao-te**	**53.71**	**329**	*e*P	**P**	**00 42 16.8**	**+0.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,120nm,6.0s						
KLR	**Kul'dur**	**53.72**	**349**	P	**P**	**00 42 16.5**	**+0.2**
	comp=Z,4.7nm,1.1s,baz=211,slow=2.7,SNR=7.6						
LZH	**Lanzhou**	**55.10**	**319**	*e*P	**P**	**00 42 28.5**	**+1.8**
LZH				pP	pP	00 42 31.8	-1.2
LZH				sP	sP	00 42 33.5	-2.0
LZH				*e*PP	**PP**	**00 44 33.5**	**+3.3**
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,7.2s						
LZH				LR	LR		
	comp=N,230nm,14.3s						
LZH				LR	LR		
	comp=E,240nm,14.5s						
LZH				LR	LR		
	comp=Z,400nm,17.0s						
HIA	**Hailar**	**56.93**	**340**	P	**P**	**00 42 39.8**	**+0.4**
PETK	**Petropavlovsk-**	**57.30**	**9**	P	**P**	**00 42 42.2**	**+0.3**
	comp=Z,6.4nm,0.9s,baz=171,slow=8.5,SNR=3.2						
GTA	**Gaotai**	**59.62**	**320**	P	**P**	**00 43 00.5**	**+1.9**
GTA				pP	pP	00 43 04.3	-0.7
GTA				sP	pwP	00 43 06.5	-1.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,64nm,5.1s						
GTA				LR	LR		
	comp=N,190nm,19.3s						
GTA				LR	LR		
	comp=E,260nm,18.2s						
GTA				LR	LR		
	comp=Z,190nm,18.9s						
ULN	**Ulaanbaatar**	**61.00**	**332**	P	**P**	**00 43 06.3**	**-1.5**
ULN				IAmb	IAmb	00 43 10.9	
	comp=Z,5.2nm,1.1s						
LSA	**Lhasa**	**61.27**	**307**	P	**P**	**00 43 10.1**	**-0.3**
LSA				IAmb	IAmb	00 43 19.5	
	comp=Z,12nm,1.4s						
PPT2	**Papeete2**	**65.36**	**108**	*e*S	**S**	**00 52 15.9**	**-4.9**
	comp=Z,120nm,37.8s						
PPT2	**Papeete2**	**65.36**	**108**	*e*LR	LR	01 03 09.0	
	comp=Z,351nm,30.5s						
TBI	**Tubuai**	**66.04**	**114**	*e*LQ	LQ	01 00 38.4	
	comp=Z,401nm,34.0s						
TBI				*e*LR	LR	01 03 24.2	
	comp=Z,464nm,40.2s						
YAK	**Yakutsk**	**66.34**	**352**	P	**P**	**00 43 43.3**	**+0.7**
WMQ	**Urumqi**	**69.68**	**319**	*e*P	**P**	**00 44 06.3**	**+2.2**
WMQ				pP	pP	00 44 10.0	-0.6
WMQ				pmax	pmax		
	comp=Z,18nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,220nm,4.7s						
WMQ				LR	LR		
	comp=N,400nm,16.5s						
WMQ				LR	LR		
	comp=Z,450nm,20.5s						
WMQ	**Urumqi**	**69.68**	**319**	P	**P**	**00 44 03.8**	**-0.3**
MK31	**Makanchi Array**	**74.38**	**321**	P	**P**	**00 44 33.0**	**+0.8**
MK31				IAmb	IAmb	00 44 44.4	
	comp=Z,13nm,1.3s						
MKAR	**Makanchi Array**	**74.38**	**321**	P	**P**	**00 44 32.0**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=102,slow=8.1,SNR=7.8						
MKAR	**Makanchi Array**	**74.38**	**321**	P	**P**	**00 44 33.0**	**+0.9**
VNDA	**Vanda**	**74.58**	**176**	P	**P**	**00 44 35.1**	**+2.3**
	comp=Z,2.2nm,0.8s,baz=325,slow=7.3,SNR=13						
VNDA	**Vanda**	**74.58**	**176**	P	**P**	**00 44 35.3**	**+2.5**
ZALV	**Zalesovo Beam**	**75.89**	**328**	P	**P**	**00 44 40.0**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=109,slow=5.9,SNR=6.2						
ZALV	**Zalesovo Beam**	**75.89**	**328**	P	**P**	**00 44 40.8**	**+0.2**
NIL	**Nilore**	**76.98**	**306**	P	**P**	**00 44 48.4**	**+1.1**
BOOM	**Boomskoye usch**	**77.20**	**315**	P	**P**	**00 44 48.5**	**-0.1**
KURK	**Kurchatov**	**78.08**	**323**	P	**P**	**00 44 52.6**	**-0.5**
KURK				IAmb	IAmb	00 45 07.1	
	comp=Z,7.1nm,1.1s						
AAK	**Ala-Archa**	**78.26**	**315**	P	**P**	**00 44 55.2**	**+0.7**
ARSB	**Arslanbob**	**79.01**	**313**	P	**P**	**00 44 59.4**	**+0.8**
ARSB				IAmb	IAmb	00 45 06.0	
	comp=Z,17nm,1.4s						
TTA	**Tatalina**	**79.40**	**23**	P	**P**	**00 45 01.3**	**+1.1**
TTA				IAmb	IAmb	00 45 07.8	
	comp=Z,10nm,1.3s						
CNPM	**China Poot**	**79.89**	**28**	P	**P**	**00 45 04.6**	**+1.8**
BTK	**Batken**	**80.31**	**311**	P	**P**	**00 45 05.8**	**+0.2**
BTK				IAmb	IAmb	00 45 25.5	
	comp=Z,10nm,1.3s						
KK31	**Karatay Array**	**81.22**	**314**	P	**P**	**00 45 11.3**	**+0.9**
KKAR	**Karatay Array**	**81.22**	**314**	P	**P**	**00 45 11.1**	**+0.7**
KKAR	**Karatay Array**	**81.22**	**314**	P	**P**	**00 45 11.0**	**+0.7**
KTH	**Kantishna Hill**	**81.73**	**24**	P	**P**	**00 45 12.9**	**+0.3**
IMAR	**Indian Mountai**	**81.74**	**21**	P	**P**	**00 45 13.3**	**+0.7**
SML	**Sawmill**	**82.12**	**26**	P	**P**	**00 45 15.7**	**+1.0**
NRIK	**Noril'sk**	**82.29**	**342**	P	**P**	**00 45 15.2**	**-0.2**
	comp=Z,6.0nm,0.8s,baz=113,slow=4.3,SNR=20						
RND	**Reindeer**	**82.52**	**24**	P	**P**	**00 45 16.6**	**-0.2**
RND				IAmb	IAmb	00 45 19.8	
	comp=Z,11nm,1.2s						
DHY	**Denali Highway**	**83.01**	**25**	P	**P**	**00 45 20.0**	**+0.5**
DHY				IAmb	IAmb	00 45 28.5	
	comp=Z,9.7nm,1.1s						
CCB	**Clear Creek Bu**	**83.42**	**24**	P	**P**	**00 45 21.8**	**+0.5**
CCB				IAmb	IAmb	00 45 28.0	
	comp=Z,8.8nm,1.1s						
BRVK	**Borovoye**	**83.71**	**324**	P	**P**	**00 45 23.8**	**+0.7**
BRVK				IAmb	IAmb	00 45 29.1	
	comp=Z,7.2nm,1.1s						
IL31		**83.84**	**24**	P	**P**	**00 45 23.6**	**+0.2**
IL31				IAmb	IAmb	00 45 36.1	
	comp=Z,5.3nm,1.1s						
ILAR	**Eielson Array**	**83.84**	**24**	P	**P**	**00 45 23.1**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=254,slow=4.9,SNR=16						
ILAR	**Eielson Array**	**83.84**	**24**	P	**P**	**00 45 23.6**	**+0.1**
MAW	**Mawson**	**83.93**	**202**	P	**P**	**00 45 26.0**	**+2.1**
	comp=Z,1.2nm,0.6s,baz=112,slow=7.0,SNR=7.4						
MAW	**Mawson**	**83.93**	**202**	P	**P**	**00 45 25.2**	**+1.3**
DOT	**Dot Lake**	**84.61**	**25**	P	**P**	**00 45 28.3**	**+0.9**
DOT				IAmb	IAmb	00 45 41.5	
	comp=Z,5.2nm,1.0s						
BCAR	**Beaver Creek A**	**85.41**	**26**	P	**P**	**00 45 33.5**	**+2.0**
HRA	**Herat**	**86.11**	**305**	P	**P**	**00 45 35.7**	**-0.1**
HRA				IAmb	IAmb	00 45 42.3	
	comp=Z,8.6nm,1.1s						
QSPA	**South Pole Qui**	**86.53**	**180**	P	**P**	**00 45 38.0**	**+0.8**
QSPA				IAmb	IAmb	00 45 48.6	
	comp=Z,3.9nm,0.9s						
DAWY	**Dawson**	**86.71**	**25**	P	**P**	**00 45 38.9**	**+0.9**
DAWY				IAmb	IAmb	00 45 52.6	
	comp=Z,5.3nm,1.0s						
ABKAR	**Akbulak array**	**89.47**	**319**	P	**P**	**00 45 51.0**	**-0.3**
ABKAR	**Akbulak array**	**89.47**	**319**	P	**P**	**00 45 51.0**	**-0.3**
ABKAR				IAmb	IAmb	00 45 55.9	
	comp=Z,2.7nm,1.1s						
SYO	**Syowa Base**	**92.38**	**200**	*e*P	**P**	**00 46 03.8**	**-0.7**
SYO	**Syowa Base**	**92.38**	**200**	*e*sP	sP	00 46 10.1	-3.3
TORD	**Torodi Ar. Bea**	**142.67**	**287**	PKP	**PKPdf**	**00 52 26.3**	**-2.2**
	comp=Z,0.4nm,0.7s,baz=79,slow=3.1,SNR=2.5						

*IDC **30** 00:37:38.8±0.8,6˚96N×123˚64E,h0km,mb4.2/10, mb1 4.4/10,mb1mx4.0/48,mbtmp4.2/10,Error ellipse: s-maj=26.8km s-min=15.7km az=62.0*

*MAN **30** 00:37:41.2,7˚02N×123˚70E,h1km,mb4.8,ML3.7,MS3.6 MAN Intensity III - Cotabato City; Intensity II - Balabaga, Lanao del Sur; Intensity I - Zamboanga City.*

*NEIC **30** 00:37:46.4±1.7,6˚99N±0˚08×123˚84E±0˚07,h58km±5km, mb4.4/18,Error ellipse: s-maj=11.8km s-min=9.2km az=199.0*

ISC 30 00:37:43.5±1.1,7˚00N±0˚04×123˚72E±0˚03,h29km±9km, n52,σ1°37/61,mb4.4/15,1C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**			*e*P	**Pn**	**00 38 00.1**	**-0.2**
PAGZ				*e*S	**Sb**	**00 38 11.4**	**-0.9**
SKMP	**Bagumbayan, Su**	**0.95**	**120**	*e*P	**Pb**	**00 37 59.7**	**-1.6**
SKMP				*e*S	**Sb**	**00 38 11.4**	**-2.1**
KCP	**Kidapawan**	**1.36**	**90**	↓*i*P	**Pn**	**00 38 06.0**	**-0.6**
KCP				*i* S	**Sb**	**00 38 30.1**	**+4.7**
ZCP	**Zamboanga City**	**1.64**	**268**	↓*i*P	**Pb**	**00 38 13.0**	**0.0**
ZCP				*i* S	**Sb**	**00 38 34.4**	**+1.1**
CGP	**Cagayan de Oro**	**1.73**	**34**	↑*i*P	**Pn**	**00 38 12.2**	**+0.4**
CGP				*i* S	**Sn**	**00 38 34.2**	**+1.3**
DAV	**Davao City (W)**	**1.84**	**88**	Pn	**Pn**	**00 38 13.8**	**+0.5**
	288nm,0.3s,baz=267,slow=7.4,SNR=27						
DAV				Sn	**Sn**	**00 38 37.0**	**+1.4**
	154nm,0.3s,baz=335,slow=24,SNR=13						
DAV				LR	LR	00 39 04.6	
	comp=Z,2μm,19.7s,baz=226,slow=44						
DAV	**Davao City (W)**	**1.84**	**88**		**Pn**	**00 38 13.6**	**+0.4**
DAV				Sn	**Sn**	**00 38 36.2**	**+0.5**
DDMP	**Don Marcelino,**	**2.17**	**114**	*e*P	**Pn**	**00 38 18.3**	**+0.6**
DDMP				*e*S	**Sn**	**00 38 43.4**	**-0.3**
CNOP	**Candoni, Negro**	**3.00**	**339**	*e*P	**Pn**	**00 38 28.7**	**-0.5**
CNOP				*e*S	**Sn**	**00 38 59.9**	**-4.4**
LLP	**Lapu-Lapu**	**3.30**	**4**	*e*P	**Pn**	**00 38 35.5**	**+2.2**
LLP				*i* S	**Sn**	**00 39 13.5**	**+1.8**
GLSP	**General Luna,**	**3.65**	**41**	*e*P	**Pn**	**00 38 37.0**	**-1.0**
GUIM	**Jordan**	**3.77**	**343**	*e*P	**Pn**	**00 38 40.6**	**+0.9**
CUYO	**Cuyo Island**	**4.66**	**325**	*e*P	**Pn**	**00 38 52.9**	**+0.8**
MYLDM	**Lahad Datu**	**5.50**	**251**		Pn	00 39 08.2	+4.7
ENPP	**El Nido**	**5.95**	**315**	*e*P	**Pn**	**00 39 10.2**	**+0.4**
TOLI2	**Tolitoli**	**6.54**	**207**	Pn	**Pn**	**00 39 17.3**	**-0.6**
TNTI	**Ternate**	**7.18**	**149**	Pn	**Pn**	**00 39 26.3**	**-0.3**
LUWI	**Luwuk**	**8.05**	**187**		**Pn**	**00 39 42.0**	**+3.5**
FAKI	**Fak Fak**	**13.02**	**139**	Pn	**Pn**	**00 40 45.1**	**-1.6**
KSM	**Kuching**	**14.46**	**248**	Pn	**Pn**	**00 41 08.7**	**+2.3**
MMRI	**Maumere**	**15.61**	**185**	Pn	**Pn**	**00 41 22.5**	**+0.9**
MMRI				IAmb	IAmb	00 41 25.6	
	comp=Z,28nm,1.1s						
MTN	**Manton Dam**	**21.05**	**159**	P	**P**	**00 42 25.0**	**-0.4**
MTN				IAmb	IAmb	00 42 26.2	
	comp=Z,30nm,1.1s						
KNRA	**Kununurra**	**23.08**	**168**	P	**P**	**00 42 48.1**	**+1.1**
FITZ	**Fitzroy Crossi**	**25.01**	**176**	P	**P**	**00 43 04.5**	**-0.7**
	comp=Z,2.6nm,0.4s,baz=5.4,slow=9.6,SNR=14						
FITZ	**Fitzroy Crossi**	**25.01**	**176**	P	**P**	**00 43 04.9**	**-0.2**
WB0	**Warramunga Arr**	**28.60**	**159**	P	**P**	**00 43 36.4**	**-1.0**
WRA	**Warramunga Arr**	**28.74**	**159**	P	**P**	**00 43 37.7**	**-1.1**
	comp=Z,7.7nm,0.9s,baz=338,slow=9.9,SNR=23						
WRA	**Warramunga Arr**	**28.74**	**159**	P	**P**	**00 43 37.2**	**-1.5**
WB2	**Warramunga Arr**	**28.75**	**159**		**P**	**00 43 37.3**	**-1.5**
WB2				IAmb	IAmb	00 43 38.5	
	comp=Z,13nm,0.9s						
AS31	**Alice Springs**	**32.06**	**162**		**P**	**00 44 07.5**	**-0.6**
ASAR	**Alice Springs**	**32.06**	**162**	P	**P**	**00 44 07.8**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=340,slow=7.7,SNR=30						
**

mb4.9/28,mB5.4/12,MLv5.0/5,Mw(mB)4.8/12
ISC 30 00:39:27.7N0.3,3°**39**S0.0**04**×**145°10**E4.0**05**,**h22**km,**n252**,**
σ1**943**/252,**mb4.9**/83,**MS4.5**/32,**11C-5D**,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**2.63**	**59**		**Pn**	**00 40 05.2**	**-3.7**
JAY	**Jayapura**	**4.48**	**281**	Pn	**Pn**	**00 40 32.0**	**-2.3**
	2.2nm,0.3s,baz=93,slow=5.1,SNR=4.7						
JAY	**Jayapura**	**4.48**	**281**	P	**Pb**	**00 40 41.8**	**-3.9**
GENI	**Genyem**	**4.99**	**279**	P	**Pb**	**00 40 58.4**	**+4.0**
PMG	**Port Moresby**	**6.32**	**161**	Pn	**Pn**	**00 40 59.1**	**-0.5**
	2.2nm,0.3s,baz=343,slow=8.7,SNR=7.7						
PMG				Sn	**Sn**	**00 42 09.7**	**-1.4**
	0.9nm,0.3s,baz=350,slow=6.9,SNR=5.1						
PMG	**Port Moresby**	**6.32**	**161**	*i* P	**Pn**	**00 40 59.2**	**-0.4**
PMG	**Port Moresby**	**6.32**	**161**	Pn	**Pn**	**00 40 58.3**	**-1.3**
SMPI	**Sarmi**	**6.53**	**282**	P	Pn	00 41 07.9	+5.3
	0.6nm83nm,1.0s						
KRVT	**Keravat (AS076**	**6.97**	**98**	Pn	**Pn**	**00 41 10.6**	**+2.0**
	2.3nm,0.3s,baz=270,slow=5.1,SNR=7.8						
RABL	**Rabaul**	**7.09**	**97**	Pn	**Pn**	**00 41 10.1**	**-0.2**
COEN	**Coen**	**10.67**	**190**	P	**Pn**	**00 42 01.3**	**+2.0**
	baz=11,SNR=7.3						
COEN	**Coen**	**10.67**	**190**	Pn	**Pn**	**00 42 00.8**	**+1.5**
FAKI	**Fak Fak**	**12.84**	**272**	Pn	**Pn**	**00 42 28.2**	**-0.9**
SWI	**Sorong**	**14.06**	**280**	P	P	00 43 06.3	+13
HNR	**Honiara**	**15.92**	**113**	LR	LR	00 49 23.4	
	comp=Z,1μm,18.3s,baz=240,slow=38						
HNR	**Honiara**	**15.92**	**113**	P	**Pn**	**00 43 11.1**	**+0.5**
HNR				pmax	pmax		
	comp=Z,288nm,1.0s						
HNR	**Honiara**	**15.92**	**113**		**Pn**	**00 43 11.1**	**+0.5**
CTA	**Charters Tower**	**16.63**	**176**	Pn	**P**	**00 43 21.6**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=339,slow=9.2,SNR=3.3						
CTAO	**Charters Tower**	**16.63**	**176**	P	**P**	**00 43 20.9**	**-1.0**
CTAO				pmax	pmax		
	comp=Z,48nm,1.5s						
CTAO	**Charters Tower**	**16.63**	**176**	P	**P**	**00 43 20.9**	**-1.0**
PATS	**Pohnpei**	**16.65**	**52**	P	**Pn**	**00 43 19.9**	**+0.1**
	baz=17,SNR=4.8						
PATS	**Pohnpei**	**16.65**	**52**		**Pn**	**00 43 18.3**	**-1.6**
MTN	**Manton Dam**	**16.70**	**235**	Pn	**Pn**	**00 43 20.8**	**+0.3**
NLAI	**Namlea**	**17.97**	**270**	P	**P**	**00 43 42.9**	**+6.1**
	comp=Z,1μmcomp=Z,31nm,2.0s						
WB0	**Warramunga Arr**	**19.34**	**212**	P	**P**	**00 43 51.2**	**-0.7**
WB0				IAmb	IAmb	00 44 28.3	
	comp=Z,87nm,1.4s						
WRAB	**Tennant Creek**	**19.50**	**212**	*ce*P	**P**	**00 43 53.7**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,115nm,1.7s						
WB2	**Warramunga Arr**	**19.51**	**212**	P	**P**	**00 43 52.7**	**-0.9**
WB2				IAmb	IAmb	00 43 55.2	
	comp=Z,66nm,0.9s						
WRA	**Warramunga Arr**	**19.52**	**212**	P	**P**	**00 43 53.4**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=39,slow=11,SNR=51						
WRA				S	**S**	**00 47 30.2**	**-3.0**
	baz=31,slow=17,SNR=3.5						
WRA				LR	LR	00 52 15.2	
	comp=Z,5μm,18.6s,baz=35,slow=40						
WRA	**Warramunga Arr**	**19.52**	**212**	P	**P**	**00 43 53.0**	**-0.7**
WRA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WRA	**Warramunga Arr**	**19.52**	**212**	P	**P**	**00 43 53.0**	**-0.7**
KNRA	**Kununurra**	**20.19**	**232**	P	**P**	**00 44 00.1**	**-1.0**
KNRA				IAmb	IAmb	00 44 52.4	
	comp=Z,98nm,1.2s						
SOEI	**Soe**	**21.63**	**252**	P	**P**	**00 44 17.5**	**+0.7**
	comp=Z,130nm,1.4s						
SOEI	**Soe**	**21.63**	**252**	P	**P**	**00 44 16.4**	**-0.5**
DAV	**Davao City (W)**	**22.08**	**298**	LR	LR	00 52 36.4	
	comp=Z,639nm,18.0s,baz=89,slow=36						
BATI	**Baumata**	**22.32**	**251**	P	**P**	**00 44 24.6**	**+0.4**
	comp=Z,81nm,0.9s,baz=156,slow=1.2,SNR=11						
BATI	**Baumata**	**22.32**	**251**	P	**P**	**00 44 24.6**	**+0.4**
	comp=Z,69nm,1.1s						
LUWI	**Luwuk**	**22.43**	**275**	P	**P**	**00 44 24.2**	**-1.1**
EIDS	**Eidsvold**	**22.60**	**166**	P	**P**	**00 44 26.6**	**-0.3**
AS31	**Alice Springs**	**22.88**	**207**	P	**P**	**00 44 29.1**	**-0.9**
ASAR	**Alice Springs**	**22.88**	**207**	P	**P**	**00 44 29.9**	**-0.1**
	comp=Z,19nm,0.9s,baz=35,slow=8.9,SNR=51						
ASAR				S	**S**	**00 48 38.7**	**0.0**
	comp=Z,0.8nm,1.0s,baz=27,slow=17,SNR=1.9						
ASAR				LR	LR	00 54 31.6	
	comp=Z,3μm,18.5s,baz=35,slow=40						
ASAR	**Alice Springs**	**22.88**	**207**	P	**P**	**00 44 29.1**	**-0.9**
ASAR	**Alice Springs**	**22.88**	**207**	P	**P**	**00 44 29.1**	**-0.9**
QLP	**Quilpie**	**23.07**	**182**	P	**P**	**00 44 31.1**	**-0.9**
	baz=23,SNR=6.1						
RMQ	**Roma**	**23.23**	**172**	P	**P**	**00 44 31.7**	**-1.8**
	baz=23,SNR=11						
MMRI	**Maumere**	**23.32**	**256**	P	**P**	**00 44 34.5**	**-0.1**
MMRI				IAmb	IAmb	00 45 11.2	
	comp=Z,52nm,1.3s						
FITZ	**Fitzroy Crossi**	**24.02**	**231**	P	**P**	**00 44 40.5**	**-0.7**
	comp=Z,24nm,0.7s,baz=52,slow=8.7,SNR=38						
FITZ				LR	LR	00 53 36.5	
	comp=Z,1μm,19.4s,baz=52,slow=36						
FITZ	**Fitzroy Crossi**	**24.02**	**231**	P	**P**	**00 44 40.3**	**-0.9**
	baz=24,SNR=27						
FITZ	**Fitzroy Crossi**	**24.02**	**231**	P	**P**	**00 44 39.8**	**-1.5**
FITZ				IAmb	IAmb	00 44 45.3	
	comp=Z,24nm,0.7s						
BSSI	**Bau Bau, Buton**	**24.67**	**263**	P	**P**	**00 44 51.5**	**+4.2**
	comp=Z,949nmcomp=Z,35nm,1.1s						
TOLI2	**Tolitoli**	**24.72**	**280**	P	**P**	**00 44 47.0**	**-0.7**
TOLI2				IAmb	IAmb	00 45 01.6	
	comp=Z,34nm,0.9s						
SANVU	**Saraoutou**	**24.84**	**120**	P	**P**	**00 44 46.8**	**-2.0**
SANVU				IAmb	IAmb	00 45 23.8	
	comp=Z,24nm,0.8s						
BKSI	**Bulukumba**	**24.98**	**265**	P	**P**	**00 44 55.0**	**+4.9**
	comp=Z,695nmcomp=Z,28nm,1.0s						
TTSI	**Tana Toraja**	**25.24**	**270**	P	P	00 45 03.3	+11
WSI	**Waingapu**	**25.41**	**255**	P	**P**	**00 44 55.4**	**+1.5**
	comp=Z,1μm,0.4s						
WRKA	**Warakurna**	**26.92**	**215**	P	**P**	**00 45 07.5**	**-0.1**
	baz=27,SNR=30						
ARMA	**Armidale**	**27.58**	**168**	P	**P**	**00 45 13.3**	**-0.2**
ARMA				IAmb	IAmb	00 45 41.4	
	comp=Z,33nm,1.5s						
DZM	**Mont Dzumac**	**27.82**	**134**	LR	LR	00 54 57.2	
	comp=Z,1μm,19.4s,baz=272,slow=34						
DZM	**Mont Dzumac**	**27.82**	**134**	*e*LR	LR	00 52 22.2	
	comp=Z,2μm,23.6s						
CMSA	**Cobar Meteorol**	**28.00**	**179**	P	**P**	**00 45 16.2**	**-0.9**
	baz=28,SNR=7.5						
STKA	**Stephens Creek**	**28.53**	**186**	P	**P**	**00 45 21.6**	**-0.2**
	comp=Z,5.6nm,0.9s,baz=355,slow=10,SNR=8.0						
STKA				LR	LR	00 57 54.5	
	comp=Z,1μm,18.6s,baz=2.7,slow=39						
STKA	**Stephens Creek**	**28.53**	**186**	P	**P**	**00 45 21.6**	**-0.2**
HTT	**Hallett**	**30.44**	**190**	P	**P**	**00 45 38.9**	**+0.1**
	baz=30,SNR=5.1						
BBOO	**Buckleboo**	**30.47**	**195**	P	**P**	**00 45 35.8**	**-3.2**
	baz=30,SNR=5.9						
FORT	**Forrest**	**31.64**	**209**	P	**P**	**00 45 49.5**	**+0.1**
	baz=32,SNR=8.9						
FORT	**Forrest**	**31.64**	**209**	P	**P**	**00 45 49.1**	**-0.3**
SBUM	**Sibu**	**33.37**	**280**	P	**P**	**00 46 04.1**	**-0.7**
SBUM				IAmb	IAmb	00 46 15.2	
	comp=Z,32nm,1.5s						
JOW	**Kunigami**	**34.16**	**333**	P	**P**	**00 46 10.7**	**-0.8**
MEEK	**Meekatharra**	**34.32**	**225**	P	**P**	**00 46 14.3**	**+1.4**
	baz=34,SNR=5.2						
KSM	**Kuching**	**35.11**	**277**	P	**P**	**00 46 19.1**	**-0.8**
KSM				IAmb	IAmb	00 46 23.5	
	comp=Z,25nm,1.3s						
MSVF	**Nonsavu**	**35.30**	**116**	P	**P**	**00 46 21.7**	**+0.2**
MSVF				pmax	pmax		
	comp=Z,58nm,1.7s						
MSVF	**Nonsavu**	**35.30**	**116**		**P**	**00 46 21.7**	**+0.2**
MSVF				IAmb	IAmb	00 46 26.1	
	comp=Z,58nm,1.7s						
YHNB	**Yeheng**	**36.19**	**322**	P	**P**	**00 46 27.7**	**-1.4**
MORW	**Morawa**	**37.60**	**224**	P	**P**	**00 46 40.3**	**-0.7**
MORW				IAmb	IAmb	00 47 13.8	
	comp=Z,57nm,1.8s						
JWT	**Wachi**	**39.53**	**347**	P	**P**	**00 46 58.3**	**+1.2**
JWT				IAmb	IAmb	00 47 04.8	
	comp=Z,66nm,1.5s						
MJAR	**Matsushiro Arr**	**40.24**	**351**	P	**P**	**00 47 02.6**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=169,slow=8.3,SNR=6.7						
MJAR	**Matsushiro Arr**	**40.24**	**351**	P	**P**	**00 47 02.8**	**-0.2**
MJAR				pmax	pmax		
	comp=Z,12nm,1.7s						
MJAR	**Matsushiro Arr**	**40.24**	**351**	P	**P**	**00 47 02.8**	**-0.2**
MAT	**Matsushiro**	**40.25**	**351**	P	**P**	**00 47 03.1**	**+0.1**
NJ2	**Nanjing**	**43.17**	**327**	*e*P	**P**	**00 47 26.5**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,920nm,19.4s						
NJ2				LR	LR		
	comp=Z,520nm,14.7s						
NJ2				LR	LR		
	comp=Z,1μm,18.5s						
KSRS	**Korea Array**	**43.66**	**340**	P	**P**	**00 47 31.8**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=156,slow=8.0,SNR=6.9						
KSRS				LR	LR	01 03 43.7	
	comp=Z,525nm,18.3s,baz=173,slow=33						
KSAR	**Wonju Array Be**	**43.67**	**340**	P	**P**	**00 47 31.0**	**+0.1**
KSAR	**Wonju Array Be**	**43.67**	**340**	P	**P**	**00 47 31.0**	**+0.1**
SDSI	**Sungai Dareh**	**43.70**	**272**	P	**P**	**00 47 32.8**	**+1.2**
	comp=Z,33nm,1.2s						
BKNI	**Bangkinang**	**44.19**	**274**	P	**P**	**00 47 35.2**	**-0.4**
WHN	**Wuhan**	**44.73**	**321**	ǁP	**P**	**00 47 42.0**	**+2.5**
RPSI	**Rantau Prapat**	**46.55**	**277**	P	**P**	**00 47 53.6**	**-0.6**
PSI	**Prapat**	**46.56**	**277**	P	**P**	**00 47 54.0**	**-0.5**
	comp=Z,10nm,1.0s,baz=158,slow=0.1,SNR=6.7						
PSI	**Prapat**	**46.56**	**277**	P	**P**	**00 47 53.6**	**-0.9**
PSI				pmax	pmax		
	comp=Z,86nm,1.8s						
SLVN	**Son La**	**47.23**	**303**	P	**P**	**00 47 59.2**	**-0.3**
SLVN				IAmb	IAmb	00 48 08.0	
	comp=Z,15nm,1.2s						
ASAJ	**Asahikawa**	**47.35**	**358**	P	**P**	**00 48 01.4**	**+1.5**
	comp=Z,7.0nm,1.0s,baz=242,slow=5.9,SNR=4.0						
GYA	**Guiyang**	**47.55**	**311**	*e*P	**P**	**00 48 04.5**	**+2.5**
GYA				pP	pP	00 48 06.5	-1.8
GYA				PP	**PP**	**00 49 57.0**	**+3.3**
GYA				S	S	00 55 05.5	+9.2
GYA				SS	**SS**	**00 58 24.5**	**-0.1**
GYA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
GYA				pmax	pmax		
	comp=Z,120nm,3.5s						
GYA				LR	LR		
	comp=Z,350nm,17.7s						
GYA				LR	LR		
	comp=Z,270nm,17.8s						
GYA				LR	LR		
	comp=Z,360nm,21.0s						
ENH	**Enshi**	**47.73**	**317**	P	**P**	**00 48 03.5**	**+0.2**
ENH				IAmb	IAmb	00 48 33.7	
	comp=Z,23nm,1.3s						
USA0B	**Ussuriysk Arra**	**48.82**	**347**	P	**P**	**00 48 11.6**	**+0.3**
USA0B				pmax	pmax		
	comp=Z,13nm,1.0s						
USA0B	**Ussuriysk Arra**	**48.82**	**347**	P	**P**	**00 48 11.6**	**+0.3**
USA0B				IAmb	IAmb	00 48 47.6	
	comp=Z,13nm,1.0s						
USRK	**Ussuriysk Ar.**	**48.82**	**347**	P	**P**	**00 48 12.2**	**+0.9**
	comp=Z,5.3nm,0.6s,baz=164,slow=8.3,SNR=5.5						
USRK				LR	LR	01 07 12.6	
	comp=Z,275nm,18.9s,baz=153,slow=34						
USRK	**Ussuriysk Ar.**	**48.82**	**347**	P	**P**	**00 48 11.2**	**-0.1**
USRK	**Ussuriysk Ar.**	**48.82**	**347**	P	**P**	**00 48 11.2**	**-0.1**
KMI	**Kunming**	**49.92**	**307**ǁ	*e*P	**P**	**00 48 23.5**	**+3.1**
KMI				pP	pP	00 48 24.5	-2.2
KMI				sP	sP	00 48 25.8	-3.3
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
KMI				LR	LR		
	comp=Z,320nm,20.6s						
KMI				LR	LR		
	comp=Z,250nm,30.0s						
KMI				LR	LR		
	comp=Z,510nm,34.6s						
KMI	**Kunming**	**49.92**	**307**	P	**P**	**00 48 21.1**	**+0.7**
KMI				pmax	pmax		
	comp=Z,45nm,1.3s						
KMI	**Kunming**	**49.92**	**307**	P	**P**	**00 48 21.1**	**+0.7**
YSS	**Yuzh-Sakhalins**	**50.17**	**358**	*e*P	**P**	**00 48 21.4**	**-0.2**
YSS				*e*S	**S**	**00 55 30.9**	**-1.3**
YSS				*e*SS	**SS**	**00 58 57.6**	**-8.4**
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,19.0s						
CN2	**Changchun**	**50.20**	**342**	*e*P	P	00 48 15.5	-6.4
CM31	**Chiang Mai Arr**	**50.37**	**297**	P	**P**	**00 48 24.2**	**+0.6**
CM31				IAmb	IAmb	00 49 27.9	
	comp=Z,36nm,1.6s						
CMAR	**Chiang Mai Arr**	**50.37**	**297**	P	**P**	**00 48 25.6**	**+2.0**
	comp=Z,1.5nm,0.4s,baz=116,slow=5.5,SNR=20						
CMAR				LR	LR	01 07 37.4	
	comp=Z,144nm,21.8s,baz=151,slow=34						
CMAR	**Chiang Mai Arr**	**50.37**	**297**	*ce*P	**P**	**00 48 25.8**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**50.37**	**297**	P	**P**	**00 48 24.3**	**+0.6**
XAN	**Xi'an**	**50.48**	**321**	P	**P**	**00 48 25.0**	**+0.7**
XAN				pP	pwP	00 48 33.3	+0.1
XAN				pmax	pmax		
	comp=Z,12nm,0.5s						
XAN	**Xi'an**	**50.48**	**321**	P	**P**	**00 48 24.7**	**+0.4**
XAN				pmax	pmax		
	comp=Z,27nm,1.4s						
XAN	**Xi'an**	**50.48**	**321**	P	**P**	**00 48 24.7**	**+0.4**
XAN				IAmb	IAmb	00 48 52.5	
	comp=Z,27nm,1.4s						
CHTO	**Chiang Mai**	**50.49**	**298**	P	**P**	**00 48 24.2**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,25nm,1.7s						
CHTO	**Chiang Mai**	**50.49**	**298**	P	**P**	**00 48 24.1**	**-0.4**
CHTO				IAmb	IAmb	00 49 21.6	
	comp=Z,25nm,1.6s						
CD2	**Chengdu**	**52.11**	**314**	P	**P**	**00 48 36.8**	**+0.2**
CD2				sP	pP	00 48 42.0	-0.9
CD2				S	**S**	**00 56 03.5**	**+3.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,290nm,4.1s						
CD2				LR	LR		
	comp=Z,330nm,17.3s						
CD2				LR	LR		
	comp=Z,430nm,13.7s						
CD2				LR	LR		
	comp=Z,530nm,14.1s						
HHC	**Hu-ho-hao-te**	**53.63**	**329**	*e*P	**P**	**00 48 46.8**	**-0.9**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,190nm,5.3s						
KLR	**Kul'dur**	**53.68**	**349**	P	**P**	**00 48 48.4**	**+0.7**
	comp=Z,3.5nm,1.0s,baz=183,slow=5.7,SNR=5.1						
KLR				LR	LR	01 09 40.3	
	comp=Z,173nm,18.1s,baz=190,slow=34						
KLR	**Kul'dur**	**53.68**	**349**	*i* P	**P**	**00 48 47.3**	**-0.4**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LZH	**Lanzhou**	**55.01**	**319**	*e*P	**P**	**00 48 59.0**	**+1.1**
LZH				pP	pP	00 49 03.8	-0.4
LZH				sP	pwP	00 49 07.5	+0.6
LZH				*e*S	**S**	**00 56 38.5**	**-0.7**
LZH				sS	sS	00 56 48.8	-0.8
LZH				SS	**SS**	**01 00 18.0**	**-5.3**
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,140nm,6.2s						
LZH				LR	LR		
	comp=Z,400nm,14.1s						
LZH				LR	LR		
	comp=Z,480nm,15.0s						
LZH				LR	LR		
	comp=Z,580nm,16.3s						
HIA	**Hailar**	**56.87**	**340**	P	**P**	**00 49 11.0**	**+0.2**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HIA	**Hailar**	**56.87**	**340**	P	**P**	**00 49 11.0**	**+0.2**
HIA				IAmb	IAmb	00 49 34.5	
	comp=Z,7.9nm,0.8s						
PETK	**Petropavlovsk-**	**57.28**	**9**	P	**P**	**00 49 14.5**	**+0.9**
	comp=Z,8.6nm,1.0s,baz=151,slow=6.4,SNR=5.0						
PETK				LR	LR	01 09 55.2	
	comp=Z,201nm,21.9s,baz=189,slow=32						
ZEA	**Zeya**	**58.85**	**348**	*e*P	**P**	**00 49 26.4**	**+1.8**
ZEA				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ZEA				MLR	MLR		
	comp=Z,200nm,17.0s						
SHL	**Shillong**	**59.02**	**302**	P	**P**	**00 49 26.5**	**-0.1**
SHL				pmax	pmax		
	comp=Z,27nm,0.3s						
SHL	**Shillong**	**59.02**	**302**	P	**P**	**00 49 26.5**	**-0.1**
GTA	**Gaotai**	**59.54**	**320**⇑	P	**P**	**00 49 31.0**	**+1.2**
GTA				pP	pP	00 49 36.8	+0.6
GTA				sP	pwP	00 49 39.3	+0.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,130nm,5.6s						
GTA				LR	LR		
	comp=Z,300nm,19.3s						
GTA				LR	LR		
	comp=Z,260nm,19.6s						
GTA				LR	LR		
	comp=Z,250nm,19.6s						
ULN	**Ulaanbaatar**	**60.93**	**332**	*ce*P	**P**	**00 49 40.1**	**+0.9**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ULN	**Ulaanbaatar**	**60.93**	**332**	P	**P**	**00 49 39.6**	**+0.4**
ULN				IAmb	IAmb	00 49 48.8	
	comp=Z,14nm,1.4s						
LSA	**Lhasa**	**61.17**	**307**	P	**P**	**00 49 42.4**	**+0.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LSA	**Lhasa**	**61.17**	**307**	P	**P**	**00 49 42.4**	**+0.8**
SONM	**Songino Array**	**61.22**	**331**	P	**P**	**00 49 41.9**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=134,slow=10,SNR=2.2						
SONM				LR	LR	01 15 39.7	
	comp=Z,389nm,19.5s,baz=154,slow=36						
SONM	**Songino Array**	**61.22**	**331**	P	**P**	**00 49 40.9**	**-0.2**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**61.22**	**331**	P	**P**	**00 49 40.9**	**-0.2**
MA2	**Magadan**	**62.94**	**3**	LR	LR	01 17 51.5	
	comp=Z,74nm,18.7s,baz=194,slow=37						
ZAK	**Zakamensk**	**64.46**	**332**	*e*P	**P**	**00 50 02.6**	**0.0**
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s						
TLY	**Talaya**	**65.18**	**333**	LR	LR	01 16 35.9	
	comp=Z,536nm,21.6s,baz=127,slow=34						
PPT2	**Papeete2**	**65.47**	**108**	*e*LR	LR	01 09 52.3	
	comp=Z,266nm,27.8s						
TBI	**Tubuai**	**66.14**	**114**	*e*LQ	LQ	01 07 21.8	
	comp=Z,431nm,33.2s						
TBI				*e*LR	LR	01 10 02.3	
	comp=Z,501nm,40.0s						
YAK	**Yakutsk**	**66.31**	**352**	*e*P	**P**	**00 50 14.2**	**0.0**
YAK				*e**PP	**sP**	**00 50 22.1**	**-0.8**
YAK				*e*		00 50 45.1	
YAK				*e*S	**S**	**00 59 04.7**	**+2.5**
YAK				*e**SS	sS	00 59 34.4	+22
YAK				*e*		01 00 06.7	
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.5s						
YAK				pmax	pmax		
	comp=Z,336nm,3.8s						
YAK				pmax	pmax		
	comp=N,235nm,3.3s						
YAK				pmax	pmax		
	comp=E,297nm,4.8s						
YAK				smax	smax		
	comp=E,433nm,4.1s						
YAK				smax	smax		
	comp=N,388nm,3.3s						
YAK	**Yakutsk**	**66.31**	**352**	P	**P**	**00 50 14.0**	**-0.2**
YAK				IAmb	IAmb	00 50 21.8	
	comp=Z,18nm,1.0s						
WMQ	**Urumqi**	**69.59**	**319**	P	**P**	**00 50 37.5**	**+2.1**
WMQ				pP	pP	00 50 40.5	-1.4
WMQ				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.5s						
WMQ				LR	LR		
	comp=Z,320nm,19.9s						
WMQ				LR	LR		
	comp=Z,360nm,25.5s						
WMQ				LR	LR		
	comp=Z,510nm,23.1s						
WMQ	**Urumqi**	**69.59**	**319**	P	**P**	**00 50 36.5**	**+1.1**
WMQ				pmax	pmax		
	comp=Z,24nm,1.4s						
WMQ	**Urumqi**	**69.59**	**319**	P	**P**	**00 50 36.5**	**+1.1**
WMQ				IAmb	IAmb	00 50 38.9	
	comp=Z,24nm,1.4s						
BILL	**Bilibino**	**72.80**	**8**⇑	*e*P	**P**	**00 50 57.3**	**+3.1**
BILL				*e**SP	**pP**	**00 51 01.2**	**+0.6**
BILL				*e*		00 51 12.7	
BILL				S	**SKiKP**	**01 00 23.0**	**-3.8**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,102nm,17.0s						
ZSN	**Zaisan**	**72.95**	**322**	*e*P	**P**	**00 50 56.2**	**+0.6**
	baz=322						
ZSN				*e*S	**SKiKP**	**01 00 24.4**	**-3.3**
	baz=322						
ZSN	**Zaisan**	**72.95**	**322**	*e*P	**P**	**00 50 56.1**	**+0.5**
ZSN				*e*S	**SKiKP**	**01 00 24.3**	**-3.3**
MK31	**Makanchi Array**	**74.29**	**321**	P	**P**	**00 51 04.4**	**+0.9**
MK31				pmax	pmax		
	comp=Z,10.0nm,1.3s						
MK31	**Makanchi Array**	**74.29**	**321**	P	**P**	**00 51 04.4**	**+0.9**
MKAR	**Makanchi Array**	**74.29**	**321**	P	**P**	**00 51 04.2**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=99,slow=7.6,SNR=11						
MKAR				LR	LR	01 22 18.6	
	comp=Z,165nm,20.9s,baz=96,slow=35						
MKAR	**Makanchi Array**	**74.29**	**321**	*ce*P	**P**	**00 51 05.4**	**+1.9**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VNDA	**Vanda**	**74.61**	**176**	P	**P**	**00 51 06.8**	**+2.0**
	comp=Z,1.9nm,0.9s,baz=316,slow=6.9,SNR=5.9						
VNDA	**Vanda**	**74.61**	**176**	P	**P**	**00 51 05.7**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNDA	**Vanda**	**74.61**	**176**	P	**P**	**00 51 05.7**	**+0.9**
SHLS	**Shalkode**	**74.85**	**316**	*e*P	**P**	**00 51 07.0**	**0.0**
	comp=Z,4.7nm,1.0s,baz=316						
**SHLS

MDOK	Medeo	76.53	316	*e*P		P		00 51 17.1	+0.6
TNSS	Tian-Shan	76.56	316	*e*P		P		00 51 18.3	+1.2
	baz=315								
TNSS	Tian-Shan	76.56	316	*e*P		P		00 51 18.3	+1.2
AAA	Alma-Ata	76.64	316	*e*P		P		00 51 18.2	+1.1
	baz=316								
AAA	Alma-Ata	76.64	316	*e*P		P		00 51 18.2	+1.1
CHKK	Chushkaly	76.78	316	*e*P		P		00 51 18.0	+0.1
	baz=316								
CHKK	Chushkaly	76.78	316	*e*P		P		00 51 17.9	+0.1
NIL	Nilore	76.88	306	P		P		00 51 19.4	+0.8
NIL				pmax		pmax			
	comp=Z,23nm,0.8s								
NIL	Nilore	76.88	306	P		P		00 51 19.4	+0.8
KUU	Kurty	77.24	316	*e*P		P		00 51 20.7	+0.2
	comp=Z,5.6nm,1.1s,baz=316								
KUU	Kurty	77.24	316	*e*P		P		00 51 20.6	+0.2
KUU				pmax		pmax			
	comp=Z,6.0nm,1.1s								
KURK	Kurchatov	78.00	323	*ce*P		P		00 51 24.1	-0.3
KURK				pmax		pmax			
	comp=Z,12nm,1.7s								
KURK	Kurchatov	78.00	323	P		P		00 51 24.4	0.0
AAK	Ala-Archa	78.17	315	*ce*P		P		00 51 25.7	-0.1
AAK				pmax		pmax			
	comp=Z,31nm,1.7s								
AAK	Ala-Archa	78.17	315	P		P		00 51 26.2	+0.4
SVW2	Sparrevohn	78.69	25	P		P		00 51 28.9	+0.9
SVW2				IAmb		IAmb		00 51 37.0	
	comp=Z,28nm,1.2s								
ARSB	Arslanbob	78.92	313	P		P		00 51 30.8	+0.9
ARSB				pmax		pmax			
	comp=Z,19nm,1.3s								
ARSB	Arslanbob	78.92	313	P		P		00 51 30.8	+0.9
ARSB				IAmb		IAmb		00 51 54.5	
	comp=Z,19nm,1.3s								
BTLS	Baital	79.14	317	*e*P		P		00 51 31.2	+0.3
	baz=317								
BTLS	Baital	79.14	317	*e*P		P		00 51 31.2	+0.3
DRK	Karamyk	79.35	311	P		P		00 51 32.2	-0.3
TTA	Tatalina	79.41	23	P		P		00 51 32.6	+0.5
TTA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
TTA	Tatalina	79.41	23	P		P		00 51 32.5	+0.5
CNPM	China Poot	79.91	28	P		P		00 51 35.2	+0.4
CNPM				IAmb		IAmb		00 51 39.8	
	comp=Z,30nm,1.0s								
BTK	Batken	80.22	311	P		P		00 51 37.5	+0.6
BTK				pmax		pmax			
	comp=Z,13nm,1.3s								
BTK	Batken	80.22	311	P		P		00 51 37.5	+0.6
KBL	Kabul	80.48	306	P		P		00 51 38.1	-0.6
KBL				pmax		pmax			
	comp=Z,15nm,1.8s								
KBL	Kabul	80.48	306	P		P		00 51 38.1	-0.6
DZA	Taraz	80.49	314	*e*P		P		00 51 38.3	0.0
	baz=314								
DZA	Taraz	80.49	314	*e*P		P		00 51 38.3	0.0
KK31	Karatay Array	81.12	314	P		P		00 51 41.9	+0.2
KK31				pmax		pmax			
	comp=Z,13nm,1.4s								
KK31	Karatay Array	81.12	314	P		P		00 51 41.9	+0.2
KK31				IAmb		IAmb		00 52 07.9	
	comp=Z,13nm,1.4s								
KKAR	Karatay Array	81.12	314	P		P		00 51 41.8	+0.1
KKAR				pmax		pmax			
	comp=Z,13nm,1.4s								
KKAR	Karatay Array	81.12	314	P		P		00 51 41.8	+0.1
KKAR	Karatay Array	81.12	314	P		P		00 51 41.9	+0.2
IUG	Iuzhnay	81.26	313	*e*P		P		00 51 43.1	+0.5
	baz=313								
IUG	Iuzhnay	81.26	313	*e*P		P		00 51 43.0	+0.5
BRZS	Berezniki	81.39	322	*e*P		P		00 51 42.9	0.0
	baz=321								
BRZS	Berezniki	81.39	322	*e*P		P		00 51 42.9	0.0
PMR	Palmer	81.70	26	P		P		00 51 44.7	+0.5
PMR	Palmer	81.70	26	P		P		00 51 44.7	+0.5
IMAR	Indian Mountai	81.75	21	P		P		00 51 45.4	+1.0
SML	Sawmill	82.14	26	P		P		00 51 48.0	+1.4
NRIK	Noril'sk	82.23	342	P		P		00 51 47.5	+0.6
	comp=Z,10nm,0.8s,baz=118,slow=4.8,SNR=22								
NRIK				LR		LR		01 29 38.7	
	comp=Z,299nm,18.1s,baz=190,slow=37								
NRIK	Noril'sk	82.23	342	*ce*P		P		00 51 47.8	+0.9
NRIK				pmax		pmax			
	comp=Z,13nm,1.0s								
RND	Reindeer	82.53	25	P		P		00 51 48.5	-0.2
RND				pmax		pmax			
	comp=Z,19nm,1.0s								
RND	Reindeer	82.53	25	P		P		00 51 48.5	-0.2
RND				IAmb		IAmb		00 51 53.3	
	comp=Z,20nm,1.0s								
WRH	Wood River Hil	83.26	24	P		P		00 51 51.8	-0.5
CCB	Clear Creek Bu	83.44	24	P		P		00 51 53.4	+0.1
CCB				IAmb		IAmb		00 51 57.6	
	comp=Z,18nm,1.1s								
COLA	College	83.51	23	*i* P		P		00 51 55.4	+1.8
COLA				pmax		pmax			
	comp=Z,11nm,1.0s								
BRVK	Borovoye	83.63	324	*ce*P		P		00 51 55.5	+1.0
BRVK				pmax		pmax			
	comp=Z,11nm,1.3s								
BRVK	Borovoye	83.63	324	P		P		00 51 54.7	+0.2
BRVK				IAmb		IAmb		00 52 19.8	
	comp=Z,13nm,1.1s								
IL31		83.85	24	P		P		00 51 54.7	-0.6
IL31				IAmb		IAmb		00 51 59.3	
	comp=Z,9.3nm,0.9s								
ILAR	Eielson Array	83.85	24	P		P		00 51 54.7	-0.7
	comp=Z,5.7nm,0.9s,baz=254,slow=4.0,SNR=28								
ILAR	Eielson Array	83.85	24	P		P		00 51 54.4	-1.0
ILAR	Eielson Array	83.85	24	P		P		00 51 54.4	-1.0
MAW	Mawson	83.92	202	P		P		00 51 55.6	0.0
	comp=Z,2.5nm,0.8s,baz=98,slow=11,SNR=4.1								
MAW				LR		LR		01 27 31.6	
	comp=Z,151nm,19.4s,baz=62,slow=34								
BCAR	Beaver Creek A	85.43	26	P		P		00 52 03.8	+0.3
BMAR	Burnt Mountain	85.67	21	P		P		00 52 05.7	+1.2
HRA	Herat	86.01	305	P		P		00 52 06.7	-0.5
HRA				IAmb		IAmb		00 52 10.4	
	comp=Z,9.6nm,1.1s								
EGAK	Eagle	86.18	24	P		P		00 52 07.0	0.0
QSPA	South Pole Qui	86.56	180	P		P		00 52 08.6	-0.5
QSPA				IAmb		IAmb		00 52 14.8	
	comp=Z,20nm,1.5s								
ABKAR	Akbulak array	89.38	319	P		P		00 52 22.5	-0.2
ABKAR	Akbulak array	89.38	319	P		P		00 52 21.8	-0.9
GEYT	Alibeck	89.68	308	LR		LR		01 34 38.3	
	comp=Z,226nm,20.7s,baz=225,slow=37								
INK	Inuvik	89.94	22	P		P		00 52 25.9	+1.1
	comp=Z,1.4nm,0.8s,baz=280,slow=7.0,SNR=3.1								
ARU	Arti	90.88	326	*d i* P		P		00 52 27.9	-1.7
ARU								00 56 04.3	
ARU				S		SKSac		01 02 59.6	-0.5
ARU				SS		SS		01 09 24.5	-3.6
ARU				pmax		pmax			
	comp=Z,10.0nm,1.8s								
ARU				MLR		MLR			
	comp=Z,308nm,21.0s								
SYO	Syowa Base	92.37	200	*e*P		P		00 52 35.2	-1.0
SYO	Syowa Base	92.37	200	*e*PcP		PcP		00 52 38.0	+1.1
SYO	Syowa Base	92.37	200	*e*X		P		00 52 45.1	+8.9
BELG	Belogornoye	97.24	322	*i* P		Pdif		00 53 00.6	+1.7
MAK	Makhachkala	97.86	313	*e*P		P		00 52 56.7	-5.1
MAK				*e*				00 57 00.5	
MAK				*e*SSS		SSS		01 14 56.1	
MAK				pmax		pmax			
	comp=Z,118nm,0.8s								
MAK				MLR		MLR			
	comp=Z,132nm,16.0s								
KBZ	Khabaz	101.15	314	*i* P		Pdif		00 53 17.4	+0.9
KBZ				pmax		pmax			
	comp=Z,3.0nm,1.1s								
KIV	Kislovodsk	101.28	314	*e*P		Pdif		00 53 16.6	-0.7
KIV				pmax		pmax			
	comp=Z,14nm,1.0s								
TORD	Torodi Ar. Bea	142.56	287	PKhKP		PKPpre		00 58 55.4	
	comp=Z,0.3nm,0.6s,baz=58,slow=1.8,SNR=2.4								
SDV	Santo Domingo	144.07	80			PKPbc		00 59 01.9	+0.8
HUMP	Col San Antoni	146.33	62			PKPdf		00 59 06.5	-0.1
SAML	Samuel	149.25	114	PKP2		PKPbc		00 59 16.2	+0.4
SAML	Samuel	149.25	114			PKPbc		00 59 16.2	+0.4
KIC	Kosan Boka	149.81	277	*e*PKP2		PKPbc		00 59 17.6	+0.4
	comp=Z,10nm,1.1s								
DBIC	Dimbokro	149.90	277	PKPbc		PKiKP		00 59 18.1	-0.3
	comp=Z,2.8nm,0.8s,baz=93,slow=2.2,SNR=3.7								
DBIC	Dimbokro	149.90	277	PKP2		PKPbc		00 59 17.6	+0.1
DBIC	Dimbokro	149.90	277			PKPbc		00 59 17.6	+0.1
TIC	Toumodi	150.06	277	*e*PKP2		PKPbc		00 59 17.8	-0.1
LIC	Lamto	150.10	277	*e*PKP2		PKiKP		00 59 18.8	0.0
	comp=Z,74nm,1.6s								

*HEL **30** 00:40:19.2, 67°.82N×20°.31E, h0km, Explosion*
ISC 30 00:40:18.3±0.9, 67°.81N±0°.03×20°.27E±0°.03, h0km, n25, σ0s74/29, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.15	10	P	Pg	00 40 21.2	+0.1
KUA				S	Sg	00 40 23.2	+0.2
KUA	Kurravaara	0.15	10	*i* P	Pg	00 40 21.2	+0.1
KUA				*i* S	Sg	00 40 23.2	+0.2
RATU	Laukkuluspa	0.26	273	P	Pg	00 40 22.9	-0.4
RATU	Laukkuluspa	0.26	273	*i* P	Pg	00 40 22.9	-0.4
KOVU	Salmi	0.42	355	P	Pg	00 40 26.0	-0.3
KOVU	Salmi	0.42	355	*i* P	Pg	00 40 26.0	-0.3
NIKU	Nikkaluokta	0.47	278	P	Pg	00 40 26.8	-0.5
NIKU	Nikkaluokta	0.47	278	*i* P	Pg	00 40 26.8	-0.5
LANU	Lannavaara	0.69	69	P	Pg	00 40 31.6	+0.1
LANU	Lannavaara	0.69	69	*e*P	Pg	00 40 31.5	-0.1
DUNU	Dundret	0.70	170	P	Pg	00 40 31.6	-0.1
DUNU	Dundret	0.70	170	*i* P	Pg	00 40 31.6	-0.1
SALU	Saltoluokta	0.80	238	P	Pg	00 40 33.2	-0.4
SALU	Saltoluokta	0.80	238	*i* P	Pg	00 40 33.2	-0.4
SALU	Saltoluokta	0.80	238	*e*P	Pg	00 40 33.0	-0.7
KIF	Kilpisjarvi	1.22	9	*e*P	Pg	00 40 41.3	-0.2
KIF	Kilpisjarvi	1.22	9	*e*P	Pg	00 40 41.4	-0.2
PAJU	Pajala	1.35	124	P	Pg	00 40 43.5	-0.7
PAJU	Pajala	1.35	124	*e*P	Pg	00 40 43.5	-0.7
ERTU	Ertsjaerv	1.47	148	*e*P	Pn	00 40 45.4	-0.6
KALU	Kalix	2.31	147	*e*PB	Pn	00 40 59.1	+1.5
TOF	Tornio	2.36	136	*e*PB	Pn	00 40 59.7	+1.5
SGF	Sodankyl	2.42	96	*e*PB	Pb	00 41 0.5	-1.2
SGF				*e*SB	Sb	00 41 32.9	-0.2
RNF	Rovaniemi	2.54	116	*e*PB	Pb	00 41 03.0	-1.7
RNF				*e*SG	Sb	00 41 37.0	+0.6
BURU	Burvik	3.27	172	*e*PG	Pb	00 41 18.2	+1.1

UPP 30 00:40:25.0±0.4, 67°.81N×20°.22E, h2km±9km, ML2.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.15	18	P	Pg	00 40 27.9	0.0
KUA				S	Sg	00 40 30.0	+0.2
RATU	Laukkuluspa	0.24	273	P	Pg	00 40 29.6	0.0
KOVU	Salmi	0.41	357	S	Sg	00 40 38.5	+0.3
PAJU	Pajala	1.37	124	P	Pn	00 40 50.2	-1.0

*HEL **30** 00:47:13.9, 67°.89N×19°.98E, h0km, ML1.9, Explosion*
ISC 30 00:47:14.9±0.9, 67°.83N±0°.03×20°.26E±0°.03, h0km, n31, σ0s94/37, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.25	269	P	Pg	00 47 19.6	-0.1
RATU	Laukkuluspa	0.25	269	*i* P	Pg	00 47 19.6	-0.1
KOVU	Salmi	0.40	355	P	Pg	00 47 22.2	-0.3
KOVU	Salmi	0.40	355	*i* P	Pg	00 47 22.2	-0.3
NIKU	Nikkaluokta	0.46	275	P	Pg	00 47 23.5	-0.3
NIKU	Nikkaluokta	0.46	275	*i* P	Pg	00 47 23.5	-0.3
LANU	Lannavaara	0.69	71	P	Pg	00 47 28.3	+0.2
LANU	Lannavaara	0.69	71	*e*P	Pg	00 47 28.1	+0.1
LANU				*e*S	Sg	00 47 37.6	+0.6
DUNU	Dundret	0.72	170	P	Pg	00 47 28.8	+0.2
DUNU	Dundret	0.72	170	*i* P	Pg	00 47 28.9	+0.2
SALU	Saltoluokta	0.81	237	P	Pg	00 47 30.0	-0.3
SALU	Saltoluokta	0.81	237	*i* P	Pg	00 47 30.0	-0.3
SALU	Saltoluokta	0.81	237	*e*P	Pg	00 47 29.9	-0.5
KIF	Kilpisjarvi	1.20	9	*e*PB	Pb	00 47 37.6	-0.8
KIF				MSG		00 47 50.5	
	comp=Z,11nm,0.2s						
KIF				*e*S	Sg	00 47 53.1	-0.2
KIF	Kilpisjarvi	1.20	9	*e*P	Pb	00 47 37.8	-0.6
PAJU	Pajala	1.37	125	P	Pn	00 47 40.4	-0.8
PAJU	Pajala	1.37	125	*e*P	Pn	00 47 40.4	-0.8
ERTU	Ertsjaerv	1.49	149	P	Pn	00 47 42.5	-0.3
ERTU	Ertsjaerv	1.49	149	*e*P	Pn	00 47 42.4	-0.4
ERTU				*e*SN	Sn	00 48 03.6	+0.7
HARU	Harads	1.70	170	P	Pn	00 47 46.1	+0.5
HARU	Harads	1.70	170	*e*P	Pn	00 47 46.1	+0.5
KALU	Kalix	2.33	147	P	Pn	00 47 55.9	+1.5
KALU	Kalix	2.33	147	*e*PB	Pn	00 47 55.9	+1.5
KALU				*e*SB	Sb	00 48 26.8	-0.1
TOF	Tornio	2.38	136	*e*PB	Pn	00 47 56.8	+1.8
TOF				MSG		00 48 27.5	
	comp=Z,4.3nm,0.2s						
TOF				*e*SG	Sb	00 48 29.2	+0.9
SJUU	Sjulsmark	2.39	166	P	Pn	00 47 56.5	+1.3
SJUU	Sjulsmark	2.39	166	*e*P	Pn	00 47 56.5	+1.3
SGF	Sodankyl	2.43	96	*e*PB	Pb	00 47 58.1	-1.3
RNF	Rovaniemi	2.55	116	*e*PB	Pb	00 47 59.9	-1.6
RNF				*e*SG	Sb	00 48 33.9	+0.5
ARA0	ARCESS Array S	2.57	46	*e*P	Pn	00 47 59.0	+1.3
BURU	Burvik	3.29	172	*e*P	Pn	00 48 09.7	+2.1
KU6	Riekki	4.20	111	*e*SG	Sg	00 49 28.1	-1.5

UPP 30 00:47:17.7±0.2, 67°.86N×20°.21E, h0km, ML2.2, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RATU	Laukkuluspa	0.24	261	P	Pg	00 47 22.4	+0.3
RATU				S	Sg	00 47 25.7	+0.5
RATU	Laukkuluspa	0.24	261	*i* S	Pg	00 47 22.3	+0.1
RATU	Laukkuluspa	0.24	261	S	Pg	00 47 22.3	+0.1
KOVU	Salmi	0.36	357	P	Pg	00 47 24.7	+0.1
KOVU				S	Sg	00 47 29.6	+0.3
NIKU	Nikkaluokta	0.44	271	P	Pg	00 47 26.2	0.0
SALU	Saltoluokta	0.81	234	P	Pg	00 47 32.8	-0.4

IDC 30 00:51:16.4±4.4, 5°.42S×147°.24E, h184km±54km, mb2.9/2, mb1 3.1/4, mb1mx2.9/39, mbtmp3.5/4, Error ellipse: s-maj=98.5km s-min=37.2km az=112.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.96	181	P	Pn	00 52 19.1	+1.9
	1.1nm,0.3s,baz=346,slow=17,SNR=2.0						
PMG				S	Sn	00 53 04.6	-0.3
	5.5nm,0.3s,baz=15,slow=20,SNR=12						
WRA	Warramunga Arr	19.13	220	P	P	00 55 25.9	+0.2
	0.5nm,0.3s,baz=44,slow=11,SNR=20						
ASAR	Alice Springs	22.23	214	P	P	00 55 58.7	+0.4
	1.1nm,0.8s,baz=47,slow=7.4,SNR=11						
MKAR	Makanchi Array	77.20	320	P	P	01 02 49.9	-0.2
	0.2nm,0.4s,baz=108,slow=7.6,SNR=1.6						
TORD	Torodi Ar. Bea	145.17	285	PKPbc	PKPbc	01 10 31.6	-1.4
	0.3nm,0.6s,baz=64,slow=2.6,SNR=5.3						

*NEIC **30** 01:23:20.4±1.6, 3°.2N±0°.1×83°.1W±0°.1, h10km±1km, mb4.1/7, Error ellipse: s-maj=26.8km s-min=13.2km az=222.0*
*IDC **30** 01:23:30.8±6.4, 4°.46N×82°.64W, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.7/24, mbtmp3.7/5, ML2.6/1, MS3.7/5, Ms1 3.7/5, ms1mx3.3/21, Error ellipse: s-maj=169.0km s-min=30.5km az=14.0*
ISC 30 01:23:21.6±1.3, 3°.3N±0°.1×83°.07W±0°.10, h10km, n25, σ1s62/17, mb4.1/6, MS3.8/5, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTAV	Otavalo	5.51	123		Pn	01 24 43.6	-0.6
HDC	Heredia	6.76	351	Pn	Pn	01 25 00.3	-0.7
JTS	Las Juntas de	7.21	345		Pn	01 25 06.4	-0.7
ROSC	El Rosal	8.86	80	Pn	Pn	01 25 32.2	+2.0
	1.6nm,0.3s,baz=253,slow=17,SNR=1.7						
ROSC				Sn	Sn	01 27 10.2	-0.2
	1.4nm,0.3s,baz=342,slow=19,SNR=1.2						
ROSC	El Rosal	8.86	80		Pn	01 25 29.3	-0.8
SDV	Santo Domingo	13.56	65		Pn	01 26 35.0	+0.7
PETF	Flores	15.11	334	Pn	Pn	01 26 54.9	-0.3
CCIG	Comitan	15.70	326	Pn	Pn	01 27 02.7	-0.5
TLIG	Tlapa	20.80	314	P	P	01 28 02.3	-1.1
GCPR	Guaynabo City	22.35	47	P	P	01 28 18.4	-1.5
GCPR				IAmb	IAmb	01 28 25.7	
	comp=Z,9.9nm,1.1s						
SAML	Samuel	23.25	122	P	P	01 28 29.1	-0.2
LPAZ	La Paz	24.41	143	LR	LR	01 40 35.7	
	comp=Z,167nm,18.6s,baz=290,slow=41						
H03N2	Juan Fernandez	36.73	174	T	T	02 09 39.7	
	baz=358						
H03N1	Juan Fernandez	36.73	174	T	T	02 09 40.6	
	baz=358						
H03N3	Juan Fernandez	36.75	174	T	T	02 09 39.0	
	baz=358,SNR=4.9						
CPUP	Villa Florida	38.55	141	LR	LR	01 49 53.6	
	comp=Z,132nm,18.7s,baz=232,slow=40						
SDCO	Great Sand Dun	39.99	332	P	P	01 30 55.0	-1.9
SDCO				IAmb	IAmb	01 31 03.2	
	comp=Z,3.9nm,1.0s						
PDAR	Pinedale Array	45.86	333	P	P	01 31 48.0	+3.7
	comp=Z,0.3nm,0.7s,baz=145,slow=9.8,SNR=2.3						
NVAR	Mina Array Bea	47.50	322	P	P	01 32 02.7	+5.4
	comp=Z,1.5nm,0.8s,baz=131,slow=9.7,SNR=9.4						
NVAR	Mina Array Bea	47.50	322	P	P	01 31 57.2	-0.1
YMP	Mirror Lake PI	47.67	334	P	P	01 31 57.0	-1.6
ULM	Lac du Bonnet	48.04	349	P	P	01 32 03.4	+2.4
	comp=Z,2.2nm,0.8s,baz=142,slow=12,SNR=3.5						
PPT	Papeete	68.74	250	LR	LR	01 59 03.6	
	comp=Z,58nm,18.2s,baz=44,slow=31						
ILAR	Eielson Array	76.11	337	P	P	01 35 15.7	+6.3
	comp=Z,0.1nm,0.5s,baz=132,slow=4.0,SNR=1.9						
ILAR				LR	LR	02 10 52.9	
	comp=Z,39nm,18.4s,baz=150,slow=38						
NOA	NORSAR Array B	89.23	29	LR	LR	02 12 14.8	
	comp=Z,17nm,20.9s,baz=55,slow=33						

*IDC **30** 01:27:05.2±2.1, 20°.61S×70°.35W, h0km, mb3.9/1, mb1 3.8/2, mb1mx3.5/22, mbtmp3.8/2, ML3.4/1, Error ellipse: s-maj=111.8km s-min=31.0km az=121.0*
*NEIC **30** 01:27:06.4±1.5, 19°.92S±0°.05×71°.13W±0°.10, h32km±5km, Error ellipse: s-maj=13.2km s-min=7.2km az=93.0*
*GUC **30** 01:27:07.7±0.6, 19°.94S×71°.10W, h40km±11km, ML3.5*
ISC 30 01:27:05.8±1.8, 19°.93S±0°.04×71°.11W±0°.07, h26km±13km, n49, σ0s88/58, 7C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA02	Huaiquique	0.98	110	*e*P	Pb	01 27 24.3	+0.1
TA02				*e*S	Sb	01 27 37.0	+0.3
TA02				IAML		01 27 38.5	
	comp=N,4μm,0.2s						
PSGC	Pisagua	0.98	70	⇓*e*P	Pn	01 27 23.9	-0.2
PSGC				*i* S	Sn	01 27 37.0	-0.1
PSGC				IAML		01 27 39.8	
	comp=N,1μm,0.5s						
PSGCX	Pisagua	0.98	70		Pn	01 27 23.5	-0.5
TA01	Diego Aracena	1.07	126	⇑*i* P	Pn	01 27 25.7	+0.6
TA01				*i* S	Sn	01 27 39.2	-0.1
TA01				IAML		01 27 40.2	
	comp=E,2μm,0.3s						
TA01	Diego Aracena	1.07	126		Pn	01 27 25.2	0.0
HMBC	Humberstone	1.20	107	*e*P	Pn	01 27 27.6	+0.6
HMBC				*i* S	Sb	01 27 43.4	+0.3
HMBC				IAML		01 27 51.6	
	comp=E,2μm,0.6s						
PATCX	Punta Patache	1.26	135	⇑*i* P	Pn	01 27 28.5	+0.7
PATCX				*i* S	Sn	01 27 44.0	0.0
PATCX				IAML		01 27 56.1	
	comp=E,850nm,0.6s						
PATCX	Punta Patache	1.26	135		Pn	01 27 28.0	+0.2
PB11	IPOC Station P	1.38	83	⇑*i* P	Pn	01 27 30.3	+0.8
PB11				*e*S	Sb	01 27 47.8	-0.4
PB11				IAML		01 27 49.5	
	comp=N,3μm,0.3s						
PB11	IPOC Station P	1.38	83		Pn	01 27 29.8	+0.3
MNMC	Minye Minye	1.63	61	⇑*i* P	Pn	01 27 34.4	+1.3
MNMC				*e*S	Sb	01 27 54.9	-0.9
MNMC				IAML		01 28 05.7	
	comp=N,2μm,0.7s						
MNMC	Minye Minye	1.63	61		Pn	01 27 34.1	+0.9
AP01	Chacalluta	1.71	25	*e*P	Pn	01 27 35.4	+1.5
AP01				IAML		01 28 04.1	
	comp=N,1μm,0.3s						
AP01	Chacalluta	1.71	25	Pn	Pn	01 27 34.6	+0.7
GO01	Chusmiza	1.82	82	*i* P	Pn	01 27 37.2	+1.3
GO01				*e*S	Sb	01 28 00.7	-0.7
GO01	Chusmiza	1.82	82		Pn	01 27 36.6	+0.7
PB08	IPOC Station P	1.85	97	*e*P	Pn	01 27 37.3	+1.1
PB08				*e*S	Sb	01 28 00.9	-1.1
PB08				IAML		01 28 04.4	
	comp=N,511nm,0.2s						
PB08	IPOC Station P	1.85	97		Pn	01 27 36.5	+0.4
PB01	IPOC Station P	1.88	126	⇑*i* P	Pn	01 27 37.6	+1.3
PB01				*e*S	Sn	01 27 59.7	+0.5
PB01				IAML		01 28 02.2	
	comp=E,538nm,0.3s						
PB01	IPOC Station P	1.88	126		Pn	01 27 36.9	+0.5
PB07	IPOC Station P	2.12	148	*e*P	Pn	01 27 40.5	+0.8
PB07				IAML		01 28 22.4	
	comp=E,303nm,0.4s						
PB07	IPOC Station P	2.12	148		Pn	01 27 40.2	+0.4
PB16	IPOC Station P	2.19	44	*e*P	Pn	01 27 42.8	+1.7
PB16				IAML		01 28 22.5	
	comp=E,383nm

*ISK **30** 01:35:23.2,38°.63N×26°.12E,h15km,ML3.7/39*
*ATH **30** 01:35:23.7,38°.58N×26°.09E,h29km±1km,ML3.5/12,Error ellipse: s-maj=1.6km s-min=0.8km az=358.0*
*THE **30** 01:35:25.0,38°.61N×26°.11E,h19km±1km,ML3.4/5,Error ellipse: s-maj=1.8km s-min=0.5km az=331.0*

ISC 30 01:35:24.3±1.0,38°.62N±0°.02×26°.13E±0°.02,h15km±8km, n174,σ0°60/190,7C-22D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSRA	**Psara**	**0.45**	**261**	P	**Pg**	**01 35 33.4**	**+0.2**
PSRA				S	**Sg**	**01 35 39.3**	**0.0**
PSRA				AML	AML	01 35 40.0	
	comp=E,11570μm,0.1s						
PSRA				AML	AML	01 35 44.8	
	comp=N,13912μm,0.2s						
URLA	**Izmir**	**0.45**	**124**	PG	**Pg**	**01 35 33.2**	**0.0**
URLA				SG	**Sg**	**01 35 39.7**	**+0.4**
SIGR	**SIGRI**	**0.63**	**341**	P	**Pg**	**01 35 36.2**	**-0.5**
SIGR				S	**Sb**	**01 35 46.6**	**+0.8**
SIGR				AML	AML	01 35 48.8	
	comp=N,34832μm,0.4s						
SIGR				AML	AML	01 35 49.0	
	comp=E,39772μm,0.5s						
SIGR	**SIGRI**	**0.63**	**341**	PG	**Pg**	**01 35 35.9**	**-0.8**
SIGR	**SIGRI**	**0.63**	**341**	P	**Pg**	**01 35 36.4**	**-0.3**
SIGR				S	**Sb**	**01 35 46.6**	**+0.8**
PRK	**Paraskevi**	**0.64**	**10**	P	**Pg**	**01 35 37.3**	**+0.5**
PRK				S	**Sn**	**01 35 48.0**	**-0.8**
PRK				AML	AML	01 35 50.1	
	comp=N,34734μm,0.9s						
PRK				AML	AML	01 35 50.2	
	comp=E,24652μm,0.4s						
DKL	**Dikili**	**0.76**	**53**	PG	**Pb**	**01 35 38.5**	**-0.7**
DKL				SG	**Sb**	**01 35 49.2**	**-0.2**
SMG	**Samos**	**1.06**	**148**	P	**Pb**	**01 35 44.1**	**-0.3**
SMG				S	**Sb**	**01 35 58.4**	**+0.3**
SMG				AML	AML	01 36 00.5	
	comp=E,23490μm,0.5s						
SMG				AML	AML	01 36 01.0	
	comp=N,23067μm,0.4s						
SMG	**Samos**	**1.06**	**148**	P	**Pb**	**01 35 43.8**	**-0.6**
SMG				S	**Sb**	**01 35 58.6**	**+0.4**
EZN	**Ezine**	**1.22**	**7**	PN	**Pn**	**01 35 46.1**	**-0.8**
EZN				SN	**Sb**	**01 36 02.8**	**+0.2**
EZN	**Ezine**	**1.22**	**7**	P	**Pn**	**01 35 46.0**	**-0.8**
EZN				S	**Sb**	**01 36 02.5**	**-0.1**
	comp=N,2μm,0.5s						
BOZC	**Bozcaada**	**1.23**	**357**	PN	**Pn**	**01 35 46.2**	**-0.8**
BOZC				SN	**Sb**	**01 36 02.9**	**0.0**
GCAM	**G?zelcaml?**	**1.26**	**136**	PN	**Pn**	**01 35 46.9**	**-0.5**
EFSA	**Agios Efstrati**	**1.28**	**317**	P	**Pb**	**01 35 48.1**	**-0.1**
TNSA	**Tinos**	**1.31**	**216**	P	**Pn**	**01 35 47.5**	**-0.7**
AKS	**Akhisar**	**1.34**	**78**	PN	**Pn**	**01 35 48.1**	**-0.5**
GOMA	**Golmarmara-Man**	**1.41**	**86**	PN	**Pn**	**01 35 48.9**	**-0.5**
KARY	**Karystos**	**1.45**	**247**	P	**Pn**	**01 35 49.6**	**-0.5**
KARY				AML	AML	01 36 12.1	
	comp=E,1969μm,0.6s						
KARY				AML	AML	01 36 12.4	
	comp=N,2000μm,0.6s						
KARY	**Karystos**	**1.45**	**247**	P	**Pn**	**01 35 49.4**	**-0.6**
KARY				S	**Sn**	**01 36 07.1**	**-1.7**
	comp=N,968nm,0.6s						
LIA	**Limnos Island**	**1.48**	**331**	P	**Pn**	**01 35 50.5**	**+0.2**
LIA				AML	AML	01 36 13.2	
	comp=E,2883μm,0.6s						
LIA				AML	AML	01 36 14.1	
	comp=N,2306μm,0.7s						
LIA	**Limnos Island**	**1.48**	**331**	P	**Pn**	**01 35 50.4**	**0.0**
LIA				S	**Sn**	**01 36 08.8**	**-0.6**
	comp=N,1μm,0.6s						
AYDB	**Zeytinkoy-Aydi**	**1.54**	**115**	PN	**Pn**	**01 35 50.9**	**-0.5**
GADA	**Gvkgeada**	**1.58**	**354**	PN	**Pn**	**01 35 51.3**	**-0.6**
GADA	**Gvkgeada**	**1.58**	**354**	P	**Pn**	**01 35 51.5**	**-0.4**
KYMI	**Kymi, Euboea I**	**1.59**	**271**	P	**Pn**	**01 35 51.6**	**-0.3**
KYMI				AML	AML	01 36 26.3	
	comp=N,470μm,0.6s						
KYMI				AML	AML	01 36 32.6	
	comp=E,502μm,0.7s						
KYMI	**Kymi, Euboea I**	**1.59**	**271**	P	**Pn**	**01 35 51.4**	**-0.5**
APE	**Apeiranthos**	**1.61**	**197**	P	**Pn**	**01 35 51.9**	**-0.5**
APE				AML	AML	01 36 18.6	
	comp=N,1512μm,0.5s						
APE				AML	AML	01 36 24.8	
	comp=E,1314μm,0.5s						
APE	**Apeiranthos**	**1.61**	**197**	⇓P	**Pn**	**01 35 51.7**	**-0.6**
APE				⇓S	**Sn**	**01 36 12.3**	**-0.6**
APE	**Apeiranthos**	**1.61**	**197**	PN	**Pn**	**01 35 51.9**	**-0.5**
APE	**Apeiranthos**	**1.61**	**197**	P	**Pn**	**01 35 51.8**	**-0.5**
APE				S	**Sn**	**01 36 12.3**	**-0.6**
	comp=E,715nm,0.5s						
BALB	**Balikesir**	**1.71**	**53**	PN	**Pn**	**01 35 52.3**	**-1.2**
EREA	**Eretria**	**1.73**	**264**	P	**Pn**	**01 35 53.8**	**-0.1**
EREA				AML	AML	01 36 22.4	
	comp=N,905μm,0.5s						
EREA				AML	AML	01 36 23.4	
	comp=E,760μm,0.4s						
EREA	**Eretria**	**1.73**	**264**	P	**Pn**	**01 35 53.6**	**-0.3**
YKAV	**Yalikavak-Bodr**	**1.75**	**148**	PN	**Pn**	**01 35 53.9**	**-0.2**
AMGA	**Amorgos Island**	**1.79**	**186**	P	**Pn**	**01 35 54.0**	**-0.7**
AMGA				AML	AML	01 36 26.4	
	comp=N,1461μm,0.5s						
AMGA				AML	AML	01 36 31.9	
	comp=E,1976μm,0.6s						
AMGA	**Amorgos Island**	**1.79**	**186**	P	**Pn**	**01 35 53.7**	**-1.0**
GELI	**Tayfur-Gelibol**	**1.80**	**8**	PN	**Pn**	**01 35 54.5**	**-0.3**
DION	**Dionisos Attik**	**1.81**	**253**	P	**Pn**	**01 35 54.7**	**-0.2**
DION				AML	AML	01 36 26.1	
	comp=N,3651μm,0.6s						
DION				AML	AML	01 36 26.5	
	comp=E,3213μm,0.8s						
DION	**Dionisos Attik**	**1.81**	**253**	P	**Pn**	**01 35 54.6**	**-0.3**
BODT	**Bodrum**	**1.81**	**148**	PN	**Pn**	**01 35 54.9**	**-0.1**
BODT	**Bodrum**	**1.81**	**148**	P	**Pn**	**01 35 55.0**	**-0.1**
LPK	**Lapseki**	**1.82**	**15**	PN	**Pn**	**01 35 54.7**	**-0.5**
AOS	**Alonnisos**	**1.84**	**288**	P	**Pn**	**01 35 55.4**	**+0.1**
AOS	**Alonnisos**	**1.84**	**288**	PN	**Pn**	**01 35 55.0**	**-0.4**
AOS	**Alonnisos**	**1.84**	**288**	P	**Pn**	**01 35 55.5**	**+0.1**
MLSB	**Milas**	**1.85**	**135**	PN	**Pn**	**01 35 55.4**	**-0.2**
PTL	**Penteli**	**1.87**	**253**	P	**Pn**	**01 35 55.4**	**-0.4**
GONE	**Gonen-Balikesi**	**1.87**	**40**	PN	**Pn**	**01 35 55.6**	**-0.2**
SMTH	**Samothraki Isl**	**1.91**	**346**	P	**Pn**	**01 35 56.1**	**-0.3**
SMTH	**Samothraki Isl**	**1.91**	**346**	P	**Pn**	**01 35 55.9**	**-0.5**
ATHU	**Athens Univers**	**1.95**	**251**	P	**Pn**	**01 35 56.5**	**-0.4**
ATHU	**Athens Univers**	**1.95**	**251**	P	**Pn**	**01 35 56.5**	**-0.4**
VLY	**Voula,Athens**	**1.99**	**248**	P	**Pn**	**01 35 57.1**	**-0.3**
KULA	**Kula-Manisa**	**1.99**	**92**	PN	**Pn**	**01 35 57.3**	**-0.2**
KULA	**Kula-Manisa**	**1.99**	**92**	P	**Pn**	**01 35 57.7**	**+0.2**
ATH	**Athens Observa**	**2.00**	**252**	AML	AML	01 36 32.2	
	comp=N,1192μm,0.7s						
ATH				AML	AML	01 36 34.2	
	comp=E,1018μm,0.9s						
ERIK	**Erikli-Kesan**	**2.08**	**8**	PN	**Pn**	**01 35 58.3**	**-0.3**
ENEZ	**Enez**	**2.12**	**1**	PN	**Pn**	**01 35 58.9**	**-0.3**
ENEZ	**Enez**	**2.12**	**1**	P	**Pn**	**01 35 59.2**	**0.0**
DST	**Dursunbey**	**2.18**	**62**	PN	**Pn**	**01 35 59.9**	**-0.2**
NIS1	**Nisyros Isl.**	**2.18**	**157**	PN	**Pn**	**01 36 00.0**	**0.0**
EDC	**Edincik**	**2.19**	**37**	PN	**Pn**	**01 36 00.1**	**-0.1**
CMBO	**Columbo, Santo**	**2.21**	**195**	P	**Pn**	**01 36 00.1**	**-0.4**
CMBO	**Columbo, Santo**	**2.21**	**195**	P	**Pn**	**01 35 59.8**	**-0.7**
DATC	**Datca-Mugla**	**2.22**	**146**	PN	**Pn**	**01 36 00.6**	**+0.1**
RKY	**Sarkoy-Tekirda**	**2.22**	**21**	PN	**Pn**	**01 36 00.5**	**-0.2**
THT2	**Imerovigli**	**2.25**	**195**	P	**Pn**	**01 36 00.4**	**-0.6**
VILL	**Villia**	**2.26**	**259**	P	**Pn**	**01 36 01.1**	**-0.1**
YER	**Yerkesik**	**2.26**	**130**	PN	**Pn**	**01 36 01.2**	**0.0**
YER	**Yerkesik**	**2.26**	**130**	P	**Pn**	**01 36 01.9**	**+0.7**
SAP3	**Santorini-Thir**	**2.26**	**196**	P	**Pn**	**01 36 00.7**	**-0.5**
THR8	**Santorini-Mono**	**2.26**	**193**	P	**Pn**	**01 36 00.3**	**-0.9**
THAS	**Thassos island**	**2.27**	**332**	P	**Pn**	**01 36 01.0**	**-0.3**
THAS	**Thassos island**	**2.27**	**332**	P	**Pn**	**01 36 00.7**	**-0.5**
THAS				S	**Sn**	**01 36 29.7**	**+0.8**
	comp=E,178nm,0.7s						
ANAF	**Anafi Island**	**2.27**	**187**	P	**Pn**	**01 36 00.8**	**-0.5**
ANAF	**Anafi Island**	**2.27**	**187**	P	**Pn**	**01 36 00.3**	**-1.0**
THR3	**Thira Island,**	**2.28**	**195**	P	**Pn**	**01 36 00.3**	**-1.1**
SIMA	**Simav-Kutahya**	**2.28**	**77**	PN	**Pn**	**01 36 01.4**	**-0.1**
THR5	**Thira Island,**	**2.28**	**196**	P	**Pn**	**01 36 00.9**	**-0.5**
ALN	**Alexandroupoli**	**2.28**	**358**	PN	**Pn**	**01 36 01.2**	**-0.2**
ALN	**Alexandroupoli**	**2.28**	**358**	P	**Pn**	**01 36 01.0**	**-0.4**
VIL2	**Platees**	**2.28**	**261**	P	**Pn**	**01 36 01.3**	**-0.1**
SNT5	**Nea Kammeni, S**	**2.28**	**195**	P	**Pn**	**01 36 01.6**	**+0.1**
SNT5	**Nea Kammeni, S**	**2.28**	**195**	P	**Pn**	**01 36 01.1**	**-0.4**
MRMT	**Marmara Adasi**	**2.29**	**29**	PN	**Pn**	**01 36 01.5**	**-0.1**
MHLA	**Plaka, Milos I**	**2.31**	**216**	P	**Pn**	**01 36 00.8**	**-0.9**
PAIG	**Paliouri**	**2.31**	**305**	P	**Pn**	**01 36 01.9**	**+0.1**
PAIG	**Paliouri**	**2.31**	**305**	P	**Pn**	**01 36 01.6**	**-0.2**
THR6	**Thira Island,**	**2.33**	**195**	P	**Pn**	**01 36 01.7**	**-0.4**
MHLO	**Agia Marina, M**	**2.36**	**216**	P	**Pn**	**01 36 01.5**	**-1.0**
MHLO	**Agia Marina, M**	**2.36**	**216**	P	**Pn**	**01 36 01.3**	**-1.2**
NEO	**Neokhori**	**2.37**	**288**	P	**Pn**	**01 36 02.5**	**-0.1**
NEO	**Neokhori**	**2.37**	**288**	P	**Pn**	**01 36 02.0**	**-0.7**
OUR	**Ouranopolis**	**2.39**	**317**	P	**Pn**	**01 36 03.0**	**+0.1**
OUR	**Ouranopolis**	**2.39**	**317**	PN	**Pn**	**01 36 02.7**	**-0.2**
OUR	**Ouranopolis**	**2.39**	**317**	P	**Pn**	**01 36 02.8**	**-0.2**
XOR	**Xorichti**	**2.41**	**289**	P	**Pn**	**01 36 02.8**	**-0.4**
ATAL	**Atalanti**	**2.43**	**273**	P	**Pn**	**01 36 03.7**	**+0.1**
ATAL	**Atalanti**	**2.43**	**273**	P	**Pn**	**01 36 03.5**	**0.0**
SHAP	**Saphane-Kutahy**	**2.45**	**79**	PN	**Pn**	**01 36 03.9**	**0.0**
TURN	**Turunc**	**2.49**	**137**	PN	**Pn**	**01 36 04.5**	**+0.2**
UKOP	**Uzunkopru-Edir**	**2.54**	**9**	PN	**Pn**	**01 36 05.0**	**0.0**
LOUT	**Loutraki**	**2.56**	**257**	P	**Pn**	**01 36 05.2**	**-0.1**
RDO	**Rodhopi**	**2.57**	**350**	PN	**Pn**	**01 36 05.3**	**-0.1**
RDO	**Rodhopi**	**2.57**	**350**	P	**Pn**	**01 36 05.3**	**-0.1**
EPID	**Epidavros**	**2.57**	**248**	P	**Pn**	**01 36 05.1**	**-0.4**
ORLT	**Orhaneli**	**2.58**	**55**	PN	**Pn**	**01 36 05.7**	**+0.1**
GEDZ	**Gediz**	**2.60**	**79**	PN	**Pn**	**01 36 06.0**	**+0.1**
TKR	**Tekirdag**	**2.61**	**24**	PN	**Pn**	**01 36 05.9**	**-0.1**
KRND	**KRANIDI**	**2.65**	**243**	P	**Pn**	**01 36 06.9**	**+0.3**
KRND	**KRANIDI**	**2.65**	**243**	P	**Pn**	**01 36 06.3**	**-0.3**
KAVA	**Kavala**	**2.68**	**333**	P	**Pn**	**01 36 06.8**	**-0.1**
KAVA	**Kavala**	**2.68**	**333**	P	**Pn**	**01 36 06.9**	**-0.1**
DALY	**Dalyan (Mula)**	**2.69**	**131**	PN	**Pn**	**01 36 07.5**	**+0.5**
AXAR	**Agios Charalam**	**2.72**	**274**	P	**Pn**	**01 36 07.9**	**+0.4**
AXAR	**Agios Charalam**	**2.72**	**274**	P	**Pn**	**01 36 07.8**	**+0.4**
PLG	**Polygyros**	**2.72**	**311**	P	**Pn**	**01 36 07.6**	**+0.1**
TVSB	**Tavsanli**	**2.73**	**71**	PN	**Pn**	**01 36 07.9**	**+0.2**
MDNY	**Mudanya-Bursa**	**2.76**	**50**	PN	**Pn**	**01 36 08.2**	**+0.2**
THAL	**Thalero**	**2.78**	**259**	P	**Pn**	**01 36 08.8**	**+0.4**
THAL	**Thalero**	**2.78**	**259**	P	**Pn**	**01 36 08.7**	**+0.4**
CRLT	**Corlu**	**2.80**	**26**	PN	**Pn**	**01 36 08.7**	**+0.1**
DSF	**Desfina**	**2.83**	**267**	P	**Pn**	**01 36 08.8**	**-0.3**
ARG	**Arkhangelos**	**2.88**	**146**	P	**Pn**	**01 36 10.3**	**+0.7**
ARG	**Arkhangelos**	**2.88**	**146**	PN	**Pn**	**01 36 10.0**	**+0.4**
ARG	**Arkhangelos**	**2.88**	**146**	P	**Pn**	**01 36 10.1**	**+0.4**
AGG	**Agios Georgios**	**2.99**	**279**	PN	**Pn**	**01 36 11.4**	**+0.1**
CAME	**Cameli-Denizli**	**3.02**	**123**	PN	**Pn**	**01 36 12.0**	**+0.3**
GUR	**Goura**	**3.05**	**258**	P	**Pn**	**01 36 12.3**	**+0.1**
FETY	**Fethiye**	**3.07**	**129**	PN	**Pn**	**01 36 12.8**	**+0.5**
FETY	**Fethiye**	**3.07**	**129**	P	**Pn**	**01 36 14.1**	**+1.8**
SOH	**Sokhos**	**3.07**	**317**	P	**Pn**	**01 36 12.9**	**+0.5**
SRS	**Serrai**	**3.17**	**323**	P	**Pn**	**01 36 13.9**	**+0.2**
ALIK	**Aliki, Aigiali**	**3.17**	**265**	P	**Pn**	**01 36 14.9**	**+1.2**
KARP	**Karpathos**	**3.17**	**165**	PN	**Pn**	**01 36 13.9**	**+0.2**
KARP	**Karpathos**	**3.17**	**165**	P	**Pn**	**01 36 13.6**	**-0.1**
VLX	**Vlachokerasia**	**3.21**	**248**	P	**Pn**	**01 36 15.0**	**+0.7**
NVR	**Nevrokopi**	**3.24**	**328**	P	**Pn**	**01 36 15.1**	**+0.4**
EFP	**Efpalio**	**3.32**	**268**	P	**Pn**	**01 36 16.3**	**+0.6**
ISK	**Istanbul-Kandi**	**3.33**	**42**	P	**Pn**	**01 36 15.6**	**-0.3**
NPS	**Neapolis**	**3.37**	**187**	P	**Pn**	**01 36 16.1**	**-0.4**
STIA	**Sitia Lasithi**	**3.41**	**180**	P	**Pn**	**01 36 16.9**	**0.0**
IDI	**Anoyia**	**3.46**	**197**	⇓P	**Pn**	**01 36 18.5**	**+0.7**
IDI				⇓S	**Sn**	**01 37 01.4**	**+2.7**
IDI	**Anoyia**	**3.46**	**197**	P	**Pn**	**01 36 17.2**	**-0.6**
LAST	**Lasithi**	**3.49**	**189**	P	**Pn**	**01 36 17.2**	**-0.9**
ZKR	**Zakros**	**3.49**	**179**	P	**Pn**	**01 36 18.1**	**0.0**
RODP	**Rodopos**	**3.59**	**213**	P	**Pn**	**01 36 19.1**	**-0.3**
GRG	**Griva**	**3.70**	**310**	P	**Pn**	**01 36 22.3**	**+1.3**
STIP	**Stip**	**4.31**	**317**	⇓P	**Pn**	**01 36 29.5**	**+0.2**
RAZG	**Razgrad**	**4.96**	**3**	⇓P	**Pn**	**01 36 38.2**	**0.0**
ICOR	**Ion Corvin**	**5.64**	**12**	⇓P	**Pn**	**01 36 47.4**	**-0.2**
TIRR	**Tirgusor**	**6.08**	**16**	⇓P	**Pn**	**01 36 53.8**	**+0.1**
HARR	**Harsova**	**6.22**	**12**	⇓P	**Pn**	**01 36 55.7**	**+0.2**
TPGR	**Topolog**	**6.47**	**15**	⇓P	**Pn**	**01 36 59.3**	**+0.3**
ISR	**Istrita**	**6.51**	**3**	⇓P	**Pn**	**01 37 00.7**	**+1.1**
CFR	**Carcaliu**	**6.73**	**12**	⇓P	**Pn**	**01 37 03.0**	**+0.5**
GRER		**6.79**	**5**	⇓P	**Pn**	**01 37 04.8**	**+1.4**
ARR	**Arges**	**6.84**	**351**	⇓P	**Pn**	**01 37 05.6**	**+1.4**
HERR	**Herculane**	**6.85**	**337**	⇓P	**Pn**	**01 37 04.9**	**+0.7**
VOIR		**6.86**	**354**	⇓P	**Pn**	**01 37 04.8**	**+0.3**
BISRR	**Bisoca**	**6.94**	**3**	⇓P	**Pn**	**01 37 06.5**	**+0.9**
LOT	**Lotru**	**7.05**	**346**	⇓P	**Pn**	**01 37 07.3**	**+0.2**
ODBI	**Odobesti**	**7.18**	**5**	⇓P	**Pn**	**01 37 09.5**	**+0.8**
GZR	**Gura Zlata**	**7.22**	**341**	⇓P	**Pn**	**01 37 09.2**	**-0.2**
PLOR	**Plostina**	**7.24**	**3**	⇓P	**Pn**	**01 37 10.9**	**+1.3**
VRI	**Vrincioaia**	**7.26**	**3**	⇓P	**Pn**	**01 37 11.0**	**+1.1**
DOPR	**Dopca**	**7.37**	**356**	⇓P	**Pn**	**01 37 12.6**	**+1.2**
BZS	**Buzias**	**7.76**	**336**	⇓P	**Pn**	**01 37 16.9**	**+0.2**
TESR	**Tescani**	**7.90**	**3**	⇓P	**Pn**	**01 37 19.9**	**+1.2**
CJR	**Cluj-Napoca**	**8.30**	**348**	⇓P	**Pn**	**01 37 24.4**	**+0.2**
BIZ	**Bicaz**	**8.32**	**360**	⇓P	**Pn**	**01 37 25.2**	**+0.8**
SIRR	**Siria**	**8.33**	**338**	⇓P	**Pn**	**01 37 24.8**	**+0.3**
MILM	**Milestii Mici**	**8.53**	**13**	⇓P	**Pn**	**01 37 28.4**	**+1.2**
DRGR		**8.55**	**344**	⇓P	**Pn**	**01 37 27.8**	**+0.2**

*LJU **30** 01:37:57.8,45°.25N×14°.73E,h12km,ML2.2*
*ROM **30** 01:37:57.2±0.3,45°.15N±0°.02×14°.87E±0°.02,h10km, ML2.7/9,Error ellipse: s-maj=2.0km s-min=1.8km az=237.0*
*RHSSO **30** 01:37:58.2±0.5,45°.22N×14°.68E,h4km±3km,ML2.4/6*
*PRU **30** 01:37:58.8±0.0,45°.22N×14°.60E,h12km*
*VIE **30** 01:37:59.8±0.7,45°.31N×14°.72E,h4km,mb2.1/7,ml2.4/14, Error ellipse: s-maj=5.1km s-min=3.0km az=166.0 25 km E of Rijeka*

ISC 30 01:37:58.3±1.1,45°.25N±0°.01×14°.74E±0°.01,h1km±10km, n80,σ0°97/146,1C-3D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIY	**Rijeka**	**0.19**	**293**	⇑*i* Pg	**Pg**	**01 38 01.9**	**-0.1**
RIY				*e*Sg	**Sg**	**01 38 04.9**	**+0.3**
RIY	**Rijeka**	**0.19**	**293**	*i* Pg	**Pg**	**01 38 02.0**	**-0.1**
RIY				Sg	**Sg**	**01 38 04.1**	**-0.5**
RIY	**Rijeka**	**0.19**	**293**	*i* Pg	**Pg**	**01 38 02.0**	**-0.1**
RIY				Sg	**Sg**	**01 38 04.9**	**+0.3**
GBRS	**Gornja Briga**	**0.29**	**11**	*i* Pg	**Pg**	**01 38 04.2**	**-0.4**
GBRS				*i* Sg	**Sg**	**01 38 08.5**	**+0.9**
	comp=Z,154nm,0.1s						
KNDS	**Knezji Dol**	**0.38**	**318**	*i* Pg	**Pg**	**01 38 05.1**	**-0.4**
KNDS				*i* Sg	**Sg**	**01 38 11.2**	**+0.8**
	comp=Z,43nm,0.1s						
BOJS	**Bojanci**	**0.45**	**55**	*i* Pg	**Pg**	**01 38 07.0**	**+0.1**
BOJS				*e*Sg	**Sg**	**01 38 13.3**	**+0.6**
	comp=Z,48nm,0.1s						
CEY	**Cerknica**	**0.54**	**336**	*e*Pg	**Pg**	**01 38 08.2**	**-0.4**
CEY				*e*Sg	**Sg**	**01 38 16.2**	**+0.6**
	comp=Z,101nm,0.2s						
CEY	**Cerknica**	**0.54**	**336**	⇓*i* Pg	**Pg**	**01 38 08.1**	**-0.5**
CEY				*e*Sg	**Sg**	**01 38 16.2**	**+0.6**
VISS	**Visnje**	**0.56**	**8**	*i* Pg	**Pg**	**01 38 08.8**	**-0.3**
VISS				*i* Sg	**Sg**	**01 38 16.9**	**+0.6**
	comp=Z,161nm,0.2s						
SKDS	**Skadanscina**	**0.59**	**301**	*i* Sg	**Sg**	**01 38 18.2**	**+0.9**
	comp=Z,39nm,0.1s						
OZLJ	**Ozalj**	**0.63**	**54**	*e*Pg	**Pb**	**01 38 11.4**	**-0.8**
OZLJ				Sg	**Sg**	**01 38 19.4**	**+0.8**
OZLJ	**Ozalj**	**0.63**	**54**	*e*Pg	**Pb**	**01 38 11.5**	**-0.8**
OZLJ				Sg	**Sg**	**01 38 19.9**	**+1.2**
NVLJ	**Novalja**	**0.69**	**172**	*e*Pg	**Pg**	**01 38 11.1**	**-0.4**
NVLJ				Sg	**Sb**	**01 38 21.8**	**-1.4**
NVLJ	**Novalja**	**0.69**	**172**	*e*Pg	**Pg**	**01 38 11.2**	**-0.4**
NVLJ				Sg	**Sb**	**01 38 22.0**	**-1.3**
GBAS	**Gorenja Brezov**	**0.72**	**343**	*i* Pg	**Pg**	**01 38 11.6**	**-0.5**
GBAS				*i* Sg	**Sg**	**01 38 21.7**	**+0.3**
	comp=Z,50nm,0.2s						
CRES	**Cresnjev**	**0.77**	**41**	*i* Pg	**Pg**	**01 38 13.2**	**+0.1**
CRES				*e*Sg	**Sg**	**01 38 24.1**	**+1.1**
	comp=Z,36nm,0.2s						
CRES	**Cresnjev**	**0.77**	**41**	⇓*i* Pg	**Pg**	**01 38 12.9**	**-0.2**
CRES				*e*Sg	**Sg**	**01 38 24.3**	**+1.2**
JAVS	**Javornik**	**0.80**	**324**	*i* Sg	**Sg**	**01 38 25.0**	**+1.0**
	comp=Z,16nm,0.1s						
LJU	**Ljubljana**	**0.81**	**350**	P	**Pg**	**01 38 14.5**	**+0.7**
LJU				S	**Sb**	**01 38 27.2**	**+0.5**
LJU				AML	AML		
	comp=E,492μm,0.6s						
LJU				AML	AML		
	comp=N,888μm,0.2s						
LJU				AML	AML		
	comp=N,888μm,0.2s						
LJU	**Ljubljana**	**0.81**	**350**	*e*Pg	**Pg**	**01 38 13.3**	**-0.5**
LJU				*e*Sg	**Sg**	**01 38 24.7**	**+0.4**
LEGS	**Legarje**	**0.81**	**30**	*i* Pg	**Pg**	**01 38 13.9**	**0.0**
LEGS				*e*Sg	**Sg**	**01 38 25.1**	**+0.7**
TRI	**Trieste**	**0.82**	**304**	P	**Pg**	**01 38 14.5**	**+0.4**
TRI				S	**Sb**	**01 38 27.7**	**+0.6**
TRI				AML	AML		
	comp=E,115μm,0.2s						
TRI				AML	AML		
	comp=N,88μm,0.6s						
TRI				AML	AML		
	comp=E,115μm,0.2s						
PDKS	**Podkum**	**0.83**	**13**	*i* Pg	**Pg**	**01 38 14.5**	**+0.2**
PDKS				*e*Sg	**Sg**	**01 38 25.7**	**+0.5**
	comp=Z,52nm,0.1s						
UDBI	**Udbina**	**1.03**	**134**	*e*Pg	**Pb**	**01 38 18.1**	**-0.8**
UDBI				Sg	**Sb**	**01 38 32.2**	**-0.8**
UDBI	**Udbina**	**1.03**	**134**	*e*Pg	**Pb**	**01 38 18.5**	**-0.5**
UDBI				Sg	**Sb**	**01 38 32.9**	**-0.1**
ZAG	**Zagreb**	**1.05**	**56**	⇓*i* Pg	**Pg**	**01 38 18.1**	**-0.4**
ZAG				*e*Sg	**Sb**	**01 38 34.1**	**+0.4**
ZAG	**Zagreb**	**1.05**	**56**	*e*Pg	**Pb**	**01 38 19.5**	**+0.1**
ZAG				Sg	**Sb**	**01 38 33.2**	**-0.5**
ZAG	**Zagreb**	**1.05**	**56**	*e*Pg	**Pb**	**01 38 19.4**	**+0.1**
ZAG				Sg	**Sg**	**01 38 31.6**	**-0.5**
SABO	**M.te Sabotino**	**1.08**	**313**	P	**Pb**	**01 38 19.5**	**-0.5**
SABO				S	**Sn**	**01 38 36.0**	**-0.4**
SABO				AML	AML		
	comp=E,165μm,0.5s						
SABO				AML	AML		
	comp=N,193μm,0.3s						
PTJ	**Puntijarka**	**1.09**	**52**	*e*Pg	**Pb**	**01 38 19.8**	**-0.2**
PTJ				Sg	**Sb**	**01 38 34.6**	**-0.2**
PTJ	**Puntijarka**	**1.09**	**52**	*e*Pg	**Pb**	**01 38 19.8**	**-0.2**
PTJ				Sg	**Sb**	**01 38 34.7**	**-0.2**
GORS	**Gorjuse**	**1.19**	**334**	*i* Pg	**Pg**	**01 38 21.2**	**+0.1**
GORS				*e*Sg	**Sb**	**01 38 37.8**	**+0.1**
	comp=Z,26nm,0.2s						
CADS	**Cadrg**	**1.20**	**325**	*e*Sg	**Sn**	**01 38 38.7**	**-0.7**
	comp=Z,16nm,0.2s						
OBKA	**Obir**	**1.27**	**354**	*e*Pn	**Pg**	**01 38 22.4**	**-0.3**
	comp=Z,4.5nm,0.1s,SNR=52						
OBKA				Sg	**Sb**	**01 38 39.8**	**-0.2**
	comp=Z,39nm,0.2s						
DUGI	**Dugi Otok**	**1.28**	**169**	*e*Pn	**Pn**	**01 38 24.0**	**+0.7**
DUGI				Sn	**Sn**	**01 38 42.6**	**+1.5**
DUGI	**Dugi Otok**	**1.28**	**169**	*e*Pg	**Pg**	**01 38 21.8**	**-1.0**
DUGI				Sn	**Sn**	**01 38 41.6**	**+0.5**
PRIJ	**Prijedor**	**1.43**	**100**	*e*Sg	**Sg**	**01 38 44.3**	**+0.1**
**VINO

RETA				*e*Sn	**Sn**	**01 39 39.5**	**+2.3**
	comp=E,1.9nm,0.3s						
KHC	**Kasperske Hory**	**3.96**	**349**	*e*PN	**Pn**	**01 38 59.5**	**-0.8**
KHC				*e*SN	**Sn**	**01 39 44.5**	**-3.0**
KHC				*e*SG	**Sg**	**01 40 04.3**	**-1.3**
KRUC	**Moravsky**	**3.98**	**16**	*e*PN	**Pn**	**01 39 00.4**	**-0.1**
VRAC	**Vranov**	**4.25**	**17**	*e*PN	**Pn**	**01 39 04.0**	**-0.3**

IDC 30 02:03:28.1±2.2, 4°71S×129°02E, h0km, mb3.6/1, mb1 3.8/3, mb1mx3.5/24, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=159.1km s-min=28.7km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.00**	**162**	Pn	Pn	02 07 14.3	-0.4
	0.2nm,0.3s,baz=344,slow=13,SNR=7.9						
WRA				Sn	Sn	02 10 01.2	-12
	0.1nm,0.3s,baz=334,slow=23,SNR=5.4						
ASAR	**Alice Springs**	**19.42**	**166**	P	P	02 07 56.4	+0.2
	0.3nm,0.3s,baz=348,slow=9.8,SNR=23						
MKAR	**Makanchi Array**	**65.79**	**327**	P	P	02 14 15.2	0.0
	0.7nm,1.0s,baz=117,slow=9.4,SNR=3.1						

IDC 30 02:18:03.0±2.0, 2°45N×127°16E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/45, mbtmp3.4/4, Error ellipse: s-maj=112.6km s-min=24.2km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.47**	**184**	P	P	02 22 42.8	+0.4
	1.2nm,0.9s,baz=23,slow=7.7,SNR=2.6						
WRA	**Warramunga Arr**	**23.34**	**163**	P	P	02 23 11.6	-1.5
	0.8nm,0.6s,baz=341,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.77**	**166**	P	P	02 23 46.2	+1.4
	0.2nm,0.5s,baz=340,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**58.85**	**326**	P	P	02 28 03.2	-0.3
	0.3nm,0.4s,baz=125,slow=7.4,SNR=5.7						

*IDC **30** 02:20:00.7±1.1, 5°76N×61°31E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.7/51, mbtmp3.8/10, MS3.7/32, Ms1 3.7/32, ms1mx3.6/45, Error ellipse: s-maj=31.0km s-min=20.3km az=36.0*
*NEIC **30** 02:20:02.9±1.2, 5°7N±0°.1×61°.28E±0°.10, h10km±1km, mb4.3/21, Error ellipse: s-maj=21.8km s-min=13.6km az=212.0*
*GCMT **30** 02:20:03.9±0.3, 5°.65N±0°.03×61°.32E±0°.04, h18km±1km, MW4.8/79, Moment Tensor Solution. s13,c15; s79,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.95±.16; $M_{\theta\theta}$1.20±.10; $M_{\phi\phi}$0.74±.09; $M_{r\theta}$-0.15±.24; $M_{r\phi}$-0.65±.05; $M_{\theta\phi}$-0.20±.25; Best double couple: $M_0$1.81800×10^{16} NP1:ϕ_s312.00000°,δ45.00000°,λ-81.00000°. NP2: ϕ_s119.00000°,δ45.00000°,λ-99.00000°. Principal axes: T 1.6580, Plg0.0000°, Azm215.0000°; N 0.3110, Plg6.0000°, Azm125.0000°; P -1.9780, Plg84.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 02:20:03.4±0.8, 5°7N±0°.1×61°4E±0°.1, h14km, n66, σ1§04/40, mb4.0/13, MS3.7/29, 4C, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.72**	**312**	Pn	**Pn**	**02 22 25.6**	**+2.5**
WSAR	**Wadi Sarin**	**17.63**	**352**	LR	LR	02 29 34.0	
	comp=Z,254nm,19.2s,baz=185,slow=33						
ATD	**Arta Tunnel**	**19.19**	**289**	LR	LR	02 30 49.8	
	comp=Z,122nm,18.8s,baz=110,slow=34						
PALK	**Pallekele**	**19.28**	**84**	LR	LR	02 30 26.8	
	comp=Z,279nm,19.0s,baz=12,slow=32						
RAYN	**Ar Rayn**	**23.39**	**321**	P	**P**	**02 25 10.6**	**-1.4**
KBL	**Kabul**	**29.57**	**13**	P	**P**	**02 26 07.7**	**-0.4**
NIL	**Nilore**	**29.92**	**20**	P	**P**	**02 26 11.7**	**+0.6**
GEYT	**Alibeck**	**32.22**	**355**	LR	LR	02 38 42.7	
	comp=Z,52nm,21.5s,baz=10.0,slow=35						
FOMA	**Nahampoana Res**	**33.55**	**204**	P	**P**	**02 26 43.2**	**+0.2**
BTK	**Batken**	**35.25**	**13**	P	**P**	**02 26 58.4**	**+0.7**
MARD	**Mardin**	**36.65**	**332**	P	**P**	**02 27 09.2**	**-0.6**
LSA	**Lhasa**	**36.87**	**46**	P	**P**	**02 27 13.2**	**+1.0**
PSI	**Prapat**	**37.57**	**93**	LR	LR	02 41 52.6	
	comp=Z,56nm,18.1s,baz=263,slow=35						
KK31	**Karatay Array**	**38.12**	**11**	P	**P**	**02 27 22.4**	**+0.3**
KK31				IAmb	IAmb	02 27 30.3	
	comp=Z,5.5nm,1.5s						
KKAR	**Karatay Array**	**38.12**	**11**	P	**P**	**02 27 22.7**	**+0.6**
GAZ	**Gaziantep**	**38.31**	**328**	P	**P**	**02 27 22.5**	**-1.3**
GAZ				IAmb	IAmb	02 28 27.0	
	comp=Z,17nm,1.8s						
AAK	**Ala-Archa**	**38.58**	**16**	P	**P**	**02 27 27.0**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=209,slow=10,SNR=4.7						
AAK				LR	LR	02 44 36.7	
	comp=Z,148nm,19.4s,baz=150,slow=38						
AAK	**Ala-Archa**	**38.58**	**16**	IAmb	IAmb	02 27 29.6	
	comp=Z,20nm,1.9s						
CM31	**Chiang Mai Arr**	**38.78**	**68**	P	**P**	**02 27 28.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**38.78**	**68**	P	**P**	**02 27 27.9**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=226,slow=6.2,SNR=3.2						
CMAR				LR	LR	02 42 11.2	
	comp=Z,68nm,21.6s,baz=328,slow=34						
FRU1	**Bishkek**	**38.78**	**16**	P	**P**	**02 27 28.3**	**+0.6**
KBZ	**Khabaz**	**41.22**	**340**	LR	LR	02 45 53.6	
	comp=Z,66nm,18.4s,baz=148,slow=38						
AKAS	**Kas**	**42.08**	**321**	P	**P**	**02 27 53.9**	**-1.4**
AKAS				IAmb	IAmb	02 29 21.6	
	comp=Z,12nm,1.5s						
BRTR	**Keskin Array B**	**42.08**	**328**	P	**P**	**02 27 53.7**	**-1.5**
	comp=Z,1.1nm,0.8s,baz=160,slow=7.9,SNR=4.6						
BRTR				LR	LR	02 45 34.3	
	comp=Z,52nm,19.6s,baz=138,slow=36						
KARP	**Karpathos**	**43.26**	**318**	P	**P**	**02 28 04.6**	**-0.1**
ABKAR	**Akbulak array**	**43.42**	**359**	P	**P**	**02 28 05.9**	**+0.2**
MANT	**Manisa**	**44.15**	**322**	P	**P**	**02 28 11.7**	**-0.3**
MKAR	**Makanchi Array**	**44.74**	**20**	P	**P**	**02 28 16.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=209,slow=7.9,SNR=2.9						
MKAR				LR	LR	02 49 18.5	
	comp=Z,57nm,18.6s,baz=212,slow=39						
BOSA	**Boshof**	**48.71**	**224**	LR	LR	02 47 23.2	
	comp=Z,192nm,19.5s,baz=12,slow=34						
VRI	**Vrincioaia**	**50.01**	**329**	⇑P	**P**	**02 28 59.2**	**+1.8**
PLOR	**Plostina**	**50.03**	**329**	⇑P	**P**	**02 28 58.2**	**+0.6**
TESR	**Tescani**	**50.48**	**329**	⇑P	**P**	**02 29 01.1**	**+0.1**
VOIR		**50.60**	**327**	⇑P	**P**	**02 29 01.2**	**-0.8**
ZAA0	**Zalesovo Array**	**51.74**	**17**	P	**P**	**02 29 11.1**	**+0.8**
ZALV	**Zalesovo Beam**	**51.74**	**17**	P	**P**	**02 29 07.5**	**-2.9**
	comp=Z,0.3nm,0.4s,baz=224,slow=8.1,SNR=2.7						
ZALV				LR	LR	02 51 32.4	
	comp=Z,83nm,20.2s,baz=229,slow=37						
ZALV	**Zalesovo Beam**	**51.74**	**17**	P	**P**	**02 29 10.2**	**-0.2**
BURAR	**Bucovina Array**	**51.95**	**330**	P	**P**	**02 29 11.9**	**-0.2**
AKASG	**Malin Array Be**	**52.27**	**335**	P	**P**	**02 29 11.8**	**-2.5**
	comp=Z,0.1nm,0.2s,baz=141,slow=6.0,SNR=5.1						
AKASG				LR	LR	02 53 16.3	
	comp=Z,44nm,20.0s,baz=270,slow=38						
SONM	**Songino Array**	**56.86**	**35**	LR	LR	02 55 02.1	
	comp=Z,140nm,18.5s,baz=42,slow=37						
VRAC	**Vranov**	**57.52**	**327**	P	**P**	**02 29 51.5**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=176,slow=5.1,SNR=3.2						
TLY	**Talaya**	**57.62**	**30**	LR	LR	02 55 23.7	
	comp=Z,71nm,19.0s,baz=260,slow=37						
TORD	**Torodi Ar. Bea**	**59.21**	**282**	P	**P**	**02 30 04.4**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=95,slow=3.1,SNR=5.1						
TORD				LR	LR	02 54 27.9	
	comp=Z,55nm,19.4s,baz=330,slow=35						
TORD	**Torodi Ar. Bea**	**59.21**	**282**	IAmb	IAmb	02 30 06.6	
	comp=Z,2.1nm,1.2s						
FINES	**FINESS Array B**	**61.52**	**342**	LR	LR	02 58 25.8	
	comp=Z,67nm,18.8s,baz=168,slow=38						
NWAO	**Narrogin (SRO)**	**65.41**	**130**	LR	LR	02 53 34.6	
	comp=Z,37nm,19.2s,baz=196,slow=31						
DBIC	**Dimbokro**	**65.79**	**275**	LR	LR	02 59 03.7	
	comp=Z,71nm,19.5s,baz=60,slow=36						
NRIK	**Noril'sk**	**65.85**	**10**	LR	LR	03 01 52.2	
	comp=Z,123nm,20.2s,baz=200,slow=38						
NOA	**NORSAR Array B**	**66.64**	**336**	LR	LR	03 02 12.9	
	comp=Z,30nm,19.9s,baz=115,slow=38						
FITZ	**Fitzroy Crossi**	**67.65**	**112**	LR	LR	02 54 53.1	
	comp=Z,30nm,20.7s,baz=328,slow=31						
ARCES	**ARCESS Array B**	**67.91**	**347**	LR	LR	03 04 05.3	
	comp=Z,35nm,18.3s,baz=355,slow=39						
KSRS	**Korea Array**	**67.99**	**52**	LR	LR	03 02 06.1	
	comp=Z,52nm,18.1s,baz=256,slow=37						
KLR	**Kul'dur**	**72.94**	**40**	LR	LR	03 04 42.6	
	comp=Z,76nm,21.1s,baz=347,slow=37						
MAW	**Mawson**	**73.14**	**179**	LR	LR	02 57 10.7	
	comp=Z,74nm,20.6s,baz=246,slow=30						
YAK	**Yakutsk**	**74.91**	**27**	LR	LR	03 05 22.2	
	comp=Z,43nm,20.3s,baz=260,slow=36						
MJAR	**Matsushiro Arr**	**76.06**	**54**	LR	LR	03 07 31.8	
	comp=Z,28nm,18.0s,baz=130,slow=38						
WRA	**Warramunga Arr**	**76.08**	**112**	P	**P**	**02 31 51.1**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=288,slow=5.0,SNR=7.9						
WRA	**Warramunga Arr**	**76.08**	**112**	P	**P**	**02 31 51.6**	**+0.3**
ASAR	**Alice Springs**	**76.45**	**116**	P	**P**	**02 31 53.1**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=284,slow=5.9,SNR=13						
ASAR				LR	LR	03 00 41.2	
	comp=Z,29nm,20.0s,baz=262,slow=32						
ASAR	**Alice Springs**	**76.45**	**116**	P	**P**	**02 31 52.8**	**-0.5**
AS31	**Alice Springs**	**76.45**	**116**	P	**P**	**02 31 53.5**	**+0.2**
STKA	**Stephens Creek**	**84.74**	**123**	LR	LR	03 06 45.1	
	comp=Z,48nm,19.5s,baz=207,slow=33						
PETK	**Petropavlovsk-**	**89.28**	**37**	LR	LR	03 15 57.1	
	comp=Z,60nm,18.5s,baz=284,slow=38						
VNDA	**Vanda**	**97.80**	**168**	LR	LR	03 11 32.8	
	comp=Z,62nm,18.3s,baz=199,slow=32						
TXAR	**Lajitas Array**	**142.31**	**338**	PKhKP	PKPpre	02 39 29.5	
	comp=Z,0.2nm,0.8s,baz=35,slow=2.2,SNR=2.6						
TXAR				PKP	**PKPdf**	**02 39 37.4**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=135,slow=0.5,SNR=4.1						
TXAR	**Lajitas Array**	**142.31**	**338**		**PKPdf**	**02 39 36.9**	**+0.3**
MTO3	**Montecristo**	**144.75**	**305**	PKPdf	**PKPdf**	**02 39 41.7**	**+0.4**

*NIC **30** 02:22:39.9±0.0, 35°.55N×27°.81E, h16km±2km, Ml2.9/3*
*ATH **30** 02:22:40.2, 35°.60N×27°.77E, h23km±2km, ML2.5/7, Error ellipse: s-maj=3.6km s-min=1.3km az=322.0*
*ISK **30** 02:22:40.5, 35°.62N×27°.75E, h10km, ML2.5/20*
*THE **30** 02:22:41.1, 35°.62N×27°.76E, h0km±1km, ML2.2/4, Error ellipse: s-maj=2.9km s-min=1.1km az=156.0*

ISC 30 02:22:40.3±1.2, 35°.60N±0°.03×27°.79E±0°.02, h13km±10km, n62, σ0§78/78, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.52**	**264**	P	**Pg**	**02 22 50.1**	**-0.4**
KARP				AML	AML	02 23 02.3	
	comp=E,1065μm,0.2s						
KARP				AML	AML	02 23 02.5	
	comp=N,1213μm,0.2s						
KARP	**Karpathos**	**0.52**	**264**	PG	**Pg**	**02 22 50.3**	**-0.3**
KARP				SG	**Sb**	**02 22 57.8**	**-0.9**
KARP	**Karpathos**	**0.52**	**264**	P	**Pg**	**02 22 50.2**	**-0.4**
KARP				S	**Sb**	**02 22 58.3**	**-0.4**
KARP				AML	AML	02 23 01.9	
	comp=N,1.1nm,0.2s						
KARP				AML	AML	02 23 01.9	
	comp=N,1.1nm,0.2s						
KARP				AML	AML	02 23 02.1	
	comp=N,1.2nm,0.2s						
KARP				AML	AML	02 23 02.1	
	comp=N,1.2nm,0.2s						
KARP	**Karpathos**	**0.52**	**264**	P	**Pg**	**02 22 50.2**	**-0.4**
KARP				S	**Sb**	**02 22 59.2**	**+0.5**
	comp=N,578nm,0.2s						
ARG	**Arkhangelos**	**0.67**	**24**	P	**Pg**	**02 22 53.5**	**0.0**
ARG				S	**Sb**	**02 23 03.3**	**+0.2**
ARG				AML	AML	02 23 11.5	
	comp=E,475μm,0.3s						
ARG				AML	AML	02 23 12.7	
	comp=N,311μm,0.7s						
ARG	**Arkhangelos**	**0.67**	**24**	PG	**Pb**	**02 22 53.9**	**0.0**
ARG				SG	**Sb**	**02 23 03.7**	**+0.6**
ARG	**Arkhangelos**	**0.67**	**24**	P	**Pb**	**02 22 53.7**	**-0.2**
ARG				S	**Sn**	**02 23 04.3**	**-1.5**
ARG	**Arkhangelos**	**0.67**	**24**	P	**Pg**	**02 22 53.6**	**+0.1**
ARG				S	**Sn**	**02 23 04.1**	**-1.8**
	comp=N,205nm,0.5s						
NIS1	**Nisyros Isl.**	**1.12**	**334**	P	**Pg**	**02 23 01.8**	**-0.2**
NIS1				AML	AML	02 23 30.9	
	comp=E,782μm,0.7s						
NIS1				AML	AML	02 23 32.5	
	comp=N,580μm,0.7s						
NIS1	**Nisyros Isl.**	**1.12**	**334**	PN	**Pg**	**02 23 01.7**	**-0.2**
NIS1				SN	**Sn**	**02 23 17.2**	**+0.3**
NIS1	**Nisyros Isl.**	**1.12**	**334**	P	**Pn**	**02 23 01.4**	**-0.3**
NIS1				S	**Sn**	**02 23 18.3**	**+1.4**
MRSB	**Marmaris-Mugla**	**1.16**	**16**	PN	**Pg**	**02 23 03.1**	**+0.4**
DATC	**Datca-Mugla**	**1.16**	**355**	PN	**Pg**	**02 23 02.7**	**-0.1**
TURN	**Turunc**	**1.23**	**17**	PN	**Pg**	**02 23 04.1**	**+0.1**
ZKR	**Zakros**	**1.38**	**250**	P	**Pb**	**02 23 05.7**	**-0.1**
ZKR				AML	AML	02 23 34.0	
	comp=N,200μm,0.8s						
ZKR				AML	AML	02 23 34.9	
	comp=E,442μm,1.0s						
ZKR	**Zakros**	**1.38**	**250**	PN	**Pb**	**02 23 05.8**	**-0.1**
ZKR	**Zakros**	**1.38**	**250**	P	**Pb**	**02 23 05.8**	**-0.1**
DALY	**Dalyan (Mula)**	**1.40**	**30**	PN	**Pb**	**02 23 06.7**	**+0.4**
STIA	**Sitia Lasithi**	**1.45**	**255**	P	**Pb**	**02 23 06.9**	**-0.2**
FETY	**Fethiye**	**1.47**	**45**	PN	**Pb**	**02 23 07.9**	**+0.4**
FETY	**Fethiye**	**1.47**	**45**	P	**Pg**	**02 23 08.2**	**-0.4**
FETY				S	**Sg**	**02 23 28.9**	**+1.2**
BODT	**Bodrum**	**1.51**	**345**	PN	**Pb**	**02 23 07.8**	**-0.4**
BODT	**Bodrum**	**1.51**	**345**	P	**Pb**	**02 23 07.4**	**-0.8**
KSL	**Kastellorizon**	**1.55**	**69**	P	**Pb**	**02 23 08.6**	**-0.3**
KSL	**Kastellorizon**	**1.55**	**69**	P	**Pn**	**02 23 07.3**	**-0.3**
KSL	**Kastellorizon**	**1.55**	**69**	P	**Pb**	**02 23 08.6**	**-0.3**
KSL				S	**Sb**	**02 23 29.0**	**+0.5**
	comp=E,38nm,1.4s						
YER	**Yerkesik**	**1.58**	**14**	PN	**Pb**	**02 23 09.2**	**-0.3**
YER	**Yerkesik**	**1.58**	**14**	P	**Pg**	**02 23 10.1**	**-0.7**
YER				S	**Sg**	**02 23 31.4**	**+0.1**
AKAS	**Kas**	**1.60**	**66**	PN	**Pb**	**02 23 09.9**	**+0.1**
MLSB	**Milas**	**1.69**	**360**	PN	**Pb**	**02 23 10.6**	**-0.7**
ANAF	**Anafi Island**	**1.81**	**295**	P	**Pn**	**02 23 11.6**	**+0.5**
ANAF				AML	AML	02 23 41.4	
	comp=N,454μm,0.4s						
ANAF				AML	AML	02 23 42.7	
	comp=E,463μm,0.4s						
ANAF	**Anafi Island**	**1.81**	**295**	P	**Pn**	**02 23 11.5**	**+0.4**
ANAF				S	**Sb**	**02 23 35.3**	**-0.5**
CAME	**Cameli-Denizli**	**1.81**	**42**	PN	**Pb**	**02 23 12.7**	**-0.7**
NPS	**Neapolis**	**1.81**	**260**	P	**Pb**	**02 23 12.7**	**-0.7**
NPS				AML	AML	02 23 42.6	
	comp=E,192μm,0.5s						
NPS				AML	AML	02 23 50.3	
	comp=N,184μm,0.7s						
NPS	**Neapolis**	**1.81**	**260**	P	**Pb**	**02 23 13.0**	**-0.4**
LAST	**Lasithi**	**1.94**	**258**	P	**Pb**	**02 23 14.4**	**-1.2**
LAST				AML	AML	02 23 58.5	
	comp=N,96μm,0.7s						
LAST				AML	AML	02 24 01.4	
	comp=E,95μm,1.0s						
LAST	**Lasithi**	**1.94**	**258**	P	**Pb**	**02 23 15.5**	**-0.1**
ELL	**Elmali**	**2.06**	**56**	PN	**Pb**	**02 23 16.5**	**-1.1**
ELL	**Elmali**	**2.06**	**56**	P	**Pn**	**02 23 15.0**	**+0.3**
THR6	**Thira Island,**	**2.09**	**292**	P	**Pn**	**02 23 15.5**	**+0.6**
THR6	**Thira Island,**	**2.09**	**292**	P	**Pn**	**02 23 15.8**	**+0.8**
THR3	**Thira Island,**	**2.10**	**293**	P	**Pn**	**02 23 15.8**	**+0.6**
SNT5	**Nea Kammeni, S**	**2.10**	**293**	P	**Pn**	**02 23 15.6**	**+0.4**
CMBO	**Columbo, Santo**	**2.12**	**295**	P	**Pn**	**02 23 16.0**	**+0.6**
CMBO	**Columbo, Santo**	**2.12**	**295**	P	**Pn**	**02 23 15.8**	**+0.3**
GCAM	**G?zelcaml?**	**2.15**	**348**	PN	**Pb**	**02 23 17.1**	**-1.9**
SMG	**Samos**	**2.24**	**340**	P	**Pn**	**02 23 18.2**	**+1.1**
SMG	**Samos**	**2.24**	**340**	P	**Pb**	**02 23 18.5**	**-2.2**
APE	**Apeiranthos**	**2.34**	**309**	P	**Pn**	**02 23 19.0**	**+0.5**
APE	**Apeiranthos**	**2.34**	**309**	PN	**Pn**	**02 23 19.5**	**+0.9**
APE	**Apeiranthos**	**2.34**	**309**	P	**Pn**	**02 23 18.7**	**+0.2**
APE	**Apeiranthos**	**2.34**	**309**	P	**Pn**	**02 23 19.0**	**+0.5**
APE				S	**Sn**	**02 23 48.0**	**+0.8**
	comp=E,30nm,0.9s						
AYDB	**Zeytinkoy-Aydi**	**2.34**	**2**	PN	**Pn**	**02 23 19.8**	**+1.2**
IDI	**Anoyia**	**2.39**	**263**	P	**Pn**	**02 23 20.2**	**+1.0**
IDI	**Anoyia**	**2.39**	**263**	PN	**Pn**	**02 23 20.3**	**+1.0**
KORT	**Korkueli**	**2.49**	**55**	PN	**Pn**	**02 23 22.6**	**+1.9**
IMMV	**Iera Moni Meta**	**3.11**	**269**	PN	**Pn**	**02 23 30.5**	**+1.4**
GVD	**Gavdhos**	**3.13**	**257**	PN	**Pn**	**02 23 30.8**	**+1.5**
AKMS	**Akamas**	**3.76**	**98**	P	**Pn**	**02 23 37.1**	**-0.8**
AKMS				S	**Sn**	**02 24 22.0**	**-0.1**
AKMS				AML	AML	02 24 22.5	
	comp=E,0.1nm,0.5s						
AKMS				AML	AML	02 24 22.5	
	comp=E,0.1nm,0.5s						
AKMS				AML	AML	02 24 23.7	
	comp=E,0.1nm,1.2s						
AKMS				AML	AML	02 24 23.7	
	comp=E,0.1nm,1.2s						
ALFC	**Alefka**	**3.95**	**95**	P	**Pn**	**02 23 40.3**	**-0.3**
ALFC				S	**Sn**	**02 24 26.7**	**-0.1**
ALFC				AML	AML	02 24 34.0	
ALFC				AML	AML	02 24 34.0	
ALFC				AML	AML	02 24 37.0	
	comp=E,0.1nm,0.8s						
ALFC				AML	AML	02 24 37.0	
	comp=E,0.1nm,0.8s						
NATA	**Nata**	**4.00**	**100**	P	**Pn**	**02 23 41.3**	**+0.1**
SZAC	**Souni**	**4.25**	**100**	P	**Pn**	**02 23 44.8**	**0.0**

*ATH **30** 02:23:16.1, 37°.59N×19°.73E, h27km±1km, ML2.7/5, Error ellipse: s-maj=3.0km s-min=1.0km az=75.0*
*THE **30** 02:23:17.6, 37°.54N×19°.88E, h8km±1km, ML2.8/4, Error ellipse: s-maj=3.2km s-min=1.4km az=132.0*

ISC 30 02:23:14.9±2.3, 37°.56N±0°.07×19°.65E±0°.07, h14km±12km, n45, σ1§11/54, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.84**	**40**	P	**Pg**	**02 23 31.9**	**+0.5**
KEF3				S	**Sb**	**02 23 43.4**	**+0.8**
KEF3	**Kipouria, Keph**	**0.84**	**40**	P	**Pg**	**02 23 32.3**	**+1.0**
VLMS	**Volimes, Zakyn**	**0.86**	**68**	P	**Pg**	**02 23 31.5**	**-0.2**
VLMS				S	**Sb**	**02 23 42.7**	**-0.5**
VLMS				AML	AML	02 23 44.4	
	comp=E,1525μm,0.3s						
VLMS				AML	AML	02 23 55.0	
	comp=N,1957μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.86**	**68**	P	**Pg**	**02 23 31.4**	**-0.2**
VLMS				S	**Sg**	**02 23 40.8**	**-2.1**
	comp=N,1μm,0.6s						
DMLN	**Damoulianata-K**	**0.88**	**40**	P	**Pg**	**02 23 32.3**	**+0.2**
DMLN				S	**Sb**	**02 23 44.2**	**+0.3**
DMLN	**Damoulianata-K**	**0.88**	**40**	P	**Pg**	**02 23 32.5**	**+0.4**
DMLN				S	**Sb**	**02 23 44.5**	**+0.7**
	comp=N,695nm,0.3s						
KEF4	**Livadi, Kephal**	**0.93**	**41**	P	**Pg**	**02 23 33.0**	**+0.1**
KEF4				S	**Sb**	**02 23 45.7**	**+0.8**
KEF4	**Livadi, Kephal**	**0.93**	**41**	P	**Pg**	**02 23 33.2**	**+0.4**
KEF5	**Kardakata, Kep**	**0.96**	**42**	P	**Pg**	**02 23 33.4**	**-0.1**
VLS	**Valsamata**	**0.96**	**50**	P	**Pg**	**02 23 33.3**	**-0.2**
VLS				S	**Sb**	**02 23 45.9**	**-0.2**
VLS				AML	AML	02 23 51.2	
	comp=E,725μm,0.5s						
VLS				AML	AML	02 23 52.5	
	comp=N,1122μm,0.7s						
VLS	**Valsamata**	**0.96**	**50**	P	**Pg**	**02 23 33.4**	**-0.2**
VLS				S	**Sb**	**02 23 45.9**	**-0.2**
	comp=N,462nm,0.4s						
FSK	**Fiskardo**	**1.15**	**38**	P	**Pg**	**02 23 36.4**	**-0.7**
FSK	**Fiskardo**	**1.15**	**38**	P	**Pg**	**02 23 36.5**	**-0.6**
EVGI	**Lefkada island**	**1.32**	**36**	P	**Pn**	**02 23 39.5**	**+0.5**
EVGI	**Lefkada island**	**1.32**	**36**	P	**Pn**	**02 23 39.9**	**+0.9**
NYDR	**Nydri-Lefkada**	**1.42**	**35**	P	**Pn**	**02 23 41.2**	**+0.9**
NYDR				S	**Sb**	**02 23 59.1**	**+0.1**
NYDR	**Nydri-Lefkada**	**1.42**	**35**	P	**Pn**	**02 23 41.5**	**+1.2**
NYDR				S	**Sb**	**02 23 59.8**	**+0.7**
	comp=N,260nm,0.7s						
LKD2	**Lefkada island**	**1.46**	**33**	P	**Pn**	**02 23 41.9**	**+1.0**
LKD2	**Lefkada island**	**1.46**	**33**	P	**Pn**	**02 23 42.0**	**+1.0**
LKD2				S	**Sg**	**02 24 02.5**	**+0.5**
TSLK	**Tsoukalades, L**	**1.49**	**32**	P	**Pn**	**02 23 42.5**	**+1.2**
TSLK	**Tsoukalades, L**	**1.49**	**32**	P	**Pn**	**02 23 43.0**	**+1.7**
RLS	**Riolos of Patr**	**1.52**	**70**	P	**Pn**	**02 23 42.6**	**+0.9**
PDO	**Prodromos**	**1.59**	**49**	P	**Pn**	**02 23 43.9**	**+1.2**
PDO				AML	AML	02 24 15.1	
	comp=E,478μm,0.4s						
PDO				AML	AML	02 24 19.2	
	comp=N,378μm,0.8s						
PDO	**Prodromos**	**1.59**	**49**	P	**Pn**	**02 23 44.0**	**+1.3**
AMT	**Artemida-Makis**	**1.63**	**90**	P	**Pn**	**02 23 43.6**	**+0.3**
AMT				AML	AML	02 24 20.1	
	comp=E,339μm,0.8s						
AMT				AML	AML	02 24 23.6	
	comp=N,427μm,0.7s						
DRO	**Drossia**	**1.68**	**76**	P	**Pn**	**02 23 44.7**	**+0.8**
PYL	**PYLOS**	**1.79**	**111**	P	**Pn**	**02 23 46.6**	**+1.1**
ITM	**Ithomi**	**1.85**	**101**	P	**Pn**	**02 23 47.8**	**+1.5**
EFP	**Efpalio**	**1.98**	**63**	P	**Pn**	**02 23 49.2**	**+1.2**
KLV	**Kalavryta, Ach**	**2.04**

σ2°25/13, **mb3.3/3, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**2.05**	**305**	P	**Pn**	**02 45 20.4**	**-2.2**
LUWI	**Luwuk**	**2.92**	**261**	P	**Pn**	**02 45 37.0**	**+2.4**
LUWI				S	**Sn**	**02 46 08.6**	**+0.1**
GTOI	**Gorontalo**	**2.92**	**295**	P	**Pn**	**02 45 33.0**	**-1.6**
GTOI				S	**Sn**	**02 46 09.2**	**+0.6**
MRSI	**Marisa**	**3.87**	**286**	P	**Pn**	**02 45 50.7**	**+3.0**
APSI	**Ampana**	**4.02**	**266**	P	**Pn**	**02 45 51.3**	**+1.5**
MSAI	**Masohi**	**4.25**	**130**	P	Pn	02 46 02.5	+10
MPSI	**Mapaga**	**5.84**	**279**	P	**Pn**	**02 46 15.7**	**+1.0**
KAPI	**Kappang**	**7.35**	**233**	Pn	**Pn**	**02 46 33.4**	**-2.1**
	1.0nm,0.3s,baz=284,slow=1.3,SNR=4.7						
KAPI				Sn	**Sn**	**02 47 54.2**	**-3.5**
	0.8nm,0.3s,baz=53,slow=20,SNR=3.0						
WRA	**Warramunga Arr**	**21.01**	**157**	P	**P**	**02 49 33.1**	**+1.8**
	0.6nm,0.4s,baz=337,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**24.28**	**161**	P	**P**	**02 50 06.8**	**+1.9**
	0.4nm,0.7s,baz=349,slow=9.0,SNR=5.7						
PSI	**Prapat**	**26.94**	**277**	LR	LR	03 02 05.1	
	comp=Z,54nm,18.8s,baz=89,slow=39						
MKAR	**Makanchi Array**	**60.54**	**327**	P	**P**	**02 54 56.5**	**-1.1**
	1.3nm,0.7s,baz=130,slow=8.3,SNR=4.5						
MKAR				LR	LR	03 24 11.8	
	comp=Z,31nm,18.7s,baz=242,slow=39						

DJA 30 02:44:55.5±0.6, **8°S**±4.7, **112°8E**±°, **h146**km±15km, **M4.2/7, mB4.7/2, mb4.2/3, MLv4.2/7, Mw(mB)3.9/2, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.84**	**91**	P	Pn	02 45 43.8	+3.1
SAUI				S	Sn	02 46 15.3	-0.3
SOEI	**Soe**	**4.49**	**246**	P	Pn	02 46 02.8	+0.5
SOEI				S	Sn	02 46 55.1	+0.9
MSAI	**Masohi**	**4.59**	**6**	P	Pn	02 46 00.5	-3.0
BATI	**Baumata**	**5.22**	**244**	P	Pn	02 46 12.2	+0.4
	0.2nm28nm,0.5s						
BATI				S	Sn	02 47 12.5	+1.2
	0.2nm28nm,0.5s						

*IDC **30** 02:48:15.4±1.2,5.6°8N×61.3°7E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.4/57, mbtmp3.8/5, MS3.2/3, Ms1 3.2/3, ms1mx2.8/37, Error ellipse: s-maj=53.3km s-min=24.0km az=41.0*

ISC 30 02:48:17.6±1.3, **5.7N**±0.3°×**61.4E**±0.3°, **h14**km, **n11**, σ0°**82**/8, **mb3.8**/5, **MS3.1**/3, **3D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**27.87**	**210**	LR	LR	03 03 04.3	
	comp=Z,50nm,18.3s,baz=176,slow=32						
EIL	**Elat**	**34.48**	**317**	LR	LR	03 07 58.0	
	comp=Z,44nm,18.6s,baz=256,slow=34						
MMAI	**Mount Meron Ar**	**36.37**	**322**	LR	LR	03 10 05.0	
	comp=Z,30nm,19.4s,baz=320,slow=36						
BRTR	**Keskin Array B**	**42.08**	**328**	P	**P**	**02 56 09.4**	**0.0**
	1.0nm,0.9s,baz=121,slow=10,SNR=3.6						
AKTO	**Aktyubinsk**	**44.68**	**357**	P	**P**	**02 56 30.0**	**0.0**
	0.9nm,0.6s,baz=153,slow=12,SNR=2.8						
VRI	**Vrincioaia**	**50.01**	**329**	⇓P	**P**	**02 57 13.1**	**+1.5**
TESR	**Tescani**	**50.48**	**329**	⇓P	**P**	**02 57 14.3**	**-0.9**
VOIR		**50.61**	**327**	⇓P	**P**	**02 57 15.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**59.21**	**282**	P	**P**	**02 58 19.0**	**0.0**
	0.7nm,0.9s,baz=87,slow=5.1,SNR=3.9						
WRA	**Warramunga Arr**	**76.08**	**112**	P	**P**	**03 00 05.5**	**0.0**
	1.6nm,1.0s,baz=293,slow=4.6,SNR=8.8						
ASAR	**Alice Springs**	**76.45**	**116**	P	**P**	**03 00 07.6**	**0.0**
	1.2nm,0.8s,baz=288,slow=5.9,SNR=13						

*NNC **30** 02:50:53.8±7.3, 33.3°33N×75.6°1E, h0km, mb3.9, Error ellipse: s-maj=99.1km s-min=57.4km az=85.0*
*BJI **30** 02:51:10.6±0.0, 35.6°5N×78.2°5E, h7km, ML3.4/5*
*IDC **30** 02:51:11.7±3.3, 36.0°4N×77.8°2E, h0km, mb3.8/3, mb1 3.7/7, mb1mx3.3/55, mbtmp3.6/7, ML3.2/4, MS3.3/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=49.5km s-min=36.1km az=175.0*
*NEIC **30** 02:51:12.2±2.2, 35.7°N×0.1°E×78.0°E×0.1°, h10km±1km, mb4.0/7, Error ellipse: s-maj=20.8km s-min=16.2km az=137.0*

ISC 30 02:51:15.1±1.2, **36°10N**±0.09×**78.0E**±0.1°, **h10**km, **n26**, σ2°**02**/23, **mb3.9**/4, **4C-2D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIL	**Nilore**	**4.58**	**239**	Pn	Pn	02 52 18.7	-5.8
ARSB	**Arslanbob**	**6.51**	**325**	Pn	**Pn**	**02 52 54.6**	**+3.5**
BTK	**Batken**	**6.89**	**307**	Pn	**Pn**	**02 52 57.2**	**+0.9**
TKM2	**Tokmak 2**	**7.06**	**346**	⇑Pn	Pb	02 53 12.3	-5.6
	3.9nm,0.7s						
TKM2				⇓Sn	**Sg**	**02 55 03.9**	**+2.3**
	7.8nm,1.1s						
AAK	**Ala-Archa**	**7.06**	**339**	Pn	**Pn**	**02 53 02.1**	**+3.4**
	0.6nm,0.3s,baz=132,slow=5.1,SNR=9.9						
AAK				Lg	Lg	02 55 05.2	
	0.2nm,0.3s,baz=350,slow=18,SNR=3.1						
AAK	**Ala-Archa**	**7.06**	**339**	⇑Pn	Pb	02 53 08.2	-10
	3.4nm,0.8s						
AAK				⇑Sn	**Sg**	**02 54 57.8**	**-4.0**
	14nm,0.9s						
KK31	**Karatay Array**	**9.06**	**323**	⇑Pn	**Pn**	**02 53 28.6**	**+2.7**
	0.3nm,0.3s,baz=153,slow=14,SNR=12						
KK31				⇓Sn	Sn	02 55 23.6	+16
	0.7nm,0.5s,baz=157,slow=25,SNR=4.1						
KK31	**Karatay Array**	**9.06**	**323**		**Pn**	**02 53 28.2**	**+2.3**
KKAR	**Karatay Array**	**9.06**	**323**	Pn	**Pn**	**02 53 27.6**	**+1.7**
WMQ	**Urumqi**	**10.73**	**41**	eP	**Pn**	**02 53 49.8**	**+0.9**
MKAR	**Makanchi Array**	**11.17**	**16**	Pn	**Pn**	**02 53 55.1**	**+0.3**
	0.2nm,0.3s,baz=200,slow=14,SNR=7.6						
MKAR				Sn	**Sn**	**02 55 58.6**	**-1.1**
	0.1nm,0.3s,baz=198,slow=18,SNR=3.6						
KURK	**Kurchatov**	**14.62**	**2**	Pn	**Pn**	**02 54 43.2**	**+1.3**
KURK				IAmb	IAmb	02 55 26.4	
	comp=Z,11nm,1.8s						
BVAR	**Borovoye Array**	**17.75**	**345**	P	**Pn**	**02 55 20.2**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=115,slow=14,SNR=2.8						
ZAA0	**Zalesovo Array**	**18.48**	**11**	P	**P**	**02 55 31.1**	**+0.1**
ZALV	**Zalesovo Beam**	**18.48**	**13**	P	**P**	**02 55 30.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=180,slow=10,SNR=2.9						
ABKAR	**Akbulak array**	**18.61**	**321**	P	**Pn**	**02 55 33.5**	**+0.7**
ABKAR				IAmb	IAmb	02 56 27.4	
	comp=Z,2.6nm,0.8s						
SONM	**Songino Array**	**24.03**	**52**	P	**P**	**02 56 29.7**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=232,slow=12,SNR=4.0						
SONM	**Songino Array**	**24.03**	**52**	IAmb	IAmb	02 56 30.8	
	comp=Z,1.3nm,0.8s						
BR131	**Keskin Array S**	**34.90**	**290**	P	**P**	**02 58 05.9**	**-1.0**
BR131				IAmb	IAmb	02 58 09.2	
	comp=Z,9.3nm,1.4s						
AKASG	**Malin Array Be**	**37.60**	**308**	P	**P**	**02 58 30.0**	**+0.2**
FINES	**FINESS Array B**	**41.01**	**325**	P	**P**	**02 58 55.5**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=111,slow=8.1,SNR=8.3						
FINES	**FINESS Array B**	**41.01**	**325**	P	**P**	**02 58 58.5**	**+0.4**
JNU	**Nakatsue**	**43.21**	**78**	LR	LR	03 19 02.4	
	comp=Z,20nm,19.0s,baz=22,slow=39						
ARCES	**ARCESS Array B**	**43.73**	**336**	P	**P**	**02 59 18.4**	**-1.7**
	comp=Z,3.1nm,0.9s,baz=93,slow=10.0,SNR=3.5						
SEY	**Seymchan**	**51.60**	**34**	LR	LR	03 25 52.3	
	comp=Z,56nm,18.9s,baz=218,slow=40						
EGAK	**Eagle**	**74.88**	**16**	P	**P**	**03 02 56.2**	**+0.6**

*JMA **30** 03:17:05.7, 29.8°80N×129.9°9E, h68km±1km, M3.7*
JMA Felt I J1.
*IDC **30** 03:17:09.6±2.3, 29.9°1N×130.0°4E, h115km±22km, mb3.4/7, mb1 3.5/11, mb1mx3.3/41, mbtmp3.7/11, Error ellipse: s-maj=27.7km s-min=15.6km az=74.0*

ISC 30 03:17:05.2±0.8, **29.80N**±0.05×**129.97E**±0.07, **h71**km±7km, **n28**, σ1°**29**/34, **mb3.7**/7, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.09**	**299**	P	**Pn**	**03 17 15.8**	**+0.3**
JNN				eS	**Sn**	**03 17 23.2**	**+0.1**
JYAK	**Yakushimahirau**	**0.64**	**47**	P	**Pn**	**03 17 19.6**	**+0.1**
JYAK				eS	**Sn**	**03 17 29.6**	**-0.5**
JKC	**Kuchinoerabu**	**0.69**	**17**	P	**Pn**	**03 17 20.4**	**+0.3**
JKC				eS	**Sn**	**03 17 31.4**	**+0.4**
JTAJ	**Takarajima**	**0.93**	**226**	P	**Pn**	**03 17 23.7**	**+0.9**
JMTN	**Minamitane**	**1.01**	**53**	P	**Pn**	**03 17 24.3**	**+0.5**
JMTN				eS	**Sn**	**03 17 38.2**	**+0.6**
JTN	**Tanegashima 3**	**1.22**	**45**	P	**Pn**	**03 17 27.2**	**+0.6**
JTN				eS	**Sn**	**03 17 42.7**	**+0.1**
JAM	**Amami Oshima**	**1.42**	**193**	P	**Pn**	**03 17 29.6**	**+0.5**
JZK	**Kikaishima**	**1.48**	**180**	P	**Pn**	**03 17 31.5**	**+1.6**
JTSR	**Tashiro 2**	**1.59**	**31**	P	**Pn**	**03 17 32.0**	**+0.5**
JTSR				eS	**Sn**	**03 17 51.7**	**+0.4**
JAMN	**Amaminishikomi**	**1.70**	**204**	P	**Pn**	**03 17 33.6**	**+0.8**
JSU	**Suzuyama**	**1.75**	**14**	P	**Pn**	**03 17 34.5**	**+0.9**
JSJ	**Shimokoshiki**	**1.89**	**353**	P	**Pn**	**03 17 36.0**	**+0.6**
JTK	**Tokunoshima**	**2.19**	**204**	P	**Pn**	**03 17 40.6**	**+1.1**
JOKE	**Okinoerabujima**	**2.72**	**207**	P	**Pn**	**03 17 47.8**	**+1.2**
JYRO	**Yoronjima**	**3.07**	**206**	P	**Pn**	**03 17 51.8**	**+0.5**
JOW	**Kunigami**	**3.31**	**207**	P	**Pn**	**03 17 54.9**	**+0.3**
JNU	**Nakatsue**	**3.41**	**13**	P	**Pn**	**03 17 58.8**	**+2.8**
	6.2nm,0.3s,baz=336,slow=6.3,SNR=42						
JNU				S	**Sn**	**03 18 38.3**	**+3.1**
	2.2nm,0.3s,baz=82,slow=15,SNR=4.7						
JNTH	**Nagotoyohara**	**3.69**	**208**	P	**Pn**	**03 18 00.8**	**+1.0**
KSRS	**Korea Array**	**7.83**	**348**	P	Pn	03 19 00.7	+4.4
	0.2nm,0.3s,baz=166,slow=14,SNR=9.0						
MJAR	**Matsushiro Arr**	**9.64**	**44**	P	**Pn**	**03 19 24.7**	**+3.6**
	0.1nm,0.3s,baz=243,slow=14,SNR=3.5						
ASAJ	**Asahikawa**	**17.46**	**32**	P	**Pn**	**03 21 02.7**	**-1.3**
	0.3nm,0.3s,baz=108,slow=3.2,SNR=3.0						
SONM	**Songino Array**	**25.56**	**321**	P	**P**	**03 22 27.9**	**+0.4**
	2.0nm,0.6s,baz=142,slow=10,SNR=7.5						
MKAR	**Makanchi Array**	**40.42**	**308**	P	**P**	**03 24 36.1**	**-0.3**
	0.4nm,0.7s,baz=100,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**49.63**	**175**	P	**P**	**03 25 49.4**	**-0.3**
	1.6nm,0.7s,baz=353,slow=8.4,SNR=20						
ASAR	**Alice Springs**	**53.29**	**175**	P	**P**	**03 26 18.1**	**+1.1**
	0.4nm,0.5s,baz=6.0,slow=14,SNR=11						
ILAR	**Eielson Array**	**60.58**	**29**	P	**P**	**03 27 07.3**	**-0.7**
	0.3nm,0.9s,baz=294,slow=6.8,SNR=3.5						
FINES	**FINESS Array B**	**70.53**	**330**	P	**P**	**03 28 10.3**	**-1.9**
	1.8nm,0.8s,baz=53,slow=3.9,SNR=6.5						
AKASG	**Malin Array Be**	**73.83**	**319**	P	**P**	**03 28 31.3**	**-0.8**
	0.3nm,0.4s,baz=56,slow=5.9,SNR=2.4						

TAP 30 03:41:03.7, 24.1°13N×121.6°2E, h6km, **ML1.0, C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**0.05**	**331**	P	Pg	03 41 04.8	-0.3
	baz=332						
NACB				S	Sg	03 41 05.8	-0.3
	baz=332						
TWD	**Chiawan**	**0.06**	**202**	P	Pg	03 41 05.5	+0.3
	baz=194						
TWD				S	Sg	03 41 06.7	+0.4
	baz=194						
ETLH	**Xiulin Townshi**	**0.14**	**300**	eP	Pg	03 41 07.0	+0.2
	baz=301						
ETLH				eS	Sg	03 41 09.8	+1.1
	baz=301						
HWA	**Hwalien**	**0.16**	**185**	eP	Pg	03 41 07.8	+0.9
	baz=182						
WHF	**Hehuan Shan**	**0.32**	**272**	P	Pg	03 41 10.8	+0.6
	baz=272						
WHF				S	Sg	03 41 15.9	+1.3
	baz=272						
NNSB	**Datong**	**0.36**	**324**	eP	Pg	03 41 11.7	+0.8
	baz=327						
NNSH	**Datong**	**0.36**	**324**	eP	Pg	03 41 11.7	+0.8
	baz=326						
TWT	**Tachien**	**0.42**	**287**	eS	Sb	03 41 20.3	-0.2
	baz=285						
TDCB	**Techi**	**0.44**	**286**	eP	Pb	03 41 13.3	-0.6
	baz=286						
TDCB				eS	Sb	03 41 19.8	-1.1
	baz=286						
OWD	**Renai**	**0.44**	**246**	eP	Pb	03 41 13.2	-0.8
	baz=248						

IDC 30 03:42:23.6±10.0, **20.6°7S×178.5°8W, h696**km±140km, **mb2.5/5, mb1 2.8/5, mb1mx2.6/30, mbtmp3.6/5, Error ellipse: s-maj=105.7km s-min=50.8km az=163.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.23**	**244**	P	P	03 48 40.1	-0.7
	1.2nm,0.7s,baz=86,slow=14,SNR=3.0						
ASAR	**Alice Springs**	**43.96**	**257**	P	P	03 49 34.1	+0.4
	0.9nm,0.6s,baz=96,slow=7.6,SNR=14						
WRA	**Warramunga Arr**	**44.04**	**262**	P	P	03 49 34.0	-0.4
	0.1nm,0.4s,baz=97,slow=7.7,SNR=5.4						
TXAR	**Lajitas Array**	**87.60**	**58**	P	P	03 54 01.6	+0.2
	0.3nm,0.9s,baz=213,slow=8.2,SNR=2.9						
ILAR	**Eielson Array**	**88.60**	**13**	P	P	03 54 04.8	-0.3
	0.2nm,0.5s,baz=212,slow=5.6,SNR=4.5						
AKASG	**Malin Array Be**	**142.90**	**331**	PKP	PKPdf	04 00 39.9	-0.7
	0.8nm,0.5s,baz=43,slow=4.2,SNR=6.2						

IDC 30 03:43:30.5±2.1, **2.8°N×126.5°4E, h0**km, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.2**/37, **mbtmp3.3**/3, **Error ellipse: s-maj=183.1km s-min=24.8km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.28**	**161**	P	P	03 48 38.5	-1.5
	0.4nm,0.4s,baz=340,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.67**	**165**	P	P	03 49 13.1	+1.7
	0.2nm,0.5s,baz=344,slow=13,SNR=5.9						
MKAR	**Makanchi Array**	**58.72**	**326**	P	P	03 53 29.9	-0.3
	0.3nm,0.5s,baz=114,slow=7.0,SNR=3.4						

*IDC **30** 03:46:33.3±2.7, 46.7°3N×153.6°E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/49, mbtmp3.5/3, ML2.2/1, Error ellipse: s-maj=74.4km s-min=37.9km az=172.0*
*KRSC **30** 03:46:58.8±1.2, 48.4°8N×155.7°4E, h152km±18km, ML3.9*

ISC 30 03:46:59.2±2.2, **49.3N**±0.3°×**153.7E**±0.2°, **h150**km, **n9**, σ2°**78**/8, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.10**	**48**	eS	**Sn**	**03 48 06.4**	**+3.1**
PAU	**Pauzhetka**	**2.96**	**42**	eS	**Sn**	**03 48 25.7**	**+3.6**
KDTR	**Khodutka, Kamc**	**3.77**	**47**	eS	**Sn**	**03 48 39.7**	**-1.0**
RUS	**Russkaya**	**4.39**	**43**	eS	**Sn**	**03 48 55.0**	**-0.2**
PETK	**Petropavlovsk-**	**4.57**	**32**	Pn	Pn	03 48 15.6	+8.7
	0.2nm,0.3s,baz=207,slow=9.7,SNR=5.1						
SPN	**Mys Shipunski**	**5.51**	**44**	S	**Sn**	**03 49 18.0**	**-3.9**
MKZ	**Mys Kozlova**	**7.24**	**40**	eP	**Pn**	**03 48 42.4**	**+0.1**
MKAR	**Makanchi Array**	**46.13**	**295**	P	**P**	**03 55 08.2**	**-0.1**
	0.9nm,0.6s,baz=56,slow=7.4,SNR=8.8						
TXAR	**Lajitas Array**	**75.93**	**61**	P	**P**	**03 58 29.1**	**-0.3**
	0.1nm,0.5s,baz=285,slow=7.1,SNR=3.8						

IDC 30 03:54:06.2±7.3, **18.8°S×174.1°W, h0**km, **mb4.0**/3, **mb1 4.3**/3, **mb1mx3.7**/32, **mbtmp4.0**/3, **Error ellipse: s-maj=314.5km s-min=36.7km az=142.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**48.47**	**255**	P	P	04 02 51.1	+0.1
	2.5nm,0.7s,baz=90,slow=9.0,SNR=45						
WRA	**Warramunga Arr**	**48.48**	**260**	P	P	04 02 50.6	-0.4
	1.0nm,0.3s,baz=98,slow=6.7,SNR=36						
ILAR	**Eielson Array**	**85.96**	**11**	P	P	04 06 47.8	0.0
	0.5nm,1.0s,baz=226,slow=6.4,SNR=7.2						

*REY **30** 03:58:31.0, 64.2°62N×17.4°4W, h10km*
*IDC **30** 03:58:32.2±0.7, 64.3°9N×17.8°2W, h0km, mb3.8/12, mb1 4.1/15, mb1mx3.8/41, mbtmp3.8/15, ML2.6/2, MS3.3/13, Ms1 3.3/13, ms1mx3.1/44, Error ellipse: s-maj=26.0km s-min=11.6km az=23.0*
*NEIC **30** 03:58:33.4±1.4, 64.5°2N±0.09×17.7°W±0.1°, h7km±4km, mb4.4/67, Error ellipse: s-maj=13.0km s-min=7.9km az=193.0*

ISC 30 03:58:33.2±0.9, **64.52N**±0.04×**17.53W**±0.03, **h4**km±6km, **n161**, σ1°**36**/151, **mb4.3**/51, **MS3.4**/11, **Iceland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDJK	**Dyngjujokull**	**0.13**	**97**	P	Pg	03 58 34.3	-1.6
	baz=141						
IHAM	**Hamarinn**	**0.13**	**252**	P	**Pg**	**03 58 35.1**	**-0.8**
	baz=231						
IGRF	**Grimsfjall**	**0.16**	**135**	P	**Pg**	**03 58 35.5**	**-1.0**
	baz=160						
IVON	**Vonarskard**	**0.18**	**328**	P	Pg	03 58 34.1	-2.7
	baz=294						
IHUS	**Husbondi**	**0.23**	**194**	P	**Pg**	**03 58 37.6**	**-0.1**
	baz=196						
IVOT	**Vottur**	**0.29**	**149**	P	**Pg**	**03 58 37.9**	**-1.0**
	baz=162						
IURH	**Urdarhals**	**0.34**	**29**	P	Pg	03 58 35.9	-4.0
	baz=32						
IJOK	**Jokulheimar**	**0.36**	**236**	P	**Pg**	**03 58 39.4**	**-0.9**
	baz=229						
IJOK				S	**Sg**	**03 58 46.3**	**+1.3**
	baz=229						
ISKR	**Skrokkalda**	**0.37**	**277**	P	**Pg**	**03 58 38.8**	**-1.6**
	baz=263						
IIEY	**Innrieyrar**	**0.50**	**211**	P	**Pg**	**03 58 41.9**	**-0.9**
	baz=210						
IIEY				S	**Sg**	**03 58 51.0**	**+1.7**
	baz=210						
THOR	**Thorvaldshraun**	**0.56**	**41**	P	Pg	03 58 39.6	-4.3
	baz=45						
IKRE	**Kreppuhraun**	**0.56**	**61**	P	Pg	03 58 39.8	-4.1
	baz=69						
IKRE				S	**Sg**	**03 58 47.0**	**-4.2**
	baz=69						
IKAL	**Kalfafell**	**0.58**	**187**	P	**Pg**	**03 58 43.2**	**-1.1**
	baz=189						
IKAL				S	**Sg**	**03 58 53.4**	**+1.6**
	baz=189						
IKSK	**Karasker**	**0.58**	**128**	P	Pg	03 58 41.6	-2.8
	baz=137						
IKSK				S	**Sg**	**03 58 50.8**	**-1.2**
	baz=137						
IASK	**Askja**	**0.66**	**35**	P	Pg	03 58 41.1	-4.7
	baz=37						
IMKO	**Mokollar**	**0.69**	**48**	P	Pg	03 58 41.9	-4.5
	baz=52						
IVAT	**Vatnsfell**	**0.69**	**242**	P	**Pg**	**03 58 45.2**	**-1.3**
	baz=237						
IFAG	**Fagurholsmyri**	**0.75**	**149**	P	**Pb**	**03 58 45.5**	**-3.4**
	baz=155						
IFAG				S	**Sb**	**03 58 57.8**	**-1.6**
	baz=155						
IVSH	**V-Sauoahnukur**	**0.83**	**69**	P	Pb	03 58 44.5	-5.6
	baz=74						
ISVA	**Svartarkot**	**0.83**	**8**	P	Pb	03 58 43.9	-6.2
	baz=6.2						
IADA	**Aoalbol**	**0.98**	**58**	P	Pb	03 58 46.7	-6.0
	baz=62						
BORG	**Borgarnes**	**1.65**	**280**	Pn	**Pn**	**03 58 59.4**	**-3.5**
	23nm,0.3s,baz=96,slow=8.9,SNR=67						
BORG				Sn	**Sn**	**03 59 23.8**	**-0.6**
	17nm,0.3s,baz=130,slow=8.6,SNR=4.6						
BORG	**Borgarnes**	**1.65**	**280**	Pn	**Pn**	**03 58 60.0**	**-2.9**
BORG				Sn	**Sn**	**03 59 23.3**	**-1.1**
SCO	**Scoresbysund**	**6.22**	**346**	Pn	**Pn**	**04 00 04.7**	**-1.0**
SCO	**Scoresbysund**	**6.22**	**346**	*e*	**Pn**	**04 00 03.5**	**-2.1**
	baz=142,slow=11						
SCO				*i* P	Pb	04 00 04.9	-17
SCO				*i* S	**Sn**	**04 01 18.4**	**+1.3**
SCO				IAML		04 01 40.2	
	comp=Z,2.7nm,0.4s						
ANGG	**Ammassalik, Gr**	**8.55**	**286**	Pn	**Pn**	**04 00 36.0**	**-1.6**
EKR1	**Eskdalemuir Ar**	**11.65**	**135**	Pn	**Pn**	**04 01 19.4**	**-0.6**
EKA	**Eskdalemuir Ar**	**11.66**	**135**	Pn	**Pn**	**04 01 18.9**	**-1.2**
	baz=321,slow=13,SNR=12						
ESK	**Eskdalemuir**	**11.66**	**136**	Pn	**Pn**	**04 01 22.5**	**+2.4**
DAG	**Danmarks Havn**	**12.32**	**359**	*i* P	**Pn**	**04 01 32.1**	**+3.1**
DAG	**Danmarks Havn**	**12.32**	**359**	*eP*	**Pn**	**04 01 32.1**	**+3.1**
NOA	**NORSAR Array B**	**13.54**	**92**	Pn	**Pn**	**04 01 45.3**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=299,slow=13,SNR=3.2						
NOA				LR	LR	04 06 41.4	
	comp=Z,73nm,20.5s,baz=300,slow=36						
SFJD	**Kangerlussuaq**	**13.71**	**295**	LR	LR	04 06 04.3	
	comp=Z,93nm,20.3s,baz=26,slow=33						
HFS	**Hagfors**	**15.05**	**93**	LR	LR	04 07 15.8	
	comp=Z,82nm,18.4s,baz=256,slow=34						
UCC	**Uccle**	**17.92**	**130**		**Pn**	**04 02 43.0**	**+0.1**
WLF	**Walferdange**	**19.49**	**129**	P	**P**	**04 03 00.7**	**-0.1**
WLF				IAmb	IAmb	04 03 03.4	
	comp=Z,26nm,1.5s						
CLF	**Chambon-Foret**	**19.70**	**138**	P	**P**	**04 03 03.5**	**+0.4**
FIA1	**FINESS Array S**	**19.75**	**79**	P	**P**	**04 03 03.7**	**+0.2**
FIA1				IAmb	IAmb	04 03 09.2	
	comp=Z,21nm,1.4s						
FINES	**FINESS Array B**	**19.75**	**79**	P	**P**	**04 03 04.5**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=5.7,slow=5.7,SNR=5.5						
TULEG	**Thule**	**19.97**	**328**	P	**P**	**04 03 05.6**	**-0.2**
CLL	**Collm**	**20.66**	**115**	*eP*	**P**	**04 03 15.0**	**+1.5**
	comp=Z,11nm,1.1s						
CLL	**Collm**	**20.66**	**115**	P	**P**	**04 03 13.1**	**-0.4**
ECH	**Echery**	**21.07**	**129**	P	**P**	**04 03 18.2**	**+0.1**
NKC	**Novy Kostel**	**21.29**	**118**	*eP*	**P**	**04 03 24.5**	**+4.1**
STU	**Stuttgart**	**21.30**	**125**	P	**P**	**04 03 21.2**	**+0.8**
STU				IAmb	IAmb	04 03 26.6	
	comp=Z,19nm,0.9s						
BRG	**Berggiesshubel**	**21.36**	**115**	*eP*	**P**	**04 03 20.6**	**-0.5**
	comp=Z,6.0nm,0.9s						
BFO	**Black Forest**	**21.37**	**127**	P

ESDC	**Sonseca Array**	**26.12**	**156**	P		**P**	**04 04 09.2**	**+1.3**
KOLS	**Kolonicke sedl**	**26.24**	**107**	*e*P		**P**	**04 04 11.0**	**+2.1**
PESTR	**Estremoz**	**26.35**	**162**	P		**P**	**04 04 10.1**	**+0.1**
PESTR				IAmb		IAmb	04 04 15.7	
	comp=Z,11nm,1.2s							
RES	**Resolute Bay**	**26.58**	**325**	LR		LR	04 14 52.0	
	comp=Z,76nm,19.1s,baz=90,slow=37							
RES	**Resolute Bay**	**26.58**	**325**	P		**P**	**04 04 10.7**	**-1.0**
AKASG	**Malin Array Be**	**27.84**	**97**	P		**P**	**04 04 23.7**	**+0.5**
	comp=Z,0.1nm,0.2s,baz=321,slow=9.6,SNR=1.8							
AKASG	**Malin Array Be**	**27.84**	**97**	P		**P**	**04 04 21.1**	**-2.1**
OBN	**Obninsk**	**27.91**	**84**	P		**P**	**04 04 22.4**	**-1.4**
BUR08	**Bucovina Ar. S**	**28.47**	**106**	P		**P**	**04 04 28.6**	**-0.4**
BURAR	**Bucovina Array**	**28.50**	**106**	P		**P**	**04 04 29.4**	**+0.1**
DIVS	**Divibare**	**29.26**	**116**	P		**P**	**04 04 35.9**	**-0.1**
DIVS				IAmb		IAmb	04 04 49.9	
	comp=Z,14nm,1.5s							
NRIK	**Noril'sk**	**36.59**	**35**	LR		LR	04 21 16.0	
	comp=Z,22nm,18.8s,baz=14,slow=37							
BR131	**Keskin Array S**	**38.45**	**105**	P		**P**	**04 05 56.5**	**+0.6**
BR131				IAmb		IAmb	04 06 01.5	
	comp=Z,6.5nm,1.1s							
BRTR	**Keskin Array B**	**38.45**	**105**	P		**P**	**04 05 56.7**	**+0.8**
	comp=Z,1.8nm,0.9s,baz=12,slow=8.0,SNR=4.8							
BRTR	**Keskin Array B**	**38.45**	**105**	P		**P**	**04 05 55.7**	**-0.2**
KBZ	**Khabaz**	**39.12**	**92**	P		**P**	**04 06 03.1**	**+1.9**
	comp=Z,3.3nm,0.9s,baz=312,slow=4.8,SNR=4.1							
YKA	**Yellowknife Ar**	**39.30**	**313**	LR		LR	04 22 11.4	
	comp=Z,54nm,20.4s,baz=0.0,slow=36							
ELL	**Elmali**	**39.46**	**111**	P		**P**	**04 06 05.0**	**+0.8**
MEDO	**Medina**	**39.79**	**268**	P		**P**	**04 06 05.5**	**-1.3**
MMNY	**Mt. Morris Dam**	**39.90**	**267**	P		**P**	**04 06 06.8**	**-0.9**
INK	**Inuvik**	**39.96**	**329**	LR		LR	04 23 07.6	
	comp=Z,45nm,18.5s,baz=90,slow=37							
ULM	**Lac du Bonnet**	**41.63**	**289**	LR		LR	04 22 38.5	
	comp=Z,52nm,18.2s,baz=78,slow=35							
ABKAR	**Akbulak array**	**42.05**	**73**	P		**P**	**04 06 25.7**	**+0.3**
TIXI	**Tiksi**	**42.18**	**15**	P		**P**	**04 06 25.9**	**-0.2**
TIXI				IAmb		IAmb	04 06 30.7	
	comp=Z,17nm,1.4s							
GNI	**Garni**	**42.84**	**94**	P		**P**	**04 06 32.1**	**0.0**
TOLK	**Toolik Lake Re**	**42.88**	**336**	P		**P**	**04 06 31.8**	**-0.2**
TOLK				IAmb		IAmb	04 06 34.5	
	comp=Z,7.2nm,0.9s							
BMAR	**Burnt Mountain**	**43.02**	**333**	P		**P**	**04 06 33.6**	**+0.5**
MARD	**Mardin**	**43.50**	**100**	P		**P**	**04 06 38.2**	**+0.7**
MARD				IAmb		IAmb	04 06 43.3	
	comp=Z,14nm,1.2s							
ACSO	**Alum Creek Sta**	**44.14**	**269**	P		**P**	**04 06 41.8**	**-0.6**
ACSO				IAmb		IAmb	04 06 56.8	
	comp=Z,8.4nm,1.1s							
COLD	**Coldfoot**	**44.24**	**336**	P		**P**	**04 06 42.6**	**-0.3**
COLD				IAmb		IAmb	04 06 45.0	
	comp=Z,5.7nm,1.3s							
R53A	**Hurricane**	**45.27**	**267**	P		**P**	**04 06 50.3**	**-1.2**
R53A				IAmb		IAmb	04 06 55.0	
	comp=Z,7.7nm,1.0s							
P49A	**Miami Univ. Ec**	**45.47**	**270**	P		**P**	**04 06 52.2**	**-0.7**
IL31		**45.81**	**332**	P		**P**	**04 06 54.1**	**-1.2**
IL31				IAmb		IAmb	04 06 58.3	
	comp=Z,4.1nm,1.1s							
ILAR	**Eielson Array**	**45.81**	**332**	P		**P**	**04 06 55.5**	**+0.1**
	comp=Z,2.4nm,1.1s,baz=25,slow=6.7,SNR=15							
ILAR				PcP		**PcP**	**04 08 33.2**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=352,slow=3.2,SNR=5.5							
MDM	**Murphy Dome**	**45.91**	**333**	P		**P**	**04 06 55.6**	**-0.5**
MDM				IAmb		IAmb	04 06 59.8	
	comp=Z,9.3nm,1.3s							
COLA	**College**	**45.91**	**333**	P		**P**	**04 06 56.5**	**+0.3**
COLA				IAmb		IAmb	04 06 57.9	
	comp=Z,9.6nm,1.3s							
TCOL	**CIGO, UAF Yank**	**45.91**	**333**	P		**P**	**04 06 56.5**	**+0.4**
IMAR	**Indian Mountai**	**45.99**	**337**	P		**P**	**04 06 57.2**	**+0.5**
BCAR	**Beaver Creek A**	**46.23**	**329**	P		**P**	**04 06 59.2**	**+0.4**
ZAA0	**Zalesovo Array**	**47.74**	**51**	P		**P**	**04 07 10.0**	**-0.6**
ZAA0				IAmb		IAmb	04 07 10.7	
	comp=Z,5.4nm,1.5s							
ZALV	**Zalesovo Beam**	**47.74**	**51**	P		**P**	**04 07 09.8**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=350,slow=7.5,SNR=4.1							
ZALV	**Zalesovo Beam**	**47.74**	**51**	P		**P**	**04 07 10.0**	**-0.6**
USIN	**University of**	**48.05**	**272**	P		**P**	**04 07 12.1**	**-1.1**
KURK	**Kurchatov**	**48.20**	**58**	P		**P**	**04 07 13.8**	**-0.4**
KURK				IAmb		IAmb	04 07 16.7	
	comp=Z,3.5nm,0.9s							
T47A	**Sharon Grove**	**48.62**	**271**	P		**P**	**04 07 16.6**	**-1.0**
EGMT	**Eagleton**	**48.93**	**297**	P		**P**	**04 07 19.5**	**-0.5**
GCMT	**Greycliff**	**50.74**	**295**	P		**P**	**04 07 33.3**	**-0.5**
KK31	**Karatay Array**	**51.34**	**70**	P		**P**	**04 07 38.1**	**-0.1**
KK31				IAmb		IAmb	04 07 42.0	
	comp=Z,5.5nm,1.3s							
KKAR	**Karatay Array**	**51.34**	**70**	P		**P**	**04 07 38.0**	**-0.3**
U40A	**Yellville**	**51.64**	**275**	P		**P**	**04 07 40.7**	**+0.2**
U40A				IAmb		IAmb	04 07 51.4	
	comp=Z,5.3nm,0.9s							
BOZ	**Bozeman (W)**	**51.66**	**297**	P		**P**	**04 07 39.7**	**-1.1**
BOZ				IAmb		IAmb	04 07 43.5	
	comp=Z,5.7nm,1.1s							
YMP	**Mirror Lake Pl**	**51.80**	**295**	P		**P**	**04 07 41.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**53.01**	**156**	P		**P**	**04 07 49.5**	**-1.4**
	comp=Z,1.4nm,0.8s,baz=338,slow=8.9,SNR=7.3							
TORD	**Torodi Ar. Bea**	**53.01**	**156**	P		**P**	**04 07 51.1**	**+0.3**
KAN01	**Argonia South**	**53.07**	**280**	P		**P**	**04 07 49.4**	**-1.8**
BW06	**Boulder Array**	**53.22**	**293**	P		**P**	**04 07 51.7**	**-0.8**
BW06				IAmb		IAmb	04 07 57.0	
	comp=Z,6.5nm,1.0s							
PD31	**Pinedale Array**	**53.22**	**293**	IAmb		IAmb	04 07 53.7	
	comp=Z,3.8nm,0.9s							
PDAR	**Pinedale Array**	**53.22**	**293**	P		**P**	**04 07 51.4**	**-1.1**
	comp=Z,2.8nm,0.9s,baz=53,slow=6.5,SNR=16							
PDAR				LR		LR	04 30 13.1	
	comp=Z,42nm,19.7s,baz=351,slow=36							
BTK	**Batken**	**54.02**	**71**	P		**P**	**04 07 58.1**	**-0.1**
DRK	**Karamyk**	**54.91**	**71**	P		**P**	**04 08 05.9**	**+1.0**
HWUT	**Hardware Ranch**	**55.00**	**294**	P		**P**	**04 08 06.2**	**+0.8**
HWUT				IAmb		IAmb	04 08 07.9	
	comp=Z,7.5nm,1.2s							
KSH	**Kashi**	**56.57**	**68**	*e*P		**P**	**04 08 21.0**	**+4.4**
KSH				pmax		pmax		
	comp=Z,8.0nm,0.9s							
KSH				pmax		pmax		
	comp=Z,120nm,4.2s							
DUG	**Dugway, Tooele**	**56.69**	**294**	IAmb		IAmb	04 08 20.2	
	comp=Z,4.2nm,1.1s							
SRU	**San Rafael Swe**	**56.71**	**292**	P		**P**	**04 08 16.8**	**-0.9**
PV13	**Radium Mtn., P**	**56.83**	**290**	P		**P**	**04 08 17.7**	**-1.0**
WMQ	**Urumqi**	**57.33**	**56**	*e*P		**P**	**04 08 25.5**	**+3.7**
KBL	**Kabul**	**57.98**	**76**	P		**P**	**04 08 26.7**	**0.0**
JCT	**Junction City**	**59.65**	**278**	P		**P**	**04 08 39.0**	**+0.9**
U15A	**North Rim**	**59.73**	**291**	IAmb		IAmb	04 08 42.6	
	comp=Z,4.6nm,1.1s							
NIL	**Nilore**	**60.51**	**73**	P		**P**	**04 08 44.4**	**+0.4**
X16A	**Lo Mia Camp, P**	**61.12**	**290**	P		**P**	**04 08 48.4**	**0.0**
X16A				IAmb		IAmb	04 08 51.4	
	comp=Z,3.7nm,1.1s							
TXAR	**Lajitas Array**	**62.30**	**280**	P		**P**	**04 08 56.2**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=48,slow=3.7,SNR=7.3							
TXAR				LR		LR	04 35 18.2	
	comp=Z,25nm,20.9s,baz=0.0,slow=36							
GTA	**Gaotai**	**65.41**	**49**	*e*P		**P**	**04 09 17.8**	**+1.1**
GTA				pP		pP	04 09 22.8	+4.2
GTA				sP		sP	04 09 25.5	+6.1
GTA				pmax		pmax		
	comp=Z,3.0nm,1.4s							
HHC	**Hu-ho-hao-te**	**67.63**	**40**	*e*P		**P**	**04 09 32.0**	**+1.2**
HHC				pmax		pmax		
	comp=Z,11nm,0.6s							
HHC				pmax		pmax		
	comp=Z,63nm,7.6s							
LZH	**Lanzhou**	**69.74**	**47**	*e*P		**P**	**04 09 43.8**	**-0.3**
LZH				pP		pP	04 09 46.3	+0.2
LZH				sP		sP	04 09 47.5	+0.7
LZH				*e*PP		**PP**	**04 12 20.0**	**+2.3**
LZH				pmax		pmax		
	comp=Z,18nm,1.3s							
LZH				pmax		pmax		
	comp=Z,77nm,7.9s							
LZH				LR		LR		
	comp=N,100nm,16.4s							
LZH				LR		LR		
	comp=E,120nm,16.3s							
LZH				LR		LR		
	comp=Z,180nm,18.6s							
NJ2	**Nanjing**	**77.86**	**37**	*e*P		**P**	**04 10 32.0**	**+0.4**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.6s							

NEIC ***30*** *04:00:35.6±0.9,21°.4N±0°.1×144°.5E±0°.2,h16km±6km, mb4.3/10,Error ellipse: s-maj=24.8km s-min=17.8km az=66.0*

IDC ***30*** *04:00:36.9±0.7,21°.41N×144°.44E,h21km±5km, mb3.7/10, mb1 3.9/10,mb1mx3.6/49,mbtmp3.8/10,MS3.0/1, Ms1 3.0/1,ms1mx2.4/42,Error ellipse: s-maj=28.0km s-min=15.7km az=96.0*

ISC 30 04:00:37.8±0.8,21°.4N±0°.1×144°.5E±0°.2,h35km,n27, σ1§49/25,mb3.9/13,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JCJ	**Chichijima**	**6.05**	**340**	Pn		**Pn**	**04 02 02.5**	**-2.4**
MJAR	**Matsushiro Arr**	**16.05**	**341**	LR		LR	04 09 41.7	
	comp=Z,59nm,20.2s,baz=150,slow=34							
MJAR	**Matsushiro Arr**	**16.05**	**341**	Pn		**Pn**	**04 04 20.5**	**-0.4**
H11S3	**WAKE ISLAND Hy**	**21.04**	**94**	T		T	04 28 08.0	
	baz=283,slow=74,SNR=25							
H11S1	**WAKE ISLAND Hy**	**21.05**	**94**	T		T	04 28 06.8	
	baz=283,slow=74,SNR=25							
H11S2	**WAKE ISLAND Hy**	**21.05**	**94**	T		T	04 28 07.6	
	baz=283,slow=74,SNR=25							
KSRS	**Korea Array**	**21.50**	**322**	P		**P**	**04 05 25.6**	**+2.1**
	2.1nm,0.5s,baz=147,slow=9.1,SNR=11							
KLR	**Kul'dur**	**29.57**	**343**	P		**P**	**04 06 40.7**	**+1.5**
	2.4nm,0.7s,baz=143,slow=7.6,SNR=9.4							
SONM	**Songino Array**	**40.36**	**320**	P		**P**	**04 08 12.1**	**-0.1**
	1.5nm,0.8s,baz=104,slow=4.6,SNR=2.6							
SONM	**Songino Array**	**40.36**	**320**	IAmb		IAmb	04 08 12.8	
	comp=Z,2.2nm,1.1s							
WRA	**Warramunga Arr**	**42.28**	**194**	P		**P**	**04 08 28.7**	**+0.6**
	comp=Z,1.5nm,1.2s,baz=15,slow=9.2,SNR=4.5							
WRA				pP		**pP**	**04 08 35.7**	**-1.9**
	comp=Z,0.6nm,0.8s,baz=14,slow=8.6,SNR=3.5							
ASAR	**Alice Springs**	**45.98**	**194**	P		**P**	**04 08 58.2**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=15,slow=9.5,SNR=9.7							
ASAR				pP		**pP**	**04 09 05.1**	**-2.3**
	comp=Z,0.5nm,0.7s,baz=18,slow=9.1,SNR=4.7							
ZAA0	**Zalesovo Array**	**55.21**	**322**	P		**P**	**04 10 06.6**	**-0.4**
ZALV	**Zalesovo Beam**	**55.21**	**322**	P		**P**	**04 10 07.0**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=106,slow=7.7,SNR=11							
ZALV	**Zalesovo Beam**	**55.21**	**322**	P		**P**	**04 10 06.7**	**-0.4**
MKAR	**Makanchi Array**	**55.81**	**313**	P		**P**	**04 10 11.5**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=87,slow=7.9,SNR=5.2							
KURK	**Kurchatov**	**58.53**	**317**	P		**P**	**04 10 30.6**	**-0.1**
ILAR	**Eielson Array**	**61.73**	**27**	P		**P**	**04 10 52.2**	**-0.1**
	comp=Z,0.4nm,1.0s,baz=260,slow=5.4,SNR=3.7							
ILAR				pP		**pP**	**04 10 58.6**	**-3.8**
	comp=Z,0.4nm,0.6s,baz=261,slow=5.4,SNR=4.3							
NIL	**Nilore**	**63.27**	**298**	P		**P**	**04 11 03.4**	**+0.1**
BRVK	**Borovoye**	**63.76**	**320**	P		**P**	**04 11 06.4**	**+0.3**
KK31	**Karatay Array**	**64.21**	**309**	P		**P**	**04 11 09.3**	**0.0**
KK31				IAmb		IAmb	04 11 10.6	
	comp=Z,2.3nm,0.8s							
KKAR	**Karatay Array**	**64.21**	**309**	P		**P**	**04 11 09.5**	**+0.2**
ABKAR	**Akbulak array**	**70.62**	**316**	P		**P**	**04 11 49.6**	**0.0**
ABKAR				IAmb		IAmb	04 11 50.9	
	comp=Z,2.6nm,0.9s							
YKA	**Yellowknife Ar**	**76.13**	**28**	pP		P	04 12 29.0	+7.1
	comp=Z,0.5nm,0.5s,baz=295,slow=5.2,SNR=2.5							
NVAR	**Mina Array Bea**	**82.35**	**52**	P		**P**	**04 12 59.2**	**+2.7**
	comp=Z,0.5nm,0.8s,baz=310,slow=4.2,SNR=3.3							
NVAR				pP		**pP**	**04 13 06.3**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=281,slow=5.3,SNR=5.1							
NVAR	**Mina Array Bea**	**82.35**	**52**	P		**P**	**04 12 58.1**	**+1.5**
FINES	**FINESS Array B**	**83.97**	**335**	P		**P**	**04 13 05.8**	**+1.6**
	comp=Z,1.9nm,0.8s,baz=60,slow=6.5,SNR=9.8							

IDC ***30*** *04:10:56.1±1.4,5°.65S×149°.44E,h0km,mb3.6/3, mb1 4.0/5,mb1mx3.5/37,mbtmp3.9/5,ML2.1/1,MS3.1/6, Ms1 3.1/6,ms1mx2.8/31,Error ellipse: s-maj=61.3km s-min=20.3km az=142.0*

ISC 30 04:11:01.8±1.2,6°.0S±0°.4×149°.7E±0°.3,h35km,n9,σ0§70/8, MS3.0/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KRVT	**Keravat (AS076**	**2.88**	**54**	Pn		**Pn**	**04 11 45.0**	**-0.2**
	48nm,0.3s,baz=189,slow=0.6,SNR=16							
KRVT				Sn		**Sn**	**04 12 18.8**	**+0.1**
	12nm,0.3s,baz=134,slow=10,SNR=3.9							
PMG	**Port Moresby**	**4.21**	**216**	Pn		**Pn**	**04 12 04.2**	**+0.7**
	7.1nm,0.3s,baz=29,slow=4.8,SNR=34							
PMG				Sn		**Sn**	**04 12 50.3**	**-1.1**
	21nm,0.3s,baz=8.2,slow=23,SNR=11							
PMG				LR		LR	04 13 44.2	
	comp=Z,183nm,21.0s,baz=62,slow=38							
HNR	**Honiara**	**10.73**	**109**	LR		LR	04 17 03.3	
	comp=Z,61nm,20.5s,baz=353,slow=33							
WRA	**Warramunga Arr**	**20.36**	**226**	P		**P**	**04 15 35.1**	**-0.3**
	2.3nm,0.8s,baz=52,slow=11,SNR=21							
WRA				LR		LR	04 24 06.4	
	comp=Z,60nm,20.8s,baz=45,slow=39							
DZM	**Mont Dzumac**	**22.75**	**136**	LR		LR	04 23 59.1	
	comp=Z,108nm,18.3s,baz=234,slow=34							
ASAR	**Alice Springs**	**23.21**	**219**	P		**P**	**04 16 06.2**	**+0.3**
	0.5nm,0.5s,baz=53,slow=9.5,SNR=10							
FITZ	**Fitzroy Crossi**	**26.36**	**241**	P		**P**	**04 16 34.3**	**-0.6**
	2.1nm,0.7s,baz=37,slow=8.6,SNR=7.0							
FITZ				LR		LR	04 28 34.6	
	comp=Z,51nm,18.3s,baz=50,slow=40							
STKA	**Stephens Creek**	**26.83**	**195**	LR		LR	04 26 29.8	
	comp=Z,32nm,20.4s,baz=26,slow=34							
TORD	**Torodi Ar. Bea**	**147.67**	**285**	PKPbc		**PKPdf**	**04 30 41.5**	**+0.5**
	0.4nm,0.3s,baz=68,slow=2.6,SNR=16							

REY ***30*** *04:16:40.5,64°.67N×17°.47W,h8km*

IDC ***30*** *04:16:40.8±0.7,64°.57N×17°.68W,h0km,mb3.8/11, mb1 4.1/15,mb1mx3.8/51,mbtmp3.9/15,ML2.6/3,MS3.0/5, Ms1 3.1/5,ms1mx2.6/50,Error ellipse: s-maj=22.9km s-min=12.8km az=18.0*

NEIC ***30*** *04:16:42.1±1.5,64°.50N±0°.09×17°.8W±0°.1,h9km±3km, mb4.4/41,Error ellipse: s-maj=13.0km s-min=7.9km az=176.0*

ISC 30 04:16:42.4±0.4,64°.62N±0°.03×17°.55W±0°.03,h10km,n128, σ1§47/124,mb4.2/37,MS3.1/4,Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
IVON	**Vonarskard**	**0.10**	**302**	P		**Pg**	**04 16 43.3**	**-1.9**
	baz=271							
IVON				S		**Sg**	**04 16 45.9**	**-1.1**
	baz=271							
IDJK	**Dyngjujokull**	**0.18**	**130**	P		**Pg**	**04 16 44.5**	**-1.8**
	baz=150							
IHAM	**Hamarinn**	**0.18**	**221**	P		**Pg**	**04 16 45.2**	**-1.2**
	baz=219							
IDYN	**Dyngjuhals**	**0.19**	**24**	P		**Pg**	**04 16 43.5**	**-3.0**
	baz=19							
IGRF	**Grimsfjall**	**0.24**	**150**	P		**Pg**	**04 16 46.0**	**-1.4**
	baz=162							
IURH	**Urdarhals**	**0.27**	**40**	P		Pg	04 16 44.7	-3.1
	baz=42							
IURH				S		**Sg**	**04 16 48.7**	**-2.7**
	baz=42							
IHUS	**Husbondi**	**0.33**	**188**	P		**Pg**	**04 16 48.1**	**-0.8**
	baz=192							
ISKR	**Skrokkalda**	**0.37**	**261**	P		**Pg**	**04 16 48.2**	**-1.4**
	baz=255							
IVOT	**Vottur**	**0.38**	**155**	P		**Pg**	**04 16 48.4**	**-1.5**
	baz=163							
IJOK	**Jokulheimar**	**0.42**	**224**	P		**Pg**	**04 16 49.5**	**-1.2**
	baz=223							
THOR	**Thorvaldshraun**	**0.49**	**49**	P		Pg	04 16 48.5	-3.4
	baz=52							
THOR				S		**Sg**	**04 16 54.9**	**-3.5**
	baz=52							
IKRE	**Kreppuhraun**	**0.53**	**71**	P		Pg	04 16 49.1	-3.5
	baz=76							
IKRE				S		**Sg**	**04 16 56.2**	**-3.4**
	baz=76							
IASK	**Askja**	**0.58**	**41**	P		Pg	04 16 49.9	-3.8
	baz=42							
IIEY	**Innrieyrar**	**0.58**	**206**	P		**Pg**	**04 16 52.2**	**-1.4**
	baz=207							
IKSK	**Karasker**	**0.66**	**134**	P		**Pg**	**04 16 51.9**	**-3.1**
	baz=140							
IKAL	**Kalfafell**	**0.68**	**185**	P		**Pg**	**04 16 53.7**	**-1.7**
	baz=188							
ISVA	**Svartarkot**	**0.73**	**10**	P		Pg	04 16 52.6	-3.9
	baz=7.5							
IVAT	**Vatnsfell**	**0.74**	**235**	P		**Pg**	**04 16 54.8**	**-1.8**
	baz=233							
IVSH	**V-Sauoahnukur**	**0.81**	**75**	P		Pg	04 16 53.7	-4.1
	baz=79							
BORG	**Borgarnes**	**1.63**	**276**	Pn		**Pn**	**04 17 08.4**	**-2.6**
	18nm,0.3s,baz=88,slow=8.2,SNR=57							
BORG				Sn		**Sg**	**04 17 32.5**	**-2.2**
	19nm,0.3s,baz=39,slow=23,SNR=6.8							
BORG	**Borgarnes**	**1.63**	**276**	Pn		**Pn**	**04 17 08.5**	**-2.6**
BORG				Sn		**Sn**	**04 17 29.6**	**-2.4**
SCO	**Scoresbysund**	**6.13**	**346**	Pn		**Pn**	**04 18 11.7**	**-1.1**
SCO	**Scoresbysund**	**6.13**	**346**	*e*		Pn	04 18 04.8	-8.0
	baz=156,slow=8.6							
SCO				*i*	P	**Pn**	**04 18 11.0**	**-1.8**
SCO				*i*	S	**Sn**	**04 19 24.5**	**+1.7**
SCO				IAML			04 19 47.1	
	comp=Z,2.0nm,0.4s							
EKA	**Eskdalemuir Ar**	**11.74**	**136**	Pn		**Pn**	**04 19 29.5**	**-0.2**
	baz=321,slow=13,SNR=18							
DAG	**Danmarks Havn**	**12.22**	**359**	*i* P		Pn	04 19 42.7	+6.6
DAG	**Danmarks Havn**	**12.22**	**359**	*e*P		Pn	04 19 42.8	+6.6
NC204	**NORSAR Array S**	**13.25**	**92**	Pn		**Pn**	**04 19 51.4**	**+1.0**
NOA	**NORSAR Array B**	**13.55**	**92**	Pn		**Pn**	**04 19 51.9**	**-2.5**
	comp=Z,0.0nm,0.3s,baz=296,slow=15,SNR=2.7							
NOA				LR		LR	04 24 52.1	
	comp=Z,24nm,20.8s,baz=5.0,slow=36							
SFJD	**Kangerlussuaq**	**13.67**	**295**	LR		LR	04 24 28.1	
	comp=Z,78nm,18.7s,baz=7.0,slow=34							
HFS	**Hagfors**	**15.07**	**93**	Pn		**P**	**04 20 20.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=304,slow=3.2,SNR=6.6							
ARCES	**ARCESS Array B**	**17.16**	**54**	P		**Pn**	**04 20 42.8**	**+0.9**
	baz=271,slow=14,SNR=3.0							
FINES	**FINESS Array B**	**19.73**	**79**	P		**P**	**04 21 12.9**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=278,slow=5.4,SNR=4.1							
CLL	**Collm**	**20.70**	**116**	*e*P		**P**	**04 21 24.0**	**+1.6**
BRG	**Berggiesshubel**	**21.41**	**115**	*e*P		**P**	**04 21 30.3**	**+0.3**
	comp=Z,14nm,1.3s							
FRB	**Frobisher Bay**	**21.75**	**291**	LR		LR	04 28 48.3	
	comp=Z,41nm,19.5s,baz=260,slow=34							
PRU	**Pruhonice**	**22.35**	**116**	*e*P		**P**	**04 21 41.3**	**+1.2**
CHVC	**Chvalec**	**22.47**	**113**	*e*P		**P**	**04 21 42.6**	**+1.2**
OSTC	**Ostas**	**22.56**	**112**	*e*P		**P**	**04 21 43.0**	**+0.7**
KHC	**Kasperske Hory**	**22.67**	**118**	*e*P		**P**	**04 21 44.1**	**+0.5**
KHC	**Kasperske Hory**	**22.67**	**118**	P		**P**	**04 21 44.5**	**+0.9**
DPC	**Dobruska-Polom**	**22.76**	**113**	*e*P		**P**	**04 21 45.1**	**+0.6**
DAVA	**Damuels**	**22.87**	**126**	P		**P**	**04 21 46.5**	**+0.7**
	comp=Z,17nm,2.0s							
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**	**04 21 46.7**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=334,slow=8.9,SNR=8.5							
GERES	**GERESS Array B**	**22.95**	**118**	P		**P**	**04 21 47.5**	**+0.9**
RETA	**Reutte**	**23.01**	**125**	P		**P**	**04 21 46.6**	**-0.6**
	comp=Z,9.2nm,1.3s							
MOTA	**Moosalm**	**23.25**	**124**	P		**P**	**04 21 51.8**	**+2.1**
	comp=Z,5.9nm,1.2s							
SQTA	**Sankt Quirin**	**23.39**	**124**	P		**P**	**04 21 50.7**	**-0.4**
	comp=Z,4.2nm,1.0s							
WATA	**Walderalm**	**23.43**	**124**	*e*P		**P**	**04 21 51.2**	**-0.3**
	comp=Z,7.3nm,1.1s							
WTTA	**Wattenberg**	**23.51**	**124**	*e*P		**P**	**04 21 53.0**	**+0.6**
	comp=Z,9.6nm,1.5s							
EUNU	**Eureka**	**23.70**	**336**	P		**P**	**04 21 54.9**	**+1.1**
KBA	**Koelnbreinsper**	**24.29**	**121**	*e*P		**P**	**04 22 02.7**	**+2.9**
	comp=Z,5.3nm,1.1s							
CONA	**Conrad Observa**	**24.53**	**117**	*e*P		**P**	**04 22 02.4**	**+0.5**
	comp=Z,4.5nm,1.2s							
SMOL	**Smolenice**	**24.66**	**114**	*e*P		**P**	**04 22 04.2**	**+1.3**
PRED	**Cave del Predi**	**24.91**	**122**	P		**P**	**04 22 06.3**	**+1.1**
PRED				IAmb		IAmb	04 22 08.7	
	comp=Z,14nm,1.4s							
ARSA	**Arzberg**	**24.96**	**118**	*e*P		**P**	**04 22 06.5**	**+0.9**
	comp=Z,3.0nm,1.2s							
LANS	**Liptovska Anna**	**24.97**	**111**	*e*P		**P**	**04

	comp=Z,7.5nm,1.3s								
WMQ	**Urumqi**	**57.28**	**56**	*e*P		**P**	**04 26 33.5**	**+3.7**
SPR3	**Spring Creek 3**	**58.27**	**295**	P		**P**	**04 26 37.0**	**-0.1**
SPR3				IAmb		IAmb	04 26 40.8	
	comp=Z,7.3nm,1.4s							
BNM	**Barren Site**	**59.34**	**285**	P		**P**	**04 26 44.5**	**0.0**
JCT	**Junction City**	**59.63**	**277**	P		**P**	**04 26 46.0**	**-0.4**
WUAZ	**Wupatki**	**60.10**	**290**	P		**P**	**04 26 49.0**	**-0.7**
NIL	**Nilore**	**60.48**	**73**	P		**P**	**04 26 52.7**	**+0.6**
SHPR	**Sheep Range**	**60.76**	**294**	P		**P**	**04 26 53.0**	**-1.1**
SHPR				IAmb		IAmb	04 26 57.6	
	comp=Z,4.5nm,1.5s							
X16A	**Lo Mia Camp, P**	**61.09**	**290**	P		**P**	**04 26 56.8**	**+0.4**
X16A				IAmb		IAmb	04 26 59.6	
	comp=Z,3.0nm,1.2s							
GTA	**Gaotai**	**65.35**	**49**	*e*P		**P**	**04 27 24.8**	**+0.3**
GTA				pP		sP	04 27 30.0	+0.2
GTA				sP		pP	04 27 33.3	+5.0
GTA				pmax		pmax		
	comp=Z,3.0nm,1.6s							
HSIG		**65.60**	**286**	P		**P**	**04 27 26.5**	**+0.4**
HHC	**Hu-ho-hao-te**	**67.56**	**40**	*e*P		**P**	**04 27 41.0**	**+2.4**
HHC				pmax		pmax		
	comp=Z,11nm,0.7s							
HHC				pmax		pmax		
	comp=Z,64nm,6.6s							
LZH	**Lanzhou**	**69.68**	**48**	*e*P		**P**	**04 27 53.0**	**+1.0**
LZH				pP		pP	04 27 55.5	-0.3
LZH				sP		sP	04 27 56.8	-0.4
LZH				*e*PP		**PP**	**04 30 29.3**	**+3.9**
LZH				pmax		pmax		
	comp=Z,19nm,1.3s							
LZH				pmax		pmax		
	comp=Z,77nm,6.0s							
LZH				LR		LR		
	comp=N,120nm,16.6s							
LZH				LR		LR		
	comp=E,120nm,16.5s							
LZH				LR		LR		
	comp=Z,200nm,18.7s							
CMAR	**Chiang Mai Arr**	**84.18**	**59**	P		**P**	**04 29 13.7**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=320,slow=6.6,SNR=4.5							
JOW	**Kunigami**	**85.04**	**30**	P		**P**	**04 29 18.9**	**+1.0**

*NEIC **30** 04:18:22.5±0.8,21°.81N±0°.09×143°.4E±0°.2, h9km±4km, mb4.6/32, Error ellipse: s-maj=20.3km s-min=12.9km az=80.0*

*IDC **30** 04:18:24.9±0.7,21°.80N×143°.40E, h25km±3km, mb4.0/15, mb1 4.2/16, mb1mx3.9/50, mbtmp4.1/16, ML2.6/1, MS3.5/16, Ms1 3.5/16, ms1mx3.3/36, Error ellipse: s-maj=22.0km s-min=14.4km az=87.0*

ISC 30 04:18:26.0±0.5, 21°.82N±0°.07×143°.4E±0°.1, h35km, n74, σ0§74/60, mb4.3/27, MS3.4/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.36**	**348**	Pn	**Pn**	**04 19 43.9**	**+0.3**
JCJ					**Sn**	**04 20 43.3**	**-0.9**
GUMO	**Guam**	**8.31**	**170**	LR	LR	04 23 03.7	
	comp=Z,332nm,19.1s,baz=75,slow=34						
JHJ	**Hachijo jima 2**	**11.70**	**345**	LR	LR	04 25 29.9	
	comp=Z,361nm,18.8s,baz=194,slow=36						
MJAR	**Matsushiro Arr**	**15.35**	**344**	Pn	**Pn**	**04 21 59.1**	**-0.9**
	0.0nm,0.3s,baz=166,slow=8.3,SNR=2.8						
MJAR				LR	LR	04 27 31.4	
	comp=Z,264nm,20.3s,baz=155,slow=36						
JNU	**Nakatsue**	**15.80**	**318**	LR	LR	04 27 36.0	
	comp=Z,72nm,18.8s,baz=120,slow=35						
KSRS	**Korea Array**	**20.53**	**323**	P	Pn	04 23 07.0	+3.2
	3.0nm,0.4s,baz=147,slow=9.0,SNR=20						
KSRS				LR	LR	04 30 12.1	
	comp=Z,52nm,18.3s,baz=130,slow=34						
KSAR	**Wonju Array Be**	**20.55**	**323**	P	**P**	**04 23 01.4**	**-0.2**
SSLB	**Suanglung**	**20.78**	**280**	P	**P**	**04 23 04.8**	**+0.5**
SSLB				IAmb	IAmb	04 23 19.5	
	comp=Z,32nm,1.1s						
JEW	**Eniwo**	**21.02**	**356**	P	**P**	**04 23 05.9**	**-0.7**
JEW				IAmb	IAmb	04 23 20.2	
	comp=Z,30nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**22.06**	**91**	T	T	04 45 56.7	
	baz=279						
H11N2	**WAKE ISLAND Hy**	**22.07**	**91**	T	T	04 45 57.4	
	baz=279,SNR=3.9						
H11N3	**WAKE ISLAND Hy**	**22.08**	**91**	T	T	04 45 55.5	
	baz=279						
H11S3	**WAKE ISLAND Hy**	**22.11**	**94**	T	T	04 46 01.6	
	baz=283,slow=74,SNR=24						
H11S1	**WAKE ISLAND Hy**	**22.12**	**94**	T	T	04 45 57.4	
	baz=283,slow=74,SNR=24						
H11S2	**WAKE ISLAND Hy**	**22.12**	**94**	T	T	04 45 54.0	
	baz=283,slow=74,SNR=18						
ASAJ	**Asahikawa**	**22.24**	**358**	LR	LR	04 31 26.0	
	comp=Z,122nm,20.6s,baz=154,slow=35						
USA0B	**Ussuriysk Arra**	**24.23**	**340**	P	**P**	**04 23 39.2**	**-0.3**
USA0B				IAmb	IAmb	04 23 59.0	
	comp=Z,30nm,1.9s						
USRK	**Ussuriysk Ar.**	**24.23**	**340**	pP	**pP**	**04 23 48.2**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=156,slow=10,SNR=5.7						
USRK				LR	LR	04 33 46.7	
	comp=Z,73nm,18.9s,baz=163,slow=38						
USRK	**Ussuriysk Ar.**	**24.23**	**340**	P	**P**	**04 23 39.1**	**-0.5**
JAY	**Jayapura**	**24.33**	**187**	LR	LR	04 31 06.8	
	comp=Z,95nm,21.5s,baz=351,slow=31						
KRVT	**Keravat (AS076**	**27.31**	**161**	LR	LR	04 32 54.2	
	comp=Z,64nm,20.4s,baz=325,slow=32						
KLR	**Kul'dur**	**28.87**	**344**	P	**P**	**04 24 22.9**	**+1.6**
	comp=Z,3.7nm,0.8s,baz=151,slow=7.9,SNR=9.7						
KLR				pP	**pP**	**04 24 30.5**	**-0.3**
	comp=Z,7.7nm,0.6s,baz=166,slow=4.7,SNR=13						
PETK	**Petropavlovsk-**	**33.10**	**16**	LR	LR	04 36 55.8	
	comp=Z,54nm,20.8s,baz=203,slow=34						
SONM	**Songino Array**	**39.37**	**320**	pP	pP	04 26 01.7	0.0
	comp=Z,1.7nm,0.5s,baz=129,slow=8.6,SNR=2.8						
SONM	**Songino Array**	**39.37**	**320**	P	**P**	**04 25 52.7**	**+0.4**
CTAO	**Charters Tower**	**41.75**	**176**	P	**P**	**04 26 11.3**	**-0.7**
WB0	**Warramunga Arr**	**42.26**	**193**	P	**P**	**04 26 15.7**	**-0.5**
WRAB	**Tennant Creek**	**42.43**	**193**	P	**P**	**04 26 17.7**	**+0.1**
WRAB				IAmb	IAmb	04 26 19.0	
	comp=Z,9.3nm,1.1s						
WB2	**Warramunga Arr**	**42.44**	**193**	P	**P**	**04 26 17.7**	**0.0**
WB2				IAmb	IAmb	04 26 19.1	
	comp=Z,15nm,1.3s						
WRA	**Warramunga Arr**	**42.45**	**193**	P	**P**	**04 26 17.3**	**-0.4**
	comp=Z,4.8nm,1.0s,baz=13,slow=8.9,SNR=17						
AS31	**Alice Springs**	**46.15**	**192**	P	**P**	**04 26 47.2**	**-0.1**
ASAR	**Alice Springs**	**46.15**	**192**	P	**P**	**04 26 47.0**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=17,slow=9.2,SNR=23						
ASAR	**Alice Springs**	**46.15**	**192**	P	**P**	**04 26 46.6**	**-0.8**
EIDS	**Eidsvold**	**47.50**	**171**	P	**P**	**04 26 58.0**	**+0.2**
STKA	**Stephens Creek**	**53.42**	**182**	P	**P**	**04 27 42.9**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=166,slow=2.3,SNR=3.3						
ZAA0	**Zalesovo Array**	**54.24**	**322**	P	**P**	**04 27 48.8**	**+0.5**
ZAA0				IAmb	IAmb	04 27 57.3	
	comp=Z,6.1nm,0.8s						
ZALV	**Zalesovo Beam**	**54.24**	**322**	P	**P**	**04 27 48.6**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=109,slow=8.3,SNR=5.3						
ZALV				pP	**pP**	**04 27 56.1**	**-1.8**
	comp=Z,3.7nm,0.6s,baz=110,slow=7.8,SNR=12						
ZALV	**Zalesovo Beam**	**54.24**	**322**	P	**P**	**04 27 48.4**	**+0.1**
MKAR	**Makanchi Array**	**54.76**	**313**	P	**P**	**04 27 53.0**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=90,slow=12,SNR=2.4						
KURK	**Kurchatov**	**57.52**	**317**	P	**P**	**04 28 12.4**	**+0.6**
ARSB	**Arslanbob**	**61.46**	**306**	P	**P**	**04 28 39.7**	**+0.3**
IL31		**61.84**	**27**	P	**P**	**04 28 40.8**	**-0.4**
IL31				IAmb	IAmb	04 29 14.5	
	comp=Z,5.3nm,1.3s						
ILAR	**Eielson Array**	**61.84**	**27**	P	**P**	**04 28 40.6**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=266,slow=5.1,SNR=14						
ILAR				LR	LR	04 52 26.7	
	comp=Z,42nm,22.0s,baz=294,slow=33						
ILAR	**Eielson Array**	**61.84**	**27**	P	**P**	**04 28 40.4**	**-0.9**
NIL	**Nilore**	**62.16**	**297**	P	**P**	**04 28 44.4**	**+0.3**
BVAR	**Borovoye Array**	**62.70**	**319**	P	**P**	**04 28 47.6**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=89,slow=6.9,SNR=13						
BRVK	**Borovoye**	**62.77**	**319**	P	**P**	**04 28 48.3**	**+0.5**
KKAR	**Karatay Array**	**63.13**	**308**	P	**P**	**04 28 50.7**	**+0.3**
BMAR	**Burnt Mountain**	**63.15**	**24**	P	**P**	**04 28 50.8**	**+0.7**
BCAR	**Beaver Creek A**	**63.90**	**29**	P	**P**	**04 28 56.3**	**+1.1**
INK	**Inuvik**	**67.37**	**24**	P	**P**	**04 29 17.9**	**+0.5**
	comp=Z,2.5nm,0.9s,baz=255,slow=5.2,SNR=8.1						
INK	**Inuvik**	**67.37**	**24**	P	**P**	**04 29 17.6**	**+0.3**
ABKAR	**Akbulak array**	**69.60**	**316**	P	**P**	**04 29 31.6**	**0.0**
GEYT	**Alibeck**	**73.34**	**305**	pP	pP	04 30 04.0	-0.4
	comp=Z,3.6nm,0.9s,baz=82,slow=11,SNR=2.4						
YKA	**Yellowknife Ar**	**76.25**	**28**	P	**P**	**04 30 11.1**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=296,slow=4.8,SNR=6.2						
RES	**Resolute Bay**	**76.91**	**13**	P	**P**	**04 30 14.8**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=243,slow=6.1,SNR=5.2						
RES	**Resolute Bay**	**76.91**	**13**	IAmb	IAmb	04 32 54.3	
	comp=Z,8.2nm,1.4s						
ARCES	**ARCESS Array B**	**78.86**	**342**	P	**P**	**04 30 25.5**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=74,slow=6.7,SNR=3.0						
ARCES				pP	**PcP**	**04 30 33.5**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=67,slow=9.3,SNR=2.6						
ARCES				LR	LR	05 10 51.3	
	comp=Z,34nm,18.6s,baz=280,slow=40						
BEKR	**Beckworth**	**80.90**	**51**	P	**P**	**04 30 37.4**	**+0.4**
J08A	**Circle Bar Ran**	**80.96**	**47**	P	**P**	**04 30 37.8**	**+0.5**
J08A				IAmb	IAmb	04 31 33.6	
	comp=Z,16nm,1.8s						
KBZ	**Khabaz**	**82.42**	**314**	P	**P**	**04 30 45.5**	**+0.8**
	comp=Z,2.9nm,1.0s,baz=119,slow=10,SNR=2.9						
KBZ				pP	**pP**	**04 30 53.8**	**-1.0**
	comp=Z,7.2nm,0.9s,baz=72,slow=3.8,SNR=6.6						
NVAR	**Mina Array Bea**	**82.91**	**52**	P	**P**	**04 30 48.6**	**+0.9**
	comp=Z,1.7nm,0.6s,baz=279,slow=5.7,SNR=16						
NVAR				pP	**pP**	**04 30 56.4**	**-1.7**
	comp=Z,1.0nm,0.6s,baz=289,slow=5.7,SNR=7.6						
NVAR	**Mina Array Bea**	**82.91**	**52**	P	**P**	**04 30 48.2**	**+0.4**
FINES	**FINESS Array B**	**83.15**	**335**	P	**P**	**04 30 48.1**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=51,slow=4.3,SNR=9.8						
FINES				pP	**pP**	**04 30 55.7**	**-2.7**
	comp=Z,1.6nm,0.7s,baz=67,slow=4.9,SNR=2.3						
FINES				LR	LR	05 09 37.2	
	comp=Z,47nm,18.9s,baz=38,slow=37						
YHB	**Horse Butte**	**85.21**	**44**	P	**P**	**04 31 00.4**	**+1.0**
FFC	**Flin Flon**	**85.61**	**32**	P	**P**	**04 31 01.2**	**+0.4**
DUG	**Dugway, Tooele**	**86.10**	**48**	P	**P**	**04 31 03.9**	**+0.1**
DUG				IAmb	IAmb	04 31 05.4	
	comp=Z,6.3nm,1.3s						
LCMT	**Little Creek M**	**87.15**	**51**	P	**P**	**04 31 09.5**	**+0.5**
PDAR	**Pinedale Array**	**87.16**	**45**	LR	LR	05 05 37.7	
	comp=Z,45nm,19.2s,baz=137,slow=32						
Y14A	**Wickenburg**	**88.64**	**54**	IAmb	IAmb	04 31 17.6	
	comp=Z,3.2nm,0.8s						
NOA	**NORSAR Array B**	**88.90**	**339**	LR	LR	05 14 37.8	
	comp=Z,29nm,20.7s,baz=275,slow=38						
ULM	**Lac du Bonnet**	**91.23**	**34**	LR	LR	05 10 59.2	
	comp=Z,20nm,20.6s,baz=90,slow=35						
PLCA	**Paso Flores**	**145.69**	**131**	PKPbc	**PKPab**	**04 38 01.7**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=248,slow=5.4,SNR=2.6						
LPAZ	**La Paz**	**149.73**	**85**	PKPbc	**PKiKP**	**04 38 14.3**	**-0.5**
	comp=Z,2.8nm,1.0s,baz=293,slow=5.2,SNR=9.3						

*IDC **30** 04:23:15.9±0.9,7°.63N×125°.60E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/36, mbtmp3.7/7, MS3.3/3, Ms1 3.4/3, ms1mx2.8/31, Error ellipse: s-maj=63.0km s-min=18.2km az=75.0*

*MAN **30** 04:23:21.7, 7°.51N×125°.82E, h19km, mb5.0, ML3.9, MS3.9*

*NEIC **30** 04:23:21.9±1.2, 7°.57N±0°.08×125°.6E±0°.2, h41km±3km, mb4.4/4, Error ellipse: s-maj=26.9km s-min=11.6km az=88.0*

ISC 30 04:23:20.3±1.5, 7°.56N±0°.04×125°.85E±0°.05, h29km±11km, n28, σ2§00/32, mb3.9/9, MS3.5/3, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**0.56**	**209**	Pn	**Pn**	**04 23 32.9**	**+0.6**
MATI	**Mati**	**0.73**	**147**	*e*P	**Pn**	**04 23 35.8**	**+1.2**
MATI				*e*S	**Sn**	**04 23 48.0**	**+3.2**
KCP	**Kidapawan**	**0.93**	**234**	↑*i*P	**Pn**	**04 23 38.6**	**+1.1**
KCP				*i* S	**Sn**	**04 23 53.0**	**+3.0**
DDMP	**Don Marcelino,**	**1.45**	**186**	*e*P	**Pn**	**04 23 44.8**	**+0.2**
DDMP				*e*S	**Sb**	**04 24 05.7**	**+1.0**
CGP	**Cagayan de Oro**	**1.45**	**308**	↑*i*P	**Pb**	**04 23 45.3**	**-1.3**
CGP				*i* S	**Sb**	**04 24 06.7**	**+1.9**
SKMP	**Bagumbayan, Su**	**1.66**	**232**	*e*P	**Pn**	**04 23 48.0**	**+0.5**
SKMP				*e*S	**Sb**	**04 24 09.5**	**-1.2**
GLSP	**General Luna,**	**2.23**	**7**	*e*P	**Pn**	**04 23 55.7**	**+0.4**
GLSP				*e*S	**Sb**	**04 24 26.0**	**-1.1**
PAGZ	**Pagadian**	**2.46**	**277**	*e*P	**Pn**	**04 23 59.1**	**+0.6**
MSLP	**Maasin**	**2.74**	**339**	*e*P	**Pn**	**04 24 03.2**	**+0.8**
LLP	**Lapu-Lapu**	**3.31**	**326**	*e*P	**Pn**	**04 24 11.8**	**+1.6**
LLP				*e*S	**Sb**	**04 25 04.8**	**+6.5**
LUWI	**Luwuk**	**9.08**	**200**	Pn	**Pn**	**04 25 31.2**	**+1.7**
SBUM	**Sibu**	**14.49**	**250**	Pn	**Pn**	**04 26 40.8**	**-2.8**
NJ2	**Nanjing**	**25.23**	**346**	*e*P	**P**	**04 28 40.5**	**-3.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**25.49**	**180**	P	**P**	**04 28 46.8**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=7.0,slow=8.7,SNR=9.5						
CMAR	**Chiang Mai Arr**	**28.32**	**295**	LR	LR	04 41 03.7	
	comp=Z,32nm,19.0s,baz=166,slow=38						
JHJ2	**Mitsune**	**28.53**	**25**	P	**P**	**04 29 14.0**	**+0.5**
WRA	**Warramunga Arr**	**28.58**	**163**	P	**P**	**04 29 14.8**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=345,slow=9.3,SNR=3.5						
MBWA	**Marble Bar**	**29.16**	**192**	P	**P**	**04 29 18.1**	**-1.1**
ASAR	**Alice Springs**	**32.02**	**166**	P	**P**	**04 29 45.7**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=341,slow=7.0,SNR=7.4						
MKAR	**Makanchi Array**	**53.95**	**324**	P	**P**	**04 32 40.7**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=130,slow=8.5,SNR=4.9						
ZALV	**Zalesovo Beam**	**56.81**	**332**	P	**P**	**04 33 00.0**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=120,slow=5.8,SNR=4.2						
AAK	**Ala-Archa**	**56.97**	**317**	LR	LR	04 58 20.7	
	comp=Z,34nm,18.2s,baz=100,slow=37						
KURK	**Kurchatov**	**58.07**	**327**	P	**P**	**04 33 11.3**	**+0.5**
KURK				IAmb	IAmb	04 33 24.3	
	comp=Z,3.7nm,1.0s						
IL31		**82.05**	**26**	P	**P**	**04 35 39.5**	**+2.0**
ILAR	**Eielson Array**	**82.05**	**26**	P	**P**	**04 35 38.2**	**+0.6**
	comp=Z,0.3nm,1.0s,baz=269,slow=3.6,SNR=2.4						
VNDA	**Vanda**	**87.31**	**173**	LR	LR	05 15 01.6	
	comp=Z,17nm,19.9s,baz=360,slow=36						
FINES	**FINESS Array B**	**88.07**	**332**	P	**P**	**04 36 07.2**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=36,slow=7.1,SNR=5.0						
TORD	**Torodi Ar. Bea**	**120.84**	**290**	PKP	**PKPdf**	**04 42 10.0**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=102,slow=4.9,SNR=3.0						

*IDC **30** 04:46:52.4±3.1, 6°.43S×105°.51E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/37, mbtmp3.9/4, ML4.8/1, Error ellipse: s-maj=97.8km s-min=39.7km az=6.0*

*DJA **30** 04:46:56.7±0.2, 7°.5±3°×10°.6E±°, h10km, M4.3/15, mb4.5/2, MLv4.3/15*

ISC 30 04:46:55.1±1.4, 6°.50S±0°.06×105°.74E±0°.04, h6km±10km, n26, σ1§04/29, mb3.8/3, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.54**	**45**	P	**Pb**	**04 47 06.5**	**-0.5**
SKJI	**Sukabumi**	**0.95**	**122**	P	**Pb**	**04 47 13.8**	**-0.2**
SKJI				S	**Sb**	**04 47 27.0**	**+0.2**
TNG	**Tangerang**	**0.96**	**70**	P	**Pg**	**04 47 13.1**	**-0.3**
TNG				S	**Sg**	**04 47 26.5**	**+0.6**
DBJI	**Dramaga**	**1.00**	**93**	P	**Pg**	**04 47 14.1**	**-0.2**
DBJI				S	**Sg**	**04 47 27.2**	**-0.2**
CBJI	**Citeko**	**1.10**	**86**	P	**Pn**	**04 47 17.5**	**+0.5**
BLSI	**Bandar Lampung**	**1.23**	**336**	P	**Pn**	**04 47 19.3**	**+0.5**
BLSI				S	**Sn**	**04 47 36.2**	**+0.4**
KASI	**Kota Agung**	**1.57**	**308**	P	**Pg**	**04 47 24.7**	**-0.6**
KASI				S	**Sg**	**04 47 47.2**	**+1.5**
LEM	**Lembang**	**1.89**	**100**	Pn	**Pg**	**04 47 30.4**	**-1.0**
	334nm,0.3s,baz=342,slow=7.8,SNR=92						
LEM				Sn	**Sg**	**04 47 57.5**	**+1.6**
	82nm,0.3s,baz=163,slow=19,SNR=4.0						
LEM	**Lembang**	**1.89**	**100**	P	**Pb**	**04 47 29.4**	**-0.7**
LEM				S	**Sn**	**04 47 52.3**	**0.0**
KLSI		**2.06**	**331**	P	**Pb**	**04 47 31.5**	**-1.4**
KLSI				S	**Sg**	**04 48 02.7**	**+1.3**
LWLI	**Liwa**	**2.23**	**311**	P	**Pg**	**04 47 36.7**	**-1.2**
CISI	**Cisompet, Garu**	**2.31**	**117**	P	**Pn**	**04 47 33.6**	**-0.1**
CISI				S	**Sn**	**04 48 02.1**	**-0.4**
KPJI	**Karang Pucung**	**3.27**	**105**	P	**Pn**	**04 47 48.5**	**+1.6**
MNAI	**Manna**	**3.50**	**307**	P	**Pn**	**04 47 52.3**	**+2.3**
KSI	**Kapahiang**	**4.23**	**312**	P	Pb	04 48 04.1	-5.8
UGM	**Wanagama**	**4.95**	**107**	P	**Pn**	**04 48 11.6**	**+1.6**
PWJI	**Pagerwojo**	**6.20**	**104**	P	**Pn**	**04 48 26.1**	**-1.1**
H01W3	**Cape Leeuwin H**	**29.29**	**166**	T	T	05 23 16.1	
	baz=344,slow=76,SNR=335						
H01W1	**Cape Leeuwin H**	**29.30**	**166**	T	T	05 23 18.0	
	baz=344,slow=76,SNR=278						
H01W2	**Cape Leeuwin H**	**29.30**	**166**	T	T	05 23 18.7	
	baz=344,slow=76,SNR=550						
WRA	**Warramunga Arr**	**30.81**	**118**	P	**P**	**04 53 11.2**	**-0.7**
	0.6nm,0.5s,baz=291,slow=10,SNR=6.1						
WRA				PcP	**PcP**	**04 56 08.2**	**-1.2**
	0.2nm,0.4s,baz=309,slow=1.8,SNR=2.8						
ASAR	**Alice Springs**	**31.99**	**125**	P	**P**	**04 53 22.4**	**0.0**
	0.6nm,0.8s,baz=291,slow=7.7,SNR=7.4						
H08S2	**Diego Garcia H**	**33.01**	**266**	T	T	05 27 45.0	
	baz=91,slow=75,SNR=85						
H08S3	**Diego Garcia H**	**33.02**	**266**	T	T	05 27 45.4	
	baz=91,slow=75,SNR=131						
H08S1	**Diego Garcia H**	**33.03**	**266**	T	T	05 27 48.4	
	baz=91,slow=75,SNR=19						
STKA	**Stephens Creek**	**41.90**	**132**	P	**P**	**04 54 47.1**	**+0.6**
	1.4nm,0.4s,baz=300,slow=9.1,SNR=2.9						

*IDC **30** 04:47:57.9±0.7, 11°.32N×86°.18W, h0km, mb4.0/14, mb1 4.2/15, mb1mx4.0/37, mbtmp4.0/15, ML4.2/1, MS3.5/11, Ms1 3.6/11, ms1mx3.3/32, Error ellipse: s-maj=32.5km s-min=13.1km az=54.0*

*UCR **30** 04:47:59.1±1.0, 10°.89N×86°.72W, h5km, MW4.6, mb4.3(NEIC)*

*INET **30** 04:48:00.5, 10°.82N×86°.61W, h25km, MW4.4*

*NEIC **30** 04:48:05.1±1.4, 11°.10N±0°.07×86°.48W±0°.07, h53km±6km, mb4.3/92, Error ellipse: s-maj=12.7km s-min=7.5km az=224.0*

ISC 30 04:48:02.6±0.5, 11°.05N±0°.06×86°.54W±0°.06, h31km, n164, σ1§18/134, mb4.3/52, MS3.6/10, 5C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**0.98**	**110**	*e*P	**Pn**	**04 48 20.3**	**0.0**
GBS3	**Finca Las Img**	**1.09**	**104**	↑*i*P	**Pn**	**04 48 21.6**	**-0.2**
LAPC	**Finca la Perla**	**1.12**	**104**	↑*i*P	**Pn**	**04 48 22.0**	**-0.1**
BUEV	**Buena Vista**	**1.14**	**102**	*i* P	**Pn**	**04 48 22.6**	**+0.2**
BUEV				*e*S	**Sb**	**04 48 41.8**	**+3.6**
GB1A	**Borinquen Arri**	**1.14**	**101**	*e*P	**Pb**	**04 48 23.1**	**-0.7**
GB1A				*i* S	**Sb**	**04 48 41.2**	**+3.0**
GPS3	**Bodega del ICE**	**1.19**	**104**	↑*i*P	**Pn**	**04 48 23.1**	**0.0**
BUAI	**Buenos Aires**	**1.19**	**98**	↑*i*P	**Pb**	**04 48 24.0**	**-0.6**
GPS1	**Guardaparques**	**1.20**	**103**	*i* P	**Pn**	**04 48 23.4**	**+0.1**
GPS2	**Hotel Rincn d**	**1.20**	**104**	↑*i*P	**Pn**	**04 48 23.3**	**0.0**
ORTG	**Ortega, Santa**	**1.26**	**123**	*e*P	**Pn**	**04 48 23.9**	**-0.2**
GUAI	**GUAI**	**1.27**	**127**	*i* P	**Pn**	**04 48 23.3**	**-0.9**
LIM1	**Limonal**	**1.31**	**105**	*i* P	**Pn**	**04 48 24.9**	**+0.2**
GUAB	**Guayabo de Bag**	**1.33**	**105**	*i* P	**Pn**	**04 48 25.2**	**+0.2**
COLC	**Colonia**	**1.36**	**106**	*i* P	**Pb**	**04 48 28.7**	**+1.2**
HORNC	**Hornillas**	**1.37**	**104**	*i* P	**Pn**	**04 48 26.0**	**+0.3**
CUI	**Cuipilapa**	**1.40**	**106**	*e*P	**Pn**	**04 48 26.5**	**+0.4**
DUNO	**Dulce Nombre,**	**1.40**	**133**	*e*P	**Pn**	**04 48 24.9**	**-1.1**
CNGN	**Cerro Negro**	**1.45**	**354**	*e*P	**Pn**	**04 48 27.2**	**+0.4**
ACAL	**Aguas Claras**	**1.53**	**105**	*i* P	**Pn**	**04 48 28.8**	**+0.9**
ACON	**Acoyapa**	**1.62**	**55**		**Pn**	**04 48 29.4**	**+0.4**
CRIN	**San Cristobal**	**1.72**	**343**	*e*P	**Pn**	**04 48 30.8**	**+0.4**
CRIN	**San Cristobal**	**1.72**	**343**	Pn	**Pn**	**04 48 30.8**	**+0.4**
JTS	**Las Juntas de**	**1.73**	**116**	Pn	**Pn**	**04 48 30.8**	**+0.3**
	52nm,0.3s,baz=9.3,slow=23,SNR=124						
JTS				Lg	Lg	04 49 01.0	
	221nm,0.3s,baz=237,slow=7.2,SNR=8.4						
JTS	**Las Juntas de**	**1.73**	**116**	*e*P	**Pn**	**04 48 31.2**	**+0.7**
JTS	**Las Juntas de**	**1.73**	**116**	Pn	**Pn**	**04 48 30.6**	**+0.1**
CASO	**Castillo**	**1.87**	**109**	*i* P	**Pn**	**04 48 33.0**	**+0.4**
ARE1	**Arenal 1**	**1.88**	**108**	*e*P	**Pn**	**04 48 33.4**	**+0.8**
CEDE	**Laguna Cedeo**	**1.88**	**107**	*e*P	**Pn**

CPCT					IAmb	IAmb	04 53 27.4	
	comp=Z,8.2nm,0.8s							
KMSC	**Kings Mountain**	**24.45**	**10**	P	**P**	**P**	**04 53 19.3**	**+0.6**
KMSC					IAmb	IAmb	04 53 28.9	
	comp=Z,8.8nm,1.1s							
TKL	**Tuckaleechee C**	**24.63**	**5**	P	**P**	**P**	**04 53 20.2**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=173,slow=3.3,SNR=6.9							
TKL				LR		LR	05 03 28.1	
	comp=Z,131nm,19.0s,baz=173,slow=38							
WHAR	**Wooly Hollow**	**24.70**	**349**	P	**P**	**P**	**04 53 20.1**	**-0.9**
WHAR					IAmb	IAmb	04 53 28.9	
	comp=Z,12nm,0.8s							
W57A	**Gilead**	**24.73**	**13**	P	**P**	**P**	**04 53 21.1**	**-0.1**
V51A	**Loudon**	**24.73**	**4**	P	**P**	**P**	**04 53 21.5**	**+0.3**
V51A					IAmb	IAmb	04 53 31.3	
	comp=Z,8.7nm,1.0s							
H06E1	**SOCORRO T-PHAS**	**24.77**	**291**	T	T		05 19 00.3	
	SNR=23							
X37A	**Clayton**	**24.78**	**342**	P	**P**	**P**	**04 53 21.8**	**+0.1**
V52A	**Sevierville**	**24.83**	**6**	P	**P**	**P**	**04 53 22.3**	**+0.1**
V52A					IAmb	IAmb	04 53 33.6	
	comp=Z,9.8nm,1.1s							
W39A	**Magazine**	**24.93**	**346**	IAmb	IAmb		04 53 32.5	
	comp=Z,7.1nm,0.8s							
CLTN	**Cedars of Leba**	**24.93**	**0**	IAmb	IAmb		04 53 35.0	
	comp=Z,6.4nm,0.5s							
V55A	**Taylorsville**	**25.16**	**10**	P	**P**	**P**	**04 53 25.4**	**+0.2**
V55A					IAmb	IAmb	04 53 36.7	
	comp=Z,7.1nm,0.9s							
LCAR	**Lake Charles**	**25.26**	**351**	IAmb	IAmb		04 53 34.1	
	comp=Z,12nm,1.1s							
U49A	**Red Boiling Sp**	**25.36**	**1**	IAmb	IAmb		04 53 27.6	
	comp=Z,4.1nm,0.6s							
TZTN	**Tazewell**	**25.53**	**6**	P	**P**	**P**	**04 53 28.2**	**-0.3**
V58A	**Windy Hill, Pi**	**25.54**	**14**	IAmb	IAmb		04 53 37.6	
	comp=Z,10nm,0.7s							
T47A	**Sharon Grove**	**25.84**	**359**	IAmb	IAmb		04 53 39.6	
	comp=Z,11nm,1.1s							
U40A	**Yellville**	**25.84**	**348**	IAmb	IAmb		04 53 39.8	
	comp=Z,11nm,0.8s							
PBMO	**Poplar Bluff**	**25.86**	**353**	P	**P**	**P**	**04 53 31.3**	**-0.2**
TUL1	**Leonard**	**26.14**	**343**	IAmb	IAmb		04 53 41.5	
	comp=Z,14nm,1.0s							
T42A	**Van Buren**	**26.20**	**352**	IAmb	IAmb		04 53 42.4	
	comp=Z,6.5nm,0.9s							
U38A	**Gravette**	**26.26**	**346**	IAmb	IAmb		04 53 43.2	
	comp=Z,12nm,1.1s							
S51A	**Beattyville**	**26.61**	**5**	P	**P**	**P**	**04 53 38.3**	**0.0**
T57A	**Hurt**	**26.66**	**13**	P	**P**	**P**	**04 53 38.0**	**-0.7**
WCI	**Wyandotte Cave**	**27.07**	**0**	P	**P**	**P**	**04 53 42.2**	**-0.2**
WCI					IAmb	IAmb	04 53 51.3	
	comp=Z,8.6nm,0.8s							
RCRC	**Randolf Colleg**	**27.07**	**13**	P	**P**	**P**	**04 53 42.6**	**+0.2**
R49A	**Shelbyville**	**27.16**	**2**	P	**P**	**P**	**04 53 42.1**	**-1.0**
R49A					IAmb	IAmb	04 53 57.2	
	comp=Z,3.5nm,0.7s							
CCM	**Cathedral Cave**	**27.23**	**352**	P	**P**	**P**	**04 53 42.8**	**-1.0**
CCM					IAmb	IAmb	04 53 51.3	
	comp=Z,9.0nm,1.1s							
MSTX	**Muleshoe**	**27.23**	**329**	IAmb	IAmb		04 54 02.5	
	comp=Z,6.9nm,0.8s							
BLO	**Bloomington**	**28.01**	**0**	P	**P**	**P**	**04 53 48.7**	**-2.1**
Q54A	**Coxs Mills**	**28.28**	**9**	P	**P**	**P**	**04 53 53.4**	**+0.1**
Q54A					IAmb	IAmb	04 54 03.0	
	comp=Z,8.5nm,0.8s							
P40A	**Paris**	**28.79**	**351**	P	**P**	**P**	**04 53 57.4**	**-0.4**
O52A	**Adamsville**	**29.25**	**7**	P	**P**	**P**	**04 54 01.4**	**-0.4**
ANMO	**Albuquerque**	**29.92**	**326**	P	**P**	**P**	**04 54 08.9**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=130,slow=6.7,SNR=3.5							
ANMO	**Albuquerque**	**29.92**	**326**			**P**	**04 54 08.9**	**+0.8**
SAML	**Samuel**	**30.56**	**130**	P	**P**	**P**	**04 54 13.7**	**0.0**
L48A	**N Adams**	**30.83**	**3**	P	**P**	**P**	**04 54 15.1**	**-0.7**
L48A					IAmb	IAmb	04 54 18.4	
	comp=Z,8.8nm,0.9s							
SDCO	**Great Sand Dun**	**31.57**	**331**	P	**P**	**P**	**04 54 22.9**	**+0.2**
LPAZ	**La Paz**	**32.70**	**146**	P	**P**	**P**	**04 54 33.6**	**+0.5**
	comp=Z,1.8nm,1.2s,baz=350,slow=6.1,SNR=2.4							
LPAZ				LR		LR	05 08 33.7	
	comp=Z,64nm,20.7s,baz=318,slow=38							
ECSD	**EROS Data Cent**	**33.72**	**347**	P	**P**	**P**	**04 54 40.0**	**-1.1**
ECSD					IAmb	IAmb	04 54 49.0	
	comp=Z,4.0nm,0.8s							
SADO	**Sadowa**	**34.20**	**9**	P	**P**	**P**	**04 54 42.9**	**-2.4**
	comp=Z,2.4nm,0.4s,baz=153,slow=4.5,SNR=4.0							
SIV	**San Ignacio**	**36.83**	**136**	P	**P**	**P**	**04 55 09.1**	**+0.9**
	comp=Z,2.8nm,0.5s,baz=315,slow=7.8,SNR=12							
CTU	**Camp Tracy**	**36.97**	**327**	P	**P**	**P**	**04 55 07.9**	**-1.4**
PD31	**Pinedale Array**	**37.43**	**332**	P	**P**	**P**	**04 55 12.6**	**-0.7**
PDAR	**Pinedale Array**	**37.43**	**332**	P	**P**	**P**	**04 55 12.6**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=126,slow=10,SNR=6.5							
PDAR				PcP		**PcP**	**04 57 31.6**	**0.0**
	comp=Z,0.2nm,0.4s,baz=139,slow=6.0,SNR=3.6							
PDAR	**Pinedale Array**	**37.43**	**332**	P	**P**	**P**	**04 55 12.7**	**-0.5**
NVAR	**Mina Array Bea**	**39.34**	**319**	P	**P**	**P**	**04 55 30.9**	**+1.5**
	comp=Z,0.8nm,0.6s,baz=130,slow=7.5,SNR=7.2							
NVAR				PcP		**PcP**	**04 57 38.9**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=112,slow=4.0,SNR=6.1							
ULM	**Lac du Bonnet**	**39.84**	**351**	P	**P**	**P**	**04 55 30.0**	**-3.1**
	comp=Z,2.6nm,0.4s,baz=158,slow=7.7,SNR=11							
GCMT	**Greycliff**	**39.86**	**335**	P	**P**	**P**	**04 55 33.5**	**0.0**
H03N2	**Juan Fernandez**	**44.83**	**171**	T	T		05 44 02.8	
	baz=349,slow=76,SNR=12							
H03N1	**Juan Fernandez**	**44.83**	**171**	T	T		05 44 03.8	
	baz=349,slow=76,SNR=6							
H03N3	**Juan Fernandez**	**44.84**	**171**	T	T		05 44 02.7	
	baz=349,slow=76,SNR=11							
BDFB	**Brasilia**	**46.45**	**124**	P	**P**	**P**	**04 56 26.1**	**-1.0**
	comp=Z,4.0nm,0.6s,baz=284,slow=9.3,SNR=6.5							
BDFB				LR		LR	05 17 15.0	
	comp=Z,64nm,20.1s,baz=322,slow=38							
BDFB	**Brasilia**	**46.45**	**124**	IAmb	IAmb		04 56 28.1	
	comp=Z,7.7nm,1.1s							
PLCA	**Paso Flores**	**53.60**	**165**	P	**P**	**P**	**04 57 20.7**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=315,slow=5.7,SNR=2.9							
PLCA	**Paso Flores**	**53.60**	**165**	IAmb	IAmb		04 57 38.6	
	comp=Z,3.7nm,0.9s							
TRQA	**Tornquist**	**53.98**	**156**	P	**P**	**P**	**04 57 24.3**	**+0.5**
TAOE	**Nuku Hiva Isla**	**56.88**	**252**	*eT*	T		05 58 48.8	
	comp=Z,23nm,0.2s							
INK	**Inuvik**	**64.81**	**343**	P	**P**	**P**	**04 58 36.9**	**-1.1**
	comp=Z,1.5nm,1.0s,baz=92,slow=8.6,SNR=3.4							
INK	**Inuvik**	**64.81**	**343**	IAmb	IAmb		04 58 39.0	
	comp=Z,3.2nm,1.1s							
BCAR	**Beaver Creek A**	**64.89**	**336**	P	**P**	**P**	**04 58 39.5**	**+0.7**
PMOR	**Pomariorio Ree**	**66.06**	**248**	*eT*	T		06 10 17.1	
	comp=Z,4.6nm,0.2s							
ILAR	**Eielson Array**	**67.66**	**336**	P	**P**	**P**	**04 58 54.8**	**-1.7**
	comp=Z,0.6nm,0.9s,baz=140,slow=5.3,SNR=8.6							
ILAR				LR		LR	05 31 16.8	
	comp=Z,42nm,21.2s,baz=152,slow=38							
PPT	**Papeete**	**68.44**	**246**	LR	LR		05 23 39.7	
	comp=Z,65nm,18.2s,baz=352,slow=31							
PPT2	**Papeete2**	**68.45**	**246**	*eLR*		LR	05 19 49.0	
	comp=Z,56nm,23.8s							
TBI	**Tubuai**	**70.39**	**240**	*eT*	T		06 15 40.9	
	comp=Z,5.8nm,0.3s							
ESDC	**Sonseca Array**	**77.35**	**52**	P	**P**	**P**	**04 59 51.5**	**-3.2**
	comp=Z,0.5nm,0.8s,baz=286,slow=4.8,SNR=2.8							
ESDC	**Sonseca Array**	**77.35**	**52**	IAmb	IAmb		04 59 53.8	
	comp=Z,1.4nm,1.1s							
NOA	**NORSAR Array B**	**84.15**	**29**	LR	LR		05 33 27.3	
	comp=Z,27nm,21.9s,baz=275,slow=33							
TORD	**Torodi Ar. Bea**	**85.84**	**77**	P	**P**	**P**	**05 00 40.0**	**0.0**
	comp=Z,0.1nm,0.5s,baz=272,slow=3.0,SNR=2.8							
GERES	**GERESS Array B**	**88.42**	**41**	LR	LR		05 37 50.6	
	comp=Z,33nm,20.8s,baz=16,slow=34							
MKAR	**Makanchi Array**	**121.56**	**9**	PKP		**PKPdf**	**05 06 51.4**	**-2.0**
	comp=Z,0.2nm,0.4s,baz=313,slow=3.5,SNR=5.7							
GTA	**Gaotai**	**129.46**	**354**	PKP		**PKPdf**	**05 07 07.8**	**-1.1**
GTA				sPKP			05 07 23.0	
GTA				LR	LR			
	comp=N,280nm,20.7s							
GTA				LR	LR			
	comp=E,310nm,20.4s							
GTA				LR	LR			
	comp=Z,250nm,20.7s							
ASAR	**Alice Springs**	**139.56**	**246**	PKP		**PKPdf**	**05 07 27.9**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=97,slow=1.1,SNR=8.6							
ASAR	**Alice Springs**	**139.56**	**246**			**PKPdf**	**05 07 27.5**	**-0.5**
WRA	**Warramunga Arr**	**139.72**	**252**	PKP		**PKPdf**	**05 07 28.5**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=96,slow=2.5,SNR=9.9							
CMAR	**Chiang Mai Arr**	**150.19**	**349**	PKPbc		**PKPbc**	**05 07 50.5**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=32,slow=5.5,SNR=4.4							

*NEIC **30** 04:49:48.0±0.6, 6.7N±0.1×72.9W±0.1, h170km±9km,*
mb4.1/11, Error ellipse: s-maj=18.4km s-min=12.0km az=134.0
*IDC **30** 04:49:47.6±0.6, 6.73N×72.92W, h164km±6km, mb3.4/13, mb1 3.6/17, mb1mx3.5/37, mbtmp3.9/17, MS3.1/1, Ms1 3.1/1, ms1mx2.4/20, Error ellipse: s-maj=11.0km s-min=6.8km az=130.0*
*VAO **30** 04:49:48.1±0.4, 6.78N×73.09W, h169km±3km, mb4.2*
*RSNC **30** 04:49:48.5±1.1, 6.81N×73.16W, h152km±4km, ML4.0, Mw4.0, Fault plane solution: NP1:θ≈31.00000°, δ61.00000°, λ158.00000°.*
ISC 30 04:49:47.2±0.5, 6.83N±0.03×73.08W±0.03, h161km±4km, n103, σ1≈57/150, mb3.7/13, 3C-6D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**204**	*eP*		**Pn**		**04 50 08.9**	**-0.4**
BARC				*eS*		**Sn**		**04 50 24.3**	**-1.8**
BARC				*i*				04 50 25.9	
	comp=Z,2μm,0.3s								
PAMC	**Pamplona, Colo**	**0.63**	**36**	*eP*		**Pn**		**04 50 11.8**	**+0.7**
PAMC				*eS*		**Sn**		**04 50 29.2**	**-0.2**
PAMC				*i*				04 50 31.0	
	comp=Z,4μm,0.6s								
BRRC	**Barranca, Sant**	**0.69**	**294**	*iP*		**Pn**		**04 50 10.8**	**0.0**
BRRC				*eS*		**Sn**		**04 50 28.3**	**-0.6**
BRRC				*i*				04 50 29.2	
	comp=Z,2μm,0.2s								
RUSC	**La Rusia**	**0.93**	**180**	*eP*		**Pn**		**04 50 12.8**	**-0.3**
RUSC				*eS*		**Sn**		**04 50 31.8**	**-1.1**
RUSC				*i*				04 50 33.8	
	comp=Z,1μm,0.5s								
TAMC	**Tame, Arauca**	**1.33**	**107**	*iP*		**Pn**		**04 50 17.1**	**+1.0**
TAMC				*eS*		**Sn**		**04 50 38.1**	**-0.1**
TAMC				*i*				04 50 41.9	
	comp=Z,250nm,0.4s								
PTBC	**PUERTO BERRIO,**	**1.40**	**258**	*eP*		**Pn**		**04 50 15.4**	**-1.2**
PTBC				*eS*		**Sn**		**04 50 36.7**	**-2.5**
PTBC				*i*				04 50 44.0	
	comp=Z,2μm,0.4s								
OCAC	**Ocana**	**1.42**	**350**	*eP*		**Pn**		**04 50 17.0**	**0.0**
OCAC				*eS*		**Sn**		**04 50 39.0**	**-1.1**
OCAC				*i*				04 50 45.5	
	comp=Z,1μm,0.3s								
SPBC	**San Pablo de B**	**1.53**	**220**	*eP*		**Pn**		**04 50 17.8**	**-0.2**
SPBC				*eS*		**Sn**		**04 50 39.9**	**-1.9**
SPBC				*i*				04 50 42.9	
	comp=Z,2μm,0.5s								
ZARC	**Zaragoza, Cauc**	**1.89**	**291**	*eP*		**Pn**		**04 50 21.1**	**-0.7**
ZARC				*eS*		**Sn**		**04 50 46.6**	**-1.8**
ZARC				*i*				04 50 52.3	
	comp=Z,2μm,0.4s								
NORC	**Norcasia**	**2.18**	**235**	*eP*		**Pn**		**04 50 24.9**	**-0.3**
NORC				*eS*		**Sn**		**04 50 52.3**	**-2.2**
NORC				*i*				04 50 54.5	
	comp=Z,759nm,0.3s								
CHIC	**Chingaza**	**2.28**	**197**	*eP*		**Pn**		**04 50 26.6**	**-0.1**
CHIC				*eS*		**Sn**		**04 50 55.9**	**-1.3**
CHIC				*i*				04 51 01.8	
	comp=Z,452nm,0.4s								
ROSC	**El Rosal**	**2.33**	**212**	P		**Pn**		**04 50 28.8**	**+1.5**
	comp=Z,71nm,0.3s,baz=301,slow=13,SNR=94								
ROSC				S		**Sn**		**04 50 59.4**	**+1.2**
	comp=Z,228nm,0.3s,baz=153,slow=20,SNR=14								
ROSC	**El Rosal**	**2.33**	**212**	Pn		**Pn**		**04 50 28.6**	**+1.3**
HELC	**Santa Helena**	**2.52**	**256**	*eP*		**Pn**		**04 50 29.0**	**-0.5**
HELC				*eS*		**Sn**		**04 51 00.7**	**-1.4**
HELC				*i*				04 51 07.0	
	comp=Z,760nm,0.4s								
UREC	**San Jos de Ur**	**2.60**	**291**	*eP*		**Pn**		**04 50 28.9**	**-1.2**
VILC	**Villavicencio,**	**2.77**	**193**	*eP*		**Pn**		**04 50 31.9**	**-0.4**
VILC				*eS*		**Sn**		**04 51 06.5**	**-0.7**
PTGC	**Puerto Gaitan,**	**2.77**	**160**	*eP*		**Pn**		**04 50 31.7**	**-0.6**
PTGC				*eS*		**Sn**		**04 51 04.5**	**-2.7**
GUY2C	**Guyana, Caldas**	**2.78**	**235**	*eP*		**Pn**		**04 50 33.0**	**+0.2**
GUY2C				*eS*		**Sn**		**04 51 08.9**	**+1.0**
GUY2C				*i*				04 51 15.1	
	comp=Z,630nm,0.6s								
RREF	**El Recreo**	**2.96**	**230**	*eP*		**Pn**		**04 50 35.5**	**+0.3**
RREF				*eS*		**Sn**		**04 51 13.1**	**+0.9**
CBOC	**Ciudad Bolivar**	**3.07**	**252**	*eP*		**Pn**		**04 50 36.2**	**+0.1**
CBOC				*eS*		**Sn**		**04 51 12.2**	**-1.7**
CBOC				*i*				04 51 23.2	
	comp=Z,260nm,0.6s								
DBBC	**Dabeiba**	**3.12**	**274**	*iP*		**Pn**		**04 50 36.4**	**-0.2**
DBBC				*eS*		**Sn**		**04 51 12.7**	**-2.2**
DBBC				*i*				04 51 17.0	
	comp=Z,2μm,0.2s								
TOLC	**Tolima**	**3.15**	**225**	*eP*		**Pn**		**04 50 37.4**	**+0.1**
TOLC				*eS*		**Sn**		**04 51 16.5**	**+0.4**
TOLC				*i*				04 51 25.6	
	comp=Z,812nm,0.7s								
SDV	**Santo Domingo**	**3.17**	**50**	P		**Pn**		**04 50 38.2**	**+0.8**
	comp=Z,102nm,0.3s,baz=218,slow=5.7,SNR=292								
SDV				S		**Sn**		**04 51 15.7**	**-0.5**
	comp=Z,88nm,0.3s,baz=51,slow=2.1,SNR=27								
SDV	**Santo Domingo**	**3.17**	**50**	*eP*		**Pn**		**04 50 38.4**	**+1.0**
SDV				*eS*		**Sn**		**04 51 15.8**	**-0.5**
SDV				*i*				04 51 18.2	
	comp=Z,239nm,0.6s								
SDV	**Santo Domingo**	**3.17**	**50**			**Pn**		**04 50 38.0**	**+0.6**
SDV	**Santo Domingo**	**3.17**	**50**	*eP*		**Pn**		**04 50 38.3**	**+1.0**
MOTC	**Monteria, Cord**	**3.21**	**307**	*eP*		**Pn**		**04 50 36.1**	**-1.6**
MOTC				*eS*		**Sn**		**04 51 14.1**	**-2.9**
MOTC				*i*				04 51 17.9	
	comp=Z,310nm,0.3s								
ARGC	**Ariguani, Magd**	**3.23**	**339**	*eP*		**Pn**		**04 50 39.0**	**+1.1**
ARGC				*eS*		**Sn**		**04 51 17.8**	**+0.4**
ARGC				*i*				04 51 31.1	
	comp=Z,247nm,0.4s								
ANIL	**Santa Ana**	**3.28**	**225**	*eP*		**Pn**		**04 50 39.1**	**+0.2**
ANIL				*eS*		**Sn**		**04 51 18.7**	**-0.2**
ANIL				*i*				04 51 23.7	
	comp=Z,109nm,0.3s								
ORTC	**Ortega, Tolima**	**3.61**	**217**	*eP*		**Pn**		**04 50 42.7**	**-0.2**
ORTC				*eS*		**Sn**		**04 51 25.4**	**-0.8**
ORTC				*i*				04 51 31.5	
	comp=Z,261nm,0.4s								
CVALL	**Valledupar, Ce**	**3.66**	**357**	*eP*		**Pn**		**04 50 42.4**	**-1.1**
CVALL				*eS*		**Sn**		**04 51 24.2**	**-3.1**
CVALL				*i*				04 51 32.1	
	comp=Z,267nm,0.4s								
SJCC	**San Jacinto, C**	**3.69**	**326**	*eP*		**Pn**		**04 50 42.9**	**-1.0**
SJCC				*eS*		**Sn**		**04 51 24.2**	**-3.8**
SJCC				*i*				04 51 29.3	
	comp=Z,3μm,1.1s								
PLMC	**San Jos del P**	**3.72**	**239**	*eP*		**Pn**		**04 50 44.2**	**-0.1**
PLMC				*eS*		**Sn**		**04 51 25.9**	**-2.7**
PLMC				*i*				04 51 33.4	
	comp=Z,229nm,0.2s								
GUVC	**San Jose del G**	**4.28**	**174**	*eP*		**Pn**		**04 50 50.2**	**-1.2**
GUVC				*eS*		**Sn**		**04 51 39.3**	**-2.3**
GUVC				*i*				04 51 43.9	
	comp=Z,246nm,0.3s								
YOTC	**Yotoco, Valle**	**4.31**	**229**	*eP*		**Pn**		**04 50 51.3**	**-0.6**
YOTC				*eS*		**Sn**		**04 51 45.6**	**+3.2**
YOTC				*i*				04 51 54.2	
	comp=Z,36nm,0.4s								
SOLC	**Bahia Solano**	**4.34**	**262**	*eP*		**Pn**		**04 50 52.5**	**+0.2**
SOLC				*eS*		**Sn**		**04 51 40.6**	**-2.4**
SOLC				*i*				04 51 49.6	
	comp=Z,50nm,0.9s								
SMRC	**Santa Marta, M**	**4.46**	**345**	*eP*		**Pn**		**04 50 53.4**	**-0.3**
SMRC				*eS*		**Sn**		**04 51 41.9**	**-3.8**
SMRC				*i*				04 51 47.6	
	comp=Z,122nm,0.7s								
CAPC	**Capurgana**	**4.60**	**293**	*eP*		**Pn**		**04 50 52.8**	**-2.8**
CAPC				*eS*		**Sn**		**04 51 44.1**	**-4.9**
PIZC	**Pizarro, Choco**	**4.64**	**247**	*eP*		**Pn**		**04 50 56.6**	**+0.5**
PIZC				*i*				04 52 07.3	
	comp=Z,86nm,1.2s								
PTAC	**Punta Ardita,**	**4.71**	**274**	*eP*		**Pn**		**04 50 56.2**	**-0.8**
PTAC				*eS*		**Sn**		**04 51 49.3**	**-2.2**
PTAC				*i*				04 51 58.6	
	comp=Z,445nm,0.3s								
MACC	**Macarena, Meta**	**4.71**	**189**	*eP*		**Pn**		**04 50 55.4**	**-1.7**
MACC				*eS*		**Sn**		**04 51 45.2**	**-6.5**
MACC				*i*				04 51 53.0	
	comp=Z,92nm,0.1s								
MARP	**Paez Belalcaza**	**4.89**	**216**	*eP*		**Pn**		**04 50 59.1**	**-0.6**
MARP				*eS*		**Sn**		**04 51 51.5**	**-4.7**
MARP				*i*				04 52 19.1	
	comp=Z,20nm,0.4s								
GARC	**Garzon, Huila**	**5.20**	**208**	*eP*		**Pn**		**04 51 02.6**	**-1.1**
GARC				*eP*		**Pn**		**04 51 02.6**	**-1.1**
GARC				*eS*		**Sn**		**04 52 00.2**	**-3.4**
GARC				*eS*		**Sn**		**04 52 00.2**	**-3.4**
PCON	**Cinco Dias**	**5.56**	**217**	*eP*		**Pn**		**04 51 09.3**	**+0.5**
PCON				*eP*		**Pn**		**04 51 09.3**	**+0.5**
PCON				*i*				04 52 21.8	
	comp=Z,315nm,1.1s								
PCON				*i*				04 52 21.8	
	comp=Z,315nm,1.1s								
BBAC	**Balboa, Cauca**	**6.33**	**221**	*eP*		**Pn**		**04 51 18.3**	**-0.3**
BBAC				*eP*		**Pn**		**04 51 18.3**	**-0.3**
BBAC				*eS*		**Sn**		**04 52 27.6**	**-2.8**
BBAC				*eS*		**Sn**		**04 52 27.6**	**-2.8**
BBAC				*i*				04 52 31.3	
	comp=Z,29nm,0.3s								
BBAC				*i*				04 52 31.3	
	comp=Z,29nm,0.3s								
OTAV	**Otavalo**	**8.46**	**220**	Pn		**Pn**		**04 51 47.1**	**-0.1**
OTAV	**Otavalo**	**8.46**	**220**	*eP*		**Pn**		**04 51 46.9**	**-0.3**
PCRV	**Puerto La Cruz**	**8.99**	**68**	P		**Pn**		**04 51 53.4**	**-0.4**
	comp=Z,2.3nm,0.3s,baz=324,slow=5.0,SNR=12								
PCRV				S		**Sn**		**04 53 31.4**	**-2.5**
	baz=307,slow=20,SNR=1.9								
PLCV	**Puerto La Cruz**	**9.03**	**68**			**Pn**		**04 51 53.4**	**-0.9**
JTS	**Las Juntas de**	**12.24**	**287**	P		**P**		**04 52 44.8**	**+2.7**
	comp=Z,1.9nm,0.3s,baz=73,slow=11,SNR=6.1								
SJG	**San Juan**	**13.09**	**30**	P		**Pn**		**04 52 47.2**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=208,slow=18,SNR=2.3								
CZSB	**Cruzeiro do Su**	**14.46**	**179**	*eP*		**Pn**		**04 53 04.4**	**-0.2**
MACA	**Manacapuru-AM**	**15.86**	**128**	*eP*		**P**		**04 53 22.6**	**+0.3**
MACA				*eS*		**Sn**		**04 56 19.1**	**+0.1**
ETMB	**Extrema**	**17.89**	**157**	*eP*		**P**		**04 53 44.4**	**-0.3**
SAML	**Samuel**	**18.52**	**148**	P		**P**		**04 53 49.4**	**-2.1**
SAML				IAmb		IAmb		04 54 22.5	
	comp=Z,9.1nm,0.9s								
SAML	**Samuel**	**18.52**	**148**	*eP*		**P**		**04 53 51.2**	**-0.3**
SAML				*eS*		**S**		**04 57 14.2**	**-0.2**
ITTB	**Itaituba**	**20.57**	**122**	*eP*		**P**		**04 54 14.7**	**+1.0**
ITTB				*eS*		**S**		**04 57 55.5**	**+0.3**
MALB	**Monte Alegre**	**20.66**	**114**	*eP*		**P**		**04 54 15.9**	**+1.3**
MCPB	**Macapa, AP**	**22.16**	**108**	*eP*		**P**		**04 54 30.9**	**+0.5**
NPGB	**Novo Progresso**	**22.41**	**128**	*eP*		**P**		**04 54 32.6**	**-0.2**
VILB	**Vilhena**	**23.45**	**147**	*eP*		**P**		**04 54 42.2**	**-0.1**
LPAZ	**La Paz**	**23.48**	**168**	P		**P**		**04 54 42.3**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=352,slow=6.2,SNR=12								
LPAZ	**La Paz**	**23.48**	**168**	*eP*		**P**		**04 54 42.6**	**-0.6**
CLDB	**Colider**	**24.60**	**135**	*eP*		**P**		**04 54 51.2**	**-1.5**
SIV	**San Ignacio**	**25.60**	**152**	P		**P**		**04 55 00.6**	**-1.2**
	comp=Z,1.9nm,0.9s,baz=346,slow=9.6,SNR=7.9								
PTLB	**Pontes e Lacer**	**26.09**	**148**	*eP*		**P**		**04 55 05.5**	**-0.6**
TMAB	**Tom-Au,PA,Br**	**26.56**	**109**	*eP*		**P**		**04 55 10.3**	**-0.2**
PRPB	**Parauapebas**	**26.56**	**119**	*eP*		**P**		**04 55 10.6**	**0.0**
SNDB	**Serra Nova Dou**	**28.60**	**131**	*eP*		**P**		**04 55 29.1**	**+0.5**
LVC	**Limon Verde**	**29.54**	**172**	LR		LR		05 08 07.2	
	comp=Z,33nm,18.5s,baz=309,slow=37								
SMTB	**Santa Maria do**	**29.80**	**121**	*eP*		**P**		**04 55 40.0**	**+0.7**
ROSB	**Rosrio**	**30.47**	**108**	*eP*		**P**		**04 55 45.8**	**+0.6**
ARAG	**Araguaiana, MT**	**30.74**	**137**	*eP*		**P**		**04 55 46

STKA	**Stephens Creek**	**35.61**	**247**	P	**P**		**05 04 01.3**	**-0.2**
	2.4nm,0.8s,baz=113,slow=9.4,SNR=5.1							
ASAR	**Alice Springs**	**42.70**	**259**	P	**P**		**05 04 59.0**	**-0.1**
	1.5nm,0.8s,baz=95,slow=8.0,SNR=14							
WRA	**Warramunga Arr**	**42.96**	**265**	P	**P**		**05 05 00.0**	**-1.1**
	0.7nm,0.7s,baz=96,slow=8.5,SNR=12							
PETK	**Petropavlovsk-**	**78.01**	**346**	P	**P**		**05 08 52.1**	**-0.3**
	5.1nm,0.8s,baz=136,slow=11,SNR=3.7							
NVAR	**Mina Array Bea**	**83.55**	**44**	P	**P**		**05 09 21.7**	**-0.2**
	0.7nm,0.8s,baz=224,slow=8.3,SNR=4.8							
TXAR	**Lajitas Array**	**89.39**	**58**	P	**P**		**05 09 49.6**	**-0.2**
	0.5nm,0.8s,baz=209,slow=6.9,SNR=7.4							
CMAR	**Chiang Mai Arr**	**89.53**	**290**	P	**P**		**05 09 51.8**	**+1.3**
	0.5nm,0.3s,baz=104,slow=3.8,SNR=2.9							
PDAR	**Pinedale Array**	**91.49**	**44**	P	**P**		**05 09 59.5**	**+0.1**
	0.5nm,0.8s,baz=270,slow=3.0,SNR=4.7							
AKASG	**Malin Array Be**	**144.17**	**329**	PKP	PKPbc		05 16 22.1	-2.1
	0.3nm,0.3s,baz=43,slow=4.1,SNR=9.8							

KRSC 30 05:04:59.6±1.9, 49°23N×156°66E, h40km±24km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.50**	**347**	*eS*	Sn	05 05 42.6	+0.4
PAU	**Pauzhetka**	**2.24**	**2**	*eS*	Sn	05 06 03.7	+3.1
KDTR	**Khodutka, Kamc**	**2.74**	**19**	*eP*	Pn	05 05 44.9	+4.0
KDTR				*eS*	Sn	05 06 17.3	+4.6
MTVR	**Mutnovka**	**3.40**	**16**	P	Pn	05 05 54.4	+4.2
MTVR				S	Sn	05 06 34.9	+5.6
RUS	**Russkaya**	**3.42**	**19**	S	Sn	05 06 33.7	+4.2
GRL	**Gorelyy**	**3.45**	**15**	P	Pn	05 05 55.8	+5.0
GRL				S	Sn	05 06 36.0	+5.6
MKZ	**Mys Kozlova**	**6.19**	**29**	P	Pn	05 06 32.8	+4.5

*IDC **30** 05:18:08.9±1.0, 5°70N×61°32E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.8/36, mbtmp3.9/11, MS3.6/5, Ms1 3.6/5, ms1mx3.1/42, Error ellipse: s-maj=31.6km s-min=20.9km az=42.0*

*NEIC **30** 05:18:10.1±1.2, 5°8N±0°2×61°34E±0°04, h10km±2km, mb4.4/11, Error ellipse: s-maj=29.3km s-min=4.1km az=192.0*

ISC 30 05:18:10.3±1.1, 5°8N±0°2×61°4E±0°1, h10km, n33, σ0s88/28, mb4.0/15, MS3.6/3, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**17.53**	**352**	LR	LR	05 27 32.2	
	comp=Z,209nm,21.1s,baz=194,slow=32						
PALK	**Pallekele**	**19.28**	**85**	LR	LR	05 28 16.7	
	comp=Z,94nm,21.5s,baz=6.7,slow=32						
PALK	**Pallekele**	**19.28**	**85**	P	**P**	**05 22 35.4**	**-0.1**
PALK				IAmb	IAmb	05 22 56.9	
	comp=Z,19nm,1.2s						
UOSS	**Minazif**	**19.67**	**346**	P	**P**	**05 22 39.4**	**-0.2**
UOSS				IAmb	IAmb	05 22 52.8	
	comp=Z,25nm,1.1s						
RAYN	**Ar Rayn**	**23.31**	**321**	P	**P**	**05 23 18.9**	**+0.1**
OPO	**Ambohidratompo**	**27.96**	**210**	LR	LR	05 32 09.0	
	comp=Z,103nm,19.5s,baz=190,slow=30						
GAR	**Garm**	**34.03**	**13**	P	**P**	**05 24 56.1**	**+1.3**
GAR				IAmb	IAmb	05 25 07.1	
	comp=Z,9.9nm,1.5s						
BTK	**Batken**	**35.15**	**13**	P	**P**	**05 25 04.0**	**-0.4**
BTK				IAmb	IAmb	05 25 16.4	
	comp=Z,15nm,1.5s						
AAK	**Ala-Archa**	**38.49**	**16**	P	**P**	**05 25 35.4**	**+2.5**
	comp=Z,0.9nm,0.6s,baz=194,slow=3.8,SNR=4.5						
AAK	**Ala-Archa**	**38.49**	**16**	P	**P**	**05 25 33.9**	**+1.0**
CMAR	**Chiang Mai Arr**	**38.74**	**68**	P	**P**	**05 25 34.8**	**-0.4**
KBZ	**Khabaz**	**41.12**	**340**	P	**P**	**05 25 55.8**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=113,slow=15,SNR=3.4						
KVAR	**Kislovodsk Ar**	**41.39**	**340**	LR	LR	05 43 08.9	
	comp=Z,86nm,20.9s,baz=92,slow=36						
BRTR	**Keskin Array B**	**41.99**	**328**	P	**P**	**05 26 03.0**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=142,slow=8.7,SNR=5.2						
BRTR	**Keskin Array B**	**41.99**	**328**	P	**P**	**05 26 01.4**	**-0.6**
ABKAR	**Akbulak array**	**43.32**	**359**	P	**P**	**05 26 11.3**	**-1.1**
ABKAR				IAmb	IAmb	05 26 21.3	
	comp=Z,5.0nm,0.9s						
ABKAR	**Akbulak array**	**43.32**	**359**	P	**P**	**05 26 11.3**	**-1.1**
IDI	**Anoyia**	**44.57**	**316**	P	**P**	**05 26 21.6**	**-1.3**
MKAR	**Makanchi Array**	**44.65**	**20**	P	**P**	**05 26 23.6**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=201,slow=8.3,SNR=3.0						
LEM	**Lembang**	**47.84**	**105**	LR	LR	05 42 23.9	
	comp=Z,91nm,20.5s,baz=188,slow=30						
ZALV	**Zalesovo Beam**	**51.65**	**17**	P	**P**	**05 27 18.1**	**+0.9**
	comp=Z,0.4nm,0.5s,baz=235,slow=10,SNR=2.7						
ZALV	**Zalesovo Beam**	**51.65**	**17**	P	**P**	**05 27 16.1**	**-1.1**
TOA0	**Torodi Ar. Sit**	**59.18**	**282**	P	**P**	**05 28 12.2**	**0.0**
TOA0				IAmb	IAmb	05 28 27.8	
	comp=Z,3.4nm,1.2s						
TORD	**Torodi Ar. Bea**	**59.18**	**282**	P	**P**	**05 28 13.0**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=96,slow=5.3,SNR=5.4						
TORD	**Torodi Ar. Bea**	**59.18**	**282**	P	**P**	**05 28 12.6**	**+0.4**
FINES	**FINESS Array B**	**61.42**	**342**	P	**P**	**05 28 26.3**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=64,slow=3.2,SNR=1.3						
FINES	**FINESS Array B**	**61.42**	**342**	P	**P**	**05 28 26.6**	**0.0**
SENIN	**Lac Senin/Sane**	**61.52**	**320**	P	**P**	**05 28 28.0**	**+0.1**
ESDC	**Sonseca Array**	**67.39**	**311**	P	**P**	**05 29 06.2**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=90,slow=5.1,SNR=7.2						
ARCES	**ARCESS Array B**	**67.81**	**347**	P	**P**	**05 29 08.1**	**-0.2**
	comp=Z,6.9nm,1.1s,baz=127,slow=3.6,SNR=5.4						
WRA	**Warramunga Arr**	**76.12**	**112**	P	**P**	**05 29 59.1**	**0.0**
	comp=Z,1.6nm,1.0s,baz=295,slow=4.4,SNR=6.6						
ASAR	**Alice Springs**	**76.50**	**116**	P	**P**	**05 30 01.4**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=302,slow=5.3,SNR=9.2						
ASAR	**Alice Springs**	**76.50**	**116**	P	**P**	**05 30 01.2**	**0.0**

*GUC **30** 05:19:42.6±0.5, 20°21S×69°06W, h114km±2km, ML3.6*

*IDC **30** 05:19:50.6±7.7, 19°59S×68°67W, h181km±52km, mb3.0/2, mb1 3.0/3, mb1mx2.9/19, mbtmp3.6/3, Error ellipse: s-maj=88.6km s-min=55.6km az=42.0*

ISC 30 05:19:41.3±1.0, 20°21S±0°03×69°13W±0°07, h122km±7km, n22, σ0s87/40, 10C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.07**	**345**	⇑*iP*	**Pn**	**05 19 58.6**	**+0.1**
PB08				*i* S	**Sn**	**05 20 10.9**	**-0.5**
PB08				IAML		05 20 11.9	
	comp=N,4μm,0.3s						
GO01	**Chusmiza**	**0.54**	**354**	*eP*	**Pn**	**05 20 00.4**	**0.0**
GO01				*eS*	**Sn**	**05 20 14.4**	**-0.3**
PB11	**IPOC Station P**	**0.67**	**312**	⇑*iP*	**Pn**	**05 20 01.1**	**+0.3**
PB11				*i* S	**Sn**	**05 20 15.6**	**+0.1**
PB11				IAML		05 20 17.2	
	comp=E,3μm,0.3s						
HMBC	**Humberstone**	**0.71**	**265**	⇑*iP*	**Pn**	**05 20 01.4**	**+0.3**
HMBC				*eS*	**Sn**	**05 20 16.1**	**0.0**
HMBC				IAML		05 20 17.1	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**0.89**	**202**	⇑*iP*	**Pn**	**05 20 03.0**	**+0.4**
PB01				*eS*	**Sn**	**05 20 18.4**	**-0.4**
PB01				IAML		05 20 20.1	
	comp=N,3μm,0.2s						
TA02	**Huaiquique**	**0.94**	**266**	⇑*iP*	**Pn**	**05 20 03.5**	**+0.6**
TA02				*i* S	**Sn**	**05 20 19.5**	**+0.2**
TA01	**Diego Aracena**	**1.04**	**250**	⇑*iP*	**Pn**	**05 20 04.3**	**+0.4**
TA01				*i* S	**Sn**	**05 20 21.4**	**+0.3**
PSGC	**Pisagua**	**1.11**	**303**	⇑*iP*	**Pn**	**05 20 05.1**	**+0.3**
PSGC				*i* S	**Sn**	**05 20 22.3**	**-0.3**
PATCX	**Punta Patache**	**1.13**	**237**	⇑*iP*	**Pn**	**05 20 05.5**	**+0.6**
PATCX				*i* S	**Sn**	**05 20 23.0**	**+0.2**
PATCX				IAML		05 20 24.4	
	comp=E,788nm,0.2s						
MNMC	**Minye Minye**	**1.16**	**338**	⇓*iP*	**Pn**	**05 20 06.3**	**+0.9**
MNMC				*eS*	**Sn**	**05 20 24.5**	**+0.8**
PB09	**IPOC Station P**	**1.58**	**184**	⇑*iP*	**Pn**	**05 20 10.9**	**+0.9**
PB09				*i* S	**Sn**	**05 20 32.5**	**+0.6**
PB09				IAML		05 20 33.3	
	comp=N,600nm,0.4s						
PB07	**IPOC Station P**	**1.66**	**205**	⇑*iP*	**Pn**	**05 20 11.4**	**+0.4**
PB07				*i* S	**Sn**	**05 20 33.8**	**+0.2**
PB07				IAML		05 20 34.1	
	comp=N,783nm,0.3s						
PB16	**IPOC Station P**	**1.90**	**349**	⇓*iP*	**Pn**	**05 20 15.5**	**+1.2**
PB16				*i* S	**Sn**	**05 20 40.7**	**+1.4**
PB03	**IPOC Station P**	**1.92**	**197**	*eP*	**Pn**	**05 20 14.7**	**+0.6**
PB03				IAML		05 20 39.1	
	comp=E,433nm,0.2s						
AP01	**Chacalluta**	**2.16**	**328**	*eP*	**Pn**	**05 20 17.3**	**+0.4**
AP01				*eS*	**Sn**	**05 20 43.5**	**-0.6**
PB04	**IPOC Station P**	**2.31**	**204**	*eP*	**Pn**	**05 20 19.8**	**+0.8**
PB04				*i* S	**Sn**	**05 20 46.6**	**-1.3**
PB04				IAML		05 20 48.9	
	comp=N,414nm,0.1s						
LVC	**Limon Verde**	**2.40**	**175**	*eP*	**Pn**	**05 20 21.3**	**+1.1**
LVC				*i* S	**Sn**	**05 20 50.8**	**+0.8**
PB06	**IPOC Station P**	**2.52**	**189**	⇓*iP*	**Pn**	**05 20 21.9**	**+0.4**
PB06				IAML		05 20 54.5	
	comp=N,228nm,0.2s						
PB06				IAML		05 20 56.2	
	comp=E,314nm,0.2s						
PB15	**IPOC Station P**	**3.00**	**186**	⇓*iP*	**Pn**	**05 20 28.5**	**+0.6**
PB15				*i* S	**Sn**	**05 21 03.6**	**-0.1**
LPAZ	**La Paz**	**4.02**	**14**	P	**Pn**	**05 20 44.0**	**+2.3**
	comp=E,2.4nm,0.3s,baz=204,slow=5.7,SNR=92						
LPAZ				S	**Sn**	**05 21 25.8**	**-2.7**
	comp=E,0.1nm,0.3s,baz=108,slow=6.4,SNR=1.9						
BDFB	**Brasilia**	**20.60**	**81**	P	**P**	**05 24 10.2**	**-0.8**
	comp=E,1.2nm,0.6s,baz=243,slow=14,SNR=2.5						
TORD	**Torodi Ar. Bea**	**77.12**	**71**	P	**P**	**05 31 21.2**	**-0.7**
	comp=E,0.2nm,0.3s,baz=256,slow=5.6,SNR=6.1						

KRSC 30 05:24:12.1±2.0, 53°69N×168°10E, h50km±62km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**3.85**	**286**	*eP*	Pn	05 25 12.0	+3.3
MKZ				S	Sn	05 25 58.2	+5.7
KBTR	**Krutoberegovo**	**3.96**	**312**	P	Pn	05 25 11.9	+1.8
KZV	**Kizimen**	**4.78**	**290**	*eP*	Pn	05 25 25.1	+3.5
KZV				S	Sn	05 26 19.1	+3.4
ZLN	**Zelenaya**	**4.82**	**302**	P	Pn	05 25 27.0	+4.9
SPN	**Mys Shipunski**	**4.87**	**266**	S	Sn	05 26 20.1	+2.3
KII	**Karymskiy**	**5.13**	**277**	P	Pn	05 25 30.5	+4.1
NLC	**Nalytchevo**	**5.26**	**268**	S	Sn	05 26 31.8	+4.5
AVH	**Avacha**	**5.61**	**269**	*eP*	Pn	05 25 37.6	+4.7
KRX	**Arik**	**5.65**	**270**	P	Pn	05 25 37.6	+4.1
KOK	**Koryaka**	**5.67**	**270**	P	Pn	05 25 37.8	+4.1
RUS	**Russkaya**	**5.92**	**262**	P	Pn	05 25 41.1	+4.1
RUS				S	Sn	05 26 47.8	+4.4
KRMR	**Karymshinskiy**	**6.05**	**266**	P	Pn	05 25 44.3	+5.5
KRMR				S	Sn	05 26 52.3	+5.7
MTVR	**Mutnovka**	**6.10**	**263**	S	Sn	05 26 52.8	+4.7
GRL	**Gorelyy**	**6.15**	**263**	*eP*	Pn	05 25 45.2	+4.9
KDTR	**Khodutka, Kamc**	**6.37**	**257**	P	Pn	05 25 47.5	+4.2
KDTR				S	Sn	05 26 58.0	+3.4

*IDC **30** 05:35:29.0±0.7, 5°66N×61°36E, h0km, mb3.9/15, mb1 4.1/15, mb1mx3.9/37, mbtmp3.9/15, MS3.8/6, Ms1 3.8/6, ms1mx3.3/49, Error ellipse: s-maj=19.1km s-min=16.4km az=139.0*

*NEIC **30** 05:35:29.6±1.8, 5°7N±0°1×61°3E±0°1, h10km±1km, mb4.5/31, Error ellipse: s-maj=18.0km s-min=16.5km az=215.0*

*GCMT **30** 05:35:31.6±0.4, 5°71N±0°02×61°14E±0°04, h14km±1km, MW4.8/83, Moment Tensor Solution. s19,c21; s83,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=1.45±.10; $M_{\theta\theta}$=0.31±.08; $M_{r\theta}$=0.31±.18; $M_{\theta\phi}$=-0.44±.05; $M_{\phi r}$=0.73±.24; Best double couple: $M_0$1.82900×10^{16} NP1:ϕs127.00000°, δ47.00000°, λ-63.00000°. NP2: ϕs270.00000°, δ49.00000°, λ-116.00000°. Principal axes: T 1.6030, Plg1.0000°, Azm18.0000°; N 0.4500, Plg20.0000°, Azm288.0000°; P -2.0550, Plg70.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 05:35:30.3±0.6, 5°64N±0°09×61°37E±0°08, h14km, n68, σ1s13/63, mb4.5/37, MS4.1/3, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.77**	**312**	Pn	**Pn**	**05 37 52.4**	**+1.8**
WSAR	**Wadi Sarin**	**17.69**	**352**	LR	LR	05 44 51.6	
	comp=Z,331nm,21.2s,baz=164,slow=32						
ATD	**Arta Tunnel**	**19.22**	**289**	LR	LR	05 46 19.8	
	comp=Z,102nm,20.3s,baz=57,slow=34						
PALK	**Pallekele**	**19.28**	**84**	LR	LR	05 45 53.9	
	comp=Z,253nm,18.9s,baz=3.7,slow=32						
UOSS	**Minazif**	**19.82**	**346**	P	**P**	**05 39 57.2**	**-3.5**
FURI	**Furi**	**22.74**	**280**	P	**P**	**05 40 30.7**	**-1.9**
RAYN	**Ar Rayn**	**23.44**	**321**	P	**P**	**05 40 38.3**	**-1.2**
RAYN				IAmb	IAmb	05 41 00.7	
	comp=Z,15nm,1.3s						
RER	**Riviere de l'E**	**27.20**	**192**	P	**P**	**05 41 13.0**	**-0.9**
ABPO	**Ambohimpanom**	**28.19**	**209**	P	**P**	**05 41 22.5**	**-0.4**
ABPO				IAmb	IAmb	05 41 23.8	
	comp=Z,19nm,1.4s						
KBL	**Kabul**	**29.62**	**13**	P	**P**	**05 41 35.9**	**+0.4**
KBL				IAmb	IAmb	05 41 58.4	
	comp=Z,4.3nm,0.6s						
MBAR	**Mbarara**	**31.21**	**259**	P	**P**	**05 41 49.1**	**-0.6**
GEYT	**Alibeck**	**32.27**	**355**	P	**P**	**05 41 59.9**	**+1.2**
GYA0B	**ALIBECK ARRAY**	**32.27**	**355**	P	**P**	**05 41 59.8**	**+1.1**
GYA0B				IAmb	IAmb	05 42 09.0	
	comp=Z,4.3nm,0.6s						
GAR	**Garm**	**34.18**	**12**	P	**P**	**05 42 15.2**	**-0.2**
GAR				IAmb	IAmb	05 42 22.3	
	comp=Z,7.0nm,1.2s						
SHL	**Shillong**	**35.28**	**53**	P	**P**	**05 42 21.9**	**-3.3**
SHL				IAmb	IAmb	05 42 34.9	
	comp=Z,11nm,1.3s						
BTK	**Batken**	**35.30**	**13**	P	**P**	**05 42 24.9**	**-0.2**
BTK				IAmb	IAmb	05 42 36.1	
	comp=Z,10nm,1.1s						
MARD	**Mardin**	**36.70**	**332**	P	**P**	**05 42 37.5**	**+0.4**
MARD				IAmb	IAmb	05 42 47.1	
	comp=Z,12nm,1.1s						
LSA	**Lhasa**	**36.90**	**46**	P	**P**	**05 42 39.0**	**-0.3**
LSA				IAmb	IAmb	05 42 50.3	
	comp=Z,9.9nm,1.2s						
ARSB	**Arslanbob**	**37.01**	**15**	P	**P**	**05 42 40.2**	**+0.4**
KK31	**Karatay Array**	**38.17**	**11**	P	**P**	**05 42 49.8**	**+0.4**
KKAR	**Karatay Array**	**38.17**	**11**	P	**P**	**05 42 49.6**	**+0.3**
KKAR	**Karatay Array**	**38.17**	**11**	P	**P**	**05 42 49.9**	**+0.5**
KKAR				IAmb	IAmb	05 43 01.5	
	comp=Z,8.9nm,1.5s						
AAK	**Ala-Archa**	**38.63**	**16**	P	**P**	**05 42 55.7**	**+2.3**
	comp=Z,1.8nm,0.6s,baz=189,slow=7.4,SNR=6.0						
AAK	**Ala-Archa**	**38.63**	**16**	P	**P**	**05 42 54.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**38.79**	**68**	P	**P**	**05 42 56.6**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=270,slow=7.2,SNR=5.0						
CMAR	**Chiang Mai Arr**	**38.79**	**68**	P	**P**	**05 42 54.6**	**-0.3**
LSZ	**Lusaka**	**38.90**	**237**	P	**P**	**05 42 55.8**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=46,slow=7.0,SNR=5.1						
LSZ	**Lusaka**	**38.90**	**237**	P	**P**	**05 42 55.0**	**-0.9**
LSZ				IAmb	IAmb	05 42 58.9	
	comp=Z,13nm,1.4s						
MATP	**Matopo**	**41.40**	**230**	P	**P**	**05 43 18.1**	**+1.4**
	comp=Z,2.5nm,0.9s,baz=53,slow=7.9,SNR=4.1						
MATP				LR	LR	05 58 25.4	
	comp=Z,338nm,18.2s,baz=51,slow=33						
BRTR	**Keskin Array B**	**42.13**	**328**	P	**P**	**05 43 23.6**	**+1.2**
	comp=Z,1.7nm,0.9s,baz=138,slow=8.1,SNR=5.2						
BRTR	**Keskin Array B**	**42.13**	**328**	P	**P**	**05 43 20.9**	**-1.6**
ANTO	**Ankara**	**42.69**	**327**	P	**P**	**05 43 27.5**	**+0.6**
ABKAR	**Akbulak array**	**43.48**	**359**	P	**P**	**05 43 33.9**	**+0.9**
ABKAR				IAmb	IAmb	05 43 41.1	
	comp=Z,12nm,1.0s						
ABKAR	**Akbulak array**	**43.48**	**359**	P	**P**	**05 43 33.8**	**+0.7**
MKAR	**Makanchi Array**	**44.79**	**20**	P	**P**	**05 43 43.4**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=209,slow=11,SNR=2.4						
LBTB	**Lobatse**	**46.25**	**227**	LR	LR	06 00 44.1	
	comp=Z,215nm,20.3s,baz=47,slow=33						
BOSA	**Boshof**	**48.67**	**224**	P	**P**	**05 44 16.0**	**+1.6**
	comp=Z,2.2nm,0.8s,baz=71,slow=2.6,SNR=5.0						
TSUM	**Tsumeb**	**49.68**	**239**	P	**P**	**05 44 22.3**	**0.0**
MLR	**Muntele Rosu**	**50.22**	**328**	P	**P**	**05 44 27.4**	**+1.4**
ARU	**Arti**	**50.69**	**358**	P	**P**	**05 44 29.2**	**-0.1**
ARU				IAmb	IAmb	05 44 36.5	
	comp=Z,7.6nm,0.9s						
ZALV	**Zalesovo Beam**	**51.79**	**17**	P	**P**	**05 44 38.0**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=218,slow=7.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**51.79**	**17**	P	**P**	**05 44 37.3**	**-0.2**
BURAR	**Bucovina Array**	**52.00**	**330**	P	**P**	**05 44 39.8**	**+0.4**
XAN	**Xi'an**	**52.25**	**51**	P	**P**	**05 44 41.7**	**+0.3**
XAN				IAmb	IAmb	05 44 48.6	
	comp=Z,7.6nm,1.1s						
AKASG	**Malin Array Be**	**52.32**	**335**	P	**P**	**05 44 43.2**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=140,slow=6.2,SNR=3.7						
AKASG	**Malin Array Be**	**52.32**	**335**	P	**P**	**05 44 42.2**	**+0.7**
KIRV	**Kirov**	**53.62**	**352**	LR	LR	06 08 31.5	
	comp=Z,28nm,19.8s,baz=190,slow=37						
SONM	**Songino Array**	**56.90**	**35**	P	**P**	**05 45 15.7**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=224,slow=6.0,SNR=3.2						
SOKA	**Soboth**	**57.05**	**324**	*eP*	**P**	**05 45 16.1**	**+0.1**
	comp=Z,6.1nm,1.8s						
ARSA	**Arzberg**	**57.06**	**324**	*eP*	**P**	**05 45 16.3**	**+0.3**
	comp=Z,8.1nm,1.8s						
CONA	**Conrad Observa**	**57.22**	**325**	*eP*	**P**	**05 45 16.9**	**-0.4**
	comp=Z,8.5nm,1.3s						
MYKA	**Terra Mystica**	**57.85**	**323**	*eP*	**P**	**05 45 20.8**	**-0.9**
	comp=Z,6.2nm,1.1s						
MOA	**Molln**	**58.10**	**324**	*eP*	**P**	**05 45 23.0**	**-0.4**
	comp=Z,7.6nm,1.1s						
ABTA	**Abfaltersbach**	**58.59**	**323**	*eP*	**P**	**05 45 26.8**	**-0.1**
	comp=Z,7.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**59.23**	**282**	P	**P**	**05 45 32.9**	**+1.1**
	comp=Z,1.6nm,1.0s,baz=94,slow=5.1,SNR=6.6						
TORD	**Torodi Ar. Bea**	**59.23**	**282**	P	**P**	**05 45 31.9**	**+0.1**
WTTA	**Wattenberg**	**59.36**	**323**	*eP*	**P**	**05 45 31.6**	**-0.8**
	comp=Z,5.7nm,1.0s						
WATA	**Walderalm**	**59.43**	**323**	*eP*	**P**	**05 45 30.8**	**-2.0**
	comp=Z,3.3nm,1.0s						
MOTA	**Moosalm**	**59.72**	**323**	*eP*	**P**	**05 45 33.0**	**-1.8**
	comp=Z,4.7nm,1.1s						
FETA	**Feichten**	**59.80**	**322**	*eP*	**P**	**05 45 34.4**	**-1.0**
	comp=Z,6.5nm,1.4s						
ESDC	**Sonseca Array**	**67.50**	**311**	P	**P**	**05 46 26.3**	**+0.1**
	comp=Z,1.8nm,1.0s,baz=86,slow=4.5,SNR=4.7						
ESDC	**Sonseca Array**	**67.50**	**311**	P	**P**	**05 46 25.7**	**-0.5**
ARCES	**ARCESS Array B**	**67.97**	**347**	P	**P**	**05 46 28.1**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=123,slow=6.6,SNR=5.4						
WRA	**Warramunga Arr**	**76.05**	**112**	P	**P**	**05 47 18.9**	**+1.0**
	comp=Z,3.3nm,1.0s,baz=290,slow=5.1,SNR=15						
WRA	**Warramunga Arr**	**76.05**	**112**	P	**P**	**05 47 17.1**	**-0.8**
WB2	**Warramunga Arr**	**76.06**	**112**	P	**P**	**05 47 17.7**	**-0.3**
ASAR	**Alice Springs**	**76.42**	**116**	P	**P**	**05 47 21.1**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=289,slow=5.7,SNR=15						
ASAR	**Alice Springs**	**76.42**	**116**	P	**P**	**05 47 20.2**	**+0.2**

*MOS **30** 05:48:19.9±0.9, 5°73N×61°32E, h9km, mb5.1/68, MS4.2/8, Error ellipse: s-maj=6.6km s-min=3.9km az=98.8*

*IDC **30** 05:48:20.9±0.4, 5°78N×61°40E, h0km, mb4.5/29, mb1 4.6/31, mb1mx4.5/44, mbtmp4.5/31, ML4.4/2, MS4.2/34, Ms1 4.2/34, ms1mx4.1/42, Error ellipse: s-maj=12.6km s-min=11.6km az=141.0*

*GCMT **30** 05:48:22.4±0.2, 5°70N±0°01×61°30E±0°01, h12km, MW5.1/128, Moment Tensor Solution. s54,c68; s128,c216; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=5.13±.09; $M_{\theta\theta}$=4.31±.08; $M_{\theta\phi}$=0.81±.09; $M_{r\theta}$=2.45±.26; $M_{\theta\phi}$=-2.05±.07; $M_{\phi r}$=1.42±.29; Best double couple: $M_0$5.91500×10^{16} NP1:ϕs112.00000°, δ31.00000°, λ-95.00000°. NP2:ϕs297.00000°, δ59.00000°, λ-87.00000°. Principal axes: T 5.9740, Plg14.0000°, Azm25.0000°; N -0.1170, Plg2.0000°, Azm116.0000°; P -5.8570, Plg76.0000°, Azm215.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **30** 05:48:22.4±1.1, 5°78N±0°07×61°39E±0°08, h10km±1km, mb5.1/95 Error ellipse: s-maj=14.0km s-min=11.9km az=110.0*

*BGR **30** 05:48:45.3±0.0, 7°63N×59°24E, h33km, mb5.1, Ms4.0*

ISC 30 05:48:23.8±0.5, 5°85N±0°05×61°39E±0°05, h19km±1km, h19km:pP-P, n554, σ1s61/600, mb5.0/179, MS4.3/51, 26C-33D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.65**	**311**	Pn	**Pn**	**05 50 44.6**	**+2.7**
SHAO	**Shalim**	**13.35**	**336**	*i* P	**Pn**	**05 51 35.3**	**+2.8**
	SNR=9.7						
SHAO	**Shalim**	**13.35**	**336**	P	**Pn**	**05 51 36.0**	**+3.5**
	SNR=9.6	

ASHO Ashiyiah 19.42 345 *i* P P 05 52 49.5 +0.4
SNR=8.8
ASHO Ashiyiah 19.42 345 P Pn 05 52 51.0 +0.7
SNR=9.8
ASHO P Pn 05 52 51.0 +0.7
SNR=9.8
HATD Hatta, Dubai 19.54 346 *i* P Pn 05 52 51.5 -0.2
SNR=13
HATD Hatta, Dubai 19.54 346 P Pn 05 52 52.5 +0.7
SNR=7.9
HATD P Pn 05 52 52.5 +0.7
SNR=7.9
HATD P Pn 05 52 52.5 +0.7
SNR=7.9
ASUD Al Ashush, Dub 19.56 343 P Pn 05 52 52.2 +0.2
FAQ Al Faqa, Dubai 19.60 344 P Pn 05 52 52.8 +0.4
AJN Ajban 19.60 342 P Pn 05 52 53.5 +1.0
UOSS Minazif 19.63 346 *i* P Pn 05 52 53.1 +0.2
SNR=11
UOSS Minazif 19.63 346 P Pn 05 52 52.9 0.0
UOSS P Pn 05 52 52.9 0.0
UOSS Minazif 19.63 346 P P 05 52 52.0 +0.5
UOSS IAmb IAmb 05 53 04.0
comp=Z,160nm,1.4s
NAZ Nazwa, Dubai 19.81 344 P Pn 05 52 56.1 +1.1
MSFE Esma-Masafi 20.04 346 P Pn 05 52 58.1 +0.4
UMQ Umm Al-Quwin 20.32 345 P Pn 05 53 01.8 +0.8
HYB Hyderabad 20.34 54 *i* P Pn 05 53 03.0 +1.7
HYB *eS* Sn 05 57 08.0 +18
SHME Shamm 20.71 347 P Pn 05 53 06.4 +0.9
RAYN Ar Rayn 23.30 321 *i* P P 05 53 29.5 -1.3
SNR=26
RAYN Ar Rayn 23.30 321 P P 05 53 30.1 -0.7
RAYN pmax pmax
comp=Z,46nm,0.9s
RAYN Ar Rayn 23.30 321 P P 05 53 30.1 -0.7
RAYN IAmb IAmb 05 53 32.9
comp=Z,46nm,0.8s
KIBK Kibwezi 24.70 251 P P 05 53 44.7 +0.6
SNR=11
LODK Lodwar 26.06 266 P P 05 53 58.6 +2.2
SNR=48
OPO Ambohidratompo 28.02 210 LR LR 06 02 20.5
comp=Z,913nm,20.7s,baz=188,slow=30
ABPO Ambohimpanom 28.38 209 P P 05 54 16.0 -1.3
ABPO pmax pmax
comp=Z,25nm,1.6s
ABPO Ambohimpanom 28.38 209 P P 05 54 16.0 -1.3
HRA Herat 28.41 1 P P 05 54 18.5 +1.0
KBL Kabul 29.42 13 P P 05 54 31.1 +4.6
SNR=12
KBL Kabul 29.42 13 P P 05 54 27.4 +0.9
KBL pmax pmax
comp=Z,52nm,1.6s
KBL Kabul 29.42 13 P P 05 54 27.4 +0.9
KBL IAmb IAmb 05 54 38.4
comp=Z,52nm,1.6s
NIL Nilore 29.78 20 P P 05 54 30.6 +1.1
NIL pmax pmax
comp=Z,29nm,1.3s
NIL Nilore 29.78 20 P P 05 54 30.6 +1.1
NIL IAmb IAmb 05 54 40.1
comp=Z,29nm,1.2s
MBAR Mbarara 31.27 259 P P 05 54 41.4 -1.7
MBAR pmax pmax
comp=Z,6.0nm,0.8s
MBAR Mbarara 31.27 259 P P 05 54 41.4 -1.7
GEYT Alibeck 32.07 355 P P 05 54 51.0 +1.3
comp=Z,3.2nm,0.9s,baz=200,slow=7.9,SNR=5.3
GEYT Alibeck 32.07 355 P P 05 54 50.0 +0.3
GYA0B ALIBECK ARRAY 32.07 355 P P 05 54 50.3 +0.6
CHGR Chuyangaron 33.41 11 P P 05 55 03.2 +1.8
CHGR IAmb IAmb 05 55 10.5
comp=Z,38nm,1.4s
GAR Garm 33.98 12 P P 05 55 06.5 +0.1
GAR IAmb IAmb 05 55 15.9
comp=Z,42nm,1.4s
DRK Karamyk 34.78 14 P P 05 55 16.0 +2.5
BTK Batken 35.10 13 P P 05 55 16.8 +0.7
BTK Batken 35.10 13 P P 05 55 16.8 +0.7
SHL Shillong 35.14 53 P P 05 55 19.8 +3.0
SNR=15
SHL Shillong 35.14 53 P P 05 55 15.7 -1.1
SHL pmax pmax
comp=Z,28nm,1.1s
SHL Shillong 35.14 53 P P 05 55 15.7 -1.1
SHL IAmb IAmb 05 55 25.9
comp=Z,28nm,1.1s
KSH Kashi 36.01 19 P P 05 55 22.3 -1.7
KSH pP pP 05 55 27.5 -1.3
KSH PP PnPn 05 56 40.8 -4.2
KSH S S 06 00 59.0 -3.0
KSH pmax pmax
comp=Z,20nm,1.1s
KSH pmax pmax
comp=Z,350nm,4.9s
KSH LR LR
comp=Z,740nm,12.4s
KSH LR LR
comp=Z,510nm,7.3s
KSH LR LR
comp=Z,2μm,17.2s
MARD Mardin 36.54 332 P P 05 55 30.7 +2.2
ARSB Arslanbob 36.81 15 P P 05 55 31.3 +0.5
ARSB pmax pmax
comp=Z,24nm,1.4s
ARSB Arslanbob 36.81 15 P P 05 55 31.3 +0.5
IUG luznay 36.95 11 *eP* P 05 55 33.4 +1.4
comp=Z,5.8nm,1.3s,baz=10
IUG luznay 36.95 11 *eP* P 05 55 33.4 +1.4
IUG pmax pmax
comp=Z,6.0nm,1.3s
GNI Garni 37.29 339 *i* P P 05 55 34.9 0.0
GNI pmax pmax
comp=Z,50nm,1.5s
GNI Garni 37.29 339 P P 05 55 35.3 +0.4
PSI Prapat 37.54 93 LR LR 06 08 40.1
comp=Z,337nm,20.3s,baz=270,slow=32
PSI Prapat 37.54 93 P P 05 55 35.8 -1.5
PSI pmax pmax
comp=Z,51nm,1.9s
RPSI Rantau Prapat 37.55 93 P P 05 55 35.8 -1.4
RPSI IAmb IAmb 05 55 53.0
comp=Z,51nm,1.9s
KK31 Karatay Array 37.97 11 P P 05 55 41.1 +0.6
KK31 pmax pmax
comp=Z,24nm,1.4s
KK31 Karatay Array 37.97 11 P P 05 55 41.1 +0.6
KKAR Karatay Array 37.97 11 P P 05 55 41.0 +0.5
KKAR pmax pmax
comp=Z,24nm,1.4s
KKAR Karatay Array 37.97 11 P P 05 55 41.0 +0.5
EKS2 Erkin-Say 38.27 15 P P 05 55 46.0 +2.9
SNR=41
AAK Ala-Archa 38.44 16 LR LR 06 12 57.2
comp=Z,654nm,18.9s,baz=213,slow=38
AAK Ala-Archa 38.44 16 P P 05 55 47.6 +3.0
SNR=13
AAK Ala-Archa 38.44 16 *i* P P 05 55 47.3 +2.8
SNR=15
AAK Ala-Archa 38.44 16 *ce* P P 05 55 45.1 +0.6
AAK pmax pmax
comp=Z,22nm,0.6s
UTHA Uthaitani 38.55 72 P P 05 55 48.7 +3.0
comp=Z,291nmcomp=Z,20nm,1.0s
KBK Karagaybulak 38.58 16 P P 05 55 49.1 +3.4
SNR=11
CM13 Chiang Mai Arr 38.65 68 P P 05 55 50.2 +3.7
comp=Z,129nmcomp=Z,7.5nm,1.0s
CM32 Chiang Mai Arr 38.65 67 P P 05 55 58.0 +11
CM05 Chiang Mai Arr 38.68 68 P P 05 55 50.0 +3.2
comp=Z,6.6nm,1.2s
CM02 Chiang Mai Arr 38.69 68 P P 05 55 50.6 +3.8
comp=Z,104nmcomp=Z,8.3nm,1.7s
CMAR Chiang Mai Arr 38.69 68 P P 05 55 48.6 +1.7
comp=Z,6.3nm,1.0s,baz=260,slow=9.4,SNR=24
CMAR PcP PcP 05 57 59.7 +0.9
comp=Z,1.0nm,0.3s,baz=255,slow=4.3,SNR=8.1
CMAR LR LR 06 10 31.0
comp=Z,244nm,21.6s,baz=298,slow=34
CMAR Chiang Mai Arr 38.69 68 *i* P P 05 55 49.5 +2.6
CMAR pmax pmax
comp=Z,4.0nm,0.8s
CM01 Chiang Mai Arr 38.70 68 P P 05 55 50.5 +3.5
comp=Z,126nmcomp=Z,9.4nm,1.2s

BOOM Boomskoye usch 38.71 17 P P 05 55 48.9 +2.0
BOOM pmax pmax
comp=Z,26nm,1.2s
BOOM Boomskoye usch 38.71 17 P P 05 55 48.9 +2.0
CM04 Chiang Mai Arr 38.71 68 P P 05 55 50.0 +3.0
comp=Z,129nmcomp=Z,8.6nm,1.1s
CM09 Chiang Mai Arr 38.73 68 P P 05 55 50.0 +2.8
comp=Z,121nmcomp=Z,12nm,1.1s
KDJ Kajisay 38.76 19 P P 05 55 47.7 +0.3
KDJ Kajisay 38.76 19 P P 05 55 47.6 +0.3
CHTO Chiang Mai 38.78 67 P P 05 55 48.0 +0.4
CHTO pmax pmax
comp=Z,25nm,1.3s
CHTO Chiang Mai 38.78 67 P P 05 55 48.0 +0.4
CM33 Chiang Mai Arr 38.78 67 P P 05 55 50.0 +2.4
CMMT Chiang Mai 38.78 67 P P 05 55 50.0 +2.4
comp=Z,222nmcomp=Z,10nm,1.9s
CHMS Chumysh 38.84 16 P P 05 55 50.5 +2.7
SNR=5.2
CM36 Chiang Mai Arr 38.84 68 P P 05 55 50.0 +1.8
AKH Akhalkalaki 38.85 338 P P 05 55 49.0 +0.9
AKH pmax pmax
comp=Z,73nm,1.3s
AKH Akhalkalaki 38.85 338 P P 05 55 49.0 +0.9
AKH IAmb IAmb 05 56 16.8
comp=Z,73nm,1.3s
KOPT Kop Dagi 38.87 334 P P 05 55 49.4 +1.0
KOPT IAmb IAmb 05 55 53.7
comp=Z,58nm,1.5s
CM35 Chiang Mai Arr 38.94 67 P P 05 55 51.0 +2.1
MAK Makhachkala 38.95 344 *eP* P 05 55 43.4 -5.2
MAK *eS* S 06 01 41.4 -4.9
MAK *eSS* SnSn 06 04 34.1 -3.6
MAK pmax pmax
comp=Z,233nm,1.2s
MAK MLR MLR
comp=Z,137nm,15.0s
CM34 Chiang Mai Arr 38.98 67 P P 05 55 51.0 +1.7
TKM2 Tokmak 2 39.00 17 P P 05 55 51.4 +2.0
SNR=8.9
USP Ospenovka 39.02 15 P P 05 55 51.9 +2.5
SNR=6.8
LSZ Lusaka 39.02 237 P P 05 55 49.6 -0.2
comp=Z,2.8nm,0.5s,baz=46,slow=4.7,SNR=6.6
LSZ PcP PcP 05 58 00.4 +0.5
comp=Z,1.7nm,0.4s,baz=79,slow=5.0,SNR=3.0
LSZ Lusaka 39.02 237 P P 05 55 50.0 +0.2
LSZ pmax pmax
comp=Z,11nm,1.1s
LSZ Lusaka 39.02 237 P P 05 55 50.0 +0.2
SGDS Sogindy 39.23 15 *eP* P 05 55 52.4 +1.2
comp=Z,6.8nm,1.3s,baz=15
SGDS Sogindy 39.23 15 *eP* P 05 55 52.3 +1.2
SGDS pmax pmax
comp=Z,7.0nm,1.3s
TNSS Tian-Shan 39.51 18 *eP* P 05 55 55.1 +1.3
baz=18
TNSS Tian-Shan 39.51 18 *eP* P 05 55 55.1 +1.3
AAA Alma-Ata 39.65 18 *eP* P 05 55 57.2 +2.6
baz=18
AAA LR LR 06 12 46.5
comp=Z,167nm,14.7s,baz=18
AAA Alma-Ata 39.65 18 *eP* P 05 55 57.2 +2.6
AAA MLR MLR
comp=Z,167nm,15.0s
MDOK Medeo 39.65 18 *eP* P 05 55 56.4 +1.7
baz=18
MDOK LR LR 06 12 27.3
comp=Z,190nm,14.8s,baz=18
MDOK Medeo 39.65 18 *eP* P 05 55 56.4 +1.7
MDOK MLR MLR
comp=Z,190nm,15.0s
GROC Groznyy 39.67 342 *eP* P 05 55 56.0 +1.3
GROC *e* 05 57 27.5
GROC *e* 05 57 59.7
GROC pmax pmax
comp=Z,59nm,1.2s
ZEI Tsey 39.92 340 *eP* P 05 55 57.0 0.0
ZEI pmax pmax
comp=Z,17nm,2.0s
SATY Saty 39.99 19 *eP* P 05 55 58.4 +0.8
comp=Z,5.1nm,1.2s,baz=19
SATY Saty 39.99 19 *eP* P 05 55 58.3 +0.8
SATY pmax pmax
comp=Z,5.0nm,1.2s
KUU Kurty 40.11 17 *eP* P 05 55 58.8 +0.4
baz=17
KUU Kurty 40.11 17 *eP* P 05 55 58.7 +0.4
CHKK Chushkaly 40.26 18 *eP* P 05 56 00.5 +0.9
baz=17
CHKK Chushkaly 40.26 18 *eP* P 05 56 00.5 +0.9
SHLS Shalkode 40.44 20 *eP* P 05 56 03.5 +2.3
comp=Z,4.9nm,0.8s,baz=21
SHLS Shalkode 40.44 20 *eP* P 05 56 03.5 +2.3
SHLS pmax pmax
comp=Z,5.0nm,0.8s
KPKS Kokpek 40.45 19 *eP* P 05 56 01.7 +0.4
comp=Z,6.9nm,0.7s,baz=19
KPKS Kokpek 40.45 19 *eP* P 05 56 01.7 +0.4
KPKS pmax pmax
comp=Z,7.0nm,0.7s
BTLS Baital 40.57 14 *eP* P 05 56 03.4 +1.2
comp=Z,5.8nm,1.4s,baz=14
BTLS Baital 40.57 14 *eP* P 05 56 03.3 +1.2
BTLS pmax pmax
comp=Z,6.0nm,1.4s
KBZ Khabaz 41.09 340 P P 05 56 07.7 +1.3
comp=Z,8.1nm,0.8s,baz=161,slow=7.5,SNR=18
KBZ LR LR 06 14 23.3
comp=Z,302nm,19.6s,baz=148,slow=38
KBZ Khabaz 41.09 340 *ce* P P 05 56 07.3 +0.9
KBZ pmax pmax
comp=Z,7.0nm,0.9s
KIV Kislovodsk 41.36 339 *eP* P 05 56 10.9 +2.1
KIV *e* 05 57 47.4
KIV *eS* S 06 02 26.3 +3.7
KIV pmax pmax
comp=Z,39nm,1.0s
KIV MLR MLR
comp=Z,539nm,16.0s
MATP Matopo 41.55 230 P P 05 56 10.2 -0.4
comp=Z,4.2nm,1.0s,baz=52,slow=9.3,SNR=6.6
MATP PcP PcP 05 58 08.0 -0.1
comp=Z,4.6nm,1.0s,baz=52,slow=7.1,SNR=3.4
TDK Taldyqorghan 41.73 18 *eP* P 05 56 12.9 +1.2
comp=Z,23nm,1.1s,baz=18
TDK LR LR 06 13 57.5
comp=Z,253nm,15.4s,baz=18
TDK Taldyqorghan 41.73 18 *eP* P 05 56 12.9 +1.2
TDK pmax pmax
comp=Z,23nm,1.1s
TDK MLR MLR
comp=Z,253nm,15.0s
BR131 Keskin Array S 41.98 328 P P 05 56 14.6 +0.7
BR131 pmax pmax
comp=Z,29nm,0.9s
BR131 Keskin Array S 41.98 328 P P 05 56 14.6 +0.7
BR131 IAmb IAmb 05 56 16.0
comp=Z,29nm,0.9s
BRTR Keskin Array B 41.98 328 P P 05 56 15.2 +1.2
comp=Z,13nm,0.8s,baz=150,slow=9.6,SNR=45
BRTR PP PP 05 57 47.0 -4.2
comp=Z,1.7nm,0.9s,baz=153,slow=9.7,SNR=2.7
BRTR PcP PcP 05 58 10.1 +1.0
comp=Z,3.6nm,1.1s,baz=145,slow=5.3,SNR=4.0
BRTR LR LR 06 14 04.0
comp=Z,327nm,19.8s,baz=130,slow=37
BRTR Keskin Array B 41.98 328 *i* P P 05 56 15.1 +1.1
BRTR pmax pmax
comp=Z,13nm,0.8s
BRTR Keskin Array B 41.98 328 P P 05 56 14.6 +0.6
AKAS Kas 41.99 320 P P 05 56 12.8 -1.4
ELL Elmali 42.12 321 P P 05 56 15.6 +0.4
ELL pmax pmax
comp=Z,165nm,1.6s
ELL Elmali 42.12 321 P P 05 56 15.6 +0.4
GOF Gofitskoye 42.21 341 *eP* P 05 56 24.1 +8.5
ANTO Ankara 42.54 327 P P 05 56 19.2 +0.8
ANTO Ankara 42.54 327 P P 05 56 19.2 +0.8
ILGA Ilgaz 42.90 329 P P 05 56 21.6 0.0
ABKAR Akbulak array 43.27 359 P P 05 56 25.9 +1.8
ABKAR IAmb IAmb 05 56 33.4
comp=Z,33nm,0.9s
ABKAR Akbulak array 43.27 359 P P 05 56 26.3 +2.1
MDUB Mudurnu 43.83 326 P P 05 56 29.1 +0.1

SLVN Son La 43.92 65 P P 05 56 31.4 +1.6
SLVN IAmb IAmb 05 56 39.4
comp=Z,25nm,1.2s
KMI Kunming 43.97 60 ⇓ *eP* P 05 56 32.0 +1.6
KMI pP pP 05 56 35.3 +0.1
KMI sP sP 05 56 37.0 0.0
KMI PP PP 05 58 12.0 -0.9
KMI S S 06 03 07.3 +5.6
KMI pmax pmax
comp=Z,18nm,0.7s
KMI pmax pmax
comp=Z,210nm,5.1s
KMI LR LR
comp=Z,320nm,18.8s
KMI LR LR
comp=Z,380nm,18.7s
KMI LR LR
comp=Z,500nm,25.4s
MANT Manisa 44.05 322 P P 05 56 31.5 +0.6
WMQ Urumqi 44.33 27 P P 05 56 35.5 +2.7
WMQ pP sP 05 56 37.8 -1.4
WMQ sP pwP 05 56 41.5 -0.4
WMQ pmax pmax
comp=Z,26nm,1.1s
WMQ pmax pmax
comp=Z,320nm,3.9s
WMQ LR LR
comp=Z,580nm,19.3s
WMQ LR LR
comp=Z,1μm,20.3s
WMQ LR LR
comp=Z,1μm,24.7s
WMQ Urumqi 44.33 27 P P 05 56 33.4 +0.6
WMQ pmax pmax
comp=Z,21nm,1.0s
WMQ Urumqi 44.33 27 P P 05 56 33.4 +0.6
WMQ IAmb IAmb 05 56 42.2
comp=Z,20nm,1.0s
MAKZ Makanchi 44.50 20 P P 05 56 34.5 +0.4
MAKZ pmax pmax
comp=Z,22nm,1.2s
MAKZ Makanchi 44.50 20 P P 05 56 34.5 +0.4
MAKZ IAmb IAmb 05 56 42.7
comp=Z,22nm,1.1s
AKTO Aktyubinsk 44.53 357 LR LR 06 15 53.5
comp=Z,497nm,20.9s,baz=164,slow=37
IDI Anoyia 44.57 316 ⇓ P P 05 56 36.4 +1.5
IDI Anoyia 44.57 316 P P 05 56 34.5 -0.4
IDI IAmb IAmb 05 56 37.8
comp=Z,35nm,1.1s
MK31 Makanchi Array 44.59 20 *i* P P 05 56 35.9 +1.1
MK31 Makanchi Array 44.59 20 P P 05 56 35.3 +0.4
MKAR Makanchi Array 44.59 20 P P 05 56 36.1 +1.2
comp=Z,2.8nm,0.7s,baz=209,slow=9.3,SNR=13
MKAR PcP PcP 05 58 17.1 -0.5
comp=Z,2.7nm,0.8s,baz=242,slow=2.6,SNR=5.4
MKAR LR LR 06 17 38.1
comp=Z,294nm,18.3s,baz=212,slow=39
MKAR Makanchi Array 44.59 20 *i* P P 05 56 35.9 +1.1
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 44.59 20 P P 05 56 35.7 +0.8
BRZS Berezniki 45.00 10 *eP* P 05 56 39.1 +1.1
comp=Z,4.1nm,1.6s,baz=10
BRZS Berezniki 45.00 10 *eP* P 05 56 39.1 +1.1
BRZS pmax pmax
comp=Z,4.0nm,1.6s
APE Apeiranthos 45.12 319 ⇓ P P 05 56 40.1 +0.9
APE Apeiranthos 45.12 319 *i* P P 05 56 39.7 +0.5
APE pmax pmax
comp=Z,9.0nm,0.7s
ZSN Zaisan 46.08 22 *eP* P 05 56 47.8 +1.2
baz=22
ZSN Zaisan 46.08 22 *eP* P 05 56 47.8 +1.2
LBTB Lobatse 46.41 227 P P 05 56 49.6 +0.1
comp=Z,3.2nm,0.9s,baz=63,slow=8.1,SNR=4.9
LBTB PcP PcP 05 58 24.1 -0.3
comp=Z,4.2nm,0.7s,baz=317,slow=3.4,SNR=4.3
LBTB Lobatse 46.41 227 P P 05 56 48.3 -1.3
LBTB pmax pmax
comp=Z,19nm,1.2s
LBTB Lobatse 46.41 227 P P 05 56 48.3 -1.3
LBTB IAmb IAmb 05 57 10.5
comp=Z,19nm,1.1s
CD2 Chengdu 46.88 53 *eP* P 05 56 54.0 +0.8
CD2 S S 06 03 47.0 +3.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,490nm,15.7s
CD2 LR LR
comp=Z,590nm,18.1s
CD2 LR LR
comp=Z,720nm,17.2s
KURK Kurchatov 46.98 15 *ceP* P 05 56 54.6 +1.0
KURK pmax pmax
comp=Z,11nm,1.3s
KURK Kurchatov 46.98 15 P P 05 56 54.0 +0.5
KURK IAmb IAmb 05 57 02.2
comp=Z,16nm,1.1s
ALN Alexandroupoli 47.07 323 P P 05 56 55.2 +0.8
ALN Alexandroupoli 47.07 323 P P 05 56 55.2 +0.8
BRVK Borovoye 47.63 7 *ceP* P 05 57 00.1 +1.5
BRVK pmax pmax
comp=Z,21nm,2.5s
BRVK Borovoye 47.63 7 P P 05 56 59.9 +1.3
BRVK IAmb IAmb 05 57 08.2
comp=Z,13nm,1.1s
GYA Guiyang 47.74 59 ⇑ P P 05 57 01.3 +1.2
GYA sP sP 05 57 07.0 +0.2
GYA S S 06 04 00.3 +4.4
GYA pmax pmax
comp=Z,12nm,0.9s
GYA LR LR
comp=Z,300nm,17.4s
GYA LR LR
comp=Z,330nm,21.6s
GYA LR LR
comp=Z,440nm,22.7s
BELG Belogornoye 47.77 349 *eP* P 05 57 00.1 +0.4
BELG pmax pmax
comp=Z,9.0nm,1.3s
LEM Lembang 47.81 105 LR LR 06 13 50.0
comp=Z,160nm,21.8s,baz=182,slow=32
KDZ Kurdzhali 47.91 324 *eP* P 05 57 01.6 +0.6
TIRR Tirgusor 48.07 328 ⇑ P P 05 57 02.8 +0.7
TIRR Tirgusor 48.07 328 P P 05 57 03.0 +0.9
TIRR Tirgusor 48.07 328 P P 05 57 03.0 +0.9
DIM Dimitrovgrad 48.08 324 *eP* P 05 57 03.0 +0.7
VRH Novokhopyorsk 48.09 343 *eP* P 05 57 01.3 -0.8
VRH pmax pmax
comp=Z,30nm,1.2s
GTA Gaotai 48.10 40 P P 05 57 03.5 +0.8
GTA pP pwP 05 57 10.3 -2.0
GTA sP sP 05 57 13.0 +3.9
GTA PcP PcP 05 58 31.0 +0.8
GTA S S 06 04 05.5 +4.9
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,82nm,4.7s
GTA LR LR
comp=Z,700nm,21.1s
GTA LR LR
comp=Z,690nm,20.0s
GTA LR LR
comp=Z,900nm,21.1s
AGG Agios Georgios 48.30 319 P P 05 57 03.5 -0.6
AGG Agios Georgios 48.30 319 P P 05 57 03.5 -0.6
TPGR Topolog 48.34 329 ⇑ P P 05 57 04.7 +0.5
RZN Rozhen 48.34 323 *eP* P 05 57 05.4 +0.8
VORD Divnogorie 48.60 342 *eP* P 05 57 05.5 -0.6
VORD pmax pmax
comp=Z,40nm,1.9s
CFR Carcaliu 48.70 329 ⇑ P P 05 57 07.8 +0.8
BOSA Boshof 48.84 224 P P 05 57 07.7 -0.7
comp=Z,3.4nm,0.8s,baz=35,slow=11,SNR=3.7
BOSA LR LR 06 16 02.6
comp=Z,846nm,18.8s,baz=42,slow=34
BOSA Boshof 48.84 224 P P 05 57 07.4 -1.1
BOSA pmax pmax
comp=Z,17nm,1.4s
BOSA Boshof 48.84 224 P P 05 57 07.4 -1.1
BOSA IAmb IAmb 05 57 22.1
comp=Z,17nm,1.4s

VSR	**Storozhevoye**	**48.86**	**342**	*eP*		**P**		**05 57 07.7**	**-0.4**
VSR					pmax	pmax				
	comp=Z,20nm,0.9s									
MMB	**Musomiste**	**48.88**	**323**	*eP*		**P**		**05 57 08.5**	**0.0**
QIZ	**Qiongzhong**	**48.92**	**70**	P		**P**		**05 57 09.0**	**-0.2**
QIZ				S		**S**		**06 04 13.5**	**+0.9**
QIZ				LR		LR				
	comp=Z,130nm,16.5s									
QIZ				LR		LR				
	comp=Z,180nm,15.5s									
LZH	**Lanzhou**	**49.16**	**46**	*eP*		**P**		**05 57 07.8**	**-3.1**
LZH				pP		pP		05 57 12.0	-3.8
LZH				sP		sP		05 57 14.0	-3.7
LZH				*eS*		**S**		**06 04 09.3**	**-6.5**
LZH				sS		sS		06 04 37.8	+14
LZH				pmax		pmax				
	comp=Z,27nm,1.2s									
LZH				pmax		pmax				
	comp=Z,150nm,6.2s									
LZH				LR		LR				
	comp=N,500nm,14.0s									
LZH				LR		LR				
	comp=E,470nm,14.2s									
LZH				LR		LR				
	comp=Z,560nm,16.8s									
KKB	**Krupnik**	**49.43**	**322**	*eP*		**P**		**05 57 12.5**	**-0.2**
MILM	**Milestii Mici**	**49.59**	**331**	⇑P		**P**		**05 57 14.3**	**+0.6**
VTS	**Vitosha**	**49.78**	**323**	*eP*		**P**		**05 57 15.7**	**+0.1**
TSUM	**Tsumeb**	**49.80**	**239**	P		**P**		**05 57 16.5**	**+0.5**
VRI	**Vrincioaia**	**49.90**	**329**	⇑P		**P**		**05 57 17.0**	**+0.8**
PLOR	**Plostina**	**49.93**	**329**	⇑P		**P**		**05 57 17.5**	**+1.0**
HUMR	**Humele**	**49.96**	**326**	⇑P		**P**		**05 57 18.0**	**+1.4**
MLR	**Muntele Rosu**	**50.06**	**328**	P		**P**		**05 57 18.1**	**+0.5**
MLR	**Muntele Rosu**	**50.06**	**328**	P		**P**		**05 57 18.1**	**+0.5**
TESR	**Tescani**	**50.38**	**329**	⇓P		**P**		**05 57 20.0**	**+0.2**
ARU	**Arti**	**50.49**	**358**	*d iP*		**P**		**05 57 21.4**	**+0.9**
ARU								05 58 39.9		
ARU								05 59 15.1		
ARU				S		**S**		**06 04 37.7**	**+4.3**
ARU				SS		**SS**		**06 08 00.0**	**-7.5**
ARU				pmax		pmax				
	comp=Z,33nm,1.4s									
ARU				MLR		MLR				
	comp=Z,390nm,18.0s									
ARU	**Arti**	**50.49**	**358**	P		**P**		**05 57 21.3**	**+0.9**
ARU				IAmb		IAmb		05 57 28.8		
	comp=Z,26nm,0.9s									
VOIR		**50.50**	**327**	⇑P		**P**		**05 57 21.9**	**+1.0**
DOPR	**Dopca**	**50.66**	**328**	⇓P		**P**		**05 57 22.2**	**+0.1**
SORM	**Soroca**	**50.67**	**332**	⇓P		**P**		**05 57 22.2**	**+0.3**
ARR	**Arges**	**50.68**	**327**	⇓P		**P**		**05 57 22.8**	**+0.6**
SBUM	**Sibu**	**50.79**	**92**	P		**P**		**05 57 24.6**	**+1.2**
SBUM				IAmb		IAmb		05 57 26.3		
	comp=Z,19nm,1.1s									
SVE	**Sverdlovsk**	**50.85**	**359**	*eP*		**P**		**05 57 24.4**	**+1.3**
SVE				pmax		pmax				
	comp=Z,23nm,1.4s									
BIZ	**Bicaz**	**50.94**	**329**	⇓P		**P**		**05 57 24.9**	**+0.9**
PRAR	**RASCA**	**51.16**	**330**	⇓P		**P**		**05 57 25.9**	**+0.2**
ZAA0	**Zalesovo Array**	**51.59**	**17**	P		**P**		**05 57 29.4**	**+0.6**
ZALV	**Zalesovo Beam**	**51.59**	**17**	P		**P**		**05 57 29.3**	**+0.5**
	comp=Z,3.9nm,0.7s,baz=223,slow=6.1,SNR=23									
ZALV				PcP		**PcP**		**05 58 42.1**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=279,slow=3.6,SNR=2.2									
ZALV				LR		LR		06 20 02.8		
	comp=Z,362nm,20.8s,baz=215,slow=37									
ZALV	**Zalesovo Beam**	**51.59**	**17**	P		**P**		**05 57 28.9**	**+0.1**
HERR	**Herculane**	**51.61**	**325**	⇓P		**P**		**05 57 29.5**	**+0.4**
GZR	**Gura Zlata**	**51.72**	**326**	⇑P		**P**		**05 57 30.9**	**+0.9**
BURAR	**Bucovina Array**	**51.84**	**329**	⇑P		**P**		**05 57 31.7**	**+0.8**
BURAR	**Bucovina Array**	**51.84**	**329**	P		**P**		**05 57 31.7**	**+0.8**
BUR08	**Bucovina Ar. S**	**51.87**	**329**	P		**P**		**05 57 31.7**	**+0.6**
BUR08				IAmb		IAmb		05 57 58.4		
	comp=Z,34nm,1.5s									
XAN	**Xi'an**	**52.10**	**51**	P		**P**		**05 57 33.8**	**+0.7**
XAN				pP		pwP		05 57 40.5	-2.1
XAN				pmax		pmax				
	comp=Z,18nm,0.8s									
XAN	**Xi'an**	**52.10**	**51**	P		**P**		**05 57 33.6**	**+0.5**
XAN				pmax		pmax				
	comp=Z,21nm,1.2s									
XAN	**Xi'an**	**52.10**	**51**	P		**P**		**05 57 33.6**	**+0.5**
XAN				IAmb		IAmb		05 57 47.6		
	comp=Z,21nm,1.2s									
AKASG	**Malin Array Be**	**52.15**	**335**	P		**P**		**05 57 33.0**	**0.0**
	comp=Z,3.6nm,0.9s,baz=130,slow=6.6,SNR=23									
AKASG				PcP		**PcP**		**05 58 44.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=117,slow=2.4,SNR=6.2									
AKASG				LR		LR		06 21 46.4		
	comp=Z,178nm,19.6s,baz=100,slow=38									
AKASG	**Malin Array Be**	**52.15**	**335**	*i* P		**P**		**05 57 33.0**	**0.0**
AKASG				pmax		pmax				
	comp=Z,6.0nm,1.0s									
AKBB	**Malin Array Si**	**52.15**	**335**	P		**P**		**05 57 33.5**	**+0.5**
AKBB				pmax		pmax				
	comp=Z,47nm,1.7s									
AKBB	**Malin Array Si**	**52.15**	**335**	P		**P**		**05 57 33.5**	**+0.5**
AKBB				IAmb		IAmb		05 57 34.4		
	comp=Z,47nm,1.6s									
BZS	**Buzias**	**52.50**	**326**	⇓P		**P**		**05 57 36.1**	**+0.3**
DIVS	**Divibare**	**52.57**	**323**	⇓*iP*		**P**		**05 57 36.3**	**-0.1**
DIVS	**Divibare**	**52.57**	**323**	P		**P**		**05 57 36.6**	**+0.2**
DRGR		**52.62**	**327**	⇓P		**P**		**05 57 37.7**	**+1.0**
BBLS	**Lazići**	**52.79**	**323**	⇓*iP*		**P**		**05 57 37.8**	**-0.2**
BRY	**Bratogost**	**52.80**	**321**	*eP*		**P**		**05 57 35.3**	**-2.9**
MATE	**Matera**	**52.86**	**318**	⇑P		**P**		**05 57 39.3**	**+0.9**
SIRR	**Siria**	**52.87**	**326**	⇓P		**P**		**05 57 39.4**	**+0.9**
OBN	**Obninsk**	**53.02**	**342**	⇓*eP*		**P**		**05 57 40.2**	**+0.9**
OBN				*PP		**pP**		**05 57 42.0**	**-2.0**
OBN								05 58 47.0		
OBN				*eS*		S		06 05 18.0	+10
OBN				SS		**SS**		**06 08 43.0**	**-4.4**
OBN				SSS		SSS		06 10 37.0		
OBN				pmax		pmax				
	comp=Z,7.0nm,0.8s									
OBN				MLR		MLR				
	comp=Z,166nm,19.0s									
TEKS	**Tekeris**	**53.10**	**323**	⇓*iP*		**P**		**05 57 40.6**	**+0.4**
HAPS	**Han Pijesak,BI**	**53.19**	**323**	⇓*iP*		**P**		**05 57 40.6**	**-0.4**
MOS	**Moscow**	**53.25**	**343**	*eP*		**P**		**05 57 40.4**	**-0.6**
MOS				*e*				05 57 47.6		
MOS				*e*				05 59 42.1		
MOS				pmax		pmax				
	comp=Z,48nm,1.1s									
FRGS	**Fruska Gora**	**53.27**	**324**	⇓*iP*		**P**		**05 57 41.8**	**+0.3**
STON	**Ston**	**53.31**	**321**	⇓*iP*		**P**		**05 57 41.2**	**-0.6**
KIRV	**Kirov**	**53.42**	**352**	*ceP*		**P**		**05 57 41.7**	**-0.5**
LVV	**L'vov**	**53.90**	**331**	*eP*		**P**		**05 57 45.1**	**-0.8**
LVV				*e*				05 59 42.6		
LVV				*eS*		**S**		**06 05 17.0**	**-3.3**
LVV				pmax		pmax				
	comp=Z,60nm,1.8s									
UZH	**Uzhgorod**	**53.99**	**329**	⇑*iP*		**P**		**05 57 47.1**	**+0.5**
UZH				*e*				05 57 54.8		
CORL	**Corleone**	**54.01**	**313**	P		**P**		**05 57 47.2**	**+0.1**
KOLS	**Kolonicke sedl**	**54.19**	**329**	*eP*		**P**		**05 57 49.5**	**+1.4**
KOLS				pmax		pmax				
	comp=Z,53nm,1.2s									
KOLS	**Kolonicke sedl**	**54.19**	**329**	*eP*		**P**		**05 57 49.5**	**+1.4**
KWP	**Kalwaria Pacla**	**54.42**	**330**	*eP*		**P**		**05 57 50.4**	**+0.6**
KWP	**Kalwaria Pacla**	**54.42**	**330**	P		**P**		**05 57 49.8**	**0.0**
KWP	**Kalwaria Pacla**	**54.42**	**330**	P		**P**		**05 57 49.8**	**0.0**
MORH	**Mrgy, Hungar**	**54.54**	**325**	⇓*iP*		**P**		**05 57 51.1**	**+0.4**
CRVS	**Cervenica-Dubn**	**54.59**	**329**	*eP*		**P**		**05 57 51.9**	**+0.9**
CRVS				pmax		pmax				
	comp=Z,151nm,1.9s									
CRVS	**Cervenica-Dubn**	**54.59**	**329**	*eP*		**P**		**05 57 51.9**	**+0.9**
BLY	**Banja Luka**	**54.61**	**322**	⇓*iP*		**P**		**05 57 51.7**	**+0.5**
PSZ	**Piszkesteto**	**54.82**	**327**	⇑P		**P**		**05 57 53.1**	**+0.3**
PSZ	**Piszkesteto**	**54.82**	**327**	P		**P**		**05 57 53.1**	**+0.3**
PSZ	**Piszkesteto**	**54.82**	**327**	P		**P**		**05 57 53.1**	**+0.3**
KECS	**Kecovo**	**54.84**	**328**	*eP*		**P**		**05 57 53.4**	**+0.5**
KECS				pmax		pmax				
	comp=Z,7.0nm,1.2s									
KECS	**Kecovo**	**54.84**	**328**	*eP*		**P**		**05 57 53.4**	**+0.5**
INTR	**Introdacqua**	**55.36**	**318**	P		**P**		**05 57 56.9**	**+0.1**
INTR				IAmb		IAmb		05 57 58.0		
	comp=Z,37nm,1.4s									
WHN	**Wuhan**	**55.37**	**57**	⇓P		P		05 58 04.5	+7.5
WHN				S		**S**		**06 05 34.8**	**-5.9**
WHN				LR		LR				
	comp=Z,1µm,31.9s									
NIE	**Niedzica**	**55.51**	**329**	*eP*		**P**		**05 57 58.3**	**+0.6**
VYHS	**Vyhne**	**55.73**	**327**	*eP*		**P**		**05 57 59.6**	**+0.3**
VYHS				pmax		pmax				
	comp=Z,34nm,1.2s									
VYHS	**Vyhne**	**55.73**	**327**	*eP*		**P**		**05 57 59.6**	**+0.3**
BEHE	**Becsehely**	**55.77**	**324**	⇓*iP*		**P**		**05 58 02.8**	**+3.3**
LANS	**Liptovska Anna**	**55.78**	**328**	*eP*		**P**		**05 58 00.6**	**+0.9**
LANS				pmax		pmax				
	comp=Z,18nm,1.2s									
LANS	**Liptovska Anna**	**55.78**	**328**	*eP*		**P**		**05 58 00.6**	**+0.9**
KOGS	**Kog**	**56.06**	**324**	*iP*		**P**		**05 58 02.0**	**+0.4**
BOJS	**Bojanci**	**56.17**	**322**	*iP*		**P**		**05 58 03.0**	**+0.5**
KEST	**Kesra**	**56.18**	**309**	P		**P**		**05 58 04.2**	**+1.4**
	comp=Z,9.4nm,1.1s,baz=182,slow=23,SNR=4.6									
KEST				PcP		**PcP**		**05 59 00.2**	**-0.3**
	comp=Z,15nm,0.9s,baz=307,slow=7.0,SNR=7.5									
KEST				LR		LR		06 23 10.8		
	comp=Z,113nm,18.0s,baz=6.5,slow=37									
KEST	**Kesra**	**56.18**	**309**	IAmb		IAmb		05 59 03.4		
	comp=Z,16nm,0.9s									
CRES	**Cresnjev**	**56.21**	**323**	⇓*iP*		**P**		**05 58 02.9**	**+0.1**
NRCA	**Norcia**	**56.25**	**319**	P		**P**		**05 58 03.5**	**+0.4**
OJC	**Ojcow**	**56.26**	**329**	*eP*		**P**		**05 58 02.7**	**-0.3**
OJC	**Ojcow**	**56.26**	**329**	P		**P**		**05 58 02.8**	**-0.2**
OJC	**Ojcow**	**56.26**	**329**	P		**P**		**05 58 02.8**	**-0.2**
TAM	**Tamanrasset**	**56.35**	**293**	P		**P**		**05 58 05.5**	**+1.1**
TAM				pmax		pmax				
	comp=Z,35nm,1.2s									
TAM	**Tamanrasset**	**56.35**	**293**	P		**P**		**05 58 05.5**	**+1.1**
TAM				IAmb		IAmb		05 58 06.6		
	comp=Z,35nm,1.2s									
SMOL	**Smolenice**	**56.52**	**326**	*eP*		**P**		**05 58 04.7**	**-0.2**
SMOL				pmax		pmax				
	comp=Z,7.0nm,1.0s									
SMOL	**Smolenice**	**56.52**	**326**	*eP*		**P**		**05 58 04.7**	**-0.2**
ZST	**Bratislava**	**56.52**	**326**	*eP*		**P**		**05 58 04.9**	**0.0**
ZST	**Bratislava**	**56.52**	**326**	*eP*		**P**		**05 58 04.9**	**0.0**
MODS	**Modra-Piesok**	**56.52**	**326**	*eP*		**P**		**05 58 03.9**	**-1.0**
MODS				pmax		pmax				
	comp=Z,34nm,1.1s									
MODS	**Modra-Piesok**	**56.52**	**326**	*eP*		**P**		**05 58 03.9**	**-1.0**
IDID	**Didziasalis**	**56.58**	**337**	*eP*		**P**		**05 58 05.2**	**+0.1**
JAVC	**Velka Javorina**	**56.58**	**327**	*eP*		**P**		**05 58 06.3**	**+0.9**
HHC	**Hu-ho-hao-te**	**56.68**	**44**	*eP*		**P**		**05 58 08.0**	**+1.7**
HHC				pmax		pmax				
	comp=Z,21nm,0.8s									
HHC				pmax		pmax				
	comp=Z,130nm,6.6s									
SONM	**Songino Array**	**56.72**	**35**	P		**P**		**05 58 08.0**	**+1.5**
	comp=Z,4.4nm,0.9s,baz=232,slow=6.8,SNR=12									
SONM				LR		LR		06 23 22.7		
	comp=Z,534nm,18.4s,baz=211,slow=37									
SONM	**Songino Array**	**56.72**	**35**	P		**P**		**05 58 07.7**	**+1.2**
SONM				pmax		pmax				
	comp=Z,7.0nm,1.0s									
SONM	**Songino Array**	**56.72**	**35**	P		**P**		**05 58 07.7**	**+1.2**
CEY	**Cerknica**	**56.79**	**322**	*eP*		**P**		**05 58 06.9**	**0.0**
IIGN	**Ignalina**	**56.80**	**337**	*eP*		**P**		**05 58 06.8**	**0.0**
LJU	**Ljubljana**	**56.88**	**323**	*eP*		**P**		**05 58 08.0**	**+0.5**
LJU	**Ljubljana**	**56.88**	**323**	⇓*iP*		**P**		**05 58 08.0**	**+0.5**
SOKA	**Soboth**	**56.90**	**323**	*eP*		**P**		**05 58 07.8**	**+0.1**
	comp=Z,20nm,1.2s,SNR=8.7									
ARSA	**Arzberg**	**56.91**	**324**	*eP*		**P**		**05 58 08.0**	**+0.3**
	comp=Z,20nm,0.9s,SNR=12									
ISAL	**Salakas**	**57.00**	**337**	*eP*		**P**		**05 58 08.5**	**+0.3**
CONA	**Conrad Observa**	**57.07**	**325**	*eP*		**P**		**05 58 09.1**	**+0.2**
	comp=Z,31nm,1.0s,SNR=22									
JAVS	**Javornik**	**57.09**	**322**	*i* P		**P**		**05 58 08.8**	**-0.3**
OBKA	**Obir**	**57.10**	**323**	*eP*		**P**		**05 58 09.6**	**+0.4**
	comp=Z,33nm,1.7s,SNR=7.6									
SUW	**Suwalki**	**57.11**	**334**	*eP*		**P**		**05 58 09.0**	**+0.1**
SUW	**Suwalki**	**57.11**	**334**	P		**P**		**05 58 09.0**	**+0.1**
SUW	**Suwalki**	**57.11**	**334**	P		**P**		**05 58 09.0**	**+0.1**
ULN	**Ulaanbaatar**	**57.11**	**35**	*ceP*		**P**		**05 58 09.4**	**+0.1**
ULN				pmax		pmax				
	comp=Z,5.0nm,1.3s									
MORC	**Moravsky Berou**	**57.17**	**328**	⇓P		**P**		**05 58 10.0**	**+0.4**
MORC	**Moravsky Berou**	**57.17**	**328**	*eP*		**P**		**05 58 09.4**	**-0.1**
MORC	**Moravsky Berou**	**57.17**	**328**	P		**P**		**05 58 08.8**	**-0.8**
MORC	**Moravsky Berou**	**57.17**	**328**	P		**P**		**05 58 08.8**	**-0.8**
TRI	**Trieste**	**57.18**	**322**	P		**P**		**05 58 09.3**	**-0.3**
TRI	**Trieste**	**57.18**	**322**	P		**P**		**05 58 09.3**	**-0.3**
KLMR	**Klimovskoe**	**57.30**	**347**	*eP*		**P**		**05 58 06.8**	**-3.4**
KLMR				pmax		pmax				
	comp=Z,29nm,1.2s									
KLMR	**Klimovskoe**	**57.30**	**347**	*eP*		**P**		**05 58 06.8**	**-3.4**
KLMR				AMP				05 58 11.2		
	comp=Z,29nm,1.2s									
KRUC	**Moravsky**	**57.39**	**326**	*eP*		**P**		**05 58 11.0**	**0.0**
VRAC	**Vranov**	**57.42**	**327**	⇓P		**P**		**05 58 11.7**	**+0.4**
VRAC	**Vranov**	**57.42**	**327**	*eP*		**P**		**05 58 11.4**	**+0.1**
TLY	**Talaya**	**57.47**	**30**	*eP*		**P**		**05 58 13.4**	**+1.8**
TLY				*e*				06 00 27.0		
TLY				*eS*		**S**		**06 06 07.3**	**-0.7**
TLY				pmax		pmax				
	comp=Z,31nm,1.6s									
TLY				MLR		MLR				
	comp=Z,187nm,10.0s									
PRED	**Cave del Predi**	**57.66**	**323**	P		**P**		**05 58 13.3**	**+0.3**
MYKA	**Terra Mystica**	**57.70**	**323**	*eP*		**P**		**05 58 13.2**	**-0.2**
	comp=Z,40nm,1.5s,SNR=11									
KRLC	**Kraliky**	**57.74**	**328**	*eP*		**P**		**05 58 13.5**	**-0.1**
KRLC	**Kraliky**	**57.74**	**328**	*eP*		**P**		**05 58 13.5**	**-0.1**
PABE	**Paberze**	**57.81**	**336**	*eP*		**P**		**05 58 14.0**	**+0.2**
MOA	**Molln**	**57.95**	**324**	*eP*		**P**		**05 58 14.9**	**-0.1**
	comp=Z,36nm,0.9s,SNR=18									
TREC	**Trest**	**58.02**	**326**	*eP*		**P**		**05 58 15.8**	**+0.3**
TREC	**Trest**	**58.02**	**326**	*eP*		**P**		**05 58 15.8**	**+0.3**
ZOU	**Zoufplan**	**58.07**	**323**	P		**P**		**05 58 16.4**	**+0.2**
ZOU				IAmb		IAmb		05 58 30.5		
	comp=Z,18nm,1.2s									
STAL	**STALIGIAL**	**58.09**	**322**	P		**P**		**05 58 16.2**	**+0.1**
KBA	**Koelnbreinsper**	**58.10**	**323**	*eP*		**P**		**05 58 15.6**	**-0.7**
	comp=Z,24nm,1.2s,SNR=8.7									
DPC	**Dobruska-Polom**	**58.14**	**328**	*eP*		**P**		**05 58 16.3**	**-0.1**
DPC				*e*				05 58 21.9		
DPC	**Dobruska-Polom**	**58.14**	**328**	*eP*		**P**		**05 58 16.3**	**-0.1**
DPC				*epP*		**sP**		**05 58 21.9**	**-1.1**
CIMO	**Cimolais**	**58.28**	**322**	P		**P**		**05 58 16.7**	**-0.7**
CIMO				IAmb		IAmb		05 58 19.5		
	comp=Z,22nm,1.4s									
OSTC	**Ostas**	**58.31**	**328**	*eP*		**P**		**05 58 17.7**	**+0.1**
OSTC				*ex*		x		05 58 24.0		
TEOL	**Teolo**	**58.32**	**321**	P		**P**		**05 58 17.7**	**0.0**
UPC	**Upice**	**58.40**	**328**	*eP*		**P**		**05 58 18.1**	**0.0**
UPC	**Upice**	**58.40**	**328**	*eP*		**P**		**05 58 18.1**	**0.0**
CHVC	**Chvalec**	**58.42**	**328**	*eP*		**P**		**05 58 18.4**	**+0.1**
CHVC				*ex*		x		05 58 25.1		
ABTA	**Abfaltersbach**	**58.44**	**323**	*eP*		**P**		**05 58 18.6**	**0.0**
	comp=Z,22nm,1.0s,SNR=8.7									
CTI	**Castel Tesino**	**58.64**	**322**	P		**P**		**05 58 19.9**	**-0.2**
CTI				pmax		pmax				
	comp=Z,17nm,0.9s									
CTI	**Castel Tesino**	**58.64**	**322**	P		**P**		**05 58 19.9**	**-0.2**
CTI				IAmb		IAmb		05 58 21.2		
	comp=Z,16nm,0.9s									
RJOB	**Jochberg**	**58.75**	**324**	*eP*		**P**		**05 58 20.9**	**+0.2**
	comp=Z,8.0nm,1.3s,baz=120,slow=7.0									
GEC2	**GERESS Array S**	**58.78**	**325**	*eP*		**P**		**05 58 20.8**	**-0.1**
	comp=Z,10nm,1.4s,baz=120,slow=7.0									
GEC2	**GERESS Array S**	**58.78**	**325**	P		**P**		**05 58 19.8**	**-1.1**
GERES	**GERESS Array B**	**58.78**	**325**	P		**P**		**05 58 20.0**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=118,slow=8.2,SNR=20									
GERES				LR		LR		06 25 04.5		
	comp=Z,123nm,21.0s,baz=114,slow=38									
GERES	**GERESS Array B**	**58.78**	**325**	P		**P**		**05 58 19.3**	**-1.6**
GERES	**GERESS Array B**	**58.78**	**325**	P		**P**		**05 58 19.3**	**-1.6**
PRU	**Pruhonice**	**58.91**	**327**	*eP*		**P**		**05 58 21.2**	**-0.4**
PRU				*e*				05 58 27.9		
PRU	**Pruhonice**	**58.91**	**327**	*eP*		**P**		**05 58 21.2**	**-0.4**
PRU				*ex*		x		05 58 27.9		
VSU	**Vasula**	**58.92**	**340**	*eP*		**P**		**05 58 21.5**	**-0.1**
KHC	**Kasperske Hory**	**58.99**	**325**	*eP*		**P**		**05 58 21.0**	**-1.3**
KHC				*e*				05 58 27.9		
KHC	**Kasperske Hory**	**58.99**	**325**	*eP*		**P**		**05 58 21.0**	**-1.3**
KHC				*epP*		**sP**		**05 58 27.9**	**-1.0**
KHC	**Kasperske Hory**	**58.99**	**325**	P		**P**		**05 58 21.4**	**-0.9**
PRA	**Prague**	**59.01**	**327**	*eP*		**P**		**05 58 22.3**	**0.0**
PRA	**Prague**	**59.01**	**327**	*eP*		**P**		**05 58 22.3**	**0.0**
PBCC	**Pribram**	**59.05**	**326**	*eP*		**P**		**05 58 21.6**	**-1.1**
PVCC	**Panska Ves**	**59.18**	**327**	*eP*		**P**		**05 58 23.6**	**+0.1**
PVCC	**Panska Ves**	**59.18**	**327**	*eP*		**P**		**05 58 23.6**	**+0.1**
TOA0	**Torodi Ar. Sit**	**59.22**	**282**	P		**P**		**05 58 24.6**	**+0.2**
TORD	**Torodi Ar. Bea**	**59.22**	**282**	P		**P**		**05 58 24.6**	**+0.2**
	comp=Z,13nm,1.0s,baz=91,slow=6.3,SNR=51									
TORD				PcP		**PcP**		**05 59 13.2**	**+0.4**
	comp=Z,5.2nm,0.8s,baz=72,slow=3.3,SNR=6.5									
TORD				LR		LR		06 25 04.9		
	comp=Z,205nm,18.1s,baz=20,slow=37									
TORD	**Torodi Ar. Bea**	**59.22**	**282**	P		**P**		**05 58 24.4**	**0.0**
WTTA	**Wattenberg**	**59.22**	**323**	*eP*		**P**		**05 58 23.4**	**-0.6**
	comp=Z,30nm,1.0s,SNR=11									
WATA	**Walderalm**	**59.28**	**323**	*eP*		**P**		**05 58 23.5**	**-1.0**
	comp=Z,22nm,1.1s,SNR=7.6									
WET	**Wettzell**	**59.40**	**325**	*eP*		**P**		**05 58 24.7**	**-0.4**
	comp=Z,78nm,2.9s,baz=120,slow=7.0									
SQTA	**Sankt Quirin**	**59.45**	**323**	*eP*		**P**		**05 58 24.8**	**-0.8**
	comp=Z,19nm,0.9s,SNR=6.8									
NJ2	**Nanjing**	**59.48**	**56**	*eP*		**P**		**05 58 27.0**	**+1.1**
NJ2				pmax		pmax				
	comp=Z,13nm,0.6s									
MOTA	**Moosalm**	**59.57**	**323**	*eP*		**P**		**05 58 25.6**	**-1.0**
	comp=Z,24nm,1.0s,SNR=7.8									
BJI	**Beijing**	**59.65**	**47**	P		**P**		**05 58 28.0**	**+1.1**
BJI				pmax		pmax				
	comp=Z,9.0nm,1.0s									
BJI				pmax		pmax				
	comp=Z,95nm,4.9s									
BJI				LR		LR				
	comp=Z,260nm,14.0s									
BJI				LR		LR				
	comp=Z,230nm,18.3s									
BJI				LR		LR				
	comp=Z,450nm,26.5s									
FETA	**Feichten**	**59.65**	**322**	*eP*		**P**		**05 58 26.6**	**-0.5**
	comp=Z,11nm,1.0s									
BRG	**Berggiesshubel**	**59.70**	**327**	*eP*		**P**		**05 58 28.0**	**+0.9**
	comp=Z,21nm,1.4s									
BRG	**Berggiesshubel**	**59.70**	**327**	*eP*		**P**		**05 58 28.0**	**+0.9**
BRG				pmax		pmax				
	comp=Z,21nm,1.4s									
BRG	**Berggiesshubel**	**59.70**	**327**	*eP*		**P**		**05 58 28.0**	**+0.9**
	comp=Z,21nm,1.4s,baz=120,slow=7.0									
RETA	**Reutte**	**59.84**	**323**	*eP*		**P**		**05 58 27.9**	**-0.4**
	comp=Z,14nm,1.1s									
FUR	**Furstenfeldbru**	**59.85**	**324**	*eP*		**P**		**05 58 28.7**	**+0.4**
	comp=Z,71nm,1.1s,baz=120,slow=7.0									
SLIT	**Slitere, Latvi**	**59.96**	**337**	*eP*		**P**		**05 58 28.6**	**-0.1**
FBE	**Freiberg**	**60.04**	**327**	*eP*		**P**		**05 58 30.8**	**+1.3**
	comp=Z,38nm,1.3s,baz=120,slow=7.0									
ROTZ	**Rotzenmuhle**	**60.09**	**326**	*eP*		**P**		**05 58 30.0**	**+0.2**
	comp=Z,18nm,1.4s,baz=120,slow=7.0									
NKC	**Novy Kostel**	**60.19**	**326**	*eP*		**P**		**05 58 30.7**	**+0.2**
NKC				*e*				05 58 37.1		
NKC	**Novy Kostel**	**60.19**	**326**	*eP*		**

NWAO pmax pmax
comp=Z,15nm,0.9s
NWAO Narrogin (SRO) 65.48 130 P **P** **05 59 05.6 -0.4**
NWAO IAmb IAmb 05 59 06.8
comp=Z,15nm,0.9s
NWAO Narrogin (SRO) 65.48 130 P **P** **05 59 05.8 -0.2**
NWAO IAmb IAmb 05 59 06.8
comp=Z,20nm,0.9s
NRIK Noril'sk 65.70 10 P **P** **05 59 07.1 +0.3**
comp=Z,0.9nm,0.4s,baz=249,slow=6.5,SNR=4.3
NRIK LR LR 06 30 02.2
comp=Z,604nm,20.7s,baz=201,slow=38
NRIK Noril'sk 65.70 10 *ce* P **P** **05 59 06.6 -0.2**
NRIK pmax pmax
comp=Z,4.0nm,1.2s
KIC Kosan Boka 65.72 274 *e* P **P** **05 59 08.1 +0.1**
comp=Z,90nm,1.2s
DBIC Dimbokro 65.82 275 P **P** **05 59 09.0 +0.4**
comp=Z,14nm,0.8s,baz=81,slow=8.5,SNR=16
DBIC LR LR 06 26 53.2
comp=Z,219nm,21.1s,baz=70,slow=35
DBIC Dimbokro 65.82 275 P **P** **05 59 08.9 +0.4**
DBIC pmax pmax
comp=Z,22nm,1.0s
DBIC Dimbokro 65.82 275 P **P** **05 59 08.9 +0.3**
TIC Toumodi 65.98 275 *e* P **P** **05 59 09.8 +0.1**
LIC Lamto 66.01 274 *e* P **P** **05 59 09.9 0.0**
comp=Z,56nm,0.7s
KONO Kongsberg 66.44 334 *ce* P **P** **05 59 12.9 +1.2**
KONO pmax pmax
comp=Z,48nm,2.5s
NB2 NORSAR Subarra 66.52 336 P **P** **05 59 11.2 -1.1**
comp=Z,88nm,2.5s,baz=126,slow=6.9
NB2 NORSAR Subarra 66.52 336 P **P** **05 59 11.2 -1.1**
baz=126,slow=6.9
NOA NORSAR Array B 66.52 336 P **P** **05 59 12.1 -0.1**
comp=Z,3.8nm,0.8s,baz=114,slow=7.2,SNR=6.0
NOA LR LR 06 30 11.5
comp=Z,163nm,21.8s,baz=130,slow=38
NBO00 NORSAR Array S 66.69 336 P **P** **05 59 13.6 +0.2**
ESBB Sonseca Array 67.39 311 P **P** **05 59 18.6 +0.3**
ESBB IAmb IAmb 05 59 19.6
comp=Z,20nm,1.1s
ESDC Sonseca Array 67.39 311 P **P** **05 59 18.2 -0.1**
comp=Z,11nm,1.0s,baz=90,slow=5.7,SNR=32
ESDC LR LR 06 28 31.6
comp=Z,65nm,18.2s,baz=205,slow=36
ESDC Sonseca Array 67.39 311 P **P** **05 59 18.1 -0.1**
PAB San Pablo 67.65 310 P **P** **05 59 20.4 +0.4**
PAB pmax pmax
comp=Z,32nm,1.3s
PAB San Pablo 67.65 310 P **P** **05 59 20.4 +0.4**
FITZ Fitzroy Crossi 67.67 112 LR LR 06 23 57.0
comp=Z,37nm,21.7s,baz=292,slow=32
FITZ Fitzroy Crossi 67.67 112 P **P** **05 59 20.5 +0.2**
FITZ IAmb IAmb 05 59 22.2
comp=Z,20nm,1.2s
ARCES ARCESS Array B 67.78 347 P **P** **05 59 20.3 +0.2**
comp=Z,7.4nm,0.8s,baz=134,slow=5.2,SNR=18
ARCES PcP **PcP** **05 59 47.4 +0.7**
comp=Z,8.7nm,1.2s,baz=116,slow=2.8,SNR=4.5
ARCES LR LR 06 31 10.4
comp=Z,122nm,20.7s,baz=125,slow=38
KSAR Wonju Array Be 67.84 52 P **P** **05 59 20.9 -0.2**
KSAR Wonju Array Be 67.84 52 P **P** **05 59 20.9 -0.2**
KSRS Korea Array 67.88 52 P **P** **05 59 21.1 -0.1**
comp=Z,4.9nm,0.7s,baz=260,slow=7.2,SNR=14
JNU Nakatsue 69.66 57 LR LR 06 31 56.9
comp=Z,163nm,18.3s,baz=274,slow=38
PBRG Braganca 69.87 312 *e* P **P** **05 59 34.5 +0.8**
comp=Z,49nm,1.8s
PMRV Marv??o 69.95 310 *e* P **P** **05 59 34.9 +0.7**
MVO Moncorvo 69.97 312 *e* P **P** **05 59 34.9 +0.6**
comp=Z,38nm,1.5s
POLO Lamas de Olo 70.57 312 *e* P **P** **05 59 38.6 +0.5**
comp=Z,27nm,1.6s
MTN Manton Dam 71.72 106 P **P** **05 59 44.3 -1.1**
DSB Dublin 72.12 324 P **P** **05 59 47.1 +0.1**
KLR Kul'dur 72.80 40 P **P** **05 59 50.1 -1.1**
comp=Z,0.9nm,0.3s,baz=257,slow=6.8,SNR=6.7
KLR LR LR 06 33 23.4
comp=Z,369nm,19.3s,baz=256,slow=37
KLR Kul'dur 72.80 40 *ce* P **P** **05 59 49.7 -1.5**
KLR pmax pmax
comp=Z,4.0nm,1.0s
MAW Mawson 73.28 179 P **P** **05 59 52.6 -1.0**
comp=Z,1.8nm,0.7s,baz=38,slow=6.1,SNR=4.8
MAW LR LR 06 24 11.5
comp=Z,312nm,21.9s,baz=50,slow=29
YAK Yakutsk 74.77 27 P **P** **06 00 02.0 -0.3**
comp=Z,4.1nm,0.4s,baz=202,slow=4.2,SNR=4.8
YAK Yakutsk 74.77 27 *e* P **P** **06 00 02.1 -0.3**
YAK *e**PP **PcP** **06 00 18.0 +1.5**
YAK *e*PPP PPP 06 04 37.0
YAK *e*S **S** **06 09 33.0 -4.9**
YAK *e**SS **SKSac** **06 09 59.8 -10**
YAK *e* 06 10 26.9
YAK *e*SS **SS** **06 14 30.8 +5.2**
YAK pmax pmax
comp=Z,29nm,1.5s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK pmax pmax
comp=Z,480nm,4.2s
YAK pmax pmax
comp=N,232nm,3.6s
YAK pmax pmax
comp=E,331nm,4.0s
YAK smax smax
comp=E,193nm,3.5s
YAK smax smax
comp=N,109nm,4.3s
YAK Yakutsk 74.77 27 IAmb IAmb 06 00 03.4
comp=Z,35nm,1.2s
MAT Matsushiro 75.95 54 P **P** **06 00 09.3 -0.5**
MJAR Matsushiro Arr 75.95 54 P **P** **06 00 09.8 0.0**
comp=Z,1.3nm,0.7s,baz=272,slow=11,SNR=4.1
MJAR Matsushiro Arr 75.95 54 P **P** **06 00 09.9 0.0**
MJAR pmax pmax
comp=Z,5.0nm,1.3s
WRA Warramunga Arr 76.10 112 P **P** **06 00 11.0 0.0**
comp=Z,15nm,1.0s,baz=290,slow=5.0,SNR=81
WRA LR LR 06 32 35.4
comp=Z,35nm,18.4s,baz=280,slow=35
WRA Warramunga Arr 76.10 112 P **P** **06 00 10.8 -0.2**
WRA pmax pmax
comp=Z,3.0nm,1.2s
WRA Warramunga Arr 76.10 112 P **P** **06 00 10.8 -0.2**
WRAB Tennant Creek 76.11 112 *ce* P **P** **06 00 10.9 -0.1**
WRAB pmax pmax
comp=Z,84nm,2.5s
WRAB Tennant Creek 76.11 112 P **P** **06 00 11.0 -0.1**
WB2 Warramunga Arr 76.11 112 P **P** **06 00 11.1 +0.1**
WB0 Warramunga Arr 76.12 112 P **P** **06 00 11.4 +0.3**
SYO Syowa Base 76.20 188 ‖ *e* P **P** **06 00 09.6 -0.9**
SYO Syowa Base 76.20 188 ‖ *es* P sP 06 00 16.6 -0.5
WR0 Warramunga Arr 76.29 112 P **P** **06 00 11.9 -0.1**
WR0 IAmb IAmb 06 00 13.2
comp=Z,35nm,1.3s
ASAR Alice Springs 76.48 116 P **P** **06 00 13.4 +0.3**
comp=Z,12nm,0.9s,baz=286,slow=5.7,SNR=65
ASAR LR LR 06 29 14.0
comp=Z,81nm,21.9s,baz=284,slow=32
ASAR Alice Springs 76.48 116 P **P** **06 00 12.2 -0.9**
ASAR Alice Springs 76.48 116 P **P** **06 00 12.2 -0.9**
AS31 Alice Springs 76.48 116 P **P** **06 00 13.2 0.0**
JHJ Hachijo jima 2 77.11 57 LR LR 06 35 44.9
comp=Z,103nm,20.9s,baz=285,slow=37
TIXI Tiksi 77.48 17 *i* P **P** **06 00 17.4 -0.4**
TIXI Tiksi 77.48 17 P **P** **06 00 17.3 -0.4**
TIXI IAmb IAmb 06 00 18.7
comp=Z,18nm,1.2s
YSS Yuzh-Sakhalins 79.86 43 *eP* **P** **06 00 30.7 -0.6**
YSS *e* 06 03 37.7
YSS *eS* **S** **06 10 31.0 -2.8**
YSS *eSS* **SS** **06 15 46.2 +3.1**
YSS pmax pmax
comp=Z,20nm,0.8s
YSS MLR MLR
comp=N,300nm,16.0s
YSS MLR MLR
comp=E,600nm,16.0s
YSS MLR MLR
comp=Z,600nm,16.0s

YSS Yuzh-Sakhalins 79.86 43 P **P** **06 00 30.6 -0.6**
YSS IAmb IAmb 06 00 32.2
comp=Z,19nm,1.1s
DAG Danmarks Havn 82.06 347 *i* P **P** **06 00 42.8 +0.3**
DAG pmax pmax
comp=Z,9.0nm,1.0s
DAG Danmarks Havn 82.06 347 *i* P **P** **06 00 42.8 +0.3**
comp=Z,9.1nm,1.0s
DAG Danmarks Havn 82.06 347 *i* P **P** **06 00 42.9 +0.3**
DAG IAmb IAmb 06 00 43.5
comp=Z,9.1nm,1.0s
NVL N'lazarevskaya 83.20 195 *eP* P 06 00 38.6 -10
NVL pmax pmax
comp=Z,6.0nm,0.9s
STKA Stephens Creek 84.79 123 P **P** **06 00 57.2 -0.1**
comp=Z,5.4nm,0.8s,baz=288,slow=5.1,SNR=12
STKA Stephens Creek 84.79 123 P **P** **06 00 57.3 -0.1**
STKA pmax pmax
comp=Z,2.0nm,1.0s
STKA Stephens Creek 84.79 123 P **P** **06 00 57.3 -0.1**
SNAA Sanae 87.66 197 P **P** **06 01 11.2 +0.4**
SNAA Sanae 87.66 197 *ce* P **P** **06 01 12.2 +1.4**
SNAA pmax pmax
comp=Z,20nm,2.5s
SNAA Sanae 87.66 197 P **P** **06 01 10.7 0.0**
VNA2 Neumayer--Watz 88.69 198 P **P** **06 01 16.5 +0.9**
VNA1 Neumayer--Stat 88.86 198 P **P** **06 01 17.3 +1.0**
PETK Petropavlovsk- 89.15 37 LR LR 06 44 26.1
comp=Z,288nm,18.4s,baz=272,slow=38
VNA3 Neumayer Olymp 89.50 198 P **P** **06 01 20.0 +0.6**
BILL Bilibino 90.13 21 ‖ *eP* **P** **06 01 23.1 +0.6**
BILL *PP **pP** **06 01 27.0 -0.4**
BILL *SP **sP** **06 01 28.0 -1.1**
BILL 06 04 53.0
BILL PPP PPP 06 07 03.0
BILL pmax pmax
comp=Z,7.0nm,1.1s
EUNU Eureka 92.68 355 P **P** **06 01 35.5 +1.4**
EUNU IAmb IAmb 06 01 45.5
comp=Z,16nm,1.6s
VNDA Vanda 97.94 168 LR LR 06 40 33.7
comp=Z,246nm,19.9s,baz=240,slow=32
ILAR Eielson Array 106.50 12 PP **PP** **06 06 58.9 -1.8**
comp=Z,0.4nm,1.0s,baz=327,slow=6.5,SNR=3.0
LPAZ La Paz 129.51 254 PKP **PKPdf** **06 07 33.3 0.0**
comp=Z,1.5nm,0.8s,baz=360,slow=2.0,SNR=5.4
LPAZ La Paz 129.51 254 PKIKP **PKPdf** **06 07 32.7 -0.6**
LPAZ La Paz 129.51 254 PKPdf **PKPdf** **06 07 32.7 -0.6**
PB11 IPOC Station P 130.49 249 PKPdf **PKiKP** **06 07 35.1 -0.2**
PDAR Pinedale Array 130.92 351 PKP **PKPdf** **06 07 35.0 +0.1**
comp=Z,0.9nm,0.7s,baz=63,slow=2.7,SNR=9.0
PDAR Pinedale Array 130.92 351 **PKPdf** **06 07 34.8 0.0**
BCOK Bluff Creek, N 134.24 336 PKPdf **PKPdf** **06 07 40.2 -0.8**
NVAR Mina Array Bea 135.95 360 PKP **PKiKP** **06 07 45.6 -0.4**
comp=Z,1.3nm,0.8s,baz=350,slow=1.1,SNR=8.5
NVAR Mina Array Bea 135.95 360 PKPdf **PKPdf** **06 07 45.1 +0.7**
OTAV Otavalo 139.46 277 *eP* **PKiKP** **06 07 54.0 -0.1**
TXAR Lajitas Array 142.19 338 PKhKP PKPpre 06 07 50.7
comp=Z,1.2nm,0.7s,baz=59,slow=3.1,SNR=19
ESQI Esquipulas 144.60 305 PKPbc 06 07 59.8 +0.7
HPIG 145.09 340 **PKPab** **06 08 00.8 +0.3**
TLIG Tlapa 149.46 320 **PKPbc** **06 08 13.4 +0.5**

*IDC **30** 05:52:23.9± 1.3, 32.53N× 97.19W, h0km, mb3.9/3, mb1 4.0/8, mb1mx3.7/54, mbtmp3.7/8, ML4.1/4, MS2.7/3, Ms1 2.7/3, ms1mx2.4/52, Error ellipse: s-maj=22.3km s-min=11.8km az=139.0*
*ANF **30** 05:52:23.4± 0.6, 32.47N× 97.09W, h1km± 5km, ML4.3/16, Error ellipse: s-maj=3.4km s-min=2.5km az=144.0*
*NEIC **30** 05:52:24.0± 0.8, 32.50N± 0.04× 97.13W± 0.05, h5km± 2km, mb_Lg3.4/115, Error ellipse: s-maj=8.1km s-min=5.6km az=228.0*

ISC 30 05:52:24.5± 0.6, 32.49N± 0.03× 97.12W± 0.04, h10km, n150, σt 1.17/156, mb3.6/3, Central Texas

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
WHTX	**Lake Whitney,** baz=30,SNR=173	**0.57**	**210**	P	**Pg**	**05 52 34.5**	**-1.1**
WHTX				S	**Sg**	**05 52 41.9**	**-1.2**
	baz=30						
WHTX	**Lake Whitney,**	**0.57**	**210**	Pg	**Pg**	**05 52 34.8**	**-0.8**
Z35A	**Perchaven, San**	**0.85**	**352**		**Pg**	**05 52 39.8**	**-1.1**
Z35A				Sg	**Sg**	**05 52 48.8**	**-3.3**
Z35A				IAmb_Lg		05 52 51.7	
	comp=Z,520nm,0.8s						
237A	**Washetta, Mont**	**1.21**	**113**		**Pn**	**05 52 47.0**	**-0.5**
237A				IAmb_Lg		05 53 02.0	
	comp=Z,443nm,1.1s						
237A				Sn	**Sn**	**05 53 05.0**	**+1.1**
435B	**Jarrell**	**1.74**	**193**	P	**Pn**	**05 52 54.6**	**-0.2**
	baz=13,SNR=48						
435B				S	**Sb**	**05 53 19.6**	**+1.0**
	baz=13						
435B	**Jarrell**	**1.74**	**193**	Pn	**Pn**	**05 52 54.6**	**-0.2**
435B				IAmb_Lg		05 53 19.6	
	comp=Z,277nm,0.7s						
Z38A	**Mt. Pleasant**	**1.95**	**66**		**Pn**	**05 52 58.0**	**+0.2**
ABTX	**Abilene, Hawle**	**2.14**	**274**	Pn	**Pn**	**05 53 00.5**	**+0.2**
	baz=93						
ABTX				Pb	**Pb**	**05 53 02.8**	**-0.6**
	baz=93						
ABTX				S	**Sb**	**05 53 30.1**	**+0.1**
	baz=93						
ABTX	**Abilene, Hawle**	**2.14**	**274**		**Pn**	**05 53 00.7**	**+0.4**
NATX	**Nacogdoches**	**2.21**	**108**	P	**Pn**	**05 53 01.7**	**+0.5**
	baz=290,SNR=21						
NATX				S	**Sn**	**05 53 29.7**	**+1.2**
	baz=290						
NATX	**Nacogdoches**	**2.21**	**108**	Pn	**Pn**	**05 53 01.4**	**+0.2**
NATX				IAmb_Lg		05 53 38.0	
	comp=Z,192nm,0.7s						
X37A	**Clayton**	**2.56**	**34**	Pn	**Pn**	**05 53 06.6**	**+0.5**
X37A				IAmb_Lg		05 53 46.3	
	comp=Z,136nm,1.0s						
WMOK	**Wichita Mounta**	**2.64**	**329**	P	**Pn**	**05 53 07.6**	**+0.4**
	baz=148,SNR=220						
WMOK				S	**Sn**	**05 53 40.9**	**+1.6**
	baz=148						
WMOK	**Wichita Mounta**	**2.64**	**329**	Pn	**Pn**	**05 53 07.7**	**+0.4**
WMOK				IAmb_Lg		05 53 52.4	
	comp=Z,209nm,0.9s						
W35A	**Tecumseh**	**2.67**	**4**		**Pn**	**05 53 08.0**	**+0.4**
HKT	**Hockley**	**2.76**	**156**	Pn	**Pn**	**05 53 08.9**	**+0.1**
FNO	**Franklin**	**2.77**	**355**		**Pn**	**05 53 08.8**	**-0.2**
OKCFA	**Oklahoma City**	**2.94**	**355**	IAmb_Lg		05 54 03.2	
	comp=Z,138nm,0.7s						
JCT	**Junction City**	**3.04**	**230**	P	**Pn**	**05 53 12.4**	**-0.4**
	baz=48,SNR=59						
JCT				Sb	**Sb**	**05 53 58.1**	**+2.1**
	baz=48						
JCT	**Junction City**	**3.04**	**230**	Pn	**Pn**	**05 53 12.9**	**+0.1**
OK025	**Westminster Rd**	**3.09**	**357**		**Pn**	**05 53 14.2**	**+0.7**
BCOK	**Bluff Creek, N**	**3.19**	**353**	Pn	**Pn**	**05 53 15.0**	**+0.2**
BCOK				IAmb_Lg		05 54 08.6	
	comp=Z,176nm,0.8s						
OK029	**Liberty Lake**	**3.31**	**355**		**Pn**	**05 53 16.8**	**+0.3**
OK029				IAmb_Lg		05 54 08.0	
	comp=Z,81nm,0.8s						
WLAR	**White Oak Lake**	**3.57**	**69**	Pn	**Pn**	**05 53 19.7**	**-0.3**
WLAR				IAmb_Lg		05 54 21.5	
	comp=Z,142nm,0.8s						
TUL1	**Leonard**	**3.59**	**17**	P	**Pn**	**05 53 20.7**	**+0.5**
	baz=198,SNR=12						
TUL1				Sb	**Sb**	**05 54 15.1**	**+3.4**
	baz=198						
TUL1	**Leonard**	**3.59**	**17**		**Pn**	**05 53 20.0**	**-0.2**
TUL1				IAmb_Lg		05 54 25.5	
	comp=Z,104nm,0.9s						
MIAR	**Mount Ida**	**3.60**	**54**	P	**Pn**	**05 53 20.2**	**-0.2**
	baz=236,SNR=16						
MIAR	**Mount Ida**	**3.60**	**54**	Pn	**Pn**	**05 53 20.2**	**-0.2**
735A	**Kenedy**	**3.67**	**190**		**Pn**	**05 53 22.9**	**+1.6**
QUOK	**Quay**	**3.69**	**5**		**Pn**	**05 53 21.9**	**+0.2**
QUOK				IAmb_Lg		05 54 21.8	
	comp=Z,88nm,1.2s						
Z41A	**Richland Creek**	**3.71**	**77**	P	**Pn**	**05 53 22.1**	**+0.2**
	baz=259,SNR=11						
Z41A				S	**Sn**	**05 54 05.0**	**-0.7**
	baz=259						
Z41A	**Richland Creek**	**3.71**	**77**		**Pn**	**05 53 21.9**	**0.0**
Z41A				IAmb_Lg		05 54 26.0	
	comp=Z,108nm,0.8s						

441A DeRidder 3.77 116 **Pn** **05 53 23.0 +0.2**
441A IAmb_Lg 05 54 29.1
comp=Z,66nm,0.8s
W39A Magazine 3.87 45 P **Pn** **05 53 25.6 +1.4**
baz=227,SNR=11
W39A S **Sn** **05 54 10.9 +1.2**
baz=227
W39A Magazine 3.87 45 IAmb_Lg 05 54 28.3
comp=Z,84nm,0.8s
X40A Basin Creek Fa 4.10 60 P **Pn** **05 53 27.3 0.0**
baz=242,SNR=11
X40A Basin Creek Fa 4.10 60 **Pn** **05 53 27.1 -0.1**
GC02 Grant County # 4.40 352 **Pn** **05 53 31.5 +0.1**
T35A Sooner Cattle 4.45 6 Pn **Pn** **05 53 32.0 -0.1**
T35A IAmb_Lg 05 54 47.4
comp=Z,104nm,1.1s
AMTX Amarillo 4.49 303 P **Pn** **05 53 33.7 +0.9**
baz=121
AMTX Sb **Sb** **05 54 43.0 +5.1**
baz=121
AMTX Amarillo 4.49 303 **Pn** **05 53 33.6 +0.8**
KAN14 Manchester OK 4.51 351 **Pn** **05 53 32.8 -0.2**
KAN13 South Haven SW 4.53 356 Pn **Pn** **05 53 31.1 -2.0**
U38A Gravette 4.54 29 **Pn** **05 53 33.5 +0.1**
833A Chaparral WMA, 4.59 206 P **Pn** **05 53 33.9 -0.1**
baz=25
833A S **Sn** **05 54 26.8 -0.6**
baz=25
833A Chaparral WMA, 4.59 206 Pn **Pn** **05 53 34.2 +0.2**
833A IAmb_Lg 05 55 01.6
comp=Z,90nm,0.9s
UALR University of 4.59 59 **Pn** **05 53 33.3 -0.7**
HHAR Hobbs 4.61 34 Pn **Pn** **05 53 34.3 0.0**
CCAR Cane Creek 4.70 71 IAmb_Lg 05 55 01.6
comp=Z,101nm,0.9s
KS20 Mayfield South 4.75 356 **Pn** **05 53 36.2 0.0**
143A Socs Landing, 4.83 86 **Pn** **05 53 37.4 +0.1**
143A IAmb_Lg 05 55 06.2
comp=Z,106nm,0.9s
W41B Gary Mavity, V 4.86 55 P **Pn** **05 53 37.9 +0.2**
baz=238,SNR=11
W41B S **Sn** **05 54 33.8 -0.2**
baz=238
W41B Gary Mavity, V 4.86 55 **Pn** **05 53 38.3 +0.6**
WHAR Wooly Hollow 4.89 54 Pn **Pn** **05 53 38.8 +0.7**
MSTX Muleshoe 4.96 289 P **Pn** **05 53 40.2 +0.9**
baz=106
MSTX Muleshoe 4.96 289 **Pn** **05 53 40.1 +0.8**
U40A Yellville 5.23 41 P **Pn** **05 53 43.7 +0.9**
baz=224
U40A S **Sn** **05 54 43.4 +0.3**
baz=224
U40A Yellville 5.23 41 Pn **Pn** **05 53 41.8 -1.0**
U40A IAmb_Lg 05 55 12.1
comp=Z,50nm,1.1s
FCAR Ozark Folk Cen 5.35 49 **Pn** **05 53 45.0 +0.5**
344A Westbrook Farm 5.52 99 Pn **Pn** **05 53 45.9 -0.9**
X43A Marvell 5.59 67 IAmb_Lg 05 55 24.2
comp=Z,49nm,0.8s
VBMS Vicksburg 5.59 91 S **Sn** **05 54 52.1 0.0**
baz=275
VBMS Vicksburg 5.59 91 IAmb_Lg 05 55 20.9
comp=Z,55nm,0.9s
CPRX Cap Rock 5.71 277 **Pn** **05 53 50.4 +0.9**
CLNB Carlsbad 5.72 270 **Pn** **05 53 49.5 -0.2**
S39A Bolivar 6.05 30 Pn **Pn** **05 53 54.6 +0.5**
S39A IAmb_Lg 05 55 51.6
comp=Z,35nm,0.9s
R32A Long Quarter, 6.07 348 Pn **Pn** **05 53 54.4 +0.1**
LCAR Lake Charles 6.09 52 **Pn** **05 53 54.6 -0.1**
MGMO Mountain Grove 6.13 39 **Pn** **05 53 56.1 +0.9**
MGMO IAmb_Lg 05 55 46.8
comp=Z,42nm,0.8s
GDL2 Guadalupe Moun 6.14 269 **Pn** **05 53 55.2 -0.2**
HBAR Harrisburg 6.18 59 IAmb_Lg 05 55 56.9
comp=Z,57nm,0.8s
TX31 Lajitas Ar. Si 6.45 243 **Pn** **05 53 59.4 -0.3**
TX32 Lajitas Array 6.45 243 Pn **Pn** **05 53 59.5 -0.1**
TXAR Lajitas Array 6.45 243 Pn **Pn** **05 53 58.6 -1.0**
comp=Z,2.6nm,0.3s,baz=65,slow=12,SNR=162
TXAR Pg **Pb** **05 54 17.1 +0.2**
comp=Z,2.9nm,0.3s,baz=63,slow=12,SNR=6.0
TXAR Sn **Sn** **05 55 10.8 -2.5**
comp=Z,5.9nm,0.3s,baz=59,slow=18,SNR=4.3
TXAR Lg Lg 05 55 42.9
comp=Z,8.9nm,0.3s,baz=69,slow=13,SNR=5.4
TXAR LR LR 05 56 28.2
comp=Z,45nm,20.9s,baz=0.0,slow=38
TXAR Lajitas Array 6.45 243 Pn **Pn** **05 53 59.2 -0.4**
Y45A Yeager Farm, C 6.50 76 Pn **Pn** **05 54 00.4 +0.2**
Y45A IAmb_Lg 05 56 08.2
comp=Z,60nm,1.0s
KSU1 Kansas State U 6.61 3 P **Pn** **05 54 02.2 +0.3**
baz=184
KSU1 Kansas State U 6.61 3 **Pn** **05 54 01.5 -0.3**
CBKS Cedar Bluff 6.67 342 P **Pn** **05 54 02.4 -0.2**
baz=161
CBKS S **Sn** **05 55 15.3 -3.3**
baz=161
CBKS Cedar Bluff 6.67 342 Pn **Pn** **05 54 02.3 -0.2**
CBKS IAmb_Lg 05 56 03.2
comp=Z,70nm,0.8s
T42A Van Buren 6.72 46 Pn **Pn** **05 54 03.5 +0.3**
OXF Oxford 6.75 70 S **Sn** **05 55 18.2 -2.4**
baz=255
OXF Oxford 6.75 70 Pn **Pn** **05 54 03.0 -0.6**
OXF IAmb_Lg 05 56 10.7
comp=Z,49nm,0.9s
146A Union 6.81 87 Pn **Pn** **05 54 03.5 -1.0**
146A IAmb_Lg 05 56 04.6
comp=Z,32nm,0.8s
PBMO Poplar Bluff 6.98 50 **Pn** **05 54 06.7 -0.1**
PBMO IAmb_Lg 05 56 23.7
comp=Z,29nm,1.1s
R40A Maddies Statio 7.01 33 Pn **Pn** **05 54 06.5 -0.8**
R40A IAmb_Lg 05 56 16.2
comp=Z,26nm,0.7s
MNTX Cornudas Mount 7.06 266 P **Pn** **05 54 08.0 0.0**
baz=81
MNTX Cornudas Mount 7.06 266 Pn **Pn** **05 54 08.1 +0.2**
W45A Hickory Valley 7.12 66 IAmb_Lg 05 56 25.7
comp=Z,38nm,0.9s
CCM Cathedral Cave 7.34 39 P **Pn** **05 54 12.1 +0.3**
baz=222
CCM S **Sn** **05 55 32.7 -2.5**
baz=222
CCM Cathedral Cave 7.34 39 **Pn** **05 54 12.0 +0.1**
CCM IAmb_Lg 05 56 27.5
comp=Z,33nm,0.8s
T25A Trinidad 7.58 310 **Pn** **05 54 16.1 +0.7**
Z47A Carrollton 7.65 82 Pn **Pn** **05 54 16.8 +0.8**
Z47A IAmb_Lg 05 56 41.5
comp=Z,24nm,0.8s
P38A Dawn 7.69 21 **Pn** **05 54 15.5 -1.1**
P38A IAmb_Lg 05 56 35.5
comp=Z,32nm,0.8s
FVM French Village 7.75 43 Pn **Pn** **05 54 16.2 -1.1**
KSCO Kaye Shedlock' 7.90 327 P **Pn** **05 54 19.1 -0.5**
baz=144
KSCO Kaye Shedlock' 7.90 327 Pn **Pn** **05 54 19.2 -0.5**
KSCO IAmb_Lg 05 56 53.3
comp=Z,53nm,0.8s
PLAL Pickwick Lake 7.93 69 **Pn** **05 54 19.0 -0.9**
BNM Barren Site 8.13 284 Pn **Pn** **05 54 22.9 +0.1**
P40A Paris 8.14 29 **Pn** **05 54 22.4 -0.3**
P40A IAmb_Lg 05 56 50.5
comp=Z,40nm,0.7s
ANMO Albuquerque 8.16 290 Pn **Pn** **05 54 23.3 +0.1**
comp=Z,0.2nm,0.3s,baz=102,slow=16,SNR=3.7
ANMO Pg Pb 05 54 52.0 +5.9
comp=Z,2.0nm,0.3s,baz=105,slow=18,SNR=9.6
ANMO Lg Lg 05 56 38.4
comp=Z,7.8nm,0.3s,baz=13,slow=21,SNR=5.3
ANMO LR LR 05 57 36.0
comp=Z,56nm,20.1s,baz=115,slow=39
ANMO Albuquerque 8.16 290 Pn **Pn** **05 54 24.9 +1.7**
S44A Carbondale 8.28 49 Pn **Pn** **05 54 25.2 +0.6**
S44A IAmb_Lg 05 57 04.1
comp=Z,20nm,0.8s
T45A Paducah 8.31 55 IAmb_Lg 05 56 47.3
comp=Z,21nm,0.7s
SLM Saint Louis 8.31 40 IAmb_Lg 05 57 00.7
comp=Z,21nm,0.8s
SIUC Southern Illin 8.31 49 Pn **Pn** **05 54 25.8 +0.7**
SIUC IAmb_Lg 05 56 56.1
comp=Z,24nm,0.9s

WVT	**Waverly**	**8.50**	**62**	P		**Pn**	**05 54 27.7**	**0.0**
	baz=247							
WVT	**Waverly**	**8.50**	**62**	Pn		**Pn**	**05 54 25.7**	**-2.0**
LRAL	**Lakeview Retre**	**8.54**	**84**	Pn		**Pn**	**05 54 27.1**	**-1.1**
X48A	**Hartselle**	**8.64**	**74**	Pn		**Pn**	**05 54 28.5**	**-1.1**
SDCO	**Great Sand Dun**	**8.64**	**310**	Pn		**Pn**	**05 54 31.1**	**+1.1**
	baz=125							
SDCO				Pg		Pg	05 55 03.5	-6.5
	baz=125							
SDCO	**Great Sand Dun**	**8.64**	**310**	Pn		**Pn**	**05 54 31.3**	**+1.4**
121A	**Cookes Peak, D**	**9.01**	**273**	Pn		**Pn**	**05 54 34.8**	**-0.1**
Y49A	**Blount Mountai**	**9.08**	**78**	Pn		**Pn**	**05 54 35.1**	**-0.5**
V48A	**Smith Brothers**	**9.13**	**66**	Pn		**Pn**	**05 54 35.3**	**-1.1**
Q44A	**Meyer Farm, Va**	**9.18**	**44**	IAmb_Lg			05 57 24.7	
	comp=Z,23nm,0.9s							
HPIG		**9.26**	**236**	IAmb_Lg			05 57 28.4	
	comp=Z,19nm,0.9s							
OGNE	**Ogallala**	**9.32**	**336**	Pn		**Pn**	**05 54 38.7**	**-0.3**
P43A	**Skaggs, Pawnee**	**9.42**	**39**	Pn		**Pn**	**05 54 40.3**	**0.0**
P43A				IAmb_Lg			05 57 27.0	
	comp=Z,21nm,0.8s							
USIN	**University of**	**9.47**	**52**	IAmb_Lg			05 57 32.9	
	comp=Z,23nm,1.2s							
N41A	**Harden Midland**	**9.62**	**30**	Pn		**Pn**	**05 54 42.7**	**-0.4**
N41A				IAmb_Lg			05 57 51.1	
	comp=Z,44nm,1.1s							
SWET	**Sewanee**	**9.69**	**71**	Pn		**Pn**	**05 54 43.4**	**-0.7**
FPAL	**Fort Paine**	**9.82**	**75**	Pn		**Pn**	**05 54 44.4**	**-1.5**
SCIA	**State Center**	**9.90**	**17**	IAmb_Lg			05 57 42.0	
	comp=Z,31nm,0.7s							
W50A	**Signal Mountai**	**10.19**	**71**	Pn		**Pn**	**05 54 49.5**	**-1.4**
O44A	**Mansfield**	**10.35**	**40**	Pn		**Pn**	**05 54 53.1**	**0.0**
X51A	**Calhoun**	**10.44**	**75**	Pn		**Pn**	**05 54 53.2**	**-1.1**
WCI	**Wyandotte Cave**	**10.53**	**54**	Pn		**Pn**	**05 54 53.0**	**-2.6**
L40A	**Anamosa**	**10.65**	**24**	Pn		**Pn**	**05 54 55.7**	**-1.4**
CPCT	**Cooper Cave**	**10.87**	**71**	Pn		**Pn**	**05 54 58.8**	**-1.3**
BLO	**Bloomington**	**10.88**	**49**	Pn		**Pn**	**05 55 01.0**	**+0.7**
N23A	**Red Feather La**	**10.98**	**322**	Pn		**Pn**	**05 55 02.7**	**+0.8**
PHWY	**Pilot Hill**	**11.04**	**325**	Pn		**Pn**	**05 55 01.5**	**-1.3**
ECSD	**EROS Data Cent**	**11.24**	**2**	P		**Pn**	**05 55 03.3**	**-1.9**
	baz=182							
ECSD	**EROS Data Cent**	**11.24**	**2**	Pn		**Pn**	**05 55 02.8**	**-2.4**
V52A	**Sevierville**	**11.69**	**70**	Pn		**Pn**	**05 55 11.7**	**+0.3**
JFWS	**Jewell Farm**	**11.74**	**26**	P		**Pn**	**05 55 10.5**	**-1.6**
	baz=210							
JFWS	**Jewell Farm**	**11.74**	**26**	Pn		**Pn**	**05 55 09.4**	**-2.6**
I42A	**Draeger Farm,**	**13.08**	**27**	Pn		**Pn**	**05 55 28.4**	**-1.9**
SPMN	**Marine on St.**	**13.15**	**14**	Pn		**Pn**	**05 55 29.7**	**-1.6**
U54A	**Nelsons Funny**	**13.24**	**68**	Pn		**Pn**	**05 55 31.8**	**-0.8**
G40A	**Rib Lake**	**13.85**	**21**	Pn		**Pn**	**05 55 37.3**	**-3.5**
PDAR	**Pinedale Array**	**14.21**	**320**	Pn		**Pn**	**05 55 47.5**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=116,slow=12,SNR=2.4							
PDAR				Lg		Lg	05 59 56.1	
	comp=Z,0.1nm,0.3s,baz=112,slow=36,SNR=3.7							
PDAR				LR		LR	06 01 16.5	
	comp=Z,35nm,20.8s,baz=152,slow=38							
TEIG	**Tepich**	**14.54**	**145**	Pn		**Pn**	**05 55 51.4**	**+0.9**
CMIG	**Matias Romero**	**15.46**	**172**	Pn		**Pn**	**05 56 03.5**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=354,slow=9.9,SNR=18							
ELK	**Elko**	**16.70**	**305**	Pn		**Pn**	**05 56 18.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=101,slow=5.2,SNR=2.6							
ULM	**Lac du Bonnet**	**17.77**	**3**	Lg		Lg	06 01 36.2	
	comp=Z,0.1nm,0.3s,baz=28,slow=17,SNR=2.5							
ILAR	**Eielson Array**	**44.20**	**332**	P		**P**	**06 00 34.1**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=119,slow=5.6,SNR=8.1							
ARCES	**ARCESS Array B**	**70.12**	**18**	P		**P**	**06 03 35.8**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=316,slow=6.3,SNR=5.3							
GERES	**GERESS Array B**	**78.30**	**39**	P		**P**	**06 04 27.6**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=315,slow=3.5,SNR=2.3							

*GRAL **30** 05:57:21.5±0.3,33°.23N×35°.72E, h10km±2km, MD2.7*
*GII **30** 05:57:21.5±0.1,33°.29N×35°.68E, h9km, MD0.9/1*
ISC 30 05:57:21.4±1.4,33°25N±0°.04×35°72E±0°.08, h13km±7km, n9, σ0s32/15, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NATI	**Neve Ativ**	**0.01**	**60**	Pg		**Pg**	**05 57 23.7**	**0.0**
NATI				Sg		**Sg**	**05 57 25.1**	**-0.1**
GEM	**Giv'at Ha'Em**	**0.07**	**228**	Pg		**Pg**	**05 57 23.8**	**-0.2**
SHBL	**Chebaa**	**0.10**	**12**	*eP*		**Pg**	**05 57 24.4**	**-0.1**
SHBL				*eS*		**Sg**	**05 57 26.5**	**-0.2**
RCY	**Rachaya**	**0.26**	**22**	*eP*		**Pg**	**05 57 26.9**	**-0.1**
RCY				*eS*		**Sg**	**05 57 30.9**	**+0.2**
QRWL	**Qaraoun**	**0.29**	**354**	*eP*		**Pg**	**05 57 27.3**	**-0.3**
MMA0B	**Mount Meron ar**	**0.36**	**228**	Pg		**Pg**	**05 57 28.4**	**-0.3**
MMA0B				Sg		**Sg**	**05 57 33.9**	**+0.4**
DQRL	**Deir Qamar**	**0.47**	**344**	*eP*		**Pg**	**05 57 30.6**	**-0.1**
DQRL				*eS*		**Sg**	**05 57 37.2**	**+0.2**
BHL	**Bhannes**	**0.65**	**355**	*eP*		**Pg**	**05 57 33.8**	**-0.4**
HMDT	**Nahal Hemdat**	**1.01**	**189**	Pg		**Pg**	**05 57 40.5**	**-0.5**
HMDT				Sg		**Sb**	**05 57 54.6**	**+0.5**

*IDC **30** 06:04:38.3±1.9,2°.03N×126°.40E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/40, mbtmp3.7/4, Error ellipse: s-maj=117.3km s-min=23.4km az=68.0*
*NEIC **30** 06:04:42.6±1.1,1°.92N±0°.05×126°.3E±0°.2, h35km±2km, mb4.1/11, Error ellipse: s-maj=29.8km s-min=4.5km az=73.0*
ISC 30 06:04:43.2±1.0,1°.9N±0°.2×126°.3E±0°.2, h35km, n18, σ0s92/19, mb4.0/8, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.56**	**136**			**Pn**	**06 05 08.0**	**-0.5**
TNTI				Sn		**Sn**	**06 05 28.6**	**+1.1**
MTN	**Manton Dam**	**15.42**	**162**	Pn		**Pn**	**06 08 17.6**	**-0.8**
KNRA	**Kununurra**	**17.64**	**172**	P		**P**	**06 08 47.5**	**+0.4**
KNRA				IAmb	IAmb		06 08 57.4	
	comp=Z,19nm,1.4s							
FITZ	**Fitzroy Crossi**	**19.89**	**182**	P		**Pn**	**06 09 12.8**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=21,slow=15,SNR=1.2							
FITZ	**Fitzroy Crossi**	**19.89**	**182**	P		**Pn**	**06 09 12.9**	**-0.6**
WB0	**Warramunga Arr**	**22.96**	**160**	P		**P**	**06 09 44.0**	**-0.8**
WB0				IAmb	IAmb		06 09 57.9	
	comp=Z,4.9nm,1.0s							
WRAB	**Tennant Creek**	**23.10**	**160**	P		**P**	**06 09 45.6**	**-0.6**
WRAB				IAmb	IAmb		06 09 48.6	
	comp=Z,3.8nm,0.7s							
WRA	**Warramunga Arr**	**23.11**	**160**	P		**P**	**06 09 45.4**	**-0.9**
	comp=Z,2.7nm,0.6s,baz=339,slow=11,SNR=40							
WRA	**Warramunga Arr**	**23.11**	**160**	P		**P**	**06 09 45.9**	**-0.4**
WB2	**Warramunga Arr**	**23.11**	**160**	P		**P**	**06 09 45.7**	**-0.6**
WB2				IAmb	IAmb		06 09 47.3	
	comp=Z,4.1nm,0.6s							
WC3	**Warramunga Arr**	**23.13**	**160**	P		**P**	**06 09 45.6**	**-0.9**
WC3				IAmb	IAmb		06 09 47.6	
	comp=Z,5.1nm,0.6s							
WR0	**Warramunga Arr**	**23.19**	**160**	P		**P**	**06 09 46.2**	**-0.9**
WR0				IAmb	IAmb		06 09 54.6	
	comp=Z,8.1nm,1.2s							
ASAR	**Alice Springs**	**26.48**	**164**	P		**P**	**06 10 19.8**	**+2.4**
	comp=Z,1.2nm,0.7s,baz=347,slow=12,SNR=13							
MK31	**Makanchi Array**	**58.80**	**326**	P		**P**	**06 14 37.6**	**-0.5**
MKAR	**Makanchi Array**	**58.80**	**326**	P		**P**	**06 14 38.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=124,slow=8.0,SNR=7.3							
MKAR	**Makanchi Array**	**58.80**	**326**	P		**P**	**06 14 37.5**	**-0.7**
KURK	**Kurchatov**	**63.04**	**328**	P		**P**	**06 15 07.1**	**+0.3**
ABKAR	**Akbulak array**	**73.28**	**321**	P		**P**	**06 16 11.4**	**+0.3**

IDC 30 06:07:59.8±1.7,2°.35N×127°.06E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/33, mbtmp3.7/6, MS2.9/1, Ms1 2.9/1, ms1mx2.4/40, Error ellipse: s-maj=96.6km s-min=26.1km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.37**	**184**	P		P	06 12 38.8	+0.6
	1.1nm,0.6s,baz=11,slow=10,SNR=2.9							
WRA	**Warramunga Arr**	**23.28**	**162**	P		P	06 13 09.8	+0.5
	1.6nm,0.4s,baz=342,slow=11,SNR=22							
KRVT	**Keravat (AS076**	**25.81**	**105**	LR		LR	06 22 41.6	
	comp=Z,26nm,19.0s,baz=270,slow=34							
ASAR	**Alice Springs**	**26.71**	**166**	P		P	06 13 41.1	+0.1
	0.2nm,0.4s,baz=344,slow=12,SNR=4.5							
STKA	**Stephens Creek**	**36.73**	**159**	P		P	06 15 09.8	+0.9
	1.4nm,0.5s,baz=348,slow=10,SNR=4.0							
MKAR	**Makanchi Array**	**58.87**	**326**	P		P	06 18 01.5	+1.0
	0.3nm,0.5s,baz=115,slow=8.8,SNR=2.0							
VNDA	**Vanda**	**82.03**	**173**	P		P	06 20 19.5	-1.9
	0.2nm,0.3s,baz=330,slow=8.1,SNR=2.1							

IDC 30 06:32:18.6±3.0,21°.72N×144°.86E, h0km, mb3.4/6, mb1 3.5/6, mb1mx3.4/56, mbtmp3.5/6, Error ellipse: s-maj=122.3km s-min=20.4km az=80.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSRS	**Korea Array**	**21.45**	**321**	P		P	06 37 06.8	-1.8
	0.6nm,0.4s,baz=149,slow=9.3,SNR=4.3							
KLR	**Kul'dur**	**29.36**	**342**	P		P	06 38 22.3	-1.0
	0.7nm,0.5s,baz=306,slow=19,SNR=2.8							
WRA	**Warramunga Arr**	**42.67**	**195**	P		P	06 40 16.5	-0.8
	0.3nm,0.9s,baz=6.2,slow=9.3,SNR=2.7							
ASAR	**Alice Springs**	**46.36**	**194**	P		P	06 40 46.9	+0.1
	0.3nm,0.8s,baz=25,slow=11,SNR=2.9							
ZALV	**Zalesovo Beam**	**55.16**	**321**	P		P	06 41 53.9	+1.1
	1.0nm,0.6s,baz=100,slow=9.0,SNR=4.9							
MKAR	**Makanchi Array**	**55.83**	**313**	P		P	06 41 58.9	+1.1
	0.3nm,0.6s,baz=87,slow=7.7,SNR=3.2							

IDC 30 06:36:01.1±1.7,2°.50N×127°.26E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/49, mbtmp3.7/5, Error ellipse: s-maj=101.9km s-min=22.5km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.53**	**184**	P		P	06 40 41.0	-0.2
	1.1nm,0.7s,baz=8.9,slow=10,SNR=2.4							
WRA	**Warramunga Arr**	**23.36**	**163**	P		P	06 41 10.8	-0.7
	1.7nm,0.8s,baz=342,slow=10,SNR=14							
ASAR	**Alice Springs**	**26.80**	**166**	P		P	06 41 43.5	+0.2
	0.3nm,0.5s,baz=358,slow=10,SNR=4.3							
STKA	**Stephens Creek**	**36.80**	**159**	P		P	06 43 11.3	+0.4
	3.4nm,0.7s,baz=349,slow=9.2,SNR=6.6							
MKAR	**Makanchi Array**	**58.86**	**325**	P		P	06 46 01.8	0.0
	0.4nm,0.6s,baz=133,slow=7.3,SNR=3.9							

*UCR **30** 06:37:08.4±0.7,12°.99N×88°.92W, h46km±11km, ML3.8*
*SNET **30** 06:37:08.3±0.7,12°.99N×88°.93W, h46km±11km, ML3.8*
*INET **30** 06:37:10.5, 13°.14N×88°.68W, h15km, MW3.1*
ISC 30 06:37:06.1±2.0,12°.9N±0°.1×88°.95W±0°.06, h17km±13km, n39, σ0s32/51, 2C-23D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.54**	**43**	*i* P		**Pn**	**06 37 19.6**	**+0.6**
ALJI				*eS*		**Sn**	**06 37 27.7**	**0.0**
ALJI				IAML			06 37 29.2	
	comp=Z,6μm,0.2s							
ALJI	**Alcalda de J**	**0.54**	**43**	*i* P		**Pn**	**06 37 19.6**	**+0.6**
ALJI				*eS*		**Sn**	**06 37 27.7**	**0.0**
ALJI				IAML			06 37 29.2	
	comp=Z,6μm,0.2s							
COEG	**Centro de Oper**	**0.69**	**5**	*i* P		**Pn**	**06 37 21.1**	**-0.1**
COEG				IAML			06 37 34.4	
	comp=Z,5μm,0.3s							
COEG	**Centro de Oper**	**0.69**	**5**	*i* P		**Pn**	**06 37 21.1**	**-0.1**
COEG				IAML			06 37 34.4	
	comp=Z,5μm,0.3s							
COEB	**Comit de Eme**	**0.70**	**35**	*i* P		**Pn**	**06 37 21.5**	**+0.2**
COEB				*eS*		**Sn**	**06 37 31.8**	**+0.1**
COEB				IAML			06 37 32.8	
	comp=Z,4μm,0.1s							
COEB	**Comit de Eme**	**0.70**	**35**	*i* P		**Pn**	**06 37 21.5**	**+0.2**
COEB				*eS*		**Sn**	**06 37 31.8**	**+0.1**
COEB				IAML			06 37 32.8	
	comp=Z,4μm,0.1s							
LFRS	**El Faro**	**0.70**	**351**	*i* P		**Pn**	**06 37 21.3**	**0.0**
LFRS	**El Faro**	**0.70**	**351**	*i* P		**Pn**	**06 37 21.3**	**0.0**
TECA	**Tecapa**	**0.71**	**37**	*i* P		**Pn**	**06 37 21.8**	**+0.2**
TECA	**Tecapa**	**0.71**	**37**	*i* P		**Pn**	**06 37 21.8**	**+0.2**
JUCU	**Jucuarán**	**0.75**	**64**	*i* P		**Pn**	**06 37 21.8**	**-0.3**
JUCU				*eS*		**Sn**	**06 37 32.8**	**-0.3**
JUCU				IAML			06 37 35.3	
	comp=Z,2μm,0.3s							
PAVA	**Las Pavas**	**0.78**	**1**	*i* P		**Pn**	**06 37 22.7**	**+0.2**
PAVA				*eS*		**Sn**	**06 37 33.8**	**0.0**
PAVA	**Las Pavas**	**0.78**	**1**	*i* P		**Pn**	**06 37 22.7**	**+0.2**
PAVA				*eS*		**Sn**	**06 37 33.8**	**0.0**
LCY	**Lacayo**	**0.80**	**52**	*eP*		**Pn**	**06 37 23.0**	**+0.3**
LCY	**Lacayo**	**0.80**	**52**	*eP*		**Pn**	**06 37 23.0**	**+0.3**
SNET	**Serv Nac Est T**	**0.81**	**340**	*i* P		**Pn**	**06 37 22.7**	**-0.1**
SNET				*eS*		**Sn**	**06 37 33.9**	**-0.4**
SNET				IAML			06 37 35.6	
	comp=Z,2μm,0.2s							
SNET	**Serv Nac Est T**	**0.81**	**340**	*i* P		**Pn**	**06 37 22.7**	**-0.1**
SNET				*eS*		**Sn**	**06 37 33.9**	**-0.4**
SNET				IAML			06 37 35.6	
	comp=Z,2μm,0.2s							
PACA	**Pacayal**	**0.81**	**48**	*eP*		**Pn**	**06 37 23.4**	**+0.5**
PACA	**Pacayal**	**0.81**	**48**	*eP*		**Pn**	**06 37 23.4**	**+0.5**
LBRS	**Las Brisas**	**0.81**	**353**	*eP*		**Pn**	**06 37 23.1**	**+0.3**
LBRS	**Las Brisas**	**0.81**	**353**	*eP*		**Pn**	**06 37 23.1**	**+0.3**
BOQS	**Boqueron**	**0.87**	**338**	*eP*		**Pn**	**06 37 24.0**	**+0.2**
BOQS	**Boqueron**	**0.87**	**338**	*eP*		**Pn**	**06 37 24.0**	**+0.2**
CEDA	**San Andres**	**0.97**	**333**	*i* P		**Pn**	**06 37 25.1**	**0.0**
CEDA	**San Andres**	**0.97**	**333**	*i* P		**Pn**	**06 37 25.1**	**0.0**
LCND	**La Caada**	**1.10**	**70**	*i* P		**Pb**	**06 37 26.6**	**0.0**
LCND				*eS*		**Sn**	**06 37 41.2**	**-0.3**
LCND				IAML			06 37 43.1	
	comp=Z,2μm,0.3s							
LCND	**La Caada**	**1.10**	**70**	*i* P		**Pb**	**06 37 26.6**	**0.0**
LCND				*eS*		**Sn**	**06 37 41.2**	**-0.3**
LCND				IAML			06 37 43.1	
	comp=Z,2μm,0.3s							
TACO	**Tacachico**	**1.11**	**339**	*eP*		**Pn**	**06 37 26.8**	**-0.1**
TACO	**Tacachico**	**1.11**	**339**	*eP*		**Pn**	**06 37 26.8**	**-0.1**
CEVE	**Cerro Verde**	**1.11**	**324**	*eP*		**Pn**	**06 37 28.0**	**+0.9**
CEVE	**Cerro Verde**	**1.11**	**324**	*eP*		**Pn**	**06 37 28.0**	**+0.9**
SBLS	**San Blas**	**1.12**	**324**	*eP*		**Pg**	**06 37 28.0**	**+0.1**
SBLS	**San Blas**	**1.12**	**324**	*eP*		**Pg**	**06 37 28.0**	**+0.1**
RTR	**El Retiro**	**1.18**	**325**	*eP*		**Pg**	**06 37 28.7**	**-0.3**
RTR	**El Retiro**	**1.18**	**325**	*eP*		**Pg**	**06 37 28.7**	**-0.3**
NUBE	**Las Nubes**	**1.26**	**320**	*eP*		**Pn**	**06 37 29.3**	**+0.2**
NUBE	**Las Nubes**	**1.26**	**320**	*eP*		**Pn**	**06 37 29.3**	**+0.2**
ESQI	**Esquipulas**	**1.67**	**347**	*i* P		**Pn**	**06 37 35.1**	**+0.4**

*IDC **30** 06:38:10.4±1.1,5°.91N×61°.47E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.5/63, mbtmp3.8/6, MS3.3/15, Ms1 3.3/15, ms1mx3.0/47, Error ellipse: s-maj=71.8km s-min=23.6km az=34.0*
*NEIC **30** 06:38:10.1±1.0,5°.5N±0°.1×61°.3E±0°.2, h10km±1km, mb4.2/7, Error ellipse: s-maj=27.5km s-min=20.0km az=235.0*
ISC 30 06:38:11.2±0.7,5°.6N±0°.1×61°.3E±0°.1, h14km, n33, σ1s02/19, mb3.8/8, MS3.2/14, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DGAR	**Diego Garcia**	**17.03**	**139**	P		**Pn**	**06 42 08.7**	**-0.4**
WSAR	**Wadi Sarin**	**17.75**	**352**	LR		LR	06 48 19.2	
	comp=Z,43nm,18.1s,baz=216,slow=35							
PALK	**Pallekele**	**19.34**	**84**	P		**P**	**06 42 36.0**	**-0.4**
PALK				IAmb	IAmb		06 43 02.0	
	comp=Z,14nm,1.1s							
RAYN	**Ar Rayn**	**23.46**	**321**	P		**P**	**06 43 20.0**	**-0.6**
RAYN				IAmb	IAmb		06 43 21.4	
	comp=Z,4.7nm,0.9s							
RER	**Riviere de l'E**	**27.12**	**191**	P		**P**	**06 43 52.4**	**-1.7**
MBAR	**Mbarara**	**31.14**	**260**	LR		LR	06 55 20.4	
	comp=Z,30nm,19.4s,baz=33,slow=33							
GEYT	**Alibeck**	**32.34**	**355**	LR		LR	06 57 53.4	
	comp=Z,40nm,18.2s,baz=250,slow=37							
EIL	**Elat**	**34.55**	**317**	LR		LR	06 58 03.2	
	comp=Z,42nm,20.0s,baz=101,slow=35							
KKAR	**Karatay Array**	**38.25**	**11**	P		**P**	**06 45 31.2**	**+0.2**
GAZ	**Gaziantep**	**38.39**	**328**	P		**P**	**06 45 32.6**	**+0.3**
LSZ	**Lusaka**	**38.81**	**237**	LR		LR	06 59 41.1	
	comp=Z,51nm,18.8s,baz=220,slow=33							
CMAR	**Chiang Mai Arr**	**38.86**	**67**	LR		LR	07 00 41.0	
	comp=Z,18nm,20.5s,baz=290,slow=35							
KBZ	**Khabaz**	**41.32**	**340**	LR		LR	07 04 49.8	
	comp=Z,28nm,18.1s,baz=134,slow=39							
MATP	**Matopo**	**41.32**	**230**	LR		LR	07 00 46.8	
	comp=Z,109nm,18.1s,baz=38,slow=33							

BRTR	**Keskin Array B**	**42.16**	**328**	P		**P**	**06 46 03.8**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=131,slow=6.7,SNR=4.6							
BRTR				LR		LR	07 04 01.1	
	comp=Z,31nm,18.3s,baz=132,slow=37							
BRTR	**Keskin Array B**	**42.16**	**328**	P		**P**	**06 46 03.6**	**0.0**
ABKAR	**Akbulak array**	**43.54**	**359**	P		**P**	**06 46 14.6**	**+0.1**
ABKAR				IAmb	IAmb		06 46 22.4	
	comp=Z,5.2nm,0.9s							
ABKAR	**Akbulak array**	**43.54**	**359**	P		**P**	**06 46 14.7**	**+0.3**
IDI	**Anoyia**	**44.71**	**316**	LR		LR	07 05 16.2	
	comp=Z,25nm,18.3s,baz=300,slow=36							
AKTO	**Aktyubinsk**	**44.79**	**357**	LR		LR	07 06 30.8	
	comp=Z,30nm,18.3s,baz=164,slow=38							
MKAR	**Makanchi Array**	**44.87**	**20**	LR		LR	07 05 36.8	
	comp=Z,34nm,21.2s,baz=228,slow=37							
LBTB	**Lobatse**	**46.16**	**227**	LR		LR	07 03 15.0	
	comp=Z,59nm,21.1s,baz=60,slow=32							
BOSA	**Boshof**	**48.59**	**224**	LR		LR	07 06 12.3	
	comp=Z,42nm,18.0s,baz=6.5,slow=34							
ZALV	**Zalesovo Beam**	**51.87**	**17**	LR		LR	07 11 28.1	
	comp=Z,38nm,18.4s,baz=248,slow=39							
ZALV	**Zalesovo Beam**	**51.87**	**17**	P		**P**	**06 47 18.1**	**-0.9**
BURAR	**Bucovina Array**	**52.03**	**330**	P		**P**	**06 47 19.6**	**-0.9**
TORD	**Torodi Ar. Bea**	**59.19**	**282**	P		**P**	**06 48 14.1**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=83,slow=6.5,SNR=4.5							
TORD	**Torodi Ar. Bea**	**59.19**	**282**	P		**P**	**06 48 12.2**	**-0.3**
HFS	**Hagfors**	**65.21**	**336**	P		**P**	**06 48 51.0**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=116,slow=9.8,SNR=2.0							
ESDC	**Sonseca Array**	**67.50**	**311**	P		**P**	**06 49 08.6**	**+1.4**
	comp=Z,0.7nm,0.9s,baz=94,slow=5.2,SNR=3.8							
WRA	**Warramunga Arr**	**76.07**	**112**	P		**P**	**06 50 00.6**	**+1.6**
	comp=Z,1.0nm,1.1s,baz=299,slow=4.3,SNR=5.0							
ASAR	**Alice Springs**	**76.43**	**116**	P		**P**	**06 50 02.6**	**+1.6**
	comp=Z,0.5nm,0.7s,baz=294,slow=5.9,SNR=5.0							
ASAR	**Alice Springs**	**76.43**	**116**	P		**P**	**06 50 01.7**	**+0.7**

*IDC **30** 06:38:28.7±1.2,39°.17N×28°.92E, h0km, mb3.7/4, mb1 3.6/9, mb1mx3.4/54, mbtmp3.6/9, ML3.4/4, MS2.8/7, Ms1 2.8/7, ms1mx2.5/57, Error ellipse: s-maj=16.7km s-min=13.5km az=37.0*
*ISK **30** 06:38:29.8, 39°.35N×29°.03E, h5km, ML3.9/69*
*THE **30** 06:38:31.7, 39°.28N×28°.99E, h4km±4km, ML3.7/6, Error ellipse: s-maj=4.4km s-min=1.5km az=102.0*
ISC 30 06:38:30.8±1.0, 39°.33N±0°.02×29°.03E±0°.02, h11km±8km, n116, σ1s10/127, mb3.7/4, MS3.1/3, 8C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIMA	**Simav-Kutahya**	**0.25**	**188**	PG		**Pg**	**06 38 36.4**	**+0.4**
SHAP	**Saphane-Kutahy**	**0.34**	**154**	PG		**Pg**	**06 38 38.1**	**+0.4**
TVSB	**Tavsanli**	**0.36**	**70**	PG		**Pg**	**06 38 37.8**	**-0.2**
TVSB				SG		**Sg**	**06 38 43.2**	**+0.4**
GEDZ	**Gediz**	**0.41**	**134**	PG		**Pg**	**06 38 39.3**	**+0.3**
GEDZ				SG		**Sb**	**06 38 46.2**	**-0.4**
DST	**Dursunbey**	**0.42**	**311**	PG		**Pg**	**06 38 38.4**	**-0.7**
ORLT	**Orhaneli**	**0.72**	**352**	PG		**Pg**	**06 38 43.9**	**-0.9**
KULA	**Kula-Manisa**	**0.86**	**199**	PG		**Pg**	**06 38 47.5**	**0.0**
KULA	**Kula-Manisa**	**0.86**	**199**	P		**Pg**	**06 38 47.1**	**-0.4**
KULA				S		**Sg**	**06 38 58.3**	**-0.5**
BALB	**Balikesir**	**0.94**	**290**	PG		**Pg**	**06 38 49.2**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.04**	**354**	PG		**Pg**	**06 38 50.1**	**-0.8**
AKS	**Akhisar**	**1.05**	**245**	PG		**Pg**	**

BRTR				Sn	**Sn**	06 40 08.3	-0.8	
	1.5nm,0.3s,baz=255,slow=22,SNR=1.6							
BRTR				Lg	Lg	06 40 27.1		
	0.7nm,0.3s,baz=256,slow=28,SNR=11							
BRTR				LR	LR	06 41 24.8		
	comp=Z,68nm,18.3s,baz=252,slow=48							
TIRR	**Tirgusor**	**5.14**	**355**	⇑P	**Pn**	**06 39 48.0**	**+0.2**	
IDI	**Anoyia**	**5.21**	**221**	Pn	**Pn**	**06 39 45.5**	**-3.4**	
	0.1nm,0.3s,baz=238,slow=22,SNR=2.0							
IDI				LR	LR	06 41 22.0		
	comp=Z,16nm,19.0s,baz=32,slow=34							
HARR	**Harsova**	**5.42**	**352**	⇓P	**Pn**	**06 39 52.5**	**+0.9**	
TPGR	**Topolog**	**5.54**	**356**	⇑P	**Pn**	**06 39 53.2**	**-0.1**	
STIP	**Stip**	**5.72**	**297**	*i* Pn	**Pn**	**06 39 54.7**	**-1.1**	
CFR	**Carcaliu**	**5.88**	**354**	⇓P	**Pn**	**06 39 57.8**	**-0.1**	
MLR	**Muntele Rosu**	**6.56**	**341**	Pn	**Pn**	**06 40 08.5**	**+1.0**	
	0.4nm,0.3s,baz=221,slow=5.0,SNR=7.2							
MLR				Sn	**Sn**	**06 41 24.3**	**+2.0**	
	0.8nm,0.3s,baz=131,slow=11,SNR=3.6							
MLR				Lg	Lg	06 42 02.6		
	0.4nm,0.3s,baz=84,slow=20,SNR=3.5							
VRI	**Vrincioaia**	**6.75**	**346**	⇑P	**Pn**	**06 40 10.8**	**+0.9**	
VOIR		**6.78**	**336**	⇓P	**Pn**	**06 40 09.7**	**-0.6**	
ARR	**Arges**	**6.85**	**333**	⇑P	**Pn**	**06 40 10.6**	**-0.7**	
DOPR	**Dopca**	**7.15**	**339**	⇓P	**Pn**	**06 40 16.3**	**+0.8**	
HERR	**Herculane**	**7.41**	**321**	⇑P	**Pn**	**06 40 18.7**	**-0.2**	
GZR	**Gura Zlata**	**7.62**	**325**	⇑P	**Pn**	**06 40 22.1**	**+0.2**	
BIZ	**Bicaz**	**7.90**	**345**	⇑P	**Pn**	**06 40 26.7**	**+1.1**	
MMAI	**Mount Meron Ar**	**8.14**	**139**	Pn	**Pn**	**06 40 27.6**	**-1.4**	
	1.0nm,0.3s,baz=310,slow=11,SNR=2.5							
MMAI				LR	LR	06 44 29.7		
	comp=Z,46nm,18.7s,baz=5.0,slow=45							
BZS	**Buzias**	**8.33**	**321**	⇑P	**Pn**	**06 40 30.6**	**-1.0**	
KBZ	**Khabaz**	**11.29**	**63**	LR	LR	06 46 23.4		
	comp=Z,43nm,19.8s,baz=292,slow=42							
AKASG	**Malin Array Be**	**11.37**	**1**	Pn	**Pn**	**06 41 15.0**	**+1.8**	
	0.3nm,0.3s,baz=177,slow=12,SNR=4.3							
FINES	**FINESS Array B**	**22.21**	**356**	P	**P**	**06 43 28.0**	**+0.9**	
	3.3nm,1.0s,baz=192,slow=18,SNR=3.1							
HFS	**Hagfors**	**22.95**	**340**	LR	LR	06 53 12.7		
	comp=Z,67nm,19.0s,baz=100,slow=38							
AKTO	**Aktyubinsk**	**23.20**	**52**	P	**P**	**06 43 38.3**	**+0.7**	
	1.9nm,0.8s,baz=260,slow=11,SNR=4.1							
ARU	**Arti**	**25.88**	**39**	P	**P**	**06 44 03.9**	**+1.5**	
	0.9nm,0.6s,baz=190,slow=19,SNR=3.7							
ARU				LR	LR	06 54 28.3		
	comp=Z,41nm,19.5s,baz=208,slow=37							
TORD	**Torodi Ar. Bea**	**35.53**	**230**	P	**P**	**06 45 26.4**	**-1.6**	
	0.4nm,0.7s,baz=25,slow=8.4,SNR=2.6							
SFJD	**Kangerlussuaq**	**50.56**	**330**	LR	LR	07 10 02.4		
	comp=Z,39nm,19.4s,baz=20,slow=37							

*VAO **30** 06:43:41.2±3.5, 8°.83S×77°.55W, h10km, mb4.3*
*IDC **30** 06:44:23.0±2.1, 7°.82S×74°.65W, h147km±30km, mb3.6/4, mb1 3.4/8, mb1mx3.3/35, mbtmp3.8/8, Error ellipse: s-maj=30.0km s-min=12.9km az=51.0*

ISC 30 06:44:23.3±0.7, 7°.82S±0°.08×74°.61W±0°.07, h150km, n11, σ1°29/14, mb3.8/4, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.82**	**280**	P	**Pn**	**06 45 21.8**	**+0.3**
	1.0nm,0.3s,baz=88,slow=2.2,SNR=29						
ATAH				S	**Sn**	**06 46 05.0**	**-1.8**
	11nm,0.3s,baz=276,slow=15,SNR=16						
NNA	**Nana**	**4.69**	**208**	P	**Pn**	**06 45 34.0**	**+1.3**
	1.9nm,0.3s,baz=357,slow=11,SNR=8.6						
NNA				S	**Sn**	**06 46 25.9**	**-0.8**
	4.4nm,0.3s,baz=149,slow=19,SNR=6.7						
ETMB	**Extrema**	**8.53**	**104**	*eP*	**Pn**	**06 46 22.2**	**-1.6**
LPAZ	**La Paz**	**10.53**	**144**	P	**Pn**	**06 46 50.2**	**-0.7**
	0.1nm,0.3s,baz=350,slow=11,SNR=1.6						
SIV	**San Ignacio**	**15.53**	**123**	P	**P**	**06 47 56.3**	**+0.8**
	0.4nm,0.3s,baz=317,slow=10,SNR=12						
SIV				S	**Sn**	**06 50 45.7**	**-1.6**
	0.2nm,0.3s,baz=237,slow=11,SNR=4.2						
ITTB	**Itaituba**	**19.07**	**81**	*eP*	**Pn**	**06 48 36.1**	**-0.8**
MALB	**Monte Alegre**	**21.11**	**75**	*eP*	**P**	**06 48 58.6**	**+2.3**
SJG	**San Juan**	**27.09**	**18**	P	**P**	**06 49 52.5**	**+0.4**
	4.7nm,0.6s,baz=156,slow=6.2,SNR=6.0						
TXAR	**Lajitas Array**	**46.34**	**324**	P	**P**	**06 52 34.9**	**+0.4**
	0.3nm,0.8s,baz=140,slow=10.0,SNR=3.1						
DBIC	**Dimbokro**	**71.03**	**80**	P	**P**	**06 55 25.8**	**+0.3**
	1.2nm,0.4s,baz=262,slow=4.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**78.58**	**75**	P	**P**	**06 56 08.6**	**-0.3**
	0.3nm,0.3s,baz=269,slow=5.2,SNR=4.5						

*INET **30** 06:52:42.7, 10°.10N×86°.30W, h15km, MW3.4*
*UCR **30** 06:52:45.7±1.5, 10°.44N×86°.26W, h5km, MW4.3*
*IDC **30** 06:52:51.8±1.2, 10°.98N×84°.96W, h85km±24km, mb3.1/4, mb1 3.5/5, mb1mx3.2/35, mbtmp3.5/5, Error ellipse: s-maj=51.8km s-min=17.6km az=18.0*

ISC 30 06:52:47.2±1.6, 10°.43N±0°.06×86°.20W±0°.06, h18km±4km, n38, σ0°91/44, mb3.4/5C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HZTE	**Horizontes, Gu**	**0.66**	**64**	*eP*	**Pb**	**06 53 00.2**	**+0.1**
HZTE				*eS*	**Sn**	**06 53 11.6**	**+0.1**
GUAI	**GUAI**	**0.70**	**103**	⇑*iP*	**Pg**	**06 53 00.4**	**-0.6**
GUAI				*i* S	**Sb**	**06 53 11.3**	**+1.2**
ORTG	**Ortega, Santa**	**0.73**	**95**	*eP*	**Pg**	**06 53 01.1**	**-0.6**
DUNO	**Dulce Nombre,**	**0.78**	**116**	*eP*	**Pb**	**06 53 01.4**	**-0.8**
GBS3	**Finca Las Img**	**0.81**	**64**	*i* P	**Pb**	**06 53 02.2**	**-0.6**
LAPC	**Finca la Perla**	**0.83**	**66**	*i* P	**Pb**	**06 53 02.4**	**-0.7**
BUEV	**Buena Vista**	**0.86**	**65**	*eP*	**Pb**	**06 53 03.1**	**-0.6**
BUEV				*i* S	**Sg**	**06 53 16.3**	**+0.7**
GB1A	**Borinquen Arri**	**0.88**	**64**	*i* P	**Pb**	**06 53 03.4**	**-0.6**
GB1A				*i* S	**Sn**	**06 53 16.9**	**-0.2**
GPS3	**Bodega del ICE**	**0.89**	**68**	⇑*iP*	**Pb**	**06 53 03.5**	**-0.6**
GPS3				*i* S	**Sg**	**06 53 16.8**	**+0.6**
GPS2	**Hotel Rincn d**	**0.90**	**69**	⇑*iP*	**Pb**	**06 53 03.6**	**-0.6**
GPS1	**Guardaparques**	**0.91**	**68**	⇑*iP*	**Pb**	**06 53 03.8**	**-0.6**
BUAI	**Buenos Aires**	**0.93**	**62**	*i* P	**Pb**	**06 53 05.0**	**-0.4**
LIM1	**Limonal**	**0.97**	**72**	*i* P	**Pb**	**06 53 04.7**	**-0.8**
GUAB	**Guayabo de Bag**	**1.00**	**74**	*i* P	**Pb**	**06 53 05.0**	**-1.0**
COLC	**Colonia**	**1.01**	**76**	*i* P	**Pg**	**06 53 08.1**	**+1.2**
CUI	**Cuipilapa**	**1.05**	**77**	*eP*	**Pb**	**06 53 06.0**	**-0.7**
CUI				*i* S	**Sg**	**06 53 21.5**	**+0.2**
HORNC	**Hornillas**	**1.05**	**74**	*i* P	**Pb**	**06 53 05.1**	**-1.7**
HORNC				*i* S	**Sg**	**06 53 21.2**	**-0.1**
ACAL	**Aguas Claras**	**1.17**	**80**	⇑*iP*	**Pn**	**06 53 07.8**	**-0.8**
PTEN	**Parque Tenorio**	**1.23**	**76**	*i* P	**Pn**	**06 53 08.9**	**-0.6**
JTS	**Las Juntas de**	**1.24**	**96**	P	**Pn**	**06 53 08.5**	**-1.1**
	46nm,0.3s,baz=358,slow=23,SNR=221						
JTS				S	**Sn**	**06 53 26.7**	**+0.9**
	58nm,0.3s,baz=9.5,slow=18,SNR=14						
JTS	**Las Juntas de**	**1.24**	**96**	*eP*	**Pn**	**06 53 08.5**	**-1.1**
CASO	**Castillo**	**1.44**	**90**	*i* P	**Pn**	**06 53 12.0**	**-0.4**
ARE1	**Arenal 1**	**1.46**	**89**	*eP*	**Pn**	**06 53 12.7**	**+0.1**
CEDE	**Laguna Cedeo**	**1.48**	**88**	*eP*	**Pn**	**06 53 12.2**	**-0.7**
FORC	**Fortuna**	**1.51**	**88**	*i* P	**Pn**	**06 53 13.1**	**-0.2**
JACO	**JACO, Garabito**	**1.70**	**116**	*eP*	**Pb**	**06 53 17.7**	**-0.2**
COVE	**Coope Vega, Sa**	**1.79**	**81**	*eP*	**Pn**	**06 53 16.4**	**-0.8**
HDC	**Heredia**	**2.10**	**101**	*eP*	**Pb**	**06 53 24.1**	**-0.7**
LCR2	**La Lucha 2**	**2.27**	**107**	*eP*	**Pb**	**06 53 25.9**	**-1.9**
RIMA	**Rio Macho**	**2.39**	**106**	*eP*	**Pn**	**06 53 26.4**	**+0.7**
CDM	**Cerro de Muert**	**2.55**	**110**	*eP*	**Pb**	**06 53 31.1**	**-1.6**
DRK0	**Durika**	**3.13**	**111**	*eP*	**Pn**	**06 53 36.6**	**+0.8**
RIOS	**Rincon, Osa**	**3.16**	**123**	*eP*	**Pn**	**06 53 37.5**	**+1.5**
CMIG	**Matias Romero**	**10.72**	**309**	P	Pn	06 55 30.6	+11
	0.1nm,0.3s,baz=99,slow=13,SNR=3.5						
TXAR	**Lajitas Array**	**24.91**	**322**	P	**P**	**06 58 09.6**	**+0.3**
	0.6nm,0.6s,baz=138,slow=9.6,SNR=11						
PDAR	**Pinedale Array**	**38.12**	**332**	P	**P**	**07 00 03.9**	**-1.6**
	0.2nm,0.6s,baz=120,slow=13,SNR=2.6						
NVAR	**Mina Array Bea**	**40.02**	**320**	P	**P**	**07 00 22.8**	**+1.4**
	0.6nm,0.7s,baz=133,slow=7.5,SNR=6.7						
TORD	**Torodi Ar. Bea**	**85.65**	**77**	P	P	07 05 14.9	-11
	0.2nm,0.7s,baz=289,slow=4.4,SNR=3.0						

IDC 30 06:54:12.0±1.2, 5°.29N×61°.50E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/40, mbtmp3.8/4, MS3.5/2, Ms1 3.5/2, ms1mx2.7/51, Error ellipse: s-maj=71.6km s-min=27.8km az=8.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**38.80**	**67**	P	P	07 01 38.9	-0.1
	0.5nm,0.3s,baz=257,slow=10,SNR=4.5						
LSZ	**Lusaka**	**38.82**	**238**	LR	LR	07 15 53.2	
	comp=Z,51nm,19.3s,baz=240,slow=34						
MATP	**Matopo**	**41.28**	**231**	LR	LR	07 16 28.6	
	comp=Z,75nm,19.1s,baz=28,slow=32						
TORD	**Torodi Ar. Bea**	**59.44**	**282**	P	P	07 04 17.1	-0.1
	0.6nm,0.9s,baz=102,slow=9.1,SNR=3.1						
WRA	**Warramunga Arr**	**75.79**	**112**	P	P	07 06 00.5	0.0
	1.3nm,0.9s,baz=294,slow=4.9,SNR=8.6						
ASAR	**Alice Springs**	**76.14**	**116**	P	P	07 06 02.6	+0.1
	0.8nm,0.8s,baz=292,slow=5.1,SNR=6.7						

*IDC **30** 06:59:54.2±1.0, 35°.63N×96°.74W, h0km, mb3.2/1, mb1 3.8/6, mb1mx3.6/39, mbtmp3.6/6, ML3.7/5, Error ellipse: s-maj=16.1km s-min=11.6km az=149.0*
*NEIC **30** 06:59:55.9±1.3, 35°.54N±0°.04×96°.75W±0°.05, h8km±8km, Error ellipse: s-maj=6.7km s-min=5.1km az=220.0*
*ANF **30** 06:59:56.1±0.6, 35°.53N×96°.75W, h8km±4km, ML4.7/16, Error ellipse: s-maj=3.8km s-min=2.7km az=171.0*
*NEIC **30** 06:59:56.3, 35°.54N×96°.78W, h10km, Moment Tensor Solution. Moment tensor: Scale 10^14^Nm; Mrr-0.45; Mθθ3.19; Mϕϕ-2.74; Mrθ0.66; Mθϕ0.88; Mϕr0.12; Fault plane solution: M0 3.18000×10^14^ NP1:ϕs36.35000°, δ83.52000°, λ172.59000°. NP2:ϕs127.19000°, δ82.64000°, λ6.53000°. Principal axes: T 3.4296, Plg10.0000°, Azm352.0000°; N -0.5668, Plg80.0000°, Azm175.0000°; P -2.8628, Plg1.0000°, Azm82.0000°;*
*TUL **30** 06:59:56±1.3, 35°.54N±0°.04×96°.77W±0°.05, h7km±7km, Mwr3.6/13(NEIC) Error ellipse: s-maj=6.0km s-min=4.9km az=212.0*

ISC 30 06:59:56.2±0.8, 35°.58N±0°.02×96°.77W±0°.02, h14km±6km, n177, σ1°48/203, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK011	**Prague**	**0.11**	**143**		**Pg**	**06 59 58.6**	**-0.9**
OK030	**Cody Creek RV**	**0.35**	**358**	Pg	**Pg**	**07 00 03.9**	**+0.5**
OK030				Sg	**Sg**	**07 00 09.8**	**+1.6**
OK005	**Luther M Schoo**	**0.35**	**283**		**Pg**	**07 00 03.7**	**+0.4**
OK031	**S. Brethren Rd**	**0.38**	**351**		**Pg**	**07 00 04.4**	**+0.5**
OK031				Sg	**Sg**	**07 00 10.6**	**+1.4**
OK001	**Jones High Sch**	**0.42**	**268**	Pg	**Pg**	**07 00 04.2**	**-0.5**
W35A	**Tecumseh**	**0.43**	**192**	Pg	**Pg**	**07 00 03.8**	**-0.9**
W35A				Sg	**Sg**	**07 00 09.3**	**-1.3**
OK025	**Westminster Rd**	**0.46**	**271**	Pg	**Pg**	**07 00 05.0**	**-0.4**
OK009	**Oakdale Elemen**	**0.53**	**271**		**Pg**	**07 00 06.1**	**-0.5**
OKCSW	**OKLAHOMA CITY**	**0.57**	**253**		**Pg**	**07 00 06.7**	**-0.7**
OKCFA	**Oklahoma City**	**0.58**	**254**		**Pg**	**07 00 06.9**	**-0.7**
QUOK	**Quay**	**0.60**	**5**		**Pg**	**07 00 08.1**	**+0.3**
QUOK				Sg	**Sb**	**07 00 17.3**	**+0.6**
OK029	**Liberty Lake**	**0.60**	**292**		**Pg**	**07 00 07.7**	**-0.3**
FNO	**Franklin**	**0.61**	**238**		**Pg**	**07 00 07.2**	**-0.8**
BCOK	**Bluff Creek, N**	**0.69**	**277**	Pg	**Pg**	**07 00 09.0**	**-0.6**
TUL1	**Leonard**	**0.86**	**67**	P	**Pg**	**07 00 12.4**	**-0.5**
	baz=245,SNR=96						
TUL1				S	**Sb**	**07 00 24.6**	**+0.3**
	baz=245						
TUL1	**Leonard**	**0.86**	**67**	Pg	**Pg**	**07 00 12.4**	**-0.5**
CROK	**Carrier**	**1.35**	**314**	Pn	**Pn**	**07 00 21.2**	**+0.6**
T35A	**Sooner Cattle**	**1.35**	**9**		**Pn**	**07 00 21.0**	**+0.4**
X37A	**Clayton**	**1.51**	**130**	Pn	**Pn**	**07 00 23.2**	**+0.4**
KAN13	**South Haven SW**	**1.54**	**338**		**Pn**	**07 00 24.4**	**+1.2**
GC02	**Grant County #**	**1.55**	**326**		**Pn**	**07 00 24.4**	**+1.1**
KAN14	**Manchester OK**	**1.68**	**325**		**Pn**	**07 00 26.5**	**+1.4**
KAN01	**Argonia South**	**1.77**	**333**		**Pn**	**07 00 27.6**	**+1.3**
KS20	**Mayfield South**	**1.77**	**339**		**Pn**	**07 00 27.5**	**+1.2**
KAN05	**Bluff City Nor**	**1.77**	**330**		**Pn**	**07 00 27.7**	**+1.4**
WMOK	**Wichita Mounta**	**1.85**	**244**	P	**Pn**	**07 00 27.9**	**+0.4**
	baz=64						
WMOK				S	**Sb**	**07 00 52.8**	**+0.1**
	baz=64						
WMOK	**Wichita Mounta**	**1.85**	**244**	Pn	**Pn**	**07 00 28.3**	**+0.9**
KS21	**Milan North St**	**1.85**	**337**		**Pn**	**07 00 28.8**	**+1.3**
KAN10	**Anthony SW Sta**	**1.88**	**326**		**Pn**	**07 00 29.1**	**+1.3**
KAN08	**Anthony NE Sta**	**1.91**	**330**		**Pn**	**07 00 30.2**	**+1.9**
U32A	**Winter Ranch,**	**1.98**	**295**		**Pn**	**07 00 31.2**	**+2.0**
KAN12	**Harper NE Stat**	**1.98**	**330**		**Pn**	**07 00 30.7**	**+1.5**
U38A	**Gravette**	**2.12**	**65**		**Pn**	**07 00 32.6**	**+1.5**
Z35A	**Perchaven, San**	**2.27**	**190**		**Pn**	**07 00 34.3**	**+1.1**
HHAR	**Hobbs**	**2.40**	**72**	Pn	**Pn**	**07 00 36.2**	**+1.2**
W39A	**Magazine**	**2.47**	**98**	P	**Pn**	**07 00 36.7**	**+0.8**
	baz=279,SNR=165						
W39A				S	**Sn**	**07 01 07.9**	**+2.1**
	baz=279						
W39A	**Magazine**	**2.47**	**98**		**Pn**	**07 00 36.6**	**+0.7**
Z38A	**Mt. Pleasant**	**2.74**	**147**		**Pn**	**07 00 40.1**	**+0.4**
MIAR	**Mount Ida**	**2.81**	**111**	P	**Pn**	**07 00 41.6**	**+1.0**
	baz=292,SNR=56						
MIAR				S	**Sn**	**07 01 16.2**	**+1.8**
	baz=292						
MIAR	**Mount Ida**	**2.81**	**111**	Pn	**Pn**	**07 01 48.8**	**+1.1**
R32A	**Long Quarter,**	**3.24**	**332**		**Pn**	**07 00 48.1**	**+1.6**
U40A	**Yellville**	**3.27**	**75**	P	**Pn**	**07 00 47.7**	**+0.7**
	baz=257,SNR=74						
U40A				S	**Sn**	**07 01 28.0**	**+2.4**
	baz=257						
U40A	**Yellville**	**3.27**	**75**	Pn	**Pn**	**07 00 48.0**	**+1.0**
X40A	**Basin Creek Fa**	**3.41**	**107**	Pn	**Pn**	**07 00 49.6**	**+0.8**
	baz=289,SNR=22						
X40A				Pb	**Pb**	**07 00 57.2**	**+0.9**
	baz=289						
X40A	**Basin Creek Fa**	**3.41**	**107**		**Pn**	**07 00 49.8**	**+0.9**
S39A	**Bolivar**	**3.48**	**52**	Pn	**Pn**	**07 01 51.6**	**+1.7**
KSU1	**Kansas State U**	**3.52**	**2**	Pn	**Pn**	**07 00 51.1**	**+0.7**
	baz=182,SNR=18						
KSU1				Pb	**Pb**	**07 00 59.9**	**+1.7**
	baz=182						
KSU1				Sb	**Sg**	**07 01 46.3**	**-2.9**
	baz=182						
KSU1	**Kansas State U**	**3.52**	**2**	Pn	**Pn**	**07 00 50.7**	**+0.3**
WLAR	**White Oak Lake**	**3.56**	**121**	Pn	**Pn**	**07 00 51.6**	**+0.8**
WHTX	**Lake Whitney,**	**3.62**	**189**	Pn	**Pn**	**07 00 51.8**	**0.0**
	baz=9.1						
WHTX				Pb	**Pb**	**07 01 00.2**	**+0.3**
	baz=9.1						
WHTX	**Lake Whitney,**	**3.62**	**189**	Pn	**Pn**	**07 00 52.1**	**+0.4**
237A	**Washetta, Mont**	**3.65**	**167**	Pn	**Pn**	**07 00 52.5**	**+0.2**
WHAR	**Wooly Hollow**	**3.67**	**93**	Pn	**Pn**	**07 00 53.4**	**+1.0**
UALR	**University of**	**3.71**	**101**		**Pn**	**07 00 54.0**	**+1.0**
W41B	**Gary Mavity, V**	**3.72**	**95**	Pn	**Pn**	**07 00 53.8**	**+0.8**
	baz=277,SNR=31						
W41B				Pb	**Pb**	**07 01 02.5**	**+1.0**
	baz=277						
W41B				S	**Sn**	**07 01 39.0**	**+2.4**
	baz=277						
W41B	**Gary Mavity, V**	**3.72**	**95**		**Pn**	**07 00 54.2**	**+1.1**
ABTX	**Abilene, Hawle**	**3.79**	**220**	P	**Pn**	**07 00 54.5**	**+0.4**
	baz=38,SNR=13						
ABTX	**Abilene, Hawle**	**3.79**	**220**		**Pn**	**07 00 54.5**	**+0.4**
FCAR	**Ozark Folk Cen**	**3.79**	**84**		**Pn**	**07 00 54.5**	**+0.4**
MGMO	**Mountain Grove**	**3.96**	**65**		**Pn**	**07 00 58.0**	**+1.6**
CBKS	**Cedar Bluff**	**4.01**	**325**	P	**Pn**	**07 00 58.5**	**+1.3**
	baz=143,SNR=5.5						
CBKS				Sn	**Sn**	**07 01 45.0**	**+1.1**
	baz=143						
CBKS				Sb	**Sg**	**07 02 01.4**	**-3.5**
	baz=143						
CBKS	**Cedar Bluff**	**4.01**	**325**		**Pn**	**07 00 58.3**	**+1.2**
Z41A	**Richland Creek**	**4.01**	**124**	P	**Pn**	**07 00 57.6**	**+0.5**
	baz=306						
Z41A	**Richland Creek**	**4.01**	**124**		**Pn**	**07 00 57.1**	**0.0**
AMTX	**Amarillo**	**4.08**	**262**	P	**Pn**	**07 00 59.3**	**+1.2**
	baz=79						
AMTX				Sb	**Sb**	**07 02 01.1**	**+4.2**
	baz=79						
AMTX	**Amarillo**	**4.08**	**262**		**Pn**	**07 00 59.6**	**+1.4**
NATX	**Nacogdoches**	**4.19**	**155**	S	**Sn**	**07 01 46.5**	**-1.9**
	baz=336						
NATX	**Nacogdoches**	**4.19**	**155**		**Pn**	**07 01 00.0**	**+0.4**
CCAR	**Cane Creek**	**4.43**	**110**	Pn	**Pn**	**07 01 03.6**	**+0.6**
R40A	**Maddies Statio**	**4.51**	**52**	Pn	**Pn**	**07 01 05.5**	**+1.5**
LCAR	**Lake Charles**	**4.59**	**82**		**Pn**	**07 01 05.0**	**0.0**
P38A	**Dawn**	**4.79**	**31**	Pn	**Pn**	**07 01 09.3**	**+1.5**
T42A	**Van Buren**	**4.81**	**71**	Pn	**Pn**	**07 01 08.7**	**+0.6**
435B	**Jarrell**	**4.83**	**188**	P	**Pn**	**07 01 08.0**	**-0.3**
	baz=8.0,SNR=6.9						
435B				Sb	**Sb**	**07 02 23.9**	**+5.4**
	baz=8.0						
435B	**Jarrell**	**4.83**	**188**	Pn	**Pn**	**07 01 08.2**	**-0.2**
X43A	**Marvell**	**4.94**	**101**	Pn	**Pn**	**07 01 10.2**	**+0.2**
HBAR	**Harrisburg**	**4.98**	**88**	Pn	**Pn**	**07 01 11.2**	**+0.8**
CCM	**Cathedral Cave**	**5.08**	**59**	P	**Pn**	**07 01 12.8**	**+1.0**
	baz=242						
CCM				S	**Sn**	**07 02 11.9**	**+1.8**
	baz=242						
CCM	**Cathedral Cave**	**5.08**	**59**	Pn	**Pn**	**07 01 13.0**	**+1.2**
N33A	**J Bar K, Exete**	**5.18**	**354**	Pn	**Pn**	**07 01 13.5**	**+0.3**
MSTX	**Muleshoe**	**5.19**	**254**	Pn	**Pn**	**07 01 13.9**	**+0.4**
PBMO	**Poplar Bluff**	**5.27**	**75**		**Pn**	**07 01 15.2**	**+0.8**
143A	**Socs Landing,**	**5.29**	**121**		**Pn**	**07 01 15.4**	**+0.7**
N35A	**Tabor**	**5.35**	**9**		**Pn**	**07 01 16.6**	**+1.0**
P40A	**Paris**	**5.44**	**42**		**Pn**	**07 01 18.0**	**+1.2**
MET	**Memphis--Engin**	**5.61**	**93**	Pn	**Pn**	**07 01 19.1**	**+0.1**
FVM	**French Village**	**5.63**	**63**		**Pn**	**07 01 20.5**	**+1.1**
HKT	**Hockley**	**5.67**	**172**	Pn	**Pn**	**07 01 19.6**	**-0.2**
JCT	**Junction City**	**5.69**	**207**	P	**Pn**	**07 01 19.5**	**-0.7**
	baz=26,SNR=20						
JCT				Sb	**Sb**	**07 02 50.0**	**+6.8**
	baz=26						
JCT	**Junction City**	**5.69**	**207**	Pn	**Pn**	**07 01 20.3**	**+0.1**
KSCO	**Kaye Shedlock'**	**5.79**	**308**	P	**Pn**	**07 01 24.3**	**+2.6**
	baz=125						
KSCO	**Kaye Shedlock'**	**5.79**	**308**		**Pn**	**07 01 22.7**	**+0.9**
N38A	**Joes South For**	**5.91**	**27**		**Pn**	**07 01 23.7**	**+0.6**
BGNE	**Belgrade**	**5.92**	**350**	Pn	**Pn**	**07 01 23.7**	**+0.3**
OXF	**Oxford**	**6.13**	**98**	P	**Pn**	**07 01 26.5**	**+0.3**
	baz=282,SNR=26						
OXF	**Oxford**	**6.13**	**98**	Pn	**Pn**	**07 01 26.7**	**+0.5**
Y45A	**Yeager Farm, C**	**6.19**	**104**	Pn	**Pn**	**07 01 26.9**	**-0.2**
W45A	**Hickory Valley**	**6.21**	**92**	Pn	**Pn**	**07 01 27.3**	**0.0**
T25A	**Trinidad**	**6.36**	**286**	P	**Pn**	**07 01 32.2**	**+2.6**
	baz=102						
T25A				Sb	**Sg**	**07 03 13.8**	**-6.5**
	baz=102						
L34A	**Svendsen Farm,**	**6.39**	**3**	Pn	**Pn**	**07 01 30.6**	**+0.9**
CPRX	**Cap Rock**	**6.40**	**249**	Pn	**Pn**	**07 01 30.3**	**+0.2**
S44A	**Carbondale**	**6.40**	**69**	Pn	**Pn**	**07 01 29.4**	**-0.6**
SIUC	**Southern Illin**	**6.43**	**68**	Pn	**Pn**	**07 01 30.2**	**-0.2**
OGNE	**Ogallala**	**6.77**	**324**	Pn	**Pn**	**07 01 36.1**	**+1.0**
Q44A	**Meyer Farm, Va**	**7.02**	**59**	Pn	**Pn**	**07 01 39.1**	**+0.7**
146A	**Union**	**7.04**	**112**	Pn	**Pn**	**07 01 38.7**	**0.0**
P43A	**Skaggs, Pawnee**	**7.04**	**53**	Pn	**Pn**	**07 01 39.7**	**+1.0**
PLAL	**Pickwick Lake**	**7.13**	**92**		**Pn**	**07 01 39.4**	**-0.6**
WVT	**Waverly**	**7.28**	**83**	P	**Pn**	**07 01 41.5**	**-0.5**
	baz=268						
WVT				S	**Sn**	**07 03 02.3**	**-2.1**
	baz=268						
WVT	**Waverly**	**7.28**	**83**	Pn	**Pn**	**07 01 41.3**	**-0.7**
SDCO	**Great Sand Dun**	**7.34**	**290**	P	**Pn**	**07 01 44.5**	**+1.3**
	baz=105,SNR=32						
SDCO	**Great Sand Dun**	**7.34**	**290**	Pn	**Pn**	**07 01 44.0**	**+0.8**
Q24A	**Divide**	**7.49**	**299**	P	**Pn**	**07 01 46.4**	**+1.2**
	baz=115						
Q24A				S	**Sn**	**07 03 10.0**	**0.0**
	baz=115						
833A	**Chaparral WMA,**	**7.57**	**198**

*NEIC **30** 07:04:26.3±1.8,5˚.6N±0˚.1×61˚.3E±0˚.1, h10km±1km, mb4.7/24, Error ellipse: s-maj=22.4km s-min=19.8km az=228.0*

*GCMT **30** 07:04:27.3±0.3,5˚.74N±0˚.02×61˚.15E±0˚.03, h12km±1km, MW4.8/84, Moment Tensor Solution. s18,c21; s84,c109; Duration: 0 Moment tensor: Scale 10^16 Nm: Mrr=1.65±.13; Mθθ 1.44±.09; Mφφ 0.20±.07; Mrθ 0.86±.23; Mrφ -0.39±.05; Mθφ 0.81±.27; Best double couple: M=1.94400×10^16 NP1: φs 124.00000°, δ 37.00000°, λ -53.00000°. NP2: φs 260.00000°, δ 61.00000°, λ -115.00000°. Principal axes: T 1.6890, Plg 13.0000°, Azm 8.0000°; N 0.5080, Plg 22.0000°, Azm 273.0000°; P -2.1980, Plg 65.0000°, Azm 126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 07:04:27.7±0.6, 5˚.63N±0˚.10×61˚.34E±0˚.10, h14km, n115, σ 1§27/100, mb4.5/39, MS3.7/28, 11C-7D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOCY	**Socotra**	**9.76**	**312**	P	Pn	07 06 52.8	+4.9
SHAO	**Shalim**	**13.53**	**336**	P	**Pn**	**07 07 42.3**	**+3.0**
ABTO	**Aybut**	**14.07**	**327**	P	**Pn**	**07 07 49.4**	**+2.6**
WHFO	**Wadi Hawf**	**14.29**	**329**	P	**Pn**	**07 07 52.9**	**+3.2**
	SNR=5.5						
WHFO				P	**Pn**	**07 07 52.9**	**+3.2**
	SNR=5.5						
DQM	**DQM**	**14.69**	**346**	P	**Pn**	**07 07 58.3**	**+3.1**
DQM				P	**Pn**	**07 07 58.3**	**+3.1**
MHTO	**MHTO**	**15.62**	**348**	P	**P**	**07 08 09.8**	**-1.8**
	SNR=20						
MHTO				P	**P**	**07 08 09.8**	**-1.8**
	SNR=20						
JLN	**Jalan Bani Buh**	**16.54**	**354**	P	**P**	**07 08 21.9**	**0.0**
	SNR=6.7						
JLN				P	**P**	**07 08 21.9**	**0.0**
	SNR=6.7						
WSAR	**Wadi Sarin**	**17.71**	**352**	P	**P**	**07 08 35.5**	**+0.6**
	0.3nm,0.3s,baz=188,slow=7.1,SNR=4.6						
WSAR				LR	LR	07 13 49.3	
	comp=Z,344nm,21.8s,baz=200,slow=32						
ATD	**Arta Tunnel**	**19.20**	**289**	LR	LR	07 15 06.0	
	comp=Z,89nm,21.5s,baz=34,slow=34						
PALK	**Pallekele**	**19.30**	**84**	LR	LR	07 14 32.6	
	comp=Z,206nm,21.4s,baz=11,slow=31						
UOSS	**Minazif**	**19.83**	**346**	P	**P**	**07 08 56.0**	**-2.2**
UOSS				IAmb	IAmb	07 09 15.2	
	comp=Z,38nm,1.2s						
RAYN	**Ar Rayn**	**23.44**	**321**	P	**P**	**07 09 35.4**	**-1.5**
RAYN				IAmb	IAmb	07 09 37.9	
	comp=Z,13nm,0.9s						
RER	**Riviere de l'E**	**27.18**	**191**	P	**P**	**07 10 10.8**	**-0.3**
HRA	**Herat**	**28.63**	**2**	P	**P**	**07 10 22.5**	**-1.6**
KBL	**Kabul**	**29.64**	**13**	P	**P**	**07 10 31.5**	**-1.6**
MBAR	**Mbarara**	**31.18**	**260**	LR	LR	07 21 25.9	
	comp=Z,96nm,20.1s,baz=58,slow=33						
GEYT	**Alibeck**	**32.29**	**355**	LR	LR	07 24 11.6	
	comp=Z,94nm,21.6s,baz=195,slow=37						
GAR	**Garm**	**34.20**	**12**	P	**P**	**07 11 11.1**	**-1.9**
GAR				IAmb	IAmb	07 11 22.2	
	comp=Z,18nm,1.4s						
DRK	**Karamyk**	**35.00**	**14**	P	**P**	**07 11 21.9**	**+1.8**
ARSB	**Arslanbob**	**37.04**	**15**	P	**P**	**07 11 36.7**	**-0.6**
ARSB				IAmb	IAmb	07 11 44.9	
	comp=Z,9.6nm,1.3s						
PSI	**Prapat**	**37.58**	**93**	LR	LR	07 25 05.5	
	comp=Z,77nm,20.6s,baz=270,slow=33						
RPSI	**Rantau Prapat**	**37.59**	**93**	P	**P**	**07 11 42.8**	**+0.6**
KK31	**Karatay Array**	**38.20**	**11**	P	**P**	**07 11 46.7**	**-0.2**
KKAR	**Karatay Array**	**38.20**	**11**	P	**P**	**07 11 46.8**	**-0.1**
AAK	**Ala-Archa**	**38.66**	**16**	P	**P**	**07 11 52.9**	**+1.9**
	comp=Z,1.6nm,0.6s,baz=182,slow=4.6,SNR=5.8						
AAK	**Ala-Archa**	**38.66**	**16**	P	**P**	**07 11 49.9**	**-1.2**
CMAR	**Chiang Mai Arr**	**38.82**	**67**	P	**P**	**07 11 54.8**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=253,slow=9.3,SNR=4.2						
CMAR				LR	LR	07 25 49.7	
	comp=Z,53nm,21.7s,baz=330,slow=33						
CMAR	**Chiang Mai Arr**	**38.82**	**67**	P	**P**	**07 11 51.3**	**-1.2**
KBZ	**Khabaz**	**41.28**	**340**	P	**P**	**07 12 12.7**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=153,slow=11,SNR=2.3						
KVAR	**Kislovodsk Arr**	**41.55**	**340**	LR	LR	07 29 15.4	
	comp=Z,156nm,20.4s,baz=90,slow=36						
BRTR	**Keskin Array B**	**42.14**	**328**	P	**P**	**07 12 20.0**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=146,slow=9.2,SNR=9.8						
ABKAR	**Akbulak array**	**43.49**	**359**	P	**P**	**07 12 30.9**	**+0.4**
ABKAR				IAmb	IAmb	07 12 38.4	
	comp=Z,16nm,0.9s						
AKTO	**Aktyubinsk**	**44.75**	**357**	LR	LR	07 31 35.7	
	comp=Z,134nm,22.0s,baz=160,slow=36						
MKAR	**Makanchi Array**	**44.82**	**20**	P	**P**	**07 12 41.1**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=216,slow=9.7,SNR=4.0						
MKAR				LR	LR	07 33 13.3	
	comp=Z,76nm,19.6s,baz=210,slow=38						
MKAR	**Makanchi Array**	**44.82**	**20**	P	**P**	**07 12 40.6**	**-0.6**
BOSA	**Boshof**	**48.64**	**224**	LR	LR	07 31 59.1	
	comp=Z,168nm,19.1s,baz=28,slow=34						
CFR	**Carcaliu**	**48.87**	**329**	⇓P	**P**	**07 13 13.4**	**+0.5**
VASR	**Vaslui**	**50.06**	**330**	⇓P	P	07 13 14.9	-7.1
VRI	**Vrincioaia**	**50.06**	**329**	⇑P	**P**	**07 13 23.8**	**+1.7**
PLOR	**Plostina**	**50.09**	**329**	⇑P	**P**	**07 13 24.0**	**+1.7**
MLR	**Muntele Rosu**	**50.22**	**328**	⇓P	**P**	**07 13 25.3**	**+1.8**
TESR	**Tescani**	**50.54**	**329**	⇑P	**P**	**07 13 25.9**	**+0.3**
VOIR		**50.66**	**327**	⇑P	**P**	**07 13 27.0**	**+0.3**
ARU	**Arti**	**50.71**	**358**	LR	LR	07 35 26.1	
	comp=Z,62nm,20.9s,baz=185,slow=37						
ARU	**Arti**	**50.71**	**358**	P	**P**	**07 13 26.4**	**-0.3**
ARU				IAmb	IAmb	07 13 33.8	
	comp=Z,13nm,0.9s						
DOPR	**Dopca**	**50.83**	**328**	⇑P	**P**	**07 13 28.0**	**+0.1**
ARR	**Arges**	**50.84**	**327**	⇓P	**P**	**07 13 27.8**	**-0.2**
BIZ	**Bicaz**	**51.10**	**329**	⇑P	**P**	**07 13 30.7**	**+0.8**
ZALV	**Zalesovo Beam**	**51.82**	**17**	P	**P**	**07 13 34.8**	**-0.4**
	comp=Z,0.8nm,0.8s,baz=229,slow=5.7,SNR=3.7						
ZALV				LR	LR	07 35 56.7	
	comp=Z,89nm,21.2s,baz=223,slow=36						
ZALV	**Zalesovo Beam**	**51.82**	**17**	P	**P**	**07 13 33.3**	**-1.9**
GZR	**Gura Zlata**	**51.87**	**326**	⇓P	**P**	**07 13 37.6**	**+1.8**
BURAR	**Bucovina Array**	**52.01**	**330**	⇑P	**P**	**07 13 37.4**	**+0.6**
AKASG	**Malin Array Be**	**52.33**	**335**	P	**P**	**07 13 38.0**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=130,slow=7.0,SNR=5.9						
AKASG				LR	LR	07 37 50.4	
	comp=Z,56nm,20.2s,baz=60,slow=38						
BZS	**Buzias**	**52.66**	**326**	⇓P	**P**	**07 13 41.2**	**-0.3**
DRGR		**52.78**	**327**	⇓P	**P**	**07 13 42.8**	**+0.4**
SIRR	**Siria**	**53.03**	**326**	⇑P	**P**	**07 13 43.5**	**-0.8**
OBN	**Obninsk**	**53.21**	**343**	LR	LR	07 38 17.5	
	comp=Z,20nm,18.2s,baz=156,slow=38						
KIRV	**Kirov**	**53.63**	**352**	LR	LR	07 38 44.0	
	comp=Z,96nm,19.1s,baz=157,slow=38						
KOLS	**Kolonicke sedl**	**54.36**	**329**	*eP*	**P**	**07 13 55.0**	**+1.0**
CRVS	**Cervenica-Dubn**	**54.75**	**329**	*eP*	**P**	**07 13 57.0**	**+0.2**
PSZ	**Piszkesteto**	**54.98**	**327**	⇑P	**P**	**07 13 58.2**	**-0.4**
PSZ	**Piszkesteto**	**54.98**	**327**	P	**P**	**07 13 56.9**	**-1.7**
PSZ				IAmb	IAmb	07 13 59.0	
	comp=Z,5.6nm,1.0s						
VYHS	**Vyhne**	**55.89**	**327**	*eP*	**P**	**07 14 04.5**	**-0.6**
LANS	**Liptovska Anna**	**55.94**	**328**	*eP*	**P**	**07 14 05.8**	**+0.3**
SONM	**Songino Array**	**56.93**	**35**	P	**P**	**07 14 13.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=247,slow=3.0,SNR=1.8						
SONM				LR	LR	07 39 27.3	
	comp=Z,100nm,18.3s,baz=25,slow=37						
SOKA	**Soboth**	**57.05**	**324**	*eP*	**P**	**07 14 12.7**	**-0.8**
	comp=Z,2.0nm,0.7s						
ARSA	**Arzberg**	**57.06**	**324**	*eP*	**P**	**07 14 13.6**	**+0.2**
	comp=Z,5.4nm,1.1s						
CONA	**Conrad Observa**	**57.23**	**325**	*eP*	**P**	**07 14 14.6**	**0.0**
	comp=Z,5.0nm,0.9s						
OBKA	**Obir**	**57.25**	**323**	*eP*	**P**	**07 14 14.5**	**-0.4**
	comp=Z,5.3nm,1.1s						
SUW	**Suwalki**	**57.29**	**334**	P	**P**	**07 14 12.9**	**-1.9**
MORC	**Moravsky Berou**	**57.33**	**328**	⇑P	**P**	**07 14 14.8**	**-0.5**
MORC	**Moravsky Berou**	**57.33**	**328**	*eP*	**P**	**07 14 15.0**	**-0.3**
MORC	**Moravsky Berou**	**57.33**	**328**	P	**P**	**07 14 13.9**	**-1.4**
MORC				IAmb	IAmb	07 14 28.3	
	comp=Z,10nm,1.3s						
KLMR	**Klimovskoe**	**57.51**	**348**	*eP*	**P**	**07 14 15.0**	**-1.3**
KLMR				AMP		07 14 23.3	
	comp=Z,16nm,1.2s						
KRUC	**Moravsky**	**57.55**	**327**	*eP*	**P**	**07 14 16.4**	**-0.4**
VRAC	**Vranov**	**57.57**	**327**	⇑P	**P**	**07 14 17.4**	**+0.4**
VRAC	**Vranov**	**57.57**	**327**	*eP*	**P**	**07 14 17.0**	**0.0**
MYKA	**Terra Mystica**	**57.85**	**323**	*eP*	**P**	**07 14 18.9**	**-0.2**
	comp=Z,6.7nm,1.0s						
KRLC	**Kraliky**	**57.90**	**328**	*eP*	**P**	**07 14 18.5**	**-0.8**
MOA	**Molln**	**58.10**	**324**	*eP*	**P**	**07 14 20.7**	**0.0**
	comp=Z,7.0nm,0.8s						
KBA	**Koelnbreinsper**	**58.25**	**323**	*eP*	**P**	**07 14 21.7**	**-0.3**
	comp=Z,6.9nm,1.2s						
DPC	**Dobruska-Polom**	**58.30**	**328**	*eP*	**P**	**07 14 21.9**	**-0.2**
DPC				*ex*	x	07 14 28.6	
ABTA	**Abfaltersbach**	**58.59**	**323**	*eP*	**P**	**07 14 23.9**	**-0.4**
	comp=Z,6.6nm,1.1s						
GERES	**GERESS Array B**	**58.93**	**325**	P	**P**	**07 14 25.0**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=120,slow=7.9,SNR=4.6						
GERES				LR	LR	07 40 31.7	
	comp=Z,46nm,18.6s,baz=120,slow=37						
KHC	**Kasperske Hory**	**59.15**	**325**	*eP*	**P**	**07 14 26.3**	**-1.7**
KHC				*ex*	x	07 14 33.2	
KHC	**Kasperske Hory**	**59.15**	**325**	P	**P**	**07 14 26.8**	**-1.2**
KHC				IAmb	IAmb	07 14 34.2	
	comp=Z,5.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**59.21**	**282**	P	**P**	**07 14 29.1**	**+0.1**
	comp=Z,3.1nm,1.0s,baz=97,slow=5.4,SNR=11						
TORD				PcP	**PcP**	**07 15 17.9**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=81,slow=5.6,SNR=3.0						
TORD				LR	LR	07 38 51.5	
	comp=Z,46nm,18.2s,baz=315,slow=35						
TORD	**Torodi Ar. Bea**	**59.21**	**282**	P	**P**	**07 14 29.8**	**+0.8**
WTTA	**Wattenberg**	**59.36**	**323**	*eP*	**P**	**07 14 28.9**	**-0.8**
	comp=Z,6.7nm,0.9s						
WATA	**Walderalm**	**59.43**	**323**	*eP*	**P**	**07 14 28.9**	**-1.2**
	comp=Z,5.7nm,1.3s						
SQTA	**Sank Quirin**	**59.60**	**323**	*eP*	**P**	**07 14 30.4**	**-0.9**
	comp=Z,5.8nm,0.9s						
MOTA	**Moosalm**	**59.72**	**323**	*eP*	**P**	**07 14 31.0**	**-1.2**
	comp=Z,6.2nm,1.0s						
CLL	**Collm**	**60.59**	**327**	*eP*	**P**	**07 14 38.0**	**+0.2**
	comp=Z,9.0nm,1.3s						
FINES	**FINESS Array B**	**61.59**	**342**	P	**P**	**07 14 43.5**	**-0.9**
	comp=Z,1.8nm,0.9s,baz=236,slow=3.4,SNR=4.1						
FINES				LR	LR	07 43 03.4	
	comp=Z,100nm,19.9s,baz=140,slow=38						
SENIN	**Lac Senin/Sane**	**61.65**	**320**	P	**P**	**07 14 44.2**	**-1.2**
BFO	**Black Forest**	**61.83**	**323**	P	**P**	**07 14 45.6**	**-0.8**
ECH	**Echery**	**62.49**	**322**	P	**P**	**07 14 50.0**	**-0.8**
DBIC	**Dimbokro**	**65.78**	**275**	P	**P**	**07 15 13.5**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=49,slow=8.5,SNR=4.3						
DBIC				LR	LR	07 42 35.5	
	comp=Z,53nm,20.8s,baz=78,slow=35						
NRIK	**Noril'sk**	**65.93**	**10**	LR	LR	07 46 27.9	
	comp=Z,139nm,20.5s,baz=200,slow=38						
NOA	**NORSAR Array B**	**66.70**	**336**	LR	LR	07 46 03.7	
	comp=Z,46nm,20.7s,baz=110,slow=38						
ESDC	**Sonseca Array**	**67.49**	**311**	P	**P**	**07 15 23.5**	**0.0**
	comp=Z,2.5nm,0.9s,baz=91,slow=5.3,SNR=8.7						
ESDC	**Sonseca Array**	**67.49**	**311**	P	**P**	**07 15 21.4**	**-2.1**
ARCES	**ARCESS Array B**	**67.98**	**347**	LR	LR	07 47 25.5	
	comp=Z,40nm,18.8s,baz=235,slow=38						
KSRS	**Korea Array**	**68.05**	**52**	P	**P**	**07 15 26.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=270,slow=5.7,SNR=3.0						
KSRS				LR	LR	07 47 01.1	
	comp=Z,46nm,18.5s,baz=276,slow=38						
USRK	**Ussuriysk Ar.**	**72.25**	**45**	LR	LR	07 49 15.8	
	comp=Z,90nm,18.4s,baz=216,slow=37						
MAW	**Mawson**	**73.06**	**179**	LR	LR	07 40 06.7	
	comp=Z,81nm,21.9s,baz=48,slow=29						
WRA	**Warramunga Arr**	**76.06**	**112**	P	**P**	**07 16 16.6**	**+1.2**
	comp=Z,2.5nm,1.0s,baz=293,slow=4.5,SNR=14						
WRA	**Warramunga Arr**	**76.06**	**112**	P	**P**	**07 16 15.2**	**-0.2**
WB2	**Warramunga Arr**	**76.08**	**112**	P	**P**	**07 16 13.7**	**-1.8**
WB2				IAmb	IAmb	07 16 26.3	
	comp=Z,13nm,1.4s						
ASAR	**Alice Springs**	**76.43**	**116**	P	**P**	**07 16 18.4**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=284,slow=5.4,SNR=12						
ASAR				LR	LR	07 45 19.2	
	comp=Z,28nm,19.7s,baz=310,slow=32						
ASAR	**Alice Springs**	**76.43**	**116**	P	**P**	**07 16 17.6**	**+0.1**
STKA	**Stephens Creek**	**84.71**	**123**	P	**P**	**07 17 02.4**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=311,slow=11,SNR=2.9						
STKA				LR	LR	07 50 42.4	
	comp=Z,55nm,20.2s,baz=216,slow=33						
PETK	**Petropavlovsk-**	**89.36**	**37**	LR	LR	08 00 31.0	
	comp=Z,59nm,18.0s,baz=287,slow=38						
VNDA	**Vanda**	**97.73**	**168**	LR	LR	07 56 39.0	
	comp=Z,71nm,19.1s,baz=232,slow=32						
TXAR	**Lajitas Array**	**142.37**	**338**	PKhKP	PKPpre	07 23 55.8	
	comp=Z,0.2nm,0.7s,baz=66,slow=3.2,SNR=4.9						
TXAR				PKP	**PKPdf**	**07 24 01.8**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=70,slow=0.2,SNR=3.7						

IDC 30 07:19:19.7±2.1, 2˚.24N×126˚.89E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/40, mbtmp3.6/3, Error ellipse: s-maj=175.7km s-min=25.0km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.22**	**162**	P	P	07 24 28.7	+0.1
	1.8nm,0.5s,baz=341,slow=11,SNR=27						
ASAR	**Alice Springs**	**26.64**	**166**	P	P	07 25 00.3	+0.1
	0.2nm,0.4s,baz=347,slow=8.1,SNR=4.3						
MKAR	**Makanchi Array**	**58.87**	**326**	P	P	07 29 20.2	-0.2
	0.5nm,0.5s,baz=118,slow=7.4,SNR=6.5						

IDC 30 07:42:50.4±21.0, 5˚.84S×154˚.89E, h154km±213km, mb3.6/3, mb1 3.7/4, mb1mx3.3/30, mbtmp4.0/4, ML3.5/1, Error ellipse: s-maj=176.0km s-min=79.3km az=118.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**16.46**	**210**	P	P	07 46 32.4	-0.2
	0.1nm,0.3s,baz=42,slow=14,SNR=2.7						
WRA	**Warramunga Arr**	**24.40**	**233**	P	P	07 47 55.1	+0.4
	3.8nm,0.5s,baz=58,slow=10.0,SNR=87						
ASAR	**Alice Springs**	**26.87**	**227**	P	P	07 48 16.6	-0.3
	0.8nm,0.5s,baz=58,slow=8.8,SNR=12						
MKAR	**Makanchi Array**	**82.47**	**319**	P	P	07 54 55.8	0.0
	0.4nm,0.8s,baz=91,slow=6.3,SNR=3.7						

*IDC **30** 07:56:48.2±6.1, 6˚.86S×129˚.19E, h98km±63km, mb3.7/4, mb1 4.1/8, mb1mx3.7/33, mbtmp4.4/8, ML4.5/3, Error ellipse: s-maj=43.8km s-min=25.3km az=40.0*

*NEIC **30** 07:56:52.9±2.7, 7˚.03S±0˚.07×129˚.20E±0˚.08, h151km±12km, mb4.3/6, Error ellipse: s-maj=11.4km s-min=10.1km az=72.0*

*DJA **30** 07:56:53.6±0.3, 7˚.S±2˚×12˚9E±˚, h177km±11km, M4.4/11, mB5.0/6, mb4.5/8, MLv4.5/11, Mw(mB)4.3/6*

ISC 30 07:56:52.7±0.7, 7˚.13S±0˚.05×129˚.19E±0˚.05, h150km, n37, σ 2§59/46, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.26**	**112**	P	**Pn**	**07 57 35.0**	**+4.1**
SAUI				S	**Sn**	**07 58 04.2**	**+3.9**
SAUI	**Saumlaki**	**2.26**	**112**	Pn	**Pn**	**07 57 34.5**	**+3.6**
SAUI				Sn	**Sn**	**07 58 00.2**	**0.0**
AAI	**Ambon**	**3.56**	**344**	P	**Pn**	**07 57 50.0**	**+2.8**
NLAI	**Namlea**	**4.39**	**332**	P	**Pn**	**07 58 01.1**	**+3.0**
FAKI	**Fak Fak**	**5.17**	**36**	P	**Pn**	**07 58 07.4**	**-1.1**
	0.4nm3µm72nm,0.6s						
FAKI				S	**Sn**	**07 59 02.1**	**-5.5**
	0.4nm3µm72nm,0.6s						
FAKI	**Fak Fak**	**5.17**	**36**	Pn	**Pn**	**07 58 07.5**	**-0.9**
FAKI				Sn	**Sn**	**07 59 03.9**	**-3.7**
SOEI	**Soe**	**5.53**	**241**	P	**Pn**	**07 58 15.4**	**+2.1**
	0.6nm2µm192nm,0.8s						
SOEI	**Soe**	**5.53**	**241**	Pn	**Pn**	**07 58 14.9**	**+1.7**
SANI	**Sanana**	**5.97**	**328**	P	**Pn**	**07 58 20.9**	**+1.9**
	0.1nm38nm,1.1s						
MTN	**Manton Dam**	**6.00**	**162**	Pn	**Pn**	**07 58 21.6**	**+2.2**
MTN				Sn	**Sn**	**07 59 27.0**	**-0.2**
BATI	**Baumata**	**6.26**	**240**	P	**Pn**	**07 58 25.3**	**+2.3**
	48nm,0.3s,baz=107,slow=1.8,SNR=43						
BATI				S	**Sn**	**07 59 33.1**	**-0.6**
	13nm,0.3s,baz=98,slow=20,SNR=6.6						
BATI	**Baumata**	**6.26**	**240**	P	**Pn**	**07 58 24.0**	**+1.0**
	0.6nm2µm148nm,0.6s						
EDFI	**Ende, Flores**	**7.60**	**257**	P	**Pn**	**07 58 42.0**	**+1.1**
	0.0nm14nm,1.1s						
KNRA	**Kununurra**	**8.51**	**183**	Pn	**Pn**	**07 58 53.7**	**+0.8**
MRSI	**Marisa**	**10.46**	**316**	P	**Pn**	**07 59 22.6**	**+3.8**
FITZ	**Fitzroy Crossi**	**11.44**	**197**	P	**Pn**	**07 59 31.4**	**-0.3**
	0.6nm,0.3s,baz=8.0,slow=10,SNR=58						
FITZ				S	**Sn**	**08 01 31.1**	**-7.2**
	4.3nm,0.3s,baz=92,slow=14,SNR=10.0						
FITZ	**Fitzroy Crossi**	**11.44**	**197**		**Pn**	**07 59 32.1**	**+0.4**
WB0	**Warramunga Arr**	**13.54**	**159**		**Pn**	**07 59 58.0**	**-0.9**
WRAB	**Tennant Creek**	**13.68**	**159**		**Pn**	**08 00 00.1**	**-0.6**
WRA	**Warramunga Arr**	**13.69**	**159**	P	**Pn**	**07 59 59.8**	**-1.0**
	2.7nm,0.3s,baz=343,slow=10.0,SNR=81						
WRA				S	**Sn**	**08 02 26.1**	**-6.3**
	2.9nm,0.3s,baz=24,slow=24,SNR=5.8						
WRA	**Warramunga Arr**	**13.69**	**159**		**Pn**	**07 59 58.1**	**-2.7**
WB2	**Warramunga Arr**	**13.69**	**159**		**Pn**	**08 00 00.2**	**-0.6**
WR0	**Warramunga Arr**	**13.77**	**158**		**Pn**	**08 00 00.8**	**-1.0**
COEN	**Coen**	**15.33**	**117**		**P**	**08 00 23.3**	**+0.6**
COEN				IAmb	IAmb	08 00 33.4	
	comp=Z,3.9nm,0.7s						
AS31	**Alice Springs**	**17.06**	**165**		**Pn**	**08 00 44.5**	**+2.1**
ASAR	**Alice Springs**	**17.06**	**165**	P	**Pn**	**08 00 44.5**	**+2.1**
	comp=Z,5.4nm,0.3s,baz=344,slow=11,SNR=615						
ASAR				S	**S**	**08 03 48.2**	**-3.9**
	comp=Z,1.0nm,0.3s,baz=324,slow=15,SNR=4.4						
ASAR	**Alice Springs**	**17.06**	**165**	P	**Pn**	**08 00 43.3**	**+0.9**
PMG	**Port Moresby**	**17.93**	**98**	P	**Pn**	**08 00 52.7**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=281,slow=5.2,SNR=3.8						
PMG	**Port Moresby**	**17.93**	**98**	P	**P**	**08 00 52.2**	**+0.8**
PMG				IAmb	IAmb	08 00 57.3	
	comp=Z,14nm,0.8s						
CTA	**Charters Tower**	**20.97**	**130**	P	**P**	**08 01 26.6**	**+2.4**
	comp=Z,2.5nm,0.9s,baz=324,slow=14,SNR=1.8						
FORT	**Forrest**	**23.56**	**182**	P	**P**	**08 01 51.1**	**+1.6**
FORT				IAmb	IAmb	08 01 53.2	
	comp=Z,13nm,0.7s						
STKA	**Stephens Creek**	**27.21**	**156**	P	**P**	**08 02 24.4**	**+1.8**
	comp=Z,2.4nm,0.6s,baz=336,slow=12,SNR=7.3						
STKA	**Stephens Creek**	**27.21**	**156**	P	**P**	**08 02 24.0**	**+1.5**
MKAR	**Makanchi Array**	**67.89**	**327**	P	**P**	**08 07 35.3**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=114,slow=8.5,SNR=22						
MKAR	**Makanchi Array**	**67.89**	**327**	P	**P**	**08 07 34.9**	**-0.1**
MAKZ	**Makanchi**	**68.07**	**327**	P	**P**	**08 07 36.6**	**+0.4**
MAKZ				IAmb	IAmb	08 07 45.0	
	comp=Z,6.7nm,1.1s						
ZALV	**Zalesovo Beam**	**71.34**	**334**	P	**P**	**08 07 55.2**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=130,slow=3.8,SNR=5.9						

*REY **30** 08:11:32.9, 64˚.67N×17˚.42W, h8km*

*IDC **30** 08:11:33.9±0.6, 64˚.57N×17˚.92W, h0km, mb3.9/18, mb1 4.1/21, mb1mx4.0/41, mbtmp3.9/21, ML2.4/2, MS3.2/13, Ms1 3.2/13, ms1mx2.9/52, Error ellipse: s-maj=18.6km s-min=10.5km az=25.0*

*MOS **30** 08:11:33.4±1.2, 64˚.56N×17˚.81W, h10km, mb4.5/21, Error ellipse: s-maj=13.0km s-min=7.5km az=111.4*

*NEIC **30** 08:11:34.9±2.0, 64˚.58N±0˚.08×17˚.8W±0˚.1, h5km±2km, mb4.6/56, Error ellipse: s-maj=12.3km s-min=8.4km az=189.0*

ISC 30 08:11:35.4±0.3, 64˚.56N±0˚.03×17˚.71W±0˚.03, h10km, n194, σ 1§38/179, mb4.5/56, MS3.3/12, 7C, Iceland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHAM	**Hamarinn**	**0.10**	**210**	P	**Pg**	**08 11 38.2**	**+0.2**
	baz=223						
IVON	**Vonarskard**	**0.11**	**351**	P	**Pg**	**08 11 35.2**	**-3.0**
	baz=272						
IVON				S	**Sg**	**08 11 38.6**	**-1.7**
	baz=272						
IGRF	**Grimsfjall**	**0.25**	**129**	P	**Pg**	**08 11 38.1**	**-2.3**
	baz=166						
IHUS	**Husbondi**	**0.27**	**175**	P	**Pg**	**08 11 40.1**	**-0.8**
	baz=195						
IDYN	**Dyngjuhals**	**0.27**	**33**	P	Pg	08 11 35.6	-5.3
	baz=10						
IDYN				S	Sg	08 11 37.7	-6.9
	baz=10						
ISKR	**Skrokkalda**	**0.29**	**270**	P	**Pg**	**08 11 41.0**	**-0.2**
	baz=256						
IJOK	**Jokulheimar**	**0.33**	**222**	P	**Pb**

comp=Z,0.1nm,0.3s,baz=298,slow=4.1,SNR=4.3
TULEG **Thule** 19.89 328 P **P** **08 16 04.2 -2.2**
CLL **Collm** 20.74 115 *e*P **P** **08 16 16.0 +0.2**
CLL *e* 08 16 23.0
CLL *e*(PP) 08 16 31.0
CLL **Collm** 20.74 115 P **P** **08 16 16.0 +0.2**
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL **Collm** 20.74 115 P **P** **08 16 16.0 +0.2**
LVZ **Lovozero** 20.83 57 P **P** **08 16 16.6 0.0**
LVZ pmax pmax
comp=Z,130nm,1.5s
LVZ **Lovozero** 20.83 57 P **P** **08 16 16.6 0.0**
GRA1 **Grafenberg Arr** 21.36 120 P **P** **08 16 22.7 +0.2**
GRA1 IAmb IAmb 08 16 38.1
comp=Z,35nm,1.5s
GRF **Grafenberg Arr** 21.36 120 P **P** **08 16 22.7 +0.2**
GRF pmax pmax
comp=Z,35nm,1.5s
STU **Stuttgart** 21.39 125 P **P** **08 16 23.4 +0.6**
STU **Stuttgart** 21.39 125 P **P** **08 16 23.4 +0.6**
BRG **Berggiesshubel** 21.45 115 *e*P **P** **08 16 23.5 +0.1**
comp=Z,14nm,1.4s
BRG **Berggiesshubel** 21.45 115 *e*P **P** **08 16 23.5 +0.1**
BRG pmax pmax
comp=Z,14nm,1.4s
BFO **Black Forest** 21.46 127 P **P** **08 16 23.0 -0.6**
BFO pmax pmax
comp=Z,21nm,1.5s
BFO **Black Forest** 21.46 127 P **P** **08 16 23.0 -0.6**
VSU **Vasula** 21.67 85 *i* P **P** **08 16 24.0 -1.6**
CHVC **Chvalec** 22.51 112 *e*P **P** **08 16 35.3 +0.4**
KHC **Kasperske Hory** 22.71 118 *i* P **P** **08 16 38.4 +1.5**
KHC pmax pmax
comp=Z,11nm,1.0s
KHC **Kasperske Hory** 22.71 118 *e*P **P** **08 16 37.4 +0.5**
KHC **Kasperske Hory** 22.71 118 P **P** **08 16 36.8 -0.1**
DPC **Dobruska-Polom** 22.81 112 *e*P **P** **08 16 38.6 +0.6**
DPC **Dobruska-Polom** 22.81 112 *e*P **P** **08 16 38.6 +0.6**
DPC *ex* x 08 16 52.2
SUW **Suwalki** 22.96 98 P **P** **08 16 39.7 +0.2**
SUW **Suwalki** 22.96 98 P **P** **08 16 39.7 +0.2**
GEC2 **GERESS Array S** 22.99 118 P **P** **08 16 40.2 +0.3**
GERES **GERESS Array B** 22.99 118 P **P** **08 16 40.9 +0.9**
comp=Z,0.9nm,0.7s,baz=328,slow=9.5,SNR=7.4
GERES LR LR 08 26 10.8
comp=Z,40nm,18.2s,baz=323,slow=38
GERES **GERESS Array B** 22.99 118 P **P** **08 16 40.7 +0.8**
GERES **GERESS Array B** 22.99 118 P P 08 16 40.7 +0.8
KRLC **Kraliky** 23.20 112 *e*P P 08 16 31.7 -10
KRLC **Kraliky** 23.20 112 *e*P P 08 16 31.7 -10
KRLC *ex* x 08 16 44.1
DAVOX **Davos/Dischmat** 23.33 127 P **P** **08 16 44.5 +1.0**
comp=Z,1.4nm,0.8s,baz=354,slow=15,SNR=3.2
DAVOX LR LR 08 27 02.2
comp=Z,62nm,18.6s,baz=320,slow=40
TMCR **Tamitsa** 23.47 65 *e*P **P** **08 16 43.4 -1.2**
TMCR pmax pmax
comp=Z,18nm,0.9s
EUNU **Eureka** 23.73 336 P **P** **08 16 47.1 +0.1**
EUNU IAmb IAmb 08 16 50.7
comp=Z,22nm,1.4s
VRAC **Vranov** 23.74 114 P **P** **08 16 48.7 +1.4**
comp=Z,1.0nm,0.3s,baz=284,slow=11,SNR=3.5
VRAC LR LR 08 27 32.4
comp=Z,49nm,18.2s,baz=328,slow=40
MORC **Moravsky Berou** 23.74 112 P **P** **08 16 45.0 -2.4**
MORC **Moravsky Berou** 23.74 112 P **P** **08 16 45.0 -2.4**
CTI **Castel Tesino** 24.58 125 P **P** **08 16 55.5 +0.2**
CTI pmax pmax
comp=Z,9.0nm,1.2s
CTI **Castel Tesino** 24.58 125 P **P** **08 16 55.5 +0.2**
SMOL **Smolenice** 24.70 114 *e*P **P** **08 16 57.2 +0.9**
SMOL pmax pmax
comp=Z,4.0nm,1.2s
SMOL **Smolenice** 24.70 114 *e*P **P** **08 16 57.2 +0.9**
PRED **Cave del Predi** 24.94 122 P **P** **08 16 59.1 +0.6**
PRED IAmb IAmb 08 17 03.9
comp=Z,13nm,1.4s
VYHS **Vyhne** 25.28 112 *e*P **P** **08 17 00.6 -0.9**
VYHS **Vyhne** 25.28 112 *e*P **P** **08 17 00.6 -0.9**
KLMR **Klimovskoe** 25.72 72 *e*P **P** **08 17 00.7 -4.7**
KLMR pmax pmax
comp=Z,12nm,1.5s
KLMR **Klimovskoe** 25.72 72 *e*P **P** **08 17 00.7 -4.7**
KLMR AMP 08 17 03.6
comp=Z,12nm,1.5s
KWP **Kalwaria Pacla** 25.97 106 **P** **08 17 08.5 +0.7**
ESDC **Sonseca Array** 26.20 155 P **P** **08 17 10.4 +0.5**
comp=Z,0.9nm,0.7s,baz=348,slow=8.5,SNR=5.6
KOLS **Kolonicke sedl** 26.33 107 *e*P **P** **08 17 13.2 +2.2**
KOLS **Kolonicke sedl** 26.33 107 *e*P **P** **08 17 13.2 +2.2**
AKASG **Malin Array Be** 27.92 97 P **P** **08 17 26.4 +1.2**
comp=Z,0.7nm,0.5s,baz=322,slow=10,SNR=5.2
AKASG **Malin Array Be** 27.92 97 *ce*P **P** **08 17 29.0 +3.8**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKBB **Malin Array Si** 27.92 97 *ce*P **P** **08 17 29.6 +4.4**
KIRV **Kirov** 31.10 69 LR LR 08 30 01.4
comp=Z,50nm,20.3s,baz=331,slow=36
KIRV **Kirov** 31.10 69 *ce*P **P** **08 17 53.6 +0.3**
BELG **Belogornoye** 34.60 79 *i* P **P** **08 18 23.5 -0.4**
BELG pmax pmax
comp=Z,2.0nm,0.9s
ARU **Arti** 36.21 66 LR LR 08 33 00.6
comp=Z,22nm,19.2s,baz=305,slow=36
NRIK **Noril'sk** 36.60 35 P **P** **08 18 41.3 +0.4**
comp=Z,2.2nm,0.3s,baz=281,slow=5.1,SNR=7.0
NRIK **Noril'sk** 36.60 35 *ce*P **P** **08 18 40.8 -0.1**
NRIK pmax pmax
comp=Z,5.0nm,0.9s
SOC **Sochi** 37.95 95 *e*P **P** **08 18 52.2 -0.5**
SOC *e*PPP PPP 08 20 43.5
SOC *e*S **S** **08 24 45.5 +1.4**
SOC MLR MLR
comp=Z,198nm,16.0s
BRTR **Keskin Array B** 38.54 105 P **P** **08 18 59.5 +1.6**
comp=Z,1.2nm,0.7s,baz=298,slow=6.2,SNR=3.3
KIV **Kislovodsk** 38.93 92 *e*P **P** **08 19 01.8 +0.8**
KIV pmax pmax
comp=Z,18nm,1.0s
KIV MLR MLR
comp=Z,63nm,16.0s
YKA **Yellowknife Ar** 39.22 313 P **P** **08 19 01.9 -1.2**
comp=Z,1.7nm,1.0s,baz=41,slow=8.7,SNR=5.0
INK **Inuvik** 39.88 329 P **P** **08 19 07.8 -0.7**
comp=Z,2.2nm,1.0s,baz=35,slow=4.7,SNR=2.3
INK **Inuvik** 39.88 329 P **P** **08 19 07.8 -0.7**
INK pmax pmax
comp=Z,3.0nm,1.1s
AKTO **Aktyubinsk** 40.41 73 LR LR 08 35 40.6
comp=Z,53nm,18.2s,baz=349,slow=36
ULM **Lac du Bonnet** 41.55 289 LR LR 08 35 12.2
comp=Z,43nm,21.2s,baz=160,slow=34
ABKAR **Akbulak array** 42.11 73 P **P** **08 19 26.5 -0.7**
ABKAR **Akbulak array** 42.11 73 P **P** **08 19 26.8 -0.4**
ABKAR IAmb IAmb 08 19 30.3
comp=Z,5.6nm,1.3s
TIXI **Tiksi** 42.16 15 *e*P **P** **08 19 28.4 +1.2**
TIXI **Tiksi** 42.16 15 P **P** **08 19 27.6 +0.4**
TOLK **Toolik Lake Re** 42.81 336 P **P** **08 19 34.3 +1.7**
TOLK IAmb IAmb 08 19 37.8
comp=Z,12nm,1.2s
BMAR **Burnt Mountain** 42.95 333 P **P** **08 19 35.3 +1.5**
COLD **Coldfoot** 44.17 336 P **P** **08 19 44.9 +1.3**
DAWY **Dawson** 44.74 328 P **P** **08 19 48.2 -0.1**
DAWY IAmb IAmb 08 19 52.0
comp=Z,14nm,1.5s
F33A **5 Mile Ranch,** 45.19 285 P **P** **08 19 52.8 +0.8**
F33A IAmb IAmb 08 19 55.7
comp=Z,12nm,1.1s
IL31 45.73 332 P **P** **08 19 57.3 +1.3**
IL31 IAmb IAmb 08 19 58.5
comp=Z,9.4nm,1.4s
ILAR **Eielson Array** 45.73 332 P **P** **08 19 57.0 +1.0**
comp=Z,3.9nm,1.1s,baz=27,slow=4.8,SNR=17
ILAR PcP **PcP** **08 21 33.5 0.0**
comp=Z,1.1nm,0.9s,baz=353,slow=2.0,SNR=6.7
ILAR **Eielson Array** 45.73 332 P **P** **08 19 56.0 -0.1**
ILAR **Eielson Array** 45.73 332 P **P** **08 19 56.0 -0.1**
MDM **Murphy Dome** 45.83 333 P **P** **08 19 57.1 +0.3**
MDM IAmb IAmb 08 20 01.8
comp=Z,8.0nm,1.1s
COLA **College** 45.84 333 P **P** **08 19 57.7 +0.9**
COLA pmax pmax
comp=Z,6.0nm,0.9s
COLA **College** 45.84 333 P **P** **08 19 57.7 +0.9**
COLA IAmb IAmb 08 19 59.2
comp=Z,5.7nm,0.8s
TCOL **CIGO, UAF Yank** 45.84 333 P **P** **08 19 57.6 +0.8**
IMAR **Indian Mountai** 45.92 337 P **P** **08 19 58.7 +1.2**
BCAR **Beaver Creek A** 46.15 328 P **P** **08 20 00.1 +0.7**
RIDG **Independent Ri** 46.23 331 P **P** **08 20 01.1 +1.0**
WCI **Wyandotte Cave** 47.16 271 P **P** **08 20 08.3 +0.8**
WCI pmax pmax
comp=Z,5.0nm,0.8s
WCI **Wyandotte Cave** 47.16 271 P **P** **08 20 08.2 +0.8**
WCI IAmb IAmb 08 20 11.9
comp=Z,5.4nm,0.8s
ZALV **Zalesovo Beam** 47.77 51 P **P** **08 20 10.8 -1.3**
comp=Z,1.0nm,0.7s,baz=323,slow=9.5,SNR=4.9
ZALV PcP **PcP** **08 21 42.0 +1.1**
comp=Z,0.5nm,0.6s,baz=318,slow=1.9,SNR=3.5
ZALV **Zalesovo Beam** 47.77 51 P **P** **08 20 11.6 -0.5**
KURK **Kurchatov** 48.25 58 *ce*P **P** **08 20 14.7 -1.1**
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURK **Kurchatov** 48.25 58 P **P** **08 20 14.4 -1.4**
KURK IAmb IAmb 08 20 18.5
comp=Z,6.5nm,1.2s
T47A **Sharon Grove** 48.55 270 P **P** **08 20 18.6 +0.3**
HODGE **Hodges** 48.79 264 P **P** **08 20 22.5 +2.3**
EGMT **Eagleton** 48.84 297 P **P** **08 20 22.0 +1.4**
W50A **Signal Mountai** 49.28 267 P **P** **08 20 25.6 +1.6**
W50A IAmb IAmb 08 20 26.7
comp=Z,9.0nm,1.1s
GCMT **Greycliff** 50.65 295 P **P** **08 20 34.1 -0.3**
HRY **Holter Researc** 50.72 298 P **P** **08 20 35.6 +0.7**
RLMT **Red Lodge** 51.05 294 P **P** **08 20 39.1 +1.6**
RLMT IAmb IAmb 08 20 45.0
comp=Z,8.7nm,1.4s
KKAR **Karatay Array** 51.40 70 P **P** **08 20 40.1 +0.2**
KKAR **Karatay Array** 51.40 70 P **P** **08 20 40.1 +0.2**
YNE **Yellowstone No** 51.43 295 P **P** **08 20 40.8 +0.3**
BOZ **Bozeman (W)** 51.57 297 P **P** **08 20 42.4 +1.1**
BOZ pmax pmax
comp=Z,6.0nm,1.1s
BOZ **Bozeman (W)** 51.57 297 P **P** **08 20 42.4 +1.1**
MKAR **Makanchi Array** 52.86 58 P **P** **08 20 51.7 +0.9**
comp=Z,1.7nm,1.0s,baz=348,slow=6.2,SNR=4.6
MKAR **Makanchi Array** 52.86 58 *ce*P **P** **08 20 52.9 +2.2**
MKAR pmax pmax
comp=Z,2.0nm,1.0s
TORD **Torodi Ar. Bea** 53.08 156 P **P** **08 20 52.6 0.0**
comp=Z,1.9nm,0.9s,baz=340,slow=7.7,SNR=8.5
TORD **Torodi Ar. Bea** 53.08 156 P **P** **08 20 52.4 -0.2**
BW06 **Boulder Array** 53.13 293 P **P** **08 20 53.5 +0.4**
BW06 IAmb IAmb 08 20 56.3
comp=Z,6.4nm,1.1s
PD31 **Pinedale Array** 53.13 293 P **P** **08 20 53.0 0.0**
PD31 IAmb IAmb 08 20 57.0
comp=Z,14nm,1.5s
PDAR **Pinedale Array** 53.13 293 P **P** **08 20 53.8 +0.7**
comp=Z,2.5nm,0.8s,baz=56,slow=5.8,SNR=17
PDAR LR LR 08 42 05.3
comp=Z,31nm,19.6s,baz=0.5,slow=34
PDAR **Pinedale Array** 53.13 293 P **P** **08 20 53.1 0.0**
N23A **Red Feather La** 53.25 289 P **P** **08 20 53.3 -0.7**
N23A IAmb IAmb 08 20 58.2
comp=Z,12nm,1.4s
AAK **Ala-Archa** 53.38 67 *ce*P **P** **08 20 55.9 +1.1**
AAK pmax pmax
comp=Z,10.0nm,1.3s
BTK **Batken** 54.08 71 P **P** **08 21 00.1 +0.2**
BTK pmax pmax
comp=Z,13nm,1.2s
BTK **Batken** 54.08 71 P **P** **08 21 00.1 +0.2**
GAR **Garm** 54.77 72 P **P** **08 21 04.5 -0.5**
HWUT **Hardware Ranch** 54.91 294 P **P** **08 21 06.5 +0.5**
HWUT IAmb IAmb 08 21 08.7
comp=Z,5.7nm,1.1s
WMOK **Wichita Mounta** 55.47 279 P **P** **08 21 08.0 -1.9**
WMOK pmax pmax
comp=Z,6.0nm,1.3s
WMOK **Wichita Mounta** 55.47 279 P **P** **08 21 08.0 -1.9**
WMOK IAmb IAmb 08 21 12.7
comp=Z,5.5nm,1.2s
P17A **Butcher Ranch,** 56.40 292 P **P** **08 21 13.1 -3.6**
SRU **San Rafael Swe** 56.62 291 P **P** **08 21 17.6 -0.7**
SRU pmax pmax
comp=Z,4.0nm,1.0s
SRU **San Rafael Swe** 56.62 291 P **P** **08 21 17.6 -0.7**
PV03 **Paradox Valley** 56.67 290 P **P** **08 21 19.2 +0.5**
PV03 IAmb IAmb 08 21 20.8
comp=Z,7.4nm,1.1s
Q16A **Castle Valley** 57.05 292 P **P** **08 21 19.6 -1.7**
WMQ **Urumqi** 57.37 56 *e*P **P** **08 21 26.5 +3.1**
MVU **Marysvale** 57.82 292 P **P** **08 21 24.9 -2.0**
MTPU **Mount Pierson** 58.20 292 P **P** **08 21 28.2 -1.5**
SPR3 **Spring Creek 3** 58.23 294 P **P** **08 21 31.5 +1.7**
SPR3 IAmb IAmb 08 21 41.4
comp=Z,9.0nm,1.4s
DBIC **Dimbokro** 58.51 165 P **P** **08 21 31.9 +0.3**
comp=Z,3.4nm,0.9s,baz=14,slow=5.4,SNR=3.3
DBIC **Dimbokro** 58.51 165 P **P** **08 21 31.9 +0.3**
DBIC pmax pmax
comp=Z,8.0nm,1.2s
DBIC **Dimbokro** 58.51 165 IAmb IAmb 08 21 36.8
comp=Z,7.9nm,1.1s
CCUT **Cedar City** 59.10 293 P **P** **08 21 34.1 -1.6**
JCT **Junction City** 59.57 277 P **P** **08 21 38.9 0.0**
JCT pmax pmax
comp=Z,5.0nm,1.0s
JCT **Junction City** 59.57 277 P **P** **08 21 38.9 0.0**
JCT IAmb IAmb 08 21 42.8
comp=Z,5.0nm,0.9s
NVAR **Mina Array Bea** 60.27 297 P **P** **08 21 42.8 -1.0**
comp=Z,0.4nm,0.8s,baz=344,slow=0.9,SNR=3.8
SHPR **Sheep Range** 60.72 294 P **P** **08 21 49.2 +2.3**
SHPR IAmb IAmb 08 21 52.1
comp=Z,6.8nm,1.4s
X16A **Lo Mia Camp, P** 61.04 289 P **P** **08 21 49.6 +0.5**
TXAR **Lajitas Array** 62.21 280 P **P** **08 21 55.8 -1.2**
comp=Z,0.9nm,0.9s,baz=71,slow=4.5,SNR=7.2
319A **Douglas** 62.79 286 P **P** **08 22 02.2 +1.4**
GTA **Gaotai** 65.44 49 *e*P **P** **08 22 20.5 +2.4**
GTA pP sP 08 22 26.0 +2.8
GTA sP pP 08 22 29.0 +7.2
GTA pmax pmax
comp=Z,3.0nm,1.3s
HHC **Hu-ho-hao-te** 67.65 39 *e*P **P** **08 22 34.0 +1.8**
HHC pmax pmax
comp=Z,9.0nm,0.7s
HHC pmax pmax
comp=Z,56nm,6.6s
LZH **Lanzhou** 69.77 47 *e*P **P** **08 22 43.8 -1.7**
LZH pP pP 08 22 46.3 -3.0
LZH sP sP 08 22 47.3 -3.4
LZH *e*PP **PP** **08 25 20.0 +0.8**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,73nm,6.2s
LZH LR LR
comp=N,170nm,16.3s
LZH LR LR
comp=E,170nm,16.5s
LZH LR LR
comp=Z,270nm,19.6s
KSRS **Korea Array** 74.78 28 LR LR 08 59 04.2
comp=Z,14nm,18.8s,baz=140,slow=38
NJ2 **Nanjing** 77.88 37 *e*P **P** **08 23 33.3 +0.4**
NJ2 pmax pmax
comp=Z,13nm,0.6s
CMAR **Chiang Mai Arr** 84.27 58 P **P** **08 24 06.2 -0.8**
comp=Z,0.8nm,0.3s,baz=338,slow=6.8,SNR=4.3
STKA **Stephens Creek** 144.86 31 PKP **PKPab** **08 31 10.6 -0.2**
comp=Z,1.4nm,0.7s,baz=342,slow=7.2,SNR=3.9

*NEIC **30** 08:24:48.7±1.9, 10°.9S±0°.1×165°.6E±0°.1, h35km±2km, mb4.3/12, Error ellipse: s-maj=27.0km s-min=7.0km az=49.0*
*IDC **30** 08:24:49.7±3.7, 10°.78S×165°.73E, h56km±32km, mb3.8/7, mb1 4.0/9, mb1mx3.6/43, mbtmp4.2/9, ML4.7/2, MS3.4/11, Ms1 3.4/11, ms1mx3.1/32, Error ellipse: s-maj=30.5km s-min=19.9km az=34.0*

ISC 30 08:24:47.7±1.0, 10°.82S±0°.10×165°.8E±0°.1, h35km, n37,
σ1§41/28, mb4.2/11, MS3.2/8, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	4.81	163		**Pn**	**08 26 00.0**	**+2.3**
SANVU				Sn	**Sn**	**08 26 51.6**	**-0.7**
HNR	**Honiara**	5.88	283	P	**Pn**	**08 26 12.9**	**+0.5**
	50nm,0.3s,baz=136,slow=6.9,SNR=10						
HNR				S	**Sn**	**08 27 21.4**	**+2.7**
	12nm,0.3s,baz=156,slow=20,SNR=2.0						
HNR				LR	LR	08 28 34.7	
	comp=Z,647nm,18.8s,baz=114,slow=38						
HNR	**Honiara**	5.88	283	Pn	**Pn**	**08 26 11.9**	**-0.6**
DZM	**Mont Dzumac**	11.21	177	P	**Pn**	**08 27 27.8**	**+2.2**
	2.1nm,0.3s,baz=357,slow=6.6,SNR=38						
DZM				S	**Sn**	**08 29 27.6**	**-2.3**
	0.3nm,0.3s,baz=270,slow=20,SNR=4.4						
DZM				LR	LR	08 31 43.7	
	comp=Z,143nm,18.4s,baz=45,slow=37						
DZM	**Mont Dzumac**	11.21	177		**Pn**	**08 27 26.0**	**+0.3**
PMG	**Port Moresby**	18.36	273	LR	LR	08 35 53.8	
	comp=Z,159nm,18.5s,baz=95,slow=36						
EIDS	**Eidsvold**	20.07	222	P	**P**	**08 29 16.3**	**-1.9**
CTA	**Charters Tower**	20.91	242	P	**P**	**08 29 27.9**	**+0.5**
	12nm,1.0s,baz=49,slow=14,SNR=4.7						
CTAO	**Charters Tower**	20.91	242	P	**P**	**08 29 27.6**	**+0.2**
CTAO				IAmb	IAmb	08 29 33.4	
	comp=Z,14nm,0.9s						
LHI	**Lord Howe Isla**	21.52	196	P	**P**	**08 29 34.8**	**+1.1**
AFI	**Afiamalu**	22.16	100	LR	LR	08 36 45.2	
	comp=Z,106nm,21.9s,baz=257,slow=32						
COEN	**Coen**	22.27	260	P	**P**	**08 29 39.9**	**-2.1**
COEN				IAmb	IAmb	08 29 52.6	
	comp=Z,13nm,1.2s						
ARMA	**Armidale**	23.52	212	P	**P**	**08 29 53.0**	**-1.8**
ARMA				IAmb	IAmb	08 30 06.5	
	comp=Z,22nm,1.5s						
JAY	**Jayapura**	26.19	287	LR	LR	08 41 45.2	
	comp=Z,102nm,18.0s,baz=196,slow=39						
H11S2	**WAKE ISLAND Hy**	29.14	2	T	T	09 01 08.6	
	baz=181,slow=76,SNR=86						
H11S3	**WAKE ISLAND Hy**	29.14	2	T	T	09 01 08.9	
	baz=181,slow=76,SNR=70						
H11S1	**WAKE ISLAND Hy**	29.15	2	T	T	09 01 13.3	
	baz=181,slow=76,SNR=52						
URZ	**Urewera**	29.16	161	P	**P**	**08 30 47.3**	**+1.6**
	comp=Z,4.5nm,0.4s,baz=342,slow=9.8,SNR=3.6						
URZ				LR	LR	08 41 40.3	
	comp=Z,86nm,18.8s,baz=30,slow=35						
H11N1	**WAKE ISLAND Hy**	30.36	2	T	T	09 02 42.6	
	baz=182,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	30.36	2	T	T	09 02 40.7	
	baz=182,slow=76,SNR=13						
H11N2	**WAKE ISLAND Hy**	30.38	2	T	T	09 02 43.7	
	baz=182,slow=76,SNR=19						
STKA	**Stephens Creek**	30.61	223	LR	LR	08 42 28.3	
	comp=Z,58nm,18.1s,baz=25,slow=35						
WB0	**Warramunga Arr**	31.48	250	P	**P**	**08 31 05.6**	**-0.9**
WB0				IAmb	IAmb	08 31 20.3	
	comp=Z,4.6nm,1.1s						
WC3	**Warramunga Arr**	31.54	249	P	**P**	**08 31 05.9**	**-1.1**
WC3				IAmb	IAmb	08 31 24.3	
	comp=Z,6.5nm,1.2s						
WB2	**Warramunga Arr**	31.56	249	P	**P**	**08 31 06.5**	**-0.7**
WB2				IAmb	IAmb	08 31 30.5	
	comp=Z,4.8nm,1.1s						
WRA	**Warramunga Arr**	31.57	249	P	**P**	**08 31 06.2**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=82,slow=9.2,SNR=7.7						
WRA				LR	LR	08 43 47.9	
	comp=Z,42nm,19.6s,baz=70,slow=36						
WRA	**Warramunga Arr**	31.57	249	P	**P**	**08 31 06.4**	**-0.8**
GUMO	**Guam**	31.89	319	LR	LR	08 44 36.1	
	comp=Z,42nm,18.7s,baz=116,slow=37						
AS31	**Alice Springs**	32.90	243	P	**P**	**08 31 17.8**	**-1.1**
ASAR	**Alice Springs**	32.90	243	P	**P**	**08 31 18.0**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=68,slow=9.8,SNR=12						
ASAR				LR	LR	08 44 11.6	
	comp=Z,47nm,18.8s,baz=104,slow=35						
ASAR	**Alice Springs**	32.90	243	P	**P**	**08 31 18.0**	**-0.9**
FITZ	**Fitzroy Crossi**	39.45	255	P	**P**	**08 32 15.4**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=90,slow=5.1,SNR=4.5						
FITZ	**Fitzroy Crossi**	39.45	255	P	**P**	**08 32 14.4**	**-0.5**
FITZ				IAmb	IAmb	08 32 28.4	
	comp=Z,5.9nm,1.2s						
PPT	**Papeete**	43.74	104	LR	LR	08 49 20.2	
	comp=Z,25nm,19.3s,baz=206,slow=34						
QSPA	**South Pole Qui**	79.19	180	P	**P**	**08 36 49.0**	**0.0**
NVAR	**Mina Array Bea**	85.87	50	P	**P**	**08 37 23.2**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=226,slow=7.3,SNR=4.4						
MKAR	**Makanchi Array**	93.36	317	P	**P**	**08 37 59.5**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=90,slow=7.2,SNR=2.9						

*IDC **30** 08:26:53.4±1.4, 36°.80N×71°.23E, h0km, mb3.8/4, mb1 3.9/9, mb1mx3.5/54, mbtmp3.8/9, ML3.4/5, MS2.6/2, Ms1 2.6/2, ms1mx2.3/43, Error ellipse: s-maj=24.0km s-min=20.7km az=127.0*
*NNC **30** 08:26:59.0±3.5, 37°.10N×70°.56E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=32.7km s-min=15.8km az=151.0*

ISC 30 08:26:55.4±0.9, 36°.83N±0°.07×70°.86E±0°.06, h10km, n17,
σ1§96/24, mb3.7/4, 6C-9D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	5.94	136	*e*P	Pn	08 28 14.0	-9.4
THN				*e*S	**Sn**	**08 29 32.0**	**+0.5**
KK31	**Karatay Array**	6.27	358	⇓Pn	**Pn**	**08 28 29.6**	**+1.6**
	3.3nm,0.5s,baz=182,slow=13,SNR=58						
KK31				⇑Sn	**Sn**	**08 29 42.0**	**+2.2**
	2.6nm,0.3s,baz=187,slow=23						
KK31				⇑Lg	Lg	08 30 10.5	
	8.6nm,0.5s						
AAK	**Ala-Archa**	6.44	25	Pn	**Pn**	**08 28 32.5**	**+2.0**
	1.8nm,0.3s,baz=192,slow=6.4,SNR=13						
AAK				Sn	**Sn**	**08 29 44.9**	**+0.7**
	0.6nm,0.3s,baz=127,slow=10,SNR=2.4						
AAK				Lg	Lg	08 30 16.0	
	0.6nm,0.3s,baz=0.0,slow=20,SNR=2.3						
AAK	**Ala-Archa**	6.44	25	⇓Pn	Pn	08 28 34.2	+3.8
	5.8nm,0.7s						
AAK				⇓Sn	**Sn**	**08 29 45.2**	**+1.1**
	19nm,0.8s						
AAK				⇓Lg	Lg	08 30 18.0	
	19nm,0.8s						
TKM2	**Tokmak 2**	7.09	29	⇑Pn	**Pn**	**08 28 41.5**	**+2.0**
	6.1nm,0.6s						
TKM2				⇑Sn	**Sn**	**08 30 04.1**	**+3.9**
	5.0nm,0.8s						
TKM2				⇑Lg	Lg	08 30 41.6	
	7.5nm,0.9s						
GEYT	**Alibeck**	10.20	280	Pn	**Pn**	**08 29 23.1**	**+1.1**
	1.3nm,0.3s,baz=116,slow=10,SNR=7.9						
GEYT				Sn	**Sn**	**08 31 17.5**	**+1.2**
	2.0nm,0.3s,baz=80,slow=20,SNR=8.0						
GEYT				LR	LR	08 34 32.1	
	comp=Z,33nm,19.1s,baz=355,slow=44						
GYA0B	**ALIBECK ARRAY**	10.20	280	⇓Pn	**Pn**	**08 29 23.4**	**+1.5**
GYA0B				⇓Sn	**Sn**	**08 31 16.7**	**+0.3**
MKAR	**Makanchi Array**	13.10	37	Pn	**Pn**	**08 29 59.6**	**-1.8**
	0.0nm,0.3s,baz=224,slow=15,SNR=2.4						
MKAR				LR	LR	08 35 24.1	
	comp=Z,28nm,20.3s,baz=324,slow=40						
AB31	**Akbulak array**	14.74	331	⇑Pn	**Pn**	**08 30 23.0**	**-0.9**
	0.6nm,0.3s,baz=136,slow=11,SNR=35						
AB31				⇓Sn	**Sn**	**08 33 04.2**	**-3.0**
	4.1nm,0.9s,baz=150,slow=23,SNR=4.9						
BVAR	**Borovoye Array**	16.20	359	Pn	**Pn**	**08 30 41.3**	**-1.7**
	0.2nm,0.3s,baz=134,slow=12,SNR=2.6						
AKTO	**Aktyubinsk**	16.44	330	Pn	**Pn**	**08 30 45.8**	**-0.3**
	0.2nm,0.3s,baz=139,slow=9.3,SNR=3.5						
AKTO	**Aktyubinsk**	16.44	330	⇓Pn	P	**08 30 46.8**	**-2.0**
	3.8nm,0.8s						
AKTO				⇓Sn	**Sn**	**08 33 44.9**	**-3.6**
	5.5nm,1.4s						
ZALV	**Zalesovo Beam**	19.66	25	P	**P**	**08 31 22.3**	**-2.0**
	0.2nm,0.3s,baz=220,slow=12,SNR=7.9						
FINES	**FINESS Array B**	37.15	326	P	**P**	**08 34 07.3**	**+1.3**
	0.6nm,0.3s,baz=119,slow=8.0,SNR=11						
ARCES	**ARCESS Array B**	40.80	337	P	P	**08 34 37.3**	**+0.8**
	6.4nm,1.1s,baz=105,slow=7.9,SNR=2.5						
NOA	**NORSAR Array B**	44.05	323	P	**P**	**08 35 03.9**	**+0.8**
	0.8nm,0.8s,baz=95,slow=7.9,SNR=2.4						
WRA	**Warramunga Arr**	82.26	122	P	**P**	**08 39 15.6**	**-1.6**
	0.3nm,0.8s,baz=325,slow=4.6,SNR=3.0						

*IDC **30** 08:37:55.6±0.8,21°.36N×143°.30E, h0km, mb3.6/10, mb1 3.8/10, mb1mx3.6/35, mbtmp3.6/10, MS3.1/1, Ms1 3.1/1, ms1mx2.3/35, Error ellipse: s-maj=30.5km s-min=19.0km az=87.0*

ISC 30 08:38:00.8±0.9, 21°.4N±0°.1×143°.2E±0°.2, h35km, n12, σ1§14/11, mb3.5/9, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.82**	**324**	P	**P**	**08 42 38.0**	**-1.2**
	0.8nm,0.7s,baz=148,slow=9.0,SNR=4.0						
KLR	**Kul'dur**	**29.28**	**345**	P	**P**	**08 43 59.8**	**+0.1**
	1.7nm,0.6s,baz=173,slow=6.4,SNR=5.9						
PETK	**Petropavlovsk-**	**33.59**	**16**	LR	LR	08 56 14.2	
	comp=Z,36nm,21.2s,baz=135,slow=33						
WRA	**Warramunga Arr**	**41.96**	**193**	P	**P**	**08 45 48.3**	**-0.3**
	0.2nm,0.8s,baz=12,slow=7.9,SNR=3.3						
ASAR	**Alice Springs**	**45.67**	**192**	P	**P**	**08 46 17.6**	**-0.8**
	0.1nm,0.5s,baz=16,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**54.51**	**322**	P	**P**	**08 47 25.2**	**+0.1**
	0.9nm,0.5s,baz=102,slow=7.8,SNR=4.9						
MKAR	**Makanchi Array**	**54.97**	**313**	P	**P**	**08 47 30.2**	**+1.7**
	0.2nm,0.5s,baz=90,slow=8.5,SNR=3.3						
ILAR	**Eielson Array**	**62.31**	**27**	P	**P**	**08 48 17.5**	**-1.8**
	0.3nm,0.8s,baz=214,slow=7.4,SNR=3.1						
YKA	**Yellowknife Ar**	**76.73**	**28**	P	**P**	**08 49 48.6**	**+0.3**
	0.3nm,0.5s,baz=296,slow=4.8,SNR=3.3						
NVAR	**Mina Array Bea**	**83.31**	**51**	P	**P**	**08 50 26.0**	**+1.4**
	0.2nm,0.5s,baz=289,slow=5.4,SNR=3.5						
FINES	**FINESS Array B**	**83.51**	**335**	P	**P**	**08 50 25.0**	**+0.2**
	1.4nm,0.9s,baz=191,slow=3.9,SNR=5.4						
LPAZ	**La Paz**	**149.91**	**86**	PKPbc	**PKiKP**	**08 57 50.3**	**+0.3**
	0.4nm,0.5s,baz=297,slow=2.3,SNR=3.9						

*NEIC **30** 08:46:35.8±1.3, 19°.22S±0°.04×69°.48W±0°.06, h109km±3km, Error ellipse: s-maj=8.6km s-min=5.2km az=88.0*
*VAO **30** 08:46:35.1±0.9, 19°.12S×69°.61W, h124km, mb4.2*
*IDC **30** 08:46:36.7±2.5, 19°.26S×69°.33W, h129km±16km, mb3.7/3, mb1 3.7/7, mb1mx3.4/29, mbtmp4.1/7, Error ellipse: s-maj=47.0km s-min=14.9km az=99.0*
*GUC **30** 08:46:36.3±0.8, 19°.18S×69°.39W, h104km±2km, ML4.1*

ISC 30 08:46:34.9±0.7, 19°.20S±0°.04×69°.43W±0°.06, h110km±7km, n80, σ1§22/88, 4C-8D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNMC	**Minye Minye**	**0.17**	**293**	⇑*iP*	**Pn**	**08 46 50.9**	**+0.3**
MNMC				*i*S	**Sn**	**08 47 02.6**	**+0.2**
MNMC				IAML		08 47 05.4	
	comp=E,17μm,0.2s						
MNMC	**Minye Minye**	**0.17**	**293**		**Pn**	**08 46 50.5**	**-0.2**
GO01	**Chusmiza**	**0.52**	**155**	*eP*	**Pn**	**08 46 53.2**	**+0.7**
GO01				*i*S	**Sn**	**08 47 06.3**	**+0.6**
GO01				IAML		08 47 06.9	
	comp=E,15μm,0.1s						
GO01	**Chusmiza**	**0.52**	**155**		**Pn**	**08 46 53.4**	**+0.9**
GO01				Sn	**Sn**	**08 47 06.1**	**+0.5**
PB11	**IPOC Station P**	**0.60**	**201**	*eP*	**Pn**	**08 46 53.3**	**+0.6**
PB11				*i*S	**Sn**	**08 47 06.1**	**+0.1**
PB11	**IPOC Station P**	**0.60**	**201**	Pn	**Pn**	**08 46 52.9**	**+0.2**
PB11				Sn	**Sn**	**08 47 06.0**	**-0.1**
PSGC	**Pisagua**	**0.77**	**239**	⇓*iP*	**Pn**	**08 46 54.5**	**+0.5**
PSGC				*e*S	**Sn**	**08 47 08.1**	**-0.3**
PSGC				IAML		08 47 08.5	
	comp=N,12μm,0.2s						
PSGCX	**Pisagua**	**0.77**	**239**	Pn	**Pn**	**08 46 54.0**	**0.0**
PSGCX				Sn	**Sn**	**08 47 08.1**	**-0.2**
PB16	**IPOC Station P**	**0.86**	**355**	⇑*iP*	**Pn**	**08 46 56.6**	**+1.1**
PB16				*i*S	**Sn**	**08 47 11.7**	**+0.9**
PB16				IAML		08 47 12.7	
	comp=N,6μm,0.3s						
PB16	**IPOC Station P**	**0.86**	**355**		**Pn**	**08 46 56.5**	**+1.1**
PB16				Sn	**Sn**	**08 47 11.4**	**+0.6**
PB08	**IPOC Station P**	**0.97**	**165**	⇓*iP*	**Pn**	**08 46 57.6**	**+1.3**
PB08				*i*S	**Sn**	**08 47 13.4**	**+1.0**
PB08				IAML		08 47 14.2	
	comp=E,4μm,0.1s						
PB08	**IPOC Station P**	**0.97**	**165**		**Pn**	**08 46 57.1**	**+0.8**
HMBC	**Humberstone**	**1.16**	**202**	⇓*iP*	**Pn**	**08 46 58.7**	**+0.7**
HMBC				*e*S	**Sn**	**08 47 16.1**	**+0.7**
HMBC				IAML		08 47 19.9	
	comp=N,4μm,0.2s						
AP01	**Chacalluta**	**1.20**	**313**	⇑*iP*	**Pn**	**08 46 59.2**	**+0.9**
AP01				*i*S	**Sn**	**08 47 16.6**	**+0.8**
AP01				IAML		08 47 20.9	
	comp=E,6μm,0.3s						
AP01	**Chacalluta**	**1.20**	**313**		**Pn**	**08 46 59.0**	**+0.8**
TA02	**Huaiquique**	**1.26**	**212**	*eP*	**Pn**	**08 46 59.8**	**+0.9**
TA02				*i*S	**Sn**	**08 47 17.6**	**+0.5**
TA02				IAML		08 47 19.4	
	comp=N,7μm,0.2s						
TA01	**Diego Aracena**	**1.53**	**207**	⇓*iP*	**Pn**	**08 47 02.4**	**+0.2**
TA01				*e*S	**Sn**	**08 47 22.9**	**+0.1**
TA01	**Diego Aracena**	**1.53**	**207**	Pn	**Pn**	**08 47 02.4**	**+0.2**
PATCX	**Punta Patache**	**1.75**	**203**	*eP*	**Pn**	**08 47 05.2**	**+0.3**
PATCX				*i*S	**Sn**	**08 47 26.8**	**-0.9**
PATCX				IAML		08 47 38.1	
	comp=E,1μm,0.5s						
PATCX	**Punta Patache**	**1.75**	**203**	Pn	**Pn**	**08 47 05.3**	**+0.4**
PB01	**IPOC Station P**	**1.84**	**182**	⇓*iP*	**Pn**	**08 47 07.0**	**+1.0**
PB01				*i*S	**Sn**	**08 47 30.7**	**+1.1**
PB01				IAML		08 47 32.3	
	comp=E,2μm,0.2s						
PB01	**IPOC Station P**	**1.84**	**182**		**Pn**	**08 47 07.0**	**+1.0**
PB07	**IPOC Station P**	**2.55**	**190**	*eP*	**Pn**	**08 47 15.9**	**+0.7**
PB07	**IPOC Station P**	**2.55**	**190**		**Pn**	**08 47 16.1**	**+0.9**
PB09	**IPOC Station P**	**2.59**	**176**	⇓*iP*	**Pn**	**08 47 16.8**	**+1.0**
PB09	**IPOC Station P**	**2.59**	**176**		**Pn**	**08 47 17.1**	**+1.3**
PB03	**IPOC Station P**	**2.85**	**186**	*eP*	**Pn**	**08 47 19.6**	**+0.4**
LPAZ	**La Paz**	**3.15**	**23**	P	**Pn**	**08 47 26.6**	**+3.1**
	comp=E,8.2nm,0.3s,baz=218,slow=6.8,SNR=32						
LPAZ	**La Paz**	**3.15**	**23**	⇓*iP*	**Pn**	**08 47 26.6**	**+3.1**
LPAZ	**La Paz**	**3.15**	**23**	*eP*	**Pn**	**08 47 23.9**	**+0.4**
PB04	**IPOC Station P**	**3.19**	**192**	⇓*iP*	**Pn**	**08 47 25.0**	**+1.3**
PB04				IAML		08 48 19.1	
	comp=E,326nm,0.2s						
PB04				IAML		08 48 28.6	
PB04	**IPOC Station P**	**3.19**	**192**		**Pn**	**08 47 25.1**	**+1.4**
LVC	**Limon Verde**	**3.43**	**172**	P	**Pn**	**08 47 29.1**	**+2.0**
	comp=E,19nm,0.3s,baz=358,slow=9.8,SNR=82						
LVC				S	**Sn**	**08 48 08.3**	**+1.2**
	comp=E,39nm,0.3s,baz=153,slow=20,SNR=17						
LVC	**Limon Verde**	**3.43**	**172**	Pn	**Pn**	**08 47 29.0**	**+2.0**
LVC	**Limon Verde**	**3.43**	**172**	*eP*	**Pn**	**08 47 27.9**	**+0.9**
PB06	**IPOC Station P**	**3.49**	**182**		**Pn**	**08 47 29.5**	**+1.8**
PB15	**IPOC Station P**	**3.99**	**181**	⇑*iP*	**Pn**	**08 47 35.5**	**+1.1**
PB15	**IPOC Station P**	**3.99**	**181**		**Pn**	**08 47 35.9**	**+1.5**
PB10	**IPOC Station P**	**4.42**	**194**	Pn	**Pn**	**08 47 40.0**	**+0.1**
PB14	**IPOC Station P**	**5.48**	**189**	Pn	**Pn**	**08 47 53.9**	**-0.6**
GO02	**Mina Guanaco**	**5.94**	**181**	Pn	**Pn**	**08 48 01.1**	**+0.3**
AC01	**Pan de Azucar**	**7.00**	**189**		**Pn**	**08 48 13.2**	**-1.6**
AC02	**Maricunga**	**7.61**	**178**	Pn	**Pn**	**08 48 24.4**	**+0.9**
SIV	**San Ignacio**	**8.58**	**69**	P	**Pn**	**08 48 35.4**	**-1.0**
	comp=E,0.8nm,0.3s,baz=271,slow=10,SNR=22						
SIV				S	**Sn**	**08 50 06.1**	**-5.5**
	comp=E,0.1nm,0.3s,baz=337,slow=21,SNR=3.9						
AC05	**El Transito**	**9.63**	**184**	Pn	**Pn**	**08 48 48.5**	**-2.1**
ETMB	**Extrema**	**9.83**	**19**	*eP*	**Pn**	**08 48 52.3**	**-1.0**
CO01	**Juntas del Tor**	**10.75**	**183**	Pn	**Pn**	**08 49 05.1**	**-0.8**
VILB	**Vilhena**	**10.82**	**56**	*eP*	**Pn**	**08 49 07.1**	**+0.3**
CPUP	**Villa Florida**	**13.22**	**125**	P	**Pn**	**08 49 37.5**	**-0.8**
	comp=E,0.1nm,0.3s,baz=292,slow=12,SNR=4.7						
CPUP	**Villa Florida**	**13.22**	**125**		**Pn**	**08 49 38.5**	**+0.1**
ROC1	**El Roble**	**13.79**	**186**	Pn	**Pn**	**08 49 47.1**	**+1.1**
MT02	**Curacav**	**14.09**	**186**	Pn	**Pn**	**08 49 50.7**	**+1.1**
BO02	**Sierra Bellavi**	**15.58**	**184**	Pn	**P**	**08 50 10.8**	**+0.3**
BO02				IAmb	IAmb	08 50 31.4	
	comp=Z,22nm,1.4s						
TRCB	**Terra Rica**	**16.08**	**106**	*eP*	**P**	**08 50 16.6**	**+0.5**
H03N1	**Juan Fernandez**	**16.52**	**209**	T	T	09 06 55.5	
	baz=32,slow=72,SNR=33						
H03N2	**Juan Fernandez**	**16.53**	**209**	T	T	09 06 55.4	
	baz=32,slow=72,SNR=29						
H03N3	**Juan Fernandez**	**16.54**	**209**	T	T	09 06 54.1	
	baz=32,slow=72,SNR=29						
PTGB	**Pitanga**	**17.01**	**112**	*eP*	**P**	**08 50 28.6**	**+2.2**
ITAB	**Concordia**	**17.78**	**120**	*eP*	**Pn**	**08 50 36.8**	**+1.3**
MACA	**Manacapuru-AM**	**18.09**	**29**	*eP*	**P**	**08 50 37.7**	**-0.5**
NPGB	**Novo Progresso**	**18.25**	**50**	*eP*	**P**	**08 50 39.9**	**-0.1**
SNDB	**Serra Nova Dou**	**18.88**	**70**	*eP*	**P**	**08 50 47.2**	**+0.4**
FRTB	**Fartura**	**18.96**	**106**	*eP*	**Pn**	**08 50 48.6**	**-1.0**
BB19B	**Bebedouro**	**19.71**	**99**	*eP*	**P**	**08 50 56.7**	**+0.8**
ITTB	**Itaituba**	**19.90**	**44**	*eP*	**P**	**08 50 58.1**	**+0.2**
IPMB	**Ipameri, GO**	**20.15**	**90**	*eP*	**P**	**08 51 00.7**	**0.0**
BDFB	**Brasilia**	**20.73**	**84**	P	**P**	**08 51 08.4**	**+1.3**
	comp=Z,3.6nm,0.5s,baz=260,slow=9.2,SNR=11						
BDFB	**Brasilia**	**20.73**	**84**	P	Pn	08 51 08.9	-1.5
BDFB				IAmb	IAmb	08 51 10.3	
	comp=Z,4.0nm,0.5s						
JANB	**Januaria**	**24.34**	**84**	*eP*	**P**	**08 51 42.7**	**-0.1**
SDBA	**SAO DESIDERIO**	**24.53**	**78**	*eP*	**P**	**08 51 45.0**	**+0.5**
MCPB	**Macapa, AP**	**25.31**	**44**	*eP*	**P**	**08 51 52.2**	**+0.6**
DBIC	**Dimbokro**	**68.57**	**75**	P	**P**	**08 57 23.8**	**-2.6**
	comp=Z,2.8nm,0.8s,baz=288,slow=6.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**77.06**	**71**	P	**P**	**08 58 16.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=252,slow=5.0,SNR=7.0						
TORD	**Torodi Ar. Bea**	**77.06**	**71**	P	**P**	**08 58 17.1**	**+0.5**
H11S2	**WAKE ISLAND Hyd**	**27.07**	**279**	T	T	11 25 04.8	
	baz=101,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hyd**	**27.08**	**279**	T	T	11 25 06.7	
	baz=101,slow=75,SNR=13						
H11S3	**WAKE ISLAND Hyd**	**27.09**	**279**	T	T	11 25 05.3	
	baz=101,slow=75,SNR=22						
H11N3	**WAKE ISLAND Hyd**	**27.09**	**281**	T	T	11 25 03.0	
	baz=101,slow=74,SNR=4.4						
H11N2	**WAKE ISLAND Hyd**	**27.11**	**281**	T	T	11 25 04.1	
	baz=101,slow=74,SNR=7.3						
H11N1	**WAKE ISLAND Hyd**	**27.11**	**281**	T	T	11 25 05.2	
	baz=101,slow=74,SNR=5.4						

NNC 30 09:01:55.8±2.5, 38°.62N×69°.15E, h0km, mb3.9, mpv3.5, 4C-4D, Error ellipse: s-maj=20.8km s-min=16.8km az=158.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnaya**	**3.59**	**11**	Pg	Pb	09 03 00.8	+0.7
	23nm,0.5s						
IUG				Lg	Lg	09 03 51.5	
	49nm,0.7s						
KK31	**Karatay Array**	**4.59**	**13**	⇑Pn	Pn	09 03 07.6	+1.1
	0.5nm,0.3s,baz=195,slow=15,SNR=11						
KK31				Pg	Pb	09 03 18.6	+1.3
	6.7nm,0.7s,baz=191,slow=14,SNR=26						
KK31				⇑Lg	Lg	09 04 21.8	
	10nm,0.7s,baz=194,slow=27,SNR=10.0						
MRKS	**Merke**	**5.16**	**36**	Pg	Pb	09 03 26.9	0.0
	7.8nm,0.6s						
MRKS				Lg	Lg	09 04 36.5	
	11nm,0.5s						
AAK	**Ala-Archa**	**5.71**	**44**	⇓Pn	Pn	09 03 22.7	+0.7
	1.7nm,0.4s						
AAK				Pg	Pg	09 03 41.7	-3.6
	3.0nm,0.6s						
AAK				⇑Sn	Sn	09 04 30.6	+2.2
	4.4nm,0.7s						
AAK				⇓Lg	Lg	09 04 57.4	
	9.9nm,0.8s						
SGDS	**Sogindy**	**6.36**	**39**	Pg	Pb	09 03 49.3	+1.9
SGDS				Lg	Lg	09 05 15.8	
TKM2	**Tokmak 2**	**6.51**	**47**	⇓Pn	Pn	09 03 32.4	-0.6
	2.5nm,0.6s						
TKM2				⇑Sn	Sn	09 04 50.2	+2.0
	4.7nm,0.9s						
TKM2				⇓Lg	Lg	09 05 24.6	
	3.9nm,0.8s						
DGS	**Degeres**	**6.82**	**45**	Pg	Pb	09 03 57.8	+2.6
	2.8nm,0.4s						
DGS				Lg	Lg	09 05 29.4	
	4.8nm,0.6s						

*BJI **30** 09:01:56.1±0.0, 37°.51S×178°.16E, h68km, mB5.6/9, mb5.4/10, Ms5.0/2, Ms7 4.8/2*
*NEIC **30** 09:01:57.3±2.4, 37°.33S±0°.07×178°.3E±0°.1, h68km±4km, mb4.8/22, Error ellipse: s-maj=13.9km s-min=9.6km az=72.0*
*IDC **30** 09:01:58.6±1.3, 37°.15S×178°.10E, h68km±10km, mb4.5/16, mb1 4.5/16, mb1mx4.4/32, mbtmp4.8/16, MS3.6/21, Ms1 3.6/21, ms1mx3.5/31, Error ellipse: s-maj=14.4km s-min=12.0km az=148.0*

ISC 30 09:01:57.8±0.4, 37°.37S±0°.05×178°.27E±0°.06, h68km, n149, σ1§69/132, mb4.8/27, 2C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.19**	**171**		**Pn**	**09 02 07.6**	**-0.6**
MXZ				Sn	**Sn**	**09 02 15.5**	**-0.1**
URZ	**Urewera**	**1.27**	**226**	P	**Pn**	**09 02 21.2**	**+1.6**
	2μm,0.3s,baz=262,slow=3.5,SNR=3876						
URZ				S	**Sn**	**09 02 38.4**	**+2.3**
	2μm,0.3s,baz=144,slow=19,SNR=8.7						
BKZ	**Black Stump Fm**	**2.27**	**217**		**Pn**	**09 02 35.0**	**+1.9**
HIZ	**Hauiti**	**2.93**	**246**	Pn	**Pn**	**09 02 42.9**	**+0.9**
HIZ				Sn	**Sn**	**09 03 17.2**	**+1.2**
BFZ	**Birch Farm**	**3.66**	**205**		**Pn**	**09 02 50.9**	**-1.1**
BFZ				Sn	**Sn**	**09 03 34.1**	**+0.2**
OUZ	**Omahuta**	**4.34**	**298**	Pn	**Pn**	**09 03 00.6**	**-0.7**
MSWZ	**Moikau Station**	**4.67**	**209**		**Pn**	**09 03 02.8**	**-2.9**
PLWZ	**Palliser**	**4.79**	**208**	Pn	**Pn**	**09 03 04.8**	**-2.7**
PLWZ				Sn	**Sn**	**09 03 59.7**	**-2.1**
SNZO	**South Karori**	**4.80**	**214**		**Pn**	**09 03 05.7**	**-1.9**
BHW	**Baring Head**	**4.81**	**212**		**Pn**	**09 03 05.2**	**-2.5**
TUWZ	**Tuamarina**	**5.26**	**218**		**Pn**	**09 03 11.5**	**-2.2**
CMWZ	**Cape Campbell**	**5.38**	**214**		**Pn**	**09 03 14.1**	**-1.3**
NNZ	**Nelson**	**5.39**	**223**		**Pn**	**09 03 14.4**	**-1.2**
BSWZ	**Blackbirch Sta**	**5.51**	**217**		**Pn**	**09 03 14.6**	**-2.6**
QRZ	**Quartz Range**	**5.64**	**231**	Pn	**Pn**	**09 03 18.2**	**-0.8**
THZ	**Tophouse**	**6.03**	**222**	Pn	**Pn**	**09 03 22.3**	**-2.1**
KHZ	**Kahutara**	**6.21**	**214**	Pn	**Pn**	**09 03 24.4**	**-2.3**
LTZ	**Lake Taylor**	**7.09**	**219**		**Pn**	**09 03 36.2**	**-2.7**
OXZ	**Oxford**	**7.61**	**217**		**Pn**	**09 03 43.0**	**-3.0**
MQZ	**McQueen's Vall**	**7.63**	**212**	Pn	**Pn**	**09 03 42.7**	**-3.5**
RPZ	**Rata Peaks**	**8.38**	**219**	P	**Pn**	**09 03 54.1**	**-2.3**
	47nm,0.3s,baz=56,slow=2.0,SNR=120						
RPZ				S	**Sn**	**09 05 23.2**	**-6.3**
	68nm,0.3s,baz=323,slow=21,SNR=13						
RPZ	**Rata Peaks**	**8.38**	**219**	Pn	**Pn**	**09 03 54.0**	**-2.5**
LBZ	**Lake Benmore**	**9.30**	**219**	Pn	**Pn**	**09 04 06.5**	**-2.5**
ODZ	**Otahua Downs**	**9.57**	**214**		**Pn**	**09 04 09.7**	**-3.1**
WKZ	**Wanaka**	**10.20**	**220**		**Pn**	**09 04 20.7**	**-0.7**
MLZ	**Mavora Lakes**	**11.03**	**220**		**Pn**	**09 04 32.5**	**-0.2**
DZM	**Mont Dzumac**	**18.36**	**323**	P	**Pn**	**09 06 07.6**	**-0.2**
	0.5nm,0.3s,baz=161,slow=15,SNR=6.5						
DZM				LR	LR	09 12 05.0	
	comp=Z,496nm,18.1s,baz=171,slow=34						
DZM	**Mont Dzumac**	**18.36**	**323**	*e*LR	LR	09 10 38.7	
	comp=Z,1μm,26.9s						
DZM	**Mont Dzumac**	**18.36**	**323**	P	**P**	**09 06 06.8**	**-0.3**
MSVF	**Nonsavu**	**19.57**	**359**	P	**P**	**09 06 19.5**	**-0.8**
MSVF				IAmb	IAmb	09 06 41.5	
	comp=Z,36nm,0.9s						
SANVU	**Saraoutou**	**23.94**	**333**	P	**P**	**09 07 04.7**	**-1.0**
SANVU				IAmb	IAmb	09 07 12.7	
	comp=Z,36nm,0.7s						
RAR	**Rarotonga**	**24.93**	**56**	LR	LR	09 14 35.2	
	comp=Z,82nm,21.6s,baz=238,slow=30						
AFI	**Afiamalu**	**25.00**	**23**	P	**P**	**09 07 15.0**	**-0.4**
	comp=Z,49nm,0.9s,baz=280,slow=6.1,SNR=4.3						
AFI	**Afiamalu**	**25.00**	**23**	P	**P**	**09 07 15.2**	**-0.2**
AFI				IAmb	IAmb	09 07 20.8	
	comp=Z,44nm,0.8s						
STKA	**Stephens Creek**	**30.54**	**269**	P	**P**	**09 08 06.2**	**+1.4**
	comp=Z,10nm,0.9s,baz=91,slow=9.1,SNR=9.2						
STKA				LR	LR	09 19 43.3	
	comp=Z,122nm,19.8s,baz=64,slow=35						
STKA	**Stephens Creek**	**30.54**	**269**	P	**P**	**09 08 04.5**	**-0.3**
TBI	**Tubuai**	**30.99**	**72**	*e*T	T	09 40 00.2	
	comp=Z,44nm,0.3s						
HNR	**Honiara**	**32.37**	**325**	LR	LR	09 18 48.3	
	comp=Z,50nm,18.7s,baz=138,slow=31						
PAE	**Pea**	**34.38**	**64**	*e*T	T	09 44 19.0	
	comp=Z,5.3nm,0.3s						
PPT2	**Papeete2**	**34.43**	**64**	*e*LR	LR	09 17 56.5	
	comp=Z,130nm,23.8s						
PPT2	**Papeete2**	**34.43**	**64**	*e*T	T	09 44 23.4	
	comp=Z,7.0nm,0.3s						
PPT	**Papeete**	**34.44**	**64**	LR	LR	09 19 02.8	
	comp=Z,75nm,21.6s,baz=221,slow=30						
TVO	**Taravao**	**34.53**	**65**	*e*T	T	09 44 30.7	
	comp=Z,4.0nm,0.3s						
MEH	**Mehetia**	**35.33**	**66**	*e*T	T	09 45 28.7	
	comp=Z,19nm,0.3s						
PMOR	**Pomariorio Ree**	**37.35**	**62**	*e*T	T	09 48 02.9	
	comp=Z,7.7nm,0.3s						
VAH	**Vaihoa**	**37.38**	**63**	*e*T	T	09 48 04.4	
	comp=Z,17nm,0.2s						
COEN	**Coen**	**38.95**	**297**	P	**P**	**09 09 17.5**	**+0.2**
PMG	**Port Moresby**	**39.54**	**307**	LR	LR	09 25 21.4	
	comp=Z,127nm,18.7s,baz=125,slow=36						
AS31	**Alice Springs**	**40.23**	**277**	P	**P**	**09 09 28.2**	**+0.2**
ASAR	**Alice Springs**	**40.23**	**277**	P	**P**	**09 09 27.9**	**-0.1**
	comp=Z,11nm,0.6s,baz=123,slow=8.1,SNR=150						
ASAR				ScP	**ScP**	**09 15 10.1**	**-3.9**
	comp=Z,1.6nm,0.8s,baz=119,slow=3.9,SNR=5.9						
ASAR				S	**S**	**09 15 28.1**	**-2.1**
	comp=Z,2.1nm,0.8s,baz=132,slow=15,SNR=10						
ASAR				LR	LR	09 27 51.8	
	comp=Z,113nm,18.4s,baz=118,slow=39						
ASAR	**Alice Springs**	**40.23**	**277**	P	**P**	**09 09 27.8**	**-0.2**
KRVT	**Keravat (AS076**	**40.74**	**318**	P	**P**	**09 09 30.0**	**-2.2**
	comp=Z,19nm,0.4s,baz=124,slow=3.8,SNR=4.7						
KRVT				LR	LR	09 25 32.6	
	comp=Z,73nm,18.1s,baz=142,slow=35						
VNDA	**Vanda**	**40.87**	**185**	P	**P**	**09 09 35.6**	**+3.1**
	comp=Z,2.4nm,0.7s,baz=17,slow=6.5,SNR=11						
VNDA				ScP	**ScP**	**09 15 16.1**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=345,slow=4.6,SNR=6.7						
VNDA				LR	LR	09 23 35.9	
	comp=Z,68nm,21.7s,baz=18,slow=32						
VNDA	**Vanda**	**40.87**	**185**	P	**P**	**09 09 33.5**	**+1.0**
WR0	**Warramunga Arr**	**41.70**	**282**	P	**P**	**09 09 40.3**	**+0.3**
WR0				IAmb	IAmb	09 10 05.1	
	comp=Z,7.5nm,0.8s						
FORT	**Forrest**	**41.70**	**264**	P	**P**	**09 09 40.1**	**+0.1**
WB2	**Warramunga Ar**	**41.86**	**282**	P	**P**	**09 09 41.0**	**-0.4**
WRAB	**Tennant Creek**	**41.86**	**282**	P	**P**	**09 09 41.0**	**-0.4**
WRAB				IAmb	IAmb	09 09 46.5	
	comp=Z,9.6nm,0.6s						
WRA	**Warramunga Arr**	**41.87**	**282**	P	**P**	**09 09 41.0**	**-0.4**
	comp=Z,7.2nm,0.4s,baz=122,slow=7.6,SNR=81						
WRA				ScP	**ScP**	**09 15 17.4**	**-3.1**
	comp=Z,1.0nm,0.6s,baz=117,slow=3.6,SNR=7.1						
WRA				S	**S**	**09 15 54.7**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=121,slow=15,SNR=6.1						
WRA	**Warramunga Arr**	**41.87**	**282**	P	**P**	**09 09 40.8**	**-0.6**
WB0	**Warramunga Ar**	**41.92**	**282**	P	**P**	**09 09 41.5**	**-0.3**
WB0				IAmb	IAmb	09 09 50.6	
	comp=Z,12nm,0.5s						
KNRA	**Kununurra**	**48.65**	**283**	P	**P**	**09 10 35.7**	**+0.5**
KNRA				IAmb	IAmb	09 10 38.8	
	comp=Z,19nm,1.1s						
JAY	**Jayapura**	**48.91**	**306**	LR	LR	09 31 34.2	
	comp=Z,43nm,20.7s,baz=166,slow=36						
FITZ	**Fitzroy Crossi**	**49.72**	**278**	P	**P**	**09 10 43.8**	**+0.5**
	comp=Z,8.7nm,0.7s,baz=155,slow=9.8,SNR=6.2						
FITZ				LR	LR	09 29 34.3	
	comp=Z,28nm,21.9s,baz=112,slow=33						
FITZ	**Fitzroy Crossi**	**49.72**	**278**	P	**P**	**09 10 42.4**	**-0.9**
FITZ				IAmb	IAmb	09 10 46.2	
	comp=Z,17nm,1.2s						
SOEI	**Soe**	**55.71**	**285**	P	P	09 11 33.0	+5.3
BATI	**Baumata**	**55.90**	**284**	LR	LR	09 37 18.8	
	comp=Z,161nm,18.4s,baz=124,slow=38						
SWI	**Sorong**	**56.48**	**299**	P	P	09 11 39.1	+6.1
MMRI	**Maumere**	**57.97**	**285**	P	**P**	**09 11 47.8**	**+4.2**
SANI	**Sanana**	**59.43**	**293**	P	**P**	**09 11 53.6**	**-0.1**
MAW	**Mawson**	**64.70**	**203**	P	**P**	**09 12 31.1**	**+3.0**
	comp=Z,6.8nm,0.9s,baz=154,slow=13,SNR=3.3						
MAW				LR	LR	09 41 43.6	
	comp=Z,62nm,18.0s,baz=66,slow=37						
MAW	**Mawson**	**64.70**	**203**	P	**P**	**09 12 29.1**	**

MKAR	**Makanchi Array**	**119.75**	**308**	PKP		**PKPdf**	**09 20 37.8**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=143,slow=2.2,SNR=7.6							
MKAR	**Makanchi Array**	**119.75**	**308**			**PKPdf**	**09 20 38.0**	**-1.7**
ZALV	**Zalesovo Beam**	**121.06**	**316**	PKP		**PKPdf**	**09 20 41.0**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=38,slow=0.4,SNR=3.6							
KURK	**Kurchatov**	**123.47**	**311**			**PKPdf**	**09 20 45.8**	**-0.8**
KKAR	**Karatay Array**	**126.12**	**300**			**PKiKP**	**09 20 52.2**	**-0.2**
ARA0	**ARCESS Array S**	**144.58**	**344**	*e*PKPbc		**PKPab**	**09 21 23.3**	**-0.8**
ARCES	**ARCESS Array B**	**144.58**	**344**	PKP		**PKPab**	**09 21 23.1**	**-1.0**
	comp=Z,3.2nm,0.6s,baz=39,slow=2.3,SNR=21							
KLMR	**Klimovskoe**	**145.11**	**326**	*e*PKPdf		**PKPbc**	**09 21 23.8**	**-2.3**
KLMR				AMP			09 21 40.8	
	comp=Z,28nm,1.4s							
KTK1	**Kautokeino**	**145.49**	**344**	*e*PKPbc		**PKPdf**	**09 21 26.1**	**-0.9**
TRO	**Tromso**	**145.81**	**347**	*e*PKPdf		**PKPab**	**09 21 28.3**	**-0.3**
KBZ	**Khabaz**	**145.83**	**295**	PKPbc		**PKPab**	**09 21 29.0**	**-0.5**
	comp=Z,9.4nm,0.9s,baz=167,slow=1.7,SNR=9.7							
STEI	**Steigen**	**147.95**	**348**	*e*PKPdf		**PKPbc**	**09 21 33.0**	**-1.2**
FAUS	**Fauske**	**148.43**	**348**	*e*PKPdf		**PKPbc**	**09 21 34.1**	**-1.4**
LIC	**Lamto**	**148.85**	**174**	*e*P		**PKiKP**	**09 21 40.3**	**+0.7**
	comp=Z,2.7nm,0.2s							
KIC	**Kosan Boka**	**149.01**	**174**	*e*P		**PKPab**	**09 21 42.9**	**+0.1**
	comp=Z,9.0nm,0.6s							
TIC	**Toumodi**	**149.27**	**174**	*e*P		**PKPab**	**09 21 41.9**	**-1.9**
DBIC	**Dimbokro**	**149.31**	**174**	PKPbc		**PKPbc**	**09 21 39.1**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=139,slow=7.1,SNR=2.3							
KONS	**Konsvik**	**149.60**	**348**	*e*PKPbc		**PKPbc**	**09 21 37.6**	**-0.8**
MOR8	**Moi Rana**	**149.67**	**347**	*e*PKPbc		**PKPbc**	**09 21 38.3**	**-0.4**
FINES	**FINESS Array B**	**150.30**	**333**	PKPbc		**PKPbc**	**09 21 38.8**	**-1.5**
	comp=Z,3.3nm,0.4s,baz=45,slow=3.4,SNR=47							
NSS	**Namsos**	**151.60**	**348**	*e*PKPbc		**PKiKP**	**09 21 43.0**	**-0.6**
BR131	**Keskin Array S**	**152.34**	**286**			**PKPbc**	**09 21 45.0**	**-1.0**
BRTR	**Keskin Array B**	**152.34**	**286**	PKPbc		**PKiKP**	**09 21 46.2**	**0.0**
	comp=Z,4.0nm,0.7s,baz=134,slow=3.6,SNR=12							
BRTR	**Keskin Array B**	**152.34**	**286**			**PKPbc**	**09 21 45.5**	**-0.4**
AKASG	**Malin Array Be**	**154.28**	**311**	PKPbc		**PKPbc**	**09 21 48.9**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=56,slow=2.5,SNR=8.3							
AKASG				PKPab		**PKPab**	**09 22 03.0**	**-0.8**
	comp=Z,4.1nm,0.9s,baz=60,slow=4.0,SNR=7.0							
AKASG	**Malin Array Be**	**154.28**	**311**			**PKPbc**	**09 21 47.6**	**-1.9**
DOMB	**Dombas**	**154.41**	**348**	*e*PKPbc		**PKPbc**	**09 21 51.0**	**+1.5**
NC602	**NORSAR Array S**	**155.15**	**344**	*e*PKPbc		PKPbc	09 21 52.1	
TORD	**Torodi Ar. Bea**	**155.68**	**188**	PKP		**PKPdf**	**09 21 47.0**	**+2.7**
	comp=Z,1.1nm,0.9s,baz=84,slow=0.8,SNR=4.1							
TORD				PKPbc		PKPbc	09 21 55.6	
	comp=Z,0.6nm,0.7s,baz=160,slow=0.4,SNR=4.6							
TORD				PKPab		**PKPab**	**09 22 12.2**	**+1.6**
	comp=Z,1.4nm,0.6s,baz=301,slow=0.5,SNR=5.1							
TORD	**Torodi Ar. Bea**	**155.68**	**188**			**PKPdf**	**09 21 44.8**	**+0.4**
SKAR	**Skarslia**	**155.82**	**348**	*e*PKPab		**PKPab**	**09 22 09.0**	**-1.2**
KONO	**Kongsberg**	**156.54**	**345**	*e*PKPab		**PKPab**	**09 22 14.1**	**+0.8**
DPC	**Dobruska-Polom**	**161.69**	**321**	*e*PKPAB		**PKPab**	**09 22 36.8**	**+0.8**
CLL	**Collm**	**162.58**	**328**	*e*PKPab		**PKPab**	**09 22 39.0**	**-0.8**
	comp=Z,6.0nm,0.8s							
NKC	**Novy Kostel**	**163.61**	**326**	*e*PKPAB		**PKPab**	**09 22 43.4**	**-1.0**
KHC	**Kasperske Hory**	**163.84**	**321**	*e*PKPAB		**PKPab**	**09 22 45.4**	**0.0**
GERES	**GERESS Array B**	**163.96**	**320**	PKPab		**PKPab**	**09 22 44.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=32,slow=6.3,SNR=3.9							

*IDC **30** 09:11:10.4±1.8, 1.°86N×126.°43E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/39, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=114.0km s-min=22.3km az=68.0*
*DJA **30** 09:11:15.1±0.3, 2.°N±3.°×12.°6E±.°, h10km, M4.2/9, MLv4.2/9*
ISC 30 09:11:16.1±1.1, 1.°80N±0.°06×126.°45E±0.°07, h35km, n12, σ1s15/13, mb3.9/3, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.37**	**138**	P	**Pn**	**09 11 40.0**	**+1.2**
SGSI	**Sangihe**	**2.09**	**334**	P	**Pn**	**09 11 49.0**	**+0.3**
SGSI				S	**Sn**	**09 12 14.6**	**+1.1**
KMSI	**Cibinong**	**2.75**	**244**	P	**Pn**	**09 11 57.8**	**0.0**
KMSI				S	**Sn**	**09 12 29.7**	**-0.2**
GTOI	**Gorontalo**	**3.63**	**252**	P	**Pn**	**09 12 10.1**	**+0.2**
SANI	**Sanana**	**3.85**	**187**	P	**Pn**	**09 12 13.1**	**+0.2**
LUWI	**Luwuk**	**4.64**	**233**	P	**Pn**	**09 12 25.2**	**+1.4**
MRSI	**Marisa**	**4.70**	**254**	P	**Pn**	**09 12 26.7**	**+2.1**
KCP	**Kidapawan**	**5.35**	**345**	⇑*e*P	Pn	09 12 39.2	+5.6
FITZ	**Fitzroy Crossi**	**19.79**	**182**	P	**P**	**09 15 42.3**	**-1.2**
	0.2nm,0.3s,baz=6.7,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**22.95**	**161**	P	**P**	**09 16 16.8**	**-0.7**
	1.4nm,0.3s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**26.33**	**164**	P	**P**	**09 16 49.5**	**+0.6**
	0.8nm,0.4s,baz=343,slow=8.0,SNR=14						
MKAR	**Makanchi Array**	**58.98**	**326**	P	**P**	**09 21 11.2**	**-1.1**
	1.1nm,0.5s,baz=122,slow=7.6,SNR=12						

*IDC **30** 09:11:25.1±29.0, 35.°27N×71.°64E, h197km±183km, mb3.3/4, mb1 3.3/5, mb1mx2.8/49, mbtmp3.7/5, ML3.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.3/30, Error ellipse: s-maj=465.3km s-min=103.0km az=159.0*
ISC 30 09:11:38.2±2.3, 36.°8N±0.°2×71.°0E±0.°2, h200km, n13, σ1s00/13, mb3.7/3, 2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.69**	**21**	P	**Pn**	**09 13 02.7**	**+0.9**
	SNR=72						
EKS2	**Erkin-Say**	**6.21**	**19**	P	**Pn**	**09 13 09.9**	**+1.7**
	SNR=14						
KK31	**Karatay Array**	**6.29**	**357**	⇓Pn	**Pn**	**09 13 10.2**	**+1.1**
	0.3nm,0.2s,baz=180,slow=12,SNR=27						
KK31				⇓Sn	**Sn**	**09 14 19.8**	**-1.3**
	3.6nm,0.5s,baz=186,slow=22,SNR=3.6						
AAK	**Ala-Archa**	**6.40**	**24**	P	**Pn**	**09 13 11.8**	**+1.1**
	SNR=11						
ULHL	**Ulahol**	**6.76**	**35**	P	**Pn**	**09 13 15.9**	**+0.5**
	SNR=5.5						
TKM2	**Tokmak 2**	**7.04**	**29**	P	**Pn**	**09 13 19.8**	**+0.7**
	SNR=7.7						
MKAR	**Makanchi Array**	**13.03**	**37**	P	**Pn**	**09 14 35.2**	**-0.7**
	0.1nm,0.3s,baz=218,slow=15,SNR=4.6						
ZALV	**Zalesovo Beam**	**19.62**	**25**	P	**P**	**09 15 51.4**	**+0.2**
	0.8nm,0.5s,baz=210,slow=12,SNR=2.8						
FINES	**FINESS Array B**	**37.22**	**326**	P	**P**	**09 18 30.3**	**+0.3**
	2.1nm,1.0s,baz=122,slow=9.3,SNR=6.3						
ARCES	**ARCESS Array B**	**40.85**	**337**	P	**P**	**09 19 00.1**	**+0.1**
	4.5nm,1.0s,baz=121,slow=8.7,SNR=6.0						
NB2	**NORSAR Subarra**	**44.13**	**323**	P	**P**	**09 19 25.9**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.13**	**323**	P	**P**	**09 19 25.8**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=97,slow=7.8,SNR=4.6						
KLR	**Kul'dur**	**44.95**	**54**	LR	LR	09 39 05.3	
	comp=Z,22nm,18.4s,baz=84,slow=36						

*IDC **30** 09:29:41.3±1.7, 17.°87S×69.°32W, h150km±13km, mb3.6/4, mb1 3.6/6, mb1mx3.3/35, mbtmp4.0/6, Error ellipse: s-maj=27.9km s-min=13.1km az=109.0*
ISC 30 09:29:41.3±1.1, 17.°84S±0.°08×69.°3W±0.°1, h150km, n11, σ1s20/10, mb3.9/4, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.92**	**37**	P	**Pn**	**09 30 16.8**	**+0.6**
	15nm,0.3s,baz=233,slow=7.6,SNR=508						
LVC	**Limon Verde**	**4.76**	**175**	P	**Pn**	**09 30 52.1**	**+0.2**
	5.3nm,0.3s,baz=334,slow=8.8,SNR=6.0						
LVC				S	**Sn**	**09 31 45.5**	**-1.4**
	14nm,0.3s,baz=91,slow=22,SNR=20						
SIV	**San Ignacio**	**8.11**	**78**	P	**Pn**	**09 31 37.7**	**+1.3**
	0.5nm,0.3s,baz=296,slow=13,SNR=8.1						
SIV				S	**Sn**	**09 33 05.2**	**-1.6**
	0.3nm,0.3s,baz=1.8,slow=20,SNR=8.3						
H03N1	**Juan Fernandez**	**17.76**	**207**	T	T	09 51 28.3	
	baz=28,slow=73,SNR=4.8						
H03N2	**Juan Fernandez**	**17.77**	**207**	T	T	09 51 22.8	
	baz=28,slow=73,SNR=4.5						
H03N3	**Juan Fernandez**	**17.78**	**207**	T	T	09 51 27.1	
	baz=28,slow=73,SNR=4.6						
PLCA	**Paso Flores**	**22.84**	**182**	P	**P**	**09 34 32.9**	**+1.3**
	1.6nm,0.8s,baz=21,slow=11,SNR=4.2						
DBIC	**Dimbokro**	**68.12**	**75**	P	**P**	**09 40 25.9**	**+0.3**
	1.6nm,0.5s,baz=226,slow=7.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**76.53**	**71**	P	**P**	**09 41 15.7**	**+0.2**
	1.0nm,0.5s,baz=260,slow=5.1,SNR=18						
YKA	**Yellowknife Ar**	**87.62**	**341**	P	**P**	**09 42 11.5**	**-0.6**
	0.6nm,0.5s,baz=126,slow=6.1,SNR=5.7						
SONM	**Songino Array**	**149.88**	**6**	PKPbc	**PKPbc**	**09 49 12.8**	**-1.1**
	0.4nm,0.5s,baz=352,slow=2.0,SNR=2.7						

IDC 30 09:32:50.1±2.1, 1.°99N×126.°73E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/44, mbtmp3.4/3, Error ellipse: s-maj=172.6km s-min=25.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.04**	**161**	P	P	09 37 56.9	-0.3
	0.8nm,0.5s,baz=340,slow=10,SNR=22						
ASAR	**Alice Springs**	**26.44**	**165**	P	P	09 38 29.0	0.0
	0.3nm,0.5s,baz=345,slow=7.5,SNR=9.9						
MKAR	**Makanchi Array**	**58.98**	**326**	P	P	09 42 51.8	+0.2
	0.2nm,0.3s,baz=113,slow=6.5,SNR=5.0						

TRN 30 09:34:07.3, 18.°28N×63.°23W, h49km, MD4.3, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEUS	**St. Eustatius**	**0.82**	**163**	*e*P	Pn	09 34 23.3	+0.6
SEUS				*e*S	Sn	09 34 37.1	+3.3
SKI	**Saint Kitts**	**1.05**	**153**	*e*P	Pn	09 34 26.8	+1.0
SKI				*e*S	Sn	09 34 42.1	+2.6
SKOC	**St. Kitts, UWI**	**1.09**	**154**	*e*P	Pn	09 34 27.7	+1.4
SKOC				*e*S	Sn	09 34 42.6	+2.3
MLYT	**Lee's Yard**	**1.84**	**147**	*e*P	Pn	09 34 38.8	+2.2
MLYT				*e*S	Sn	09 35 00.0	+1.3
ANBD	**Bethesda, Anti**	**1.86**	**131**	*e*P	Pn	09 34 38.1	+1.3
ANBD				*e*S	Sn	09 35 01.6	+2.5
TBG	**Guadaloupe-3**	**2.85**	**148**	*e*P	Pn	09 34 52.6	+2.2
TBG				*e*S	Sn	09 35 25.7	+2.1
DSLB	**Salisbury**	**3.32**	**148**	*e*P	Pn	09 34 59.0	+2.2
DSLB				*e*S	Sn	09 35 35.6	+0.6
SLBI	**Saint Lucia, B**	**4.76**	**153**	*e*P	Pn	09 35 18.5	+1.9
SLBI	**Saint Lucia, B**	**4.76**	**153**	*e*S	Sn	09 36 11.8	+1.3
SVB	**Belmont**	**5.33**	**159**	*e*P	Pn	09 35 25.8	+1.3

*STR **30** 09:34:20.6±0.9, 44.°N±3.°×1.°0E±.°, h3km, MLv4.2/14, smi:scs/0.6/LOCSAT earthModelID smi:scs/0.6/alpes_taup-2.11 preliminary*
*IDC **30** 09:34:25.6±0.8, 44.°65N×9.°43E, h0km, mb3.8/7, mb1 3.9/16, mb1mx3.7/56, mbtmp3.8/16, ML3.7/8, MS2.9/10, Ms1 2.9/10, ms1mx2.7/48, Error ellipse: s-maj=17.1km s-min=9.6km az=123.0*
*BGR **30** 09:34:25.2±0.5, 44.°44N×9.°46E, h10km, ML4.0/23, Error ellipse: s-maj=11.1km s-min=10.0km az=110.0*
*ROM **30** 09:34:25.2±0.1, 44.°536N±0.°007×9.°445E±0.°008, h7km±1km, ML3.8/69, Mw3.6, Error ellipse: s-maj=0.6km s-min=0.6km az=227.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=2.49; $M_{\theta\theta}$=2.51; $M_{\phi\phi}$=-0.02; $M_{r\theta}$=0.01; $M_{r\phi}$=-1.07; $M_{\theta r}$=1.53; Fault plane solution: M_o=3.11032×10^{14} NP1:ϕ_s=86.00000°, δ=45.00000°, λ=-129.00000°. NP2:ϕ_s=315.00000°, δ=57.00000°, λ=-58.00000°.*
*GEN **30** 09:34:25.9, 44.°57N×9.°44E, h8km±4km, Ml3.7*
*PRU **30** 09:34:25.4±0.0, 44.°68N×9.°29E, h0km*
*LDG **30** 09:34:26.2±0.1, 44.°53N×9.°43E, h8km, Ml3.7/41, Error ellipse: s-maj=1.8km s-min=1.3km az=23.0*
*NEIC **30** 09:34:27.7±2.1, 44.°54N±0.°05×9.°55E±0.°05, h15km±6km, Error ellipse: s-maj=7.3km s-min=5.5km az=195.0*
*BEO **30** 09:34:31.6±0.7, 44.°86N×9.°90E, h0km, ML4.0/9*
ISC 30 09:34:26.3±0.7, 44.°55N±0.°02×9.°43E±0.°01, h13km±4km, n397, σ2s18/479, mb3.9/7, MS2.9/3, 25C-3D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GORR	**Gorreto**	**0.11**	**303**	P	**Pg**	**09 34 28.5**	**-1.0**
GORR				S	**Sg**	**09 34 30.8**	**-1.1**
GORR	**Gorreto**	**0.11**	**303**	⇑P	**Pg**	**09 34 28.6**	**-1.0**
GORR				S	**Sg**	**09 34 30.9**	**-0.9**
GORR				AML	AML		
GORR				AML	AML		
	comp=E,84900μm,0.6s						
GORR				AML	AML		
GORR				AML	AML		
	comp=E,84900μm,0.6s						
BOB	**Bobbio (Coli)**	**0.22**	**4**	⇑P	**Pg**	**09 34 30.2**	**-1.0**
BOB				S	**Sg**	**09 34 33.8**	**-0.7**
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
BOB				AML	AML		
	comp=N,51650μm,0.6s						
BOB				AML	AML		
BOB				AML	AML		
	comp=E,49850μm,0.6s						
BOB				AML	AML		
	comp=N,51650μm,0.6s						
BOB				AML	AML		
BOB				AML	AML		
	comp=E,49850μm,0.6s						
BOB				AML	AML		
GRAM	**Graiana**	**0.46**	**96**	P	**Pg**	**09 34 34.4**	**-1.0**
GRAM				S	**Sg**	**09 34 41.1**	**-0.5**
GRAM	**Graiana**	**0.46**	**96**	⇑P	**Pg**	**09 34 34.4**	**-1.0**
GRAM				S	**Sg**	**09 34 41.1**	**-0.5**
GRAM				AML	AML		
	comp=N,46750μm,0.3s						
GRAM				AML	AML		
	comp=E,29250μm,0.4s						
PLMA	**Palmaria, Port**	**0.58**	**148**	⇑P	**Pg**	**09 34 36.5**	**-1.1**
PLMA				S	**Sg**	**09 34 44.5**	**-0.8**
PLMA				AML	AML		
	comp=E,17850μm,1.3s						
PLMA				AML	AML		
	comp=N,19750μm,1.3s						
PLMA				AML	AML		
	comp=N,19750μm,1.3s						
PLMA				AML	AML		
	comp=E,17850μm,1.3s						
FIVI	**Fivizzano**	**0.59**	**121**	P	**Pg**	**09 34 36.8**	**-0.9**
FIVI				S	**Sg**	**09 34 45.1**	**-0.5**
EQUI	**Equi**	**0.64**	**126**	P	**Pg**	**09 34 37.8**	**-1.0**
EQUI				S	**Sg**	**09 34 46.8**	**-0.6**
EQUI	**Equi**	**0.64**	**126**	P	**Pg**	**09 34 37.9**	**-1.0**
EQUI				S	**Sg**	**09 34 46.6**	**-0.7**
EQUI				AML	AML		
	comp=E,5655μm,0.3s						
EQUI				AML	AML		
	comp=N,6560μm,1.4s						
PRMA	**PARMA**	**0.67**	**71**		**Pb**	**09 34 39.4**	**-0.3**
SARO	**Sassorosso**	**0.79**	**117**	P	**Pg**	**09 34 40.3**	**-1.2**
SARO				S	**Sb**	**09 34 51.4**	**-1.0**
SARO	**Sassorosso**	**0.79**	**117**	AML	AML		
	comp=N,6800μm,0.4s						
SARO				AML	AML		
	comp=E,4525μm,0.4s						
VLC	**Villacollemand**	**0.79**	**119**	P	**Pg**	**09 34 40.6**	**-0.9**
VLC				AML	AML		
	comp=E,5185μm,0.8s						
VLC				AML	AML		
	comp=N,5895μm,1.2s						
VLC				AML	AML		
	comp=E,5220μm,0.8s						
VLC				AML	AML		
	comp=N,5900μm,1.2s						
VLC				AML	AML		
	comp=N,5915μm,1.2s						
VLC	**Villacollemand**	**0.79**	**119**		**Pb**	**09 34 41.0**	**-0.8**
QLNO	**Quiliano**	**0.81**	**254**	⇑P	**Pg**	**09 34 40.9**	**-1.0**
QLNO				S	**Sb**	**09 34 52.8**	**0.0**
QLNO				AML	AML		
	comp=N,4000μm,0.6s						
QLNO				AML	AML		
	comp=E,4730μm,0.8s						
FINB	**Finale Ligure**	**0.87**	**245**	⇑P	**Pg**	**09 34 42.4**	**-0.7**
FINB				S	**Sb**	**09 34 54.9**	**+0.2**
CARD	**Cardoso**	**0.92**	**124**	P	**Pg**	**09 34 42.9**	**-1.2**
CARD				S	**Sg**	**09 34 54.7**	**-1.3**
CARD	**Cardoso**	**0.92**	**124**	P	**Pg**	**09 34 42.8**	**-1.2**
CARD				AML	AML		
	comp=N,14200μm,1.2s						
CARD				AML	AML		
	comp=E,12400μm,0.2s						
NOVE	**Novellara**	**0.95**	**74**	AML	AML		
	comp=E,12345μm,0.6s						
NOVE				AML	AML		
	comp=N,11450μm,1.2s						
NOVE				AML	AML		
	comp=E,12350μm,0.6s						
NOVE				AML	AML		
	comp=N,11500μm,1.2s						
BDI	**Bagni Di Lucca**	**0.97**	**119**	P	**Pg**	**09 34 43.9**	**-1.0**
BDI				AML	AML		
	comp=E,10600μm,1.0s						
BDI				AML	AML		
	comp=N,7190μm,1.1s						
BDI				AML	AML		
	comp=E,9865μm,0.4s						
BDI				AML	AML		
	comp=E,10580μm,1.0s						
BDI				AML	AML		
	comp=N,8290μm,0.8s						
MAIM	**Mastiano**	**0.99**	**129**	P	**Pg**	**09 34 44.1**	**-1.3**
MAIM				S	**Sg**	**09 34 57.0**	**-1.3**
MAIM	**Mastiano**	**0.99**	**129**	P	**Pg**	**09 34 44.3**	**-1.1**
MAIM				S	**Sb**	**09 34 57.9**	**-0.3**
MAIM				AML	AML		
	comp=N,8080μm,0.4s						
MAIM				AML	AML		
	comp=E,6360μm,0.6s						
RORO	**Rocca Rossa**	**1.07**	**247**	P	**Pg**	**09 34 45.2**	**-1.6**
RORO	**Rocca Rossa**	**1.07**	**247**	P	**Pg**	**09 34 45.2**	**-1.6**
RORO				AML	AML		
	comp=E,2175μm,0.3s						
RORO				AML	AML		
	comp=N,3955μm,1.5s						
POPM	**Popiglio**	**1.08**	**117**	AML	AML		
	comp=E,8485μm,0.3s						
POPM				AML	AML		
	comp=N,9020μm,0.8s						
ZCCA	**Zocca**	**1.13**	**99**	P	**Pn**	**09 34 48.8**	**+1.1**
ZCCA				AML	AML		
	comp=E,6255μm,0.6s						
ZCCA				AML	AML		
	comp=N,9565μm,0.5s						
ZCCA				AML	AML		
	comp=N,9920μm,0.5s						
ZCCA				AML	AML		
	comp=E,5665μm,0.5s						
ZCCA				AML	AML		
	comp=E,6260μm,0.6s						
ZCCA				AML	AML		
	comp=N,9550μm,0.5s						
ZCCA	**Zocca**	**1.13**	**99**		**Pg**	**09 34 46.7**	**-1.3**
PII	**Pisa**	**1.14**	**136**	P	**Pg**	**09 34 46.7**	**-1.5**
PII				AML	AML		
	comp=E,11350μm,1.1s						
PII				AML	AML		
	comp=N,6270μm,0.3s						
GROG	**Isola di Gorgo**	**1.17**	**163**	⇑P	**Pg**	**09 34 47.1**	**-1.6**
GROG				S	**Sb**	**09 35 03.1**	**-0.2**
GROG				AML	AML		
	comp=E,8095μm,0.8s						
GROG				AML	AML		
	comp=N,4830μm,0.2s						
CAVE	**Cavezzo**	**1.17**	**74**	AML	AML		
	comp=E,18700μm,0.5s						
CAVE				AML	AML		
	comp=E,18700μm,0.5s						
CAVE				AML	AML		
	comp=N,12020μm,1.5s						
GBOS	**Grotte di Boss**	**1.18**	**256**	P	**Pg**	**09 34 47.4**	**-1.6**
GBOS				AML	AML		
	comp=E,2545μm,0.7s						
GBOS				AML	AML		
	comp=N,3190μm,0.7s						
RAVA	**Ravarino**	**1.23**	**79**	⇑P	**Pn**	**09 34 51.9**	**+2.9**
RAVA				AML	AML		
	comp=E,32350μm,0.5s						
RAVA				AML	AML		
	comp=N,18750μm,0.7s						
RAVA				AML	AML		
	comp=N,18700μm,0.7s						
RAVA				AML	AML		
	comp=N,18700μm,0.7s						
RAVA				AML	AML		
	comp=E,32350μm,0.5s						
MTCR	**Monte La Croce**	**1.24**	**114**	P	**Pb**	**09 34 49.2**	**-0.3**
MTCR				AML	AML		
	comp=E,4260μm,0.4s						
MTCR				AML	AML		
	comp=N,5620μm,1.0s						
MTCR				AML	AML		
	comp=N,5665μm,1.0s						
MTCR				AML	AML		
	comp=E,4270μm,0.4s						
MDI	**Monti di Nese**	**1.25**	**9**	P	**Pb**	**09 34 48.8**	**-0.9**
MDI				AML	AML		
	comp=E,4280μm,0.2s						
MDI				AML	AML		
	comp=E,4475μm,0.2s						
MDI				AML	AML		
	comp=E,4285μm,0.2s						
MDI				AML	AML		
	comp=N,4250μm,0.8s						
MDI				AML	AML		
	comp=N,4235μm,0.8s						
MGRO	**Montegrosso**	**1.27**	**247**	P	**Pn**	**09 34 48.4**	**-1.4**
MGRO				S	**Sg**	**09 35 05.6**	**-1.5**
MGRO				AML	AML		
	comp=E,3685μm,0.7s						
MGRO				AML	AML		
	comp=N,3015μm,0.7s						
FNVD	**Fontana Vidola**	**1.27**	**107**	P	**Pg**	**09 34 50.2**	**-0.5**
FNVD				AML	AML		
	comp=E,6005μm,0.6s						
FNVD				AML	AML		
	comp=N,4450μm,0.3s						
GAZZ	**Gazzo Veronese**	**1.32**	**64**	*e*Pg	**Pg**	**09 34 52.1**	**+0.5**
GAZZ				*e*Sg	**Sn**	**09 35 12.0**	**+4.4**
SALO	**Salr**	**1.33**	**36**	AML	AML		
	comp=N,8255μm,0.7s						
SALO				AML	AML		
	comp=E,5770μm,1.0s						
SALO				AML	AML		
	comp=N,20100μm,0.7s						
SALO				AML	AML		
	comp=E,13150μm,1.0s						
SALO				AML	AML		
	comp=N,20100μm,0.7s						
SALO	**Salr**	**1.33**	**36**	Pn	**Pn**	**09 34 50.7**	**+0.2**
CRMI	**Carmignano**	**1.34**	**124**	P	**Pn**	**09 34 50.3**	**-0.4**
CRMI				AML	AML		
	comp=N,2020μm,0.4s						
CRMI				AML	AML		
	comp=E,2080μm,0.7s						
CRMI				AML	AML		
	comp=E,853μm,0.7s						
CRMI				AML	AML		
	comp=N,834μm,0.4s						
VARE	**Varese**	**1.40**	**341**	AML	AML		
	comp=E,3305μm,0.8s						
VARE				AML	AML		
	comp=N,2150μm,0.7s						
MUGIO	**Muggio**	**1.40**	**349**	⇑P	**Pn**	**09 34 51.5**	**0.0**
MUGIO				AML	AML		
	comp=E,2770μm,0.8s						
MUGIO				AML	AML		
	comp=N,2755μm,0.7s						
MUGIO				AML	AML		
	comp=E,2770μm,0.8s		

FIU AML AML
comp=E,12385µm,0.6s
comp=N,19700µm,0.5s
MAGA Magasa 1.50 34 ⇑P **Pn** 09 34 52.4 -0.5
MAGA AML AML
comp=N,5320µm,0.6s
MAGA AML AML
comp=E,13650µm,1.2s
BALD Monte Baldo 1.51 40 *e*Pg **Pn** 09 34 53.5 +0.4
BALD *e*Sg **Sg** 09 35 15.3 +0.5
TRAV Traversella 1.54 310 P **Pn** 09 34 53.6 +0.2
TRAV AML AML
comp=E,1500µm,1.1s
TRAV AML AML
comp=N,1186µm,0.8s
BRIS BRISIGHELLA 1.55 104 AML AML
comp=E,1805µm,0.6s
BRIS AML AML
comp=N,3350µm,0.5s
TURF col de Turini 1.57 249 P **Pn** 09 34 52.3 -1.6
TURF S **Sn** 09 35 13.0 -1.2
SBF Sospel 1.59 245 *e*Pn **Pn** 09 34 53.2 -0.9
SBF Sospel 1.59 245 *e*Pg **Pb** 09 34 55.4 0.0
SBF *e*Sn **Sn** 09 35 13.3 -1.1
comp=N,1µm,0.5s
ESCA l'Escarene 1.64 245 P **Pn** 09 34 53.8 -0.9
PZZ Stroppo 1.65 270 P **Pn** 09 34 55.6 +0.6
PZZ AML AML
comp=N,4590µm,0.6s
PZZ AML AML
comp=E,3045µm,0.7s
OSSC Osservatorio P 1.66 127 AML AML
comp=E,2285µm,1.5s
OSSC AML AML
comp=N,2065µm,1.1s
OSSC AML AML
comp=N,2230µm,1.4s
OSSC AML AML
comp=E,2035µm,1.1s
OSSC Osservatorio P 1.66 127 Pn **Pn** 09 34 54.7 -0.3
MARN Marana (Italy) 1.67 48⇑*e*Pn **Pn** 09 34 55.2 0.0
MARN *e*Sn **Sg** 09 35 19.1 -0.9
CIRO Champorcher 1.69 309 P **Pn** 09 34 55.6 -0.1
CIRO AML AML
comp=E,904µm,0.7s
CIRO AML AML
comp=N,1385µm,0.6s
MABI Malga Bissina 1.69 27 ⇑P **Pn** 09 34 55.7 0.0
MABI AML AML
comp=N,1045µm,0.5s
MABI AML AML
comp=E,1450µm,1.0s
LMD Lutirano 1.70 105 AML AML
comp=N,1810µm,0.6s
LMD AML AML
comp=E,1730µm,0.6s
CSNT Castellina Chi 1.72 128 P **Pn** 09 34 55.5 -0.4
CSNT AML AML
comp=N,1820µm,0.6s
CSNT AML AML
comp=E,1325µm,1.2s
ISO Isola 1.74 259 P **Pn** 09 34 56.0 -0.2
TEOL Teolo 1.79 62 *e*Pn **Pn** 09 34 57.1 +0.3
TEOL Teolo 1.79 62 ⇑P **Pn** 09 34 57.1 +0.3
TEOL AML AML
comp=N,6740µm,1.1s
TEOL AML AML
comp=E,7540µm,1.1s
TEOL Teolo 1.79 62 **Pn** 09 34 57.1 +0.3
MMK Mattmark 1.83 326 P **Pn** 09 34 58.2 +0.7
MMK AML AML
comp=N,684µm,0.5s
MMK AML AML
comp=E,746µm,0.9s
DOSS Dosso del Somm 1.83 42 *e*Pn **Pn** 09 34 57.5 0.0
GAGG Gaggia 1.88 35 *e*Pn **Pn** 09 34 58.3 +0.1
MBDF Montbardon 1.90 276 *e*P **Pn** 09 34 59.2 +0.7
MBDF Montbardon 1.90 276 *e*Pg **Pb** 09 35 01.3 +0.4
MBDF *e*Sg **Sb** 09 35 25.2 +0.6
comp=E,216nm,0.4s
BERNI Berninapass 1.92 12 P **Pn** 09 34 59.5 +0.7
BERNI AML AML
comp=E,1000µm,1.2s
BERNI AML AML
comp=N,1360µm,1.1s
TUE Stuetta 1.93 358 AML AML
comp=E,744µm,1.4s
TUE AML AML
comp=N,710µm,0.7s
TUE AML AML
comp=N,938µm,0.7s
TUE AML AML
comp=E,958µm,1.4s
TUE Stuetta 1.93 358 **Pn** 09 34 58.6 -0.3
CALF Calern 1.97 247 P **Pn** 09 34 58.5 -0.9
FUSIO Fusio 1.98 345 AML AML
comp=E,1020µm,1.0s
FUSIO AML AML
comp=N,804µm,1.0s
PGF Pioggiola 2.02 189 P Pn 09 34 54.2 -5.9
PGF S **Sn** 09 35 22.6 -2.6
PGF Pioggiola 2.02 189 *e*Pn **Pn** 09 34 59.0 -1.1
PGF *e*Sn **Sn** 09 35 22.6 -2.6
comp=N,236nm,0.3s
PGF Pioggiola 2.02 189 P **Pn** 09 34 58.6 -1.5
PGF AML AML
comp=E,482µm,0.7s
PGF AML AML
comp=N,523µm,0.8s
BNI Bardonecchia 2.02 286 P **Pn** 09 35 01.6 +1.5
BNI AML AML
comp=E,444µm,0.9s
BNI AML AML
comp=N,620µm,0.7s
BNI AML AML
comp=N,520µm,0.7s
BNI AML AML
comp=E,603µm,0.9s
BNI Bardonecchia 2.02 286 Pn **Pb** 09 35 02.2 -0.7
CRE Caprese Michel 2.04 116 AML AML
comp=N,1470µm,0.6s
CRE AML AML
comp=E,1550µm,0.8s
BRMO Bormio 2.04 19 ⇑P **Pn** 09 35 01.3 +0.9
BRMO AML AML
comp=E,800µm,0.9s
BRMO AML AML
comp=N,550µm,1.1s
OGMO Fort Saint-Gob 2.06 290 P **Pb** 09 35 02.7 -0.8
REMY Saint-Rhmy-en 2.06 310 AML AML
comp=E,1010µm,1.3s
REMY AML AML
comp=N,1435µm,1.0s
OGAG Argentiere 2.07 269 P **Pn** 09 35 02.1 +1.4
MRGE Morge 2.07 307 P **Pn** 09 35 02.0 +1.1
MRGE AML AML
comp=E,1045µm,0.8s
MRGE AML AML
comp=N,1047µm,0.6s
LPG La Plagne 2.12 298 *e*P **Pn** 09 35 03.2 +1.5
LPG La Plagne 2.12 298 *e*Pg **Pg** 09 35 06.0 -1.0
LPG *e*Sg **Sg** 09 35 33.6 -0.9
comp=N,286nm,0.7s
LPL La Plagne 2.14 298 *e*P **Pn** 09 35 03.2 +1.3
LPL La Plagne 2.14 298 *e*Pg **Pb** 09 35 06.0 +1.0
LPL *e*Sg **Sb** 09 35 33.2 +1.6
comp=N,461nm,0.6s
CTI Castel Tesino 2.17 45 ⇑P **Pn** 09 35 02.4 +0.2
CTI AML AML
comp=E,2365µm,0.5s
CTI AML AML
comp=N,1680µm,1.0s
CTI Castel Tesino 2.17 45 **Pn** 09 35 02.2 +0.1
MOSI Grossmontoni 2.22 20 P **Pn** 09 35 04.2 +1.3
MOSI AML AML
comp=N,3610µm,0.8s
MOSI AML AML
comp=E,2725µm,0.9s
FRF La Foret Royal 2.23 245 *e*Pn **Pn** 09 35 02.2 -0.7
FRF *e*Sn **Sn** 09 35 28.9 -1.4
comp=E,382nm,0.5s
DAVOX Davos/Dischmat 2.26 8 Pn **Pn** 09 35 05.1 +1.7
comp=E,9.2nm,0.3s,baz=193,slow=11,SNR=55
DAVOX Lg Lg 09 35 34.3
comp=E,24nm,0.3s,baz=93,slow=24,SNR=7.8
DAVOX LR LR 09 35 44.5

comp=E,83nm,18.2s,baz=174,slow=37
RSL Roselend 2.29 301 P **Pb** 09 35 06.8 -0.6
APPI Appiano 2.31 33 AML AML
comp=E,1600µm,0.6s
APPI AML AML
comp=N,1415µm,1.4s
SENIN Lac Senin/Sane 2.36 321 Pn **Pb** 09 35 07.3 -1.3
KOSI Kohlern 2.36 35 ⇑P **Pn** 09 35 06.0 +1.2
KOSI AML AML
comp=N,1325µm,1.0s
KOSI AML AML
comp=E,1790µm,0.8s
ATMI Monte Miggiano 2.38 120 AML AML
comp=N,1900µm,0.6s
ATMI AML AML
comp=E,1260µm,0.8s
ATPI Pietralunga - 2.41 116 AML AML
comp=E,580µm,0.5s
ATPI AML AML
comp=N,598µm,0.5s
LMR La Mourre 2.43 241 *e*Pn **Pn** 09 35 04.5 -1.1
LMR La Mourre 2.43 241 *e*P **Pn** 09 35 07.7 +2.1
LMR *e*Sn **Sn** 09 35 32.9 -2.2
comp=N,80nm,0.3s
GDM Grand'Maison 2.44 287 Pn **Pb** 09 35 10.6 +0.5
ATVO AVT- Monte Val 2.44 117 AML AML
comp=E,752µm,0.9s
ATVO AML AML
comp=N,811µm,0.9s
NARO Abbazia di Nar 2.46 111 AML AML
comp=E,374µm,0.9s
NARO AML AML
comp=N,348µm,0.5s
SACS San Casciano d 2.47 132 AML AML
comp=E,200µm,1.5s
SACS AML AML
comp=N,246µm,0.6s
BLAF les Blancs 2.50 257 P **Pn** 09 35 07.3 +0.7
PLONS Plons/SG 2.50 359 *e*Pn **Pn** 09 35 08.7 +2.0
PLONS *e*Sn **Sb** 09 35 40.9 -1.0
PLONS Plons/SG 2.50 359 AML AML
comp=N,764µm,0.8s
PLONS AML AML
comp=E,796µm,0.6s
ORIF Oris-en-Rattie 2.56 280 P **Pb** 09 35 10.1 -1.8
ORIF Oris-en-Rattie 2.56 280 *e*P **Pn** 09 35 08.8 +1.4
ORIF Oris-en-Rattie 2.56 280 *e*Pg **Pg** 09 35 13.9 -1.3
ORIF *e*Sg **Sg** 09 35 46.2 -2.1
comp=E,241nm,0.6s
ORIF Oris-en-Rattie 2.56 280 AML AML
comp=N,558µm,1.1s
ORIF AML AML
comp=E,556µm,0.8s
ABSI Aberstueckl 2.56 31 AML AML
comp=N,1110µm,0.7s
ABSI AML AML
comp=E,1465µm,1.6s
FSSB Fossombrone 2.56 108 AML AML
comp=N,1425µm,0.9s
FSSB AML AML
comp=E,998µm,0.3s
MURB Monte Urbino 2.58 119 **Pn** 09 35 07.8 +0.1
LATE Laterza 2.59 137 **Pn** 09 35 07.5 -0.3
POLC Polcenigo 2.63 55 AML AML
comp=N,2075µm,0.6s
POLC AML AML
comp=E,2050µm,0.5s
FETA Feichten 2.64 20 *e*Pn **Pn** 09 35 10.3 +1.7
comp=E,13nm,0.7s,SNR=32
FETA Feichten 2.64 20 **Pn** 09 35 10.3 +1.7
MLYF Mely 2.69 259 P **Pn** 09 35 10.4 +1.2
CIMO Cimolais 2.76 49 **Pn** 09 35 10.4 +0.3
ROSI Rosskopf 2.76 30 AML AML
comp=E,1140µm,0.8s
ROSI AML AML
comp=N,1440µm,0.7s
DAVA Damuels 2.76 6 *e*Pn **Pn** 09 35 12.1 +1.8
comp=N,13nm,0.2s,SNR=21
DAVA Damuels 2.76 6 **Pn** 09 35 12.1 +1.8
ARTF Artigues 2.78 251 P **Pn** 09 35 10.6 +0.2
ASSB Assisi San Ben 2.78 122 AML AML
comp=N,312µm,1.2s
ASSB AML AML
comp=E,380µm,0.5s
BSTF la Bastide-des 2.80 258 P **Pn** 09 35 11.4 +0.7
SMRF Simiane la Rot 2.83 260 *e*P **Pn** 09 35 12.0 +0.9
SMRF *e*Sn **Sn** 09 35 43.0 -2.0
SMRF *e*Sg **Sg** 09 35 55.1 -1.9
comp=E,343nm,0.5s
OGSM Saint Maurice 2.85 293 P **Pn** 09 35 14.4 +3.0
STAL STALIGIAL 2.88 52 **Pn** 09 35 12.2 +0.4
WILA Wila 2.89 353 *e*Pn **Pn** 09 35 13.3 +1.3
WILA *e*Sn **Sn** 09 35 46.9 +0.2
RUSF Rustrel 2.90 259 P **Pn** 09 35 13.1 +1.1
OBER Oberstdorf 2.93 12 *e*Pn **Pn** 09 35 14.9 +2.4
OBER *e*Sn **Sn** 09 35 50.5 +3.0
ASEAF Site Antares, 2.94 235 P **Pn** 09 35 12.4 +0.1
CESI CESI - Serrava 2.95 120 AML AML
comp=N,180µm,1.1s
CESI AML AML
comp=E,146µm,0.6s
SQTA Sankt Quirin 2.95 24 *e*Pn **Pn** 09 35 15.1 +2.2
comp=E,25nm,0.2s,SNR=29
SQTA Sankt Quirin 2.95 24 **Pn** 09 35 15.1 +2.2
MOTA Moosalm 3.04 22 *i* Pn **Pn** 09 35 16.4 +2.3
comp=E,65nm,0.4s,SNR=92
MOTA Moosalm 3.04 22 **Pn** 09 35 16.4 +2.3
RISI Rein 3.04 37 AML AML
comp=N,1510µm,0.4s
RISI AML AML
comp=E,1016µm,0.4s
BALST Balsthal 3.04 337 *e*Pn **Pn** 09 35 15.8 +1.7
BALST *e*Sn **Sn** 09 35 51.7 +1.3
ZUGS Zugspitze, Sch 3.07 20 *e*Pn **Pn** 09 35 17.0 +2.4
RETA Reutte 3.09 17 *i* Pn **Pn** 09 35 16.6 +1.9
comp=E,24nm,0.5s,SNR=23
RETA Reutte 3.09 17 **Pn** 09 35 16.6 +1.9
ABTA Abfaltersbach 3.09 43 *i* Pn **Pn** 09 35 16.3 +1.5
comp=E,90nm,0.5s,SNR=66
ABTA Abfaltersbach 3.09 43 **Pn** 09 35 16.3 +1.5
OG35 Corcelles 3.11 300 Pn **Pn** 09 35 17.3 +2.4
OG35 S **Sn** 09 35 55.5 +3.5
SULZ Cheisacher 3.12 343 *e*Pn **Pn** 09 35 16.3 +1.2
CABF La Chapelle 3.12 313 *e*P **Pn** 09 35 17.3 +2.1
CABF La Chapelle 3.12 313 *e*Pg **Pb** 09 35 23.4 +1.7
CABF *e*Sn **Sn** 09 35 50.8 -1.6
comp=E,255nm,0.7s
WTTA Wattenberg 3.13 29 *i* Pn **Pn** 09 35 17.2 +1.9
comp=E,12nm,0.2s,SNR=22
WTTA Wattenberg 3.13 29 AML AML
comp=N,515µm,0.7s
WTTA AML AML
comp=E,854µm,0.7s
WTTA Wattenberg 3.13 29 **Pn** 09 35 17.2 +1.9
ARBF Arbois 3.13 252 P **Pn** 09 35 15.6 +0.3
WATA Walderalm 3.17 27 *i* Pn **Pn** 09 35 18.0 +2.1
comp=E,7.1nm,0.2s,SNR=18
WATA Walderalm 3.17 27 **Pn** 09 35 18.0 +2.1
UBR Ueberruh 3.17 8 *e*Pn **Pn** 09 35 17.3 +1.4
UBR *e*Sn **Sn** 09 35 56.2 +2.7
NRCA Norcia 3.17 121 **Pn** 09 35 17.1 +1.1
PART Garmisch-Parte 3.18 21 *e*Pn **Pn** 09 35 18.2 +2.3
PART *e*Sn **Sn** 09 35 56.7 +3.0
ZOU Zoufplan 3.20 50 **Pn** 09 35 16.6 +0.2
WALHA Wallhausen, DE 3.22 356 *e*Pn **Pn** 09 35 17.1 +0.7
WALHA *e*Sn **Sb** 09 36 00.0 -2.2
WALHA *e*Sg **Sg** 09 36 13.2 +3.7
PP3 Marolino 3.24 110 AML AML
comp=E,630µm,0.7s
PP3 AML AML
comp=N,472µm,0.7s
METMA Mettma DE 3.27 346 *e*Pn **Pn** 09 35 17.8 +0.6
METMA *e*Sn **Sn** 09 35 56.2 +0.2
SABO M.te Sabotino 3.28 63 AML AML
comp=N,1510µm,0.7s
SABO AML AML
comp=E,998µm,0.6s
TRI Trieste 3.28 68 **Pn** 09 35 16.7 -0.6
CHMF Charmoille 3.33 325 P **Pn** 09 35 19.9 +1.9
CHMF S **Sn** 09 35 59.9 +2.6
PTCC Patocco-Chiusa 3.33 55 AML AML
comp=N,458µm,0.6s
PTCC AML AML
comp=E,468µm,0.6s
LOMF Lomont 3.34 328 Pg **Pn** 09 35 20.3 +2.1

LOMF S **Sn** 09 36 01.8 +4.1
ROBS Robic 3.34 58 *i* Pn **Pn** 09 35 17.8 -0.3
EMING Emmingen-Lipti 3.37 353 *e*Pn **Pn** 09 35 18.9 +0.3
EMING *e*Sn **Sn** 09 35 57.9 -0.6
SKDS Skadanscina 3.40 71 *i* Pn **Pn** 09 35 18.4 -0.6
SKDS *i* Sn **Sn** 09 35 57.1 -2.1
comp=Z,178nm,0.6s
VIVF Saint-Julien-l 3.40 277 *e*Pn **Pn** 09 35 17.6 -1.4
VIVF Saint-Julien-l 3.40 277 *e*P **Pn** 09 35 20.7 +1.7
VIVF Saint-Julien-l 3.40 277 *e*Pg **Pb** 09 35 27.6 +1.2
VIVF *e*Sn **Sn** 09 35 56.3 -2.9
comp=Z,67nm,0.6s
BERGE Lenzkirch (DE) 3.44 346 *e*Pn **Pn** 09 35 20.0 +0.5
BERGE *e*Sn **Sn** 09 35 60.0 -0.2
PRED Cave del Predi 3.48 55 Pn **Pn** 09 35 20.7 +0.7
ACOM Acomizza, Ital 3.50 54 AML AML
comp=N,745µm,0.6s
ACOM AML AML
comp=E,904µm,0.5s
SSB Saint Sauveur 3.55 284 P **Pn** 09 35 22.6 +1.6
SSB Saint Sauveur 3.55 284 Pn **Pn** 09 35 22.7 +1.6
KIZ Kirchzarten 3.57 343 P **Pn** 09 35 21.9 +0.6
KIZ S **Sn** 09 36 02.5 -0.7
BE1 Monatshausen 3.59 20 *e*Pn **Pn** 09 35 23.1 +1.5
BE1 *e*Sn **Sn** 09 36 04.6 +0.8
MYKA Terra Mystica 3.62 53 *i* Pn **Pn** 09 35 23.2 +1.2
comp=E,3.2nm,0.3s,SNR=6.1
MYKA Terra Mystica 3.62 53 **Pn** 09 35 23.2 +1.2
AQU L'Aquila 3.63 126 *e*Pn **Pn** 09 35 25.2 +3.1
AQU L'Aquila 3.63 126 Pn **Pn** 09 35 25.2 +3.1
RIY Rijeka 3.67 76 *e*Pn **Pn** 09 35 25.0 +2.3
RIY Rijeka 3.67 76 Sn **Sn** 09 36 05.3 -0.5
VIVA Pratoni del Vi 3.71 138 AML AML
comp=E,807µm,0.1s
VIVA AML AML
comp=N,626µm,0.9s
HINF Hinteralfeld 3.73 332 *e*P **Pn** 09 35 25.0 +1.5
HINF Hinteralfeld 3.73 332 *e*Pg **Pb** 09 35 34.4 +2.5
HINF *e*Sn **Sn** 09 36 04.1 -3.2
comp=N,66nm,0.4s
KBA Koelnbreinsper 3.73 46 *i* Pn **Pn** 09 35 25.1 +1.4
comp=N,37nm,0.7s,SNR=32
KBA Koelnbreinsper 3.73 46 **Pn** 09 35 25.1 +1.4
CEY Cerknica 3.73 70 *e*Pn **Pn** 09 35 22.0 -1.6
FUR Furstenfeldbru 3.84 19 *e*Pn **Pn** 09 35 25.9 +0.9
FUR *e*Sn **Sn** 09 36 09.3 -0.7
FUR *e*Sg **Sg** 09 36 35.1 +5.5
BFO Black Forest 3.86 349 *e*Pn **Pn** 09 35 25.4 +0.1
BFO *e*Sn **Sn** 09 36 09.6 -0.9
BFO Black Forest 3.86 349 Pn **Pn** 09 35 26.2 +0.9
NVLJ Novalja 3.89 88 *e*Pn **Pn** 09 35 26.6 +1.0
NVLJ Sn **Sn** 09 36 10.5 -0.7
LJU Ljubljana 3.90 66 *e*Pn **Pn** 09 35 24.6 -1.2
GBRS Gornja Briga 3.94 74 *i* Pn **Pn** 09 35 26.4 0.0
RJOB Jochberg 3.96 35 *e*Pn **Pn** 09 35 28.1 +1.4
ECH Echery 3.99 338 P **Pn** 09 35 28.1 +1.1
ECH Echery 3.99 338 *e*Pn **Pn** 09 35 28.2 +1.1
ECH Echery 3.99 338 Pn **Pn** 09 35 28.7 +1.5
LASF Ste Croix 4.03 265 *e*Pn **Pn** 09 35 26.3 -1.2
LASF Ste Croix 4.03 265 *e*P **Pn** 09 35 28.6 +1.1
LASF Ste Croix 4.03 265 *e*Pg **Pb** 09 35 39.9 +2.9
LASF *e*Sn **Sn** 09 36 11.0 -3.5
comp=N,31nm,0.5s
HAU Haudompre 4.07 329 *e*P **Pn** 09 35 29.6 +1.5
HAU *e*Sn **Sn** 09 36 12.3 -3.3
comp=N,229nm,0.5s
DUGI Dugi Otok 4.08 96 *e*Pn **Pn** 09 35 29.4 +1.1
DUGI Sn **Sn** 09 36 13.7 -2.2
OBKA Obir 4.10 60 *e*Pn **Pn** 09 35 29.5 +0.9
comp=N,1.7nm,0.1s
OBKA Obir 4.10 60 **Pn** 09 35 29.6 +0.9
INTR Introdacqua 4.13 126 Pn **Pn** 09 35 30.8 +1.7
CDF Champ du Feu 4.14 340 *e*P **Pn** 09 35 30.0 +0.8
CDF Champ du Feu 4.14 340 *e*Pg **Pb** 09 35 41.8 +2.8
CDF *e*Sn **Sn** 09 36 13.6 -4.0
comp=N,84nm,0.6s
STU Stuttgart 4.23 358 Pn **Pn** 09 35 31.2 +0.9
BOJS Bojanci 4.24 75 *i* Pn **Pn** 09 35 31.4 +0.9
BOJS *e*Sn **Sn** 09 36 18.7 -1.1
comp=Z,184nm,0.8s
OZLJ Ozalj 4.41 74 Sn **Sn** 09 36 22.9 -1.1
SMF Signal de Mont 4.45 300 *e*P **Pn** 09 35 35.2 +1.9
SMF *e*Sn **Sn** 09 36 21.8 -3.1
comp=Z,83nm,0.5s
CRES Cresnjev 4.45 71 *e*Pn **Pn** 09 35 34.0 +0.6
SOKA Soboth 4.47 60 *e*Pn **Pn** 09 35 34.2 +0.4
comp=Z,4.5nm,0.3s,SNR=6.5
SOKA Soboth 4.47 60 **Pn** 09 35 34.2 +0.4
UDBI Udbina 4.53 88 *e*Pn **Pn** 09 35 36.4 +1.8
UDBI Sn **Sn** 09 36 26.4 -0.6
ZIRJ Zirje 4.57 99 *e*Pn **Pn** 09 35 35.9 +1.0
ZIRJ Sn **Sn** 09 36 25.4 -2.4
MORI Morici 4.57 96 *e*Pn **Pn** 09 35 36.6 +1.6
MORI Sn **Sn** 09 36 26.4 -1.5
MOA Molln 4.71 44 *e*Pn **Pn** 09 35 37.6 +0.6
MOA *e*Sn **Sn** 09 36 26.5 -5.0
MOA Molln 4.71 44 *i* Pn **Pn** 09 35 37.8 +0.8
comp=Z,3.0nm,0.2s
MOA Molln 4.71 44 **Pn** 09 35 37.8 +0.8
LOR Lormes 4.75 307 P **Pn** 09 35 39.3 +1.8
LOR S **Sn** 09 36 32.8 +0.5
LOR Lormes 4.75 307 *e*P **Pn** 09 35 39.4 +2.0
baz=125
LOR Lormes 4.75 307 *e*Pg **Pb** 09 35 52.6 +3.4
baz=129
LOR *e*Sn **Sn** 09 36 28.2 -4.1
comp=Z,105nm,0.5s
PAGF Fort de Pagny 4.75 329 *e*P **Pn** 09 35 39.7 +2.2
baz=150
PAGF *e*Sn **Sn** 09 36 28.5 -4.0
comp=Z,12nm,0.2s
SFTF Sexfontaines 4.76 322 *e*P **Pn** 09 35 39.6 +2.0
baz=142
SFTF *e*Sn **Sn** 09 36 28.8 -3.7
comp=Z,50nm,0.6s
ZAG Zagreb 4.81 72 *e*Pn **Pb** 09 35 50.6 +0.3
AVF Avril sur Loir 4.81 300 *e*P **Pn** 09 35 39.9 +1.6
AVF *e*Sn **Sn** 09 36 30.3 -3.6
comp=Z,15nm,0.4s
PTJ Puntijarka 4.82 71 *e*Pn **Pn** 09 35 40.2 +1.7
SSF Saint Saulge 4.84 303 *e*Pn **Pn** 09 35 37.3 -1.5
SSF Saint Saulge 4.84 303 *e*P **Pn** 09 35 40.1 +1.3
SSF Saint Saulge 4.84 303 *e*Pg **Pg** 09 35 55.4 -3.6
SSF *e*Sn **Sn** 09 36 30.6 -4.1
comp=Z,34nm,0.5s
MEZF Maizieres J'vi 4.98 324 *e*P **Pn** 09 35 42.7 +2.1
baz=154
MEZF *e*Sn **Sn** 09 36 33.8 -4.1
KIJV Kijevo 5.04 94 *e*Pn **Pn** 09 35 43.0 +1.5
KIJV Sn **Sn** 09 36 38.0 -1.5
BGF Bois d'Agland 5.04 296 *e*P **Pn** 09 35 42.7 +1.2
BGF *e*Sn **Sn** 09 36 35.6 -3.9
comp=Z,76nm,0.5s
ARSA Arzberg 5.04 55 *e*Pn **Pn** 09 35 42.2 +0.7
comp=Z,5.4nm,0.3s,SNR=8.9
ARSA Arzberg 5.04 55 **Pn** 09 35 42.2 +0.7
WET Wettzell 5.17 26 *e*Pn **Pn** 09 35 43.3 0.0
WET *e*Sn **Sn** 09 36 41.0 -1.8
SJAF Saint Jean de 5.18 249 Pn 09 35 49.1 +5.7
EJON La Jonquera 5.20 249 **Pn** 09 35 45.9 +2.2
KALN Kalnik 5.20 70 *e*Pn **Pn** 09 35 44.5 +0.7
GEC2 GERESS Array S 5.21 33 *e*Pn **Pn** 09 35 43.7 -0.3
GEC2 *e*Sn **Sn** 09 36 42.2 -1.7
GEC2 GERESS Array S 5.21 33 Pn **Pn** 09 35 43.6 -0.3
GERES GERESS Array B 5.21 33 Pn **Pn** 09 35 43.6 -0.3
comp=Z,3.6nm,0.3s,baz=206,slow=13,SNR=131
GERES Sn **Sn** 09 36 42.1 -1.7
comp=Z,11nm,0.3s,baz=214,slow=24,SNR=19
CAF Calviac 5.26 277 *e*Pn **Pn** 09 35 43.4 -1.1
CAF Calviac 5.26 277 *e*P **Pn** 09 35 46.7 +2.2
CAF Calviac 5.26 277 *e*Pg **Pb** 09 36 01.9 +3.9
CAF *e*Sn **Sn** 09 36 41.4 -3.6
comp=Z,6.7nm,0.5s
GRA1 Grafenberg Arr 5.29 13 Pn **Pn** 09 35 43.3 -1.7
GRF Grafenberg Arr 5.29 13 *e*Pn **Pn** 09 35 44.0 -1.0
GRF *e*Sn **Sn** 09 36 42.6 -3.2
MTLF Montolieu 5.34 260 *e*Pn **Pn** 09 35 44.7 -0.9
MTLF Montolieu 5.34 260 *e*P **Pn** 09 35 47.9 +2.3
MTLF Montolieu 5.34 260 *e*Pg **Pg** 09 36 04.6 -3.9
MTLF *e*Sn **Sn** 09 36 43.5 -3.5
comp=Z,11nm,0.4s
TCF Toulx Ste Croi 5.37 291 *e*Pn **Pn** 09 35 48.8 +2.8
TCF *e*Sn **Sn** 09 36 44.0 -3.7

	comp=Z,39nm,0.5s							
SGRT	**San Giovanni R**	**5.40**	**119**	Pn		**Pn**	**09 35 47.2**	**+0.7**
KHC	**Kasperske Hory**	**5.40**	**30**	*e*Pn		**Pn**	**09 35 46.2**	**-0.2**
KHC				*e*SN		**Sn**	**09 36 46.1**	**-2.3**
KHC				*e*SG		**Sg**	**09 37 16.5**	**-3.0**
KHC	**Kasperske Hory**	**5.40**	**30**	Pn		**Pn**	**09 35 46.0**	**-0.5**
HYF	**Humbligny**	**5.46**	**302**	*e*P		**Pn**	**09 35 49.5**	**+2.2**
HYF				*e*Sn		**Sn**	**09 36 46.4**	**-3.5**
RIVT	**Riveris**	**5.47**	**342**	*e*Pn		**Pn**	**09 35 49.5**	**+2.1**
RIVT				*e*Sn		**Sn**	**09 36 50.5**	**+0.3**
BEHE	**Becsehely**	**5.51**	**67**	*e*Pn		Pn	09 35 53.6	+5.7
BLY	**Banja Luka**	**5.54**	**85**	*e*Pn		**Pn**	**09 35 50.5**	**+2.2**
BLY				*e*Sn		**Sn**	**09 36 49.0**	**-2.8**
BLY	**Banja Luka**	**5.54**	**85**	*e*Pn		**Pn**	**09 35 48.1**	**-0.2**
ROTZ	**Rotzenmuhle**	**5.56**	**19**	*e*Pn		**Pn**	**09 35 47.3**	**-1.3**
ROTZ				*e*Sn		**Sn**	**09 36 48.5**	**-3.7**
WLF	**Walferdange**	**5.59**	**338**	Pn		**Pn**	**09 35 50.0**	**+1.1**
CONA	**Conrad Observa**	**5.60**	**51**	*i* Pn		**Pn**	**09 35 49.8**	**+0.5**
	comp=Z,16nm,0.6s,SNR=17							
CONA	**Conrad Observa**	**5.60**	**51**			**Pn**	**09 35 49.8**	**+0.5**
MAKA	**Makarska**	**5.63**	**100**	*e*Pn		**Pn**	**09 35 50.6**	**+1.1**
MAKA				*e*Sn		**Sn**	**09 36 52.2**	**-1.7**
RICI	**Ricice**	**5.66**	**98**	Sn		**Sn**	**09 36 52.2**	**-2.5**
RJF	**Les Rejaudoux**	**5.67**	**280**	*e*Pn		**Pn**	**09 35 48.3**	**-1.8**
RJF	**Les Rejaudoux**	**5.67**	**280**	*e*P		**Pn**	**09 35 53.4**	**+3.3**
RJF				*e*Sn		**Sn**	**09 36 50.7**	**-4.3**
	comp=Z,3.0nm,0.3s							
LSTV	**Lastovo**	**5.70**	**106**	*e*Pn		**Pn**	**09 35 50.8**	**+0.3**
LSTV				Sn		**Sn**	**09 36 53.5**	**-2.3**
TNS	**Taunus Mts**	**5.72**	**354**	*e*Pn		**Pn**	**09 35 50.9**	**+0.1**
MANZ	**Manzenberg**	**5.74**	**18**	*e*Pn		**Pn**	**09 35 49.6**	**-1.6**
MANZ				*e*Sn		**Sn**	**09 36 53.1**	**-3.7**
PBCC	**Pribram**	**6.01**	**30**	*e*PN		**Pn**	**09 35 54.4**	**-0.4**
NKC	**Novy Kostel**	**6.05**	**19**	*e*PN		**Pn**	**09 35 54.0**	**-1.3**
NKC				*e*SN		**Sn**	**09 37 00.7**	**-3.7**
CLF	**Chambon-Foret**	**6.06**	**308**	Pn		**Pn**	**09 35 57.5**	**+2.1**
LFF	**La Frestale**	**6.20**	**277**	*e*P		**Pn**	**09 35 59.9**	**+2.5**
LFF				*e*Sn		**Sn**	**09 37 04.4**	**-3.7**
	comp=Z,26nm,0.6s							
STON	**Ston**	**6.22**	**103**	*e*Pn		**Pn**	**09 36 00.2**	**+2.5**
STON				*e*Sn		**Sn**	**09 37 07.3**	**-1.4**
STON	**Ston**	**6.22**	**103**	*e*Pn		**Pn**	**09 35 58.5**	**+0.8**
STON	**Ston**	**6.22**	**103**	*e*Pn		**Pn**	**09 35 59.4**	**+1.7**
STON				Sn		**Sn**	**09 37 06.6**	**-2.0**
MLS	**Moulis**	**6.24**	**258**			Pn	09 36 03.8	+5.9
MOX	**Moxa**	**6.28**	**13**	*e*Pn		**Pn**	**09 35 57.0**	**-1.5**
MOX				*e*Sn		**Sn**	**09 37 06.9**	**-3.1**
ZST	**Bratislava**	**6.44**	**53**	*e*PN		**Pn**	**09 36 00.3**	**-0.4**
PRU	**Pruhonice**	**6.46**	**31**	*e*PN		**Pn**	**09 35 59.9**	**-1.1**
PRU				*e*SN		**Sn**	**09 37 11.2**	**-3.3**
BAIF	**Baives**	**6.56**	**329**	*e*P		**Pn**	**09 36 05.0**	**+2.7**
BAIF				*e*Sn		**Sn**	**09 37 11.3**	**-5.5**
	comp=Z,6.0nm,0.5s							
KRUC	**Moravsky**	**6.58**	**44**	*e*PN		**Pn**	**09 36 01.5**	**-1.1**
KRUC				*e*SN		**Sn**	**09 37 14.1**	**-3.3**
MATE	**Matera**	**6.63**	**123**	⇑P		**Pn**	**09 35 58.8**	**-4.5**
MODS	**Modra-Piesok**	**6.64**	**52**	*e*PN		**Pn**	**09 36 02.5**	**-0.9**
MODS				*e*SN		**Sn**	**09 37 13.1**	**-5.8**
MORH	**Mrgy, Hungar**	**6.70**	**72**	*e*Pn		**Pn**	**09 36 02.1**	**-2.2**
TREB	**Trebinje**	**6.73**	**103**	*e*Pn		**Pn**	**09 36 06.4**	**+1.8**
TREB				*e*Sn		**Sn**	**09 37 20.2**	**-0.9**
TREB	**Trebinje**	**6.73**	**103**	*e*Pn		**Pn**	**09 36 06.5**	**+1.8**
EPF	**Esparros**	**6.75**	**260**	*e*Pn		**Pn**	**09 36 03.2**	**-1.8**
EPF	**Esparros**	**6.75**	**260**	*e*P		**Pn**	**09 36 08.5**	**+3.5**
EPF				*e*Sn		**Sn**	**09 37 17.6**	**-4.1**
	comp=Z,9.1nm,0.5s							
SMOL	**Smolenice**	**6.80**	**51**	*e*PN		**Pn**	**09 36 06.0**	**+0.4**
VRAC	**Vranov**	**6.84**	**43**	Pn		**Pn**	**09 36 05.1**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=232,slow=12,SNR=5.9							
VRAC				Sn		**Sn**	**09 37 20.2**	**-3.6**
	comp=Z,0.7nm,0.3s,baz=272,slow=4.7,SNR=4.8							
VRAC				Lg		Lg	09 38 04.3	
	comp=Z,1.1nm,0.3s,baz=143,slow=22,SNR=5.9							
VRAC	**Vranov**	**6.84**	**43**	⇑P		**Pn**	**09 36 05.5**	**-0.6**
VRAC	**Vranov**	**6.84**	**43**	*e*PN		**Pn**	**09 36 05.2**	**-1.0**
VRAC				*e*SN		**Sn**	**09 37 20.6**	**-3.2**
ETOS	**Mallorca**	**6.85**	**228**			Pn	**09 36 08.5**	**+2.2**
HAPS	**Han Pijesak,BI**	**6.85**	**91**	*e*Pn		**Pn**	**09 36 09.7**	**+3.3**
HAPS				*e*Sn		**Sn**	**09 37 19.4**	**-4.8**
HAPS	**Han Pijesak,BI**	**6.85**	**91**	*e*Pn		**Pn**	**09 36 06.6**	**+0.2**
ECHI	**Chisagues Biel**	**6.96**	**258**			Pn	09 36 13.2	+5.3
UPM	**Unac-Piva**	**6.98**	**98**	*e*Pn		**Pn**	**09 36 10.8**	**+2.5**
BRG	**Berggiesshubel**	**7.03**	**24**	PN		**Pn**	**09 36 08.1**	**-0.6**
BRG				*e*			09 36 43.6	
BRG	**Berggiesshubel**	**7.03**	**24**	SN		**Sn**	**09 37 25.4**	**-3.0**
BRG				SG		**Sg**	**09 38 09.9**	**-1.7**
	comp=Z,48nm,1.0s							
MFF	**Saint Martin d**	**7.03**	**290**	*e*P		**Pn**	**09 36 11.3**	**+2.6**
MFF				*e*Sn		**Sn**	**09 37 23.1**	**-5.3**
	comp=Z,6.6nm,0.5s							
MFF				*e*Sg		**Sg**	**09 38 05.3**	**-6.3**
	comp=Z,1.2nm,0.3s							
JAVC	**Velka Javorina**	**7.12**	**50**	*e*PN		**Pn**	**09 36 10.8**	**+0.7**
CLL	**Collm**	**7.18**	**18**	*e*Pn		**Pn**	**09 36 12.0**	**+1.2**
CLL				*e*Pg		**Pg**	**09 36 44.0**	**+0.4**
CLL				*e*Sn		**Sn**	**09 37 25.0**	**-7.1**
CLL				*e*			09 37 29.0	
CLL				*e*Sb		**Sb**	**09 37 48.0**	**-8.1**
CLL				*e*Sg		**Sg**	**09 38 12.0**	**-4.5**
	comp=Z,37nm,0.9s							
CLL				LmV			09 39 00.0	
	comp=Z,100nm,18.8s							
CLL				Lmax			09 39 00.0	
BBLS	**Lazići**	**7.20**	**92**	*e*Pn		**Pn**	**09 36 12.6**	**+1.3**
BBLS	**Lazići**	**7.20**	**92**	*e*Pn		**Pn**	**09 36 12.5**	**+1.3**
TEKS	**Tekeris**	**7.22**	**86**	*e*Pn		**Pn**	**09 36 09.8**	**-1.6**
ETSF	**Etsaut**	**7.42**	**261**	*e*Pn		**Pn**	**09 36 12.6**	**-1.6**
ETSF	**Etsaut**	**7.42**	**261**	*e*P		**Pn**	**09 36 18.0**	**+3.8**
ETSF				*e*Sn		**Sn**	**09 37 32.6**	**-5.6**
	comp=Z,5.5nm,0.5s							
UPC	**Upice**	**7.45**	**34**	*e*PN		**Pn**	**09 36 13.0**	**-1.5**
UPC				*e*SN		**Sn**	**09 37 34.2**	**-4.5**
DPC	**Dobruska-Polom**	**7.45**	**36**	*e*PN		**Pn**	**09 36 13.1**	**-1.5**
DPC				*e*SN		**Sn**	**09 37 35.3**	**-3.7**
KRLC	**Kraliky**	**7.45**	**39**	*e*PN		**Pn**	**09 36 13.8**	**-0.8**
KRLC				*e*SN		**Sn**	**09 37 35.1**	**-3.9**
PDG	**Podgorica**	**7.45**	**103**	*e*Pn		**Pn**	**09 36 17.3**	**+2.7**
PDG	**Podgorica**	**7.45**	**103**	⇑P		**Pn**	**09 36 15.1**	**+0.5**
PDG	**Podgorica**	**7.45**	**103**	*e*Pn		**Pn**	**09 36 16.1**	**+1.5**
PDG	**Podgorica**	**7.45**	**103**	Pn		**Pn**	**09 36 15.6**	**+1.0**
CHVC	**Chvalec**	**7.52**	**34**	*e*PN		**Pn**	**09 36 14.4**	**-1.2**
CHVC				*e*SN		**Sn**	**09 37 36.0**	**-4.7**
OSTC	**Ostas**	**7.56**	**35**	*e*PN		**Pn**	**09 36 15.1**	**-1.0**
OSTC				*e*SN		**Sn**	**09 37 38.3**	**-3.4**
DIVS	**Divibare**	**7.59**	**90**	*e*Pn		**Pn**	**09 36 17.0**	**+0.4**
DIVS	**Divibare**	**7.59**	**90**	*e*Pn		**Pn**	**09 36 17.3**	**+0.7**
DIVS	**Divibare**	**7.59**	**90**			**Pn**	**09 36 18.0**	**+1.5**
VYHS	**Vyhne**	**7.60**	**55**	*e*PN		**Pn**	**09 36 14.8**	**-1.8**
VYHS				*e*SN		**Sn**	**09 37 38.6**	**-3.9**
MORC	**Moravsky Berou**	**7.61**	**44**	⇑P		**Pn**	**09 36 17.1**	**+0.2**
MORC	**Moravsky Berou**	**7.61**	**44**	*e*PN		**Pn**	**09 36 16.7**	**-0.1**
MORC				*e*SN		**Sn**	**09 37 36.8**	**-6.1**
MORC	**Moravsky Berou**	**7.61**	**44**			**Pn**	**09 36 17.0**	**+0.2**
LDF	**La Druitiere**	**7.72**	**305**	*e*Pn		**Pn**	**09 36 16.1**	**-2.2**
LDF	**La Druitiere**	**7.72**	**305**	*e*P		**Pn**	**09 36 21.8**	**+3.5**
LDF				*e*Sn		**Sn**	**09 37 39.4**	**-6.2**
	comp=Z,7.1nm,0.5s							
SJES	**Sjenica**	**7.72**	**96**	*e*Pn		**Pn**	**09 36 21.5**	**+3.1**
SJES				*e*Sn		**Sn**	**09 37 41.6**	**-4.2**
IVAS	**Ivanjica**	**7.79**	**93**	*e*Pn		**Pn**	**09 36 21.4**	**+2.2**
IVAS				*e*Sn		**Sn**	**09 37 42.9**	**-4.3**
SJPF	**Ste Jean**	**7.83**	**263**	*e*Pn		**Pn**	**09 36 19.0**	**-0.8**
TRUS	**Trudelj**	**7.87**	**88**	*e*Pn		**Pn**	**09 36 21.7**	**+1.3**
PSZ	**Piszkesteto**	**8.00**	**61**	⇑Pn		**Pn**	**09 36 23.7**	**+1.5**
PSZ	**Piszkesteto**	**8.00**	**61**	Pn		**Pn**	**09 36 22.9**	**+0.7**
FLN	**La Foliniere**	**8.02**	**305**	*e*Pn		**Pn**	**09 36 20.1**	**-2.2**
	baz=124							
FLN	**La Foliniere**	**8.02**	**305**	*e*P		**Pn**	**09 36 25.7**	**+3.4**
	baz=127							
FLN				*e*Sn		**Sn**	**09 37 45.4**	**-7.3**
	comp=Z,9.7nm,0.5s							
GRR	**Gorron**	**8.07**	**302**	*e*Pn		**Pn**	**09 36 21.1**	**-2.0**
GRR	**Gorron**	**8.07**	**302**	*e*P		**Pn**	**09 36 25.6**	**+2.5**
GRR				*e*Sn		**Sn**	**09 37 48.2**	**-5.9**
	comp=Z,2.2nm,0.3s							
GRUS	**Gruza**	**8.14**	**91**	*e*Pn		**Pn**	**09 36 24.8**	**+0.8**
LANS	**Liptovska Anna**	**8.28**	**53**	*e*PN		**Pn**	**09 36 26.9**	**+0.9**
TIR	**Tirane**	**8.30**	**109**	*e*Pn		**Pn**	**09 36 29.2**	**+3.0**
SELS	**Selova**	**8.55**	**95**	*e*Pn		**Pn**	**09 36 30.9**	**+1.2**
BZS	**Buzias**	**8.69**	**79**	⇓P		**Pn**	**09 36 33.5**	**+1.9**
MDVR	**Moldovita**	**8.76**	**84**	⇓P		**Pn**	**09 36 35.2**	**+2.6**

KEST	**Kesra**	**8.80**	**180**	Pn		**Pn**	**09 36 36.2**	**+3.0**
	comp=Z,2.9nm,0.3s,baz=297,slow=5.9,SNR=13							
KEST				LR		LR	09 40 01.8	
	comp=Z,188nm,20.7s,baz=1.0,slow=38							
KEST	**Kesra**	**8.80**	**180**	Pn		**Pn**	**09 36 34.1**	**+0.9**
SGMF	**Saint Gilles**	**9.07**	**298**	*e*Pn		**Pn**	**09 36 35.2**	**-1.6**
SGMF	**Saint Gilles**	**9.07**	**298**	*e*P		**Pn**	**09 36 40.9**	**+4.1**
BARS	**Barje**	**9.14**	**97**	*e*Pn		**Pn**	**09 36 38.2**	**+0.4**
BARS				*e*Sn		**Sn**	**09 38 16.2**	**-4.3**
ZAGS	**Zajecar**	**9.23**	**90**	*e*Pn		**Pn**	**09 36 39.2**	**+0.2**
HERR	**Herculane**	**9.26**	**83**	⇓P		**Pn**	**09 36 42.0**	**+2.6**
CRVS	**Cervenica-Dubn**	**9.34**	**58**	*e*PN		**Pn**	**09 36 40.7**	**+0.2**
QUIF	**Quistinic**	**9.36**	**296**	*e*Pn		**Pn**	**09 36 39.8**	**-0.8**
GZR	**Gura Zlata**	**9.50**	**80**	⇑P		**Pn**	**09 36 43.8**	**+1.1**
ROSF	**Rostrenen**	**9.55**	**298**	*e*P		**Pn**	**09 36 46.7**	**+3.4**
ROSF				*e*Sn		**Sn**	**09 38 23.0**	**-7.4**
	comp=Z,1.5nm,0.4s							
DRGR		**9.57**	**72**	⇑P		**Pn**	**09 36 44.7**	**+1.1**
KOLS	**Kolonicke sedl**	**9.85**	**59**	*e*PN		**Pn**	**09 36 47.7**	**+0.3**
ESDC	**Sonseca Array**	**11.07**	**249**	Pn		**Pn**	**09 37 06.0**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=64,slow=14,SNR=4.9							
ESDC				LR		LR	09 41 31.3	
	comp=Z,83nm,18.7s,baz=155,slow=38							
VOIR		**11.10**	**80**	⇑P		**Pn**	**09 37 09.3**	**+4.7**
MLR	**Muntele Rosu**	**11.73**	**80**	LR		LR	09 42 44.8	
	comp=Z,39nm,19.2s,baz=122,slow=43							
MLR	**Muntele Rosu**	**11.73**	**80**	⇑P		**Pn**	**09 37 15.8**	**+2.4**
EADA	**Adamuz**	**12.29**	**244**			**Pn**	**09 37 23.9**	**+3.0**
EALB	**Alboran**	**12.81**	**232**			**Pn**	**09 37 30.6**	**+2.7**
ECAB	**El Cabril**	**12.89**	**245**			**Pn**	**09 37 31.8**	**+2.8**
EKA	**Eskdalemuir Ar**	**13.48**	**328**	Pn		**Pn**	**09 37 37.0**	**+0.1**
	baz=140,slow=14,SNR=3.1							
SFS	**San Fernando**	**14.36**	**241**	P		**Pn**	**09 37 52.7**	**+3.7**
AKASG	**Malin Array Be**	**14.68**	**58**	Pn		**Pn**	**09 37 53.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=247,slow=12,SNR=3.3							
SLIT	**Slitere, Latvi**	**15.35**	**27**	P		**P**	**09 38 05.2**	**-1.8**
HFS	**Hagfors**	**15.82**	**8**	LR		LR	09 45 06.7	
	comp=Z,43nm,19.5s,baz=180,slow=41							
NOA	**NORSAR Array B**	**16.56**	**3**	LR		LR	09 44 05.2	
	comp=Z,22nm,19.2s,baz=200,slow=35							
AVE	**Averroes**	**17.22**	**235**	P		**P**	**09 38 30.8**	**+2.9**
BRTR	**Keskin Array B**	**18.57**	**97**	P		**Pn**	**09 38 44.1**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=269,slow=12,SNR=2.9							
BRTR				LR		LR	09 45 43.3	
	comp=Z,15nm,20.6s,baz=318,slow=36							
FINES	**FINESS Array B**	**19.57**	**24**	P		**P**	**09 38 53.7**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=218,slow=13,SNR=2.3							
FINES	**FINESS Array B**	**19.57**	**24**	P		**P**	**09 38 54.2**	**+0.8**
MMAI	**Mount Meron Ar**	**23.19**	**111**	P		**P**	**09 39 33.3**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=301,slow=15,SNR=1.3							
ARCES	**ARCESS Array B**	**26.36**	**13**	P		**P**	**09 40 02.0**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=169,slow=9.8,SNR=1.1							
ARCES				LR		LR	09 49 38.5	
	comp=Z,38nm,21.6s,baz=275,slow=35							
TORD	**Torodi Ar. Bea**	**31.98**	**194**	P		**P**	**09 40 55.9**	**+3.9**
	comp=Z,1.0nm,0.6s,baz=7.0,slow=9.3,SNR=7.9							
TORD	**Torodi Ar. Bea**	**31.98**	**194**	P		**P**	**09 40 51.8**	**-0.2**
AKTO	**Aktyubinsk**	**32.87**	**62**	LR		LR	09 56 32.9	
	comp=Z,17nm,18.9s,baz=290,slow=40							
MKAR	**Makanchi Array**	**49.26**	**60**	P		**P**	**09 43 15.4**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=295,slow=5.8,SNR=5.7							
MKAR	**Makanchi Array**	**49.26**	**60**	P		**P**	**09 43 14.4**	**0.0**
ULM	**Lac du Bonnet**	**65.49**	**317**	P		**P**	**09 45 09.1**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=63,slow=9.2,SNR=3.3							
ILAR	**Eielson Array**	**69.45**	**349**	P		**P**	**09 45 33.9**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=4.5,slow=4.6,SNR=3.8							
KSRS	**Korea Array**	**81.27**	**45**	LR		LR	10 27 25.8	
	comp=Z,13nm,19.5s,baz=290,slow=39							
SMY	**Shemya**	**82.21**	**9**			pP	09 46 51.3	-0.1
TXAR	**Lajitas Array**	**84.50**	**306**	P		**P**	**09 47 00.3**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=75,slow=3.0,SNR=10							
ASAR	**Alice Springs**	**130.56**	**84**	PKP		**PKPdf**	**09 53 36.5**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=345,slow=2.9,SNR=4.5							

*HLW **30** 09:43:10.4,34°.55N×26°.80E,h18km±14km,Md3.5*
*THE **30** 09:43:12.2,34°.52N×26°.78E,h31km±30km,ML3.0/3,Error ellipse: s-maj=30.7km s-min=1.4km az=340.0*
*ATH **30** 09:43:14.4,34°.95N×26°.62E,h59km±3km,ML2.8/8,Error ellipse: s-maj=5.4km s-min=2.0km az=336.0*
*GII **30** 09:43:16.0±0.0,34°.25N×27°.41E,h1km,Mm2.7/2*
ISC 30 09:43:09.7±1.6,34°.53N±0°.04×26°.86E±0°.05,h24km±16km, n32,σ1°48/42,Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.79**	**318**	P		**Pn**	**09 43 25.2**	**-0.2**
ZKR				S		**Sb**	**09 43 33.5**	**-1.5**
ZKR				AML		AML	09 43 38.3	
	comp=N,1953μm,0.4s							
ZKR				AML		AML	09 43 42.4	
	comp=E,3467μm,0.5s							
ZKR	**Zakros**	**0.79**	**318**	P		**Pn**	**09 43 25.1**	**-0.2**
ZKR				S		**Sn**	**09 43 36.9**	**+0.5**
	comp=E,1μm,0.5s							
STIA	**Sitia Lasithi**	**0.92**	**317**	P		**Pn**	**09 43 27.3**	**+0.1**
STIA				S		**Sn**	**09 43 39.3**	**-0.4**
KARP	**Karpathos**	**1.04**	**13**	P		**Pb**	**09 43 29.9**	**+0.8**
KARP				AML		AML	09 43 51.4	
	comp=E,1678μm,0.5s							
KARP				AML		AML	09 43 52.9	
	comp=N,1656μm,0.6s							
KARP	**Karpathos**	**1.04**	**13**	P		**Pb**	**09 43 30.2**	**+1.1**
KARP				S		**Sn**	**09 43 43.7**	**+0.9**
	comp=N,830nm,0.7s							
NPS	**Neapolis**	**1.26**	**306**	P		**Pn**	**09 43 32.1**	**+0.2**
NPS				AML		AML	09 43 54.0	
	comp=E,1200μm,0.5s							
NPS				AML		AML	09 44 06.0	
	comp=N,878μm,1.1s							
LAST	**Lasithi**	**1.30**	**299**	P		**Pn**	**09 43 32.6**	**+0.1**
LAST				AML		AML	09 43 58.5	
	comp=E,778μm,0.6s							
LAST				AML		AML	09 44 04.6	
	comp=N,789μm,0.5s							
LAST	**Lasithi**	**1.30**	**299**	P		**Pn**	**09 43 32.6**	**+0.1**
LAST				S		**Sn**	**09 43 47.9**	**-1.2**
	comp=N,408nm,1.1s							
SIVA	**Sivas**	**1.76**	**287**	P		**Pn**	**09 43 39.7**	**+1.0**
SIVA				AML		AML	09 44 23.2	
	comp=E,1400μm,0.7s							
SIVA				AML		AML	09 44 29.4	
	comp=N,766μm,0.8s							
IDI	**Anoyia**	**1.79**	**296**	P		**Pn**	**09 43 39.7**	**+0.6**
IDI				AML		AML	09 44 17.7	
	comp=E,283μm,0.5s							
IDI				AML		AML	09 44 21.5	
	comp=N,305μm,0.7s							
IDI	**Anoyia**	**1.79**	**296**	P		**Pn**	**09 43 39.6**	**+0.5**
ARG	**Arkhangelos**	**1.98**	**31**	P		**Pb**	**09 43 43.6**	**-1.3**
ARG	**Arkhangelos**	**1.98**	**31**	P		**Pb**	**09 43 43.8**	**-1.1**
ANAF	**Anafi Island**	**2.03**	**334**	P		**Pn**	**09 43 41.3**	**-1.1**
ANAF				AML		AML	09 44 22.7	
	comp=E,850μm,0.5s							
ANAF				AML		AML	09 44 22.8	
	comp=N,907μm,0.5s							
THR5	**Thira Island,**	**2.25**	**327**	P		**Pn**	**09 43 43.8**	**-1.7**
VAM	**Vamos**	**2.36**	**293**	P		**Pn**	**09 43 47.8**	**+0.9**
AMGA	**Amorgos Island**	**2.43**	**341**	P		**Pn**	**09 43 46.6**	**-1.3**
AMGA				AML		AML	09 44 37.4	
	comp=E,179μm,0.6s							
AMGA				AML		AML	09 44 43.5	
	comp=N,183μm,1.0s							
IMMV	**Iera Moni Meta**	**2.54**	**292**	P		**Pn**	**09 43 50.5**	**+1.0**
IMMV	**Iera Moni Meta**	**2.54**	**292**	P		**Pn**	**09 43 50.4**	**+1.0**
APE	**Apeiranthos**	**2.76**	**337**	P		**Pn**	**09 43 51.2**	**-1.2**
FETY	**Fethiye**	**2.77**	**40**	P		**Pn**	**09 43 54.0**	**+1.4**
SLUM	**Salum**	**3.33**	**205**	P		**Pn**	**09 44 01.0**	**+0.7**
	baz=205							
SLUM				S		**Sn**	**09 44 37.9**	**-1.2**
	baz=205							
SWA2		**5.40**	**193**	P		**Pn**	**09 44 30.5**	**+1.7**
	baz=193							
SWA2				S		**Sn**	**09 45 28.5**	**-1.7**
	baz=193							
GLL	**Jalalah**	**6.42**	**139**	P		**Pn**	**09 44 44.4**	**+1.6**
	baz=138							
SUZ	**Suez**	**6.89**	**131**	P		**Pn**	**09 44 51.9**	**+2.7**
	baz=130							
HFRF	**Wahat Farafira**	**7.46**	**170**	P		**Pn**	**09 44 58.7**	**+1.7**
	baz=169							
HMDT	**Nahal Hemdat**	**7.59**	**105**	Pn		**Pn**	**09 45 01.4**	**+2.6**
HMDT				Sn		**Sn**	**09 46 23.0**	**-1.1**
DSI	**Dead Sea**	**7.74**	**110**	Pn		**Pn**	**09 45 02.3**	**+1.5**
GHAJ	**Ghor Haditha**	**7.99**	**111**	Pn		**Pn**	**09 45 07.1**	**+2.8**

PRNI	**Paran**	**8.04**	**119**	Pn		**Pn**	**09 45 06.8**	**+1.8**
PRNI				Sn		**Sn**	**09 46 33.2**	**-2.1**
MBRI	**Mt Berech**	**8.30**	**122**	Pn		**Pn**	**09 45 10.9**	**+2.3**
MBRI				Sn		**Sn**	**09 46 40.1**	**-1.5**
EIL	**Elat**	**8.40**	**123**	Pn		**Pn**	**09 45 12.3**	**+2.4**

IDC 30 09:46:14.9±3.7,5.76N×60.78E,h0km,mb4.0/5,mb1 4.2/5, mb1mx3.6/47,mbtmp4.0/5,MS3.0/3,Ms1 3.0/3, ms1mx2.6/32,Error ellipse: s-maj=97.4km s-min=37.8km az=79.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**39.29**	**68**	P		P	09 53 46.2	+0.2
	2.6nm,0.3s,baz=252,slow=7.1,SNR=7.8							
CMAR				LR		LR	10 08 00.8	
	comp=Z,10nm,22.0s,baz=285,slow=33							
BOSA	**Boshof**	**48.35**	**223**	LR		LR	10 13 54.3	
	comp=Z,30nm,18.8s,baz=36,slow=34							
ZALV	**Zalesovo Beam**	**51.86**	**18**	P		P	09 55 25.2	+0.2
	0.9nm,0.7s,baz=214,slow=7.2,SNR=4.3							
SONM	**Songino Array**	**57.14**	**35**	P		P	09 56 02.9	-0.8
	1.4nm,1.2s,baz=232,slow=7.1,SNR=3.5							
SONM				LR		LR	10 20 28.4	
	comp=Z,15nm,20.8s,baz=212,slow=36							
WRA	**Warramunga Arr**	**76.64**	**112**	P		P	09 58 08.1	-0.2
	1.4nm,1.1s,baz=285,slow=6.0,SNR=4.7							
ASAR	**Alice Springs**	**77.00**	**116**	P		P	09 58 10.6	+0.3
	0.7nm,0.9s,baz=289,slow=5.9,SNR=6.3							

*IDC **30** 09:54:34.7±1.5,0°.10S×98°.32E,h0km,mb3.9/7,mb1 3.9/8, mb1mx3.6/44,mbtmp3.9/8,ML3.4/1,Error ellipse: s-maj=60.1km s-min=20.4km az=58.0*
*DJA **30** 09:54:43.9±1.2,0°N±9°×9°E±°,h45km±17km,M3.6/6, MLv3.6/6*
ISC 30 09:54:43.3±0.9,0°.26N±0°.07×98°.73E±0°.07,h43km,n16, σ1°74/15,mb4.0/7,Northern Sumatera

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

```
DBBC Dabeiba              3.95 125 eP      Pn    10 22 53.9 +1.5
UREC San Jos de Ur        4.19 111 eP      Pn    10 22 55.9 +0.3
UREC                               i             10 23 17.3
     comp=Z,46nm,0.1s
SJCC San Jacinto, C       4.27  82↑iP      Pn    10 22 57.6 +0.9
SJCC                               eS      Sn    10 23 43.2 -2.1
SJCC                               i             10 23 49.1
     comp=Z,10nm,0.3s
HELC Santa Helena         4.99 128 eP      Pn    10 23 06.8  0.0
HELC                               i             10 23 36.3
     comp=Z,12nm,0.3s
GUY2C Guyana, Caldas      5.75 135 eP      Pn    10 23 17.5 +0.1
NORC Norcasia             5.89 129 eP      Pn    10 23 22.0 +3.1
NORC                               i             10 23 50.8
     comp=Z,3.6nm,0.5s
OCAC Ocana                6.17 100 eP      Pn    10 23 22.1 -0.7
OCAC                               i             10 23 48.5
     comp=Z,4.6nm,0.4s
```

IDC ***30*** *10:24:43.5±0.7,36°.62N×97°.62W,h0km,mb3.9/4, mb1 4.0/10,mb1mx3.7/49,mbtmp3.8/10,ML3.8/6,MS3.5/19, Ms1 3.5/19,ms1mx3.2/55,Error ellipse: s-maj=11.5km s-min=10.2km az=168.0*

NEIC ***30*** *10:24:44.3±1.4,36°.58N±0°.02×97°.60W±0°.06,h2km±6km, Error ellipse: s-maj=7.1km s-min=2.2km az=69.0*

ANF ***30*** *10:24:44.6±0.2,36°.59N×97°.58W,h5km,ML5.1/17,Error ellipse: s-maj=2.5km s-min=2.4km az=4.0*

TUL ***30*** *10:24:44.4±1.6,36°.60N±0°.02×97°.61W±0°.05,h6km±6km, ML4.3,Mwr4.0/48(NEIC),Error ellipse: s-maj=6.6km s-min=1.8km az=64.0*

NEIC ***30*** *10:24:44.4,36°.60N×97°.61W,h4km,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.44; $M_{\theta\theta}$=0.86; $M_{\phi\phi}$=-0.42; $M_{r\theta}$=0.18; $M_{r\phi}$=-0.92; $M_{\theta\phi}$=-0.19; Fault plane solution: M_0=1.21000×10^{15} NP1:ϕs341.78000°, δ88.12000°, λ-13.06000°. NP2:ϕs72.21000°, δ76.94000°, λ-178.07000°. Principal axes: T 1.3743, Plg8.0000°, Azm28.0000°; N -0.4606, Plg77.0000°, Azm154.0000°; P -0.9137, Plg11.0000°, Azm296.0000°;*

ISC 30 10:24:44.9±0.8,36°.60N±0°.02×97°.63W±0°.02,h17km±6km, n276,σ1ϕ73/301,mb4.0/5,MS3.7/10,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CROK	**Carrier**	**0.30**	**252**	Pg	**Pg**	**10 24 51.0**	**-0.4**
CROK				Sg	**Sg**	**10 24 55.3**	**-0.5**
GC02	**Grant County #**	**0.31**	**325**		**Pg**	**10 24 51.1**	**-0.6**
GC02				Sg	**Sg**	**10 24 55.9**	**-0.4**
KAN13	**South Haven SW**	**0.43**	**17**		**Pg**	**10 24 52.9**	**-0.9**
KAN13				Sg	**Sg**	**10 24 58.5**	**-1.4**
KAN14	**Manchester OK**	**0.45**	**324**		**Pg**	**10 24 53.5**	**-0.5**
KAN14				Sg	**Sg**	**10 25 00.0**	**-0.2**
KAN05	**Bluff City Nor**	**0.55**	**339**		**Pg**	**10 24 55.4**	**-0.5**
KAN05				Sg	**Sg**	**10 25 03.0**	**-0.3**
KAN01	**Argonia South**	**0.57**	**350**		**Pg**	**10 24 55.5**	**-0.8**
KAN01				Sg	**Sg**	**10 25 03.4**	**-0.4**
KS20	**Mayfield South**	**0.64**	**6**		**Pg**	**10 24 56.6**	**-0.9**
KS20				Sg	**Sg**	**10 25 05.2**	**-0.8**
KAN10	**Anthony SW Sta**	**0.65**	**325**		**Pg**	**10 24 57.1**	**-0.5**
KAN10				Sg	**Sg**	**10 25 05.9**	**-0.4**
KAN08	**Anthony NE Sta**	**0.69**	**337**		**Pg**	**10 24 57.9**	**-0.5**
KS21	**Milan North St**	**0.69**	**358**		**Pg**	**10 24 57.7**	**-0.8**
KAN12	**Harper NE Stat**	**0.76**	**337**		**Pg**	**10 24 59.2**	**-0.6**
OK029	**Liberty Lake**	**0.81**	**170**		**Pg**	**10 24 60.0**	**-0.8**
QUOK	**Quay**	**0.86**	**119**		**Pg**	**10 25 00.5**	**-1.2**
OK031	**S. Brethren Rd**	**0.91**	**135**		**Pg**	**10 25 01.5**	**-1.1**
BCOK	**Bluff Creek, N**	**0.94**	**179**		**Pg**	**10 25 02.3**	**-0.8**
T35A	**Sooner Cattle**	**0.95**	**70**		**Pg**	**10 25 02.3**	**-1.2**
OK030	**Cody Creek RV**	**0.96**	**134**		**Pg**	**10 25 02.4**	**-1.1**
OK009	**Oakdale Elemen**	**1.03**	**170**		**Pg**	**10 25 04.0**	**-0.8**
OK025	**Westminster Rd**	**1.04**	**167**		**Pg**	**10 25 04.2**	**-0.9**
U32A	**Winter Ranch,**	**1.12**	**259**		**Pg**	**10 25 05.9**	**-0.8**
OKCFA	**Oklahoma City**	**1.19**	**173**		**Pg**	**10 25 06.8**	**-1.1**
OKCSW	**OKLAHOMA CITY**	**1.20**	**172**		**Pg**	**10 25 07.0**	**-1.1**
OK011	**Prague**	**1.35**	**145**		**Pn**	**10 25 09.8**	**+0.9**
FNO	**Franklin**	**1.35**	**172**		**Pn**	**10 25 09.5**	**+0.6**
W35A	**Tecumseh**	**1.57**	**157**		**Pn**	**10 25 12.9**	**+1.0**
TUL1	**Leonard**	**1.64**	**114**	P	**Pn**	**10 25 13.7**	**+0.8**
	baz=296,SNR=1000						
TUL1				S	**Sb**	**10 25 35.8**	**+0.8**
	baz=296						
TUL1	**Leonard**	**1.64**	**114**		**Pn**	**10 25 13.8**	**+0.9**
R32A	**Long Quarter,**	**2.02**	**335**	Pn	**Pb**	**10 25 20.8**	**-0.4**
WMOK	**Wichita Mounta**	**2.08**	**207**	P	**Pn**	**10 25 20.5**	**+1.5**
	baz=27,SNR=885						
WMOK				S	**Sb**	**10 25 48.3**	**+0.6**
	baz=27						
WMOK	**Wichita Mounta**	**2.08**	**207**	Pn	**Pn**	**10 25 20.6**	**+1.6**
U38A	**Gravette**	**2.62**	**92**		**Pn**	**10 25 28.0**	**+1.5**
KSU1	**Kansas State U**	**2.63**	**18**	Pn	**Pn**	**10 25 28.1**	**+1.5**
	baz=198,SNR=354						
KSU1				Pb	**Pg**	**10 25 33.5**	**-1.9**
	baz=198						
KSU1				Sb	**Sg**	**10 26 07.2**	**-2.2**
	baz=198						
KSU1	**Kansas State U**	**2.63**	**18**		**Pn**	**10 25 28.2**	**+1.6**
X37A	**Clayton**	**2.72**	**137**	Pn	**Pn**	**10 25 29.6**	**+1.8**
CBKS	**Cedar Bluff**	**2.77**	**324**	P	**Pn**	**10 25 30.1**	**+1.6**
	baz=142,SNR=101						
CBKS				Sb	**Sb**	**10 26 10.5**	**+2.7**
	baz=142						
CBKS	**Cedar Bluff**	**2.77**	**324**		**Pn**	**10 25 31.6**	**+3.0**
HHAR	**Hobbs**	**2.99**	**95**	Pn	**Pn**	**10 25 33.6**	**+2.0**
Z35A	**Perchaven, San**	**3.27**	**174**	Pn	**Pn**	**10 25 36.9**	**+1.5**
W39A	**Magazine**	**3.42**	**113**	Pn	**Pn**	**10 25 38.2**	**+0.8**
	baz=296,SNR=64						
W39A				Pb	**Pb**	**10 25 46.3**	**+1.2**
	baz=296						
W39A	**Magazine**	**3.42**	**113**		**Pn**	**10 25 39.0**	**+1.6**
S39A	**Bolivar**	**3.61**	**71**	Pn	**Pn**	**10 25 42.1**	**+2.0**
AMTX	**Amarillo**	**3.71**	**244**	Pn	**Pn**	**10 25 43.5**	**+2.0**
	baz=61						
AMTX				Pb	**Pb**	**10 25 51.5**	**+1.4**
	baz=61						
AMTX				Sb	**Sg**	**10 26 40.5**	**-3.6**
	baz=61						
AMTX	**Amarillo**	**3.71**	**244**	Pn	**Pn**	**10 25 44.0**	**+2.5**
U40A	**Yellville**	**3.86**	**92**	P	**Pn**	**10 25 44.5**	**+1.0**
	baz=275,SNR=34						
U40A				S	**Sn**	**10 26 29.9**	**+1.6**
	baz=275						
U40A	**Yellville**	**3.86**	**92**	Pn	**Pn**	**10 25 44.7**	**+1.2**
MIAR	**Mount Ida**	**3.89**	**121**	P	**Pn**	**10 25 45.2**	**+1.3**
	baz=303,SNR=56						
MIAR	**Mount Ida**	**3.89**	**121**	Pn	**Pn**	**10 25 46.0**	**+2.2**
Z38A	**Mt. Pleasant**	**3.98**	**146**		**Pn**	**10 25 47.0**	**+1.9**
N33A	**J Bar K, Exete**	**4.14**	**2**		**Pn**	**10 25 48.2**	**+0.8**
ABTX	**Abilene, Hawle**	**4.29**	**203**	P	**Pn**	**10 25 50.6**	**+1.1**
	baz=22,SNR=33						
ABTX	**Abilene, Hawle**	**4.29**	**203**	Pn	**Pn**	**10 25 50.6**	**+1.1**
MGMO	**Mountain Grove**	**4.34**	**81**		**Pn**	**10 25 51.7**	**+1.6**
P38A	**Dawn**	**4.43**	**46**	Pn	**Pn**	**10 25 52.5**	**+1.3**
X40A	**Basin Creek Fa**	**4.44**	**117**	Pn	**Pn**	**10 25 52.8**	**+1.3**
	baz=300,SNR=29						
X40A				Pb	**Pb**	**10 26 02.9**	**+0.4**
	baz=300						
X40A				S	**Sn**	**10 26 44.9**	**+2.2**
	baz=300						
X40A	**Basin Creek Fa**	**4.44**	**117**		**Pn**	**10 25 53.2**	**+1.8**
FCAR	**Ozark Folk Cen**	**4.51**	**97**		**Pn**	**10 25 54.5**	**+2.2**
WHAR	**Wooly Hollow**	**4.53**	**105**	Pn	**Pn**	**10 25 53.9**	**+1.2**
N35A	**Tabor**	**4.54**	**19**		**Pn**	**10 25 54.3**	**+1.5**
R40A	**Maddies Statio**	**4.59**	**67**	Pn	**Pn**	**10 25 55.5**	**+2.0**
WHTX	**Lake Whitney,**	**4.59**	**178**	P	**Pn**	**10 25 54.7**	**+1.1**
	baz=358						
WHTX				Sb	**Sb**	**10 27 04.9**	**+4.7**
	baz=358						
WHTX	**Lake Whitney,**	**4.59**	**178**		**Pn**	**10 25 54.7**	**+1.1**
W41B	**Gary Mavity, V**	**4.60**	**106**	Pn	**Pn**	**10 25 54.4**	**+0.8**
	baz=290,SNR=13						
W41B				Pb	**Pb**	**10 26 03.7**	**-1.4**
	baz=290						
W41B				S	**Sn**	**10 26 47.1**	**+0.6**
	baz=290						
W41B	**Gary Mavity, V**	**4.60**	**106**		**Pn**	**10 25 54.9**	**+1.4**
KSCO	**Kaye Shedlock'**	**4.63**	**303**	P	**Pn**	**10 25 55.9**	**+1.8**
	baz=120,SNR=17						
KSCO				Sb	**Sg**	**10 27 08.6**	**-5.0**
	baz=120						
KSCO	**Kaye Shedlock'**	**4.63**	**303**	Pn	**Pn**	**10 25 56.0**	**+1.8**
UALR	**University of**	**4.67**	**111**		**Pn**	**10 25 55.7**	**+1.1**
WLAR	**White Oak Lake**	**4.70**	**127**	Pn	**Pn**	**10 25 56.8**	**+1.7**
BGNE	**Belgrade**	**4.82**	**355**	P	**Pn**	**10 25 57.6**	**+0.9**
	baz=175,SNR=16						
BGNE				S	**Sn**	**10 26 54.0**	**+1.8**
	baz=175						
BGNE	**Belgrade**	**4.82**	**355**	Pn	**Pn**	**10 25 57.8**	**+1.0**
237A	**Washetta, Mont**	**4.83**	**161**	Pn	**Pn**	**10 25 57.3**	**+0.6**
MSTX	**Muleshoe**	**4.95**	**240**	P	**Pn**	**10 25 59.9**	**+1.3**
	baz=56,SNR=8.4						
MSTX				Sb	**Sb**	**10 27 17.1**	**+6.5**
	baz=56						
MSTX	**Muleshoe**	**4.95**	**240**	Pn	**Pn**	**10 26 00.3**	**+1.7**
Z41A	**Richland Creek**	**5.18**	**129**	P	**Pn**	**10 26 02.5**	**+0.9**
	baz=312,SNR=8.5						
Z41A				S	**Sn**	**10 27 01.3**	**+0.4**
	baz=312						
Z41A	**Richland Creek**	**5.18**	**129**		**Pn**	**10 26 02.5**	**+0.9**
LCAR	**Lake Charles**	**5.26**	**94**		**Pn**	**10 26 03.6**	**+1.0**
T42A	**Van Buren**	**5.26**	**83**	Pn	**Pn**	**10 26 05.4**	**+2.6**
P40A	**Paris**	**5.29**	**55**		**Pn**	**10 26 04.3**	**+1.2**
CCM	**Cathedral Cave**	**5.29**	**72**	P	**Pn**	**10 26 04.0**	**+0.8**
	baz=256						
CCM				Sn	**Sn**	**10 27 05.5**	**+1.7**
	baz=256						
CCM				Sb	**Sb**	**10 27 26.7**	**+6.5**
	baz=256						
CCM	**Cathedral Cave**	**5.29**	**72**	Pn	**Pn**	**10 26 05.3**	**+2.2**
NATX	**Nacogdoches**	**5.42**	**152**		**Pn**	**10 26 05.1**	**+0.2**
N38A	**Joes South For**	**5.42**	**38**		**Pn**	**10 26 05.2**	**+0.3**
L34A	**Svendsen Farm,**	**5.45**	**10**	Pn	**Pn**	**10 26 04.5**	**-0.8**
T25A	**Trinidad**	**5.46**	**278**	P	**Pn**	**10 26 07.1**	**+1.4**
	baz=94,SNR=24						
T25A				Sb	**Sg**	**10 27 34.9**	**-5.4**
	baz=94						
T25A	**Trinidad**	**5.46**	**278**		**Pn**	**10 26 07.2**	**+1.5**
CCAR	**Cane Creek**	**5.49**	**117**		**Pn**	**10 26 06.4**	**+0.6**
OGNE	**Ogallala**	**5.54**	**323**	Pn	**Pn**	**10 26 09.3**	**+2.7**
HBAR	**Harrisburg**	**5.74**	**98**	Pn	**Pn**	**10 26 10.6**	**+1.2**
PBMO	**Poplar Bluff**	**5.79**	**86**		**Pn**	**10 26 11.7**	**+1.7**
435B	**Jarrell**	**5.80**	**180**	P	**Pn**	**10 26 10.8**	**+0.7**
	baz=360,SNR=21						
435B				S	**Sn**	**10 27 16.4**	**+0.2**
	baz=360						
435B	**Jarrell**	**5.80**	**180**	Pn	**Pn**	**10 26 10.7**	**+0.7**
X43A	**Marvell**	**5.88**	**109**		**Pn**	**10 26 13.8**	**+2.6**
FVM	**French Village**	**5.91**	**74**		**Pn**	**10 26 12.3**	**+0.7**
LPAR	**Lepanto**	**6.02**	**97**		**Pn**	**10 26 13.6**	**+0.5**
K31A	**O'Neill**	**6.08**	**352**		**Pn**	**10 26 16.0**	**+2.0**
SLM	**Saint Louis**	**6.21**	**69**	Pn	**Pn**	**10 26 16.5**	**+0.7**
SCIA	**State Center**	**6.31**	**32**	P	**Pn**	**10 26 18.7**	**+1.5**
	baz=214,SNR=7.7						
SCIA				S	**Sn**	**10 27 30.0**	**+1.1**
	baz=214						
SCIA	**State Center**	**6.31**	**32**		**Pn**	**10 26 19.0**	**+1.8**
JCT	**Junction City**	**6.36**	**197**	P	**Pn**	**10 26 18.7**	**+0.8**
	baz=16						
JCT	**Junction City**	**6.36**	**197**	Pn	**Pn**	**10 26 19.1**	**+1.1**
SDCO	**Great Sand Dun**	**6.39**	**283**	P	**Pn**	**10 26 20.8**	**+2.3**
	baz=98,SNR=23						
SDCO	**Great Sand Dun**	**6.39**	**283**	Pn	**Pn**	**10 26 20.4**	**+1.9**
Q24A	**Divide**	**6.41**	**294**	P	**Pn**	**10 26 20.2**	**+1.4**
	baz=109						
Q24A				S	**Sn**	**10 27 34.2**	**+2.6**
	baz=109						
Q24A	**Divide**	**6.41**	**294**		**Pn**	**10 26 19.9**	**+1.2**
143A	**Socs Landing,**	**6.43**	**125**	Pn	**Pn**	**10 26 20.2**	**+1.3**
N41A	**Harden Midland**	**6.71**	**50**	Pn	**Pn**	**10 26 24.3**	**+1.7**
CLNB	**Carlsbad**	**6.73**	**232**	Pn	**Pn**	**10 26 24.6**	**+1.6**
S44A	**Carbondale**	**6.78**	**78**		**Pn**	**10 26 24.8**	**+1.2**
SIUC	**Southern Illin**	**6.81**	**78**		**Pn**	**10 26 24.7**	**+0.7**
W45A	**Hickory Valley**	**7.01**	**99**	Pn	**Pn**	**10 26 27.9**	**+1.2**
OXF	**Oxford**	**7.02**	**105**	P	**Pn**	**10 26 27.0**	**+0.1**
	baz=290,SNR=6.1						
OXF	**Oxford**	**7.02**	**105**	Pn	**Pn**	**10 26 25.7**	**-1.1**
P43A	**Skaggs, Pawnee**	**7.08**	**62**	Pn	**Pn**	**10 26 29.1**	**+1.5**
K38A	**Parkersburg**	**7.11**	**30**		**Pn**	**10 26 30.1**	**+2.0**
Y45A	**Yeager Farm, C**	**7.16**	**110**	Pn	**Pn**	**10 26 29.6**	**+0.8**
ECSD	**EROS Data Cent**	**7.17**	**6**	P	**Pn**	**10 26 28.8**	**-0.2**
	baz=186,SNR=39						
ECSD				S	**Sn**	**10 27 47.8**	**-2.2**
	baz=186						
ECSD	**EROS Data Cent**	**7.17**	**6**	Pn	**Pn**	**10 26 29.1**	**+0.2**
Q44A	**Meyer Farm, Va**	**7.20**	**69**	Pn	**Pn**	**10 26 30.6**	**+1.2**
T45A	**Paducah**	**7.22**	**84**		**Pn**	**10 26 31.8**	**+2.2**
ANMO	**Albuquerque**	**7.36**	**260**	Pn	**Pn**	**10 26 33.8**	**+2.1**
	0.2nm,0.3s,baz=77,slow=12,SNR=5.2						
ANMO				Pg	Pb	10 26 58.2	+6.0
	1.3nm,0.3s,baz=80,slow=17,SNR=14						
ANMO				Lg	Lg	10 28 33.5	
	15nm,0.3s,baz=359,slow=14,SNR=8.5						
ANMO				LR	LR	10 29 42.7	
	comp=Z,151nm,20.8s,baz=75,slow=41						
ANMO	**Albuquerque**	**7.36**	**260**	Sb	**Sg**	**10 28 32.8**	**-8.3**
	baz=74						
ANMO	**Albuquerque**	**7.36**	**260**	Pn	**Pn**	**10 26 34.1**	**+2.3**
L40A	**Anamosa**	**7.38**	**40**		**Pn**	**10 26 31.6**	**-0.2**
S22A	**4UR Ranch, Cre**	**7.43**	**282**	Sb	**Sg**	**10 28 36.7**	**-6.8**
	baz=96						
S22A	**4UR Ranch, Cre**	**7.43**	**282**	Pn	**Pn**	**10 26 35.2**	**+2.4**
HDIL	**Hopedale**	**7.63**	**56**	P	**Pn**	**10 26 35.8**	**+0.5**
	baz=241,SNR=21						
HDIL				S	**Sn**	**10 27 59.3**	**-2.0**
	baz=241						
HDIL	**Hopedale**	**7.63**	**56**	Pn	**Pn**	**10 26 35.8**	**+0.5**
344A	**Westbrook Farm**	**7.69**	**130**	Pn	**Pn**	**10 26 37.6**	**+1.6**
PHWY	**Pilot Hill**	**7.70**	**310**		**Pn**	**10 26 37.8**	**+1.4**
735A	**Kenedy**	**7.72**	**181**		**Pn**	**10 26 37.6**	**+1.1**
N23A	**Red Feather La**	**7.78**	**306**	P	**Pn**	**10 26 39.7**	**+2.1**
	baz=121,SNR=7.6						
N23A	**Red Feather La**	**7.78**	**306**	Pn	**Pn**	**10 26 40.5**	**+2.9**
SUSD	**Miller**	**7.90**	**353**	S	**Sn**	**10 28 05.4**	**-2.6**
	baz=172						
WVT	**Waverly**	**7.92**	**90**	P	**Pn**	**10 26 38.3**	**-1.0**
	baz=276						
WVT				S	**Sn**	**10 28 05.1**	**-3.4**
	baz=276						
WVT	**Waverly**	**7.92**	**90**	Pn	**Pn**	**10 26 39.8**	**+0.5**
PLAL	**Pickwick Lake**	**7.93**	**99**		**Pn**	**10 26 39.9**	**+0.5**
Y22D	**IRIS PASSCAL I**	**8.00**	**254**	Pn	**Pn**	**10 26 40.6**	**+0.2**
O44A	**Mansfield**	**8.03**	**61**		**Pn**	**10 26 41.6**	**+1.0**
USIN	**University of**	**8.06**	**77**	Pn	**Pn**	**10 26 42.6**	**+1.4**
MNTX	**Cornudas Mount**	**8.07**	**235**	P	**Pn**	**10 26 42.7**	**+1.4**
	baz=50,SNR=18						
MNTX	**Cornudas Mount**	**8.07**	**235**	Pn	**Pn**	**10 26 42.6**	**+1.3**
I37A	**Lemond, Waseca**	**8.08**	**22**	Pn	**Pn**	**10 26 41.8**	**+0.3**
146A	**Union**	**8.10**	**117**		**Pn**	**10 26 41.7**	**+0.1**
L42A	**Oliver, Polo**	**8.20**	**46**	Pn	**Pn**	**10 26 44.3**	**+1.2**
833A	**Chaparral WMA,**	**8.38**	**191**	P	**Pn**	**10 26 48.0**	**+2.4**
	baz=9.8						
T47A	**Sharon Grove**	**8.46**	**84**		**Pn**	**10 26 47.8**	**+1.2**
JFWS	**Jewell Farm**	**8.49**	**40**	P	**Pn**	**10 26 47.2**	**+0.1**
	baz=224,SNR=14						
JFWS	**Jewell Farm**	**8.49**	**40**	Pn	**Pn**	**10 26 47.6**	**+0.5**
Z47A	**Carrollton**	**8.55**	**111**		**Pn**	**10 26 49.0**	**+1.0**
P46A	**Rosedale**	**8.75**	**67**		**Pn**	**10 26 52.6**	**+1.9**
V48A	**Smith Brothers**	**8.78**	**92**	Pn	**Pn**	**10 26 52.3**	**+1.2**
TX31	**Lajitas Ar. Si**	**8.84**	**217**		**Pn**	**10 26 53.1**	**+1.1**
TX32	**Lajitas Array**	**8.84**	**217**	Pn	**Pn**	**10 26 52.4**	**+0.4**
TXAR	**Lajitas Array**	**8.84**	**217**	Pn	**Pn**	**10 26 51.9**	**0.0**
	1.5nm,0.3s,baz=45,slow=11,SNR=119						
TXAR				Lg	Lg	10 29 21.6	
	5.3nm,0.3s,baz=31,slow=25,SNR=7.9						
TXAR				LR	LR	10 30 30.8	
	comp=Z,359nm,18.2s,baz=0.0,slow=39						
TXAR	**Lajitas Array**	**8.84**	**217**	Pn	**Pn**	**10 26 52.1**	**+0.2**
M44A	**Midewin, Midew**	**8.87**	**54**		**Pn**	**10 26 53.2**	**+1.0**
RSSD	**Black Hills**	**8.96**	**329**	P	**Pn**	**10 26 55.5**	**+1.8**
	baz=145						
RSSD	**Black Hills**	**8.96**	**329**	Pn	**Pn**	**10 26 56.3**	**+2.6**
I40A	**Norwalk**	**9.04**	**34**		**Pn**	**10 26 54.2**	**-0.4**
SFIN	**Lafayette**	**9.08**	**62**	P	**Pn**	**10 26 56.0**	**+0.9**
	baz=249,SNR=5.5						
SFIN	**Lafayette**	**9.08**	**62**		**Pn**	**10 26 55.5**	**+0.4**
CLTN	**Cedars of Leba**	**9.13**	**90**		**Pn**	**10 26 57.1**	**+1.2**
K22A	**Casper**	**9.14**	**314**		**Pn**	**10 26 56.4**	**+0.3**
BLO	**Bloomington**	**9.15**	**70**		**Pn**	**10 26 56.6**	**+0.5**
WCI	**Wyandotte Cave**	**9.17**	**76**	P	**Pn**	**10 26 57.7**	**+1.4**
	baz=263						
WCI				S	**Sn**	**10 28 36.1**	**-3.0**
	baz=263						
WCI	**Wyandotte Cave**	**9.17**	**76**	Pn	**Pn**	**10 26 57.8**	**+1.4**
F33A	**5 Mile Ranch,**	**9.29**	**6**		**Pn**	**10 26 57.7**	**-0.3**
SPMN	**Marine on St.**	**9.36**	**21**	P	**Pn**	**10 26 59.1**	**+0.1**
	baz=204,SNR=19						
SPMN	**Marine on St.**	**9.36**	**21**	Pn	**Pn**	**10 26 59.6**	**+0.6**
L44A	**Lake County Fo**	**9.36**	**50**	P	**Pn**	**10 26 59.2**	**+0.2**
	baz=236						
L44A	**Lake County Fo**	**9.36**	**50**		**Pn**	**10 26 58.8**	**-0.2**
LRAL	**Lakeview Retre**	**9.44**	**109**	P	**Pn**	**10 27 00.0**	**0.0**
	baz=295						
LRAL	**Lakeview Retre**	**9.44**	**109**	Pn	**Pn**	**10 27 00.3**	**+0.3**
U49A	**Red Boiling Sp**	**9.54**	**87**		**Pn**	**10 27 02.2**	**+0.7**
Y49A	**Blount Mountai**	**9.58**	**103**		**Pn**	**10 27 03.2**	**+1.2**
SWET	**Sewanee**	**9.59**	**95**		**Pn**	**10 27 04.1**	**+1.9**
F36A	**Milaca**	**9.76**	**17**	Pn	**Pn**	**10 27 05.5**	**+1.1**
I42A	**Draeger Farm,**	**9.87**	**40**		**Pn**	**10 27 06.7**	**+0.8**
P48A	**Milroy**	**10.05**	**70**		**Pn**	**10 27 09.8**	**+1.4**
R49A	**Shelbyville**	**10.05**	**77**		**Pn**	**10 27 07.8**	**-0.7**
RDMU	**Red Mountain**	**10.15**	**297**		**Pn**	**10 27 11.3**	**+1.3**
E28A	**Huff**	**10.23**	**348**		**Pn**	**10 27 11.2**	**+0.3**
N47A	**Urbana**	**10.26**	**62**		**Pn**	**10 27 11.5**	**+0.3**
T50A	**Nancy**	**10.27**	**84**		**Pn**	**10 27 12.7**	**+1.2**
L46A	**Eue Claire**	**10.31**	**55**		**Pn**	**10 27 12.3**	**+0.3**
G40A	**Rib Lake**	**10.32**	**31**		**Pn**	**10 27 13.0**	**+0.8**
250A	**Grady**	**10.47**	**113**		**Pn**	**10 27 15.2**	**+1.0**
P49A	**Miami Univ. Ec**	**10.60**	**70**	P	**Pn**	**10 27 15.7**	**-0.2**
	baz=258						
P49A	**Miami Univ. Ec**	**10.60**	**70**		**Pn**	**10 27 16.2**	**+0.3**
X51A	**Calhoun**	**10.60**	**97**		**Pn**	**10 27 16.0**	**0.0**
CPCT	**Cooper Cave**	**10.68**	**92**	Pn	**Pn**	**10 27 17.3**	**+0.2**
R50A	**Paris**	**10.71**	**77**		**Pn**	**10 27 18.0**	**+0.5**
P17A	**Butcher Ranch,**	**10.73**	**289**		**Pn**	**10 27 19.2**	**+1.3**
Z51A	**Franklin**	**10.73**	**104**		**Pn**	**10 27 18.8**	**+1.0**
V51A	**Loudon**	**10.76**	**90**		**Pn**	**10 27 18.5**	**+0.3**
E38A	**The Farm, Brul**	**10.98**	**23**	Pn	**Pn**	**10 27 20.8**	**-0.3**
O49A	**Covington**	**11.03**	**67**	Pn	**Pn**	**10 27 22.6**	**+0.7**
PD31	**Pinedale Array**	**11.06**	**308**		**Pn**	**10 27 25.1**	**+2.7**
PDAR	**Pinedale Array**	**11.06**	**308**	Pn	**Pn**	**10 27 22.8**	**+0.3**
	0.4nm,0.3s,baz=105,slow=17,SNR=8.6						
PDAR				Pg		10 28 05.8	
	1.4nm,0.3s,baz=109,slow=14,SNR=7.6						
PDAR				Lg	Lg	10 30 30.5	
	1.7nm,0.3s,baz=120,slow=37,SNR=5.5						
PDAR				LR	LR	10 31 22.7	
	comp=Z,118nm,18.9s,baz=113,slow=36						
PDAR	**Pinedale Array**	**11.06**	**308**	Pn	**Pn**	**10 27 23.3**	**+0.8**
W52A	**Murphy**	**11.22**	**94**		**Pn**	**10 27 26.0**	**+1.4**
TKL	**Tuckaleechee C**	**11.25**	**91**	Pn	**Pn**	**10 27 24.5**	**-0.4**
	1.1nm,0.3s,baz=198,slow=4.3,SNR=14						
TKL				Sn	**Sn**	**10 29 27.6**	**-2.5**
	1.3nm,0.3s,baz=156,slow=20,SNR=2.6						
TKL				Lg	Lg	10 30 34.1	
	5.4nm,0.3s,baz=18,slow=16,SNR=17						
TKL				LR	LR	10 31 43.9	
	comp=Z,233nm,18.7s,baz=292,slow=37						
TKL	**Tuckaleechee C**	**11.25**	**91**		**Pn**	**10 27 25.6**	**+0.7**
S51A	**Beattyville**	**11.26**	**80**		**Pn**	**10 27 26.0**	**+1.0**
TZTN	**Tazewell**	**11.33**	**86**	P	**Pn**	**10 27 28.1**	**+2.2**
	baz=274						
V52A	**Sevierville**	**11.37**	**90**		**Pn**	**10 27 27.2**	**+0.7**
L48A	**N Adams**	**11.54**	**58**	Pn	**Pn**	**10 27 28.6**	**-0.2**
Q51A	**Peebles**	**11.56**	**74**		**Pn**	**10 27 29.6**	**+0.5**
F42A	**Maple Grove Fa**	**11.61**	**35**		**Pn**	**10 27 29.1**	**-0.6**
352A	**Blakely**	**11.71**	**112**	Pn	**Pn**	**10 27 30.0**	**-1.1**
U15A	**North Rim**	**11.80**	**274**	Pn	**Pn**	**10 27 34.9**	**+2.2**
HPIG		**11.80**	**218**		**Pn**	**10 27 32.9**	**+0.2**
ACSO	**Alum Creek

LPAZ	**La Paz**	**59.52**	**147**	P	**P**	**10 34 49.1**	**+1.1**
	0.3nm,0.4s,baz=323,slow=5.1,SNR=3.4						
ARCES	**ARCESS Array B**	**66.36**	**19**	P	**P**	**10 35 32.5**	**+0.3**
	3.5nm,1.0s,baz=318,slow=5.2,SNR=4.4						
ARCES				LR	LR	11 03 33.6	
	comp=Z,68nm,18.1s,baz=245,slow=35						
NOA	**NORSAR Array B**	**66.92**	**30**	LR	LR	11 03 49.5	
	comp=Z,36nm,19.3s,baz=310,slow=35						
FINES	**FINESS Array B**	**72.19**	**25**	P	**P**	**10 36 10.8**	**+2.5**
	0.8nm,0.5s,baz=289,slow=5.8,SNR=8.5						
FINES				LR	LR	11 06 37.3	
	comp=Z,58nm,19.2s,baz=302,slow=35						
NRIK	**Noril'sk**	**74.31**	**358**	LR	LR	11 11 00.5	
	comp=Z,30nm,18.5s,baz=26,slow=37						
AKASG	**Malin Array Be**	**81.31**	**31**	LR	LR	11 13 01.0	
	comp=Z,33nm,19.2s,baz=280,slow=36						
MLR	**Muntele Rosu**	**83.75**	**36**	LR	LR	11 13 57.0	
	comp=Z,17nm,18.0s,baz=28,slow=35						
KBZ	**Khabaz**	**92.38**	**27**	LR	LR	11 18 51.3	
	comp=Z,43nm,19.0s,baz=5.5,slow=35						
HHC	**Hu-ho-hao-te**	**98.41**	**338**	*e*P	**P**	**10 38 22.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC				pmax	pmax		
	comp=Z,84nm,6.6s						

IDC 30 10:47:58.8±4.8, 18°.61N×121°.14E, h0km, mb3.2/3, mb1 3.3/3, mb1mx3.1/54, mbtmp3.2/3, MS3.4/1, Ms1 3.4/1, ms1mx2.3/21, Error ellipse: s-maj=424.1km s-min=27.9km az=61.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.44**	**161**	P	P	10 55 38.7	-0.6
	0.2nm,0.7s,baz=341,slow=9.0,SNR=2.0						
MKAR	**Makanchi Array**	**42.44**	**320**	P	P	10 55 55.3	-0.1
	1.1nm,0.8s,baz=112,slow=9.2,SNR=5.0						
ASAR	**Alice Springs**	**43.83**	**163**	P	P	10 56 07.0	+0.2
	0.1nm,0.8s,baz=344,slow=7.6,SNR=3.4						
GEYT	**Alibeck**	**57.70**	**304**	LR	LR	11 26 45.3	
	comp=Z,33nm,18.9s,baz=270,slow=40						

*JMA **30** 10:53:24.4±0.1, 24°.32N×121°.80E, h22km±2km, M3.3*
*TAP **30** 10:53:24.8, 24°.37N×121°.83E, h17km, ML3.8, B*
ISC 30 10:53:24.7±0.9, 24°.35N±0°.01×121°.84E±0°.02, h19km±2km, n140, σ0s90/236, 7C-15D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENAH	**Nanao**	**0.11**	**344**	*i* P	**Pg**	**10 53 28.3**	**-0.3**
	baz=344						
ENAH				*i* S	**Sg**	**10 53 30.6**	**-0.6**
	baz=344						
ENA	**Nanau**	**0.12**	**311**	⇓*i* P	**Pg**	**10 53 28.5**	**-0.3**
	baz=308						
ENA				*i* S	**Sg**	**10 53 30.7**	**-0.8**
	baz=308						
TWC	**Suao**	**0.26**	**1**	⇓*i* P	**Pb**	**10 53 30.4**	**-0.3**
	baz=12						
TWC				*i* S	**Sb**	**10 53 34.0**	**-0.7**
	baz=12						
NACB	**Ninganchiao**	**0.28**	**233**	⇓*i* P	**Pg**	**10 53 31.0**	**-0.1**
	baz=229						
NACB				*i* S	**Sg**	**10 53 34.8**	**-0.6**
	baz=229						
TWD	**Chiawan**	**0.35**	**220**	P	**Pb**	**10 53 32.0**	**-0.4**
	baz=215						
ETLH	**Xiulin Townshi**	**0.36**	**247**	⇓*i* P	**Pb**	**10 53 32.3**	**-0.4**
	baz=245						
ETLH				*e*S	**Sb**	**10 53 37.1**	**-0.9**
	baz=245						
ENTT	**Nioudou**	**0.39**	**319**	⇑*i* P	**Pb**	**10 53 32.7**	**-0.4**
	baz=320						
ENTT				*e*S	**Sg**	**10 53 37.9**	**-0.4**
	baz=320						
NDT	**Datong Townshi**	**0.39**	**310**	⇑*i* P	**Pb**	**10 53 33.0**	**-0.2**
	baz=310						
NDT				*i* S	**Sb**	**10 53 38.2**	**-0.8**
	baz=310						
TWE	**Neicheng**	**0.41**	**337**	⇑*i* P	**Pg**	**10 53 33.0**	**-0.2**
	baz=340						
TWE				*e*S	**Sg**	**10 53 38.2**	**-0.6**
	baz=340						
ILA	**Ilan**	**0.43**	**348**	⇓*i* P	**Pb**	**10 53 33.6**	**-0.1**
	baz=351						
ILA				*i* S	**Sb**	**10 53 39.5**	**-0.3**
	baz=351						
HWA	**Hwalien**	**0.43**	**211**	*e*P	**Pb**	**10 53 34.4**	**+0.6**
	baz=213						
NNSB	**Datong**	**0.43**	**281**	*i* P	**Pb**	**10 53 33.5**	**-0.3**
	baz=286						
NNSB				S	**Sb**	**10 53 39.0**	**-1.0**
	baz=286						
NNSH	**Datong**	**0.43**	**281**	*i* P	**Pb**	**10 53 33.5**	**-0.3**
	baz=283						
NNSH				*i* S	**Sg**	**10 53 38.8**	**-0.8**
	baz=283						
NNS	**Nan Shan**	**0.44**	**282**	⇑*i* P	**Pb**	**10 53 33.7**	**-0.3**
	baz=287						
NNS				*i* S	**Sg**	**10 53 39.2**	**-0.7**
	baz=287						
EGS		**0.50**	**9**	⇓*i* P	**Pb**	**10 53 34.9**	**-0.1**
	baz=18						
NTC	**Toucheng**	**0.51**	**359**	⇓*i* P	**Pg**	**10 53 35.0**	**0.0**
	baz=1.0						
NTC				*e*S	**Sg**	**10 53 41.7**	**-0.2**
	baz=1.0						
NWLT	**Wulai**	**0.53**	**324**	⇑*i* P	**Pg**	**10 53 35.3**	**-0.1**
	baz=322						
NWLT				*e*S	**Sb**	**10 53 41.9**	**-0.8**
	baz=322						
YHNB	**Yeheng**	**0.53**	**307**	⇑*i* P	**Pg**	**10 53 35.4**	**-0.1**
	baz=307						
YHNB				*i* S	**Sb**	**10 53 42.2**	**-0.6**
	baz=307						
NSK	**Sanguang**	**0.55**	**307**	⇑*i* P	**Pg**	**10 53 35.6**	**-0.2**
	baz=307						
NSK				*i* S	**Sg**	**10 53 42.6**	**-0.6**
	baz=307						
FUSS	**Fushou**	**0.56**	**260**	⇓*i* P	**Pg**	**10 53 36.0**	**+0.1**
	baz=260						
FUSS				*i* S	**Sg**	**10 53 43.4**	**-0.2**
	baz=260						
WHF	**Hehuan Shan**	**0.56**	**249**	⇓*i* P	**Pg**	**10 53 36.1**	**-0.1**
	baz=255						
WHF				S	**Sg**	**10 53 43.8**	**-0.2**
	baz=255						
TWT	**Tachien**	**0.61**	**261**	⇓*i* P	**Pn**	**10 53 37.5**	**-1.2**
	baz=260						
TWT				*e*S	**Sg**	**10 53 45.4**	**0.0**
	baz=260						
TIPB	**Shuangxi**	**0.62**	**359**	⇓*i* P	**Pb**	**10 53 37.0**	**0.0**
	baz=360						
TIPB				*i* S	**Sb**	**10 53 44.8**	**-0.6**
	baz=360						
TDCB	**Techi**	**0.63**	**262**	⇓*i* P	**Pg**	**10 53 37.5**	**+0.2**
	baz=261						
TDCB				*e*S	**Sg**	**10 53 45.4**	**-0.4**
	baz=261						
ESL	**Shilin**	**0.65**	**215**	P	**Pg**	**10 53 37.2**	**-0.4**
	baz=221						
ESL				*e*S	**Sn**	**10 53 47.5**	**-1.3**
	baz=221						
TWB1	**Santiao Chiao**	**0.67**	**11**	⇓*i* P	**Pb**	**10 53 37.7**	**-0.2**
	baz=13						
TWB1				S	**Sb**	**10 53 46.0**	**-0.7**
	baz=13						
TWA	**Mucha**	**0.67**	**340**	P	**Pg**	**10 53 37.9**	**-0.2**
	baz=341						
TWA				*e*S	**Sb**	**10 53 46.5**	**-0.3**
	baz=341						
CHGB	**Renai**	**0.67**	**245**	⇓*i* P	**Pg**	**10 53 38.2**	**+0.1**
	baz=253						
CHGB				*e*S	**Sn**	**10 53 47.8**	**-1.9**
	baz=253						
NHDH	**Xindian Distri**	**0.68**	**335**	*e*P	**Pg**	**10 53 38.1**	**-0.1**
	baz=335						
NHDH				*e*S	**Sb**	**10 53 46.3**	**-0.6**
	baz=335						
TATO	**Taipei**	**0.70**	**333**	P	**Pg**	**10 53 38.4**	**-0.3**
	baz=333						
TATO				*e*S	**Sb**	**10 53 47.0**	**-0.7**
	baz=333						
NWF	**Wu-fen Shan**	**0.72**	**356**	*i* P	**Pg**	**10 53 39.0**	**-0.1**
	baz=348						
NWF				S	**Sb**	**10 53 48.0**	**-0.4**
	baz=348						
OWD	**Renai**	**0.72**	**237**	⇓*i* P	**Pg**	**10 53 38.8**	**-0.2**
	baz=233						
OWD				*e*S	**Sn**	**10 53 51.0**	**+0.3**
	baz=233						
WFSB	**Wu-fen Shan**	**0.72**	**356**	*i* P	**Pg**	**10 53 39.0**	**0.0**
	baz=350						
WFSB				S	**Sb**	**10 53 48.2**	**-0.1**
	baz=350						
TAP	**Taipei**	**0.75**	**336**	*e*P	**Pn**	**10 53 40.3**	**-0.1**
	baz=337						
TAP				*e*S	**Sg**	**10 53 49.7**	**+0.1**
	baz=337						
EGFH	**Guangfu**	**0.77**	**209**	*e*P	**Pg**	**10 53 39.8**	**-0.1**
	baz=223						
EGFH				*e*S	**Sn**	**10 53 53.2**	**+1.4**
	baz=223						
NSTT	**Nanjuang**	**0.82**	**290**	*i* P	**Pn**	**10 53 40.7**	**-0.6**
	baz=281						
NSTT				S	**Sg**	**10 53 51.3**	**-0.3**
	baz=281						
WHP	**Taichung City**	**0.82**	**265**	*e*P	**Pn**	**10 53 41.0**	**-0.4**
	baz=265						
WHP				*e*S	**Sn**	**10 53 52.0**	**-1.1**
	baz=265						
YM01	**YM01**	**0.83**	**343**	P	**Pn**	**10 53 41.3**	**-0.3**
	baz=344						
YM01				*e*S	**Sb**	**10 53 51.5**	**-0.1**
	baz=344						
TWS1	**Kuangyinshan**	**0.84**	**333**	*i* P	**Pn**	**10 53 41.7**	**+0.1**
	baz=334						
TWS1				*e*S	**Sn**	**10 53 53.4**	**-0.2**
	baz=334						
YM10	**YM10**	**0.84**	**342**	*e*P	**Pn**	**10 53 41.4**	**-0.3**
	baz=343						
YM04	**YM04**	**0.85**	**341**	*e*P	**Pn**	**10 53 41.4**	**-0.4**
	baz=342						
YM04				*e*S	**Sn**	**10 53 52.9**	**-0.8**
	baz=342						
YM11	**YM11**	**0.85**	**343**	*e*P	**Pn**	**10 53 41.7**	**-0.1**
	baz=337						
YM11				*e*S	**Sn**	**10 53 53.8**	**0.0**
	baz=337						
YM05	**YM05**	**0.85**	**343**	P	**Pn**	**10 53 41.4**	**-0.4**
	baz=344						
YM05				*e*S	**Sg**	**10 53 52.4**	**-0.4**
	baz=344						
NCUH	**Zhongli**	**0.86**	**316**	*e*P	**Pn**	**10 53 41.9**	**0.0**
	baz=313						
NCUH				*e*S	**Sn**	**10 53 53.4**	**-0.6**
	baz=313						
NWRT	**Kuosheng**	**0.87**	**349**	*e*P	**Pn**	**10 53 42.8**	**+0.8**
	baz=350						
NWRT				*e*S	**Sg**	**10 53 53.2**	**-0.1**
	baz=350						
YM08	**YM08**	**0.87**	**345**	P	**Pg**	**10 53 41.6**	**-0.1**
	baz=339						
YM08				*e*S	**Sb**	**10 53 52.3**	**-0.2**
	baz=339						
ANP	**Anpu**	**0.89**	**341**	*e*P	**Pn**	**10 53 42.0**	**-0.3**
	baz=342						
ANP				*e*S	**Sb**	**10 53 52.1**	**-1.0**
	baz=342						
NTST	**Danshui**	**0.89**	**336**	*e*P	**Pn**	**10 53 42.4**	**+0.1**
	baz=337						
NTST				*e*S	**Sn**	**10 53 54.9**	**+0.3**
	baz=337						
DPDB	**Guoxing**	**0.89**	**250**	P	**Pn**	**10 53 42.5**	**+0.1**
	baz=250						
DPDB				*e*S	**Sn**	**10 53 54.1**	**-0.7**
	baz=250						
SBCB	**Hsinchu**	**0.90**	**300**	*e*P	**Pn**	**10 53 42.5**	**+0.1**
	baz=293						
SBCB				*e*S	**Sn**	**10 53 56.9**	**+2.0**
	baz=293						
HSN	**Hsinchu**	**0.92**	**300**	*e*P	**Pg**	**10 53 41.9**	**-0.7**
	baz=303						
HSN				*e*S	**Sn**	**10 53 55.9**	**+0.6**
	baz=303						
HGSD	**Ruisui**	**0.93**	**204**	P	**Pg**	**10 53 43.2**	**+0.3**
	baz=193						
HGSD				*e*S	**Sn**	**10 53 56.5**	**+0.8**
	baz=193						
TWY	**Chenhua**	**0.95**	**347**	*e*P	**Pg**	**10 53 43.5**	**+0.2**
	baz=348						
TWY				*e*S	**Sg**	**10 53 55.7**	**-0.2**
	baz=348						
EHY	**Hungye**	**0.96**	**210**	P	**Pb**	**10 53 42.3**	**-0.6**
	baz=221						
EHY				*e*S	**Sn**	**10 53 56.8**	**+0.3**
	baz=221						
NSM	**Shimen**	**0.96**	**346**	*e*P	**Pn**	**10 53 43.1**	**-0.3**
	baz=347						
NSM				*e*S	**Sn**	**10 53 56.6**	**+0.1**
	baz=347						
TWQ1	**Liyutan**	**0.97**	**270**	P	**Pg**	**10 53 44.7**	**+1.0**
	baz=271						
TWQ1				*e*S	**Sn**	**10 53 58.9**	**+2.1**
	baz=271						
NMLH	**Miaoli**	**0.98**	**281**	*e*P	**Pg**	**10 53 45.4**	**+1.6**
	baz=288						
NMLH				*e*S	**Sn**	**10 53 58.0**	**+1.2**
	baz=288						
SMLT	**Sun Moon Lake**	**0.98**	**242**	P	**Pg**	**10 53 44.0**	**+0.2**
	baz=242						
SMLT				*e*S	**Sn**	**10 53 57.9**	**+0.9**
	baz=242						
SSLB	**Suanglung**	**0.98**	**236**	*i* P	**Pg**	**10 53 43.7**	**-0.2**
	baz=236						
SSLB				*e*S	**Sn**	**10 53 56.2**	**-0.8**
	baz=236						
NSY	**Sanyi**	**0.99**	**274**	*e*P	**Pg**	**10 53 45.1**	**+1.1**
	baz=275						
NSY				*e*S	**Sn**	**10 53 58.6**	**+1.4**
	baz=275						
TYC	**Yuchr**	**1.00**	**244**	P	**Pg**	**10 53 44.4**	**+0.2**
	baz=249						
TYC				*e*S	**Sg**	**10 53 57.9**	**+0.4**
	baz=249						
JYNG	**Yonaguni jima**	**1.01**	**84**	P	**Pb**	**10 53 43.8**	**+0.1**
JYNG				S	**Sb**	**10 53 57.5**	**+0.9**
YOJ	**Yonaguni jima**	**1.07**	**84**	*e*P	**Pn**	**10 53 44.6**	**-0.1**
	baz=75						
YOJ	**Yonaguni jima**	**1.07**	**84**	P	**Pn**	**10 53 44.8**	**0.0**
YOJ				*e*S	**Sb**	**10 53 59.1**	**+0.8**
YULB	**Yu-li**	**1.07**	**208**	P	**Pb**	**10 53 43.8**	**-1.0**
	baz=219						
YULB				*e*S	**Sg**	**10 54 01.0**	**+1.3**
	baz=219						
TCU	**Taichung**	**1.08**	**260**	P	**Pg**	**10 53 47.1**	**+1.3**
	baz=261						
TCU				*e*S	**Sg**	**10 54 02.0**	**+2.0**
	baz=261						
WDJ	**Dajia District**	**1.10**	**270**	*e*P	**Pg**	**10 53 47.4**	**+1.4**
	baz=271						
WDJ				*e*S	**Sg**	**10 54 00.1**	**-0.3**
	baz=271						
EYUL	**Yuli**	**1.10**	**206**	*e*P	**Pg**	**10 53 46.2**	**+0.1**
	baz=222						
EYUL				*e*S	**Sg**	**10 54 01.5**	**+0.8**
	baz=222						
TWF1	**Yuli**	**1.11**	**207**	*e*P	**Pn**	**10 53 44.4**	**-0.9**
	baz=217						
WHYT	**Xinyi Township**	**1.11**	**235**	*e*P	**Pg**	**10 53 46.6**	**+0.3**
	baz=227						
WJS	**Zhushan**	**1.15**	**243**	*e*P	**Pg**	**10 53 47.8**	**+0.9**
	baz=233						
WNT	**Mingjian**	**1.16**	**246**	*e*P	**Pg**	**10 53 47.8**	**+0.6**
	baz=245						
WNT				*e*S	**Sg**	**10 54 05.0**	**+2.6**
	baz=245						
WCHH	**Zhanghua**	**1.20**	**257**	*e*P	**Pg**	**10 53 48.4**	**+0.4**
	baz=259						
WCHH				*e*S	**Sg**	**10 54 06.9**	**+3.1**
	baz=259						
FULB	**Fuli**	**1.25**	**204**	*e*P	**Pg**	**10 53 48.1**	**-0.8**
	baz=220						
FULB				*e*S	**Sg**	**10 54 05.1**	**-0.2**
	baz=220						
ALS	**Alishan**	**1.26**	**229**	*e*P	**Pg**	**10 53 48.8**	**-0.4**
	baz=216						
ALS				*e*S	**Sg**	**10 54 05.6**	**-0.2**
	baz=216						
PCYT	**Pengchaiyu**	**1.29**	**9**	*e*P	**Pn**	**10 53 47.7**	**-0.2**
	baz=10.0						
PCYT				*e*S	**Sg**	**10 54 06.1**	**-0.6**
	baz=10.0						
CHN5	**Tsauling**	**1.30**	**235**	*e*P	**Pg**	**10 53 50.1**	**+0.2**
	baz=237						
CHN5				*e*S	**Sg**	**10 54 08.6**	**+1.6**
	baz=237						
CHKT	**Chengkung**	**1.32**	**199**	*e*P	**Pn**	**10 53 47.5**	**-0.6**
	baz=185						
WGK	**Gukeng**	**1.34**	**241**	*e*P	**Pg**	**10 53 51.3**	**+0.6**
	baz=242						
WGK				*e*S	**Sg**	**10 54 10.7**	**+2.5**
	baz=242						
WDLH	**Douliu**	**1.36**	**241**	*e*P	**Pg**	**10 53 51.0**	**0.0**
	baz=256						
WDLH				*e*S	**Sg**	**10 54 11.0**	**+2.2**
	baz=256						
ELDTW	**Lidau**	**1.38**	**213**	*e*P	**Pn**	**10 53 48.8**	**-0.3**
	baz=199						
ELDTW				*e*S	**Sg**	**10 54 08.6**	**-0.8**
	baz=199						
RLNB	**Erlin**	**1.43**	**252**	*e*P	**Pg**	**10 53 52.2**	**-0.1**
	baz=267						
RLNB				*e*S	**Sg**	**10 54 12.7**	**+1.7**
	baz=267						
EDH	**Donghe**	**1.45**	**200**	*e*P	**Pb**	**10 53 51.3**	**0.0**
	baz=186						
EDH				*e*S	**Sg**	**10 54 10.1**	**-1.7**
	baz=186						
WTK	**Tuku**	**1.48**	**244**	*e*P	**Pg**	**10 53 52.8**	**-0.6**
	baz=256						
WTK				*e*S	**Sg**	**10 54 14.9**	**+2.2**
	baz=256						
CHN2	**Minshiung**	**1.49**	**237**	*e*P	**Pg**	**10 53 54.1**	**+0.6**
	baz=239						
CHN2				*e*S	**Sg**	**10 54 14.5**	**+1.6**
	baz=239						
TPUB	**Ta-pu**	**1.52**	**227**	*e*P	**Pg**	**10 53 53.3**	**-0.9**
	baz=218						
TPUB				*e*S	**Sg**	**10 54 15.2**	**+1.2**
	baz=218						
STYT	**Tauyuan**	**1.54**	**220**	*e*P	**Pb**	**10 53 52.9**	**+0.1**
	baz=222						
STYT				*e*S	**Sg**	**10 54 14.6**	**0.0**
	baz=222						
CHY	**Chiayi**	**1.55**	**237**	*e*P	**Pg**	**10 53 54.1**	**-0.5**
	baz=239						
CHY				*e*S	**Sg**	**10 54 17.1**	**+2.3**
	baz=239						
WTP	**Ta-pu**	**1.57**	**226**	*e*P	**Pg**	**10 53 54.2**	**-0.8**
	baz=227						
WTP				*e*S	**Sg**	**10 54 17.4**	**+1.8**
	baz=227						
LONT	**Longtian**	**1.58**	**205**	*e*P	**Pn**	**10 53 51.5**	**-0.2**
	baz=206						
TWK	**Hsinying**	**1.64**	**229**	*e*P	**Pg**	**10 53 55.1**	**-1.3**
	baz=230						
TWK				*e*S	**Sg**	**10 54 19.4**	**+1.7**
	baz=230						
WSF	**Szhu**	**1.64**	**245**	*e*P	**Pb**	**10 53 54.5**	**+0.1**
	baz=255						
WSF				*e*S	**Sg**	**10 54 18.6**	**+0.8**
	baz=255						
WLGB	**Puzi**	**1.66**	**239**	*e*P	**Pb**	**10 53 54.2**	**-0.4**
	baz=240						
WLGB				*e*S	**Sg**	**10 54 18.6**	**+0.4**
	baz=240						
SNST	**Tainan City**	**1.67**	**228**	*e*P	**Pg**	**10 53 55.7**	**-1.2**
	baz=229						
SNST				*e*S	**Sg**	**10 54 19.1**	**+0.5**
	baz=229						
CHN1	**Nanshi**	**1.67**	**226**	*e*P	**Pg**	**10 53 55.9**	**-1.1**
	baz=228						
CHN1				*e*S	**Sg**	**10 54 18.8**	**+0.1**
	baz=228						
TWG	**Pinlang**	**1.68**	**205**	*e*P	**Pn**	**10 53 52.7**	**-0.4**
	baz=206						
TWG				*e*S	**Sb**	**10 54 16.1**	**+0.4**
	baz=206						
TWGBT	**Beinan**	**1.68**	**205**	*e*P	**Pn**	**10 53 52.3**	**-0.8**
	baz=193						
LDUT	**Ludao**	**1.70**	**192**	*e*P	**Pn**	**10 53 52.7**	**-0.7**
	baz=182						
LDUT				*e*S	**Sb**	**10 54 15.2**	**-1.2**
	baz=182						
SGST	**Jiashian**	**1.71**	**223**	*e*P	**Pb**	**10 53 55.3**	**-0.3**
	baz=217						
SGST				*e*S	**Sg**	**10 54 20.2**	**+0.3**
	baz=217						
IRIF	**Iriomote-Funau**	**1.72**	**90**	P	**Pn**	**10 53 54.0**	**+0.3**
IRIF				S	**Sn**	**10 54 16.0**	**+0.8**
ICHU	**Yijhu**	**1.73**	**236**	*e*P	**Pg**	**10 53 57.0**	**-1.2**
	baz=221						
ICHU				*e*S	**Sg**	**10 54 22.2**	**+1.5**
	baz=221						
SLGT	**Liugui**	**1.74**	**219**	*e*P	**Pb**	**10 53 56.4**	**+0.3**
	baz=221						
SLGT				*e*S	**Sg**	**10 54 21.6**	**+0.7**
	baz=221						
CHN8	**Yiju**	**1.79**	**237**	*e*P	**Pb**	**10 53 57.5**	**+0.5**
	baz=222						
CHN8				*e*S	**Sg**	**10 54 23.1**	**+0.4**
	baz=222						
HATJ	**Hateruma jima**	**1.81**	**99**	P	**Pb**	**10 53 56.5**	**-0.9**
CHN3	**Shinhua**	**1.85**	**227**	*e*P	**Pb**	**10 53 57.6**	**-0.5**
	baz=229						
SCST	**Cishan**	**1.91**	**221**	*e*P	**Pb**	**10 53 59.1**	**+0.1**
	baz=222						
ECL	**Taimali**	**1.92**	**205**	*e*P	**Pb**	**10 53 57.6**	**-1.6**
	baz=195						
SSD	**Sandimen**	**1.94**	**215**	*e*P	**Pb**	**10 54 00.0**	**+0.4**
	baz=228						
SSD				*e*S	**Sg**	**10 54 25.5**	**-1.9**
	baz=228						
TSMG	**Majia**	**1.97**	**214**	*e*P	**Pb**	**10 53 59.6**	**-0.4**
	baz=227						
TSMG				*e*S	**Sg**	**10 54 26.4**	**-1.8**
	baz=227						
JKRS	**Kuro-shima**	**1.98**	**93**	P	**Pn**	**10 53 58.5**	**+1.2**
JKRS				S	**Sn**	**10 54 22.1**	**+0.5**
TWM1	**Shoushan**	**2.00**	**221**	*e*P	**Pb**	**10 54 01.4**	**+0.8**
	baz=220						
MASBT	**Mashibuluo**	**2.05**	**213**	*e*P	**Pb**	**10 53 59.6**	**-1.9**
	baz=215						
JIJ	**Ishigaki jima**	**2.10**	**89**	P	**Pn**	**10 53 59.4**	**+0.5**
EAST	**Anshuo**	**2.16**	**205**	*e*P	**Pn**	**10 54 01.1**	**+1.3**
	baz=197						
SSPT	**Xinbi**	**2.19**	**213**	*e*P	**Pb**	**10 54 03.0**	**-0.8**
	baz=199						
PTTC	**Pingtan**	**2.20**	**302**	*e*P	**Pn**	**10 54 01.6**	**+1.2**
	baz=302						
PNG	**Penghu**	**2.23**	**250**	*e*P	**Pn**	**10 54 01.8**	**+1.1**
	baz=251						
PHUB	**P'eng-hu**	**2.24**	**249**	*e*P	**Pn**	**10 54 01.8**	**+1.0**
	baz=250						
JISG	**Ishigakijimahi**	**2.26**	**83**	P	**Pn**	**10 54 01.5**	**+0.4**
SCZT	**Fangliau**	**2.26**	**210**	*e*P	**Pb**	**10 54 03.5**	**-1.5**
	baz=197						
VWUC	**VWUC**	**2.27**	**287**	*e*P	**Pn**	**10 54 01.4**	**+0.1**
	baz=287						
WDGT	**Dungji**	**2.27**	**242**	*e*P	**Pb**	**10 54 03.0**	**-2.2**
	baz=243						
LAY	**Lan-yu**	**2.31**	**187**	*e*P	**Pn**	**10 54 01.0**	**-0.9**
	baz=189						
SLIU	**Shizi**	**2.33**	**205**	*e*P	**Pn**	**10 54 02.6**	**+0.5**
	baz=198						
WLCH	**Liuqiu**	**2.40**	**214**	*e*P	**Pb**	**10 54 07.9**	**+0.5**
	baz=217						
VCHM	**Qimei**	**2.48**	**243**	*e*P	**Pn**	**10 54 03.6**	**-0.5**
	baz=245						
MATB	**Ma-tsu**	**2.49**	**317**	*e*P	**Pn**	**10 54 04.0**	**-0.3**
	baz=316						
PTMZ	**Houxiangcun**	**2.57**	**286**	*e*P	**Pn**	**10 54 06.3**	**+0.9**
	baz=286						
TWK1	**Hengchun**	**2.58**	**202**	*e*P	**Pn**	**10 54 06.4**	**+1.0**
	baz=193						
TWKBT	**Hengchun**	**2.58**	**202**	*e*P	**Pb**	**10 54 08.3**	**-2.0**
	baz=193						
JTJ	**Tarama**	**2.62**	**83**	P	**Pn**	**10 54 07.4**	**+1.3**
JTJ				*e*S	**Sn**	**10 54 38.6**	**+1.2**
LYJJ	**Jianjiangzhen**	**2.89**	**320**	*e*P	**Pn**	**10 54 10.5**	**+0.7**
	baz=319						
XPSS	**Dashigiu**	**2.97**	**330**	*e*P	**Pn**	**10 54 10.8**	**-0.1**
	baz=329						
JIRB	**Irabujima**	**3.07**	**80**	P	**Pn**	**10 54 13.7**	**+1.4**
**

baz=78
AXDP Jialang 3.57 280 *e*P Pn 10 54 19.7 +0.6
baz=280
ZPLA Ao Xicun 3.76 265 *e*P Pn 10 54 22.6 +0.8
baz=264

IDC 30 10:58:32.8±5.8, 1°53N×127°45E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/42, mbtmp3.3/3, MS2.2/1, Ms1 2.2/1, ms1mx1.9/21, Error ellipse: s-maj=140.8km s-min=82.7km az=87.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.07**	**230**	LR	LR	11 05 40.0	
	comp=Z,13nm,18.6s,baz=90,slow=42						
WRA	**Warramunga Arr**	**22.39**	**163**	P	P	11 03 32.9	-0.1
	0.4nm,0.6s,baz=340,slow=11,SNR=7.7						
ASAR	**Alice Springs**	**25.82**	**166**	P	P	11 04 06.8	+0.7
	0.1nm,0.5s,baz=344,slow=7.1,SNR=4.7						
STKA	**Stephens Creek**	**35.84**	**159**	P	P	11 05 34.0	-0.3
	0.5nm,0.3s,baz=348,slow=9.3,SNR=2.8						

IDC 30 11:05:58.5±23.0, 8°58S×130°16E, h197km±113km, mb3.4/1, mb1 3.2/4, mb1mx2.9/30, mbtmp3.7/4, Error ellipse: s-maj=247.0km s-min=64.1km az=0.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.43**	**204**	P	Pn	11 08 23.6	+0.1
	0.1nm,0.3s,baz=28,slow=12,SNR=4.2						
WRA	**Warramunga Arr**	**12.00**	**161**	P	Pn	11 08 43.8	+0.3
	0.2nm,0.3s,baz=343,slow=13,SNR=16						
ASAR	**Alice Springs**	**15.43**	**167**	P	Pn	11 09 25.2	-0.9
	0.4nm,0.3s,baz=350,slow=11,SNR=60						
STKA	**Stephens Creek**	**25.50**	**157**	P	P	11 11 09.0	+0.1
	1.4nm,0.6s,baz=321,slow=14,SNR=3.5						

*VAO **30** 11:14:07.9±1.3, 15°34S×75°14W, h10km, mb4.7*
*NEIC **30** 11:14:15.0±2.1, 15°2S±0°1×74°9W±0°1, h61km±10km, mb4.3/6, Error ellipse: s-maj=19.9km s-min=9.5km az=50.0*
*IDC **30** 11:14:15.6±0.8, 15°15S×74°86W, h57km±7km, mb3.8/5, mb1 4.0/9, mb1mx3.7/34, mbtmp4.1/9, MS3.0/10, Ms1 3.0/10, ms1mx2.9/28, Error ellipse: s-maj=27.3km s-min=10.5km az=53.0*
ISC 30 11:14:13.4±0.6, 15°30S±0°06×74°87W±0°08, h35km, n103, σ2°32/86, mb4.4/10, MS3.2/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.81**	**330**	P	**Pn**	**11 15 09.4**	**-0.3**
	17nm,0.3s,baz=152,slow=13,SNR=27						
NNA				S	**Sn**	**11 15 52.1**	**-1.3**
	135nm,0.3s,baz=201,slow=14,SNR=6.9						
NNA				LR	LR	11 16 41.5	
	comp=Z,58nm,20.8s,baz=150,slow=40						
NNA	**Nana**	**3.81**	**330**	Pn	**Pn**	**11 15 09.7**	**0.0**
AP01	**Chacalluta**	**5.30**	**126**	Pn	**Pn**	**11 15 33.4**	**+3.3**
PB16	**IPOC Station P**	**5.96**	**121**	*e*P	**Pn**	**11 15 42.1**	**+2.4**
PB16				*e*S	**Sn**	**11 16 46.2**	**-0.8**
PB16	**IPOC Station P**	**5.96**	**121**		**Pn**	**11 15 42.8**	**+3.2**
PSGC	**Pisagua**	**6.23**	**134**	*e*P	**Pn**	**11 15 44.2**	**+1.2**
PSGCX	**Pisagua**	**6.23**	**134**	Pn	**Pn**	**11 15 46.5**	**+3.5**
MNMC	**Minye Minye**	**6.32**	**128**	Pn	**Pn**	**11 15 48.5**	**+4.2**
LPAZ	**La Paz**	**6.56**	**100**	P	**Pn**	**11 15 52.2**	**+4.2**
	1.9nm,0.3s,baz=288,slow=6.7,SNR=28						
LPAZ	**La Paz**	**6.56**	**100**	Pn	**Pn**	**11 15 51.3**	**+3.3**
LPAZ	**La Paz**	**6.56**	**100**	*e*P	**Pn**	**11 15 48.5**	**+0.5**
PB11	**IPOC Station P**	**6.66**	**132**	Pn	**Pn**	**11 15 52.4**	**+3.4**
TA01	**Diego Aracena**	**6.88**	**140**	Pn	**Pn**	**11 15 54.6**	**+2.8**
GO01	**Chusmiza**	**6.94**	**130**	Pn	**Pn**	**11 15 55.7**	**+2.6**
PATCX	**Punta Patache**	**7.09**	**141**	Pn	**Pn**	**11 15 56.8**	**+2.0**
PB08	**IPOC Station P**	**7.27**	**132**	Pn	**Pn**	**11 16 00.5**	**+2.9**
PB01	**IPOC Station P**	**7.67**	**139**	Pn	**Pn**	**11 16 05.1**	**+2.4**
CZSB	**Cruzeiro do Su**	**7.82**	**16**	*e*P	**Pn**	**11 16 03.3**	**-1.4**
PB07	**IPOC Station P**	**7.95**	**144**	Pn	**Pn**	**11 16 10.1**	**+3.4**
PB04	**IPOC Station P**	**8.30**	**148**	Pn	**Pn**	**11 16 13.5**	**+2.0**
PB09	**IPOC Station P**	**8.38**	**141**	Pn	**Pn**	**11 16 16.6**	**+4.0**
ATAH	**Atahualpa**	**8.82**	**337**	P	**Pn**	**11 16 21.1**	**+2.2**
	0.4nm,0.3s,baz=93,slow=13,SNR=1.7						
ATAH				S	**Sn**	**11 17 58.7**	**+1.4**
	1.6nm,0.3s,baz=151,slow=7.6,SNR=1.5						
ATAH				LR	LR	11 19 59.4	
	comp=Z,79nm,20.0s,baz=168,slow=40						
PB06	**IPOC Station P**	**8.91**	**147**	Pn	**Pn**	**11 16 24.2**	**+4.4**
PB10	**IPOC Station P**	**9.13**	**154**	Pn	**Pn**	**11 16 23.7**	**+1.1**
LVC	**Limon Verde**	**9.20**	**143**	P	**Pn**	**11 16 27.2**	**+3.3**
	2.1nm,0.3s,baz=314,slow=10,SNR=14						
LVC				S	**Sn**	**11 18 05.1**	**-1.4**
	1.9nm,0.3s,baz=271,slow=23,SNR=4.7						
LVC	**Limon Verde**	**9.20**	**143**	Pn	**Pn**	**11 16 27.6**	**+3.6**
PB15	**IPOC Station P**	**9.37**	**148**	Pn	**Pn**	**11 16 29.3**	**+3.1**
ETMB	**Extrema**	**10.05**	**58**	*e*P	**Pn**	**11 16 36.6**	**+1.2**
GO02	**Mina Guanaco**	**10.99**	**154**	Pn	**Pn**	**11 16 50.6**	**+2.1**
AC01	**Pan de Azucar**	**11.51**	**160**	Pn	**Pn**	**11 16 56.8**	**+1.6**
AC02	**Maricunga**	**12.66**	**156**	Pn	**Pn**	**11 17 13.2**	**+1.7**
SAML	**Samuel**	**13.05**	**62**	Pn	**Pn**	**11 17 15.2**	**-1.2**
SAML	**Samuel**	**13.05**	**62**	*e*P	**Pn**	**11 17 15.2**	**-1.2**
SIV	**San Ignacio**	**13.31**	**95**	P	**Pn**	**11 17 18.5**	**-1.5**
	1.0nm,0.3s,baz=293,slow=9.4,SNR=14						
OTAV	**Otavalo**	**15.84**	**347**	*e*P	**P**	**11 17 57.4**	**-0.4**
GCUF	**Volcan Galeras**	**16.60**	**351**	*e*P	**P**	**11 18 09.7**	**+3.4**
FLOC	**Florencia**	**16.79**	**357**	*e*P	**Pn**	**11 18 04.9**	**-1.1**
MACC	**Macarena, Meta**	**17.36**	**3**	*e*P	**P**	**11 18 13.2**	**-1.0**
BBAC	**Balboa, Cauca**	**17.37**	**352**	*e*P	P	11 18 20.7	+6.2
GARC	**Garzon, Huila**	**17.39**	**358**	*e*P	**P**	**11 18 16.6**	**+1.9**
PCON	**Cinco Dias**	**17.58**	**355**	*e*P	**P**	**11 18 22.4**	**+5.2**
MARP	**Paez Belalcaza**	**18.06**	**357**	*e*P	**P**	**11 18 23.6**	**+1.4**
H03N1	**Juan Fernandez**	**18.43**	**191**	T	T	11 37 16.7	
	baz=13,slow=74,SNR=2340						
H03N2	**Juan Fernandez**	**18.43**	**191**	T	T	11 37 18.9	
	baz=13,slow=74,SNR=1412						
H03N3	**Juan Fernandez**	**18.45**	**191**	T	T	11 37 14.0	
	baz=13,slow=74,SNR=1783						
MACA	**Manacapuru-AM**	**18.46**	**51**	*e*P	**Pn**	**11 18 26.6**	**-0.1**
AQDB	**Aquidauana**	**18.95**	**109**	*e*P	**P**	**11 18 31.9**	**+0.2**
ORTC	**Ortega, Tolima**	**19.09**	**359**	*e*P	Pn	11 18 41.0	+6.8
YOTC	**Yotoco, Valle**	**19.22**	**356**	*e*P	Pn	11 18 45.2	+9.4
ANIL	**Santa Ana**	**19.67**	**358**	*e*P	Pn	11 18 49.9	+8.4
CPUP	**Villa Florida**	**19.70**	**127**	LR	LR	11 27 48.2	
	comp=Z,19nm,21.8s,baz=55,slow=41						
TOLC	**Tolima**	**19.76**	**359**	*e*P	**Pn**	**11 18 47.4**	**+4.8**
CHIC	**Chingaza**	**19.83**	**3**	*e*P	**Pn**	**11 18 47.7**	**+4.2**
ROSC	**El Rosal**	**20.02**	**2**	LR	LR	11 28 27.3	
	comp=Z,96nm,18.7s,baz=65,slow=43						
PLMC	**San Jos del P**	**20.12**	**356**	*e*P	Pn	11 18 53.7	+7.1
GUY2C	**Guyana, Caldas**	**20.40**	**359**	*e*P	**P**	**11 18 47.2**	**-0.7**
NPGB	**Novo Progresso**	**20.81**	**69**	*e*P	**P**	**11 18 53.7**	**+1.7**
SPBC	**San Pablo de B**	**20.83**	**2**	*e*P	Pn	11 18 55.9	+1.0
CBOC	**Ciudad Bolivar**	**21.06**	**357**	*e*P	pP	11 19 05.1	+0.8
RUSC	**La Rusia**	**21.13**	**5**	*e*P	**P**	**11 18 51.1**	**-4.8**
PTBC	**PUERTO BERRIO,**	**21.70**	**1**	*e*P	P	11 18 50.1	-11
BARC	**Barichara**	**21.82**	**5**	*e*P	**P**	**11 19 09.3**	**+6.3**
DBBC	**Dabeiba**	**22.21**	**356**	*e*P	P	11 19 14.5	+7.4
PAMC	**Pamplona, Colo**	**22.60**	**6**	*e*P	**P**	**11 19 11.6**	**0.0**
ZARC	**Zaragoza, Cauc**	**22.65**	**0**	*e*P	**P**	**11 19 12.2**	**+0.5**
UREC	**San Jos de Ur**	**22.91**	**358**	*e*P	P	11 19 21.6	+7.1
SNDB	**Serra Nova Dou**	**23.14**	**85**	*e*P	**P**	**11 19 16.2**	**-0.6**
PCMB	**Pacaembu**	**23.24**	**109**	*e*P	**P**	**11 19 17.7**	**0.0**
PTGB	**Pitanga**	**23.36**	**117**	*e*P	**P**	**11 19 19.9**	**+0.9**
ITRB	**Iturama**	**23.77**	**104**	*e*P	**P**	**11 19 23.4**	**+0.5**
MALB	**Monte Alegre**	**24.32**	**59**	*e*P	**P**	**11 19 27.0**	**-1.1**
SDV	**Santo Domingo**	**24.39**	**10**	LR	LR	11 31 17.5	
	comp=Z,15nm,20.8s,baz=260,slow=42						
SJCC	**San Jacinto, C**	**25.04**	**359**	*e*P	P	11 19 42.0	+7.5
FRTB	**Fartura**	**25.16**	**112**	*e*P	**P**	**11 19 35.5**	**-0.1**
PLCA	**Paso Flores**	**25.62**	**172**	P	**P**	**11 19 40.9**	**+1.2**
	1.5nm,0.7s,baz=346,slow=12,SNR=6.3						
PLCA				LR	LR	11 29 01.2	
	comp=Z,18nm,18.4s,baz=355,slow=34						
PLCA	**Paso Flores**	**25.62**	**172**	P	**P**	**11 19 39.8**	**+0.2**
PLCA				IAmb	IAmb	11 20 06.0	
	comp=Z,8.8nm,1.1s						
IPMB	**Ipameri, GO**	**25.67**	**100**	*e*P	**P**	**11 19 39.7**	**-0.7**
BDFB	**Brasilia**	**25.88**	**94**	LR	LR	11 30 35.5	
	comp=Z,63nm,18.0s,baz=301,slow=38						
LPIG	**La Paz**	**52.27**	**318**	P	**P**	**11 23 21.5**	**0.0**
	comp=Z,12nm,0.3s,baz=126,slow=17,SNR=4.6						
TX31	**Lajitas Ar. Si**	**52.37**	**328**	P	**P**	**11 23 21.0**	**-1.3**
TX32	**Lajitas Array**	**52.37**	**328**	P	**P**	**11 23 20.9**	**-1.5**
TXAR	**Lajitas Array**	**52.37**	**328**	P	**P**	**11 23 21.3**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=150,slow=8.6,SNR=24						
TXAR				pP	**sP**	**11 23 36.5**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=145,slow=8.9,SNR=4.7						
TXAR	**Lajitas Array**	**52.37**	**328**	P	**P**	**11 23 19.5**	**-2.8**
LIC	**Lamto**	**72.40**	**78**	*e*P	**P**	**11 25 34.7**	**-1.9**
	comp=Z,1.5nm,0.3s						
TIC	**Toumodi**	**72.54**	**78**	*e*P	**P**	**11 25 34.7**	**-2.8**
DBIC	**Dimbokro**	**72.70**	**78**	*e*P	**P**	**11 25 36.8**	**-1.6**
	comp=Z,3.1nm,1.0s,baz=220,slow=7.6,SNR=4.4						
DBIC				LR	LR	11 55 05.5	
	comp=Z,44nm,20.1s,baz=267,slow=34						
KIC	**Kosan Boka**	**72.71**	**78**	*e*P	**P**	**11 25 36.9**	**-1.6**
	comp=Z,6.9nm,0.6s						
QSPA	**South Pole Qui**	**74.85**	**180**	P	**P**	**11 25 50.7**	**+0.4**
QSPA				IAmb	IAmb	11 26 08.2	
	comp=Z,4.4nm,0.9s						
TOA0	**Torodi Ar. Sit**	**80.84**	**74**	P	**P**	**11 26 22.8**	**-1.5**
TOA0				IAmb	IAmb	11 26 26.4	
	comp=Z,5.5nm,1.0s						
TORD	**Torodi Ar. Bea**	**80.84**	**74**	P	**P**	**11 26 23.4**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=266,slow=5.8,SNR=19						
TORD				pP	**sP**	**11 26 39.5**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=255,slow=5.1,SNR=2.9						
TORD				LR	LR	12 00 21.9	
	comp=Z,26nm,20.3s,baz=5.0,slow=34						
TORD	**Torodi Ar. Bea**	**80.84**	**74**	P	**P**	**11 26 22.3**	**-2.1**
VNDA	**Vanda**	**81.91**	**191**	LR	LR	11 56 55.7	
	comp=Z,12nm,20.1s,baz=168,slow=31						
ESDC	**Sonseca Array**	**85.59**	**47**	P	**P**	**11 26 47.9**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=253,slow=4.8,SNR=4.1						
H11N3	**WAKE ISLAND Hyl**	**21.19**	**284**	T	T	13 45 23.9	
	baz=97,slow=74,SNR=4.2						
H11N2	**WAKE ISLAND Hyl**	**21.20**	**284**	T	T	13 45 25.4	
	baz=97,slow=74,SNR=5.5						
H11N1	**WAKE ISLAND Hyl**	**21.20**	**284**	T	T	13 45 25.6	
	baz=97,slow=74,SNR=3.4						
H11S2	**WAKE ISLAND Hyl**	**21.24**	**283**	T	T	13 45 35.5	
	baz=97,slow=75,SNR=7.7						
H11S1	**WAKE ISLAND Hyl**	**21.25**	**283**	T	T	13 45 29.0	
	baz=97,slow=75,SNR=6.7						
H11S3	**WAKE ISLAND Hyl**	**21.26**	**283**	T	T	13 45 37.8	
	baz=97,slow=75,SNR=6.2						
ASAR	**Alice Springs**	**132.13**	**217**	PKP	**PKPdf**	**11 33 23.3**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=151,slow=2.1,SNR=2.9						
ASAR				pPKP	**sPKPdf**	**11 33 40.7**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=134,slow=2.0,SNR=3.5						
WRA	**Warramunga Arr**	**134.71**	**220**	PKP	**PKPdf**	**11 33 28.5**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=142,slow=1.8,SNR=4.5						
WRA				pPKP	**sPKPdf**	**11 33 45.5**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=138,slow=1.8,SNR=5.5						
ZALV	**Zalesovo Beam**	**138.28**	**18**	PKP	**PKPdf**	**11 33 34.3**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=316,slow=4.1,SNR=4.0						
SONM	**Songino Array**	**147.54**	**358**	PKPbc	**PKPbc**	**11 33 53.1**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=344,slow=2.3,SNR=8.8						

*GCG **30** 11:16:27.9±0.8, 13°52N×92°39W, h35km±999km, MD3.9*
*IDC **30** 11:16:33.3±1.3, 14°69N×91°66W, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/33, mbtmp3.6/5, ML3.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/23, Error ellipse: s-maj=35.4km s-min=7.8km az=20.0*
ISC 30 11:16:37.5±2.4, 14°2N±0°3×92°0W±0°1, h54km, n12, σ1°39/12, mb3.6/4, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**1.17**	**76**	*e*P	**Pn**	**11 16 55.8**	**-2.0**
PCG	**Pacaya**	**1.38**	**81**	*e*P	**Pn**	**11 16 59.1**	**-1.6**
NBG	**Las Nubes**	**1.66**	**76**	*e*P	**Pn**	**11 17 04.4**	**-0.2**
MRL	**Marmol**	**2.43**	**68**	*e*P	**Pn**	**11 17 14.9**	**-0.1**
MRL				*e*S	Sn	11 17 51.2	+7.6
CMIG	**Matias Romero**	**4.01**	**317**	Pn	**Pn**	**11 17 34.7**	**-1.7**
	1.1nm,0.3s,baz=130,slow=16,SNR=30						
CMIG				Sn	**Sn**	**11 18 21.7**	**-0.5**
	7.9nm,0.3s,baz=104,slow=15,SNR=5.5						
TXAR	**Lajitas Array**	**18.55**	**326**	P	**Pn**	**11 20 51.8**	**+1.1**
	0.1nm,0.3s,baz=147,slow=11,SNR=8.6						
TKL	**Tuckaleechee C**	**22.64**	**18**	LR	LR	11 31 05.1	
	comp=Z,23nm,18.3s,baz=268,slow=40						
ANMO	**Albuquerque**	**24.45**	**330**	P	**P**	**11 21 52.1**	**+0.5**
	1.2nm,0.5s,baz=140,slow=11,SNR=10						
NVAR	**Mina Array Bea**	**33.53**	**321**	P	**P**	**11 23 13.8**	**+1.4**
	0.5nm,0.6s,baz=134,slow=9.4,SNR=6.2						
YKA	**Yellowknife Ar**	**50.85**	**347**	P	**P**	**11 25 31.1**	**-1.5**
	0.5nm,0.5s,baz=147,slow=8.9,SNR=5.3						
ILAR	**Eielson Array**	**62.68**	**337**	P	**P**	**11 26 57.8**	**+1.4**
	0.3nm,0.9s,baz=126,slow=4.6,SNR=3.3						
CMAR	**Chiang Mai Arr**	**145.82**	**341**	PKPbc	**PKPab**	**11 36 11.8**	**-0.3**
	0.5nm,0.4s,baz=336,slow=4.2,SNR=5.0						

IDC 30 11:20:16.4±3.3, 3°19S×139°67E, h134km±30km, mb3.0/2, mb1 3.4/3, mb1mx3.0/22, mbtmp3.6/3, MS2.4/1, Ms1 2.4/1, ms1mx2.1/15, Error ellipse: s-maj=111.6km s-min=22.6km az=114.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.23**	**57**	P	Pn	11 20 42.2	+0.3
	21nm,0.3s,baz=181,slow=10.0,SNR=93						
JAY				S	Sn	11 21 01.2	-0.1
	9.4nm,0.3s,baz=46,slow=16,SNR=7.5						
WRA	**Warramunga Arr**	**17.45**	**197**	P	P	11 24 10.8	0.0
	0.5nm,0.3s,baz=20,slow=11,SNR=27						
WRA				S	S	11 27 14.7	-11
	0.0nm,0.3s,baz=19,slow=25,SNR=3.5						
KAPI	**Kappang**	**19.95**	**264**	LR	LR	11 34 19.9	
	comp=Z,9.8nm,20.2s,baz=110,slow=42						
ASAR	**Alice Springs**	**21.11**	**195**	P	P	11 24 50.2	-0.3
	0.8nm,0.5s,baz=25,slow=12,SNR=17						
ILAR	**Eielson Array**	**85.87**	**24**	P	P	11 32 40.9	+0.1
	0.3nm,0.7s,baz=265,slow=4.7,SNR=4.9						

*ATH **30** 11:23:20.1, 38°58N×26°08E, h31km±1km, ML2.6/8, Error ellipse: s-maj=2.3km s-min=1.0km az=300.0*
*ISK **30** 11:23:20.1, 38°59N×26°13E, h15km, ML2.7/12*
*THE **30** 11:23:22.0, 38°61N×26°11E, h24km±2km, ML2.6/6, Error ellipse: s-maj=3.0km s-min=0.8km az=31.0*
ISC 30 11:23:20.4±1.0, 38°60N±0°02×26°10E±0°03, h25km±11km, n38, σ0°83/53, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSRA	**Psara**	**0.42**	**263**	P	**Pb**	**11 23 29.5**	**+0.2**
PSRA				S	**Sb**	**11 23 35.8**	**+0.4**
URLA	**Izmir**	**0.46**	**121**	PG	**Pb**	**11 23 29.5**	**-0.4**
URLA				SG	**Sb**	**11 23 35.8**	**-0.5**
SIGR	**SIGRI**	**0.64**	**343**	P	**Pb**	**11 23 32.7**	**-0.2**
SIGR				S	**Sn**	**11 23 43.6**	**+0.3**
SIGR				AML	AML	11 23 45.1	
	comp=N,2135μm,0.4s						
SIGR				AML	AML	11 23 45.2	
	comp=E,2320μm,0.4s						
SIGR	**SIGRI**	**0.64**	**343**	PG	**Pb**	**11 23 33.3**	**+0.3**
SIGR				SG	**Sn**	**11 23 43.0**	**-0.3**
SIGR	**SIGRI**	**0.64**	**343**	P	**Pb**	**11 23 32.8**	**-0.2**
SIGR				S	**Sn**	**11 23 43.2**	**-0.1**
	comp=E,1μm,0.4s						
PRK	**Paraskevi**	**0.66**	**12**	P	**Pn**	**11 23 33.9**	**-0.2**
PRK				S	**Sn**	**11 23 44.5**	**+0.8**
PRK				AML	AML	11 23 45.7	
	comp=N,1490μm,0.5s						
PRK				AML	AML	11 23 46.1	
	comp=E,1107μm,0.3s						
PRK	**Paraskevi**	**0.66**	**12**	P	**Pn**	**11 23 34.0**	**-0.2**
PRK				S	**Sn**	**11 23 44.6**	**+0.9**
	comp=E,748nm,0.6s						
DKL	**Dikili**	**0.79**	**53**	PG	**Pn**	**11 23 35.4**	**-0.5**
DKL				SG	**Sn**	**11 23 46.7**	**-0.1**
SMG	**Samos**	**1.06**	**147**	P	**Pb**	**11 23 40.5**	**+0.4**
SMG				S	**Sn**	**11 23 54.7**	**+1.0**
SMG				AML	AML	11 23 56.8	
	comp=E,1789μm,0.5s						
SMG				AML	AML	11 23 56.8	
	comp=N,1693μm,0.5s						
SMG	**Samos**	**1.06**	**147**	P	**Pb**	**11 23 40.7**	**+0.6**
SMG				S	**Sn**	**11 23 54.5**	**+0.9**
EZN	**Ezine**	**1.24**	**8**	PN	**Pb**	**11 23 42.6**	**-0.5**
EZN	**Ezine**	**1.24**	**8**	P	**Pn**	**11 23 42.4**	**+0.3**
EZN				S	**Sb**	**11 23 58.8**	**+0.2**
	comp=N,120nm,0.5s						
BOZC	**Bozcaada**	**1.24**	**358**	PN	**Pb**	**11 23 43.4**	**+0.2**
GCAM	**G?zelcaml?**	**1.27**	**135**	PN	**Pb**	**11 23 43.6**	**+0.1**
TNSA	**Tinos**	**1.29**	**215**	P	**Pb**	**11 23 44.0**	**+0.1**
AKS	**Akhisar**	**1.37**	**78**	PN	**Pb**	**11 23 44.9**	**-0.4**
KARY	**Karystos**	**1.43**	**247**	P	**Pb**	**11 23 45.8**	**-0.5**
KARY				AML	AML	11 24 07.4	
	comp=E,188μm,0.5s						
KARY				AML	AML	11 24 07.7	
	comp=N,185μm,0.3s						
KARY	**Karystos**	**1.43**	**247**	P	**Pb**	**11 23 45.8**	**-0.5**
KARY				S	**Sb**	**11 24 03.5**	**-0.5**
	comp=N,92nm,0.4s						
LIA	**Limnos Island**	**1.48**	**332**	P	**Pb**	**11 23 46.7**	**-0.5**
LIA				AML	AML	11 24 09.5	
	comp=E,240μm,0.6s						
LIA				AML	AML	11 24 09.7	
	comp=N,176μm,0.4s						
LIA	**Limnos Island**	**1.48**	**332**	P	**Pb**	**11 23 46.6**	**-0.6**
LIA				S	**Sn**	**11 24 04.5**	**+0.5**
	comp=N,108nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**1.55**	**114**	PN	**Pb**	**11 23 47.8**	**-0.7**
KYMI	**Kymi, Euboea I**	**1.57**	**272**	P	**Pb**	**11 23 48.2**	**-0.5**
APE	**Apeiranthos**	**1.59**	**197**	P	**Pb**	**11 23 48.1**	**-1.1**
APE				AML	AML	11 24 15.1	
	comp=E,136μm,0.4s						
APE				AML	AML	11 24 15.5	
	comp=N,120μm,0.2s						
APE	**Apeiranthos**	**1.59**	**197**	PN	**Pb**	**11 23 48.2**	**-0.9**
APE	**Apeiranthos**	**1.59**	**197**	P	**Pb**	**11 23 48.2**	**-0.9**
APE				S	**Sb**	**11 24 08.5**	**-0.3**
BALB	**Balikesir**	**1.73**	**53**	PN	**Pb**	**11 23 50.3**	**-1.2**
AMGA	**Amorgos Island**	**1.77**	**185**	P	**Pn**	**11 23 50.0**	**+0.6**
DION	**Dionisos Attik**	**1.78**	**254**	P	**Pb**	**11 23 51.0**	**-1.4**
DION				AML	AML	11 24 21.5	
	comp=N,388μm,0.6s						
DION				AML	AML	11 24 22.8	
	comp=E,335μm,0.5s						
DION	**Dionisos Attik**	**1.78**	**254**	P	**Pb**	**11 23 50.9**	**-1.5**
DION				S	**Sb**	**11 24 12.9**	**-1.4**
	comp=E,182nm,0.5s						
BODT	**Bodrum**	**1.81**	**148**	PN	**Pb**	**11 23 51.0**	**-1.8**
GELI	**Tayfur-Gelibol**	**1.82**	**9**	PN	**Pb**	**11 23 51.7**	**-1.3**
AOS	**Alonnisos**	**1.82**	**289**	P	**Pb**	**11 23 52.2**	**-0.9**
MLSB	**Milas**	**1.86**	**134**	PN	**Pb**	**11 23 51.9**	**-1.7**
SMTH	**Samothraki Isl**	**1.92**	**347**	P	**Pn**	**11 23 52.5**	**+1.0**
KULA	**Kula-Manisa**	**2.01**	**92**	PN	**Pn**	**11 23 54.1**	**+1.3**
ANAF	**Anafi Island**	**2.25**	**187**	P	**Pn**	**11 23 56.8**	**+0.7**
ANAF				AML	AML	11 24 39.2	
	comp=E,262μm,0.3s						
ANAF				AML	AML	11 24 40.8	
	comp=N,206μm,0.3s						
ANAF	**Anafi Island**	**2.25**	**187**	P	**Pn**	**11 23 56.9**	**+0.8**
ALN	**Alexandroupoli**	**2.30**	**359**	P	**Pn**	**11 23 58.1**	**+1.4**

*JMA **30** 11:34:57.1, 24°33N×121°81E, h21km±2km, M2.6*
*TAP **30** 11:34:57.3, 24°37N×121°83E, h17km, ML3.2, B*
ISC 30 11:34:57.1±0.8, 24°39N±0°01×121°87E±0°02, h16km±5km, n110, σ0°68/172, 8C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENAH	**Nanao**	**0.08**	**322**	P	**Pg**	**11 35 00.8**	**+0.5**
	baz=341						
ENAH				*i* S	**Sg**	**11 35 03.1**	**+0.7**
	baz=341						
ENA	**Nanau**	**0.12**	**290**	*i* P	**Pg**	**11 35 01.0**	**+0.3**
	baz=305						
ENA				*i* S	**Sb**	**11 35 03.0**	**-0.7**
	baz=305						
TWC	**Suao**	**0.22**	**356**	⇓*i* P	**Pb**	**11 35 02.9**	**+0.1**
	baz=12						
TWC				*i* S	**Sb**	**11 35 06.3**	**-0.3**
	baz=12						
NACB	**Ninganchiao**	**0.33**	**229**	⇓*i* P	**Pg**	**11 35 03.4**	**-0.5**
	baz=229						
NACB				S	**Sg**	**11 35 07.2**	**-1.3**
	baz=229						
ENTT	**Nioudou**	**0.37**	**313**	⇑*i* P	**Pb**	**11 35 05.2**

TATO					eS		Sb	11 35 19.7	0.0	**CHY**	**Chiayi**	**1.59**	**236**	*eP*		**Pb**	11 35 26.7	+0.7	**WMOK**	**Wichita Mounta**	**1.48**	**230**	P		**Pn**	12 19 25.5	0.0
	baz=333										baz=237									baz=50							
NWF	**Wu-fen Shan**	**0.69**	**354**	*eP*		**Pn**	11 35 11.5	-0.7	**WTP**	**Ta-pu**	**1.61**	**226**	*eP*		**Pb**	11 35 26.8	+0.2	WMOK				S		**Sb**	12 19 45.9	+0.7
	baz=348									baz=228										baz=50							
NWF					eS		Sb	11 35 20.4	+0.3	WTP				eS		Sb	11 35 46.9	+0.2	**WMOK**	**Wichita Mounta**	**1.48**	**230**	Pn		**Pn**	12 19 25.4	0.0
	baz=348									baz=228									**KAN01**	**Argonia South**	**1.49**	**349**			**Pn**	12 19 26.3	+0.7
WFSB	**Wu-fen Shan**	**0.69**	**354**	*eP*		**Pn**	11 35 11.4	-0.7	**TWK**	**Hsinying**	**1.68**	**229**	*eP*		**Pb**	11 35 28.0	+0.2	**KAN10**	**Anthony SW Sta**	**1.54**	**339**	Pn		**Pn**	12 19 27.0	+0.7
	baz=350									baz=231									**KS20**	**Mayfield South**	**1.54**	**355**			**Pn**	12 19 27.2	+0.8
WFSB					eS		Sb	11 35 20.3	+0.4	**IRIF**	**Iriomote-Funau**	**1.70**	**91**	P		**Pn**	11 35 26.1	0.0	**KAN08**	**Anthony NE Sta**	**1.60**	**343**			**Pn**	12 19 28.1	+0.9
	baz=350									IRIF				eS		Sb	11 35 48.2	-1.0	**KAN12**	**Harper NE Stat**	**1.68**	**343**			**Pn**	12 19 29.5	-0.3
ESL	**Shilin**	**0.69**	**215**	*eP*		**Pb**	11 35 09.9	-0.9	**SNST**	**Tainan City**	**1.71**	**227**	*eP*		**Pn**	11 35 27.2	+0.9	**X37A**	**Clayton**	**1.99**	**123**			**Pn**	12 19 32.9	+0.3
	baz=221									baz=230									**Z35A**	**Perchaven, San**	**2.36**	**177**	Pn		**Pn**	12 19 38.2	+0.7
ESL					eS		Sb	11 35 19.9	-0.3	**CHN1**	**Nanshi**	**1.71**	**226**	*eP*		**Pb**	11 35 28.3	+0.1	**U38A**	**Gravette**	**2.55**	**72**			**Pn**	12 19 41.6	+1.3
	baz=221									baz=228									**HHAR**	**Hobbs**	**2.87**	**77**			**Pn**	12 19 44.9	+0.3
CHGB	**Renai**	**0.71**	**243**	*iP*		**Pb**	11 35 10.8	-0.5	**TWGBT**	**Beinan**	**1.72**	**205**	*eP*		**Pn**	11 35 27.6	+1.2	**R32A**	**Long Quarter,**	**2.92**	**339**	Pn		**Pn**	12 19 46.8	+1.5
	baz=253									baz=193									**W39A**	**Magazine**	**2.99**	**98**	P		**Pn**	12 19 46.5	+0.3
CHGB					S		Sb	11 35 19.8	-1.1	**SGST**	**Jiashian**	**1.75**	**222**	*eP*		**Pb**	11 35 28.5	-0.4		baz=280,SNR=23							
	baz=253									baz=225									W39A				S		**Sn**	12 20 22.0	-0.1
OWD	**Renai**	**0.76**	**236**	P		**Pb**	11 35 11.5	-0.6	**SLGT**	**Liugui**	**1.78**	**219**	*eP*		**Pb**	11 35 29.6	+0.2		baz=280							
	baz=233									baz=221									**W39A**	**Magazine**	**2.99**	**98**			**Pn**	12 19 46.5	+0.3
OWD					eS		Sb	11 35 22.2	0.0	**SCST**	**Cishan**	**1.95**	**220**	*eP*		**Pb**	11 35 31.2	-1.1	**Z38A**	**Mt. Pleasant**	**3.14**	**140**			**Pn**	12 19 48.2	-0.1
	baz=233									baz=222									**MIAR**	**Mount Ida**	**3.33**	**109**	P		**Pn**	12 19 51.9	+1.0
YM01	**YM01**	**0.80**	**341**	P		**Pn**	11 35 13.7	-0.2	**JKRS**	**Kuro-shima**	**1.96**	**94**	P		**Pn**	11 35 30.9	+1.2		baz=291,SNR=6.8							
	baz=343								JKRS				S		**Sb**	11 35 55.3	-1.4	MIAR				S		**Sn**	12 20 31.9	+1.3
YM01					S		Sn	11 35 24.0	-1.4	**SSD**	**Sandimen**	**1.99**	**215**	*eP*		**Pb**	11 35 32.3	-0.6		baz=291							
	baz=343									baz=217									**MIAR**	**Mount Ida**	**3.33**	**109**			**Pn**	12 19 52.0	+1.0
YM10	**YM10**	**0.81**	**340**	P		**Pn**	11 35 13.6	-0.4	**TSMG**	**Majia**	**2.01**	**214**	*eP*		**Pb**	11 35 32.8	-0.5	**KSU1**	**Kansas State U**	**3.46**	**10**	Pn		**Pn**	12 19 53.8	+1.0
	baz=343									baz=226										baz=190							
YM10					eS		Sn	11 35 25.2	-0.6	**JIJ**	**Ishigaki jima**	**2.08**	**90**	P		**Pn**	11 35 31.8	+0.5	KSU1				Pb		**Pb**	12 20 02.0	+1.8
	baz=343									**MASBT**	**Mashibuluo**	**2.10**	**213**	*eP*		**Pn**	11 35 33.0	+1.4		baz=190							
EGFH	**Guangfu**	**0.82**	**209**	*eP*		**Pb**	11 35 12.5	-0.5		baz=215									**KSU1**	**Kansas State U**	**3.46**	**10**			**Pn**	12 19 52.9	+0.2
	baz=223								**JISG**	**Ishigakijimahi**	**2.24**	**84**	P		**Pn**	11 35 33.9	+0.4	**ABTX**	**Abilene, Hawle**	**3.58**	**212**	P		**Pn**	12 19 55.0	+0.5
EGFH					eS		Sg	11 35 25.0	+1.1	JISG				eS		Sn	11 36 01.9	+1.1		baz=31							
	baz=223								**SSPT**	**Xinbi**	**2.24**	**212**	*eP*		**Pb**	11 35 37.0	-0.1	ABTX				S		**Sn**	12 20 37.6	+0.9
TWS1	**Kuangyinshan**	**0.82**	**330**	*eP*		**Pn**	11 35 14.2	+0.2		baz=200										baz=31							
	baz=334								**PNG**	**Penghu**	**2.27**	**249**	*eP*		**Pn**	11 35 34.5	+0.6	**ABTX**	**Abilene, Hawle**	**3.58**	**212**			**Pn**	12 19 54.8	+0.4
TWS1					eS		Sn	11 35 25.6	-0.2		baz=251								**AMTX**	**Amarillo**	**3.59**	**258**	Pb		**Pb**	12 20 02.1	-0.5
	baz=334								**PHUB**	**P'eng-hu**	**2.27**	**248**	*eP*		**Pn**	11 35 34.3	+0.4		baz=76							
YM11	**YM11**	**0.82**	**341**	P		**Pn**	11 35 14.4	+0.3		baz=250									**AMTX**	**Amarillo**	**3.59**	**258**	Pn		**Pn**	12 19 55.0	+0.4
	baz=337								**VWUC**	**VWUC**	**2.28**	**286**	*eP*		**Pn**	11 35 33.7	-0.3	**CBKS**	**Cedar Bluff**	**3.63**	**330**	Pn		**Pn**	12 19 56.4	+1.2
YM11					eS		Sn	11 35 26.0	+0.1		baz=287									baz=148,SNR=26							
	baz=337								**SCZT**	**Fangliau**	**2.31**	**210**	*eP*		**Pb**	11 35 36.9	-1.5	CBKS				Pb		**Pb**	12 20 05.0	+1.8
YM04	**YM04**	**0.82**	**339**	*eP*		**Pn**	11 35 13.5	-0.6		baz=197										baz=148							
	baz=342								**WDGT**	**Dungji**	**2.31**	**241**	*eP*		**Pn**	11 35 36.0	+1.5	CBKS				Sn		**Sn**	12 20 39.6	+1.5
YM04					eS		Sg	11 35 23.8	-0.2		baz=243									baz=148							
	baz=342								**LAY**	**Lan-yu**	**2.35**	**187**	*eP*		**Pn**	11 35 33.4	-1.7	CBKS				Sb		**Sg**	12 20 53.3	-2.3
YM05	**YM05**	**0.82**	**341**	*eP*		**Pn**	11 35 14.3	+0.2		baz=190										baz=148							
	baz=336								**MATB**	**Ma-tsu**	**2.47**	**316**	*eP*		**Pn**	11 35 36.0	-0.8	**WHTX**	**Lake Whitney,**	**3.69**	**181**	Pn		**Pn**	12 19 56.4	+0.5
YM05					eS		Sn	11 35 25.7	-0.3		baz=316									baz=1.0,SNR=18							
	baz=336								**PTMZ**	**Houxiangcun**	**2.58**	**285**	*eP*		**Pn**	11 35 39.0	+0.7	WHTX				Pb		**Pb**	12 20 03.2	-0.9
NSTT	**Nanjuang**	**0.82**	**287**	*eP*		**Pg**	11 35 13.2	+0.1		baz=286										baz=1.0							
	baz=281								**XPSS**	**Dashiqiu**	**2.95**	**330**	*eP*		**Pn**	11 35 43.3	0.0	WHTX				Sb		**Sb**	12 20 51.5	+2.7
NSTT					S		Sg	11 35 23.9	-0.1		baz=329									baz=1.0							
	baz=281								**KNMB**	**Chin-men Tao**	**3.17**	**272**	*eP*		**Pn**	11 35 46.9	+0.6	**WHTX**	**Lake Whitney,**	**3.69**	**181**			**Pn**	12 19 56.2	+0.3
YM08	**YM08**	**0.84**	**343**	*eP*		**Pn**	11 35 14.4	+0.1		baz=274									**U40A**	**Yellville**	**3.74**	**78**	P		**Pn**	12 19 56.6	0.0
	baz=338								**AXDP**	**Jialang**	**3.58**	**279**	*eP*		**Pn**	11 35 51.9	-0.1		baz=261,SNR=8.4							
YM08					eS		Sn	11 35 25.0	-1.2		baz=280								**U40A**	**Yellville**	**3.74**	**78**			**Pn**	12 19 56.7	0.0
	baz=338																		**S39A**	**Bolivar**	**3.84**	**57**			**Pn**	12 19 57.9	+0.1
WHP	**Taichung City**	**0.84**	**263**	P		**Pg**	11 35 13.9	+0.4											**237A**	**Washetta, Mont**	**3.91**	**160**			**Pn**	12 19 58.5	-0.4
	baz=265																		**X40A**	**Basin Creek Fa**	**3.93**	**106**	P		**Pn**	12 19 59.9	+0.7
WHP					eS		Sg	11 35 25.0	+0.3											baz=289,SNR=5.1							
	baz=265																		X40A				S		**Sn**	12 20 46.6	+1.3
NCU	**National Centr**	**0.85**	**313**	*eP*		**Pn**	11 35 14.5	+0.1												baz=289							
	baz=316																		**X40A**	**Basin Creek Fa**	**3.93**	**106**			**Pn**	12 19 59.9	+0.7
NCUH	**Zhongli**	**0.85**	**313**	*eP*		**Pn**	11 35 14.2	-0.2											**WHAR**	**Wooly Hollow**	**4.19**	**94**			**Pn**	12 20 03.0	+0.3
	baz=315																		**W41B**	**Gary Mavity, V**	**4.24**	**96**	P		**Pn**	12 20 03.6	+0.2
ANP	**Anpu**	**0.86**	**339**	P		**Pn**	11 35 14.2	-0.4												baz=278,SNR=12							
	baz=342																		W41B				Sn		**Sn**	12 20 52.6	-0.2
ANP					eS		Sg	11 35 24.6	-0.5											baz=278							
	baz=342																		W41B				Sb		**Sb**	12 21 09.2	+4.7
NTST	**Danshui**	**0.86**	**334**	*eP*		**Pn**	11 35 14.8	+0.3												baz=278							
	baz=346																		**W41B**	**Gary Mavity, V**	**4.24**	**96**			**Pn**	12 20 03.4	0.0
SBCB	**Hsinchu**	**0.90**	**297**	*eP*		**Pb**	11 35 13.9	-0.4											**UALR**	**University of**	**4.24**	**101**	Pn		**Pn**	12 20 04.3	+0.9
	baz=298																		**FCAR**	**Ozark Folk Cen**	**4.29**	**86**	Pn		**Pn**	12 20 04.2	+0.1
TWY	**Chenhua**	**0.92**	**345**	*eP*		**Pn**	11 35 15.9	+0.5											**MGMO**	**Mountain Grove**	**4.39**	**69**			**Pn**	12 20 05.8	+0.4
	baz=348																		**Z41A**	**Richland Creek**	**4.50**	**121**	S		**Sn**	12 20 58.0	-1.4
TWY					eS		Sn	11 35 28.0	-0.2											baz=304							
	baz=348																		**NATX**	**Nacogdoches**	**4.54**	**149**	S		**Sn**	12 20 59.1	-1.2
DPDB	**Guoxing**	**0.93**	**248**	*eP*		**Pb**	11 35 15.1	+0.2												baz=331							
	baz=248																		**MSTX**	**Muleshoe**	**4.74**	**250**	P		**Pn**	12 20 11.7	+1.3
HGSD	**Ruisui**	**0.98**	**204**	*eP*		**Pb**	11 35 16.2	+0.5												baz=67,SNR=14							
	baz=193																		MSTX				S		**Sn**	12 21 06.4	+0.9
HGSD					eS		Sb	11 35 28.9	+0.5											baz=67							
	baz=193																		**MSTX**	**Muleshoe**	**4.74**	**250**	Pn		**Pn**	12 20 10.8	+0.3
JYNG	**Yonagunijimaku**	**0.99**	**86**	P		**Pg**	11 35 16.4	+0.2											**R40A**	**Maddies Statio**	**4.86**	**56**	Pn		**Pn**	12 20 12.1	+0.2
JYNG					S		Sn	11 35 29.7	-0.2																			
NMLH	**Miaoli**	**0.99**	**279**	*eP*		**Pg**	11 35 16.4	+0.1											**435B**	**Jarrell**	**4.90**	**182**	Pb		**Pb**	12 20 25.3	+0.6
	baz=280																			baz=2.0							
TWQ1	**Liyutan**	**1.00**	**268**	*eP*		**Pg**	11 35 18.0	+1.6											435B				S		**Sn**	12 21 08.8	-0.4
	baz=278																			baz=2.0							
EHY	**Hungye**	**1.01**	**210**	*eP*		**Pb**	11 35 14.9	-1.3											435B				Sb		**Sb**	12 21 29.0	+5.4
	baz=220																			baz=2.0							
NSY	**Sanyi**	**1.01**	**272**	*eP*		**Pg**	11 35 18.0	+1.4											**435B**	**Jarrell**	**4.90**	**182**			**Pn**	12 20 11.9	-0.6
	baz=273																		**P38A**	**Dawn**	**4.98**	**37**			**Pn**	12 20 13.7	+0.1
SMLT	**Sun Moon Lake**	**1.01**	**241**	P		**Pn**	11 35 16.8	0.0											**LCAR**	**Lake Charles**	**5.08**	**84**	Pn		**Pn**	12 20 14.6	-0.4
	baz=241																		**T42A**	**Van Buren**	**5.26**	**73**	Pn		**Pn**	12 20 17.8	+0.4
SSLB	**Suanglung**	**1.02**	**235**	P		**Pb**	11 35 16.4	0.0											**KSCO**	**Kaye Shedlock'**	**5.32**	**310**	P		**Pn**	12 20 21.3	+2.8
	baz=237																			baz=127,SNR=10.0							
SSLB					eS		Sb	11 35 28.4	-1.3										**KSCO**	**Kaye Shedlock'**	**5.32**	**310**	Pn		**Pn**	12 20 19.4	+0.9
	baz=237																		**N35A**	**Tabor**	**5.34**	**14**	Pn		**Pn**	12 20 19.3	+0.7
TYC	**Yuchr**	**1.04**	**243**	*eP*		**Pb**	11 35 16.8	+0.1											**CCM**	**Cathedral Cave**	**5.47**	**63**	P		**Pn**	12 20 21.3	+1.0
	baz=243																			baz=246							
YOJ	**Yonaguni jima**	**1.05**	**86**	*eP*		**Pg**	11 35 17.3	-0.1											CCM				S		**Sn**	12 21 24.1	+0.8
	baz=72																			baz=246							
YOJ					eS		Sn	11 35 31.0	-0.4										**CCM**	**Cathedral Cave**	**5.47**	**63**			**Pn**	12 20 20.5	+0.2
	baz=72																		**X43A**	**Marvell**	**5.47**	**100**	Pn		**Pn**	12 20 19.5	-0.8
YOJ	**Yonaguni jima**	**1.05**	**86**	P		**Pg**	11 35 17.3	-0.1											**JCT**	**Junction City**	**5.58**	**202**	P		**Pn**	12 20 22.0	+0.1
YOJ					S		Sg	11 35 31.7	+0.6											baz=21							
TCU	**Taichung**	**1.11**	**258**	*eP*		**Pg**	11 35 19.2	+0.7											**JCT**	**Junction City**	**5.58**	**202**	Pn		**Pn**	12 20 22.4	+0.5
	baz=258																		**P40A**	**Paris**	**5.72**	**46**	Pn		**Pn**	12 20 24.5	+0.8
WDJ	**Dajia District**	**1.12**	**268**	*eP*		**Pg**	11 35 20.0	+1.3											**PBMO**	**Poplar Bluff**	**5.74**	**77**	Pn		**Pn**	12 20 23.9	-0.1
	baz=277																		**BGNE**	**Belgrade**	**5.74**	**354**	Pn		**Pn**	12 20 25.1	+1.0
YULB	**Yu-li**	**1.12**	**208**	*eP*		**Pn**	11 35 16.1	-2.0											**143A**	**Socs Landing,**	**5.79**	**119**	Pn		**Pn**	12 20 25.7	+0.9
	baz=219																		**T25A**	**Trinidad**	**5.84**	**286**	P		**Pn**	12 20 26.6	+1.0
YULB					eS		Sg	11 35 34.1	+0.8											baz=102							
	baz=219																		T25A				S		**Sn**	12 21 32.2	-0.4
EYUL	**Yuli**	**1.15**	**206**	*eP*		**Pn**	11 35 18.0	-0.5												baz=102							
	baz=222																		**T25A**	**Trinidad**	**5.84**	**286**	Pn		**Pn**	12 20 26.6	+1.0
EYUL					eS		Sg	11 35 34.9	+0.6										**HKT**	**Hockley**	**5.87**	**167**	Pn		**Pn**	12 20 24.9	-0.9
	baz=222																		**FVM**	**French Village**	**6.04**	**66**	Pn		**Pn**	12 20 27.8	-0.4
WHYT	**Xinyi Township**	**1.15**	**234**	*eP*		**Pn**	11 35 18.0	-0.6											**N38A**	**Joes South For**	**6.06**	**31**			**Pn**	12 20 28.8	+0.4
	baz=227																		**L34A**	**Svendsen Farm,**	**6.32**	**7**	Pn		**Pn**	12 20 31.9	-0.1
TWF1	**Yuli**	**1.15**	**207**	*eP*		**Pn**	11 35 17.0	-1.6											**OGNE**	**Ogallala**	**6.39**	**327**	Pn		**Pn**	12 20 34.5	+1.5
	baz=223																		**OXF**	**Oxford**	**6.65**	**98**	S		**Sn**	12 21 51.2	-1.2
TWF1					eS		Sn	11 35 34.8	+0.7											baz=282							
	baz=223																		**OXF**	**Oxford**	**6.65**	**98**	Pn		**Pn**	12 20 36.0	-0.5
WJS	**Zhushan**	**1.18**	**242**	*eP*		**Pg**	11 35 20.5	+0.6											**VBMS**	**Vicksburg**	**6.68**	**119**	Pn		**Pn**	12 20 36.4	-0.6
	baz=244																		**Y45A**	**Yeager Farm, C**	**6.71**	**103**	Pn		**Pn**	12 20 37.4	0.0
WJS					eS		Sg	11 35 36.5	+1.2										**W45A**	**Hickory Valley**	**6.73**	**92**	Pn		**Pn**	12 20 37.9	+0.3
	baz=244																		**GDL2**	**Guadalupe Moun**	**6.75**	**241**	Pn		**Pn**	12 20 39.5	+1.4
WNT	**Mingjian**	**1.19**	**245**	*eP*		**Pg**	11 35 20.8	+0.7											**SDCO**	**Great Sand Dun**	**6.82**	**290**	P		**Pn**	12 20 41.0	+1.8
	baz=245																			baz=105							
WNT					eS		Sg	11 35 36.7	+1.0										**SDCO**	**Great Sand Dun**	**6.82**	**290**	Pn		**Pn**	12 20 39.5	+0.3
	baz=245																		**SIUC**	**Southern Illin**	**6.88**	**71**	Pn		**Pn**	12 20 39.3	-0.3
WCHH	**Zhanghua**	**1.23**	**256**	*eP*		**Pg**	11 35 21.1	+0.3											**UTMT**	**University of**	**6.95**	**82**	Pn		**Pn**	12 20 39.9	-0.7
	baz=257																		**344A**	**Westbrook Farm**	**6.99**	**125**	Pn		**Pn**	12 20 40.1	-1.1
PCYT	**Pengchaiyu**	**1.25**	**9**	*eP*		**Pb**	11 35 19.9	-0.5											**Q24A**	**Divide**	**6.99**	**300**	P		**Pn**	12 20 43.2	+1.7
	baz=10.0																			baz=116							
FULB	**Fuli**	**1.29**	**204**	*eP*		**Pn**	11 35 20.6	0.0											Q24A				S		**Sn**	12 22 01.3	+0.3
	baz=221																			baz=116							
FULB					eS		Sb	11 35 38.6	+1.2										**Q24A**	**Divide**	**6.99**	**300**	Pn		**Pn**	12 20 41.6	+0.2
	baz=221																		**K31A**	**O'Neill**	**7.00**	**352**	Pn		**Pn**	12 20 42.3	+0.9
ALS	**Alishan**	**1.30**	**228**	*eP*		**Pb**	11 35 21.6	+0.2											**N41A**	**Harden Midland**	**7.18**	**44**			**Pn**	12 20 44.1	+0.2
	baz=216																		**P43A**	**Skaggs, Pawnee**	**7.39**	**55**	Pn		**Pn**	12 20 45.9	-0.7
ALS					eS		Sb	11 35 39.1	+1.1										**Q44A**	**Meyer Farm, Va**	**7.41**	**62**	Pn		**Pn**	12 20 47.9	+0.9
	baz=216																		**ANMO**	**Albuquerque**	**7.44**	**267**	Pn		**Pn**	12 20 49.1	+1.5
CHN5	**Tsauling**	**1.34**	**234**	*eP*		**Pb**	11 35 22.4	+0.5												0.1nm,0.3s,baz=82,slow=18,SNR=1.7							
	baz=235																		ANMO				Pg		Pb	12 21 14.8	+6.7
CHKT	**Chengkung**	**1.36**	**200**	*eP*		**Pn**	11 35 22.0	+0.5												1.1nm,0.3s,baz=81,slow=17,SNR=10							
	baz=185																		ANMO				Lg		Lg	12 22 50.5	
WDLH	**Douliu**	**1.40**	**240**	*eP*		**Pb**	11 35 23.7	+0.9												1.7nm,0.3s,baz=353,slow=19,SNR=3.1							
	baz=242																		**ANMO**	**Albuquerque**	**7.44**	**267**			**Pn**	12 20 47.3	-0.3
ELDTW	**Lidau**	**1.42**	**213**	*eP*		**Pn**	11 35 22.6	+0.2											**833A**	**Chaparral WMA,**	**7.54**	**194**	Pn		**Pn**	12 20 48.0	-0.7
	baz=200																		**PLAL**	**Pickwick Lake**	**7.65**	**93**	Pn		**Pn**	12 20 49.8	-0.5
RLNB	**Erlin**	**1.46**	**251**	*eP*		**Pb**	11 35 24.6	+0.7											**BNM**	**Barren Site**	**7.74**	**261**	Pn		**Pn**	12 20 51.2	-0.5
	baz=264																		**MNTX**	**Cornudas Mount**	**7.75**	**241**	P		**Pn**	12 20 52.1	+0.3
EDH	**Donghe**	**1.50**	**200**	*eP*		**Pn**	11 35 22.0	-1.4												baz=57							
	baz=187																		**MNTX**	**Cornudas Mount**	**7.75**	**241**	Pn		**Pn**	12 20 51.3	-0.4
WTK	**Tuku**	**1.52**	**243**	*eP*		**Pb**	11 35 25.2	+0.4											**WVT**	**Waverly**	**7.78**	**84**	Pn		**Pn**	12 20 50.3	-1.7
	baz=245																		**K38A**	**Parkersburg**	**7.82**	**26**	Pn		**Pn**	12 20 54.0	+1.4
TPUB	**Ta-pu**	**1.56**	**227**	*eP*		**Pb**	11 35 25.6	-0.1											**S22A**	**4UR Ranch, Cre**	**7.85**	**288**	Pn		**Pn**	12 20 54.7	+1.5
	baz=218																		**L40A**	**Anamosa**	**7.98**	**35**	Pn		**Pn**	12 20 54.1	-0.7
TPUB					eS		Sb	11 35 46.4	+1.1										**HDIL**	**Hopedale**	**8.02**	**50**			**Pn**	12 20 55.4	0.0
	baz=218																		**ECSD**	**EROS Data Cent**	**8.06**	**4**	P		**Pn**	12 20 54.7	-1.2
STYT	**Tauyuan**	**1.58**	**220**	*eP*		**Pb**	11 35 25.7	-0.4												baz=184							
	baz=222																										
STYT					eS		Sb	11 35 46.4	+0.4																		
	baz=222																										

*IDC **30** 11:37:39.7±0.6,56°.14S×24°.39W,h0km,mb4.1/3, mb1 4.2/3,mb1mx3.8/17,mbtmp4.0/3,MS3.0/2,Ms1 3.0/2, ms1mx2.6/19,Error ellipse: s-maj=30.8km s-min=15.4km az=38.0*

ISC 30 11:37:38.7±1.2,**57°.0S**±0°.2×**24°.5W**±0°.3,**h10**km,**n7**,σ0**38**/4, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**17.27**	**157**	P	**P**	**11 41 41.1**	**+0.1**
PLCA	**Paso Flores**	**33.65**	**279**	LR	LR	11 56 40.8	
	comp=Z,14nm,21.4s,baz=158,slow=34						
LPAZ	**La Paz**	**52.16**	**303**	P	**P**	**11 46 50.1**	**+0.1**
	3.1nm,0.6s,baz=168,slow=6.1,SNR=11						
MBAR	**Mbarara**	**71.27**	**60**	LR	LR	12 15 26.0	
	comp=Z,18nm,18.4s,baz=96,slow=32						
TORD	**Torodi Ar. Bea**	**73.18**	**27**	P	**P**	**11 49 09.4**	**+0.1**
	0.3nm,0.4s,baz=196,slow=5.3,SNR=4.2						
ASAR	**Alice Springs**	**97.61**	**160**	P	Pdif	11 51 21.2	+7.8
	0.1nm,0.4s,baz=179,slow=3.8,SNR=6.3						
ILAR	**Eielson Array**	**151.88**	**310**	PKPbc	**PKPbc**	**11 57 31.8**	**-0.3**
	1.2nm,0.8s,baz=113,slow=2.1,SNR=11						

IDC 30 11:57:30.3±1.2,**64°.63N×18°.82W,h0**km,**mb3.4**/4, **mb

ECSD				S		Sn	12 22 22.6	-4.3
	baz=184							
ECSD	**EROS Data Cent**	**8.06**	**4**	Pn		**Pn**	**12 20 55.8**	**-0.1**
TX31	**Lajitas Ar. Si**	**8.26**	**222**			**Pn**	**12 21 00.0**	**+1.3**
TX32	**Lajitas Array**	**8.26**	**222**	Pn		**Pn**	**12 21 00.0**	**+1.3**
TXAR	**Lajitas Array**	**8.26**	**222**	Pn		**Pn**	**12 20 58.4**	**-0.3**
	0.1nm,0.3s,baz=45,slow=12,SNR=7.6							
TXAR				Lg		Lg	12 23 15.2	
	3.9nm,0.3s,baz=39,slow=26,SNR=9.1							
TXAR	**Lajitas Array**	**8.26**	**222**			**Pn**	**12 20 59.5**	**+0.8**
N23A	**Red Feather La**	**8.49**	**310**	Pn		**Pn**	**12 21 03.4**	**+1.3**
X48A	**Hartselle**	**8.58**	**95**	Pn		**Pn**	**12 21 02.1**	**-0.9**
L42A	**Oliver, Polo**	**8.72**	**41**	Pn		**Pn**	**12 21 04.3**	**-0.6**
I37A	**Lemond, Waseca**	**8.86**	**19**	Pn		**Pn**	**12 21 06.3**	**-0.6**
CLTN	**Cedars of Leba**	**8.99**	**84**	Pn		**Pn**	**12 21 08.7**	**+0.1**
LRAL	**Lakeview Retre**	**9.00**	**104**	Pn		**Pn**	**12 21 07.7**	**-1.0**
JFWS	**Jewell Farm**	**9.09**	**35**	P		**Pn**	**12 21 09.2**	**-0.9**
	baz=220							
JFWS				S		**Sn**	**12 22 47.9**	**-4.5**
	baz=220							
JFWS	**Jewell Farm**	**9.09**	**35**	Pn		**Pn**	**12 21 09.6**	**-0.4**
Y49A	**Blount Mountai**	**9.22**	**98**	Pn		**Pn**	**12 21 11.3**	**-0.6**
WCI	**Wyandotte Cave**	**9.24**	**71**	Pn		**Pn**	**12 21 11.8**	**-0.3**
M44A	**Midewin, Midew**	**9.27**	**49**	Pn		**Pn**	**12 21 12.6**	**0.0**
BLO	**Bloomington**	**9.32**	**65**			**Pn**	**12 21 12.7**	**-0.5**
SWET	**Sewanee**	**9.37**	**90**	Pn		**Pn**	**12 21 13.4**	**-0.5**
SFIN	**Lafayette**	**9.38**	**57**	Pn		**Pn**	**12 21 13.6**	**-0.3**
U49A	**Red Boiling Sp**	**9.44**	**82**	Pn		**Pn**	**12 21 14.2**	**-0.6**
PV03	**Paradox Valley**	**9.51**	**289**	Pn		**Pn**	**12 21 15.6**	**-0.5**
PV04	**Paradox Valley**	**9.59**	**290**	Pn		**Pn**	**12 21 17.4**	**+0.3**
I40A	**Norwalk**	**9.71**	**30**	Pn		**Pn**	**12 21 17.8**	**-0.7**
FPAL	**Fort Paine**	**9.72**	**93**	Pn		**Pn**	**12 21 18.2**	**-0.6**
L44A	**Lake County Fo**	**9.82**	**46**	S		**Sn**	**12 23 06.1**	**-4.2**
	baz=232							
RSSD	**Black Hills**	**9.84**	**331**	Pn		**Pn**	**12 21 20.6**	**+0.2**
K43A	**Burlington**	**9.92**	**42**	Pn		**Pn**	**12 21 20.7**	**-0.7**
I42A	**Draeger Farm,**	**10.47**	**36**	Pn		**Pn**	**12 21 27.9**	**-0.9**
F36A	**Milaca**	**10.57**	**15**	Pn		**Pn**	**12 21 29.8**	**-0.6**
G40A	**Rib Lake**	**11.02**	**28**	Pn		**Pn**	**12 21 35.3**	**-1.1**
TKL	**Tuckaleechee C**	**11.08**	**86**	Pn		**Pn**	**12 21 36.6**	**-0.8**
PDAR	**Pinedale Array**	**11.78**	**311**	Pn		**Pn**	**12 21 46.6**	**-0.4**
	0.2nm,0.3s,baz=126,slow=10,SNR=6.0							
PDAR				Lg		Lg	12 25 06.5	
	0.3nm,0.3s,baz=116,slow=29,SNR=3.9							
PDAR	**Pinedale Array**	**11.78**	**311**			**Pn**	**12 21 47.9**	**+0.9**
SADO	**Sadowa**	**16.60**	**51**	LR		LR	12 28 41.6	
	comp=Z,27nm,19.4s,baz=330,slow=35							
JTS	**Las Juntas de**	**27.70**	**153**	LR		LR	12 36 59.6	
	comp=Z,6.0nm,19.3s,baz=44,slow=39							
ILAR	**Eielson Array**	**41.29**	**330**	P		**P**	**12 26 45.1**	**+1.1**
	0.2nm,0.7s,baz=111,slow=7.9,SNR=3.4							

*IDC **30** 12:28:53.6±1.1,21°.83N×143°.56E,h28km±6km, mb3.2/7, mb1 3.4/7, mb1mx3.3/49, mbtmp3.4/7, MS3.0/2, Ms1 3.0/2, ms1mx2.5/18, Error ellipse: s-maj=30.7km s-min=20.5km az=92.0*

ISC 30 12:28:54.4±1.0, 21°.9N±0°.1×143°.5E±0°.2, h35km, n16, σ1§07/12, mb3.5/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MJAR	**Matsushiro Arr**	**15.33**	**344**	Pn		**P**	**12 32 32.5**	**0.0**
	0.0nm,0.3s,baz=160,slow=10,SNR=4.5							
KSRS	**Korea Array**	**20.56**	**322**	P		Pn	12 33 36.6	+4.2
	1.0nm,0.7s,baz=150,slow=8.9,SNR=7.7							
KSRS				LR		LR	12 40 26.4	
	comp=Z,51nm,20.9s,baz=106,slow=34							
H11N1	**WAKE ISLAND Hy 21.96**	**91**		T		T	12 56 26.3	
	baz=279,slow=75,SNR=5.4							
H11N2	**WAKE ISLAND Hy 21.96**	**91**		T		T	12 56 23.3	
	baz=279,slow=75,SNR=4.1							
H11N3	**WAKE ISLAND Hy 21.98**	**91**		T		T	12 56 19.9	
	baz=279,slow=75,SNR=4.1							
H11S3	**WAKE ISLAND Hy 22.01**	**95**		T		T	12 56 27.0	
	baz=283,slow=74,SNR=9.1							
H11S1	**WAKE ISLAND Hy 22.02**	**95**		T		T	12 56 29.1	
	baz=283,slow=74,SNR=16							
H11S2	**WAKE ISLAND Hy 22.02**	**95**		T		T	12 56 26.8	
	baz=283,slow=74,SNR=9.0							
KLR	**Kul'dur**	**28.80**	**344**	P		**P**	**12 34 49.1**	**-0.4**
	1.4nm,0.8s,baz=141,slow=14,SNR=2.2							
KLR				pP		**pP**	**12 34 58.3**	**-0.8**
	2.7nm,0.7s,baz=151,slow=9.4,SNR=6.1							
SONM	**Songino Array**	**39.40**	**320**	P		**P**	**12 36 20.7**	**-0.2**
	0.3nm,0.5s,baz=141,slow=8.0,SNR=2.8							
SONM				pP		**pP**	**12 36 30.1**	**-0.3**
	0.5nm,0.6s,baz=123,slow=10,SNR=2.4							
SONM				LR		LR	12 52 40.7	
	comp=Z,19nm,18.7s,baz=352,slow=36							
WRA	**Warramunga Arr**	**42.51**	**193**	P		**P**	**12 36 46.4**	**-0.2**
	0.2nm,0.6s,baz=15,slow=8.9,SNR=1.6							
ASAR	**Alice Springs**	**46.22**	**192**	P		**P**	**12 37 15.6**	**-0.7**
	0.3nm,0.7s,baz=19,slow=8.4,SNR=10.0							
MKAR	**Makanchi Array**	**54.80**	**313**	P		**P**	**12 38 22.5**	**+1.5**
	0.2nm,0.5s,baz=108,slow=10,SNR=1.4							
MKAR				pP		**pP**	**12 38 30.6**	**-0.1**
	0.6nm,0.6s,baz=84,slow=11,SNR=4.5							
ILAR	**Eielson Array**	**61.75**	**27**	P		**P**	**12 39 09.1**	**0.0**
	0.1nm,0.7s,baz=240,slow=8.2,SNR=3.7							
ILAR				pP		**pP**	**12 39 17.3**	**-2.0**
	0.6nm,0.8s,baz=252,slow=6.2,SNR=3.8							
NVAR	**Mina Array Bea**	**82.80**	**52**	P		**P**	**12 41 17.2**	**+1.7**
	0.3nm,0.8s,baz=324,slow=3.9,SNR=1.9							
LPAZ	**La Paz**	**149.62**	**85**	pPKPbc		pPKPbc	12 48 50.3	-2.2
	1.2nm,0.7s,baz=234,slow=9.6,SNR=4.0							

*IDC **30** 12:33:41.1±1.6, 1°.84N×126°.07E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.5/38, mbtmp3.7/4, ML3.5/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/42, Error ellipse: s-maj=122.2km s-min=22.0km az=68.0*

*DJA **30** 12:33:47.3±1.2,2°.N±3°×12°.6E±°, h34km±22km, M3.9/13, mB5.1/1, mb4.1/3, MLv3.8/13, Mw(mB)4.4/1*

ISC 30 12:33:47.3±0.9, 1°.85N±0°.06×126°.48E±0°.07, h35km, n17, σ1§82/19, mb3.9/3, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.39**	**141**	P		**Pn**	**12 34 10.3**	**0.0**
TNTI				S		**Sn**	**12 34 30.5**	**+3.1**
SGSI	**Sangihe**	**2.05**	**332**	P		**Pn**	**12 34 18.1**	**-1.3**
KMSI	**Cibinong**	**2.81**	**243**	P		**Pn**	**12 34 28.6**	**-1.2**
GTOI	**Gorontalo**	**3.68**	**251**	P		**Pn**	**12 34 42.6**	**+0.9**
SANI	**Sanana**	**3.91**	**187**	P		**Pn**	**12 34 46.7**	**+1.8**
LUWI	**Luwuk**	**4.70**	**232**	P		**Pn**	**12 34 56.6**	**+0.8**
MRSI	**Marisa**	**4.74**	**253**	P		**Pn**	**12 34 57.0**	**+0.6**
NLAI	**Namlea**	**5.10**	**173**	P		**Pn**	**12 35 01.5**	**+0.2**
	0.2nm2µm30nm,1.0s							
KCP	**Kidapawan**	**5.31**	**345⇑**	*eP*		**Pn**	**12 35 07.0**	**+2.8**
KCP				*i* S		**Sn**	**12 36 08.3**	**+4.1**
SWI	**Sorong**	**5.49**	**119**	P		**Pn**	**12 35 07.4**	**+0.8**
	0.1nm7.0nm,1.2s							
APSI	**Ampana**	**5.56**	**240**	P		**Pn**	**12 35 08.9**	**+1.3**
BATI	**Baumata**	**12.31**	**193**	LR		LR	12 41 27.9	
	comp=Z,34nm,20.4s,baz=55,slow=38							
FITZ	**Fitzroy Crossi**	**19.84**	**182**	P		**P**	**12 38 13.5**	**-1.8**
	0.1nm,0.3s,baz=0.4,slow=11,SNR=5.5							
WRA	**Warramunga Arr**	**22.99**	**161**	P		**P**	**12 38 48.2**	**-1.0**
	2.4nm,0.6s,baz=336,slow=9.7,SNR=29							
KSI	**Kapahiang**	**24.50**	**257**	P		**P**	**12 39 03.6**	**-0.1**
ASAR	**Alice Springs**	**26.38**	**165**	P		**P**	**12 39 20.0**	**-0.6**
	0.3nm,0.4s,baz=352,slow=15,SNR=13							
ASAR				PcP		**PcP**	**12 42 45.2**	**-0.7**
	0.2nm,0.5s,baz=333,slow=2.0,SNR=5.8							
MKAR	**Makanchi Array**	**58.95**	**326**	P		**P**	**12 43 41.5**	**-1.9**
	0.3nm,0.3s,baz=120,slow=7.3,SNR=12							

*IDC **30** 12:34:51.0±5.3,21°.92N×143°.64E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.6/44, mbtmp3.6/6, MS2.9/1, Ms1 2.9/1, ms1mx2.2/49, Error ellipse: s-maj=144.3km s-min=35.2km az=15.0*

ISC 30 12:34:57.0±4.8, 22°.1N±0°.9×143°.6E±0°.3, h35km, n13, σ1§13/6, mb3.5/5, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MJAR	**Matsushiro Arr**	**15.17**	**343**	LR		LR	12 43 41.5	
	comp=Z,44nm,18.4s,baz=145,slow=35							
KSRS	**Korea Array**	**20.46**	**322**	P		**P**	**12 39 30.9**	**-0.7**
	0.9nm,0.7s,baz=146,slow=8.9,SNR=5.7							
H11N1	**WAKE ISLAND Hy 21.88**	**92**		T		T	13 02 14.0	
	baz=279,slow=75,SNR=5.5							
H11N2	**WAKE ISLAND Hy 21.88**	**92**		T		T	13 02 19.1	
	baz=279,slow=75,SNR=4.0							
H11N3	**WAKE ISLAND Hy 21.90**	**92**		T		T	13 02 16.9	
	baz=279,slow=75,SNR=4.1							
H11S3	**WAKE ISLAND Hy 21.94**	**95**		T		T	13 02 18.6	
	baz=282,slow=74,SNR=16							
H11S1	**WAKE ISLAND Hy 21.95**	**95**		T		T	13 02 17.4	
	baz=282,slow=74,SNR=9.1							
H11S2	**WAKE ISLAND Hy 21.95**	**95**		T		T	13 02 20.1	
	baz=282,slow=74,SNR=12							
SONM	**Songino Array**	**39.31**	**320**	P		**P**	**12 42 24.0**	**+1.3**
	0.3nm,0.5s,baz=103,slow=6.4,SNR=3.0							
ILAR	**Eielson Array**	**61.54**	**27**	P		**P**	**12 45 10.0**	**-0.3**
	0.2nm,0.6s,baz=270,slow=4.5,SNR=4.3							
YKA	**Yellowknife Ar**	**75.95**	**28**	P		**P**	**12 46 40.6**	**+0.6**
	0.4nm,0.5s,baz=298,slow=4.7,SNR=4.8							
NVAR	**Mina Array Bea**	**82.61**	**52**	P		**P**	**12 47 17.2**	**0.0**
	0.3nm,0.6s,baz=279,slow=5.3,SNR=4.5							
FINES	**FINESS Array B**	**83.02**	**335**	P		**P**	**12 47 17.4**	**-1.1**
	1.1nm,0.8s,baz=42,slow=8.5,SNR=3.9							

IDC 30 12:37:05.5±12.0, 14°.83S×164°.73E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/35, mbtmp4.0/4, ML3.6/1, MS3.0/2, Ms1 2.9/2, ms1mx2.4/32, Error ellipse: s-maj=219.5km s-min=34.8km az=50.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**7.38**	**168**	Pn		Pn	12 38 54.5	-0.2
	1.1nm,0.3s,baz=95,slow=13,SNR=14							
DZM				Sn		Sn	12 40 22.0	+2.8
	0.5nm,0.3s,baz=319,slow=19,SNR=3.4							
STKA	**Stephens Creek**	**27.09**	**227**	P		P	12 42 49.7	-0.4
	3.0nm,0.6s,baz=47,slow=8.4,SNR=7.6							
STKA				LR		LR	12 53 34.0	
	comp=Z,19nm,18.3s,baz=27,slow=36							
WRA	**Warramunga Arr**	**29.42**	**256**	P		P	12 43 11.5	+0.5
	0.6nm,0.8s,baz=86,slow=8.4,SNR=5.2							
ASAR	**Alice Springs**	**30.35**	**248**	P		P	12 43 19.1	-0.2
	1.1nm,0.5s,baz=79,slow=9.1,SNR=19							
FITZ	**Fitzroy Crossi**	**37.58**	**260**	LR		LR	12 59 04.0	
	comp=Z,28nm,19.2s,baz=34,slow=35							

*GCG **30** 12:46:46.0±0.5, 14°.02N×92°.55W, h31km±999km, MD4.0*
*MEX **30** 12:46:49.5±0.7, 14°.59N×92°.10W, h84km±7km, MD4.1*

ISC 30 12:46:53.0±1.8, 14°.8N±0°.1×92°.24W±0°.09, h64km±11km, n8, σ2§17/14, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
THIG		**0.13**	**349**	*i* P		**Pn**	**12 47 01.2**	**-1.4**
THIG				*i* S		**Sn**	**12 47 10.9**	**+1.3**
PCIG		**1.32**	**314**	*i* P		**Pn**	**12 47 14.6**	**-0.7**
PCIG				*i* S		**Sn**	**12 47 33.3**	**+1.2**
FUG	**Fuego 3**	**1.39**	**104**	*eP*		**Pn**	**12 47 13.9**	**-2.7**
CCIG	**Comitan**	**1.50**	**4**	*i* P		**Pn**	**12 47 16.1**	**-1.9**
PCG	**Pacaya**	**1.63**	**104**	*eP*		**Pn**	**12 47 17.5**	**-2.3**
PCG				*eS*		**Sn**	**12 47 41.9**	**+2.0**
NBG	**Las Nubes**	**1.84**	**96**	*eP*		**Pn**	**12 47 21.8**	**-0.9**
NBG				*eS*		**Sn**	**12 47 49.2**	**+4.1**
TGIG		**2.16**	**337**	*i* P		**Pn**	**12 47 25.4**	**-1.4**
TGIG				*i* S		**Sn**	**12 47 53.4**	**+0.9**
CMIG	**Matias Romero**	**3.43**	**312**	*i* P		**Pn**	**12 47 43.6**	**-0.4**
CMIG				*i* S		**Sn**	**12 48 24.6**	**+1.1**

IDC 30 12:51:32.7±2.0, 1°.99N×126°.57E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/53, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=114.0km s-min=25.3km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**19.98**	**183**	P		P	12 56 06.2	-0.6
	0.1nm,0.3s,baz=23,slow=8.9,SNR=2.5							
WRA	**Warramunga Arr**	**23.09**	**161**	P		P	12 56 40.5	+0.2
	0.6nm,0.4s,baz=341,slow=11,SNR=18							
ASAR	**Alice Springs**	**26.48**	**165**	P		P	12 57 12.2	+0.3
	0.2nm,0.4s,baz=345,slow=8.4,SNR=11							
MKAR	**Makanchi Array**	**58.89**	**326**	P		P	13 01 33.4	-0.2
	0.4nm,0.5s,baz=119,slow=8.7,SNR=4.0							

*IDC **30** 12:53:47.7±1.1, 6°.30N×61°.08E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.8/51, mbtmp3.9/12, MS3.3/15, Ms1 3.3/15, ms1mx3.1/41, Error ellipse: s-maj=29.4km s-min=20.3km az=29.0*

ISC 30 12:53:50.5±0.9, 6°.5N±0°.2×61°.2E±0°.2, h10km, n25, σ1§22/13, mb3.8/12, MS3.3/14, 2D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PALK	**Pallekele**	**19.43**	**87**	LR		LR	13 03 50.0	
	comp=Z,59nm,20.9s,baz=17,slow=31							
GEYT	**Alibeck**	**31.38**	**355**	LR		LR	13 13 15.5	
	comp=Z,27nm,20.1s,baz=205,slow=37							
AAK	**Ala-Archa**	**37.85**	**16**	P		**P**	**13 01 09.0**	**+1.3**
	1.2nm,0.5s,baz=179,slow=4.7,SNR=5.1							
CMAR	**Chiang Mai Arr**	**38.66**	**69**	P		**P**	**13 01 13.5**	**-1.2**
	0.5nm,0.5s,baz=261,slow=9.0,SNR=6.2							
CMAR				LR		LR	13 15 19.1	
	comp=Z,16nm,21.6s,baz=246,slow=33							
KBZ	**Khabaz**	**40.38**	**339**	LR		LR	13 20 57.4	
	comp=Z,28nm,18.3s,baz=124,slow=40							
BRTR	**Keskin Array B**	**41.28**	**327**	P		**P**	**13 01 36.9**	**+0.5**
	1.7nm,0.8s,baz=136,slow=9.6,SNR=5.5							
BRTR				LR		LR	13 19 44.1	
	comp=Z,23nm,18.5s,baz=145,slow=38							
MKAR	**Makanchi Array**	**44.05**	**21**	P		**P**	**13 01 59.4**	**+0.9**
	0.5nm,0.7s,baz=204,slow=8.9,SNR=2.5							
MKAR				LR		LR	13 22 19.1	
	comp=Z,22nm,18.1s,baz=207,slow=39							
BOSA	**Boshof**	**49.16**	**223**	LR		LR	13 21 17.4	
	comp=Z,37nm,19.0s,baz=38,slow=34							
ZALV	**Zalesovo Beam**	**51.03**	**18**	P		**P**	**13 02 53.4**	**+0.8**
	0.8nm,0.7s,baz=214,slow=10,SNR=2.8							
ZALV				LR		LR	13 27 00.1	
	comp=Z,29nm,18.0s,baz=63,slow=39							
SONM	**Songino Array**	**56.31**	**35**	P		**P**	**13 03 31.6**	**-0.1**
	0.6nm,0.7s,baz=208,slow=4.9,SNR=3.5							
GERES	**GERESS Array B**	**58.09**	**325**	P		**P**	**13 03 43.4**	**-0.8**
	0.3nm,0.7s,baz=116,slow=8.3,SNR=3.5							
TORD	**Tondi Ar. Bea**	**58.84**	**281**	P		**P**	**13 03 48.3**	**-1.6**
	0.8nm,1.0s,baz=83,slow=5.3,SNR=3.4							
FINES	**FINESS Array B**	**60.68**	**342**	P		**P**	**13 04 01.6**	**-0.1**
	1.1nm,0.8s,baz=154,slow=7.7,SNR=3.2							
DBIC	**Dimbokro**	**65.52**	**274**	LR		LR	13 31 54.2	
	comp=Z,19nm,21.4s,baz=3.5,slow=35							
NOA	**NORSAR Array B**	**65.80**	**336**	LR		LR	13 35 42.4	
	comp=Z,18nm,18.7s,baz=280,slow=38							
NWAO	**Narrogin (SRO)**	**66.09**	**130**	LR		LR	13 28 26.7	
	comp=Z,65nm,20.1s,baz=123,slow=32							
ARCES	**ARCESS Array B**	**67.07**	**347**	P		**P**	**13 04 43.7**	**0.0**
	4.1nm,0.9s,baz=147,slow=5.1,SNR=4.0							
ARCES				LR		LR	13 35 23.6	
	comp=Z,26nm,18.4s,baz=305,slow=37							
KSRS	**Korea Array**	**67.66**	**52**	LR		LR	13 33 43.5	
	comp=Z,34nm,18.2s,baz=148,slow=35							
MAW	**Mawson**	**73.96**	**179**	LR		LR	13 29 25.2	
	comp=Z,30nm,19.7s,baz=57,slow=29							
MJAR	**Matsushiro Arr**	**75.75**	**54**	LR		LR	13 39 38.8	
	comp=Z,21nm,18.6s,baz=125,slow=36							
WRA	**Warramunga Arr**	**76.58**	**112**	P		**P**	**13 05 41.1**	**-0.7**
	3.3nm,0.8s,baz=288,slow=5.0,SNR=7.0							
SYO	**Syowa Base**	**76.84**	**188**	*eP*		**P**	**13 05 44.4**	**+2.2**
SYO	**Syowa Base**	**76.84**	**188**	*i* P		P	13 05 46.3	+4.1
ASAR	**Alice Springs**	**76.99**	**116**	P		**P**	**13 05 43.0**	**-1.1**
	1.2nm,0.6s,baz=287,slow=6.2,SNR=5.2							
TXAR	**Lajitas Array**	**141.47**	**338**	PKhKP		PKPpre	13 13 14.2	
	0.2nm,0.7s,baz=72,slow=3.9,SNR=2.6							

JMA 30 12:54:28.8±0.1, 24°.30N×123°.45E, h20km±2km, M1.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IRIF	**Iriomote-Funau**	**0.26**	**82**	P		Pb	12 54 34.5	-0.3
IRIF				S		Sb	12 54 39.1	+0.2
HATJ	**Hateruma jima**	**0.41**	**127**	*eS*		Sb	12 54 42.5	-0.5
YOJ	**Yonaguni jima**	**0.43**	**292**	P		Pb	12 54 37.6	-0.1
YOJ				*eS*		Sb	12 54 43.5	-0.3
JYNG	**Yonagunijimaku**	**0.48**	**288**	P		Pb	12 54 38.5	-0.1
JYNG				S		Sb	12 54 45.0	-0.3
JKRS	**Kuro-shima**	**0.51**	**97**	P		Pb	12 54 39.0	-0.1
JKRS				S		Sb	12 54 46.6	+0.4
JIJ	**Ishigaki jima**	**0.64**	**84**	P		Pb	12 54 40.7	-0.5
JIJ				S		Sb	12 54 49.6	-0.1
JISG	**Ishigakijimahi**	**0.83**	**70**	P		Pb	12 54 44.5	-0.1

TAP 30 12:54:56.9, 24°.44N×121°.84E, h28km, ML2.5, 4C-8D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ENAH	**Nanao**	**0.03**	**299⇑**	*i* P		Pb	12 55 01.7	+0.1
	baz=295							
ENAH				*i* S		Sb	12 55 05.2	+0.4
	baz=295							
ENA	**Nanau**	**0.09**	**264⇑**	*i* P		Pb	12 55 02.1	+0.2
	baz=262							
ENA				*i* S		Sb	12 55 05.4	+0.2
	baz=262							
TWC	**Suao**	**0.17**	**4⇑**	*i* P		Pb	12 55 02.8	+0.2
	baz=7.0							
TWC				*i* S		Sb	12 55 06.7	+0.3
	baz=7.0							
ENTT	**Nioudou**	**0.32**	**310⇓**	*i* P		Pb	12 55 04.7	+0.2
	baz=310							
ENTT				*i* S		Sb	12 55 10.3	+0.7
	baz=310							
TWE	**Neicheng**	**0.32**	**332⇓**	*i* P		Pb	12 55 04.8	+0.3
	baz=338							
TWE				*i* S		Sb	12 55 10.2	+0.5
	baz=338							
ILA	**Ilan**	**0.34**	**346**	P		Pb	12 55 04.9	+0.1
	baz=343							
ILA				S		Sn	12 55 11.3	-0.7
	baz=343							
NDT	**Datong Townshi**	**0.34**	**299⇓**	*i* P		Pb	12 55 05.1	+0.3
	baz=303							
NDT				S		Sn	12 55 11.3	-0.6
	baz=303							
NACB	**Ninganchiao**	**0.34**	**220**	⇓P		Pb	12 55 04.8	0.0
	baz=224							
NACB				S		Sb	12 55 10.9	+0.8
	baz=224							
ETLH	**Xiulin Townshi**	**0.40**	**235**	P		Pb	12 55 06.0	+0.3
	baz=238							
ETLH				S		Sb	12 55 12.1	+0.4
	baz=238							
NNSB	**Datong**	**0.41**	**269**	⇓P		Pb	12 55 06.2	+0.3
	baz=269							
NNSB				S		Sb	12 55 12.4	+0.3
	baz=269							
NNSH	**Datong**	**0.41**	**269**	*eP*		Pb	12 55 06.0	+0.1
	baz=269							
NNSH				*eS*		Sb	12 55 12.5	+0.4
	baz=269							
EGS		**0.42**	**12**	P		Pn	12 55 06.9	-0.2
	baz=14							
EGS				S		Sn	12 55 13.4	-0.5
	baz=14							
NTC	**Toucheng**	**0.42**	**359**	P		Pb	12 55 05.3	-0.6
	baz=5.0							
NTC				S		Sb	12 55 12.4	+0.4
	baz=5.0							
TWD	**Chiawan**	**0.42**	**212**	*i* P		Pb	12 55 06.1	+0.2
	baz=214							
TWD				*i* S		Sn	12 55 13.1	-0.8
	baz=214							
NNS	**Nan Shan**	**0.42**	**271⇓**	*i* P		Pb	12 55 06.3	+0.2
	baz=270							
NNS				*i* S		Sb	12 55 12.5	+0.1
	baz=270							
NWLT	**Wulai**	**0.45**	**318**	*eP*		Pb	12 55 06.7	+0.2
	baz=318							
NWLT				*eS*		Sb	12 55 13.6	+0.4
	baz=318							
YHNB	**Yeheng**	**0.48**	**299**	⇓P		Pb	12 55 07.3	+0.3
	baz=299							
YHNB				S		Sb	12 55 14.2	+0.4
	baz=299							
NSK	**Sanguang**	**0.49**	**299⇓**	*i* P		Pb	12 55 07.5	+0.2
	baz=299							
NSK				*i* S		Sb	12 55 14.8	+0.6
	baz=299							
TIPB	**Shuangxi**	**0.53**	**359**	P		Pb	12 55 08.2	+0.4
	baz=2.0							
TIPB				*i* S		Sb	12 55 15.6	+0.4
	baz=2.0							
FUSS	**Fushou**	**0.57**	**251**	*i* P		Pb	12 55 09.0	+0.4

NSTT				*i* S		Sn	12 55 23.9	+0.9		
	baz=284									
NCUH	**Zhongli**	**0.79**	**312**	*e*S		Sn	12 55 26.0	+2.8		
	baz=311									
ANP	**Anpu**	**0.80**	**339**	P		Pn	12 55 13.2	+0.7		
	baz=327									
NTST	**Danshui**	**0.81**	**334**	*e*S		Sn	12 55 25.8	+2.3		
	baz=343									
WHP	**Taichung City**	**0.83**	**259**	P		Pn	12 55 13.2	+0.3		
	baz=259									
WHP				S		Sn	12 55 24.8	+0.6		
	baz=259									
SBCB	**Hsinchu**	**0.85**	**295**	*e*S		Sn	12 55 27.8	+3.1		
	baz=294									
EGFH	**Guangfu**	**0.85**	**206**	*e*P		Pn	12 55 13.0	-0.1		
	baz=218									
EGFH				*e*S		Sb	12 55 24.1	-0.1		
	baz=218									
TWY	**Chenhua**	**0.86**	**346**	P		Pb	12 55 13.7	+0.4		
	baz=346									
TWY				S		Sn	12 55 26.3	+1.4		
	baz=346									
NMLH	**Miaoli**	**0.96**	**276**	*e*P		Pb	12 55 17.2	+2.3		
	baz=275									
NMLH				*e*S		Sn	12 55 30.1	+2.8		
	baz=275									
TWQ1	**Liyutan**	**0.97**	**265**	P		Pb	12 55 16.7	+1.5		
	baz=264									
TWQ1				S		Sn	12 55 30.1	+2.4		
	baz=264									
NSY	**Sanyi**	**0.98**	**269**	P		Pb	12 55 16.9	+1.5		
	baz=268									
NSY				*e*S		Sb	12 55 30.4	+2.5		
	baz=268									
HGSD	**Ruisui**	**1.01**	**202**	P		Pn	12 55 15.3	-0.1		
	baz=216									
HGSD				S		Sb	12 55 29.4	+0.6		
	baz=216									
SMLT	**Sun Moon Lake**	**1.02**	**237**	*e*P		Pn	12 55 15.1	-0.4		
	baz=244									
SMLT				S		Sb	12 55 29.9	+0.9		
	baz=244									
SSLB	**Suanglung**	**1.03**	**231**	P		Pb	12 55 16.7	+0.4		
	baz=231									
SSLB				S		Sb	12 55 30.2	+0.8		
	baz=231									
EHY	**Hungye**	**1.04**	**207**	P		Pn	12 55 15.6	-0.1		
	baz=218									
EHY				S		Sb	12 55 30.1	+0.5		
	baz=218									
TYC	**Yuchr**	**1.04**	**239**	P		Pb	12 55 16.1	-0.1		
	baz=239									
TYC				S		Sb	12 55 29.5	0.0		
	baz=239									
YOJ	**Yonaguni jima**	**1.07**	**88**	P		Pb	12 55 16.9	0.0		
	baz=80									
YOJ				S		Sb	12 55 32.2	+1.7		
	baz=80									
YULB	**Yu-li**	**1.15**	**205**	*e*P		Pb	12 55 17.7	-0.5		
	baz=205									
YULB				S		Sn	12 55 31.6	-0.4		
	baz=205									
WHYT	**Xinyi Township**	**1.16**	**231**	*e*S		Sb	12 55 35.2	+2.1		
	baz=230									
WJS	**Zhushan**	**1.18**	**239**	*e*P		Pb	12 55 20.0	+1.3		
	baz=237									
WJS				*e*S		Sb	12 55 38.2	+4.5		
	baz=237									
TWF1	**Yuli**	**1.19**	**205**	*e*P		Pn	12 55 17.6	-0.2		
	baz=216									
TWF1				S		Sb	12 55 33.6	-0.2		
	baz=216									
WNT	**Mingjian**	**1.19**	**242**	*e*S		Sb	12 55 37.8	+4.0		
	baz=242									
PCYT	**Pengchaiyu**	**1.21**	**10**	*e*P		Pn	12 55 19.5	+0.3		
	baz=10.0									
PCYT				*e*S		Sb	12 55 34.3	-0.1		
	baz=10.0									
ALS	**Alishan**	**1.32**	**226**	P		Pb	12 55 21.8	+0.6		
	baz=214									
ALS				*e*S		Sb	12 55 38.0	+0.1		
	baz=214									
FULB	**Fuli**	**1.33**	**202**	*e*P		Pn	12 55 19.3	-0.4		
	baz=213									
FULB				*e*S		Sb	12 55 38.2	+0.3		
	baz=213									
CHN5	**Tsauling**	**1.35**	**232**	P		Pb	12 55 22.0	+0.3		
	baz=231									
CHN5				S		Sb	12 55 41.0	+2.5		
	baz=231									
ELDTW	**Lidau**	**1.45**	**211**	*e*P		Pn	12 55 21.8	+0.3		
	baz=210									
ELDTW				S		Sn	12 55 39.8	+0.1		
	baz=210									
CHN4	**Tsaushan**	**1.57**	**227**	P		Pb	12 55 25.7	+0.3		
	baz=215									
CHN4				S		Sb	12 55 46.3	+1.5		
	baz=215									
TPUB	**Ta-pu**	**1.58**	**225**	*e*P		Pb	12 55 25.5	0.0		
	baz=213									
TPUB				*e*S		Sb	12 55 46.1	+1.0		
	baz=213									
STYT	**Tauyuan**	**1.61**	**218**	*e*P		Pb	12 55 25.7	-0.3		
	baz=210									
STYT				*e*S		Sb	12 55 46.5	+0.5		
	baz=210									
WTP	**Ta-pu**	**1.63**	**224**	*e*P		Pb	12 55 26.4	0.0		
	baz=212									
WTP				*e*S		Sb	12 55 47.3	+0.8		
	baz=212									
TWK	**Hsinying**	**1.70**	**227**	*e*P		Pb	12 55 27.2	-0.3		
	baz=226									
CHN1	**Nanshi**	**1.73**	**224**	*e*S		Sb	12 55 51.2	+1.9		
	baz=223									
SLGT	**Liugui**	**1.80**	**217**	*e*P		Pb	12 55 29.0	-0.3		
	baz=216									
SLGT				*e*S		Sb	12 55 52.8	+1.3		
	baz=216									

*ATH **30** 12:54:57.3, 38˚.38N×20˚.48E, h17km±1km, ML2.5/8, Error ellipse: s-maj=1.6km s-min=0.6km az=276.0*
*THE **30** 12:54:57.9, 38˚.39N×20˚.45E, h9km, ML2.5/6, Error ellipse: s-maj=0.9km s-min=0.3km az=141.0*
ISC 30 12:54:57.2±0.8, 38˚.40N±0˚.02×20˚.43E±0˚.03, h14km±4km, n54, σ0=84/93, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.11**	**83**	P	**Pg**	**12 55 00.1**	**-0.4**
VSK1				S	**Sg**	**12 55 01.8**	**-0.9**
KEF5	**Kardakata, Kep**	**0.12**	**164**	P	**Pg**	**12 55 00.7**	**0.0**
KEF5				S	**Sg**	**12 55 03.0**	**+0.1**
KEF5	**Kardakata, Kep**	**0.12**	**164**	P	**Pg**	**12 55 00.6**	**0.0**
KEF5				S	**Sg**	**12 55 02.7**	**-0.2**
FSK	**Fiskardo**	**0.12**	**59**	P	**Pg**	**12 55 00.5**	**-0.2**
FSK				S	**Sg**	**12 55 02.6**	**-0.4**
FSK				AML	AML	12 55 03.0	
	comp=E,9414μm,0.2s						
FSK				AML	AML	12 55 04.1	
	comp=N,4132μm,0.3s						
FSK	**Fiskardo**	**0.12**	**59**	P	**Pg**	**12 55 00.5**	**-0.2**
FSK				S	**Sg**	**12 55 02.6**	**-0.4**
KEF4	**Livadi, Kephal**	**0.14**	**180**	P	**Pg**	**12 55 01.1**	**+0.3**
KEF4				S	**Sg**	**12 55 03.9**	**+0.6**
KEF4	**Livadi, Kephal**	**0.14**	**180**	P	**Pg**	**12 55 01.0**	**+0.3**
KEF4				S	**Sg**	**12 55 03.8**	**+0.6**
DMLN	**Damoulianata-K**	**0.16**	**195**	P	**Pg**	**12 55 01.6**	**+0.4**
DMLN				S	**Sg**	**12 55 04.5**	**+0.7**
DMLN	**Damoulianata-K**	**0.16**	**195**	P	**Pg**	**12 55 01.6**	**+0.4**
DMLN				S	**Sg**	**12 55 04.5**	**+0.7**
LXRA	**Lixouri, Kepha**	**0.20**	**177**	P	**Pg**	**12 55 02.1**	**+0.5**
LXRA				S	**Sb**	**12 55 05.9**	**-0.2**
KEF3	**Kipouria, Keph**	**0.20**	**198**	P	**Pg**	**12 55 01.8**	**+0.1**
KEF3				S	**Sg**	**12 55 05.1**	**+0.3**
KEF3	**Kipouria, Keph**	**0.20**	**198**	P	**Pg**	**12 55 01.8**	**+0.1**
KEF3				S	**Sg**	**12 55 04.8**	**0.0**
ARGA	**Argostoli. Kep**	**0.22**	**169**	P	**Pg**	**12 55 02.2**	**+0.1**
ARGA				S	**Sg**	**12 55 05.7**	**+0.4**
VLS	**Valsamata**	**0.25**	**149**	P	**Pg**	**12 55 02.6**	**-0.1**
VLS				S	**Sg**	**12 55 06.5**	**+0.2**
VLS				AML	AML	12 55 06.5	
	comp=N,3882μm,0.2s						
VLS				AML	AML	12 55 06.5	
	comp=E,3538μm,0.1s						
VLS	**Valsamata**	**0.25**	**149**	P	**Pg**	**12 55 02.5**	**-0.1**
VLS				S	**Sg**	**12 55 06.5**	**+0.2**
EVGI	**Lefkada island**	**0.29**	**39**	P	**Pg**	**12 55 03.5**	**+0.2**
EVGI				S	**Sg**	**12 55 08.1**	**+0.8**
EVGI	**Lefkada island**	**0.29**	**39**	P	**Pg**	**12 55 03.5**	**+0.2**
EVGI				S	**Sg**	**12 55 08.0**	**+0.6**
PSDA	**Pessada-Kefalo**	**0.31**	**156**	P	**Pg**	**12 55 03.6**	**0.0**
PSDA				S	**Sg**	**12 55 08.1**	**+0.3**
PSDA	**Pessada-Kefalo**	**0.31**	**156**	P	**Pg**	**12 55 03.6**	**0.0**
PSDA				S	**Sg**	**12 55 08.2**	**+0.3**
NYDR	**Nydri-Lefkada**	**0.38**	**34**	P	**Pg**	**12 55 04.8**	**0.0**
NYDR				S	**Sg**	**12 55 10.9**	**+0.7**
NYDR	**Nydri-Lefkada**	**0.38**	**34**	P	**Pg**	**12 55 04.9**	**0.0**
NYDR				S	**Sg**	**12 55 10.5**	**+0.3**
	comp=E,928nm,0.3s						
MGNA	**Meganis**	**0.39**	**48**	P	**Pg**	**12 55 04.9**	**-0.1**
MGNA				S	**Sg**	**12 55 10.7**	**+0.4**
MGNA				AML	AML	12 55 11.2	
	comp=E,2350μm,0.2s						
MGNA				AML	AML	12 55 11.2	
	comp=N,3098μm,0.2s						
LKD2	**Lefkada island**	**0.43**	**25**	P	**Pg**	**12 55 05.8**	**0.0**
LKD2				S	**Sg**	**12 55 12.5**	**+0.8**
LKD2				AML	AML	12 55 17.5	
	comp=E,982μm,0.3s						
LKD2				AML	AML	12 55 18.4	
	comp=N,1064μm,0.2s						
LKD2	**Lefkada island**	**0.43**	**25**	P	**Pg**	**12 55 06.0**	**+0.1**
LKD2				S	**Sg**	**12 55 12.5**	**+0.8**
TSLK	**Tsoukalades, L**	**0.47**	**23**	P	**Pg**	**12 55 06.7**	**+0.3**
TSLK				S	**Sb**	**12 55 14.1**	**+0.2**
TSLK				AML	AML	12 55 15.3	
	comp=N,1355μm,0.4s						
TSLK				AML	AML	12 55 17.2	
	comp=E,1077μm,0.5s						
TSLK	**Tsoukalades, L**	**0.47**	**23**	P	**Pg**	**12 55 06.7**	**+0.3**
TSLK				S	**Sb**	**12 55 14.2**	**+0.2**
	comp=E,625nm,0.3s						
VLMS	**Volimes, Zakyn**	**0.55**	**160**	P	**Pg**	**12 55 07.9**	**-0.1**
VLMS				S	**Sg**	**12 55 15.2**	**-0.1**
VLMS	**Volimes, Zakyn**	**0.55**	**160**	P	**Pg**	**12 55 07.8**	**-0.2**
VLMS				S	**Sb**	**12 55 16.7**	**+0.4**
	comp=E,1μm,0.2s						
PDO	**Prodromos**	**0.63**	**71**	P	**Pg**	**12 55 09.1**	**-0.4**
PDO				S	**Sg**	**12 55 17.5**	**-0.3**
PDO				AML	AML	12 55 24.6	
	comp=N,880μm,0.3s						
PDO				AML	AML	12 55 29.9	
	comp=E,543μm,0.7s						
PDO	**Prodromos**	**0.63**	**71**	P	**Pg**	**12 55 09.1**	**-0.4**
PDO				S	**Sb**	**12 55 18.4**	**-0.2**
	comp=E,508nm,0.5s						
RLS	**Riolos of Patr**	**0.89**	**112**	P	**Pg**	**12 55 13.5**	**-0.8**
DRO	**Drossia**	**1.10**	**113**	P	**Pb**	**12 55 17.4**	**-0.7**
DRO	**Drossia**	**1.10**	**113**	P	**Pb**	**12 55 16.9**	**-1.2**
DRO				S	**Sn**	**12 55 35.3**	**+2.0**
	comp=E,200nm,0.4s						
IGT	**Igoumenitsa**	**1.14**	**356**	P	**Pb**	**12 55 19.1**	**+0.4**
IGT	**Igoumenitsa**	**1.14**	**356**	P	**Pb**	**12 55 19.1**	**+0.4**
IGT				S	**Sn**	**12 55 36.1**	**+2.0**
EFP	**Efpalio**	**1.16**	**88**	P	**Pb**	**12 55 18.2**	**-0.9**
EFP				AML	AML	12 55 41.4	
	comp=E,655μm,0.5s						
EFP				AML	AML	12 55 41.6	
	comp=N,472μm,0.4s						
EFP	**Efpalio**	**1.16**	**88**	P	**Pb**	**12 55 18.3**	**-0.7**
EFP				S	**Sn**	**12 55 36.7**	**+2.0**
	comp=N,298nm,0.4s						
ANX	**Ano Chora**	**1.19**	**80**	P	**Pb**	**12 55 19.1**	**-0.5**
ANX				S	**Sn**	**12 55 38.0**	**+2.5**
EVR	**Evrytania**	**1.20**	**64**	P	**Pb**	**12 55 19.1**	**-0.7**
EVR	**Evrytania**	**1.20**	**64**	P	**Pb**	**12 55 19.2**	**-0.6**
SERG	**Sergoula**	**1.28**	**89**	P	**Pn**	**12 55 20.2**	**-0.5**
SERG	**Sergoula**	**1.28**	**89**	P	**Pn**	**12 55 20.4**	**-0.3**
SERG				S	**Sg**	**12 55 40.1**	**+1.6**
TRIZ	**Trizonia**	**1.29**	**91**	P	**Pn**	**12 55 20.0**	**-0.8**
TRIZ	**Trizonia**	**1.29**	**91**	P	**Pn**	**12 55 20.4**	**-0.4**
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**12 55 21.6**	**0.0**
KALE				AML	AML	12 55 47.0	
	comp=E,197μm,0.8s						
KALE				AML	AML	12 55 47.2	
	comp=N,266μm,1.0s						
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**12 55 21.4**	**-0.2**
KALE				S	**Sg**	**12 55 42.0**	**+1.4**
KLV	**Kalavryta, Ach**	**1.40**	**104**	P	**Pn**	**12 55 22.5**	**+0.1**
KLV	**Kalavryta, Ach**	**1.40**	**104**	P	**Pn**	**12 55 22.5**	**+0.1**
GUR	**Goura**	**1.58**	**106**	P	**Pn**	**12 55 25.4**	**+0.5**
AGG	**Agios Georgios**	**1.62**	**67**	P	**Pg**	**12 55 27.7**	**-0.5**
TRIP	**Tripoli**	**1.70**	**120**	P	**Pg**	**12 55 29.0**	**-0.7**
RICI	**Ricice**	**5.67**	**335**	*e*Pn	**Pn**	**12 56 20.7**	**-0.3**
RICI				Sn	**Sn**	**12 57 22.3**	**-3.6**
KIJV	**Kijevo**	**6.37**	**333**	*e*Pn	**Pn**	**12 56 31.2**	**+0.6**
KIJV				Sn	**Sn**	**12 57 40.9**	**-2.3**
MORI	**Morici**	**6.52**	**328**	*e*Pn	**Pn**	**12 56 33.7**	**+1.0**
MORI				Sn	**Sn**	**12 57 44.5**	**-2.3**

*NEIC **30** 12:57:09.3±1.9, 32˚.39S±0˚.06×179˚.8E±0˚.1, h315km±5km, mb4.6/47, Error ellipse: s-maj=14.6km s-min=8.3km az=100.0*
*IDC **30** 12:57:12.2±1.2, 32˚.25S×179˚.65E, h327km±11km, mb4.0/19, mb1 4.2/21, mb1mx4.1/38, mbtmp4.8/21, Error ellipse: s-maj=11.0km s-min=10.5km az=141.0*
ISC 30 12:57:08.6±0.4, 32˚.36S±0˚.05×179˚.72E±0˚.07, h300km, n125, σ1§56/137, mb4.5/38, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.71**	**34**	P	**Pn**	**12 58 14.8**	**+3.2**
	275nm,0.3s,baz=97,slow=14,SNR=6.9						
RAO				S	**S**	**12 59 03.0**	**+0.8**
	360nm,0.3s,baz=254,slow=24,SNR=7.6						
RAO	**Raoul Island**	**3.71**	**34**	Pn	**Pn**	**12 58 13.8**	**+2.2**
RAO				S	**S**	**12 59 02.3**	**+0.1**
MXZ	**Matakaoa Point**	**5.32**	**192**	Pn	**Pn**	**12 58 32.2**	**+2.5**
MXZ				S	**S**	**12 59 36.3**	**+1.4**
OUZ	**Omahuta**	**5.84**	**239**	Pn	**Pn**	**12 58 38.7**	**+2.8**
URZ	**Urewera**	**6.26**	**199**	P	**Pn**	**12 58 42.2**	**+1.4**
	61nm,0.3s,baz=263,slow=3.5,SNR=104						
URZ				S	**S**	**12 59 56.1**	**+0.7**
	384nm,0.3s,baz=228,slow=22,SNR=27						
URZ	**Urewera**	**6.26**	**199**		**Pn**	**12 58 42.3**	**+1.4**
URZ				S	**S**	**12 59 55.6**	**+0.3**
BKZ	**Black Stump Fm**	**7.28**	**200**		**Pn**	**12 58 54.4**	**+1.1**
BKZ				S	**S**	**13 00 18.0**	**0.0**
HIZ	**Hauiti**	**7.31**	**212**	Pn	**Pn**	**12 58 54.8**	**+1.2**
BFZ	**Birch Farm**	**8.76**	**198**		**Pn**	**12 59 11.3**	**-0.1**
MSWZ	**Moikau Station**	**9.72**	**200**		**Pn**	**12 59 23.4**	**+0.2**
SNZO	**South Karori**	**9.79**	**203**		**Pn**	**12 59 23.9**	**-0.1**
BHW	**Baring Head**	**9.83**	**202**		**Pn**	**12 59 24.2**	**-0.2**
PLWZ	**Palliser**	**9.86**	**200**	Pn	**Pn**	**12 59 24.6**	**-0.3**
TUWZ	**Tuamarina**	**10.16**	**205**	P	**Pn**	**12 59 29.6**	**+1.1**
NNZ	**Nelson**	**10.19**	**208**	P	**P**	**12 59 31.5**	**-0.7**
QRZ	**Quartz Range**	**10.23**	**212**	P	**P**	**12 59 31.5**	**-1.2**
CMWZ	**Cape Campbell**	**10.35**	**204**	P	**P**	**12 59 32.9**	**-1.2**
BSWZ	**Blackbirch Sta**	**10.44**	**205**	P	**P**	**12 59 33.4**	**-1.6**
THZ	**Tophouse**	**10.85**	**208**		**Pn**	**12 59 37.6**	**+0.7**
KHZ	**Kahutara**	**11.17**	**204**		**P**	**12 59 42.1**	**-1.0**
LTZ	**Lake Taylor**	**11.96**	**207**		**Pn**	**12 59 50.5**	**0.0**
OXZ	**Oxford**	**12.51**	**207**	P	**P**	**12 59 57.8**	**-0.2**
MQZ	**McQueen's Vall**	**12.62**	**204**		**P**	**12 59 58.8**	**-0.4**
RPZ	**Rata Peaks**	**13.22**	**209**	P	**Pn**	**13 00 05.1**	**-0.6**
	39nm,0.3s,baz=35,slow=2.4,SNR=57						
RPZ				S	S	13 02 21.9	-10
	25nm,0.3s,baz=360,slow=5.0,SNR=16						
FOZ	**Fox Glacier**	**13.61**	**212**		**P**	**13 00 10.0**	**-0.1**
LBZ	**Lake Benmore**	**14.13**	**209**		**Pn**	**13 00 16.4**	**-0.1**
ODZ	**Otahua Downs**	**14.50**	**207**	P	**Pn**	**13 00 20.8**	**-0.1**
MSVF	**Nonsavu**	**14.64**	**354**	P	**Pn**	**13 00 23.4**	**+0.5**
WKZ	**Wanaka**	**14.98**	**211**		**P**	**13 00 25.1**	**-0.2**
DZM	**Mont Dzumac**	**15.62**	**308**	P	**Pn**	**13 00 35.8**	**+1.4**
	1.6nm,0.3s,baz=132,slow=16,SNR=13						
DZM	**Mont Dzumac**	**15.62**	**308**	P	**Pn**	**13 00 34.5**	**+0.1**
DZM				AmB	AmB	13 00 40.6	
	comp=Z,35nm,0.8s						
MLZ	**Mavora Lakes**	**15.80**	**211**	P	**P**	**13 00 33.8**	**-0.5**
WHZ	**Wether Hill Ro**	**16.29**	**211**	P	**P**	**13 00 39.0**	**-0.5**
LHI	**Lord Howe Isla**	**17.55**	**267**	P	**P**	**13 00 54.1**	**+0.7**
AFI	**Afiamalu**	**19.94**	**25**	P	**P**	**13 01 19.8**	**+0.7**
	comp=Z,24nm,0.3s,baz=336,slow=1.9,SNR=36						
AFI	**Afiamalu**	**19.94**	**25**	P	**P**	**13 01 19.0**	**-0.1**
SANVU	**Saraoutou**	**20.32**	**323**	P	**P**	**13 01 23.5**	**+0.6**
ARMA	**Armidale**	**24.03**	**267**	P	**P**	**13 01 57.5**	**+0.3**
EIDS	**Eidsvold**	**25.98**	**278**	P	**P**	**13 02 16.3**	**+1.8**
EIDS				AmB	AmB	13 02 17.4	
	comp=Z,12nm,0.7s						
TOO	**Toolangi**	**28.43**	**250**	P	**P**	**13 02 35.8**	**-0.4**
TOO				AmB	AmB	13 02 40.2	
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**32.18**	**260**	P	**P**	**13 03 11.3**	**+2.2**
	comp=Z,25nm,0.7s,baz=93,slow=11,SNR=33						
STKA	**Stephens Creek**	**32.18**	**260**	P	**P**	**13 03 10.2**	**+1.2**
CTA	**Charters Tower**	**32.28**	**284**	P	**P**	**13 03 11.9**	**+1.9**
	comp=Z,12nm,0.5s,baz=108,slow=9.9,SNR=27						
CTAO	**Charters Tower**	**32.28**	**284**	P	**P**	**13 03 12.0**	**+1.9**
CTAO				AmB	AmB	13 03 13.0	
	comp=Z,15nm,0.7s						
BBOO	**Buckleboo**	**36.59**	**257**	P	**P**	**13 03 47.2**	**+0.5**
PMG	**Port Moresby**	**37.78**	**300**	P	**P**	**13 03 56.5**	**-0.2**
	comp=Z,5.9nm,0.6s,baz=171,slow=19,SNR=3.1						
COEN	**Coen**	**38.02**	**290**	P	**P**	**13 03 59.6**	**+0.8**
KRVT	**Keravat (AS076**	**38.09**	**311**	P	**P**	**13 03 59.8**	**+0.4**
	comp=Z,78nm,0.7s,baz=350,slow=1.5,SNR=19						
AS31	**Alice Springs**	**41.11**	**270**	P	**P**	**13 04 24.4**	**+0.4**
ASAR	**Alice Springs**	**41.11**	**270**	P	**P**	**13 04 24.6**	**+0.5**
	comp=Z,26nm,0.8s,baz=107,slow=7.6,SNR=414						
ASAR				ScP	**ScP**	**13 09 31.2**	**-6.8**
	comp=Z,0.9nm,0.7s,baz=119,slow=4.4,SNR=3.7						
ASAR				S	**S**	**13 10 11.0**	**-3.2**
	comp=Z,3.7nm,1.0s,baz=112,slow=15,SNR=13						
ASAR	**Alice Springs**	**41.11**	**270**	P	**P**	**13 04 24.1**	**0.0**
WR0	**Warramunga Arr**	**42.10**	**276**	P	**P**	**13 04 32.0**	**-0.1**
WR0				AmB	AmB	13 04 33.3	
	comp=Z,42nm,1.2s						
WB2	**Warramunga Arr**	**42.27**	**276**	P	**P**	**13 04 33.6**	**+0.2**
WB2				AmB	AmB	13 04 34.6	
	comp=Z,54nm,1.1s						
WRAB	**Tennant Creek**	**42.27**	**276**	P	**P**	**13 04 33.5**	**+0.1**
WRAB				AmB	AmB	13 04 34.6	
	comp=Z,30nm,0.9s						
WRA	**Warramunga Arr**	**42.28**	**276**	P	**P**	**13 04 34.1**	**+0.6**
	comp=Z,24nm,0.4s,baz=113,slow=7.9,SNR=323						
WRA				ScP	**ScP**	**13 09 37.4**	**-5.2**
	comp=Z,3.3nm,0.9s,baz=123,slow=4.1,SNR=11						
WRA				S	**S**	**13 10 27.1**	**-4.2**
	comp=Z,4.9nm,0.8s,baz=111,slow=14,SNR=11						
WRA	**Warramunga Arr**	**42.28**	**276**	P	**P**	**13 04 33.1**	**-0.4**
WB0	**Warramunga Arr**	**42.31**	**276**	P	**P**	**13 04 34.1**	**+0.4**
WB0				AmB	AmB	13 04 34.9	
	comp=Z,62nm,1.1s						
FORT	**Forrest**	**43.69**	**258**	P	**P**	**13 04 44.5**	**-0.1**
FORT				AmB	AmB	13 04 45.6	
	comp=Z,36nm,0.8s						
VNDA	**Vanda**	**45.96**	**185**	P	**P**	**13 05 03.6**	**+1.9**
	comp=Z,1.7nm,0.5s,baz=6.5,slow=8.1,SNR=28						
VNDA				ScP	**ScP**	**13 09 53.0**	**-3.7**
	comp=Z,0.7nm,0.8s,baz=280,slow=3.6,SNR=3.6						
VNDA	**Vanda**	**45.96**	**185**	P	**P**	**13 05 02.2**	**+0.5**
MTN	**Manton Dam**	**48.42**	**282**	P	**P**	**13 05 21.4**	**+0.1**
SMPI	**Sarmi**	**48.95**	**300**	P	**P**	**13 05 26.3**	**+0.9**
	comp=Z,17nm,1.5s						
KNRA	**Kununurra**	**48.96**	**277**	P	**P**	**13 05 25.8**	**+0.3**
KNRA				AmB	AmB	13 05 29.0	
	comp=Z,11nm,0.5s						
FITZ	**Fitzroy Crossi**	**50.45**	**273**	P	**P**	**13 05 37.0**	**+0.4**
	comp=Z,5.7nm,0.7s,baz=130,slow=4.6,SNR=26						
FITZ	**Fitzroy Crossi**	**50.45**	**273**	P	**P**	**13 05 36.9**	**+0.2**
FITZ				AmB	AmB	13 05 37.9	
	comp=Z,16nm,1.1s						
QSPA	**South Pole Qui**	**57.76**	**180**	P	**P**	**13 06 30.7**	**+2.2**
	comp=Z,41nm,0.8s,baz=257,slow=0.3,SNR=130						
QSPA	**South Pole Qui**	**57.76**	**180**	P	**P**	**13 06 27.8**	**-0.7**
EDFI	**Ende, Flores**	**58.43**	**280**	P	**P**	**13 06 33.6**	**-0.3**
BELA	**Belgrano 2**	**68.11**	**173**	P	**P**	**13 07 35.9**	**0.0**
MAW	**Mawson**	**69.79**	**201**	P	**P**	**13 07 46.4**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=127,slow=6.9,SNR=6.0						
MAW	**Mawson**	**69.79**	**201**	P	**P**	**13 07 45.4**	**-0.9**
SNAA	**Sanae**	**76.24**	**179**	P	**P**	**13 08 24.4**	**+0.4**
SNAA	**Sanae**	**76.24**	**179**	P	**P**	**13 08 24.1**	**+0.2**
VNA3	**Neumayer Olymp**	**76.47**	**177**	P	**P**	**13 08 25.7**	**+0.5**
VNA2	**Neumayer--Watz**	**76.88**	**178**	P	**P**	**13 08 28.1**	**+0.7**
	baz=180,slow=5.7						
VNA1	**Neumayer--Stat**	**77.12**	**177**	P	**P**	**13 08 29.4**	**+0.7**
MJAR	**Matsushiro Arr**	**78.78**	**327**	P	**P**	**13 08 36.9**	**-1.4**
	comp=Z,1.5nm,0.8s,baz=142,slow=3.4,SNR=4.1						
PLCA	**Paso Flores**	**82.58**	**134**	P	**P**	**13 09 00.6**	**+2.0**
	comp=Z,3.6nm,0.6s,baz=239,slow=5.0,SNR=17						
PLCA	**Paso Flores**	**82.58**	**134**	P	**P**	**13 08 56.2**	**-2.4**
PLCA				AmB	AmB	13 09 01.2	
	comp=Z,24nm,1.4s						
LC01	**Cunco**	**82.84**	**132**	P	**P**	**13 09 00.9**	**+1.1**
LC01				AmB	AmB	13 09 03.9	
	comp=Z,9.0nm,0.8

ARCES PKP **PKiKP** **13 16 02.0 -1.0**
comp=Z,2.7nm,0.9s,baz=60,slow=2.6,SNR=5.4
ARCES SKP 13 19 03.8
comp=Z,2.2nm,0.7s,baz=38,slow=1.6,SNR=7.4
FIA1 FINESS Array S 146.25 337 PKPdf 13 16 11.4 -0.1
FINES FINESS Array B 146.25 337 PKPbc **PKPdf 13 16 12.2 +0.8**
comp=Z,6.5nm,0.6s,baz=41,slow=4.4,SNR=62
FINES FINESS Array B 146.25 337 PKPdf 13 16 11.3 -0.1
NB2 NORSAR Subarra150.34 349 PKP **PKPbc 13 16 22.9 -0.8**
comp=Z,0.9nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B150.34 349 PKPbc **PKPbc 13 16 22.9 -0.8**
comp=Z,2.5nm,0.6s,baz=14,slow=4.1,SNR=15
AKASG Malin Array Be 151.58 319 PKPbc **PKPbc 13 16 25.6 -1.3**
comp=Z,0.4nm,0.3s,baz=51,slow=3.2,SNR=4.2
DBIC Dimbokro 154.09 170 PKPbc **PKPbc 13 16 33.6 +0.2**
comp=Z,1.5nm,0.4s,baz=158,slow=3.5,SNR=5.1
DBIC PKPab **PKPab 13 16 48.8 +0.6**
comp=Z,4.7nm,0.9s,baz=170,slow=4.6,SNR=4.0
DBIC Dimbokro 154.09 170 PKPbc 13 16 31.5 -2.0
CLL Collm 158.70 337 *e*PKPab **PKPab 13 17 07.0 -0.2**
TORD Torodi Ar. Bea 160.79 186 PKPab **PKPab 13 17 16.5 -0.6**
comp=Z,1.7nm,0.5s,baz=187,slow=2.9,SNR=21
TORD Torodi Ar. Bea 160.79 186 PKPab 13 17 16.3 -0.8
STAL STALIGIAL 162.89 328 PKPdf 13 16 33.0 -1.6

*JMA **30** 13:23:15.8±0.2,23°.85N×123°.33E, h26km±2km, M3.3*
*IDC **30** 13:23:28.9±1.9,21°.12N×121°.40E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/45, mbtmp3.4/4, MS2.9/1, Ms1 2.9/1, ms1mx2.3/32, Error ellipse: s-maj=67.0km s-min=24.0km az=51.0*
ISC 30 13:23:14.7±1.7, 23°.83N±0°.09×123°.28E±0°.06, h29km±12km, n12, σ1ᵗ15/18, mb3.7/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.53**	**65**	P		**Pb**		**13 23 25.6**	**+0.1**
HATJ				*e*S		**Sb**		**13 23 32.5**	**-0.4**
IRIF	**Iriomote-Funau**	**0.65**	**39**	P		**Pb**		**13 23 27.4**	**-0.1**
IRIF				S		**Sb**		**13 23 35.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.67**	**339**	P		**Pn**		**13 23 28.8**	**+0.5**
YOJ				S		**Sn**		**13 23 37.9**	**+0.1**
JYNG	**Yonagunijimaku**	**0.69**	**334**	P		**Pn**		**13 23 28.9**	**+0.4**
JYNG				S		**Sb**		**13 23 38.2**	**+0.9**
JKRS	**Kuro-shima**	**0.78**	**59**	P		**Pb**		**13 23 30.1**	**+0.4**
JKRS				S		**Sn**		**13 23 40.2**	**-0.3**
JIJ	**Ishigaki jima**	**0.95**	**56**	P		**Pb**		**13 23 32.5**	**-0.1**
JIJ				*e*S		**Sn**		**13 23 44.4**	**-0.3**
JISG	**Ishigakijimahi**	**1.20**	**51**	P		**Pn**		**13 23 36.0**	**+0.4**
JISG				S		**Sb**		**13 23 52.0**	**0.0**
JTJ	**Tarama**	**1.53**	**58**	P		**Pb**		**13 23 42.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**23.31**	**261**	P		**P**		**13 28 17.0**	**-3.4**
	0.2nm,0.5s,baz=74,slow=9.5,SNR=2.9								
AAK	**Ala-Archa**	**44.24**	**307**	LR		LR		13 52 50.3	
	comp=Z,14nm,18.6s,baz=90,slow=40								
WRA	**Warramunga Arr**	**44.83**	**165**	P		**P**		**13 31 27.3**	**+0.9**
	0.7nm,0.7s,baz=347,slow=9.0,SNR=4.9								
ASAR	**Alice Springs**	**48.33**	**167**	P		**P**		**13 31 55.8**	**+1.9**
	0.6nm,0.7s,baz=352,slow=6.8,SNR=17								

IDC 30 13:27:21.7±4.8, 6°.59S×103°.65E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/51, mbtmp3.4/3, Error ellipse: s-maj=194.5km s-min=33.6km az=51.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**30.93**	**266**	T		T		14 06 18.9	
	baz=90								
H08S3	**Diego Garcia H**	**30.94**	**266**	T		T		14 06 21.4	
	baz=90,SNR=3.0								
H08S1	**Diego Garcia H**	**30.95**	**266**	T		T		14 06 14.9	
	baz=90								
WRA	**Warramunga Arr**	**32.61**	**117**	P		P		13 33 54.8	-0.6
	0.2nm,0.6s,baz=287,slow=10,SNR=1.6								
SONM	**Songino Array**	**54.24**	**2**	P		P		13 36 49.3	-0.2
	0.4nm,0.6s,baz=185,slow=8.0,SNR=2.9								
MKAR	**Makanchi Array**	**56.44**	**343**	P		P		13 37 04.8	-0.4
	0.3nm,0.6s,baz=151,slow=7.7,SNR=3.3								
TXAR	**Lajitas Array**	**145.72**	**45**	PKPbc		PKPbc		13 47 03.6	+0.1
	0.2nm,0.8s,baz=324,slow=4.5,SNR=3.2								

*IDC **30** 13:43:56.1±1.1, 49°.69N×88°.76E, h20km±5km, mb3.5/5, mb1 3.6/10, mb1mx3.4/55, mbtmp3.7/10, ML3.8/5, MS2.7/4, Ms1 2.7/4, ms1mx2.4/30, Error ellipse: s-maj=19.6km s-min=17.4km az=87.0*
*NNC **30** 13:44:02.2±2.0, 49°.86N×87°.56E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=18.9km s-min=11.3km az=97.0*
*MOS **30** 13:44:03.2±1.8, 49°.90N×87°.43E, h22km, mb4.2/1, Error ellipse: s-maj=10.2km s-min=5.9km az=57.6*
*SOME **30** 13:44:03.2, 49°.87N×87°.88E, h0km*
*ASRS **30** 13:44:03.0±0.2, 50°.N±1°×87°.7E±0°.9, h10km, MLh4.5/20, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
*NEIC **30** 13:44:06.8±1.2, 49°.89N±0°.07×87°.41E±0°.06, h45km±8km, mb4.0/8, Error ellipse: s-maj=11.3km s-min=2.6km az=155.0*
ISC 30 13:44:01.0±0.7, 49°.84N±0°.02×87°.72E±0°.02, h9km±4km, n117, σ2ᵗ35/185, mb3.8/8, 16C-12D, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DGZ	**Jazzator, Alta**	**0.23**	**234**	Pg		**Pg**		**13 44 05.3**	**-0.5**
DGZ				Sg		**Sg**		**13 44 08.4**	**-0.6**
CUR	**Chagan-Uzun**	**0.49**	**57**	Pg		**Pb**		**13 44 11.5**	**-0.3**
CUR				Sg		**Sb**		**13 44 19.2**	**+0.1**
AKAR	**Aktash**	**0.49**	**353**	Pg		**Pb**		**13 44 12.0**	**+0.2**
AKAR				Sg		**Sb**		**13 44 19.8**	**+0.6**
CHBI	**Chibit, Altay**	**0.50**	**344**	Pg		**Pb**		**13 44 12.0**	**+0.1**
CHBI				Sg		**Sb**		**13 44 19.7**	**+0.3**
ULGR	**Ulagan, Altay**	**0.80**	**11**	Pg		**Pb**		**13 44 17.4**	**+0.2**
ULGR				Sg		**Sn**		**13 44 29.3**	**-1.5**
TUNR	**Tungur**	**0.95**	**290**	Pg		**Pg**		**13 44 18.9**	**-0.4**
TUNR				Sg		**Sg**		**13 44 32.4**	**+0.7**
TEL	**Teeli**	**1.98**	**52**	Pg		**Pg**		**13 44 37.9**	**-1.1**
TEL				Sg		**Sg**		**13 45 06.6**	**+2.0**
ARTR	**Artybash**	**1.98**	**352**	Pg		**Pg**		**13 44 38.5**	**-0.6**
ARTR				Sg		**Sg**		**13 45 06.7**	**+1.9**
GALT	**Gorno-Altaysk,**	**2.40**	**333**	Pg		**Pg**		**13 44 45.9**	**-1.1**
GALT				Sg		**Sg**		**13 45 19.6**	**+1.4**
TASR	**Tashtagol**	**2.93**	**2**	Pg		**Pb**		**13 44 54.6**	**+1.2**
TASR				Sg		**Sg**		**13 45 33.0**	**-2.0**
ZSN	**Zaisan**	**3.05**	**219**	*e*P		**Pb**		**13 44 56.0**	**+0.7**
	56nm,0.3s								
ZSN				*e*S		**Sb**		**13 45 33.8**	**+1.2**
	510nm,0.7s								
ZSN	**Zaisan**	**3.05**	**219**	*e*PN		**Pb**		**13 44 56.0**	**+0.7**
ZSN				*e*S		**Sb**		**13 45 33.8**	**+1.2**
ELT	**Eltsovka**	**3.55**	**345**	Pn		**Pn**		**13 44 59.3**	**+3.1**
ELT				Pg		**Pg**		**13 45 07.3**	**-1.7**
ELT				Sg		**Sg**		**13 45 54.1**	**-0.9**
TBTR	**Tabat**	**3.62**	**30**	Pg		**Pg**		**13 45 09.1**	**-1.3**
TBTR				Sg		**Sg**		**13 45 57.5**	**+0.3**
DJO	**Djoy, Khakassi**	**3.68**	**35**	Pg		**Pg**		**13 45 09.5**	**-1.9**
DJO				Sg		**Sg**		**13 46 00.2**	**+1.2**
DJOS	**Djoyskaya Sosn**	**3.75**	**37**	Pg		**Pg**		**13 45 14.7**	**+1.8**
DJOS				Sg		**Sg**		**13 46 02.0**	**+0.5**
VEH	**Verkhnyaya Baz**	**3.79**	**24**	Pn		**Pb**		**13 45 04.3**	**-3.7**
VEH				Pg		**Pg**		**13 45 12.4**	**-1.1**
VEH				Sg		**Sg**		**13 46 00.4**	**-2.1**
CERR	**Cheremushki**	**3.81**	**36**	Pn		**Pn**		**13 45 03.1**	**+3.3**
CERR				Pg		**Pg**		**13 45 13.6**	**-0.3**
CERR				Sg		**Sg**		**13 46 04.2**	**+1.0**
BLRR	**Bol'shaya Rech**	**4.35**	**41**	Pn		**Pn**		**13 45 10.1**	**+2.8**
BLRR				Pg		**Pg**		**13 45 22.5**	**-1.9**
BLRR				Sg		**Sg**		**13 46 19.4**	**-1.3**
ZAA0	**Zalesovo Array**	**4.49**	**338**	⇓Pn		**Pn**		**13 45 11.1**	**+1.9**
	1.9nm,0.4s								
ZAA0				⇑Pg		**Pb**		**13 45 22.0**	**+2.0**
	4.7nm,0.5s								
ZAA0				⇓Lg		Lg		13 46 23.8	
	27nm,0.6s								
ZAA0	**Zalesovo Array**	**4.49**	**338**			**Pn**		**13 45 10.8**	**+1.7**
ZALV	**Zalesovo Beam**	**4.49**	**338**	Pn		**Pn**		**13 45 10.9**	**+1.8**
	7.9nm,0.3s,baz=157,slow=14,SNR=111								
ZALV				Sn		**Sn**		**13 46 04.7**	**+3.2**
	16nm,0.3s,baz=165,slow=25,SNR=7.6								
ZALV				Lg		Lg		13 46 27.6	
	18nm,0.3s,baz=156,slow=28,SNR=7.1								
ZALV				LR		LR		13 47 05.7	
	comp=Z,59nm,18.0s,baz=112,slow=39								
ZALV	**Zalesovo Beam**	**4.49**	**338**	*e*PN		**Pn**		**13 45 11.2**	**+2.1**
ZALV				pmax		pmax			
	comp=Z,19nm,0.3s								
ZALV	**Zalesovo Beam**	**4.49**	**338**			**Pn**		**13 45 10.6**	**+1.5**
ARDR	**Aradan**	**4.52**	**50**	Pn		**Pn**		**13 45 12.5**	**+2.9**
ARDR				Pg		**Pg**		**13 45 27.1**	**-0.5**
ARDR				Sg		**Sg**		**13 46 25.8**	**-0.2**
ABNR	**Abakan**	**4.53**	**29**	Sg		**Sg**		**13 46 25.4**	**-0.8**
POMOR	**Pomortsevo, Ku**	**4.64**	**351**	Pn		**Pn**		**13 45 06.9**	**-4.2**
POMOR				Pg		**Pg**		**13 45 27.5**	**-2.3**
POMOR				Sg		**Sg**		**13 46 31.4**	**+1.7**
MK31	**Makanchi Array**	**4.73**	**232**	⇓Pn		**Pn**		**13 45 14.6**	**+2.1**
MK31				⇑Pg		**Pg**		**13 45 29.2**	**-2.4**
	comp=Z,25nm,0.5s,baz=54,slow=16,SNR=16								
MK31				⇑Lg		Lg		13 46 30.5	
	comp=Z,109nm,0.7s,baz=53,slow=28,SNR=8.6								
MK31	**Makanchi Array**	**4.73**	**232**	*i*PN		**Pn**		**13 45 14.3**	**+1.8**
MK31	**Makanchi Array**	**4.73**	**232**	Pn		**Pn**		**13 45 14.0**	**+1.5**
MKAR	**Makanchi Array**	**4.73**	**232**	Pn		**Pn**		**13 45 14.4**	**+1.9**
	comp=Z,5.4nm,0.3s,baz=58,slow=13,SNR=215								
MKAR				Pg		**Pg**		**13 45 30.3**	**-1.3**
	comp=Z,18nm,0.3s,baz=53,slow=17,SNR=43								
MKAR				Sn		**Sn**		**13 46 11.6**	**+4.2**
	comp=Z,11nm,0.3s,baz=52,slow=19,SNR=4.1								
MKAR				Lg		Lg		13 46 29.8	
	comp=Z,22nm,0.3s,baz=52,slow=30,SNR=6.8								
MKAR	**Makanchi Array**	**4.73**	**232**	Pn		**Pn**		**13 45 15.1**	**+2.6**
MKAR				Pg		**Pg**		**13 45 30.5**	**-1.1**
MKAR				Sg		**Sg**		**13 46 31.4**	**-1.4**
MKAR	**Makanchi Array**	**4.73**	**232**	Pn		**Pn**		**13 45 14.2**	**+1.7**
SALR	**Pechorkino, Sa**	**4.75**	**346**	Pn		**Pn**		**13 45 15.1**	**+2.4**
SALR				Pg		**Pg**		**13 45 28.7**	**-3.3**
SALR				Sg		**Sg**		**13 46 33.2**	**-0.2**
ERNS	**Erzin**	**4.81**	**82**	Pn		**Pn**		**13 45 12.7**	**-0.9**
ERNS				Pg		**Pb**		**13 45 28.9**	**+3.4**
ERNS				Sg		**Sg**		**13 46 32.0**	**-3.3**
SEM	**Semipalatinsk**	**4.84**	**280**	*e*P		Pn		13 45 18.9	+4.8
	comp=Z,19nm,0.2s								
SEM				*e*S		**Sn**		**13 46 13.0**	**+2.6**
	comp=Z,88nm,0.6s								
SEM	**Semipalatinsk**	**4.84**	**280**	*e*PN		Pn		13 45 18.9	+4.8
SEM				*e*S		**Sn**		**13 46 13.0**	**+2.6**
MAKZ	**Makanchi**	**4.88**	**234**	Pn		**Pn**		**13 45 16.3**	**+1.8**
MAKZ				Pg		**Pg**		**13 45 32.3**	**-2.2**
MAKZ				Sg		**Sg**		**13 46 34.6**	**-3.1**
MAKZ	**Makanchi**	**4.88**	**234**	⇓Pn		**Pn**		**13 45 16.4**	**+1.8**
	comp=Z,3.8nm,0.2s								
MAKZ				⇑Pg		**Pg**		**13 45 32.1**	**-2.4**
	comp=Z,30nm,0.6s								
MAKZ				⇓Lg		Lg		13 46 33.0	
	comp=Z,127nm,0.8s								
MAKZ	**Makanchi**	**4.88**	**234**	PN		**Pn**		**13 45 16.4**	**+1.8**
MAKZ	**Makanchi**	**4.88**	**234**	Pn		**Pn**		**13 45 16.4**	**+1.8**
SHRR	**Shira**	**4.90**	**17**	Pn		**Pn**		**13 45 18.1**	**+3.3**
SHRR				Pg		**Pg**		**13 45 30.7**	**-4.1**
SHRR				Sg		**Sg**		**13 46 35.4**	**-2.8**
KHAR	**Kharino, NSO,**	**5.42**	**334**	Pn		**Pn**		**13 45 23.7**	**+1.9**
KHAR				Pg		**Pg**		**13 45 44.7**	**0.0**
KHAR				Sg		**Sg**		**13 46 57.8**	**+3.1**
KEM	**Kemerovo**	**5.61**	**350**	Sg		**Sg**		**13 47 03.6**	**+2.8**
BSTK	**Bystrovka, Nov**	**5.67**	**329**	Pn		**Pn**		**13 45 26.9**	**+1.6**
BSTK				Pg		**Pg**		**13 45 46.7**	**-2.8**
BSTK				Sg		**Sg**		**13 47 06.0**	**+3.2**
NVS	**Novosibirsk**	**5.71**	**333**	Pn		**Pn**		**13 45 27.3**	**+1.4**
NVS				Pg		**Pg**		**13 45 47.9**	**-2.5**
NVS				Sg		**Sg**		**13 47 02.4**	**-1.9**
NVSII	**Novosibirsk**	**5.71**	**333**	Pn		**Pn**		**13 45 28.1**	**+2.2**
NVSII				Pg		**Pg**		**13 45 47.7**	**-2.7**
NVSII				Sg		**Sg**		**13 47 06.0**	**+1.7**
NHES	**Novosibirsk, N**	**5.80**	**332**	Pg		**Pg**		**13 45 48.7**	**-3.4**
NHES				Sg		**Sg**		**13 47 08.6**	**+1.4**
TDJR	**Todzha**	**5.87**	**61**	Pn		**Pn**		**13 45 30.7**	**+2.6**
TDJR				Pg		**Pg**		**13 45 54.7**	**+1.3**
TDJR				Sg		**Sg**		**13 47 02.2**	**-7.1**
KURK	**Kurchatov**	**5.90**	**282**	⇑Pn		**Pn**		**13 45 29.0**	**+0.6**
	comp=Z,12nm,0.5s								
KURK				⇑Sn		**Sn**		**13 46 36.5**	**+0.4**
	comp=Z,74nm,0.7s								
KURK				⇑Lg		Lg		13 47 04.8	
	comp=Z,108nm,0.6s								
KURK	**Kurchatov**	**5.90**	**282**	PN		**Pn**		**13 45 29.7**	**+1.2**
KURK	**Kurchatov**	**5.90**	**282**			**Pn**		**13 45 29.7**	**+1.2**
WMQ	**Urumqi**	**6.02**	**180**	PN		Pn		13 45 35.2	+5.0
WMQ	**Urumqi**	**6.02**	**180**	Pn		Pn		13 45 35.2	+5.0
KNGR	**Kungurtug, Tuv**	**6.34**	**79**	Pn		**Pn**		**13 45 35.1**	**+0.5**
KNGR				Pg		**Pg**		**13 46 01.5**	**-0.8**
KNGR				Sg		**Sg**		**13 47 25.2**	**+0.9**
ORY	**Orie**	**6.87**	**38**	Pn		Pn		13 45 47.7	+5.9
ORY				Pg		**Pg**		**13 46 11.7**	**-0.8**
ORY				Sg		**Sg**		**13 47 40.0**	**-1.3**
KAPS	**Kapalarasan**	**7.26**	**234**	*e*P		**Pn**		**13 45 48.2**	**+1.0**
	comp=Z,10nm,0.3s								
KAPS				*e*S		**Sn**		**13 47 02.9**	**-6.8**
	comp=Z,34nm,0.3s								
KAPS	**Kapalarasan**	**7.26**	**234**	*e*PN		**Pn**		**13 45 48.2**	**+1.0**
DJR	**Jarkent**	**7.72**	**227**	*e*P		**Pn**		**13 45 58.0**	**+4.5**
	comp=Z,7.5nm,0.4s								
DJR				*e*S		**Sn**		**13 47 19.8**	**-1.2**
	comp=Z,12nm,0.6s								
DJR	**Jarkent**	**7.72**	**227**	*e*P		**Pn**		**13 45 58.0**	**+4.5**
DJR				*e*S		**Sn**		**13 47 19.8**	**-1.2**
MNBS	**Baschi**	**8.59**	**231**	*e*P		**Pn**		**13 46 06.2**	**+0.7**
	comp=Z,4.1nm,0.4s								
MNBS				*e*S		Sn		13 47 33.9	-8.6
	comp=Z,16nm,0.5s								
MNBS	**Baschi**	**8.59**	**231**	*e*P		**Pn**		**13 46 06.2**	**+0.7**
MNBS				*e*S		Sn		13 47 33.9	-8.5
PDGK	**Podgornoye**	**8.63**	**224**	⇑Pn		**Pn**		**13 46 05.2**	**-0.8**
	comp=Z,6.2nm,0.9s								
PDGK				⇓Lg		Lg		13 48 34.5	
	comp=Z,29nm,0.8s								
PDGK	**Podgornoye**	**8.63**	**224**	P		**Pn**		**13 46 05.0**	**-1.0**
SHLS	**Shalkode**	**8.77**	**224**	*e*P		**Pn**		**13 46 12.0**	**+3.9**
	comp=Z,3.6nm,0.2s								
SHLS				*e*S		**Sn**		**13 47 43.7**	**-3.4**
	comp=Z,13nm,0.6s								
SHLS	**Shalkode**	**8.77**	**224**	*e*P		**Pn**		**13 46 12.0**	**+3.9**
SHLS				*e*S		**Sn**		**13 47 43.7**	**-3.4**
KPKS	**Kokpek**	**8.89**	**228**	*e*P		**Pn**		**13 46 13.4**	**+3.7**
	comp=Z,8.2nm,0.1s								
KPKS				*e*S		**Sn**		**13 47 46.0**	**-3.9**
	comp=Z,26nm,0.4s								
KPKS	**Kokpek**	**8.89**	**228**	*e*P		**Pn**		**13 46 13.4**	**+3.7**
KPKS				*e*S		**Sn**		**13 47 46.1**	**-3.9**
UZB	**Uzynbulak**	**8.98**	**225**	*e*P		**Pn**		**13 46 13.3**	**+2.4**
	comp=Z,4.1nm,0.4s								
UZB				*e*S		**Sn**		**13 47 46.6**	**-5.6**
	comp=Z,14nm,1.0s								
UZB	**Uzynbulak**	**8.98**	**225**	*e*P		**Pn**		**13 46 13.3**	**+2.4**
UZB				*e*S		**Sn**		**13 47 46.6**	**-5.6**
KURS	**Kuram**	**9.13**	**230**	*e*P		**Pn**		**13 46 13.6**	**+0.8**
KURS				*e*S		Sn		13 47 46.8	-8.9
KURS	**Kuram**	**9.13**	**230**	*e*P		**Pn**		**13 46 13.6**	**+0.8**
SATY	**Saty**	**9.34**	**227**	*e*P		**Pn**		**13 46 19.5**	**+3.7**
	comp=Z,2.6nm,0.2s								
SATY				*e*S		**Sn**		**13 47 56.5**	**-4.4**
	comp=Z,16nm,0.5s								
SATY	**Saty**	**9.34**	**227**	*e*P		**Pn**		**13 46 19.5**	**+3.7**
SATY				*e*S		**Sn**		**13 47 56.5**	**-4.4**
PRZ	**Przheval'sk**	**9.79**	**225**	P		**Pn**		**13 46 24.5**	**+2.5**
PRZ	**Przheval'sk**	**9.79**	**225**	Pn		**Pn**		**13 46 24.5**	**+2.5**
OTUK	**Ortayu**	**10.23**	**267**	⇓Pn		**Pn**		**13 46 27.4**	**-0.4**
	comp=Z,3.6nm,0.5s								
OTUK				⇓Sn		**Sn**		**13 48 22.4**	**-0.1**
	comp=Z,2.2nm,0.5s								
OTUK				⇑Lg		Lg		13 49 22.6	
	comp=Z,50nm,1.1s								
OTUK	**Ortayu**	**10.23**	**267**	P		**Pn**		**13 46 27.4**	**-0.4**
OTUK				S		**Sn**		**13 48 22.4**	**-0.1**
TLY	**Talaya**	**10.26**	**74**	Lg		Lg		13 49 17.5	
	comp=Z,0.0nm,0.3s,baz=234,slow=19,SNR=3.2								
TLY				LR		LR		13 50 06.5	
	comp=Z,9.1nm,20.0s,baz=3.0,slow=38								
KDJ	**Kajisay**	**10.63**	**228**	P		**Pn**		**13 46 35.3**	**+1.8**
KDJ	**Kajisay**	**10.63**	**228**	Pn		**Pn**		**13 46 35.3**	**+1.8**
TKM2	**Tokmak 2**	**10.85**	**235**	⇓Pn		**Pn**		**13 46 40.1**	**+3.5**
	comp=Z,2.3nm,0.7s								
TKM2				⇑Lg		Lg		13 49 45.9	
	comp=Z,16nm,0.9s								
BOOM	**Boomskoye usch**	**10.98**	**232**	P		**Pn**		**13 46 38.9**	**+0.6**
BOOM	**Boomskoye usch**	**10.98**	**232**	Pn		**Pn**		**13 46 38.9**	**+0.6**
BVAR	**Borovoye Array**	**11.28**	**293**	Pn		**Pn**		**13 46 42.1**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=314,slow=28,SNR=14								
BVAR				Sn		**Sn**		**13 48 46.0**	**-2.3**
	comp=Z,1.2nm,0.3s,baz=74,slow=21,SNR=4.6								
BRVK	**Borovoye**	**11.35**	**293**	⇑Pn		**Pn**		**13 46 43.4**	**+0.3**
	comp=Z,3.7nm,1.0s								
BRVK				⇑Sn		**Sn**		**13 48 49.6**	**-0.2**
	comp=Z,6.0nm,0.5s								
BRVK				⇑Lg		Lg		13 49 58.8	
	comp=Z,12nm,0.9s								
BRVK	**Borovoye**	**11.35**	**293**	*i*P		**Pn**		**13 46 46.2**	**+3.1**
BRVK	**Borovoye**	**11.35**	**293**			**Pn**		**13 46 43.2**	**+0.1**
AAK	**Ala-Archa**	**11.64**	**237**	Pn		**Pn**		**13 46 49.2**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=90,slow=8.0,SNR=6.9								
AAK	**Ala-Archa**	**11.64**	**237**	⇑Pn		**Pn**		**13 46 51.5**	**+4.2**
	comp=Z,2.4nm,0.7s								
AAK				⇓Lg		Lg		13 50 08.6	
	comp=Z,15nm,0.8s								
SONM	**Songino Array**	**12.47**	**92**	Lg		Lg		13 50 24.2	
	comp=Z,0.1nm,0.3s,baz=274,slow=20,SNR=4.1								
KK31	**Karatay Array**	**13.62**	**247**	⇓Pn		**Pn**		**13 47 13.0**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=55,slow=13,SNR=14								
KK31				⇑Lg		Lg		13 51 12.6	
	comp=Z,9.8nm,0.8s,baz=43,slow=30,SNR=6.1								
KK31	**Karatay Array**	**13.62**	**247**	P		**Pn**		**13 47 12.3**	**-1.9**
KK31	**Karatay Array**	**13.62**	**247**			**Pn**		**13 47 12.3**	**-1.9**
KKAR	**Karatay Array**	**13.62**	**247**	P		**Pn**		**13 47 11.9**	**-2.4**
KKAR	**Karatay Array**	**13.62**	**247**			**Pn**		**13 47 12.1**	**-2.1**
KKAR	**Karatay Array**	**13.62**	**247**	Pn		**Pn**		**13 47 11.9**	**-2.4**
GAR	**Garm**	**16.45**	**235**	Pn		**Pn**		**13 47 51.8**	**-0.2**
GAR				lAmb		lAmb		13 48 05.1	
	comp=Z,7.4nm,1.0s								
ABKAR	**Akbulak array**	**18.00**	**279**	P		**Pn**		**13 48 11.1**	**-0.1**
ABKAR	**Akbulak array**	**18.00**	**279**			**Pn**		**13 48 10.5**	**-0.7**
ARU	**Arti**	**18.60**	**302**	*c i*P		**Pn**		**13 48 21.5**	**+3.1**
ARU				pmax		pmax			
	comp=Z,9.0nm,1.2s								
ARU	**Arti**	**18.60**	**302**	P		**P**		**13 48 17.2**	**-1.0**
ARU				lAmb		lAmb		13 48 26.8	
	comp=Z,11nm,1.2s								
AKTO	**Aktyubinsk**	**19.00**	**283**	P		**P**		**13 48 22.3**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=81,slow=14,SNR=6.8								
KIRV	**Kirov**	**23.75**	**306**	*i*P		**P**		**13 49 14.0**	**+0.8**
YAK	**Yakutsk**	**25.97**	**46**	*i*P		**P**		**13 49 35.7**	**+2.3**
YAK				pmax		pmax			
	comp=Z,3.0nm,0.9s								
USRK	**Ussuriysk Ar.**	**30.35**	**83**	LR		LR		14 03 18.1	
	comp=Z,32nm,21.0s,baz=202,slow=39								
KSRS	**Korea Array**	**31.24**	**98**	LR		LR		14 03 50.7	
	comp=Z,22nm,18.1s,baz=130,slow=39								
FINES	**FINESS Array B**	**35.30**	**313**	P		**P**		**13 50 55.6**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=38,slow=9.6,SNR=3.3								
AKASG	**Malin Array Be**	**36.55**	**294**	P		**P**		**13 51 06.1**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=64,slow=8.9,SNR=4.1								
AKASG				pP		**pP**		**13 51 11.4**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=62,slow=9.2,SNR=3.1								
NC405	**NORSAR Array S**	**42.08**	**315**	P		**P**

	baz=249							
NSK	**Sanguang**	**0.60**	**251**	P	Pb	13 45 14.6	-0.2	
	baz=250							
NSK				S	Sb	13 45 23.6	+0.4	
	baz=250							
NNSB	**Datong**	**0.71**	**231**	*e*P	Pg	13 45 15.9	-0.3	
	baz=231							
NNSH	**Datong**	**0.71**	**231**	*e*P	Pb	13 45 16.7	+0.2	
	baz=231							
NNSH				*e*S	Sb	13 45 26.9	+0.7	
	baz=231							
NACB	**Ninganchiao**	**0.78**	**207**	*e*P	Pg	13 45 17.6	-0.1	
	baz=207							
NACB				*e*S	Sb	13 45 29.1	+0.8	
	baz=207							
ETLH	**Xiulin Townshi**	**0.81**	**215**	*e*P	Pb	13 45 18.9	+0.6	
	baz=214							

JMA 30 13:45:37.5±0.2, 23°.85N×123°.32E, h26km±3km, M2.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.49**	**65**	P	Pb	13 45 47.3	-0.3
HATJ				S	Sb	13 45 54.5	+0.1
IRIF	**Iriomote-Funau**	**0.61**	**38**	P	Pb	13 45 49.2	-0.4
IRIF				S	Sb	13 45 57.7	-0.2
YOJ	**Yonaguni jima**	**0.67**	**335**	P	Pb	13 45 50.5	-0.1
YOJ				*e*S	Sb	13 45 59.7	+0.1
JYNG	**Yonagunijimaku**	**0.69**	**330**	P	Pb	13 45 50.7	-0.2
JYNG				S	Sb	13 45 59.7	-0.4
JKRS	**Kuro-shima**	**0.74**	**58**	P	Pb	13 45 51.6	-0.2
JKRS				*e*S	Sn	13 46 02.3	-0.4
JIJ	**Ishigaki jima**	**0.91**	**56**	P	Pn	13 45 54.5	-0.1
JIJ				*e*S	Sb	13 46 06.1	-0.3
JISG	**Ishigakijimahi**	**1.17**	**51**	P	Pn	13 45 57.7	-0.4
JISG				S	Sb	13 46 13.9	+0.2
JTJ	**Tarama**	**1.49**	**58**	P	Pb	13 46 04.1	-0.4

*IDC **30** 14:27:41.8±1.3, 1°.61N×92°.31E, h0km, mb3.6/7, mb1 3.8/10, mb1mx3.6/32, mbtmp3.7/10, ML3.9/3, MS3.0/2, Ms1 3.1/2, ms1mx2.5/30, Error ellipse: s-maj=39.9km s-min=20.4km az=43.0*

*NEIC **30** 14:27:42.3±1.5, 1°.5N±0°.1×92°.36E±0°.04, h10km±2km, mb4.3/6, Error ellipse: s-maj=22.1km s-min=5.5km az=171.0*

ISC 30 14:27:46.5±0.9, 1°.7N±0°.1×92°.38E±0°.07, h35km, n37, σ1§37/32, mb3.8/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**4.01**	**79**	P	**Pn**	**14 28 44.7**	**-0.8**
	5µm204nm,0.6s						
MLSI	**Meulaboh, Aceh**	**4.78**	**57**	P	**Pn**	**14 28 55.7**	**-0.4**
	124nm,0.8s						
BSI	**Banda Aceh**	**4.79**	**37**	P	**Pn**	**14 28 52.3**	**-4.0**
	462nm,0.6s						
TPTI		**5.05**	**72**	P	**Pn**	**14 28 59.4**	**-0.4**
	1µm50nm,0.5s						
GSI	**Gunungsitoli**	**5.21**	**94**	P	**Pn**	**14 28 58.0**	**-3.9**
	1µm79nm,0.5s						
GSI	**Gunungsitoli**	**5.21**	**94**		**Pn**	**14 29 00.6**	**-1.3**
KCSI	**Kotacane, Aceh**	**5.69**	**71**	P	**Pn**	**14 29 09.3**	**+0.6**
	133nm,0.7s						
LHMI	**Lhok Sumawe**	**5.77**	**52**	P	**Pn**	**14 29 09.2**	**-0.5**
TSI	**Tuntungan**	**6.44**	**73**	P	**Pn**	**14 29 19.4**	**+0.5**
	115nm,0.6s						
RPSI	**Rantau Prapat**	**6.62**	**81**		**Pn**	**14 29 20.7**	**-0.7**
RPSI	**Rantau Prapat**	**6.62**	**81**		**Pn**	**14 29 20.8**	**-0.7**
RPSI					**Sn**	**14 30 35.6**	**-0.1**
PSI	**Prapat**	**6.64**	**80**	Pn	**Pn**	**14 29 20.8**	**-1.0**
	1.2nm,0.3s,baz=181,slow=2.7,SNR=13						
PSI				Sn	**Sn**	**14 30 35.6**	**-0.7**
	1.7nm,0.3s,baz=180,slow=20,SNR=3.6						
PSI				LR	LR	14 32 26.4	
	comp=Z,230nm,18.0s,baz=268,slow=42						
MNSI	**Mandailing Nat**	**7.25**	**97**	P	Pn	14 29 24.4	-5.6
BKNI	**Bangkinang**	**8.76**	**99**	Pn	**Pn**	**14 29 49.4**	**-1.4**
KULM	**Kulim**	**9.01**	**66**		**Pn**	**14 29 53.5**	**-0.6**
IPM	**Ipoh**	**9.07**	**72**		**Pn**	**14 29 54.8**	**-0.4**
SDSI	**Sungai Dareh**	**9.41**	**106**	P	Pn	14 29 48.3	-11
	788nm6.5nm,0.7s						
PALK	**Pallekele**	**12.90**	**296**	Pn	**Pn**	**14 30 46.4**	**-1.2**
	0.4nm,0.3s,baz=270,slow=5.1,SNR=3.2						
PALK				Sn	Sn	14 32 55.6	-15
	1.2nm,0.3s,baz=265,slow=20,SNR=6.0						
CMAR	**Chiang Mai Arr**	**17.89**	**21**	Pn	**Pn**	**14 31 52.2**	**-0.5**
	0.3nm,0.3s,baz=217,slow=13,SNR=5.6						
CMAR				LR	LR	14 39 24.1	
	comp=Z,220nm,19.4s,baz=275,slow=39						
KSM	**Kuching**	**17.92**	**90**	P	**P**	**14 31 54.8**	**+1.2**
KSM				IAmb	IAmb	14 32 21.4	
	comp=Z,27nm,1.4s						
SBUM	**Sibu**	**19.84**	**87**	Pn	**Pn**	**14 32 15.2**	**-1.2**
H08S2	**Diego Garcia H**	**21.89**	**245**	T	T	14 54 34.3	
	baz=65,slow=75,SNR=5.5						
H08S3	**Diego Garcia H**	**21.89**	**245**	T	T	14 54 31.5	
	baz=65,slow=75,SNR=7.2						
H08S1	**Diego Garcia H**	**21.90**	**245**	T	T	14 54 36.5	
	baz=65,slow=75,SNR=4.4						
MKAR	**Makanchi Array**	**45.81**	**350**	P	**P**	**14 36 05.2**	**+0.3**
	comp=Z,1.6nm,1.1s,baz=201,slow=9.9,SNR=3.7						
WRA	**Warramunga Arr**	**46.41**	**120**	P	**P**	**14 36 09.5**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=296,slow=8.5,SNR=3.6						
WRA	**Warramunga Arr**	**46.41**	**120**	IAmb	IAmb	14 36 17.4	
	comp=Z,0.2nm,1.4s						
WR0	**Warramunga Arr**	**46.59**	**120**	P	**P**	**14 36 10.4**	**-1.1**
SONM	**Songino Array**	**47.57**	**13**	P	**P**	**14 36 20.6**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=189,slow=7.3,SNR=3.2						
SONM	**Songino Array**	**47.57**	**13**	IAmb	IAmb	14 36 28.5	
	comp=Z,1.2nm,1.0s						
ASAR	**Alice Springs**	**47.57**	**125**	P	**P**	**14 36 20.6**	**+1.4**
	comp=Z,0.1nm,0.6s,baz=292,slow=7.6,SNR=3.2						
ZALV	**Zalesovo Beam**	**52.49**	**354**	P	**P**	**14 36 56.5**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=166,slow=6.6,SNR=5.4						
ZALV	**Zalesovo Beam**	**52.49**	**354**	P	**P**	**14 36 56.1**	**+0.2**
TIXI	**Tiksi**	**73.63**	**11**	P	**P**	**14 39 16.1**	**+0.1**
TIXI				IAmb	IAmb	14 39 16.2	
	comp=Z,4.9nm,1.5s						
FINES	**FINESS Array B**	**77.39**	**333**	P	**P**	**14 39 37.7**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=113,slow=9.2,SNR=3.2						
GERES	**GERESS Array B**	**81.30**	**319**	P	**P**	**14 40 00.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=109,slow=6.2,SNR=3.7						
TXAR	**Lajitas Array**	**145.56**	**25**	PKPbc	**PKPab**	**14 47 23.7**	**+1.3**
	comp=Z,0.1nm,0.7s,baz=294,slow=6.5,SNR=2.0						

TAP 30 14:28:48.9, 24°.25N×121°.46E, h9km±1km, ML0.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.04**	**156**	*e*P	Pg	14 28 51.9	+1.0
	baz=155						
ETLH				S	Sg	14 28 52.8	+0.6
	baz=155						
NACB	**Ninganchiao**	**0.14**	**120**	P	Pg	14 28 53.0	+0.9
	baz=120						
NACB				S	Sg	14 28 55.4	+1.2
	baz=120						
NNSB	**Datong**	**0.20**	**338**	*e*P	Pg	14 28 53.7	+0.6
	baz=338						
NNSB				*e*S	Sg	14 28 57.6	+1.6
	baz=338						
NNSH	**Datong**	**0.20**	**338**	*e*S	Sg	14 28 57.3	+1.3
	baz=338						
FUSS	**Fushou**	**0.20**	**271**	*e*S	Sg	14 28 57.3	+1.1
	baz=270						
WHF	**Hehuan Shan**	**0.21**	**241**	*i* P	Pg	14 28 54.5	+1.1
	baz=239						
WHF				*i* S	Sg	14 28 57.6	+1.1
	baz=239						
NNS	**Nan Shan**	**0.21**	**337**	S	Sg	14 28 58.0	+1.7
	baz=338						
TDCB	**Techi**	**0.28**	**272**	*e*P	Pb	14 28 55.9	-0.3
	baz=271						
TDCB				*e*S	Sb	14 29 00.2	-0.8
	baz=271						

JMA 30 14:29:24.4±0.1, 24°.90N×123°.41E, h27km, M1.3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.57**	**220**	P	Pb	14 29 35.3	-0.5
YOJ				*e*S	Sb	14 29 42.6	-1.0
JYNG	**Yonagunijimaku**	**0.61**	**224**	P	Pb	14 29 36.2	-0.4
JYNG				*e*S	Sb	14 29 44.4	-0.5
IRIF	**Iriomote-Funau**	**0.63**	**153**	P	Pb	14 29 36.4	-0.5
IRIF				S	Sb	14 29 45.5	+0.1
JIJ	**Ishigaki jima**	**0.85**	**129**	P	Pb	14 29 39.9	-0.7
JIJ				*e*S	Sb	14 29 51.2	-0.5
JKRS	**Kuro-shima**	**0.86**	**140**	P	Pb	14 29 40.2	-0.5
JKRS				S	Sb	14 29 51.5	-0.2
JISG	**Ishigakijimahi**	**0.88**	**111**	P	Pn	14 29 40.5	-0.4
HATJ	**Hateruma jima**	**0.91**	**157**	*e*S	Sb	14 29 52.9	-0.5

*IDC **30** 15:13:43.7±2.2, 1°.52N×92°.50E, h0km, mb3.6/3, mb1 3.9/6, mb1mx3.5/47, mbtmp3.8/6, ML3.7/3, MS3.7/2, Ms1 3.7/2, ms1mx2.8/38, Error ellipse: s-maj=46.0km s-min=27.6km az=30.0*

*NEIC **30** 15:13:43.5±2.6, 1°.5N±0°.1×92°.38E±0°.09, h10km±2km, mb4.6/4, Error ellipse: s-maj=20.4km s-min=12.5km az=218.0*

*DJA **30** 15:13:51.4±1.3, 2°N±5°×9°3E±1°.0, h10km, M4.5/10, mB5.3/6, mb4.5/9, MLv4.4/10, Mw(mB)4.7/6*

ISC 30 15:13:45.5±0.9, 1°.64N±0°.09×92°.54E±0°.08, h10km, n32, σ1§17/27, mb3.8/5, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**3.87**	**78**	P	**Pn**	**15 14 44.6**	**-0.5**
MLSI	**Meulaboh, Aceh**	**4.66**	**56**	P	**Pn**	**15 14 57.7**	**+1.6**
TPTI		**4.91**	**71**	P	**Pn**	**15 14 59.9**	**+0.4**
TPTI				S	**Sn**	**15 15 53.3**	**-3.1**
GSI	**Gunungsitoli**	**5.05**	**94**	P	**Pn**	**15 15 01.2**	**-0.2**
GSI	**Gunungsitoli**	**5.05**	**94**		**Pn**	**15 15 00.1**	**-1.3**
KCSI	**Kotacane, Aceh**	**5.55**	**70**	P	**Pn**	**15 15 08.9**	**+0.6**
	0.3nm2µm55nm,0.6s						
LHMI	**Lhok Sumawe**	**5.67**	**51**	P	**Pn**	**15 15 10.5**	**+0.6**
	0.2nm2µm41nm,0.4s						
LHMI	**Lhok Sumawe**	**5.67**	**51**	Pn	**Pn**	**15 15 09.4**	**-0.5**
TSI	**Tuntungan**	**6.30**	**73**	P	Pb	15 15 33.9	-1.5
RPSI	**Rantau Prapat**	**6.47**	**81**		**Pn**	**15 15 21.1**	**+0.2**
RPSI	**Rantau Prapat**	**6.47**	**81**		**Pn**	**15 15 21.4**	**+0.5**
PSI	**Prapat**	**6.49**	**80**	Pn	**Pn**	**15 15 21.4**	**+0.2**
	0.9nm,0.3s,baz=0.1,slow=8.4,SNR=5.2						
PSI				Sn	**Sn**	**15 16 37.1**	**+1.7**
	1.6nm,0.3s,baz=180,slow=21,SNR=6.7						
MNSI	**Mandailing Nat**	**7.09**	**97**	P	**Pn**	**15 15 29.8**	**+0.4**
SISI	**Saibi**	**7.18**	**114**	P	**Pn**	**15 15 31.8**	**+1.1**
	0.1nm22nm,1.8s						
KULM	**Kulim**	**8.87**	**66**		**Pn**	**15 15 53.2**	**-0.7**
IPM	**Ipoh**	**8.93**	**71**	Pn	**Pn**	**15 15 55.9**	**+1.1**
SDSI	**Sungai Dareh**	**9.25**	**106**	P	**Pn**	**15 15 59.9**	**+0.8**
	5.4nm,1.1s						
KRJI	**Kerinci**	**9.66**	**112**	P	**Pn**	**15 16 06.1**	**+1.3**
PALK	**Pallekele**	**13.06**	**296**	Pn	**Pn**	**15 16 51.3**	**+0.1**
	0.2nm,0.3s,baz=272,slow=13,SNR=1.5						
PALK				Sn	Sn	15 19 00.5	-16
	0.4nm,0.3s,baz=356,slow=21,SNR=1.7						
PALK	**Pallekele**	**13.06**	**296**	Pn	Pn	15 16 47.3	-4.0
CMAR	**Chiang Mai Arr**	**17.86**	**20**	P	**Pn**	**15 17 56.7**	**+2.3**
	0.3nm,0.3s,baz=207,slow=12,SNR=1.4						
H08S2	**Diego Garcia H**	**22.02**	**245**	T	T	15 41 07.6	
	baz=64,slow=74						
H08S3	**Diego Garcia H**	**22.02**	**245**	T	T	15 41 05.3	
	baz=64,slow=74						
H08S1	**Diego Carcia H**	**22.03**	**245**	T	T	15 41 19.6	
	baz=64						
CHGR	**Chuyangaron**	**42.61**	**333**	P	P	15 21 39.6	-2.6
CHGR				IAmb	IAmb	15 21 41.6	
	comp=Z,8.0nm,0.5s						
MKAR	**Makanchi Array**	**45.86**	**350**	P	**P**	**15 22 07.9**	**-0.1**
WRA	**Warramunga Arr**	**46.26**	**120**	P	**P**	**15 22 11.1**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=301,slow=8.7,SNR=2.3						
WRA				LR	LR	15 41 03.6	
	comp=Z,92nm,21.5s,baz=45,slow=36						
WR0	**Warramunga Arr**	**46.44**	**120**	P	**P**	**15 22 12.3**	**-0.7**
WR0				IAmb	IAmb	15 22 25.3	
	comp=Z,7.4nm,1.4s						
SONM	**Songino Array**	**47.56**	**13**	P	**P**	**15 22 21.9**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=204,slow=8.1,SNR=4.5						
JNU	**Nakatsue**	**47.67**	**45**	LR	LR	15 43 03.7	
	comp=Z,81nm,19.2s,baz=180,slow=37						
ZALV	**Zalesovo Beam**	**52.53**	**354**	P	**P**	**15 22 58.8**	**0.0**
	comp=Z,0.6nm,0.5s,baz=163,slow=10,SNR=2.7						
CLL	**Collm**	**82.18**	**321**	*i* P	**P**	**15 26 05.2**	**-1.6**

*IDC **30** 15:14:17.8±2.1, 29°.99S×177°.61W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.8/37, mbtmp4.0/3, ML3.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/23, Error ellipse: s-maj=47.2km s-min=18.4km az=93.0*

*NEIC **30** 15:14:21.2±1.4, 29°.97S±0°.04×177°.4W±0°.3, h31km±16km, mb4.2/10, Error ellipse: s-maj=33.4km s-min=6.3km az=89.0*

ISC 30 15:14:21.2±1.8, 30°.01S±0°.07×177°.4W±0°.2, h35km, n22, σ1§20/19, mb4.0/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.90**	**326**	Pn	**Pn**	**15 14 36.9**	**-0.4**
	152nm,0.3s,baz=7.7,slow=22,SNR=7.6						
RAO				Sn	**Sn**	**15 14 47.7**	**-1.4**
	667nm,0.3s,baz=78,slow=15,SNR=8.3						
RAO	**Raoul Island**	**0.90**	**326**	Pn	**Pn**	**15 14 36.8**	**-0.6**
URZ	**Urewera**	**9.42**	**208**	Pn	**Pn**	**15 16 33.5**	**-0.9**
	0.1nm,0.3s,baz=48,slow=18,SNR=1.9						
URZ				Sn	**Sn**	**15 18 18.7**	**-0.4**
	0.6nm,0.3s,baz=42,slow=23,SNR=8.3						
OXZ	**Oxford**	**15.77**	**210**	P	**P**	**15 18 04.5**	**+0.4**
OXZ				IAmb	IAmb	15 18 28.0	
	comp=Z,47nm,1.4s						
MQZ	**McQueen's Vall**	**15.82**	**207**	Pn	**P**	**15 18 02.6**	**-2.1**
AFI	**Afiamalu**	**16.83**	**19**	LR	LR	15 23 03.7	
	comp=Z,40nm,20.0s,baz=252,slow=31						
CTAO	**Charters Tower**	**34.30**	**278**	P	**P**	**15 21 06.5**	**+2.1**
STKA	**Stephens Creek**	**35.12**	**256**	P	**P**	**15 21 14.2**	**+2.8**
	comp=Z,2.2nm,0.8s,baz=91,slow=7.6,SNR=4.4						
STKA	**Sthens Creek**	**35.12**	**256**	IAmb	IAmb	15 21 23.1	
	comp=Z,2.1nm,1.4s						
PMG	**Port Moresby**	**38.95**	**294**	P	**P**	**15 21 43.2**	**-0.9**
BBOO	**Buckleboo**	**39.62**	**254**	P	**P**	**15 21 48.8**	**-0.7**
AS31	**Alice Springs**	**43.69**	**266**	P	**P**	**15 22 22.8**	**-0.2**
ASAR	**Alice Springs**	**43.70**	**266**	P	**P**	**15 22 23.1**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=102,slow=7.6,SNR=25						
WR0	**Warramunga Arr**	**44.47**	**271**	P	**P**	**15 22 30.2**	**+0.9**
WR0				IAmb	IAmb	15 22 35.4	
	comp=Z,7.5nm,1.5s						
WB2	**Warramunga Arr**	**44.64**	**271**	P	**P**	**15 22 31.0**	**+0.4**
WB2				IAmb	IAmb	15 22 31.8	
	comp=Z,3.8nm,1.1s						
WRA	**Warramunga Arr**	**44.65**	**271**	P	**P**	**15 22 30.4**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=111,slow=7.5,SNR=9.9						
WRA	**Warramunga Arr**	**44.65**	**271**	P	**P**	**15 22 31.0**	**+0.3**
WRA				IAmb	IAmb	15 22 33.0	
	comp=Z,0.4nm,1.4s						
H03S2	**Juan Fernandez**	**80.21**	**123**	T	T	16 56 06.7	
	baz=241						
H03S1	**Juan Fernandez**	**80.22**	**123**	T	T	16 56 09.3	
	baz=241						
H03S3	**Juan Fernandez**	**80.23**	**123**	T	T	16 56 07.3	
	baz=241						
FINES	**FINESS Array B**	**144.97**	**341**	PKP	**PKPdf**	**15 33 54.3**	**+0.4**
	comp=Z,4.1nm,0.6s,baz=60,slow=3.7,SNR=30						
NOA	**NORSAR Array B**	**148.44**	**352**	PKPbc	**PKiKP**	**15 34 05.2**	**+0.2**
	comp=Z,1.3nm,1.0s,baz=18,slow=2.9,SNR=2.6						

*IDC **30** 15:18:01.1±1.2, 1°.51N×92°.33E, h0km, mb3.7/7, mb1 3.9/10, mb1mx3.6/50, mbtmp3.8/10, ML4.0/3, MS3.6/7, Ms1 3.7/7, ms1mx3.1/46, Error ellipse: s-maj=37.7km s-min=20.2km az=46.0*

*NEIC **30** 15:18:03.2±1.8, 1°.7N±0°.1×92°.50E±0°.09, h10km±1km, mb4.4/13, Error ellipse: s-maj=20.0km s-min=13.4km az=211.0*

*DJA **30** 15:18:49.2±1.6, 2°N±3°×9°6E±°, h30km±15km, M4.4/16, mB5.1/4, mb4.8/9, MLv4.2/16, Mw(mB)4.4/4, Mwp6.2/1*

ISC 30 15:18:06.6±0.7, 1°.63N±0°.09×92°.47E±0°.07, h35km, n63, σ1§35/55, mb4.1/11, MS3.8/4, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**3.93**	**79**	P	**Pn**	**15 19 04.5**	**-0.1**
MLSI	**Meulaboh, Aceh**	**4.72**	**56**	P	**Pn**	**15 19 15.7**	**+0.3**
TPTI		**4.98**	**71**	P	**Pn**	**15 19 18.7**	**-0.2**
GSI	**Gunungsitoli**	**5.12**	**94**	P	**Pn**	**15 19 20.4**	**-0.5**
GSI	**Gunungsitoli**	**5.12**	**94**	Pn	**Pn**	**15 19 20.1**	**-0.8**
KCSI	**Kotacane, Aceh**	**5.62**	**70**	P	**Pn**	**15 19 29.0**	**+1.2**
LHMI	**Lhok Sumawe**	**5.72**	**51**	P	Pn	15 19 41.5	+12
LHMI	**Lhok Sumawe**	**5.72**	**51**	Pn	**Pn**	**15 19 29.9**	**+0.8**
TSI	**Tuntungan**	**6.37**	**73**	P	**Pn**	**15 19 39.7**	**+1.7**
RPSI	**Rantau Prapat**	**6.54**	**81**	Pn	**Pn**	**15 19 39.5**	**-0.8**
PSI	**Prapat**	**6.55**	**80**	Pn	**Pn**	**15 19 40.6**	**-0.2**
	1.4nm,0.3s,baz=220,slow=0.2,SNR=12						
PSI				Sn	**Sn**	**15 20 52.8**	**-1.6**
	3.3nm,0.3s,baz=180,slow=13,SNR=1.5						
PSI				LR	LR	15 22 46.1	
	comp=Z,1µm,18.6s,baz=269,slow=42						
MNSI	**Mandailing Nat**	**7.16**	**97**	P	**Pn**	**15 19 49.9**	**+1.0**
SISI	**Saibi**	**7.25**	**114**	P	Pn	15 19 58.6	+8.5
BKNI	**Bangkinang**	**8.67**	**99**	P	**Pn**	**15 20 09.8**	**+0.1**
	0.6nm5µm67nm,0.7s						
BKNI	**Bangkinang**	**8.67**	**99**	Pn	**Pn**	**15 20 09.0**	**-0.7**
KULM	**Kulim**	**8.94**	**66**	Pn	**Pn**	**15 20 11.2**	**-2.1**
IPM	**Ipoh**	**9.00**	**72**	Pn	**Pn**	**15 20 12.4**	**-1.8**
SDSI	**Sungai Dareh**	**9.31**	**106**	P	**Pn**	**15 20 21.7**	**+3.2**
	0.1nm16nm,0.8s						
TRTT	**Trang**	**9.47**	**49**	P	**Pn**	**15 20 20.8**	**+0.1**
	32nm,0.8s						
KRJI	**Kerinci**	**9.72**	**112**	P	Pn	15 20 29.7	+5.5
	2.1nm5µm565nm,0.6s						
MYKOM	**Kota Tinggi**	**11.38**	**89**	Pn	**Pn**	**15 20 46.3**	**-0.5**
KSI	**Kapahiang**	**11.40**	**117**	P	Pn	15 20 56.3	+9.1
	113µm34nm,0.7s						
MNAI	**Manna**	**12.05**	**120**	Pn	**Pn**	**15 20 56.1**	**0.0**
PALK	**Pallekele**	**12.99**	**296**	Pn	**Pn**	**15 21 04.9**	**-4.0**
	0.5nm,0.3s,baz=206,slow=16,SNR=1.2						
PALK				Sn	Sn	15 23 16.0	-16
	2.9nm,0.3s,baz=132,slow=22,SNR=6.7						
PALK				LR	LR	15 25 20.7	
	comp=Z,197nm,19.4s,baz=222,slow=34						
PALK	**Pallekele**	**12.99**	**296**	Pn	**Pn**	**15 21 09.5**	**+0.5**
CISI	**Cisompet, Garu**	**17.83**	**121**	P	**P**	**15 22 12.6**	**-0.1**
CISI				IAmb	IAmb	15 22 35.9	
	comp=Z,73nm,1.5s						
CM05	**Chiang Mai Arr**	**17.83**	**20**	P	**P**	**15 22 15.5**	**+2.9**
	comp=Z,5.1nm,0.9s						
CM04	**Chiang Mai Arr**	**17.84**	**21**	P	**P**	**15 22 16.0**	**+3.2**
	comp=Z,68nmcomp=Z,8.8nm,1.0s						
CM01	**Chiang Mai Arr**	**17.86**	**20**	P	**P**	**15 22 15.8**	**+2.9**
	comp=Z,67nmcomp=Z,8.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**17.89**	**20**	P	**Pn**	**15 22 12.2**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=217,slow=13,SNR=10.0						
CMAR				LR	LR	15 29 08.1	
	comp=Z,79nm,21.0s,baz=250,slow=37						
CM35	**Chiang Mai Arr**	**18.16**	**21**	P	**P**	**15 22 18.0**	**+1.7**
CHTO	**Chiang Mai**	**18.21**	**20**		**P**	**15 22 15.1**	**-1.8**
SBUM	**Sibu**	**19.76**	**87**	Pn	**Pn**	**15 22 35.0**	**-0.5**
SBUM				IAmb	IAmb	15 22 44.1	
	comp=Z,12nm,0.9s						
SMRI	**Semarang**	**19.90**	**116**		**Pn**	**15 22 37.2**	**-0.1**
H08S2	**Diego Garcia H**	**21.95**	**245**	T	T	15 45 21.4	
	baz=65,slow=75,SNR=6.6						
H08S3	**Diego Garcia H**	**21.96**	**245**	T	T	15 45 17.5	
	baz=65,slow=75,SNR=9.2						
H08S1	**Diego Carcia H**	**21.97**	**245**	T	T	15 44 54.4	
	baz=65,slow=75,SNR=3.4						
JAGI	**Jajag, Banyuwa**	**23.84**	**115**	P	**P**	**15 23 16.5**	**-0.3**
KNRA	**Kununurra**	**39.78**	**117**	P	**P**	**15 25 36.6**	**0.0**
KNRA				IAmb	IAmb	15 26 03.7	
	comp=Z,16nm,1.3s						
KKAR	**Karatay Array**	**45.71**	**338**	P	**P**	**15 26 24.7**	**+0.4**
KKAR	**Karatay Array**	**45.71**	**338**	P	**P**	**15 26 25.2**	**+0.8**
KKAR				IAmb	IAmb	15 26 33.0	
	comp=Z,1.9nm,0.9s						
MKAR	**Makanchi Array**	**45.85**	**350**	P	**P**	**15 26 25.9**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=155,slow=7.5,SNR=4.4						
MKAR	**Makanchi Array**	**45.85**	**350**	P	**P**	**15 26 24.4**	**-1.0**
WRA	**Warramunga Arr**	**46.32**	**120**	P	**P**	**15 26 29.2**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=297,slow=8.5,SNR=5.7						
WRAB	**Tennant Creek**	**46.32**	**120**	P	**P**	**15 26 29.0**	**-0.6**
WB2	**Warramunga Arr**	**46.33**	**120**	P	**P**	**15 26 28.7**	**-0.9**
WB2				IAmb	IAmb	15 26 54.0	
	comp=Z,5.4nm,1.0s						
WR0	**Warramunga Arr**	**46.50**	**120**	P	**P**	**15 26 29.3**	**-1.6**
WR0				IAmb	IAmb	15 26 55.4	
	comp=Z,3.1nm,0.9s						
ASAR	**Alice Springs**	**47.48**	**125**	P	**P**	**15 26 37.7**	**-0.9**
	comp=Z,0.2nm,0.8s,baz=303,slow=7.9,SNR=2.0						
ASAR				PcP	**PcP**	**15 28 09.6**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=315,slow=3.5,SNR=4.1						
SONM	**Songino Array**	**47.58**	**13**	P	**P**	**15 26 40.1**	**+1.1**
	comp=Z

0.3nm1µm47nm,1.0s
TNTI Ternate 8.10 230 Pn **Pn** 15 26 39.9 -0.8
KCP Kidapawan 8.44 277 ǁ *i*P **Pn** 15 26 43.9 -1.6
KCP *i* S **Sn** 15 28 18.9 -0.9
FAKI Fak Fak 9.02 188 P **Pn** 15 26 56.0 +2.7
21nm,0.8s
FAKI Fak Fak 9.02 188 **Pn** 15 26 53.7 +0.3
CGP Cagayan de Oro 9.09 286ǁ *e*P **Pn** 15 26 51.3 -3.0
MSAI Masohi 10.42 206 P **Pn** 15 27 14.4 +1.8
740nm31nm,0.9s
KMSI Cibinong 10.98 241 P **Pn** 15 27 22.3 +2.0
2µm79nm,0.6s
SANI Sanana 11.03 223 P **Pn** 15 27 23.6 +2.6
12nm,0.6s
BNDI Bandanaira 11.12 199 P **Pn** 15 27 24.3 +2.1
103nm,1.6s
JAY Jayapura 11.13 140 LR LR 15 30 43.0
comp=Z,950nm,20.1s,baz=324,slow=33
GTOI Gorontalo 11.81 243 P **Pn** 15 27 33.5 +1.9
426nm30nm,0.5s
MRSI Marisa 12.83 245 P **Pn** 15 27 46.8 +1.2
1µm144nm,0.6s
LUWI Luwuk 12.86 237 P **Pn** 15 27 49.0 +3.0
64nm,1.1s
LUWI Luwuk 12.86 237 Pn **Pn** 15 27 45.6 -0.3
GUMO Guam 13.43 55 LR LR 15 32 26.5
comp=Z,274nm,21.4s,baz=243,slow=35
TOLI2 Tolitoli 13.64 249 Pn **Pn** 15 27 55.4 -1.4
APSI Ampana 13.74 240 P **Pn** 15 27 59.9 +1.8
354nm34nm,1.2s
SAUI Saumlaki 14.13 189 P **Pn** 15 28 06.1 +2.8
45nm,0.9s
SAUI Saumlaki 14.13 189 Pn **Pn** 15 28 03.2 -0.1
MPSI Mapaga 14.75 248 P **Pn** 15 28 13.1 +1.3
21nm,0.9s
MYLDM Lahad Datu 14.99 267 Pn **Pn** 15 28 14.7 -0.3
MYLDM IAmb IAmb 15 28 31.9
comp=Z,113nm,1.5s
TTSI Tana Toraja 16.42 237 P **P** 15 28 35.9 0.0
comp=Z,770nmcomp=Z,71nm,1.3s
BNSI Bone 16.97 233 P **P** 15 28 42.3 +0.3
comp=Z,719nmcomp=Z,38nm,1.1s
SPSI Sidrap Palu 16.98 234 P **P** 15 28 41.8 -0.3
comp=Z,22nm,1.0s
BKSI Bulukumba 17.53 230 P **P** 15 28 49.0 +0.8
comp=Z,28nm,1.3s
KAPI Kappang 17.62 232 LR LR 15 35 41.4
comp=Z,274nm,20.1s,baz=22,slow=38
SOEI Soe 18.23 211 P **Pn** 15 28 57.6 +1.5
comp=Z,78nm,1.0s
SOEI Soe 18.23 211 **P** 15 28 55.4 -0.6
SOEI IAmb IAmb 15 29 20.7
comp=Z,55nm,0.8s
MMRI Maumere 18.44 218 P **Pn** 15 29 00.4 +1.8
comp=Z,51nm,1.2s
MMRI Maumere 18.44 218 P **P** 15 28 57.7 -0.6
EDFI Ende, Flores 18.87 219 P **Pn** 15 29 04.6 +0.8
comp=Z,393nmcomp=Z,17nm,1.2s
BATI Baumata 18.92 211 P **Pn** 15 29 05.4 +1.1
comp=Z,3.3nm,0.3s,baz=358,slow=1.4,SNR=11
BATI Baumata 18.92 211 P **Pn** 15 29 05.7 +1.3
comp=Z,27nm,1.2s
MTN Manton Dam 18.93 187 P **P** 15 29 03.5 -0.2
MTKI Muara Teweh, K 19.87 250 P **Pn** 15 29 16.3 +0.6
comp=Z,2µmcomp=Z,22nm,0.8s
WSI Waingapu 20.45 220 P **P** 15 29 20.4 +0.2
comp=Z,702nm,0.5s
PMG Port Moresby 20.50 138 P Pn 15 29 23.3 +0.2
comp=Z,10nm,0.9s,baz=326,slow=16,SNR=5.1
PMG LR LR 15 37 45.2
comp=Z,100nm,18.2s,baz=306,slow=38
PMG Port Moresby 20.50 138 Pn 15 29 22.0 -1.1
TWG Pinlang 20.55 325 P **P** 15 29 20.4 -0.9
YULB Yu-li 20.88 327 P **P** 15 29 24.4 -0.4
YULB IAmb IAmb 15 29 27.8
comp=Z,40nm,0.7s
YOJ Yonaguni jima 20.90 332 P **P** 15 29 24.9 -0.1
BBKI Banjar Baru 20.93 244 P Pn 15 29 26.9 -1.3
comp=Z,1µmcomp=Z,19nm,1.3s
WBSI Waikabubak, Su 21.02 222 P **P** 15 29 27.3 +0.8
comp=Z,581nmcomp=Z,32nm,1.0s
KRVT Keravat (AS076 21.14 119 P **P** 15 29 28.7 +0.9
comp=Z,62nm,1.1s,baz=98,slow=7.6,SNR=8.6
KRVT LR LR 15 35 37.8
comp=Z,299nm,20.9s,baz=308,slow=31
TPUB Ta-pu 21.17 325 P **P** 15 29 27.3 -0.7
NACB Ninganchiao 21.35 329 P **P** 15 29 28.7 -1.2
NACB IAmb IAmb 15 29 34.1
comp=Z,55nm,0.9s
SSLB Suanglung 21.38 327 P **P** 15 29 28.8 -1.4
SSLB IAmb IAmb 15 29 38.4
comp=Z,30nm,0.8s
SBUM Sibu 21.55 261 P **P** 15 29 30.4 -1.7
SBUM Sibu 21.55 261 P **P** 15 29 37.0 +4.8
YHNB Yeheng 21.87 329 P **P** 15 29 34.8 -0.8
YHNB IAmb IAmb 15 29 41.5
comp=Z,36nm,0.9s
TATO Taipei 22.07 330 P **P** 15 29 36.6 -1.0
TATO IAmb IAmb 15 29 40.5
comp=Z,39nm,0.7s
KNRA Kununurra 22.11 192 P **P** 15 29 36.7 -1.4
KNRA IAmb IAmb 15 29 41.1
comp=Z,36nm,0.8s
TWSI Taliwang, Sumb 22.18 229 P **P** 15 29 39.8 +0.9
comp=Z,278nmcomp=Z,16nm,0.9s
STKI Sintang 22.81 256 P **P** 15 29 46.9 +1.3
KSM Kuching 23.62 260 P **P** 15 29 51.6 -2.1
KSM IAmb IAmb 15 29 56.9
comp=Z,55nm,1.2s
GMJI Gumukmas 24.58 235 P **P** 15 30 04.1 +1.5
comp=Z,59nm,1.0s
FITZ Fitzroy Crossi 25.24 198 P **P** 15 30 06.8 -1.6
comp=Z,9.6nm,0.7s,baz=31,slow=8.3,SNR=25
FITZ Fitzroy Crossi 25.24 198 P **P** 15 30 06.2 -2.3
DLV T Lat 25.41 285 P **P** 15 30 08.0 -2.3
DLV IAmb IAmb 15 30 14.1
comp=Z,38nm,1.1s
WB0 Warramunga Arr 25.68 178 P **P** 15 30 10.7 -1.8
WRAB Tennant Creek 25.85 178 P **P** 15 30 12.2 -1.8
WRAB IAmb IAmb 15 30 17.4
comp=Z,24nm,1.0s
WRA Warramunga Ar 25.85 178 P **P** 15 30 13.3 -0.8
comp=Z,21nm,1.0s,baz=358,slow=9.6,SNR=34
WRA Warramunga Arr 25.85 178 P **P** 15 30 12.5 -1.6
WB2 Warramunga Arr 25.86 178 P **P** 15 30 12.5 -1.5
WB2 IAmb IAmb 15 30 17.5
comp=Z,21nm,0.9s
WR0 Warramunga Arr 25.88 178 P **P** 15 30 12.8 -1.4
QIZ Qiongzhong 26.43 301 P **P** 15 30 20.6 +1.3
JNU Nakatsue 27.04 355 P **P** 15 30 24.5 -0.2
JNU IAmb IAmb 15 30 29.8
comp=Z,74nm,1.4s
JHS Saijyo 28.80 359 P **P** 15 30 40.4 0.0
JHS IAmb IAmb 15 30 47.8
comp=Z,28nm,1.2s
CTA Charters Tower 28.84 155 P **P** 15 30 40.9 0.0
comp=Z,4.8nm,0.6s,baz=342,slow=12,SNR=4.6
CTA LR LR 15 41 52.9
comp=Z,338nm,18.9s,baz=44,slow=36
CTAO Charters Tower 28.84 155 P **P** 15 30 39.8 -1.0
LEM Lembang 28.86 244 LR LR 15 43 26.4
comp=Z,140nm,18.5s,baz=154,slow=39
NJ2 Nanjing 29.27 334 *e*P **P** 15 30 45.8 +1.3
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
AS31 Alice Springs 29.55 179 P **P** 15 30 45.9 -1.3
ASAR Alice Springs 29.55 179 P **P** 15 30 46.7 -0.5
comp=Z,2.5nm,0.6s,baz=18,slow=12,SNR=38
ASAR PcP **PcP** 15 33 52.2 +0.3
comp=Z,0.6nm,0.6s,baz=3.7,slow=2.5,SNR=5.1
ASAR LR LR 15 43 21.5
comp=Z,108nm,18.3s,baz=350,slow=38
ASAR Alice Springs 29.55 179 P **P** 15 30 45.3 -1.8
MYKOM Kota Tinggi 29.91 263 P **P** 15 30 48.2 -2.2
MYKOM IAmb IAmb 15 30 51.9
comp=Z,19nm,0.8s
MYKOM Kota Tinggi 29.91 263 P **P** 15 30 52.0 +1.5
MJAR Matsushiro Arr 30.64 7 P **P** 15 30 58.2 +1.6
comp=Z,1.6nm,0.9s,baz=182,slow=6.2,SNR=3.7
MJAR PcP **PcP** 15 33 55.8 +1.3
comp=Z,3.8nm,0.8s,baz=167,slow=3.2,SNR=9.0
KSRS Korea Array 31.66 351 P **P** 15 31 04.8 -0.8
comp=Z,1.4nm,0.9s,baz=170,slow=10.0,SNR=4.5
KHON Khomkaen 31.76 291 P **P** 15 31 07.8 +1.1
comp=Z,30nm,0.5s
JMM Marumori 32.34 11 P **P** 15 31 11.8 +0.3

IPM Ipoh 32.41 269 P **P** 15 31 11.8 -0.7
IPM Ipoh 32.41 269 P **P** 15 31 13.0 +0.5
GYA Guiyang 32.68 311 *e*P **P** 15 31 16.5 +1.7
GYA pmax pmax
comp=Z,5.0nm,0.8s
KULM Kulim 32.73 270 P **P** 15 31 14.8 -0.5
KULM IAmb IAmb 15 31 16.6
comp=Z,18nm,0.9s
KULM Kulim 32.73 270 P **P** 15 31 16.0 +0.7
SDSI Sungai Dareh 32.80 259 P P 15 31 25.3 +9.4
BKNI Bangkinang 32.93 261 P **P** 15 31 16.6 -0.4
TRTT Trang 33.64 275 P **P** 15 31 24.5 +1.2
comp=Z,22nm,1.0s
PHET Kaeng Krachan 34.10 284 P **P** 15 31 30.0 +2.7
comp=Z,18nm,0.9s
PHIT Phitsanulok 34.21 292 P **P** 15 31 29.0 +0.8
comp=Z,70nm,0.8s
GIRL Giralia 34.22 213 P **P** 15 31 28.1 0.0
UTTA Uttaradit 34.23 293 P **P** 15 31 29.5 +1.2
comp=Z,187nmcomp=Z,19nm,0.8s
SURT Suratani 34.55 277 P **P** 15 31 35.3 +4.1
comp=Z,0.7nm,1.2s
H11S3 WAKE ISLAND Hy 34.59 66 T T 16 08 14.0
baz=253,slow=75,SNR=701
H11S1 WAKE ISLAND Hy 34.61 66 T T 16 08 15.1
baz=253,slow=75,SNR=287
H11S2 WAKE ISLAND Hy 34.61 66 T T 16 08 09.6
baz=253,slow=75,SNR=409
RPSI Rantau Prapat 34.67 266 P **P** 15 31 31.1 -1.1
RPSI IAmb IAmb 15 31 33.1
comp=Z,20nm,1.0s
PHRA Phrae 34.73 294 P **P** 15 31 33.9 +1.2
comp=Z,90nm,1.2s
UTHA Uthaitani 34.74 289 P **P** 15 31 34.8 +2.0
comp=Z,14nm,1.2s
PKDT Phuket 34.98 275 P **P** 15 31 36.3 +1.4
comp=Z,26nm,0.9s
SUKH Sukhothai 35.01 292 P **P** 15 31 36.0 +0.9
comp=Z,21nm,0.7s
H11N1 WAKE ISLAND Hy 35.14 64 T T 16 08 56.4
baz=250,slow=75,SNR=45
H11N2 WAKE ISLAND Hy 35.15 64 T T 16 08 54.7
baz=250,slow=75,SNR=33
H11N3 WAKE ISLAND Hy 35.16 64 T T 16 08 56.4
baz=250,slow=75,SNR=40
LAMP Lampang 35.28 294 P **P** 15 31 39.2 +1.7
comp=Z,18nm,0.9s
PAYA Payao 35.31 295 P **P** 15 31 39.1 +1.4
comp=Z,2µmcomp=Z,100nm,0.7s
KCSI Kotacane, Aceh 35.72 268 P **P** 15 31 41.4 +0.1
comp=Z,34nm,1.2s
CM35 Chiang Mai Arr 35.76 294 P **P** 15 31 42.0 +0.4
CM36 Chiang Mai Arr 35.77 293 P **P** 15 31 42.0 +0.3
CM34 Chiang Mai Arr 35.81 294 P **P** 15 31 42.0 0.0
CM04 Chiang Mai Arr 35.85 293 P **P** 15 31 43.6 +1.3
comp=Z,73nmcomp=Z,9.8nm,1.0s
CM09 Chiang Mai Arr 35.85 293 P **P** 15 31 43.6 +1.3
comp=Z,114nmcomp=Z,15nm,0.9s
CM01 Chiang Mai Arr 35.87 293 P **P** 15 31 43.0 +0.5
comp=Z,78nmcomp=Z,12nm,0.9s
CM05 Chiang Mai Arr 35.88 293 P **P** 15 31 43.7 +1.1
comp=Z,52nmcomp=Z,6.9nm,0.9s
CM02 Chiang Mai Arr 35.89 293 P **P** 15 31 43.0 +0.4
comp=Z,88nmcomp=Z,12nm,0.9s
CM31 Chiang Mai Arr 35.90 293 P **P** 15 31 44.2 +1.5
comp=Z,351nm,0.8s
CM31 Chiang Mai Arr 35.90 293 P **P** 15 31 42.6 -0.1
CM31 IAmb IAmb 15 31 44.8
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 35.90 293 P **P** 15 31 43.7 +1.0
comp=Z,6.6nm,0.8s,baz=118,slow=6.7,SNR=58
CMAR PcP **PcP** 15 34 11.2 +1.7
comp=Z,2.1nm,0.8s,baz=93,slow=1.8,SNR=8.2
CMAR LR LR 15 47 42.4
comp=Z,50nm,18.1s,baz=156,slow=38
CM15 Chiang Mai Arr 35.91 293 P **P** 15 31 44.0 +1.2
comp=Z,108nmcomp=Z,15nm,0.8s
CM13 Chiang Mai Arr 35.92 293 P **P** 15 31 44.0 +1.1
comp=Z,76nmcomp=Z,11nm,0.9s
XAN Xi'an 35.98 324 P **P** 15 31 44.0 +0.7
XAN pP pP 15 31 50.5 -2.1
XAN pmax pmax
comp=Z,13nm,1.0s
XAN Xi'an 35.98 324 P **P** 15 31 43.5 +0.2
XAN IAmb IAmb 15 31 44.6
comp=Z,14nm,1.2s
CMMT Chiang Mai 35.99 294 P **P** 15 31 44.0 +0.5
comp=Z,175nmcomp=Z,3.7nm,1.1s
CM33 Chiang Mai Arr 35.99 294 P **P** 15 31 44.0 +0.5
CHTO Chiang Mai 35.99 294 P **P** 15 31 43.1 -0.4
CM32 Chiang Mai Arr 36.04 293 P **P** 15 31 45.0 +1.1
GSI Gunungsitoli 36.19 264 P **P** 15 31 44.7 -0.5
comp=Z,3µmcomp=Z,88nm,1.0s
GSI Gunungsitoli 36.19 264 P **P** 15 31 44.0 -1.2
TPTI 36.34 267 P **P** 15 31 49.0 +2.5
comp=Z,11nm,1.1s
LHMI Lhok Sumawe 36.42 271 P **P** 15 31 45.1 -2.1
MHMT Maesarieng 36.75 292 P **P** 15 31 51.5 +1.5
FORT Forrest 37.01 188 P **P** 15 31 50.4 -1.5
BJT Baijiatuau 37.24 338 P **P** 15 31 52.8 -1.1
BJT IAmb IAmb 15 31 55.9
comp=Z,23nm,1.2s
BJI Beijing 37.26 338 P **P** 15 31 54.8 +0.8
BJI pmax pmax
comp=Z,15nm,1.2s
CD2 Chengdu 37.30 315 P **P** 15 31 55.5 +1.0
CD2 S **S** 15 37 40.5 +0.6
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=Z,400nm,13.2s
CD2 LR LR
comp=Z,350nm,14.7s
CD2 LR LR
comp=Z,260nm,12.7s
USA0B Ussuriysk Arra 38.01 358 P **P** 15 31 57.8 -2.5
USRK Ussuriysk Ar. 38.01 358 P **P** 15 31 57.5 -2.7
STKA Stephens Creek 38.50 169 P **P** 15 32 03.3 -1.3
comp=Z,6.6nm,0.9s,baz=332,slow=11,SNR=8.6
STKA Stephens Creek 38.50 169 P **P** 15 32 03.2 -1.4
ASAJ Asahikawa 38.73 10 P **P** 15 32 06.8 +0.4
comp=Z,2.9nm,0.7s,baz=215,slow=18,SNR=1.8
JKA Kamikawa-asahi 38.73 10 P **P** 15 32 06.2 -0.1
BBOO Buckleboo 38.73 177 P **P** 15 32 05.7 -0.8
BBOO IAmb IAmb 15 32 08.1
comp=Z,14nm,0.8s
HHC Hu-ho-hao-te 39.83 334 *e*P **P** 15 32 15.8 +0.1
HHC pmax pmax
comp=Z,12nm,0.8s
HHC pmax pmax
comp=Z,130nm,8.5s
ARMA Armidale 40.21 155 P **P** 15 32 18.6 -0.4
LZH Lanzhou 40.42 322 *e*P **P** 15 32 21.8 +1.0
LZH pP pP 15 32 29.8 -0.5
LZH sP pwP 15 32 33.0 -0.7
LZH *e*PP **PnPn** 15 33 59.5 +1.3
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,120nm,5.2s
LZH LR LR
comp=Z,250nm,13.0s
LZH LR LR
comp=Z,230nm,13.6s
LZH LR LR
comp=Z,240nm,15.7s
YSS Yuzh-Sakhalins 41.51 10 P **P** 15 32 29.1 -0.2
YSS IAmb IAmb 15 32 29.3
comp=Z,30nm,1.4s
NWAO Narrogin (SRO) 41.76 201 P **P** 15 32 30.4 -1.2
NWAO IAmb IAmb 15 32 31.5
comp=Z,42nm,1.4s
DZM Mont Dzumac 42.67 132 *e*LR LR 15 44 31.8
comp=Z,283nm,27.6s
GTA Gaotai 45.00 323 *e*P **P** 15 32 59.0 +1.1
GTA pP pP 15 33 05.5 -1.9
GTA sP pwP 15 33 08.5 -2.3
GTA PcP **PcP** 15 34 40.5 +1.9
GTA pmax pmax
comp=Z,8.0nm,1.3s
GTA pmax pmax
comp=Z,88nm,5.3s
GTA LR LR
comp=Z,95nm,15.6s
GTA LR LR
comp=Z,76nm,16.0s

GTA LR LR
comp=Z,85nm,15.3s
LSA Lhasa 46.30 306 P **P** 15 33 09.4 +0.6
ULN Ulaanbaatar 47.40 336 P **P** 15 33 16.2 -0.4
SONM Songino Array 47.64 335 P **P** 15 33 20.0 +1.5
comp=Z,12nm,0.7s,baz=152,slow=9.1,SNR=68
SONM LR LR 15 53 07.4
comp=Z,107nm,21.8s,baz=198,slow=36
SONM Songino Array 47.64 335 P **P** 15 33 17.9 -0.5
TAPN Taplejung 48.37 301 *e*P **P** 15 33 25.2 +0.5
comp=Z,16nm,0.8s
ODAN Odare 48.50 301 *e*P **P** 15 33 25.8 +0.2
comp=Z,37nm,0.9s
RAMN Ramite 49.20 301 *e*P **P** 15 33 31.5 +0.5
comp=Z,20nm,0.7s
GUN Gumba 50.08 301 *e*P **P** 15 33 38.1 +0.3
comp=Z,42nm,1.1s
PKI Pulchoki 50.39 301 *e*P **P** 15 33 39.9 -0.2
comp=Z,11nm,0.9s
PKIN Phulchoki 50.40 301 *e*P **P** 15 33 39.8 -0.4
KKN Kakani 50.56 301 *e*P **P** 15 33 41.3 0.0
comp=Z,19nm,1.0s
DMN Daman 50.66 301 *e*P **P** 15 33 42.0 -0.1
PETK Petropavlovsk- 50.90 19 P **P** 15 33 43.9 +0.8
PET Petropavlovsk 51.13 19 P **P** 15 33 44.8 0.0
GKN Gorkha 51.16 301 *e*P **P** 15 33 45.7 -0.1
comp=Z,11nm,0.8s
KOLN Koldanda 51.99 301 *e*P **P** 15 33 52.4 +0.4
comp=Z,41nm,0.9s
DANN Dangsing 52.00 301 *e*P **P** 15 33 52.3 +0.1
comp=Z,40nm,0.7s
PYUN Piuthan 52.59 301 *e*P **P** 15 33 56.9 +0.4
comp=Z,42nm,0.7s
WMQ Urumqi 54.98 321 *e*P **P** 15 34 15.5 +2.0
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ pmax pmax
comp=Z,120nm,5.5s
YAK Yakutsk 55.92 358 P **P** 15 34 18.7 -1.1
YAK IAmb IAmb 15 34 21.1
comp=Z,12nm,0.7s
MK31 Makanchi Array 59.74 322 P **P** 15 34 47.4 +0.4
MK31 IAmb IAmb 15 34 49.3
comp=Z,19nm,1.3s
MKAR Makanchi Array 59.74 322 P **P** 15 34 48.1 +1.1
comp=Z,6.2nm,0.6s,baz=109,slow=8.6,SNR=53
MKAR Makanchi Array 59.74 322 P **P** 15 34 47.7 +0.7
MAKZ Makanchi 59.94 322 P **P** 15 34 48.9 +0.6
LBZ Lake Benmore 60.07 150 P **P** 15 34 49.1 -0.1
SHLS Shalkode 60.10 317 *e*P **P** 15 34 48.2 -1.5
comp=Z,4.7nm,1.0s,baz=317
SNZO South Karori 60.33 145 P **P** 15 34 50.3 -0.7
KPKS Kokpek 60.74 317 *e*P **P** 15 34 54.3 +0.3
comp=Z,5.2nm,1.3s,baz=317
SATY Saty 60.78 316 *e*P **P** 15 34 55.1 +0.7
comp=Z,4.0nm,1.2s,baz=316
KDJ Kajisay 61.32 315 P **P** 15 34 56.4 -1.7
KSH Kashi 61.37 312 *e*P **P** 15 35 00.8 +2.4
KSH pmax pmax
comp=Z,26nm,0.6s
KSH pmax pmax
comp=Z,260nm,7.0s
TDK Taldyqorghan 61.49 319 *e*P **P** 15 34 59.8 +0.9
comp=Z,8.4nm,1.0s,baz=318
TDK *e*S **S** 15 43 19.4 +1.3
baz=318
MDOK Medeo 61.75 316 *e*P **P** 15 35 01.6 +0.6
baz=316
TNSS Tian-Shan 61.78 316 *e*P **P** 15 35 02.4 +1.0
baz=316
ZAA0 Zalesovo Array 61.80 330 P **P** 15 35 00.5 -0.4
ZAA0 IAmb IAmb 15 35 02.0
comp=Z,6.5nm,0.8s
ZALV Zalesovo Beam 61.80 330 P **P** 15 35 01.1 +0.2
comp=Z,6.3nm,0.8s,baz=104,slow=6.1,SNR=14
AAA Alma-Ata 61.86 316 *e*P **P** 15 35 02.7 +1.2
baz=316
NIL Nilore 62.03 305 P **P** 15 35 02.3 -0.5
CHKK Chushkaly 62.03 317 *e*P **P** 15 35 02.9 +0.3
baz=317
KUU Kurty 62.48 317 *e*P **P** 15 35 06.1 +0.4
comp=Z,8.7nm,1.6s,baz=316
KURK Kurchatov 63.62 324 P **P** 15 35 13.2 +0.2
ARSB Arslanbob 64.07 313 P **P** 15 35 16.4 0.0
ARSB IAmb IAmb 15 35 18.8
comp=Z,20nm,1.4s
BTLS Baital 64.41 317 *e*P **P** 15 35 18.4 +0.1
baz=317
BTK Batken 65.35 311 P **P** 15 35 24.5 -0.2
BTK IAmb IAmb 15 35 26.9
comp=Z,23nm,1.5s
GAR Garm 65.49 310 P **P** 15 35 25.8 +0.2
TIXI Tiksi 65.58 358 P **P** 15 35 25.0 -0.4
KBL Kabul 65.62 305 P **P** 15 35 25.8 -0.9
KBL IAmb IAmb 15 35 28.1
comp=Z,16nm,1.4s
DZA Taraz 65.67 314 *e*P **P** 15 35 27.2 +0.6
baz=314
CHGR Chuyangaron 66.30 310 P **P** 15 35 30.7 -0.1
KK31 Karatay Array 66.31 315 P **P** 15 35 30.7 +0.1
KK31 IAmb IAmb 15 35 32.7
comp=Z,8.0nm,1.1s
KKAR Karatay Array 66.31 315 P **P** 15 35 30.5 -0.2
KKAR Karatay Array 66.31 315 P **P** 15 35 30.6 -0.1
IUG Iuzhnay 66.42 313 *e*P **P** 15 35 32.0 +0.5
comp=Z,4.2nm,0.9s,baz=313
BRZS Berezniki 66.87 322 *e*P **P** 15 35 34.3 +0.1
comp=Z,3.6nm,1.3s,baz=322
BRVK Borovoye 69.28 325 P **P** 15 35 49.3 +0.2
BRVK IAmb IAmb 15 35 50.5
comp=Z,12nm,0.7s
NRIK Noril'sk 69.92 344 P **P** 15 35 53.1 +0.4
comp=Z,9.1nm,0.8s,baz=128,slow=6.0,SNR=18
HRA Herat 71.17 304 P **P** 15 36 01.4 0.0
HRA IAmb IAmb 15 36 03.0
comp=Z,22nm,1.4s
SDPT Sand Point 71.50 33 P **P** 15 36 03.3 +0.6
ANM Nome 72.41 23 P **P** 15 36 09.2 +1.3
CHGN Chignik 72.88 33 P **P** 15 36 11.3 +0.4
RDOG Red Dog Mine 74.71 20 P **P** 15 36 21.7 +0.3
RDOG IAmb IAmb 15 36 24.1
comp=Z,16nm,1.0s
ABKAR Akbulak array 74.73 319 P **P** 15 36 21.7 -0.3
ABKAR Akbulak array 74.73 319 P **P** 15 36 21.6 -0.3
ABKAR IAmb IAmb 15 36 23.4
comp=Z,10nm,1.0s
GEYT Alibeck 74.80 308 P **P** 15 36 24.3 +1.7
comp=Z,6.2nm,0.7s,baz=130,slow=2.3,SNR=21
GEYT LR LR 16 11 44.2
comp=Z,51nm,20.8s,baz=90,slow=38
GEYT Alibeck 74.80 308 P **P** 15 36 23.5 +0.9
GYA0B ALIBECK ARRAY 74.80 308 P **P** 15 36 23.4 +0.8
GYA0B IAmb IAmb 15 36 25.4
comp=Z,20nm,1.1s
TTA Tatalina 75.79 26 P **P** 15 36 28.6 +0.8
TTA IAmb IAmb 15 36 30.4
comp=Z,17nm,1.2s
OHAK Old Harbor 75.84 32 P **P** 15 36 28.4 +0.3
OHAK IAmb IAmb 15 36 29.9
comp=Z,18nm,1.1s
AKTO Aktyubinsk 76.13 320 LR LR 16 10 25.9
comp=Z,32nm,21.6s,baz=94,slow=36
KDAK Kodiak Island 76.32 32 P **P** 15 36 32.2 +1.4
ARU Arti 76.67 327 P **P** 15 36 32.0 -0.9
ARU IAmb IAmb 15 36 34.0
comp=Z,11nm,1.0s
RSO Redoubt South 76.74 29 P **P** 15 36 33.0 -0.4
CNPM China Poot 77.32 30 P **P** 15 36 36.2 -0.3
PPLA Purkeypile 77.48 27 P **P** 15 36 38.1 +0.6
PPLA IAmb IAmb 15 36 43.3
comp=Z,23nm,1.4s
BRLK Bradley Lake 77.53 30 P **P** 15 36 37.8 +0.1
BRLK IAmb IAmb 15 36 43.8
comp=Z,25nm,1.3s
SKT Skwentna 77.61 28 P **P** 15 36 37.9 -0.1
SKT IAmb IAmb 15 36 39.9
comp=Z,14nm,1.2s
SUA Susitna One 77.89 28 P **P** 15 36 39.7 -0.1
KTH Kantishna Hill 78.17 26 P **P** 15 36 41.6 +0.4
KTH IAmb IAmb 15 36 43.6
comp=Z,22nm,1.2s
BPAW Bear Paw Mtn. 78.24 26 P **P** 15 36 42.4 +0.8
BPAW IAmb IAmb 15 36 43.8
comp=Z,19nm,1.2s
TRF Thorofare Moun 78.43 26 P **P** 15 36 42.7 -0.1

TRF					IAmb	IAmb	15 36 43.7	
	comp=Z,14nm,1.0s							
PMR	**Palmer**	**78.67**	**28**	P		**P**	**15 36 43.9**	**0.0**
PMR					IAmb	IAmb	15 36 45.3	
	comp=Z,17nm,1.0s							
BWN	**Browne**	**78.91**	**26**	P		**P**	**15 36 46.0**	**+0.9**
KNK	**Knik Glacier**	**78.97**	**29**	P		**P**	**15 36 46.1**	**+0.5**
KNK					IAmb	IAmb	15 36 47.6	
	comp=Z,22nm,1.0s							
RND	**Reindeer**	**79.06**	**27**	P		**P**	**15 36 45.7**	**-0.5**
RND					IAmb	IAmb	15 36 47.3	
	comp=Z,28nm,1.4s							
SML	**Sawmill**	**79.08**	**28**	P		**P**	**15 36 46.3**	**+0.1**
I23K	**Minto, Yukon-K**	**79.11**	**25**	P		**P**	**15 36 47.0**	**+0.8**
COLD	**Coldfoot**	**79.13**	**23**	P		**P**	**15 36 47.6**	**+1.2**
COLD					IAmb	IAmb	15 36 49.3	
	comp=Z,24nm,1.1s							
PPT	**Papeete**	**79.41**	**109**	LR		LR	16 04 30.2	
	comp=Z,73nm,21.2s,baz=300,slow=30							
PPT2	**Papeete2**	**79.42**	**109**	eLR		LR	16 01 23.8	
	comp=Z,163nm,23.2s							
WRH	**Wood River Hil**	**79.55**	**26**	P		**P**	**15 36 48.5**	**-0.1**
WRH					IAmb	IAmb	15 36 50.1	
	comp=Z,16nm,1.2s							
SCM	**Sheep Creek Mo**	**79.55**	**28**	P		**P**	**15 36 49.1**	**+0.2**
MDM	**Murphy Dome**	**79.56**	**25**	P		**P**	**15 36 48.5**	**-0.2**
TOLK	**Toolik Lake Re**	**79.61**	**21**	P		**P**	**15 36 49.9**	**+0.8**
TOLK					IAmb	IAmb	15 36 51.4	
	comp=Z,11nm,0.8s							
CCB	**Clear Creek Bu**	**79.69**	**25**	P		**P**	**15 36 49.1**	**-0.3**
CCB					IAmb	IAmb	15 36 50.6	
	comp=Z,20nm,1.4s							
HDA	**Harding Lake**	**80.03**	**26**	P		**P**	**15 36 50.6**	**-0.7**
IL31		**80.10**	**25**	P		**P**	**15 36 50.9**	**-0.7**
ILAR	**Eielson Array**	**80.10**	**25**	P		**P**	**15 36 51.5**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=246,slow=5.3,SNR=38							
ILAR	**Eielson Array**	**80.10**	**25**	P		**P**	**15 36 50.6**	**-1.1**
KLU	**Klutina**	**80.19**	**29**	P		**P**	**15 36 52.6**	**+0.3**
KLU					IAmb	IAmb	15 36 56.1	
	comp=Z,21nm,1.2s							
PAX	**Paxson**	**80.53**	**27**	P		**P**	**15 36 54.2**	**+0.1**
TBI	**Tubuai**	**80.55**	**115**	eLR		LR	16 02 02.3	
	comp=Z,214nm,24.2s							
N25K	**Chitina, Valde**	**80.83**	**29**	P		**P**	**15 36 57.0**	**+1.2**
RIDG	**Independent Ri**	**80.88**	**26**	P		**P**	**15 36 56.5**	**+0.5**
RIDG					IAmb	IAmb	15 36 57.7	
	comp=Z,11nm,1.0s							
GLB	**Gilahina Butte**	**81.19**	**29**	P		**P**	**15 36 58.3**	**+0.6**
GLB					IAmb	IAmb	15 37 00.5	
	comp=Z,22nm,1.1s							
DOT	**Dot Lake**	**81.22**	**27**	P		**P**	**15 36 58.1**	**+0.4**
DOT					IAmb	IAmb	15 36 59.4	
	comp=Z,9.9nm,1.1s							
MENT	**Mentasta**	**81.33**	**27**	P		**P**	**15 36 59.0**	**+0.7**
BARN	**Barnard Glacie**	**82.21**	**29**	P		**P**	**15 37 04.2**	**+1.0**
CTGM	**Chitina Glacie**	**82.37**	**29**	P		**P**	**15 37 05.2**	**+1.3**
TABL	**Tabls Mountain**	**82.45**	**30**	P		**P**	**15 37 05.5**	**+1.0**
EGAK	**Eagle**	**82.55**	**26**	P		**P**	**15 37 06.2**	**+1.6**
DAWY	**Dawson**	**83.31**	**26**	P		**P**	**15 37 09.8**	**+1.2**
VNDA	**Vanda**	**84.95**	**174**	P		**P**	**15 37 16.3**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=320,slow=6.1,SNR=11							
VNDA	**Vanda**	**84.95**	**174**	P		**P**	**15 37 15.9**	**-0.6**
INK	**Inuvik**	**85.50**	**22**	P		**P**	**15 37 19.3**	**-0.3**
INK					IAmb	IAmb	15 37 21.0	
	comp=Z,9.2nm,1.1s							
WHY	**Whitehorse**	**85.54**	**30**	P		**P**	**15 37 21.5**	**+1.4**
BESE	**Bessie Mountai**	**85.71**	**32**	P		**P**	**15 37 22.6**	**+1.6**
RAYN	**Ar Rayn**	**85.81**	**293**	P		**P**	**15 37 22.6**	**+0.4**
KBZ	**Khabaz**	**86.32**	**313**	P		**P**	**15 37 24.4**	**+0.2**
	comp=Z,5.1nm,0.9s,baz=46,slow=3.3,SNR=4.2							
GEVA	**Gevas**	**86.66**	**308**	P		**P**	**15 37 26.6**	**+0.4**
KLMR	**Klimovskoe**	**86.71**	**331**	eP		**P**	**15 37 23.8**	**-1.9**
KLMR					AMP		15 37 26.6	
	comp=Z,28nm,1.4s							
TAOE	**Nuku Hiva Isla**	**87.30**	**99**	eLR		LR	16 05 05.8	
	comp=Z,400nm,24.6s							
MAW	**Mawson**	**88.32**	**201**	P		**P**	**15 37 33.7**	**+0.5**
	comp=Z,3.3nm,0.9s,baz=83,slow=5.2,SNR=3.6							
C36M	**Paulatuk**	**88.72**	**20**	P		**P**	**15 37 34.8**	**-0.3**
C36M					IAmb	IAmb	15 37 36.0	
	comp=Z,8.2nm,0.8s							
ATD	**Arta Tunnel**	**89.48**	**281**	LR		LR	16 13 49.6	
	comp=Z,12nm,22.0s,baz=54,slow=33							
ARCES	**ARCESS Array B**	**90.58**	**340**	P		**P**	**15 37 43.1**	**-0.8**
	comp=Z,14nm,0.7s,baz=81,slow=5.8,SNR=29							
ARCES					LR	LR	16 24 56.3	
	comp=Z,24nm,18.9s,baz=290,slow=40							
ARD7	**ARCESS Array S**	**90.59**	**340**	P		**P**	**15 37 43.5**	**-0.4**
FINES	**FINESS Array B**	**92.94**	**333**	P		**P**	**15 37 54.1**	**-0.9**
	comp=Z,3.6nm,0.8s,baz=90,slow=4.6,SNR=8.1							
FINES					LR	LR	16 21 35.5	
	comp=Z,49nm,21.6s,baz=82,slow=37							
BRTR	**Keskin Array B**	**93.73**	**310**	P		**P**	**15 37 58.6**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=307,slow=38,SNR=3.0							
RES	**Resolute Bay**	**94.25**	**12**	P		**P**	**15 38 00.8**	**0.0**
RES					IAmb	IAmb	15 38 02.1	
	comp=Z,6.5nm,1.0s							
AKASG	**Malin Array Be**	**94.32**	**322**	P		**P**	**15 37 60.0**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=63,slow=4.9,SNR=2.8							
YKA	**Yellowknife Ar**	**94.53**	**26**	P		**P**	**15 38 02.3**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=297,slow=4.6,SNR=16							
QSPA	**South Pole Qui**	**95.95**	**180**	P		**P**	**15 38 08.5**	**-0.2**
QSPA					IAmb	IAmb	15 38 11.2	
	comp=Z,4.4nm,0.9s							
BURAR	**Bucovina Array**	**97.71**	**320**	P		**P**	**15 38 16.0**	**-1.2**
NVAR	**Mina Array Bea**	**100.28**	**49**	P		**Pdif**	**15 38 30.0**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=259,slow=5.8,SNR=7.0							
TORD	**Torodi Ar. Bea**	**128.50**	**292**	PKP		**PKPdf**	**15 43 50.2**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=63,slow=2.0,SNR=8.3							
DBIC	**Dimbokro**	**136.59**	**286**	PKP		**PKPdf**	**15 44 04.6**	**-0.6**
	comp=Z,4.0nm,1.1s,baz=113,slow=7.7,SNR=3.3							
PLCA	**Paso Flores**	**139.30**	**152**	PKP		**PKiKP**	**15 44 11.2**	**-0.7**
	comp=Z,2.6nm,1.0s,baz=201,slow=7.2,SNR=3.5							
MOTC	**Monteria, Cord**	**147.37**	**63**	eP		**PKPdf**	**15 44 25.4**	**+1.1**
OTAV	**Otavalo**	**147.46**	**80**	eP		**PKPbc**	**15 44 27.8**	**+0.2**
DBBC	**Dabeiba**	**147.60**	**67**	eP		PKPab	15 44 40.4	+11
UREC	**San Jos de Ur**	**147.92**	**65**	eP		**PKPbc**	**15 44 28.4**	**+0.1**
CBOC	**Ciudad Bolivar**	**148.21**	**69**	eP		**PKPbc**	**15 44 29.2**	**-0.1**
BBAC	**Balboa, Cauca**	**148.23**	**76**	eP		**PKPbc**	**15 44 28.9**	**-0.4**
YOTC	**Yotoco, Valle**	**148.54**	**72**	eP		**PKPab**	**15 44 36.5**	**+3.0**
GUY2C	**Guyana, Caldas**	**149.04**	**69**	eP		**PKPbc**	**15 44 32.2**	**+0.4**
PUAC	**Puerto Asis, P**	**149.24**	**79**	eP		**PKPdf**	**15 44 27.1**	**-0.4**
MARP	**Paez Belalcaza**	**149.25**	**74**	eP		**PKiKP**	**15 44 33.2**	**-0.1**
ANIL	**Santa Ana**	**149.26**	**71**	eP		**PKPbc**	**15 44 31.8**	**-0.3**
TOLC	**Tolima**	**149.31**	**70**	eP		**PKPdf**	**15 44 29.7**	**+1.8**
ORTC	**Ortega, Tolima**	**149.60**	**72**	eP		**PKPdf**	**15 44 28.7**	**+0.6**
OCAC	**Ocana**	**149.68**	**62**	eP		**PKPdf**	**15 44 29.9**	**+1.6**
GARC	**Garzon, Huila**	**149.88**	**75**	eP		**PKPbc**	**15 44 33.9**	**+0.3**
BARC	**Barichara**	**150.52**	**65**	eP		**PKiKP**	**15 44 36.0**	**+0.2**
PAMC	**Pamplona, Colo**	**150.63**	**63**	eP		**PKPdf**	**15 44 29.6**	**-0.6**
CHIC	**Chingaza**	**150.78**	**69**	eP		**PKPdf**	**15 44 29.5**	**-0.9**
RUSC	**La Rusia**	**150.90**	**66**	eP		**PKPdf**	**15 44 31.3**	**+0.6**
VILC	**Villavicencio,**	**150.99**	**70**	eP		**PKPbc**	**15 44 35.6**	**-0.5**
MACC	**Macarena, Meta**	**151.47**	**74**	eP		**PKPbc**	**15 44 36.8**	**-0.3**
SDV	**Santo Domingo**	**151.70**	**59**	eP		**PKPdf**	**15 44 32.2**	**+0.8**
LPAZ	**La Paz**	**156.47**	**117**	PKPab		**PKPab**	**15 45 09.3**	**+2.1**
	comp=Z,2.7nm,0.8s,baz=255,slow=4.1,SNR=8.5							
CPUP	**Villa Florida**	**157.33**	**154**	PKPab		**PKPab**	**15 45 10.8**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=209,slow=1.4,SNR=4.9							

*IDC **30** 15:28:06.6±0.9, 14°.52S×76°.21W, h0km, mb4.1/9, mb1 4.2/13, mb1mx4.1/28, mbtmp4.1/13, ML3.6/4, MS3.5/8, Ms1 3.5/8, ms1mx3.3/26, Error ellipse: s-maj=31.9km s-min=15.4km az=61.0*

*NEIC **30** 15:28:06.9±1.3, 14°.65S±0°.03×76°.39W±0°.10, h10km±1km, mb4.1/6, Error ellipse: s-maj=16.0km s-min=4.1km az=276.0*

*VAO **30** 15:28:17.9±1.2, 14°.37S×75°.90W, h79km, mb4.3*

ISC 30 15:28:09.8±0.6, **14°.55S**±0°.06×**76°.23W**±0°.09, **h29**km, **n89**, σ1s **81**/**73**, **mb3.9**/**10**, **MS3.8**/**7**, **Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.61**	**347**	Pn		**Pn**		**15 28 51.0**	**+0.8**
	11nm,0.3s,baz=165,slow=14,SNR=26								
NNA				LR		LR		15 29 19.1	
	comp=Z,75nm,18.3s,baz=123,slow=28								
NNA				Sn		**Sb**		**15 29 24.6**	**-3.1**
	105nm,0.3s,baz=194,slow=12,SNR=11								
NNA	**Nana**	**2.61**	**347**	Pn		**Pn**		**15 28 48.9**	**-1.3**
PB16	**IPOC Station P**	**7.47**	**121**	eP		**Pn**		**15 29 59.8**	**+2.4**
PB16				eS		**Sn**		**15 31 16.1**	**-5.4**
PB16	**IPOC Station P**	**7.47**	**121**	Pn		**Pn**		**15 29 59.1**	**+1.7**
ATAH	**Atahualpa**	**7.67**	**344**	Pn		**Pn**		**15 30 00.8**	**+0.8**
	0.6nm,0.3s,baz=87,slow=18,SNR=1.8								
ATAH				Sn		**Sn**		**15 31 24.5**	**-1.6**
	baz=199,slow=5.1,SNR=1.9								
PSGCX	**Pisagua**	**7.70**	**132**	Pn		**Pn**		**15 29 59.9**	**-0.3**
MNMC	**Minye Minye**	**7.82**	**127**			**Pn**		**15 30 00.9**	**-1.0**
LPAZ	**La Paz**	**8.00**	**104**	Pn		Pn		15 30 09.1	+4.3
	3.8nm,0.3s,baz=277,slow=7.1,SNR=141								
LPAZ				LR		LR		15 33 51.2	
	comp=Z,207nm,18.5s,baz=276,slow=43								
LPAZ	**La Paz**	**8.00**	**104**	eP		Pn		15 30 08.9	+4.2
LPAZ	**La Paz**	**8.00**	**104**	Pn		**Pn**		**15 30 07.7**	**+3.0**
LPAZ	**La Paz**	**8.00**	**104**	eP		**Pn**		**15 30 07.8**	**+3.0**
PB11	**IPOC Station P**	**8.15**	**130**	Pn		**Pn**		**15 30 06.1**	**-0.2**
TA01	**Diego Aracena**	**8.31**	**137**			**Pn**		**15 30 07.8**	**-0.6**
GO01	**Chusmiza**	**8.44**	**128**			**Pn**		**15 30 10.3**	**-0.3**
PATCX	**Punta Patache**	**8.51**	**138**	Pn		**Pn**		**15 30 10.8**	**-0.5**
PB08	**IPOC Station P**	**8.75**	**130**			**Pn**		**15 30 14.6**	**-0.2**
PB01	**IPOC Station P**	**9.11**	**136**			**Pn**		**15 30 18.6**	**-0.8**
PB07	**IPOC Station P**	**9.35**	**141**			**Pn**		**15 30 21.6**	**-1.2**
PB04	**IPOC Station P**	**9.66**	**144**	Pn		**Pn**		**15 30 25.8**	**-1.2**
PB09	**IPOC Station P**	**9.80**	**138**	Pn		**Pn**		**15 30 28.8**	**-0.2**
PB06	**IPOC Station P**	**10.28**	**143**	Pn		**Pn**		**15 30 34.5**	**-1.1**
PB10	**IPOC Station P**	**10.41**	**150**	Pn		**Pn**		**15 30 35.5**	**-1.7**
LVC	**Limon Verde**	**10.60**	**140**	Pn		**Pn**		**15 30 41.5**	**+1.3**
	1.3nm,0.3s,baz=317,slow=8.8,SNR=8.6								
LVC				Sn		**Sn**		**15 32 36.1**	**-2.1**
	0.5nm,0.3s,baz=92,slow=20,SNR=1.8								
LVC				Lg		Lg		15 33 36.4	
	0.2nm,0.3s,baz=97,slow=21,SNR=6.7								
LVC	**Limon Verde**	**10.60**	**140**	Pn		**Pn**		**15 30 40.6**	**+0.4**
PB15	**IPOC Station P**	**10.73**	**144**			**Pn**		**15 30 41.1**	**-0.7**
ETMB	**Extrema**	**10.86**	**65**	eP		**Pn**		**15 30 44.7**	**+1.2**
GO02	**Mina Guanaco**	**12.27**	**150**	Pn		**Pn**		**15 31 02.7**	**-0.2**
AC02	**Maricunga**	**13.91**	**153**	Pn		**Pn**		**15 31 21.8**	**-3.7**
SAML	**Samuel**	**13.93**	**68**	Pn		**Pn**		**15 31 27.1**	**+1.7**
SIV	**San Ignacio**	**14.70**	**98**	Pn		**Pn**		**15 31 34.3**	**-1.6**
	0.3nm,0.3s,baz=282,slow=15,SNR=8.2								
OTAV	**Otavalo**	**14.85**	**351**	eP		**P**		**15 31 41.6**	**-2.3**
VILB	**Vilhena**	**15.65**	**86**	eP		**P**		**15 31 49.2**	**-3.2**
BBAC	**Balboa, Cauca**	**16.49**	**356**	eP		**P**		**15 32 02.7**	**+0.8**
PTLB	**Pontes e Lacer**	**16.54**	**95**	eP		**P**		**15 32 02.7**	**+0.5**
GARC	**Garzon, Huila**	**16.64**	**3**	eP		**P**		**15 32 01.3**	**-2.3**
MARP	**Paez Belalcaza**	**17.28**	**1**	eP		**P**		**15 32 10.2**	**-0.5**
ORTC	**Ortega, Tolima**	**18.36**	**3**	eP		Pn		15 32 28.8	+6.3
YOTC	**Yotoco, Valle**	**18.41**	**360**	eP		**P**		**15 32 16.4**	**-6.6**
H03N1	**Juan Fernandez**	**18.97**	**187**	T		T		15 51 55.0	
	baz=8.3,slow=74,SNR=869								
H03N2	**Juan Fernandez**	**18.97**	**187**	T		T		15 51 54.8	
	baz=8.3,slow=74,SNR=1355								
H03N3	**Juan Fernandez**	**18.98**	**187**	T		T		15 51 54.3	
	baz=8.3,slow=74,SNR=1516								
TOLC	**Tolima**	**19.03**	**3**	eP		**Pn**		**15 32 30.4**	**-0.5**
MACA	**Manacapuru-AM**	**19.06**	**55**	eP		**Pn**		**15 32 31.2**	**+0.3**
CHIC	**Chingaza**	**19.21**	**8**	eP		**Pn**		**15 32 36.3**	**+3.1**
RREF	**El Recreo**	**19.34**	**3**	eP		P		15 32 26.1	-7.6
ROSC	**El Rosal**	**19.36**	**6**	LR		LR		15 40 52.0	
	comp=Z,150nm,20.8s,baz=61,slow=40								
GUY2C	**Guyana, Caldas**	**19.66**	**3**	eP		**Pn**		**15 32 38.3**	**-0.3**
CLDB	**Colider**	**20.26**	**82**	eP		**P**		**15 32 42.8**	**-0.4**
CBOC	**Ciudad Bolivar**	**20.28**	**1**	eP		Pn		15 32 43.3	-2.3
RUSC	**La Rusia**	**20.55**	**9**	eP		P		15 32 36.7	-10
PTBC	**PUERTO BERRIO,**	**21.02**	**5**	eP		**P**		**15 32 49.1**	**-2.3**
CPUP	**Villa Florida**	**21.21**	**127**	P		**P**		**15 32 54.7**	**+1.4**
	3.5nm,0.9s,baz=288,slow=14,SNR=3.8								
CPUP				LR		LR		15 42 22.7	
	comp=Z,76nm,18.9s,baz=234,slow=40								
CPUP	**Villa Florida**	**21.21**	**127**	IAmb		IAmb		15 32 54.9	
	comp=Z,1.1nm,0.6s								
DBBC	**Dabeiba**	**21.43**	**0**	eP		**P**		**15 32 54.8**	**-1.0**
NPGB	**Novo Progresso**	**21.80**	**72**	eP		**P**		**15 32 58.9**	**-1.0**
ZARC	**Zaragoza, Cauc**	**21.94**	**4**	eP		**P**		**15 33 00.4**	**-0.8**
ITTB	**Itaituba**	**22.58**	**65**	eP		**P**		**15 33 09.6**	**+1.4**
SDV	**Santo Domingo**	**23.93**	**14**	P		**P**		**15 33 23.0**	**+1.2**
	comp=Z,12nm,0.7s,baz=190,slow=7.7,SNR=16								
SDV	**Santo Domingo**	**23.93**	**14**	eP		**P**		**15 33 19.0**	**-2.8**
SDV	**Santo Domingo**	**23.93**	**14**	eP		**P**		**15 33 23.1**	**+1.2**
PLCA	**Paso Flores**	**26.55**	**170**	P		**P**		**15 33 46.8**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=0.9,slow=16,SNR=4.6								
PLCA				LR		LR		15 41 45.8	
	comp=Z,30nm,21.6s,baz=344,slow=31								
PLCA	**Paso Flores**	**26.55**	**170**	IAmb		IAmb		15 33 51.0	
	comp=Z,0.4nm,0.6s								
IPMB	**Ipameri, GO**	**27.10**	**101**	eP		**P**		**15 33 51.0**	**+0.5**
BDFB	**Brasilia**	**27.26**	**96**	P		**P**		**15 33 52.3**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=252,slow=9.6,SNR=2.4								
BDFB				LR		LR		15 45 24.6	
	comp=Z,258nm,18.3s,baz=294,slow=38								
JANB	**Januaria**	**30.85**	**95**	eP		**P**		**15 34 23.9**	**0.0**
TXAR	**Lajitas Array**	**51.04**	**329**	P		**P**		**15 37 10.8**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=148,slow=8.6,SNR=6.1								
ULM	**Lac du Bonnet**	**66.79**	**346**	P		**P**		**15 38 58.6**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=154,slow=8.3,SNR=4.7								
ULM	**Lac du Bonnet**	**66.79**	**346**	IAmb		IAmb		15 39 13.9	
	comp=Z,3.2nm,1.0s								
VNA2	**Neumayer--Watz**	**69.47**	**161**	P		**P**		**15 39 17.2**	**+2.1**
SNAA	**Sanae**	**71.07**	**161**	P		**P**		**15 39 26.2**	**+1.2**
SNAA				IAmb		IAmb		15 39 27.6	
	comp=Z,2.4nm,0.7s								
QSPA	**South Pole Qui**	**75.60**	**180**	LR		LR		16 09 57.7	
	comp=Z,55nm,18.0s,baz=347,slow=33								
TOA0	**Torodi Ar. Sit**	**81.90**	**74**	P		**P**		**15 40 28.2**	**+0.9**
TORD	**Torodi Ar. Bea**	**81.90**	**74**	P		**P**		**15 40 28.4**	**+1.1**
	comp=Z,6.6nm,0.7s,baz=270,slow=4.2,SNR=28								
TORD	**Torodi Ar. Bea**	**81.90**	**74**	P		**P**		**15 40 28.2**	**+0.9**
YKA	**Yellowknife Ar**	**82.45**	**343**	P		**P**		**15 40 29.5**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=174,slow=5.3,SNR=6.9								
ESDC	**Sonseca Array**	**86.05**	**47**	P		**P**		**15 40 49.6**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=244,slow=3.7,SNR=2.2								
ESDC				LR		LR		16 14 47.0	
	comp=Z,38nm,21.9s,baz=200,slow=33								
BOSA	**Boshof**	**92.90**	**120**	LR		LR		16 21 09.3	
	comp=Z,26nm,18.1s,baz=66,slow=34								
H11N3	**WAKE ISLAND Hyl**	**19.73**	**285**	T		T		17 57 56.1	
	baz=96,slow=74,SNR=148								
H11N2	**WAKE ISLAND Hyl**	**19.74**	**285**	T		T		17 57 56.7	
	baz=96,slow=74,SNR=171								
H11N1	**WAKE ISLAND Hyl**	**19.74**	**285**	T		T		17 57 59.7	
	baz=96,slow=74,SNR=50								
H11S2	**WAKE ISLAND Hyl**	**19.79**	**283**	T		T		17 58 02.8	
	baz=97,slow=75,SNR=38								
H11S1	**WAKE ISLAND Hyl**	**19.80**	**283**	T		T		17 57 55.9	
	baz=97,slow=75,SNR=46								
H11S3	**WAKE ISLAND Hyl**	**19.81**	**283**	T		T		17 58 01.7	
	baz=97,slow=75,SNR=45								
ASAR	**Alice Springs**	**131.93**	**218**	PKP		**PKiKP**		**15 47 22.6**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=121,slow=1.6,SNR=6.3								
WRA	**Warramunga Arr**	**134.41**	**222**	PKP		**PKiKP**		**15 47 27.2**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=135,slow=2.0,SNR=6.0								
ZALV	**Zalesovo Beam**	**137.96**	**17**	PKP		**PKiKP**		**15 47 33.2**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=304,slow=3.3,SNR=2.5								
SONM	**Songino Array**	**146.74**	**357**	PKPbc		**PKiKP**		**15 47 50.7**	**-1.3**
	comp=Z,1.9nm,0.6s,baz=331,slow=1.8,SNR=14								
SONM	**Songino Array**	**146.74**	**357**	PKPbc		**PKPab**		**15 47 50.0**	**-0.4**
LZH	**Lanzhou**	**158.55**	**360**	ePKP		**PKPdf**		**15 48 04.5**	**-0.7**
LZH				pPKP		pPKPdf		15 48 08.0	-6.8
LZH				sPKP				15 48 09.0	
LZH				PKP		**PKPab**		**15 48 42.3**	**+2.3**
LZH				LR		LR			
	comp=N,87nm,18.0s								
LZH				LR		LR			
	comp=E,92nm,18.2s								
LZH				LR		LR			
	comp=Z,130nm,20.1s								

*JMA **30** 15:42:27.4±0.1, 24°.52N×122°.03E, h74km±2km, M2.1*

*TAP **30** 15:42:27.6, 24°.59N×122°.07E, h69km±1km, ML3.0, B*

ISC 30 15:42:28.5±1.3, **24°.57N**±0°.03×**122°.07E**±0°.02, **h66**km±7km, **n76**, σ0s **67**/142, **5C-1D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.21**	**280**	*i* P		**Pn**		**15 42 38.5**	**-0.1**
	baz=275								
TWC				S		**Sn**		**15 42 46.0**	**0.0**
	baz=275								
ENAH	**Nanao**	**0.27**	**243**	⇑*i*P		**Pn**		**15 42 39.2**	**+0.2**
	baz=239								
ENAH				*i* S		**Sn**		**15 42 47.6**	**+1.0**
	baz=239								
EGS		**0.30**	**334**	*i* P		**Pn**		**15 42 39.1**	**-0.1**
	baz=335								
ENA	**Nanau**	**0.34**	**244**	⇑*i*P		**Pn**		**15 42 39.5**	**0.0**
	baz=241								
ENA				*i* S		**Sn**		**15 42 48.4**	**+0.9**
	baz=241								
ILA	**Ilan**	**0.35**	**303**	*i* P		**Pn**		**15 42 40.3**	**+0.7**
	baz=301								
ILA				S		**Sn**		**15 42 49.0**	**+1.3**
	baz=301								
NTC	**Toucheng**	**0.36**	**322**	*e*P		**Pn**		**15 42 39.1**	**-0.6**
	baz=320								
NTC				*e*S		**Sn**		**15 42 47.2**	**-0.5**
	baz=320								
TWE	**Neicheng**	**0.40**	**292**	⇑*i*P		**Pn**		**15 42 40.2**	**+0.3**
	baz=289								
TWE				S		**Sn**		**15 42 48.9**	**+0.6**
	baz=289								
TWB1	**Santiao Chiao**	**0.44**	**350**	⇓*i*P		**Pn**		**15 42 39.9**	**-0.5**
	baz=350								
TWB1				*i* S		**Sn**		**15 42 48.1**	**-0.9**
	baz=350								
TIPB	**Shuangxi**	**0.46**	**330**	⇑*i*P		**Pn**		**15 42 40.1**	**-0.4**
	baz=329								
TIPB				*i* S		**Sn**		**15 42 48.6**	**-0.7**
	baz=329								
ENTT	**Nioudou**	**0.47**	**278**	*i* P		**Pn**		**15 42 40.9**	**+0.3**
	baz=276								
ENTT				*i* S		**Sn**		**15 42 50.3**	**+0.8**
	baz=276								
NDT	**Datong Townshi**	**0.51**	**273**	*i* P		**Pn**		**15 42 41.2**	**+0.2**
	baz=271								
NDT				S		**Sn**		**15 42 51.1**	**+0.8**
	baz=271								
NWLT	**Wulai**	**0.56**	**291**	*i* P		**Pn**		**15 42 41.8**	**+0.3**
	baz=289								
NWLT				S		**Sn**		**15 42 51.3**	**+0.2**
	baz=289								
NWF	**Wu-fen Shan**	**0.56**	**332**	*i* P		**Pn**		**15 42 41.3**	**-0.3**
	baz=331								
NWF				*i* S		**Sn**		**15 42 50.7**	**-0.6**
	baz=331								
WFSB	**Wu-fen Shan**	**0.56**	**332**	P		**Pn**		**15 42 41.2**	**-0.3**
	baz=331								
WFSB				S		**Sn**		**15 42 50.5**	**-0.6**
	baz=331								
NACB	**Ninganchiao**	**0.59**	**228**	P		**Pn**		**15 42

	baz=232							
OWD				*e*S		**Sn**	15 43 01.2	+0.1
	baz=232							
NHW	**Xinwu Township**	**1.03**	**295**	P		**Pn**	15 42 46.8	-0.3
	baz=294							
NHW				S		**Sn**	15 43 00.7	-0.3
	baz=294							
WHP	**Taichung City**	**1.07**	**254**	P		**Pn**	15 42 48.2	+0.5
	baz=253							
WHP				S		**Sn**	15 43 02.4	+0.3
	baz=253							
EGFH	**Guangfu**	**1.08**	**213**	P		**Pn**	15 42 47.0	-0.8
	baz=212							
EGFH				S		**Sn**	15 43 01.6	-0.5
	baz=212							
NMLH	**Miaoli**	**1.17**	**268**	P		**Pn**	15 42 49.0	+0.1
	baz=267							
NMLH				S		**Sn**	15 43 04.3	0.0
	baz=267							
DPDB	**Guoxing**	**1.18**	**243**	P		**Pn**	15 42 49.4	+0.3
	baz=242							
DPDB				*e*S		**Sn**	15 43 05.5	+1.0
	baz=242							
TWQ1	**Liyutan**	**1.21**	**260**	P		**Pn**	15 42 49.2	-0.2
	baz=258							
TWQ1				S		**Sn**	15 43 05.0	-0.1
	baz=258							
HGSD	**Ruisui**	**1.23**	**209**	P		**Pn**	15 42 48.9	-0.8
	baz=208							
HGSD				S		**Sn**	15 43 05.6	0.0
	baz=208							
EHY	**Hungye**	**1.27**	**213**	P		**Pn**	15 42 48.8	-1.4
	baz=212							
EHY				S		**Sn**	15 43 06.1	-0.4
	baz=212							
SMLT	**Sun Moon Lake**	**1.27**	**238**	*e*P		**Pn**	15 42 51.4	+1.0
	baz=236							
SMLT				S		**Sn**	15 43 06.9	+0.1
	baz=236							
SSLB	**Suanglung**	**1.29**	**233**	P		**Pn**	15 42 50.9	+0.3
	baz=231							
SSLB				S		**Sn**	15 43 07.9	+0.9
	baz=231							
WDJ	**Dajia District**	**1.33**	**261**	*e*S		**Sn**	15 43 08.1	+0.2
	baz=259							
TCU	**Taichung**	**1.34**	**252**	*e*S		**Sn**	15 43 09.3	+1.1
	baz=250							
YULB	**Yu-li**	**1.37**	**211**	P		**Pn**	15 42 50.0	-1.6
	baz=210							
YULB				*e*S		**Sn**	15 43 08.5	-0.5
	baz=210							
EYUL	**Yuli**	**1.40**	**210**	*e*P		**Pn**	15 42 50.6	-1.4
	baz=209							
TWF1	**Yuli**	**1.41**	**210**	*e*P		**Pn**	15 42 50.9	-1.3
	baz=209							
TWF1				*e*S		**Sn**	15 43 10.6	+0.7
	baz=209							
WHYT	**Xinyi Township**	**1.42**	**232**	*e*P		**Pn**	15 42 52.7	+0.4
	baz=231							
WHYT				*e*S		**Sn**	15 43 12.2	+2.1
	baz=231							
WJS	**Zhushan**	**1.44**	**239**	*e*P		**Pn**	15 42 53.3	+0.8
	baz=238							
WNT	**Mingjian**	**1.45**	**242**	*e*P		**Pn**	15 42 53.3	+0.7
	baz=240							
WNT				*e*S		**Sn**	15 43 11.4	+0.6
	baz=240							
IRIF	**Iriomote-Funau**	**1.53**	**99**	P		**Pn**	15 42 53.5	-0.2
IRIF				*e*S		**Sn**	15 43 13.1	+0.4
FULB	**Fuli**	**1.54**	**208**	*e*P		**Pn**	15 42 53.1	-0.9
	baz=207							
FULB				*e*S		**Sn**	15 43 12.2	-0.9
	baz=207							
ALS	**Alishan**	**1.57**	**228**	*e*P		**Pn**	15 42 55.1	+0.6
	baz=226							
ALS				*e*S		**Sn**	15 43 14.4	+0.3
	baz=226							
CHN5	**Tsauling**	**1.60**	**233**	*e*P		**Pn**	15 42 55.1	+0.3
	baz=232							
CHN5				*e*S		**Sn**	15 43 15.0	+0.4
	baz=232							
ELDTW	**Lidau**	**1.68**	**215**	*e*P		**Pn**	15 42 54.7	-1.2
	baz=214							
ELDTW				*e*S		**Sn**	15 43 14.8	-1.8
	baz=214							
JKRS	**Kuro-shima**	**1.80**	**100**	P		**Pn**	15 42 57.6	+0.3
JKRS				*e*S		**Sn**	15 43 19.8	+0.7
TPUB	**Ta-pu**	**1.83**	**226**	*e*P		**Pn**	15 42 59.2	+1.4
	baz=225							
STYT	**Tauyuan**	**1.85**	**221**	*e*P		**Pn**	15 42 59.6	+1.5
	baz=220							
JIJ	**Ishigaki jima**	**1.90**	**96**	P		**Pn**	15 42 58.5	-0.1
JIJ				*e*S		**Sn**	15 43 21.5	-0.1
JISG	**Ishigakijimahi**	**2.04**	**89**	P		**Pn**	15 43 00.5	0.0

*IDC **30** 15:42:54.6±1.9,51°.30N×175°.10W,h0km,mb3.7/5, mb1 3.7/6,mb1mx3.5/36,mbtmp3.6/6,ML3.6/1, Error ellipse: s-maj=54.7km s-min=28.8km az=145.0*
*NEIC **30** 15:42:57.8±1.5,51°.1N±0°.1×174°.99W±0°.09,h25km±8km, Error ellipse: s-maj=16.5km s-min=5.9km az=155.0*
*AEIC **30** 15:42:59±1.4,51°.20N±0°.10×175°.06W±0°.09,h26km±6km, ML3.3,mb4.0/32(NEIC), Error ellipse: s-maj=14.9km s-min=5.7km az=156.0*

ISC 30 15:42:55.9±3.3,51°.13N±0°.09×175°.04W±0°.05, h10km±20km,n76,σ0°83/72,mb3.8/13,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSMY	**Great Sitkin M**	**1.12**	**326**		**Pb**	**15 43 17.5**	**+0.2**
ETKA	**Kagalaska Isla**	**1.13**	**311**		**Pn**	**15 43 17.6**	**-0.1**
GSCK	**Great Sitkin C**	**1.13**	**322**		**Pn**	**15 43 17.6**	**-0.1**
GSTD	**Great Sitkin T**	**1.16**	**324**		**Pn**	**15 43 18.2**	**0.0**
GSTD					**Sn**	**15 43 33.9**	**-0.2**
GSTR	**Great Sitkin T**	**1.16**	**327**		**Pb**	**15 43 18.5**	**+0.5**
ATKA	**Atka Island**	**1.20**	**26**		**Pn**	**15 43 18.7**	**0.0**
ATKA					**Sb**	**15 43 34.4**	**+0.1**
ADK	**Adak**	**1.28**	**307**		**Pn**	**15 43 19.8**	**0.0**
ADAG	**Mount Adagdak**	**1.30**	**312**		**Pb**	**15 43 20.8**	**+0.5**
KOKL	**Mount Kliuchef**	**1.31**	**23**		**Pn**	**15 43 21.0**	**+0.7**
KOKL					**Sn**	**15 43 38.0**	**+0.2**
KOSE	**Korovin Southe**	**1.37**	**26**		**Pb**	**15 43 21.9**	**+0.3**
KIRH	**Kanaga Island**	**1.50**	**302**		**Pb**	**15 43 23.6**	**-0.2**
KIMD	**Kanaga Island**	**1.51**	**296**		**Pn**	**15 43 23.5**	**+0.5**
KIKV	**Kanaga Island**	**1.53**	**300**		**Pn**	**15 43 23.9**	**+0.7**
KIKV					**Sb**	**15 43 43.7**	**0.0**
KICM	**Kanaga Island**	**1.56**	**301**		**Pb**	**15 43 24.5**	**-0.4**
TAFP	**Tanaga Falls P**	**2.00**	**294**		**Pn**	**15 43 31.0**	**+1.4**
TAFP					**Sn**	**15 43 55.6**	**+1.0**
TASE	**Tanaga Southea**	**2.00**	**292**		**Pb**	**15 43 31.3**	**-1.1**
KDAK	**Kodiak Island**	**14.62**	**54**	Pn	**Pn**	**15 46 22.8**	**+0.3**
CNPM	**China Poot**	**15.87**	**49**	Pn	**Pn**	**15 46 39.4**	**+0.3**
BRLK	**Bradley Lake**	**16.12**	**48**	Pn	**Pn**	**15 46 41.8**	**-0.6**
SEW	**Seward**	**16.92**	**48**	Pn	**Pn**	**15 46 51.9**	**-0.5**
SEW				IAmb	IAmb	15 47 13.1	
	comp=Z,25nm,1.3s						
O22K	**Cooper Landing**	**16.93**	**47**	Pn	**Pn**	**15 46 53.2**	**+0.6**
KNK	**Knik Glacier**	**17.86**	**45**	Pn	**Pn**	**15 47 04.0**	**-0.2**
KNK				IAmb	IAmb	15 47 30.2	
	comp=Z,10nm,1.1s						
GLI	**Glacier Island**	**18.28**	**47**	P	**P**	**15 47 09.8**	**+0.3**
IMAR	**Indian Mountai**	**18.42**	**28**	P	**P**	**15 47 11.0**	**+0.1**
SCM	**Sheep Creek Mo**	**18.52**	**44**	P	**P**	**15 47 12.2**	**0.0**
FID	**Port Fidalgo**	**18.52**	**48**	P	**P**	**15 47 10.9**	**-1.2**
FID				IAmb	IAmb	15 47 24.8	
	comp=Z,17nm,1.2s						
RND	**Reindeer**	**18.58**	**39**	P	**P**	**15 47 12.5**	**-0.3**
RND				IAmb	IAmb	15 47 35.1	
	comp=Z,11nm,1.4s						
I23K	**Minto, Yukon-K**	**19.32**	**34**	P	**P**	**15 47 21.0**	**+0.2**
I23K				IAmb	IAmb	15 47 48.9	
	comp=Z,10nm,1.5s						
CCB	**Clear Creek Bu**	**19.60**	**36**	P	**P**	**15 47 22.0**	**-1.9**
MDM	**Murphy Dome**	**19.61**	**35**	P	**P**	**15 47 22.5**	**-1.6**
N25K	**Chitina, Valde**	**19.66**	**46**	P	**P**	**15 47 24.3**	**-0.4**
N25K				IAmb	IAmb	15 47 40.1	
	comp=Z,13nm,1.4s						
HDA	**Harding Lake**	**19.81**	**37**	P	**P**	**15 47 25.6**	**-0.5**
HDA				IAmb	IAmb	15 47 39.2	
	comp=Z,3.6nm,0.6s						
IL31		**20.01**	**36**	P	**P**	**15 47 26.6**	**-1.7**
ILAR	**Eielson Array**	**20.01**	**36**	P	**P**	**15 47 26.4**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=227,slow=9.1,SNR=18						
VRDI	**Verde Repeater**	**20.08**	**48**	P	**P**	**15 47 27.3**	**-2.0**
CRQM	**Cirque**	**20.10**	**49**	P	**P**	**15 47 29.4**	**-0.1**
COLD	**Coldfoot**	**20.31**	**28**	P	**P**	**15 47 32.3**	**+0.7**
RIDG	**Independent Ri**	**20.33**	**40**	P	**P**	**15 47 31.2**	**-0.8**
RIDG				IAmb	IAmb	15 47 58.5	
	comp=Z,9.0nm,1.4s						
DOT	**Dot Lake**	**20.62**	**41**	P	**P**	**15 47 34.1**	**-0.9**
DOT				IAmb	IAmb	15 47 43.7	
	comp=Z,5.7nm,1.1s						
BCAR	**Beaver Creek A**	**21.37**	**43**	P	**P**	**15 47 44.6**	**+1.5**
TOLK	**Toolik Lake Re**	**21.43**	**26**	P	**P**	**15 47 44.0**	**+0.3**
TOLK				IAmb	IAmb	15 47 47.4	
	comp=Z,3.5nm,0.8s						
K27K	**Chicken**	**21.58**	**41**	P	**P**	**15 47 45.5**	**+0.3**
K27K				IAmb	IAmb	15 47 56.9	
	comp=Z,5.2nm,1.1s						
BMAR	**Burnt Mountain**	**22.19**	**31**	P	**P**	**15 47 52.1**	**+0.3**
EGAK	**Eagle**	**22.22**	**39**	P	**P**	**15 47 51.4**	**-0.8**
EGAK				IAmb	IAmb	15 48 03.1	
	comp=Z,4.0nm,0.8s						
DAWY	**Dawson**	**22.70**	**42**	P	**P**	**15 47 56.1**	**-1.3**
INK	**Inuvik**	**26.33**	**34**	P	**P**	**15 48 31.4**	**0.0**
	comp=Z,0.4nm,0.5s,baz=246,slow=14,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**34.42**	**211**	T	T	16 26 37.0	
	baz=18,slow=76,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**34.42**	**211**	T	T	16 26 35.0	
	baz=18,slow=76,SNR=3.6						
H11N1	**WAKE ISLAND Hy**	**34.43**	**211**	T	T	16 26 37.4	
	baz=18,slow=76,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**35.62**	**211**	T	T	16 28 27.9	
	baz=16						
H11S2	**WAKE ISLAND Hy**	**35.64**	**211**	T	T	16 28 47.1	
	baz=16						
H11S3	**WAKE ISLAND Hy**	**35.64**	**211**	T	T	16 28 16.7	
	baz=16						
PDAR	**Pinedale Array**	**44.12**	**74**	P	P	15 51 14.2	+10
	comp=Z,0.5nm,0.5s,baz=294,slow=5.4,SNR=1.8						
SONM	**Songino Array**	**48.85**	**299**	P	**P**	**15 51 41.2**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=44,slow=8.5,SNR=3.7						
SONM	**Songino Array**	**48.85**	**299**	IAmb	IAmb	15 51 45.2	
	comp=Z,1.3nm,1.2s						
TXAR	**Lajitas Array**	**56.35**	**84**	P	P	15 52 49.3	+12
	comp=Z,0.2nm,0.6s,baz=305,slow=5.4,SNR=1.9						
MK31	**Makanchi Array**	**62.02**	**311**	P	**P**	**15 53 15.0**	**-1.0**
MK31				IAmb	IAmb	15 53 23.1	
	comp=Z,2.7nm,1.1s						
MKAR	**Makanchi Array**	**62.02**	**311**	P	**P**	**15 53 15.2**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=50,slow=6.6,SNR=14						
ABKAR	**Akbulak array**	**69.53**	**325**	P	**P**	**15 54 04.0**	**-0.3**
KK31	**Karatay Array**	**70.27**	**315**	P	**P**	**15 54 08.6**	**-0.4**
KK31				IAmb	IAmb	15 54 09.8	
	comp=Z,1.5nm,0.6s						
KKAR	**Karatay Array**	**70.27**	**315**	P	**P**	**15 54 08.8**	**-0.2**
KKAR	**Karatay Array**	**70.27**	**315**	P	**P**	**15 54 08.8**	**-0.2**
KKAR				IAmb	IAmb	15 54 09.8	
	comp=Z,1.5nm,0.6s						
TAPN	**Taplejung**	**73.49**	**293**	*e*P	**P**	**15 54 30.3**	**+1.3**
GAR	**Garm**	**73.62**	**312**	P	**P**	**15 54 29.6**	**+0.2**
GUN	**Gumba**	**74.12**	**295**	*e*P	**P**	**15 54 34.0**	**+1.3**
	comp=Z,17nm,0.7s						
RAMN	**Ramite**	**74.44**	**294**	*e*P	**P**	**15 54 35.6**	**+1.1**
	comp=Z,21nm,0.9s						
PKI	**Pulchoki**	**74.65**	**295**	*e*P	**P**	**15 54 36.6**	**+0.8**
	comp=Z,10nm,0.9s						
PKIN	**Phulchoki**	**74.65**	**295**	*e*P	**P**	**15 54 36.4**	**+0.7**
	comp=Z,5.3nm,0.6s						
GKN	**Gorkha**	**74.76**	**296**	*e*P	**P**	**15 54 37.3**	**+1.1**
DANN	**Dangsing**	**74.99**	**296**	*e*P	**P**	**15 54 38.6**	**+0.9**
	comp=Z,14nm,0.8s						
KOLN	**Koldanda**	**75.53**	**296**	*e*P	**P**	**15 54 41.6**	**+0.9**
PYUN	**Piuthan**	**75.62**	**297**	*e*P	**P**	**15 54 42.1**	**+0.9**
	comp=Z,22nm,1.0s						
AKASG	**Malin Array Be**	**76.47**	**344**	P	**P**	**15 54 44.5**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=14,slow=6.2,SNR=2.4						
AKBB	**Malin Array Si**	**76.47**	**344**	P	**P**	**15 54 45.0**	**-0.3**
AKBB				IAmb	IAmb	15 54 48.5	
	comp=Z,3.2nm,1.1s						
NIL	**Nilore**	**76.48**	**307**	P	**P**	**15 54 44.9**	**-0.9**
ASAR	**Alice Springs**	**86.95**	**226**	P	**P**	**15 55 41.7**	**+0.8**
	comp=Z,0.4nm,1.0s,baz=19,slow=5.7,SNR=4.8						

*IDC **30** 15:56:25.6±6.0,23°.22S×177°.39W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.6/25,mbtmp3.9/3, Error ellipse: s-maj=243.8km s-min=55.7km az=150.0*
*NEIC **30** 15:56:38.2±2.3,24°.5S±0°.3×176°.9W±0°.2,h132km±12km, mb4.3/7,Error ellipse: s-maj=39.2km s-min=22.4km az=170.0*

ISC 30 15:56:39.5±1.6,24°.4S±0°.2×176°.9W±0°.1,h150km,n13, σ0°92/12,mb4.0/6,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**8.11**	**323**	Pn	**Pn**	**15 58 34.6**	**0.0**
NIUE	**Niue**	**8.34**	**52**	Pn	**Pn**	**15 58 37.7**	**+0.1**
CTA	**Charters Tower**	**34.31**	**270**	P	**P**	**16 03 12.0**	**+0.1**
	1.1nm,0.3s,baz=99,slow=14,SNR=1.4						
CTAO	**Charters Tower**	**34.31**	**270**	P	**P**	**16 03 12.9**	**+1.0**
CTAO				IAmb	IAmb	16 03 41.9	
	comp=Z,10.0nm,1.1s						
ASAR	**Alice Springs**	**44.75**	**260**	P	**P**	**16 04 39.0**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=94,slow=7.3,SNR=13						
WR0	**Warramunga Arr**	**45.01**	**266**	P	**P**	**16 04 40.8**	**+0.4**
WB2	**Warramunga Ar**	**45.19**	**266**	P	**P**	**16 04 42.6**	**+0.9**
WB2				IAmb	IAmb	16 04 45.8	
	comp=Z,4.8nm,1.2s						
WB0	**Warramunga Arr**	**45.20**	**266**	P	**P**	**16 04 40.2**	**-1.6**
WB0				IAmb	IAmb	16 04 55.7	
	comp=Z,7.5nm,1.4s						
WRA	**Warramunga Arr**	**45.20**	**266**	P	**P**	**16 04 40.5**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=102,slow=8.4,SNR=5.8						
WRA	**Warramunga Ar**	**45.20**	**266**	IAmb	IAmb	16 04 43.4	
	comp=Z,2.0nm,1.1s						
MTN	**Manton Dam**	**50.31**	**273**	P	**P**	**16 05 20.6**	**-0.6**
MTN				IAmb	IAmb	16 05 32.2	
	comp=Z,17nm,1.5s						
KNRA	**Kununurra**	**51.52**	**269**	P	**P**	**16 05 29.6**	**-0.6**
AKASG	**Malin Array Be**	**146.85**	**329**	PKPbc	**PKPab**	**16 16 05.3**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=39,slow=4.3,SNR=6.7						

*IDC **30** 16:01:00.8±1.1,37°.39N×26°.81E,h0km,mb3.5/3, mb1 3.7/8,mb1mx3.4/37,mbtmp3.6/8,ML3.5/5,MS2.9/6, Ms1 2.9/6,ms1mx2.6/42, Error ellipse: s-maj=27.3km s-min=13.9km az=130.0*
*ISK **30** 16:01:01.0,37°.36N×26°.77E,h6km,ML3.9/18*
*ATH **30** 16:01:01.1,37°.38N×26°.82E,h26km±1km,ML3.8/10, Error ellipse: s-maj=1.8km s-min=0.8km az=73.0*
*THE **30** 16:01:01.6,37°.35N×26°.78E,h2km±1km,ML3.8/15, Error ellipse: s-maj=1.3km s-min=0.5km az=81.0*
*GII **30** 16:01:12.6±0.0,36°.77N×27°.57E,h2km,MD3.1/1,Mm3.5/2*

ISC 30 16:01:01.8±0.9,37°.34N±0°.02×26°.80E±0°.02,h15km±6km, n141,σ1°56/171,mb3.6/3,5C-4D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.37**	**4**	P	**Pg**	**16 01 08.6**	**-0.8**
SMG				S	**Sg**	**16 01 14.1**	**-0.4**
SMG				AML	AML	16 01 14.7	
	comp=N,31729μm,0.2s						
SMG				AML	AML	16 01 16.1	
	comp=E,29315μm,0.2s						
SMG	**Samos**	**0.37**	**4**	P	**Pg**	**16 01 08.6**	**-0.8**
SMG				S	**Sg**	**16 01 13.9**	**-0.6**
	comp=E,16μm,0.2s						
YKAV	**Yalikavak-Bodr**	**0.44**	**119**	PG	**Pb**	**16 01 10.7**	**-0.6**
YKAV				SG	**Sg**	**16 01 16.9**	**+0.4**
BODT	**Bodrum**	**0.49**	**124**	PG	**Pg**	**16 01 11.6**	**0.0**
BODT				SG	**Sb**	**16 01 19.4**	**+0.2**
BODT	**Bodrum**	**0.49**	**124**	P	**Pg**	**16 01 11.5**	**0.0**
BODT				S	**Sg**	**16 01 18.6**	**+0.4**
GCAM	**G?zelcaml?**	**0.50**	**44**	PG	**Pb**	**16 01 11.4**	**-0.9**
KOSK	**Kos Island**	**0.60**	**166**	P	**Pg**	**16 01 13.3**	**-0.4**
KOSK				S	**Sb**	**16 01 23.4**	**+1.0**
	comp=E,18μm,0.4s						
NISR	**Nisiros**	**0.77**	**160**	P	**Pb**	**16 01 17.1**	**+0.1**
NISR				S	**Sb**	**16 01 28.2**	**+0.9**
NISR				AML	AML	16 01 35.1	
	comp=E,12625μm,0.3s						
NISR				AML	AML	16 01 41.3	
	comp=N,8333μm,0.5s						
NISR	**Nisiros**	**0.77**	**160**	P	**Pg**	**16 01 16.7**	**-0.1**
NISR				S	**Sb**	**16 01 27.9**	**+0.6**
MLSB	**Milas**	**0.78**	**93**	PG	**Pb**	**16 01 17.4**	**+0.3**
MLSB				SG	**Sb**	**16 01 28.5**	**+1.0**
NIS1	**Nisyros Isl.**	**0.80**	**158**	P	**Pb**	**16 01 17.3**	**-0.1**
NIS1				S	**Sb**	**16 01 29.9**	**+1.9**
NIS1				AML	AML	16 01 36.7	
	comp=N,22968μm,0.7s						
NIS1				AML	AML	16 01 37.4	
	comp=E,25713μm,0.5s						
NIS1	**Nisyros Isl.**	**0.80**	**158**	PG	**Pb**	**16 01 17.3**	**-0.1**
NIS1	**Nisyros Isl.**	**0.80**	**158**	P	**Pg**	**16 01 17.1**	**-0.2**
NIS1				S	**Sb**	**16 01 30.3**	**+2.3**
	comp=E,13μm,0.6s						
AMGA	**Amorgos Island**	**0.89**	**235**	P	**Pg**	**16 01 18.7**	**-0.3**
AMGA				S	**Sb**	**16 01 32.5**	**+1.9**
AMGA				AML	AML	16 01 34.4	
	comp=N,17993μm,0.6s						
AMGA				AML	AML	16 01 34.9	
	comp=E,26543μm,0.6s						
AMGA	**Amorgos Island**	**0.89**	**235**	P	**Pb**	**16 01 19.0**	**+0.1**
AMGA				S	**Sb**	**16 01 31.5**	**+0.9**
DATC	**Datca-Mugla**	**0.90**	**130**	PG	**Pb**	**16 01 19.3**	**+0.2**
DATC				SG	**Sb**	**16 01 32.6**	**+1.7**
URLA	**Izmir**	**1.03**	**351**	PG	**Pg**	**16 01 20.8**	**-1.0**
APE	**Apeiranthos**	**1.05**	**255**	P	**Pg**	**16 01 21.3**	**-0.8**
APE				AML	AML	16 01 39.7	
	comp=N,4511μm,0.3s						
APE				AML	AML	16 01 40.0	
	comp=E,4997μm,0.3s						
APE	**Apeiranthos**	**1.05**	**255**	⇓P	**Pb**	**16 01 22.1**	**+0.4**
APE	**Apeiranthos**	**1.05**	**255**	PG	**Pg**	**16 01 21.3**	**-0.8**
APE	**Apeiranthos**	**1.05**	**255**	P	**Pb**	**16 01 22.2**	**+0.4**
APE				S	**Sb**	**16 01 36.3**	**+1.0**
	comp=E,2μm,0.3s						
AYDB	**Zeytinkoy-Aydi**	**1.06**	**55**	PG	**Pb**	**16 01 21.5**	**-0.4**
YER	**Yerkesik**	**1.20**	**99**	PN	**Pb**	**16 01 24.5**	**+0.2**
YER	**Yerkesik**	**1.20**	**99**	P	**Pg**	**16 01 24.2**	**-0.8**
YER				S	**Sn**	**16 01 41.4**	**+1.2**
MRSB	**Marmaris-Mugla**	**1.28**	**119**	PN	**Pn**	**16 01 26.1**	**+0.9**
ANAF	**Anafi Island**	**1.28**	**220**	P	**Pg**	**16 01 25.3**	**-1.2**
ANAF	**Anafi Island**	**1.28**	**220**	P	**Pg**	**16 01 24.8**	**-1.7**
ANAF				S	**Sn**	**16 01 44.3**	**+2.1**
	comp=E,11μm,0.3s						
TURN	**Turunc**	**1.28**	**116**	PN	**Pn**	**16 01 26.5**	**+1.3**
TNSA	**Tinos**	**1.32**	**279**	P	**Pg**	**16 01 26.4**	**-0.9**
TNSA				AML	AML	16 01 46.1	
	comp=E,3343μm,0.6s						
TNSA				AML	AML	16 01 47.0	
	comp=N,3135μm,0.2s						
THR8	**Santorini-Mono**	**1.41**	**229**	P	**Pn**	**16 01 26.7**	**-0.3**
CMBO	**Columbo, Santo**	**1.42**	**233**	P	**Pn**	**16 01 27.6**	**+0.6**
CMBO				AML	AML	16 01 53.3	
	comp=N,17014μm,0.6s						
CMBO				AML	AML	16 01 56.4	
	comp=E,11520μm,0.8s						
CMBO	**Columbo, Santo**	**1.42**	**233**	P	**Pn**	**16 01 26.9**	**-0.1**
CMBO				S	**Sg**	**16 01 45.9**	**-1.6**
	comp=E,6μm,0.7s						
THT2	**Imerovigli**	**1.43**	**231**	P	**Pn**	**16 01 27.2**	**0.0**
THT2				S	**Sg**	**16 01 46.5**	**-1.4**
	comp=E,4μm,0.7s						
SFIR	**Foira Santorin**	**1.43**	**231**	P	**Pn**	**16 01 27.6**	**+0.3**
THR7	**Fira-Santorini**	**1.43**	**231**	P	**Pn**	**16 01 27.8**	**+0.5**
THR7	**Fira-Santorini**	**1.43**	**231**	P	**Pn**	**16 01 27.1**	**-0.2**
SNT1	**Gialos, Santor**	**1.44**	**230**	P	**Pn**	**16 01 27.1**	**-0.2**
SNT1				S	**Sb**	**16 01 46.3**	**-0.1**
	comp=E,4μm,0.8s						
THR3	**Thira Island,**	**1.46**	**231**	P	**Pn**	**16 01 28.0**	**+0.4**
THR3	**Thira Island,**	**1.46**	**231**	P	**Pn**	**16 01 27.8**	**+0.2**
SNT5	**Nea Kammeni, S**	**1.46**	**231**	P	**Pn**	**16 01 28.0**	**+0.3**
SAP3	**Santorini-Thir**	**1.48**	**233**	P	**Pn**	**16 01 28.7**	**+0.8**
SAP3	**Santorini-Thir**	**1.48**	**233**	P	**Pn**	**16 01 27.2**	**-0.7**
SAP3				S	**Sb**	**16 01 48.3**	**+0.8**
	comp=E,9μm,1.1s						
THR5	**Thira Island,**	**1.48**	**232**	P	**Pn**	**16 01 28.6**	**+0.6**
THR6	**Thira Island,**	**1.49**	**229**	P	**Pn**	**16 01 28.5**	**+0.4**
ARG	**Arkhangelos**	**1.54**	**136**	P	**Pn**	**16 01 29.2**	**+0.4**
ARG				AML	AML	16 01 59.2	
	comp=N,7667μm,0.5s						
ARG				AML	AML	16 02 02.0	
	comp=E,5037μm,0.9s						
ARG	**Arkhangelos**	**1.54**	**136**	PN	**Pn**	**16 01 30.1**	**+1.3**
ARG	**Arkhangelos**	**1.54**	**136**	P	**Pn**	**16 01 29.1**	**+0.3**
ARG				S	**Sg**	**16 01 51.5**	**-0.1**
	comp=E,3μm,0.7s						
PSRA	**Psara**	**1.55**	**321**	P	**Pn**	**16 01 29.4**	**+0.5**
DALY	**Dalyan (Mula)**	**1.57**	**109**	PN	**Pb**	**16 01 30.6**	**0.0**
GOMA	**Golmarmara-Man**	**1.62**	**32**	PN	**Pn**	**16 01 30.9**	**+1.0**
DKL	**Dikili**	**1.73**	**3**	PN	**Pn**	**16 01 31.7**	**+0.3**
AKS	**Akhisar**	**1.73**	**27**	PN	**Pn**	**16 01 32.4**	**+1.0**
MANT	**Manisa**	**1.80**	**50**	Pn	**Pn**	**16 01 32.6**	**0.0**
KARP	**Karpathos**	**1.81**	**171**	P	**Pn**	**16 01 32.7**	**+0.2**
KARP	**Karpathos**	**1.81**	**171**	PN	**Pn**	**16 01 32.9**	**+0.3**
KARP	**Karpathos**	**1.81**	**171**	Pn	**Pn**	**16 01 32.5**	**0.0**
KARP	**Karpathos**	**1.81**	**171**	P	**Pn**	**16 01 32.5**	**0.0**
KULA	**Kula-Manisa**	**1.88**	**51**	PN	**

IMMV	**Iera Moni Meta**	**2.95**	**231**	P		**Pn**	**16 01 49.3**	**+1.1**
IMMV	**Iera Moni Meta**	**2.95**	**231**	P		**Pn**	**16 01 49.2**	**+1.1**
ISP	**Isparta**	**3.00**	**80**	Pn		**Pn**	**16 01 48.6**	**-0.3**
KTHA	**Kythira Island**	**3.19**	**251**	P		**Pn**	**16 01 53.2**	**+1.7**
ALN	**Alexandroupoli**	**3.60**	**351**	Pn		**Pn**	**16 01 57.2**	**+0.2**
ITM	**Ithomi**	**3.89**	**269**	Pn		**Pn**	**16 02 03.7**	**+2.6**
AGG	**Agios Georgios**	**3.90**	**297**			**Pn**	**16 02 02.9**	**+1.6**
ANTO	**Ankara**	**5.33**	**60**	⇓P		Pn	16 02 08.0	-13
BRTR	**Keskin Array B**	**5.87**	**64**	Pn		**Pn**	**16 02 30.4**	**+2.1**
	comp=N,0.9nm,0.3s,baz=244,slow=14,SNR=28							
BRTR				Sn		**Sn**	**16 03 34.3**	**-1.1**
	baz=252,slow=26,SNR=1.1							
BRTR	**Keskin Array B**	**5.87**	**64**			**Pn**	**16 02 29.8**	**+1.4**
BR131	**Keskin Array S**	**5.87**	**64**			**Pn**	**16 02 30.1**	**+1.7**
RAZG	**Razgrad**	**6.22**	**358**	⇓P		Pn	16 02 27.1	-6.0
ICOR	**Ion Corvin**	**6.81**	**6**	⇑P		Pn	16 02 34.2	-7.0
TIRR	**Tirgusor**	**7.21**	**9**	Pn		**Pn**	**16 02 48.5**	**+1.8**
CFR	**Carcaliu**	**7.89**	**7**	⇑P		Pn	16 02 48.2	-7.9
TIP	**Timpagrande**	**8.11**	**286**	Pn		**Pn**	**16 02 59.9**	**+0.8**
MLR	**Muntele Rosu**	**8.17**	**356**	Pn		**Pn**	**16 03 00.3**	**+0.4**
	comp=N,0.2nm,0.3s,baz=170,slow=11,SNR=1.9							
MLR				LR		LR	16 06 48.9	
	comp=N,151nm,19.8s,baz=157,slow=43							
MMC7	**Mount Meron ar**	**8.25**	**119**	Pn		**Pn**	**16 03 01.4**	**+0.4**
MMA0B	**Mount Meron ar**	**8.26**	**119**	Pn		**Pn**	**16 03 02.8**	**+1.7**
MMA0B				Sn		**Sn**	**16 04 29.2**	**-5.0**
MMAI	**Mount Meron Ar**	**8.26**	**119**	Pn		**Pn**	**16 03 01.8**	**+0.7**
	comp=N,2.6nm,0.3s,baz=306,slow=12,SNR=14							
MMAI				Sn		**Sn**	**16 04 28.4**	**-5.8**
	comp=N,7.7nm,0.3s,baz=319,slow=23,SNR=13							
GEM	**Giv'at Ha'Em**	**8.33**	**117**	Pn		**Pn**	**16 03 04.1**	**+2.0**
GEM				Sn		**Sn**	**16 04 30.1**	**-5.9**
NATI	**Neve Ativ**	**8.36**	**116**	Pn		**Pn**	**16 03 04.3**	**+1.9**
DIVS	**Divibare**	**8.50**	**325**	Pn		**Pn**	**16 03 05.5**	**+1.0**
VRI	**Vrincioaia**	**8.52**	**360**	⇓P		Pn	16 02 58.1	-6.5
GZR	**Gura Zlata**	**8.60**	**341**	⇑P		**Pn**	**16 03 01.6**	**-4.2**
BZS	**Buzias**	**9.14**	**336**	⇑P		Pn	16 03 08.6	-4.4
GHAJ	**Ghor Haditha**	**9.42**	**127**	Pn		**Pn**	**16 03 19.1**	**+1.1**
PRNI	**Paran**	**9.75**	**133**	Pn		**Pn**	**16 03 22.6**	**+1.0**
PRNI				Sn		**Sn**	**16 05 04.1**	**-6.7**
MBRI	**Mt Berech**	**10.12**	**136**	Pn		**Pn**	**16 03 28.0**	**+1.4**
MBRI				Sn		**Sn**	**16 05 14.0**	**-5.9**
EIL	**Elat**	**10.23**	**136**	Pn		**Pn**	**16 03 28.1**	**0.0**
	comp=N,0.6nm,0.3s,baz=130,slow=3.5,SNR=4.5							
EIL				Sn		**Sn**	**16 05 15.6**	**-7.0**
	comp=N,2.0nm,0.3s,baz=60,slow=16,SNR=8.9							
EIL				LR		LR	16 08 05.6	
	comp=N,24nm,20.0s,baz=290,slow=41							
EIL	**Elat**	**10.23**	**136**	Pn		**Pn**	**16 03 29.1**	**+0.9**
VRAC	**Vranov**	**14.06**	**331**	LR		LR	16 10 47.3	
	comp=N,62nm,18.1s,baz=131,slow=42							
GERES	**GERESS Array B**	**14.93**	**324**	LR		LR	16 11 20.6	
	comp=N,80nm,19.1s,baz=275,slow=42							
DAVOX	**Davos/Dischmat**	**15.69**	**312**	LR		LR	16 11 36.4	
	comp=N,59nm,18.7s,baz=110,slow=41							
CLL	**Collm**	**17.06**	**329**	*e*P		**P**	**16 05 02.0**	**+0.6**
OBN	**Obninsk**	**18.98**	**17**	LR		LR	16 14 14.5	
	comp=N,16nm,19.7s,baz=355,slow=42							
TORD	**Torodi Ar. Bea**	**32.91**	**230**	P		**P**	**16 07 37.5**	**+1.9**
	comp=N,0.8nm,0.8s,baz=35,slow=8.7,SNR=4.2							
MKAR	**Makanchi Array**	**41.49**	**59**	P		**P**	**16 08 49.4**	**+1.2**
	comp=N,0.6nm,0.7s,baz=270,slow=8.6,SNR=6.5							
MKAR	**Makanchi Array**	**41.49**	**59**	P		**P**	**16 08 49.8**	**+1.5**
SONM	**Songino Array**	**57.09**	**52**	P		**P**	**16 10 49.9**	**+2.3**
	comp=N,0.4nm,0.8s,baz=282,slow=6.8,SNR=2.3							
SONM	**Songino Array**	**57.09**	**52**	P		**P**	**16 10 49.0**	**+1.4**
SONM				IAmb		IAmb	16 10 50.1	
	comp=Z,0.9nm,1.0s							

IGQ ***30*** *16:27:06.2±0.6,2˚S±3˚×7˚8W±˚, h10km, M4.1*

ISC 30 16:27:03.9±1.6**, 2˚08S**±0˚05**×77˚60W**±0˚05**, h5**km±13km,
n45,σ1°45/52, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKYU	**Pakayacu**	**0.43**	**0**	P	**Pb**	**16 27 14.0**	**+0.1**
PKYU				S	**Sb**	**16 27 21.3**	**+0.6**
PUYO	**Puyo, Santa Ro**	**0.72**	**324**	P	**Pb**	**16 27 19.7**	**+0.6**
APUY	**Puyo**	**0.73**	**327**	P	**Pb**	**16 27 19.7**	**+0.5**
APUY				S	**Sn**	**16 27 31.2**	**-1.4**
SANGA	**Volcan Sangay**	**0.78**	**272**	P	**Pn**	**16 27 21.3**	**-0.6**
PAT1	**Patacocha**	**1.01**	**304**	P	**Pn**	**16 27 25.0**	**-0.3**
ARRY	**Arrayan**	**1.03**	**303**	P	**Pn**	**16 27 24.8**	**-0.6**
BULB	**Ulba Tungurahu**	**1.03**	**308**	P	**Pn**	**16 27 24.9**	**-0.5**
BRUN	**Tungurahua Vol**	**1.04**	**309**	P	**Pn**	**16 27 25.3**	**-0.2**
BMAS	**Trigal station**	**1.05**	**303**	P	**Pn**	**16 27 25.3**	**-0.4**
RETU	**Refugio**	**1.05**	**306**	P	**Pn**	**16 27 25.3**	**-0.5**
RUN5	**Runtun**	**1.06**	**308**	P	**Pn**	**16 27 25.3**	**-0.4**
JUI6	**Juive**	**1.09**	**307**	P	**Pn**	**16 27 25.7**	**-0.4**
BBIL	**Ulba Tungurahu**	**1.09**	**305**	P	**Pn**	**16 27 25.9**	**-0.2**
ARDO	**Archidona, Ten**	**1.09**	**349**	P	**Pg**	**16 27 25.2**	**+0.2**
IGUA	**Igualata**	**1.19**	**299**	P	**Pn**	**16 27 28.7**	**+0.8**
PIAT	**Ana Tenorio**	**1.26**	**328**	P	**Pb**	**16 27 28.4**	**0.0**
PIS1	**Pisayambo**	**1.28**	**322**	P	**Pg**	**16 27 29.2**	**+0.6**
BOSC	**San Juan Bosco**	**1.40**	**220**	P	**Pg**	**16 27 31.3**	**+0.5**
SAGO	**Sagoatoa**	**1.41**	**311**	P	**Pg**	**16 27 32.0**	**+1.0**
VCES	**Cotopaxi**	**1.50**	**328**	P	**Pg**	**16 27 33.5**	**+0.8**
TAMB	**Tambo**	**1.57**	**331**	P	**Pb**	**16 27 34.0**	**+0.1**
BMOR	**Cotopaxi Volca**	**1.59**	**327**	P	**Pb**	**16 27 34.4**	**+0.2**
BTAM	**Cotopaxi Volca**	**1.61**	**330**	P	**Pb**	**16 27 34.7**	**+0.2**
BREF	**Cotopaxi Volca**	**1.63**	**329**	P	**Pg**	**16 27 36.4**	**+1.1**
VC1	**Cotopaxi 1**	**1.64**	**330**	P	**Pb**	**16 27 35.1**	**+0.2**
BNAS	**Cotopaxi Volca**	**1.65**	**328**	P	**Pg**	**16 27 35.6**	**0.0**
CAMI	**Rancho Maria**	**1.66**	**327**	P	**Pb**	**16 27 35.6**	**+0.3**
ANTS	**Antisana-Sarah**	**1.67**	**340**	P	**Pn**	**16 27 34.9**	**+0.5**
ANTG	**Antisana-Guama**	**1.70**	**337**	P	**Pb**	**16 27 35.4**	**-0.6**
COHC	**Cochancay**	**1.70**	**257**	P	**Pg**	**16 27 37.2**	**+0.6**
ANTI	**Antisana**	**1.71**	**341**	P	**Pn**	**16 27 35.1**	**+0.2**
MILO	**Milagro-Astudi**	**1.97**	**264**	P	**Pg**	**16 27 41.9**	**+0.2**
LAV4	**Lava4-Reventad**	**1.97**	**359**	P	**Pn**	**16 27 39.0**	**+0.8**
CONE	**Cono NE Rev Vo**	**1.99**	**359**	P	**Pn**	**16 27 39.4**	**+0.8**
OTAV	**Otavalo**	**2.45**	**340**	*e*P	**Pb**	**16 27 48.5**	**-0.3**
OTAV				*e*S	**Sg**	**16 28 21.4**	**-1.4**
OTAV				*i*		16 28 32.4	
	comp=Z,22nm,0.6s						
CUSE	**Cuicocha Este**	**2.50**	**341**	*e*P	**Pg**	**16 27 51.9**	**0.0**
CUSE				*e*S	**Sb**	**16 28 21.3**	**+0.5**
PAC1	**Pacto, Paraso**	**2.62**	**333**	*e*P	**Pb**	**16 27 49.9**	**-1.5**
PAC1				*e*S	**Sb**	**16 28 23.2**	**-0.8**
PAC1				*i*		16 28 37.6	
	comp=Z,93nm,0.3s						
PUAC	**Puerto Asis, P**	**2.80**	**21**	*e*P	**Pn**	**16 27 48.1**	**-1.4**
GCUF	**Volcan Galeras**	**3.29**	**4**	*e*P	**Pb**	**16 28 00.8**	**-2.4**
GCUF				*e*S	**Sb**	**16 28 44.3**	**+0.6**
GCUF				*i*		16 28 49.0	
	comp=Z,52nm,0.3s						
CRUC	**La Cruz**	**3.68**	**10**	*e*P	**Pb**	**16 28 08.3**	**-1.3**
CRUC				*e*S	**Sb**	**16 28 58.6**	**+3.9**
CRUC				*i*		16 29 06.2	
	comp=Z,13nm,0.2s						
BBAC	**Balboa, Cauca**	**4.09**	**5**	*e*P	**Pb**	**16 28 13.2**	**-3.3**
BBAC				*e*S	**Sb**	**16 29 07.4**	**+1.0**
BBAC				*i*		16 29 26.2	
	comp=Z,9.4nm,0.3s						
PCON	**Cinco Dias**	**4.54**	**15**	*e*P	**Pb**	**16 28 25.7**	**+1.2**
GARC	**Garzon, Huila**	**4.73**	**26**	*e*P	**Pn**	**16 28 13.8**	**-2.4**
MARP	**Paez Belalcaza**	**5.16**	**19**	*e*P	Pb	16 28 29.2	-5.6
BETC	**Betania**	**5.19**	**25**	*e*S	**Sb**	**16 29 44.4**	**+6.3**
BETC				*i*		16 30 05.5	
	comp=Z,4.5nm,0.4s						

LDG ***30*** *16:28:12.2±0.1,51˚27N×19˚08E, h1km, Ml3.8/11, Error ellipse: s-maj=2.8km s-min=2.3km az=26.0, Suspected Mining induced.*

MOS ***30*** *16:28:12.6±0.8,51˚25N×19˚06E, h10km, mb4.5/3, Error ellipse: s-maj=6.7km s-min=4.3km az=69.1*

IPEC ***30*** *16:28:12.6±0.2,51˚27N×19˚08E, h0km, ML4.1/3, Error ellipse: s-maj=2.2km s-min=1.5km az=155.0*

NEIC ***30*** *16:28:13.3±2.5,51˚29N±0˚03×19˚07E±0˚07, h6km±4km, Error ellipse: s-maj=6.3km s-min=4.6km az=88.0*

DNK ***30*** *16:28:13.1±2.0,51˚05N×19˚03E, h23km±90km, ML2.8*

PRU ***30*** *16:28:14.2±0.0,51˚21N×19˚04E, h0km, M4.2, Belchatow*

IDC ***30*** *16:28:14.3±0.5,51˚19N×19˚07E, h0km, mb3.5/5, mb1 3.8/14, mb1mx3.6/54, mbtmp3.7/14, ML3.6/9, MS2.9/4, Ms1 2.9/4, ms1mx2.6/40, Error ellipse: s-maj=8.2km s-min=6.2km az=116.0*

BGR ***30*** *16:28:15.6±0.4,51˚17N×19˚02E, h1km, ML4.3/12, Error ellipse: s-maj=6.7km s-min=4.4km az=27.0*

UPP ***30*** *16:28:16.5±3.1,51˚37N×18˚69E, h0km, ML2.8, Suspected explosion*

ISC 30 16:28:11.8±0.4**, 51˚27N**±0˚02**×19˚08E**±0˚02**, h0km, n321,**
σ2°12/436, mb4.0/14, MS2.9/4, 17C-13D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**1.15**	**156**	*e*Pg	**Pb**	**16 28 34.6**	**+0.1**
OJC				*e*Sg	**Sb**	**16 28 50.4**	**+0.5**
OJC	**Ojcow**	**1.15**	**156**	*e*Pg	**Pb**	**16 28 34.7**	**+0.2**
OJC				*e*Sg	**Sb**	**16 28 50.8**	**+0.9**
OJC	**Ojcow**	**1.15**	**156**	*e*Pg	**Pb**	**16 28 34.7**	**+0.2**
OJC				*e*Sg	**Sb**	**16 28 50.8**	**+0.9**
OJC	**Ojcow**	**1.15**	**156**	Pg	**Pb**	**16 28 34.8**	**+0.3**
OJC				Sg	**Sb**	**16 28 50.4**	**+0.5**
BEL	**Belsk**	**1.21**	**61**	*e*Pg	**Pn**	**16 28 38.7**	**+2.8**
BEL				*e*Sg	**Sn**	**16 28 56.7**	**+3.8**
RAC	**Raciborz**	**1.31**	**206**	*e*P	**Pn**	**16 28 38.3**	**+0.9**
RAC				*e*		16 28 57.0	
OKC	**Ostrava-Krasne**	**1.55**	**203**	*e*Pn	**Pg**	**16 28 41.7**	**+0.2**
OKC				*e*Sg	**Sg**	**16 29 03.3**	**+1.7**
OKC	**Ostrava-Krasne**	**1.55**	**203**	*e*P	**Pb**	**16 28 41.5**	**+0.1**
OKC				*e*		16 29 01.2	
OKC				smax	smax		
	comp=N,888nm,0.6s						
OKC	**Ostrava-Krasne**	**1.55**	**203**	*e*PG	**Pb**	**16 28 41.5**	**+0.1**
OKC				*e*SG	**Sn**	**16 29 01.2**	**-0.3**
	comp=N,888nm,0.6s						
OKC	**Ostrava-Krasne**	**1.55**	**203**	*e*Pn	**Pg**	**16 28 41.7**	**+0.2**
OKC				*e*Sg	**Sg**	**16 29 03.3**	**+1.7**
MORC	**Moravsky Berou**	**1.79**	**214**	⇑P	**Pn**	**16 28 44.6**	**+0.7**
MORC				⇓S	**Sb**	**16 29 08.7**	**+0.3**
MORC	**Moravsky Berou**	**1.79**	**214**	*e*PN	**Pn**	**16 28 44.6**	**+0.7**
MORC				*e*SG	**Sb**	**16 29 08.7**	**+0.3**
MORC	**Moravsky Berou**	**1.79**	**214**	*e*Pn	**Pn**	**16 28 44.8**	**+0.8**
MORC				*e*Sg	**Sb**	**16 29 08.9**	**+0.5**
MORC	**Moravsky Berou**	**1.79**	**214**	P	**Pn**	**16 28 44.4**	**+0.5**
MORC	**Moravsky Berou**	**1.79**	**214**	*e*Pn	**Pn**	**16 28 44.8**	**+0.8**
MORC				*e*Sg	**Sb**	**16 29 08.9**	**+0.5**
MORC	**Moravsky Berou**	**1.79**	**214**	Pn	**Pn**	**16 28 44.4**	**+0.5**
MORC	**Moravsky Berou**	**1.79**	**214**	*e*Pn	**Pn**	**16 28 44.5**	**+0.5**
	baz=33						
MORC				*e*Sg	**Sb**	**16 29 08.7**	**+0.3**
	comp=N,2μm,1.6s,baz=33						
KSP	**Ksiaz**	**1.81**	**257**	*e*Pn	**Pn**	**16 28 44.7**	**+0.5**
KSP				*e*Pg	**Pg**	**16 28 48.7**	**+2.3**
KSP				*e*Sg	**Sg**	**16 29 12.0**	**+2.1**
KSP	**Ksiaz**	**1.81**	**257**	*e*Pn	**Pn**	**16 28 45.0**	**+0.8**
KSP				*e*Pg	**Pg**	**16 28 48.7**	**+2.3**
KSP				*e*Sg	**Sg**	**16 29 12.5**	**+2.6**
KSP	**Ksiaz**	**1.81**	**257**	*e*Pn	**Pn**	**16 28 45.0**	**+0.8**
KSP				*e*Pg	**Pg**	**16 28 48.7**	**+2.3**
KSP				*e*Sg	**Sg**	**16 29 12.5**	**+2.6**
KRLC	**Kraliky**	**1.89**	**232**	*e*P	**Pn**	**16 28 46.0**	**+0.7**
KRLC				*e*		16 29 11.5	
KRLC				smax	smax		
	comp=N,851nm,0.6s						
KRLC	**Kraliky**	**1.89**	**232**	*e*PN	**Pn**	**16 28 46.0**	**+0.7**
KRLC				*e*SG	**Sb**	**16 29 11.5**	**+0.2**
	comp=N,851nm,0.6s						
OSTC	**Ostas**	**1.95**	**250**	*e*PN	**Pn**	**16 28 47.1**	**+1.0**
OSTC				*e*SG	**Sg**	**16 29 14.7**	**+0.3**
	comp=N,2μm,1.4s						
DPC	**Dobruska-Polom**	**1.98**	**243**	*e*Pn	**Pb**	**16 28 47.7**	**-0.9**
DPC				*e*Sg	**Sn**	**16 29 12.1**	**+0.1**
DPC	**Dobruska-Polom**	**1.98**	**243**	*e*P	**Pb**	**16 28 48.0**	**-0.7**
DPC				*e*		16 29 15.2	
DPC				smax	smax		
	comp=N,490nm,0.4s						
DPC	**Dobruska-Polom**	**1.98**	**243**	*e*PN	**Pb**	**16 28 48.0**	**-0.7**
DPC				*e*SG	**Sg**	**16 29 15.2**	**-0.1**
	comp=N,490nm,0.4s						
DPC	**Dobruska-Polom**	**1.98**	**243**	*e*Pn	**Pb**	**16 28 47.7**	**-0.9**
DPC				*e*Sg	**Sn**	**16 29 12.1**	**+0.1**
NIE	**Niedzica**	**2.01**	**157**	*e*Pg	**Pn**	**16 28 48.2**	**+1.2**
NIE				*e*Sg	**Sg**	**16 29 16.9**	**+0.6**
CHVC	**Chvalec**	**2.03**	**252**	*e*PN	**Pb**	**16 28 48.6**	**-1.0**
CHVC				*e*SG	**Sg**	**16 29 17.5**	**+0.5**
	comp=N,2μm,1.2s						
UPC	**Upice**	**2.09**	**250**	*e*P	**Pb**	**16 28 49.4**	**-1.1**
UPC				*e*		16 29 19.2	
UPC				smax	smax		
	comp=N,2μm,1.2s						
UPC	**Upice**	**2.09**	**250**	*e*PN	**Pb**	**16 28 49.4**	**-1.1**
UPC				*e*PG	**Pg**	**16 28 52.2**	**+0.4**
UPC				*e*SG	**Sg**	**16 29 19.2**	**+0.4**
	comp=N,2μm,1.2s						
LANS	**Liptovska Anna**	**2.14**	**173**	*e*P	**Pn**	**16 28 49.9**	**+1.2**
LANS				*e*		16 29 18.7	
LANS				pmax	pmax		
	comp=N,613nm,0.6s						
LANS	**Liptovska Anna**	**2.14**	**173**	*e*PN	**Pn**	**16 28 49.9**	**+1.2**
LANS				*e*SN	**Sb**	**16 29 18.7**	**+0.3**
LANS				*e*LG	Lg	16 29 29.8	
GKP	**Gorka Klasztor**	**2.30**	**331**	*e*Pn	**Pb**	**16 28 53.3**	**-0.8**
GKP				*e*Pg	**Pg**	**16 28 59.7**	**+3.8**
GKP				*e*Sg	**Sg**	**16 29 32.5**	**+6.9**
VRAC	**Vranov**	**2.53**	**220**	Pn	**Pn**	**16 28 55.9**	**+1.8**
	comp=N,7.2nm,0.3s,baz=45,slow=12,SNR=48						
VRAC				Pg	**Pg**	**16 29 02.4**	**+2.2**
	comp=N,25nm,0.3s,baz=41,slow=16,SNR=48						
VRAC				Sn	**Sn**	**16 29 25.4**	**-0.2**
	comp=N,25nm,0.3s,baz=326,slow=19,SNR=5.5						
VRAC				Lg	Lg	16 29 32.1	
	comp=N,100nm,0.3s,baz=331,slow=18,SNR=23						
VRAC	**Vranov**	**2.53**	**220**	⇑P	**Pn**	**16 28 55.4**	**+1.3**
VRAC				⇓S	**Sn**	**16 29 26.8**	**+1.2**
VRAC	**Vranov**	**2.53**	**220**	*e*PN	**Pn**	**16 28 55.1**	**+1.0**
VRAC				*e*SG	**Sg**	**16 29 31.8**	**-1.3**
VRAC	**Vranov**	**2.53**	**220**	*e*Pn	**Pn**	**16 28 55.1**	**+1.0**
	baz=38						
VRAC				*e*Sg	**Sg**	**16 29 31.7**	**-1.3**
	comp=N,607nm,0.9s,baz=38						
JAVC	**Velka Javorina**	**2.58**	**201**	*e*PN	**Pn**	**16 28 56.4**	**+1.6**
VYHS	**Vyhne**	**2.78**	**183**	*e*P	**Pn**	**16 28 58.4**	**+0.8**
VYHS	**Vyhne**	**2.78**	**183**	*e*PN	**Pn**	**16 28 58.4**	**+0.8**
VYHS				*e*		16 29 06.4	
KRUC	**Moravsky**	**2.81**	**219**	*e*PN	**Pn**	**16 28 58.8**	**+0.9**
KRUC				*e*SG	**Sg**	**16 29 40.3**	**-1.6**
KRUC	**Moravsky**	**2.81**	**219**	*e*Pn	**Pn**	**16 28 58.8**	**+0.9**
	baz=37						
KRUC				*e*Sg	**Sg**	**16 29 40.2**	**-1.6**
	comp=N,608nm,0.8s,baz=37						
CRVS	**Cervenica-Dubn**	**2.82**	**146**	*e*P	**Pn**	**16 28 59.4**	**+1.3**
CRVS				pmax	pmax		
	comp=N,1μm,1.0s						
CRVS	**Cervenica-Dubn**	**2.82**	**146**	*e*PN	**Pn**	**16 28 59.4**	**+1.3**
CRVS				*e*PG	**Pg**	**16 29 05.2**	**-0.6**
CRVS				*e*LG	Lg	16 29 55.6	
KWP	**Kalwaria Pacla**	**2.84**	**124**	*e*Pb	**Pn**	**16 29 00.0**	**+1.7**
KWP				*e*Pg	**Pg**	**16 29 05.4**	**-0.8**
KWP				*e*Sg	**Sg**	**16 29 41.8**	**-1.2**
KWP	**Kalwaria Pacla**	**2.84**	**124**	P	**Pn**	**16 28 59.3**	**+0.9**
KWP	**Kalwaria Pacla**	**2.84**	**124**		**Pn**	**16 28 59.3**	**+0.9**
KECS	**Kecovo**	**2.93**	**161**	*e*P	**Pn**	**16 29 00.2**	**+0.6**
KECS				pmax	pmax		
	comp=N,398nm,0.9s						
KECS	**Kecovo**	**2.93**	**161**	*e*Pn	**Pn**	**16 29 00.2**	**+0.6**
KECS				*e*		16 29 07.6	
KECS				*e*LG	Lg	16 29 53.2	
PVCC	**Panska Ves**	**2.95**	**257**	*e*P	**Pn**	**16 29 00.6**	**+0.7**
PVCC	**Panska Ves**	**2.95**	**257**	*e*PN	**Pn**	**16 29 00.6**	**+0.7**
PVCC				*e*SG	**Sg**	**16 29 47.2**	**+0.7**
	comp=N,1μm,1.0s						
TREC	**Trest**	**3.04**	**231**	*e*P	**Pn**	**16 29 02.1**	**+1.0**
TREC				*e*		16 29 47.5	
TREC				smax	smax		
	comp=N,252nm,0.6s						
TREC	**Trest**	**3.04**	**231**	*e*PN	**Pn**	**16 29 02.1**	**+1.0**
TREC				*e*SG	**Sg**	**16 29 47.5**	**-1.8**
	comp=N,252nm,0.6s						
KOLS	**Kolonicke sedl**	**3.11**	**137**	*e*P	**Pn**	**16 29 03.3**	**+1.2**
KOLS				pmax	pmax		
	comp=N,749nm,1.1s						
KOLS	**Kolonicke sedl**	**3.11**	**137**	*e*Pn	**Pn**	**16 29 03.3**	**+1.2**
KOLS				*e*		16 29 11.4	
KOLS				*e*LG	Lg	16 30 21.1	
MODS	**Modra-Piesok**	**3.13**	**203**	*e*P	**Pn**	**16 29 02.3**	**0.0**
MODS				pmax	pmax		
	comp=N,300nm,1.1s						
MODS	**Modra-Piesok**	**3.13**	**203**	*e*PN	**Pn**	**16 29 02.2**	**0.0**
MODS				*e*LG	Lg	16 30 02.1	
PRU	**Pruhonice**	**3.16**	**248**	*e*P	**Pn**	**16 29 03.6**	**+0.8**
PRU	**Pruhonice**	**3.16**	**248**	*e*PN	**Pn**	**16 29 03.6**	**+0.8**
PRU				*e*SG	**Sg**	**16 29 53.7**	**+0.4**
	comp=N,452nm,1.0s						
PRA	**Prague**	**3.19**	**250**	*e*P	**Pb**	**16 29 11.1**	**+1.8**
PRA	**Prague**	**3.19**	**250**	*e*PG	**Pb**	**16 29 11.1**	**+1.8**
PRA				*e*SG	**Sg**	**16 29 54.4**	**+0.2**
	comp=N,724nm,1.5s						
BRG	**Berggiesshubel**	**3.27**	**265**	PN	**Pn**	**16 29 05.8**	**+1.6**
BRG				PG	**Pg**	**16 29 14.2**	**-0.2**
BRG				SG	**Sg**	**16 29 58.8**	**+2.1**
	comp=N,298nm,0.5s						
	comp=N,755nm,3.6s						
	comp=E,864nm,5.4s						
	comp=Z,1μm,5.0s						
BRG	**Berggiesshubel**	**3.27**	**265**	*e*Pn	**Pn**	**16 29 05.6**	**+1.4**
BRG				*e*Pg	**Pg**	**16 29 14.3**	**0.0**
BRG				*e*Sg	**Sg**	**16 29 58.3**	**+1.7**
BRG	**Berggiesshubel**	**3.27**	**265**	P	**Pn**	**16 29 05.8**	**+1.6**
BRG				MLR	MLR		
	comp=N,755nm,3.7s						
BRG				MLR	MLR		
	comp=E,864nm,5.4s						
BRG				MLR	MLR		
	comp=Z,1μm,5.0s						
BRG	**Berggiesshubel**	**3.27**	**265**	*e*Pn	**Pn**	**16 29 05.6**	**+1.4**
BRG				*e*Pg	**Pg**	**16 29 14.3**	**0.0**
BRG				*e*Sg	**Sg**	**16 29 58.3**	**+1.7**
ZST	**Bratislava**	**3.33**	**203**	*e*P	**Pn**	**16 29 06.3**	**+1.2**
ZST	**Bratislava**	**3.33**	**203**	*e*PN	**Pn**	**16 29 06.3**	**+1.2**
UZH	**Uzhgorod**	**3.36**	**141**	⇑*i*P	**Pn**	**16 29 05.8**	**+0.3**
UZH				*e*S	**Sn**	**16 29 46.6**	**+0.6**
UZH				smax	smax		
	comp=N,100nm,0.8s						
UZH				smax	smax		
	comp=E,100nm,0.8s						
UZH				MLR	MLR		
	comp=Z,60nm,1.0s						
PSZ	**Piszkesteto**	**3.40**	**171**	⇓P	**Pn**	**16 29 07.5**	**+1.4**
PSZ	**Piszkesteto**	**3.40**	**171**	P	**Pn**	**16 29 06.8**	**+0.7**
PSZ	**Piszkesteto**	**3.40**	**171**	Pn	**Pn**	**16 29 06.8**	**+0.7**
LVV	**L'vov**	**3.48**	**113**	*e*P	**Pn**	**16 29 08.7**	**+1.6**
LVV				*e*		16 29 49.1	
LVV				pmax	pmax		
	comp=Z,620nm,1.0s						
LVV				smax	smax		
	comp=E,1μm,1.2s						
LVV				smax	smax		
	comp=N,2μm,1.5s						
LVV				MLR	MLR		
	comp=E,2μm,3.8s						
LVV				MLR	MLR		
	comp=N,1μm,3.2s						
LVV				MLR	MLR		
	comp=Z,900nm,3.2s						
SRO	**Srobarova**	**3.50**	**189**	*e*P	**Pg**	**16 29 21.9**	**+3.2**
SRO				pmax	pmax		
	comp=N,266nm,0.9s						
SRO	**Srobarova**	**3.50**	**189**	*e*	**Pg**	**16 29 21.9**	**+3.2**
SRO				*e*LG	Lg	16 30 21.6	
RUE	**Ruedersdorf**	**3.50**	**292**	*e*P	**Pg**	**16 29 19.4**	**+0.5**
PBCC	**Pribram**	**3.62**	**246**	*e*PN	**Pn**	**16 29 10.0**	**+1.0**
PBCC				*e*SG	**Sg**	**16 30 07.4**	**-0.4**
	comp=N,244nm,1.4s						
FBE	**Freiberg**	**3.63**	**267**	*e*Pg	**Pg**	**16 29 21.3**	**0.0**
FBE				*e*

BUR08	Bucovina Ar. S	5.39	130		Pn		Pn	16 29 35.3	+1.8	
BLEU	Blekinge	5.40	340		P		Pn	16 29 34.0	+0.5	
BLEU					S		Sn	16 30 35.4	-0.9	
BURAR	Bucovina Array	5.42	130	⇑	P		Pn	16 29 35.6	+1.7	
BURAR	Bucovina Array	5.42	130		Pn		Pn	16 29 35.6	+1.7	
ARCR	ARCALIA	5.43	138	⇑	P		Pn	16 29 36.3	+2.4	
LUNU	Lund	5.51	325		P		Pn	16 29 36.0	+0.9	
LUNU					S		Sn	16 30 37.4	-1.8	
OBKA	Obir	5.62	214	*e*	Pn		Pn	16 29 39.1	+2.4	
	comp=E,5.0nm,0.6s,SNR=7.8									
OBKA					Sg		Sg	16 31 17.7	+5.4	
	comp=E,24nm,0.5s									
OBKA	Obir	5.62	214				Pn	16 29 39.1	+2.4	
OBKA					Lg		Lg	16 31 17.7		
KBA	Koelnbreinsper	5.63	224	*e*	Pn		Pn	16 29 38.2	+1.3	
	comp=Z,1.4nm,0.3s									
KBA					*e*Sn		Sn	16 30 44.0	+1.7	
	comp=Z,14nm,0.5s									
KBA	Koelnbreinsper	5.63	224				Pn	16 29 38.2	+1.3	
KBA							Sn	16 30 44.0	+1.7	
GOLS	Golise	5.74	205	*e*	Pn		Pn	16 29 39.9	+1.7	
MYKA	Terra Mystica	5.86	220	*e*	Sn		Sb	16 31 06.6	+1.0	
	comp=Z,11nm,0.8s									
MYKA	Terra Mystica	5.86	220				Sb	16 31 06.6	+1.0	
NACGM	Naroch	5.90	49	*e*	P		Pb	16 29 51.0	-4.4	
NACGM					*e*S		Sb	16 31 02.0	-4.5	
NACGM					*e*SS		Sg	16 31 18.0	-3.0	
NACGM					*e*LR		LR	16 32 06.0		
BZS	Buzias	5.90	162	⇑	P		Pn	16 29 41.9	+1.5	
IIGN	Ignalina	5.92	44	*e*	P		Pg	16 30 06.5	+1.4	
IIGN					IAmb		IAmb	16 30 22.8		
	comp=Z,20nm,0.6s									
ISAL	Salakas	6.02	42	*e*	P		Pg	16 30 06.7	-0.4	
ISAL					IAmb		IAmb	16 30 17.8		
	comp=Z,26nm,0.8s									
PRED	Cave del Predi	6.05	219		Pn		Pn	16 29 43.3	+0.9	
DEL	Delary	6.05	331		P		Pn	16 29 43.4	+0.9	
IDID	Didziasalis	6.12	46	*e*	P		Pg	16 30 07.4	-1.6	
IDID					IAmb		IAmb	16 30 15.0		
	comp=Z,14nm,0.6s									
BYXU	Byxelkrok	6.15	349		P		Pn	16 29 44.8	+1.0	
BYXU	Byxelkrok	6.15	349		P		Pn	16 29 44.8	+1.0	
OSKU	Oskarshamn	6.19	345		P		Pn	16 29 45.0	+0.8	
OSKU	Oskarshamn	6.19	345		P		Pn	16 29 45.0	+0.8	
ZOU	Zoufplan	6.20	223		Pn		Pn	16 29 46.4	+1.7	
MDB	Medias	6.21	144	⇑	P		Pn	16 29 47.1	+2.4	
MICGM	Minsk	6.23	55	*e*	P		Pb	16 30 00.0	-1.1	
MICGM				*e*	PP		PgPg	16 30 21.0	+10	
MICGM					*e*S		Sg	16 31 28.0	-3.8	
MICGM				*e*	LR		LR	16 32 00.0		
MNK	Minsk	6.23	55	*e*	P		Pb	16 30 00.0	-1.1	
ABTA	Abfaltersbach	6.26	226	*e*	Pn		Pn	16 29 47.5	+2.2	
	comp=Z,0.3nm,0.2s									
ABTA					Sg		Sg	16 31 38.3	+5.7	
	comp=Z,148nm,1.0s									
ABTA	Abfaltersbach	6.26	226				Pn	16 29 47.5	+2.2	
ABTA					Lg		Lg	16 31 38.3		
WATA	Walderalm	6.29	234	*e*	Pn		Pn	16 29 46.1	+0.2	
	comp=Z,0.2nm,0.1s									
WATA	Walderalm	6.29	234		P		Pn	16 29 46.1	+0.2	
WATA	Walderalm	6.29	234				Pn	16 29 46.1	+0.2	
WTTA	Wattenberg	6.31	233	*e*	Pn		Pn	16 29 47.7	+1.5	
	comp=Z,1.7nm,0.3s,SNR=4.8									
WTTA					Sg		Sg	16 31 35.9	+1.6	
	comp=Z,122nm,1.1s									
WTTA	Wattenberg	6.31	233				Pn	16 29 47.7	+1.5	
WTTA							Sg	16 31 35.9	+1.6	
BIZ	Bicaz	6.33	131	⇑	P		Pn	16 29 48.3	+2.1	
GZR	Gura Zlata	6.38	156	⇓	P		Pn	16 29 48.9	+2.0	
AKASG	Malin Array Be	6.43	91		Pn		Pn	16 29 48.2	+0.6	
	comp=Z,5.4nm,0.3s,baz=274,slow=12,SNR=21									
AKASG					Sn		Sn	16 30 59.1	-2.6	
	comp=Z,7.6nm,0.3s,baz=280,slow=23,SNR=6.0									
AKASG					Lg		Lg	16 31 33.4		
	comp=Z,11nm,0.3s,baz=276,slow=28,SNR=5.1									
AKASG	Malin Array Be	6.43	91		P		Pn	16 29 50.0	+2.4	
AKASG	Malin Array Be	6.43	91		Pn		Pn	16 29 50.0	+2.4	
AKBB	Malin Array Si	6.43	91	⇓	*e*P		Pn	16 29 48.0	+0.4	
AKBB	Malin Array Si	6.43	91		Pn		Pn	16 29 48.1	+0.4	
MOTA	Moosalm	6.53	236	*e*	Pn		Pn	16 29 50.1	+0.9	
	comp=Z,1.1nm,0.3s,SNR=5.5									
MOTA				*e*	Sn		Sn	16 31 00.3	-4.0	
	comp=Z,11nm,0.5s									
MOTA					Sg		Sg	16 31 44.1	+2.7	
	comp=Z,65nm,0.9s									
MOTA	Moosalm	6.53	236				Pn	16 29 50.1	+0.9	
MOTA							Sn	16 31 00.3	-4.0	
MOTA							Sg	16 31 44.1	+2.7	
SQTA	Sankt Quirin	6.55	235	*e*	Pn		Pn	16 29 49.4	-0.1	
	comp=Z,0.4nm,0.2s									
SQTA	Sankt Quirin	6.55	235		P		Pn	16 29 49.4	-0.1	
SQTA	Sankt Quirin	6.55	235				Pn	16 29 49.4	-0.1	
VSTU	Vaestervik	6.57	348		P		Pn	16 29 50.5	+1.0	
VSTU	Vaestervik	6.57	348		P		Pn	16 29 50.5	+1.0	
TRI	Trieste	6.59	214		P		Pn	16 29 51.4	+1.6	
TRI	Trieste	6.59	214		Pn		Pn	16 29 51.4	+1.6	
LOT	Lotru	6.61	150	⇑	P		Pn	16 29 51.8	+1.6	
RETA	Reutte	6.62	238	*e*	Pn		Pn	16 29 50.3	-0.1	
	comp=Z,0.4nm,0.2s									
RETA					*e*Sn		Sn	16 31 05.3	-1.2	
	comp=Z,5.7nm,0.5s									
RETA	Reutte	6.62	238				Pn	16 29 50.3	-0.1	
RETA							Sn	16 31 05.3	-1.2	
CIMO	Cimolais	6.62	224		Pn		Pn	16 29 51.2	+0.9	
SLIT	Slitere, Latvi	6.64	15	*e*	P		Pg	16 30 23.9	+5.0	
EKSU	Eksjoe	6.69	342		P		Pn	16 29 51.7	+0.5	
EKSU	Eksjoe	6.69	342		P		Pn	16 29 51.7	+0.5	
DOPR	Dopca	6.75	139	⇓	P		Pn	16 29 54.0	+1.8	
HERR	Herculane	6.77	159	⇑	P		Pn	16 29 54.0	+1.6	
SORM	Soroca	6.78	114	⇑	P		Pn	16 29 53.5	+1.0	
TESR	Tescani	6.89	131	⇓	P		Pn	16 29 55.4	+1.4	
FETA	Feichten	6.93	235	*e*	Pn		Pn	16 29 55.6	+0.9	
	comp=Z,4.4nm,0.8s									
FETA					Pg		Pg	16 30 27.6	+3.0	
	comp=Z,4.7nm,0.6s									
FETA	Feichten	6.93	235				Pn	16 29 55.6	+0.9	
FETA							Pg	16 30 27.6	+3.0	
ARR	Arges	6.97	146	⇑	P		Pn	16 29 56.8	+1.7	
VOIR		7.06	143	⇑	P		Pn	16 29 58.0	+1.6	
CTI	Castel Tesino	7.18	226		P		Pn	16 29 59.5	+1.5	
CTI	Castel Tesino	7.18	226		Pn		Pn	16 29 59.5	+1.5	
DIVS	Divibare	7.20	175		Pn		Pn	16 29 59.5	+1.2	
DAVA	Damuels	7.22	240	*e*	Pn		Pn	16 29 59.8	+1.2	
	comp=Z,0.8nm,0.2s									
DAVA	Damuels	7.22	240				Pn	16 29 59.8	+1.2	
LNKU	Linkoeping	7.27	345		P		Pn	16 29 59.7	+0.6	
LNKU	Linkoeping	7.27	345		P		Pn	16 29 59.7	+0.6	
MLR	Muntele Rosu	7.37	139		Pn		Pn	16 30 01.8	+1.1	
	comp=Z,0.4nm,0.3s,baz=195,slow=6.6,SNR=4.1									
MLR	Muntele Rosu	7.37	139	⇑	P		Pn	16 30 01.7	+1.1	
MLR	Muntele Rosu	7.37	139		Pn		Pn	16 30 01.5	+0.9	
DAVOX	Davos/Dischmat	7.53	237		Pn		Pn	16 30 04.5	+1.5	
	comp=Z,1.0nm,0.3s,baz=16,slow=14,SNR=12									
DAVOX					Sn		Sn	16 31 32.6	+3.5	
	comp=Z,0.5nm,0.3s,baz=235,slow=19,SNR=1.4									
DAVOX					Lg		Lg	16 32 13.4		
	comp=Z,2.3nm,0.3s,baz=170,slow=12,SNR=10									
BFO	Black Forest	7.55	251		P		Pn	16 30 04.1	+1.0	
BFO	Black Forest	7.55	251		Pn		Pn	16 30 04.1	+1.0	
KIS	Kishinev	7.68	120	*e*	P		Pn	16 30 03.6	-1.2	
KIS					*e*S		Sn	16 31 28.0	-4.5	
KIS					LRM		MLR	16 33 15.0		
	comp=Z,400nm,6.0s									
KIS	Kishinev	7.68	120	*e*	P		Pn	16 30 03.6	-1.2	
KIS					*e*S		Sn	16 31 28.0	-4.5	
KIS					pmax		pmax			
	comp=E,400nm,6.0s									
TEOL	Teolo	7.70	223		Pn		Pn	16 30 05.8	+0.7	
TUE	Stuetta	8.01	237				Pn	16 30 11.0	+1.5	
ESKU	Eskilstuna	8.12	350		P		Pn	16 30 11.5	+0.7	
ESKU	Eskilstuna	8.12	350		P		Pn	16 30 11.5	+0.7	
CDF	Champ du Feu	8.15	254	*e*	P		Pn	16 30 12.7	+1.4	
CDF				*e*	Sg		Sg	16 32 28.1	-5.2	
	comp=E,13nm,0.4s									
ECH	Echery	8.30	253		P		Pn	16 30 14.1	+0.7	
ECH	Echery	8.30	253		Pn		Pn	16 30 14.1	+0.7	
NRTU	Norrtaelje	8.43	358		P		Pn	16 30 16.3	+1.3	
NRTU	Norrtaelje	8.43	358		P		Pn	16 30 16.3	+1.3	
VSU	Vasula	8.45	28	*e*	P		Pn	16 30 18.1	+2.8	
VSU	Vasula	8.45	28	*i*	P		Pn	16 30 16.8	+1.6	
CFR	Carcaliu	8.58	132	⇑	P		Pn	16 30 18.0	+0.8	
HINF	Hinteralfeld	8.67	251	*e*	P		Pn	16 30 20.7	+2.3	
HINF				*e*	Sg		Sg	16 32 43.8	-6.2	
	comp=E,17nm,0.6s									
HAU	Haudompre	8.88	253	*e*	Sg		Sg	16 32 50.2	-6.7	
	comp=E,22nm,0.6s									
PAGF	Fort de Pagny	9.04	258	*e*	P		Pn	16 30 26.5	+3.1	
	baz=66									
PAGF				*e*	Sn		Sn	16 31 58.4	-7.4	
PAGF				*e*	Sg			16 32 55.3		
	comp=E,23nm,0.8s									
GIVF	Givet	9.13	268	*e*	Sg		Sn	16 32 57.8	+50	
MURB	Monte Urbino	9.16	212		Pn		Pn	16 30 24.6	-0.6	
SENIN	Lac Senin/Sane	9.19	242		Pn		Pn	16 30 26.9	+1.2	
HFS	Hagfors	9.39	343		Pn		Pn	16 30 27.7	-0.5	
	comp=E,1.5nm,0.3s,baz=155,slow=14,SNR=57									
HFS					Sn		Sn	16 32 09.9	-4.4	
	comp=E,0.5nm,0.3s,baz=151,slow=22,SNR=3.1									
HFS					Lg		Lg	16 33 14.2		
	comp=E,0.6nm,0.3s,baz=156,slow=28,SNR=5.3									
MEZF	Maizieres J'vi	9.47	258	*e*	Pn		Pn	16 30 25.5	-3.8	
MEZF				*e*	Sg		Sn	16 33 09.3	+53	
	comp=E,8.3nm,0.8s									
BAIF	Baives	9.53	268	*e*	Sg		Sn	16 33 10.1	+52	
CABF	La Chapelle	9.73	246	*e*	Sg		Sn	16 33 15.5	+52	
	comp=E,2.8nm,0.5s									
KONO	Kongsberg	9.96	331	*i*	P		Pn	16 30 39.0	+3.0	
LPL	La Plagne	10.02	240	*e*	P		Pn	16 30 40.6	+3.5	
LPG	La Plagne	10.03	240	*e*	P		Pn	16 30 40.6	+3.4	
BNI	Bardonecchia	10.35	238		P		Pn	16 30 42.7	+1.1	
BNI	Bardonecchia	10.35	238		Pn		Pn	16 30 42.7	+1.1	
NC602	NORSAR Array S	10.38	339		Pn		Pn	16 30 40.0	-1.6	
NC605	NORSAR Array S	10.44	339		Pn		Pn	16 30 40.6	-2.0	
MBDF	Montbardon	10.52	236	*e*	P		Pn	16 30 46.5	+2.6	
NA001	NORSAR Array S	10.62	338		Pn		Pn	16 30 43.5	-1.6	
PUL	Pulkovo	10.62	32	*i*	P		Pn	16 30 48.0	+3.0	
NC405	NORSAR Array S	10.68	340		Pn		Pn	16 30 44.6	-1.2	
NB201	NORSAR Array S	10.71	339		Pn		Pn	16 30 44.3	-2.0	
NOA	NORSAR Array B	10.72	339		Pn		Pn	16 30 44.6	-1.8	
	comp=E,0.1nm,0.3s,baz=12,slow=20,SNR=21									
NOA					Sn		Sn	16 32 40.8	-6.3	
	comp=E,0.0nm,0.3s,baz=150,slow=21,SNR=3.5									
NOA					Lg		Lg	16 33 53.4		
	comp=E,0.0nm,0.3s,baz=327,slow=8.0,SNR=3.3									
NBO00	NORSAR Array S	10.81	338		Pn		Pn	16 30 46.0	-1.7	
NC303	NORSAR Array S	10.85	340		Pn		Pn	16 30 46.7	-1.5	
ORIF	Oris-en-Rattie	10.87	239	*e*	P		Pn	16 30 52.0	+3.4	
FINES	FINESS Array B	10.90	18		Pn		Pn	16 30 48.0	-0.9	
	comp=E,1.2nm,0.3s,baz=191,slow=12,SNR=43									
FINES					Sn		Sn	16 32 45.2	-6.3	
	comp=E,1.1nm,0.3s,baz=195,slow=20,SNR=4.3									
FINES					Lg		Lg	16 34 00.5		
	comp=E,1.4nm,0.3s,baz=199,slow=25,SNR=3.3									
FINES	FINESS Array B	10.90	18		P		Pn	16 30 48.3	-0.6	
FINES	FINESS Array B	10.90	18				Pn	16 30 48.3	-0.6	
FIA1	FINESS Array S	10.90	18		Pn		Pn	16 30 48.2	-0.7	
SSF	Saint Saulge	11.03	254	*e*	Pn		Pn	16 30 48.3	-2.4	
SSF				*e*	Sg			16 33 56.7		
	comp=E,0.8nm,0.3s									
NC204	NORSAR Array S	11.03	339		Pn		Pn	16 30 48.9	-1.8	
SMF	Signal de Mont	11.03	251	*e*	Sg			16 33 57.5		
	comp=E,4.2nm,0.6s									
OBN	Obninsk	11.17	63		Sn		Sn	16 32 50.5	-7.5	
	comp=E,0.2nm,0.3s,baz=60,slow=20,SNR=1.2									
OBN					Lg		Lg	16 34 09.2		
	comp=E,0.3nm,0.3s,baz=173,slow=23,SNR=7.5									
OBN	Obninsk	11.17	63	⇓	*e*P		Pn	16 30 56.0	+3.5	
OBN					*e*S		Sn	16 32 53.6	-4.4	
OBN					pmax		pmax			
	comp=Z,5.0nm,0.9s									
OBN					MLR		MLR			
	comp=Z,79nm,14.0s									
AVF	Avril sur Loir	11.25	253	*e*	Sg			16 34 03.6		
	comp=Z,16nm,1.1s									
FRF	La Foret Royal	11.41	232	*e*	P		Pn	16 30 58.8	+2.9	
HYF	Humbligny	11.46	256	*e*	Sg			16 34 10.8		
LMR	La Mourre	11.64	232	*e*	Pn		Pn	16 30 55.6	-3.5	
BGF	Bois d'Agland	11.67	253	*e*	Sg			16 34 17.1		
	comp=E,11nm,0.6s									
MOS	Moscow	11.90	61	*e*	P		Pn	16 30 58.9	-3.6	
LPSR	Galich'ya Gora	12.32	76	*e*	P		Pn	16 31 06.3	-2.0	
LPSR					pmax		pmax			
	comp=Z,30nm,1.8s									
VSR	Storozhevoye	12.59	82	*e*	P		Pn	16 31 08.7	-3.2	
VSR					pmax		pmax			
	comp=Z,10.0nm,1.4s									
VORD	Divnogorie	12.70	83	*e*	P		Pn	16 31 11.5	-2.0	
VORD					pmax		pmax			
	comp=Z,3.0nm,1.2s									
EKR10	Eskdalemuir Ar	13.83	296		Pn		Pn	16 31 26.4	-2.5	
EKR9	Eskdalemuir Ar	13.84	296		Pn		Pn	16 31 26.1	-2.8	
EKR8	Eskdalemuir Ar	13.84	296		Pn		Pn	16 31 25.8	-3.3	
EKR7	Eskdalemuir Ar	13.85	296		Pn		Pn	16 31 26.0	-3.1	
EKA	Eskdalemuir Ar	13.89	296		Pn		Pn	16 31 26.9	-2.7	
	baz=104,slow=13,SNR=16									
EKA					Sn		Sn	16 33 56.9	-7.5	
	baz=103,slow=23,SNR=2.7									
ESK	Eskdalemuir	13.91	296		P		Pn	16 31 28.5	-1.5	
ESK	Eskdalemuir	13.91	296		Pn		Pn	16 31 28.5	-1.5	
VRH	Novokhopyorsk	14.18	81	*e*	P		Pn	16 31 30.1	-3.5	
VRH					pmax		pmax			
	comp=Z,10.0nm,0.6s									
KLMR	Klimovskoe	14.85	42	*e*	P		Pn	16 31 43.4	+0.7	
KLMR				*e*				16 34 32.0		
KLMR					pmax		pmax			
	comp=Z,15nm,1.2s									
KLMR	Klimovskoe	14.85	42	*e*	Pn		Pn	16 31 43.5	+0.7	
KLMR					AMP			16 31 49.3		
	comp=Z,15nm,1.2s									
KLMR				*e*	Sn		Sn	16 34 32.0	+4.3	
KLMR				*e*	Sn		Sn	16 34 32.0	+4.3	
KLMR				⇓	Lg		Lg	16 36 11.5		
KLMR				⇓	Lg		Lg	16 36 11.5		
KLMR				⇓	Lg		Lg	16 36 11.5		
ANTO	Ankara	14.88	135		P		Pn	16 31 43.4	+0.1	
ANTO	Ankara	14.88	135		Pn		Pn	16 31 43.4	+0.1	
APE	Apeiranthos	14.92	160	*i*	P		Pn	16 31 45.4	+1.5	
BR131	Keskin Array S	15.38	133		P		P	16 31 55.5	+0.6	
BR131					pmax		pmax			
	comp=Z,4.0nm,1.0s									
BR131	Keskin Array S	15.38	133		P		P	16 31 55.5	+0.6	
BRTR	Keskin Array B	15.38	133		LR		LR	16 38 48.7		
	comp=Z,27nm,20.5s,baz=342,slow=41									
BRTR	Keskin Array B	15.38	133		P		P	16 31 55.8	+0.9	
BRTR	Keskin Array B	15.38	133		P		P	16 31 55.8	+0.9	
KIV	Kislovodsk	17.47	106	*e*	P		P	16 32 19.9	+1.9	
KIV					pmax		pmax			
	comp=Z,25nm,1.1s									
KIV					MLR		MLR			
	comp=Z,127nm,14.0s									
BELG	Belogornoye	17.63	75	*i*	P		P	16 32 20.2	+0.5	
BELG					pmax		pmax			
	comp=Z,2.0nm,0.7s									
KBZ	Khabaz	17.72	106	*i*	P		P	16 32 22.7	+2.0	
KBZ					pmax		pmax			
	comp=Z,28nm,2.8s									
ARD6	ARCESS Array S	18.57	7	*e*	P		P	16 32 27.8	-2.1	
ARD6	ARCESS Array S	18.57	7		P		P	16 32 27.8	-2.1	
ARD6					IAmb		IAmb	16 32 33.8		
	comp=Z,31nm,1.4s									
ARD4	ARCESS Array S	18.57	7	*e*	P		P	16 32 27.8	-2.1	
ARD4	ARCESS Array S	18.57	7		P		P	16 32 27.8	-2.1	
ARD4					IAmb		IAmb	16 32 55.8		
	comp=Z,30nm,1.4s									
ARCES	ARCESS Array B	18.58	7		Pn		P	16 32 26.7	-3.3	
	baz=192,slow=12,SNR=22									
ARCES					Lg		Lg	16 38 00.8		
	baz=238,slow=5.2,SNR=2.9									
ARD9	ARCESS Array S	18.59	7	*e*	P		P	16 32 28.2	-1.9	
ARD9	ARCESS Array S	18.59	7		P		P	16 32 28.2	-1.9	
ARD9					IAmb		IAmb	16 32 45.0		
	comp=Z,26nm,1.2s									
KIRV	Kirov	18.78	55		P		P	16 32 32.3	+0.1	
	comp=Z,1.0nm,0.3s,baz=251,slow=11,SNR=2.8									
KIRV					Lg		Lg	16 38 10.3		
	comp=Z,0.2nm,0.3s,baz=157,slow=20,SNR=5.9									
KIRV	Kirov	18.78	55	*i*	P		Pn	16 32 35.8	+3.2	
MAK	Makhachkala	20.95	102	*e*	P		P	16 32 52.4	-3.6	
MAK				*e*	S		S	16 36 45.1	-5.0	
MAK				*e*	SS		SnSn	16 37 09.1	-1.0	
MAK					pmax		pmax			
	comp=Z,356nm,1.4s									
MAK					MLR		MLR			
	comp=Z,154nm,16.0s									
GNI	Garni	20.98	112		LR		LR	16 42 06.2		
	comp=Z,44nm,18.5s,baz=356,slow=40									
MMAI	Mount Meron Ar	21.80	141		LR		LR	16 42 48.3		
	comp=Z,23nm,18.3s,baz=0.0,slow=40									
ARU	Arti	23.61	62		P		P	16 33 23.2	-0.8	
	comp=Z,1.2nm,0.5s,baz=281,slow=10,SNR=6.8									
ARU					S		S	16 37 35.5	-3.7	
	comp=Z,0.3nm,0.3s,baz=270,slow=20,SNR=1.6									
ARU					Lg		Lg	16 40 44.7		
	comp=Z,1.0nm,0.5s,baz=131,slow=20,SNR=2.1									
ARU	Arti	23.61	62	*c*	*i*P		P	16 33 23.3	-0.7	
ARU					S		S	16 37 37.2	-2.0	
ARU					pmax		pmax			
	comp=Z,15nm,2.8s									
ARU	Arti	23.61	62		P		P	16 33 23.0	-1.0	
AKTO	Aktyubinsk	24.41	77		P		P	16 33 32.2	+0.5	
	comp=Z,1.9nm,0.6s,baz=280,slow=14,SNR=5.0									
BORG	Borgarnes	24.77	318		LR		LR	16 44 19.3		
	comp=Z,51nm,20.6s,baz=154,slow=39									
AB09	Akbulak array	25.95	78		P		P	16 33 47.0	+1.4	
AB05	Akbulak array	25.96	78		P		P	16 33 47.4	+1.7	
ABKAR	Akbulak array	25.96	78		P		P	16 33 47.2	+1.5	
ABKAR					IAmb		IAmb	16 33 54.9		
	comp=Z,3.7nm,1.1s									
SPB2	Spitsbergen Ar	27.03	359		P		P	16 33 57.2	+2.0	
SPB2					IAmb		IAmb	16 34 05.9		
	comp=Z,50nm,1.4s									
SPB3	Spitsbergen Ar	27.03	359	*e*	P		P	16 33 55.8	+0.7	
SPB3	Spitsbergen Ar	27.03	359		P		P	16 33 55.8	+0.7	
SPB3					IAmb		IAmb	16 34 05.0		
	comp=Z,56nm,1.4s									
SPA2	Spitsbergen Ar	27.04	359	*e*	P		P	16 33 57.2	+2.1	
SPA2	Spitsbergen Ar	27.04	359		P		P	16 33 57.2	+2.1	
SPITS	Spitsbergen Ar	27.04	359		P		P	16 33 55.4	+0.3	
	comp=Z,5.4nm,1.0s,baz=153,slow=9.7,SNR=1.6									
GYB5	ALIBECK ARRAY	30.45	101		P		P	16 34 27.3	+1.4	
BRVK	Borovoye	30.92	66	*i*	P		P	16 34 32.1	+2.2	
BRVK					pmax		pmax			
	comp=Z,1.0nm,0.7s									
MKAR	Makanchi Array	40.55	71		P		P	16 35 53.9	+1.4	
	comp=Z,0.1nm,0.3s,baz=311,slow=7.0,SNR=6.1									
TORD	Torodi Ar. Bea	40.55	207		P		P	16 35 54.0	+1.3	
	comp=Z,0.5nm,0.7s,baz=20,slow=7.0,SNR=1.8									
TORD	Torodi Ar. Bea	40.55	207		P		P	16 35 52.6	-0.2	
WMQ	Urumqi	45.36	71	*e*	P		P	16 36 35.5	+3.9	
SONM	Songino Array	53.50	57		P		P	16 37 36.0	+2.2	
	comp=Z,0.4nm,0.7s,baz=303,slow=8.3,SNR=3.7									
SONM	Songino Array	53.50	57	*e*	P		P	16 37 38.0	+4.2	
LZH	Lanzhou	59.82	69	*e*	P		P	16 38 19.8	+0.9	
LZH					pmax		pmax			
	comp=Z,16nm,1.3s									
LZH					pmax		pmax			
	comp=Z,49nm,7.8s									
YKA	Yellowknife Ar	60.81	337		P		P	16 38 27.3	+2.2

FITZ	**Fitzroy Crossi**	**25.73**	**235**	P		**P**	**17 03 40.6**	**-2.0**
	comp=Z,14nm,0.6s,baz=47,slow=9.4,SNR=32							
FITZ				LR		LR	17 14 31.7	
	comp=Z,1μm,19.6s,baz=57,slow=38							
FITZ	**Fitzroy Crossi**	**25.73**	**235**	P		**P**	**17 03 40.4**	**-2.3**
FITZ				IAmb		IAmb	17 03 44.1	
	comp=Z,14nm,0.7s							
MRSI	**Marisa**	**25.84**	**279**	P		**P**	**17 03 45.8**	**+2.1**
	comp=Z,554nmcomp=Z,11nm,1.5s							
DZM	**Mont Dzumac**	**25.95**	**136**	P		**P**	**17 03 46.2**	**+1.5**
	comp=Z,4.0nm,0.6s,baz=232,slow=17,SNR=2.1							
DZM	**Mont Dzumac**	**25.95**	**136**	*e*S		**S**	**17 08 10.0**	**-5.4**
	comp=Z,316nm,24.9s							
DZM				*e*LR		LR	17 10 15.8	
	comp=Z,2μm,22.9s							
DZM	**Mont Dzumac**	**25.95**	**136**	P		**P**	**17 03 44.0**	**-0.8**
EDFI	**Ende, Flores**	**26.10**	**258**	P		**P**	**17 03 48.6**	**+2.4**
	comp=Z,5.1nm,1.1s							
ARMA	**Armidale**	**26.89**	**172**	P		**P**	**17 03 54.6**	**+1.5**
ARMA				IAmb		IAmb	17 04 16.8	
	comp=Z,14nm,1.0s							
BNSI	**Bone**	**27.30**	**268**	P		**P**	**17 03 57.7**	**+0.8**
	comp=Z,21nm,1.1s							
BASI	**Baing, Sumba**	**27.45**	**255**	P		**P**	**17 03 59.7**	**+1.4**
	comp=Z,46nm,1.0s							
TTSI	**Tana Toraja**	**27.60**	**270**	P		**P**	**17 04 01.2**	**+1.6**
	comp=Z,17nm,1.3s							
WSI	**Waingapu**	**27.62**	**256**	P		**P**	**17 04 01.7**	**+1.9**
	comp=Z,68nm,0.8s							
STKA	**Stephens Creek**	**28.59**	**190**	LR		LR	17 16 09.6	
	comp=Z,637nm,20.9s,baz=6.7,slow=38							
STKA	**Stephens Creek**	**28.59**	**190**	P		**P**	**17 04 08.3**	**+0.1**
H11S3	**WAKE ISLAND Hy**	**29.05**	**40**	T		T	17 34 46.9	
	baz=223,slow=75,SNR=30							
H11S2	**WAKE ISLAND Hy**	**29.06**	**40**	T		T	17 34 44.8	
	baz=223,slow=75,SNR=17							
H11S1	**WAKE ISLAND Hy**	**29.07**	**40**	T		T	17 34 45.4	
	baz=223,slow=75,SNR=19							
H11N1	**WAKE ISLAND Hy**	**30.08**	**39**	T		T	17 36 07.2	
	baz=218							
H11N3	**WAKE ISLAND Hy**	**30.10**	**39**	T		T	17 36 08.1	
	baz=218,slow=74							
H11N2	**WAKE ISLAND Hy**	**30.10**	**39**	T		T	17 36 04.8	
	baz=218,slow=74							
BBOO	**Buckleboo**	**30.89**	**199**	P		**P**	**17 04 27.6**	**-1.0**
BBOO				IAmb		IAmb	17 04 35.2	
	comp=Z,13nm,1.1s							
TGY	**Tagaytay City**	**31.69**	**304**	LR		LR	17 15 08.0	
	comp=Z,398nm,22.0s,baz=118,slow=32							
MBWA	**Marble Bar**	**32.07**	**235**	P		**P**	**17 04 39.5**	**+0.2**
PSA00	**Pilbara Seismi**	**32.18**	**234**	P		**P**	**17 04 38.6**	**-1.6**
FORT	**Forrest**	**32.59**	**212**	P		**P**	**17 04 42.7**	**-0.9**
STKI	**Sintang**	**36.15**	**275**	P		P	17 05 26.9	+12
JNU	**Nakatsue**	**39.83**	**338**	LR		LR	17 18 56.3	
	comp=Z,231nm,21.4s,baz=162,slow=31							
AFI	**Afiamalu**	**41.47**	**107**	LR		LR	17 19 27.0	
	comp=Z,271nm,21.7s,baz=272,slow=31							
NJ2	**Nanjing**	**44.74**	**325**	*e*P		**P**	**17 06 25.0**	**-0.5**
NJ2				pmax		pmax		
	comp=Z,11nm,0.5s							
KSRS	**Korea Array**	**44.78**	**338**	LR		LR	17 24 12.2	
	comp=Z,207nm,18.0s,baz=152,slow=35							
SDSI	**Sungai Dareh**	**46.07**	**272**	P		**P**	**17 06 37.7**	**+1.3**
WHN	**Wuhan**	**46.45**	**319**	⇓P		P	17 06 46.3	+7.2
RPSI	**Rantau Prapat**	**48.92**	**277**	P		**P**	**17 06 56.5**	**-2.1**
RPSI				IAmb		IAmb	17 07 06.2	
	comp=Z,9.5nm,1.3s							
XAN	**Xi'an**	**52.22**	**319**	P		**P**	**17 07 21.0**	**-2.2**
XAN				IAmb		IAmb	17 07 29.4	
	comp=Z,20nm,1.3s							
CMAR	**Chiang Mai Arr**	**52.60**	**296**	P		**P**	**17 07 26.4**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=114,slow=6.1,SNR=5.6							
CMAR				LR		LR	17 29 34.1	
	comp=Z,80nm,19.1s,baz=160,slow=36							
CMAR	**Chiang Mai Arr**	**52.60**	**296**	P		**P**	**17 07 25.1**	**-1.2**
KLR	**Kul'dur**	**54.43**	**347**	LR		LR	17 27 05.7	
	comp=Z,41nm,21.7s,baz=174,slow=32							
HHC	**Hu-ho-hao-te**	**55.13**	**327**	*e*P		**P**	**17 07 43.0**	**-1.5**
HHC				pmax		pmax		
	comp=Z,12nm,0.7s							
HHC				pmax		pmax		
	comp=Z,160nm,6.6s							
LZH	**Lanzhou**	**56.78**	**318**	*e*P		**P**	**17 07 56.0**	**-0.6**
LZH				pP		pP	17 07 59.3	0.0
LZH				sP		pwP	17 08 01.0	+1.7
LZH				pmax		pmax		
	comp=Z,23nm,1.3s							
LZH				pmax		pmax		
	comp=Z,75nm,7.8s							
LZH				LR		LR		
	comp=N,230nm,16.0s							
LZH				LR		LR		
	comp=E,250nm,16.2s							
LZH				LR		LR		
	comp=Z,350nm,18.6s							
PETK	**Petropavlovsk-**	**57.23**	**7**	P		**P**	**17 08 01.8**	**+2.6**
	comp=Z,4.8nm,0.9s,baz=152,slow=6.5,SNR=2.6							
PETK				LR		LR	17 28 20.7	
	comp=Z,302nm,21.9s,baz=191,slow=32							
GTA	**Gaotai**	**61.28**	**319**	P		**P**	**17 08 30.0**	**+2.3**
GTA				pP		pwP	17 08 35.8	+5.3
GTA				sP		sP	17 08 38.8	+7.3
GTA				pmax		pmax		
	comp=Z,5.0nm,1.5s							
GTA				pmax		pmax		
	comp=Z,97nm,5.3s							
GTA				LR		LR		
	comp=N,92nm,18.5s							
GTA				LR		LR		
	comp=E,130nm,17.8s							
GTA				LR		LR		
	comp=Z,130nm,18.5s							
SONM	**Songino Array**	**62.62**	**330**	P		**P**	**17 08 38.9**	**+2.3**
	comp=Z,1.3nm,0.9s,baz=138,slow=5.4,SNR=6.2							
SONM				LR		LR	17 34 39.8	
	comp=Z,157nm,21.5s,baz=152,slow=35							
PPT2	**Papeete2**	**63.14**	**108**	*e*LR		LR	17 27 28.0	
	comp=Z,139nm,25.2s							
TBI	**Tubuai**	**63.87**	**114**	*e*LR		LR	17 27 51.7	
	comp=Z,470nm,34.0s							
WMQ	**Urumqi**	**71.35**	**319**	*e*P		**P**	**17 09 34.0**	**+1.9**
WMQ				pmax		pmax		
	comp=Z,13nm,1.3s							
WMQ				pmax		pmax		
	comp=Z,120nm,3.7s							
WMQ				LR		LR		
	comp=E,230nm,28.5s							
WMQ				LR		LR		
	comp=Z,270nm,21.1s							
VNDA	**Vanda**	**74.19**	**177**	P		**P**	**17 09 48.9**	**+0.6**
	comp=Z,1.6nm,1.1s,baz=316,slow=3.6,SNR=6.2							
VNDA				LR		LR	17 40 16.0	
	comp=Z,147nm,19.1s,baz=348,slow=34							
VNDA	**Vanda**	**74.19**	**177**	P		**P**	**17 09 48.8**	**+0.5**
MKAR	**Makanchi Array**	**76.02**	**320**	P		**P**	**17 09 59.8**	**+0.4**
	comp=Z,6.4nm,1.2s,baz=110,slow=7.0,SNR=7.8							
MKAR				LR		LR	17 42 59.6	
	comp=Z,142nm,19.8s,baz=98,slow=35							
ZALV	**Zalesovo Beam**	**77.31**	**327**	P		**P**	**17 10 07.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=118,slow=12,SNR=2.5							
ZALV				LR		LR	17 42 58.7	
	comp=Z,78nm,21.0s,baz=115,slow=35							
ILAR	**Eielson Array**	**83.18**	**23**	P		**P**	**17 10 39.5**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=259,slow=5.0,SNR=7.4							
ILAR				LR		LR	17 44 00.3	
	comp=Z,85nm,19.7s,baz=264,slow=33							
ILAR	**Eielson Array**	**83.18**	**23**	P		**P**	**17 10 35.3**	**-2.6**
NRIK	**Noril'sk**	**83.22**	**342**	P		**P**	**17 10 38.6**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=131,slow=4.3,SNR=7.3							
NRIK				LR		LR	17 48 35.6	
	comp=Z,49nm,19.2s,baz=210,slow=36							
MAW	**Mawson**	**84.56**	**203**	LR		LR	17 46 07.9	
	comp=Z,68nm,21.2s,baz=60,slow=34							
ABKAR	**Akbulak array**	**91.14**	**319**	P		**P**	**17 11 15.7**	**-1.2**
GEYT	**Alibeck**	**91.72**	**308**	LR		LR	17 54 17.4	
	comp=Z,161nm,20.8s,baz=55,slow=37							
YKA	**Yellowknife Ar**	**96.91**	**28**	LR		LR	17 52 42.2	
	comp=Z,66nm,20.0s,baz=0.0,slow=34							
TORD	**Torodi Ar. Bea**	**144.90**	**288**	PKP		**PKPdf**	**17 17 50.3**	**0.0**
	comp=Z,1.2nm,0.7s,baz=62,slow=4.0,SNR=6.7							
TORD	**Torodi Ar. Bea**	**144.90**	**288**			**PKPab**	**17 17 47.2**	**-2.2**

*BJI **30** 18:02:56.4±0.0,2.°96N×90.°00E,h10km,mB5.0/38, mb4.7/52,Ms4.6/43,Ms7 4.3/42*
*IDC **30** 18:03:01.7±0.5,3.°59N×90.°38E,h0km,mb4.3/29,*

mb1 4.4/31,mb1mx4.3/52,mbtmp4.3/31,ML4.3/2,MS4.0/34, Ms1 4.0/34,ms1mx3.9/45,Error ellipse: s-maj=18.5km s-min=10.8km az=44.0
*MOS **30** 18:03:01.4±1.0,3.°41N×90.°09E,h21km,mb5.0/21, MS4.1/8,Error ellipse: s-maj=12.2km s-min=5.5km az=104.3*
*KLM **30** 18:03:04.0,3.°64N×90.°15E,h10km,mb5.1*
*DJA **30** 18:03:04.4±1.3,4.°N±3.°×9.°0E±.°,h18km±10km,M4.9/48, mb5.0/48,mB5.3/21,MLv5.5/7,Mw(mB)4.8/21,Mwp5.0/2*
*NEIC **30** 18:03:05.9±2.4,3.°47N±0.°09×90.°14E±0.°06,h35km±1km, mb5.0/27,Error ellipse: s-maj=16.7km s-min=7.3km az=203.0*
*GCMT **30** 18:03:05.3±0.2,3.°55N±0.°01×90.°14E±0.°01,h27km±1km, MW5.0/108,Moment Tensor Solution. s49,c64; s108,c165; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=0.47±.16; Mθθ=1.61±.11; Mϕϕ2.08±.12; Mrθ1.49±.21; Mθϕ=3.81±.11; Mϕr=1.70±.23; Best double couple: Mo4.68500×1016 NP1:ϕs195.00000°,δ70.00000°, λ10.00000°. NP2:ϕs102.00000°,δ80.00000°,λ160.00000°. Principal axes: T 5.3290, Plg21.0000°, Azm57.0000°; N -1.2880, Plg68.0000°, Azm257.0000°; P -4.0420, Plg7.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **30** 18:03:12.4±0.0,3.°32N×91.°10E,h33km,mb5.0*
ISC 30 18:03:06.5±0.4,3.°51N±0.°05×90.°21E±0.°04,h35km,n361, σ1§85/301,mb4.7/97,MS4.2/53,24C-20D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**6.21**	**100**	P		**Pn**	**Pn**	**18 04 36.1**	**+0.4**
	3.5nm5μm187nm,0.4s								
SNSI				S		**Sn**	**Sn**	**18 05 39.1**	**-6.4**
	3.5nm5μm187nm,0.4s								
MLSI	**Meulaboh, Aceh**	**6.23**	**83**	P		**Pn**	**Pn**	**18 04 35.4**	**-0.5**
	3.4nm5μm376nm,0.7s								
LHMI	**Lhok Sumawe**	**6.94**	**75**	P		**Pn**	**Pn**	**18 04 46.4**	**+0.8**
	1.9nm3μm4μm215nm,0.8s								
LHMI	**Lhok Sumawe**	**6.94**	**75**	Pn		**Pn**	**Pn**	**18 04 47.1**	**+1.5**
TPTI		**6.96**	**92**	P		**Pn**	**Pn**	**18 04 46.8**	**+0.7**
	0.4nm1μm61nm,0.5s								
KCSI	**Kotacane, Aceh**	**7.55**	**90**	P		**Pn**	**Pn**	**18 04 56.0**	**+1.9**
	1.4nm3μm314nm,0.8s								
GSI	**Gunungsitoli**	**7.68**	**106**	P		**Pn**	**Pn**	**18 04 55.1**	**-0.8**
	0.7nm2μm118nm,0.7s								
GSI	**Gunungsitoli**	**7.68**	**106**	Pn		**Pn**	**Pn**	**18 04 55.0**	**-0.8**
GSI				Sn		**Sn**	**Sn**	**18 06 17.1**	**-4.6**
TSI	**Tuntungan**	**8.34**	**90**	P		**Pn**	**Pn**	**18 05 07.0**	**+2.0**
	158nm,0.8s								
PSI	**Prapat**	**8.73**	**94**	Pn		**Pn**	**Pn**	**18 05 09.1**	**-1.4**
	4.6nm,0.3s,baz=360,slow=8.9,SNR=25								
PSI				Sn		**Sn**	**Sn**	**18 06 46.5**	**-1.3**
	5.4nm,0.3s,baz=180,slow=21,SNR=5.6								
RPSI	**Rantau Prapat**	**8.74**	**95**	Pn		**Pn**	**Pn**	**18 05 10.5**	**0.0**
RPSI				Sn		**Sn**	**Sn**	**18 06 49.8**	**+1.9**
PKDT	**Phuket**	**9.19**	**61**	P		**Pn**	**Pn**	**18 05 16.0**	**-0.5**
	0.7nm3μm142nm,0.8s								
MNSI	**Mandailing Nat**	**9.74**	**106**	P		**Pn**	**Pn**	**18 05 24.4**	**+0.2**
	3μm107nm,0.6s								
SISI	**Saibi**	**10.09**	**118**	P		**Pn**	**Pn**	**18 05 31.3**	**+2.3**
	62nm,1.3s								
SURT	**Suratani**	**10.11**	**57**	P		**Pn**	**Pn**	**18 05 31.0**	**+1.8**
	87nm8.7nm,1.1s								
PALK	**Pallekele**	**10.17**	**292**	Pn		**Pn**	**Pn**	**18 05 27.3**	**-2.9**
	22nm,0.3s,baz=219,slow=14,SNR=87								
PALK				Sn		Sn	Sn	18 07 07.0	-16
	16nm,0.3s,baz=209,slow=17,SNR=4.6								
PALK				LR		LR	LR	18 08 57.4	
	comp=Z,1μm,18.7s,baz=216,slow=34								
PALK	**Pallekele**	**10.17**	**292**	Pn		**Pn**	**Pn**	**18 05 26.7**	**-3.5**
TRTT	**Trang**	**10.37**	**65**	P		**Pn**	**Pn**	**18 05 32.8**	**0.0**
	69nm,1.2s								
KULM	**Kulim**	**10.56**	**80**	Pn		**Pn**	**Pn**	**18 05 34.8**	**-0.7**
KULM	**Kulim**	**10.56**	**80**	P		**Pn**	**Pn**	**18 05 35.0**	**-0.4**
IPM	**Ipoh**	**10.84**	**85**	Pn		**Pn**	**Pn**	**18 05 38.2**	**-1.0**
IPM	**Ipoh**	**10.84**	**85**	P		**Pn**	**Pn**	**18 05 39.0**	**-0.2**
BKNI	**Bangkinang**	**11.28**	**106**	P		**Pn**	**Pn**	**18 05 47.1**	**+1.9**
	1μm79nm,1.0s								
SDSI	**Sungai Dareh**	**12.05**	**111**	P		**Pn**	**Pn**	**18 05 57.2**	**+1.4**
	408nm18nm,0.7s								
KRJI	**Kerinci**	**12.55**	**116**	P		**Pn**	**Pn**	**18 06 04.3**	**+1.6**
	5μm540nm,1.1s								
PHET	**Kaeng Krachan**	**13.19**	**44**	P		**Pn**	**Pn**	**18 06 12.0**	**+0.5**
	894nm86nm,0.8s								
PATY	**Pattaya**	**14.09**	**48**	P		**Pn**	**Pn**	**18 06 24.5**	**+0.8**
	99nm,0.9s								
KSI	**Kapahiang**	**14.28**	**120**	P		**Pn**	**Pn**	**18 06 27.2**	**+0.9**
	61nm,1.1s								
MNAI	**Manna**	**14.94**	**121**	P		**Pn**	**Pn**	**18 06 36.7**	**+1.4**
	167nm,2.4s								
UTHA	**Uthaitani**	**15.04**	**37**	P		**Pn**	**Pn**	**18 06 35.8**	**-0.7**
	894nm97nm,1.0s								
LHSI	**Lahat**	**15.17**	**119**	P		**Pn**	**Pn**	**18 06 40.1**	**+1.8**
	45nm,1.7s								
SRAK	**Srakaew**	**15.67**	**47**	P		**P**	**P**	**18 06 51.0**	**+2.6**
ADKI	**Addanki**	**15.87**	**321**	*e*P		**Pn**	**Pn**	**18 06 44.0**	**-3.3**
PVM	**Polavaram**	**16.05**	**329**	*e*P		**Pn**	**Pn**	**18 06 46.3**	**-3.2**
CHLP	**Challavanipeta**	**16.08**	**338**	*e*P		**Pn**	**Pn**	**18 06 46.2**	**-3.7**
MYLAV	**Mylavaram**	**16.17**	**325**	*e*P		**Pn**	**Pn**	**18 06 47.8**	**-3.4**
LWLI	**Liwa**	**16.22**	**121**	P		**P**	**P**	**18 06 53.7**	**-1.1**
	3μm93nm,0.8s								
MHMT	**Maesarieng**	**16.43**	**27**	P		**Pn**	**Pn**	**18 06 53.5**	**-0.9**
	819nm49nm,0.8s								
KLSI		**16.64**	**119**	P		**P**	**P**	**18 06 59.0**	**-0.2**
	514nm48nm,1.2s								
SUKH	**Sukhothai**	**16.68**	**33**	P		**Pn**	**Pn**	**18 06 57.0**	**-0.6**
	53nm,0.9s								
NJS	**Nagarjunasagar**	**16.82**	**321**	*e*P		**Pn**	**Pn**	**18 06 56.7**	**-2.7**
KASI	**Kota Agung**	**16.86**	**122**	P		**P**	**P**	**18 07 01.9**	**+0.2**
	2μm212nm,1.2s								
PPBI	**Pangkal Pinang**	**16.89**	**109**	P		**P**	**P**	**18 07 01.3**	**-0.7**
	840nm52nm,1.2s								
PHIT	**Phitsamulok**	**16.89**	**36**	P		**P**	**P**	**18 07 00.9**	**-1.1**
	3μm300nm,1.0s								
CHAI	**Chaiyaphum**	**16.91**	**42**	P		**Pn**	**Pn**	**18 07 00.4**	**-0.1**
	998nm72nm,1.3s								
URV	**Uravakonda**	**17.09**	**313**	*e*P		**Pn**	**Pn**	**18 07 00.1**	**-2.7**
CM13	**Chiang Mai Arr**	**17.09**	**29**	P		**Pn**	**Pn**	**18 07 02.0**	**-0.8**
	126nm17nm,1.0s								
CM05	**Chiang Mai Arr**	**17.10**	**29**	P		**Pn**	**Pn**	**18 07 02.5**	**-0.3**
	165nm21nm,1.1s								
CM04	**Chiang Mai Arr**	**17.11**	**29**	P		**Pn**	**Pn**	**18 07 02.0**	**-1.1**
	233nm28nm,1.1s								
CM01	**Chiang Mai Arr**	**17.12**	**29**	P		**Pn**	**Pn**	**18 07 02.9**	**-0.3**
	226nm30nm,1.0s								
CM02	**Chiang Mai Arr**	**17.12**	**29**	P		**Pn**	**Pn**	**18 07 02.9**	**-0.3**
	181nm24nm,1.1s								
CM15	**Chiang Mai Arr**	**17.13**	**29**	P		**P**	**P**	**18 07 03.5**	**-1.2**
	137nm13nm,0.9s								
CM31	**Chiang Mai Arr**	**17.14**	**29**	P		**P**	**P**	**18 07 03.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**17.14**	**29**	Pn		**Pn**	**Pn**	**18 07 01.1**	**-2.4**
	0.3nm0.3s,baz=221,slow=12,SNR=55								
CMAR	**Chiang Mai Arr**	**17.14**	**29**	*i* P		**Pn**	**Pn**	**18 07 01.9**	**-1.5**
CMAR				pmax		pmax	pmax		
	comp=Z,20nm,1.1s								
CM09	**Chiang Mai Arr**	**17.16**	**29**	P		**P**	**P**	**18 07 03.5**	**-1.5**
	comp=Z,201nmcomp=Z,23nm,0.9s								
CM32	**Chiang Mai Arr**	**17.26**	**29**	P		**P**	**P**	**18 07 05.0**	**-1.2**
CM36	**Chiang Mai Arr**	**17.27**	**30**	P		**Pn**	**Pn**	**18 07 04.0**	**-1.0**
GGR	**Gangavaram**	**17.28**	**326**	*e*P		**Pn**	**Pn**	**18 07 02.9**	**-2.3**
UTTA	**Uttaradit**	**17.41**	**35**	P		**P**	**P**	**18 07 06.7**	**-1.1**
	comp=Z,1μmcomp=Z,128nm,1.1s								
BLSI	**Bandar Lampung**	**17.42**	**120**	P		**P**	**P**	**18 07 08.7**	**+0.8**
	comp=Z,56nm,0.4s								
CM35	**Chiang Mai Arr**	**17.43**	**29**	P		**Pn**	**Pn**	**18 07 06.0**	**-1.1**
CHTO	**Chiang Mai**	**17.45**	**29**	P		**Pn**	**Pn**	**18 07 06.0**	**-1.2**
CHTO				pmax		pmax	pmax		
	comp=Z,24nm,1.2s								
CHTO	**Chiang Mai**	**17.45**	**29**	Pn		**Pn**	**Pn**	**18 07 06.0**	**-1.2**
CMMT	**Chiang Mai**	**17.45**	**29**	P		**P**	**P**	**18 07 07.0**	**-1.2**
	comp=Z,315nmcomp=Z,9.5nm,1.4s								
CM33	**Chiang Mai Arr**	**17.45**	**29**	P		**P**	**P**	**18 07 07.0**	**-1.3**
LAMP	**Lampang**	**17.54**	**31**	P		**P**	**P**	**18 07 08.0**	**-1.2**
	comp=Z,915nmcomp=Z,98nm,1.1s								
CM34	**Chiang Mai Arr**	**17.58**	**29**	P		**P**	**P**	**18 07 09.0**	**-0.6**
CUPL	**Choutuppal**	**17.62**	**322**	*e*P		**Pn**	**Pn**	**18 07 05.5**	**-3.9**
KHON	**Khomkaen**	**17.79**	**43**	P		**P**	**P**	**18 07 12.9**	**+1.0**
	comp=Z,2μmcomp=Z,86nm,1.0s								
PHRA	**Phrae**	**17.84**	**33**	P		**Pn**	**Pn**	**18 07 11.0**	**-1.0**
	comp=Z,716nm,1.4s								
HYB	**Hyderabad**	**17.94**	**321**	*i* P		**P**	**P**	**18 07 12.0**	**-1.6**
HYB				*e*S		**S**	**S**	**18 10 39.0**	**+1.1**
HYBB	**Hyderabad (bro**	**17.94**	**321**	*e*P		**Pn**	**Pn**	**18 07 11.7**	**-1.6**
PAYA	**Payao**	**18.37**	**30**	P		**Pn**	**Pn**	**18 07 18.3**	**-0.3**
	comp=Z,8μmcomp=Z,498nm,1.1s								
SBJI	**Serang**	**18.55**	**121**	P		**Pn**	**Pn**	**18 07 21.5**	**+0.7**
	comp=Z,105nm,0.5s								
RPR	**Rampur**	**18.62**	**326**	*e*P		**Pn**	**Pn**	**18 07 20.2**	**-1.4**
TNG	**Tangerang**	**19.02**	**120**	P		**Pn**	**Pn**	**18 07 28.0**	**+1.5**
	comp=Z,268nm,0.5s								
UBPT	**Khong Chiam**	**19.05**	**51**	P		**Pn**	**Pn**	**18 07 27.4**	**+0.6**
	comp=Z,67nm,2.0s								
UBPT	**Khong Chiam**	**19.05**	**51**	P		**Pn**	**Pn**	**18 07 27.4**	**+0.6**
UBPT				IAmb		IAmb	IAmb	18 07 27.8	
	comp=Z,84nm,1.1s								
SAIH	**SAIHA**	**19.06**	**8**	*e*P		**Pn**	**Pn**	**18 07 27.3**	**+0.3**
SAIH				*e*S		Sn	Sn	18 10 47.2	-12
NONG	**Nongkai**	**19.23**	**40**	P		**Pn**	**Pn**	**18 07 28.6**	**-0.4**
	comp=Z,81nm,1.4s								
DBJI	**Dramaga**	**19.30**	**121**	P		**Pn**	**Pn**	**18 07 30.5**	**+0.6**
	comp=Z,46nm,1.4s								
SKJI	**Sukabumi**	**19.37**	**123**	P		**Pn**	**Pn**	**18 07 31.1**	**+0.4**
	comp=Z,86nm,0.8s								
BELO	**BELONIA**	**19.66**	**3**	*e*P		**Pn**	**Pn**	**18 07 39.9**	**+5.8**
KLRI	**Killari**	**19.68**	**318**	*e*P		**Pn**	**Pn**	**18 07 32.5**	**-1.8**
DLV	**T Lat**	**19.94**	**64**	P		**P**	**P**	**18 07 36.0**	**+0.1**
DLV				IAmb		IAmb	IAmb	18 07 40.2	
	comp=Z,144nm,1.5s								
KSM	**Kuching**	**20.18**	**95**	P		Pn	Pn	18 07 41.0	+0.7
LEM	**Lembang**	**20.18**	**121**	P		**P**	**P**	**18 07 38.5**	**0.0**
	comp=Z,66nm,1.1s,baz=129,slow=0.8,SNR=11								
LEM				LR		LR	LR	18 15 09.9	
	comp=Z,493nm,18.0s,baz=299,slow=36								
LEM	**Lembang**	**20.18**	**121**	P		Pn	Pn	18 07 40.8	+0.3
	comp=Z,53nm,1.5s								
AGT	**Agartala**	**20.28**	**3**	*e*P		Pn	Pn	18 07 39.6	-1.8
AGT				*e*S		Sn	Sn	18 11 31.9	+3.0
JCJI	**Jatiwangi**	**20.59**	**119**	P		Pn	Pn	18 07 45.6	+0.6
	comp=Z,158nm,0.4s								
CISI	**Cisompet, Garu**	**20.72**	**122**	P		Pn	Pn	18 07 45.4	-1.3
	comp=Z,2μmcomp=Z,147nm,1.4s								
H08S3	**Diego Garcia H**	**20.86**	**238**	T		T	T	18 29 24.5	
	baz=57,slow=75,SNR=1086								
H08S2	**Diego Garcia H**	**20.86**	**238**	T		T	T	18 29 30.8	
	baz=57,slow=75,SNR=479								
KAD	**Karad**	**20.86**	**312**	*e*P		Pn	Pn	18 07 48.0	-0.3
H08S1	**Diego Carcia H**	**20.88**	**238**	T		T	T	18 29 33.2	
	baz=57,slow=75,SNR=95								
STKI	**Sintang**	**21.53**	**99**	P		**P**	**P**	**18 07 54.5**	**+1.7**
	comp=Z,3μmcomp=Z,15nm,0.9s								
KPJI	**Karang Pucung**	**21.57**	**120**	P		**P**	**P**	**18 07 54.0**	**+0.8**
	comp=Z,52nm,1.0s								
SBUM	**Sibu**	**22.01**	**92**	P		**P**	**P**	**18 08 00.0**	**+2.1**
KOHI	**KOHIMA**	**22.40**	**9**	*e*P		**P**	**P**	**18 08 01.1**	**-1.1**
KOHI				IAmb		IAmb	IAmb	18 08 10.4	
	comp=Z,106nm,0.9s								
KOHI				*e*S		**S**	**S**	**18 12 08.7**	**+2.3**
GUWA	**GUWAHATI**	**22.60**	**3**	*e*P		**P**	**P**	**18 08 03.0**	**-1.1**
GUWA				*e*S		**S**	**S**	**18 12 11.9**	**+2.3**
SMRI	**Semarang**	**22.75**	**117**	P		**P**	**P**	**18 08 07.7**	**+1.8**
	comp=Z,80nm,1.0s								
MOKO	**MOKOCHONG**	**23.06**	**10**	*e*P		**P**	**P**	**18 08 06.9**	**-2.2**
MOKO				*e*P		pP	pP	18 08 09.9	-8.0
MOKO				*e*S		**S**	**S**	**18 12 14.6**	**-3.2**

LUWI Luwuk 32.86 97 P **P** **18 09 39.8 +2.5**
EDFI Ende, Flores 33.67 111 P **P** **18 09 42.8 -1.7**
LZH Lanzhou 34.78 20 *e*P **P** **18 09 54.0 +0.1**
LZH pP pP 18 10 00.3 -3.2
LZH sP pwP 18 10 02.0 -4.0
LZH *e*PP **PP** **18 11 12.3 -0.9**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,97nm,5.2s
LZH LR LR
comp=Z,760nm,13.0s
LZH LR LR
comp=Z,690nm,13.2s
LZH LR LR
comp=Z,800nm,15.6s
XAN Xi'an 35.03 28 P **P** **18 09 54.8 -1.1**
XAN pP pP 18 10 01.0 -4.5
XAN S **S** **18 15 27.8 +1.8**
XAN pmax pmax
comp=Z,13nm,1.4s
XAN pmax pmax
comp=Z,200nm,4.6s
XAN LR LR
comp=Z,590nm,21.6s
XAN LR LR
comp=Z,650nm,17.6s
XAN LR LR
comp=Z,560nm,15.7s
WHN Wuhan 35.26 38 ⇓P **P** **18 09 59.0 +1.1**
WHN S **S** **18 15 34.8 +5.3**
WHN pmax pmax
comp=Z,82nm,1.5s
WHN LR LR
comp=Z,1μm,13.4s
DAV Davao City (W) 35.39 83 LR LR 18 26 47.4
comp=Z,177nm,18.3s,baz=268,slow=40
BATI Baumata 35.99 113 LR LR 18 26 08.4
comp=Z,633nm,19.9s,baz=323,slow=39
SANI Sanana 36.19 98 P **P** **18 10 07.2 +1.1**
WSAR Wadi Sarin 36.29 306 P **P** **18 10 09.7 +2.8**
comp=Z,4.3nm,0.8s,baz=344,slow=7.0,SNR=1.8
WSAR LR LR 18 22 29.2
comp=Z,209nm,21.2s,baz=132,slow=32
GTA Gaotai 36.79 12 ⇑P **P** **18 10 11.5 +0.4**
GTA pP pP 18 10 17.8 -2.9
GTA sP pwP 18 10 21.0 -2.2
GTA pmax pmax
comp=Z,17nm,1.4s
GTA pmax pmax
comp=Z,48nm,5.1s
GTA LR LR
comp=Z,280nm,17.4s
GTA LR LR
comp=Z,260nm,17.1s
GTA LR LR
comp=Z,310nm,17.8s
KSH Kashi 38.10 342 P **P** **18 10 21.3 -0.9**
KSH pP pP 18 10 27.3 -4.4
KSH S **S** **18 16 11.5 -1.4**
KSH pmax pmax
comp=Z,14nm,0.8s
KSH pmax pmax
comp=Z,340nm,4.1s
KSH LR LR
comp=Z,390nm,7.9s
KSH LR LR
comp=Z,430nm,7.4s
KSH LR LR
comp=Z,320nm,6.3s
NJ2 Nanjing 39.11 40 *e*P **P** **18 10 31.5 +0.9**
NJ2 pmax pmax
comp=Z,7.0nm,0.9s
KDJ Kajisay 40.18 345 P **P** **18 10 39.7 +0.1**
KDJ pmax pmax
comp=Z,20nm,1.0s
KDJ Kajisay 40.18 345 P **P** **18 10 39.7 +0.1**
KDJ IAmb IAmb 18 10 49.8
comp=Z,20nm,1.0s
WMQ Urumqi 40.21 357 *e*P **P** **18 10 40.3 +0.6**
WMQ pP pP 18 10 45.0 -4.3
WMQ sP pwP 18 10 49.3 -2.6
WMQ pmax pmax
comp=Z,41nm,0.9s
WMQ pmax pmax
comp=Z,180nm,4.3s
WMQ LR LR
comp=Z,900nm,16.7s
WMQ LR LR
comp=Z,840nm,23.7s
WMQ LR LR
comp=Z,1μm,23.7s
BTK Batken 40.40 337 P **P** **18 10 39.6 -1.7**
BTK pmax pmax
comp=Z,24nm,1.3s
BTK Batken 40.40 337 P **P** **18 10 39.6 -1.7**
SHLS Shalkode 40.62 348 *e*P **P** **18 10 42.5 -0.7**
comp=Z,6.8nm,1.8s,baz=348
SHLS Shalkode 40.62 348 *e*P **P** **18 10 42.5 -0.7**
SHLS pmax pmax
comp=Z,7.0nm,1.8s
ARSB Arslanbob 40.71 340 P **P** **18 10 44.5 +0.6**
ARSB pmax pmax
comp=Z,45nm,1.0s
ARSB Arslanbob 40.71 340 P **P** **18 10 44.5 +0.6**
SATY Saty 40.76 347 *e*P **P** **18 10 44.2 -0.1**
comp=Z,3.3nm,0.9s,baz=347
SATY Saty 40.76 347 *e*P **P** **18 10 44.2 -0.1**
SATY pmax pmax
comp=Z,3.0nm,0.9s
FITZ Fitzroy Crossi 40.99 123 P **P** **18 10 45.0 -1.4**
comp=Z,4.9nm,0.9s,baz=304,slow=8.2,SNR=4.7
FITZ Fitzroy Crossi 40.99 123 P **P** **18 10 45.0 -1.4**
BTO Baotou 41.03 23 *e*P **P** **18 10 42.0 -4.6**
KPKS Kokpek 41.08 347 *e*P **P** **18 10 46.5 -0.4**
baz=347
KPKS Kokpek 41.08 347 *e*P **P** **18 10 46.5 -0.4**
MDOK Medeo 41.19 345 *e*P **P** **18 10 47.8 0.0**
baz=346
MDOK *e*S **S** **18 17 00.5 +1.3**
baz=346
MDOK LR LR 18 28 15.7
comp=Z,137nm,15.0s,baz=346
MDOK Medeo 41.19 345 *e*P **P** **18 10 47.8 0.0**
MDOK *e*S **S** **18 17 00.4 +1.3**
MDOK MLR MLR
comp=Z,137nm,15.0s
AML Almayashu 41.20 341 P **P** **18 10 48.7 +0.4**
SNR=16
AAA Alma-Ata 41.26 345 *e*P **P** **18 10 48.7 +0.3**
comp=Z,7.5nm,0.6s,baz=345
AAA *e*S **S** **18 17 02.2 +2.1**
baz=345
AAA LR LR 18 28 21.2
comp=Z,129nm,15.2s,baz=345
AAA Alma-Ata 41.26 345 *e*P **P** **18 10 48.7 +0.3**
AAA *e*S **S** **18 17 02.2 +2.1**
AAA pmax pmax
comp=Z,7.0nm,0.6s
AAA MLR MLR
comp=Z,129nm,15.0s
KBK Karagaybulak 41.29 343 P **P** **18 10 49.8 +1.0**
SNR=9.8
TKM2 Tokmak 2 41.35 344 P **P** **18 10 49.5 +0.3**
SNR=8.9
AAK Ala-Archa 41.41 342 P **P** **18 10 50.7 +1.0**
comp=Z,3.1nm,0.8s,baz=158,slow=3.8,SNR=10
AAK Ala-Archa 41.41 342 *i* P **P** **18 10 49.0 -0.7**
AAK pmax pmax
comp=Z,26nm,1.3s
AAK Ala-Archa 41.41 342 P **P** **18 10 50.9 +1.2**
EKS2 Erkin-Say 41.65 342 P **P** **18 10 52.8 +1.2**
SNR=10
HHC Hu-ho-hao-te 41.86 24 *e*P **P** **18 10 54.3 +0.9**
HHC pP pP 18 10 59.5 -3.5
HHC sP pwP 18 11 05.0 -0.7
HHC S **S** **18 17 11.0 +1.9**
HHC pmax pmax
comp=Z,16nm,0.9s
HHC pmax pmax
comp=Z,81nm,6.6s
HHC LR LR
comp=Z,330nm,21.8s
HHC LR LR
comp=Z,210nm,19.9s
HHC LR LR
comp=Z,370nm,17.0s
USP Ospenovka 41.98 343 P **P** **18 10 54.6 +0.4**
SNR=13
KUU Kurty 42.05 345 *e*P **P** **18 10 53.9 -0.9**
comp=Z,7.7nm,1.0s,baz=345
KUU Kurty 42.05 345 *e*P **P** **18 10 53.9 -0.9**
KUU pmax pmax
comp=Z,8.0nm,1.0s
SGDS Sogindy 42.11 343 *e*P **P** **18 10 55.1 -0.3**
comp=Z,3.6nm,1.0s,baz=343
SGDS Sogindy 42.11 343 *e*P **P** **18 10 55.0 -0.3**
SGDS pmax pmax
comp=Z,4.0nm,1.0s
IUG luzhnay 42.49 338 *e*P **P** **18 10 58.7 +0.1**
baz=338
IUG luzhnay 42.49 338 *e*P **P** **18 10 58.6 +0.1**
TDK Taldyqorghan 42.61 348 *e*P **P** **18 10 58.2 -1.1**
comp=Z,3.3nm,0.6s,baz=348
TDK Taldyqorghan 42.61 348 *e*P **P** **18 10 58.2 -1.1**
TDK pmax pmax
comp=Z,3.0nm,0.6s
DZA Taraz 42.67 339 *e*P **P** **18 10 58.7 -1.2**
baz=340
DZA Taraz 42.67 339 *e*P **P** **18 10 58.6 -1.2**
KK31 Karatay Array 43.14 339 P **P** **18 11 03.9 +0.3**
KKAR Karatay Array 43.14 339 P **P** **18 11 03.6 0.0**
KKAR Karatay Array 43.14 339 P **P** **18 11 03.6 0.0**
BJI Beijing 43.29 29 P **P** **18 11 05.8 +1.0**
BJI pmax pmax
comp=Z,12nm,1.4s
BJI pmax pmax
comp=Z,200nm,4.9s
BJI LR LR
comp=Z,350nm,15.1s
BJI LR LR
comp=Z,370nm,19.6s
BJI LR LR
comp=Z,150nm,22.1s
MK31 Makanchi Array 43.66 352 P **P** **18 11 06.9 -0.9**
MK31 pmax pmax
comp=Z,9.0nm,1.1s
MK31 Makanchi Array 43.66 352 P **P** **18 11 06.9 -0.9**
MKAR Makanchi Array 43.66 352 P **P** **18 11 07.3 -0.4**
comp=Z,4.5nm,0.9s,baz=168,slow=10,SNR=20
MKAR Makanchi Array 43.66 352 P **P** **18 11 07.2 -0.6**
MKAR Makanchi Array 43.66 352 P **P** **18 11 07.2 -0.6**
MAKZ Makanchi 43.72 352 P **P** **18 11 04.8 -3.5**
BTLS Baital 43.73 343 *e*P **P** **18 11 07.7 -0.7**
baz=344
BTLS Baital 43.73 343 *e*P **P** **18 11 07.6 -0.7**
ZSN Zaisan 44.02 355 *e*P **P** **18 11 10.7 +0.1**
baz=355
ZSN Zaisan 44.02 355 *e*P **P** **18 11 10.7 +0.1**
H01W3 Cape Leeuwin H 44.32 151 T T 18 58 21.1
baz=326,slow=75,SNR=394
H01W2 Cape Leeuwin H 44.33 152 T T 18 58 22.0
baz=326,slow=75,SNR=353
H01W1 Cape Leeuwin H 44.34 151 T T 18 58 27.3
baz=326,slow=75,SNR=392
NWAO Narrogin (SRO) 44.36 147 LR LR 18 27 39.7
comp=Z,267nm,19.0s,baz=350,slow=33
GEYT Alibeck 45.10 324 P **P** **18 11 20.1 +0.7**
comp=Z,7.8nm,0.7s,baz=171,slow=13,SNR=9.4
GEYT LR LR 18 32 24.6
comp=Z,174nm,18.6s,baz=50,slow=39
SONM Songino Array 46.31 15 P **P** **18 11 29.0 +0.1**
comp=Z,8.1nm,0.6s,baz=194,slow=8.8,SNR=63
SONM LR LR 18 32 55.1
comp=Z,444nm,20.7s,baz=186,slow=39
SONM Songino Array 46.31 15 P **P** **18 11 29.8 +0.8**
SONM pmax pmax
comp=Z,20nm,0.8s
SONM Songino Array 46.31 15 P **P** **18 11 29.8 +0.8**
ULN Ulaanbaatar 46.51 16 *i* P **P** **18 11 30.5 -0.1**
ULN pmax pmax
comp=Z,16nm,1.6s
SEM Semipalatinsk 47.49 351 *e*P **P** **18 11 36.8 -1.4**
baz=352
SEM LR LR 18 32 17.7
comp=Z,70nm,15.1s,baz=352
SEM Semipalatinsk 47.49 351 *e*P **P** **18 11 36.8 -1.4**
SEM MLR MLR
comp=Z,70nm,15.0s
OPO Ambohidratompo 47.70 241 P **P** **18 11 43.3 +3.0**
comp=Z,2.3nm,0.8s,baz=303,slow=13,SNR=1.8
ZAK Zakamensk 48.00 11 *e*P **P** **18 11 41.6 -0.4**
ZAK pmax pmax
comp=Z,6.0nm,1.3s
KURK Kurchatov 48.05 350 P **P** **18 11 40.6 -1.6**
KURK pmax pmax
comp=Z,26nm,1.1s
KURK Kurchatov 48.05 350 P **P** **18 11 40.6 -1.6**
KSRS Korea Array 48.30 41 LR LR 18 36 17.0
comp=Z,131nm,18.1s,baz=230,slow=42
BRZS Berezniki 48.63 345 *e*P **P** **18 11 46.1 -0.8**
baz=345
BRZS Berezniki 48.63 345 *e*P **P** **18 11 46.0 -0.8**
WB0 Warramunga Arr 49.18 120 P **P** **18 11 51.5 0.0**
WB0 IAmb IAmb 18 12 03.3
comp=Z,28nm,1.4s
WRA Warramunga Arr 49.20 120 P **P** **18 11 51.8 +0.1**
comp=Z,7.4nm,1.0s,baz=298,slow=8.6,SNR=23
WRA LR LR 18 36 06.2
comp=Z,122nm,18.1s,baz=310,slow=40
WRA Warramunga Arr 49.20 120 P **P** **18 11 51.5 -0.2**
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRA Warramunga Arr 49.20 120 P **P** **18 11 51.5 -0.2**
WRAB Tennant Creek 49.21 120 *ce*P **P** **18 11 51.9 +0.2**
WRAB pmax pmax
comp=Z,17nm,1.3s
WRAB Tennant Creek 49.21 120 P **P** **18 11 51.4 -0.4**
WRAB IAmb IAmb 18 11 53.2
comp=Z,15nm,1.1s
WB2 Warramunga Arr 49.21 120 P **P** **18 11 52.0 +0.2**
WB2 IAmb IAmb 18 12 02.2
comp=Z,9.3nm,0.9s
TLY Talaya 49.31 11 *i* P **P** **18 11 53.8 +1.8**
TLY pmax pmax
comp=Z,5.0nm,0.9s
WR0 Warramunga Arr 49.38 120 P **P** **18 11 53.6 +0.5**
WR0 IAmb IAmb 18 11 54.5
comp=Z,21nm,1.2s
ASAR Alice Springs 50.40 125 P **P** **18 12 00.0 -0.8**
comp=Z,2.0nm,0.9s,baz=307,slow=7.0,SNR=13
ASAR LR LR 18 35 53.0
comp=Z,110nm,18.0s,baz=298,slow=39
ZAA0 Zalesovo Array 50.48 356 P **P** **18 12 00.3 -0.4**
ZALV Zalesovo Beam 50.48 356 P **P** **18 11 59.9 -0.9**
comp=Z,3.3nm,0.4s,baz=177,slow=7.5,SNR=21
ZALV LR LR 18 34 45.1
comp=Z,326nm,21.7s,baz=177,slow=38
ZALV Zalesovo Beam 50.48 356 P **P** **18 11 59.4 -1.4**
ZALV Zalesovo Beam 50.48 356 P **P** **18 11 59.4 -1.4**
BRVK Borovoye 52.06 345 P **P** **18 12 10.9 -1.8**
AB31 Akbulak array 52.35 335 P **P** **18 12 14.3 -0.6**
ABKAR Akbulak array 52.35 335 P **P** **18 12 14.6 -0.4**
ABKAR Akbulak array 52.35 335 P **P** **18 12 15.1 +0.2**
AKTO Aktyubinsk 54.06 335 P **P** **18 12 27.6 +0.1**
comp=Z,1.4nm,0.9s,baz=107,slow=9.6,SNR=3.9
MAK Makhachkala 54.57 322 *e*P P 18 12 25.5 -5.8
MAK *e* 18 14 29.8
MAK *e*S **S** **18 20 00.0 -8.4**
MAK *e*SS **SS** **18 23 47.6 -3.9**
MAK pmax pmax
comp=Z,176nm,18.2s
MAK MLR MLR
comp=Z,176nm,18.0s
USRK Ussuriysk Ar. 54.72 36 P **P** **18 12 31.7 -0.7**
comp=Z,0.6nm,0.5s,baz=240,slow=4.8,SNR=1.4
USRK LR LR 18 37 54.7
comp=Z,128nm,18.6s,baz=218,slow=38
GNI Garni 54.86 318 P **P** **18 12 33.8 +0.2**
comp=Z,9.8nm,1.1s,baz=202,slow=18,SNR=2.1
GNI Garni 54.86 318 *i* P **P** **18 12 33.1 -0.6**
GNI pmax pmax
comp=Z,6.0nm,0.8s
MJAR Matsushiro Arr 54.98 47 P **P** **18 12 33.4 -1.0**
comp=Z,2.0nm,0.9s,baz=248,slow=6.9,SNR=6.2
MJAR LR LR 18 38 22.7
comp=Z,93nm,19.1s,baz=140,slow=39
GROC Groznyy 55.75 322 *e*P **P** **18 12 39.2 -0.6**
GROC *e* 18 13 37.9
GROC *e* 18 14 39.0
GROC *e*S **S** **18 20 29.2 +4.9**
GROC pmax pmax
comp=Z,67nm,1.1s
ZEI Tsey 56.72 320 *e*P P 18 12 55.1 +8.1
ZEI pmax pmax
comp=Z,17nm,1.0s
BOD Bodaibo 57.31 15 *e*P **P** **18 12 51.6 +1.0**
BOD pmax pmax
comp=Z,16nm,1.8s
KLR Kul'dur 57.61 31 *ce*P **P** **18 12 51.8 -1.2**
KLR pmax pmax
comp=Z,2.0nm,1.0s
KBZ Khabaz 57.83 321 P **P** **18 12 56.0 +1.5**
comp=Z,3.8nm,1.0s,baz=205,slow=14,SNR=3.2
KBZ LR LR 18 40 29.7
comp=Z,49nm,18.2s,baz=94,slow=39
KIV Kislovodsk 58.07 321 *e*P **P** **18 12 54.6 -1.8**
KIV pmax pmax
comp=Z,114nm,1.1s
KIV MLR MLR
comp=Z,181nm,17.0s
SVE Sverdlovsk 58.13 341 *de*P P 18 13 04.9 +8.5
SVE pmax pmax
comp=Z,45nm,1.4s
ARU Arti 58.49 340 P **P** **18 13 00.4 +1.4**
comp=Z,0.2nm,0.3s,baz=282,slow=22,SNR=1.9
ARU Arti 58.49 340 *c i*P P 18 13 07.1 +8.1
ARU 18 13 48.1
ARU 18 15 10.4
ARU S S 18 21 20.5 +21
ARU pmax pmax
comp=Z,23nm,1.2s
ARU MLR MLR
comp=Z,260nm,18.0s
ZEA Zeya 58.52 25 *e*P P 18 13 13.6 +14
ZEA pmax pmax
comp=Z,10.0nm,1.3s
ZEA MLR MLR
comp=Z,200nm,14.0s
CTA Charters Tower 59.79 116 P **P** **18 13 07.8 -0.8**
comp=Z,5.4nm,0.9s,baz=284,slow=9.3,SNR=3.3
BELG Belogornoye 60.11 331 *i* P **P** **18 13 08.8 -1.4**
BELG pmax pmax
comp=Z,1.0nm,1.4s
STKA Stephens Creek 60.13 130 P **P** **18 13 10.8 0.0**
comp=Z,10nm,1.0s,baz=318,slow=8.6,SNR=11
STKA LR LR 18 40 15.6
comp=Z,161nm,18.4s,baz=282,slow=37
STKA Stephens Creek 60.13 130 P **P** **18 13 10.5 -0.3**
STKA pmax pmax
comp=Z,3.0nm,1.1s
STKA Stephens Creek 60.13 130 P **P** **18 13 10.5 -0.3**
ANN Anapa 61.80 320 *e*P P 18 13 11.5 -10
ANN pmax pmax
comp=Z,101nm,1.1s
VRH Novokhopyorsk 62.39 328 *e*P **P** **18 13 25.2 -0.5**
VRH pmax pmax
comp=Z,30nm,1.6s
BRTR Keskin Array B 62.43 313 P **P** **18 13 27.4 +1.0**
comp=Z,1.9nm,0.6s,baz=30,slow=20,SNR=7.5
BRTR LR LR 18 41 10.8
comp=Z,60nm,20.1s,baz=134,slow=37
KIRV Kirov 63.41 338 *i* P **P** **18 13 31.6 -0.7**
VSR Storozhevoye 63.77 327 *e*P **P** **18 13 35.9 +1.1**
VSR pmax pmax
comp=Z,20nm,1.6s
LPSR Galich'ya Gora 64.60 328 *e*P **P** **18 13 40.0 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
YAK Yakutsk 65.36 19 *e*P **P** **18 13 44.0 -1.0**
YAK pmax pmax
comp=Z,14nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK pmax pmax
comp=N,7.0nm,1.0s
NRIK Noril'sk 65.75 359 P **P** **18 13 48.5 +1.0**
comp=N,3.0nm,0.7s,baz=164,slow=11,SNR=3.7
NRIK LR LR 18 44 02.9
comp=N,362nm,21.9s,baz=198,slow=38
NRIK Noril'sk 65.75 359 *i* P **P** **18 13 45.6 -1.8**
NRIK pmax pmax
comp=Z,1.0nm,0.4s
MOS Moscow 66.85 331 *e*P P 18 13 58.8 +4.1
MOS *e* 18 14 10.0
MOS pmax pmax
comp=Z,65nm,1.2s
OBN Obninsk 67.06 330 ⇓*e*P **P** **18 13 54.4 -1.6**
OBN *e**PP **pP** **18 14 02.4 -3.7**
OBN *e* 18 14 20.3
OBN pmax pmax
comp=Z,3.0nm,0.9s
OBN MLR MLR
comp=Z,129nm,18.0s
TIRR Tirgusor 67.65 317 ⇑P **P** **18 14 02.1 +2.1**
TIRR Tirgusor 67.65 317 ⇑P **P** **18 14 02.1 +2.1**
TPGR Topolog 67.77 317 ⇓P **P** **18 14 03.3 +2.4**
IDI Anoyia 67.92 307 ⇓P **P** **18 14 05.0 +3.0**
CFR Carcaliu 68.06 318 ⇑P **P** **18 14 06.1 +3.5**
CFR Carcaliu 68.06 318 ⇑P **P** **18 14 06.1 +3.5**
MILM Milestii Mici 68.17 320 ⇑P **P** **18 14 06.6 +3.4**
RAZG Razgrad 68.70 316 ⇑P **P** **18 14 09.9 +3.2**
KLMR Klimovskoe 68.74 336 *e*P P 18 14 13.8 +7.3
KLMR pmax pmax
comp=Z,21nm,1.2s
KLMR Klimovskoe 68.74 336 *e*P P 18 14 13.9 +7.4
KLMR AMP 18 14 16.1
comp=Z,21nm,1.2s
SORM Soroca 68.87 321 ⇓P P 18 14 11.3 +3.8
SORM Soroca 68.87 321 ⇓P P 18 14 11.3 +3.8
BISRR Bisoca 69.13 318 ⇑P **P** **18 14 12.2 +2.8**
VRI Vrincioaia 69.21 318 ⇓P P 18 14 14.0 +4.2
VRI Vrincioaia 69.21 318 ⇓P P 18 14 14.0 +4.2
AKASG Malin Array Be 69.22 324 P **P** **18 14 11.4 +1.7**
comp=Z,0.4nm,0.5s,baz=91,slow=4.8,SNR=2.7
AKASG LR LR 18 48 09.9
comp=Z,66nm,18.9s,baz=75,slow=39
PLOR Plostina 69.26 318 ⇑P P 18 14 14.0 +3.9
PLOR Plostina 69.26 318 ⇑P P 18 14 14.0 +3.9
TESR Tescani 69.46 319 ⇑P **P** **18 14 14.6 +3.3**
MLR Muntele Rosu 69.63 317 ⇓P **P** **18 14 16.1 +3.5**
MLR Muntele Rosu 69.63 317 ⇓P **P** **18 14 16.1 +3.5**
MLR Muntele Rosu 69.63 317 P **P** **18 14 11.6 -0.9**
BOSA Boshof 69.96 238 P **P** **18 14 15.7 +0.8**
comp=Z,2.8nm,1.0s,baz=107,slow=9.8,SNR=3.0
BOSA LR LR 18 41 13.7
comp=Z,69nm,18.2s,baz=54,slow=33
BOSA Boshof 69.96 238 P **P** **18 14 12.5 -2.4**
BOSA pmax pmax
comp=Z,11nm,1.1s
BOSA Boshof 69.96 238 P **P** **18 14 12.5 -2.4**
BOSA IAmb IAmb 18 14 30.7
comp=Z,11nm,1.1s
PRAR RASCA 69.99 319 ⇓P P 18 14 19.1 +4.5
HUMR Humele 70.02 316 ⇓P P 18 14 20.5 +5.7
DOPR Dopca 70.14 318 ⇑P P 18 14 20.0 +4.5
VOIR 70.22 317 ⇓P P 18 14 20.5 +4.4
VOIR 70.22 317 ⇓P P 18 14 20.5 +4.4
ARR Arges 70.48 317 ⇓P P 18 14 22.5 +4.8
BURAR Bucovina Array 70.72 319 ⇑P P 18 14 24.5 +5.4
BURAR Bucovina Array 70.72 319 ⇑P P 18 14 24.5 +5.4
GZR Gura Zlata 71.76 317 ⇑P P 18 14 30.6 +5.2
GZR Gura Zlata 71.76 317 ⇑P P 18 14 30.6 +5.2
NACGM Naroch 72.09 327 *e* P 18 14 32.0 +4.9
DRGR 72.14 318 ⇓P P 18 14 33.5 +5.8
DRGR 72.14 318 ⇓P P 18 14 33.5 +5.8
TIXI Tiksi 72.27 12 *i* P P **18 14 26.6 -1.3**
TIXI Tiksi 72.27 12 P **P** **18 14 26.4 -1.4**
TIXI IAmb IAmb 18 14 34.7
comp=Z,16nm,1.0s
BZS Buzias 72.60 317 ⇑P P 18 14 35.8 +5.4
BZS Buzias 72.60 317 ⇑P P 18 14 35.8 +5.4
SIRR Siria 72.72 317 ⇓P P 18 14 36.9 +5.8
UZH Uzhgorod 72.88 320 ⇓*i*P P 18 14 37.1 +5.2
UZH *e* 18 14 47.8
KOLS Kolonicke sedl 72.97 320 *e*P P 18 14 42.7 +10
KOLS Kolonicke sedl 72.97 320 *e* P 18 14 42.7 +10
MAW Mawson 73.52 191 LR LR 18 40 14.4
comp=Z,128nm,19.9s,baz=56,slow=30
PETK Petropavlovsk- 73.81 35 LR LR 18 50 11.1
comp=Z,122nm,18.6s,baz=230,slow=38
FINES FINESS Array B 74.78 333 P **P** **18 14 42.2 -0.5**
comp=Z,2.5nm,0.7s,baz=102,slow=6.4,SNR=10
FINES LR LR 18 48 57.1
comp=Z,115nm,21.2s,baz=120,slow=37
FINES FINESS Array B 74.78 333 P **P** **18 14 42.4 -0.4**

FINES	**FINESS Array B**	**74.78**	**333**	P	**P**	**18 14 42.4**	**-0.4**
VYHS	**Vyhne**	**75.08**	**319**	*e*P	P	18 14 53.6	+8.7
VYHS	**Vyhne**	**75.08**	**319**	*e*	P	18 14 53.5	+8.6
MODS	**Modra-Piesok**	**76.08**	**319**	*e*P	P	18 14 59.0	+8.4
MODS	**Modra-Piesok**	**76.08**	**319**	*e*	P	18 14 59.0	+8.4
VRAC	**Vranov**	**76.69**	**320**	LR	LR	18 53 44.8	
	comp=Z,46nm,19.0s,baz=112,slow=40						
KRLC	**Kraliky**	**76.71**	**321**	*e*P	P	18 14 59.9	+5.7
KRLC				*e*		18 15 03.3	
KRLC	**Kraliky**	**76.71**	**321**	*e*P	P	18 14 59.9	+5.7
KRLC				*ex*	x	18 15 03.3	
DPC	**Dobruska-Polom**	**77.05**	**321**	*e*P	P	18 15 02.5	+6.4
DPC	**Dobruska-Polom**	**77.05**	**321**	*e*P	P	18 15 02.5	+6.4
ARSA	**Arzberg**	**77.05**	**318**	*e*P	P	18 15 03.7	+7.6
	comp=Z,5.1nm,1.0s						
OSTC	**Ostas**	**77.15**	**321**	*e*P	P	18 15 02.8	+6.2
CHVC	**Chvalec**	**77.26**	**321**	*e*P	P	18 15 07.4	+10
SOKA	**Soboth**	**77.30**	**317**	*e*P	P	18 15 06.7	+9.1
	comp=Z,10nm,1.1s						
OBKA	**Obir**	**77.60**	**317**	*e*P	P	18 15 09.4	+10
	comp=Z,9.6nm,1.4s						
ARCES	**ARCESS Array B**	**78.06**	**341**	P	**P**	**18 15 00.8**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=98,slow=4.7,SNR=9.8						
ARCES				LR	LR	18 50 54.0	
	comp=Z,79nm,20.1s,baz=125,slow=37						
PRU	**Pruhonice**	**78.12**	**320**	*e*P	P	18 15 10.7	+8.7
PRU	**Pruhonice**	**78.12**	**320**	*e*P	P	18 15 10.7	+8.7
GERES	**GERESS Array B**	**78.49**	**319**	P	**P**	**18 15 05.0**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=104,slow=5.6,SNR=9.8						
GERES				LR	LR	18 53 11.3	
	comp=Z,65nm,21.1s,baz=106,slow=38						
KHC	**Kasperske Hory**	**78.61**	**319**	*e*P	P	18 15 10.8	+6.0
KHC				*e*		18 15 20.5	
KHC	**Kasperske Hory**	**78.61**	**319**	*e*P	P	18 15 10.8	+6.0
KHC				*ex*	x	18 15 20.5	
BRG	**Berggiesshubel**	**78.63**	**321**	*e*P	P	18 15 13.7	+8.9
	comp=Z,15nm,1.3s						
BRG	**Berggiesshubel**	**78.63**	**321**	*e*P	P	18 15 13.7	+8.9
BRG				pmax	pmax		
	comp=Z,15nm,1.3s						
CLL	**Collm**	**79.28**	**321**	*e*P	**P**	**18 15 08.0**	**-0.3**
CLL				*e*PcP	**PcP**	**18 15 16.0**	**-0.5**
	comp=Z,14nm,1.3s						
CLL	**Collm**	**79.28**	**321**	*e*P	**P**	**18 15 08.0**	**-0.3**
CLL				*e*		18 15 16.0	
WTTA	**Wattenberg**	**79.68**	**317**	*e*P	P	18 15 18.7	+7.8
	comp=Z,9.5nm,1.0s						
SQTA	**Sankt Quirin**	**79.96**	**317**	*e*P	P	18 15 20.8	+8.4
	comp=Z,6.0nm,1.1s						
MOTA	**Moosalm**	**80.05**	**317**	*e*P	P	18 15 19.8	+7.0
	comp=Z,7.3nm,0.9s						
SYO	**Syowa Base**	**80.12**	**196**	⇑*i*sP	sP	18 15 30.7	+4.3
GRF	**Grafenberg Arr**	**80.21**	**320**	*e*P	P	18 15 23.9	+10
	comp=Z,17nm,1.2s,baz=107,slow=5.2						
HFS	**Hagfors**	**80.26**	**330**	LR	LR	18 54 18.6	
	comp=Z,82nm,18.1s,baz=58,slow=38						
FETA	**Feichten**	**80.27**	**317**	*e*P	P	18 15 23.2	+9.2
	comp=Z,6.8nm,1.2s						
RETA	**Reutte**	**80.29**	**317**	*e*P	P	18 15 22.0	+8.0
	comp=Z,10nm,1.1s						
DAVOX	**Davos/Dischmat**	**80.83**	**317**	LR	LR	18 54 23.4	
	comp=Z,55nm,21.5s,baz=96,slow=38						
DAVA	**Damuels**	**80.87**	**317**	*e*P	P	18 15 26.6	+9.4
	comp=Z,11nm,1.2s						
NB2	**NORSAR Subarra**	**81.61**	**331**	P	P	18 15 26.2	+5.5
	comp=Z,10nm,1.4s,baz=97,slow=5.6						
NOA	**NORSAR Array B**	**81.61**	**331**	P	**P**	**18 15 20.1**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=24,slow=16,SNR=2.0						
NOA				PP	PP	18 18 35.0	+7.6
	comp=Z,0.8nm,0.8s,baz=110,slow=7.7,SNR=3.5						
NOA				LR	LR	18 56 34.0	
	comp=Z,78nm,18.4s,baz=95,slow=39						
SPITS	**Spitsbergen Ar**	**83.30**	**348**	LR	LR	18 56 56.2	
	comp=Z,226nm,20.0s,baz=35,slow=39						
TORD	**Torodi Ar. Bea**	**87.77**	**283**	P	**P**	**18 15 54.9**	**+2.3**
	comp=Z,0.2nm,0.6s,baz=122,slow=36,SNR=1.9						
VNDA	**Vanda**	**89.48**	**168**	P	**P**	**18 16 00.2**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=315,slow=1.7,SNR=3.6						
VNDA				LR	LR	18 52 01.6	
	comp=Z,257nm,18.2s,baz=302,slow=33						
DAG	**Danmarks Havn**	**90.87**	**347**	*e*P	P	18 16 12.1	+6.1
DAG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DAG	**Danmarks Havn**	**90.87**	**347**	*i* P	P	18 16 12.1	+6.1
	comp=Z,7.5nm,1.1s						
DAG	**Danmarks Havn**	**90.87**	**347**	*e*P	P	18 16 12.1	+6.1
DAG				IAmb	IAmb	18 16 15.6	
	comp=Z,7.5nm,1.1s						
ESDC	**Sonseca Array**	**91.00**	**310**	P	**P**	**18 16 09.7**	**+2.3**
	comp=Z,2.8nm,1.2s,baz=148,slow=47,SNR=3.2						
ESDC				LR	LR	19 02 12.4	
	comp=Z,50nm,18.0s,baz=150,slow=39						
MDT	**Midelt**	**92.17**	**303**	LR	LR	19 00 12.8	
	comp=Z,66nm,19.2s,baz=127,slow=37						
DBIC	**Dimbokro**	**94.62**	**277**	LR	LR	18 54 51.2	
	comp=Z,56nm,21.9s,baz=66,slow=33						
PDAR	**Pinedale Array**	**130.59**	**19**	PKP	**PKiKP**	**18 22 14.8**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=118,slow=25,SNR=2.3						
NVAR	**Mina Array Bea**	**130.64**	**30**	PKP	**PKiKP**	**18 22 14.4**	**-1.0**
	comp=Z,0.4nm,0.9s,baz=336,slow=3.3,SNR=2.6						
TXAR	**Lajitas Array**	**144.74**	**21**	PKP	**PKPdf**	**18 22 39.5**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=147,slow=0.8,SNR=12						

*IDC **30** 18:04:09.4±1.5, 4.°06S×147.°06E, h0km, mb3.5/4, mb1 3.8/6, mb1mx3.5/43, mbtmp3.6/6, ML1.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/27, Error ellipse: s-maj=42.7km s-min=24.7km az=136.0*

ISC 30 18:04:14.3±1.2, 4.°1S±0.°2×147.°2E±0.°2, h35km, n8, σ1§29/7, mb3.5/3, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.85**	**93**	Pn	**Pn**	**18 05 24.5**	**-0.4**
	5.7nm,0.3s,baz=180,slow=2.2,SNR=13						
KRVT				LR	LR	18 07 38.5	
	comp=Z,59nm,20.6s,baz=299,slow=42						
PMG	**Port Moresby**	**5.31**	**180**	Pn	**Pn**	**18 05 32.1**	**+0.9**
	0.7nm,0.3s,baz=312,slow=15,SNR=1.6						
PMG				LR	LR	18 07 51.7	
	comp=Z,81nm,18.8s,baz=318,slow=42						
JAY	**Jayapura**	**6.63**	**283**	LR	LR	18 07 57.0	
	comp=Z,141nm,18.1s,baz=19,slow=35						
WRA	**Warramunga Arr**	**20.14**	**217**	P	**P**	**18 08 44.7**	**-0.9**
	1.6nm,0.9s,baz=43,slow=10,SNR=13						
ASAR	**Alice Springs**	**23.32**	**212**	P	**P**	**18 09 18.4**	**-1.1**
	0.8nm,0.9s,baz=47,slow=8.4,SNR=9.5						
FITZ	**Fitzroy Crossi**	**25.27**	**235**	P	**P**	**18 09 36.4**	**-1.2**
	2.5nm,0.9s,baz=39,slow=8.9,SNR=2.7						
ILAR	**Eielson Array**	**83.64**	**23**	P	**P**	**18 16 40.5**	**+1.5**
	0.2nm,0.5s,baz=235,slow=3.2,SNR=2.2						
TORD	**Torodi Ar. Bea**	**144.73**	**287**	PKP	**PKPdf**	**18 23 48.3**	**-0.3**
	0.2nm,0.6s,baz=116,slow=1.5,SNR=1.5						

*DJA **30** 18:22:18.0±0.4, 8.°S±5.°×12.°2E±.°, h10km, M3.6/10, MLv3.6/10*

*IDC **30** 18:22:22.7±2.1, 8.°62S×121.°57E, h54km±21km, mb3.5/3, mb1 3.8/7, mb1mx3.4/33, mbtmp3.8/7, ML3.6/4, Error ellipse: s-maj=59.7km s-min=10.0km az=52.0*

ISC 30 18:22:19.0±0.7, 8.°47S±0.°06×122.°06E±0.°05, h31km, n17, σ2§82/22, mb4.0/3, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.24**	**132**	P	**Pn**	**18 22 25.4**	**-1.1**
MMRI				S	**Sn**	**18 22 30.4**	**-0.8**
EDFI	**Ende, Flores**	**0.46**	**233**	P	**Pb**	**18 22 26.6**	**-2.3**
WSI	**Waingapu**	**2.11**	**236**	P	**Pb**	**18 22 53.0**	**-3.5**
BASI	**Baing, Sumba**	**2.27**	**220**	P	**Pn**	**18 22 55.1**	**+0.7**
BATI	**Baumata**	**2.34**	**138**	P	**Pb**	**18 23 01.7**	**+1.1**
	26nm,0.3s,baz=340,slow=1.8,SNR=84						
BATI				S	**Sb**	**18 23 34.0**	**+4.9**
	11nm,0.3s,baz=230,slow=21,SNR=3.5						
BATI	**Baumata**	**2.34**	**138**	P	**Pb**	**18 22 59.7**	**-0.8**
SOEI	**Soe**	**2.53**	**120**	P	**Pb**	**18 23 00.4**	**-3.4**
WBSI	**Waikabubak, Su**	**2.88**	**246**	P	**Pn**	**18 23 03.2**	**+0.4**
BKSI	**Bulukumba**	**3.67**	**328**	P	**Pn**	**18 23 13.4**	**-0.3**
KAPI	**Kappang**	**4.13**	**326**	P	Pb	18 23 23.6	-7.5
	1.1nm,0.3s,baz=246,slow=3.4,SNR=5.6						
KAPI				S	**Sn**	**18 24 07.0**	**-0.3**
	0.5nm,0.3s,baz=239,slow=21,SNR=1.1						
PLAI	**Plampang**	**4.25**	**265**	P	**Pn**	**18 23 22.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**10.18**	**160**	P	**Pn**	**18 24 45.5**	**+2.3**
	0.3nm,0.3s,baz=341,slow=8.9,SNR=18						
FITZ				S	**Sn**	**18 26 35.6**	**-0.6**
	0.2nm,0.3s,baz=61,slow=20,SNR=2.3						
WRA	**Warramunga Arr**	**16.47**	**135**	P	**Pn**	**18 26 07.3**	**-0.6**
	0.2nm,0.3s,baz=300,slow=13,SNR=10						
WRA				S	**Sn**	**18 29 03.0**	**-6.9**
	0.2nm,0.3s,baz=306,slow=24,SNR=5.9						
ASAR	**Alice Springs**	**18.89**	**144**	P	**Pn**	**18 26 39.6**	**+1.7**
	0.4nm,0.3s,baz=325,slow=11,SNR=52						
ASAR				S	**Sn**	**18 30 02.8**	**-5.8**
	0.0nm,0.3s,baz=317,slow=23,SNR=4.7						
CMAR	**Chiang Mai Arr**	**35.16**	**320**	P	**P**	**18 29 11.2**	**+0.9**
	0.6nm,0.8s,baz=142,slow=6.7,SNR=8.2						
SONM	**Songino Array**	**57.75**	**348**	P	**P**	**18 32 08.0**	**+0.9**
	1.0nm,0.7s,baz=159,slow=10,SNR=5.8						
MKAR	**Makanchi Array**	**65.41**	**331**	P	**P**	**18 32 58.9**	**+0.1**
	1.0nm,0.7s,baz=147,slow=6.1,SNR=7.8						

*REY **30** 18:42:10.4, 64.°65N×17.°41W, h2km*

*IDC **30** 18:42:11.7±0.8, 64.°56N×17.°61W, h0km, mb3.7/8, mb1 3.9/11, mb1mx3.6/51, mbtmp3.6/11, ML2.9/3, MS3.4/2, Ms1 3.3/2, ms1mx2.6/49, Error ellipse: s-maj=26.7km s-min=11.1km az=12.0*

*NEIC **30** 18:42:12.2±1.6, 64.°4N±0.°1×17.°6W±0.°1, h10km±4km, mb4.7/4, Error ellipse: s-maj=19.7km s-min=7.0km az=198.0*

ISC 30 18:42:12.3±0.5, 64.°65N±0.°03×17.°36W±0.°03, h10km, n47, σ2§37/54, mb3.8/10, Iceland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDYN	**Dyngjuhals**	**0.14**	**360**	P	**Pg**	**18 42 13.7**	**-1.9**
	baz=6.5						
IDYN				S	**Sg**	**18 42 16.2**	**-1.7**
	baz=6.5						
IVON	**Vonarskard**	**0.17**	**277**	P	**Pg**	**18 42 13.8**	**-2.3**
	baz=280						
IURH	**Urdarhals**	**0.19**	**29**	P	**Pg**	**18 42 14.9**	**-1.6**
	baz=32						
THOR	**Thorvaldshraun**	**0.41**	**46**	P	**Pg**	**18 42 18.6**	**-1.8**
	baz=47						
THOR				S	**Sb**	**18 42 25.3**	**-2.6**
	baz=47						
IKRE	**Kreppuhraun**	**0.44**	**72**	P	**Pg**	**18 42 19.1**	**-1.9**
	baz=72						
IKRE				S	**Sg**	**18 42 25.8**	**-1.1**
	baz=72						
IASK	**Askja**	**0.51**	**37**	P	**Pg**	**18 42 20.3**	**-1.8**
	baz=38						
IMKO	**Mokollar**	**0.55**	**53**	P	**Pg**	**18 42 20.9**	**-2.1**
	baz=54						
IMKO				S	**Sb**	**18 42 29.1**	**-2.8**
	baz=54						
IKSK	**Karasker**	**0.63**	**141**	S	**Sg**	**18 42 30.4**	**-2.3**
	baz=140						
IKSK				P	**Pg**	**18 42 22.1**	**-2.4**
	baz=140						
ISVA	**Svartarkot**	**0.69**	**4**	P	**Pg**	**18 42 22.9**	**-2.8**
	baz=5.2						
ISVA				S	**Sb**	**18 42 33.0**	**-3.0**
	baz=5.2						
IVSH	**V-Sauoahnukur**	**0.72**	**77**	P	**Pg**	**18 42 23.6**	**-2.6**
	baz=77						
IVSH				S	**Sg**	**18 42 34.1**	**-1.5**
	baz=77						
IVAT	**Vatnsfell**	**0.82**	**236**	P	**Pg**	**18 42 25.4**	**-2.7**
	baz=236						
IFAG	**Fagurholsmyri**	**0.84**	**158**	P	**Pg**	**18 42 25.4**	**-3.1**
	baz=157						
IFAG				S	**Sg**	**18 42 37.5**	**-1.9**
	baz=157						
IADA	**Aoalbol**	**0.85**	**63**	P	**Pg**	**18 42 25.7**	**-3.0**
	baz=64						
IADA				S	**Sg**	**18 42 38.3**	**-1.4**
	baz=64						
IMEL	**Melhnausar**	**0.97**	**18**	P	**Pg**	**18 42 27.2**	**-3.7**
	baz=18						
IMEL				S	**Sb**	**18 42 41.8**	**-2.3**
	baz=18						
IREN	**Reynihlio**	**1.02**	**11**	P	**Pg**	**18 42 28.2**	**-3.7**
	baz=12						
IREN				S	**Sg**	**18 42 41.8**	**-3.3**
	baz=12						
IGRS	**Grimsstaoir**	**1.12**	**27**	P	**Pg**	**18 42 30.2**	**-3.6**
	baz=28						
BORG	**Borgarnes**	**1.71**	**275**	Pg	**Pn**	**18 42 39.7**	**-2.4**
	20nm,0.3s,baz=92,slow=9.0,SNR=17						
BORG				Lg	Lg	18 43 01.3	
	5.4nm,0.3s,baz=56,slow=17,SNR=4.0						
BORG	**Borgarnes**	**1.71**	**275**		**Pn**	**18 42 41.3**	**-0.7**
SCO	**Scoresbysund**	**6.11**	**345**	Pn	Pn	18 43 46.4	+3.9
SCO	**Scoresbysund**	**6.11**	**345**	*e*	**Pn**	**18 43 41.5**	**-1.0**
	baz=168,slow=10						
SCO				*i* P	Pn	18 43 46.3	+3.7
SCO				*e*S	**Sn**	**18 44 58.6**	**+6.2**
SCO				IAML		18 45 06.1	
	comp=Z,1.4nm,0.5s						
EKA	**Eskdalemuir Ar**	**11.71**	**136**	Pn	**Pn**	**18 44 58.8**	**-0.4**
	baz=326,slow=13,SNR=7.1						
NOA	**NORSAR Array B**	**13.47**	**92**	Pn	**Pn**	**18 45 22.9**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=156,slow=8.6,SNR=1.9						
HFS	**Hagfors**	**14.99**	**93**	Pn	**P**	**18 45 50.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=265,slow=16,SNR=6.2						
FINES	**FINESS Array B**	**19.65**	**79**	P	**Pn**	**18 46 43.3**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=353,slow=4.8,SNR=2.3						
FINES	**FINESS Array B**	**19.65**	**79**	P	**Pn**	**18 46 42.5**	**+0.3**
CLL	**Collm**	**20.65**	**116**	*i* P	Pn	18 46 52.6	-1.4
	comp=Z,62nm,2.5s						
BRG	**Berggiesshubel**	**21.36**	**115**	*e*P	**P**	**18 46 58.5**	**-0.9**
	comp=Z,9.3nm,1.4s						
KHC	**Kasperske Hory**	**22.62**	**119**	*e*P	**P**	**18 47 16.3**	**+3.3**
KHC				*ex*	x	18 47 20.5	
DPC	**Dobruska-Polom**	**22.70**	**113**	*e*P	**P**	**18 47 14.3**	**+0.4**
GERES	**GERESS Array B**	**22.90**	**119**	P	**P**	**18 47 17.2**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=337,slow=5.8,SNR=5.4						
GERES	**GERESS Array B**	**22.90**	**119**	P	**P**	**18 47 14.4**	**-1.6**
KRLC	**Kraliky**	**23.10**	**113**	*e*P	P	18 47 27.2	+9.2
EUNU	**Eureka**	**23.71**	**336**	P	**P**	**18 47 25.9**	**+2.0**
ESDC	**Sonseca Array**	**26.22**	**156**	P	**P**	**18 47 48.5**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=349,slow=9.0,SNR=5.6						
AKASG	**Malin Array Be**	**27.78**	**98**	P	**P**	**18 48 02.8**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=274,slow=3.8,SNR=1.9						
ARU	**Arti**	**36.03**	**66**	LR	LR	19 03 56.6	
	comp=Z,57nm,19.5s,baz=188,slow=36						
KBZ	**Khabaz**	**39.06**	**93**	LR	LR	19 05 45.0	
	comp=Z,47nm,19.1s,baz=349,slow=36						
ILAR	**Eielson Array**	**45.73**	**333**	P	**P**	**18 50 35.6**	**+2.6**
	comp=Z,1.9nm,1.1s,baz=24,slow=6.9,SNR=8.8						
ILAR				PcP	**PcP**	**18 52 12.8**	**+2.3**
	comp=Z,0.6nm,1.0s,baz=330,slow=2.5,SNR=4.7						
ILAR	**Eielson Array**	**45.73**	**333**	P	P	18 50 36.5	+3.5
KKAR	**Karatay Array**	**51.23**	**70**	P	**P**	**18 51 15.0**	**-0.7**
MKAR	**Makanchi Array**	**52.68**	**58**	P	**P**	**18 51 26.4**	**0.0**
	comp=Z,1.2nm,1.0s,baz=289,slow=7.4,SNR=4.1						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**18 51 32.2**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=46,slow=6.4,SNR=7.8						
PDAR	**Pinedale Array**	**53.23**	**293**	P	**P**	**18 51 30.6**	**-0.2**
GAR	**Garm**	**54.60**	**73**	P	**P**	**18 51 42.0**	**+1.3**
GAR				IAmb	IAmb	18 51 45.2	
	comp=Z,9.2nm,1.0s						
MSTX	**Muleshoe**	**57.95**	**282**	P	**P**	**18 52 00.2**	**-4.5**
SONM	**Songino Array**	**59.61**	**40**	P	**P**	**18 52 17.8**	**+1.7**
	comp=Z,0.6nm,1.0s,baz=326,slow=7.0,SNR=2.1						
CMAR	**Chiang Mai Arr**	**84.09**	**59**	P	**P**	**18 54 44.1**	**+0.9**
	comp=Z,0.9nm,1.0s,baz=317,slow=6.5,SNR=6.5						

*IDC **30** 18:53:36.7±5.4, 6.°79S×129.°86E, h59km±56km, mb3.7/6, mb1 4.0/10, mb1mx3.7/30, mbtmp4.0/10, ML4.2/4, Error ellipse: s-maj=50.9km s-min=22.0km az=51.0*

*NEIC **30** 18:53:44.8±2.8, 7.°06S±0.°07×129.°63E±0.°07, h148km±12km, mb4.4/4, Error ellipse: s-maj=12.6km s-min=7.0km az=139.0*

*DJA **30** 18:53:45.7±0.4, 7.°S±3.°×13.°0E±.°, h172km±14km, M4.1/13, mB4.8/3, mb4.1/6, MLv4.2/13, Mw(mB)4.0/3*

ISC 30 18:53:43.9±0.6, 7.°21S±0.°05×129.°57E±0.°06, h139km, n37, σ2§89/44, mb3.8/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.88**	**114**	P	**Pn**	**18 54 20.3**	**+3.3**
SAUI				S	**Sn**	**18 54 44.4**	**+2.1**
SAUI	**Saumlaki**	**1.88**	**114**		**Pn**	**18 54 20.9**	**+4.0**
SAUI				Sn	**Sn**	**18 54 44.2**	**+1.9**
BNDI	**Bandanaira**	**2.69**	**7**	P	**Pn**	**18 54 29.7**	**+2.8**
MSAI	**Masohi**	**3.89**	**351**	P	**Pn**	**18 54 45.3**	**+2.9**
NLAI	**Namlea**	**4.65**	**328**	P	**Pn**	**18 54 55.7**	**+3.3**
FAKI	**Fak Fak**	**5.03**	**32**	P	**Pn**	**18 54 58.8**	**+1.2**
FAKI	**Fak Fak**	**5.03**	**32**	Pn	**Pn**	**18 54 56.8**	**-0.7**
FAKI				Sn	**Sn**	**18 55 51.6**	**-3.4**
MTN	**Manton Dam**	**5.81**	**165**	Pn	**Pn**	**18 55 10.4**	**+2.5**
SOEI	**Soe**	**5.82**	**244**	P	**Pn**	**18 55 11.8**	**+3.6**
	0.5nm746nm70nm,0.8s						
SOEI	**Soe**	**5.82**	**244**		**Pn**	**18 55 11.4**	**+3.2**
SANI	**Sanana**	**6.24**	**325**	P	**Pn**	**18 55 16.0**	**+2.2**
	0.0nm9.3nm,0.8s						
SWI	**Sorong**	**6.53**	**15**	P	**Pn**	**18 55 19.1**	**+1.5**
	0.2nm9.5nm,0.8s						
BATI	**Baumata**	**6.55**	**243**	P	**Pn**	**18 55 18.6**	**+0.7**
	6.8nm,0.3s,baz=133,slow=1.4,SNR=16						
BATI				S	**Sn**	**18 56 32.0**	**+0.6**
	10nm,0.3s,baz=72,slow=19,SNR=11						
BATI	**Baumata**	**6.55**	**243**	P	**Pn**	**18 55 20.9**	**+3.0**
	0.2nm13nm,0.6s						
KNRA	**Kununurra**	**8.45**	**185**	Pn	**Pn**	**18 55 44.7**	**+1.3**
FITZ	**Fitzroy Crossi**	**11.48**	**199**	P	**Pn**	**18 56 23.1**	**-0.6**
	1.0nm,0.3s,baz=34,slow=8.5,SNR=47						
FITZ				S	**Sn**	**18 58 23.5**	**-6.9**
	3.1nm,0.3s,baz=286,slow=23,SNR=9.9						
FITZ	**Fitzroy Crossi**	**11.48**	**199**		**Pn**	**18 56 23.5**	**-0.2**
WB0	**Warramunga Arr**	**13.33**	**160**	Pn	**Pn**	**18 56 47.1**	**-0.7**
WRAB	**Tennant Creek**	**13.47**	**160**	Pn	**Pn**	**18 56 48.9**	**-0.7**
WRA	**Warramunga Arr**	**13.48**	**160**	P	**Pn**	**18 56 47.8**	**-1.8**
	0.8nm,0.3s,baz=332,slow=14,SNR=39						
WRA				S	**Sn**	**18 59 12.1**	**-6.7**
	3.9nm,0.3s,baz=330,slow=22,SNR=12						
WRA	**Warramunga Arr**	**13.48**	**160**	Pn	**Pn**	**18 56 48.9**	**-0.8**
WB2	**Warramunga Arr**	**13.48**	**160**	Pn	**Pn**	**18 56 49.3**	**-0.4**
WR0	**Warramunga Arr**	**13.56**	**160**	Pn	**Pn**	**18 56 49.8**	**-0.9**
COEN	**Coen**	**14.96**	**118**	P	**P**	**18 57 11.6**	**+1.0**
AS31	**Alice Springs**	**16.88**	**166**	P	**Pn**	**18 57 33.5**	**+1.5**
ASAR	**Alice Springs**	**16.89**	**166**	P	**Pn**	**18 57 33.5**	**+1.5**
	1.0nm,0.3s,baz=337,slow=8.6,SNR=60						
ASAR				S	**Sn**	**19 00 32.5**	**-8.1**
	0.8nm,0.3s,baz=350,slow=26,SNR=7.4						
ASAR	**Alice Springs**	**16.89**	**166**		**Pn**	**18 57 35.0**	**+3.0**
PSA00	**Pilbara Seismi**	**17.09**	**212**	P	**Pn**	**18 57 37.0**	**+2.5**
PSA00				IAmb	IAmb	18 57 37.6	
	comp=Z,13nm,0.7s						
FORT	**Forrest**	**23.49**	**183**	P	**P**	**18 58 43.4**	**+2.2**
BBOO	**Buckleboo**	**26.18**	**168**	P	**P**	**18 59 07.8**	**+2.3**
BBOO				IAmb	IAmb	18 59 09.2	
	comp=Z,12nm,1.1s						
STKA	**Stephens Creek**	**26.99**	**157**	P	**P**	**18 59 16.4**	**+3.7**
	comp=Z,1.5nm,0.5s,baz=329,slow=12,SNR=4.5						
CMAR	**Chiang Mai Arr**	**39.54**	**311**	P	**P**	**19 01 00.7**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=133,slow=7.1,SNR=9.3						
MJAR	**Matsushiro Arr**	**44.27**	**10**	P	**P**	**19 01 37.6**	**-2.1**
	comp=Z,1.0nm,0.6s,baz=185,slow=9.1,SNR=2.7						
SONM	**Songino Array**	**58.50**	**342**	P	**P**	**19 03 25.4**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=168,slow=7.4,SNR=3.3						
MKAR	**Makanchi Array**	**68.17**	**327**	P	**P**	**19 04 29.9**	**+0.8**
	comp=Z,2.1nm,0.5s,baz=116,slow=8.2,SNR=52						
ABKAR	**Akbulak array**	**82.40**	**322**	P	**P**	**19 05 50.1**	**-0.3**
ILAR	**Eielson Array**	**93.72**	**25**	P	**P**	**19 06 43.0**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=257,slow=4.8,SNR=6.0						

*IDC **30** 19:04:52.2±3.4, 35.°97N×140.°58E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.2/38, mbtmp3.3/2, Error ellipse: s-maj=88.6km s-min=27.6km az=44.0*

*JMA **30** 19:04:52.1±0.1, 35.°75N×140.°74E, h13km±2km, M3.8 JMA Felt II J1.*

*NIED **30** 19:04:52.1, 35.°75N×140.°74E, h13km, MW3.5, Moment Tensor Solution. s3 Moment tensor: Scale 10^{14}Nm; M_{rr}-0.44; $M_{\theta\theta}$-1.57; $M_{\phi\phi}$2.01; $M_{r\theta}$0.79; $M_{\theta\phi}$-0.23; $M_{\phi r}$1.04; Fault plane solution: $M_0$2.24000×10^{14} NP1: ϕ_s218.00000°, δ83.00000°, λ-38.00000°. NP2: ϕ_s313.00000°, δ53.00000°, λ-172.00000°.*

**ISC 30 19:04:52.0±1.0, 35.°79N±0.°04×140.°76E±0.°05, h12km±7km, n21, σ1§40/18, 4C-1D, Near east

WRA	**Warramunga Arr**	**77.42**	**112**	P	P	19 54 53.5 +0.3
	0.7nm,0.9s,baz=296,slow=4.8,SNR=3.6					
ASAR	**Alice Springs**	**77.74**	**116**	P	P	19 54 54.9 -0.1
	0.7nm,0.9s,baz=294,slow=4.2,SNR=5.8					

IDC 30 19:44:53.7±3.6, 1.60N×93.32E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.1/42, mbtmp3.2/4, MS2.8/3, Ms1 2.8/3, ms1mx2.7/18, Error ellipse: s-maj=108.0km s-min=34.3km az=64.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PALK	**Pallekele**	**13.78**	**295**	LR		LR		19 52 00.8	
	comp=Z,54nm,21.1s,baz=214,slow=31								
CMAR	**Chiang Mai Arr**	**17.64**	**18**	P		Pn		19 49 00.9	-0.1
	baz=217,slow=12,SNR=6.6								
CMAR				LR		LR		19 56 17.3	
	comp=Z,20nm,18.0s,baz=170,slow=39								
WRA	**Warramunga Arr**	**45.57**	**120**	P		P		19 53 15.7	-0.2
	0.2nm,0.7s,baz=299,slow=8.6,SNR=1.8								
MKAR	**Makanchi Array**	**46.03**	**349**	P		P		19 53 19.4	+0.4
	0.4nm,0.8s,baz=170,slow=9.6,SNR=1.9								
MKAR				LR		LR		20 13 46.2	
	comp=Z,10nm,21.6s,baz=160,slow=38								
SONM	**Songino Array**	**47.43**	**12**	P		P		19 53 29.6	-0.5
	0.2nm,0.6s,baz=193,slow=5.9,SNR=2.4								

*ISK **30** 19:45:07.9, 37.37N×26.82E, h11km, ML2.8/17*
*ATH **30** 19:45:08.6, 37.42N×26.77E, h19km±2km, ML2.7/6, Error ellipse: s-maj=2.0km s-min=1.0km az=60.0*
ISC 30 19:45:07.5±1.3, 37.41N±0.02×26.84E±0.02, h11km±12km, n33, σ0s68/42, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.30**	**359**	P		**Pb**		**19 45 15.1**	**+0.2**
SMG				S		**Sb**		**19 45 19.7**	**-0.2**
SMG				AML		AML		19 45 22.2	
	comp=N,2789μm,0.3s								
SMG				AML		AML		19 45 24.7	
	comp=E,2578μm,0.3s								
GCAM	**G?zelcaml?**	**0.43**	**47**	PG		**Pb**		**19 45 17.8**	**+0.8**
GCAM				SG		**Sb**		**19 45 25.1**	**+1.7**
YKAV	**Yalikavak-Bodr**	**0.45**	**129**	PG		**Pb**		**19 45 17.2**	**-0.2**
YKAV				SG		**Sb**		**19 45 23.8**	**-0.3**
BODT	**Bodrum**	**0.51**	**133**	PG		**Pb**		**19 45 17.9**	**-0.5**
BODT				SG		**Sb**		**19 45 25.6**	**-0.2**
MLSB	**Milas**	**0.75**	**98**	PG		**Pn**		**19 45 23.3**	**-0.7**
NISR	**Nisiros**	**0.83**	**164**	P		**Pn**		**19 45 25.7**	**+0.7**
NISR				S		**Sn**		**19 45 36.9**	**-0.3**
NISR				AML		AML		19 45 43.0	
	comp=E,470μm,0.4s								
NISR				AML		AML		19 45 44.5	
	comp=N,342μm,0.7s								
NIS1	**Nisyros lsl.**	**0.85**	**161**	P		**Pn**		**19 45 25.5**	**+0.2**
NIS1				S		**Sn**		**19 45 37.4**	**-0.3**
NIS1				AML		AML		19 45 47.8	
	comp=N,1080μm,0.4s								
NIS1				AML		AML		19 45 50.3	
	comp=E,1044μm,0.5s								
NIS1	**Nisyros lsl.**	**0.85**	**161**	PG		**Pb**		**19 45 24.2**	**0.0**
DATC	**Datca-Mugla**	**0.92**	**134**	PG		**Pn**		**19 45 25.9**	**-0.4**
AMGA	**Amorgos Island**	**0.95**	**233**	P		**Pb**		**19 45 26.0**	**+0.1**
AMGA				S		**Sb**		**19 45 38.3**	**-0.2**
AMGA				AML		AML		19 45 40.7	
	comp=N,1129μm,0.7s								
AMGA				AML		AML		19 45 40.9	
	comp=E,1907μm,0.5s								
URLA	**Izmir**	**0.97**	**348**	PG		**Pn**		**19 45 27.6**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**0.99**	**57**	PG		**Pn**		**19 45 27.7**	**+0.3**
APE	**Apeiranthos**	**1.10**	**252**	P		**Pn**		**19 45 28.6**	**-0.2**
APE				S		**Sb**		**19 45 43.1**	**+0.3**
APE				AML		AML		19 45 45.1	
	comp=N,763μm,0.5s								
APE				AML		AML		19 45 46.0	
	comp=E,662μm,0.3s								
APE	**Apeiranthos**	**1.10**	**252**	PG		**Pn**		**19 45 28.9**	**+0.1**
YER	**Yerkesik**	**1.18**	**103**	PN		**Pn**		**19 45 31.1**	**+1.1**
MRSB	**Marmaris-Mugla**	**1.29**	**122**	PN		**Pg**		**19 45 32.4**	**+0.2**
TURN	**Turunc**	**1.29**	**119**	PN		**Pg**		**19 45 32.2**	**0.0**
TNSA	**Tinos**	**1.34**	**276**	P		**Pg**		**19 45 33.0**	**-0.3**
ANAF	**Anafi Island**	**1.35**	**220**	P		**Pg**		**19 45 33.4**	**-0.1**
ANAF				S		**Sg**		**19 45 52.0**	**+0.9**
ANAF				AML		AML		19 45 53.9	
	comp=E,1204μm,0.3s								
ANAF				AML		AML		19 45 54.6	
	comp=N,1857μm,0.4s								
SNT5	**Nea Kammeni, S**	**1.53**	**230**	P		**Pg**		**19 45 37.4**	**+0.6**
GOMA	**Golmarmara-Man**	**1.55**	**33**	PN		**Pg**		**19 45 36.8**	**-0.4**
THR6	**Thira Island,**	**1.56**	**228**	P		**Pg**		**19 45 37.7**	**+0.2**
DALY	**Dalyan (Mula)**	**1.56**	**112**	PN		**Pg**		**19 45 36.5**	**-1.0**
ARG	**Arkhangelos**	**1.57**	**139**	P		**Pg**		**19 45 37.5**	**-0.2**
ARG	**Arkhangelos**	**1.57**	**139**	PN		**Pb**		**19 45 36.4**	**-0.2**
DKL	**Dikili**	**1.66**	**2**	PN		**Pg**		**19 45 38.4**	**-0.9**
KULA	**Kula-Manisa**	**1.81**	**52**	PN		**Pb**		**19 45 40.4**	**-0.3**
KARP	**Karpathos**	**1.88**	**172**	PN		**Pn**		**19 45 40.3**	**+0.8**
FETY	**Fethiye**	**1.95**	**113**	PN		**Pb**		**19 45 42.1**	**-0.9**
SIGR	**SIGRI**	**1.96**	**337**	P		**Pb**		**19 45 42.1**	**-1.0**
KARY	**Karystos**	**2.01**	**289**	P		**Pb**		**19 45 43.0**	**-0.9**
MHLA	**Plaka, Milos I**	**2.04**	**252**	P		**Pb**		**19 45 43.3**	**-1.3**
DION	**Dionisos Attik**	**2.40**	**287**	P		**Pn**		**19 45 47.9**	**+1.3**

*IDC **30** 19:45:30.6±0.9, 4.00N×71.34W, h0km, mb3.5/5, mb1 4.0/8, mb1mx3.7/30, mbtmp3.7/8, ML2.6/2, MS3.1/3, Ms1 3.2/3, ms1mx2.6/30, Error ellipse: s-maj=21.7km s-min=17.1km az=41.0*
*RSNC **30** 19:45:34.7±0.8, 3.91N×71.53W, h0km±4km, ML3.6, Mw3.8*
ISC 30 19:45:32.7±0.8, 4.03N±0.03×71.41W±0.04, h10km, n46, σ2s38/78, mb3.5/4, 1D, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.74**	**283**	*eP*		**Pg**		**19 45 46.6**	**-0.5**
PTGC				*eS*		**Sg**		**19 45 56.2**	**-0.6**
PTGC				*i*				19 46 00.6	
	comp=Z,1μm,0.3s								
GUVC	**San Jose del G**	**1.91**	**220**	*eP*		**Pn**		**19 46 04.5**	**-0.9**
GUVC				*eS*		**Sn**		**19 46 27.9**	**-1.6**
GUVC				*i*				19 46 31.2	
	comp=Z,598nm,0.3s								
VILC	**Villavicencio,**	**2.28**	**272**	*eP*		**Pn**		**19 46 11.4**	**+0.8**
VILC				*eS*		**Sn**		**19 46 39.6**	**+0.8**
VILC				*i*				19 46 47.2	
	comp=Z,816nm,0.3s								
CHIC	**Chingaza**	**2.39**	**285**	*eP*		**Pn**		**19 46 13.3**	**+1.0**
CHIC				*eS*		**Sn**		**19 46 44.1**	**+2.1**
CHIC				*i*				19 46 54.4	
	comp=Z,417nm,0.5s								
TAMC	**Tame, Arauca**	**2.42**	**351**	*eP*		**Pb**		**19 46 15.8**	**-0.7**
TAMC				*eS*		**Sb**		**19 46 48.2**	**+1.7**
TAMC				*i*				19 46 59.4	
	comp=Z,623nm,0.5s								
RUSC	**La Rusia**	**2.49**	**318**	*eP*		**Pn**		**19 46 16.2**	**+2.4**
RUSC				*eS*		**Sb**		**19 46 48.2**	**-0.6**
RUSC				*i*				19 47 07.2	
	comp=Z,316nm,0.5s								
ROSC	**El Rosal**	**3.01**	**286**	Pn		**Pn**		**19 46 21.3**	**+0.4**
	comp=Z,13nm,0.3s,baz=119,slow=18,SNR=13								
ROSC				Lg		Lg		19 47 11.3	
	comp=Z,32nm,0.3s,baz=195,slow=21,SNR=4.5								
MACC	**Macarena, Meta**	**3.07**	**233**	*eP*		**Pn**		**19 46 21.3**	**0.0**
MACC				*eS*		**Sn**		**19 47 00.8**	**+2.6**
MACC				*i*				19 47 12.7	
	comp=Z,203nm,0.7s								
BARC	**Barichara**	**3.10**	**325**	*eP*		**Pn**		**19 46 24.4**	**+2.5**
BARC				*i*				19 47 17.9	
	comp=Z,274nm,0.3s								
SPBC	**San Pablo de B**	**3.11**	**301**	*eP*		**Pn**		**19 46 22.7**	**+0.8**
SPBC				*eS*		**Sn**		**19 46 56.4**	**-2.8**
SPBC				*i*				19 47 18.1	
	comp=Z,247nm,0.4s								
PAMC	**Pamplona, Colo**	**3.53**	**339**	*eP*		**Pn**		**19 46 30.6**	**+2.5**
PAMC				*eS*		**Sn**		**19 47 10.6**	**+0.4**
PAMC				*i*				19 47 35.4	
	comp=Z,227nm,0.5s								
NORC	**Norcasia**	**3.77**	**294**	*eP*		**Pn**		**19 46 32.6**	**+1.6**
NORC				*eS*		**Sn**		**19 47 11.2**	**-4.4**
NORC				*i*				19 47 35.3	
	comp=Z,68nm,0.4s								

BRRC	**Barranca, Sant**	**3.82**	**323**	*eP*	**Pn**	**19 46 32.2**	**+0.6**
BRRC				*eS*	**Sn**	**19 47 18.9**	**+2.2**
BRRC				*i*		19 47 41.1	
	comp=Z,76nm,0.3s						
ORTC	**Ortega, Tolima**	**3.83**	**268**	*eP*	**Pn**	**19 46 32.6**	**+0.8**
ORTC				*eS*	**Sn**	**19 47 19.8**	**+2.8**
ORTC				*i*		19 47 44.5	
	comp=Z,156nm,0.5s						
PTBC	**PUERTO BERRIO,**	**3.93**	**310**	*eP*	**Pn**	**19 46 34.4**	**+1.2**
PTBC				*eS*	**Sn**	**19 47 16.3**	**-3.1**
PTBC				*i*		19 47 36.7	
	comp=Z,91nm,0.5s						
TOLC	**Tolima**	**3.94**	**278**	*eP*	**Pn**	**19 46 34.6**	**+1.0**
TOLC				*eS*	**Sn**	**19 47 24.2**	**+4.1**
TOLC				*i*		19 47 44.7	
	comp=Z,373nm,0.6s						
ANIL	**Santa Ana**	**4.01**	**277**	*eP*	**Pn**	**19 46 35.3**	**+0.8**
ANIL				*eS*	**Sb**	**19 47 30.6**	**-1.9**
ANIL				*eS*	**Sg**	**19 47 35.6**	**-6.1**
ANIL				*i*		19 47 45.3	
	comp=Z,37nm,0.4s						
RREF	**El Recreo**	**4.02**	**283**	*eP*	**Pn**	**19 46 32.7**	**-2.2**
RREF				*eS*	**Sn**	**19 47 28.1**	**+5.6**
RREF				*i*		19 47 50.5	
	comp=Z,114nm,0.6s						
GUY2C	**Guyana, Caldas**	**4.12**	**287**	*eP*	**Pn**	**19 46 37.6**	**+1.4**
GUY2C				*eS*	**Sn**	**19 47 25.2**	**+0.5**
GUY2C				*i*		19 47 48.6	
	comp=Z,86nm,0.7s						
BETC	**Betania**	**4.24**	**252**	*eP*	**Pn**	**19 46 35.6**	**-1.9**
BETC				*eS*	**Sb**	**19 47 41.9**	**+3.0**
GARC	**Garzon, Huila**	**4.47**	**246**	*eP*	**Pn**	**19 46 41.8**	**+1.0**
GARC				*eS*	**Sb**	**19 47 42.5**	**-3.1**
GARC				*i*		19 47 51.8	
	comp=Z,232nm,0.2s						
OCAC	**Ocana**	**4.60**	**336**	*eP*	**Pn**	**19 46 44.9**	**+2.4**
OCAC				*eS*	**Sn**	**19 47 39.7**	**+3.7**
OCAC				*i*		19 48 06.6	
	comp=Z,131nm,0.5s						
HELC	**Santa Helena**	**4.63**	**298**	*eP*	**Pn**	**19 46 45.3**	**+2.1**
HELC				*eS*	**Sn**	**19 47 40.6**	**+3.4**
HELC				*i*		19 48 03.5	
	comp=Z,41nm,0.5s						
MARP	**Paez Belalcaza**	**4.69**	**256**	*eP*	**Pn**	**19 46 44.1**	**+0.2**
MARP				*eS*	**Sb**	**19 47 55.2**	**+3.3**
MARP				*i*		19 48 02.3	
	comp=Z,47nm,0.7s						
ZARC	**Zaragoza, Cauc**	**4.86**	**315**	*eP*	**Pn**	**19 46 48.3**	**+2.4**
ZARC				*eS*	**Sn**	**19 47 41.3**	**-1.0**
ZARC				*i*		19 47 52.3	
	comp=Z,65nm,0.4s						
SDV	**Santo Domingo**	**4.89**	**9**	Pn	**Pn**	**19 46 46.8**	**+0.3**
	comp=Z,4.1nm,0.3s,baz=154,slow=1.9,SNR=6.9						
SDV				Sn	**Sn**	**19 47 46.8**	**+3.5**
	comp=Z,23nm,0.3s,baz=77,slow=21,SNR=4.9						
SDV				Lg	Lg	19 48 10.9	
	comp=Z,44nm,0.3s,baz=61,slow=19,SNR=11						
SDV				LR	LR	19 49 18.3	
	comp=Z,107nm,19.7s,baz=257,slow=46						
SDV	**Santo Domingo**	**4.89**	**9**	*eP*	**Pn**	**19 46 46.5**	**0.0**
SDV				*eS*	**Sn**	**19 47 43.7**	**+0.4**
SDV				*i*		19 48 24.0	
	comp=Z,163nm,0.6s						
YOTC	**Yotoco, Valle**	**4.93**	**270**	*eP*	**Pn**	**19 46 46.8**	**-0.2**
YOTC				*eS*	**Sn**	**19 47 43.1**	**-1.0**
YOTC				*i*		19 48 11.7	
	comp=Z,34nm,0.5s						
PLMC	**San Jos del P**	**4.94**	**280**	*eP*	**Pn**	**19 46 50.2**	**+3.1**
PLMC				*eS*	**Sb**	**19 47 59.4**	**+0.5**
PLMC				*i*		19 48 16.6	
	comp=Z,20nm,0.7s						
PCON	**Cinco Dias**	**5.26**	**251**	*eP*	Pn	19 46 57.8	+5.8
PCON				*eS*	**Sb**	**19 48 10.7**	**+2.1**
PCON				*i*		19 48 28.5	
	comp=Z,92nm,0.6s						
POPC	**Popayan, Colom**	**5.46**	**254**	*eP*	**Pn**	**19 46 53.4**	**-1.0**
POPC				*eS*	**Sb**	**19 48 16.1**	**+1.9**
POPC				*i*		19 48 33.2	
	comp=Z,13nm,0.7s						
SOTA	**Rioblanco**	**5.52**	**250**	*eP*	**Pn**	**19 46 57.7**	**+2.2**
SOTA				*eS*	**Sb**	**19 48 21.9**	**+5.7**
UREC	**San Jos de Ur**	**5.53**	**312**	*eP*	**Pn**	**19 46 54.8**	**-0.3**
UREC				*i*		19 48 05.9	
	comp=Z,28nm,0.3s						
BBAC	**Balboa, Cauca**	**6.16**	**251**	*eP*	Pn	19 47 11.1	+7.0
BBAC				*eS*	**Sb**	**19 48 40.3**	**+6.0**
BBAC				*i*		19 48 47.5	
	comp=Z,11nm,0.5s						
PUAC	**Puerto Asis, P**	**6.21**	**236**	*eS*	**Sb**	**19 48 34.3**	**-1.1**
MOTC	**Monteria, Cord**	**6.34**	**318**	*eP*	**Pn**	**19 47 06.6**	**+0.3**
MOTC				*eS*	**Sn**	**19 48 18.7**	**-0.1**
MOTC				*i*		19 48 55.0	
	comp=Z,12nm,0.6s						
GCUF	**Volcan Galeras**	**6.55**	**245**	*eP*	Pb	19 47 20.2	-7.0
GCUF				*eS*	**Sb**	**19 48 51.1**	**+5.3**
GCUF				*i*		19 49 07.5	
	comp=Z,24nm,0.7s						
SJCC	**San Jacinto, C**	**6.93**	**328**	*eP*	**Pn**	**19 47 15.0**	**+0.5**
SJCC				*eS*	**Sn**	**19 48 29.5**	**-3.9**
SJCC				*i*		19 48 44.6	
	comp=Z,14nm,0.5s						
PCRV	**Puerto La Cruz**	**9.08**	**47**	Pn	**Pn**	**19 47 44.7**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=216,slow=14,SNR=7.7						
LPAZ	**La Paz**	**20.44**	**171**	P	**P**	**19 50 11.3**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=348,slow=11,SNR=12						
LPAZ				Lg	Lg	19 56 22.3	
	comp=Z,1.9nm,0.9s,baz=299,slow=24,SNR=2.7						
LPAZ				LR	LR	19 58 23.4	
	comp=Z,64nm,19.5s,baz=324,slow=38						
SIV	**San Ignacio**	**22.36**	**153**	P	**P**	**19 50 31.2**	**0.0**
	comp=Z,0.5nm,0.5s,baz=339,slow=7.7,SNR=4.2						
SIV				Lg	Lg	19 57 09.8	
	comp=Z,2.3nm,1.0s,baz=275,slow=18,SNR=3.6						
SIV				LR	LR	19 59 19.7	
	comp=Z,74nm,18.3s,baz=248,slow=37						
TXAR	**Lajitas Array**	**39.59**	**313**	P	**P**	**19 53 04.5**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=124,slow=9.5,SNR=7.2						
YKA	**Yellowknife Ar**	**66.46**	**340**	P	**P**	**19 56 21.0**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=44,slow=51,SNR=2.5						
GERES	**GERESS Array B**	**83.77**	**41**	P	**P**	**19 58 01.8**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=279,slow=2.6,SNR=5.5						
ASAR	**Alice Springs**	**148.72**	**229**	PKPbc	**PKPdf**	**20 05 18.6**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=115,slow=3.7,SNR=5.3						
WRA	**Warramunga Arr**	**150.34**	**236**	PKPbc	**PKPbc**	**20 05 24.4**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=115,slow=2.1,SNR=4.5						

IDC 30 19:48:20.8±44.0, 15.13S×170.88W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/37, mbtmp4.0/3, Error ellipse: s-maj=863.2km s-min=187.1km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**46.28**	**240**	P		P		19 56 48.5	0.0
	0.6nm,0.4s,baz=85,slow=12,SNR=5.3								
WRA	**Warramunga Arr**	**52.27**	**256**	P		P		19 57 34.1	-0.4
	0.6nm,0.5s,baz=94,slow=7.0,SNR=13								
ASAR	**Alice Springs**	**52.51**	**252**	P		P		19 57 36.3	+0.1
	4.3nm,0.5s,baz=89,slow=8.0,SNR=76								

IDC 30 19:50:41.2±1.3, 28.30N×103.95E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.4/43, mbtmp3.5/5, ML3.0/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/38, Error ellipse: s-maj=61.1km s-min=23.7km az=62.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.82**	**206**	Pn		Pn		19 53 17.0	-0.4
	0.0nm,0.3s,baz=17,slow=13,SNR=10								
KSRS	**Korea Array**	**22.06**	**59**	LR		LR		20 05 45.5	
	0.3nm,19.1s,baz=125,slow=41								
MKAR	**Makanchi Array**	**25.08**	**323**	P		P		19 56 08.0	+0.7
	0.3nm,0.4s,baz=126,slow=12,SNR=8.0								
WRA	**Warramunga Arr**	**56.24**	**145**	P		P		20 00 23.1	-0.3
	0.2nm,0.5s,baz=335,slow=8.2,SNR=2.7								
ASAR	**Alice Springs**	**59.18**	**148**	P		P		20 00 44.5	+0.4
	0.3nm,0.7s,baz=326,slow=7.1,SNR=3.0								
FINES	**FINESS Array B**	**59.83**	**327**	P		P		20 00 47.2	-0.9
	2.4nm,0.9s,baz=83,slow=11,SNR=2.8								

*UPA **30** 20:13:30.4±2.4, 9.91N×78.35W, h36km±13km, MW4.2*
ISC 30 20:13:28.7±1.8, 9.93N±0.07×78.34W±0.03, h23km±16km, n29, σ1s18/53, 2C-4D, Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CNTA3	**Canitas, Panam**	**0.89**	**218**	*i*	*P*		Pn	20 13 44.0	-1.8
CNTA3					*eS*		**Sb**	**20 13 55.5**	**-1.4**
CHPO	**Chepo, Panama**	**1.08**	**225**	*i*	*P*		**Pn**	**20 13 48.2**	**-0.2**
UPD2	**Meteti**	**1.41**	**167**	*eP*			**Pn**	**20 13 53.5**	**+0.4**
UPD2				*eS*			**Sn**	**20 14 11.3**	**+0.4**
UPD2				*i*				20 14 17.9	
	comp=Z,210nm,0.4s								
UPD2	**Meteti**	**1.41**	**167**	*i*	*P*		**Pn**	**20 13 53.4**	**+0.4**
UPD2				*eS*			**Sb**	**20 14 12.6**	**+0.6**
UPA	**Univ. de Panam**	**1.51**	**231**	*eP*			**Pn**	**20 13 54.2**	**-0.2**
UPA				*eS*			**Sn**	**20 14 11.6**	**-1.7**
UPA				*i*				20 14 12.8	
	comp=Z,121nm,0.3s								
UPA	**Univ. de Panam**	**1.51**	**231**	*eP*			**Pn**	**20 13 54.3**	**0.0**
UPA				*eS*			**Sn**	**20 14 12.0**	**-1.3**
CAP2	**Capurgana**	**1.60**	**143**	*eP*			**Pn**	**20 13 56.0**	**+0.4**
CAP2				*eS*			**Sn**	**20 14 17.0**	**+1.5**
ARRA3	**Arraijan, Pana**	**1.61**	**234**	*eP*			**Pn**	**20 13 56.5**	**+0.7**
ARRA3				*eS*			**Sn**	**20 14 16.3**	**+0.3**
CAPC	**Capurgana**	**1.61**	**143**	*eP*			**Pn**	**20 13 55.9**	**+0.1**
CAPC				*eS*			**Sn**	**20 14 16.2**	**+0.2**
CAPC				*i*				20 14 19.6	
	comp=Z,188nm,0.5s								
MLIR	**Monte Lirio**	**1.64**	**245**	*eP*			**Pb**	**20 13 58.3**	**0.0**
MLIR				*eS*			**Sn**	**20 14 15.1**	**-1.5**
CHOR3	**La Chorrera**	**1.74**	**234**	*eP*			**Pn**	**20 13 59.0**	**+1.5**
CHOR3				*eS*			**Sn**	**20 14 20.1**	**+1.0**
ZANG	**Zanguenga, Cho**	**1.79**	**237**	*eP*			**Pn**	**20 13 59.8**	**+1.6**
ZANG				*eS*			**Sn**	**20 14 21.5**	**+1.2**
VTON	**El Valle, Cocl**	**2.19**	**233**	*eP*			**Pn**	**20 14 05.8**	**+2.0**
VTON				*eS*			**Sn**	**20 14 29.9**	**-0.3**
LCBC	**Los crdobas,**	**2.22**	**119**	*eP*			**Pn**	**20 14 05.4**	**+1.2**
LCBC				*eS*			**Sn**	**20 14 32.4**	**+1.6**
LCBC				*i*				20 14 37.5	
	comp=Z,148nm,0.7s								
PNME	**Penonome**	**2.43**	**234**	*eP*			**Pn**	**20 14 07.9**	**+0.8**
PNME				*eS*			**Sn**	**20 14 34.9**	**-1.2**
PNME				*i*				20 14 39.5	
	comp=Z,123nm,0.3s								
PNME	**Penonome**	**2.43**	**234**	*eP*			**Pn**	**20 14 08.4**	**+1.4**
PNME				*eS*			**Sn**	**20 14 36.2**	**+0.1**
PTAC	**Punta Ardita,**	**2.82**	**169**	*eP*			**Pn**	**20 14 12.8**	**+0.5**
PTAC				*i*				20 14 22.2	
	comp=Z,63nm,0.3s								
PTAC				*eS*			**Sn**	**20 14 45.8**	**+0.2**
AZU	**Azuero**	**2.86**	**222**	*i*	*P*		**Pn**	**20 14 13.1**	**+0.2**
AZU				*i*				20 14 13.9	
	comp=Z,143nm,0.4s								
AZU				*eS*			**Sn**	**20 14 44.6**	**-2.1**
AZU	**Azuero**	**2.86**	**222**	*i*	*P*		**Pn**	**20 14 13.2**	**+0.2**
AZU				*eS*			**Sn**	**20 14 45.0**	**-1.6**
MOTC	**Monteria, Cord**	**2.88**	**113**	*eP*			**Pn**	**20 14 13.4**	**+0.2**
MOTC				*i*				20 14 14.1	
	comp=Z,24nm,0.4s								
MOTC				*eS*			**Sn**	**20 14 46.4**	**-0.8**
MONA	**Monteria**	**2.88**	**113**	*eP*			**Pn**	**20 14 13.5**	**+0.1**
MONA				*eS*			**Sn**	**20 14 46.6**	**-0.7**
OCU3	**Ocu, Herrera**	**3.11**	**231**	*eP*			**Pn**	**20 14 18.7**	**+2.3**
OCU3				*eS*			**Sn**	**20 14 51.8**	**-1.2**
SJCC	**San Jacinto, C**	**3.11**	**90**	*i*	*P*		**Pn**	**20 14 17.3**	**+0.8**
SJCC				*eS*			**Sn**	**20 14 51.8**	**-1.2**
UREC	**San Jos de Ur**	**3.52**	**128**	*eP*			**Pn**	**20 14 22.9**	**+0.9**
UREC				*eS*			**Sn**	**20 15 01.3**	**-1.7**
DBBC	**Dabeiba**	**3.58**	**144**	*eP*			**Pn**	**20 14 24.2**	**+1.2**
DBBC				*eS*			**Sn**	**20 15 04.5**	**-0.1**
DBBC				*i*				20 15 07.7	
	comp=Z,94nm,0.8s								
ZARC	**Zaragoza, Cauc**	**4.21**	**125**	*eP*			**Pn**	**20 14 31.1**	**-0.4**
ZARC				*eS*			**Sn**	**20 15 17.0**	**-3.0**
ZARC				*i*				20 15 22.0	
	comp=Z,92nm,0.4s								
CBOC	**Ciudad Bolivar**	**4.65**	**150**	*eP*			**Pn**	**20 14 39.2**	**+1.5**
DRK0	**Durika**	**4.88**	**263**	*eP*			**Pn**	**20 14 41.9**	**+0.9**
DRK0				*eS*			Sn	20 15 30.8	-6.1
NORC	**Norcasia**	**5.54**	**141**	*eS*			**Sn**	**20 15 51.9**	**-0.9**
NORC				*i*				20 15 57.7	
	comp=Z,7.0nm,0.5s								

*DRS **30** 20:30:50.4±0.0, 43.18N×46.12E, h13km*
*NORS **30** 20:30:50.4±0.0, 43.07N×46.25E, h25km, MPVA3.5*
*MOS **30** 20:30:50.1±0.0, 43.14N×46.23E, h6km, MPVA3.5*
**ISC 30 20:30:51.6±1.1, 43.14N±0.04×46.22E±0.02, h14km±10km, n29, σ1

	1.5nm,0.8s,baz=97,slow=7.8,SNR=18						
ASAR				ScP	**ScP**	**21 03 03.2**	**+2.9**
	0.4nm,0.6s,baz=107,slow=4.2,SNR=6.3						
ASAR				S	**S**	**21 04 17.4**	**-1.5**
	0.8nm,0.9s,baz=95,slow=16,SNR=7.5						
WRA	**Warramunga Arr**	**43.63**	**263**	P	**P**	**20 58 34.3**	**+0.1**
	0.7nm,0.5s,baz=92,slow=5.9,SNR=21						
MJAR	**Matsushiro Arr**	**70.16**	**324**	P	**P**	**21 01 32.4**	**-1.9**
	0.8nm,0.6s,baz=153,slow=5.7,SNR=2.7						
TXAR	**Lajitas Array**	**88.14**	**58**	P	**P**	**21 03 09.9**	**+0.9**
	0.5nm,0.8s,baz=223,slow=3.7,SNR=5.7						
ILAR	**Eielson Array**	**89.10**	**13**	P	**P**	**21 03 11.7**	**-0.8**
	0.7nm,0.7s,baz=220,slow=5.5,SNR=12						

IDC 30 20:59:23.2±38.0, 2°.43S×67°.83E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.5/63, mbtmp3.8/3, MS3.4/4, Ms1 3.3/4, ms1mx2.9/46, Error ellipse: s-maj=907.5km s-min=55.3km az=98.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**16.06**	**53**	LR	LR	21 07 50.6	
	comp=Z,113nm,20.1s,baz=327,slow=32						
PSI	**Prapat**	**31.52**	**81**	LR	LR	21 17 04.4	
	comp=Z,58nm,20.7s,baz=266,slow=34						
CMAR	**Chiang Mai Arr**	**37.00**	**55**	P	P	21 06 34.8	-0.1
	0.4nm,0.3s,baz=250,slow=11,SNR=5.2						
BOSA	**Boshof**	**48.17**	**233**	LR	LR	21 27 00.7	
	comp=Z,20nm,18.1s,baz=54,slow=34						
WRA	**Warramunga Arr**	**67.12**	**111**	P	P	21 10 19.2	-0.1
	1.0nm,0.7s,baz=280,slow=5.9,SNR=9.3						
ASAR	**Alice Springs**	**67.15**	**115**	P	P	21 10 19.7	+0.1
	0.8nm,0.8s,baz=282,slow=6.2,SNR=9.2						
KRVT	**Keravat (AS076**	**84.04**	**94**	LR	LR	21 51 04.9	
	comp=Z,46nm,18.5s,baz=32,slow=37						

*IDC **30** 21:02:19.7±0.6, 36°.16N×68°.20E, h0km, mb4.2/24, mb1 4.3/29, mb1mx4.2/64, mbtmp4.3/29, ML4.2/4, MS3.6/30, Ms1 3.6/30, ms1mx3.5/58, Error ellipse: s-maj=12.8km s-min=11.4km az=4.0*

*MOS **30** 21:02:22.7±1.1, 36°.45N×68°.13E, h27km, mb4.7/16, Error ellipse: s-maj=7.0km s-min=3.7km az=70.1*

*NNC **30** 21:02:23.4±1.5, 36°.68N×67°.89E, h0km, mb5.0, mpv4.8, Error ellipse: s-maj=15.9km s-min=7.5km az=160.0*

*BJI **30** 21:02:24.3±0.0, 36°.51N×68°.54E, h15km, mB4.8/30, mb4.6/35, Ms4.3/23, Ms7 4.0/22*

*NEIC **30** 21:02:24.3±1.9, 36°.41N±0°.05×67°.97E±0°.07, h26km±4km, mb4.6/24, Error ellipse: s-maj=8.2km s-min=7.4km az=64.0*

ISC 30 21:02:24.4±0.3, 36°37N±0°.04×68°02E±0°03, h30km, n267, σ1ŝ77/270, mb4.6/70, MS3.7/33, 21C-17D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.01**	**155**	PN	**Pn**	**21 02 58.9**	**+2.4**
KBL	**Kabul**	**2.01**	**155**		**Pn**	**21 02 58.9**	**+2.4**
KBL				Sn	**Sn**	**21 03 22.6**	**+1.9**
CHGR	**Chuyangaron**	**2.46**	**21**		**Pn**	**21 03 03.8**	**+1.3**
GAR	**Garm**	**3.20**	**34**		**Pn**	**21 03 14.0**	**+1.3**
CEP	**Cherat**	**4.08**	**127**	⇑P	**Pn**	**21 03 26.9**	**+2.0**
CEP				S	**Sn**	**21 04 13.0**	**+1.3**
BTK	**Batken**	**4.29**	**30**	PN	**Pn**	**21 03 28.8**	**+1.0**
BTK	**Batken**	**4.29**	**30**	Pn	**Pn**	**21 03 28.8**	**+1.0**
THW	**Thamme Wali**	**4.71**	**138**	P	**Pn**	**21 03 34.4**	**+1.0**
TAS	**Tashkent**	**5.05**	**11**	PN	**Pn**	**21 03 40.3**	**+2.2**
NIL	**Nilore**	**5.08**	**121**	PN	**Pn**	**21 03 39.9**	**+1.4**
NIL	**Nilore**	**5.08**	**121**		**Pn**	**21 03 39.9**	**+1.4**
IUG	**luzhnay**	**5.98**	**15**	*e*P	**Pn**	**21 03 51.3**	**+0.4**
	baz=15						
IUG				LR	LR	21 06 13.8	
	202nm,10.5s,baz=15						
IUG	**luzhnay**	**5.98**	**15**	*e*PN	**Pn**	**21 03 51.3**	**+0.4**
IUG				MLR	MLR		
	comp=Z,202nm,11.0s						
ARSB	**Arslanbob**	**6.28**	**37**	PN	**Pn**	**21 03 55.8**	**+0.6**
ARSB	**Arslanbob**	**6.28**	**37**		**Pn**	**21 03 55.8**	**+0.6**
KK31	**Karatay Array**	**7.00**	**15**	⇓Pn	**Pn**	**21 04 05.1**	**+0.4**
	comp=Z,13nm,0.3s,baz=206,slow=14,SNR=468						
KK31				⇓Sn	**Sn**	**21 05 21.3**	**-2.0**
	comp=Z,61nm,0.7s,baz=26,slow=51,SNR=4.7						
KK31				⇑Lg	Lg	21 05 57.9	
	comp=Z,114nm,0.7s,baz=202,slow=27						
KK31	**Karatay Array**	**7.00**	**15**	PN	**Pn**	**21 04 05.7**	**+0.9**
KK31	**Karatay Array**	**7.00**	**15**	Pn	**Pn**	**21 04 05.7**	**+0.9**
KKAR	**Karatay Array**	**7.00**	**15**	PN	**Pn**	**21 04 05.8**	**+1.0**
KKAR	**Karatay Array**	**7.00**	**15**	Pn	**Pn**	**21 04 05.8**	**+1.0**
KKAR	**Karatay Array**	**7.00**	**15**		**Pn**	**21 04 05.6**	**+0.8**
DZA	**Taraz**	**7.00**	**20**	*e*P	**Pn**	**21 04 05.0**	**+0.1**
	baz=21						
DZA				LR	LR	21 06 51.5	
	comp=Z,156nm,9.4s,baz=21						
DZA	**Taraz**	**7.00**	**20**	*e*PN	**Pn**	**21 04 04.9**	**+0.1**
DZA				MLR	MLR		
	comp=Z,156nm,9.0s						
KSH	**Kashi**	**7.03**	**61**	P	**Pn**	**21 04 01.3**	**-4.1**
KSH				S	**Sn**	**21 05 15.5**	**-8.8**
KSH				pmax	pmax		
	comp=Z,290nm,0.7s						
KSH				smax	smax		
	comp=N,760nm,0.5s						
KSH				smax	smax		
	comp=E,410nm,0.5s						
KSH				LR	LR		
	comp=N,4μm,2.8s						
KSH				LR	LR		
	comp=E,4μm,2.3s						
KSH				LR	LR		
	comp=Z,3μm,4.9s						
AML	**Almayashu**	**7.25**	**36**	P	**Pn**	**21 04 09.0**	**+0.4**
	SNR=111						
EKS2	**Erkin-Say**	**7.70**	**34**	P	**Pn**	**21 04 15.8**	**+1.2**
	SNR=35						
AAK	**Ala-Archa**	**8.01**	**37**	Pn	**Pn**	**21 04 19.7**	**+0.8**
	comp=Z,4.0nm,0.3s,baz=224,slow=9.8,SNR=68						
AAK				Sn	**Sn**	**21 05 48.9**	**+0.3**
	comp=Z,7.4nm,0.3s,baz=210,slow=18,SNR=1.6						
AAK				Lg	Lg	21 06 33.1	
	baz=200,slow=23,SNR=1.7						
AAK				LR	LR	21 07 38.0	
	comp=Z,419nm,19.4s,baz=231,slow=39						
AAK	**Ala-Archa**	**8.01**	**37**	P	**Pn**	**21 04 19.8**	**+0.8**
	SNR=36						
AAK	**Ala-Archa**	**8.01**	**37**	⇓Pn	**Pn**	**21 04 19.4**	**+0.5**
	comp=Z,73nm,0.7s						
AAK				⇓Sn	**Sn**	**21 05 51.1**	**+2.5**
	comp=Z,64nm,0.5s						
AAK				⇑Lg	Lg	21 06 31.9	
	comp=Z,363nm,1.4s						
AAK	**Ala-Archa**	**8.01**	**37**	*ce*P	**Pn**	**21 04 19.6**	**+0.7**
AAK				pmax	pmax		
	comp=Z,76nm,0.7s						
AAK	**Ala-Archa**	**8.01**	**37**		**Pn**	**21 04 19.5**	**+0.7**
GEYT	**Alibeck**	**8.06**	**284**	Pn	**Pn**	**21 04 16.7**	**-2.6**
	comp=Z,2.3nm,0.3s,baz=13,slow=26,SNR=7.1						
GEYT				Sn	**Sn**	**21 05 50.4**	**+1.0**
	comp=Z,11nm,0.3s,baz=131,slow=18,SNR=1.3						
GEYT	**Alibeck**	**8.06**	**284**		**Pn**	**21 04 18.9**	**-0.4**
GYA0B	**ALIBECK ARRAY**	**8.06**	**284**	⇓Pn	**Pn**	**21 04 18.9**	**-0.4**
GYA0B				⇑Sn	**Sn**	**21 05 51.4**	**+2.0**
GYA0B	**ALIBECK ARRAY**	**8.06**	**284**		**Pn**	**21 04 19.0**	**-0.4**
FRU1	**Bishkek**	**8.21**	**36**	P	**Pn**	**21 04 21.8**	**+0.3**
FRU1	**Bishkek**	**8.21**	**36**		**Pn**	**21 04 21.8**	**+0.3**
KBK	**Karagaybulak**	**8.25**	**38**	P	**Pn**	**21 04 23.4**	**+1.2**
	SNR=126						
CHMS	**Chumysh**	**8.41**	**36**	P	**Pn**	**21 04 24.6**	**+0.4**
	SNR=63						
USP	**Ospenovka**	**8.50**	**34**	P	**Pn**	**21 04 25.9**	**+0.4**
	SNR=6.1						
BOOM	**Boomskoye usch**	**8.65**	**43**	P	**Pn**	**21 04 27.8**	**+0.1**
BOOM	**Boomskoye usch**	**8.65**	**43**		**Pn**	**21 04 27.8**	**+0.1**
ULHL	**Ulahol**	**8.66**	**45**	P	**Pn**	**21 04 28.6**	**+0.7**
	SNR=15						
SGDS	**Sogindy**	**8.71**	**34**	*i* P	**Pn**	**21 04 27.5**	**-0.9**
	baz=34						
SGDS				*e*S	**Sn**	**21 06 04.8**	**-0.7**
	baz=34						
SGDS				LR	LR	21 08 06.4	
	comp=Z,140nm,9.9s,baz=34						
SGDS	**Sogindy**	**8.71**	**34**	*i* P	**Pn**	**21 04 27.4**	**-0.9**
SGDS				*e*S	**Sn**	**21 06 04.8**	**-0.7**
SGDS				MLR	MLR		
	comp=Z,140nm,10.0s						
TKM2	**Tokmak 2**	**8.77**	**39**	P	**Pn**	**21 04 29.5**	**+0.2**
	SNR=33						
TKM2	**Tokmak 2**	**8.77**	**39**	⇓Pn	**Pn**	**21 04 29.2**	**-0.1**
	comp=Z,37nm,0.7s						
TKM2				⇑Sn	**Sn**	**21 06 06.9**	**-0.4**
	comp=Z,22nm,0.5s						
TKM2				⇑Lg	Lg	21 06 57.2	
	comp=Z,155nm,1.1s						
TKM2	**Tokmak 2**	**8.77**	**39**	*i* P	**Pn**	**21 04 28.2**	**-1.1**
TKM2				pmax	pmax		
	comp=Z,37nm,0.6s						
KDJ	**Kajisay**	**9.14**	**48**	P	**Pn**	**21 04 34.6**	**+0.2**
KDJ	**Kajisay**	**9.14**	**48**		**Pn**	**21 04 34.6**	**+0.2**
TNSS	**Tian-Shan**	**9.57**	**43**	*e*P	**Pn**	**21 04 40.3**	**-0.2**
	baz=43						
TNSS	**Tian-Shan**	**9.57**	**43**	*e*P	**Pn**	**21 04 40.3**	**-0.2**
AAA	**Alma-Ata**	**9.67**	**42**	*e*P	**Pn**	**21 04 41.9**	**+0.3**
	baz=42						
AAA				*e*S	**Sn**	**21 06 29.9**	**+0.8**
	baz=42						
AAA				LR	LR	21 08 13.6	
	comp=Z,264nm,8.3s,baz=42						
AAA	**Alma-Ata**	**9.67**	**42**	*e*P	**Pn**	**21 04 41.8**	**+0.3**
AAA				*e*S	**Sn**	**21 06 29.9**	**+0.8**
AAA				MLR	MLR		
	comp=Z,264nm,8.0s						
KNDC	**Almaty**	**9.70**	**42**	⇑P	**Pn**	**21 04 43.1**	**+1.1**
	comp=Z,102nm,0.6s						
MDOK	**Medeo**	**9.71**	**43**	*e*P	**Pn**	**21 04 42.0**	**-0.2**
	baz=43						
MDOK				*e*S	**Sn**	**21 06 30.4**	**+0.2**
	baz=43						
MDOK				LR	LR	21 08 22.4	
	comp=Z,613nm,10.0s,baz=43						
MDOK	**Medeo**	**9.71**	**43**	*e*P	**Pn**	**21 04 41.9**	**-0.2**
MDOK				*e*S	**Sn**	**21 06 30.4**	**+0.2**
MDOK				MLR	MLR		
	comp=Z,613nm,10.0s						
BTLS	**Baital**	**9.79**	**26**	*e*P	**Pn**	**21 04 42.2**	**-0.9**
	comp=Z,2.5nm,1.4s,baz=26						
BTLS				LR	LR	21 08 34.3	
	comp=Z,176nm,10.6s,baz=26						
BTLS	**Baital**	**9.79**	**26**	*e*P	**Pn**	**21 04 42.2**	**-0.9**
BTLS				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BTLS				MLR	MLR		
	comp=Z,176nm,11.0s						
KUU	**Kurty**	**9.85**	**38**	*e*P	**Pn**	**21 04 43.2**	**-0.8**
	baz=38						
KUU				LR	LR	21 08 33.1	
	comp=Z,191nm,8.9s,baz=38						
KUU	**Kurty**	**9.85**	**38**	*e*P	**Pn**	**21 04 43.1**	**-0.8**
KUU				MLR	MLR		
	comp=Z,191nm,9.0s						
PRZ	**Przheval'sk**	**10.09**	**50**	P	**Pn**	**21 04 47.5**	**+0.2**
PRZ	**Przheval'sk**	**10.09**	**50**		**Pn**	**21 04 47.5**	**+0.2**
CHKK	**Chushkaly**	**10.15**	**40**	*e*P	**Pn**	**21 04 46.8**	**-1.3**
	baz=40						
CHKK	**Chushkaly**	**10.15**	**40**	*e*P	**Pn**	**21 04 46.7**	**-1.3**
SATY	**Saty**	**10.42**	**47**	*e*P	**Pn**	**21 04 51.9**	**0.0**
	comp=Z,2.3nm,0.8s,baz=47						
SATY				LR	LR	21 08 52.7	
	comp=Z,203nm,12.1s,baz=47						
SATY	**Saty**	**10.42**	**47**	*e*P	**Pn**	**21 04 51.8**	**0.0**
SATY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SATY				MLR	MLR		
	comp=Z,203nm,12.0s						
KPKS	**Kokpek**	**10.83**	**46**	*i* P	**Pn**	**21 04 56.6**	**-0.8**
	comp=Z,6.8nm,0.7s,baz=46						
KPKS				LR	LR	21 08 56.7	
	comp=Z,120nm,8.1s,baz=46						
KPKS	**Kokpek**	**10.83**	**46**	*i* P	**Pn**	**21 04 56.5**	**-0.8**
KPKS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KPKS				MLR	MLR		
	comp=Z,120nm,8.0s						
SHLS	**Shalkode**	**11.11**	**49**	*e*P	**Pn**	**21 05 04.2**	**+2.9**
	comp=Z,7.5nm,0.8s,baz=50						
SHLS				LR	LR	21 09 31.2	
	comp=Z,158nm,9.3s,baz=50						
SHLS	**Shalkode**	**11.11**	**49**	*e*P	**Pn**	**21 05 04.1**	**+2.9**
SHLS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SHLS				MLR	MLR		
	comp=Z,158nm,9.0s						
PDGK	**Podgornoye**	**11.22**	**48**	⇓Pn	**Pn**	**21 05 02.2**	**-0.6**
	comp=Z,17nm,0.6s						
PDGK				⇑Lg	Lg	21 08 16.2	
	comp=Z,114nm,1.2s						
PDGK	**Podgornoye**	**11.22**	**48**	P	**Pn**	**21 05 01.6**	**-1.2**
TDK	**Taldyqorghan**	**11.68**	**39**	*i* P	**Pn**	**21 05 07.9**	**-1.0**
	comp=Z,11nm,0.8s,baz=39						
TDK				LR	LR	21 09 40.8	
	comp=Z,206nm,10.4s,baz=39						
TDK	**Taldyqorghan**	**11.68**	**39**	*i* P	**Pn**	**21 05 07.9**	**-1.0**
TDK				pmax	pmax		
	comp=Z,11nm,0.8s						
TDK				MLR	MLR		
	comp=Z,206nm,10.0s						
OTUK	**Ortayu**	**12.29**	**14**	⇓Pn	**Pn**	**21 05 16.3**	**-1.0**
	comp=Z,26nm,0.9s						
OTUK				⇑Sn	**Sn**	**21 07 32.4**	**-0.7**
	comp=Z,37nm,0.9s						
OTUK				⇓Lg	Lg	21 08 43.8	
	comp=Z,85nm,1.1s						
OTUK	**Ortayu**	**12.29**	**14**	P	**Pn**	**21 05 16.6**	**-0.7**
BRZS	**Berezniki**	**14.02**	**13**	*e*P	**Pn**	**21 05 39.3**	**-1.6**
	comp=Z,15nm,0.9s,baz=13						
BRZS				LR	LR	21 11 07.3	
	baz=13						
BRZS	**Berezniki**	**14.02**	**13**	*e*P	**Pn**	**21 05 39.2**	**-1.6**
BRZS				pmax	pmax		
	comp=Z,15nm,0.9s						
AB31	**Akbulak array**	**14.16**	**338**	⇑Pn	**Pn**	**21 05 41.0**	**-1.9**
	comp=Z,24nm,0.8s,baz=153,slow=13,SNR=206						
AB31				⇑Sn	**Sn**	**21 08 17.1**	**-1.7**
	comp=Z,4.7nm,0.5s,baz=164,slow=24,SNR=4.4						
ABKAR	**Akbulak array**	**14.16**	**338**		**Pn**	**21 05 41.1**	**-1.7**
ABKAR	**Akbulak array**	**14.16**	**338**		**Pn**	**21 05 41.1**	**-1.7**
MAKZ	**Makanchi**	**14.74**	**41**	⇑P	**Pn**	**21 05 48.5**	**-2.1**
	comp=Z,9.1nm,0.7s						
MK31	**Makanchi Array**	**14.89**	**41**	⇓P	**Pn**	**21 05 51.2**	**-1.6**
	comp=Z,13nm,0.8s,baz=229,slow=13,SNR=60						
MK31	**Makanchi Array**	**14.89**	**41**	P	**Pn**	**21 05 51.0**	**-1.8**
MK31	**Makanchi Array**	**14.89**	**41**		**Pn**	**21 05 51.0**	**-1.8**
MKAR	**Makanchi Array**	**14.89**	**41**	Pn	**Pn**	**21 05 51.3**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=232,slow=14,SNR=44						
MKAR				LR	LR	21 12 02.5	
	comp=Z,386nm,19.1s,baz=235,slow=39						
MKAR	**Makanchi Array**	**14.89**	**41**	P	**Pn**	**21 05 50.4**	**-2.4**
MKAR	**Makanchi Array**	**14.89**	**41**		**Pn**	**21 05 50.4**	**-2.4**
WSAR	**Wadi Sarin**	**15.40**	**214**	LR	LR	21 13 08.3	
	comp=Z,258nm,19.2s,baz=70,slow=42						
DANN	**Dangsing**	**15.51**	**117**	*e*P	**Pn**	**21 05 56.5**	**-4.8**
	comp=Z,108nm,0.5s						
AKTO	**Aktyubinsk**	**15.80**	**336**	Pn	**Pn**	**21 06 03.9**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=147,slow=13,SNR=24						
AKTO	**Aktyubinsk**	**15.80**	**336**	⇓Pn	**Pn**	**21 06 03.7**	**-1.0**
	comp=Z,21nm,0.7s						
AKTO				⇓Sn	**Sn**	**21 08 57.1**	**-1.6**
	comp=Z,35nm,1.2s						
KURK	**Kurchatov**	**16.25**	**25**	⇑P	**Pn**	**21 06 06.9**	**-3.3**
	comp=Z,19nm,1.1s						
KURK	**Kurchatov**	**16.25**	**25**	P	**Pn**	**21 06 06.9**	**-3.3**
KURK				pmax	pmax		
	comp=Z,19nm,1.1s						
KURK	**Kurchatov**	**16.25**	**25**		**Pn**	**21 06 06.9**	**-3.3**
BVAR	**Bovoye Array**	**16.74**	**5**	Pn	**Pn**	**21 06 13.6**	**-2.9**
	comp=Z,2.4nm,0.3s,baz=147,slow=8.3,SNR=65						
BRVK	**Borovoye**	**16.76**	**5**	⇑P	**Pn**	**21 06 14.5**	**-2.3**
	comp=Z,67nm,1.1s						
BRVK	**Borovoye**	**16.76**	**5**	*i* P	**Pn**	**21 06 15.0**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,67nm,1.1s						
BRVK	**Borovoye**	**16.76**	**5**		**Pn**	**21 06 14.7**	**-2.1**
BRVK				IAmb	IAmb	21 06 24.6	
	comp=Z,78nm,1.1s						
WMQ	**Urumqi**	**16.77**	**58**	P	**P**	**21 06 19.8**	**+0.7**
WMQ				pP	pP	21 06 23.5	-3.9
WMQ				S	**Sn**	**21 09 24.5**	**+2.0**
WMQ				pmax	pmax		
	comp=Z,32nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.1s						
WMQ				LR	LR		
	comp=Z,1μm,11.9s						
WMQ				LR	LR		
	comp=Z,2μm,6.7s						
WMQ				LR	LR		
	comp=Z,950nm,20.5s						
WMQ	**Urumqi**	**16.77**	**58**	P	**P**	**21 06 17.5**	**-1.6**
WMQ				pmax	pmax		
	comp=Z,19nm,0.8s						
WMQ	**Urumqi**	**16.77**	**58**	P	**P**	**21 06 17.5**	**-1.6**
DMN	**Daman**	**16.91**	**116**	*e*P	**Pn**	**21 06 15.1**	**-4.0**
KKN	**Kakani**	**16.93**	**115**	*e*P	**Pn**	**21 06 14.8**	**-4.5**
	comp=Z,55nm,0.6s						
MAK	**Makhachkala**	**17.09**	**299**	*e*P	**Pn**	**21 06 16.8**	**-4.1**
MAK				*e*S	**Sn**	**21 09 25.5**	**-4.5**
MAK				pmax	pmax		
	comp=Z,347nm,1.5s						
MAK				MLR	MLR		
	comp=Z,431nm,10.0s						
PKIN	**Phulchoki**	**17.14**	**116**	*e*P	**Pn**	**21 06 17.4**	**-4.5**
	comp=Z,75nm,0.5s						
PKI	**Pulchoki**	**17.15**	**116**	*e*P	**Pn**	**21 06 17.9**	**-4.3**
	comp=Z,60nm,0.7s						
GUN	**Gumba**	**17.30**	**114**	*e*P	**Pn**	**21 06 20.5**	**-3.6**
	comp=Z,85nm,0.8s						
GROC	**Groznyy**	**18.36**	**299**	*e*P	**P**	**21 06 33.4**	**-3.1**
GROC				*e*S	**Sn**	**21 09 59.1**	**-1.7**
RAMN	**Ramite**	**18.37**	**115**	*e*P	**P**	**21 06 34.4**	**-2.6**
	comp=Z,124nm,0.7s						
GNI	**Garni**	**18.65**	**289**	P	**P**	**21 06 40.9**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=170,slow=16,SNR=2.6						
GNI				LR	LR	21 16 11.0	
	comp=Z,161nm,18.6s,baz=86,slow=44						
TAPN	**Taplejung**	**18.97**	**113**	*e*P	**P**	**21 06 41.9**	**-1.7**
	comp=Z,138nm,0.7s						
ODAN	**Odare**	**19.00**	**114**	*e*P	**P**	**21 06 42.8**	**-1.1**
	comp=Z,86nm,0.6s						
LSA	**Lhasa**	**20.48**	**102**	P	Pn	21 07 01.5	-1.0
LSA				pmax	pmax		
	comp=Z,61nm,1.1s						
LSA	**Lhasa**	**20.48**	**102**	P	**P**	**21 06 59.7**	**-0.6**
LSA				pmax	pmax		
	comp=Z,37nm,0.8s						
LSA	**Lhasa**	**20.48**	**102**	P	**P**	**21 06 59.7**	**-0.6**
LSA				IAmb	IAmb	21 07 04.8	
	comp=Z,37nm,0.8s						
KBZ	**Khabaz**	**20.54**	**299**	P	**P**	**21 07 02.3**	**+2.1**
	comp=Z,2.6nm,0.7s,baz=163,slow=5.9,SNR=8.3						
KBZ				LR	LR	21 17 25.5	
	comp=Z,187nm,18.2s,baz=106,slow=44						
KBZ	**Khabaz**	**20.54**	**299**	*i* P	**P**	**21 06 58.1**	**-2.1**
KBZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KIV	**Kislovodsk**	**20.73**	**299**	*e*P	**P**	**21 06 59.7**	**-2.8**
KIV				*e*S	**S**	**21 10 49.1**	**-3.4**
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
KIV				MLR	MLR		
	comp=Z,417nm,14.0s						
KIV	**Kislovodsk**	**20.73**	**299**	P	**P**	**21 07 03.2**	**+0.6**
GOF	**Gofitskoye**	**20.76**	**302**	⇑*e*P	Pn	21 07 06.4	+1.2
GOF				*e*S	**S**	**21 10 52.3**	**-0.5**
GOF				pmax	pmax		
	comp=Z,50nm,1.0s						
GOF				smax	smax		
	comp=N,46nm,0.9s						
GOF				smax	smax		
	comp=E,108nm,1.8s						
ARU	**Arti**	**21.06**	**345**	P	**P**	**21 07 07.4**	**+1.6**
	comp=E,5.8nm,0.5s,baz=162,slow=5.9,SNR=49						
ARU				LR	LR	21 15 34.9	
	comp=E,256nm,18.3s,baz=158,slow=37						
ARU	**Arti**	**21.06**	**345**	*d i*P	**P**	**21 07 07.2**	**+1.4**
ARU						21 07 27.6	
ARU				SS	Sn	21 11 28.6	+23
ARU				pmax	pmax		
	comp=Z,22nm,0.7s						
ARU	**Arti**	**21.06**	**345**	P	**P**	**21 07 06.7**	**+0.9**
ARU				IAmb	IAmb	21 07 08.4	
	comp=Z,22nm,0.7s						
HYB	**Hyderabad**	**21.06**	**151**	*i* P	**P**	**21 07 09.0**	**+2.9**
SVE	**Sverdlovsk**	**21.06**	**349**	*e*P	**P**	**21 07 07.1**	**+1.3**
SVE				*e*S	**S**	**21 10 55.1**	**-3.4**
SVE				pmax	pmax		
	comp=Z,49nm,1.0s						
SVE				MLR	MLR		
	comp=Z,562nm,15.0s						
ZAA0	**Zalesovo Array**	**21.10**	**28**	P	**P**	**21 07 06.1**	**-0.2**
ZAA0				IAmb	IAmb	21 07 13.8	
	comp=Z,23nm,0.7s						
ZALV	**Zalesovo Beam**	**21.10**	**28**	P	**P**	**21 07 06.3**	**0.0**
	comp=Z,22nm,0.7s,baz=225,slow=10,SNR=61						
ZALV				LR	LR	21 14 60.0	
	comp=Z,39nm,21.7s,baz=220,slow=36						
ZALV	**Zalesovo Beam**	**21.10**	**28**	P	**P**	**21 07 06.1**	**-0.2**
ZALV	**Zalesovo Beam**	**21.10**	**28**	P	**P**	**21 07 06.1**	**-0.2**
BELG	**Belogornoye**	**21.54**	**324**	*i* P	**P**	**21 07 11.3**	**+0.4**
BELG				pmax	pmax		
	comp=Z,14nm,1.1s						
GUWA	**GUWAHATI**	**22.58**	**110**	*e*P	**P**	**21 07 21.7**	**-0.7**
GUWA				IAmb	IAmb	21 07 25.6	
	comp=Z,21nm,0.8s						
TEZP	**TEZPUR**	**23.21**	**108**	*e*P	**P**	**21 07 27.5**	**-1.3**
TEZP				IAmb	IAmb	21 07 29.0	
	comp=Z,47nm,0.7s						
RAYN	**Ar Rayn**	**23.27**	**243**	P	**P**	**21 07 29.9**	**+0.4**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RAYN	**Ar Rayn**	**23.27**	**243**	P	**P**	**21 07 29.9**	**+0.4**
ZIRO	**ZIRO**	**23.57**	**105**	*e*P	**P**	**21 07 31.7**	**-1.0**
ZIRO				IAmb	IAmb	21 07 34.2	
	comp=Z,43nm,0.7s						
VRH	**Novokhopyorsk**	**23.91**	**317**	*e*P	**P**	**21 07 36.3**

comp=Z,320nm,16.0s
ZAK Zakamensk 28.90 50 *e*P P 21 08 14.3 -6.3
ZAK pmax pmax
comp=Z,5.0nm,1.2s
TLY Talaya 29.49 47 LR LR 21 21 55.3
comp=Z,97nm,18.6s,baz=257,slow=40
CD2 Chengdu 30.14 90 *e*P **P** **21 08 32.0 +0.3**
CD2 S **S** **21 13 29.0 +0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,390nm,14.7s
CD2 LR LR
comp=Z,380nm,8.2s
SONM Songino Array 30.39 56 P **P** **21 08 34.6 +0.7**
comp=Z,2.9nm,0.9s,baz=261,slow=8.7,SNR=16
SONM LR LR 21 22 19.6
comp=Z,249nm,18.8s,baz=210,slow=40
SONM Songino Array 30.39 56 P **P** **21 08 33.9 0.0**
SONM pmax pmax
comp=Z,3.0nm,1.1s
SONM Songino Array 30.39 56 P **P** **21 08 33.9 0.0**
KLMR Klimovskoe 30.45 333 P **P** **21 08 32.9 -1.1**
KLMR pmax pmax
comp=Z,20nm,1.5s
KLMR Klimovskoe 30.45 333 P **P** **21 08 33.0 -1.1**
KLMR AMP 21 08 49.3
comp=Z,20nm,1.5s
ELL Elmali 30.48 282 P **P** **21 08 35.2 +0.5**
ELL pmax pmax
comp=Z,46nm,0.8s
ELL Elmali 30.48 282 P **P** **21 08 35.2 +0.5**
ULN Ulaanbaatar 30.84 56 *i* P **P** **21 08 38.5 +0.7**
ULN pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 31.16 310 P **P** **21 08 42.9 +2.4**
comp=Z,0.6nm,0.4s,baz=91,slow=7.1,SNR=7.3
AKASG LR LR 21 23 46.3
comp=Z,166nm,19.4s,baz=100,slow=41
AKASG Malin Array Be 31.16 310 P **P** **21 08 41.2 +0.8**
AKASG pmax pmax
comp=Z,1.0nm,0.8s
AKASG Malin Array Be 31.16 310 P **P** **21 08 41.2 +0.8**
MHMT Maesarieng 31.99 116 P **P** **21 08 48.0 0.0**
comp=Z,19nm,0.7s
CHTO Chiang Mai 32.32 114 P **P** **21 08 50.8 -0.1**
CHTO pmax pmax
comp=Z,5.0nm,0.7s
CHTO Chiang Mai 32.32 114 P **P** **21 08 50.8 -0.1**
CHTO IAmb IAmb 21 08 51.8
comp=Z,4.5nm,0.7s
CM33 Chiang Mai Arr 32.32 114 P **P** **21 08 51.0 +0.1**
CMMT Chiang Mai 32.33 114 P **P** **21 08 51.3 +0.3**
comp=Z,3.8nm,1.3s
CM32 Chiang Mai Arr 32.35 115 P **P** **21 08 51.0 -0.2**
CM34 Chiang Mai Arr 32.45 114 P **P** **21 08 53.0 +0.9**
CM13 Chiang Mai Arr 32.54 115 P **P** **21 08 52.0 -0.9**
comp=Z,66nmcomp=Z,8.4nm,1.1s
CM31 Chiang Mai Arr 32.55 115 P P 21 09 01.6 +8.7
CMAR Chiang Mai Arr 32.55 115 P **P** **21 08 52.5 -0.4**
comp=Z,4.9nm,0.7s,baz=301,slow=8.5,SNR=36
CMAR LR LR 21 24 23.4
comp=Z,78nm,18.2s,baz=346,slow=41
CM35 Chiang Mai Arr 32.56 114 P **P** **21 08 53.0 0.0**
CM02 Chiang Mai Arr 32.56 115 P **P** **21 08 53.2 +0.2**
comp=Z,81nmcomp=Z,9.5nm,0.9s
CM01 Chiang Mai Arr 32.58 115 P **P** **21 08 53.5 +0.2**
comp=Z,110nmcomp=Z,9.1nm,0.8s
CM05 Chiang Mai Arr 32.58 115 P **P** **21 08 53.0 -0.2**
comp=Z,67nmcomp=Z,8.7nm,1.2s
CM09 Chiang Mai Arr 32.59 115 P **P** **21 08 53.0 -0.3**
comp=Z,76nmcomp=Z,7.8nm,0.9s
CM04 Chiang Mai Arr 32.61 115 P **P** **21 08 53.5 +0.1**
comp=Z,100nmcomp=Z,12nm,0.9s
CM36 Chiang Mai Arr 32.62 115 P **P** **21 08 53.0 -0.6**
MLR Muntele Rosu 32.74 299 ⇑P P 21 08 59.4 +4.9
LAMP Lampang 33.01 114 P **P** **21 08 58.0 +1.0**
comp=Z,12nm,0.9s
VOIR 33.37 299 ⇑P **P** **21 09 03.8 +3.8**
PHRA Phrae 33.47 113 P **P** **21 09 00.9 -0.1**
comp=Z,60nm,1.4s
ARR Arges 33.67 299 ⇓P **P** **21 09 06.1 +3.6**
HHC Hu-ho-hao-te 34.06 69 *e*P **P** **21 09 08.8 +2.7**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,110nm,6.6s
GYA Guiyang 34.24 96 ⇓P **P** **21 09 07.0 -0.8**
GYA sP sP 21 09 22.0 +1.2
GYA pmax pmax
comp=Z,9.0nm,0.8s
PHIT Phitsanulok 34.43 115 P **P** **21 09 11.5 +2.2**
comp=Z,48nm,1.2s
NRIK Noril'sk 34.72 12 P **P** **21 09 13.6 +2.3**
comp=Z,6.6nm,0.5s,baz=212,slow=5.2,SNR=15
NRIK LR LR 21 24 49.4
comp=Z,56nm,18.8s,baz=198,slow=39
NRIK Noril'sk 34.72 12 *i* P **P** **21 09 12.5 +1.2**
NRIK pmax pmax
comp=Z,12nm,0.9s
UTHA Uthaitani 34.80 118 P **P** **21 09 13.6 +1.0**
comp=Z,208nmcomp=Z,12nm,0.8s
DRGR 35.01 302 ⇑P **P** **21 09 14.6 +0.4**
KOLS Kolonicke sedl 35.38 305 *e*P **P** **21 09 21.4 +4.1**
KOLS Kolonicke sedl 35.38 305 *e*P **P** **21 09 21.4 +4.1**
BZS Buzias 35.78 300 ⇑P P 21 09 28.8 +8.1
NONG Nongkai 35.91 111 P **P** **21 09 21.3 -0.8**
comp=Z,16µmcomp=Z,41nm,1.0s
FINES FINESS Array B 36.27 327 P **P** **21 09 26.5 +1.8**
comp=Z,2.8nm,0.7s,baz=120,slow=8.1,SNR=11
FINES LR LR 21 24 24.4
comp=Z,106nm,19.1s,baz=109,slow=36
FINES FINESS Array B 36.27 327 P **P** **21 09 24.5 -0.1**
FINES FINESS Array B 36.27 327 P **P** **21 09 24.5 -0.1**
CHAI Chaiyaphum 36.41 115 P **P** **21 09 26.7 +0.3**
comp=Z,24nm,1.0s
MORC Moravsky Berou 38.51 307 ⇑P **P** **21 09 48.0 +4.1**
KRLC Kraliky 39.00 307 *e*P P 21 09 54.4 +6.4
KRLC Kraliky 39.00 307 *e*P P 21 09 54.4 +6.4
DPC Dobruska-Polom 39.30 307 *e*P **P** **21 09 54.4 +3.9**
DPC Dobruska-Polom 39.30 307 *e*P **P** **21 09 54.4 +3.9**
ARCES ARCESS Array B 40.37 338 P **P** **21 10 00.6 +1.6**
comp=Z,7.1nm,0.9s,baz=120,slow=7.2,SNR=12
ARCES LR LR 21 27 25.6
comp=Z,151nm,19.6s,baz=110,slow=37
BRG Berggiesshubel 40.81 308 *e*(P) P 21 10 10.8 +7.8
comp=Z,1.7nm,0.6s
BRG Berggiesshubel 40.81 308 *e*P P 21 10 10.8 +7.8
BRG pmax pmax
comp=Z,2.0nm,0.6s
GERES GERESS Array B 41.04 305 P **P** **21 10 07.2 +2.2**
comp=Z,0.4nm,0.8s,baz=89,slow=9.5,SNR=5.1
GERES LR LR 21 29 05.8
comp=Z,88nm,21.0s,baz=94,slow=39
GERES GERESS Array B 41.04 305 P **P** **21 10 05.6 +0.6**
GERES GERESS Array B 41.04 305 P **P** **21 10 05.6 +0.6**
KHC Kasperske Hory 41.10 306 *e*P **P** **21 10 08.5 +3.1**
KHC Kasperske Hory 41.10 306 *e*P **P** **21 10 08.5 +3.1**
CLL Collm 41.40 309 *e*P **P** **21 10 09.0 +1.2**
CLL LmV 21 30 00.0
comp=Z,100nm,19.1s
NJ2 Nanjing 41.87 81 *e*P **P** **21 10 13.3 +1.4**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
NB2 NORSAR Subarra 43.04 323 P **P** **21 10 21.8 +0.7**
comp=Z,4.2nm,0.8s,baz=100,slow=8.6
NOA NORSAR Array B 43.04 323 P **P** **21 10 22.3 +1.2**
comp=Z,1.8nm,0.8s,baz=98,slow=8.0,SNR=6.1
NOA LR LR 21 30 59.8
comp=Z,92nm,18.2s,baz=100,slow=40
PSI Prapat 43.92 132 P **P** **21 10 26.7 -2.0**
comp=Z,5.8nm,0.7s,baz=360,slow=16,SNR=10
YAK Yakutsk 45.47 36 P **P** **21 10 41.1 +0.7**
comp=Z,2.5nm,0.3s,baz=356,slow=1.4,SNR=1.2
YAK Yakutsk 45.47 36 *e*P **P** **21 10 40.8 +0.4**
YAK *e**PP **sP** **21 10 53.0 -0.5**
YAK *e* 21 12 32.6
YAK *e*S **S** **21 17 18.0 -1.8**
YAK *e**SS **sS** **21 17 40.1 +5.3**
YAK *e*SS **SS** **21 20 39.3 -3.9**
YAK *e*SSS SSS 21 21 40.0
YAK pmax pmax
comp=Z,14nm,1.3s
YAK pmax pmax
comp=N,3.0nm,1.5s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=Z,198nm,4.1s
YAK pmax pmax
comp=N,145nm,3.0s
YAK pmax pmax
comp=E,139nm,3.2s
YAK smax smax
comp=E,269nm,4.2s
YAK smax smax
comp=N,110nm,3.0s
TIXI Tiksi 46.80 22 *e*P **P** **21 10 51.8 +1.1**
TIXI Tiksi 46.80 22 P **P** **21 10 51.5 +0.8**
KLR Kul'dur 47.16 53 P **P** **21 10 54.6 +0.8**
comp=N,1.2nm,0.6s,baz=262,slow=11,SNR=4.4
KLR LR LR 21 31 05.1
comp=N,144nm,20.8s,baz=224,slow=37
KSRS Korea Array 47.19 70 LR LR 21 34 10.7
comp=N,126nm,18.4s,baz=298,slow=41
DAG Danmarks Havn 54.17 344 *i* P **P** **21 11 47.0 +0.6**
DAG *i* 21 11 59.0
DAG pmax pmax
comp=Z,1.0nm,0.4s
DAG Danmarks Havn 54.17 344 *i* P **P** **21 11 47.0 +0.6**
comp=Z,0.7nm,0.4s
DAG *i* 21 11 59.0
DAG Danmarks Havn 54.17 344 *i* P **P** **21 11 47.0 +0.6**
DAG IAmb IAmb 21 11 50.6
comp=Z,0.7nm,0.4s
DAG *i* 21 11 59.0
MJAR Matsushiro Arr 55.23 67 P **P** **21 11 53.4 -1.3**
comp=Z,0.3nm,0.4s,baz=313,slow=12,SNR=4.3
MJAR LR LR 21 36 41.0
comp=Z,63nm,20.6s,baz=120,slow=37
MJAR Matsushiro Arr 55.23 67 P **P** **21 11 54.9 +0.2**
ESDC Sonseca Array 55.38 297 P **P** **21 11 57.8 +2.1**
comp=Z,2.3nm,0.8s,baz=59,slow=6.0,SNR=6.5
ESDC LR LR 21 39 33.2
comp=Z,26nm,18.5s,baz=150,slow=40
MA2 Magadan 55.94 38 LR LR 21 36 46.3
comp=Z,1µm,21.0s,baz=348,slow=37
BILL Bilibino 59.77 26 ⇓*e*P **P** **21 12 29.0 +2.9**
BILL *e**PP **pP** **21 12 35.3 -0.4**
BILL *SP **sP** **21 12 40.0 +0.6**
BILL *e* 21 13 08.6
BILL pmax pmax
comp=Z,5.0nm,1.4s
BILL MLR MLR
comp=Z,117nm,16.0s
SUMG Summit 60.39 341 *i* P P 21 12 40.8 +10
SUMG Summit 60.39 341 *i* P P 21 12 40.8 +10
SUMG Summit 60.39 341 *i* P P 21 12 40.9 +10
TOA0 Torodi Ar. Sit 63.31 267 P **P** **21 12 50.7 -0.1**
TOA0 IAmb IAmb 21 12 58.3
comp=Z,3.5nm,0.9s
TORD Torodi Ar. Bea 63.31 267 P **P** **21 12 50.8 0.0**
comp=Z,1.5nm,0.7s,baz=39,slow=5.4,SNR=16
TORD Torodi Ar. Bea 63.31 267 P **P** **21 12 51.0 +0.2**
SFJD Kangerlussuaq 66.99 338 LR LR 21 42 31.1
comp=Z,73nm,18.6s,baz=26,slow=36
RES Resolute Bay 68.64 355 LR LR 21 49 23.2
comp=Z,58nm,18.2s,baz=94,slow=41
TOLK Toolik Lake Re 71.64 14 P **P** **21 13 43.7 +1.0**
KIC Kosan Boka 72.38 265 *e*P P 21 13 54.1 +6.2
comp=Z,7.7nm,0.8s
TIC Toumodi 72.43 265 *e*P P 21 13 54.4 +6.2
LIC Lamto 72.69 265 *e*P P 21 13 57.8 +8.1
comp=Z,14nm,0.7s
COLD Coldfoot 72.72 15 P **P** **21 13 50.1 +1.0**
COLD IAmb IAmb 21 14 01.9
comp=Z,5.0nm,0.9s
IMAR Indian Mountai 73.00 17 P **P** **21 13 51.6 +0.8**
C36M Paulatuk 74.22 4 P **P** **21 13 58.3 +0.5**
INK Inuvik 74.40 8 P **P** **21 14 00.4 +1.5**
comp=Z,2.0nm,0.7s,baz=15,slow=8.2,SNR=7.3
INK Inuvik 74.40 8 P **P** **21 13 59.9 +1.0**
INK pmax pmax
comp=Z,4.0nm,0.6s
INK Inuvik 74.40 8 P **P** **21 13 59.9 +1.0**
INK IAmb IAmb 21 14 11.5
comp=Z,3.6nm,0.6s
ILAR Eielson Array 75.54 15 P **P** **21 14 06.4 +0.8**
comp=Z,1.5nm,0.9s,baz=322,slow=4.3,SNR=15
ILAR LR LR 21 52 53.1
comp=Z,50nm,18.0s,baz=276,slow=40
BOSA Boshof 76.13 218 P **P** **21 14 09.0 -0.5**
comp=Z,2.4nm,0.9s,baz=98,slow=5.5,SNR=3.0
BOSA Boshof 76.13 218 P **P** **21 14 09.3 -0.2**
BOSA IAmb IAmb 21 14 24.7
comp=Z,6.2nm,1.1s
FITZ Fitzroy Crossi 76.78 124 LR LR 21 51 42.6
comp=Z,17nm,20.9s,baz=42,slow=39
YKA Yellowknife A 81.46 1 P **P** **21 14 39.0 +0.8**
comp=Z,2.0nm,0.8s,baz=350,slow=6.0,SNR=9.0
YKA LR LR 21 55 37.9
comp=Z,80nm,18.9s,baz=0.0,slow=39
YKA Yellowknife Ar 81.46 1 P **P** **21 14 39.0 +0.8**
WRA Warramunga Arr 83.99 120 P **P** **21 14 50.3 -1.7**
comp=Z,3.2nm,0.7s,baz=323,slow=4.8,SNR=34
WRA Warramunga Arr 83.99 120 P **P** **21 14 50.4 -1.6**
WRAB Tennant Creek 83.99 120 P **P** **21 14 50.6 -1.4**
WRAB pmax pmax
comp=Z,6.0nm,1.1s
WRAB Tennant Creek 83.99 120 P **P** **21 14 50.6 -1.4**
WRAB IAmb IAmb 21 14 51.2
comp=Z,6.3nm,1.1s
WB2 Warramunga Arr 84.00 120 P **P** **21 14 50.6 -1.4**
WB2 IAmb IAmb 21 14 51.2
comp=Z,4.8nm,1.0s
ASAR Alice Springs 86.18 123 P **P** **21 15 01.3 -1.6**
comp=Z,3.1nm,0.8s,baz=311,slow=4.9,SNR=37
ASAR Alice Springs 86.18 123 P **P** **21 15 01.8 -1.2**
ULM Lac du Bonnet 92.59 350 LR LR 22 04 02.2
comp=Z,48nm,20.9s,baz=334,slow=40

*IDC **30** 21:11:11.8±1.0, 46.17N×155.39E, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.5/42, mbtmp3.7/6, Error ellipse: s-maj=44.2km s-min=25.9km az=127.0*
ISC 30 21:11:17.3±1.1, 46.2N±0.2×155.4E±0.3, h35km, n6, σ0s83/6, mb3.8/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVAR	**Mina Array Bea**	**61.30**	**63**	P	**P**	**21 21 30.1**	**+0.7**
	0.5nm,0.7s,baz=303,slow=7.2,SNR=4.5						
PDAR	**Pinedale Array**	**63.81**	**55**	P	**P**	**21 21 44.8**	**-1.2**
	0.7nm,0.9s,baz=31,slow=3.5,SNR=4.2						
FINES	**FINESS Array B**	**65.20**	**336**	P	**P**	**21 21 54.7**	**+0.2**
	1.6nm,0.7s,baz=34,slow=7.1,SNR=5.2						
WRA	**Warramunga Arr**	**68.52**	**201**	P	**P**	**21 22 15.8**	**-0.2**
	0.2nm,0.9s,baz=17,slow=6.7,SNR=2.3						
ASAR	**Alice Springs**	**72.20**	**201**	P	**P**	**21 22 38.5**	**+0.1**
	0.3nm,0.6s,baz=15,slow=5.8,SNR=4.7						
TXAR	**Lajitas Array**	**76.39**	**62**	P	**P**	**21 23 03.4**	**+0.2**
	1.2nm,0.6s,baz=305,slow=4.8,SNR=16						

*IDC **30** 21:23:22.5±1.0, 47.03N×152.63E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.5/40, mbtmp3.6/6, ML 1.9/1, Error ellipse: s-maj=46.4km s-min=21.8km az=115.0*
ISC 30 21:23:31.2±1.1, 47.1N±0.2×152.7E±0.3, h67km, n15, σ1s45/7, mb3.4/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**6.84**	**26**	Pn	**Pn**	**21 25 06.8**	**-2.0**
	0.1nm,0.3s,baz=190,slow=13,SNR=1.5						
PETK				Sn	**Sn**	**21 26 27.1**	**+2.0**
	0.4nm,0.3s,baz=94,slow=18,SNR=1.3						
H11N2	**WAKE ISLAND Hy**	**29.67**	**152**	T	T	22 01 17.7	
	baz=341,slow=76,SNR=221						
H11N1	**WAKE ISLAND Hy**	**29.68**	**152**	T	T	22 01 18.9	
	baz=341,slow=76,SNR=139						
H11N3	**WAKE ISLAND Hy**	**29.69**	**152**	T	T	22 01 20.1	
	baz=341,slow=76,SNR=113						
H11S1	**WAKE ISLAND Hy**	**30.75**	**153**	T	T	22 02 40.9	
	baz=341,slow=76,SNR=101						
H11S3	**WAKE ISLAND Hy**	**30.76**	**153**	T	T	22 02 48.8	
	baz=341,slow=76,SNR=88						
H11S2	**WAKE ISLAND Hy**	**30.77**	**153**	T	T	22 02 31.3	
	baz=341,slow=76,SNR=66						
ILAR	**Eielson Array**	**36.48**	**39**	P	**P**	**21 30 29.6**	**+0.2**
	0.3nm,0.7s,baz=282,slow=9.1,SNR=4.0						
FINES	**FINESS Array B**	**63.59**	**334**	P	**P**	**21 33 54.5**	**+0.2**
	3.1nm,1.1s,baz=33,slow=8.8,SNR=7.4						
WRA	**Warramunga Arr**	**68.73**	**198**	P	**P**	**21 34 27.7**	**0.0**
	0.1nm,0.5s,baz=13,slow=6.7,SNR=1.6						
ASAR	**Alice Springs**	**72.43**	**198**	P	**P**	**21 34 50.8**	**+0.6**
	0.4nm,0.7s,baz=4.9,slow=5.6,SNR=5.0						
TXAR	**Lajitas Array**	**77.60**	**60**	P	**P**	**21 35 20.3**	**+0.1**
	0.6nm,0.5s,baz=301,slow=4.8,SNR=13						
H03N2	**Juan Fernandez**	**139.07**	**90**	T	T	00 17 49.8	
	baz=309,slow=77,SNR=13						
H03N1	**Juan Fernandez**	**139.09**	**90**	T	T	00 17 51.1	
	baz=309,slow=77,SNR=24						
H03N3	**Juan Fernandez**	**139.09**	**90**	T	T	00 17 47.9	
	baz=309,slow=77,SNR=19						

JMA 30 21:29:54.2±0.2, 23.84N×123.30E, h22km±2km, M1.6, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.51**	**65**	P	Pb	21 30 04.3	-0.2
HATJ				S	Sb	21 30 11.3	-0.2
IRIF	**Iriomote-Funau**	**0.63**	**38**	P	Pb	21 30 06.2	-0.4
IRIF				*e*S	Sb	21 30 15.1	+0.1
JKRS	**Kuro-shima**	**0.76**	**58**	*e*S	Sb	21 30 19.3	+0.7
JIJ	**Ishigaki jima**	**0.93**	**56**	P	Pb	21 30 11.7	+0.1
JIJ				*e*S	Sb	21 30 23.9	+0.3
JISG	**Ishigakijimahi**	**1.19**	**51**	P	Pn	21 30 15.2	-0.3
JISG				*e*S	Sn	21 30 31.0	+0.1

TAP 30 21:30:37.3, 24.30N×121.43E, h8km, ML2.0, 5C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETLH	**Xiulin Townshi**	**0.11**	**152**	*i* P	Pg	21 30 40.4	+0.7
	baz=153						
ETLH				*i* S	Sg	21 30 42.3	+0.8
	baz=153						
NNSB	**Datong**	**0.13**	**342**	⇓*i* P	Pg	21 30 40.7	+0.5
	baz=342						
NNSB				*i* S	Sg	21 30 42.5	+0.2
	baz=342						
NNSH	**Datong**	**0.13**	**342**	*i* P	Pg	21 30 40.8	+0.5
	baz=340						
NNSH				S	Sg	21 30 42.7	+0.5
	baz=340						
NNS	**Nan Shan**	**0.15**	**340**	⇓*i* P	Pg	21 30 41.0	+0.5
	baz=343						
NNS				S	Sg	21 30 43.2	+0.5
	baz=343						
FUSS	**Fushou**	**0.17**	**252**	⇑*i* P	Pg	21 30 41.8	+0.8
	baz=252						
FUSS				*i* S	Sg	21 30 44.4	+0.9
	baz=252						
NACB	**Ninganchiao**	**0.20**	**130**	*e*P	Pg	21 30 41.8	+0.5
	baz=130						
NACB				S	Sg	21 30 44.6	+0.6
	baz=130						
WHF	**Hehuan Shan**	**0.21**	**224**	⇑*i* P	Pg	21 30 42.3	+0.5
	baz=211						
WHF				S	Sg	21 30 45.3	+0.5
	baz=211						
TWT	**Tachien**	**0.23**	**258**	*e*P	Pg	21 30 43.1	+1.1
	baz=257						
TWT				*e*S	Sg	21 30 46.7	+1.4
	baz=257						
TDCB	**Techi**	**0.25**	**259**	P	Pg	21 30 43.0	+0.7
	baz=253						
TDCB				*e*S	Sg	21 30 46.4	+0.7
	baz=253						
TWD	**Chiawan**	**0.27**	**145**	*e*P	Pg	21 30 43.2	+0.6
	baz=144						
TWD				*e*S	Sg	21 30 46.9	+0.7
	baz=144						
NDT	**Datong Townshi**	**0.31**	**15**	*i* P	Pg	21 30 43.8	+0.4
	baz=16						
NDT				*e*S	Sg	21 30 47.8	+0.2
	baz=16						
ENA	**Nanau**	**0.31**	**66**	*e*P	Pg	21 30 43.5	+0.1
	baz=67						
CHGB	**Renai**	**0.33**	**224**	⇑*i* P	Pg	21 30 44.3	+0.4
	baz=223						
CHGB				*e*S	Sg	21 30 48.9	+0.5
	baz=223						
ENTT	**Nioudou**	**0.36**	**21**	⇑*i* P	Pg	21 30 44.8	+0.4
	baz=15						
ENTT				S	Sg	21 30 49.7	+0.5
	baz=15						
YHNB	**Yeheng**	**0.37**	**353**	*i* P	Pg	21 30 45.2	+0.6
	baz=354						
YHNB				S	Sg	21 30 49.0	-0.4
	baz=354						
ENAH	**Nanao**	**0.38**	**67**	*e*P	Pg	21 30 44.4	-0.3
	baz=55						
ENAH				*e*S	Sg	21 30 50.9	+1.2
	baz=55						
NSK	**Sanguang**	**0.38**	**350**	*e*P	Pg	21 30 45.4	+0.7
	baz=353						
NSK				*e*S	Sg	21 30 50.2	+0.5
	baz=353						
OWD	**Renai**	**0.41**	**214**	⇑*i* P	Pg	21 30 45.5	+0.1
	baz=212						
OWD				*e*S	Sg	21 30 50.9	0.0
	baz=212						
WHP	**Taichung City**	**0.44**	**267**	*e*P	Pg	21 30 46.6	+0.7
	baz=266						
WHP				*e*S	Sg	21 30 52.9	+1.3
	baz=266						
TWE	**Neicheng**	**0.47**	**28**	*e*P	Pg	21 30 46.5	+0.1
	baz=41						
TWE				*e*S	Sg	21 30 52.8	+0.1
	baz=41						
NWLT	**Wulai**	**0.48**	**8**	*e*P	Pg	21 30 46.6	0.0
	baz=10.0						
NWLT				*e*S	Sg	21 30 52.4	-0.5
	baz=10.0						
ESL	**Shilin**	**0.48**	**179**	*e*P	Pg	21 30 46.9	+0.2
	baz=167						
TWC	**Suao**	**0.49**	**51**	*e*P	Pg	21 30 47.0	+0.1
	baz=52						
SMLT	**Sun Moon Lake**	**0.64**	**229**	*e*P	Pg	21 30 50.0	+0.4
	baz=228						
SMLT				*e*S	Sg	21 30 58.1	+0.2
	baz=228						
TYC	**Yuchr**	**0.65**	**233**	*e*P	Pg	21 30 49.9	0.0
	baz=231						
TYC				*e*S	Sg	21 30 58.8	+0.4
	baz=231						
SSLB	**Suanglung**	**0.67**	**220**	*e*P	Pg	21 30 49.8	-0.4
	baz=219						
SSLB				*e*S	Sg	21 30 58.7	-0.2
	baz=219						
TIPB	**Shuangxi**	**0.76**	**28**	*e*P	Pg	21 30 51.7	-0.3
	baz=17						
EHY	**Hungye**	**0.80**	**187**	*e*P	Pb	21 30 53.4	0.0
	baz=179						
YM10	**YM10**	**0.86**	**8**	*e*P	Pn	21 30 55.2	-0.6
	baz=9.0						
YM05	**YM05**	**0.87**	**8**	*e*P	Pn	21 30 55.4	-0.6
	baz=9.0						
YULB	**Yu-li**	**0.91**	**188**	*e*P	Pg	21 30 54.8	0.0
	baz=195						
YULB				*e*S	Sb	21 31 08.0	+0.3
	baz=195						
TWF1	**Yuli**	**0.95**	**187**	*e*P	Pb	21 30 56.1	0.0
	baz=180						
CHN5	**Tsauling**	**0.98**	**225**	*e*P	Pn	21 30 57.8	+0.4
	baz=225						
ELDTW	**Lidau**	**1.17**	**199**	*e*P	Pg	21 30 59.6	-0.1
	baz=187						
CHN4	**Tsaushan**	**1.22**	**219**	*e*P	Pn	21 31 01.7	+1.0
	baz=219						
TPUB	**Ta-pu**	**1.23**	**216**	*e*P	Pg	21 31 02.9	+1.9
	baz=216						

IDC 30 21:37:37.4±1.8, 2.11N×126.59E, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/47, mbtmp3.7/5, Error ellipse: s-maj=123.0km s-min=22.1km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.10**	**183**	P	P	21 42 13.2	+0.4
	0.5nm,0.3s,baz=21,slow=9.9,SNR=3.1						
WRA	**Warramunga Arr**	**23.20**	**161**	P	P	21 42 44.8	-1.2

1.3nm,0.4s,baz=339,slow=11,SNR=6.8
ASAR Alice Springs 26.59 165 P P 21 43 17.9 +0.4
0.6nm,0.5s,baz=348,slow=9.3,SNR=9.5
MKAR Makanchi Array 58.80 326 P P 21 47 37.5 -0.2
0.6nm,0.5s,baz=120,slow=7.8,SNR=18
VNDA Vanda 81.84 173 P P 21 49 58.5 +0.5
0.2nm,0.5s,baz=315,slow=4.7,SNR=3.7

IDC 30 22:04:47.9±638.0, 61°31N×44°47E, h0km, Error ellipse: s-maj=284.9km s-min=202.2km az=79.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I31KZ	**AKTYUBINSK INF**	**13.28**	**139**	*i*		23 29 20.0	
	baz=330,slow=320,SNR=5.3						
I46RU	**ZALESOVO INFRA**	**22.50**	**91**	*i*		00 21 30.0	
	baz=307,slow=344,SNR=1.7						
I53US	**FAIRBANKS INFR**	**53.79**	**6**	*i*		03 35 30.0	
	baz=357,slow=334,SNR=1.5						

*IDC **30** 22:11:03.5±1.4, 28°.36S×177°.85W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/23, mbtmp3.8/4, MS3.3/3, Ms1 3.3/3, ms1mx3.0/28, Error ellipse: s-maj=32.5km s-min=19.2km az=84.0*

ISC 30 22:11:01.0±1.3, 30°.2S±0°.2×177°.1W±0°.2, h10km, n10, σ0s83/8, mb4.0/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.17**	**320**	Pn	**Pb**	**22 11 23.2**	**0.0**
	383nm,0.3s,baz=90,slow=8.5,SNR=12						
RAO				Sn	**Sb**	**22 11 38.5**	**+0.1**
	973nm,0.3s,baz=174,slow=22,SNR=8.9						
DZM	**Mont Dzumac**	**16.85**	**295**	LR	LR	22 18 23.8	
	comp=Z,98nm,20.0s,baz=100,slow=28						
RAR	**Rarotonga**	**17.92**	**64**	LR	LR	22 21 24.7	
	comp=Z,100nm,18.7s,baz=275,slow=35						
STKA	**Stephens Creek**	**35.33**	**256**	P	**P**	**22 17 57.6**	**+1.0**
	2.2nm,0.9s,baz=116,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**43.94**	**266**	P	**P**	**22 19 07.5**	**-0.9**
	1.7nm,0.9s,baz=109,slow=7.9,SNR=14						
WRA	**Warramunga Arr**	**44.91**	**271**	P	**P**	**22 19 15.8**	**-0.4**
	0.9nm,0.3s,baz=112,slow=7.9,SNR=28						
VNDA	**Vanda**	**48.43**	**186**	LR	LR	22 38 33.4	
	comp=Z,23nm,19.9s,baz=346,slow=33						
NVAR	**Mina Array Bea**	**87.50**	**42**	P	**P**	**22 23 49.8**	**+0.6**
	0.2nm,0.6s,baz=235,slow=8.6,SNR=1.9						
FINES	**FINESS Array B**	**145.18**	**341**	PKP	**PKPbc**	**22 30 37.2**	**-0.5**
	3.6nm,0.6s,baz=54,slow=4.1,SNR=24						
AKASG	**Malin Array Be**	**151.59**	**324**	PKPbc	**PKPbc**	**22 30 54.2**	**-0.9**
	0.9nm,0.5s,baz=47,slow=2.6,SNR=4.7						

IDC 30 22:21:49.9±4.0, 11°.25S×167°.00E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/27, mbtmp3.7/3, Error ellipse: s-maj=199.4km s-min=31.5km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.57**	**251**	P	P	22 28 22.8	-0.5
	0.9nm,0.5s,baz=82,slow=9.0,SNR=16						
ASAR	**Alice Springs**	**33.81**	**244**	P	P	22 28 34.5	+0.4
	1.1nm,0.9s,baz=74,slow=8.6,SNR=11						
ILAR	**Eielson Array**	**83.32**	**18**	P	P	22 34 18.4	0.0
	0.3nm,0.8s,baz=234,slow=4.9,SNR=7.3						

*ASRS **30** 22:24:25.8±0.2, 52°N±2°×99°.4E±0°.8, h5km, MLh4.0/11, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*BYKL **30** 22:24:31.4±0.3, 51°.76N×99°.61E*

ISC 30 22:24:30.0±0.7, 51°.77N±0°.03×99°.72E±0°.02, h10km, n54, σ3s05/98, 1C-2D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORL	**Orlik**	**0.77**	**4**	⇓*i* Pg	**Pb**	**22 24 46.1**	**+0.4**
ORL				*e* Sg	**Sb**	**22 24 56.2**	**-0.1**
ORL				Pmax			
	313nm,0.6s						
ORL				Smax			
	1µm,0.3s						
MOY	**Mondy**	**0.80**	**97**	⇑*i* Pg	**Pn**	**22 24 47.6**	**+0.2**
MOY				*e* Pb	**Pb**	**22 24 49.6**	**+3.5**
MOY				*e* Sg	**Sn**	**22 24 58.7**	**-0.7**
MOY				*e* Sb	**Sb**	**22 25 03.6**	**+6.7**
MOY				Pmax			
	323nm,0.4s						
MOY				max			
	474nm,0.7s						
MOY	**Mondy**	**0.80**	**97**	Pg	**Pn**	**22 24 47.5**	**0.0**
MOY				Sg	**Sn**	**22 24 59.6**	**+0.1**
ARS	**Arshan**	**1.68**	**84**	*e* Pg	**Pg**	**22 25 03.1**	**+0.8**
ARS				*e*		22 25 06.0	
ARS				*e* Sg	**Sg**	**22 25 26.4**	**+2.3**
ARS				*e*		22 25 30.4	
ARS				Pmax			
	174nm,0.4s						
ARS				max			
	1µm,0.5s						
KNGR	**Kungurtug, Tuv**	**1.81**	**231**	⇓*i* Pg	**Pb**	**22 25 02.5**	**-0.9**
KNGR				*e*		22 25 04.6	
KNGR				*e*		22 25 10.3	
KNGR				*i* Sg	**Sb**	**22 25 26.0**	**-0.1**
KNGR				*e*		22 25 28.6	
KNGR	**Kungurtug, Tuv**	**1.81**	**231**	Pg	**Pb**	**22 25 02.4**	**-1.0**
KNGR				Sg	**Sb**	**22 25 25.7**	**-0.5**
TDJR	**Todzha**	**2.32**	**287**	*e* Pn	**Pb**	**22 25 10.5**	**-1.5**
TDJR				*e* Pg	**Pg**	**22 25 12.7**	**-1.8**
TDJR				*e* Sg	**Sb**	**22 25 42.2**	**+1.4**
TDJR				Pmax			
	113nm,0.5s						
TDJR				Smax			
	222nm,0.4s						
TDJR	**Todzha**	**2.32**	**287**	Pg	**Pb**	**22 25 12.0**	**0.0**
TDJR				Sg	**Sg**	**22 25 43.4**	**-1.2**
TLY	**Talaya**	**2.44**	**91**	*e* Pg	**Pg**	**22 25 15.6**	**-1.2**
TLY				*e*		22 25 25.3	
TLY				*e* Sg	**Sg**	**22 25 49.9**	**+1.5**
TLY				Pmax			
	41nm,0.5s						
TLY				Smax			
	120nm,0.5s						
TLY	**Talaya**	**2.44**	**91**	Pg	**Pg**	**22 25 16.5**	**-0.3**
TLY				Sg	**Sg**	**22 25 49.8**	**+1.5**
ZAK	**Zakamensk**	**2.64**	**120**	*e* Pg	**Pg**	**22 25 19.2**	**-1.4**
ZAK				*e* PgPg	**PbPb**	**22 25 23.4**	**+2.8**
ZAK				*e* Sg	**Sg**	**22 25 56.4**	**+1.6**
ZAK				Pmax			
	70nm,0.6s						
ZAK				Smax			
	347nm,1.0s						
ZAK	**Zakamensk**	**2.64**	**120**	Pg	**Pg**	**22 25 19.3**	**-1.3**
ZAK				Sg	**Sg**	**22 25 56.9**	**+2.2**
IRK	**Irkutsk**	**2.85**	**79**	*e*	**Pb**	**22 25 20.5**	**-0.5**
IRK				*e* Pg	**Pg**	**22 25 23.3**	**-1.3**
IRK				*e* Sg	**Sg**	**22 26 01.7**	**+0.1**
IRK				*e*		22 26 04.1	
IRK				Pmax			
	183nm,0.1s						
IRK				Smax			
	975nm,0.6s						
IRK	**Irkutsk**	**2.85**	**79**	Pg	**Pg**	**22 25 23.3**	**-1.3**
IRK				Sg	**Sg**	**22 26 02.4**	**+0.8**
IVK	**Ivanovka**	**2.91**	**88**	*e* Pg	**Pg**	**22 25 24.4**	**-1.4**
IVK				*e* Sg	**Sg**	**22 26 03.8**	**+0.2**
IVK				Pmax			
	62nm,0.9s						
IVK				Smax			
	97nm,0.3s						
LSTR	**Listvyanka**	**3.17**	**86**	*e* Pn	**Pn**	**22 25 21.3**	**+1.3**
LSTR				*e* Pg	**Pg**	**22 25 29.2**	**-1.6**
LSTR				*e* Sg	**Sg**	**22 26 10.9**	**-1.0**
LSTR				Smax			
	184nm,1.0s						
ERNS	**Erzin**	**3.25**	**244**	Pg	**Pb**	**22 25 28.7**	**+0.8**
ERNS				Sg	**Sb**	**22 26 08.6**	**+1.0**
KZLR	**Kyzyl**	**3.28**	**271**	Pg	**Pb**	**22 25 27.8**	**-0.5**
KZLR				Sg	**Sb**	**22 26 08.0**	**-0.2**
BGT	**Bolshoye Golou**	**3.53**	**83**	*e*	**Pn**	**22 25 23.3**	**-1.6**
BGT				*e* Pg	**Pg**	**22 25 35.5**	**-2.1**
BGT				*e* Sg	**Sg**	**22 26 22.4**	**-1.0**
BGT				Pmax			
	51nm,0.8s						
BGT				Smax			
	175nm,0.8s						
ARDR	**Aradan**	**3.96**	**284**	Pn	**Pn**	**22 25 33.1**	**+2.2**
ARDR				Pg	**Pg**	**22 25 43.9**	**-1.9**
ARDR				Sg	**Sb**	**22 26 29.6**	**+1.8**
STDB	**Stepnoy Dvoret**	**4.13**	**82**	*e*	**Pn**	**22 25 32.2**	**-0.9**
STDB				*e*		22 25 42.5	
STDB				*e* Sg	**Sg**	**22 26 42.1**	**-0.4**
STDB				*e*		22 26 45.2	
TRG	**Tyrgan**	**4.19**	**74**	*e*	**Pb**	**22 25 40.1**	**-3.7**
TRG				*e* Pg	**Pg**	**22 25 48.0**	**-2.2**
TRG				*e*		22 26 31.7	
TRG				*e* Sg	**Sg**	**22 26 41.9**	**-2.6**
TRG				*e*		22 26 44.9	
TRG				Pmax			
	66nm,0.7s						
TRG				max			
	278nm,0.9s						
TRG	**Tyrgan**	**4.19**	**74**	Pg	**Pg**	**22 25 48.8**	**-1.4**
TRG				S	**Sb**	**22 26 31.4**	**-3.1**
TRG				Sg	**Sg**	**22 26 47.2**	**+2.8**
ORY	**Orie**	**4.26**	**321**	Pg	**Pb**	**22 25 46.1**	**+1.2**
ORY				Sg	**Sb**	**22 26 38.4**	**+2.0**
KAB	**Kabansk**	**4.30**	**84**	*e*	**Pb**	**22 25 45.8**	**+0.1**
KAB				*e* Sg	**Sg**	**22 26 47.6**	**-0.5**
KAB				*e*		22 26 50.4	
KAB				max			
	487nm,0.6s						
FFNB	**Fofonovo**	**4.37**	**84**	*e* Pn	Pn	22 25 40.8	+4.4
FFNB				*e*		22 25 45.0	
FFNB				*e* Sg	**Sg**	**22 26 48.5**	**-1.7**
BLRR	**Bol'shaya Rech**	**4.64**	**289**	Pg	**Pb**	**22 25 52.5**	**+0.9**
BLRR				Sg	**Sb**	**22 26 51.6**	**+4.1**
UUDB	**Ulan-Yde**	**4.93**	**86**	*e* Pg	**Pg**	**22 26 00.5**	**-3.9**
UUDB				*e* Sn	**Sb**	**22 26 53.5**	**-2.1**
UUDB				*e* Sg	**Sg**	**22 27 05.3**	**-2.8**
UUDB				Pmax			
	10.0nm,0.6s						
UUDB				Smax			
	107nm,0.9s						
OGRR	**Ongureny**	**5.14**	**65**	*e*	Pn	22 25 52.1	+5.1
OGRR				*e*		22 26 02.1	
OGRR				*e* Pg	**Pg**	**22 26 05.1**	**-3.3**
OGRR				*e* Sg	**Sg**	**22 27 12.6**	**-2.4**
OGRR				Pmax			
	11nm,0.3s						
OGRR				Smax			
	122nm,1.2s						
CERR	**Cheremushki**	**5.21**	**285**	Pg	**Pb**	**22 26 04.7**	**+3.5**
CERR				Sg	**Sb**	**22 27 08.5**	**+4.7**
DJOS	**Djoyskaya Sosn**	**5.21**	**285**	Pg	**Pb**	**22 26 03.9**	**+2.6**
DJOS				Sg	**Sb**	**22 27 07.7**	**+3.8**
KELR	**Kotokel**	**5.23**	**76**	*e* Pn	**Pn**	**22 25 50.3**	**+2.1**
KELR				*e* Pg	**Pg**	**22 26 06.7**	**-3.4**
KELR				*e*		22 27 06.3	
KELR				*e* Sg	**Sg**	**22 27 14.4**	**-3.4**
DJO	**Djoy, Khakassi**	**5.32**	**284**	Pg	**Pb**	**22 26 06.5**	**+3.5**
DJO				Sg	**Sb**	**22 27 11.6**	**+4.7**
ABNR	**Abakan**	**5.40**	**295**	Pg	**Pb**	**22 26 06.5**	**+2.1**
ABNR				Sg	**Sg**	**22 27 16.4**	**-6.9**
TBTR	**Tabat**	**5.64**	**285**	Pg	**Pb**	**22 26 09.9**	**+1.4**
TBTR				Sg	**Sb**	**22 27 22.6**	**+6.5**
MXMB	**Maximikha**	**5.71**	**71**	*e* Sg	**Sg**	**22 27 30.3**	**-2.9**
VEH	**Verkhnyaya Baz**	**5.93**	**288**	Pg	**Pb**	**22 26 15.8**	**+2.2**
VEH				Sg	**Sb**	**22 27 31.1**	**+6.5**
TEL	**Teeli**	**6.01**	**267**	Pg	**Pb**	**22 26 16.9**	**+2.1**
TEL				Sg	**Sg**	**22 27 36.0**	**-6.8**
ULN	**Ulaanbaatar**	**6.14**	**127**	Sg	**Sg**	**22 27 41.8**	**-5.3**
SHRR	**Shira**	**6.37**	**299**	Pg	Pg	22 26 26.8	-5.1
SHRR				Sg	**Sb**	**22 27 44.5**	**+7.5**
SYVR	**Suvo**	**6.53**	**69**	*e* Pn	**Pn**	**22 26 09.4**	**+3.4**
SYVR				Pg	Pg	22 26 29.3	-5.6
SYVR				*e*		22 27 28.8	
SYVR				*e* Sg	**Sg**	**22 27 54.5**	**-4.8**
SYVR				Pmax			
	4.0nm,0.7s						
SYVR				Smax			
	51nm,1.0s						
NIZ	**Nizh Angarsk**	**7.07**	**52**	*e* Pn	**Pn**	**22 26 15.7**	**+2.3**
NIZ				*e*		22 26 25.5	
NIZ				*e*		22 26 47.7	
NIZ				*e*		22 27 40.1	
NIZ				*e* Sg	**Sg**	**22 28 12.4**	**-4.3**
NIZ				*e*		22 28 15.9	
NIZ				max			
	179nm,1.3s						
YLYR	**Ulyunkhan**	**7.52**	**61**	*e*	Pn	22 26 12.9	-6.8
YLYR				*e*		22 27 46.3	
YLYR				*e* Sg	**Sg**	**22 28 25.2**	**-6.1**
YLYR				Smax			
	139nm,1.7s						
KMO	**Kumora**	**7.94**	**54**	*e*		22 28 03.9	
KMO				*e* Sg	**Sg**	**22 28 38.4**	**-6.3**
KMO				Smax			
	136nm,1.5s						
KPC	**Khapcheranga**	**8.29**	**99**	*e* Pg	Pg	22 27 03.3	-5.4
KPC				*e*		22 28 17.2	
KPC				*e* Sg	**Sg**	**22 28 50.9**	**-5.0**
KPC				*e*		22 28 58.8	
KPC				Pmax			
	1.0nm,0.6s						
KPC				max			
	31nm,1.8s						
YOA	**Uoyan**	**8.32**	**54**	*e*	**Pg**	**22 27 11.9**	**+2.8**
YOA				Sg	**Sg**	**22 28 50.1**	**-6.6**
YOA				Smax			
	536nm,1.7s						
CIT	**Chita**	**8.56**	**83**	Sg	**Sg**	**22 29 00.6**	**-3.9**
CIT				Smax			
	48nm,0.3s						
UKT	**Uakit**	**9.06**	**60**	*e*	Pn	22 26 49.4	+8.5
UKT				*e*		22 27 22.9	
UKT				*e*		22 28 27.2	
UKT				*e* Sg	Sn	22 29 12.5	+50
SVKR	**Severomuysk**	**9.24**	**56**	*e*		22 28 43.6	
SVKR				*e*		22 28 51.9	
SVKR				*e* Sg	Sn	22 29 19.2	+52
SVKR				Smax			
	132nm,2.0s						
BOD	**Bodaibo**	**10.22**	**48**	*e* Sg		22 29 51.2	
BOD				*e*		22 29 55.8	
BOD				max			
	28nm,1.3s						
NLYR	**Nelyaty**	**10.49**	**57**	*e* Sg		22 29 58.5	
NLYR				*e*		22 30 14.5	
NLYR				max			
	49nm,2.0s						
CRS	**Chara**	**11.97**	**57**	*e* Sg		22 30 42.0	
CRS				Smax			
	16nm,1.4s						
TUP	**Tupik**	**12.44**	**70**	*e*	Pn	22 27 50.9	+24
TUP				*e*		22 30 41.5	
TUP				*e* Sg		22 31 00.7	
KRSR	**Krestovskiy**	**35.02**	**58**	Sg		22 27 27.6	

*NEIC **30** 22:53:05.5±1.5, 4°.03S±0°.06×80°.70W±0°.08, h30km±8km, mb4.2/7, ML4.7(ARE), Error ellipse: s-maj=11.6km s-min=8.3km az=88.0*
*ARE **30** 22:53:06±1.3, 4°.02S±0°.06×80°.72W±0°.08, h27km±6km, Error ellipse: s-maj=10.8km s-min=8.6km az=87.0*
*IDC **30** 22:53:08.0±1.2, 3°.50S×80°.51W, h0km, mb4.2/10, mb1 4.3/14, mb1mx4.0/33, mbtmp4.2/14, ML3.8/4, MS3.3/13, Ms1 3.3/13, ms1mx3.2/32, Error ellipse: s-maj=31.7km s-min=17.0km az=66.0*
*IGQ **30** 22:53:10.1±0.7, 4°.5S×4°×8°1W±°, h12km, M4.8*
*VAO **30** 22:53:14.8±1.7, 3°.83S×80°.58W, h58km±13km, mb4.5*

ISC 30 22:53:13.7±0.7, 3°.80S±0°.05×80°.70W±0°.08, h57km, n131, σ1s59/124, mb4.3/13, MS3.4/7, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARNL	**Arenillas**	**0.68**	**68**	P	**Pn**	**22 53 26.8**	**-0.7**
ARNL				S	**Sn**	**22 53 37.5**	**+0.1**
MCRA	**Macar, Loja**	**0.93**	**127**	P	**Pn**	**22 53 29.0**	**-1.7**
MCRA				S	**Sn**	**22 53 41.2**	**-2.2**

ISPG	**Isla Puna-Puer**	**0.98**	**32**	P	**Pn**	**22 53 32.4**	**+1.0**
ACH2	**Ecuador-Machal**	**1.03**	**59**	P	**Pn**	**22 53 31.9**	**-0.1**
MORR	**Playas El Morr**	**1.21**	**17**	P	**Pn**	**22 53 33.8**	**-0.6**
GONZ	**Gonzanam**	**1.37**	**108**	P	**Pn**	**22 53 36.1**	**-0.8**
AGUAY	**Guayaquil**	**1.89**	**23**	P	**Pn**	**22 53 42.6**	**-1.0**
COHC	**Cochancay**	**1.96**	**47**	P	**Pn**	**22 53 44.4**	**-0.1**
AMIL	**Milagro (Trans**	**1.99**	**34**	P	**Pn**	**22 53 44.5**	**-0.4**
PPLP	**Puerto Lpez**	**2.24**	**358**	P	**Pn**	**22 53 47.4**	**-1.0**
BOSC	**San Juan Bosco**	**2.29**	**74**	P	**Pn**	**22 53 50.8**	**+1.6**
SANGA	**Volcan Sangay**	**2.90**	**53**	P	**Pn**	**22 53 58.6**	**+0.8**
IGUA	**Igualata**	**3.08**	**42**	P	**Pn**	**22 54 01.0**	**+0.6**
BMAS	**Trigal station**	**3.18**	**44**	P	**Pn**	**22 54 02.6**	**+1.0**
ARRY	**Arrayan**	**3.19**	**45**	P	**Pn**	**22 54 02.1**	**+0.4**
BBIL	**Ulba Tunguruhu**	**3.21**	**43**	P	**Pn**	**22 54 03.9**	**+1.9**
RETU	**Refugio**	**3.24**	**44**	P	**Pn**	**22 54 04.0**	**+1.4**
JUI6	**Juive**	**3.24**	**43**	P	**Pn**	**22 54 03.6**	**+1.2**
BULB	**Ulba Tungurahu**	**3.27**	**44**	P	**Pn**	**22 54 04.0**	**+1.1**
CAB1	**Cabo Pasado-Ma**	**3.40**	**4**	P	**Pn**	**22 54 04.4**	**+0.1**
CABP	**Cabo Pasado**	**3.40**	**4**	P	**Pn**	**22 54 04.8**	**+0.5**
FLF1	**Flavio Alfaro-**	**3.52**	**14**	P	**Pn**	**22 54 06.0**	**0.0**
FLFR	**Flavio Alfaro**	**3.52**	**14**	P	**Pn**	**22 54 05.4**	**-0.6**
PIS1	**Pisayambo**	**3.57**	**40**	P	**Pn**	**22 54 08.7**	**+1.6**
ILLI	**Illinizas Sur**	**3.64**	**33**	P	**Pn**	**22 54 09.1**	**+1.1**
PIAT	**Ana Tenorio**	**3.70**	**41**	P	**Pn**	**22 54 09.7**	**+1.0**
PKYU	**Pakayacu**	**3.76**	**55**	P	**Pn**	**22 54 09.8**	**+0.5**
VCES	**Cotopaxi**	**3.76**	**38**	P	**Pn**	**22 54 11.9**	**+2.2**
BMOR	**Cotopaxi Volca**	**3.78**	**36**	P	**Pn**	**22 54 11.9**	**+1.9**
CAMI	**Rancho Maria**	**3.80**	**35**	P	**Pn**	**22 54 12.3**	**+2.2**
BNAS	**Cotopaxi Volca**	**3.82**	**35**	P	**Pn**	**22 54 12.6**	**+2.2**
MAG1	**Magdalena**	**3.82**	**14**	P	**Pn**	**22 54 10.3**	**+0.3**
BREF	**Cotopaxi Volca**	**3.84**	**36**	P	**Pn**	**22 54 12.8**	**+1.9**
BTAM	**Cotopaxi Volca**	**3.86**	**37**	P	**Pn**	**22 54 13.0**	**+1.9**
TAMB	**Tambo**	**3.86**	**37**	P	**Pn**	**22 54 12.9**	**+1.8**
VC1	**Cotopaxi 1**	**3.88**	**36**	P	**Pn**	**22 54 13.3**	**+1.9**
ATAH	**Atahualpa**	**4.03**	**145**	Pn	**Pn**	**22 54 14.8**	**+1.5**
	7.9nm,0.3s,baz=1.4,slow=9.2,SNR=31						
ATAH				Lg	Lg	22 55 11.3	
	66nm,0.3s,baz=318,slow=22,SNR=6.7						
ATAH				LR	LR	22 55 56.6	
	comp=Z,574nm,19.4s,baz=304,slow=40						
ANTG	**Antisana-Guama**	**4.08**	**37**	P	**Pn**	**22 54 15.2**	**+1.1**
ANTS	**Antisana-Sarah**	**4.14**	**38**	P	**Pn**	**22 54 16.1**	**+1.2**
GGPC	**Guagua Pichinc**	**4.16**	**30**	P	**Pn**	**22 54 16.7**	**+1.5**
TERV	**Terraza Guagua**	**4.17**	**30**	P	**Pn**	**22 54 16.8**	**+1.5**
PINO	**Pino**	**4.18**	**30**	P	**Pn**	**22 54 16.6**	**+1.2**
ANTI	**Antisana**	**4.18**	**37**	P	**Pn**	**22 54 16.8**	**+1.3**
BV15	**Puerto Quito-O**	**4.20**	**21**	P	**Pn**	**22 54 14.3**	**-0.9**
YANA	**Yana**	**4.23**	**30**	P	**Pn**	**22 54 17.3**	**+1.3**
PULU	**Pululahua**	**4.38**	**30**	P	**Pn**	**22 54 19.3**	**+1.2**
PAC1	**Pacto, Paraso**	**4.47**	**25**	*e*P	**Pn**	**22 54 18.6**	**-0.5**
PAC1				*e*S	**Sn**	**22 55 10.2**	**+0.4**
PAC1	**Pacto, Paraso**	**4.47**	**25**	P	**Pn**	**22 54 18.4**	**-0.7**
OTAV	**Otavalo**	**4.60**	**29**	*e*P	**Pn**	**22 54 21.0**	**-0.1**
OTAV				*e*S	**Sn**	**22 55 15.5**	**+2.0**
OTAV	**Otavalo**	**4.60**	**29**	Pn	Pn	22 54 16.3	-4.7
OTAV				Sn	**Sn**	**22 55 10.5**	**-3.0**
OTAV	**Otavalo**	**4.60**	**29**	*e*P	**Pn**	**22 54 22.1**	**+1.0**
OTAV				*e*S	**Sn**	**22 55 13.1**	**-0.4**
CUSE	**Cuicocha Este**	**4.68**	**29**	*e*P	**Pn**	**22 54 23.1**	**+0.9**
CUSE	**Cuicocha Este**	**4.68**	**29**	P	**Pn**	**22 54 23.7**	**+1.5**
CUSW	**Cuicocha Oeste**	**4.69**	**30**	P	**Pn**	**22 54 24.1**	**+1.8**
CUIC	**Cuicocha-Domo**	**4.70**	**30**	P	**Pn**	**22 54 23.6**	**+1.2**
IMBA	**Imbabura, San**	**4.76**	**32**	P	**Pn**	**22 54 25.4**	**+2.2**
URCU	**Urcuqui**	**4.87**	**30**	P	**Pn**	**22 54 25.8**	**+1.1**
YAHU	**Yahuarcocha**	**4.90**	**32**	P	**Pn**	**22 54 27.2**	**+2.0**
LNGL	**El Angel-Carch**	**5.25**	**31**	P	**Pn**	**22 54 31.6**	**+1.5**
ECEN	**Cerro Negro**	**5.34**	**31**	P	**Pn**	**22 54 32.5**	**+1.2**
CHL2	**Volcn Chiles**	**5.35**	**31**	P	**Pn**	**22 54 32.6**	**+1.2**
PUAC	**Puerto Asis, P**	**5.97**	**44**	*e*P	**Pn**	**22 54 39.6**	**0.0**
GCUF	**Volcan Galeras**	**6.01**	**34**	*e*P	**Pn**	**22 54 40.5**	**0.0**
CRUC	**La Cruz**	**6.51**	**35**	*e*P	**Pn**	**22 54 47.0**	**-0.3**
BBAC	**Balboa, Cauca**	**6.73**	**31**	*e*P	**Pn**	**22 54 49.9**	**-0.3**
BBAC				*e*S	**Sn**	**22 56 05.4**	**-0.3**
FLOC	**Florencia**	**7.35**	**43**	*e*P	**Pn**	**22 54 56.9**	**-1.5**
PCON	**Cinco Dias**	**7.45**	**35**	*e*P	**Pn**	**22 55 01.8**	**+1.5**
POPC	**Popayan, Colom**	**7.47**	**33**	*e*P	**Pn**	**22 54 59.6**	**-0.7**
GARC	**Garzon, Huila**	**7.90**	**41**	*e*P	**Pn**	**22 55 05.2**	**-1.0**
MARP	**Paez Belalcaza**	**8.12**	**36**	*e*P	**Pn**	**22 55 07.9**	**-1.4**
YOTC	**Yotoco, Valle**	**8.87**	**29**	*e*P	**Pn**	**22 55 16.5**	**-2.9**
NNA	**Nana**	**8.98**	**155**	Pn	**Pn**	**22 55 22.4**	**+1.5**
	2.4nm,0.3s,baz=354,slow=10,SNR=5.7						
NNA				Sn	**Sn**	**22 56 57.9**	**-2.7**
	3.0nm,0.3s,baz=270,slow=18,SNR=1.9						
NNA				LR	LR	22 58 55.4	
	comp=Z,75nm,19.7s,baz=329,slow=38						
NNA	**Nana**	**8.98**	**155**	Pn	Pn	22 55 10.3	-11
NNA				Sn	Sn	22 56 48.6	-12
ORTC	**Ortega, Tolima**	**9.40**	**35**	*e*P	**Pn**	**22 55 24.5**	**-2.0**
TOLC	**Tolima**	**9.91**	**33**	*e*P	**Pn**	**22 55 35.4**	**+1.6**
PAYG	**Puerto Ayora**	**10.07**	**288**	Pn	Pn	22 55 30.9	-4.8
PAYG				Sn	Sn	22 57 19.2	-8.1
GUY2C	**Guyana, Caldas**	**10.43**	**31**	*e*P	**Pn**	**22 55 38.9**	**-2.1**
ROSC	**El Rosal**	**10.69**	**37**	LR	LR	23 00 30.6	
	comp=Z,379nm,19.9s,baz=245,slow=43						
CHIC	**Chingaza**	**10.89**	**40**	*e*P	**Pn**	**22 55 47.4**	**+0.2**
DBBC	**Dabeiba**	**11.64**	**23**	*e*P	**Pn**	**22 55 59.5**	**+2.3**
RUSC	**La Rusia**	**12.27**	**38**	*e*P	**Pn**	**22 56 05.5**	**-0.7**
ZARC	**Zaragoza, Cauc**	**12.64**	**27**	*e*P	**Pn**	**22 56 11.4**	**+0.6**
TAMC	**Tame, Arauca**	**13.51**	**41**	*e*P	**P**	**22 56 31.1**	**+1.0**
JTS	**Las Juntas de**	**14.63**	**343**	LR	LR	23 00 00.5	
	comp=Z,16nm,19.1s,baz=213,slow=29						
SDV	**Santo Domingo**	**16.11**	**38**	Pn	**Pn**	**22 56 52.7

PDAR	**Pinedale Array**	**53.20**	**334**	LR	LR	23 25 21.4		
	comp=Z,40nm,18.5s,baz=274,slow=36							
ULM	**Lac du Bonnet**	**55.41**	**348**	P	**P**	**23 02 41.6**	**-0.4**	
	comp=Z,2.9nm,0.8s,baz=183,slow=3.9,SNR=4.0							
LIC	**Lamto**	**76.20**	**83**	*e*PKP2	**P**	**23 04 59.3**	**+2.7**	
	comp=Z,8.9nm,0.5s							
TIC	**Toumodi**	**76.25**	**82**	*e*PKP2	**P**	**23 04 57.9**	**+1.0**	
DBIC	**Dimbokro**	**76.42**	**82**	P	**P**	**23 04 59.0**	**+1.2**	
	comp=Z,4.2nm,0.6s,baz=240,slow=6.8,SNR=11							
DBIC				LR	LR	23 37 57.3		
	comp=Z,18nm,18.5s,baz=265,slow=35							
DBIC	**Dimbokro**	**76.42**	**82**	P	**P**	**23 04 54.1**	**-3.7**	
DBIC				IAmb	IAmb	23 04 59.5		
	comp=Z,6.3nm,0.8s							
KIC	**Kosan Boka**	**76.50**	**83**	*e*PKP2	**P**	**23 04 59.5**	**+1.2**	
	comp=Z,9.6nm,0.5s							
ESDC	**Sonseca Array**	**82.25**	**49**	P	**P**	**23 05 30.2**	**+1.0**	
	comp=Z,1.0nm,0.9s,baz=266,slow=5.0,SNR=7.9							
TORD	**Torodi Ar. Bea**	**83.46**	**76**	P	**P**	**23 05 36.7**	**+0.8**	
	comp=Z,0.8nm,0.4s,baz=271,slow=6.7,SNR=16							
ZALV	**Zalesovo Beam**	**128.62**	**11**	PKP	**PKPdf**	**23 12 14.7**	**+0.3**	
	comp=Z,1.4nm,0.7s,baz=225,slow=1.9,SNR=4.4							
SONM	**Songino Array**	**135.71**	**353**	PKP	**PKPdf**	**23 12 28.4**	**+0.3**	
	comp=Z,0.4nm,0.5s,baz=3.8,slow=4.5,SNR=2.5							
ASAR	**Alice Springs**	**136.62**	**229**	PKhKP	PKPpre	23 12 28.0		
	comp=Z,0.2nm,0.2s,baz=138,slow=3.2,SNR=2.1							
WRA	**Warramunga Arr**	**138.27**	**234**	PKhKP	PKPpre	23 12 32.4		
	comp=Z,0.3nm,0.4s,baz=106,slow=2.7,SNR=4.8							

NEIC ***30*** *23:12:38.3±1.7, 11.62S±0.09×162.1E±0.1, h19km±6km, mb4.1/13, Error ellipse: s-maj=23.7km s-min=5.9km az=57.0*

IDC ***30*** *23:12:47.6±10.0, 11.84S×162.24E, h110km±111km, mb3.4/4, mb1 3.6/6, mb1mx3.4/30, mbtmp3.8/6, ML3.7/2, Error ellipse: s-maj=71.0km s-min=28.9km az=160.0*

ISC 30 23:12:40.5±0.8, 11.59S±0.08×162.1E±0.1, h39km, n30, σ1§21/23, mb3.8/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.03**	**315**	Pn	**Pn**	**23 13 24.8**	**-1.2**
SANVU	**Saraoutou**	**6.25**	**128**		**Pn**	**23 14 10.6**	**+0.2**
DZM	**Mont Dzumac**	**11.21**	**159**	P	**Pn**	**23 15 20.6**	**+2.3**
	0.3nm,0.3s,baz=28,slow=9.5,SNR=16						
DZM				S	**Sn**	**23 17 22.2**	**-0.3**
	0.3nm,0.3s,baz=182,slow=22,SNR=1.3						
DZM	**Mont Dzumac**	**11.21**	**159**		**Pn**	**23 15 16.7**	**-1.7**
CTA	**Charters Tower**	**17.43**	**239**	P	**P**	**23 16 44.9**	**+3.1**
	0.2nm,0.3s,baz=60,slow=9.8,SNR=2.1						
CTAO	**Charters Tower**	**17.43**	**239**		**P**	**23 16 42.2**	**+0.4**
CTAO				IAmb	IAmb	23 16 46.8	
	comp=Z,6.3nm,0.9s						
COEN	**Coen**	**18.62**	**261**	P	**Pn**	**23 16 56.0**	**+0.4**
COEN				IAmb	IAmb	23 16 58.3	
	comp=Z,6.1nm,1.1s						
PATS	**Pohnpei**	**18.70**	**348**	P	**P**	**23 16 56.1**	**+0.4**
ARMA	**Armidale**	**21.11**	**206**	P	**P**	**23 17 19.9**	**-2.2**
WR0	**Warramunga Arr**	**27.78**	**249**	P	**P**	**23 18 26.1**	**0.0**
WB0	**Warramunga Arr**	**27.87**	**250**	P	**P**	**23 18 26.2**	**-0.7**
WB0				IAmb	IAmb	23 18 28.2	
	comp=Z,3.1nm,1.0s						
WB2	**Warramunga Arr**	**27.95**	**249**	P	**P**	**23 18 27.3**	**-0.3**
WB2				IAmb	IAmb	23 18 40.3	
	comp=Z,2.1nm,1.0s						
WRA	**Warramunga Arr**	**27.96**	**249**	P	**P**	**23 18 27.8**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=78,slow=9.7,SNR=7.0						
WRA	**Warramunga Arr**	**27.96**	**249**	IAmb	IAmb	23 18 30.8	
	comp=Z,0.1nm,1.1s						
ASAR	**Alice Springs**	**29.38**	**242**	P	**P**	**23 18 40.4**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=74,slow=9.9,SNR=17						
ASAR	**Alice Springs**	**29.38**	**242**	P	**P**	**23 18 39.3**	**-1.0**
TOO	**Toolangi**	**29.86**	**207**	P	**P**	**23 18 43.4**	**-1.0**
TOO				IAmb	IAmb	23 18 44.3	
	comp=Z,9.4nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**30.23**	**9**	T	T	23 49 49.9	
	baz=188,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**30.23**	**9**	T	T	23 49 49.4	
	baz=188,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**30.25**	**9**	T	T	23 49 49.9	
	baz=188,slow=76,SNR=17						
FAKI	**Fak Fak**	**30.83**	**284**	P	**P**	**23 18 53.7**	**+0.5**
H11N1	**WAKE ISLAND Hy**	**31.46**	**9**	T	T	23 51 19.0	
	baz=188,slow=76,SNR=11						
H11N3	**WAKE ISLAND Hy**	**31.47**	**9**	T	T	23 51 19.5	
	baz=188,slow=76,SNR=13						
H11N2	**WAKE ISLAND Hy**	**31.48**	**9**	T	T	23 51 21.5	
	baz=188,slow=76,SNR=13						
BHW	**Baring Head**	**31.74**	**162**	P	**P**	**23 19 01.0**	**+0.2**
BBOO	**Buckleboo**	**31.90**	**224**	P	**P**	**23 19 02.8**	**+0.4**
BBOO				IAmb	IAmb	23 19 12.4	
	comp=Z,4.3nm,1.0s						
FORT	**Forrest**	**36.84**	**234**	P	**P**	**23 19 44.1**	**-1.1**
FORT				IAmb	IAmb	23 20 02.8	
	comp=Z,19nm,1.1s						
SONM	**Songino Array**	**77.04**	**325**	P	**P**	**23 24 30.1**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=142,slow=5.6,SNR=3.7						
SONM	**Songino Array**	**77.04**	**325**	IAmb	IAmb	23 24 31.6	
	comp=Z,0.8nm,0.8s						
ILAR	**Eielson Array**	**85.19**	**20**	P	**P**	**23 25 12.4**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=246,slow=3.8,SNR=1.5						

IDC ***30*** *23:21:58.0±1.4, 4.11N×71.46W, h0km, mb3.4/3, mb1 3.8/6, mb1mx3.6/34, mbtmp3.7/6, ML2.5/2, MS3.3/2, Ms1 3.3/2, ms1mx2.5/22, Error ellipse: s-maj=19.7km s-min=17.3km az=57.0*

RSNC ***30*** *23:22:00.8±1.4, 3.98N×71.52W, h6km±6km, ML3.5, Mw3.7, Fault plane solution: NP1:φs100.00000°, δ49.00000°, λ-82.00000°.*

NEIC ***30*** *23:22:00.2±2.3, 4.24N±0.05×71.45W±0.08, h16km±5km, mb4.3/10, Error ellipse: s-maj=12.2km s-min=4.4km az=63.0*

ISC 30 23:21:58.8±1.7, 3.96N±0.04×71.48W±0.05, h10km±10km, n53, σ1§38/70, mb4.2/7, 3C-3D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTGC	**Puerto Gaitan,**	**0.69**	**290**	⇑*i*P	**Pg**	**23 22 11.7**	**-0.5**
PTGC				*e*S	**Sg**	**23 22 21.8**	**+0.4**
PTGC				*i*		23 22 36.0	
	comp=Z,970nm,0.3s						
GUVC	**San Jose del G**	**1.81**	**219**	*e*P	**Pn**	**23 22 29.9**	**-0.1**
GUVC				*e*S	**Sn**	**23 22 53.6**	**+0.5**
GUVC				*i*		23 22 56.4	
	comp=Z,583nm,0.2s						
VILC	**Villavicencio,**	**2.21**	**274**	*e*P	**Pn**	**23 22 36.7**	**+1.0**
VILC				*e*S	**Sn**	**23 23 04.0**	**+0.8**
VILC				*i*		23 23 21.0	
	comp=Z,936nm,0.4s						
CHIC	**Chingaza**	**2.34**	**287**	⇓*e*P	**Pn**	**23 22 38.5**	**+0.7**
CHIC				*e*S	**Sn**	**23 23 06.8**	**+0.1**
CHIC				*i*		23 23 17.5	
	comp=Z,356nm,0.4s						
TAMC	**Tame, Arauca**	**2.48**	**353**	*e*P	**Pn**	**23 22 41.2**	**+1.8**
TAMC				*e*S	**Sn**	**23 23 11.3**	**+1.6**
TAMC				*i*		23 23 24.8	
	comp=Z,518nm,0.4s						
RUSC	**La Rusia**	**2.50**	**320**	⇑*e*P	**Pn**	**23 22 41.5**	**+1.5**
RUSC				*e*S	**Sn**	**23 23 10.4**	**-0.3**
RUSC				*i*		23 23 32.2	
	comp=Z,206nm,0.4s						
ROSC	**El Rosal**	**2.96**	**287**	Pn	**Pn**	**23 22 48.4**	**+2.1**
	comp=Z,12nm,0.3s,baz=118,slow=8.0,SNR=14						
ROSC				Lg	Lg	23 23 31.5	
	comp=Z,18nm,0.3s,baz=120,slow=21,SNR=5.9						
ROSC	**El Rosal**	**2.96**	**287**		**Pn**	**23 22 48.6**	**+2.4**
MACC	**Macarena, Meta**	**2.97**	**233**	*e*P	**Pn**	**23 22 46.4**	**+0.3**
MACC				*e*S	**Sb**	**23 23 26.3**	**-1.9**
MACC				*i*		23 23 39.3	
	comp=Z,233nm,0.5s						
SPBC	**San Pablo de B**	**3.08**	**303**	*e*P	**Pn**	**23 22 48.0**	**+0.4**
SPBC				*e*S	**Sn**	**23 23 25.9**	**+1.3**
SPBC				*i*		23 23 43.0	
	comp=Z,194nm,0.4s						
BARC	**Barichara**	**3.12**	**327**	*e*P	**Pn**	**23 22 48.6**	**+0.3**
BARC				*i*		23 23 42.8	
	comp=Z,202nm,0.4s						
PAMC	**Pamplona, Colo**	**3.57**	**340**	*e*S	**Sn**	**23 23 38.2**	**+0.9**
PAMC				*i*		23 24 01.5	
	comp=Z,146nm,0.4s						
NORC	**Norcasia**	**3.73**	**295**	*e*P	**Pn**	**23 22 57.3**	**+0.7**
NORC				*i*		23 24 00.2	
	comp=Z,51nm,0.4s						
ORTC	**Ortega, Tolima**	**3.76**	**269**	⇓*i*P	**Pn**	**23 22 57.8**	**+0.9**
ORTC				*e*S	**Sn**	**23 23 41.5**	**+0.3**
ORTC				*i*		23 24 09.5	
	comp=Z,145nm,0.5s						
BRRC	**Barranca, Sant**	**3.84**	**325**	*e*P	**Pn**	**23 22 59.0**	**+1.1**
BRRC				*e*S	**Sn**	**23 23 43.5**	**+0.3**
BRRC				*i*		23 24 11.3	
	comp=Z,65nm,0.7s						
TOLC	**Tolima**	**3.88**	**279**	*e*P	**Pn**	**23 22 59.0**	**+0.2**
TOLC				*e*S	**Sn**	**23 23 46.3**	**+1.6**
PTBC	**PUERTO BERRIO,**	**3.92**	**311**	*e*P	**Pn**	**23 22 59.3**	**+0.2**
PTBC				*i*		23 24 01.6	
	comp=Z,66nm,0.4s						
ANIL	**Santa Ana**	**3.95**	**278**	*e*P	**Pn**	**23 23 00.4**	**+0.6**
ANIL				*e*S	**Sn**	**23 23 46.3**	**0.0**
ANIL				*i*		23 24 08.9	
	comp=Z,24nm,0.4s						
RREF	**El Recreo**	**3.97**	**284**	*e*P	**Pn**	**23 23 00.9**	**+0.6**
RREF				*e*S	**Sn**	**23 23 47.8**	**+0.6**
RREF				*i*		23 24 15.2	
	comp=Z,73nm,0.6s						
GUY2C	**Guyana, Caldas**	**4.07**	**288**	⇓*i*P	**Pn**	**23 23 02.6**	**+1.0**
GUY2C				*e*S	**Sn**	**23 23 49.7**	**+0.1**
GUY2C				*i*		23 23 55.4	
	comp=Z,68nm,0.6s						
BETC	**Betania**	**4.15**	**252**	*e*P	**Pn**	**23 23 03.4**	**+1.1**
GARC	**Garzon, Huila**	**4.37**	**246**	*e*P	**Pn**	**23 23 04.8**	**-0.8**
GARC				*e*S	**Sn**	**23 23 56.4**	**-0.3**
MARP	**Paez Belalcaza**	**4.60**	**256**	*e*P	**Pn**	**23 23 09.2**	**+0.5**
MARP				*i*		23 24 27.6	
	comp=Z,36nm,0.7s						
HELC	**Santa Helena**	**4.60**	**299**	*e*P	**Pn**	**23 23 09.4**	**+0.6**
HELC				*e*S	**Sn**	**23 24 02.2**	**-0.3**
HELC				*i*		23 24 28.5	
	comp=Z,27nm,0.5s						
OCAC	**Ocana**	**4.63**	**337**	*e*P	**Pn**	**23 23 09.5**	**+0.5**
OCAC				*e*S	**Sn**	**23 24 03.1**	**+0.1**
OCAC				*i*		23 24 36.6	
	comp=Z,86nm,0.6s						
FLOC	**Florencia**	**4.79**	**241**	⇑*e*P	**Pn**	**23 23 11.6**	**+0.5**
FLOC				*e*S	**Sn**	**23 24 06.8**	**+0.2**
FLOC				*i*		23 24 31.4	
	comp=Z,113nm,0.5s						
ZARC	**Zaragoza, Cauc**	**4.86**	**316**	*e*P	**Pn**	**23 23 13.6**	**+1.6**
ZARC				*i*		23 24 15.8	
	comp=Z,36nm,0.5s						
PLMC	**San Jos del P**	**4.88**	**281**	*e*P	**Pn**	**23 23 14.8**	**+2.4**
PLMC				*i*		23 23 17.1	
	comp=Z,44nm,0.4s						
SDV	**Santo Domingo**	**4.97**	**10**	Pn	**Pn**	**23 23 11.5**	**-2.2**
	comp=Z,2.4nm,0.3s,baz=291,slow=17,SNR=6.5						
SDV				Sn	**Sn**	**23 24 11.9**	**+0.5**
	comp=Z,12nm,0.3s,baz=0.8,slow=10,SNR=4.3						
SDV				Lg	Lg	23 24 32.9	
	comp=Z,17nm,0.3s,baz=25,slow=23,SNR=4.8						
SDV	**Santo Domingo**	**4.97**	**10**	*e*P	**Pn**	**23 23 14.5**	**+0.8**
SDV	**Santo Domingo**	**4.97**	**10**		**Pn**	**23 23 12.7**	**-1.0**
POPC	**Popayan, Colom**	**5.37**	**255**	*e*P	**Pn**	**23 23 10.9**	**+0.6**
POPC				*i*		23 24 49.7	
	comp=Z,13nm,0.4s						
DBBC	**Dabeiba**	**5.60**	**303**	*e*P	**Pn**	**23 23 24.0**	**+1.7**
DBBC				*e*S	**Sn**	**23 24 27.7**	**+0.8**
BBAC	**Balboa, Cauca**	**6.07**	**252**	*e*P	**Pn**	**23 23 30.9**	**+2.1**
BBAC				*i*		23 25 12.7	
	comp=Z,13nm,0.6s						
OTAV	**Otavalo**	**7.88**	**242**	Pn	**Pn**	**23 23 58.4**	**+4.4**
PCRV	**Puerto La Cruz**	**9.18**	**47**	Pn	**Pn**	**23 24 09.7**	**-1.8**
	comp=Z,2.1nm,0.3s,baz=222,slow=12,SNR=9.2						
PLCV	**Puerto La Cruz**	**9.21**	**48**		**Pn**	**23 24 09.7**	**-2.1**
LPAZ	**La Paz**	**20.39**	**171**	P	Pn	23 26 38.8	+0.2
	comp=Z,2.0nm,0.8s,baz=344,slow=13,SNR=5.3						
LPAZ				LR	LR	23 36 04.0	
	comp=Z,44nm,18.1s,baz=90,slow=41						
LPAZ	**La Paz**	**20.39**	**171**	IAmb	IAmb	23 26 41.5	
	comp=Z,3.2nm,1.1s						
SIV	**San Ignacio**	**22.34**	**153**	P	**P**	**23 26 59.7**	**+2.7**
	comp=Z,0.5nm,0.5s,baz=32,slow=15,SNR=2.3						
SIV				Lg	Lg	23 33 36.3	
	comp=Z,2.3nm,0.9s,baz=280,slow=14,SNR=3.1						
TX31	**Lajitas Ar. Si**	**39.59**	**313**	P	**P**	**23 29 29.5**	**-1.1**
TXAR	**Lajitas Array**	**39.59**	**313**	P	**P**	**23 29 29.6**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=123,slow=8.7,SNR=6.3						
TXAR	**Lajitas Array**	**39.59**	**313**	P	**P**	**23 29 28.4**	**-2.3**
MNTX	**Cornudas Mount**	**42.13**	**315**	P	**P**	**23 29 51.4**	**-0.1**
MNTX				IAmb	IAmb	23 29 51.8	
	comp=Z,2.9nm,0.8s						
JFWS	**Jewell Farm**	**42.23**	**339**	P	**P**	**23 29 52.0**	**-0.1**
JFWS				IAmb	IAmb	23 29 58.9	
	comp=Z,5.1nm,0.9s						
LC01	**Cunco**	**42.64**	**180**	P	**P**	**23 29 57.9**	**+2.4**
LC01				IAmb	IAmb	23 30 03.2	
	comp=Z,6.3nm,1.1s						
PV13	**Radium Mtn., P**	**48.13**	**320**	P	**P**	**23 30 38.4**	**-1.0**
PV13				IAmb	IAmb	23 30 48.0	
	comp=Z,6.1nm,1.0s						
Q16A	**Castle Valley**	**50.08**	**319**	P	**P**	**23 30 51.0**	**-3.3**
ULM	**Lac du Bonnet**	**50.52**	**340**	LR	LR	23 53 38.9	
	comp=Z,54nm,18.4s,baz=41,slow=38						
SAO	**San Andreas Ge**	**56.21**	**312**	P	**P**	**23 31 39.6**	**+0.3**
FFC	**Flin Flon**	**56.33**	**339**	P	**P**	**23 31 38.8**	**-1.0**
FFC				IAmb	IAmb	23 31 39.2	
	comp=Z,2.9nm,1.1s						
IL31		**80.23**	**335**	P	**P**	**23 34 08.1**	**-1.3**
ILAR	**Eielson Array**	**80.23**	**335**	P	**P**	**23 34 08.2**	**-1.2**

NEIC ***30*** *23:37:34.0±1.7, 6.26S±0.06×147.75E±0.07, h72km±6km, mb4.9/60, Error ellipse: s-maj=10.0km s-min=8.9km az=118.0*

DJA ***30*** *23:37:34.6±0.4, 6.3S±3.1×14.8E±., h58km±4km, M5.0/25, mb5.1/25, mB5.4/11, MLv5.1/3, Mw(mB)4.8/11*

IDC ***30*** *23:37:34.1±1.2, 6.32S×147.72E, h69km±11km, mb4.3/9, mb1 4.6/15, mb1mx4.4/31, mbtmp4.8/15, MS3.5/20, Ms1 3.5/20, ms1mx3.4/40, Error ellipse: s-maj=15.1km s-min=7.9km az=118.0*

ISC 30 23:37:32.3±0.4, 6.30S±0.05×147.74E±0.05, h50km, n148, σ1§27/140, mb4.8/42, MS3.5/17, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.14**	**191**	P	**Pn**	**23 38 20.8**	**+1.5**
	131nm,0.3s,baz=32,slow=5.5,SNR=81						
PMG				S	**Sn**	**23 38 58.4**	**+2.8**
	155nm,0.3s,baz=182,slow=24,SNR=7.1						
PMG	**Port Moresby**	**3.14**	**191**	Pn	**Pn**	**23 38 20.6**	**+1.2**
MANU	**Manus Island**	**4.25**	**355**	Pn	**Pn**	**23 38 35.5**	**+0.9**
KRVT	**Keravat (AS076**	**4.71**	**65**	P	**Pn**	**23 38 41.2**	**+0.3**
	83nm,0.3s,baz=296,slow=0.4,SNR=42						
KRVT				S	**Sn**	**23 39 36.8**	**+2.6**
	baz=189,slow=23,SNR=0.7						
KRVT				LR	LR	23 40 34.5	
	comp=Z,1μm,19.6s,baz=249,slow=38						
RABL	**Rabaul**	**4.88**	**65**	Pn	**Pn**	**23 38 44.2**	**+1.0**
JAY	**Jayapura**	**7.96**	**298**	P	**Pn**	**23 39 28.8**	**+3.2**
	3.9nm,0.3s,baz=91,slow=9.6,SNR=13						
JAY				LR	LR	23 42 49.3	
	comp=Z,282nm,19.7s,baz=250,slow=40						
JAY	**Jayapura**	**7.96**	**298**	P	**Pn**	**23 39 29.3**	**+3.8**
	0.2nm512nm35nm,1.0s						
GENI	**Genyem**	**8.40**	**296**	P	**Pn**	**23 39 33.2**	**+1.7**
	73nm,0.6s						
COEN	**Coen**	**8.84**	**210**	P	**Pn**	**23 39 38.8**	**+1.3**
	baz=8.9,SNR=45						
COEN	**Coen**	**8.84**	**210**	Pn	**Pn**	**23 39 38.7**	**+1.1**
SMPI	**Sarmi**	**9.97**	**295**	P	Pn	23 40 08.7	+16
MTSU	**Mount Surprise**	**12.23**	**196**	P	**Pn**	**23 40 24.5**	**+0.6**
	baz=12,SNR=46						
HNR	**Honiara**	**12.48**	**105**	P	**Pn**	**23 40 29.5**	**+2.1**
	15nm,0.3s,baz=162,slow=3.7,SNR=12						
HNR				LR	LR	23 44 46.0	
	comp=Z,218nm,21.4s,baz=309,slow=35						
HNR	**Honiara**	**12.48**	**105**	Pn	**Pn**	**23 40 29.4**	**+2.0**
CTA	**Charters Tower**	**13.78**	**186**	P	**Pn**	**23 40 46.9**	**+1.7**
	0.9nm,0.3s,baz=19,slow=15,SNR=6.6						
CTAO	**Charters Tower**	**13.78**	**186**	Pn	**Pn**	**23 40 47.5**	**+2.4**
QIS	**Mount Isa**	**16.22**	**208**	P	**Pn**	**23 41 17.6**	**+0.6**
	baz=16,SNR=69						
KDU	**Kakadu**	**16.33**	**246**	P	**Pn**	**23 41 18.6**	**+0.1**
	baz=16,SNR=28						
SAUI	**Saumlaki**	**16.40**	**263**	P	**P**	**23 41 21.6**	**+0.2**
	9μm113nm,1.2s						
SAUI	**Saumlaki**	**16.40**	**263**	Pn	**Pn**	**23 41 19.2**	**0.0**
SAUI				IAmb	IAmb	23 41 25.9	
	comp=Z,101nm,0.9s						
SWI	**Sorong**	**17.31**	**288**	P	**P**	**23 41 31.2**	**-0.2**
	comp=Z,1μmcomp=Z,54nm,0.8s						
MTN	**Manton Dam**	**17.61**	**247**	P	**P**	**23 41 35.7**	**+0.9**
	baz=18,SNR=17						
MTN	**Manton Dam**	**17.61**	**247**		**Pn**	**23 41 33.7**	**-0.7**
WB0	**Warramunga Arr**	**18.64**	**223**	P	**P**	**23 41 46.0**	**-0.1**
WB0				IAmb	IAmb	23 41 49.2	
	comp=Z,80nm,0.8s						
WR0	**Warramunga Arr**	**18.68**	**222**	P	**P**	**23 41 46.5**	**0.0**
WR0				IAmb	IAmb	23 41 50.2	
	comp=Z,69nm,0.9s						
WRAB	**Tennant Creek**	**18.78**	**223**	P	**P**	**23 41 47.7**	**0.0**
WRAB				IAmb	IAmb	23 41 50.4	
	comp=Z,58nm,0.9s						
WB2	**Warramunga Arr**	**18.79**	**223**	P	**P**	**23 41 47.8**	**0.0**
WB2				IAmb	IAmb	23 41 50.5	
	comp=Z,44nm,0.8s						
WRA	**Warramunga Arr**	**18.80**	**223**	P	**P**	**23 41 47.3**	**-0.5**
	comp=Z,8.3nm,0.3s,baz=45,slow=12,SNR=371						
WRA				S	**Sn**	**23 45 13.9**	**-4.6**
	baz=40,slow=23,SNR=0.9						
WRA				ScP	**ScP**	**23 49 45.0**	**-0.4**
	baz=33,slow=2.2,SNR=6.0						
WRA				LR	LR	23 50 39.4	
	comp=Z,130nm,18.5s,baz=45,slow=42						
WRA	**Warramunga Arr**	**18.80**	**223**	P	**P**	**23 41 46.4**	**-1.5**
MSAI	**Masohi**	**18.97**	**278**	P	**P**	**23 41 48.9**	**-0.9**
EIDS	**Eidsvold**	**19.23**	**171**	P	**Pn**	**23 41 53.9**	**+0.1**
	baz=19,SNR=23						
EIDS	**Eidsvold**	**19.23**	**171**	P	**P**	**23 41 53.4**	**+0.9**
EIDS				IAmb	IAmb	23 41 54.8	
	comp=Z,45nm,0.7s						
RMQ	**Roma**	**20.10**	**177**	P	Pn	23 42 03.7	-0.5
	baz=20,SNR=28						
QLP	**Quilpie**	**20.45**	**189**	P	**P**	**23 42 07.0**	**+1.3**
	baz=20,SNR=107						
KNRA	**Kununurra**	**20.81**	**242**	P	**P**	**23 42 09.2**	**-0.5**
	baz=21,SNR=21						
KNRA	**Kununurra**	**20.81**	**242**	P	**P**	**23 42 09.3**	**-0.5**
KNRA				IAmb	IAmb	23 42 14.6	
	comp=Z,34nm,0.6s						
SANVU	**Saraoutou**	**21.15**	**117**	P	**P**	**23 42 14.1**	**+0.8**
SANVU				IAmb	IAmb	23 42 23.5	
	comp=Z,33nm,0.8s						
TNTI	**Ternate**	**21.52**	**288**	P	**P**	**23 42 16.6**	**-0.7**
TNTI				IAmb	IAmb	23 42 24.1	
	comp=Z,42nm,1.1s						
AS31	**Alice Springs**	**21.80**	**216**	P	**P**	**23 42 20.8**	**+0.5**
AS31				IAmb	IAmb	23 42 21.6	
	comp=Z,45nm,0.5s						
ASAR	**Alice Springs**	**21.80**	**216**	P	**P**	**23 42 20.9**	**+0.6**
	comp=Z,65nm,0.5s,baz=50,slow=9.3,SNR=998						
ASAR				S	**S**	**23 46 18.6**	**-0.3**
	comp=Z,5.3nm,0.7s,baz=33,slow=24,SNR=6.8						
ASAR				ScP	**ScP**	**23 49 52.0**	**-0.4**
	comp=Z,3.5nm,1.1s,baz=46,slow=3.2,SNR=7.9						
ASAR				LR	LR	23 50 53.8	
	comp=Z,121nm,20.4s,baz=50,slow=37						
ASAR	**Alice Springs**	**21.80**	**216**	P	**P**	**23 42 20.4**	**0.0**
SOEI	**Soe**	**23.49**	**260**	P	**P**	**23 42 39.7**	**+1.6**
	comp=Z,41nm,0.8s						
SOEI	**Soe**	**23.49**	**260**	P	**P**	**23 42 38.8**	**+0.7**
SOEI				IAmb	IAmb	23 42 49.4	
	comp=Z,27nm,0.6s						
DZM	**Mont Dzumac**	**23.92**	**133**	LR	LR	23 51 12.2	
	comp=Z,315nm,18.7s,baz=277,slow=34						
DZM	**Mont Dzumac**	**23.92**	**133**	P	**P**	**23 42 42.0**	**0.0**
BATI	**Baumata**	**24.14**	**259**	P	**P**	**23 42 45.3**	**+1.4**
	comp=Z,52nm,0.6s,baz=174,slow=2.6,SNR=21						
BATI				LR	LR	23 54 45.2	
	comp=Z,292nm,19.8s,baz=106,slow=43						
BATI	**Baumata**	**24.14**	**259**	P	**P**	**23 42 45.7**	**+1.8**
	comp=Z,492nmcomp=Z,47nm,1.0s						
ARMA	**Armidale**	**24.27**	**172**	P	**P**	**23 42 45.6**	**+0.5**
	baz=24,SNR=27						
ARMA	**Armidale**	**24.27**	**172**	P	**P**	**23 42 45.6**	**+0.5**
ARMA				IAmb	IAmb	23 42 47.8	
	comp=Z,32nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.54**	**239**	P	**P**	**23 42 48.0**	**+0.5**
	comp=Z,137nm,0.6s,baz=59,slow=7.8,SNR=361						
FITZ				LR	LR	23 52 54.4	
	comp=Z,187nm,21.4s,baz=62,slow=38						
FITZ	**Fitzroy Crossi**	**24.54**	**239**	P	**P**	**23 42 48.0**	**+0.5**
	baz=25,SNR=248						
CMSA	**Cobar Meteorol**	**25.18**	**184**	P	**P**	**23 42 52.6**	**-0.6**
	baz=25,SNR=29						
MMRI	**Maumere**	**25.39**	**263**	P	**P**	**23 42 57.8**	**+2.5**
	comp=Z,4μmcomp=

	comp=Z,23nm,0.7s						
MUN	**Mundaring**	**38.97**	**225**	P	**P**	**23 44 54.4**	**+0.6**
	baz=39,SNR=4.9						
LEM	**Lembang**	**39.85**	**267**	LR	LR	00 05 32.8	
	comp=Z,43nm,18.2s,baz=326,slow=42						
RKGY	**Rocky Gully**	**39.99**	**221**	P	**P**	**23 45 03.3**	**+1.0**
	baz=40,SNR=7.5						
KNTN	**Kanton**	**40.55**	**87**	P	**P**	**23 45 05.3**	**-2.0**
LBZ	**Lake Benmore**	**42.72**	**156**	P	**P**	**23 45 24.2**	**-0.4**
LBZ				IAmb	IAmb	23 45 33.9	
	comp=Z,29nm,1.1s						
MLZ	**Mavora Lakes**	**42.76**	**159**	P	**P**	**23 45 25.0**	**+0.1**
MLZ				IAmb	IAmb	23 45 34.6	
	comp=Z,18nm,1.1s						
NIUE	**Niue**	**43.08**	**111**	P	**P**	**23 45 26.5**	**-1.3**
ODZ	**Otahua Downs**	**43.45**	**156**	P	**P**	**23 45 29.8**	**-0.6**
ODZ				IAmb	IAmb	23 45 35.3	
	comp=Z,16nm,1.1s						
MJAR	**Matsushiro Arr**	**43.54**	**349**	LR	LR	00 01 28.7	
	comp=Z,62nm,21.9s,baz=235,slow=33						
SDSI	**Sungai Dareh**	**46.51**	**275**	P	**P**	**23 45 57.3**	**+2.1**
NJ2	**Nanjing**	**47.04**	**326**	*e*P	**P**	**23 46 01.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSRS	**Korea Array**	**47.30**	**338**	LR	LR	00 05 21.0	
	comp=Z,57nm,18.6s,baz=150,slow=35						
PSI	**Prapat**	**49.57**	**279**	LR	LR	00 10 15.2	
	comp=Z,34nm,18.4s,baz=74,slow=40						
USA0B	**Ussuriysk Arra**	**52.24**	**346**	P	**P**	**23 46 37.2**	**-1.2**
USRK	**Ussuriysk Ar.**	**52.24**	**346**	P	**P**	**23 46 38.1**	**-0.3**
	comp=Z,2.5nm,1.0s,baz=242,slow=10,SNR=4.3						
CMAR	**Chiang Mai Arr**	**54.04**	**298**	P	**P**	**23 46 53.8**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=241,slow=38,SNR=1.4						
CMAR				LR	LR	00 08 14.1	
	comp=Z,8.5nm,21.0s,baz=45,slow=34						
CD2	**Chengdu**	**56.01**	**314**	*e*P	**P**	**23 47 07.0**	**+0.8**
HHC	**Hu-ho-hao-te**	**57.48**	**328**	*e*P	**P**	**23 47 18.5**	**+2.0**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.6s						
LZH	**Lanzhou**	**58.92**	**319**	*e*P	**P**	**23 47 28.3**	**+1.5**
LZH				pP	sP	23 47 43.5	-2.7
LZH				sP	pP	23 47 51.3	+11
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
LZH				pmax	pmax		
	comp=Z,86nm,8.0s						
LZH				LR	LR		
	comp=N,280nm,16.3s						
LZH				LR	LR		
	comp=E,280nm,16.5s						
LZH				LR	LR		
	comp=Z,450nm,18.7s						
PEA0B	**Petropavlovsk-**	**59.78**	**7**	P	**P**	**23 47 30.8**	**-1.4**
PEA0B				IAmb	IAmb	23 47 33.1	
	comp=Z,26nm,1.1s						
PETK	**Petropavlovsk-**	**59.78**	**7**	P	**P**	**23 47 31.6**	**-0.6**
	comp=Z,7.7nm,0.9s,baz=179,slow=8.0,SNR=5.3						
PETK				LR	LR	00 10 10.3	
	comp=Z,66nm,20.2s,baz=151,slow=33						
PPT	**Papeete**	**62.10**	**106**	LR	LR	00 12 16.1	
	comp=Z,20nm,19.1s,baz=338,slow=34						
GTA	**Gaotai**	**63.44**	**320**	*e*P	P	23 48 01.8	+4.5
GTA				pP	sP	23 48 19.0	+2.1
GTA				sP	PcP	23 48 24.8	-9.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.5s						
SONM	**Songino Array**	**65.02**	**331**	P	**P**	**23 48 07.7**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=140,slow=6.6,SNR=4.4						
VNDA	**Vanda**	**71.57**	**177**	P	**P**	**23 48 47.9**	**+0.1**
	comp=Z,3.0nm,0.6s,baz=334,slow=6.5,SNR=34						
VNDA				LR	LR	00 18 13.1	
	comp=Z,23nm,19.1s,baz=343,slow=34						
VNDA	**Vanda**	**71.57**	**177**	P	**P**	**23 48 48.0**	**+0.2**
WMQ	**Urumqi**	**73.50**	**319**	*e*P	**P**	**23 49 01.3**	**+1.3**
MKAR	**Makanchi Array**	**78.20**	**320**	P	**P**	**23 49 25.0**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=101,slow=7.7,SNR=7.9						
MAKZ	**Makanchi**	**78.40**	**320**	P	**P**	**23 49 25.6**	**-2.2**
ZALV	**Zalesovo Beam**	**79.66**	**328**	P	**P**	**23 49 33.8**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=126,slow=5.9,SNR=4.7						
ZALV	**Zalesovo Beam**	**79.66**	**328**	P	**P**	**23 49 31.8**	**-2.7**
KDAK	**Kodiak Island**	**79.82**	**28**	P	**P**	**23 49 34.9**	**-0.3**
KDJ	**Kajisay**	**80.02**	**315**	P	**P**	**23 49 34.3**	**-2.6**
KSH	**Kashi**	**80.13**	**312**	*e*P	P	23 49 43.0	+5.5
KSH				sP	sP	23 50 02.5	+4.6
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,170nm,5.6s						
NIL	**Nilore**	**80.70**	**305**	P	**P**	**23 49 38.6**	**-2.0**
TTA	**Tatalina**	**81.04**	**23**	P	**P**	**23 49 40.1**	**-1.7**
CNPM	**China Poot**	**81.28**	**27**	P	**P**	**23 49 42.0**	**-1.0**
CNPM				IAmb	IAmb	23 49 58.7	
	comp=Z,18nm,1.1s						
BRLK	**Bradley Lake**	**81.55**	**27**	P	**P**	**23 49 42.5**	**-2.0**
BRLK				IAmb	IAmb	23 49 42.9	
	comp=Z,6.1nm,0.9s						
MAW	**Mawson**	**82.25**	**203**	P	**P**	**23 49 47.1**	**-0.9**
	comp=Z,2.0nm,0.8s,baz=60,slow=11,SNR=4.4						
MAW				LR	LR	00 26 58.1	
	comp=Z,21nm,18.1s,baz=68,slow=36						
KTH	**Kantishna Hill**	**83.34**	**23**	P	**P**	**23 49 55.0**	**+1.3**
KTH				IAmb	IAmb	23 50 04.2	
	comp=Z,7.4nm,1.2s						
TRF	**Thorofare Moun**	**83.54**	**24**	P	**P**	**23 49 53.7**	**-1.3**
QSPA	**South Pole Qui**	**83.67**	**180**	P	**P**	**23 49 55.2**	**-0.4**
QSPA				IAmb	IAmb	23 49 56.0	
	comp=Z,8.5nm,0.8s						
ILAR	**Eielson Array**	**85.47**	**23**	P	**P**	**23 50 00.9**	**-3.6**
	comp=Z,0.6nm,0.6s,baz=252,slow=4.5,SNR=9.7						
TOLK	**Toolik Lake Re**	**86.24**	**19**	P	**P**	**23 50 07.8**	**-0.5**
BARN	**Barnard Glacie**	**86.25**	**27**	P	**P**	**23 50 08.8**	**+0.1**
BARN				IAmb	IAmb	23 50 13.3	
	comp=Z,6.2nm,1.1s						
CTGM	**Chitina Glacie**	**86.37**	**28**	P	**P**	**23 50 07.7**	**-1.5**
YBH	**Yreka Blue Hor**	**93.81**	**49**	LR	LR	00 25 19.2	
	comp=Z,51nm,20.5s,baz=282,slow=30						
GERES	**GERESS Array B**	**122.57**	**326**	PKP	**PKPdf**	**23 56 20.8**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=318,slow=1.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**145.88**	**284**	PKPbc	**PKPdf**	**23 57 05.8**	**-0.9**
	comp=Z,4.8nm,0.6s,baz=73,slow=3.3,SNR=31						
KIC	**Kosan Boka**	**152.65**	**272**	*e*PKIKP	**PKPbc**	**23 57 24.0**	**-0.6**
	comp=Z,6.1nm,0.7s						
DBIC	**Dimbokro**	**152.77**	**272**	PKPbc	**PKPbc**	**23 57 23.6**	**-1.3**
	comp=Z,2.4nm,0.6s,baz=323,slow=0.3,SNR=6.3						
LIC	**Lamto**	**152.93**	**271**	*e*PKIKP	**PKPbc**	**23 57 24.2**	**-1.0**
	comp=Z,8.0nm,0.5s						
TIC	**Toumodi**	**152.93**	**272**	*e*PKIKP	**PKPbc**	**23 57 24.4**	**-0.9**
BDFB	**Brasilia**	**153.19**	**145**	PKPbc	**PKPbc**	**23 57 24.9**	**-0.9**
	comp=Z,5.6nm,0.7s,baz=197,slow=3.6,SNR=8.9						

DJA 30 23:41:28.1±0.7, 3°S±3°×12°8E±°, h14km±8km, M3.6/11, MLv3.6/11, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.98**	**167**	P	Pb	23 41 46.4	-0.6
AAI				S	Sn	23 42 00.9	-0.4
AAI	**Ambon**	**0.98**	**167**	P	Pb	23 41 46.1	-0.9
NLAI	**Namlea**	**1.02**	**240**	P	Pn	23 41 48.2	+0.2
NLAI				S	Sn	23 42 02.0	-0.1
MSAI	**Masohi**	**1.13**	**123**	P	Pg	23 41 50.0	0.0
MSAI				S	Sn	23 42 05.1	+0.2
SANI	**Sanana**	**2.10**	**288**	P	Pn	23 42 02.5	-0.4
LBMI	**Labuha**	**2.12**	**347**	P	Pn	23 42 03.9	+0.7
BNDI	**Bandanaira**	**2.63**	**133**	P	Pn	23 42 09.2	-0.9
TNTI	**Ternate**	**3.52**	**350**	P	Pn	23 42 22.0	-0.5
SWI	**Sorong**	**3.76**	**61**	P	Pn	23 42 26.0	+0.3
FAKI	**Fak Fak**	**4.27**	**93**	P	Pn	23 42 33.5	+0.8

ISC Computed Locations for November 2014

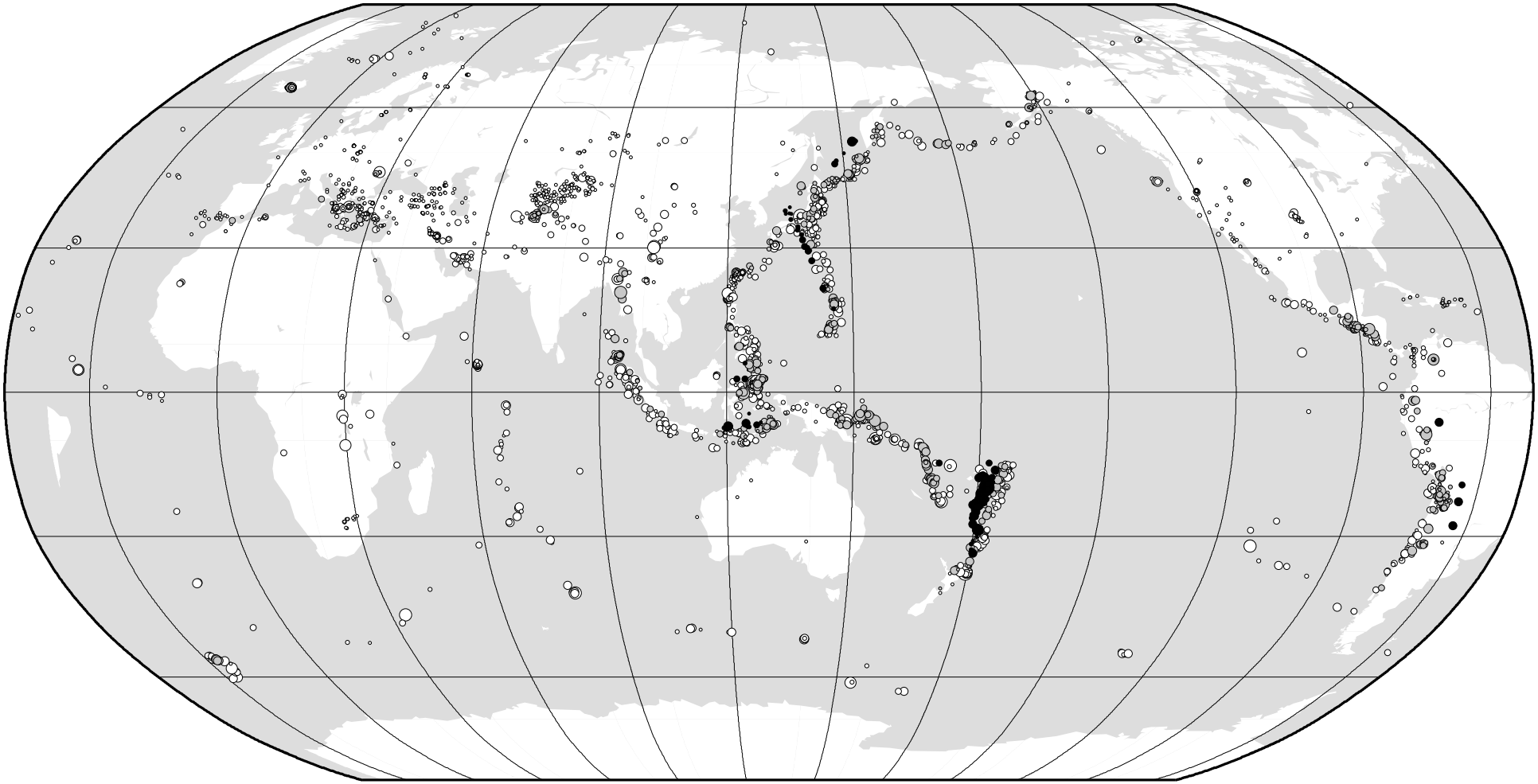

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3389 Events